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# SERVICE LETTER

## No. SL-AG-114

Initial Release 02/07/2014

Fuel Filter Installation Compliance Check

A handwritten signature in blue ink, appearing to read "James Alman", written over a horizontal line.

James Alman

Vice President Engineering

**AIRPLANES AFFECTED:**

**MODEL**

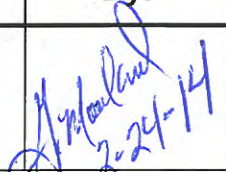
**SERIAL NUMBERS**

S2R-H80

H80-101 & UP

### LOG OF REVISIONS

**NOTE:** Re-formatting and correction of typographical errors is not considered revision. True revisions are indicated by a dark vertical line at the right margin of the lines revised.

Rev.	Page	Description of Revision	By:
IR	All	New Document Initial Release.	 Handwritten signature and date: 2-24-14

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## **2 PURPOSE AND REASON FOR PUBLICATION**

There is a possibility for foreign object debris, FOD, to be introduced into the fuel system if the fuel filter has not been installed properly.

This Service Letter provides the instructions for checking the fuel filter installation.

Furthermore this service letter provides the instructions for correcting the fuel filter installation if it is determine to be incorrect.

## **3 SCOPE/COMPLIANCE**

It is highly recommended that this Service Letter be accomplished to ensure proper aircraft performance.

## **4 BY WHOM WORK WILL BE ACOMPLISHED**

The work is to be accomplished by an FAA licensed A&P mechanic, or foreign equivalent. The action must be recorded in the airplane log book and signed off by the mechanic.

## **5 APPROVAL**

### **5.1 THRUSH AIRCRAFT, INC. APPROVAL**

This Service Letter is approved by the Vice President of Engineering at Thrush Aircraft, Inc.

### **5.2 FAA APPROVAL**

N/A

## 6 MAN HOURS

### 6.1 REMOVAL AND MODIFICATION

The total time required for incorporating SL-AG-114 is as follows:

- 1.0 Hours for Aircraft Skin Removal, Fuel Filter Check, and Aircraft Skin Reassembly
- 4.5 Hours for correcting the Fuel Filter installation if required.

## 7 NEW PARTS AND MATERIAL

### 7.1 PARTS REQUIRED MAY BE PURCHASED FROM THRUSH AIRCRAFT IF NEEDED. 1 EACH.

- It is recommended that all affected "O" RINGS be replaced.
  1. "O" RING 102A10001-15 OR MS29561-237
  2. "O" RING 102A10001-16 OR MS29513-013
  3. "O" RING MS83248-1-910 OR MS9387-10
  4. Firewall Fitting #10 to #8 282010005-001 Revision B
  5. "O" RING MS28775-114

# 8 FUEL FILTER INSTALLATION COMPLIANCE CHECK

## 8.1 REMOVE APPLICABLE SKINS.

Remove the skins that are high-lighted in Figure 114-1 from the fuselage forward assembly.

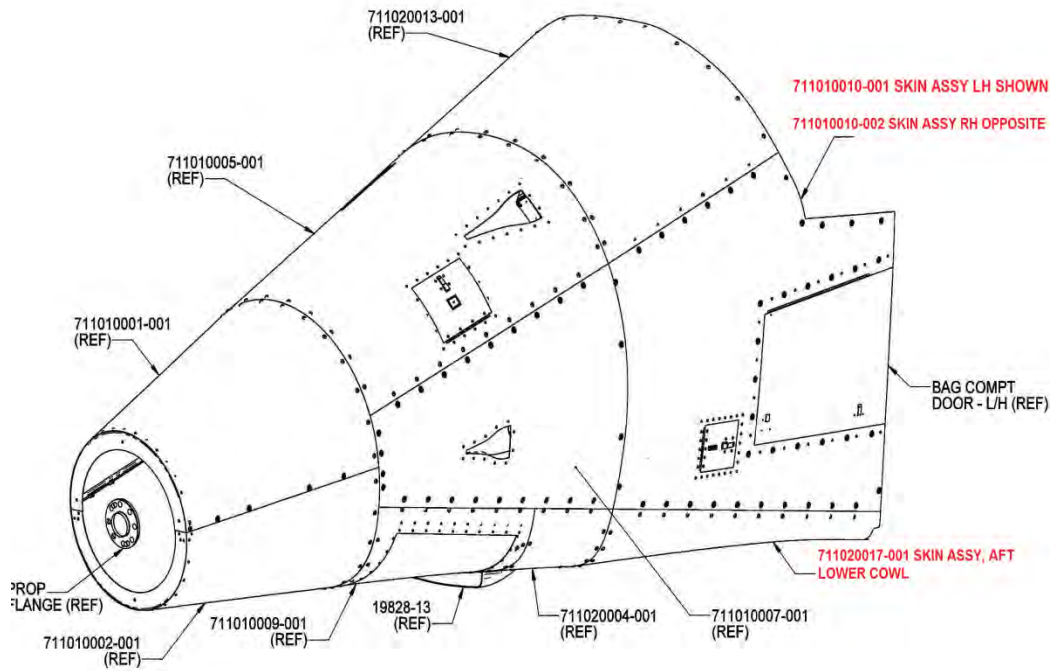


Figure 114-1 SKINS TO BE REMOVED

## 8.2 LOCATE FUEL FILTER

Locate fuel filter using Figure 114-2

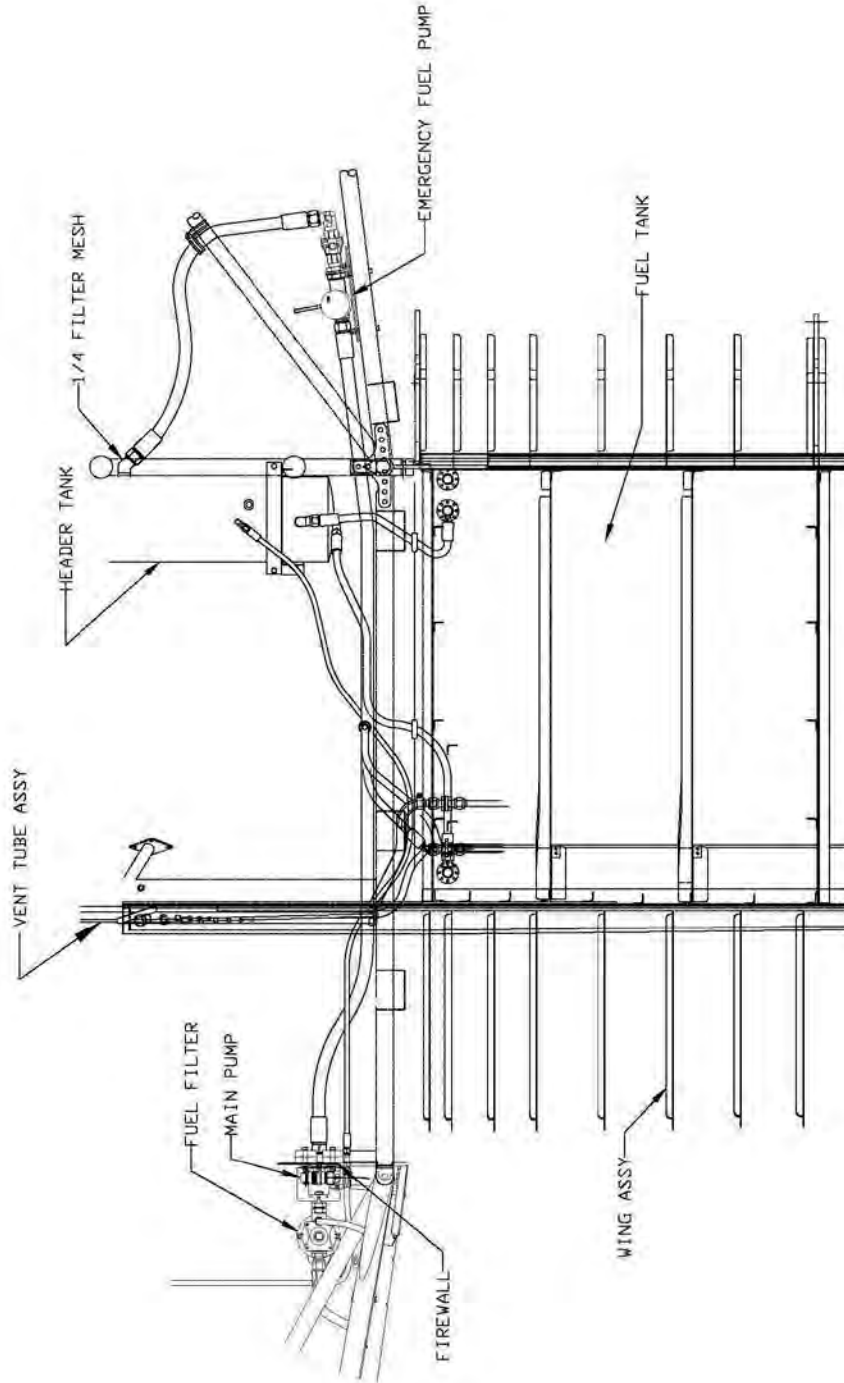


FIGURE 114-2 FUEL FILTER LOCATION



### 8.3 DETERMINE IN THE FUEL FILTER IS COMPLIANT OR NON COMPLIANT.

See figure 114-3 for a compliant installation.

See figure 114-4 for a non-compliant installation.

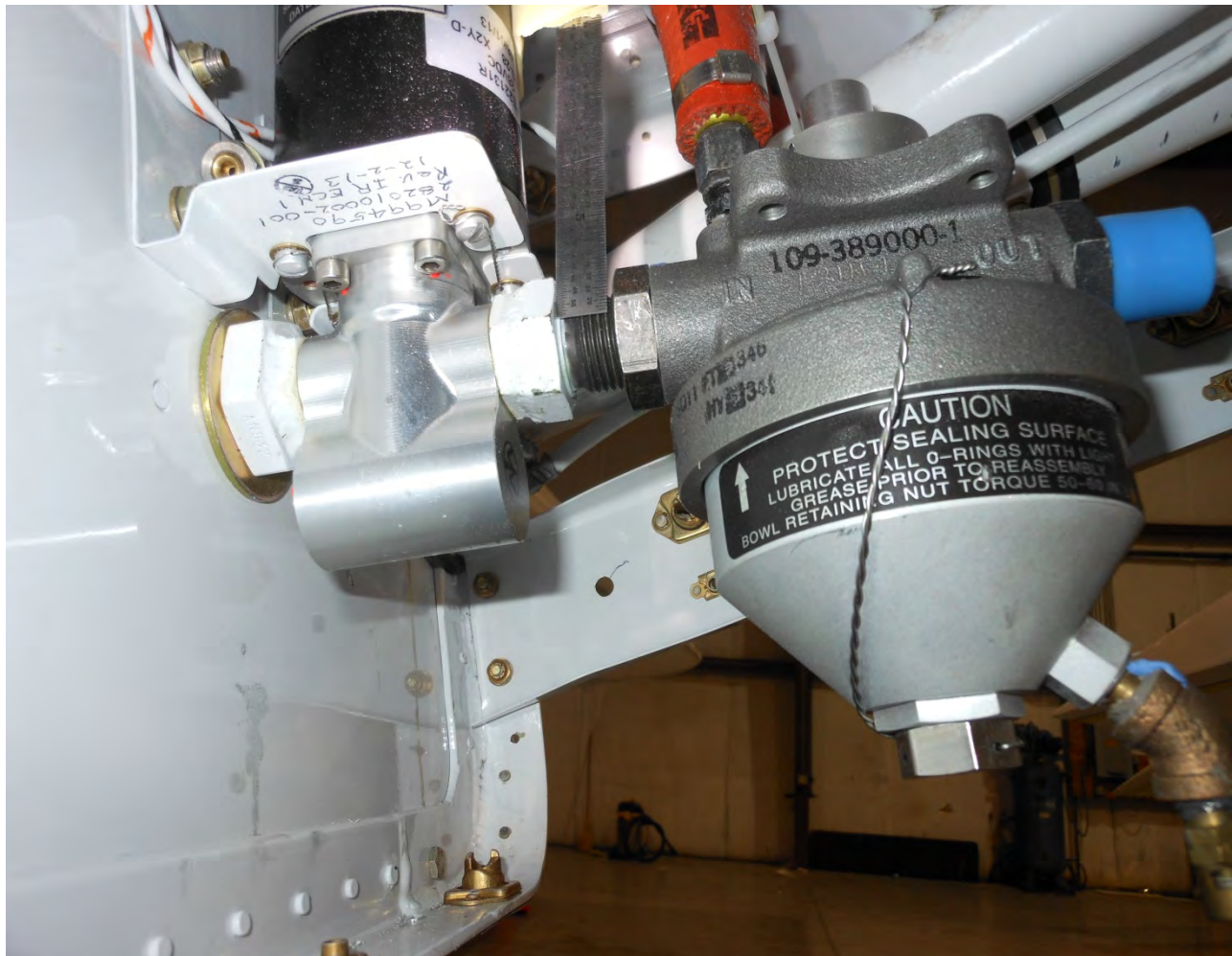


FIGURE 114-3 COMPLIANT INSTALLATION

Notice how the 6" x 1/2" ruler fits between the nuts and 4 threads are easily visible.

Replace 282010005-001, Firewall Fitting #10 to #8, at next 100 hour inspection. Order new Fitting in accordance with Revision B of the 282010005-001 drawing.

See Figure 114-5 for details



FIGURE 114-4 NON COMPLIANT INSTALLATION

Notice how the 6" x 1/2" ruler does not fit between the nuts and that barely 3 threads are easily visible.

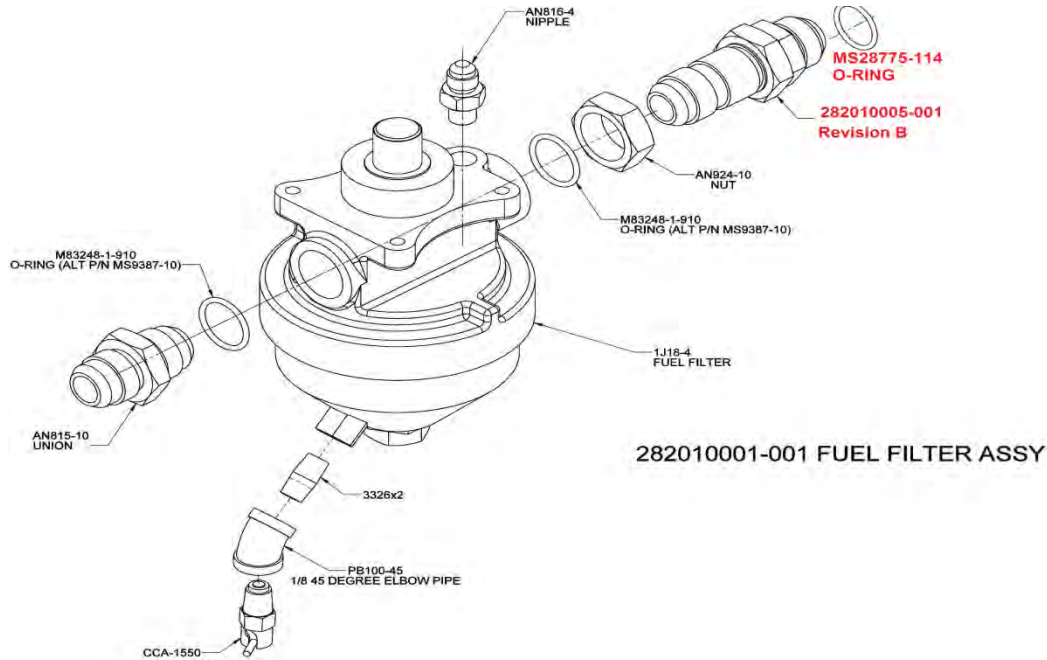


FIGURE 114-5

Replace 282010005-001, Firewall Fitting #10 to #8, at next 100 hour inspection.  
Order new Fitting in accordance with Revision B of that drawing 282010005-001.

## 8.4 COMPLIANT INSTALLATION.

Reassemble skins removed in step 8.1 above and proceed to Section 9 below.

## 8.5 NON COMPLIANT INSTALLATION.

### 8.5.1 PROCEDURAL SEQUENCES

8.5.1.1 Caution: The following procedures must be followed in the order of steps given to avoid damage to the components and to assure proper functioning of the unit.

8.5.1.2 Caution: Anytime the fuel filter is opened and air is allowed in the system, the FCU must be purged/bled of all air before starting engine.

See Maintenance Manual Section 4.7.7 for purging instructions.

### 8.5.2 FUEL FILTER REMOVAL

1. Refer to figure 114-6 for identification of parts during disassembly and re-assembly.
2. Place adequate sized container under fuel filter to catch any spillage.
  - a. Turn airframe fuel shutoff valve to "OFF" position. Cut, remove and discard safety wire (not shown) securing filter bowl assembly. Remove all houses attached to the fuel filter.
  - b. Using 13/16" wrench unscrew hex nut, (Item 1) bowl retainer. (Right hand threads.)
  - c. Pull filter bowl (Item 2) straight off filter housing stud.
  - d. Using one thin 1/2" open end wrench, hold filter retaining nut (Item 3) while loosening jam nut (Item 4) with second 1/2" wrench. DO NOT twist or bend stud. Stud is not a removable item.
  - e. Remove retaining and jam nuts (Items 3 and 4).
  - f. Filter element (Item 5) will now drop off stud.
  - g. Seal central tube opening of filter element with suitable size rubber plug, to keep inside of filter element from getting contaminated during the cleaning process. Gently clean filter element by rinsing in new/unused solvent (Safty-kleen SK-105, Varsol, MIL-PRK-680 Type II, Odorless mineral spirits or equivalent) and blowing debris off surfaces using a low-pressure (up to 30 PSI Max) clean compressed air source.

**CAUTION**

**DO NOT scrape, pry or poke mesh surfaces with sharp objects.**

- i. Turn upper half of filter counter clockwise and remove from existing 282010005-001 fitting. \*\*See Figure 114-5.
- ii. Remove existing 282010005-001 fitting from fuel pump and discard along with existing O-RING.
- iii. Place a new MS28775-114 O-Ring on the new 282010005-001 Revision B fitting and re-assemble in the fuel pump. \*\*See Figure 114-5.
- iv. Install the AN924-10 Nut on the new 28201005-004 fitting. \*\*
- v. Install a new M83248-1-910 O-RING on the new fitting. \*\*
- vi. Install the top of the fuel filter on to the new fitting turning clockwise up to the O\_RING. \*\*

- vii. Bring the AN924-10 Nut and secure to O-RING>
  
- h. Replace filter element (Item 5) on stud and secure with retaining nut (Item 3) tightened moderately.
- i. While holding retaining nut with thin ½” open-end wrench tighten jam nut (Item 4) with second ½” wrench.

**CAUTION**

**Do not allow stud to twist.**

- j. Push filter bowl (Item 2) into housing taking care not to cock sideways.
- k. Replace fuel bowl retaining nut “O” ring. Apply light coating of petroleum jelly or low weight oil lubricant to “O” ring on filter bowl retainer nut (Item 1) and install on stud with 50 to 60 inch pounds torque.
- l. Secure Filter bowl retainer nut with .032” stainless steel lockwire.
- m. Turn airframe fuel shutoff valve to “ON” position. Turn main fuel pump on and observe 12.5 = 34 PSI on fuel pressure gauge. Observe fuel filter assembly for leaks prior to closing filter access panel.

1J18-4 FUEL FILTER  
ILLUSTRATION I  
FIELD SERVICEABLE COMPONENTS

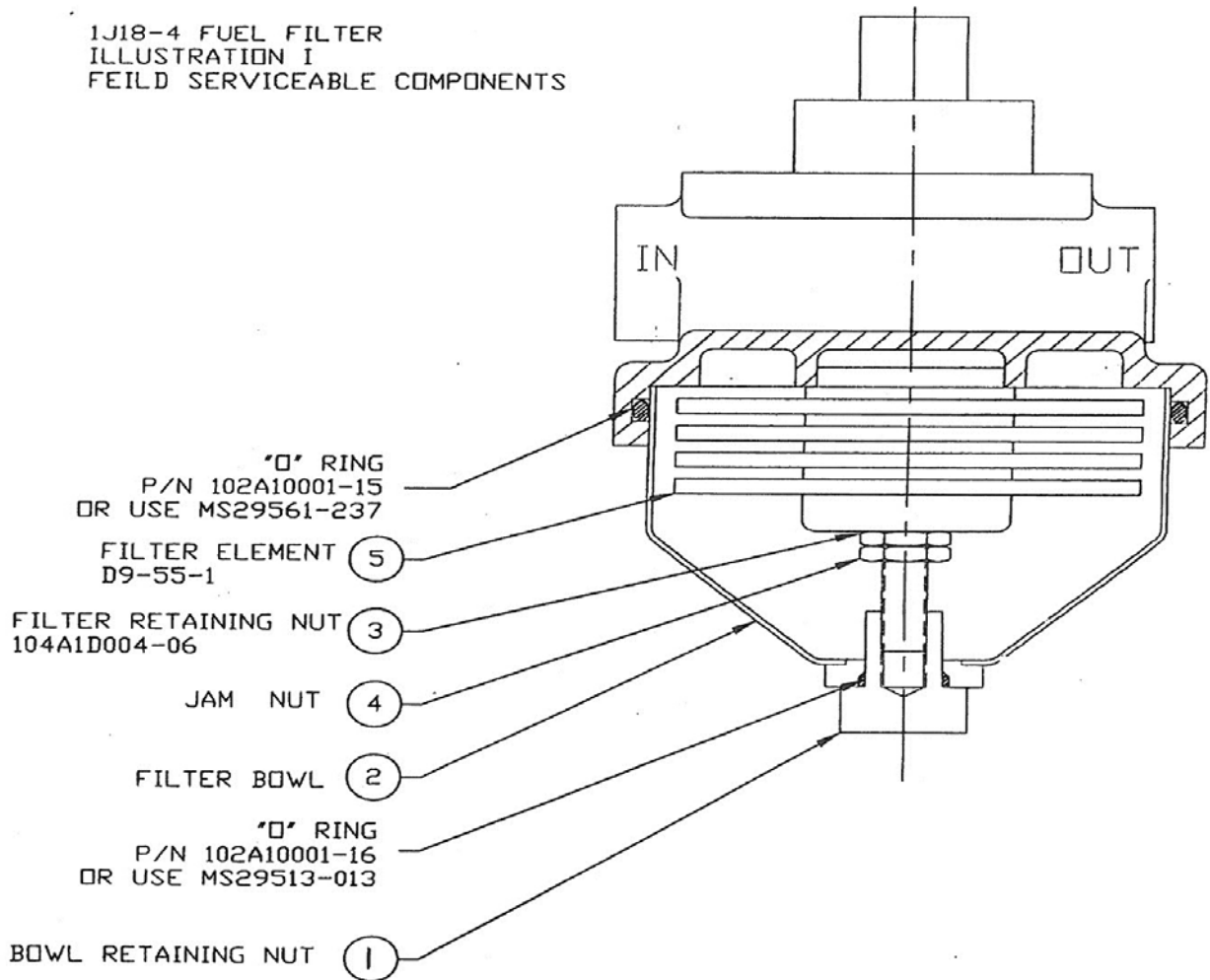


FIGURE 114-6 REPLACEABLE PARTS

## 9 RECORD OF COMPLIANCE

Make appropriate entry in airplane maintenance records as follows:

“Thrush Service Letter SL-AG-114 Rev. IR complied with at \_\_\_\_\_  
total hours on aircraft.

\_\_\_\_\_  
(name & Certificate #)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(date)