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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2025-1365; Project Identifier AD-2024-00684-E; Amendment 39-23271; AD 2026-04-11]

RIN 2120-AA64

Airworthiness Directives; Lycoming Engines

AGENCY:

Federal Aviation Administration (FAA), DOT.

ACTION:

Final rule.

SUMMARY:

The FAA is superseding Airworthiness Directive (AD) 2024-21-02, which applies to Lycoming Engines (Lycoming) model engines that have certain connecting rod assemblies installed. AD 2024-21-02 required repetitive oil inspections for bronze metal particulates and, if found, additional inspections of the connecting rod bushings for damage, proper fit, movement, and wear, and replacement if necessary. As terminating action to the connecting rod bushing inspections, AD 2024-21-02 also required replacement of the connecting rod bushings with parts eligible for installation. Since the FAA issued AD 2024-21-02, the ship date range for potentially affected parts that may be subject to connecting rod failure has been expanded, and additional parts that are eligible for installation have been identified. This AD requires the actions in AD 2024-21-02 and expands the applicability. The FAA is issuing this AD to address the unsafe condition on these products.

DATES:

This AD is effective April 8, 2026.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of April 8, 2026.

ADDRESSES:

AD Docket: You may examine the AD docket at *regulations.gov* under Docket No. FAA-2025-1365; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

Material Incorporated by Reference:

- For Lycoming 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*.
- 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. It is also available at*regulations.gov* under Docket No. FAA-2025-1365.

FOR FURTHER INFORMATION CONTACT:

David Bergeron, Aviation Safety Engineer, FAA, 1701 Columbia Avenue, College Park, GA 30337; phone: (516) 228-7321; email: *david.j.bergeron@faa.gov*.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2024-21-02, Amendment 39-22869 (89 FR 86721, October 31, 2024) (AD 2024-21-02). AD 2024-21-02 applied to Lycoming model engines that have certain connecting rod assemblies installed. AD 2024-21-02 was prompted by several reports of connecting rod failures, which resulted in uncontained engine failure and in-flight shutdowns. The NPRM was published in the **Federal Register** on August 7, 2025 (90 FR 38081). Since the FAA issued AD 2024-21-02, the ship date range for potentially affected parts that may be subject to connecting rod failure has been expanded, and additional parts that are eligible for installation have been identified. In addition, the manufacturer requested that credit be given to operators for the actions required in AD 2024-21-02 provided that the operators already accomplished AD 2017-16-11 and re-inspected any replacement connecting rod bushings received from Lycoming in accordance with the required actions of AD 2017-16-11. In the NPRM, the FAA proposed to require repetitive oil inspections for bronze metal particulates and, if found, additional inspections of the connecting rod bushings for damage (*e.g.,* deterioration, missing metal), proper fit, movement, and wear, and replacement if necessary. As terminating action to the connecting rod bushing inspections, the NPRM also proposed to require replacement of the connecting rod bushings with parts eligible for installation. The NPRM also proposed to expand the applicability by extending the shipping date range for affected parts. The FAA is issuing this AD to address the unsafe condition on these products.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from one commenter, Lycoming. The following presents the comment received on the NPRM and the FAA's response to that comment.

Request To Modify List of Known Engine Models With Affected Parts Installed

Lycoming requested that the FAA modify the list of engines known to have an affected part installed in the proposed AD to include Lycoming Model IO-580 series, IO-720 series, and O-290 series engines.

The FAA agrees with the commenter's request and has revised Note 1 to paragraph (c) of this AD to include Lycoming Model IO-580 series, IO-720 series, and O-290 series engines.

Conclusion

The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adopting the AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for minor editorial changes, and any other changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Material Incorporated by Reference Under 1 CFR Part 51

The FAA reviewed Lycoming Mandatory Service Bulletin No. 630B, dated June 11, 2025, which specifies procedures for inspection of the connecting rod bushings for damage, proper fit, movement, and wear.

This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the **ADDRESSES** section.

Costs of Compliance

The FAA estimates that this AD affects 45,152 engines installed on airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

Estimated Costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspect oil	2 work-hours × $85 per hour = $170	$65	$235	$10,610,720
Inspect connecting rod bushings	1 work-hour × $85 per hour = $85	0	85	3,837,920
Replace connecting rod bushings (per bushing)	4.5 work-hours × $85 per hour = $382	380	762	34,405,824

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.

The FAA is 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.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will 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 this AD:

(1) Is not a “significant regulatory action” under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, and

(3) 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.

List of Subjects in 14 CFR Part 39

- Air transportation
- Aircraft
- Aviation safety
- Incorporation by reference
- Safety

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 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:

a. Removing Airworthiness Directive 2024-21-02, Amendment 39-22869 (89 FR 86721, October 31, 2024); and

b. Adding the following new airworthiness directive:

2026-04-11 Lycoming Engines: Amendment 39-23271; Docket No. FAA-2025-1365; Project Identifier AD-2024-00684-E.

(a) Effective Date

This airworthiness directive (AD) is effective April 8, 2026.

(b) Affected ADs

This AD replaces AD 2024-21-02, Amendment 39-22869 (89 FR 86721, October 31, 2024); (AD 2024-21-02).

(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	01/30/2009-09/09/2021
LW-11750	Connecting Rod Assembly	01/30/2009-09/09/2021
78030	Connecting Rod Assembly	01/30/2009-09/09/2021
LW-19332	Connecting Rod Assembly	01/30/2009-09/09/2021
LW-13865	Connecting Rod Assembly	01/30/2009-09/09/2021
77450	Connecting Rod Assembly	01/30/2009-09/09/2021
LW-13422	Connecting Rod Assembly	01/30/2009-09/09/2021
LW-13937	Connecting Rod Assembly	01/30/2009-09/09/2021
LW-15288	Connecting Rod Assembly	01/30/2009-09/09/2021

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, IO-580 series, IO-720 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-290 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 630B, dated June 11, 2025.

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 or AEL13923, and any connecting rod assembly having P/N AEL11750, AEL78030, SL78030, SL77450, SL13937, SL19332, SL11750, and SL13422.

(i) Credit for Previous Actions

(1) 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.

(2) You may take credit for the actions required by paragraph (g)(2) of this AD if you performed those actions before the effective date of this AD using Lycoming MSB 630A, dated June 13, 2017.

(3) You may take credit for the actions required by paragraph (g) of this AD if you accomplished AD 2017-16-11, Amendment 39-18988 (82 FR 37296, August 10, 2017) before the effective date of this AD. Credit is not given if you received replacement bushings from Lycoming as a result of accomplishing AD 2017-16-11 and you did not perform the connecting rod bushing press-out verification procedure on the replacement bushings in accordance with Lycoming Engines Mandatory Service Bulletin No. 632B, dated August 4, 2017.

(4) You may take credit for the actions required by paragraph (g) of this AD if you accomplished AD 2024-21-02, Amendment 39-22869 (89 FR 86721, October 31, 2024) before the effective date of this AD.

(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 East Certification Branch, send it to the attention of the person identified in paragraph (k)(1) of this AD and email to: *AMOC@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 David Bergeron, Aviation Safety Engineer, FAA, 1701 Columbia Avenue, College Park, GA 30337; phone: (516) 228-7321; email: *david.j.bergeron@faa.gov*.

(2) Material 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 Mandatory Service Bulletin No. 630B, dated June 11, 2025.

(ii) [Reserved]

(3) For Lycoming 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*.

Issued on February 18, 2026.

Paul R. Bernado,

Acting Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2026-04281 Filed 3-3-26; 8:45 am]

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TRADUCTION DE COURTOISIE

de la DIRECTIVE de NAVIGABILITE FAA de référence US-2026-04-11

Lycoming Engines

Moteurs à pistons Lycoming

Moteur à pistons - Bague de bielle - Inspections / Remplacement

(a)Date d'entrée en vigueur :

Cette consigne de navigabilité (CN) entre en vigueur le 08 avril 2026.

(b) CN affectées

Cette CN remplace la CN 2024-21-02, amendement 39-22869 (89 FR 86721, 31 octobre 2024) ; (CN 2024-21-02).

(c) Applicabilité :

Cette CN s'applique aux moteurs Lycoming Engines (Lycoming) dont une pièce est concernée et portant le numéro de pièce (P/N) est installée et qui ont été assemblés pendant la période de livraison indiquée dans le tableau 1 du paragraphe (c) de cette CN.

Tableau 1 du paragraphe (c) – Numéros de pièces concernées

P/N	Pièce concernée	Période de livraison
LW-13923	Bague de bielle	01/30/2009-09/09/2021
LW-11750	Ensemble de bielle	01/30/2009-09/09/2021
78030	Ensemble de bielle	01/30/2009-09/09/2021
LW-19332	Ensemble de bielle	01/30/2009-09/09/2021
LW-13865	Ensemble de bielle	01/30/2009-09/09/2021
77450	Ensemble de bielle	01/30/2009-09/09/2021
LW-13422	Ensemble de bielle	01/30/2009-09/09/2021
LW-13937	Ensemble de bielle	01/30/2009-09/09/2021
LW-15288	Ensemble de bielle	01/30/2009-09/09/2021

Note 1 au paragraphe (c) : Les pièces concernées sont connues pour être installées sur les modèles Lycoming AEIO320, AEIO-360, AEIO-390, AEIO-540, AEIO-580-B1A, AIO-320, AIO360, HIO-360, HIO-390-A1A, HIO-540-A1A, HO-360, IO-320, IO-360, IO-390, IO-540, IO-580, IO-720, IVO-360-A1A, IVO-540-A1A, série LHIO360, série LIO-320, série LIO-360, série LO-360, série LTIO-540, série LTO-360, O-233-A1, série O-235, série O-290, série O-320, série O-340, série O-360, série O-435, série O-540, série SO-580, série TEO-540, série TIGO-541, série TIO-360, série TIO-540, série TIO-541, TIVO-540-A2A, série TO-360, série TVO-435, TVO-540-A1A, VO-360, VO-435, VO-540 et VSO-580-A1A.

(d) Objet

Code JASC (Joint Aircraft System Component) 8500, Moteur (à pistons).

(e) Situation dangereuse

Cette CN a été émise à la suite de plusieurs rapports faisant état de défaillances de bielles entraînant des pannes moteur non contenues et des arrêts en vol (IFSD). La FAA émet cette CN afin de prévenir les défaillances de bielles. Si elle n'est pas corrigée, cette condition dangereuse pourrait entraîner une panne moteur, un arrêt en vol (IFSD) et une perte de contrôle de l'aéronef.

(f) Conformité

Se conformer à cette CN dans les délais de mise en conformité spécifiés, sauf si cela a déjà été fait.

(g) Actions requises

(1) Lors de la prochaine vidange d'huile ou dans les 4 mois suivant la date d'entrée en vigueur de cette CN, selon la première éventualité, puis à chaque vidange d'huile jusqu'à ce que le remplacement des bagues requis par le paragraphe (g)(3) ou (4) de cette CN soit effectué, procéder à une inspection visuelle du filtre à huile moteur, de la

crépine de pression d'huile et de la crépine d'aspiration d'huile (selon la configuration du moteur) afin de détecter la présence de particules métalliques en bronze. Les mesures requises par le présent paragraphe peuvent être effectuées par le propriétaire/exploitant (pilote) titulaire d'au moins une licence de pilote privé et doivent être consignées dans les registres de l'aéronef afin de démontrer la conformité à cette CN.

Note 2 au paragraphe (g)(1) : Des conseils concernant les instructions d'inspection du filtre à huile moteur, de la crépine de pression d'huile et de la crépine d'aspiration d'huile, ainsi que l'identification des matières solides métalliques, sont disponibles dans le bulletin de service obligatoire Lycoming n° (MSB) 480F, daté du 25 mai 2017 (Lycoming MSB 480F).

(2) Si, lors d'une inspection requise par le paragraphe (g)(1) de cette CN, des particules métalliques de bronze sont détectées et que leur source est identifiée comme étant les bagues de bielle, avant tout nouveau vol, inspecter toutes les bagues de bielle concernées afin de détecter tout dommage (par exemple, détérioration, manque de métal), vérifier leur bon ajustement, leur mouvement et leur usure conformément à la section « Inspection des bague de bielle » du document Lycoming MSB 630B, daté du 11 juin 2025.

Note 3 au paragraphe (g)(2) : Des conseils pour identifier la source de contamination métallique sont disponibles dans le tableau 3 du document Lycoming MSB 480F.

(3) Si les bagues de bielle sont jugées non-conformes à l'inspection requise au paragraphe (g)(2) de cette CN, avant tout nouveau vol, remplacez les bagues de bielle par des pièces pouvant être installées. Cela met fin à l'inspection répétitive requise au paragraphe (g)(1) de cette CN.

(4) Lors de la prochaine révision complète du moteur(overhaul), remplacer les bagues de bielle par des pièces éligibles pour l'installation. Cela met fin à l'inspection répétitive requise au paragraphe (g)(1) de cette CN.

(h) Définition

Pour la mise en application de cette CN, une « pièce éligible à être installée » désigne toute bague de bielle portant la référence P/N 01K28983 ou AEL13923, ainsi que tout ensemble de bielle portant la référence P/N AEL11750, AEL78030, SL78030, SL77450, SL13937, SL19332, SL11750 et SL13422.

(j) Reconnaissance des actions antérieures

(1) Vous pouvez être considéré comme ayant satisfait aux exigences du paragraphe (g)(1) de cette CN si vous avez effectué ces actions avant la date d'entrée en vigueur de cette CN en utilisant le Lycoming MSB 480F.

(2) Vous pouvez être considéré comme ayant satisfait aux exigences du paragraphe (g)(2) de cette CN si vous avez effectué ces actions avant la date d'entrée en vigueur de cette CN en vous référant à la note de service Lycoming MSB 630A, datée du 13 juin 2017.

(3) Vous pouvez être considéré comme ayant satisfait aux exigences du paragraphe (g) de cette CN si vous avez mis en œuvre la CN 2017-16-11, amendement 39-18988 (82 FR 37296, 10 août 2017) avant la date d'entrée en vigueur de cette CN. Aucun crédit ne sera accordé si vous avez reçu des bagues de remplacement de la part de Lycoming à la suite de la mise en œuvre de la consigne de navigabilité AD 2017-16-11 et que vous n'avez pas effectué la procédure de vérification de l'extraction des bagues de bielle sur les bagues de remplacement conformément au bulletin de service obligatoire n° 632B de Lycoming Engines, daté du 4 août 2017.

(4) Vous pouvez valider les mesures requises au paragraphe (g) de cette CN si vous avez déjà mis en œuvre la CN 2024-21-02, amendement 39-22869 (89 FR 86721, 31 octobre 2024) avant la date d'entrée en vigueur de cette CN.

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