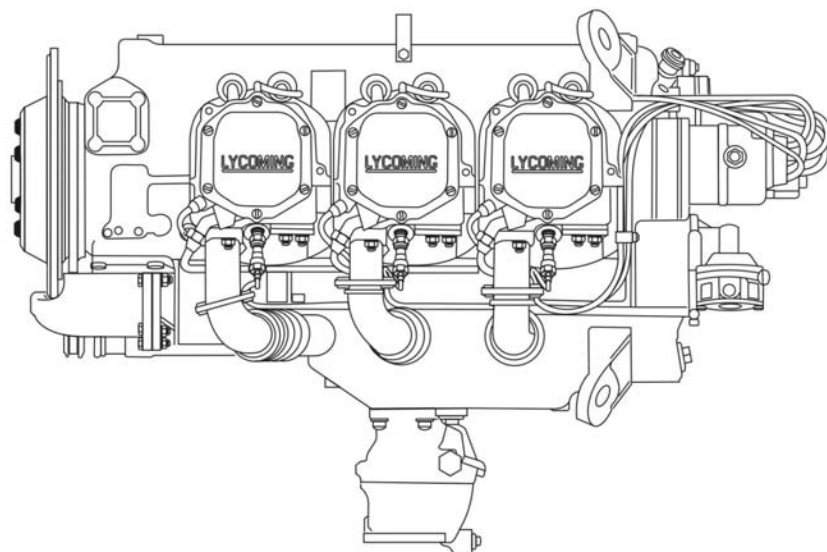


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Engine Parts Catalog O-540-B, -E & -G Series

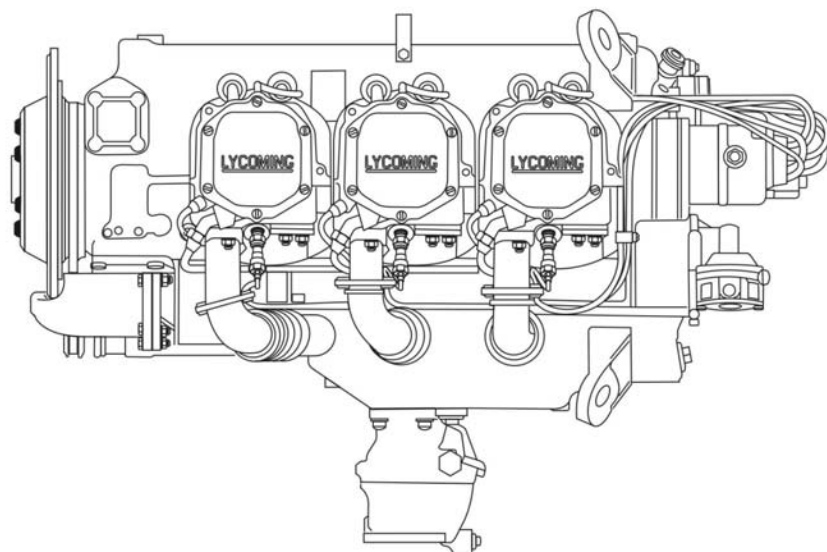
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AUGUST 2009

Part No. PC-115-2

652 Oliver Street
Williamsport, PA 17701

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Engine Parts Catalog O-540-B, -E & -G Series

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AUGUST 2009

Part No. PC-115-2

652 Oliver Street
Williamsport, PA 17701

INTRODUCTION

This illustrated parts catalog contains a complete parts listing for the Lycoming O-540-B, -E and -G Series standard cylinder flange crankcase 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 addresses of where to obtain these publications appears in the latest revision of Service Letter No. L114.

NOTE

The illustrations, pictures and drawings shown in this publication are typical of the subject matter they portray.

This catalog, when used in conjunction with the appropriate overhaul manual, shall be used for parts identification only. Under no circumstances shall this catalog be used as an assembly or installation document.

Any reference in this document to a suppliers/parts manufacturers' product, by name, trademark, part number or other description is solely for the purposes of identification and does not indicate or infer that Lycoming accepts responsibility for quality control and/or airworthiness of parts which do not pass through the Lycoming quality control system.

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SERVICE BULLETINS, INSTRUCTIONS AND LETTERS

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

HOW TO ORDER PARTS

In ordering parts for your engine, observe the following instructions which will expedite shipment of correct parts required without delay.

- a. Always specify the model and serial number of your engine.
- b. Always specify Part Number, Nomenclature and quantity required.

Lycoming Engines, a division of AVCO Corporation

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OVERSIZE AND UNDERSIZE PARTS LISTING

PART NO.	DESCRIPTION	OVERSIZE								UNDERSIZE		
		P02 .002	P05 .005	P10 .010	P15 .015	P20 .020	P30 .030	P40 .040	P50 .050	M03 .003	M06 .006	M10 .010
61681	GUIDE	SEE LATEST REVISION OF SERVICE INSTRUCTION NO. 1256 FOR APPLICATION.										
66610	BUSHING		X	X								
66796	INSERT			X								
69796	DOWEL		X									
71903-A,-B	BUSHING	SEE LATEST REVISION OF SERVICE INSTRUCTION NO. 1143 FOR APPLICATION.										
72057	SEAT			X		X	X					
72058	SEAT			X		X	X					
72060-S	BUSHING		X	X	X	X						
72061-S	BUSHING		X	X	X	X						
72062-S	BUSHING		X	X	X	X						
72155-S	BUSHING		X	X	X	X						
73810	BUSHING	SEE LATEST REVISION OF SERVICE INSTRUCTION NO. 1142 FOR APPLICATION.										
74230	GUIDE	SEE LATEST REVISION OF SERVICE INSTRUCTION NO. 1256 FOR APPLICATION.										
75302	DOWEL			X								
75656-S	BUSHING		X	X	X	X						
75657-S	BUSHING		X	X		X						
78443	SEAL	SEE LATEST REVISION OF SERVICE INSTRUCTION NO. 1324 FOR APPLICATION.										
LW-10647	DWEL		X	X								
LW-11021	BEARING				X					X	X	X
LW-11575	BEARING				X					X	X	X
LW-11997	SEAL	SEE LATEST REVISION OF SERVICE INSTRUCTION NO. 1324 FOR APPLICATION.										
LW-13521	BEARING			X						X*	X*	X*
LW-13522	BEARING									X	X	X
LW-13792	SEAL	SEE LATEST REVISION OF SERVICE INSTRUCTION NO. 1324 FOR APPLICATION.										
LW-13884	BEARING				X					X	X	X
LW-13885	BEARING									X	X	X
LW-15628	SEAL	SEE LATEST REVISION OF SERVICE INSTRUCTION NO. 1324 FOR APPLICATION.										
LW-16047	BEARING				X					X	X	X
LW-16048	BEARING			X						X*	X*	X*
STD-1065	DOWEL	X	X	X	X							
18A19399	BEARING				X					X	X	X
18A19441	BEARING				X					X	X	X
18D19394	BEARING				X					X	X	X
18E19396	BEARING				X					X	X	X

* - Also available in P10 oversize.

In addition to the above, studs are available in P01, P02, P03, P05, P07, P10 & P12.

NOTE

When ordering oversize and undersize parts, be sure to specify the required oversize and undersize dimension along with the proper part number. For example, to order bearing LW-13884 in .003 undersize, order part number LW-13884-M3. Oversize code letter is "P" while undersize code letter is "M". These letters are then followed by the number designating the size in thousandths of an inch.

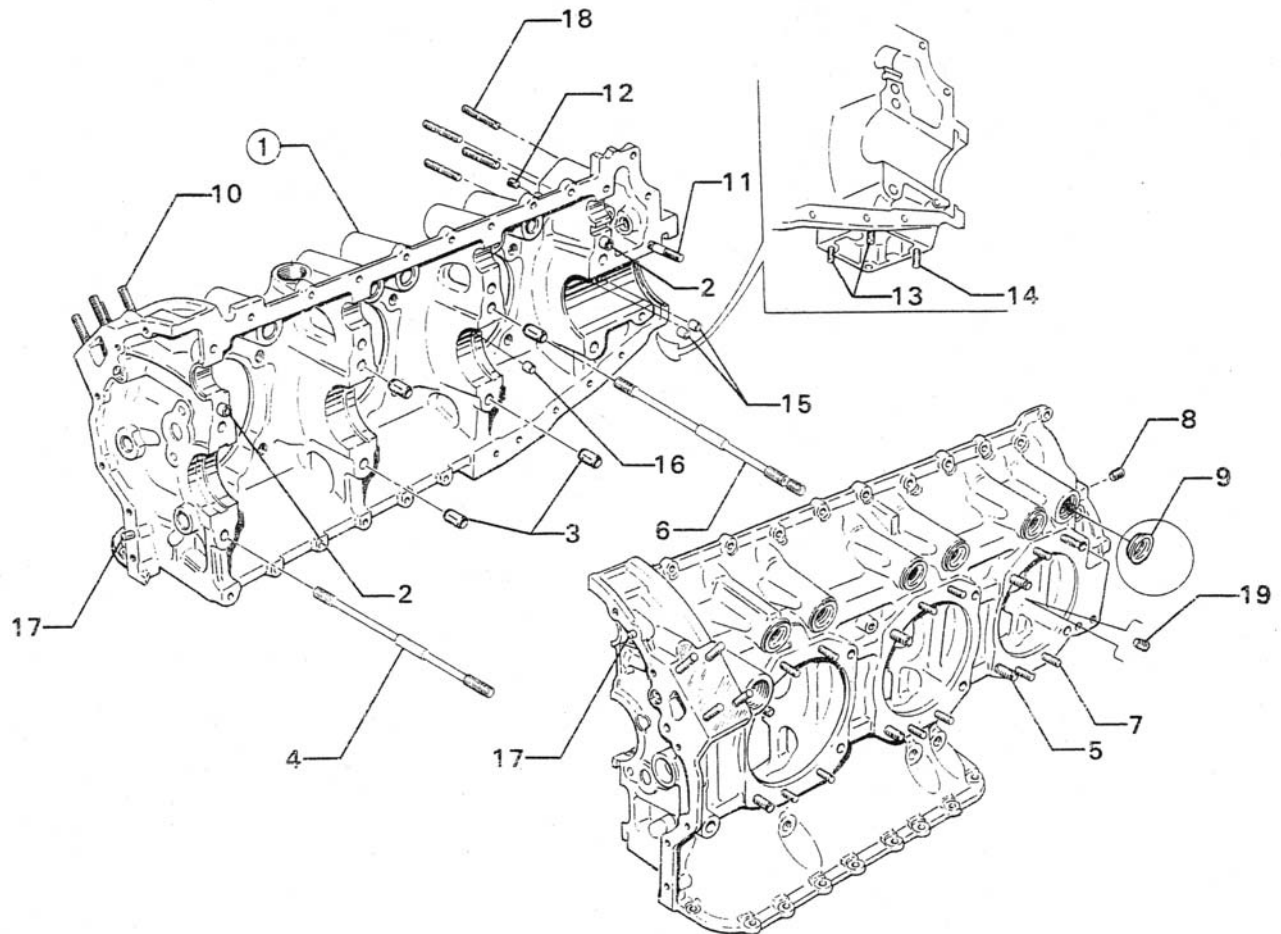
CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP
CRANKCASE ASSEMBLY

FIG. REF. 1	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	LW-11033	CRANKCASE ASSEMBLY (See Note)		1	1	1	1	1	1	1	1		
	LW-11964	CRANKCASE ASSEMBLY (See Note)										1	1
2	STD-557	DOWEL, 1/2 dia. x 11/16 long, hollow	2										
3	75302	DOWEL, Crankcase thru stud										4	4
4	66734	STUD, 1/2-13 x 9-7/8 long	4										
5	50-15	STUD, 1/2-13 x 1-7/8 long	12										
6	69679	STUD, 5/16-18 x 10-21/32 long	4										
7	38-13	STUD, 3/8-16 x 1-5/8 long	24										
8	1102	PLUG, 1/8 pipe x 3/8 long, socket	5										
9	65007	RETAINER, Shroud tube seal	12										
10	38-15	STUD, 3/8-16 x 1-7/8 long	8										
11	38-22	STUD, 3/8-16 x 2-3/4 long	1										
12	STD-1339	PLUG, 1/16-27 pipe, Allen head	1										
13	31C-12	STUD, 5/16-18 Nat'l. Form x 1-1/2 long	2										
14	31C-13	STUD, 5/16-18 Nat'l. Form x 1-5/8 long	1										
15	69796	DOWEL, Crankshaft bearing	2										
16	LW-10647	DOWEL, Crankshaft bearing	6										
17	STD-514	DOWEL, 5/16 diameter x 1/2 long	2										
18	31C-16*	STUD, 5/16-18 x 2.00 long, driven height (1.27-1.31)			4			4	4		4		
	31C-14*	STUD, 5/16-18 x 1-3/4 long, driven height (.96-1.00)		4	4	4	4	4	4	4		4	4
19	STD-1339	PLUG, 1/16-27 NPT, Allen head (piston squirt holes)										6	6

* - Check crankcase for height of studs required.

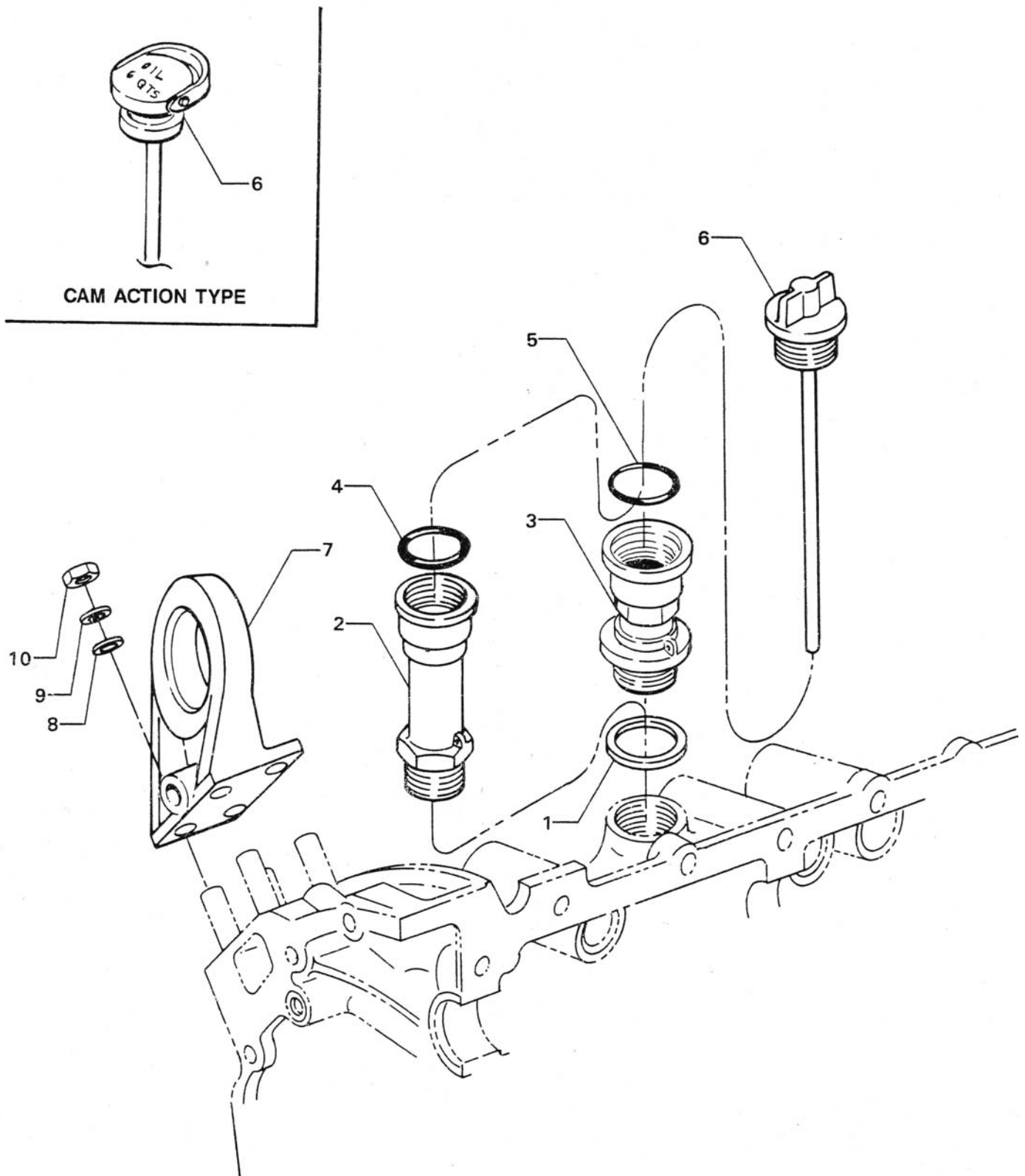
NOTE

This part is not available as a service item. Refer to Service Kit Section 7 for applicable Crankcase Assembly and governor stud kit part number.

**FIGURE 1. CRANKCASE ASSEMBLY**

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP
OIL LEVEL GAGES AND ENGINE MOUNTING BRACKETS

FIG. REF. 2	PART NUMBER	DESCRIPTION	O N A L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	70457	GASKET, Oil filler extension	1										
2	75761	EXTENSION, Oil filler, long (4-1/2 in.)				1		1	1	1			
	77770	EXTENSION, Oil filler, long (6-5/16 in.)									1		
3	75737	EXTENSION, Oil filler, short (2-11/16 in.)		1	1	1	1		1			1	1
	77527	EXTENSION, Oil filler, short (2-3/16 in.)			1	1		1	1	1			
	74313	EXTENSION, Oil filler, short (2-3/16 in.) alt.			1	1		1	1	1			
4	74065	“O” RING, Oil level gage		1	1	1	1	1	1	1		1	1
5	72312	RING, Oil seal, 1.00 I.D. x 1/8 section			1	1		1	1	1	1		
6	LW-14779	GAGE ASSEMBLY, Oil level (threaded plug)			1								
	LW-14774	GAGE ASSEMBLY, Oil level (threaded plug)				1		1	1	1			
	LW-14756	GAGE ASSEMBLY, Oil level (threaded plug)		1	1	1	1		1			1	1
	LW-14732	GAGE ASSEMBLY, Oil level (cam action)			1	1		1	1	1			
	LW-14734	GAGE ASSEMBLY, Oil level (cam action)									1		
7	70456	BRACKET, Engine mounting (Dynafoal)	4										
	12A19770	BRACKET, Engine mounting (Dynafoal)						4		4			
8	STD-33	WASHER, 3/8 plain	16										
9	STD-678	WASHER, 3/8 lock, internal teeth	16										
10	STD-596	NUT, 3/8-24 plain	16										

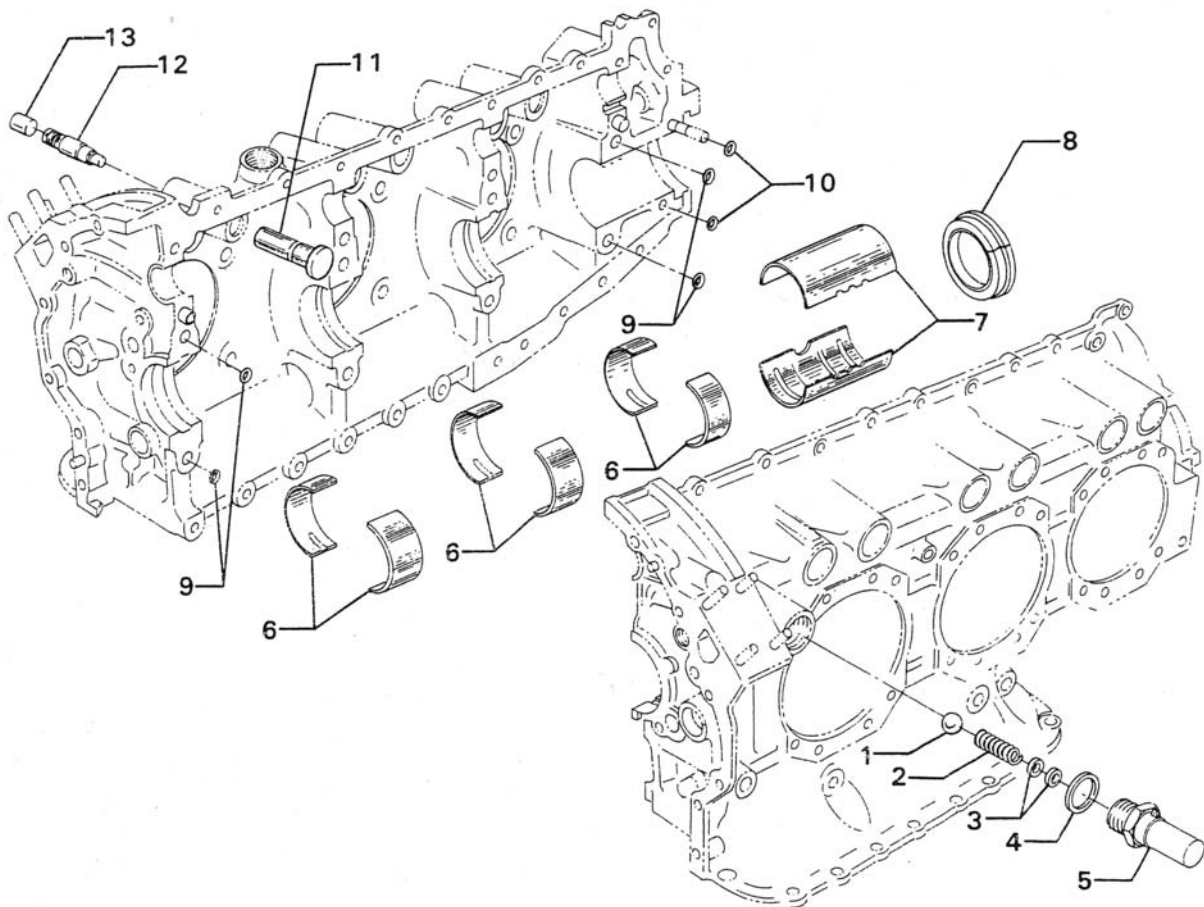
**FIGURE 2. OIL LEVEL GAGES AND ENGINE MOUNTING BRACKETS**

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP
CRANKCASE RELATED PARTS

FIG. REF. 3	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	1028-B	BALL, 11/16 diameter	1										
2	68668*	SPRING, Oil pressure relief valve	1										
	LW-18085*	SPRING, Oil pressure relief valve	1										
	77467*	SPRING, Oil pressure relief valve	1										
	LW-11713*	SPRING, Oil pressure relief valve	1										
	61084*	SPRING, Oil pressure relief valve	1										
3	STD-425	WASHER, No. 10 plain (max. 9)	AR										
4	06E19769-1.25	GASKET, 1-1/4 I.D. x 1-1/2 O.D. x 3/32 annular	1										
5	76529	PLUG, Oil relief valve	1										
6	18D19394	BEARING, Crankshaft		6	6	6	6	6	6	6	6		
	LW-16047	BEARING, Crankshaft (alternate)		6	6	6	6	6	6	6	6		
	LW-11021	BEARING, Crankshaft (alternate)		6	6	6	6	6	6	6	6		
	LW-11575	BEARING, Crankshaft (alternate)										6	6
	18E19396	BEARING, Crankshaft (alternate)										6	6
7	LW-13884	BEARING, Crankshaft, front		2	2	2	2	2	2	2	2		
	18A19441	BEARING, Crankshaft, front (alternate)		2	2	2	2	2	2	2	2		
	LW-13885	BEARING, Crankshaft, front										2	2
	18A19399	BEARING, Crankshaft, front (alternate)										2	2
8	LW-13792**	SEAL, Crankshaft oil, solid		1	1	1	1	1	1	1	1		
	LW-11997**	SEAL, Crankshaft oil, split		1	1	1	1	1	1	1	1		
	LW-15628**	SEAL, Crankshaft oil, solid										1	1
	78443**	SEAL, Crankshaft oil, split										1	1
9	72075	SEAL, Oil, 3/32 section x 15/32 I.D.										4	4
	72075	SEAL, Oil, 3/32 section x 15/32 I.D.		8	8	8	8	8	8	8	8		
10	72091	RING, Oil seal, 23/64 I.D. x 7/64	2										
11	72877	BODY, Hydraulic tappet	12										
12	78290	PLUNGER ASSEMBLY, Hydraulic tappet	12										
13	78524	SOCKET, Push rod, hydraulic tappet	12										

* - Select spring to give a minimum of three threads exposed on adjusting screw to allow field adjustment. Reference latest revision of SSP-1776, Part 1 for spring identification.

** - See latest revision of Service Instruction No. 1324 for application.

**FIGURE 3. CRANKCASE RELATED PARTS**

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP
CRANKSHAFT AND RELATED PARTS

FIG. REF. 4	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	13E17674	CRANKSHAFT AND COUNTERWEIGHT ASSY.		1	1	1	1						
	13E17676	CRANKSHAFT AND COUNTERWEIGHT ASSY.						1	1	1	1		
	13F17779	CRANKSHAFT AND COUNTERWEIGHT ASSY.										1	1
2	13E17648	CRANKSHAFT AND PLUG ASSEMBLY		1	1	1	1	1	1	1	1		
	13F17754	CRANKSHAFT AND PLUG ASSEMBLY										1	1
3	STD-1211	PLUG, 2.00 dia. expansion	1										
4	73810*	BUSHING, Crankshaft dynamic counterweight	4										
5	71640	PLUG, 1-3/8 diameter		1	1	1	1	1	1	1	1		
	60945	PLUG, 1-1/4 diameter										1	1
6	72062	BUSHING, Propeller flange, long		4	4	4	4	4	4	4	4		
7	72061	BUSHING, Propeller flange, short		1	1	1	1	1	1	1	1		
8	72060	BUSHING, Propeller flange, indexing		1	1	1	1	1	1	1	1		
9	75656	BUSHING, Propeller flange, long										4	4
10	72155	BUSHING, Propeller flange, short										1	1
11	75657	BUSHING, Propeller flange, indexing										1	1
12	STD-1065	DOWEL, Stepped, 5/16 x 1/4 dia. x 35/64 long	1										
13	LW-19225**	COUNTERWEIGHT ASSEMBLY		2	2	2	2					2	2
	LW-19227**	COUNTERWEIGHT ASSEMBLY						2	2	2	2		
14	71903†	BUSHING, Dynamic counterweight	8										
15	70416**	ROLLER, Dynamic counterweight, 6.3 order		2	2	2	2					2	2
	72797**	ROLLER, Dynamic counterweight, 6.3 order						2	2	2	2		
16	72022**	ROLLER, Dynamic counterweight, 5.1 order		2	2	2	2					2	2
	72965**	ROLLER, Dynamic counterweight, 5.1 order						2	2	2	2		
17	LW-14820	RING, Internal retaining	8										
18	71907	WASHER, Dynamic counterweight	8										
19	13S19647●	GEAR, Crankshaft	1										
20	LW-18638	LOCKPLATE, Crankshaft gear	1										
21	STD-2209	BOLT, 5/16-24 x 1-3/4 long, hex. head	1										
22	LW-16064‡	SUPPORT ASSY., Starter ring gear, 12/14 pitch		1	1	1	1	1	1	1		1	
	77579■	SUPPORT ASSY., Starter ring gear, 12/14 pitch		1		1	1	1	1	1	1	1	1
	72245◆	SUPPORT ASSY., Starter ring gear, 12/14 pitch				1							
	75030▶	SUPPORT ASSY., Starter ring gear, 12/14 pitch				1			1		1		
23	72566	GEAR, Starter ring (12/14 pitch)	1										

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

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

† See latest revision of Service Instruction No. 1143 for application.

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

‡ Provision for 1.91:1 drive.

■ Provision for 3.25:1 drive for alternators with no prop. de-icing.

◆ Provision for 2.50:1 drive.

▶ Provision for 3.25:1 drive for alternators with prop. de-icing.

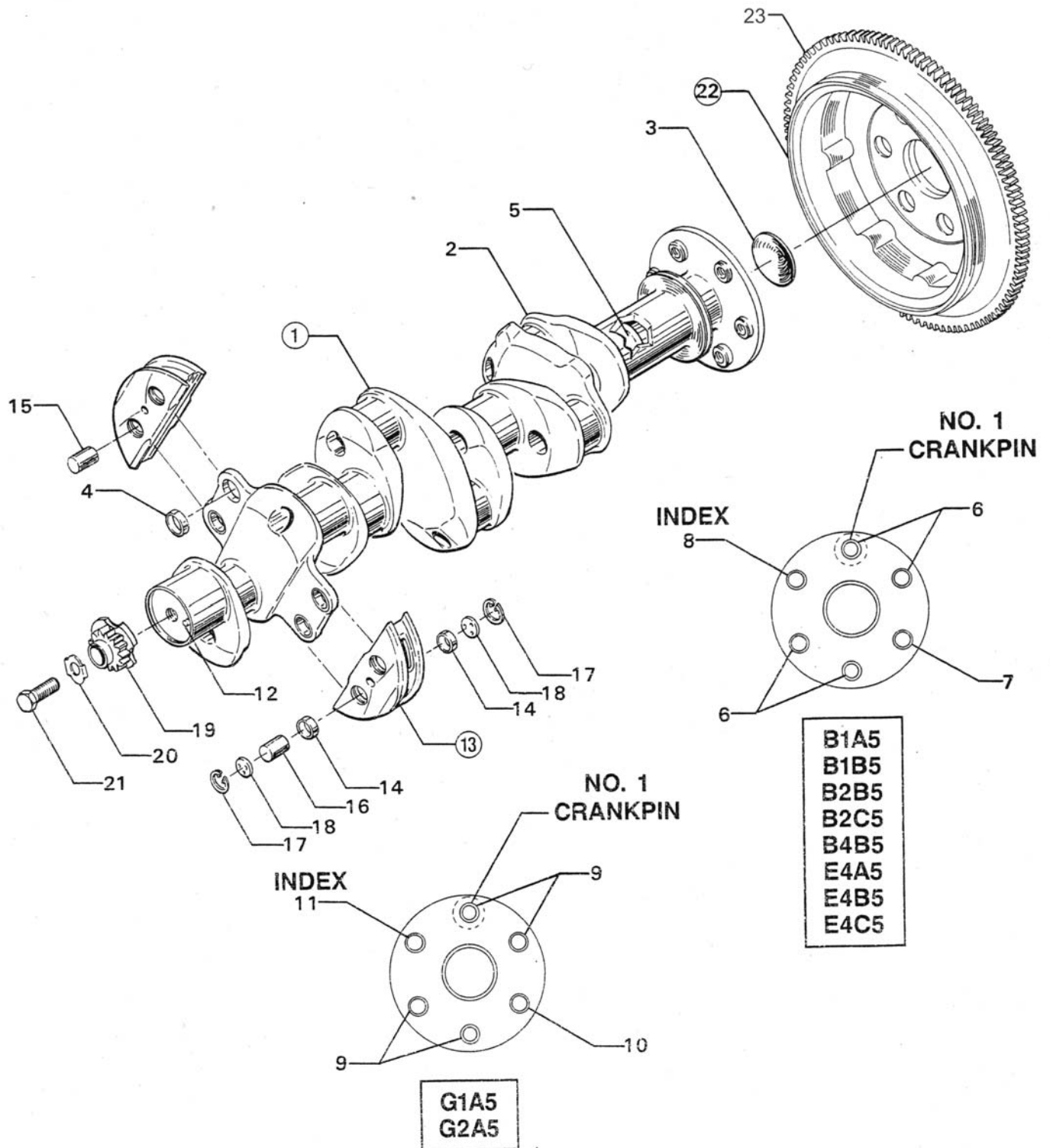


FIGURE 4. CRANKSHAFT AND RELATED PARTS

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP
CAMSHAFT AND RELATED PARTS

FIG. REF. 5	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	LW-19340	CAMSHAFT ASSEMBLY	1										
2	76118	SPACER, Tachometer shaft centering	1										
3	76155	SHAFT ASSEMBLY, Tachometer	1										
4	LW-18667	PIN, 3/16 diameter. x 2-21/64 long	1										
5	MS16625-1081	RING, Internal retaining	1										

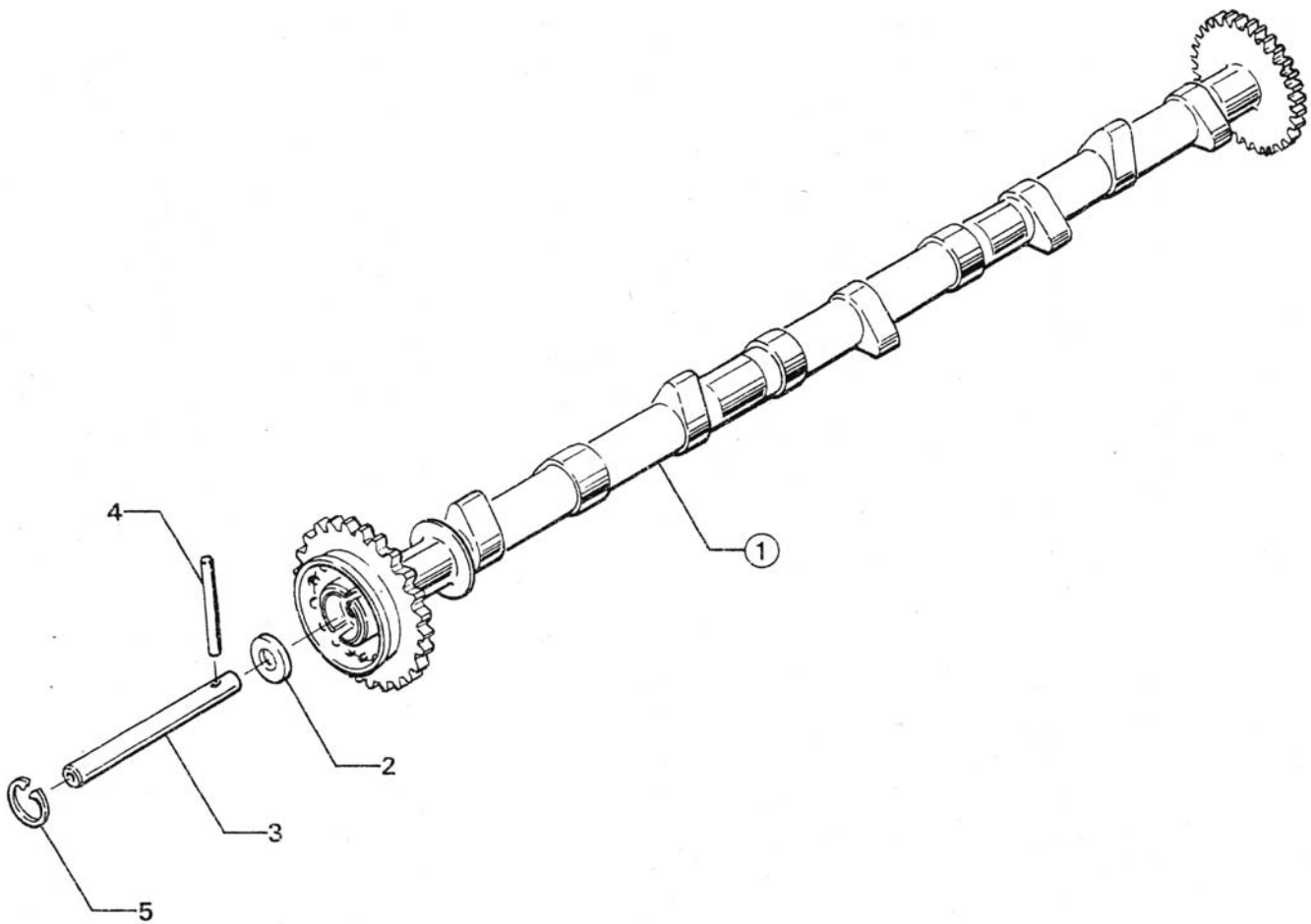
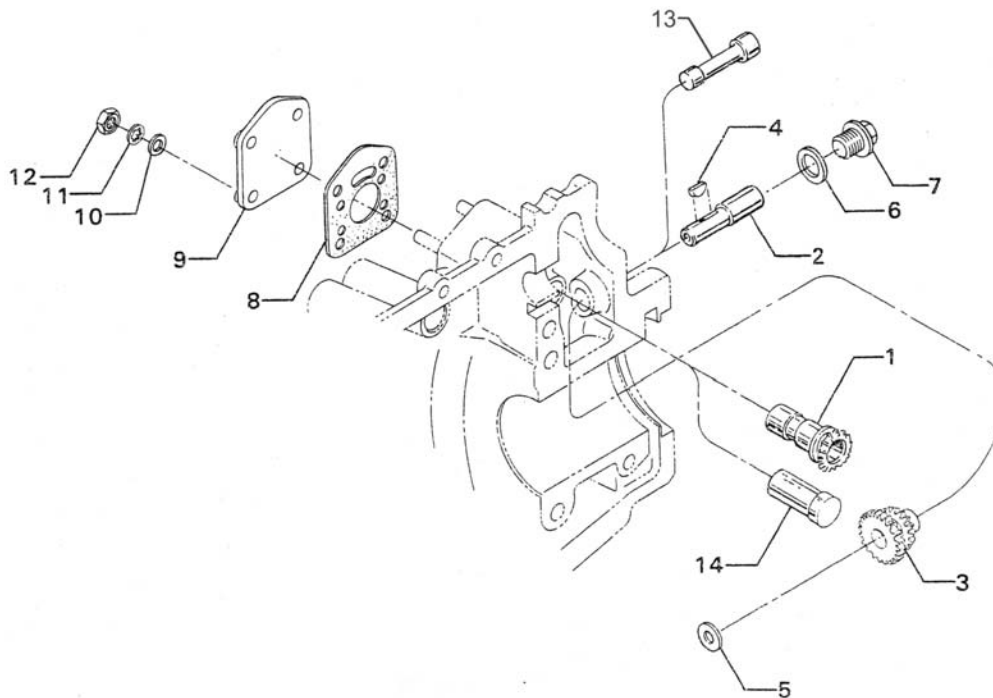


FIGURE 5. CAMSHAFT AND RELATED PARTS

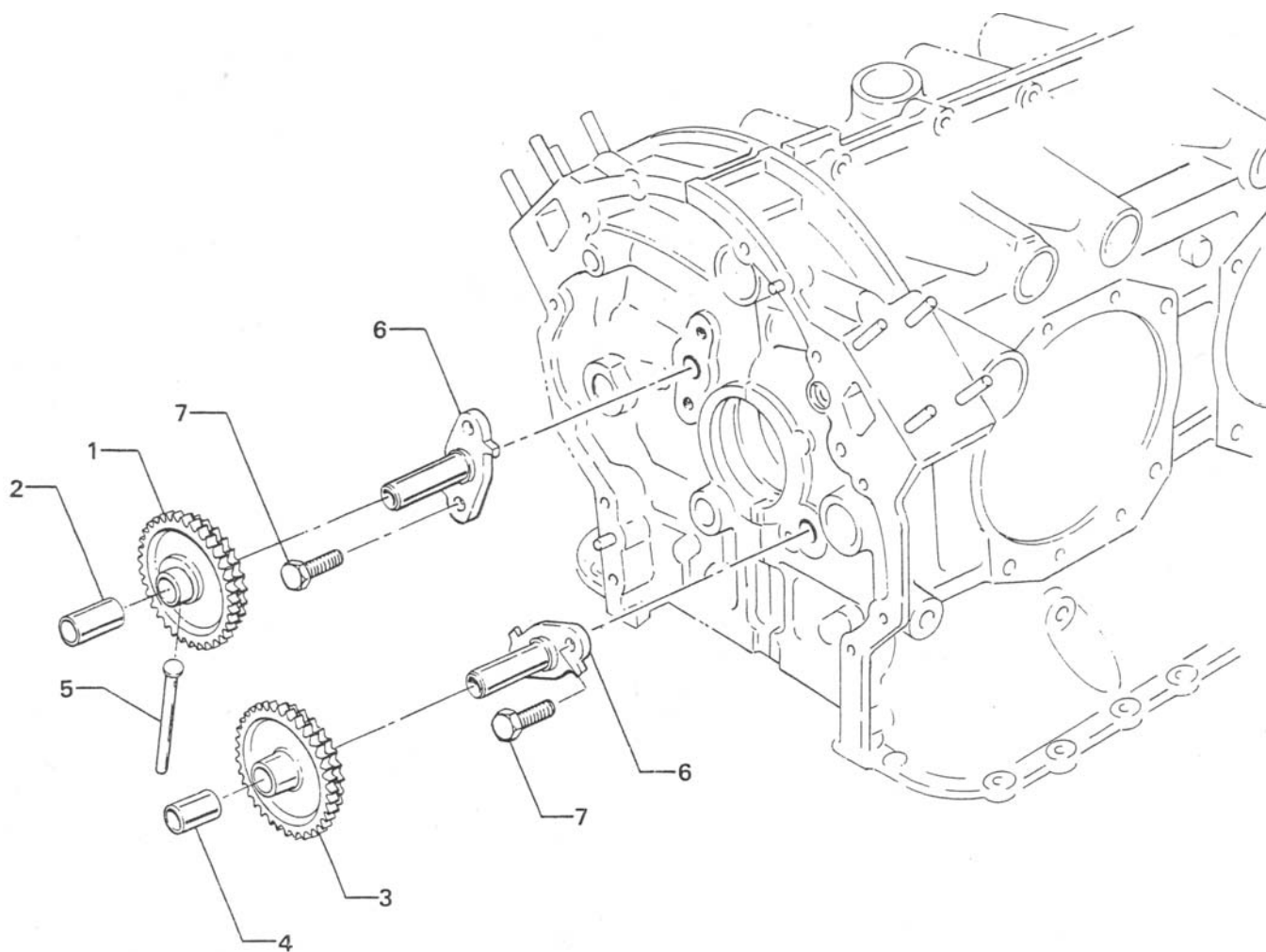
CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP
PROPELLER GOVERNOR DRIVE ASSEMBLY

FIG. REF. 6	PART NUMBER	DESCRIPTION	O N A L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	70389	GEAR, Propeller governor driven		1	1			1	1	1	1	1	
2	70384	SHAFT, Propeller governor idler gear		1	1			1	1	1	1	1	
3	70388	GEAR, Propeller governor idler		1	1			1	1	1	1	1	
4	STD-737	KEY, 3/32 x 1/2, Woodruff		1	1			1	1	1	1	1	
5	73249	WASHER, Thrust		AR	AR			AR	AR	AR	AR	AR	
	73250	WASHER, Thrust		AR	AR			AR	AR	AR	AR	AR	
	73251	WASHER, Thrust		AR	AR			AR	AR	AR	AR	AR	
	73252	WASHER, Thrust		AR	AR			AR	AR	AR	AR	AR	
6	70455	GASKET, 25/32 I.D. x 1-1/8 O.D. x 1/32 to 3/64 thick	1										
7	LW-13896	PLUG, 3/4-16 hex. head	1										
8	72053	GASKET, Governor	1										
9	72378	COVER, Governor drive	1										
10	STD-35	WASHER, 5/16 plain (Woodward governor)			20			20			20		
	STD-35	WASHER, 5/16 plain (AN governor)		4	4	4	4	4	4	4		4	4
11	STD-475	WASHER, 5/16 lock, internal teeth	4										
12	STD-1410	NUT, 5/16-18 plain	4										
13	74057	PLUG, Propeller governor idler shaft				1	1						1
14	74058	PLUG, Propeller governor drive gear				1	1						1


FIGURE 6. PROPELLER GOVERNOR DRIVE ASSEMBLY

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP
CRANKSHAFT IDLER GEARS

FIG. REF. 7	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	71652	GEAR ASSEMBLY, Crankshaft idler	1										
2	67530	BUSHING, Crankshaft idler gear	1										
3	71668	GEAR ASSEMBLY, Crankshaft idler, plain	1										
4	67530	BUSHING, Crankshaft idler gear	1										
5	61544	PLUNGER, Fuel pump, long	1										
6	LW-13795	SHAFT, Crankshaft idler gear	2										
7	STD-2167	SCREW, 5/16-18 x 7/8 long, hex. head	4										

**FIGURE 7. CRANKSHAFT IDLER GEARS**

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP
CRANKCASE ATTACHING PARTS

FIG. REF. 8	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	60803	STRAP, Lifting		1	1	1	1	1	1	1	1		
	60803	STRAP, Lifting										2	2
2	AN6-34A	BOLT, 3/8-24 x 3-37/64 long, hex. head	1										
3	STD-33	WASHER, 3/8 plain	3										
4	STD-678	WASHER, 3/8 lock, internal teeth	2										
5	STD-596	NUT, 3/8-24 plain	2										
6	LW-25-1.50	BOLT, 1/4-20 x 1-1/2 long, hex. head		11	11	11	11	11	11				
	LW-25-1.50	BOLT, 1/4-20 x 1-1/2 long, hex. head								10	10	10	10
7	LW-25-1.75	BOLT, 1/4-20 x 1-3/4 long, hex. head	1										
	LW-25-1.75*	BOLT, 1/4-20 x 1-3/4 long, hex. head								1	1	1	1
8	STD-8	WASHER, 1/4 plain		27	27	27	27	27	27				
	STD-8	WASHER, 1/4 plain								26	26	26	26
9	LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. head	4										
10	STD-160	WASHER, 1/4 lock, internal teeth	16										
11	STD-1411	NUT, 1/4-20 plain	12										
12	LW-25S1.50	BOLT, 1/4-20 x 1-1/2 long, hex. head, dr. end	6										
13	STD-8	WASHER, 1/4 plain (18 max.)	AR										
14	STD-1409	NUT, 1/4-20 slotted shear	6										
15	AN6-21	BOLT, 3/8-24 x 2-13/64 long, hex. head drilled	1										
16	STD-33	WASHER, 3/8 plain	2										
17	STD-872	NUT, 3/8-24 slotted	1										

* Assemble in upper rear crankcase attaching flange hole.

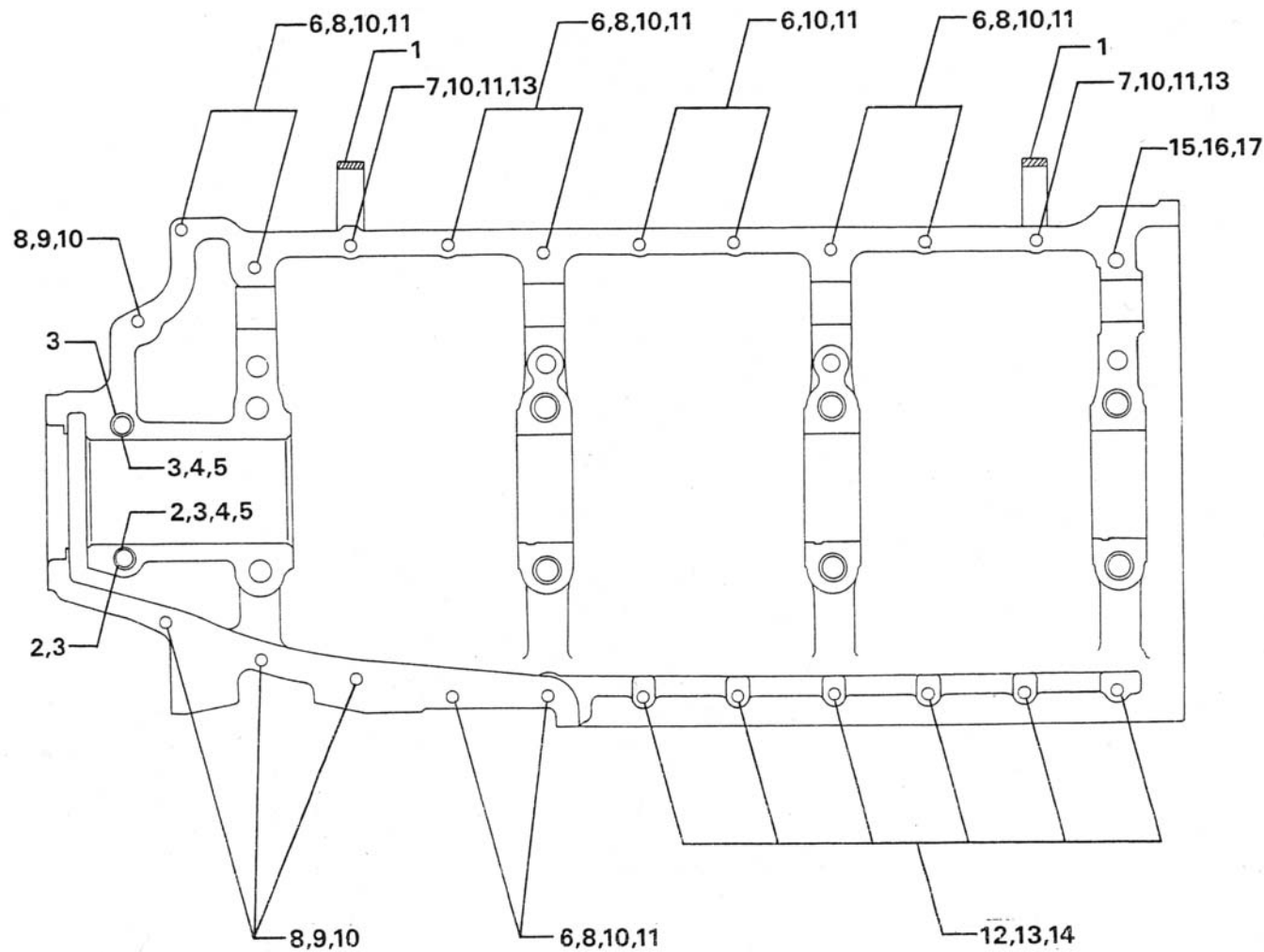


FIGURE 8. CRANKCASE ATTACHING PARTS

ACCESSORY HOUSING AND RELATED PARTS
ACCESSORY HOUSING ASSEMBLY

FIG. REF. 9	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	73818	GASKET, Accessory housing	1										
2	76152	HOUSING ASSEMBLY, Accessory	1										
3	31C-12	STUD, 5/16-18 x 1-1/2 long	4										
4	31CD-17	STUD, 5/16-18 x 2-1/8 long, drilled	3										
5	31C-21	STUD, 5/16-18 x 2-5/8 long	4										
6	25C-21	STUD, 1/4-20 x 2-5/8 long	4										
7	STD-784	PLUG, 3/8 pipe, Allen head	1										
8	1102	PLUG, 1/8-27 NPT, Allen head	2										

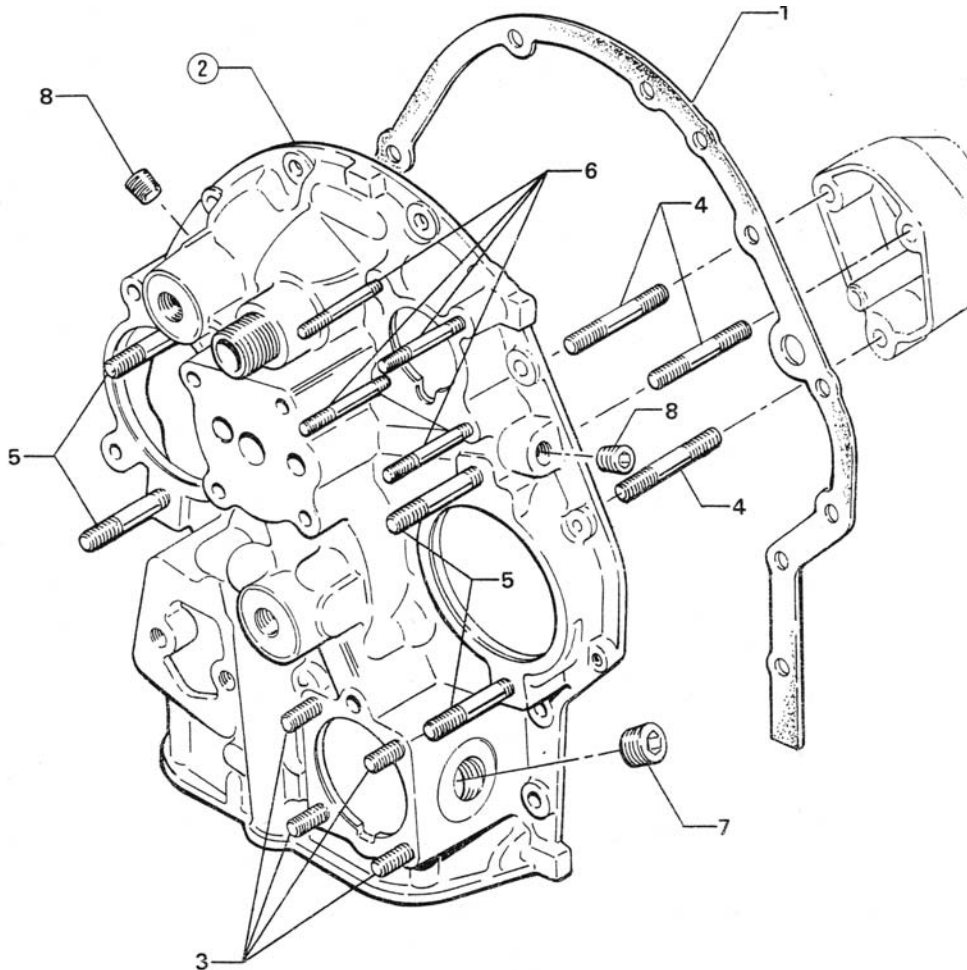
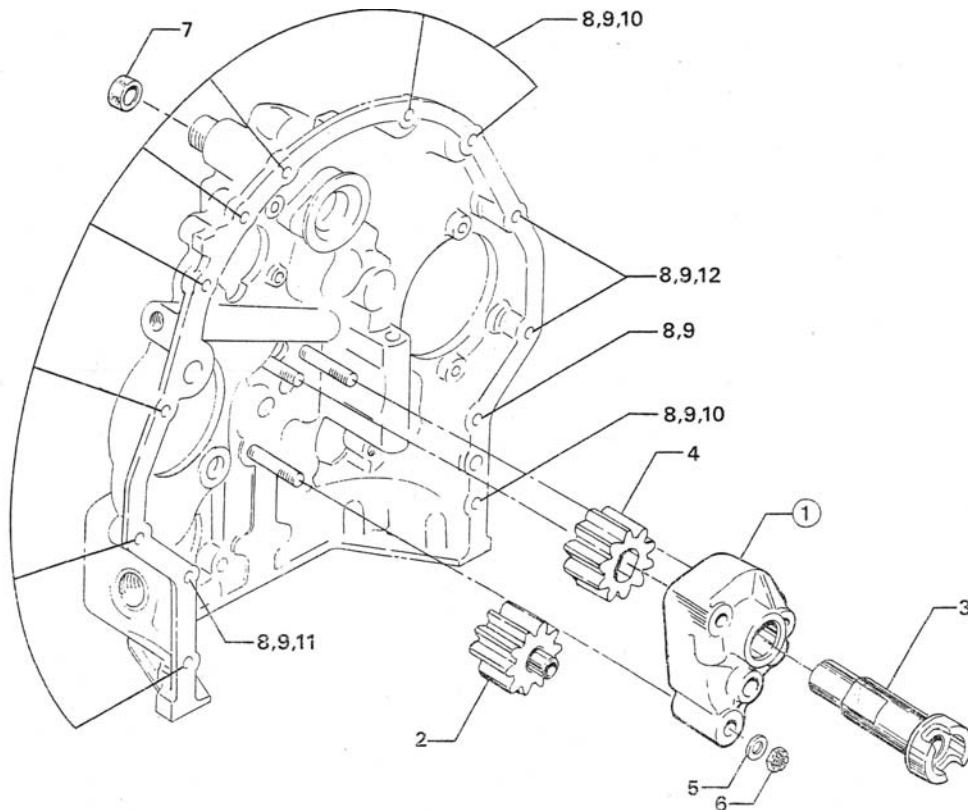


FIGURE 9. ACCESSORY HOUSING ASSEMBLY

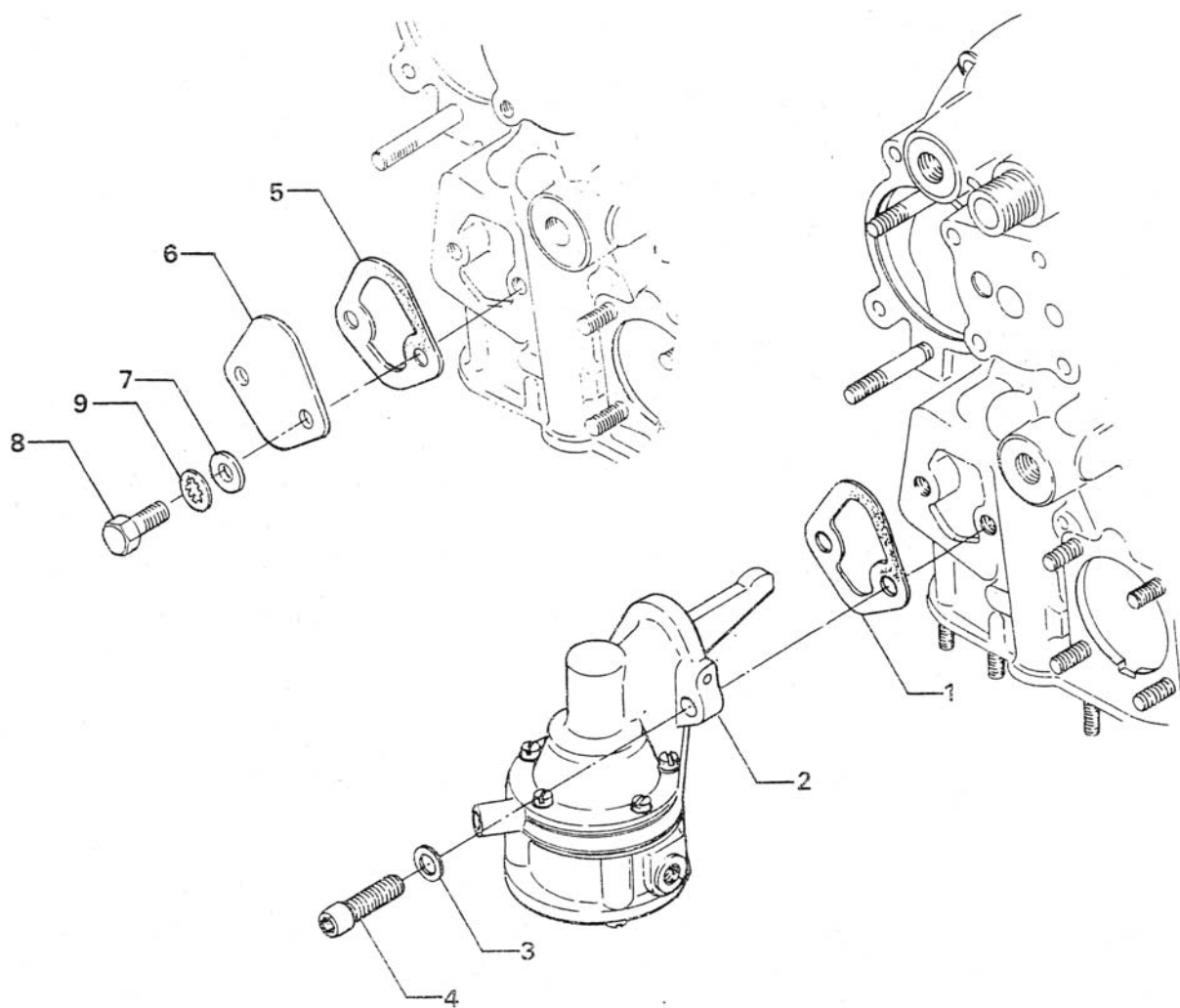
ACCESSORY HOUSING AND RELATED PARTS
OIL PUMP ASSEMBLY AND ACCESSORY HOUSING ATTACHING PARTS

FIG. REF. 10	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	78531	BODY, Oil pump	1										
2	LW-18110	IMPELLER ASSEMBLY, Oil pump driven	1										
3	74641	SHAFT, Oil pump drive	1										
4	LW-18109	IMPELLER, Oil pump driving	1										
5	STD-35	WASHER, 5/16 plain	3										
6	STD-1420	NUT, 5/16-18 slotted	3										
7	LW-14260	SEAL, Oil, tachometer drive	1										
8	STD-8	WASHER, 1/4 plain	10										
9	STD-160	WASHER, 1/4 lock, internal teeth	12										
10	LW-25-0.94	BOLT, 1/4-20 x 15/16 long, hex. head	9										
11	LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. head	1										
12	LW-25-1.88	BOLT, 1/4-20 x 1-7/8 long, hex. head	2										


FIGURE 10. OIL PUMP ASSEMBLY AND ACCESSORY HOUSING ATTACHING PARTS

ACCESSORY HOUSING AND RELATED PARTS
FUEL PUMP ASSEMBLY, COVER AND ATTACHMENTS

FIG. REF. 11	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	60096	GASKET, Fuel pump	1										
2	LW-15472	FUEL PUMP (6441271)	1										
3	STD-33	WASHER, 3/8 plain	2										
4	STD-1882	SCREW, 3/8-16 x 1-9/32 long, socket hd., dr. head	2										
5	60096	GASKET, Pad cover				1	1					1	
6	65098	COVER, Pad				1	1					1	
7	STD-33	WASHER, 3/8 plain				2	2					2	
8	LW-38-0.75	BOLT, 3/8-16 x 3/4 long, hex. head				2	2					2	
9	STD-678	WASHER, Lock				2	2					2	

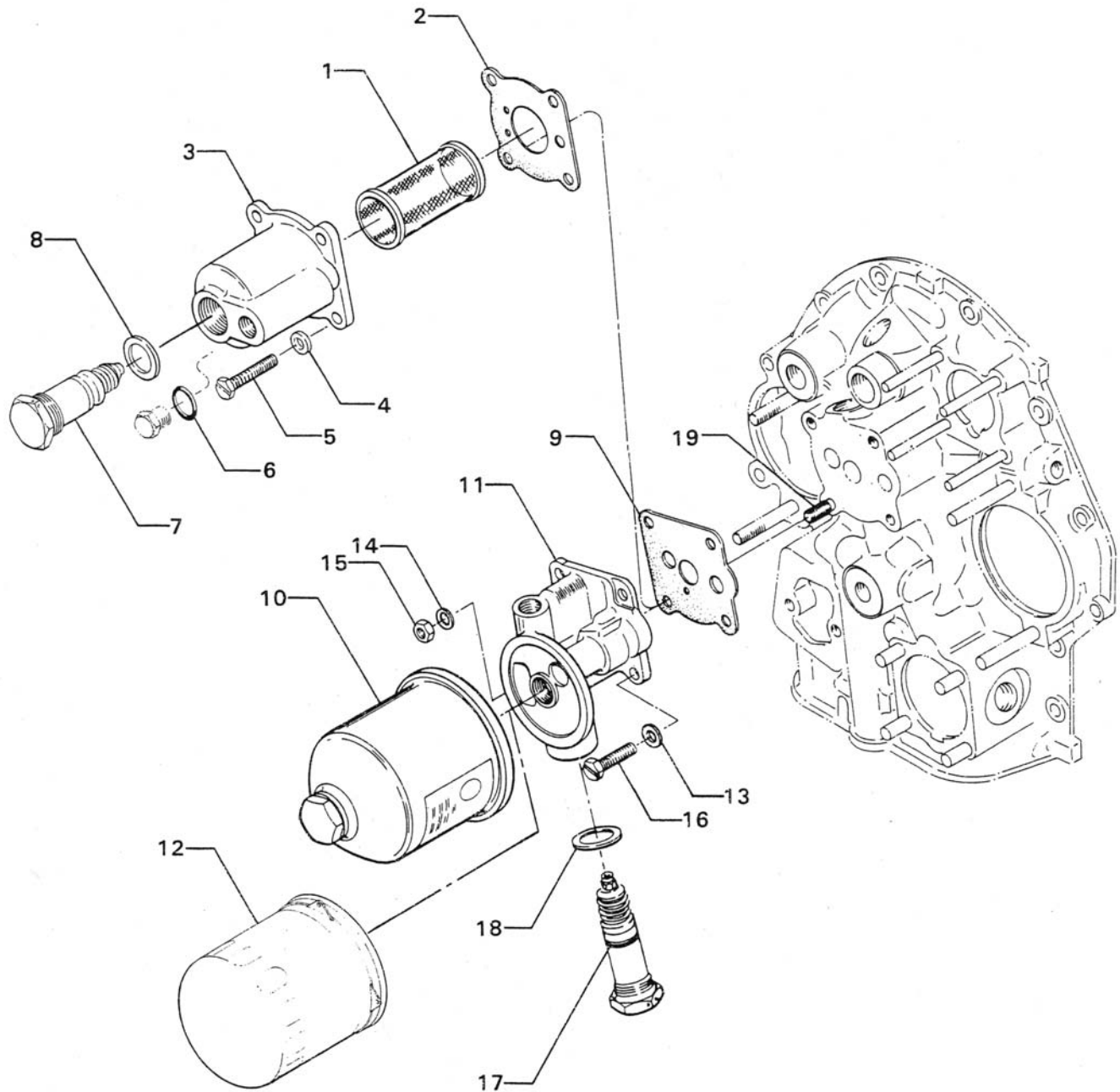
**FIGURE 11. FUEL PUMP ASSEMBLY, COVER AND ATTACHMENTS**

ACCESSORY HOUSING AND RELATED PARTS
OIL PRESSURE SCREEN, OIL FILTER AND OIL COOLER BYPASS VALVE

FIG. REF. 12	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	62817	SCREEN ASSEMBLY, Oil pressure		1	1	1		1	1	1	1		
2	61173	GASKET, Oil pressure housing		1	1	1		1	1	1	1		
3	68974	HOUSING, Oil pressure screen			1								
	69510	HOUSING, Oil pressure screen & thermostatic valve		1	1	1		1	1	1	1		
	62815	HOUSING, Oil pressure screen				1							
4	STD-8	WASHER, 1/4 plain		4	4	4		4	4	4	4		
5	STD-1856	SCREW, 1/4-20 x 31/32 to 1.00 long, hex. hd., slotted		4	4	4		4	4	4	4		
	STD-1856	SCREW, 1/4-20 x 31/32 to 1.00 long, hex. hd., slotted		3		3	3	3	3	3	3	3	3
6	06E19769-0.63	GASKET, 7/8 O.D. x 5/8 I.D. x 3/32 annular		1	1	1		1	1	1	1		
7	53E19600	VALVE ASSEMBLY, Temp. control, oil cooler bypass		1	1	1		1	1	1	1		
8	76510	GASKET, Valve assembly		1	1	1		1	1	1	1		
9	LW-12795	GASKET, Oil filter adapter		1		1	1	1	1	1	1	1	1
10	77853*	HOUSING ASSEMBLY, Oil filter		1		1	1	1	1	1	1	1	1
11	77852	BASE ASSEMBLY, Oil filter		1		1	1	1	1	1	1	1	1
12	LW-13215**	OIL FILTER, Short (spin on type)				1		1		1			
13	STD-8	WASHER, 1/4 plain		4		4	4	4	4	4	4	4	4
14	STD-160	WASHER, 1/4 lock, internal lock		1		1	1	1	1	1	1	1	1
15	STD-1411	NUT, 1/4-20 plain		1		1	1	1	1	1	1	1	1
16	STD-1856	SCREW, 1/4-20 x 1.00 long, hex. hd., self-locking		3		3	3	3	3	3	3	3	3
17	56E19600	VALVE ASSEMBLY, Temp. control, oil cooler bypass		1		1	1	1	1	1	1	1	1
18	76510	GASKET, Valve assembly		1		1	1	1	1	1	1	1	1
19	25C-10	STUD, 1/4-20 x 1-1/4 long		1		1	1	1	1	1	1	1	1

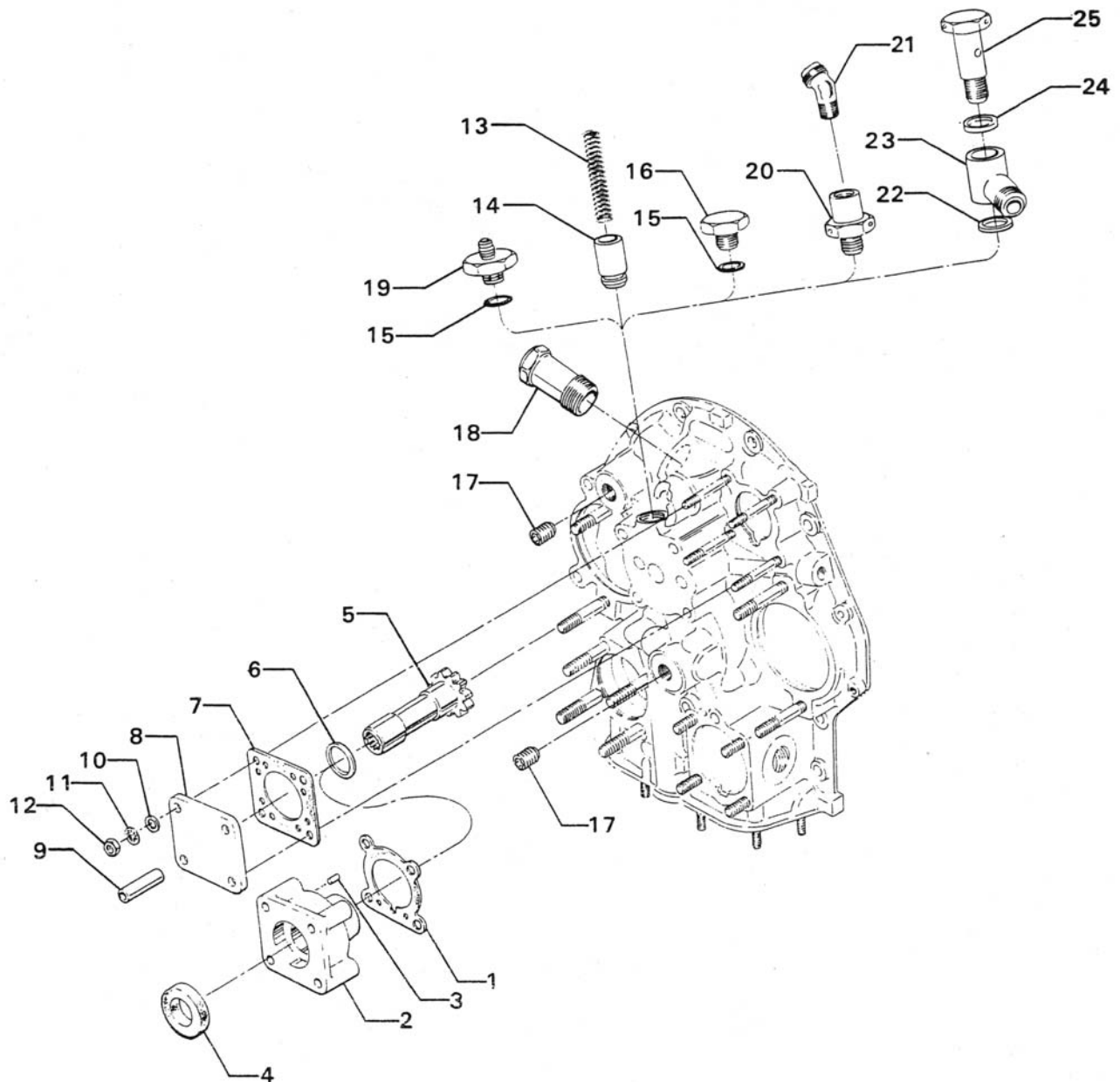
* This complete Oil Filter Housing Assembly is no longer available. Lycoming will continue to supply a Filter Element Kit P/N LW-14089 which includes (1) element, (1) square gasket, (1) copper gasket and (1) flat gasket.

** Reference latest revision of SSP-885 for oil filter kits and replacement filters.

**FIGURE 12. OIL PRESSURE SCREEN, OIL FILTER AND OIL COOLER BYPASS VALVE**

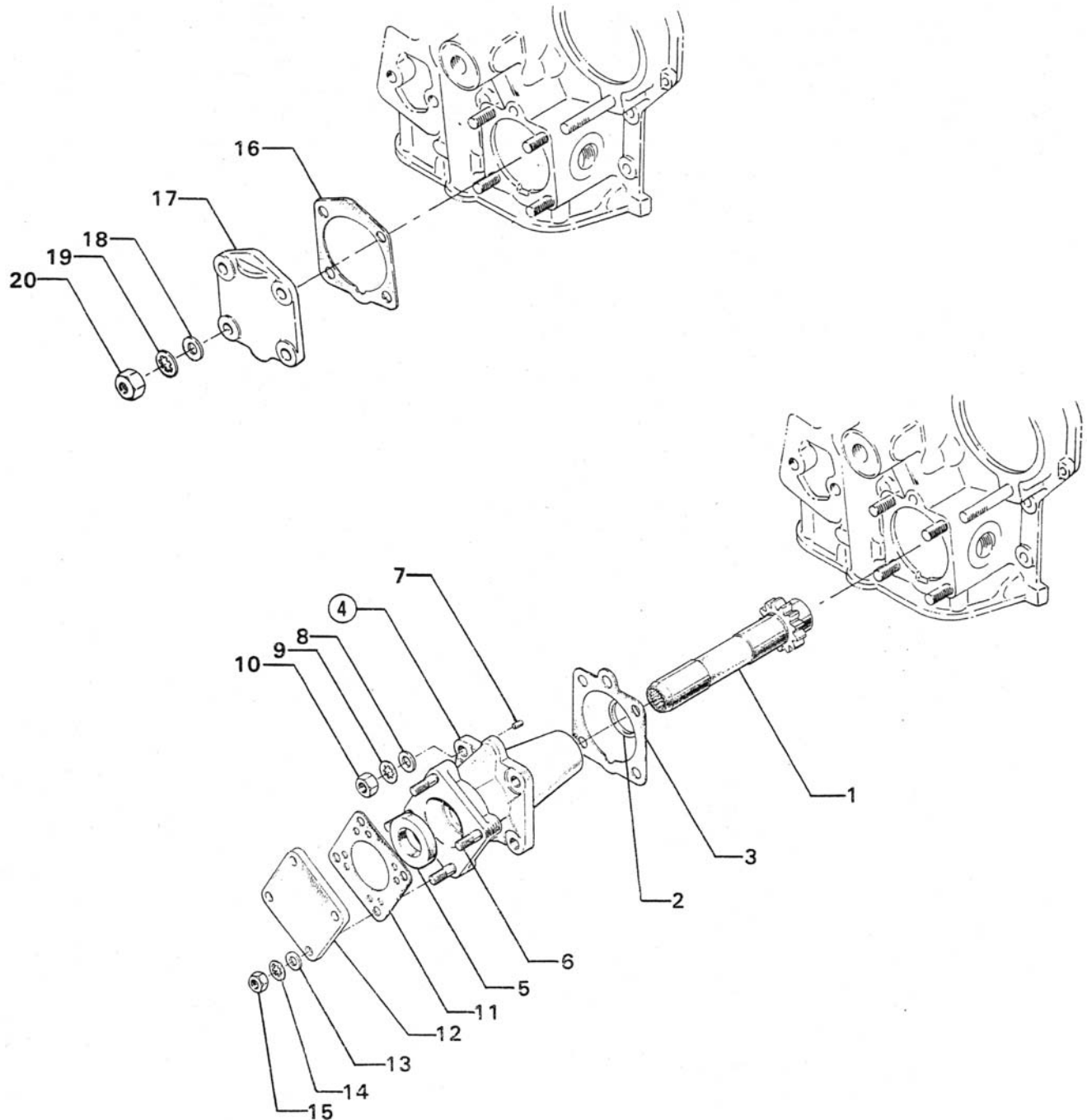
ACCESSORY HOUSING AND RELATED PARTS
VACUUM PUMP DRIVE, OIL COOLER AND BREATHER FITTINGS

FIG. REF. 13	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	61183	GASKET, Accessory adapter	1										
2	67536	ADAPTER ASSEMBLY, Vacuum pump		1	1	1	1	1	1	1	1	1	
3	STD-1774	DOWEL, 1/8 diameter x 1/4 long		1	1	1	1	1	1	1	1	1	
4	STD-2217	SEAL, Oil, 7/8 I.D. x 1-1/2 O.D. x 5/16 wide		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	
6	71596	WASHER, Accessory driven gear		1	1	1	1	1	1	1	1	1	
7	8313	GASKET, Vacuum pump		1	1	1	1	1	1	1	1	1	
8	60430	COVER, Vacuum pump	1										
9	68593	SPACER, Vacuum pump stud				4	4	4		4	4	4	4
10	STD-8	WASHER, 1/4 plain	4										
11	STD-160	WASHER, 1/4 lock, internal lock	4										
12	STD-1411	NUT, 1/4-20 plain	4										
13	69436	SPRING, Oil cooler bypass			1	1							
14	62415	PLUNGER, Oil cooler bypass			1	1							
15	06E19769-0.63	GASKET, 7/8 O.D. x 5/8 I.D. x 3/32	1										
16	62417	PLUG, Oil cooler bypass		1	1	1		1		1	1		
17	STD-784	PLUG, 3/8-18 NPT Allen pipe, slotted	2										
18	71651	FITTING, Breather (assemble in accessory hsg.)	1										
19	69675	CONNECTOR, Accy. hsg. to oil cooler inlet hose				1		1	1		1		
20	71600	ADAPTER, Oil cooler connection			1	1	1		1			1	1
21	78948	ELBOW, 45°							1				
22	71623	WASHER, Oil cooler fitting						1					
23	AN777-8D	ELBOW, Universal 75°						1					
24	AN901-8A	GASKET, Metal tube connection seal						1					
25	71620	BOLT, Oil cooler fitting						1					

**FIGURE 13. VACUUM PUMP DRIVE, OIL COOLER AND BREATHER FITTINGS**

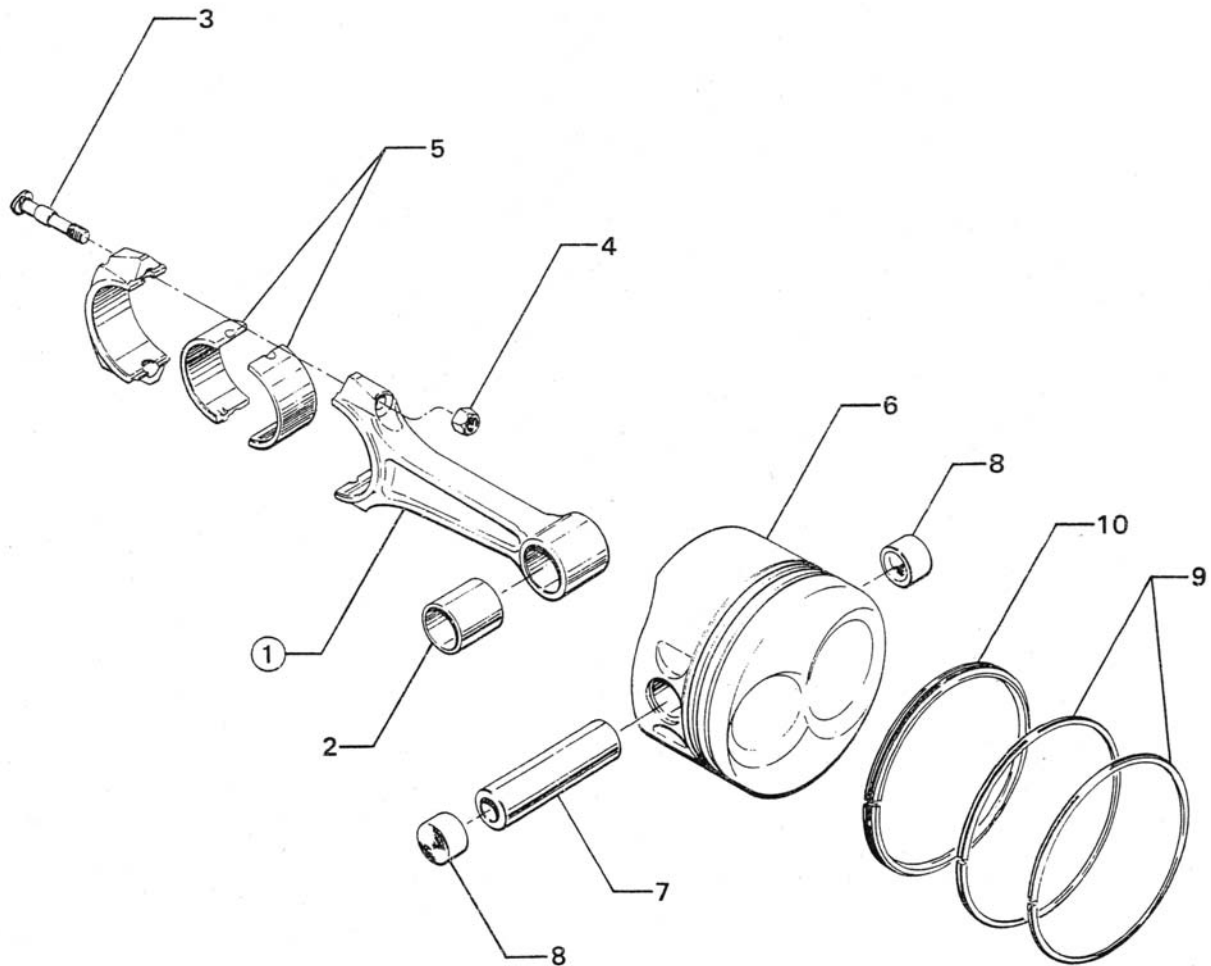
ACCESSORY HOUSING AND RELATED PARTS
HYDRAULIC PUMP DRIVE, COVER AND ATTACHMENTS

FIG. REF. 14	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	72964	GEAR ASSEMBLY, Hydraulic pump driven		1	1					1		1	
2	71596	WASHER, Accessory driven gear		1	1					1		1	
3	68315	GASKET, Accessory drive adapter		1	1					1		1	
4	71675	ADAPTER ASSEMBLY, Hydraulic pump		1	1					1		1	
5	06A19956	SEAL, Oil, 7/8 I.D. x 1-1/2 O.D. x 5/16 wide		1	1					1		1	
6	25C-12	STUD, 1/4-20 x 1-1/2 long		4	4					4		4	
7	STD-1774	PIN, 1/8 diameter x 1/4 long		1	1					1		1	
8	STD-35	WASHER, 5/16 plain		4	4					4		4	
9	STD-475	WASHER, 5/16 lock, internal teeth		4	4					4		4	
10	STD-1410	NUT, 5/16-18 plain		4	4					4		4	
11	8313	GASKET, Pump		1	1					1		1	
12	60430	COVER, Pump		1	1					1		1	
13	STD-8	WASHER, 1/4 plain		4	4					4		4	
14	STD-160	WASHER, 1/4 lock, internal teeth		4	4					4		4	
15	STD-1411	NUT, 1/4-20 plain		4	4					4		4	
16	69551	GASKET, Hydraulic pump adapter pad	1										
17	69106	COVER, Hydraulic pump adapter	1										
18	STD-35	WASHER, 5/16 plain	4										
19	STD-475	WASHER, 5/16 lock, internal teeth	4										
20	STD-1410	NUT, 5/16 plain	4										

**FIGURE 14. HYDRAULIC PUMP DRIVE, COVER AND ATTACHMENTS**

CYLINDER, PISTON AND VALVE TRAIN
CONNECTING RODS, PISTONS AND RING ASSEMBLIES

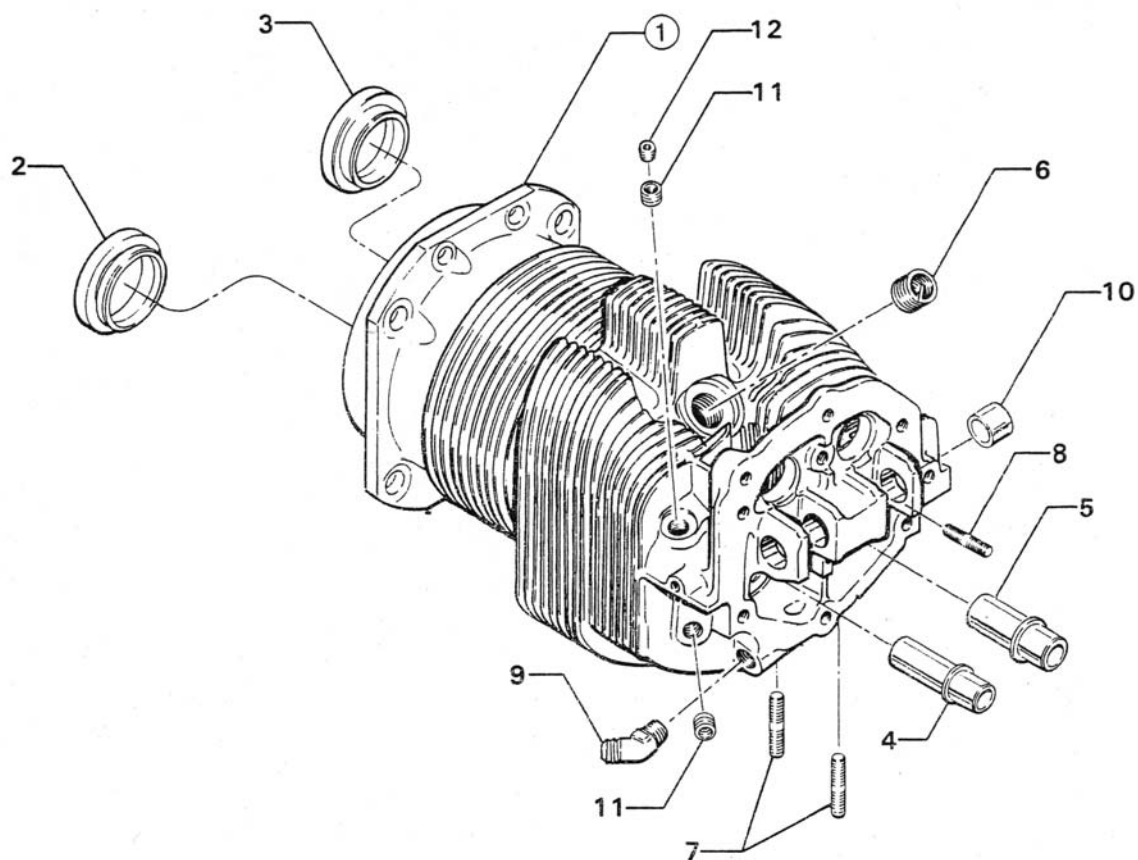
FIG. REF. 15	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	LW-11750	CONNECTING ROD ASSEMBLY	6										
2	LW-13923	BUSHING, Connecting rod, upper	6										
3	75061	BOLT, Connecting rod	12										
4	LW-12186	NUT, Connecting rod bolt	12										
5	LW-13521	BEARING, Connecting rod	12										
	LW-16048	BEARING, Connecting rod (alternate)	12										
	LW-13522	BEARING, Connecting rod (alternate)	12										
6	75089	PISTON, Compression ratio 8.50:1							6	6	6	6	6
	75413	PISTON, Compression ratio 7.00:1		6	6	6	6	6					
7	LW-14078	PIN, Piston	6										
8	60828	PLUG, Piston pin	12										
9	74241	RING, Piston, top compression	12										
10	73857	RING, Piston, oil regulating (expander type)	6										

**FIGURE 15. CONNECTING RODS, PISTONS AND RING ASSEMBLIES**

CYLINDER, PISTON AND VALVE TRAIN
CYLINDER ASSEMBLY

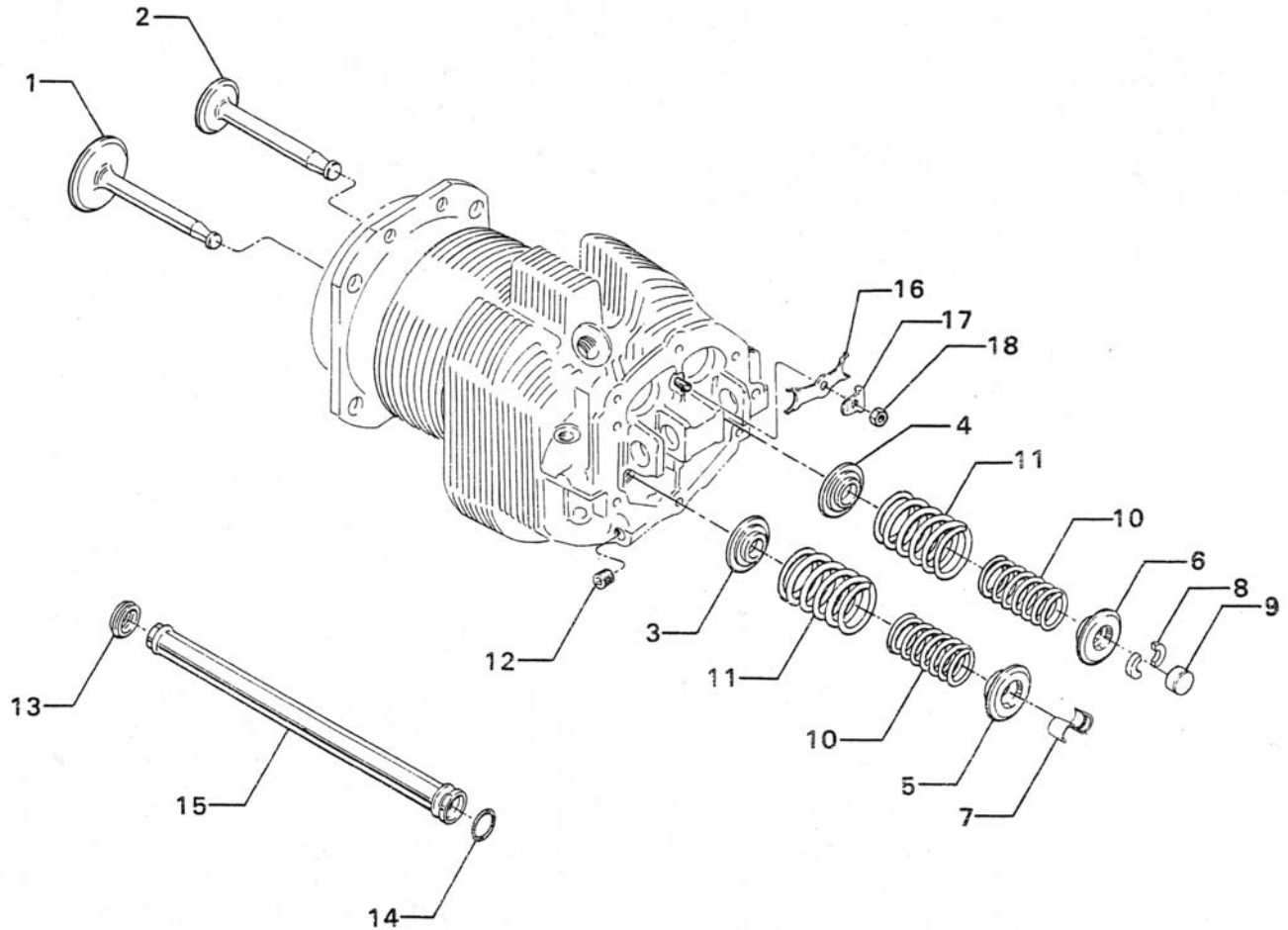
FIG. REF. 16	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	LW-12425	CYLINDER AND HEAD ASSEMBLY (Nitrided)	6										
2	72057	SEAT, Intake valve	6										
3	72058	SEAT, Exhaust valve	6										
4	61681	GUIDE, Intake valve	6										
5	74230	GUIDE, Exhaust valve	6										
6	66796	INSERT, Spark plug, 18-1.5 MM	12										
7	31C-12	STUD, 5/16-18 x 1-1/2 long	12										
8	25C-9	STUD, 1/4-20 x 1-1/8 long	6										
9	MS20823-6D	ELBOW, 3/8 flared tube	6										
10	66610	BUSHING, Rocker shaft	24										
11	STD-1872	INSERT, 1/8-27 Heli-coil, taper pie thread	12										
12	1102*	PLUG, 1/8 pipe x 3/8 long	6										

* Assemble in cylinder head.

**FIGURE 16. CYLINDER ASSEMBLY**

CYLINDER, PISTON AND VALVE TRAIN
VALVE ASSEMBLY AND RELATED PARTS

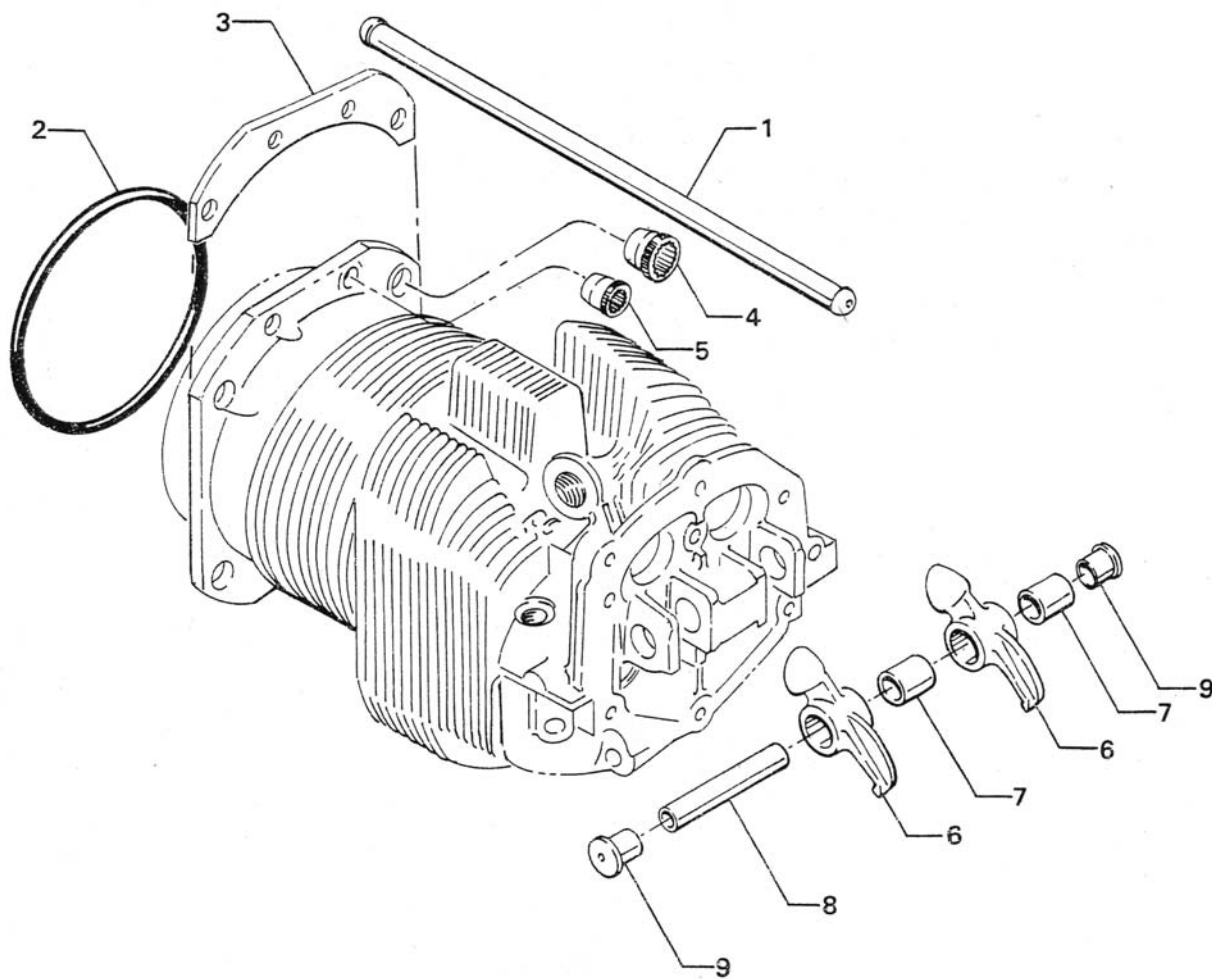
FIG. REF. 17	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	73938	VALVE, Intake	6										
2	LW-19001	VALVE, Exhaust (rotator type)	6										
3	65441	SEAT, Valve spring, lower intake	6										
4	LW-13323	SEAT, Valve spring, lower exhaust	6										
5	LW-10077	SEAT, Valve spring, upper intake	6										
6	LW-16475	SEAT, Valve spring, upper exhaust (rotator type)	6										
7	60009	KEY, Valve, intake	12										
8	17C21191	KEY, Valve, exhaust (rotator type)	12										
9	17C19386	CAP, Valve stem, exhaust (rotator type)	6										
10	LW-11795	SPRING, Valve, inner	12										
11	LW-11800	SPRING, Valve, outer	12										
12	1102	PLUG, 1/8 pipe x 3/8 long	2										
13	LW-18661	SEAL, Shroud tube	12										
14	70310	SEAL, Shroud tube	12										
15	LW-11485	TUBE, Push rod shroud	12										
16	LW-14995	SPRING, Shroud tube	6										
17	LW-12272	LOCKPLATE, Shroud tube	6										
18	STD-1411	NUT, 1/4-20 plain	6										

**FIGURE 17. VALVE ASSEMBLY AND RELATED PARTS**

CYLINDER, PISTON AND VALVE TRAIN
CYLINDER RELATED PARTS

FIG. REF. 18	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	73434*	ROD ASSEMBLY, Push (total of 12 required)	AR										
	15F19957-35*	ROD ASSEMBLY, Push (total of 12 required)	AR										
	15F19957-36*	ROD ASSEMBLY, Push (total of 12 required)	AR										
	73437*	ROD ASSEMBLY, Push (total of 12 required)	AR										
2	71481	RING, Oil seal, 3/32 dia. section x 4-27/32 I.D.	6										
3	69531	PLATE, Cylinder hold down nut	12										
4	71133	NUT, 1/2-20 NF-3, cylinder hold down	24										
5	71134	NUT, 3/8-24 NF-3	24										
6	17F19353	ROCKER ASSEMBLY, Valve	12										
7	74637	BUSHING, Valve rocker	12										
8	LW-13790	SHAFT, Valve rocker	6										
9	LW-12892	THRUST BUTTON, Rocker shaft	12										

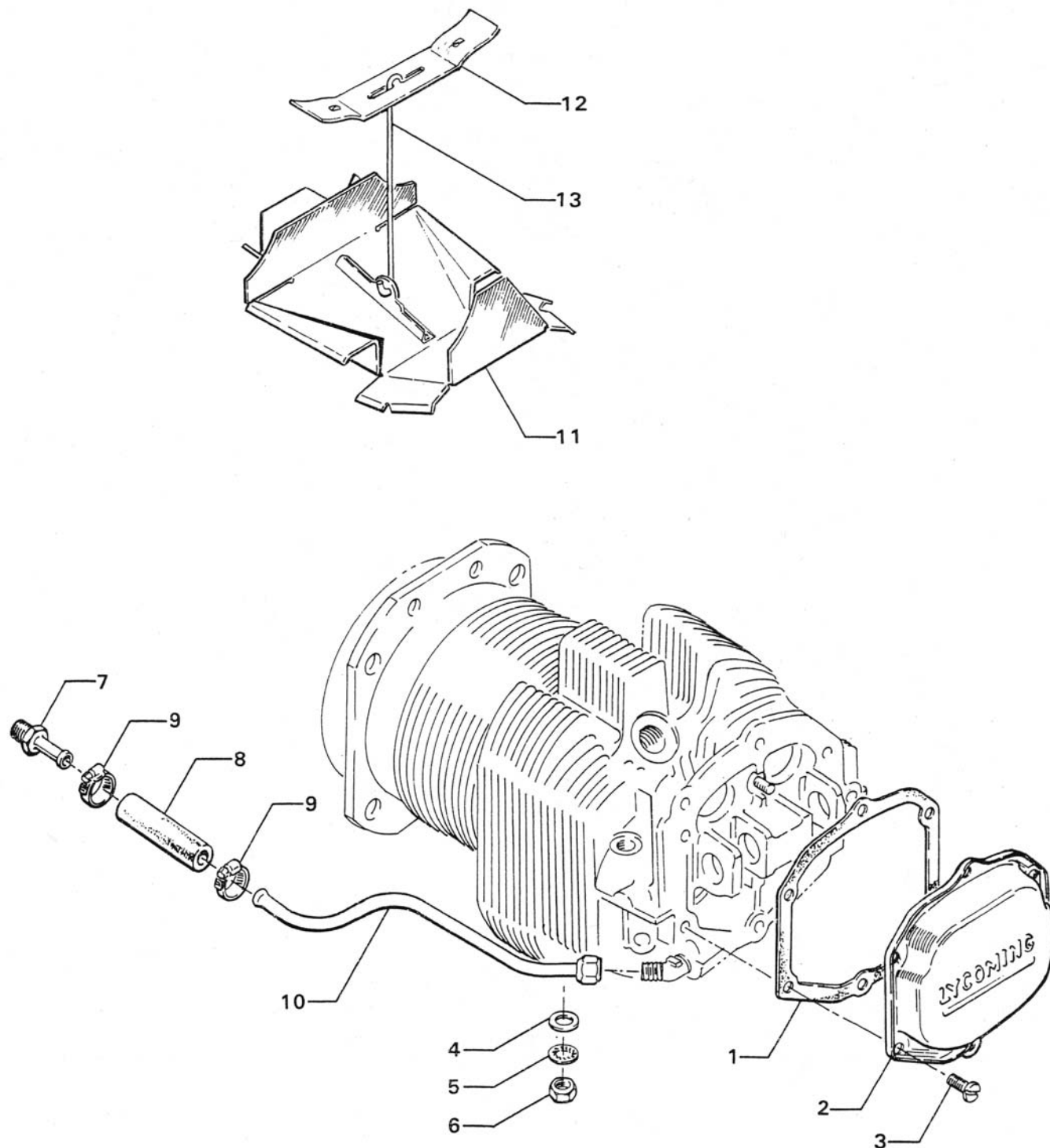
* See latest revision of Lycoming Service Instruction No. 1060 for complete push rod application.

**FIGURE 18. CYLINDER RELATED PARTS**

CYLINDER, PISTON AND VALVE TRAIN

CYLINDER HEAD DRAIN TUBES, INTERCYLINDER COOLING BAFFLES AND RELATED PARTS

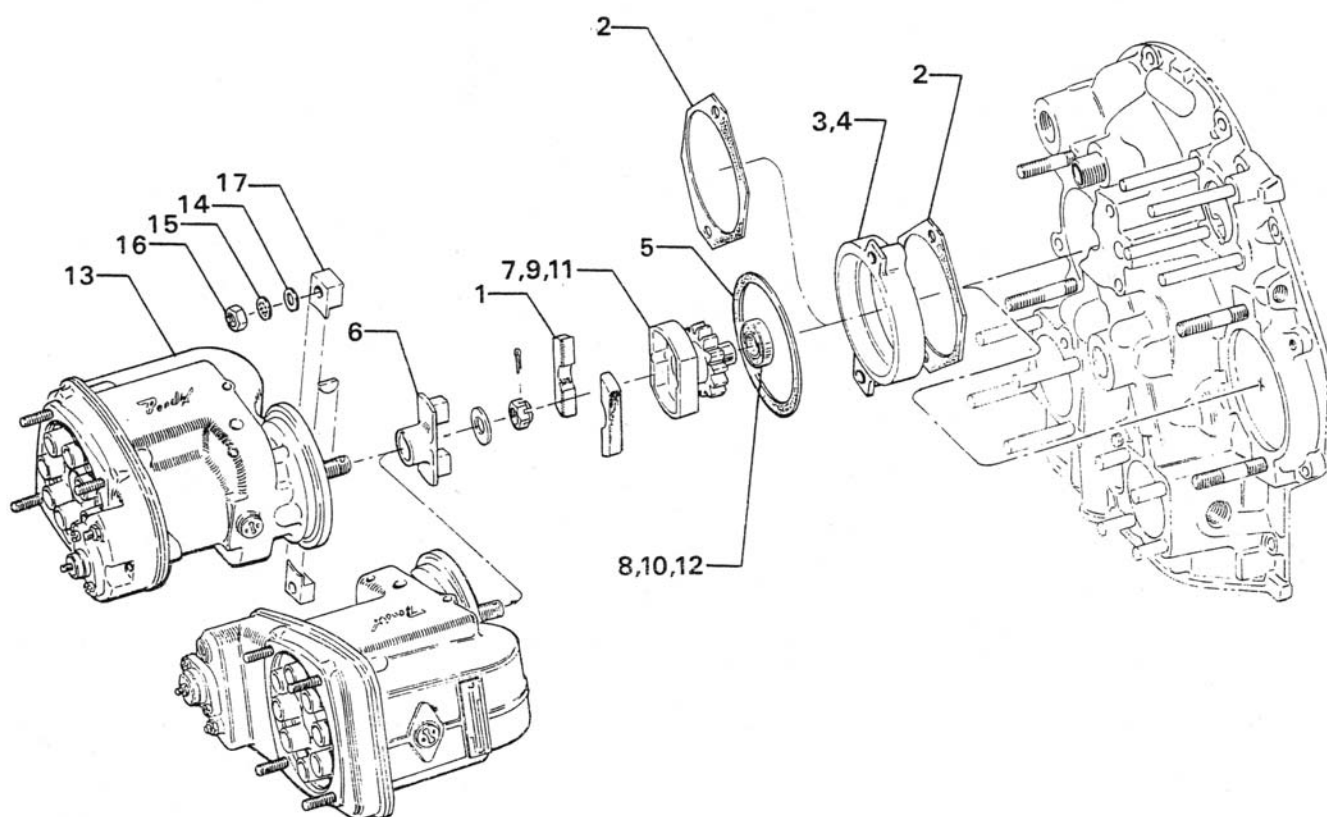
FIG. REF. 19	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	75906	GASKET, Rocker box cover	6										
2	61247	COVER, Rocker box	6										
3	STD-1925	SCREW, 1/4-20 x 5/8 long, pan hd., self-locking	36										
4	STD-35	WASHER, 5/16 plain	12										
5	STD-475	WASHER, 5/16 lock, internal teeth	12										
6	STD-1410	NUT, 5/16 plain	12										
7	STD-684	NIPPLE, Straight, 3/8 I.D. hose	6										
8	STD-1821	HOSE, 3/8 I.D. x 2-1/2 long	6										
9	LW-15592-5-05	CLAMP, Hose	12										
10	68759	TUBE ASSEMBLY, Cyl. head oil drain, cyl. no. 1	1										
	71737	TUBE ASSEMBLY, Cyl. head oil drain, cyl. no. 2	1										
	68761	TUBE ASSEMBLY, Cyl. head oil drain, cyl. nos. 3,4,5,6	4										
11	72152	BAFFLE ASSEMBLY, Intercylinder	4										
12	71611	RETAINER, Intercylinder baffle	4										
13	71610	HOOK, Intercylinder baffle retainer	4										

**FIGURE 19. CYLINDER HEAD DRAIN TUBES, INTERCYLINDER COOLING BAFFLES AND RELATED PARTS**

IGNITION SYSTEM
BENDIX MAGNETOS AND MAGNETO DRIVES

FIG. REF. 20	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	LW-13641	CUSHION, Magneto drive	4										
2	62224	GASKET, Magneto adapter		4	4	4		4	4	4			
	62224	GASKET, Magneto adapter			2		2				2	2	2
3	LW-12707	ADAPTER, Magneto	2										
4	LW-13926	ADAPTER, Magneto (right magneto)			1								
	LW-12707	ADAPTER, Magneto (left magneto)			1								
5	LW-12681	GASKET, Magneto			2		2				2	2	2
6	73000	COUPLING, Magneto drive	1										
	73013	COUPLING, Magneto drive (retard)		1	1				1				
7	LW-19096	GEAR RETAINER ASSEMBLY	2										
8	67542	BEARING, Ball	2										
9	LW-19096*	GEAR RETAINER ASSEMBLY								1			
10	67542*	BEARING, Ball								1			
11	LW-19100*	GEAR RETAINER ASSEMBLY								1			
12	67542*	BEARING, Ball								1			
13	LW-51365-47	MAGNETO, Bendix, impulse coupling (S6LN-21)								2			
	LW-163050-9	MAGNETO, Bendix (S6LN-204)		1					1				
	LW-163010-10	MAGNETO, Bendix, retard breaker (S6LN-200)		1					1				
	LW-51365-46	MAGNETO, Bendix (S6LN-20)			1	1		1		1			
	LW-51365-47	MAGNETO, Bendix, impulse coupling (S6LN-21)			1	1		1		1			
	LW-163050-9	MAGNETO, Bendix, right magneto (S6LN-204)						1		1			
	LW-51365-57	MAGNETO, Bendix, impulse coupling (S6LN-21)						1		1			
	LW-349310-1	MAGNETO, Bendix (S6LN-1209)					1				1	1	1
	LW-349370-4	MAGNETO, Bendix, impulse coupling (S6LN-1227)					1				1	1	1
	LW-349310-8	MAGNETO, Bendix, electric tack pick-up (S6LN-1209)									1		
	LW-349370-4	MAGNETO, Bendix, impulse coupling (S6LN-1227)									1		
14	STD-1727	WASHER, 3/4 O.D. x 21/64 I.D. x 1/8		4	4	4		4	4	4			
15	STD-475	WASHER, 5/16 lock, internal teeth	4										
16	STD-1410	NUT, 5/16-18 plain	4										
17	66M19385	CLAMP, Magneto					4				4	4	4

* Used with two S6LN-21 Impulse Magnetos.

**FIGURE 20. BENDIX MAGNETOS AND MAGNETO DRIVES**

IGNITION SYSTEM
 IGNITION HARNESSSES AND ATTACHMENTS FOR BENDIX MAGNETOS

FIG. REF. 21	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	LW-M-2469*	HARNESS ASSEMBLY, Magneto, left		1					1				
	LW-M-2470*	HARNESS ASSEMBLY, Magneto, right		1					1				
	LW-M-2457	HARNESS ASSEMBLY, Magneto, left					1				1	1	1
	LW-M-2458	HARNESS ASSEMBLY, Magneto, right					1				1	1	1
	LW-M-2463	HARNESS ASSEMBLY, Magneto, left			1	1		1	1	1			
	LW-M-2464	HARNESS ASSEMBLY, Magneto, right			1	1		1	1	1			
2	LW-M-2376	PLATE, spark plug cable	2										
3	72351	SCREW, No. 10-32 self-locking		8	8	8		8	8	8			
4	LW-18959-175-25	CLAMP, 1-3/4 I.D., offset		6	6	6		6	6	6			
5	LW-16266-25-25	CLIP, One wire for 1/4 screw					2				2	2	2
6	LW-14060	CLIP, Two wire for 1/4 screw					2				2	2	2
7	LW-16266-10-63	CLIP, Six wire for no. 10 screw					1				1	1	1
8	LW-16266-25-44	CLAMP, Three wire		2	2	2	5	2	2	2	5	5	5
9	STD-553	SCREW, No. 6-32 x 1/2 long		6	6	6		6	6	6			
10	AN365-632A	NUT, No. 6-32 self-locking		6	6	6		6	6	6			
11	STD-692	SCREW, No. 10-32 x 1/2 long					4				4	4	4
12	STD-670	NUT, No. 10-32 self-locking					4				4	4	4
13	72815	BRACKET, Twist					4				4	4	4
14	STD-8	WASHER, 1/4 plain					10				10	10	10
15	STD-160	WASHER, 1/4 lock					5				5	5	5
16	STD-696	WASEHR, 1/4 plain					AR				AR	AR	AR
17	STD-1874	SCREW, 1/4-20					5				5	5	5
18	76734	ZIP STRAP					11				11	11	11
19	1182-B3**	SPARK PLUG (Champion REM-40E)	12										

* Used for parallel valve and Piper long top leads.

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

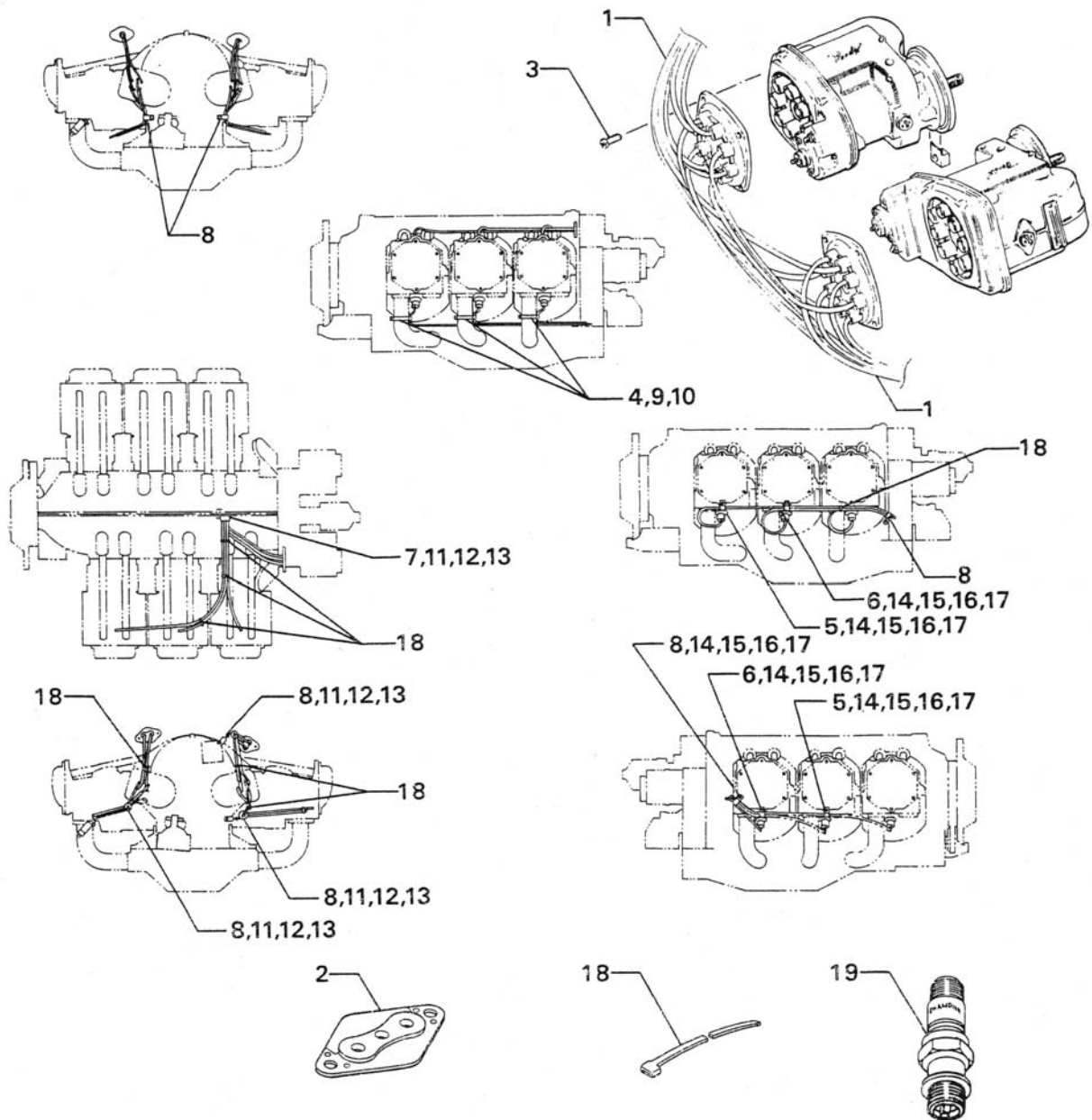


FIGURE. 21. IGNITION HARNESSES AND ATTACHMENTS FOR BENDIX MAGNETOS

IGNITION SYSTEM
 SLICK MAGNETOS, HARNESSSES, DRIVES AND SPARK PLUGS

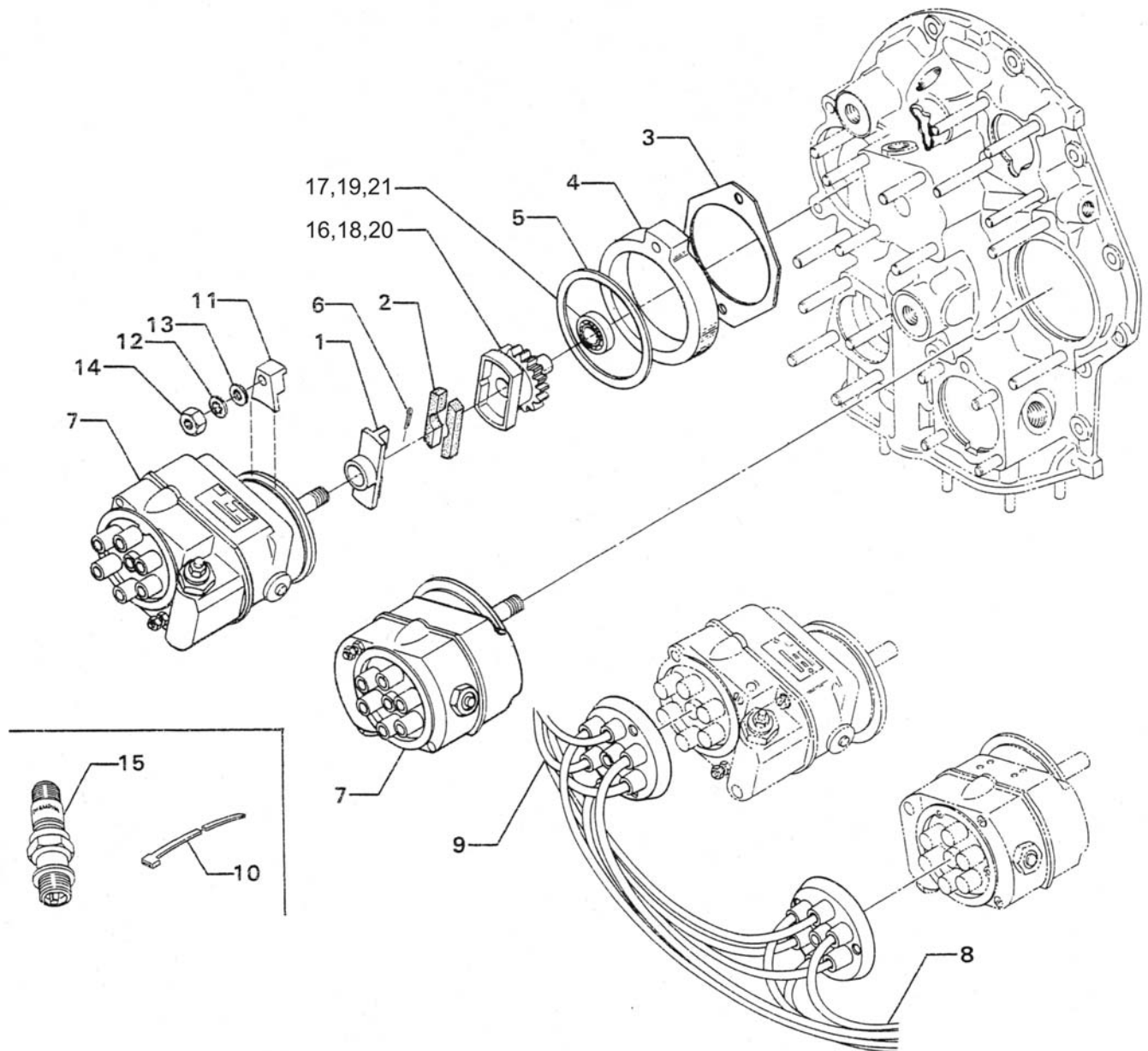
FIG. REF. 22	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	73000	COUPLING, Magneto drive			1	1	1	1		1	1	1	1
2	LW-13641	CUSHION, Magneto drive			4	4	4	4		4	4	4	4
3	62224	GASKET, Magneto adapter			2	2	2	2		2	2	2	2
4	LW-12707	ADAPTER, Magneto			2	2	2	2		2	2	2	2
5	LW-12681	GASKET, Magneto	2										
6	STD-713	PIN, Cotter, 3/32 x 3/4 long		2					2		2		
7	66JC45SDNN*	MAGNETO, Right and left (6255) impulse coupling								2			
	066JP-0SCNN*	MAGNETO, Right (6250) plain	1										
	66JC45SDNN*	MAGNETO, Left (6255) impulse coupling			1	1		1		1			
	66JC35SDNN*	MAGNETO, Left (6251) impulse coupling					1				1	1	1
	66JR37SCNN*	MAGNETO, Left (6293) retard		1					1				
	66JP-0SCGN*	MAGNETO, Right (6271) plain									1		
8	67U20612	HARNESS ASSEMBLY, Ignition, right (M-2956)			1	1		1	1	1			
	67U20638	HARNESS ASSEMBLY, Ignition, right (M-2962)					1				1	1	1
	67U20608	HARNESS ASSEMBLY, Ignition, right (M-2878)		1					1†				
9	67U20609	HARNESS ASSEMBLY, Ignition, left (M-2877)		1	1	1		1	1†	1			
	67U20639	HARNESS ASSEMBLY, Ignition, left (M-2961)					1				1	1	1
	67U20613	HARNESS ASSEMBLY, Ignition, left (M-6027)							1				
10	76734	ZIP STRAP	AR										
11	66M21195	CLAMP, Magneto	4										
12	STD-475	WASHER, 5/16 lock, internal teeth	4										
13	STD-1727	WASHER, Plain, 3/4 O.D. x 11/32 I.D. x 1/8 thick	4										
14	STD-1410	NUT, 5/16-18 plain	4										
15	1182-B3•	SPARK PLUG (Champion REM-40E)	12										
16	LW-19096	GEAR RETAINER ASSEMBLY	2										
17	67542	BEARING, Ball	2										
18	LW-19096♦	GEAR RETAINER ASSEMBLY								1			
19	67542♦	BEARING, Ball								1			
20	LW-19100♦	GEAR RETAINER ASSEMBLY								1			
21	67542♦	BEARING, Ball								1			

* See latest revision of Service Instruction No. 1443 for complete listing of approved Slick Magnetos.

† Incorporates long leads for Piper Aircraft.

• See latest revision of Service Instruction No. 1042 for complete listing of all approved spark plugs.

♦ Used when two S6LN-21 Impulse Magnetos are installed.

**FIGURE 22. SLICK MAGNETOS, HARNESSES, DRIVES AND SPARK PLUGS**

BAG – MAGNETO HARNESS ATTACHING**PART NO. 01P19762-3**

O-540-B1A5, -B1B5, -B2B5, -B4B5, -E4A5, -E4B5

Part No.	Part Name	Qty.
01P19762-3	BAG – MAGNETO HARNESS ATTACHING	1
LW-16266-25-25	CLIP, 1 wire	2
LW-14060	CLIP, 2 wire	3
STD-8	WASHER, 1/4 plain	10
STD-160	WASHER, 1/4 lock	8
STD-1874	SCREW, Rocker box	8
76734	ZIP STRAP	8
LW-16266-25-44	CLIP, 4 wire	3
STD-1411	NUT, 1/4 plain	4
STD-696	WASHER, 1/4 plain (thin)	6
LW-M-2376	PLATE, 3 wire	2

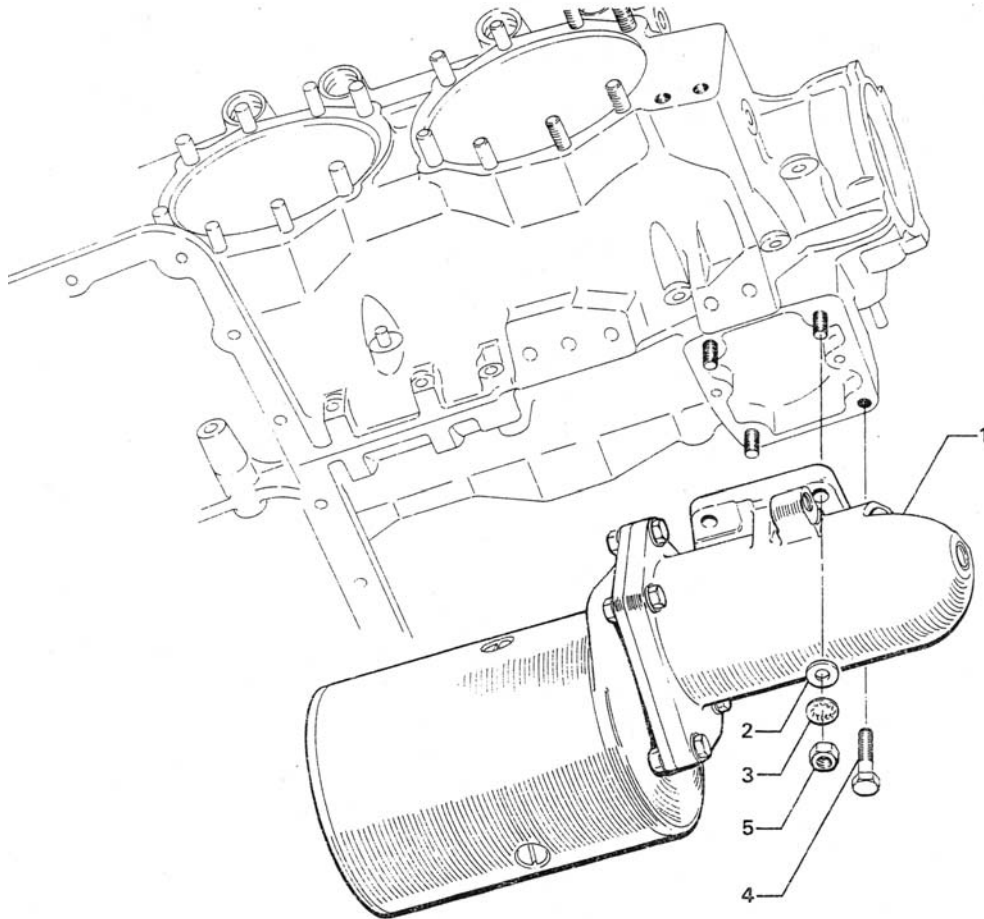
BAG – MAGNETO HARNESS ATTACHING**PART NO. 01P19762-4**

O-540-B2C5, -E4C5, -G1A5, -G2A5

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 plain (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-2376	PLATE, 3 wire	2

ELECTRICAL COMPONENTS
PRESTOLITE STARTERS AND ATTACHING PARTS

FIG. REF. 23	PART NUMBER	DESCRIPTION	O N A L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	LW-15571	STARTER, 12 volt, 12/14 pitch (MZ-4222)	1										
	LW-15572	STARTER, 24 volt, 12/14 pitch (MHB-4016)				1			1	1	1		1
2	STD-35	WASHER, 5/16 plain	4										
3	STD-475	WASHER, 5/16 lock, internal teeth	4										
4	LW-31-1.16	BOLT, 5/16-18 x 1-5/32 long, hex. head	1										
5	STD-1410	NUT, 5/16-18 plain	3										


FIGURE 23. PRESTOLITE STARTERS AND ATTACHING PARTS

ELECTRICAL COMPONENTS
LYCOMING LIGHT WEIGHT STARTER AND ATTACHING PARTS

FIG. REF. 24	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	31B21064*	STARTER ASSEMBLY, 24 volt, 12/14 pitch	1										
	31A21198*	STARTER ASSEMBLY, 12 volt, 12/14 pitch	1										
2	31E21143	MOTOR AND SOLENOID ASSEMBLY (24 volt)	1										
	31E21199	MOTOR AND SOLENOID ASSEMBLY (12 volt)	1										
3	31D21088	HOUSING ASSEMBLY, Starter support	1										
4	STD-514	DOWEL	2										
5	LW-25-1.75	BOLT, 1/4-20 x 1-3/4 long, hex. head	1										
6	LW-25-2.00	BOLT, 1/4-20 x 2.00 long, hex. head	2										
7	STD-160	WASHER, 1/4 lock, internal teeth	3										
8	STD-8	WASHER, 1/4 plain	3										
9	STD-35	WASHER, 5/16 plain	4										
10	STD-475	WASHER, 5/16 lock, internal teeth	4										
11	LW-31-1.16	BOLT, 5/16-18 x 1-5/32 long, hex. head	1										
12	STD-1410	NUT, 5/16-18 plain	3										
13	01L21158**	SHIM, Starter (housing shaped)	AR										
14	01L21159**	SHIM, Starter	AR										

* Refer to latest revision of Starter Maintenance Manual SSP-490 for complete parts breakdown.

** Refer to latest revision of Service Instruction No. 1447 for shim application.

NOTE

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

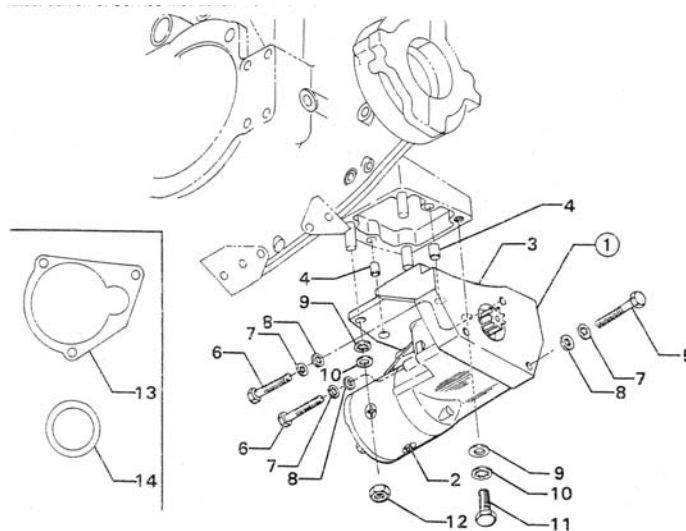


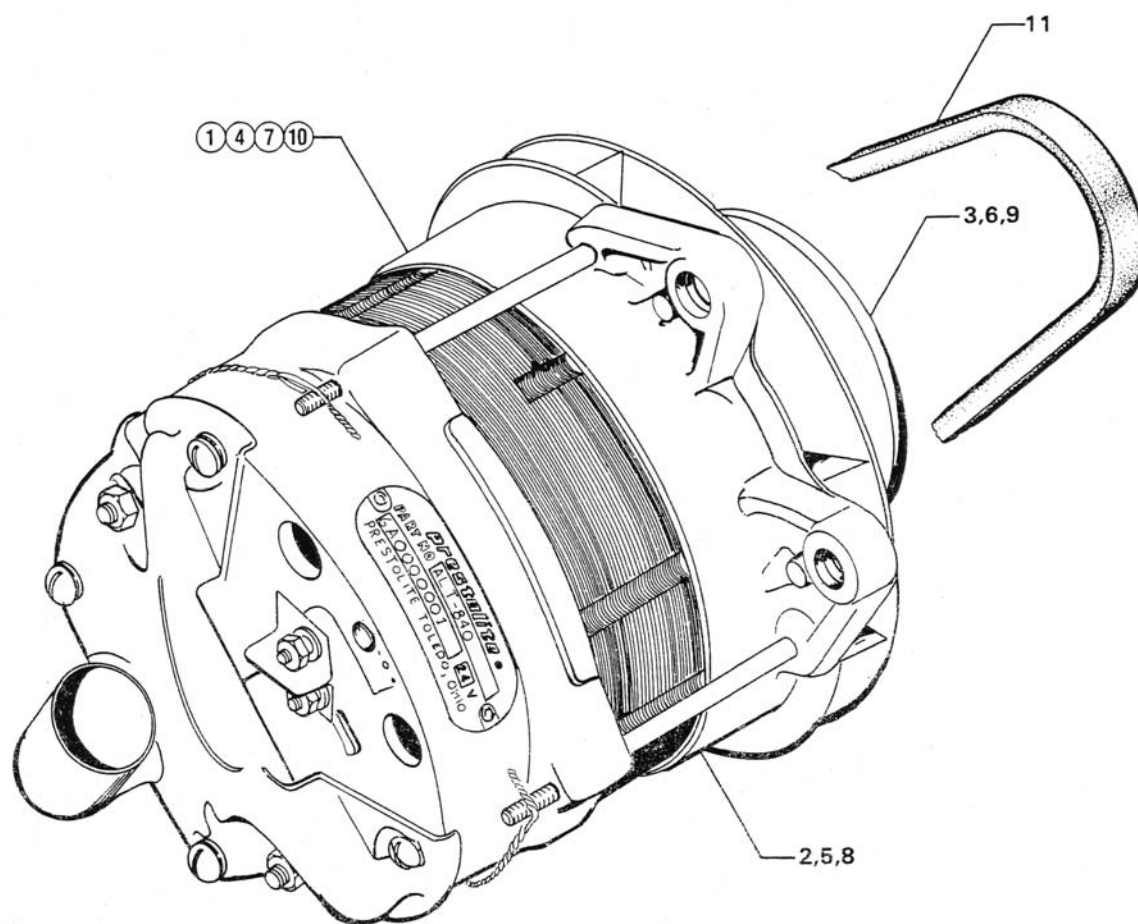
FIGURE 24. LYCOMING LIGHT WEIGHT STARTER AND ATTACHING PARTS

ELECTRICAL COMPONENTS
ALTERNATOR ASSEMBLIES AND BELTS

FIG. REF. 25	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	32C19553	ALTERNATOR ASSEMBLY, 24 volt, 70 amp.				1			1	1	1	1	1
2	LW-14326	ALTERNATOR, 24 volt, 70 amp. (ALU-8421-LS)				1			1	1	1	1	1
3	36B19484	PULLEY, Alternator				1			1	1	1	1	1
4	32B19549	ALTERNATOR ASSEMBLY, 12 volt, 70 amp.						1	1	1			
5	LW-14318	ALTERNATOR, 12 volt, 70 amp. (ALX-8421-LS)						1	1	1			
6	36B19484	PULLEY, Alternator						1	1	1			
7	LW-14371	ALTERNATOR ASSEMBLY, 12 volt, 60 amp.		1				1				1	1
8	LW-14313	ALTERNATOR, 12 volt, 60 amp. (ALY-8420-LS)		1				1				1	1
9	36B19484	PULLEY, Alternator		1				1				1	1
10	LW-14315	ALTERNATOR ASSY., 12 volt, 60 amp. (ALY-6427)				1	1					1	
11	37A19773-376	BELT, Alternator drive, 3/8 in. wide		1		1		1	1	1	1	1	1
	37A19773-367	BELT, Alternator drive, 3/8 in. wide (Piper)				1							
	37A19773-372	BELT, Alternator drive, 3/8 in. wide (for Prestolite)				1	1					1	
	77734	BELT, Alternator drive, 1/2 in. wide (Chrysler 12V., 37A.)				1	1					1	
	71579	BELT, Generator drive, 1.91:1 drive				1			1				
	72270	BELT, Generator drive, 2.40:1 drive				1							

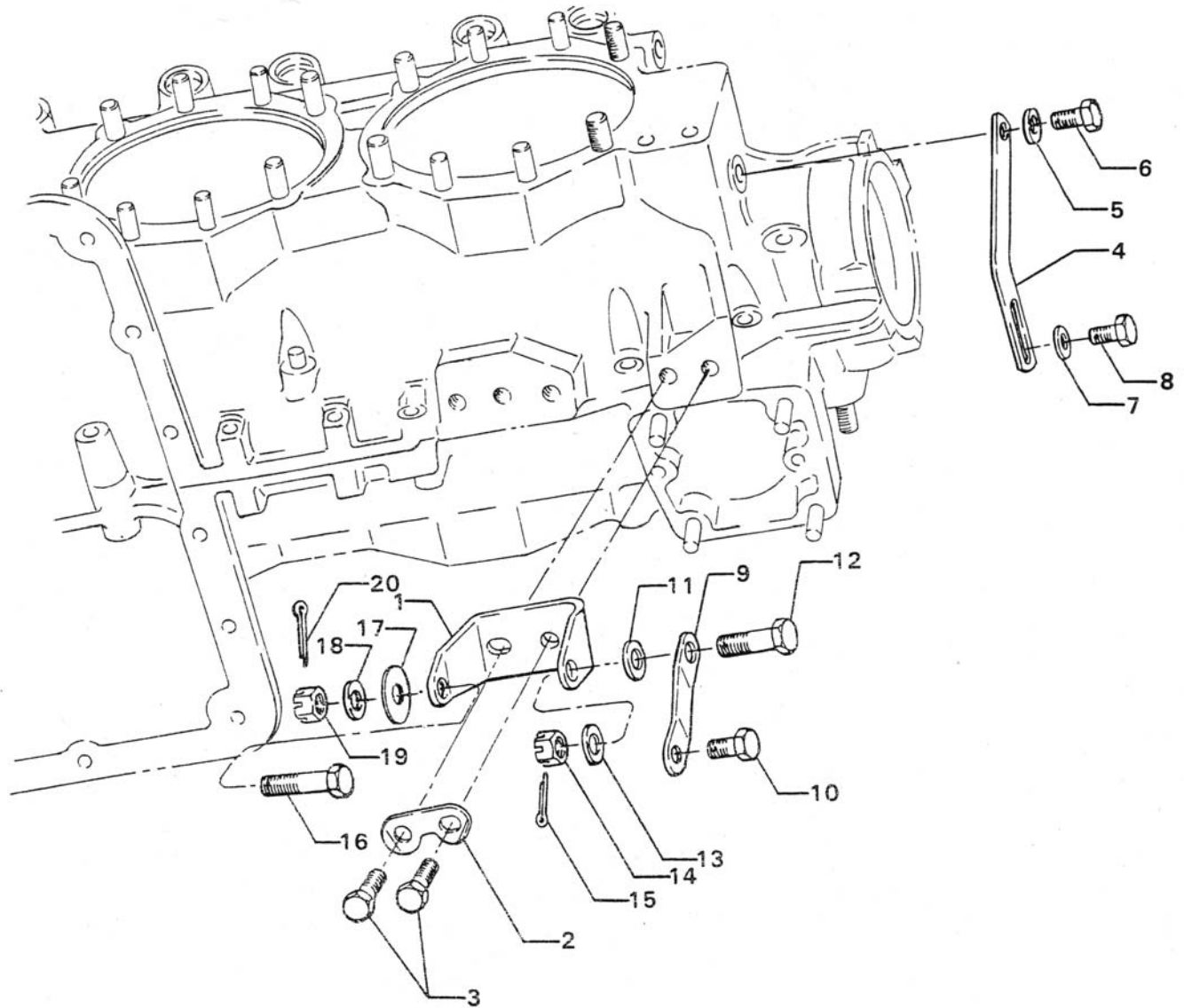
NOTE

See latest revision of Service Instruction No. 1154 for complete listing of FAA approved starters, generator, alternators, regulators and relays.

**FIGURE 25. ALTERNATOR ASSEMBLIES AND BELTS**

ELECTRICAL COMPONENTS
ALTERNATOR MOUNTING AND ATTACHING PARTS

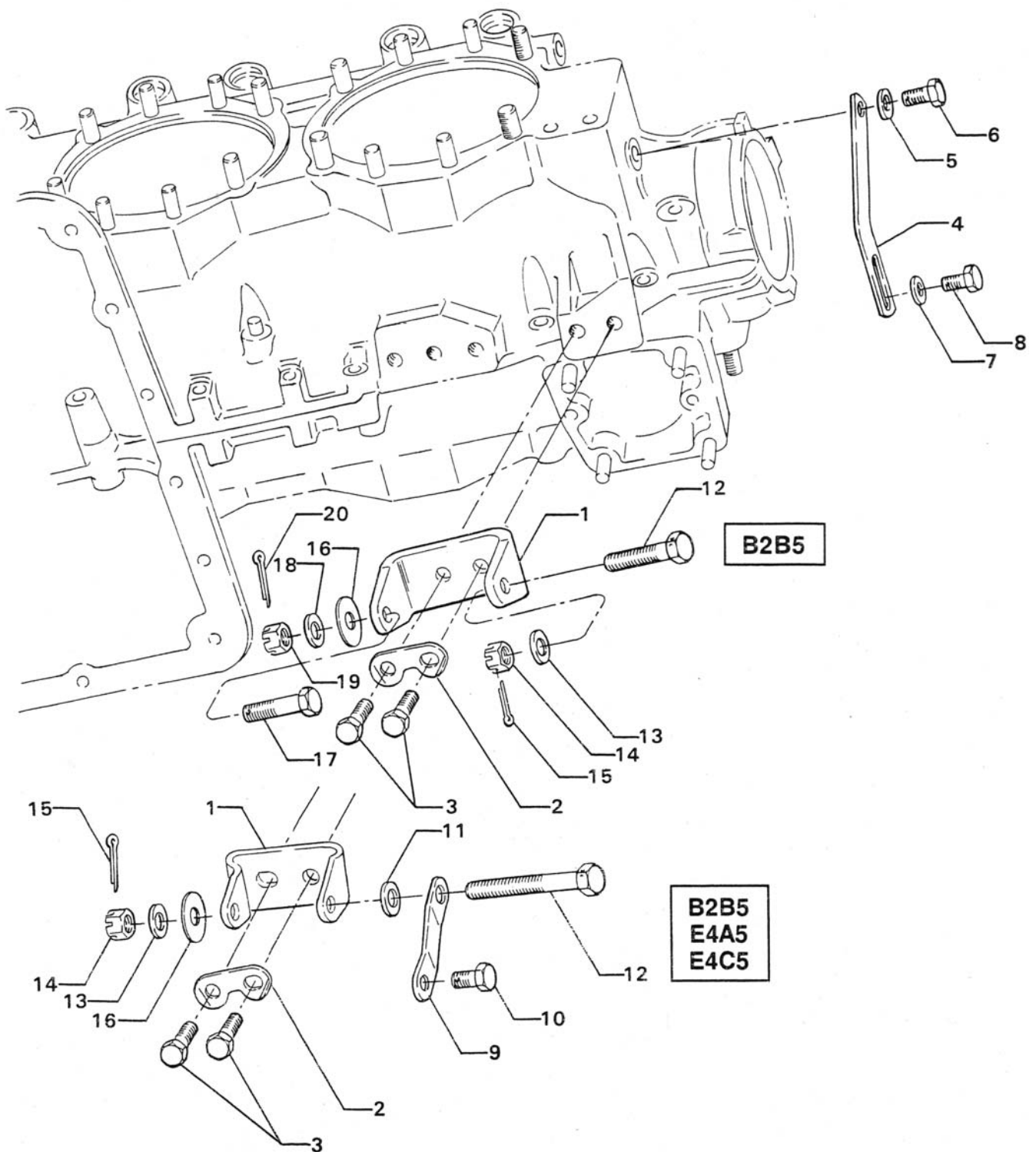
FIG. REF. 26	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	07A19474	BRACKET, Alternator		1		1	1	1	1	1	1	1	1
2	73383	LOCKPLATE, 5/16 bolt x 1.00 spacing		1		1	1	1	1	1	1	1	1
3	LW-31-0.94	BOLT, 5/16-18 x 15/16 long, hex. head		2		2	2	2	2	2	2	2	2
4	75380	LINK, Alternator adjusting		1		1	1	1	1	1	1	1	1
5	STD-35	WASHER, 5/16 plain		1		1	1	1	1	1	1	1	1
6	LW-31H0.75	BOLT, 5/16-18 x 3/4 long, hex. head, dr.		1		1	1	1	1	1	1	1	1
7	STD-1727	WASHER, Plain, 3/4 O.D. x 11/32 ID x 1/8 thick		1		1	1	1	1	1	1	1	1
8	LW-31H0.75	BOLT, 5/16-18 x 3/4 long, hex. head, dr.		1		1	1	1	1	1	1	1	1
9	74323	STRUT, Alternator support		1		1	1	1	1	1	1	1	1
10	LW-31H0.75	BOLT, 5/16-18 x 3/4 long, hex. head, dr.		1		1	1	1	1	1	1	1	1
11	STD-690	WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick		1		1	1	1	1	1	1	1	1
12	AN6-14	BOLT, 3/8-24 x 1-37/64 long, hex. head, dr. end		1		1	1	1	1	1	1	1	1
	AN6-17	BOLT, 3/8-24 x 1-61/64 long, hex. head, dr. end				1		1	1	1	1	1	1
13	STD-690	WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick		AR		AR	AR	AR	AR	AR	AR	AR	AR
14	STD-872	NUT, 3/8-24 slotted		1		1	1	1	1	1	1	1	1
15	STD-713	PIN, Cotter, 3/32 diameter x 3/4 long		1		1	1	1	1	1	1	1	1
16	AN6-16	BOLT, 3/8-24 x 1-53/64 long, hex. head, dr. end		1		1	1	1	1	1	1	1	1
17	76534	SHIM, 1-1/8 O.D. x 13/32 I.D. x 1/64 thick		AR		AR	AR	AR	AR	AR	AR	AR	AR
18	STD-690	WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick		AR		AR	AR	AR	AR	AR	AR	AR	AR
19	STD-872	NUT, 3/8-24 slotted		1		1	1	1	1	1	1	1	1
20	STD-713	PIN, Cotter, 3/32 diameter x 3/4 long		1		1	1	1	1	1	1	1	1

**FIGURE 26. ALTERNATOR MOUNTING AND ATTACHING PARTS**

ELECTRICAL COMPONENTS
ALTERNATOR MOUNTING AND ATTACHING PARTS

FIG. REF. 27	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	77756*	BRACKET, Alternator				1							
	74324	BRACKET, Alternator							1				
2	73383	LOCKPLATE, 5/16 bolt x 1.00 spacing				1			1				
3	LW-31-0.94	BOLT, 5/16-18 x 15/16 long, hex. head				2			2				
4	LW-10091*	LINK, Alternator adjusting				1							
	74325	LINK, Alternator adjusting							1				
5	STD-35	WASHER, 5/16 plain				1			1				
6	LW-31H0.75	BOLT, 5/16-18 x 3/4 long, hex. head dr.				1			1				
7	STD-1727	WASHER, Plain, 3/4 O.D. x 11/32 I.D. x 1/8 thick				1			1				
8	LW-31H0.75	BOLT, 5/16-18 x 3/4 long, hex. head dr.				1			1				
9	74323	STRUT, Alternator support							1				
10	LW-31H0.75	BOLT, 5/16-18 x 3/4 long, hex. head dr.							1				
11	STD-690	WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick							1				
12	AN6-12	BOLT, 3/8-24 x 1-21/64 long, hex. head, dr. end				1							
	AN6-32	BOLT, 3/8-24 x 3-21/64 long, hex. head, dr. end							1				
13	STD-690	WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick				AR			AR				
14	STD-872	NUT, 3/8-24 slotted				1			1				
15	STD-713	PIN, Cotter, 3/32 diameter x 3/4 long				1			1				
16	76534	SHIM, 1-1/8 O.D. x 13/32 I.D. x .005 thick				AR			AR				
17	AN6-16	BOLT, 3/8-24 x 1-53/64 long, hex. head, dr. end				1							
18	STD-690	WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick				AR							
19	STD-872	NUT, 3/8-24 slotted				1							
20	STD-713	PIN, Cotter, 3/32 diameter x 3/4 long				1							

* Special installation for Piper Aircraft Corp.

**FIGURE 27. ALTERNATOR MOUNTING AND ATTACHING PARTS**

ELECTRICAL COMPONENTS
GENERATOR MOUNTING AND ATTACHING PARTS

FIG. REF. 28	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	70419	BRACKET, Generator		2	2	2	2		2			2	
2	LW-31-0.94	BOLT, 5/16-18 x 15/16 long, hex. head		4	4	4	4		4			4	
3	73383	LOCKPLATE, 5/16 bolt x 1.00 spacing		2	2	2	2		2			2	
4	76028	LINK, Generator adjusting		1	1	1	1		1			1	
5	STD-35	WASHER, 5/16 plain		1	1	1	1		1			1	
6	LW-31H0.75	BOLT, 5/16-18 x 3/4 long, hex. head dr.		1	1	1	1		1			1	
7	LW-31S1.16	BOLT, 5/16-18 x 1-5/32 long, dr. end		2	2	2	2		2			2	
8	STD-35	WASHER, 5/16 plain		AR	AR	AR	AR		AR			AR	
9	STD-1420	NUT, 5/16-18 slotted		2	2	2	2		2			2	
10	STD-68	PIN, Cotter		2	2	2	2		2			2	
11	STD-1727	WASHER, Plain, 3/4 O.D. x 11/32 I.D. x 1/8 thick		1	1	1	1		1			1	
12	LW-31H0.75	BOLT, 5/16-18 x 3/4 long, hex. head dr.		1	1	1	1		1			1	

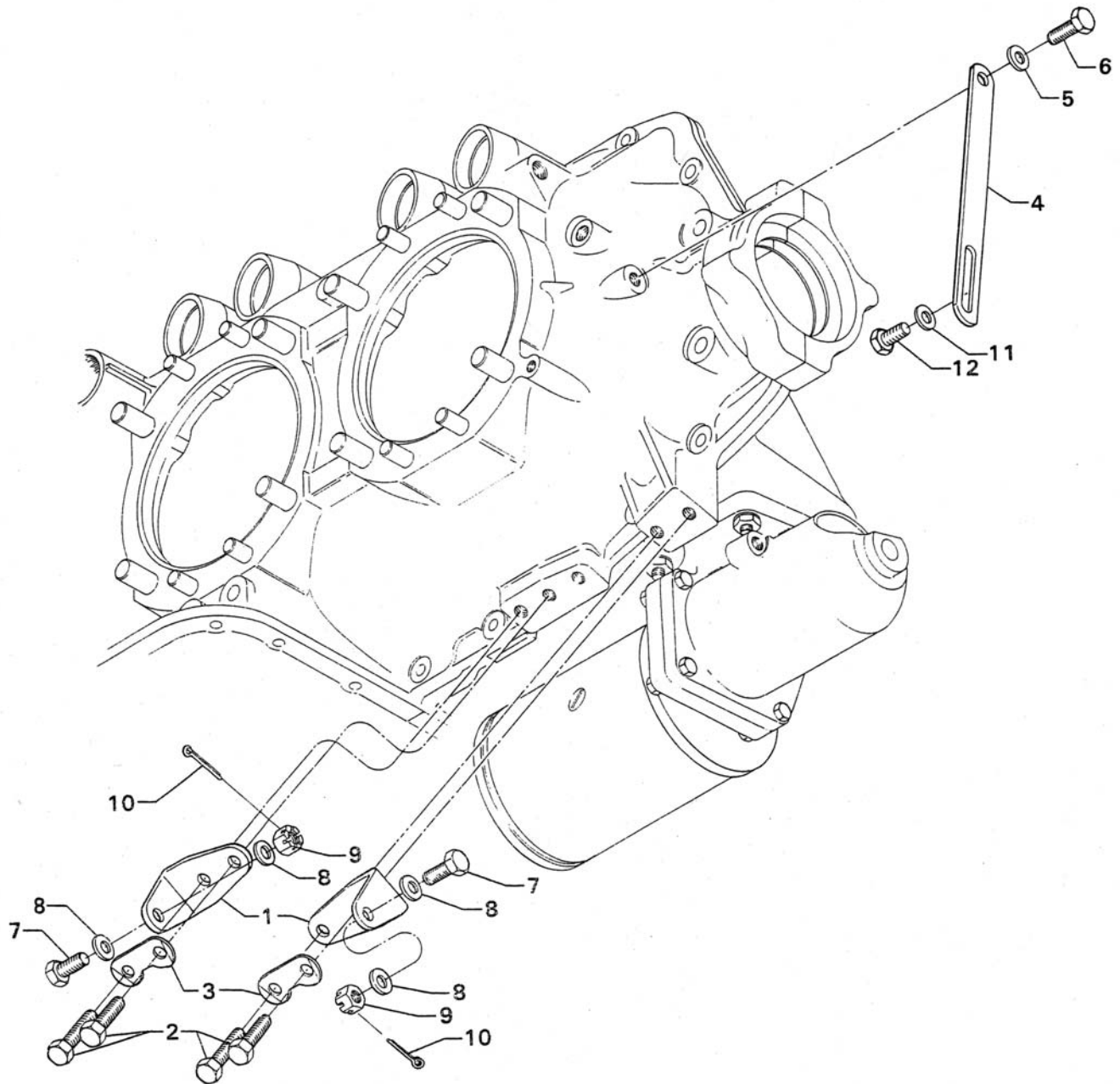
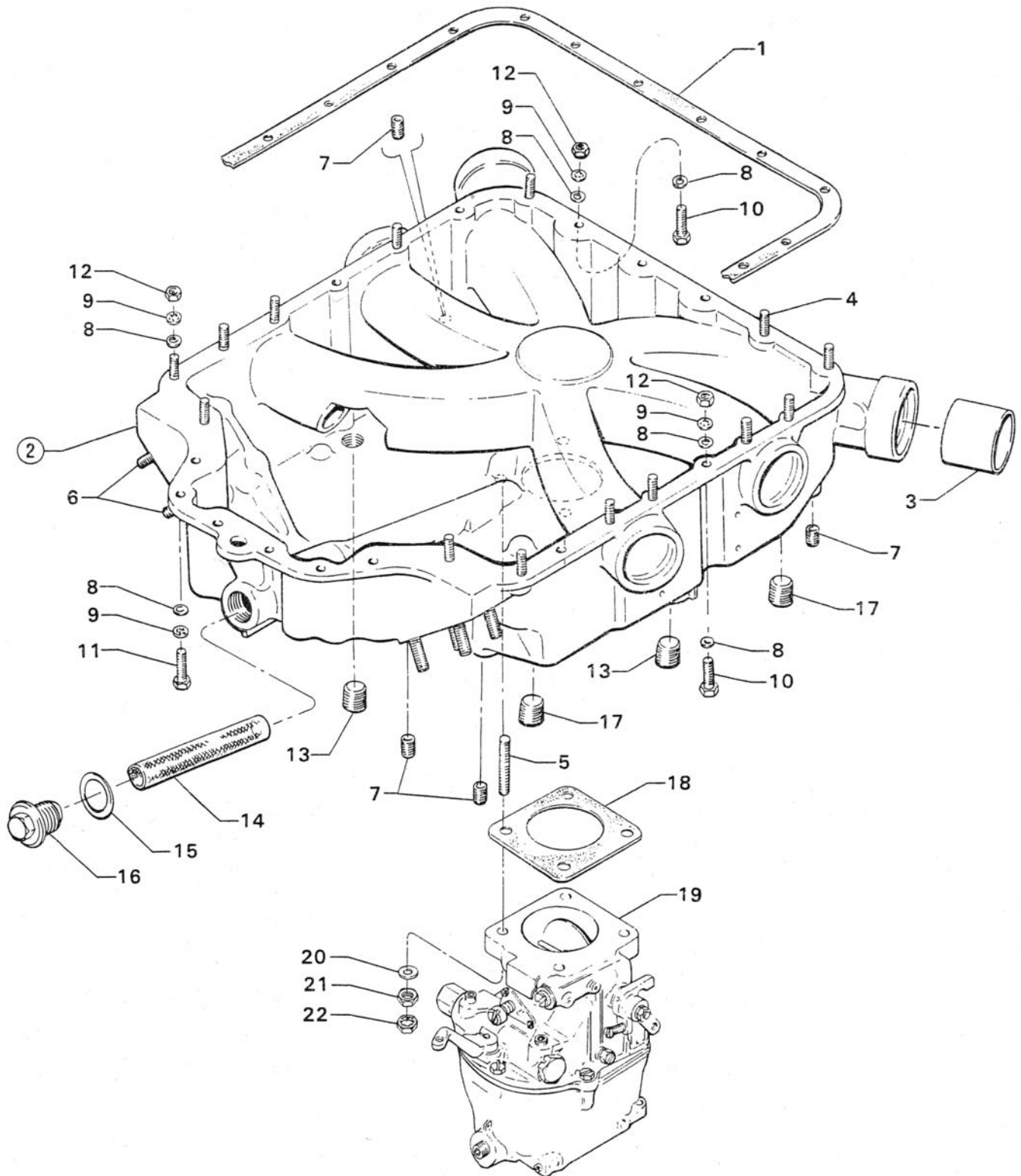


FIGURE 28. GENERATOR MOUNTING AND ATTACHING PARTS

OIL SUMP AND INDUCTION SYSTEM
 OIL SUMP ASSEMBLY, CARBURETORS AND ATTACHMENTS

FIG. REF. 29	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	LW-13306	GASKET, Oil sump	1										
2	LW-13901	SUMP ASSEMBLY, Oil	1										
3	71699	CONNECTION, Intake pipe	6										
4	25C-11	STUD, 1/4-20 x 1-3/8 long	14										
5	31C-15	STUD, 5/16-18 x 1-7/8 long	4										
6	38-15	STUD, 3/8-16 x 1-7/8 long	8										
7	STD-1173	INSERT, 1/4-20 Heli-Coil x 1/2 long	4										
8	STD-8	WASHER, 1/4 plain	34										
9	STD-160	WASHER, 1/4 lock, internal teeth	27										
10	LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. head	7										
11	LW-25-1.00	BOLT, 1/4-20 x 1.00 long, hex. head	6										
12	STD-1411	NUT, 1/4-20 plain	21										
13	STD-551	PLUG, 1/2-14 NPT, sq. head, drilled	2										
	STD-2229	PLUG, 1/2-14 NPT, Allen head							2				
14	70484	SCREEN, Oil suction	1										
15	06E19769-1.00	GASKET, 1.00 I.D. x 1-1/4 O.D. x 3/32 thick	1										
16	LW-12545	PLUG, 1.00-20 thread x 5/8 hex. head	1										
17	STD-2229	PLUG, 1/2-14 NPT, Allen head	2										
18	66224	GASKET, Carburetor	1										
19	72740	CARBURETOR, (10-4404) (Model MA-4-5)		1	1	1		1	1	1	1		
	74121	CARBURETOR, (10-4404-1) (Model MA-4-5)				1	1					1	1
	LW-10540	CARBURETOR, (10-5054) (Model MA-4-5)						1		1			
20	STD-35	WASHER, 5/16 plain	4										
21	STD-1410	NUT, 5/16-18 plain	4										
22	STD-36	LOCKNUT, 5/16, Palnut	4										

**FIGURE 29. OIL SUMP ASSEMBLY, CARBURETORS AND ATTACHMENTS**

OIL SUMP AND INDUCTION SYSTEM
INTAKE PIPES AND ATTACHMENTS

FIG. REF. 30	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	70485	PIPE, Intake	6										
2	69603	HOSE, 1-3/4 I.D. x 2-3/16 O.D. x 1-3/4 long	6										
3	LW-15592-8-28	CLAMP, Hose	12										
4	71973	GASKET, 2 bolt flange, 1-7/8 I.D.	6										
5	73346	FLANGE, Intake pipe, upper	6										
6	STD-8	WASHER, 1/4 plain	12										
7	STD-160	WASHER, 1/4 lock, internal teeth	12										
8	LW-25-1.25	BOLT, 1/4-20 x 1-1/4 long, hex. head	12										

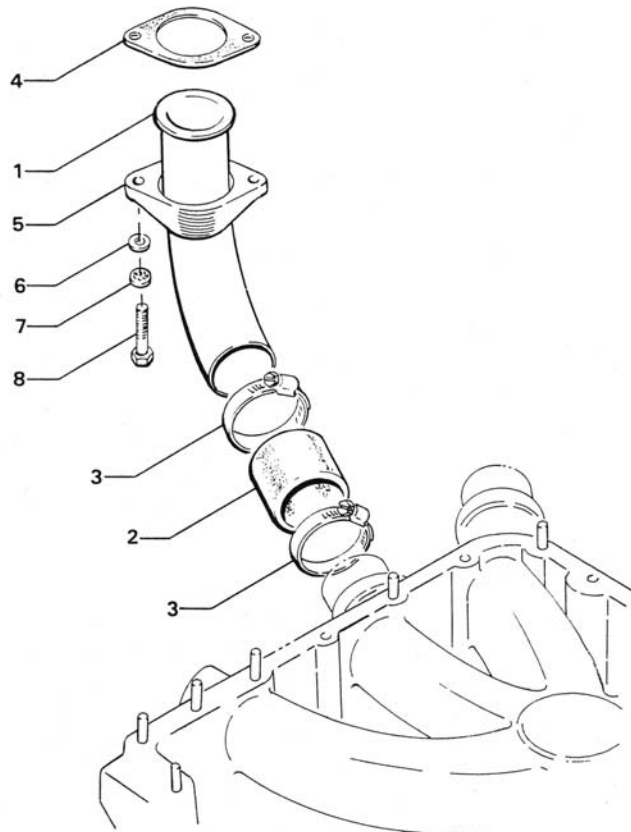
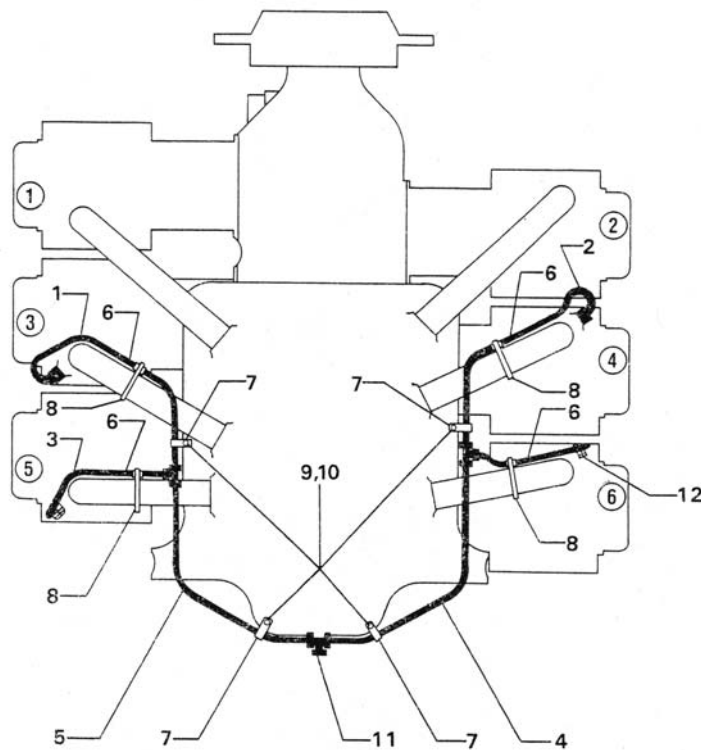


FIGURE 30. INTAKE PIPES AND ATTACHMENTS

OIL SUMP AND INDUCTION SYSTEM
PRIMING SYSTEM

FIG. REF. 31	PART NUMBER	DESCRIPTION	O N A L	QUANTITY PER ASSEMBLY									
				B 1 A 5	B 1 B 5	B 2 B 5	B 2 C 5	B 4 B 5	E 4 A 5	E 4 B 5	E 4 C 5	G 1 A 5	G 2 A 5
1	LW-12098-0-150	TUBE ASSEMBLY, Primer, cylinder no. 3		1		1	1		1		1	1	
2	LW-12098-0-180	TUBE ASSEMBLY, Primer, cylinder no. 4		1		1	1		1		1	1	
3	LW-12098-0-120	TUBE ASSEMBLY, Primer, cylinder no. 5 and 6		2		2	2		2		2	2	
4	LW-12098-0-100	TUBE ASSEMBLY, Primer, intermediate, right		1		1	1		1		1	1	
5	LW-12098-0-120	TUBE ASSEMBLY, Primer, intermediate, left		1		1	1		1		1	1	
6	LW-12598	SLEEVE, Primer line		4		4	4		4		4	4	
7	LW-16266-25-13	CLAMP, Primer line		4		4	4		4		4	4	
8	LW-18959-175-25	CLAMP, Primer liner		4		4	4		4		4	4	
9	STD-553	SCREW, No. 6-32 x 1/2 long, round head		4		4	4		4		4	4	
10	AN365-632A	NUT, No. 6-32, self-lock		4		4	4		4		4	4	
11	STD-853	TEE, Union, 1/8 tube		3		3	3		3		3	3	
12	63D21408	NIPPLE ASSEMBLY, Primer		4		4	4		4		4	4	


FIGURE 31. PRIMING SYSTEM

SERVICE KIT SECTION**SEAL AND GASKET SET**

Part No.	Part Name	Qty.
71569-1	SEAL AND GASKET SET	1
LW-12272	LOCKPLATE, Shroud tube	6
LW-12681	GASKET, Magneto	2
LW-12795	GASKET, Oil filter adapter	1
LW-13306	GASKET, Oil sump	1
LW-13792	SEAL, Crankshaft oil	1
LW-14260	SEAL, Tachometer drive oil	1
LW-14995	SPRING, Shroud tube	6
LW-15628	SEAL, Crankshaft	1
LW-18638	LOCKPLATE, Crankshaft gear	1
LW-18661	SEAL, Shroud tube	12
MS16625-1081	RING, Internal retaining	1
06E19769-1.00	GASKET, Oil suction screen	1
STD-213	SEAL, Oil	1
06E19769-0.63	GASKET, Annular	2
06E19769-1.25	GASKET, Annular	1
STD-2217	SEAL, Oil	2
1691-C	GASKET, Fuel pump	1
8313	GASKET, Vacuum pump	2
60096	GASKET, Fuel pump	1
61173	GASKET, Oil pressure housing	1
61183	GASKET, Accessory adapter	1
62224	GASKET, Magneto adapter	1
LW-19296	GASKET, Exhaust flange	6
66224	GASKET, Carburetor	1
68315	GASKET, Accessory drive adapter	1
69164	GASKET, Fuel pump adapter	1
69345	SPACER	6
69551	GASKET, Accessory drive adapter	1
70310	SEAL, Shroud tube	12
70455	GASKET	1
70457	GASKET	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, Oil filler extension	1
72075	RING, Oil seal	8
72078	LOCKPLATE, Cam gear	2
72091	RING, Oil seal	2
72210	GASKET	1
72312	RING, Oil seal	1
73383	LOCKPLATE, Generator bracket	2
73818	GASKET, Accessory housing	1
74065	“O” RING, Oil level gage	1
74068	“O” RING	1
74305	SEAL	1
75906	GASKET, Rocker box cover	6
76510	GASKET	1
76940	SEAL, Crankshaft oil	1

SERVICE KIT SECTION**CYLINDER, PISTON AND RING ASSEMBLY**

O-540-B1A5, -B1B5, -B2B5, -B2C5, -B4B5

Part No.	Part Name	Qty.
05K21103	CYLINDER, PISTON AND RING ASSEMBLY	1
LW-12425	CYLINDER AND HEAD ASSEMBLY	1
LW-19001	VALVE, Exhaust	1
73938	VALVE, Intake	1
LW-11800	SPRING, Valve, outer	2
LW-11795	SPRING, Valve, inner	2
LW-10077	SEAT, Valve spring, upper, intake	1
LW-16475	SEAT, Valve spring, upper, exhaust	1
LW-13323	SEAT, Valve spring, lower, exhaust	1
60009	KEY, Valve, intake	2
17C21191	KEY, Valve, exhaust	2
17C19386	CAP, Valve stem, exhaust	1
75413	PISTON	1
74241	RING, Piston, compression	2
73857	RING, Piston, oil regulating	1
LW-14077	PIN, Piston	1
LW-11775	PLUG, Piston pin	2
60828	PLUG, Piston pin	2
71481	RING, Cylinder base seal	1
LW-18661	SEAL, Shroud tube	2
70310	SEAL, Shroud tube	2
75906	GASKET, Rocker box cover	1
SSP-2272	TAG	1
SSP-2472	TAG	1
65441	SEAT, Valve spring, lower, intake	1

SERVICE KIT SECTION**CYLINDER, PISTON AND RING ASSEMBLY**

O-540-E4A5, -E4B5, -E4C5, -G1A5, -G2A5

Part No.	Part Name	Qty.
05K21102	CYLINDER, PISTON AND RING ASSEMBLY	1
LW-12425	CYLINDER AND HEAD ASSEMBLY	1
LW-19001	VALVE, Exhaust	1
73938	VALVE, Intake	1
LW-11800	SPRING, Valve, outer	2
LW-11795	SPRING, Valve, inner	2
LW-10077	SEAT, Valve spring, upper, intake	1
LW-16475	SEAT, Valve spring, upper, exhaust	1
LW-13323	SEAT, Valve spring, lower, exhaust	1
60009	KEY, Valve, intake	2
17C21191	KEY, Valve, exhaust	2
17C19386	CAP, Valve stem, exhaust	1
75089	PISTON	1
74241	RING, Piston, compression	2
73857	RING, Piston, oil regulating	1
LW-14077	PIN, Piston	1
LW-11775	PLUG, Piston pin	2
60828	PLUG, Piston pin	2
71481	RING, Cylinder base seal	1
LW-18661	SEAL, Shroud tube	2
70310	SEAL, Shroud tube	2
75906	GASKET, Rocker box cover	1
SSP-2272	TAG	1
SSP-2472	TAG	1
65441	SEAT, Valve spring, lower, intake	1

SERVICE KIT SECTION**CRANKCASE ASSEMBLY AND GOVERNOR STUD KIT**

O-540-B1A5, -B1B5, -B2B5, -B2C5, -B4B5, -E4A5, -E4B5, -E4C5

Part No.	Part Name	Qty.
LW-11033-S	CRANKCASE ASSEMBLY AND GOVERNOR STJUD KIT	1
LW-11033*	CRANKCASE ASSEMBLY	1
31C-14	STUD, AN governor	4
31C-16	STUD, Woodward governor	4

*See Figure 1, Page 1-1 for component parts.

CRANKCASE ASSEMBLY AND GOVERNOR STUD KIT

O-540-G1A5, -G2A5

Part No.	Part Name	Qty.
LW-11964-S	CRANKCASE ASSEMBLY AND GOVERNOR STJUD KIT	1
LW-11964*	CRANKCASE ASSEMBLY	1
STD-1339	PLUG	6
31C-14	STUD, AN governor	4
31C-16	STUD, Woodward governor	4

*See Figure 1, Page 1-1 for component parts.

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PART NO.	PART NAME	PAGE NO.	PART NO.	PART NAME	PAGE NO.
AN6-12	Bolt	5-7	LW-11021	Bearing	1-5
AN6-14	Bolt	5-5	LW-11033	Crankcase Assembly	1-1
AN6-16	Bolt	5-5	LW-11485	Tube	3-5
AN6-16	Bolt	5-7	LW-11575	Bearing	1-5
AN6-17	Bolt	5-5	LW-11713	Spring	1-5
AN6-21	Bolt	1-13	LW-11750	Connecting Rod	3-1
AN6-32	Bolt	5-7	LW-11795	Spring	3-5
AN6-34A	Bolt	1-13	LW-11800	Spring	3-5
AN365-632A	Nut	4-3	LW-11964	Crankcase Assembly	1-1
AN365-632A	Nut	6-4	LW-11997	Seal	1-5
AN777-8D	Elbow	2-6	LW-12098-0-100	Tube Assembly	6-4
AN901-8A	Gasket	2-6	LW-12098-0-120	Tube Assembly	6-4
LW-M-2376	Plate	4-3	LW-12098-0-150	Tube Assembly	6-4
LW-M-2457	Harness Assembly	4-3	LW-12098-0-180	Tube Assembly	6-4
LW-M-2458	Harness Assembly	4-3	LW-12186	Nut	3-1
LW-M-2463	Harness Assembly	4-3	LW-12272	Lockplate	3-5
LW-M-2464	Harness Assembly	4-3	LW-12475	Cylinder Assembly	3-3
LW-M-2469	Harness Assembly	4-3	LW-12545	Plug	6-1
LW-M-2470	Harness Assembly	4-3	LW-12598	Sleeve	6-4
LW-25-0.94	Bolt	2-2	LW-12681	Gasket	4-1
LW-25-1.00	Bolt	6-1	LW-12681	Gasket	4-5
LW-25-1.13	Bolt	1-13	LW-12707	Adapter	4-1
LW-25-1.13	Bolt	2-2	LW-12707	Adapter	4-5
LW-25-1.13	Bolt	6-1	LW-12795	Gasket	2-4
LW-25-1.25	Bolt	6-3	LW-12892	Thrust Button	3-7
LW-25-1.50	Bolt	1-13	LW-13215	Oil Filter	2-4
LW-25-1.75	Bolt	1-13	LW-13306	Gasket	6-1
LW-25-1.75	Bolt	5-2	LW-13323	Seat	3-5
LW-25-1.88	Bolt	2-2	LW-13521	Bearing	3-1
LW-25-2.00	Bolt	5-2	LW-13522	Bearing	3-1
LW-25S1.50	Bolt	1-13	LW-13641	Cushion	4-1
LW-31H0.75	Bolt	5-5	LW-13641	Cushion	4-5
LW-31H0.75	Bolt	5-7	LW-13790	Shaft	3-7
LW-31H0.75	Bolt	5-9	LW-13792	Seal	1-5
LW-31-0.94	Bolt	5-5	LW-13795	Shaft	1-11
LW-31-0.94	Bolt	5-7	LW-13884	Bearing	1-5
LW-31-0.94	Bolt	5-9	LW-13885	Bearing	1-5
LW-31-1.16	Bolt	5-1	LW-13896	Plug	1-10
LW-31-1.16	Bolt	5-2	LW-13901	Sump Assembly	6-1
LW-31S1.16	Bolt	5-9	LW-13923	Bushing	3-1
LW-38-0.75	Bolt	2-3	LW-13926	Adapter	4-1
LW-10077	Seat	3-5	LW-14060	Clip	4-3
LW-10091	Link	5-7	LW-14078	Pin	3-1
LW-10540	Carburetor	6-1	LW-14260	Seal	2-2
LW-10647	Dowel	1-1	LW-14313	Alternator Assembly	5-3

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LW-14315	Alternator Assembly	5-3	LW-349310-1	Magneto	4-1
LW-14318	Alternator	5-3	LW-349310-8	Magneto	4-1
LW-14326	Alternator	5-3	LW-349370-4	Magneto	4-1
LW-14371	Alternator Assembly	5-3	LW-51365-46	Magneto	4-1
LW-14732	Gage Assembly	1-3	LW-51365-47	Magneto	4-1
LW-14734	Gage Assembly	1-3	LW-51365-57	Magneto	4-1
LW-14756	Gage Assembly	1-3	MS16625-1081	Ring	1-9
LW-14774	Gage Assembly	1-3	MS20823-6D	Elbow	3-3
LW-14779	Gage Assembly	1-3	STD-8	Washer	1-13
LW-14820	Ring	1-7	STD-8	Washer	2-2
LW-14995	Spring	3-5	STD-8	Washer	2-4
LW-15472	Fuel Pump	2-3	STD-8	Washer	2-6
LW-15571	Starter	5-1	STD-8	Washer	2-8
LW-15572	Starter	5-1	STD-8	Washer	4-3
LW-15592-5-05	Clamp	3-9	STD-8	Washer	5-2
LW-15592-8-28	Clamp	6-3	STD-8	Washer	6-1
LW-15628	Seal	1-5	STD-8	Washer	6-3
LW-16047	Bearing	1-5	STD-33	Washer	1-3
LW-16048	Bearing	3-1	STD-33	Washer	1-13
LW-16064	Support Assembly	1-7	STD-33	Washer	2-3
LW-16266-10-63	Clip	4-3	STD-35	Washer	1-10
LW-16266-25-13	Clamp	6-4	STD-35	Washer	2-2
LW-16266-25-25	Clip	4-3	STD-35	Washer	2-8
LW-16266-25-44	Clamp	4-3	STD-35	Washer	3-9
LW-163010-10	Magneto	4-1	STD-35	Washer	5-1
LW-163050-9	Magneto	4-1	STD-35	Washer	5-2
LW-16475	Seat	3-5	STD-35	Washer	5-5
LW-18085	Spring	1-5	STD-35	Washer	5-7
LW-18109	Impeller	2-2	STD-35	Washer	5-9
LW-18110	Impeller Assembly	2-2	STD-35	Washer	6-1
LW-18638	Lockplate	1-7	STD-36	Locknut	6-1
LW-18661	Seal	3-5	STD-68	Pin	5-9
LW-18667	Pin	1-9	STD-160	Washer	1-13
LW-18959-175-25	Clamp	4-3	STD-160	Washer	2-2
LW-18959-175-25	Clamp	6-4	STD-160	Washer	2-4
LW-19001	Valve	3-5	STD-160	Washer	2-6
LW-19096	Gear Retainer	4-1	STD-160	Washer	2-8
LW-19096	Gear Retainer	4-5	STD-160	Washer	4-3
LW-19100	Gear Retainer	4-1	STD-160	Washer	5-2
LW-19100	Gear Retainer	4-5	STD-160	Washer	6-1
LW-19225	Counterweight Assy.	1-7	STD-160	Washer	6-3
LW-19227	Counterweight Assy.	1-7	STD-425	Washer	1-5
LW-19298	Ring	3-3	STD-475	Washer	1-10
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LW-19340	Camshaft Assembly	1-9	STD-475	Washer	3-9

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STD-475	Washer	4-5	STD-1411	Nut	2-6
STD-475	Washer	5-1	STD-1411	Nut	2-8
STD-475	Washer	5-2	STD-1411	Nut	3-5
STD-514	Dowel	1-1	STD-1411	Nut	6-1
STD-514	Dowel	5-2	STD-1420	Nut	2-2
STD-551	Plug	6-1	STD-1420	Nut	5-9
STD-553	Screw	4-3	STD-1727	Washer	4-1
STD-553	Screw	6-4	STD-1727	Washer	4-5
STD-557	Dowel	1-1	STD-1727	Washer	5-5
STD-596	Nut	1-3	STD-1727	Washer	5-7
STD-596	Nut	1-13	STD-1727	Washer	5-9
STD-670	Nut	4-3	STD-1774	Dowel	2-6
STD-678	Washer	1-3	STD-1774	Pin	2-8
STD-678	Washer	1-13	STD-1821	Hose	3-9
STD-678	Washer	2-3	STD-1856	Screw	2-4
STD-684	Nipple	3-9	STD-1872	Insert	3-3
STD-690	Washer	5-5	STD-1874	Screw	4-3
STD-690	Washer	5-7	STD-1882	Screw	2-3
STD-692	Screw	4-3	STD-1925	Screw	3-9
STD-696	Washer	4-3	STD-2167	Screw	1-11
STD-713	Pin	4-5	STD-2209	Bolt	1-7
STD-713	Pin	5-5	STD-2217	Seal	2-6
STD-713	Pin	5-7	STD-2229	Plug	6-1
STD-737	Key	1-10	25C-9	Stud	3-3
STD-784	Plug	2-1	25C-10	Stud	2-4
STD-784	Plug	2-6	25C-11	Stud	6-1
STD-853	Tee	6-4	25C-12	Stud	2-8
STD-872	Nut	1-13	25C-21	Stud	2-1
STD-872	Nut	5-5	31C-12	Stud	1-1
STD-872	Nut	5-7	31C-12	Stud	2-1
STD-1065	Dowel	1-7	31C-12	Stud	3-3
STD-1173	Insert	6-1	31C-13	Stud	1-1
STD-1211	Plug	1-7	31C-14	Stud	1-1
STD-1339	Plug	1-1	31C-15	Stud	6-1
STD-1409	Nut	1-13	31C-16	Stud	1-1
STD-1410	Nut	1-10	31C-21	Stud	2-1
STD-1410	Nut	2-8	31CD-17	Stud	2-1
STD-1410	Nut	3-9	38-13	Stud	1-1
STD-1410	Nut	4-1	38-15	Stud	1-1
STD-1410	Nut	4-5	38-15	Stud	6-1
STD-1410	Nut	5-1	38-22	Stud	1-1
STD-1410	Nut	5-2	50-15	Stud	1-1
STD-1410	Nut	6-1	1028-B	Ball	1-5
STD-1411	Nut	1-13	1102	Plug	1-1

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1102	Plug	3-5	69551	Gasket	2-8
1182-B3	Spark Plug	4-3	69603	Hose	6-3
1182-B3	Spark Plug	4-5	69675	Connector	2-6
8313	Gasket	2-6	69679	Stud	1-1
8313	Gasket	2-8	69796	Dowel	1-1
60009	Key	3-5	70310	Seal	3-5
60096	Gasket	2-3	70384	Shaft	1-10
60430	Cover	2-6	70388	Gear	1-10
60430	Cover	2-8	70389	Gear	1-10
60803	Strap	1-13	70416	Roller	1-7
60828	Plug	3-1	70419	Bracket	5-9
60945	Plug	1-7	70455	Gasket	1-10
61084	Spring	1-5	70456	Bracket	1-3
61173	Gasket	2-4	70457	Gasket	1-3
61183	Gasket	2-6	70484	Screen	6-1
61247	Cover	3-9	70485	Pipe	6-3
61544	Plunger	1-11	71133	Nut	3-7
61681	Guide	3-3	71134	Nut	3-7
62224	Gasket	4-1	71481	Ring	3-7
62224	Gasket	4-5	71579	Belt	5-3
62415	Plunger	2-6	71596	Washer	2-6
62417	Plug	2-6	71596	Washer	2-8
62815	Housing	2-4	71600	Adapter	2-6
62817	Screen Assembly	2-4	71610	Hook	3-9
65007	Retainer	1-1	71611	Retainer	3-9
65098	Cover	2-3	71620	Bolt	2-6
65441	Seat	3-5	71623	Washer	2-6
66224	Gasket	6-1	71640	Plug	1-7
66610	Bushing	3-3	71651	Fitting	2-6
66734	Stud	1-1	71652	Gear Assembly	1-11
66796	Insert	3-3	71668	Gear Assembly	1-11
67530	Bushing	1-11	71675	Adapter Assembly	2-8
67536	Adapter Assembly	2-6	71699	Connection	6-1
67542	Bearing	4-1	71737	Tube Assembly	3-9
67542	Bearing	4-5	71903	Bushing	1-7
68315	Gasket	2-8	71907	Washer	1-7
68593	Spacer	2-6	71973	Gasket	6-3
68668	Spring	1-5	72022	Roller	1-7
68759	Tube Assembly	3-9	72053	Gasket	1-10
68761	Tube Assembly	3-9	72057	Seat	3-3
68974	Housing	2-4	72058	Seat	3-3
69106	Cover	2-8	72060	Bushing	1-7
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