2024-21-02 Lycoming Engines: Amendment 39-22869; Docket No. FAA-2024-1695; Project Identifier AD-2023-00783-E.

(a) Effective Date

This airworthiness directive (AD) is effective December 5, 2024.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Lycoming Engines (Lycoming) model engines that have an affected part and part number (P/N) installed and are assembled within the ship date range, as specified in Table 1 to paragraph (c) of this AD.

Table 1 to Paragraph (c)
Affected P/Ns

P/N	Affected part	Ship date range
LW-13923	Connecting Rod Bushing	01/30/2009-11/17/2015
LW-11750	Connecting Rod Assembly	01/30/2009-11/19/2015
78030	Connecting Rod Assembly	01/30/2009-03/31/2016
LW-13865	Connecting Rod Assembly	01/30/2009-02/14/2017
77450	Connecting Rod Assembly	01/30/2009-02/14/2017
LW-13422	Connecting Rod Assembly	01/30/2009-02/14/2017
LW-13937	Connecting Rod Assembly	01/30/2009-02/14/2017
LW-15288	Connecting Rod Assembly	01/30/2009-02/14/2017

Note 1 to paragraph (c): The affected parts are known to be installed on Lycoming Model AEIO-320 series, AEIO-360 series, AEIO-390 series, AEIO-540 series, AEIO-580-B1A, AIO-320 series, AIO-360 series, HIO-360 series, HIO-390-A1A, HIO-540-A1A, HO-360 series, IO-320 series, IO-360 series, IO-390 series, IO-540 series, IVO-360-A1A, IVO-540-A1A, LHIO-360 series, LIO-320 series, LIO-360 series, LO-360 series, LTIO-540 series, LTO-360 series, O-233-A1, O-235 series, O-320 series, O-340 series, O-360 series, O-435 series, O-540 series, SO-580 series, TEO-540 series, TIGO-541 series, TIO-360 series, TIO-540 series, TIO-541 series, TIVO-540-A2A, TO-360 series, TVO-435 series, TVO-540-A1A, VO-360 series, VO-435 series, VO-540 series, and VSO-580-A1A engines.

(d) Subject

Joint Aircraft System Component (JASC) Code 8500, Engine (Reciprocating).

(e) Unsafe Condition

This AD was prompted by several reports of connecting rod failures resulting in uncontained engine failure and in-flight shutdowns (IFSDs). The FAA is issuing this AD to prevent connecting rod failure. The unsafe condition, if not addressed, could result in engine failure, an IFSD, and loss of control of the aircraft.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) At the next oil change or within 4 months after the effective date of this AD, whichever occurs first, and thereafter at every oil change until the bushing replacement required by either paragraph (g)(3) or (4) of this AD is done, perform a visual inspection of the engine oil filter, oil pressure screen, and oil suction screen (depending on the engine configuration) for bronze metal particulates. The actions required by this paragraph may be performed by the owner/operator (pilot) holding at least a private pilot certificate and must be entered into the aircraft records showing compliance with this AD in accordance with 14 CFR 43.9(a) and 91.417(a)(2)(v). The record must be maintained as required by 14 CFR 91.417, 121.380, or 135.439.

Note 2 to paragraph (g)(1): Guidance for engine oil filter, oil pressure screen, and oil suction screen inspection instructions and identification of metallic solids may be found in Lycoming Mandatory Service Bulletin No. (MSB) 480F, dated May 25, 2017 (Lycoming MSB 480F).

(2) If, during any inspection required by paragraph (g)(1) of this AD, any bronze metal particulates are found and the source is identified as the connecting rod bushings, before further flight, inspect all affected connecting rod bushings for damage (e.g. deterioration, missing metal), proper fit, movement, and wear in accordance with ``Connecting Rod Bushing Inspection,'' of Lycoming MSB 630A, dated June 13, 2017.

Note 3 to paragraph (g)(2): Guidance for identifying the source of metallic contamination may be found in Table 3 of Lycoming MSB 480F.

(3) If the connecting rod bushings fail any inspection required by paragraph (g)(2) of this AD, before further flight, replace the connecting rod bushings with parts eligible for installation. This terminates the repetitive inspection required by paragraph (g)(1) of this AD.

(4) At the next engine overhaul, replace the connecting rod bushings with parts eligible for installation. This terminates the repetitive inspection required by paragraph (g)(1) of this AD.

(h) Definition

For the purpose of this AD, a ``part eligible for installation'' is any connecting rod bushing having P/N 01K28983.

(i) Credit for Previous Actions

You may take credit for the actions required by paragraph (g)(1) of this AD if you performed those actions before the effective date of this AD using Lycoming MSB 480F.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, East Certification Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the branch office, send it to the attention of the person identified in paragraph (k)(1) of this AD and email to: 9-avs-nyaco-cos@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(k) Additional Information

(1) For more information about this AD, contact James Delisio, Aviation Safety Engineer, FAA, 1701 Columbia Avenue, College Park, GA 30337; phone: (516) 228-7321; email: james.delisio@faa.gov.

(2) Service information identified in this AD that is not incorporated by reference is available at the address specified in paragraph (l)(3) of this AD.

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the material listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this material as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Lycoming Engines Mandatory Service Bulletin No. 630A, dated June 13, 2017.

(ii) [Reserved]

(3) For Lycoming Engines material identified in this AD, contact Lycoming Engines, 652 Oliver Street, Williamsport, PA 17701; phone: (800) 258-3279; website: lycoming.com/contact/knowledge-base/publications.

(4) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit www.archives.gov/federal-register/cfr/ibr-locations or email fr.inspection@nara.gov.