

# EMERGENCY AIRWORTHINESS DIRECTIVE



Aircraft Certification Service  
Washington, DC

U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

[www.faa.gov/aircraft/safety/alerts/](http://www.faa.gov/aircraft/safety/alerts/)

---

**DATE: November 18, 2009**

**AD #: 2009-24-52**

This emergency airworthiness directive (AD) supersedure is sent to all owners and operators of all Teledyne Continental Motors (TCM) 240, 360, 470, 520, and 550 series reciprocating engines.

## **Background**

This emergency AD supersedure results from TCM reporting three occurrences of rapid wear on the face of hydraulic lifters, part numbers (P/Ns) 657913, 657915, and 657916, at 5, 6, and 38 hours time-in-service, and from the need to add the 550 series engines to the applicability. This condition, if not corrected, could result in loss of engine power and loss of control of the airplane.

## **Explanation of Relevant Service Information**

We have reviewed and approved TCM Mandatory Service Bulletin (MSB) No. MSB09-08, dated November 3, 2009. The MSB describes procedures for inspecting engines for hydraulic lifters, P/Ns 657913, 657915, and 657916, and replacing those lifters if installed.

## **FAA's Determination and Requirements of the Rule**

We have identified an unsafe condition that is likely to exist or develop on other TCM engines of this same type design. This AD requires determining if hydraulic lifters, P/Ns 657913, 657915, and 657916, are installed, and replacing those lifters if installed. You must use the service information described previously to perform these actions.

## **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.

We are 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.

## **Determination of Rule's Effective Date**

We are issuing this AD supersedure under 49 U.S.C. Section 44701 according to the authority delegated to me by the Administrator, and it is effective immediately upon receipt.

**2009-24-52 Teledyne Continental Motors (Formerly Continental):** Directorate Identifier 2009-NE-38-AD.

**Effective Date**

(a) Emergency AD 2009-24-52, issued on November 18, 2009, is effective upon receipt.

**Affected ADs**

(b) This AD supersedes Emergency AD 2009-24-51, issued November 16, 2009.

**Applicability**

(c) This AD supersedure applies to all Teledyne Continental Motors (TCM) 240, 360, 470, 520, and 550 series reciprocating engines with hydraulic valve lifters, part numbers (P/Ns) 657913, 657915, or 657916, installed. These engines are installed on, but not limited to, general aviation airplanes.

**Unsafe Condition**

(d) This AD supersedure results from TCM reporting three occurrences of rapid wear on the face of lifters, P/Ns 657913, 657915, and 657916, at 5, 6, and 38 hours time-in-service, and from the need to add the 550 series engines to the applicability. We are issuing this AD to prevent excessive hydraulic lifter wear, which can result in loss of engine power and loss of control of the airplane.

**Compliance**

(e) You are responsible for having the actions required by this AD performed before further flight after the effective date of this AD, unless the actions have already been done.

**Excluded Engines**

(f) If your engine was manufactured or rebuilt before June 19, 2009, and you have not had any hydraulic lifters replaced after June 19, 2009, no action is required.

**Determining P/N of Lifters**

(g) If your engine was manufactured or rebuilt on or after June 19, 2009, or if any of your hydraulic lifters were replaced on or after June 19, 2009, and you can't determine the P/N of your hydraulic lifters from the engine records:

(1) Use the list of engine serial numbers in Section A of TCM Mandatory Service Bulletin (MSB) No. MSB09-8, dated November 3, 2009.

(2) Inspect the hydraulic lifters in each cylinder for P/Ns 657913, 657915, and 657916. Use TCM MSB No. MSB09-8, dated November 3, 2009, Section 1. Action Required, paragraphs 1. through 3. to determine the P/N of the lifters.

**Replacing the Lifters**

(h) If your engine has any affected hydraulic lifters, replace the hydraulic lifters using TCM MSB No. MSB09-8, dated November 3, 2009, Step 2, paragraphs 2. through 4.

**Installation Prohibition**

(i) After the effective date of this AD, do not install any hydraulic lifters, P/Ns 657913, 657915, or 657916, into any TCM 240, 360, 470, 520, or 550 series reciprocating engine.

**Alternative Methods of Compliance**

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

**Contact Information**

(k) For further information, contact: Anthony Holton, Aerospace Engineer, Atlanta Certification Office, FAA, Small Airplane Directorate, 1701 Columbia Avenue, College Park, GA 30337; e-mail: [anthony.holton@faa.gov](mailto:anthony.holton@faa.gov); telephone (404) 474-5567; fax (404) 474-5606.

Issued in Burlington, Massachusetts, on November 18, 2009.

Peter A. White,  
Assistant Manager, Engine and Propeller Directorate,  
Aircraft Certification Service.