
AIRWORTHINESS DIRECTIVE

For the reasons set out in the background section, the CASA delegate whose signature appears below issues the following Airworthiness Directive (AD) under subregulation 39.1 (1) of CASR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

Lycoming Pistons Engines

AD/LYC/109
Amdt 2

Crankshaft Gear Bolt

13/2003

- Applicability:
1. Except as described in Part 2 of this Applicability section:
Textron Lycoming O-540, IO-540, AEIO-540, TIO-540 and LTIO-540 series engines; either
 - a. Factory new, factory rebuilt and factory overhauled engines listed by serial number in Textron Lycoming Mandatory Service Bulletin (MSB) 554 and Supplements to Textron Lycoming Mandatory Service Bulletin (MSB) 554; or
 - b. Engines that have had a crankshaft gear bolt part number (P/N) STD-2209 installed at Textron Lycoming Williamsport in the period 27 November 1996 to 10 November 1998; or
 - c. Engines fitted with a crankshaft gear bolt P/N STD-2209 that was supplied originally by Textron Lycoming during the period 27 November 1996 to 10 November 1998 and installed during field maintenance or at a field overhaul since 27 November 1996.
 2. This directive is **not applicable** to Textron Lycoming O-540, IO-540, AEIO-540, TIO-540 and LTIO-540 series engines:
 - a. Incorporating single drive dual magnetos; or
 - b. O-540-F model engines:
 - i. Having had crankshaft gear bolt P/N STD-2209 replaced in accordance with AD/LYC/104 or FAA AD 99-03-05; or
 - ii. Listed by serial number in Table 1 of MSB 554; and
 - iii. Where the crankshaft gear bolt has not been subsequently replaced with a bolt supplied by Textron Lycoming during the period 27 November 1996 to 10 November 1998; or
 - c. Engines fitted with a Superior Air Parts FAA approved PMA crankshaft gear bolt P/N SL-STD-2209; or

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- d. Engines fitted with a crankshaft gear bolt included in Textron Lycoming gear bolt replacement kit 05K19987; or
- e. Engines fitted with a crankshaft gear bolt P/N STD-2247; or
- f. Engines that are supported by CASA recognised supply documentation detailing that Textron Lycoming did not originally supply the currently installed crankshaft gear bolt during the period 27 November 1996 to 10 November 1998.

Note 1: Superior Air Parts PMA bolts may be identified by the letters SL on the bolt head.

Note 2: Refer to CASA CAAP 42W-1(2) for CASA recognised supply documentation.

Requirement: In accordance with Textron Lycoming MSB 554, replace the crankshaft gear bolt P/N STD-2209 with a bolt:

- i. Included in Textron Lycoming gear bolt replacement kit 05K19987; or
- ii. A bolt P/N SL-STD-2209 manufactured by Superior Air Parts under an FAA PMA approval; or
- iii. A bolt P/N STD-2209 supplied by Textron Lycoming other than during the period 27 November 1996 through 10 November 1998; or
- iv. A bolt P/N STD-2247.

Note 3: FAA Airworthiness Directive 2002-23-06 refers

Compliance: Unless previously accomplished; within 10 hours time in service or prior to 31 December 2003, whichever occurs first.

This Amendment becomes effective on 25 December 2003.

Background: This directive was originally issued to require certain crankshaft gear bolts to be removed from service. This amendment has been issued to amend the applicability to include engines detailed by serial number in Supplement 5 to MSB 554. The amendment also includes; the fitment of a bolt P/N STD-2247 provides a further terminating action for the requirements of this directive.

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Amendment 1 of this Airworthiness Directive became effective on 27 November 2002.

A handwritten signature in black ink, appearing to read 'Jim Coyne', with a stylized flourish at the end.

Jim Coyne
Delegate of the Civil Aviation Safety Authority

12 November 2003