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# SERVICE INFORMATION LETTER



DATE: November 30, 2012

1. SUBJECT: Hi/Lo Rotor RPM Switch Installation

2. MODEL: F-28F, 280FX (24V aircraft)

3. EFFECTIVITY: F-28F, S/N 830 and prior; 280FX, S/N 2135 and prior

4. REFERENCE: Enstrom F-28F/280F Series Maintenance Manual, Rev. 4 or Later Revision

5. BACKGROUND:

Enstrom has certified a new installation for a P/N ECD4079 Hi/Lo Rotor RPM Switch that activates the warning light and the audio horn of the Rotor Warning System at rotor speeds outside of the rotor operating range (below 332 RPM or above 385 RPM). The previous system only activated the warning when the rotor RPM was below the operating range.

This Service Information Letter (SIL) is intended to make operators aware that the Hi/Lo Rotor RPM Switch Installation Kit, P/N 28-01064, containing the Hi/Lo Rotor RPM Switch is available and to provide instructions to perform the installation.

Maintenance aspects of the Hi/Lo Rotor RPM Switch are provided in the Enstrom F-28F/280F Series Maintenance Manual, Revision 4, or later revision.

6. COMPLIANCE:

**NOTES**

**Perform all maintenance of the Hi/Lo Rotor RPM Warning System IAW the Enstrom F-28F/280F Series Maintenance Manual, paragraph 21-7, and the paragraphs to follow.**

## NOTES

**Refer to Enstrom kit drawing 28-01064 for installation detail. Zone references in the instructions below refer to the field of the drawing where the detail is depicted.**

**All installation hardware is supplied with the kit, unless otherwise noted.**

**Conductive compound, Kopr-Shield CP8-TB, is not provided with the kit and must be supplied by the installer.**

**Enstrom Document 28-SP-133 (included with the kit) provides instructions for standard acceptable practices for electrical installations.**

**An example of a complete Hi/Lo Rotor RPM Switch Installation is shown in Figure 1.**

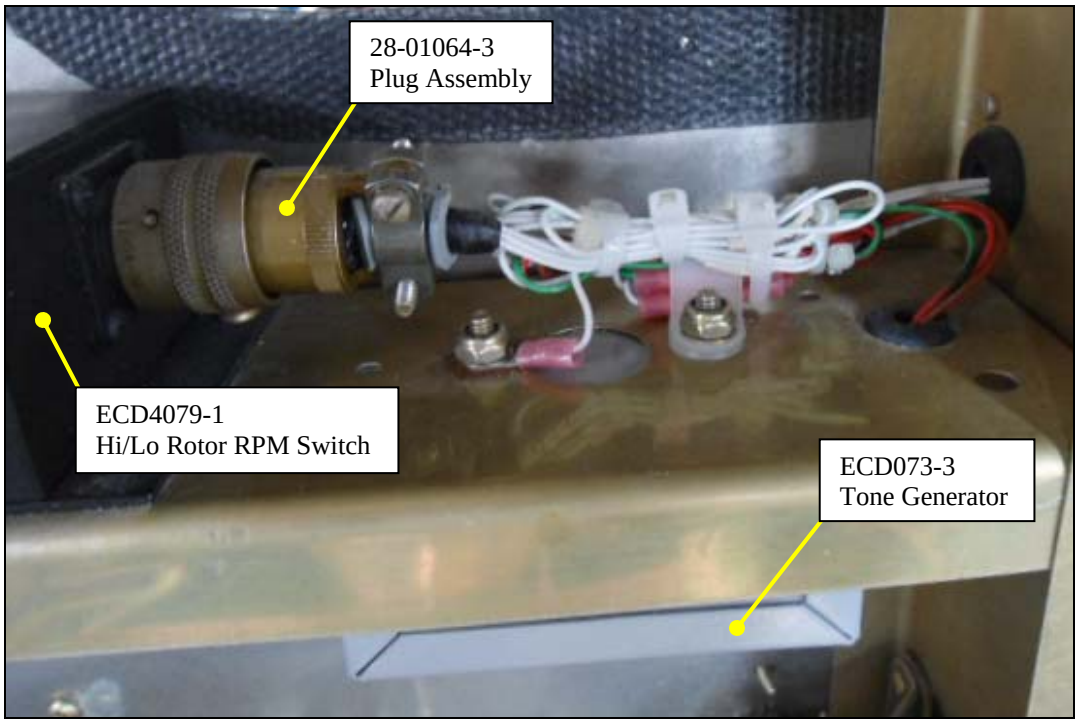


**Figure 1. Hi/Lo Rotor RPM Switch Installation**

**(Clamp and splice bundle size and tie wrap arrangement may vary from this example shown.)**

6.1 REMOVAL – Low RPM Switch

A. Remove the speed amplifier or mini-speed control (P/N 726607):

1) Ensure all electrical power is off.

2) Remove the back cushions and seatback access panel.

3) Pull the speed amplifier from the mounting bracket. Discard the speed amplifier.

4) Remove the socket (P/N 58390) and attaching screws. Discard the screws.

5) Mark the six (6) wires from the socket for identification. (Refer to kit drawing 28-01064, zone B-1, for wire identification.) Disconnect the wires from the socket. Temporarily bundle and tape the wires from the wire harness off to the side. Discard the socket.

B. Remove the tone generator (P/N ECD073-1) for relocation:

1) Locate the four (4) wire splices from the tone generator. Mark the four wires on either side of the splices for identification. (Refer to Diagram 21-6 of the F-28F/280F Series Maintenance Manual for wire identification.) Remove the splices. Temporarily bundle and tape the wires from the wire harness off to the side.

2) Remove the tone generator unit from the cover (remove the two screws on the forward side of the tone generator). Retain the tone generator unit and screws and place to the side.

3) Remove the screws that attach the tone generator cover (U-channel) to the bulkhead. Retain the cover. Discard the screws.

6.2 PREPARATION

A. Hi/Lo Rotor RPM Switch (P/N ECD4079-1):

1) Drill 0.166” diameter holes (4 places) through the bulkhead at the locations shown on kit drawing (zone B-4).

B. Tone Generator (P/N ECD073-3):

1) Drill 0.166” diameter holes (2 places) through the bulkhead at the locations shown on kit drawing (zone B-4).

2) Drill 0.166” diameter holes through the existing two holes in the tone generator cover to match the holes drilled in step 1 above (zone B-4).

3) Drill 0.81” diameter hole (1 place) through the bulkhead at the location shown on kit drawing (zone B-3). Install MS35489-16 grommet.

4) Prepare the surfaces on both sides of the bulkhead (top and bottom) and both sides of the tone generator cover (inside and out) for bare metal grounding of the terminal ring (approximately 0.50” around the 0.166” hole). The location of the terminal ring installation is at the outboard attachment of the tone generator (zone A-4, zone B-4).

   NOTE: Ensure the surface around the mounting hole in the tone generator cover is paint-free.

5) Apply Kopr-Shield CP8-TB, or equivalent, (supplied by the installer) to the bulkhead and tone generator surfaces (zone A-4; zone B-4).

6.3 INSTALLATION (See Figure 1)

A. Hi/Lo Rotor RPM Switch (ECD4079-1):

1) Install ECD4079-1 with kit-supplied hardware (zone B-4).

2) Connect the P/N 28-01064-3 plug assembly to the Hi/Lo Rotor RPM Switch, if not already connected.

3) Crimp the six (6) wire connections between P/N 28-01064-3 plug assembly and the wire harness. Ensure that the wires identified in step 6.1, A, 5 are crimped to the corresponding wires identified on the plug assembly (zone B-1; zone B-2).

B. Tone Generator (ECD073-3):

1) Route the four (4) wires from the tone generator unit up through the 0.81” hole.

2) Crimp the four (4) wire connections between the tone generator unit and the wire harness. Ensure that the wires identified in step 6.1, B, 1 are crimped to the corresponding wires.

3) Secure all splices (10 total) in a bundle and tie wrap both ends of the splice bundle. This bundle will be secured in the clamp installed in step 5 below.

4) Install the tone generator cover with the MS35206-244 screw, washer, terminal ring (from P/N 28-01064-3), and nut at the location shown on the kit drawing (zone B-4).

   NOTE: Ensure that the hole in the tone generator cover with Kopr-Shield applied is orientated properly.

5) Install the tone generator cover with the MS35206-245 screw, clamp (with bundled splices), washer, and nut at the location shown on the kit drawing (zone B-4).

6) Install the tone generator unit to the cover with the screws retained in step 6.1, B, 2.

7) Tie wrap the wire harness as required with remaining kit-supplied cable ties. Refer to Figure 1 for an example of a complete installation.

C. Reinstall the seatback access panel and back cushions.

## 6.4 "ROTOR RPM" ANNUNCIATOR SEGMENT INSTALLATION

A. Remove the console hood (instrument panel visor).

B. Remove the LOW ROTOR RPM segment from the annunciator panel. (Figure 2)

1) Press the LOW ROTOR RPM segment once to extend the segment from the annunciator panel (Figure 2a).

2) Pivot the segment downward to access the retaining wires. Carefully disengage each wire from the segment and remove the segment.

C. Install the ROTOR RPM segment (P/N 90-42130-030) according to the removal steps above in reverse order (Figure 2b).

D. Reinstall the console hood.

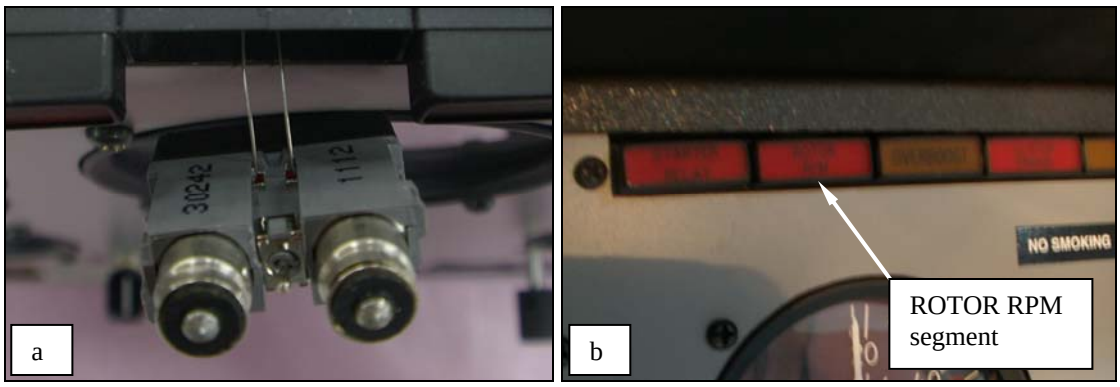


**Figure 2. ROTOR RPM Annunciator Segment Installation**

## 6.5 TEST

A. Perform a Functional Test of the Hi/Lo Rotor RPM Switch in accordance with paragraph 21-7, F, of the F-28F/280F Series Maintenance Manual for the ROTOR RPM visual and audio signals.

7. PARTS

   A. 28-01064 Kit – Hi/Lo Rotor RPM Switch Installation:

      1) All parts (assemblies and hardware) required to complete the installation are specified on drawing 28-01064 and are included with the kit. (Exception: Kopr-Shield CP8-TB must be supplied by the installer.)

8. SPECIAL TOOLS OR EQUIPMENT: None

9. MAN-HOURS: Installation – 1 hour

10. WARRANTY: Per Enstrom policy

11. WEIGHT CHANGE: N/A

12. LOG BOOK ENTRY: As required for maintenance actions

13. REPETITIVE INSPECTIONS: None