



SERVICE INFORMATION LETTER

SERVICE INFORMATION LETTER NO. 0189

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DATE: February 4, 2019

1. SUBJECT: Magneto Retard Terminal P-Lead Insulator
2. MODEL: F-28C, F-28C-2, F-28C-2R, F-28F, F-28F-R, 280C, 280F, and 280FX
3. EFFECTIVITY: F-28F S/N 832 and prior; 280FX S/N 2158 and prior; any F-28C, F-28C-2, F-28C-2R, F-28F, F-28F-R, 280C, 280F, and 280FX that may have had the P-lead insulator changed in the field
4. BACKGROUND:

Enstrom has been made aware of an issue with some aircraft involving the D3200 magneto retard terminal P-lead insulator. It has been reported that the aircraft does not start while the starter button is pressed, rather, the aircraft starts as the starter button is released.

There are two common causes of this issue:

- The retard timing is set too advanced, at TDC (top dead center). For proper operation of the shower-of-sparks starting system, the retard contact (points) must be set to open half tooth on the starter ring gear after TDC. Refer to the Enstrom F-28F/280F Series Maintenance Manual, Section 13-9, paragraph E, item (2) for steps for setting the proper timing,
- Or the soft rubber retard terminal P-lead insulator is installed.

NOTE: **The ignition timing marks are stamped into the starter ring gear support assembly and not actually on the ring gear. To aid in setting the magneto timing, it may be advisable to extend the marks onto the ring gear using a fine Sharpie® or similar marker (Figure 1).**

The magneto retard terminal insulator may be either phenolic or soft rubber. The soft rubber insulator is generally used in pressurized magnetos. It forms a tight seal but the compressed insulator may hold the wire insulation and prevent the lead from seating on the terminal and making proper electrical contact. The phenolic insulator will not trap the wire insulation so the lead will make better contact with the terminal. The aircraft with the serial numbers listed above were assembled with a soft rubber insulator (Figure 2). Enstrom recommends checking for this rubber insulator and, if installed, replacing with a phenolic bushing to allow the lead to seat properly.

This Service Information Letter (SIL) provides instructions for checking and replacing the magneto retard terminal P-lead insulator.

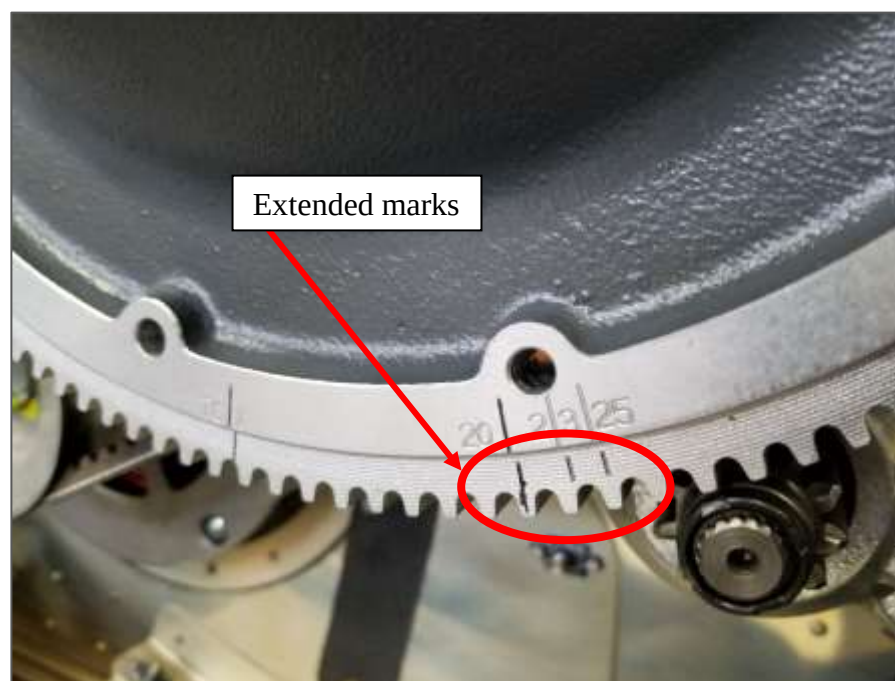


Figure 1. Timing index marks extended onto the ring gear

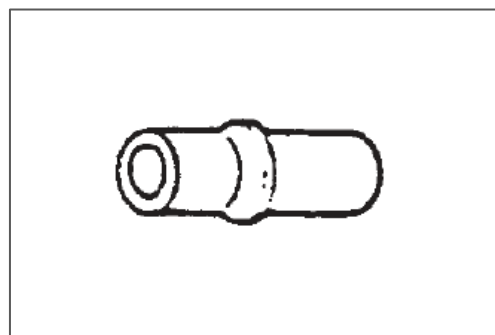


Figure 2. P/N 10-382812 Rubber Insulator

5. COMPLIANCE:

At the next 100 hr/annual inspection, determine if the P-lead insulator is rubber. If so, replace P/N 10-382812 rubber insulator with P/N 10-157212 (Kit P/N 10-157208) bushing in accordance with paragraph 6.

6. PROCEDURE:

NOTE: Perform all related system maintenance in accordance with the Enstrom F-28F/280F Series Maintenance Manual (MM).

NOTE: The retard contact inside the magneto is designed to contact the inside of the cover when the P-lead is removed from the magneto to deactivate the shower of sparks system. It is important that the retard P-lead slides freely within the magneto cover to ensure that the P-lead makes an electrical connection with the retard points (contactor) inside the magneto.

6.1 Remove seat cushions and the access panel in the seat back.

6.2 Remove the co-pilot side firewall access panel.

6.3 Identify the retard circuit P-lead.

6.4 Remove the retard P-lead from the magneto cover and determine if the P-lead insulator is the rubber insulator or the hard phenolic bushing. If the insulator is rubber, proceed to step 6.5. If the insulator is the phenolic bushing, proceed to step 6.9.

NOTE: If the aircraft has a phenolic insulator and has been starting when the starter button is released as described in Section 4, set the magneto retard timing per the Enstrom F-28F/280F Series Maintenance Manual, Section 13-9, paragraph E, item (2).

6.5 Cut the P-lead wire about 2 inch/51 mm from the terminal.

CAUTION

The magneto retard terminal bushing (P/N 10-157212) is similar to right and left P-lead connection bushings (P/N 10-382697), but is shorter in length. Ensure the correct bushing is being installed on the retard terminal P-lead wire. Installing the incorrect bushing will cause improper magneto operation.

6.6 Slide the rubber P-lead insulator (P/N 10-382812) (Figure 2) off of the wire and slide the phenolic insulated bushing (P/N 10-157212) (Figure 3) onto the wire.

6.7 Reconnect the P-lead wire with a butt connector (P/N AS-N-345) or equivalent.

6.8 Install the P-lead back into the magneto.

NOTE: It is possible to distort the retard points copper contactor tang when installing the cover. It is important to check that the retard P-lead is actually contacting the retard points during installation of the P-lead. When installing the retard P-lead, and before the coupling nut is installed, push the P-lead insulator into the magneto cover and ensure that the contactor inside the magneto is touching and pushes the insulator back out a small amount.

6.9 Reinstall the access panels and aircraft seat cushions.

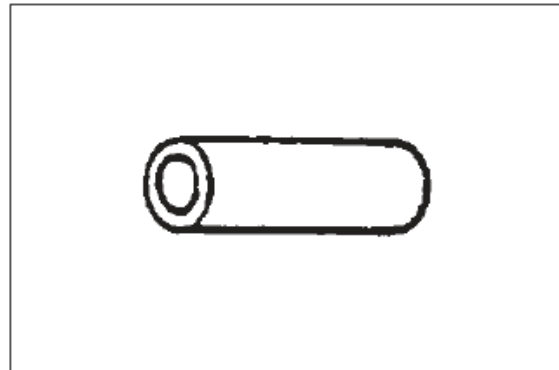


Figure 3. 10-157212 Phenolic Bushing

7. PARTS

7.1 Kit, Magneto Retard Terminal – P/N 10-157208

7.2 Butt connector – P/N AS-N-345 (or equivalent)

8. SPECIAL TOOLS OR EQUIPMENT: None

9. MAN-HOURS: 20 minutes

10. WARRANTY: Per Enstrom policy

11. WEIGHT CHANGE: N/A

12. LOG BOOK ENTRY: As required for maintenance actions

13. REPETITIVE INSPECTIONS: None