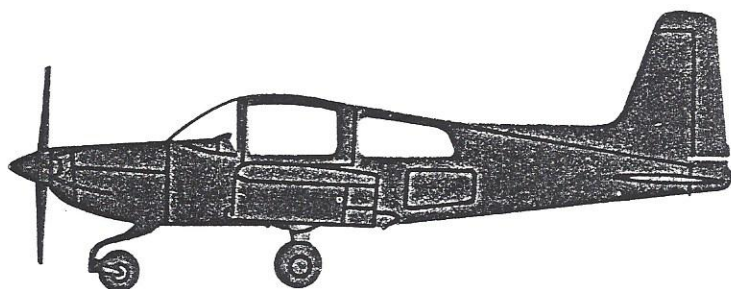
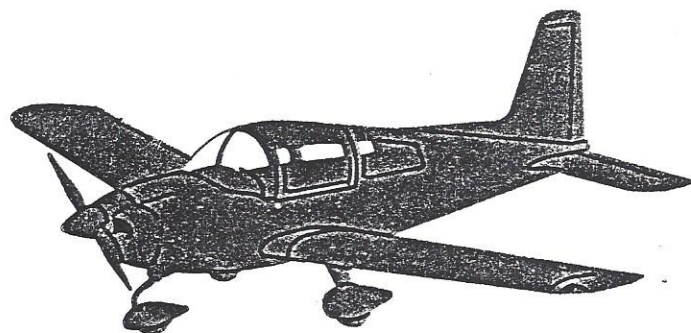
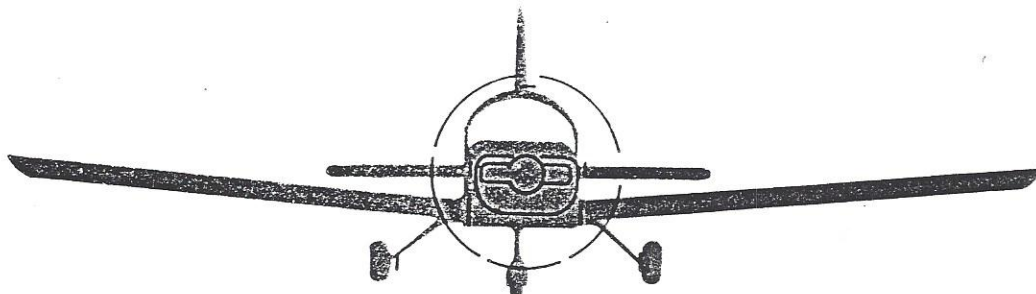


SINGLE ENGINE AIRCRAFT ACCESSORY KIT NO.132

SUBJECT: ENGINE (ATA NO. 79) OIL COOLER - INSTALLATION OF.



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11 MARCH 1977

GRUMMAN AMERICAN AVIATION
CORPORATION

PO BOX 2206, SAVANNAH, GEORGIA 31402

PILOT'S INFORMATION SHEET

SINGLE ENGINE AIRCRAFT ACCESSORY KIT NO. 132

ENGINE OIL COOLER INSTALLATION

There will be no cockpit procedural changes due to the incorporation of this Accessory Kit.

GRUMMAN AMERICAN SINGLE ENGINE AIRCRAFT ACCESSORY KIT NO. 132

PROPRIETARY INFORMATION

This document consisting of 8 pages with 4 figures contains information proprietary to Grumman American Aviation Corporation. It shall not be used, duplicated or further disseminated for any purpose, other than that for use in connection with an installation in AA-1, AA-1A, AA-1B aircraft, without written consent of an authorized representative of Grumman American Aviation Corporation.

GRUMMAN AMERICAN SINGLE ENGINE AIRCRAFT ACCESSORY KIT NO. 132

SUBJECT: Engine (ATA No. 79) Oil Cooler - Installation of.

PURPOSE/DISCUSSION: The purpose of this kit is to provide additional oil cooling.

DESCRIPTION: This kit installs Engine Oil Cooler Assembly on Engine Firewall using Support Assembly and miscellaneous hardware. Utilizes ram cooling air to cool oil.

SPECIAL TOOLS/
EQUIPMENT REQUIRED: Standard aircraft riveting tools.

EFFECTIVITY:

<u>MODEL</u>	<u>SERIAL NUMBER</u>
AA-1	0001 & SUBQ.
AA-1A	0001 & SUBQ.
AA-1B	0001 & SUBQ.

WEIGHT AND BALANCE:

<u>WEIGHT</u>	<u>ARM</u>	<u>MOM</u>
+6.03	45.68	+275.44

THIS IS A DESIGN IMPROVEMENT. NO PARTS OR LABOR CREDIT WILL BE GIVEN.

PRICE: Prices are subject to change without notice:

List Price (C)

~~\$399.00~~

The following instructions, in step by step form, are written as a guide to perform this installation or modification. Compliance with safe maintenance practices as recommended in the maintenance manual and FAA Regulations is Mandatory.

GRUMMAN AMERICAN SINGLE ENGINE AIRCRAFT ACCESSORY KIT NO. 132

MODIFICATION INSTRUCTIONS:

- A. Prepare aircraft for safe maintenance.
 - a. Insure Master Switch OFF.
 - b. Aircraft grounded.
- A-1 Gain access to Engine Compartment, by removing upper and lower Engine Cowls.
- A-2 Locate 804062-501 Support Assembly using dimensions called out in Figure 1, Detail A.
- A-3 Drill .311-.318 Dia. 4 holes through Firewall and Honeycomb.

NOTE

Caution should be used when drilling through firewall and honeycomb.

- A-4 Remove wire from 362-EW Oil Thermistor. Retain hardware for reuse. Discard Electrical Boot. (See Figure 3).
- A-5 On early models, remove 500006-7 Blast Tube, 505003-2 Bracket and hardware and discard. On late models remove 804039-4 Hose, QS100M28S Clamp from Shroud on Oil Screen Housing and retain for reuse. Remove Oil Screen Housing, insure that Oil Screen remains in Housing, discard bolts (4). Remove Shroud Assy. from housing and discard. Retain Oil Screen Housing for reuse.
- A-6 At point directly aft of oil thermistor (WL 47.0 and BL 0.00) Drill .50 Dia. hole .3 to .4 deep but not through Honeycomb aft face sheet. (See Figure 3).
- A-7 Fill .50 Dia. hole with Pro Seal 700 Sealant (MIL-S-38249 TYPE I).
- A-8 Install the Oil Cooler Bypass Valve, supplied with the LW14971 Kit, into the LW14959 Adapter. Install the crush washer with the unbroken surface against the flange of the plug. Turn the plug until the sealing surfaces are in contact and then tighten the plug an additional 135° (3/8 of a turn). Safety wire the plug to the LW14959 Adapter using MS20995C32 Safety wire. (See Figure 2).
- A-9 Coat AN912-2 Reducers (2) and MS20822-6 90° Elbows (2) with thread lubricant. Install Reducers and Elbows on LW14959 Adapter. Position Elbows per Section C-C, Figure 3. (See Figure 2 and 3).

NOTE

It is recommended that the Gasket Mating Surfaces of the Oil Screen Housing and Engine be inspected and thoroughly cleaned of any remaining Gasket material or debris. Clean the Oil Screen in the Oil Screen Housing with solvent and Air Dry.

GRUMMAN AMERICAN SINGLE ENGINE AIRCRAFT ACCESSORY KIT NO. 132

- A-10 Install the LW14959 Adapter, Oil Screen and Oil Screen Housing (removed in Step A-5) using 61173 Gaskets (2) and hardware, supplied with the LW14971 Kit. Torque the Bolts that secure the LW14959 Adapter and Oil Screen Housing 40-60 in./lbs. (See Figure 2 and 3).

NOTE

If aircraft had 804039-4 Hose installed between Rear Baffle and Shroud on Oil Screen Housing proceed to Step A-13.

- A-11 Remove MS21266-1N Grommet from Baffle and discard. Enlarge existing 1.12 Dia. hole to 2.31 Dia. hole (See Figure 1, Detail B).
- A-12 Locate 804039-502 Plate Assy. in the enlarged hole, using pilot holes provided drill .125-.129 Dia. (4) holes. Rivet in place using MS20470AD4-3 Rivets (4). (See Figure 1, Detail B).

- A-13 Coat MS20823-6 45° Elbows (2) with thread lubricant and install Elbows (2) in Oil Cooler. Install 111F417-6-0145 Hose (Cool Oil Return; 14.5 inches long) and 111F417-6-0265 Hose (Hot Oil Out; 26.5 inches long) on Elbows. (See Figure 4).
- A-14 Install 902015-1 Bushings (4) wet using Pro Seal 700 Sealant (MIL-S-38249 TYPE I) (See Figure 3). Sealant should fill honeycomb cavity caused by drilling. Install 804062-501 Support Assembly on Firewall using 804062-4 Gasket, AN3-10A Bolts (4) and AN970-3 Washers (4).

NOTE

Use Pro Seal 700 Sealant (MIL-S-38249 TYPE I) to fill holes in corners of Support Assembly.

- A-15 Attach 5505002-1 Oil Cooler to Support Assembly using AN3H42A Bolts (4), AN970-3 Washers (4), AN960-10 Washers (4), 5902000-1 Spacer (4), AN960-10 or 10L Washers, as required (See Note), 5902001-1 Doublers (2) and Torque Bolts to 20-25 in./lbs. and safety wire with MS20995C32.

NOTE

Proper installation of hardware used above is critical. The AN960-10 or 10L Washers act as spacers to provide proper installation of 5902000-1 Spacer and prevent any loading on the flanges of the Oil Cooler. (See Figure 4, Aux. View F). Insure that the 5902001-1 Doubler is installed with the radius edges (rounded corner) adjacent to Oil Cooler Flange Mold Line.

- A-16 Connect wire removed in Step A-4 to Oil Thermistor. Connect 111F417-6-0145 Hose and 111F417-6-0265 Hose to MS20822-6 Elbows on LW14959 Adapter. (See Figure 3).

GRUMMAN AMERICAN SINGLE ENGINE AIRCRAFT ACCESSORY KIT NO. 132

- A-17 On early models install the 804039-4 Hose using QS100M28S Clamps (2) (supplied with Accessory Kit) between the 804039-502 Plate Assembly (installed in the Baffle Assembly; Step A-12) and the 804062-501 Oil Cooler Support Assembly (installed on the Firewall; Step A-14). On late models connect the 804039-4 Hose that was removed from the Oil Screen Housing Shroud in Step A-5 to the 804062-501 Oil Cooler Support Assembly (installed on the Firewall; Step A-14) using the Clamp retained in Step A-5. See Figure 4.

NOTE

Check Engine Oil Level to insure that Engine is properly serviced for Engine Operation.

- A-18 Reinstall Upper and Lower Engine Cowling. Removed in Step A-1.
- A-19 Operationally check Oil Cooler installation by operating Engine. After Engine run check for leaks. Service engine oil with approved type.

NOTE

Approximately 1 qt. of additional oil will be required to fill oil cooler and lines.

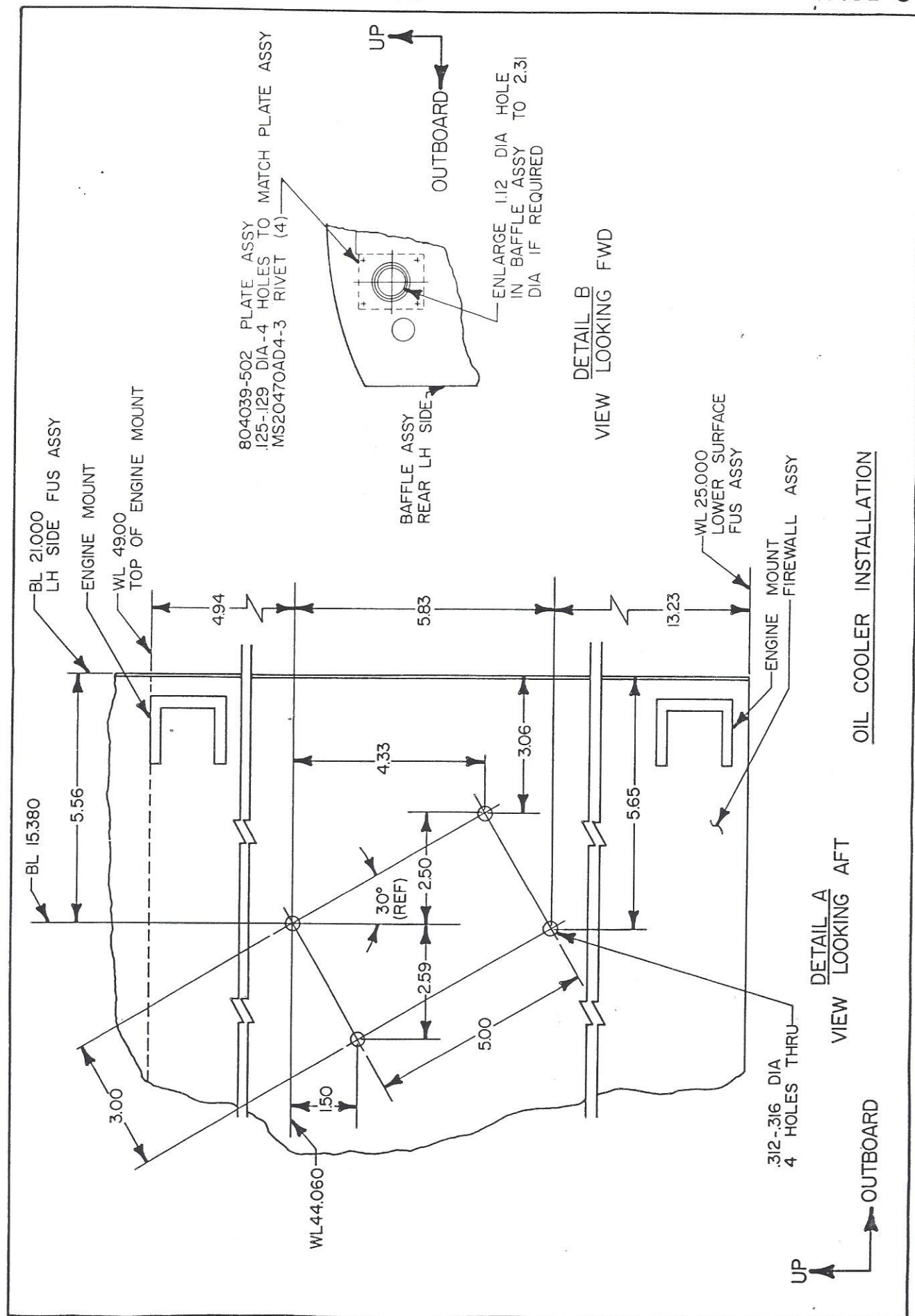
- A-20 Return aircraft to flight status.
- A-21 Record compliance in aircraft log book.

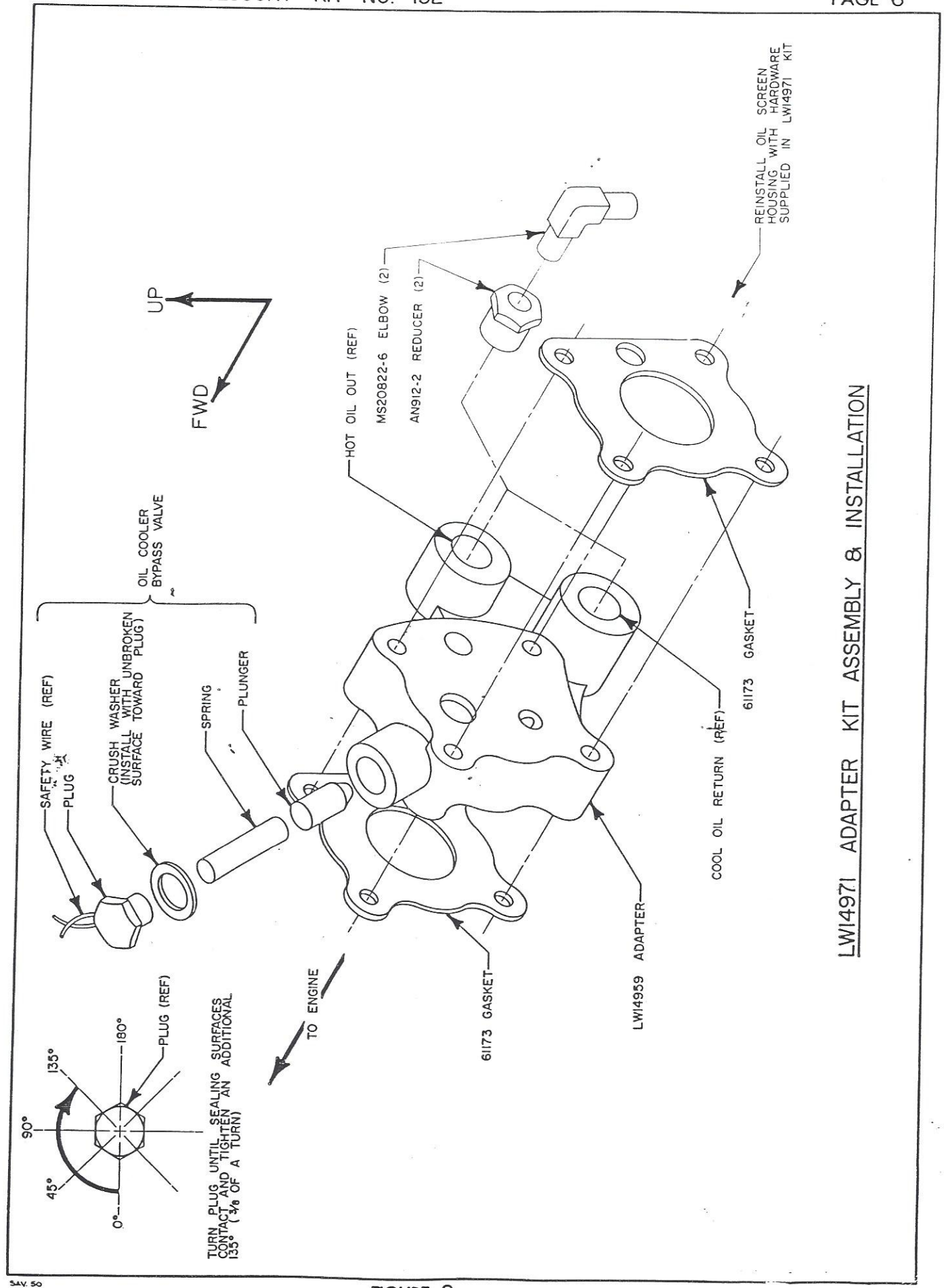
PARTS REQUIRED PER AIRCRAFT

Part Number	Nomenclature	Qty.
111F417-6-0265	Hose	1
111F417-6-0145	Hose	1
804039-502	Plate Assy.	1
QS100M28S	Clamp	2
MS20823-6	Elbow (45°)	2
MS20822-6	Elbow (90°)	2
LW14971	Adpater Kit	1
AN970-3	Washer	8
AN960-10	Washer	8
AN912-2	Reducer	2
AN3H42A	Bolt	4
AN3-10A	Bolt	4
MS20470AD4-3	Rivet	4
5902001-1	Doubler	2
5902000-1	Spacer	4
5505002-1	Oil Cooler	1
804062-4	Gasket	1
804039-4	Hose	1
902015-1	Bushing	4
804062-501	Support Assy.	1
AN960-10L	Washer	4
Pro Seal 700	Sealant	$\frac{1}{2}$ pt.

Accessory Kit prepared by Grumman American Aviation Corporation,
P.O. Box 2206, Travis Field, Savannah, Georgia 31402.

FAA (DER) Approval of this Accessory Kit has been granted.





LWI4971 ADAPTER KIT ASSEMBLY & INSTALLATION

FIGURE 2

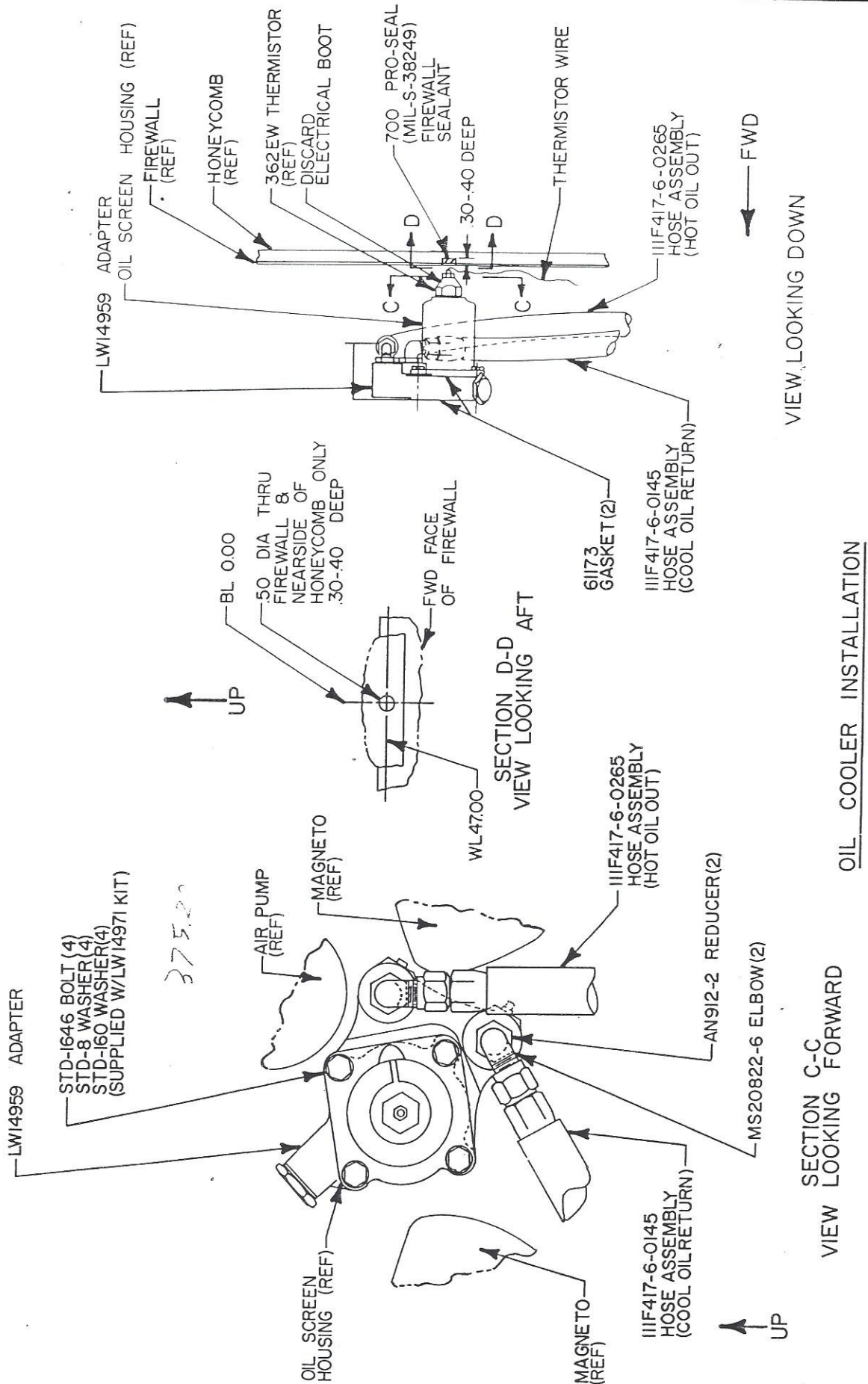


FIGURE 3

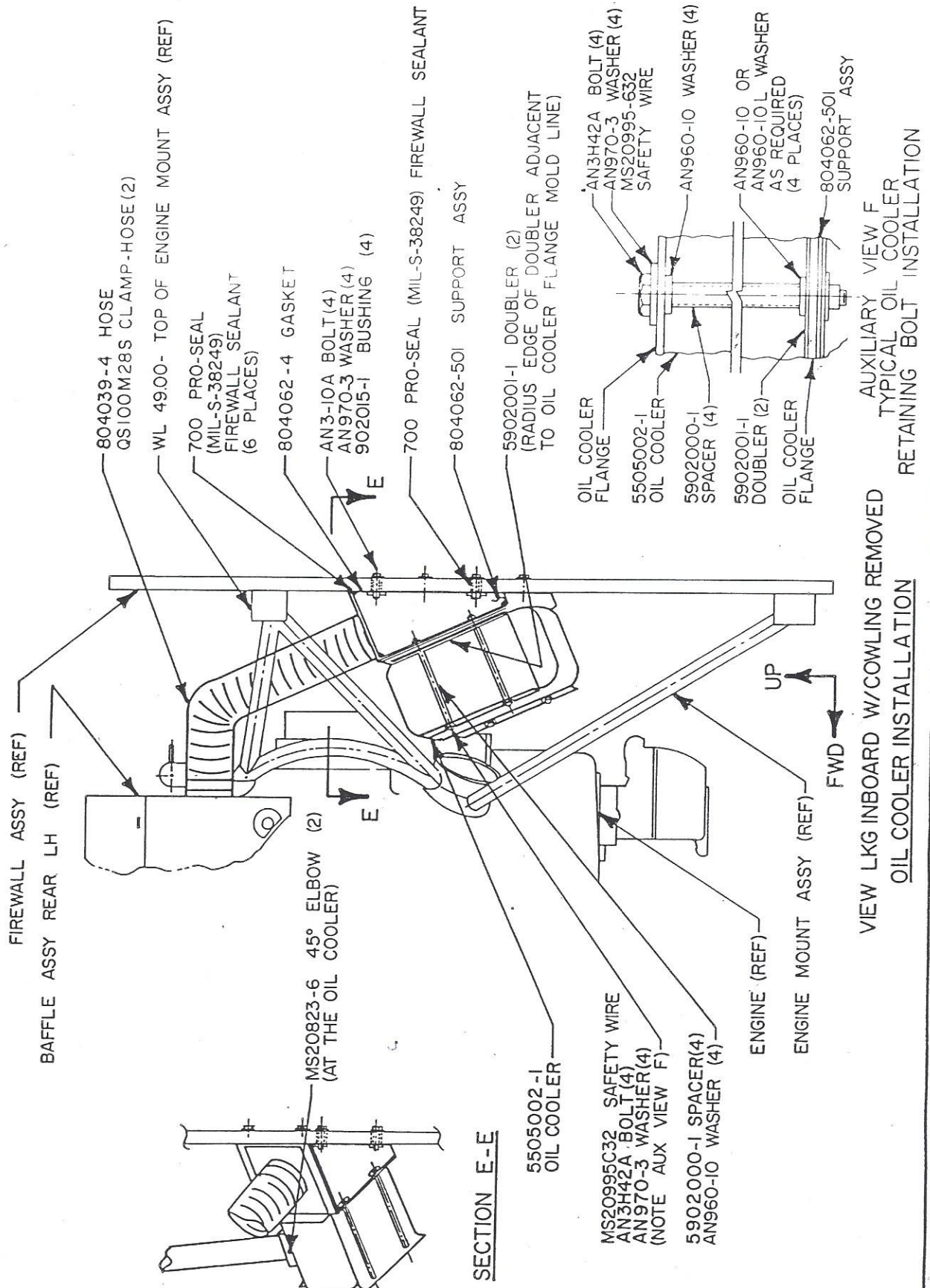


FIGURE 4