



DIRECCIÓN NACIONAL DE AERONAVEGABILIDAD (DNA)  
DIRECCIÓN AVIACIÓN GENERAL (DAG)  
REPÚBLICA ARGENTINA

## ADVERTENCIA 091/DAG

La presente ADVERTENCIA tiene por objeto dar a conocer una situación que puede resultar de interés para Talleres Aeronáuticos de Reparación, operadores y/o propietarios de aeronaves. Se emite a los efectos de informar y las recomendaciones no tienen carácter mandatorio.

Ciudad Autónoma de Buenos Aires, 16 de julio de 2008.

**APLICABLE A:** Motores Marca Lycoming Modelos O, IO, LIO, AIO, AEIO-320 SERIES; O, LO, IO, LIO, AIO, AEIO, TO, TIO-360 SERIES; O, IO, AEIO, TIO, LTIO-540 SERIES; AEIO, IO-580 SERIES e IO-720 SERIES, con la base o pestaña del cilindro ancha (*wide cylinder flange*). Estos motores están identificados por una letra "A" o "E" contenida en el N/S.

**MOTIVO:** Posible desplazamiento del Eje del Engranaje de Mando (EEM) del Governor de la hélice (*propeller governor idler gear shaft*), pudiendo eventualmente llegar a la separación del motor lo que resultaría una pérdida de aceite y posible pérdida de potencia en el motor.

**ANTECEDENTES:** Esta Advertencia pone en conocimiento del público usuario el Special Airworthiness Information Bulletin (SAIB) N° NE-08-32 del 03-Julio-2008, emitido por la Federal Aviation Administration de EE.UU., relacionado con la inapropiada instalación del (*set screw*) prisionero con base penetrante AN565B1032H3, 4 o 5, cuya instalación es con el fin de justamente impedir el movimiento del EEM. Lycoming ha emitido el SI 1343 B donde se indican las tareas a realizar para la correcta instalación de este prisionero.

Se adjunta a esta Advertencia el SAIB N° NE-08-32 (dos páginas).

**RECOMENDACION:** Con el fin de prevenir el desplazamiento del EEM, esta Dirección recomienda que durante las Recorridas Generales o cada vez que este eje sea instalado en el cárter del motor, la instalación se realice siguiendo las instrucciones del Lycoming SI 1343 B y lo indicado en el párrafo "*Recommendations*" del SAIB N° NE-08-32.

Para obtener mayor información dirigirse a la División Ingeniería de la DAG:

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Ing. Aer. Juan José Bordet  
Director de Aviación General



**SUBJ:** Propeller Governor Set Screw

*This is information only. Recommendations aren't mandatory.*

## Introduction

This Special Airworthiness Information Bulletin (SAIB) alerts owners, operators, and certificated repair facilities of **Lycoming Engines O, IO, LIO, AIO, AEIO-320 Series; O, LO, IO, LIO, AIO, AEIO, TO, TIO-360 Series; O, IO, AEIO, TIO, LTIO-540 Series; AEIO, IO-580 Series; and IO-720 Series, Wide Cylinder Flange Engines that are equipped with a front crankcase-mounted propeller governor.** Wide cylinder flange engines are identified by the suffix "A or E" in the engine serial number. At this time, this airworthiness concern isn't an unsafe condition that would warrant airworthiness directive action under Title 14 of the Code of Federal Regulations (14 CFR) part 39.

## Background

Illustrations of the description below can be found in Lycoming Engines Service Instruction (SI) No. 1343B.

During engine manufacture, overhaul, or any time the propeller governor idler gear shaft is installed in the engine crankcase, a set screw, part number (P/N) AN565B1032H3, H4, or H5 is installed through a section of the crankcase and into a hole in the shaft. This set screw installation is designed to prevent any movement of the propeller governor idler gear shaft.

If the set screw is not properly installed and the crankcase threads are not peened to lock the set screw, the set screw can loosen and back out. If the set screw backs out, the propeller governor idler gear shaft can move, eventually separating from the engine, resulting in a loss of engine oil and a loss of engine power. Additionally, the engine oil has, in three of the reported accidents, been deposited on the windshield, restricting the visibility of the pilot during an emergency landing.

There are seven documented accidents/incidents of this set screw backing out of the engine crankcase. Two of the accidents resulted in fatalities. In one of the most recent incidents, the pilot was able to return to the airport. The damaged engine parts from this incident included the following:

- Crankcase
- Crankshaft
- Camshaft
- Connecting rods
- Counterweights
- Pistons
- Cylinders
- Oil pump impeller
- Accessory housing

Lycoming Engines issued SI No. 1343B to clarify the peening process after the set screw is installed and to add the application of Loctite 290 to the set screw threads before final assembly of the set

screw. The Loctite 290 is not used instead of peening the threads, but is used **in addition** to peening, to provide an additional method of retaining the set screw.

### **Recommendations**

1. During initial installation of the set screw, ensure the set screw is aligned with, and enters, the hole in the propeller governor idler gear shaft.
2. Once alignment is achieved, remove the set screw and use Loctite 290 on the set screw threads as specified in Lycoming SI 1343B as an additional method of set screw retention.
3. Install and tighten the set screw until it bottoms out in the hole in the propeller governor idler gear shaft.
4. Peen the crankcase threads as specified in Lycoming SI 1343B, except peen the threads of the hole directly on top of the set screw; do not peen the set screw as indicated in Fig 3 of SI 1343B.

### **For Further Information Contact**

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### **For Related Service Information Contact**

Lycoming Engines, 652 Oliver St, Williamsport, PA 17701; phone: (570) 323-6181; fax: (570) 327-7101; or go to their Web site at: <http://www.lycoming.textron.com/support/publications/service-instructions/pdfs/SI1343B.pdf>