



2008-14-07 Lycoming Engines (formerly Textron Lycoming Division, AVCO Corporation):
Amendment 39-15602. Docket No. FAA-2007-0218; Directorate Identifier 92-ANE-56-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective August 14, 2008.

Affected ADs

(b) This AD supersedes AD 2002-26-01, Amendment 39-12986.

Applicability

(c) This AD applies to fuel injected reciprocating engines manufactured by Lycoming Engines that incorporate externally mounted fuel injection lines (engines with an "I" in the prefix of the engine model designation) as listed in the following Table 1:

Table 1. Engine Models Affected

Engine	Model
AEIO-320	-D1B, -D2B, -E1B, -E2B
AIO-320	-A1B, -B1B, -C1B
IO-320	-B1A, -B1C, -C1A, -D1A, -D1B, -E1A, -E1B, -E2A, -E2B
LIO-320	-B1A, -C1A
AEIO-360	-A1A, -A1B, -A1B6, -A1D, -A1E, -A1E6, -B1F, -B2F, -B1G6, -B1H, -B4A, -H1A, -H1B
AIO-360	-A1A, -A1B, -B1B
HIO-360	-A1A, -A1B, -B1A, -C1A, -C1B, -D1A, -E1AD, -E1BD, -F1AD, -G1A
IO-360	-A1A, -A1B, -A1B6, -A1B6D, -A1C, -A1D, -A1D6, -A2A, -A2B, -A3B6, -A3B6D, -B1B, -B1D, -B1E, -B1F, -B1G6, -B2F, -B2F6, -B4A, -C1A, -C1B, -C1C, -C1C6, -C1D6, -C1E6, -C1F, -C1G6, -C2G6, -F1A, -J1A6D, -M1B, -L2A, -M1A
IVO-360	-A1A
LIO-360	-C1E6
TIO-360	-A1B, -C1A6D
IGO-480	-A1B6
AEIO-540	-D4A5, -D4B5, -D4D5, -L1B5, -L1B5D, -L1D5
IGO-540	-B1A, -B1C

IO-540	-A1A5, -AA1A5, -AA1B5, -AB1A5, -AC1A5, -AE1A5, -B1A5, -B1C5, -C1B5, -C4B5, -C4D5D, -D4A5, -E1A5, -E1B5, -G1A5, -G1B5, -G1C5, -G1D5, -G1E5, -G1F5, -J4A5, -V4A5D, -K1A5, -K1A5D, -K1B5, -K1C5, -K1D5, -K1E5, -K1E5D, -K1F5, K1H5, -K1J5, -K1F5D, -K1G5, -K1G5D, -K1H5, -K1J5D, -K1K5, -K1E5, -K1E5D, -K1F5, -K1J5, -L1C5, -M1A5, -M1B5D, -M1C5, -N1A5, -P1A5, -R1A5, -S1A5, -T4A5D, -T4B5, -T4B5D, -T4C5D, -V4A5, -V4A5D, -W1A5, -W1A5D, -W3A5D
IVO-540	-A1A
LTIO-540	-F2BD, -J2B, -J2BD, -N2BD, -R2AD, -U2A, -V2AD, -W2A
TIO-540	-A1A, -A1B, -A2A, -A2B, -A2C, AE1A5, -AE2A, -AH1A, -AA1AD, -AF1A, -AF1B, -AG1A, -AB1AD, -AB1BD, -AH1A, -AJ1A, -AK1A, -C1A, -E1A, -G1A, -F2BD, -J2B, -J2BD, -N2BD, -R2AD, -S1AD, -U2A, -V2AD, -W2A
TIVO-540	-A2A
IO-720	-A1A, -A1B, -D1B, -D1BD, -D1C, -D1CD, -B1B, -B1BD, -C1B

Engine models in Table 1 are installed on, but not limited to, Piper PA-24 Comanche, PA-30 and PA-39 Twin Comanche, PA-28 Arrow, and PA-23 Aztec; Beech 23 Musketeer; Mooney 20, and Cessna 177 Cardinal airplanes.

(d) This AD is not applicable to engines having internally mounted fuel injection lines, which are not accessible.

(e) This AD is not applicable to engines that have a Maintenance and Overhaul Manual with an Airworthiness Limitations Section that requires inspection of externally mounted fuel injector lines. Those engines models are not included in Table 1 of this AD.

Unsafe Condition

(f) This AD results from Lycoming Engines revising their Mandatory Service Bulletin (MSB) to add new engine models requiring inspection, and from the need to clarify a repetitive inspection compliance time. We are issuing this AD to prevent failure of the fuel injector fuel lines that would allow fuel to spray into the engine compartment, resulting in an engine fire.

Compliance

(g) You are responsible for having the actions required by this AD performed within the compliance times specified unless the actions have already been done.

Engines That Have Had Initial Inspections

(h) For engines that have had initial inspections in accordance with Textron Lycoming MSB No. 342, dated March 24, 1972; Textron Lycoming MSB No. 342A, dated May 26, 1992; Textron Lycoming MSB No. 342B, dated October 22, 1993; Supplement No. 1 to MSB No. 342B, dated April 27, 1999; Textron Lycoming MSB No. 342C, dated April 28, 2000; Textron Lycoming MSB No. 342D, dated July 10, 2001; and Lycoming Engines MSB No. 342E, dated May 18, 2004, inspect in accordance with paragraph (j) of this AD.

Engines That Have Not Had Initial Inspections

(i) For engines that have not had initial inspections previously done in accordance with Textron Lycoming MSB No. 342, dated March 24, 1972; Textron Lycoming MSB No. 342A, dated May 26, 1992; Textron Lycoming MSB No. 342B, dated October 22, 1993; Supplement No. 1 to MSB No. 342B, dated April 27, 1999; Textron Lycoming MSB No. 342C, dated April 28, 2000; Textron Lycoming MSB No. 342D, dated July 10, 2001; or Lycoming Engines MSD No. 342E, dated May 18, 2004, inspect as follows:

(1) For engines that have not yet had any fuel line maintenance done, or have not had any fuel line maintenance done since new or since the last overhaul, inspect in accordance with paragraph (k) of this AD within 50 hours time-in-service (TIS) after the effective date of this AD.

(2) For all other engines, inspect in accordance with paragraph (k) of this AD within 10 hours TIS after the effective date of this AD.

Repetitive Inspections

(j) Thereafter, inspect at intervals of 100 hours TIS (not to exceed 110 hours), at each engine overhaul, and after any maintenance has been done on the engine where any clamp (or clamps) on a fuel injector line (or lines) has been disconnected, moved, or loosened, in accordance with paragraph (k) of this AD.

Inspection Criteria

(k) Inspect the fuel injector fuel lines and clamps between the fuel manifold and the fuel injector nozzles, and replace as necessary any fuel injector fuel line and clamp that does not meet all conditions specified in Lycoming Engines MSB No. 342E, dated May 18, 2004.

Alternative Methods of Compliance

(l) The Manager, New York Aircraft Certification Office, FAA, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

Related Information

(m) FAA Special Airworthiness Information Bulletin No. NE-07-49, dated September 20, 2007, is not mandatory, but has additional information on this subject.

(n) Contact Norm Perenson, Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine & Propeller Directorate, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; e-mail: Norman.perenson@faa.gov; telephone (516) 228-7337; fax (516) 794-5531, for more information about this AD.

Material Incorporated by Reference

(o) You must use Lycoming Engines Mandatory Service Bulletin No. 342E, dated May 18, 2004, to perform the actions required by this AD. The Director of the Federal Register approved the incorporation by reference of this service bulletin in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Lycoming Engines, 652 Oliver Street, Williamsport, PA 17701, or go to <http://www.lycoming.textron.com> for a copy of this service information. You may review copies at the FAA, New England Region, 12 New England Executive Park, Burlington, MA; or at the National

Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Burlington, Massachusetts, on June 24, 2008.

Peter A. White,

Assistant Manager, Engine and Propeller Directorate, Aircraft Certification Service.

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