[4910-13]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Parts 1, 21, 43, 45, 61, 65, and 91

[Docket No. FAA–2001–11133; Amendment No. 1-53; 21-85; 43-39; 45-24; 61-110; 65-45; 91-282]

RIN 2120–AH19

Certification of Aircraft and Airmen for the Operation of Light-Sport Aircraft

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is creating a new rule for the manufacture, certification, operation, and maintenance of light-sport aircraft. Light-sport aircraft weigh less than 1,320 pounds (1,430 pounds for aircraft intended for operation on water) and are heavier and faster than ultralight vehicles and include airplanes, gliders, balloons, powered parachutes, weight-shift-control aircraft, and gyroplanes. This action is necessary to address advances in sport and recreational aviation technology, lack of appropriate regulations for existing aircraft, several petitions for rulemaking, and petitions for exemptions from existing regulations. The intended effect of this action is to provide for the manufacture of safe and economical certificated aircraft that exceed the limits currently allowed by ultralight regulation, and to allow operation of these aircraft by certificated pilots for sport and recreation, to carry a passenger, and to conduct flight training and towing in a safe manner.

DATES: Effective September 1, 2004.

FOR FURTHER INFORMATION CONTACT: For questions on airman certification and operational issues (parts 1, 61, and 91 of title 14, Code of Federal Regulations (14 CFR)), contact Susan Gardner, Flight Standards Service, General Aviation and Commercial Division (AFS–800), Federal Aviation Administration, 800 Independence Ave., SW., Washington, DC 20591; telephone 907-271-2034 or 202-267-8212. .

For questions on aircraft certification and identification (14 CFR parts 21 and 45), contact Scott Sedgwick, Aircraft Certification Service, Small Airplane Directorate (ACE-100), Federal Aviation Administration, 901 Locust Street, Kansas City, MO 64106; telephone 816-329-2464; fax 816-329-4090; e-mail 9-ACE-AVR-SPORTPILOT-QUESTIONS@faa.gov.

For questions on aircraft maintenance and repairman certification (14 CFR parts 43 and 65), contact Bill O'Brien, Aircraft Maintenance Division (AFS-305), Federal Aviation Administration, 800 Independence Ave., SW., Washington, DC 20591; telephone (202) 267-3796.

In addition, information on the implementation of this rule is available on http://AFS600.faa.gov.

SUPPLEMENTARY INFORMATION:

Availability of Rulemaking Documents

You can get an electronic copy using the Internet by—

(1) Searching the Department of Transportation's (DOT) electronic Docket Management System (DMS) Web page (http://dms.dot.gov/search).

(2) Visiting the FAA Office of Rulemaking's Web page at http://www.faa.gov/avr/arm/index.cfn.

(3) Accessing the Government Printing Office's Web page at http://www.access.gpo.gov/su_docs/aces/aces140.html.

You can also get a copy by submitting a request to the Federal Aviation Administration, Office of Rulemaking, ARM–1, 800 Independence Avenue SW., Washington, DC 20591, or by calling (202) 267–9680. Identify the amendment number or docket number of this rulemaking.

You may search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, or labor union, etc.). You may review DOT's complete Privacy Act statement in the April 11, 2000 Federal Register (65 FR 19477) or at http://dms.dot.gov.

Implementation Information

The FAA spent a considerable amount of time determining the effective date of the final rule. Based on a review of the planning and scheduling of the tasks necessary to support the development of the infrastructure to implement the final rule, the agency believes that it had two options in determining this date. The first option was to establish the effective date of the rule after all of the guidance, policy, and infrastructure was in place to implement the rule. The FAA considered the economic impact of delaying the implementation of the rule while waiting for all of this material to be completed and believes that such action would not be in the best interest of those persons affected by the

rule. Additionally, the complexity of the rule and the interrelationship among many of its new provisions makes the use of more than a single effective date for the rule difficult to implement. The second option was to select an effective date shortly after publication of the rule in the Federal Register. The FAA could then provide the public with many of the benefits of the rule while concurrently carrying out a plan for implementing other portions of the rule. The plan will contain milestones for completion of the specific guidance, policy, and infrastructure necessary for the public to conduct operations and seek certification under the new regulations. Selection of this option, for example, will permit currently certificated pilots to take advantage of many of the benefits of the new rule, such as those provisions relating to the exercise of sport pilot privileges without the necessity of holding an airman medical certificate. The infrastructure to implement other provisions of the rule can be developed during this period.

Due to the agency's intent to provide the public with as many of the benefits of the rule as soon as possible, the agency has established a single effective date of September 1, 2004 for the final rule. Shortly after publication of this rule, the FAA will post an implementation plan for the rule on the FAA Sport Pilot and Light-Sport Aircraft Website, http://www.faa.gov/avr/afs/ sportpilot or http://AFS600.faa.gov. The FAA recognizes that persons seeking certification as airmen under the rule or seeking the certification of light-sport aircraft under the rule will not be able to obtain such certification immediately after the rule's effective date. The FAA, however, will work closely with the sport aviation community and those organizations that support its members to ensure that each milestone on the FAA's implementation plan is met and that information regarding implementation of the rule is made available in a timely manner.

The FAA has also reissued exemptions to the Experimental Aircraft Association (EAA), the United States Ultralight Organization (USUA), and Aero Sports Connection (ASC) that address flight training in ultralight vehicles. These revised exemptions from certain provisions of 14 CFR part 103 contain an expiration date of January 31, 2008. This date coincides with the date established to transition existing ultralight training vehicles, single and two-place ultralight-like aircraft, and ultralight operators and instructors to the provisions of the final rule.

Small Business Regulatory Enforcement Fairness Act

The Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996 requires the FAA to comply with small entity requests for information or advice about compliance with statutes and regulations within its jurisdiction. Therefore, any small entity that has a question regarding this document may contact its local FAA official, or the person listed under "FOR FURTHER INFORMATION CONTACT" above. You can find out more about SBREFA on the Internet at http://www.faa.gov/avr/arm/sbrefa.htm.

Guide to Terms and Acronyms Frequently Used in This Document

AD—Airworthiness Directive
AGL—Above ground level
AME—Aviation Medical Examiner
ARAC—Aviation Rulemaking Advisory Committee
ASC-- Aero Sports Connection
ATC—Air traffic control
BAA-- Bilateral Airworthiness Agreement
BASA-- Bilateral Aviation Safety Agreement
CAS—Calibrated airspeed
DAR—Designated Airworthiness Representative
DPE—Designated pilot examiner

EAA—Experimental Aircraft Association
Experimental light-sport aircraft—Aircraft issued an experimental certificate under §21.191 (i)
IFR—Instrument flight rules
LTA—Lighter-than-air
MSL—Mean sea level
NAS—National Airspace System
NM—Nautical mile
NTSB—National Transportation Safety Board
PMA—Parts Manufacturer Approval
SFAR—Special Federal Aviation Regulation
Special light-sport aircraft—Aircraft issued a special airworthiness certificate in the light-sport category (or, aircraft issued a special airworthiness certificate under §21.190)
STC—Supplemental type certificate
TC—Type certificate
TSO—Technical Standard Order
Ultralight-like aircraft—An unregistered aircraft that exceeds the parameters of part 103 and meets the definition of "light-sport aircraft"
USUA—United States Ultralight Association
V_H—Maximum airspeed in level flight with maximum continuous power
V_{NE}—Maximum never-exceed speed
V_{S0}—Maximum stalling speed or minimum steady flight speed in landing configuration
V_{S1}—Maximum stalling speed or minimum steady flight speed without the use of lift-enhancing devices

Outline of This Document

I. The Proposed Rule
I.1. NPRM and On-Line Public Forum
I.2. Public Comment Period
I.3. Ex Parte Communications
II. Purpose of This Final Rule
III. General Discussion of Changes in the Final Rule
III.1. FAA Judgment and Discretion
III.2. Summary of Significant Issues Raised By Commenters
III.3. Security Concerns Related to Pilot Identification and Certification
III.4. SFAR No. 89
III.5.A. Comments on Ultralight Vehicles
III.5.B. Future Rulemaking on Ultralight Vehicles
IV. Comparative Tables
V. Section–by-Section Discussion of Comments and Changes Incorporated Into the Final Rule
V.1. Part 1

V.2. Part 21
V.3. Part 43
V.3.A. Part 43--General Issues
V.3.B. Part 43--Section-by-Section Discussion
V.4. Part 45
V.5. Part 61
V.5.A. Part 61--General Issues
V.5.A.i. SFAR No. 89 Conversion Table
V.5.A.ii. Medical Provisions
V.5.A.iii. Flight Training and Proficiency Requirements
V.5.A.iv. Make and Model Logbook Endorsements, and Sets of Aircraft
V.5.A.v. Changes to Airspace Restrictions
V.5.A.vi. Changes to Altitude Limitations
V.5.A.vii. Gyroplanes
V.5.A.viii. Demonstration of Aircraft to Perspective Buyers
V.5.A.ix. Category and Class Discussion: FAA Form 8710-11 Submission
V.5.B. Part 61 Section-by-Section Discussion
V.6. Part 65
V.7. Part 91
V.7.A. Part 91--General Issues
V.7.B. Part 91--Section-by-Section Discussion
VI. Plain Language
VII. Paperwork Reduction Act
VIII. International Compatibility
IX. Economic Assessment
X. Regulatory Flexibility Determination
XI. Trade Impact Analysis
XII. Unfunded Mandates Assessment
XIII. Executive Order 3132, Federalism
XIV. Environmental Analysis
XV. Energy Impact
XVI. List of Subjects

I. The Proposed Rule

I.1. NPRM and On-Line Public Forum

On February 5, 2002 the FAA published the Notice of Proposed Rulemaking (NPRM), "Certification of Aircraft and Airmen for the Operation of Light-Sport Aircraft" (67 FR 5368; Feb. 5, 2002), and requested comments by May 6, 2002. In addition, the

FAA held an on-line public forum from April 1, 2002, until April 19, 2002, during which time the FAA posed 15 questions on the Internet. For a description of the on-line public forum and a list of the 15 questions, see the FAA's announcement published in the Federal Register on March 19, 2002 (67 FR 12826; March 19, 2002). The NPRM and the announcement of the on-line public forum are in the public docket for this rulemaking.

I.2. Public Comment Period

The FAA received over 4,700 comments to the NPRM. Of those, 2,913 were in response to the publication of the NPRM in the Federal Register, and approximately 1,800 additional comments came through the on-line forum. To read the on-line forum comments, go to the electronic docket address given above in the section entitled "Availability of Rulemaking Documents" and view item number 2676 in Docket No. FAA–2001–11133. A detailed discussion of the public's comments and the FAA's responses are in "V. Section-by-Section Discussion of Comments and Changes Incorporated Into the Final Rule."

Most commenters expressed fundamental agreement with the FAA's intent in proposing the rule. While there were many comments containing specific criticisms of the proposed rule and suggestions for how the rule could be improved, few of the commenters expressed a complete disagreement with the FAA's goal of providing for the manufacture of safe and economical aircraft and to allow operation of these aircraft by the public in a safe manner. Some comments contained numerous specific suggestions and criticisms, yet were prefaced by a statement of support for the FAA's efforts to make aviation more accessible to the general public. It should be noted that, while not

substantial in number, several commenters expressed a fundamental disagreement with the FAA's proposed action, based upon a lack of confidence in the ultralight community. The commenters did not support these concerns with accompanying data.

I.3. Ex Parte Communications

The FAA worked closely with industry associations on this rulemaking in a number of ways. FAA staff conducted informational sessions with interested groups to determine how these rules, if adopted, should best be implemented. The FAA also assisted manufacturers in the development of consensus standards for light-sport aircraft. The Experimental Aircraft Association (EAA) and others met with the FAA repeatedly to urge the completion of this rulemaking as quickly as possible so as to meet the public need for authority to engage in activities permitted under this rule.

On occasion, FAA personnel met with interested organizations to discuss specific aspects of the NPRM and to determine, based on information received from these groups, how the NPRM should be modified. The issues discussed, however, were also set out in numerous comments to the public docket. These discussions, while of an ex parte nature, have helped to develop a final rule that is responsive to the comments. The revisions to the NPRM, as adopted in this final rule, respond to written and oral concerns raised by individuals and organizations. This final rule reflects the FAA's independent judgment as to the appropriate level of safety for the manufacture and operation of light-sport aircraft.

II. Purpose of This Rule

The FAA intends this rule to--

- Increase safety in the light-sport aircraft community by closing the gaps in existing regulations and by accommodating new advances in technology.
- Provide for the manufacture of light-sport aircraft that are safe for their intended operations.
- Allow operation of light-sport aircraft exceeding the limits of ultralight vehicles operated under 14 CFR part 103, with a passenger and for flight training, rental, and towing.
- Establish training and certification requirements for repairman (light-sport aircraft) to maintain and inspect light-sport aircraft.

The rule is designed to allow individuals to experience sport and recreational aviation in a manner that is safe for the intended operations, but not overly burdensome. By bringing these individuals under a new regulatory framework, the FAA believes this rule lays the groundwork for enhancing safety in the light-sport aircraft category.

This rule does not change existing aircraft certification or maintenance regulations for aircraft already issued an airworthiness certificate, such as a standard, primary, or special certificate (e.g., experimental amateur-built and experimental exhibition aircraft). However, as discussed in the section-by-section preamble discussion for §1.1, Definition of Light-Sport Aircraft, a sport pilot can operate an aircraft meeting the light-sport aircraft definition in §1.1, regardless of the airworthiness certificate issued. In addition, this rule does not change existing part 103 requirements.

A more detailed discussion and justification for the rule can be found in the preamble to the NPRM published in the Federal Register on February 5, 2002. On page 5370 of that Federal Register publication, is a section entitled "Effects of the Proposal on the Public and Industry" that gives answers to frequently asked questions (FAQs). These questions and answers have been updated on the FAA's website

(http://faa.gov/avr/afs/sportpilot and click on FAQs) to reflect the changes being adopted in this final rule.

III. General Discussion of Changes in the Final Rule

III.1. FAA Judgment and Discretion

As the following summary reflects, commenters provided a variety of suggestions for the rule. As discussed more completely in the section-by-section discussions that follow, the FAA carefully considered the comments. Besides the specific issues in the comments, the FAA weighed two factors in adopting, modifying, or rejecting the comments.

First, the FAA is making decisions in a new area for regulation. Although some experience exists in similar aircraft, the rule anticipates growth and change in the industry. There are areas where only time and experience will determine whether these regulatory provisions meet the FAA's expectations or require modification. There is room for debate and disagreement, and the FAA is prepared to make changes when appropriate. But in the FAA's judgment, these standards strike a balance in favor of safety while allowing freedom to operate.

Second, there are situations where a line must be drawn. For example, the case can be made that the maximum weight or speed could be somewhat higher or lower than what is being adopted. In these situations, the FAA is not establishing this rule with the intent of including or excluding specific aircraft. Instead, the FAA is trying to

objectively determine where the line should be drawn while considering the appropriate level of safety and the complexity of the operation.

III.2. Summary of Significant Issues Raised By Commenters

While most commenters expressed a desire to see some aspect of the proposed rule revised, they either agreed with the proposed regulation overall or agreed with the intent of the proposal. Most commenters believed the proposal would succeed if revised to address the issues they identified.

Significant issues raised by commenters are listed below, with reference to the corresponding proposal. These issues account for approximately 80 percent of the comments. They, and other comments on the NPRM, are discussed in detail under "V. Section-by-Section Discussion of Comments and Changes Incorporated Into the Final Rule."

- Towing: 1,298 comments
  - a. Prohibition of towing of hangliders and paragliders by ultralight pilots; part 103--691 comments
  - b. Prohibition of towing of hangliders and paragliders by light-sport aircraft; SFAR No. 89 section 73(b)(12)--607 comments
- Section 1.1 definition of "light-sport aircraft"--122 comments
- Maximum weight limits for light-sport aircraft; §1.1 definition of "light-sport aircraft" paragraph (1)--489 comments
- Maximum speed in level flight under maximum continuous power for light-sport aircraft; §1.1 definition of "light-sport aircraft" paragraph (2)--141 comments
- Maximum stall speed limits for light-sport aircraft; §1.1 definition of "light-sport aircraft" paragraph (4)--62 comments
- Fixed or ground-adjustable propellers and repositionable landing gear on light-sport aircraft; §1.1 definition of "light-sport aircraft" paragraphs (8) and (11)--116 comments

- Sport pilot certification (general comments on SFAR No. 89)--653 comments
- Maximum speed limit on student pilot operation of light-sport aircraft; SFAR No. 89 section 35(e)--57 comments
- Altitude limits on operation of light-sport aircraft; SFAR No. 89 section 73(b)(6)--55 comments
- Logbook endorsement requirement for each make and model of light-sport aircraft; SFAR No. 89 section 61--129 comments.
- Repairman certification; §65.107--159 comments
- Existing exemptions for two-seat ultralight vehicles; part 103--288 comments.
- Operation of ultralights that would be issued an experimental certificate; §21.191 (i)--116 comments
- Use of a U.S. driver's license to establish medical eligibility; SFAR 89, sections 15 and 111--230 comments

III.3. Security Concerns Related to Pilot Identification and Certification

One State's Department of Transportation's aeronautical division expressed concern that allowing persons with a driver's license as a sole form of identification to have access to airports and the airspace system would reduce pilot identification standards and would lead to reduced security. The commenter said that since the terrorist attacks of September 11, 2001, airport security identification, as well as pilot identification, are under greater scrutiny, and that higher standards must be established to prevent unauthorized access to airports and aircraft. The commenter went on to say that additional scrutiny provided by the process of obtaining a pilot certificate, an airman medical certificate, and passing an FAA practical test is a welcome safety enhancement at this time and must not be eliminated.

The FAA agrees that the additional scrutiny provided by the process of obtaining a pilot certificate, an airman medical certificate, and passing an FAA practical test

enhances safety. The FAA is not eliminating any of these certificate or testing requirements for holders of currently issued pilot certificates. All persons operating an aircraft are required to possess a pilot certificate and pass a practical test. All persons issued at least a recreational pilot certificate (except those operating gliders and balloons) are also required to possess an airman medical certificate. This rulemaking action will bring persons who were formerly operating as ultralight pilots into an existing certification system that will provide further scrutiny of these individuals. These ultralight pilots have not been required to have pilot certificates, possess airman medical certificates or driver's licenses, or been required to take practical tests. Therefore, they have not been subject to any level of government scrutiny. Only sport pilots, or those seeking to exercise sport pilot privileges will be afforded the opportunity to exercise certificate privileges with either an airman medical certificate or a U.S. driver's license. These persons will be required to possess a pilot certificate and pass a practical test.

Sport pilots, like all pilots, will have to hold and possess their sport or student pilot certificates at all times when operating light-sport aircraft. Recent FAA rulemaking requires all pilots to carry photo identification when exercising the privileges of a pilot certificate and to present it, if requested by the FAA, an authorized representative of the National Transportation Safety Board (NTSB), the Transportation Security Administration (TSA), or a law enforcement officer (67 FR 65858; Oct. 28, 2002). That rule will apply to all sport pilots.

Additionally, the FAA is creating FAA Form 8710-11 "Sport Pilot Certificate and/or Rating Application." Information from the applicant's U.S. driver's license or airman medical certificate will be recorded on the form.

As a result of this new regulatory action, an estimated 15,000 persons operating ultralight-like aircraft now will be required to hold pilot certificates. In addition, persons performing work on light-sport aircraft will be required to hold repairman (light-sport aircraft) certificates. According to new security procedures, their names will be entered into the FAA airman registry. In addition, all existing unregistered ultralight-like aircraft and two-place utralight training vehicles will now, as certificated aircraft, be required to display an "N" registration number. These numbers will also be entered into the FAA aircraft registry. This will enable the TSA to conduct any necessary security screening for certificated airmen and registered aircraft operating in the National Airspace System (NAS).

These new sport pilots will now be required to make themselves aware of safety- and security-related information contained in notices to airmen (NOTAMs). Currently, operators of ultralight vehicles are not required to review these NOTAMs; although those who receive voluntary training and participate in industry-provided ultralight programs are encouraged to access this information that is made available through their organizations.

III.4. SFAR No. 89

The FAA proposed most of the sport pilot certification requirements as a Special Federal Aviation Regulation (SFAR). After further consideration, the FAA decided not to use the SFAR, but to codify most of the requirements as new subparts J and K of part 61, and the remainder in the existing structure of part 61. The SFAR format is appropriate to regulate operations in a very narrow set of circumstances, to address a

temporary situation, or both. However, light-sport aircraft and their operation will be a significant segment of aviation and will require long-term regulatory oversight.

For the convenience of the user, a table showing how the sections of SFAR No. 89 were incorporated into part 61 is provided under "V. Section-by-Section Discussion of Comments and Changes Incorporated Into the Final Rule."

III.5.A. Comments on Ultralight Vehicles

The comments regarding ultralight vehicles were so significant, that, except for towing issues, a response is presented here, rather than in the section-by-section analysis below. A total of 1,586 comments were related to the operation of ultralights under the proposed rule. Of those, 1,298 comments addressed ultralight towing, specifically—

- The prohibition on towing hangliders and paragliders by ultralight pilots; part 103--691 comments; and
- The prohibition on towing hangliders and paragliders by light-sport aircraft; SFAR No. 89 section 73 (b)(12)--607 comments.

Towing issues are discussed in the section-by-section analysis for §61.69.

Four hundred and four comments addressed--(1) eliminating existing exemptions from part 103 (288 comments) and (2) reclassifying aircraft operating under exemptions to part 103 as light-sport aircraft under §21.191 (i) (116 comments). The commenters were nearly uniform in their opposition to eliminating existing exemptions from part 103 and codifying the exemptions into parts 21 and 61. The majority of commenters opposed including ultralights in the proposed regulation. Almost all commenters suggested

keeping ultralight regulation as it is, but incorporating existing exemptions from part 103 into that part.

Part 103 defines an ultralight vehicle and prescribes the operating rules for these vehicles. An ultralight vehicle is either an unpowered or powered vehicle with certain weight, speed, and other limits, as prescribed in §103.1. An ultralight vehicle can carry only one occupant and be used for sport and recreational purposes. The ultralight industry has established voluntary training programs and recommended maintenance practices. In an effort to encourage the use of these voluntary training programs, the FAA has granted exemptions to part 103 that allow—

- Training and proficiency flights to be conducted in a two-place ultralight vehicle operated by an ultralight flight instructor or ultralight student.
- Tandem training operations for hang gliders and powered paragliders conducted by an ultralight flight instructor or ultralight student.
- Towing operations in a single-seat and two-seat ultralight-like aircraft to facilitate operations and training in an ultralight vehicle that is a hang glider, glider, or paraglider.

The FAA has granted these exemptions to part 103 to gather data and to temporarily meet the training needs for persons operating ultralight vehicles and to resolve operational issues such as towing.

Commenters contended that eliminating existing training exemptions from part 103 would--

- Force unregistered two-place training ultralights to be classified as experimental light-sport aircraft, which would prevent their use for compensation or hire and increase the operating costs of these aircraft; and

- Place unregistered single-place and two-place ultralight-like aircraft and standard category aircraft under the same regulation.

Many of these commenters specifically referred to the United States Ultralight Association (USUA)'s comprehensive suggestion for a two-tiered approach for the regulation of ultralight vehicles and light-sport aircraft. USUA recommended that the FAA not only retain the proposed regulations for light-sport aircraft, but also adopt additional regulations codifying long-standing FAA exemptions for two-place ultralight training. One set of regulations (Tier I) would address single- and two-place ultralight-like aircraft. Single-place aircraft would be limited to 360 pounds empty weight (662 pounds maximum gross weight), 10 gallons maximum fuel capacity, 32 knots maximum power-off stall speed, and 72 knots V_H. Two-place aircraft under Tier I would be limited to 496 pounds empty weight (992 pounds maximum gross weight), 10 gallons maximum fuel capacity, 35 knots maximum power-off stall speed, and 75 knots V_H. Another set of regulations (Tier II) would address light-sport airplanes, using the weight and performance limits as proposed in the NPRM.

USUA's suggested regulations for ultralight vehicles would accommodate both "fat single- and two-place ultralight aircraft." USUA stated that this regulation could require registration of these aircraft. This action would enable the FAA to provide safety information to the owners and permit training for compensation, as permitted under current exemptions. USUA noted that these ultralight vehicles would have more restrictions than light-sport aircraft. For example, they would not be permitted to operate over congested areas, and would require prior air traffic control (ATC) permission for flight in controlled airspace.

USUA was unequivocal in its comments on the proposed rule, stating that the FAA must update ultralight regulations to better reflect the manner in which ultralights are currently flown in the United States. USUA stated that two-place ultralights have become heavier since part 103 was established in 1980, and that two-seat ultralight training has become common as a result of the training exemptions. The USUA stated that its suggested regulatory approach would include two-seat and single-seat unregistered ultralight-like aircraft, allowing for a permanent solution to the ongoing problem of how to regulate ultralights that do not comply with part 103.

USUA clearly stated that ultralight pilots want the part 103 training exemption provisions used by USUA and other ultralight associations incorporated in the regulations. USUA noted that its recommendation to expand the parameters of ultralight vehicles currently regulated by part 103 has an international precedent in Europe. USUA also noted that the Federation Aeronautique Internationale (FAI), the world governing body of air sports activities, has defined microlights as weighing up to 450 kg (992 pounds) gross weight, with a stall speed no greater than 65 kilometers per hour (kph) (35 knots), and the Joint Aviation Authorities (JAA) have accepted this definition.

Regarding airspeed, the rule allows a sport pilot to fly only a light-sport aircraft that has a maximum airspeed in level flight with maximum continuous power (V_H) of 87 knots CAS or less, unless he or she receives additional training and a one-time endorsement to operate a light-sport aircraft with a V_H up to 120 knots CAS.

On the weight criterion, the FAA proposed a weight limit of 1,232 pounds, which is increased to 1,320 pounds in the final rule for aircraft not intended for operation on water. This weight is maximum gross takeoff weight and is essentially equivalent to the

empty weight suggested by USUA. The gross takeoff weight includes the added weight of two passengers, ten or more gallons of fuel, one or more pieces of luggage, and a ballistic parachute carried on an aircraft. This weight allows the aircraft to be constructed with stronger materials, to use stronger landing gear, and to use a heavier and more powerful four-stroke engine. All of these items were specifically requested by industry and other commenters, most often in the interest of safety. The consensus standards will address a minimum weight for design standards for a single-place light-sport aircraft.

USUA's recommendation was influential on the ultralight community. Most commenters addressing the subject of ultralights simply recommended that the FAA adopt the USUA's two-tiered approach; however, many of these commenters did not supply any analysis to support their recommendation.

Concerning the aircraft certification component of the USUA's proposed two-tiered concept, the FAA believes that the use of consensus standards is appropriate for aircraft that exceed the parameters of ultralight vehicles as specified in part 103, yet do not exceed the parameters of a light-sport aircraft. The FAA believes that the operating characteristics of these aircraft necessitate their certification. However, their characteristics and the operations that they will be used to conduct do not warrant the more extensive certification standards applied to primary or standard category aircraft. The FAA believes that the use of consensus standards provides a level of safety appropriate for the operation of the aircraft.

Concerning the regulation of airmen and flight operations, FAA does not completely agree with USUA's proposal. The FAA does not agree that the part 103 operating environment is appropriate for the larger, heavier, higher performance aircraft

USUA's proposal identifies as "Tier 1– Ultralight Aircraft." The FAA acknowledges the safety benefits for aircraft design and manufacturing and airman training that have resulted from the exemption process; however, the FAA believes that the operational characteristics of these aircraft are of such a degree that a more comprehensive regulatory structure should be applicable to their operation.

Like USUA, most commenters who are ultralight pilots stated that ultralights fundamentally differ from standard category aircraft, and that the FAA should continue to regulate ultralights, regardless of their size, under part 103. For two reasons, the FAA disagrees with the suggestion that all ultralight-like aircraft should be regulated under part 103, either with incorporations of the existing training exemptions or with a continuation of the current exemptions.

First, that approach would not provide the solution recommended specifically by the Aviation Rulemaking Advisory Committee (ARAC). USUA chaired the ARAC working group that addressed the regulation of ultralight vehicles. That working group of the committee was made up of members of the ultralight industry and produced a comprehensive recommendation to the FAA regarding ultralight regulation. The FAA notes that the ARAC recommendation did not include USUA's proposal to expand part 103 to include larger aircraft. The ARAC recommendation did, however, include the USUA's position as a dissenting opinion. ARAC's recommendation to focus on appropriate training for sport pilots served as the basis for the FAA's proposed rule. ARAC's recommendation did not propose either the continuation of existing part 103 exemptions, or the codification of those exemptions into part 103. See the discussion in

the preamble of the NPRM, "Section V. The Aviation Rulemaking Advisory Committee (ARAC)."

Second, the FAA issued exemptions to temporarily resolve training issues and operational issues such as towing. In the preamble to the rule establishing part 103 (47 FR 38776; Sept. 2, 1982), the FAA explained its rationale for permitting no more than a single occupant in an ultralight vehicle. The FAA noted that the general public might incorrectly assume that an ultralight operator possesses certain minimum qualifications and has met specific requirements resulting in the issuance of a pilot certificate. The public would be unaware of the risks that an ultralight pilot assumes with the operation of an uncertificated ultralight vehicle. The FAA still believes that it would be inappropriate to permit the operation of larger and more capable ultralight-like aircraft without the benefits afforded by the certification of these aircraft and their pilots. In addition, extending current training exemptions on a long-term basis would be an inappropriate use of the exemption process. It would not allow the FAA to address the many other regulatory changes contemplated in this rulemaking.

This rule is intended to provide a comprehensive regulatory approach that extends beyond the ultralight community. A significant purpose of the rule is to certificate those two-seat ultralight-like aircraft previously operated under part 103 training exemptions and those two-seat and single-seat unregistered ultralight-like aircraft operating outside of the regulations.

Several commenters noted that the speed differential between ultralights and standard category aircraft makes their operation in the same airspace dangerous. However, USUA recommended a continuation of the current practice allowed under part

103, which permits flights in controlled airspace (Class A, B, C, D, and surface-based Class E) with prior ATC permission. These flights may occur at any altitude, with no equipment requirements for communication, navigation, or identification, and with no required pilot training.

The FAA has considered the comments on the issue of speed differentials and operations in controlled airspace. As adopted, a sport pilot operating a light-sport aircraft will be prohibited from operating in Class A airspace and from operating above 10,000 feet mean sea level (MSL). A sport pilot is authorized to operate in Class G and E airspace. With training on airspace requirements and communications equivalent to the training requirements for a private pilot, and a one-time endorsement from an authorized instructor, a sport pilot can operate in Class B, C, and D airspace and to, from, through, or at an airport having an operational control tower. A sport pilot can only do so, however, if the light-sport aircraft he or she is operating is properly equipped and authorized for that operation. The FAA is also providing that, like a student pilot, a sport pilot will not be authorized to take off or land at any of the airports listed in part 91, appendix D, section 4. For a complete discussion, see "V.5.A.v. Changes to Airspace Restrictions" and the discussion of §91.131 below.

The FAA notes that many of USUA's suggestions were incorporated in the FAA's proposal. The FAA agreed with the recommendation that it not permit flight at night. However, the rule will permit special light-sport aircraft to fly over cities. The use of light-sport aircraft engines that meet consensus standards for powerplant performance and reliability will make any prohibition of flight over cities unnecessary. Experimental light-sport aircraft (the existing fleet of ultralight-like aircraft) will continue to be

restricted to flight over uncongested areas. The rule provides more privileges than the two-tier system suggested by USUA. The rule allows the carriage of a passenger for purposes other than flight training, which has never been allowed under part 103 or the part 103 training exemptions. The rule establishes new categories of airman ratings and two new classes of aircraft—(1) weight-shift-control, and (2) powered parachute. The rule allows a special light-sport aircraft owner to accept compensation for the use of the aircraft for flight training or towing a glider or unpowered ultralight vehicle. It also allows a light-sport aircraft owner to accept compensation for rental of the aircraft. Neither of these privileges had been allowed under the part 103 exemptions. The rule establishes the requirements for repairmen (light-sport aircraft) to maintain and inspect the newly certificated experimental and special light-sport aircraft. Finally, the final rule addresses the concern that it will limit or prevent the use of currently unregistered ultralight-like aircraft. The FAA revised the final rule to assist those who have been operating two-seat ultralight-like aircraft under the part 103 training exemptions. The rule provides a 5-year period during which persons may continue to operate their two-place ultralight-like aircraft and receive compensation for flight training, provided those aircraft are certificated as experimental light-sport aircraft. The FAA expects that in the long term, instructors operating light-sport aircraft previously classified as two-seat ultralight-like aircraft will provide instruction at a lower cost and with greater safety.

In some cases, the rule is more restrictive than USUA's recommendation, but the FAA is using a building-block approach in extending privileges to sport pilots. The rule permits a sport pilot to obtain additional training to permit the exercise of additional privileges at a later time. In the proposed rule, the FAA stated that there would be many

safety benefits to certificating sport pilots, light-sport aircraft, and the repairman who would maintain these aircraft that would not be realized under the USUA proposal. For a complete discussion of these safety benefits and alternatives refer to the discussion in the preamble of the NPRM, "IV. Background--B. The FAA's Reason for This Proposal."

III.5.B. Future Rulemaking on Ultralight Vehicles

The NPRM did not address, nor does the final rule address, the use of hangliders, paragliders and powered paragliders in tandem operations and training. There is a need to address these issues, but the FAA did not examine questions in this area for this rule. Rather than delay this rule to include these issues, the FAA intends to initiate a separate rulemaking action. Until that can be completed, the FAA intends to maintain the status quo for these operations by continuing or reissuing training exemptions as necessary.

IV. Comparative Tables

The following tables provide a quick comparison of regulations governing light-sport aircraft and other aircraft.

Abbreviations Used In Tables

A&P—Airframe and powerplant
CFI—Certificated flight instructor
CTD—Computer Testing Designee
DPE—Designated Pilot Examiner
ELSA--Experimental light-sport aircraft
EW—Empty weight
IFR—Instrument flight rules
LS-I—Light-sport—Inspection
LS-M—Light-sport—Maintenance
M/M—Make and model

MTOW—Maximum takeoff weight
PIC—Pilot in command
PMA—Parts Manufacturer Approval
SLSA—Special light-sport aircraft
SP—Sport pilot
STC—Supplemental Type Certificate
TC—Type Certificate
TSO—Technical Standard Order
VFR—Visual flight rules

Light-Sport Aircraft Maintenance and Certification Requirements

	Ultralights, part 103--254 pounds EW	ELSA under §21.191 (i)--1,320 pounds MTOW	SLSA under §21.190--1,320 pounds MTOW	Amateur-built under §21.191 (g)--No MTOW	Primary aircraft under §21.24--2,700 pounds MTOW	Standard aircraft under §21.21--No MTOW
Regist-ration "N" number	None	Yes	Yes	Yes	Yes	Yes
Airworth-iness Certificate	None	Yes	Yes	Yes	Yes	Yes
Operating privileges and limits (may be restricted by pilot certificate or aircraft operating limitations)	• Day • VFR • Uncong-ested areas only • Class A, B, C, D, and surface-based E airspace; ATC permission required (no equipment required) • Class E and G airspace • No passengers • Flight training (under part 103 two-place training exemption) • Towing (under part 103 towing exemption)	• Day/night • VFR/IFR • Congested and uncongested areas • Class A, B, C, D, E and G airspace; (with part 91 equipment) • One passenger • Limited flight training (5 years under §91.319 (e)(2)) • Towing existing fleet (under §91.319 (e)(1))	• Day/night • VFR/IFR • Congested and uncongested areas • Class A, B, C, D, E and G airspace; (with part 91 equipment) • One passenger • Flight training and rental • Towing	• Day/night • VFR/IFR • Congested and uncongested areas • Class A, B, C, D, E and G airspace; (with part 91 equipment)	• Day/night • VFR/IFR • Congested and uncongested areas • Class A, B, C, D, E and G airspace; (with part 91 equipment) • Flight training and rental • Towing	• Day/night • VFR/IFR • Congested and uncongested areas • Class A, B, C, D, E and G airspace; (with part 91 equipment) • Flight training and rental • Com-mercial operations

	Ultralights, part 103--254 pounds EW	ELSA under §21.191 (i)--1,320 pounds MTOW	SLSA under §21.190--1,320 pounds MTOW	Amateur-built under §21.191 (g)--No MTOW	Primary aircraft under §21.24--2,700 pounds MTOW	Standard aircraft under §21.21--No MTOW
Mainten-ance	None	Owner-maintained	Maintenance-- • Repairman (LS-M) • Mechanic (A&P) • Part 145 Repair station Preventive maintenance-- • Sport pilot or higher	Owner-maintained	Maintenance-- • Mechanic (A & P) • Part 145 Repair station Preventive maintenance-- • Recreation-al pilot or higher	Maintenance -- • Mechanic (A & P) • Part 145 Repair station Preventive maintenance – • Recreation-al pilot or higher
Inspect-ions	None (1)	Annual con-dition-- • Repairman LS –I and LS-M • Mechanic (A & P) • Part 145 Repair station 100-hour condition (2)-- • Repairman LS-M • Mechanic (A & P) • Part 145 Repair station	Annual condition-- • Repairman LS - M • Mechanic (A & P) • Part 145 Repair station 100-hour condition (3)-- • Repairman LS-M • Mechanic (A & P) • Part 145 Repair station	Annual condition-- • Repairman (experimental aircraft builder) • Mechanic (A & P) • Part 145 repair station	Annual condition-- • Mechanic (A & P) • Part 145 repair station 100-hour condition (4)-- • Mechanic (A & P) • Part 145 Repair station	Annual condition-- • Mechanic (A & P) • Part 145 Repair station 100-hour condition (4)-- • Mechanic (A & P) • Part 145 repair station
Airworth-iness Directives	None	None issued against ELSA	Yes – Type certificated TC/STC/PMA/ TSO-approved products, if installed	None issued against amateur-built aircraft	Yes	Yes
Safety Directives	None	None	Yes	None	None	None
FAA Type or Product-ion Certificate	No	No	No	No	Yes	Yes
Consensus Standard	No	No (5)	Yes	No	No	No

(1) For two-place ultralight training vehicles operating under an exemption and registered with an FAA-recognized ultralight organization – 100-hour condition inspection done by ultralight instructor registered with an FAA-recognized ultralight organization.
(2) Applies to training aircraft used for compensation until January 31, 2010 , and tow aircraft used for compensation
(3) Applies to aircraft used for flight training or towing for compensation
(4) Applies to aircraft used for flight instruction for hire – §91.409
(5) ELSA – Kit-built (§21.191(i)(2)(ii)) or aircraft that have been previously issued a special airworthiness certificate in the light-sport category (§21.191 (i)(3)) meet consensus standards

Aircraft Authorized That May Be Operated By Pilots

	Part 103 Ultralight Weight: (254 EW) (496 EW–2-place trainer operating under part 103 exemption) Aircraft Certification: None - Ultralight Vehicle	Light-Sport Aircraft Weight: (1,320/1,430 Floats and amphibious MTOW) Aircraft Certification: ELSA, SLSA, Limited, Restricted, Primary, Standard	Small Aircraft Weight: (< 12, 500 MTOW) Aircraft Certification: ELSA, SLSA, Limited, Restricted, Primary, Standard
Ultralight pilot Ultralight instructor	Yes	No	No
Sport Pilot	Yes	Yes	Yes, if aircraft meets the definition of "light-sport aircraft" in §1.1
Recreational Pilot	Yes	Yes	Yes – 4-place/2 passengers; 180 horsepower, single-engine, non-complex rotorcraft/airplane
Private Pilot	Yes	Yes	Yes
CFI – Sport Pilot	Yes	Yes	Yes, if aircraft meets the definition of "light-sport aircraft" in §1.1
CFI	Yes	Yes	Yes

Pilot Certification Eligibility, Training and Testing Requirements

	Medical Eligibility	Training Requirements	Testing Requirements	Add-On Privileges or Ratings
Ultralight Pilot	None	None	None	No
Ultralight Instructor	None	None	None	None
Sport Pilot	Current and valid U.S. driver's license unless §61.303(b) applies Or Valid medical certificate issued under part 67 Gliders and balloons—Airman medical certificate not required	Airplane, Gyro, weight-shift-control, and airships 20 Hours – Total 15 Hours – Flight training 5 Hours – Solo 2 Hours – Dual Cross Country 1 Solo Cross Country 3 Hours – Prep (Registered ultralight pilots with FAA-recognized ultralight organizations may be given credit until January 31, 2007 Other requirements for powered parachutes, gliders, balloons	CFI or CFI-SP Recommendation – Knowledge test Practical test	Cat/Class Privileges– Training – CFI or CFI-SP Recommendation – CFI or CFI-SP Proficiency Check –Different CFI or CFI-SP Endorsement/Form 8710-11 Make and model (to operate aircraft within a set of aircraft) Class B, C, D– V_H> 87 Knots CAS-- Training –CFI or CFI-SP Endorsement - CFI or CFI-SP
Recreational Pilot	Third-class medical certificate issued under part 67 Except for gliders and balloons - Medical eligibility not required	Airplane and Rotorcraft 30 Hours – Total 15 Hours – Flight training 3 Hours – Solo 2 Hours – Flight training cross country-(limited 50 NM range from	CFI Recommendation - Knowledge test Practical test	Cat/Class Rating – Training – CFI Recommendation – CFI Practical test - Cat/class rating Issued

	Medical Eligibility	Training Requirements	Testing Requirements	Add-On Privileges or Ratings
		departure airport, permitted with additional training (see §61.101 (c)) 3 Hours – Prep		(Make and model – training recommended) <u>Class B, C, D</u> Training – CFI Endorsement - CFI
Private Pilot	Third-class medical issued under part 67 Except for gliders and balloons -- Medical eligibility not required	For airplanes: 40 Hours – Total 20 Hours – Flight training 10 Hours – Solo 3 Hours – Flight training cross country 5 Hours – Solo cross country 3 Hours – Prep 3 Hours—Night 3 Hours—Instrument training	CFI Recommendation – Knowledge test – Practical Test –	<u>Cat/Class Rating –</u> Training – CFI Recommendation – CFI Practical Test
Commercial Pilot	Second-class Medical certificate Issued under part 67 Except for gliders and balloons -- Medical eligibility not required	For airplanes: 250 Hours – Total Additional flight training requirements for each category and class	CFI Recommendation – Knowledge test – Practical Test –	<u>Cat/Class Rating –</u> Training – CFI Recommendation – CFI Practical Test

	Medical Eligibility	Training Requirements	Testing Requirements	Add-On Privileges or Ratings
CFI – Sport Pilot	Current and valid U.S. driver's license unless §61.303(b) applies Or Valid airman medical certificate issued under part 67---Only required when acting as pilot in command Gliders and balloons—Airman medical certificate not required	150 Hours – Total Additional flight training requirements for each category and class Sport Pilot certificate or higher Category and class privileges or rating	CFI Recommendation – Knowledge test – Practical test –	<u>Cat/Class Privilege–</u> Training –CFI or CFI-SP Recommendation – CFI or CFI-SP Proficiency check – Different -CFI or CFI-SP Endorsement/Form 8710-11 <u>Make and model</u> <u>5 hours PIC</u> Endorsements—Must have those endorsements required to exercise pilot privileges in the aircraft
CFI	Valid airman medical certificate issued under part 67--Only required when acting as pilot in command Gliders and balloons—Airman medical certificate not required	ATP or Commercial certificate (with Instrument Rating if appropriate) Category/Class Rating Additional flight training requirements for each category and class	CFI Recommendation – Knowledge test – Practical test –	<u>Cat/Class Rating –</u> Training – CFI Recommendation – CFI Practical Test

Airman Certification – Operating Privileges and Limitations

	Ultralight Pilot	Sport Pilot	Recreational Pilot	Private Pilot	CFI – Sport Pilot	CFI
Day	Yes	Yes	Yes	Yes	Yes	Yes
Night	No	No	No	Yes	No if exercising sport or recreational pilot privileges	Yes
VFR—visibility 3 miles or more	Yes	Yes	Yes	Yes	Yes	Yes
VFR—visibility less than 3 miles	Yes	No	No	Yes	No if exercising sport or recreational pilot privileges	Yes
IFR	No	No	No	Yes with instrument rating	No without an instrument rating	Yes with instrument rating
Passenger carriage	No	Yes – One Passenger	Yes – One Passenger	Yes	Yes	Yes
Compensation	No	No	No	Limited	Limited if exercising sport or recreational pilot privileges; Yes otherwise	Yes
Class A airspace	Yes with ATC authorization	No	No	Yes with instrument rating	No if exercising sport or recreational pilot privileges; Yes otherwise	Yes with instrument rating
Class B, C, D airspace	Yes with ATC authorization	Yes with training	Yes with training	Yes	Yes (additional training may be required)	Yes
Class E, G airspace	Yes	Yes	Yes	Yes	Yes	Yes

	Ultralight Pilot	Sport Pilot	Recreational Pilot	Private Pilot	CFI – Sport Pilot	CFI
> 10, 000 MSL	Yes	No	No	Yes	No if exercising sport or recreational pilot privileges. Yes otherwise	Yes
< 10, 000 MSL	Yes	Yes	Yes	Yes	Yes	Yes
Cross country	Yes	Yes	Yes with training	Yes	Yes (for recreational pilot additional training is required)	Yes
> 120 knots CAS	No	No	Yes	Yes	No if exercising sport pilot privileges. Yes otherwise	Yes
< 87 knots CAS	Yes	Yes	Yes	Yes	Yes	Yes
> 87 knots CAS	Yes	Yes with training	Yes	Yes	Yes (additional training may be required)	Yes
Airman Certification—Privileges for Which Additional Training Is Required						
	Ultralight Pilot	Sport Pilot	Recreational Pilot	Private Pilot	CFI – Sport Pilot	CFI
Added Cat/Class Privilege	N/A	Yes	N/A	N/A	N/A	N/A
Make and Model Privilege	N/A	Yes	N/A	N/A	N/A	N/A
Added Cat/Class Rating	N/A	N/A	Yes	Yes	N/A	Yes
Class B, C, and D	No	Yes	Yes	No	Yes if exercising sport or recreational pilot privileges	No

	Ultralight Pilot	Sport Pilot	Recreational Pilot	Private Pilot	CFI – Sport Pilot	CFI
> 87 knots CAS	No	Yes	No	No	Yes if exercising sport or recreational pilot privileges	No
Cross country	No	No	Yes	No	Yes if exercising recreational pilot privileges	No
IFR	N/A	N/A	N/A	Yes	N/A	Yes
Tail wheel	No	Yes	Yes	Yes	Yes	Yes
High-Performance	N/A	N/A	N/A	Yes	N/A	Yes
Complex	No	N/A	Yes	Yes	N/A	Yes
High Altitude	No	N/A	N/A	Yes	N/A	Yes
Type	N/A	N/A	N/A	Yes	N/A	Yes
Towing	No (additional training required if operating under Part 103 exemption)	N/A	N/A	Yes (additional experience required)	N/A	N/A
Sales demo	No	No (N/A if aircraft salesman)	No (N/A if aircraft salesman)	Yes (additional experience required)	N/A	N/A
Agricultural (non-commercial)	N/A	No	No	No	N/A	N/A
Charitable Flights	N/A	N/A	N/A	Yes (additional experience required)	N/A	N/A
Provide Flight Training	No (additional training required if operating under part 103 exemption)	N/A	N/A	N/A	Yes	Yes

V. Section–by-Section Discussion of Comments and Changes Incorporated Into Final Rule

The following is a summary of comments for each section of rule text, with a description of any changes the FAA is making to the final rule. Because of the large number of comments received on the proposed rule, it is not possible to discuss each commenter's remarks individually. Some of the changes are being made as the result of public comments, and others are being made after further review within the FAA. As discussed previously in this preamble, the requirements proposed as SFAR No. 89 are being moved into part 61, and a conversion table is included for the reader's convenience in the discussion of comments to part 61. All comments to proposed SFAR No. 89 therefore are located under the discussion of changes to part 61.

V.1. Part 1—Definitions And Abbreviations

Section 1.1 General definitions

Definition of "consensus standard"

The FAA received numerous comments on the topic of consensus standards. Most commenters expressed support for the concept of airworthiness standards developed by a consensus of industry and the FAA. However, some commenters expressed concern that they could not review any actual consensus standards, as the standards were nonexistent at the time of the NPRM comment period. These standards would be developed either concurrent with, or subsequent to, the adoption of the rule. The FAA understands the commenters' concern, but notes that the consensus standards development process will include adequate opportunity for public participation and

comment. The FAA further notes that the consensus standards process will not replace, but rather will supplement, existing design, manufacturing, and airworthiness certification procedures, and that alternative consensus standards may be found acceptable.

Since the publication of the proposal, a number of aviation organizations have chosen to work with ASTM International to develop light-sport aircraft consensus standards. ASTM International has established Committee F37 – Light-Sport Aircraft for this standards development task. Anyone who desires to comment on the consensus standards may participate in their development by ASTM International. Also, when an acceptable standard is developed, the FAA will publish a Notice of Availability in the Federal Register. This notification will include a statement that the FAA has found the standard acceptable for certification of the specified aircraft under the provisions of this rule. This statement will assert that:

- The FAA has participated in the development process for this consensus standard;
- The FAA has reviewed the standard for compliance with the regulatory requirements of the rule; and
- Any light-sport aircraft designed, manufactured, and operated in accordance with that consensus standard provides the public with an appropriate level of safety.

If comments from the public are received as a result of the Notice of Availability, the FAA will address them during its recurring review of the consensus standards and participation in the consensus standards revision process. Refer to the comment below from NTSB concerning FAA participation in the revision of consensus standards.

Several commenters recommended delaying the effective date of the rule until the consensus standards were issued. The FAA recognizes that consensus standards may not

be completed by the effective date of the rule, and has therefore revised the rule to permit existing two-seat ultralights to be used for many of the operations that are intended for aircraft manufactured to a consensus standard.

Some commenters were concerned that the consensus standards process would only represent viewpoints of particular manufacturers, and would not assure adequate representation of small manufacturers or aircraft operators. Other commenters believed the consensus standards should not be set only by the aircraft manufacturers and ASTM International. Another proposed that a committee of pilots, aircraft owners, manufacturers, standards organizations, and regulators should formulate the consensus standards. The FAA agrees that broad representation of all affected parties is necessary for the FAA to accept a consensus standard. Any and all interested parties can participate in the development of consensus standards. In fact, OMB Circular A-119 requires balanced participation and voting. The FAA believes that the ASTM process balances the representation of product manufacturers, product users, and the interests of other affected persons. The FAA notes that the current ASTM consensus standard committees are comprised of individuals representing all the perspectives recommended by the commenter. The FAA believes that the ASTM standards development procedures satisfy the other attributes (openness, due process, and appeals process) set forth in OMB Circular A-119 for an acceptable consensus standard body. The OMB Circular permits FAA to make this determination. If necessary, the FAA will participate with other standards development organizations in the development of alternative consensus standards. The FAA would refer to paragraphs 2, 6.e. and f. of OMB Circular A-119 in making this determination. These paragraphs describe the goals of the government in

using consensus standards and the considerations the FAA should make when considering the use of a consensus standard.

The FAA received a comment from the NTSB saying that the NPRM lacked sufficient information for it to determine to what extent the FAA will be involved in the review of consensus standards after they have been issued. As stated in the NPRM, the FAA will participate in the development of and any revision to the consensus standards, in accordance with OMB Circular A-119. In the preamble of the NPRM, the FAA stated that it expected a suitable consensus standard to be reviewed every two years. As a member of the consensus standard body, the FAA can call for revisions to the consensus standard when the agency determines such revisions are necessary. The FAA, as all other participants, may propose changes to amend the consensus standard to address new technology, applications, or deficiencies. As part of the FAA's participation in the consensus standards development, the FAA will review proposed consensus standards prior to the issuance of a Notice of Availability. The FAA will not issue a Notice of Availability for a consensus standard it considers unacceptable. The FAA will notify the public, through a Notice of Availability, of its acceptance of a consensus standard or any revision to a consensus standard. The FAA will continue to participate in revising the consensus standard at an interval no longer than every 2 years. The FAA will respond to comments on the consensus standards in this revision process.

One commenter proposed that the term "industry developed consensus airworthiness standard" be changed to "industry developed airworthiness standard." The FAA prefers that the word "consensus" be included to emphasize that these standards are developed in accordance OMB A-119. Use of the term "consensus" will also distinguish

consensus standards from airworthiness standards that are developed by the FAA through the normal rulemaking process and are specifically contained in other parts of 14 CFR subchapter C. Within the definition, the FAA is removing the modifier "airworthiness" from the phrase "industry developed consensus airworthiness standard." This change is to permit the consensus standards body to develop light-sport aircraft and sport pilot safety standards that may encompass more standards than those affecting airworthiness.

A commenter stated that FAA involvement in developing the criteria for certificating light-sport aircraft should be minimal to keep aircraft design and manufacturing costs down. As noted above, the FAA has chosen to use consensus standards developed in accordance with the criteria in OMB Circular A-119 for these aircraft. The use of the consensus standard process assures government and industry discussion and agreement on appropriate standards for the required level of safety. The FAA believes that the consensus standards process will minimize costs while meeting the level of safety appropriate for these aircraft.

Several commenters expressed concern that the consensus standards would result in excessive increases to the price of light-sport aircraft. A commenter expressed concern over insurance costs for light-sport aircraft, and expressed the opinion that general aviation revitalization depends on the availability of factory-built aircraft priced under $40,000. The FAA has discussed the certification process for these aircraft in both the NPRM and this final rule. How the public will interact with insurance companies and legal professionals, as well as the pricing of these aircraft are matters of commercial interest. The FAA, however, believes that this rule may significantly decrease the cost of

purchasing and operating light-sport aircraft. See the full economic analysis in the public docket for this rulemaking.

Consensus Standards Topics

In the notice, the FAA proposed that consensus standards address airworthiness certification and continued airworthiness. In the NPRM, the proposed definition for consensus standard specified that the standard address "… aircraft design and performance, quality assurance system requirements, production acceptance test specifications, and continued operational safety monitoring system characteristics." Based on comments received from the public on the proposed rule and as a result of FAA review of the NPRM, the FAA has determined that the consensus standard definition should be expanded to include additional topics. These additional topics are related to aircraft maintenance and operations, or subjects that should be more appropriately addressed as separate topics rather than as subsections within the four topics listed in the FAA's proposed definition.

In view of this consideration, the consensus standards definition is being revised to specifically require the consensus standards to address topics other than the four specified in the proposed rule. The revised definition sets forth a broader approach. It generally specifies that the consensus standards must address the three subjects of aircraft design, production and airworthiness. Additional specific topics the consensus standards must address are set forth in the revised definition. Consensus standards may address additional topics, as determined by the consensus standards body. As a result of FAA's review of questions from commenters to the NPRM, and as a result of FAA's

participation in the ongoing development of consensus standards, the FAA has determined that the consensus standards must address the following topics so that appropriate information and procedures are provided for manufacturers and operators of light-sport aircraft.

Design and Performance: The consensus standard includes a design and performance section, which should address the following:

(1) Methodology for determining parameters associated with the definition of light-sport aircraft. The consensus standard should provide methodologies for determining definition parameters such as: maximum takeoff weight; maximum airspeed in level flight with maximum continuous power (V_H); maximum never-exceed speed (V_{NE}) for gliders; maximum stalling speed or minimum steady flight speed without the use of lift-enhancing devices (V_{S1}).

(2) Methodology for distinguishing different make and model aircraft from the same manufacturer and for updating and recording information that may change during the course of the production of the make and model aircraft.

Required Equipment: The FAA did not expressly propose to require the consensus standard to address or include minimum equipment in the NPRM. However, the FAA notes that certain aircraft equipment is required by part 91 to operate in the NAS. The FAA notes that, because the requirements of §91.205 do not apply to these aircraft, the FAA has revised the definition of consensus standard to specifically indicate

that a consensus standard must address required equipment. The design and performance portion of the consensus standard, therefore, should indicate standards for performance for equipment that is required for specific authorized operations. The FAA recognizes that the operator of a light-sport aircraft may have a variety of privileges based on differing certificate privileges or individual logbook endorsements. However, a person may not exercise those privileges, unless the aircraft is appropriately equipped.

Quality Assurance: Commenters recommended that instructors functioning also as dealers, be allowed to continue to assemble weight-shift-control and powered parachutes kits for their clients. They did not believe that this privilege should be limited to the factory (manufacturer). The commenters also expressed an interest in assembling, demonstrating, and selling the aircraft. They cite that they were already providing these distributor-type services. They further stated that costs to ship a completed aircraft are much more than shipping a kit-built aircraft that can be assembled at the final destination. The FAA agrees that persons other than the manufacturer may complete the assembly of light-sport aircraft subject to this rule. This may be permitted provided the consensus standard addresses how the manufacturer will control these outside entities under its quality assurance system. The consensus standard should address how the manufacturer maintains oversight of the persons and the processes of assembly, and, if the aircraft is delivered to a dealer for assembly, procedures for the dealer to issue a statement of compliance on behalf of the manufacturer. The manufacturer that issues the statement of compliance is responsible for the quality of the end product, and this includes material supplied by, or assembly work performed by, a person or other entity.

In the proposed definition, the term "quality assurance system requirements" has been revised to read "manufacturer quality assurance systems" to emphasize that the aircraft manufacturer has the overall responsibility to assure that safe aircraft are delivered to its customers.

Production Acceptance Tests: The production acceptance tests should include all tests needed to prove the aircraft's reliability and functionality. These tests may be accomplished at different stages of assembly and at final completion. The tests verify the aircraft's proper function on the ground and in the air, as required by §21.190 (c)(7). The consensus standard should include tests that demonstrate that the aircraft is in a condition for safe operation. As a minimum, these ground and flight tests show that the aircraft--

- Has been assembled in accordance with the manufacturer's criteria and specifications.
- Can be operated normally throughout all ranges of capability, as defined in the consensus standard.

In the proposed definition, the term "production acceptance test specifications" has been revised to read "production acceptance test procedures." The FAA believes that use of the word "specifications" is not consistent with performance-based standards, which are preferable to prescriptive standards for aircraft built to consensus standards.

Aircraft Operating Instructions: In the proposal, the FAA stated that the consensus standards must address aircraft design and performance. The proposal did not include a specific requirement for the consensus standards to address aircraft operating instructions. Proposed §21.186, however, required the manufacturer to identify, and the applicant to present, the applicable "Pilot Operating Handbook."

In the final rule the FAA is revising the consensus standard definition to specifically address aircraft operating instructions. Although the FAA believed that the proposed consensus standards definition would require aircraft operating instructions to be addressed in the standards for aircraft design and performance, the FAA has determined that standards for aircraft operating instructions should be developed specifically as part of the consensus standards process.

The FAA also notes that rather than using the term "Pilot Operating Handbook" in the definition of consensus standards it is using the term "Aircraft Operating Instructions." The term "Pilot Operating Handbook" is normally associated with type-certificated general aviation aircraft and may include information approved by the FAA. "Aircraft Operating Instructions," however, will not require FAA approval. "Aircraft Operating Instructions" provide methods and procedures to safely operate the aircraft. Additionally, the aircraft operating instructions specify those parameters (e.g. weight, stall speed, maximum speed) that show the aircraft make and model meets the light-sport aircraft definition.

Maintenance and Inspection Procedures: The proposal did not include a specific requirement for the consensus standards to address maintenance and inspection procedures. Proposed §21.186, however, required the manufacturer to identify, and the applicant to present, the applicable maintenance and inspection procedures. In the final rule the FAA is revising the consensus standard definition to specifically address maintenance and inspection procedures. The FAA has determined that standards for

maintenance and inspection procedures should be developed specifically as part of the consensus standards process.

Through the consensus standards process the rule requires the development of maintenance and inspection procedures for the entire aircraft. This includes the engine, propeller, and accessories, such as ballistic parachutes, floats, and skis. These maintenance and inspection procedures can be developed solely by the airframe manufacturer or with other manufacturers that supply engines, propellers, or other products for the aircraft. The purpose of requiring maintenance and inspection procedures is to ensure the continued airworthiness of the aircraft throughout its useful life. Maintenance and inspection procedures should contain at least two parts, one part for inspection and one for maintenance.

The inspection section should include inspection requirements and a checklist for conducting the annual condition inspection, the 100-hour inspection, or any other inspection, as needed. The inspection section should also identify any checks needed to verify adequate limits for items subject to wear or replacement due to age or time in use.

The maintenance section should specifically address major aircraft systems and components such as the engine, propeller, fuel system, flight controls, lubrication system, instrumentation, airframe, and landing gear. Each part of this maintenance section should identify the maintenance that a certificated repairman, mechanic, or repair station can perform, and those preventive maintenance tasks that a pilot can perform. For each major system, instructions should be provided that detail the service and maintenance requirements for that system, including removal and replacement instructions for components, repair and overhaul instructions for those products that can be repaired and

overhauled, and how Airworthiness Directives (ADs) and Safety Directives should be addressed.

The maintenance and inspection procedures also should include a section that addresses major repairs and major alterations. This section should include the training requirements for a person to perform a major repair for each aircraft system (e.g., overhaul an engine), what data should be used to perform a major repair or major alteration, and describe the process used to notify the manufacturer that a major repair or major alteration has been accomplished on its product. While a parts manual is not required to be developed as part of the required maintenance and inspection procedures, the FAA recommends that manufacturers develop these manuals to ensure the proper parts are installed.

Identification and Recording of Major Repairs and Major Alterations: The proposal did not include a specific requirement for the consensus standards to address major repairs and major alterations, and procedures to record them, for each class of light-sport aircraft. The FAA has revised the proposal to require maintenance on special light-sport aircraft to be performed in accordance with part 43, except for those requirements that apply to the performance and recording of major repairs and major alterations. In the final rule, therefore, the FAA is revising the consensus standard definition to specifically address major repairs and major alterations. The FAA has determined that standards for defining, performing, and recording major repairs and major alterations should be developed specifically as part of the consensus standards process. The consensus standard also should address the level of training a person must

have before performing a major repair. Refer to the discussions of part 43 and §91.327 for more explanation of this topic.

Continued Airworthiness:

The FAA specifically requested comments from the public on its proposal that the consensus standards include provisions for defining minimum characteristics for a manufacturer's continued operational safety monitoring system. The FAA received comments both for and against the use of the FAA's existing AD process for correcting unsafe conditions in light-sport aircraft. These comments are addressed in item (2) below. The FAA discussed the expectations for a continued airworthiness system in the section-by-section analysis of the NPRM under "Definition of 'Consensus Standard'" under §1.1, and also in §21.186 (c)(6). In response to comments received concerning continued airworthiness, the following clarifies the processes that should be followed for the continued airworthiness of special light-sport aircraft.

The consensus standard should address the following:

(1) The types of occurrences or events or incidents that the aircraft owner is to report back to the manufacturer.

(2) How the manufacturer will issue Safety Directives to correct unsafe conditions, including a process for how the determination of an unsafe condition will be made. Examples of unsafe conditions include, but may not be limited to:

(a) Structural failures that reduce the aircraft ability to carry flight or ground loads;

(b) Structural failures affecting the attachment of high mass items to the aircraft;

(c) Structural failures affecting flight or powerplant control systems; or

(d) Failures that might result in occurrence of a fire in flight.

A commenter stated that for light-sport aircraft, the AD system should be used because the aviation community is familiar with it, and it helps to assure that the owners of light-sport aircraft can be found regardless of changes of ownership of the aircraft manufacturer. A different commenter questioned if Safety Directives issued by the aircraft manufacturer would be any better quality than ADs, which the commenter believes are sometimes issued in haste and may be ineffective or burdensome. Another commenter agreed with not using the AD system, believing that the AD system can be used in the event that a manufacturer no longer exists or is no longer able to issue safety-of-flight information.

The FAA maintains the position it took in the proposed rule. The FAA does not intend to issue ADs on the special light-sport aircraft, but will issue them on type-certificated products incorporated into special light-sport aircraft, and may, if necessary, issue them on products having other forms of FAA approval. Therefore, as proposed, the final rule requires development of corrective actions for unsafe conditions in special light-sport aircraft by the aircraft manufacturer, or a group or individual that has assumed that responsibility. As described in the discussion of proposed §21.186 (c)(6), the FAA intended for the rule to provide for persons other than the manufacturer to assume

continued airworthiness responsibilities in the event that the special light-sport aircraft manufacturer would cease to exist, or cease to provide safety-of-flight information.

The FAA, in discussing the intended advantages of the proposed rule, referred to the safety benefits of "…safety-of-flight bulletins, similar to airworthiness directives and service bulletins…" that would be issued by the manufacturer to correct problems that might exist on aircraft in service. A commenter recommended that the FAA change the term "safety-of-flight" to a different term such as "safety directive," since the military already uses the term "safety-of-flight" and this may cause confusion. The FAA agrees and has revised the term to "Safety Directive" in the final rule. The FAA uses the term "Safety Directive" to identify the documents that a special light-sport aircraft manufacturer issues to make changes that are needed to correct conditions that may adversely affect safety of flight for aircraft that are in service.

One commenter recommended that proposed corrective actions by individual manufacturers should be subject to industry review and acceptance within a two- or three-month time period. The FAA recognizes that this proposal would provide for a balance of manufacturer and operator interests in assuring effective continued airworthiness support of special light-sport aircraft. As the consensus standards process develops procedures for continued airworthiness, the FAA will present the commenter's proposal to the appropriate technical committee for consideration.

(3) Operator actions that will be addressed by a service publication other than a Safety Directive. This discussion addresses a comment expressing concern that manufacturers might issue mandatory part replacement or maintenance instructions that

would be not be justified by any corresponding safety concern. The consensus standard should identify those situations for which the manufacturer's Safety Directives should not be issued. Those situations include, but are not limited to, circumstances in which service publications are issued to improve or enhance the following:

(a) Spare part sales;

(b) Aircraft performance, capability, or efficiency, unless the change is needed for the aircraft to meet the minimum design and performance standards identified in the consensus standard and the manufacturer's statement of compliance;

(c) Aircraft appearance;

(d) Aircraft maintainability; or

(e) Any other aircraft characteristic when the action called for does not remedy an unsafe condition, including those related to reliability which do not have an impact on safety of flight.

(4) A process for responding to requests for methods of correcting unsafe conditions that differ from those prescribed in Safety Directives. This section addresses comments recommending that the owner of a special light-sport aircraft be able to correct an unsafe condition using methods other than specified by a Safety Directive. Refer also to the discussion in §91.327, "Safety-of-Flight Issues." The FAA notes that owner-developed alterations and repairs are permitted for experimental light-sport aircraft where compliance with Safety Directives is not mandatory.

(5) A process for permitting successor organizations to assume responsibility for providing continued airworthiness support. Adding this section to the consensus standard addresses comments recommending the consensus standard contain provisions for assuming or transferring continued airworthiness responsibilities if the original manufacturer of a light-sport aircraft goes out of business. The FAA, in the NPRM, intended to allow for this. This was discussed in the proposal in §§21.186 (b)(1)(iv), (b)(1)(v), and (c)(6), in which the FAA allowed for a person other than the original aircraft manufacturer to assume continued airworthiness responsibilities for in-service aircraft. (The phrase "manufacturer or a person acceptable to the FAA" in proposed §21.186 (b)(1)(iv) and (v) allowed for this possibility.) A person acceptable to the FAA may include persons other than the original manufacturer, such as a licensee, designee, successor, or a person other than the manufacturer or licensee who built a product or part that was not part of the original design, (i.e., a third-party modifier). In the current rule, these provisions are in §91.327 (b), since continued airworthiness of light-sport aircraft will be controlled by the operating limitations of the aircraft airworthiness certificate.

(6) An process for qualification of third-party alterations or replacement parts, if a manufacturer chooses to permit this. In the proposed rule, alterations, repairs, design modifications, or replacement parts manufactured by third parties (distinct from the manufacturer or the airplane owner) were not addressed. The FAA's assumption at the time of the NPRM was that each manufacturer would determine if it intended to permit third-party aircraft support, such as the manufacture of replacement parts, or the alteration of aircraft in service. If a manufacturer chooses to permit this, the standard

should address how oversight and control of the third parties performing this service will be accomplished by the manufacturer.

The FAA also notes that the operating limitations for aircraft having the special light-sport aircraft airworthiness certificate require that all changes to an aircraft after its original manufacture be authorized by the manufacturer or other acceptable person. Aircraft modifiers, manufacturers of replacement parts for light-sport aircraft, and manufacturers of products used to modify light-sport aircraft also must comply with the provisions of the applicable consensus standard in order to be considered a person acceptable to the FAA.

(7) A process for responding to an aircraft owner's assertion that a Safety Directive was issued for reasons other than to correct an unsafe condition. Providing this process also responds to the previously stated concern that manufacturers might require the operator to purchase expensive parts and make changes to the aircraft that do not correct an unsafe condition. By developing guidelines through an appropriate consensus standard, the balanced representation of interests will help to minimize the possibility of a manufacturer issuing a safety directive for an inappropriate reason. If an aircraft owner believes a Safety Directive was issued for reasons other than to correct an unsafe condition, the owner should raise this issue to the manufacturer. The consensus standard process should address how the manufacturer reviews the request, and how it responds to the aircraft owner by justifying its position that the Safety Directive addresses an existing unsafe condition affecting the aircraft. The FAA notes that a manufacturer may permit an alternative means of compliance to the Safety Directive. In the event that the aircraft

owner does not accept the manufacturer's response and chooses not to correct the condition in a manner permitted by the manufacturer, the aircraft owner may request a waiver from the FAA to operate his or her aircraft without following the Safety Directive. See the discussion of the "waiver" process under §91.327, "Safety-of-flight issues."

(8) A process for reviewing ADs issued on FAA-approved products used in special light-sport aircraft. Upon further internal review, the FAA recognized that special light-sport aircraft may embody equipment that has its own FAA approval (e.g., engines, propellers, communications equipment, instruments). Owners of special light-sport aircraft will be required to comply with applicable ADs issued against FAA-approved products installed on special light-sport aircraft. For details, see the discussion under §91.327 "Safety-of-flight issues."

In addition, the FAA believes that the consensus standards should also address —

Manufacturer's Assembly Instructions. In proposed §21.193 (e)(5), the FAA stated an expectation that kit-built experimental light-sport aircraft would be assembled following detailed instructions provided by the manufacturer. This was stated in the section-by-section analysis of the NPRM. However, the FAA did not establish any requirements with regard to the quality of those assembly instructions. In the final rule, a requirement is being added to §21.193 (e)(4) for the assembly instructions to meet the consensus standard. Also, there is a change to §21.191 (i)(2) requiring that the assembler provide evidence that he or she assembled the aircraft according to the manufacturer's instructions.

The manufacturer should prescribe the details of an individual aircraft assembly process. The objective is for the assembly instructions to provide the detailed instructions to build and safely flight test the product. Any necessary mechanical skills or training should be defined. The instructions should prescribe the tooling, fixtures, inspections, measurements, and other pertinent items that must be recorded by the assembler and presented to the FAA or the FAA representative, such as, the Designated Airworthiness Representative (DAR), as evidence that the manufacturer's assembly instructions were followed.

In the proposed definition, the term "continued operational safety monitoring system characteristics" is revised to read "continued airworthiness." The changed language requires the consensus standard to address continued airworthiness subjects that may be considered outside the scope of a continued operational safety monitoring system.

Changes

The definition of "consensus standard" is changed in the final rule as follows:

The words "consensus airworthiness standard" are changed to "consensus standard."

The word "governs" is changed to "applies to."

The words "aircraft design and performance" are changed to "aircraft design, production, and airworthiness."

The four topics that a consensus standard would govern have been revised and additional specific items have been added to the list of items that a consensus standard must address.

The definition now lists the items that a consensus standard "includes but is not limited to. The topics specified in the definition now include "standards for aircraft design and performance, required equipment, manufacturer quality assurance systems, production acceptance test procedures, operating instructions, maintenance and inspection procedures, identification and recording of major repairs and major alterations, and continued airworthiness."

Definition of "Light-sport aircraft"

Overview

The FAA believes that there might be confusion concerning what airworthiness certificates apply to light-sport aircraft. Therefore, the FAA is clarifying this issue. A sport pilot may operate any aircraft that meets the definition in §1.1 of a light-sport aircraft, regardless of the airworthiness certificate issued for the aircraft. An aircraft that meets the light-sport aircraft definition may have any airworthiness certificate that may be issued for an aircraft, such as standard, special, primary, or experimental amateur-built aircraft. An aircraft that meets the light-sport aircraft definition and holds a standard airworthiness certificate must be operated and maintained in accordance with the limitations of that airworthiness certificate. For example, the sport pilot must operate the aircraft within the limits of the aircraft's flight manual and type certificate data sheet. Also, maintenance will still need to be done in accordance with part 43 by an appropriately rated mechanic, repairman, or repair station. A repairman (light-sport aircraft) is not authorized to conduct any maintenance on an aircraft issued a standard airworthiness certificate or a special airworthiness certificate in a category other than light-sport.

Numerous commenters raised issues pertaining to the design attributes associated with the definition of light-sport aircraft. A majority recommended expanding the design attributes in one or more areas, such as maximum weight, stall speed, or cruise speed. The design attributes associated with the definition are discussed individually later in this section.

As stated in the proposal, the FAA intended to limit the definition of light-sport aircraft to primarily address the population of ultralight-like aircraft that are being operated under exemptions to part 103 to conduct flight training. The rule was not primarily intended to address type-certificated and vintage aircraft where there were not significant regulatory, certification, or operational issues. The FAA recognizes that any aircraft that meets the light-sport aircraft definition may be operated by a sport pilot. However, it is necessary for the FAA to use its judgment and discretion in setting limits on aircraft to be flown by sport pilots.

The most frequently cited justification to increasing one or more design attributes associated with the light-sport aircraft definition was to enable existing aircraft designs to be operated as light-sport aircraft. A majority of these comments contended that the light-sport aircraft definition should be expanded to accept these additional aircraft simply because these larger or higher performance aircraft could be safely operated as light-sport aircraft.

While some changes were made to the design attributes of the definition, there was only one change made to the definition as a result of comments pertaining to operating type-certificated aircraft as light-sport aircraft. The change prohibits aircraft

modified to meet the parameters of the definition from being operated as light-sport aircraft. The reasoning for this change is explained below.

One commenter noted that the FAA's proposal is unique in attempting to address aircraft for used for recreation rather than transportation purposes. Some commenters expressed concern that the light-sport aircraft definition did not describe how a given constraint would be shown to be satisfied. Neither a §1.1 definition nor an operating rule definition is normally so complete as to establish how compliance with the definition is determined.

Another commenter noted that the definition of an aircraft category is usually established in the applicability section of the appropriate airworthiness standard, rather than in §1.1. The FAA agrees with this observation. However, there will not be airworthiness standards set forth in specific parts of the Code of Federal Regulations, and the definition of light-sport aircraft will be applicable to a variety of different kinds of aircraft. Also, the definition is significant both for aircraft and airman certification purposes. For these reasons, it is appropriate for the FAA to establish these limits for the light-sport aircraft in the general definitions section of part 1.

Many commenters wanted various existing airplanes to be included in the light-sport aircraft definition. Many of these commenters believe that the existing service record of these airplanes makes them safe and more affordable than a new airplane. The FAA recognizes that certain aircraft that do not meet the definition of light-sport aircraft may have operating characteristics that are similar to aircraft that meet the definition. The FAA determined that the values used in the definition strike an appropriate balance between safety and public interest. Refer to the discussion under "III.1. FAA Judgment

and Discretion." The FAA has revised the light-sport aircraft definition without the intent to include or exclude specific aircraft.

General Comments on the Design Attributes in the Light-Sport Aircraft Definition

There was considerable interest in changing the design attributes that control the definition of light-sport aircraft. The FAA received numerous general questions and comments on aircraft currently certificated. Some commenters operating aircraft with a standard or an experimental certificate stated that their aircraft nearly met the definition of light-sport aircraft. Many of these commenters expressed their desire that the light-sport aircraft definition be changed to include their aircraft, whether it be an airplane with a standard airworthiness certificate, an amateur-built aircraft, or a vintage aircraft with a standard airworthiness certificate. Several commenters stated a desire that the FAA revise the light-sport aircraft definition to permit them to obtain the perceived advantages of the sport pilot certificate's medical provisions when operating their aircraft.

Commenters also requested clarification as to how compliance with some of the parameters used to define light-sport aircraft will be determined. The most frequently cited parameters were maximum takeoff weight, maximum airspeed in level flight with maximum continuous power V_H, and stall speeds V_{S1} (without lift enhancing devices) and V_{S0} (landing configuration). As discussed under §1.1, the consensus standards will address details on methods of demonstrating compliance.

A commenter stated that the light-sport aircraft definition should require ballistic parachute recovery systems as protection in case of inadvertent encounter of instrument

flight rule (IFR) weather conditions. The FAA disagrees. This rule does not directly prescribe design or equipment standards, those are contained in the consensus standards.

Modifications of Aircraft to Meet the Light-Sport Aircraft Definition

Some commenters stated that aircraft with quite high payload and performance characteristics that far exceed the stated definition of light-sport aircraft could be modified to meet the definition of light-sport aircraft. The FAA has revised the definition of light-sport aircraft in the rule to prevent these modifications. The FAA notes that these types of modified aircraft are outside the stated purpose of the proposal. The proposal identified light-sport aircraft as aircraft that exceed the limits set in §103.1, and are compatible with the skills and training required to obtain a sport pilot certificate. Light-sport aircraft are simple low-performance aircraft that are distinct from small aircraft that can be designed and built to existing airworthiness standards. In the proposal, the FAA permitted sport pilots to fly any aircraft that meets the light-sport aircraft definition. In prohibiting modifications to aircraft to meet the light-sport aircraft definition, the FAA seeks to ensure that the light-sport aircraft operating characteristics are consistent with the skills and training for the sport pilot. The FAA is concerned that modifications to an aircraft to meet the light-sport aircraft definition may increase its complexity to a level that is inappropriate for the capabilities of the sport pilot. This is the FAA's rationale for excluding these modified aircraft from the light-sport aircraft definition.

The FAA notes that compliance with light-sport aircraft parameters can be more readily verified for type-certificated aircraft than for amateur-built aircraft certificated under existing §21.191 (g). Amateur-built aircraft do not have a TC, a flight manual, or a

type certificate data sheet. Because of this, it may be difficult to determine if aircraft with other than a standard airworthiness certificate meet the limits listed for a light-sport aircraft and can be operated by a sport pilot. The FAA anticipates that the aircraft design consensus standard will include methodologies that will readily enable a determination that an aircraft design meets the light-sport aircraft definition.

Requests for Light-Sport Aircraft Definition to Include Additional Kinds of Aircraft

A number of commenters wanted "light" helicopters and gyroplanes to be included in the definition of light-sport aircraft. They believed that these aircraft are suited for the sport and recreation that the proposed rule addresses.

As stated in the proposal, the FAA did not include helicopters because their complex design, manufacture, and operation is beyond what the FAA envisioned for light-sport aircraft. The FAA included gyroplanes in the light-sport aircraft definition, but does not intend to issue the special airworthiness certificate in the light-sport category for gyroplanes. See the discussion of paragraph (9) of the definition of light-sport aircraft below.

Several comments recommended that the light-sport aircraft definition include individual unique aircraft designs, such as flying platforms or tandem wing aircraft. The FAA disagrees. The light-sport aircraft definition does not need to address every possible variation of aircraft. The FAA believes that the unique nature of these aircraft precludes the development of consensus standards for these aircraft at this time. However, these aircraft remain eligible for the experimental certificate for operating amateur-built aircraft, under existing §21.191 (g). A few commenters requested that aircraft with

standard airworthiness certificates not be included in the sport pilot program. As stated in the proposed rule, a sport pilot may fly an aircraft with a standard airworthiness certificate, if it meets the definition of light-sport aircraft. See also §21.175 discussion on airworthiness certificates. As stated above in the section titled "Modifications of Aircraft to Meet the Light-Sport Aircraft Definition," a sport pilot may not fly an aircraft with a standard airworthiness certificate that has been modified to meet the light-sport aircraft definition.

Comments Concerning the Limits Established by the Light-Sport Aircraft Definition

Many commenters suggested alternatives to the maximum speed as limiting factors for the light-sport aircraft definition. The alternatives proposed included wing loading (airplane weight divided by airplane wing area); horsepower (ranging from 80 to 180 horsepower); fuel capacity; aircraft payload; kinetic energy of the airplane at cruise speed; weight of the drive train package. One commenter proposed to base the light-sport aircraft definition on the weights and aerodynamic performance of the J-3 Cub airplane. The FAA disagrees that the light-sport aircraft definition should be changed to replace the maximum speed limit with a different limiting design condition. The FAA does not believe that any of the alternatives suggested will be a better, more readily determined method of assuring that light-sport aircraft are simple, low performance aircraft. The FAA has not eliminated a maximum speed in the light-sport aircraft definition. However, the light-sport aircraft definition has been revised to increase the maximum speed limit. The FAA has not adopted an alternative approach to setting an upper limit to the power or performance of a light-sport aircraft. However the FAA decided that the light-sport aircraft definition should set an upper limit for aircraft power

to assure that the aircraft is suitable for the sport pilot. The FAA believes that the maximum airspeed limit, combined with a maximum takeoff weight, acceptably serves this purpose, for the reasons originally stated in the proposed rule. The FAA discusses each of the attributes of the light-sport aircraft definition elsewhere in this section.

Some commenters believed that the limits in the FAA's definition of light-sport aircraft would limit innovation, or lead to the development of unsafe aircraft. The FAA disagrees with this opinion, and believes that the consensus standards process and the FAA's participation in that process will lead to an acceptable balance between innovation and safety.

A few commenters requested that the FAA use the definition of microlight aircraft established by the International Aeronautical Federation (FAI). The FAA did consider this definition in developing its proposal. The microlight aircraft definition primarily addresses weight, seating capacity, and stall speed. The FAA notes that the light-sport aircraft definition addresses significantly more parameters than the definition of microlight aircraft. The FAA developed this definition to provide for the development of an aircraft that matches the capabilities of the sport pilot.

A few commenters believed that the FAA's definition of light-sport aircraft was too broad. Alternatives suggested included three different weight limits for light sport-aircraft, and the two-tiered system proposed by USUA and discussed in detail under "III.5.A. Comments on Ultralight Vehicles." The FAA disagrees that the light-sport aircraft definition should be changed to address different weight limits for different kinds of light-sport aircraft. The FAA believes that the use of a broad definition for light-sport aircraft, along with the development of consensus standards appropriate for each class of

aircraft, will result in safe and economical aircraft for the wide range of products in recreational aviation.

One commenter suggested eliminating the word "light" from the definition, to prevent the implication that there might be medium- and heavy- sport aircraft to follow. Another commenter suggested "Class III aircraft" as an alternative, stating that the public might form an impression that light-sport aircraft "…are frivolous toys." The FAA disagrees with these opinions and believes that the words used to describe "light-sport aircraft" are adequate to distinguish this category of aircraft.

Several commenters stated that the cost of new aircraft would be prohibitive with the goals of the proposed rule. The FAA disagrees. The aircraft certification process that uses industry consensus standards and a manufacturer's statement of compliance is a lower-cost approach than type and production certification. Refer to the full regulatory evaluation that is in the rulemaking docket for a detailed discussion on the estimated cost to the end user.

A commenter suggested that light-sport aircraft should have a maximum noise limit established and verified by a simple protocol to be defined in the consensus standard for aircraft performance. The commenter believed that including a noise limit would prevent adverse public impressions of light-sport aircraft. Current amateur-built aircraft do not require compliance with a maximum noise limit. Presently, part 36 noise standards are applicable only to aircraft with a type certificate or a standard airworthiness certificate. See "XIV. Environmental Analysis" below.

Paragraph (1) Maximum certificated takeoff weight

Some commenters stated that lacking a definition of maximum takeoff weight, aircraft with fairly high performance characteristics could meet the definition of light-sport aircraft by limiting the approved weight and payload of the airplane. The FAA considers this a valid concern and has provided some additional constraints on the weight as detailed below. The maximum weight of a light-sport aircraft is the sum of:

(1) Aircraft empty weight;

(2) Weight of the passenger for each seat installed;

(3) Baggage allowance for each passenger; and

(4) Full fuel, including a minimum of the half-hour fuel reserve required for day visual flight rules in §91.151 (a)(1).

Some commenters wanted the weight increased to permit stronger aircraft structures, use of four-stroke or type-certificated engines, electrical systems for avionics, starters for engines, or ballistic recovery systems. The FAA is increasing the weight limitation of the light-sport aircraft from the proposed 1,232 pounds (560 kilograms) to 1,320 pounds (600 kilograms). The originally proposed weight limitation was based on the 1,200-pound weight limitation proposed by the ARAC's light-sport aircraft working group. The FAA agrees that there may be a safety benefit to light-sport aircraft designs to include provisions for currently produced type-certificated four-stroke engines and ballistic parachute recovery systems. Commenters submitted data that indicated that an additional 60 to 70 pounds would accommodate four-stroke aviation powerplants, and that an additional 30 to 40 pounds would accommodate the ballistic parachute recovery

systems. For these reasons, the FAA has revised its proposed maximum takeoff weight limitation to 1,320 pounds (600 kilograms) for aircraft designed for operation on land.

In addition, many commenters requested that the proposed weight limitation be increased to accommodate flying boats, amphibious or float plane aircraft designs. The FAA originally envisioned these kinds of aircraft in its proposed light-sport aircraft definition. Recommendations from these commenters indicated weights ranging from 100 pounds to 250 pounds to allow for amphibious or float plane capability. The rule provides for a maximum take-off weight of 1,430 pounds for light-sport aircraft designed for operation on water. The 110-pound weight increase compared to an aircraft not designed for operation on water is consistent with data submitted regarding weight of floats for microlight type aircraft.

Some commenters objected to setting a weight limit that becomes a specific number of pounds based on conversion of kilograms to pounds, assuming that the FAA is relying solely upon foreign airworthiness standards in establishing the light-sport aircraft category. The FAA stated weight limitations are different from those used by other airworthiness authorities for the reasons stated in the two preceding paragraphs.

Many commenters proposed alternative weight limits, ranging from 1,250 to 2,650 pounds, to encompass a number of existing general aviation or classic aircraft. In the FAA's judgment, the weight limit in the rule is appropriate for the light-sport aircraft to be compatible with the skills and training of the sport pilot.

Some commenters wanted the weight increased, stating that a passenger weight of 170 pounds is not realistic today. The FAA notes that the maximum take-off weight includes the weight of the occupants. The manufacturer may want to consider this in

their design and communicate any weight limits to the customer. A few commenters stated that the FAA should use weight other than maximum takeoff weight as a limiting condition. Alternatives suggested by commenters included aircraft empty weight, or maximum payload. The FAA believes that the maximum take-off weight is an appropriate limiting parameter for light-sport aircraft, because it is an objective measure that can easily be determined when the aircraft configuration is specified.

A few commenters agreed with the FAA's originally proposed weight limit of 1,232 pounds for aircraft that are not lighter-than-air (LTA) aircraft. Some commenters questioned the rationale for the FAA's originally proposed weight limit. As stated above, the weight limit originally proposed by the FAA for other than LTA was a balance between the original ARAC recommendation for light-sport aircraft, and existing foreign airworthiness requirements for sport aircraft, such as microlights and aircraft certificated under the Joint Airworthiness Requirements for Very Light Aircraft (JAR-VLA).

Some commenters objected to the FAA's proposed weight limit of 660 pounds (300 kilograms) for an LTA aircraft, stating that the weight limit is too low for a two-passenger hot air balloon. One comment asked if the weight limit was intended to refer to an uninflated mass. The FAA intended for the LTA weight limit to be comparable to the weight limit for the other light-sport aircraft designs, that is, a maximum mass for the aircraft. The FAA intended for the weight limit to include the aircraft with passengers and fuel, and the weight of the lifting gas (the product of lifting gas volume and density) added to the weight of the uninflated mass. For airships, the FAA intended the defined weight limit to include the empty weight of the airship, the weight of pilot and passenger, fuel, and lifting gas (FAA-P-8110-2, "Airship Design Criteria," paragraph 2-4). One

commenter provided a weight statement for a two-passenger hot air balloon, saying that 800 to 1,000 pounds would be appropriate in that it would allow for two 15-gallon fuel tanks, or 230 pounds of fuel. The FAA disagrees. The FAA's originally proposed weight limit for LTA aircraft was based on a review of the weights of type-certificated manned free balloons. The FAA believed that the maximum weight permitted for a LTA light-sport aircraft should not be greater than the maximum weight of currently existing type-certificated manned free balloons. The FAA believes the requirements in part 21 and part 31 are appropriate for the manufacture and design of hot air balloons larger than proposed by the FAA.

Additionally, one commenter stated that 2,200 pounds would be an appropriate weight limit for airships in the light-sport aircraft category because the low speeds for takeoff or approach to landing would result in low kinetic energy. The commenter also expressed concern that existing very light hot air airships are robust enough to accommodate two large persons plus the systems and structures for a powered LTA aircraft. The commenter did not provide any data to support the position that the weight limit in the FAA's proposal or the existing airship design certification criteria for small airships used for sport and personal recreation are unnecessarily burdensome. The FAA believes that the requirements of part 21 and the guidance contained in FAA publication FAA-P-8110-2, "Airship Design Criteria" are appropriate for the manufacture and design of airships as large as that proposed by the commenter.

Several commenters stated that the FAA's proposed weight limit for the light-sport aircraft definition had the effect of eliminating some existing certificated aircraft that they believed were ideally suited for the sport pilot rule. One commenter's opinion

was that the FAA strategically established the weight limit to favor the sale of new, more expensive light-sport aircraft. The FAA did not have such a purpose in mind when it established its proposed light-sport aircraft weight limit. Also, in establishing the light-sport aircraft, FAA did not intend to promote existing certificated aircraft. When the FAA initially set the proposed limits for the light-sport aircraft definition, the FAA did not look at currently built aircraft, either with type certificate approval or in the amateur-built aircraft marketplace. The FAA's proposed definition was to address aircraft to be designed and built for the sport pilot, rather than addressing existing aircraft for currently certificated pilots.

A commenter stated that the proposed weight limit eliminates the eligibility of many production aircraft, and seems to cater to homebuilt aircraft. The FAA disagrees with this opinion. The reasons for the weight limit were discussed in the proposal and were intended to accommodate a wide variety of simple, low performance aircraft that have no more than two occupants. The FAA has explained elsewhere in this section the reasons for its changes to the proposed weight limit in the light-sport aircraft definition. A few commenters noted that the FAA's originally proposed weight limit would result in some models in a particular classic aircraft line being eligible for the light-sport aircraft category, while other models in the same line would not be eligible. The FAA believes that this is evidence that the weight limit for light-sport aircraft was not drawn with the intent of including or excluding specific aircraft.

A commenter proposed that the FAA establish different weight limits for single- and two-seat aircraft. This would add an additional limiting condition to the definition of light-sport aircraft. The FAA disagrees. The weight is only one component of the

definition. The FAA believes that its weight limit is appropriate for a two-seat aircraft. One of the main purposes of the light-sport aircraft definition is to provide appropriate flight training aircraft for sport pilots. The weight limit proposed by the FAA is intended to accommodate aircraft designed for two occupants. The FAA does not have data that would support establishing a reduced weight limit for single occupant aircraft. The FAA notes, however, that a manufacturer may choose to produce a single place aircraft with a weight less than the maximum permitted by the rule. A commenter stated that the weight limit will preclude tricycle landing gear on light-sport aircraft, and that will make light-sport aircraft more difficult to operate by low-time pilots. The FAA does not agree that the weight limit will preclude tricycle gear light-sport aircraft. The FAA is aware of tricycle-gear aircraft that meet the light-sport aircraft weight limit.

A commenter proposed that the FAA's weight limit should only apply to powered parachutes and weight-shift-control aircraft, and that higher weights should be permitted for airplanes in the light-sport aircraft category. The FAA disagrees that different weight limits should be established for powered parachutes, weight-shift-control aircraft, and airplanes. However, the FAA agrees that the weight limit for light-sport aircraft should be raised and has done so in the final rule. The FAA believes that the maximum weight limits established in the light-sport aircraft definition will permit the design and manufacture of two-seat airplanes suitable for operation by sport pilots. Manufacturers of powered parachutes and weight-shift control aircraft may manufacture aircraft that weigh less than the maximum weight limit permitted by the light-sport aircraft definition.

Some commenters stated that low stall speed is more important than aircraft weight. The FAA agrees that low stall speed is important; however, the FAA does not

believe that the light-sport aircraft definition should identify any one attribute of the definition as more important than another.

Commenters recommended that sport pilots be permitted to fly aircraft heavier than the FAA's proposed weight limits with a logbook endorsement. Another commenter proposed that sport pilots with higher experience levels be permitted to fly aircraft heavier than the FAA's proposed weight limits. A different commenter said that for 5 years following the adoption of the FAA's proposal, sport pilots should be permitted to fly existing general aviation training aircraft that are within 120 percent of the limits established in the light-sport aircraft definition. The FAA disagrees that sport pilots should be permitted to fly aircraft heavier than the weight limits for light-sport aircraft. The FAA believes that a pilot operating aircraft above these weights should have at least a private or recreational pilot's certificate. For further discussion on sport pilot training limits reference the discussion titled "Flight Training and Proficiency Requirements" in the section on Part 61 general issues.

Paragraph (2) Maximum airspeed in level flight with maximum continuous power (V_H)

As discussed in more detail later in this section, the FAA always intended that the light-sport aircraft definition would establish an appropriate limiting maximum airspeed. During the preliminary discussions to set the design attributes proposed in the NPRM, the FAA considered a range of limiting airspeeds. When setting an appropriate limiting maximum airspeed, the FAA took into account that: (1) Training requirements for the sport pilot certificate are based on the simplicity of the aircraft's operating characteristics; and (2) aircraft certification requirements are based on a performance envelope appropriate for a light-sport aircraft.

In constructing the light-sport aircraft definition, the FAA also took into consideration three groups of aircraft that will be addressed by this rule: (1) Two-place ultralight-like aircraft that have been operating under an exemption to part 103; (2) new light-sport aircraft to be designed, manufactured and operated under this rule; and (3) existing aircraft whose low performance capabilities would meet the light-sport aircraft definition. In the proposed rule, the FAA believed that the 115 knots CAS V_H limit met the two considerations in the preceding paragraph and covered the range of aircraft described in this paragraph.

Additionally, the FAA specifically requested additional input through the light-sport aircraft online forum on methods to establish upper limits for the light-sport aircraft definition. To read the online forum comments, go to the electronic docket address given above in the section titled "Availability of Rulemaking Documents" and view item number 2676 in Docket No. FAA-2001-11133.

The FAA still believes that establishing a maximum airspeed in level flight at maximum continuous power (V_H) is the best way to limit "high-end" capability of the powered light-sport aircraft. With the change to the light-sport aircraft definition permitting increased weight, which may provide for the use of higher-powered engines, the FAA is also increasing V_H to 120 knots. The FAA believes that this small increase is appropriate for the revised light-sport aircraft definition and remains consistent with the purpose that was the basis for the originally proposed 115-knot CAS (V_H) limit. The FAA believes that the training required for sport pilots operating light-sport aircraft over 87 knots (V_H) addresses any training concerns and that the change in the V_H airspeed

limit from 115 to 120 knots does not require any additional training beyond what is established in the rule.

Some commenters believed that the proposed airspeed limitation, V_H, should be eliminated and some commenters state that unlimited maximum speeds would not jeopardize safety. A commenter said that the FAA should impose other design limits or flight characteristics instead of a maximum speed limit for light-sport airplanes. One commenter specifically asked why the FAA cares how fast the airplane can fly. The FAA disagrees that a maximum speed limit is unnecessary for light-sport aircraft. As stated in the NPRM, the FAA believes that a maximum speed limit is appropriate for aircraft designed for operation by persons with the minimum training and experience of a sport pilot. Some commenters state that the maximum speed limitation is essentially unenforceable. For the purpose of issuing the special light-sport aircraft airworthiness certificate, the FAA believes that the consensus standards will identify an easily repeatable demonstration for the manufacturer to prove that the aircraft meets the light-sport aircraft definition. The manufacturer will perform this test in support of its statement of compliance.

One commenter stated that aircraft speeds vary with altitude, and the light-sport aircraft definition did not state any FAA expectation concerning this. The FAA agrees with the comment, and is specifying in the light-sport aircraft definition that performance limitations are expected to be met for standard atmospheric conditions at sea level.

Commenters stated that the FAA's proposed limit of 115 knots maximum airspeed in level flight with maximum continuous power is unnecessary or redundant because the aircraft weight and stall speed establish power and wing loading, which

effectively set drag that limits maximum speed. One commenter proposed that a weight limit of 750 pounds for a single-seat light-sport airplane would limit power and airspeed without requiring a design constraint. Alternatively, some commenters proposed that the sport pilot accept an operating limitation to not operate at speeds in excess of the FAA's desired limit. A commenter proposed that a sport pilot operating limitation of 100 knots CAS in the airport traffic pattern should be an alternative to the proposed light-sport aircraft maximum airspeed limit. The FAA believes that because of the wide variety of aircraft to be included in the light-sport aircraft definition, the use of airplane-based parameters is not adequate to eliminate an upper limit on light-sport aircraft speed. The FAA requires a maximum speed limit to assure a light-sport aircraft design that is compatible with the capabilities of a sport pilot. However the FAA disagrees with the use of operating limitations to prescribe limitations on the aircraft definition. Using operating limitations instead of aircraft design limits may permit sport pilots to use aircraft that exceed the parameters of the light-sport aircraft definition.

Commenters requested that the FAA consider alternative maximum speed limits, ranging from 120 to 187 knots CAS. One commenter proposed that the maximum airspeed limit should be 120 knots, so that 2 nautical miles (NM) per minute would simplify navigation by pilotage. The FAA disagrees that simplifying navigation by pilotage would be an appropriate justification; however, the FAA is increasing the maximum speed value to 120 knots CAS from the 115 knots CAS originally proposed. As previously stated, the FAA believes this small increase is appropriate for the revised definition of "light-sport aircraft," and it remains consistent with the original proposal.

The FAA does not believe that this change will materially affect the population of aircraft that are eligible to meet the definition of light-sport aircraft.

Commenters stated that the proposed limit is unenforceable, because a propeller pitch change can increase or decrease the airplane speed at maximum power. Some commenters asked if flat pitch propellers or engine governors would be permitted as a way for an airplane to satisfy the maximum airspeed constraint. The FAA agrees that the manufacturer may use flat pitch propellers or engine governors as part of the aircraft design to demonstrate compliance with the light-sport aircraft definition. If an aircraft propeller or engine configuration causes the aircraft to exceed the prescribed limitations, the aircraft will not be considered to meet the definition of light-sport aircraft. The FAA notes that although it is not permitting variable pitch propellers, the use of ground adjustable propellers is permitted. The FAA expects the airplane manufacturer to define the airplane configuration, using critical parameters, when determining compliance with the light-sport aircraft definition. The FAA expects that the sport pilot will operate the aircraft in the configuration that the manufacturer used to demonstrate compliance with the light-sport aircraft definition.

Commenters stated that the proposed limit is impractical, because when the airplane nose drops, it will accelerate and possibly exceed the limit set by the light-sport aircraft definition. The FAA disagrees that the limit is impractical. The proposed limit is for straight and level flight only and should not be confused with a maximum operating speed or a maximum dive speed. The consensus standard for airplane design and performance will assure that the aircraft structure has adequate margins to be operated within its allowable speed range.

Several commenters stated that the same flying skills are needed for a slower or a faster airplane. The FAA disagrees and notes that the skills necessary to operate an aircraft that exceeds 120 knots differ from those skills necessary to operate a light-sport aircraft. In addition, the FAA requires a sport pilot to obtain additional training to operate an aircraft with V_H greater than 87 knots and less than 120 knots because different skills are necessary to operate these light-sport aircraft with higher performance capabilities. For further discussion on training requirements reference "V.5.A.iii. Flight Training and Proficiency Requirements" in the discussion of Part 61 general issues.

A commenter proposed that a different light-sport airplane category permit faster airplanes, or that a sport pilot be permitted to operate faster airplanes with a logbook endorsement. The FAA disagrees that sport pilots should be permitted to fly faster aircraft heavier than permitted by the definition of light-sport aircraft. The FAA believes that a pilot operating aircraft above the speed in the definition should have at least a private or recreational pilot's certificate because the FAA believes it would not be appropriate or safe for persons with the minimum training and experience of a sport pilot to operate faster or heavier aircraft.

A commenter stated that cruise speed has little to do with aircraft energy when the aircraft is out of control. The FAA notes that the purpose of the limitation on speed is to make it easier for the sport pilot to maintain aircraft control. The FAA believes that, at higher cruise speeds, the possibility for adverse consequences from momentary loss of control is greater. Commenters objected that the proposed limit would force the design of inefficient aircraft. The FAA disagrees with this opinion. Faster aircraft are not necessarily more efficient than slower aircraft. Maximum speed is not an indication as to

whether or not an aircraft has an efficient design. An efficient aircraft design (with lower drag) can provide benefits to the operator other than increased speed. Such benefits may permit the aircraft to use a smaller engine, have increased range, or have increased payload capacity.

Some commenters proposed that a horsepower limit would be more suitable than a maximum speed limit. A commenter stated that horsepower and drag are the factors that set airplane maximum speed. The FAA agrees that there are alternative methods of limiting aircraft speed, however, the FAA has chosen to limit the speed directly rather than indirectly through some other parameter. Due to the variability of aircraft design the FAA believes that limiting horsepower would not necessarily result in consistent maximum airspeed limitations.

Some commenters stated that higher speed does not affect safety, but insufficient power may reduce safety. The FAA has previously discussed how higher speed may affect safety. With regard to simple, low-performance aircraft, the design and performance consensus standard will ensure that all aircraft meet a minimum performance standard and therefore provide an acceptable level of safety. Several commenters stated that the maximum airspeed is dependent upon throttle position, and that operating at 100% throttle is not a normal operation. Although this statement is true, the FAA has determined that it is appropriate to impose a maximum speed limit for the reasons stated above.

Another commenter stated that many airplanes "claim" inflated top speeds, so only a demonstrated maximum speed would be credible. The FAA agrees and notes that V_H was selected as it is easily demonstrated. Several commenters noted that in-service

variations affecting engine or propeller efficiency, instrument calibration, or airplane aerodynamics could cause significant variations in actual maximum airspeed. The FAA agrees that some small variations in actual aircraft performance are to be expected. However, the FAA believes that a demonstration by the manufacturer of the aircraft's maximum airspeed in a specified configuration is adequate to ensure that the airplane design is compatible with the light-sport aircraft definition. A commenter stated that foreign sport airplane airworthiness standards do not impose a maximum airspeed requirement, and this would be an unfair advantage compared to American aircraft. The FAA disagrees that foreign aircraft have an unfair advantage. Regardless of the country of manufacture, in order to be considered a light-sport aircraft, the aircraft must meet the parameters of the light-sport aircraft definition.

A commenter proposed that the light-sport aircraft definition should assure structural integrity by requiring that the maximum speed in level flight with maximum continuous power, V_H, be less than or equal to the design maneuvering speed (V_A) at altitudes of 8,000 feet or less. Because the FAA is not establishing structural limits in the definition of light-sport aircraft, it would be inappropriate to include this constraint in the definition. The FAA believes that this would be an excessive restriction for light-sport aircraft.

Paragraph (3) Maximum never-exceed speed (V_{NE}) for a glider

A commenter stated that the FAA's proposed maximum speed of 115 knots for a glider does not provide adequate protection against headwinds or wind shear. A commenter asked that the never-exceed speed (V_{NE}) be increased slightly to allow for

increased safety, utility, and comfort. Several comments recommended increased V_{NE} for gliders. Additional comments expressed satisfaction with the consistency with the V_H for powered aircraft. The FAA is aware that the two maximum speed limits established in the light-sport aircraft definition have two different bases. As stated in the previous section, the FAA's concern is that the light-sport aircraft definition set a maximum speed limit for the aircraft to be flown by sport pilots. In response to the comments reported in this section, in the final rule, V_{NE} for gliders is increased to 120 knots CAS. This is done to maintain consistency between the V_H value for powered aircraft and the V_{NE} value for gliders.

Proposed paragraph (4) Maximum stalling speed or minimum steady flight speed in landing configuration (V_{S0})

Some commenters recommended that the FAA eliminate the 39-knot stall speed in the landing configuration. Many comments recommended raising the limit of 39 knots CAS in the landing configuration. Some commenters questioned the narrow proposed spread between the originally proposed V_{S0} (proposed in paragraph (4)) of 39 knots CAS and the V_{S1} (proposed in paragraph (5)) of 44 knots CAS.

The FAA agrees that the proposed spread of stall speeds in practice is narrow, and provides a mixed message as to the limiting design condition. A low stall speed is desirable, but not at the expense of forcing a simple aircraft that otherwise meets the definition to become more complex to operate and maintain by adding flaps to a design for no other purpose than to meet the V_{S0} requirement. Light-sport aircraft may have flaps because the safety benefit of this feature can be achieved without the complexity

inherent in retractable landing gear or controllable-pitch propellers. The FAA is eliminating the maximum stalling speed in the landing configuration (V_{S0}) restriction that was proposed in paragraph (4) of the NPRM because the low-speed limit is adequately addressed by the maximum "clean" stall speed (V_{S1}).

Final rule paragraph (4) Maximum stalling speed or minimum steady flight speed without the use of lift-enhancing devices (V_{S1}) (proposed as paragraph (5))

The FAA received numerous comments concerning the two proposed maximum stall speeds. Some commenters agreed with the stall speeds originally proposed by the FAA. Many commenters proposed higher alternative values for the light-sport aircraft stall speed limit, ranging from 45 miles per hour (mph) (39 knots) to 63 mph (55 knots). Typically, commenters referred to a particular homebuilt, classic, or existing training airplane as being appropriate for consideration under the light-sport aircraft definition and for operation by a sport pilot. The FAA did not establish a maximum stall speed for light-sport aircraft based on the parameters of particular aircraft.

Additionally, one commenter asked why the stall speeds were so low. The FAA's proposed stall speeds were based on early discussions with light-sport aircraft industry representatives. A basic design principle for light-sport aircraft is that the stall speed for these aircraft is about one third of the aircraft maximum speed. The FAA notes that when it increased the maximum aircraft speed in the final rule it also increased the maximum stall speed accordingly.

A commenter stated that the FAA should increase the stall speed to a range of 50 mph to 60 mph, "…which would be above what is generally encountered as normally

high runway turbulence and would lead to safer landings." The FAA believes that the stall speed established in the light-sport aircraft definition should be adequate to address airport surface conditions normally encountered by light-sport aircraft. Permitting significantly increased stall speeds may have the effect of changing the takeoff and landing characteristics of light-sport aircraft to a degree that is inappropriate for their operation by sport pilots.

A commenter stated that a 50-knot stall speed would be needed for light-sport aircraft to operate in Class B, C, or D airspace. The FAA does not agree that operating in these airspace classes requires such a high stall speed and notes that ultralight vehicles may operate in Class B, C, or D airspace with ATC permission. Additionally, other aircraft with stall speeds below 50 knots routinely operate in these classes of airspace.

A commenter proposed that the FAA require shoulder harnesses in light-sport aircraft and then increase the proposed stall speed limits by 10 percent. The FAA disagrees that installing shoulder harnesses should permit increased stall speeds for light-sport aircraft. This rule does not directly prescribe equipment standards as those are contained in the consensus standards.

A commenter proposed that an increased stall speed would permit a higher aircraft weight, which would permit installation of more navigation and communication equipment on the light-sport aircraft. As noted elsewhere in this section, to accommodate the weight increase and maximum speed increase from the originally proposed maximum values, the FAA is increasing the limit stall speed without the use of lift enhancing devices V_{S1} to 45 knots CAS.

Several commenters proposed that the light-sport aircraft should have a lower stall speed limit. One reasoned that slower flight permits a wider choice of emergency landing fields. Several stated that the stall speed should be as low as possible for safety's sake. The FAA agrees with these principles; however, disagrees with the need to lower the proposed stall speed. The FAA believes that the revised stall speed is appropriate for aircraft that might weigh as much as the maximum weight limit that is established in the light-sport aircraft definition. The FAA notes that the maximum stall speed does not prohibit a manufacturer from producing lighter aircraft with lower stall speeds.

A commenter believed that 30 to 35 knots would be better than the value proposed by the FAA, and recommended that the part 103 stall speed of 24 knots would be even better. As described in detail elsewhere in this section, the FAA believes that an increased stall speed for light-sport aircraft is appropriate for the maximum aircraft weight permitted by the light-sport aircraft definition. The FAA notes that the light-sport aircraft definition is intended to broadly encompass a wide range of aircraft for sport pilots. Some light-sport aircraft design parameters significantly exceed the parameters of vehicles operating under part 103. Therefore, it would not be appropriate to use the part 103 stall speed limits for all light-sport aircraft.

A commenter agreed with the concern for a low stall speed, but stated that pilot awareness should better focus on airplane angle of attack rather than speed. The FAA agrees that there is a need to limit the capability of the light-sport aircraft but notes that angle of attack is not an appropriate design parameter for these aircraft. Pilot training typically addresses critical aircraft attitudes, including angle of attack.

A commenter stated that FAA should clarify that aircraft speeds are more accurately represented by knots True Air Speed (TAS) or knots Calibrated Air Speed (CAS), rather than knots Indicated Air Speed (IAS). Both the proposal and the final rule refer to speeds in knots CAS.

Commenters asked for details on how the stall speed is determined. The definition was changed to specify that maximum stalling speed is determined at maximum weight, with most critical center of gravity location, at sea level standard day conditions. However, the actual test method is to be defined in the consensus standard.

Final Rule Paragraph (5) Maximum seating capacity (proposed as paragraph (6))

Several commenters stated that the FAA should permit more than two seats for the light-sport aircraft. Additionally, a commenter asked if four-seat airplanes could meet the light-sport aircraft definition with limitation of only using two seats. Light-sport aircraft are simple, non-complex, aircraft and adding more seats or passengers would add to the weight and complexity of these aircraft resulting in operational characteristics that would be inappropriate for the sport pilot. A commenter asked if a single-seat aircraft is eligible as a light-sport aircraft. The definition permits a single-seat aircraft.

A commenter asked if side-by-side seating would be permitted for flight instruction. Another commenter questioned the permissible arrangement of the seats in a two-place aircraft. Side-by-side or tandem seating is permitted under this rule. The definition does not define the arrangement of the seats.

Final Rule Paragraph (6) Single, reciprocating engine (proposed as paragraph (7))

Commenters recommended that the light-sport aircraft definition allow for multi-engine aircraft, turbine-powered aircraft, or both. The FAA disagrees with this suggestion. Multi-engine and turbine-powered aircraft introduce a level of operational and mechanical complexity that extends far beyond the scope of this rule. Current pilot certification rules require an additional rating for multi-engine operation and a type rating for turbojet powered aircraft. These additional pilot ratings are not available to the holder of a sport pilot certificate. Further, most turbopropeller engines make use of cockpit-controllable variable pitch propellers and many have a reverse thrust operational mode as well. Such devices are mechanically and operationally complex, requiring more extensive training to operate in flight and having far more complex maintenance requirements. Therefore, the definition of light-sport aircraft will continue to exclude multiengine or turbine-powered aircraft.

Several commenters proposed that small turbine engines be permitted for light-sport aircraft. Reasons included simplicity of design and operation, desire to foster innovation, and safety relative to a propeller design. A commenter stated that a small turbine engine permits a simpler powerplant package for a powered glider than a propeller engine. The FAA does not agree that turbine engines are appropriate for the light-sport aircraft category. Turbine engines possess inherent design characteristics that must be accommodated by stringent design, maintenance, and operating criteria that are inconsistent with the light-sport aircraft regulatory philosophy. Specifically, turbine engine failure modes, such as disc bursts, can be catastrophic to the aircraft. The FAA has established engine and airframe certification regulations to address these failure modes such as mandatory life limits, extensive engine analyses and testing, and airframe

layout, structural and performance criteria that require extensive FAA oversight that is beyond the scope of this rulemaking.

Many commenters stated that light-sport aircraft should have the safety benefit of multi-engine reliability. A commenter stated that small multi-engine ultralight-like airplanes respond differently to a single engine failure than relatively larger general aviation aircraft. Another commenter stated that the light-sport aircraft performance would assure that multi-engine operation would require a negligible difference in pilot skills. Another proposed to require only a single thrust line and permit multi-engines. Another proposed that the light-sport aircraft definition contain suggested specific performance values and include provisions that would result in a light-sport aircraft having docile handling characteristics to accommodate single-engine failure in a multi-engine layout. A commenter proposed that multi-engines be permitted, with a combined horsepower limit. For the reasons stated previously, the FAA disagrees that light-sport aircraft should be permitted to have multiple engines because of the additional operational complexity of these aircraft.

A commenter stated that for ultralight-like aircraft, the engines should be considered non-essential equipment. Another commenter stated that because ultralight pilots are trained to stay within safe gliding distance from an emergency landing field then engines should be considered as non-essential equipment. The FAA will permit the teams developing the design consensus standards for the different classes of light-sport aircraft to determine whether engine operation is essential to the safe operation of these aircraft. Neither the light-sport aircraft definition nor the rule directly prescribes standards for design of equipment, such as engines. The FAA believes that in many

instances light-sport aircraft will be operated well beyond safe gliding distances from an emergency landing field.

A commenter asked if type-certificated engines will be required for light-sport aircraft. The FAA notes that the rule does not require the installation of type-certificated engines.

The FAA notes that in the final rule the term "single non-turbine engine" has been modified to single reciprocating non-turbine engine. This was done to preclude light-sport aircraft powered by rocket engines but still permit rotary and diesel engines.

Final Rule Paragraphs (7) and (8) Propellers (proposed as paragraph (8))

The FAA received numerous comments on the proposed definition limiting powered light-sport aircraft to a fixed or ground-adjustable propeller. Several commenters stated that existing electronically controlled in-flight adjustable propellers are widely used in the ultralight industry, and are not as complicated as hydromechanically controlled constant-speed propellers. A commenter stated that the light-sport aircraft definition should not stifle innovation in developing automatically controlled adjustable propellers. Most of the commenters stated that electrically driven variable-pitch propellers have been used on ultralight vehicles, and that they are not inherently complex and recommended changing the definition to include variable-pitch propellers. The FAA does not agree that the light-sport aircraft definition should be changed to permit controllable pitch propellers. These propellers add operational complexity to an aircraft, as well as the potential for mechanical failure. In addition, because of the training requirements for sport pilots and repairmen (light-sport aircraft),

the FAA does not believe that light-sport aircraft should have controllable pitch propellers. The FAA further notes that a controllable-pitch propeller is one of the characteristics of a complex airplane as listed in §61.31 (e). As stated in the proposed rule, the FAA intends for light-sport aircraft to be simple, low performance aircraft.

Commenters proposed that adjustable-pitch propellers are needed for safety and performance benefits for powered aircraft, particularly for seaplanes. One commenter stated that the maximum speed limit and additional weight for floatplanes should permit adjustable propellers for those aircraft. Another commenter noted that reversible propellers are typically used by floatplanes as brakes in surface operations on the water. The FAA does not believe that these benefits justify permitting controllable pitch propellers for these aircraft for the reasons stated above.

Commenters proposed that controllable pitch propellers be permitted on light-sport aircraft and that a sport pilot be permitted to operate that aircraft if the pilot has the appropriate training and a corresponding endorsement. The FAA does not agree that the light-sport aircraft definition should be revised to permit this because it would require a level of training for sport pilots and repairmen (light-sport aircraft) that is not commensurate with the privileges of those certificates.

A commenter proposed that adjustable propellers be permitted on light-sport aircraft, but that a private pilot license be required for these aircraft. Light-sport aircraft are intended to be flown by persons exercising privileges of a sport pilot. In addition, the FAA notes that private pilots may fly aircraft with adjustable propellers; however those aircraft are not considered light-sport aircraft.

A commenter asked if the FAA would require operators of existing weight-shift-control and powered parachute aircraft to remove their in-flight electronically adjustable propellers. If the operator wishes the aircraft to be considered a light-sport aircraft, the aircraft may not be equipped with an in-flight adjustable propeller. Under the provisions of §21.191 (i)(1), existing aircraft would have to meet the definition of a light-sport aircraft in order to receive an experimental certificate for the purpose of operating a light-sport aircraft. The operator may be able to qualify for another experimental certificate for a different purpose such as amateur-built.

Some commenters recommended that the light-sport aircraft definition include particular aircraft that have constant-speed propellers. Some commenters stated that variable-pitch propellers provide performance benefits for smaller powerplants, and that this can be a safety benefit. The FAA does not agree that these potential benefits outweigh concerns discussed previously concerning the complexity of operations and maintenance for light-sport aircraft.

Some commenters stated that seaplanes use reversible-pitch propellers to assist in water handling characteristics and that the definition of light-sport aircraft be modified to permit reversible-pitch props on seaplanes. For the reasons stated above, the FAA disagrees and will not permit the use of reversible pitch propellers for seaplanes.

Some commenters requested that the light-sport aircraft definition permit powered gliders to have in-flight adjustable propellers. According to the commenters, powered gliders use a small motor and propeller to prolong the cruise or soaring flight. The powerplant may also be used for self-launching of the powered glider. A number of

different systems exist, ranging from a windmilling propeller, to various autofeather propeller systems, to systems that fold the propeller and stow the motor.

The FAA notes that reduction of drag is critical to safe operation of unpowered and powered gliders. Powered gliders are a unique kind of light-sport aircraft in that they use a propeller to carry the aircraft to glide altitude, then the engine is turned off as the aircraft begins soaring flight. If the propeller were not stowed or faired from the cockpit to reduce drag, the aircraft's glide performance would be greatly hindered.

The FAA further notes that propellers used on powered gliders are simple and only allow the pilot to feather or retract the propeller from the cockpit once the engine has been shut down. In addition, potential failure of these systems does not add to pilot workload during the more critical flight phases of takeoff or landing. Therefore, the FAA believes that the use of an autofeathering propeller system is appropriate for powered gliders. The proposed light-sport aircraft definition is revised in the final rule to permit autofeathering propeller systems on powered gliders.

Paragraph (9) Gyroplane rotor system

The definition of light-sport aircraft in proposed §1.1 included gyroplanes. As discussed in the NPRM, the FAA did not propose to issue special airworthiness certificates for gyroplanes in the light-sport category. The FAA received numerous comments on the subject of gyroplanes (or autogyros or gyrocopters), including a submittal from the gyroplane trade association. Most of the comments concerned the availability of dual-instruction, and the effect that terminating current training exemptions would have on the availability of training for gyroplane pilots. The FAA

included gyroplanes in the light-sport aircraft definition to permit a sport pilot to fly the small gyroplanes that are currently available on the market. The FAA believes that the training exemptions have permitted some increased availability of gyroplane flight instructors because the exemptions allowed for a two-seat gyroplane to be operated as an ultralight training vehicle by a qualified ultralight instructor. Existing two-seat gyroplanes that had been operated as training vehicles under the part 103 exemptions, and which have been certificated under §21.191 (i)(1), will be permitted to conduct similar flight training operations for five years, as provided for in §91.319 in this rule. The part 61 provisions of the rule will permit an existing ultralight gyroplane flight instructor to transition to become a flight instructor with a sport pilot rating. The FAA anticipates that this 5-year transition period will permit the gyroplane flight instructor pool to continue to expand to address the concerns of most of the commenters.

Two-seat gyroplanes that have been issued experimental certificates for the purpose of operating amateur-built aircraft under §21.191 (g) may be operated in accordance with operating limitations issued under §91.319. Generally, they may be used for sport and recreation operations, including carrying a passenger, and receiving personal flight training. Receiving personal flight training (obtaining credit for flight instruction received in the aircraft that one owns) was a concern for some commenters.

Many of the commenters were concerned that the consensus standards for light-sport aircraft would add prohibitively expensive costs to gyroplanes, and would result in fewer gyroplane flight instructors. The FAA notes that there are four gyroplane designs that have been type certificated. The FAA notes that many gyroplane designs are smaller and lighter weight than type certificated gyroplane designs. One commenter stated that

even with less mass, ultralight gyroplanes are not different from existing gyroplanes and could be considered similar to gyroplanes that have a standard airworthiness certificate. If it is true that existing ultralight gyroplanes are similar to gyroplanes that have a standard airworthiness certificate, then the FAA will work with any manufacturer who desires to obtain a type certificate for a two-seat gyroplane that meets existing airworthiness standards. Part 27 airworthiness standards define an internationally recognized level of safety for small rotary wing aircraft. A gyroplane design may also receive a primary category type certificate, which will be issued if the FAA finds that the aircraft complies with the applicable airworthiness requirements approved under §21.17 (f) and has no feature or characteristic that makes it unsafe for its intended use.

Many of the commenters who called for the special light-sport aircraft airworthiness certificate for gyroplanes referred to the simple design and operation of flight controls. The FAA acknowledges that this is a reason for permitting sport pilots to fly gyroplanes, and for that reason the FAA included gyroplanes in the light-sport aircraft definition. However, the FAA does not agree that this operational simplicity would apply to design and performance criteria for the light-sport aircraft gyroplane design. Complicating design factors for gyroplanes include the location of thrust and lift lines with respect to the center of gravity; horizontal and vertical stabilizer size and location; and effects of turbulence. Larger gyroplanes have greater inertia, which makes the aircraft less sensitive to the relative effects of these factors. The FAA believes that the dynamics of a rotary wing aircraft and the light weight of existing two-seat ultralight gyroplanes require a design standard for structural integrity and aircraft stability that may

add prohibitively expensive costs to gyroplanes. One commenter expressed doubt that the ultralight gyroplane industry would agree upon a design standard.

The FAA reviewed gyroplane accident statistics in the NTSB's electronic database. The data show 70 fatal accidents in the years 1983 through 1994 with mechanical failures accounting for 12 of those accidents. Data show 20 fatal accidents in the years 1995 through 2001, and mechanical failures accounting for two of those accidents. This data tends to support those commenters who state that gyroplane safety is better served by increased availability of training rather than different standards for design and performance of gyroplanes. Refer to the discussion under "VI.5.A.viii. Gyroplanes" for details on how this rule proposes to assure better training for sport pilots seeking a gyroplane rating.

To summarize, the FAA stated in the NPRM that, for sport pilots flying light-sport aircraft, the continued use of exemptions would generally be inappropriate to allow aircraft larger than the limits in part 103 to be used for flight training. At this time, the FAA is not participating in developing consensus standards for gyroplanes, because the FAA believes that, unlike other kinds of light-sport aircraft, there are significant complex design issues for gyroplanes that are unresolved by the industry. The simplicity of operation of gyroplanes supports making this aircraft available to sport pilots. The need for dual instruction in gyroplanes, and the scarcity of gyroplane instructors, is reason for the FAA to issue training exemptions for the gyroplane community. Including gyroplanes in the light-sport aircraft definition will permit the continued construction of two-seat gyroplanes that will support increased availability of gyroplane flight instructors. If the gyroplane community is successful in developing a design and

performance consensus standard, and if service experience, including accident data, demonstrates a marked difference between ultralight gyroplanes and those that are built to that voluntary consensus standard, then the FAA may revise the rule to permit gyroplanes to receive the special airworthiness certificates in the light-sport category. Otherwise, before the end of the 5-year period during which aircraft certificated under §21.191(i)(1) may be used for flight training for compensation, the FAA may consider if it will continue to keep exemptions in place to allow flight instructors to train sport pilots in gyroplanes issued experimental certificates.

Paragraph (10) Nonpressurized cabin

The FAA did not receive any comments on the proposed requirement for a light-sport aircraft to include a nonpressurized cabin, if equipped with a cabin, in paragraph (10).

Paragraphs (11) through (13) Landing gear

Numerous commenters requested that the FAA revise the proposed definition of a light-sport aircraft to permit retractable landing gear. The FAA reiterates its original position that for aircraft other than gliders, retractable landing gear is inconsistent with the simplicity of the light-sport aircraft, and the training requirements for the sport pilot.

The FAA received many comments requesting that the light-sport aircraft definition allow for simple mechanical retractable landing gear. Some commenters requested that specific existing aircraft that have simple mechanical retractable landing gear be eligible to be a light-sport aircraft. They noted these aircraft would otherwise

satisfy the FAA's proposed definition of light-sport aircraft. The reasons stated by commenters for permitting light-sport aircraft to have retractable landing gear included--the safety benefit for emergency landings on water or rough fields; that speed limitations make the performance restriction of a fixed gear redundant; that training and endorsement for pilots under existing §61.31 (e) adequately prepares pilots to operate aircraft with retractable landing gear; that the slow speed of light-sport aircraft will naturally limit damage in event of an inadvertent gear-up landing; that gear-up landings are not an uncommon occurrence; and that mechanical retractable landing gear is inherently simple compared to electrical, hydraulic, or pneumatically actuated systems. The FAA disagrees that aircraft other than gliders should have simple mechanical, or any other type of, retractable landing gear for the reasons stated above.

A commenter asked the FAA to define its safety concern for not permitting light-sport aircraft to have retractable landing gear. The FAA does not expect retractable gear would improve the safety of a light-sport aircraft. The FAA believes that retractable landing gear add to pilot workload, particularly during the critical takeoff and landing phases of flight. Further, the addition of retractable landing gear would introduce the potential for gear failure. Therefore, the FAA believes that allowing the use of retractable landing gear on light-sport aircraft other than gliders would provide no safety benefit for powered airplanes while adding to the operational and mechanical complexity of the aircraft.

Many of these commenters stated their position that retractable landing gear does not add to aircraft complexity while helping to reduce drag and increase aircraft performance. The FAA disagrees and notes that retractable gear adds complexity as

discussed above. The FAA notes that retractable landing gear are designed to enhance the performance of aircraft by reducing drag. This performance improvement is typically attained at operational speeds that exceed the performance limitations for light-sport aircraft. Several commenters proposed alternative rule language to permit simple mechanical retractable landing gear, and to define repositionable landing gear. As stated above, the FAA is not revising the light-sport aircraft definition to permit retractable landing gear on aircraft other than gliders. The FAA discusses repositionable landing gear later in this section.

Some commenters proposed to permit simple mechanical retractable landing gear for specific makes and models of aircraft, which would otherwise satisfy the proposed light-sport aircraft definition. Other proposed exceptions included replica fighter aircraft, and existing classic aircraft. The FAA does not agree for the reasons stated elsewhere in this section.

A commenter submitted a description of an existing aircraft mechanical retractable landing gear, with a pneumatic gear position indicating system. The FAA believes that the system's complex description justifies the FAA's position that it is inappropriate for the light-sport aircraft.

Several commenters stated that it is discriminatory to permit retractable landing gear for some kinds of light-sport aircraft but not for others. The FAA explains below why it is allowing retractable landing gear for gliders.

Several commenters stated that, by including a reference to landing gear, the FAA does not include provisions for foot-launched aircraft, such as hang gliders and powered paragliders in the light-sport aircraft definition. The FAA does not consider these to be

light-sport aircraft. As stated in the proposed rule, the FAA specifically intended to exclude from consideration as light-sport aircraft configurations in which the engine and/or wing is mounted on the person operating the aircraft, rather than a fuselage.

A commenter requested a definition of repositionable landing gear that distinguishes it from retractable landing gear. The FAA notes that for the purposes of light-sport aircraft, repositionable landing gear is wheeled landing gear that allows an aircraft designed for operation on water to take off and land from a hard surface and which may be retracted on the ground to permit takeoff and landing on water. Repositionable landing gear remains fixed in its position from takeoff through landing. For aircraft intended for operation on water, repositionable landing gear is acceptable for light-sport aircraft because it does not add to mechanical or operational complexity.

In the proposed rule, the FAA had permitted repositionable landing gear for seaplanes. The FAA had not intended to only permit repositionable landing gear for fixed wing airplanes intended for operation on water. Upon further consideration, the FAA has changed the term "seaplanes" to "aircraft designed for operation on water." This change in terminology is consistent with FAA's original intention to permit powered parachutes and weight-shift-control aircraft to be used for operation on water. It also removes the restrictions on powered parachutes and weight-shift-control aircraft designed for operation on water implied by the use of the term "seaplanes." As noted previously in the discussion of light-sport aircraft weight limits, the FAA has also intended to permit the light-sport aircraft definition to include flying boat aircraft. For this reason, the FAA has added the term "hull" to paragraph (12) of the light-sport aircraft definition.

Several commenters saw no difference between simple retractable landing gear, and the repositionable landing gear that the FAA's proposal would permit for seaplanes. The FAA disagrees. The FAA did not intend to permit retractable landing gear for aircraft designed for operation on water. The FAA believes that the repositionable landing gear that will be permitted for light-sport aircraft that are designed for operation on water is consistent with the FAA's original position that sport pilots flying aircraft other than gliders should not have to concern themselves with verifying the position of a light-sport aircraft's landing gear.

Although no comments were received on the topic, FAA did not intend for the definition of light-sport aircraft to preclude the installation of skis. FAA believes that fixed skis are acceptable for light-sport aircraft, and retractable skis are not acceptable for light-sport aircraft.

Some commenters pointed out a need for provisions for a simple retractable wheel for gliders that are light-sport aircraft. The FAA agrees that retractable landing gear is acceptable for use on light-sport gliders. Most of the gliders that otherwise meet the definition of a light-sport aircraft do make use of retractable landing gear. Reduction of drag is of critical importance for gliders, because they do not use power to generate airspeed and maintain lift. Because of these considerations, the FAA is revising the definition of a light-sport aircraft to permit a retractable landing gear (wheel or skid) for gliders. The consensus standards for light-sport aircraft gliders should assure that the retractable landing gear will be a simple mechanically operated system.

Changes

The words, “since its original certification has continued to meet the following” are added to the introductory text of §1.1. The reasons for this are discussed in the section titled “Modification of Type-Certificated Aircraft to Meet the Light-Sport Aircraft Definition.”

The FAA is restructuring the maximum takeoff weight requirements in paragraph (1) of the definition of “light-sport aircraft.” In addition, the FAA is changing the maximum takeoff weight from “1,232 pounds (560 kilograms)” to “not more than 1,320 pounds (600 kilograms)” and is adding “1,430 pounds (650 kilograms) for an aircraft designed for operation on water.”

For the V_H requirements in paragraph (2), “115 knots CAS under standard atmospheric conditions” is changed in the final rule to read “120 knots CAS under standard atmospheric conditions at sea level.”

In paragraph (3) (regarding V_{NE} for a glider), “115 knots CAS” is changed to “120 knots CAS.”

Proposed paragraph (4) (regarding V_{S0}) is not adopted in the final rule.

Proposed paragraph (5) (regarding V_{S1}) is adopted as paragraph (4) in the final rule, with the following change. The words “44 knots CAS” are changed to read, “45 knots CAS at the aircraft’s maximum certificated takeoff weight and most critical center of gravity.”

Proposed paragraph (6), prescribing a maximum seating capacity of two seats, is renumbered as paragraph (5) in the final rule and adopted with the addition of a non-substantive change to include the words “no more than.”

Proposed paragraph (7), prescribing a single, non-turbine engine for powered light-sport aircraft, is renumbered as paragraph (6) in the final rule and modified by replacing the word "nonturbine" with "reciprocating."

The fixed or ground-adjustable propeller requirements for light-sport aircraft in proposed paragraph (8) are divided into paragraphs (7) and (8) in the final rule to distinguish between powered gliders and other powered aircraft. In the final rule, paragraph (7) requires a fixed or ground-adjustable propeller for powered aircraft other than a powered glider. Paragraph (8) requires a fixed or autofeathering propeller system for a powered glider.

Paragraph (9), regarding the gyroplane rotor system, is adopted without change.

Paragraph (10), concerning a nonpressurized cabin, is adopted without change.

Proposed paragraph (11) contained requirements for fixed landing gear for light-sport aircraft, with an exception permitting repositionable landing gear for seaplanes. In the final rule, this is modified and divided into paragraphs (11) and (12) in the final rule for clarity. In the final rule, paragraph (11) requires fixed landing gear, except for an aircraft intended for operation on water or a glider. Paragraph (12) requires fixed or repositionable landing gear, floats, or a hull for an aircraft intended for operation on water.

Paragraph (13) is added to permit fixed or retractable landing gear for gliders.

Definition of "Powered Parachute"

Several commenters requested that the powered parachute definition be broadened to permit paragliders and paramotors, or other forms of foot-launched aircraft.

Some commenters were opposed to identifying these aircraft as powered parachutes. The FAA does not intend light-sport aircraft to include foot-launched aircraft because the variety of these aircraft combined with the lack of an aircraft fuselage and an aircraft geometry based on the individual characteristics of the operator would not be consistent with the FAA's desire for training aircraft built to specific design and performance standards.

Commenters proposed that the rule make provisions for land- and sea-classes for powered parachutes. The proposed rules for aircraft certification do not preclude this, assuming that appropriate aircraft design consensus standards for both land and sea class powered parachutes are developed. Similarly, the FAA did not intend to preclude the installation of skis on powered parachutes. As stated previously, the FAA believes that fixed skis are acceptable for light-sport aircraft. The FAA will participate in the development of the consensus standards for powered parachute design and performance, and will determine when these standards are completed and acceptable for use.

Some commenters proposed specific language for the definition of a powered parachute. The FAA agrees that the definition should make clear that the wing of a powered parachute does not deploy unless the aircraft is in motion, and is revising the definition to accommodate this. Also, the definition is being revised to characterize the powered parachute wing as "flexible" or "semi-rigid" instead of the term "non-rigid" that was used in the proposed rule. This change more closely represents current designs for powered parachutes. In the proposed rule, the definition described the wing as "…inflat[ing] into a lifting surface when exposed to a wind." The definition is revised to state "…the wing is not in a position for flight until the aircraft is in motion…" to more

correctly correspond to powered parachute operational practice. The language in the proposed definition stated that the engine is an integral part of the aircraft. The definition is revised to specify that the engine is a part of the fuselage, as was intended by the FAA. Also, the revised definition specifies that the seats are a part of the fuselage. That is consistent with current designs and was intended by the FAA. The language in the proposal did not address this consideration.

A commenter proposed that the definition identify different classes of powered parachutes, including utility or commercial. The FAA notes that powered parachutes will not be issued type certificates. Aircraft used for commercial purposes typically have a type certificate based on compliance with the airworthiness standards and certification procedural requirements contained in 14 CFR. The FAA intends that experimental and special light-sport aircraft be limited to activities generally considered to be sport and recreation. The operating limitations for experimental and special light-sport aircraft will generally prohibit these aircraft from being used for commercial purposes.

The FAA received comments that the definition for powered parachute aircraft should not be limited to aircraft with a fuselage. The FAA does not agree for reasons stated in the proposed rule and notes that to remove this restriction would permit foot-launched vehicles, such as powered paragliders, to be considered light-sport aircraft. The FAA retains the requirement for a fuselage in the definition.

Changes

The proposed rule stated: "A powered parachute means a powered aircraft that derives its lift from a non-rigid wing that inflates into a lifting surface when exposed to a wind." This is changed to state: "A powered parachute means a powered aircraft

comprised of a flexible or semi-rigid wing connected to a fuselage so that the wing is not in position for flight until the aircraft is in motion."

The proposed definition also stated: "A powered parachute is propelled by an engine that is an integral part of the aircraft and is controlled by a pilot within a fuselage that is suspended beneath the non-rigid wing." The definition is changed to state: "The fuselage of a powered parachute contains the aircraft engine, a seat for each occupant and is attached to wheels or floats."

Definition of "Weight-Shift-Control Aircraft"

Several commenters proposed alternative definitions for the weight-shift-control aircraft that would permit rigid wings with ailerons and rudder control. One commenter noted that the consensus standard for weight-shift-control aircraft that is being developed makes provisions for rigid-wing aircraft. The commenter believes that this is a good feature. The FAA's definition identified "…a framed, pivoting wing…." A rigid wing is beyond what the FAA intended for these aircraft. The FAA intended for the weight-shift-control aircraft classification to address only flex-wing aircraft. The definition is being revised to clarify this by specifically indicating that the aircraft is "controllable only in pitch and roll."

A commenter questioned the FAA's objective in making a classification for weight-shift-control aircraft. The FAA believes that weight-shift-control aircraft should be distinguished not only by their use of flexible wings and weight shift for flight control, but also by the aircraft response to a pilot input. Pilot input is applied to a control bar that is a rigid wing member. The rigid wing member is limited to translation in a lateral plane

that is either push forward (aircraft nose up)/pull aft (aircraft nose down), or push left (aircraft turn right)/push right (aircraft turn left). The former motions control aircraft pitch; the latter motions control aircraft roll. These motions cause aircraft response in the opposite sense for a conventional three-axis-control aircraft. The training for sport pilots to operate a weight-shift-control aircraft is based on these assumptions.

A commenter stated that the definition of a weight-shift-control aircraft should more correctly address control by changing the direction of wing lift, rather than changing the aircraft center of gravity location. The commenter also noted that if aircraft center of gravity location is calculated with respect to a fuselage station, then the pilot control inputs do not change the airplane center of gravity location. The FAA agrees with the commenter, and the weight-shift-control aircraft definition is revised to indicate that for flight control the center of gravity location is considered in relation to the wing.

The FAA did receive some comments that the definition for weight-shift-control aircraft should not be limited to aircraft with a fuselage. The FAA does not agree for reasons stated in the proposed rule and notes that to remove this restriction would permit foot-launched vehicles, such as powered or unpowered hang gliders, to be considered light-sport aircraft. The FAA has retained the requirement for a fuselage.

The FAA is working with the weight-shift-control aircraft technical committee of ASTM. The FAA has discussed with this group that the definition of weight-shift-control aircraft should be limited to two-axis-control aircraft, in which the wing pitch attitude may vary, and the wing position may be moved about the longitudinal axis of the aircraft. The definition of weight-shift-control aircraft precludes yaw control by vertical surfaces,

or hinged control surfaces such as a rudder or ailerons to distinguish these aircraft from airplanes.

Changes

The proposed definition of weight-shift control aircraft stated: "Weight-shift-control aircraft means a powered aircraft with a framed pivoting wing and a fuselage that is controllable in pitch and roll only by the pilot's ability to change the aircraft's center of gravity." This is changed to state: "Weight-shift-control aircraft means a powered aircraft with a framed pivoting wing and a fuselage controllable only in pitch and roll by the pilot's ability to change the aircraft's center of gravity with respect to the wing."

The FAA is also adding to the definition the following sentence: "Flight control of the aircraft depends on the wing's ability to flexibly deform rather than the use of control surfaces."

V.2. Part 21—Certification Procedures For Products And Parts

Section 21.175 Airworthiness certificates: Classification

A few commenters recommended that light-sport aircraft be issued standard airworthiness certificates. The FAA agrees that a light-sport aircraft may be issued a standard airworthiness certificate if it meets the requirements of the airworthiness standards under §21.175 (a). But an aircraft issued a standard airworthiness certificate requires a type certificate for its design, and usually a production certificate to be manufactured. Any light-sport aircraft not manufactured under a type certificate cannot be issued a standard airworthiness certificate.

One commenter recommended that light-sport be added as a category of airworthiness certificate. The FAA agrees in part, but, as proposed in the NPRM and adopted in this final rule, determines that light-sport aircraft will be added as a category under special airworthiness certificate. Aircraft may receive a special airworthiness certificate in two separate ways. First, an aircraft may receive a special airworthiness certificate in the light-sport category if that aircraft meets a consensus standard. Second, if a light-sport aircraft does not meet a consensus standard, the owner may obtain an experimental certificate for it.

One commenter recommended retaining experimental as a purpose, and not as a classification, on the special airworthiness certificate. The FAA disagrees. Taking this action would not allow the FAA to distinguish the various purposes for which experimental certificates are issued. Also, this action was not proposed and is outside the scope of this rulemaking.

A few other commenters recommended that light-sport aircraft be required to have type certificates. One purpose of this rule is to provide for increased safety without substantially increasing the burden on the industry. Imposing type design requirements would add substantially to the cost of producing aircraft. A type certificate will not be necessary for light-sport aircraft that are certificated as special light-sport aircraft or experimental light-sport aircraft. They are issued airworthiness certificates with operating limitations that provide an appropriate level of safety for these aircraft. However, if the manufacturer of a light-sport aircraft chooses to apply to the FAA and demonstrates the appropriate level of compliance with the existing regulations, it may obtain a type certificate for its light-sport aircraft.

Finally, upon further review, the FAA is correcting the wording of paragraph (b) to remove the word "categories" and the words "experimental airworthiness certificate" are corrected to read "experimental certificate." This is necessary because all of the items in the list are not categories of special airworthiness certificates, and the experimental certificate does not indicate the airworthiness standards that the aircraft meets.

Changes

In paragraph (b), the word "categories" is removed, and the words "experimental airworthiness certificate" are corrected to read "experimental certificate."

Section 21.181 Duration [of airworthiness certificates]

Several commenters agreed with the FAA's position that the aircraft owner is ultimately responsible for the airworthiness of the light-sport aircraft. These commenters also assumed that the FAA could take certificate action against the holder of the airworthiness certificate if necessary. The FAA discussed certificate action in the NPRM, but realizes that the proposed rule would not have provided a sufficient regulatory means to invalidate the airworthiness certificates issued to these aircraft. The FAA is therefore adopting language to include several limitations to the duration of the airworthiness certificate.

The proposed rule would have revised paragraph (a)(1) to include requirements for special airworthiness certificates in the light-sport category. The FAA has decided not to amend (a)(1) but to move the proposed requirements for maintaining a valid

special airworthiness certificate in the light-sport aircraft category to new paragraph (a)(3) (and redesignate proposed (a)(3) as (a)(4)). The new paragraph clarifies that those requirements must be continuously met to maintain the validity of the airworthiness certificate. The paragraph indicates that the aircraft must meet the definition of a light-sport aircraft; conform to its original configuration, except for authorized alterations; have no unsafe condition or be likely to develop an unsafe condition; and be registered in the United States. If a special light-sport aircraft fails to meet the limitations listed under §21.181 (a)(3), the special airworthiness certificate issued under §21.190 (a) is no longer valid. However, the aircraft may still be eligible for an experimental certificate issued under §21.191 (i)(3) with a duration established by §21.181(a)(4).

Changes

Paragraph (a)(1) is retained without change in the final rule. Proposed paragraph (a)(3), which discusses experimental certificates, is redesignated as (a)(4), and a new paragraph (a)(3) addressing special airworthiness certificates is added. New paragraph (a)(3) adds requirements that the aircraft must meet to maintain eligibility for a special airworthiness certificate.

Section §21.182 Aircraft identification

The FAA received no comments on this section.

Changes

The proposal is adopted without change.

Proposed §21.186 (adopted as §21.190—see discussion below)

Proposed §21.186 is renumbered as §21.190 in the final rule. This is being done because §21.45, which addresses privileges of the holder or licensee of a type certificate for a product, refers to §§21.173 through 21.189. Since light-sport aircraft are not issued type certificates, the FAA is moving this section on light-sport aircraft out of that group of sections to §21.190.

Section §21.190 Issue of a special airworthiness certificate for a light-sport category aircraft (proposed as §21.186)

Paragraph (a) Purpose: The FAA received comments that suggested using certification standards already acceptable in Europe and other countries. The FAA opted for design and performance standards developed through the consensus standard process. Those working on the consensus standards are aware of the other certification standards and may adopt all or a portion of them as deemed appropriate. See also discussions in §1.1 above.

The FAA received several comments stating that gyroplanes also should be allowed to obtain special airworthiness certificates in the light-sport category under the terms of the proposed rule and not be limited to experimental certificates. The commenters recommended that gyroplanes have the same options as the other types of special light-sport aircraft to obtain a special light-sport aircraft airworthiness certificate. See the discussion of gyroplanes under the definition of "light-sport aircraft" in §1.1 above.

In addition, upon further review by the FAA, the words "for sport and recreation," "flight training," and "rental" are deleted from this paragraph because these intended operations are more appropriate for inclusion under the operating rules of §91.327. As discussed under that section, special light-sport aircraft may be used for these types of operations or purposes.

Paragraph (b) Eligibility: Proposed paragraph (b)(1) would have required that the registered owner of the aircraft provide the documentation listed in paragraph (b). Upon further review, the FAA realized that it was inappropriate to require the registered owner, rather than the applicant for the airworthiness certificate, to submit this information.

In many cases, the proposal may have resulted in the registered owner needing to resubmit the information required by paragraph (b) and the airworthiness certificate being needlessly re-issued with a change in ownership. This would be an unnecessary administrative burden to the owners, to the FAA, and to the manufacturers. As specified in §21.179, airworthiness certificates for all aircraft are transferred with the aircraft. Accordingly, the term "registered owner" in proposed paragraph (b)(1) is changed to "applicant" in the final rule.

Proposed (b)(1)(i) would have required the submission of the applicable pilot operating handbook. Upon further review, the FAA is changing the name of the document to "aircraft operating instructions." The name change will distinguish it from a pilot operating handbook, which is normally developed for small aircraft certificated under part 23. The content of the aircraft operating instructions will be governed by applicable consensus standard.

A few commenters recommended that the FAA revise paragraph (b)(1) to allow light-sport aircraft manufacturers to apply for blocks of registration numbers. This is unnecessary since it can be done under 14 CFR part 47, Aircraft Registration.

Proposed paragraphs (b)(1)(iv) and (b)(1)(v) were intended to prevent past and future modifications that deviate from the consensus standards. The final rule deletes the proposed requirement that the registered owner produce statements regarding the past and future modification. Instead, the final rule addresses this issue with a limitation on the duration of the certificate's effectivity under §21.181 (a)(3), discussed above. Also, the FAA is addressing alterations to these aircraft in the operating limitations contained in §91.327. The intent of the limitation is to preclude unauthorized alterations, repairs, and replacement parts. For additional discussion, see §91.327 (b)(5), and (b)(6) of the operating limitations concerning alterations and repairs for these aircraft.

Proposed paragraph (b) is also revised to require an applicant to submit the aircraft's flight training supplement. The FAA proposed that the manufacturer of an aircraft intended for certification with a special airworthiness certificate in the light-sport category issue a statement of compliance that identified the applicable pilot flight training manual and state that it would be made available to any interested person. The FAA is changing the term "flight training manual" to "flight training supplement." as this document is intended to supplement the aircraft's operating instructions. To ensure that all owners of these aircraft possess appropriate flight training information to safely operate the aircraft, the FAA is requiring an applicant for a special airworthiness certificate in the light-sport category to submit the aircraft's flight training supplement when application for that certificate is made.

Proposed paragraph (b)(2) would have prevented an aircraft having either a standard or a primary category airworthiness certificate from obtaining a special light-sport aircraft airworthiness certificate. This prohibition is broadened in the final rule to include not only aircraft issued standard or primary airworthiness certificates, but also those issued restricted, limited, or provisional airworthiness certificates or equivalent foreign airworthiness certificates. In broadening the rule's provisions, the FAA is using the same rationale that it used in the proposed rule. In the preamble of the proposed rule, the FAA stated that allowing aircraft with standard or primary airworthiness certificates to obtain a special light-sport certificate would be an unnecessary burden on the manufacturers, the operators, and the FAA. The FAA also stated that there would be little interest in "downgrading," as a special light-sport aircraft airworthiness certificate would have more restrictive operating limitations. (See discussion of proposed §21.186 (b)(2).) The FAA is making these changes for the same reasons. These provisions are not intended to preclude a special light-sport aircraft airworthiness certificate from being issued to an aircraft that has been previously issued an experimental certificate.

A few commenters also recommended that the FAA revise paragraph (b)(3) to allow use of designated airworthiness representatives (DARs) at factories for the purpose of performing FAA inspections. DARs are FAA designees and, as authorized, they may perform FAA inspections. They may be employed by manufacturers. No revision is necessary to allow DARs the authority to perform the inspections under (b)(3). See also the discussion on DARs under §21.191 (i)(1).

A commenter stated that requiring an individual FAA inspection before issue of a special airworthiness certificate is unnecessary. The FAA disagrees. The FAA, through

an aviation safety inspector or a designee, inspects all aircraft before issuing an airworthiness certificate. An inspection is necessary to establish a minimum level of safety for special light-sport aircraft. The inspection is a way of determining that the aircraft complies with the applicable consensus standard. As discussed above, an inspection may be performed by an appropriately authorized FAA designee.

Another commenter wanted to know if minimum equipment required under § 91.205 will apply to these aircraft. Section 91.205 only applies to powered civil aircraft with standard category U.S. airworthiness certificates. Instead, the appropriate minimum equipment requirements for specific categories and classes of light-sport aircraft will be established by the applicable consensus standard. In addition, the operating rules in part 91 may establish specific requirements for particular operations. See part 91 general issues discussion on minimum equipment.

Another commenter recommended that the rule address alterations. The FAA agrees and is revising the definition of "consensus standard" in §1.1 to permit authorized alterations. The FAA is also adding §91.327 (b)(5) and (b)(6) to better address repairs and alterations. See the discussions of those sections.

A commenter questioned if §21.190 (b) requires that the FAA perform an inspection every time a different wing is used or installed on a powered parachute or weight-shift-control aircraft. Owners of these types of aircraft regularly change the wings to change the performance and maneuverability of the aircraft. This allows the aircraft to have different capabilities depending on what the owner wants to do on the particular flight. The FAA does not consider an inspection necessary each time a wing is installed or removed, if the different wings have been inspected and authorized for

installation on the light-sport aircraft. If the manufacturer has authorized the installation of the different wings and the initial inspections have been done, the changing of wings does not need to be inspected again for installation, except as part of the regular aircraft maintenance. As discussed under part 45, the aircraft registration number must be placed on the fuselage, but is not required on the wing. Therefore, if the registration number is placed on the wing, it must have the same registration number as the one placed on the fuselage. The FAA notes that the inspection requirement under §21.190 (b)(3) pertains to the issuance of an airworthiness certificate only and not to inspection after maintenance or repair activities.

Paragraph (c) Manufacturer's statement of compliance: Two commenters recommended that the FAA stop all rulemaking activity until it does a survey of manufacturers to determine how many would retroactively issue statements of compliance for a special airworthiness certificate. The FAA disagrees. The rule permits a manufacturer to issue a statement of compliance for any aircraft manufactured prior to the effective date of the rule. Therefore, each manufacturer would make a business decision whether to issue a retroactive statement of compliance.

Several commenters recommended delaying the effective date of the rule until the consensus standards are issued. Several other commenters said the proposal should be re-opened for comment when the consensus standards are developed. The FAA disagrees and notes that there are adequate opportunities for the public to participate in the development of the consensus standards. Also, alternative consensus standards may be developed and presented to the FAA for consideration. Any consensus standards

accepted by the FAA will constitute one means, but not the only means, of complying with the rule. This is discussed under the definition of "consensus standard" in §1.1.

In the NPRM, under paragraph (c)(4) (now (c)(3)), the FAA referred to a "quality system." This was intended to be consistent with other references to a "quality assurance system" in the NPRM. In the final rule, paragraph (c)(3) has been revised accordingly.

Several commenters recommended that the pilot operating handbook and maintenance and aircraft operating instructions comply with the consensus standard. The FAA agrees, and the final rule, under §21.190 (c)(4), includes the requirement that both the aircraft operating instructions and maintenance and inspection procedures comply with the consensus standard. As discussed under §1.1 above, the FAA is changing the term "pilot operating handbook" to "aircraft operating instructions."

A few commenters recommended that the pilot flight training manual be deleted from the list of items that need to be submitted in proposed paragraph (c)(5) (now (c)(4)). The FAA disagrees. These commenters stated that this information is normally provided by the FAA or another third party. The FAA agrees that a person other the manufacturer may develop this manual. However, the manufacturer must provide this manual if the aircraft model is to be eligible for the special airworthiness certificate in the light-sport category because it provides specific training information necessary for a make and model endorsement. In addition, in final rule paragraph (c)(4), the term "flight training manual" is changed to "flight training supplement." This is being done to more clearly indicate that this document supplements the aircraft operating instructions.

Several commenters suggested that the manufacturer's system for monitoring and correcting unsafe conditions comply with the consensus standard. The FAA agrees. The

FAA intended that the continued airworthiness system meet the consensus standard, as evidenced by including this requirement in §1.1 under the definition of "consensus standard" in the proposed rule. Proposed §21.186 (c)(6) would only have required that the manufacturer identify its system for monitoring and correcting safety-of-flight issues in the statement of compliance. The final rule, under §21.190 (c)(5), requires that the manufacturer's continued airworthiness system comply with an identified consensus standard. Additionally, the final rule clarifies that the process the manufacturer will use to monitor and correct safety-of-flight issues will include the issuance of safety directives.

Some commenters recommended that there be independent third-party audits of manufacturer compliance with consensus standards, including those dealing with monitoring of continued operational safety. The FAA believes that the manufacturer's statement of compliance is appropriate for determining whether a light-sport aircraft meets the consensus standards. Past experience with construction of non-type-certificated aircraft that meet the definition of light-sport aircraft has not indicated a need for significant FAA oversight. The FAA accepts that a manufacturer can participate in a system that includes voluntary third-party audits, but there is no requirement in this rule for these audits. The FAA generally will not perform compliance evaluations of these manufacturers. Note that manufacturers will, however, have to comply with any audit requirements defined in the consensus standards.

A commenter wanted the FAA to establish criteria for a third party to use to conduct compliance audits within industry standards. As stated above, the FAA is not

requiring third-party audits of manufacturers. However, the consensus standards may establish criteria for audits to be performed.

Another commenter states that FAA oversight of the consensus standards is not clear once the FAA has accepted them. The FAA agrees that more clarification is needed and has added more detail on FAA participation in consensus standards in §1.1, as discussed above.

In proposed paragraph (c)(8), the FAA proposed that the manufacturer test its aircraft in accordance with a production acceptance test procedure established in the consensus standard. The FAA is modifying the final rule (now (c)(7)) to specify that these production and acceptance test procedures include both ground and flight tests. Production acceptance tests are also discussed in the definition of "consensus standard" in §1.1.

Paragraph (d) Imported light-sport aircraft: A few commenters recommended that manufacturers in other countries meet the same consensus standards that the United States-manufactured aircraft must meet. Other commenters recommended that imported aircraft be issued a special airworthiness certificate without meeting the consensus standards, if the country of origin considered the aircraft airworthy. The proposed rule would have required all aircraft, regardless of the country of manufacture, to meet a consensus standard. This provision is retained in the final rule. This ensures a uniform level of safety for these aircraft, regardless of the country of manufacture. The FAA may accept a consensus standard developed in another country.

One commenter questioned whether foreign-manufactured ultralights would be eligible for a special light-sport aircraft airworthiness certificate, or whether they would have to be imported as experimental aircraft. As stated in paragraph (d), foreign-manufactured aircraft are eligible for a special light-sport aircraft airworthiness certificate. These aircraft must meet the same eligibility requirements as U.S.-manufactured aircraft and an applicant seeking a special airworthiness certificate for a light-sport category aircraft must also submit a manufacturer's statement of compliance. The FAA notes that these aircraft must not have been issued a foreign airworthiness certificate equivalent to a U.S. standard, primary, restricted, limited, or provisional airworthiness certificate. A foreign-manufactured ultralight would, therefore, not necessarily have to be imported as an experimental aircraft.

The FAA notes that in the regulatory text of paragraph (d), references to "imported light-sport aircraft" are changed to "light-sport aircraft manufactured outside the United States" Since a light-sport aircraft could be issued an airworthiness certificate in the light-sport category long after the aircraft has been physically imported into the United States, the FAA is revising the term "imported light-sport aircraft" to "light-sport aircraft manufactured outside the United States." This change clarifies that an applicant for an airworthiness certificate for an aircraft manufactured outside the United States must provide the evidence specified in paragraph (d) whenever an application for an airworthiness certificate under §21.190 is made. In addition, references to "import" and "export" are removed, since the use of these terms is redundant when referring to bilateral agreements.

Proposed paragraph (d)(1) would have required evidence that the imported light-sport aircraft was manufactured in a country with which the United States had an agreement for import or export of that particular product. The FAA has determined that the proposed rule language would unduly limit the number of exporting countries. To ease this restriction, the FAA has determined that the existence of a Bilateral Airworthiness Agreement (BAA) concerning airplanes or a Bilateral Aviation Safety Agreement (BASA) with associated Implementation Procedures for Airworthiness (IPA) concerning airplanes, or equivalent airworthiness agreement, provides a suitable basis for issuing an airworthiness certificate for aircraft manufactured outside the United States. Any BAA, BASA with an IPA, or equivalent airworthiness agreement concerning airplanes between the country of export and the United States is sufficient, even if the agreement does not address light-sport aircraft. These agreements establish a working history and relationship between the countries, even though light-sport aircraft may not be specifically addressed in the agreement. These bilateral agreements provide a means by which the FAA could, if necessary, seek assistance from the local Civil Aviation Authority (CAA) on any light sport aircraft problems dealing with production, continued airworthiness, or other matters needing investigation or analysis.

Proposed paragraph (d)(2) would have required evidence that the make and model of the aircraft manufactured outside of the United States is eligible for an airworthiness certificate or flight authority in the country of manufacture. The final rule removes the words "make and model." As the provisions of the rule address specific aircraft, the use of the term "make and model" is redundant. The FAA is also adding the words "or other similar certification" to recognize additional methods of providing evidence of

airworthiness certification in the country of manufacture. Special light-sport aircraft imported into the United States may meet other national certifications for which there may not be an equivalent in the United States.

The FAA is deleting proposed paragraph (d)(3) that required that the civil aviation authority of the country of export to determine that the aircraft is in a condition for safe operation. This requirement is deleted because an inspection by a foreign CAA is redundant. Special light-sport aircraft will be inspected as part of the process for issuing an airworthiness certificate under paragraph (b)(3).

Changes

Paragraph (a): The FAA is changing the paragraph caption of paragraph (a) to read "Purpose." Elsewhere in the paragraph, the words "for sport and recreation," "flight training," and "rental" are deleted.

Paragraph (b): In paragraph (b)(1), the term "a registered owner" is changed to "an applicant," and the word "submit" is changed to "provide."

In paragraph (b)(1)(i) "applicable pilot operating handbook" is changed to "the aircraft's operating instructions."

In paragraph (b)(1)(ii), "applicable maintenance and inspection procedures" is changed to "the aircraft's maintenance and inspection procedures."

The provisions of proposed paragraphs (b)(1)(iv) and (v) are not adopted. The intent of these provisions is now addressed in §91.327.

In the final rule, new paragraph (b)(1)(iv) states that an applicant must provide the FAA with "the aircraft's flight training supplement."

In paragraph (b)(2), "in the standard or primary category" is revised to include aircraft with restricted, limited, or provisional airworthiness certificates.

Paragraph (c): The paragraph was reworded and reorganized for improved clarity as follows:

Proposed paragraphs (c)(1) and (c)(2) are combined so that (c)(1) now includes "the consensus standard used."

Proposed paragraph (c)(3) is redesignated as (c)(2) and revised with no substantive change.

Proposed paragraph (c)(4) is redesignated as (c)(3) and revised. The term "quality system" is changed to "quality assurance system."

Proposed paragraph (c)(5) is redesignated as (c)(4) and reorganized. In addition, the term "applicable pilot operating handbook" is changed to "aircraft operating instructions," and "pilot flight training manual" is changed to "aircraft flight training supplement."

Proposed paragraph (c)(6) is redesignated as (c)(5) and is revised. Paragraph (c)(5) now states that the manufacturer will monitor and correct safety-of-flight issues, rather than identify a document to that effect. The paragraph also includes the requirement that the continued airworthiness system comply with the consensus standard

and that the process to monitor and correct safety-of-flight issues will include the issuance of safety directives.

Proposed paragraph (c)(7) is redesignated as (c)(6).

Proposed paragraph (c)(8) is redesignated as (c)(7) and is reorganized and revised. The paragraph now includes the requirement that the manufacturer will ground and flight test the aircraft.

Paragraph (d): The paragraph heading is changed from "Imported light-sport aircraft" to "Light-sport aircraft manufactured outside the United States."

The words "imported," "import," and "export" are removed in the final rule, and the words "manufactured outside the United States" are used.

In the introductory text, the words "registered owner" are changed to "applicant."

Paragraph (d)(1) includes more specific language regarding the types of international agreements that are required for aircraft manufactured outside of the United States to be certificated as special light-sport aircraft.

In paragraph (d)(2), the words "make and model" are removed; the words "flight authority" are changed to "flight authorization;" and the words "other similar certification" are added.

Proposed paragraph (d)(3) is deleted.

Section § 21.191 Experimental Certificates

Paragraph (i) Operating light-sport aircraft: The proposed rule made several references to "for the purpose of sport and recreation and flight training." These are not purposes related to the certification of light-sport aircraft, but are operational privileges and limitations. Therefore, all references to "sport and recreation" or "flight training" are removed from this section and addressed in the requirements for operating limitations set forth in part 91.

Proposed §21.191 (i)(1) would have permitted a light-sport aircraft with an experimental certificate to be used for training for compensation or hire until 36 months after the effective date of the regulation. Currently, two-seat ultralight vehicles are not permitted to be operated under part 103, but can be used for flight training for compensation or hire under exemptions to part 103. Because these provisions affect the operation, rather than the certification, of the aircraft, the rule language containing these provisions has been moved to §91.319, and all comments addressing this issue are discussed under that section.

As discussed in the following paragraphs, there were numerous comments on the certification of existing two-seat ultralight vehicles. A few commenters also expressed concern over the certification of older unregistered ultralight-like aircraft. One commenter suggested that these unregistered ultralight-like aircraft be "grandfathered" into the rule. Paragraph (i)(1) effectively allows grandfathering if the aircraft meets the requirements for the issuance of an experimental certificate, and is safe for operation as a light-sport aircraft. There is no requirement that these aircraft meet a consensus standard. Another commenter stated that requiring that certain documents, such as operating

instructions and inspection procedures manuals, for certification of older unregistered ultralight-like aircraft would be a problem. Owners may no longer possess or be able to obtain these documents. Paragraph (i)(1) has no requirements that the applicant have any manufacturer documents in order to be issued an airworthiness certificate.

Several commenters stated that they wanted to receive an experimental certificate for their existing unregistered ultralight-like aircraft without having to meet the "51%-build" requirement for amateur-built aircraft. The "51%-build" requirement applies only to amateur-built aircraft certificated under §21.191 (g). There is no "51% build" requirement for existing unregistered ultralight-like aircraft that are certificated under §21.191 (i)(1).

Several commenters expressed concern over the process of issuing airworthiness certificates for unregistered ultralight-like aircraft and recommended measures to speed the process and prevent backlogs, such as use of DARs. Another commenter wanted to know if the FAA would allow representatives from private ultralight organizations to be designated as inspectors, as in done in Great Britain. The FAA believes that after the effective date of this final rule, a large number of owners of existing two-seat ultralight-like aircraft operating under training exemptions will apply for an experimental light-sport certificate. The FAA believes that there are several thousand of these aircraft that have not been registered. The FAA intends to rely primarily on DARs to meet the initial need for issuing airworthiness certificates on light-sport aircraft. The FAA is working with industry to develop procedures to ensure that adequate numbers of DARs will be available. The FAA will issue advisory material to on how to apply to be a DAR to

certificate light-sport aircraft and how to get light-sport aircraft registered and certificated.

The FAA recognizes that a number of administrative and resource challenges will prevent the entire existing fleet of unregistered ultralight-like aircraft from being certificated on September 1, 2004. The FAA expects registration and certification to proceed as expeditiously as circumstances permit once this final rule becomes effective.

The FAA proposed that if a person sought to have an aircraft certificated under §21.191 (i)(1) that did not meet the definition of "ultralight vehicle" specified in part 103, that person would have to apply to register the aircraft with the FAA not later than 24 months after the effective date of the rule. Under the proposal, a person would then be required to have the aircraft inspected by the FAA (or a designated representative of the Administrator) and have an experimental light-sport certificate issued for the aircraft not later than 36 months after the effective date of the final rule.

Under the final rule, the FAA is revising §21.191(i)(1) to remove language that many believed would have allowed a person to operate an aircraft, which exceeds the parameters of an ultralight vehicle yet meets the definition of light-sport aircraft, without registering that aircraft for a period of 24 months. The FAA is also revising §21.191(i)(1) to avoid any implication that a person can operate these aircraft for 36 months without an airworthiness certificate. The revised language makes clear the original intent of the proposal, which was that an experimental certificate will not be issued for an aircraft under §21.191 (i)(1) after August 31, 2007.

The FAA notes that, except as specified in §91.715, §91.203(a) prohibits a person from operating a civil aircraft unless it has within it an appropriate and current

airworthiness certificate and a registration certificate (or application as per §47.31(b)). Once an aircraft registration certificate has been issued by the FAA and received by the applicant, a two-place training vehicle operated under an exemption to part 103 is considered an aircraft. Operation of the aircraft without an airworthiness certificate is a violation of the provisions of §91.203(a) and the statutory provisions of 49 USC §44711(a)(1). Preamble language contained in the notice may have misled some individuals operating under an exemption to part 103 to believe that an aircraft could be operated without both a registration certificate and an airworthiness certificate or that an aircraft issued a registration certificate could be operated without an airworthiness certificate. This impression may have been caused by using rule language that included a compliance date based on making an application for a registration certificate and not reiterating both the regulatory and statutory requirement for an aircraft to be issued an airworthiness certificate before it can be operated. The FAA should not have stated in the notice that if you currently operate an ultralight vehicle under a training exemption and have applied to the FAA for an aircraft registration, you would be allowed to continue to operate under a training exemption until you are issued an experimental, light-sport airworthiness certificate. The FAA strongly encourages those persons seeking airworthiness certificates for light-sport aircraft under 21.191(i)(1) to make the necessary arrangements to obtain airworthiness certification to coincide with the issuance of the aircraft's registration. Such action will minimize the amount of time that these aircraft cannot be legally operated.

The FAA also notes that if an ultralight-like aircraft does not meet the definition of an ultralight vehicle specified in part 103, or is not operated in accordance with the

provisions of an exemption under part 103 to conduct flight training, the aircraft can not be operated under part 91 until the aircraft has been registered with the FAA and an airworthiness certificate has been issued for the aircraft. Additionally, any person operating the aircraft must possess a current and valid pilot certificate.

After reviewing the comments, the FAA believes it is necessary to clarify that only aircraft that have not been previously issued U.S. or foreign airworthiness certificates are eligible for the experimental light-sport certificate under §21.191 (i)(1). If an aircraft has previously been issued any airworthiness certificate under part 21, it is not eligible for an experimental light-sport certificate under §21.191 (i)(1). Language has been added to §21,191 (i)(1) in the final rule to reflect his intent. Also see the discussion above, "III.5.A. Comments on Ultralight Vehicles."

Proposed paragraph (i)(2) addressed operating a light-sport aircraft that was assembled from an eligible kit. Proposed §21.193 (e)(5) stated that the assembler of an aircraft, seeking certification under paragraph (i)(2), had to provide the instructions used to assemble the aircraft. There was no requirement in §21.191 (i)(2) that a person had to assemble the aircraft in accordance with the manufacturer's assembly instructions. In the final rule, therefore, §21.191 (i)(2) now includes the requirement that the aircraft kit be assembled in accordance with the manufacturer's assembly instructions that meet an applicable consensus standard.

A commenter stated that experimental certificates should not be issued for light-sport aircraft that are not intended for experimental use but are intended to be mass-produced on production line. The commenter said that the FAA should create another status for aircraft whose certification falls between current type-certificated aircraft and

true experimental aircraft. The FAA believes that the special light-sport aircraft certificate serves this purpose. In "experimental certificate," the word "experimental" indicates that there is no known standard for the design or production of the aircraft. Therefore, the FAA believes that experimental certificates are appropriate for kit-built aircraft.

The same commenter noted that proposed §21.191 (i) would allow certification of aircraft carrying persons for compensation or hire that have never been shown to meet any design or production airworthiness standard. The FAA notes that these aircraft will not be permitted to be used for the full range of compensation or hire operations normally carried out by aircraft with standard airworthiness certificates. Operating limitations for these aircraft will restrict their use, as specified in §91.319. The commenter also stated that there is no rigid conformity requirement for kit-built aircraft certificated under this section. The FAA disagrees and notes that an applicant seeking to certificate a kit-built aircraft under §21.191 (i)(2) must also comply with §21.193(e) and provide a statement of compliance issued by the aircraft's manufacturer that contains the information generally required by §21.190 (c). The commenter was also concerned that an operator of a special light-sport aircraft could decide to obtain an experimental light sport certificate when that operator no longer intends to comply with the more stringent operating limitations of the special light-sport aircraft. The commenter asserts that the operator could still engage in many of the operations permitted for special light-sport aircraft without meeting those more stringent limitations. The FAA disagrees. Operating limitations specified in §91.319 for experimental light-sport aircraft certificated under

§21.191 (i)(3) are more restrictive than the operating limitations issued to special light-sport aircraft.

The FAA is deleting the requirement that aircraft certificated under §21.191 (i)(2) be assembled without the supervision and quality system of the manufacturer. The FAA does not want to preclude individuals seeking certification of these aircraft under this section from obtaining the assistance of the manufacturer.

In paragraph (i)(3), the FAA is changing the reference to §21.190 from §21.186. In addition, the words "sport and recreation and flight training" are deleted. These limitations are addressed in operating limitations specified in §91.319.

A few commenters wanted the FAA to amend §39.1 to permanently relieve experimental aircraft from airworthiness directives. The FAA did not propose this action in the NPRM and considers it to be outside the scope of this rule.

Changes

The proposed amendment to paragraph (h) is adopted without change.

Paragraph (i) is changed by removing the words "for the purpose of sport and recreation and flight training" throughout.

Paragraph (i)(1) is changed to state that the paragraph applies to light-sport aircraft that have "not been issued an airworthiness certificate under [part 21]."

In paragraph (i)(1), the references to the time a person must apply for registration and receive an experimental certificate are removed and replaced with the sentence, "An experimental certificate will not be issued under this paragraph for these aircraft after

August 31, 2007."Also in paragraph (i)(1), the allowable period for which the aircraft may be used for compensation and hire for initial flight training was moved to §91.319.

In paragraph (i)(2), the term "eligible kit" is changed to "aircraft kit," and a reference to §21.193 (e) is included to clarify what constitutes an eligible kit. The paragraph is also changed to specify that the aircraft must be assembled in accordance with the manufacturer's assembly instructions that meet applicable consensus standards. In addition, the requirement that the kit be assembled without the supervision and quality system of the manufacturer is deleted.

In paragraph (i)(3), the FAA is changing the reference to §21.190 from §21.186. In addition, the words "sport and recreation and flight training" are deleted.

Section 21.193 Experimental certificates: general

One commenter suggested that the proposal would not permit a manufacturer to produce only kits. The FAA disagrees. The rule does not contain such a limitation. As proposed, the manufacturer is required to manufacture and assemble at least one complete aircraft of each make and model before an airworthiness certificate is issued for a kit-built aircraft under §21.191 (i). The aircraft assembled by the manufacturer must have been issued a special light-sport airworthiness certificate. This provides evidence that the aircraft meets an applicable consensus standard.

Other commenters recommended that the FAA clarify what an applicant must provide to the FAA to show that the kit-built light-sport aircraft was assembled in accordance with the manufacturer's instructions. The FAA agrees and has made changes

to the final rule in response to these comments. The changes to §21.191 (i)(2) mentioned above require the applicant to provide evidence that the aircraft was assembled in accordance with the manufacturer's assembly instructions and that the assembly instructions meet an applicable consensus standard.

One commenter questioned the need for the requirement that a registered owner provide evidence that an imported aircraft kit was manufactured in a country with which the United States had an agreement for its import or export. The commenter noted that kit-built aircraft would be classified as experimental light-sport aircraft under the rule. The FAA disagrees. Kit-built experimental light-sport aircraft certificated under §21.191 (i)(2) must comply with consensus standards. The FAA believes that all aircraft designed to a consensus standard must be manufactured in a country with which the United States has a BAA, BASA with an IPA concerning airplanes, or equivalent airworthiness agreement, regardless of whether the aircraft is a kit or a completed aircraft. The requirement in §21.193 (e)(6) is similar to that imposed under §21.190 (d). The requirement specified in §21.193 (e)(6) is retained and modified in a manner similar to §21.190 (d) to better describe the applicable international agreements. See discussion of §21.190 (d).

Proposed paragraph (e)(5) would have required that the assembler of a kit aircraft provide the assembly instructions. This requirement has been removed; however, §21.191 (i)(2) has been changed to require that these aircraft be assembled in accordance with the manufacturer's assembly instructions that meet an applicable consensus standard. Under that section, the FAA does not specifically require that an applicant submit manufacturer's assembly instructions; however, it may be necessary for the

applicant to present those instructions to show that the kit was assembled in accordance with those instructions.

The FAA has added new §21.193 (e)(5) to the final rule to require that the assembler of a kit aircraft provide the aircraft flight-training supplement. This is to assure that the assembler, who must operate and test the aircraft according to the manufacturer's instructions as part of the assembly process, is aware of any flight-training requirements that the manufacturer may specify. This document should also identify the set of aircraft to which the individual aircraft belongs. This is consistent with requirements for a ready-to-fly aircraft under §21.190 (b)(1).

A few commenters requested direct assistance from the FAA in the assembly and certification of their specific aircraft. This is outside the scope of rulemaking. The FAA does not assist persons in the assembly of aircraft. The FAA will, however, respond to questions regarding the certification of aircraft.

Additionally, the FAA received comments pertaining to the construction of kit-built light-sport aircraft and the FAA's control of kit manufacturers. The FAA provides for the safety of the kit-built aircraft through the inspection of the assembled aircraft prior to issuing an experimental certificate. Each kit-built aircraft is inspected prior to certification. An aircraft that is not in a condition for safe operation will not be issued an experimental certificate.

Changes

In paragraph (e), "registered owner" is changed to "applicant."

Paragraph (e)(1) is revised for clarity with no substantive change.

In paragraph (e)(2), "applicable pilot operating handbook" is changed to "the aircraft operating instructions."

In paragraph (e)(3), "applicable maintenance and inspection procedures" is changed to "the aircraft maintenance and inspection procedures."

Paragraph (e)(4) is revised for clarity and to correct references to §21.190 (which was proposed as §21.186). Also, the paragraph is modified to require that assembly instructions must meet an applicable consensus standard.

The provisions of proposed paragraph (e)(5) are not adopted. Instead, its provisions have been revised and placed §21.191 (i)(2).

In the final rule, new paragraph (e)(5) adds the requirement to provide the aircraft flight training supplement.

Proposed paragraph (e)(6) is revised to include more specific language regarding the types of international agreements that are required for an experimental light-sport aircraft to be certificated from an aircraft kit manufactured outside the United States.

V.3. Part 43—Maintenance, Preventive Maintenance, Rebuilding, and Alteration

V.3.A. Part 43--General Issues

The NPRM proposed to give repairmen (light-sport aircraft) the authority to work on special light-sport aircraft without complying with part 43. The proposal was based on the three factors--(1) special light-sport aircraft would be very basic in design and construction; (2) these aircraft, and parts installed on them, would not be FAA approved; and (3) work could be performed on these aircraft under operating limitations that would

contain provisions similar to part 43. The proposal would have required maintenance on these aircraft to be performed in accordance with operating limitations. This parallels the current requirement to have annual condition inspections on experimental amateur-built aircraft performed in accordance with the aircraft's operating limitations.

Several commenters expressed concern that there would be a degradation of safety by excepting special light-sport aircraft from part 43 maintenance performance standards and recording requirements. One commenter specifically expressed concerns that safety would be compromised without a maintenance standard and wanted part 43 to be required, or equivalent standards included in the aircraft operating limitations. The FAA agrees and is changing the rule to require maintenance to be performed in accordance with part 43 for reasons described below. These requirements will apply to repairmen, repair stations, or mechanics when performing and recording work on special light-sport aircraft.

After reviewing public comments on the definition of "light-sport aircraft" in §1.1, the FAA is increasing the takeoff weight of light-sport aircraft to allow incorporation of more reliable FAA-approved type-certificated engines and propellers. As a result of that change, the FAA anticipates that type-certificated engines and propellers will be installed on special light-sport aircraft, the majority of which will be used for flight training and rental.

The FAA wants to encourage the use of these of these type-certificated products, as they will enhance safety and reliability of special light-sport aircraft. This change necessitates more clearly established maintenance performance and recording procedures,

in part to address work that may be performed to satisfy ADs issued on products installed on these aircraft.

The need to perform and record maintenance on these aircraft in accordance with part 43 was highlighted when, on September 3, 2002, the FAA issued Airworthiness Directive 2002-16-07 on Bombardier-Rotax 912 and 914 series type-certificated engines. These engines may be used on ultralight-like aircraft used for flight training and amateur-built aircraft, the kinds of aircraft that may fall within the weight, speed, and two-seat occupancy parameters of light-sport aircraft. The AD demonstrates that it is reasonable to expect that some special light-sport aircraft used for training and rental will be subject to ADs.

Generally, the changes in this rule require compliance with §§43.9, 43.12, and 43.13. Repairmen performing maintenance and pilots performing preventive maintenance on light-sport special aircraft will be held to the following:

- The recording requirements in §43.9 for maintenance;
- The falsification and alteration of records prohibitions in §43.12; and
- The performance requirements in §43.13, which requires the repairman and pilot to do the work in accordance with the manufacturer's instructions and states that the work performed must be done in a way that the aircraft condition is equal to its original or properly altered condition.

Other sections of part 43 are changed to address the newly created sport pilots and repairmen (light-sport aircraft) under §§43.9, 43.12, and 43.13. These changes will permit these persons to perform maintenance in accordance with the provisions of part 43; however, a person performing work equivalent to a major repair or a major alteration

on a non-FAA-approved product installed on a special light-sport aircraft will not need to—

- Use the repair and alteration form (FAA Form 337) required by §§43.5 (b) and 43.9 (d);
- Use the list of major repairs and major alterations in part 43, appendix A, sections (a) and (b) to determine what constitutes a major repair or major alteration; or
- Record major repairs and major alterations as prescribed in part 43, appendix B.

The use of Form 337 is not required because special light-sport aircraft will be built to a consensus standard "accepted" by the FAA, but not "approved" by the FAA. Since data used to comply with the consensus standard will be accepted design data only, the FAA will not require the use of approved data for major repairs or major alterations, nor will the FAA require the use of a form that requires the listing of "approved" data for a major repair or major alteration of a special light-sport special aircraft. The FAA expects that the consensus standards will address the identification and recording of major repairs and major alterations for each category of light-sport aircraft.

For major repairs and major alterations performed on FAA-approved products installed on special light-sport aircraft, the recording requirements to document major repairs and major alterations in part 43 will apply.

Another commenter expressed concern that communication and navigation equipment required by part 91 would not be adequately maintained. The FAA agrees this

kind of equipment should be maintained in accordance with part 91 and the applicable provisions of part 43 and these requirements are now reflected in the rule.

Several commenters wanted part 43 to be amended to allow sport pilots to perform preventive maintenance as defined in part 43. The FAA agrees that sport pilots should be permitted to perform preventive maintenance on certain light-sport aircraft. Therefore § 43.3 is revised to permit sport pilots to perform preventive maintenance, but only on special light sport aircraft the pilot owns and operates.

V.3.B. Part 43--Section-by-Section Discussion

Section 43.1 Applicability

The FAA's response to comments regarding the applicability of part 43 to light sport aircraft are addressed in the discussion above. In the final rule, paragraph (b) is revised to remove proposed language stating that part 43 would not apply to any aircraft issued a special airworthiness certificate in the light-sport category.

In addition, paragraph (d) is added to create exceptions for major repairs and major alterations performed on products not produced under an FAA approval installed on special light-sport aircraft. If the parts are produced under an FAA approval, the exceptions in paragraph (d) do not apply.

Changes

The introductory text of paragraph (a) is amended to include a reference to the exception established by new paragraph (d).

Paragraph (b) is revised to remove the proposed exception for special light-sport aircraft.

Paragraph (d) is added to address the performance of major repairs and major alterations on special light-sport aircraft.

Section 43.3 Persons authorized to perform maintenance, preventive maintenance, rebuilding, and alterations

As stated above, §43.1 now includes maintenance performance and recording requirements for special light-sport aircraft. In §43.3, paragraph (c) is revised to allow repairmen to perform alterations as provided in part 65. This change is being made because part 65 has been revised to permit repairmen (light-sport aircraft) to perform alterations on special light-sport aircraft. Also, §43.3 (g) is revised to allow the holder of a sport pilot certificate to perform preventive maintenance on special light-sport aircraft, if he or she owns or operates the aircraft.

The new maintenance privileges for sport pilots and repairmen (light-sport aircraft) do not extend to work performed on type-certificated aircraft that meet the definition of light-sport aircraft. Sport pilots and repairmen (light-sport aircraft) will not be permitted to perform preventive maintenance and maintenance on type-certificated aircraft. This decision is based on the fact that they do not have the same level of experience as persons who currently perform maintenance and preventive maintenance

on type certificated aircraft. The FAA believes the amount of training required under this rule for sport pilots and repairmen (light-sport aircraft) is not sufficient to permit them to sign off maintenance-related tasks on more complicated type-certificated aircraft and this lack of training would create additional safety concerns.

The FAA wants to make it clear that, while an appropriately rated sport pilot may fly a type-certificated aircraft that meets the definition of light-sport aircraft, only certificated airframe and powerplant mechanics with inspection authorization and appropriately rated repair stations must conduct the annual inspection and ensure compliance with ADs and other inspections required to maintain a standard airworthiness certificate or other special airworthiness certificate issued to a type certificated aircraft.

Some commenters expressed confusion over what the term "preventive maintenance" means. As defined in §1.1, preventive maintenance means "...simple or minor preservation operations and the replacement of small standard parts not involving complex assembly operations." Preventive maintenance operations are listed in appendix A of part 43. As the term pertains to special light-sport aircraft, preventive maintenance may be performed by the holder of at least a sport pilot certificate. That aircraft must be owned or operated by that pilot and the work must be performed in accordance the performance rules specified in §43.13.

Experimental aircraft do not meet a recognized standard for certification, and the FAA has not imposed the maintenance rules in part 43 for the continuing airworthiness of these aircraft. Therefore, the limitations on the performance of preventive maintenance

in part 43 do not apply, and experimental aircraft may have preventive maintenance performed by any individual.

Light-sport aircraft manufacturers are not included in the list of persons authorized to perform maintenance, preventive maintenance, rebuilding or alterations, or approve an aircraft for return to service, because they are not required to hold an FAA-issued production approval or repair station certificate. This lack of FAA certification does not prevent the manufacturer from having FAA-certificated persons on its staff who are authorized to perform maintenance and inspection functions.

Changes

Paragraphs (c) and (g) of §43.3 are revised in the final rule as discussed above.

Section 43.7 Persons authorized to approve aircraft, airframe, aircraft engines, propellers, appliances, or component parts for return to service after maintenance, preventive maintenance, rebuilding, or alteration

In §43.7, paragraph (g) is added to enable the repairman (light-sport aircraft) with a maintenance rating to approve an aircraft certificated as a special light-sport category aircraft for return to service. This includes approving both special and experimental light-sport aircraft for return to service after the performance of either an annual condition inspection or a 100-hour inspection. It also includes approving a special light-sport aircraft for return to service after maintenance is performed on that aircraft.

Paragraph (h) is added to allow the holder of a sport pilot certificate to approve a special light-sport aircraft for return to service after performance of preventive maintenance as authorized in §43.3 (g).

For reasons similar to those discussed under §43.3, light-sport aircraft manufactures are not authorized to approve aircraft for return to service, unless otherwise certificated.

Changes

Paragraphs (g) and (h) are added to §43.7 as discussed above.

Section 43.9 Content, form, and disposition of maintenance, preventive maintenance, and alterations records (except inspections performed in accordance with part 91, part 125, §135.411(a)(1), and §135.419 of this chapter)

Section 43.9 is amended and reorganized for clarity. In the final rule, the FAA is adding a new paragraph (d) using the language presently at the end of paragraph (a) (beginning with the words "In addition to the entry required…"). This new paragraph contains the obligation for persons who perform major repairs and major alterations on type-certificated aircraft to record that work as prescribed in appendix B to part 43. As stated above, the FAA will not require that major repairs and major alterations on non-FAA-approved products installed on an aircraft certificated as a special light-sport category aircraft meet these requirements. New paragraph (d) is being established to facilitate the exception specified in §43.1 (d)(1), which states that the repair or alteration form specified in this section is not required to be completed when work is performed on a non-FAA-approved product. Major repairs and major alterations performed on FAA-

approved products must still meet the recording requirements in part 43. For a complete discussion, see "V.3.A. Part 43--General Issues" above.

In addition, although not related to the amendments for the recording major repairs and major alterations, the FAA is taking this opportunity to revise the heading of §43.9 and paragraph (c) to remove the reference to part 123, which no longer exists.

Changes

The heading for §43.9 is revised to remove the reference to part 123.

In paragraph (a), the concluding text (beginning with the words, "In addition to the entry required…") is designated as a new paragraph (d). In addition, the words, "required by this paragraph" are changed to "required by paragraph (a) of this section."

In paragraph (c), the reference to part 123 is removed.

V.4. Part 45—Identification And Registration Marking

Section 45.11 General

Although not proposed in the NPRM, the FAA is including an amendment to §45.11 in the final rule. The change is necessary because current §45.11 sets forth a requirement that an aircraft's identification plate must be secured either adjacent to and aft of the rearmost entrance door or on the fuselage surface near the tail surfaces. Powered parachutes and weight-shift-control aircraft have neither entrance doors or tail surfaces. Therefore, the FAA is adding an exception in a new paragraph (e) to address

powered parachutes and weight-shift-control aircraft. Identification plates on these aircraft may be secured to the aircraft fuselage exterior so that they are legible to a person on the ground.

Changes

Paragraph (a) is amended to add a reference to the exception in new paragraph (e).

Paragraph (e) is added, as discussed above.

The changes were not proposed.

Section 45.23 Display of marks; General

Section 45.23 (b) sets forth the general requirements for displaying registration marks ("N" numbers) on an aircraft, as well as other display markings for other types of aircraft. Although not originally included in the proposed rule, the FAA is adopting a revision to §45.23 (b) to respond to commenters' requests that light-sport aircraft have additional markings identifying them as light-sport aircraft similar to other marking requirements for experimental aircraft. This change to §45.23 adds the requirement for special light-sport aircraft certificated under §91.190 to include the mark "light-sport." The FAA emphasizes that aircraft having a standard airworthiness certificate that meet the definition of a light-sport aircraft are not required to have the mark "light-sport" displayed on the aircraft. Aircraft that are required to be marked "experimental" also are not required have the mark "light-sport" displayed on the aircraft.

Changes

Paragraph (b) is revised to add light-sport aircraft to the list of other aircraft to which the section applies. This amendment was not proposed.

Section § 45.27 Location of marks; nonfixed-wing aircraft

The FAA received several comments on the where marks should be located on non-fixed-wing aircraft. Some commenters recommended that the FAA require powered parachute owners to place markings on the airframe and not the airfoil. One commenter requested that markings be required on gas tanks. Another commenter wanted to be able to "swap out" the wings on weight-shift-control aircraft, as they have multiple wings that attach directly to one powered fuselage unit, and it only takes minutes to change them. The FAA believes that all of these commenters' concerns can be addressed by requiring that the markings be placed on the fuselage, as that is a permanent structure of these aircraft. The FAA has revised the rule language accordingly.

Another commenter requested that marks be required on the wing or the canopy, as is done in Europe. The FAA will allow markings on the wings or canopy if the operator wants to place them there; however, they will not be required. As discussed above, the markings are required on the fuselage. This allows the interchanging of wings without having to have the wings and the fuselage recertificated as one unit each time they are changed.

Changes

In paragraph (e), the words "on any structural member or airfoil" have been changed to "on any fuselage structural member."

Section 45.29 Size of marks

Some commenters suggested that the rule allow experimental light-sport aircraft to use 1.5-inch-high markings instead of 3-inch-high markings already required for most similar types of aircraft. These commenters noted that because some light-sport aircraft are constructed using narrow tubular metal spars to form the aircraft's fuselage, there is not sufficient area on the side of such aircraft to display 3-inch-high markings. The FAA disagrees with these observations. Aircraft that do not have the required surface area for the display of the required 3-inch-high markings may be modified easily to be in compliance with this requirement through the installation of a plate on the side of the aircraft large enough to accommodate the required markings. The FAA does not believe that the markings for these aircraft should be smaller than those required for other certificated aircraft. The FAA will continue to require that all registered aircraft display at least 3-inch-high markings.

Some commenters wanted all light-sport aircraft to display 12-inch markings, regardless of the type of aircraft. The FAA disagrees that all light-sport aircraft must display such marks. While most aircraft are required to display 12-inch-high marks, part 45 allows for certain types of aircraft and experimental aircraft with airspeeds under 180 knots CAS to display 3-inch-high marks. The size and speed of light-sport aircraft does not necessitate the display of marks of a size more appropriate for larger and faster aircraft.

Changes

The proposed rule is adopted without change.

V.5. Part 61—Certification: Pilots, Flight Instructors, And Ground Instructors

V.5.A. Part 61--General Issues

V.5.A.i. SFAR No. 89 Conversion Table

As discussed above, the FAA proposed the sport pilot certification provisions as Special Federal Aviation Regulation (SFAR) No. 89. Those provisions now have been incorporated into the main body of part 61. Please use the chart below to determine how the SFAR section numbers correspond to part 61 section numbers.

SFAR Section	Part 61 Section
1. What is the purpose of this SFAR?	§61.1 Applicability and definitions. §61.301 What is the purpose of this subpart? §61.401 What is the purpose of this subpart? §61.213 Eligibility requirements. §61.215 Ground instructor privileges.
3. When am I eligible for a certificate under this SFAR?	Existing §61.83, Eligibility requirements for student pilots, contains the same requirements as the proposed rule. §61.305 What are the age and language requirements for a sport pilot certificate? § 61.403 What are the age, language, and pilot certificate requirements for a flight instructor certificate with a sport pilot rating?
5. Does this SFAR expire?	Not adopted in final rule
7. Does a sport pilot certificate issued under this SFAR expire?	Existing §61.19, Duration of pilot and instructor certificates, contains the same requirements as the proposed rule.
9. What is a light-sport aircraft?	§1.1 General definitions
11. Who is an authorized instructor?	Existing §61.1, Applicability and definitions, contains the same requirements as the proposed rule.
13. Do regulations other than those contained in this SFAR apply to a sport pilot?	§61.303 If I want to operate a light-sport aircraft, what operating limits and endorsement requirements in this subpart must I comply with?
15. Must I hold an airman medical certificate?	§61.3 Requirement for certificates, ratings, and authorization. §61.23 Medical certificates: Requirement and duration.
17. Am I prohibited from operating a light-sport aircraft if I have a medical deficiency?	§61.53 Prohibition on operations during medical deficiency.
Student Pilot Certificate to Operate Light-Sport	

SFAR Section	Part 61 Section
Aircraft	
31. How do I apply for a student pilot certificate to operate light-sport aircraft?	Existing §61.85, Application, contains the same requirements as the proposed rule.
33. (a), (b), and (c): What solo requirements must a student pilot operating light-sport aircraft meet?	§61.87 Solo requirements for student pilots.
33. (d), (e), and (f): What solo requirements must a student pilot operating light-sport aircraft meet?	§61.93 Solo cross-country flight requirements.
35. Are there any limits on how a student pilot may operate a light-sport aircraft?	§61.89 General limitations §61.23 Medical certificates: Requirement and duration
37. How do I obtain privileges to operate in Class B, C, or D airspace and at an airport located in Class B, C, or D airspace?	§61.94 Student pilot seeking a sport pilot certificate or recreational pilot certificate: Operations at airports within, and in airspace within, Class B, C, and D airspace, or at airports with an operational control tower in other airspace.
Sport Pilot Certificate	
51. What aeronautical knowledge must I have to apply for a sport pilot certificate?	§61.309 What aeronautical knowledge must I have to apply for a sport pilot certificate?
53. What flight proficiency requirements must I meet to apply for a sport pilot certificate?	§61.311 What flight proficiency requirements must I meet to apply for a sport pilot certificate?
55. What aeronautical experience must I have to apply for a sport pilot certificate?	§61.313 What aeronautical experience must I have to apply for a sport pilot certificate?
57. What tests do I have to take to receive a sport pilot certificate?	§61.307 What tests do I have to take to obtain a sport pilot certificate?
59. Will my sport pilot certificate list light-sport aircraft category and class ratings?	§61.317 Is my sport pilot certificate issued with aircraft category and class ratings?
61. May I operate all categories, classes, and makes and models of light-sport aircraft with my sport pilot certificate?	§61.303 If I want to operate a light-sport aircraft, what operating limits and endorsement requirements in this subpart must I comply with? §61.319 Can I operate a make and model of aircraft other than the make and model aircraft for which I have received an endorsement?
63. How do I obtain privileges to operate an additional category or class of light-sport aircraft?	§61.321 How do I obtain privileges to operate an additional category or class of light-sport aircraft?
65. How do I obtain privileges to operate an additional make and model of light-sport aircraft?	§61.323 How do I obtain privileges to operate a make and model of light-sport aircraft in the same category and class within a different set of aircraft?
67. Must I carry my logbook with me in the aircraft?	§61.51 Pilot logbooks.
Privileges and Limits of Holders of a Sport Pilot Certificate	
71. What type of aircraft may I fly if I hold a sport pilot certificate?	§61.303 If I want to operate a light-sport aircraft, what operating limits and endorsement requirements in this subpart must I comply with?
73. What are my limits for the operation of light-sport aircraft?	§61.315 What are the privileges and limits of my sport pilot certificate?
75. May I demonstrate an aircraft in flight to a prospective buyer?	§61.315 What are the privileges and limits of my sport pilot certificate? Paragraph (c)(9)
77. May I carry a passenger?	§61.315 What are the privileges and limits of my sport pilot certificate?
79. May I share operating expenses of a flight with a passenger?	§61.315 What are the privileges and limits of my sport pilot certificate? Paragraph (b)
81. How do I obtain privileges to operate in Class B, C, or D airspace?	§61.325 How do I obtain privileges to operate a light-sport aircraft at an airport within, or in airspace within, Class B, C, and D airspace, or in other airspace with an airport having an operational control tower?
83. How do I obtain privileges to operate a light-sport	§61.327 How do I obtain privileges to operate a light-sport

SFAR Section	Part 61 Section
aircraft that has a V_H greater than 87 knots CAS?	aircraft that has a V_H greater than 87 knots CAS?
Transitioning to a Sport Pilot Certificate	
91. How do I obtain a sport pilot certificate if I already hold at least a private pilot certificate issued under 14 CFR part 61?	§61.303 If I want to operate a light-sport aircraft, what operating limits and endorsement requirements in this subpart must I comply with?
93. How do I obtain a sport pilot certificate if I do not hold a pilot certificate issued under 14 CFR part 61, but I have been flying ultralight vehicles under 14 CFR part 103?	§61.52 Use of aeronautical experience obtained in ultralight vehicles. §61.329 Are there special provisions for obtaining a sport pilot certificate for persons who are registered ultralight pilots with an FAA-recognized ultralight organization?
95. How do I obtain a sport pilot certificate if I don't hold a pilot certificate and have never flown an ultralight vehicle?	Subpart J—Sport Pilots establishes all requirements.
Flight Instructor Certificate With a Sport Pilot Rating	
111. Must I hold an airman medical certificate?	§61.3 Requirement for certificates, ratings, and authorizations. §61.23 Medical certificates: Requirement and duration.
113. What aeronautical knowledge requirements must I meet to apply for a flight instructor certificate with a sport pilot rating?	§61.407 What aeronautical knowledge must I have to obtain a flight instructor certificate with a sport pilot rating?
115. What training must I have in areas of operation to apply for a flight instructor certificate with a sport pilot rating?	§61.409 What flight proficiency requirements must I meet to apply for a flight instructor certificate with a sport pilot rating?
117. What aeronautical experience must I have to apply for a flight instructor certificate with a sport pilot rating?	§61.411 What aeronautical experience must I have to apply for a flight instructor certificate with a sport pilot rating?
119. What tests do I have to take to get a flight instructor certificate with a sport pilot rating?	§61.405 What tests do I have to take to obtain a flight instructor certificate with a sport pilot rating?
121. What records do I have to keep and for how long?	§61.423 What are the recordkeeping requirements for a flight instructor with a sport pilot rating?
123. Will my flight instructor certificate with a sport pilot rating list light-sport aircraft category and class ratings?	§61.417 Will my flight instructor certificate with a sport pilot rating list aircraft category and class ratings?
125. Am I authorized to provide training in all categories and classes of light-sport aircraft with my flight instructor certificate with a sport pilot rating?	§61.413 What are the privileges of my flight instructor certificate with a sport pilot rating? §61.415 What are the limits of a flight instructor certificate with a sport pilot rating?
127. How do I obtain privileges to provide flight training in an additional category or class of light-sport aircraft?	§61.419 How do I obtain privileges to provide training in an additional category or class of light-sport aircraft?
129. How do I obtain privileges authorizing me to provide flight training in an additional make and model of light-sport aircraft?	Not adopted in final rule.
131. Do I need to carry my logbook with me in the aircraft?	§61.51 Pilot logbooks.
133. What privileges do I have if I hold a flight instructor certificate with a sport pilot rating?	§61.413 What are the privileges of my flight instructor certificate with a sport pilot rating?
135. What are the limits of a flight instructor certificate with a sport pilot rating?	§61.52 Use of aeronautical experience obtained in ultralight vehicles. §61.415 What are the limits of a flight instructor certificate with a sport pilot rating?
137. Are there any additional qualifications for training first-time flight instructor applicants?	§61.415 What are the limits of a flight instructor certificate with a sport pilot rating?

SFAR Section	Part 61 Section
139. May I give myself an endorsement?	§61.421 May I give myself an endorsement?
Transitioning to a Flight Instructor Certificate With a Sport Pilot Rating	
151. What if I already hold a flight instructor certificate issued under 14 CFR part 61 and want to exercise the privileges of a flight instructor certificate with a sport pilot rating?	§61.429 May I exercise the privileges of a flight instructor certificate with a sport pilot rating if I hold a flight instructor certificate with another rating?
153. What if I am only a registered ultralight instructor with an FAA-recognized ultralight organization?	§61.52 Use of aeronautical experience obtained in ultralight vehicles §61.431 Are there special provisions for obtaining a flight instructor certificate with a sport pilot rating for persons who are registered ultralight instructors with an FAA-recognized ultralight organization?
155. What if I've never provided flight or ground training in an aircraft or an ultralight vehicle?	Subpart K—Flight Instructors with a Sport Pilot Rating establishes all requirements
Pilot Logbooks	
171. How do I log training time and aeronautical experience?	§61.51 Pilot logbooks
173. How do I log pilot-in-command flight time?	§61.51 Pilot logbooks
175. May I use training time and aeronautical experience logged as a sport pilot toward a higher certificate or rating issued under 14 CFR part 61?	§61.51 Pilot logbooks §61.52 Use of aeronautical experience obtained in ultralight vehicles
177. May I credit training time and aeronautical experience logged as an ultralight operator toward a sport pilot certificate?	§61.52 Use of aeronautical experience obtained in ultralight vehicles
179. May I use aeronautical experience I got as the operator of an ultralight vehicle to meet the requirements for a higher certificate or rating issued under 14 CFR part 61?	§61.52 Use of aeronautical experience obtained in ultralight vehicles
Recent Flight Experience Requirements for a Sport Pilot Certificate or a Flight Instructor Certificate With a Sport Pilot Rating	
191. What recent flight experience requirements must I meet for a sport pilot certificate?	Existing §61.57 contains the same requirements as the proposed rule.
193. What are the flight review requirements for a sport pilot certificate?	Existing §61.56 contains the same requirements as the proposed rule.
195. How do I renew my flight instructor certificate?	§61.425 How do I renew my flight instructor certificate?
197. What must I do if my flight instructor certificate with a sport pilot rating expires?	§61.427 What must I do if my flight instructor certificate with a sport pilot rating expires?
Ground Instructor Privileges	
211. What are the eligibility requirements for a ground instructor certificate?	§61.213 Eligibility requirements
213. What additional privileges do I have if I hold a ground instructor certificate with a basic ground instructor rating?	§61.215 Ground instructor privileges
215. What additional privileges do I have if I hold a ground instructor certificate with an advanced ground instructor rating?	§61.215 Ground instructor privileges

V.5.A.ii. Medical Provisions

Under Section 15 of SFAR No. 89, the FAA proposed to require sport pilot certificate holders; student pilots operating within the limitations of a sport pilot certificate; and higher-rated pilots who elect to exercise only sport pilot privileges to hold and possess either a current and valid U.S. driver's license or a current and valid airman medical certificate issued under part 67. These provisions, as revised in the final rule, are located under §§61.3, 61.23, and 61.303 in the operating rules where medical certificate requirements for all pilots are found.

Under Section 111 of SFAR No. 89, the FAA proposed to require individuals exercising the privileges of a flight instructor certificate with a sport pilot rating and acting as pilot in command of a light-sport aircraft other than a glider or balloon, to hold and possess a current and valid U.S. driver's license or a current and valid airman medical certificate issued under part 67. These provisions, as revised in the final rule, are located under §§61.3 and 61.23 in the operating rules where medical certificate requirements for all flight instructors are found.

Under Section 17 of SFAR No. 89, the FAA set forth circumstances under which a medical deficiency would preclude operators from exercising sport pilot privileges. In the final rule, these provisions are located under §61.53 where medical deficiency provisions are found. These provisions are also found in §§61.23 and 61.303.

Comments received on the proposed medical provisions were mainly supportive. A minority of commenters opposed the rule. Several commenters, however, raised questions or offered other alternatives. Some requested that the FAA extend sport pilot

medical provisions to recreational, and even private, pilots. A few commenters recommended minor editorial changes.

The FAA has reconsidered the circumstances in which a current and valid U.S. driver's license should be allowed in lieu of a valid airman medical certificate and has made substantive revisions to the medical provisions in the final rule. These revisions are based on the FAA's concern that pilots whose airman medical certificates have been denied, suspended, or revoked or whose Authorization for Special Issuance of a Medical Certificate (Authorization) has been withdrawn would be allowed to operate light-sport aircraft other than gliders and balloons under the proposed rule. Therefore, possession of a current and valid U.S. driver's license alone is not enough to dispel this concern. For this reason, this final rule permits using a current and valid U.S. driver's license as evidence of medical qualification based on certain conditions. If a person has applied for an airman medical certificate, that person must have been found eligible for the issuance of at least a third-class airman medical certificate. If a person has held an airman medical certificate, that person's most recently issued airman medical certificate must not have been revoked or suspended. If a person has been granted an Authorization, that Authorization must not have been withdrawn.

These provisions apply only to persons who have held or applied for an airman medical certificate or who have been granted an Authorization. It does not require the pilot of a light-sport aircraft to apply for an airman medical certificate. The words "most recent application" refer to the latest medical application that is in on file with the FAA and on which action was taken. In addition, the words "most recently issued airman medical certificate" refer to the latest airman medical certificate on file with the FAA.

In addition, the FAA has determined that the rule should explicitly provide that a pilot may not use a current and valid U.S. driver's license in lieu of a valid airman medical certificate if the pilot knows or has reason to know of any medical condition that would make that person unable to operate a light-sport aircraft in a safe manner. This reiterates the requirement of §61.53, but ensures that a person using a driver's license to exercise sport pilot privileges focuses on it. This does not require a pilot to qualify for an airman medical certificate, but if an individual has any question about his or her medical capacity to fly, that person should consult his or her personal physician. The individual still has the responsibility to determine whether he or she meets the provisions of §61.53.

An applicant for a student pilot certificate seeking sport pilot privileges may be asked whether:

- He or she was found eligible for the issuance of at least a third-class airman medical certificate (if he or she recently applied for an airman medical certificate).
- His or her most recently issued airman medical certificate has been suspended or revoked.
- His or her most recent Authorization has been withdrawn.

The applicant may also be asked whether he or she knows or has reason to know of any medical condition that would make that person unable to operate a light sport aircraft in a safe manner. If the applicant answers "yes" to any of these questions, the applicant will be reminded that while he or she may be issued a student pilot certificate, he or she may not use a driver's license as evidence of medical qualification.

By incorporating these provisions, the FAA confirms that persons who would exercise sport pilot privileges must consider their medical fitness before operating. If a person should not be exercising airman privileges for medical reasons, that person should not be conducting sport pilot privileges unless and until it is safe for that person to do so.

Comments that supported the proposed medical provisions:

The majority of the comments received on the proposed medical provisions were supportive. Supporting commenters regarded these proposed sections as the most critical part of the action and stated that if the FAA publishes a final rule with more restrictive medical requirements, they would withdraw support for the entire proposal. They stated that using a current and valid U.S. driver's license as proof of general medical qualification would permit older pilots no longer qualifying for an airman medical certificate to continue flying. In addition, commenters indicated that operators of light-sport aircraft are less likely to jeopardize the safety of surrounding individuals than motorists driving vehicles on public roadways. Commenters indicated that driving a motor vehicle is often more demanding and stressful than piloting an aircraft and that the overall incidence of crashes related to medical incapacitation is very low. According to commenters, most pilots are conscientious enough to take their own health into consideration when making the decision on whether to fly.

Numerous supporters of proposed medical provisions mentioned the financial and time burden placed on pilots to maintain an airman medical certificate, noting specifically the backlog for special-issuance medical certificates. Commenters stated that many pilots cannot obtain a third-class airman medical certificate and that some pilots, while

medically capable of flying, cannot afford the medical testing needed to maintain an airman medical certificate.

Many commenters viewed this proposal as a means to allow individuals who have lost their third-class airman medical certificates to operate light-sport aircraft. Commenters identifying themselves as senior citizens commonly shared this view and welcome the opportunity to return to flying after being unable to obtain an airman medical certificate for many years.

Other comments in support may be summarized generally as follows:

- The FAA airman medical certificate is aimed at more stressful tasks like those performed by commercial pilots who often fly IFR.
- FAA airman medical certificates do not provide a guarantee about how a person will feel 2 hours later and do not prevent in-flight health hazards.
- Sport pilots, in particular, do not have that "must get there" attitude.
- As long as the process of §61.53 remains in place, there is no reason to require a non-commercial pilot to hold an airman medical certificate.
- The additional requirement of a driver's license covers the increase in risk that the public may perceive and is appropriate for the weight and speed of light-sport aircraft.
- The current regime probably leads pilots to avoid doctors and treatments for certain medical conditions (e.g., depression), thus decreasing safety.

<u>FAA response to supporting comments</u>

As stated in the NPRM, the FAA believes that the level of health evidenced by a current and valid U.S. driver's license is a necessary, minimum prerequisite to safely operate light-sport aircraft other than gliders and balloons. The FAA chose to use state driver standards because they require a minimum level of health to be met before issuance. The FAA recognizes that these standards are sufficient minimum standards for

drivers operating their automobiles at high speeds and in close proximity to other automobiles. They also are sufficient as minimum standards for pilots of light-sport aircraft other than gliders and balloons, absent evidence of a medical condition that would make the pilot otherwise unsafe to fly. Further, a state driver's license may be revoked or suspended for certain offenses that also may impact the license holder's ability and fitness to fly a light-sport aircraft, thus providing an added level of protection. If the U.S. driver's license of a person holding a sport pilot certificate or rating (who does not possess a valid airman medical certificate) is revoked or rescinded for any offense--including, among others, substance abuse, excessive speeding, careless and reckless operation of a vehicle, numerous traffic violations--the individual will not be able to exercise sport pilot privileges until the license is reinstated or the person obtains a valid airman medical certificate.

While pilots of light-sport aircraft will be required to hold and possess at least a current and valid U.S. driver's license, meeting this requirement alone does not equate to fitness to fly. The FAA cannot over-emphasize the crucial responsibility placed on those exercising sport pilot privileges to carefully consider fitness to fly before every flight. The FAA has always understood that pilots' own judgment regarding their fitness to fly is their most basic and important safety responsibility and that no level of airman medical certification will ever alleviate this responsibility. Those who would exercise sport pilot privileges must understand that, by taking control of an aircraft as pilot in command, they have made an unequivocal declaration as to their belief in their fitness to fly. To ensure that pilots focus on this responsibility, the final rule, as adopted, specifically provides that a pilot may not use a current and valid U.S. driver's license as evidence of medical

qualification if he or she knows or has reason to know of any medical condition that would make that person unable to operate a light-sport aircraft in a safe manner.

The FAA believes that these minimum standards constitute only one aspect of the overall determination as to fitness to fly light-sport aircraft. The possession of a current and valid U.S. driver's license is not in and of itself sufficient to establish the fitness of the pilot. Therefore, it must be clear that a U.S. driver's license is not, for the purposes of this action, an FAA airman medical certificate. The FAA cautions that reference to a sport pilot "driver's license medical" should be avoided because a current and valid U.S. driver's license does not become a sport pilot certificate holder's airman medical certificate.

Moreover, the FAA is concerned that a number of commenters believe that the proposed rule would have presented an avenue for pilots who have been denied an airman medical certificate under part 67 to continue to fly. The FAA believes that most pilots who become aware through an airman medical examination of a condition that could prevent them from flying safely would not continue to fly. The commenters reveal, however, that a number of pilots might not give sufficient weight to the evidence of their medical conditions in deciding whether they are fit to fly. The FAA has determined, therefore, that the best course of action for aviation safety is to not allow a current and valid U.S. driver's license as evidence of medical qualification if a person's most recent application for an airman medical certificate has been denied or most recently issued airman medical certificate has been suspended or revoked.

The possession of a current and valid U.S. driver's license in no way constitutes a certification by the FAA that the holder of that license is fit to fly light-sport aircraft-that

certification is provided by the pilot alone. It merely allows that the holder has met minimum FAA requirements and is permitted to operate a light-sport aircraft subject to the requirements of part 61 and the pilot's own determination of his or her fitness to fly.

Comments that supported the U.S. driver's license proposal for ultralight operations but not for more complex light-sport aircraft operations

One commenter agreed that a U.S. driver's license is acceptable for ultralights and powered parachutes, but indicated that "all pilots of powered flight (single-engine aircraft) should undergo initial and periodic medical examinations." According to this commenter, since a third-class airman medical certificate is the current FAA standard for general aviation, it should be the same standard for sport pilots flying within the single-engine category.

One commenter had no objection to those exercising sport pilot privileges being able to use a U.S. driver's license to verify health. According to this commenter, this proposal can benefit those who cannot pass an FAA medical examination for whatever reason, but the commenter points out that a certain level of physical ability is required for safe flight. This commenter has compiled data that indicates that medical issues are virtually no problem when considering ultralight flight and therefore it strongly objects to a medical physical requirement for those pilots and instructors. Pilot medical data specifically relating to the operation of the significantly heavier and faster aircraft (up to 130 mph) as now proposed by the FAA, however, is not so clear. Therefore, the commenter could not comment on the safety of allowing pilots of heavier, faster aircraft

which fly over congested areas and into controlled airspace to fly without a medical examination.

FAA response to commenters who supported the proposal in part

Commenters seem to be suggesting that the FAA adopt separate sets of standards; a two-tiered approach for this rulemaking action that would require airman medical certification for certain sport pilot certificate holders. The FAA did not propose such an approach because, by doing so, the regulations basically would remain as they are today. By establishing new rules and creating a new sport pilot certificate the FAA intends to allow for limited operations in a safe manner that will bring pilots operating ultralight-like aircraft into a more uniform regulatory system. Because the commenters do not describe how the FAA could implement their proposals other than to essentially maintain current regulatory parameters, the FAA could not consider them.

Comments that opposed the proposed medical provisions

One medical organization commented that its general membership was "overwhelmingly against" the NPRM's recommended use of a driver's license. According to this organization, the FAA desire for not "creating a significant financial barrier" is without merit with respect to the airman medical certificate. The organization indicated that a 2001 survey of airmen medical examiners with at least a 66% response rate indicates the average cost of a third-class medical is $66.69. Annualized for those

under 40, the cost is $22.23 and for those over 40, $33.35, which can hardly be considered a financial burden.

In addition, this organization stated that the NPRM's conclusion that driving fast in close proximity to other automobiles is safe and achieved by the varied medical clearances for driver's licenses, as applied across states, is misleading and supporting statistics are glaringly absent. Using only fatal crashes where a driver was reportedly "ill, passed out/blacked out" as a percent of total fatal crashes for just the year 2000 shows 0.9%. This percentage goes up if other driver factors such as medication reaction, not using medication, or other physical impairment are also considered. In 1 year, this figure is nearly five times that of the NPRM-quoted 7-year period where an airman medical certificate is required in aviation. According to this organization, "[t]he FAA's belief that the medical standards that permit an individual to drive…provides an adequate level of safety to operate…aircraft is not supported. Actually the opposite is true in that the numbers indicate an unreasonable risk to aviation safety for any level of piloting."

FAA response to comments that opposed the proposed medical provisions

The FAA concurs that, in the case of some applicants for airman medical certification, the cost of an airman medical examination is not cost-prohibitive. If the AME directs an applicant to undergo further testing beyond a standard physical, however, the cost to obtain an airman medical certificate can become more expensive. Under this action, individuals will have to obtain an airman medical certificate if they do not have or do not want to obtain a U.S. driver's license. The intent of this action, however, is not to recommend a practical fee or to analyze the cost factors for obtaining an airman medical

certificate; it is to assure that, for sport pilot operations, an applicant can meet a basic level of health. The 2001 survey the commenter referenced was a compilation of information obtained from 3,800 individuals over a 4-year period who filled out a questionnaire at FAA-sponsored airman medical examiners periodic training seminars about their familiarity with and use of the Federal Air Surgeon's Bulletin. It was not specifically a questionnaire aimed at performing an analysis of AME fees.

The FAA does not intend to imply that driving an automobile and piloting an aircraft are exactly similar or that driving fast and in close proximity to other automobiles is safe. The FAA makes the comparison to driving to indicate only that, when compared to sport pilot operations, driving can be more stressful and can require more skill sometimes than flying a light-sport aircraft. For the NPRM, the FAA reviewed accident data relating to the medical condition(s) of a pilot not required to hold an airman medical certificate as a causal factor in general aviation accidents and not accident data relating to a driver's medical condition as causal factors in fatal automobile accidents. Therefore, the FAA cannot respond to the commenter regarding the 0.9% rate of total fatal automobile crashes in 2000 relating to a certain medical condition of the driver. Further, the FAA does not have enough accidents related to medical causes to be able to assign a yearly accident rate for fatal general aviation accidents. It should be noted, as stated in the NPRM, that the NTSB will investigate any accidents or incidents involving certificated sport pilots, light-sport aircraft, or persons exercising the privileges of a sport pilot. The FAA anticipates working closely with the NTSB to analyze light-sport aircraft accidents suspected of being caused by a pilot's medical condition.

General opposing comments

Opposing commenters also addressed the following:

- The ease with which a U.S. driver's license may be obtained in most states.
- The variation in standards among the states.
- The lack of serious medical testing during the application process for a U.S. driver's license.
- Inconsistent and inadequate vision tests.
- The process for obtaining a U.S. driver's license differs from that involved with obtaining an airman medical certificate and that driver's license medical standards and FAA airman medical standards differ.
- The FAA did not enact its 1995 proposal to allow recreational pilots to exercise privileges without an airman medical certificate for many reasons, including safety concerns, and there have been no substantial changes in need or requirements for safety since that ruling.

FAA response to general opposing comments: The FAA reiterates that the intent of this action is not to reduce safety or to encourage those experiencing medical problems, including vision problems, to exercise any type of sport pilot operation. Individuals with medical conditions that would prevent them from flying safely must not exercise sport pilot privileges. Additionally, individuals using a driver's license to exercise sport pilot privileges whose most recent application for an airman medical certificate has been denied or whose most recently issued airman medical certificate has been suspended or revoked must not exercise sport pilot privileges.

This action requires a basic level of health for sport pilot operations, if that basic level cannot be met then sport pilot privileges must not be exercised. The intent of this action is not to encourage those who have medical conditions or who may develop a medical condition(s) to become lax about their health and take chances piloting a light-

sport aircraft. As it does with all pilots, the FAA recommends that persons holding a sport pilot certificate or rating consult with their private physician routinely and especially if they have any indication of adverse health. The FAA recommends routine vision screening.

The FAA acknowledges that the process to obtain and maintain an airman medical certificate versus that to obtain and maintain a U.S. driver's license is different and that U.S. driver's license standards vary from state to state. Even though the process for applying for and renewing a U.S. driver's license varies throughout the United States, U.S. issuing authorities require applicants to verify some basic level of health on their various driver's license applications. Each state requires an applicant to meet minimum vision standards. Many authorities require applicants to reveal any medical condition(s) that might preclude them from obtaining a U.S. driver's license in that jurisdiction. If any of these applicants affirm having received treatment for a medical condition (e.g., stroke or paralysis, brain disorder, heart disorder, seizures) on an application, a licensed physician must further evaluate whether that person should be allowed to drive a motor vehicle. The same is true for an individual who applies for an airman medical certificate who indicates that he or she has a medical condition. That individual's Aviation Medical Examiner (AME) must further evaluate whether that person should be issued an airman medical certificate. Individuals who are not medically fit to operate a motor vehicle should not exercise the privileges of a sport pilot certificate. It is true that an individual who holds either a U.S. driver's license or an airman medical certificate could choose to operate a motor vehicle or conduct sport pilot operations when not medically fit to do so. If sport pilots choose to do so, however, they are violating not only the terms of their U.S.

driver's license or airman medical certificate but also the long-standing provisions of §61.53 that pertain to prohibition on operations during medical deficiency. Sport pilots using a driver's license must also comply with the provisions of §§61.3, 61.23, and 61.303.

The FAA rescinded its 1995 proposal to allow recreational pilots to self-evaluate under the provisions of §61.53 because it had no experience allowing recreational pilots, who may pilot more sophisticated and faster aircraft, to fly without FAA airman medical certification. Conversely, the FAA has had many years of experience allowing pilots of what are considered ultralight vehicles today to fly without medical certification and, based on this experience, believes this rule provides an equivalent level of safety for those being brought into compliance. Validating this experience is the accident data that the FAA has received under the terms of exemptions that have been granted to operate a two-seat ultralight vehicle for training purposes.

Comments that favored extending sport pilot medical provisions to other pilots

Several commenters favored extending proposed sport pilot medical provisions to pilots with higher-level certificates. These commenters contended that the same reasoning and justification proposed for sport pilots should apply to other pilots, recreational pilots in particular, who are subject to many of the same limitations such as those on carrying passengers, use of aircraft not having fixed gear, night flight, and visibility restrictions. It is suggested that the FAA review sport pilot data over time to provide for private pilots to use the sport pilot medical provisions that will be adopted under this rule.

According to commenters it has been adequately proven that existing medicine cannot predict heart attacks or strokes, so elimination of the FAA airman medical examination would have no adverse affect on safety.

FAA response to comments that favored extending sport pilot medical provisions to other pilots

The medical provisions the FAA proposed under this action were proposed for sport pilot operations only. The FAA has never considered expanding these provisions nor would it be within the scope of this action to consider doing so. The FAA agrees with commenters that it must gain experience with sport pilot medical provisions.

Commenters' general remarks and questions about proposed medical provisions

Some commenters who expressed support for the proposal in principle and for the option of a U.S. driver's license over an airman medical certificate raised the following issues:

Question: What "known medical conditions" would prevent a person from exercising sport pilot privileges?

Response: The FAA has not established a list of disqualifying medical conditions under §61.53. That could prevent a person from relying on a driver's license as the sole evidence of medical qualification. If a person chooses to exercise sport pilot privileges using an airman medical certificate, the FAA's disqualifying medical conditions set forth under part 67 apply. The ability to certify no known medical conditions becomes a

matter between the pilot and his or her AME. If an individual's most recent application for an airman medical certificate has been denied after examination by an AME, that person would not be able to use a driver's license as evidence of medical qualification.

If an individual chooses to medically qualify for light-sport aircraft operations using a current and valid U.S. driver's license, then the restrictions and limitations listed on the U.S. driver's license apply, as do those imposed by judicial or administrative order for the operation of a motor vehicle. The determination as to whether a pilot has a medical condition that would make him or her unable to operate the aircraft in a safe manner is the sole responsibility of the pilot. The ability to certify no known medical conditions that would prohibit the safe operation of an aircraft is a matter about which a pilot should consult his or her personal physician.

Those experiencing medical symptoms that would prevent them from safely exercising the privileges of their sport pilot certificate, or that raise a reasonable concern, however, cannot claim to have no known medical deficiencies.

The FAA acknowledges that those interested only in exercising sport pilot privileges may not seek airman medical certification or may allow their current airman medical certificate to expire. This is acceptable under this rule. Depending on the FAA's experience under this rule, however, it could choose to establish a list of disqualifying medical conditions or even revert to requiring airman medical certification if it becomes apparent that those exercising sport pilot privileges are not exercising reasonable judgment with regard to their medical fitness to fly.

Question: Is the special issuance of a medical certificate under §67.401 considered a denial of an application for an airman medical certificate?

Response: No. A pilot who has received a special issuance of a medical certificate may also exercise sport pilot privileges using a U.S. driver's license, provided he or she is medically fit to fly.

Remark: The proposed medical provisions discriminate against the following:

- Those who live in rural Alaska who do not drive and therefore cannot take advantage of the option of using a driver's license.
- Those who hold foreign pilot certificates or foreign driver's licenses.
- Those who could qualify for a third-class airman medical certificate but do not choose or otherwise have the need, desire, or money to have a U.S. driver's license.
- Those pilots other than sport pilots who are required to hold an FAA airman medical certificate.

It is not the FAA's intention to discriminate against anyone or to disadvantage those who do not have or cannot obtain a current and valid U.S. driver's license. This action provides an alternate means of compliance with full FAA airman medical certification for sport pilot certificate holders only and for those who are able to obtain and maintain a current and valid U.S. driver's license only. Standards for those who wish to maintain higher-level pilot certificates and ratings remain unaffected by this action; therefore this action cannot be considered discriminatory against them because operations they would conduct do not fall within the scope of this action.

The FAA understands that there may be individuals in the United States who may have difficulty traveling to their licensing entities to acquire a U.S. driver's license. The FAA notes that it may be similarly difficult for some individuals to obtain an FAA airman medical certificate. While the FAA appreciates that requiring those holding a sport pilot certificate or rating to hold and possess either a current and valid U.S. driver's license or a valid airman medical certificate does place a disproportionately higher burden on those individuals who live some distance from the appropriate certification resources, no regulation can have an entirely uniform effect on all entities subject to its requirements and limitations. The FAA believes that these minimum standards are necessary and that it would not be in the interest of safety to alter them because they may place a slightly greater hardship on certain individuals over others.

Because this rule requires a current and valid U.S. driver's license, a foreign driver's license would not be acceptable. Because of the events of September 11, 2001 and ongoing harmonization efforts, guidance on issuing U.S. pilot certificates and airman medical certificates based on foreign certificates continues to evolve. Current guidance can be found in FAA Order 8700.1 "General Aviation Inspector's Handbook," chapter 29, "Issue of a U.S. Pilot Certificate on the Basis of a Foreign-Pilot License."

Remark: Many drivers operate motor vehicles while taking narcotics and tranquilizers even when counseled not to do so. Also, individuals who have been advised by their physician not to drive due to a medical condition may continue to drive anyway.

Response: The FAA acknowledges that people may choose to continue to drive and even fly against medical advice or while taking certain medications. What is more,

some may not even consult with a private physician about a medical condition or before taking medication. Unfortunately, there are those who will take chances and any action the FAA may take would not dissuade these individuals. Further, this situation can apply not only to drivers and pilots, but to operators of any kind of transport vehicle, machinery, or equipment. Fortunately, however, aviation accident statistics rarely indicate medical factors as probable cause. This would seem to indicate that, for the most part, pilots do not take chances flying when they know they are not medically fit to do so.

Question: Why are the requirements for operating light-sport aircraft higher than requirements to operate gliders?

Response: Today's technological advances in light-sport aircraft call for a set of standards that could no longer be served by those set forth for balloons and gliders. The FAA is adopting this rule to increase safety in the light-sport aircraft community by closing gaps in existing regulations and accommodating new advances in technology. Therefore, requirements for light-sport aircraft and sport pilot certificate holders are necessarily more rigid than those for glider operations. The FAA believes that a permanent and appropriate level of regulation is necessary. Because the FAA has added more requirements for certification and training for light-sport aircraft, it also determined that some medical provisions for sport pilot certificate holders would be necessary. While airman medical certification is optional for light-sport operations, some minimum level of proof of general good health is warranted. The FAA determined that the ability to meet the medical requirements necessary to obtain a U.S. driver's license would be appropriate.

Question: Can deaf individuals obtain sport pilot certificate?

Response: Yes. Deaf individuals are eligible to apply for pilot certificates. Deaf individuals interested in piloting should consult the FAA website at http://www2.faa.gov/avr/afs/deaffaq.htm.

Question: Will flight instructors and employees of flight schools be required to adhere to DOT drug-testing policies?

Response: For sport pilot operations, flight instructors and employees of flight schools are not considered "employees who must be tested" as defined under part 121, appendix I. Flight instructors with a sport pilot rating acting as pilot in command of a light-sport aircraft other than a glider or balloon, however, must adhere to the provisions of existing §§61.15, 91.17, and 91.19 regarding offenses involving alcohol or drugs.

Other suggested modifications from commenters

Many commenters provided suggested alternatives to the proposed medical provisions. Among others, these suggestions included the following:

- Institute a fourth-class airman medical certificate;
- Require a third-class airman medical certificate for those with no, or no recent, appreciable flight time;
- Require a third-class airman medical certificate for night flight and IFR flight;
- Require an eye examination at a local clinic in lieu of a U.S. driver's license;

- Have the option of having an evaluation from a private physician once every 5 years in lieu of a U.S. driver's license;
- Allow a written medical declaration or certificate of good health to replace the driver's license for those who do not want to get a U.S. driver's license or an airman medical certificate;
- Do not allow by-mail or on-line renewals of a U.S. driver's license for sport pilot operations;
- Have a "grandfather clause" to allow pilots, who might lose airman medical certification but who have a lifetime of flying experience and flying time, to continue to fly the aircraft they have flown all their lives even if that aircraft would not meet the weight restrictions laid out in the proposal.

FAA response to other suggested modifications from commenters

The FAA considered several viable alternatives to airman medical certification. As discussed in the proposed rule, the ARAC also proposed many alternatives. The FAA proposed to allow either airman medical certification as currently set forth under part 67 or a current and valid U.S. driver's license as a means for holders of sport pilot certificates and ratings to meet medical qualifications because it wanted to avoid creating a new class of airman medical certificate that might not be viable. The FAA already has an elaborate airman medical certification program for higher-rated pilots. If sport pilots do not want to choose airman medical certification then they choose to be subject to the medical protocols established by U.S. driver's licensing entities. The FAA wanted a viable, proven means of certification such as that already established within the FAA and among U.S. driver's licensing entities. Creating a new class of airman medical certificate would involve more comprehensive regulations (e.g., amendments to parts 61, 67, and 183) because it would involve new airman certification rules, new medical standards, and perhaps new designees or an expansion of the role of existing designees. It would require a new, special category of disqualifying medical conditions, new forms, new certificates,

and further paperwork and recordkeeping requirements that light-sport operations do not appear to warrant. Any of these alternatives proposed by commenters, ARAC, or considered by the FAA would be difficult to regulate and a burden to implement.

While many of these comments for alternatives and additions to the proposed sport pilot medical provisions may have merit, the commenters did not provide cost justification or any detailed discussion of how the FAA could propose adopting and implementing them.

Editorial comments on proposed medical provisions

One organization recommended that proposed Section 111 be entitled "Must I hold an airman pilot and medical certificate as a Sport Pilot Flight Instructor?" rather than "Must I hold an airman medical certificate?" It recommended that proposed Section 111 be reworded to bring the requirement of this regulation in line with the requirements of §61.183, which is to hold a pilot certificate in order to be flight instructor.

Another commenter suggested that the word "requirement," used in SFAR No. 89 section 3 (b), should be replaced with the word "reasons." According to this commenter, "requirements" is not the correct word because "requirements" never prevented anyone from speaking, reading, or understanding English. Using the word "reasons" would allow for consistent usage of the term under current regulations.

FAA response to editorial comments on proposed medical provisions

The comments requesting editorial changes have merit. The FAA adopts medical provisions that more clearly define requirements for flight instructors and that avoid the incorrect use of the terminology "medical requirements." The terminology the FAA uses under existing §§61.123, 61.153, 61.183, and 61.213 is "medical reasons," which is correct.

Other editorial change

The FAA is changing the words "current and valid" when referring to an airman medical certificate to "valid" to avoid redundancy. An airman medical certificate is "valid" provided it has not expired as set forth under existing §61.23. Because there are no recency-of-experience requirements associated with an airman medical certificate, the word "current" is redundant and therefore not necessary.

Future Rulemaking on Private Pilots with Weight-Shift-Control or Powered Parachute Ratings

During the process of drafting the final rule, the FAA recognized that it did not specifically propose medical eligibility requirements for private pilots with a weight-shift-control or powered parachute rating. This would have inadvertently defaulted these pilots to a requirement to hold at least a third-class airman medical certificate to exercise the privileges associated with those ratings. This was not the FAA's intent. However, because the FAA did not propose and seek public comment on allowing private pilots

with a weight-shift-control or powered parachute rating to operate those aircraft without holding a third-class airman medical certificate, the FAA must initiate future rulemaking action. It should be noted that persons wishing to operate weight-shift-control aircraft or powered parachutes while exercising sport pilot privileges, but not private pilot privileges, may do so under this rule. In addition, under current rules, a weight-shift-control aircraft can be operated as an experimental powered glider, with an endorsement for self-launching, without an airman medical certificate.

V.5.A.iii. Flight Training and Proficiency Requirements

As a result of this rulemaking action, the new sport pilot certificate has been established with training, experience, and testing requirements commensurate with the privileges and limits associated with this certificate level. This pilot certificate will fall between the part 103 regulations that address ultralight pilot privileges and those that address the recreational pilot certificate. Two of the key privileges a sport pilot will be granted are: (1) The ability to operate a simple, non-complex light-sport aircraft, defined in §1.1, that exceed the parameters of an ultralight vehicle; and (2) permission to carry a passenger. Light-sport aircraft comprise the following categories of aircraft--airplane, gyroplane, glider, balloon, airship, powered parachute, and weight-shift-control aircraft.

Several commenters wished to see the minimum number of hours required to obtain a sport pilot certificate raised, while a few commenters wished to see the number of hours required lowered.

The FAA expects that the 20-hour minimum flight time requirement for all aircraft (except gliders, balloons, and powered parachutes) is adequate to train a person to

exercise the privileges of a sport pilot. Sport pilots are limited in the types of aircraft they may operate and the operations they may conduct. The flight time and flight training are minimum requirements that an applicant for a sport pilot certificate must meet and even if satisfied, there are several additional checks before a sport pilot certificate is issued. Importantly, the applicant must be recommended by an authorized instructor who endorses the applicant's logbook indicating that he or she is prepared to take and pass the practical test. The applicant must also have been recommended for and passed a knowledge test on the general knowledge requirements necessary to exercise sport pilot privileges and operate a light-sport aircraft in the NAS. Once recommended by the authorized instructor, the applicant must demonstrate to the FAA, or FAA designated examiner, that the practical test standards can be met before the certificate is issued.

The knowledge and flight training requirements, established for a sport pilot, requires the ability to comply with the operating rules in part 91, the certification rules in part 61, and NTSB rules in 14 CFR part 830. After satisfying all of these requirements for a pilot certificate, a sport pilot may—

- Operate an aircraft that meets the definition of light-sport aircraft that does not exceed 87 knots V_H and carry only one passenger
- Fly only between sunrise and sunset, below 10,000 feet MSL, with visual reference to the surface, and when the visibility is 3 miles or greater
- Operate in class E and G airspace, but not in class A, B, C, and D airspace where you need to communicate with ATC, and fly cross-country
- Not tow any object, not conduct sales demonstration rides if an aircraft salesman, not fly for compensation or hire, or carry a passenger for compensation or hire.

Additionally, to accommodate the approach originally proposed by the ultralight industry, the FAA established a building-block approach to permit a sport pilot to obtain additional privileges. After meeting the requirements for a sport pilot certificate, the pilot must obtain additional experience, training, and/or testing to receive an endorsement allowing the pilot to—

- Operate a new category or class of light-sport aircraft
- Operate a make and model of light-sport aircraft within a different set of aircraft
- Operate a light-sport aircraft that exceeds 87 knots V_H (but does not exceed 120 knots V_H)
- Operate in Class B, C, and D airspace and other airspace in which communication with ATC is required

One commenter suggested that the training and proficiency requirements be made commensurate with the complexity of aircraft on which the training is being given. The FAA believes that the rule does this. All student pilots, regardless of the certificate levels they are seeking, or the complexity of the aircraft, are trained to safely operate the aircraft in which they are receiving training in order to conduct solo operations. The FAA does not set a minimum time to meet the solo requirement, although an endorsement from an authorized flight instructor and continued supervision during solo training is required. A student pilot then continues training that is specific to the pilot certificate he or she is seeking.

The minimum training required for a sport certificate will be appropriate for a light-sport aircraft, in the category the student wishes to fly, and in an aircraft that operates at an airspeed below 87 knots CAS V_H (100 mph). Although, the student does

have the option to operate a light-sport aircraft that exceeds 87 knots V_H this will require training beyond the minimums set forth for a sport pilot certificate. How much additional training will depend on the complexity of the light-sport aircraft and the skills of the pilot.

An important factor to remember when comparing the training requirements of an ultralight pilot, a sport pilot, a recreational pilot, and a private pilot is that the rules do consider the type of aircraft operated (category, class, weight, speed, and complexity), and the operating privileges and limitations. Reference the charts under "IV. Comparative Tables" for an overview of these factors.

Additionally, some commenters raised concerns about the minimum training requirements for a sport pilot who would have the authority to operate an experimental, primary, or standard category aircraft that currently can only be operated by a recreational pilot or higher certificate level. The FAA believes that pilot training, and subsequent privileges and limitations of the pilot certificate, are based on an aircraft's operating characteristics, speed, weight, and complexity. They are not based on how the aircraft was manufactured and the type of airworthiness certificate the aircraft has been issued. The FAA believes that any aircraft that meets the definition of a light-sport aircraft can be safely operated by a sport pilot with the required training, testing, and endorsements. How the aircraft is operated and maintained is dependent on the type of airworthiness certificate issued. A sport pilot is trained and tested to ensure that he or she can make those determinations.

The FAA received numerous comments recommending that cross-country distances for weight-shift-control aircraft training be decreased to distances similar to

those required for gyroplane training. The FAA proposed that the training requirements for weight-shift-control aircraft be identical to those for powered fixed-wing requirements. The commenters pointed out that a weight-shift-control aircraft have an open fuselage and fly at much slower speeds than fixed-wing aircraft. They stated that speeds of weight-shift-control aircraft are rarely in excess of 87 knots CAS, which are similar to speeds achieved by gyroplanes. The FAA agrees that weight-shift-control aircraft have similar operating speeds to gyroplanes; therefore, the FAA is reducing the training requirements for cross-country distances at the sport pilot and private pilot certificate levels to reflect the lower operating speeds of these aircraft.

The FAA also received numerous comments on the flight training requirements in a powered parachute for sport pilot and private pilot certificates. Most commenters said that powered parachute training requirements should parallel the training requirements for gliders and balloons, as opposed to paralleling the training requirements for fixed-wing aircraft, which was proposed. After gaining operational experience in powered parachutes during the development of the practical test standards, the FAA agrees, and, therefore, in the final rule the training requirements for powered parachutes are modified to parallel those for gliders and balloons. This change to the final rule reflects the need for training in the critical takeoff and landing phases of flight, as well as ground handling during set-up and after landing. The powered parachute minimum flight time and flight training time for sport pilots and private pilots is decreased. For a sport pilot, the decrease is from 20 hours to 12 hours for total flight time, which must include 10 hours of flight training time. Even though the minimum time requirement is decreased, the training time must now include an additional requirement for at least 20 takeoffs and

landings with an authorized instructor and 10 solo takeoffs and landings to a full stop. For a private pilot, the decrease is from 40 hours to 25 hours of total time, and from 20 hours to 10 hours of flight training time. However, the training time must now include at least 30 takeoffs and landings with an authorized instructor to a full stop and 20 solo takeoffs and landing to a full stop. These revised flight times are in excess of what is required for a glider or balloon pilot at the sport pilot and private pilot certificate levels.

In addition, although cross-country and night training is not required for a glider or balloon rating at the private pilot level, the FAA is requiring this training at the private pilot level for a powered parachute rating. Night training is not required at the sport pilot level because sport pilots are not authorized to fly at night; however, cross country training is required at the sport pilot level with a powered parachute rating. These additional training requirements for a powered parachute rating are necessary because powered parachutes, unlike gliders and balloons, are powered aircraft. The cross-country requirements were changed to reflect the significantly slower speeds of powered parachutes, generally 30 mph, as opposed to the proposed requirements that were applicable to much faster fixed wing aircraft. For sport pilots, the requirement for 2 hours cross-country flight training is reduced to 1 hour, and the solo cross-country flight requirements are reduced to require only one solo flight with a straight-line distance of 10 NM between the take off and landing locations.

The FAA received comments on powered parachute and weight-shift-control navigational training requirements. In addition to considering those comments, while developing practical test standards for these aircraft, the FAA became more familiar with the characteristics of these aircraft. During that process, the FAA realized that weight-

shift-control aircraft and powered parachutes typically navigate by dead reckoning, which requires the aid of a magnetic compass, as opposed to pilotage, which does not require one. Most powered parachutes and weight-shift-control aircraft do not have a magnetic compass. This is also the case with many of other open-cockpit, slower light-sport aircraft such as gyroplanes and some fixed-wing aircraft. In the final rule, therefore, the FAA is adding words such as "as applicable" or "as appropriate" to §§61.1, 61.93, and 61.309 when addressing the use of navigation systems. This means that training is required only on the navigation systems appropriate for the kind of aircraft flown. The practical test standards will provide specific guidelines for meeting this training requirement. Additionally, the FAA reviewed the proposed solo cross-country flight requirement for persons seeking weight-shift-control aircraft privileges and is revising the proposal to require the flight to include a full-stop landing at a minimum of two points. This change is also being made to the proposed requirements for persons seeking airplane and rotorcraft privileges. It is being made to preclude cross-country flights that include only a takeoff and landing at the original point of departure.

The Administrator's Safer Skies Program reviews general aviation accidents and determines new methods to prevent future accidents. One program recommendation was that the FAA review part 61 for how it addresses training and testing pilot judgment. As a result of that review, the FAA will require sport pilot training that is specifically aimed at aeronautical decision making and risk management. This training will provide a way of evaluating whether a sport pilot adequately uses risk management techniques in conjunction with aeronautical decision making. The FAA and industry are currently developing new training and certification materials to meet these new requirements.

Accordingly, the FAA is changing references in aeronautical knowledge requirements that refer to "judgment" to "risk management."

Several commenters noted that the FAA proposed to require solo cross-country training to obtain a sport pilot certificate to operate a balloon, but not to obtain other pilot certificates to operate a balloon. The commenters noted that this proposed requirement in the regulatory text conflicted with the discussion in the preamble. This was an error in the regulatory language, and §61.313 (f) is changed to reflect the FAA's intent that solo cross-country training for balloons is not required.

There were several commenters who noted that certain proposed flight training and proficiency maneuver requirements would have been inappropriate for training in powered parachutes and weight-shift-control aircraft. The maneuvers the commenters cited for powered parachutes were meta-stable stalls and partial canopy collapses. The commenters said that meta-stable stalls are a result of a design and rigging issue not a flight training issue. They recommended that meta-stable stall avoidance is one of ensuring proper rigging of the canopy and should be addressed during the training segments on proper rigging. For weight-shift-control aircraft, the commenters cited spins, and tumble entry and avoidance techniques. In addition, a few commenters suggested eliminating the powered parachute training requirement for crosswind takeoffs and landings because a powered parachuted does not have rudder or aileron control surfaces, and a pilot cannot compensate for crosswinds on takeoffs and landings. Many commenters suggested that the rule be revised to either require recognition and avoidance training for those areas of operation or to eliminate those training requirements. The FAA agrees. While it is crucial that pilots of powered parachutes and weight-shift-

control aircraft be capable of recognizing and avoiding such emergencies, it is not safe for pilots to experience them in training. The FAA is therefore revising the rule as follows.

In SFAR No. 89 sections 33, 53, and 115 and §61.107, the FAA proposed flight proficiency training requirements for student pilots seeking a sport pilot certificate, sport pilots, private pilots, and persons seeking a flight instructor certificate with a sport pilot rating in the areas of stalls, meta-stable stalls, and partial canopy collapses in powered parachutes. Flight proficiency training requirements are now included in §§61.87, 61.107, 61.311, and 61.409. However, in the final rule, the requirements for flight proficiency in crosswind takeoffs and landings, meta-stable stalls, and partial canopy collapses are removed for the reasons cited in the previous paragraph. Those subjects will be covered in the aeronautical knowledge sections of the final rule and addressed in the practical test standards.

Proposed SFAR No. 89 section 51 would have required sport pilots to receive ground training in stall awareness, spin entry, spins, and spin recovery techniques (if applicable). It also would have required sport pilots seeking to operate weight-shift-control aircraft to receive training in tumble entry, and tumble avoidance techniques. Proposed section 53 of SFAR No. 89 would have required a sport pilot to receive ground and flight training in slow flight and stalls, except when seeking privileges in a lighter-than-air aircraft or a gyroplane.

In the final rule, the FAA is removing the requirement to receive training in tumble entry and tumble avoidance techniques for a sport pilot seeking to operate a weight-shift-control aircraft. The FAA is also removing the requirements for both a sport

pilot and a private pilot seeking to operate a powered parachute to receive training in slow flight and stalls. In addition, the FAA is also removing the requirement for sport pilots seeking to operate a lighter-than-air aircraft to receive training in slow flight. Sport pilots will be required to receive ground training in stall awareness, spin entry, spins, and spin recovery techniques. This training should provide applicants with a general understanding of these aeronautical knowledge areas and include specific training applicable to the category and class of aircraft in which privileges are sought.

For flight instructors seeking a sport pilot rating, the FAA is revising proposed section 115 of SFAR No. 89 by not requiring an applicant to receive training in slow flight if the person is seeking to operate a lighter-than-air aircraft or a powered parachute. The rule also does not require an applicant to receive training in stalls if the person is seeking to operate a lighter-than-air aircraft, a powered parachute, or a gyroplane. In addition, the final rule removes the proposed requirements for spin training for those individuals seeking flight instructor privileges in weight-shift-control aircraft because a weight-shift-control aircraft does not spin. In the final rule, the FAA is adding a requirement for training in tumble entry and avoidance techniques for those persons seeking flight instructor privileges in weight-shift-control aircraft. A flight instructor must be knowledgeable about this particular maneuvering characteristic and have the skills to provide proper instruction on tumble entry and avoidance techniques.

Similarly, proposed §61.107 (b)(9)(viii) would have contained a requirement to conduct slow flight in a powered parachute. During the development of the practical test standards, the FAA determined that since powered parachutes only fly no more than 30

mph, this training requirement is not applicable for this category of aircraft. In the final rule, this requirement is removed. This requirement is also removed from §61.311.

A few commenters noted that in proposed SFAR No. 89 section 55, the FAA did not address the aeronautical experience required for a class privilege for land or sea in the airplane, powered parachute, and weight-shift-control aircraft categories. Although the FAA did not specifically address requirements for land and sea privileges, the requirements set forth in that section applied to both classes of aircraft. The FAA is revising the final rule in §§61.311 and 61.313 (a), (g), and (h) to differentiate between land and sea privileges. The final rule requires specific endorsements for the exercise of either set of privileges.

Additionally, the commenters were not sure if the proposed rule addressed the requirements for the addition of class privileges. For the addition of class privileges, refer to §61.321, which requires that the appropriate ground and flight training specified in §§61.309 and 61.311 for the new class of aircraft. This training and recommendation must be accomplished with an authorized instructor with a different authorized instructor completing a proficiency check.

V.5.A.iv. Make And Model Logbook Endorsements, and Sets Of Aircraft

In proposed section 61 of SFAR No. 89 (now §61.319), the FAA proposed that the holder of a sport pilot certificate must have a logbook endorsement from an authorized flight instructor for each category, class, or make or model of light-sport aircraft that he or she wished to operate. In addition, proposed SFAR No. 89 section 125

(now §§61.413 and 61.415), stated that a flight instructor with a sport pilot rating could provide training only in a category and class and make and model of light-sport aircraft in which he or she is authorized to provide training. These proposed requirements were intended to ensure that any sport pilot flying in, or any flight instructor with a sport pilot rating instructing in, one of the unique light-sport aircraft that fall into the broad categories and classes of aircraft established in §61.5 would receive additional flight training that was make-and-model specific.

The FAA notes that the preamble to the NPRM (under "Proposed Sections 59 and 61") stated that the FAA would work with industry to develop procedures to allow flight instructors with a sport pilot rating to issue logbook endorsements "for a particular group of make and model aircraft having similar operating characteristics." The agency recognized then that grouping aircraft having similar performance and operating characteristics could reduce the administrative burden of obtaining logbook endorsements for all make and models of aircraft. The agency asked for comments, both in the NPRM and in the on-line public forum, on whether make and model endorsements for sport pilots would be in the public interest.

Nearly all of the numerous comments addressing this issue criticized the make and model endorsement requirement as overly burdensome and unnecessary. Several commenters noted the particular burden the endorsement requirement would place on flight instructors with a sport pilot rating, who would be required to obtain a logbook endorsement for every make and model of light-sport aircraft they wished to use for training. Many commenters noted that this proposed requirement might have the unintended effect of discouraging a current ultralight instructor from becoming a flight

instructor with a sport pilot rating because that instructor would be required to obtain specific training for each aircraft on which he or she wished to provide training. Many commenters also noted that, in some remote areas of the United States, obtaining training for a specific make and model of light-sport aircraft might require a prospective flight instructor with a sport pilot rating to travel some distance and incur relatively high expenses to gain an endorsement. This could make qualified instructors hard to find and consequently make their services more expensive, the commenters said. The commenters also pointed out that, if a flight instructor with a sport pilot rating had difficulty obtaining the appropriate logbook endorsement to train on a specific make or model of light-sport aircraft, a student pilot seeking a sport pilot certificate or a sport pilot might have difficulty finding an instructor in his or her area qualified to offer training on the aircraft he or she wishes to fly.

Most commenters felt that the differences between various makes and models of light-sport aircraft were minor and generally would not affect the ability of a flight instructor with a sport pilot rating to safely provide training in various makes and models of light-sport aircraft, nor would those minor differences affect a sport pilot's ability to operate them. Many commenters suggested removing the requirement completely for these reasons. Commenters also suggested the FAA organize light-sport aircraft of similar performance and handling characteristics into broad groups and allow flight instructors with a sport pilot rating to receive logbook endorsements within each group, rather than obtain one endorsement for each make and model of aircraft. Most commenters felt this modification would reduce the cost to flight instructors with a sport

pilot rating, consequently reducing the cost passed to sport pilots and student pilots seeking a sport pilot certificate.

An industry organization suggested that it would be reasonable to allow for the operation of an additional make and model of light-sport aircraft if the sport pilot became familiar with the operating limitations, emergency procedures, operating speeds, and weight and balance for the particular make and model of aircraft. Additionally, the sport pilot would be required perform the following flight operations prior to carrying a passenger, accomplishing a cross-country flight, or operating solo in Class B or C airspace--take-offs and landings (minimum of 3 to a full stop), power-off stalls (as appropriate), and 1 hour of pilot-in-command flight time. The sport pilot would then endorse his or her logbook specifying that these actions had been completed. The endorsement would permit the sport pilot to operate that make and model of aircraft.

After reviewing the comments and gaining a better understanding of the technical similarities between certain makes and models of light-sport aircraft, the FAA agrees that the proposed rule could have been administratively and economically burdensome. Although the FAA does not believe the requirements should be completely eliminated, the FAA is changing the final rule as discussed below.

The FAA now recognizes that grouping makes and models of light-sport aircraft that have very similar performance and operating characteristics as a set of aircraft would be an effective means to permit sport pilots to operate any aircraft within that set once an endorsement to operate any aircraft within that set has been received. The FAA now believes that it is possible to group light-sport aircraft into sets of aircraft, as defined in current §61.1. Section 61.1 states that the term “set of aircraft” refers to aircraft that

"share similar performance characteristics, such as similar airspeed and altitude operating envelopes, similar handling characteristics, and the same number and type of propulsion systems." This concept of grouping aircraft having similar operating characteristics, or using sets of aircraft, has been used successfully for many years through the National Designated Pilot Examiner Registry (NDPER) program for training and checking pilots operating warbirds and other vintage aircraft.

A working group of FAA and industry representatives, including pilots, flight instructors and manufacturers, will be established to develop standards for defining and establishing sets of aircraft. Sets of light-sport aircraft will be established according to the definition of "set of aircraft" in §61.1 and made available to the public. The parameters to establish sets of aircraft will be referenced in the advisory material, and a list of aircraft that meet the parameters for a specific set of aircraft will be available on the FAA's website. All experimental, primary, and standard category light-sport aircraft will be grouped into sets. In addition, newly manufactured light-sport aircraft will be required to have "flight training supplements" to identify the sets of aircraft to which they belong. As a member of the working group, the FAA will recommend that sets of aircraft include experimental aircraft with modifications and single-seat aircraft.

The FAA is revising the rule (under §§61.319 and 61.323) to require that, before conducting flight operations, the holder of a sport pilot certificate—

- Must receive training from an authorized instructor in a make and model of light-sport aircraft that is in the same set as the aircraft in which the pilot intends to conduct flight operations.
- Must record a make and model logbook endorsement from an authorized instructor for the make and model of light-sport aircraft in which flight privileges are desired.

- May operate any additional make and model of light-sport aircraft within a set of light-sport aircraft under a single make and model logbook endorsement issued by an authorized flight instructor.

Under the final rule (under §61.415), the FAA is not requiring an additional make and model endorsement for a flight instructor with a sport pilot rating. The FAA recognizes that such a requirement would be superfluous. Also, as discussed in the following paragraph, if a flight instructor with a sport pilot rating holds a higher pilot certificate, a make and model endorsement is not required under the final rule.

The FAA received several comments from individuals and industry organizations that stated that the FAA should reconsider the proposed requirement that the holder of a recreational pilot certificate or higher who is exercising sport pilot privileges be required to receive flight training and a make and model logbook endorsement from an authorized instructor before being permitted to fly a specific make and model light-sport aircraft. The FAA recognizes that the holder of a recreational pilot certificate or higher pilot certificate with the applicable rating has received more training than a sport pilot, which in most cases was in more complex and larger aircraft. Therefore, the FAA is revising the final rule under §61.303 to establish that the holder of a recreational pilot certificate or higher is not required to obtain a make and model logbook endorsement from an authorized instructor to operate a light-sport aircraft while exercising the privileges of a sport pilot certificate.

Several commenters said it would be burdensome to require a flight instructor with a sport pilot rating to have at least 5 hours of required pilot-in-command time in each make and model of light-sport aircraft in which he or she is authorized to provide

flight training. This was proposed in SFAR No. 89 section 135 (c). After gathering additional technical information and considering the comments, the FAA still believes that flight instructors with a sport pilot rating must become familiar with the light-sport aircraft on which they intend to provide training and must have at least 5 hours of flight time in the make and model of aircraft within a set of aircraft. The ability to satisfy the make and model requirement within the set of aircraft provisions discussed above partially relieves the burden. Additionally, the FAA no longer believes it necessary for a flight instructor to receive this training from another flight instructor. The final rule is changed to provide the level of safety intended under the proposed rule and to reduce the administrative burden and possibly the economic burden. In the final rule (§61.415 (e)), before conducting flight-training operations, a flight instructor with a sport pilot rating must log at least 5 hours of flight time in a make and model of light-sport aircraft within the same set of aircraft in which flight-training operations are to be conducted.

Although the final rule does not require endorsements for each individual make and model flown within a set of aircraft, the FAA believes, and will recommend through advisory material, that all pilots and flight instructors should consider a familiarization flight in each light-sport aircraft in which flight operations will be conducted. Guidelines for the familiarization flights will be established in the standards for the aircraft training supplement and in advisory material provided by the FAA. Make and model familiarization training should address the aircraft's performance envelope, preflight, cockpit orientation, use of flaps, takeoff, climb, cruise, required maneuvers, slow flight, stalls, approach, landing, aircraft operating instructions, and aircraft flight training supplement.

V.5.A.v. Changes to Airspace Restrictions

As described in the proposed rule, with additional training, a sport pilot may operate in Class B, C, or D airspace with a U.S. driver's license or an airman medical certificate. Currently ultralight pilots operating under part 103 are permitted to operate within Class B, C, or D airspace with prior air traffic control authorization. They may not, however, operate over any congested area of a city, town, or settlement. Ultralight pilots have had the authority to operate any type of ultralight vehicle (i.e., fixed wing, powered parachute, weight-shift-control) in Class B, C, and D airspace without an airman medical certificate for approximately 20 years. Additionally, the FAA has allowed balloon and glider pilots to operate in this airspace without an airman medical certificate since 1945. In consideration of a sport pilot's limited privileges within this airspace, and after analyzing relevant accident data, the FAA has determined that, as proposed in the NPRM, it is appropriate to allow sport pilots to operate in Class B, C, and D airspace with a U.S. driver's license or an airman medical certificate. For further discussion on medical provisions, see "V.5.A.ii. Medical Provisions."

Some commenters, including the NTSB, expressed concern about the slower light-sport aircraft operating in close proximity to faster general aviation and commercial aircraft in Class B, C, and D airspace, and said that this could pose difficulty for air traffic controllers and present a potentially dangerous situation. A few commenters, including the NTSB, expressed concern that training requirements for sport pilots may not be sufficient to permit sport pilots to operate in the same airspace as transport category aircraft. The FAA also received comments expressing concern over the lack of

experience of sport pilots operating light-sport aircraft in Class B, C, or D airspace, or at major airports located in Class B airspace, as listed in 14 CFR part 91, appendix D, section 4. The commenters said that this would pose a burden on other pilots in those classes of airspace and for ATC facilities.

The FAA has considered these comments and maintains the position it took in the NPRM regarding operations in Class B, C, and D airspace. See the discussions of proposed SFAR No. 89 sections 37, 81, 121, and 135, and §61.101 in the preamble to the NPRM. However, the FAA agrees with the commenters who felt that some airspace is too busy and congested, not only for sport pilots, but also for recreational pilots, and has reconsidered sport pilot and recreational pilot operations at the major airports located in Class B airspace, as listed in 14 CFR part 91, appendix D, section 4. The FAA is changing §91.131 (b)(2) to provide that, like all student pilots, a sport pilot or a recreational pilot is not authorized to take off or land at the major airports located in Class B airspace, as listed in 14 CFR part 91, appendix D, section 4. It should also be noted that sport pilots and recreational pilots are prohibited from operations in Class B, C, and D airspace unless they have received the required training and an endorsement, in accordance with §§61.325 and 61.101 (d). Those sections establish equivalent training requirements to those that a private pilot must receive for operating in those classes of airspace. Furthermore, a sport pilot may not fly above 10,000 feet, at night, or when flight or surface visibility is less than 3 statute miles. Basic VFR weather minimums specified in §91.155 also apply to sport pilots. A private pilot, however, has more privileges than a sport pilot in airspace that transport category aircraft operate in. Specifically a private pilot is authorized to land at the major airports located in Class B

airspace, as listed in 14 CFR part 91, appendix D, section 4, and a private pilot may operate in Class A, B, C, D, E, and G airspace without any additional training.

The FAA notes that, in the final rule under §61.89, the FAA defines the limitations for a student pilot seeking a sport pilot certificate. The rule provides that a student pilot seeking a sport pilot certificate is prohibited from operations in Class B, C and D airspace; at an airport located in Class B, C, or D airspace; and to, from, through, or on an airport having an operational control tower. Therefore, he or she is not required to receive training on procedures for operations in these classes of airspace. If, however, he or she wishes to operate in Class B, C, or D airspace; at an airport located in Class B, C, or D airspace; or to, from, through, or on an airport having an operational control tower, under §61.94, that student pilot seeking a sport pilot certificate is required to receive airspace and airport-specific training and an endorsement.

A recreational pilot is prohibited from operations in Class B, C and D airspace; at an airport located in Class B, C, or D airspace; and to, from, through, or on an airport having an operational control tower, unless he or she wishes to receive the additional training specified in §61.101 (d). Therefore, a student pilot seeking a recreational pilot certificate is prohibited from operating in this airspace unless receiving the additional training specified under §61.94.

The FAA is also modifying §61.95 to exclude a student pilot seeking a sport pilot or recreational pilot certificate from the requirements of this rule because new §61.94 will apply to persons. Section 61.94 parallels the requirements of §61.95, although it is more restrictive. The required training in §61.94 encompasses training on Class B, C, D airspace and airport-specific training, as opposed to the training requirements in §61.95

that is limited to only Class B airspace and airport-specific training and the required endorsement.

In the proposed rule, the FAA would have prohibited a sport pilot from operating in Class B, C, and D airspace without additional training and an endorsement, and would have revised the rule for the recreational pilot to parallel the new sport pilot rule language. Currently, recreational pilots are prohibited from operating in airspace that requires communication with ATC.

The FAA intended the proposed language to prohibit sport pilots and recreational pilots without appropriate ground and flight training from conducting light-sport aircraft operations in airspace that has an operational control tower. Upon further review, the FAA realized that this would not have prohibited operations as described in §§91.126 (d) and 91.127 (e), which prohibit operations in Class E and G airspace that have an operational control tower. Pilots operating in airspace and at airports with operational control towers must receive training and have appropriate equipment. Therefore, in the final rule, §§61.94, 61.101 (d), and 61.325 address not only how student pilots seeking a sport pilot and recreational pilot certificate and sport pilots and recreational pilots, respectively, obtain privileges to operate a light-sport aircraft at airports within, or in airspace within, Class B, C, and D airspace, but also at other airspace with an airport having an operational control tower. The headings of those sections are revised, and within the regulatory text the words "…and to, from, through, or at an airport having an operational control tower" are added. In addition, §61.425 includes parallel language to describe endorsement records that must be kept by flight instructors with a sport pilot rating.

For further discussion of equipment required for operating light-sport aircraft in these classes of airspace, see "V.7.A. Part 91--General Issues" below.

V.5.A.vi. Changes to Altitude Limitations

Proposed section 73 (b)(6) of SFAR No. 89 (now §61.315 (c)(11)) would have restricted the operation of a light-sport aircraft to altitudes of no more than 10,000 feet above MSL or 2,000 feet above ground level (AGL), whichever is higher. The FAA received several comments on this proposed restriction, and nearly all of them opposed it. Most stated that allowing pilots to fly at higher altitudes would enhance safety.

Several commenters noted that higher altitudes permit safer stall and spin recovery training because of the increased margin for error. One commenter specifically noted that visibility is often better above 10,000 feet MSL, which enhances safety. Another commenter offered a similar observation, noting that pilots often choose to fly at higher altitudes to avoid flying through dangerous weather systems. Many commenters also noted that glider pilots often need to fly at altitudes greater than 10,000 feet MSL to take full advantage of areas of rising warm air, called thermals, which help to keep gliders aloft.

The FAA does not believe that these commenters provided valid justification for amending the rule. After considering these comments and other comments expressing concern about sport pilots operating in congested, high-altitude airspace, the FAA has revised §61.315 (c)(11) to be more restrictive. The rule now prohibits operations above

10,000 feet MSL, and the latitude that was proposed for operations up to 2,000 feet AGL, if higher, is removed. The FAA is making this revision for the following reasons.

First, operations above 10,000 feet MSL require that a pilot have skills and training on oxygen requirements and medical factors, reduced aircraft performance, and the other risks associated with operations at higher altitudes. The minimum training that a sport pilot receives does not encompass these additional training requirements.

Second, given that the aircraft that typically operate above 10,000 feet MSL are often much larger than light-sport aircraft and usually cruise at considerably higher speeds, the FAA is concerned about permitting light-sport aircraft to operate at the same altitudes as these aircraft.

Third, light-sport aircraft typically do not have position or anticollision lights to help other pilots see and avoid these aircraft, which would be beneficial at higher speeds.

Lastly, there are still many areas in the United States where operations above 10,000 feet MSL do not require communication with ATC or the equipment required to be easily identified on radar by ATC, such as transponders. Most light-sport aircraft do not have transponders or the capability to conduct radio communications, reducing their ability to coordinate their operations with ATC and be easily identified to ensure collision avoidance.

Several commenters disagreed with the limit of 2,000 feet AGL, arguing that most pilots would prefer, in the interest of safety, to clear mountains by more than 2,000 feet AGL. The FAA agrees with these commenters in that there could be circumstances in which a sport pilot would need more than 2,000 feet AGL to safely clear

a mountain. However, as discussed above regarding training and equipment required for high-altitude operations, the FAA does not believe it is necessary to permit operations above 10,000 feet MSL solely for the purpose of crossing mountainous terrain. The pilot must determine whether it is safe to clear mountainous terrain and remain below 10,000 feet MSL.

The FAA is revising §61.311 (c), and limiting sport pilot operations at all times to below 10,000 feet MSL. The FAA believes that this revision will simplify the altitude restrictions and increase the level of safety.

The FAA maintains that any pilot who wishes to exercise the privilege of operating above 10,000 feet MSL must gain the necessary experience and receive the additional training required for at least a private pilot certificate, or, in limited cases, a recreational pilot certificate.

V.5.G.vii. Gyroplanes

Most gyroplanes historically have not been designed and manufactured to a specific regulatory standard. These aircraft are typically issued experimental certificates, which prohibit them from being used to conduct flight training operations for compensation or hire. Under the existing regulations, gyroplanes can be issued a standard category or primary category airworthiness certificate, which will permit such use; however, very few manufacturers have chosen this certification path. Today most of the gyroplanes that fit under the definition of a light-sport aircraft are certificated as experimental amateur-built aircraft or are being operated under part 103. Those

gyroplanes that exceed the limits of part 103 will need to be certificated as experimental light-sport aircraft to continue operating under this rule.

The FAA has issued exemptions to permit gyroplanes without standard category airworthiness certificates to be operated for compensation or hire while conducting flight training. The three FAA-recognized ultralight organizations, the Experimental Aircraft Association (EAA), Aero Sports Connection (ASC), and the United States Ultralight Association (USUA) hold exemptions that permit its members to conduct flight training in a two-place ultralight-like gyroplane, and the Popular Rotorcraft Association (PRA) holds an exemption for gyroplanes issued an experimental amateur-built certificate.

The FAA received numerous comments, including comments from an industry association, regarding the inclusion of gyroplanes and helicopters in the proposed rule. The comments reflected two general areas of concern. A primary concern was whether gyroplanes would be manufactured under a consensus standard and issued special airworthiness certificates, permitting these aircraft to conduct training operations for compensation or hire. Commenters expressed the need for appropriate training aircraft to be available for gyroplane flight instruction. The ability to manufacture a gyroplane under a consensus standard would provide new training aircraft that meet a design standard.

Secondly, many expressed significant concern about the lack of pilot training and the lack of qualified flight instructors available for gyroplanes. The gyroplane industry submitted comments requesting that the FAA consider the importance of ensuring that flight instructors with a sport pilot rating have the ability to instruct in light-sport gyroplanes. FAA and industry analysis and data supports the conclusion that a lack of

training, flight experience, and flight proficiency account for about half of all gyroplane accidents. Lack of proficiency or poor judgment under which a pilot flies a gyroplane beyond the aircraft's or the pilot's own safe limits are often factors in many gyroplane accidents.

The FAA acknowledges that the gyroplane training infrastructure is less developed than other traditional aircraft training networks, owing in part to historical and cultural influences within the gyroplane community, the scarcity of training aircraft, gyroplane instructors and DPEs, the lack of gyroplane knowledge training resources, and even to a widespread inconsistent and often inadequate understanding and appreciation of gyroplane control and stability issues, by both instructors and pilots and the general aviation community. These factors, coupled with an inappropriate reliance on the use of fixed-wing training methodologies by students and instructors, sometimes leave less experienced pilots unaware of the limits of a particular gyroplane. This lack of consistent, comprehensive, and gyroplane-specific training often leaves new gyroplane pilots unaware of their aircraft's handling characteristics, and ill-prepared to make sound flight decisions, particularly when they encounter the limits of the aircraft flight envelope.

The FAA notes that there are a total of approximately 35 gyroplane instructors throughout the U.S. who are either certificated by the FAA or who are operating under a part 103 training exemption. Many of these instructors provide training only part-time. Further, those gyroplanes used for training possess flight handling and stability characteristics that are often very different from the characteristics of the small, single-place gyroplanes into which a student pilot might later transition. Additionally, the

scarcity of both instructors and qualified FAA aviation safety inspectors and DPEs provide further discouragement for an individual attempting to undertake training for a gyroplane rating. All of these impediments to an individual becoming a gyroplane pilot are compounded by existing night and night cross-country training requirements, which most gyroplane training aircraft are not equipped to accomplish. Further, many gyroplane instructors are often not willing to endure the risk and difficulty of conducting night cross-country flights in open cockpit experimental aircraft.

Many individuals presented such reasoning in their comments, arguing that, given the existing obstacles to an individual obtaining gyroplane flight instruction, the FAA should avoid exacerbating the problem and allow light-sport gyroplanes to obtain special airworthiness certificates under this rule. These commenters stated that, without the availability of special light-sport gyroplanes, or the ability of gyroplane instructors to use existing two-place gyroplanes to conduct training for compensation or hire, a significant percentage of gyroplane instructors (currently ultralight flight instructors) will not be able to continue instructing.

Based on these concerns, the gyroplane industry identified numerous general training issues it felt should be addressed in the final rule regarding light-sport gyroplane aircraft. Many of the comments addressed have been considered for all categories of aircraft and discussed elsewhere in this preamble. Specific gyroplane-only issues included:

- Removal of the mandatory requirement for night training at all pilot certificate levels and the addition of a limitation on the pilot certificate;
- Elimination of the requirement that a single-place ultralight gyroplane pilot take a check ride in a two-place light-sport aircraft;

- Extension of the training exemptions or issuance of Letters of Deviation Authority for an indefinite period if gyroplanes can not be certificated under §21.186 (now §21.190);
- Review of current exemptions and practical test standards to incorporate more stringent training requirements that flight instructors understand pitch and stability, and recognize departure from controlled flight and apply appropriate recovery techniques.

With regard to the gyroplane industry's request for revisions to the training requirements, the FAA is making changes to the rule, not only for sport pilots and flight instructors with a sport pilot rating, but also for recreational pilots and private pilots flying gyroplanes.

The new two-place experimental light-sport gyroplanes certificated under §21.191(i)(1), consisting of the existing fleet of two-place ultralight-like gyroplanes, will be permitted to be used for training for compensation or hire for a 5-year period, similar to all other categories of light-sport aircraft. Experimental light-sport gyroplanes, as well as any experimental amateur-built light-sport gyroplanes, will be authorized to be operated by a sport pilot to carry a passenger and to receive flight training. If the gyroplane industry develops an industry consensus standard through the ASTM process (as discussed under §21.190), the FAA can examine the safety performance of gyroplanes that are built according to that standard. If there are positive safety benefits for gyroplanes built to the consensus standard, the FAA may consider future rulemaking that would permit gyroplanes built to the consensus standard to receive a special light-sport aircraft airworthiness certificate under §21.190 and also allow light-sport kit-built manufactured to a consensus standard to receive an experimental light-sport aircraft certificate under §21.191 (i)(2). The FAA may favorably consider petitions for

exemption to allow flight training in an aircraft built to this standard to gain operational data to support future rulemaking.

If the gyroplane industry is unable to agree on a consensus standard, the FAA will decide at that time whether to favorably consider petitions for exemption to allow training in experimental light-sport gyroplanes for compensation or hire or alternative arrangements. In addition, the FAA will need to evaluate the safety of continuing the current exemption issued to the Popular Rotorcraft Association to conduct training for compensation or hire in experimental gyroplanes.

V.5.A.viii. Demonstration of Aircraft to Prospective Buyers

Commenters suggested that the FAA consider allowing aircraft salespersons who are sport pilots, flight instructors with a sport pilot rating, or recreational pilots to demonstrate aircraft in flight to prospective buyers after meeting experience requirements similar to those for a private pilot under §61.113 (f). The commenters also requested the FAA consider allowing a recreational pilot who is not an aircraft salesperson to demonstrate a light-sport aircraft to a prospective buyer because a similar privilege was proposed for sport pilots.

In section 75 of SFAR 89 (now §61.315 (c)(9)), the FAA proposed that a sport pilot who is not an aircraft salesperson would be permitted to demonstrate a light-sport aircraft in flight to a prospective buyer. The proposal, however, would not have allowed a sport pilot who is an aircraft salesperson to demonstrate a light-sport aircraft in flight to a prospective buyer. The FAA did not propose this privilege for a flight instructor with a

sport pilot rating because these types of privileges are typically addressed by the underlying pilot certificate. Additionally, §61.101 (d)(12) currently states that a recreational pilot is prohibited from demonstrating an aircraft in flight to a prospective buyer.

The FAA maintains that aircraft salespersons must hold at least a private pilot certificate to demonstrate an aircraft in flight to a perspective buyer. With the addition of ratings at the private pilot certificate level for weight-shift-control aircraft and powered parachutes, the regulations will now permit appropriately rated private pilots who are aircraft salespersons to demonstrate these categories of aircraft in flight to prospective buyers.

The FAA maintains that, for sales demonstrations that are not conducted by an aircraft salesperson, a sport pilot or a recreational pilot can conduct this activity. Therefore, to ensure that recreational pilots have at least the same privileges as sport pilots, the FAA is revising §61.101 (d)(12) to allow a recreational pilot to conduct sales demonstration flights as long as the pilot is not acting as an aircraft salesperson.

V.5.A.ix. Category and Class Discussion: FAA Form 8710–11 Submission

After further consideration of the NPRM, the FAA is adding a requirement to §61.321 (proposed as SFAR No. 89 section 63) to require that the holder of a sport pilot certificate seeking to operate in an additional category or class of light-sport aircraft complete an application for those privileges on a form and in a manner acceptable to the FAA. The FAA expects that FAA Form 8710-11, Sport Pilot Certificate and/or Rating

Application, will be used for this process. Since the sport pilot certificate does not list category and class privileges, this form will be used to provide a record of the completed proficiency check and will provide a record available to the FAA and the NTSB when conducting accident and incident investigations or enforcement actions. Also it can provide a method for an airman to reconstruct a lost logbook, document endorsements that establish additional category and class privileges, or establish proof of required endorsements for insurance purposes.

This requirement will also provide a method to gather additional data. Although this will require that additional paperwork be completed by airmen and authorized instructors, the FAA believes that the requirement is necessary, considering the previously discussed benefits to the public and the government. To facilitate compliance with this requirement, the FAA has modified the automated procedure, through Integrated Airman Certificate and/or Rating Application (IACARA), for completing FAA Form 8710-11.

Pursuant to §61.423, FAA Form 8710-11 must be signed by the recommending instructor. The applicant must present this form to the authorized instructor conducting the proficiency check. In accordance with §61.423, the authorized instructor conducting the proficiency check must complete, sign and submit FAA Form 8710-11 within 10 days to the FAA upon satisfactory completion of the proficiency check. The authorized instructor must retain a copy of the form and retain it for three years in accordance with the recordkeeping requirements of §61.423.

V.5.B. Part 61--Section-by-Section Discussion

Section 61.1 Applicability and definitions

The FAA received comments on the definition of "cross-country" in §61.1 (b)(3). They also commented on the provisions for pilotage, dead reckoning, electronic navigation aids, radio aids, and other navigation systems, which were not revised under the proposal. Commenters pointed out that the regulation would require training on each of these navigation techniques and systems. The commenters said that training on each of these requirements could not be accomplished for weight-shift-control aircraft and powered parachutes. After considering the comments and becoming more familiar with powered parachute and weight-shift-control aircraft during the development of the practical test standards, the FAA recognizes that training on each of these navigation techniques and systems should be required when appropriate. Most of these aircraft do not have any electronic navigation equipment or radios aids and are not required to demonstrate this for the issuance of a sport pilot certificate. Therefore, the FAA is changing the final rule to add the words, "as applicable" paragraph (b)(3)(iii)(B) and (iv)(B). This is also discussed above under "V.5.A.iii. Flight Training and Proficiency Requirements."

The FAA also is adding a definition of "student pilot seeking a sport pilot certificate" to §61.1. This definition is added to differentiate these student pilots from other student pilots. The definition specifies that a student pilot seeking a sport pilot certificate either receives an endorsement from a certificated flight instructor with a sport pilot rating or an endorsement from a certificated flight instructor with other than a sport

pilot rating, which includes a limitation for the operation of a light-sport aircraft as specified §61.89 (c). See discussion of §61.89 (c) below.

Changes

The proposed amendments to §61.1 are adopted with formatting and wording changes for improved readability. In addition, the following changes are made.

The proposed amendment to paragraph (b)(2)(iii) is not adopted in the final rule. As proposed, the amendment would have added a reference to SFAR No. 89, the provisions of which are now incorporated into part 61. Since existing §61.1 (b)(2)(iii) already contains a reference to part 61, the amendment is no longer necessary.

In the final rule, paragraph (b)(3)(ii) introductory text is revised to add the words "(except for a powered parachute category rating)" after the words "for a private pilot certificate." This revision is made because the definition of cross-country time in paragraph (b)(3)(iv) addresses persons seeking a private pilot certificate with a powered parachute category rating.

Proposed paragraphs (b)(3)(iii)(A) and (b)(3)(iv)(A) have been included in the introductory language of (b)(3)(iii) and (b)(3)(iv) respectively. Proposed paragraphs (b)(3)(iii)(B) and (b)(3)(iv)(B) are therefore adopted as (b)(3)(iii)(A) and (b)(3)(iv)(A) respectively.

Proposed paragraphs (b)(3)(iii)(C) and (b)(3)(iv)(C) are adopted as (b)(3)(iii)(B) and (b)(3)(iv)(B) respectively, and each is amended by adding the words "as applicable."

Paragraph (b)(15) is added to define the term "student pilot seeking a sport pilot certificate."

Section 61.3 Requirements for certificates, ratings, and authorizations (proposed as SFAR No. 89 sections 15 and 111)

The FAA received numerous comments on the topic of medical provisions. For a complete discussion of the comments and the FAA's responses, see "V.5.A.ii. Medical Provisions."

In the final rule, the provisions of proposed SFAR No. 89 sections 15 and 111 are found in §§61.3 (c)(2) and 61.23 (a), (b), and (c). Current §61.3 (c)(2) excepts persons from having to meet the airman medical certificate requirements of the section in certain circumstances. That paragraph is amended in the final rule to include the medical provisions found in proposed SFAR No. 89 section 15 for student pilots seeking a sport pilot certificate and for sport pilots. In addition, the paragraph is further amended to require that persons using a current and valid U.S. driver's license meet certain requirements. If a person has applied for an airman medical certificate, that person must have been found eligible for the issuance of at least a third-class airman medical certificate at the time of his or her most recent application. If a person has been issued an airman medical certificate, his or her most recently issued airman medical certificate must not have been suspended or revoked. If a person has been granted an Authorization, that Authorization must not have been withdrawn. Further, a person must not know or have reason to know of any medical condition that would make him or her unable to operate a light-sport aircraft in a safe manner.

Proposed SFAR No. 89 section 111 set forth medical provisions for flight instructors with a sport pilot rating. The provisions of current §61.3 (c)(2)(ii) through

(c)(2)(iv) address these flight instructors, and a rule change to incorporate proposed section 111 is not therefore required.

See the discussion under "V.5.A.ii. Medical Provisions." In addition, §61.23, which describes what a person needs to satisfy medical eligibility requirements, is discussed below.

Changes

The medical provisions proposed in SFAR No. 89 sections 15 and 111 are transferred to §61.3 (c)(2) with the following change. New language is added to provide that persons may not use a current and valid U.S. driver's license as evidence of medical qualification if his or her most recent application for an airman medical certificate has been denied based on being found not eligible for the issuance of at least a third-class airman medical certificate, his or her most recently issued airman medical certificate has been suspended or revoked, or his or her most recent Authorization has been withdrawn. Further, that person must not know or have reason to know of any medical condition that would make him or her unable to operate a light-sport aircraft in a safe manner.

Section 61.5 Certificates and ratings issued under this part

Several commenters noted that the proposed rule made no provisions for a powered parachute-sea class rating. The FAA assumed that it was only necessary to establish a powered parachute category rating and not establish separate land and sea class ratings because the FAA was not aware that a powered parachute capable of water operations existed. The FAA is now aware that design innovation and new use of

existing technologies has allowed manufactures to design a powered parachute with an inflatable wing that is suitable for water operations. Therefore, the FAA is establishing both powered parachute-land and powered parachute-sea class ratings in §61.5.

Several commenters suggested adding additional categories of aircraft to this section. All of these suggestions were to add ultralight vehicles that the FAA has stated will remain under part 103. Some examples are paramotors, paragliders, and unpowered foot-launched parachute aircraft. The FAA has been working closely with the ultralight industry to establish common definitions and common industry standards for these vehicles. Additional categories and classes of aircraft may be addressed in future rulemaking. Existing exemptions for tandem ultralight training vehicles under part 103 may also be revised to address these new categories and classes of aircraft. See the discussion under "III.5.A. Comments on Ultralight Vehicles" and "III.5.B. Future Rulemaking on Ultralight Vehicles."

Several other commenters requested that the FAA consider commercial pilot certificates with category ratings for powered parachutes and weight-shift-control aircraft. They thought that this level of pilot certification would be required when the FAA was ready to consider some limited commercial operations for these new categories of aircraft. The commenters pointed out that powered parachutes and weight-shift-control aircraft are ideal for sightseeing, crop dusting, pipeline and powerline patrols, aerial photography, and traffic reporting. The FAA agrees that limited types of commercial operations may need to be considered in the future. If there is a need to require a commercial pilot certificate for those types of operations, the FAA may initiate rulemaking for that purpose. However, the FAA is not adding training and certification

requirements that will permit a person to add a powered parachute or weight-shift-control category rating to a commercial or airline transport pilot (ATP) certificate.

Changes

In §61.5, new paragraphs (b)(6)(i) and (ii) are added to include class ratings for powered parachute land and powered parachute sea, respectively.

In the final rule also corrects a typographical error in the body of the rule text. The paragraph designated "(i)*** (5) Sport pilot rating" should have read "(c)*** (5) Sport pilot rating."

Section 61.23 Medical certificates: Requirement and duration (proposed as SFAR No. 89 sections 15, 35, and 111)

The FAA received numerous comments on the topic of medical provisions. For a complete discussion of the comments and the FAA's responses, see "V.5.A.ii. Medical Provisions."

As noted above, in the final rule, the provisions of proposed SFAR No. 89 sections 15 and 111 are found in §§61.3 (c)(2) and 61.23 (a), (b), and (c). Among other things, §61.23 describes which operations do and do not require an airman medical certificate. In the final rule, the FAA is adding new paragraph (c) to describe operations that require either an airman medical certificate or a U.S. driver's license. The FAA notes that the final rule includes a provision that all restrictions listed on a current and valid U.S. driver's license, as well as those imposed by judicial and administrative order, apply at all times when a U.S. driver's license is used to meet the requirements of this section. This is also established under the privileges and limits for a sport pilot in

§61.315 (c)(17). This intent was discussed in the preamble of the NPRM for proposed SFAR No. 89 sections 15 and 35.

In addition, paragraph (c)(2) is further amended to require that persons using a current and valid U.S. driver's license meet certain requirements. A person using a driver's license who has recently applied for an airman medical certificate must have been found eligible for the issuance of at least a third-class airman medical certificate. If a person has been issued an airman medical certificate, his or her most recently issued airman medical certificate must not have been suspended or revoked. If a person has been granted an Authorization, his or her most recent Authorization must not have been withdrawn. Further, a person must not know or have reason to know of any medical condition that would make him or her unable to operate a light-sport aircraft in a safe manner.

Changes

The medical provisions proposed in SFAR No. 89 sections 15, 35, and 111 are transferred to §§61.3 and 61.23. Under §61.23 (c)(2)(i), a requirement is added that each restriction and limitation, including those imposed by judicial and administrative order on a current and valid U.S. driver's license, apply at all times when a U.S. driver's license is used to meet the requirements of this section.

In addition, language is added to paragraph (c)(2) to provide that persons may not use a current and valid U.S. driver's license as evidence of medical qualification if his or her most recent application for an airman medical certificate has been denied based on

being found not eligible for the issuance of at least a third-class airman medical certificate, his or her most recently issued airman medical certificate has been suspended or revoked, or his or her most recent Authorization has been withdrawn. Further, that person must not know or have reason to know of any medical condition that would make him or her unable to operate a light-sport aircraft in a safe manner.

Section 61.31 Type rating requirements, additional training, and authorization requirements

Paragraph (k)(1) is amended in the final rule to incorporate powered parachutes and weight-shift-control aircraft in the list of aircraft for which a category and class rating is not required if the aircraft is not type-certificated. The FAA recognized this oversight and is correcting it. Additionally, the FAA is making an editorial change to remove a reference to the class rating for gliders because this class rating no longer exists.

Under §61.31 (k)(2)(iii), the FAA proposed that, when conducting an operation while carrying passengers, the holder of a pilot certificate must have a category and class rating when operating an aircraft with an experimental certificate or provisional type-certificate. A few commenters said that this change would be unnecessary. They believed that if a person is qualified to fly an experimental aircraft, he or she should be qualified to carry passengers, regardless of whether he or she holds a category and class rating.

The FAA disagrees with these comments. The operation of experimental aircraft by pilots without appropriate category and class ratings was previously allowed under §61.31 (k)(2)(iii), and the operating limitations for those aircraft permitted the carriage of

passengers. However, the FAA believes that, in the interest of safety, a category and class rating is necessary when carrying a passenger, regardless of the aircraft's airworthiness certificate. This is because there is an increase in the number of experimental aircraft being operated in the NAS, and increased numbers of accidents have been attributed to a lack of category and class ratings.

A few commenters, including the NTSB, suggested that a sport pilot should be required to hold a category and class privilege when operating an experimental light-sport aircraft regardless of whether he or she is carrying a passenger. The FAA agrees with these comments and proposed that a sport pilot, regardless of whether he or she is carrying a passenger, must hold a specific category and class privilege prior to operating any light-sport aircraft. If a sport pilot wishes to exercise category and class privileges in an aircraft with an experimental certificate, for which a category or class has not been established, the FAA will specify in the aircraft's operating limitations the specific category and class rating required to operate that aircraft. The category and class specified will be based on the category and class of an aircraft that has operating characteristics similar to that new aircraft. The FAA has the authority to limit the carriage of a passenger in the aircraft's operating limitations if this is necessary for safe operation.

The FAA also considered whether a pilot holding a recreational pilot certificate or higher, while operating an experimental aircraft without a passenger, should be required to hold a category and class rating. The FAA does not believe that this is necessary at this time. The FAA did not receive any information from commenters to support requiring a category and class rating while operating an experimental aircraft without a

passenger. For operations without a passenger, the FAA will continue to address on a case-by-case basis the specific requirements for category and class ratings through the operating limitations issued for each experimental aircraft.

To ensure that pilots currently operating under the existing §61.31 (k)(2)(iii) comply with its revised provisions, the FAA is establishing a method for giving credit for previous experience gained in an experimental aircraft. This is established in the amendments to §§61.63 (k) and 61.165 (f). Certificated pilots holding a recreational pilot certificate or higher who do not have a category and class rating to operate the experimental aircraft, may apply for a category and class rating with the limitation "experimental aircraft only," and a designation for the make and model aircraft authorized to be operated. Pilots seeking this privilege must have logged at least 5 hours of pilot-in-command time in the same category, class, make, and model of aircraft issued an experimental certificate. The applicant is required to receive a logbook endorsement from an authorized flight instructor who has determined that he or she is proficient to act as pilot in command of the same category and class of aircraft. Finally, the 5 hours of flight time must be logged between September 1, 2004 and August 31, 2005. Upon satisfaction of these requirements, the FAA will issue the applicant a new pilot certificate with the additional category and class rating and the limitation "experimental aircraft only" without any further testing.

The FAA believes that the 5 hours of pilot-in-command time received within the 12-month window ensures recent experience in the category and class of experimental aircraft that the applicant intends to operate. This, combined with an endorsement from a flight instructor, gives the FAA confidence that the applicant has the necessary skills to

continue operating that make and model of experimental aircraft safely. The FAA believes this is sufficient to allow these pilots who have been previously operating without a category and class rating under the current regulation to continue operations safely. The FAA believes that it would be an unnecessary additional burden in these cases to require fulfilling the otherwise applicable testing requirements for a category and class rating.

A few commenters, including the NTSB, noted that in the proposed rule language for §61.31 (k)(2), the FAA did not recognize that the holder of a sport pilot certificate may operate an aircraft without having the appropriate category or class rating on the sport pilot certificate. This was an oversight. A sport pilot has category and class privileges that are authorized through endorsements and annotated in the pilot's logbook; therefore, an exception must be made in this section for a sport pilot. Accordingly, the FAA is adding §61.31 (k)(2)(vi).

Changes

Paragraph (k)(1) is amended in the final rule to incorporate powered parachutes and weight-shift-control aircraft in the list of aircraft for which a category and class rating is not required if the aircraft is not type-certificated. Additionally, the FAA is making an editorial change to remove the class rating for gliders because this class rating no longer exists. In paragraph (k)(2)(iii), the words "experimental or provisional aircraft type certificate, unless the operation involves carrying passengers" are designated as paragraphs (A) and (B) and corrected to read "(A) A provisional type certificate; or

(B) An experimental certificate, unless the operation involves carrying a passenger."

New paragraph (k)(2)(vi) is added.

Section 61.45 Practical tests: Required aircraft and equipment

Currently, an applicant for a certificate or rating must furnish an aircraft of U.S. registry with an airworthiness certificate and in a category specified in §61.45 (a) to conduct a practical test. Commenters noted that the FAA did not propose a change to this section to allow use of light-sport category aircraft. The FAA is therefore adding references to "light-sport category" to paragraphs (a)(1)(ii) and (a)(2)(i) to correct this oversight.

First, in paragraph (a)(1)(ii), the FAA will allow an applicant to use a light-sport category aircraft for a practical test because light-sport category aircraft are designed and manufactured to an FAA-accepted consensus standard. Therefore, for the purpose of conducting the entire flight segment of a practical test, these aircraft are considered equivalent to an aircraft issued a standard, limited, or primary category certificate.

Second, to address the addition of light-sport category aircraft to paragraph (a)(1)(ii), the FAA is providing in paragraph (a)(2)(i), that, at the discretion of the examiner, an applicant may also use an aircraft other than one in the standard, limited, or primary category, which are currently required by (a)(1)(ii), or a light-sport category aircraft. This makes it possible for an applicant to use an aircraft with an airworthiness certificate other than that specified in paragraph (a)(2)(i) for a practical test. An examiner could, therefore, permit the use of an experimental aircraft for a practical test.

The FAA is leaving use of such an aircraft to the discretion of the examiner because experimental aircraft are not designed or manufactured to a specific regulatory standard.

Several commenters stated that the FAA should modify the regulations to allow the practical test to be administered in a single-seat aircraft. They indicated that there are many existing single-seat gyroplanes, fixed-wing aircraft, powered parachutes, and weight-shift-control unregistered ultralight-like aircraft that will be operated under this rule. The commenters said that revising §61.45 to allow practical tests in these aircraft would help many pilots that are flying single-seat unregistered ultralight-like aircraft to obtain their sport pilot certificates without incurring the cost of training and testing in a two-seat aircraft with which they are not familiar.

The FAA agrees with the commenters and is establishing in §61.45 (f) specific requirements to allow a practical test to be conducted in a light-sport aircraft that has a single seat. The FAA notes that an ultralight pilot who is currently operating a single-seat ultralight-like aircraft that does not meet the definition of an ultralight vehicle will need to take a practical test to be issued a sport pilot certificate to operate that light-sport aircraft. According to information the FAA received from manufacturers, there are a number of pilots who intend to purchase single-seat light-sport aircraft, rather than ultralight vehicles, and this provision will allow them to take the practical test for the sport pilot certificate in these aircraft without incurring the cost of additional training and testing in a two-seat light-sport aircraft.

In the past, the FAA has encountered situations where pilots sought type ratings or letters of authorization in lieu of type ratings in aircraft not designed for two occupants. Testing in those aircraft has been accomplished in accordance with

established FAA guidance. In these cases, testing procedures include observation from the ground or from chase airplanes.

The FAA believes that with certain limitations, it is appropriate to allow the practical test for a sport pilot certificate to be conducted from the ground by a DPE or an FAA inspector. An examiner must agree to conduct the practical test in a single seat aircraft and must ensure that the practical test is conducted in accordance with the sport pilot practical test standards for single seat aircraft. The pilot will have a limitation placed on his or her sport pilot certificate limiting operations to a single-seat light-sport aircraft, and he or she will not be authorized to carry passengers. Only a DPE or an FAA inspector is authorized remove the limitation. This can be accomplished when the sport pilot takes a practical test in a two-place light-sport aircraft and conducts additional tasks identified in the practical test standards. It can also be accomplished if the sport pilot completes the certification requirements for a higher certificate, rating, or privilege in a two-place aircraft.

The FAA received several comments asking how a flight review required by §61.56 would be accomplished in a single-seat aircraft. A sport pilot who is issued a certificate with a single-seat limitation must complete a flight review every 24 calendar months, as required by §61.56. The flight review is required to establish that a sport pilot still maintains the knowledge and skills to exercise sport pilot privileges. There are several methods for accomplishing a flight review under §61.56. If the flight review will be accomplished in an aircraft, it must be in an aircraft with a minimum of two seats, in which the pilot is rated, and with an authorized instructor. In addition, the flight review must be conducted with a current and qualified authorized instructor who must act as

pilot in command during the conduct of the flight. Therefore, a flight review cannot be conducted in a single seat aircraft.

Changes

Paragraphs (a)(1)(ii) and (a)(2)(i) are revised to add the words "light-sport category."

Paragraph (b)(1)(iii) is revised to add an exception to new paragraph (f).

Paragraph (f) is added to allow practical tests in a single-seat light-sport aircraft.

Section 61.51 Pilot logbooks (proposed SFAR No. 89 sections 67, 131, 171, 173, and 175)

In the final rule, requirements proposed in SFAR No. 89 sections 67, 131, 171, 173, and 175 are transferred to §61.51 with minor wording changes. Several commenters expressed concern about the ability to carry a logbook in an open-cockpit aircraft. They suggested that the FAA not require this. The FAA agrees with the commenters' concerns and notes that the proposed rule permitted pilots to carry either their logbooks or documented proof of all required endorsements on all flights. See the discussion of proposed SFAR No. 89 section 67 in the NPRM for a complete discussion on what the FAA intended by "documented proof." In the final rule, the FAA is changing the words "documented proof of all required endorsements" to "other evidence of required authorized instructor endorsements." This language more closely corresponds to language contained in current §61.51 (i). In addition, the FAA is not adopting the sentence in the NPRM that read, "Documented proof includes a photocopy of the

logbook endorsements or a pre-printed form that includes the endorsements." Instead, the FAA will issue guidance material that will provide examples of what documents will be considered acceptable as evidence.

Changes

The provisions of proposed SFAR No. 89 sections 67, 131, 171, 173, and 175 are transferred to §61.51 with the following changes. The words "documented proof of all required endorsements" are changed to "other evidence of required authorized instructor endorsements." In addition, the FAA is not adopting the sentence in proposed section 67 that would have described the kinds of documents that would have been accepted as documented proof.

Section 61.52 Use of aeronautical experience obtained in ultralight vehicles (proposed SFAR No. 89 sections 135, 153, 175, 177, and 179)

The proposed requirements in SFAR No. 89 sections 135, 153, 175, 177 and 179 for using aeronautical experience obtained in ultralight vehicles (to include two-seat ultralight trainers) and for logging aeronautical experience to meet the requirements for a sport pilot certificate or for a flight instructor certificate with a sport pilot rating are moved to new §61.52.

The FAA received one comment that stated that the agency should not allow the crediting of ultralight fight time towards higher certificate levels. That commenter, however, provided no justification to support this comment. The FAA does not agree with this commenter, and the final rule will permit aeronautical experience obtained in an ultralight vehicle to be credited towards a sport pilot certificate, a flight instructor

certificate with a sport pilot rating, and a private pilot certificate with a weight-shift-control or powered parachute category rating. It will also permit aeronautical experience obtained in a two-seat ultralight trainer to be credited toward these certificates and ratings.

The FAA received many other comments that suggested the FAA should allow crediting of flight time towards other certificate levels and additional privileges. The FAA partially agrees with these commenters and is changing the final rule to allow crediting of ultralight aeronautical experience not only toward a sport pilot certificate, as proposed in the NPRM, but also toward a flight instructor certificate with a sport pilot rating, and a private pilot certificate with a weight-shift-control or powered parachute category rating. This will allow individuals who have gained experience in ultralight vehicles while operating with an FAA-recognized ultralight organization to receive credit for that experience.

In the NPRM, the FAA allowed crediting of ultralight experience to meet the requirement that, before providing flight training, a flight instructor with a sport pilot rating must log at least 5 hours of flight time in the make and model of light-sport aircraft in which flight training is to be conducted. The FAA is now establishing the provisions to credit this experience to meet the requirements of §61.415 (e) in §61.52 (b).

In addition, the FAA is also now allowing crediting of ultralight experience to qualify for glider or unpowered ultralight towing under §61.69. The experience must be properly documented. This section permits the experience gained in an ultralight vehicle to be credited only toward a certificate, rating, or privilege when that experience was obtained in a category and class of vehicle corresponding to the rating or privileges

sought. It does not allow crediting of time toward private pilot privileges other than weight-shift-control and powered parachute.

Many commenters suggested that the FAA allow sport pilots to conduct towing operations. The FAA believes that this privilege should be limited to individuals with at least a private pilot certificate. This portion of the rule remains unchanged.

The FAA recognizes that towing of light-sport aircraft is done almost exclusively by weight-shift-control and fixed-wing ultralights. Larger aircraft are not used because of the speed differential between the towing aircraft and the aircraft being towed. The FAA also recognizes that limiting towing to pilots with a private pilot certificate or higher may inhibit towing operations. This rule provides partial relief because of the ability of current weight-shift-control and powered parachute pilots to credit their time in ultralight vehicles toward the new categories of private pilot certificates. Further, such pilots will be able to credit their time towards that needed to qualify for towing under §61.69 in accordance with §61.52.

The FAA has considered allowing the same sort of credit for fixed-wing ultralight pilots to meet the requirements of a private pilot certificate with aircraft category ratings. However, this crediting was viewed as a significant change to the aeronautical experience requirements for this certificate. The FAA considered such a change outside the scope of the original proposal and significant enough to justify full public notice and comment. The FAA expects to address this issue in a separate future rulemaking and may favorably consider exemptions to this rule. See also the more detailed discussion of towing by persons with at least a private pilot certificate under §61.69.

Under new §61.52, the FAA will allow experience obtained in ultralight vehicles to meet the requirements of §61.69. Much of this experience has been gained under an exemption that has been managed successfully by the USHGA for the last 20 years. Crediting of this experience will allow most ultralight pilots currently conducting towing operations in weight-shift-control ultralights under that exemption to meet most of the minimum requirements for a private pilot certificate with a weight-shift-control aircraft category rating and the additional towing experience requirements under §61.69. Additionally, those who hold at least a private pilot certificate will be eligible to credit their ultralight towing experience in a weight-shift-control ultralight vehicle towards the towing experience requirements of §61.69. For more information on crediting flight time obtained in ultralight vehicles, refer to the discussion of §61.329.

Changes

The proposed requirements in SFAR No. 89 sections 135, 153, 175, 177, and 179 are moved to new §61.52 with the following change.

In paragraph (a)(3), language is added to establish that a person may use aeronautical experience obtained in an ultralight vehicle to meet the requirements for a private pilot certificate with a weight-shift-control or powered parachute category rating.

Section 61.53 Prohibition on operations during medical deficiency (proposed as SFAR No. 89 section 17)

The FAA received numerous comments on the topic of medical provisions. For a complete discussion of the comments and the FAA's responses, see "V.5.A.ii. Medical Provisions."

Changes

The applicable medical provisions proposed in SFAR No. 89 section 17 are transferred to §61.53 (c) without substantive change.

§61.63 Additional aircraft ratings (other than on an airplane transport pilot certificate)

The FAA is adding a new paragraph (k) to §61.63 to assist pilots currently operating under §61.31 (k)(2)(iii) without a category and class rating to comply with the new provisions of that paragraph. The revision to §61.31 (k)(2)(iii) and (k)(2)(vi) require a category and class rating for the holder of a recreational pilot certificate or higher when that pilot operates an aircraft with an experimental certificate and carries a passenger. To receive a category and class rating to operate these aircraft, a person must log at least 5 hours of flight time while acting as pilot in command in the same category, class, make, and model of experimental aircraft and receive an appropriate endorsement. Other aeronautical knowledge, flight proficiency, and aeronautical experience requirements for the issuance of the rating do not apply. This flight time must be logged between September 1, 2004 and August 31, 2005. Similar provisions are enacted for persons holding airline transport pilot certificates in §61.165 (f). A pilot who meets these

requirements will be issued an appropriate category and class rating limited to a specific make and model of experimental aircraft. See the discussion of §61.31.

Changes

Existing paragraph (k) is redesignated as (l), and a new paragraph (k), Category class ratings for the operation of aircraft with experimental certificates, is added for certificated pilots holding a recreational pilot certificate or higher who do not have a category and class rating to operate a specific make and model of experimental aircraft. They may apply for a category and class rating limited to a specific make and model of experimental aircraft.

Section 61.69 Glider and unpowered ultralight vehicle towing

One of the most common issues addressed by commenters was the towing of hang gliders, paragliders, and gliders by either ultralight vehicles or light-sport aircraft. Of the approximately 4,700 comments received, 691 related to eliminating exemptions from §§91.309 and 103.1 (b). These exemptions allow ultralight pilots to use ultralight vehicles to tow hang gliders. In addition, 607 comments related to proposed SFAR No. 89 section 73 (b)(12), which would have prohibited the towing of any object, including a hang glider, paraglider, or glider towing by a light-sport aircraft. The vast majority of these commenters opposed the proposed rule.

Most commenters stated that the proposed rule would adversely affect the safety of training in unpowered ultralights, such as hang gliders and paragliders. Without the availability of hang glider and paraglider towing by ultralights, most commenters noted

that the only way to learn to fly a hang glider or paraglider is to perform a foot launch from an elevated location. Many commenters also noted that these flights usually would be conducted without an instructor, unlike flights in which towing is involved. Therefore, many commenters argued, that without the benefits of being towed by an ultralight and the ability to receive tandem instruction while airborne, few people would endeavor to learn how to fly hang gliders or paragliders. These commenters stated that the proposed rule would have a crippling economic effect on hang glider and paraglider training.

Similarly, many commenters noted that prohibiting hang glider and paraglider towing by ultralights would eliminate the sport of hang gliding and paragliding in areas of the country without elevated terrain. In areas with a relatively flat topography, such as Florida, towing by ultralights is the only means of launching a hang glider or paraglider. Many commenters who are hang glider and paraglider instructors and ultralight tow pilots in Florida were concerned that the proposed rule would permanently curtail their operations.

Many commenters noted that hang glider and paragliding towing by ultralights has contributed to the growth of the sport, and that the proposed rule would jeopardize the future of the sport. They also noted that eliminating hang glider and paraglider towing by ultralights would prohibit the display of hang gliders and paragliders at airshows, where foot launches usually cannot be accomplished. Commenters added that this would further reduce the exposure of the sport and limit its growth potential.

The FAA agrees with the commenters' suggestions that light-sport aircraft should be permitted to be used for towing operations. The FAA recognizes that towing

operations have been conducted safely for over 20 years using ultralight-like aircraft, which now will be certificated as light-sport aircraft. These same aircraft have been operated safely under an exemption from §§91.309 and 103.1(b) held by the USHGA since 1984.

The existing fleet of ultralights conducting towing operations consists of fixed-wing ultralight-like aircraft, which the industry refers to as "tugs," and weight-shift-control aircraft, both of which are specifically designed and equipped to withstand the load of towing hang gliders, gliders, and paragliders. These aircraft must meet the requirements of §91.309. The FAA will issue additional guidance material to ensure that the aircraft are designed, equipped, and maintained, and operated safely. The FAA has not limited the period during which the small existing fleet of experimental light-sport aircraft that will be used for this purpose. These aircraft may be used for towing unless the FAA issues an operating limitation prohibiting this activity.

Newly manufactured aircraft issued a special airworthiness certificate in the light-sport category that will be used for towing will be designed and manufactured to meet criteria established in the consensus standard. If the FAA determines that the aircraft was not manufactured in accordance with a consensus standard that identifies aircraft requirements for towing, the aircraft will be issued an operating limitation prohibiting the conduct of towing operations. The FAA will not authorize experimental light-sport kit aircraft to be used to conduct these types of operations. When an experimental or a special light-sport aircraft is used in towing operations for compensation or hire, these aircraft must also meet the 100-hour condition inspection requirement established for experimental and special light-sport aircraft in §§91.319 (g) and 91.327 (c), respectively.

While a substantial number of commenters suggested that sport and recreational pilots be allowed to conduct towing operations for compensation or hire, the FAA maintains that only private pilots or higher should be permitted to conduct these types of operations. Under §61.69, only a private pilot or higher can tow a glider and is authorized to conduct towing operations for compensation or hire under §61.113. The FAA is revising the final rule to allow ultralight vehicle pilots, qualified under an FAA-recognized ultralight organization, to credit experience under §61.52 towards a private pilot certificate and towards the experience requirements of §61.69. With the addition of a rating at the private pilot certificate level for weight-shift-control aircraft, the regulations will now accommodate these types of aircraft that will be used for towing operations under this new regulatory framework.

The FAA notes that for towing operations that are not conducted for compensation or hire, a pilot is still required to meet the minimum requirements established in §61.69. Therefore, the FAA does not believe it is necessary to allow a sport or recreational pilot to conduct towing operations.

See discussions under §§61.113, 91,319, and 91.327 for more information on changes made regarding private pilots using powered ultralight vehicles to tow.

Changes

Section 61.69 is revised to permit towing of unpowered ultralight vehicles by holders of at least a private pilot certificate. In addition, all references to "gliders" are changed to "gliders or unpowered ultralight vehicles."

Section 61.87 Solo requirements for student pilots (proposed as SFAR No. 89 section 33 (a), (b), and (c))

Under section 33 of SFAR No. 89, the FAA proposed solo and solo-cross country requirements for student pilots operating light-sport aircraft. In the final rule, the pre-solo flight training provisions are located in §61.87. Also, the FAA has moved the cross-country flight training requirements for student pilots seeking a sport pilot certificate with privileges in a weight-shift-control aircraft and a powered parachute to §61.93. Student pilots, student pilots seeking a sport pilot certificate, and other pilots seeking privileges or a rating in a weight-shift-control aircraft or a powered parachute will be trained to the same standard prior to conducting solo or solo cross-country flight operations. This is consistent with the solo and solo cross-country flight-training requirements for all student pilots training in other categories of aircraft.

After considering the comments and becoming familiar with powered parachutes during the development of the practical test standards, the FAA recognizes that the requirements for student pilots training on meta-stable stalls and partial canopy collapses should be revised.

In addition, to specify that the maneuvers and procedures for pre-solo flight training listed in this section also apply to student pilots seeking sport pilot privileges in single-engine airplanes, gyroplanes, gliders, airships, and balloons, the FAA is adding the words "or privileges" after the word "rating" in the introductory text of paragraphs (d), (g), (i), (j), and (k).

For a complete discussion on specific changes to training and proficiency requirements please refer to "V.5.A.iii. Flight Training and Proficiency Requirements."

Changes

The proposed provisions of SFAR No. 89 section 33 (a), (b), and (c) are transferred to new paragraphs (l) and (m) of §61.87. The provisions are modified to remove the powered parachute pre-solo flight training requirements pertaining to recovery from partial canopy collapse, meta-stable stalls and avoidance.

In addition, the words "or privileges" are added after the word "rating" in the introductory text of paragraphs (d), (g), (i), (j), and (k).

Section 61.89 General limitations (proposed as SFAR No. 89 section 35)

The proposed general limitations in SFAR No. 89 section 35 for student pilots seeking a sport pilot certificate are moved to §61.89.

Proposed section 35 (e) of SFAR No. 89 would have limited the maximum speed a student pilot could operate a light-sport aircraft to 87 knots CAS. There were many comments on this issue, and they criticized the proposed requirement as not being in the interest of safety and being unnecessarily restrictive of the manner in which a student pilot can learn to fly a light-sport aircraft. Nearly all of the commenters disagreed with the need for such a limit, and many commenters suggested that stall speed has a far greater impact on safety than maximum speed. One commenter noted that this section would require instructor pilots to use two sets of aircraft for instruction, thus increasing the cost of training. Several commenters suggested that it is safer for a student to train in the same aircraft he or she will later fly.

The FAA agrees with commenters and is eliminating this limitation. Each student pilot must have a specific make and model endorsement on his or her student pilot certificate authorizing solo flight, appropriate to the aircraft being operated. For each category, class, and make and model of light-sport aircraft a student pilot operates that exceeds 87 knots CAS, he or she will get additional training. Therefore, imposing a speed limit of 87 knots CAS on student pilot seeking a sport pilot certificate is unnecessary. The FAA is identifying the specific limitations that only apply to a student pilot seeking a sport pilot certificate in paragraph (c) of §61.89. All other limitations on student pilots are noted in current paragraphs (a) and (b) of §61.89. These limitations also apply to student pilots seeking a sport pilot certificate.

New paragraph (c) of §61.89 identifies those restrictive privileges and limitations that distinguish a student pilot seeking a sport pilot certificate from other student pilots. This paragraph specifies that a student pilot seeking a sport pilot certificate may fly only a light-sport aircraft and is prohibited from flying at night and above 10,000 feet MSL. The paragraph also restricts the classes of airspace and types of airports a sport pilot seeking a sport pilot certificate may use without receiving additional training and an endorsement. Training for a sport pilot certificate does not include training for operating in Class B, C, and D airspace and airports, and in other airspace and airports with operational control towers because, unlike other student pilots, sport pilots do not have those additional privileges. These are additional privileges that are granted with the appropriate additional training and endorsements established in §61.94 for student pilots seeking a sport pilot certificate and in §61.325 for a sport pilot.

For a complete discussion of changes made to training and proficiency requirements, refer to "V.5.A.iii. Flight Training and Proficiency Requirements."

Changes

The FAA is transferring the provisions of proposed SFAR No. 89 section 35 to new paragraph (c) of §61.89. Other limitations from SFAR No. 89 section 35 are found in paragraphs (a) and (b) of the existing rule. Also, the 87-knot CAS speed restriction on student pilots seeking a sport pilot certificate is removed from the final rule.

Section 61.93 Solo cross-country flight requirements (proposed as SFAR No. 89 section 33 (d), (e), and (f))

Under section 33 of SFAR No. 89, the FAA proposed solo and solo cross-country flight training requirements for student pilots. In the final rule, the solo cross-country flight training provisions are located under §61.93. By moving the solo cross-country flight training requirements into the existing sections of part 61, both sport pilots and private pilots seeking either privileges or a rating in a weight-shift-control aircraft or a powered-parachute will be trained to the same standard prior to conducting solo cross-country operations. This is consistent with the solo cross-country flight training requirements for all other categories of aircraft.

After considering the comments and becoming familiar with powered parachute and weight-shift-control aircraft during the development of the practical test standards, the FAA recognized that dead reckoning should require the aid of a magnetic compass, although one is still not required for pilotage. The FAA is therefore adding the words "as

appropriate" to paragraph (l) to allow latitude in determining when this requirement must be met.

Upon further consideration, the FAA realizes it should have included different solo cross-country training requirements for weight-shift-control aircraft and powered parachutes that were consistent with the solo cross-country flight training requirements for all other categories of light-sport aircraft. When the FAA began incorporating these requirements into the section, the agency determined that the solo cross-country flight training requirements for operations in a weight-shift-control aircraft for takeoff, approach, and landing procedures, including crosswind approaches and landings was not addressed in the NPRM. Therefore, these provisions are added to paragraph (m) of §61.93. In addition, a new solo cross-country flight training requirement for takeoff, approach, and landing procedures in a powered parachute (without a requirement for crosswind approaches and landings) is added to paragraph (l) of §61.93. The crosswind takeoff and landing requirements were not addressed in this section because powered parachutes are not designed for crosswind takeoffs and landings.

For a complete discussion on specific changes to training and proficiency requirements please refer to "V.5.A.iii. Flight Training and Proficiency Requirements."

Changes

The proposed provisions of SFAR No. 89 section 33 (d), (e), and (f) are transferred to paragraphs (l) and (m) of §61.93 with the following changes.

The requirement for training with the aid of a magnetic compass has been revised, and the words "as appropriate" are added to (l)(1) and (m)(1).

In paragraph (l)(11), a provision for takeoff, approach, and landing procedures is added.

In paragraph (m)(11), a provision for takeoff, approach, and landing procedures, including crosswind approaches and landings, is added.

Section 61.94 Student pilot seeking a sport pilot certificate or a recreational pilot certificate: Operations at airports within, and in airspace located within, Class B, C, and D airspace, or at airports with an operational control tower in other airspace (proposed as SFAR No. 89 section 37)

The FAA is adopting this section with minor wording changes. The FAA recognizes that operational control towers may be located in other than Class B, C, or D airspace. To ensure that a student pilot seeking a sport pilot certificate or a recreational pilot has adequate training to safely operate within such airspace and at airports located within that airspace, the FAA is adding language to require that the training specified within §61.94 be completed before such operations are conducted.

To facilitate changes made to §61.101, which permit recreational pilots with sufficient training to operate in Class B, C, and D airspace, at an airport located in Class B, C, or D airspace, or to, from, through, or at an airport having an operational control tower, the requirements of §61.94 will also apply to recreational pilots. Although the requirements of §61.94 are more stringent than those found in §61.95, the requirements to permit the conduct of operations in Class B airspace are equivalent for pilots affected by

either section. For complete discussion of changes made to this section, see "V.5.A.v. Changes to Airspace Restrictions."

Changes

The proposed provisions of SFAR No. 89 section 37 are transferred to new §61.94 with the words "to, from, through, or at an airport having an operational control tower" added, and with other minor wording changes. In addition, the heading and paragraph (a) are revised to include the words "or recreational pilot."

Section 61.95 Operations in Class B airspace and at airports located within Class B airspace

The FAA did not propose to amend §61.95; however, the FAA is amending this section to exclude a student pilot seeking a sport pilot certificate or a recreational pilot certificate. New §61.94 is added that contains requirements for a student pilot seeking a sport pilot certificate or a recreational pilot certificate wishing to obtain privileges to operate in Class B airspace or at an airport located in Class B airspace. See discussion under "V.5.A.v. Changes to Airspace Restrictions."

Changes

Paragraph (c) is added to §61.95 to provide that the section does not apply to a student pilot seeking a sport pilot certificate or a recreational pilot certificate.

Section 61.99 Aeronautical experience

The FAA did not receive any comments on this section.

Changes

The proposed amendment is adopted without change.

Section 61.101 Recreational pilot privileges and limits

There were several comments requesting that the FAA expand the privileges for holders of a recreational pilot certificate. Most of these comments suggested expanding the distance recreational pilots may fly without meeting the requirement of §61.101 (c) and allowing recreational pilots to meet the same medical certification requirements as sport pilots.

Several commenters favored extending proposed sport pilot medical provisions to holders of higher-level pilot certificates. These commenters contended that the same reasoning and justification proposed for sport pilots should apply to other pilots. They noted that recreational pilots are subject to many of the same operating limitations as sport pilots. These include limits on carrying passengers, use of other than fixed-gear aircraft, and prohibitions on flight between sunrise and sunset, and when flight or surface visibility is less than 3 statue miles. Therefore, the commenters believe recreational pilots should not be subject to current medical requirements that are more stringent than those for sport pilots. They suggested that the FAA review sport pilot data over time and consider allowing recreational pilots to meet the sport pilot medical requirements that are adopted under this rule.

The FAA did not consider expanding the applicability of the proposed sport pilot medical requirements in this rulemaking action, nor would it be within the scope of this action to do so. The FAA agrees with commenters that the agency must gain experience with sport pilot medical requirements, but the FAA will not consider extending these provisions beyond sport pilots and will not grant any petitions for exemption or rulemaking requesting that it do so at this time.

The FAA notes that it is not within the scope of this rulemaking to make substantive changes to the privileges of a recreational pilot, except where such changes are necessary to maintain consistency with the privileges for sport pilots provided under the final rule. The FAA also notes that, because recreational pilots are permitted to operate larger aircraft, the training requirements for recreational pilots are more extensive than for sport pilots.

Specifically, commenters suggested allowing recreational pilots to demonstrate aircraft to prospective buyers, as is allowed for sport pilots who are not aircraft salespersons. The FAA agrees and is adding a provision permitting holders of a recreational pilot certificate to demonstrate aircraft to prospective buyers, provided the recreational pilot is not an aircraft salesperson. For a discussion of the privilege of demonstrating aircraft to prospective buyers, please refer to "V.5.A.viii. Demonstration of Aircraft to Prospective Buyers." In addition, several commenters suggested that recreational pilots be allowed to conduct towing operations. The FAA still maintains that only a pilot with at least a private pilot certificate should be authorized to conduct towing operations. For a discussion of comments suggesting that the privilege of conducting towing operations be added to recreational pilot certificate, see the discussion of §61.69.

Finally, many commenters suggested that recreational pilot be allowed to exercise the privileges of sport pilots. The FAA is revising the final rule under §61.303 to allow a recreational pilot to exercise sport pilot privileges if he or she has received the cross-country training required in §61.101 (c) and holds any other endorsements required by subpart J of part 61. The cross-country training required in §61.101 (c) will provide a recreational pilot with at least the same minimum cross-country training that a sport pilot

must meet to be eligible for this certificate. For a discussion of the changes related to this, see §61.303.

When drafting the NPRM, the FAA did not establish aeronautical knowledge, flight proficiency, and aeronautical experience requirements for recreational pilots to obtain category and class ratings in powered parachutes and weight-shift-control aircraft. The proposal, however, did not revise §61.101 (d)(2) to prohibit recreational pilots from acting as pilot in command of these aircraft. As the FAA will not issue ratings for recreational pilots to operate these aircraft, the FAA is adding a limitation to §61.101 (d)(2) to specifically prohibit recreational pilots from acting as pilot in command of a powered parachute or a weight-shift-control aircraft.

In drafting the NPRM, the FAA did not consider the fact that operational control towers may, on occasion, be located in Class G or E airspace. To address this omission and therefore require a recreational pilot to receive appropriate training prior to conducting operations at an airport that has an operational control tower in Class G or E airspace, the FAA is revising paragraphs (d) and (e)(7) to add the words "to, from, through, or at an airport having an operational control tower." For a discussion of the changes related to operations in Class B, C, and D airspace, see "V.5.A.v. Changes to Airspace Restrictions."

Changes

In the final rule, paragraph (e)(2) is revised to prohibit recreational pilots from operating powered parachutes and weight-shift-control aircraft.

In addition, paragraph (e)(12) is added to permit holders of a recreational pilot certificate to demonstrate aircraft to prospective buyers, provided the recreational pilot is not an aircraft salesperson.

Finally, the FAA is revising paragraphs (d) and (e)(7) to add the words "to, from, through, or at an airport having an operational control tower."

Section 61.107 Flight proficiency

As discussed in §61.5 above, based on several comments, the FAA is adding a powered parachute--sea rating. Therefore, the FAA is changing §61.107 to establish the appropriate flight proficiency training necessary for seaplane base operations.

In addition, the FAA is removing proposed paragraph (b)(9)(viii), which would have required a person to receive and log ground and flight training in slow flight and stalls for a powered parachute rating. See discussion under "V.5.A.iii. Flight Training and Proficiency Requirements."

Changes

In the final rule, paragraph (b)(9)(iii) is changed to require flight proficiency training in seaplane base operations for a powered parachute--sea rating. In addition, proposed paragraph (b)(9)(viii) is not adopted, and paragraphs (ix) through (xi) are redesignated as (viii) through (x) respectively.

Section 61.109 Aeronautical experience

Several commenters noted that powered parachutes are not properly equipped to engage in operations at night. These commenters suggested that the requirement for night flight training be eliminated. The FAA agreed with these commenters and although the FAA will not remove the requirement for this training, the final rule will provide for a new exception to this training requirement in §61.110. This exception will permit a person who does not receive the required night training to be issued a certificate with a night flying limitation. See §61.110 for a discussion of night flying exceptions.

A few commenters also suggested that, given the slow speeds at which powered parachutes travel, the cross-country training distances required under the proposed rule would be excessive. The commenters also suggested that the flight proficiency requirements should more closely parallel glider and balloon training. The FAA agrees and therefore is making changes in the final rule to address these comments. For a complete discussion on specific changes to training and proficiency requirements refer to "V.5.A.iii. Flight Training and Proficiency Requirements."

The FAA notes that in the NPRM, in proposed paragraph (i), in the aeronautical experience table describing the training necessary for a weight-shift-control rating, a paragraph was incorrectly formatted, therefore making the table misleading. Under the list of items included under "(iv) Ten hours solo flight time in a weight-shift-control aircraft consisting of at least--," the requirement for three takeoffs and landings (with each landing involving a flight in the traffic pattern) at an airport with an operating control tower should have been designated as "(C)" in the list, rather than as a separate paragraph "(v)." In the final rule, the FAA is correctly designating that list to indicate

that the requirement for three takeoffs and landings in a weight-shift-control aircraft at an airport with an operating control tower must be accomplished as solo flight.

Changes

The FAA is reformatting proposed paragraph (i) and adopting it with the following changes for a powered parachute rating:

The total flight time requirement is reduced from 40 hours to 25 hours in a powered parachute.

The requirement for total flight training with an authorized instructor is reduced from 20 to 10 hours, and an additional requirement for 30 takeoffs and landings with an authorized instructor is being added.

The requirement for 10 hours of solo flight training is not being changed, but the solo takeoff and landing requirement is increased from 10 to 20.

A reference to the night flying exceptions specified in §61.110 is included in the night flight training requirements, and the requirement to conduct one night cross-country flight over 25 NM total distance is removed.

The 3-hour solo cross-country requirement is reduced to 1 hour, and the solo cross-country flight distance requirement is reduced from 50 NM to 25 NM.

In addition, requirements for a weight-shift-control rating are moved to new paragraph (j).

In paragraph (j), for weight-shift-control aircraft, the FAA is reducing the night cross-country flight requirement for a private pilot certificate from 100 NM to a required distance of at least 75 nautical miles, and the requirement for a solo cross-country flight

from 150 nautical miles to 100 NM. Additionally, the FAA is revising the proposal to clarify that the requirement for three takeoffs and landings in a weight-shift-control aircraft at an airport with an operating control tower must be accomplished as solo flight.

Section 61.110 Night flying exceptions

The FAA did not propose to amend §61.110, however, the FAA received many comments suggesting that a private pilot who wants to obtain a weight-shift-control, powered parachute, or gyroplane rating should not be required to fly at night if the aircraft is not equipped for that operation, or the pilot chooses not to seek those privileges. Most aircraft in those three categories are not equipped with the aircraft instruments or lighting required under part 91 for night operations. Those aircraft are primarily suited for daytime operations under visual flight rules.

The FAA is modifying §61.110 to permit a person seeking a private pilot certificate with a gyroplane, powered parachute, or weight-shift-control aircraft rating to obtain that rating without complying with the night flying requirements specified in §61.109 (d)(2), (i)(2), or (j)(2). A private pilot who does not complete these requirements for night operations will have a limitation placed on his or her pilot certificate stating "night flying prohibited." This limitation can be removed at any time by a designated examiner or an FAA inspector when the pilot completes the night flying requirements established under the appropriate section of part 61.

Changes

The FAA is adding paragraph (c) to §61.110 to permit a person who does not meet the night flying requirements in §61.109 (d)(2), (i)(2), or (j)(2) to be issued a private pilot certificate with the limit "Night flying prohibited." This limitation may be removed by an examiner if the holder complies with the requirements of §61.109 (d)(2), (i)(2), or (j)(2), as appropriate.

Section 61.113 Private pilot privileges and limitations: Pilot in command

The FAA is revising §61.113 (g) to allow a private pilot to act as pilot in command while towing an unpowered ultralight vehicle for compensation or hire. This change conforms to the revisions made to §61.69. For a discussion of those changes, see §61.69 above.

Changes

Paragraph (g) is revised.

Section 61.165 Additional aircraft category and class ratings.

The FAA is adding a new paragraph (f) to §61.165 to assist airline transport pilots currently operating under §61.31 (k)(2)(iii) without a category and class rating to comply with the new provisions of that paragraph. The revision to §61.31 (k)(2)(iii) requires a category and class rating for the holder of a pilot certificate when that pilot operates an aircraft with an experimental certificate and carries a passenger. To receive a category and class rating to operate these aircraft, a person must log at least 5 hours of flight time

while acting as pilot in command in the same category, class, make, and model of experimental aircraft and receive an appropriate endorsement. Other aeronautical knowledge, flight proficiency, and aeronautical experience requirements for the issuance of the rating do not apply. This flight time must be logged between September 1, 2004 and August 31, 2005. Similar provisions are enacted in §61.63 (k) for persons holding other pilot certificates. An airline transport pilot who meets these requirements will be issued an appropriate category and class rating limited to a specific make and model of experimental aircraft. See the discussion of §61.31.

Changes

A new paragraph (f), Category class ratings for the operation of aircraft with experimental certificates, is added for airline transport pilots who do not have a category and class rating to operate the experimental aircraft. They may apply for a category and class rating limited to a specific make and model of experimental aircraft.

Subpart H—Flight Instructors Other Than Flight Instructors with a Sport Pilot Rating

The FAA is revising the heading of subpart H to include the words "other than flight instructors with a sport pilot rating." Because of the unique requirements that apply to flight instructors with a sport pilot rating, the FAA is placing those requirements into a new subpart K, rather than into existing subpart H.

Changes

The heading for subpart H is revised.

Section 61.181 Applicability

In the final rule, the FAA is revising §61.181 to make the applicability of the section consistent with the newly revised subpart H heading (discussed above).

Changes

Section 61.181 is revised to add the words "except for flight instructor certificates with a sport pilot rating."

Section 61.213 Eligibility requirements (proposed as SFAR No. 89 sections 211 and 213)

The FAA did not receive any comments on sections 211 and 213 of proposed SFAR No. 89. The provisions are therefore transferred to §61.213 without substantive change.

Changes

Paragraphs (a)(4)(i) and (a)(4)(ii) are revised to include the requirements of sections 211 and 213 of proposed SFAR No. 89.

Section 61.215 Ground instructor privileges (proposed as SFAR No. 89 section 215)

The FAA did not receive any comments on sections 215 of proposed SFAR No. 89. The provisions are therefore transferred to §61.215 without substantive change.

Changes

Paragraph (a) is revised to include the requirements of section 215 of proposed SFAR No. 89.

Subpart J--Sport Pilots

The FAA concluded that the certification rules pertaining to sport pilots merited their own subpart in part 61. The rules originally proposed in SFAR No. 89 pertaining to sport pilots are moved into subpart J. A table cross-referencing those sections of proposed SFAR No. 89 with corresponding sections of part 61 appears at the beginning of this section-by-section analysis for part 61.

Section 61.301 What is the purpose of this subpart? (proposed as SFAR No. 89 section 1)

The FAA did not receive any comments on section 1 of proposed SFAR No. 89. The provisions applicable to sport pilots and persons seeking to exercise sport pilot privileges are therefore transferred to §61.301 without substantive change. Section 61.301 provides the user with an overview of the requirements prescribed in this subpart.

Changes

The provisions of section 1 of proposed SFAR No. 89 applicable to sport pilots and persons seeking to exercise sport pilot privileges are transferred to §61.301 without substantive change.

Section 61.303 What operating limits and endorsement requirements of this subpart apply to my operation of a light-sport aircraft for the certificates and ratings I hold? (proposed as SFAR No. 89 section 91)

The FAA is adding §61.303 to clarify which operating limits and endorsement requirements apply to the operation of a light-sport aircraft, depending on the type of certificate or rating a pilot holds and the medical eligibility requirements the pilot meets.

Many comments expressed confusion about the ability to exercise sport privileges while holding a higher-level pilot certificate. Many commenters also were not certain what privileges they could exercise based on their medical eligibility or what privileges they could exercise when operating a light-sport aircraft. To clarify the operating limits and endorsement requirements for pilots exercising sport pilot privileges, the FAA has included a table in §61.303.

The FAA has revised the final rule to allow a recreational pilot who does not have an airman medical certificate to exercise sport pilot privileges if that person has received

the cross-country training required in §61.101 (c). Proposed SFAR No. 89 section 91 excluded recreational pilots from exercising sport pilot privileges because they did not have the cross-country training required for a sport pilot. The cross-country training required in §61.101 (c) is equivalent to the cross-country requirements for sport pilots. See the discussion in §61.101 for more information.

The FAA is not requiring a pilot who holds a recreational pilot certificate or higher who wants to exercise sport pilot privileges to have make and model training and a corresponding endorsement. See the discussion under "V.5.A.iv. Make And Model Logbook Endorsements, and Sets of Aircraft."

In addition, the FAA is requiring persons who hold a recreational pilot certificate or higher but not a rating for the category and class of light-sport aircraft they seek to operate to comply with the limitations in §61.315, except paragraph (c)(14), and, if a private pilot or higher, paragraph (c)(7). Paragraph (c)(14) addresses aircraft that have a V_H in excess of 87 knots CAS, and paragraph (c)(7) addresses requirements for training to operate in Class B, C, and D airspace, at an airport located in Class B, C, or D airspace, and to, from, through, or at an airport having an operational control tower. As these pilots have been trained to operate these aircraft and in these types of airspace, the FAA sees no need to require additional endorsements.

Paragraph (b) is added to require that persons using a current and valid U.S. driver's license meet certain requirements. A person using a U.S. driver's license must comply with each restriction and limitation imposed by that license and any judicial or administrative order for the operation of a motor vehicle. Also, if a person has applied for an airman medical certificate, that person must have been found eligible for the

issuance of at least a third-class airman medical certificate at the time of his or her most recent application. If a person has been issued an airman medical certificate, his or her most recently issued airman medical certificate must not have been suspended or revoked. If a person has been granted an Authorization, his or her most recent Authorization must not have been withdrawn. Further, a person must not know or have reason to know of any medical condition that would make him or her unable to operate a light-sport aircraft in a safe manner. See discussion under "V.5.A.ii. Medical Provisions."

Changes

Section 61.303 is added to set forth operating limitations and endorsement requirements for persons seeking to operate light-sport aircraft. This new section is derived from the proposed provisions of SFAR No. 89 section 91. It provides a more detailed description, in a table, of the privileges a person may exercise based upon his or her medical eligibility and the certificates and endorsements he or she holds.

In the final rule, the introductory text of paragraph (a) prohibits a recreational pilot from exercising sport pilot privileges unless that person has complied with the cross-country training requirements in §61.101 (c).

In addition, the proposed requirement in SFAR No. 89 section 91 paragraph 2 for a person holding at least a private pilot's certificate and seeking to exercise sport pilot privileges is deleted. That provision would have required that person to receive specific

training for any make and model of light-sport aircraft in which the person has not acted as pilot in command is deleted.

The requirements in paragraphs (a)(1)(iii) and (a)(2)(iii) of the final rule reflect the exceptions to the endorsement requirements discussed above.

In addition, paragraph (b) is added to indicate that a person using a current and valid U.S. driver's license must meet the applicable requirements specified in §61.23 (c)(2).

Section 61.305 What are the age and language requirements for a sport pilot certificate? (proposed as SFAR No. 89 section 3)

Several commenters suggested lowering the age requirement for powered parachute pilots to be equivalent with the age requirements for the operation of gliders and balloons because of the simplicity of the aircraft. Other commenters suggested lowering the age to solo in all categories of light-sport aircraft. These commenters suggested that the minimum age requirement to solo in a light-sport aircraft be the same as the minimum age requirement to solo in a glider or a balloon. The commenters believed that the simple nature of light-sport aircraft justified such a change.

The FAA disagrees with this suggestion. Balloon and glider pilots typically operate as part of an organized activity requiring other participants; therefore younger pilots are rarely operate these aircraft without some level of supervision. Pilots of powered parachutes and other categories of light-sport aircraft may frequently operate these aircraft without any support personnel or supervision by other more experienced

pilots. The FAA contends that capabilities of these aircraft and the fact that they are frequently operated by a single pilot without direct supervision precludes the agency from lowering the age limit for solo operations in these aircraft.

Changes

The provisions of section 3 of proposed SFAR No. 89 addressing the eligibility requirements for a sport pilot certificate are transferred to §61.305 without substantive change.

Section 61.307 What tests do I have to take to obtain a sport pilot certificate? (proposed as SFAR No. 89 section 57)

The FAA received a few comments on the proposed provisions of this section. The commenters recommended that the practical tests be conducted in accordance with the procedures specified in current §§61.43, 61.45, 61.47, and 61.49. By incorporating the provisions of proposed SFAR No. 89 into part 61, the procedures specified in those sections apply to practical and knowledge tests administered to sport pilot applicants.

The commenters also recommended that the testing be conducted in accordance with FAA Order 8710.3, Pilot Examiner's Handbook. The FAA notes that all testing should be done in accordance with applicable FAA orders. Such a provisions would be inappropriate for inclusion in this rule.

One commenter recommended that a student pilot be required to pass the knowledge test prior to being issued a student pilot certificate. This action was not

proposed, and the FAA considers such an action to be outside the scope of this rulemaking.

Another commenter recommended that the holder of a private pilot certificate or higher be exempt from taking a knowledge test addressing the subjects specified in proposed SFAR No. 89 section 51. The FAA notes that the holder of a private pilot certificate or higher is not required to take a test on the aeronautical knowledge areas specified in §61.309 to exercise the privileges of a sport pilot certificate.

Two commenters recommended that applicants be permitted to take the practical test in a single-seat aircraft with the examiner observing the test from the ground. This comment is addressed in the discussion of §61.45.

Changes

The provisions of section 57 of proposed SFAR No. 89 are transferred to §61.307 without substantive change.

Section 61.309 What aeronautical knowledge must I have to apply for a sport pilot certificate? (proposed as SFAR No. 89 section 51)

The FAA received a few comments on the proposed provisions of this section.

One commenter objected to requiring extensive training for pilots who will be permitted to fly "fat" ultralights. This comment, the removal of tumble entry and tumble avoidance technique training, and additional training in risk management are discussed under "V.5.A.iii. Flight Training and Proficiency Requirements."

Another commenter suggested that training not be required in electronic navigation, while an additional commenter suggested that, if the FAA wishes to specifically mandate training in electronic navigation systems, the reference to navigation systems should refer to electronic navigation systems. The prevalence of electronic navigation systems in light-sport aircraft necessitates the aeronautical knowledge training be required in these systems. Although most navigation systems are electronic, the FAA has retained the generic reference to "navigation system." to conform to other requirements in part 61.

Changes

The provisions of section 51 of proposed SFAR No. 89 are transferred to §61.309 with the following modifications.

The words "as appropriate" are added to paragraph (d) regarding the use of aeronautical charts for VFR navigation using pilotage, dead reckoning, and navigation systems.

In paragraph (j), the term "if applicable" is changed "applicable to airplanes and gliders" to clarify that this requirement is only applicable to persons seeking privileges to operate those aircraft.

The requirement in paragraph (k) of proposed SFAR No. 89 section 51 for tumble entry and tumble avoidance technique training for weight-shift-control aircraft category privileges is removed.

The word "judgment" is replaced with the words "risk management" in new paragraph (k).

Section 61.311 What flight proficiency requirements must I meet to apply for a sport pilot certificate? (proposed as SFAR No. 89 section 53)

Upon further consideration of the proposal, the FAA is revising ground and flight training requirements pertaining to slow flight and stalls. See discussion under "V.5.A.iii. Flight Training and Proficiency Requirements."

In addition, the incorporation of proposed SFAR No. 89 into part 61 necessitates the inclusion of an exception to the flight proficiency requirements of this section for registered pilots with FAA-recognized ultralight organizations. References to land and sea classes are also included for those categories of aircraft for which those classes exist.

Changes

The provisions of section 53 of proposed SFAR No. 89 are transferred to §61.311, with changes.

In the final rule, the section is revised to include an exception for persons who are registered pilots with an FAA-recognized ultralight organization and to refer to both land and sea classes for airplane, weight-shift-control, and powered parachute categories of light-sport aircraft.

Proposed paragraph (i) is changed to no longer require applicants for sport pilot privileges in lighter-than-air aircraft and powered parachutes to receive and log slow flight training. It has also been changed to no longer require applicants for sport pilot privileges in powered parachutes to receive and log stall training. In addition, in the final rule, the training requirement for slow flight and stalls is split into separate paragraphs (i) and (j), specifying those aircraft for which the training is not required.

Section 61.313 What aeronautical experience must I have to apply for a sport pilot certificate? (proposed as SFAR No. 89 section 55)

See discussion under "V.5.A.iii. Flight Training and Proficiency Requirements."

Changes

The provisions of section 55 of proposed SFAR No. 89 are transferred to §61.313, with the following changes.

References to land and sea classes of aircraft are added to paragraphs (a), (g), and (f).

References to a "full-stop landing" are revised to read "full-stop landing at a minimum of two points" in paragraphs (a)(1)(iii), (d)(1)(iii), and (h)(1)(iii).

In paragraph (b), the term "solo flight time" is changed to "solo flight training."

In paragraph (f), the aeronautical experience requirements for lighter-than-air category and balloon class privileges, are changed by deleting the requirement for one solo cross-country flight of at least 25 NM.

In paragraph (g), the aeronautical experience requirements for powered parachute category privileges, are changed as follows:

The requirement for 20 hours total flight time is reduced to 12 hours.

The requirement for 15 hours of flight training is reduced to 10 hours, which must include 20 takeoffs and landings to a full stop in a powered parachute with each landing involving flight in the traffic pattern at an airport.

The requirement for 2 hours of cross-country flight training is reduced to 1 hour.

The requirement for 5 hours of solo flight training is reduced to 2 hours and must include 10 solo takeoffs and landings, and one solo flight with a 10-NM leg with a landing at a different airport in lieu of the requirement for one solo flight of 25 NM with one 15-NM leg.

In paragraph (h), the aeronautical experience requirements for weight-shift-control aircraft category privileges, is changed by reducing the 75 NM solo cross-country requirement to 50 NM.

Section 61.315 What are the privileges and limitations of my sport pilot certificate? (proposed as SFAR No. 89 sections 73, 75, 77 and 79)

A few commenters noted that, in many states, a U.S. driver's license may be revoked for failure to pay certain taxes, failure to pay child support, or other

circumstances that do not pertain to flying ability. These commenters believed that a person's ability to obtain a driver's license may not be related to poor health. The FAA, however, maintains the position it took in the proposed rule, that all limitations imposed on a driver's license apply to the use of that license to establish medical eligibility for a sport pilot certificate.

To further clarify its position on this issue, the FAA is adding the language in §61.315 (c)(17) stating: "…or any limit imposed by judicial or administrative order when using your driver's license to satisfy a requirement of this part." As stated in the proposed rule, it is the FAA's intent that, if an individual's driving privileges have been suspended, revoked, or restricted for any reason by an administrative or judicial body, those same limitations apply to the use of that individual's driver's license to establish medical eligibility for a sport pilot certificate, regardless of whether the terms of those limitations are printed on the individual's driver's license or other document, and regardless of whether the restrictions imposed were the result of an infraction unrelated to an individual's driving or flying ability. If an individual's driving privileges have been suspended, revoked, or in any way limited by a court or administrative order, the license holder may no longer use his or her driver's license to establish medical eligibility for a sport pilot certificate.

A commenter proposed that sport pilots be limited to single-place aircraft, and a private pilot certificate be required to fly a two-place aircraft. The FAA disagrees. The FAA believes that the training provided to a sport pilot is sufficient to permit that person to safely operate a simple, non-complex aircraft. The FAA believes that carrying a passenger does not increase the complexity of the aircraft to warrant the additional

training required for a higher level certificate. One of the stated objectives of the sport pilot certificate is to permit, for personal use, the holder of such a certificate to operate a light-sport aircraft that has the capability of carrying only two occupants—the pilot and one passenger.

The FAA is also adding language to §61.315 (b)(7) to require additional training to operate in Class B, C, and D airspace. For a complete discussion of all issues related to operations in class B, C, and D airspace, refer to "V.5.A.v. Changes to Airspace Restrictions."

Several commenters suggested that the FAA allow a sport pilot to conduct search and rescue operations and said that the aircraft now being certificated as light-sport aircraft would be well suited for that activity. Although the FAA agrees that these aircraft are well suited for the activity, it still believes that this activity should be conducted by at least a private pilot who has accomplished the additional training and testing requirements at that certificate level.

For a discussion of demonstrating aircraft to prospective buyers, please refer to "V.5.A.viii. Demonstration of Aircraft to Prospective Buyers."

For a discussion of comments received requesting towing privileges for sport and recreational pilots, see the discussion of §61.69 above.

Section 73 of proposed SFAR No. 89 stated that a sport pilot would be limited to sport and recreational flying only. Sport and recreational flying, however, was not specifically defined in the NPRM. That limitation is removed in the final rule and replaced with prohibitions against acting as pilot in command of a light-sport aircraft

when carrying a passenger or property for compensation or hire, for compensation or hire, or in the furtherance of business. This change better describes those types of operations it intended to restrict when it proposed that a sport pilot would be limited to sport and recreational flying only.

The authority to operate up to 2,000 AGL when above 10,000 feet MSL is removed. For further information on this change, see "V.5.A.vi. Changes to Altitude Limitations."

Additionally, since light-sport aircraft operated by sport pilots are intended to be simple and non-complex, the FAA is adding a provision in paragraph (c)(19) to specifically prohibit a sport pilot from acting as a pilot flight crewmember on any aircraft for which more than one pilot is required by the type certificate of the aircraft or the regulations under which the flight is conducted. A similar provision currently exists in §61.101 (e) for recreational pilots. The two exceptions contained in that paragraph, however, are not included in §61.315.

Changes

The provisions of sections 73, 75, 77, and 79 of proposed SFAR No. 89 are transferred to §61.315, with the following changes.

In paragraph (c)(1), (c)(2), and (c)(3), prohibitions that a person may not act as pilot in command of a light-sport aircraft when carrying a passenger or property for compensation or hire, for compensation or hire, or in the furtherance of business are added. These provisions are added because the FAA is not including in the final rule the

limitation on sport and recreational flying proposed in SFAR No. 89 section 73 paragraph (a).

In paragraph (c)(7), the words "or to, from, through, or at an airport having an operational control tower" are added.

In paragraph (c)(11), the authority to operate up to 2,000 AGL when above 10,000 feet MSL is removed.

In paragraph (c)(17), a provision is added to require a sport pilot to comply with any limit imposed by judicial or administrative order when using his or her U.S. driver's license to satisfy a requirement of part 61.

Paragraph (c)(19) is added to prohibit a sport pilot from acting as a pilot flight crewmember on any aircraft for which more than one pilot is required by the type certificate of the aircraft or the regulations under which the flight is conducted.

Section 61.317 Is my sport pilot certificate issued with aircraft category and class ratings? (proposed as SFAR No. 89 section 59)

The FAA did not receive any comments on section 59 of proposed SFAR No. 89.

Changes

The provisions of section 59 of proposed SFAR No. 89 are transferred to §61.317 without substantive change.

Section 61.319 Can I operate a make and model of aircraft other than the make and model aircraft for which I have received an endorsement? (proposed as SFAR No. 89 section 61)

The FAA made changes to this section to incorporate the concept of make and model endorsements providing privileges to operate any aircraft within a set of aircraft. For a discussion of the comments and more information on this issue, see "V.5.A.iv. Make and Model Logbook Endorsements, and Sets of Aircraft."

Changes

The provisions of section 61 of proposed SFAR No. 89 are transferred to §61.319 and revised to allow the holder of a sport pilot certificate with an endorsement to operate a specific make and model of light-sport aircraft to operate any other aircraft belonging to the same set of aircraft.

Section 61.321 How do I obtain privileges to operate an additional category or class of light-sport aircraft? (proposed as SFAR No. 89 section 63)

Generally, for a discussion of the comments and changes made to this section, see "V.5.A.iv. Make and Model Logbook Endorsements, and Sets of Aircraft."

For a discussion of the comments and the changes to the requirements in §61.321 (c) for an applicant to complete an application and present this application to the authorized instructor, see "V.5.A.ix. Category and Class Discussion: FAA Form 8710-11 Submission."

Changes

The provisions of section 63 of proposed SFAR No. 89 are transferred to §61.321 with an additional requirement in paragraph (c) for sport pilot seeking to operate an additional category or class of light-sport aircraft to complete an application for those privileges on a form and in a manner acceptable to the FAA. The person must present this application to the authorized instructor who conducted the proficiency check specified in paragraph (b) of the section.

Section 61.323 How do I obtain privileges to operate a make and model of light-sport aircraft in the same category and class within a different set of aircraft? (proposed as SFAR No. 89 section 65)

The FAA made changes to this section to incorporate the concept of make and model endorsements providing privileges to operate any aircraft within a set of aircraft. For a discussion of the comments and changes made to this section, see "V.5.A.iv. Make and Model Logbook Endorsements, and Sets of Aircraft."

Changes

The provisions of section 65 of proposed SFAR No. 89 are transferred to §61.323 with changes. The FAA is revising this section to allow the holder of a sport pilot

certificate with an endorsement for a specific make and model light-sport aircraft to operate any other aircraft within the same set of aircraft.

Section 61.325 How do I obtain privileges to operate a light-sport aircraft at an airport within, or in airspace within, Class B, C, and D airspace, or in other airspace with an airport having an operational control tower? (proposed as SFAR No. 89 section 81)

For a discussion of comments and changes to this section, see "V.5.A.v. Changes to Airspace Restrictions."

Changes

The provisions of section 81 of proposed SFAR No. 89 are transferred to §61.325 with the following change. The FAA is adding the words "at an airport located in Class B, C, or D airspace, or to, from, through, or at an airport having an operational control tower."

Section 61.327 How do I obtain privileges to operate a light-sport aircraft that has a V_H greater than 87 knots CAS? (proposed as SFAR No. 89 section 83)

The FAA received a few comments on proposed section 83 of SFAR No. 89. The commenters recommended that the FAA eliminate the proposed requirement that sport pilots seeking to operate an aircraft with a V_H greater than 87 knots CAS receive an endorsement from an authorized instructor. For the reasons stated in the proposed rule, and also because the FAA is eliminating the proposed requirement for a specific make and model endorsement for each aircraft a sport pilot operates, the FAA has retained this requirement in the final rule.

Changes

The provisions of section 83 of proposed SFAR No. 89 are transferred to §61.327 without substantive change.

Section 61.329 Are there special provisions for obtaining a sport pilot certificate for persons who are registered ultralight pilots with an FAA-recognized ultralight organization? (proposed as SFAR No. 89 section 93)

The FAA received comments suggesting that other organizations not mentioned specifically in the preamble of the proposal should be considered for crediting of ultralight experience. At the time of the NPRM, the FAA stated that it considered only ASC, EAA, and USUA to be FAA-recognized ultralight organizations. One commenter specifically requested that USHGA be considered an FAA-recognized ultralight organization. Some commenters also thought that State associations that have required that ultralight pilots meet their requirements should have been addressed. Both the final rule and the NPRM do not limit those organizations that can be considered as FAA-recognized ultralight organizations. The FAA agrees that USHGA should be considered an FAA-recognized ultralight organization and recognizes it as such. The FAA also recognizes that many State associations have now affiliated themselves with FAA-recognized ultralight organizations. Ultralight pilots in these State associations will be able to become sport pilots using the transition provisions of §61.329, provided they are recognized pilots with one of the four current FAA-recognized ultralight organizations.

The FAA originally proposed that any registered ultralight pilot with an FAA-recognized ultralight organization would have up to 24 months after the effective date of the final rule to apply for a sport pilot certificate and receive credit for experience and

training successfully completed with that ultralight organization. Although there were no comments on this proposal, the FAA concluded that it would be in the interest of safety, fairness, and ease of administration to revise the provisions of the proposal in the final rule. The final rule permits an ultralight pilot registered with an FAA-recognized ultralight organization on or before September 1, 2004 to obtain a sport pilot certificate without meeting the aeronautical knowledge and flight proficiency requirements of §§61.309 and 61. 311 provided that person obtains the sport pilot certificate no later than January 31, 2007. Ultralight pilots registered with these organizations after September 1, 2004 will be required to meet these aeronautical knowledge and flight proficiency requirements but may credit experience obtained while a member of an FAA-recognized ultralight organization in accordance with §61.52.

The purpose of §61.329 is to provide a means of transition for those pilots who receive training with FAA-recognized ultralight organizations to obtain sport pilot certificates. Under current ultralight training programs, it is possible for an ultralight pilot to be eligible for a sport pilot certificate with as little as 10 hours of flight time. These ultralight pilots need not meet the aeronautical experience requirements specified in §61.313. The FAA has determined that this is acceptable for ultralight pilots registered with an FAA-recognized organization on or before September 1, 2004 who pass both a knowledge and practical test before January 31 2007. But after September 1, 2004, all pilot applicants must meet the aeronautical experience requirements of §61.313. Registered pilots with FAA-recognized ultralight organizations, however, may credit ultralight aeronautical experience toward meeting these requirements in accordance with §61.52. These requirements will ensure that all applicants meet the same standards and

receive adequate training. They will also provide a single measure for assessing an applicant's qualifications, as all applicants must demonstrate proficiency and satisfactorily complete both FAA knowledge and practical tests.

An ultralight pilot registered with an FAA-recognized ultralight organization before September 1, 2004, who completes a practical test no later than January 31, 2007, will be issued a sport pilot certificate with a logbook endorsement permitting that person to exercise sport pilot privileges in each category, class, make, and model for which the FAA-recognized ultralight organization has found him or her proficient to operate. Registered ultralight pilots with an FAA-recognized ultralight organization who were not registered on or before September 1, 2004 and successfully complete the practical test for the sport pilot certificate will receive a logbook endorsement permitting them to exercise sport pilot privileges in the category, class, make and model of aircraft in which the practical test was taken; however they will not receive a logbook endorsement for each category, class, make, and model of aircraft they were recognized by an the organization to operate.

The FAA received many comments regarding the requirement for notarized documentation of experience from the FAA-recognized ultralight organization. The commenters were concerned about the added cost and burden this will present. The ultralight organizations indicated that they would have to put notaries on their staffs or take the documents to a notary, adding cost and burden to the process.

The FAA agrees with the comments and has replaced the requirement for a notarized document with a requirement that an applicant provide the FAA with a certified copy of his or her ultralight pilot records from the FAA-recognized ultralight

organization. The FAA has historically allowed other organizations to certify graduation certificates and similar documents and the FAA concluded that is sufficient for this regulatory requirement.

Many commenters suggested that the FAA allow an applicant who is concurrently seeking both a sport pilot certificate and a flight instructor certificate with a sport pilot rating to take only one knowledge test to meet both aeronautical knowledge requirements. The FAA agrees with these commenters and will permit a person seeking a sport pilot certificate under paragraph (a)(1) to take either the knowledge test for a sport pilot certificate or the flight instructor certificate with a sport pilot rating to satisfy the requirements of this section. The FAA believes that the applicant will demonstrate a higher level of knowledge by taking the knowledge test for a flight instructor certificate for a sport pilot rating.

Proposed paragraphs (a)(3)(ii), which would have required documents from an FAA-recognized ultralight organization to list each category and class of ultralight vehicle that the organization recognizes a person as being qualified to operate, is changed in paragraph (a)(1) of the final rule to require that the documents indicate that person is recognized to operate the category and class of aircraft for which sport pilot privileges are sought. As a result of this change, the documentation provided by an applicant under paragraph (a)(1) of the rule need not show all categories and classes that the organization considers the applicant qualified to operate, only the category and class of aircraft for which sport pilot privileges are sought. Documentation submitted by an applicant under paragraph (a)(2), however, must show each aircraft a person is recognized to operate. This requirement enables the FAA to provide the applicant with a logbook endorsement

permitting operation of each category, class, make and model listed without further testing.

The FAA has also revised the final rule by adding paragraph (b). This paragraph clarifies that the FAA will provide a person who meets the provisions of paragraph (a)(1) of this section with a logbook endorsement for each category, class, make, and model of aircraft listed on the ultralight pilot's records provided to the FAA, regardless of the aircraft in which the practical test is taken.

Changes

The provisions of section 93 of proposed SFAR No. 89 are transferred to §61.329 with minor reformatting. Also, the following changes are made.

In paragraph (a)(1) (proposed as paragraph (a)), the words "not later than 24 months after the effective date of the final rule" are changed to "on or before September 1, 2004."

In paragraph (a)(1)(i)(B), the FAA is adding a provision that permits a registered ultralight pilot seeking a sport pilot certificate to pass either the knowledge test for a sport pilot certificate (as set forth in the proposal), or the knowledge test for a flight instructor certificate with a sport pilot rating.

In paragraphs (a)(1)(i)(D) and (a)(2)(iv), the word "notarized" is changed to "certified."

Proposed paragraph (b)(4)(ii) is changed in paragraph (a)(2)(iv)(B) of the final rule to require that a person who is a registered ultralight pilot on or after September 1,

2004 and is seeking a sport pilot certificate to provide documents provided by an applicant for a sport pilot certificate indicate that the person is recognized to operate only the category and class of aircraft for which sport pilot privileges are sought.

Proposed paragraph (c) is removed.

New paragraph (b) is added as discussed above.

Subpart K--Flight Instructors with a Sport Pilot Rating

The FAA concluded that the certification rules pertaining to flight instructors with a sport pilot rating merited their own subpart in part 61. Most of the rules originally proposed in SFAR No. 89 pertaining to flight instructors were moved into subpart K without change. A table with cross-references to the proposed SFAR No. 89 appears at the beginning of this section-by-section analysis for part 61.

Section 61.401 What is the purpose of this subpart? (proposed as SFAR No. 89 section 1)

The FAA did not receive any comments on section 1 of proposed SFAR No. 89. The provisions applicable to flight instructors with a sport pilot rating are therefore transferred to §61.401 without substantive change. Section 61.401 provides the user with an overview of the requirements prescribed in this subpart.

Changes

The provisions of section 1 of proposed SFAR No. 89 applicable to flight instructors with a sport pilot rating are transferred to §61.401 without substantive change.

Section 61.403 What are the age, language, and pilot certificate requirements for a flight instructor certificate with a sport pilot rating? (proposed as SFAR No. 89 section 3)

The FAA created this section to incorporate the eligibility requirements originally contained in SFAR No. 89 section 3. Section 3 would have required that a flight instructor with a sport pilot rating hold a sport or private pilot certificate. Although a number of commenters agreed with the FAA's proposal to permit flight instructors with a sport pilot rating to possess only a sport pilot certificate, the FAA received several comments expressing concern that persons holding no more than a sport pilot certificate could serve as flight instructors. Commenters noted that the FAA traditionally requires a flight instructor to hold a commercial pilot certificate. These commenters were specifically concerned that the FAA would be certificating flight instructors with an inappropriately low level of experience and training, thereby decreasing safety. The FAA believes that the training and experience required for a flight instructor certificate with a sport pilot rating is appropriate for the types of instruction that these flight instructors will provide. The FAA notes that these persons will be providing instruction in simple, non-complex aircraft with limited operational characteristics. The FAA also notes that it has established minimum aeronautical experience requirements in §61.411 for flight instructors with a sport pilot rating that exceeds that specified for a sport pilot certificate.

In the final rule, the FAA revised the language requiring a person to "hold a current and valid sport pilot certificate or a current and valid private pilot certificate" to

"hold a current and valid pilot certificate." This change permits persons holding recreational, commercial, and airline transport pilot certificates to obtain a flight instructor certificate with a sport pilot rating. Since the FAA intends to permit a person with a sport pilot certificate to obtain a flight instructor certificate with a sport pilot rating, the FAA believes that persons with higher-level pilot certificates should not be precluded from obtaining a flight instructor certificate with a sport pilot rating.

Changes

The provisions of section 3 of proposed SFAR No. 89 addressing the eligibility requirements for flight instructors with a sport pilot rating are transferred to §61.403 with the following change. In paragraph (c) of the final rule, the language requiring a person to "hold a current and valid sport pilot certificate or a current and valid private pilot certificate" is changed to "hold a current and valid pilot certificate."

Section 61.405 What tests do I have to take to obtain a flight instructor certificate with a sport pilot rating? (proposed as SFAR No. 89 section 119)

The FAA created this section to incorporate the testing requirements originally contained SFAR No. 89 section 119. The FAA received a comment from a national organization representing flight instructors recommending changes regarding spin training instructional competency and proficiency in weight-shift-control aircraft. In addition, several commenters noted, while it is crucial that pilots of weight-shift-control aircraft be capable of recognizing and avoiding spins, it is not safe for pilots to learn these techniques by actually performing them. The FAA supports these recommendations and is removing the proposed requirement that a person seeking to provide instruction in a weight-shift-control aircraft possess both competency and instructional proficiency in stall awareness, spin entry, spins, and spin recovery procedures. These requirements are still applicable to persons seeking to provide instruction in airplanes and gliders. For more information, see "V.5.A.iii. Flight Training and Proficiency Requirements."

Changes

The provisions of section 119 of proposed SFAR No. 89 are transferred to §61.405 with the following changes.

The section is reworded and reorganized for clarity.

In paragraph (b)(1)(ii) of the final rule (proposed as paragraph (b)(3)), the requirement for a person to receive a logbook endorsement indicating competency and instructional proficiency in stall awareness, spin entry, spins, and spin recovery procedures has been deleted for persons seeking privileges to provide instruction in weight-shift-control aircraft.

In paragraph (b)(2)(iii) of the final rule (proposed as paragraph (b)(4)) is modified as follows.

A person seeking privileges to provide instruction in a weight-shift-control aircraft is not required to demonstrate an ability to teach stall awareness, spin entry, spins, and spin recovery procedures.

The term "practical" is added before the word "test."

The term "instructional procedures" is replaced with "instructional competency and proficiency."

The term "applicable light-sport aircraft" is replaced with "applicable category and class of aircraft."

Section 61.407 What aeronautical knowledge must I have to obtain a flight instructor certificate with a sport pilot rating? (proposed SFAR No. 89 section 113)

The FAA did not receive any comments on this section and is adopting the section as proposed except for minor revisions to improve clarity.

Changes

The provisions of section 113 of proposed SFAR No. 89 are transferred to §61.407 with the following changes. Proposed paragraphs (b) and (c) are adopted as paragraphs (c) and (b) respectively, and in paragraph (c) of the final rule, the words "for

the aircraft category and class in which you seek flight instructor privileges" are added after "applicable to a sport pilot certificate."

Section 61.409 What flight proficiency requirements must I meet to apply for a flight instructor certificate with a sport pilot rating? (proposed as SFAR No. 89 section 115)

For a discussion on this section, see "V.5.A.iii. Flight Training and Proficiency Requirements."

Changes

The provisions of section 115 of proposed SFAR No. 89 are transferred to §61.409 with the following changes.

In the introductory text of the section, the words "for airplane single-engine, glider, gyroplane, airship, balloon, powered parachute, and weight-shift-control privileges" are replaced with the words "for the aircraft category and class in which you seek flight instructor privileges" are added.

Paragraph (k) (proposed as paragraph (a)(11)) is changed to no longer require applicants for a flight instructor certificate seeking instructional privileges in lighter-than-air aircraft and powered parachutes to receive and log slow flight training. It is also changed to no longer require applicants seeking instructional privileges in powered parachutes to receive and log stall training. In addition, in the final rule, the training requirement for slow flight and stalls is split into separate paragraphs (k) and (l), specifying those aircraft for which the training is not required.

Paragraph (m) (proposed as paragraph (a)(12)) is changed to remove the requirement for spin training in a weight-shift-control aircraft, requiring it for airplanes and gliders only.

Paragraph (o) is added to require "tumble entry and avoidance techniques" maneuvers for weight-shift-control aircraft only.

Section 61.411 What aeronautical experience must I have to apply for a flight instructor certificate with a sport pilot rating? (proposed as SFAR No. 89 section 117)

The FAA received several comments to this section. One commenter stated that the FAA should decrease the aeronautical experience requirements for flight instructors seeking instructional privileges in powered parachutes to 50 hours. Other commenters questioned the need for flight instructors to obtain 15 hours of cross-country flight time in powered parachutes. Another commenter questioned the need for flight instructors to have 15 hours of pilot-in-command time in a weight-shift-control aircraft. A number of commenters recommended that the FAA decrease the requirements for flight instructors seeking instructional privileges in airplanes, weight-shift-control aircraft, and powered parachutes to 55 hours. One commenter stated that until 2 years ago, all three national ultralight organizations required only 55 hours of flight time to qualify as an ultralight flight instructor. The commenter further noted that two of these three organizations now require flight instructors to possess a minimum of 100 hours of flight time. A number of commenters stated that the proposed requirements for flight instructors should mirror the requirements of these two organizations. However, another commenter recommended

that all flight instructors have at least 250 hours of flight experience. This commenter was concerned that sport pilots would be trained by instructors who have very little experience themselves.

The FAA has considered the commenters' concerns and notes that there may be legitimate reasons to either increase or decrease the aeronautical experience requirements set forth in the NPRM. The FAA believes that the aeronautical experience requirements set forth in the NPRM establish a reasonable level of minimum aeronautical experience for the issuance of flight instructor certificates with a sport pilot rating. As the sport pilot rating is a new rating to be added to the flight instructor certificate, the FAA will monitor the implementation of the rule and may revise aeronautical experience requirements for the rating, if the FAA deems such action appropriate.

Changes

The provisions of section 117 of proposed SFAR No. 89 are transferred to §61.411 with no substantive change.

Section 61.413 What are the privileges of my flight instructor certificate with a sport pilot rating? (proposed as SFAR No. 89 section 133)

The FAA identified several privileges that a flight instructor with a sport pilot rating would be permitted to exercise that were omitted in SFAR No. 89 section 133 of the proposed rule. This omission is being corrected in the final rule.

In addition to the privileges listed in the NPRM, under the final rule, the holder of a flight instructor certificate with a sport pilot rating is authorized, within the limits of his

or her certificate and rating, to provide training and logbook endorsements for the following:

(1) A flight instructor certificate with a sport pilot rating;

(2) A powered parachute or weight-shift-control aircraft rating;

(3) An operating privilege for a sport pilot;

(4) A practical test and knowledge test for a private pilot certificate with a powered parachute or weight-shift-control aircraft rating or a flight instructor certificate with a sport pilot rating.

Although the FAA received a few comments on this section that addressed towing and the ability to demonstrate light-sport aircraft for sale, these privileges are not based upon an individual's flight instructor certificate, but rather on that individual's underlying pilot certificate. Comments on towing and the demonstration of aircraft for sale are discussed in those sections that address the privileges of a person's underlying pilot certificate.

Changes

The provisions of section 133 of proposed SFAR No. 89 are transferred to §61.413 and reorganized for clarity. Also, the following changes are made.

In paragraph (a), the words "a student pilot certificate to operate light-sport aircraft" are changed to "a student pilot seeking a sport pilot certificate"

Paragraph (c) is added to include training and logbook endorsements for a flight instructor certificate with a sport pilot rating.

Paragraph (d) is added to include training and logbook endorsements for a powered parachute or weight-shift-control aircraft rating.

Paragraph (f) is changed by including training and logbook endorsements for an operating privilege.

Paragraphs (g) and (h) (proposed as paragraphs (e) and (f)) are amended by adding, after "for a sport pilot," the words "certificate, a private pilot certificate with a powered parachute or weight-shift-control aircraft rating or a flight instructor certificate with a sport pilot rating."

Section 61.415 What are the limits of a flight instructor certificate with a sport pilot rating? (proposed as SFAR No. 89 section 135)

Several commenters questioned the need for make and model endorsements for flight instructors. Many commenters believed that this requirement is unnecessary because of the simple nature of the aircraft in which instructors will be providing training. Additionally, many commenters questioned the need for flight instructors to obtain 5 hours of pilot-in-command time in a specific make and model of aircraft prior to providing flight instruction in that aircraft. The FAA recognizes that under current §61.195 (f), a flight instructor may not provide training required for the issuance of a certificate or rating in a multi-engine airplane, helicopter, or powered lift unless that instructor has at least 5 hours of pilot-in-command time in that specific make and model

of aircraft. This requirement is therefore not applicable to the majority of aircraft in which flight instruction is conducted. The FAA notes however that the final rule permits a person to serve as a flight instructor if that person holds only a sport pilot certificate. In view of the limited experience of these certificate holders, the FAA deems it prudent that flight instructors with a sport pilot rating obtain at least 5 hours pilot-in-command time before conducting flight instruction in a make and model of light-sport aircraft within the same set of aircraft as that in which the training is provided. For additional discussion, see "V.5.A.iv. Make and Model Logbook Endorsements, and Sets of Aircraft."

Commenters stated that the FAA should allow training to be conducted in single-place aircraft. The FAA does not agree that all training provided by flight instructors with a sport pilot rating be permitted in single-place aircraft. Under current §61.195 (g)(2), the FAA requires pre-solo flight training for single-place aircraft to be provided in an aircraft that has two pilot stations and is of the same category and class applicable to the certificate and rating sought. The FAA believes that the commenters did not provide sufficient justification to remove this long-standing requirement. The final rule requires that pre-solo flight training must be given in an aircraft that has two pilot stations and is of the same category and class applicable to the certificate, rating, or privilege sought. Section 61.195 (g) ensures that pre-solo fight training is provided by an authorized instructor in an aircraft with two pilot stations. Section 61.415 will apply a similar requirement to persons receiving flight instruction from flight instructors with a sport pilot rating. Similar to §61.195 (g), pilots being trained by flight instructors with a sport pilot rating will have the latitude under §61.415 to meet all other experience and solo training requirements in a single-place aircraft.

As the provisions of proposed SFAR No. 89 have been included in new subpart K of part 61, and the applicability of subpart H has been revised to exclude flight instructors with a sport pilot rating, the limitations that previously applied to all flight instructors in subpart H must be included in subpart K for them to apply to flight instructors with a sport pilot rating. Therefore, the FAA is now including in §61.415 specific regulatory language to address the limits referred to §61.195 (a), (d)(1) through (d)(3), and (d)(5).

Changes

The FAA is transferring the provisions of proposed SFAR No. 89 section 135 to §61.415 and reorganizing them with the following revisions.

In paragraph (a), the description of the limits for providing ground or flight training is clarified by addressing training provided by a person holding a pilot certificate other than a sport pilot certificate.

Paragraph (e) is revised to incorporate the concept of "set of aircraft," and the requirement to obtain aeronautical experience as a registered pilot with an FAA-recognized ultralight organization is removed. The concept of "set of aircraft" is discussed under "V.5.A.iv. Make and Model Logbook Endorsements, and Sets of Aircraft." The use of aeronautical experience obtained in ultralight vehicles is addressed in §61.52 of the final rule.

Paragraph (f) is revised to incorporate operations to, from, through, or at an airport having an operational control tower. (See "V.5.A.v. Changes to Airspace Restrictions.")

Paragraph (h) is added to require that all training be performed in an aircraft that complies with the requirements of §91.109. This corrects an inadvertent omission of a reference to §61.195 (g) in the NPRM.

Paragraph (i) is added to require that flight training must be provided in an aircraft that has at least two pilot stations and is of the same category and class appropriate to the certificate rating or privilege sought. Pre-solo flight training for single-place aircraft

needs to be provided in an aircraft that has two pilot stations and is of the same category and class appropriate to the certificate rating or privilege sought.

Section 61.417 Will my flight instructor certificate with a sport pilot rating list aircraft category and class ratings? (proposed as SFAR No. 89 section 123)

The FAA did not receive any comments on this section. Although it was proposed that a person receiving a flight instructor certificate with a sport pilot rating receive logbook endorsements for the category, class, and make and model aircraft in which the person is authorized to provide training, the FAA is removing provisions specifying that a person would receive a make and model endorsement. The FAA is removing these provisions because the authority to operate any make and model of aircraft within a specific set of aircraft is a privilege of the person's underlying pilot certificate and not the flight instructor certificate. See the discussion "V.5.A.iv. Make and Model Logbook Endorsements, and Sets of Aircraft."

Changes

The provisions of section 123 of proposed SFAR No. 89 are transferred to §61.417 with the following change. The words "make and model" are removed.

Section 61.419 How do I obtain privileges to provide training in an additional category or class of light-sport aircraft? (proposed as SFAR No. 89 section 127)

The FAA received a few comments on this section. One commenter was concerned that there will not be enough instructors to provide endorsements for

instructors seeking to provide training in additional categories and classes of aircraft. Another commenter proposed that instructors certificated under subpart H of part 61 should not be required to complete the proposed proficiency check. The FAA believes that the "grandfathering" provisions of the final rule will result in sufficient numbers of instructors being able to provide the required endorsements. The FAA notes that the proficiency check required by §61.419 (b) will only apply to flight instructors exercising the privileges of a sport pilot rating. The FAA also notes that instructors certificated under subpart H are not subject to this requirement.

For information on changes related to filing applications and endorsements, refer to the discussion under "V.5.A.ix. Category and Class Discussion: FAA Form 8710-11 Submission." For discussion of make and model endorsements, refer to the discussion under "V.5.A.iv. Make And Model Endorsements, and Sets of Aircraft."

In addition, the FAA made a minor editorial change to the title and the introductory text by deleting the word "flight" to be more accurate. This change reflects that flight instructors provide both ground and flight training.

Changes

The provisions of section 127 of proposed SFAR No. 89 are transferred to §61.419 with the following changes.

The title of this section is changed by removing the word "flight." The word "flight" is also removed from the introductory text.

In paragraph (a), the term "aeronautical and knowledge experience requirements" is changed to "aeronautical knowledge and flight proficiency requirements." This change properly refers to the requirements an applicant must meet in §§61.407 and 61.409.

Proposed paragraph (b) is split into paragraphs (b) and (d) in the final rule for clarity. The logbook endorsement requirement is now in paragraph (d) of the final rule. The term "light-sport aircraft privilege" is changed to "category and class flight instructor privilege" in paragraphs (b) and (d) of the final rule.

Paragraph (c) in the final rule is added to require a person to complete and present an application to obtain the privileges sought.

Section 61.421 May I give myself an endorsement? (proposed as SFAR No. 89 section 139)

The FAA received comments noting an error made in the proposed rule omitting the word "not." The FAA is correcting the error.

Changes

The provisions of section 139 of proposed SFAR No. 89 are transferred to §61.421 with the following changes.

The phrase "you may give yourself an endorsement" is changed to "you may not give yourself an endorsement," as was originally intended.

The FAA is also adding the word "rating" to the list of endorsements a flight instructor with a sport pilot rating is not permitted to give him or herself. This conforms to the list of prohibitions specified in §61.195 (i).

Section 61.423 What are the record keeping requirements for a flight instructor with a sport pilot rating? (proposed as SFAR No. 89 section 121)

The FAA received no comments on this section.

The FAA notes that the NPRM only referred to the endorsement of a person's logbook. Under current rules, a flight instructor is required to sign the logbook of any person to whom he or she provides training. To clarify that flight instructors with a sport pilot rating must sign the logbook of each person to whom they have given flight or ground training, the FAA is revising paragraph (a)(1) accordingly.

The NPRM did not specifically require a flight instructor to retain a record of the type of endorsement provided to a person who received training. The final rule corrects this omission in paragraph (a)(2).

The FAA is revising paragraph (a)(2)(iii) to include the words "to, from, through, or at an airport having an operational control tower." This change is discussed under "V.5.A.v. Changes to Airspace Restrictions."

The FAA is adding (b) to include a requirement for an instructor to complete, sign, and submit to the FAA the application presented to him or her by a person seeking to operate or provide training in an additional category and class of light-sport aircraft. This application must be submitted within 10 days of providing the endorsement. For a discussion of this provision, see "V.5.A.ix. Category and Class Discussion: FAA Form 8710-11 Submission."

Changes

The provisions of section 121 of proposed SFAR No. 89 are transferred to §61.423 with the following changes.

The section heading is revised, and the text of the section is reorganized for improved readability.

In paragraph (a)(1) the FAA is clarifying that a flight instructor with a sport pilot rating must sign the logbook of each person to whom he or she has given training.

In paragraph (a)(2), a requirement to retain a record of the type of endorsement is added.

Paragraph (a)(2)(iii) is revised to include the words "to, from, through, or at an airport having an operational control tower."

Paragraph (b) is added to include a requirement for an instructor to complete, sign, and submit to the FAA the application presented to him or her by a person seeking to obtain additional category and class privileges.

Section 61.425 How do I renew my flight instructor certificate? (proposed as SFAR No. 89 section 195)

The FAA received no comments requesting changes to this section. However a few commenters expressed concerns that current Flight Instructor Refresher Clinics (Courses) (FIRCs) may not be a suitable means for flight instructors with a sport pilot rating to renew their flight instructor certificates. The commenters asked if persons providing FIRCs would be given latitude to develop courses specifically designed for flight instructors with a sport pilot rating. The FAA notes that persons providing FIRCs

may specifically tailor those courses to the needs of flight instructors with sport pilot ratings. Further guidance will be available to FIRC sponsors at a later date.

Changes

The provisions of section 195 of proposed SFAR No. 89 are transferred to §61.425 without substantive change.

Section 61.427 What must I do if my flight instructor certificate with a sport pilot rating expires? (proposed as SFAR No. 89 section 197)

The FAA received no comments on this section.

Changes

The provisions of section 197 of proposed SFAR No. 89 are transferred to §61.427. The section is modified to note that a person may pass a practical test as prescribed in §61.405 (b) or §61.183 (h). This change reflects the separation of flight instructor requirements into subparts H and K of part 61.

Section 61.429 May I exercise the privileges of a flight instructor certificate with a sport pilot rating if I hold a flight instructor certificate with another rating? (proposed as SFAR No. 89 section 151)

The FAA received several comments on this section. The majority of the commenters recommended that the FAA delete or reduce the proposed requirement for a person exercising the privileges of a flight instructor with a sport pilot rating to have at least 5 hours of pilot-in-command time in a specific make and model of light-sport

aircraft in which that person provides training. Other commenters recommended that the FAA delete the proposed requirement that a flight instructor receive specific training in any make and model of light-sport aircraft in which that person has not acted as pilot in command prior to providing training. The FAA is retaining the proposed requirement that a person exercising the privileges of a flight instructor certificate with a sport pilot rating have at least 5 hours of pilot-in-command time in a specific make and model of light-sport aircraft prior to providing flight training. However, the rule will permit a person with this experience to provide flight training in any aircraft within the same set of light-sport aircraft as the make and model of aircraft in which that person has 5 hours of pilot-in-command time.

The FAA found that section 151 of proposed SFAR No. 89 did not reference commercial pilots with an airship or a balloon rating. As these pilots may provide flight instruction under current rules, and therefore may be considered authorized instructors, the FAA believes it is appropriate to permit these persons to exercise the privileges of a flight instructor certificate with a sport pilot rating in the classes of aircraft in which they are currently authorized to provide training. This omission is corrected in the final rule.

Proposed paragraphs (a)(2) and (a)(3) would have established requirements for a person transitioning to a flight instructor certificate with a sport pilot rating to receive specific training or have 5 hours of pilot-in-command time in any make and model of light-sport aircraft prior to providing training in that aircraft. This requirement to have 5 hours of pilot-in-command time is now set forth in §61.415 (e). Training requirements for the operation of makes and models of light-sport aircraft are addressed in those sections that apply to a person's underlying pilot certificate.

Paragraph (b) is added in the final rule. This paragraph clarifies that the requirements of §§61.415 and 61.423 also apply to flight instructors with other than a sport pilot rating, commercial pilots with an airship rating, or commercial pilots with a balloon rating, when those persons exercise the privileges of a flight instructor certificate with a sport pilot rating.

Paragraph (c) (proposed as paragraph (b)) is changed to state that, to exercise privileges of a flight instructor certificate in a category, class, or make and model of light-sport aircraft for which one is not currently rated, a person must meet all applicable requirements specified in §61.419 to provide training in an additional category or class of light-sport aircraft. In the NPRM, SFAR No. 89 section 151 (b) referenced sections 127 and 129; however, section 129 is not being adopted and therefore paragraph (c) only contains to §61.419, which corresponds to SFAR No. 89 section 127.

Changes

The provisions of section 151 of proposed SFAR No. 89 are transferred to §61.429 with changes.

In the introductory text of the section, the words "a commercial pilot certificate with an airship rating, or a commercial pilot certificate with a balloon rating issued under this part" are added.

In paragraph (a) (proposed as paragraph (a)(1)), the words "…on your existing pilot certificate and flight instructor certificate when exercising your flight instructor privileges" are changed to read, "…on your flight instructor certificate, commercial pilot certificate with an airship rating, or commercial pilot certificate with a balloon rating, as

appropriate, when exercising your flight instructor privileges and the privileges specified in §61.413."

Paragraph (b) is added in the final rule to require persons subject to this section to comply with the limits specified in §61.415 and the recordkeeping requirements of §61.423.

Paragraph (c) (proposed as paragraph (b)) is changed to state that persons subject to this section must meet all applicable requirements specified in §61.419 to provide training in an additional category or class of light-sport aircraft.

Section 61.431 Are there special provisions for obtaining a flight instructor certificate with a sport pilot rating for persons who are registered ultralight flight instructors with an FAA recognized ultralight organization? (proposed as SFAR No. 89 section 153)

The provisions of this section were intended to encourage and assist ultralight instructors registered with FAA-recognized ultralight organizations to obtain flight instructor certificates with a sport pilot rating. The final rule will allow an ultralight flight instructor who is registered with an FAA-recognized ultralight organization before September 1, 2004 to apply for a flight instructor certificate with a sport pilot rating and receive credit for experience and training successfully completed with the ultralight organization. The FAA believes that the provisions of this section respond to commenters' requests to make the transition from basic and advanced ultralight flight instructors to flight instructors with a sport pilot rating simple and reasonable.

One commenter stated that the FAA should not require ultralight instructors who have thousands of flight hours of ultralight flight time to obtain additional training. The

FAA believes that this section addresses the commenter's concern, as it provides registered ultralight instructors with FAA-recognized ultralight organizations a means to obtain flight instructor certificates with a sport pilot rating without meeting the requirements specified for other applicants.

A number of commenters recommended that ultralight instructors not take knowledge tests for both the sport pilot certificate and a flight instructor certificate with a sport pilot rating. Other commenters recommended that transitioning ultralight flight instructors not be required to take any knowledge test. To ensure standardization, the FAA requires all applicants for an underlying pilot certificate to take the specific knowledge test applicable to that certificate, and is therefore requiring that an applicant pass a knowledge test for both his or her underlying pilot certificate and a flight instructor certificate with a sport pilot rating.

Some commenters recommended that ultralight flight instructors transitioning to flight instructors with a sport pilot rating not be required to pass an "initial flight check." In the interest of safety and standardization, the FAA will not issue an initial flight instructor certificate without the applicant passing a practical test.

A number of commenters recommended that the FAA permit ultralight instructors to become flight instructors without first obtaining a sport pilot certificate. As the privilege to operate an aircraft is based upon a person's underlying pilot certificate and not his or her flight instructor certificate, the FAA is not adopting the commenter's recommendation.

One commenter recommended that current ultralight instructors with specific make and model experience be permitted to provide themselves with an endorsement

certifying their own proficiency in a particular make and model of light-sport aircraft. As this recommendation goes against the FAA's long-standing policy against self-endorsements, the FAA is also not adopting this commenter's recommendation.

Other commenters questioned the ability of the FAA to effectuate a transition from operations conducted under training exemptions to operations conducted in accordance with subpart K. In the final rule, the FAA is establishing an effective date for compliance, which will permit current ultralight flight instructors to become flight instructors with a sport pilot rating and exercise the privileges of that certificate in appropriately certificated aircraft without disrupting current training programs.

The FAA originally proposed that any registered ultralight instructor with an FAA-recognized ultralight organization would have up to 36 months after the effective date of the final rule to apply for a flight instructor certificate with a sport pilot rating and receive credit for experience and training successfully completed with the ultralight organization. Upon further consideration, the FAA concluded that it would be in the interest of safety, fairness, and ease of administration to limit this provision to ultralight instructors registered with those organizations on or before September 1, 2004, but provide them with a period of 36 months to avail themselves of the provisions of this section. Once the rule is effective, the minimum requirements established in §61.411 must be met by all applicants for a flight instructor certificate with a sport pilot rating who were not registered ultralight instructors on or before September 1, 2004. The FAA believes it is both unnecessary and not in the interest of safety to permit these ultralight instructors to meet the provisions of this section in lieu of the more stringent requirements of other sections in subpart K.

As proposed, ultralight flight instructors who are registered with an FAA-recognized ultralight organization on the effective date of the rule would have had 36 months after the effective date of the final rule to apply for a flight instructor certificate with a sport pilot rating and receive credit for meeting the aeronautical knowledge, flight proficiency, and aeronautical experience requirements of subpart K. The final rule continues to extend this privilege to ultralight flight instructors registered with an FAA-recognized ultralight organization on or before September 1, 2004, but not to those registered after that date. All applicants must satisfactorily complete both FAA knowledge tests and practical tests.

Consistent with the change in §61.303, the words "a current recreational pilot certificate and meet the requirements of §61.101 (c)" are added to paragraph (a). As recreational pilots who meet the requirements of §61.101 (c) have met aeronautical knowledge, flight proficiency, and aeronautical experience requirements equal to or greater than those required of sport pilots, the FAA contends it would be inappropriate to preclude these pilots from obtaining a flight instructor certificate with a sport pilot rating.

In the final rule, the FAA is clarifying the reference to "experience requirements" in paragraph (b). The revision specifies that an applicant need not meet the aeronautical experience requirement specified in §61.407, the flight proficiency requirements specified in §61.409, and the aeronautical experience requirements specified in §61.411. The FAA notes that an applicant is still required to meet the minimum flight time requirements in the category and class of light-sport aircraft for which privileges are sought. This revision is consistent with terminology used in part 61.

As discussed in §61.329, the FAA received many comments regarding the requirement for notarized documentation of experience from the FAA-recognized ultralight organization. Many commenters were concerned about the added cost and burden this requirement would present. The FAA again agrees with the comments and is replacing the requirement for a notarized document with a requirement that an applicant provide the FAA with a certified copy of his or her ultralight pilot records from the FAA-recognized ultralight organization.

Proposed paragraph (e)(2) is changed in paragraph (d)(2) of the final rule to require that documents provided by an applicant for a flight instructor certificate with a sport pilot rating indicate that the person is recognized to operate and provide training in the category and class of aircraft for which instructional privileges are sought. This change corresponds to a similar change made in §61.329.

Changes

The provisions of section 153 of proposed SFAR No. 89 are transferred to §61.431. The section is reorganized for clarity, and the following changes are made.

In the introductory text, the words "not later than [Date 36 months after the effective date of the final rule], and you want to apply for a flight instructor certificate with a sport pilot rating" are changed to "on or before September 1, 2004, and you want to apply for a flight instructor certificate with a sport pilot rating, not later than January 31, 2008."

In paragraph (a) of the final rule, the words "a current recreational pilot certificate and meet the requirements of §61.101 (c)" are added.

In paragraph (b), the reference to "experience requirements" is changed in the final rule to include "the aeronautical knowledge requirements specified in §61.407, the flight proficiency requirements specified in §61.409, and the aeronautical experience requirements specified in §61.411."

In paragraph (d) (proposed as paragraph (e)), the requirement to "obtain and present upon application a notarized copy" is changed to "submit a certified copy."

Proposed paragraph (e)(2) is changed in paragraph (d)(2) of the final rule to require that documents provided by an applicant for a flight instructor certificate with a sport pilot rating indicate that the person is recognized to operate and provide training in the category and class of aircraft for which flight instructor privileges are sought.

V.6. Part 65—Certification: Airmen Other Than Flight Crew Members

Section 65.85 Airframe rating; additional privileges; and
Section 65.87 Powerplant rating; additional privileges

The FAA did not propose to amend §§65.85 and 65.87. They are amended in the final rule to allow appropriately certificated mechanics with an airframe or powerplant rating the additional privilege of performing and inspecting major repairs and major alterations to light-sport aircraft issued a special airworthiness certificate in the light-sport category and approving them for return to service. This privilege to perform and inspect major repairs and major alterations and approve a product or part for return to

service on a light-sport aircraft is limited to products and parts that are not produced under an FAA approval, such as those built under a light-sport aircraft manufacturer's consensus standard. This rule change gives the airframe- or powerplant-rated mechanic the same privilege to perform and inspect major repairs and major alterations on special light-sport aircraft that this rule grants a repairman (light-sport aircraft) with a maintenance rating.

This privilege is not extended to major repairs and major alterations performed on products produced under an FAA approval. A mechanic with an airframe or powerplant rating cannot approve a product or part for return to service after performing and inspecting a major repair or major alteration on a product produced under an FAA approval. This work must be performed in accordance with part 43 and other applicable provisions of part 65.

The rule also requires that any major repair or major alteration performed on a product or part not produced under an FAA approval installed on a special light-sport aircraft be performed in accordance with the manufacturer's instructions or instructions developed by a person acceptable to the FAA.

Changes

Sections 65.85 and 65.87 are each amended by designating the existing text as paragraph (a), inserting the words, "Except as provided in paragraph (b) of this section" at the beginning of paragraph (a), and adding new paragraph (b) to permit appropriately certificated mechanics to perform and inspect major repairs and major alterations on products not produced under an FAA approval installed on a special light-sport aircraft, as discussed above.

Section 65.101 Eligibility requirements: General

The FAA did not receive any comments on this section.

Changes

The proposed rule is adopted without substantive change.

§65.103 Repairman certificate: Privileges and limitations

The FAA did not propose any amendments to this section. The NPRM, however, included a proposed exception to this section in §65.107 (d). It provides that §65.103 does not apply to the holder of a repairman certificate (light-sport aircraft) while that repairman is performing work under that certificate. The more appropriate location for this exception is in a new paragraph (c) of §65.103. Placing this exception as new paragraph (c) of §65.103 parallels the structure of paragraph (b) in §65.101, which includes a provision stating that the section does not apply to the issuance of repairman certificates (experimental aircraft builder) under §65.104. The FAA is making this editorial revision in this final rule.

Changes

The provisions of proposed §65.107 (d) are added as new paragraph (c) of §65.103 in the final rule.

Section 65.107 Repairman certificate (light-sport aircraft): Eligibility, privileges and limits

Under §65.107, the FAA proposed requirements for acquiring a repairman (light-sport aircraft) certificate. The FAA received numerous comments on this proposed section.

A few commenters felt that the lack of clear guidelines for this section made it difficult to comment on its viability. One organization reserved opinion on this section, stating that it could not properly comment until reviewing the consensus standards that would control implementation of this rule. The FAA addresses this comment in the discussion of the definition of "consensus standard" under §1.1.

Several commenters expressed concern that the FAA has been allowing repairman standards to steadily decline over the years, and that the proposed rule would only further compromise safety. The FAA disagrees and points out that the privileges and limitations for repairmen found in part 65 have not changed since 1980.

Some commenters felt that the maintenance training course hour requirements were excessive and would inhibit owners of light-sport aircraft from performing preventive maintenance on their aircraft. This rule establishes a repairman certificate (light-sport aircraft) with two ratings--inspection and maintenance. The rule sets the training required to qualify for a repairman certificate (light-sport aircraft) with an inspection rating at 16 hours. The training required for a repairman (light-sport aircraft) certificate with a maintenance rating, as adopted in this final rule, depends on the class of aircraft the individual repairman wants to maintain. The FAA had to establish a training requirement for light sport aircraft repairman certificates because, unlike a builder of an

amateur-built aircraft, the light-sport aircraft owner cannot show that he or she manufactured the major portion of the aircraft, and therefore cannot show that he or she would have the skills necessary to inspect and maintain the light-sport aircraft.

The FAA notes that this rule will not prohibit owners from performing maintenance on experimental light-sport aircraft. Owner-performed maintenance is allowed. However, all experimental light-sport aircraft operating limitations will require that an annual condition inspection be performed. The rule allows an owner of an experimental light-sport aircraft to perform this inspection only if he or she has obtained a repairman certificate (light-sport aircraft) with an inspection rating. To obtain the certificate, an applicant must complete an FAA-accepted 16-hour course on inspecting the same class of light sport aircraft for which the person intends to exercise the privileges of the certificate and rating. The repairman certificate with an inspection rating will authorize the owner to sign off the annual condition inspection for his or her own light-sport aircraft issued an experimental certificate under §21.191 (i). If an individual wants to maintain other light-sport aircraft as well, he or she must earn a repairman (light-sport aircraft) certificate with a maintenance rating. That person must take an FAA-accepted course that addresses maintenance of the particular class of aircraft that he or she desires to work on.

The NTSB commented that, although the FAA referred to minimum training and testing requirements in the NPRM, no test requirement was specified. The NTSB stated that applicants for a repairman certificate should be required to pass a written examination before being awarded a maintenance rating, and that that test should include the general knowledge section of the mechanic certificate written test. The FAA agrees.

The final rule includes a requirement that an applicant must take a training course. This training course should contain a written test that the applicant should pass with a minimum score of 80%. This is discussed in further detail later in this section. The test will include the areas of the general knowledge section of the mechanic certificate written test that are applicable to light-sport aircraft that have been issued a special airworthiness certificate for either experimental or special light-sport aircraft.

As adopted in this final rule, the required hours of training for a repairman (light-sport aircraft) certificate with a maintenance rating will depend on the class of light-sport aircraft the applicant intends to work on. This rating will allow the repairman to perform annual condition inspections on both experimental and special light-sport aircraft, 100-hour inspections on special light-sport aircraft used for flight training and towing, and maintenance on special light-sport aircraft. Since the aircraft a repairman with a maintenance rating will work on may be used for flight training or towing, and are typically operated for compensation or hire, the FAA believes that more training should be required for these repairmen than for repairmen with an inspection rating.

A couple of commenters suggested that the requirements might force existing ultralight repairmen to work outside the rules or go out of business. The FAA disagrees. The rule will standardize maintenance only within the special and experimental light-sport aircraft community and does not impact those individuals who perform work on ultralight vehicles operated under part 103.

A few commenters expressed concern over the impracticality of requiring repairmen to be certificated on each make and model of aircraft they intend to maintain. The FAA agrees. The FAA believes that the differences between makes and models of

aircraft within a specific class of aircraft are not extensive enough to require an applicant for a repairman certificate with an inspection rating to successfully complete a training course for each specific make and model of aircraft on which that person intends to perform work. Rather than requiring applicants for a repairman certificate (light-sport aircraft) with an inspection rating to complete training on each make and model of aircraft on which they intend to perform work, the FAA is requiring training to be completed for each class of aircraft. Although the FAA proposed that persons seeking repairman certificate (light-sport aircraft) with a maintenance rating complete a course on the requirements of a particular category of light-sport aircraft, the FAA recognizes that, when applied to aircraft certification, the use of the term "class" is more appropriate and consistent with the change made for persons seeking a repairman certificate (light-sport aircraft) with an inspection rating.

Commenters were divided on whether or not the 16-hour training course requirement for a repairman (light-sport aircraft) with an inspection rating should be limited to providing privileges for a specific make and model of experimental light-sport aircraft. Some thought it was too long; others thought it was too short. The 16-hour inspection training course is designed to train an individual owner with no background in aviation maintenance or inspection to perform a satisfactory annual condition inspection on his or her experimental light-sport aircraft and, on the basis of that inspection, make a determination if that aircraft is safe to fly. The FAA understands that some individuals may have more aviation maintenance experience than others, and part of the 16-hour course they would take may be a review, and that other individuals taking the training would be receiving new information. While some individuals will be covering

previously learned material, the FAA believes that to perform an annual condition inspection on an experimental light-sport aircraft, 16 hours is the minimum amount of training required to properly train a person with no prior aviation maintenance experience.

Several commenters thought that the maintenance training course hour requirements proposed in NPRM were too low to ensure safety. The FAA agrees that the required number of hours to obtain a repairman (light-sport aircraft) certificate, as proposed, would now be insufficient for some classes of aircraft because the changes adopted in this final rule will increase the use of FAA-approved products on special light-sport aircraft. To exercise the privileges of a repairman certificate with a maintenance rating on aircraft having a special airworthiness certificate in the light-sport category, airplane class, the FAA is requiring 120 hours of FAA-accepted maintenance training, and 104 hours of FAA-accepted maintenance training for weight-shift-control and powered parachute classes. These additional hours are needed to:

- Address part 39 and part 43 requirements for FAA-approved products.
- Include additional training elements, to address items such as type-certificated engines, floats, and composite structures.
- Provide more in-depth training on items such as two- and four-cycle engines, and electrical systems.

On the other hand, the FAA believes that 80 hours of training is adequate to perform the annual condition inspection and routine maintenance, as defined in the manufacturer's maintenance and inspections procedures for gliders and lighter-than-air aircraft.

While even these increases in training hours will not satisfy all commenters, the FAA took into consideration that it takes fewer skills generally to maintain light-sport aircraft than other more complex aircraft. For example, it takes less than 2 hours to remove and replace the fabric, or sails, on the wings of many light-sport aircraft. In comparison, replacing the fabric on the wings of an aircraft type-certificated under CAR 3 takes a week or more because of the number of steps involved. The additional training time required for airplane, weight-shift-control aircraft, and powered parachute classes will ensure that FAA-approved products, such as type-certificated engines and propellers, will be properly maintained and inspected to an FAA performance standard and properly recorded in the aircraft records.

Commenters pointed out that the proposed 80-hour training requirement for a repairman (light-sport aircraft) with a maintenance rating compares poorly with the 1,900 hours of required training for an airframe and powerplant rating at a part 147 aviation maintenance technician school. The FAA notes that the required airframe and powerplant curriculum subjects in appendix B of part 147 includes many technical subjects that are not relevant to light-sport aircraft (for example, turbine and radial engine maintenance, engine overhauls, autopilots, ice protection, cabin pressurization systems, helicopter maintenance, constant speed propellers, propeller governors, turbo chargers, superchargers, and turbine driven auxiliary power units). In addition, while a mechanic with an airframe and powerplant rating is trained on all aircraft types a repairman (light-sport rating) with a maintenance rating is trained in one class of aircraft such as powered parachutes, weight-shift-control aircraft, or airplanes, so the number of training hours can be significantly reduced to address only that class of aircraft. If the repairman with a

maintenance rating wants to become rated in another light-sport class of aircraft, he or she will have to take another FAA-acceptable course for that specific class of aircraft.

Furthermore, this rule does not allow a repairman (light-sport aircraft) to perform major repairs, such as welding of tubing and exhaust systems unless that repairman has received additional training acceptable to the FAA, such as training from a manufacturer or other industry-accepted training providers prior to performing the work.

The FAA will look at five areas in deciding whether to accept a training course design. They are:

- The recommended passing grade for the written test in a training course is 80 percent.
- All training should be taught to a level 3 standard. Level 3 training is training in which the student actually performs a task with supervision or additional instruction.
- All courses should meet the training guidance in FAA advisory material or its educational equivalent, and each course must be accepted by the FAA.
- The course outline should include training on multiple aircraft within the same class of light-sport aircraft. Maintenance subjects such as engine theory, inspection, repair, troubleshooting, servicing, propeller, weight and balance, rigging, fuel and lubricating systems, flight controls, landing gear, electrical system, ballistic parachutes, and structural repairs for several makes and model aircraft will be covered. Applicable Federal aviation regulations will also be taught.
- The student will have to pass a final written test on all subjects covered before a certificate of training will be issued by the training facility.

While the FAA considers the number of training hours adequate at this point in time, FAA may amend the regulation if the number of training hours or subjects taught are found insufficient to ensure aviation safety.

Several commenters wanted the FAA to extend repairman (light-sport aircraft) privileges to experimental, amateur built or older type-certificated aircraft. It is not within the scope of this rulemaking to extend repairman (light-sport aircraft) privileges to those performing work on aircraft other than experimental or special light-sport aircraft.

Since the FAA revised part 43 to make it applicable to special light-sport aircraft, in paragraph (c) of the final rule, the FAA must revise the privileges of a person holding a repairman certificate (light-sport aircraft) with a maintenance rating to recognize that the person will be performing maintenance on special light-sport aircraft in accordance with part 43. The FAA has therefore included the term "approve and return to service" when addressing maintenance, preventive, and alterations performed by a repairman certificate (light-sport aircraft) with a maintenance rating. The FAA is also revising the rule to clarify that the holder of a repairman certificate (light-sport aircraft) with a maintenance rating may perform both the annual condition inspection and the 100-hour inspection required by §91.327. In addition, the FAA is revising the privileges of this repairman to include performing major repairs and major alterations on products not produced under an FAA approval that have been installed on special light-sport aircraft. This privilege is also discussed under part 43 above.

The FAA is also added new paragraph (d) to prohibit a repairman (light-sport aircraft) with a maintenance rating from approving for return to service any aircraft or part thereof unless that person has previously performed the work concerned satisfactorily. This paragraph is added as a result of revisions making part 43 applicable to special light-sport aircraft and contains language similar to that contained in current §65.81, which addresses the general privileges and limitations of mechanics. It differs

from that language to the extent that it does not permit a repairman (light-sport aircraft) with a maintenance rating to supervise work performed by other persons. Similarly, a person who has not previously performed that work may show the ability to do the work by performing it to the satisfaction of the FAA or certain specified certificate holders.

The rule is also revised in paragraph (d) of the final rule to require that a repairman (light-sport aircraft) with a maintenance rating understand the current instructions of the manufacturer and the maintenance manuals for the specific operation concerned prior to exercising certificate privileges. This provision is identical to language found in current §65.81 (b), which sets forth the privileges and limitations of a person holding a mechanic certificate and is similar to provisions contained in §65.103 (b) for repairmen. The new provision is included because a repairman (light-sport aircraft) with a maintenance rating may perform work and approve special light-sport aircraft for return to service under part 43.

Changes

In paragraph (a)(2)(ii), the words "make and model of experimental light-sport aircraft" are changed to "class of experimental light-sport aircraft."

In paragraph (a)(3)(ii), the term "category of light-sport aircraft" is changed to "class of light-sport aircraft." In addition, the requirement to complete "an 80-hour training course" is changed to a requirement to complete a 120-hour training course for airplane class privileges, a 104-hour training course for weight-shift-control aircraft and powered parachute class privileges.

In paragraph (b), the words "may perform a condition inspection on an aircraft" are changed to "may perform an annual condition inspection on a light-sport aircraft." In addition, the reference to make and model in proposed paragraph (b) is changed to class in paragraph (b)(3) of the final rule.

Proposed paragraph (c) is divided into paragraphs (c)(1) through (c)(3) in the final rule. In addition, the words "perform maintenance on a light-sport aircraft that has a special airworthiness certificate issued under §21.186 or §21.191 (i) of this chapter" are changed in paragraph (c)(1) to "approve and return to service an aircraft that has been issued a special airworthiness certificate in the light-sport category under §21.190 of this chapter, or any part thereof, after performing or inspecting maintenance (to include the annual condition inspection and the 100-hour inspection required by §91.327 of this chapter), preventive maintenance, or an alteration (excluding a major repair or a major alteration on a product produced under an FAA approval)."

In paragraph (c)(2), the words "perform the annual condition inspection on a light-sport aircraft that has been issued an experimental certificate for operating a light-sport aircraft under §21.191 (i) of this chapter" are added.

In paragraph (c)(3) of the final rule, the provisions proposed paragraph (c) regarding training requirements are revised to read "only perform maintenance, preventive maintenance, and an alteration on a light-sport aircraft that is in the same class of light-sport aircraft for which the holder has completed the training specified in paragraph (a)(3)(ii) of this section. Before performing a major repair, the holder must complete additional training acceptable to the FAA and appropriate to the repair performed."

Proposed paragraph (d) is adopted as paragraph (c) of §65.103.

A new paragraph (d) is added in the final rule to prohibit a repairman (light-sport aircraft) with a maintenance rating from approving for return to service any aircraft or part thereof unless that person has previously performed the work concerned satisfactorily. That paragraph also permits a person who has not previously performed that work to show the ability to do the work by performing it to the satisfaction of the FAA or certain specified certificate holders. It also requires the repairman to understand the current instructions of the manufacturer and the maintenance manuals for the specific operation concerned prior to exercising certificate privileges.

V.7. Part 91 —General Operating And Flight Rules

V.7.A. Part 91--General Issues

Some commenters expressed concern that a light-sport aircraft with operating limitations permitting flights into Class B, C, and D airspace would not have the same equipment and inspection requirements as standard category aircraft. It was not the FAA's intent to except light-sport aircraft from part 91 requirements with regard to required equipment to operate in Class B, C, or D airspace. The FAA notes that the provisions of §§91.129, 91.130, and 91.131 will continue to apply to light-sport aircraft operated in Class B, C, and D airspace. However, the provisions of §91.205 will not apply to experimental or special light-sport aircraft. That section only applies to powered civil aircraft with a standard category U.S. airworthiness certificate. To ensure that special light-sport aircraft are appropriately equipped for the various types of operations for which they may be used, the FAA has revised the definition of "consensus standard"

in §1.1 to include a requirement that the standard address minimum equipment requirements. Any aircraft built under a consensus standard will therefore have to meet the minimum equipment requirements prescribed by that standard to be certificated as a special light-sport aircraft. The equipment requirements for experimental light-sport aircraft remain identical to current part 91 requirements.

Light-sport aircraft issued an experimental light-sport or special light-sport airworthiness certificate that are authorized to operate in Class B, C, and D airspace must have the equipment for VFR or IFR operations specified in the applicable consensus standards and any other equipment specified by the operating requirements contained in subpart C of part 91. In addition, aircraft that operate under IFR must comply with the altimeter tests and inspections required by §91.411. Aircraft required to have a transponder must comply with the tests and inspections required by §91.413. These inspections and tests must be performed and approved in accordance with appendixes E and F of part 43.

The FAA received comments suggesting that light-sport aircraft should not be required to have emergency locator transmitters (ELTs). ELT equipment requirements are specified in §91.207 and apply to certain U.S.-registered civil airplanes and operations. The regulatory requirements for ELTs are mandated by 49 United States Code section 44712. The FAA cannot modify §91.207 to contradict provisions contained in the U.S. Code.

Section 91.207 applies to U.S.-registered civil airplanes, and not to all aircraft; therefore, some light sport aircraft will not be required to comply with that section. Section 91.207 also contains several provisions excepting some airplanes and operations

from its coverage. An example particularly relevant to light-sport aircraft is the exception for aircraft equipped to carry not more than one person. The final rule does not modify ELT requirements, as those requirements are mandated by statute. Owners and operators should consult §91.207 to determine if their aircraft or operation is covered by the requirement.

Several commenters wanted the FAA to amend §91.215, ATC transponder and altitude reporting equipment and use, so that transponders would not be required for light-sport aircraft. The FAA does not agree with the commenters. Section 91.215 applies to all aircraft when flying in certain airspace, unless a specified exception applies. Those who wish to operate light-sport aircraft must meet the provisions of §91.215. The manner in which an aircraft is certificated, its operational parameters, and the training received by the pilot operating that aircraft does not change the FAA's underlying rationale for the implementation of §91.215.

Two commenters suggested that paragraph (a) of §91.109, Simulated instrument flight instruction, be revised to add a specific definition of dual controls for powered parachutes, given the unique method of controlling those aircraft. They requested that "in the case of a powered parachute, full dual controls are defined as a configuration that allows, while in flight, for the instructor and student to manipulate throttle, engine kill switch, and steering lines." The FAA does not believe a change to the rule is necessary. The FAA believes that a prudent flight instructor would not provide flight instruction without access to the throttle, engine kill switch, and steering lines by both the instructor and student pilot.

V.7.B. Part 91--Section-by-Section Discussion

Section 91.1 Applicability

The FAA did not receive any comments on this section.

Changes

The proposed rule is adopted without change.

Section 91.113 Right-of-way rules: Except water operations

One commenter asked what rights the new light-sport aircraft category will have under the right-of-way rules. The right-of-way rules for light-sport aircraft will depend upon the category and class of aircraft operated. No distinction will be made for light-sport aircraft, other than that based upon category and class. See the discussion of §91.113 in the NPRM.

Changes

The proposed rule is adopted without change.

Section 91.126 Operating on or in the vicinity of an airport in Class G airspace

One commenter suggested that it is unsafe to allow the operation of light-sport aircraft in a traffic pattern with general aviation aircraft traveling at higher speeds. The FAA does not agree. The FAA currently allows these operations by powered parachutes, weight-shift-control aircraft and other light-sport aircraft. This practice has not proven unsafe, although it does require good operating procedures and practices. It requires that

pilots have adequate training on operations at towered and non-towered airports where the mix of traffic can range from a slow J-3 Cub or Flightstar to a Citation jet. The FAA is reviewing Advisory Circulars and the Aeronautical Information Manual to ensure that they adequately address procedures for weight-shift-control, powered parachutes and other light-sport aircraft.

Another commenter suggested that it is unsafe to allow the operation of powered parachutes in a traffic pattern with general aviation aircraft traveling at higher speeds. The FAA notes that both the proposed and final rule require powered parachutes to avoid the flow of fixed-wing aircraft.

Changes

The proposed rule is adopted without change.

Section 91.131 Operations in Class B airspace

There were several comments expressing concern about the operation of light-sport aircraft in Class B, C, and D airspace. Commenters stated that the operation of slower light-sport aircraft in close proximity to faster general aviation and commercial aircraft could pose difficulty for air traffic controllers. In response to these comments, the FAA is changing the final rule to provide that, like a student pilot, a sport or a recreational pilot will not be authorized to fly in Class B airspace associated with those airports listed in part 91, appendix D, section 4. As discussed under "V.5.A.v. Changes to Airspace Restrictions," the FAA is also amending part 61 to provide that sport pilots

operating in airspace having operational control towers must receive appropriate training to operate in that airspace.

Some commenters noted that recreational pilots should be extended the same privileges under this section as sport pilots, given that recreational pilots are required to meet more extensive training and proficiency requirements. The FAA agrees and is revising this section to extend the same privileges to recreational pilots, provided the recreational pilot has met either the requirements of §61.101 (d) or §61.94. Current §91.131 (b) addresses pilot requirements for operations at an airport within Class B airspace or within Class B airspace. Paragraph (1) (ii) addresses two types of pilots--student pilots, and recreational pilots seeking private pilot certification who have met the requirements of §61.95. In this final rule, provisions for persons with at least a private pilot certificate remain in (b)(1)(i). Recreational pilots are addressed in (b)(1)(ii) and, in response to comments, the FAA is expanding their privileges to match those for sport pilots, provided they receive the training specified in §61.101 (d) or §61.94. A new paragraph (b)(1)(iii) contains the proposed provision for sport pilots and also includes a provision to permit the person to operate at an airport in Class B airspace or within Class B airspace if that person has met either the requirements of §61.325 or the requirements for a student pilot seeking a recreational pilot certificate under §61.94. New paragraph (b)(1)(iv) provides similar privileges to a student pilot who has met either the requirements of §61.94 or §61.95, as applicable.

Proposed paragraph (b)(2) is revised to remove the proposal to permit a sport pilot to operate an aircraft at those airports listed in part 91, appendix D, section 4. This change is discussed in "V.5.A.v. Changes to Airspace Restrictions."

Changes

Paragraph (b)(1)(i) of current §91.131 is revised by deleting the word "or."

Current paragraph (b)(1)(ii) is changed in the final rule to include requirements for holders of a recreational pilot certificate. The current requirements for student pilots are removed and placed in new paragraph (b)(1)(iv).

Proposed paragraph (b)(1)(ii) is reformatted and redesignated as (b)(1)(iii) in the final rule, now containing subparagraphs (b)(1)(iii)(A) and (B). In final rule paragraph (b)(1)(iii)(A), the proposed reference to "section 81 of SFAR 89" is changed to "§61.325 of this chapter." In addition, in final rule paragraph (b)(1)(iii)(B), the words "the requirements for a student pilot seeking a recreational pilot certificate in §61.94 of this chapter" are added.

Paragraph (b)(1)(iv), based partially on current (b)(1)(2), is added to address the requirements for student pilots to operate at an airport in Class B airspace or within Class B airspace.

Paragraph (b)(2) is changed by revising the proposed reference "paragraph (b)(1)(iii) of this section" to read "paragraphs (b)(1)(ii), (b)(1)(iii) and (b)(1)(iv) of this section." In addition, the proposed words "or a sport pilot certificate and has met the requirements of section 81 of SFAR 89" are removed.

Section 91.155 Basic VFR weather minimums

One commenter expressed concern that VFR operations would be permitted at night and without lights. The commenter suggested the rule be amended to prohibit VFR operation of light-sport aircraft between sunrise and sunset, unless the aircraft were equipped with anti-collision lights visible for at least 3 statute miles. If an aircraft were equipped with such lights, the commenter suggested, the FAA should allow VFR operations 30 minutes before sunrise and 30 minutes after sunset. The FAA notes that the provisions of current §91.209 apply to all aircraft, to include light-sport aircraft.

Other commenters said that powered parachutes and weight-shift-control aircraft are generally not safe for night operations without altitude instruments, even under VFR conditions, and recommended they be eliminated from §91.155.

The FAA agrees with comments that night operations are unsafe for any aircraft without proper equipment installed. To be operated between sunset and sunrise, aircraft must have the aircraft lights required by §91.209, and pilots must be authorized to conduct night operations. Additionally, special light-sport aircraft consensus standards will be required to address minimum equipment requirements for VFR night operations. Experimental light-sport aircraft minimum equipment requirements for these operations will be specified in their operating limitations. A sport pilot is not authorized to operate at night, and a recreational pilot is not authorized to operate between sunset and sunrise. A private pilot who does not have a night flying prohibition on his or her pilot certificate may operate a light-sport aircraft at night if the aircraft is properly equipped. The FAA notes that §61.110 is revised to permit a person to be issued a private pilot certificate with a rating in weight-shift-control aircraft, powered parachutes, or gyroplanes, even if that person has not completed the night flight training requirements for the issuance of the

certificate and rating. The certificate will, however, carry the limitation "Night flying prohibited." See §61.110 for further discussion.

Changes

In paragraph (b)(2), the words "between 1 and 3 statute miles" are changed to "less than 3 statute miles but not less than 1 statute mile."

Section 91.213 Inoperative instruments and equipment

The FAA received two comments on this section. One commenter asked if light-sport aircraft must meet the instrument requirements of §91.213. Yes, light-sport aircraft must meet the provisions of §91.213.

Another commenter believed that all light-sport aircraft, except powered parachutes and weight-shift-control aircraft, are already included in current §91.213 (d)(1)(i), and, therefore, paragraph (d) should be amended to change the words "or light-sport aircraft" to say "powered parachute or weight-shift-control aircraft." The FAA agrees that the current §91.213 (d) does not specifically address powered parachutes or weight-shift-control aircraft. As stated in the notice, the FAA intends that the provisions of §91.213 (d) apply to all the kinds of light-sport aircraft to include powered parachutes and weight-shift-control aircraft. However, to ensure that the provisions of this section apply to powered parachutes and weight-shift-control aircraft that may exceed the parameters of the light-sport aircraft, the FAA is revising the proposed rule language to change the words "or light-sport aircraft" to "powered parachute or weight-shift-control aircraft."

Changes

The proposed rule is adopted without change.

Section 91.309 Towing: Gliders and unpowered ultralight vehicles

The FAA received numerous comments on eliminating towing exemptions from §§91.309 and 103.1 (b) and incorporating the provisions of the exemptions in the final rule. Although not proposed, the FAA is amending §91.309 to establish operational requirements for towing an unpowered ultralight vehicle by a civil aircraft. Current section §91.309 only addresses requirements for the towing of gliders by civil aircraft. Since §61.69 is amended to establish specific experience and training requirements for pilots towing unpowered ultralight vehicles, the FAA believes it is also appropriate to establish specific requirements to operate a civil aircraft towing an unpowered ultralight vehicle. These new operational requirements for towing unpowered ultralight vehicles are identical to current operational requirements for towing gliders. Prior to this rule, both §61.69 and §91.309 only contained requirements addressing the towing of gliders. See discussion of §61.69 above.

Changes

In §91.309, the section heading, and paragraphs (a) introductory text, (a)(3), (a)(5), and (b) are amended by adding the words, "or unpowered ultralight vehicle" after the word "glider."

Section 91.319 Aircraft having experimental certificates: Operating limitations

Section 91.319 (a)(2) of the NPRM proposed an exception to the limitation on the use of aircraft with an experimental certificate issued under § 21.191 (i)(1) for carrying persons or property for compensation or hire. The exception would have allowed flight training in these aircraft for compensation or hire for an indefinite period.

As discussed more fully under §91.327, the FAA is modifying how operations for compensation or hire are addressed in the final rule. As a result, the FAA is not adopting (a)(2) as proposed, but instead is adopting a provision in new paragraph (e) that addresses operations conducted for compensation or hire and is not limited to the carriage of persons or property for compensation or hire. Section 91.319 (e) reflects the FAA's intent that light-sport aircraft issued an experimental certificate under §21.191 (i) should not generally be used for compensation or hire. Section 91.319 (e) allows exceptions to the general rule only for light-sport aircraft issued an experimental certificate under §21.191 (i)(1) when used to tow a glider or an unpowered ultralight vehicle in accordance with §91.309 or to conduct flight training in an aircraft that the person conducting flight training provides for up to 5 years after the rule becomes effective.

Additionally, §91.319 (f) is modified to clarify the FAA's intent that light-sport aircraft issued an experimental certificate under §21.191 (i) should not generally be used for lease or rental. These experimental aircraft are for personal use, and do not meet a design standard, nor are they manufactured, or maintained at the same level as special light-sport aircraft, primary, or standard category aircraft. Therefore, they should not be made available to general public for lease or rental, except when used to tow a glider that is a light-sport aircraft or unpowered ultralight vehicle. Paragraph (f) prohibits a person who owns an aircraft issued an experimental certificate under §21.191 (i) from leasing

that aircraft, except when the aircraft is used to tow a glider that is a light-sport aircraft or unpowered ultralight vehicle. The FAA notes that other regulations may also impose additional limitations on the use of experimental light-sport aircraft for compensation or hire, such as those that specify the privileges of a person's airman certificate and those that relate to commercial operators.

The FAA stated in the proposed rule that aircraft operating limitations would address the maintenance requirements for these experimental aircraft. Comments requested that the FAA require increased inspections of these aircraft if they are used for compensation or hire such as when they are being used for flight training. The FAA agrees. Paragraph (g) is added to specify that experimental light-sport aircraft that are used for flight training or towing must be inspected by an appropriately rated mechanic, repairman (light-sport aircraft) with a maintenance rating, or a repair station within the preceding 100 hours of time in service. The FAA is adopting this requirement to ensure a higher degree of safety when these aircraft are used for compensation or hire. Further, the added stress that an aircraft may be subjected to when used in towing operations supports additional inspection requirements.

Paragraph (h) of the final rule (proposed as paragraph (f)) also is revised to require that a request for deviation authority contain a justification that establishes a level of safety equivalent to that provided under the regulations for the deviation requested. The FAA has determined that the specific regulatory language must require an equivalent level of safety to remain consistent with requirements for an exemption. This is necessary because this deviation authority process is intended to supplement the exemption process for this rule and establish a way within the regulatory structure to

approve flight training for compensation or hire without the need for a person to submit a petition for exemption.

The FAA received numerous comments expressing concern about curtailing exemptions permitting the carrying of passengers in two-seat ultralight vehicles for compensation or hire. Many of these commenters specifically directed their remarks to the prohibition of carrying passengers in aircraft issued experimental certificates under §21.191 and the ending of the two-seat ultralight training exemptions from part 103. Numerous commenters stated that completely eliminating the operation of two-seat ultralight-like aircraft for compensation or hire after 36 months appears arbitrary. The FAA notes, however, that the training exemptions do not provide authority to conduct operations other than flight training in two-seat ultralight-like aircraft for compensation or hire.

Some commenters asked about the continuation of existing training exemptions for two-place training vehicles. After the rule becomes effective, the FAA intends to continue the existing flight training exemptions to provide ultralight flight instructors with adequate time to transition to the new system of certificates and ratings and continue current operations. During this time, these ultralight flight instructors should take action to obtain the newly required airman certificates and those certificates necessary to operate their aircraft under the new rules. The FAA does not anticipate allowing instructors, other than those afforded relief under the current training exemptions, to avail themselves of the benefits of these exemptions. New instructors will have to meet the provision of the new rules. The FAA has reissued these part 103 training exemptions with an expiration date of January 31, 2008.

Based on the comments, the FAA has also decided to extend the period during which aircraft certificated under §21.191 (i) and currently operated under part 103 training exemptions may be used to conduct flight training for compensation or hire. The final rule extends this period from 36 months to 60 months. After this time, these aircraft will no longer be permitted to be used for flight training for compensation or hire.

The additional time provided under paragraph (e)(2) for instructors to provide flight training in these aircraft for compensation or hire will ease some financial difficulties for those ultralight instructors transitioning to FAA-certificated flight instructors with sport pilot ratings.

The FAA believes that extending the period during which a person may conduct flight training for compensation or hire in light-sport aircraft issued an airworthiness certificate under §21.191 (i) will help to decrease the financial burden for persons providing flight instruction in these kinds of aircraft. This action will provide these instructors with additional time in which to purchase special light-sport aircraft to provide flight instruction under the rule, thereby delaying replacement costs. In addition, this action should further expand the growth of the industry as a whole. The FAA believes this rule may open new markets, provide more investment capital, and expand the availability of insurance coverage. These effects will allow instructors providing flight training in these aircraft to take advantage of the same opportunities as other general aviation instructors, such as those gained from being affiliated with flying clubs or flight schools. For more information, see the economic regulatory evaluation, which is in the public docket for this rulemaking.

Changes

Paragraph (e) (proposed as (a)(2)) is added with the following changes. The words "carrying persons or property" are removed. In addition, provisions to permit towing a glider that is a light-sport aircraft or an unpowered vehicle in accordance with §91.309 and to permit a person to conduct flight training in an aircraft which that person provides prior to January 31, 2010.

New paragraph (f) is added to prohibit a person who owns an aircraft issued an experimental certificate under §21.191 (i) from leasing that aircraft unless the aircraft is operated in accordance with new paragraph (e)(1).

New paragraph (g) is added provide 100-hour inspection requirements for aircraft issued an experimental certificate under §21.191(i)(1) when used to tow gliders that are light-sport aircraft or unpowered ultralight vehicles or to conduct flight training for compensation or hire.

New paragraph (h) (proposed as paragraph (f)) is changed to also require that the justification for the request for deviation authority must establish a level of safety equivalent to that provided under the regulations for the deviation requested.

Section 91.327 Aircraft having a special airworthiness certificate in the light-sport category: Operating limitations

Purpose (now §91.327 (a)): As discussed earlier in §21.190, the reference to the use of these aircraft for "sport and recreation" has been removed. Proposed §91.327 (a)(1) specified that special light-sport aircraft could only be operated for the purpose for which the certificate was issued. The term "sport and recreation," however, was not

defined in the NPRM, and its removal from §21.190 makes it necessary to specify the operating limitations for these aircraft in this paragraph. In revising this paragraph, the FAA has more clearly specified the operating limitations that were implied by the use of the term "sport and recreation."

Section 91.327 (a) is modified to clarify the FAA's intent that special light-sport aircraft should not generally be used for compensation or hire. Section 91.327 (a)(1) and (a)(2) allow exceptions to the general rule only for towing a glider or an unpowered vehicle and for flight training. The use of special light-sport aircraft to engage in towing operations is discussed under §61.69.

The FAA is also removing the term "rental" because the term "compensation or hire" provides a more accurate description under existing interpretations, decisions, and cases of those operations the FAA intends to restrict. This revision does not limit the ability of a person to rent a special light-sport aircraft; however, it does limit those operations that a person may conduct when operating the aircraft.

Maintenance (Now §91.327 (b)(1)): Proposed paragraph (a)(3) addressed maintenance of light-sport aircraft. In the final rule, it is revised and moved to paragraph (b)(1). The proposal prohibited operation of a special light-sport aircraft unless the aircraft was maintained in accordance with the manufacturer's maintenance and inspection procedures by a certificated repairman with a light-sport aircraft maintenance rating, an appropriately rated mechanic, or an appropriately rated repair station.

The FAA received several comments requesting that part 43 be used as a standard for maintenance and inspections performed on light-sport aircraft. As described in the part 43 discussion earlier in this preamble, the final rule adopts this recommendation. Section 91.327 (b)(1) now requires that the aircraft be maintained in accordance with the applicable provisions of part 43 and maintenance and inspection procedures developed by the manufacturer or a person acceptable to the FAA. For the purpose of this section, "a person acceptable to the FAA" includes the following:

- The manufacturer that issued the statement of compliance.
- Any person who has assumed, and is properly exercising, the original manufacturer's responsibility for carrying out the continued airworthiness procedures described in the consensus standard.
- The holder of an FAA-approved technical standard order (TSO) authorization, parts manufacturer approval (PMA), type certificate (TC), or supplemental type certificate (STC) for a product or part installed on the aircraft.
- Any person authorized by the manufacturer to produce modification or replacement parts in accordance with the applicable consensus standard addressing "qualification of third-party modification or replacement parts."

The term "person acceptable to the FAA" is not intended to include FAA designees. Under the terms of their delegation, individual FAA designees are not authorized to make design changes or other modifications to aircraft having a special airworthiness certificate in the light-sport category.

Condition inspections (now §91.327 (b)(2)): In the NPRM, paragraph (a)(4) would have required a condition inspection once every 12 calendar months, in accordance with the aircraft manufacturer's maintenance and inspection procedures, by a certificated repairman with a light-sport aircraft maintenance rating, an appropriately rated mechanic, or an appropriately rated repair station. The FAA, upon further review,

is taking out the words “in accordance with the aircraft manufacturer’s maintenance and inspection procedures” and replacing them with “in accordance with inspection procedures developed by the aircraft manufacturer or a person acceptable to the FAA.”

This change is being made for two reasons. First, the FAA wants to clarify that only inspection actions, and not other maintenance tasks, are performed during an annual condition inspection. The condition inspection required by this part is a visual inspection to determine if the aircraft is in a condition for safe operation. If the FAA retained the word “maintenance” in the paragraph, it would imply that maintenance other than an inspection could be performed during the course of an annual condition inspection. All of these additional maintenance functions such as overhaul, repair, preservation and replacement of parts are not part of an annual condition inspection.

Second, the words “person acceptable to the FAA” are included to allow an individual acceptable to the FAA to assume the continued airworthiness responsibilities for an aircraft design from a manufacturer who is no longer in business or can no longer support the aircraft. This change will permit a person acceptable to the FAA to develop inspection procedures for special light-sport aircraft that meet the requirements of the consensus standards for that category of aircraft.

Two commenters expressed concern over the requirement for a condition inspection once every 12 calendar months for individuals living in Alaska. They stated that requiring an annual condition inspection would pose a unique hardship given the difficulty and expense of finding a qualified inspector in Alaska. The FAA has considered the unique circumstances of persons living in Alaska, but believes this requirement is necessary to provide an adequate level of safety. In addition, the

requirement for an annual inspection is the same requirement that is imposed on type-certificated and amateur-built aircraft. The FAA points out that more persons will be eligible to perform the annual condition inspection of special light-sport aircraft than can perform the annual inspection on other aircraft. Under the rule, a repairman (light-sport aircraft) with a maintenance rating, as well as a mechanic with an airframe and powerplant rating and a certificated repair station can conduct this annual condition inspection.

Safety-of-flight issues (Airworthiness Directives and Safety Directives) (now §91.327 (b)(3) and (b)(4)): Proposed paragraph (a)(5) would have required the owner or operator to comply with a program for monitoring and correcting safety-of-flight issues specified by the manufacturer (in the statement of compliance for the aircraft), or by a person acceptable to the FAA. The FAA expected that any such program would meet a consensus standard, as defined in §1.1. This provision has been revised and addressed in paragraphs (b)(3) and (b)(4). The reasons for this are as follows.

As proposed, §91.327 would not have specified compliance with ADs on special light-sport aircraft. At the time of the NPRM, it was not expected that light-sport aircraft would contain type-certificated products or other parts produced under an FAA-approval. Safety issues would have been addressed in safety-of-flight bulletins issued under the consensus standard. The FAA stated in the proposed rule that, in lieu of issuing ADs on light-sport aircraft, it would rely on certificate action if public safety required. See the discussion of "continued airworthiness" under "Definition of Consensus Standards" in §1.1. The FAA did not entirely, however, preclude the possibility of issuing ADs against

special light-sport aircraft. In the NPRM, the FAA said it would issue ADs for special light-sport aircraft if public safety required, or as a consequence of a serious breakdown in the fulfillment of a manufacturer's responsibility to support its aircraft.

The FAA issues ADs to correct an existing unsafe condition in a product when the condition is likely to exist or develop in other products of the same type design. They are issued for engines, propellers, and other products approved under a TC or an STC, or that are manufactured under a production certificate, a PMA, or a TSO authorization.

As the result of comments on the NPRM, the maximum takeoff weight for light-sport aircraft is increased so that products, such as more reliable type-certificated engines and propellers, can be installed on these aircraft. Installation of type certificated engines, propellers and other products described in the preceding paragraph means that the FAA must address maintenance performance and recording procedures for complying with ADs issued for such products if they are installed on special light-sport aircraft. This is necessary because such products will have continued airworthiness instructions provided as a part of their FAA approval. As a result, paragraph (b)(3) adds a requirement that the owner or operator comply with all applicable ADs for FAA-approved products installed on special light-sport aircraft.

The FAA notes that an owner or operator may request an alternate means of compliance with an AD. An owner or operator can contact the FAA person whose name is given in the applicable AD and ask for approval to correct the unsafe condition in a manner different than required by the AD.

The FAA is adding a requirement in paragraph (b)(4) that owners or operators of special light-sport aircraft comply with safety directives that correct unsafe conditions.

The definition of "consensus standard," as specified in §1.1, requires that the standard include provisions for maintaining the continued airworthiness of these aircraft. Under this process, a manufacturer, or successor to the manufacturer who is responsible for continued airworthiness, must, under §21.190, monitor and correct safety-of-flight issues through the issuance of safety directives. Accordingly, under §91.327 (b)(4), the FAA is adopting operating limitations that require compliance with these Safety Directives. This prohibits the operation of a special light-sport aircraft with a known unsafe condition. The final rule also requires compliance with applicable Safety Directives. These safety directives may be issued by persons other than the manufacturer who are acceptable to the FAA, such as licensees authorized by the manufacturer or successors.

Safety Directives may be issued only to correct unsafe conditions that are likely to occur in other aircraft of the same make and model. Safety Directives should not address problems unique to a single aircraft, nor should they be used for product improvements or enhancements. Safety-of-flight determinations are made, and Safety Directives issued, in accordance with the consensus standard for continued airworthiness. Section 91.327 (b)(4) permits, and consensus standard will include, procedures for an owner or operator to request approval for other means of correcting unsafe conditions that differ from the means described in a Safety Directive.

A special light-sport aircraft will be considered ineligible for a special light-sport category airworthiness certificate if an applicable Safety Directive or an AD has not been complied with. If an owner or operator decides not to comply with a Safety Directive, his or her aircraft may be re-certificated as an experimental aircraft under §21.191 (i)(3).

Owners and operators of experimental light-sport aircraft are not required to comply with Safety Directives.

If an operator would like to maintain the special light-sport aircraft airworthiness certificate without following a Safety Directive, there are two ways to do this.

(1) The owner or operator may approach the person that issued the Safety Directive and request permission to use a different method to correct the unsafe condition, as specified under §91.327 (b)(3)(i). The person issuing the safety directive must concur that the method specified is satisfactory.

(2) If the first method is not satisfactory, and the owner or operator has evidence that the Safety Directive was issued for reasons not related to safety, the owner or operator may provide this evidence to the FAA and request a waiver to operate the aircraft without complying with the Safety Directive, as specified in §91.327 (b)(3)(ii). The FAA will establish a procedure for FAA Aircraft Certification Service review of waiver requests. This review will examine whether the manufacturer followed the criteria in the consensus standard and issued the Safety Directive to correct an unsafe condition. This waiver request procedure will be described in the guidance material for the rule.

Alterations (now §91.327 (b)(5)): Paragraph (b)(5) adds a prohibition against operating a special light-sport aircraft unless each alteration made after its date of manufacture meets the applicable consensus standard and has been authorized by either the manufacturer or a person acceptable to the FAA. If an aircraft has been improperly

altered, contains unauthorized parts, or has been repaired outside the limits specified in the manufacturer's maintenance and inspection procedures manual, the aircraft will no longer meet the consensus standard and is not considered safe to fly. This determination is similar to that made for type-certificated aircraft. A type-certificated aircraft that has been improperly altered, or has unapproved parts installed, no longer meets its type design and is considered unairworthy. This operating limitation is consistent with the change to the definition of "consensus standard" in §1.1, which includes a requirement that the consensus standard address the identification and recording of major repairs and major alterations. See discussion of "consensus standard" in §1.1 above. This change to §91.327 also supports the requirement in §21.181 (a)(3)(ii) that a special airworthiness certificate in the light-sport category is effective as long as the aircraft conforms to its original configuration, except for those properly authorized alterations performed in accordance with an applicable consensus standard.

Major repairs and major alterations (now §91.327 (b)(6)): The FAA is changing the definition of "consensus standard" in §1.1 to include a requirement that a consensus standard address the identification of major repairs and major alterations applicable to special light-sport aircraft and how those major repairs and major alterations are recorded. The aircraft consensus standard should allow for the identification of major repairs and major alterations by the manufacturer, or person acceptable to the FAA, on parts produced under a consensus standard. In addition, the consensus standard should identify how major alterations will be authorized by the manufacturer and how major repairs and alterations will be recorded.

The reason the FAA is now requiring that manufacturers identify major repairs and major alterations and how those repairs and alterations will be recorded is that design data that meets the aircraft consensus standard is only FAA-accepted data, not FAA-approved data. Therefore, the FAA is not requiring the use of approved data for repairs or alterations on products produced without an FAA approval, or the use of a form that requires the listing of approved data for a major repair or major alteration on products produced without an FAA approval and installed on special light-sport aircraft.

The final rule does not require persons performing work on special light-sport aircraft to use FAA Form 337 for major repairs and major alterations on products produced without an FAA approval, as required by §§43.5 (b) and 43.9 (d). They do not have to use the list of major repairs and major alterations in part 43 appendix A sections (a) and (b) for products produced without an FAA approval. They also are not required to record major repairs and major alterations in accordance with part 43 appendix B for those parts and products produced without an FAA approval, such as those manufactured under a consensus standard. For additional discussion, see part 43 above.

<u>Recordkeeping requirements for major repairs and major alterations performed on type-certificated products (now §91.327 (b)(7))</u>: Several commenters requested a higher weight limit for special light-sport category aircraft for the purpose of installing type-certificated engines and propellers. As discussed in §91.327 (b)(1) and in part 43, the FAA determined that it is necessary that the performance and recording of maintenance work on these aircraft generally meet the requirements of part 43. This paragraph of the

rule specifically requires the owner or operator to comply with the recordkeeping requirements for the recording of major repairs and major alterations performed on type-certificated products in accordance with §43.9 (d), and with the retention requirements in §91.417.

Additional Maintenance Requirements for Aircraft Used for Flight Training and Towing (now §91.327 (c)):

Proposed paragraph (b)(2) would have addressed special inspection requirements for special light-sport aircraft used for flight training. These special requirements were proposed to insure a higher degree of safety when these aircraft are used for this type of operation. As discussed above, §91.327 (a) has been changed to allow both flight training and towing gliders and unpowered ultralight vehicles as exceptions to the general prohibition against use of these aircraft for compensation or hire. To ensure a higher level of safety for aircraft used in operations in which compensation may be provided, the FAA will require 100-hour inspections for aircraft used for towing a glider or unpowered ultralight vehicle for compensation. This new requirement is in addition to the originally proposed requirement for a 100-hour inspection when the aircraft is used for flight training. Further, the FAA believes that added aircraft stress placed on these aircraft as a result of their use in towing operations necessitates this additional inspection requirement.

As originally proposed, paragraph (b)(2) would have required one type of inspection within 100 hours of time in service. That inspection requirement is contained in paragraph (c)(1) of the final rule. Paragraph (c)(2) is added in the final rule to allow a

second type of inspection to satisfy the 100-hour requirement for aircraft that are used in towing or flight training. An inspection for the issuance of an airworthiness certificate in accordance with part 21 is acceptable as a replacement for the 100-hour inspection. This change is added to the rule because, before an airworthiness certificate is issued for an aircraft, it must be inspected and determined to be safe to fly. The inspection for the issuance of a special airworthiness certificate in the light-sport category is similar in scope and detail to 100-hour inspection. Therefore the FAA has determined that requiring two similar inspections within the first 100-hour time period after an aircraft is issued its airworthiness certificate is not necessary.

Operating instructions (now §91.327 (d)): New paragraph (d) requires the operator of a special light-sport aircraft to operate the aircraft in accordance with the aircraft manufacturer's operating instructions. It also requires the operator to have the necessary equipment on board the aircraft for the type of operation conducted, as specified in the aircraft's equipment list. As proposed in §21.186, the FAA would have required a person seeking a special light-sport category airworthiness certificate to submit a pilot operating handbook (renamed "operating instructions" in the final rule). That handbook, however, would not have required FAA approval. Therefore, current §91.9, which requires compliance with the operating limitations specified in the approved flight manual, would not have applied. This provision corrects that oversight and requires a pilot to operate the aircraft in accordance with its operating instructions. Additionally, the FAA notes that these operating instructions will specify equipment necessary for particular types of flight operations. This new requirement is necessary because §91.205,

which specifies instrument and equipment requirements for particular flight operations, does not apply to aircraft that are not issued standard airworthiness certificates.

Passenger warnings (now §91.327 (e)): New paragraph (e) of the final rule requires that the operator of a special light-sport aircraft advise each person of the nature of the aircraft, and that it does not meet the airworthiness requirements for an aircraft issued a standard airworthiness certificate. The requirement for passenger warning is consistent with the warning requirements for other non-type-certificated aircraft, but was inadvertently omitted from the proposed rule. The final rule corrects this oversight. Some commenters, noting and recommending correction of the FAA's oversight, asked whether placards could be used to provide this warning. Placards are acceptable if displayed so that a passenger can readily see and take note of the warning.

Additional limitations (now §91.327 (f)): This paragraph was originally proposed as paragraph (c). It states that the FAA may impose additional limitations on special light-sport aircraft that the FAA considers necessary. The proposed paragraph is adopted with minor wording changes. Note that under this provision, the FAA may consider limiting the passengers that can be carried on these aircraft if operational experience demonstrates such a need.

Changes

Proposed §91.327 is revised and reorganized in the final rule, as follows.

Paragraph (a) is revised to more clearly specify the operating limitations for a special light-sport aircraft, and to indicate that these aircraft may not be used for compensation or hire except to tow a glider or unpowered ultralight vehicle in accordance with §91.309, or to conduct flight training.

Proposed paragraph (a)(1) is not adopted.

In proposed paragraph (a)(2), the compensation or hire provisions are retained in paragraph (a) of the final rule; however, the words "carrying persons or property" and "or for rental" are removed. The paragraph is further revised to permit special light-sport aircraft to be used for compensation or hire while towing a glider or an unpowered ultralight vehicle in accordance with §91.309.

Proposed paragraphs (a)(3) through (a)(5), which addressed maintenance, condition inspections, and safety-of-flight issues, are revised and moved to paragraph (b) of the final rule, as described below.

Proposed paragraph (b) provisions are moved to paragraph (c) in the final rule, as described below.

Paragraph (b)(1) (proposed as paragraph (a)(3)) is modified in the final rule to reflect that special light-sport aircraft must be maintained in accordance with the applicable provisions of part 43. In addition, the words "aircraft manufacturer's maintenance and inspection procedures" are changed to "maintenance and inspection procedures developed by the aircraft manufacturer or a person acceptable to the FAA."

Paragraph (b)(2) (proposed as paragraph (a)(4)) is modified in the final rule by changing the words "aircraft manufacturer's maintenance and inspection procedures" to

"inspection procedures developed by the aircraft manufacturer or a person acceptable to the FAA." In addition, the term "repairman with a light-sport aircraft maintenance rating" is changed to "repairman (light-sport aircraft) with a maintenance rating."

Paragraph (b)(3) is added to the final rule to require an owner or operator to comply with all applicable airworthiness directives.

Paragraph (b)(4) (proposed as paragraph (a)(5)) is modified in the final rule to require compliance with safety directives. The paragraph also describes procedures for alternative compliance with safety directives.

Paragraph (b)(5) is added to the final rule to require that each alteration done after an aircraft's date of manufacture meets the applicable and current consensus standard and has been authorized by either the manufacturer or a person acceptable to the FAA.

Paragraph (b)(6) is added in the final rule. The paragraph requires that each major alteration to an aircraft product produced under a consensus standard is authorized, performed and inspected in accordance with maintenance and inspection procedures developed by the manufacturer or a person acceptable to the FAA.

Paragraph (b)(7) is added in the final rule. The paragraph requires an owner or operator to comply with the requirements for the recording and retention of records for major repairs and major alterations performed on type-certificated products.

Proposed paragraph (c) is moved to paragraph (f) in the final rule, as discussed below.

Paragraph (c) (proposed as paragraph (b)) is expanded in the final rule. The proposal addressed aircraft used to provide flight instruction. In the final rule, the

paragraph addresses aircraft used for compensation or hire to tow gliders or unpowered ultralight vehicles or to conduct flight training. To be operated for this flight instruction or towing, an aircraft must be inspected in accordance with inspection procedures developed by the aircraft manufacturer or person acceptable to the FAA and approved for return to service in accordance with part 43 within the last 100 hours of time in service. Alternatively, to meet this requirement, an aircraft can be inspected for the issuance of an airworthiness certificate. The original proposal only would have permitted a condition inspection to be performed and only addressed flight training.

Paragraph (d) is added in the final rule. It requires the operator of a special light-sport aircraft to operate the aircraft in accordance with its operating instructions, including the equipment requirements specified in the aircraft's equipment list.

Paragraph (e) is added in the final rule. It contains a requirement that the operator of a special light-sport aircraft advise each person carried of the special nature of the aircraft and that it does not meet the airworthiness requirements for a standard category aircraft.

Paragraph (f) (proposed as paragraph (c)) is adopted with minor wording changes.

Section 91.409 Inspections

This section is revised to correct the proposed language. The NPRM stated that paragraphs (a) and (b) would not apply to "an aircraft that carries the following special airworthiness certificates: special flight permit, light-sport aircraft, current experimental, or provisional." In the final rule, the FAA is eliminating the unnecessary reference to

special airworthiness certificates. Additionally, the FAA is changing the proposed term "light-sport aircraft" to "light-sport." This change conforms with the terminology adopted in part 21.

Proposed paragraph (c)(1) of this section would have required that inspections mandated by paragraphs (a) and (b) not apply to aircraft that carry special flight permits, current experimental, light-sport or provisional airworthiness certificates. The FAA received one comment requesting that the FAA differentiate between the [special] light-sport category and the light-sport experimental category because experimental aircraft have always had specific limitations to control inspection, repair, and alteration. The FAA notes that experimental aircraft, such as amateur-built aircraft, are not subject to the inspection requirements of paragraphs (a) and (b) and only require an annual condition inspection. Special light-sport aircraft are also not subject to the inspection requirements of paragraphs (a) and (b); however, the operating limitations set forth in §91.327 impose requirements for a condition inspection every 12 calendar months and an inspection within the preceding 100 hours of time in service if the aircraft has been used for certain operations.

Changes

Paragraph (c)(1) is adopted with no substantive change.

Appendix D to Part 91

The introductory text of Section 4 is revised to prohibit sport and recreational pilot operations at those 12 airports specified in the section. Section 91.131 (b)(2) states that no person may take off or land a civil aircraft at those airports listed in that section

unless the pilot in command holds at least a private pilot certificate. Section 4 is revised to be consistent with the provisions of §91.131 (b)(2).

Changes

The section heading and the introductory text of Section 4 are revised as discussed above.

VI. Plain Language

Executive Order 12866 (58 FR 51735, Oct. 4, 1993) requires each agency to write regulations that are simple and easy to understand. In the NPRM, the FAA used Plain Language techniques, such as question-and-answer format, use of pronouns, short sentences, and clear outlining of the preamble discussion. One of the questions the FAA asked for the On-Line Forum was whether readers found the document clear and easy to understand. Approximately 70 people responded.

About a dozen commenters said they did not find the NPRM easier to read, but most did not go into detail.

About 30 others said that they thought the format of the NPRM was a great improvement over other regulations, but that the complexity of the subject and the length of the document made it still somewhat difficult to follow. Some said they did not like having to read references to other regulations elsewhere in 14 CFR that were not reproduced in the NPRM, or that they thought those regulations should have been rewritten to match the plain language style of the new regulations. Some said that they had concerns that some provisions could be misinterpreted, or that the NPRM did not

answer all of the questions they had. The FAA agrees that it would be best to revise all of the related sections in 14 CFR in plain language format and reproduce them in one document for the reader's convenience; however, such a large task would have caused a considerable delay and resulted in a much longer document. The FAA is clarifying and simplifying other regulations throughout 14 CFR as opportunities arise; that is, when the FAA revises any sections of 14 CFR in other rulemaking actions, it is using clearer language.

The remaining commenters (approximately 30) said that they did find the NPRM clear and easy to read, and they appreciated the FAA's efforts to write it in plain language.

VII. Paperwork Reduction Act

As required by the Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)), the FAA submitted a copy of the information collection requirements(s) in this final rule to the Office of Management and Budget (OMB) for its review. An agency may not collect or sponsor the collection of information, nor may it impose an information collection requirement unless it displays a currently valid OMB control number. Persons are not required to respond to a collection of information unless it displays a currently valid OMB control number.

This rule contains information collections that are subject to review by OMB under the Paperwork Reduction Act of 1995 (Pub. L. 104-13). OMB approved the collection of this information and assigned OMB Control Number 2120-0690. This rule was proposed in the Federal Register of February 5, 2002. At that time, the

FAA requested public comments on the proposed information collection requirements. Some commenters stated that it would be an unnecessary expense for ultralight pilots seeking a sport pilot certificate to provide notarized copies of ultralight association records. The FAA agrees with the commenters and is removing the requirement that the copies be notarized. See the discussion of §61.329 above.

The description of the annual burden is shown below.

Description of Respondents: Manufacturers, aircraft owners, pilots, flight instructors with a sport pilot rating, and maintenance personnel.

Estimated Burden: The FAA expects that this rule will affect those dealing with the certification, operation, maintenance, and manufacture of light-sport aircraft, as well as flight instructors with a sport pilot rating.

The final rule, which imposes additional reporting and recordkeeping requirements, will have the following impacts, by CFR part number:

Part	Time (in hours)	Cost
21	53,849.80	$2,965,211
47	6,134.75	$202,194
61 (Pilots)	10,676.67	$1,185,993
61 (Instructors)	376.99	$54,039
43, 65, 91 (Maintenance)	1,316	$2,147,791
183	233.1717	$17,841
Total	72,582.38	$6,573,069

The regulation will increase paperwork for the Federal government, as shown in the following table:

Category	Time (in hours)	Cost
Aircraft Certification	5,429	$397,027
Pilot and Instructor Qualifications	795	$41,537
Maintenance	803	$45,479
Miscellaneous	928.39	$39,690
TOTAL	7,955.39	$523,733

VIII. International Compatibility

In keeping with U.S. obligations under the Convention on International Civil Aviation, it is FAA policy to comply with International Civil Aviation Organization (ICAO) Standards and Recommended Practices to the maximum extent practicable. The FAA has determined that there are no ICAO Standards and Recommended Practices that correspond to this regulation.

IX. Economic Assessment

Changes to Federal regulations must undergo several economic analyses. First, Executive Order 12866 directs each Federal agency to propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. Second, the Regulatory Flexibility Act of 1980 requires agencies to analyze the economic impact of regulatory changes on small entities. Third, the Trade Agreements Act (19 U.S.C. 2531-2533) prohibits agencies from setting standards that create unnecessary obstacles to the foreign commerce of the United States. In developing U.S. standards, this Trade Agreements Act also requires agencies to consider international standards and,

where appropriate, use them as the basis of U.S. standards. Fourth, the Unfunded Mandates Reform Act of 1995 (Public Law 104-4) requires agencies to prepare a written assessment of the costs, benefits, and other effects of proposed or final rules that include a Federal mandate likely to result in the expenditure by State, local, or tribal governments, in the aggregate, or by the private sector, of $100 million or more annually (adjusted for inflation).

In conducting these analyses, FAA has determined this rule (1) has benefits that justify its costs, is a "significant regulatory action" as defined in section 3(f) of Executive Order 12866 and is "significant" as defined in DOT's Regulatory Policies and Procedures; (2) will not have a significant economic impact on a substantial number of small entities; (3) will not result in an international trade disadvantage; and (4) does not impose an unfunded mandate on State, local, or tribal governments, or on the private sector. These analyses, available in the docket, are summarized below.

Total Costs and Benefits of this Rulemaking

The estimated cost of this final rule is $221.0 million ($158.4 million, discounted). The estimated potential benefits fall within the range of $85.3 million (the set of preventable NTSB accidents) and $325.4 million (the set of preventable NTSB accidents and the preventable association accidents). The discount benefits range between $57.7 million and $220.3 million.

Who is Potentially Affected by this Rulemaking

Private Sector

- All 14,000 pilots of unregistered ultralight-like aircraft must obtain sport pilot certifications, must have their aircraft inspected and certified, and must have their aircraft maintained by appropriately trained repairmen.
- Existing uncertified vehicles that fit the definition of light-sport aircraft will not be issued experimental certificates after August 31, 2007.

- Manufacturers of aircraft will produce special light sport aircraft certificated under §21.190 that adhere to manufacturer's consensus standards.

- New kit-built light-sport aircraft that are produced under consensus standards will have to be certified as experimental light-sport aircraft, under §21.191(i)(2).

- New factory built light-sport aircraft produced under consensus standards may be certified as special light-sport aircraft or as experimental light-sport aircraft.

- Current ultralight instructors operating under the part 103 training exemption that receive a flight instructor certificate with a sport pilot rating and plan to continue flight instructing will have to replace their existing training aircraft within five years after the rule is enacted with a certificated special light-sport aircraft (§21.190) in order to continue to offer training for compensation.

- Sport pilot organizations or some for-profit organizations will develop training courses for instructors with a sport pilot rating to purchase.

- Some existing aircraft will fit the definition of light-sport aircraft and anyone with a sport pilot certificate will be allowed to fly them provided they are only exercising sport pilot privileges. Under the current rules a private or recreational pilot certificate would be required to operate these aircraft.

- New sport pilot Designated Airworthiness Representatives (DARs) for light-sport aircraft will need to take a three-day training course in order to issue airworthiness certificates for light sport aircraft.

- New Designated Pilot Examiners (DPEs) for sport pilots will have to take a five-day training course in order to prepare them to examine sport pilots and sport pilot instructors.

- The FAA will work with industry in developing and overseeing the consensus standards.

- The FAA will develop Advisory Circulars, orders, and articles for the light sport repairman course requirements.

- The FAA will develop and provide training programs for Designated Airworthiness Representatives, and Designated Pilot Examiners.

- The FAA will appoint, supervise and renew light-sport DARs, and sport pilot DPEs.

- The FAA will develop practical test standards and knowledge test standards for prospective sport pilots and flight instructors with a sport pilot rating applying for certification.

- Each light-sport aircraft issued an experimental certificate or a special light-sport airworthiness certificate will be registered in the FAA Civil Aviation Registry.

- The NTSB will investigate accidents involving light-sport aircraft.

<u>The FAA's Cost Assumptions and Sources of Information</u>

- Discount rate – 7%
- Period of analysis – 2004 through 2013
- All monetary values are expressed in 2002 dollars.
- Number of existing aircraft and pilots/instructors affected – 15,300
- The number of new sport pilots is estimated to be 400 for each of the first two years. The number of new sport pilots will increase by 400 every two years, so by 2012 and 2013 there will be 2,000 new sport pilots each year for a total of 12,000 new sport

pilots over ten years. The number of new sport pilot instructors is estimated to be 70 for each of the first two years (2004-2005). The number of new sport pilot instructors will increase by 20 every two years, so by 2012 and 2013 there will be 150 new sport pilot instructors each year for a total of 1,100 new sport pilot instructors over ten years. The new instructors will come from the existing sport pilots or new sport pilots from prior years.

- From 2006 to 2013 the affected population of pilots and instructors will grow at 6.82 percent a year. This rate was used in projecting future accidents.
- Value of fatality avoided - $3.0 million
- Value of serious injury avoided - $580,700
- Value of avoiding destroyed aircraft - $18,083
- Value of avoiding substantially damaged aircraft - $9,041

Alternatives The FAA Considered

Alternative One – Status Quo: The status quo represents a situation in which the FAA would issue training exemptions from part 103 indefinitely. This would perpetuate "rulemaking by exemption," which the FAA wants to avoid.

Alternative Two – Strictly Enforce Current Regulations: The second alternative is to strictly enforce the current rules that could apply to sports pilots. The problem with this is that the existing rules on these types of operations and aircraft were developed long before sports pilots became a large and growing part of aviation. The current rules,

if strictly enforced, would result in very costly requirement requirements. From 2004 to 2013, the total cost of this alternative will be approximately $478 million ($368 million discounted).

Benefits of This Rulemaking

The FAA has performed an analysis of potential safety benefits of this rule. Safety benefits are the number of accidents that may be avoided because of the rule, with their attendant fatalities, injuries and property damage.

This analysis estimated accidents prevented from two sets of data. One set of data was U.S. Government data – the NTSB and NASDAC databases that included accidents involving certificated and uncertificated aircraft that meet the definition of light-sport aircraft. The second set was from three of the FAA recognized ultralight organizations that contained records of accidents of aircraft meeting the definition of light-sport aircraft, but were not FAA certificated.

Accidents from the government databases included 19 between 1995 and 2002 that would likely be prevented by this rule. The projected total estimated benefits from avoiding those accidents that were in the U.S. Government databases are $85.3 million ($57.7 million, discounted) over the next ten years.

A review of the information from the trade organizations revealed that there were 57 accidents between 1995 and 2002 that involved light-sport type aircraft. The estimated potential benefits fall within the range of $85.3 million (the set of preventable NTSB accidents) and $325.4 million (the set of preventable NTSB accidents and the

preventable association accidents). The discounted benefits range between $57.7 million and $220.3 million.

Costs of this Rulemaking

From 2004 to 2013, the total cost of the rule will be approximately $221.0 million ($158.4 million, discounted). The total cost of the rule consists of private sector costs and government costs. Private sector costs will be approximately $202.0 million ($144.5 million, discounted), of which $139.5 million ($98.9 million, discounted) represent the out-of-pocket costs. Government costs will be approximately $18.9 million ($13.9 million, discounted).

Differences in the NPRM Economic Evaluation and the Final Rule Economic Evaluation

Estimated costs and benefits have changed significantly in the final rule regulatory evaluation from the NPRM regulatory evaluation. The NPRM estimated costs of $40.3 million ($33.9 million, discounted) in 1999 dollars, while the final rule cost estimates are $221.0 million ($158.4 million, discounted) in 2002 dollars. The NPRM estimated benefits of $221.4 million ($153.3 million, discounted) and the final rule estimates the potential benefits to fall within the range of $85.3 million and $325.4 million (between $57.7 million and $220.3 million, discounted).

X. Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (RFA) directs the FAA to fit regulatory requirements to the scale of the business, organizations, and governmental jurisdictions

subject to the regulation. The FAA is required to determine whether a proposed or final action will have a "significant economic impact on a substantial number of small entities" as they are defined in the Act. If the FAA finds that the action will have a significant impact, the FAA must do a "regulatory flexibility analysis."

Most of the individual sport pilots impacted by this rulemaking are people who are flying as a hobby. The Regulatory Flexibility Act does not apply to them. However, some of the sport pilot instructors are providing instruction as a business endeavor, and in these cases the Regulatory Flexibility Act does apply. Costs imposed on instructors are between $6,000 and $7,000 over a ten-year period. This cost does not include any cost for the maintenance repair class. The rule allows a sport pilot with an instructor rating to take this class; the rule does not mandate it. For this reason, the cost of this class is not considered in this regulatory flexibility determination. On an annualized basis, these imposed costs are between $630 and $820, which the FAA does not consider as significant costs. Some existing instructors will have to acquire a new light sport aircraft within five years if they plan to continue instructing student sport pilots. A little over a quarter of the new and existing sport pilot instructors would be impacted by this provision of the rule. For these instructors, if they are not able to sell their old light sport aircraft, the ten year imposed cost of this rule could be as high as $11,700 or $1,220 annualized (in most cases the cost would be less). For some weekend instructors these costs may be more than what they may wish to incur, and they would stop being instructors. The FAA does not believe this will occur, because the FAA believes that most, possible all, of these instructors will be able to sell their old light sport aircraft that this rule requires them to replace. By selling their old light sport aircraft, these impacted

instructors could reduce the ten-year costs imposed by this provision to about $6,000, which could reduce their annualized costs to $630. The FAA does not consider this to be a significant cost. Consequently, the FAA certifies that the rule will not have a significant economic impact on a substantial number of sport pilot instructors.

XI. International Trade Impact Assessment

The Trade Agreement Act of 1979 prohibits Federal agencies from engaging in any standards or related activities that create unnecessary obstacles to the foreign commerce of the United States. Legitimate domestic objectives, such as safety, are not considered unnecessary obstacles. The statute also requires consideration of international standards and, where appropriate, that they be the basis for U.S. standards. This effort includes both barriers affecting the export of American goods and services to foreign countries and barriers affecting the import of foreign goods and services into the United States.

In accordance with the above statute, the FAA has assessed the potential effect of the proposal and has determined that it will not present a significant impediment to either U.S. firms doing business aboard or foreign firms doing business in the United States. The rule is expected to stimulate a great deal of growth for the light-sport aircraft aviation industry in the United States and abroad. The belief that no significant trade disadvantage will take place is based on the premise that the number of the requirements contained in the rule (namely, aircraft certification standards) essentially mirrors those that already exist internationally.

XII. Unfunded Mandates Assessment

The Unfunded Mandates Reform Act of 1995 (the Act) is intended, among other things, to curb the practice of imposing unfunded Federal mandates on State, local, and tribal governments.

Title II of the Act requires each Federal agency to prepare a written statement assessing the effects of any Federal mandate in a proposed or final agency rule that may result in an expenditure of $100 million or more (adjusted annually for inflation) in any one year by State, local, and tribal governments, in the aggregate, or by the private sector; such a mandate is deemed to be a "significant regulatory action." The FAA currently uses an inflation-adjusted value of $120.7 million in lieu of $100 million.

Since the compliance cost of the rule does not exceed $100 million in any of the years, the rule does not contain such a mandate. Therefore, the requirements of Title II of the Unfunded Mandates Reform Act of 1995 do not apply.

XIII. Executive Order 13132, Federalism

The FAA has analyzed this final rule under the principles and criteria of Executive Order 13132, Federalism. The FAA determined that this action will not have a substantial direct effect on the States, or the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government, and therefore does not have federalism implications.

XIV. Environmental Analysis

FAA Order 1050.1E identifies FAA actions that are categorically excluded from preparation of an environmental assessment or environmental impact statement under the National Environmental Policy Act in the absence of extraordinary circumstances. The FAA has determined this rulemaking action qualifies for the categorical exclusion identified in paragraph 312f. and involves no extraordinary circumstances.

XV. Energy Impact

The energy impact of this rule has been assessed in accordance with the Energy Policy and Conservation Act (EPCA) Public Law 94-163, as amended (42 U.S.C. 6362) and FAA Order 1053.1. The FAA has determined that the final rule is not a major regulatory action under the provisions of the EPCA.

XVI. List of Subjects

14 CFR Part 1

Air transportation.

14 CFR Part 21

Aircraft, Aviation safety, Exports, Imports, Reporting and recordkeeping requirements.

14 CFR Part 43

Aircraft, Aviation safety, Reporting and recordkeeping requirements.

14 CFR Part 45

Aircraft, Exports, Signs and symbols.

14 CFR Part 61

Aircraft, Airmen, Recreation and recreation areas, Reporting and recordkeeping requirements, Teachers.

14 CFR Part 65

Air traffic controllers, Aircraft, Airmen, Airports, Reporting and recordkeeping requirements.

14 CFR Part 91

Air traffic control, Aircraft, Airmen, Airports, Aviation Safety, Noise control, Reporting and recordkeeping requirements.

The Amendments

In consideration of the foregoing, the Federal Aviation Administration amends 14 CFR chapter I as follows:

PART 1—DEFINITIONS AND ABBREVIATIONS

1. The authority citation for part 1 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

2. Amend §1.1 by adding the following definitions in alphabetical order to read as follows:

§1.1 General definitions.

* * * * *

Consensus standard means, for the purpose of certificating light-sport aircraft, an industry-developed consensus standard that applies to aircraft design, production, and airworthiness. It includes, but is not limited to, standards for aircraft design and performance, required equipment, manufacturer quality assurance systems, production acceptance test procedures, operating instructions, maintenance and inspection procedures, identification and recording of major repairs and major alterations, and continued airworthiness.

* * * * *

Light-sport aircraft means an aircraft, other than a helicopter or powered-lift that, since its original certification, has continued to meet the following:

(1) A maximum takeoff weight of not more than—

(i) 660 pounds (300 kilograms) for lighter-than-air aircraft;

(ii) 1,320 pounds (600 kilograms) for aircraft not intended for operation on water; or

(iii) 1,430 pounds (650 kilograms) for an aircraft intended for operation on water.

(2) A maximum airspeed in level flight with maximum continuous power (V_H) of not more than 120 knots CAS under standard atmospheric conditions at sea level.

(3) A maximum never-exceed speed (V_{NE}) of not more than 120 knots CAS for a glider.

(4) A maximum stalling speed or minimum steady flight speed without the use of lift-enhancing devices (V_{S1}) of not more than 45 knots CAS at the aircraft's maximum certificated takeoff weight and most critical center of gravity.

(5) A maximum seating capacity of no more than two persons, including the pilot.

(6) A single, reciprocating engine, if powered.

(7) A fixed or ground-adjustable propeller if a powered aircraft other than a powered glider.

(8) A fixed or autofeathering propeller system if a powered glider.

(9) A fixed-pitch, semi-rigid, teetering, two-blade rotor system, if a gyroplane.

(10) A nonpressurized cabin, if equipped with a cabin.

(11) Fixed landing gear, except for an aircraft intended for operation on water or a glider.

(12) Fixed or repositionable landing gear, or a hull, for an aircraft intended for operation on water.

(13) Fixed or retractable landing gear for a glider.

* * * * *

Powered parachute means a powered aircraft comprised of a flexible or semi-rigid wing connected to a fuselage so that the wing is not in position for flight until the aircraft is in motion. The fuselage of a powered parachute contains the aircraft engine, a seat for each occupant and is attached to the aircraft's landing gear.

* * * * *

Weight-shift-control aircraft means a powered aircraft with a framed pivoting wing and a fuselage controllable only in pitch and roll by the pilot's ability to change the

aircraft's center of gravity with respect to the wing. Flight control of the aircraft depends on the wing's ability to flexibly deform rather than the use of control surfaces.

* * * * *

PART 21—CERTIFICATION PROCEDURES FOR PRODUCTS AND PARTS

3. The authority citation for part 21 continues to read as follows:

Authority: 42 U.S.C. 7572; 49 U.S.C. 106(g), 40105, 40113, 44701-44702, 44707, 44709, 44711, 44713, 44715, 45303.

4. Amend §21.175 by revising paragraph (b) to read as follows:

§21.175 Airworthiness certificates: classification.

* * * * *

(b) Special airworthiness certificates are primary, restricted, limited, light-sport, and provisional airworthiness certificates, special flight permits, and experimental certificates**.**

5. Amend §21.181 by redesignating paragraph (a)(3) as paragraph (a)(4) and revising it to read as follows, and adding new paragraph (a)(3) to read as follows:

§21.181 Duration.

(a) * * *

(3) A special airworthiness certificate in the light-sport category is effective as long as—

(i) The aircraft meets the definition of a light-sport aircraft;

(ii) The aircraft conforms to its original configuration, except for those alterations performed in accordance with an applicable consensus standard and authorized by the aircraft's manufacturer or a person acceptable to the FAA;

(iii) The aircraft has no unsafe condition and is not likely to develop an unsafe condition; and

(iv) The aircraft is registered in the United States.

(4) An experimental certificate for research and development, showing compliance with regulations, crew training, or market surveys is effective for 1 year after the date of issue or renewal unless the FAA prescribes a shorter period. The duration of an experimental certificate issued for operating amateur-built aircraft, exhibition, air-racing, operating primary kit-built aircraft, or operating light-sport aircraft is unlimited, unless the FAA establishes a specific period for good cause.

* * * * *

6. Amend §21.182 by revising paragraph (b)(2) to read as follows:

§21.182 Aircraft identification.

* * * * *

(b) * * *

(2) An experimental certificate for an aircraft not issued for the purpose of operating amateur-built aircraft, operating primary kit-built aircraft, or operating light-sport aircraft.

* * * * *

7. Add §21.190 to read as follows:

§21.190 Issue of a special airworthiness certificate for a light-sport category aircraft.

(a) Purpose. The FAA issues a special airworthiness certificate in the light-sport category to operate a light-sport aircraft, other than a gyroplane.

(b) Eligibility. To be eligible for a special airworthiness certificate in the light-sport category:

(1) An applicant must provide the FAA with—

(i) The aircraft's operating instructions;

(ii) The aircraft's maintenance and inspection procedures;

(iii) The manufacturer's statement of compliance as described in paragraph (c) of this section; and

(iv) The aircraft's flight training supplement.

(2) The aircraft must not have been previously issued a standard, primary, restricted, limited, or provisional airworthiness certificate, or an equivalent airworthiness certificate issued by a foreign civil aviation authority.

(3) The aircraft must be inspected by the FAA and found to be in a condition for safe operation.

(c) Manufacturer's statement of compliance for light-sport category aircraft. The manufacturer's statement of compliance required in paragraph (b)(1)(iii) of this section must—

(1) Identify the aircraft by make and model, serial number, class, date of manufacture, and consensus standard used;

(2) State that the aircraft meets the provisions of the identified consensus standard;

(3) State that the aircraft conforms to the manufacturer's design data, using the manufacturer's quality assurance system that meets the identified consensus standard;

(4) State that the manufacturer will make available to any interested person the following documents that meet the identified consensus standard:

(i) The aircraft's operating instructions.

(ii) The aircraft's maintenance and inspection procedures.

(iii) The aircraft's flight training supplement.

(5) State that the manufacturer will monitor and correct safety-of-flight issues through the issuance of safety directives and a continued airworthiness system that meets the identified consensus standard;

(6) State that at the request of the FAA, the manufacturer will provide unrestricted access to its facilities; and

(7) State that the manufacturer, in accordance with a production acceptance test procedure that meets an applicable consensus standard has—

(i) Ground and flight tested the aircraft;

(ii) Found the aircraft performance acceptable; and

(iii) Determined that the aircraft is in a condition for safe operation.

(d) Light-sport aircraft manufactured outside the United States. For aircraft manufactured outside of the United States to be eligible for a special airworthiness certificate in the light-sport category, an applicant must meet the requirements of paragraph (b) of this section and provide to the FAA evidence that—

(1) The aircraft was manufactured in a country with which the United States has a Bilateral Airworthiness Agreement concerning airplanes or Bilateral Aviation Safety Agreement with associated Implementation Procedures for Airworthiness concerning airplanes, or an equivalent airworthiness agreement; and

(2) The aircraft is eligible for an airworthiness certificate, flight authorization, or other similar certification in its country of manufacture.

8. Amend §21.191 by revising the heading of paragraph (h) and adding paragraph (i) to read as follows:

§21.191 Experimental certificates.

* * * * *

(h) Operating primary kit-built aircraft. * * *

(i) Operating light-sport aircraft. Operating a light-sport aircraft that–

(1) Has not been issued a U.S. or foreign airworthiness certificate and does not meet the provisions of §103.1 of this chapter. An experimental certificate will not be issued under this paragraph for these aircraft after August 31, 2007;

(2) Has been assembled—

(i) From an aircraft kit for which the applicant can provide the information required by §21.193 (e); and

(ii) In accordance with manufacturer's assembly instructions that meet an applicable consensus standard; or

(3) Has been previously issued a special airworthiness certificate in the light-sport category under §21.190.

9. Amend § 21.193 by adding paragraph (e) to read as follows:

§21.193 Experimental certificates: general.

* * * * *

(e) In the case of a light-sport aircraft assembled from a kit to be certificated in accordance with §21.191 (i)(2), an applicant must provide the following:

(1) Evidence that an aircraft of the same make and model was manufactured and assembled by the aircraft kit manufacturer and issued a special airworthiness certificate in the light-sport category.

(2) The aircraft's operating instructions.

(3) The aircraft's maintenance and inspection procedures.

(4) The manufacturer's statement of compliance for the aircraft kit used in the aircraft assembly that meets §21.190 (c), except that instead of meeting §21.190 (c)(7), the statement must identify assembly instructions for the aircraft that meet an applicable consensus standard.

(5) The aircraft's flight training supplement.

(6) In addition to paragraphs (e)(1) through (e)(5) of this section, for an aircraft kit manufactured outside of the United States, evidence that the aircraft kit was manufactured in a country with which the United States has a Bilateral Airworthiness Agreement concerning airplanes or a Bilateral Aviation Safety Agreement with associated Implementation Procedures for Airworthiness concerning airplanes, or an equivalent airworthiness agreement.

PART 43—MAINTENANCE, PREVENTIVE MAINTENANCE, REBUILDING, AND ALTERATION

10. The authority citation for part 43 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701, 44703, 44705, 44707, 44711, 44713, 44717, 44725.

11. Amend §43.1 by:

a. Revising the introductory text of paragraph (a);

b. Revising paragraph (b); and

c. Adding paragraph (d).

The revisions and additions read as follows:

§43.1 Applicability.

(a) Except as provided in paragraphs (b) and (d) of this section, this part prescribes rules governing the maintenance, preventive maintenance, rebuilding, and alteration of any—

* * * * *

(b) This part does not apply to any aircraft for which the FAA has issued an experimental certificate, unless the FAA has previously issued a different kind of airworthiness certificate for that aircraft.

* * * * *

(d) This part applies to any aircraft issued a special airworthiness certificate in the light-sport category except:

(1) The repair or alteration form specified in §§43.5 (b) and 43.9 (d) is not required to be completed for products not produced under an FAA approval;

(2) Major repairs and major alterations for products not produced under an FAA approval are not required to be recorded in accordance with appendix B of this part; and

(3) The listing of major alterations and major repairs specified in paragraphs (a) and (b) of appendix A of this part is not applicable to products not produced under an FAA approval.

12. Amend §43.3 by revising paragraphs (c) and (g) to read as follows:

§43.3 Persons authorized to perform maintenance, preventive maintenance, rebuilding, and alterations.

* * * * *

(c) The holder of a repairman certificate may perform maintenance, preventive maintenance, and alterations as provided in part 65 of this chapter.

* * * * *

(g) Except for holders of a sport pilot certificate, the holder of a pilot certificate issued under part 61 may perform preventive maintenance on any aircraft owned or operated by that pilot which is not used under part 121, 129, or 135 of this chapter. The holder of a sport pilot certificate may perform preventive maintenance on an aircraft owned or operated by that pilot and issued a special airworthiness certificate in the light-sport category.

* * * * *

13. Amend §43.7 by adding paragraphs (g) and (h) to read as follows:

§43.7 Persons authorized to approve aircraft, airframes, aircraft engines, propellers, appliances, or component parts for return to service after maintenance, preventive maintenance, rebuilding, or alteration.

* * * * *

(g) The holder of a repairman certificate (light-sport aircraft) with a maintenance rating may approve an aircraft issued a special airworthiness certificate in light-sport category for return to service, as provided in part 65 of this chapter.

(h) The holder of at least a sport pilot certificate may approve an aircraft owned or operated by that pilot and issued a special airworthiness certificate in the light-sport category for return to service after performing preventive maintenance under the provisions of §43.3 (g).

14. Amend §43.9 by:

a. Revising the section heading;

b. Redesignating the concluding text of paragraph (a) as paragraph (d);

c. Revising new paragraph (d); and

d. Removing the reference "123" from paragraph (c).

The revisions read as follows:

§43.9 Content, form, and disposition of maintenance, preventive maintenance, rebuilding, and alteration records (except inspections performed in accordance with part 91, part 125, §135.411 (a)(1), and §135.419 of this chapter).

* * * * *

(d) In addition to the entry required by paragraph (a) of this section, major repairs and major alterations shall be entered on a form, and the form disposed of, in the manner prescribed in appendix B, by the person performing the work.

PART 45—IDENTIFICATION AND REGISTRATION MARKING

15. The authority citation for part 45 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40103, 44109, 40113-40114, 44101-44105, 44107-44108, 44110-44111, 44504, 44701, 44708-44709, 44711-44713, 44725, 45302-45303, 46104, 46304, 46306, 47122.

16. Amend §45.11 by:

a. Amending the third sentence of paragraph (a) to revise the words "paragraphs (c) and (d) of this section" to read "paragraphs (c), (d), and (e) of this section"; and

b. Adding paragraph (e) to read as follows.

§45.11 General.

* * * * *

(e) For powered parachutes and weight-shift-control aircraft, the identification plate prescribed in paragraph (a) of this section must be secured to the aircraft fuselage exterior so that it is legible to a person on the ground.

17. Amend §45.23 by revising paragraph (b) to read as follows:

§45.23 Display of marks; general.

* * * * *

(b) When marks include only the Roman capital letter "N" and the registration number is displayed on limited, restricted or light-sport category aircraft or experimental or provisionally certificated aircraft, the operator must also display on that aircraft near each entrance to the cabin, cockpit, or pilot station, in letters not less than 2 inches nor more than 6 inches high, the words "limited," "restricted,'' "light-sport," "experimental," or "provisional," as applicable.

18. Amend §45.27 by adding paragraph (e) to read as follows:

§45.27 Location of marks; non-fixed-wing aircraft.

* * * * *

(e) <u>Powered parachute and weight-shift-control aircraft</u>. Each operator of a powered parachute or a weight-shift-control aircraft must display the marks required by

§45.23. The marks must be displayed horizontally and in two diametrically opposite positions on any fuselage structural member.

19. Amend §45.29 by revising paragraphs (b)(1)(iii) and (b)(2) to read as follows:

§45.29 Size of marks.

* * * * *

(b) * * *

(1) * * *

(iii) Marks at least 3 inches high may be displayed on an aircraft for which the FAA has issued an experimental certificate under §21.191 (d), §21.191 (g), or §21.191 (i) of this chapter to operate as an exhibition aircraft, an amateur-built aircraft, or a light-sport aircraft when the maximum cruising speed of the aircraft does not exceed 180 knots CAS; and

* * * * *

(2) Airships, spherical balloons, nonspherical balloons, powered parachutes, and weight-shift-control aircraft must be at least 3 inches high; and

* * * * *

PART 61—CERTIFICATION: PILOTS, FLIGHT INSTRUCTORS, AND GROUND INSTRUCTORS

20. The authority citation for part 61 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701–44703, 44707, 44709–44711, 45102–45103, 45301–45302.

21. Amend §61.1 by:

a. Revising paragraphs (b)(3)(i) introductory text and (b)(3)(ii) introductory text;

b. Redesignating paragraphs (b)(3)(iii), (b)(3)(iv), (b)(3)(v), and (b)(15) as paragraphs (b)(3)(v), (b)(3)(vi), (b)(3)(vii), and (b)(16), respectively; and

c. Adding new paragraphs (b)(3)(iii), (b)(3)(iv), and (b)(15).

The additions and revisions read as follows:

§61.1 Applicability and definitions.

* * * * *

(b) * * *

(3) * * *

(i) Except as provided in paragraphs (b)(3)(ii) through (b)(3)(vi) of this section, time acquired during flight—

* * * * *

(ii) For the purpose of meeting the aeronautical experience requirements (except for a rotorcraft category rating), for a private pilot certificate (except for a powered parachute category rating), a commercial pilot certificate, or an instrument rating, or for the purpose of exercising recreational pilot privileges (except in a rotorcraft) under §61.101 (c), time acquired during a flight—

* * * * *

(iii) For the purpose of meeting the aeronautical experience requirements for a sport pilot certificate (except for powered parachute privileges), time acquired during a flight conducted in an appropriate aircraft that—

(A) Includes a point of landing at least a straight line distance of more than 25 nautical miles from the original point of departure; and

(B) Involves, as applicable, the use of dead reckoning; pilotage; electronic navigation aids; radio aids; or other navigation systems to navigate to the landing point.

(iv) For the purpose of meeting the aeronautical experience requirements for a sport pilot certificate with powered parachute privileges or a private pilot certificate with a powered parachute category rating, time acquired during a flight conducted in an appropriate aircraft that —

(A) Includes a point of landing at least a straight line distance of more than 15 nautical miles from the original point of departure; and

(B) Involves, as applicable, the use of dead reckoning; pilotage; electronic navigation aids; radio aids; or other navigation systems to navigate to the landing point.

* * * * *

(15) <u>Student pilot seeking a sport pilot certificate</u> means a person who has received an endorsement—

(i) To exercise student pilot privileges from a certificated flight instructor with a sport pilot rating; or

(ii) That includes a limitation for the operation of a light-sport aircraft specified in §61.89 (c) issued by a certificated flight instructor with other than a sport pilot rating.

* * * * *

22. Amend §61.3 by:

a. Revising paragraph (c)(2)(i);

b. Redesignating paragraphs (c)(2)(ii) through (c)(2)(vii) as paragraphs (c)(2)(vi) through (c)(2)(xi) respectively;

c. Revising the reference to "paragraph (c)(2)(iii)" to read "paragraph (c)(2)(vii)" in newly redesignated paragraph (c)(2)(viii); and

d. Adding new paragraphs (c)(2)(ii) through (c)(2)(v).

The revisions and additions read as follows:

§61.3 Requirement for certificates, ratings, and authorizations.

* * * * *

(c) * * *

(2) * * *

(i) Is exercising the privileges of a student pilot certificate while seeking a pilot certificate with a glider category rating, a balloon class rating, or glider or balloon privileges;

(ii) Is exercising the privileges of a student pilot certificate while seeking a sport pilot certificate with other than glider or balloon privileges and holds a current and valid U.S. driver's license;

(iii) Is exercising the privileges of a student pilot certificate while seeking a pilot certificate with a weight-shift-control aircraft category rating or a powered parachute category rating and holds a current and valid U.S. driver's license;

(iv) Is exercising the privileges of a sport pilot certificate with glider or balloon privileges;

(v) Is exercising the privileges of a sport pilot certificate with other than glider or balloon privileges and holds a current and valid U.S. driver's license. A person who has applied for or held a medical certificate may exercise the privileges of a sport pilot certificate using a current and valid U.S. driver's license only if that person--

(A) Has been found eligible for the issuance of at least a third-class airman medical certificate at the time of his or her most recent application; and

(B) Has not had his or her most recently issued medical certificate suspended or revoked or most recent Authorization for a Special Issuance of a Medical Certificate withdrawn.

* * * * *

23. Amend §61.5 by:

a. Redesignating paragraphs (a)(1)(ii) through (a)(1)(v) as paragraphs (a)(1)(iii) through (a)(1)(vi), respectively;

b. Redesignating paragraphs (b)(5) and (b)(6) as paragraphs (b)(7) and (b)(8), respectively; and

c. Adding new paragraphs (a)(1)(ii), (b)(1)(vi), (b)(1)(vii), (b)(5), (b)(6), and (c)(5) to read as follows:

§61.5 Certificates and ratings issued under this part.

(a) * * *

(1) * * *

(ii) Sport pilot.

* * * * *

(b) * * *

(1) * * *

(vi) Powered parachute.

(vii) Weight-shift-control aircraft.

* * * * *

(5) Weight-shift-control aircraft class ratings–

(i) Weight-shift-control aircraft land.

(ii) Weight-shift-control aircraft sea.

(6) Powered parachute class ratings–

(i) Powered parachute land.

(ii) Powered parachute sea.

* * * * *

(c) * * *

(5) Sport pilot rating.

* * * * *

24. Amend §61.23 by:

a. Revising paragraphs (a) introductory text, (a)(3)(iii), (a)(3)(iv), (b) introductory text, and (b)(1) through (b)(4);

b. Redesignating paragraph (c) as paragraph (d); and

c. Adding new paragraph (c).

The additions and revisions read as follows:

§61.23 Medical certificates: Requirement and duration.

(a) Operations requiring a medical certificate. Except as provided in paragraphs (b) and (c) of this section, a person--

* * * * *

(3) * * *

(iii) When exercising the privileges of a student pilot certificate;

(iv) When exercising the privileges of a flight instructor certificate, except for a flight instructor certificate with a glider category rating or sport pilot rating, if the person is acting as pilot in command or is serving as a required flight crewmember; or

* * * * *

(b) Operations not requiring a medical certificate. A person is not required to hold a valid medical certificate--

(1) When exercising the privileges of a student pilot certificate while seeking–

(i) A sport pilot certificate with glider or balloon privileges; or

(ii) A pilot certificate with a glider category rating or balloon class rating;

(2) When exercising the privileges of a sport pilot certificate with privileges in a glider or balloon;

(3) When exercising the privileges of a pilot certificate with a glider category or balloon class rating;

(4) When exercising the privileges of a flight instructor certificate with–

(i) A sport pilot rating in a glider or balloon; or

(ii) A glider category rating;

* * * * *

(c) Operations requiring either a medical certificate or U.S. driver's license. (1) A person must hold and possess either a valid medical certificate issued under part 67 of this chapter or a current and valid U.S. driver's license when exercising the privileges of—

(i) A student pilot certificate while seeking sport pilot privileges in a light-sport aircraft other than a glider or balloon;

(ii) A sport pilot certificate in a light-sport aircraft other than a glider or balloon; or

(iii) A flight instructor certificate with a sport pilot rating while acting as pilot in command or serving as a required flight crewmember of a light-sport aircraft other than a glider or balloon.

(2) A person using a current and valid U.S. driver's license to meet the requirements of this paragraph must--

(i) Comply with each restriction and limitation imposed by that person's U.S. driver's license and any judicial or administrative order applying to the operation of a motor vehicle;

(ii) Have been found eligible for the issuance of at least a third-class airman medical certificate at the time of his or her most recent application (if the person has applied for a medical certificate);

(iii) Not have had his or her most recently issued medical certificate (if the person has held a medical certificate) suspended or revoked or most recent Authorization for a Special Issuance of a Medical Certificate withdrawn; and

(iv) Not know or have reason to know of any medical condition that would make that person unable to operate a light-sport aircraft in a safe manner.

* * * * *

25. Amend §61.31 by:

a. Revising paragraphs (k)(1) and (k)(2)(iii);

b. Removing the word "or;" from the end of paragraph (k)(2)(iv) and placing it at the end of paragraph (k)(2)(v); and

c. Adding paragraph (k)(2)(vi).

The addition and revisions read as follows:

§ 61.31 Type rating requirements, additional training, and authorization requirements.

* * * * *

(k) * * *

(1) This section does not require a category and class rating for aircraft not type-certificated as airplanes, rotorcraft, gliders, lighter-than-air aircraft, powered-lifts, powered parachutes, or weight-shift-control aircraft.

(2) * * *

(iii) The holder of a pilot certificate when operating an aircraft under the authority of--

(A) A provisional type certificate; or

(B) An experimental certificate, unless the operation involves carrying a passenger;

* * * * *

(vi) The holder of a sport pilot certificate when operating a light-sport aircraft.

26. Amend §61.45 by revising paragraphs (a)(1)(ii), (a)(2)(i), and (b)(1)(iii), and adding paragraph (f) to read as follows:

§61.45 Practical tests: Required aircraft and equipment.

(a) * * *

(1) * * *

(ii) Has a current standard airworthiness certificate or special airworthiness certificate in the limited, primary, or light-sport category.

(2) * * *

(i) An aircraft that has a current airworthiness certificate other than a standard airworthiness certificate or special airworthiness certificate in the limited, primary, or light-sport category, but that otherwise meets the requirements of paragraph (a)(1) of this section;

* * * * *

(b) * * *

(1) * * *

(iii) Except as provided in paragraphs (e) and (f) of this section, at least two pilot stations with adequate visibility for each person to operate the aircraft safely; and

* * * * *

(f) Light-sport aircraft with a single seat. A practical test for a sport pilot certificate may be conducted in a light-sport aircraft having a single seat provided that the–

(1) Examiner agrees to conduct the test;

(2) Examiner is in a position to observe the operation of the aircraft and evaluate the proficiency of the applicant; and

(3) Pilot certificate of an applicant successfully passing the test is issued a pilot certificate with a limitation "No passenger carriage and flight in a single-seat light-sport aircraft only."

27. Amend §61.51 by:

a. Revising paragraphs (c)(1), (e)(1) introductory text, and (e)(1)(i);

b. Redesignating paragraph (i)(3) as (i)(4); and

c. Adding new paragraphs (i)(3) and (i)(5).

The additions and revisions read as follows:

§61.51 Pilot logbooks.

* * * * *

(c) * * *

(1) Apply for a certificate or rating issued under this part or a privilege authorized under this part; or

* * * * *

(e) * * *

(1) A sport, recreational, private, or commercial pilot may log pilot-in-command time only for that flight time during which that person–

(i) Is the sole manipulator of the controls of an aircraft for which the pilot is rated or has privileges;

* * * * *

(i) * * *

(3) A sport pilot must carry his or her logbook or other evidence of required authorized instructor endorsements on all flights.

* * * * *

(5) A flight instructor with a sport pilot rating must carry his or her logbook or other evidence of required authorized instructor endorsements on all flights when providing flight training.

28. Add §61.52 to read as follows:

§61.52 Use of aeronautical experience obtained in ultralight vehicles.

(a) A person may use aeronautical experience obtained in an ultralight vehicle to meet the requirements for the following certificates and ratings issued under this part:

(1) A sport pilot certificate.

(2) A flight instructor certificate with a sport pilot rating;

(3) A private pilot certificate with a weight-shift-control or powered parachute category rating.

(b) A person may use aeronautical experience obtained in an ultralight vehicle to meet the provisions of §§61.69 and 61.415 (e).

(c) A person using aeronautical experience obtained in an ultralight vehicle to meet the requirements for a certificate or rating specified in paragraph (a) of this section or the requirements of paragraph (b) of this section must–

(1) Have been a registered ultralight pilot with an FAA-recognized ultralight organization when that aeronautical experience was obtained;

(2) Document and log that aeronautical experience in accordance with the provisions for logging aeronautical experience specified by an FAA-recognized ultralight organization and in accordance with provisions for logging pilot time in aircraft as specified in §61.51; and

(3) Obtain the experience in a category and class of vehicle corresponding to the rating or privileges sought.

29. Amend §61.53 by adding paragraph (c) to read as follows:

§61.53 Prohibition on operations during medical deficiency.

* * * * *

(c) Operations requiring a medical certificate or a U.S. driver's license. For operations provided for in §61.23 (c), a person must meet the provisions of —

(1) Paragraph (a) of this section if that person holds a valid medical certificate issued under part 67 of this chapter and does not hold a current and valid U.S. driver's license.

(2) Paragraph (b) of this section if that person holds a current and valid U.S. driver's license.

30. Amend 61.63 by redesignating paragraph (k) as (l), and add new paragraph (k) to read as follows:

§61.63 Additional aircraft ratings (other than on an airplane transport pilot certificate).

* * * * *

(k) Category class ratings for the operation of aircraft with experimental certificates: Notwithstanding the provisions of paragraphs (b) and (c) of this section, a person holding at least a recreational pilot certificate may apply for a category and class rating limited to a specific make and model of experimental aircraft, provided—

(1) The person has logged at least 5 hours flight time while acting as pilot in command in the same category, class, make, and model of aircraft that has been issued an experimental certificate;

(2) The person has received a logbook endorsement from an authorized instructor who has determined that he or she is proficient to act as pilot in command of the same category, class, make, and model of aircraft for which application is made; and

(3) The flight time specified in paragraph (k)(1) of this section must be logged between September 1, 2004 and August 31, 2005.

* * * * *

31. Revise § 61.69 to read as follows:

§ 61.69 Glider and unpowered ultralight vehicle towing: Experience and training requirements.

(a) No person may act as pilot in command for towing a glider or unpowered ultralight vehicle unless that person–

(1) Holds at least a private pilot certificate with a category rating for powered aircraft;

(2) Has logged at least 100 hours of pilot-in-command time in the aircraft category, class and type, if required, that the pilot is using to tow a glider or unpowered ultralight vehicle;

(3) Has a logbook endorsement from an authorized instructor who certifies that the person has received ground and flight training in gliders or unpowered ultralight vehicles and is proficient in--

(i) The techniques and procedures essential to the safe towing of gliders or unpowered ultralight vehicles, including airspeed limitations;

(ii) Emergency procedures;

(iii) Signals used; and

(iv) Maximum angles of bank.

(4) Except as provided in paragraph (b) of this section, has logged at least three flights as the sole manipulator of the controls of an aircraft towing a glider or unpowered ultralight vehicle simulating towing flight procedures while accompanied by a pilot who meets the requirements of paragraphs (c) and (d) of this section;

(5) Except as provided in paragraph (b) of this section, has received a logbook endorsement from the pilot, described in paragraph (a)(4) of this section, certifying that

the person has accomplished at least 3 flights in an aircraft while towing a glider or unpowered ultralight vehicle, or while simulating towing flight procedures; and

(6) Within the preceding 12 months has–

(i) Made at least three actual or simulated tows of a glider or unpowered ultralight vehicle while accompanied by a qualified pilot who meets the requirements of this section; or

(ii) Made at least three flights as pilot in command of a glider or unpowered ultralight vehicle towed by an aircraft.

(b) Any person who, before May 17, 1967, has made and logged 10 or more flights as pilot in command of an aircraft towing a glider or unpowered ultralight vehicle in accordance with a certificate of waiver need not comply with paragraphs (a)(4) and (a)(5) of this section.

(c) The pilot, described in paragraph (a)(4) of this section, who endorses the logbook of a person seeking towing privileges must have–

(1) Met the requirements of this section prior to endorsing the logbook of the person seeking towing privileges; and

(2) Logged at least 10 flights as pilot in command of an aircraft while towing a glider or unpowered ultralight vehicle.

(d) If the pilot described in paragraph (a)(4) of this section holds only a private pilot certificate, then that pilot must have–

(1) Logged at least 100 hours of pilot-in-command time in airplanes, or 200 hours of pilot-in-command time in a combination of powered and other-than-powered aircraft; and

(2) Performed and logged at least three flights within the 12 calendar months preceding the month that pilot accompanies or endorses the logbook of a person seeking towing privileges –

(i) In an aircraft while towing a glider or unpowered ultralight vehicle accompanied by another pilot who meets the requirements of this section; or

(ii) As pilot in command of a glider or unpowered ultralight vehicle being towed by another aircraft.

32. Amend §61.87 by:

a. Adding the words "or privileges" after the word "rating" in the introductory text of paragraphs (d), (g), (i), (j), and (k);

b. Redesignating paragraphs (l), (m), and (n) as paragraphs (n), (o) and (p), respectively; and

c. Adding paragraphs (l) and (m) to read as follows:

§61.87 Solo requirements for student pilots.

* * * * *

(l) <u>Maneuvers and procedures for pre-solo flight training in a powered parachute</u>. A student pilot who is receiving training for a powered parachute rating or privileges must receive and log flight training for the following maneuvers and procedures:

(1) Proper flight preparation procedures, including preflight planning and preparation, preflight assembly and rigging, aircraft systems, and powerplant operations.

(2) Taxiing or surface operations, including run-ups.

(3) Takeoffs and landings, including normal and crosswind.

(4) Straight and level flight, and turns in both directions.

(5) Climbs, and climbing turns in both directions.

(6) Airport traffic patterns, including entry and departure procedures.

(7) Collision avoidance, windshear avoidance, and wake turbulence avoidance.

(8) Descents, and descending turns in both directions.

(9) Emergency procedures and equipment malfunctions.

(10) Ground reference maneuvers.

(11) Straight glides, and gliding turns in both directions.

(12) Go-arounds.

(13) Approaches to landing areas with a simulated engine malfunction.

(14) Procedures for canopy packing and aircraft disassembly.

(m) Maneuvers and procedures for pre-solo flight training in a weight-shift-control aircraft. A student pilot who is receiving training for a weight-shift-control aircraft rating or privileges must receive and log flight training for the following maneuvers and procedures:

(1) Proper flight preparation procedures, including preflight planning and preparation, preflight assembly and rigging, aircraft systems, and powerplant operations.

(2) Taxiing or surface operations, including run-ups.

(3) Takeoffs and landings, including normal and crosswind.

(4) Straight and level flight, and turns in both directions.

(5) Climbs, and climbing turns in both directions.

(6) Airport traffic patterns, including entry and departure procedures.

(7) Collision avoidance, windshear avoidance, and wake turbulence avoidance.

(8) Descents, and descending turns in both directions.

(9) Flight at various airspeeds from maximum cruise to slow flight.

(10) Emergency procedures and equipment malfunctions.

(11) Ground reference maneuvers.

(12) Stall entry, stall, and stall recovery.

(13) Straight glides, and gliding turns in both directions.

(14) Go-arounds.

(15) Approaches to landing areas with a simulated engine malfunction.

(16) Procedures for disassembly.

* * * * *

33. Amend §61.89 by adding paragraph (c) to read as follows:

§ 61.89 General limitations.

* * * * *

(c) A student pilot seeking a sport pilot certificate must comply with the provisions of paragraphs (a) and (b) of this section and may not act as pilot in command—

(1) Of an aircraft other than a light-sport aircraft;

(2) At night;

(3) At an altitude of more than 10,000 feet MSL; and

(4) In Class B, C, and D airspace, at an airport located in Class B, C, or D airspace, and to, from, through, or on an airport having an operational control tower without having received the ground and flight training specified in §61.94 and an endorsement from an authorized instructor.

34. Amend §61.93 by adding paragraphs (l) and (m) to read as follows:

§61.93 Solo cross-country flight requirements.

* * * * *

(l) Maneuvers and procedures for cross-country flight training in a powered parachute. A student pilot who is receiving training for cross-country flight in a powered parachute must receive and log flight training in the following maneuvers and procedures:

(1) Use of aeronautical charts for VFR navigation using pilotage and dead reckoning with the aid of a magnetic compass, as appropriate.

(2) Use of aircraft performance charts pertaining to cross-country flight.

(3) Procurement and analysis of aeronautical weather reports and forecasts, including recognizing critical weather situations and estimating visibility while in flight.

(4) Emergency procedures.

(5) Traffic pattern procedures that include area departure, area arrival, entry into the traffic pattern, and approach.

(6) Procedures and operating practices for collision avoidance, wake turbulence precautions, and windshear avoidance.

(7) Recognition, avoidance, and operational restrictions of hazardous terrain features in the geographical area where the cross-country flight will be flown.

(8) Procedures for operating the instruments and equipment installed in the aircraft to be flown, including recognition and use of the proper operational procedures and indications.

(9) If equipped for flight with navigation radios, the use of radios for VFR navigation.

(10) Recognition of weather and upper air conditions favorable for the cross-country flight.

(11) Takeoff, approach and landing procedures.

(m) Maneuvers and procedures for cross-country flight training in a weight-shift-control aircraft. A student pilot who is receiving training for cross-country flight in a weight-shift-control aircraft must receive and log flight training for the following maneuvers and procedures:

(1) Use of aeronautical charts for VFR navigation using pilotage and dead reckoning with the aid of a magnetic compass, as appropriate.

(2) Use of aircraft performance charts pertaining to cross-country flight.

(3) Procurement and analysis of aeronautical weather reports and forecasts, including recognizing critical weather situations and estimating visibility while in flight.

(4) Emergency procedures.

(5) Traffic pattern procedures that include area departure, area arrival, entry into the traffic pattern, and approach.

(6) Procedures and operating practices for collision avoidance, wake turbulence precautions, and windshear avoidance.

(7) Recognition, avoidance, and operational restrictions of hazardous terrain features in the geographical area where the cross-country flight will be flown.

(8) Procedures for operating the instruments and equipment installed in the aircraft to be flown, including recognition and use of the proper operational procedures and indications.

(9) If equipped for flight using navigation radios, the use of radios for VFR navigation.

(10) Recognition of weather and upper air conditions favorable for the cross-country flight.

(11) Takeoff, approach and landing procedures, including crosswind approaches and landings.

35. Add §61.94 to read as follows:

§ 61.94 Student pilot seeking a sport pilot certificate or a recreational pilot certificate: Operations at airports within, and in airspace located within, Class B, C, and D airspace, or at airports with an operational control tower in other airspace.

(a) A student pilot seeking a sport pilot certificate or a recreational pilot certificate who wants to obtain privileges to operate in Class B, C, and D airspace, at an airport located in Class B, C, or D airspace, and to, from, through, or at an airport having an operational control tower, must receive and log ground and flight training from an authorized instructor in the following aeronautical knowledge areas and areas of operation:

(1) The use of radios, communications, navigation systems and facilities, and radar services.

(2) Operations at airports with an operating control tower, to include three takeoffs and landings to a full stop, with each landing involving a flight in the traffic pattern, at an airport with an operating control tower.

(3) Applicable flight rules of part 91 of this chapter for operations in Class B, C, and D airspace and air traffic control clearances.

(4) Ground and flight training for the specific Class B, C, or D airspace for which the solo flight is authorized, if applicable, within the 90-day period preceding the date of the flight in that airspace. The flight training must be received in the specific airspace area for which solo flight is authorized.

(5) Ground and flight training for the specific airport located in Class B, C, or D airspace for which the solo flight is authorized, if applicable, within the 90-day period preceding the date of the flight at that airport. The flight and ground training must be received at the specific airport for which solo flight is authorized.

(b) The authorized instructor who provides the training specified in paragraph (a) of this section must provide a logbook endorsement that certifies the student has received that training and is proficient to conduct solo flight in that specific airspace or at that specific airport and in those aeronautical knowledge areas and areas of operation specified in this section.

36. Amend §61.95 by adding paragraph (c) to read as follows:

§ 61.95 Operations in Class B airspace and at airports located within Class B airspace.

* * * * *

(c) This section does not apply to a student pilot seeking a sport pilot certificate or a recreational pilot certificate.

37. Amend §61.99 by revising the introductory text to read as follows:

§ 61.99 Aeronautical experience.

A person who applies for a recreational pilot certificate must receive and log at least 30 hours of flight time that includes at least—

* * * * *

38. Amend §61.101 by:

a. Revising paragraph (b) introductory text and paragraph (c) introductory text;

b. Redesignating paragraphs (d) through (i) as paragraphs (e) through (j), respectively;

c. Revising redesignated paragraphs (e) introductory text, (e)(1), (e)(2), (e)(7), (e)(11), and (e)(12); and

d. Adding new paragraph (d).

The addition and revisions read as follows:

§61.101 Recreational pilot privileges and limits.

* * * * *

(b) A person who holds a current and valid recreational pilot certificate may act as pilot in command of an aircraft on a flight within 50 nautical miles from the departure airport, provided that person has—

* * * * *

(c) A person who holds a current and valid recreational pilot certificate may act as pilot in command of an aircraft on a flight that exceeds 50 nautical miles from the departure airport, provided that person has—

* * * * *

(d) A person who holds a current and valid recreational pilot certificate may act as pilot in command of an aircraft in Class B, C, and D airspace, at an airport located in Class B, C, or D airspace, and to, from, through, or at an airport having an operational control tower, provided that person has--

(1) Received and logged ground and flight training from an authorized instructor on the following aeronautical knowledge areas and areas of operation, as appropriate to the aircraft rating held:

(i) The use of radios, communications, navigation system and facilities, and radar services.

(ii) Operations at airports with an operating control tower to include three takeoffs and landings to a full stop, with each landing involving a flight in the traffic pattern at an airport with an operating control tower.

(iii) Applicable flight rules of part 91 of this chapter for operations in Class B, C, and D airspace and air traffic control clearances;

(2) Been found proficient in those aeronautical knowledge areas and areas of operation specified in paragraph (d)(1) of this section; and

(3) Received from an authorized instructor a logbook endorsement, which is carried on the person's possession or readily accessible in the aircraft, that certifies the person has received and been found proficient in those aeronautical knowledge areas and areas of operation specified in paragraph (d)(1) of this section.

(e) Except as provided in paragraphs (d) and (i) of this section, a recreational pilot may not act as pilot in command of an aircraft—

(1) That is certificated—

(i) For more than four occupants;

(ii) With more than one powerplant;

(iii) With a powerplant of more than 180 horsepower; or

(iv) With retractable landing gear;

(2) That is classified as a multiengine airplane, powered-lift, glider, airship, balloon, powered parachute, or weight-shift-control aircraft;

* * * * *

(7) In Class A, B, C, and D airspace, at an airport located in Class B, C, or D airspace, or to, from, through, or at an airport having an operational control tower;

* * * * *

(11) On a flight outside the United States, unless authorized by the country in which the flight is conducted;

(12) To demonstrate that aircraft in flight as an aircraft salesperson to a prospective buyer;

* * * * *

39. Amend §61.107 by adding paragraphs (b)(9) and (b)(10) to read as follows:

§61.107 Flight proficiency.

* * * * *

(b) * * *

(9) For a powered parachute category rating—

(i) Preflight preparation;

(ii) Preflight procedures;

(iii) Airport and seaplane base operations, as applicable;

(iv) Takeoffs, landings, and go-arounds;

(v) Performance maneuvers;

(vi) Ground reference maneuvers;

(vii) Navigation;

(viii) Night operations, except as provided in §61.110;

(ix) Emergency operations; and

(x) Post-flight procedures.

(10) For a weight-shift-control aircraft category rating—

(i) Preflight preparation;

(ii) Preflight procedures;

(iii) Airport and seaplane base operations, as applicable;

(iv) Takeoffs, landings, and go-arounds;

(v) Performance maneuvers;

(vi) Ground reference maneuvers;

(vii) Navigation;

(viii) Slow flight and stalls;

(ix) Night operations, except as provided in §61.110;

(x) Emergency operations; and

(xi) Post-flight procedures.

40. Amend §61.109 by:

a. Revising the reference to "paragraph (i)" to read "paragraph (k)" in the introductory text of paragraphs (a), (b), (c), (d), and (e);

b. Redesignating paragraph (i) as paragraph (k) and revising the reference to "paragraph (i)(2)" to read "paragraph (k)(2)" in redesignated paragraph (k)(1); and

c. Adding new paragraphs (i) and (j).

The additions and revisions read as follows:

§61.109 Aeronautical experience.

* * * * *

(i) For a powered parachute rating. A person who applies for a private pilot certificate with a powered parachute category rating must log at least 25 hours of flight time in a powered parachute that includes at least 10 hours of flight training with an authorized instructor, including 30 takeoffs and landings, and 10 hours of solo flight training in the areas of operation listed in §61.107 (b)(9) and the training must include at least –

(1) One hour of cross-country flight training in a powered parachute that includes a 1-hour cross-country flight with a landing at an airport at least 25 nautical miles from the airport of departure;

(2) Except as provided in §61.110, 3 hours of night flight training in a powered parachute that includes 10 takeoffs and landings (with each landing involving a flight in the traffic pattern) at an airport;

(3) Three hours of flight training in preparation for the practical test in a powered parachute, which must have been performed within the 60-day period preceding the date of the test; and

(4) Three hours of solo flight time in a powered parachute, consisting of at least—

(i) One solo cross-country flight with a landing at an airport at least 25 nautical miles from the departure airport; and

(ii) Twenty solo takeoffs and landings to a full stop (with each landing involving a flight in a traffic pattern) at an airport, with at least 3 takeoffs and landings at an airport with an operating control tower.

(j) For a weight-shift-control aircraft rating. A person who applies for a private pilot certificate with a weight-shift-control rating must log at least 40 hours of flight time that includes at least 20 hours of flight training with an authorized instructor and 10 hours of solo flight training in the areas listed in §61.107 (b)(10) and the training must include at least--

(1) Three hours of cross-country flight training in a weight-shift-control aircraft;

(2) Except as provided in §61.110, 3 hours of night flight training in a weight-shift-control aircraft that includes—

(i) One cross-country flight over 75 nautical miles total distance; and

(ii) Ten takeoffs and landings (with each landing involving a flight in the traffic pattern) at an airport;

(3) Three hours of flight training in preparation for the practical test in a weight-shift-control aircraft, which must have been performed within the 60-day period preceding the date of the test; and

(4) Ten hours of solo flight time in a weight-shift-control aircraft, consisting of at least–

(i) Five hours of solo cross-country time;

(ii) One solo cross-country flight over 100 nautical miles total distance, with landings at a minimum of three points, and one segment of the flight being a straight line distance of at least 50 nautical miles between takeoff and landing locations; and

(iii) Three takeoffs and landings (with each landing involving a flight in the traffic pattern) at an airport with an operating control tower.

* * * * *

41. Amend §61.110 by adding paragraph (c) to read as follows:

§61.110 Night flying exceptions.

* * * * *

(c) A person who does not meet the night flying requirements in §61.109 (d)(2), (i)(2), or (j)(2) may be issued a private pilot certificate with the limitation "Night flying prohibited." This limitation may be removed by an examiner if the holder complies with the requirements of §61.109 (d)(2), (i)(2), or (j)(2), as appropriate.

42. Amend §61.113 by revising paragraph (g) to read as follows:

§61.113 Private pilot privileges and limitations: Pilot in command.

* * * * *

(g) A private pilot who meets the requirements of §61.69 may act as a pilot in command of an aircraft towing a glider or unpowered ultralight vehicle.

43. Amend 61.165 by adding paragraph (f) to read as follows:

§61.165 Additional aircraft category and class ratings.

* * * * *

(f) <u>Category class ratings for the operation of aircraft with experimental certificates</u>. Notwithstanding the provisions of paragraphs (a) through (e) of this section, a person holding an airline transport certificate may apply for a category and class rating limited to a specific make and model of experimental aircraft, provided—

(1) The person has logged at least 5 hours flight time while acting as pilot in command in the same category, class, make, and model of aircraft that has been issued an experimental certificate;

(2) The person has received a logbook endorsement from an authorized instructor who has determined that he or she is proficient to act as pilot in command of the same category, class, make, and model of aircraft for which application is made; and

(3) The flight time specified in paragraph (f)(1) of this section must be logged between September 1, 2004 and August 31, 2005.

Subpart H—Flight Instructors Other Than Flight Instructors with a Sport Pilot Rating

44. Revise the heading of subpart H to read as set forth above.

45. Revise §61.181 to read as follows:

§61.181 Applicability.

This subpart prescribes the requirements for the issuance of flight instructor certificates and ratings (except for flight instructor certificates with a sport pilot rating), the conditions under which those certificates and ratings are necessary, and the limitations on those certificates and ratings.

46. Amend §61.213 by revising paragraphs (a)(4)(i) and (a)(4)(ii) to read as follows:

§61.213 Eligibility requirements.

(a) * * *

(4) * * *

(i) For a basic ground instructor rating §§61.97, 61.105, and 61.309;

(ii) For an advanced ground instructor rating §§61.97, 61.105, 61.125, 61.155, and 61.309; and

* * * * *

47. Amend §61.215 by revising paragraph (a) to read as follows:

§61.215 Ground instructor privileges.

(a) A person who holds a basic ground instructor rating is authorized to provide—

(1) Ground training in the aeronautical knowledge areas required for the issuance of a sport pilot certificate, recreational pilot certificate, private pilot certificate, or associated ratings under this part;

(2) Ground training required for a sport pilot, recreational pilot, and private pilot flight review; and

(3) A recommendation for a knowledge test required for the issuance of a sport pilot certificate, recreational pilot certificate, or private pilot certificate under this part.

* * * * *

48. Amend part 61 by adding subpart J to read as follows:

Subpart J— Sport Pilots

Sec.

61.301 What is the purpose of this subpart and to whom does it apply?
61.303 If I want to operate a light-sport aircraft, what operating limits and endorsement requirements in this subpart must I comply with?
61.305 What are the age and language requirements for a sport pilot certificate?
61.307 What tests do I have to take to obtain a sport pilot certificate?
61.309 What aeronautical knowledge must I have to apply for a sport pilot certificate?
61.311 What flight proficiency requirements must I meet to apply for a sport pilot certificate?
61.313 What aeronautical experience must I have to apply for a sport pilot certificate?
61.315 What are the privileges and limits of my sport pilot certificate?
61.317 Is my sport pilot certificate issued with aircraft category and class ratings?
61.319 Can I operate a make and model of aircraft other than the make and model for which I have received an endorsement?
61.321 How do I obtain privileges to operate an additional category or class of light-sport aircraft?
61.323 How do I obtain privileges to operate a make and model of lights-port aircraft in the same category and class within a different set of aircraft?

61.325 How do I obtain privileges to operate a light-sport aircraft at an airport within, or in airspace within, Class B, C, and D airspace, or in other airspace with an airport having an operational control tower?
61.327 How do I obtain privileges to operate a light-sport aircraft that has a V_H greater than 87 knots CAS?
61.329 Are there special provisions for obtaining a sport pilot certificate for persons who are registered ultralight pilots with an FAA-recognized ultralight organization?

§61.301 What is the purpose of this subpart and to whom does it apply?

(a) This subpart prescribes the following requirements that apply to a sport pilot certificate:

(1) Eligibility.

(2) Aeronautical knowledge.

(3) Flight proficiency.

(4) Aeronautical experience.

(5) Endorsements.

(6) Privileges and limits.

(7) Transition provisions for registered ultralight pilots.

(b) Other provisions of this part apply to the logging of flight time and testing.

(c) This subpart applies to applicants for, and holders of, sport pilot certificates. It also applies to holders of recreational pilot certificates and higher, as provided in §61.303.

§61.303 If I want to operate a light-sport aircraft, what operating limits and endorsement requirements in this subpart must I comply with?

(a) Use the following table to determine what operating limits and endorsement requirements in this subpart, if any, apply to you when you operate a light-sport aircraft. The medical certificate specified in this table must be valid. If you hold a recreational pilot certificate, but not a medical certificate, you must comply with cross-country requirements in §61.101 (c), even if your flight does not exceed 50 nautical miles from your departure airport. You must also comply with requirements in other subparts of this part that apply to your certificate and the operation you conduct.

If you hold	And you hold	Then you may operate	And
(1) A medical certificate,	(i) A sport pilot certificate,	(A) Any light sport aircraft for which you hold the endorsements required for its category, class, make and model,	(1) You must hold any other endorsements required by this subpart, and comply with the limitations in §61.315.
	(ii) At least a recreational pilot certificate with a category and class rating,	(A) Any light sport aircraft in that category and class,	(1) You do not have to hold any of the endorsements required by this subpart, nor do you have to comply with the limitations in §61.315.
	(iii) At least a recreational pilot certificate but not a rating for the category and class of light sport aircraft you operate,	(A) That light sport aircraft, only if you hold the endorsements required in §61.321 for its category and class,	(1) You must comply with the limitations in §61.315, except §61.315 (c)(14) and, if a private pilot or higher, §61.315 (c)(7).

(2) Only a U.S. driver's license,	(i) A sport pilot certificate,	(A) Any light sport aircraft for which you hold the endorsements required for its category, class, make and model,	(1) You must hold any other endorsements required by this subpart, and comply with the limitations in §61.315.
	(ii) At least a recreational pilot certificate with a category and class rating,	(A) Any light sport aircraft in that category and class,	(1) You do not have to hold any of the endorsements required by this subpart, but you must comply with the limitations in §61.315.
	(iii) At least a recreational pilot certificate but not a rating for the category and class of light-sport aircraft you operate,	(A) That light sport aircraft, only if you hold the endorsements required in §61.321 for its category and class,	(1) You must comply with the limitations in §61.315, except §61.315 (c)(14) and, if a private pilot or higher, §61.315 (c)(7).

(3) Neither a medical certificate nor a U.S. driver's license,	(i) A sport pilot certificate,	(A) Only a light sport glider or balloon for which you hold the endorsements required for its category, class, make and model,	(1) You must hold any other endorsements required by this subpart, and comply with the limitations in §61.315.
	(ii) At least a private pilot certificate with a category and class rating for glider or balloon,	(A) Only a light sport glider or balloon in that category and class,	(1) You do not have to hold any of the endorsements required by this subpart, but you must comply with the limitations in §61.315.
	(iii) At least a private pilot certificate but not a rating for glider or balloon,	(A) Only a light sport glider or balloon, if you hold the endorsements required in §61.321 for its category and class,	(1) You must comply with the limitations in §61.315, except §61.315 (c)(14) and, if a private pilot or higher, §61.315 (c)(7).

(b) A person using a current and valid U.S. driver's license to meet the requirements of this paragraph must--

(1) Comply with each restriction and limitation imposed by that person's U.S. driver's license and any judicial or administrative order applying to the operation of a motor vehicle;

(2) Have been found eligible for the issuance of at least a third-class airman medical certificate at the time of his or her most recent application (if the person has applied for a medical certificate);

(3) Not have had his or her most recently issued medical certificate (if the person has held a medical certificate) suspended or revoked or most recent Authorization for a Special Issuance of a Medical Certificate withdrawn; and

(4) Not know or have reason to know of any medical condition that would make that person unable to operate a light-sport aircraft in a safe manner.

§61.305 What are the age and language requirements for a sport pilot certificate?

(a) To be eligible for a sport pilot certificate you must:

(1) Be at least 17 years old (or 16 years old if you are applying to operate a glider or balloon).

(2) Be able to read, speak, write, and understand English. If you cannot read, speak, write, and understand English because of medical reasons, the FAA may place limits on your certificate as are necessary for the safe operation of light-sport aircraft.

§61.307 What tests do I have to take to obtain a sport pilot certificate?

To obtain a sport pilot certificate, you must pass the following tests:

(a) Knowledge test. You must pass a knowledge test on the applicable aeronautical knowledge areas listed in §61.309. Before you may take the knowledge test for a sport pilot certificate, you must receive a logbook endorsement from the authorized instructor who trained you or reviewed and evaluated your home-study course on the aeronautical knowledge areas listed in §61.309 certifying you are prepared for the test.

(b) Practical test. You must pass a practical test on the applicable areas of operation listed in §§61.309 and 61.311. Before you may take the practical test for a sport pilot certificate, you must receive a logbook endorsement from the authorized instructor who provided you with flight training on the areas of operation specified in §§61.309 and 61.311 in preparation for the practical test. This endorsement certifies that

you meet the applicable aeronautical knowledge and experience requirements and are prepared for the practical test.

§61.309 What aeronautical knowledge must I have to apply for a sport pilot certificate?

Except as specified in §61.329, to apply for a sport pilot certificate you must receive and log ground training from an authorized instructor or complete a home-study course on the following aeronautical knowledge areas:

(a) Applicable regulations of this chapter that relate to sport pilot privileges, limits, and flight operations.

(b) Accident reporting requirements of the National Transportation Safety Board.

(c) Use of the applicable portions of the aeronautical information manual and FAA advisory circulars.

(d) Use of aeronautical charts for VFR navigation using pilotage, dead reckoning, and navigation systems, as appropriate.

(e) Recognition of critical weather situations from the ground and in flight, windshear avoidance, and the procurement and use of aeronautical weather reports and forecasts.

(f) Safe and efficient operation of aircraft, including collision avoidance, and recognition and avoidance of wake turbulence.

(g) Effects of density altitude on takeoff and climb performance.

(h) Weight and balance computations.

(i) Principles of aerodynamics, powerplants, and aircraft systems.

(j) Stall awareness, spin entry, spins, and spin recovery techniques, as applicable.

(k) Aeronautical decision making and risk management.

(l) Preflight actions that include—

(1) How to get information on runway lengths at airports of intended use, data on takeoff and landing distances, weather reports and forecasts, and fuel requirements; and

(2) How to plan for alternatives if the planned flight cannot be completed or if you encounter delays.

§61.311 What flight proficiency requirements must I meet to apply for a sport pilot certificate?

Except as specified in §61.329, to apply for a sport pilot certificate you must receive and log ground and flight training from an authorized instructor on the following areas of operation, as appropriate, for airplane single-engine land or sea, glider, gyroplane, airship, balloon, powered parachute land or sea, and weight-shift-control aircraft land or sea privileges:

(a) Preflight preparation.

(b) Preflight procedures.

(c) Airport, seaplane base, and gliderport operations, as applicable.

(d) Takeoffs (or launches), landings, and go-arounds.

(e) Performance maneuvers, and for gliders, performance speeds.

(f) Ground reference maneuvers (not applicable to gliders and balloons).

(g) Soaring techniques (applicable only to gliders).

(h) Navigation.

(i) Slow flight (not applicable to lighter-than-air aircraft and powered parachutes).

(j) Stalls (not applicable to lighter-than-air aircraft, gyroplanes, and powered parachutes).

(j) Emergency operations.

(k) Post-flight procedures.

§61.313 What aeronautical experience must I have to apply for a sport pilot certificate?

Except as specified in §61.329, use the following table to determine the aeronautical experience you must have to apply for a sport pilot certificate:

If you are applying for a sport pilot certificate with…	Then you must log at least…	Which must include at least…
(a) Airplane category and single-engine land or sea class privileges,	(1) 20 hours of flight time, including at least 15 hours of flight training from an authorized instructor in a single-engine airplane and at least 5 hours of solo flight training in the areas of operation listed in §61.311,	(i) 2 hours of cross-country flight training, (ii) 10 takeoffs and landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport; (iii) One solo cross-country flight of at least 75 nautical miles total distance, with a full-stop landing at a minimum of two points and one segment of the flight consisting of a straight-line distance of at least 25 nautical miles between the takeoff and landing locations, and (iv) 3 hours of flight training on those areas of operation specified in §61.311 preparing for the practical test within 60 days before the date of the test.
(b) Glider category privileges, and you have not logged at least 20 hours of flight time in a heavier-than-air aircraft,	(1) 10 hours of flight time in a glider, including 10 flights in a glider receiving flight training from an authorized instructor and at least 2 hours of solo flight training in the areas of operation listed in §61.311,	(i) Five solo launches and landings, and (ii) 3 hours of flight training on those areas of operation specified in §61.311 preparing for the practical test within 60 days before the date of the test.
(c) Glider category privileges, and you have logged 20 hours flight time in a heavier-than-air aircraft,	(1) 3 hours of flight time in a glider, including five flights in a glider while receiving flight training from an authorized instructor and at least 1 hour of solo flight training in the areas of operation listed in § 61.311,	(i) Three solo launches and landings, and (ii) 3 hours of flight training on those areas of operation specified in §61.311 preparing for the practical test within 60 days before the date of the test.

If you are applying for a sport pilot certificate with…	Then you must log at least…	Which must include at least…
(d) Rotorcraft category and gyroplane class privileges,	(1) 20 hours of flight time, including 15 hours of flight training from an authorized instructor in a gyroplane and at least 5 hours of solo flight training in the areas of operation listed in §61.311,	(i) 2 hours of cross-country flight training, (ii) 10 takeoffs and landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport, (iii) One solo cross-country flight of at least 50 nautical miles total distance, with a full-stop landing at a minimum of two points, and one segment of the flight consisting of a straight-line distance of at least 25 nautical miles between the takeoff and landing locations, and (iv) 3 hours of flight training on those areas of operation specified in §61.311 preparing for the practical test within 60 days before the date of the test.
(e) Lighter-than-air category and airship class privileges,	(1) 20 hours of flight time, including 15 hours of flight training from an authorized instructor in an airship and at least 3 hours performing the duties of pilot in command in an airship with an authorized instructor in the areas of operation listed in §61.311,	(i) 2 hours of cross-country flight training, (ii) Three takeoffs and landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport, (iii) One cross-country flight of at least 25 nautical miles between the takeoff and landing locations, and (iv) 3 hours of flight training on those areas of operation specified in §61.311 preparing for the practical test within 60 days before the date of the test.
(f) Lighter-than-air category and balloon class privileges,	(1) 7 hours of flight time in a balloon, including three flights with an authorized instructor and one flight performing the duties of pilot in command in a balloon with an authorized instructor in the areas of operation listed in §61.311,	(i) 2 hours of cross-country flight training, and (ii) 3 hours of flight training on those areas of operation specified in §61.311 preparing for the practical test within 60 days before the date of the test.

If you are applying for a sport pilot certificate with…	Then you must log at least…	Which must include at least…
(g) Powered parachute category land or sea class privileges,	(1) 12 hours of flight time in a powered parachute, including 10 hours flight training and, and at least 2 hours solo flight training in the areas of operation listed in §61.311.	(i) 1 hour of cross-country flight training, (ii) 20 takeoffs and landings to a full stop in a powered parachute with each landing involving flight in the traffic pattern at an airport; (iii) 10 solo takeoffs and landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport, (iv) One solo flight with a landing at a different airport and one segment of the flight consisting of a straight-line distance of at least 10 nautical miles between takeoff and landing locations, and (v) 3 hours of flight training on those areas of operation specified in §61.311 preparing for the practical test within 60 days before the date of the test.
(h) Weight-shift-control aircraft category land or sea class privileges,	(1) 20 hours of flight time, including 15 hours of flight training from an authorized instructor in a weight-shift-control aircraft and at least 5 hours of solo flight training in the areas of operation listed in §61.311,	(i) 2 hours of cross-country flight training; (ii) 10 takeoffs and landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport, (iii) One solo cross-country flight of at least 50 nautical miles total distance, with a full-stop landing at a minimum of two points, and one segment of the flight consisting of a straight-line distance of at least 25 nautical miles between takeoff and landing locations, and (iv) 3 hours of flight training on those areas of operation specified in §61.311 preparing for the practical test within 60 days before the date of the test.

§61.315 What are the privileges and limits of my sport pilot certificate?

(a) If you hold a sport pilot certificate you may act as pilot in command of a light-sport aircraft, except as specified in paragraph (c) of this section.

(b) You may share the operating expenses of a flight with a passenger, provided the expenses involve only fuel, oil, airport expenses, or aircraft rental fees. You must pay at least half the operating expenses of the flight.

(c) You may not act as pilot in command of a light-sport aircraft:

(1) That is carrying a passenger or property for compensation or hire.

(2) For compensation or hire.

(3) In furtherance of a business.

(4) While carrying more than one passenger.

(5) At night.

(6) In Class A airspace.

(7) In Class B, C, and D airspace, at an airport located in Class B, C, or D airspace, and to, from, through, or at an airport having an operational control tower unless you have met the requirements specified in §61.325.

(8) Outside the United States, unless you have prior authorization from the country in which you seek to operate. Your sport pilot certificate carries the limit "Holder does not meet ICAO requirements."

(9) To demonstrate the aircraft in flight to a prospective buyer if you are an aircraft salesperson.

(10) In a passenger-carrying airlift sponsored by a charitable organization.

(11) At an altitude of more than 10,000 feet MSL.

(12) When the flight or surface visibility is less than 3 statute miles.

(13) Without visual reference to the surface.

(14) If the aircraft has a V_H that exceeds 87 knots CAS, unless you have met the requirements of §61.327.

(15) Contrary to any operating limitation placed on the airworthiness certificate of the aircraft being flown.

(16) Contrary to any limit or endorsement on your pilot certificate, airman medical certificate, or any other limit or endorsement from an authorized instructor.

(17) Contrary to any restriction or limitation on your U.S. driver's license or any restriction or limitation imposed by judicial or administrative order when using your driver's license to satisfy a requirement of this part.

(18) While towing any object.

(19) As a pilot flight crewmember on any aircraft for which more than one pilot is required by the type certificate of the aircraft or the regulations under which the flight is conducted.

§61.317 Is my sport pilot certificate issued with aircraft category and class ratings?

Your sport pilot certificate does not list aircraft category and class ratings. When you successfully pass the practical test for a sport pilot certificate, regardless of the light-sport aircraft privileges you seek, the FAA will issue you a sport pilot certificate without any category and class ratings. The FAA will provide you with a logbook endorsement for the category, class, and make and model aircraft of aircraft in which you are authorized to act as pilot in command.

§61.319 Can I operate a make and model of aircraft other than the make and model aircraft for which I have received an endorsement?

If you hold a sport pilot certificate you may operate any make and model of light-sport aircraft in the same category and class and within the same set of aircraft as the make and model of aircraft for which you have received an endorsement.

§61.321 How do I obtain privileges to operate an additional category or class of light-sport aircraft?

If you hold a sport pilot certificate and seek to operate an additional category or class of light-sport aircraft, you must—

(a) Receive a logbook endorsement from the authorized instructor who trained you on the applicable aeronautical knowledge areas specified in §61.309 and areas of operation specified in §61.311. The endorsement certifies you have met the aeronautical knowledge and flight proficiency requirements for the additional light-sport aircraft privilege you seek;

(b) Successfully complete a proficiency check from an authorized instructor other than the instructor who trained you on the aeronautical knowledge areas and areas of operation specified in §§61.309 and 61.311 for the additional light-sport aircraft privilege you seek;

(c) Complete an application for those privileges on a form and in a manner acceptable to the FAA and present this application to the authorized instructor who conducted the proficiency check specified in paragraph (b) of this section; and

(d) Receive a logbook endorsement from the instructor who conducted the proficiency check specified in paragraph (b) of this section certifying you are proficient in the applicable areas of operation and aeronautical knowledge areas, and that you are authorized for the additional category and class light-sport aircraft privilege.

§61.323 How do I obtain privileges to operate a make and model of light-sport aircraft in the same category and class within a different set of aircraft?

If you hold a sport pilot certificate and seek to operate a make and model of light-sport aircraft in the same category and class but within a different set of aircraft as the make and model of aircraft for which you have received an endorsement, you must—

(a) Receive and log ground and flight training from an authorized instructor in a make and model of light-sport aircraft that is within the same set of aircraft as the make and model of aircraft you intend to operate;

(b) Receive a logbook endorsement from the authorized instructor who provided you with the aircraft specific training specified in paragraph (a) of this section certifying you are proficient to operate the specific make and model of light-sport aircraft.

§61.325 How do I obtain privileges to operate a light-sport aircraft at an airport within, or in airspace within, Class B, C, and D airspace, or in other airspace with an airport having an operational control tower?

If you hold a sport pilot certificate and seek privileges to operate a light-sport aircraft in Class B, C, or D airspace, at an airport located in Class B, C, or D airspace, or to, from, through, or at an airport having an operational control tower, you must receive and log ground and flight training. The authorized instructor who provides this training

must provide a logbook endorsement that certifies you are proficient in the following aeronautical knowledge areas and areas of operation:

(a) The use of radios, communications, navigation system/facilities, and radar services.

(b) Operations at airports with an operating control tower to include three takeoffs and landings to a full stop, with each landing involving a flight in the traffic pattern, at an airport with an operating control tower.

(c) Applicable flight rules of part 91 of this chapter for operations in Class B, C, and D airspace and air traffic control clearances.

§61.327 How do I obtain privileges to operate a light-sport aircraft that has a V_H greater than 87 knots CAS?

If you hold a sport pilot certificate and you seek to operate a light-sport aircraft that has a V_H greater than 87 knots CAS you must—

(a) Receive and log ground and flight training from an authorized instructor in an aircraft that has a V_H greater than 87 knots CAS; and

(b) Receive a logbook endorsement from the authorized instructor who provided the training specified in paragraph (a) of this section certifying that you are proficient in the operation of light-sport aircraft with a V_H greater than 87 knots CAS.

§61.329 Are there special provisions for obtaining a sport pilot certificate for persons who are registered ultralight pilots with an FAA-recognized ultralight organization?

(a) If you are a registered ultralight pilot with an FAA-recognized ultralight organization use the following table to determine how to obtain a sport pilot certificate.

If you are…	Then you must …
(1) A registered ultralight pilot with an FAA-recognized ultralight organization on or before September 1, 2004, and you want to apply for a sport pilot certificate,	(i) Not later than January 31, 2007-- (A) Meet the eligibility requirements in §§61.305 and 61.23, but not the aeronautical knowledge requirements specified in §61.309, the flight proficiency requirements specified in §61.311, and the aeronautical experience requirements specified in §61.313, (B) Pass the knowledge test for a sport pilot certificate specified in §61.307 or the knowledge test for a flight instructor certificate with a sport pilot rating specified in §61.405, (C) Pass the practical test for a sport pilot certificate specified in §61.307, (D) Provide the FAA with a certified copy of your ultralight pilot records from an FAA-recognized ultralight organization, and those records must-- (1) Document that you are a registered ultralight pilot with that FAA-recognized ultralight organization, and (2) Indicate that you are recognized to operate each category and class of aircraft for which you seek sport pilot privileges.

If you are…	Then you must …
(2) A registered ultralight pilot with an FAA-recognized ultralight organization after September 1, 2004, and you want to apply for a sport pilot certificate,	(i) Meet the eligibility requirements in §§61.305 and 61.23, (ii) Meet the aeronautical knowledge requirements specified in §61.309, the flight proficiency requirements specified in §61.311, and aeronautical experience requirements specified in §61.313; however, you may credit your ultralight aeronautical experience in accordance with §61.52 toward the requirements in §§61.309, 61.311, and 61.313, (iii) Pass the knowledge and practical tests for a sport pilot certificate specified in §61.307, and (iv) Provide the FAA with a certified copy of your ultralight pilot records from an FAA-recognized ultralight organization, and those records must-- (A) Document that you are a registered ultralight pilot with that FAA-recognized ultralight organization, and (B) Indicate that you are recognized to operate the category and class of aircraft for which you seek sport pilot privileges.

(b) When you successfully pass the practical test for a sport pilot certificate, the FAA will issue you a sport pilot certificate without any category and class ratings. The FAA will provide you with a logbook endorsement for the category, class, and make and model of aircraft in which you have successfully passed the practical test and for which you are authorized to act as pilot in command. If you meet the provisions of paragraph

(a)(1) of this section, the FAA will provide you with a logbook endorsement for each category, class, and make and model of aircraft listed on the ultralight pilot records you provide to the FAA.

49. Amend part 61 by adding subpart K to read as follows:

Subpart K—Flight Instructors with a Sport Pilot Rating

Sec.

61.401 What is the purpose of this subpart?
61.403 What are the age, language, and pilot certificate requirements for a flight instructor certificate with a sport pilot rating?
61.405 What tests do I have to take to obtain a flight instructor certificate with a sport pilot rating?
61.407 What aeronautical knowledge must I have to apply for a flight instructor certificate with a sport pilot rating?
61.409 What flight proficiency requirements must I meet to apply for a flight instructor certificate with a sport pilot rating?
61.411 What aeronautical experience must I have to apply for a flight instructor certificate with a sport pilot rating?
61.413 What are the privileges of my flight instructor certificate with a sport pilot rating?
61.415 What are the limits of a flight instructor certificate with a sport pilot rating?
61.417 Will my flight instructor certificate with a sport pilot rating list aircraft category and class ratings?
61.419 How do I obtain privileges to provide training in an additional category or class of light-sport aircraft?
61.421 May I give myself an endorsement?
61.423 What are the recordkeeping requirements for a flight instructor with a sport pilot rating?
61.425 How do I renew my flight instructor certificate?
61.427 What must I do if my flight instructor certificate with a sport pilot rating expires?
61.429 May I exercise the privileges of a flight instructor certificate with a sport pilot rating if I hold a flight instructor certificate with another rating?
61.431 Are there special provisions for obtaining a flight instructor certificate with a sport pilot rating for persons who are registered ultralight instructors with an FAA-recognized ultralight organization?

§ 61.401 What is the purpose of this subpart?

(a) This part prescribes the following requirements that apply to a flight instructor certificate with a sport pilot rating:

(1) Eligibility.

(2) Aeronautical knowledge.

(3) Flight proficiency.

(4) Endorsements.

(5) Privileges and limits.

(6) Transition provisions for registered ultralight flight instructors.

(b) Other provisions of this part apply to the logging of flight time and testing.

§61.403 What are the age, language, and pilot certificate requirements for a flight instructor certificate with a sport pilot rating?

To be eligible for a flight instructor certificate with a sport pilot rating you must:

(a) Be at least 18 years old.

(b) Be able to read, speak, write, and understand English. If you cannot read, speak, write, and understand English because of medical reasons, the FAA may place limits on your certificate as are necessary for the safe operation of light-sport aircraft.

(c) Hold at least a current and valid sport pilot certificate with category and class ratings or privileges, as applicable, that are appropriate to the flight instructor privileges sought.

§61.405 What tests do I have to take to obtain a flight instructor certificate with a sport pilot rating?

To obtain a flight instructor certificate with a sport pilot rating you must pass the following tests:

(a) Knowledge test. Before you take a knowledge test, you must receive a logbook endorsement certifying you are prepared for the test from an authorized instructor who trained you or evaluated your home-study course on the aeronautical knowledge areas listed in §61.407. You must pass knowledge tests on—

(1) The fundamentals of instructing listed in §61.407 (a), unless you meet the requirements of §61.407 (c); and

(2) The aeronautical knowledge areas for a sport pilot certificate applicable to the aircraft category and class for which flight instructor privileges are sought.

(b) Practical test.

(1) Before you take the practical test, you must–

(i) Receive a logbook endorsement from the authorized instructor who provided you with flight training on the areas of operation specified in §61.409 that apply to the category and class of aircraft privileges you seek. This endorsement certifies you meet the applicable aeronautical knowledge and experience requirements and are prepared for the practical test;

(ii) If you are seeking privileges to provide instruction in an airplane or glider, receive a logbook endorsement from an authorized instructor indicating that you are competent and possess instructional proficiency in stall awareness, spin entry, spins, and

spin recovery procedures after you have received flight training in those training areas in an airplane or glider, as appropriate, that is certificated for spins;

(2) You must pass a practical test—

(i) On the areas of operation listed in §61.409 that are appropriate to the category and class of aircraft privileges you seek;

(ii) In an aircraft representative of the category and class of aircraft for the privileges you seek;

(iii) In which you demonstrate that you are able to teach stall awareness, spin entry, spins, and spin recovery procedures if you are seeking privileges to provide instruction in an airplane or glider. If you have not failed a practical test based on deficiencies in your ability to demonstrate knowledge or skill in these areas and you provide the endorsement required by paragraph (b)(1)(ii) of this section, an examiner may accept the endorsement instead of the demonstration required by this paragraph. If you are taking a test because you previously failed a test based on not meeting the requirements of this paragraph, you must pass a practical test on stall awareness, spin entry, spins, and spin recovery instructional competency and proficiency in the applicable category and class of aircraft that is certificated for spins.

§61.407 What aeronautical knowledge must I have to apply for a flight instructor certificate with a sport pilot rating?

(a) Except as specified in paragraph (c) of this section you must receive and log ground training from an authorized instructor on the fundamentals of instruction that includes:

(1) The learning process.

(2) Elements of effective teaching.

(3) Student evaluation and testing.

(4) Course development.

(5) Lesson planning.

(6) Classroom training techniques.

(b) You must receive and log ground training from an authorized instructor on the aeronautical knowledge areas applicable to a sport pilot certificate for the aircraft category and class in which you seek flight instructor privileges.

(c) You do not have to meet the requirements of paragraph (a) of this section if you—

(1) Hold a flight instructor certificate or ground instructor certificate issued under this part;

(2) Hold a current teacher's certificate issued by a State, county, city, or municipality; or

(3) Are employed as a teacher at an accredited college or university.

§61.409 What flight proficiency requirements must I meet to apply for a flight instructor certificate with a sport pilot rating?

You must receive and log ground and flight training from an authorized instructor on the following areas of operation for the aircraft category and class in which you seek flight instructor privileges:

(a) Technical subject areas.

(b) Preflight preparation.

(c) Preflight lesson on a maneuver to be performed in flight.

(d) Preflight procedures.

(e) Airport, seaplane base, and gliderport operations, as applicable.

(f) Takeoffs (or launches), landings, and go-arounds.

(g) Fundamentals of flight.

(h) Performance maneuvers and for gliders, performance speeds.

(i) Ground reference maneuvers (except for gliders and lighter-than-air).

(j) Soaring techniques.

(k) Slow flight (not applicable to lighter-than-air and powered parachutes).

(l) Stalls (not applicable to lighter-than-air, powered parachutes, and gyroplanes).

(m) Spins (applicable to airplanes and gliders).

(n) Emergency operations.

(o) Tumble entry and avoidance techniques (applicable to weight-shift-control aircraft).

(p) Post-flight procedures.

§61.411 What aeronautical experience must I have to apply for a flight instructor certificate with a sport pilot rating?

Use the following table to determine the experience you must have for each aircraft category and class**:**

If you are applying for a flight instructor certificate with a sport pilot rating for…	Then you must log at least…	Which must include at least…

If you are applying for a flight instructor certificate with a sport pilot rating for…	Then you must log at least…	Which must include at least…
(a) Airplane category and single-engine class privileges,	(1) 150 hours of flight time as a pilot,	(i) 100 hours of flight time as pilot in command in powered aircraft, (ii) 50 hours of flight time in a single-engine airplane, (iii) 25 hours of cross-country flight time, (iv) 10 hours of cross-country flight time in a single-engine airplane, and (v) 15 hours of flight time as pilot in command in a single-engine airplane that is a light-sport aircraft.
(b) Glider category privileges,	(1) 25 hours of flight time as pilot in command in a glider, 100 flights in a glider, and 15 flights as pilot in command in a glider that is a light-sport aircraft, or (2) 100 hours in heavier-than-air aircraft, 20 flights in a glider, and 15 flights as pilot in command in a glider that is a light-sport aircraft.	
(c) Rotorcraft category and gyroplane class privileges,	(1) 125 hours of flight time as a pilot,	(i) 100 hours of flight time as pilot in command in powered aircraft, (ii) 50 hours of flight time in a gyroplane, (iii) 10 hours of cross-country flight time, (iv) 3 hours of cross-country flight time in a gyroplane, and (v) 15 hours of flight time as pilot in command in a gyroplane that is a light-sport aircraft.

If you are applying for a flight instructor certificate with a sport pilot rating for…	Then you must log at least…	Which must include at least…
(d) Lighter-than-air category and airship class privileges,	(1) 100 hours of flight time as a pilot,	(i) 40 hours of flight time in an airship, (ii) 20 hours of pilot in command time in an airship, (iii) 10 hours of cross-country flight time, (iv) 5 hours of cross-country flight time in an airship, and (v) 15 hours of flight time as pilot in command in an airship that is a light-sport aircraft.
(e) Lighter-than-air category and balloon class privileges,	(1) 35 hours of flight time as pilot-in-command,	(i) 20 hours of flight time in a balloon, (ii) 10 flights in a balloon, and (iii) 5 flights as pilot in command in a balloon that is a light-sport aircraft.
(f) Weight-shift-control aircraft category privileges,	(1) 150 hours of flight time as a pilot,	(i) 100 hours of flight time as pilot in command in powered aircraft, (ii) 50 hours of flight time in a weight-shift-control aircraft, (iii) 25 hours of cross-country flight time, (iv) 10 hours of cross-country flight time in a weight-shift-control aircraft, and (v) 15 hours of flight time as pilot in command in a weight-shift-control aircraft that is a light-sport aircraft.
(g) Powered-parachute category privileges,	(1) 100 hours of flight time as a pilot,	(i) 75 hours of flight time as pilot in command in powered aircraft, (ii) 50 hours of flight time in a powered parachute, (iii) 15 hours of cross-country flight time, (iv) 5 hours of cross-country flight time in a powered parachute, and (v) 15 hours of flight time as pilot in command in a powered parachute that is a light-sport aircraft.

§61.413 What are the privileges of my flight instructor certificate with a sport pilot rating?

If you hold a fight flight instructor certificate with a sport pilot rating, you are authorized, within the limits of your certificate and rating, to provide training and logbook endorsements for—

(a) A student pilot seeking a sport pilot certificate;

(b) A sport pilot certificate;

(c) A flight instructor certificate with a sport pilot rating;

(d) A powered parachute or weight-shift-control aircraft rating;

(e) Sport pilot privileges;

(f) A flight review or operating privilege for a sport pilot;

(g) A practical test for a sport pilot certificate, a private pilot certificate with a powered parachute or weight-shift-control aircraft rating or a flight instructor certificate with a sport pilot rating;

(h) A knowledge test for a sport pilot certificate, a private pilot certificate with a powered parachute or weight-shift-control aircraft rating or a flight instructor certificate with a sport pilot rating; and

(i) A proficiency check for an additional category, class, or make and model privilege for a sport pilot certificate or a flight instructor certificate with a sport pilot rating.

§61.415 What are the limits of a flight instructor certificate with a sport pilot rating?

If you hold a flight instructor certificate with a sport pilot rating, you are subject to the following limits:

(a) You may not provide ground or flight training in any aircraft for which you do not hold:

(1) A sport pilot certificate with applicable category and class privileges and make and model privileges or a pilot certificate with the applicable category and class rating; and

(2) Applicable category and class privileges for your flight instructor certificate with a sport pilot rating.

(b) You may not provide ground or flight training for a private pilot certificate with a powered parachute or weight-shift-control aircraft rating unless you hold:

(1) At least a private pilot certificate with the applicable category and class rating; and

(2) Applicable category and class privileges for your flight instructor certificate with a sport pilot rating.

(c) You may not conduct more than 8 hours of flight training in any 24-consecutive-hour period.

(d) You may not endorse a:

(1) Student pilot's certificate or logbook for solo flight privileges, unless you have–

(i) Given that student the flight training required for solo flight privileges required by this part; and

(ii) Determined that the student is prepared to conduct the flight safely under known circumstances, subject to any limitations listed in the student's logbook that you consider necessary for the safety of the flight.

(2) Student pilot's certificate and logbook for a solo cross-country flight, unless you have determined the student's flight preparation, planning, equipment, and proposed procedures are adequate for the proposed flight under the existing conditions and within any limitations listed in the logbook that you consider necessary for the safety of the flight.

(3) Student pilot's certificate and logbook for solo flight in Class B, C and D airspace areas, at an airport within Class B, C, or D airspace and to from, through or on an airport having an operational control tower, unless that you have–

(i) Given that student ground and flight training in that airspace or at that airport; and

(ii) Determined that the student is proficient to operate the aircraft safely.

(4) Logbook of a pilot for a flight review, unless you have conducted a review of that pilot in accordance with the requirements of §61.56.

(e) You may not provide flight training in an aircraft unless you have at least 5 hours of flight time in a make and model of light-sport aircraft within the same set of aircraft as the aircraft in which you are providing training.

(f) You may not provide training to operate a light-sport aircraft in Class B, C, and D airspace, at an airport located in Class B, C, or D airspace, and to, from, through,

or at an airport having an operational control tower, unless you have the endorsement specified in §61.325, or are otherwise authorized to conduct operations in this airspace and at these airports.

(g) You may not provide training in a light-sport aircraft with a V_H greater than 87 knots CAS unless you have the endorsement specified in §61.327, or are otherwise authorized to operate that light-sport aircraft.

(h) You must perform all training in an aircraft that complies with the requirements of §91.109 of this chapter.

(i) If you provide flight training for a certificate, rating or privilege, you must provide that flight training in an aircraft that meets the following:

(1) The aircraft must have at least two pilot stations and be of the same category and class appropriate to the certificate, rating or privilege sought.

(2) For single place aircraft, pre-solo flight training must be provided in an aircraft that has two pilot stations and is of the same category and class appropriate to the certificate, rating, or privilege sought.

§61.417 Will my flight instructor certificate with a sport pilot rating list aircraft category and class ratings?

Your flight instructor certificate does not list aircraft category and class ratings. When you successfully pass the practical test for a flight instructor certificate with a sport pilot rating, regardless of the light-sport aircraft privileges you seek, the FAA will issue you a flight instructor certificate with a sport pilot rating without any category and class ratings. The FAA will provide you with a logbook endorsement for the category and class of light-sport aircraft you are authorized to provide training in.

§61.419 How do I obtain privileges to provide training in an additional category or class of light-sport aircraft?

If you hold a flight instructor certificate with a sport pilot rating and seek to provide training in an additional category or class of light-sport aircraft you must—

(a) Receive a logbook endorsement from the authorized instructor who trained you on the applicable areas of operation specified in §61.409 certifying you have met the aeronautical knowledge and flight proficiency requirements for the additional category and class flight instructor privilege you seek;

(b) Successfully complete a proficiency check from an authorized instructor other than the instructor who trained you on the areas specified in §61.409 for the additional category and class flight instructor privilege you seek;

(c) Complete an application for those privileges on a form and in a manner acceptable to the FAA and present this application to the authorized instructor who conducted the proficiency check specified in paragraph (b) of this section; and

(d) Receive a logbook endorsement from the instructor who conducted the proficiency check specified in paragraph (b) of this section certifying you are proficient in the areas of operation and authorized for the additional category and class flight instructor privilege.

§61.421 May I give myself an endorsement?

No. If you hold a flight instructor certificate with a sport pilot rating, you may not give yourself an endorsement for any certificate, privilege, rating, flight review, authorization, practical test, knowledge test, or proficiency check required by this part.

§61.423 What are the recordkeeping requirements for a flight instructor with a sport pilot rating?

(a) As a flight instructor with a sport pilot rating you must:

(1) Sign the logbook of each person to whom you have given flight training or ground training.

(2) Keep a record of the name, date, and type of endorsement for:

(i) Each person whose logbook or student pilot certificate you have endorsed for solo flight privileges.

(ii) Each person for whom you have provided an endorsement for a knowledge test, practical test, or proficiency check, and the record must indicate the kind of test or check, and the results.

(iii) Each person whose logbook you have endorsed as proficient to operate—

(A) An additional category or class of light-sport aircraft;

(B) An additional make and model of light-sport aircraft;

(C) In Class B, C, and D airspace; at an airport located in Class B, C, or D airspace; and to, from, through, or at an airport having an operational control tower; and

(D) A light-sport aircraft with a V_H greater than 87 knots CAS.

(iv) Each person whose logbook you have endorsed as proficient to provide flight training in an additional—

(A) Category or class of light-sport aircraft; and

(B) Make and model of light-sport aircraft.

(b) Within 10 days after providing an endorsement for a person to operate or provide training in an additional category and class of light-sport aircraft you must—

(1) Complete, sign, and submit to the FAA the application presented to you to obtain those privileges; and

(2) Retain a copy of the form.

(c) You must keep the records listed in this section for 3 years. You may keep these records in a logbook or a separate document.

§61.425 How do I renew my flight instructor certificate?

If you hold a flight instructor certificate with a sport pilot rating you may renew your certificate in accordance with the provisions of §61.197.

§61.427 What must I do if my flight instructor certificate with a sport pilot rating expires?

You may exchange your expired flight instructor certificate with a sport pilot rating for a new certificate with a sport pilot rating and any other rating on that certificate by passing a practical test as prescribed in §61.405 (b) or §61.183 (h) for one of the ratings listed on the expired flight instructor certificate. The FAA will reinstate any privilege authorized by the expired certificate.

§61.429 May I exercise the privileges of a flight instructor certificate with a sport pilot rating if I hold a flight instructor certificate with another rating?

If you hold a current and valid flight instructor certificate, a commercial pilot certificate with an airship rating, or a commercial pilot certificate with a balloon rating issued under this part, and you seek to exercise the privileges of a flight instructor

certificate with a sport pilot rating, you may do so without any further showing of proficiency, subject to the following limits:

(a) You are limited to the aircraft category and class ratings listed on your flight instructor certificate, commercial pilot certificate with an airship rating, or commercial pilot certificate with a balloon rating, as appropriate, when exercising your flight instructor privileges and the privileges specified in §61.413.

(b) You must comply with the limits specified in §61.415 and the recordkeeping requirements of §61.423.

(c) If you want to exercise the privileges of your flight instructor certificate, commercial pilot certificate with an airship rating, or commercial pilot certificate with a balloon rating, as appropriate, in a category, class, or make and model of light-sport aircraft for which you are not currently rated, you must meet all applicable requirements to provide training in an additional category or class of light-sport aircraft specified in §61.419.

§61.431 Are there special provisions for obtaining a flight instructor certificate with a sport pilot rating for persons who are registered ultralight instructors with an FAA-recognized ultralight organization?

If you are a registered ultralight instructor with an FAA-recognized ultralight organization on or before September 1, 2004, and you want to apply for a flight instructor certificate with a sport pilot rating, not later than January 31, 2008 –

(a) You must hold either a current and valid sport pilot certificate, a current recreational pilot certificate and meet the requirements §61.101 (c), or at least a current and valid private pilot certificate issued under this part.

(b) You must meet the eligibility requirements in §§61.403 and 61.23. You do not have to meet the aeronautical knowledge requirements specified in §61.407, the flight proficiency requirements specified in §61.409 and the aeronautical experience requirements specified in §61.411, except you must meet the minimum total flight time requirements in the category and class of light-sport aircraft specified in §61.411.

(c) You do not have to meet the aeronautical knowledge requirement specified in §61.407 (a) if you have passed an FAA-recognized ultralight organization's fundamentals of instruction knowledge test.

(d) You must submit a certified copy of your ultralight pilot records from the FAA-recognized ultralight organization. Those records must—

(1) Document that you are a registered ultralight flight instructor with that FAA-recognized ultralight organization; and

(2) Indicate that you are recognized to operate and provide training in the category and class of aircraft for which you seek privileges.

(e) You must pass the knowledge test and practical test for a flight instructor certificate with a sport pilot rating applicable to the aircraft category and class for which you seek flight instructor privileges.

PART 65—CERTIFICATION: AIRMEN OTHER THAN FLIGHT CREWMEMBERS

50. The authority citation for part 65 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701-44703, 44707, 44709-44711, 45102-45103, 45301-45302.

51. Amend §65.85 by designating the existing text as paragraph (a) and inserting phrase "Except as provided in paragraph (b) of this section," at the beginning of new paragraph (a), and adding paragraph (b) to read as follows:

§65.85 Airframe rating; additional privileges.

* * * * *

(b) A certificated mechanic with an airframe rating can approve and return to service an airframe, or any related part or appliance, of an aircraft with a special airworthiness certificate in the light-sport category after performing and inspecting a major repair or major alteration for products that are not produced under an FAA approval provided the work was performed in accordance with instructions developed by the manufacturer or a person acceptable to the FAA.

52. Amend §65.87 by designating the existing text as paragraph (a) and inserting the phrase "Except as provided in paragraph (b) of this section," at the beginning of new paragraph (a) and adding paragraph (b) to read as follows:

§65.87 Powerplant rating; additional privileges.

* * * * *

(b) A certificated mechanic with a powerplant rating can approve and return to service a powerplant or propeller, or any related part or appliance, of an aircraft with a special airworthiness certificate in the light-sport category after performing and inspecting a major repair or major alteration for products that are not produced under an

FAA approval, provided the work was performed in accordance with instructions developed by the manufacturer or a person acceptable to the FAA.

53. Amend §65.101 by revising paragraph (b) to read as follows:

§65.101 Eligibility requirements: General.

* * * * *

(b) This section does not apply to the issuance of a repairman certificate (experimental aircraft builder) under §65.104 or to a repairman certificate (light-sport aircraft) under §65.107.

54. Amend §65.103 by adding paragraph (c) to read as follows:

§65.103 Repairman certificate: Privileges and limitations.

* * * * *

(c) This section does not apply to the holder of a repairman certificate (light-sport aircraft) while that repairman is performing work under that certificate.

* * * * *

55. Add §65.107 to subpart E to read as follows:

§65.107 Repairman certificate (light-sport aircraft): Eligibility, privileges, and limits.

(a) Use the following table to determine your eligibility for a repairman certificate (light-sport aircraft) and appropriate rating:

To be eligible for…	You must…
(1) A repairman certificate (light-sport aircraft),	(i) Be at least 18 years old, (ii) Be able to read, speak, write, and understand English. If for medical reasons you cannot meet one of these requirements, the FAA may place limits on your repairman certificate necessary to safely perform the actions authorized by the certificate and rating, (iii) Demonstrate the requisite skill to determine whether a light-sport aircraft is in a condition for safe operation, and (iv) Be a citizen of the United States, or a citizen of a foreign country who has been lawfully admitted for permanent residence in the United States.
(2) A repairman certificate (light-sport aircraft) with an inspection rating,	(i) Meet the requirements of paragraph (a)(1) of this section, and (ii) Complete a 16-hour training course acceptable to the FAA on inspecting the particular class of experimental light-sport aircraft for which you intend to exercise the privileges of this rating.
(3) A repairman certificate (light-sport aircraft) with a maintenance rating,	(i) Meet the requirements of paragraph (a)(1) of this section, and (ii) Complete a training course acceptable to the FAA on maintaining the particular class of light-sport aircraft for which you intend to exercise the privileges of this rating. The training course must, at a minimum, provide the following number of hours of instruction: (A) For airplane class privileges--120-hours, (B) For weight-shift control aircraft class privileges—104 hours, (C) For powered parachute class privileges—104 hours, (D) For lighter than air class privileges—80 hours, (E) For glider class privileges—80 hours.

(b) The holder of a repairman certificate (light-sport aircraft) with an inspection rating may perform the annual condition inspection on a light-sport aircraft:

(1) That is owned by the holder;

(2) That has been issued an experimental certificate for operating a light-sport aircraft under §21.191 (i) of this chapter; and

(3) That is in the same class of light-sport-aircraft for which the holder has completed the training specified in paragraph (a)(2)(ii) of this section.

(c) The holder of a repairman certificate (light-sport aircraft) with a maintenance rating may—

(1) Approve and return to service an aircraft that has been issued a special airworthiness certificate in the light-sport category under §21.190 of this chapter, or any part thereof, after performing or inspecting maintenance (to include the annual condition inspection and the 100-hour inspection required by §91.327 of this chapter), preventive maintenance, or an alteration (excluding a major repair or a major alteration on a product produced under an FAA approval);

(2) Perform the annual condition inspection on a light-sport aircraft that has been issued an experimental certificate for operating a light-sport aircraft under §21.191 (i) of this chapter; and

(3) Only perform maintenance, preventive maintenance, and an alteration on a light-sport aircraft that is in the same class of light-sport aircraft for which the holder has completed the training specified in paragraph (a)(3)(ii) of this section. Before performing a major repair, the holder must complete additional training acceptable to the FAA and appropriate to the repair performed.

(d) The holder of a repairman certificate (light-sport aircraft) with a maintenance rating may not approve for return to service any aircraft or part thereof unless that person has previously performed the work concerned satisfactorily. If that person has not previously performed that work, the person may show the ability to do the work by performing it to the satisfaction of the FAA, or by performing it under the direct supervision of a certificated and appropriately rated mechanic, or a certificated repairman, who has had previous experience in the specific operation concerned. The repairman may not exercise the privileges of the certificate unless the repairman understands the current instructions of the manufacturer and the maintenance manuals for the specific operation concerned.

PART 91 —GENERAL OPERATING AND FLIGHT RULES

56. The authority citation for part 91 continues to read as follows:

Authority: 49 U.S.C. 106(g), 1155, 40103, 40113, 40120, 44101, 44111, 44701, 44709, 44711, 44712, 44715, 44716, 44717, 44722, 46306, 46315, 46316, 46504, 46506-56507, 47122, 47508, 47528–47531, articles 12 and 29 of the Convention on International Civil Aviation (61 stat. 1180).

57. Amend §91.1 by revising paragraph (b) to read as follows:

§91.1 Applicability.

* * * * *

(b) Each person operating an aircraft in the airspace overlying the waters between 3 and 12 nautical miles from the coast of the United States must comply with §§91.1 through 91.21; §§91.101 through 91.143; §§91.151 through 91.159; §§91.167 through 91.193; §91.203; §91.205; §§ 91.209 through 91.217; §91.221; §§91.303 through 91.319; §§91.323 through 91.327; §91.605; §91.609; §§91.703 through 91.715; and §91.903.

* * * * *

58. Amend §91.113 by revising paragraphs (d)(2) and (d)(3) to read as follows:

§91.113 Right-of-way rules: Except water operations.

* * * * *

(d) * * *

(2) A glider has the right-of-way over an airship, powered parachute, weight-shift-control aircraft, airplane, or rotorcraft.

(3) An airship has the right-of-way over a powered parachute, weight-shift-control aircraft, airplane, or rotorcraft.

* * * * *

59. Amend §91.126 by revising paragraph (b)(2) to read as follows:

§91.126 Operating on or in the vicinity of an airport in Class G airspace.

(b) * * *

(2) Each pilot of a helicopter or a powered parachute must avoid the flow of fixed-wing aircraft.

* * * * *

60. Amend §91.131 by revising paragraphs (b)(1)(i), (b)(1)(ii) and (b)(2), and by adding paragraphs (b)(1)(iii) and (b)(1)(iv) to read as follows:

§91.131 Operations in Class B airspace.

* * * * *

(b) * * *

(1) * * *

(i) The pilot in command holds at least a private pilot certificate;

(ii) The pilot in command holds a recreational pilot certificate and has met--

(A) The requirements of §61.101 (d) of this chapter; or

(B) The requirements for a student pilot seeking a recreational pilot certificate in §61.94 of this chapter;

(iii) The pilot in command holds a sport pilot certificate and has met --

(A) The requirements of §61.325 of this chapter; or

(B) The requirements for a student pilot seeking a recreational pilot certificate in §61.94 of this chapter; or

(iv) The aircraft is operated by a student pilot who has met the requirements of §61.94 or §61.95 of this chapter, as applicable.

* * * * *

(2) Notwithstanding the provisions of paragraphs (b)(1)(ii), (b)(1)(iii) and (b)(1)(iv) of this section, no person may take off or land a civil aircraft at those airports listed in section 4 of appendix D to this part unless the pilot in command holds at least a private pilot certificate.

* * * * *

61. Amend §91.155 by revising paragraph (b)(2) to read as follows:

§91.155 Basic VFR weather minimums.

* * * * *

(b) * * *

(2) Airplane, powered parachute, or weight-shift-control aircraft. If the visibility is less than 3 statute miles but not less than 1 statute mile during night hours and you are operating in an airport traffic pattern within 1/2 mile of the runway, you may operate an airplane, powered parachute, or weight-shift-control aircraft clear of clouds.

* * * * *

62. Amend §91.213 by revising paragraph (d)(1)(i) to read as follows:

§91.213 Inoperative instruments and equipment.

* * * * *

(d) * * *

(1) * * *

(i) Rotorcraft, non-turbine-powered airplane, glider, lighter-than-air aircraft, powered parachute, or weight-shift-control aircraft, for which a master minimum equipment list has not been developed; or

* * * * *

63. Amend §91.309 by revising the section heading and paragraphs (a) introductory text, (a)(3), (a)(5), and (b) to read as follows:

§91.309 Towing: Gliders and unpowered ultralight vehicles.

(a) No person may operate a civil aircraft towing a glider or unpowered ultralight vehicle unless –

* * * * *

(3) The towline used has breaking strength not less than 80 percent of the maximum certificated operating weight of the glider or unpowered ultralight vehicle and not more than twice this operating weight. However, the towline used may have a breaking strength more than twice the maximum certificated operating weight of the glider or unpowered ultralight vehicle if –

(i) A safety link is installed at the point of attachment of the towline to the glider or unpowered ultralight vehicle with a breaking strength not less than 80 percent of the maximum certificated operating weight of the glider or unpowered ultralight vehicle and not greater than twice this operating weight;

(ii) A safety link is installed at the point of attachment of the towline to the towing aircraft with a breaking strength greater, but not more than 25 percent greater, than that of the safety link at the towed glider or unpowered ultralight vehicle end of the towline and not greater than twice the maximum certificated operating weight of the glider or unpowered ultralight vehicle;

* * * * *

(5) The pilots of the towing aircraft and the glider or unpowered ultralight vehicle have agreed upon a general course of action, including takeoff and release signals, airspeeds, and emergency procedures for each pilot.

(b) No pilot of a civil aircraft may intentionally release a towline, after release of a glider or unpowered ultralight vehicle, in a manner that endangers the life or property of another.

64. Amend §91.319 by redesignating paragraph (e) as paragraph (h) and adding new paragraphs (e), (f) and (g) to read as follows:

§91.319 Aircraft having experimental certificates: Operating limitations.

* * * * *

(e) No person may operate an aircraft that is issued an experimental certificate under §21.191 (i) of this chapter for compensation or hire, except a person may operate an aircraft issued an experimental certificate under §21.191 (i)(1) for compensation or hire to—

(1) Tow a glider that is a light-sport aircraft or unpowered ultralight vehicle in accordance with §91.309; or

(2) Conduct flight training in an aircraft which that person provides prior to January 31, 2010.

(f) No person may lease an aircraft that is issued an experimental certificate under §21.191 (i) of this chapter, except in accordance with paragraph (e)(1) of this section.

(g) No person may operate an aircraft issued an experimental certificate under §21.191 (i)(1) of this chapter to tow a glider that is a light-sport aircraft or unpowered ultralight vehicle for compensation or hire or to conduct flight training for compensation or hire in an aircraft which that persons provides unless within the preceding 100 hours of time in service the aircraft has—

(1) Been inspected by a certificated repairman (light-sport aircraft) with a maintenance rating, an appropriately rated mechanic, or an appropriately rated repair station in accordance with inspection procedures developed by the aircraft manufacturer or a person acceptable to the FAA; or

(2) Received an inspection for the issuance of an airworthiness certificate in accordance with part 21 of this chapter.

(h) The FAA may issue deviation authority providing relief from the provisions of paragraph (a) of this section for the purpose of conducting flight training. The FAA will issue this deviation authority as a letter of deviation authority.

(1) The FAA may cancel or amend a letter of deviation authority at any time.

(2) An applicant must submit a request for deviation authority to the FAA at least 60 days before the date of intended operations. A request for deviation authority must contain a complete description of the proposed operation and justification that establishes a level of safety equivalent to that provided under the regulations for the deviation requested.

* * * * *

65. Add §91.327 to read as follows:

§91.327 Aircraft having a special airworthiness certificate in the light-sport category: Operating limitations.

(a) No person may operate an aircraft that has a special airworthiness certificate in the light-sport category for compensation or hire except—

(1) To tow a glider or an unpowered ultralight vehicle in accordance with §91.309 of this chapter; or

(2) To conduct flight training.

(b) No person may operate an aircraft that has a special airworthiness certificate in the light-sport category unless—

(1) The aircraft is maintained by a certificated repairman with a light-sport aircraft maintenance rating, an appropriately rated mechanic, or an appropriately rated repair station in accordance with the applicable provisions of part 43 of this chapter and maintenance and inspection procedures developed by the aircraft manufacturer or a person acceptable to the FAA;

(2) A condition inspection is performed once every 12 calendar months by a certificated repairman (light-sport aircraft) with a maintenance rating, an appropriately rated mechanic, or an appropriately rated repair station in accordance with inspection procedures developed by the aircraft manufacturer or a person acceptable to the FAA;

(3) The owner or operator complies with all applicable airworthiness directives;

(4) The owner or operator complies with each safety directive applicable to the aircraft that corrects an existing unsafe condition. In lieu of complying with a safety directive an owner or operator may—

(i) Correct the unsafe condition in a manner different from that specified in the safety directive provided the person issuing the directive concurs with the action; or

(ii) Obtain an FAA waiver from the provisions of the safety directive based on a conclusion that the safety directive was issued without adhering to the applicable consensus standard;

(5) Each alteration accomplished after the aircraft's date of manufacture meets the applicable and current consensus standard and has been authorized by either the manufacturer or a person acceptable to the FAA;

(6) Each major alteration to an aircraft product produced under a consensus standard is authorized, performed and inspected in accordance with maintenance and

inspection procedures developed by the manufacturer or a person acceptable to the FAA; and

(7) The owner or operator complies with the requirements for the recording of major repairs and major alterations performed on type-certificated products in accordance with §43.9 (d) of this chapter, and with the retention requirements in §91.417.

(c) No person may operate an aircraft issued a special airworthiness certificate in the light-sport category to tow a glider or unpowered ultralight vehicle for compensation or hire or conduct flight training for compensation or hire in an aircraft which that persons provides unless within the preceding 100 hours of time in service the aircraft has—

(1) Been inspected by a certificated repairman with a light-sport aircraft maintenance rating, an appropriately rated mechanic, or an appropriately rated repair station in accordance with inspection procedures developed by the aircraft manufacturer or a person acceptable to the FAA and been approved for return to service in accordance with part 43 of this chapter; or

(2) Received an inspection for the issuance of an airworthiness certificate in accordance with part 21 of this chapter.

(d) Each person operating an aircraft issued a special airworthiness certificate in the light-sport category must operate the aircraft in accordance with the aircraft's operating instructions, including any provisions for necessary operating equipment specified in the aircraft's equipment list.

(e) Each person operating an aircraft issued a special airworthiness certificate in the light-sport category must advise each person carried of the special nature of the aircraft and that the aircraft does not meet the airworthiness requirements for an aircraft issued a standard airworthiness certificate.

(f) The FAA may prescribe additional limitations that it considers necessary.

66. Amend §91.409 by revising paragraph (c)(1) to read as follows:

§91.409 Inspections.

* * * * *

(c) * * *

(1) An aircraft that carries a special flight permit, a current experimental certificate, or a light-sport or provisional airworthiness certificate;

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67. Amend Appendix D to part 91 by revising the section heading and introductory text of Section 4 to read as follows:

Appendix D to Part 91—Airports/Locations: Special Operating Restrictions

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Section 4. Locations at which solo student, sport, and recreational pilot activity is not permitted.

Pursuant to §91.131 (b)(2), solo student, sport, and recreational pilot operations are not permitted at any of the following airports.

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Issued in Washington, DC, on July 16, 2004.

/s/ Marion C. Blakey
Administrator