



# SERVICE BULLETIN

FUJI HEAVY INDUSTRIES LTD.

HEAD OFFICE

: SUBARU BLDG,  
SHINJUKU, TOKYO, JAPAN

NO : FAS - 074A

DATE : December 27, 1974

REV "A" : February 27, 1975

1. SUBJECT : PART I - Inspection of Oil Cooler Tubes and Addition of Protective Tape.  
PART II - Replacement of Oil Cooler Tubes.
2. AIRCRAFT AFFECTED : PART I, PART II - All FA-200 Series Aircraft, S/N 1 thru 243, excluding 41, 101, 102 and 214.
3. PRIORITY : Mandatory.
4. REASON : PART I - Field reports of several cracked oil cooler return tubes at the 90 degree bend portion (engine side) make inspection and addition of protective tape necessary for safety of flight.  
PART II - Replace metal tubes of existing oil cooler line with flexible hoses to prevent loss of oil due to cracks, wear, chafing, or other damages to the tubes which may be caused by engine vibration.
5. DESCRIPTION : PART I - (1) Dye penetrant inspect the 90 degree bend portion (engine side) of oil cooler return tube and, if no cracks found, wrap tape around the affected portion. Daily inspect the specific part of the tube and replace tape every 50 flight hours.  
(2) If any crack is found, replace tube with new serviceable tube, and perform application of tape and inspection as specified in the above para (1).  
PART II - Replace the existing tubes (both feed and return) with flexible hoses.

FAS - 074 "A"

PAGE 1 OF 6

6. ACCOMPLISHMENT : PART I - Dye penetrant inspect the specific portion of the tube upon receipt of this bulletin, and install tape within 10 flight hours.

PART II - Replace the existing tubes with flexible hoses no later than March 30, 1975.

7. APPROVAL : JCAB Approval (NO-TOKYO-101) February 20, 1975 "A"

8. PARTS REQUIRED : The following parts are required to comply with this bulletin :

PART I

<u>NO</u>	<u>PART NUMBER</u>	<u>NOMENCLATURE</u>	<u>QUANTITY</u>
1	*PE-100	Heat Resisting Tape	1 m (Approx)

\*PE-100 is a product of A Johnson & Johnson, New Brunswick, N.J. 08903, U.S.A.

PART II

<u>NO</u>	<u>PART NUMBER</u>	<u>NOMENCLATURE</u>	<u>QUANTITY</u>
1	624000-6-0450	Hose	1
2	624023-6-0450	Hose	1
3	MS20822-6-6D	Elbow	2
4	AN816-6-6D	Nipple	1
5	MS21919DG28	Clamp	2
6	MS21919DG15	Clamp	10
7	MS21919DG12	Clamp	2
8	MS21919DG8	Clamp	1
9	MS35206-247	Screw	4
10	MS35206-245	Screw	2
11	NAS679A08W	Nut	6
12	AN960-8	Washer	6
13	200-91430-007	Protector	2

"A"

"A"

"A"

9. SPECIAL TOOL : PART I - Dye Penetrant Inspection Solution.  
PART II - None required.

10. WEIGHT AND BALANCE : PART I - No Change.  
PART II - Change in weight : plus 1.115 kg  
Arm : Station 925

11. REFERENCE : Not applicable.

12. MANHOUR REQUIRED : PART I - 3.0 manhours required.  
PART II - 3.0 manhours required.

13. DETAILED INSTRUCTION :

PART I - Inspection of Oil Cooler Tube and Addition of Protective Tape.

- (1) Remove upper and lower cowlings in accordance with Service Manual, para 4-3-1.
- (2) Remove clamps holding oil cooler tubes.
- (3) Loosen nut of oil cooler side return tube (P/N 200-914131-113 for 160 HP S/N 12 thru 18, 200-914131-107 for 180 HP S/N 12 thru 18, or 200-914131-119 for S/N 19 & Sub.) at oil cooler side. Also loosen nut of oil cooler side feed tube (P/N 200-914131-109 for 180 HP S/N 12 thru 18, or 200-914131-115 for 160 HP S/N 12 & Sub and for 180 HP S/N 19 & Sub.) at the same side. Prior to loosening nut, place a suitable container to catch oil.
- (4) Loosen nuts of engine side return and feed tubes (P/N 200-914131-117 for 160 HP S/N 12 thru 18, 200-914131-111 180 HP S/N 12 thru 18, or 200-914131-123 for S/N 19 & Sub.) at engine side.
- (5) Remove oil cooler tubes from engine.
- (6) Clean tube with naphtha or suitable solvent, and visually inspect for cracks, wear or other damage. Pay particular attention to flared portion of tube, and replace tube if damage is found.
- (7) Dye penetrant inspect the 90 degree bend portion of oil cooler return tube. (Ref. Figure 1, Area "A".)
- (8) If no cracks are revealed by the above inspection, wrap heat resisting tape PE-100 around tube as illustrated in the Figure 2. If any damage is found, replace tube with new one and apply tape in a similar manner.
- (9) Reverse the preceding steps to attach tubes to engine.
- (10) Accomplish daily inspection of oil line (particulary taped portion of tube) and oil level.
- (11) Replace heat resisting tape applied in the above step (8) every 50 hours.

PART II - Replacement of Oil Cooler Tubes

- (1) Remove upper and lower cowlings in accordance with Service Manual, para 4-3-1.
- (2) Accomplish steps (1) thru (5) of PART I.
- (3) Remove elbows (AN833-8D, AN924-8D Nut, MS28778-8 "O" ring for S/N 12 thru 18, or MS20822-8D for S/N 19 & Sub.) from oil cooler and install two MS20822-6-6D elbows in place. (Ref. Figure -3, Area "A".)

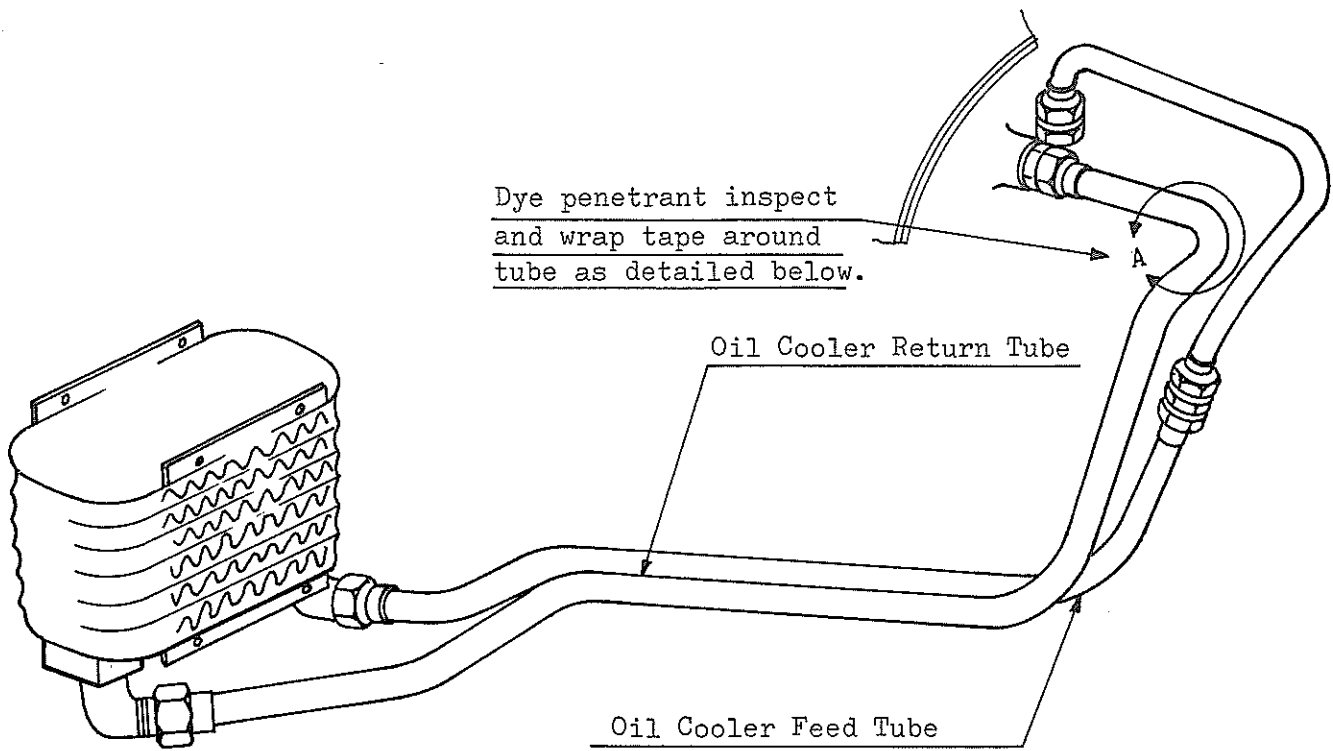


Figure 1

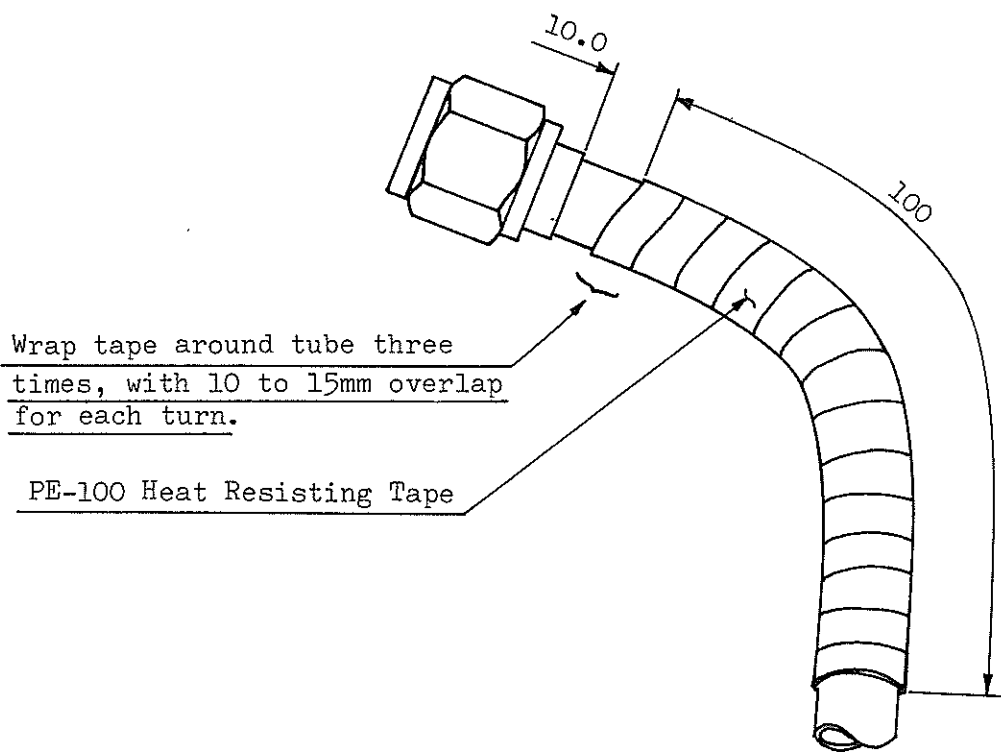


FIG-2 Details for Tape Installation (AREA "A")

- (4) Remove return tube nipple AN816-8D from engine, and install one AN816-6-6D nipple in place. (Ref. Figure -3, Area "B".)
- (5) Install hose P/N 624000-6-0450 between elbow MS20822-6-6D and nipple AN816-6-6D attached in the above steps (3) and (4) respectively.
- (6) Install hose P/N 624023-6-0450 between elbow MS20822-6-6D attached in the step (3) and nipple at Area "C".
- (7) Using one clamp MS21919DG28, two clamps MS21919DG15, one screw MS35206-247, one nut NAS679A08W, and one washer AN960-8, attach the above two hoses to suction tube as shown in Figure -3, Area "D" (2 places).
- (8) Using two clamps MS21919DG15, one clamp MS21919DG12, one screw MS35206-247, one nut NAS679A08W, and one washer AN960-8, attach the two hoses to engine mount as shown in Figure -3, Area "E".
- (9) Attach one of the two hoses to vacuum system outlet tube as shown in Figure -3, Area "F", using one clamp MS21919DG15, one clamp MS21919DG8, one screw MS35206-245, one nut NAS679A08W, and one washer AN960-8. Also secure the other tube to engine breather tube at Area "F" with one clamp MS21919DG12, one clamp MS21919DG15, one nut NAS679A08W, one screw MS35206-245, and one washer AN960-8.
- (10) Install protector P/N 200-914130-007 around each of the two hoses in the portion where they intersect inlet duct for No.2 cylinder. (Reference figure 3, Area "H".)
- (11) Secure the two hoses together with two clamps MS21919DG15, one screw MS35206-247, one nut NAS679A08W, and one washer AN960-8 as shown in figure 3, Area "G".
- (12) After completion of replacement, check to ensure that the hoses have adequate clearance and are free from chafing.
- (13) Install engine cowlings.
- (14) Check engine oil system for leakage.

"A"

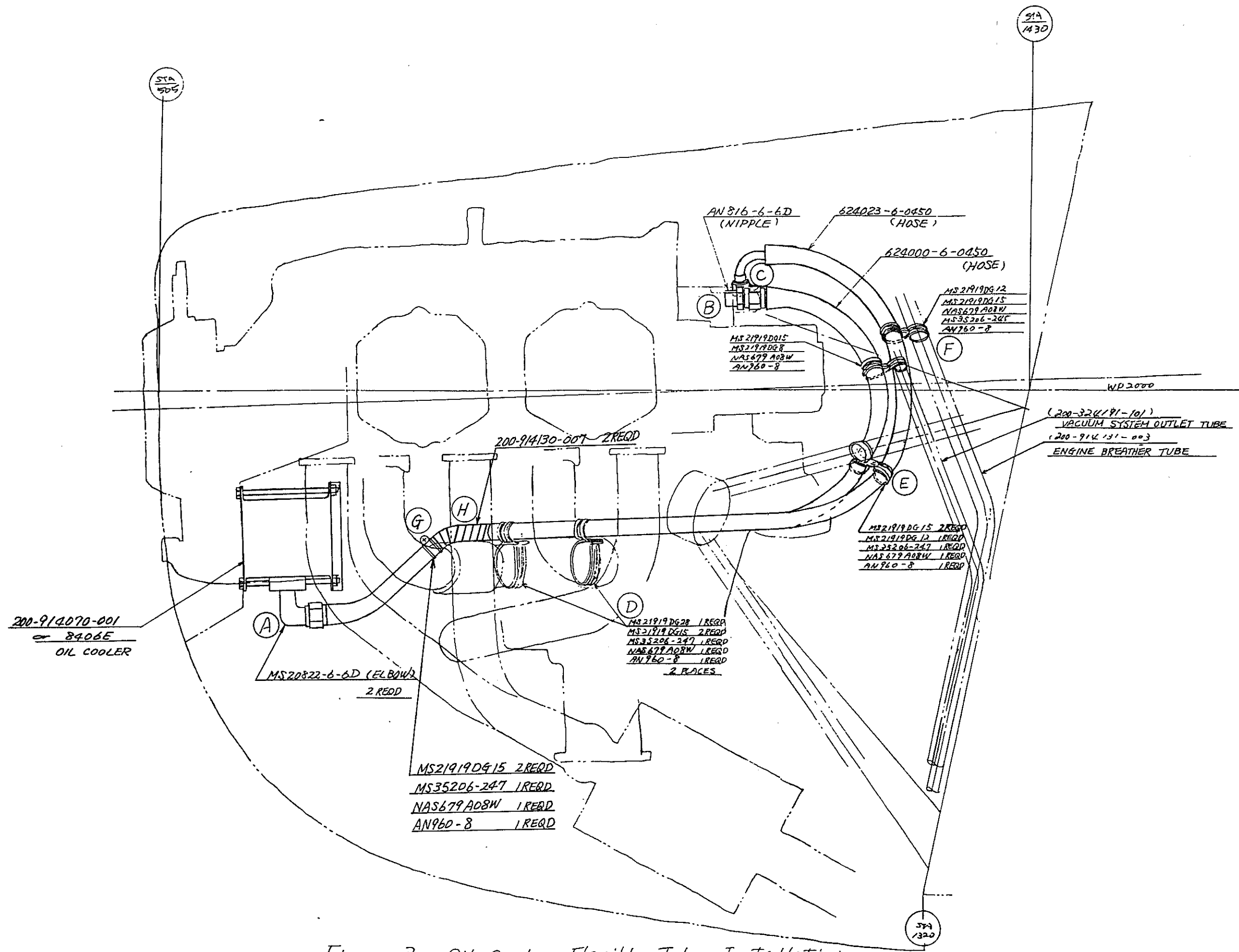


Figure 3 Oil Cooler Flexible Tube Installation.