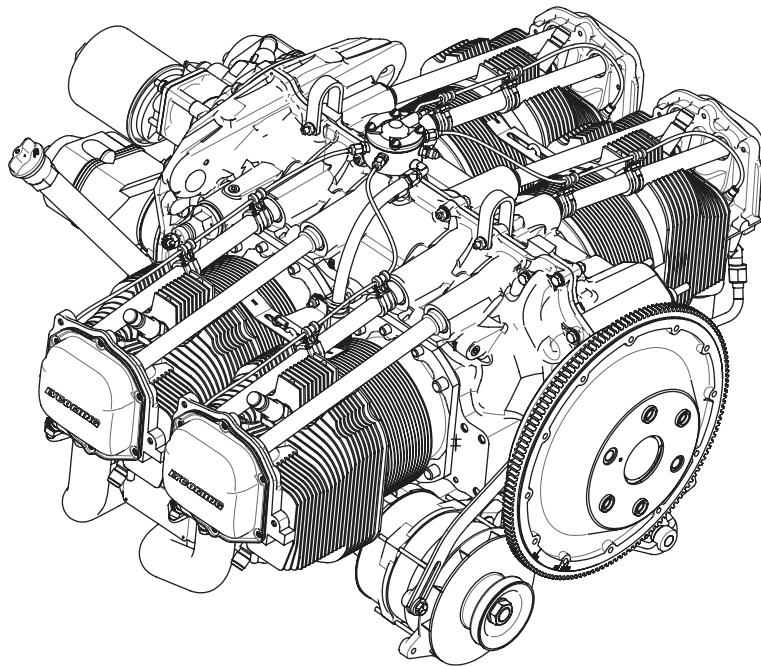


Lycoming Aircraft Engines Parts Catalog

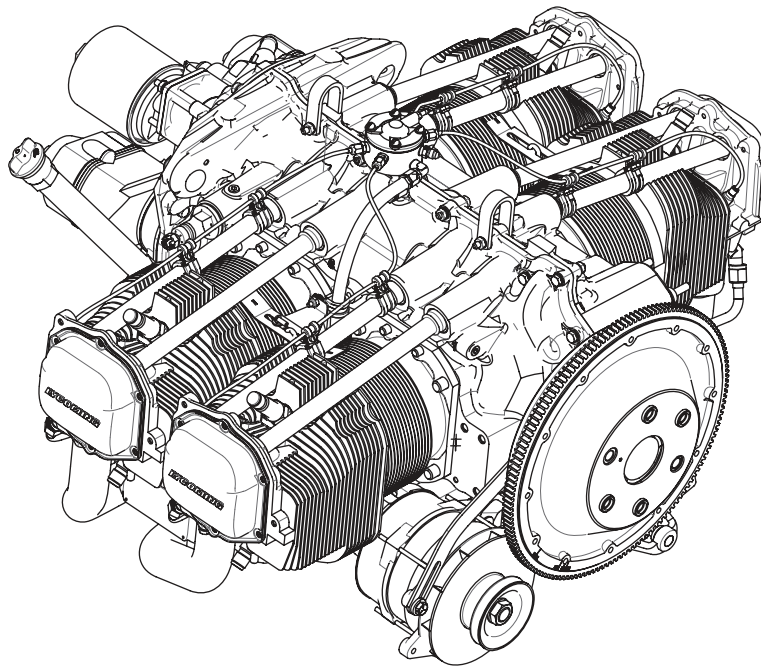


O-360-A4P

Wide Cylinder Flange Crankcase Model Engines

LYCOMING

Lycoming Aircraft Engines Parts Catalog



O-360-A4P

Wide Cylinder Flange Crankcase Model Engines

LYCOMING

This illustrated parts catalog contains a complete parts listing for the Lycoming O-360-A4P wide 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 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	P05	P10	P15	P20	P30	P40	P50	M03	M06	M10
		.002	.005	.010	.015	.020	.030	.040	.050	.003	.006	.010
61681	GUIDE	See Latest Edition of Service Instruction No. 1256.										
66610	BUSHING		X	X								
66796	INSERT			X								
69796	DOWEL		X									
72057	SEAT			X		X	X					
72058	SEAT			X		X	X					
72155-S	BUSHING		X	X	X	X						
74230	GUIDE	See Latest Edition of Service Instruction No. 1256.										
74241	RING			X								
75656-S	BUSHING		X	X	X	X						
75657-S	BUSHING		X	X		X						
LW-11997	SEAL	See Latest Edition of Service Instruction No. 1324.										
LW-13521	BEARING			X						X*	X*	X*
LW-13792	SEAL	See Latest Edition of Service Instruction No. 1324.										
LW-13884	BEARING				X					X	X	X
LW-16711	BEARING				X					X	X	X
STD-1065	DOWEL	X	X	X	X							
14H21950	RING			X		X						
18A19441	BEARING				X					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 along with the proper part number. For example, to order bearing LW-13884 in .003 undersize, order part number LW-13884-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	QTY. PER ASSY.
1	11B20061-1SH	CRANKCASE ASSEMBLY (See Note)	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, drilled	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 Helicoil x 3/8 long	2
11	LW-13793	STUD, 5/16-18 x 15/16 long, drilled	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, Allen head	4

NOTE

This part is not available as a service item. Refer to Service Kits, Section 7, for applicable Crankcase Assembly and Governor Stud Kit Part Number.

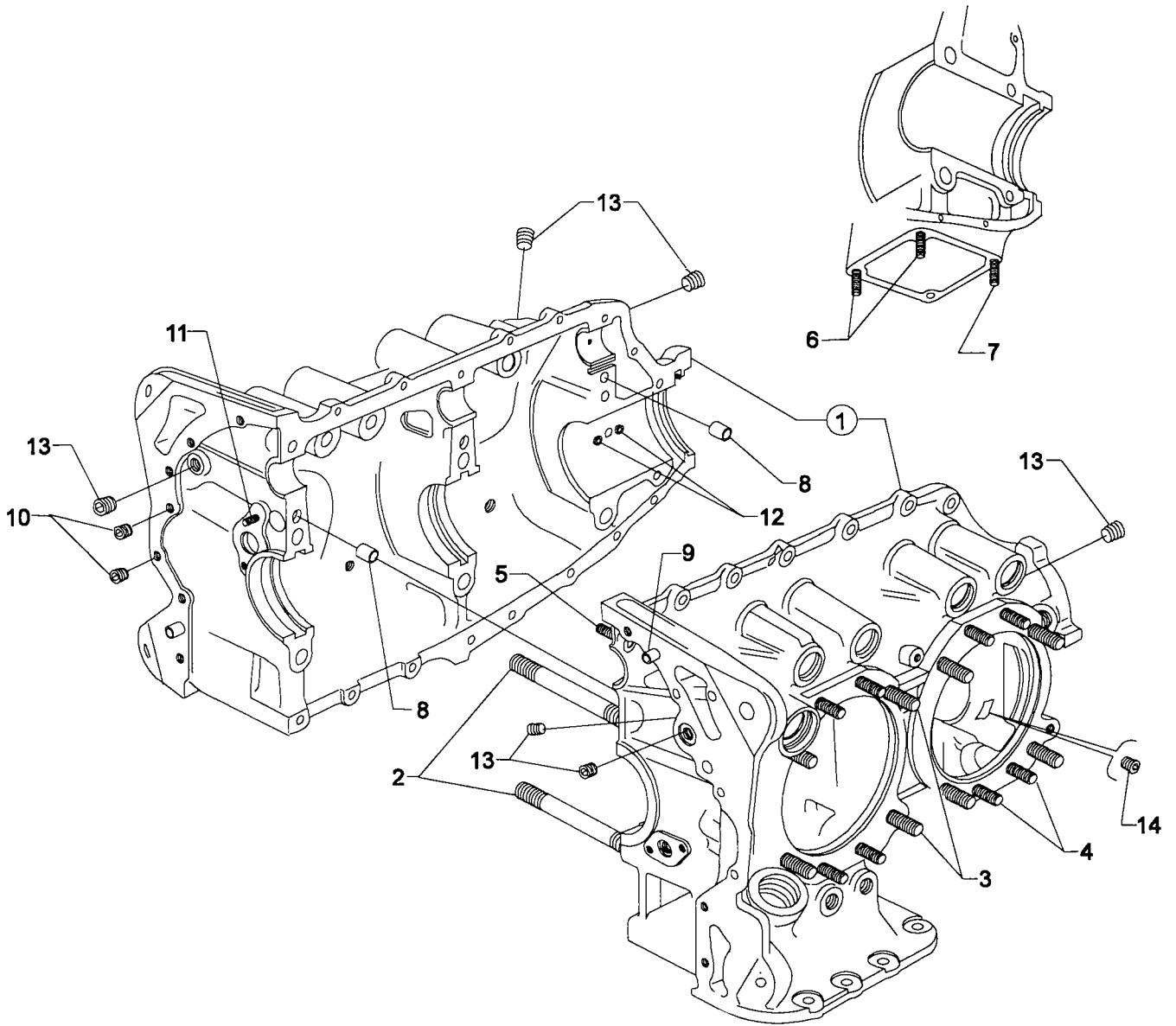


Figure 1. CRANKCASE ASSEMBLY

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP OIL LEVEL GAGE ASSEMBLY AND CRANKCASE RELATED PARTS

FIG. REF. 2	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	75767	TUBE, Oil level gage, long	1
2	72059	GASKET, Oil level gage	1
3	74065	RING, Oil level gage seal	1
4	LW-14780	GAGE ASSEMBLY, Oil level	1
5	1028-B	BALL, 11/16 diameter	1
6	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
7	06E19769-1.25	GASKET, 1-1/4 I.D. x 1-1/2 O.D. x 3/32 annular	1
8	77808	VALVE ASSY., Oil pressure relief valve, adj.	1
9	LW-16711	BEARING, Crankshaft	4
10	LW-13884	BEARING, Crankshaft, front	2
	18A19441	BEARING, Crankshaft, front (alternate)	2
11	LW-13792**	SEAL, Crankshaft oil, solid	1
	LW-11997**	SEAL, Crankshaft oil, split	1
12	72075	SEAL, Oil, 3/32 section x 7/16 I.D.	2
13	72091	RING, Oil seal, 23/64 I.D. x 7/64 dia.	2
14	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.

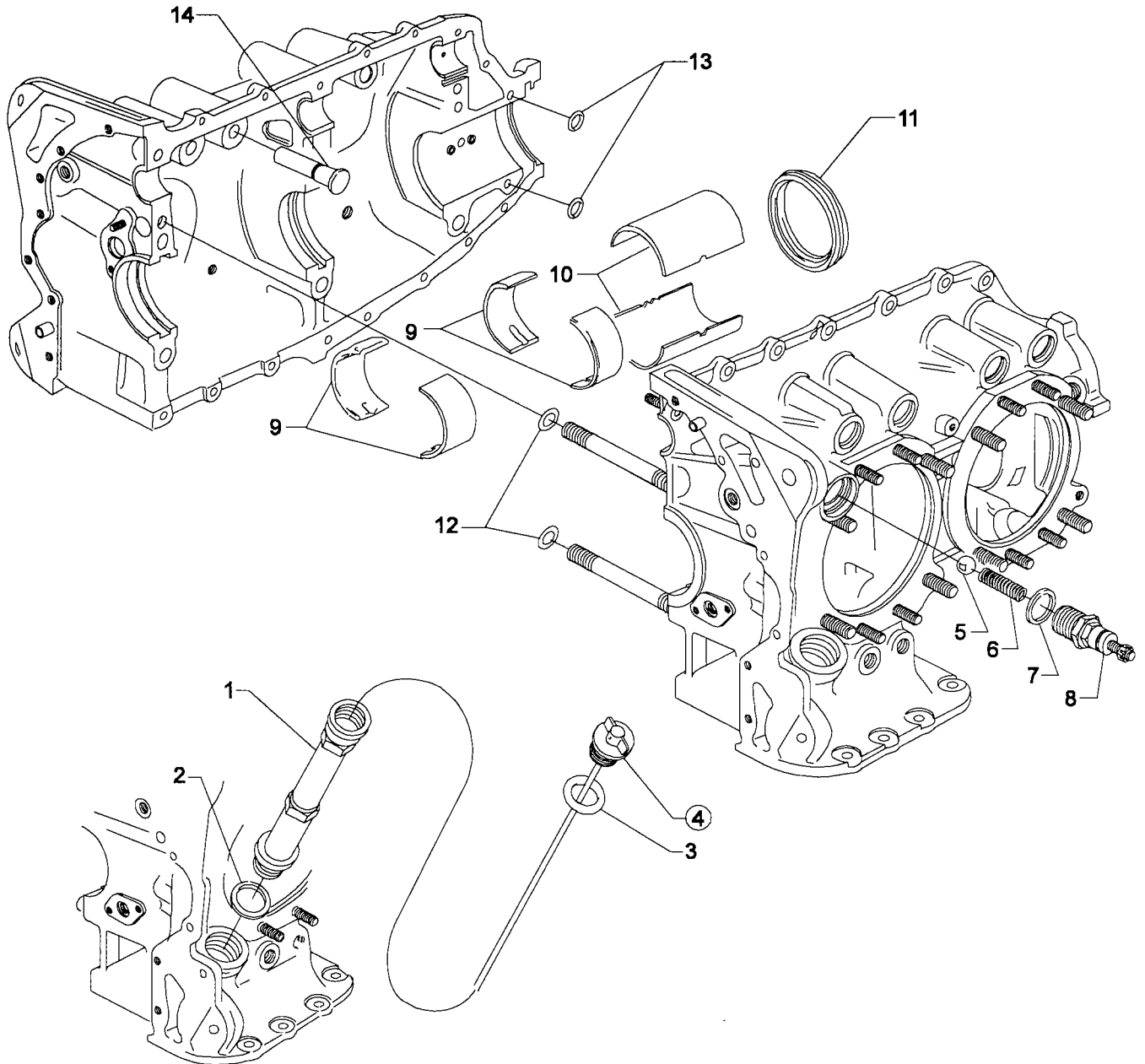


Figure 2. OIL LEVEL GAGE ASSEMBLY AND CRANKCASE RELATED PARTS

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

FIG. REF. 3	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	13B27135	CRANKSHAFT AND BUSHING ASSEMBLY	1
2	STD-1065	DOWEL, Stepped, 5/16 & 1/4 dia. x 35/64 long	1
3	75657-S	BUSHING, Propeller flange, indexing	1
4	72155-S	BUSHING, Propeller flange, short	1
5	75656-S	BUSHING, Propeller flange, long	4
6	13S19646*	GEAR, Crankshaft	1
7	LW-18639	LOCKPLATE, Crankshaft gear	1
8	STD-2213	SCREW, 5/16-24 x 1.00 long	1
9	LW-16064	SUPPORT ASSY., Starter ring gear, 12/14 pitch	1
10	72566	GEAR, Starter ring	1

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

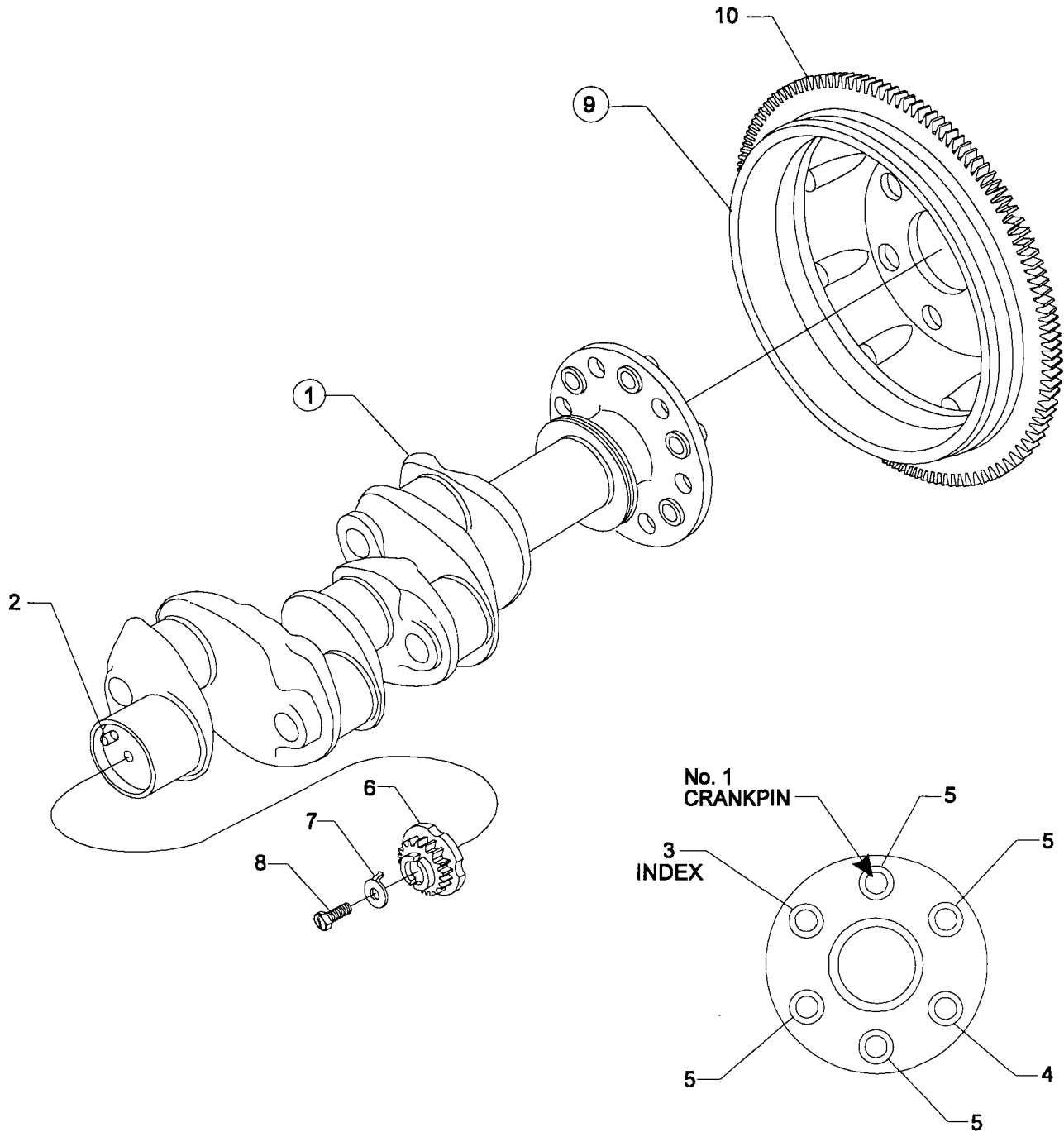


Figure 3. CRANKSHAFT ASSEMBLY AND RELATED PARTS

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

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

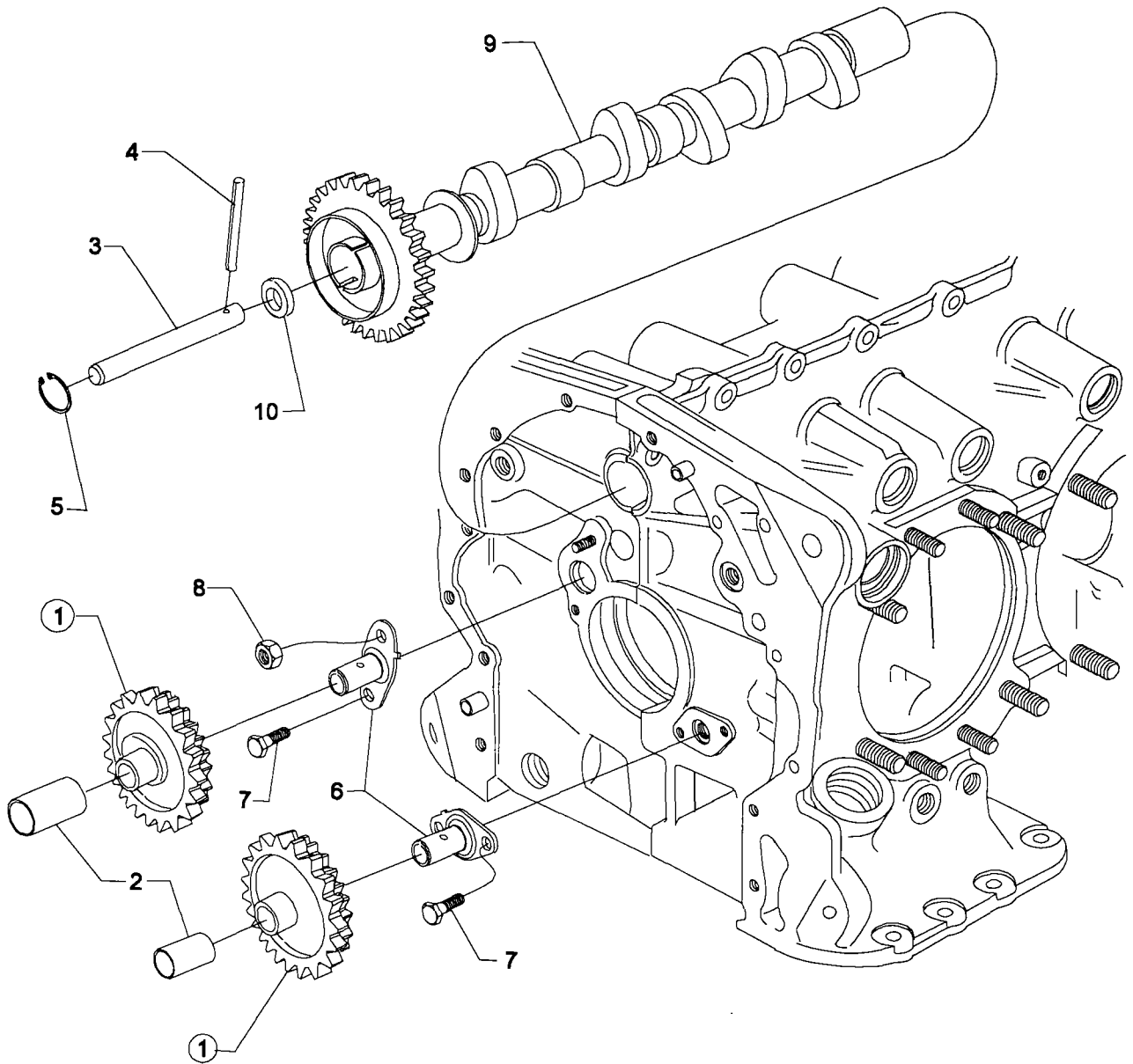


Figure 4. CRANKSHAFT IDLER GEARS, TACHOMETER DRIVE AND CAMSHAFT

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP CRANKCASE ATTACHING PARTS

FIG. REF. 5	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
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-1409	NUT, 1/4-20 slotted shear	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

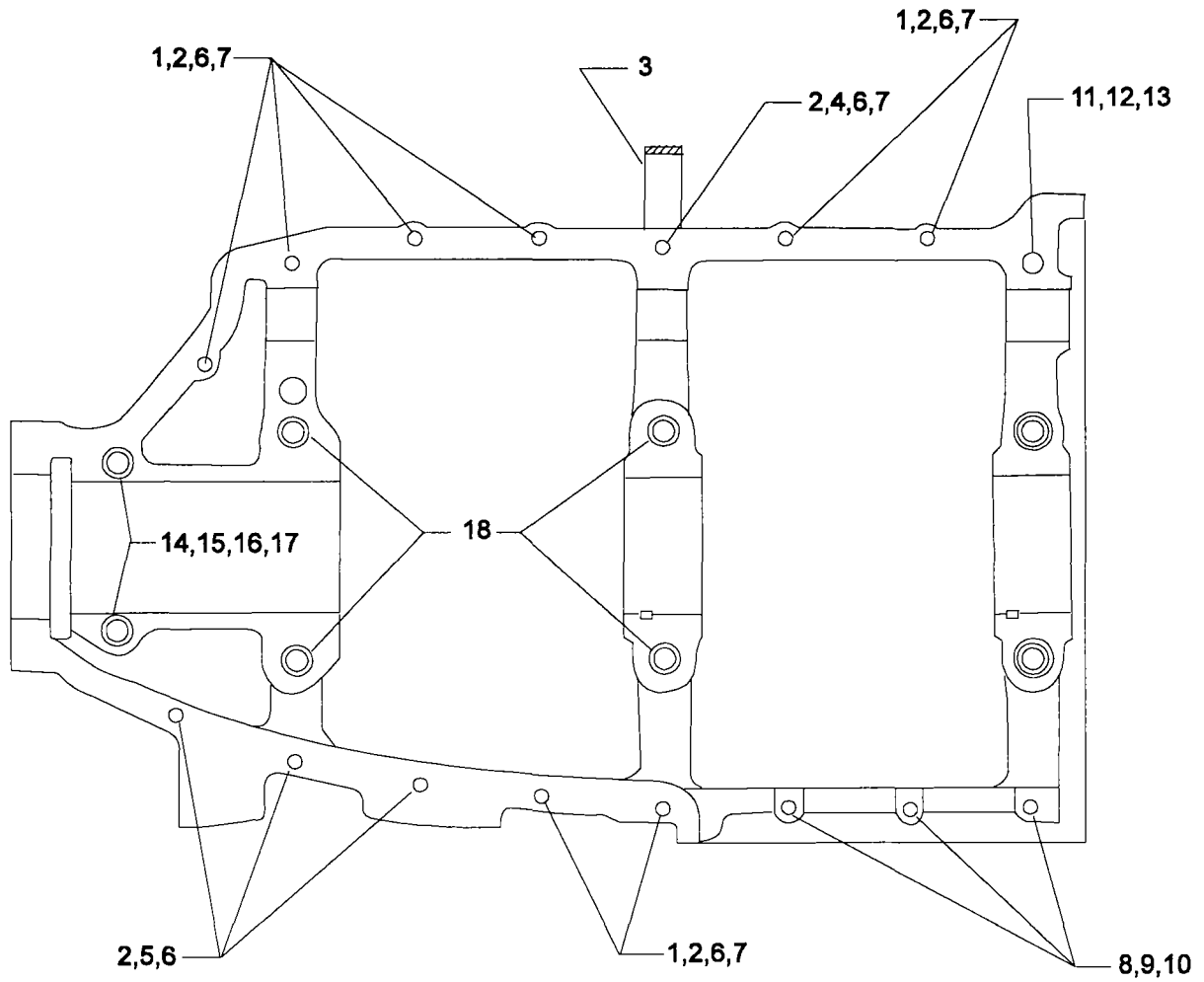


Figure 5. CRANKCASE ATTACHING PARTS

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

FIG. REF. 6	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	73818	GASKET, Accessory housing	1
2	21A21533-04	HOUSING ASSY., Accessory	1
3	25C-22	STUD, 1/4-20 x 2-3/4 long	4
4	31C-12	STUD, 5/16-18 x 1-1/2 long	6
5	31CD-17	STUD, 5/16-18 x 2-1/8 long, drilled	3
6	31C-19	STUD, 5/16-18 x 2-3/8 long	2
7	1102	PLUG, 1/8-27 NPT, Allen head	4
8	STD-784	PLUG, 3/8-18 NPT, Allen head	1

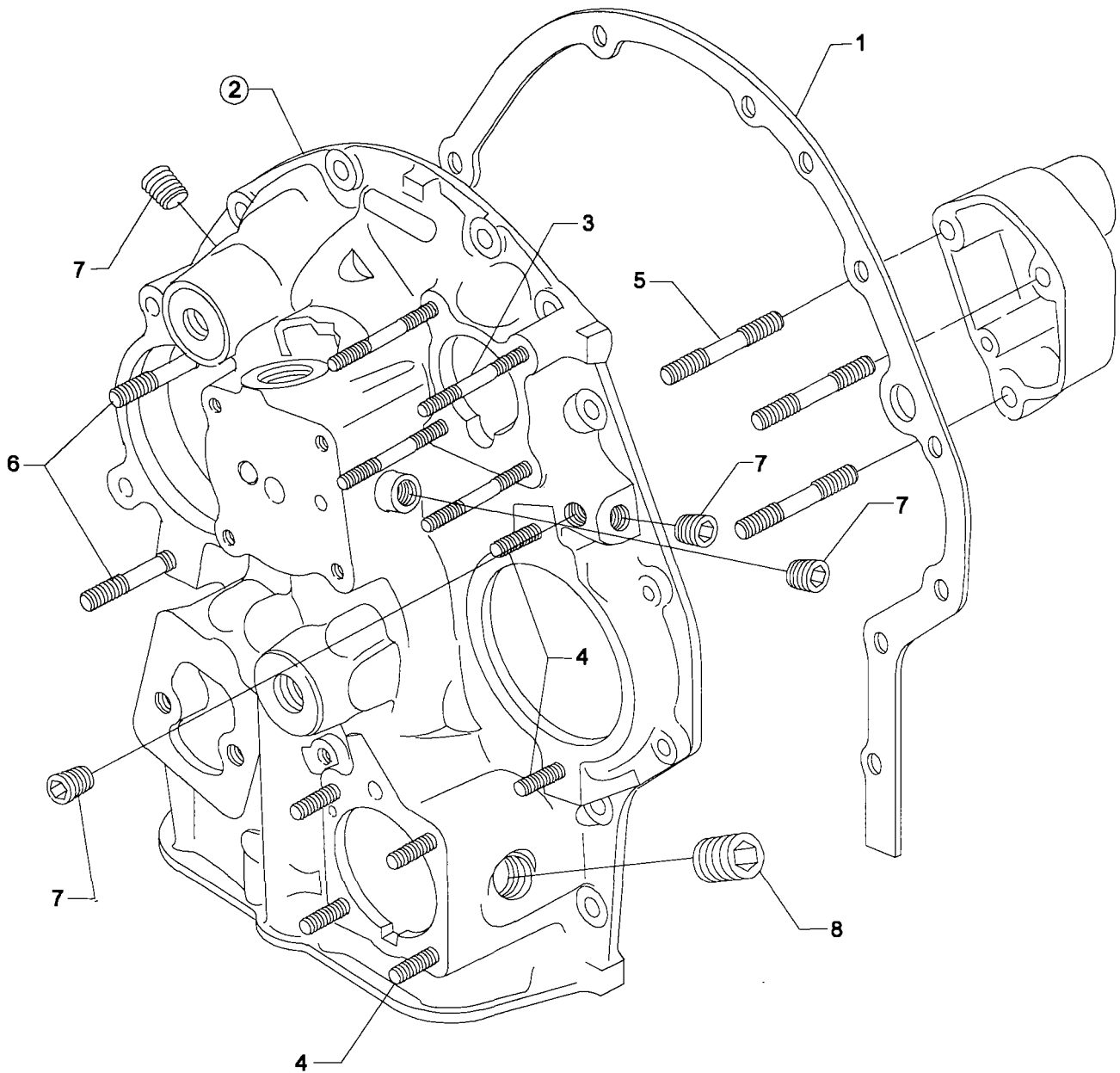


Figure 6. ACCESSORY HOUSING ASSEMBLY

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

FIG. REF. 7	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	78531	BODY, 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-25-1.50	BOLT, 1/4-20 x 1-1/2 long, hex. hd.	2

* See latest edition of Lycoming Service Bulletin No. 524.

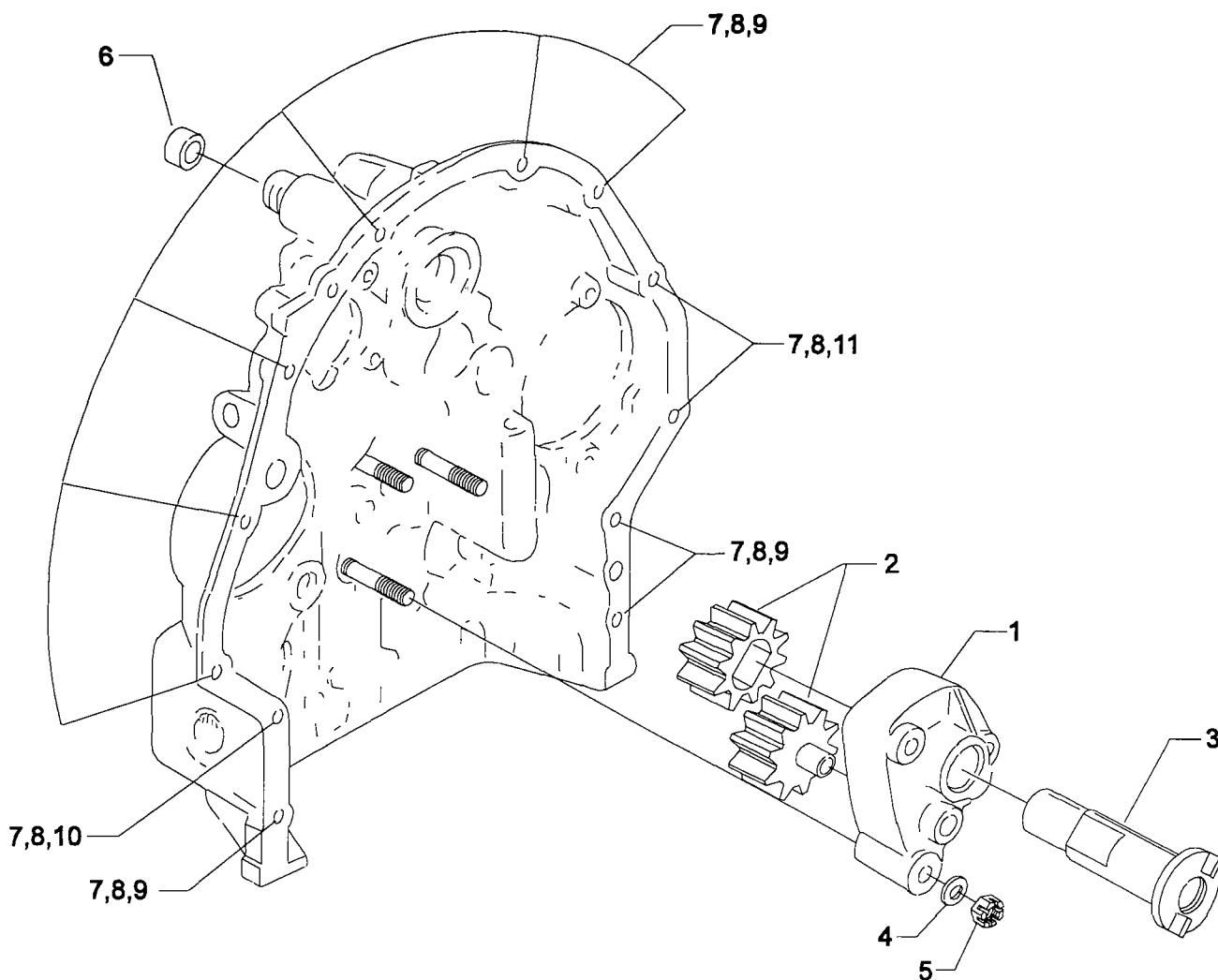


Figure 7. OIL PUMP AND ACCESSORY HOUSING ATTACHING PARTS

**ACCESSORY HOUSING AND RELATED PARTS
PROPELLER GOVERNOR DRIVE AND FUEL PUMP COVERS,
VACUUM PUMP DRIVE AND COVER**

FIG. REF. 8	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
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, Accessory adapter	1
8	61098	ADAPTER ASSY., Vacuum pump	1
9	STD-1774	PIN, 1/8 dia. x 1/4 long	1
10	06A19956	OIL SEAL, 7/8 I.D. x 1-1/2 long O.D. x 5/16 wide	1
11	72970	GEAR ASSY., Vacuum pump driven	1
12	71596	WASHER, Accessory drive gear	1
13	8313	GASKET, Vacuum pump	1
14	60430	COVER, Vacuum pump	1
15	STD-8	WASHER, 1/4 plain	4
16	STD-160	WASHER, 1/4 lock, internal teeth	4
17	STD-1411	NUT, 1/4-20 plain	4
18	60096	GASKET, Fuel pump	1
19	65098	COVER, Fuel pump	1
20	STD-33	WASHER, 3/8 plain	2
21	STD-678	WASHER, 3/8 lock, internal teeth	2
22	LW-38-0.75	BOLT, 3/8-16 x 3/4 long	2

* Used when no propeller governor oil line is installed.

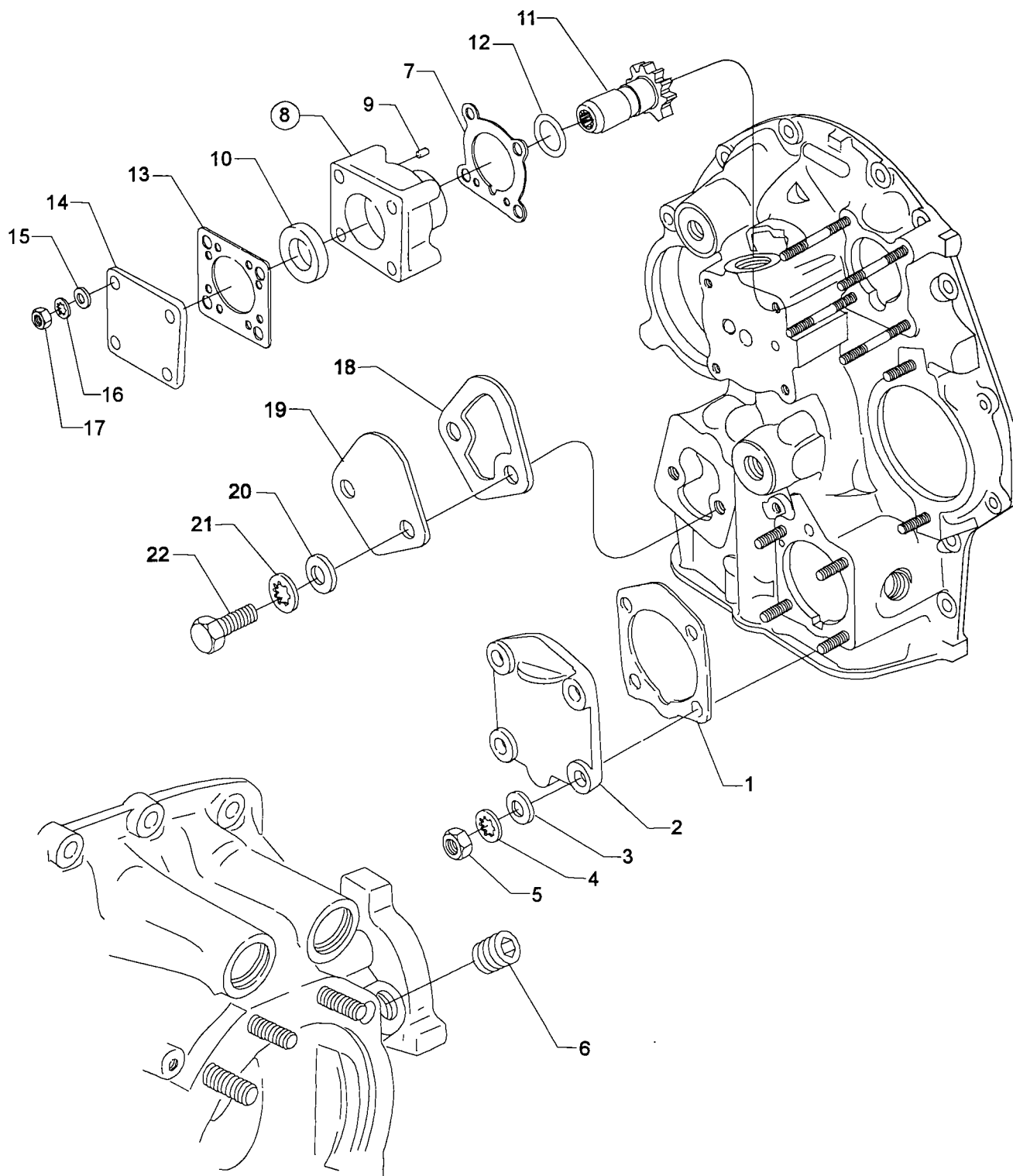


Figure 8. PROPELLER GOVERNOR DRIVE AND FUEL PUMP COVERS,
VACUUM PUMP DRIVE AND COVER

ACCESSORY HOUSING AND RELATED PARTS
OIL FILTER ASSEMBLY, OIL COOLER BYPASS VALVE AND BREATHER FITTINGS

FIG. REF. 9	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	62817	SCREEN ASSY., Oil pressure	1
2	61173	GASKET, Oil pressure housing	1
3	69510	HOUSING, Oil pressure screen	1
4	06E19769-0.63	GASKET, 7/8 O.D. x 5/8 I.D. x 3/32 annular	1
5	STD-8	WASHER, 1/4 plain	4
6	STD-1856	SCREW, 1/4-20 x 1.00 long, hex. hd.	4
7	53E22144	VALVE ASSY., Temp. control oil cooler bypass	1
8	76510	GASKET, Valve assembly	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

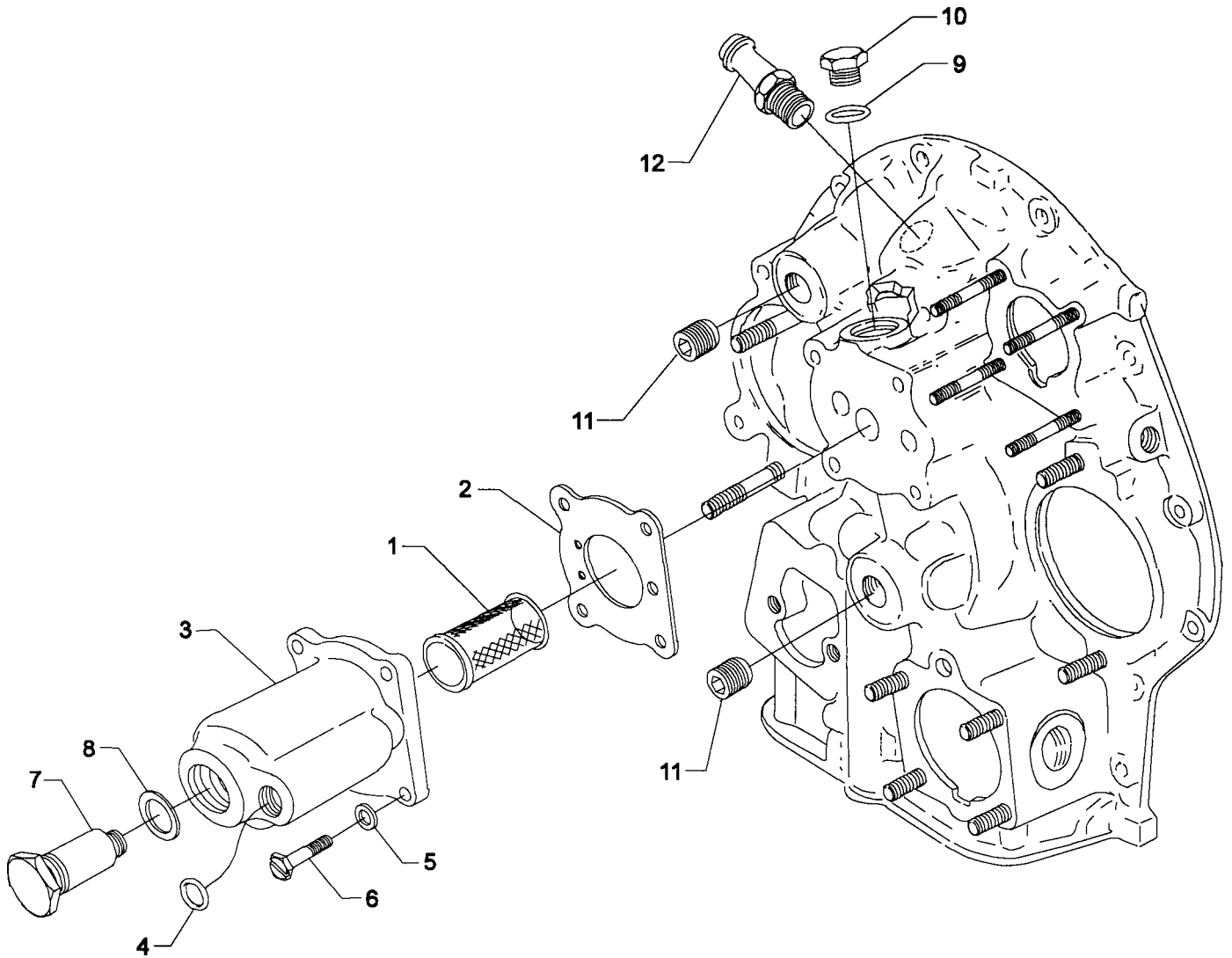


Figure 9. OIL FILTER ASSEMBLY, OIL COOLER BYPASS VALVE AND BREATHER FITTINGS

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

FIG. REF. 10	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	LW-11750-S	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	LW-13521	BEARING, Connecting rod	8
6	75089	PISTON, Compression ratio, 8.50:1	4
7	LW-14077*	PIN, Piston	4
8	LW-11775*	PLUG, Piston pin (piloted)	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.

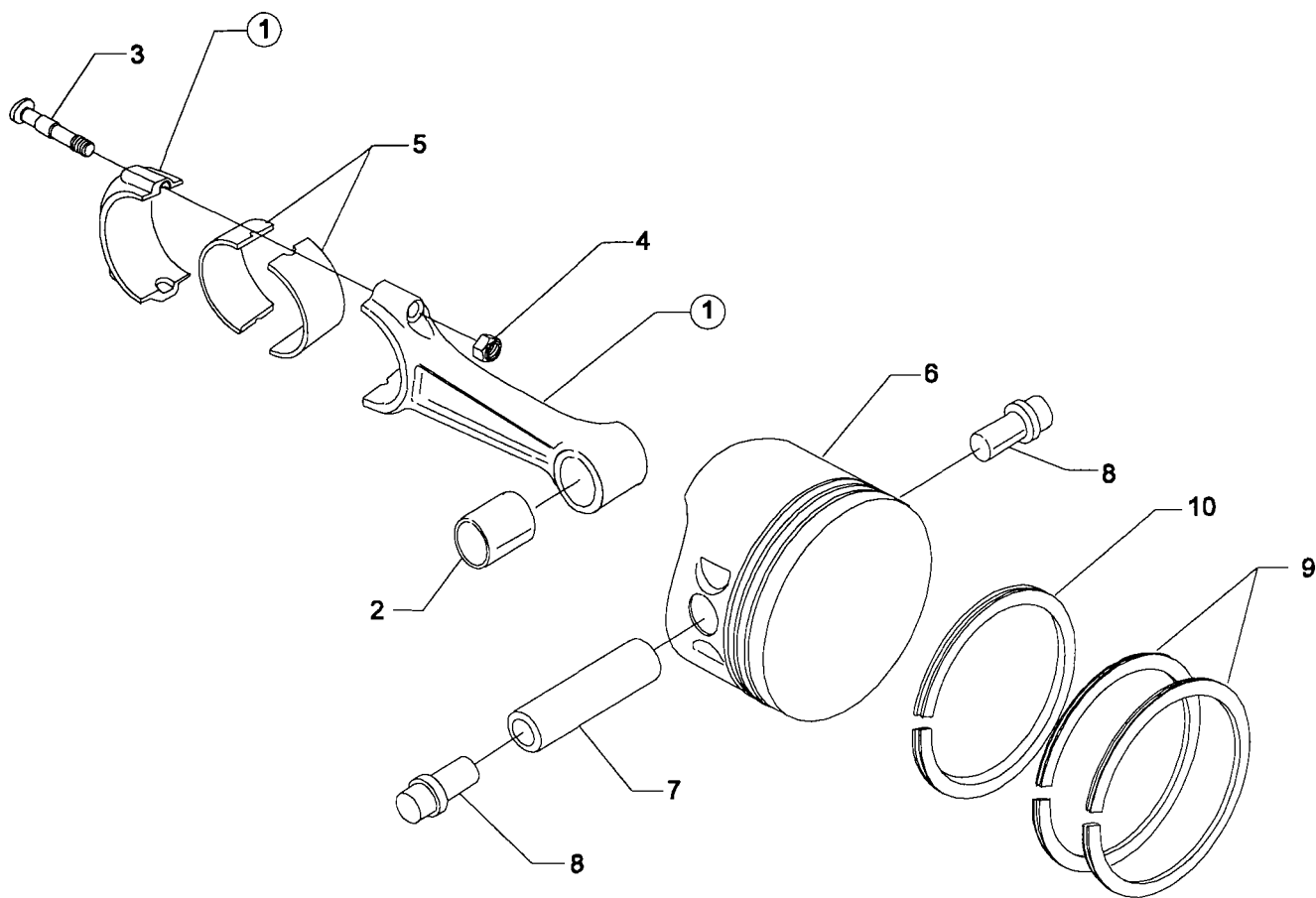


Figure 10. CONNECTING RODS, PISTONS AND RING ASSEMBLIES

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

FIG. REF. 11	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	LW-12427	CYLINDER & HEAD ASSY., Nitrided	4
2	72057	SEAT, Intake valve	4
3	72058	SEAT, Exhaust valve	4
4	61681*	GUIDE, Valve, intake, flanged	4
5	74230*	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°, 3/8 flared tube	4
11	66610	BUSHING, Rocker shaft	16
12	1102	PLUG, 1/8-27 NPT, Allen head	4
13	77611	GASKET, Exhaust flange	4
14	STD-35	WASHER, 5/16 plain	8
15	STD-475	WASHER, 5/16 lock, internal teeth	8
16	STD-1410	NUT, 5/16-18 plain	8
17	1102**	PLUG, 1/8-27 NPT, Allen head	4

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

** Additional plugs used when no priming lines are installed.

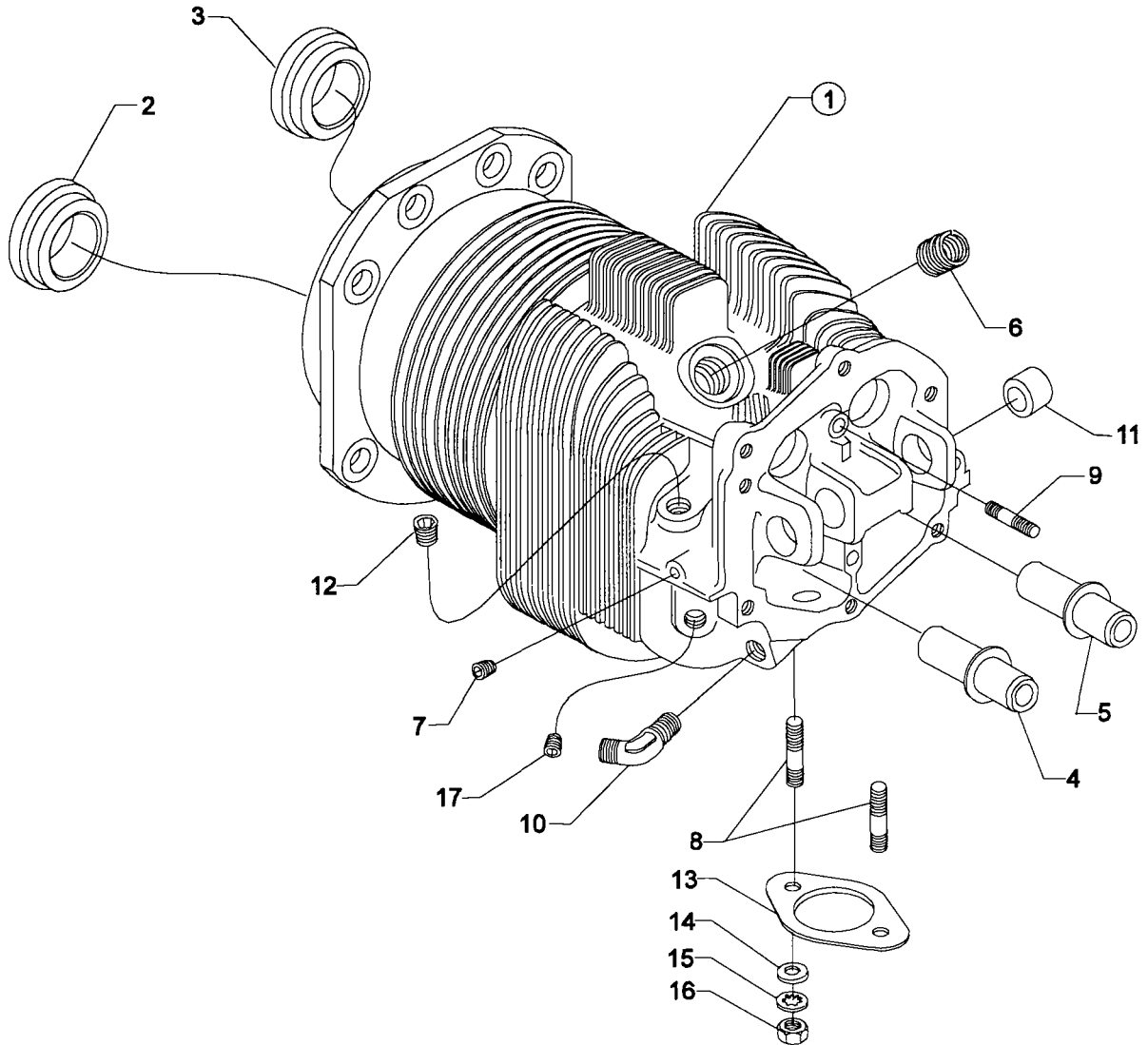


Figure 11. CYLINDER ASSEMBLY

CYLINDER, PISTON AND VALVE TRAIN CYLINDER RELATED PARTS

FIG. REF. 12	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	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
	73437*	ROD ASSY., Push (A total of 8 required)	AR
2	17F19357**	ROCKER ASSY., Valve	8
3	74637	BUSHING, Valve rocker	8
4	LW-13790	SHAFT, Valve rocker	4
5	LW-12892	THRUST BUTTON, Rocker shaft	8
6	71481	RING, Oil seal, 3/32 dia. x 4-27/32 long	4
7	74887	SPACER, 33/64 I.D. x 7/8 O.D. x 3/8 thick	2
8	383-B	NUT, 3/8-24 plain	16
9	STD-2090	NUT, 1/2 -20 plain	18

* 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).

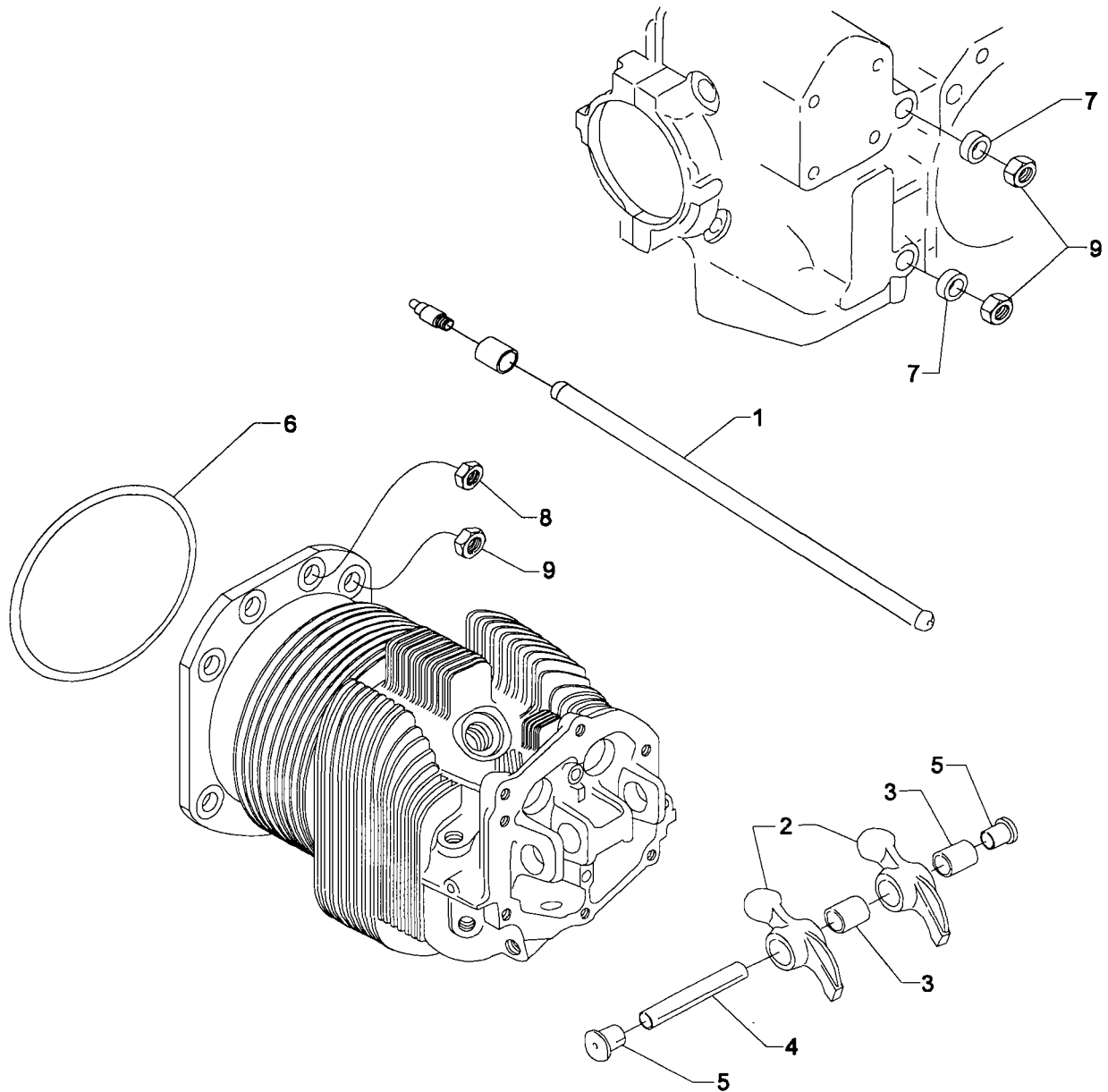


Figure 12. CYLINDER RELATED PARTS

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

FIG. REF. 13	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
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	65441	SEAT, Valve spring, lower intake	4
6	LW-13323	SEAT, Valve spring, lower exhaust	4
7	LW-10077	SEAT, Valve spring, upper intake	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

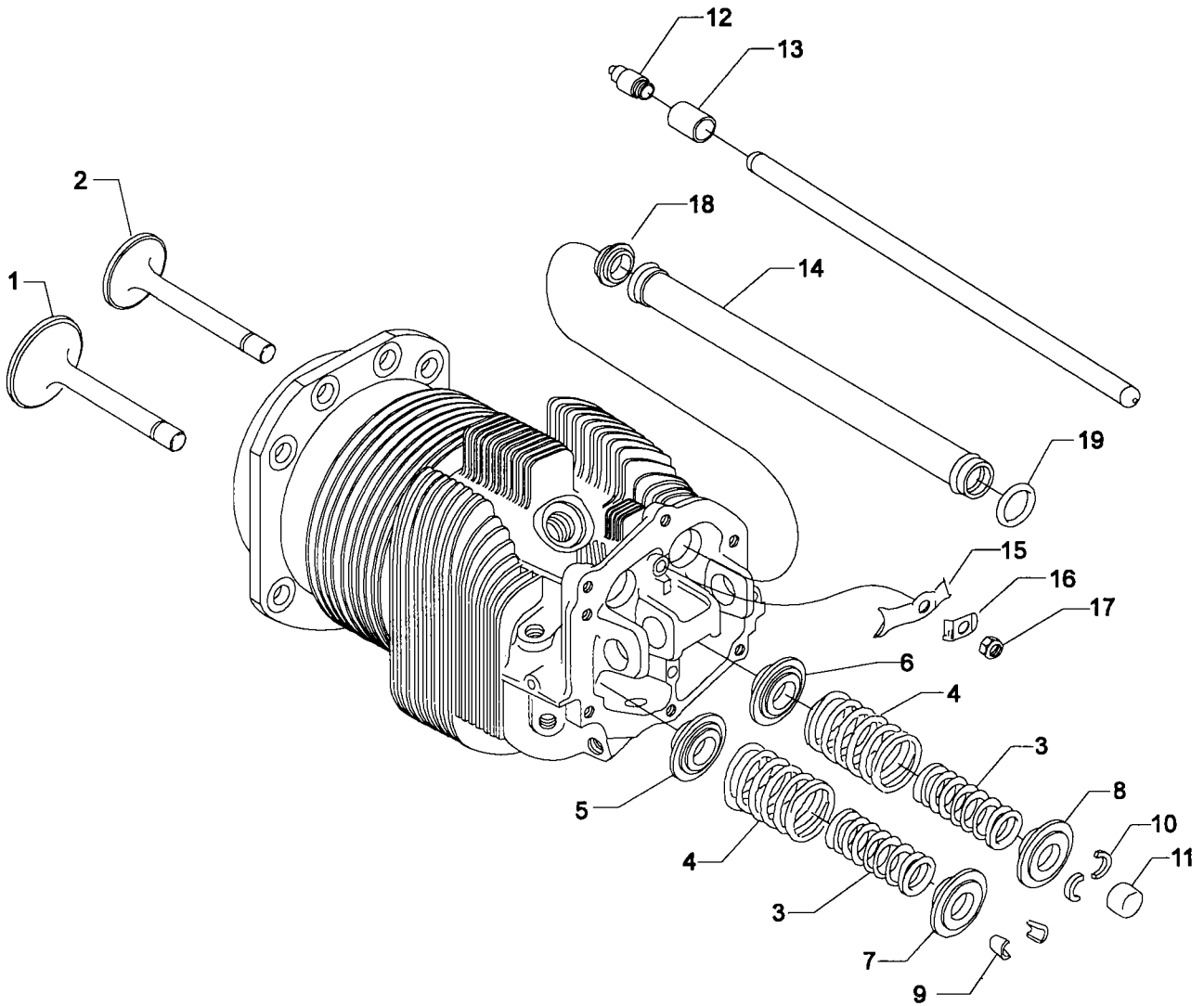


Figure 13. VALVE ASSEMBLY

**CYLINDER, PISTON AND VALVE TRAIN
CYLINDER HEAD DRAIN TUBES, INTERCYLINDER COOLING BAFFLES
AND ROCKER BOX COVERS**

FIG. REF. 14	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	STD-684	NIPPLE, Straight, 3/8 I.D. hose	4
2	STD-1821	HOSE, 3/8 x 2-1/2 long	4
3	LW-15592-5-05	CLAMP, Hose	8
4	68759	TUBE ASSY., Cyl. head oil drain, cyl. no. 1	1
5	68760	TUBE ASSY., Cyl. head oil drain, cyl. no. 2	1
6	68761	TUBE ASSY., Cyl. head oil drain, cyls. no. 3 & 4	2
7	75339	BAFFLE ASSY., Intercylinder	2
8	71611	RETAINER, Intercylinder baffle	2
9	71610	HOOK, Intercylinder baffle retainer	2
10	75906	GASKET, Rocker box cover	4
11	61247	COVER, Rocker box	4
12	STD-1925	SCREW, 1/4-20 x 5/8 long, pan. hd., self-locking	24

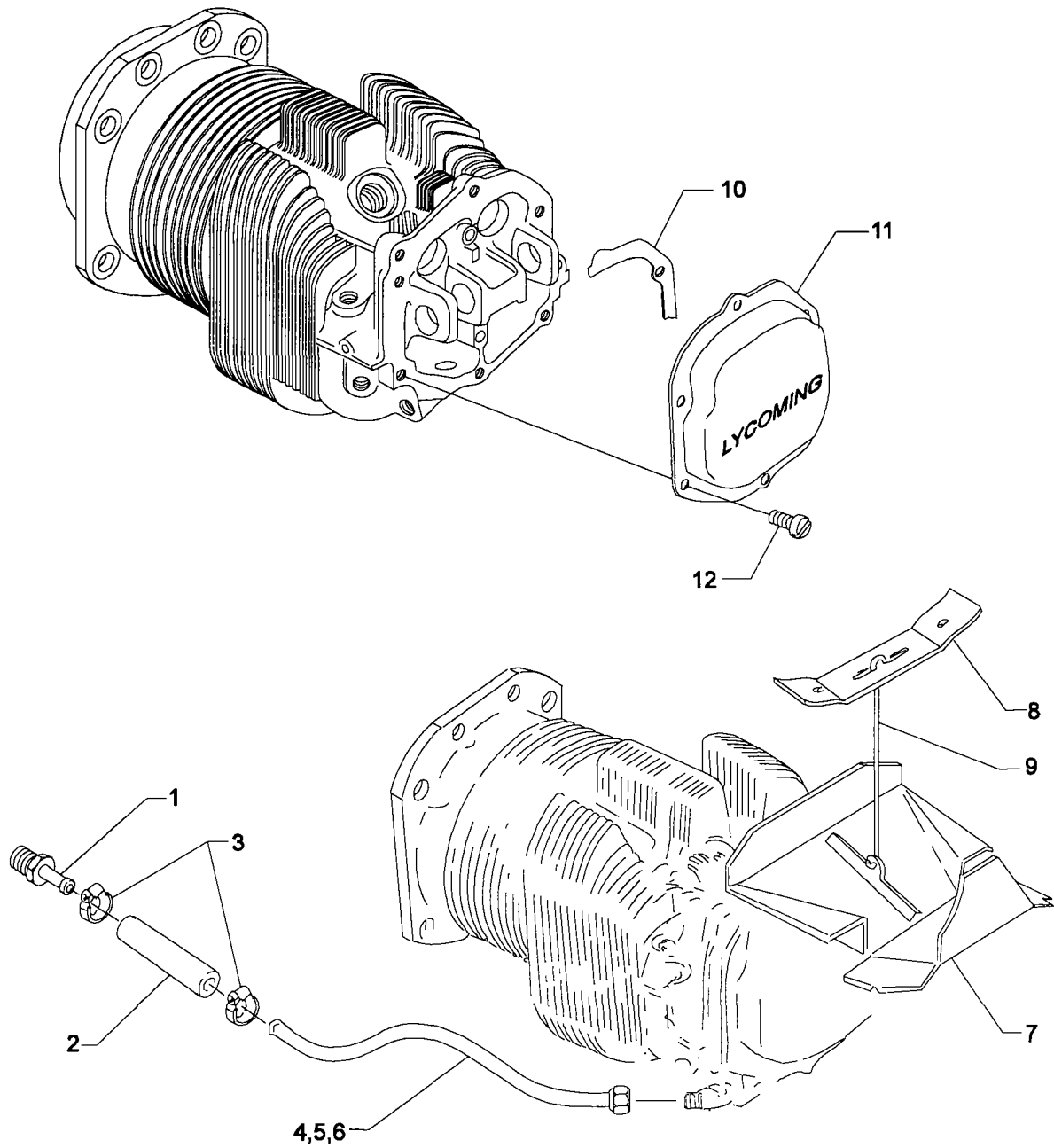


Figure 14. CYLINDER HEAD DRAIN TUBES, INTERCYLINDER COOLING BAFFLES AND ROCKER BOX COVER

IGNITION SYSTEM MAGNETOS, MAGNETO DRIVES, HARNESSSES AND SPARK PLUGS

FIG. REF. 15	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	61665	GEAR, Magneto, impulse coupling	1
2	STD-713	COTTER PIN, 3/32 dia. x 3/4 long	2
3	68C19622	GEAR, Magneto	1
4	62224	GASKET, Magneto adapter	1
5	LW-12706	ADAPTER, Magneto, impulse coupling	1
6	LW-12681	GASKET, Magneto	2
7	66GP-OSANN	MAGNETO, Plain, Right, Slick Model 4370	1
	66GC20SFNN	MAGNETO, Impulse, Left, Slick Model 4371	1
8	67P20406	HARNESS ASSY., Right, Slick Model M-2992	1
	67P20407	HARNESS ASSY., Left, Slick Model M-1795	1
9	66M21195	CLAMP, Magneto	4
10	STD-475	WASHER, 5/26 lock, internal teeth	4
11	STD-1410	NUT, 5/16-18 plain	4
12	1182-B7*	SPARK PLUG, Champion (REM37BY)	8
**	01P19762-1-43	BAG, Magneto harness attaching	1

* Item No. 12 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 a breakdown of individual parts contained in the magneto and harness attaching parts bag. These parts to be attached by customer per engine line drawing included in each bag.

P/N 01P19762-1-43

Part No.	Part Name	Qty.
LW-16266-25-25	CLIP, One wire	2
LW-14060	CLIP, Two wire	3
STD-8	WASHER, 1/4 plain	8
STD-1874	SCREW, 1/4 -20 x 13/16 long	6
76734	ZIP STRAP	8
LW-16266-25-50	CLAMP, Four wire	1
STD-696	WASHER, 1/4 plain (thin)	4
STD-1916	SCREW, 1/4-20 x 1-1/8 long	3
LW-M-2375	PLATE, Spark plug cable	2

ATTACHING HARDWARE

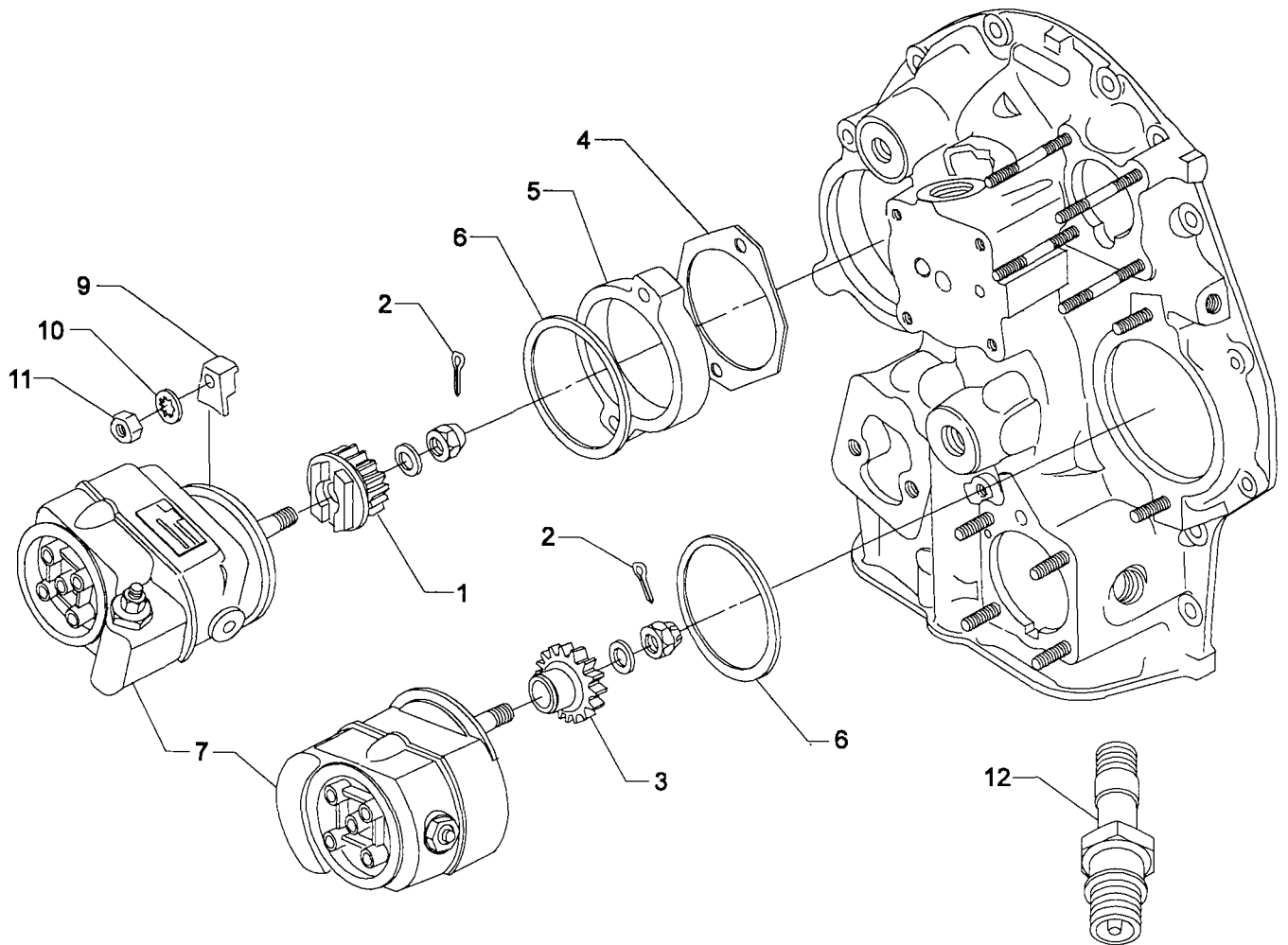
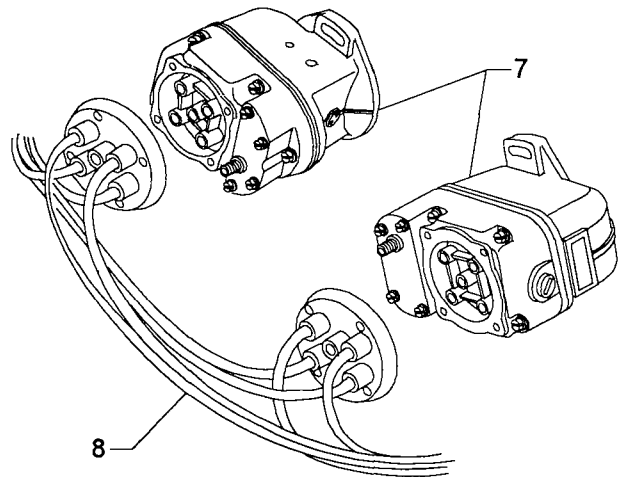


Figure 15. MAGNETOS, MAGNETO DRIVES, HARNESSES AND SPARK PLUGS

ELECTRICAL SYSTEM PRESTOLITE STARTER AND ATTACHING PARTS

FIG. REF. 16	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	LW-15571	STARTER, 12 volt, 12/14 pitch pinion (MZ-4222)	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. hd.	1
5	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.

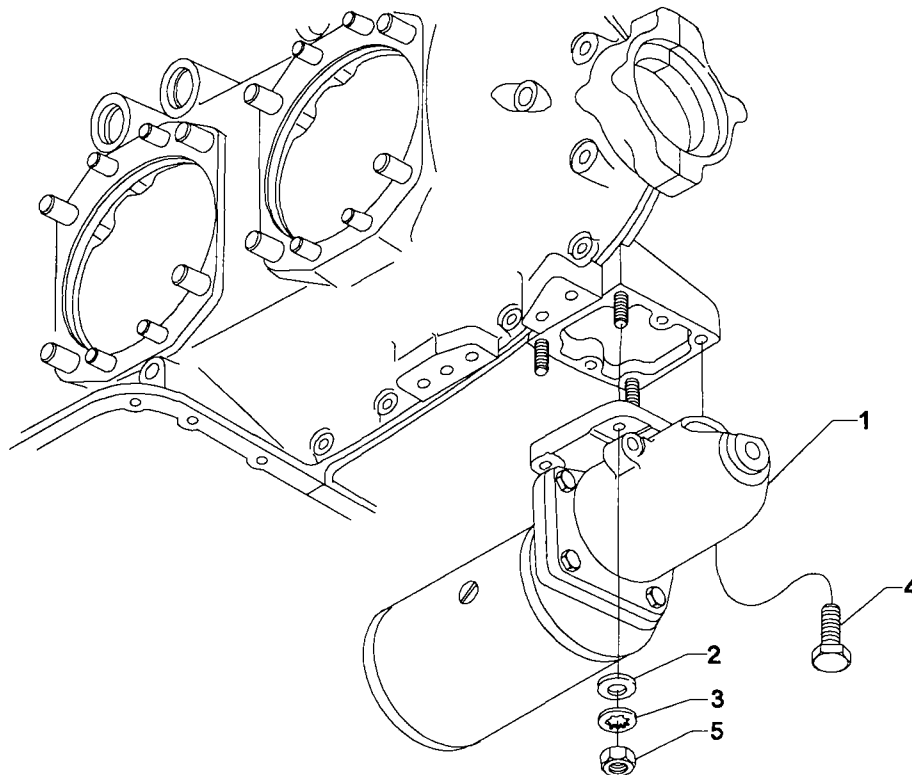


Figure 16. PRESTOLITE STARTER AND ATTACHING PARTS

ELECTRICAL SYSTEM SKY-TEC STARTER AND ATTACHING PARTS

FIG. REF. 17	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	31A22110	STARTER, Sky-Tec (149-12HT)	1
2	STD-35	WASHER, 5/16 plain	4
3	STD-475	WASHER, 5/16 lock, internal teeth	4
4	LW-31-1.09	BOLT, 5/16-18 x 1-3/32 long, hex. hd.	1
5	STD-1410	NUT, 5/16-18 plain	3

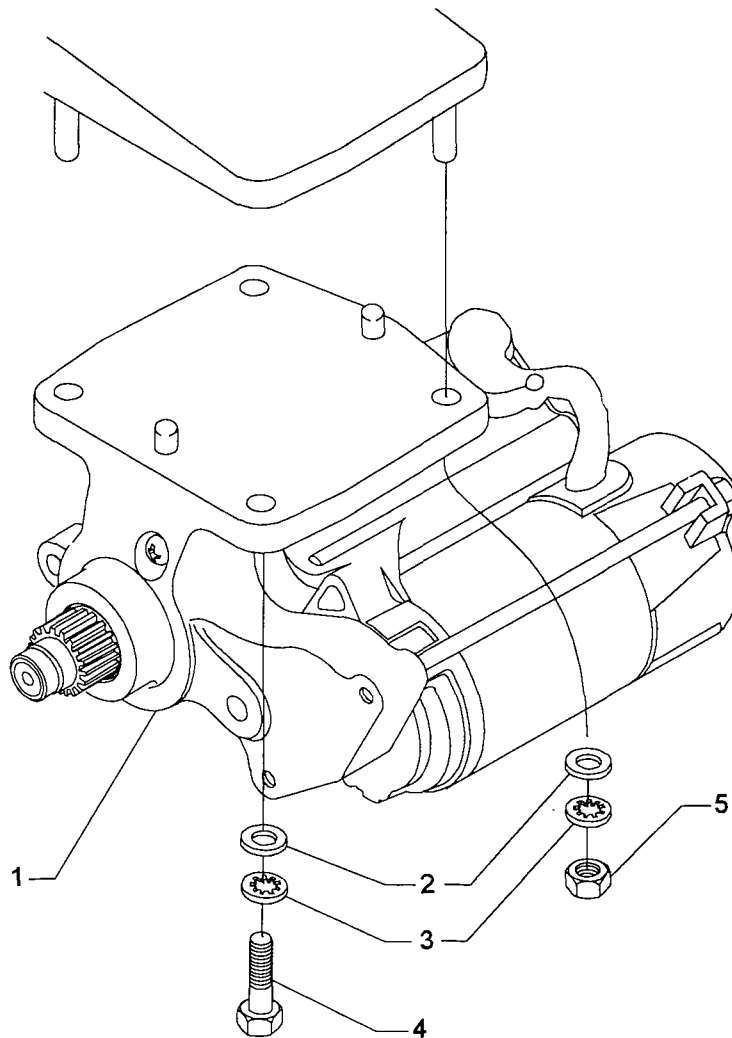


Figure 17. SKY-TEC STARTER AND ATTACHING PARTS

ELECTRICAL SYSTEM GENERATOR MOUNTING AND ATTACHING PARTS

FIG. REF. 18	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	70419	BRACKET, Generator	2
2	73383	LOCKPLATE, 5/16 bolt x 1.00 spacing	2
3	LW-31-0.94	BOLT, 5/16-18 x 15/16 long, hex. hd.	4
4	76028	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.	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.	1
9	77718	STRUT, Generator support	1
10	LW-31H0.75	BOLT, 5/16-18 x 3/4 long, hex. hd.	1
11	LW-31S1.16	BOLT, 5/16-18 x 1-5/32 long, dr. hd.	1
12	LW-31S1.28	BOLT, 5/16-18 x 1-9/32 long, dr. hd.	1
13	STD-35	WASHER, 5/16 plain	AR
14	STD-1420	NUT, 5/16-18 slotted	2
15	STD-68	COTTER PIN, 1/16 dia. x 1/2 long	2
16	37B19774-325	BELT, Generator drive	1

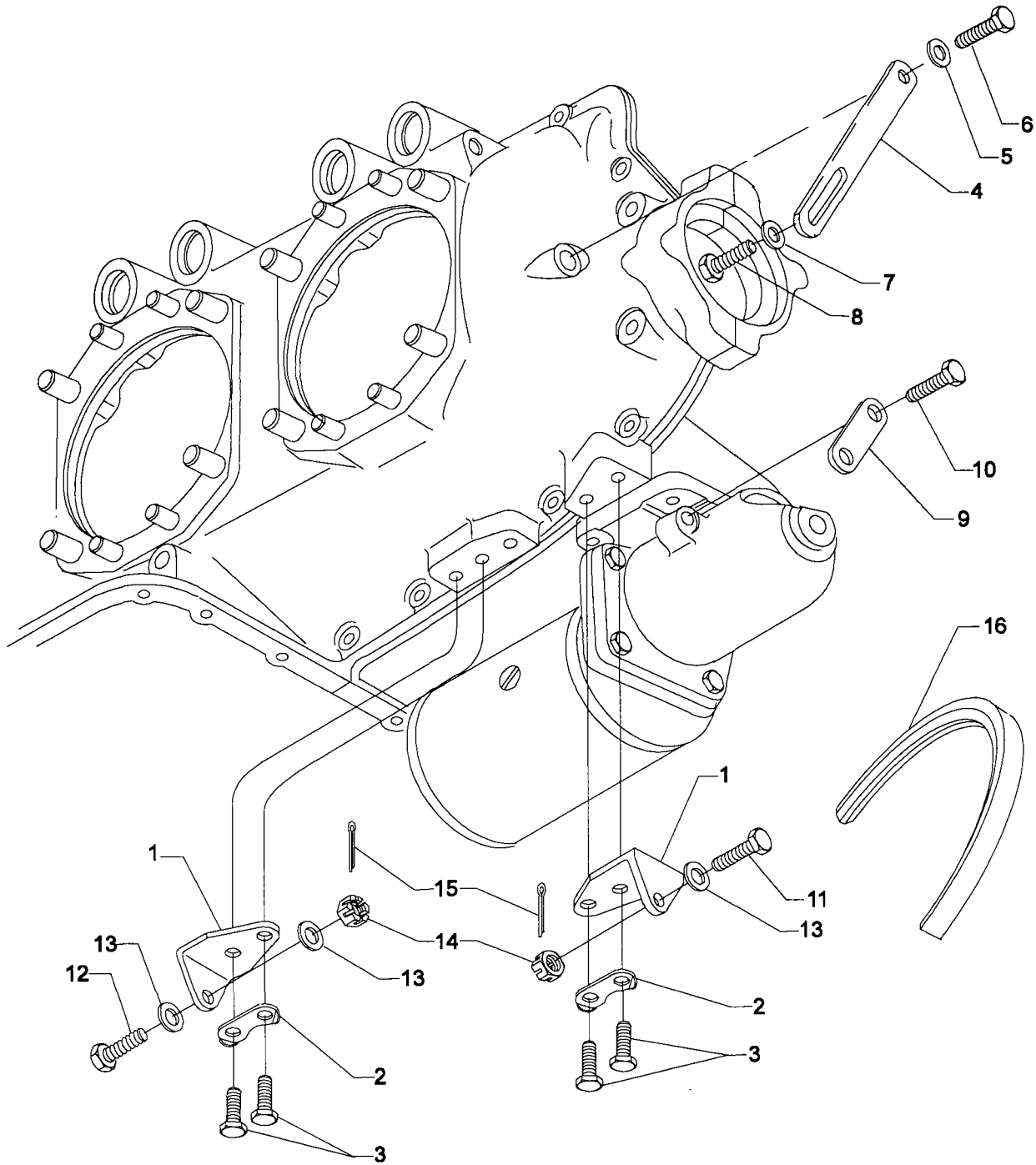


Figure 18. GENERATOR MOUNTING AND ATTACHING PARTS

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

FIG. REF. 19	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	LW-13353	GASKET, Oil sump	1
2	78915	SUMP ASSEMBLY, 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	LW-25-0.94	BOLT, 1/4-20 x 15/16 long, hex. hd.	14
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	12
13	STD-2229	PLUG, 1/2 NPT, Allen hd.	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 annular	1
16	LW-12545	PLUG, 5/8 hex. hd. x 1.00-20 thread	1

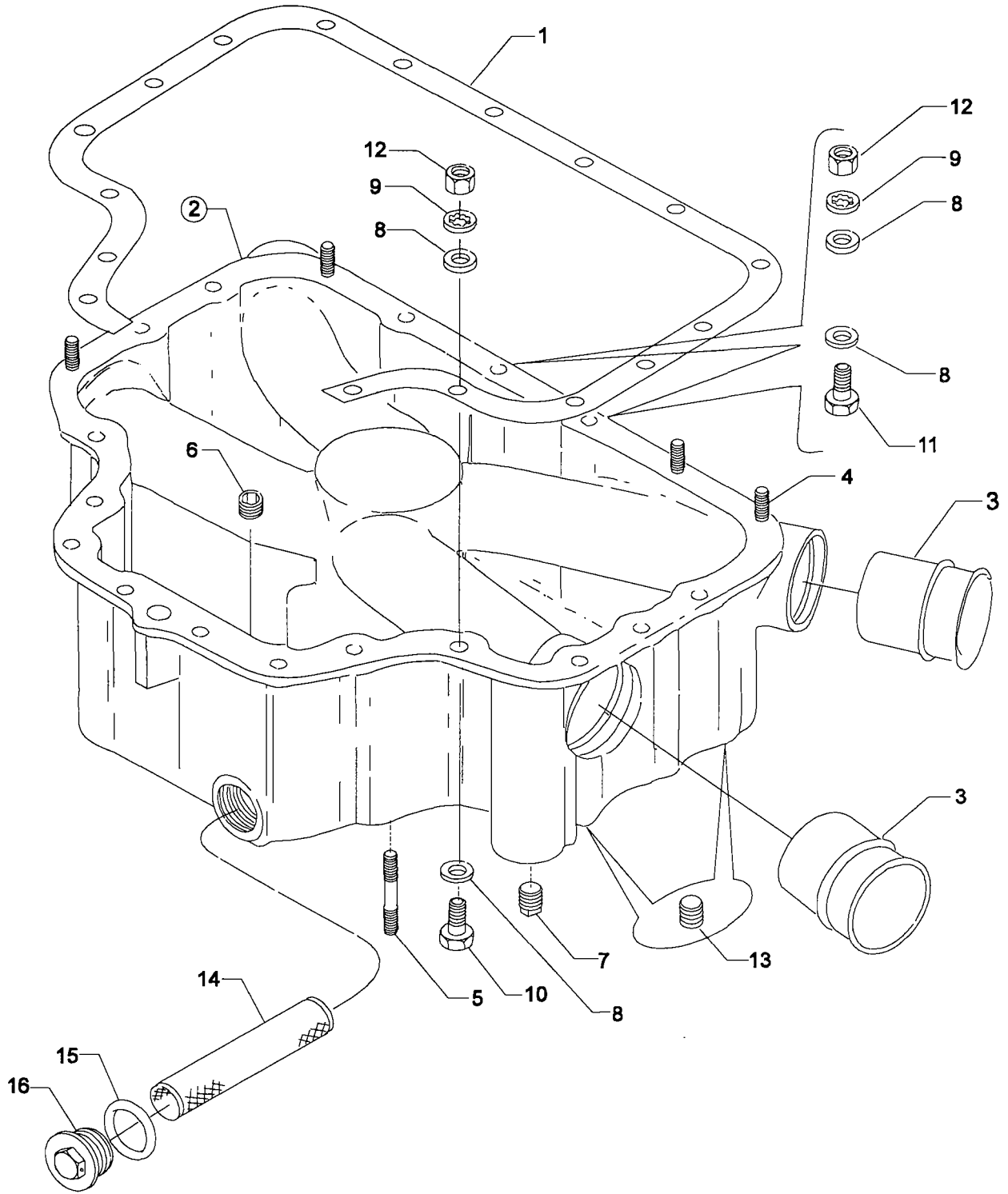


Figure 19. OIL SUMP ASSEMBLY AND OIL SUCTION SCREEN

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

FIG. REF.	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
20 1	70485	PIPE, Intake, all cylinders	4
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

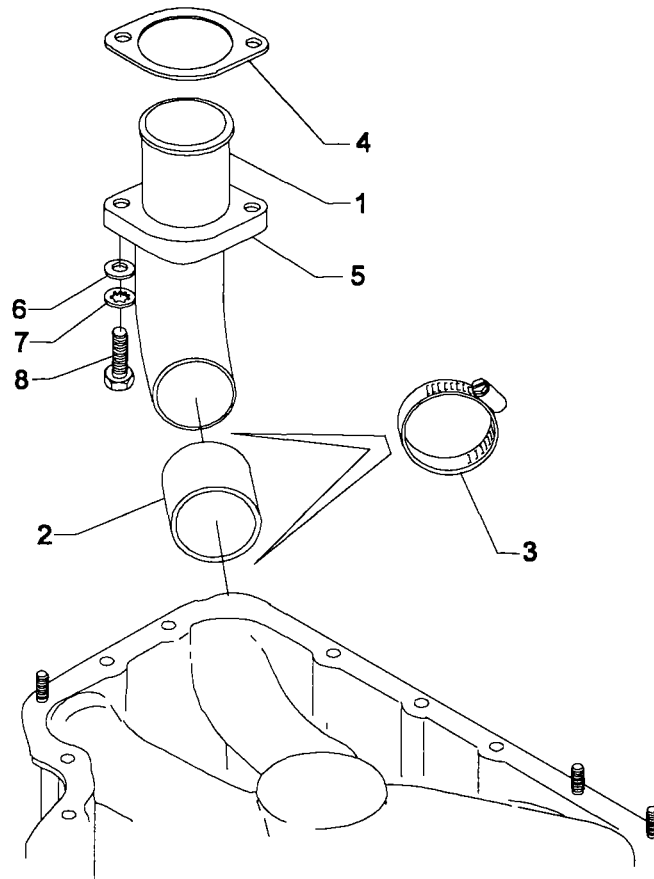


Figure 20. INTAKE PIPES AND ATTACHING PARTS

**OIL SUMP AND INDUCTION SYSTEM
CARBURETOR ASSEMBLY**

FIG. REF. 21	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	66224	GASKET, Carburetor	1
2	71098	CARBURETOR, MA 4-5 (10-3878)	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

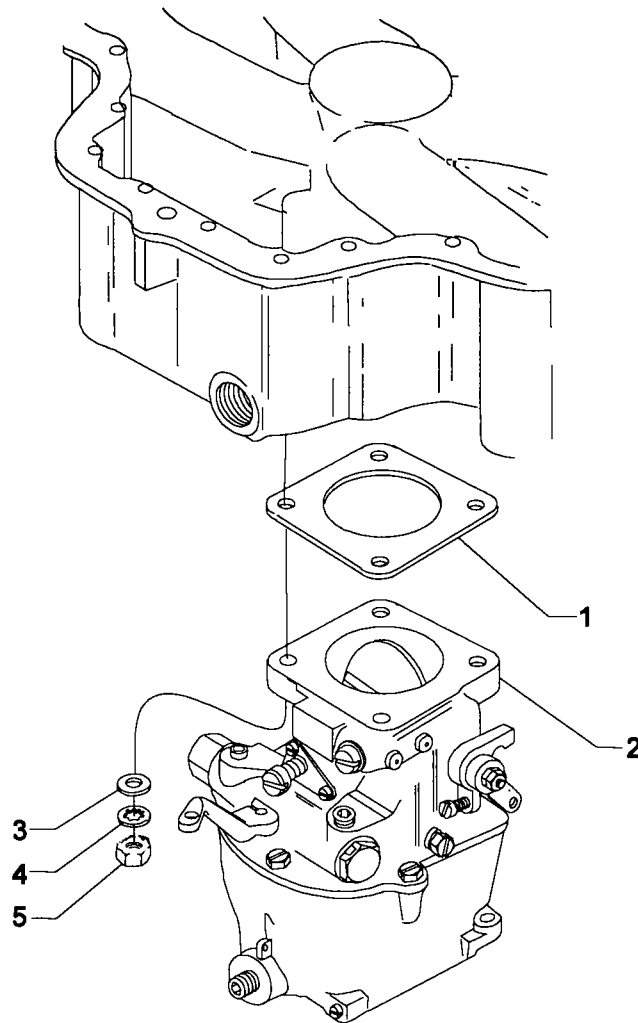


Figure 21. CARBURETOR ASSEMBLY

SERVICE KIT SECTION SEAL AND GASKET KIT

Part No.	Part Name	Qty.
75439-1	SEAL AND GASKET SET	1
AN901-8A	GASKET, Metal tube connect seal	1
LW-10332	LOCKPLATE, Crankshaft gear	1
LW-12272	LOCKPLATE, Shroud tube	4
LW-12681	GASKET, Magneto	2
LW-12795	GASKET, Oil filter adapter	1
LW-13353	GASKET, Oil sump	1
LW-13792*	SEAL, Crankshaft oil	1
LW-14260	SEAL, Tachometer drive	1
LW-14995	SPRING, Shroud tube	4
LW-18639	LOCKPLATE, Crankshaft gear	1
LW-18661	SEAL, Shroud tube	8
LW-19296	GASKET, Exhaust flange	4
STD-475	WASHER, 5/16 lock, internal teeth	4
STD-213	SEAL, Oil	1
06A19956	SEAL, Oil	1
06E 19769-0.63	GASKET	2
06E 19769-1.00	GASKET	1
06E 19769-1.25	GASKET	1
1691-C	GASKET, Fuel pump	1
60096	GASKET, Fuel pump	1
61173	GASKET, Oil pressure housing	1
61183	GASKET, Accessory adapter	1
62224	GASKET, Magneto adapter	3
66224	GASKET, Carburetor	2
68315	GASKET, Accessory drive	1
69164	GASKET, Fuel pump adapter	1
69345	SPACER	4
69551	GASKET, Accessory drive	1
70310	SEAL, Shroud tube	8
70455	GASKET	1
71481	RING, Oil seal	4
71973	GASKET	4
72053	GASKET, Governor	2
72059	GASKET, Oil level gage	1
72075	SEAL, Oil	6
72078	LOCKPLATE	2
72091	RING, Oil seal	2
72220	GASKET, Oil level gage	1
72312	RING, Oil seal	1
72829	LOCKPLATE	1
73189	GASKET	1
73383	LOCKPLATE	2
73817	LOCKPLATE	2
73818	GASKET, Accessory housing	1
74065	RING, Oil level gage seal	1

SERVICE KIT SECTION SEAL AND GASKET SET
--

Part No.	Part Name	Qty.
75439-1	SEAL AND GASKET SET (CONT.)	
74068	RING, Oil level gage plug	1
75906	GASKET, Rocker box cover	4
76510	GASKET, Oil cooler bypass	1
76940*	SEAL, Crankshaft oil	1
77154	GASKET, Carburetor	1
77611	GASKET, Exhaust flange	4
8313	GASKET, Vacuum pump	1

* Refer to latest edition of Lycoming Service Instruction No. 1324 for application.

SERVICE KIT SECTION CYLINDER, PISTON AND RING ASSEMBLY KIT

Part No.	Part Name	Qty.
05K21104	KIT - CYLINDER, PISTON AND RING ASSY.	1
LW-12427	CYLINDER AND HEAD ASSY.	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-14077	PIN, Piston	1
LW-11775	PLUG, Piston pin	2
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
SSP-2272	TAG	1
SSP-2472-1	TAG	1
SSP-672	TAG	1
72198	PLUG, Piston pin	2
77611	GASKET, Exhaust flange	1
71973	GASKET, 2 bolt flange	1

SERVICE KIT SECTION CRANKCASE ASSY. AND THRU STUD KIT

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

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31A22110	Starter	5-2
37B19774-325	Belt, Generator	5-3
53E22144	Valve Assy.	2-7
66GC20SFNN	Magneto	4-1
66GP-OSANN	Magneto	4-1
66M21195	Clamp	4-1
67P20406	Harness Assy.	4-1
67P20407	Harness Assy.	4-1
68C19622	Magneto Gear	4-1