TECHNICAL BULLETIN

* Supersedes Service Information Notice No. DN–72, Dated 18 August 1980

DRAIN KIT INSTALLATION, PN 369D28300-501 ENGINE OIL TANK AND OIL COOLER; DRAIN KIT INSTALLATION, PN 369D290120 MAIN ROTOR TRANSMISSION OIL COOLER

1. PLANNING INFORMATION

A. MODELS AFFECTED:

500D Model 369D Helicopter Serial No. 0003D thru 0604D

B. PREFACE:

The information given in this Service Information Notice lists a procedure for incorporating more readily accessible oil drain installations on the above affected helicopters, to facilitate draining and maintaining the engine oil system, and the main rotor transmission oil cooler assembly. Field modification consists primarily of removing the existing quick–drain valve on the forward side of the engine firewall, and routing new drain tubes with end caps located on the aft side of the ring structures in the engine compartment. Decals are also provided to identify each oil drain installation.

C. TIME OF COMPLIANCE:

At owners and operators discretion

D. FAA APPROVAL:

FAA/DER APPROVED 9 February 1981

E. WEIGHT AND BALANCE:

Weight and balance change negligible

F. REFERENCE:

500D HMI–Volume I, Issued 15 September 1976; Revision No. 3, 15 March 1979

TECHNICAL BULLETIN

G. PARTS LIST / MATERIALS / TOOLS AND EQUIPMENT:

PARTS/SUPPLIES			
Nomenclature	**Part No.**	**Qty.**	**Source**
PN 369D28300-501 Engine Oil Tank and Oil Cooler Drain Kit Consisting of the following:			
Decal	369D24044	1	HH
Doubler	369D28300-3	1	HH
Doubler	369H2532-17	1	HH
Tube Assembly	369D28313	2	Commercial
Tube Assembly	369D28314-11	1	Commercial
Tube Assembly	369D28314-21	1	Commercial
Bracket	369D28315	1	Commercial
Union	AN815-4J	2	Commercial
Elbow	AN833-4J	2	Commercial
Nut	AN924-4J	4	Commercial
Cap Assembly	AN929-4J	2	Commercial
Elbow	AN939-4J	2	Commercial
Washer	AN960-C716	8	Commercial
Rivet	MS20615-3M	6	Commercial
Tie Strap	MS3367-2-9	2	Commercial
Grommet	MS35489-6	1	Commercial
Packing	NAS617-4	4	Commercial
Rivet	NAS1738M4 - 1	6	Commercial
Union, bulkhead	SS-400-61	2	Commercial
Nut	SS-402-1	2	Commercial
Ferrule, front	SS-403-1	2	Commercial
Ferrule, back	SS-404-1	2	Commercial
PN 369D290120 Main Rotor Transmission Oil Cooler Drain Installation consisting of the following:			
Decal	369D24045	1	HH
Fitting	369D25717	1	HH
Tube Assembly	369D25718	1	HH
Elbow	MS20822-4J	1	Commercial
Elbow	AN833-4J	1	Commercial
Nut	AN924-4J	1	Commercial
Cap Assembly	AN929-4J	1	Commercial
Washer	AN960-C716	2	Commercial
Washer	AN960PD10L	1	Commercial
Nut	MS21042-3	1	Commercial
Clamp	MS21919DF4	1	Commercial
Clamp	MS21919DF8	1	Commercial
Bolt	NAS1303 -3	1	Commercial
Tape thread seal	TFE Fluorocarbon	AR	Parker Fluid Connector Cleveland OH or L.A. Rubber Co LA, CA

MATERIALS	
Nomenclature	**Source**
Primer, zinc chromate	

TOOLS AND EQUIPMENT	
Nomenclature	**Source**
Gun, rivet	
Drill motor, portable	
Drill bit - 0.500 inch dia (1/2)	
Drill bit - 0.451 inch dia (29/64)	
Drill bit - 0.437 inch dia (7/16)	
Drill bit - 0.140 inch dia (#28)	
Drill bit - 0.094 inch dia (#41)	

2. PROCEDURE - PN 169D28300-501 DRAIN KIT INSTALLATION

a. Open engine access doors; remove aft compartment interior trim and aft bulkhead access covers, (Refer to Section 2 of Basic HMI–Vo1 I.)

b. Drain engine oil system. (Refer to Section 2 of Basic HMI–Vol I;)

c. Remove existing PN 369A8324 quick drain valve,– overboard drain tube and related components as follows:

1. Disconnect and remove PN 369A8010–41 overboard drain tube from drain valve and helicopter structure. (Refer to Section 13 of HMI–Vol I.)

2. Disconnect and remove drain valve from PN 369A8010–601 and 603 tube assemblies (or 369D28314–11 and –21 tube assemblies, if installed from engine oil tank and oil cooler.

3. Remove two PN NAS1303–1 bolts, MS21042–3 nuts and AN960PD10L Washers securing PN 369A8325 drain valve bracket (with drain valve) to firewall. Discard valve and bracket; retain attaching hardware.

d. Rework helicopter structure as follows:

1. Using PN 369H2532–17 doubler as template, mark and drill two 0. 453 inch diameter holes and six 0.094 inch diameter rivet holes in RH side of PN 369H2532 ring assembly. Install doublet on aft side of ring, using MS20615–3M rivets with zinc chromate primer. (See Figure 1.)

2. Drill 0.437 inch diameter hole outboard of existing hole in 369D23016–6 rib at dimensions shown in View A–A. Install MS35489–6 grommet in hole in rib.

3. Using PN 369D28300–3 doublet as template, mark and drill 0.500 inch diameter hole and six 0.140 inch diameter rivet holes in 369D23020 firewall at dimensions shown in Detail B. Install doublet using NAS1738M4–1 rivets with zinc chromate primer.

e. Install new drain tubes and fittings as follows:

1. Assemble AN815-4J union on AN939-4J elbows as shown, using NAS617 packing. Install SS-400-61 unions on 369D28315 bracket and AN939-4J elbows and secure with AN924-4J nuts.

2. Install 369D28315 bracket on firewall, using existing attach hardware.

3. Connect 369D28313 drain tubes to unions with SS-402-1 nuts, SS-403-1 and SS-404-1 ferrules as shown. Do not tighten nuts at this time.

4. Route 369D29313 tube assemblies between firewall and ring assembly as shown; secure tubes at ring assembly using AN833-4J elbows, AN960-C716 washers and AN924-4J nuts as shown.

5. Connect existing 369A8010-601 and -603 (or 369D283 14-11 and -21) tube assemblies to unions on elbows as shown.

6. Secure 369D28313 tube assemblies to 369H8306 oil OUT hose, assembly with tie straps as shown. Tighten SS-402-1 nuts (securing drain tubes to unions) 1.25 turns from finger-tight.

7. Install AN929-4J cap assemblies.

8. Install 369D24044 engine oil drain decal on aft side of ring assembly as shown.

f. Check new engine oil system drain installation for discrepancies.

g. Service engine oil system, per Section 2 of Basic HMI-Vol I.

3. PROCEDURE - PN 369D290120 MAIN ROTOR TRANSMISSION OIL COOLER DRAIN KIT INSTALLATION

a. Drain main rotor transmission oil cooler assembly, per Section 2 of Basic HMI-Vol I. Discard existing AN929-8D end cap.

b. Drill 0.453 inch diameter hole in LH side of 369H2532 ring assembly at dimensions shown in Figure 2. Install AN833-4J elbow with AN960-C716 washers and AN924-4J nut.

c. Install new 369D25717 fitting with MS20822-4J elbow to tee on oil cooler.

d. Connect 369D25718 tube assembly to AN821-4J elbow; apply seal tape to threads of elbow; do not apply to first two threads.

e. Connect 369D25718 Cube assembly to AN833-4J elbow at ring assembly; install AN929-4J cap assembly.

f. Secure drain tube to 369H8016 engine mount, using clamps and attach hardware as shown.

g. Install 369D24045 oil cooler drain decal on aft side of ring assembly as shown.

h. Check oil cooler drain kit installation for discrepancies.

i. Service main rotor transmission oil cooler assembly per Section 2 of Basic HMI-Vol I. ·

j. Reinstall interior trim and aft bulkhead access covers; close engine access doors.

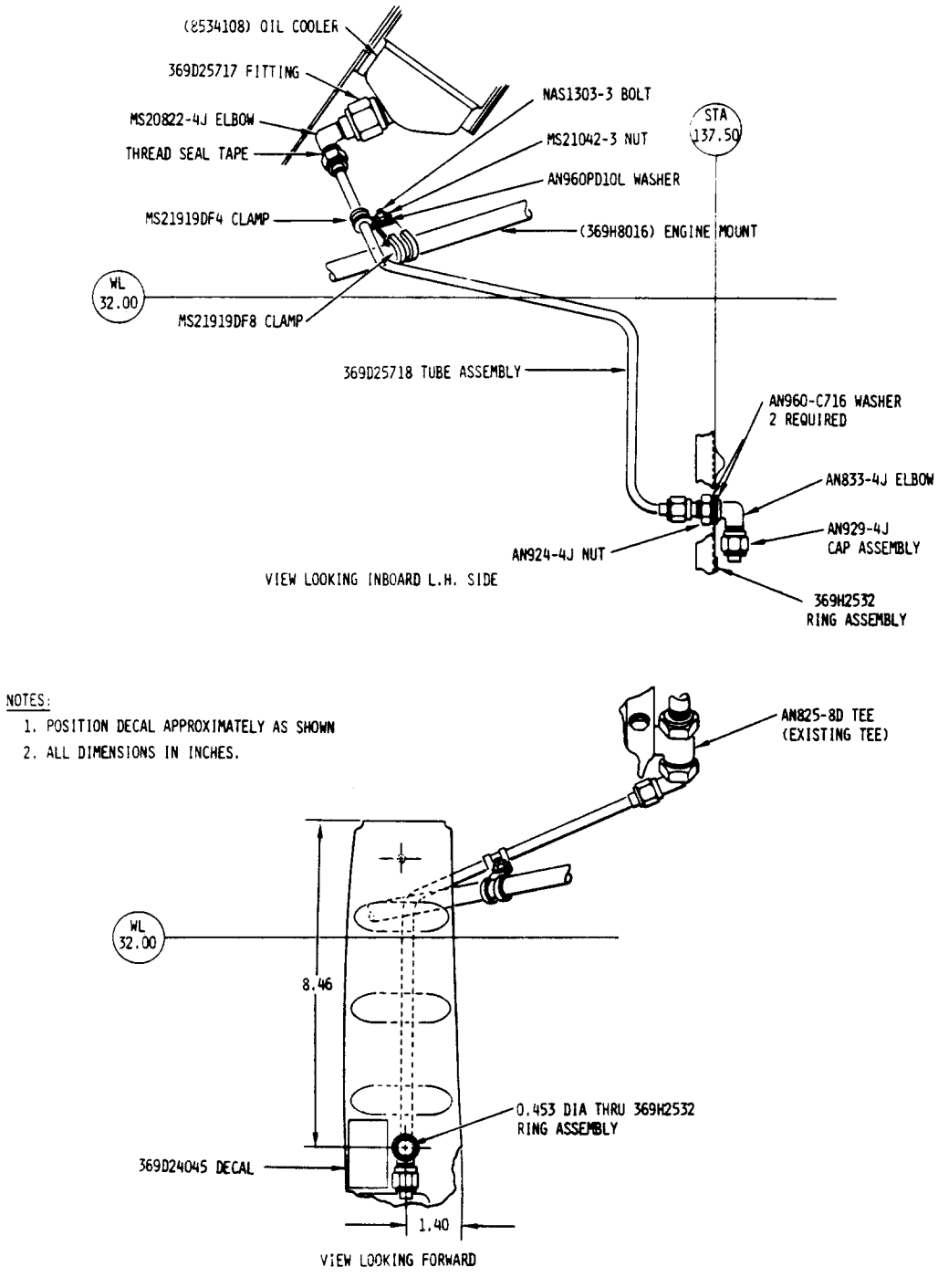


Figure 1. Drain Kit Installation - PN 369D28300-501 Engine Oil Tank and Cooler

TECHNICAL BULLETIN

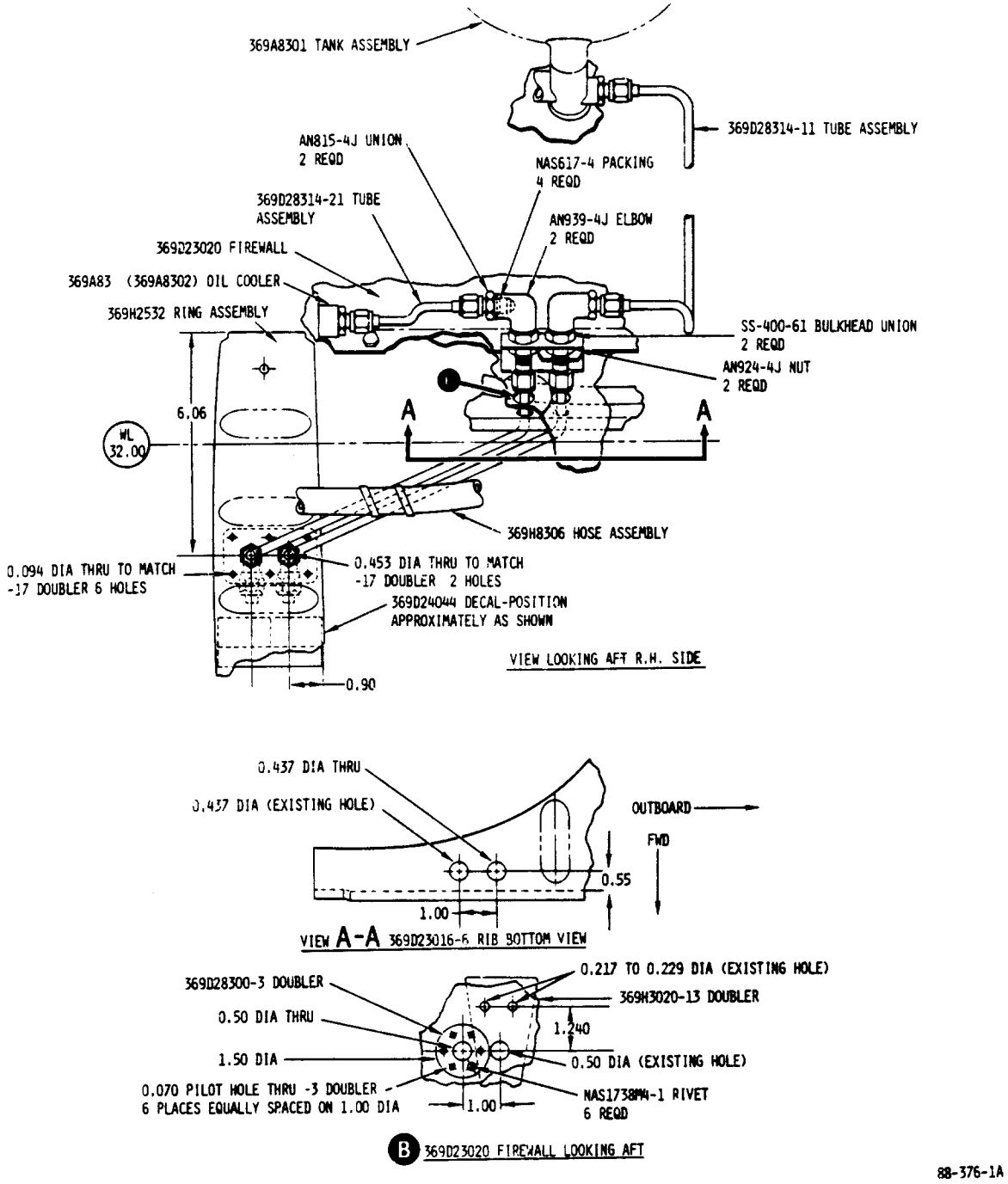
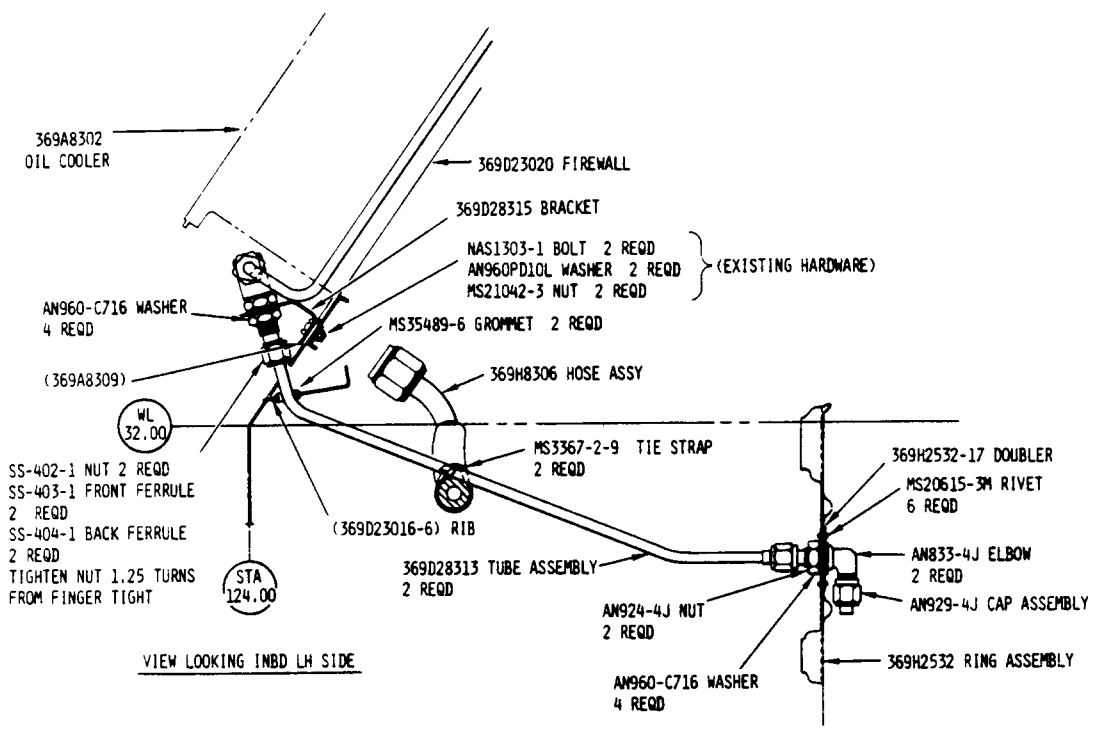


Figure 2. Drain Kit Installation - PN 369D290120 Transmission Oil Cooler (Sheet 1 of 2)



88-376-2

Figure 2. Drain Kit Installation - PN 369D290120 Transmission Oil Cooler (Sheet 2 of 2)