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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 23

[Docket No. FAA–2013–0413; Special Conditions No. 23–259–SC]

Special Conditions: Cessna Aircraft Company, Model J182T; Diesel Cycle Engine Installation

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final special conditions; request for comments.

SUMMARY: These special conditions are issued for the Cessna Aircraft Company (Cessna) Model J182T airplane. This airplane will have a novel or unusual design feature(s) associated with the installation of an aircraft diesel engine (ADE). The applicable airworthiness regulations do not contain adequate or appropriate safety standards for this design feature. These special conditions contain the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards.

DATES: The effective date of these special conditions is May 8, 2013. We must receive your comments by June 17, 2013.

ADDRESSES: Send comments identified by docket number [FAA–2013–0413] using any of the following methods:

☐ *Federal eRegulations Portal:* Go to *http://www.regulations.gov* and follow the online instructions for sending your comments electronically.

☐ *Mail:* Send comments to Docket Operations, M–30, U.S. Department of Transportation (DOT), 1200 New Jersey Avenue SE., Room W12–140, West Building Ground Floor, Washington, DC, 20590–0001.

☐ *Hand Delivery or Courier:* Take comments to Docket Operations in Room W12–140 of the West Building Ground Floor at 1200 New Jersey Avenue SE., Washington, DC, between 8 a.m., and 5 p.m., Monday through Friday, except Federal holidays.

☐ *Fax:* Fax comments to Docket Operations at 202–493–2251.

Privacy: The FAA will post all comments it receives, without change, to *http://regulations.gov,* including any personal information the commenter provides. Using the search function of the docket Web site, anyone can find and read the electronic form of all comments received into any FAA docket, including the name of the individual sending the comment (or signing the comment for an association, business, labor union, etc.). DOT's complete Privacy Act Statement can be found in the **Federal Register** published on April 11, 2000 (65 FR 19477–19478), as well as at *http://DocketsInfo.dot.gov*.

Docket: Background documents or comments received may be read at *http://www.regulations.gov* at any time. Follow the online instructions for accessing the docket or go to the Docket Operations in Room W12–140 of the West Building Ground Floor at 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m., and 5 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Mr. Peter Rouse, Federal Aviation Administration, Small Airplane Directorate, Aircraft Certification Service, 901 Locust, Room 301, Kansas City, MO 64106; telephone (816) 329–4135; facsimile (816) 329–4090.

SUPPLEMENTARY INFORMATION: The FAA has determined that notice and opportunity for prior public comment hereon are impracticable because these procedures would significantly delay issuance of the approval design and thus delivery of the affected aircraft. In addition, the substance of these special conditions has been subject to the public comment process in several prior instances with no substantive comments received. The FAA therefore finds that good cause exists for making these special conditions effective upon issuance.

Comments Invited

We invite interested people to take part in this rulemaking by sending written comments, data, or views. The most helpful comments reference a specific portion of the special conditions, explain the reason for any recommended change, and include supporting data. We ask that you send us two copies of written comments.

We will file in the docket all comments we receive, as well as a report summarizing each substantive public contact with FAA personnel concerning these special conditions. You can inspect the docket before and after the comment closing date. If you wish to review the docket in person, go to the address in the **ADDRESSES** section of this preamble between 7:30 a.m. and 4:00 p.m., Monday through Friday, except Federal holidays.

We will consider all comments we receive on or before the closing date for comments. We will consider comments filed late if it is possible to do so without incurring expense or delay. We may change these special conditions based on the comments we receive.

Background

On April 2, 2012, Cessna applied for an amendment to Type Certificate No. 3A13 to include the new Model J182T with the Societe de Motorisation Aeronautiques (SMA) Engines, Inc. SR305–230E–C1 which is a four-stroke, air cooled, diesel cycle engine that uses turbine (jet) fuel. The Model No. J182T, which is a derivative of the T182 currently approved under Type Certificate No. 3A13, is an aluminum, four place, single engine airplane with a cantilever high wing, with the SMA SR305–230E–C1 diesel cycle engine and associated systems installed.

In anticipation of the reintroduction of diesel engine technology into the small airplane fleet, the FAA issued Policy Statement PS–ACE100–2002–004 on May 15, 2004, which identified areas of technological concern. Refer to this policy for a detailed summary of the FAA's development of diesel engine requirements.

The general areas of concern involving the application of a diesel cycle engine are:

- The power characteristics of the engine,
- the use of turbine fuel in an airplane class that is typically powered by gasoline fueled engines,
- the vibration characteristics, both normal and with an inoperative cylinder,
- anticipated use of an electronic engine control system,

• the appropriate limitations and indications for a diesel cycle engine, and

• the failure modes of a diesel cycle engine.

A historical record review of diesel engine use in aircraft and part 23 identified these concerns. The review identified specific regulatory areas requiring evaluation for applicability to diesel engine installations. These concerns are not considered universally applicable to all types of possible diesel engines and diesel engine installations. However, after reviewing the Cessna installation, the SMA engine type, the SMA engine requirements, and Policy Statement PS–ACE100–2002–004, the FAA proposes engine installation and fuel system special conditions. The SMA engine has a Full Authority Digital Engine Control (FADEC), which also requires special conditions. The FADEC special conditions will be issued in a separate notice.

Type Certification Basis

Under the provisions of § 21.101, Cessna must show that the J182T meets the applicable provisions of the regulations incorporated by reference in Type Certificate No. 3A13 or the applicable regulations in effect on the date of application for the change to the model T182T. The regulations incorporated by reference in the type certificate are commonly referred to as the ''original type certification basis.'' In addition, the J182T certification basis includes special conditions and equivalent levels of safety.

If the Administrator finds that the applicable airworthiness regulations (i.e., 14 CFR part 23) do not contain adequate or appropriate safety standards for the J182T because of a novel or unusual design feature, special conditions are prescribed under the provisions of § 21.16.

In addition to the applicable airworthiness regulations and special conditions, the J182T must comply with the fuel vent and exhaust emission requirements of 14 CFR part 34 and the noise certification requirements of 14 CFR part 36.

The FAA issues special conditions, as defined in § 11.19, under § 11.38 and they become part of the type certification basis under § 21.101.

Special conditions are initially applicable to the model for which they are issued. Should the type certificate for that model be amended later to include any other model that incorporates the same novel or unusual design feature, or should any other model already included on the same type certificate be modified to incorporate the same novel or unusual design feature, the special conditions would also apply to the other model.

Novel or Unusual Design Features

The J182T will incorporate the following novel or unusual design features:

The Installation of an ADE

Discussion

Several major concerns were identified in developing FAA policy. These include installing the diesel engine and noting its vibration levels under both normal operating conditions and when one cylinder is inoperative. The concerns also include accommodating turbine fuels in airplane systems that have generally evolved based on gasoline requirements, anticipated use of a FADEC to control the engine, and appropriate limitations and indications for a diesel engine powered airplane. The general concerns associated with the aircraft diesel engine installation are as follows:

Installation and Vibration Requirements

Fuel and Fuel System Related Requirements

Limitations and Indications

Installation and Vibration Requirements: These special conditions include requirements similar to the requirements of § 23.901(d)(1) for turbine engines. In addition to the requirements of § 23.901 applied to reciprocating engines, the applicant will be required to construct and arrange each diesel engine installation to result in vibration characteristics that do not exceed those established during the type certification of the engine. These vibration levels must not exceed vibration characteristics that a previously certificated airframe structure has been approved for, unless such vibration characteristics are shown to have no effect on safety or continued airworthiness. The engine installation must be shown to be free of whirl mode flutter and also any one cylinder inoperative flutter effects. The engine limit torque design requirements as specified in § 23.361 are also modified.

An additional requirement to consider vibration levels and/or effects of an inoperative cylinder was imposed. Also, a requirement to evaluate the engine design for the possibility of, or effect of, liberating high-energy engine fragments, in the event of a catastrophic engine failure, requirements was added.

Fuel and Fuel System Related Requirements: Due to the use of turbine fuel, this airplane must comply with the requirements in § 23.951(c). In addition, the fuel flow requirements of § 23.955(c) are modified to be reflective of the diesel engine operating characteristics.

Section 23.961 will be complied with using the turbine fuel requirements. These requirements will be substantiated by flight-testing as described in Advisory Circular (AC) 23–8B, Flight Test Guide for Certification of Part 23 Airplanes.

This special condition specifically requires testing to show compliance to § 23.961 and adds the possibility of testing non-aviation diesel fuels.

To ensure fuel system compatibility and reduce the possibility of misfueling, and discounting the first clause of § 23.973(f) referring to turbine engines, the applicant will comply with § 23.973(f).

Due to the use of turbine fuel, the applicant will comply with § 23.977(a)(2), and § 23.977(a)(1) will not apply. ''Turbine engines'' will be interpreted to mean ''aircraft diesel engine'' for this requirement. An additional requirement to consider the possibility of fuel freezing was imposed.

Due to the use of turbine fuel, the applicant will comply with § 23.1305(c)(8).

Due to the use of turbine fuel, the applicant must comply with § 23.1557(c)(1)(ii). Section 23.1557(c)(1)(ii) will not apply. ''Turbine engine'' is interpreted to mean ''aircraft diesel engine'' for this requirement.

Limitations and Indications

Section 23.1305 will apply, except that the critical engine parameters for this installation that will be displayed include:

(1) Power setting, in percentage, and

(2) Fuel temperature.

Due to the use of turbine fuel, the requirements for § 23.1521(d), as applicable to fuel designation for turbine engines, as well as compliance to § 23.1557(c)(1)(ii) will be in lieu of § 23.1557(c)(1)(i).

Applicability

As discussed above, these special conditions are applicable to the Model J182T. Should Cessna apply at a later date for a change to the type certificate to include another model incorporating the same novel or unusual design feature, the special conditions would apply to that model as well.

Conclusion

This action affects only certain novel or unusual design features on one model of airplane. It is not a rule of general applicability and affects only the applicant who applied to the FAA for

approval of these features on the airplane.

The substance of these special conditions has been subjected to the notice and comment period in several prior instances and has been derived without substantive change from those previously issued. It is unlikely that prior public comment would result in a significant change from the substance contained herein. Therefore, because a delay would significantly affect the certification of the airplane, which is imminent, the FAA has determined that prior public notice and comment are unnecessary and impracticable, and good cause exists for adopting these special conditions upon issuance. The FAA is requesting comments to allow interested persons to submit views that may not have been submitted in response to the prior opportunities for comment described above.

List of Subjects in 14 CFR Part 23

Aircraft, Aviation safety, Signs and symbols.

Citation

The authority citation for these special conditions is as follows:

Authority: 49 U.S.C. 106(g), 40113, and 44701; 14 CFR 21.16 and 21.101; and 14 CFR 11.38 and 11.19.

The Special Conditions

Accordingly, pursuant to the authority delegated to me by the Administrator, the following special conditions are issued as part of the type certification basis for Cessna Model J182T airplanes.

1. Engine torque (Provisions similar to § 23.361(b)(1) and (c)(3)):

a. For diesel engine installations, the engine mounts and supporting structure must be designed to withstand the following:

(1) A limit engine torque load imposed by sudden engine stoppage due to malfunction or structural failure.

(2) The effects of sudden engine stoppage may alternatively be mitigated to an acceptable level by utilization of isolators, dampers clutches, and similar provisions, so unacceptable load levels are not imposed on the previously certificated structure.

b. The limit engine torque to be considered under § 23.361(a) must be obtained by multiplying the mean torque by a factor of four for diesel cycle engines.

(1) If a factor of less than four is used, it must be shown that the limit torque imposed on the engine mount is consistent with the provisions of § 23.361(c). In other words, it must be shown that the use of the factors listed in § 23.361(c)(3) will result in limit torques on the mount that are equivalent to or less than those imposed by a conventional gasoline reciprocating engine.

2. Flutter—(Compliance with § 23.629 (e)(1) and (e)(2) requirements):

The flutter evaluation of the airplane done in accordance with § 23.629 must include —

(a) Whirl mode degree of freedom which takes into account the stability of the plane of rotation of the propeller and significant elastic, inertial, and aerodynamic forces, and

(b) Propeller, engine, engine mount and airplane structure stiffness and damping variations appropriate to the particular configuration, and

(c) The flutter investigation will include showing the airplane is free from flutter with one cylinder inoperative.

3. Powerplant—Installation (Provisions similar to § 23.901(d)(1) for turbine engines):

Considering the vibration characteristics of diesel engines, the applicant must comply with the following:

a. Each diesel engine installation must be constructed and arranged to result in vibration characteristics that—

(1) Do not exceed those established during the type certification of the engine; and

(2) Do not exceed vibration characteristics that a previously certificated airframe structure has been approved for—

(i) Unless such vibration characteristics are shown to have no effect on safety or continued airworthiness, or

(ii) Unless mitigated to an acceptable level by utilization of isolators, dampers clutches, and similar provisions, so that unacceptable vibration levels are not imposed on the previously certificated structure.

4. Powerplant—Fuel System—Fuel system with water saturated fuel (Compliance with § 23.951(c) requirements):

Considering the fuel types used by diesel engines, the applicant must comply with the following:

a. Each fuel system for a diesel engine must be capable of sustained operation throughout its flow and pressure range with fuel initially saturated with water at 80° F and having 0.75cc of free water per gallon added and cooled to the most critical condition for icing likely to be encountered in operation.

b. Methods of compliance that are acceptable for turbine engine fuel systems requirements of § 23.951(c) are also considered acceptable for this requirement.

5. Powerplant—Fuel System—Fuel Flow (Compliance with § 23.955 requirements):

In place of § 23.955(c), the engine fuel system must provide at least 100 percent of the fuel flow required by the engine, or the fuel flow required to prevent engine damage, if that flow is greater than 100 percent. The fuel flow rate must be available to the engine under each intended operating condition and maneuver. The conditions may be simulated in a suitable mockup. This flow must be shown in the most adverse fuel feed condition with respect to altitudes, attitudes, and any other condition that is expected in operation.

6. Powerplant—Fuel System—Fuel system hot weather operation (Compliance with § 23.961 requirements):

In place of compliance with § 23.961, the applicant must comply with the following:

a. Each fuel system must be free from vapor lock when using fuel at its critical temperature, with respect to vapor formation, when operating the airplane in all critical operating and environmental conditions for which approval is requested. For turbine fuel, or for aircraft equipped with diesel cycle engines that use turbine or diesel type fuels, the initial temperature must be 110° F, −0°, +5° or the maximum outside air temperature for which approval is requested, whichever is more critical.

b. The fuel system must be in an operational configuration that will yield the most adverse, that is, conservative results.

c. To comply with this requirement, the applicant must use the turbine fuel requirements and must substantiate these by flight-testing, as described in Advisory Circular AC 23–8C, Flight Test Guide for Certification of Part 23 Airplanes.

7. Powerplant—Fuel system—Fuel tank filler connection (Compliance with § 23.973(f) requirements):

In place of compliance with § 23.973(e), the applicant must comply with the following:

For airplanes that operate on turbine or diesel type fuels, the inside diameter of the fuel filler opening must be no smaller than 2.95 inches.

8. Powerplant—Fuel system—Fuel tank outlet (Compliance with § 23.977(a)(2) requirements):

In place of compliance with § 23.977(a)(1), the applicant will comply with the following:

There must be a fuel strainer for the fuel tank outlet or for the booster pump. This strainer must, for diesel engine

powered airplanes, prevent the passage of any object that could restrict fuel flow or damage any fuel system component.

9. Equipment—General—Powerplant Instruments (Compliance with § 23.1305 and § 91.205 requirements):

In place of compliance with § 23.1305, the applicant will comply with the following:

Below are required powerplant instruments:

(a) A fuel quantity indicator for each fuel tank, installed in accordance with § 23.1337(b).

(b) An oil pressure indicator.

(c) An oil temperature indicator.

(d) An oil quantity measuring device for each oil tank which meets the requirements of § 23.1337(d).

(e) A tachometer indicating propeller speed.

(f) An indicating means for the fuel strainer or filter required by § 23.997 to indicate the occurrence of contamination of the strainer or filter before it reaches the capacity established in accordance with § 23.997(d).

Alternately, no indicator is required if the engine can operate normally for a specified period with the fuel strainer exposed to the maximum fuel contamination as specified in MIL–5007D. Additionally, provisions for replacing the fuel filter at this specified period (or a shorter period) are included in the maintenance schedule for the engine installation.

(g) Power setting either in percentage power, or through the use of manifold pressure.

(h) Fuel temperature indicator.

(i) Fuel flow indicator (engine fuel consumption).

If percentage power is used in place of manifold pressure, compliance to § 91.205 will be accomplished with the following:

The diesel engine has no manifold pressure gauge as required by § 91.205, in its place, the engine instrumentation as installed is to be approved as equivalent. The Type Certification Data Sheet (TCDS) is to be modified to show power indication will be accepted to be equivalent to the manifold pressure indication.

10. Operating Limitations and Information—Powerplant limitations—Fuel grade or designation (Compliance with § 23.1521 requirements):

All engine parameters that have limits specified by the engine manufacturer for takeoff or continuous operation must be investigated to ensure they remain within those limits throughout the expected flight and ground envelopes (e.g. maximum and minimum fuel temperatures, ambient temperatures, as applicable, etc.). This is in addition to the existing requirements specified by § 23.1521(b) and (c). If any of those limits can be exceeded, there must be continuous indication to the flight crew of the status of that parameter with appropriate limitation markings.

Instead of compliance with § 23.1521(d), the applicant must comply with the following:

The minimum fuel designation (for diesel engines) must be established so it is not less than required for the operation of the engine within the limitations in paragraphs (b) and (c) of § 23.1521.

11. Markings and Placards—Miscellaneous markings and placards—Fuel, and oil, filler openings (Compliance with § 23.1557(c)(1)(ii) requirements):

Instead of compliance with § 23.1557(c)(1)(i), the applicant must comply with the following:

Fuel filler openings must be marked at or near the filler cover with—

For diesel engine-powered airplanes—

(a) The words ''Jet Fuel''; and

(b) The permissible fuel designations, or references to the Airplane Flight Manual (AFM) for permissible fuel designations.

(c) A warning placard or note that states the following or similar:

''Warning—this airplane is equipped with an aircraft diesel engine; service with approved fuels only.''

The colors of this warning placard should be black and white.

12. Powerplant—Fuel system—Fuel-Freezing:

If the fuel in the tanks cannot be shown to flow suitably under all possible temperature conditions, then fuel temperature limitations are required. These limitations will be considered as part of the essential operating parameters for the aircraft. Limitations will be determined as follows:

(a) The takeoff temperature limitation must be determined by testing or analysis to define the minimum fuel cold-soaked temperature that the airplane can operate on.

(b) The minimum operating temperature limitation must be determined by testing to define the minimum acceptable operating temperature after takeoff (with minimum takeoff temperature established in (1) above).

13. Powerplant Installation—Vibration levels:

Vibration levels throughout the engine operating range must be evaluated and:

(a) Vibration levels *imposed on the airframe* must be less than or equivalent to those of the gasoline engine; or

(b) Any vibration level higher than that imposed on the airframe by the replaced gasoline engine must be considered in the modification and the effects on the technical areas covered by the following paragraphs must be investigated:

14 CFR part 23, §§ 23.251; 23.613; 23.627; 23.629 (or CAR 3.159, as applicable to various models); 23.572; 23.573; 23.574 and 23.901.

Vibration levels imposed on the airframe can be mitigated to an acceptable level by utilization of isolators, damper clutches, and similar provisions so that unacceptable vibration levels are not imposed on the previously certificated structure.

14. Powerplant Installation—One cylinder inoperative:

Tests or analysis, or a combination of methods, must show that the airframe can withstand the shaking or vibratory forces imposed by the engine if a cylinder becomes inoperative. Diesel engines of conventional design typically have extremely high levels of vibration when a cylinder becomes inoperative. Data must be provided to the airframe installer/modifier so either appropriate design considerations or operating procedures, or both, can be developed to prevent airframe and propeller damage.

15. Powerplant Installation—High Energy Engine Fragments:

It may be possible for diesel engine cylinders (or portions thereof) to fail and physically separate from the engine at high velocity (due to the high internal pressures). This failure mode will be considered possible in engine designs with removable cylinders or other non-integral block designs. The following is required:

(a) It must be shown that the engine construction type (massive or integral block with non-removable cylinders) is inherently resistant to liberating high energy fragments in the event of a catastrophic engine failure; or

(b) It must be shown by the design of the engine, that engine cylinders, other engine components or portions thereof (fragments) cannot be shed or blown off of the engine in the event of a catastrophic engine failure; or

(c) It must be shown that all possible liberated engine parts or components do not have adequate energy to penetrate engine cowlings; or

(d) Assuming infinite fragment energy, and analyzing the trajectory of the probable fragments and components, any hazard due to liberated engine parts or components will be minimized and the possibility of crew injury is

eliminated. Minimization must be considered during initial design and not presented as an analysis after design completion.

Issued in Kansas City, Missouri, on May 8, 2013.

Earl Lawrence,

Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2013–11731 Filed 5–15–13; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2013–0220; Directorate Identifier 2013–CE–002–AD; Amendment 39–17451; AD 2013–09–09]

RIN 2120–AA64

Airworthiness Directives; Slingsby Sailplanes Ltd. Sailplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: We are superseding an existing airworthiness directive (AD) for all Slingsby Sailplanes Ltd. Models Dart T.51, Dart T.51/17, and Dart T.51/17R sailplanes equipped with aluminum alloy spar booms. This AD results from mandatory continuing airworthiness information (MCAI) issued by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as an incident of glue joint failure on a starboard wing caused by water entering the area of the airbrake box that resulted in delamination and corrosion in the area of the aluminum alloy spar booms and the wing attach fittings. We are issuing this AD to require actions to address the unsafe condition on these products.

DATES: This AD is effective June 20, 2013.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of June 20, 2013.

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of December 14, 1998 (63 FR 58624, November 2, 1998).

ADDRESSES: You may examine the AD docket on the Internet at *http://www.regulations.gov* or in person at the Docket Management Facility, U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590.

For service information identified in this AD, contact Slingsby Advanced Composites Ltd., Ings Lane, Kirkbymoorside, North Yorkshire, England YO62 6EZ; telephone: +44(0)1751 432474; Internet: None. You may review copies of the referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329–4148.

FOR FURTHER INFORMATION CONTACT: Jim Rutherford, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329–4165; fax: (816) 329–4090; email: *jim.rutherford@faa.gov.*

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM was published in the **Federal Register** on March 6, 2013 (78 FR 14467), and proposed to supersede AD 98–22–15, Amendment 39–10863 (63 FR 58624, November 2, 1998).

Since we issued AD 98–22–15, Amendment 39–10863 (63 FR 58624, November 2, 1998), Slingsby Aviation Ltd. has revised the related service information to remove the 5-year repetitive ''cutout'' inspection and to add a repetitive annual inspection using an endoscope. The endoscope inspection method would be done using existing drain holes in the lower wing skin.

Using revised service information is mandatory within the United Kingdom airworthiness system. It is not necessary for the Civil Aviation Authority (CAA), which is the aviation authority for the United Kingdom, to issue an AD to mandate the use of new service information.

AD action is the only way the FAA can mandate the use of new service information; however, owners/operators may request approval from the FAA to use an alternative method of compliance (AMOC).

Several U.S. operators have complained that the repetitive 5-year ''cutout'' inspection in the wooden wing skin, currently required by AD 98–22–15, Amendment 39–10863 (63 FR 58624, November 2, 1998), was by default growing larger and larger with each inspection.

We have determined that the current 5-year repetitive ''cutout'' inspections will eventually weaken the wing structure and could result in an unsafe condition. We concur with the change to the annual endoscope inspection.

Comments

We gave the public the opportunity to participate in developing this AD. We have considered the comments received. John Wells, Michael Hoke, Chad Croix Wille, and one anonymous commenter support the NPRM (78 FR 14467, March 6, 2013).

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting the AD as proposed except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (78 FR 14467, March 6, 2013) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (78 FR 14467, March 6, 2013).

Costs of Compliance

We estimate that this AD will affect 10 products of U.S. registry. We also estimate that it will take about 40 work-hours per product to comply with the initial inspection requirement retained from AD 98–22–15, Amendment 39–10863 (63 FR 58624, November 2, 1998) in this AD. The average labor rate is $85 per work-hour.

Based on these figures, we estimate the cost of the initial inspection required in this AD on U.S. operators to be $34,000, or $3,400 per product.

We also estimate that it will take about 2 work-hours per product to comply with the new repetitive inspection requirement in this AD. The average labor rate is $85 per work-hour.

Based on these figures, we estimate the cost of the new repetitive inspection required in this AD on U.S. operators to be $1,700, or $170 per product.

We have no way of determining the number of repetitive inspections an owner/operator will incur over the life of the sailplane or the number of sailplanes that will need repairs.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of