



SERVICE BULLETIN

TO : All Bell 206L “Long Ranger” / Bell 407 Operators
FROM : FDC/aerofilter Engineering
SB NUMBER : SB.FDC.B206L.0009 Rev C
CATEGORY : Mandatory Service Bulletin
EFFECTIVITY : Bell 206L / Bell 407 Helicopters modified IAW STCs
FAA STC SR00180SE, TC STC SH96-103,
EASA IM R.S.0030
REF : SIL.FDC.B206L.0007
SUBJECT : Static Source Relocation - Bell 206L / 407 Helicopters
with FDC/aerofilter Installed at High Power Settings
DATE : Wednesday, March 25, 2009

STATIC REFERENCE PORT RELOCATION

1.0 BACKGROUND

Operator reports indicated erroneous *filter clogged* annunciator light illumination on Bell 206L “Long Ranger” and Bell 407 helicopters with an FDC/aerofilter installed and operating at high power settings (Bell 407) or with snow baffles installed (Bell 206L). After research and testing, it was determined that the installation of snow baffles on the Bell 206L or high power settings on the Bell 407 caused a change in air pressure in the vicinity of the filter static reference port significant enough to skew readings.

A solution to the irregularity has been developed, tested and field-verified. This solution results in a more accurate static source reading when flying at high power settings or with snow baffles installed. It is necessary to relocate the filter static reference port to prevent early *filter clogged* annunciator illumination.

2.0 COMPLIANCE

Mandatory Service Bulletin

3.0 COMPLIANCE TIME

1. Within 30 days of materials receipt OR
2. By April 30, 2009 OR
3. Prior to flying with Snow Baffles installed (Bell 206L) or high power settings (Bell 407)

Whichever comes first

4.0 SPARE KIT AVAILABILITY

To procure kits, contact FDC Customer Support

Order: 1x Kit SB.FDC.B206L.0009 per aircraft
Indicate aircraft S/N(s) and kit quantity(s)

5.0 INSTALLATION TIME

Est. 3-4 man-hours.

6.0 WEIGHT & BALANCE

Not Affected

7.0 FLIGHT MANUAL REVISION

Not Affected

8.0 DOCUMENTS

Refer to original STC documents.

9.0 INSTALLATION INSTRUCTIONS

Materials In Kit

Parts List for SB.FDC.B206L.0009 Service Bulletin Kit:

QTY.	PART NUMBER	DESCRIPTION
1	A590-1	Static Port Filter
1	AN775-4D	Banjo Bolt
1	AN776-4D	Banjo fitting, straight
2	MS28778-4	O-Ring
2	AN818-4D	B-Nut
2	MS20819-4D	Sleeve
12.25"		¼" aluminum tubing
1	AN833-4D	90° bulkhead fitting
1	AN924-4D	Nut, bulkhead fitting
2	AN960PD-716	Washer, aluminum 7/16"
2	MS35190-238	Screw, 82° flat head
2	AN960-8	Washer, aluminum No. 8
2	MS20365-832A	Nut, fiber locknut

Preparation

- (a) Disconnect aircraft battery and prepare helicopter for maintenance functions.
- (b) Remove the transmission, inlet and engine cowlings.
- (c) Remove the FDC/aerofilter filter element from the fiberglass duct assembly.
- (d) Remove the engine compressor flange Allen head screws, firewall fasteners and electrical cannon plug connector. Remove the fiberglass duct from the engine firewall.

CAUTION

Removing the fiberglass duct assembly without removing the engine compressor flange screws will permanently damage the assembly.

- (e) Remove the pressure port tubing, four attachment screws and electrical connectors from the differential pressure switch. Remove the differential pressure switch from the fiberglass duct assembly.
- (f) Disconnect the cannon plug bulkhead connector from the closeout panel and remove the cowling closeout panel from the helicopter.

Modifications

- (a) Modify the closeout panel (figure 1) by drilling one 7/16" hole for the new static source (note 2) and modifying the closeout opening for the differential pressure switch (note 1).

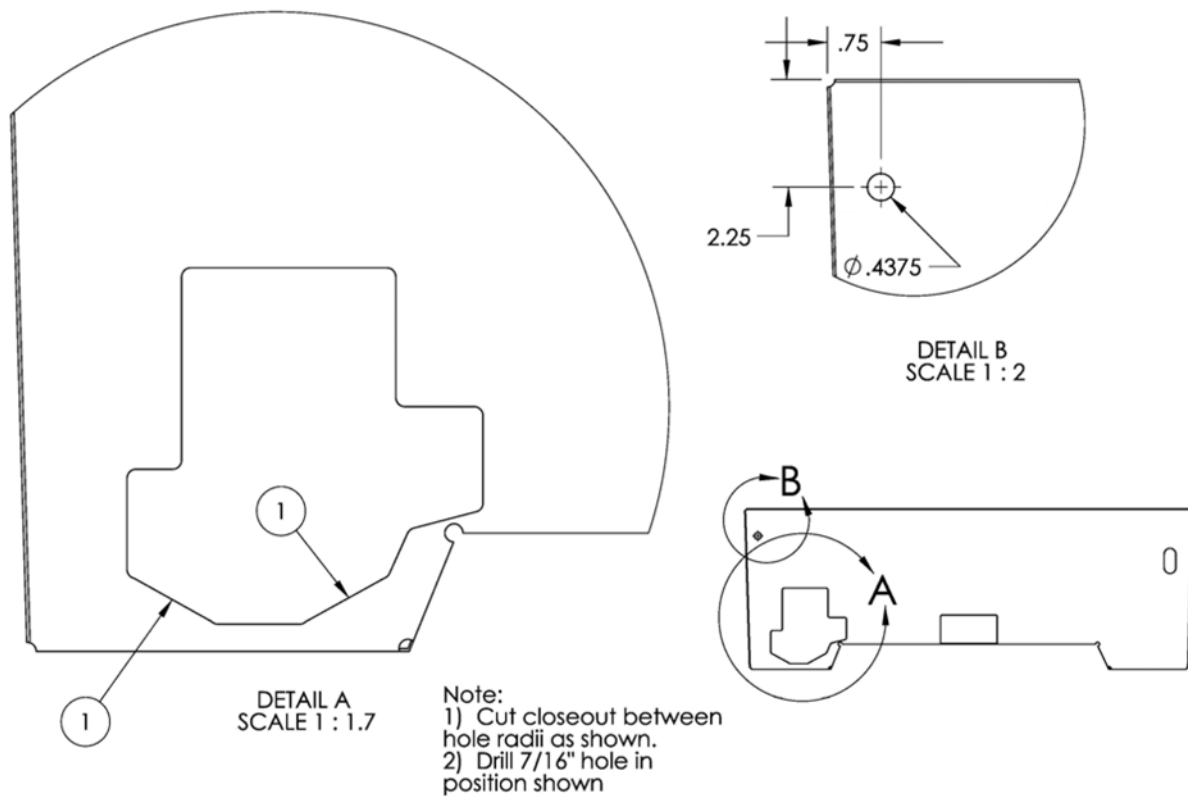


Figure 1 – Closeout Panel

- (b) Remove the differential pressure switch from the backing plate and relocate the mounting holes $\frac{1}{2}$ " forward in accordance with figure 2.
- (c) With the differential pressure switch removed, cut the safety wire from the static port and remove the static cap for the differential pressure switch.
- (d) Upon re-installation of the differential pressure switch, counter sink both outboard attachment screw holes and replace hardware with (2) MS35190-238 screws, (2) AN960-8 washers (under the nut) and (2) MS20365-832A locknuts (figures 3 & 4).

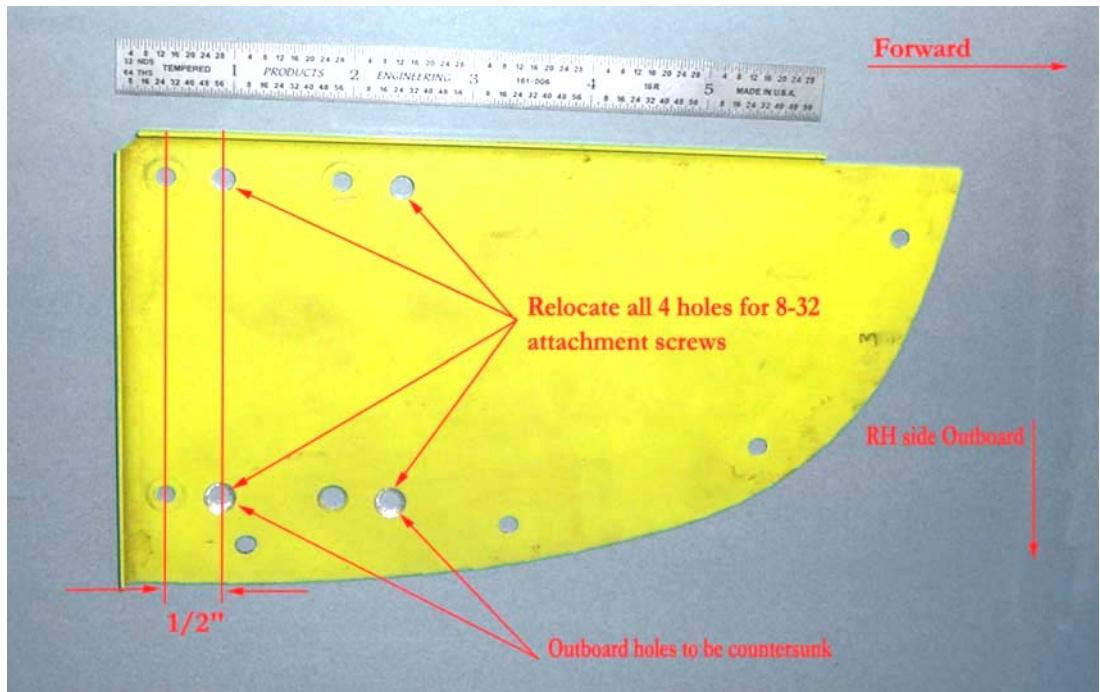


Figure 2 – Differential Pressure Switch Backing Plate

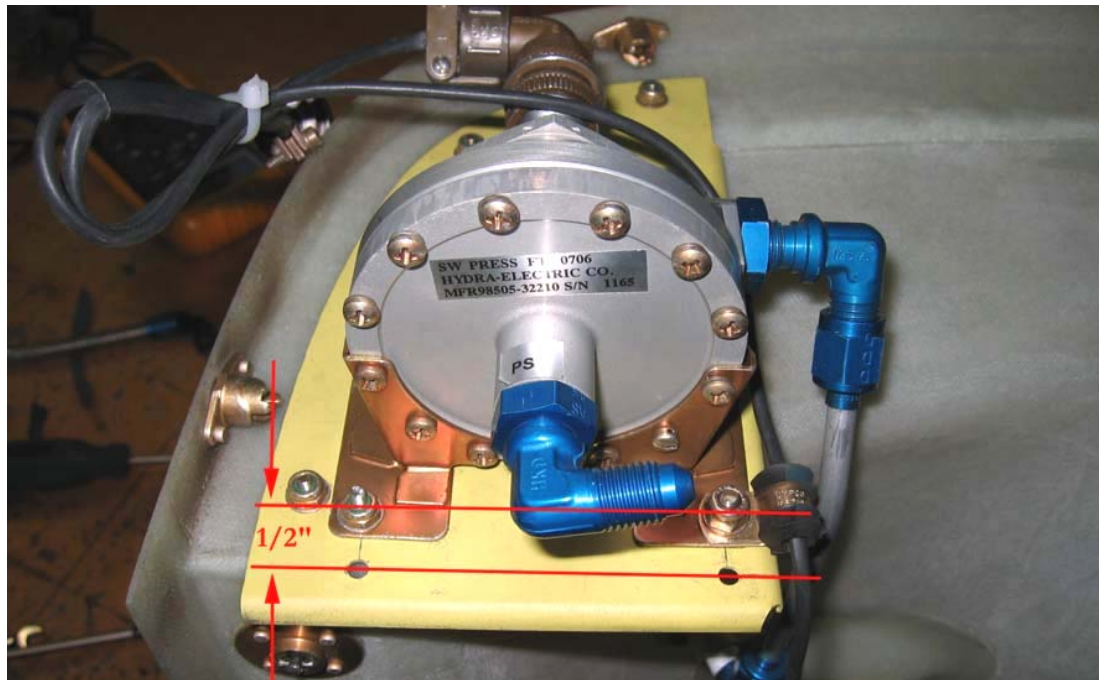


Figure 3 – Differential Pressure Switch Installed

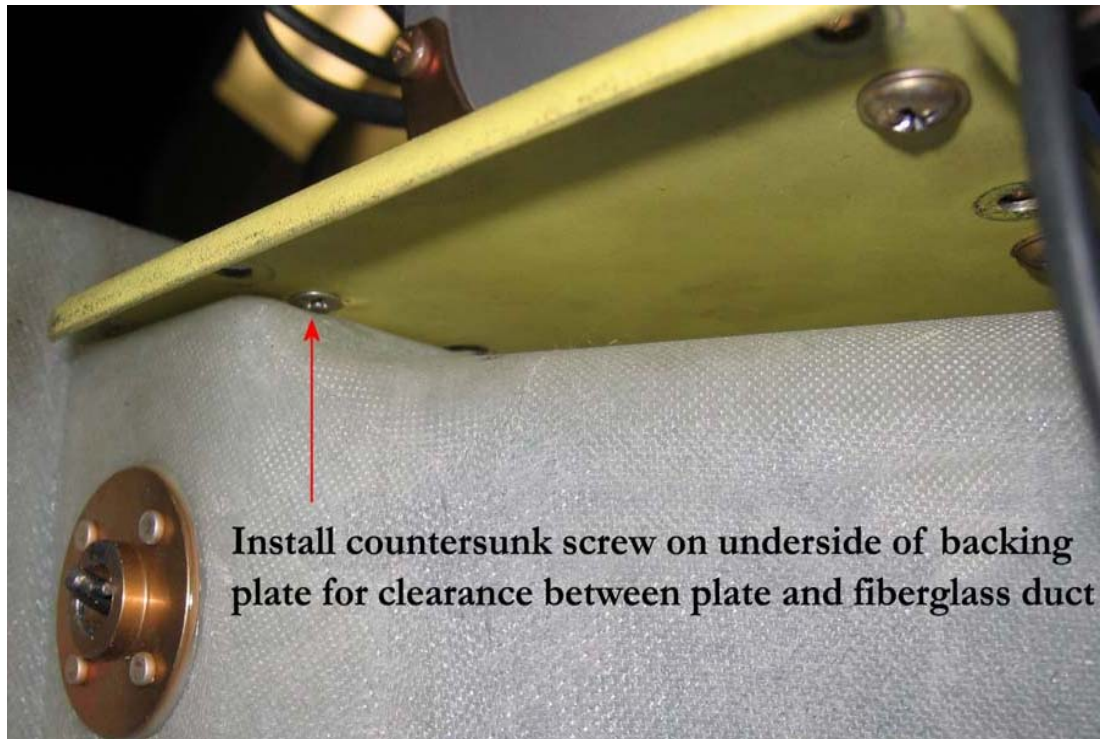


Figure 4 – Differential Pressure Switch Backing Plate

Installation

NOTE

Perform all installations functions in accordance with the original FDC/aerofilter STC installation instructions

- (a) Reinstall the modified closeout panel and attach the cannon plug bulkhead connector.
- (b) Install differential pressure switch onto the fiberglass duct assembly by reinstalling the four attachment screws to the fiberglass duct assembly and the aluminum tubing to the pressure port of the differential pressure switch (figure 3). Connect all electrical cannon plugs previously removed.
- (c) Install the fiberglass duct assembly onto the engine firewall and attach engine compressor flange Allen head screws. Connect the electrical harness cannon plug to the bulkhead connector on the closeout panel.
- (d) Install FDC/aerofilter filter element onto the fiberglass duct assembly (clean and service filter element as required).
- (e) Install AN775-4D and AN776-4D banjo bolt and fitting, with MS28778-4 O-rings, onto the differential pressure switch static port (figure 5).



Figure 5 – Differential Pressure Switch Installation with Banjo Fitting

- (f) Install AN833-4D bulkhead fitting with AN960PD-716 washers and AN924-4D nut into the modified closeout panel. Install A590-1 static port filter onto 90° bulkhead fitting (figure 6).



Figure 6 – Static Port Installation

- (g) Install ¼" aluminum tubing between differential pressure switch banjo fitting and the 90° bulkhead fitting (figure 7).

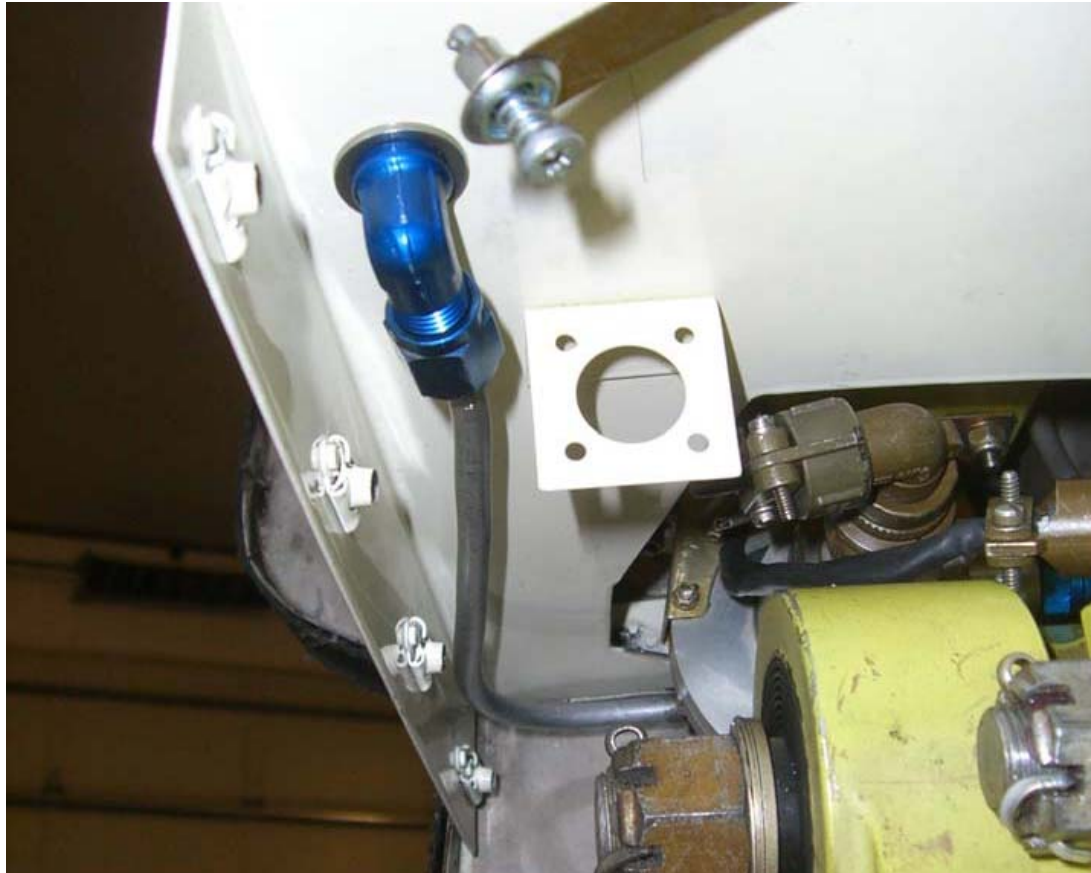


Figure 7 – Aluminum Tubing Installation

- (h) Verify torque on all fasteners, fittings and electrical connectors.
- (i) Reinstall the transmission, inlet and engine cowlings.
- (j) Reconnect aircraft battery.
- (k) Perform engine power assurance check and return helicopter to service.

NOTE

Perform all operations in accordance with the original FDC/aerofilter
STC Flight Manual Supplements

FDC Engineering

A handwritten signature in black ink, appearing to read "R. Goulden".

Russell Goulden
Vice President
Director Of Certification



SERVICE BULLETIN COMPLIANCE NOTIFICATION

SB.FDC.B206L.0009 Rev C

TO : FDC Engineering
FROM :
COMPANY :
AIRCRAFT : S/N(s)
PHONE :
FAX :
EMAIL :
DATE :

I have complied with FDC SB.FDC.B206L.0009 Rev C

NAME :
POSITION :
A&P NO :
DATE :

SIGNED :

MAIL TO : FDC Engineering
Filtration Development Company, LLC
8 Digital Drive, Suite 104
Novato, California 94949

OR EMAIL : compliance@fdcaerofilter.com

OR FAX : 415-884-0505