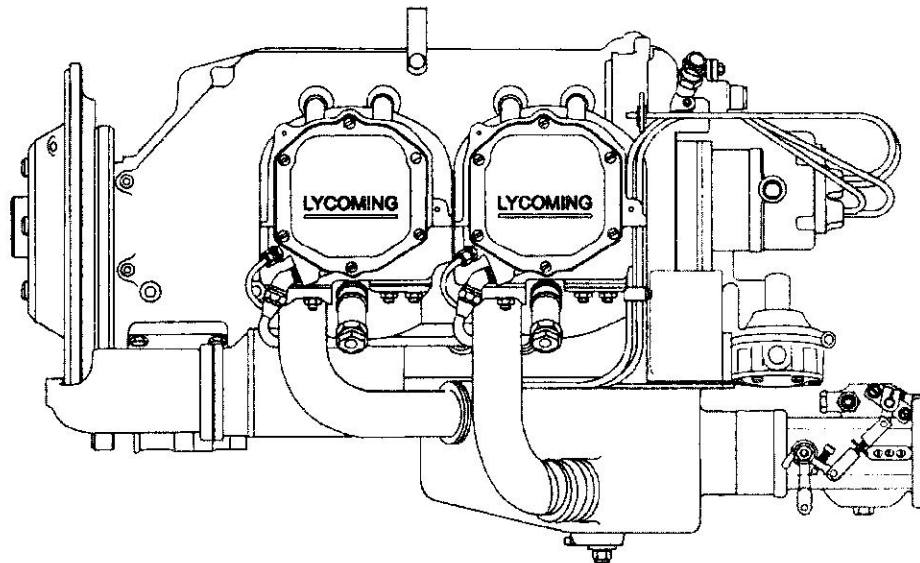


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Engine Parts Catalog

H10-360-G1A

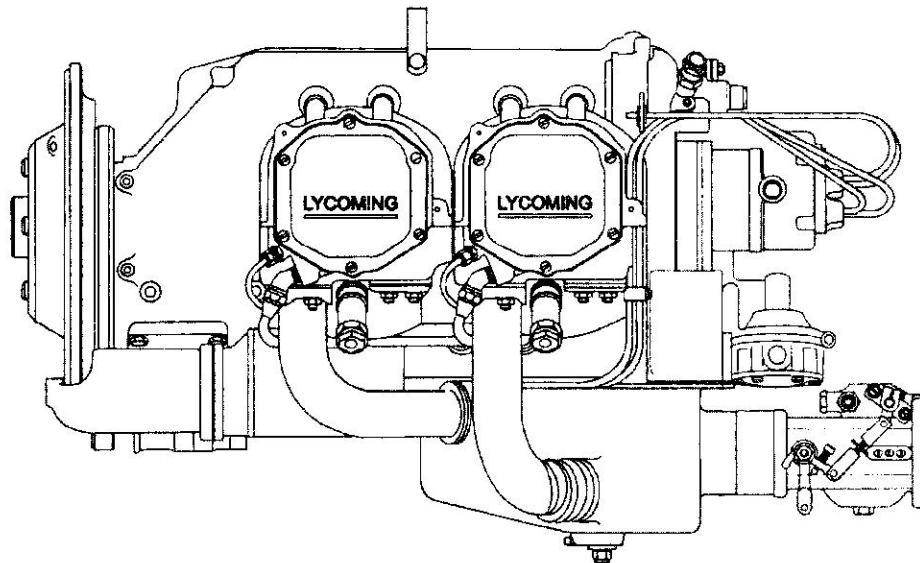
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February 2003

Part No. PC-406-6

652 Oliver Street
Williamsport, PA 17701

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Engine Parts Catalog

H10-360-G1A

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February 2003

Part No. PC-406-6

652 Oliver Street
Williamsport, PA 17701

This illustrated parts catalog contains a complete parts listing for the Lycoming HIO-360-G1A wide cylinder flange crankcase model aircraft engines.

Major assembly and sub-assembly parts of the engine 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 edition of Service Letter No. L114.

NOTE

The illustrations, pictures and drawings shown in the 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 manufacturer's 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 edition 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.

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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		X	X		X	X	X				
66610	BUSHING		X	X								
66796	INSERT		X	X								
69796	DOWEL		X									
72057	SEAT		X	X		X	X					
72058	SEAT		X	X		X	X					
72155-S	BUSHING		X	X	X	X						
74241	RING		X									
75656-S	BUSHING		X	X	X	X						
75657-S	BUSHING		X	X	X	X						
LW-11997	SEAL								X			
LW-13792	SEAL								X			
STD-1065	DOWEL	X	X	X	X							
14H21950	RING			X		X						
16R22291	GUIDE		X	X		X	X	X				
18M19389	BEARING			X						X*	X*	X*
18A19441	BEARING									X	X	X
18D23135	BEARING									X	X	X

* Also available in P10 oversize.
In addition to the above, studs are available in P03, P07 & P12.

NOTE

When ordering oversize and undersize parts, be sure to specify the required oversize and undersize dimension with the proper part number. For example, to order bearing LW-13521 in .003 undersize, order part number LW-13521-M03. 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	QUANTITY PER ASSEMBLY
1	11B20061-3SL	CRANKCASE ASSEMBLY	1
2	75154	STUD, 1/2-13 x 10-1/32 long	2
3	50-15	STUD, 1/2-13 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, dr.	1
6	31C-12	STUD, 5/16-18 x 1-1/2 long	2
7	31C-13	STUD, 5/16-18 x 1-5/8 long	1
8	STD-557	DOWEL, 1/2 dia. x 11/16 long, hollow	2
9	STD-514	DOWEL, 5/16 dia. x 1/2 long	2
10	STD-1623	INSERT, 1/4-20 UNC x 3/8 long	2
11	LW-13793	STUD, 5/16-18 x 15/16 long, dr.	1
12	69796	DOWEL, Crankshaft bearing	2
13	1102	PLUG, 1/8-27 NPT, Allen head	6
14	STD-1339	PLUG, 1/16-27 NPT	4

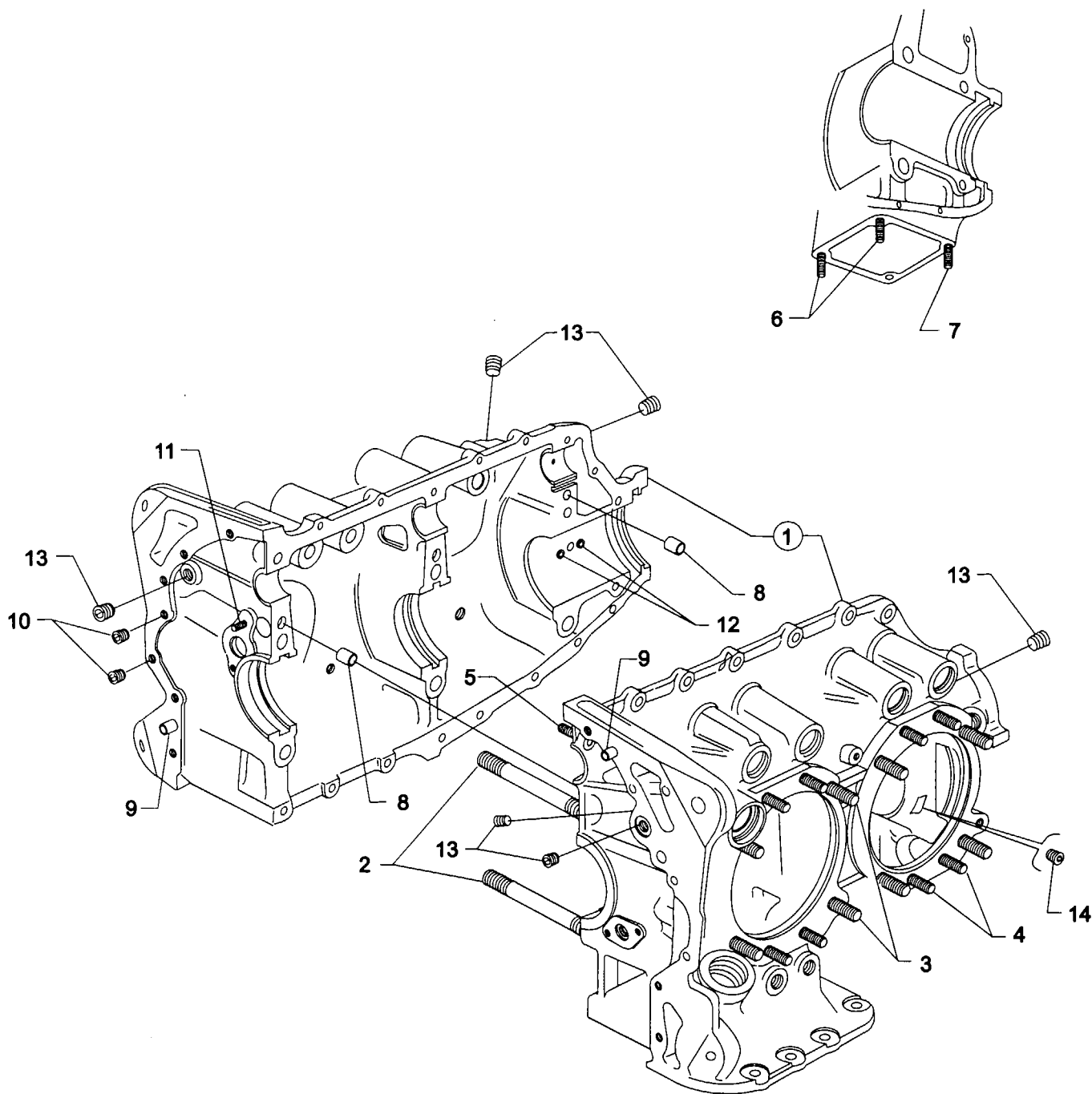


Figure 1. CRANKCASE ASSEMBLY

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

FIG. REF. 2	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	1028-B	BALL, 11/16 diameter	1
2	61084 *	SPRING, Oil pressure relief valve	1
	68668 *	SPRING, Oil pressure relief valve	1
	77467 *	SPRING, Oil pressure relief valve	1
	LW-11713 *	SPRING, Oil pressure relief valve	1
	LW-18085 *	SPRING, Oil pressure relief valve	1
3	06E19769-1.25	GASKET, 1-1/4 I.D. x 1-1/2 O.D. x 3/32 annular	1
4	77808	VALVE ASSY., Oil pressure relief valve, adj.	1
5	18D23135	BEARING, Crankshaft	4
6	18A19441	BEARING, Crankshaft, front	2
7	LW-13792 **	SEAL, Crankshaft oil, solid	1
	LW-11997 **	SEAL, Crankshaft oil, split	1
8	72075	SEAL, Oil, 3/32 section x 7/16 I.D.	2
9	72091	RING, Oil seal, 23/64 I.D. x 7/64 dia.	2
10	72877	BODY, Hydraulic tappet	8

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

** See latest edition of Lycoming Service Instruction No. 1324 for installation.

**P/N SB-1437 CAPLUG IS INSTALLED IN PLACE OF OIL LEVEL GAGE
ASSEMBLY WHICH IS SUPPLIED BY AIRFRAME MANUFACTURER.**

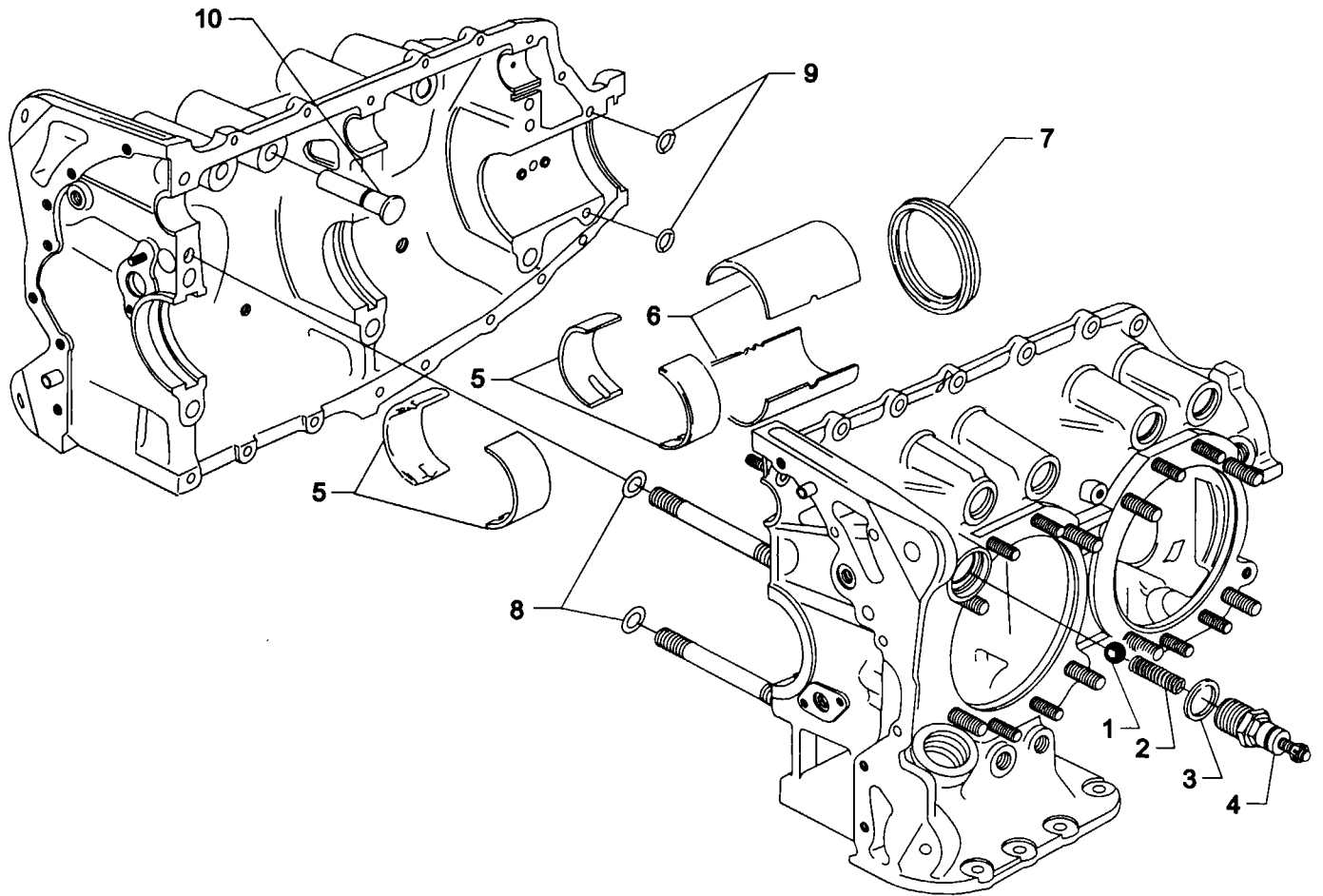


Figure 2. CRANKCASE RELATED PARTS

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP
CRANKSHAFT ASSEMBLY AND RELATED PARTS

FIG. REF. 3	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	13B27123	CRANKSHAFT AND BUSHING ASSEMBLY	1
2	STD-1065	DOWEL, Stepped, 5/16 & 1/4 dia. x 35/64 long	1
3	77416	PLUG, Crankshaft	1
4	75656-S	BUSHING, Propeller flange, long	4
5	72155-S	BUSHING, Propeller flange, short	1
6	75657-S	BUSHING, Propeller flange, indexing	1
7	13S19646 *	GEAR, Crankshaft	1
8	LW-18639	LOCKPLATE, Crankshaft gear	1
9	STD-2246	BOLT, 5/16-24 x 1.00 long	1
10	LW-16471	SUPPORT ASSY., Starter ring gear, 12/14 pitch	1
11	72566	GEAR, Starter ring	1

* See latest edition of Lycoming Service Bulletin No. 475 for proper installation.

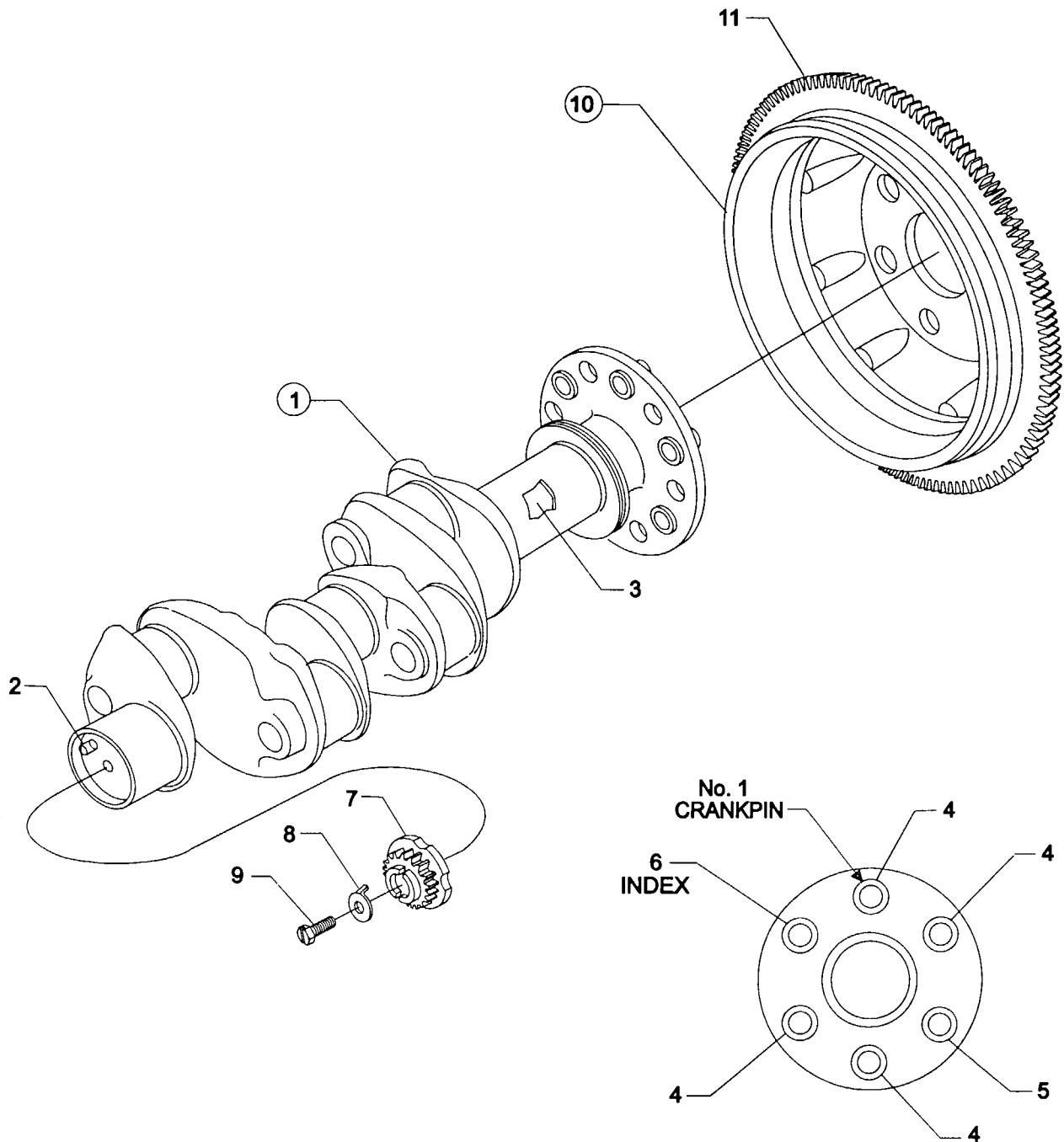


Figure 3. CRANKSHAFT ASSEMBLY AND RELATED PARTS

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP
CRANKSHAFT IDLER GEARS, TACHOMETER DRIVE AND CAMSHAFT

FIG. REF. 4	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	61544	PLUNGER, Fuel pump, long	1
2	74996	GEAR ASSY., Crankshaft idler, plain	1
3	77309	BUSHING, Crankshaft idler gear	1
4	75072	GEAR ASSY., Crankshaft idler	1
5	77309	BUSHING, Crankshaft idler gear	1
6	76121	SHAFT ASSY., Tachometer	1
7	LW-18667	PIN, 3/16 dia. x 2-21/64 long	1
8	STD-2231	RING, Internal retaining	1
9	LW-13796	SHAFT, Crankshaft idler gear	2
10	LW-31H0.88	BOLT, 5/16-18 x 7/8 long, hex. hd. dr.	3
11	STD-2168	NUT, 5/16-18 NC-3 slotted shear	1
12	LW-18840	CAMSHAFT ASSEMBLY	1
13	76118	SPACER, Tachometer shaft centering	1

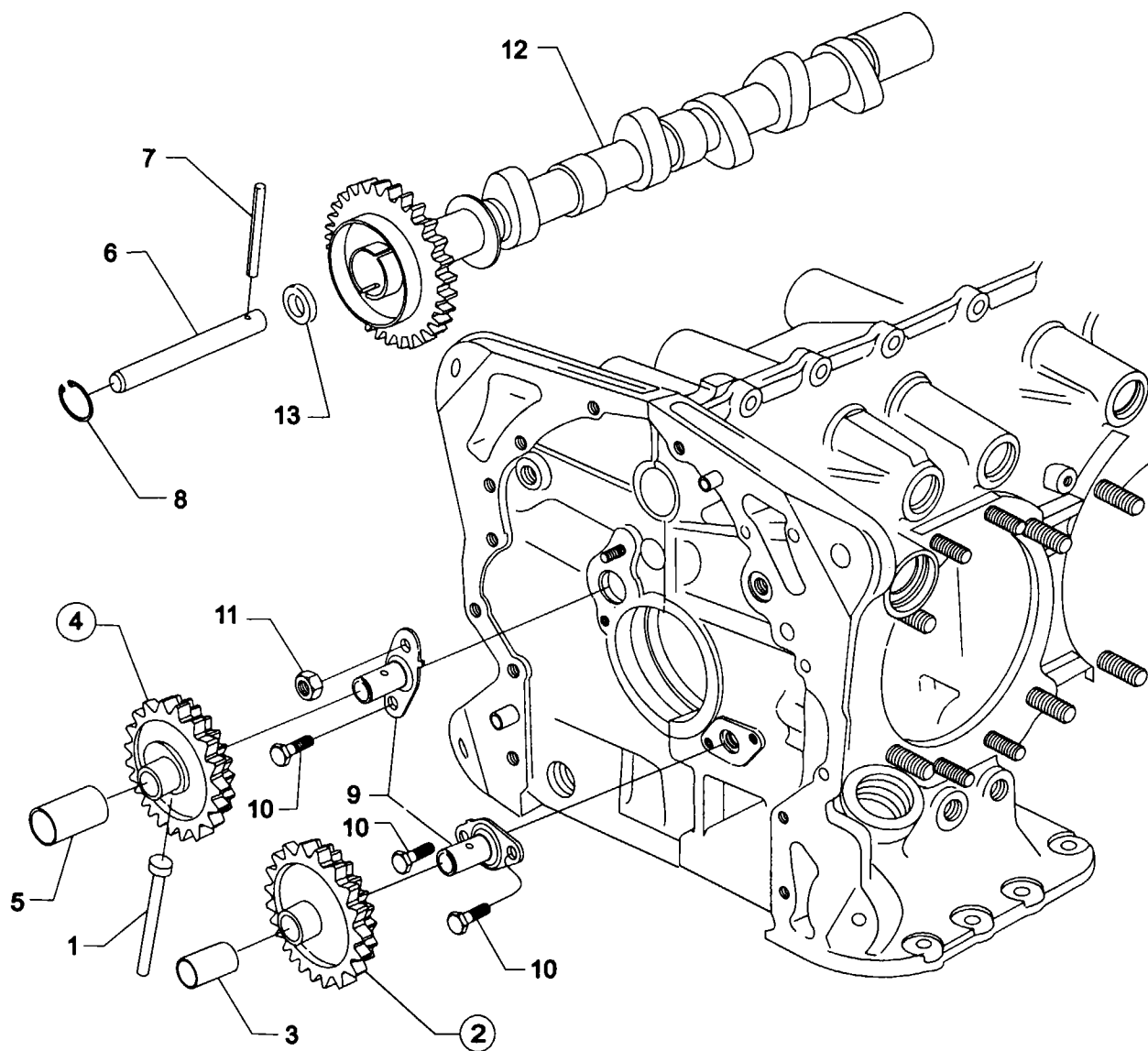


Figure 4. CRANKSHAFT IDLER GEARS, TACHOMETER DRIVE AND CAMSHAFT

**CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP
CRANKCASE ATTACHING PARTS**

FIG. REF. 5	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-25-1.50	BOLT, 1/4-20 x 1-1/2 long, hex. hd.	8
2	STD-8	WASHER, 1/4 plain	19
3	60803	STRAP, Lifting	1
4	LW-25-1.75	BOLT, 1/4-20 x 1-3/4 long, hex. hd.	1
5	LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. hd.	3
6	STD-160	WASHER, 1/4 lock, internal teeth	12
7	STD-1411	NUT, 1/4-20 plain	9
8	LW-25S1.50	BOLT, 1/4-20 x 1-1/2 long, hex. hd., dr. end	3
9	STD-8	WASHER, 1/4 plain (Max. 9)	AR
10	STD-2249	NUT, 1/4-20 slotted	3
11	STD-33	WASHER, 3/8 plain, 1/16 thick	3
12	AN960-616L	WASHER, 3/8 plain, 1/32 thick	1
13	STD-872	NUT, 3/8-24 slotted	1
14	AN6-34A	BOLT, 3/8-24 x 3-37/64 long, hex. hd.	2
15	STD-33	WASHER, 3/8 plain	2
16	STD-678	WASHER, 3/8 lock, internal teeth	2
17	STD-596	NUT, 3/8-24 plain	2
18	76220	STUD, 1/2-20 x 10-45/64 long	4

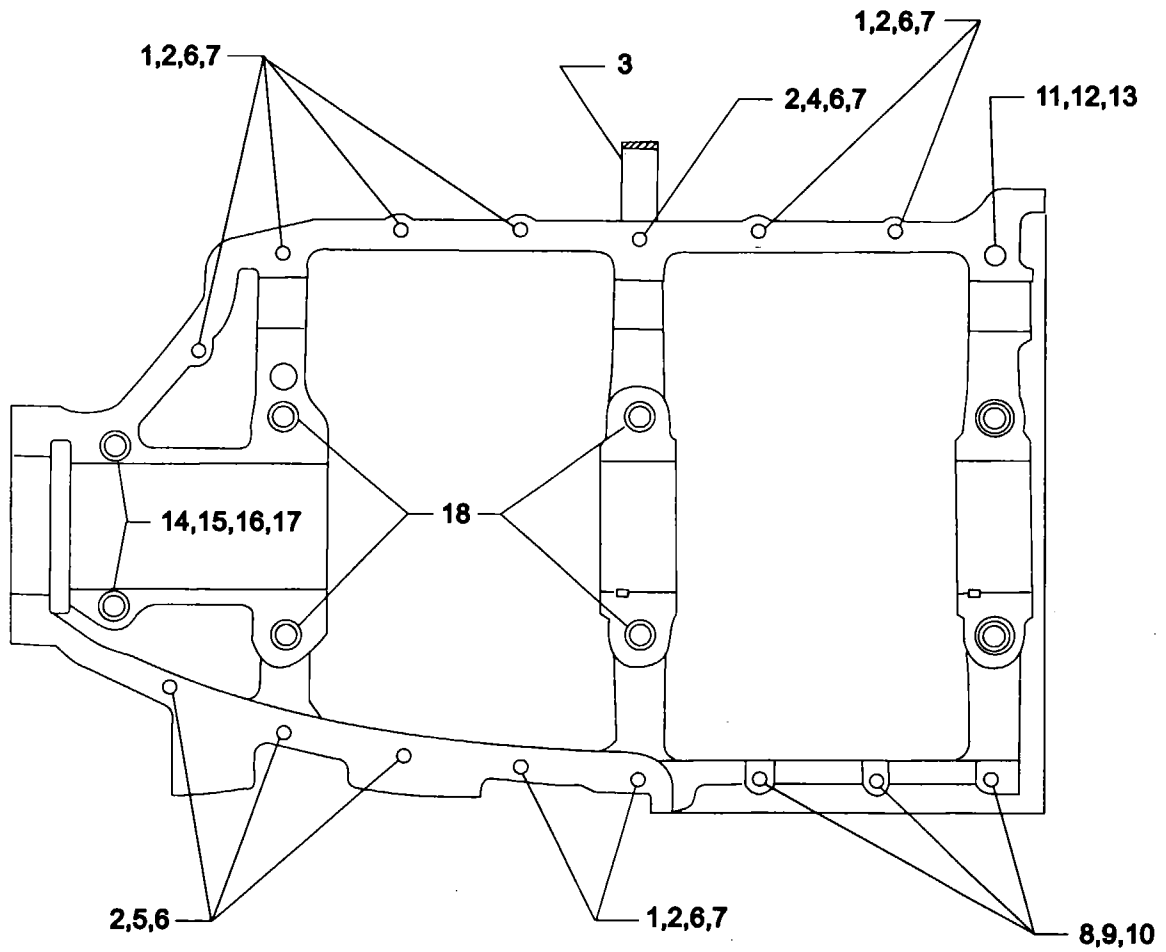


Figure 5. CRANKCASE ATTACHING PARTS

**ACCESSORY HOUSING AND RELATED PARTS
ACCESSORY HOUSING ASSEMBLY**

FIG. REF. 6	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	73818	GASKET, Accessory housing	1
2	21A21533-24	HOUSING ASSY., Accessory	1
3	25C-12	STUD, 1/4-20 x 1-1/2 long	4
4	31C-12	STUD, 5/16-18 x 1-1/2 long	4
5	31C-16	STUD, 5/16-18 x 2.00 long	4
6	31CD-17	STUD, 5/16-18 x 2-1/8 long, drilled	3
7	1102	PLUG, 1/8-27 NPT, Allen head	4
8	STD-784	PLUG, 3/8-18 NPT, Allen head	1
9	75888	STUD, 1/4-20 x 1-1/4 long	4
10	25C-11	STUD, 1/4-20 x 1-3/8 long	2

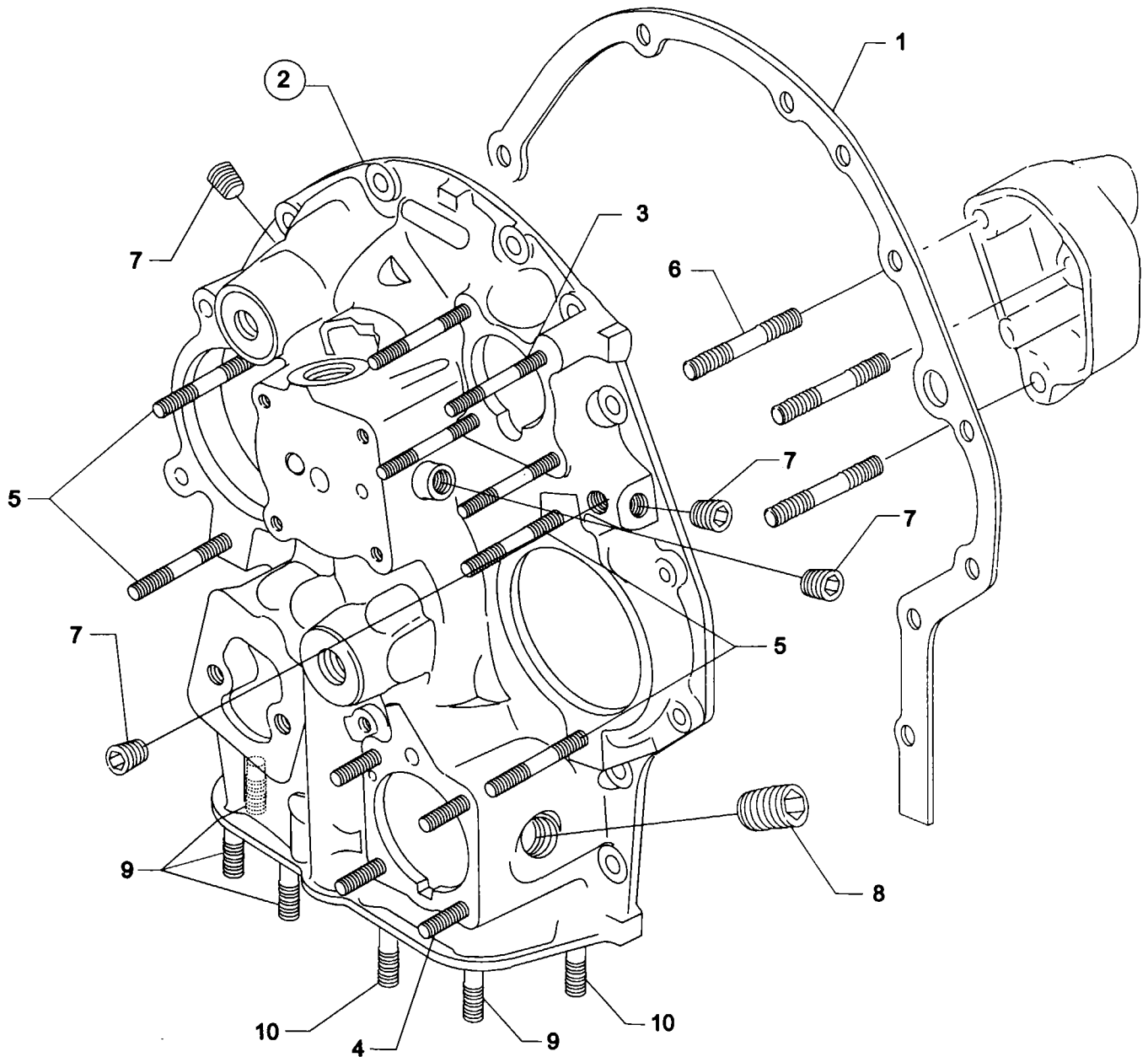


Figure 6. ACCESSORY HOUSING ASSEMBLY

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

FIG. REF. 7	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	78531	BODY ASSY., Oil pump	1
2	05K19423-S *	OIL PUMP IMPELLER KIT	1
3	61174	SHAFT, Oil pump drive	1
4	STD-35	WASHER, 5/16 plain	3
5	STD-1420	NUT, 5/16-18 slotted	3
6	LW-14260	SEAL, Tachometer drive, oil	1
7	STD-8	WASHER, 1/4 plain	12
8	STD-160	WASHER, 1/4 lock, internal teeth	12
9	LW-25-0.94	BOLT, 1/4-20 x 15/16 long, hex. hd.	9
10	LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. hd.	1
11	LW-25-1.44	BOLT, 1/4-20 x 1-7/16 long, hex. hd.	2

* To insure impellers are replaced together, oil pump impellers available in kit form only.

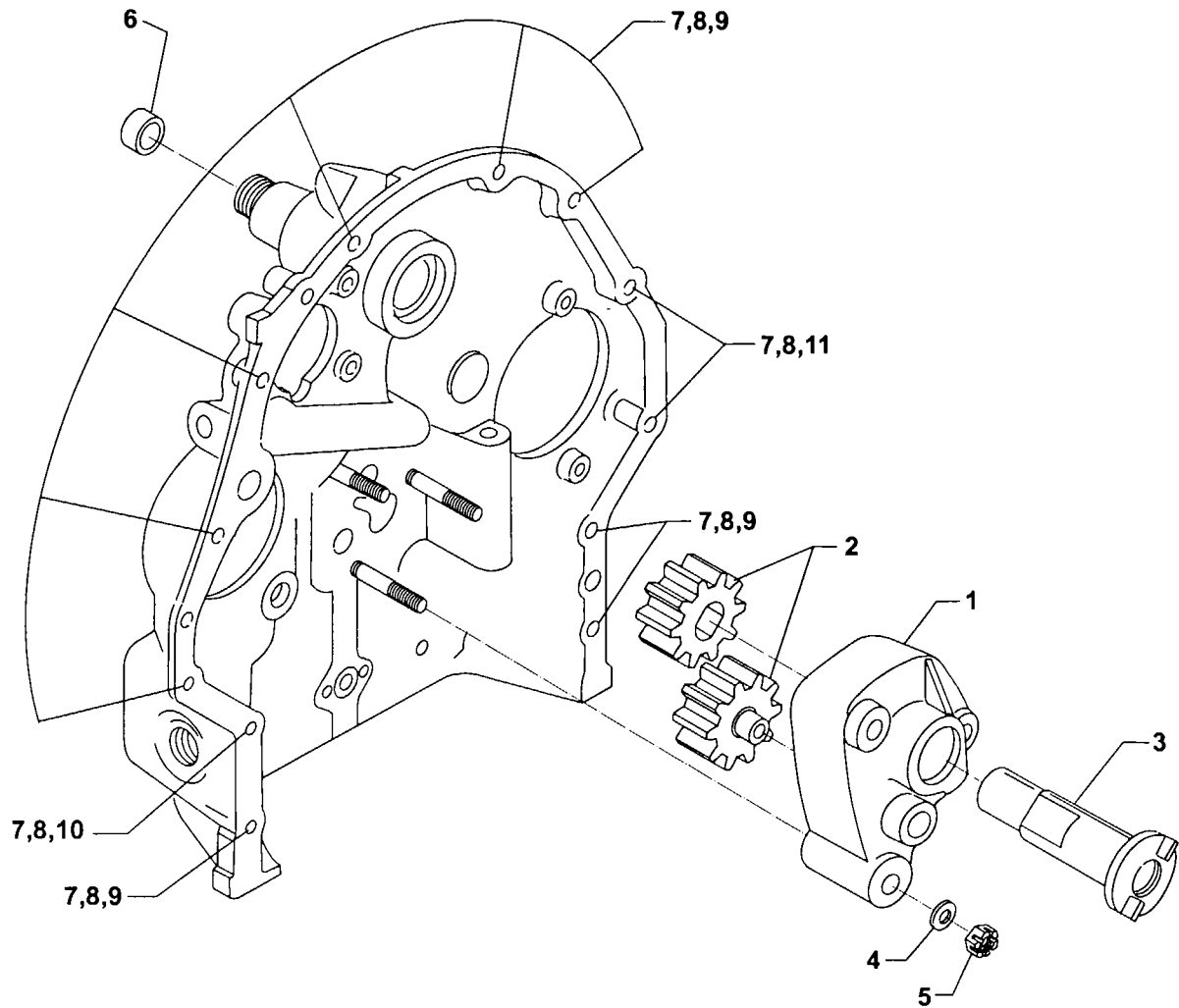


Figure 7. OIL PUMP ASSEMBLY AND ACCESSORY HOUSING ATTACHING PARTS

ACCESSORY HOUSING AND RELATED PARTS
FUEL PUMP ASSEMBLY

FIG. REF. 8	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	60096	GASKET, Fuel pump	1
2	LW-15473	FUEL PUMP, Dual diaphragm	1
3	STD-33	WASHER, 3/8 plain	2
4	STD-1882	SCREW, 3/8-16 x 1-9/32 long, socket dr.	2

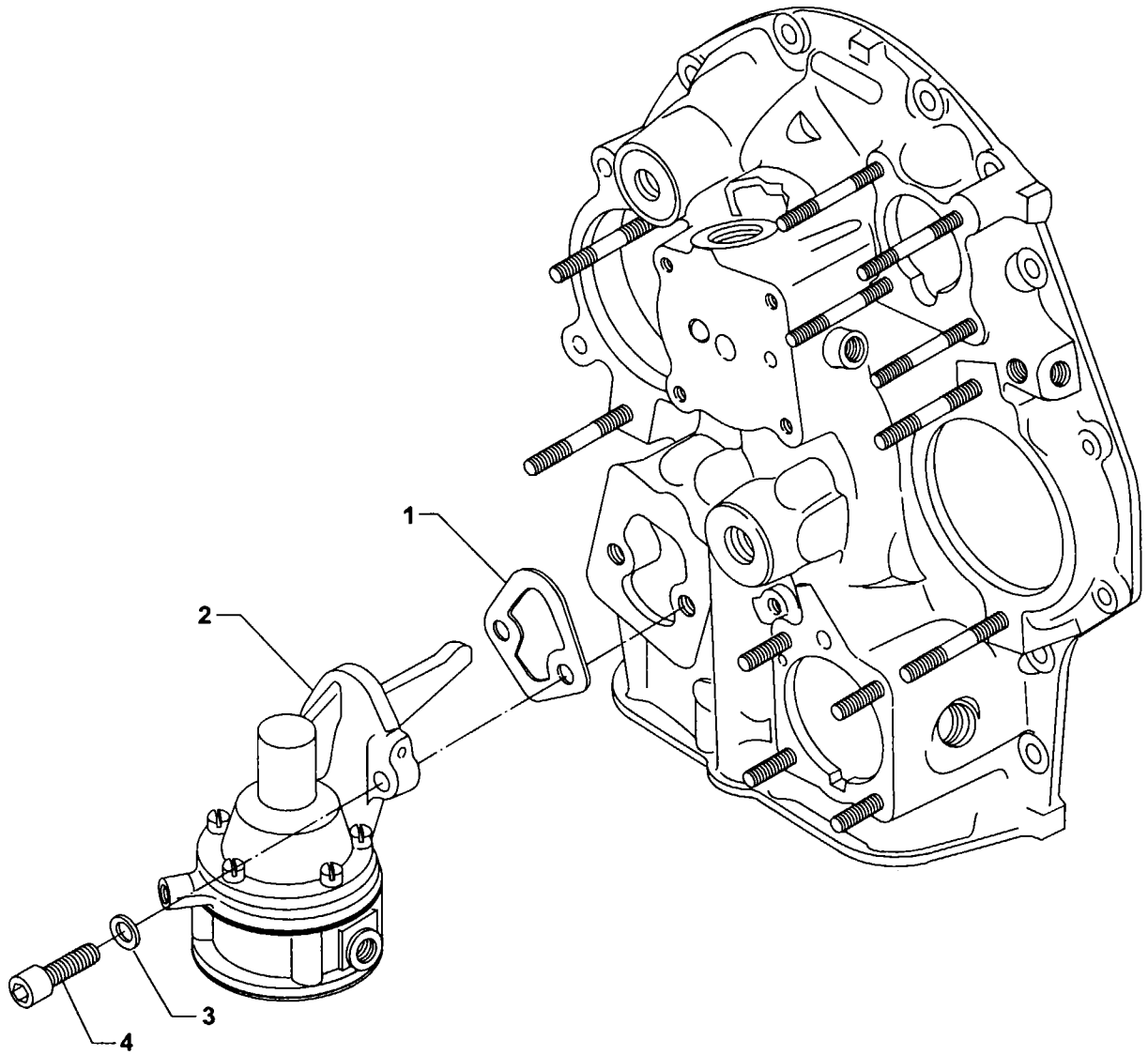


Figure 8. FUEL PUMP ASSEMBLY

ACCESSORY HOUSING AND RELATED PARTS
PROPELLER GOVERNOR AND VACUUM PUMP DRIVE COVERS

FIG. REF. 9	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	STD-783 *	PLUG, 1/4-18 NPT, Allen head	1
7	61183	GASKET, Vacuum pump	1
8	60430	COVER, Vacuum pump	1
9	STD-8	WASHER, 1/4 plain	4
10	STD-160	WASHER, 1/4 lock, internal teeth	4
11	STD-1411	NUT, 1/4-20 plain	4

* Used when no propeller governor oil line is installed.

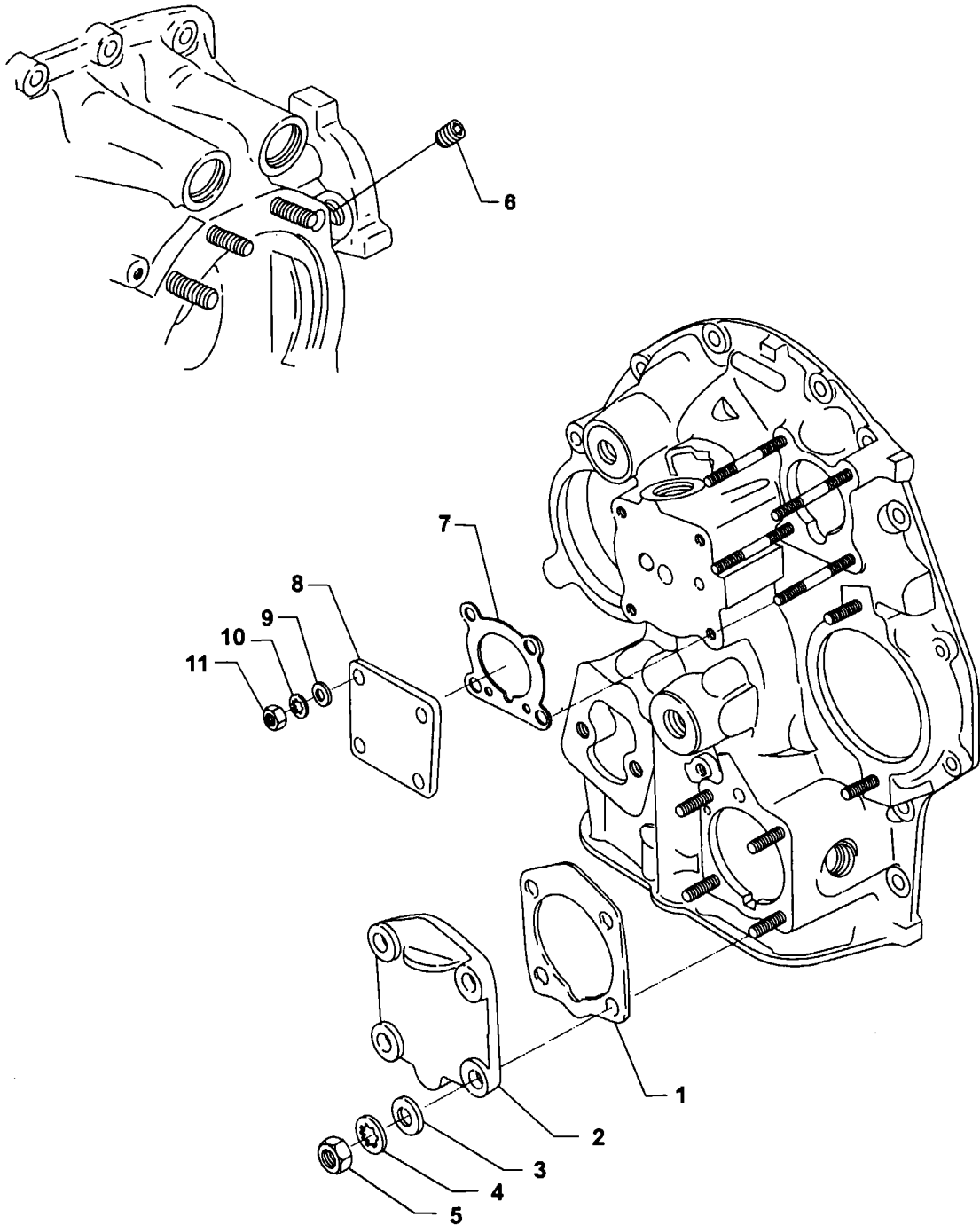


Figure 9. PROPELLER GOVERNOR AND VACUUM PUMP DRIVE COVERS

ACCESSORY HOUSING AND RELATED PARTS
REMOTE OIL FILTER COVER AND BREATHER FITTING

FIG. REF. 10	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	06B21644	GASKET, Oil filter base	1
2	21M21643	COVER, Oil filter base	1
3	STD-8	WASHER, 1/4 plain	4
4	STD-160	WASHER, 1/4 lock, internal teeth	4
5	LW-25-0.94	BOLT, 1/4-20 x 15/16 long, hex. hd.	3
6	LW-25H1.00	BOLT, 1/4-20 x 1.00 long, hex. hd., dr.	1
7	06E19769-0.63	GASKET, 7/8 O.D. x 5/8 I.D. x 3/32 annular	1
8	1540	PLUG, Thermometer well	1
9	06E19769-0.63	GASKET, 7/8 O.D. x 5/8 I.D. x 3/32 annular	1
10	62417	PLUG, Oil cooler bypass	1
11	STD-784	PLUG, 3/8-18 NPT, Allen head	2
12	71140	FITTING, Breather	1

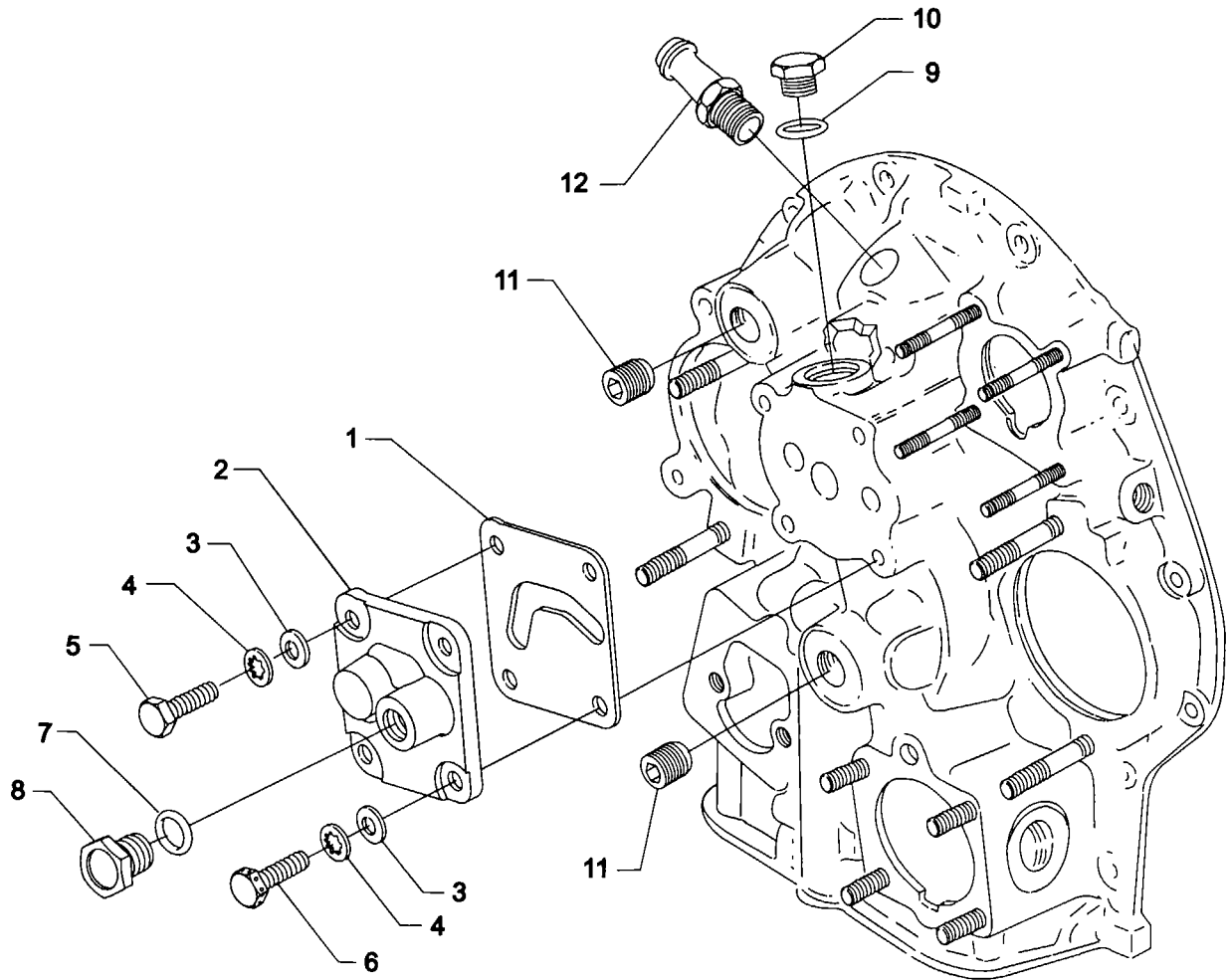


Figure 10. REMOTE OIL FILTER COVER AND BREATHER FITTING

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

FIG. REF. 11	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-11750	CONNECTING ROD ASSEMBLY	4
2	LW-13923	BUSHING, Connecting rod, upper	4
3	75061	BOLT, Connecting rod	8
4	LW-12186	NUT, Connecting rod bolt	8
5	18M19389	BEARING, Connecting rod	8
6	75089	PISTON, Compression ratio 8.50:1	4
7	LW-14078 *	PIN, Piston	4
8	72198 *	PLUG, Piston pin	8
9	74241	RING, Piston compression	8
10	14H21950	RING, Piston, oil regulating (expander type)	4

* See latest edition of Lycoming Service Instruction No. 1267.

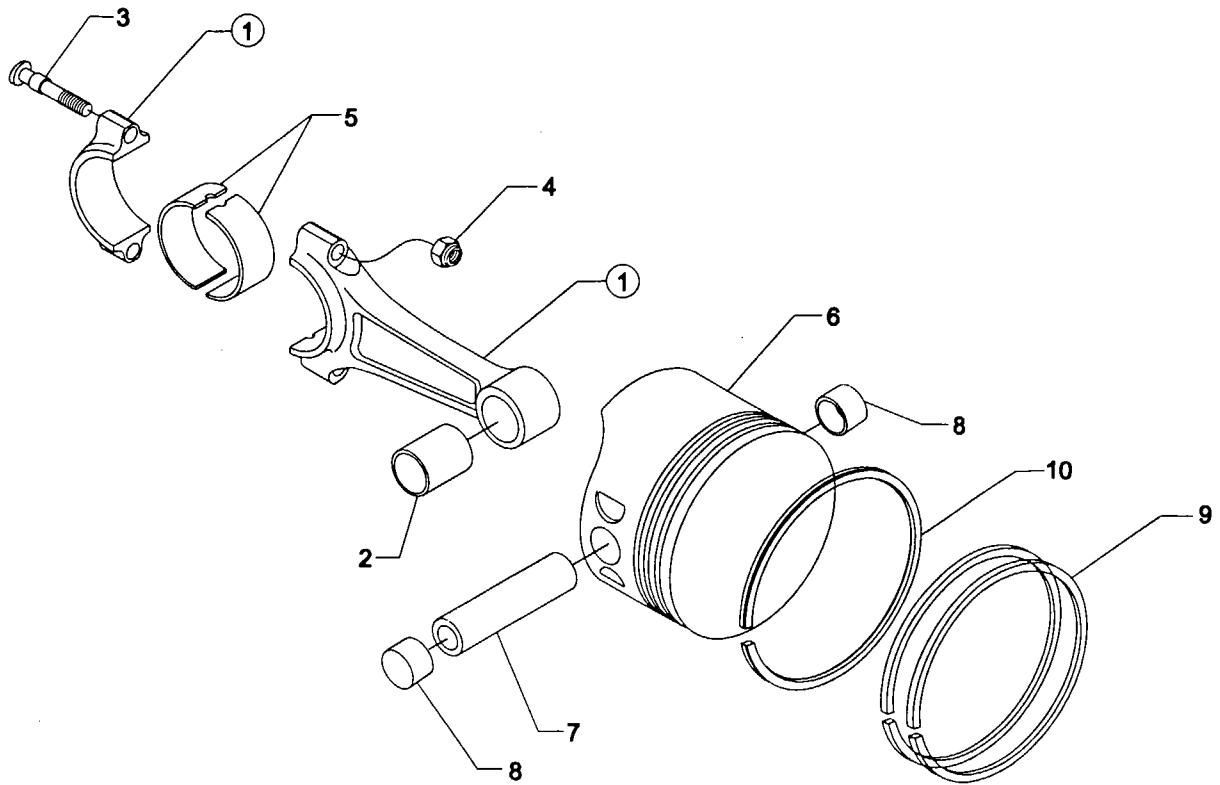


Figure 11. CONNECTING RODS, PISTONS AND RING ASSEMBLIES

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

FIG. REF. 12	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	61681 *	GUIDE, Valve intake, flanged	4
5	16R22291 *	GUIDE, Valve exhaust, flanged	4
6	66796	INSERT, Spark plug, 18-1.5 MM	8
7	STD-1353	INSERT, No. 10-24 Heli-coil x 3/8 long	4
8	31C-12	STUD, 5/16-18 x 1-1/2 long	8
9	25C-8	STUD, 1/4-20 x 1.00 long	4
10	MS20823-6D	ELBOW, 45° x 3/8 flared tube	4
11	66610	BUSHING, Rocker shaft	16
12	1102 **	PLUG, 1/8-27 NPT, Allen head	4
13	STD-35	WASHER, 5/16 plain	8
14	STD-475	WASHER, 5/16 lock, internal teeth	8
15	STD-1410	NUT, 5/16-18 plain	8

* See latest edition of Lycoming Service Instruction No. 1256.

** Assemble in cylinder head.

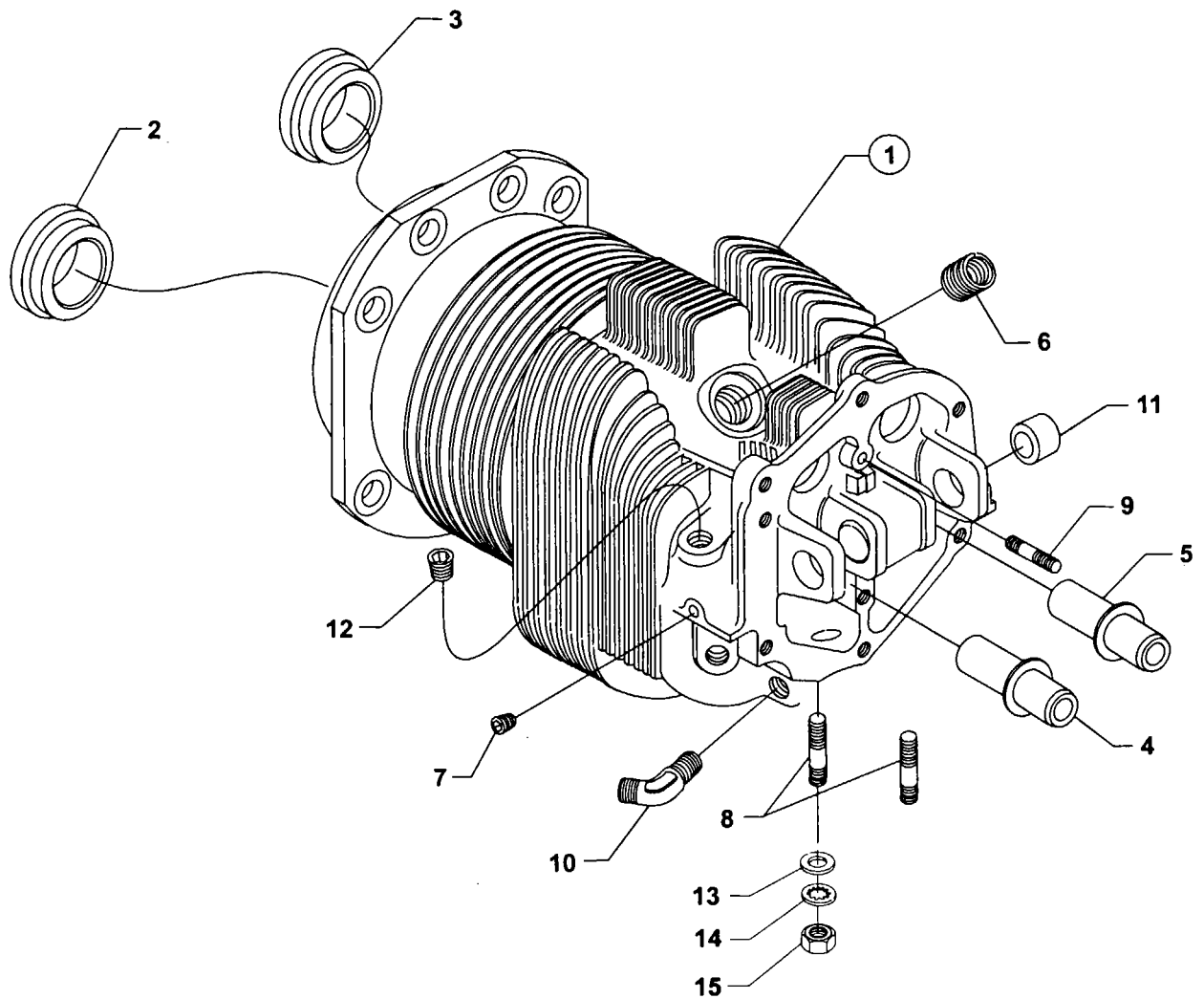


Figure 12. CYLINDER ASSEMBLY

**CYLINDER, PISTON AND VALVE TRAIN
CYLINDER RELATED PARTS**

FIG. REF. 13	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	71481	RING, Oil seal, 3/32 dia. x 4-27/32 long	4
2	74887	SPACER, 33/64 I.D. x 7/8 O.D. x 3/8 thick	2
3	383-B	NUT, 3/8-24 plain	16
4	STD-2090	NUT, 1/2-20 plain	18
5	STD-684	NIPPLE, Straight, 3/8 I.D. hose	4
6	STD-1821	HOSE, 3/8 x 2-1/2 long	4
7	LW-15592-5-05	CLAMP, Hose	8
8	68759	TUBE ASSY., Cyl. head oil drain, cyl. no. 1	1
9	68760	TUBE ASSY., Cyl. head oil drain, cyl. no. 2	1
10	68761	TUBE ASSY., Cyl. head oil drain, cyls. no. 3 & 4	2
11	75339	BAFFLE ASSY., Intercylinder	2
12	71611	RETAINER, Intercylinder baffle	2
13	71610	HOOK, Intercylinder baffle retainer	2
14	75906	GASKET, Rocker box cover	4
15	61247	COVER, Rocker box	4
16	STD-1925	SCREW, 1/4-20 x 5/8 long, pan. hd., self-locking	24

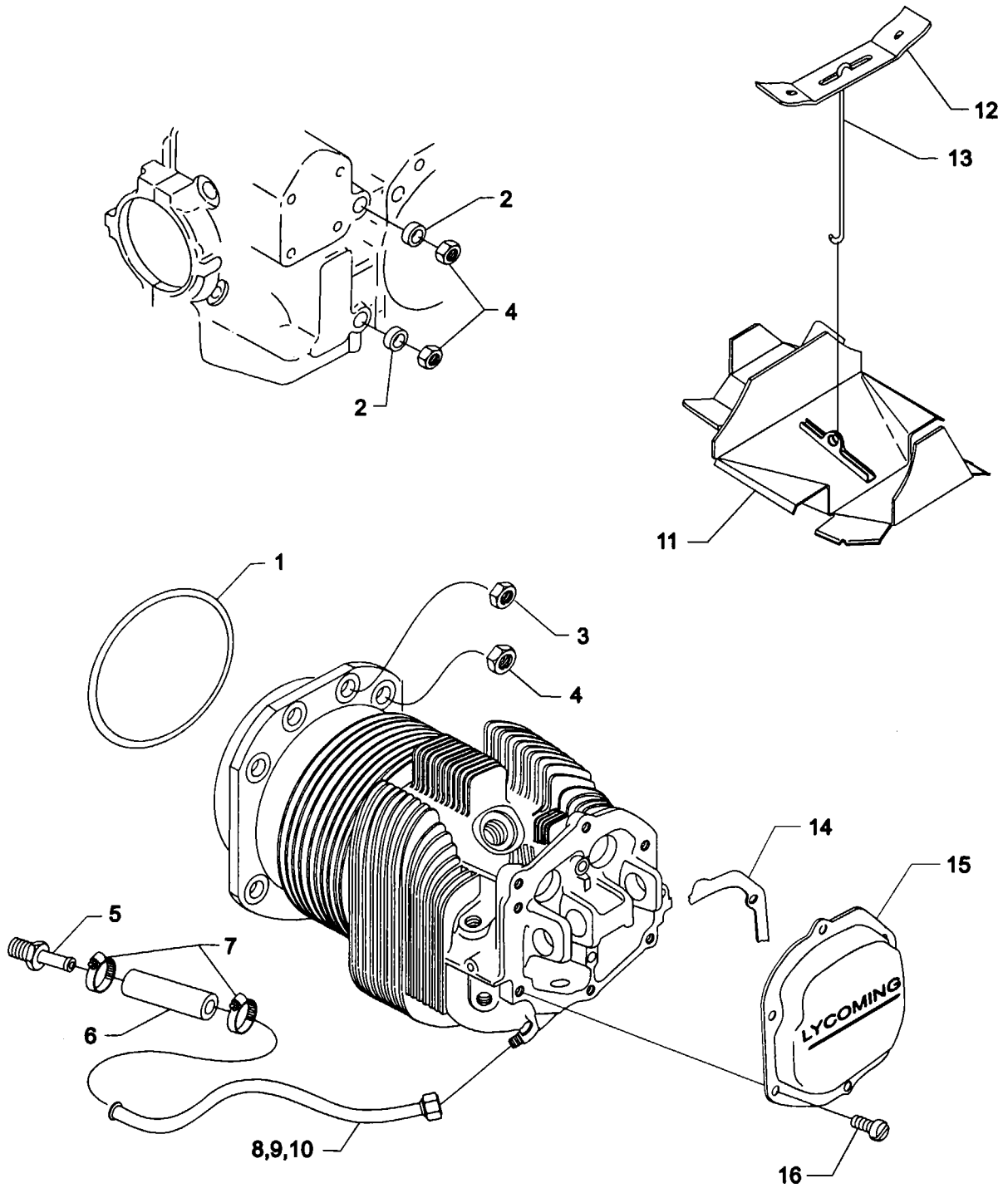


Figure 13. CYLINDER RELATED PARTS

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

FIG. REF. 14	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	73938	VALVE, Intake	4
2	LW-19001	VALVE, Exhaust (rotator type)	4
3	LW-11795	SPRING, Valve, inner	8
4	LW-11800	SPRING, Valve, outer	8
5	LW-10077	SEAT, Valve spring, upper intake	4
6	65441	SEAT, Valve spring, lower intake	4
7	LW-13323	SEAT, Valve spring, lower exhaust	4
8	LW-16475	SEAT, Valve spring, upper exhaust (rotator type)	4
9	60009	KEY, Valve, intake	8
10	17C21191	KEY, Valve, exhaust (rotator type)	8
11	17C19386	CAP, Valve stem, exhaust (rotator type)	4
12	78290	PLUNGER ASSY., Hydraulic tappet	8
13	15B21319	SOCKET, Hydraulic tappet	8
14	LW-11485	SHROUD TUBE ASSY., Push rod	8
15	LW-14995	SPRING, Shroud tube	4
16	LW-12272	LOCKPLATE, Shroud tube	4
17	STD-1411	NUT, 1/4-20 plain	4
18	LW-18661	SEAL, Shroud tube	8
19	70310	SEAL, Shroud tube	8
20	15F19957-34 *	ROD ASSY., Push (A total of 8 required)	AR
	15F19957-35 *	ROD ASSY., Push (A total of 8 required)	AR
	15F19957-36 *	ROD ASSY., Push (A total of 8 required)	AR
	15F19957-37 *	ROD ASSY., Push (A total of 8 required)	AR
21	17F19357 **	ROCKER ASSY., Valve	8
22	74637	BUSHING, Valve rocker	8
23	LW-13790	SHAFT, Valve rocker	4
24	LW-12892	THRUST BUTTON, Rocker shaft	8

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

** Due to the size of the area where the part number is stamped, the last five digits may be all that is shown (19357).

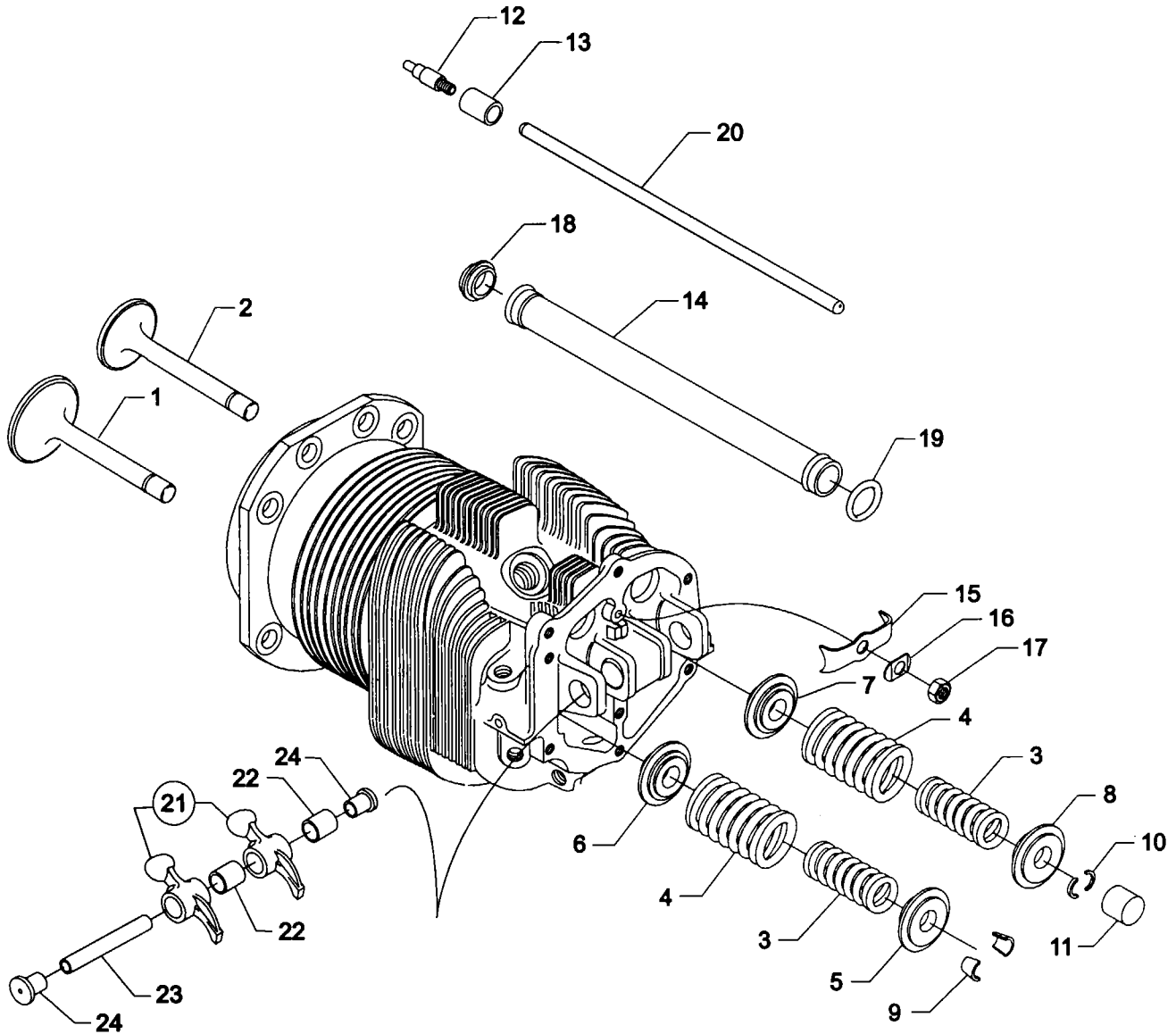


Figure 14. VALVE ASSEMBLY

IGNITION SYSTEM

SLICK MAGNETOS, MAGNETO DRIVES, SLICK HARNESES AND SPARK PLUGS

FIG. REF. 15	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	STD-713	COTTER PIN, 3/32 dia. x 3/4 long	2
2	LW-12681	GASKET, Magneto	2
3	62224	GASKET, Magneto adapter	2
4	68N23130	ADAPTER ASSY., Magneto drive	2
5	LW-14228	GEAR, Retainer, magneto drive	2
5A	05B22779	BEARING, Duplex	2
6	LW-14910	COUPLING, Magneto drive	2
7	LW-14230	CUSHION, Magneto drive	4
8	66GP-OSANN	MAGNETO, Plain, Right, Slick Model 4370	1
9	66GR25SANN	MAGNETO, Retard, Left, Slick Model 4347	1
10	67P20400	HARNESS ASSY., Right, Slick Model M-2976	1
11	67P20403	HARNESS ASSY., Left, Slick Model M-2977	1
12	66M21195	CLAMP, Magneto	4
13	STD-475	WASHER, 5/16 lock, internal teeth	4
14	STD-1410	NUT, 5/16-18 plain	4
15	1182-J7 *	SPARK PLUG, Champion (REM38S) or Auburn (SR83P)	8
	72280	SPARK PLUG HOLE PLUG	8
**	01P19762-9-48	BAG, Magneto harness attaching	1

* Item No. 13 spark plugs are used in current production only. Additional spark plugs are available for this engine. See latest edition of Lycoming Service Instruction No. 1042 for complete listing of all approved spark plugs.

** See page 4-2 for breakdown of individual parts contained in the magneto and harness attaching parts bag. These parts are to be attached by customer per engine drawing included in each bag.

MAGNETO ISOLATION DRIVE Kit P/N LW-15436 available.

P/N 01P19762-9-48

LW-16266-25-25	CLIP, One wire	4
76734	ZIP STRAP	4
73152	BRACKET, Support	1
LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long	2
LW-14875	BRACKET, Extension	1

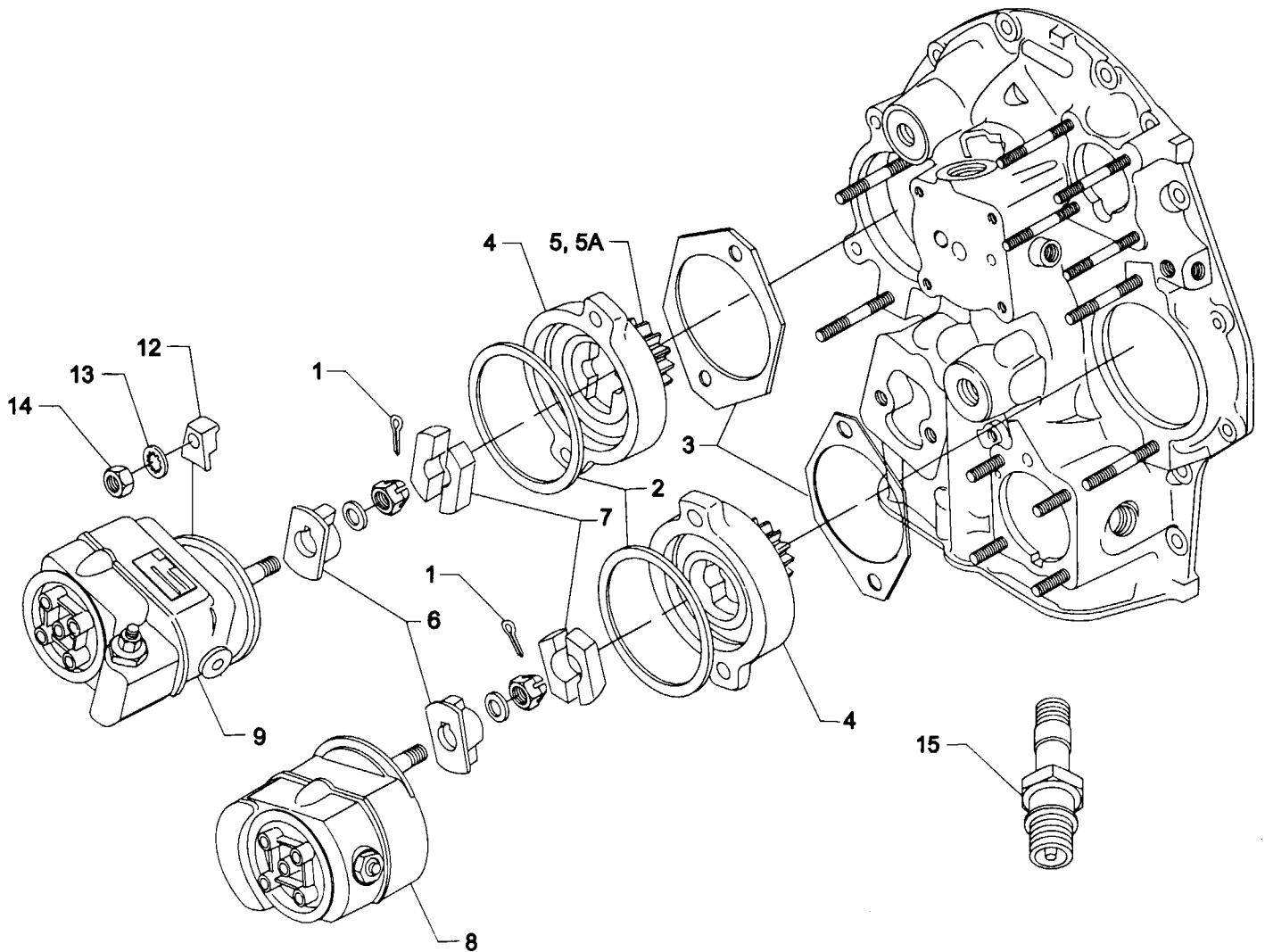
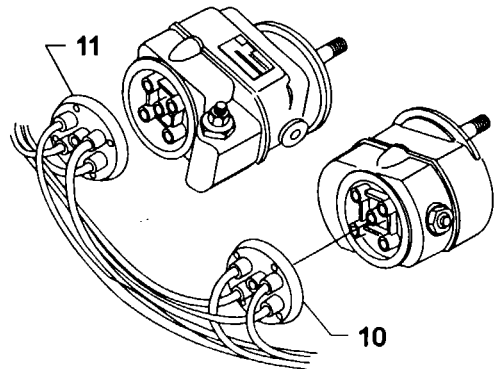


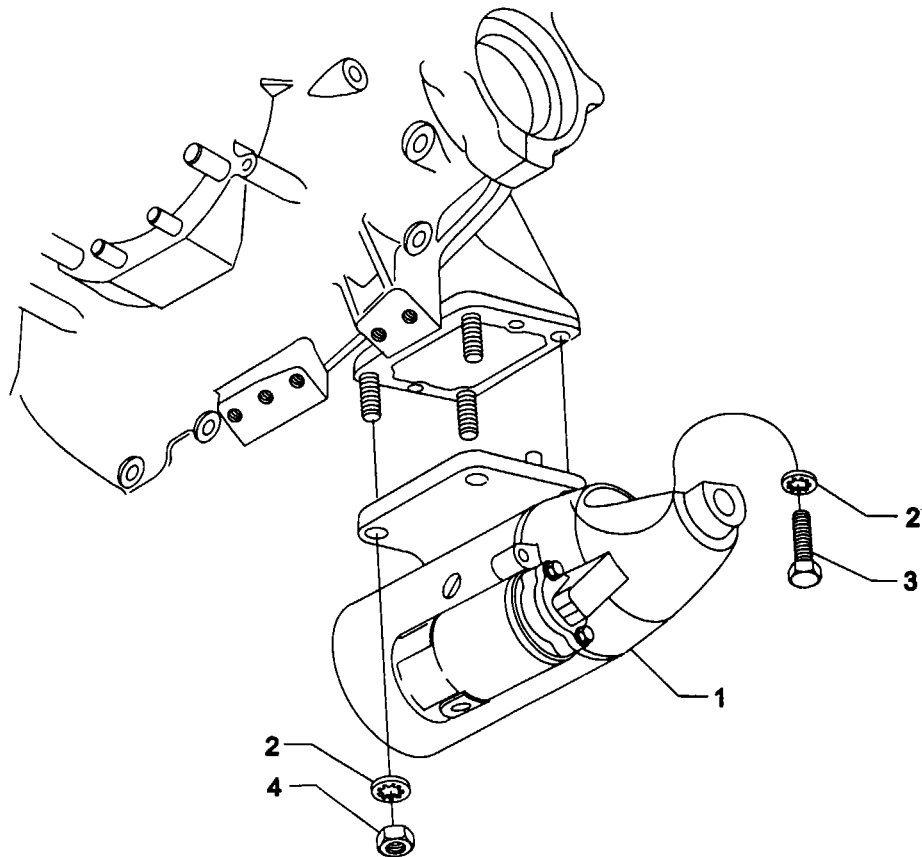
Figure 15. SLICK MAGNETOS, MAGNETO DRIVES, SLICK HARNESSES AND SPARK PLUGS

ELECTRICAL SYSTEM
SKY-TEC STARTER AND ATTACHING PARTS

FIG. REF. 16	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	31B22111	STARTER, Sky-Tec (149-24 HT)	1
2	STD-475	WASHER, 5/16 lock, internal teeth	4
3	LW-31-0.94	BOLT, 5/16-18 x 15/16 long, hex. hd.	1
4	STD-1410	NUT, 5/16-18 plain	3

NOTE

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

**Figure 16. SKY-TEC STARTER AND ATTACHING PARTS**

ELECTRICAL SYSTEM ALTERNATOR ASSEMBLY AND BELT

FIG. REF. 17	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	32C19553	ALTERNATOR ASSY., 24 volt, 70 amp.	1
2	LW-14326	ALTERNATOR, (ALU-8521-LS)	1
3	36B19484	PULLEY, Alternator	1
4	37A19773-376	BELT, Alternator drive, 3/8 wide	1

NOTE

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

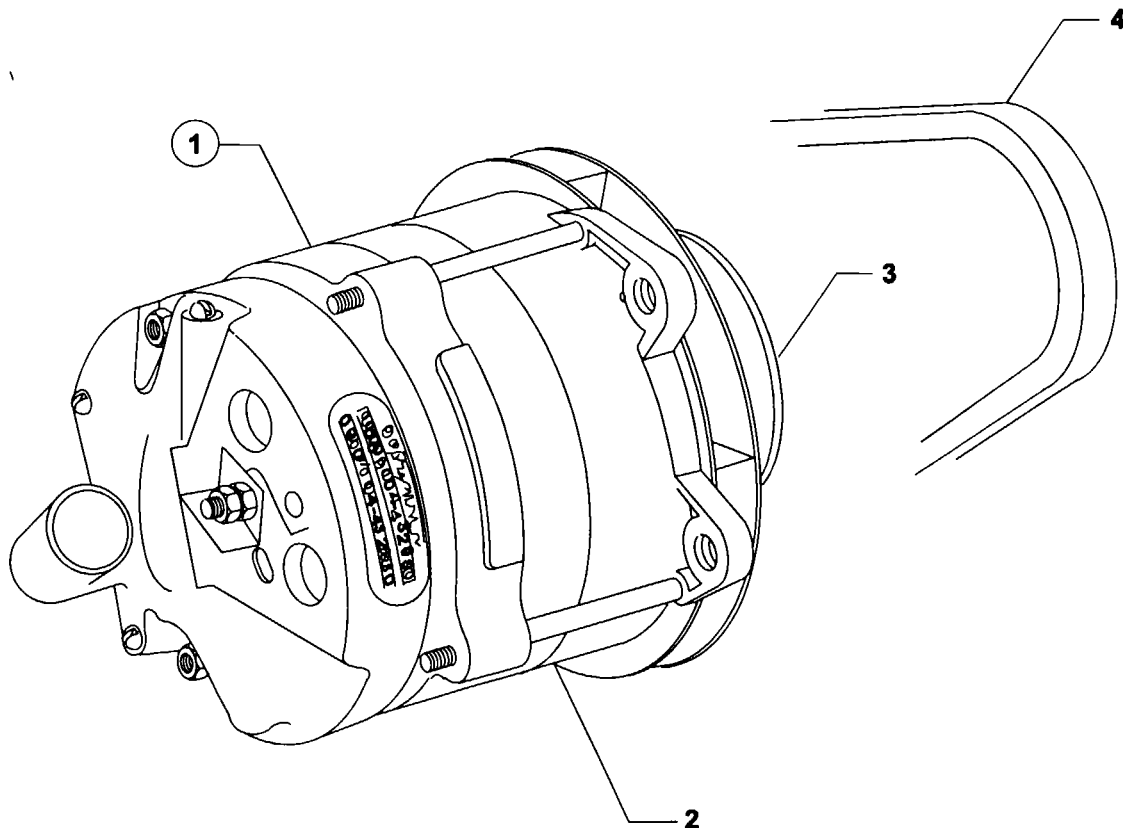


Figure 17. ALTERNATOR ASSEMBLY AND BELT

**ELECTRICAL SYSTEM
ALTERNATOR MOUNTING AND ATTACHING PARTS**

FIG. REF. 18	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-10382	BRACKET, Alternator	1
2	73383	LOCKPLATE, 5/16 bolt x 1.00 spacing	1
3	LW-31-0.94	BOLT, 5/16-18 x 15/16 long, hex. hd.	2
4	75380	LINK, Alternator adjusting	1
5	STD-35	WASHER, 5/16 plain	1
6	LW-31H0.75	BOLT, 5/16-18 x 3/4 long, hex. hd. dr.	1
7	STD-1727	WASHER, Plain, 3/4 O.D. x 11/32 I.D. x 1/8 thick	1
8	LW-31H0.75	BOLT, 5/16-18 x 3/4 long, hex. hd. dr.	1
9	74323	STRUT, Alternator support	1
10	LW-31H0.75	BOLT, 5/16-18 x 3/4 long, hex. hd. dr.	1
11	STD-690	WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick	1
12	AN6-14	BOLT, 3/8-24 x 1-37/64 long, hex. hd., drilled end	1
13	STD-690	WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick	1
14	STD-872	NUT, 3/8-24 slotted	1
15	STD-713	COTTER PIN, 3/32 dia. x 3/4 long	1
16	AN6-16	BOLT, 3/8-24 x 1-53/64 long, hex. hd., drilled end	1
17	76534	SHIM, 1-1/8 O.D. x 25/64 I.D. x 1/16 thick	3
18	STD-690	WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick	1
19	STD-872	NUT, 3/8-24 slotted	1
20	STD-713	COTTER PIN, 3/32 dia. x 3/4 long	1

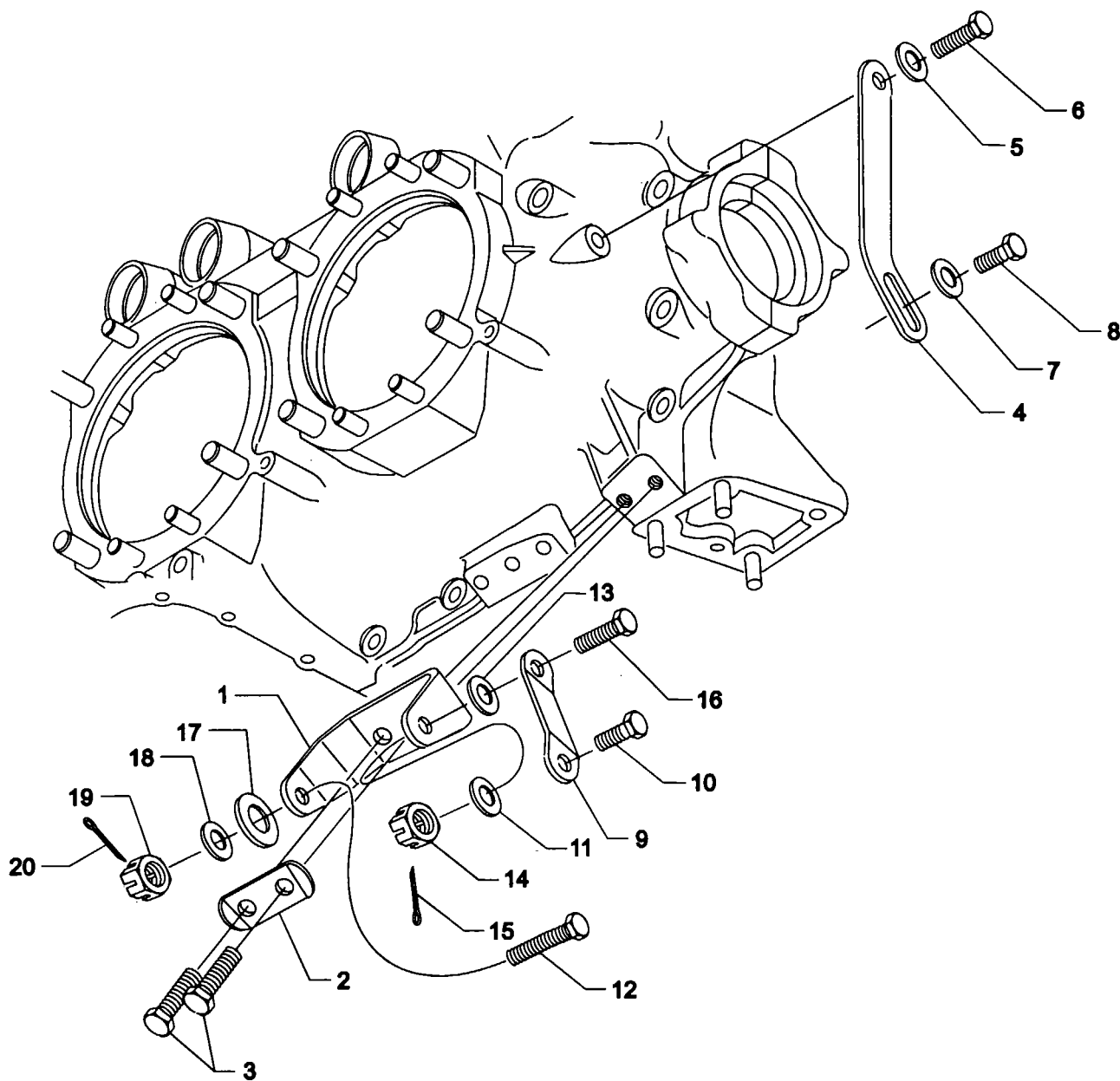


Figure 18. ALTERNATOR MOUNTING AND ATTACHING PARTS

**OIL SUMP AND INDUCTION SYSTEM
OIL SUMP ASSEMBLY AND OIL SUCTION SCREEN**

FIG. REF. 19	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-13353	GASKET, Oil sump	1
2	56A23292	SUMP ASSEMBLY, Oil	1
3	69602	CONNECTION, Intake pipe	4
4	61400	STUD, 1/4-20 x 1-3/16 long	4
5	31C-24	STUD, 5/16-18 x 3.00 long	2
6	31C-27	STUD 5/16-18 x 3-3/8 long	2
7	STD-551	PLUG, 1/2-14 NPT, Sq. hd., drilled	1
8	STD-8	WASHER, 1/4 plain	27
9	STD-160	WASHER, 1/4 lock, internal teeth	19
10	LW-25-0.94	BOLT, 1/4-20 x 15/16 long, hex. hd.	7
11	LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. hd.	2
12	STD-1411	NUT, 1/4-20 plain	17
13	LW-25-1.25	BOLT, 1/4-20 x 1-1/4 long, hex. hd.	1
14	STD-2044	NUT, 1/4-20 self-locking	1
15	73152	BRACKET, Support clamp	1
16	STD-8	WASHER, 1/4 plain	4
17	70484	SCREEN, Oil suction	1
18	06E19769-1.00	GASKET, 1.00 I.D. x 1-1/4 O.D. x 3/32 annular	1
19	LW-12545	PLUG, 5/8 hex. hd. x 1.00-20 thread	1

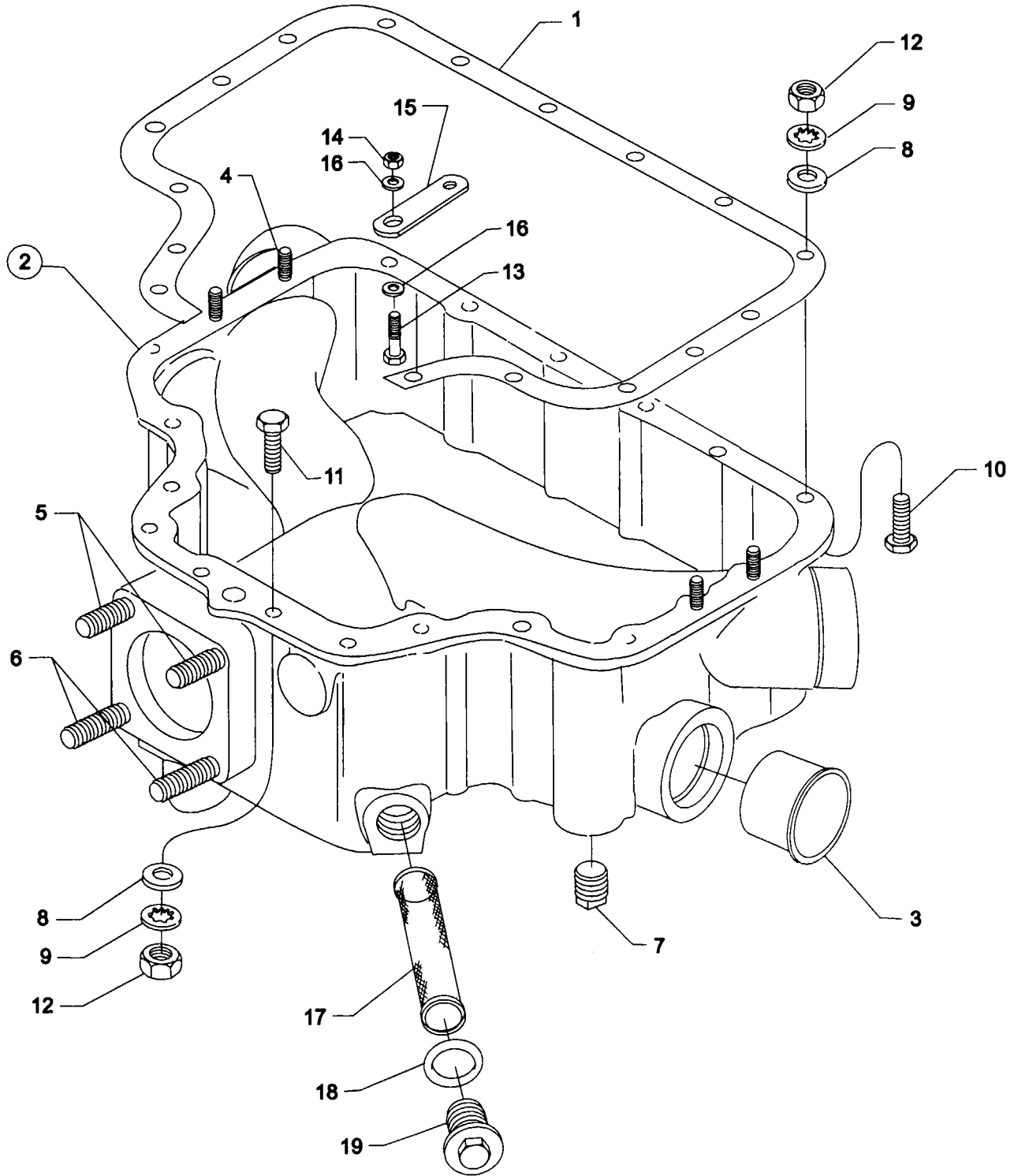


Figure 19. OIL SUMP ASSEMBLY AND OIL SUCTION SCREEN

**OIL SUMP AND INDUCTION SYSTEM
INTAKE PIPES AND ATTACHING PARTS**

FIG. REF. 20	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	71712	PIPE, Intake, cyls. 1 & 2	2
	71713	PIPE, Intake, cyls. 3 & 4	2
2	69603	HOSE, 1-3/4 I.D. x 2-3/16 O.D. x 1-3/4 long	4
3	LW-15592-8-28	CLAMP, Hose	8
4	71973	GASKET, 2 bolt flange, 1-3/4 I.D.	4
5	73346	FLANGE, Intake pipe, upper	4
6	STD-8	WASHER, 1/4 plain	8
7	STD-160	WASHER, 1/4 lock, internal teeth	8
8	LW-25-1.25	BOLT, 1/4-20 x 1-1/4 long, hex. hd.	8
9	74139 *	ADAPTER ASSY., Fuel drain valve	2

* Parts shipped loose.

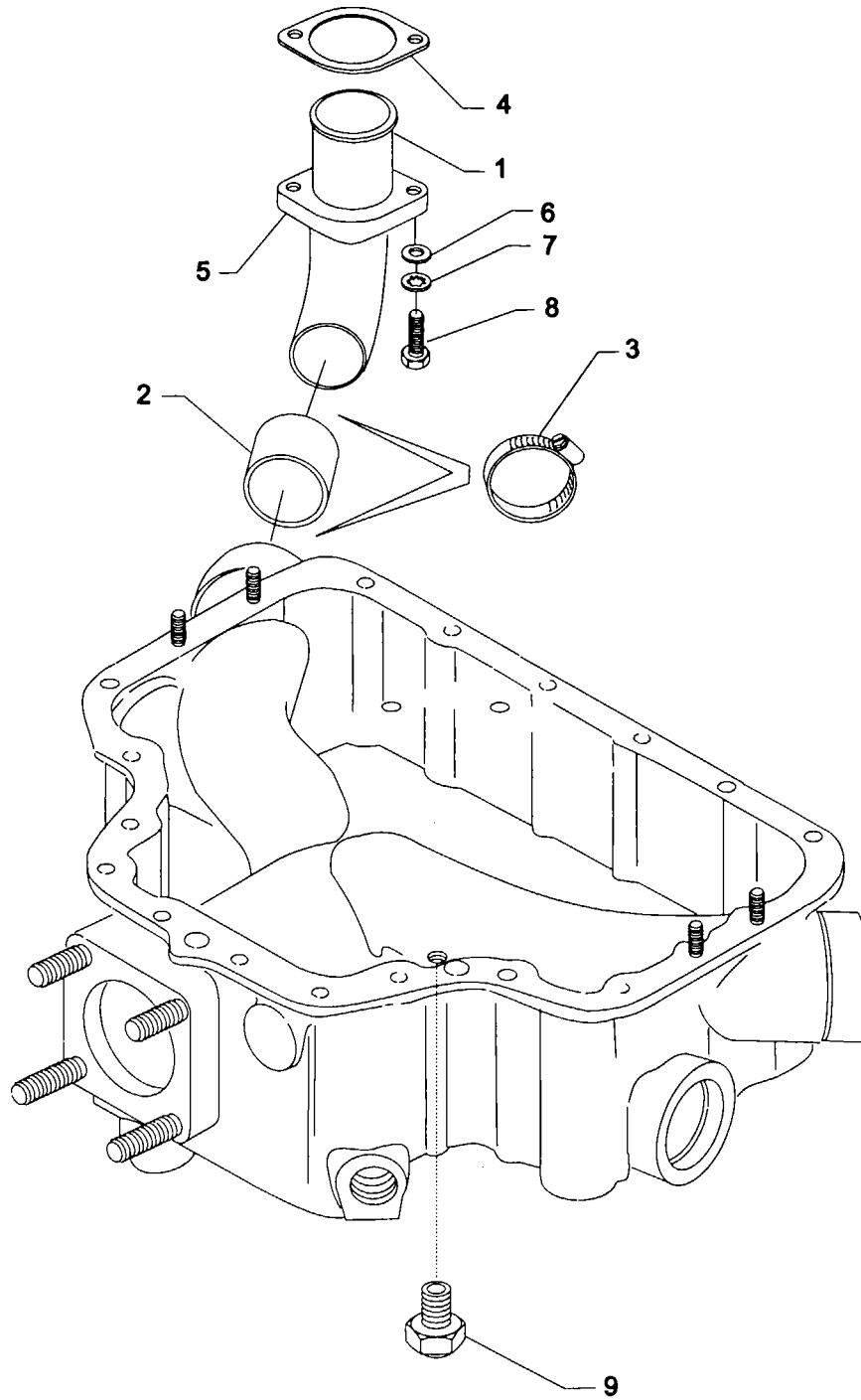


Figure 20. INTAKE PIPES AND ATTACHING PARTS

**OIL SUMP AND INDUCTION SYSTEM
FUEL INJECTOR, FUEL MANIFOLD AND INJECTION NOZZLES**

FIG. REF. 21	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	66224 *	GASKET, Fuel injector	2
2	74842 *	SPACER, Fuel injector	1
3	61J23286 *	FUEL INJECTOR (2576586-1)	1
4	74070 *, **	ELBOW, 3/8 flared tube x 9/16-18	1
5	STD-35 *	WASHER, 5/16 plain	4
6	STD-1410 *	NUT, 5/16-18 plain	4
7	STD-475 *	WASHER, 5/16 lock, internal teeth	4
8	LW-12799-6S144 *, ■	HOSE ASSY., 3/8 hose, straight	1
9	LW-18265	NOZZLE, Injection	4
10	MS29512-04	"O" RING	1
11	AN924-4	NUT, 1/4 tube bulkhead	1
12	75095	DIVIDER, Fuel nozzle line	1

* Parts shipped loose.

** Requires P/N MS29512-06 O-ring.

■ Fuel pump outlet to fuel injector inlet.

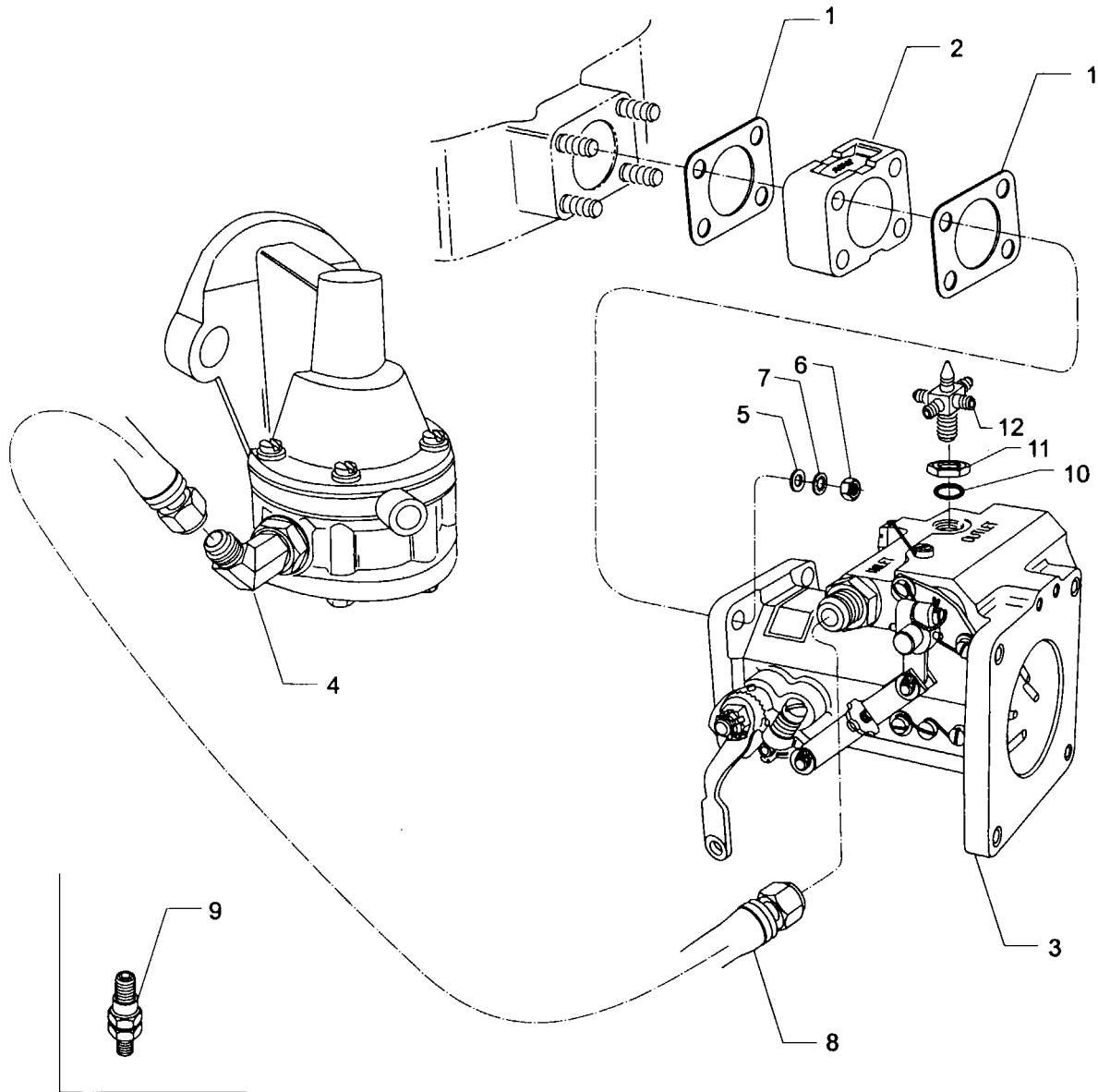


Figure 21. FUEL INJECTOR, FUEL MANIFOLD AND INJECTION NOZZLES

**OIL SUMP AND INDUCTION SYSTEM
FUEL LINES AND ATTACHING PARTS**

FIG. REF. 22	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-12098-0-350	TUBE ASSY., Fuel manifold to nozzle, cyl. no. 1	1
2	LW-12098-0-412	TUBE ASSY., Fuel manifold to nozzle, cyl. no. 2	1
3	LW-12098-0-300	TUBE ASSY., Fuel manifold to nozzle , cyl. no. 3	1
4	LW-12098-0-390	TUBE ASSY., Fuel manifold to nozzle, cyl. no. 4	1
5	73136	BRACKET, Extension, fuel inj. line	2
6	73966	SPACER, Fuel line	6
7	LW-16266-25-13	CLAMP	6
8	LW-16266-10-13	CLAMP, 1/8 dia. for No. 10 screw	8
9	STD-692	SCREW, No. 10-32 x 1/2 long, rd. hd.	2
10	LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. hd.	2
11	STD-8	WASHER, 1/4 plain	7
12	STD-160	WASHER, 1/4 lock, internal teeth	2
13	STD-670	LOCKNUT, No. 10-32	4
14	STD-425	WASHER, No. 10 plain	2
15	STD-1411	NUT, 1/4-20 plain	2
16	STD-1916	SCREW, 1/4-20 x 1-1/8 long, fill. hd.	6
17	STD-860	SCREW, No. 10-32 x 5/8 long, fill. hd.	2

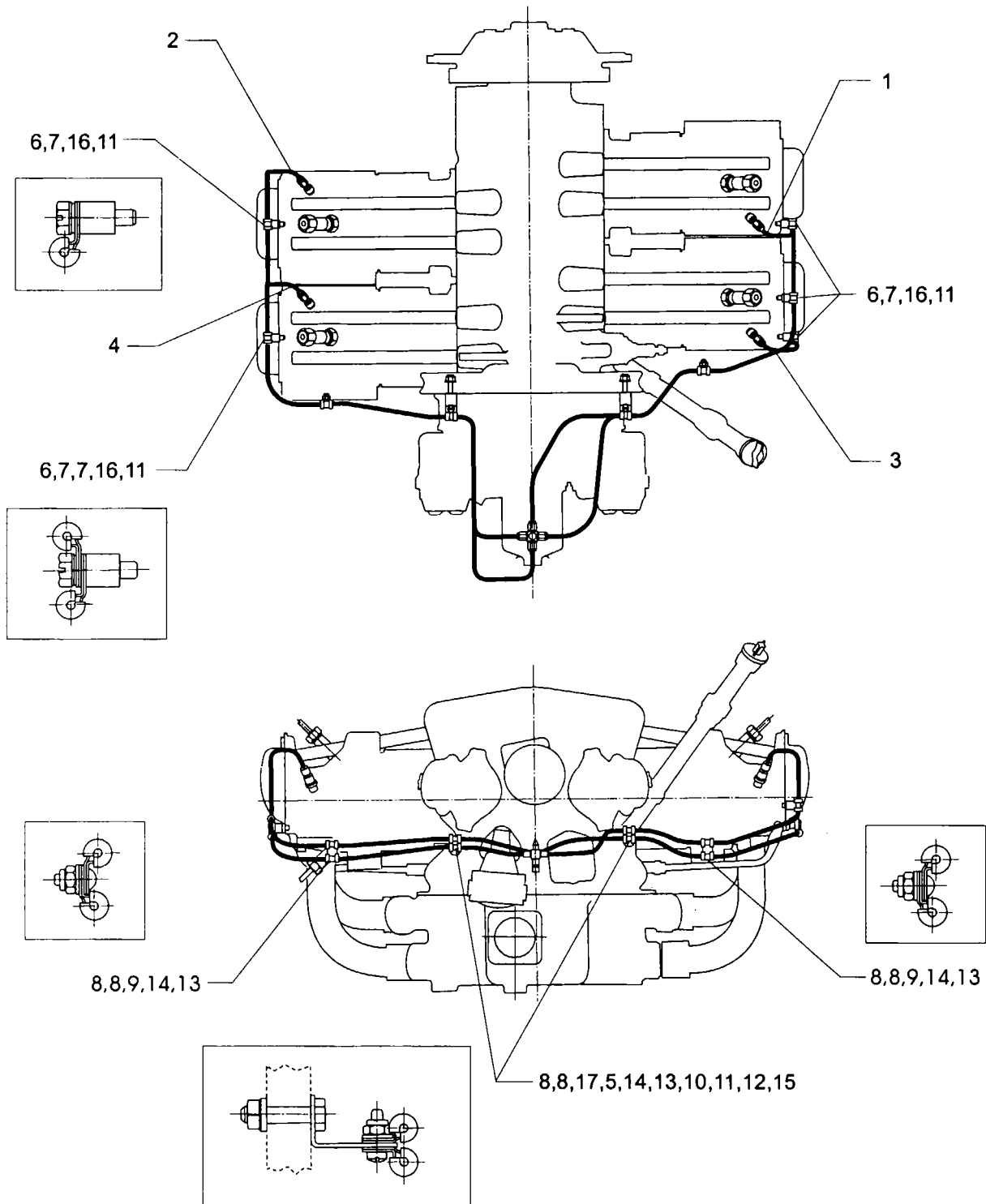


Figure 22. FUEL LINES AND ATTACHING PARTS

SERVICE KIT SECTION SEAL AND GASKET SET

Part No.	Part Name	Qty.
05K23418	KIT – SEAL AND GASKET SET	1
LW-12272	LOCKPLATE, Shroud tube	4
LW-12681	GASKET, Magneto	2
LW-13353	GASKET, Sump	1
LW-13792	SEAL, Crankshaft (solid)	1
LW-14230	CUSHION, Magneto	4
LW-14260	SEAL, Tachometer drive oil	1
LW-14995	SPRING, Shroud tube	4
LW-18639	LOCKPLATE, Crankshaft gear	1
LW-18661	SEAL, Shroud tube	8
MS29512-04	“O” RING	1
MS29512-06	“O” RING	1
STD-1821	HOSE, Cylinder drain	4
STD-2231	RING, Internal retaining	1
06E19769-0.63	GASKET, Annular	2
06E19769-1.00	GASKET, Annular	1
06E19769-1.25	GASKET, Annular	1
06B21644	GASKET, Oil filter base	1
60096	GASKET, Fuel pump	1
61183	GASKET, Vacuum pump adapter	1
62224	GASKET, Magneto adapter	2
66224	GASKET, Carburetor	1
69551	GASKET, Governor pad	1
69603	HOSE, Intake pipe	4
70310	SEAL, Shroud tube	8
71481	“O” RING, Cylinder base	4
71973	GASKET, Intake flange	4
72075	“O” RING	2
72091	“O” RING	2
73383	LOCKPLATE, Alternator	1
73818	GASKET, Sump	1
75906	GASKET, Rocker box	4

SERVICE KIT SECTION CYLINDER, PISTON AND RING KIT

Part No.	Part Name	Qty.
05K21104	KIT - CYLINDER, PISTON AND RING ASSY.	1
LW-12427	CYLINDER 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
65441	SEAT, Valve spring, lower intake	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
14H21950	RING, Piston, oil regulating	1
LW-14078	PIN, Piston	1
60828	PLUG, Piston pin	2
71481	RING, Oil seal	1
LW-18661	SEAL, Shroud tube	2
70310	SEAL, Shroud tube	2
75906	GASKET, Rocker box cover	1
72198	PLUG, Piston pin	2
77611	GASKET, Exhaust	1
71973	GASKET, 2 bolt flange	1
LW-12272	LOCKPLATE, Shroud tube	1
SSP-299	TAG	1

SERVICE KIT SECTION CRANKCASE ASSY. AND THRU STUD KIT

Part No.	Part Name	Qty.
11B20061-3SL-S	KIT, CRANKCASE ASSY. AND THRU STUD	1
11B20061-3SL	CRANKCASE ASSEMBLY	1
STD-1339	PLUG, 1/16 pipe	4
STD-2090	NUT	2
1102	PLUG, 1/8 pipe	6
74887	SPACER	2
76220	THRU STUD	4
SSP-582	TAG (Thin wall bearing)	1
SSP-272	TAG (Piston cooling nozzles)	1

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STD-596	Nut	1-9	31C-12	Stud	2-1
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STD-678	Washer	1-9	31C-13	Stud	1-1
STD-684	Nipple	3-5	31C-16	Stud	2-1
STD-690	Washer	5-3	31C-24	Stud	6-1
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