in Figure 3 above, for any probable system-failure condition combined with any damage required or selected for investigation by § 25.571(b).

(3) Consideration of certain failure conditions may be required by other subparts of part 25 regardless of calculated system reliability. Where analysis shows the probability of these failure conditions to be less than 10^{-9}, criteria other than those specified in this paragraph may be used for structural substantiation to show continued safe flight and landing.

(d) *Failure indications.* For system-failure detection and indication, the following apply:

(1) The system must be checked for failure conditions, not extremely improbable, that degrade the structural capability below the level required by part 25, or that significantly reduce the reliability of the remaining system. To the extent practicable, these failures must be detected and annunciated to the flight crew before flight. Certain elements of the control system, such as mechanical and hydraulic components, may use special periodic inspections, and electronic components may use daily checks, in lieu of warning systems, to achieve the objective of this requirement. These certification-maintenance requirements must be limited to components that are not readily detectable by normal warning systems, and where service history shows that inspections provide an adequate level of safety.

(2) The existence of any failure condition, not extremely improbable, during flight, that could significantly affect the structural capability of the airplane and for which the associated reduction in airworthiness can be minimized by suitable flight limitations, must be signaled to the flight crew. Failure conditions that result in a factor of safety between the airplane strength and the loads of Subpart C below 1.25, or flutter margins below V″, must be signaled to the crew during flight.

(e) *Dispatch with known failure conditions.* If the airplane is to be dispatched in a known system-failure condition that affects structural performance, or affects the reliability of the remaining system to maintain structural performance, then the provisions of § 25.302 must be met for the dispatched condition and for subsequent failures. Flight limitations and expected operational limitations may be taken into account in establishing Q_j as the combined probability of being in the dispatched failure condition and the subsequent failure condition for the safety margins in Figures 2 and 3. These limitations must be such that the probability of being in this combined failure state, and then subsequently encountering limit-load conditions, is extremely improbable. No reduction in these safety margins is allowed if the subsequent system-failure rate is greater than 10^{-3} per hour.

Issued in Renton, Washington, on December 31, 2008.

Linda Navarro,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. E9–10164 Filed 5–1–09; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2007–27862; Directorate Identifier 2007–CE–036–AD]

RIN 2120–AA64

Airworthiness Directives; Thrush Aircraft, Inc. (Type Certificate Previously Held by Quality Aerospace, Inc. and Ayres Corporation) Model 600 S2D and S2R (S–2R) Series Airplanes

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

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to supersede Airworthiness Directive (AD) 2006–07–15, which applies to Thrush Aircraft, Inc. Model 600 S2D and S2R (S–2R) series airplanes (type certificate previously held by Quality Aerospace, Inc. and Ayres Corporation). AD 2006–07–15 currently requires repetitive inspections of the ¼-inch and 5/16-inch bolt hole areas on the wing front lower spar caps for fatigue cracking; replacement or repair any wing front lower spar cap where fatigue cracks are found; and reporting of any fatigue cracks found to the FAA. AD 2006–07–15 also puts the affected airplanes into groups for compliance time and applicability purposes. Since we issued AD 2006–07–15, FAA analysis reveals that inspections are not detecting all existing cracks and shows the incidences of undetected cracks will increase as the airplanes age. Consequently, this proposed AD would retain the actions of AD 2006–07–15 and impose a life limit on the wing front lower spar caps that requires replacement of the wing front lower spar caps when the life limit is reached. This proposed AD would also change the requirements and applicability of the groups discussed above and remove the ultrasonic inspection method. We are proposing this AD to prevent wing front lower spar cap failure caused by undetected fatigue cracks. Such failure could result in loss of a wing in flight.

DATES: We must receive comments on this proposed AD by July 6, 2009.

ADDRESSES: Use one of the following addresses to comment on this proposed AD:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov.* Follow the instructions for submitting comments.
- *Fax:* (202) 493–2251.
- *Mail:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590.
- *Hand Delivery:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Thrush Aircraft, Inc., 300 Old Pretoria Road, P.O. Box 3149, Albany, Georgia 31706–3149. The service information is also available on the Internet at *www.thrushaircraft.com.*

For Further Information, Contact One of the Following:

—Cindy Lorenzen, Aerospace Engineer, ACE–115A, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Blvd., Suite 450, Atlanta, Georgia 30349; telephone: (770) 703–6078; facsimile: (770) 703–6097; e-mail: *cindy.lorenzen@faa.gov;* or

—Keith Noles, Aerospace Engineer, ACE–117A, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Blvd., Suite 450, Atlanta, Georgia 30349; telephone: (770) 703–6085; facsimile: (770) 703–6097; e-mail: *gregory.noles@faa.gov.*

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments regarding this proposed AD. Send your comments to an address listed under the **ADDRESSES** section. Include the docket number, ''FAA–2007–27862; Directorate Identifier 2007–CE–036–AD'' at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the proposed AD. We will consider all

comments received by the closing date and may amend the proposed AD in light of those comments.

We will post all comments we receive, without change, to *http://www.regulations.gov*, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive concerning this proposed AD.

Discussion

History of AD Actions

An accident in which the wing on a Thrush S2R series airplane separated from the airplane in flight prompted us to issue AD 97–13–11. The following presents the sequential AD history on this subject to date:

- AD 97–13–11, Amendment 39–10071 (62 FR 36978, July 10, 1997), required (until superseded by AD 97–17–03) inspecting certain areas of the wing front lower spar caps for fatigue cracks, replacing any wing front lower spar cap where fatigue cracks were found, and reporting any fatigue cracks to the FAA.
- AD 97–17–03, Amendment 39–10195 (62 FR 43926, August 18, 1997), superseded AD 97–13–11. AD 97–17–03 corrected a model designation and retained the actions of AD 97–13–11.
- AD 2000–11–16, Amendment 39–11764 (65 FR 36055, June 7, 2000), superseded AD 97–17–03. AD 2000–11–16 changed the inspections required in AD 97–17–03 to repetitive, added airplanes to the Applicability section, changed the initial compliance time for all airplanes, and arranged the affected airplanes into six groups based on usage and configuration.
- AD 2003–07–01, Amendment 39–13097 (68 FR 15653, April 1, 2003), superseded AD 2000–11–16. AD 2003–07–01 added airplanes manufactured with a similar design to the Applicability section and added an additional repair option.
- AD 2006–07–15, Amendment 39–14542 (71 FR 16691, April 4, 2006), superseded AD 2003–07–01. AD 2006–07–15 increased the inspection frequency of Groups 1, 2, 3, and 6 airplanes and lowered the initial inspection time of Group 2 airplanes based on analysis of crack report data compiled from the previous ADs.

Events That Initiated This Proposed AD

All of the ADs listed above required submitting reports to the FAA anytime a fatigue crack was found on a wing front lower spar cap. Recent analysis of the data from those reports and other historical and statistical data indicate the current inspections are not completely addressing the unsafe condition.

Specifically, the data indicate a risk that some airplanes in the Thrush fleet may currently have undetected fatigue cracks in the steel spar cap using the existing inspection program. Airplanes with cracks in the wing front lower spar caps are unable to meet ultimate strength requirements, which could lead to a wing failure. As the incidences of cracking increase, which has occurred in the Thrush airplanes, the chance of an existing crack not being detected during an inspection increases.

FAA Analysis

The FAA used a risk-based probability analysis to determine the risk of fatigue cracks occurring in the wing front lower spar cap on Model 600 S2D and S2R (S–2R) series airplanes. This analysis indicates the risk to the pilot and the public is too great to allow the continuation of the repetitive inspections as the only method to ensure the safety of these airplanes. The actions in this proposed AD are necessary to assure the continued airworthiness of these airplanes.

We analyzed data obtained from reports of 117 fatigue cracks found on the wing front lower spar caps on these airplanes since 1997. The analysis of the crack reports led to our determination to consider imposing a life limit on the wing front lower spar caps. We have confidence in the accuracy of the reports submitted by the owner/operators, Airframe and Powerplant (A&P) mechanics, and Level 2 and 3 non-destructive inspectors. Anyone with documented evidence of owner/operators, inspectors, or A&P mechanics on behalf of the owner submitting inaccurate crack reports or not submitting crack reports to the FAA should send that evidence to their local FAA Flight Standards District Office.

We have a documented occurrence of a fatigue crack that went undetected for at least two inspection cycles. The crack grew until the wing front lower spar cap was completely severed, which is considered a failure even though the wing stayed attached to the airplane. The ''big butterfly'' plate and the lower splice plate, part numbers (P/Ns) 20211–09 and 20211–11 respectively, installed on this airplane as an optional modification helped keep the wing together; however, the plates are not designed to carry all of the possible flight loads in the event a spar cap is severed.

Installing stronger ''big butterfly'' plates is beneficial because it reduces stress in the wing front lower spar caps. The reduced stress slows the crack growth rate in the spar cap. This slower crack growth rate in airplanes equipped with ''big butterfly'' plates allows for less frequent inspections. Even though P/Ns 20211–09 and 20211–11 reduce stress in the wing front lower spar caps and slow the crack growth rate, the plates will not handle all possible flight loads once the spar cap is severed. Any known cracks must still be repaired.

Thrush Aircraft, Inc. has developed Custom Kit No. CK–AG–41, Revision A, dated March 8, 2007. This kit includes parts and procedures for replacing both wing front lower spar caps with new wing front lower spar caps, P/Ns 20207–15 and 20207–16, new inboard spar webs and doublers, and new, thicker ''big butterfly'' plate and lower splice plate, P/Ns 94418–5 and 94418–7 respectively.

Airplanes that have Custom Kit No. CK–AG–41, Revision A, installed in its entirety will have lower stresses in the spar cap, which will delay the initiation of fatigue cracks and slow the fatigue crack growth rate allowing for less frequent inspections. A life limit would remain the same even after Custom Kit No. CK–AG–41, Revision A, is installed in its entirety. If additional fatigue testing and analysis is completed on this configuration in the future, a life limit may be adjusted.

Our analysis showed the wing front lower spar caps will all crack due to fatigue. In determining the maximum time allowed for life limits, we gave consideration to the following:

- Reliability of the significant amount of crack data on the Thrush fleet;
- Existence of the on-going inspection program for the wing front lower spar caps; and
- Allowance of credit for time the airplanes operated with lower horsepower radial engines and were later modified by installing a turbine engine, a higher horsepower radial engine, or larger hopper.

We could not consider the following when determining life limits:

- Individual airplanes operated at lower weights; and
- Individual airplanes operated at lower G loads.

To consider these factors, individual airplanes would need to have recorded data for every flight since the wings were installed showing the weight and recorded Gs throughout each flight, along with fatigue analysis and tests using this data.

In addition, we could not consider the effect of the following modifications when determining life limits:

- Kaplan splice blocks installed;
- ''Big butterfly'' plates and lower splice plates installed;

• Winglets installed; or
• Cold work process on the bolt holes performed.

We do not have service information to calculate the effect of these modifications, and accurate fatigue test data or fatigue analysis data supported by tests has not been provided to us for these configurations. If we receive accurate fatigue substantiation data for airplanes with these modifications, we may allow changes to life limits by an alternative method of compliance.

There is evidence of sharp, uneven edges on the spar cap bolt holes that resulted from the manufacturing process in Group 5 airplanes. Five fatigue cracks have been reported on Group 5 airplanes, and our analysis concludes fatigue cracks will occur on all these airplanes. Premature fatigue cracks begin when there is a crack starter, such as an uneven edge. At this time, there is no rework method to address the condition of these wing front lower spar caps with uneven bolt hole edges. Once the original wing front lower spar caps are replaced, a higher life limit for wing front lower spar caps without uneven bolt hole edges may be used.

Initial compliance times for replacement of the wing front lower spar caps would be based on risk analysis that allows for compliance scheduling. For any of the affected airplanes that may exceed any life limits, the compliance time range would be based on total hours time-in-service (TIS), which would address those high-usage airplanes first. Graduated compliance times would help alleviate grounding of airplanes due to the limited supply of wing front lower spar caps, while still addressing the increased risk for high-usage airplanes.

Long-Term Continued Operational Safety

Repeated loads and the resulting stresses in the metal lead to fatigue. Over time, these stresses cause the metal to wear out and cracks will form in these airplanes even when operated within the approved limitations and envelope. Higher stresses in the wing front lower spar cap, caused by pulling excessive Gs and/or operating over the design weight of the airplane, will accelerate metal fatigue. Metal will also fatigue more quickly when operated in a wet or corrosive environment, which exists when dispensing agricultural chemicals or dropping fire retardants or water.

Any type of inspection method may be affected by the reliability of the equipment used, the inspection procedure used, the environment in which the inspection is done, the quality of the calibration reference standard used, and various human factors, such as the knowledge, skill, experience, and dexterity of the inspector. Because of all these variables, most inspection results, while very good, are not always 100-percent accurate. Over time, the probability of failing to detect a crack increases due to these variables, which increases the risk to the safety of these airplanes.

Studies of the factors leading to inspection inaccuracy and their effect on a variety of inspection methods, including magnetic particle inspections and eddy current inspections, have been done by the National Aeronautics and Space Administration (since 1973 for the Space Shuttle design), the United States Air Force, and the FAA. These studies show variability in inspection results that are inherent to any measurement process.

We received a report of cracks not being detected in the Thrush wing front lower spar cap using the ultrasonic method because of the configuration of the joint. Our records indicate that ultrasonic inspections are no longer being used in the field. This inspection method should be removed. If ultrasonic inspections are no longer allowed for these inspections, the availability of inspection facilities should not be affected because the two inspection facilities certified for ultrasonic inspections are also certified for eddy current inspections.

As wing front lower spar caps accumulate hours TIS beyond the time when cracks have been found on other products of the same type design, the likelihood of fatigue cracks occurring in these wing front lower spar caps increases. Many of the affected airplanes have wing front lower spar caps that have been in service well past the number of hours TIS when cracks have been appearing on wing front lower spar caps in other products of the same type design. FAA statistical analysis of the crack data indicates the risk of a wing failure occurring is becoming very high for these airplanes.

Reclassification of Airplane Groups

A recent review of the manufacturer's build record data shows some airplanes were placed in incorrect Groups and one airplane was inadvertently left out in the previous ADs. Our review shows that Model S2R–T34 airplanes, serial numbers (S/Ns) T34–147 through T34–167, were built with wing front lower spar caps identical to Group 2 airplanes; these airplanes should be reclassified from Group 1 to Group 2. Model S2R–G10 airplane, S/N G10–137, is currently included in Group 4 airplanes but was built identical to Group 2; this airplane should be reclassified into Group 2. We inadvertently omitted Model S2R–T34 airplane, S/N T34–170, from AD 2006–07–15; that airplane should be included in Group 2. We inadvertently listed Model S2R–T34 airplane, S/N T34–225, in both Group 2 and Group 4 airplanes in AD 2006–07–15; it should be in Group 2 only. Model S2R–G1 airplane, S/Ns G1–107, G1–108, G1–109; Model S2R–G10 airplane, S/Ns G10–139 and G10–142; and Model S2R–T34 airplanes, S/Ns T34–236, T34–237, and T34–238, were built identical to Group 5; these airplanes should be in Group 5. No airplanes were built to the configuration previously identified as Group 4; Group 4 should be removed.

Relevant Service Information

The following service information was included in AD 2006–07–15 and will be included in this proposed AD:

—Ayres Corporation Service Bulletin No. SB–AG–39, dated September 17, 1996;
—Ayres Corporation Custom Kit No. CK–AG–29, dated December 23, 1997; and
—Quality Aerospace, Inc. Custom Kit No. CK–AG–30, dated December 6, 2001.

The new service information for this proposed AD is Thrush Aircraft, Inc. Custom Kit No. CK–AG–41, Revision A, dated March 8, 2007.

FAA's Determination and Requirements of the Proposed AD

We are proposing this AD because we evaluated all information and determined the unsafe condition described previously is likely to exist or develop on other products of the same type design. This proposed AD would supersede AD 2006–07–15 with a new AD that would:

• Retain the actions of AD 2006–07–15;
• Add life limits for the wing front lower spar caps;
• Lower the initial and repetitive inspection times for Group 5 airplanes;
• Correct some airplane Group classifications;
• Add an airplane to the Applicability section; and
• Remove the use of ultrasonic inspection methods.

The initial compliance time for all airplanes would be at least an additional 500 hours TIS after the effective date of the proposed AD for replacement of the wing front lower spar caps. Calculated from actual flight hour data from 285 S2R series airplanes, 500 hours TIS equates to the average yearly operational

time. The proposed compliance schedule should give owner/operators enough time to schedule the replacement of the wing front lower spar caps.

Although not required in this proposed AD, we recommend installing ''big butterfly'' and lower splice plates, P/Ns 20211–09 and P/N 20211–11, or Thrush Aircraft, Inc. Custom Kit No. CK–AG–41, Revision A, since they increase the strength of the wing beyond the minimum safety standards.

This proposed AD would require you to use the service information described previously to perform these actions.

Costs of Compliance

We estimate that this proposed AD would affect 808 airplanes in the U.S. registry, including those airplanes affected by AD 2006–07–15.

We estimate the following costs to do each proposed inspection:

Labor cost	Parts cost	Total cost per airplane	Total cost on U.S. operators
3 work-hours × $80 = $240	$525	$765	$618,120

We estimate the following costs to do cold work of bolt holes for the repair that may be required based on the results of the proposed inspection. We have no way of determining the number of airplanes that may need such repair:

Labor cost	Parts cost	Total cost per airplane
1 work-hour × $80 = $80	$100	$180

We estimate the following costs to do any reaming of outer holes to 5/16-inch diameter for the repair that may be required based on the results of the proposed inspection. We have no way of determining the number of airplanes that may need such repair:

Labor cost	Parts cost	Total cost per airplane
1 work-hour × $80 = $80	None	$80

We estimate the following costs to do any drilling and reaming of outer holes and adding three holes to install a Kaplan splice block for the repair that may be required based on the results of the proposed inspection. We have no way of determining the number of airplanes that may need such modification:

Labor cost	Parts cost	Total cost per airplane
65 work-hours × $80 = $5,200	$4,400 for splice block and $600 for hardware	$10,200

We estimate the following costs to do the proposed optional installation of Thrush Aircraft, Inc. Custom Kit No. CK–AG–41, Revision A, dated March 8, 2007. This kit may be used to do any necessary wing front lower spar cap replacement that would be required based on the results of the proposed inspection or that would be required based on reaching the proposed life limit:

Labor cost	Parts cost	Total cost per airplane
300 work-hours × $80 = $24,000	$40,000	$64,000

We estimate the following costs to do any necessary wing front lower spar cap replacement that would be required based on the results of the proposed inspection or by the wing front lower spar cap reaching the proposed life limit:

Labor cost per wing front lower spar cap	Parts cost per wing front lower spar cap	Total cost per airplane	Total cost on U.S. operators
200 work-hours × $80 = $16,000	$8,000	Each spar cap replacement = $24,000 Two spar caps per airplane = $48,000.	$38,784,000

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 the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, ''General requirements.'' Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority

because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Initial Regulatory Flexibility Analysis

Introduction and Purpose of This Analysis

The Regulatory Flexibility Act of 1980 (Pub. L. 96–354) (RFA) establishes ''as a principle of regulatory issuance that agencies shall endeavor, consistent with the objectives of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of the businesses, organizations, and governmental jurisdictions subject to regulation.'' To achieve this principle, the RFA requires agencies to solicit and consider flexible regulatory proposals and to explain the rationale for their actions to assure that such proposals are seriously considered.'' The RFA covers a wide-range of small entities, including small businesses, not-for-profit organizations, and small governmental jurisdictions.

Unless the FAA can certify that a proposed rule will not have a significant economic impact on a substantial number of small entities, the FAA is required to prepare an initial regulatory flexibility analysis (IRFA) as described in § 603 of the RFA. Such an analysis must include (1) a description of the reasons for the agency's action; (2) a statement regarding the objectives and legal basis for the proposed rule; (3) an estimate of the number of small entities that will be affected by the proposed rule; (4) a description of the projected recordkeeping, reporting, and other compliance costs; (5) a statement regarding any potential duplication, overlap, or conflict with all other relevant rules; and (6) a description of any significant alternatives that may minimize the significant economic impact of the proposed rule on small entities. Based on the following analysis, the FAA concludes that this proposed rule will have a significant economic impact on a substantial number of small entities.

Reasons Action by the FAA Is Being Considered

A series of ADs, beginning in 1997 and culminating in AD 2006–07–15 in 2006, addressed the issue of fatigue cracking of the wing front lower spar caps in Thrush Aircraft, Inc. (Thrush) Model 600 S2D and S2R (S–2R) series airplanes (type certificate previously held by Quality Aerospace, Inc. and Ayres Corporation). This type of fatigue cracking, if not addressed, could result in catastrophic wing failure. The original 1997 AD was issued after an accident on an S2R series airplane in which the wing separated from the airplane in flight. Requirements of inspection and possible replacement were changed in 2000 to repetitive inspections and possible replacement. In 2006, the inspection rate was doubled after a completely severed spar cap was found on one of the affected airplanes and the FAA noted that it was working with Thrush to develop a future terminating action. Analysis indicated that an undetected crack had existed during the previous two repetitive inspections of that spar cap.

Subsequent FAA analysis has shown that spar cap fatigue cracking has increased as the fleet has aged, and will continue to increase. Consequently, the incidences of undetected cracks will increase, increasing the probability of catastrophic wing failure. The FAA has concluded that repetitive inspections, as required since the 2000 AD, are insufficient by themselves to ensure the safety of these airplanes and, accordingly, in this proposed AD the FAA proposes spar cap life limits to address this safety issue.

Objectives of, and Legal Basis for, the Proposed Rule

The FAA is issuing this rulemaking under the authority set forth in 49 U.S.C. 44701(a)(5), which mandates the Administrator prescribe regulations for practices, methods, and procedures necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on the airplanes identified in this AD.

Description of the Small Entities That the Proposed Rule Will Apply and an Estimate of Their Number

This proposed rule would potentially affect 808 U.S. registered and operated Thrush Model 600S2D and S2R (S–2R) series airplanes.[1] In conducting this analysis, the FAA reviewed data from the FAA Registry (Registry) to determine how many of the affected Thrush airplanes are registered and operated by small entities. The Registry indicates that these 808 airplanes are owned by 546 separate entities in agricultural aviation. Although the Registry does not record financial or business data about the registered owners of aircraft, and such data for these entities are not readily available elsewhere, it appears that most, if not all, of the 546 entities are engaged in crop dusting, spraying, and seeding operations. These activities are classified in North American Industry Classification System (NAICS) industry, NAICS 115112—Soil Preparation, Planting, and Cultivating (including Crop Dusting, Crop Spraying). The concentration of these entities in a single NAICS industry reflects the specialized nature of agricultural airplanes with restricted airworthiness certificates. Furthermore, several of these entities were classified in the Standard Industrial Classification (SIC) equivalent of NAICS 115112 by *http://www.manta.com.* Although a few of these entities may also be engaged in firefighting, which is classified in NAICS 115310—Support Activities for Forestry (including Forest Fire Suppression), the FAA is unable to identify any of these entities as being principally engaged in firefighting. The Small Business Administration (SBA) small business classification for NAICS 115112 is $6.5 million in business receipts, and $16.5 million in business receipts for NAICS 115310. Only one entity in this sample appears to have business receipts over $6.5 million, and no entity has business receipts in excess of $16.5 million. Using the total number of airplanes owned as a size criterion, the FAA selected a sample of 41 of the largest affected entities, and found median sales shown by *http://www.manta.com* to be just $250,000 annually. Firms in agricultural aviation appear to be inherently of small size. Accordingly, the FAA estimates that 545 small entities will be affected by this proposed rule.

Description of the Projected Reporting, Recordkeeping, and Other Compliance Requirements of the Proposed AD

The proposed AD does not impose any additional reporting or recordkeeping requirements beyond those required by the 2006 AD. The proposed rule would retain the requirements of AD 2006–07–15 and impose a life-limit on the wing front lower spar caps, which would require operators of affected airplanes to replace the wing front lower spar caps when the life-limit is reached.

The estimated compliance cost varies widely by airplane submodel; from a cost of zero for the more than 200 older airplanes that we estimate will retire[2] before the life-limit on their wing front lower spar caps is reached, to a cost of $320,000 (5 replacements at $64,000 per

[1] FAA Registry, *http://www.faa.gov/licenses_certificates/aircraft_certification/aircraft_registry/releasable_aircraft_download.* Data downloaded on 4/14/08.

[2] As fully analyzed in the ''Cost of Compliance'' section of this proposed rule, the FAA estimates that the airplanes affected by this proposed rule retire at age 40.

replacement) for two airplanes. Individual airplane compliance costs will likely result in costs to the small entities that own these airplanes. The exact cost will vary, depending on the number of affected Thrush airplanes owned by the entity and the specific compliance cost for each airplane. The ownership table below shows the variation in the number of owners with particular numbers of airplanes. The table shows that almost 75% of the 546 individual owners have only one affected airplane, and more than 90% of owners have no more than two affected airplanes. The average (mean) number of affected airplanes held is 1.48, while the median number held is just 1.00, so the median airplane cost is equivalent to the median owner cost.

NUMBER OF THRUSH AD OWNERS HAVING PARTICULAR NUMBERS OF AFFECTED AIRPLANES

	Number of affected airplanes held by single owner	Number of owners	Cumulative %
	1	406	74.4
	2	86	90.1
	3	26	94.9
	4	13	97.3
	5	7	98.5
	6	2	98.9
	7	2	99.3
	8	1	99.5
	9	2	99.8
	13	1	100.0
Total	808	546	
Mean	1.48		
Median	1.00		

Source: FAA Registry. Data downloaded on 4/18/08.

In the ''Cost of Compliance'' section of this proposed AD, the FAA estimates total cost (undiscounted) to be $37.1 million and the present value cost to be $25.2 million. The FAA estimates that 545 of the 546 airplanes affected by this proposed AD are small firms, and, in fact, 98.8% of the proposed AD's estimated cost is attributed to small entities. The following documents and analyzes the impact of this cost on the substantial number of small firms identified in this proposed AD.

Economic Impact on Small Entities

Because the Registry does not collect financial or business data on these entities, and such data is not readily available elsewhere, the FAA also used Census Bureau size distribution data to assess the economic impact on small firms. The FAA used data from the 2002 Census since this is the latest Census for which size distribution by business receipts is readily available. These data are available in a special Census compilation for the SBA.[3] The FAA used the data for NAICS 115112—Soil Preparation, Planting, and Cultivating (including Crop Dusting, Crop Spraying), but did not use the data for NAICS 115310—Support Activities for Forestry (including Forest Fire Suppression) since, as noted above, a very high percentage of the affected small firms, if not all, meet the classification standard of NAICS 115112. Moreover, the size distribution of NAICS 115310 appears to be similar to that of NAICS 115112. The concentration of the affected airplanes in one NAICS industry, noted above, makes the use of Census data feasible and appropriate.

The relevant Census data are provided in the table below:

2002 CENSUS DATA FOR NAICS 115112—SOIL PREPARATION, PLANTING, AND CULTIVATING (INCLUDING CROP DUSTING, CROP SPRAYING)—SMALL SIZE CLASSES

Measure	Total	$0–$99,999	$100,000–$499,999	$500,000–$999,0000	$1,000,000–$4,999,999	$5,000,000–$10,000,000
Firms	2336	509	992	412	394	29
Percentage of firms	.....	21.8%	42.5%	17.6%	16.9%	1.2%
Upper bound percentile	.....	21.8%	64.3%	81.9%	98.8%	100.0%
Est. Receipts ($000)	$1,531,004	$25,681	$257,447	$286,462	$772,401	$189,013
Receipts/Firm ($)	$655,396	$50,454	$259,523	$695,296	$1,960,409	$6,517,690

Source: ''Firms'' and ''Est. Receipts'' from Small Business Administration, Office of Advocacy. *http://www.sba.gov/advo/research/us_rec02.txt.*

The table shows the number of firm and business receipt data for the five smallest size classes of NAICS 115112 that encompass the size range of the firms affected by this proposed AD. In the ''Percentage of firms'' row, for each size class, the FAA calculates that class's number of firms as a percentage of the total number of firms in the five size classes. Cumulating this percentage from the smallest to largest size class establishes the ''Upper bound percentile''—the cumulated percentage of firms of business receipt size ranging up to the upper bound of the size class.

[3] Small Business Administration, Office of Advocacy. *http://www.sba.gov/advo/research/us_rec02.txt.*

The proposed AD's cost for the firms at the upper bound percentiles is then estimated as the corresponding percentiles in the estimated firm-level compliance cost data. In order to assess the economic impact of the proposed AD, these costs are calculated as a percentage of the Census data upper bounds. For example, the upper bound percentile for the 100–500 thousand dollar size class is 64.3%, so the NAICS 115112 firms at that percentile are estimated to have $500,000 business receipts of $500,000. As shown in the table below, the FAA then determined the estimated compliance cost of firms at the same percentile in the compliance cost data to be $61,754. The FAA assumes these firms are the same so the percentage cost impact (Proposed AD Cost/Firm Size) is 12.4%. This procedure assumes the size distribution of the 808 firms affected by the proposed AD have a distribution similar to the overall distribution of the small firms in NAICS 115112. It also assumes there is a perfect rank correlation between the size of the affected firms and the firms' compliance cost. While the latter assumption is certainly not the case, any deviation from such perfect correlation can only increase the impact of the proposed AD because smaller firms will have larger costs. Accordingly, the FAA's determination that the proposed AD will have a significant impact on a substantial number of small entities is unaffected.

ECONOMIC IMPACT OF THRUSH AD ON SMALL FIRMS

Proposed AD cost to firm	Firm percentile	Estimated firm size (Census Bureau receipts upper bound)	Proposed AD Cost/Firm Size (percent)	Cumulative number of firms
$0	21.8th	$100,000	0.0	119.2
$61,754	64.3rd	500,000	12.4	351.5
$91,335	81.9th	1,000,000	9.1	447.9
$273,734	98.8th	5,000,000	5.5	540.2

The above table shows a zero-cost impact on a firm at the 21.8th percentile. This result reflects the estimate in the ''Cost of Compliance'' section of this proposed AD that more than 200 older airplanes will retire before their spar cap life-limits are reached. As already mentioned, the proposed AD cost for a firm at the 64.3rd percentile is $61,754, which as a percentage of estimated firm size (size class upper bound) is 12.4% of annual business receipts. This impact declines to 9.1% for a firm at the 81.9th percentile and to 5.5% for a firm at the 98.8th percentile. As a result, the overall pattern is zero impact for the smallest of the small firms, owners of the oldest airplanes, but a highly positive impact for the medium-sized small firms. In percentage terms, this impact falls for the largest small firms, but remains at a substantial level. While the FAA can make no definitive inference on the impact of the proposed AD on firms between the 21.8th and 64.3rd percentiles, the FAA notes the cost varies from 9.1% up to 12.4% of annual business receipts for 96 firms between the 81.9th and 64.3rd percentiles and from 5.5% to 9.1% for 92 firms between the 98.8th percentile and the 81.9th percentile. These estimated percentage impacts are substantial and therefore, the FAA concludes that this proposed AD will have a significant impact on a substantial number of small entities.

Duplicative, Overlapping or Conflicting Federal Rules

There are no Federal rules that duplicate, overlap, or conflict with this proposed AD.

Significant Alternatives to the Proposed AD

The FAA considered relying on repetitive inspections as the sole safety method, but given that the past required repetitive inspections have not fully addressed this critical safety issue, the FAA has determined that a part life limit is also necessary. A life limit on the wing front lower spar caps is the only available sufficient action presently known to the FAA. Consequently, there are no significant viable alternatives to the proposed AD.

Request for Comments

The FAA has determined that this proposed rulemaking will have a significant economic impact on a substantial number of small entities. The FAA requests comments with supporting justification regarding this determination.

International Trade Impact Analysis

The Trade Agreement Act of 1979 prohibits Federal agencies from establishing any standards or engaging in related activities that create unnecessary obstacles to the foreign commerce of the United States. The statute does not consider legitimate domestic objectives, such as safety, as unnecessary. The statute also requires consideration of international standards and, where appropriate, that they be the basis for U.S. standards. The FAA is issuing this proposed AD because of a known safety problem and, therefore, the proposed AD is not considered an unnecessary obstacle to international trade.

Unfunded Mandates Reform Act Assessment

Title II of the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4) 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 with the base year 1995) in any one year by State, local, and tribal governments in the aggregate, or by the private sector. The Act deems such a mandate to be a ''significant regulatory action.'' The FAA currently uses an inflation-adjusted value of $136.1 million.

This proposed AD does not contain such a mandate.

Regulatory Findings

We have determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the proposed regulation:

1. Is not a ''significant regulatory action'' under Executive Order 12866;

2. Is not a ''significant rule'' under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and

_____3. Could have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

Examining the AD Docket

You may examine the AD docket that contains the proposed AD, the regulatory evaluation, any comments received, and other information on the Internet at *http://www.regulations.gov;* or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Office (telephone (800) 647–5527) is located at the street address stated in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2006–07–15, Amendment 39–14542 (71 FR 16691, April 4, 2006), and adding the following new AD:

Thrush Aircraft, Inc. (Type Certificate previously held by Quality Aerospace, Inc. and Ayres Corporation): Docket No. FAA–2007–27862; Directorate Identifier 2007–CE–036–AD.

Comments Due Date

(a) We must receive comments on this airworthiness directive (AD) action by July 6, 2009.

Affected ADs

(b) The following lists a history of the ADs affected by this AD action:

(1) This AD supersedes AD 2006–07–15, Amendment 39–14542;

(2) AD 2006–07–15 superseded AD 2003–07–01, Amendment 39–13097;

(3) AD 2003–07–01 superseded AD 2000–11–16, Amendment 39–11764;

(4) AD 2000–11–16 superseded AD 97–17–03, Amendment 39–10195; and

(5) AD 97–17–03 superseded AD 97–13–11, Amendment 39–10071.

Applicability

(c) This AD affects the following airplane models and serial numbers (S/Ns) in Table 1 that are certificated in any category when wing front lower spar cap part numbers (P/N) 20207–1, 20207–2, 20207–11, 20207–12, 20207–13, 20207–14, 20207–15, or 20207–16 are installed. This AD applies to the S/Ns in Table 1 with or without a ''DC'' suffix. This AD does not affect airplanes with wing front lower spar cap P/N 22507 (any dash number). The table also identifies the group that each airplane belongs in when determining inspection compliance times and life limit times for the parts:

TABLE 1—APPLICABILITY AND AIRPLANE GROUPS

Model	Serial Nos. (S/N)	Group
(1) S–2R	5000R through 5100R, except 5010R, 5031R, 5038R, 5047R, and 5085R	1
(2) S2R–G1	G1–101 through G1–106	1
(3) S2R–R1820	R1820–001 through R1820–035	1
(4) S2R–T15	T15–001 through T15–033 (also see paragraph (d) of this AD)	1
(5) S2R–T34	6000R through 6049R, T34–001 through T34–143, T34–145, T34–171, T34-180, and T34–181 (also see paragraph (e) of this AD).	1
(6) S2R–G10	G10–101 through G10–138, G10–140, and G10–141	2
(7) S2R–G5	G5–101 through G5–105	2
(8) S2R–G6	G6–101 through G6–147	2
(9) S2RHG–T65	T65–002 through T65–018	2
(10) S2R–R1820	R1820–036	2
(11) S2R–T34	T34–144, T34–146 through T34–170, T34–172 through T34–179, and T34–189 through T34–234 (also see paragraph (e) of this AD).	2
(12) S2R–T45	T45–001 through T45–014	2
(13) S2R–T65	T65–001 through T65–018	2
(14) 600 S2D	All serial numbers beginning with 600–1311D	3
(15) S–2R	1380R, 1416R through 2592R, 3000R, and 3002R	3
(16) S2R–R1340	R1340–001 through R1340–035	3
(17) S2R–R3S	R3S–001 through R3S–011	3
(18) S2R–T11	T11–001 through T11–005	3
(19) S2R–G1	G1–107 through G1–115	5
(20) S2R–G10	G10–139, G10–142 through G10–165	5
(21) S2R–G6	G6–148 through G6–155	5
(22) S2RHG–T34	T34HG–102	5
(23) S2R–T15	T15–034 through T15–040 (also see paragraph (d) of this AD)	5
(24) S2R–T34	T34–236 through T34–270 (also see paragraph (e) of this AD)	5
(25) S2R–T45	T45–015	5
(26) S–2R	5010R, 5031R, 5038R, 5047R, and 5085R	6

(d) The S/Ns of Model S2R–T15 airplanes could incorporate T15–xxx and T27–xxx (xxx is the variable for any of the S/Ns beginning with T15– and T27–). This AD applies to both of these S/N designations as they are both Model S2R–T15 airplanes.

(e) The S/Ns of Model S2R–T34 airplanes could incorporate T34–xxx, T36–xxx, T41–xxx, or T42–xxx (xxx is the variable for any of the S/Ns beginning with T34–, T36–, T41–, and T42–). This AD applies to all of these S/N designations as they are all Model S2R–T34 airplanes.

(f) Any Group 3 airplane that has been modified with a hopper of a capacity more than 410 gallons, a piston engine greater than 600 horsepower, or a gas turbine engine greater than 600 horsepower, is a Group 1 airplane for the purposes of this AD. Inspect the airplane at the Group 1 compliance time specified in this AD. Replace the wing front lower spar caps in accordance with the formulas given in paragraph (j) of this AD.

(g) Group 6 airplanes were originally manufactured with higher horsepower radial engines, but were converted to lower horsepower radial engines. They are now configured identically to Group 3 airplanes.

Unsafe Condition

(h) This AD is the result of the analysis of data from 117 wing front lower spar cap fatigue cracks found on similar design Model 600 S2D and S2R (S–2R) series airplanes and the FAA's determination that the replacement of high time wing front lower spar caps is necessary to address the unsafe condition for certain airplanes. Since we issued AD 2006–07–15, analysis reveals that inspections are not detecting all existing cracks, and incidences of undetected cracks are increasing. This AD retains the actions of AD 2006–07–15 and imposes a life limit on the wing front lower spar caps that requires you to replace the wing front lower spar caps when the life limit is reached. This AD also changes the requirements and applicability of the groups discussed above and removes the ultrasonic inspection method. We are issuing this AD to prevent wing front lower spar cap failure caused by undetected fatigue cracks. Such failure could result in loss of a wing.

Compliance

(i) To address the problem, do the following, unless already done:

(1) If you have already done an inspection required by AD 2006–07–15, within the next 30 days after the effective date of this AD, identify the number of hours time-in-service (TIS) since your last inspection required by AD 2006–07–15. You will need this to establish the inspection interval for the next inspection required by this AD.

(2) Inspect the two outboard bolt hole areas (whether 1/4-inch and 5/16-inch diameter bolt holes or both 5/16-inch diameter bolt holes) on each wing front lower spar cap for fatigue cracking using magnetic particle or eddy current procedures. If Kaplan splice blocks, P/N 22515–1/–3 or 88–251, are installed following Quality Aerospace, Inc. Custom Kit No. CK–AG–30, dated December 6, 2001, inspect the three outboard bolt hole areas on each wing front lower spar cap for fatigue cracking using magnetic particle or eddy current procedures. Use the compliance times listed in paragraph (i)(3) of this AD for the initial inspection and the compliance time listed in paragraphs (i)(5), (i)(6), or (i)(7) of this AD for the repetitive inspections. The cracks may emanate from the bolt hole on the face of the wing front lower spar cap or they may occur in the shaft of the hole. Inspect both of those areas.

(i) If using the magnetic particle method, inspect using the ''Inspection'' portion of the ''Accomplishment Instructions'' and ''Lower Splice Fitting Removal and Installation Instructions'' in Ayres Corporation Service Bulletin No. SB–AG–39, dated September 17, 1996. Do the inspection following American Society for Testing and Materials E 1444–01, using wet particles meeting the requirements of the Society for Automotive Engineers AMS 3046. *CAUTION:* Firmly support the wings during the inspection to prevent movement of the wing front lower spar caps when the splice blocks are removed. This will allow easier realignment of the splice block holes and the holes in the wing front lower spar cap for bolt insertion and prevent damage to the bolt hole. Damage to the bolt hole inner surface or edge of the bolt hole can cause cracks to begin prematurely.

(ii) The inspection must be done by or supervised by a Level 2 or Level 3 inspector certified following the guidelines established by the American Society for Nondestructive Testing or MIL–STD–410.

(iii) If using eddy current methods, a procedure must be sent to the FAA, Atlanta Aircraft Certification Office (ACO), for approval before doing the inspection. Send your proposed procedure to the FAA, Atlanta ACO, ATTN: Cindy Lorenzen, One Crown Center, 1895 Phoenix Boulevard, Suite 450, Atlanta, Georgia 30349. You are not required to remove the splice block for the eddy current inspections, unless corrosion is visible. Eddy current inspection procedures previously approved under AD 2006–07–15, AD 2003–07–01, AD 2000–11–16, AD 97–13–11, and/or AD 97–17–03 remain valid for this AD.

(iv) If you change the inspection method used (magnetic particle or eddy current), the TIS intervals for repetitive inspections are based on the method used for the last inspection.

(3) If airplanes have not yet reached the threshold for the initial inspection required in AD 2006–07–15, initially inspect following the wing front lower spar cap hours total TIS schedule below or within the next 50 hours TIS after the effective date of this AD, whichever occurs later:

TABLE 2—INITIAL INSPECTION TIMES

Airplane group	Initially inspect upon accumulating the following hours total TIS on the wing front lower spar cap
(i) Group 1	2,000 hours TIS.
(ii) Group 2	1,400 hours TIS.
(iii) Group 3	6,400 hours TIS.
(iv) Group 5	1,000 hours TIS.
(v) Group 6	(A) S/N 5010R: 5,530 hours TIS. (B) S/N 5038R: 5,900 hours TIS. (C) S/N 5031R: 6,400 hours TIS. (D) S/N 5047R: 6,400 hours TIS. (E) S/N 5085R: 6,290 hours TIS.
(vi) Any airplane with the entire Custom Kit CK–AG–41 installed	2,000 hours TIS.

(4) Airplanes in all groups must meet the following conditions before doing the repetitive inspections required in paragraphs (i)(5), (i)(6), or (i)(7) of this AD:

(i) No cracks have been found previously on wing front lower spar cap; or

(ii) Small cracks have been repaired through cold work (or done as an option if never cracked) following Ayres Corporation Service Bulletin No. SB–AG–39, dated September 17, 1996; or

(iii) Small cracks have been repaired by reaming the 1/4-inch bolt hole to 5/16 inches diameter (or done as an option if never cracked) following Ayres Corporation Custom Kit No. CK–AG–29, Part I, dated December 23, 1997; or

(iv) Small cracks have been repaired through previous alternative methods of compliance (AMOC); or

(v) Small cracks have been repaired by installing Kaplan splice blocks, P/N 22515–1/–3 or 88–251 (or done as an option if never cracked) following Quality Aerospace, Inc. Custom Kit No. CK–AG–30, dated December 6, 2001.

(5) Repetitively inspect Groups 1, 2, 3, and 6 airplanes that do not have ''big butterfly'' plates and lower splice plates, P/Ns 20211–09 and P/N 20211–11, installed following Ayres Corporation Custom Kit No. CK–AG–29, Part II, dated December 23, 1997; or that do not have ''big butterfly'' plates and lower splice plates, P/Ns 94418–5 and 94418–7 or P/Ns 94418–13 and 94418–15, installed following Thrush Aircraft, Inc. Custom Kit No. CK–AG–41, Revision A, dated March 8, 2007; and meet the conditions in paragraph (i)(4) of this AD. Follow the wing front lower spar cap hours TIS compliance schedule below:

TABLE 3—REPETITIVE INSPECTION TIMES FOR AIRPLANE GROUPS 1, 2, 3, AND 6 WITHOUT "BIG BUTTERFLY" PLATES AND LOWER SPLICE PLATES

When airplanes accumulate the following hours TIS on the wing front lower spar cap since the last inspection required in AD 2006–07–15,	Inspect within the following hours TIS after the effective date of this AD,	Inspect thereafter at intervals not to exceed. . .
(i) *Magnetic Particle inspection:*		250 hours TIS.
(A) 350 or more hours TIS	(A) 50 hours TIS.	
(B) 175 through 349 hours TIS	(B) 75 hours TIS.	
(C) Less than 175 hours TIS	(C) upon accumulating 250 hours TIS.	
(ii) *Eddy Current inspection:*		350 hours TIS.
(A) 500 or more hours TIS	(A) 50 hours TIS.	
(B) 275 through 499 hours TIS	(B) 75 hours TIS.	
(C) Less than 275 hours TIS	(C) upon accumulating 350 hours TIS.	

(6) Repetitively inspect Groups 1, 2, 3, 5, and 6 airplanes that have "big butterfly" plates and lower splice plates, P/Ns 20211–09 and 20211–11, installed following Ayres Corporation Custom Kit No. CK–AG–29, Part II, dated December 23, 1997; or that have "big butterfly" plates and lower splice plates, P/Ns 94418–5 and 94418–7, or 94418–13 and 94418–15, installed following Thrush Aircraft, Inc. Custom Kit No. CK–AG–41, Revision A, dated March 8, 2007; and meet the conditions in paragraph (i)(4) of this AD. Follow the wing front lower spar cap hours TIS compliance schedule below:

TABLE 4—REPETITIVE INSPECTIONS TIMES FOR AIRPLANE GROUPS 1, 2, 3, 5, AND 6 WITH "BIG BUTTERFLY" PLATES AND LOWER SPLICE PLATES

When airplanes accumulate the following hours TIS on the wing front lower spar cap since the last inspection required in AD 2006–07–15,	Inspect within the following hours TIS after the effective date of this AD,	Inspect thereafter at intervals not to exceed. . .
(i) *Magnetic particle inspection:*		450 hours TIS.
(A) 650 or more hours TIS	(A) 50 hours TIS.	
(B) 375 through 649 hours TIS	(B) 75 hours TIS.	
(C) Less than 375 hours TIS	(C) upon accumulating 450 hours TIS.	
(ii) *Eddy Current inspection:*		625 hours TIS.
(A) 900 or more hours TIS	(A) 50 hours TIS.	
(B) 550 through 899 hours TIS	(B) 75 hours TIS.	
(C) Less than 550 hours TIS	(C) upon accumulating 625 hours TIS.	

Note 1: Group 5 airplanes had P/Ns 20211–09 and 20211–11 installed at the factory.

(7) Repetitively inspect airplanes that incorporate Thrush Aircraft, Inc. Custom Kit No. CK–AG–41, Revision A, dated March 8, 2007, in its entirety that meet the conditions in paragraph (i)(4) of this AD. Follow the wing front lower spar cap hours TIS compliance schedule below:

TABLE 5—REPETITIVE INSPECTION TIMES FOR AIRPLANES WITH THRUSH AIRCRAFT, INC. CUSTOM KIT NO. CK–AG–41, REVISION A, INCORPORATED IN ITS ENTIRETY

When using the following inspection methods,	Repetitively inspect at intervals not to exceed. . .
(i) Magnetic particle inspection	900 hours TIS
(ii) Eddy current inspection	1,250 hours TIS.

(8) Initially replace the wing front lower spar caps, P/Ns 20207–1, 20207–2, 20207–11, 20207–12, 20207–13, 20207–14, 20207–15, or 20207–16, at the times specified in Table 6 of this AD. Repetitively replace thereafter at the life limit times specified in Table 7 of this AD.

TABLE 6—INITIAL COMPLIANCE TIME FOR WING FRONT LOWER SPAR CAP REPLACEMENT

Total hours TIS on the wing front lower spar cap	Replace the wing front lower spar cap upon accumulating the following hours TIS on the spar cap after the effective date of this AD.
(i) Group 1 with a radial engine and more than 15,000 hours TIS	500 hours.
(ii) Group 1 with a radial engine and 12,000 to 15,000 hours TIS	1,000 hours.
(iii) Group 1 with a radial engine and 9,000 to 11,999 hours TIS	1,500 hours.
(iv) Group 1 with a radial engine and 7,400 to 8,999 hours TIS	2,000 hours.
(v) Group 1 with a radial engine and less than 7,400 hours TIS	Use Table 7(xxii).
(vi) Group 1 with a turbine engine and more than 14,000 hours TIS	500 hours.

TABLE 6—INITIAL COMPLIANCE TIME FOR WING FRONT LOWER SPAR CAP REPLACEMENT—Continued

Total hours TIS on the wing front lower spar cap	Replace the wing front lower spar cap upon accumulating the following hours TIS on the spar cap after the effective date of this AD.
(vii) Group 1 with a turbine engine and 11,000 to 14,000 hours TIS	1,000 hours.
(viii) Group 1 with a turbine engine and 8,000 to 10,999 hours TIS	1,500 hours.
(ix) Group 1 with a turbine engine and 4,200 to 7,999 hours TIS	2,000 hours.
(x) Group 1 with a turbine engine and less than 4,200 hours TIS	Use Table 7(xxiii).
(xi) Group 2 with more than 9,000 hours TIS	500 hours.
(xii) Group 2 with 6,000 to 9,000 hours TIS	1,000 hours.
(xiii) Group 2 with 3,900 hours to 5,999 hours TIS	1,500 hours.
(xiv) Group 2 with less than 3,900 hours TIS	Use Table 7(xxiv).
(xv) Group 3 and 6 with more than 28,800 hours TIS	500 hours.
(xvi) Group 3 and 6 with 27,800 to 28,799 hours TIS	1,000 hours.
(xvii) Group 3 and 6 with less than 27,800 hours TIS	Use Table 7(xxv).
(xviii) Group 5 with more than 8,000 hours TIS	500 hours.
(xix) Group 5 with 5,000 to 7,999 hours TIS	1,000 hours.
(xx) Group 5 with 2,400 to 4,999 hours TIS	1,500 hours.
(xxi) Group 5 with less than 2,400 hours TIS	Use Table 7(xxvi).

TABLE 7—WING FRONT LOWER SPAR CAP LIFE LIMITS

Airplane Group	Replace wing front lower spar cap upon the accumulation of the following hours TIS on the spar cap:
(xxii) Group 1 with a radial engine	9,400 hours TIS.
(xxiii) Group 1 with a turbine engine	6,200 hours TIS.
(xxiv) Group 2	5,400 hours TIS.
(xxv) Groups 3 and 6	28,800 hours TIS.
(xxvi) Group 5	3,900 hours TIS with original wing front lower spar cap P/N 20207–11 or 20207–12. 5,400 hours TIS after original wing front lower spar cap has been replaced with any P/N 20207-xx wing front lower spar cap.

Note 2: There is evidence of sharp, uneven edges on the spar cap bolt holes that resulted from the manufacturing process in Group 5 airplanes. Once the original spar caps are replaced, the life limit increases.

(j) As previously stated in paragraph (f) of this AD, any Group 3 airplane that has been modified with a hopper of a capacity more than 410 gallons, a piston engine greater than 600 horsepower, or a gas turbine engine greater than 600 horsepower, is a Group 1 airplane for the purposes of this AD. Replace the spar caps using the following formulas.

(1) For airplanes that were originally Group 3 airplanes and later modified by installing a piston engine of greater than 600 horsepower and/or a hopper capacity of greater than 410 gallons, calculate the equivalent Group 1 hours TIS on each spar cap as follows:

$$\text{(i) Usage factor} = \frac{\text{Total hrs. on cap pre-mod.}}{28{,}800} + \frac{\text{Additional hrs. on cap post-mod.}}{9{,}400}$$

$$\text{(ii) Equivalent Group 1 hours TIS} = 9{,}400 \times \text{Usage Factor}$$

(2) For airplanes that were originally Group 3 airplanes and later modified by installing a turbine engine of greater than 600 horsepower, with or without installing a hopper with greater than 410 gallon capacity, calculate the equivalent Group 1 hours TIS on each spar cap as follows:

$$\text{(i) Usage factor} = \frac{\text{Total hrs. on cap pre-mod.}}{28{,}800} + \frac{\text{Additional hrs. on cap post-mod.}}{6{,}200}$$

$$\text{(ii) Equivalent Group 1 hours TIS} = 6{,}200 \times \text{Usage Factor}$$

(ii) Equivalent Group 1 hours TIS = 6,200 × Usage Factor

(3) When the equivalent Group 1 hours TIS on the wing front lower spar cap equals the life limit of 9,400 hours TIS if a radial piston engine is installed or reaches 6,200 hours TIS if a turbine engine is installed, the wing front lower spar cap must be replaced. Use Table 6 if over the life limit.

(4) See the appendix to this AD for examples of how to calculate the applicable life limit.

(k) If any cracks are found during any inspection required by this AD, you must

repair the cracks or replace the wing front lower spar cap before further flight.

(1) Use the cold work process to ream out small cracks as defined in Ayres Corporation Service Bulletin No. SB–AG–39, dated September 17, 1996, and deburr the bolt hole edges with the splice blocks removed after cold work is performed; or

(2) If the crack is found in a 1/4-inch bolt hole, ream the 1/4-inch bolt hole to 5/16 inches diameter as defined in Part I of Ayres Corporation Custom Kit No. CK–AG–29, dated December 23, 1997; or

(3) Install Kaplan splice blocks, P/N 22515–1/-3 or 88–251, following Quality Aerospace, Inc. Custom Kit No. CK–AG–30, dated December 6, 2001; or

(4) Replace the affected wing front lower spar cap following an FAA-approved procedure (the applicable maintenance manual contains these procedures) or replace both lower spar caps and the surrounding structure following Thrush Aircraft, Inc. Custom Kit No. CK–AG–41, Revision A, dated March 8, 2007. Although not mandatory, the FAA recommends installing Custom Kit No. CK–AG–41, Revision A, in its entirety. The additional structure provided in the custom kit will provide a greater level of safety than the minimum acceptable level of safety provided by replacing just the lower spar cap.

(l) If a crack is found, the reaming associated with the cold work process may remove a crack if it is small enough. Some aircraft owners/operators were issued AMOCs with AD 97–17–03 to ream the ¼-inch bolt hole to 5/16 inches diameter to remove small cracks. Ayres Corporation Custom Kit No. CK–AG–29, Part I, dated December 23, 1997, also provides procedures to ream the ¼-inch bolt hole to 5/16 inches diameter, which may remove a small crack. Resizing the holes to the required size to install a Kaplan splice block may also remove small cracks. If you use any of these methods to remove cracks and the airplane is re-inspected before further flight and no cracks are found, you may continue to follow the repetitive inspection intervals for your airplane listed in paragraphs (i)(5), (i)(6), or (i)(7) of this AD.

(m) For all inspection methods (magnetic particle or eddy current), hours TIS for initial and repetitive inspections intervals and wing front lower spar cap life limit start over when the wing front lower spar cap is replaced with a new P/N 20207–1, 20207–2, 20207–11, 20207–12, 20207–13, 20207–14, 20207–15, or 20207–16. These wing front lower spar caps must be inspected as specified in paragraphs (i)(3), (i)(5), (i)(6), and (i)(7) of this AD.

(1) If the wings or wing front lower spar caps were replaced with new or used wings or wing front lower spar caps during the life of the airplane and the logbook records positively show the hours TIS of the replacement wings or wing front lower spar caps, then initially inspect at applicable times specified in paragraph (i)(3) of this AD. Repetitively inspect thereafter at intervals specified in paragraphs (i)(5), (i)(6), or (i)(7) of this AD. Replace the wing front lower spar caps upon reaching the life limit specified in Table 7 of this AD.

(2) If the wings or wing front lower spar caps were replaced with new or used wings or wing front lower spar caps during the life of the airplane and logbook records do not positively show the hours TIS of the replacement wings or wing front lower spar caps, then inspect within 50 hours TIS after the effective date of this AD, unless already done. Repetitively inspect thereafter at intervals specified in paragraphs (i)(5), (i)(6), or (i)(7) of this AD. Replace the wing front lower spar caps within 500 hours TIS after the effective date of this AD.

(3) If both wing front lower spar caps are replaced by installing the entire Thrush Aircraft, Inc. Custom Kit No. CK–AG–41, Revision A, dated March 8, 2007, then initially inspect at 2,000 hours TIS as shown in paragraph (i)(3) of this AD. Repetitively inspect thereafter at intervals specified in paragraph (i)(7) of this AD. Replace the wing front lower spar caps at times specified in paragraph (i)(8) of this AD.

(n) Any wing front lower spar cap that is removed and is at or beyond the replacement time specified in this AD must be disposed of following the procedures in 14 CFR Part 43.10.

(o) Replacement times start over when the wing front lower spar cap is replaced with a new P/N 20207–1, 20207–2, 20207–11, 20207–12, 20207–13, 20207–14, 20207–15, or 20207–16. These wing front lower spar caps are now life-limited parts and must be replaced upon the accumulation of the hours TIS specified in Table 7 of this AD.

(p) Report any cracks you find within 10 days after the cracks are found or within 10 days after the effective date of this AD, whichever occurs later. Send your report to Cindy Lorenzen, Aerospace Engineer, ACE–115A, Atlanta ACO, One Crown Center, 1895 Phoenix Blvd., Suite 450, Atlanta, GA 30349; telephone: (770) 703–6078; facsimile: (770) 703–6097; e-mail: *cindy.lorenzen@faa.gov.* The Office of Management and Budget (OMB) approved the information collection requirements contained in this regulation under the provisions of the Paperwork Reduction Act and assigned OMB Control Number 2120–0056. Include in your report the following information:

(1) Aircraft model and serial number;

(2) Engine model;

(3) Aircraft hours TIS;

(4) Left and right wing front lower spar cap hours TIS;

(5) Hours TIS on the spar cap since last inspection;

(6) Crack location and size;

(7) Procedure (magnetic particle, ultrasonic, or eddy current) used for the last inspection;

(8) Description of any previous modifications and hours TIS when the modification was done, such as engine model change, installation of winglets, hopper capacity increase, cold working procedure done on bolt holes, or installation of butterfly plates; and

(9) Information on corrective action taken or installation of Thrush Aircraft, Inc. Custom Kit No. CK–AG–41, Revision A, dated March 8, 2007, and when this corrective action was taken.

Special Flight Permits

(q) Under 14 CFR part 39.23, we are limiting the special flight permits for this AD by the following conditions:

(1) The hopper is empty;

(2) Vne is reduced to 126 miles per hour (109 knots) indicated airspeed (IAS); and

(3) Flight into known turbulence is prohibited.

Alternative Methods of Compliance (AMOCs)

(r) The Manager, Atlanta Aircraft Certification Office, FAA, ATTN: Cindy Lorenzen, Aerospace Engineer, ACE–115A, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Blvd., Suite 450, Atlanta, GA 30349; telephone: (770) 703–6078; facsimile: (770) 703–6097; e-mail: *cindy.lorenzen@faa.gov;* or Keith Noles, Aerospace Engineer, ACE–117A, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Blvd., Suite 450, Atlanta, Georgia 30349; telephone: (770) 703–6085; facsimile: (770) 703–6097; e-mail: *gregory.noles@faa.gov,* has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(s) AMOCs approved for AD 2006–07–15, AD 2003–07–01, AD 2000–11–16, AD 97–13–11, and/or AD 97–17–03 are approved as AMOCs for this AD except for those pertaining to ultrasonic inspection methods.

Related Information

(t) To get copies of the service information referenced in this AD, contact Thrush Aircraft, Inc. at 300 Old Pretoria Road, P.O. Box 3149, Albany, Georgia 31706–3149 or go to *http://www.thrushaircraft.com.* To view the AD docket, go to the U.S. Department of Transportation, Docket Operations, M–30 West Building Ground Floor, Room W12–140, New Jersey Avenue, SE., Washington, DC, or on the Internet at *http://www.regulations.gov.* The docket number is Docket No. FAA–2007–27862; Directorate Identifier 2007–CE–036–AD.

Appendix to Docket No. FAA–2007–27862

The following are examples of calculating Equivalent Group 1 hours.

Example 1: S/N xxx was originally a Group 3 airplane; later it was modified with a Wright R–1820–71, 1200 horsepower, radial engine when the wing front lower spar caps had 15,700 hours TIS on them. The wing front lower spar caps have accumulated an additional 8,200 hours since the engine conversion for a total of 23,900 hours TIS on the wing front lower spar caps.

Usage Factor = 15,700 hours/28,800 + 8,200 hours/9,400= 1.417 Equivalent Group 1 hours = 9,400 × 1.417 = 13,320 hours.

The spar caps will need to be replaced within the next 1,000 hours TIS after the effective date of this AD as determined by Table 6 for a Group 1 airplane with a radial engine with between 12,000 and 15,000 hours TIS.

_____Example 2: S/N yyy was originally a Group 3 airplane; later it was modified with a PT6A–34, 750 horsepower, turbine engine when the wing front lower spar caps had 5,300 hours TIS on them. The wing front lower spar caps now have 7,700 hours TIS.

Usage Factor = 5,300 hours/28,800 + (7,700 − 5,300)/6,200 = 0.571 Equivalent Group 1 hours = 6,200 × 0.571 = 3,540 hours.

The spar caps will need to be replaced at 6,200 Equivalent Group 1 total hours TIS, which is within the next 2,660 hours TIS (6,200 − 3,540=2,660).

Issued in Kansas City, Missouri, on April 27, 2009.

Kim Smith,

Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. E9–10162 Filed 5–1–09; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2009–0311; Airspace Docket No. 09–ANM–3]

RIN 2120–AA66

Proposed Establishment of VOR Federal Airway V–626; UT

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This action proposes to establish VOR Federal Airway 626 (V–626) located between the Myton, UT, Very High Frequency Omnidirectional Range/Tactical Air Navigation (VORTAC) and the Salt Lake City terminal Area. This route would improve aircraft flow during busy traffic periods into the Salt Lake City terminal area. This new jet route would provide a more precise means of navigation and reduce controller workload.

DATES: Comments must be received on or before June 18, 2009.

ADDRESSES: Send comments on this proposal to the U.S. Department of Transportation, Docket Operations, M–30, 1200 New Jersey Avenue, SE., West Building Ground Floor, Room W12–140, Washington, DC 20590–0001; telephone: (202) 366–9826. You must identify FAA Docket No. FAA–2009–0311 and Airspace Docket No. 09–ANM–3 at the beginning of your comments. You may also submit comments through the Internet at *http://www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT: Ken McElroy, Airspace and Rules Group, Office of System Operations Airspace and AIM, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; telephone: (202) 267–8783.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested parties are invited to participate in this proposed rulemaking by submitting such written data, views, or arguments, as they may desire. Comments that provide the factual basis supporting the views and suggestions presented are particularly helpful in developing reasoned regulatory decisions on the proposal. Comments are specifically invited on the overall regulatory, aeronautical, economic, environmental, and energy-related aspects of the proposal.

Communications should identify both docket numbers (FAA Docket No. FAA–2009–0311 and Airspace Docket No. 09–ANM–3) and be submitted in triplicate to the Docket Management Facility (see **ADDRESSES** section for address and phone number). You may also submit comments through the Internet at *http://www.regulations.gov.*

Commenters wishing the FAA to acknowledge receipt of their comments on this action must submit with those comments a self-addressed, stamped postcard on which the following statement is made: ''Comments to FAA Docket No. FAA–2009–0311 and Airspace Docket No. 09–ANM–3.'' The postcard will be date/time stamped and returned to the commenter.

All communications received on or before the specified closing date for comments will be considered before taking action on the proposed rule. The proposal contained in this action may be changed in light of comments received. All comments submitted will be available for examination in the public docket both before and after the closing date for comments. A report summarizing each substantive public contact with FAA personnel concerned with this rulemaking will be filed in the docket.

Availability of NPRMs

An electronic copy of this document may be downloaded through the Internet at *http://www.regulations.gov.* Recently published rulemaking documents can also be accessed through the FAA's Web page at *http://www.faa.gov/airports_airtraffic/air_traffic/publications/airspace_amendments/.*

You may review the public docket containing the proposal, any comments received, and any final disposition in person in the Dockets Office (see **ADDRESSES** section for address and phone number) between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. An informal docket may also be examined during normal business hours at the office of the Western Service Center, Operations Support Group, Federal Aviation Administration, 1601 Lind Avenue, SW., Renton, WA 9805.

Persons interested in being placed on a mailing list for future NPRMs should contact the FAA's Office of Rulemaking, (202) 267–9677, for a copy of Advisory Circular No. 11–2A, Notice of Proposed Rulemaking Distribution System, which describes the application procedure.

History

In November 2008, Salt Lake City Terminal Area Approach Control Facility (TRACON) requested the establishment of a new airway to facilitate the handling of aircraft entering the Salt Lake City terminal area. This action responds to that request.

The Proposal

The FAA is proposing an amendment to Title 14 Code of Federal Regulations (14 CFR) part 71 to establish VOR Federal Airway 626 (V–626) from the Myton, UT, VORTAC to the Salt Lake City terminal Area. This new route will provide a more precise means of navigation and reduce controller workload.

Domestic VOR Federal Airways are published in paragraph 6010(a) of FAA Order 7400.9S, signed October 3, 2008, and effective October 31, 2008, which is incorporated by reference in 14 CFR 71.1. The domestic VOR Federal Airway listed in this document will be published subsequently in the Order.

The FAA has determined that this proposed regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. Therefore, this proposed regulation: (1) Is not a ''significant regulatory action'' under Executive Order 12866; (2) is not a ''significant rule'' under Department of Transportation (DOT) Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this proposed rule, when promulgated, will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.