



SERVICE INFORMATION LETTER

SERVICE INFORMATION LETTER NO. T-018
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DATE: June 16, 2003

1. SUBJECT: Fuel Cell Leaks
2. MODEL: 480 and 480B
3. EFFECTIVITY: 5007, 5013 and subsequent
4. BACKGROUND: Enstrom has found a leaking fuel cell in a 480B in the final assembly/flight test process, additionally a 480B owner reported leaking fuel cells that started after approximately 200 hours time service. Investigation of the problem found a potential interference between the fuel cell and the flange plate (sump) assembly which might prevent a good seal (See Figures 1 and 2). Enstrom corrected the problem by redesigning the flange plate.

This Service Information Letter (SIL) provides instructions if the fuel cells start leaking, and it provides part number information for the new flange plate.

NOTE

Perform all maintenance procedures in accordance with (IAW) the TH-28/480 Series Maintenance Manual except as noted in this SIL.

5. COMPLIANCE: If the fuel cells start to leak, check the torque (25-30 in-lbs/2.8-3.4 Nm) on the flange plate (sump) assembly bolts and screws (See Figure 3).

If the torque is low, torque the bolts and screws and determine if the leak stops. If the leak stops, no further action is required. If the leak does not stop, remove the fuel cells and determine the source of the leak.

If the source of the leak is the flange plate assembly, remove the flange plate assembly and replace the flange plate with a new flange plate, P/N 4122053-17 or -19 (Refer to paragraph 5.1).

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If the flange plate assembly is not the source of the leak, repair the fuel cells IAW the TH-28/480 Maintenance Manual.

- 5.1. MAINTENANCE PROCEDURES: Install the flange assembly, P/N 4122053-17 or -19, using the following procedures (Refer to Figure 3):

Remove the flange plate assembly from the fuel cell (Paragraph 10-7,1 in the Maintenance Manual).

NOTE

Note the orientation of the flange plate assembly in the fuel cell and the orientation of the siphon tube before removing the flange plate assembly from the fuel cell.

Remove the fitting assembly, valve, syphon tube assembly, sump fitting, fuel strainer assembly, and float switch assembly (right side fuel cell) from the flange plate.

Reinstall the components on the new flange plate, P/N 4122053-17 or -19. Replace all o-rings, and lockwire (.032) the sump fitting and the fuel strainer assembly together. Do not install sealant around the sump fitting, fuel strainer assembly, or float switch assembly.

Reinstall the flange plate assembly on to the fuel cell (Paragraph 10-7.A.2 in the Maintenance Manual).

NOTE

When reinstalling the fuel cell cover IAW paragraph 8-17.E of the Maintenance Manual, apply sealant around the entire fuel cell cavity.

- 5.2. PARTS: Refer to Figure 4 and the associated parts listing.

- 5.3. CONSUMABLE MATERIALS:

Description	Part Number	Quantity
Sealant	Meeting Specification AMS-S-8802 Type II Class B	As required

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6. SPECIAL TOOLS: None.
7. MAN-HOURS: Varies depending on source of leak.
8. WARRANTY: Per Enstrom Warranty Policy.
9. WEIGHT CHANGE: None.
10. LOG BOOK ENTRY: As required for maintenance actions.
11. REPETITIVE INSPECTION: Not applicable.



Figure 1 - Interference Caused by Sealant



Figure 2 - Interference Result on Fuel Cell

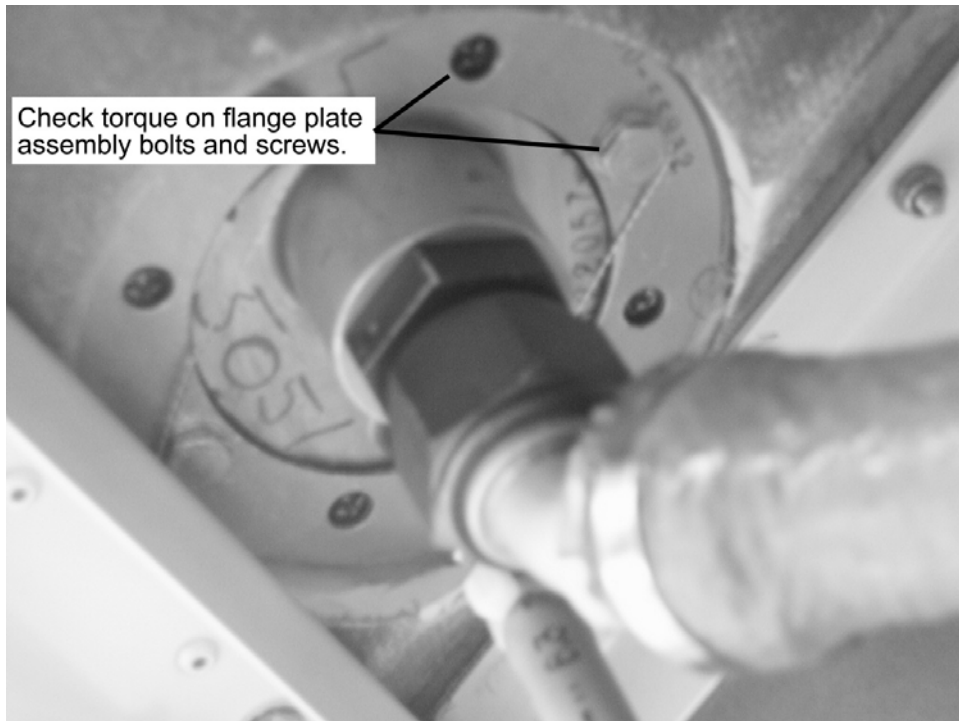


Figure 3 - Left Side Fuel Cell Sump

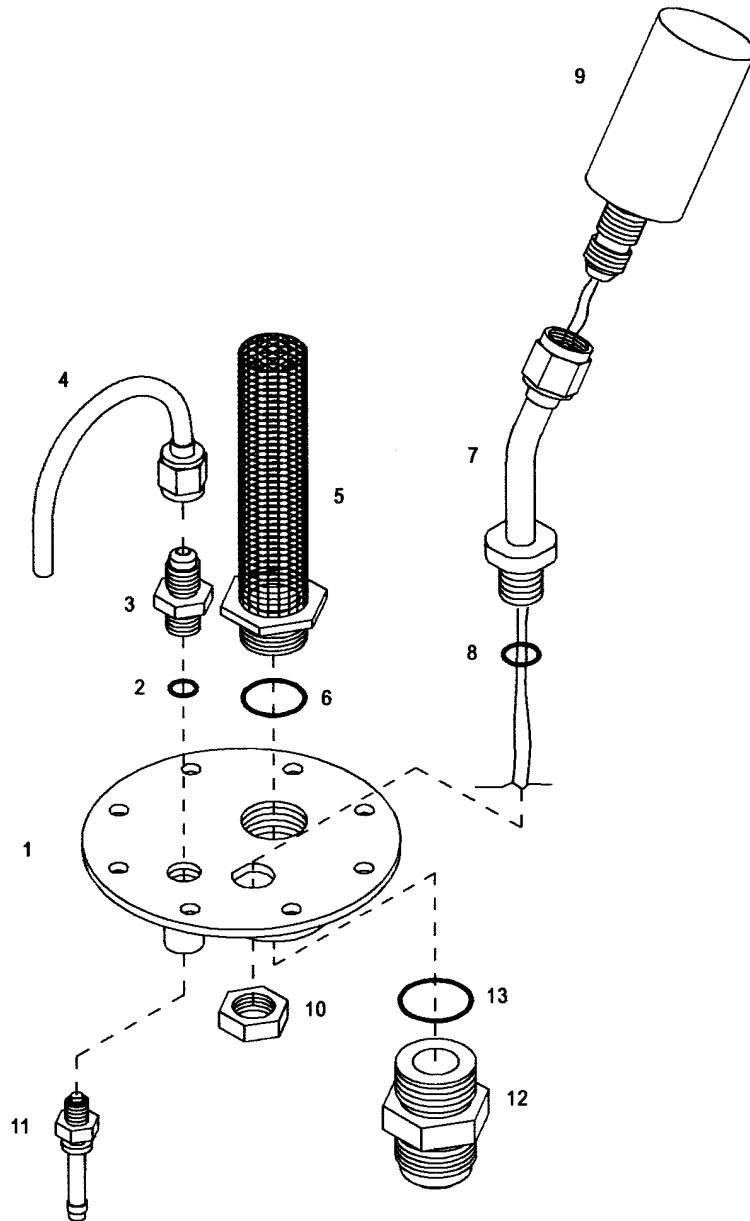


Figure 4 - Flanged Plate (Sump) Assembly

FIGURE 4 - FLANGED PLATE (SUMP) ASSEMBLY

ITEM NUMBER	PART NUMBER	DESCRIPTION	QTY PER ASSY	EFFECTIVITY		
				TH-28	480	480B
-	4122057-3	. Flanged Plate Assembly, L/H	1		X	X
-	4122057-4	. Flanged Plate Assembly, R/H	1		X	X
1	4122053-17	.. Flanged Plate (-3 Assy)	1		X	X
1	4122053-19	.. Flanged Plate (-4 Assy)	1		X	X
2	MS28775-110	.. O-Ring	1		X	X
3	4122056-11	.. Sump Fitting	1		X	X
4	4122060-1	.. Syphon Tube Assembly	1		X	X
5	4122055-3	.. Fuel Strainer Assembly	1		X	X
6	MS28775-116	.. O-Ring	1		X	X
7	4122070-1	.. Support Tube Assembly (-4 Assy)	1		X	X
8	MS29513-7	.. O-Ring (-4 Assy)	1		X	X
9	ECD4046-1	.. Float Switch (-4 Assy)	1		X	X
10	AN924-6D	.. Nut (-4 Assy)	1		X	X
11	4122034-11	.. Valve	1		X	X
12	4129054-3	. Fitting Assembly	1		X	X
13	MS28778-12	.. O-Ring	1		X	X