



652 Oliver Street
Williamsport, PA. 17701 U.S.A.

Telephone +1 (800) 258-3279 U.S. and Canada (Toll Free)
Telephone +1 (570) 323-6181 (Direct)
Facsimile +1 (570) 327-7101

www.lycoming.com

SERVICE INSTRUCTION

DATE: March 10, 2016

Service Instruction No. 1343C
(Supersedes Service Instruction No. 1343B)
Engineering Aspects are
FAA Approved

SUBJECT: Set Screw for Propeller Governor Idler Shaft

MODELS AFFECTED: The following Wide Cylinder Flange Engines that are equipped with a front crankcase mounted propeller governor:

- O, IO, LIO, AIO, AEIO-320 Series
- O, LO, IO, LIO, AIO, AEIO, TO, TIO-360 Series
- O, IO, AEIO, TIO, LTIO-540 Series
- IO-580 Series
- IO-720

NOTICE: Wide cylinder flange engines are identified by the suffix “A” or “E” in the serial number.

This revision of SI 1343 adds the engines with the suffix “E” in the serial number as part of the scope of affected engine models (which was not specified in SI-1343B) but is specified in AD 2015-02-07. The scope of engines covered by AD 2015-02-07 is unchanged.

The FAA has approved this Service Instruction as an Approved Alternate Method of Compliance (AMOC) to paragraph (e) of AD 2015-02-07.

TIME OF COMPLIANCE: At each installation of propeller governor set screw

REASON FOR REVISION: Added “E” serial number engines; clarified instructions; added figures and torque for set screw

NOTICE: Incomplete review of all the information in this document can cause errors. Read the entire Service Instruction to make sure you have a complete understanding of the requirements.

This Service Instruction is notification of a rework procedure to remove a spring pin part number (P/N) MS-9048-111 (if installed on affected Lycoming engine models) and install a 10-32 set screw in the propeller governor idler shaft in place of the spring pin during the next engine overhaul.

The set screw is a better means to hold the propeller governor idler shaft securely in place.



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Part numbers of available replacement set screws of different lengths are identified in Table 1.

Table 1
Available Set Screws

Description	Part Number
10-32 x 3/16 inch (4.83 mm) long	AN565B1032H3
10-32 x 1/4 inch (6.35 mm) long	AN565B1032H4
10-32 x 5/16 inch (7.87 mm) long	AN565B1032H5

Set Screw Installation Procedure

NOTICE: During this set screw installation procedure, it will be necessary to replace the existing idler shaft gear P/N 77876 (that goes with the spring pin P/N MS-9048-111) with a different idler gear shaft P/N LW-14021.

1. Remove and discard the spring pin P/N MS-9048-111 from the propeller governor idler shaft.
2. Remove and discard idler gear shaft (P/N 77876).
3. Examine the threads in the vacated spring pin hole in the crankcase. If the threads are damaged, re-tap the hole with a 10-32 UNF-3B, P.D. 0.1697/0.1726-inch (4.310/4.38 mm) tap. Allow open threads (Figure 5) near the top of the hole for peening the set screw.
4. Drill and tap the open spring pin hole as shown in Figure 1.
5. Spot face the area around the hole as shown in Figure 2.
6. Assemble the new idler gear shaft P/N LW-14021 together with the gear assembly and thrust washer (Figure 3) and install in the crankcase.
7. Refer to Table 1 to identify a replacement set screw shorter in length (than the spring pin) that will fit inside the hole and allow enough open threads (Figure 5) near the top of the hole for peening the set screw.
8. Apply a light coat of Loctite® 290™ to the set screw. Wipe away any excess Loctite® 290™ with a clean lint-free cloth.

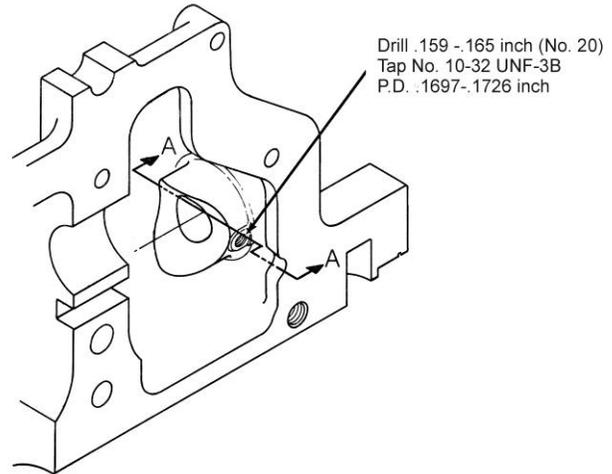
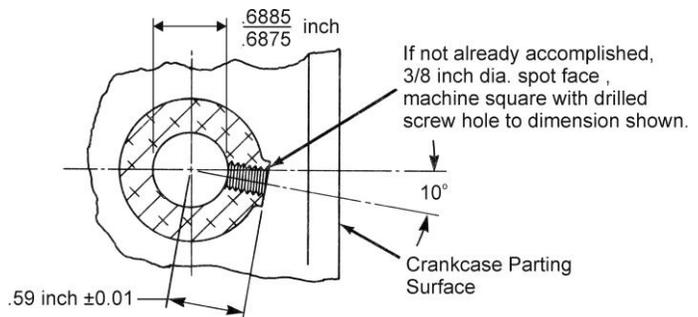
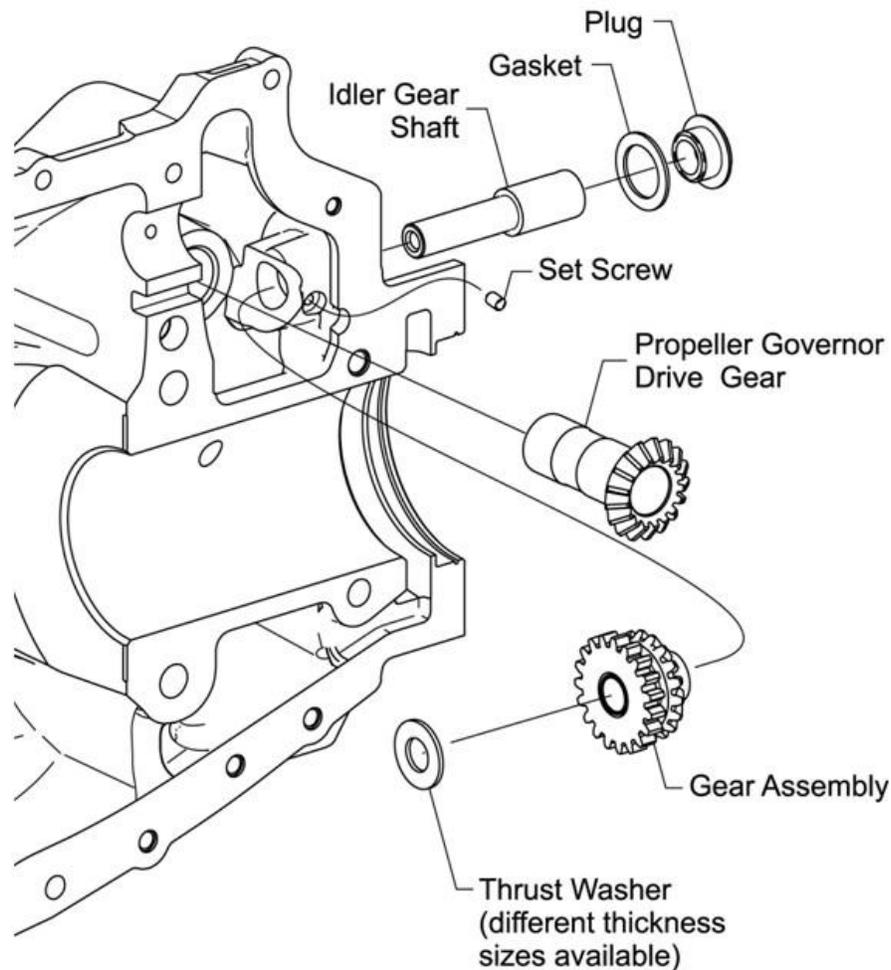


Figure 1
Drill and Tap Locations



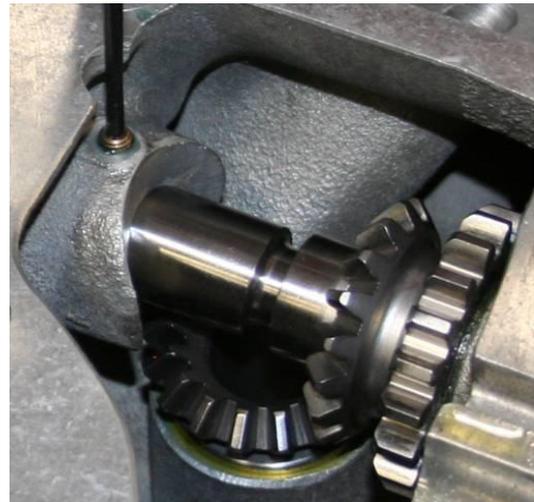
SECTION A-A
Figure 2
Spot Face Dimensions

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**Figure 3
Propeller Governor Drive**

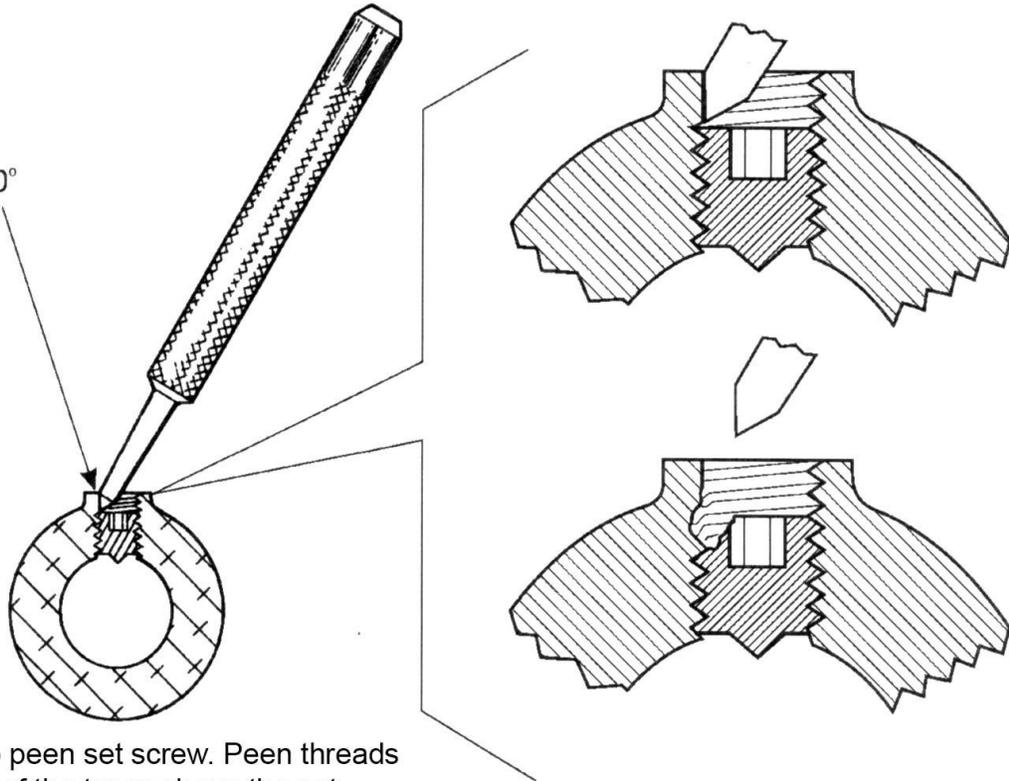
9. Install the set screw into the crankcase (Figure 4). Align the idler gear shaft with the set screw to enable the set screw to lock into the indentation in the idler gear shaft to hold the idler gear shaft in place.
10. Torque the set screw to 32 to 38 in.-lb. (3.6 to 4.3 Nm).
11. Use a smaller center punch (peening tool) with a 3/32-inch (2.38 mm) diameter at an approximate 50°/60° angle topeen the threads of the hole at the top of the taper above the set screw (as shown in Figure 5) from backing out.



**Figure 4
Set Screw Location**

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Tip has a 50°/60° included angle.



Tool in position to peen set screw. Peen threads of hole at the top of the taper above the set screw to ensure the screw will not back out.

Figure 5
Center Punch (Peening Tool) for Set Screw

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