

50.13, 50.54(dd), and 50.103 also issued under sec. 108, 68 Stat. 939, as amended (42 U.S.C. 2138). Sections 50.23, 50.35, 50.55, and 50.56 also issued under sec. 185, 68 Stat. 955 (42 U.S.C. 2235). Sections 50.33a, 50.55a and Appendix Q also issued under sec. 102, Pub. L. 91-190, 83 Stat. 853 (42 U.S.C. 4332). Sections 50.34 and 50.54 also issued under sec. 204, 88 Stat. 1245 (42 U.S.C. 5844). Sections 50.58, 50.91, and 50.92 also issued under Pub. L. 97-415, 96 Stat. 2073 (42 U.S.C. 2239). Section 50.78 also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Sections 50.80 and 50.81 also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Appendix F also issued under sec. 187, 68 Stat. 955 (42 U.S.C. 2237).

Dated at Rockville, Maryland, this 1st day of April, 1996.

For the Nuclear Regulatory Commission.
John C. Hoyle,
Secretary of the Commission.

[FR Doc. 96-8599 Filed 4-5-96; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 94-ANE-44]

Airworthiness Directives; Textron Lycoming 235 Series, 290 Series, and Certain 320 and 360 Series Reciprocating Engines

AGENCY: Federal Aviation Administration, DOT.

ACTION: Proposed rule; extension of comment period.

SUMMARY: This document extends the comment period for an earlier proposed airworthiness directive (AD), applicable to all Textron Lycoming 235 Series and 290 Series, and certain 320 and 360 series reciprocating engines, that proposed to require initial and repetitive inspections of the crankshaft inner diameter (ID) for corrosion and cracks, and replacement of cracked crankshafts with a serviceable part. In addition, that AD proposed to permit operation of engines with crankshafts that are found to have corrosion pits but are free of cracks provided repetitive inspections are performed until the next engine overhaul or 5 years after the initial inspection, whichever occurs first, at which time crankshafts with corrosion pits but no cracks must be replaced with serviceable crankshafts. Since publication of that proposal, the Federal Aviation Administration (FAA) has received numerous comments on the proposed actions, and has determined there is a need to receive more information from the public. The

FAA is therefore allowing additional time for the public to comment and is republishing the AD without change. The proposed actions are intended to prevent crankshaft failure, which can result in engine failure, propeller separation, forced landing, and possible damage to the aircraft.

DATES: Comments must be received by June 7, 1996.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), New England Region, Office of the Assistant Chief Counsel, Attention: Rules Docket No. 94-ANE-44, 12 New England Executive Park, Burlington, MA 01803-5299. Comments may be inspected at this location between 8:00 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays.

The service information referenced in the proposed rule may be obtained from Textron Lycoming, 652 Oliver St., Williamsport, PA 17701; telephone (717) 327-7080, fax (717) 327-7100. This information may be examined at the FAA, New England Region, Office of the Assistant Chief Counsel, 12 New England Executive Park, Burlington, MA.

FOR FURTHER INFORMATION CONTACT: Raymond Reinhardt, Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine and Propeller Directorate, 10 Fifth St., Valley Stream, NY 11581-1200; telephone (516) 256-7532, fax (516) 568-2716.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in the making of the proposed rule by submitting such written data, views, or arguments as they may desire. Communications should identify the Rules Docket number and be submitted in triplicate to the address specified above. All communications received on or before the closing date for comments, specified above, will be considered before taking action on the proposed rule. The proposals contained in this notice may be changed in light of the comments received.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the proposed rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this

proposal will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. 94-ANE-44." The postcard will be date stamped and returned to the commenter.

Availability of NPRMs

Any person may obtain a copy of this NPRM by submitting a request to the FAA, New England Region, Office of the Assistant Chief Counsel, Attention: Rules Docket No. 94-ANE-44, 12 New England Executive Park, Burlington, MA 01803-5299.

Discussion

On October 18, 1993, the Civil Aviation Authority (CAA), which is the airworthiness authority of the United Kingdom, received a report that a Piper PA-28-161 aircraft, with a Textron Lycoming O-320-D3G reciprocating engine executed a forced landing due to an engine crankshaft failure which caused the propeller to separate from the aircraft. The cause of the crankshaft failure was determined to be due to a high cycle reverse torsional fatigue mechanism that had initiated from a number of corrosion pits in the crankshaft bore. After the cracks had progressed through a substantial proportion of the crankshaft section, the rate of advance had increased until the remaining unseparated portion had failed as a result of overload. The cracking occurred in high cycle fatigue and it had progressed over an extended period of service. At the time of the accident the engine had operated for 1,950 hours time in service (TIS) since overhaul and had accumulated 4,429 hours TIS since new over a period of 16 years. In addition, the Federal Aviation Administration (FAA) has received reports of ten additional instances of cracks or failures of the crankshaft behind the propeller flange on various Textron Lycoming reciprocating engines due to cracks initiating from corrosion pits in the crankshaft bore. This condition, if not corrected, could result in crankshaft failure, which can result in engine failure, propeller separation, forced landing, and possible damage to the aircraft.

A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that would apply to Textron Lycoming 235 Series and 290 Series, and certain 320 and 360 series reciprocating engines was published in the Federal Register on

November 28, 1995 (60 FR 58580). The action proposed to require initial and repetitive inspections of the crankshaft inner diameter (ID) for corrosion and cracks, and replacement of cracked crankshafts with a serviceable part. In addition, that AD proposed to permit operation of engines with crankshafts that are found to have corrosion pits but are free of cracks provided repetitive inspections are performed until the next engine overhaul or 5 years after the initial inspection, whichever occurs first, at which time crankshafts with corrosion pits but no cracks must be replaced with serviceable crankshafts. The proposed actions would be performed in accordance with Textron Lycoming Mandatory Service Bulletin (MSB) No. 505A, dated October 18, 1994. However, the FAA has determined that additional inspections via Fluorescent Penetrant Inspection (FPI) are warranted if corrosion pits are found. The FPI inspection was developed due to reports from Lycoming and other approved repair stations that most of the crankshafts that are pitted do not contain cracks. The FPI inspection was based on crack propagation data developed by the FAA in conjunction with Textron Lycoming and the technical base in the U.S. for performing Non-Destructive Inspections. The FPI process has been shown to be reliable to detect cracks down to 0.050 inches deep and 0.100 inches long. The FPI inspection interval was based on the crack propagation data and the detection of a crack before the crankshaft failed. If a crankshaft is found to be pitted on-wing, it is not recommended that removal of metal be permitted to remove the corrosion pits due to possible contamination of the engine oil supply with metal filings and also to ensure the concentricity of the crankshaft is not compromised. Interested persons have been afforded an opportunity to participate in the making of this amendment. The FAA has received numerous comments on the proposed rule and the FAA's determination of the cost to the public. The FAA has determined there is a need to receive more information from the public. The FAA is therefore allowing additional time for the public to comment. All comments received will be addressed in the final rule.

There are approximately 77,100 engines of the affected design in the worldwide fleet. The FAA estimates that 46,260 engines installed on aircraft of U.S. registry would be affected by this proposed AD, that it would take approximately 4 work hours per engine to accomplish the proposed inspection,

and that the average labor rate is \$60 per work hour. The estimated cost impact for the proposed inspections would be \$11,102,400. The FAA estimates 10% of the crankshafts will require replacement at engine overhaul due to corrosion pits, and that it would take 32 work hours per engine to replace pitted crankshafts. Required parts would cost approximately \$4,742 per engine. The estimated cost for replacement of 10% of the crankshafts annually would be \$3,081,841.

The regulations proposed herein would not have substantial direct effects 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. Therefore, in accordance with Executive Order 12612, it is determined that this proposal would not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this 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) if promulgated, will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A copy of the draft regulatory evaluation prepared for this action is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption **ADDRESSES**.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

The Proposed Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration proposes to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39—AIRWORTHINESS DIRECTIVES

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

Authority: 49 USC 106(g), 40113, 44701.

39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

Textron Lycoming: Docket No. 94-ANE-44.

Applicability: Textron Lycoming 235 series, 290 series, 320 series except model O-320-B2C installed in helicopters, and 360 series except models O-360-A4G, -A4J, -A4K, -A4M, -C4F, -AEIO-360-B4A, HO-360 series, HIO-360 series, LHIO-360 series, VO-360 series, and IVO-360 series, four-cylinder reciprocating engines with fixed pitch propellers. These engines are installed on but not limited to reciprocating engine powered aircraft manufactured by Cessna, Piper, Beech, American Aircraft Corporation, Grumman American Aviation, Mooney, Augustair Inc., Maule Aerospace Technology Corporation, Great Lakes Aircraft Co., and Commander Aircraft Co.

Note: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must use the authority provided in paragraph (f) to request approval from the Federal Aviation Administration (FAA). This approval may address either no action, if the current configuration eliminates the unsafe condition, or different actions necessary to address the unsafe condition described in this AD. Such a request should include an assessment of the effect of the changed configuration on the unsafe condition addressed by this AD. In no case does the presence of any modification, alteration, or repair remove any engine from the applicability of this AD.

Compliance: Required as indicated, unless accomplished previously.

To prevent crankshaft failure, which can result in engine failure, propeller separation, forced landing, and possible damage to the aircraft, accomplish the following:

(a) For new engines shipped from Textron Lycoming prior to and including December 31, 1984, that have never been overhauled, or any remanufactured or overhauled engines that have accumulated 1,000 hours or more time in service (TIS) since remanufacture or overhaul, initially inspect the inner diameter (ID) of the crankshaft for corrosion pits within the next 100 hours TIS after the effective date of this AD, or 6 months after the effective date of this AD, whichever occurs first, in accordance with Textron Lycoming Mandatory Service Bulletin (MSB) No. 505A, dated October 18, 1994. The propeller, if installed, must be removed in accordance with the aircraft manufacturer's procedures to perform this inspection. If corrosion pits are found during this inspection, perform a Fluorescent Penetrant Inspection (FPI) in accordance with paragraph (e) of this AD.

(b) For new engines shipped from Textron Lycoming after December 31, 1984, that have never been overhauled, or any remanufactured or overhauled engines that have accumulated less than 1,000 hours TIS since remanufacture or overhaul, initially inspect the ID of the crankshaft for corrosion pits, at intervals specified in subparagraphs (1) through (3) of this paragraph, whichever occurs first, in accordance with Textron

Lycoming MSB No. 505A, dated October 18, 1994. The propeller, if installed, must be removed in accordance with the aircraft manufacturer's procedures to perform this inspection. If corrosion pits are found during this inspection, perform an FPI in accordance with paragraph (e) of this AD.

(1) At the next engine overhaul or disassembly.

(2) Within 10 years of the original ship date or 6 months from the effective date of this AD, whichever occurs later.

(3) At 1,000 hours TIS since remanufacture or overhaul, or 6 months from the effective date of this AD, whichever occurs later.

(c) Thereafter, if no corrosion pits are found on the ID of the crankshaft during the initial inspection, perform an inspection at intervals not to exceed 5 years since last inspection or at the next engine overhaul or disassembly, whichever occurs first, in accordance with Textron Lycoming MSB No. 505A, dated October 18, 1994. If corrosion pits but no cracks are found on the ID of the crankshaft during the initial inspection, repeat the FPI at intervals not to exceed 100 hours TIS since last FPI inspection, 5 years from the initial inspection that detected the corrosion pits, or next engine overhaul, whichever occurs first.

(d) Prior to further flight, remove from service and replace with a serviceable part the following:

(1) Crankshafts found cracked during FPI outlined in paragraph (e) of this AD.

(2) Crankshafts that have corrosion pits but no cracks, which are on a repetitive inspection cycle and have attained 5 years from the initial inspection that detected the corrosion pits, in accordance with Textron Lycoming MSB No. 505A, dated October 18, 1994.

(3) Crankshafts that have corrosion pits but no cracks, which are being overhauled.

(e) An engine as installed in the aircraft having a corroded crankshaft may be returned to service without disassembly provided an FPI confirms the bore to be crack free. The process and materials utilized for the FPI are in accordance with the classification contained in MIL-I-25135. The FPI must be fluorescent solvent removable (Method C) utilizing a Type 1 penetrant system with a penetrant sensitivity Level 3 or higher and a Form D-Nonaqueous Developer. Spray containers of the materials are acceptable for this inspection. Personnel performing the FPI that are making accept/reject decisions shall be qualified to at least Level II in liquid penetrant inspection in accordance with MIL-STD-410E, dated January 25, 1991 or a similar certification system assuring the competence of the inspector. This FPI process involves the removal of penetrant material from the inspection surface. Caution must be used to ensure that contaminants from the cleaning process and the FPI do not enter the engine oil supply by blocking off the area of the crankshaft bore that is aft of the area being inspected by using a clean, dry, lint-free cloth. The FPI must be performed using the following steps:

(1) Cleaning—The crankshaft bore surface must be cleaned of visible corrosion prior to the FPI process using Scotchbrite or an

equivalent material. Metal-removing processes must not be used for visible corrosion cleaning. In addition, clean all surfaces to be inspected utilizing a cleaner, such as Magnaflux Spot Check Cleaner/Remover SKC-NF or equivalent, on the ID of the crankshaft bore. Let the cleaner/remover dry for 5 minutes minimum. Wipe clean with a lint-free cloth.

(2) Penetrant Application—Spray penetrant, such as ZYGLO ZL-22A Magnaflux Corp. or equivalent Type 1 with a penetrant sensitivity Level 3 or higher, on the ID bore.

(3) Penetrant Dwell—Allow a minimum of 10 minutes dwell. For dwell times exceeding 60 minutes the penetrant shall be reapplied to prevent drying.

(4) Penetrant Removal—Remove all bulk surface penetrant by wiping with a clean, dry lint-free cloth. Make a single wipe and then fold the cloth to provide a clean surface for succeeding wipes.

(i) Solvent Wipe—After the bulk of the surface penetrant has been removed, lightly moisten a fresh lint-free cloth with cleaner/remover and again wipe the surface. The cloth must not be saturated and the inspection surface must not be flooded with solvent. Excessive solvent will wash penetrant from defects.

(ii) During wiping, the inspection surface shall be illuminated with black light. Repeat the solvent wipe as necessary until no residual trace of penetrant remains on the inspection surface.

(5) Nonaqueous Developer (solvent suspended)—Following the cleaner/remover wipe apply nonaqueous developer by spraying a developer, such as Magnaflux Spot Check Developer SKD-NF or Form D-Nonaqueous equivalent, on the ID bore. Apply a thin uniform layer to the bore surface. The optimum coating thickness is indicated by the visibility of the part surface. If the metallic luster cannot be seen the developer is too thick.

(6) Dwell—Developer dwell is required to allow the developer time to draw entrapped penetrant from any small defects. The minimum development time shall be 10 minutes. The maximum dwell time for nonaqueous developer shall be 60 minutes.

(7) Inspection shall be performed within the allotted dwell time. Components that are not inspected within the allotted dwell time must be reprocessed.

(i) Examine crankshaft bore in a darkened enclosure under ultraviolet (black) light. Allow 1 minute for eyes to adapt to darkened environment prior to inspecting crankshaft bore. Use of photochromic lenses or permanent darkened lenses is prohibited.

(ii) During inspection make sure that the black light intensity is a minimum of 1200 microwatts/cm² at the bore surface. This can be accomplished by positioning the black light as close as necessary to the bore to achieve 1200 microwatts/cm². White light background shall not exceed 20 lx/m² (2 foot-candles). A photographic light meter may be used to determine the white light background reading.

(iii) Crankshaft bores having no crack indications are acceptable.

(iv) Magnification (10X maximum) and/or white light may be used to determine

discontinuity type. Indications, on parts exhibiting fluorescent background which interferes with evaluation of questionable indications, shall be evaluated as follows:

(A) Lightly wipe the area once with a soft brush or cotton swab applicator dampened with ethyl alcohol. Do not permit alcohol to flood the surface.

(B) After the alcohol evaporates from the surface, re-inspect. If an indication reappears, evaluate it immediately. If the indication does not reappear, reapply developer. The redevelopment time shall equal the original development time. Thereafter, re-inspect.

(8) After inspection, clean residual penetrants and developers from crankshaft bore. Ensure lint-free cloth is removed from crankshaft bore prior to installing front crankshaft plug. Failure to do so may result in oil restriction within the engine and in turn cause engine failure.

(f) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, New York Aircraft Certification Office. The request should be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, New York Aircraft Certification Office.

Note: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the New York Aircraft Certification Office.

(g) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be accomplished.

Issued in Burlington, Massachusetts, on March 25, 1996.

Jay J. Pardee,

Manager, Engine and Propeller Directorate, Aircraft Certification Service.

[FR Doc. 96-8283 Filed 4-5-96; 8:45 am]

BILLING CODE 4910-13-P

14 CFR Part 71

[Airspace Docket No. 96-AWP-5]

Amendment of Class E Airspace; Ely, NV

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Supplemental notice of proposed rulemaking.

SUMMARY: This supplemental notice amends a previous proposal to amend Class E airspace at Ely, NV. The establishment of a Global Positioning System (GPS) Standard Instrument Approach Procedure (SIAP) to Runway (RWY) 18 has made this proposal necessary. The intended effect of this supplemental notice is to provide additional controlled airspace for Instrument Flight Rules (IFR) operations at Ely Airport (Yelland Field), Ely, NV.