

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [R SeeAD]

Textron Lycoming
[AD 91-14-22](#)
Amendment 39-6916
Effective Aug. 19, 1991
[Recurring: See AD](#)

[Docket No. 89-ANE-10; Amendment 39-6916; AD 91-14-22]

Airworthiness Directives; Textron Lycoming Direct Drive Piston Engines.

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

DATES: Effective August 19, 1991.

91-14-22 TEXTRON LYCOMING: Amendment 39-6916. Docket No. 89-ANE-10.

Applicability: Textron Lycoming (formerly Avco Lycoming) direct drive piston aircraft engines (except: O-320-H, O-360-E, LO-360-E, TO-360-E, LTO-360-E and TIO-541 series engines).

Compliance: Required at each engine overhaul, after a propeller strike, sudden stoppage, or whenever gear train repair is required. A propeller strike for the purpose of this AD, is defined as a sudden engine stoppage, or loss of a propeller blade or tip.

Note: Avco Lycoming Service Letter No. L163B dated December 23, 1977, "Recommendations Regarding Accidental Engine Stoppage, Loss of Propeller Blade or Tip," contains additional information on the subject.

To prevent loosening or failure of the crankshaft gear retaining bolt, which may cause sudden engine failure, accomplish the following:

- (a) Inspect the crankshaft counterbored recess, the alignment dowel, the retaining bolt and lock plate, the bolt hole threads, and the crankshaft gear for wear, galling, corrosion, and fretting in accordance with Sections 1 through 7, including all tables and figures in **Textron Lycoming Service Bulletin (SB) No. 475, Revision A**, dated July 16, 1990.
- (b) Prior to further flight, repair, rework, or replace damaged or worn parts as identified in paragraph (a) of this AD.
 - (1) Repair and rework crankshaft pilot diameter in accordance with **Textron Lycoming SB 475, Revision A**, dated July 16, 1990, and replace dowel pin with appropriate site dowel as shown in Table 1 of the service bulletin.
 - (2) Insure that the tapped threads in the gear retaining bolt hole of the crankshaft are

clean and undamaged. If threads are damaged, replace crankshaft with a serviceable unit, or have threads repaired by an FAA approved facility specifically approved to do that repair.

- (3) Inspect the counterbored gear mounting face of the crankshaft to ensure there is no damage due to fretting or galling, as damage of this nature is unrepairable.
 - (4) Repair crankshaft counterbored pilot diameter, if necessary, in accordance with Section 3 of **Textron Lycoming SB No. 475, Revision A**, dated July 16, 1990.
 - (5) Verify that the crankshaft gear incorporates three .75 inch radius scallops on the flange as shown in Figure 5 of **Textron Lycoming SB No. 475, Revision A**, dated July 16, 1990. Assemble gear onto crankshaft using a new retaining bolt and lockplate and insure fit of mating parts as described in Section 6 and Figure 6 of the **Textron Lycoming Service Bulletin No. 475, Revision A**, dated July 16, 1990.
- (c) Aircraft may be ferried in accordance with the provisions of FAR 21.197 and 21.199 to a base where the AD can be accomplished.
- (d) Upon submission of substantiating data by an owner or operator through an FAA Inspector (maintenance, avionics, or operations, as appropriate), an alternate method of compliance with the requirements of this AD or adjustments to the compliance schedule specified in this AD may be approved by the Manager, New York Aircraft Certification Office, Engine and Propeller Directorate, Aircraft Certification Service, FAA, 181 South Franklin Avenue, Room 202, Valley Stream, New York 11581.

The inspection procedures shall be done in accordance with the following Textron Lycoming document:

DOCUMENT NO.	PAGE NO.	ISSUE/REV.	DATE
SB 475	1-4	A	07/16/90

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies may be obtained from Textron Lycoming, Oliver Street, Williamsport, Pennsylvania 17701. Copies may be inspected at the FAA, New England Region, Office of the Assistant Chief Counsel, 12 New England Executive Park, Burlington, Massachusetts 01803, or at the Office of the Federal Register, 1100 L Street, NW, Room 8401, Washington, DC.

This amendment (39-6916, AD 91-14-22) becomes effective on August 19, 1991.

FOR FURTHER INFORMATION CONTACT: Mr. Pat Perrotta or Mr. N. Minnitti, Propulsion Branch, New York Aircraft Certification Office, ANE-174, FAA, Engine and Propeller Directorate, Aircraft Certification Service, 181 South Franklin Avenue, Room 202, Valley Stream, New York 11581; telephone number (516) 791-7421.

Manufacturer's Service Information:

[Textron Lycoming Service Bulletin No. 475, Revision A](#)

[\[Rev C\]](#)

[Avco Lycoming Service Letter No. L163B](#)

[\[L163C\]](#)

Copies of the service information referenced in this directive may be obtained upon request from Textron Lycoming, Oliver Street, Williamsport, Pennsylvania 17701.