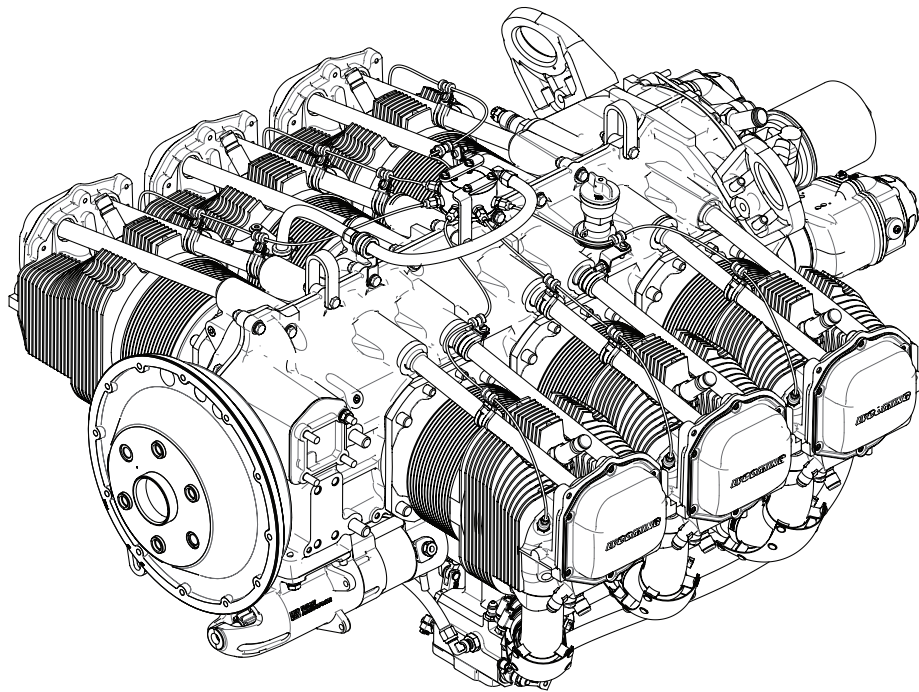


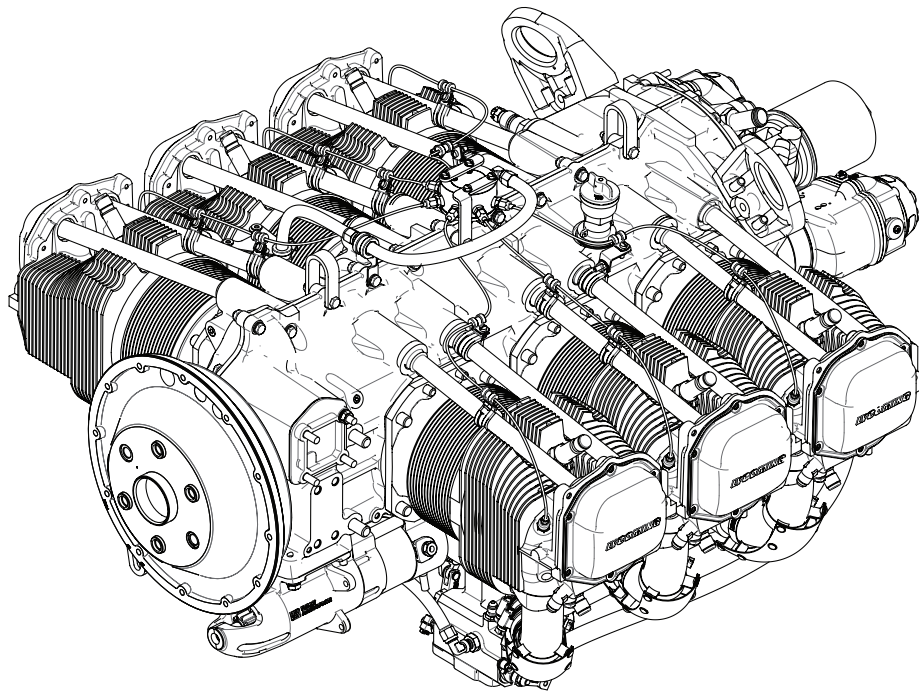
Lycoming Aircraft Engines Parts Catalog



IO-540 Wide Cylinder Flange Models

LYCOMING

Lycoming Aircraft Engines Parts Catalog



IO-540 Wide Cylinder Flange Models

LYCOMING

TECHNICAL PUBLICATION SUPPLEMENT

SUPPLEMENT No.	ENGINE MODEL	PUBLICATION No.	PUBLICATION DATE
SSP-192	IO-540 Series	PC-615	October, 1979

Insert in front of catalog for useage of subject matter.

Revised January, 1992

Page 4-3

Figure 20: Slick Magnetos, Harnesses, Drives And Spark Plugs

List page added for IO-540-C4D5

Page 4-4

Figure 20: Slick Magneto, Harnesses, Drives And Spark Plugs

Illustration page added for IO-540-C4D5

NOTE

For all other IO-540-C4D5 parts, refer to IO-540-C4B5 in this catalog.

IGNITION SYSTEM

SLICK MAGNETOS, HARNESSSES, DRIVES AND SPARK PLUGS

FIG. REF. 20	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-13641	CUSHION, Magneto drive	4
2	62224	GASKET, Magneto adapter	2
3	LW-12707	ADAPTER, Magneto, impulse coupling	2
4	LW-12681	GASKET, Magneto	2
5	66JC35SDNN *	MAGNETO, Impulse coupling (6251)	2
6	67U20639	HARNESS ASSY., Ignition, right (M-2961)	1
	67U20638	HARNESS ASSY., Ignition, left (M-2962)	1
7	76734	ZIP STRAP	AR
8	66M21195	CLAMP, Magneto	4
9	STD-475	WASHER, 5/16 lock, internal teeth	4
10	STD-1410	NUT, 5/16-18 plain	4
11	STD-713	PIN, Cotter, 3/32 x 3/4 long	2
12	1182-B3 * *	SPARK PLUG (Champion REM-40E)	12
13	LW-19096	GEAR RETAINER ASSEMBLY	2
14	67542	BEARING, Ball	2

* See latest edition of Service Instruction No. 1143 for complete listing of approved Slick Magnetos.

* * See latest edition of Lycoming Service Instruction No. 1042 for complete listing of all approved spark plugs.

BAG - MAGNETO HARNESS ATTACHING

P/N 01P19762-4

Part No.	Part Name	Qty.
01P19762-4	BAG - MAGNETO HARNESS ATTACHING	1
LW-16266-25-25	CLIP, 1 wire	4
LW-14060	CLIP, 2 wire	4
STD-8	WASHER, 1/4 plain	12
STD-160	WASHER, 1/4 lock	10
STD-1874	SCREW, 1/4 lock, rocker box	6
76734	ZIP STRAP	12
LW-16266-10-75	CLIP, 6 wire	2
LW-16266-25-44	CLIP, 4 wire	5
STD-696	WASHER, 1/4 thin	6
AN500-416-18	SCREW, 1/4 x 1-1/8 long	2
STD-1925	SCREW, 1/4 x 5/8 long	4
72815	BRACKET, Twist	4
STD-692	SCREW, No. 10 (bracket to clip)	4
STD-425	WASHER, No. 10 (bracket to clip)	4
STD-670	NUT, No. 10 (bracket to clip)	4
LW-M-2375	PLATE, 3 wire	2

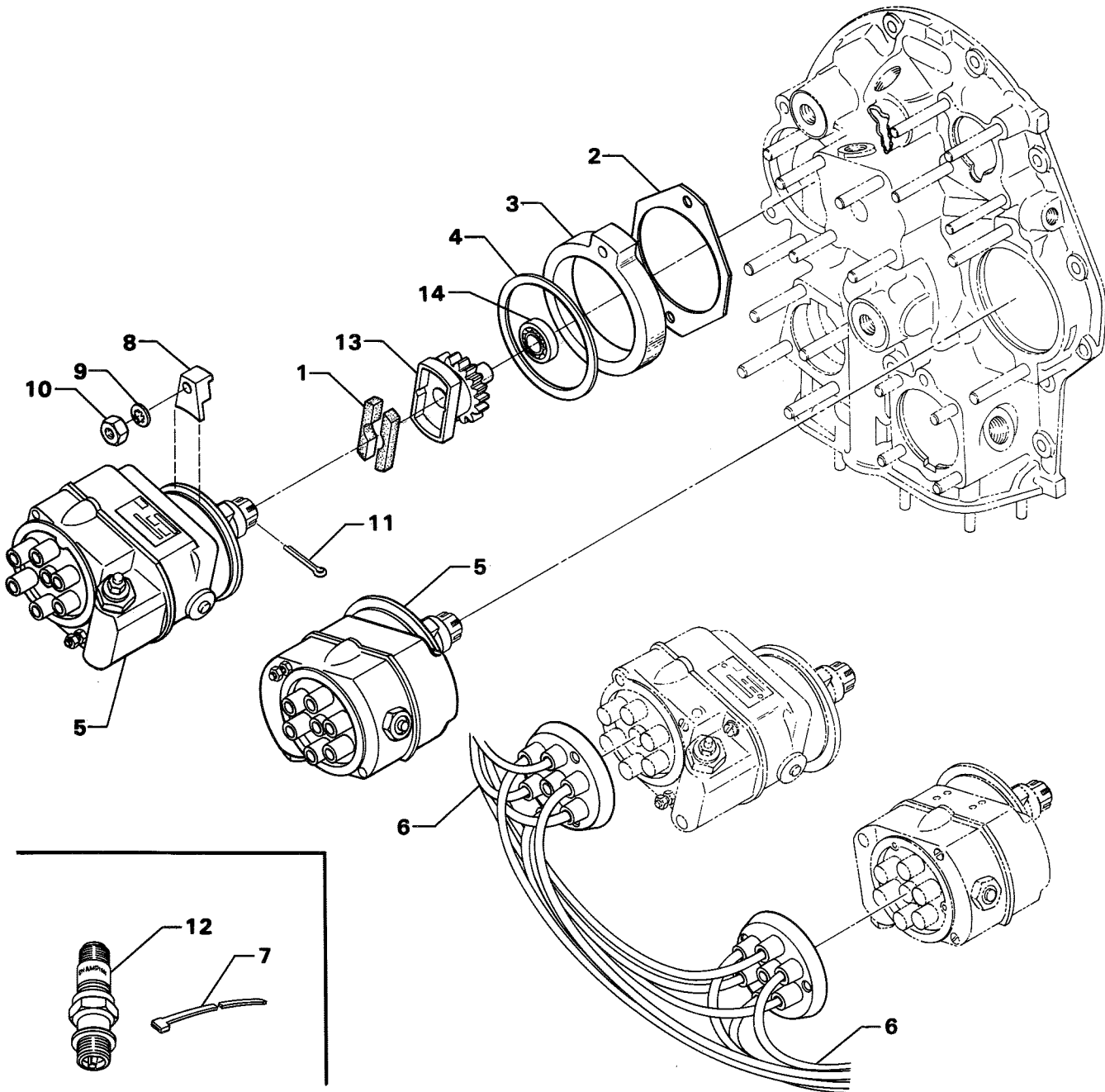


Figure 20. SLICK MAGNETOS, HARNESES, DRIVES AND SPARK PLUGS

Lycoming

652 Oliver Street
Williamsport, PA 17701 U.S.A.

TECHNICAL PUBLICATION SUPPLEMENT

SUPPLEMENT No.	ENGINE MODEL	PUBLICATION No.	PUBLICATION DATE
SSP-290	IO-540 Series	PC-615	October, 1979
This supplement is arranged in the same basic format as the original parts catalog Insert in front of catalog for useage of subject matter.			
Revised April, 1990			
Page 1-7			
Figure 5: Crankshaft, Camshaft And Related Parts			
List page added for IO-540-K2A5.			
Page 1-8			
Figure 5: Crankshaft, Camshaft And Related Parts			
Illustration page added for IO-540-K2A5.			
NOTE			
For all other parts, refer to IO-540-K1A5 in this catalog.			

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

CRANKSHAFT, CAMSHAFT AND RELATED PARTS

FIG. REF. 5	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	13F17792	CRANKSHAFT AND COUNTERWEIGHT ASSEMBLY	1
2	13F17767	CRANKSHAFT AND PLUG ASSEMBLY	1
3	STD-1211	PLUG, 2.00 dia. expansion	1
4	73810 *	BUSHING, Crankshaft dynamic counterweight	4
5	60945	PLUG, 1-1/4 diameter	1
6	75656-S	BUSHING, Propeller flange, long	1
7	72156-S	BUSHING, Propeller flange, long	4
8	75657-S	BUSHING, Propeller flange, indexing	1
9	STD-1065	DOWEL, Stepped, 5/16 x 1/4 dia. x 35/64 long	1
10	LW-19210 * *	COUNTERWEIGHT ASSEMBLY	2
11	71903 ★	BUSHING, Dynamic counterweight	8
12	76788 * *	ROLLER, Dynamic counterweight, 6.3 order	2
13	73648 * *	ROLLER, Dynamic counterweight, 5.1 order	2
14	LW-14820	RING, Internal retaining	8
15	71907	WASHER, Dynamic counterweight	8
16	13S19647 ●	GEAR, Crankshaft	1
17	LW-18638	LOCKPLATE, Crankshaft gear	1
18	STD-2209	BOLT, 5/16-24 x 1-3/4 long, hex. head	1
19	LW-19340	CAMSHAFT ASSEMBLY	1
20	76118	SPACER, Tachometer shaft centering	1
21	74997	SUPPORT ASSEMBLY, Starter ring gear, 12/14 pitch	1
22	72566	GEAR, Starter ring, 12/14 pitch	1

* See latest edition of Service Instruction No. 1142 for application.

* * See latest edition of Service Instruction No. 1012 for application.

★ See latest edition of Service Instruction No. 1143 for application.

● See latest edition of Service Bulletin No. 475 for application.

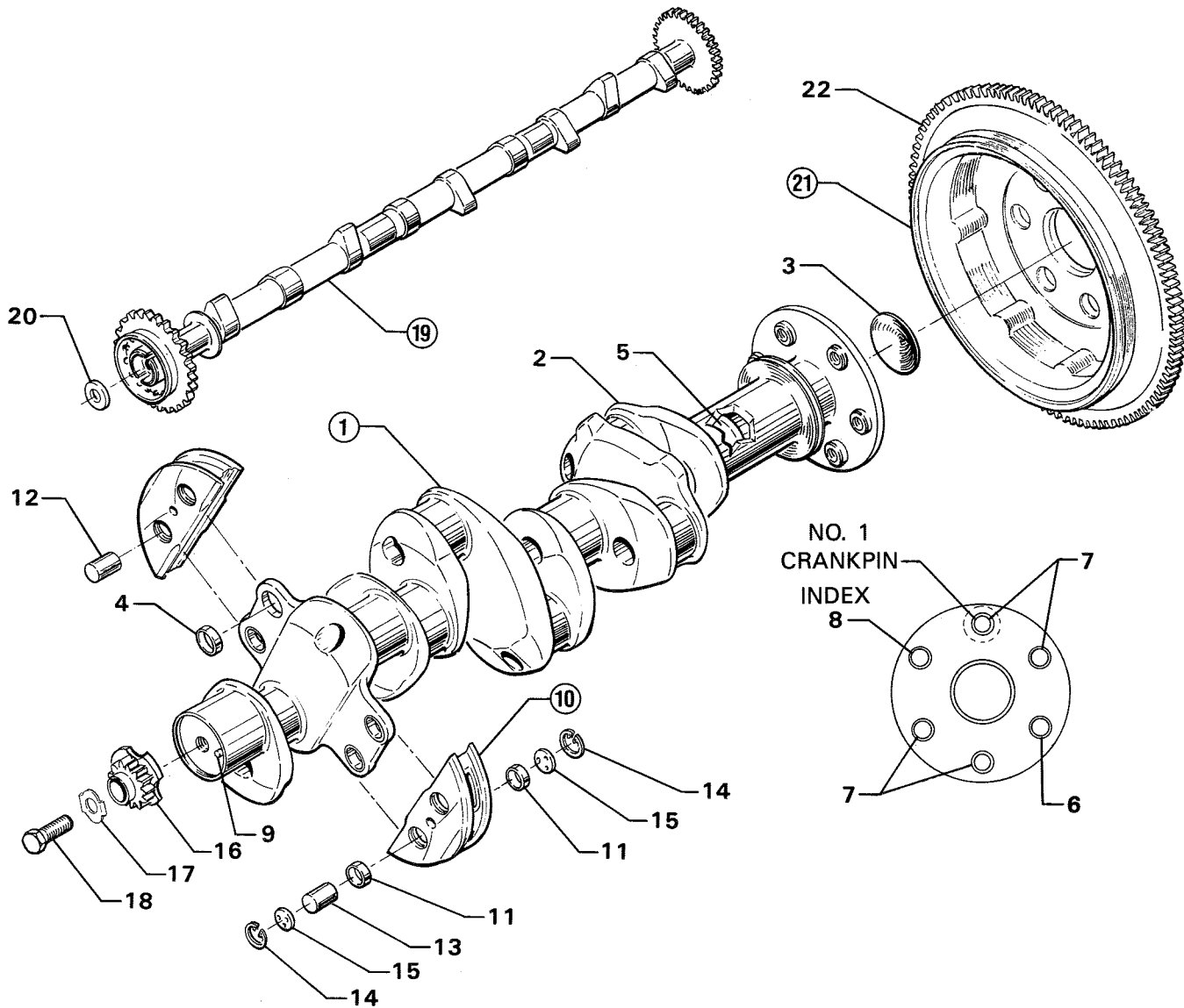


Figure 5. CAMSHAFT, CRANKSHAFT AND RELATED PARTS

Lycoming

652 Oliver Street
Williamsport, PA 17701 U.S.A.

TECHNICAL PUBLICATION SUPPLEMENT

SUPPLEMENT No.	ENGINE MODEL	PUBLICATION No.	PUBLICATION DATE
SSP- 1084-1	IO-540 Series	PC-615	October, 1979

This supplement is arranged in the same basic format as the original parts catalog.
Insert in front of catalog for useage of subject matter.

Revised January, 1985

Page 1

Figure 27A Oil Sump Assembly and Aerobatic
Components list page added for AEIO models.

Revised January, 1985

Page 2

Figure 27A Oil Sump Assembly and Aerobatic
Components illustration page added for AEIO models.

OIL SUMP AND INDUCTION SYSTEM

OIL SUMP ASSEMBLY AND AEROBATIC COMPONENTS

FIG. REF. 27A	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY											
				AEIO-540											
				D 4 A 5	D 4 B 5	L 1 B 5 D									
1	LW-13306	GASKET, Oil sump	1												
2	LW-13901	SUMP ASSY., Oil		1	1										
3	71699	CONNECTION, Intake pipe		6	6										
4	25C-11	STUD, 1/4-20 x 1-3/8 long		14	14										
5	31C-15	STUD, 5/16-18 x 1-7/8 long		4	4										
6	38-15	STUD, 3/8-16 x 1-7/8 long		8	8										
7	STD-1173	INSERT, 1/4-20 Heli-coil x 1/2 long		4	4										
8	STD-8	WASHER, 1/4 plain		34	34										
9	STD-160	WASHER, 1/4 lock, internal teeth		27	27										
10	STD-1419	BOLT, 1/4-20 x 1-1/8 long, hex. hd.		7	7										
11	STD-1688	BOLT, 1/4-20 x 1.00 long, hex. hd.		6	6										
12	STD-1411	NUT, 1/4-20 plain		21	21										
13	STD-551	PLUG, 1/2-14 NPT, Sq. hd., drilled		4	4										
14	LW-16975	SUMP & BAFFLE ASSY., Oil				1									
15	STD-8	WASHER, 1/4 plain				44									
16	STD-160	WASHER, Lock, internal teeth				27									
17	STD-1419	BOLT, 1/4-20 x 1-1/8 long, hex. hd.				17									
18	STD-1688	BOLT, 1/4-20 x 1.00 long, hex. hd.				6									
19	STD-1411	NUT, 1/4-20 plain				21									
20	STD-551	PLUG, 1/2-14 NPT, Sq. hd., drilled				1									
21	LW-16899	HOUSING ASSY., Induction				1									
22	STD-1164	INSERT, 5/16-18 x 5/8 long, helicoil				4									
23	1102	PLUG, 1/8-27 NPT, Allen head				3									
24	STD-1173	INSERT, 1/4-20 x 1/2 long, helicoil				4									
25	STD-8	WASHER, 1/4 plain				4									
26	STD-160	WASHER, 1/4 internal lock				4									
27	STD-2026	BOLT, 1/4-20 NC-3 x 3-7/8 long, hex. hd.				2									
28	STD-2025	BOLT, 1/4-20 NC-3 x 2-7/16 long, hex. hd.				2									
29	75444	ADAPTER ASSY., Fuel drain valve				2									
30	LW-13752	PLUG, Sump		1	1										
31	50004-111	RING, "O"		1	1										
32	LW-13888	SCREEN, Oil suction		1	1										
33	LW-13751	FITTING, Sump, oil suction		1	1										
34	50004-018	RING, "O"		1	1										
35	LW-13753	FITTING, Sump, oil strainer		1	1										
	LW-14250	FITTING, Sump, oil strainer, 90° elbow		1	1										
36	LW-13754	FITTING, Sump, oil return		1	1										
37	LW-13749	SEPARATOR, Oil	1												
38	LW-13902	TEE, Breather (See Figure 1 on Illustration Page)													
39	LW-13750	VALVE, Oil	1												
40	50004-027	RING, "O"	1												
41	LW-16339	ADAPTER, Oil screen, 1-1/2-18 to 7/8-14				1									
42	STD-1272	GASKET, 1-1/2 ID x 1-3/4 OD x 3/32 thick				1									
43	77644	SCREEN, Oil suction				1									
44	77155	ELBOW, 5/8 flared tube, adj. 90°				2									
45	LW-16918	FITTING, Sump, oil return, 90°				1									
46	LW-16878 *	ADAPTER, Breather (See Figure 2 on Illustration Page)													

NOTE

"Breather Option"

A visual check should be made to determine which optional installation is applicable on any given engine model.

* Not used if vacuum pump is installed.

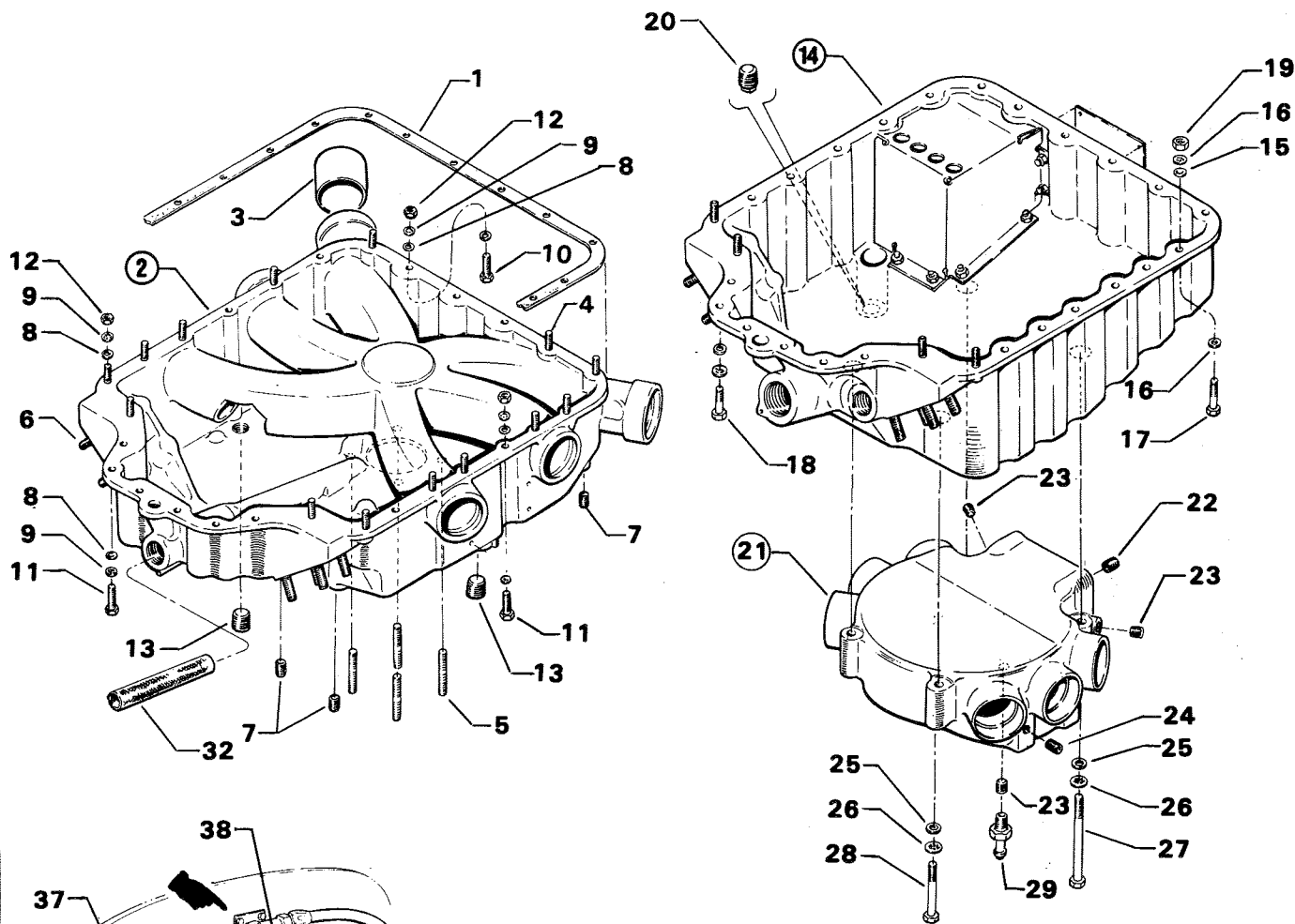


Figure 1

Inverted Oil System With Breather Tee

OVERBOARD
BREATHER
LINE

Figure 2

Inverted Oil System With Breather Adapter

Figure 27A. Oil Sump Assembly, Suction Screen and Aerobatic Components

SUPPLEMENTAL PARTS LIST SSP1080

To Provide Parts Coverage for Lycoming IO-540-AA1A5 & -M1B5D Model Aircraft Engines

This supplement offers a complete list for the IO-540-AA1A5 and the -M1B5D model engine. Page figure and reference numbers herein correspond to page, figure and reference numbers in PC-615.

When reference numbers in PC-615 are not listed here, it indicates those parts are not applicable to IO-540-AA1A5 & -M1B5D engines. Where parts are listed in this supplement without reference numbers, it indicates those parts are not illustrated in PC-615.

Use the Table of Contents in the original parts catalog PC-615 to find the page number and illustration of the desired parts. The corresponding page in this supplement lists the parts for the IO-540-AA1A5 & -M1B5D model engines.

IO-540-AA1A5 & -M1B5D

SECTION 1

Page 1-1 Crankcase Assembly

Ref. No.	Part No.	Description	Qty. Per Assy.	
			-AA1A5	-M1B5D
1	LW-13781	CRANKCASE ASSEMBLY	1	
	LW-14598	CRANKCASE ASSEMBLY		1
2	31C-12	STUD, 5/16-18 x 1-1/2 long	2	2
3	31C-13	STUD, 3/8-16 x 1-5/8 long	1	1
4	38-13	STUD, 3/8-16 x 1-5/8 long	24	28
5	38-16	STUD, 3/8-16 x 2.00 long	8	8
6	38-22	STUD, 3/8-16 x 2-3/4 long	1	1
7	38D-17	STUD, 3/8-16 x 2-1/8 long, drilled	1	1
8	50-15	STUD, 1/2-20 x 1-7/8 long	12	12
9	LW-13794	STUD, 5/16-18 x 1.00 long, drilled	1	
10	69796	DOWEL, Crankshaft bearing	2	2
11	LW-10647	DOWEL, Crankshaft bearing	6	
12	STD-514	DOWEL, 5/16 dia. x 1/2 long	2	2
13	STD-557	DOWEL, 1/2 dia. x 11/16 long	2	2
14	STD-1339	PLUG, 1/16-27 NPT	1	1
15	1102	PLUG, 1/8-27 NPT	4	4
16	65007	RETAINER, Shroud tube seal	12	12
17	72158	BUSHING, Gov. drive idler shaft	1	1
18	31C-14	STUD, 5/16-18 x 1-3/4	4	4
19	73772	NOZZLE ASSY., Piston cooling	6	6

Page 1-3 Oil Level Gages and Engine Mounting Brackets

1	70457	GASKET, Oil filler extension	1	1
2	77527	EXTENSION, Oil filler (short)	1	1
	74313	EXTENSION, Oil filler (short) (alternate)	1	1
3	72312	RING, Oil seal - 1.00 ID x 1/8 sect.	1	1
4	LW-14729	GAGE ASSEMBLY, Oil level	1	
	LW-16782-1	GAGE ASSEMBLY, Oil level		1
5	72306	BRACKET, Engine mounting	4	
	77289	BRACKET, Engine mounting		3
	77291	BRACKET, Engine mounting		1
6	STD-33	WASHER, 3/8 plain	16	16
7	STD-678	WASHER, 3/8 lock	16	16
8	STD-596	NUT, 3/8 plain	16	16

Page 1-5 Crankcase Related Parts

1	1028-B	BALL, 11/16 dia.	1	1
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IO-540-AA1A5 & -M1B5D

SECTION 1 (Cont.)

Page 1-5 (Cont.) Crankcase Related Parts

Ref. No.	Part No.	Description	Qty. Per Assy.	
			-AA1A5	-M1B5D
2	LW-11713	SPRING, Oil pressure relief valve	1	
	61084	SPRING, Oil pressure relief valve		1
4	STD-1045	GASKET, 1-1/4 ID x 1-3/64 OD x 3/32 annular	1	1
5	76159	PLUG, Oil relief valve - adj.	1	1
6	77808	VALVE ASSY., Oil pressure relief, adj.	1	1
	76162	INSERT, Oil pressure relief valve	1	1
	76161	CAP, Oil pressure relief valve	1	1
	77807	SCREW, Oil pressure, adj.	1	1
	AN310-6	NUT, 3/8-24 NF-3 (castellated)	1	1
	MS9048-100	PIN, Spring - 1/8 dia. x 1/2 long	1	1
7	LW-11575	BEARING, Crankshaft	6	
	LW-14830	BEARING, Crankshaft (clevite)		6
8	LW-13885	BEARING, Crankshaft, front	2	2
9	LW-15628	SEAL, Crankshaft oil	1	1
10	72091	RING, Oil seal, 23/64 ID x 7/64 dia. sect.	2	2
11	72877	BODY, Hydraulic tappet	12	12

Page 1-6 Propeller Governor Drive Assembly

1	LW-10442	GEAR, Propeller governor drive	1	1
2	LW-14021	SHAFT, Propeller governor idler gear	1	1
3	LW-10541	GEAR ASSY., Propeller governor idler	1	1
4	77872	BUSHING, Propeller governor idler gear	2	2
5	STD-19	DOWEL, 3/32 dia. x 7/32 long	1	1
6	STD-798	DOWEL, 3/32 dia. x 9/32 long	1	1
7	73249	WASHER, Thrust	1	1
	73250	WASHER, Thrust	un	un
	73251	WASHER, Thrust	un	un
	73252	WASHER, Thrust	un	un
8	AN565B1032H5	SET SCREW, No. 10-32 x 5/16 long	1	1
9	70455	GASKET, 25/32 ID x 1-1/8 OD x 1/16 thick	1	1
10	LW-13896	PLUG, 3/4-16 Hex hd.	1	1
11	72053	GASKET, Governor	1	1
12	72378	COVER, Governor drive	1	1
13	STD-35	WASHER, 5/16 plain	un	un
14	STD-475	WASHER, 5/16 lock	4	4
15	STD-1410	NUT, 5/16-18 plain	4	4

Page 1-7 Crankshaft, Camshaft and Related Parts

1	LW-17775	CRANKSHAFT & COUNTERWEIGHT ASSY.	1	
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IO-540-AA1A5 & -M1B5D

SECTION 1 (Cont.)

Page 1-7 (Cont.) Crankshaft, Camshaft and Related Parts

Ref. No.	Part No.	Description	Qty. Per Assy.	
			-AA1A5	-M1B5D
	LW-17783	CRANKSHAFT & COUNTERWEIGHT ASSY.		1
2	LW-17750	CRANKSHAFT ASSY.	1	
	LW-17758	CRANKSHAFT ASSY.		1
3	STD-1211	PLUG, 2.00 dia. expansion	1	1
4	73810	BUSHING, Crankshaft dynamic counterweight	4	4
5	60945	PLUG, 1-1/4 dia.	1	1
9	75656	BUSHING, Propeller flange, long	4	4
10	72155	BUSHING, Propeller flange, short	1	1
11	79024	BUSHING, Propeller flange, indexing	1	
	75657	BUSHING, Propeller flange, indexing		1
12	STD-1065	DOWEL, Stepped, 5/16 x 1/4 dia. x 1/2 long	1	
	STD-2078	DOWEL, 3/8 OD x 1/2 long		1
13	73644	COUNTERWEIGHT ASSY.	2	2
14	71903	BUSHING, Dynamic counterweight	8	8
15	76788	ROLLER, Dynamic counterweight - 6.3 order	2	2
16	76787	ROLLER, Dynamic counterweight - 5.1 order	2	2
17	LW-14820	RING, Internal retaining	8	8
18	71907	WASHER, Dynamic counterweight	8	8
19	LW-10284	GEAR, Crankshaft		1
	76786	GEAR, Crankshaft	1	
20	67516	LOCKPLATE, Crankshaft gear	1	
	LW-10332	LOCKPLATE, Crankshaft gear		1
21	STD-1937	SCREW, 5/16-24 x 1-3/4 long	1	
	AN8-14A	BOLT, 1/2-20 x 1-19/32 long		1
22	76148	CAMSHAFT	1	1
23	75030	SUPPORT ASSY., Starter ring gear, 12/14 pitch	1	
	77579	SUPPORT ASSY., Starter ring gear, 12/14 pitch		1
	74977	SUPPORT ASSY., Starter ring gear, 12/14 pitch		1
24	72566	GEAR, Starter ring, 12/14 pitch	1	1

Page 1-9 Crankshaft Idler Gears and Tachometer Drive

2	71668	GEAR ASSY., Crankshaft idler, plain	2	
3	67530	BUSHING, Crankshaft idler gear	2	
4	LW-10290	GEAR ASSY., Crankshaft idler		1
5	LW-10297	GEAR ASSY., Crankshaft idler (heavy idler)		1
	LW-10325	SPACER, Idler gear		1
7	LW-13795	SHAFT, Crankshaft idler gear	2	
8	STD-2167	SCREW, 5/16-18 x 7/8 long, hex hd. dr.	3	
9	STD-2168	NUT, 5/16-18 NC-3 slotted shear	1	
10	76155	SHAFT ASSY., Tachometer	1	1
11	78368	PIN, 3/16 dia. x 2-21/64 long	1	1

IO-540-AA1A5 & -M1B5D

SECTION 1 (Cont.)

Page 1-9 (Cont.) Crankshaft Idler Gears and Tachometer Drive

Ref. No.	Part No.	Description	Qty. Per Assy.	
			-AA1A5	-M1B5D
12	76118	SPACER, Tachometer shaft centering	1	1
13	MS16625-1081	RING, Internal retaining	1	1
14	61544	PLUNGER, Fuel pump		1

Page 1-10 Crankcase Attaching Parts

1	STD-1414	BOLT, 1/4-20 x 1-1/2 long	11	11
4	STD-8	WASHER, 1/4 plain	27	27
5	60803	STRAP, Lifting	2	2
6	STD-2084	BOLT, 1/4-20 x 1-3/4	2	2
7	STD-1419	BOLT, 1/4-20 x 1-1/8 long	4	4
8	STD-160	WASHER, 1/4 internal lock	16	16
9	STD-1411	NUT, 1/4-20 plain	12	12
10	STD-1416	BOLT, 1/4-20 x 1-1/2 long, hex hd. dr. end	6	6
11	STD-8	WASHER, 1/4 plain, max.	6	18
12	STD-1409	NUT, 1/4-20 slotted shear	6	6
13	STD-33	WASHER, 3/8 plain	1	1
14	STD-872	NUT, 3/8-24 slotted shear	1	1
15	AN6-34A	BOLT, 3/8-24 x 3-1/2 long, hex hd.	1	1
16	STD-33	WASHER, 3/8 plain	3	3
17	STD-678	WASHER, 3/8 lock, internal lock	2	2
18	STD-596	NUT, 3/8-24 plain	2	2
20	76220	STUD, 1/2-20 x 10-45/64	8	8

SECTION 2

Page 2-1 Accessory Housing Assembly

1	73818	GASKET, Accessory housing	1	1
2	LW-10641	HOUSING ASSY., Accessory	1	
3	LW-10916	HOUSING ASSY., Accessory		1
	LW-10917	HOUSING ASSY., Accessory	1	
4	61261	STUD, 5/16-18 x 2-1/8 long	4	
5	31CD-20	STUD, 5/16-18 x 2-1/2 long, dr.	3	3
6	31C-21	STUD, 5/16-18 x 2-5/8 long	4	2
7	31C-19	STUD, 5/16-18 x 2-3/8 long	4	
8	25C-21	STUD, 1/4-20 x 2-5/8 long	4	
9	25C-12	STUD, 1/4-20 x 1-1/2 long		8
10	67528	STUD, 5/16-18 x 1-5/8 long		3
11	STD-784	PLUG, 3/8 NPT	1	
12	1102	PLUG, 1/8-27 NPT	1	1

IO-540-AA1A5 & -M1B5D

SECTION 2 (Cont.)

Page 2-1 (Cont.) Accessory Housing Assembly

Ref. No.	Part No.	Description	Qty. Per Assy.	
			-AA1A5	-M1B5D
14	LW-10341	INSERT, Heli-coil 1.00-14 x 3/8		1
15	LW-12589	INSERT, Heli-coil 5/8-18 x 3/8		1
16	MS124703	INSERT, Heli-coil 3/8-16 x 1-1/8		1

Page 2-3 Oil Pump Assembly and Accessory Housing Attaching Parts

6	75287	BODY ASSY., Oil pump	1	
7	STD-1339	PLUG, 1/16-27 NPT	1	
8	61297	IMPELLER, Oil pump driving	1	1
9	61298	IMPELLER, Oil pump driven	1	1
10	76784	SHAFT, Oil pump drive	1	
11	LW-10344	BODY ASSY., Oil pump		1
12	61297	IMPELLER, Oil pump driving	1	1
13	61298	IMPELLER, Oil pump driving	1	1
14	LW-10318	GEAR ASSY., Oil pump drive		1
15	STD-35	WASHER, 5/16 plain	3	3
16	STD-1420	NUT, 5/16-18 slotted shear	3	3
17	LW-14260	SEAL, Tachometer drive oil	1	1
18	STD-8	WASHER, 1/4 plain	10	12
19	STD-160	WASHER, 1/4 lock	12	12
10	STD-1204	BOLT, 1/4-20 x 15/16 long	9	9
21	STD-1419	BOLT, 1/4-20 x 1-1/8 long	1	
22	STD-1931	BOLT, 1/2-20 x 1-7/8 long	2	
23	STD-1875	BOLT, 1/4-20 x 13/16 long		2
24	STD-1215	BOLT, 1/4-20 x 1-1/4 long		1

Page 2-5 Oil Filter Assembly and Oil Cooler Bypass Valve

2	LW-12795	GASKET, Oil filter adapter	2	
5	77852	OIL FILTER BASE ASSEMBLY	1	
6	25C-10	STUD, 1/4-20 x 1-1/4 long	1	
7	STD-8	WASHER, 1/4 plain	4	
8	STD-160	WASHER, 1/4 lock	1	
9	STD-1856	SCREW, 1/4-20 x 1.00 long	3	
10	STD-1411	NUT, 1/4-20 plain	1	
12	LW-10321	SPRING, Oil filter bypass valve		1
13	76539	SEAT, Oil relief valve		1
14	LW-10320	SLEEVE, Oil filter bypass valve		1
15	MS16625-1100	RING, Internal retaining		1
16	LW-13905	OIL FILTER, long (spin-on type)		1
	LW-13215	OIL FILTER, short (spin-on type)	1	

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SECTION 2 (Cont.)

Page 2-5 (Cont.) Oil Filter Assembly and Oil Cooler Bypass Valve

Ref. No.	Part No.	Description	Qty. Per Assy.	
			-AA1A5	-M1B5D
17	LW-13904	KIT, Converter plate, oil filter		1
18	75944	VALVE ASSY., Temp. control	1	1
	MS29513-138	SEAL, "O" ring, 2-7/64 ID x 7/64 section	1	
	LW-14445-11	VALVE ASSY., Absolute pressure relief	1	

Page 2-7 Vacuum Pump Drive Oil Cooler Fittings and Breather Fittings

1	61183	GASKET, Accessory adapter	1	
2	67536	ADAPTER ASSY., Vacuum pump	1	
3	STD-1774	DOWEL, 1/8 dia. x 1/4 long	1	
4	STD-208	SEAL, Oil 7/8 ID x 1-1/2 OD x 5/16 thick	1	1
5	72974	GEAR ASSY., Vacuum pump driven	1	
6	71596	WASHER, Accessory driven gear	1	1
7	LW-10307	GEAR ASSY., Vacuum pump driven		1
10	8313	GASKET, Vacuum pump pad	1	1
11	60430	COVER, Vacuum pump	1	1
12	STD-8	WASHER, 1/4 plain	4	4
13	STD-160	WASHER, 1/4 lock	4	4
14	STD-1411	NUT, 1/4-20 plain	4	4
15	STD-294	GASKET, 7/8 OD x 5/8 ID	1	
18	62417	PLUG, Oil cooler bypass	1	
19	71651	FITTING, Breather		1
	AN844-16D	FITTING, Breather 1.00 ID hose 45°	1	
20	MS29512-10	SEAL, Oil 3/32 section x 45/64 ID		1
21	AN814-10L	PLUG, 7/18-14 thd.		1
23	MS20823-8	ELBOW, 1/2 flared tube 45°	2	

Page 2-9 Hydraulic Pump Drive and Covers

3	72964	GEAR ASSY., Hydraulic	1	
4	71596	WASHER, Accessory drive gear	1	
5	68315	GASKET, Accessory drive gear	1	
6	LW-10807	ADAPTER ASSY., Hydraulic pump	1	
7	STD-208	SEAL, 7/8 ID x 1-1/2 OD x 5/16 wide	1	
8	25C-32	STUD, 1/4-20 x 1-1/2 long	4	
9	STD-1774	PIN, 1/8 dia. x 1/4 long	1	
10	STD-35	WASHER, 5/16 plain	4	
11	STD-475	WASHER, 5/16 lock	4	
12	STD-1410	NUT, 5/16-18 plain	4	
13	8313	GASKET, Hydraulic pump	1	
14	60430	COVER, Hydraulic pump	1	

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SECTION 2 (Cont.)

Page 2-9 (Cont.) Hydraulic Pump Drive and Covers

Ref. No.	Part No.	Description	Qty. Per Assy.	
			-AA1A5	-M1B5D
15	STD-8	WASHER, 1/4 plain	4	
16	STD-160	WASHER, 1/4 lock	4	
17	STD-1411	NUT, 1/4-20 plain	4	
18	LW-10806	SPACER, Hydraulic pump stud	4	
19	LW-10671	GEAR ASSY., Accessory driven		1
20	71596	WASHER, Accessory driven gear		1
21	STD-208	SEAL, Oil 7/8 ID x 1-1/2 OD x 5/16 wide		1
22	AN123857	"O" RING, 9/64 ID x 5/64 section		1
23	LW-14819	ADAPTER ASSY., Hydraulic pump		1
24	STD-1631	DOWEL, 11/64 dia. x 11/32 long		1
25	STD-8	WASHER, 1/4 plain		4
26	STD-160	WASHER, 1/4 lock		4
27	STD-1411	NUT, 1/4-20 plain		4
28	STD-35	WASHER, 5/16 plain		1
29	STD-475	WASHER, 5/16 lock		1
30	STD-1410	NUT, 5/16-18 plain		1
31	20415	GASKET, Hydraulic pump		1
32	72412	COVER, Hydraulic pump		1
33	STD-1828	BOLT, 5/16-18 x 1-5/16 long		2
	STD-35	WASHER, 5/16 plain		6
	STD-475	WASHER, 5/16 lock		4
	STD-1410	NUT, 5/16-18 plain		4

Page 2-11 Fuel Pump and Fuel Pump Drives

1	LW-15473	FUEL PUMP (6441234)		1
2	60096	GASKET, Fuel pump		1
3	STD-33	WASHER, 3/8 plain		2
4	STD-1882	SCREW, 3/8-16 x 1-9/32 long, socket hd. dr. hd.		2
5	LW-10799	SPACER, Fuel pump insulating	1	
6	LW-13909	PUMP, Fuel (RG9080-J4A)	1	
7	STD-35	WASHER, 23/64 plain	4	
8	STD-475	WASHER, 23/64 internal lock	4	
9	STD-1410	NUT, 23/64-18 plain	4	
10	72246	SHAFT, Fuel pump idler gear	1	
11	71667	LOCKPLATE	1	
12	STD-705	SCREW, 1/4-20 x 11/16 long, hex hd.	2	
13	71664	GEAR ASSY., Fuel pump idler	1	
14	77309	BUSHING, Crankshaft idler gear	1	
15	70474	WASHER, Fuel pump gear thrust	1	
16	STD-1737	RING, 37/64 ID dia. x 3/64 thick, external retaining	1	
17	69164	GASKET, Fuel pump adapter	1	

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SECTION 2 (Cont.)

Page 2-11 (Cont.)
Fuel Pump and Fuel Pump Drives

Ref. No.	Part No.	Description	Qty. Per Assy.	
			-AA1A5	-M1B5D
18	72972	SHAFT GEAR ASSY., Fuel pump drive	1	
19	69159	ADAPTER ASSY., Fuel pump drive	1	
20	STD-1774	PIN, 1/8 dia. x 1/4 long	1	
21	STD-213	SEAL, Oil, 3/4 ID x 1-3/8 OD	1	

SECTION 3

Page 3-1
Connecting Rod, Piston and Ring Assemblies

1	LW-10646	CONNECTING ROD ASSY.	6	6
2	LW-13923	BUSHING, Connecting rod	6	6
3	75061	BOLT, Connecting rod	12	12
	75060	BOLT, Connecting rod	12	12
4	LW-12186	NUT, Connecting rod bolt	12	12
5	LW-14954	BEARING, Connecting rod	12	12
6	LW-10545	PISTON, Compression ratio 7.30:1	6	
	LW-10207	PISTON, Compression ratio 8.7:1		6
7	74241	RING, Piston compression	12	12
8	73857	RING, Piston oil regulating	6	6
9	LW-14078	PIN, Piston	6	6
10	60828	PLUG, Piston pin	12	12

Page 3-3
Cylinder Assembly

1	LW-12997	CYLINDER & HEAD ASSY., Nitrided		6
	LW-12988	CYLINDER & HEAD ASSY., Nitrided	6	
2	LW-12688	SEAT, Intake valve	6	6
3	71894	SEAT, Exhaust valve	6	6
4	LW-11956	GUIDE, Valve intake	6	6
5	LW-11957	GUIDE, Valve exhaust		6
	LW-11958	GUIDE, Valve exhaust, ni-resist	6	
6	69260	INSERT, Spark plug, long reach	12	12
7	STD-1872	INSERT, 1/8-27 Heli-coil NPT	6	6
	72706	INSERT, Heli-coil, 1/4-20 NC x 3/8 long (self locking)		24
8	31C-13	STUD, 5/16-18 x 1-5/8 long	12	
	31C-10	STUD, 5/16-18 x 1-1/4 long		18
10	25C-8	STUD, 1/4-20 x 1.00 long	24	
11	66610	BUSHING, Rocker shaft		6
	66670	BUSHING, Rocker shaft	24	18
12	MS20823-6D	ELBOW, 45° x 3/8 flared tube	6	6

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SECTION 3 (Cont.)

Page 3-3 (Cont.) Cylinder Assembly

Ref. No.	Part No.	Description	Qty. Per Assy.	
			-AA1A5	-M1B5D
13	72343	STABILIZER, Cylinder head fins - 15 teeth	6	
	72344	STABILIZER, Cylinder head fins - 26 teeth	6	
	75151	STABILIZER, Cylinder head fins		6
	75152	STABILIZER, Cylinder head fins		6
	75164	STABILIZER, Cylinder head fins		6
	1102	PLUG, 1/8-27 NPT, Allen	6	6

Page 3-5 Valve Assembly

1	LW-13622	VALVE, Intake	6	6
2	73111	VALVE, Exhaust rotator type		6
	LW-11167	VALVE, Exhaust rotator type	6	
3	LW-11797	SPRING, Valve inner	12	12
4	LW-11796	SPRING, Valve outer	12	12
5	LW-13321	SEAT, Valve spring, lower intake	6	6
6	69532	SEAT, Valve spring, upper intake	6	6
7	LW-13322	SEAT, Valve spring, lower exhaust	6	6
8	LW-16475	SEAT, Valve spring, upper exhaust (rotator type)	6	6
9	72050	KEY, Valve intake	12	12
10	62388	CAP, Valve stem	6	6
11	MS13997-3	KEY, Valve exhaust (rotator type)	12	12
12	MS13998-3	CAP, Valve stem exhaust (rotator type)	6	6
13	78290	PLUNGER ASSY., Hydraulic tappet	12	12
14	78524	SOCKET, Push rod hydraulic tappet	12	12
15	72255	SHROUD TUBE ASSY., Push rod	12	6
	72257	SHROUD TUBE ASSY., Push rod (exhaust)		6
16	LW-13077	SPRING, Shroud tube	24	24
19	66728	WASHER, 3/4 ID x 1-1/4 OD x 1/32 (Max. 24)	24	24
20	61503	SLEEVE, Shroud tube seal	12	12
22	62922	SEAL, Shroud tube	24	24

Page 3-7 Cylinder Related Parts

1	73455	ROD ASSEMBLY, Push (intake)	un	un
	73456	ROD ASSEMBLY, Push (intake)	un	un
	73457	ROD ASSEMBLY, Push (intake)	un	un
	73458	ROD ASSEMBLY, Push (intake)	un	un
	73445	ROD ASSEMBLY, Push (exhaust)	un	un
	73446	ROD ASSEMBLY, Push (exhaust)	un	un
	73447	ROD ASSEMBLY, Push (exhaust)	un	un

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SECTION 3 (Cont.)

Page 3-7 (Cont.) Cylinder Related Parts

Ref. No.	Part No.	Description	Qty. Per Assy.	
			-AA1A5	-M1B5D
	73448	ROD ASSEMBLY, Push (exhaust)	un	un
4	67113	ROCKER ASSY., Valve intake	6	6
5	67114	BUSHING, Valve rocker intake	6	6
8	67112	ROCKER ASSY., Exhaust valve	6	
	72630	ROCKER ASSY., Exhaust valve		6
9	67114	BUSHING, Valve rocker exhaust	6	
	72705	BUSHING, Valve rocker exhaust		6
10	71549	WASHER, Valve rocker	12	12
11	72626	SHAFT, Valve rocker	12	12
14	66732	GASKET, Valve rocker shaft cover	12	12
15	66731	COVER, Valve rocker shaft	12	
	72710	COVER, Valve rocker shaft		12
16	STD-160	WASHER, 1/4 lock	24	
17	STD-1411	NUT, 1/4-20 plain	24	
18	71450	GASKET, Rocker box cover		6
	67193	GASKET, Rocker box cover	6	
19	72242	COVER, Rocker box		6
	68795	COVER ASSY., Rocker box	6	
20	STD-1925	SCREW, 1/4-20 x 5/8 self-locking	48	54
	72709	SCREW, 1/4-20 x 5/8 self-locking		24
21	74494	PLATE, Spark plug reach caution	6	6
22	71481	RING, Oil seal	6	6
23	77906	SPACER, 1/2 ID x 7/8 OD x 1/8 thick	2	2
24	74887	SPACER, 1/2 ID x 7/8 OD x 3/8 thick	2	2
25	383-B	NUT, 3/8-24 plain	24	24
26	STD-290	NUT, 1/2-20 plain	28	28
27	65321	GASKET, Exhaust flange	6	
	77611	GASKET, Exhaust flange	6	
28	61260	FLANGE, Exhaust, stainless	6	
29	STD-35	WASHER, 5/16 plain	12	
30	STD-475	WASHER, 5/16 lock	12	
31	STD-1410	NUT, 5/16-18 plain	12	

Page 3-9 Cylinder Head Drain Tubes and Intercylinder Cooling Baffles

1	STD-684	NIPPLE, Straight, 3/8 ID hose	6	6
2	STD-2180	HOSE, 3/8 ID x 1-13/16 long	6	6
3	LW-15592-5-05	CLAMP, Hose	12	12
4	72702	TUBE ASSY., No. 1 cylinder	1	1
	72703	TUBE ASSY., No. 2 cylinder	1	1
	73027	TUBE ASSY., No. 3,4,5,6 cylinder head oil drain	4	4

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SECTION 3 (Cont.)

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Cylinder Head Drain Tubes and Intercylinder Cooling Baffles

Ref. No.	Part No.	Description	Qty. Per Assy.	
			-AA1A5	-M1B5D
5	72918	BAFFLE ASSY., Intercylinder coding		4
	LW-10610	BAFFLE & CLIP ASSY., Cyls. No. 1 & 6	2	
	LW-10611	BAFFLE & CLIP ASSY., Cyls. No. 2 & 5	2	
	74718	BAFFLE ASSY., Intercylinder	2	
6	LW-10608	CLIP, Intercylinder baffle	4	
7	LW-10609	RIVET, Baffle clip	4	
8	71611	RETAINER, Intercylinder baffle	4	4
9	71610	HOOK, Intercylinder baffle	4	4
10	72834	COVER, Baffle ignition hole	4	4
11	STD-692	SCREW, No. 10-32 x 1/2 long	8	8
12	STD-670	NUT, No. 10-32 self-locking	8	
13	65614	PLUG, Baffle attaching	4	
14	STD-251	WASHER, No. 10 lock	4	
15	STD-1686	SCREW, No. 10-32 x 7/16 long, fill. hd.	4	

SECTION 4

Page 4-1

Magneto Drives and Magnetos

1	LW-13642	GEAR RETAINER, Magneto drive		1
2	LW-13641	CUSHION, Magneto drive		2
3	LW-12681	GASKET, Magneto		1
4	LW-685126-109	MAGNETO, Ignition system (D6LN-3031)		1
	LW-682560-13	MAGNETO, Ignition		1
	LW-684604-103	HARNESS, Ignition		1
5	75965	CLAMP, Magneto		2
6	STD-475	WASHER, 5/16 lock		2
7	STD-1410	NUT, 5/16-18 plain		2
	MS25082-6	NUT, 3/8-24 UNF-3 (thin)		2
10	LW-14057	CLIP, 1 wire for 1/4 screw		6
	LW-620028-3	CLIP, 2 wire for 1/4 screw		6
13	LW-620029-6	CLIP, 3 wire for 10-32 screw		1
	LW-320472-3	CLIP, 6 wire		2
14	LW-620037-4	CLIP, 6 wire for 10-32 screw		1
	LW-620036-1	CLIP, 6 wire		3
20	STD-692	SCREW, 10-32		1
21	STD-670	NUT, 10-32		1
	76505	BRACKET		1
23	76734	ZIP STRAP		31
27	STD-1925	SCREW, 1/4-20 self-locking		12
29	LW-382698	KIT, Magneto ground terminal		2

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SECTION 4 (Cont.)

Page 4-3 Magneto Drives and Magnetos

Ref. No.	Part No.	Description	Qty. Per Assy.	
			-AA1A5	-M1B5D
1	67542	BEARING, Ball	2	
2	74830	GEAR RETAINER, Magneto drive	2	
3	LW-12136	CUSHION, Magneto drive	4	
4	62224	GASKET, Magneto adapter	2	
5	LW-12707	ADAPTER, Magneto	2	
6	LW-12681	GASKET, Magneto	2	
7	73000	COUPLING, Magneto drive	1	
	73636	COUPLING, Magneto (right magneto)	1	
8	LW-349290-1	MAGNETO, S6LN-1208	1	
	LW-349310-1	MAGNETO, S6LN-1209	1	
9	75965	CLAMP, Magneto	4	
11	STD-475	WASHER, 5/16 lock	4	
12	STD-1410	NUT, 5/16-18 plain	4	

Page 4-5 Ignition Harness and Spark Plugs

21	STD-696	WASHER, 1/4 plain (thin)	un	
31	LW-720515-3	HARNESS ASSY., Ignition	1	
32	1182-K4	SPARK PLUG, (Champion RHB36W), iridium	12	
	1182-W5	SPARK PLUG, (Champion RHB37E)		12

SECTION 5

Page 5-1 Alternator Mounting Brackets (Prestolite 24V - 100 Amp. Dual Belt)*

Ref. No.	Part No.	Description	Qty. Per Assy.		
			-AA1A5	-M1B5D	-M1B5D*
1	LW-13039	BRACKET, Alternator		1	
2	77756	BRACKET, Alternator	1		
	LW-14141	BRACKET, Alternator - front			1
	LW-14142	BRACKET, Alternator - rear			1
3	73383	LOCKPLATE, 5/16 bolt x 1.00 spacing	1	1	2
4	STD-1838	BOLT, 5/16-18 x 15/16 long	2	2	4
5	75380	LINK, Alternator, adjusting		1	
	74323	STRUT, Alternator support		1	
	LW-3111.75	BOLT, 5/16-18 x 3/4 long, hex hd. dr.		3	
	STD-35	WASHER, 5/16 plain		1	
7	77757	BRACKET, Alternator belt, adjusting	1		

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SECTION 5 (Cont.)

Page 5-1 (Cont.)
Alternator Mounting Brackets
(Prestolite 24V - 100 Amp. Dual Belt)*

Ref. No.	Part No.	Description	Qty. Per Assy.		
			-AA1A5	-M1B5D	-M1B5D*
8	LW-11147	BRACKET, Alternator belt adjusting			1
	STD-1727	WASHER, Plain, 3/4 OD x 5/16 ID x 1/8 thick	1	1	1
9	LW-14637	SHIM, 13/16 OD x 15/16 ID x .005 thick	un		un
10	LW-14649	SHIM, 13/16 OD x 5/16 ID x .010 thick	un		un
11	STD-1889	BOLT, 5/16-18 x 1-1/4 long, drilled	1		1
12	78639	PULLEY & SHAFT ASSY., Alternator belt adj.	1		
	LW-10578	PULLEY & SHAFT ASSY., Alternator dual belt, adj.			1
13	78614	PULLEY, Alternator belt adj.	1		
	76420	PULLEY, Alternator idler, dual			1
	LW-10576	SHAFT, Alternator dual belt idler			1
	LW-10970	STRUT, Alternator support			1
	LW-31H.75	BOLT, 5/16-18 x 3/4 long, hex hd. drilled			1
	LW-14650	SHIM, 7/8 OD x 15/32 ID x .005 thick			un
	AN7-14	BOLT, 7/16-20 UNF-3A x 1-19/32 long, drilled end			1
	STD-632	WASHER, 7/16 plain			un
	AN310-7	NUT, 7/16-20 plain, slotted			2
	STD-761	PIN, Cotter, 3/32 dia. x 1.00 lg.			2
	AN7-12	BOLT, 7/16-20 UNF-3A x 1-11/32 lg. drilled end			1
14	78629	BALL BEARING, Alternator idler pulley	1		1
15	MS16625-1125	RING, Internal retaining	2		2
16	78617	IDLER SHAFT, Alternator belt, adj.	1		
17	76768	LOCKWASHER, Alternator idler pulley bearing	1		1
18	76769	LOCKNUT, Alternator idler pulley bearing	1		1
19	STD-669	WASHER, 1/2 ID x 1.00 OD x 1/8 thick	1		1
20	STD-676	NUT, 1/2-20 self-locking	1		1
21	STD-1727	WASHER, Plain, 3/4 OD x 5/16 ID x 1/8 thick	1		1
22	LW-14637	SHIM, 13/16 OD x 5/16 ID x .005 thick	un		un
23	STD-1889	BOLT, 5/16-18 x 1-1/4 long, drilled	1		1

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SECTION 5 (Cont.)

Page 5-1 (Cont.) Alternator Mounting Brackets (Prestolite 24V - 100 Amp. Dual Belt)*

Ref. No.	Part No.	Description	Qty. Per Assy.		
			-AA1A5	-M1B5D	-M1B5D*
24	LW-10952	SHIM, 13/16 OD x 7/16 ID x .005 thick	un		
25	AN6-12	BOLT, 3/8-24 x 1-5/16 drilled end	1		
26	AN6-14	BOLT, 3/8-24 x 1-19/32 drilled end		1	
27	STD-690	WASHER, 13/16 OD x 3/8 ID x 1/16 thick	un	un	
28	STD-872	NUT, 3/8-24 slotted	2	2	
29	STD-713	PIN, Cotter, 3/32 x 3/4 long	2	2	
31	AN6-16	BOLT, 3/8-24 x 1-13/16 drilled end	1	1	
32	76534	SHIM, 1-1/8 OD x 7/16 ID x .005 thick	un		

Page 5-3 Alternators, Regulators and Drive Belts

Ref. No.	Part No.	Description	Qty. Per Assy.	
			-AA1A5	-M1B5D
1	LW-14308	ALTERNATOR, 24 volt - 70 Amp. (ALU-8421) (externally grounded)	1	1
	LW-10967	ALTERNATOR ASSY., 24 volt - 100 Amp.		1
	76421	ALTERNATOR PULLEY, Dual belt		1
2	76026	BELT, Alternator drive (3/8 wide)		1
	74519	BELT, Alternator drive (3/8 wide)	1	
	LW-10971	BELT, Alternator drive, dual idler pulley take-up (two matched belts)		1
3	LW-10179	REGULATOR, 24 volt - full transistor (VSF-7403)		1

Page 5-4 Starting Motor and Magnetic Switch

1	LW-15572	STARTER, 24 volt (3.38:1 internal reduction)(12/14 p. pinion) (MHB-4016)	1	1
2	STD-35	WASHER, 5/16 plain	4	4
3	STD-475	WASHER, 5/16 lock, internal teeth	4	4
4	STD-2156	BOLT, 5/16-18 x 1-5/32	1	1
5	STD-1410	NUT, 5/16-18 plain	3	3

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SECTION 6

Page 6-1 Oil Sump Assembly

Ref. No.	Part No.	Description	Qty. Per Assy.	
			-AA1A5	-M1B5D
1	LW-13306	GASKET, Oil sump	1	1
2	LW-13232	HOUSING ASSY., Oil sump & induction		1
	LW-14946	HOUSING ASSY., Oil sump & induction	1	
3	STD-514	DOWEL, 5/16 dia. x 1/2	2	2
4	72179	STUD, Intake pipe extensions	3	3
5	72167	PIPE, Extension - intake cylinders no. 1 & 2	2	2
6	72168	PIPE, Extension - intake cylinders no. 3 & 4	2	2
7	72169	PIPE, Extension - intake cylinders no. 5 & 6	2	2
8	LW-11273	CLAMP, Intake pipe extension	3	3
9	25C-9	STUD, 1/4-20 x 1-1/8 long	4	4
10	25C-11	STUD, 1/2-20 x 1-3/8 long	15	15
11	38-15	STUD, 3/8-16 x 1-7/8 long		8
	38-17	STUD, 3/8-16 x 2-1/8 long	8	
12	72706	INSERT, Heli-coil, 1/4-20 x 3/8 long, self-lock	14	14
13	1102	PLUG, 1/8 NPT Allen head	5	2
14	STD-91	PLUG, 1/2-14 NPT Allen head	1	1
15	STD-784	PLUG, 3/8-18 NPT Allen head	1	1
16	STD-355	PLUG, 3/4-14 NPT Allen head	2	2
17	STD-8	WASHER, 1/4 plain	29	29
18	STD-160	WASHER, Lock, internal teeth	23	23
19	STD-1646	BOLT, 1/4-20 x 2.00 long, hex head	2	2
20	STD-1688	BOLT, 1/4-20 x 1.00 long, hex head	10	10
21	STD-1411	NUT, 1/4 plain	13	13
22	STD-589	GASKET, Annular, 1-1/8 OD x 29/32 ID x 1/16	1	1
24	72960	PLUG, 7/8-14 x 5/8 hex head	1	1
25	STD-1875	BOLT, 1/4-20 x 13/16 long	4	4
26	STD-8	WASHER, 1/4 plain	37	37
27	STD-160	WASHER, Lock, internal teeth	23	23
28	STD-1419	BOLT, 1/4-20 x 1-1/8 long, hex head	6	6
29	STD-1688	BOLT, 1/4-20 x 1.00 long, hex head	8	8
30	STD-1411	NUT, 1/4-20 plain	25	25
31	STD-551	PLUG, 1/2-14 NPT sq. hd., drilled	2	2
32	LW-13383	BAFFLE, Oil sump	1	1
33	LW-13384	SUPPORT, Oil sump baffle	4	4
34	LW-13385	SUPPORT, Oil sump baffle	2	2
35	STD-425	WASHER, 7/16 OD x 13/64 ID x 1/16 thick	6	6
36	STD-1686	SCREW, No. 10-32 x 7/16 long, fill. hd.	6	6
37	75444	ADAPTER ASSY., Fuel drain valve		2
	LW-13807	ADAPTER ASSY., Fuel drain valve	1	
38	60422	SCREEN, Oil suction	1	1
39	STD-111	GASKET, 1.00 ID x 1-1/4 OD x 3/32	1	1
40	LW-12545	PLUG, 5/8 hex hd. x 1.00-20 thread	1	1

IO-540-AA1A5 & -M1B5D

SECTION 6 (Cont.)

Page 6-4 Oil Sump Assembly

Ref. No.	Part No.	Description	Qty. Per Assy.	
			-AA1A5	-M1B5D
14	61548	NAMEPLATE	1	1
15	STD-1901	DRIVE STUD, No. 4 x 3/16 long, round hd.	4	4

Page 6-5 Intake Pipes and Air Inlet Housing

4	71973	GASKET, 2 bolt flange - 1-7/8 ID	6	6
5	74360	FLANGE, Intake pipe, upper	6	6
6	STD-8	WASHER, 1/4 plain	12	12
7	STD-160	WASHER, 1/4 lock, internal teeth	12	12
8	STD-1215	BOLT, 1/4-20 x 1-1/4 long, hex hd.	12	12
9	72711	RING, Seal, intake pipes	6	6
10	LW-12191	PIPE, Intake - cylinder no. 1	1	1
11	LW-12192	PIPE, Intake - cylinder no. 2	1	1
12	LW-12193	PIPE, Intake - cylinder no. 3	1	1
13	LW-12194	PIPE, Intake - cylinder no. 4 & 5	2	2
14	LW-12195	PIPE, Intake - cylinder no. 6	1	1
16	72210	GASKET, Air throttle housing	1	1
17	73031	HOUSING ASSY., Air inlet		1
20	LW-15730	HOUSING ASSY., Air inlet	1	
21	31C-14	STUD, 5/16-18 x 1-3/4 long	4	4
22	1102	PLUG, 1/8 pipe, Allen head	1	
23	STD-8	WASHER, 1/4 plain		6
24	STD-1875	BOLT, 1/4-20 x 13/16 long, hex hd.	6	6

Page 6-7 Fuel Injectors, Fuel Manifolds and Injector Nozzles

2	73032	GASKET, Air inlet housing	1	1
4	79034	FUEL INJECTOR, (2524422-7)		1
	LW-16954	FUEL INJECTOR, (2524846-1)	1	
5	STD-35	WASHER, 5/16		3
6	STD-1727	WASHER, Plain, 3/4 OD x 21/64 ID x 1/8 thick		1
	STD-1727	WASHER, 1/8 thick	4	
7	STD-475	WASHER, 5/16 internal lock		4
8	STD-1410	NUT, 5/16-18 plain	4	4
9	STD-1763	LOCKNUT, 5/16 palnut	4	
12	LW-10476	NOZZLE ASSY., Manifold air bleed (2524369-1)		6
	LW-10475	NOZZLE ASSY., Manifold air bleed (2524370-1)	6	
13	MS29512-6	SEAL, Oil, 5/64 dia. section x 15/32 ID		1
14	AN919-6	REDUCER, Flared tube (1/4 tubing)		1
	AN924-6	NUT, Flared tube, bulkhead fitting		1

IO-540-AA1A5 & -M1B5D

SECTION 6 (Cont.)

Page 6-7 (Cont.)

Fuel Injectors, Fuel Manifolds and Injector Nozzles

Ref. No.	Part No.	Description	Qty. Per Assy.	
			-AA1A5	-M1B5D
15	76779	ADAPTER, Injector - fuel outlet		1
	76364	ELBOW & BUSHING ASSY., 45°		1
	AN929-3	CAP ASSY., 3/16 flared tube fitting		1

Page 6-8

Fuel Injectors, Fuel Manifolds and Injector Nozzles

15	79007	MANIFOLD ASSY., Fuel	1	
16	MS20823-4	ELBOW, 1/4 tube, 1/8 NPT 45°	1	
17	AN780-2	NIPPLE, Union, 1/8 NPT	6	
18	75447	NIPPLE, 3/16 tube to 1/8 NPT, restricted	1	
24	73966	SPACER, Fuel manifold bracket	2	
25	73965	BRACKET, Fuel manifold	2	
26	STD-251	WASHER, No. 10 lock, internal teeth	4	
27	STD-82	SCREW, No. 10-24 x 1/2 long, fill hd. dr.	4	
28	75414	BRACKET, Fuel manifold		2
29	STD-160	WASHER, 1/4 lock, internal teeth		2
30	STD-1411	NUT, 1/4-20 plain		2
	76778	MANIFOLD ASSY., Fuel, right		1
	AN780-2	NIPPLE, Union, 1/8 tube		4
	MS20822-4	ELBOW, 1/4 flared tube, 1/8 NPT 90°		2
	STD-2166	ELBOW, Union		2
	76777	MANIFOLD ASSY., Fuel, left		1
	LW-25-0.75	BOLT, 1/4-20 x 3/4 long, hex hd.		2
	STD-8	WASHER, 1/4 plain		2
	STD-160	WASHER, 1/4 lock, internal teeth		2
	STD-1411	NUT, 1/4-20 plain		2
	LW-18028	MANIFOLD, Right, injector nozzle vent	1	
	LW-16599	MANIFOLD, Left, injector nozzle vent	1	
	74493	HOSE, 3/16 ID x 7/16 OD x 2-1/2 long	6	
	LW-15592-5-04	CLAMP, 7/16 ID x 5/16 wide	12	
	74655	SPACER, 9/32 ID x 1/2 OD x 3/8 long	5	
	MS9025-5	CLIP, 3/8 ID x 1/4 screw	5	
	STD-160	WASHER, 1/4 internal lock	5	
	STD-1688	BOLT, 1/4-20 x 1.00 long, hex hd.	5	
	STD-1339	PLUG, 1/16-27 NPT Allen	2	2
	AN821-6C	ELBOW, 3/8 flared tube coupling 90° manifold		2
	75340	MANIFOLD, Right, outer, injector nozzle vent		1
	75332	MANIFOLD, Left, outer, injector nozzle vent		1
	76772	HOSE, 3/16 ID x 7/16 OD x 1-7/8 long		6
	LW-15592-5-04	CLAMP, 7/16 ID x 5/16 wide		12
	74832	BRACKET, Nozzle vent, manifold		4

IO-540-AA1A5 & -M1B5D

SECTION 6 (Cont.)

Page 6-8 (Cont.)

Fuel Injectors, Fuel Manifolds and Injection Nozzles

Ref. No.	Part No.	Description	Qty. Per Assy.	
			-AA1A5	-M1B5D
	STD-860	SCREW, No. 10-32 x 5/8 long, rd. hd.		4
	STD-670	NUT, No. 10-32 self-locking		4

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Fuel Lines, Fuel Hoses and Attaching Parts

1	LW-12098-0-200	TUBE ASSY., Fuel manifold to nozzle, cyls. no. 1-2-5-6	4	
	LW-12098-0-170	TUBE ASSY., Fuel manifold to nozzle, cyls. no. 3-4	2	
	LW-12098-1-170	TUBE ASSY., Fuel manifold to nozzle, cyls. no. 2-5		2
	LW-12098-0-100	TUBE ASSY., Fuel manifold to nozzle, cyls. no. 1-3-4-6		4
	LW-16266-10-75	CLAMP	10	
	LW-16266-25-63	CLAMP		2
	STD-8	WASHER, 1/4 plain		2
	STD-160	WASHER, Lock, internal teeth		2
	STD-1411	NUT, 1/4-20 plain		2
	LW-16266-10-13	CLAMP	12	
4	STD-860	SCREW, No. 10-32 x 5/8 long, fill. hd.	15	2
5	STD-425	WASHER, No. 10 plain	3	
6	STD-670	NUT, No. 10-32 self-locking	15	2
7	73136	BRACKET, 90°	4	1
8	73152	BRACKET, Support clamp	1	1
	LW-16266-25-63	CLAMP	2	
	LW-16266-10-25	CLAMP		2

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Fuel Lines, Fuel Hoses and Attaching Parts

3	72377	ELBOW, 3/8 flared tube, adj. 90°		2
	LW-12879-6S120	HOSE, Fuel pump to injector		1
12	LW-12876-4S344	HOSE ASSY., Fuel injector to fuel manifold	1	
15	LW-12877-65051	HOSE ASSY., Fuel pump to injector	1	
	MS20822-6	ELBOW, 3/8 flared tube, 1/4 NPT - 90°	1	
	LW-12878-4S176	HOSE, Fuel injector to fuel manifold, right		1
	LW-12798-4S242	HOSE, Fuel injector to fuel manifold, left		1

New Page

Exhaust Pipe Assembly

	LW-15619	GASKET, Exhaust flange		12
	LW-14197	MANIFOLD ASSY., Exhaust, right		1
	LW-10159	PIPE, Exhaust, cyl. no. 1		1
	LW-10160	PIPE, Exhaust, cyl. no. 3		1

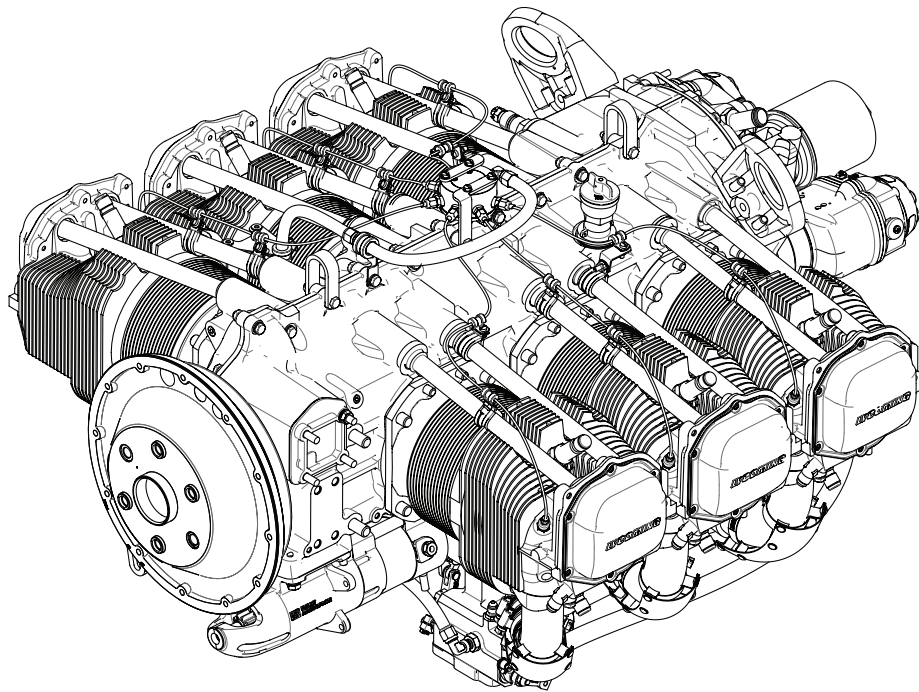
IO-540-AA1A5 & -M1B5D

SECTION 6 (Cont.)

New Page (Cont.) Exhaust Pipe Assembly

Ref. No.	Part No.	Description	Qty. Per Assy.	
			-AA1A5	-M1B5D
	LW-10161	PIPE, Exhaust, cyl. no. 5	1	
	LW-14198	MANIFOLD ASSY., Exhaust, left	1	
	LW-10164	PIPE, Exhaust, cyl. no. 2	1	
	LW-10163	PIPE, Exhaust cyl. no. 4	1	
	LW-10162	PIPE, Exhaust, cyl. no. 6	1	
	STD-475	WASHER, 5/16 lock, internal teeth	18	
	STD-1410	NUT, 5/16-18 plain	18	

Lycoming Aircraft Engines Parts Catalog



IO-540 Wide Cylinder Flange Models

LYCOMING

INTRODUCTION

This illustrated parts catalog contains a complete parts listing for the Lycoming IO-540-C4B5, -D4A5, -G1D5, -K1A5, -K1A5D, -K1B5, -K1D5, -K1E5, -K1F5, -K1F5D, -K1J5, -K1J5D, -S1A5, -T4A5D and -T4B5D wide cylinder flange model aircraft engines.

Major assembly and sub-assembly parts of the engines are listed in the Group Assembly sections in the general sequence of engine build up.

A Service Kits section and Oversize and Undersize Parts List are included to aid in ordering parts as necessary during overhaul.

The Numerical Index is provided for convenience in finding parts when only the part number is known.

Parts coverage of Vendor Accessories used on Lycoming engines may be found in the appropriate Vendor's Parts Catalog. A list of these publications appear in the latest edition of Service Letter No. L114.

NOTE

The illustrations, pictures and drawings in this publication are typical of the subject matter they portray; in no instance are they to be interpreted as examples of any specific engine, equipment or part thereof.

SERVICE BULLETINS, INSTRUCTIONS AND LETTERS

Although the information contained in this parts catalog is up-to-date at time of publication, users are urged to keep abreast of later information through all Lycoming distributors or from the the factory by subscription. Consult the latest edition of Service Letter No. L114 for subscription information.

IO-540 SERIES

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OVERSIZE AND UNDERSIZE PARTS LIST

IO-540 Wide Cylinder Flange Series

PART NO.	DESCRIPTION	OVERSIZE								UNDERSIZE		
		P05	P075	P10	P125	P15	P20	P30	P40	M03	M06	M10
76943	GUIDE, Valve intake	X		X			X	X	X			
LW-11956	GUIDE, Valve intake							X	X			
77160	GUIDE, Valve exhaust	X		X			X	X	X			
LW-11957	GUIDE, Valve exhaust	X		X			X	X	X			
LW-11958	GUIDE, Valve exhaust	X		X			X	X	X			
66610	BUSHING, Rocker shaft	X		X								
66670	BUSHING, Rocker shaft inner	X		X								
66260	INSERT, Spark plug INSERT Spark plug (long reach)			X X								
69796	DOWEL, Crankshaft bearing	X										
LW-10647	DOWEL, Crankshaft bearing	X		X								
71903-B	BUSHING, Counterweight	SEE SERVICE INSTRUCTION NO. 1143 FOR SIZE.										
72057	SEAT, Intake, valve			X			X	X				
LW-12688	SEAT, Intake, valve			X			X	X				
72058	SEAT, Exhaust, valve			X			X	X				
71894	SEAT, Exhaust, valve			X			X	X				
75656	BUSHING, Propeller flange - long	X		X		X	X					
72155	BUSHING, Propeller flange - short	X		X		X	X					
75657	BUSHING, Propeller flange - indexing	X		X			X					
73810	BUSHING, Crankshaft dynamic counterweight	X	X	X	X	X						
LW-13511	BEARING, Connecting rod			X						X	X	X
LW-13884	BEARING, Crankshaft, front									X	X	X
LW-13885	BEARING, Crankshaft, front									X	X	X
LW-11575	BEARING, Crankshaft									X	X	X
LW-11021	BEARING, Crankshaft									X	X	X

Stud available in P03, P07 and P12.

NOTE

When ordering oversize or undersize parts, be sure to specify the required oversize or undersize dimension along with the proper part number. For example: to order bearing LW-13511 in .003 undersize, order part number LW-13511-M3. Oversize code is "P" while undersize code letter is "M". These letters are then followed by the numbers designating the size in thousandths of an inch.

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

CRANKCASE ASSEMBLY

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY															
				C485	D445	G105	K1A5	K1A5D	K1B5	K1D5	K1E5	K1F5	K1G5	K1H5	K1J5	K1J5D	G1A5	T4A5D	T4B5D
1	LW-13831	CRANKCASE ASSEMBLY			1	1													
	LW-13837	CRANKCASE ASSEMBLY					1												
	LW-13838	CRANKCASE ASSEMBLY						1		1	1	1	1		1	1			
	LW-13844	CRANKCASE ASSEMBLY							1				1		1		1		
	LW-13781	CRANKCASE ASSEMBLY																1	
	LW-13847	CRANKCASE ASSEMBLY																1	1
2	31C-12	STUD, 5/16-18 x 1-1/2																	
		long	2																
3	31C-13	STUD, 5/16-18 x 1-5/8																	
		long	1																
4	38-13	STUD, 3/8-16 x 1-5/8																	
		long		24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
5	38-16	STUD, 3/8-16 x 2.00																	
		long		8	8		8	8	8	8	8	8	8	8	8	8	8	8	8
	38-15	STUD, 3/8-16 x 1-7/8																	
		long					8												
6	38-22	STUD, 3/8-16 x 2-3/4																	
		long	1																
7	38D-17	STUD, 3/8-16 x 2-1/8																	
		long - drilled	1																
8	50-15	STUD, 1/2-20 x 1-7/8																	
		long	12																
9	LW-13794	STUD, 5/16-18 x 1.00																	
		long - drilled		1	1	1	1		1	1	1	1		1		1			
10	69796	DOWEL, Crankshaft																	
		bearing	2																
11	LW-10647	DOWEL, Crankshaft																	
		bearing	6																
12	STD-514	DOWEL, 5/16 dia. x																	
		1/2 long	2																
13	STD-557	DOWEL, 1/2 dia. x																	
		11/16 long	2																
14	STD-1339	PLUG, 1/16-27 NPT																	
15	1102	PLUG, 1/8-27 NPT																	
16	65007	RETAINER, Shroud																	
		tube seal	12																
17	72158	BUSHING, Gov. drive																	
		idler shaft	1																
18	31C-14	STUD, 5/16-18 x 1-11/16																	
		long		4	4		4	4		4		4		4	4	4			
	31C-14	STUD, 5/16-18 x 1-3/4																	
		long															4		
	31C-16	STUD, 5/16-18 x 2.00																	
		long				4			4		4		4			4		4	4
19	73772	NOZZLE ASSY., Piston																	
		cooling					6	6	6	6	6	6	6	6	6	6	6	6	6

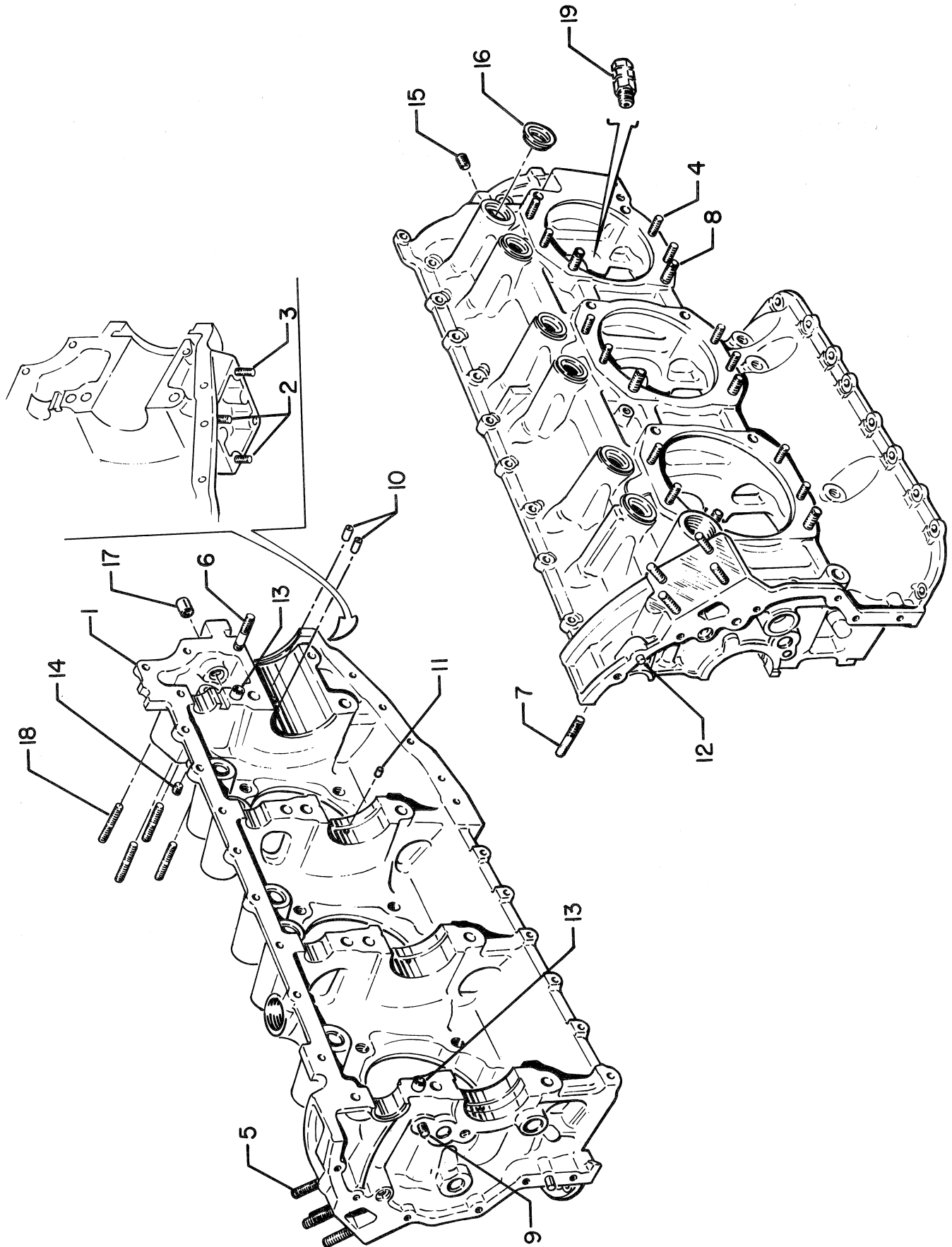


Figure 1 - Crankcase Assembly

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

OIL LEVEL GAGES AND ENGINE MOUNTING BRACKETS

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY															
				CAB	DAB	GAB	KAB	KIAB	KIB	KID	KIE	KIF	KIG	KIJ	KIS	STAB	TAB	TIB	TID
2																			
1	70457	GASKET, Oil filler extension	1																
2	75737	EXTENSION, Oil filler 2-11/16 long			1								1			1			
	77527	EXTENSION, Oil filler 2-3/16 long (cam action)			1	1		1	1	1			1	1	1		1	1	1
	77770	EXTENSION, Oil filler 6-5/16 long (cam action)					1		1			1							
	75675	EXTENSION, Oil filler 2-3/16 long						1			1								
3	72059	GASKET, Oil level gage			1								1			1			
	72312	RING, Oil seal 1.00 ID x 1/8 section			1	1	1	1	1	1	1		1	1	1		1	1	1
	72220	GASKET, Oil level gage						1			1								
4	LW-14756	GAGE ASSY., Oil level (75737 extension)			1														
	LW-14732	GAGE ASSY., Oil level (77527 extension)			1	1													
	LW-14754	GAGE ASSY., Oil level (75737 extension)											1			1			
	LW-14729	GAGE ASSY., Oil level (77527 extension)						1	1	1				1	1		1		
	LW-14737	GAGE ASSY., Oil level (77770 extension)					1		1			1							
	LW-10975	GAGE ASSY., Oil level (75675 extension)										1							
	LW-14730	GAGE ASSY., Oil level (77527 extension)															1	1	
	LW-14740	GAGE ASSY., Oil level (77527 extension)												1					
	75133	GAGE ASSY., Oil level (75675 extension)						1											
5	70456	BRACKET, Engine mounting				4	4	4	4	4	4	4	4	4	4		4	4	
	72306	BRACKET, Engine mounting			4								4			4	4	4	
6	STD-33	WASHER, 3/8 plain	16																
7	STD-678	WASHER, 3/8 lock	16																
8	STD-596	NUT, 3/8-24 plain	16																

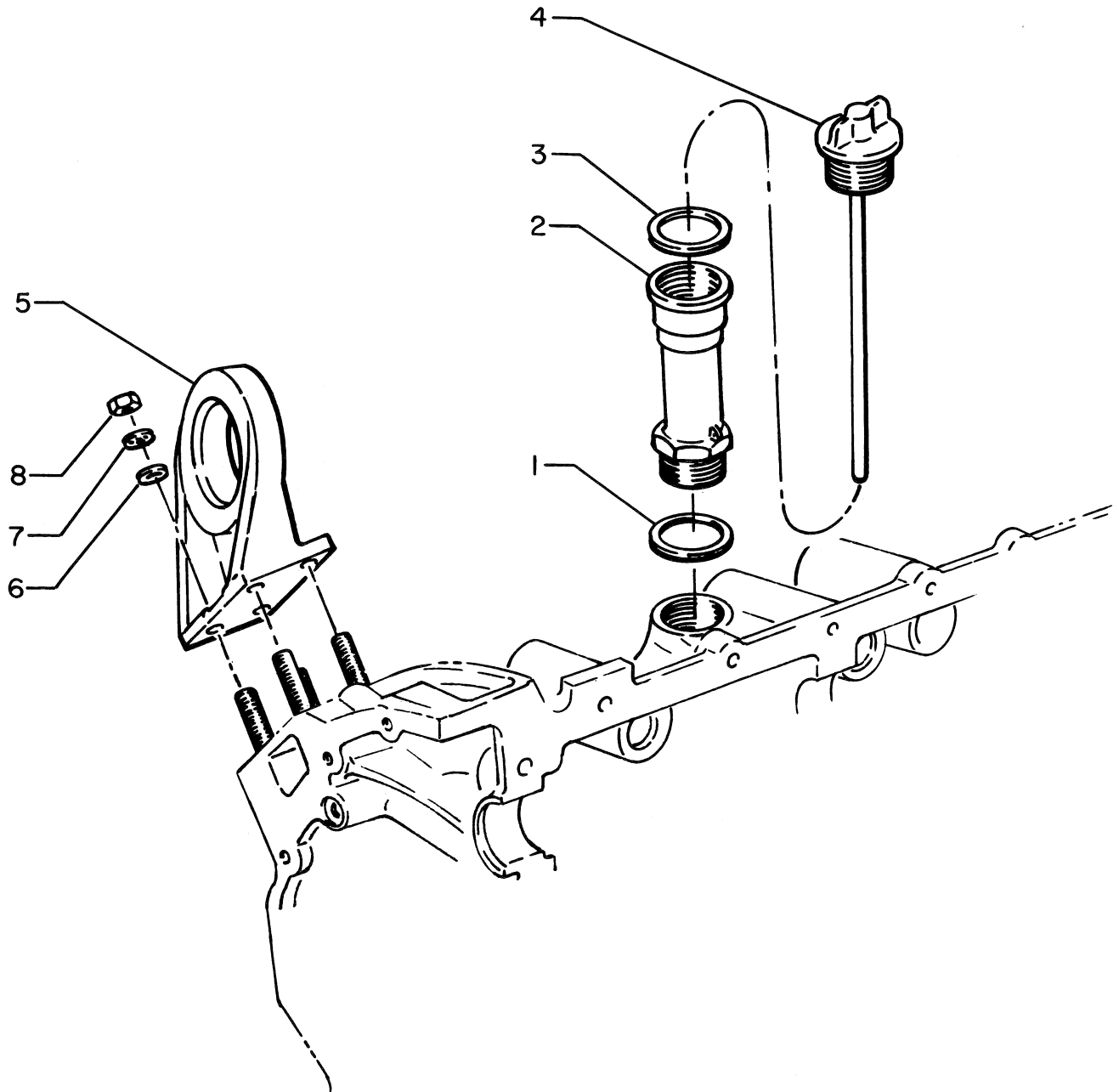


Figure 2 - Oil Level Gages and Engine Mounting Brackets

IO-540 SERIES PARTS CATALOG

WIDE CYLINDER FLANGE CRANKCASE MODEL ENGINES

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

CRANKCASE RELATED PARTS

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*** Select spring to give a minimum of three threads exposed on adjusting screw to allow field adjustment.**

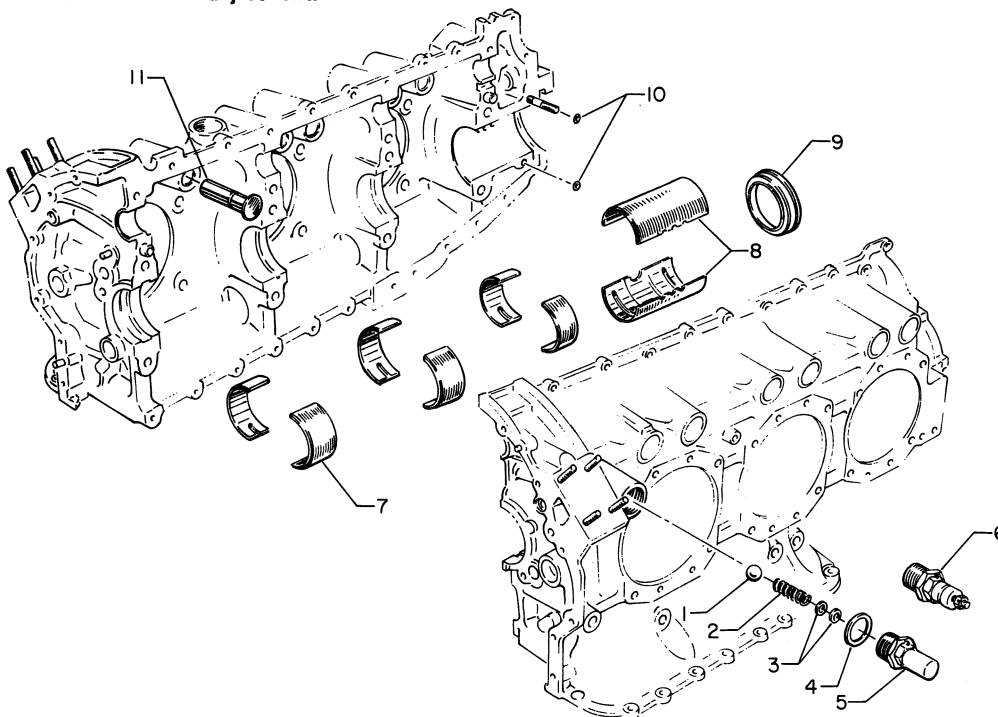


Figure 3.

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

PROPELLER GOVERNOR DRIVE ASSEMBLY

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY															
				CAB5	DAB5	GID5	KIAB	KIAB5	KIB5	KIE5	KIF5	KIG5	KIJ5	KIJ5D	SIAB	TAAB5	TAB5D		
4																			
1	LW-10442	GEAR, Propeller governor drive	1																
2	LW-14021	SHAFT, Propeller governor idler gear	1																
3	LW-10541	GEAR ASSY., Propeller governor idler	1																
4	77872	BUSHING, Propeller governor idler gear	2																
5	STD-19	DOWEL, 3/32 dia. x 7/32 long	1																
6	STD-798	DOWEL, 3/32 dia. x 9/32 long	1																
7	73249	WASHER, Thrust	1																
	73250	WASHER, Thrust	un																
	73251	WASHER, Thrust	un																
	73252	WASHER, Thrust	un																
8	AN565B1032H5	SET SCREW, No. 10-32 x 5/16 long	1																
9	70455	GASKET, 25/32 ID x 1-1/8 OD x 1/16 thick	1																
10	LW-13896	PLUG, 3/4-16 Hex hd.	1																
11	72053	GASKET, Governor	1																
12	72378	COVER, Governor drive	1																
13	STD-35	WASHER, 5/16 plain	un																
14	STD-475	WASHER, 5/16 lock	4																
15	STD-1410	NUT, 5/16-18 plain	4																

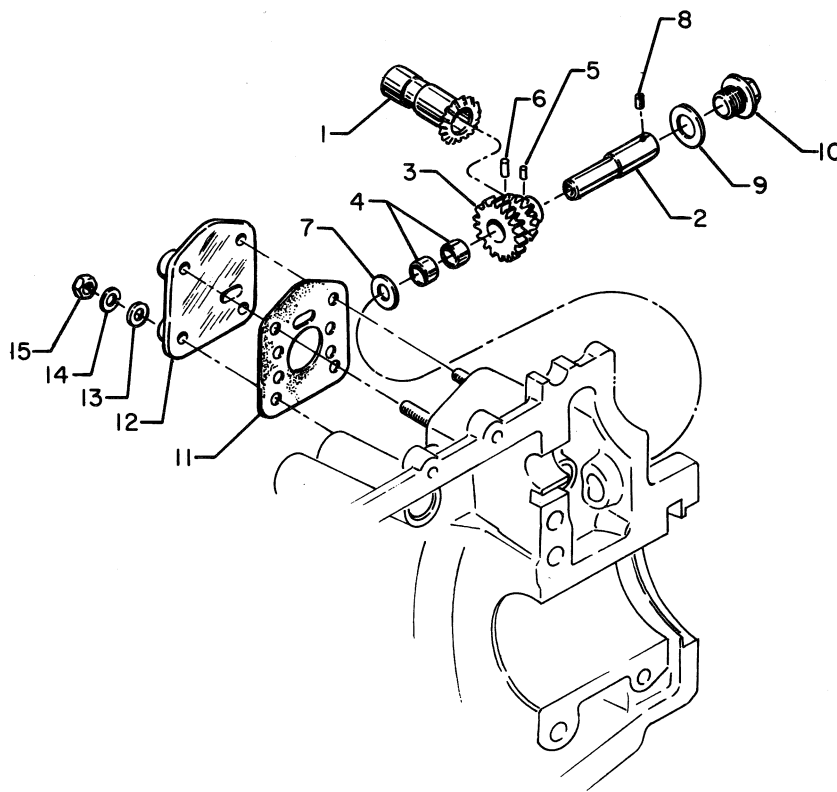


Figure 4.

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

CRANKSHAFT, CAMSHAFT AND RELATED PARTS

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY															
				CAD5	DAD5	GID5	KIAD5	KIAD5D	KIB5	KID5	KIES	KIF5D	KIG5D	KIJ5D	KJ5D	SIAS	TAASD		
1	75079	CRANKSHAFT AND COUNTERWEIGHT					1												
	75040	CRANKSHAFT AND COUNTERWEIGHT			1	1													
	76801	CRANKSHAFT AND COUNTERWEIGHT						1		1	1		1						
	LW-10844	CRANKSHAFT AND COUNTERWEIGHT										1			1		1		
	LW-11943	CRANKSHAFT AND COUNTERWEIGHT											1			1			
	LW-12583	CRANKSHAFT AND COUNTERWEIGHT							1					1					
	LW-12562	CRANKSHAFT AND COUNTERWEIGHT															1	1	
2	75078	CRANKSHAFT ASSY.					1												
	75039	CRANKSHAFT ASSY.			1	1													
	76799	CRANKSHAFT ASSY.						1		1	1		1						
	LW-10843	CRANKSHAFT ASSY.										1			1		1		
	LW-11942	CRANKSHAFT ASSY.											1			1			
	LW-12582	CRANKSHAFT ASSY.							1					1					
	LW-12561	CRANKSHAFT ASSY.															1	1	
3	STD-1211	PLUG, 2.00 dia. expansion	1																
4	73810	BUSHING, Crankshaft counterweight	4																
5	71640	PLUG, 1-3/8 dia.			1	1	1										1	1	
	60945	PLUG, 1-1/4 dia.						1	1	1	1	1	1	1	1	1	1	1	
6	72062	BUSHING, Propeller flange - long		4	4	4											4	4	
7	72061	BUSHING, Propeller flange - short		1	1	1											1	1	
8	72060	BUSHING, Propeller flange - indexing		1	1												1	1	
	72074	BUSHING, Propeller flange - indexing					1												
9	75656	BUSHING, Propeller flange - long						4	4	4	4	4	4	4	4	4	4	4	
10	72155	BUSHING, Propeller flange - short						1	1	1	1	1	1	1	1	1	1	1	
11	75657	BUSHING, Propeller flange - indexing						1	1	1	1	1		1	1				
	79024	BUSHING, Propeller flange - indexing										1	1		1	1	1		
12	STD-1065	DOWEL, Stepped 5/16 x 1/4 dia. x 1/2 long			1	1	1	1		1	1	1	1		1		1		
	STD-2078	DOWEL, 3/8 OD x 1/2 long							1				1		1		1	1	
13	72801	COUNTERWEIGHT ASSY.		2	2	2											2	2	
	73644	COUNTERWEIGHT ASSY.						2	2	2	2	2	2	2	2	2	2	2	
14	71903	BUSHING, Dynamic counterweight	8																
15	72797	ROLLER, Dynamic counterweight		2	2	2											2	2	
	76788	ROLLER, Dynamic counterweight						2	2	2	2	2	2	2	2	2	2	2	
16	72965	ROLLER, Dynamic counterweight		2	2	2											2	2	
	76787	ROLLER, Dynamic counterweight						2	2	2	2	2	2	2	2	2	2	2	
17	LW-14820	RING, Internal retaining	8																
18	71907	WASHER, Dynamic counterweight	8																
19	67514	GEAR, Crankshaft		1	1	1	1		1	1		1		1					
	76786	GEAR, Crankshaft										1					1		
	LW-10284	GEAR, Crankshaft							1				1		1		1	1	
20	67516	LOCKPLATE, Crankshaft gear		1	1	1	1			1	1	1	1		1		1	1	
	LW-10332	LOCKPLATE, Crankshaft gear							1				1		1		1	1	
21	STD-1937	SCREW, 5/16-24 x 1-3/4 long		1	1	1	1		1	1	1	1		1		1			
	AN8-14A	BOLT, 1/2-20 x 1-19/32 long							1				1		1		1	1	
22	76148	CAMSHAFT	1																
23	75030	SUPPORT ASSY., Starter ring gear									1	1				1	1		
	77579	SUPPORT ASSY., Starter ring gear			1	1	1	1		1	1		1	1		1	1	1	
	72245	SUPPORT ASSY., Starter ring gear							1						1				
24	72566	GEAR, Starter ring 12/14 pitch	1																

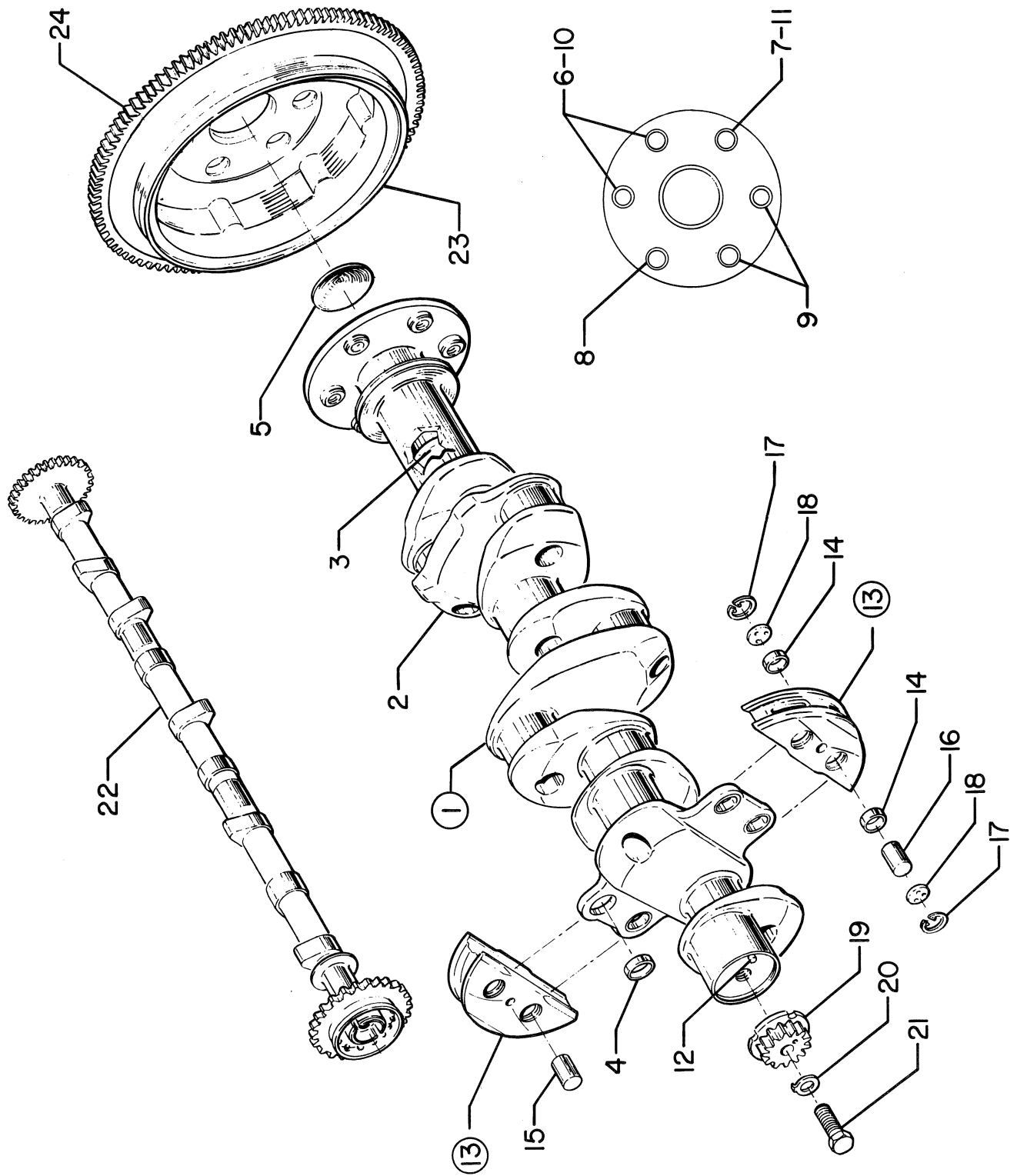


Figure 5 - Crankshaft, Camshaft and Related Parts

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

CRANKSHAFT IDLER GEARS AND TACHOMETER DRIVE

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY															
				C4B5	D4A5	G4D5	K1A5D	K1B5	K1D5	K1E5	K1F5D	K1G5D	K1J5D	S1A5	T4A5D	T4B5D			
1	71652	GEAR ASSY., Crankshaft idler (pump cam)				1	1						1	1					
2	71668	GEAR ASSY., Crankshaft idler plain				1	1	2	2	2	2	2	1	1	2				
3	67530	BUSHING, Crankshaft idler gear				2	2	2	2	2	2	2	2	2	2				
4	LW-10290	GEAR ASSY., Crankshaft idler (pump cam)												1	1	1	1		
	LW-10292	GEAR ASSY., Crankshaft idler plain						1				1							
5	LW-10297	GEAR ASSY., Crankshaft idler (heavy)						1				1	1	1	1	1			
6	LW-10324	GEAR ASSY., Fuel pump idler						1				1							
7	LW-13795	SHAFT, Crankshaft idler gear				2	2	2	2	2	2	2	2	2	2				
8	STD-2167	SCREW, 5/16-18 x 7/8 long, dr. hd.				3	3	3	3	3	3	3	3	3	3				
9	STD-2168	NUT, 5/16-18 NC-3 Slotted shear				1	1	1	1	1	1	1	1	1	1				
10	76155	SHAFT ASSY., Tachometer	1																
11	78368	PIN, 3/16 x 2-5/16 long	1																
12	76118	SPACER, Tachometer shaft centering	1																
13	MS16625-1081	RING, Internal retaining	1																
14	61544	PLUNGER, Fuel pump long				1	1						1	1	1	1	1	1	

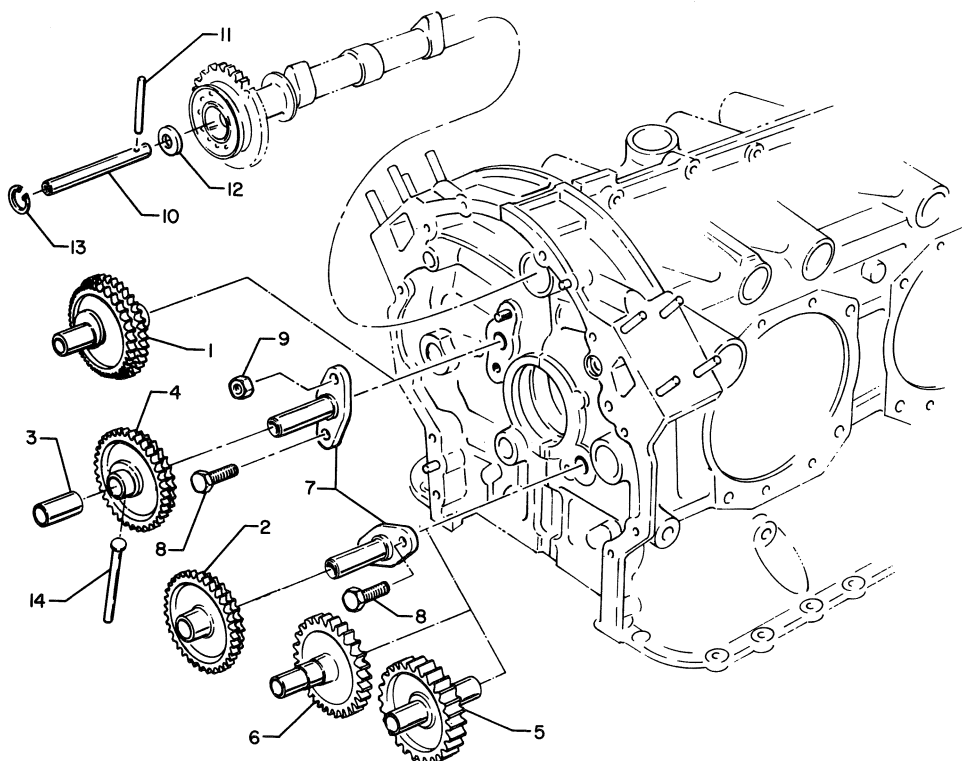


Figure 6.

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

CRANKCASE ATTACHING PARTS

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY															
				CAB	DAB	GAB	KAB	KABD	KAB	KAB	KAB	KAB	KAB	KAB	KAB	KAB	KAB	KAB	KAB
7																			
1	STD-1414	BOLT, 1/4-20 x 1-1/2 long			7	7	7	11	11	11	11	7	11	11	11	11	11	11	7
2	STD-1931	BOLT, 1/4-20 x 1-7/8 long			1	1	1					1							1
3	STD-1646	BOLT, 1/4-20 x 2.00 long			2	2	2					2							2
4	STD-8	WASHER, 1/4 plain			25	25	25	27	27	27	27	25	27	27	27	27	27	27	25
5	60803	STRAP, Lifting	2																
6	STD-2084	BOLT, 1/4-20 x 1-3/4 long			1	1	1	2	2	2	2	1	2	2	2	2	2	2	1
7	STD-1419	BOLT, 1/4-20 x 1-1/8 long	4																
8	STD-160	WASHER, 1/4 internal lock	16																
9	STD-1411	NUT, 1/4-20 plain	12																
10	STD-1416	BOLT, 1/4-20 x 1-1/2 long, dr. end	6																
11	STD-8	WASHER, 1/4 plain (Max. 18)	un																
12	STD-1409	NUT, 1/4-20 Slotted shear	6																
13	STD-33	WASHER, 3/8 plain	1																
14	STD-872	NUT, 3/8-24 Slotted shear	1																
15	AN6-34A	BOLT, 3/8-24 x 3-37/64 long	1																
16	STD-33	WASHER, 3/8 plain			3	3	3	4	4	3	3	3	3	3	4	4	3	3	3
17	STD-678	WASHER, 3/8 lock			2	2	2			2	2	2	2	2			2	2	2
18	STD-596	NUT, 3/8-24 plain			2	2	2			2	2	2	2	2			2	2	2
19	LW-11866*	SPACER NUT, Compressor						2	2						2	2			
20	76220	STUD, 1/2-20 x 10-45/64 long	8																

NOTE

* Install at front main bearing holes on right crankcase side.

Two STD-8 washers and one STD-1931 bolt assembled in rear top hole in crankcase.

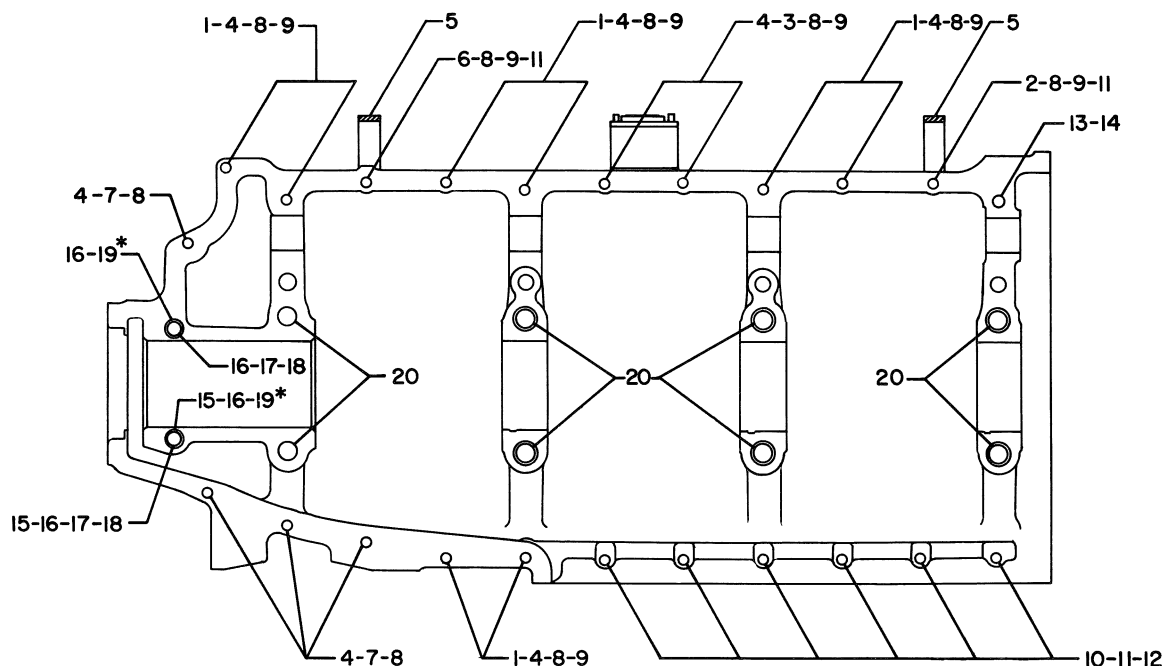


Figure 7.

ACCESSORY HOUSING AND RELATED PARTS

ACCESSORY HOUSING ASSEMBLY

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY															
				CAB5	DAB5	GAB5	KAB5	KAB5D	KAB5	KAB5	KAB5	KAB5D	KAB5	KAB5D	KAB5	KAB5D	KAB5	KAB5D	KAB5
1	73818	GASKET, Accessory housing	1																
2	76152	HOUSING ASSY., Accessory			1	1								1		1			
	78490	HOUSING ASSY., Accessory					1	1		1	1		1						
	LW-10641	HOUSING ASSY., Accessory										1						1	
3	LW-10916	HOUSING ASSY., Accessory															1		
	LW-10917	HOUSING ASSY., Accessory							1										
	LW-10908	HOUSING ASSY., Accessory													1			1	1
	LW-10904	HOUSING ASSY., Accessory												1					
4	61261	STUD, 5/16-18 x 1-1/2																	
		long			4	4	4	4		4	4	4	4		4		4		
5	31CD-17	STUD, 5/16-18 x 2-1/8																	
		long dr.			3	3	3	3		3	3		3		3		3		
	31CD-20	STUD, 5/16-18 x 2-1/2																	
		long dr.							3			3		3		3	3	3	3
6	31C-21	STUD, 5/16-18 x 2-5/8																	
		long			4	4	4	4		4	4	4	4	2	4		4	2	4
7	31C-19	STUD, 5/16-18 x 2-3/8																	
		long					4	4	4	4	4	4	4	4				4	
8	25C-21	STUD, 1/4-20 x 2-5/8																	
		long			4	4	4	4		4	4	4	4		4		4		
9	25C-12	STUD, 1/4-20 x 1-1/2																	
		long							8				8		8		8		8
10	67528	STUD, 5/16-18 x 1-5/8																	
		long							2				3		2		3		2
11	STD-784	PLUG, 3/8 NPT			1	1	1	1		1	1	1	1		1		1		1
12	1102	PLUG, 1/8-27 NPT			2	2	2	2		2	2	2	2	1	2	1	2	1	1
13	STD-1339	PLUG, 1/16-27 NPT							1					1					
14	LW-10341	INSERT, Heli-coil																	
		1.00-14 x 3/8							1				1		1		1		1
15	LW-12589	INSERT, Heli-coil																	
		5/8-18 x 3/8							1				1		1		1		1
16	MS124703	INSERT, Heli-coil																	
		3/8-16 x 1-1/8							1				1		1		1		1

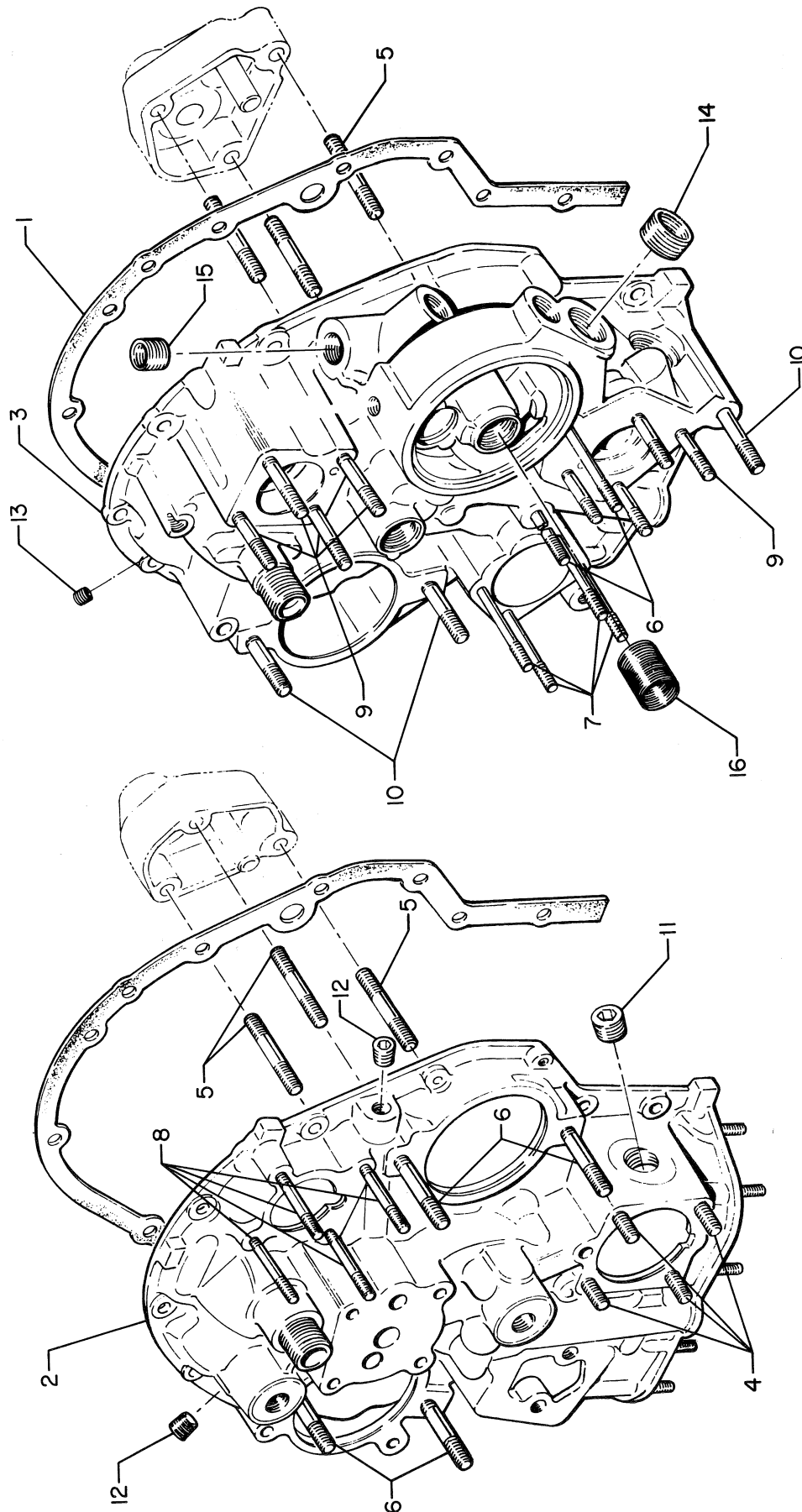


Figure 8 - Accessory Housing Assembly

ACCESSORY HOUSING AND RELATED PARTS

OIL PUMP ASSEMBLY AND ACCESSORY HOUSING ATTACHING PARTS

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY															
				CAB5	DA45	GI45	KIA5	KI45D	KIB5	KID5	KIE5	KIF5	KIF5D	KIG5	KIJ5	KIJ5D	SLA5	TA45D	TA85D
1	78528	BODY ASSY., Oil Pump				1	1	1	1	1	1		1	1	1	1			
2	STD-1339	PLUG, 1/16-27 NPT				1	1	1	1	1	1		1	1	1	1			
3	LW-13775	IMPELLER ASSY., Oil pump driven				1	1	1	1	1	1		1	1	1	1			
4	60746	IMPELLER, Oil pump drive				1	1	1	1	1	1		1	1	1	1			
5	74641	SHAFT, Oil pump drive				1	1	1	1	1	1		1	1	1	1			
6	75287	BODY ASSY., Oil pump										1						1	
7	STD-1339	PLUG, 1/16-27 NPT									1							1	
8	61297	IMPELLER, Oil pump driving									1							1	
9	61298	IMPELLER, Oil pump driven									1							1	
10	76784	SHAFT, Oil pump drive									1							1	
11	LW-10344	BODY ASSY., Oil pump							1					1	1	1	1	1	1
12	61297	IMPELLER, Oil pump driving							1					1	1	1	1	1	1
13	61298	IMPELLER, Oil pump driven							1					1	1	1	1	1	1
14	LW-10318	GEAR ASSY., Oil pump drive							1					1	1	1	1	1	1
15	STD-35	WASHER, 5/16 plain	3																
16	STD-1420	NUT, 5/16-18 Slotted shear	3																
17	LW-14260	SEAL, Tachometer drive oil	1																
18	STD-8	WASHER, 1/4 plain		10	10	10	10	10	12	10	10	10	10	12	10	12	10	12	10
19	STD-160	WASHER, 1/4 lock		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
20	STD-1204	BOLT, 1/4-20 x 15/16 long		9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
21	STD-1419	BOLT, 1/4-20 x 1-1/8 long		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
22	STD-1931	BOLT, 1/2-20 x 1-7/8 long		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
23	STD-1875	BOLT, 1/4-20 x 13/16 long							2					2	2	2			
24	STD-1215	BOLT, 1/4-20 x 1-1/4 long							1					1	1	1			

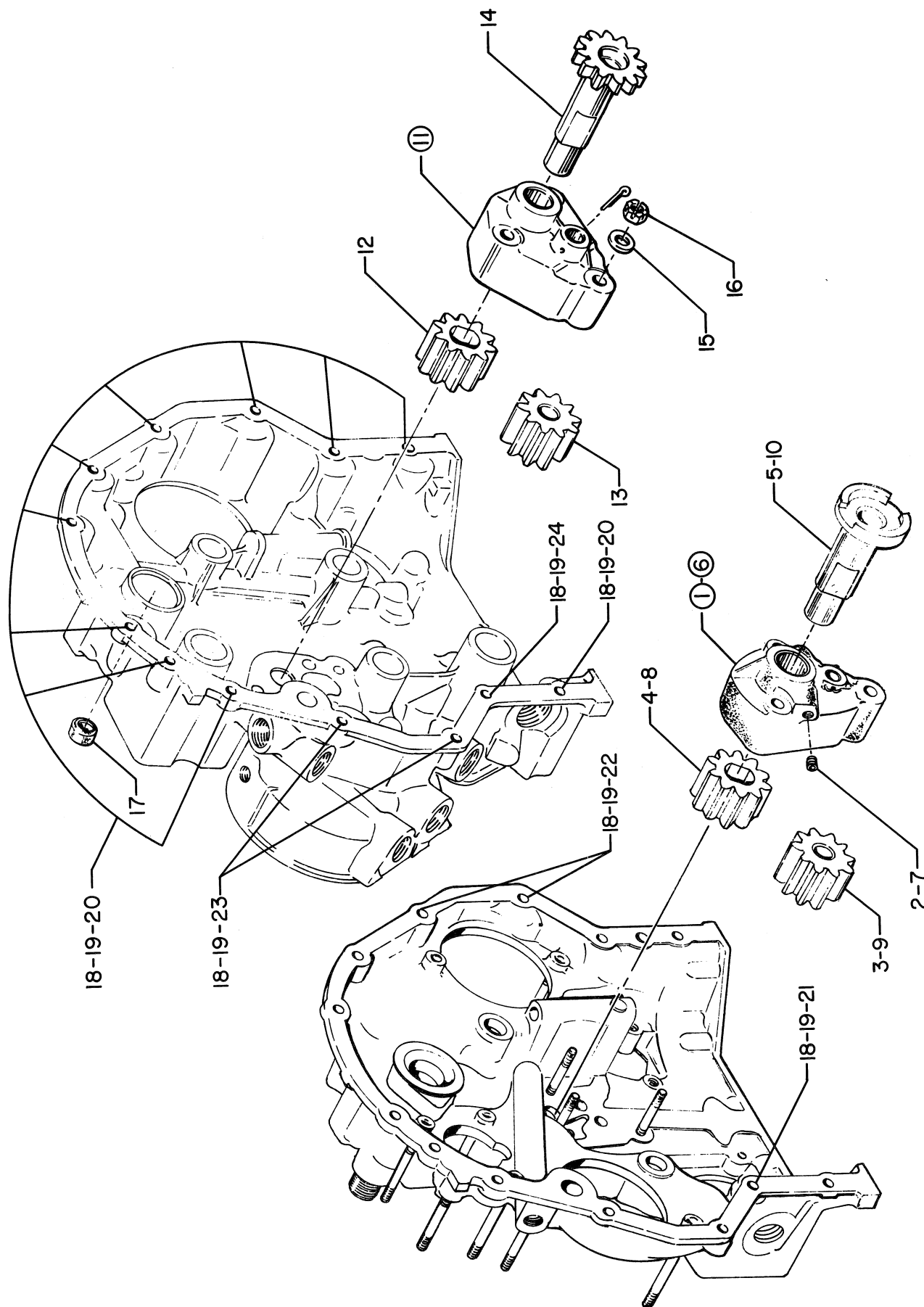


Figure 9 - Oil Pump Assembly and Accessory Housing Attaching Parts

ACCESSORY HOUSING AND RELATED PARTS

OIL FILTER ASSEMBLY AND OIL COOLER BYPASS VALVE

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY															
				CAB5	DAA5	GJDS	KJAS	KJASD	KJBS	KJDS	KJES	KJESD	KJGS	KJGSD	KJJS	KJJSD	JJAS	JJASD	JJBS
1	61173	GASKET, Oil pressure housing			1	1	1			1									
2	LW-12795	GASKET, Oil filter adapter			1			1			1	1	1		1		1		
3	62817	SCREEN ASSY., Oil pressure			1	1	1			1									
4	69510	HOUSING, Thermostatic valve & pressure screen			1	1	1			1									
5	77852	OIL FILTER BASE ASSEMBLY			1			1			1	1	1		1		1		
6	25C-10	STUD, 1/4-20 x 1-1/4 long			1			1			1	1	1		1		1		
7	STD-8	WASHER, 1/4 plain			4	4	4	4		4	4	4	4		4		4		
8	STD-160	WASHER, 1/4 lock			1			1			1	1	1		1		1		
9	STD-1856	SCREW, 1/4-20 x 1.00 long			3	4	4	3		4	3	3	3		3		3		
10	STD-1411	NUT, 1/4-20 plain			1			1			1	1	1		1		1		
11	STD-294	GASKET, 7/8 OD x 5/8 ID x 3/32 ann.	1																
12	LW-10321	SPRING, Oil filter bypass valve								1			1		1		1	1	
13	76539	SEAT, Oil relief valve								1			1		1		1	1	
14	LW-10320	SLEEVE, Oil filter bypass valve								1			1		1		1	1	
15	MS16625-1100	RING, Internal retaining								1			1		1		1	1	
16	77853	OIL FILTER HOUSING ASSEMBLY			1			1			1	1	1		1		1		
	LW-13215	OIL FILTER, Short spin-on			1			1			1	1	1		1		1		
	LW-10660	OIL FILTER ASSEMBLY								1			1		1		1	1	
	LW-13906	OIL FILTER, Short spin-on								1			1		1		1	1	
17	LW-13904	KIT, Converter plate - oil filter								1			1		1		1	1	
18	75944	VALVE ASSY., Temp. control oil cooler bypass	1																
19	MS28775-147	SEAL "O" RING, 2-43/64 ID x 7/64 sect.										1							
20	LW-11476	ADAPTER, Remote oil filter										1							
21	AN901-8C	WASHER, 3/4 ID x 1.00 OD x 1/16 thick										1							
22	LW-11477	BOLT, Remote oil filter adapter										1							
23	LW-11483	ADAPTER ASSY., Oil filter remote mounted										1							
24	STD-1849	INSERT, 3/4-16 x 3/4 long										1							

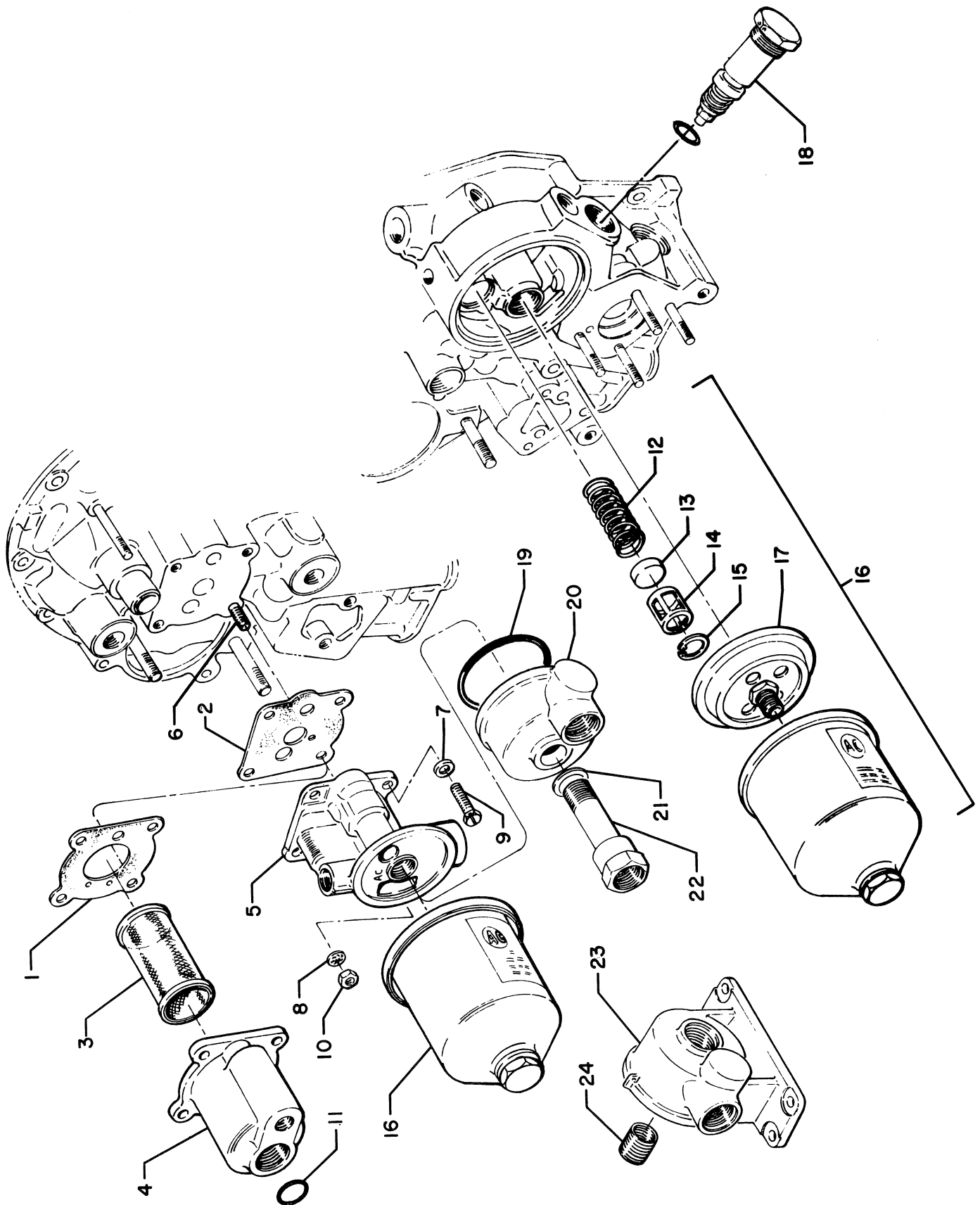


Figure 10 - Oil Filter Assembly and Oil Cooler Bypass Valve

ACCESSORY HOUSING AND RELATED PARTS

VACUUM PUMP DRIVE OIL COOLER FITTINGS AND BREATHER FITTINGS

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY															
				CAB5	DAB5	GID5	KIAB5	KIAB5D	KIBB5	KID5	KIES	KIF5D	KIG5D	KIJ5D	KJAS	TAASD	TAASD		
1	61183	GASKET, Accessory adapter		1	1	1	1		1	1	1	1	1	1	1	1			
2	67536	ADAPTER ASSEMBLY, Vacuum pump																	
3	STD-1774	DOWEL, 1/8 dia. x 1/4 long		1	1		1			1	1	1	1	1	1	1			
4	STD-208	SEAL, Oil 7/8 ID x 1-1/2 OD x 5/16 thick		1	1		1			1	1	1	1	1	1	1			
5	72974	GEAR ASSEMBLY, Vacuum pump driven		1	1		1			1	1	1	1	1	1	1			
6	71596	WASHER, Accessory driven gear		1	1		1	1		1	1	1	1	1	1	1	1	1	1
7	LW-10307	GEAR ASSEMBLY, Vacuum pump driven							1					1			1	1	
8	LW-10303	PLUG, Vacuum pump drive										1			1				
9	STD-208	SEAL, Oil 7/8 ID x 1-1/2 OD x 5/16 thick						1						1			1	1	
10	8313	GASKET, Vacuum pump pad		1	1		1	1		1	1	1	1	1	1	1	1	1	1
11	60430	COVER, Vacuum pump	1																
12	STD-8	WASHER, 1/4 plain	4																
13	STD-160	WASHER, 1/4 lock	4																
14	STD-1411	NUT, 1/4-20 plain	4																
15	STD-294	GASKET, 7/8 OD x 5/8 ID x 3/32 ann.		1	1	1	1		1	1	1	1	1	1	1	1	2	2	
16	69675	CONNECTOR, Accessory Hsg. to oil cooler inlet		1	1	1	1					1							
17	STD-784	PLUG, 3/8 NPT		2	2	2	2		2	2	2	2	2						
18	62417	PLUG, Oil cooler bypass		1			1		1	1	1		1		1				
19	71651	FITTING, Breather		1	1	1	1				1	1	1		1		1	1	
	72996	FITTING, Breather (short)					1	1	1	1			1	1					
	AN844-16D	FITTING, Breather 1.00 ID hose 45°										1			1		1		
20	MS29512-10	SEAL, Oil 3/32 sect. x 45/64 ID						2				2	1	1	1	3	3		
21	AN814-10L	PLUG, 7/18-14 thd.							1			1	1	1	1	1	1		
22	LW-14178	PLUG, Turbo drain back							1			1							
23	MS20823-8	ELBOW, 1/2 flared tube 45°									1			1	2				
24	AN822-8	ELBOW, 1/2 flared tube 3/8 NPT 90°							1		1			1					
25	AN816-8	NIPPLE, 1/2 flared tube 3/8 NPT								1									
26	1540	PLUG, Thermometer well															2	2	
27	LW-14828	REDUCER, 1/2 tubing to 5/8 tubing															2	2	

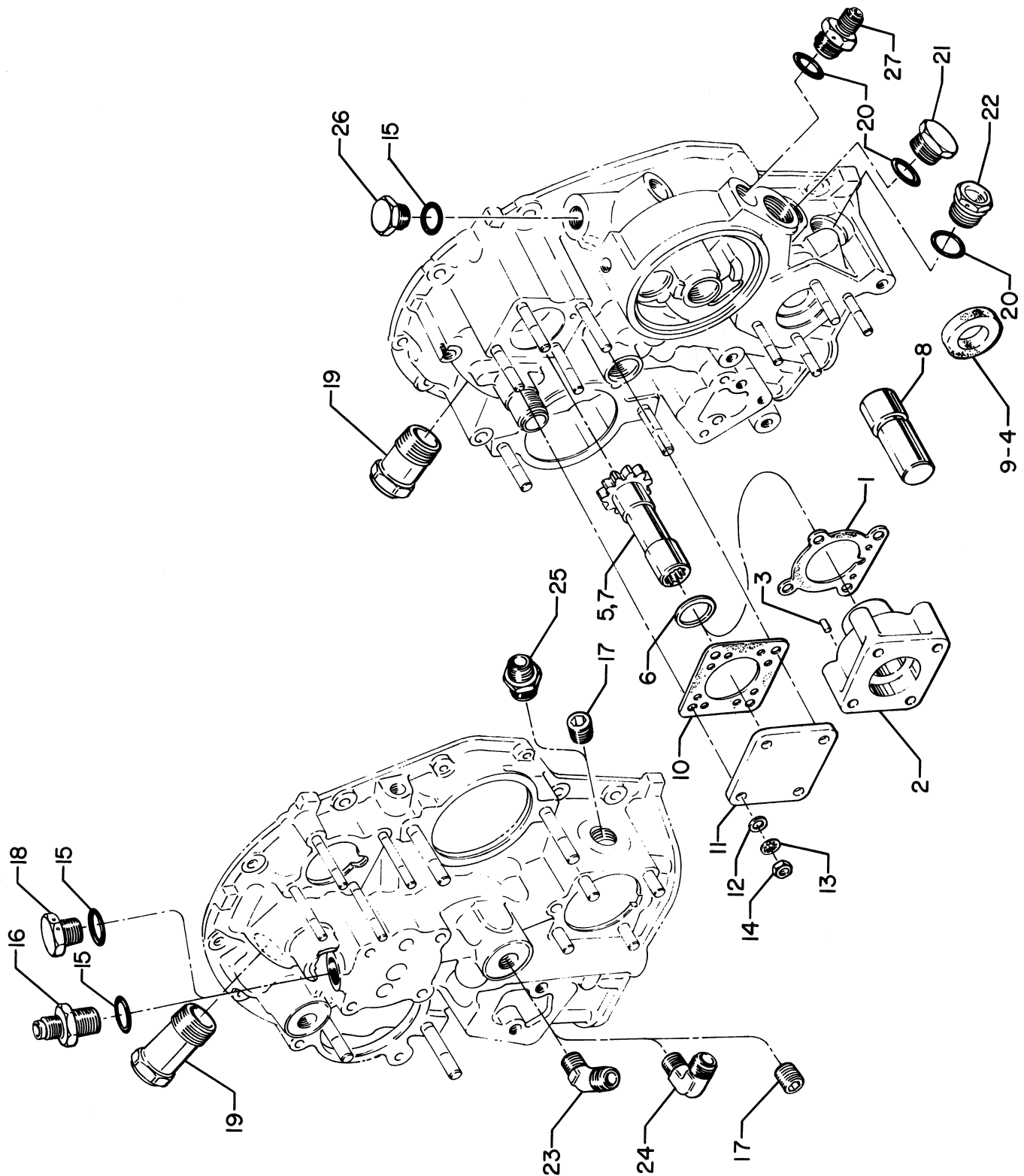


Figure 11 - Vacuum Pump Drive Oil Cooler Fittings and Breather Fittings

ACCESSORY HOUSING AND RELATED PARTS

HYDRAULIC PUMP DRIVE AND COVERS

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY															
				CBS	DAS	GDS	KIAS	KISD	KIBS	KIDS	KIFS	KISD	KIGS	KISD	KIJS	KISD	SIAS	TAASD	TASD
1	69551	GASKET, Accessory drive adapter			1	1		1		1		1		1		1			
2	69106	COVER, Governor drive adapter			1	1		1		1		1		1		1			
3	72964	GEAR ASSY., Hydraulic pump driven			1		1			1								1	
4	71596	WASHER, Accessory drive gear			1		1			1								1	
5	68315	GASKET, Accessory drive gear			1		1			1								1	
6	71675	ADAPTER ASSY., Hydraulic pump			1		1			1				1		1			
	LW-10807	ADAPTER ASSY., Hydraulic pump																1	
7	STD-208	SEAL, 7/8 ID x 1-1/2 OD x 5/16 wide			1		1			1				1		1		1	
8	25C-12	STUD, 1/4-20 x 1-1/2 long			4		4			4				4		4			
	25C-32	STUD, 1/4-20 x 4.00 long																4	
9	STD-1774	PIN, 1/8 dia. x 1/4 long			1		1			1				1		1		1	
10	STD-35	WASHER, 5/16 plain			4	4	4	4		4	4	4		4	4	4		4	
11	STD-475	WASHER, 5/16 lock			4	4	4	4		4	4	4		4	4	4		4	
12	STD-1410	NUT, 5/16-18 plain			4	4	4	4		4	4	4		4	4	4		4	
13	8313	GASKET, Hydraulic pump			1		1		1	1		1		1	1	1		1	1
14	60430	COVER, Hydraulic pump			1		1		1	1		1		1	1	1		1	1
15	STD-8	WASHER, 1/4 plain			4		4		4	4		4		4	4	4		4	4
16	STD-160	WASHER, 1/4 lock			4		4		4	4		4		4	4	4		4	4
17	STD-1411	NUT, 1/4-20 plain			4		4		4	4		4		4	4	4		4	4
18	LW-10806	SPACER, Hydraulic pump stud																4	
19	LW-10671	GEAR ASSY., Accessory drive												1			1		
20	71596	WASHER, Accessory driven gear												1			1		
21	STD-208	SEAL, Oil 7/8 ID x 1-1/2 OD x 5/16 wide												1			1		
22	AN123857	"O" RING, 9/64 ID x 5/64 sect.												1			1		
23	LW-10331	ADAPTER ASSY., Hydraulic pump												1			1		
24	STD-1631	DOWEL, 11/64 dia. x 11/32 long												1			1		
25	STD-8	WASHER, 1/4 plain												4			4		
26	STD-160	WASHER, 1/4 lock												4			4		
27	STD-1411	NUT, 1/4-20 plain												4			4		
28	STD-35	WASHER, 5/16 plain												7			7		
29	STD-475	WASHER, 5/16 lock												5			5		
30	STD-1410	NUT, 5/16-18 plain												5			5		
31	20415	GASKET, Hydraulic pump												1			1		
32	72412	COVER, Hydraulic pump												1			1		
33	STD-1828	BOLT, 5/16-18 x 1-5/16 long												2			2		
34	LW-10303	PLUG, Vacuum pump drive							1						1			1	1

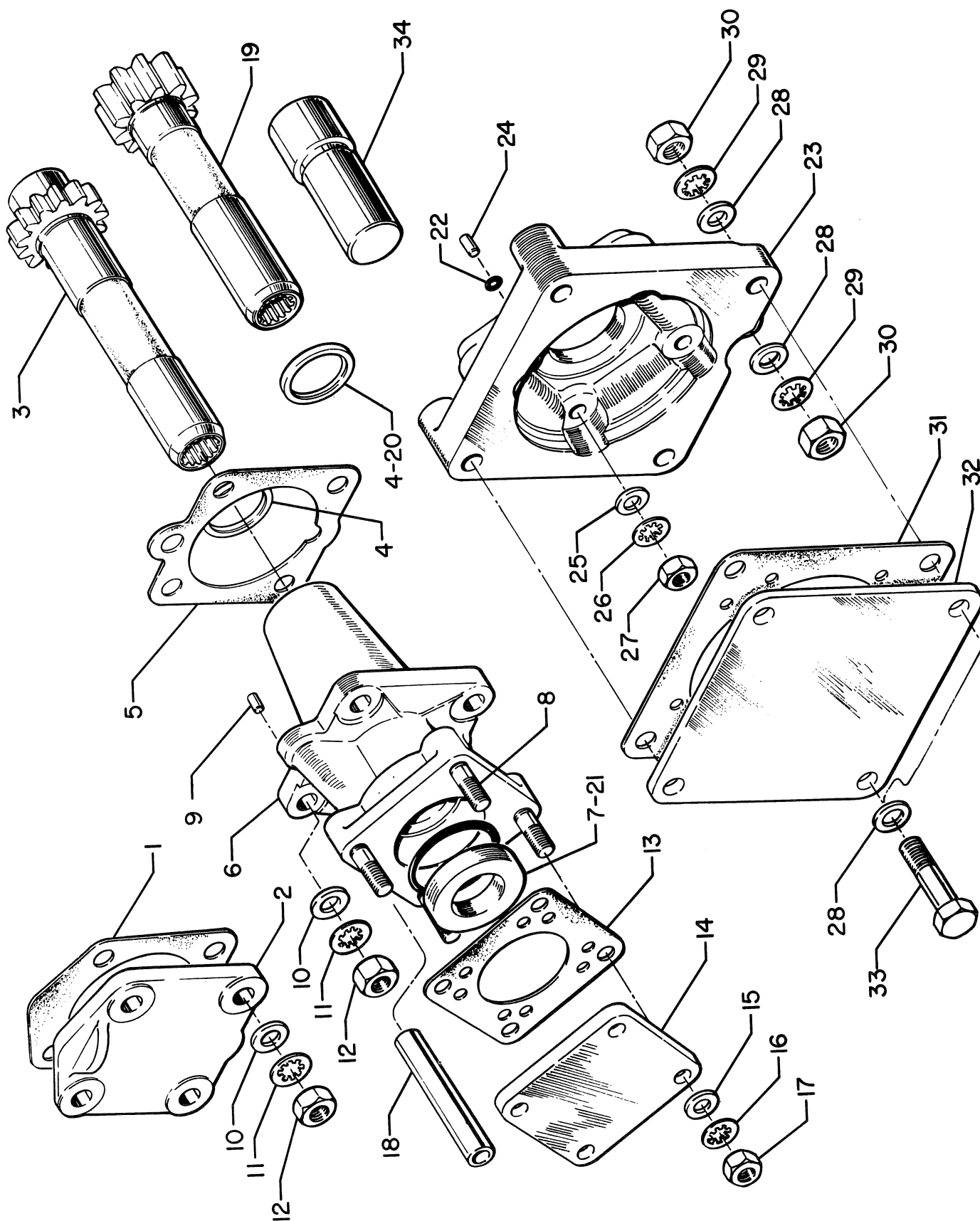


Figure 12 - Hydraulic Pump Drive and Covers

ACCESSORY HOUSING AND RELATED PARTS

FUEL PUMP AND FUEL PUMP DRIVES

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY															
				CAB	DAB	GID	KAB	KABD	KABD	KABD	KABD	KABD	KABD	KABD	KABD	KABD	KABD	KABD	KABD
13																			
1	LW-15473	FUEL PUMP (6441234)			1	1									1	1	1	1	1
2	60096	GASKET, Fuel pump			1	1									1	1	1	1	1
3	STD-33	WASHER, 3/8 plain			2	2									2	2	2	2	2
4	STD-1882	SCREW, 3/8-16 x 1-9/32 long			2	2									2	2	2	2	2
5	LW-10799	SPACER, Fuel pump insulating					1	1	1	1	1	1	1	1				1	
6	76486	PUMP, Fuel (RG-17980-D)						1		1			1						
	LW-11166	PUMP, Fuel (RG-17980-K)						1											
	78993	PUMP, Fuel (RG-17980)					1			1		1					1		
	LW-13920	PUMP, Fuel (RG-9080-J7A)											1						
	LW-13909	PUMP, Fuel (RG-9080-J4A)									1								
7	STD-35	WASHER, 5/16 plain					4	4	4	4	4	4	4	4			4		
8	STD-475	WASHER, 5/16 lock					4	4	4	4	4	4	4	4			4		
9	STD-1410	NUT, 5/16-18 plain					4	4	4	4	4	4	4	4			4		
10	72246	SHAFT, Fuel pump idler gear					1	1		1	1	1	1				1		
11	71667	LOCKPLATE, 1/4 bolt x 1-3/4 spacing					1	1		1	1	1	1				1		
12	STD-705	BOLT, 1/4-20 x 11/16 long					2	2		2	2	2	2				2		
13	71664	GEAR ASSY., Fuel pump idler					1	1		1	1	1	1				1		
14	77309	BUSHING, Crankshaft idler gear					1	1		1	1	1	1				1		
15	70474	WASHER, Fuel pump gear thrust					1	1		1	1	1	1				1		
16	STD-1737	RING, 37/64 dia. x 1/32 thick					1	1		1	1	1	1				1		
17	69164	GASKET, Fuel pump adapter					1	1	1	1	1	1	1	1			1		
18	72972	SHAFTGEAR ASSY., Fuel pump drive					1	1		1	1	1	1				1		
19	69159	ADAPTER ASSY., Fuel pump drive					1	1	1	1	1	1	1	1			1		
20	STD-1774	PIN, 1/8 dia. x 1/4 long					1	1	1	1	1	1	1	1			1		
21	STD-213	SEAL, Oil 3/4 ID x 1-3/8 OD					1	1	1	1	1	1	1	1			1		
22	LW-10329	SHAFT GEAR ASSY., Fuel pump drive							1				1						

WIDE CYLINDER FLANGE CRANKCASE MODEL ENGINES



CYLINDER, PISTON AND VALVE TRAIN

CONNECTING ROD, PISTON AND RING ASSEMBLIES

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY															
				CAB	DAB	GAB	KAB	KIAB	KIAB	KIAB	KIAB	KIAB	KIAB	KIAB	KIAB	KIAB	KIAB	KIAB	KIAB
1	LW-11750	CONNECTING ROD ASSEMBLY			6	6	6											6	6
	LW-10646	CONNECTING ROD ASSEMBLY						6	6	6	6	6	6	6	6	6	6	6	6
2	LW-13923	BUSHING, Connecting rod	6																
3	75061	BOLT, Connecting rod		12	12	12												12	12
	75060	BOLT, Connecting rod					12	12	12	12	12	12	12	12	12	12	12	12	12
4	LW-12186	NUT, Connecting rod																	
		bolt	12																
5	LW-13521	BEARING, Connecting rod		12	12	12												12	12
	LW-14954	BEARING, Connecting rod					12	12	12	12	12	12	12	12	12	12	12	12	12
6	75089	PISTON, Compression ratio																	
		8.50:1			6	6	6											6	6
	LW-10207	PISTON, Compression ratio																	
		8.7:1						6	6	6	6	6	6	6	6	6	6	6	6
7	74241	RING, Piston compression	12																
8	73857	RING, Piston oil regu-																	
		lating	6																
9	LW-14078	PIN, Piston	6																
10	60828	PLUG, Piston pin	12																

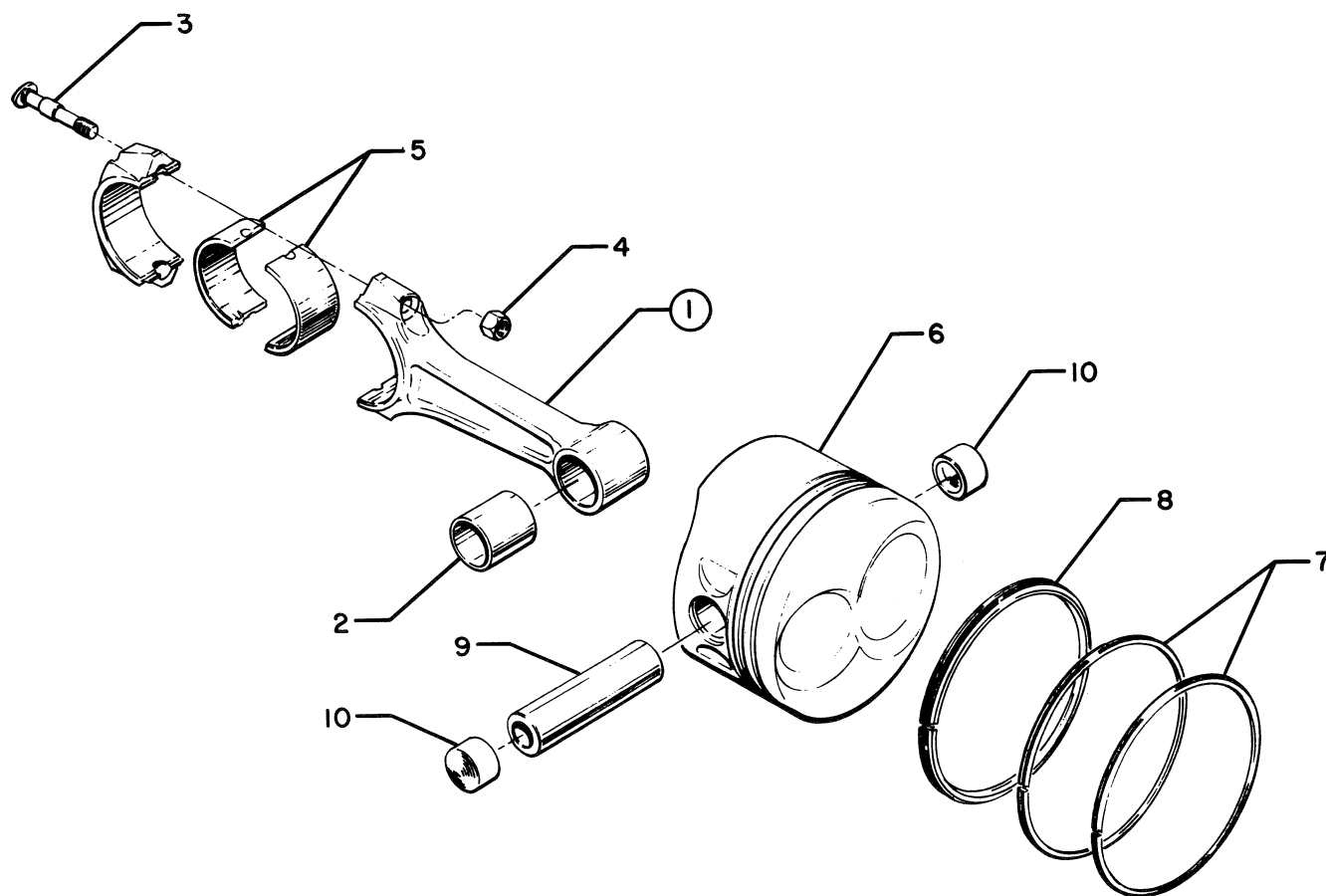


Figure 14 - Connecting Rod, Piston and Ring Assemblies

CYLINDER, PISTON AND VALVE TRAIN

CYLINDER ASSEMBLY

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
				CAB5	DAB5	GID5	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5	KID5	KIE5	KIF5	KIG5	KIGSD	KIJ5	KIJSD	KIAB	KIABD	KIB5

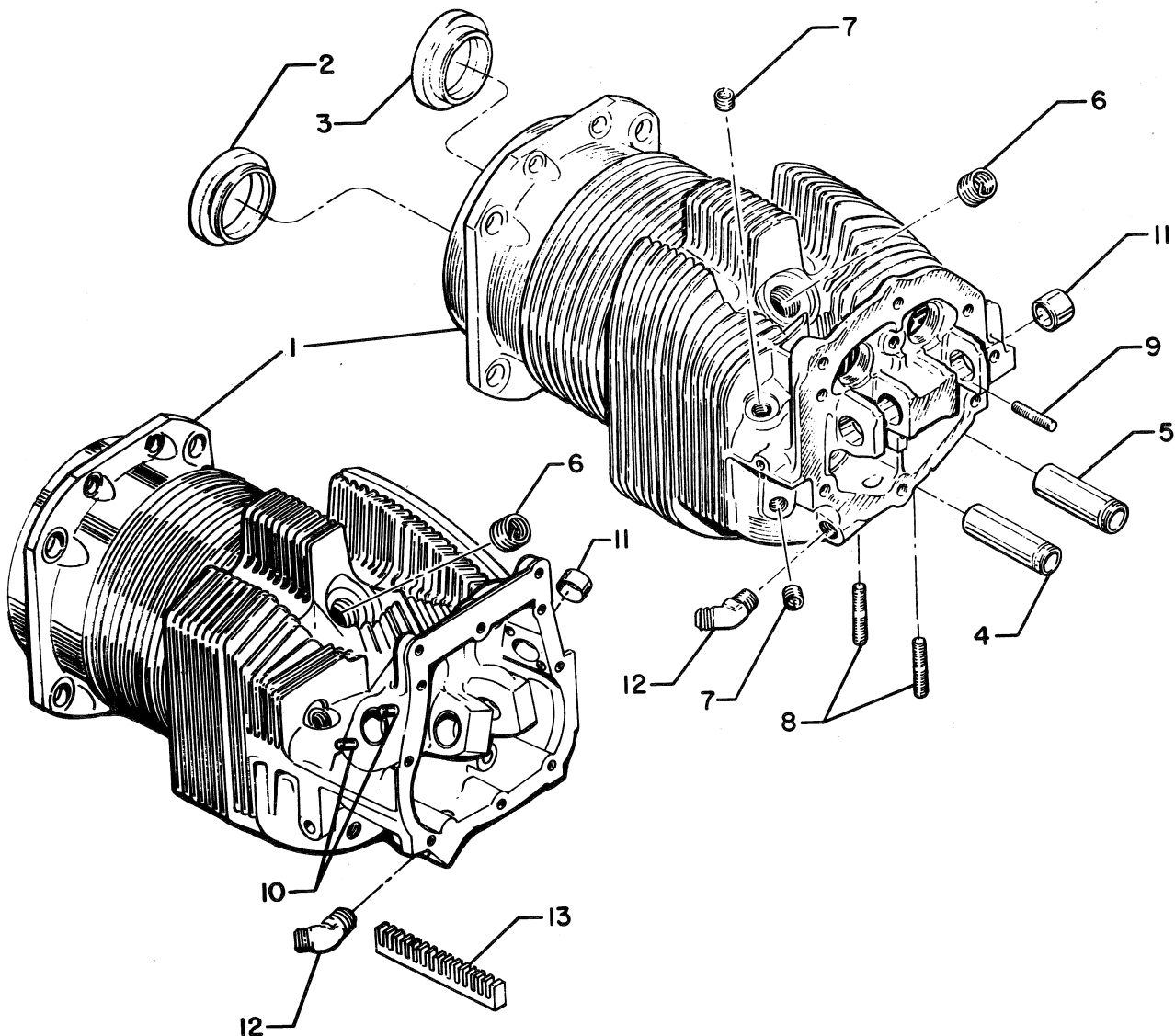


Figure 15 - Cylinder Assembly

CYLINDER, PISTON AND VALVE TRAIN

VALVE ASSEMBLY

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
				CAB5	DAB5	GID5	KIAB	KIABD	KIB5	KIB5D	KIF5	KIF5D	KIG5	KIG5D	KIJ5	KIJ5D	IIAB	IIABD	IAB5	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D	IAB5D

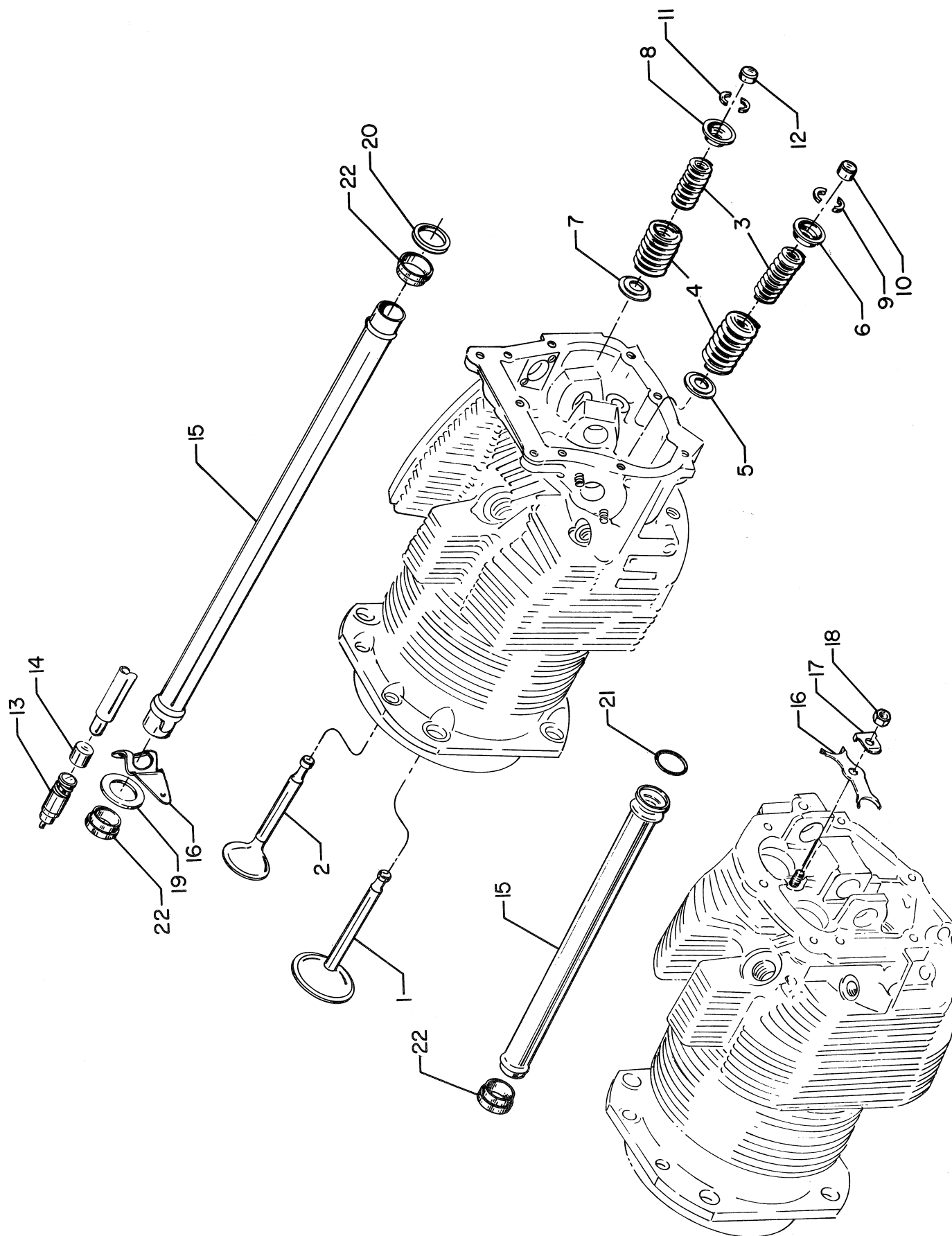


Figure 16 - Valve Assembly

CYLINDER, PISTON AND VALVE TRAIN

CYLINDER RELATED PARTS

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY															
				CAB5	DAB5	GID5	KIAB5	KIAB5D	KIB5	KIB5S	KIF5	KIF5D	KIG5	KIG5D	KIL5	KIL5D	SIAS	TAASD	TAB5D
1	73434	ROD ASSEMBLY, Push			un	un												un	un
	73435	ROD ASSEMBLY, Push			un	un												un	un
	73436	ROD ASSEMBLY, Push			un	un												un	un
	73455	ROD ASSEMBLY, Push					un	un	un	un	un	un	un	un	un	un	un		
	73456	ROD ASSEMBLY, Push					un	un	un	un	un	un	un	un	un	un	un		
	73457	ROD ASSEMBLY, Push					un	un	un	un	un	un	un	un	un	un	un		
	73458	ROD ASSEMBLY, Push					un	un	un	un	un	un	un	un	un	un	un		
2	69444	ROCKER ASSEMBLY, Valve intake			6	6												6	6
3	60398	BUSHING, Valve rocker intake			6	6												6	6
4	67113	ROCKER ASSEMBLY, Valve intake					6	6	6	6	6	6	6	6	6	6	6		
5	67114	BUSHING, Valve rocker intake					6	6	6	6	6	6	6	6	6	6	6		
6	74636	ROCKER ASSEMBLY, Exhaust valve			6	6												6	6
7	74637	BUSHING, Valve rocker exhaust			6	6												6	6
8	67112	ROCKER ASSEMBLY, Exhaust valve					6	6	6	6	6	6	6	6	6	6	6		
9	67114	BUSHING, Valve rocker exhaust					6	6	6	6	6	6	6	6	6	6	6		
10	71549	WASHER, Valve rocker					12	12	12	12	12	12	12	12	12	12	12		
11	72626	SHAFT, Valve rocker					12	12	12	12	12	12	12	12	12	12	12		
12	LW-13790	SHAFT, Valve rocker			6	6												6	6
13	LW-12892	THRUST BUTTON, Rocker shaft			12	12												12	12
14	66732	GASKET, Valve rocker shaft cover					12	12	12	12	12	12	12	12	12	12	12		
15	66731	COVER, Valve rocker shaft					12	12	12	12	12	12	12	12	12	12	12		
16	STD-160	WASHER, 1/4 lock					24	24	24	24	24	24	24	24	24	24	24		
17	STD-1411	NUT, 1/4-20 plain					24	24	24	24	24	24	24	24	24	24	24		
18	75906	GASKET, Rocker box cover			6	6												6	6
	67193	GASKET, Rocker box cover					6	6	6	6	6	6	6	6	6	6	6		
19	61247	COVER, Rocker box			6	6												6	6
	68795	COVER ASSY., Rocker box					6	6	6	6	6	6	6	6	6	6	6		
20	STD-1925	SCREW, 1/4-20 x 5/8 self-locking			36	36	48	48	48	48	48	48	48	48	48	48	48	36	36
21	74494	PLATE, Spark plug reach caution					6	6	6	6	6	6	6	6	6	6	6		
22	71481	RING, Oil seal	6																
23	77906	SPACER, 1/2 ID x 7/8 OD x 1/8 thick	2																
24	74887	SPACER, 1/2 ID x 7/8 OD x 3/8 thick	2																
25	383-B	NUT, 3/8-24 plain	24																
26	STD-2090	NUT, 1/2-20 plain	28																
27	65321	GASKET, Exhaust flange			6	6												6	6
	75118	GASKET, Exhaust flange					12	12	12	12	12	12	12	12	12	12	12		
28	61260	EXHAUST Flange			6	6												6	
	67195	EXHAUST Flange					6	6	6	6	6	6	6	6	6	6	6		
29	STD-35	WASHER, 5/16 plain	12																
30	STD-475	WASHER, 5/16 lock	12																
31	STD-1410	NUT, 5/16-18 plain	12																
	STD-2043	NUT, 5/16-18 self-locking	12																

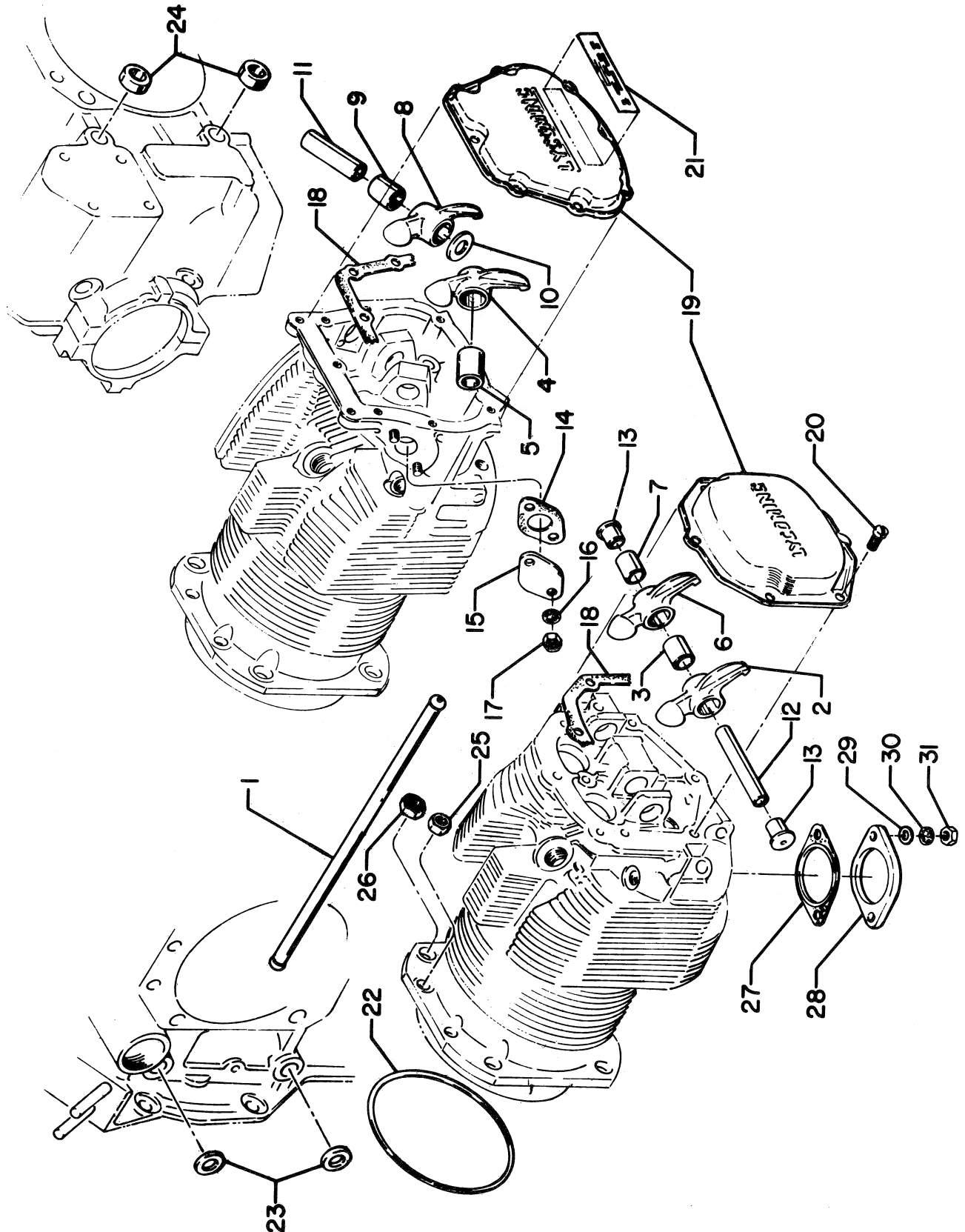


Figure 17 - Cylinder Related Parts

CYLINDER, PISTON AND VALVE TRAIN

CYLINDER HEAD DRAIN TUBES AND INTERCYLINDER COOLING BAFFLES

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY															
				CAB	DAB	GB	KAB	KABD	KAB	KAB	KAB	KAB	KAB	KAB	KAB	KAB	KAB	KAB	KAB
1	STD-684	NIPPLE, Straight 3/8 ID Hose	6																
2	STD-1821	HOSE, 3/8 ID x 2-1/2 long			6	6												6	6
	STD-2180	HOSE, 3/8 ID x 1-13/16 long					6	6	6	6	6	6	6	6	6	6	6	6	6
3	LW-15592-5-05	CLAMP, Hose	12																
4	68759	TUBE ASSY., No. 1 Cylinder head oil drain			1	1												1	1
	71737	TUBE ASSY., No. 2 Cylinder head oil drain			1	1												1	1
	68761	TUBE ASSY., No. 3,4,5,6 Cylinder head oil drain			4	4												4	4
	72702	TUBE ASSY., No. 1 Cylinder head oil drain					1	1	1	1	1	1	1	1	1	1	1	1	1
	72703	TUBE ASSY., No. 2 Cylinder head oil drain					1	1	1	1	1	1	1	1	1	1	1	1	1
	73027	TUBE ASSY., No. 3,4,5,6 Cylinder head oil drain					4	4	4	4	4	4	4	4	4	4	4	4	4
5	75339	BAFFLE ASSY., Intercylinder cooling			3	3												4	4
	73975	BAFFLE ASSY., Intercylinder cooling			1	1													
	75338	BAFFLE ASSY., Intercylinder cooling					4	4	4	4	4	4	4	4	4	4	4		
	LW-10610	BAFFLE AND CLIP ASSY., Cyls. No. 1 & 6										2				2		2	
	LW-10611	BAFFLE AND CLIP ASSY., Cyls. No. 2 & 5										2				2		2	
	74718	BAFFLE ASSY., Intercylinder										4				4		4	
6	LW-10608	CLIP, Intercylinder baffle										8				8		8	
7	LW-10609	RIVET, Baffle clip										8				8		8	
8	71611	RETAINER, Intercylinder baffle	4																
9	71610	HOOK, Intercylinder baffle	4																
10	72834	COVER, Baffle ignition hole					4	4	4	4	4	4	4	4	4	4	4	4	4
11	STD-692	SCREW, No. 10-32 x 1/2 long					8	8	8	8	8	8	8	8	8	8	8	8	8
12	STD-670	NUT, No. 10-32 self-locking					8	8	8	8	8	8	8	8	8	8	8	8	8
13	65614	PLUG, Baffle attaching					4			4	4	4	4			4	4	4	
14	STD-251	WASHER, No. 10 lock					4			4	4	4	4			4	4	4	
15	STD-1686	SCREW, No. 10-32 x 7/16 long					4			4	4	4	4			4	4	4	
16	AN931-12S17	GROMMET, 3/4 ID x 1-3/8 OD x 3/8 thick			1	1													

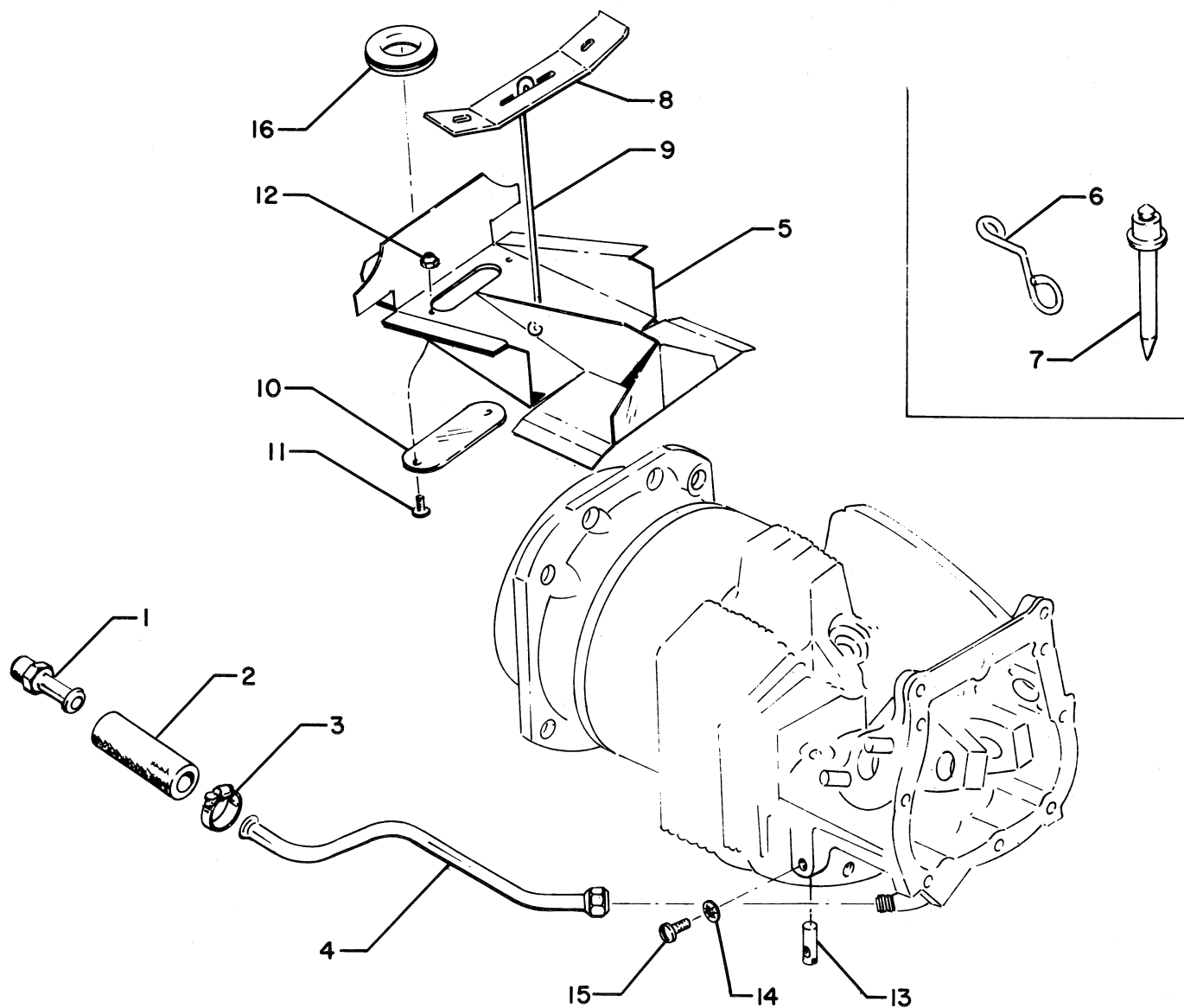


Figure 18 - Cylinder Head Drain Tubes and Intercylinder Cooling Baffles

IGNITION SYSTEM

MAGNETO DRIVES AND MAGNETOS

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY															
				C485	D4A55	G1D5	K1A5	K1B5D	K1B5	K1D5	K1E5	K1F5D	K1G5	K1B5D	K1J5D	J1A5	J1A5D	J1B5D	
1	LW-13642	GEAR RETAINER, Magneto drive							1				1	1		1	1	1	
2	LW-13641	CUSHION, Magneto drive							2				2	2		2	2	2	
3	LW-12681	GASKET, Magneto							1				1	1		1	1	1	
4	LW-385126-105	MAGNETO, Ignition System (D6LN-2031)															1	1	
	LW-382560-11	MAGNETO, Ignition															1	1	
	LW-684602-303	HARNESS, Ignition															1	1	
	LW-385126-107	MAGNETO, Ignition System (D6LN-2031)							1					1					
	LW-382560-13	MAGNETO, Ignition							1					1					
	LW-684602-303	HARNESS, Ignition							1					1					
	LW-385146-111	MAGNETO, Ignition System (D6LN-2230)											1			1			
	LW-382610-13	MAGNETO, Ignition											1			1			
	LW-384602-307	HARNESS, Ignition											1			1			
5	75965	CLAMP, Magneto							2				2	2		2	2	2	
6	STD-475	WASHER, 5/16 lock							2				2	2		2	2	2	
7	STD-1410	NUT, 5/16-18 plain							2				2	2		2	2	2	
8	STD-8	WASHER, 1/4 plain							13				13	13		13	13	13	
9	LW-620026-2	CLIP, 1 wire for 1/4 screw (bottom leads)							4				4	4		4	4	4	
10	LW-14057	CLIP, 1 wire for 1/4 screw (top leads)							2				2	2		2	2	2	
11	LW-320298-2	CLIP, 2 wire for 1/4 screw (bottom leads)							1				1	1		1	1	1	
12	LW-14060	CLIP, 2 wire for 1/4 screw (top leads)							2				2	2		2	2	2	
13	LW-620029-6	CLIP, 3 wire for 10-32 screw (bottom leads)							1				1	1		1	1	1	
14	LW-620037-4	CLIP, 6 wire for 10-32 screw							1				1	1		1	1	1	
15	62255	CLIP, 3 wire for 1/4 screw (bottom leads)							2				2	2		2	2	2	
16	LW-620036-4	CLIP, 6 wire for 10-32 screw							1				1	1		1	1	1	
17	73050	CLIP, Ignition harness							1				1	1		1	1	1	
18	LW-14875	BRACKET, Extension							1				1	1		1	1	1	
19	STD-2029	BOLT, 1/4-20 x 1-1/8 long							2				2	2		2	2	2	
20	STD-692	SCREW, 10-32							2				2	2		2	2	2	
21	STD-670	NUT, 10-32							2				2	2		2	2	2	
22	MS21919-G12	CLIP, 3/4 dia. with No. 10-32 screw							1				1	1		1	1	1	
23	76734	ZIP STRAP							26				26	26		26	26	26	
24	STD-160	WASHER, 1/4 lock							7				7	7		7	7	7	
25	STD-696	WASHER, 1/4 plain (thin)							un				un	un		un	un	un	
26	STD-1874	SCREW, 1/4-20 x 13/16 long							7				7	7		7	7	7	
27	STD-1925	SCREW, 1/4-20 self-locking							2				2	2		2	2	2	
28	10-720631-48	REPLACEMENT LEAD, Bendix harness - 48 in.							un				un	un		un	un	un	
	10-720631-78	REPLACEMENT LEAD, Bendix harness - 78 in.							un				un	un		un	un	un	
29	LW-157208	KIT, Magneto retard terminal											1			1			
	LW-382698	KIT, Magneto ground terminal											2			2	2	2	

NOTE

Replacement leads furnished with spark plug end assembled. Lead includes eyelet and ferrule for assembly to magneto plate.

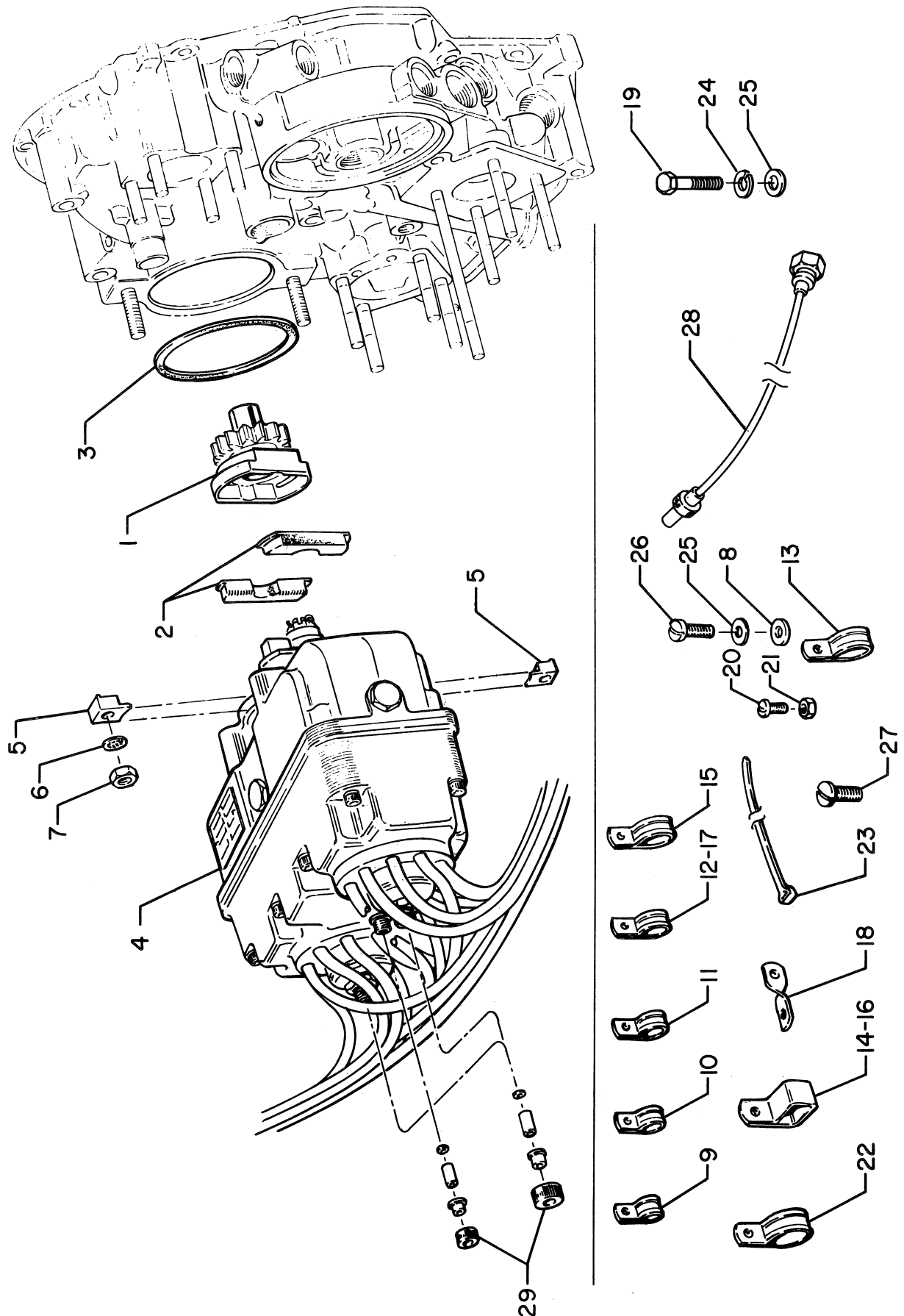


Figure 19 - Magneto Drives and Magnetos

IO-540 SERIES PARTS CATALOG

WIDE CYLINDER FLANGE CRANKCASE MODEL ENGINES

IGNITION SYSTEM

MAGNETO DRIVES AND MAGNETOS

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY																										
				CAB5	DA45	GID5	KI45	KI45D	KI55	KID5	KIE5	KIF5	KIF5D	KIG5	KIG5D	KIJ5	KIJ5D	SI45	TA45	TA45D										
20																														
1	67542	BEARING, Ball			2	2	2	2		2	2	2	2		2		2													
2	74830	GEAR RETAINER, Magneto drive			2	2	2	2		2	2	1	2		2		2													
	75124	GEAR RETAINER, Magneto drive, right										1																		
3	LW-12136	CUSHION, Magneto drive			4	4	4	4		4	4	4	4		4		4													
4	62224	GASKET, Magneto adapter			4	4	2	2		2	4	2	2		2		2													
5	LW-12707	ADAPTER, Magneto			2	2	2	2		2	2	2	2		2		2													
6	LW-12681	GASKET, Magneto					2	2				2	2		2		2													
7	73000	COUPLING, Magneto drive			1	1						1					1													
	73013	COUPLING, Magneto (retard breaker)			1	1																								
	73636	COUPLING, Magneto (right magneto)										1					1													
8	LW-163050-9	MAGNETO			1	1				1																				
	LW-163010-10	MAGNETO			1	1				1																				
	LW-349290-1	MAGNETO, S6LN-1208											1				1													
	LW-349310-1	MAGNETO, S6LN-1209						1					1		1		1													
	LW-349370-4	MAGNETO, S6LN-1227					1	1		1		2			1															
	LW-349310-8	MAGNETO, S6LN-1209 electric tach.					1			1																				
9	75965	CLAMP, Magneto					4	4		4		4	4		4		4													
10	STD-1727	WASHER, 3/4 OD x 5/16 ID x 1/8			4	4					4		4																	
11	STD-475	WASHER, 5/16 lock			4	4	4	4		4	4	4	4		4		4													
12	STD-1410	NUT, 5/16-18 plain			4	4	4	4		4	4	4	4		4		4													
	LW-157209	KIT, Magneto ground terminal			2	2					2																			
	LW-157208	KIT, Magneto retard terminal			1	1					1																			

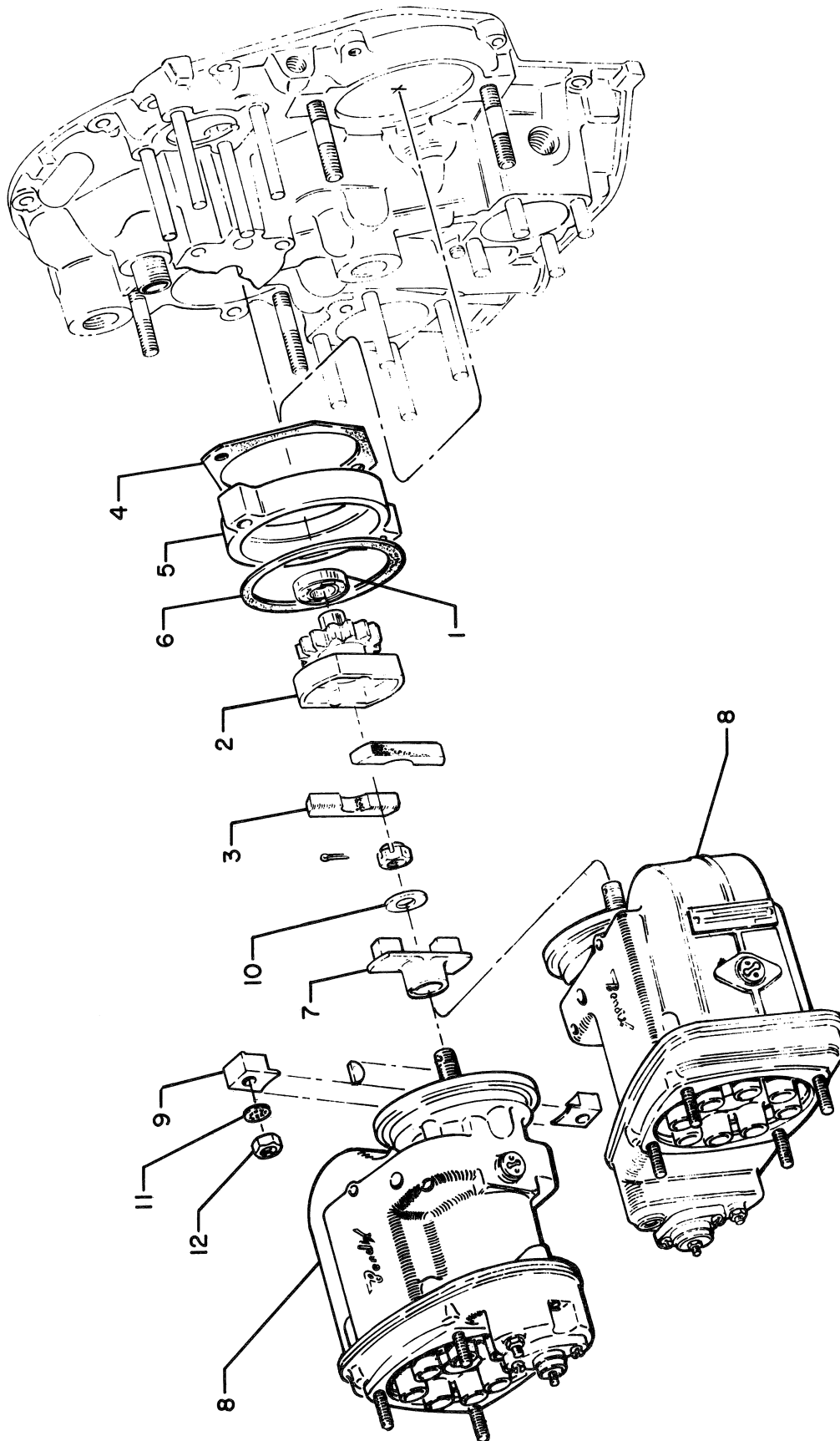


Figure 20 - Magneto Drives and Magnetos

IGNITION SYSTEM

IGNITION HARNESS AND SPARK PLUGS

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY															
				CAB	DAB	GID	KIAS	KIASD	KIBS	KIDS	KIES	KIF5	KIF5D	KIG5	KIG5D	KIJS	KIJS5D	SIAS	TAASD
21																			
1	LW-M-2469	HARNESS ASSY., Left magneto		1															
2	LW-M-2470	HARNESS ASSY., Right magneto		1															
3	71910	CLAMP, 1-3/4 ID offset		6	6														
4	STD-553	SCREW, No. 6-32 x 1/2 self-locking		6	6														
5	AN365-632A	NUT, No. 6-32 self-locking		6	6														
6	62255	CLIP, 3 wire for 1/4 screw		2	2	3	3		3	2	3	3							
7	LW-M-2463	HARNESS ASSEMBLY, Left magneto		1															
8	LW-M-2464	HARNESS ASSEMBLY		1															
9	72351	SCREW, No. 10-32 self-locking		8					8										
10	LW-M-2460	HARNESS ASSY., Left magneto				1					1								
11	LW-M-2461	HARNESS ASSY., Right magneto				1					1								
12	LW-14057	CLIP, 1 wire for 1/4 screw				4	2		2	2	4	2							
13	LW-14060	CLIP, 2 wire for 1/4 screw				4	4		4	2	4	4							
14	LW-320472-4	CLIP, 6 wire for No. 10 screw				1	1		1		1	1							
15	STD-692	SCREW, No. 10-32 x 1/2 long				2	2		2		2	2							
16	STD-670	NUT, No. 10-32 self-locking				2	2		2		2	2							
17	72815	BRACKET, Twist				2	2		2		2	2							
18	STD-8	WASHER, 1/4 plain				12	6		6	4	12	6							
19	STD-160	WASHER, 1/4 lock				10	8		8	6	10	8							
20	76734	ZIP STRAP				8	10		10		8	10							
21	STD-696	WASHER, 1/4 plain (thin)				un	un		un		un	un				un	un		
22	STD-1874	SCREW, 1/4-20				6	6		6		6	6							
23	STD-1925	SCREW, 1/4-20				4			2	4									
24	LW-M-2454	HARNESS ASSY., Left magneto					1		1			1							
25	LW-M-2455	HARNESS ASSY., Right magneto					1		1			1							
26	STD-2029	BOLT, 1/4-20 x 1-1/8					2		2			2							
27	LW-M-2466	HARNESS ASSY., Left magneto								1									
28	LW-M-2467	HARNESS ASSY., Right magneto								1									
29	LW-M-2376	PLATE, Spark plug cable		2	2	2	2		2	2	2	2							
30	STD-1411	NUT, 1/4-20 plain								4									
31	LW-720515-3	HARNESS ASSY., Ignition										1				1	1		
	10-720631-48	REPLACEMENT LEAD, Bendix harness - 48 in.		un	un	un	un		un	un	un	un				un	un		
	10-720631-78	REPLACEMENT LEAD, Bendix harness - 78 in.		un	un	un	un		un	un	un	un				un	un		
	M-1985-48	REPLACEMENT LEAD, Slick harness - 48 in.		un	un	un	un		un	un	un	un				un	un		
	M-1985-72	REPLACEMENT LEAD, Slick harness - 72 in.		un	un	un	un		un	un	un	un				un	un		
32	1182-B3	SPARK PLUG, (Champion REM 40E)		12	12														
	1182-J3	SPARK PLUG, (Champion REM 38E)					12		12	12		12		12					
	1182-Y3	SPARK PLUG, (Champion RHB 36P)					12												
	1182-K4	SPARK PLUG, (Champion RHB 36W) (Iridium)																12	
	1182-W5	SPARK PLUG, (Champion RHB 37E)									12								
	1182-D4	SPARK PLUG, (Champion RHM 38E)						12				12	12		12	12	12	12	12

NOTE

The above spark plugs are those used in current production only; this list does not include additional spark plugs that are approved for use in these engines. See latest edition of Service Instruction No. 1042 for complete listing of all approved spark plugs.

NOTE

Replacement leads furnished with spark plug end assembled. Lead includes eyelet and ferrule for assembly to magneto plate.

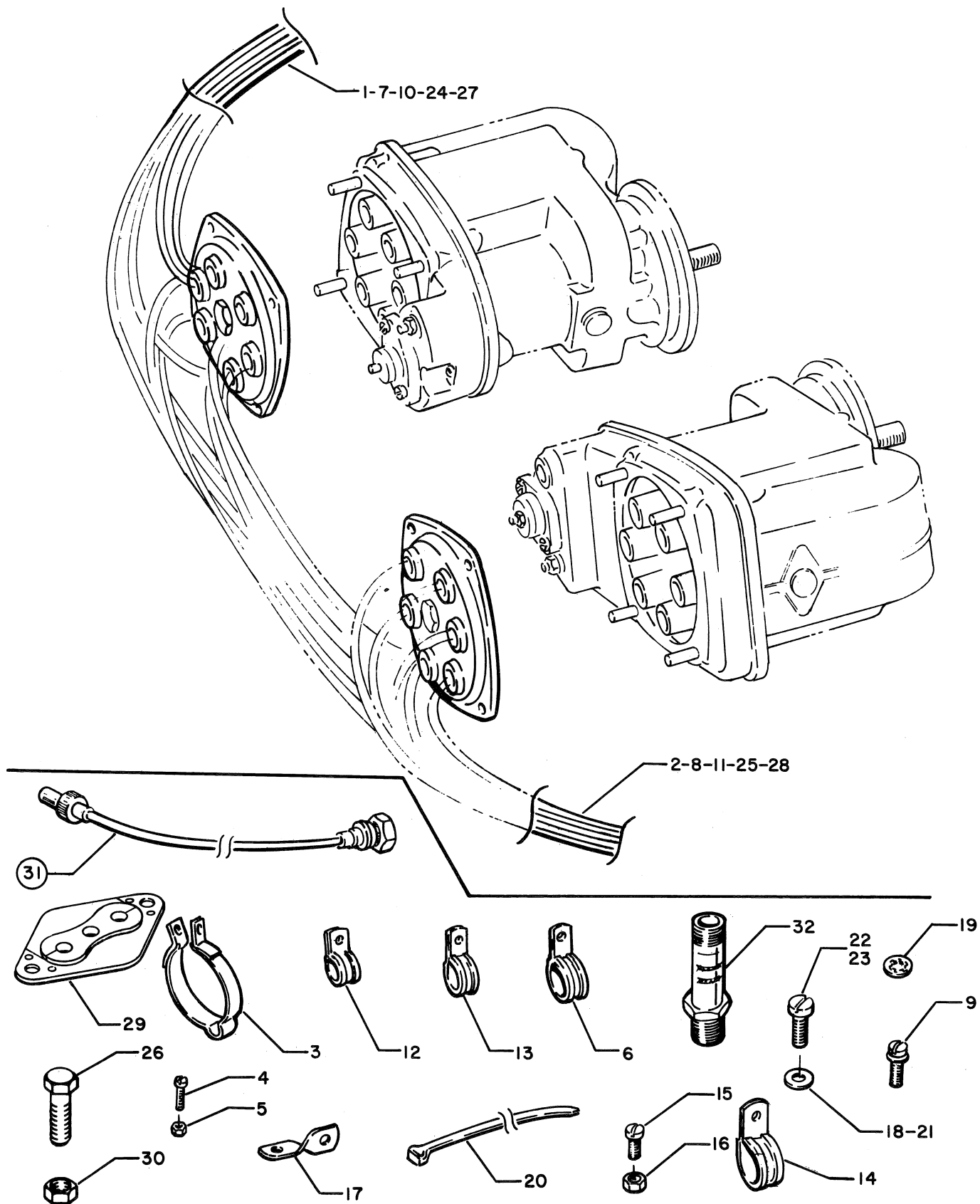


Figure 21 - Ignition Harness, Lead Assembly and Spark Plugs

ELECTRICAL SYSTEM

ALTERNATOR MOUNTING BRACKETS

FIG. REF. 22	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY															
				CAB	DAB	GAB	K1AS	K1ASD	K1BS	K1DS	K1ES	K1ESD	K1GS	K1GSD	K1J5	K1J5D	TAAS	TAASD	TA8SD
1	LW-13039	BRACKET, Alternator			1	1	1	1		1	1	1	1	1		1		1	1
2	77756*	BRACKET, Alternator			1							1				1		1	
3	73383	LOCKPLATE, 5/16 bolt x 1.00 spacing			1	1	1	1		1	1	1	1	1		1	1	1	1
4	STD-1838	BOLT, 5/16-18 x 15/16 long			2	2	2	2		2	2	2	2	2		2	2	2	2
5	75380	LINK ALTERNATOR, Adjusting			1	1	1	1		1	1	1	1	1		1		1	1
6	LW-10091*	LINK ALTERNATOR, Adjusting			1														
7	77757	BRACKET, Alternator belt adjusting										1				1		1	
8	STD-1727	WASHER, Plain 3/4 OD x 5/16 ID x 1/8 thick										1				1		1	
9	LW-14637	SHIM, 13/16 OD x 5/16 ID x .005 thick										un				un		un	
10	LW-14649	SHIM, 13/16 OD x 5/16 ID x .010 thick										un				un		un	
11	STD-1889	BOLT, 5/16-18 x 1-1/4 long drilled										1				1		1	
12	78639	PULLEY AND SHAFT ASSY., Alternator belt adjusting										1				1		1	
13	78614	PULLEY, Alternator belt adjusting										1				1		1	
14	78629	BALL BEARING, Alternator idler pulley										1				1		1	
15	MS-16625-1125	RING, Internal retaining										2				2		2	
16	68617	IDLER SHAFT, Alternator belt adjusting										1				1		1	
17	76768	LOCKWASHER, Alternator idler pulley bearing										1				1		1	
18	76760	LOCKNUT, Alternator idler pulley bearing										1				1		1	
19	STD-669	WASHER, 1/2 ID x 1.00 OD x 1/8 thick										1				1		1	
20	STD-676	NUT, 1/2-20 self-locking										1				1		1	
21	STD-1727	WASHER, Plain 3/4 OD x 5/16 ID x 1/8 thick										1				1		1	
22	LW-14637	SHIM, 13/16 OD x 5/16 ID x .005 thick										un				un		un	
23	STD-1889	BOLT, 5/16-18 x 1-1/4 long drilled										1				1		1	
24	LW-10952	SHIM, 13/16 OD x 7/16 ID x .005 thick										un				un		un	
25	AN6-12	BOLT, 3/8-24 x 1-5/16 drilled end										1				1		1	
26	AN6-14	BOLT, 3/8-24 x 1-19/32 drilled end			1	1	1	1		1	1	1	1	1		1		1	1
27	STD-690	WASHER, 13/16 OD x 3/8 ID x 1/16 thick			un	un	un	un		un	un	un	un	un		un	un	un	un
28	STD-872	NUT, 3/8-24 Slotted			2	2	2	2		2	2	2	2	2		2	2	2	2
29	STD-713	PIN, Cotter 3/32 x 3/4 long			2	2	2	2		2	2	2	2	2		2	2	2	2
30	AN6-13	BOLT, 3/8-24 x 1-7/16 drilled end										1	1						
31	AN6-16	BOLT, 3/8-24 x 1-13/16 drilled end			1	1	1	1		1	1		1	1		1	1	1	1
32	76534	SHIM, 1-1/8 OD x 7/16 ID x .005 thick			un	un	un	un		un	un	un	un	un		un	un	un	un

* Bracket used for idler pulley type belt adjusting installation.
Also used for special Piper installation with LW-10091 adjusting link.

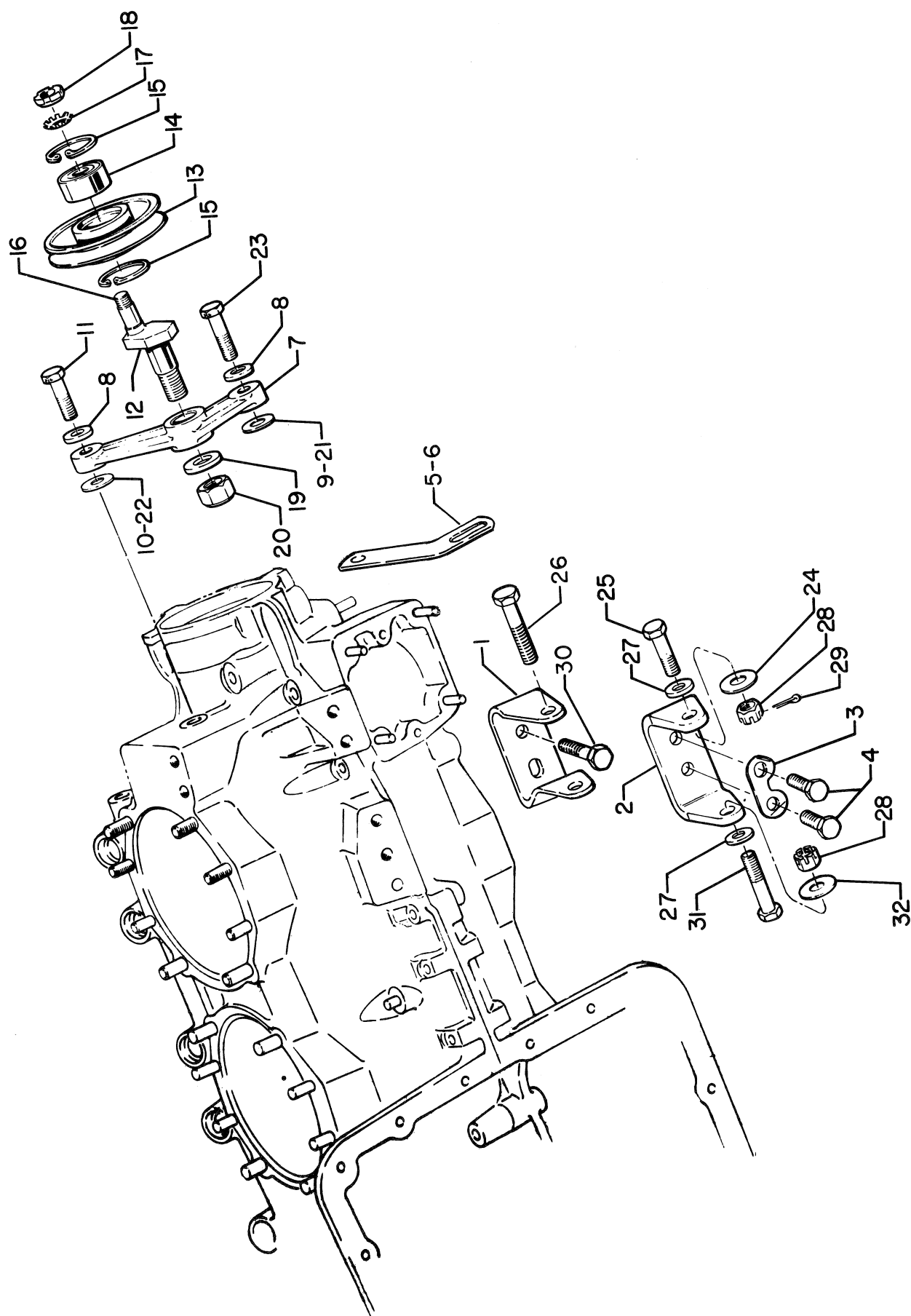


Figure 22 - Alternator Mounting Brackets

ELECTRICAL SYSTEM

ALTERNATORS, REGULATORS AND DRIVE BELTS

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY															
				CBS	DAS	GDS	KAS	KASD	KBS	KDS	KES	KESD	KGS	KGSD	KJS	KJSD	SA5	TA5D	TASD
1	LW-14308	ALTERNATOR, 12V. - 60 amp., 3.25:1 ratio (externally grounded ALY-8420)										1	1						
	LW-14316	ALTERNATOR, 12V. - 70 amp., (externally grounded ALX-8421)								1								1	1
	LW-14319	ALTERNATOR, 24V. - 50 amp., (externally grounded ALT-8421)								1									
	LW-14324	ALTERNATOR, 24V. - 70 amp., (externally grounded ALU-8421)								1	1								
2	76026	BELT, Alternator drive (3/8 wide)																	
	74519	BELT, Alternator drive (3/8 wide)																	
3	LW-10185	REGULATOR, 12V. (VSF-7203)																	
	LW-10179	REGULATOR, 24V. (VSF-7403)																	
	78059	OVERVOLTAGE RELAY, 12V. (FOC-4002A)																	
	78060	OVERVOLTAGE RELAY, 24V. (FOC-4003A)																	

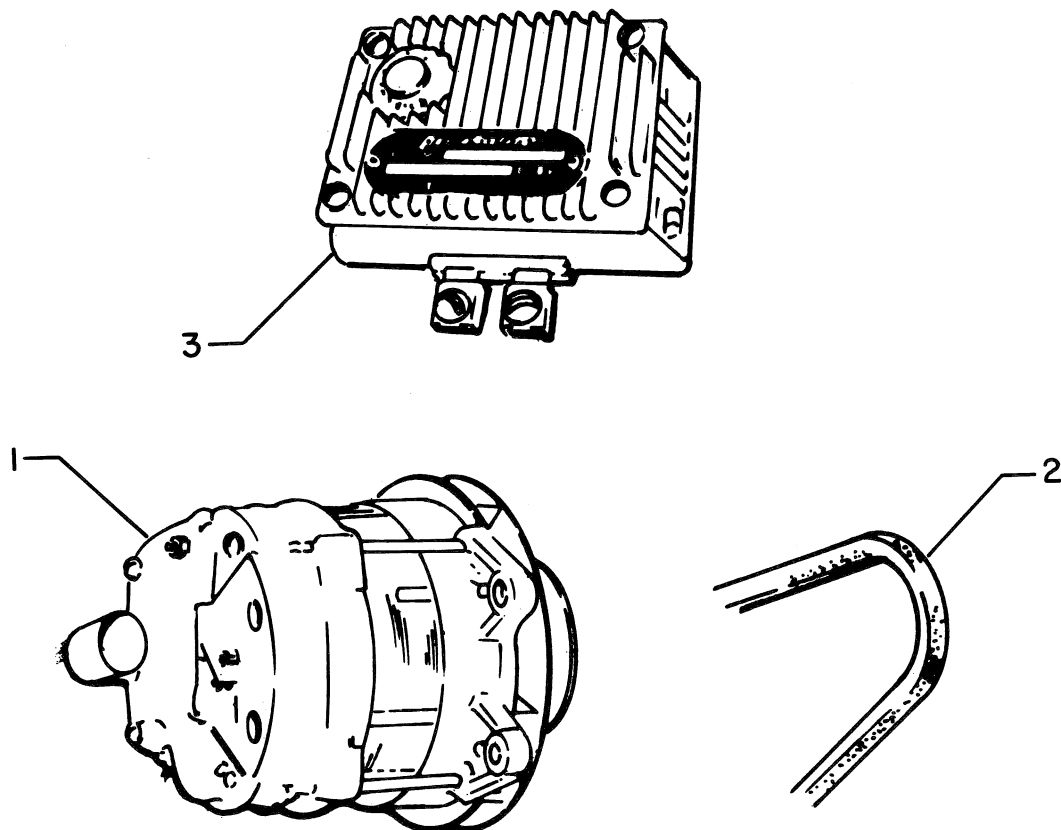


Figure 23.

ELECTRICAL SYSTEM

STARTING MOTOR AND MAGNETIC SWITCH

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY															
				CAB	DAB	GID	KIAB	KIABD	KIB	KIBS	KIES	KIESD	KIG	KIGSD	KIJ	KIJSD	SIAS	TAASD	TABSD
1	LW-15571	STARTER, 12V. (3.38:1 Int. red.)																	
		12/14 pinion, MZ-4222				1	1		1	1	1	1		1	1			1	1
	LW-15572	STARTER, 24V. (3.38:1 Int. red.)																	
		12/14 pinion, MZ-4016				1	1	1	1		1	1		1	1	1			
2	STD-35	WASHER, 5/16, plain	4																
3	STD-475	WASHER, 5/16, lock	4																
4	STD-2156	BOLT, 5/16-18 x 1-5/32	1																
5	STD-1410	NUT, 5/16-18 plain	3																
6	LW-12083	SWITCH, Magnetic 12V. (SAZ-4201E-1)				1		1		1	1		1					1	1
	LW-12085	SWITCH, Magnetic 24V. (SAZ-4401C)					1	1	1		1	1		1		1	1		

NOTE

See latest edition of Service Instruction No. 1154 for complete list of FAA approved starters, generators, alternators, regulators and relays.

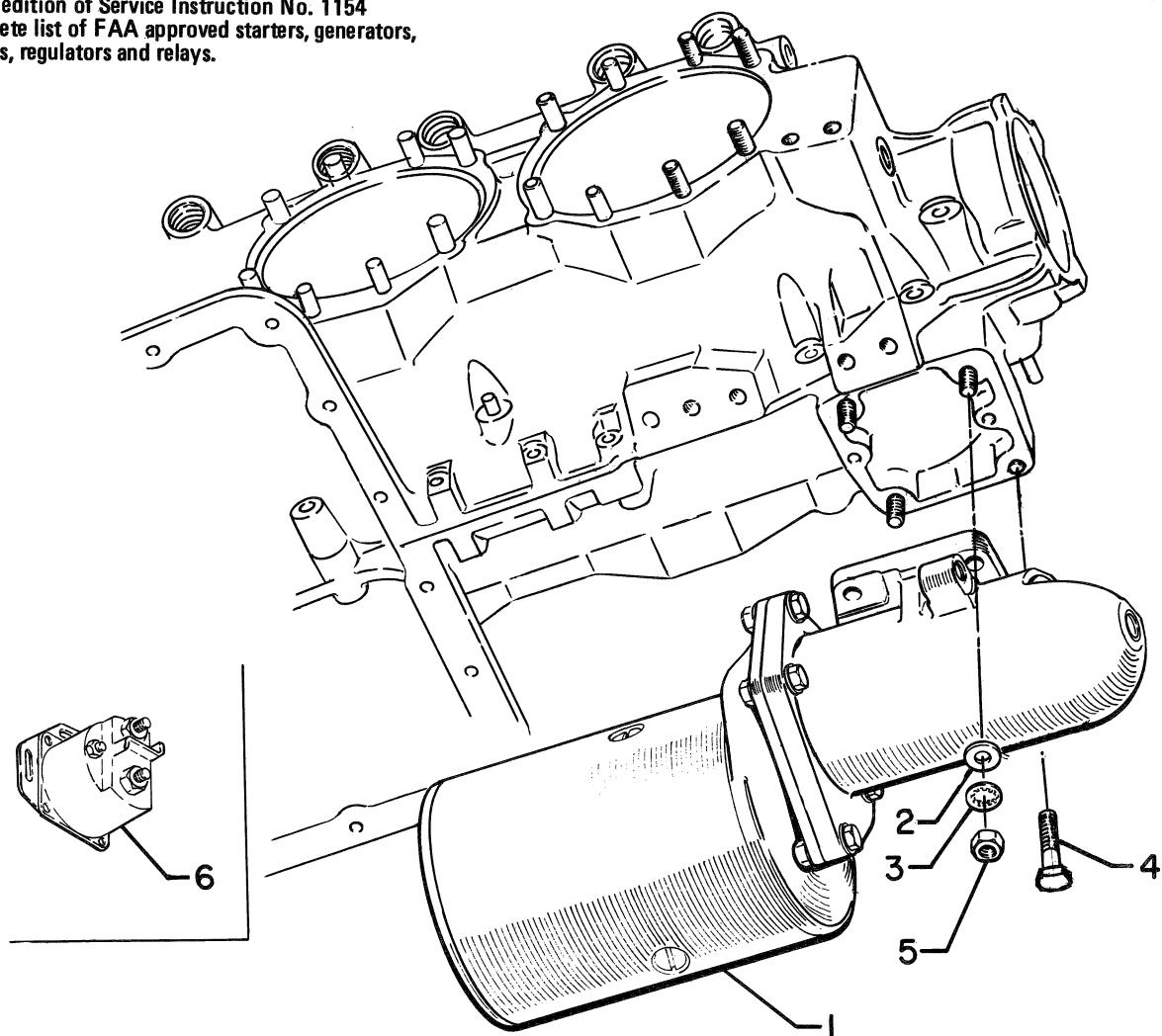


Figure 24.

OIL SUMP AND INDUCTION SYSTEM

OIL SUMP ASSEMBLY

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY															
				CAB5	DAAS	GIDS	KJAS	KJASD	KJBS	KJDS	KJES	KJESD	KJGS	KJGSD	KJJS	KJJD	SJAS	TAASD	TABSD
25																			
1	LW-13306	GASKET, Oil sump						1	1	1	1	1	1	1	1	1	1	1	1
2	74833	HOUSING ASSY., Oil sump and																	
		Induction						1	1	1	1	1	1	1	1	1	1	1	1
	LW-13232	HOUSING ASSY., Oil sump and																	
		Induction									1	1	1	1	1	1	1	1	1
	LW-10454	HOUSING ASSY., Oil sump and																	
		Induction																	1
3	STD-514	DOWEL, 5/16 dia. x 1/2						2	2	2	2	2	2	2	2	2	2	2	2
4	72179	STUD, Intake pipe extension						3	3	3	3	3	3	3	3	3	3	3	3
5	72167	PIPE, Extension intake cyls.																	
		No. 1 and 2						2	2	2	2	2	2	2	2	2	2	2	2
6	72168	PIPE, Extension intake cyls.																	
		No. 3 and 4						2	2	2	2	2	2	2	2	2	2	2	2
7	72169	PIPE, Extension intake cyls.																	
		No. 5 and 6						2	2	2	2	2	2	2	2	2	2	2	2
8	LW-11273	CLAMP, Intake pipe extension						3	3	3	3	3	3	3	3	3	3	3	3
9	25C-9	STUD, 1/4-20 x 1-1/8						4	4	4	4	4	4	4	4	4	4	4	4
10	25C-11	STUD, 1/4-20 x 1-3/8						15	15	15	15	15	15	15	15	15	15	15	15
11	38-15	STUD, 3/8-16 x 1-7/8						8	8	8	8	8	8	8	8	8	8	8	8
12	72706	INSERT, Heli-coil 1/4-20 x 3/8						14	14	14	14	14	14	14	14	14	14	14	14
13	1102	PLUG, 1/8-27 NPT						5	5	5	5	5	5	5	5	5	5	5	5
14	STD-91	PLUG, 1/2-14 NPT						1	1	1	1	1	1	1	1	1	1	1	1
15	STD-784	PLUG, 3/8-18 NPT						1	1	1	1	1	1	1	1	1	1	1	1
16	STD-355	PLUG, 3/4-14 NPT						2	2	2	2	2	2	2	2	2	2	2	2
17	STD-8	WASHER, 1/4 plain						29	29	29	29	29	29	29	29	29	29	29	29
18	STD-160	WASHER, 1/4 lock						23	23	23	23	23	23	23	23	23	23	23	23
19	STD-1646	BOLT, 1/4-20 x 2.00						2	2	2	2	2	2	2	2	2	2	2	2
20	STD-1688	BOLT, 1/4-20 x 1.00						10	10	10	10	10	10	10	10	10	10	10	10
21	STD-1411	NUT, 1/4 plain						13	13	13	13	13	13	13	13	13	13	13	13
22	STD-589	GASKET, 1-1/8 OD x 29/32 ID x .06						1	1	1	1	1	1	1	1	1	1	1	1
23	72958	BAFFLE, Oil sump						1	1	1	1	1	1	1	1	1	1	1	1
24	72960	PLUG, 7/8-14 x 5/8 hex hd.						1	1	1	1	1	1	1	1	1	1	1	1
25	STD-1875	BOLT, 1/4-20 x 13/16						4	4	4	4	4	4	4	4	4	4	4	4
26	STD-8	WASHER, 1/4 plain						37	37	37	37	37	37	37	37	37	37	37	37
27	STD-160	WASHER, 1/4 lock						23	23	23	23	23	23	23	23	23	23	23	23
28	STD-1419	BOLT, 1/4-20 x 1-1/8						6	6	6	6	6	6	6	6	6	6	6	6
29	STD-1688	BOLT, 1/4-20 x 1.00						8	8	8	8	8	8	8	8	8	8	8	8
30	STD-1411	NUT, 1/4-20 plain						25	25	25	25	25	25	25	25	25	25	25	25
31	STD-551	PLUG, 1/2-14 NPT Sq. hd. drilled						2	2	2	2	2	2	2	2	2	2	2	2
32	LW-13383	BAFFLE, Oil sump										1	1	1	1	1	1	1	1
33	LW-13384	SUPPORT, Oil sump baffle										4	4	4	4	4	4	4	4
34	LW-13385	SUPPORT, Oil sump baffle										2	2	2	2	2	2	2	2
35	STD-425	WASHER, 7/16 OD x 13/32 ID x 1/8																	
		thick										6	6	6	6	6	6	6	6
36	STD-1686	SCREW, No. 10-32 x 7/16										6	6	6	6	6	6	6	6
37	75444	ADAPTER ASSY., Fuel drain valve									2								
38	60422	SCREEN, Oil suction						1	1	1	1	1	1	1	1	1	1	1	1
39	STD-111	GASKET, 1.00 ID x 1-1/4 OD x 3/32						1	1	1	1	1	1	1	1	1	1	1	1
40	LW-12545	PLUG, 5/8 hex hd. x 1.00-20 thread						1	1	1	1	1	1	1	1	1	1	1	1

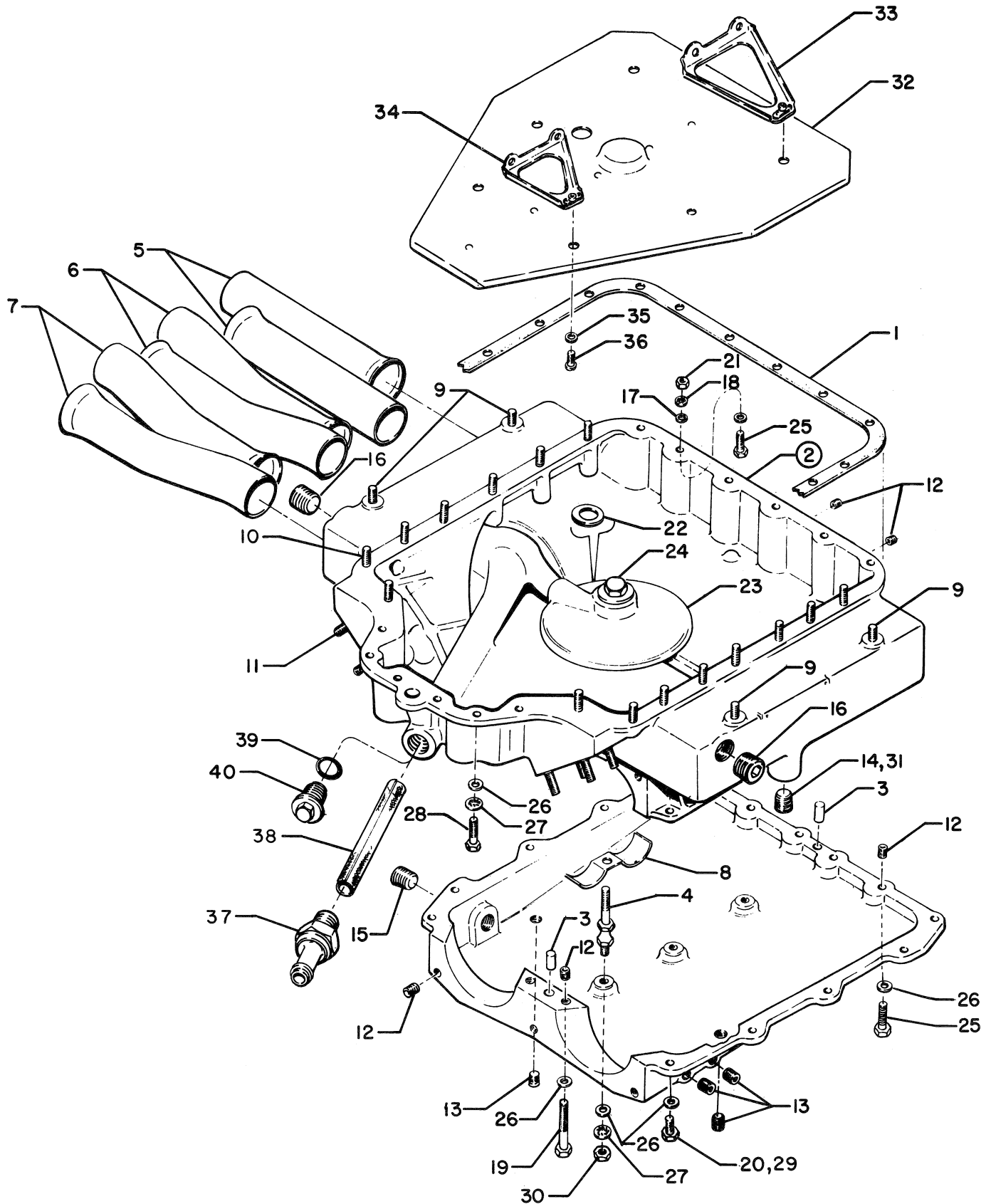


Figure 25 - Oil Sump Assembly

OIL SUMP AND INDUCTION SYSTEM

OIL SUMP ASSEMBLY

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY															
				CAB	DAB	GAB	KAB	KIAB	KIAB	KIAB	KIAB	KIAB	KIAB	KIAB	KIAB	KIAB	KIAB	KIAB	KIAB
1	LW-13306	GASKET, Oil sump																1	1
2	LW-14900	SUMP ASSY., Oil																1	1
3	STD-2184	PLUG, 1-1/8 NPT																1	1
4	71699	CONNECTOR, Intake pipe																6	6
5	25C-11	STUD, 1/4-20 x 1-3/8																14	14
6	38-15	STUD, 3/8-16 x 1-7/8																8	8
7	STD-1164	INSERT, 5/16-18 x 5/8																4	4
8	STD-71	PLUG, 3/8-18 NPT																1	1
9	1102	PLUG, 1/8 NPT																2	2
10	STD-8	WASHER, 1/4 plain																34	34
11	STD-160	WASHER, 1/4 lock																27	27
12	STD-1419	BOLT, 1/4-20 x 1-1/8																7	7
13	STD-1688	BOLT, 1/4-20 x 1.00																6	6
14	STD-1411	NUT, 1/4-20 plain																21	21
15	STD-551	PLUG, 1/2-14 NPT Sq. hd. drilled																2	2
16	70484	SCREEN, Oil suction																1	1
17	STD-111	GASKET, 1.00 ID x 1-1/4 OD x 3/32																1	1
18	LW-12545	PLUG, 5/8 Hex x 1.00-20 thread																1	1

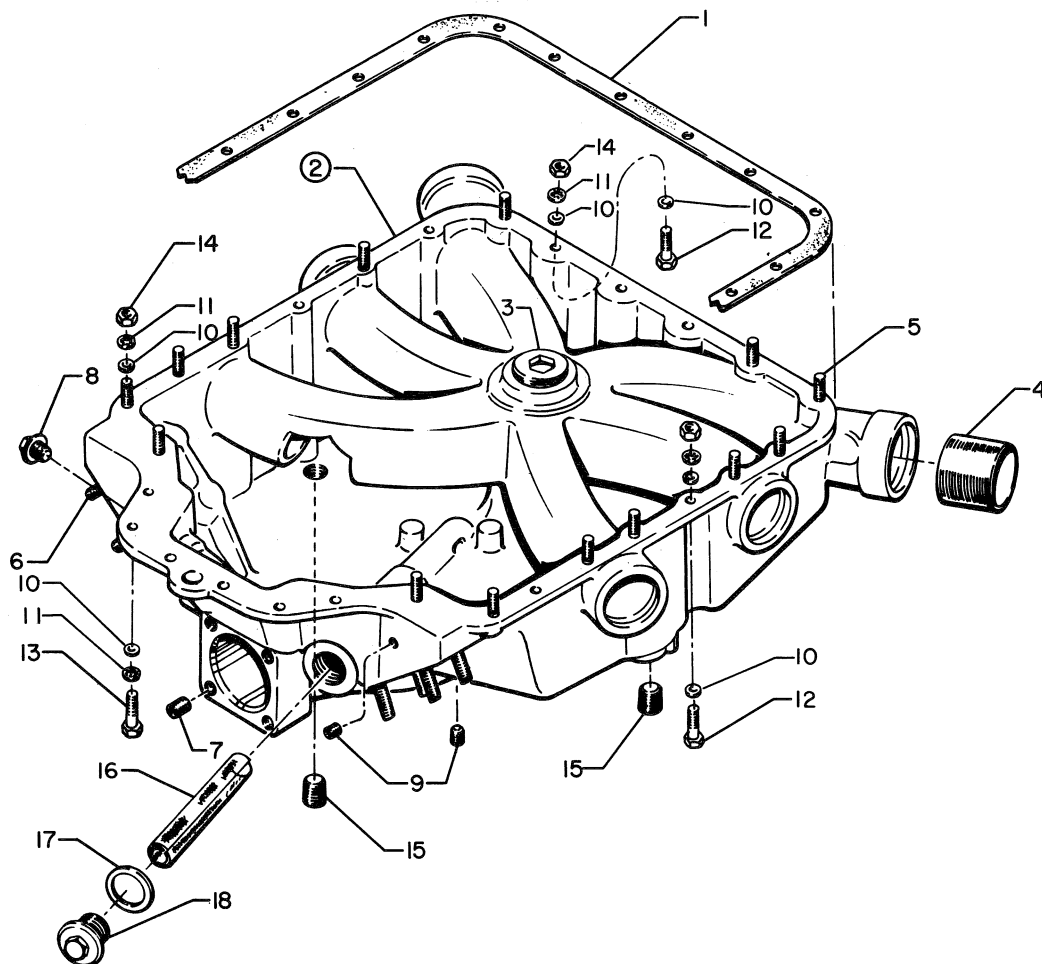


Figure 26.

OIL SUMP AND INDUCTION SYSTEM

OIL SUMP ASSEMBLY

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY															
				CBS	DAS	GDS	K1AS	K1ASD	K1BS	K1DS	K1ES	K1ESD	K1GS	K1GSD	K1JS	K1JSD	STAS	TAASD	TASD
27																			
1	LW-13306	GASKET, Oil sump				1	1												
2	72056	SUMP ASSY., Oil				1	1												
3	71699	CONNECTOR, Intake pipe				6	6												
4	25C-11	STUD, 1/4-20 x 1-3/8				14	14												
5	31C-15	STUD, 5/16-18 x 1-7/8				4	4												
6	38-15	STUD, 3/8-16 x 1-7/8				8	8												
7	STD-1173	INSERT, 1/4-20 Heli-coil x 1/2 long				4	4												
8	STD-8	WASHER, 1/4 plain				34	34												
9	STD-160	WASHER, 1/4 lock internal teeth				27	27												
10	STD-1419	BOLT, 1/4-20 x 1-1/8 long hex hd.				7	7												
11	STD-1688	BOLT, 1/4-20 x 1.00 long hex hd.				6	6												
12	STD-1411	NUT, 1/4-20 plain				21	21												
13	STD-551	PLUG, 1/2-14 NPT Sq. hd. drilled				2	2												
14	61548	NAMEPLATE				1	1												
15	STD-1901	DRIVE STUD, No. 4 x 3/16 long, round hd.				4	4												
16	70484	SCREEN, Oil suction				1	1												
17	STD-111	GASKET, 1.00 ID x 1-1/4 OD x 3/32				1	1												
18	LW-12545	PLUG, 5/8 hex hd. x 1.00-20 thread				1	1												

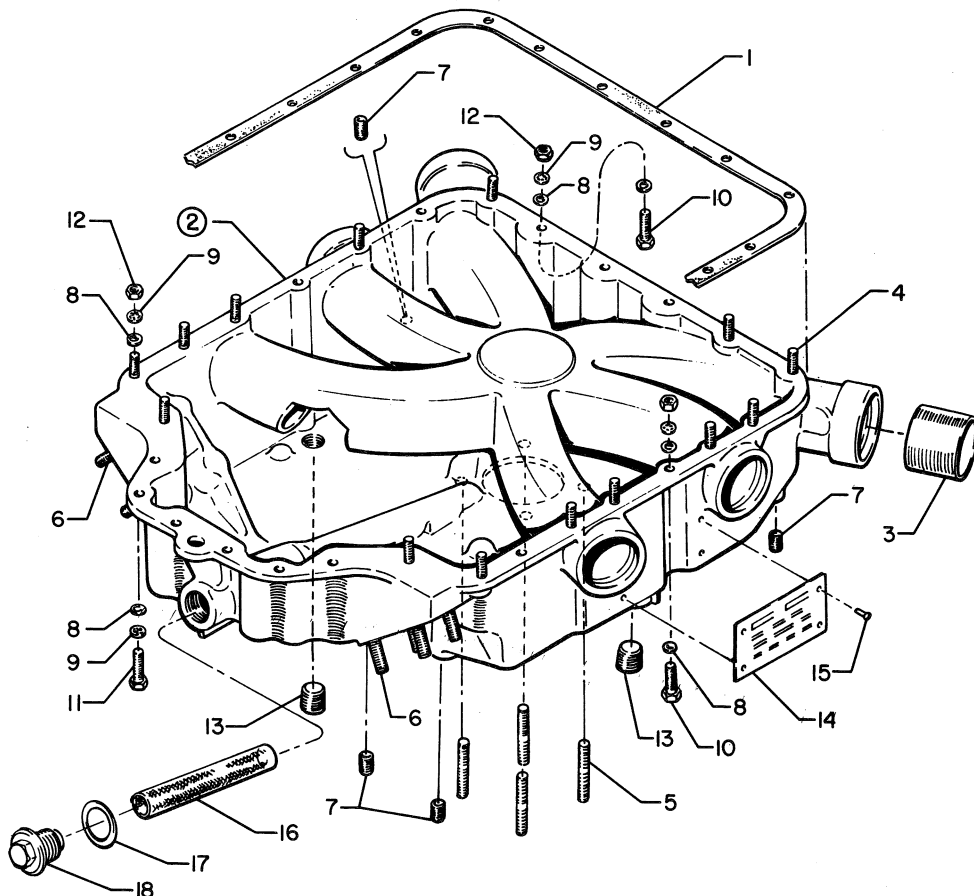


Figure 27.

OIL SUMP AND INDUCTION SYSTEM

INTAKE PIPES AND AIR INLET HOUSING

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
				CAB5	DAAS	GID5	K1AS	K1ASD	K1BS	K1DS	K1ES	K1F5	K1F5D	K1GS	K1G5D	K1JS	K1J5D	S1AS	T4ASD	T4BS5D																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										

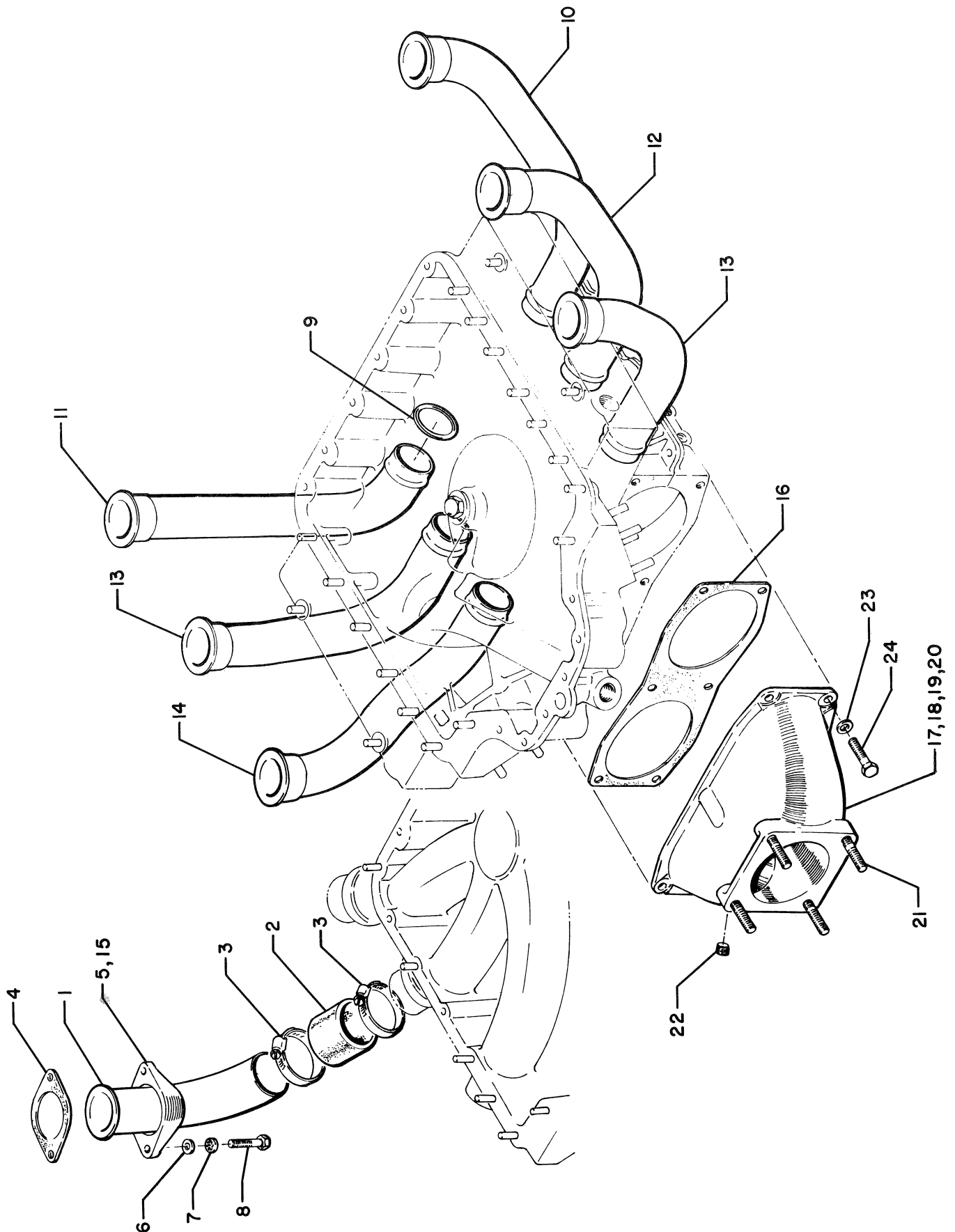


Figure 28 - Intake Pipes and Air Inlet Housing

OIL SUMP AND INDUCTION SYSTEM

FUEL INJECTORS, FUEL MANIFOLDS AND INJECTION NOZZLES

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY															
				CBS	DAS	DS	IAS	IBS	IDB	IES	IES	IESD	IGS	IGSD	ILBS	ILSD	IAS	IASD	IBS
1	66224	GASKET, Fuel injector			1	1													
2	73032	GASKET, Inlet housing					2	1	1	2	2	1	2	2	1	1	2	2	1
3	77654	SPACER, Fuel injector					1			1	1		1	1			1	1	
4	73937	FUEL INJECTOR, (2524054-7)				1													
	75176	FUEL INJECTOR, (2524213-7)			1														
	75567	FUEL INJECTOR, (2524273-8)						1	1			1		1	1				
	77003	FUEL INJECTOR, (2524298-8)					1												
	LW-10976	FUEL INJECTOR, (2524470-2)									1								
	79034	FUEL INJECTOR, (2524422-5)								1			1				1		
	LW-11924	FUEL INJECTOR, (2524556-5)								1									
	LW-11218	FUEL INJECTOR, (2524491-6)														1		1	
	LW-14184	FUEL INJECTOR, (2524673-4)																	1
5	STD-35	WASHER, 5/16 plain			4	4	4	2	2	4	4	4	2	4	4	4	2	4	4
6	STD-1727	WASHER, 3/4 OD x 5/16 ID x 1/8 thick						2	2			2				2		4	
7	STD-475	WASHER, 5/16 internal lock																4	4
8	STD-1410	NUT, 5/16-18 plain			4	4	4	4	4	4	4	4	4	4	4	4	4	4	
9	STD-1763	LOCKNUT, 5/16 palnut			4	4	4	4	4	4	4	4	4	4	4	4	4	4	
10	STD-1201	BOLT, 5/16-18 x 1-1/4																	4
11	74151	NOZZLE, Injection			6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
12	LW-10475	NOZZLE ASSY., Manifold air bleed																6	
13	MS29512-6	SEAL, Oil 5/64 dia. sect. x 15/32					1			1	1		1			1	1	1	
14	AN919-6	REDUCER, Flared tube					1			1	1		1			1	1	1	
15	76304	ELBOW, 45° adj.						1	1			1		1	1				
16	AN822-4	ELBOW, 1/4 flared tube 1/8 NPT 90°									1								

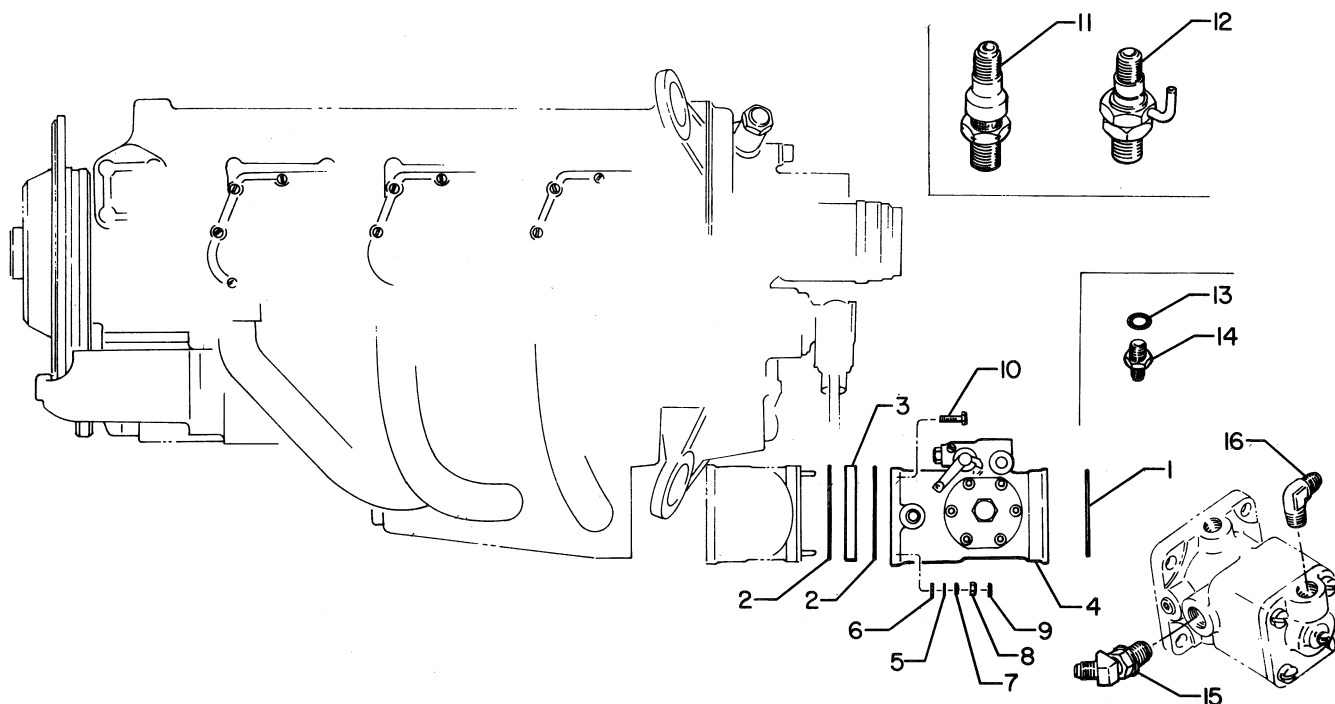


Figure 29.

OIL SUMP AND INDUCTION SYSTEM

FUEL INJECTORS, FUEL MANIFOLDS AND INJECTION NOZZLES

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY															
				CAB5	DAB5	GLD5	KIAB5	KIAB5D	KIAB5S	KIAB5S	KIAB5S	KIAB5S	KIAB5S	KIAB5S	KIAB5S	KIAB5S	KIAB5S	KIAB5S	KIAB5S
1	75283	MANIFOLD ASSY., Fuel				1	1	1											
2	MS20823-4	ELBOW, 1/4 tube, 1/8 NPT 45°				1	1	1											
3	AN780-2	NIPPLE, Union 1/8 NPT				6	6	6											
4	LW-12604	NIPPLE, 1/8 tube to 1/8 NPT																	
		(restricted)				1	1	1											
5	75573	MANIFOLD ASSY., Fuel																	
6	AN816-4	NIPPLE, 1/4 tube to 1/8 NPT																	
7	AN791-2	ELBOW, Union 45° 1/8 tube																	
8	AN780-2	NIPPLE, Union 1/8 NPT																	
9	LW-12604	NIPPLE, 1/8 tube to 1/8 NPT																	
		(restricted)																	
10	78924	MANIFOLD ASSY., Fuel																	
11	AN816-4	NIPPLE, 1/4 tube x 1/8 NPT																	
12	AN780-2	NIPPLE, Union 1/8 NPT																	
13	AN791-2	ELBOW, Union 45° 1/8 tube																	
14	75447	NIPPLE, 3/16 tube to 1/8 NPT																	
15	79007	MANIFOLD ASSY., Fuel																	
16	MS20823-4	ELBOW, 1/4 tube 1/8 NPT 45°																	
17	AN780-2	NIPPLE, Union 1/8 NPT																	
18	75447	NIPPLE, 3/16 tube to 1/8 NPT																	
		(restricted)																	
19	LW-13518	MANIFOLD ASSY., Fuel																	
20	MS20823-4	ELBOW, 1/4 tube 1/8 NPT 45°																	
21	AN791-2	ELBOW, Union 1/8 NPT 45°																	
22	AN780-2	NIPPLE, Union 1/8 NPT																	
23	LW-12604	NIPPLE, 1/8 tube to 1/8 NPT																	
		(restricted)																	
24	73966	SPACER, Fuel manifold bracket				2	2	2											
25	73965	BRACKET, Fuel manifold				2	2	2											
26	STD-251	WASHER, No. 10 lock				4	4	4	4	4	4	4	4	4	4	4	4	4	4
27	STD-82	SCREW, No. 10-24 x 1/2 dr. hd.				4	4	4	4	4	4	4	4	4	4	4	4	4	4
28	75009	BRACKET, Fuel manifold																	
29	STD-160	WASHER, 1/4 lock																	
30	STD-1499	BOLT, 1/4-20 x 1/2																	

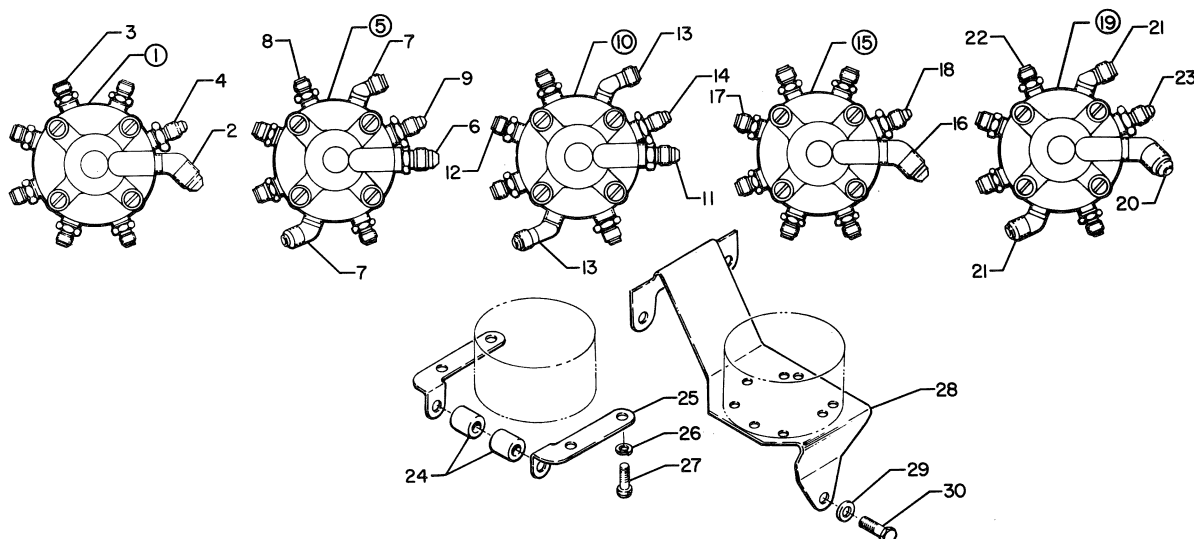


Figure 30.

OIL SUMP AND INDUCTION SYSTEM

FUEL LINES, FUEL HOSES AND ATTACHING PARTS

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY																
				CAB5	DAAS	GJDS	KJAS	KJSD	KJBS	KJDS	KJES	KJFS	KJFSD	KJGS	KJGSD	KJJS	KJJSD	SJAS	TAASD	TABSD
31																				
1	LW-12098-0-200	TUBE ASSY., Fuel manifold to nozzles cyls. 1-2-5-6			4	4	4			4	4	4	4			4		4	4	4
	LW-12098-0-200	TUBE ASSY., Fuel manifold to nozzles cyl. 1						1	1			1	1	1	1	1				
	LW-12098-0-170	TUBE ASSY., Fuel manifold to nozzles cyls. 3 & 4			2	2	2			2	2	2	2			2		2	2	2
	LW-12098-0-276	TUBE ASSY., Fuel manifold to nozzles cyl. 2						1	1			1	1	1	1	1				
	LW-12098-0-134	TUBE ASSY., Fuel manifold to nozzles cyls. 3 & 5						2	2			2	2	2	2	2				
	LW-12098-0-210	TUBE ASSY., Fuel manifold to nozzles cyls. 4 & 6						2	2			2	2	2	2	2				
2	MS21919-G12	CLIP, 3/4 dia. for No. 10 screw		12	12	10	8	8	10	10	10	10	8	8	8	10	8	10	12	12
3	LW-12516	CLIP, 1/16 ID for No. 10 screw		12	12	12	12	12	12	12	12	12	10	10	10	10	12	10	12	12
4	STD-860	SCREW, No. 10-32 x 5/8		15	15	15	13	13	15	15	15	15	13	13	13	15	13	15	15	15
5	STD-425	WASHER, No. 10 plain		5	5	3	2	3	3	3	3	3	2	2	2	3	3	3	3	3
6	STD-670	NUT, No. 10-32 self-locking		15	15	15	13	13	15	15	15	15	13	13	13	15	13	15	15	15
7	73136	BRACKET, 90°		2	2	4	4	4		4	4	4		4	4	4		4		
8	73152	BRACKET, Support clamp					1			1		1	1			1		1		
9	76735	BRACKET, Support clamp 90°											1				1		1	1
10	74278	BRACKET ASSY., Fuel line support		1	1															
11	73971	CLAMP, 1/2 ID cushion type 1/4 screw		1	1	2	1	1	1	2	2	1		1	1					
12	73751	CLAMP, 5/8 ID cushion type 1/4 screw							2			2	2			2	2	2	2	2
13	STD-692	SCREW, No. 10-32 x 1/2		2	2															
14	74070	ELBOW, 3/8 tubing adj. 45°		1			1					1								
15	MS20823-6	ELBOW, 3/8 flared 1/4 NPT, 45°					1					1								
16	MS20822-6	ELBOW, 3/8 flared 1/4 NPT, 90°					1		1		1	2					1			
17	77369	TUBE ASSY., Fuel pump to injector					1			1	1									

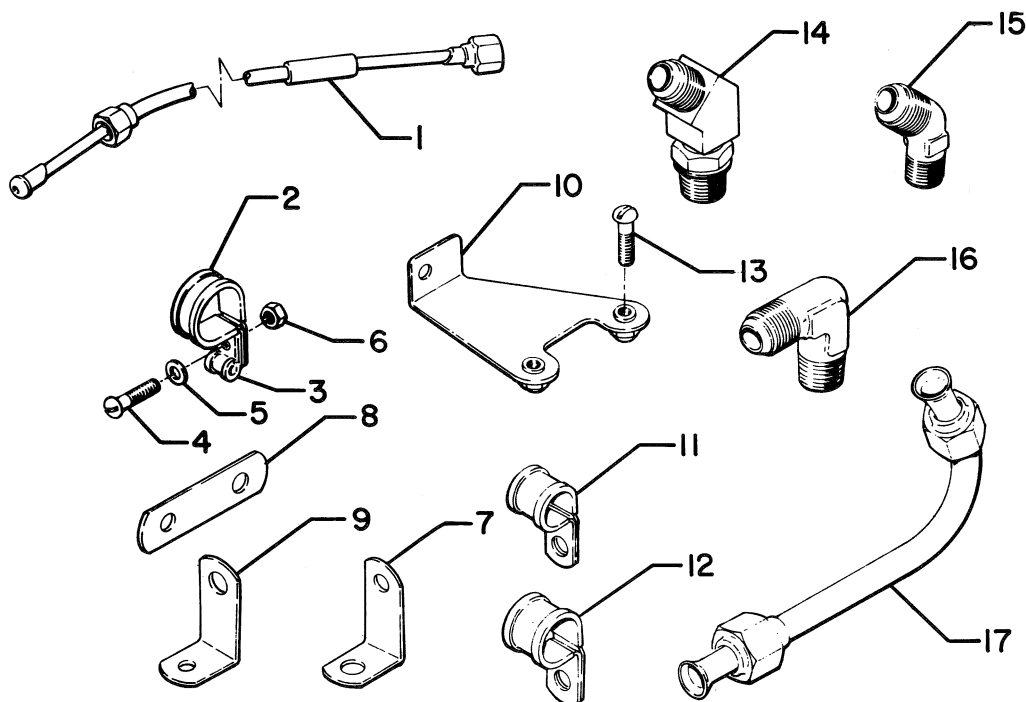


Figure 31.

OIL SUMP AND INDUCTION SYSTEM

FUEL LINES, FUEL HOSES AND ATTACHING PARTS

FIG. REF.	PART NUMBER	DESCRIPTION	ON ALL	QUANTITY PER ASSEMBLY															
				CAB5	DAAS	GJDS	KJAS	KJASD	KJBS	KJDS	KJES	KJESD	KJGS	KJGSD	KJJS	KJJS	KJAS	TAASD	TAASD
1	78523	ELBOW, 3/8 flared 1/2 NPT 90° (pump outlet)											1						
2	76422	ELBOW, 1/2 flared 1/2 NPT 90° (pump inlet)											1						
3	72377	ELBOW, 3/8 flared adj. 90° (pump outlet)												1	1	2	2	1	1
4	75739	NIPPLE, 3/8 tube 9/16-18 st. thd. (pump inlet)																1	1
5	LW-10446	ELBOW, 3/8 tube 90° swivel (fuel injector inlet)														1			
6	LW-13175-303	HOSE ASSY., Fuel injector to fuel manifold									1								
7	LW-13175-4-274	HOSE ASSY., Fuel injector to fuel manifold			1	1													
8	LW-13181-6-254	HOSE, Fuel pump to injector		1															
9	LW-13175-4-340	HOSE ASSY., Fuel injector to fuel manifold						1	1			1	1	1					
10	LW-12799-6S-110	HOSE ASSY., Fuel pump to fuel injector						1	1			1	1	1	1				
11	LW-13177-4-334	HOSE ASSY., Fuel injector to fuel manifold					1			1									
12	LW-12876-4S-344	HOSE ASSY., Fuel injector to fuel manifold							1			1	1		1	1	1		
13	LW-11925	TUBE ASSY., Fuel pump to injector							1										
14	LW-12877-6-124	HOSE, Fuel pump to injector										1				1			
15	LW-12877-6S-051	HOSE ASSY., Fuel pump to injector															1		
16	LW-12798-4-340	HOSE ASSY., Fuel injector to fuel manifold																1	1
17	LW-14183	TUBE ASSY., Fuel pump to injector																1	1

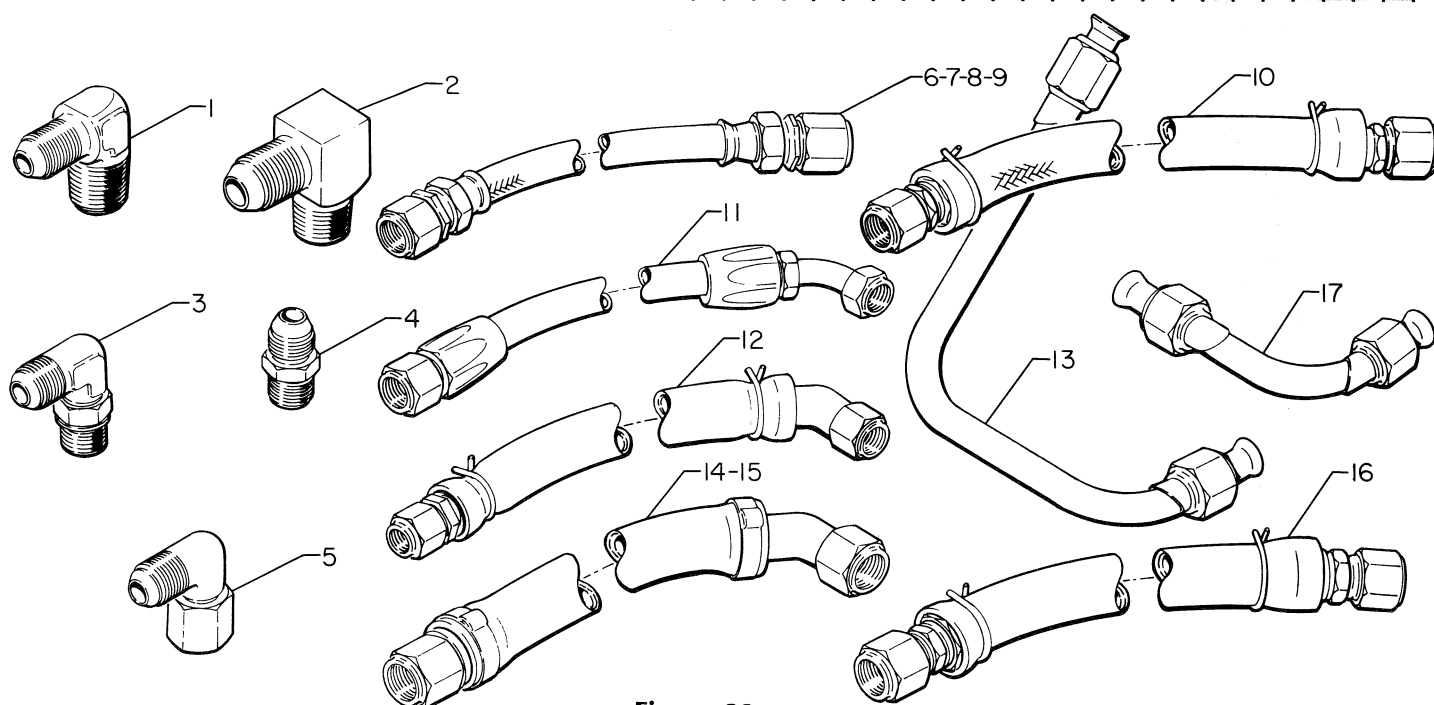


Figure 32.

SERVICE KIT SECTION

SEAL AND GASKET SET

IO-540-T4A5D, -T4B5D (Parallel Head) Wide Cylinder Flange Model

PART NUMBER	DESCRIPTION	QTY. PER ENG.
LW-13377	SEAL AND GASKET SET	1
MS29512-6	SEAL, Oil	1
MS29512-10	SEAL, Oil	1
MS16625-1081	RING, Internal retaining	1
STD-111	GASKET, Oil suction screen	1
STD-1045	GASKET, Oil pressure relief valve	1
8313	GASKET, Vacuum and hydraulic pump	3
60096	GASKET, Fuel pump	1
LW-14260	SEAL, Tachometer drive	1
62922	SEAL, Shroud tube	12
66224	GASKET, Fuel injector	1
70310	SEAL, Shroud tube	12
70455	GASKET, Prop. drive gear plug	1
70457	GASKET, Oil filter extension	1
71481	Ring, Cylinder base seal	6
LW-14820	RING, Internal retaining	8
71973	GASKET, Internal pipe flange	6
72053	GASKET, Governor	1
72091	RING, Oil seal	2
72312	RING, Oil seal oil level gage	1
73383	LOCKPLATE, Alternator bracket	1
73818	GASKET, Accessory housing	1
75118	GASKET, Exhaust flange	12
75906	GASKET, Rocker box cover	6
LW-15028	SEAL, Crankshaft oil	1
LW-10332	LOCKPLATE, Crankshaft gear	1
LW-13792	SEAL, Crankshaft	1
LW-12681	GASKET, Magneto	1
LW-12272	LOCKPLATE, Shroud tube	6
LW-13306	GASKET, Oil sump	1
LW-14995	SPRING, Shroud tube	6
STD-208	SEAL, Oil	6
71193	BOX, Set-up	1
72220	GASKET	1
77154	GASKET	1
STD-294	GASKET	1
65321	GASKET	6
STD-1733	"O" RING	1
MS9068-009	RING, Oil seal	1
72059	GASKET	1

SERVICE KIT SECTION

CYLINDER, PISTON AND RING KIT
IO-540-C4B5, -D4A5, -T4A5D and -T4B5D Wide Cylinder Flange Models

PART NUMBER	DESCRIPTION	QTY. PER ENG.
76296	CYLINDER, PISTON AND RING KIT	1
STD-1411	NUT, Plain, 1/4-20	1
STD-1925	SCREW	6
60009	KEY, Valve intake	2
62922	SEAL, Shroud tube	2
LW-13790	SHAFT, Valve rocker	1
60828	PLUG, Piston pin	2
75906	GASKET, Rocker box cover	1
61247	COVER, Rocker box	1
MS13998-3	CAP, Valve stem exhaust (rotator type)	1
LW-11800	SPRING, Valve outer	2
65441	SEAT, Valve spring lower (intake)	1
LW-11795	SPRING, Valve inner	2
LW-10077	SEAT, Valve spring inner (intake)	1
LW-14995	SPRING, Shroud tube	1
LW-12272	LOCKPLATE, Shroud tube	1
69444	ROCKER ASSEMBLY, Valve intake	1
LW-10076	SEAT, Valve spring, upper (exhaust) (rotator type)	1
LW-14077	PIN, Piston	1
70310	SEAL, Shroud tube	2
71195	BOX, Set-up	1
71481	SEAL, Cylinder base	1
74541	VALVE, Exhaust (rotator type) sodium cooled chrome stem	1
MS13997-3	KEY, Valve, exhaust (rotator type)	2
73857	RING, Piston, oil regulating (Ch.) (expander type)	1
73938	VALVE, Intake	1
74241	RING, Piston compression	2
LW-12427	CYLINDER AND HEAD ASSY., Wide deck (Nitrided Cyls., Straight Valve Head)	1
75089	PISTON	1
74636	ROCKER ASSY., Exhaust	1
LW013323	SEAT, Valve spring, lower (exhaust)	1
LW012892	THRUST BUTTON	2
STD-1215	BOLT	2
72198	PLUG	2
SSP672	TAG	1
LW-11775	PLUG, Piston pin (Alum.)	2
SSP2472	TAG	1

SERVICE KIT SECTION

CYLINDER, PISTON AND RING KIT
IO-540-G1D5, -K1A5, -K1A5D, -K1B5, -K1D5, -K1E5, -K1F5, -K1F5D,
-K1G5, -K1J5 and -K1J5D Wide Cylinder Flange

PART NUMBER	DESCRIPTION	QTY. PER ENG.
LW-13115	CYLINDER, PISTON AND RING KIT	1
STD-160	WASHER	4
STD-1215	BOLT	2
STD-1411	NUT	4
STD-1925	SCREW	8
MS13997-3	KEY, Exhaust (rotator type)	2
MS13998-3	CAP, Valve stem, exhaust	1
72050	KEY, Valve intake	2
60828	PLUG, Piston pin	2
62922	SEAL, Shroud tube	4
66731	COVER, Valve rocker shaft	2
66732	GASKET, Valve rocker shaft cover	2
67193	GASKET, Rocker box cover	1
LW-13321	SEAT, Valve spring, lower (intake)	1
68795	COVER ASSY., Rocker box	1
LW-13446	PIN, Piston pin	1
LW-14077	PIN, Piston pin	1
71195	BOX, Set-up	1
71265	ROCKER ASSY., Exhaust valve	1
71266	ROCKER ASSY., Intake valve	1
71481	SEAL, Cylinder base	1
71549	WASHER, Valve rocker thrust	2
72626	SHAFT, Valve rocker	2
73111	VALVE, Exhaust 1/2" sodium cooled	1
73112	SEAT, Valve spring, lower	1
LW-13322	SEAT, Valve spring, lower	1
LW-13622	VALVE, Intake (small hd.)	1
73857	RING, Piston, oil regulating, chrome	1
LW-12328	RING, Piston, oil regulating, chrome	1
74241	RING, Piston compression (chrome)	2
LW-10076	SEAT, Valve spring, upper (exhaust)	1
69532	SEAT, Valve spring, upper (intake)	1
LW-10207-S	PISTON (3 Ring)	1
LW-11796	SPRING, Valve outer	2
LW-11797	SPRING, Valve inner	2
LW-12987	CYLINDER ASSY., Nitrided	1
LW-11775	PLUG, Piston pin	2
SSP2272	TAG	1
62388	CAP	1

SERVICE KIT SECTION

CYLINDER, PISTON AND RING KIT
IO-540-S1A5 Wide Cylinder Flange Models

PART NUMBER	DESCRIPTION	QTY. PER ENG.
LW-14718	CYLINDER, PISTON AND RING KIT	1
72050	KEY, Valve	2
60828	PLUG, Piston pin	2
62922	SEAL, Shroud tube	4
66731	COVER, Valve rocker shaft	2
66732	GASKET, Valve rocker shaft cover	2
67112	ROCKER ASSY., Exhaust valve	1
67113	ROCKER ASSY., Intake valve	1
67193	GASKET, Rocker box cover	1
LW-13321	SEAT, Valve spring, lower	1
68795	COVER ASSY., Rocker box	1
71195	BOX, Set-up	1
71481	RING, Oil seal	1
71549	WASHER, Valve rocker	2
72626	SHAFT, Valve rocker	2
73857	RING, Oil regulating	1
73112	SEAT, Valve spring, lower	1
LW-13322	SEAT, Valve spring, lower	1
LW-13622	VALVE INTAKE	1
74241	RING, Piston	2
74802	VALVE, Exhaust	1
LW-10076	SEAT, Valve spring	1
69532	SEAT, Valve spring	1
LW-11775	PLUG, Piston pin	2
LW-11796	SPRING, Valve outer	2
LW-11797	SPRING, Valve auxiliary	2
LW-10207-S	PISTON	1
LW-13446	PISTON PIN	1
LW-14077	PISTON PIN	1
LW-12988	CYLINDER ASSY.	1
MS13997-3	KEY, Valve	2
MS13998-3	CAP, Valve stem	1
STD-160	WASHER, Internal lock	4
STD-1411	NUT, Plain	4
STD-1215	BOLT	2
STD-1925	SCREW	9
SSP2272	TAG	1
62388	CAP	2

SERVICE KIT SECTION

SEAL AND GASKET SET
 IO-540-C4B5, -D4A5 (Parallel Valve Head) Conventional and
 Wide Cylinder Flange Models

PART NUMBER	DESCRIPTION	QTY. PER ENG.
71569-1	SEAL AND GASKET SET	1
STD-111	GASKET	1
STD-208	SEAL, Oil	2
STD-213	SEAL, Oil	1
STD-294	GASKET, Annular	2
STD-1045	GASKET, Annular	1
1691-C	GASKET, Fuel pump	1
8313	GASKET, Vacuum pump	2
60096	GASKET, Fuel pump	1
LW-14260	SEAL, Tachometer drive oil	1
61173	GASKET, Oil pressure housing	1
61183	GASKET, Accessory adapter	1
62224	GASKET, Magneto adapter	4
62922	SEAL, Shroud tube	12
66224	GASKET, Carburetor	1
67516	LOCKPLATE, Crankshaft gear	1
68315	GASKET, Accessory drive adapter	1
LW-12272	LOCKPLATE, Shroud tube	6
69164	GASKET, Fuel pump adapter	1
69551	GASKET, Accessory drive adapter	1
70310	SEAL, Shroud tube	12
70455	GASKET	1
70457	GASKET	1
71193	BOX, Set-up	1
71481	RING, Oil seal	6
71667	LOCKPLATE, Fuel pump idler gear	1
71973	GASKET, 2 bolt flange	6
72053	GASKET, Governor	1
72059	GASKET	1
72075	RING, Oil seal	8
72078	LOCKPLATE, Cam gear	2
72091	RING, Oil seal	2
72210	GASKET	1
72220	GASKET, Oil level gage	1
72312	RING, Oil seal	1
LW-13306	GASKET, Oil sump	1
73383	LOCKPLATE, Generator bracket	2
73818	GASKET, Accessory housing	1
74305	SEAL	1
75906	GASKET, Rocker box cover	6
76510	GASKET	1
LW-12795	GASKET	1
76940	SEAL, Crankshaft oil	1
LW-12681	GASKET	2
LW-15628	SEAL, Crankshaft	1
LW-13792	SEAL, Crankshaft oil	1
69345	SPACER	6
LW-14995	SPRING	6
MS16625-1081	RING, Internal retaining	1
65321	GASKET	6

SERVICE KIT SECTION

SEAL AND GASKET SET

IO-540-G1D5, -K1A5, -K1A5D, -K1B5, -K1D5, -K1E5, -K1F5, -K1F5D, -K1G5, -K1G5D, -K1J5, -K1J5D, -S1A5 (Angle hd. valve) Wide Cylinder Flange Models

PART NUMBER	DESCRIPTION	QTY. PER ENG.
73185-1	SEAL AND GASKET SET	1
MS29512-6	SEAL	1
MS29512-8	SEAL, Oil	1
STD-111	GASKET, Annular	2
STD-208	SEAL, Oil	1
STD-213	SEAL, Oil (Fuel pump drive)	1
STD-294	GASKET, Annular	2
STD-1045	GASKET, Annular	1
STD-1441	GASKET, Annular	6
1691-C	GASKET, Fuel pump pad	1
8313	GASKET, Vacuum pump	2
LW-14260	SEAL, Tachometer	1
61173	GASKET, Oil pressure housing	1
61183	GASKET, Accessory adapter	1
62224	GASKET, Magneto	4
62922	SEAL, Shroud tubw	24
66732	GASKET, Valve rocker shaft cover	12
67193	GASKET, Rocker box cover	6
67516	LOCKPLATE, Crankshaft gear	1
68315	GASKET, Accessory drive adapter	1
69164	GASKET, Fuel pump adapter	1
69551	GASKET, Accessory pad cover	1
70455	GASKET	1
70457	GASKET, Oil level gage	1
72210	GASKET, Air throttle housing	1
71450	GASKET, Rocker box	6
71481	RING, Oil seal	6
71667	LOCKPLATE, Crankshaft idler gear	2
71973	GASKET, Intake flange	6
72053	GASKET, Governor drive pad	1
72075	SEAL, Oil	8
72078	LOCKPLATE, Camshaft gear	2
72091	RING, Oil seal	2
72220	GASKET, Oil filler plug	1
72312	RING, Oil seal	1
72711	RING, Oil seal intake pipe	6
LW-13306	GASKET, Oil sump	1
73032	GASKET, Air inlet housing	1
73383	LOCKPLATE	2
73818	GASKET, Accessory housing	1
74305	SEAL, Crankshaft oil	1
75233	"O" RING	24
76510	GASKET	1
76940	SEAL, Crankshaft oil	1
LW-15628	SEAL, Crankshaft	1
LW-13792	SEAL, Crankshaft oil	1
LW-12681	GASKET, Magneto	2
LW-12795	GASKET,	1
STD-589	GASKET	1
STD-1737	RING	1
71193	BOX	1

SERVICE KIT SECTION

SEAL AND GASKET SET

IO-540-K1A5D, -K1G5D (Angle head) Wide Cylinder Flange Models

PART NUMBER	DESCRIPTION	QTY. PER ENG.
LW-13367	SEAL AND GASKET SET	1
MS29512-10	SEAL, Oil	2
MS16625-1081	RING, Internal retaining	1
STD-111	GASKET, Oil suction screen	1
STD-208	SEAL, Oil	1
STD-1045	GASKET, Oil pressure relief valve	1
1691-C	GASKET, Fuel pump	1
8313	GASKET, Vacuum and hydraulic pump	2
LW-14260	SEAL, Tachometer drive	1
62922	SEAL, Shroud tube	24
66732	GASKET, Valve rocker shaft cover	12
67193	GASKET, Rocker box cover	6
69164	GASKET, Fuel pump adapter	1
70455	GASKET, Prop. drive gear plug	1
70457	GASKET, Oil filter extension	1
71450	GASKET, Rocker box cover	6
71481	RING, Cylinder base seal	6
LW-14820	RING, Internal retaining	8
71973	GASKET, Intake pipe flange	6
72053	GASKET, Governor	1
72091	RING, Oil seal	2
72210	GASKET, Air throttle housing	1
72220	GASKET, Oil level gage	1
72312	RING, Oil seal, oil level gage	1
72711	RING, Seal intake pipe	6
73032	GASKET, Inlet housing	1
73383	LOCKPLATE, Alternator bracket	1
73818	GASKET, Accessory housing	1
LW-15619	GASKET, Exhaust	12
75118	GASKET, Exhaust flange	12
LW-15628	SEAL, Crankshaft oil	1
LW-10332	LOCKPLATE, Crankshaft gear	1
LW-12681	GASKET, Magneto	1
LW-13077	SPRING, Shroud tube	24
LW-13306	GASKET, Oil sump	1
STD-589	GASKET	1
71193	BOX	1
60096	GASKET, Fuel pump accessory	1

SECTION 8
PARTS SUPERSEDURES

SECTION 1

Part No.	Superseded by	Name	Remarks
Reference Page 1-1			
LW-13802	LW-13838	Crankcase Assy.	Due to increased flange thickness at bottom parting line.
61261	31C-12	Stud	Parts standardization.
67528	31C-13	Stud	Parts standardization.
38-15	38-16	Stud	Product improvement.
38-17	38-16	Stud	Product improvement.
LW-13794	31C-8	Stud	Product improvement.
68316	31C-14	Stud	Product improvement.
67556	31C-16	Stud	Parts standardization.
Reference Page 1-3			
72051	75737	Extension	Product improvement.
75759	77527	Extension	Product improvement.
73680	75675	Extension	Product improvement.
72043	LW-14756	Gage Assy.	Parts standardization.
74702	LW-14732	Gage Assy.	Parts standardization.
74731	LW-14754	Gage Assy.	Parts standardization.
76897	LW-14729	Gage Assy.	Parts standardization.
79071	LW-14737	Gage Assy.	Parts standardization.
LW-13010	LW-14730	Gage Assy.	Parts standardization.
LW-14770	75133	Gage Assy.	Parts standardization.
71045	70456	Bracket	Product improvement.
72307	72306	Bracket	Product improvement.
STD-690	STD-33	Washer	Product improvement.
Reference Page 1-5			
STD-28	STD-425	Washer	To improve clamp on shroud tube.
71714	76529	Plug	Machined for new adjustable oil pressure relief valve.
76163	77808	Valve Assy.	To use valve assy. having hex rather than slot for adjustment.
LW-10124	LW-11021	Bearing	New bearing has larger dowel hole.

SECTION 8
PARTS SUPERSEDURES

SECTION 1 (CONT).

Part No.	Superseded by	Name	Remarks
Reference Page 1-5 (Cont.)			
73049	LW-10124	Bearing	New bearing has larger dowel hole.
74303	LW-11575	Bearing	To incorporate straight main bearing dowels.
77044	LW-13884	Bearing	Product improvement.
75210	77044	Bearing	Product improvement.
71637	75210	Bearing	Product improvement.
78319	LW-13885	Bearing	Product improvement.
74304	78319	Bearing	Product improvement.
LW-12077	LW-13792	Seal	Has glue retention grooves for use on direct drive engines.
77377	LW-12077	Seal	Product improvement.
76940	77377	Seal	Product improvement.
77377	LW-11997	Seal	Product improvement.
78443	LW-15628	Seal	Product improvement.
74305	78443	Seal	Product improvement.
69529	72877	Body, Hydraulic Tappet	Product improvement.
Reference Page 1-6			
77876	LW-14021	Shaft	Product improvement.
70395	73249	Washer	Product improvement.
70394	73250	Washer	Product improvement.
70393	73251	Washer	Product improvement.
MS-9048-111	AN565B1032H5	Set Screw	Product improvement.
70454	LW-13896	Plug	Shorter hex head.
Reference Page 1-7			
74576	75079	Crankshaft and Ct'wt. Assy.	Product improvement
73997	74576	Crankshaft and Ct'wt. Assy.	Product improvement.
72803	73997	Crankshaft and Ct'wt. Assy.	Center damper lug eliminated.
74957	75040	Crankshaft and Ct'wt. Assy.	Product improvement.

SECTION 8
PARTS SUPERSEDURES

SECTION 1 (CONT.)

Part No.	Superseded by	Name	Remarks
Reference Page 1-7 (Cont.)			
70256	73810	Bushing	Product improvement.
71327	72062	Bushing	Product improvement.
69837	71327	Bushing	Product improvement.
68700	69837	Bushing	Product improvement.
71326	72061	Bushing	Product improvement.
69836	71326	Bushing	Product improvement.
62530	69836	Bushing	Product improvement.
71325	72060	Bushing	Product improvement.
69838	71325	Bushing	Product improvement.
68886	69838	Bushing	Product improvement.
72071	72074	Bushing	Product improvement.
71325	72071	Bushing	Product improvement.
69838	71325	Bushing	Product improvement.
68886	69838	Bushing	Product improvement.
75657	79024	Bushing	Product improvement.
71906	LW-14820	Ring, Internal	Changes size.
STD-1559	STD-1937	Bolt	Product improvement.
75190	76148	Camshaft	Product improvement.
75030	77579	Support Assy.	Product improvement.
Reference Page 1-9			
LW-10575	LW-13795	Crankshaft	Product improvement.
73014	LW-10575	Crankshaft	Product improvement.
73010	73014	Crankshaft	Product improvement.
STD-1926	STD-2167	Screw	Product improvement.
STD-1409	STD-1926	Screw	Product improvement.
STD-1410	STD-2168	Nut	Product improvement.
71643	76155	Crankshaft Assy.	Product improvement.
75709	78368	Pin	Product improvement.
68753	76118	Spacer	Product improvement.

SECTION 8
PARTS SUPERSEDURES

SECTION 1 (CONT.)

Part No.	Superseded by	Name	Remarks
Reference Page 1-10			
STD-1415	STD-1931	Bolt	Product improvement.
LW-25H-2.00	STD-1646	Bolt	Product improvement.
STD-1415	STD-2084	Bolt	Product improvement.
STD-1197	AN-6-34A	Bolt	Product improvement.
STD-38	STD-596	Nut	Product improvement.
LW-10941	LW-11866	Spacer Nut	Product improvement.

SECTION 2

Reference Page 2-1

61352	73818	Gasket	Product improvement.
75367	76152	Accessory Housing	To provide positive lubrication.
71648	75367	Accessory Housing	To provide outboard support.
76487	78490	Accessory Housing	To provide positive lubrication.
LW-10915	LW-10916	Accessory Housing	Product improvement.
LW-10913	LW-10917	Accessory Housing	Product improvement.
61265	31CD-17	Stud	Parts standardization.
70470	31C-21	Stud	Parts standardization.
61668	31C-19	Stud	Parts standardization.
61238	25C-21	Stud	Parts standardization.
61262	25C-12	Stud	Parts standardization.
69942	25C-12	Stud	Parts standardization.
STD-453	STD-784	Plug	Product improvement.
STD-405	1102	Plug	Product improvement.
MS-124662	LW-12589	Insert	Product improvement.

Reference Page 2-3

76354	78528	Body, Oil Pump	Product improvement.
69183	76354	Body, Oil Pump	Product improvement.
78532	LW-13775	Impeller Assy.	Product improvement.
67512	74641	Shaft, Oil Pump	Reduce stress.
78619	74641	Shaft, Oil Pump	Reduce stress.
69183	75287	Body Assy.	Product improvement.

SECTION 8
PARTS SUPERSEDURES

SECTION 2 (CONT.)

Part No.	Superseded by	Name	Remarks
Reference Page 2-3 (Cont.)			
73872	61297	Impeller	Product improvement.
73873	61298	Impeller	Product improvement.
61165	LW-14260	Seal	Product improvement.
STD-1415	STD-1931	Bolt	Increased thread engagement.
STD-705	STD-1875	Bolt	Product improvement.
Reference Page 2-5			
76691	LW-12795	Gasket	Product improvement.
74904	76691	Gasket	Product improvement.
61400	25C-10	Stud	Longer stud.
STD-1884	STD-1856	Screw	Product improvement.
74911	77853	Oil Filter	Product improvement.
LW-13217	LW-13904	Converter Plate	Product improvement.
LW-13215	LW-13906	Oil Filter Assy.	Product improvement.
69451	75944	Valve	Product improvement.
Reference Page 2-7			
STD-1177	STD-1774	Roll Pin	Product improvement.
67537	72974	Gear Assy.	Parts standardization.
60869	71596	Washer	Interchangeability.
AN-4045-1	8313	Gasket	Product improvement.
69675	62417	Plug	Product improvement.
Reference Page 2-9			
71673	72964	Gear Assy.	Parts standardization.
60869	71596	Washer	Parts standardization.
68531	71675	Adapter Assy.	Product improvement.
61262	25C-12	Stud	Parts standardization.
69942	25C-12	Stud	Parts standardization.
STD-1177	STD-1174	Roll Pin	Product improvement.
AN-4045-1	8313	Gasket	Product improvement.
20414	72412	Cover	Product improvement.

SECTION 8
PARTS SUPERSEDURES

SECTION 2 (CONT.)

Part No.	Superseded by	Name	Remarks
Reference Page 2-11			
75247	LW-15473	Fuel Pump	New cable is heavier.
75131	75247	Fuel Pump	Product improvement.
74999	75131	Fuel Pump	Product improvement.
73870	74999	Fuel Pump	Product improvement.
73973	73870	Fuel Pump	Product improvement.
73036	73973	Fuel Pump	Product improvement.
73160	LW-10799	Spacer	Parts standardization.
LW-11970	LW-13920	Pump	Parts standardization.
76537	LW-13909	Pump	Parts standardization.
77443	LW-13909	Pump	Parts standardization.
76846-1	76537	Pump	Product improvement.
61154	77309	Bushing	Parts standardization.
72247	72972	Gear Assy.	Parts standardization.
73310	69159	Adapter Assy.	Product improvement.
STD-1177	STD-1774	Roll Pin	Product improvement.

SECTION 3

Reference Page 3-1

LW-11457	LW-11750	Connecting Rod Assy.	Interchangeable.
LW-10722	LW-11457	Connecting Rod Assy.	Product improvement.
74502	LW-10722	Connecting Rod Assy.	Product improvement.
71987	74502	Connecting Rod Assy.	Product improvement.
71092	71987	Connecting Rod Assy.	Product improvement.
65819	LW-13923	Bushing	Product improvement.
74644	75061	Bolt	Parts standardization.
71087	74644	Bolt	Parts standardization.
73171	74644	Bolt	Parts standardization.
45307	71087	Bolt	Parts standardization.
74645	75060	Bolt	Parts standardization.
73172	74645	Bolt	Parts standardization.
72794	73172	Bolt	Parts standardization.

SECTION 8
PARTS SUPERSEDURES

SECTION 3 (CONT.)

Part No.	Superseded by	Name	Remarks
Reference Page 3-1 (Cont.)			
74646	LW-12186	Nut	Parts standardization.
71950	74646	Nut	Parts standardization.
STD-872	71950	Nut	Parts standardization.
69460	71950	Nut	Parts standardization.
72218	LW-13521	Bearing	Product improvement.
74530	75089	Piston	Product improvement.
72967	74530	Piston	Product improvement.
78203	LW-10207	Piston	Product improvement.
75617	78203	Piston	Product improvement.
73264	75617	Piston	Product improvement.
73947	75617	Piston	Product improvement.
73023	73264	Piston	Product improvement.
72249	73947	Piston	Product improvement.
69457	73857	Ring	Parts standardization.
68509	69457	Ring	Parts standardization.
Reference Page 3-3			
75874	LW-12427	Cylinder and Head Assy.	Product improvement.
74973	75874	Cylinder and Head Assy.	Product improvement.
74974	LW-12987	Cylinder and Head Assy.	To incorporate small intake valve.
77344	LW-12988	Cylinder and Head Assy.	To incorporate small intake valve.
76496	77344	Alternator	Product improvement.
72212	LW-12688	Seat, Valve	Parts standardization.
71408	72212	Seat, Valve	Parts standardization.
69530	72058	Seat, Valve	Parts standardization.
66527	72058	Seat, Valve	Parts standardization.
67835	71894	Seat, Valve	Parts standardization.
71407	71894	Seat, Valve	Parts standardization.

SECTION 8
PARTS SUPERSEDURES

SECTION 3 (CONT.)

Part No.	Superseded by	Name	Remarks
Reference Page 3-3 (Cont.)			
61250	76943	Guide, Valve	Flangeless exhaust valve.
60028	76943	Guide, Valve	Flangeless exhaust valve.
66713	LW-11956	Guide, Valve	Flangeless exhaust valve.
74230	77160	Guide, Valve	Flangeless exhaust valve.
69533	74230	Guide, Valve	Flangeless exhaust valve.
72897	LW-11957	Guide, Valve	Flangeless exhaust valve.
69693	72897	Guide, Valve	Flangeless exhaust valve.
69358	69693	Guide, Valve	Flangeless exhaust valve.
75838	LW-11958	Guide, Valve	Flangeless exhaust valve.
66796	69260	Insert	Parts standardization.
61261	31C-12	Stud	Parts standardization.
31C-13	31C-12	Stud	Parts standardization.
67528	31C-13	Stud	Parts standardization.
68510	25C-9	Stud	Parts standardization.
71451	66610	Bushing	Parts standardization.
AN-823-6D	MS-20823-6D	Elbow	Parts standardization.
73640	AN-823-6D	Elbow	Product improvement.
72034	72344	Stabilizer	Product improvement.
Reference Page 3-5			
72625	73938	Valve, Intake	Product improvement.
67905	72625	Valve, Intake	Product improvement.
73129	LW-13622	Valve, Intake	Product improvement.
LW-12949	LW-13622	Valve, Intake	Product improvement.
72612	73129	Valve, Intake	Rotator type.
73117	LW-12949	Valve, Intake	Rotator type.
71953	73117	Valve, Intake	Parts standardization.
67518	71953	Valve, Intake	Parts standardization.
67518	72612	Valve, Intake	Interchangeable.
71595	74541	Valve, Intake	Product improvement.

SECTION 8
PARTS SUPERSEDURES

SECTION 3 (CONT.)

Part No.	Superseded by	Name	Remarks
Reference Page 3-5 (Cont.)			
69534	71595	Valve, Intake	Product improvement.
66531	69534	Valve, Intake	Change to chrome stem.
71381	73111	Valve, Exhaust	Change to chrome stem.
66714	71381	Valve, Exhaust	Sodium cooled.
74802	LW-11167	Valve, Exhaust	Chrome stem.
74052	74802	Valve, Exhaust	Product improvement.
73111	74052	Valve, Exhaust	Rotator type.
71381	73111	Valve, Exhaust	Change to chrome stem.
66714	71381	Valve, Exhaust	Sodium cooled.
65567	LW-11795	Spring Valve	Product improvement.
68328	LW-11797	Spring Valve	Dimensional change.
LW-11799	LW-11797	Spring Valve	Dimensional change.
76352	LW-11799	Spring Valve	Dimensional change.
76994	LW-11800	Spring Valve	Dimensional change.
65427	76994	Spring Valve	Dimensional change.
68326	LW-11796	Spring Valve	Dimensional change.
LW-11798	LW-11796	Spring Valve	Dimensional change.
76351	LW-11798	Spring Valve	Dimensional change.
68325	LW-13321	Seat	Dimensional change.
68327	LW-10077	Seat	Dimensional change.
74554	LW-13323	Seat	Dimensional change.
73112	LW-13322	Seat	Dimensional change.
73115	LW-10076	Seat	Dimensional change.
69532	73115	Seat	Dimensional change.
62387	72050	Key	Dimensional change.
60009	72050	Key	Dimensional change.
72050	MS13997-3	Key	Dimensional change.
62387	72050	Key	Dimensional change.
69697	MS13998-3	Cap	Dimensional change.

SECTION 8
PARTS SUPERSEDURES

SECTION 3 (CONT.)

Part No.	Superseded by	Name	Remarks
Reference Page 3-5 (Cont.)			
76290	78290	Plunger Assy.	Dimensional change.
78289	78290	Plunger Assy.	Dimensional change.
76289	78289	Plunger Assy.	Dimensional change.
72876	76289	Plunger Assy.	Dimensional change.
71791	72876	Plunger Assy.	Dimensional change.
68312	71791	Plunger Assy.	Dimensional change.
68324	71791	Plunger Assy.	Dimensional change.
73062	76290	Plunger Assy.	Dimensional change.
72876	73062	Plunger Assy.	Dimensional change.
65074	78524	Socket	Parts standardization.
71083	LW-11485	Tube	Parts standardization.
75774	71083	Tube	Parts standardization.
71928	72255	Tube Assy.	Parts standardization.
66739	71928	Tube Assy.	Parts standardization.
LW-13428	LW-14995	Spring	Product improvement.
LW-12273	LW-13428	Spring	Product improvement.
68517	LW-12273	Spring	Product improvement.
79051	LW-13077	Spring	Product improvement.
66717	79051	Spring	Product improvement.
71449	79051	Spring	Product improvement.
74939	79051	Spring	Product improvement.
68518	LW-12272	Lockplate	Product improvement.
60053	62922	Seal	Product improvement.
Reference Page 3-7			
71135	73434	Rod Assy.	Interchangeability.
71136	73435	Rod Assy.	Interchangeability.
71137	73436	Rod Assy.	Interchangeability.
70282	73455	Rod Assy.	Interchangeability.
70283	73456	Rod Assy.	Interchangeability.

SECTION 8
PARTS SUPERSEDURES

SECTION 3 (CONT.)

Part No.	Superseded by	Name	Remarks
Reference Page 3-7 (Cont.)			
70284	73457	Rod Assy.	Interchangeability.
66719	71549	Washer	Dimensional change.
68806	72626	Shaft, Valve	Parts standardization.
60401	LW-13790	Shaft, Valve	Parts standardization.
61246	75906	Gasket	Parts standardization.
STD-1826	STD-1925	Screw	Product improvement.
67498	71481	Ring	Interchangeability.
77907	74887	Spacer	Parts standardization.
STD-38	383-B	Nut	Parts standardization.
STD-528	STD-2090	Nut	Parts standardization.
STD-2063	STD-2090	Nut	Parts standardization.
73720	75118	Gasket	Parts standardization.
67196	73720	Gasket	Parts standardization.
STD-2	STD-2043	Nut	Parts standardization.
MS20500-524	STD-2043	Nut	Parts standardization.
STD-50	STD-2	Nut	Parts standardization.
Reference Page 3-9			
AN816-6	STD-684	Nipple	Product improvement.
AN816-6D	AN816-6	Nipple	Product improvement.
STD-347	STD-2180	Hose	Product improvement.
STD-1821	STD-347	Hose	Product improvement.
STD-2188	LW-15592-5-05	Clamp	Product improvement.
STD-1924	LW-15592-5-05	Clamp	Product improvement.
STD-1252	STD-2188	Clamp	Product improvement.
STD-1252	STD-1924	Clamp	Product improvement.
STD-1914	STD-1252	Clamp	Product improvement.
STD-1924	STD-1914	Clamp	Product improvement.
72704	73027	Tube Assy.	Product improvement.
72152	75339	Baffle	Dimensional change.

SECTION 8
PARTS SUPERSEDURES

SECTION 3 (CONT.)

Part No.	Superseded by	Name	Remarks
Reference Page 3-9 (Cont.)			
71104	72152	Baffle	Dimensional change.
74718	75338	Baffle	Dimensional change.
71578	74718	Baffle	Dimensional change.
73708	74718	Baffle	Dimensional change.
71629	71610	Hook	Dimensional change.
STD-860	STD-692	Screw	Product improvement.
AN931-12-17	AN931-12S17	Grommet	Product improvement.

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LW-10302	LW-13642	Gear	Product improvement.
LW-12136	LW-13741	Cushion	Product improvement.
68874	LW-12136	Cushion	Product improvement.
78292	LW-12681	Gasket	Product improvement.
73820	78292	Gasket	Product improvement.
LW-384602-303	LW-684602-303	Harness	Interchangeability.
LW-384602-303	LW-384602-307	Harness	Interchangeability.
LW-320297-2	LW-620026-2	Clip	Dimensional change.
LW-320297-3	LW-14057	Clip	To provide clearance.
73650	LW-14057	Clip	To provide clearance.
62254	73650	Clip	Product improvement.
65530	62254	Clip	Product improvement.
LW-14060	LW-320298-2	Clip	Product improvement.
LW-320298-3	LW-14060	Clip	Product improvement.
LW-320299-6	LW-620029-6	Clip	Product improvement.
LW-320472-4	LW-620037-4	Clip	Product improvement.
LW-320299-5	62255	Clip	Product improvement.
LW-320232	LW-620036-4	Clip	Product improvement.
62255	LW-320232	Clip	Product improvement.
LW-89027-17	LW-14875	Bracket	Product improvement.

SECTION 8
PARTS SUPERSEDURES

SECTION 4 (CONT.)

Part No.	Superseded by	Name	Remarks
Reference Page 4-1 (Cont.)			
LW-12202	MS21919-G12	Clamp	Product improvement.
MS21919-F12	LW-12202	Clamp	Product improvement.
72036	LW-12202	Clamp	Product improvement.
STD-705	STD-1925	Screw	Product improvement.
71571	LW-157208	Kit, Magneto	Parts standardization.
LW-12147	LW-382698	Kit, Magneto	Parts standardization.
Reference Page 4-3			
73008	74830	Gear	Product improvement.
73009	74830	Gear	Product improvement.
74881	75124	Gear	Product improvement.
74882	75124	Gear	Product improvement.
72282	74881	Gear	Product improvement.
70391	72282	Gear	Product improvement.
68874	LW-12136	Cushion, Magneto	Product improvement.
78292	LW-12681	Gasket, Magneto	Product improvement.
73820	78292	Gasket, Magneto	Product improvement.
71601	73000	Coupling	To provide 20° advance.
71601	73013	Coupling	To provide 20° advance.
73038	LW-163050-9	Magneto	Interchangeability.
72522	73038	Magneto	Product improvement.
73669	LW-163010-10	Magneto	Interchangeability.
73039	73669	Magneto	To provide 37-1/2° retard.
72523	73039	Magneto	Interchangeability.
75454	LW-349290-1	Magneto	Interchangeability.
75753	LW-349310-1	Magneto	Interchangeability.
75653	LW-349370-4	Magneto	Interchangeability.
LW-10172	LW-349310-8	Magneto	Interchangeability.
71571	LW-157208	Kit, Magneto	Parts standardization.
71574	LW-157209	Kit, Magneto	Parts standardization.

SECTION 8
PARTS SUPERSEDURES

SECTION 4 (CONT.)

Part No.	Superseded by	Name	Remarks
Reference Page 4-5			
LW-M-2123	LW-M-2469	Harness Assy.	Product improvement.
LW-M-2122	LW-M-2470	Harness Assy.	Product improvement.
1068-B	71910	Clamp	Product improvement.
STD-2011	STD-553	Screw	Parts standardization.
AN3650632C	AN365-632A	Nut	Self-locking.
LW-320299-5	62255	Clip	Product improvement.
STD-178	72351	Screw	Self-locking.
STD-860	72351	Screw	Self-locking.
LW-M-2159	LW-M-2460	Harness Assy.	Product improvement.
LW-M-2158	LW-M-2361	Harness Assy.	Product improvement.
LW-320297-3	LW-14057	Clip	Product improvement.
73650	LW-14057	Clip	Product improvement.
62254	73650	Clip	Product improvement.
LW-320298-3	LW-14060	Clip	Product improvement.
STD-860	STD-692	Screw	Product improvement.
76735	72815	Bracket	Product improvement.
73152	76735	Bracket	Product improvement.
LW-620515-3	LW-720515-3	Harness, Ignition	Product improvement.
78552	LW-620515-3	Harness, Ignition	Product improvement.
1182-U1	1182-B3	Spark Plug	Product improvement.
1182-M1	1182-B3	Spark Plug	Product improvement.
1182-U2	1182-Y3	Spark Plug	Long reach plugs.
1182-J4	1182-W5	Spark Plug	Product improvement.

SECTION 5

Reference Page 5-1

76533	LW-13039	Bracket	Dimensional change.
STD-1823	73383	Lockplate	Parts standardization.
73276	75380	Link	Parts standardization.
75574	78639	Pulley and Shaft	Product improvement.

SECTION 8
PARTS SUPERSEDURES

SECTION 5 (CONT.)

Part No.	Superseded by	Name	Remarks
Reference Page 5-1 (Cont.)			
74517	78614	Alternator Pulley	Product improvement.
74520	78629	Ball Bearing	Parts standardization.
LW-10577	78629	Ball Bearing	Parts standardization.
MS-16625-1112	MS-16625-1125	Ring	Parts standardization.
74516	78617	Idler Shaft	Parts standardization.
STD-33	STD-690	Washer	Product improvement.
STD-761	STD-713	Pin	Product improvement.
Reference Page 5-3			
78407	LW-14308	Alternator	Product improvement.
78310	LW-14316	Alternator	Product improvement.
77470	78310	Alternator	To incorporate new slip ring.
78312	LW-14319	Alternator	Product improvement.
78314	LW-14324	Alternator	Product improvement.
77751	78314	Alternator	To incorporate new slip ring.
74322	76026	Belt	To incorporate dacron fiber.
77347	LW-10179	Regulator	Product improvement.
Reference Page 5-4			
LW-14207	LW-15571	Starter	Product improvement.
76211	LW-14207	Starter	Product improvement.
74092	76211	Starter	Product improvement.
73269	74092	Starter	Product improvement.
72567	73269	Starter	Product improvement.
LW-14208	LW-15572	Starter	Product improvement.
76212	LW-14208	Starter	Product improvement.
72462	76212	Starter	Product improvement.
73270	72462	Starter	Product improvement.
71452	73270	Starter	Product improvement.
STD-2085	STD-2156	Bolt	Product improvement.
STD-1323	STD-2156	Bolt	Product improvement.

SECTION 8
PARTS SUPERSEDURES

SECTION 5 (CONT.)

Part No.	Superseded by	Name	Remarks
Reference Page 5-4 (Cont.)			
STD-1202	STD-1323	Bolt	Product improvement.
76773	LW-12083	Switch	Product improvement.
61427	76773	Switch	Product improvement.
76775	LW-12085	Switch	Product improvement.

SECTION 6

Reference Page 6-1

72812	LW-13306	Gasket	Product improvement.
72345	74833	Sump	Parts standardization.
74833	LW-13232	Sump	Product improvement.
72180	LW-11273	Clamp	Wider bearing surface.
68510	25C-9	Stud	Parts standardization.
69943	25C-11	Stud	Parts standardization.
61279	69943	Stud	Parts standardization.
STD-51	1102	Plug	Parts standardization.
STD-453	STD-784	Plug	Parts standardization.
STD-740	STD-355	Plug	Parts standardization.
LW-25H-200	STD-1646	Bolt	Parts standardization.
STD-705	STD-1875	Bolt	Parts standardization.
69335	LW-12545	Plug	Product improvement.

Reference Page 6-3

72812	LW-13306	Gasket	Product improvement.
LW-14136	LW-14900	Sump Assy.	To provide airframe clearance.
AN-932-D8	STD-2184	Plug	Product improvement.
69943	25C-11	Stud	Product improvement.
25C-12	25C-11	Stud	Product improvement.
69942	25C-12	Stud	Product improvement.
61262	25C-12	Stud	Product improvement.
61279	69943	Stud	Product improvement.
STD-51	1102	Plug	Product improvement.

SECTION 8
PARTS SUPERSEDURES

SECTION 6 (CONT.)

Part No.	Superseded by	Name	Remarks
Reference Page 6-3 (Cont.)			
STD-50	STD-8	Washer	Product improvement.
LW-13808	70484	Screen	Product improvement.
LW-11050	LW-13808	Crankcase Assy.	Interchangeability.
LW-11022	LW-11050	Crankcase Assy.	Interchangeability.
78222	LW-11022	Crankcase Assy.	Interchangeability.
76605	78222	Crankcase Assy.	Interchangeability.
75102	76605	Crankcase Assy.	Interchangeability.
76895	75102	Crankcase Assy.	Interchangeability.
69335	LW-12545	Plug	New length.
Reference Page 6-4			
72812	LW-13306	Gasket	Product improvement.
71697	72056	Sump Assy.	To increase thread engagement.
67747	71697	Sump Assy.	To change location of nameplate.
69943	25C-11	Stud	Parts standardization.
25C-12	25C-11	Stud	Parts standardization.
69942	25C-12	Stud	Parts standardization.
61262	25C-12	Stud	Parts standardization.
61279	69943	Stud	Parts standardization.
68437	31C-15	Stud	Parts standardization.
68316	31C-15	Stud	Parts standardization.
67528	68316	Stud	Parts standardization.
AN-535-4-3	STD-1901	Drive Stud	Parts standardization.
STD-1820	AN-535-4-3	Screw	Parts standardization.
69335	LW-12545	Plug	New length.
Reference Page 6-5			
AN-737-TW74	LW-15592-8-28	Clamp	Product improvement.
60131	71973	Gasket	Product improvement.
60064	73346	Flange	Product improvement.
STD-50	STD-8	Washer	Product improvement.

SECTION 8
PARTS SUPERSEDURES

SECTION 6 (CONT.)

Part No.	Superseded by	Name	Remarks
Reference Page 6-5 (Cont.)			
73921	LW-12191	Intake Pipe	Interchangeability.
LW-12455	LW-12191	Intake Pipe	Interchangeability.
72753	73921	Intake Pipe	Interchangeability.
72754	LW-12192	Intake Pipe	Interchangeability.
73922	LW-12193	Intake Pipe	Interchangeability.
LW-12453	LW-12193	Intake Pipe	Interchangeability.
72755	73922	Intake Pipe	Interchangeability.
73923	LW-12194	Intake Pipe	Interchangeability.
LW-12454	LW-12194	Intake Pipe	Interchangeability.
72756	73923	Intake Pipe	Interchangeability.
75223	LW-12195	Intake Pipe	Interchangeability.
72192	73031	Housing Assy.	Interchangeability.
76972	78100	Housing Assy.	Interchangeability.
LW-10456	LW-15730	Housing Assy.	Product improvement.
67556	31C-16	Stud	Product improvement.
68316	31C-14	Stud	Product improvement.
67528	68316	Stud	Product improvement.
STD-51	1102	Plug	Parts standardization.
STD-50	STD-8	Washer	Product improvement.
STD-705	STD-1875	Bolt	Product improvement.
Reference Page 6-7			
65060	66224	Gasket	Product improvement.
76083	75176	Fuel Injector	Product improvement.
73758	74151	Nozzle	Parts standardization.
73029	73758	Nozzle	Parts standardization.
72841	73029	Nozzle	Parts standardization.
74591	LW-10475	Nozzle	Parts standardization.
AN-919-6D	AN-919-6	Reducer	Product improvement.
75952	76304	Elbow	Product improvement.
AN-816-4	AN-822-4	Elbow	Product improvement.

SECTION 8
PARTS SUPERSEDURES

SECTION 6 (CONT.)

Part No.	Superseded by	Name	Remarks
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73969	75283	Manifold Assy.	Customer request.
AN-823-4	MS-20823-4	Elbow	Product improvement.
AN-824-4	AN-823-4	Elbow	Product improvement.
AN-823-4	AN-816-4	Nipple	Product improvement.
1102	75447	Nipple	Product improvement.
LW-12604	75447	Nipple	Product improvement.
75283	79007	Manifold Assy.	Customer request.
73969	75283	Manifold Assy.	Customer request.
75573	LW-13518	Manifold Assy.	Customer request.
AN-500-A10-8	STD-82	Screw	Parts standardization.
STD-1897	STD-1499	Bolt	Parts standardization.
Reference Page 6-9			
LW-12098-1-200	LW-12098-0-200	Tube Assy.	Product improvement.
73963	LW-12098-1-200	Tube Assy.	Product improvement.
LW-12098-1-170	LW-12098-0-170	Tube Assy.	Product improvement.
LW-12098-2-276	LW-12098-0-276	Tube Assy.	Product improvement.
LW-12098-2-264	LW-12098-2-276	Tube Assy.	Product improvement.
LW-12098-1-134	LW-12098-0-134	Tube Assy.	Product improvement.
73796	LW-12098-1-134	Tube Assy.	Product improvement.
LW-12098-2-210	LW-12098-0-210	Tube Assy.	Product improvement.
LW-12202	MS-21919-G12	Clip	Product improvement.
MS-21919-F12	LW-12202	Clip	Product improvement.
72036	MS-21919-F12	Clip	Product improvement.
LW-12145	LW-12516	Clip	Product improvement.
73152	76735	Bracket	Product improvement.
LW-320300-4	73971	Clamp	Product improvement.
73971	73751	Clip	Product improvement.
AN-823-6	MS-20823-6	Elbow	Product improvement.
AN-823-4	AN-823-6	Elbow	Product improvement.

SECTION 8
PARTS SUPERSEDURES

SECTION 6 (CONT.)

Part No.	Superseded by	Name	Remarks
Reference Page 6-9 (Cont.)			
AN-824-4	AN-823-4	Elbow	Product improvement.
AN-822-6-8	MS-20822-6	Elbow	Product improvement.
Reference Page 6-10			
76870	78523	Elbow	Interchangeability.
AN-822-8	76422	Elbow	Interchangeability.
AN-822-6	72377	Elbow	Interchangeability.
AN-815-6	75739	Nipple	Interchangeability.
AN-816-6	AN-815-6	Nipple	Interchangeability.
AN-816-6D	AN-816-6	Nipple	Interchangeability.
LW-10049	LW-10446	Elbow	Interchangeability.
77369	LW-10049	Elbow	Interchangeability.
73974	LW-13175-4-274	Hose Assy.	Product improvement.
74222	LW-13181-6-254	Hose Assy.	Product improvement.
72467	74222	Hose Assy.	Product improvement.
74532	LW-13175-4-340	Hose Assy.	Product improvement.
LW-12799-6-110	LW-12799-6S-110	Hose Assy.	Product improvement.
73320	LW-12799-6-110	Hose Assy.	Product improvement.
75203	LW-13177-4-334	Hose Assy.	Product improvement.
72863	75203	Hose Assy.	Product improvement.
LW-12877-6-051	LW-12877-6S-051	Hose Assy.	Product improvement.
LW-10445	LW-12877-6-051	Hose Assy.	Product improvement.
77958	LW-12798-4-340	Hose Assy.	Product improvement.

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