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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2026-8789; Project Identifier AD-2026-00678-E; Amendment 39-23454; AD 2026-17-10]

RIN 2120-AA64

Airworthiness Directives; Lycoming Engines

AGENCY:

Federal Aviation Administration (FAA), DOT.

ACTION:

Final rule; request for comments.

SUMMARY:

The FAA is adopting a new airworthiness directive (AD) for certain Lycoming Engines (Lycoming) Model O-235, O-540, and IO-540 engines with a certain piston pin installed. This AD was prompted by several reports of piston pin failure that resulted in metal particulate contamination in the engine oil and engine failure. This AD requires replacement of the affected piston pin with a part eligible for installation and, for certain engines, oil change and visual inspection of the engine oil filter, oil pressure screen, and oil suction screen for metal particulates. This AD also prohibits the installation of an affected piston pin on any engine. The FAA is issuing this AD to address the unsafe condition on these products.

DATES:

This AD is effective September 14, 2026.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of September 14, 2026.

The FAA must receive comments on this AD by October 13, 2026.

ADDRESSES:

You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- *Federal eRulemaking Portal:* Go to *regulations.gov*. Follow the instructions for submitting comments.
- *Fax:* (202) 493-2251.
- *Mail:* U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.
- *Hand Delivery:* Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

AD Docket: You may examine the AD docket at *regulations.gov* under Docket No. FAA-2026-8789; 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 street address for Docket Operations is listed above.

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-2026-8789.

FOR FURTHER INFORMATION CONTACT:

Ramanpreet Singh, Aviation Safety Engineer, FAA, 1701 Columbia Avenue, College Park, GA 30337; phone: (516) 228-7300; email: *ramanpreet.singh@faa.gov*.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written data, views, or arguments about this final rule. Send your comments using a method listed under the **ADDRESSES** section. Include "Docket No. FAA-2026-8789; Project Identifier AD-2026-00678-E" at the beginning of your comments. The most helpful comments reference a specific portion of the final rule, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this final rule because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to *regulations.gov,* including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this final rule.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this AD contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this AD, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as "PROPIN." The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this AD. Submissions containing CBI should be sent to Ramanpreet Singh, Aviation Safety Engineer, FAA, 1701 Columbia Avenue, College Park, GA 30337. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The FAA received reports from Lycoming of metal particulates found in the engine oil during oil change and two non-detectable engine failures on Lycoming Model O-235, O-540, and IO-540 engines. A manufacturer investigation revealed that certain thin-wall piston pins were manufactured with microcracks and inclusions in the base metal due to honing and tooling process changes from the piston pin supplier, making the pins more susceptible to failure. Piston pin failure can cause metal debris to circulate throughout the engine, which can damage bearings and other cylinders and can block oil passages and lead to oil starvation. As a result, Lycoming Engines published updated service material with a list of affected engines and instructions for replacement of the affected piston pins and inspection of the oil for metal particulates. The FAA is issuing this AD to prevent failure of the piston pins. This condition, if not addressed, could result in engine failure, loss of thrust control, in-flight shutdown, damage to the airplane, and loss of control of the airplane. The FAA is issuing this AD to address the unsafe condition on these products.

FAA's Determination

The FAA is issuing this AD because the agency determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Material Incorporated by Reference Under 1 CFR Part 51

The FAA reviewed Lycoming Mandatory Service Bulletin No. (MSB) 667A, dated March 12, 2026 (Lycoming MSB 667A), which identifies affected engine serial numbers and specifies procedures for the replacement of affected piston pins with a part eligible for installation. Lycoming MSB 667A also specifies procedures for oil change and visual inspection of the engine oil filter, oil pressure screen, and oil suction screen for metal particulates. The FAA also reviewed Lycoming Service Instruction No. 1009BE, dated April 24, 2020, which identifies the compliance times between overhauls for certain Lycoming Model engines. 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.

AD Requirements

This AD requires replacement of the affected piston pin with a part eligible for installation and, for certain engines, oil change and visual inspection of the engine oil filter, oil pressure screen, and oil

suction screen for metal particulates. This AD also prohibits the installation of an affected piston pin on any engine.

Differences Between This AD and the Referenced Material

This AD requires oil change and visual inspection of the engine oil filter, oil pressure screen, and oil suction screen for metal particulates within 5 hours time-in-service (TIS) unless done within last 10 hours TIS, while Lycoming MSB 667A does not have this requirement.

Justification for Immediate Adoption and Determination of the Effective Date

Section 553(b) of the Administrative Procedure Act (APA) (5 U.S.C. 551 *et seq.*) authorizes agencies to dispense with notice and comment procedures for rules when the agency, for "good cause," finds that those procedures are "impracticable, unnecessary, or contrary to the public interest." Under this section, an agency, upon finding good cause, may issue a final rule without providing notice and seeking comment prior to issuance. Further, section 553(d) of the APA authorizes agencies to make rules effective in less than thirty days, upon a finding of good cause.

An unsafe condition exists that requires the immediate adoption of this AD without providing an opportunity for public comments prior to adoption. The FAA has found that the risk to the flying public justifies forgoing notice and comment prior to adoption of this rule because piston pin microcracks and inclusions are difficult to detect prior to failure, and can result in internal damage to the engine, in-flight shutdown, and loss of control of the airplane. The FAA has determined that affected engines will need to be inspected and have affected piston pins replaced within 25 hours time-in-service or earlier after the effective date of this AD depending on the engine model. Additionally, the compliance time in this AD is shorter than the time necessary for the public to comment and for publication of the final rule. Accordingly, notice and opportunity for prior public comment are impracticable and contrary to the public interest pursuant to 5 U.S.C. 553(b).

In addition, the FAA finds that good cause exists pursuant to 5 U.S.C. 553(d) for making this amendment effective in less than 30 days, for the same reasons the FAA found good cause to forgo notice and comment.

Regulatory Flexibility Act

The requirements of the Regulatory Flexibility Act (RFA) do not apply when an agency finds good cause pursuant to 5 U.S.C. 553 to adopt a rule without prior notice and comment. Because FAA has determined that it has good cause to adopt this rule without prior notice and comment, RFA analysis is not required.

Costs of Compliance

The FAA estimates that this AD affects 957 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
Replacement of piston pin, oil change, and oil inspection	2 work-hours × $85 per hour = $170	$2,200	$2,370	$2,268,090

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators.

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, and

(2) Will not affect intrastate aviation in Alaska.

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 adding the following new airworthiness directive:

2026-17-10 Lycoming Engines: Amendment 39-23454; Docket No. FAA-2026-8789; Project Identifier AD-2026-00678-E.

(a) Effective Date

This airworthiness directive (AD) is effective September 14, 2026.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Lycoming Engines Model O-235, -A, -AP, -B, -BP, -C, -C1, -C1A, -C1B, -C1C, -C2A, -C2B, -C2C, -E1, -E1B, -E2A, -E2B, -F1, -F1B, -F2A, -F2B, -G1, -G1B, O-235-G2A, O-235-G2B, O-235-H2C, O-235-J2A, O-235-J2B, O-235-K2A, O-235-K2B, -K2C, -L2A, -L2C, -M1, -M2C, -M3C, -N2A, -N2C, -P1, -P2A, -P2C, and -P3C; O-540-A1A, -A1A5, -A1B5, -A1C5, -A1D, -A1D5, -A2B, -A3D5, -A4A5, -A4B5, -A4C5, -A4D5, -A4E5, -B1A5, -B1B5, -B1D5, -B2A5, -B2B5, -B2C5, -B4A5, -B4B5, -D1A5, -E4A5, -E4B5, -E4C5, -F1A5, -F1B5, -G1A5, -G2A5, -H1A5, -H1A5D, -H1B5D, -H2A5, -H2A5D, -H2B5D, -J1A5D, -J1B5D, -J1C5D, -J1D5D, -J2A5D, -J2B5D, -J2C5D, -J2D5D, -J3A5, -J3A5D, -J3C5D, and -L3C5D; IO-540-A1A5, -AA1A5, -AA1B5, -AB1A5, -AE1A5, -AC1A5, -AF1A5, -B1B5, -AG1A5, -B1A5, -B1C5, -C1B5, -C1C5, -C2C, -C4B5, -C4B5D, -C4C5, -C4D5, -C4D5D, -D4A5, -D4B5, -D4C5, -E1A5, -E1B5, -E1C5, -G1A5, -G1B5, -G1C5, -G1D5, -G1E5, -G1F5, -J4A5, -K1A5, -K1A5D, -K1B5, -K1B5D, -K1C5, -K1D5, -K1E5, -K1E5D, -K1F5, -K1F5D, -K1G5, -K1G5D, -K1H5, -K1J5, -K1J5D, -K1K5, -K2A5, -L1A5, -L1A5D, -L1B5D, -L1C5, -M1A5, -M1A5D, -M1B5D, -M1C5, -M2A5D, -N1A5, -P1A5, -R1A5, -S1A5, -T4A5D, -T4B5, -T4B5D, -T4C5D, -U1A5D, -U1B5D, -V4A5, -V4A5D, -W1A5, -W1A5D, and -W3A5D engines with a serial number listed in Table 2 or Table 3 of Lycoming Mandatory Service Bulletin No. (MSB) 667A, dated March 12, 2026 (Lycoming MSB 667A), and an installed piston pin having part number (P/N) LW-13445 with an FAA Form 8130-3 from the original equipment manufacturer for production dated between January 7, 2021 to December 15, 2025. If the production date on the FAA Form 8130-3 cannot be determined, or if the FAA Form 8130-3 is not available, this AD is applicable.

(d) Subject

Joint Aircraft System Component (JASC) Code 8530, Reciprocating Engine Cylinder Section.

(e) Unsafe Condition

This AD was prompted by reports from Lycoming of metal particulates found in the engine oil during oil change and two non-detectable engine failures. The FAA is issuing this AD to prevent failure of the piston pin. The unsafe condition, if not addressed, could result in engine failure, loss of thrust control, in-flight shutdown, damage to the airplane, and loss of control of the airplane.

(f) Compliance

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

(g) Definitions

(1) For the purpose of this AD, a "part eligible for installation" is one of the following:

(i) A piston pin that does not have P/N LW-13445.

(ii) A piston pin having P/N LW-13445 with an FAA Form 8130-3 from the original equipment manufacturer for production that is not dated between January 7, 2021 to December 15, 2025.

(2) For the purpose of this AD, an "affected piston pin" is a piston pin having P/N LW-13445 and one of the following:

(i) An FAA Form 8130-3 from the original equipment manufacturer for production dated between January 7, 2021 to December 15, 2025.

(ii) An FAA Form 8130-3 from the original equipment manufacturer for which the production date on the Form 8130-3 cannot be determined.

(iii) An FAA Form 8130-3 that is not available.

(h) Required Actions

(1) For all affected engines, perform an oil change and visual inspection of the engine oil filter, oil pressure screen, and oil suction screen for metal particulates as follows:

Note 1 to paragraph (h)(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 MSB No. 480F, dated May 25, 2017.

(i) For engines listed in Table 3 of Lycoming MSB 667A with greater than 150 total hours time-in-service (TIS) since installation of the affected piston pins: before further flight.

(ii) For all other affected engines: if an oil change has not been performed within the last 10 hours TIS, then within 5 hours TIS after the effective date of this AD.

(2) At the applicable compliance time required in paragraph (h)(2)(i), (ii), or (iii) of this AD, replace any affected piston pin with a part eligible for installation in accordance with the Required Action of Lycoming MSB 667A, as applicable to engine model.

(i) For engines where metal particulates were found during the oil change and inspection required by

paragraph (h)(1)(i) or (ii) of this AD: before further flight.

(ii) For engines where metal particulates were not found during the oil change and inspection required by paragraph (h)(1)(i) or (ii) of this AD and with a serial number listed in Table 2 of Lycoming MSB 667A: at the next maintenance event requiring the removal of a cylinder assembly with an affected piston pin, or at the next engine overhaul not to exceed the time between overhaul specified in Lycoming Service Instruction No. 1009BE, dated April 24, 2020, whichever occurs first after the effective date of this AD.

(iii) For engines where metal particulates were not found during the oil change and inspection required by paragraph (h)(1)(i) or (ii) of this AD and with a serial number listed in Table 3 of Lycoming MSB 667A that have 150 hours total TIS or less since installation of the affected pins: within 25 hours TIS after the effective date of this AD but before or upon reaching 150 total hours TIS since installation of the affected piston pins.

(i) Installation Prohibition

After the effective date of this AD, do not install an affected piston pin as defined in paragraph (g)(2) of this AD, on any engine.

(j) No Return of Parts

Although the service material specifies returning certain parts to the manufacturer, this AD does not include those requirements.

(k) Special Flight Permits

(1) Special flight permits may be issued in accordance with 14 CFR 21.197 and 21.199199 for the replacement requirements of this AD provided no metal particulates are found during the inspection required by this AD.

(2) Special flight permits, as described in 14 CFR 21.197 and 21.199, are not allowed for the visual inspection of the engine oil filter, oil pressure screen, and oil suction screen for metal particulates requirement of this AD.

(l) Alternative Methods of Compliance (AMOCs)

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 (m)(1) of this AD and email to: *AMOC@faa.gov*. 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.

(m) Additional Information

(1) For more information about this AD, contact Ramanpreet Singh, Aviation Safety Engineer, FAA, 1701 Columbia Avenue, College Park, GA 30337; phone: (516) 228-7300; email: *ECB-COS@faa.gov*.

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

(n) 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. 667A, dated March 12, 2026.

(ii) Lycoming Service Instruction No. 1009BE, dated April 24, 2020.

(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 August 21, 2026.

Paul R. Bernado,

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

[FR Doc. 2026-17584 Filed 8-26-26; 11:15 am]

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