

ILLUSTRATED PARTS BREAKDOWN

FOR

MJ-1 DIESEL ENGINE DRIVEN HYDRAULIC
SYSTEM PORTABLE TEST STAND

APS SYSTEMS (FSCM 60984)

1 JULY 1985

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SECTION I

INTRODUCTION

1-1. INTRODUCTION. This maintenance parts list identifies and describes the items necessary for the support of the MJ-1 Aircraft Hydraulic System Test Stand, Diesel Engine Driven, manufactured by APS Systems, 130 Clara Street, Port Hueneme, CA 93041.

1-2. ORDERING PARTS. All parts listed in this manual may be purchased from APS Systems at the address above. For ease of ordering use the following parts sample page (A) and related example order format (B).

MJ-1 Figure & Index No.	Part Number	Description 1 2 3 4 5 6 7	Units Per Assy
5.	8223614-1	MANIFOLD ASSEMBLY, Fill (see figure 4 for NHA)	REF
-1	8223714-1	VALVE, Relief, low pressure (see figure 6 for detail breakdown)	2
-2	AN919-18D	REDUCER, Tube.	1
-3	MS28778-12	PACKING, Preformed	1
-4	MS24392D6	NIPPLE, Tube.	4
-5	MS28778-6	PACKING, Preformed	4
-6	AN814-12D	PLUG, Machine thread	1
-7	MS28778-12	PACKING, Preformed	1
-8	3C60-S	VALVE CARTRIDGE, Check (see figure 7 for detail breakdown)	1
-9	8223710-1	MANIFOLD, Fill	1

A. Sample Parts page

1. Type unit	<u>MJ-1</u>
2. Figure number	<u>5</u>
3. Index number	<u>8</u>
4. Part Number	<u>3C60-S</u>
5. Part Name	<u>Valve Cartridge</u>
6. How many	<u>1</u>

B. Example Order (See numbers in A above)

1-3. MAINTENANCE PARTS LIST.

1.3.1 PURPOSE. The maintenance parts list (MPL) list all parts used in the overhaul maintenance, essentially in disassembly sequence.

1.3.2 FIGURE & INDEX NO. COLUMN. The figure and index number contained in this column refer to the specific exploded view and the keyed index numbers contained in the exploded view.

1.3.3 PART NUMBER COLUMN. The part number column contains the identification number for each part listed.

1.3.4 ATTACHING PARTS. Those parts used to attach parts or assemblies to each other are designated "AP". These attaching parts are listed immediately following the assembly or part they attach.

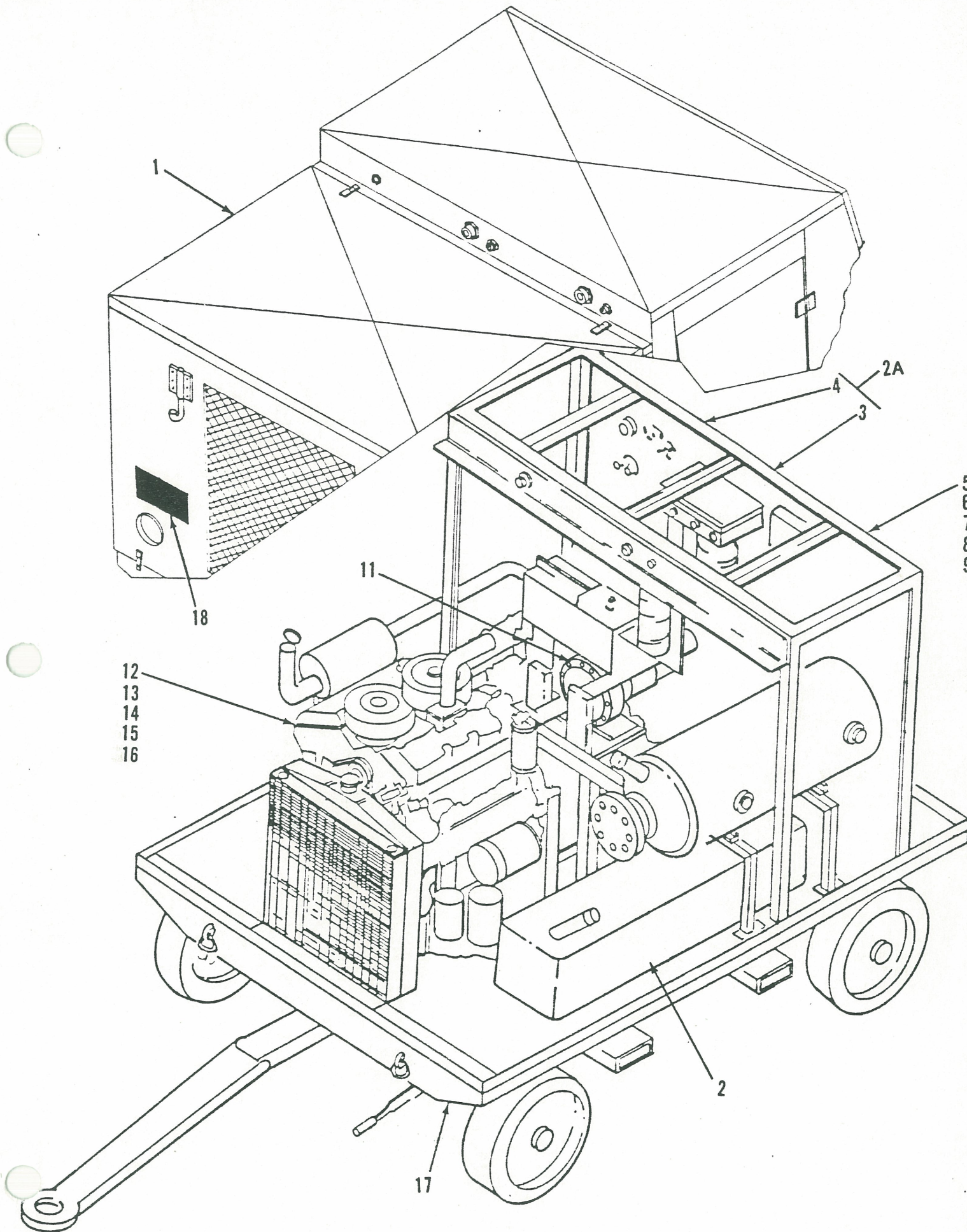


Figure 1. Major Components, MJ-1

SECTION II MAINTENANCE PARTS LIST

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
1-			TEST STAND, Diesel engine driven hydraulic system portable. MJ-1							1
-1	8223455-1		. HOUSING ASSEMBLY (See figure 2 for detail breakdown)							1
-2	10016		. INTERNAL COMPONENTS (See figure 3 for detail breakdown)							1
-2A	30044		. CONTROL PANEL ASSEMBLY.							1
-3	30043		. . PANEL ASSEMBLY, Hydraulic . . (See figure 8 for detail breakdown)							1
-4	30042		. . PANEL ASSEMBLY, Auxiliary . . (See figure 17 for detail breakdown)							1
-5	8223606-1		. . NUT, Nylok 10-32 NF (AP). . .							22
-6	8223605-1		. . BOLT, Hex, washer head 10-32 NF x 3/4 (AP)							22
-7	8223606-1		. . NUT, Nylok 10-32 NF (AP). . .							6
-8	MS27183-42		. . WASHER, Flat (AP)							6
-9	8223605-2		. . BOLT, Hex, washer head (AP) .							6
-10	NOT USED									
-11	10017		. GEARBOX/PUMP ASSEMBLY. (See . . figure 19 for breakdown)							1
-12	10018		. DIESEL ENGINE ASSEMBLY. (See . . figure 31 for breakdown)							1
-13	MS90725-113		. SCREW, Cap, front (AP).							2
-14	MS35338-48		. LOCK WASHER (AP).							10
-15	MS35690-95		. NUT, Plain (AP)							2
-16	MS90725-111		. SCREW, Cap, rear							
-17	8223451-1M		. FRAME AND RUNNING GEAR ASSEMBLY (See figure 27 for breakdown)							1
-18	8223458-1		. NAMEPLATE AND STENCIL ASSEMBLY.							1
-19	8223460-1		. . NAMEPLATE. Hyd schematic. . .							1
-20	8223461-1		. . NAMEPLATE. Manifold valve . .							1
-21	8223462-1		. . NAMEPLATE. Temperature. . . . correction							1
-22	8223463-1		. . NAMEPLATE. Identification . .							1
-23	8223464-1		. . NAMEPLATE. Lubrication. . . .							1
-24	8223735-49		. . NAMEPLATE. Pressure control							2
-25	8223735-50		. . NAMEPLATE. Volume control . .							2
-26	8223735-39		. . NAMEPLATE. Pressure return #1							1
-27	8223735-42		. . NAMEPLATE. Suction return #1							1
-28	8223735-51		. . NAMEPLATE. Air outlet							1
-29	8223735-48		. . NAMEPLATE. Manifold valve on.							1
-30	8223735-45		. . NAMEPLATE. Parking brake. . .							1

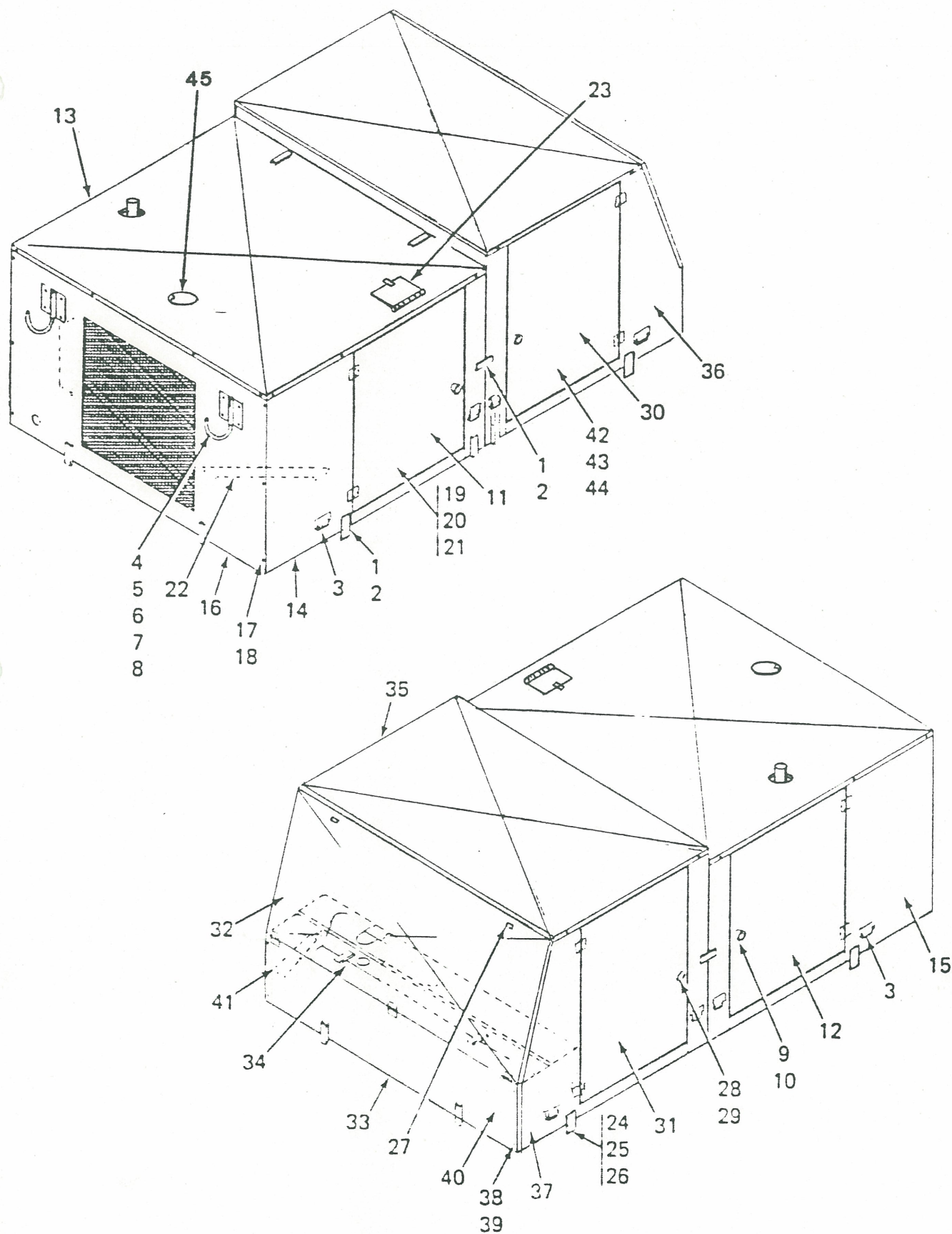


Figure 2. Housing Assembly

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
2-	8223455-1	987	HOUSING ASSEMBLY (See figure 1 for NHA)							REF
	8223551-1	987	. HOUSING ASSEMBLY, Front half							1
-1	TL300A	722	. . LATCH							6
-2	TL300-8	722	. . STRIKE							6
-3	1205-2.75-02	030	. . HANDLE							4
-4	8223777-1	987	. . BRACKET ASSEMBLY, Hose							2
-5	MS51967-8	987	. . NUT, Plain (AP)							8
-6	MS35338-46	969	. . WASHER (AP)							8
-7	MS27183-10	969	. . WASHER, Flat (AP)							8
-8	MS90725-62	987	. . SCREW, Cap (AP)							8
-9	16-10-202-11	942	. . FASTENER, Panel							2
-10	16-0-2345-16	942	. . WASHER, Lock (AP)							2
-11	8223560-1	987	. . DOOR, Front, right side							1
-12	8223559-1	987	. . DOOR, Front, left side							1
-13	8223544-1	987	. . PANEL, Front, top							1
-14	8223554-1	987	. . PANEL, Front, right side							1
-15	8223553-1	987	. . PANEL, Front, left side							1
-16	8223543-1	987	. . PANEL, Front, end							1
-17	8223606-1	987	. . NUT, Nylok 10-32 NF (AP)							78
-18	8223605-1	987	. . BOLT, Hex, washer head 10-32 . . .							78
			NF x 3/4 (AP)							
-19	8223538-1	987	. . SUPPORT, Door							2
-20	MS24665-283	969	. . PIN, Cotter (AP)							2
-21	MS27183-10	969	. . WASHER, Flat (AP)							2
-22	8223537-1	987	. . BRACE, Corner, front							2
-23			. . COVER, Reservoir, fill							1
	8223552-1	987	. HOUSING ASSEMBLY, Rear half							1
-24	TL300A	722	. . LATCH							6
-25	TL300-8	722	. . STRIKE							6
-26	1205-2.75-02	030	. . HANDLE							4
-27	16-10-201-11	942	. . FASTENER, Panel							2
-28	16-10-202-11	942	. . FASTENER, Panel							2
-29	16-0-2345-16	942	. . WASHER, Lock (AP)							4
-30	8223557-1	987	. . DOOR, Rear, left side							1
-31	8223558-1	987	. . DOOR, Rear, right side							1
-32	8223547-1	987	. . DOOR, Control panel							1
-33	8223546-1	987	. . PANEL, Rear, end							1
-34	8223548-1	987	. . PANEL, Pump cover							1
-35	8223545-1	987	. . PANEL, Rear top							1
-36	8223555-1	987	. . PANEL, Rear, left side							1
-37	8223556-1	987	. . PANEL, Rear, right side							1
-38	8223606-1	987	. . NUT, Nylok 10-32 NF (AP)							85
-39	8223605-1	987	. . BOLT, Hex, washer head 10-32 NF . .							85
			x 3/4 (AP)							
-40	8223549-1	987	. . BRACE, Corner, right							1
-41	8223550-1	987	. . BRACE, Corner, left							1
-42	8223538-1	969	. . SUPPORT, Door							2
-43	MS24665-283	969	. . PIN, Cotter (AP)							2
-44	MS27183-10	969	. . WASHER, Flat (AP)							2
-45	8223566-1	987	. COVER, Radiator fill							1

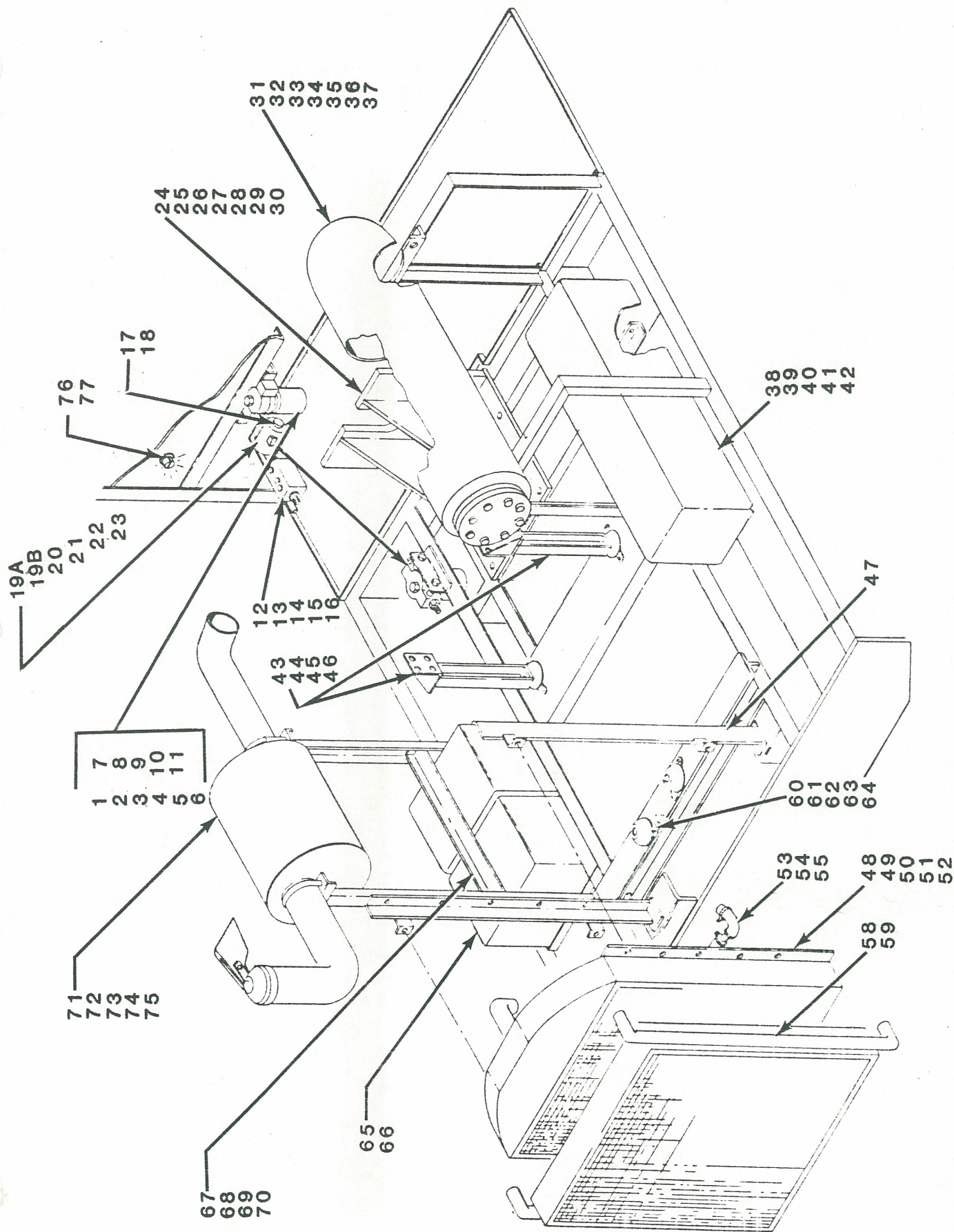


Figure 3. Internal Components

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
3-	10016		INTERNAL COMPONENTS (See figure 1 for NHA)							REF
-1	AN919-18D		. REDUCER, Tube.							4
-2	B400PC13		. PACKING, Preformed							4
-3	MS28720-12		. FILTER, Fluid							2
-4	MS28775-223		. . PACKING, Preformed							1
-5	MS28774-223		. . RETAINER, Packing							1
-6	AN6235-2A		. . ELEMENT, Filter							1
-7	8223610-1		. STANDOFF, Filter							4
-8	MS51967-2		. NUT, Plain (AP)							4
-9	MS35338-44		. WASHER, Lock (AP)							4
-10	MS27183-10		. WASHER, Flat (AP)							4
-11	MS90725-19		. SCREW, Cap (AP)							4
-12	8223536-1		. FILL MANIFOLD/SOLENOID VALVE							1
			ASSEMBLY (See figure 4 for detail breakdown)							
-13	MS51967-8		. NUT, Plain (AP)							2
-14	MS35338-46		. WASHER, Lock (AP)							2
-15	MS27183-14		. WASHER, Flat (AP)							2
-16	MS90725-60		. SCREW, Cap (AP)							2
-17	MS24392D6		. UNION, Flared tube							2
-18	MS28778-6		. PACKING, Preformed							2
-19 A	1300143		. PUMP, Hydraulic, Fill							1
-19 B	1300371		. MOTOR, Fill							1
-20	NUT 529		. NUT, Plain, hex 5/16-18 UNC (AP).							4
-21	MS35338-45		. WASHER, Lock (AP)							4
-22	MS27183-12		. WASHER, Flat (AP)							4
-23	MS90725-34		. SCREW, Cap (AP)							4
-24	40184		. BRACKET, Gearbox.							1
-25	MS90725-166		. SCREW, Cap, front (AP).							2
-26	MS27183-21		. WASHER, Flat (AP)							4
-27	NAS1099-8		. WASHER, Bevel, front (AP)							2
-28	MS35338-50		. WASHER, Lock (AP)							4
-29	MS51967-20		. NUT, Plain (AP)							4
-30	MS90725-164		. SCREW, Cap, rear (AP)							2
-31	8223532-1		. RESERVOIR ASSY (See figure 7. for breakdown)							1
-32	MS51967-8		. NUT, Plain (AP)							4
-33	MS35338-46		. WASHER, Lock (AP)							4
-34	MS27183-14		. WASHER, Flat (AP)							4
-35	MS90725-62		. SCREW, Cap (AP)							4
-36	AN186-12-8D		. ADAPTOR, Straight Pipe.							1
-37	8223616-1		. VALVE, Reservoir Drain.							1
-38	2-031-1-5200		. FUEL TANK ASSY (See figure 7A for breakdown)							1
-39	MS90725-60		. SCREW, Cap (AP)							4
-40	MS27182-14		. WASHER, Flat (AP)							8
-41	MS35338-46		. WASHER, Lock (AP)							4
-42	MS51967-8		. NUT, Plain (AP)							4
-43	40188		. BRACKET, Engine Support, rear							2

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
3-44	MS90725-111		.	SCREW, Cap (AP)	.	.	.	.	.	2
-45	MS35338-48		.	WASHER, Lock (AP)	.	.	.	.	.	2
-46	MS35690-805		.	NUT PLAIN (AP)	.	.	.	.	.	2
-47	40190		.	BRACE, Radiator Support	.	.	.	.	.	2
-48	1-3147651		.	RADIATOR.	.	.	.	.	.	1
-49	MS90725-60		.	BOLT, Hex, Hd (AP)	.	.	.	.	.	10
-50	MS27183-14		.	WASHER, Flat (AP)	.	.	.	.	.	10
-51	MS35338-46		.	WASHER, Lock (AP)	.	.	.	.	.	10
-52	MS35690-605		.	NUT, Plain (AP)	.	.	.	.	.	10
-53	8224609-1		.	HOSE, Radiator, Bottom.	.	.	.	.	.	2
-54	8224610-1		.	HOSE, Connector	.	.	.	.	.	1
-55	5432		.	CLAMPS, Hose (AP)	.	.	.	.	.	4
-56	8224608-1		.	HOSE, Radiator, Top	.	.	.	.	.	1
-57	5432		.	CLAMPS, Hose (AP)	.	.	.	.	.	2
-58	DB-1296-A		.	OIL COOLER ASSY	.	.	.	.	.	1
-59	DB-515-B		.	MOUNTING KIT, Coolor (AP)	.	.	.	.	.	1
-60	CA1595		.	MOUNTS, Engine	.	.	.	.	.	4
-61	MS90725-111		.	SCREW, Cap (AP)	.	.	.	.	.	8
-62	MS27183-18		.	WASHER, Flat (AP)	.	.	.	.	.	8
-63	MS35338-48		.	WASHER, Lock (AP)	.	.	.	.	.	8
-64	MS35690-805		.	NUT, Plain (AP)	.	.	.	.	.	8
-65	AN3150-2		.	BATTERIES	.	.	.	.	.	2
-66	8003		.	CANNON RECEPTABLES, Battery	.	.	.	.	.	2
-67	40191		.	HOLDOWN, Battery.	.	.	.	.	.	1
-68	MS907260		.	SCREEN CAP (AP)	.	.	.	.	.	2
-69	MS35338-46		.	WASHER, Lock (AP)	.	.	.	.	.	2
-70	MS51967-8		.	NUT, Plain (AP)	.	.	.	.	.	2
-71	MOM09-0140		.	MUFFLER	.	.	.	.	.	1
	-C4									
-72	22039		.	ELBOW	.	.	.	.	.	1
-73	NO NUMBER		.	PIPE ASSY	.	.	.	.	.	1
-74	206-0042		.	CLAMPS (AP)	.	.	.	.	.	2
-75	17405		.	RAIN CAP.	.	.	.	.	.	1
-76	151-3101-		.	LIGHT, Panel.	.	.	.	.	.	2
	2900-301									
-77	6S6		.	LAMP, Incandescent.	.	.	.	.	.	2

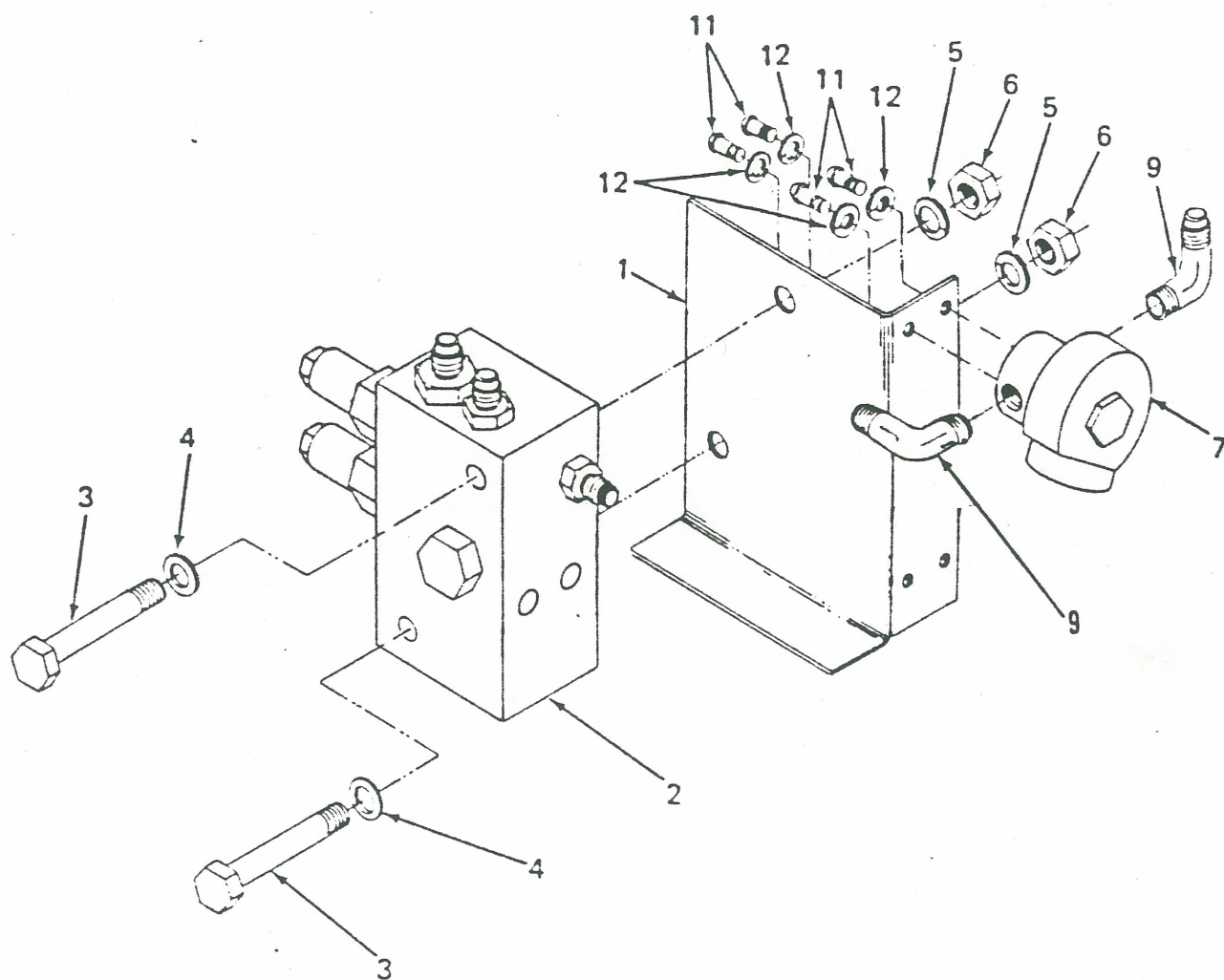


Figure 4. Fill Manifold/Solenoid Valve Assembly

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
4-	8223536-1		FILL MANIFOLD/SOLENOID VALVE							REF
			ASSEMBLY (See figure 3 for NHA)							
-1	8223611-1		. BRACKET, Fill system							1
-2	8223614-1		. MANIFOLD ASSEMBLY, Fill (see							1
			figure 5 for detail breakdown)							
-3	MS90725-73		. SCREW, Cap (AP)							2
-4	MS27183-14		. WASHER, Flat (AP).							2
-5	MS35338-46		. WASHER, Lock (AP)							2
-6	MS51967-8		. NUT, Plain (AP)							2
-7	8223760-1		. VALVE, Solenoid							1
-8	NOT USED									
-9	6CTX-S		. ELBOW, Pipe to tube, 90°.							2
-10	NOT USED									
-11	MS35206-243		. SCREW, Machine.							4
-12	MS35338-42		. WASHER, Lock							4

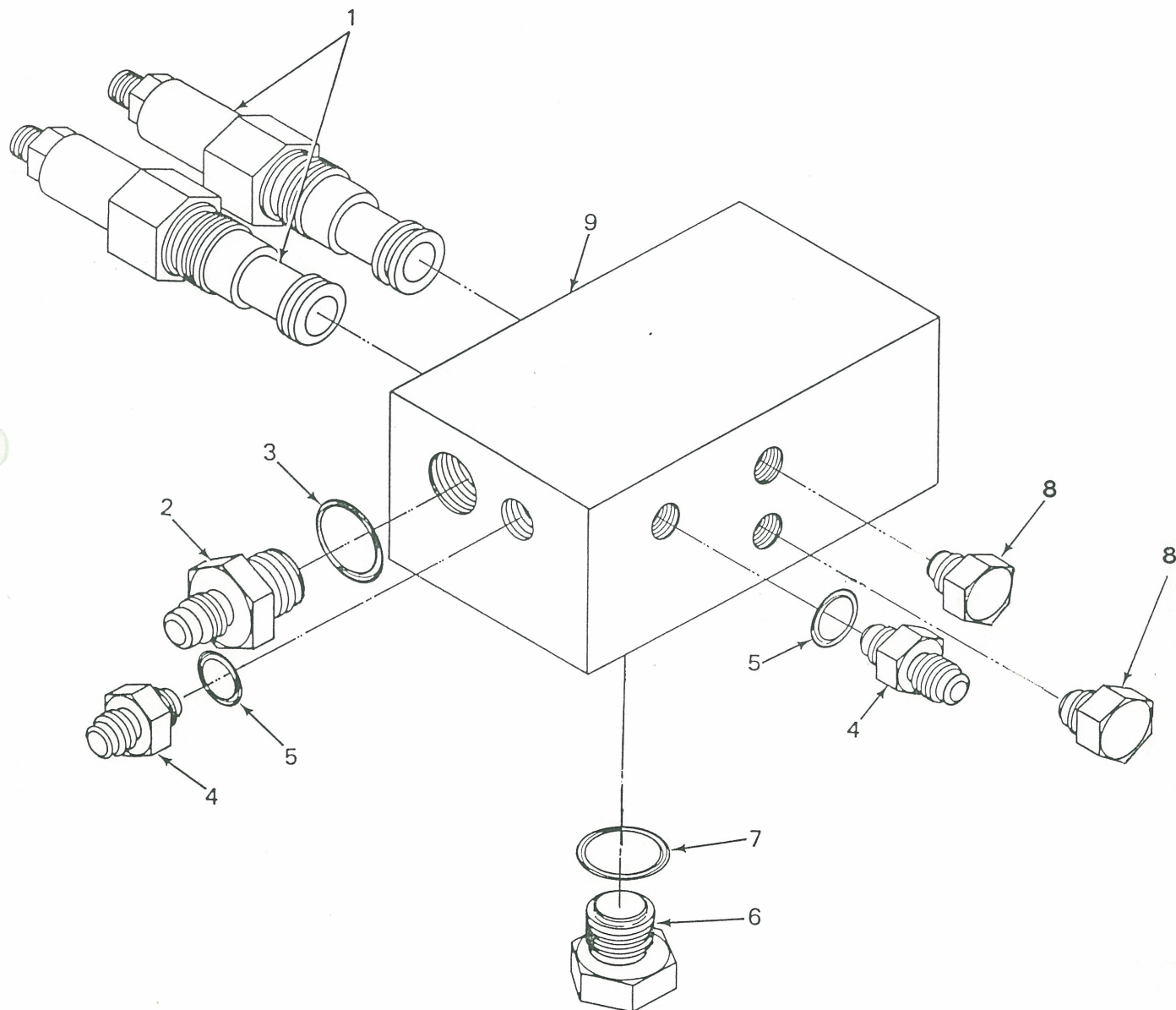


Figure 5. Fill Manifold Assembly

MJ- 1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
5-	8223614-1	987	MANIFOLD ASSEMBLY, Fill (see figure 4 for NHA)							REF
-1	8223714-1	987	. VALVE, Relief, low pressure (see . . . figure 6 for detail breakdown)							2
-2	AN919-18D	987	. REDUCER, Tube.							1
-3	MS28778-12	987	. PACKING, Preformed							1
-4	MS24392D6	987	. NIPPLE, Tube.							2
-5	MS28778-6	987	. PACKING, Preformed							2
-6	AN814-12D	987	. PLUG, Machine thread							1
-7	MS28778-12	987	. PACKING, Preformed							1
-8	NO NUMBER	987	. PLUG							2
-9	8223710-1	987	. MANIFOLD, Fill							1

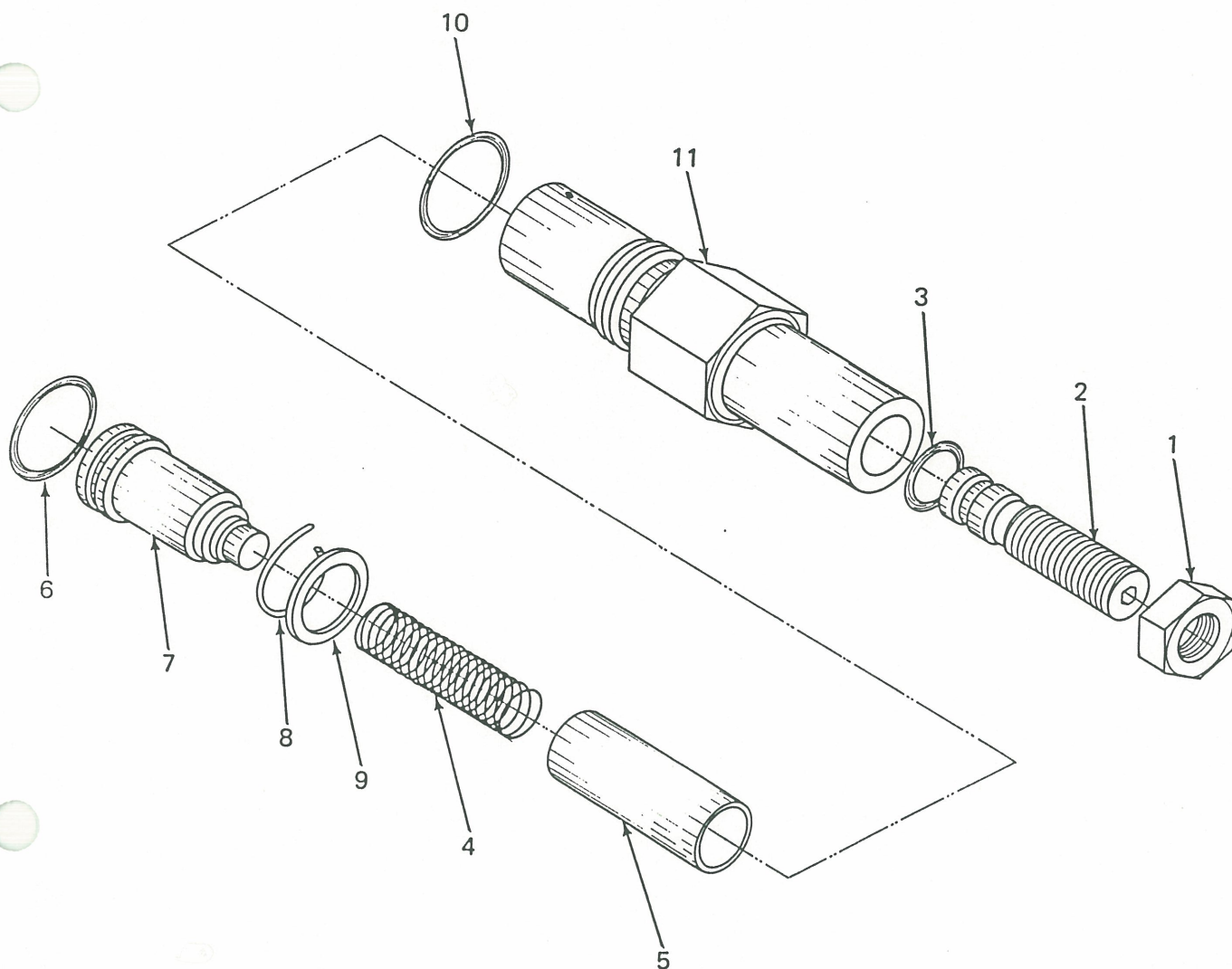


Figure 6. Low Pressure Relief Valve

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
6-	8223714-1		VALVE, Relief, low pressure (see figure 5 and 16 for NHA)							REF
-1	162003		. NUT 1/2-20 UNF.							1
-2	212093		. SCREW, Adjust							1
-3	131109		. PACKING, Preformed							1
-4	331468		. SPRING							1
-5	531022		. INSERT							1
-6	134104		. PACKING, Preformed							1
-7	974152		. HONED ASSEMBLY							1
-8	890144		. WIRE.							1
-9	492055		. SPACER							1
-10	131116		. PACKING, Preformed							1
-11	542118		. HOUSING							1

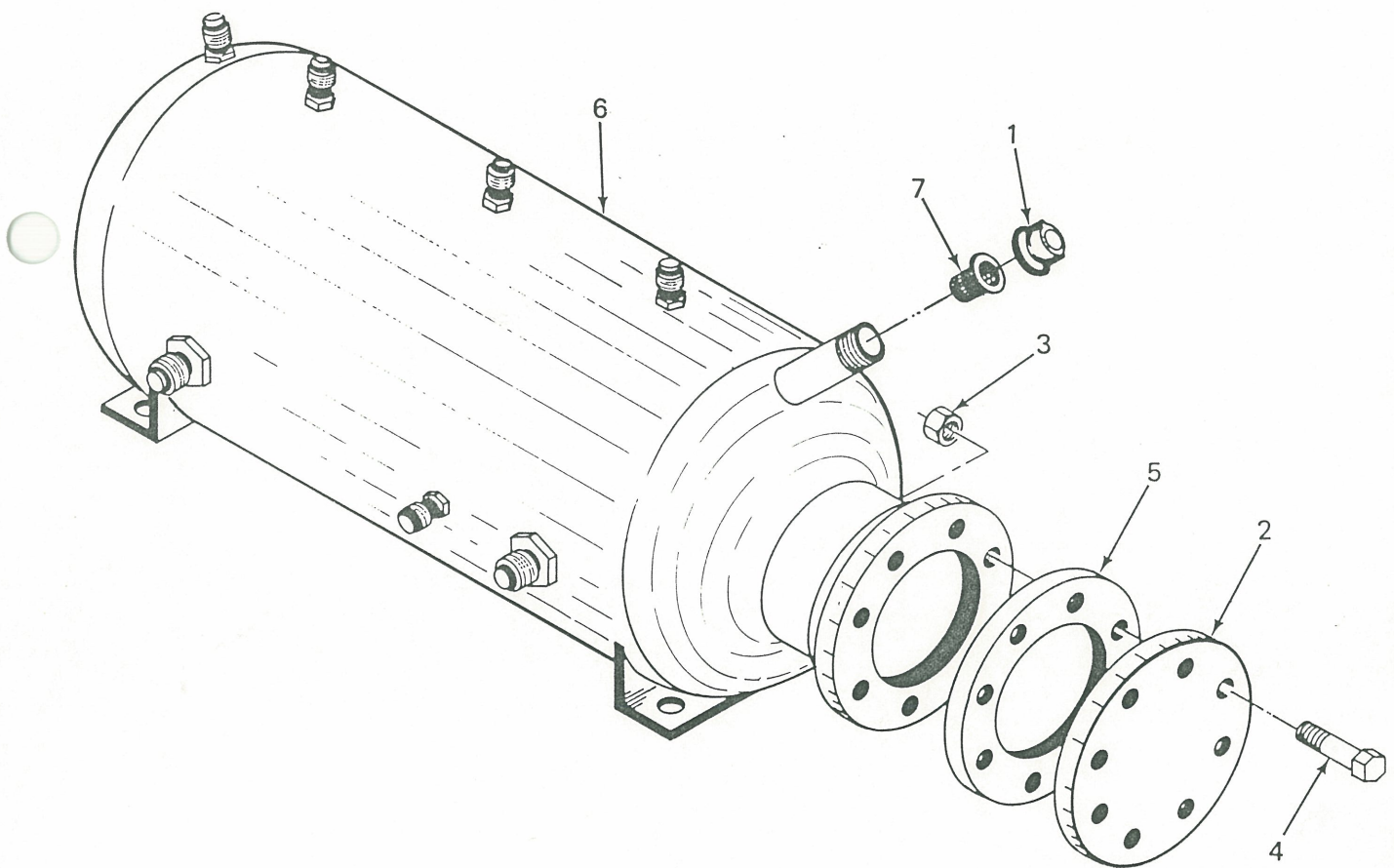


Figure 7. Reservoir Assembly

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
7-	8223532-1		RESERVOIR ASSEMBLY (See figure 3 . . for NHA)							REF
-1	8223533-1		.	CAP, Reservoir	.	.	.	.	.	1
-2	ASA-B16.1-125		.	FLANGE, S.S. Blank, 8-125#	.	.	.	.	.	1
-3	MS51971-17		.	NUT, Hexagon (AP)	.	.	.	.	.	8
-4	MS35307-489		.	SCREW, Cap (AP)	.	.	.	.	.	8
-5	ANSI-B16.5		.	GASKET, Flexitalic, 8-125#	.	.	.	.	.	1
-6	8223531-1		.	RESERVOIR SUB-ASSEMBLY	.	.	.	.	.	1
-7	8223731-1		.	SCREEN	.	.	.	.	.	1

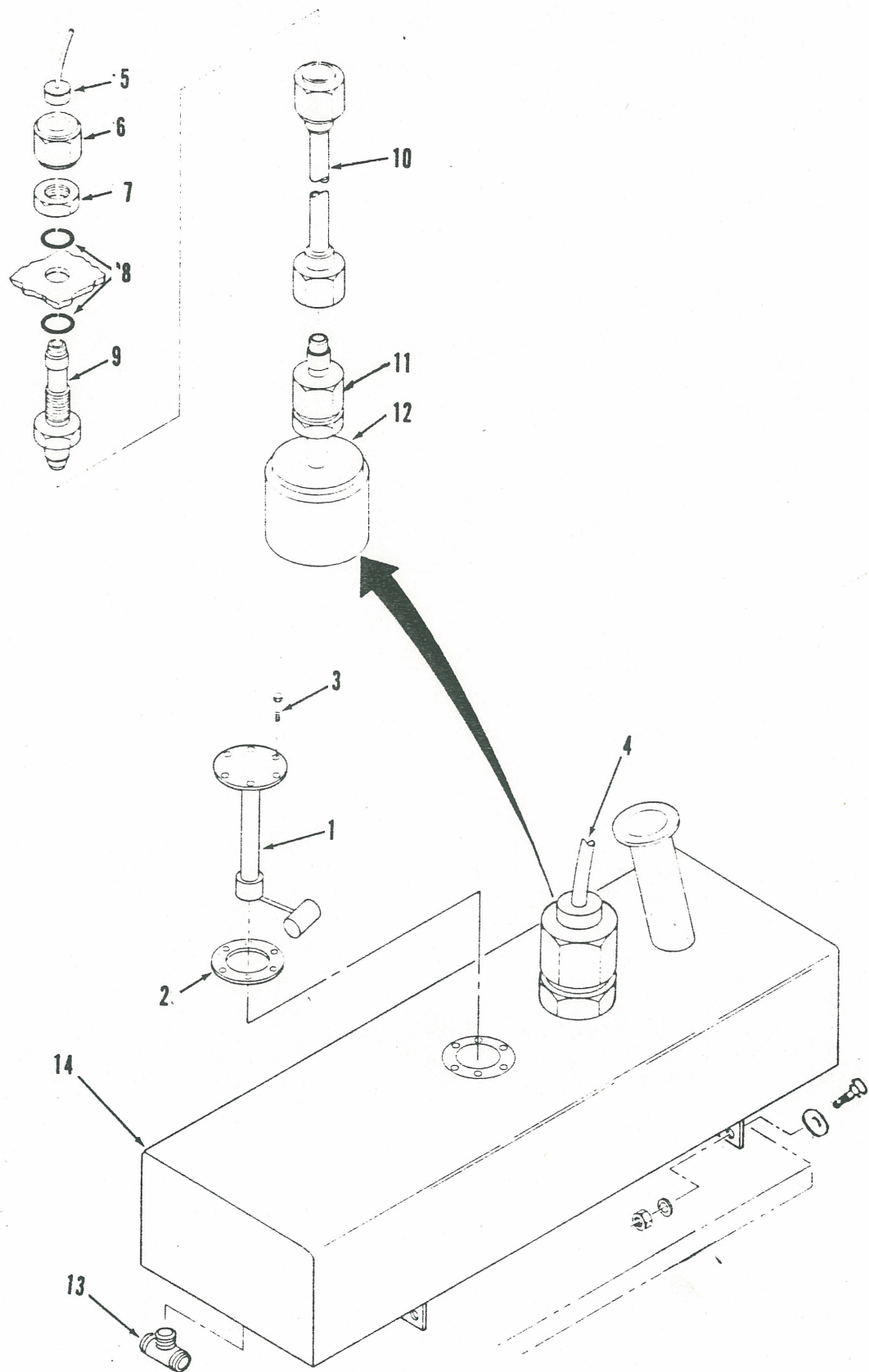


FIGURE 7A. Fuel Tank Assembly

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
7A-	2-031-1-5200		FUEL TANK ASSY (See figure 3 for. NHA)							REF
-1	6426397		.	FUEL	LEVEL	SENDER	.	.	.	1
-2	1516395		.	GASKET.	.	.	.	.	.	1
-3	AN 515-10-8		.	SCREW	.	.	.	.	.	8
-4	8224616-10		.	SWITCH	ASSY, Fuel	Low	Level	.	.	1
-5	MS20819-4D		.	.	SLEEVE.	.	.	.	.	1
-6	MS20818-4D		.	.	NUT	.	.	.	.	1
-7	AN924-4D		.	.	NUT	.	.	.	.	1
-8	MS28788-4		.	.	PACKING, Preformed	.	.	.	.	2
-9	AN832-4		.	.	UNION	.	.	.	.	1
-10	8224636-10		.	.	TUBE	ASSY	.	.	.	1
-11	MS51503BY		.	.	CONNECTOR	.	.	.	.	1
-12	01701		.	.	SWITCH.	.	.	.	.	1
-13	2091-4-4B		.	TEE	.	.	.	.	.	1
-14	2-03-1-5201		.	FUEL	TANK	.	.	.	.	1

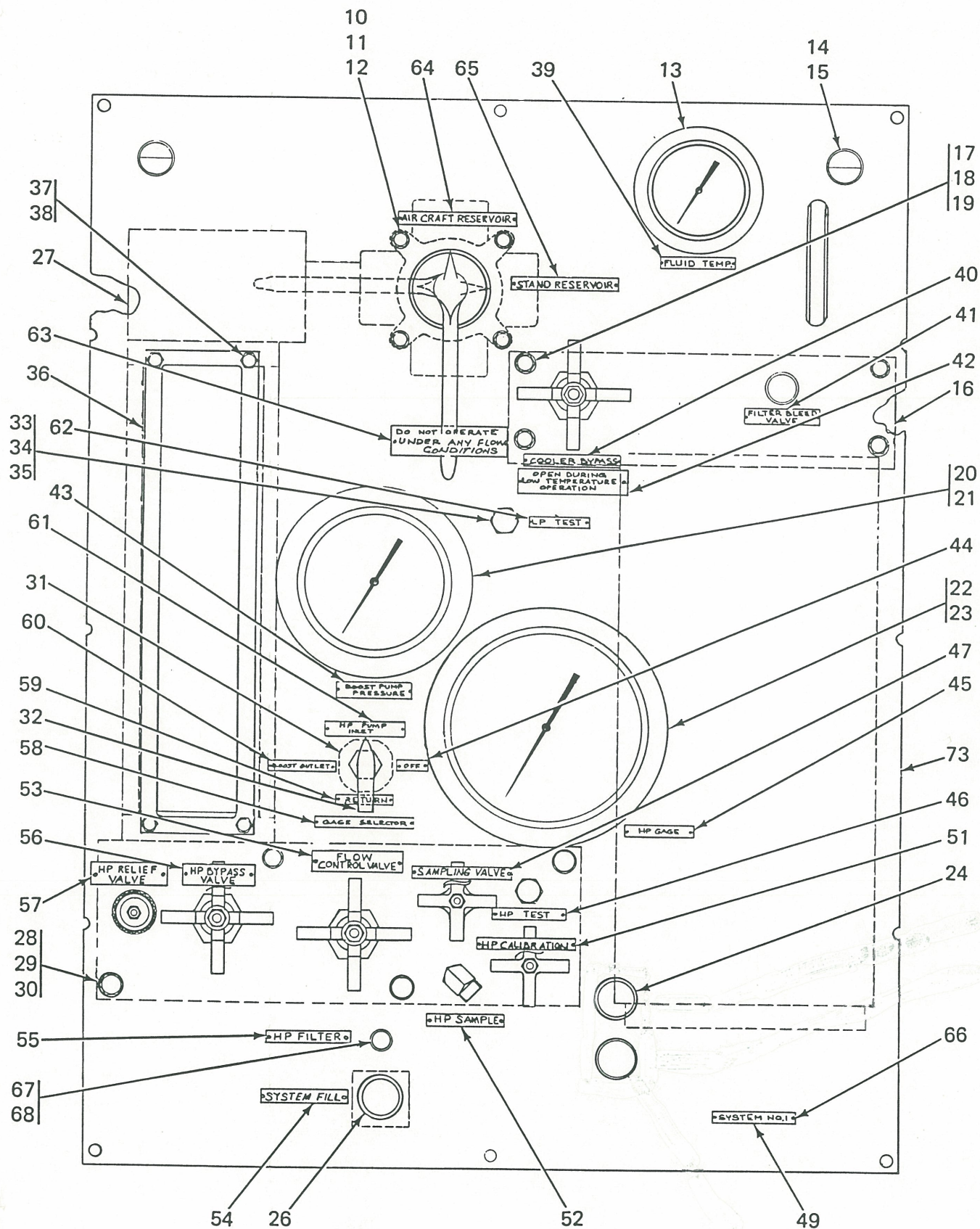


Figure 8. Hydraulic Panel Assembly (Sheet 1 of 2)

MJ-1 Figure & Index No.	Part Number	FSCM	Description	Units Per Assy
			1 2 3 4 5 6 7	
8-	8223541-1		PANEL ASSEMBLY, Hydraulic system 1 . . (see figure 1 for NHA)	REF
-1	MS28759-4-0160		. HOSE ASSEMBLY, Nonmetallic	1
-2	AC1E		. SNUBBER, Pump unit	1
-3	MS28778-4		. PACKING, Preformed	1
-4	MS28759-4-0160		. HOSE ASSEMBLY, Nonmetallic	1
-5	AN815-4D		. NIPPLE, Tube	1
-6	MS28778-4		. PACKING, Preformed	1
-7	AN816-4D		. ADAPTOR, Straight pipe	1
-8	206651		. ELBOW, Pipe-to-tube	4
-9	4-4FTX-S		. CONNECTOR, Male	2
-10	MS18154-58		. BOLT, Hexagon head (AP)	4
-11	MS27183-10		. WASHER, Flat (AP)	4
-12	MS35338-44		. WASHER, Lock (AP)	4
-13	8223727-1		. GAGE, Fluid temperature	1
-14	6S6-125		. LAMP, Incandescent	2
-15	151-3101-2900- 301		. LIGHT, Panel	2
-16	8223562-1		. MANIFOLD ASSEMBLY, Low pressure . (see figure 9 for detail breakdown)	1
-17	MS18154-58		. BOLT, Hexagon head (AP)	4
-18	MS27183-14		. WASHER, Flat (AP)	4
-19	MS35338-46		. WASHER, Lock (AP)	4
-20	8223725-1		. GAGE, Low pressure	1
-21	MS35191-274		. SCREW, Machine (AP)	3
-22	8223726-1		. GAGE, High pressure	1
-23	MS35191-291		. SCREW, Machine (AP)	3
-24	NO NUMBER		. RUBBER PLUGS	2
-25	NOT USED			
-26	10250T101-2		. SWITCH, Push fill (Bk)	1
-27	8223564-1		. MANIFOLD ASSY, High pressure . . . (see figure 14 for detail breakdown)	1
-28	MS18154-58		. BOLT, Hexagon head (AP)	4
-29	MS27183-14		. WASHER, Flat (AP)	4
-30	MS35338-46		. WASHER, Lock (AP)	4
-31	B-43ZF2		. VALVE, Gage selector	1
-32	BZ-5K-43Z-BK		. . HANDLE	1
-33	MS24393D4		. UNION, Bulkhead	1
-34	AN924-4D		. NUT, Plain	1
-35	AN929-4D		. CAP, Tube	1
-36	8223607-1		. SHIELD, Flowmeter	1
-37	MS90726-3		. SCREW, Cap	4
-38	MS27183-10		. WASHER, Flat (AP)	4
-39	8223735-4		. NAMEPLATE, Fluid temp	1
-40	8223735-8		. NAMEPLATE, Cooler bypass	1
-41	8223735-7		. NAMEPLATE, Filter bleed valve	1
-42	8223735-47		. NAMEPLATE, Low temperature	1
-43	8223735-10		. NAMEPLATE, Boost pump pressure . . .	1
-44	8223735-14		. NAMEPLATE, Off	1

PANEL - BACK VIEW

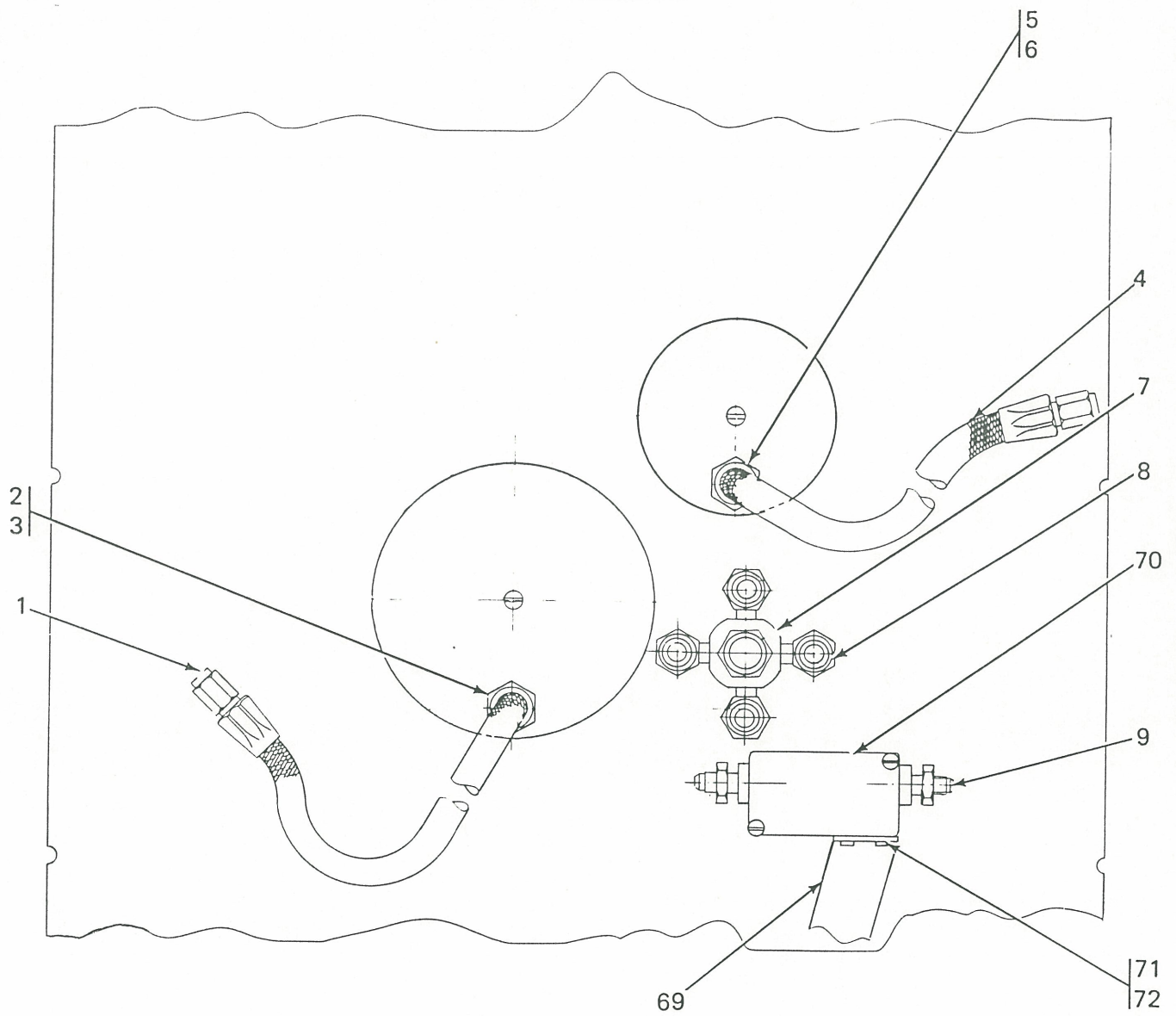


Figure 8. Hydraulic Panel Assembly (Sheet 2 of 2)

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
8 -45	8223735-16		.							1
-46	8223735-22		.							1
-47	8223735-23		.							1
-48	NOT USED									
-49	8223735-1		.							1
	8223735-2		.							1
-50	NOT USED									
-51	8223735-18		.							1
-52	8223735-17		.							1
-53	8223735-21		.							1
-54	8223735-25		.							1
-55	8223735-24		.							1
-56	8223735-20		.							1
-57	8223735-19		.							1
-58	8223735-15		.							1
-59	8223735-12		.							1
-60	8223735-11		.							1
-61	8223735-13		.							1
-62	8223735-9		.							1
-63	8223735-46		.							1
-64	8223735-5		.							1
-65	8223735-6		.							1
-66	MS21318-19		.							50
-67	8223780-1		.							1
-68	MS25331-6		.							1
-69	8223603-1		.							1
-70	8223769-1		.							1
-71	MS35207-261		.							4
-72	MS35338-43		.							4
-73	8223724-1		.							1
	8223724-2		.							1

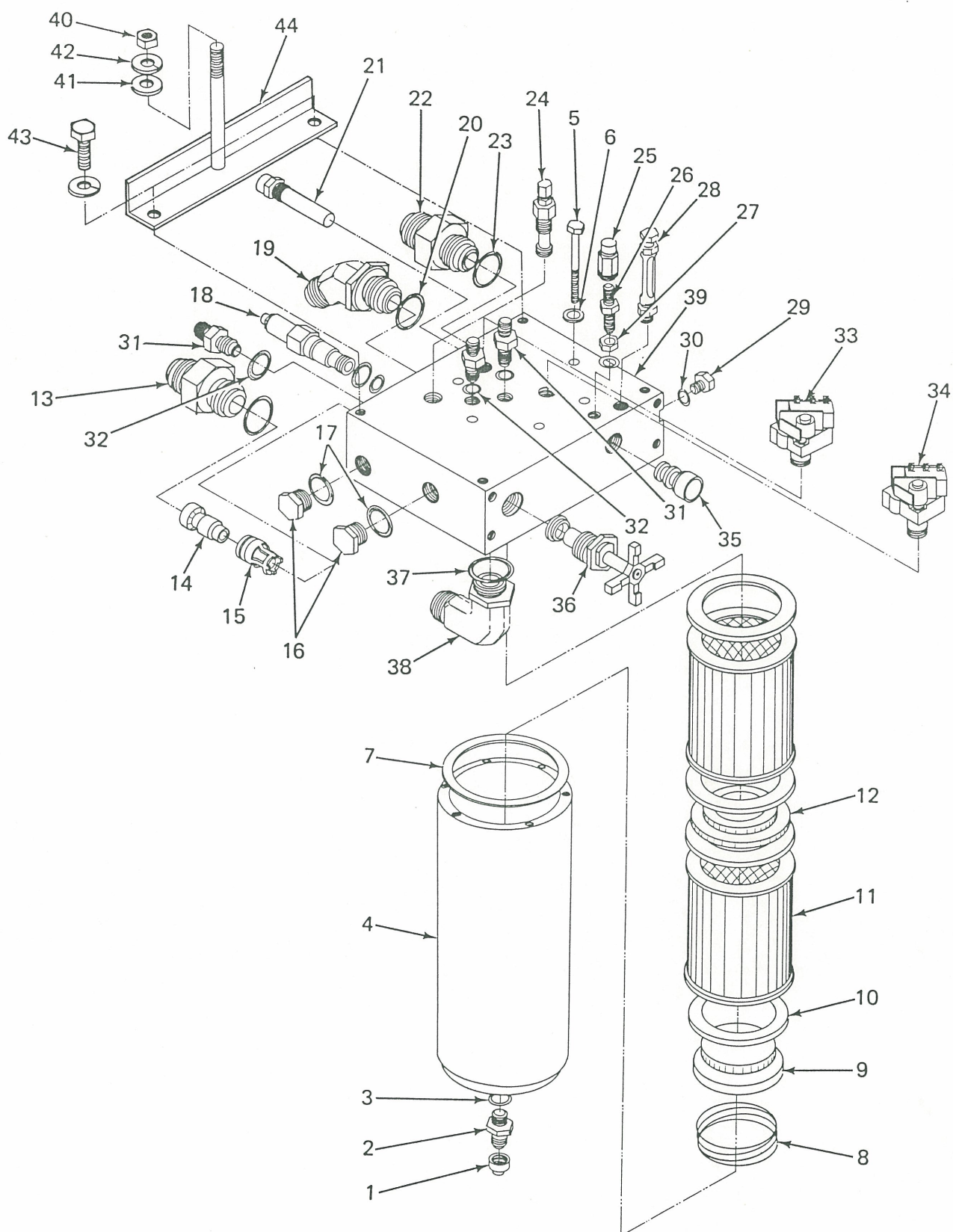


Figure 9. Low Pressure Manifold Assembly

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
9-	8223562-1		MANIFOLD ASSEMBLY, Low pressure . . (see figure 8 for NHA)							REF
-1	AN929-8D		. CAP, Tube							1
-2	MS24392D8		. NIPPLE, Tube							1
-3	MS28778-8		. PACKING, Preformed							1
-4	8223705-1		. HOUSING, Low pressure filter							1
-5	MS90725-48		. SCREW, Cap (AP)							6
-6	AN960-516L		. WASHER, Flat (AP)							6
-7	8223706-1		. GASKET, Filter housing							1
-8	8223716-1		. SPRING, Filter							1
-9	8223702-1		. RETAINER, Spring							1
-10	8223704-1		. GASKET, Filter element							4
-11	AN6236-3		. ELEMENT, Filter, fluid							2
-12	8223703-1		. SPACER, Filter element							1
-13	MS51525B24		. UNION, Flared tube							1
-14	8223712-1		. RETAINER, Check valve							1
-15	8223720-1		. VALVE CARTRIDGE, Check (see figure 10 for detail breakdown)							1
-16	AN814-12D		. PLUG, Machine thread							2
-17	MS28778-12		. PACKING, Preformed							2
-18	8223714-1		. VALVE, Relief, low pressure (see figure 6 for detail breakdown)							1
-19	MS51528B24		. ELBOW, Tube to boss							1
-20	MS28778-24		. PACKING, Preformed							1
-21	8223721-1		. THERMOMETER WELL							1
-22	MS24392D24		. NIPPLE, Tube							1
-23	MS28778-24		. PACKING, Preformed							1
-24	8223715-1		. VALVE, Thermal relief							1
-25	AN929-4D		. CAP, Tube							1
-26	MS24393-4		. NIPPLE, Tube							1
-27	AN924-4D		. NUT, Plain							1
-28	8223718-1		. GAGE ASSEMBLY, Sight, oil (see figure 11 for detail breakdown)							1
-29	AN814-2D		. PLUG, Machine thread							1
-30	MS28778-2		. PACKING, Preformed							1
-31	AN815-4D		. NIPPLE, Tube							3
-32	MS28778-4		. PACKING, Preformed							3
-33	8223722-1		. SWITCH, Pressure							1
-34	8223723-1		. SWITCH, Temperature							1
-35	8223717-1		. VALVE, Filter bleed (see figure 12 for detail breakdown)							1
-36	8223719-1		. VALVE ASSEMBLY, Throttling (see figure 13 for detail breakdown)							1
-37	MS28778-24		. PACKING, Preformed							1
-38	MS1527B24		. ELBOW, Tube-to-boss							1
-39	8223700-1		. MANIFOLD, Low pressure							1
-40	MS51967-8		. NUT, Plain (AP)							1
-41	MS27183-406		. WASHER, Flat (AP)							1
-42	MS35338-46		. WASHER, Lock (AP)							3
-43	MS18154-58		. BOLT, Hexagon head (AP)							2
-44	8223609-1		. SUPPORT, Low pressure manifold							1

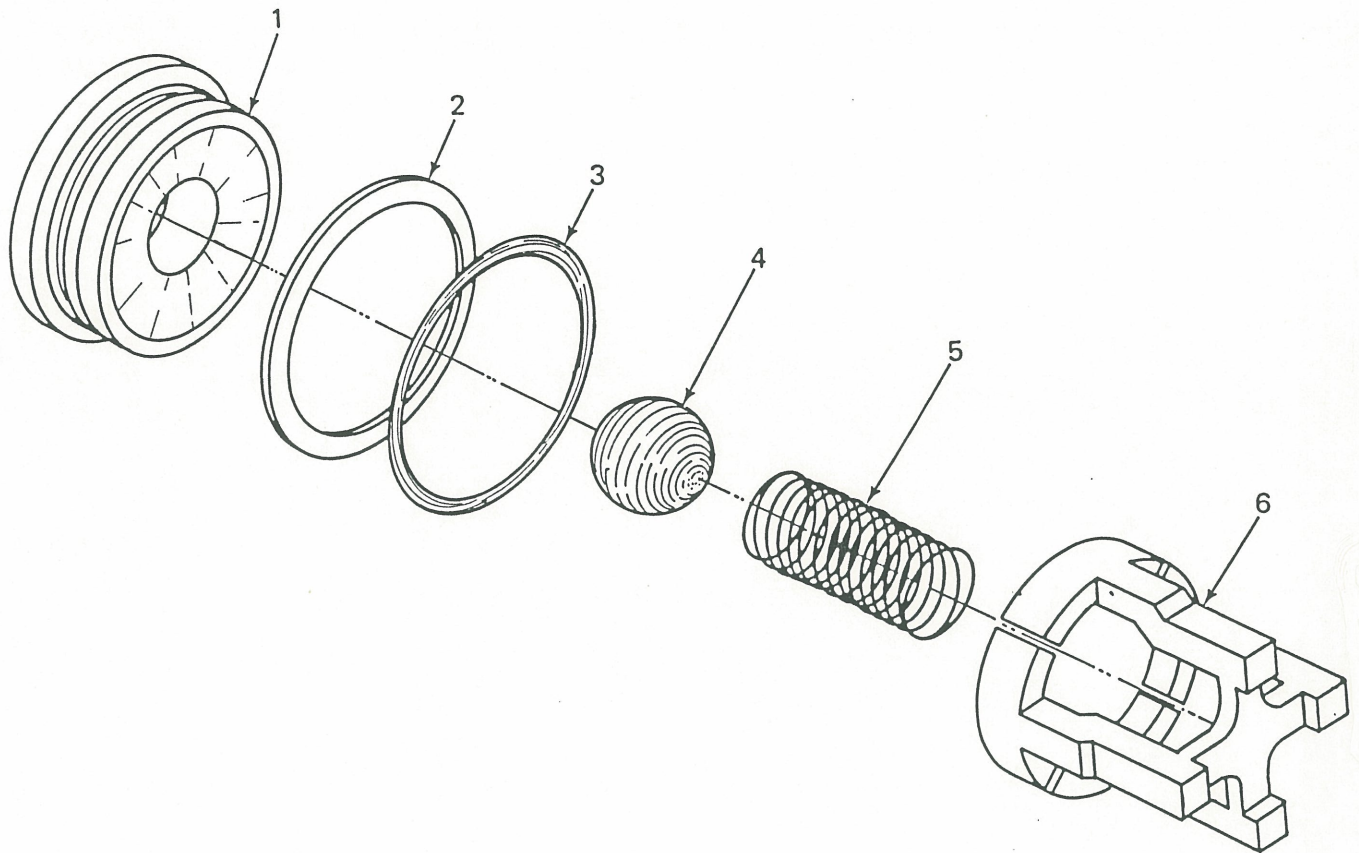


Figure 10. Check Valve Cartridge

MJ-1 Figure & Index No.	Part Number	FSCM	Description	Units Per Assy
			1 2 3 4 5 6 7	
10-	8223720-1		VALVE CARTRIDGE, Check (see figure 9 for NHA)	REF
-1	441072		. SEAT.	1
-2	142120		. RING, Back-up	1
-3	134920		. PACKING, Preformed	1
-4	101044		. BALL	1
-5	331549		. SPRING	1
-6	546041		. HOUSING	1

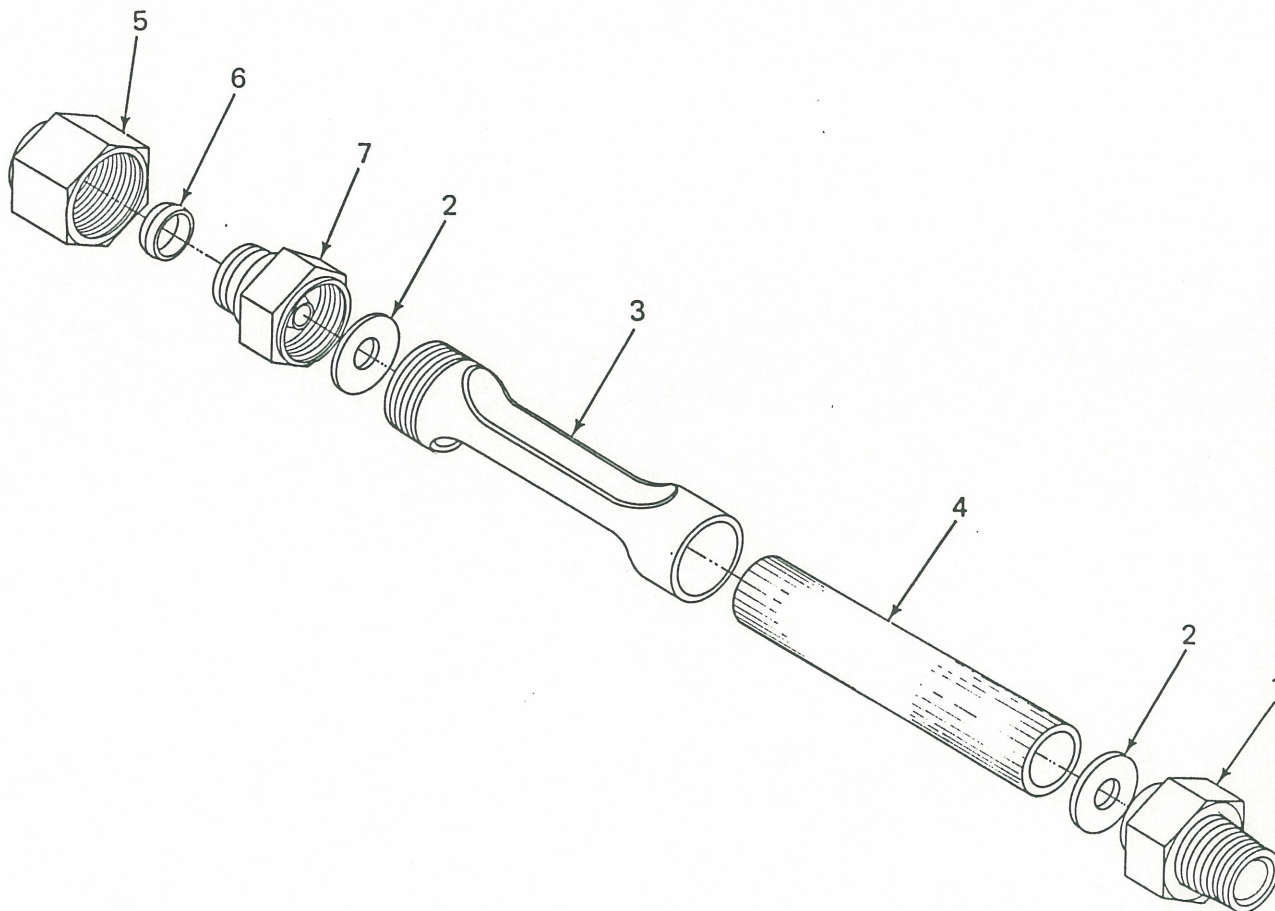


Figure 11 Oil Sight Gage Assembly

MJ-1 Figure & Index No.	Part Number	FSCM	Description	Units Per Assy
			1 2 3 4 5 6 7	
11-	8223718-1		GAGE ASSEMBLY, Sight, oil (see figure 9 for NHA)	REF
-1	543-2A		. SHANK	1
-2	134-10		. GASKET	2
-3	CS393-123A		. SHIELD	1
-4	315-6		. SIGHT	1
-5	303-15A		. NUT, Tube	1
-6	923-10A		. FERRULE, Tube	1
-7	403-55A		. CAP	1

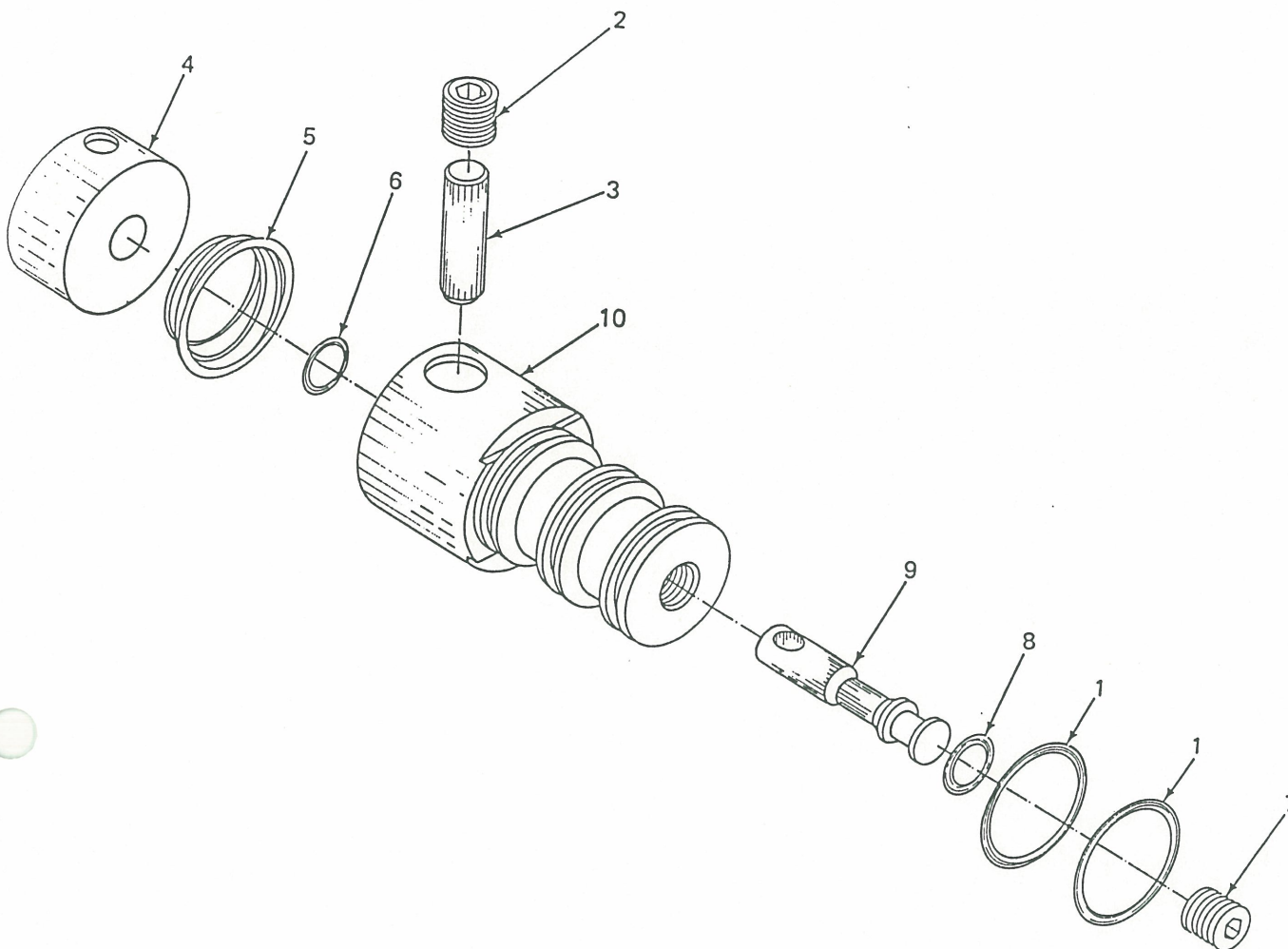


Figure 12. Filter Bleed Valve

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
12-	8223717-1		VALVE, Filter bleed (see figure 9 for . . . NHA)							REF
-1	P-1000-018		.	PACKING, Preformed	.	.	.	.	.	2
-2	PSS-1032-03		.	SCREW	.	.	.	.	.	1
-3	3209-51		.	PIN	.	.	.	.	.	1
-4	2209-03		.	BUTTON, Valve	.	.	.	.	.	1
-5	3209-47		.	SPRING	.	.	.	.	.	1
-6	P-1000-05		.	PACKING, Preformed	.	.	.	.	.	1
-7	P-1022-02		.	PLUG, Pipe	.	.	.	.	.	1
-8	P-1000-01		.	PACKING, Preformed	.	.	.	.	.	1
-9	2209-02		.	PLUNGER, Valve	.	.	.	.	.	1
-10	2208-01-56		.	BODY	.	.	.	.	.	1

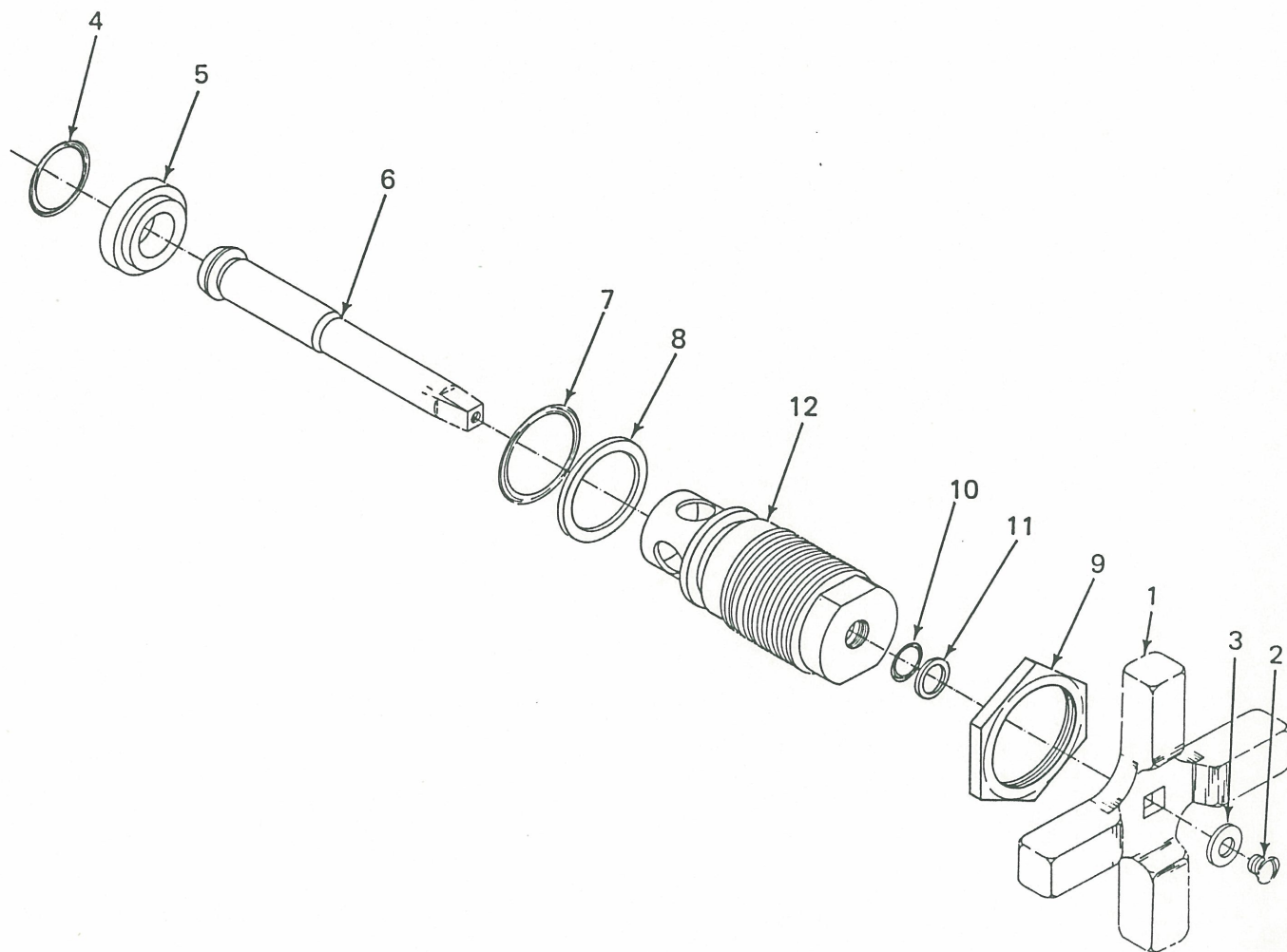


Figure 13. Throttling Valve Assembly

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
13--	8223719-1		VALVE ASSEMBLY, Throttling (see figure 9 and 14 for NHA)							REF
-1	V1165-209		.	HANDLE	.	.	.	.	.	1
-2	MS35206-254		.	SCREW, Machine (AP)	.	.	.	.	.	1
-3	MS27183-41		.	WASHER, Flat	.	.	.	.	.	1
-4	MS28775-116		.	PACKING, Preformed	.	.	.	.	.	1
-5	V1165-506-1		.	SEAT, Valve	.	.	.	.	.	1
-6	V1165-501		.	STEM	.	.	.	.	.	1
-7	MS28775-213		.	PACKING, Preformed	.	.	.	.	.	1
-8	MS28774-213		.	RETAINER, Packing	.	.	.	.	.	1
-9	V1165-504-1		.	LOCKNUT	.	.	.	.	.	1
-10	MS28775-012		.	PACKING, Preformed	.	.	.	.	.	1
-11	MS28774-12		.	RETAINER, Packing	.	.	.	.	.	1
-12	V1165-505-1		.	SLEEVE	.	.	.	.	.	1

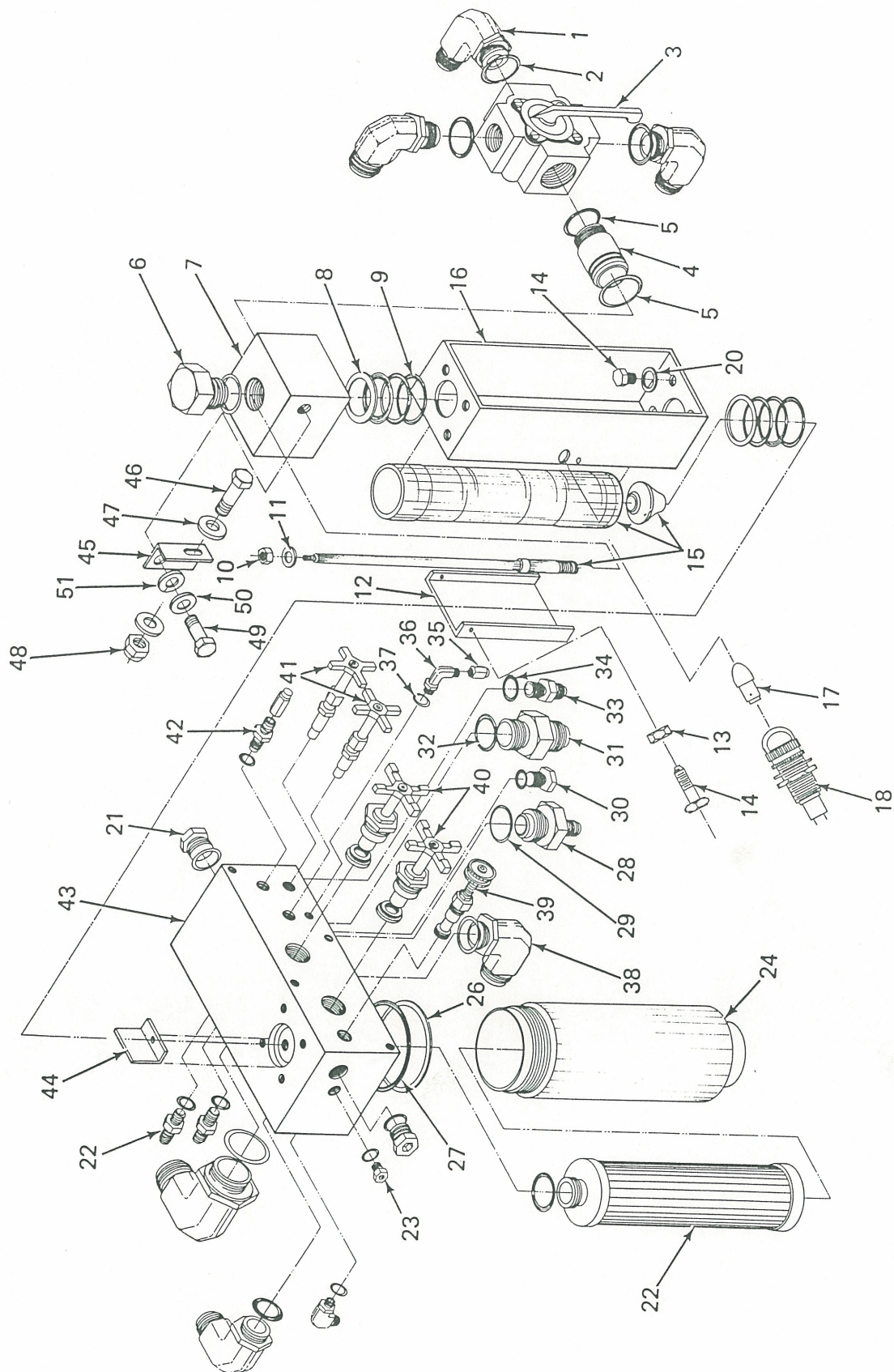


Figure 14 High Pressure Manifold Assembly

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
14-	8223564-1		MANIFOLD ASSEMBLY, High pressure . . (see figure 8 for NHA)							REF
-1	MS51527B24		. ELBOW, Tube to boss							4
-2	MS28778-24		. PACKING, Preformed							5
-3	8223741-1		. VALVE, Selector (see figure 15 for . . . detail breakdown)							1
-4	8223708-1		. FITTING, Special							1
-5	MS28775-138		. PACKING, Preformed							1
-6	AN814-12D		. PLUG, Machine thread							1
-7	8223707-1		. FITTING, Flowmeter							1
-8	3030		. GASKET							2
-9	MS28775-334		. PACKING, Preformed							6
-10	AN316-4R		. NUT, Plain							1
-11	AN960-416		. WASHER, Flat							1
-12	8223561-1		. COVER, Flowmeter							1
-13	8223606-1		. NUT, Nylok 10-32 NF							2
-14	8223605-1		. BOLT, Hex, washer head 10-32 NF x 3/4 .							2
-15	8223740-1		. FLOWMETER.							1
-16	8223711-1		. HOUSING, Flowmeter							1
-17	151-3101-2900- 301		. LIGHT, Panel							1
-18	6S6-125		. LAMP, Incandescent.							1
-19	MS18154-58		. BOLT, Hexagon head (AP)							8
-20	MS27183-14		. WASHER, Flat (AP).							8
-21	12HP50N-S		. PLUG, Hex socket							2
-22	MS24329-4		. NIPPLE, Tube.							2
-23	8HP50N-S		. PLUG, Hex socket							1
-24	AC-5457-TD2A		. BOWL, Filter							1
-25	AC-9516F-1		. ELEMENT, Filter, fluid							1
-26	MS28774-243		. RETAINER, Packing							1
-27	MS28775-243		. PACKING, Preformed							1
-28	AN919-18D		. REDUCER, Tube.							1
-29	MS28778-12		. PACKING, Preformed							2
-30	AN814-2D		. PLUG, Machine thread							1
-31	AN815-16		. NIPPLE, tube							1
-32	MS28778-16		. PACKING, Preformed							3
-33	AN919-1D		. REDUCER, Tube.							1
-34	MS28778-2		. PACKING, Preformed							2
-35	AN929-4		. CAP, Tube							2
-36	MS51527B4		. ELBOW, Tube-to-boss							1
-37	MS28778-4		. PACKING, Preformed							5
-38	MS51527B16S		. ELBOW, Tube-to-boss							2
-39	1A30-R-60S		. VALVE, Relief, high pressure (see . . . figure 16 for detail breakdown)							1
-40	8223719-1		. VALVE ASSEMBLY, Throttling (see . . . figure 13 for detail breakdown)							2
-41	S210S1		. VALVE, Needle							2
-42	AN815-4		. NIPPLE, Tube.							1
-43	8223701-1		. MANIFOLD, High pressure							1
-44	8223565-1		. BAFFLE, Flowmeter							1
-45	8223601-1		. BRACKET, Flowmeter fitting							1

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
14 -46	MS90725-8		.	SCREW, Cap	.	.	.	.	.	1
-47	MS27183-10		.	WASHER, Flat	.	.	.	.	.	2
-48	MS51922-1		.	NUT, Self-locking	.	.	.	.	.	1
-49	MS18154-58		.	BOLT, Hexagon head	.	.	.	.	.	1
-50	MS27183-14		.	WASHER, Flat	.	.	.	.	.	1
-51	MS35338-46		.	WASHER, Lock	.	.	.	.	.	9

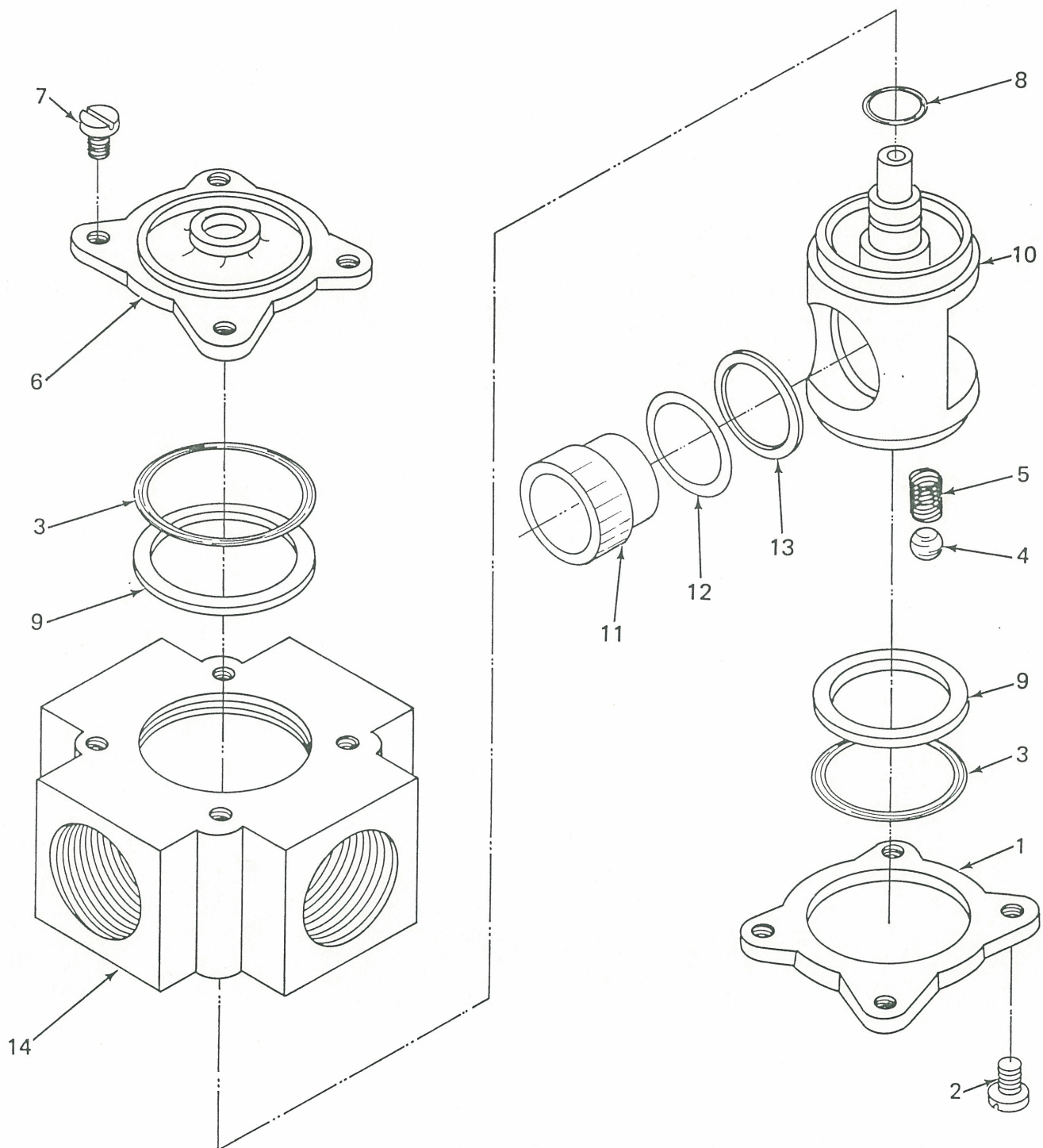


Figure 15 Selector Valve

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
15-	8223741-1		VALVE, Selector (see figure 14 for NHA).							REF
-1	10-2956-5-1		. COVER, Bottom							1
-2	MS35265-80		. SCREW, Machine							4
-3	SP100-137		. PACKING, Preformed							2
-4	250 NYLON		. BALL							2
-5	4-1454-15		. SPRING, Helicoil, compensator							2
-6	5-1061-2-1		. PLATE, Cover							1
-7	MS35239-87		. PACKING, Preformed							4
-8	SP100-9		. PACKING, Preformed							1
-9	4-2156-4		. SPACER, Ring							2
-10	10-1562-7		. DISC, Valve							1
-11	10-3156-1		. WASHER, Spring, tension 18-8 S.S.							2
-12	SP100-114		. PACKING, Preformed							2
-13	10-3156-10-1		. SEAL ASSEMBLY							2
-14	C11-267-1-10		. BODY							1

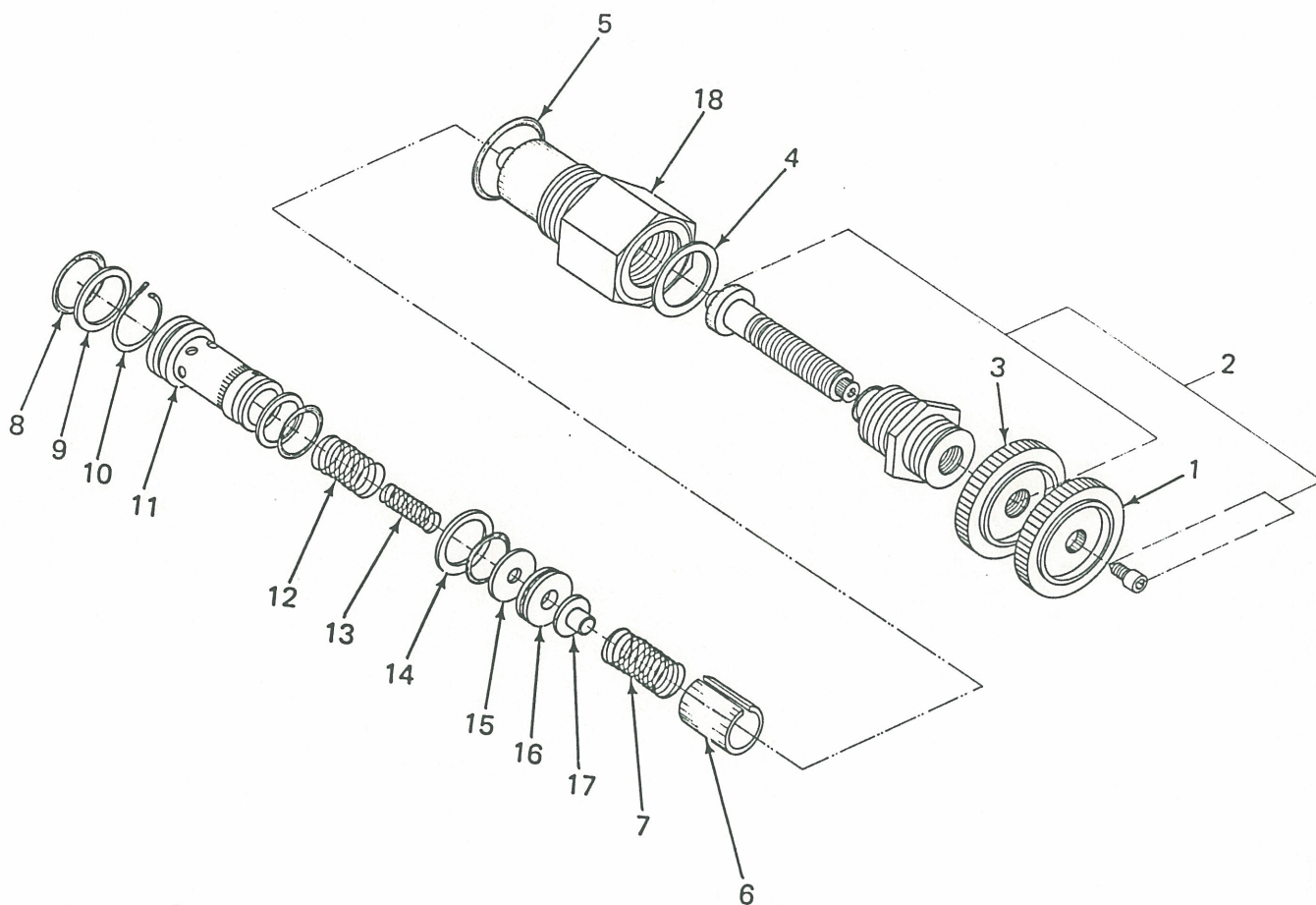


Figure 16. High Pressure Relief Valve

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
16-	1A30-R-60S		VALVE, Relief, high pressure (see figure 14 for NHA)							REF
-1	297004		. HANDKNOB							1
-2	973157		. STEM SUB-ASSEMBLY							1
-3	297002		. LOCKNUT							1
-4	201028		. GASKET							1
-5	131116		. PACKING, Preformed							1
-6	531021		. SPACER.							1
-7	331152		. SPRING.							1
-8	134104		. PACKING, Preformed							3
-9	144917		. RETAINER, Packing							2
-10	890144		. WIRE.							1
-11	974253		. HONED ASSEMBLY							1
-12	331003		. SPRING, Valve							1
-13	331160		. SPRING, Inner							1
-14	142016		. RING, Backup.							1
-15	594020		. ORIFICE PLATE							1
-16	441052		. SEAT.							1
-17	342142		. END ASSEMBLY, Spring							1
-18	542131		. HOUSING							1

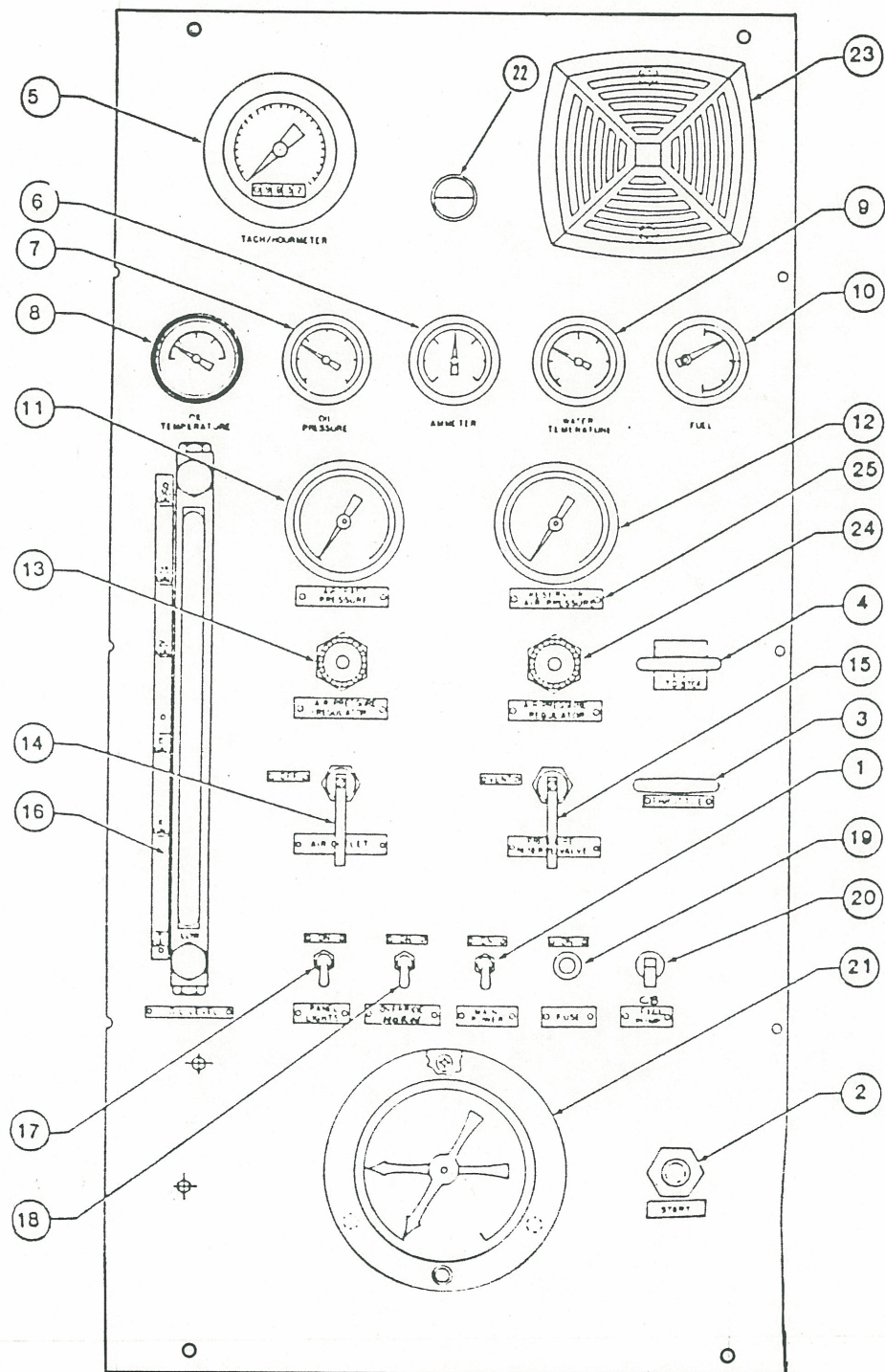


Figure 17. Auxiliary Panel Controls and Instruments
(Sheet 1 of 2)

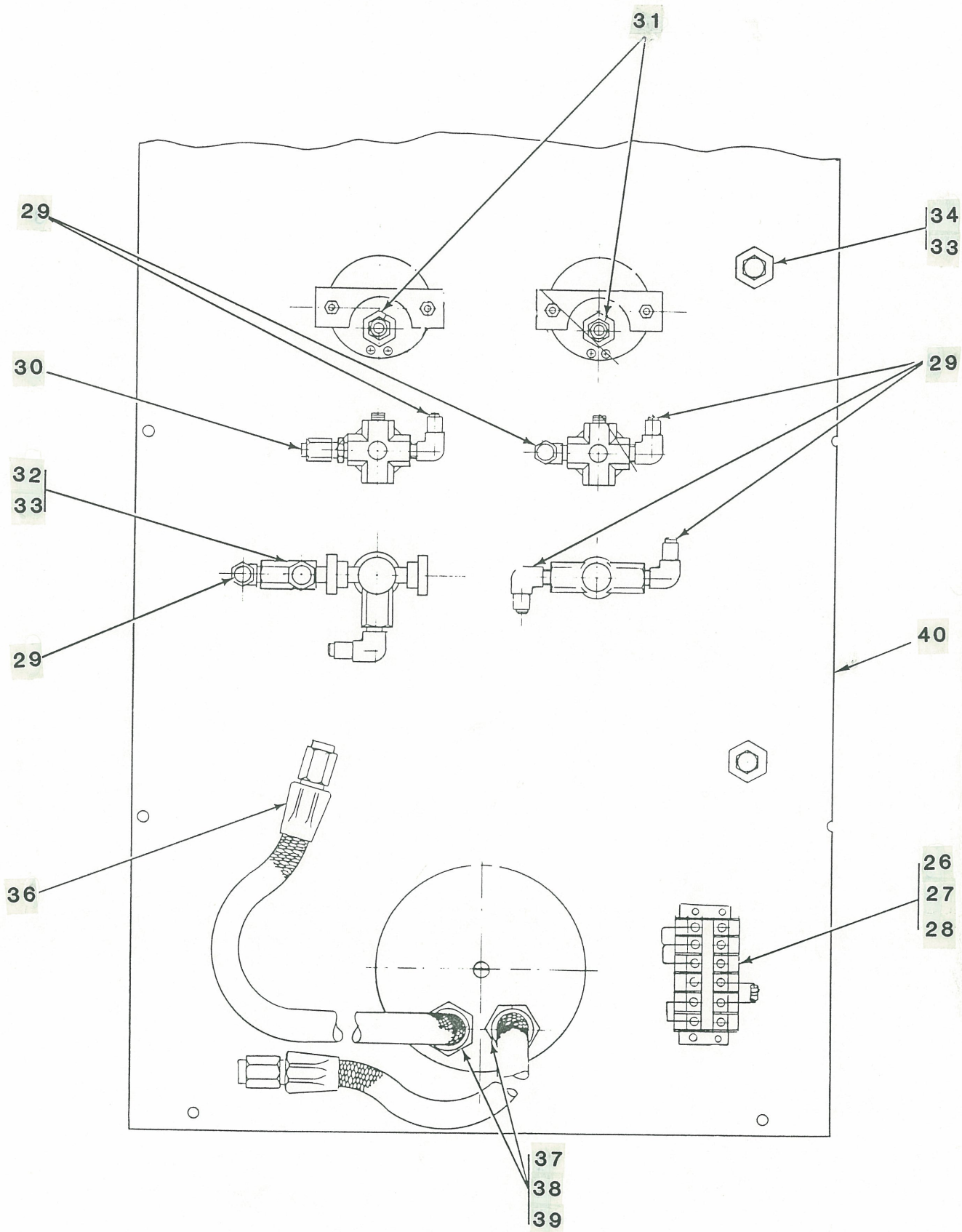


Figure 17. Auxiliary Panel Assembly (Sheet 2 of 2)

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
17-	30042		PANEL ASSY, Auxiliary (See. . . . Figure 1 for NHA)							1
-1	MS35058-22		. TOGGLE SWT, Main Pwr.							1
-2	No Number		. PUSH BUTTON, Starter.							1
-3	7392		. CABLE, Throttle							1
-4	7393		. CABLE, Engine Stop.							1
-5	5658116		. GAGE, Tachometer.							1
-6	5101845		. GAGE, Ammeter							1
-7	82304		. GAGE, Oil Pressure.							1
-8	824525-2		. . RESISTOR							1
-8	284K		. GAGE, Oil Temperature							1
-9	924789D2		. GAGE, Water Temperature							1
-10	82712		. GAGE, Fuel Level.							1
-11	1001H		. GAGE, Aircraft Pressure							1
-12	1001H		. GAGE, Reservoir Pressure.							1
-13	639A51314		. REGULATOR, Pressure							1
-14	104-CP-4		. VALVE, Two Way.							1
-15	109-CP-04		. VALVE, Three Way.							1
-16	G605-12-A-1		. INDICATOR, Sight, Liquid (See . figure 18 for breakdown)							1
-17	MS35058-22		. TOGGLE, Panel Lights.							1
-18	MS35058-22		. TOGGLE, Horn Override							1
-19	60017-1		. FUSE, 10 AMPS							1
-20	8129		. CIRCUIT BREAKER, Fill Pump.							1
-21	8223762-1		. DUPLEX PRESSURE GAGE.							1
-22	656		. LIGHT, Panel							1
-23	874-N5		. HORN, Electric.							1
	8223606-1		. . NUT, Nylok (AP)							2
	8223605-1		. . BOLT, Hex Hd.							2
-24	639A51314		. REGULATOR, Pressure							1
-25	8223235		. NAMEPLATES ASSY							1
-26	8223795-1		. TERMINAL BLOCK							1
-27	8223606-1		. NUT, Nylok							2
-28	8223605-1		. Bolt, Hex Hd							2
-29	6CTX-S		. Elbow, Male							7
-30	6FTX-S		. Connector, Male							1
-31	4-4GTX-S		. Connector, Female							1
-32	2X947		. VALVE, Relife, Air Set @ 100 PSI							1
-33	1/4 MOR-S		. TEE, Street							1
-34	MS24398D5-4		. ADAPTER, Straight							2
-35	MS28778-5		. PACKING, Preformed.							2
-36	MS28759-4 -0160		. HOSE ASSY, Non-Metalic.							2
-37	AN919-10		. REDUCER, Tube							2
-38	MS28728-4		. PACKING, Preformed.							2
-39	MS28728-2		. PACKING Preformed							2
-40	40187		. PANEL, Auxiliary							1

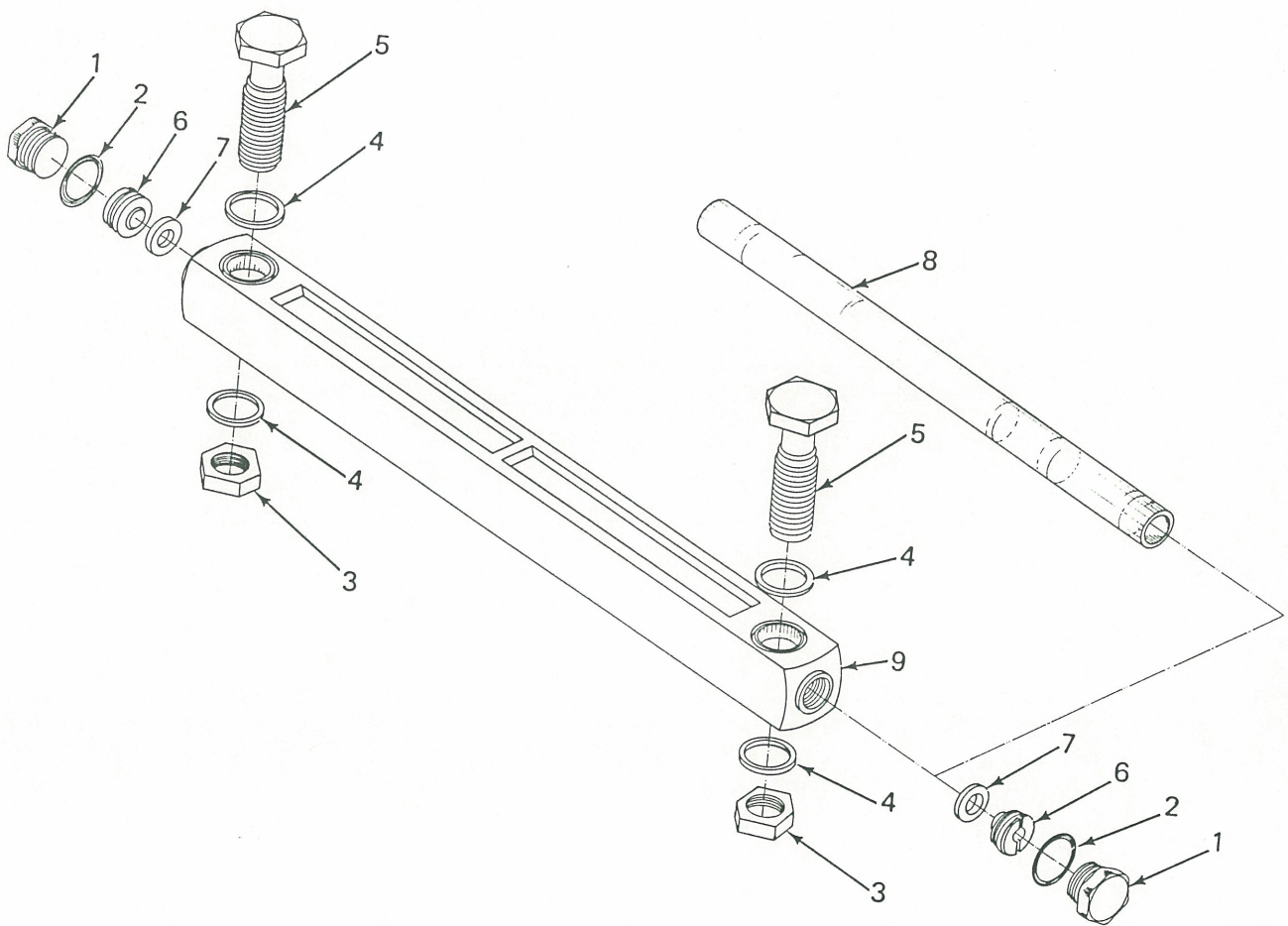


Figure 18 Liquid Sight Indicator

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
18 -	G605-12-A-1		INDICATOR, Sight, liquid (see figure 17. . for NHA)							REF
-1	753-4A		.	CLOSURE	.	.	.	.	.	2
-2	724-012		.	PACKING, Preformed	.	.	.	.	.	2
-3	723-1		.	NUT, Jam	.	.	.	.	.	2
-4	724-114		.	PACKING, Preformed	.	.	.	.	.	4
-5	1013-5A		.	BOLT, Fluid passage.	.	.	.	.	.	2
-6	743-1A		.	INSERT.	.	.	.	.	.	2
-7	134-9		.	WASHER, Flat	.	.	.	.	.	2
-8	185-12		.	SIGHT	.	.	.	.	.	1
-9	1003-12A		.	BODY, Gage	.	.	.	.	.	1

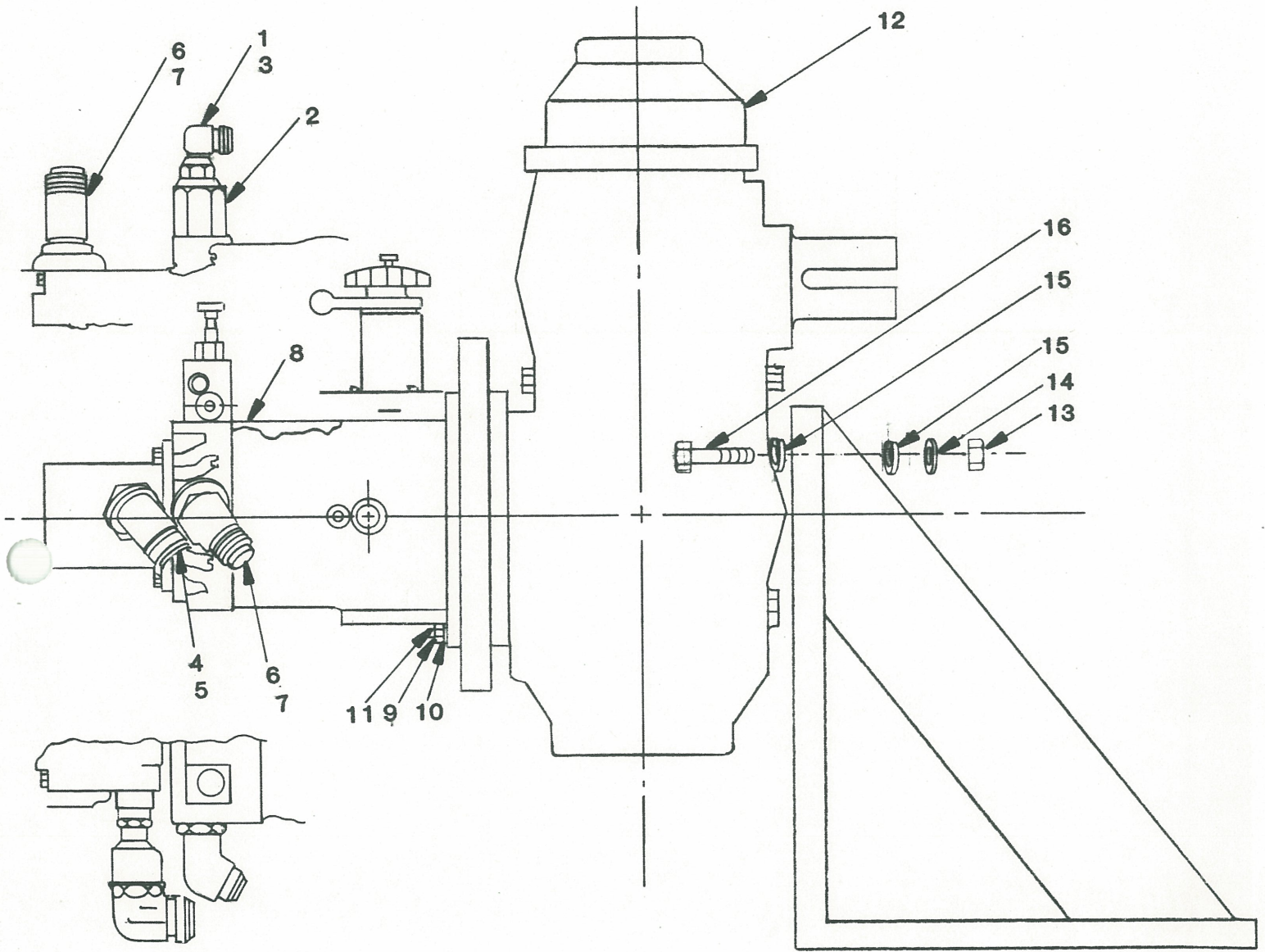


Figure 19. Gearbox/Pump Assembly

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
19 -	8223452-1		GEARBOX/PUMP ASSY. , Main (see . . figure 1 for NHA)							REF
-1	MS51521B16		. ELBOW, Flared tube							1
-2	3CM15-16T3S		. VALVE, Check, high pressure (see . . . figure 20 for detail breakdown)							1
-3	MS28778-16		. PACKING, Preformed							1
-4	MS51527B24		. ELBOW, Tube-to-boss, 90 degree . . .							1
-5	MS28778-24		. PACKING, Preformed							1
-6	MS51528B24		. ELBOW, Tube-to-boss							2
-7	MS28778-24		. PACKING, Preformed							2
-8	8223770-1		. PUMP ASSEMBLY, Main (see figure . . 21 for detail breakdown)							1
-9	MS51968-8		. NUT, Hexagon (AP)							12
-10	MS35338-46		. WASHER, Lock (AP)							12
-11	8223604-1		. STUD (AP)							12
-12	HFI-AS-001		. GEARBOX (see figure 26 for . . . detail breakdown)							1
-13	MS51967-14		. NUT, Plain (AP)							4
-14	MS35338-48		. WASHER, Lock (AP)							4
-15	MS27183-17		. WASHER, Flat (AP)							8
-16	MS90725-129		. SCREW, Cap (AP)							4

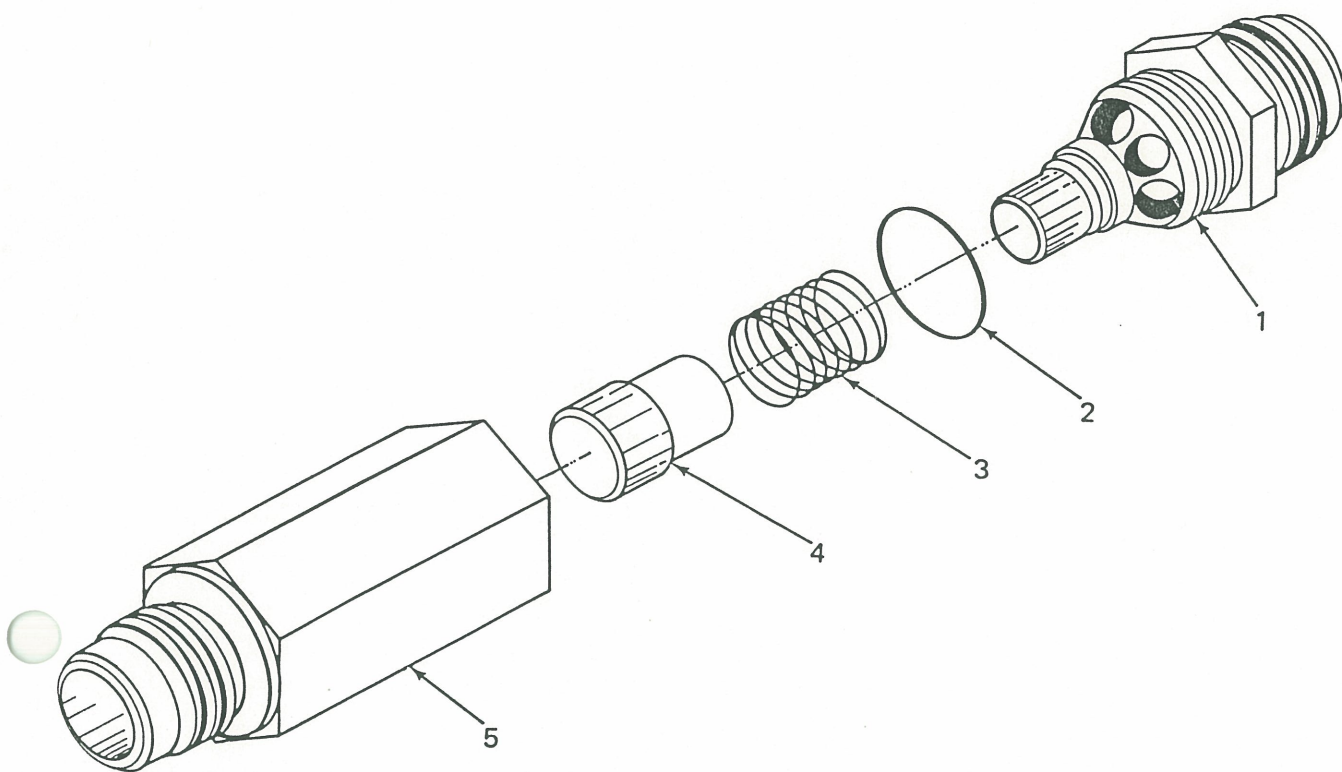


Figure 20. High Pressure Check Valve

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
20-	3CM15-16T3S		VALVE, Check, high pressure (see figure 19 for NHA)							REF
-1	361037		.	GUIDE	.	.	.	.	.	1
-2	139116		.	PACKING, Preformed	.	.	.	.	.	1
-3	331039		.	SPRING.	.	.	.	.	.	1
-4	351005		.	POPPET.	.	.	.	.	.	1
-5	984079		.	BODY	.	.	.	.	.	1

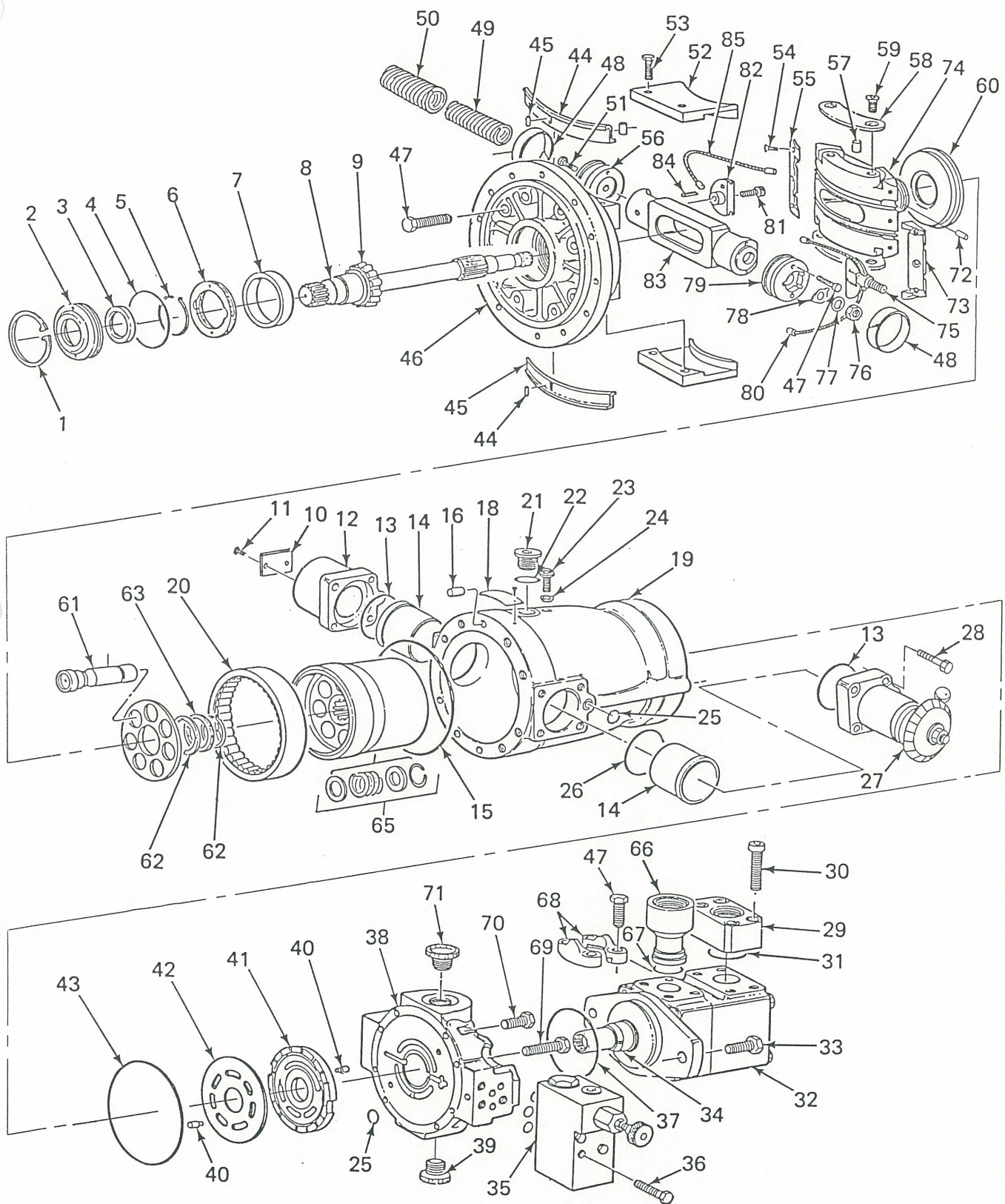


Figure 21. Main Hydraulic Pump Assembly

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
21 -	8223770-1		PUMP ASSEMBLY, Main (see figure 19 . . for NHA)							REF
-1	356-65030		. RING, Snap							1
-2	035-59336		. RETAINER, Seal							1
-3	620-82066		. SEAL, Plain, enclosed							1
-4	676-00236		. PACKING, Preformed							1
-5	035-59339		. LOCK							1
-6	035-59343		. NUT, Barrel H.D. ADJ							1
-7	230-82182		. BEARING, Cup							1
-8	S25-10396		. DRIVE SHAFT AND BEARING							1
-9	230-82181		. BEARING, Shaft							1
-10	035-59362		. PLATE, Spring warning.							1
-11	320-10203		. SCREW, Drive No. 2 x 3/16							6
-12	035-59345		. CAP, Spring							1
-13	035-59347-A		. SPACER, Piston cap							2
-14	035-59346		. SLEEVE, Piston guide							2
-15	676-00166		. PACKING, Preformed							1
-16	324-22412		. DOWEL							1
-17	035-59334		. CAM, C.C.W.							1
-18	035-59360		. NAMEPLATE							1
-19	S25-10395-6		. HOUSING AND BARREL ASSEMBLY							1
-20	035-70580		. BEARING, Roller cylinder							1
-21	488-35014		. PLUG							1
-22	676-00912		. PACKING, Preformed							1
-23	353-25019		. SCREW, Cap, hex							2
-24	631-45003		. SEAL							2
-25	676-00014		. PACKING, Preformed							2
-26	676-00037		. PACKING, Preformed							2
-27	S25-10394-C-6		. DISPLACEMENT CONTROL ASSY (See figure 22 for detail breakdown)							1
-28	306-16220		. SCREW 3/8-16 UNC x 1-3/4 (AP)							8
-29	035-59332		. FLANGE, Suction							1
-30	358-20220		. SCREW 1/2-13 NC x 1-3/4 (AP)							4
-31	676-00225		. PACKING, Preformed							1
-32	024-00666		. PUMP ASSEMBLY, Boost (see figure 23 for detail breakdown)							1
-33	306-20200		. SCREW 1/2-13 NC x 1-1/2 (AP)							2
-34	S25-10397		. COUPLING, Check valve							1
-35	S25-10393-C-6		. COMPENSATOR ASSEMBLY, Pressure (see figure 25 for detail breakdown)							1
-36	306-40186		. SCREW 5/16-18 NC x 2-3/4 (AP)							3
-37	676-00155		. PACKING, Preformed							1
-38	035-59328		. PORT BLOCK.							1
-39	449-00019		. PLUG							1
-40	033-49825		. DOWEL							4
-41	035-59333		. PLATE, Port							1
-42	033-71330		. PLATE, Face							1
-43	676-00162		. PACKING, Preformed							1
-44	035-59337		. BEARING, Race							2

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
21-45	324-20806		.	PIN, Straight, headless						2
-46	035-59335		.	FLANGE, Mounting						1
-47	306-40213		.	SCREW 7/16-14 UNC x 2-1/4 (AP)						8
-48	035-59338		.	RING, Piston						2
-49	035-59359		.	SPRING, Inner						1
-50	035-59356		.	SPRING, Outer						1
-51	358-10080		.	SCREW 10-24 UNC x 1/2						4
-52	035-59341		.	HOLDDOWN, Cam						2
-53	306-40123		.	SCREW 7/16-14 UNC x 2-1/4 (AP)						8
-54	316-10080		.	SCREW 10-24 UNC x 1/2 (AP)						6
-55	035-59342		.	GUIDE, Roller						1
-56	035-59334		.	CAP, Piston spring retainer						1
-57	230-82180		.	ROLLER, Needle						64
-58	035-59358		.	RETAINER, Roller						1
-59	316-11080		.	SCREW 14-28 UNF x 1/2 (AP)						4
-60	033-71261-B		.	PLATE, Creep						1
-61	S15-45375		.	PISTON AND SHOE ASSEMBLY						1
				(With retainer)						
-62	035-59348		.	SEAT, Cam						1
-63	035-59349		.	NUT, Cam						1
-64	035-59351		.	LOCK, Cam						1
-65	S25-10392		.	CYLINDER ASSEMBLY						1
-66	035-59331		.	FLANGE, Pressure						1
-67	676-00219		.	PACKING, Preformed						1
-68	464-00031		.	FLANGE, Split						2
-69	306-40215		.	SCREW 7/16-14 UNC x 1-3/4						4
-70	306-40214		.	SCREW 7/16-14 UNC x 1-1/4						4
-71	449-00021		.	PLUG						3
-72	035-59380		.	INSERT, Locking						1
-73	035-59355		.	GUIDE, Roller						1
-74	035-59350		.	RETAINER, Roller						1
-75	035-59353		.	SHEAVE, Take-up						1
-76	333-15000		.	NUT, Hex 3/8-24 UNF						1
-77	350-10051		.	WASHER, Thrust.						1
-78	035-59357		.	WASHER, Lock 3/8 In.						1
-79	035-59352		.	CAP, Control piston						1
-80	035-59329		.	CABLE, Take-up						1
-81	358-12120		.	SCREW 1/4-20 UNC x 3/4						1
-82	035-59354		.	SHEAVE, Fixed						1
-83	035-59361		.	PISTON, Control						1
-84	325-08160		.	PIN, Roll						1
-85	035-59330		.	CABLE, Fixed.						1

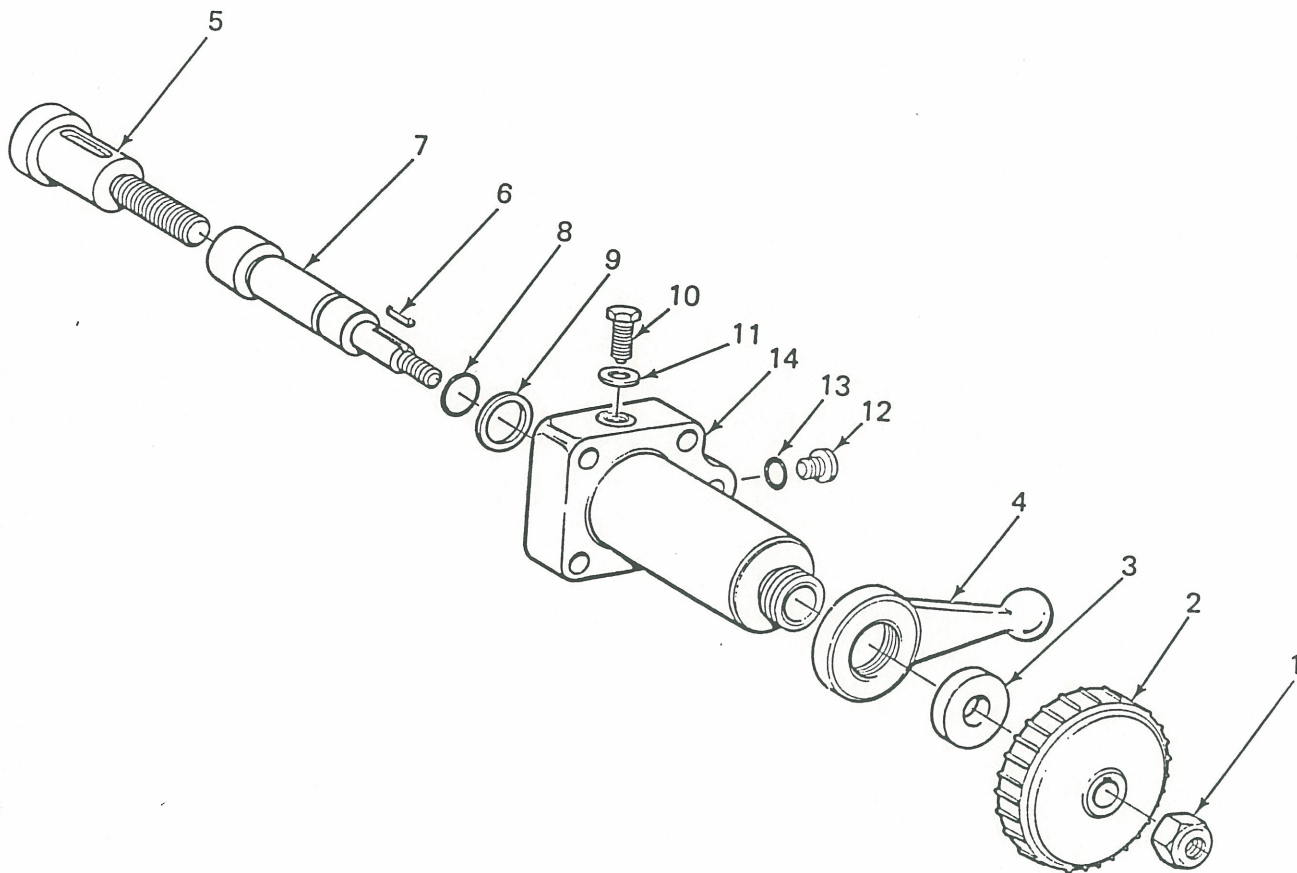


Figure 22. Displacement Control Assembly

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
22 -	S25-10394-C-6		DISPLACEMENT CONTROL ASSEMBLY . (See figure 21 for NHA)							REF
-1	331-20100		. NUT, Stop 1/2-13 UNC.							1
-2	035-14007-Z		. HANDLE							1
-3	035-49843-A		. WASHER 1/2 In.							1
-4	035-14714-Y		. LEVER							1
-5	035-59374-B		. STOP.							1
-6	211-22021		. KEY, Machine 1/8 SQ. x 1/2 LG.							1
-7	035-59375-B		. SHAFT							1
-8	676-00210		. PACKING, Preformed							1
-9	035-59377-A		. SPACER							1
-10	035-59376-A		. RETAINER							1
-11	636-61200		. PACKING, Preformed							1
-12	488-35049		. PLUG, Hex socket							1
-13	676-00903		. PACKING, Preformed							1
-14	035-59373-B		. CAP							1

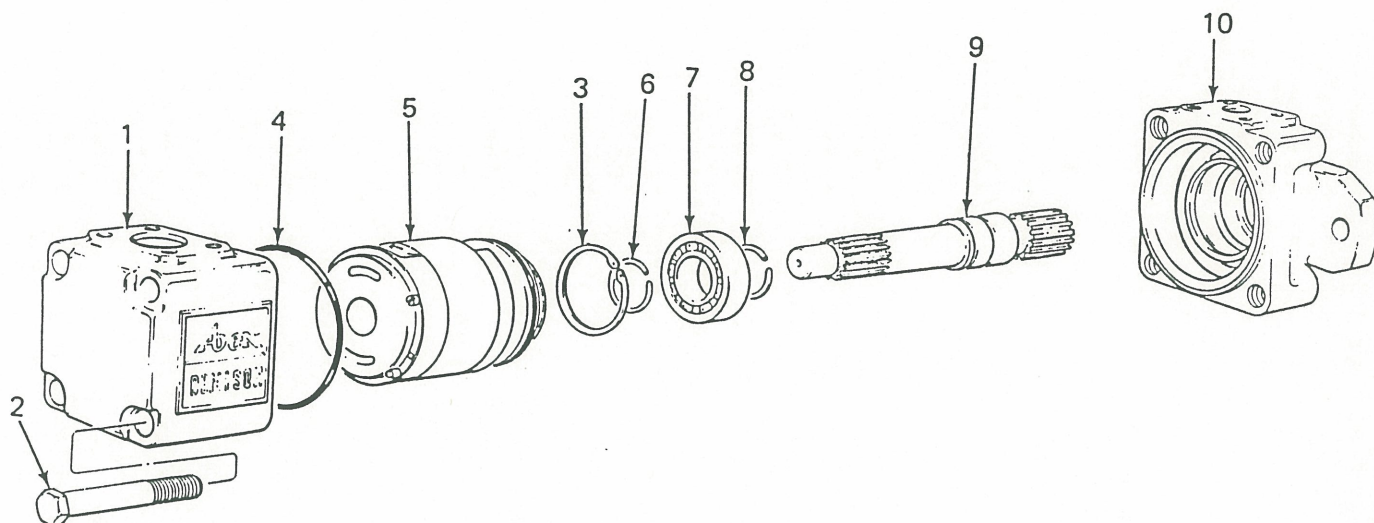


Figure 23. Boost Pump Assembly

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
23-	024-00666		PUMP ASSEMBLY, Boost (see figure 21. . for NHA)							REF
-1	034-48564		. HOUSING							1
-2	306-40038		. SCREW, Cap 1-1/2-13 x 14-1/2 (AP) . . .							4
-3	356-30244		. RING, Retaining							1
-4	676-00244		. PACKING, Preformed							1
-5	S24-10239-6		. CARTRIDGE ASSEMBLY, Boost pump (see figure 24 for detail breakdown)							1
-6	034-70777		. RING, Snap, external							1
-7	230-82054		. BEARING, Ball							1
-8	034-70777		. RING, Snap, external							1
-9	034-70815		. SHAFT, Shouldered							1
-10	034-48565		. CAP, Mounting							1

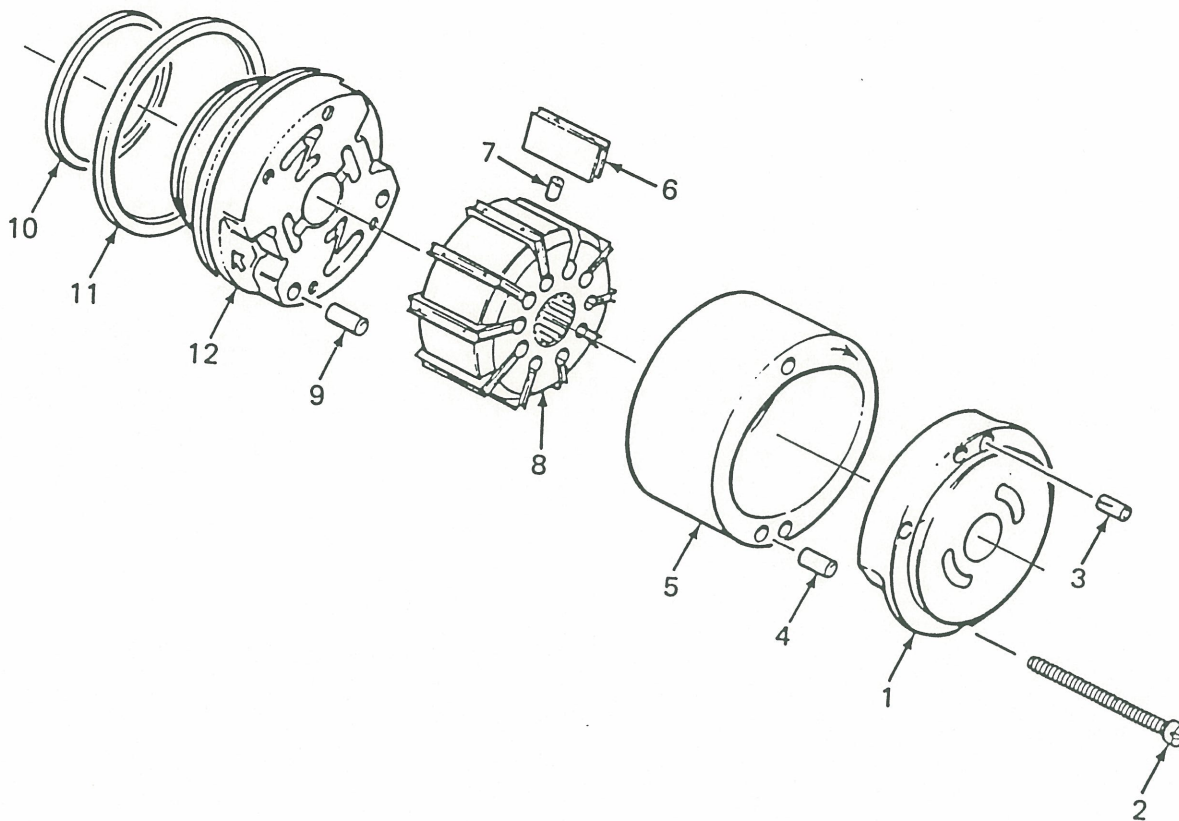


Figure 24. Boost Pump Cartridge Assembly

MJ-1 Figure & Index No.	Part Number	FSCM	Description	Units Per Assy
			1 2 3 4 5 6 7	
24 -	S24-10239-6		CARTRIDGE ASSEMBLY, Boost pump . . (see figure 23 for NHA)	REF
-1	S14-25993		. PORT PLATE AND BEARING ASSY . .	1
-2	MS35265-54		. SCREW, Machine (AP)	2
-3	323-82010		. PIN, Driv-lok	1
-4	324-21208		. PIN, Straight, headless	1
-5	034-59245		. RING, Cam.	1
-6	034-48577		. VANE, Rotor	10
-7	034-24982		. PIN, Vane holdout	10
-8	S14-23178		. ROTOR AND INSERT ASSEMBLY . .	1
-9	324-21208		. PIN, Straight, headless	1
-10	676-00229		. PACKING, Preformed	1
-11	676-00238		. PACKING, Preformed	1
-12	034-48571		. PLATE, Pressure	1

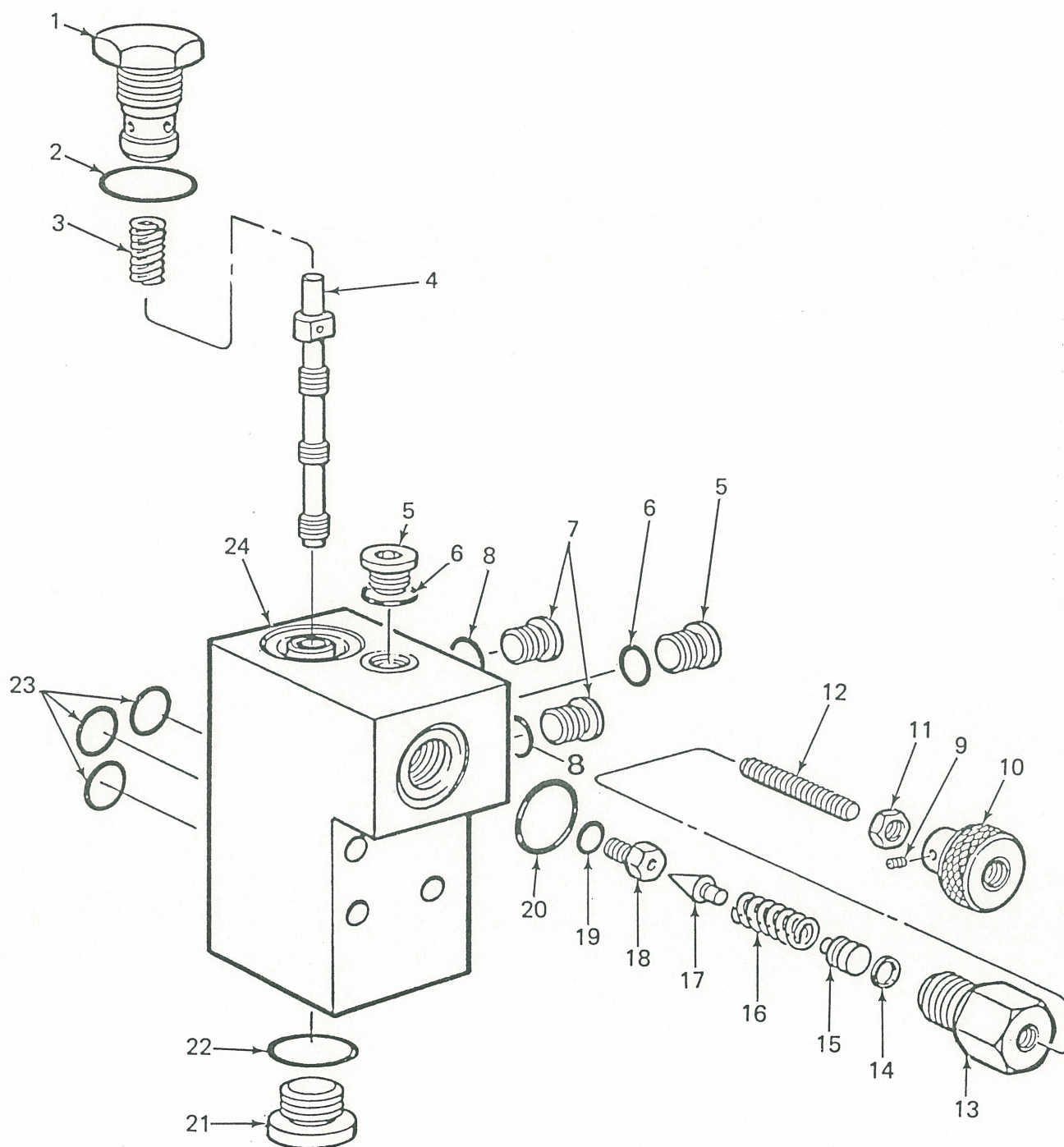


Figure 25 Pressure Compensator Assembly

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
25-	S25-10393-C-6		COMPENSATOR ASSEMBLY, Pressure . . (see figure 21 for NHA)							REF
-1	035-59369-B		.	PLUG	.	.	.	.	.	1
-2	676-00910		.	PACKING, Preformed	.	.	.	.	.	3
-3	035-59366-A		.	SPRING	.	.	.	.	.	1
-4	035-59365-B		.	SPOOL, Compensator	.	.	.	.	.	1
-5	488-35021		.	PLUG, Hexagon	.	.	.	.	.	2
-6	676-00904		.	PACKING, Preformed	.	.	.	.	.	2
-7	488-35041		.	PLUG	.	.	.	.	.	2
-8	676-00906		.	PACKING, Preformed	.	.	.	.	.	2
-9	MS51050-33		.	SCREW, Cap	.	.	.	.	.	1
-10	036-24504-Z		.	KNOB	.	.	.	.	.	1
-11	335-13100		.	NUT, Hex jam 5/16-24	.	.	.	.	.	1
-12	MS51018-82		.	SCREW, Cap	.	.	.	.	.	1
-13	033-70545-B		.	GUIDE, Housing	.	.	.	.	.	1
-14	676-00012		.	PACKING, Preformed	.	.	.	.	.	1
-15	035-59367-A		.	PISTON, Seal	.	.	.	.	.	1
-16	033-70832-A		.	SPRING	.	.	.	.	.	1
-17	036-12288-Z		.	CONE, Relief valve	.	.	.	.	.	1
-18	035-59397-A		.	SEAT, Compensator	.	.	.	.	.	1
-19	676-00903		.	PACKING, Preformed	.	.	.	.	.	1
-20	676-00910		.	PACKING, Preformed	.	.	.	.	.	3
-21	488-35055		.	PLUG, Hex soc	.	.	.	.	.	1
-22	676-00910		.	PACKING, Preformed	.	.	.	.	.	3
-23	676-00014		.	PACKING, Preformed	.	.	.	.	.	3
-24	S25-10398B		.	BLOCK, Compensator	.	.	.	.	.	1

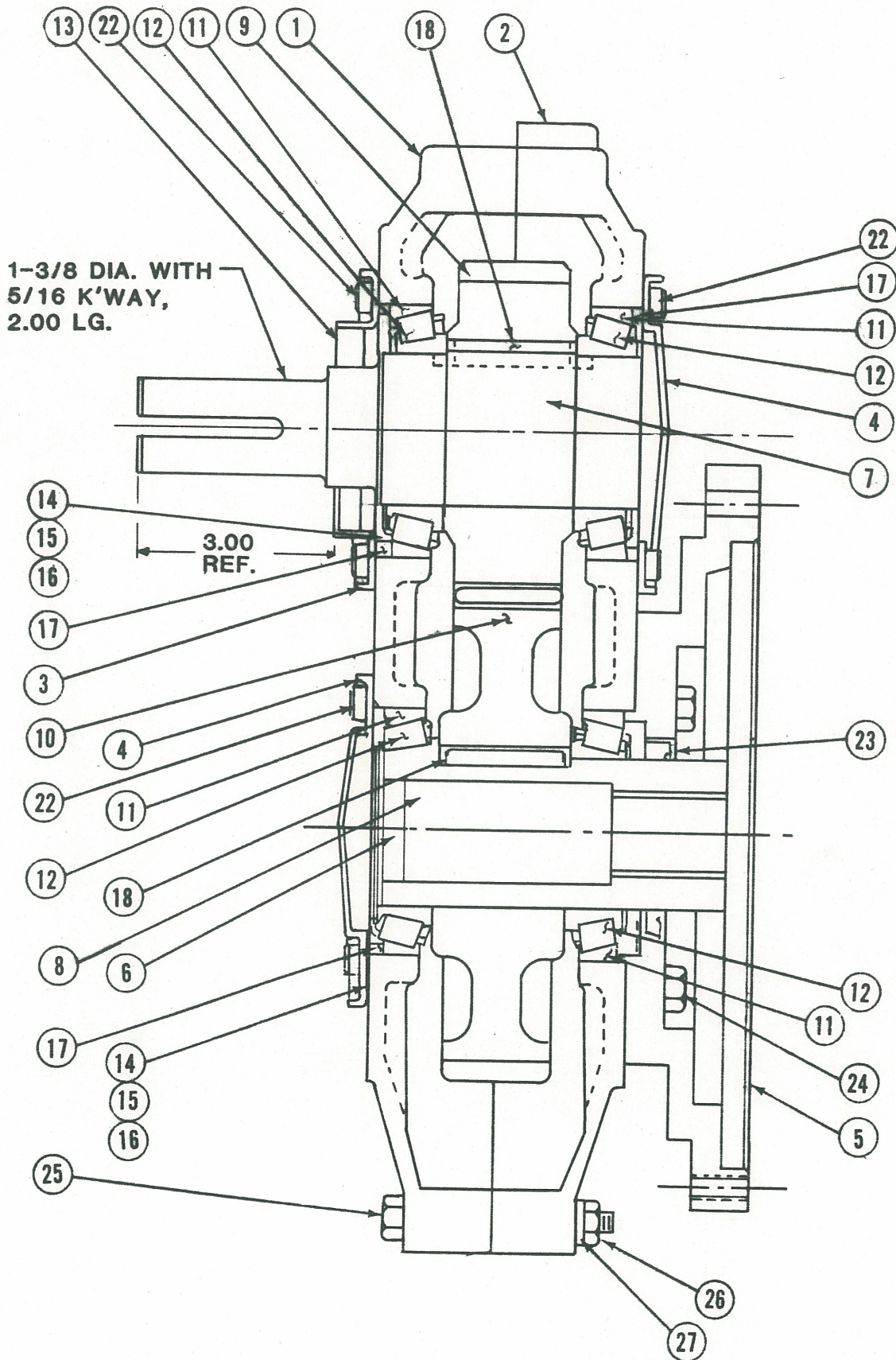


Figure 26. Gearbox (Sheet 1 of 2)

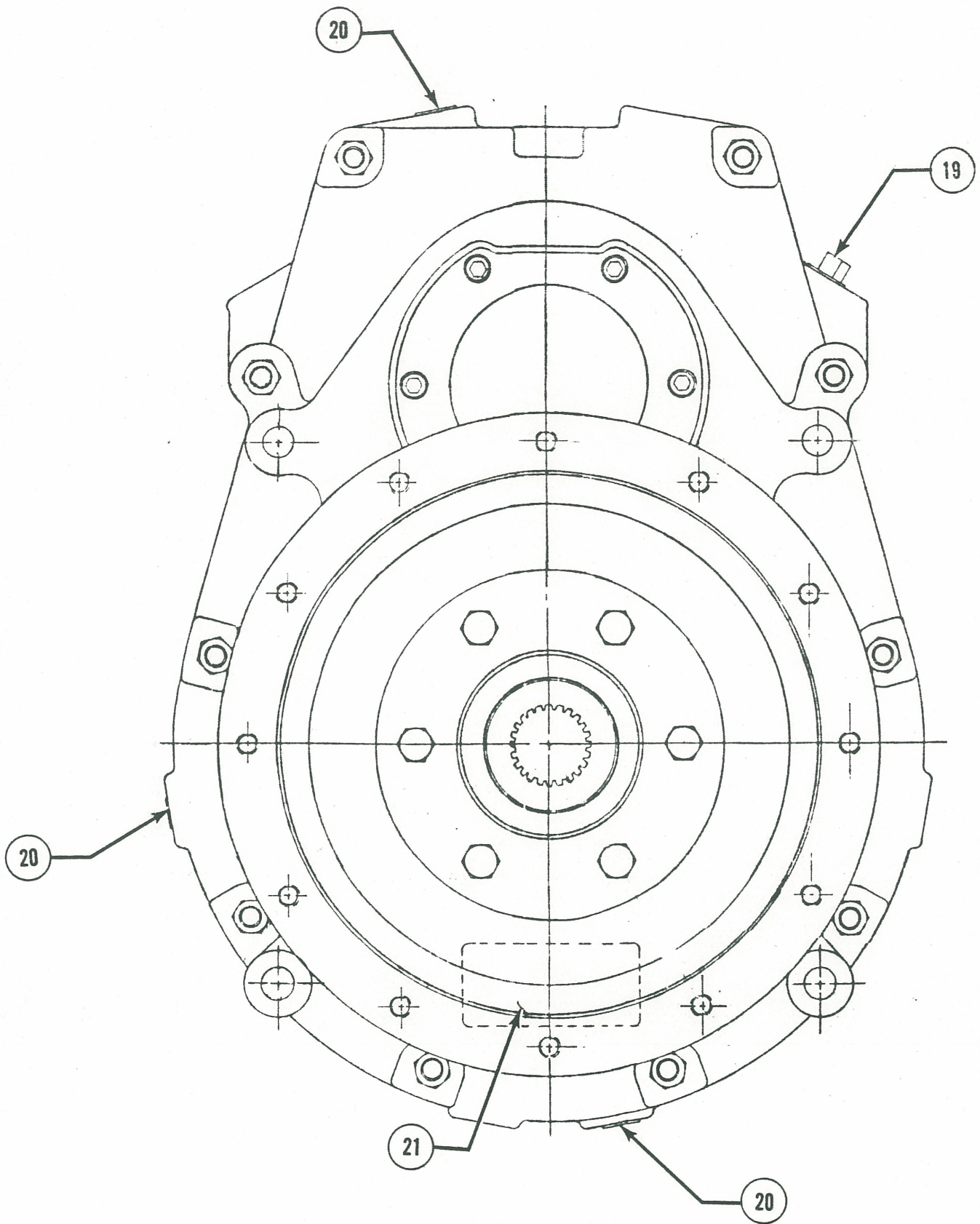


Figure 26. Gearbox (Sheet 2 of 2)

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
26-	HF1-AS-001		GEARBOX (See figure 19 for NHA. .							REF
-1	1737-132		. HOUSING							1
-2	1737-144		. HOUSING							1
-3	1672-151		. COVER, Open							1
-4	1672-149		. COVER, Closed							2
-5	1779-159		. PUMP, Flange							1
-6	4097-110		. EXPANSION, Plug							1
-7	1254-162		. SHAFT, Input.							1
-8	1295-118		. SHAFT, Output							1
-9	1812-179		. GEAR 36T.							1
-10	1810-162		. GEAR 54T.							1
-11	4223-501		. BEARING, Cup, Timken #382A. . .							4
-12	5222-407		. BEARING, Cup, Timken #387 . . .							4
-13	4491-425		. SEAL, Natinal #471984							1
-14	1913-140		. SHIM, .005 ALUM							6
-15	1913-141		. SHIM, .007 ALUM							6
-16	1913-142		. SHIM, .020 ALUM							2
-17	1010-119		. SPACER.							3
-18	4273-412		. KEY 3/8 x 3/8 x 1.78 Lg							2
-19	4411-501		. BREATHER.							1
-20	5515-528		. PIPE PLUG 3/8-18 NPT.							3
-21	1963-146		. NAMETAG							1
-22	4040-305		. SHCS 5/16-18 UNE x .75 Lg. Gr.5							18
-23	4491-511		. SEAL, National.							1
-24	4042-301		. HHCS 3/8-16 UNC x 1.00 Lg. Gr.5							6
-25	4042-312		. HHCS 3/8-16 UNCx 3-1/4 Lg. Gr.5							10
-26	4054-201		. NUT, Hex 3/8-17 UNC							10
-27	4007-103		. LOCKWASHER 3/8.							10

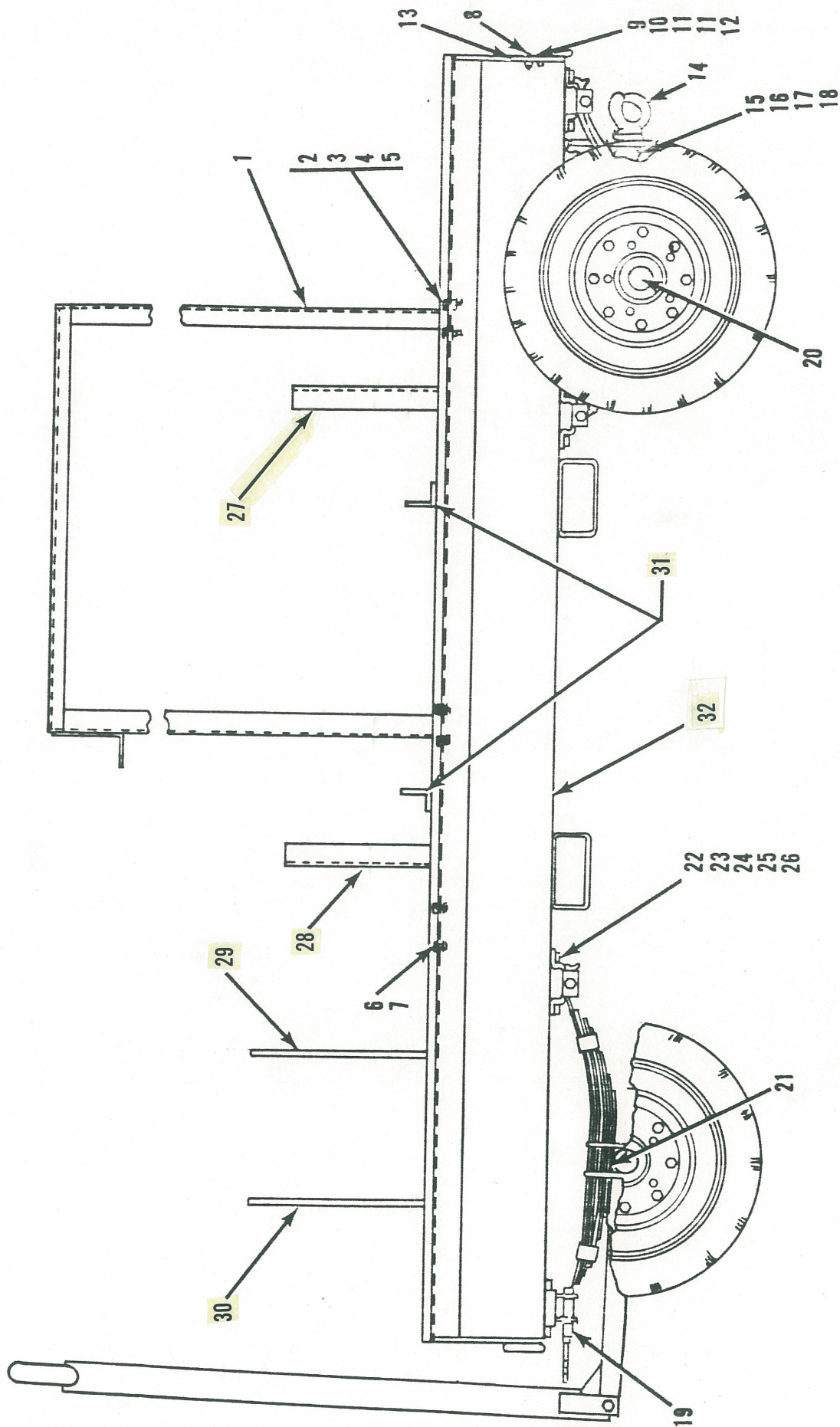


Figure 27. Frame and Running Gear Assembly

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
27-	8223451-1		FRAME AND RUNNING GEAR							REF
			ASSEMBLY (See figure 1 for NHA)							
-1	8223512-1		. FRAME, Upper							1
-2	MS35690-505		. NUT, Plain (AP)							12
-3	MS35338-45		. WASHER, Lock (AP)							12
-4	MS27183-12		. WASHER, Flat (AP)							24
-5	MS90725-36		. SCREW, Cap (AP)							12
-6	MS90725-39		. SCREW, Cap (AP)							4
-7	NAS1099-5		. WASHER, Bevel (AP)							4
-8	48B7796		. RING, Tie-down							4
-9	MS51967-8		. NUT, Plain (AP)							12
-10	MS35338-46		. WASHER, Lock (AP)							12
-11	MS27183-14		. WASHER, Flat (AP)							12
-12	MS90725-64		. SCREW, Cap (AP)							8
-13	54B6236		. NUT PLATE (AP)							4
-14	MS51335-2		. PINTLE ASSEMBLY, Towing							1
-15	MS51967-8		. NUT, Plain (AP)							12
-16	MS35338-46		. WASHER, Lock (AP)							12
-17	MS27183-14		. WASHER, Flat (AP)							12
-18	MS90725-65		. SCREW, Cap (AP)							4
-19	8223516-1		. HANDBRAKE LEVER AND CROSS-							1
			SHAFT ASSY (See figure 28 for detail breakdown)							
-20	8223514-1		. AXLE ASSEMBLY, Rear (see figure							1
			29 for detail breakdown)							
-21	8223513-1		. AXLE ASSEMBLY, Front (see figure							1
			30 for detail breakdown)							
-22	MS35690-805		. NUT, Plain (AP)							16
-23	MS35338-48		. WASHER, Lock (AP)							16
-24	MS27183-18		. WASHER, Flat (AP)							16
-25	NAS1099-8		. WASHER, Bevel (AP)							16
-26	MS90725-115		. SCREW, Cap (AP)							16
-27	40188-1		. BRACKET, Reservoir sprt(rear)							1
-28	40188-2		. BRACKET, Reservoir sprt(front)							1
-29	40192-2		. BRACE, Muffler support(rear).							1
-30	40192-1		. BRACE, Muffler sprt(front).							1
-31	40193		. BRACKET, Fuel tank support.							2
-32	8223511-1		. FRAME, Lower.							1



MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
28 -	8223516-1		HANDBRAKE LEVER AND CROSS- . . . SHAFT ASSEMBLY (See figure 27 for NHA)							REF
-1	5904		.	LEVER, Handbrake						1
-2	MS51967-8		.	NUT, Plain						6
-3	MS35338-46		.	WASHER, Lock (AP)						6
-4	MS27183-15		.	WASHER, Flat (AP).						6
-5	MS90725-71		.	SCREW, Cap (AP)						2
-6	5204		.	SPACER						2
-7	8223563-1		.	STANDOFF, Handbrake						2
-8	4800-2		.	PIN, Cotter						6
-9	4701-3		.	WASHER, Flat						1
-10	5206		.	PIN, Special						6
-11	5205		.	CONNECTOR, Axle						6
-12	MS51967-8		.	NUT, Plain						6
-13	8223606-1		.	NUT, Nylok						1
-14	8223605-1		.	BOLT, Hex, washer head 10-32 NF x 3/4 .						1
-15	MS21919DG6		.	CLAMP, Loop						1
-16	8223749-1		.	ROD, Brake						1
-17	8223748-1		.	ROD, Tie						2
-18	5000-2		.	ROD, Straight						3
-19	5909		.	LEVER, Remote control						3
-20	5908		.	BEARING						2
-21	8223747-1		.	CROSS SHAFT						1
-22	NAS1099-6		.	WASHER, Bevel						4
-23	MS90725-65		.	SCREW, Cap						4

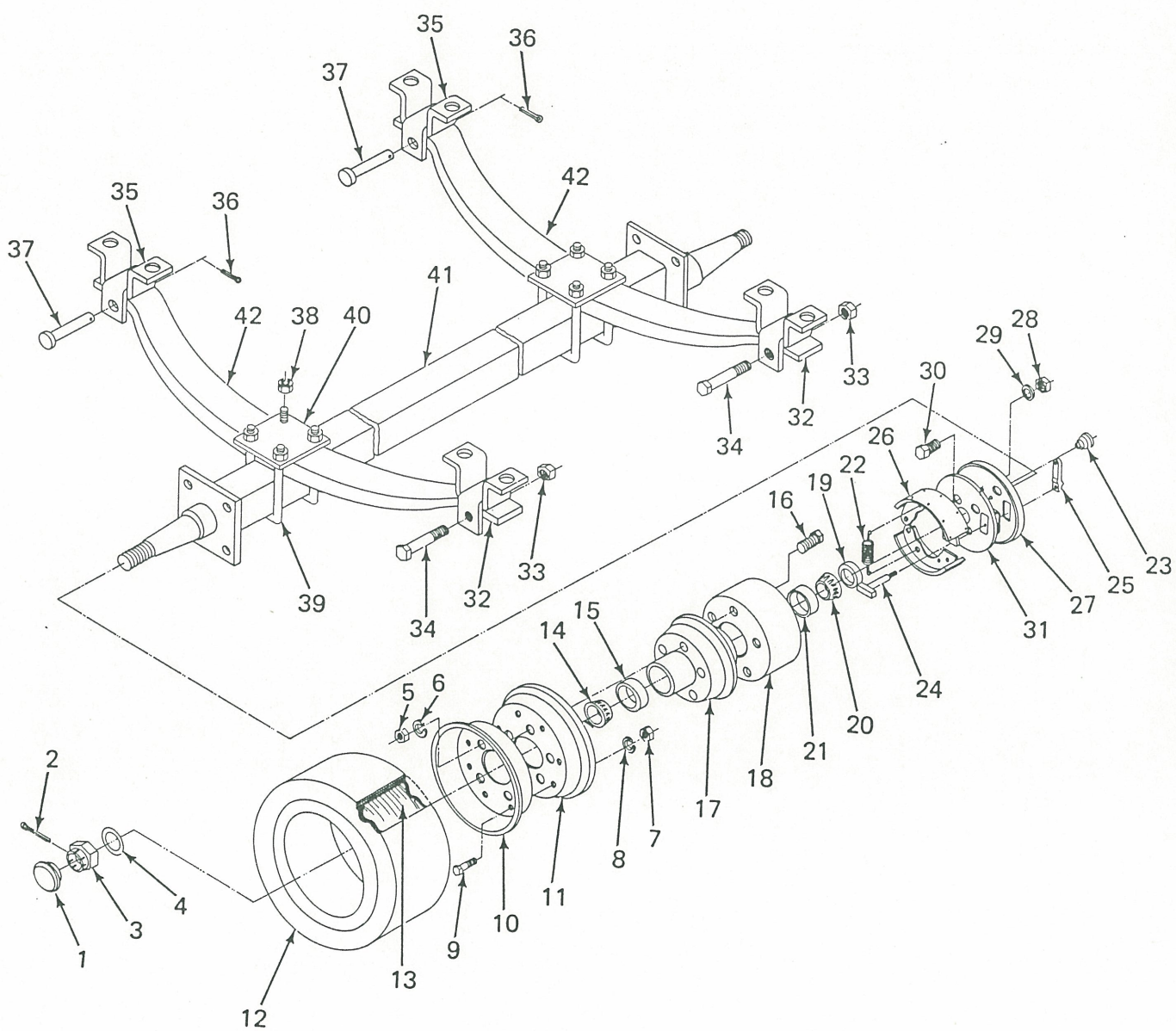


Figure 29. Rear Axle Assembly

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
29 -	8223514-1		AXLE ASSEMBLY, Rear (see figure 27 . . for NHA)							REF
-1	6312		. CAP, Grease							2
-2	4800-5		. PIN, Cotter							2
-3	4600-2		. NUT, Plain, slotted 1 In.-14 NF							2
-4	4702-2		. WASHER, Key 1 In.							2
-5	MS35690-822		. NUT, Plain							10
-6	MS35338-48		. WASHER, Lock							10
-7	MS51968-8		. NUT, Hexagon							16
-8	MS35338-46		. WASHER, Lock							16
-9	MS90726-59		. SCREW, Cap							16
-10	3712-1		. DISC, Wheel							2
-11	3712-2		. WHEEL, Pneumatic tire							2
-12	5237-347		. TIRE							2
-13	7-50-10		. TUBE, Inner							2
-14	6058		. CONE AND ROLLERS							2
-15	6151		. CUP, Tapered roller							2
-16	6251-10		. STUD							10
-17	1-3613		. HUB							2
-18	8221		. BRAKE DRUM							2
-19	6311		. SEAL, Grease							2
-20	6057		. CONE AND ROLLERS							2
-21	6151		. CUP, Tapered roller							2
-22	4150098		. SPRING, Return							2
-23	310959		. SPRING, Helical							4
-24	312853		. CAMSHAFT, Actuated							2
-25	8225		. LEVER, Brake							2
-26	317849		. BRAKE SHOE SET							4
-27	8210		. PLATE, Backing, brake							2
-28	MS51967-8		. NUT, Plain							8
-29	MS35338-46		. WASHER, Lock							8
-30	MS90726-60		. SCREW, Cap							8
-31	310949		. PLATE, Support							2
-32	4250		. BRACKET, Spring front							2
-33	MS51922-41		. NUT, Self-locking							2
-34	MS90725-132		. SCREW, Cap							2
-35	4251		. BRACKET, Eye, non-rotating							2
-36	MS24665-353		. PIN, Cotter							2
-37	5403-1		. PIN, Special							2
-38	MS51922-37		. NUT, Self-locking							8
-39	5100-6		. U-BOLT, 1/2-20 thd, 1-3/4 x 4-5/8 inside							4
-40	5600-8		. PLATE, Tie							2
-41	239-1346-2		. BEAM ASSEMBLY							1
-42	1-4010-4		. SPRING ASSEMBLY							2

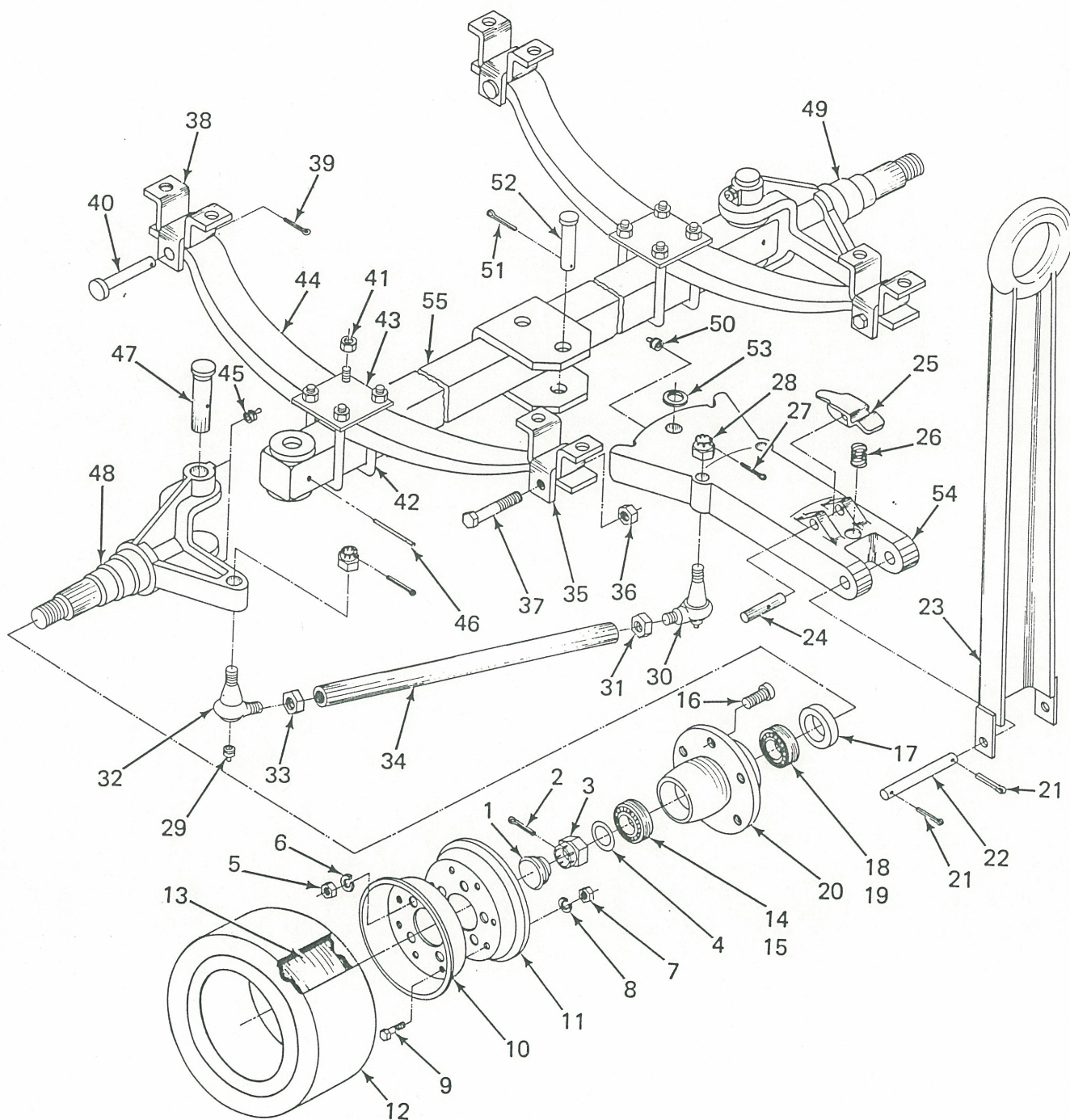


Figure 30. Front Axle Assembly

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
30-	8223513-1		AXLE ASSEMBLY, Front (see figure 27 . for NHA)							REF
-1	6312		. CAP, Grease							2
-2	4800-5		. PIN, Cotter							2
-3	4600-2		. NUT, Plain, slotted 1 In.-14 NF							2
-4	4702-2		. WASHER, Key 1 In.							2
-5	MS35690-822		. NUT, Plain							10
-6	MS35338-48		. WASHER, Lock							10
-7	MS51968-8		. NUT, Hexagon							16
-8	MS35338-46		. WASHER, Lock							16
-9	MS90726-59		. SCREW, Cap							16
-10	3712-1		. DISC, Wheel							2
-11	3712-2		. WHEEL, Pneumatic, tire							2
-12	5237-347		. TIRE							2
-13	7-50-10		. TUBE, Inner							2
-14	6058		. CONE AND ROLLERS.							2
-15	6152		. BEARING							2
-16	6251-10		. STUD							10
-17	6311		. SEAL, Grease							2
-18	6057		. CONE AND ROLLERS.							2
-19	6151		. CUP, Tapered roller							2
-20	1-3613		. HUB							2
-21	4800-6		. PIN, Cotter							1
-22	5416		. PIN, Straight, headless							1
-23	4-3502-1		. DRAWBAR.							1
-24	MS35671-66		. PIN, Grooved							1
-25	3855		. LATCH, Pedal, front							1
-26	4006		. SPRING							1
-27	4800-4		. PIN, Cotter							4
-28	No Number		. NUT (Supplied with ball joint)							2
-29	5801		. FITTING, Lubrication							2
-30	3950-2		. TIE ROD END, Steering							2
-31	4602-2		. NUT, Plain, hexagon 11/16-18 L.H.							2
-32	3950-1		. TIE ROD END, Steering							2
-33	4602-1		. NUT, Plain, hexagon 11/16-18 R.H.							2
-34	3900-221		. TUBE							2
-35	4250		. BRACKET, Spring front							2
-36	MS51922-41		. NUT, Self-locking							2
-37	MS90725-147		. SCREW, Cap							2
-38	4251		. BRACKET, Eye, non-rotating							2
-39	MS24665-353		. PIN, Cotter							2
-40	5403-1		. PIN, Special							2
-41	MS51922-37		. NUT, Self-locking							8
-42	5100-6		. U-BOLT, 1/2-20 thd, 1-3/4 x 4-5/8 inside							4
-43	5600-8		. PLATE, Tie.							2
-44	1-4010-2		. SPRING ASSEMBLY							2
-45	5800		. FITTING, Lubrication							4
-46	5000-1		. PIN, Spring (AP)							2
-47	5401		. KINGPIN, Steering							2
-48	3-3806		. SPINDLE, Wheel							1

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
30 -49	4-3806		.	SPINDLE, Wheel						1
-50	5800		.	FITTING, Lubrication						1
-51	4800-6		.	PIN, Cotter (AP)						1
-52	5400-1		.	PIN, Special (AP)						1
-53	4701-3		.	WASHER, Flat 1-3/16 In. I.D. x 2-1/4 . .						1
				In. O.D. x 1/8 (AP)						
-54	3854		.	CENTER ARM, Steering						1
-55	239-139X1		.	BEAM ASSEMBLY						1

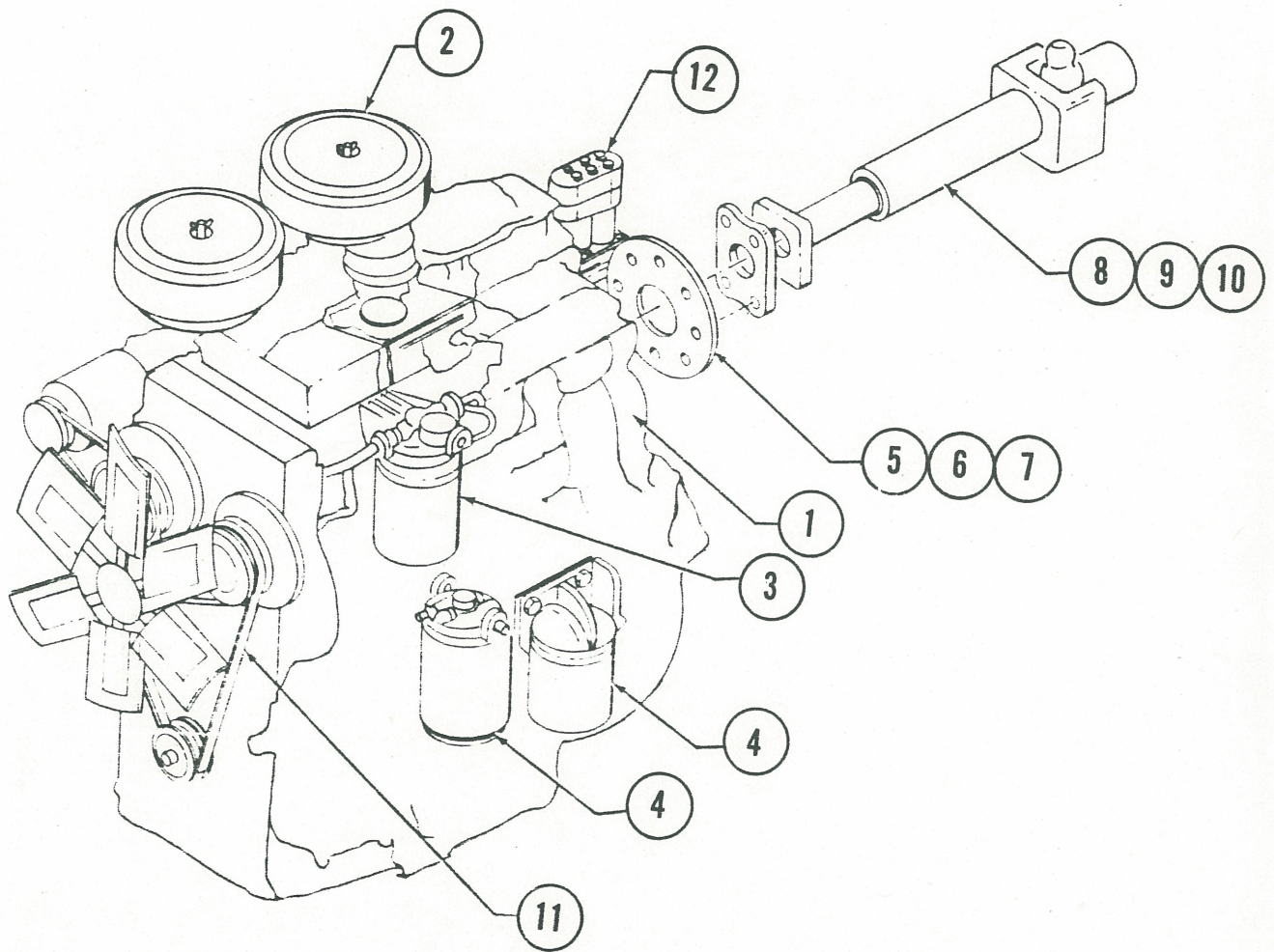


Figure 31. Diesel Engine Assembly

MJ-1 Figure & Index No.	Part Number	FSCM	Description							Units Per Assy
			1	2	3	4	5	6	7	
31-	10018		ENGINE, Diesel Assy (See figure 1 for NHA)							REF
-1	GM-5043700		. DIESEL ENGINE							1
-2	GP6M3273		. AIR CLEANER							1
-3	GP6G5618		. OIL FILTER ELEMENT.							1
-4	GP6M91690		. FUEL FILTER ELEMENT							2
-5	40195		. FLYWHEEL ADAPTER.							1
-6	MS35338-46		. WASHER, Lock (AP)							8
-7	MS90725-62		. BOLT (AP)							8
-8	40185		. DRIVESHAFT W/END YOKE							1
-9	MS90725-60		. SCREW, Cap, Hex Hd.							4
-10	MS35338-46		. WASHER, Lock (AP)							4
-11	05131395		. BELT, Fan							2
-12	GP6T-1665		. AIR COMPRESSOR ASSY							1