

AIRWORTHINESS DIRECTIVE

For the reasons set out in the background section, the CASA delegate whose signature appears below revokes Airworthiness Directive (AD) AD/LYC/107 Amdt 1 and issues the following AD under subregulation 39.1 (1) of CAR 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 Piston Engines

**AD/LYC/107
 Amdt 2**

Crankshaft Replacement

**12/2002
 DM**

- Applicability:
1. Textron Lycoming TIO-540 and LTIO-540 series engines with a rated take-off power of 300 horsepower or greater and listed by engine serial number in Table 1 of Textron Lycoming Mandatory Service Bulletin (MSB) 552; and
 2. Textron Lycoming TIO-540 and LTIO-540 series engines with a rated take-off power of 300 horsepower or greater and incorporating a crankshaft listed by crankshaft serial number in Table 2 of Textron Lycoming MSB 552; and
 3. Textron Lycoming IO-540 series engines modified under a Supplemental Type Certificate (STC) listed in Table 1 of this directive to incorporate a turbocharger, regardless of the rated horsepower.

Note 1: Applicable IO-540 powered aircraft include the Ted Smith/Piper Aerostar 601 and 601P models.

Table 1. List of STC Numbers			
SA000214DE	SA00356DE	SA01925AT	SA09650SC
SA469NE	SA2062WE	SA2118NM	SE2122WE
SA2123NM	SA257CE	SA2657WE	SA2082WE
SA305SO	SA3513WE	SA3719SW	SA385WE
SA4942NM	SA529WE	SA530WE	SA539WE
SA5699NM	SA811WE	SA840WE	SA909WE
SA978WE	SE00357DE	SE01949AT	SE1657NM
SE978NM	SE17WE	SE21WE	SE22WE
SE4157NM	SE5869SW	SE40WE	SE60WE
SE6WE	SE7734SW	SE81WE	SA01925AT
SA1648NM	SA4156NM	SA1747CE	SE4941NM
SA2656WE	SA000214DE		

Lycoming Piston Engines

AD/LYC/107 Amdt 2 (continued)

- Requirement:
1. MSB 552 listed TIO-540 and LTIO-540 engines: Replace the crankshaft in accordance with the requirements of Textron Lycoming MSB 552.
 2. MSB 552 listed TIO-540 and LTIO-540 crankshafts: Replace the crankshaft in accordance with the requirements of Textron Lycoming MSB 552.
 3. IO-540 series engines incorporating an turbocharger STC:
 - a. Determine the serial number of the crankshaft; and
 - b. If listed in Table 2 of Textron Lycoming MSB 552, replace the crankshaft in accordance with the requirements of Textron Lycoming MSB 552.

Note 2: Prior replacement of a crankshaft in accordance with either MSB 550 or 552 constitutes compliance with the requirements of this directive.

Note 3: FAA Airworthiness Directive 2002-19-03 Amdt 39-12883 refers.

- Compliance: Unless previously accomplished:
- a. Installed engines: Within 5 hours time in service from the effective date of this Directive.
 - b. Spare engines: Before installation in an aircraft.

This Amendment becomes effective on 2 October 2002.

Background: This Directive was originally issued to require certain crankshafts to be removed from service. The requirement follows advice from the engine manufacturer of a crankshaft material defect being identified in the investigation of a number of engine failures. This amendment increases the engines applicable to include IO-540 engines incorporating an STC approved turbocharger.

Lycoming Piston Engines

AD/LYC/107 Amdt 2 (continued)

Amendment 1 of this Airworthiness Directive became effective on 21 August 2002.

The original issue of this Airworthiness Directive became effective on 20 February 2002.



James Coyne
Delegate of the Civil Aviation Safety Authority

26 September 2002