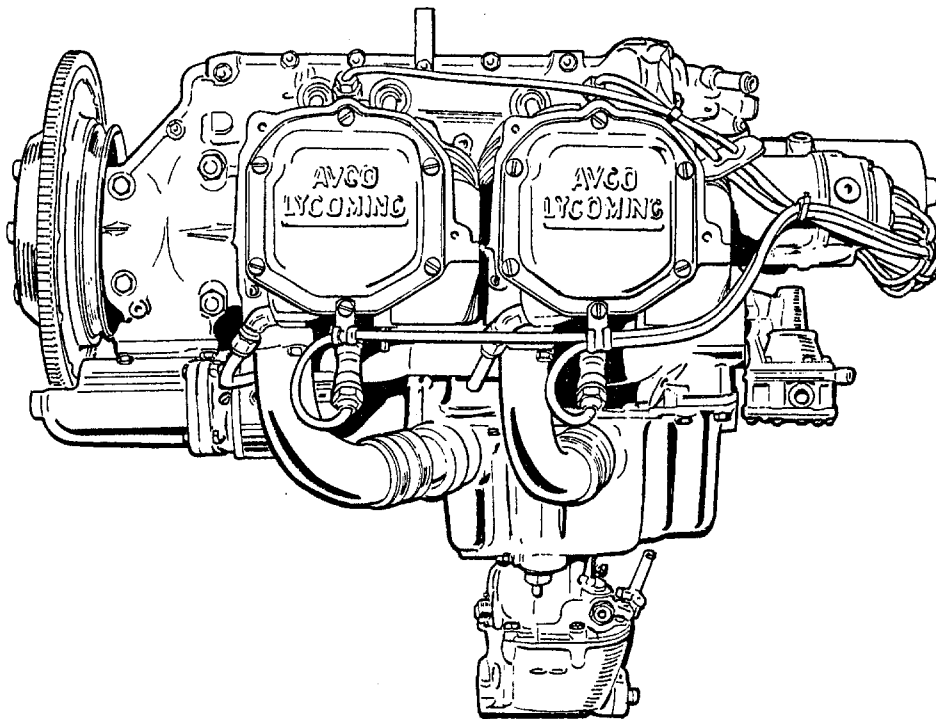


# PARTS CATALOG

PC-306-3

**AVCO LYCOMING O-360-A4N MODEL**  
**Wide Cylinder Flange**

## AIRCRAFT ENGINES



PRICE \$5.00

OCTOBER 1982

**AVCO** LYCOMING WILLIAMSPORT DIVISION  
652 Oliver Street, Williamsport, Pennsylvania 17701  
**AVCO** LYCOMING ENGINE GROUP

## INTRODUCTION

This illustrated Parts Catalog provides parts coverage for all O-360-A4N wide cylinder flange (WCF) model engines. These wide cylinder flange engines are identified by the suffix "A" on the engine serial number (e.g. L-20650-36A). The serial number as well as the model designation may be found on the engine nameplate on the oil sump.

*Group Assembly Section:* This section lists major assemblies and sub-assemblies in the general order of engine build-up.

*Service Kit Section:* Seal and gasket sets and cylinder, piston and ring kit are provided in this section.

*Numerical Index:* Quick determination of part location in the catalog is possible thru this section when only the part number is known.

*Oversize and Undersize Parts:* Procurable oversize and undersize parts are listed preceding the main group assembly parts list.

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

### NOTE

*"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 Avco Lycoming accepts responsibility for quality control and/or airworthiness of parts which do not pass through the Avco Lycoming quality control system."*

### SERVICE BULLETINS, INSTRUCTIONS AND LETTERS

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

### NOTE

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

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**O-360-A4N WIDE CYLINDER FLANGE MODEL**

Oversize and Undersize Parts Listing

PART NO.	DESCRIPTION	OVERSIZE							UNDERSIZE		
		P05	P075	P10	P125	P15	P20	P30	M03	M06	M10
76943	GUIDE, Valve intake	X		X			X	X			
66610	BUSHING, Rocker shaft	X		X							
66796	INSERT, Spark plug			X							
69796	DOWEL, Crankshaft bearing	X									
LW-10647	DOWEL, Crankshaft bearing	X		X							
72057	SEAT, Intake valve			X			X	X			
72058	SEAT, Exhaust valve			X			X	X			
72060	BUSHING, Propeller flange	X		X		X	X				
72061	BUSHING, Propeller flange	X		X		X	X				
72062	BUSHING, Propeller flange	X		X		X	X				
77160	GUIDE, Valve exhaust							X			
LW-13521	BEARING, Connecting rod			X					X	X	X
LW-13884	BEARING, Crankshaft, front								X	X	X
LW-16711	BEARING, Crankshaft								X	X	X

Studs available in P03, P07 and 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-13521 in .003 undersize, order part number LW-13521-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.

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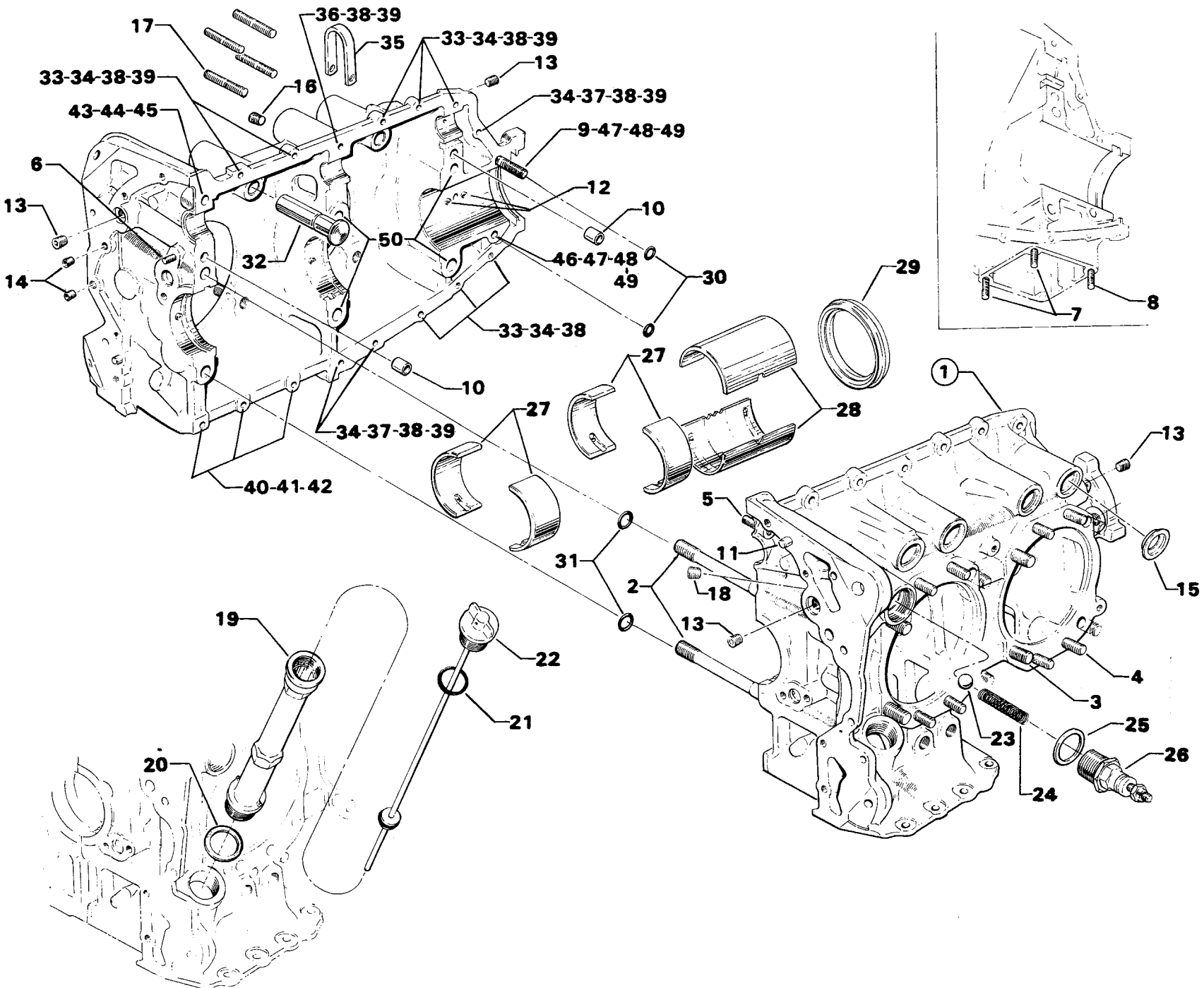
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**CRANKCASE,  
CRANKSHAFT AND  
CAMSHAFT GROUP**

**CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP**
**CRANKCASE AND OIL LEVEL GAGE ASSEMBLIES, RELATED AND ATTACHING PARTS**

FIG. REF. 1	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-18770-1	CRANKCASE ASSEMBLY	1
2	75154	STUD, 1/2-13 x 10-1/32 long	2
3	50-15	STUD, 1/2-20 x 1-7/8 long	8
4	38-13	STUD, 3/8-16 x 1-5/8 long	16
5	38D-17	STUD, 3/8-16 x 2-1/8 long, drilled	1
6	LW-13793	STUD, 5/16-18 x 15/16 long, drilled	1
7	31C-12	STUD, 5/16-18 x 1-1/2 long	2
8	31C-13	STUD, 5/16-18 x 1-5/8 long	1
9	38-22	STUD, 3/8-16 x 2-3/4 long	1
10	STD-557	DOWEL, 1/2 dia. x 19/32 long, hollow	2
11	STD-514	DOWEL, 5/16 dia. x 1/2 long	2
12	69796	DOWEL, Crankshaft bearing	2
13	1102	PLUG, 1/8-27 NPT, Allen head	4
14	STD-1623	INSERT, 1/4-20 Heli-Coil x 3/8 long	2
15	65007	RETAINER, Shroud tube seal	8
16	STD-1339	PLUG, 1/16-27 NPT, Allen head	1
17	31-16	STUD, 5/16-18 x 2-00 long	4
18	1102	PLUG, 1/8-27 NPT, Allen head	1
19	75736	TUBE, Oil level gage, long	1
20	72059	GASKET, Oil level gage	1
21	74068	RING, Oil level gage seal	1
22	LW-14758	GAGE ASSEMBLY, Oil level	1
23	1028-B	BALL, 11/16 dia.	1
24	61084*	SPRING, Oil pressure relief valve, alternate	1
25	STD-1045	GASKET, 1-1/4 I.D. x 1-1/2 O.D. x 3/32 annular	1
26	77808	VALVE ASSY., Oil pressure relief, adjustable	1
27	LW-16711	BEARING, Crankshaft	4
28	LW-13884	BEARING, Crankshaft, front	2
29	LW-13792	SEAL, Crankshaft, oil	1
30	72075	SEAL, Oil 3/32 section x 15/32 I.D.	2
31	72091	RING, Oil seal, 23/64 I.D. x 7/64 dia. section	2
32	72877	BODY, Hydraulic tappet	8
33	STD-1414	BOLT, 1/4-20 x 1-1/2 long, Hex. hd.	8
34	STD-8	WASHER, 1/4 plain	20
35	60803	STRAP, Lifting	1
36	STD-2084	BOLT, 1/4-20 x 1-3/4 long, Hex. hd.	1
37	STD-1419	BOLT, 1/4-20 x 1-1/8 long, Hex. hd.	3
38	STD-160	WASHER, 1/4 lock, internal teeth	12
39	STD-1411	NUT, 1/4-20 plain	9
40	STD-1416	BOLT, 1/4-20 x 1-1/2 long, Hex. hd., dr. end	3
41	STD-8	WASHER, 1/4 plain (9 max.)	un
42	STD-1409	NUT, 1/4-20 slotted shear	3
43	STD-33	WASHER, 3/8 plain	3
44	AN960-616L	WASHER, 3/8 plain (thick) (3 max.)	un
45	STD-872	NUT, 3/8-24 slotted	1
46	AN6-34A	BOLT, 3/8-24 x 3-37/64 long, Hex. hd.	1
47	STD-33	WASHER, 3/8 plain	2
48	STD-678	WASHER, 3/8 lock, internal teeth	2
49	STD-596	NUT, 3/8-24 plain	2
50	76220	STUD, 1/2-20 x 10-45/64 long	4

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

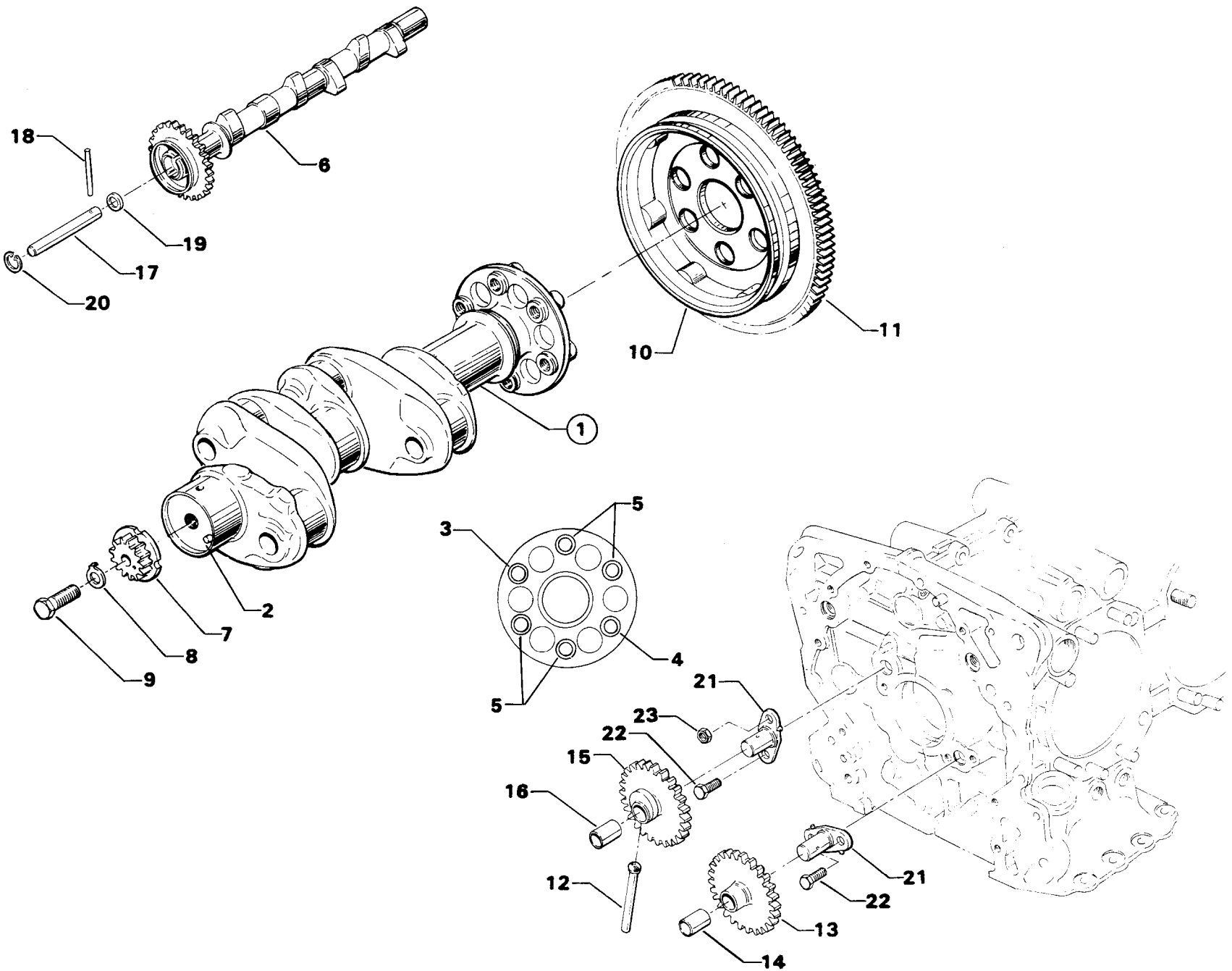


**Figure 1. Crankcase and Oil Level Gage Assemblies, Related and Attaching parts**

**CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP**  
 CRANKSHAFT, CAMSHAFT, TACHOMETER DRIVE AND RELATED PARTS

<b>FIG. REF. 2</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>QUANTITY PER ASSEMBLY</b>
1	LW-17132	CRANKSHAFT & BUSHING ASSEMBLY	1
2	STD-1065	DOWEL, Stepped, 19/64 & 1/4 dia. x 35/64 long	1
3	72060	BUSHING, Propeller flange, indexing	1
4	72061	BUSHING, Propeller flange, short	1
5	72062	BUSHING, Propeller flange, long	4
6	76097	CAMSHAFT	1
7	61155	GEAR, Crankshaft	1
8	61156	LOCKPLATE, Crankshaft gear	1
9	STD-847	SCREW, 5/16-24 x 1.00 long	1
10	LW-16471	SUPPORT ASSEMBLY, Starter ring gear	1
11	72566	GEAR, Starter ring	1
12	61544	PLUNGER, Fuel pump, long	1
13	74996	GEAR ASSEMBLY, Crankshaft idler, plain	1
14	77309	BUSHING, Crankshaft idler gear	1
15	75072	GEAR ASSEMBLY, Crankshaft idler	1
16	77309	BUSHING, Crankshaft idler gear	1
17	76121	SHAFT ASSEMBLY, Tachometer	1
18	78368	PIN, 3/16 dia. x 2-21/64 long	1
19	76118	SPACER, Tachometer shaft centering	1
20	MS16625-1081	RING, Internal retaining	1
21	LW-13796	SHAFT, Crankshaft idler gear	2
22	STD-2167	SCREW, 5/16-18 x 7/8 long, hex. hd. dr.	3
23	STD-2168	NUT, 5/16-18 NC-3 Slotted shear	1





**Figure 2. Crankshaft, Camshaft, Tachometer Drive and Related Parts**

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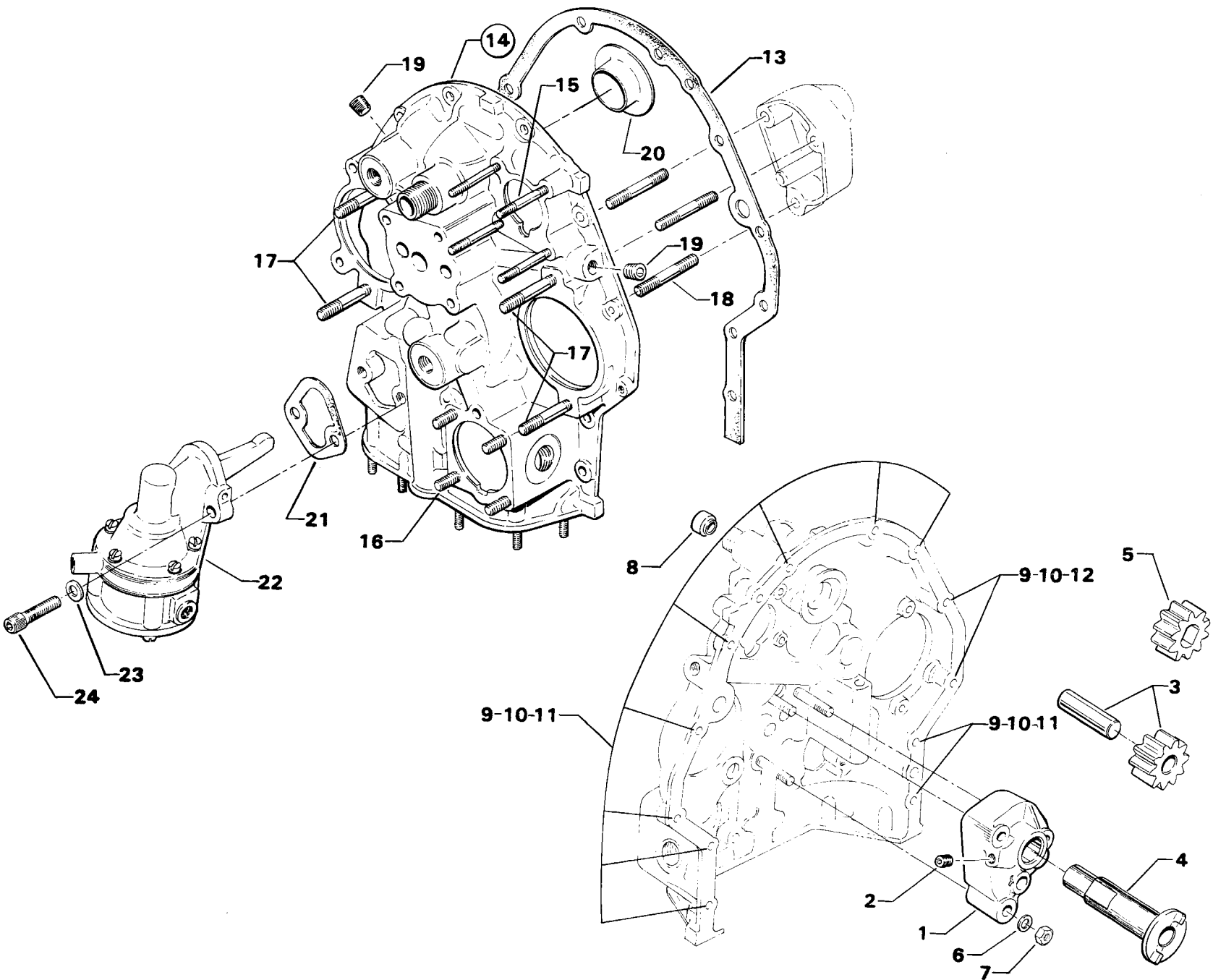
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**ACCESSORY  
HOUSING AND  
RELATED PARTS**

**ACCESSORY HOUSING AND RELATED PARTS**

## ACCESSORY HOUSING, OIL AND FUEL PUMP ASSEMBLY AND ATTACHING PARTS

FIG. REF. 3	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	78528	BODY ASSEMBLY, Oil pump	1
2	STD-1339	PLUG, 1/16-27 NPT, Allen head	1
3	LW-13775	IMPELLER ASSEMBLY, Oil pump driven	1
4	61174	SHAFT, Oil pump drive	1
5	60746	IMPELLER, Oil pump driving	1
6	STD-35	WASHER, 5/16 plain	3
7	STD-1420	NUT, 5/16-18 Slotted	3
8	LW-14260	SEAL, Tachometer drive, oil	1
9	STD-8	WASHER, 1/4 plain	12
10	STD-160	WASHER, 1/4 lock, internal teeth	12
11	STD-1204	BOLT, 1/4-20 x 15/16 long, hex. head	10
12	STD-1414	BOLT, 1/4-20 x 1-1/2 long, hex. head	2
13	73818	GASKET, Accessory housing	1
14	77997	HOUSING ASSEMBLY, Accessory	1
15	25C-22	STUD, 1/4-20 x 2-3/4 long	4
16	31C-12	STUD, 5/16-18 x 1-1/2 long	4
17	31C-19	STUD, 5/16-18 x 2-3/8 long	4
18	31CD-17	STUD, 5/16-18 x 2-1/8 long, drilled	3
19	1102	PLUG, 1/8-27 NPT, Allen	2
20	76119	SHIELD, Accessory breather oil	1
21	60096	GASKET, Fuel pump	1
22	LW-15472	FUEL PUMP, Low pressure, dual diaphragm (6441271)	1
23	STD-33	WASHER, 3/8 plain	2
24	STD-1882	SCREW, 3/8-16 x 1-9/32 long, socket hd. dr. hd.	2



**Figure 3. Accessory Housing, Oil and Fuel Pump Assembly and Attaching Parts**

**ACCESSORY HOUSING AND RELATED PARTS**

## ACCESSORY PAD COVERS, OIL FILTER, OIL COOLER BYPASS VALVE AND ATTACHING PARTS

FIG. REF. 4	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	69551	GASKET, Accessory drive adapter	1
2	69106	COVER, Governor drive adapter pad	1
3	STD-35	WASHER, 5/16 plain	4
4	STD-475	WASHER, 5/16 lock, internal teeth	4
5	STD-1410	NUT, 5/16-18 plain	4
6	72053	GASKET, Governor	1
7	72378	COVER, Governor drive	1
8	STD-35	WASHER, 5/16 plain Woodward governor	32
	STD-35	WASHER, 5/16 plain "AN" governor	4
9	STD-475	WASHER, 5/16 lock, internal teeth	4
10	STD-1410	NUT, 5/16-18 plain	4
11	61183	GASKET, Accessory adapter	1
12	61098	ADAPTER ASSEMBLY, Vacuum pump	1
13	STD-1774	PIN, 1/8 dia. x 1/4 long	1
14	STD-208	OIL SEAL, 7/8 ID x 1-1/2 ID x 5/16 wide	1
15	72970	GEAR ASSEMBLY, Vacuum pump driven	1
16	71596	WASHER, Accessory driven gear	1
17	8313	GASKET, Vacuum pump	1
18	60430	COVER, Vacuum pump	1
19	STD-8	WASHER, 1/4 plain	4
20	STD-160	WASHER, 1/4 lock, internal teeth	4
21	STD-1411	NUT, 1/4-20 plain	4
22	STD-294	GASKET, 7/8 OD x 5/8 ID x 3/32 annular	1
23	62417	PLUG, Oil cooler bypass	1
24	MS20823-8	ELBOW, 1/2 flared tube - 3/8 pipe thread	2
25	AN844-10D	ELBOW, Pipe thd. & 5/8 ID hose, 45°	1
26	LW-12795	GASKET, Oil filter adapter	2
27	77852	OIL FILTER BASE ASSEMBLY	1
28	LW-13216	OIL FILTER, Long (spin-on type)	1
29	STD-8	WASHER, 1/4 plain	4
30	STD-160	WASHER, 1/4 lock, internal teeth	1
31	STD-1411	NUT, 1/4-20 plain	1
32	STD-1856	SCREW, 1/4-20 x 1.00 long, hex. hd., self-locking	3
33	75944	VALVE ASSEMBLY, Temp. control oil cooler bypass	1
34	25C-10	STUD, 1/4-20 x 1-1/4 long	1



**SECTION**

**3**

**CYLINDER, PISTON  
AND VALVE TRAIN**

**CYLINDER, PISTON AND VALVE TRAIN  
CONNECTING ROD, PISTON AND RING ASSEMBLY**

FIG. REF. 5	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-11750	CONNECTING ROD ASSY.	4
2	LW-13923	BUSHING, Connecting rod, upper	4
3	75061	BOLT, Connecting rod, upper	8
4	LW-12186	NUT, Connecting rod bolt	8
5	LW-13521	BEARING, Connecting rod	8
6	75089	PISTON, Compression ratio 8.50:1	4
7	LW-14078	PIN, Piston	4
8	60828	PLUG, Piston pin	8
9	74241	RING, Piston compression	8
10	73857	RING, Piston, oil regulating, expander type	4

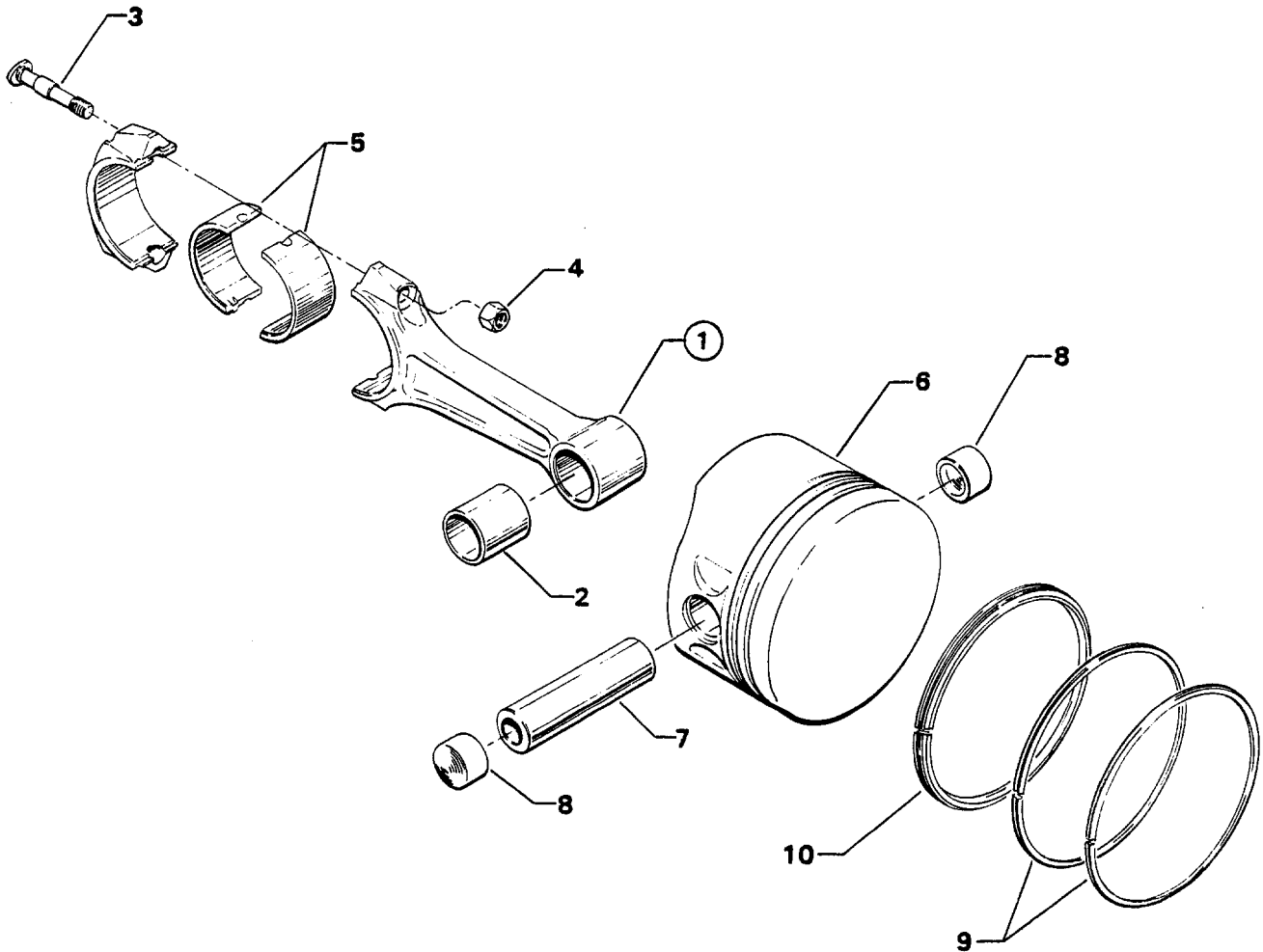


Figure 5



**CYLINDER, PISTON AND VALVE TRAIN**  
 CYLINDER ASSEMBLY

FIG. REF. 6	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-12427	CYLINDER AND HEAD ASSY., Nitrided	4
2	72057	SEAT, Intake valve	4
3	72058	SEAT, Exhaust valve	4
4	76943	GUIDE, Valve, intake	4
5	77160	GUIDE, Valve, exhaust	4
6	66796	INSERT, Spark plug, 18-1.5 MM	8
7	STD-1872	INSERT, 1/4-17 Heli-coil taper pip thd.	8
8	31C-12	STUD, 5/16-18 x 1-1/2 long	8
9	25C-9	STUD, 1/4-20 x 1-1/8 long	4
10	MS20823-6D	ELBOW, 45°, 3/8 flared tube	4
11	66610	BUSHING, Rocker shaft	16
12	1102	PLUG, 1/8-27 NPT, Allen	4

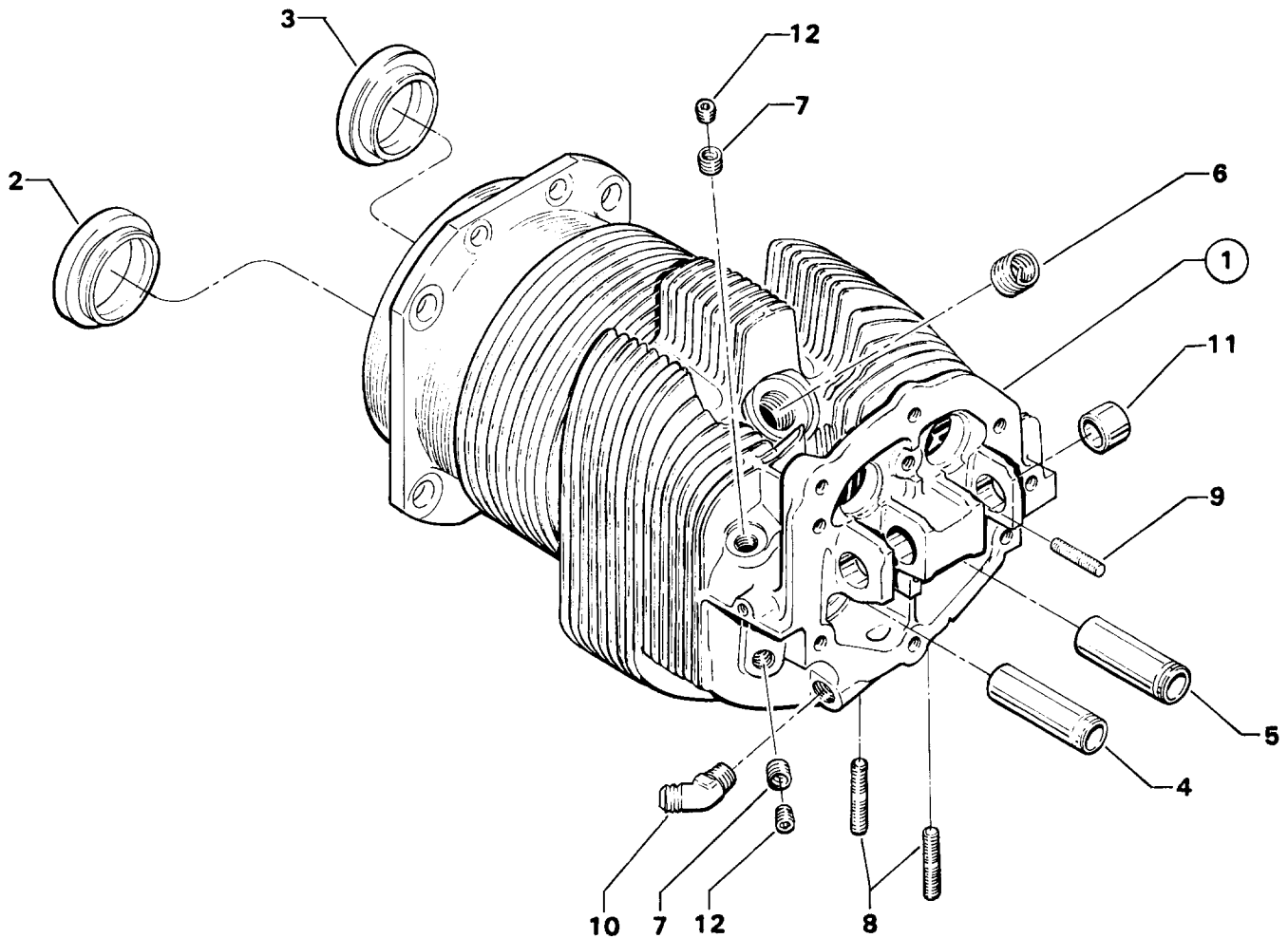


Figure 6

**CYLINDER, PISTON AND VALVE TRAIN**

## CYLINDER RELATED PARTS, VALVE ASSEMBLY AND INTERCYLINDER COOLING BAFFLES

FIG. REF. 7	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	73434	ROD ASSEMBLY, Push	un
	73435	ROD ASSEMBLY, Push - A total of 8 push	un
	73436	ROD ASSEMBLY, Push - Rods required	un
	73437	ROD ASSEMBLY, Push	un
2	69444	ROCKER ASSEMBLY, Valve, intake	4
3	60398	BUSHING, Valve rocker, intake	4
4	74636	ROCKER ASSEMBLY, Valve, exhaust	4
5	74637	BUSHING, Valve rocker, exhaust	4
6	LW-13790	SHAFT, Valve rocker	4
7	LW-12892	THRUST BUTTON, Rocker shaft	8
8	75906	GASKET, Rocker box cover	4
9	61247	COVER, Rocker box	4
10	STD-1925	SCREW, 1/4-20 x 5/8 long, pan. hd., self-locking	24
11	71481	RING, Oil seal, 3/32 dia. x 4-27/32 ID	4
12	74887	SPACER, 33/64 ID x 7/8 OD x 3/8 thick	2
13	383-B	NUT, 3/8-24 plain	16
14	STD-2090	NUT, 1/2-20 plain	18
15	65321	GASKET, Exhaust flange	4
16	STD-35	WASHER, 5/16 plain	8
17	STD-475	WASHER, 5/16 lock, internal teeth	8
18	STD-1410	NUT, 5/16-18 plain	8
19	73938	VALVE, Intake	4
20	74541	VALVE, Exhaust (rotator type)	4
21	LW-11795	SPRING, Valve, inner	8
22	LW-11800	SPRING, Valve, outer	8
23	65441	SEAT, Valve spring, lower, intake	4
24	LW-13323	SEAT, Valve spring, lower, exhaust	4
25	LW-10077	SEAT, Valve spring, upper, intake	4
26	LW-16475	SEAT, Valve spring, upper, exhaust (rotator type)	4
27	60009	KEY, Valve, intake	8
28	MS13997-3	KEY, Valve, exhaust (rotator type)	8
29	MS13998-3	CAP, Valve stem, exhaust (rotator type)	4
30	78290	PLUNGER ASSY., Hydraulic tappet	8
31	78524	SOCKET, Push rod, hydraulic tappet	8
32	LW-11485	TUBE, Push rod shroud	8
33	LW-14995	SPRING, Shroud tube	4
34	LW-12272	LOCKPLATE, Shroud tube	4
35	STD-1411	NUT, 1/4-20 plain	4
36	62922	SEAL, Shroud tube	8
37	70310	SEAL, Shroud tube	8
38	STD-684	NIPPLE, Straight, 3/8 ID hose	4
39	STD-1821	HOSE, 3/8 ID x 2-1/2 long	4
40	LW-15592-5-05	CLAMP, Hose	8
41	68759	TUBE ASSEMBLY, Cyl. head oil drain, cyl. no. 1	1
42	68760	TUBE ASSEMBLY, Cyl. head oil drain, cyl. no. 2	1
43	68761	TUBE ASSEMBLY, Cyl. head oil drain, cyl. nos. 3 & 4	2
44	75339	BAFFLE ASSEMBLY, Intercylinder	2
45	71611	RETAINER, Intercylinder baffle	2
46	71610	HOOK, Intercylinder baffle retainer	2

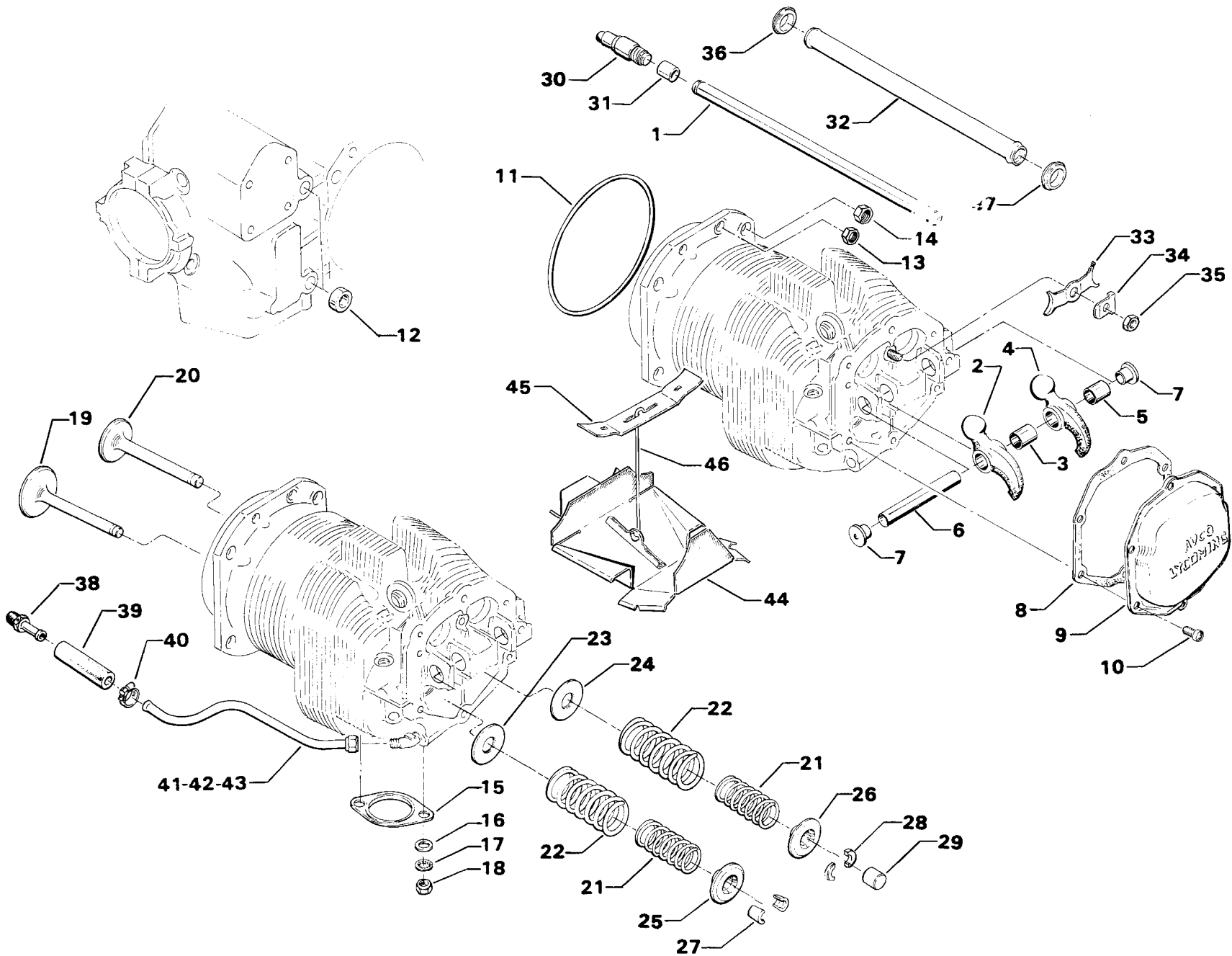


Figure 7. Cylinder Related Parts, Valve Assembly and Inter-cylinder Cooling Baffles

**SECTION**

**4**

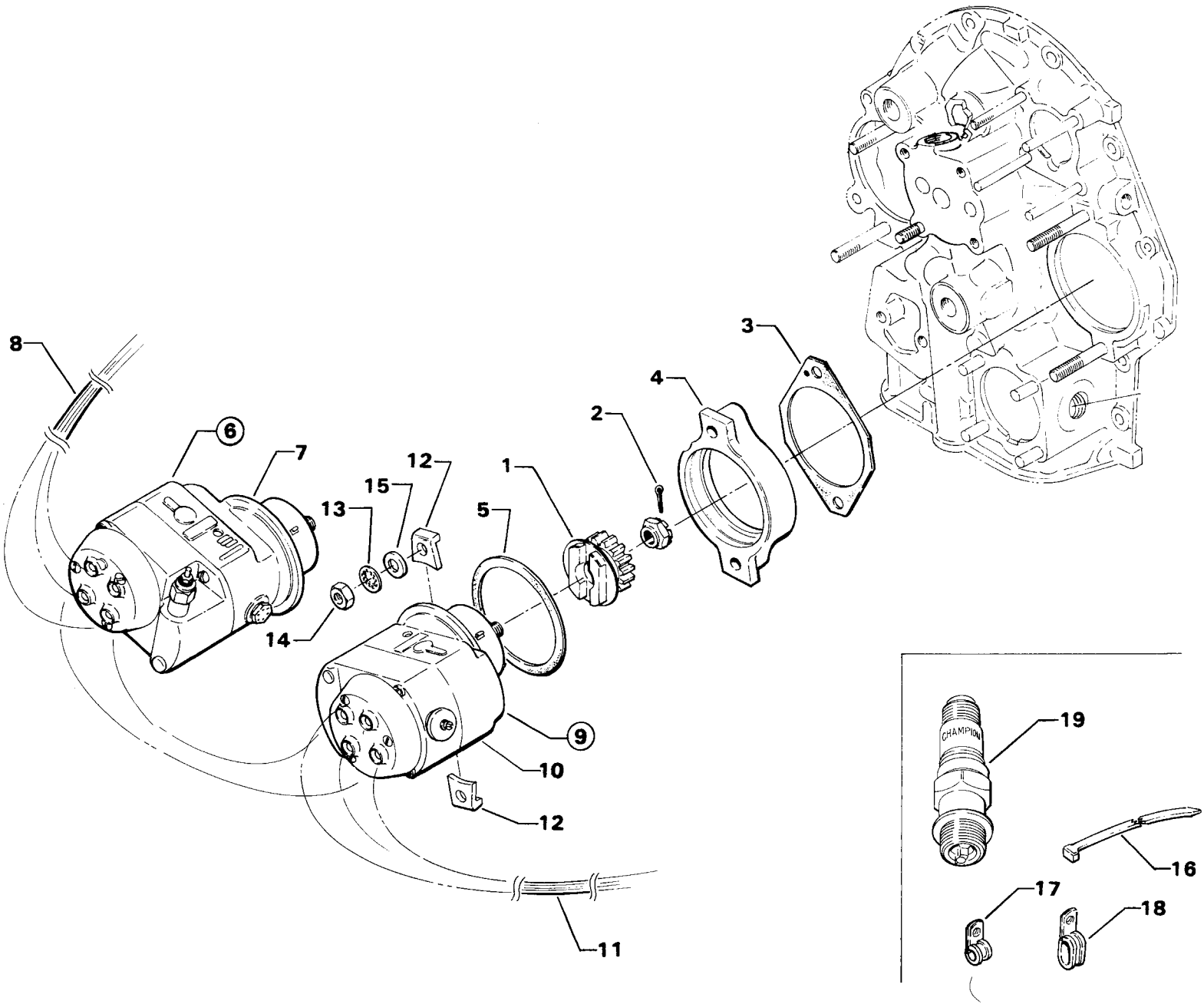
**IGNITION SYSTEM**

**IGNITION SYSTEM**
**MAGNETO DRIVES, MAGNETOS, IGNITION HARNESS AND LEAD ASSEMBLY**

FIG. REF. 8	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	61665	GEAR, Magneto, impulse coupling	2
2	STD-761	COTTER PIN, 3/32 dia. x 1.00 long	2
3	62224	GASKET, Magneto adapter & magneto	2
4	LW-12706	ADAPTER, Magneto, impulse coupling	2
5	LW-12681	GASKET, Magneto	2
6	LW-16894	MAGNETO & HARNESS ASSEMBLY, Left (Slick magneto)	1
7	LW-15638	MAGNETO, Left (Slick Model 4251 - impulse coupling)	1
8	LW-16893	HARNESS ASSEMBLY, Ignition, Left (Slick magneto)	1
	M-1735-46	REPLACEMENT LEAD T-1	un
	M-1735-42	REPLACEMENT LEAD T-3, B-2	un
	M-1735-35	REPLACEMENT LEAD B-4	un
9	LW-16895	MAGNETO & HARNESS ASSEMBLY, Right (Slick magneto)	1
10	LW-15638	MAGNETO, Right (Slick Model 4251 - impulse coupling)	1
11	LW-16892	HARNESS ASSEMBLY, Ignition, Right (Slick magneto)	1
	M-1735-44	REPLACEMENT LEAD B-1	un
	M-1735-35	REPLACEMENT LEAD B-3	un
	M-1735-46	REPLACEMENT LEAD T-2	un
	M-1735-42	REPLACEMENT LEAD T-4	un
12	76961	CLAMP, Magneto	4
13	STD-475	WASHER, 5/16 lock, internal teeth	4
14	STD-1410	NUT, 5/16-18 plain	4
15	STD-1727	WASHER, Plain, 3/4 OD x 11/32 ID x 1/8 thick	4
16	76734	ZIP STRAPS	8
17	LW-14057	CLIP, 1 wire	2
18	LW-14060	CLIP, 2 wire	3
19	1182-83	SPARK PLUG (Champion REM-40E)	8

**NOTE**

The above spark plug is the one used in current production only; there are 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.



**Figure 8. Magneto Drives, Magnetos, Ignition Harness and Lead Assembly**

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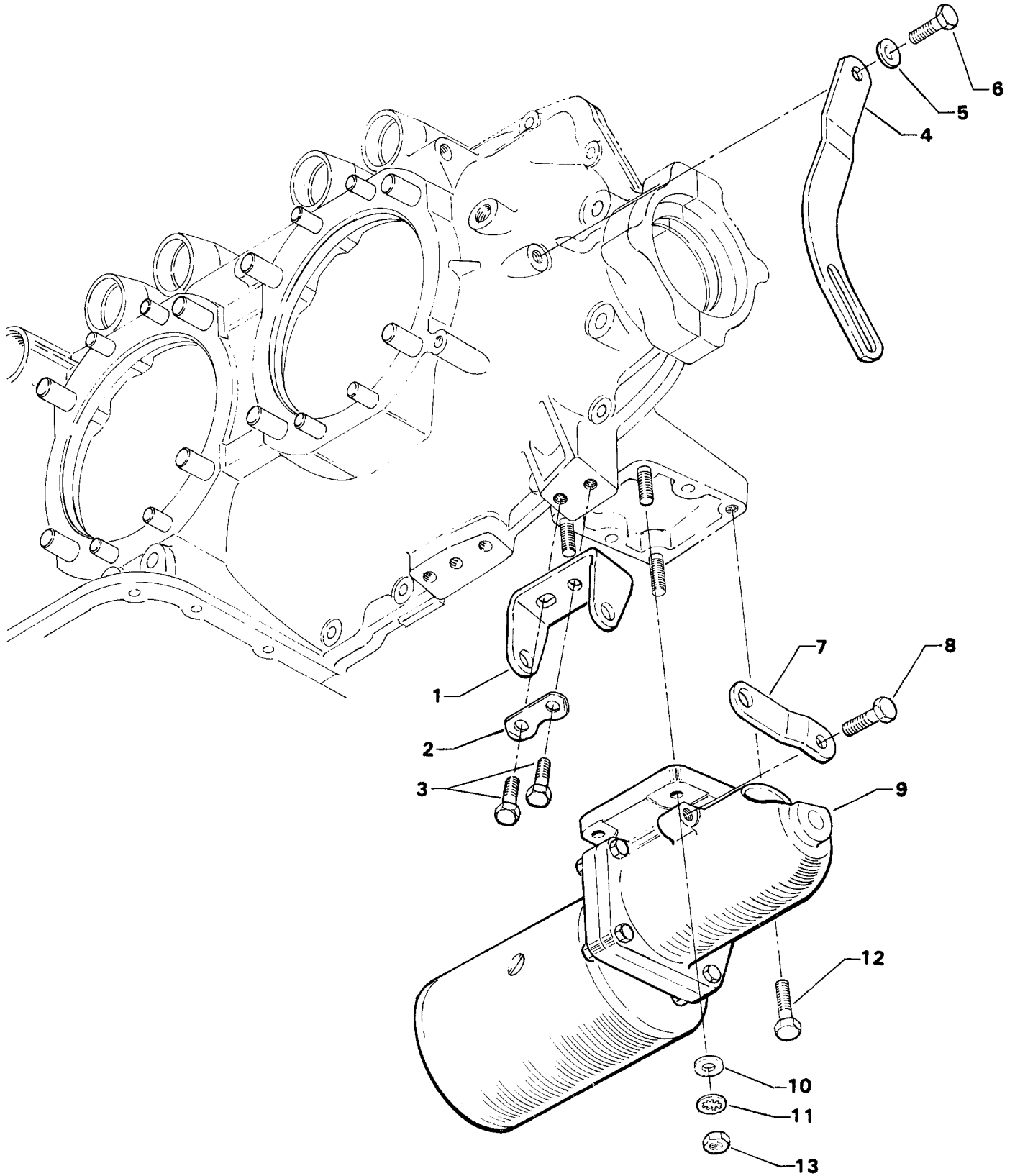
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**ELECTRICAL SYSTEM**

**ELECTRICAL SYSTEM**
**ALTERNATOR BRACKET, STARTER MOTOR AND ATTACHING PARTS**

<b>FIG. REF. 9</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>QUANTITY PER ASSEMBLY</b>
1	76906	BRACKET, Alternator	1
2	73383	LOCKPLATE, 5/16 bolt x 1-00 spacing	1
3	STD-1838	BOLT, 5/16-18 x 15/16 long, Hex. hd.	2
4	LW-10729	LINK, Alternating adjusting	1
5	STD-35	WASHER, 5/16 plain	1
6	STD-1858	BOLT, 5/16-18 x 29/32 long, Hex. hd., dr.	1
7	76908	STRUT, Alternator support	1
8	STD-1858	BOLT, 5/16-18 x 29/32 long, Hex. hd., dr.	1
9	LW-15572	STARTER, 24 volt, 3.38:1 internal reduction 12/14 pitch pinion (MHB-4016)	1
10	STD-35	WASHER, 5/16 plain	4
11	STD-475	WASHER, 5/16 lock, internal teeth	4
12	STD-2156	BOLT, 5/16-18 x 1-5/32 long, Hex. hd.	1
13	STD-1410	NUT, 5/16-18 plain	3





**Figure 9. Alternator Bracket Starter Motor and Attaching Parts**

**SECTION**

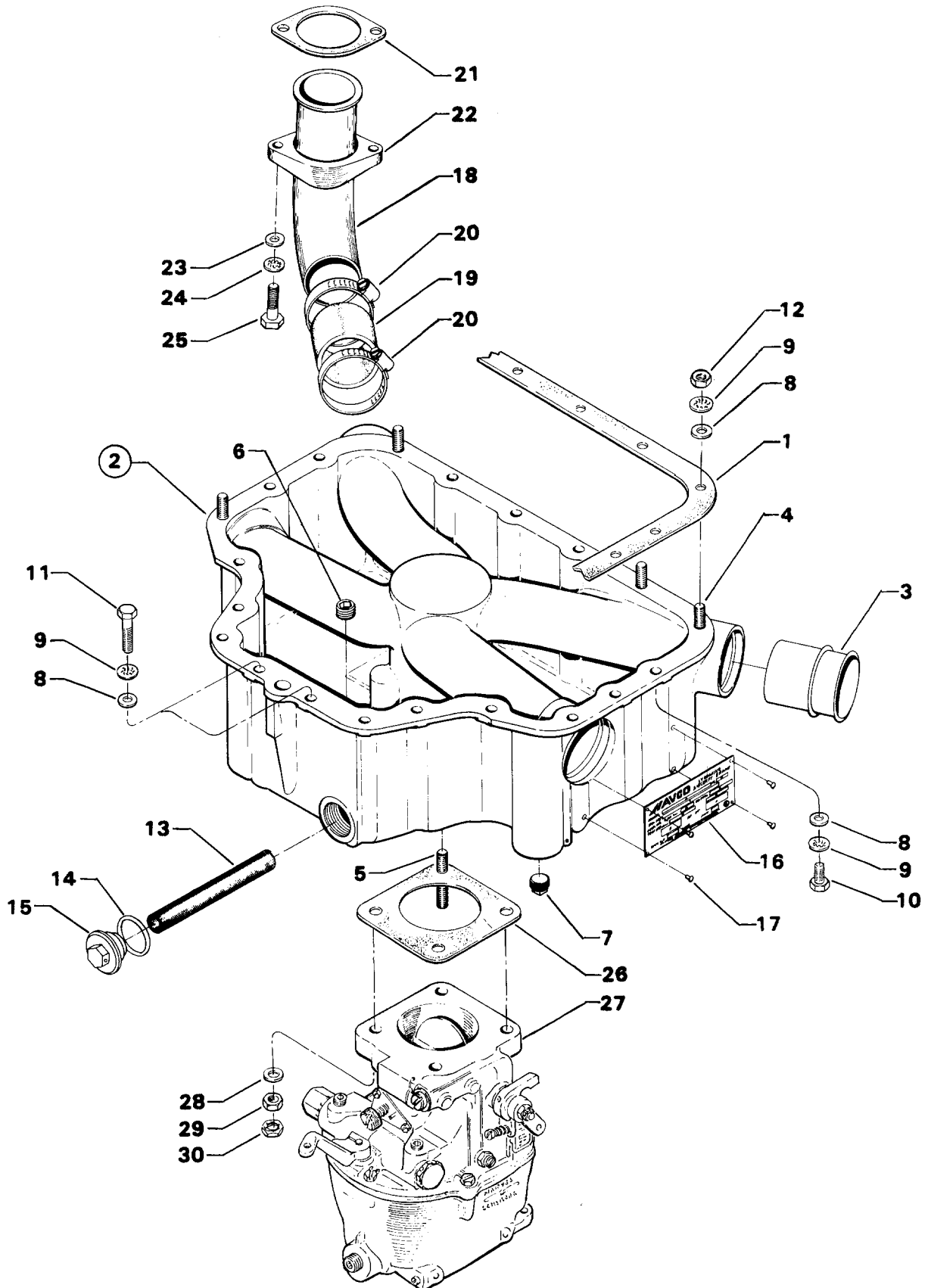
**6**

**OIL SUMP AND  
INDUCTION SYSTEM**

**OIL SUMP AND INDUCTION SYSTEM**  
**OIL SUMP, INTAKE PIPES AND CARBURETOR ASSEMBLIES**

FIG. REF. 10	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-13353	GASKET, Oil sump	1
2	78915	SUMP ASSY., Oil	1
3	78914	CONNECTION, Intake pipe	4
4	61400	STUD, 1/4-20 x 1-3/16 long	4
5	31C-15	STUD, 5/16-18 x 1-7/8 long	4
6	STD-91	PLUG, 1/2-14 NPT, Allen hd.	1
7	STD-551	PLUG, 1/2-14 NPT, Sq. hd. drilled	2
8	STD-8	WASHER, 1/4 plain	28
9	STD-160	WASHER, 1/4 lock, internal teeth	20
10	STD-1204	BOLT, 1/4-20 x 15/16 long, Hex. hd.	14
11	STD-1419	BOLT, 1/4-20 x 1-1/8 long, hex hd.	2
12	STD-1411	NUT, 1/4-20 plain	12
13	70484	SCREEN, Oil suction	1
14	STD-111	GASKET, 1.00 I.D. x 1-1/4 O.D. x 3/32 annular	1
15	LW-12545	PLUG, 5/8 Hex. hd. x 1.00-20 thd.	1
16	61548	NAMEPLATE	1
17	STD-1901	DRIVE STUD, No. 4 x 3/16 long, rd. hd.	4
18	70485	PIPE, Intake	4
19	69603	HOSE, 1-3/4 I.D. x 2-3/16 O.D. x 1-3/4 long	4
20	LW-15592-8-28	CLAMP, Hose	8
21	71973	GASKET, 2 bolt flange, 1-7/8 I.D.	4
22	73346	FLANGE, Intake pipe, upper	4
23	STD-8	WASHER, 1/4 plain	8
24	STD-160	WASHER, 1/4 lock, internal teeth	8
25	STD-1215	BOLT, 1/4-20 x 1-1/4 long, hex. hd.	8
26	66224	GASKET, Carburetor	1
27	LW-18788*	CARBURETOR, (10-5288)	1
	LW-10064	CARBURETOR, (10-5034)	1
28	STD-35	WASHER, 5/16 plain	4
29	STD-1410	NUT, 5/16-18 plain	4
30	STD-36	LOCKNUT, 5/16 (Palnut)	4

\* - Optional



**Figure 10. Oil Sump, Intake Pipes and Carburetor Assemblies**

**SECTION**

**7**

**SERVICE KIT  
SECTION**

**SERVICE KIT SECTION**

**SEAL AND GASKET SET**  
**O-360-A4N**

Part No.	Part Name	Qty.
AN901-8A	GASKET	1
STD-111	GASKET, Annular	1
STD-208	SEAL, Oil	1
STD-213	SEAL, Oil (fuel pump dr.)	1
STD-294	GASKET, Annular	2
STD-1045	GASKET, Annular	1
1691-C	GASKET, Fuel pump pad	1
8313	GASKET, Vac. pump	1
60096	GASKET, Fuel pump	1
LW-18639	LOCKPLATE, Crankshaft gear	1
LW-14260	SEAL, Tachometer	1
61173	GASKET, Oil press. hsg.	1
61183	GASKET, Acc. adapter	1
61523	BOX, Set up	1
62224	GASKET, Mag. adapter	3
LW-18661	SEAL, Shroud tube	8
65321	GASKET, Exh. flange	4
66224	GASKET, Carburetor	2
68315	GASKET, Acc. dr. adapter	1
LW-13353	GASKET, Oil sump	1
69164	GASKET, Fuel pump adapter	1
69345	SPACER	4
69551	GASKET, Acc. pad cover	1
70310	SEAL, Shroud tube	8
71481	RING, Oil seal	4
71973	GASKET, Intake flange	4
72053	GASKET, Gov. dr. pad	2
72059	GASKET	1
72075	SEAL, Oil	6
72078	LOCKPLATE, Cam gear	2
72091	RING, Oil seal	2
73383	LOCKPLATE	2
73817	LOCKPLATE, Crankshaft idler gear shaft	2
73818	GASKET, Acc. hsg.	1
74065	RING, Oil level gage seal	1
74068	RING, Oil level gage seal	1
75906	GASKET, Rocker box cover	4
76510	GASKET	1
76940	SEAL, Crankshaft oil	1
LW-13792	SEAL, Crankshaft oil	1
LW-12272	LOCKPLATE, Shroud tube	4
LW-12681	GASKET, Mag.	2
LW-12795	GASKET	1
LW-14995	SPRING	4
LW-10332	LOCKPLATE	1
70455	GASKET	1
STD-1763	PALNUT	4
72220	GASKET	1
72312	RING, Oil seal	1
77154	GASKET, Carb.	1
77611	GASKET, Exh. flange	4

**SERVICE KIT SECTION**
**CYLINDER, PISTON AND RING ASSEMBLY**  
**O-360-A4N**

Part No.	Part Name	Qty.
MS-13997-3	KEY, Valve, exhaust	2
MS-13998-3	CAP, Valve stem, exhaust	1
STD-1215	BOLT	2
STD-1411	NUT, Plain, 1/4-20	1
STD-1925	SCREW	6
60009	KEY, Valve, intake	2
60828	PLUG, Piston pin	2
61247	COVER, Rocker box	1
LW-18661	SEAL, Shroud tube	2
65441	SEAT, Valve spring, lower (intake)	1
69444	ROCKER ASSY., Valve, intake	1
70310	SEAL, Shroud tube	2
71195	BOX, Set up	1
71481	SEAL, Cylinder base	1
72198	PLUG, Piston	2
73857 or LW-12328	RING, Piston, oil reg.	1
73938	VALVE, Intake	1
74241	RING, Piston, compression	2
74541	VALVE, Exhaust	1
74636	ROCKER ASSY., Exhaust	1
75089	PISTON	1
75906	GASKET, Rocker box cover	1
LW-10077	SEAT, Valve spring, upper, intake	1
LW-11775	PLUG, Piston pin (aluminum)	2
LW-11795	SPRING, Valve, inner	2
LW-11800	SPRING, Valve, outer	2
LW-12272	LOCKPLATE, Shroud tube	1
LW-12427	CYLINDER ASSY., Nitrided	1
LW-12892	THRUST BUTTON	2
LW-13323	SEAT, Valve spring, lower, exhaust	1
LW-13790	SHAFT, Valve, rocker	1
LW-14077	PIN, Piston	1
LW-14995	SPRING, Shroud tube	1
LW-16475	SEAT, Valve spring, upper, exhaust	1
SSP-672	TAG	1
SSP-2472	TAG	1

**SECTION**

**8**

**NUMERICAL INDEX**



**NUMERICAL INDEX**

PART NO.	PART NAME	PAGE NO.	PART NO.	PART NAME	PAGE NO.
AN6-34A	Bolt	1-1	M-1735-42	Lead	4-1
AN844-10D	Elbow	2-3	M-1735-44	Lead	4-1
AN960-616L	Washer	1-1	M-1735-46	Lead	4-1
LW-10064	Carburetor	6-1	MS13997-3	Key Valve	3-3
LW-10077	Seat	3-3	MS13998-3	Cap, Valve	3-3
LW-10729	Link	5-1	MS16625-1081	Ring	1-3
LW-11485	Tube	3-3	MS20823-6D	Elbow	3-2
LW-11750	Connecting Rod	3-1	MS20823-8	Elbow	2-3
LW-11795	Spring	3-3	STD-1045	Gasket	1-1
LW-11800	Spring	3-3	STD-1065	Dowel	1-3
LW-12186	Nut, Connecting Rod	3-1	STD-1204	Bolt	2-1
LW-12272	Lockplate	3-3	STD-1204	Bolt	6-1
LW-12427	Cylinder & Head Assy.	3-2	STD-1215	Bolt	6-1
LW-12545	Plug	6-1	STD-1339	Plug	1-1
LW-12681	Gasket	4-1	STD-1339	Plug	2-1
LW-12706	Adapter	4-1	STD-1409	Nut	1-1
LW-12795	Gasket	2-3	STD-1410	Nut	2-3
LW-12892	Thrust Button	3-3	STD-1410	Nut	3-3
LW-13216	Oil Filter	2-3	STD-1410	Nut	4-1
LW-13323	Seat	3-3	STD-1410	Nut	5-1
LW-13353	Gasket	6-1	STD-1410	Nut	6-1
LW-13521	Bearing	3-1	STD-1411	Nut	1-1
LW-13775	Impeller	2-1	STD-1411	Nut	2-3
LW-13790	Shaft	3-3	STD-1411	Nut	3-3
LW-13792	Seal	1-1	STD-1411	Nut	6-1
LW-13793	Stud	1-1	STD-1414	Bolt	1-1
LW-13796	Shaft	1-3	STD-1414	Bolt	2-1
LW-13884	Bearing	1-1	STD-1416	Bolt	1-1
LW-13923	Bushing	3-1	STD-1419	Bolt	1-1
LW-14057	Clip	4-1	STD-1419	Bolt	6-1
LW-14060	Clip	4-1	STD-1420	Nut	2-1
LW-14078	Pin	3-1	STD-1623	Insert	1-1
LW-14260	Seal	2-1	STD-1727	Washer	4-1
LW-14758	Gage	1-1	STD-1774	Pin	2-3
LW-15472	Fuel Pump	2-1	STD-1821	Clamp	3-3
LW-15572	Starter	5-1	STD-1838	Bolt	5-1
LW-15638	Magneto	4-1	STD-1856	Screw	2-3
LW-15592-5-05	Clamp	3-3	STD-1858	Bolt	5-1
LW-15592-8-28	Clamp	6-1	STD-1872	Insert	3-2
LW-16471	Support Assembly	1-3	STD-1882	Screw	2-1
LW-16475	Seat	3-3	STD-1901	Drive Stud	6-1
LW-16711	Bearing	1-1	STD-1925	Screw	3-3
LW-16892	Harness	4-1	STD-2084	Bolt	1-1
LW-16893	Harness	4-1	STD-2090	Nut	3-3
LW-16894	Magneto	4-1	STD-2156	Bolt	5-1
LW-16895	Magneto	4-1	STD-2167	Screw	1-3
LW-17132	Crankshaft	1-3	STD-2168	Nut	1-3
LW-18770-1	Crankcase Assembly	1-1	STD-8	Washer	1-1
LW-18788	Carburetor	6-1	STD-8	Washer	2-1
M-1735-35	Lead	4-1	STD-8	Washer	2-3

**NUMERICAL INDEX**

PART NO.	PART NAME	PAGE NO.	PART NO.	PART NAME	PAGE NO.
STD-8	Washer	6-1	1182-B3	Spark Plug	4-1
STD-33	Washer	1-1	8313	Gasket	2-3
STD-33	Washer	2-1	60009	Key, Valve	3-3
STD-35	Washer	2-1	60096	Gasket	2-1
STD-35	Washer	2-3	60398	Bushing	3-3
STD-35	Washer	3-3	60430	Cover	2-3
STD-35	Washer	5-1	60746	Impeller	2-1
STD-35	Washer	6-1	60803	Strap Lifting	1-1
STD-36	Locknut	6-1	60828	Plug	3-1
STD-91	Plug	6-1	61084	Spring	1-1
STD-111	Gasket	6-1	61098	Adapter	2-3
STD-160	Washer	1-1	61155	Gear	1-3
STD-160	Washer	2-1	61156	Lockplate	1-3
STD-160	Washer	2-3	61174	Shaft	2-1
STD-160	Washer	6-1	61183	Gasket	2-3
STD-208	Seal	2-3	61247	Cover	3-3
STD-294	Gasket	2-3	61400	Stud	6-1
STD-475	Washer	2-3	61544	Plunger	1-3
STD-475	Washer	3-3	61548	Nameplate	6-1
STD-475	Washer	4-1	61665	Gear	4-1
STD-475	Washer	5-1	62224	Gasket	4-1
STD-514	Dowel	1-1	62417	Plug	2-3
STD-551	Plug	6-1	62922	Seal	3-3
STD-557	Dowel	1-1	65007	Retainer	1-1
STD-596	Nut	1-1	65321	Gasket	3-3
STD-678	Washer	1-1	65441	Seat	3-3
STD-684	Nipple	3-3	66224	Gasket	6-1
STD-761	Cotter Pin	4-1	66610	Bushing	3-2
STD-847	Screw	1-3	66796	Insert	3-2
STD-872	Nut	1-1	68759	Tube	3-3
25C-9	Stud	3-2	68760	Tube	3-3
25C-10	Stud	2-3	68761	Tube	3-3
25C-22	Stud	2-1	69106	Cover	2-3
31C-12	Stud	1-1	69444	Rocker	3-3
31C-12	Stud	2-1	69551	Gasket	2-3
31C-12	Stud	3-2	69603	Hose	6-1
31C-13	Stud	1-1	69796	Dowel	1-1
31C-15	Stud	6-1	70310	Seal	3-3
31C-19	Stud	2-1	70484	Screen	6-1
31CD-17	Stud	2-1	70485	Pipe, Intake	6-1
31-16	Stud	1-1	71481	Ring, Oil Seal	3-3
31D-17	Stud	1-1	71596	Washer	2-3
38-13	Stud	1-1	71610	Hook	3-3
38-22	Stud	1-1	71611	Retainer	3-3
50-15	Stud	1-1	71973	Gasket	6-1
383-B	Nut	3-3	72053	Gasket	2-3
1028-B	Ball	1-1	72057	Seat	3-2
1102	Plug	1-1	72058	Seat	3-2
1102	Plug	2-1	72059	Gasket	1-1
1102	Plug	3-2	72060	Bushing	1-3

**NUMERICAL INDEX**

PART NO.	PART NAME	PAGE NO.	PART NO.	PART NAME	PAGE NO.
72061	Bushing	1-3	75089	Piston	3-1
72062	Bushing	1-3	75154	Stud	1-1
72075	Seal	1-1	75339	Baffle	3-3
72091	Ring	1-1	75736	Tube	1-1
72378	Cover	2-3	75906	Gasket	3-3
72566	Gear	1-3	75944	Valve	2-3
72877	Tappet Body	1-1	76097	Camshaft	1-3
72970	Gear Assembly	2-3	76118	Spacer	1-3
73346	Flange	6-1	76119	Shield, Breather	2-1
73383	Lockplate	5-1	76121	Shaft	1-3
73434	Rod Assembly	3-3	76220	Stud	1-1
73435	Rod Assembly	3-3	76734	Zip Straps	4-1
73436	Rod Assembly	3-3	76906	Bracket	5-1
73437	Rod Assembly	3-3	76908	Strut	5-1
73818	Gasket	2-1	76943	Guide, Valve	3-2
73857	Ring	3-1	76961	Clamp	4-1
73938	Valve, Intake	3-3	77160	Guide, Valve	3-2
74068	Ring	1-1	77309	Bushing	1-3
74241	Ring	3-1	77808	Valve Assy.	1-1
74541	Valve Exhaust	3-3	77852	Oil Filter Base	2-3
74636	Rocker	3-3	77997	Housing Assembly	2-1
74637	Bushing	3-3	78290	Plunger Assy.	3-3
74887	Spacer	3-3	78368	Pin	1-3
74996	Gear Assembly	1-3	78524	Socket	3-3
75061	Bolt, Connecting Rod	3-1	78528	Body, Oil Pump	2-1
75072	Gear Assembly	1-3	78914	Connection	6-1
			78915	Sump	6-1