



SERVICE BULLETIN

FUJI HEAVY INDUSTRIES LTD.

HEAD OFFICE

: SUBARU BLDG,

SHINJUKU, TOKYO, JAPAN

NO : FAS-070

DATE : JUNE 1, 1973



1. SUBJECT : Installation of Engine Mounted Full-Flow Oil Filter.
2. AIRCRAFT AFFECTED : All FA-200 Series Aircraft.
3. PRIORITY : Optional.
4. REASON : To provide longer engine life and to increase the existing oil change interval (50 hours) by 25 to 100 per cent, depending on environmental conditions.
5. DESCRIPTION : Replace the existing oil filter with full-flow oil filter. Minor modification of vacuum pump exhaust line is also necessary to accomplish filter replacement.
6. ACCOMPLISHMENT : At option of the operator.
7. APPROVAL : Not Applicable.
8. PARTS REQUIRED : The following parts are required to accomplish this bulletin :

(a) Oil Filter Conversion

<u>PART NUMBER</u>	<u>NOMENCLATURE</u>	<u>QUANTITY</u>
75528	Oil Filter and Adapter	1
Consists of :	Assembly Kit	
74911	Filter and Adapter Assy	1
76691	Oil Filter Adapter Gasket	1
STD-8	Washer	4
STD-1411	Nut	1

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<u>PART NUMBER</u>	<u>NOMENCLATURE</u>	<u>QUANTITY</u>
25C-10-PO3	Stud	1
STD-1856	Self-Locking Screw	3
STD-160	Internal Tooth Lockwasher	1
5578426	Temperature Bulb Gasket	1
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200-324191-103	Tube Assy	1
F-0454-0865	Hose	1
MS20995C32-18	Lockwire	AR

(b) Filter Element Replacement

<u>PART NUMBER</u>	<u>NOMENCLATURE</u>	<u>QUANTITY</u>
6435683	Replacement Filter Element	1

9. SPECIAL TOOL : None required.
10. WEIGHT AND BALANCE : Negligible.
11. REFERENCE : Lyconing Service Letter No. L157A (December 9, 1966).
12. MANHOURS REQUIRED : 3.0 manhours required.
13. DESCRIPTION :

(a) Oil Filter Conversion

- (1) Remove the engine cowling (upper) in accordance with Service manual, para 4-3-1.
- (2) Remove the tachometer flexible shaft at the accessory housing.
- (3) If vacuum pump is installed, remove the hose F-0454-0816 and tube 200-324191-101 as shown in figure 3.
- (4) Remove oil temperature bulb, adapter and by-pass valve assy 75944 from end of oil pressure screen housing. See figure 2.
- (5) Remove the four capscrews and washers that attach the oil pressure screen housing to the engine. Remove the housing screen and gasket. If any portion of the gasket adheres to the mounting surface of the accessory housing, remove it completely before the new gasket is assembled.

- (6) Using a 1/4 inch stud driver, install a P/N 25C-10-PO3 stud (AC P/N 5579090) in the lower left tapped hole in the accessory housing mounting pad. See figure 2. Drive the stud to a height of .60/.64 inch.
- (7) Using the three STD-1856 1/4 inch capscrews, check the depth of the tapped holes in the mounting pad by turning the capscrews into the holes by hand, as far as they will go. Measure the distance between the pad and the underside of the screws. If the distance is more than 1/8 inch, retap the hole using a 1/4-20 bottoming tap to clean the threads in the bottom of the hole.
- (8) Assemble a new adapter gasket No. 76691 (AC 6437520) on the pad on the accessory housing. Use POB or equivalent gasket sealant. Note that one side of the gasket is marked "ENGINE SIDE"; this side of the gasket must be assembled toward the engine. See figure 1.
- (9) Assemble the filter and adapter assembly No. 74911 (AC 5378770) on the accessory mounting pad and secure it with a STD-8 plain washer, STD-160 internal tooth lockwasher and STD-1411 nut over the stud in the lower left corner of the mounting pad. (If there is not enough clearance between the end of the stud and the adapter to install the nut, remove the adapter assembly and drive the stud one additional turn.) Also, after tightening nut, make sure end of stud does not interfere with adapter.
- (10) Use three No. STD-1856 (equivalent to AC 6437521) self-locking bolts to attach the adapter to the mounting pad. Use STD-8 (AC 6437523) plate washers between the adapter and the lockwasher on the bolt.
- (11) Tighten the bolts and nut installed in step (9) and (10) to 75 inch pounds torque.
- (12) If the filter housing is not assembled on the adapter, proceed as follows: Make sure the adapter gasket and housing gasket are correctly seated, then check the nylon nut. The nut should be snugly seated against the cover plate by finger-tightening. The nylon nut must not protrude above the metal surface of the cover plate.
- (13) Tighten the attaching bolt with 20 to 25 foot pounds torque. Lockwire the bolt through the loop on the side of the housing.
- (14) Using AC 5578426 gasket, install the oil temperature bulb and adapter removed in the above step (4) at the location "A" shown in figure 1. Secure with lockwire.
- (15) The by-pass valve P/N 75944, removed in the above step (4), must be assembled at the location "B" shown in figure 1. Secure with lockwire.

- (16) Install the hose F-0454-0865 and tube 200-324191-103 as shown in figure 3. Refer to the above step (3). (Reuse existing hardware.)
- (17) Reinstall the tachometer flexible shaft.
- (18) Start the engine and check for oil leaks. Also check engine oil; addition of the filter assembly will require adding approximately one quart of oil.
- (19) Reinstall the engine cowling.

(b) Filter Element Replacement

The oil filter element should be replaced after each 50 hours of engine operation.

- (1) Remove the lockwire from the bolt head at the end of the filter housing.
- (2) By loosening the bolt, remove the filter assembly from the adapter.
- (3) Before discarding the filter element, remove the outer perforated paper cover; and using a sharp knife, cut through the folds of the element at both ends, close to the metal caps. Then, carefully unfold the pleated element and examine the material trapped in the filter for evidence of internal engine damage such as chips or particles from bearings. In new or newly overhauled engines, some small particles of metallic shavings might be found, but these are generally of no consequence.
- (4) Accomplish the above (a), steps (12) and (13).

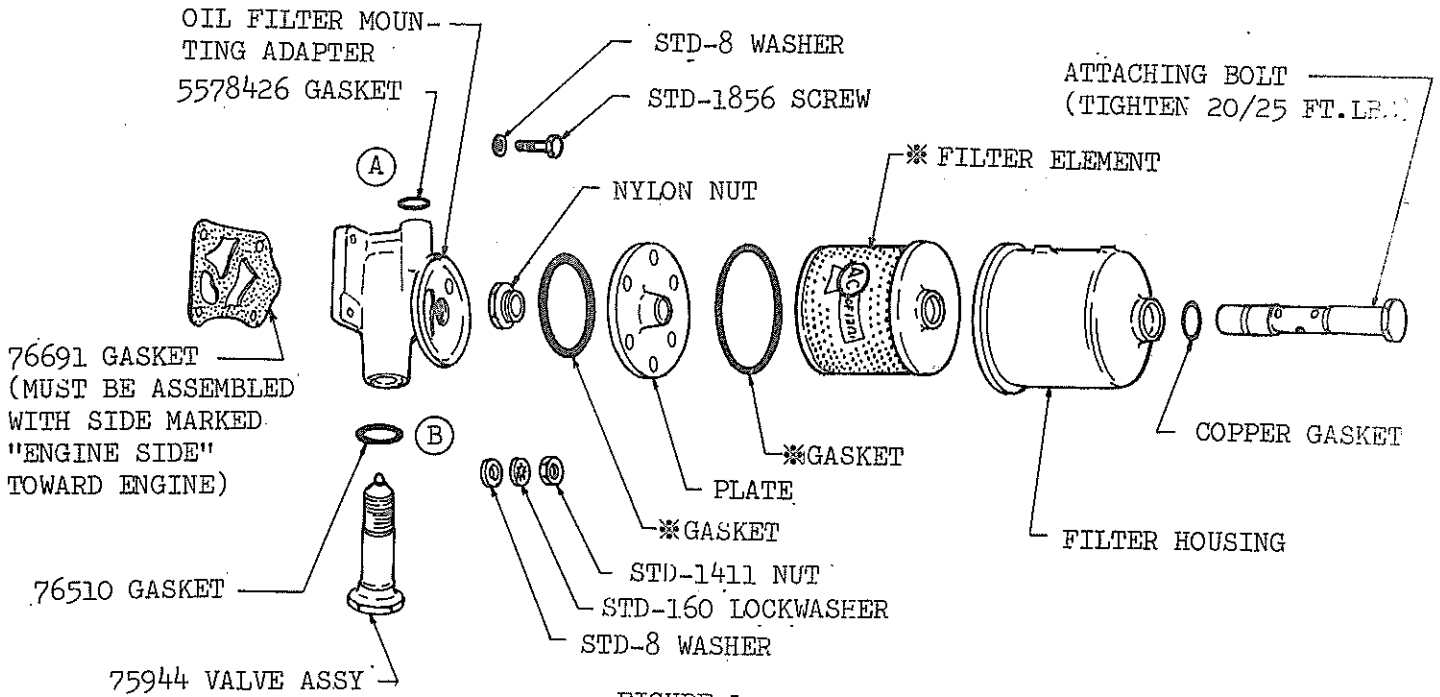


FIGURE 1

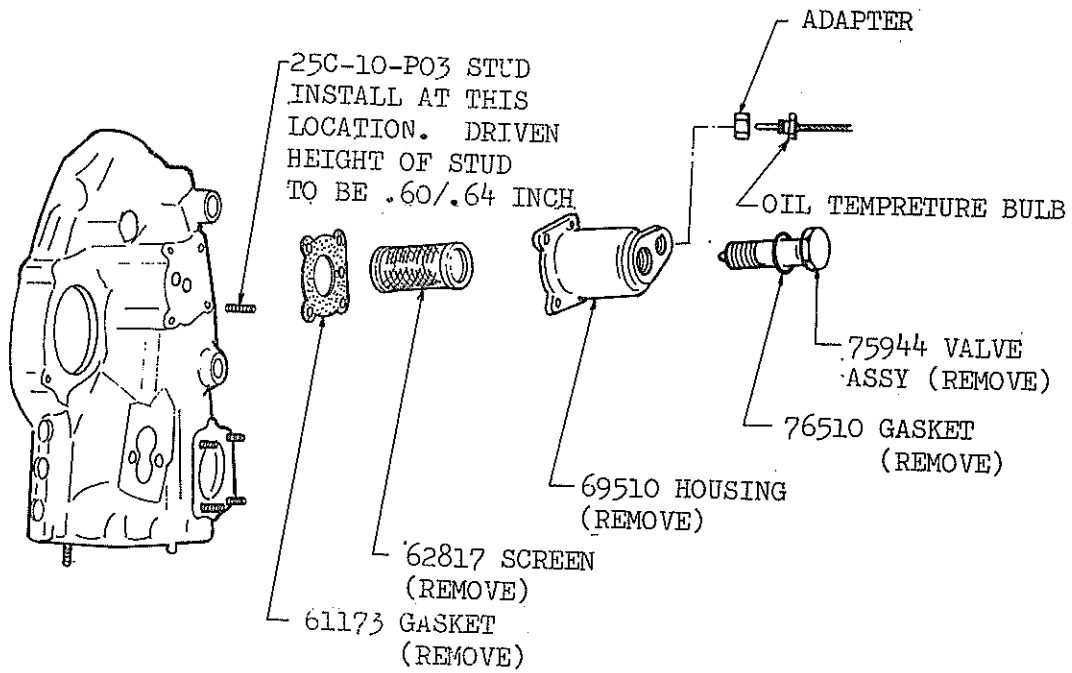
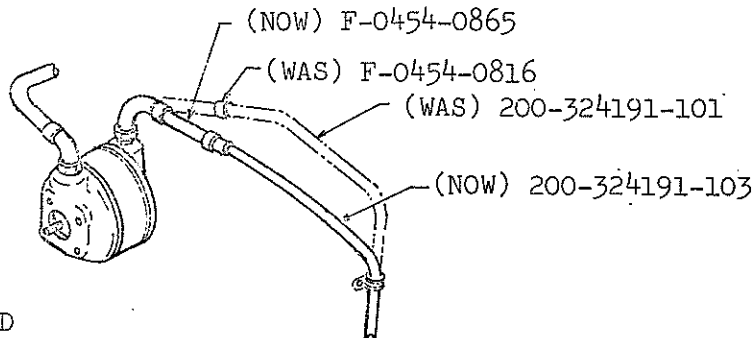


FIGURE 2



* THESE ITEMS SUPPLIED WITH REPLACEMENT FILTER ELEMENT.

FIGURE 3