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# SERVICE INFORMATION LETTER

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SERVICE INFORMATION LETTER NO. 0163

Revision 1

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DATE:            April 2, 2019

1.    SUBJECT:    Turbocharger Adapter Assembly

2.    MODEL:        F-28C, F-28C-2, F-28C-2R, F-28F, F-28F-R, 280C, 280F, and 280FX

3.    EFFECTIVITY:    All

4.    BACKGROUND:

Enstrom released a new drawing for the Turbocharger Adapter Assembly, P/N 28-12575-1; the new drawing replaced the original vendor drawing and part number (P/N 037360-115). The new drawing incorporated some minor design changes that changed the fit of the part in the aircraft. The new Adapter Assembly will not fit in aircraft manufactured prior to the release of the new Adapter Assembly.

This Service Information Letter (SIL) provides aircraft serial number effectivity for the new Adapter Assembly, provides additional procedures for checking for induction system leaks, and updates the authorized part numbers for the hardware that attaches the Adapter Assembly to the turbocharger.

Revision 1 of this SIL corrects the part number for the turbocharger Adapter Assembly, removes Figure 1 and instead adds references to the F-28/280 Series Illustrated Parts Catalog, and updates the document format.

5.    COMPLIANCE:

Use the procedure in paragraph 6.1 to check the engine induction system for leaks as required.

Refer to the F-28/280 Series Illustrated Parts Catalog, Figure 3-3 for the part number and aircraft effectivity information.

6.    REMOVAL/INSTALLATION:

**NOTE:            Perform all maintenance in accordance with the applicable maintenance manual for the aircraft model and engine model.**

**NOTE:            Refer to the F-28/280 Series Illustrated Parts Catalog, Figure 3-3 for the item numbers referenced in the following text.**

- 6.1 If the engine runs very rough at idle or idle speed increases for no apparent reason, inspect the adapter assembly for the following items:
- 6.1.1 Check the condition of the gasket (Item 190) between the adapter assembly (Item 160) and turbocharger (Item 200) and the security of the screws (Item 210) attaching the adapter assembly to the turbocharger. Replace the gasket as required. Replace AN503-10-8 Screws with NAS1352-3H8P Cap Screws and torque the screws to 35 in-lbs/4.0 Nm and lockwire.
  - 6.1.2 Remove the adapter assembly from the aircraft and check the condition of the welds on the adapter flanges. Replace or repair the adapter assembly if the welds are cracked/broken.
- NOTE:**      **The round flange on the adapter may have a segmented weld joint on the outside of the adapter; however, the inside weld on the flange must be a continuous weld joint.**
- 6.2 Use the following procedure to check for an induction system leak if the rough engine idle was not caused by the condition of the adapter assembly attachment at the turbocharger.

#### **WARNING**

**Failure to ensure that the magneto switch is off could result in injury to personnel.**

- 6.2.1 Ensure the magneto switch is off.
- 6.2.2 Remove the access panels/cowling as required to access the engine cooling fan.
- 6.2.3 Disconnect the spark plug lead from any one of the lower spark plugs on the engine and remove the spark plug.
- 6.2.4 Carefully pull the engine through until the open cylinder is in the intake stroke.
- 6.2.5 Install the spark plug hole adapter from a differential compression test set into the open cylinder.
- 6.2.6 Connect a shop air hose to the adapter and apply dry, filtered shop air to the cylinder. Do not exceed 80 psi/552 kPa pressure.
- 6.2.7 Using a soapy water solution, check the following locations for leaks:
  - 6.2.7.1 Engine induction tubes at the cylinders.
  - 6.2.7.2 Engine induction tubes at the sump assembly.
  - 6.2.7.3 Turbocharger outlet tube at sump assembly.
  - 6.2.7.4 Turbocharger outlet tube at the turbocharger adapter collar.

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6.2.7.5 Turbocharger inlet adapter to turbocharger.

6.2.7.6 Turbocharger inlet adapter to fuel servo/injector.

6.2.7.7 Engine fuel pump drain line and fitting at fuel pump and turbocharger outlet tube.

6.2.7.8 Static pressure line fitting at turbocharger outlet tube.

6.2.7.9 Sump vent at turbocharger outlet tube.

6.2.8 Repair induction leaks as required.

7. PARTS:

Refer to **the F-28/280 Series Illustrated Parts Catalog, Figure 3-3** for the current parts list for the turbocharger induction system.

8. CONSUMABLE MATERIALS:

Description	Manufacturer	Source
Soapy Water Solution	Any brand liquid dish soap	Local procurement

9. SPECIAL TOOLS: Spark plug adapter from differential compression test set.

10. MAN-HOURS: N/A

11. WARRANTY: N/A

12. WEIGHT CHANGE: N/A

13. LOG BOOK ENTRY: As required for maintenance actions.

14. REPETITIVE ACTION: Repeat the procedure in paragraph 6.1 if rough engine idle occurs.