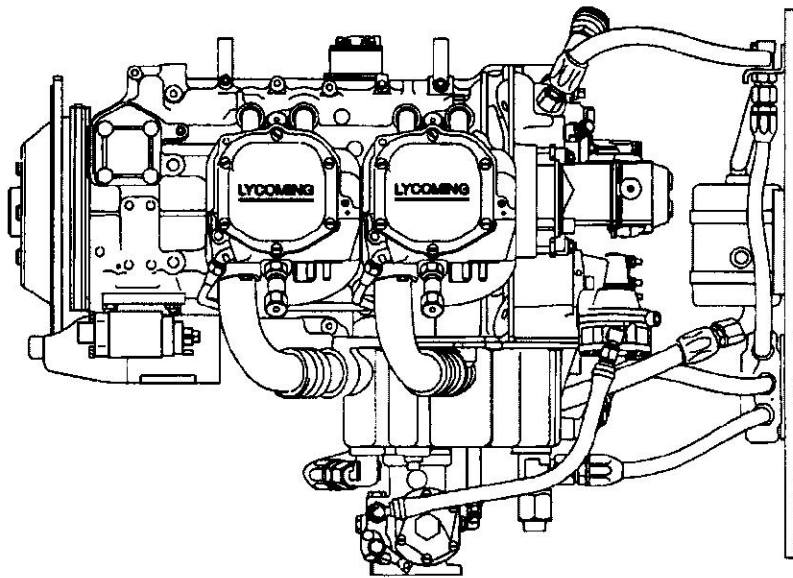


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Engine Parts Catalog

AEIO-360-H1B

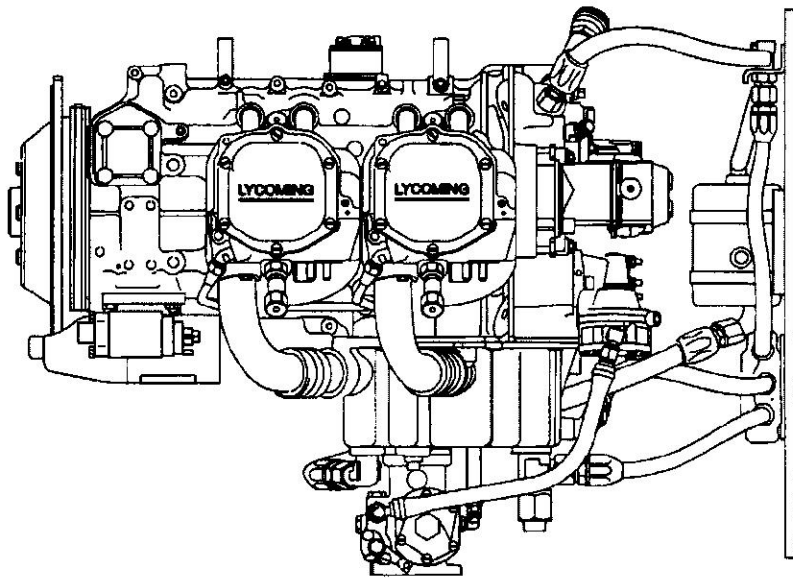
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September 2003

Part No. PC-406-5

652 Oliver Street
Williamsport, PA 17701

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Engine Parts Catalog

AEIO-360-H1B

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September 2003

Part No. PC-406-5

652 Oliver Street
Williamsport, PA 17701

This illustrated parts catalog contains a complete parts listing for the Lycoming AEIO-360-H1B 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 18A19441 in .003 undersize, order part number 18A19441-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	11B19524-1	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, 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 11/16 long, hollow	2
11	72158	BUSHING, Gov. drive idler shaft	1
12	STD-514	DOWEL, 5/16 dia. x 1/2 long	2
13	69796	DOWEL, Crankshaft bearing	2
14	STD-1623	INSERT, 1/4-20 Helicoil x 3/8 long	2
15	31C-17	STUD, 5/16-18 x 2-1/8 long	4
16	1102	PLUG, 1/8-27 NPT, Allen head	5
17	STD-1339	PLUG, 1/16-27 NPT, Allen head	5
18	71032	BUSHING, Engine support	8
19	STD-619	WASHER, 17/32 I.D. x 1-3/4 O.D. x 5/32 thick	8

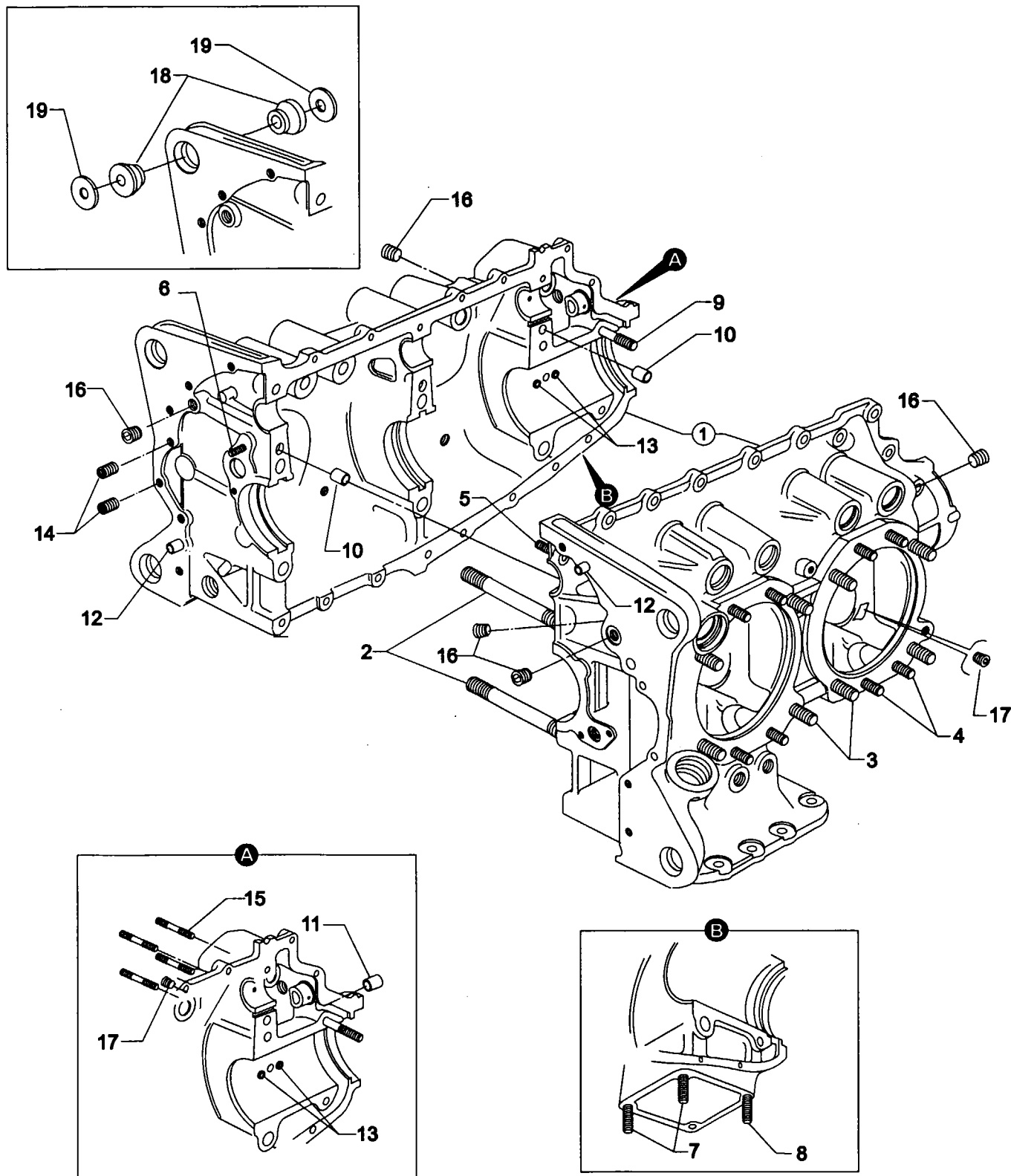


Figure 1. CRANKCASE ASSEMBLY

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

FIG. REF. 2	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
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	18D23135	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.

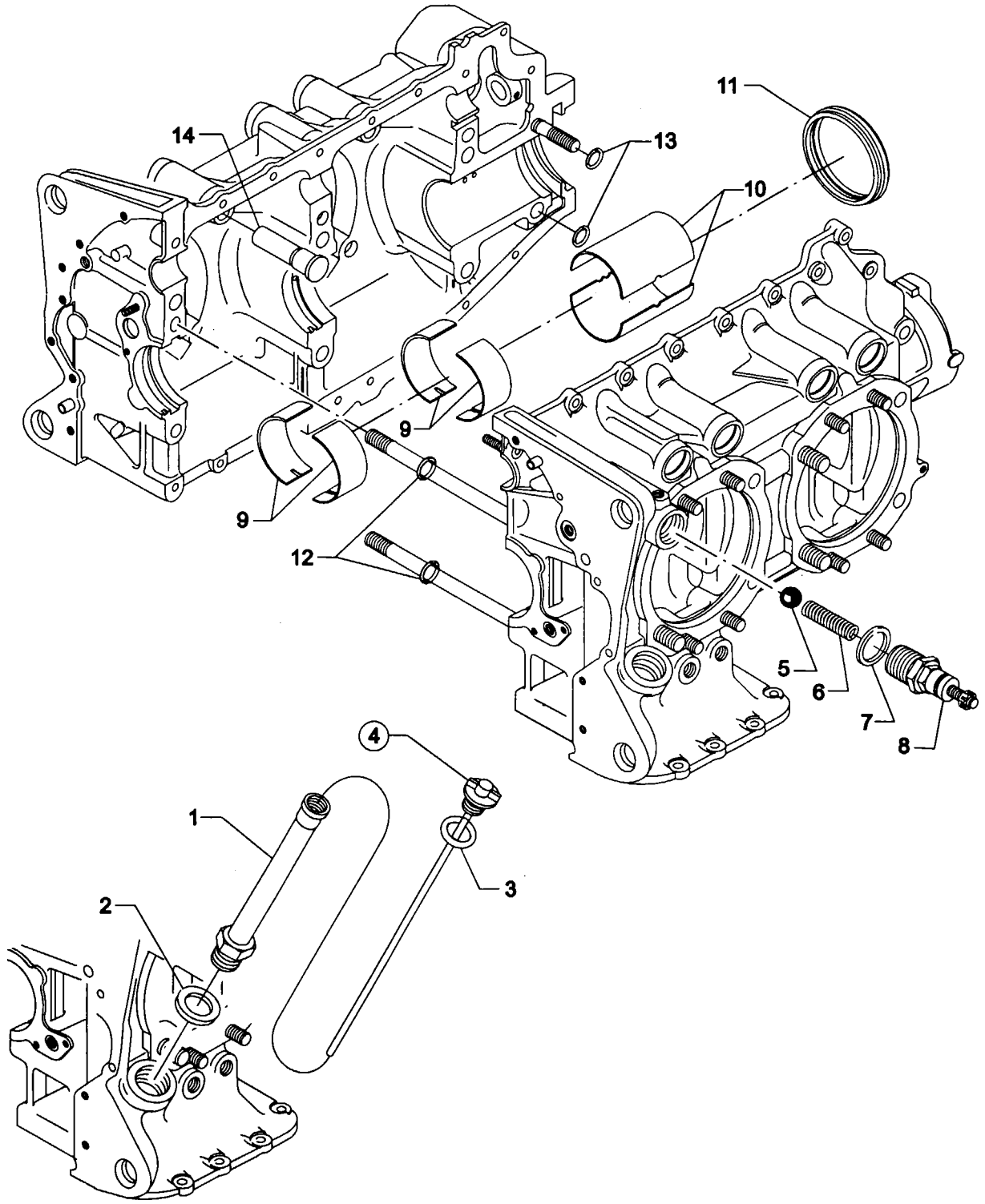


Figure 2. OIL LEVEL GAGE ASSEMBLY AND CRANKCASE RELATED PARTS

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP
CRANKSHAFT ASSEMBLY AND RELATED PARTS

FIG. REF. 3	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	13B27120	CRANKSHAFT AND BUSHING ASSEMBLY	1
2	STD-1211	PLUG, 2.00 dia. expansion	1
3	STD-1065	DOWEL, Stepped, 5/16 & 1/4 dia. x 35/64 long	1
4	61510	PLUG, 1-3/4 O.D.	1
5	75656-S	BUSHING, Propeller flange, long	4
6	72155-S	BUSHING, Propeller flange, short	1
7	75657-S	BUSHING, Propeller flange, indexing	1
8	13S19646 *	GEAR, Crankshaft	1
9	LW-18639	LOCKPLATE, Crankshaft gear	1
10	STD-2246	BOLT, 5/16-24 x 1.00 long	1
11	LW-16471	SUPPORT ASSY., Starter ring gear, 12/14 pitch	1
12	72566	GEAR, Starter ring	1

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

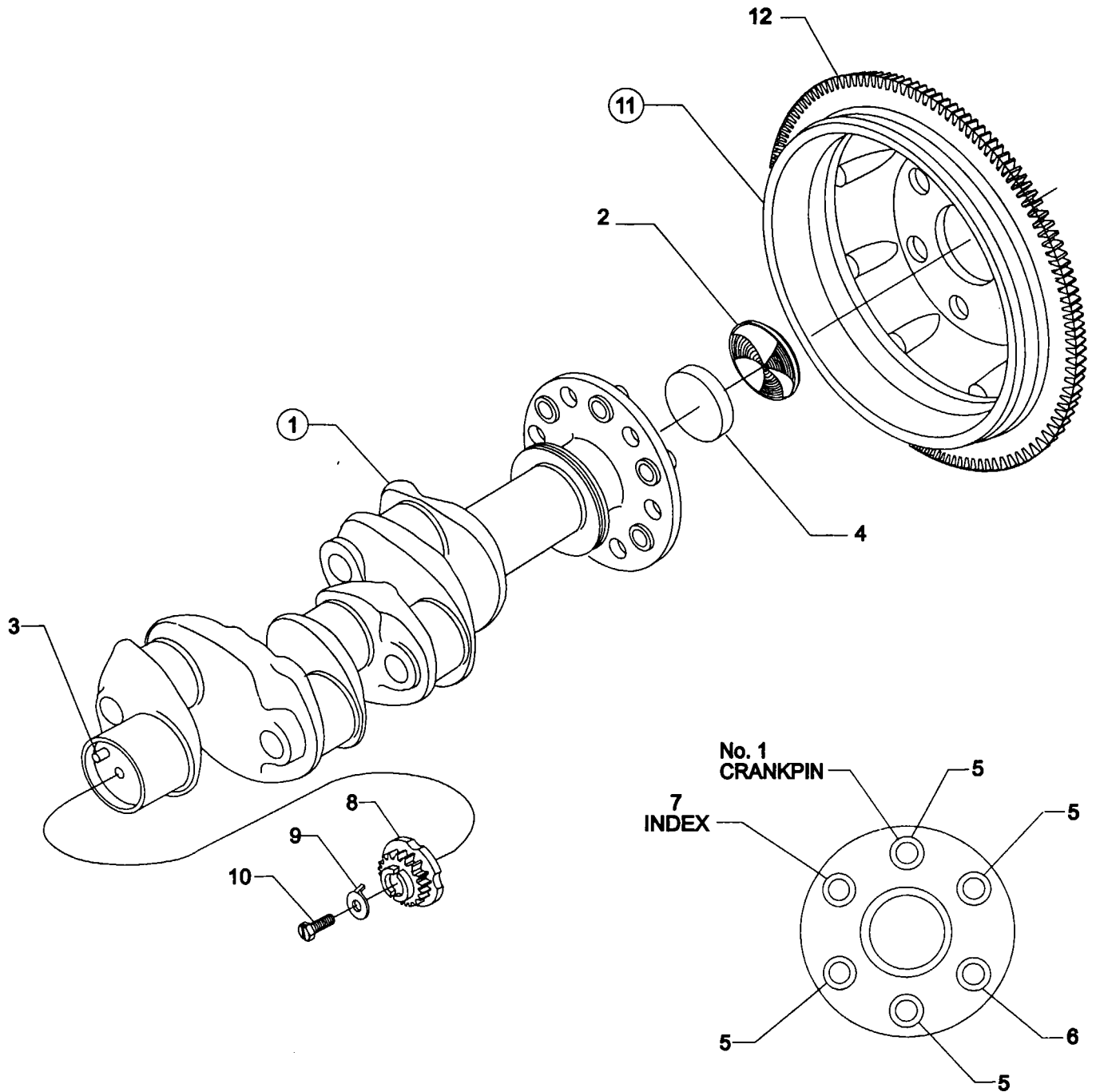


Figure 3. CRANKSHAFT ASSEMBLY AND RELATED PARTS

**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-18843	CAMSHAFT ASSEMBLY	1
13	76118	SPACER, Tachometer shaft centering	1

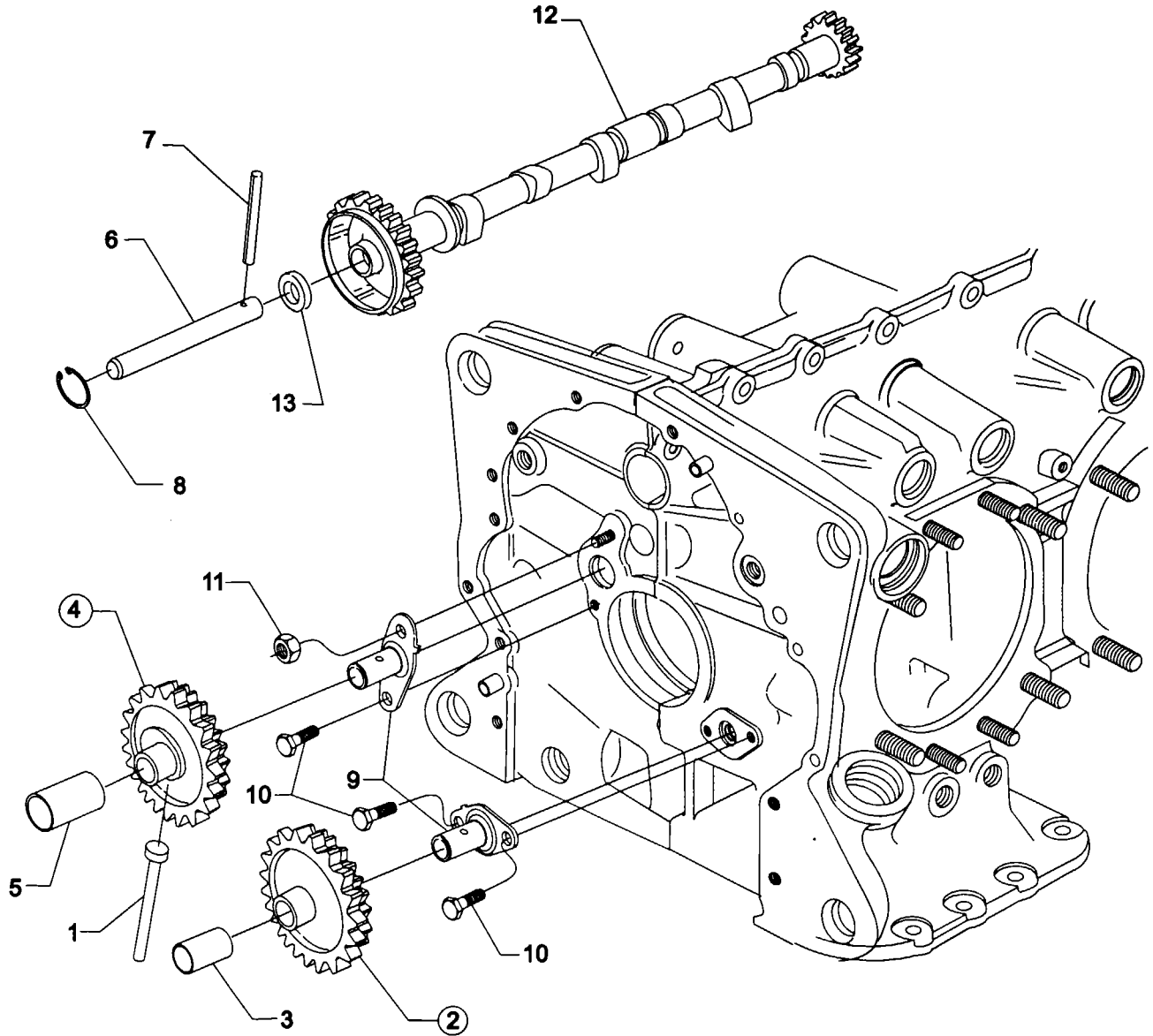


Figure 4. CRANKSHAFT IDLER GEARS, TACHOMETER DRIVE AND CAMSHAFT

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP
PROPELLER GOVERNOR DRIVE ASSEMBLY (CRANKCASE)

FIG. REF. 5	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	77875	GEAR, Propeller governor driven	1
2	LW-14021	SHAFT, Propeller governor idler gear	1
3	77874	GEAR ASSY., Propeller governor idler	1
4	77872	BUSHING, Propeller governor idler gear	2
5	STD-19	DOWEL, 3/32 dia. x 7/32 long	1
6	STD-798	DOWEL, 3/32 dia. x 9/32 long	1
7	73249	WASHER, Thrust (.0585 - .0595 thick)	AR
	73250	WASHER, Thrust (.062 - .063 thick)	AR
	73251	WASHER, Thrust (.0655 - .0665 thick)	AR
	73252	WASHER, Thrust (.069 - .070 thick)	AR
	01L21418	WASHER, Thrust (.055 - .065 thick)	AR
8	AN565B1032H5	SET SCREW, No. 10-32 x 5/16 long	1
9	70455	GASKET, 25/32 I.D. x 1-1/8 O.D. x 1/16 thick	1
10	LW-13896	PLUG, 3/4-16 hex hd.	1

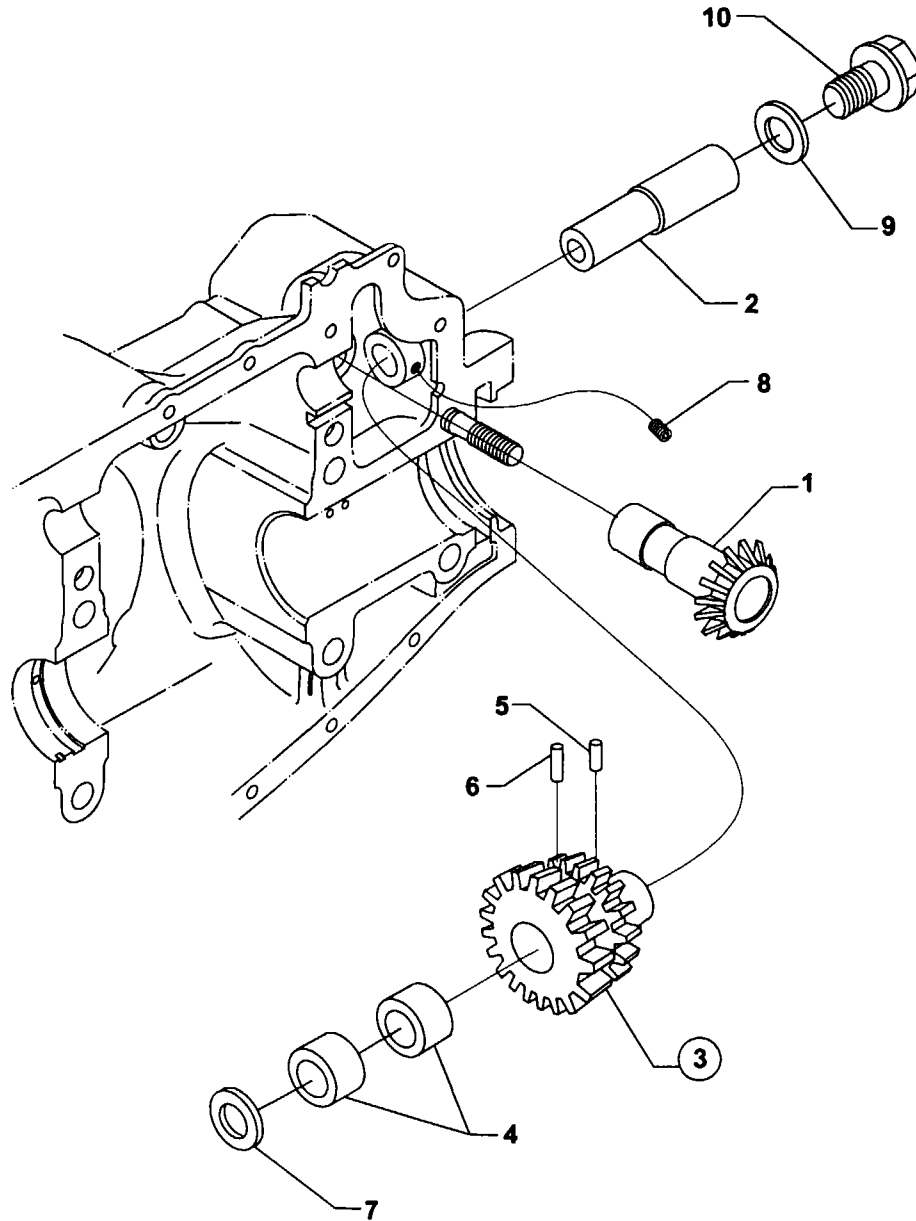


Figure 5. PROPELLER GOVERNOR DRIVE ASSEMBLY (CRANKCASE)

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP
CRANKCASE ATTACHING PARTS

FIG. REF. 6	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-25-1.50	BOLT, 1/4-20 x 1-1/2 long, hex. hd.	5
2	LW-25-2.00	BOLT 1/4-20 x 2.00 long, hex. hd.	2
3	STD-8	WASHER, 1/4 plain	13
4	60803	STRAP, Lifting	2
5	LW-25-1.75	BOLT, 1/4-20 x 1-3/4 long, hex. hd.	2
6	LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. hd.	4
7	STD-160	WASHER, 1/4 lock, internal teeth	13
8	STD-1411	NUT, 1/4-20 plain	9
9	LW-25S1.50	BOLT, 1/4-20 x 1-1/2 long, hex. hd., dr. end	3
10	STD-8	WASHER, 1/4 plain (max. 9)	AR
11	STD-2249	NUT, 1/4-20 slotted shear	3
12	STD-33	WASHER, 3/8 plain, 1/16 thick	3
13	AN960-616L	WASHER, 3/8 plain, 1/32 thick	1
14	STD-872	NUT, 3/8-24 slotted	1
15	AN6-34A	BOLT, 3/8-24 x 3-37/64 long, hex. hd.	1
16	STD-33	WASHER, 3/8 plain	2
17	STD-678	WASHER, 3/8 lock, internal teeth	2
18	STD-596	NUT, 3/8-24 plain	2
19	76220	STUD, 1/2-20 x 10-45/64 long	4

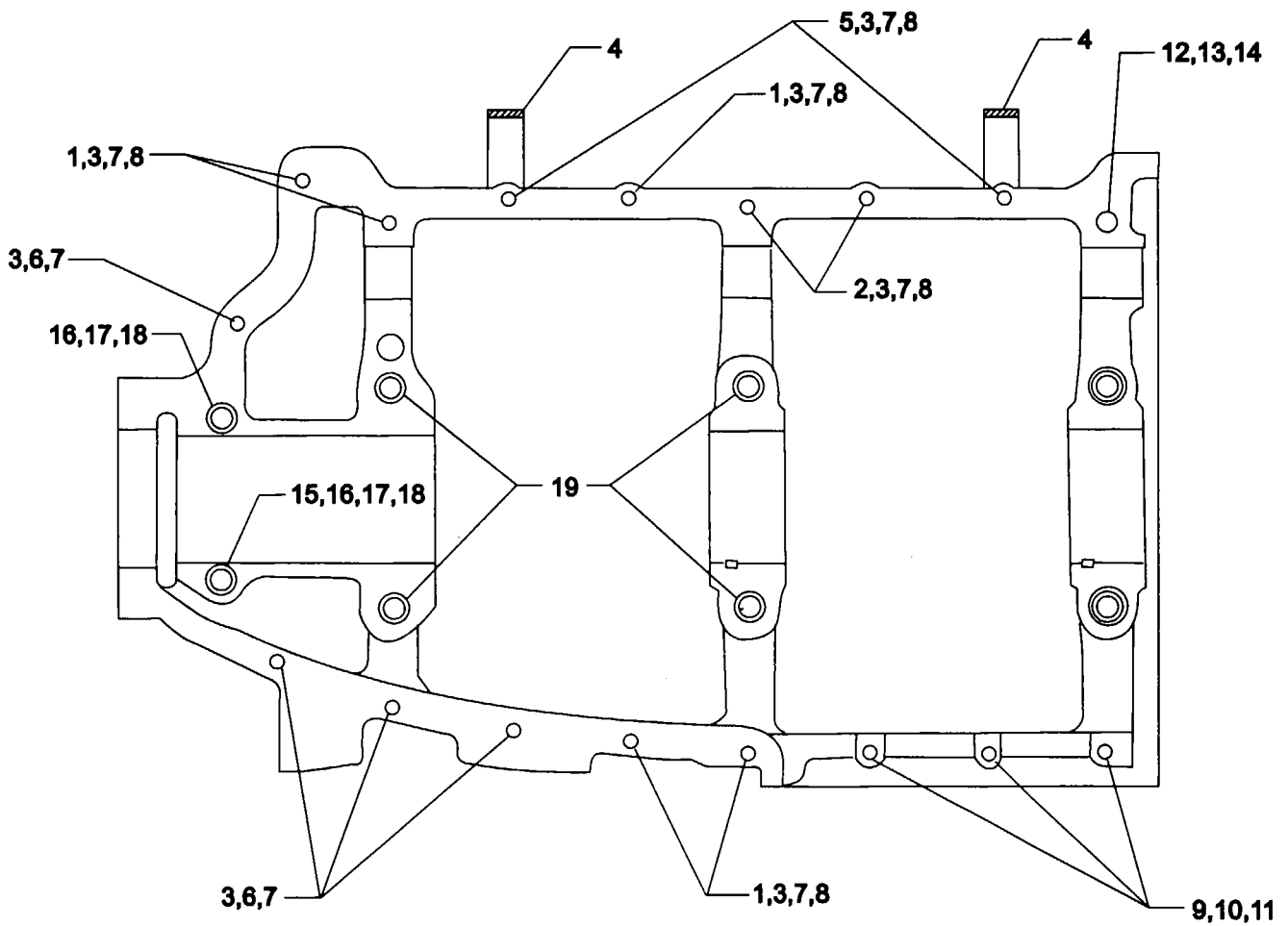


Figure 6. CRANKCASE ATTACHING PARTS

ACCESSORY HOUSING AND RELATED PARTS
ACCESSORY HOUSING ASSEMBLY

FIG. REF. 7	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	73818	GASKET, Accessory housing	1
2	21A21533-05	HOUSING ASSY., Accessory	1
3	31C-12	STUD, 5/16-18 x 1-1/2 long	4
4	31C-19	STUD, 5/16-18 x 2-3/8 long	4
5	25C-22	STUD, 1/4-20 x 2-3/4 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

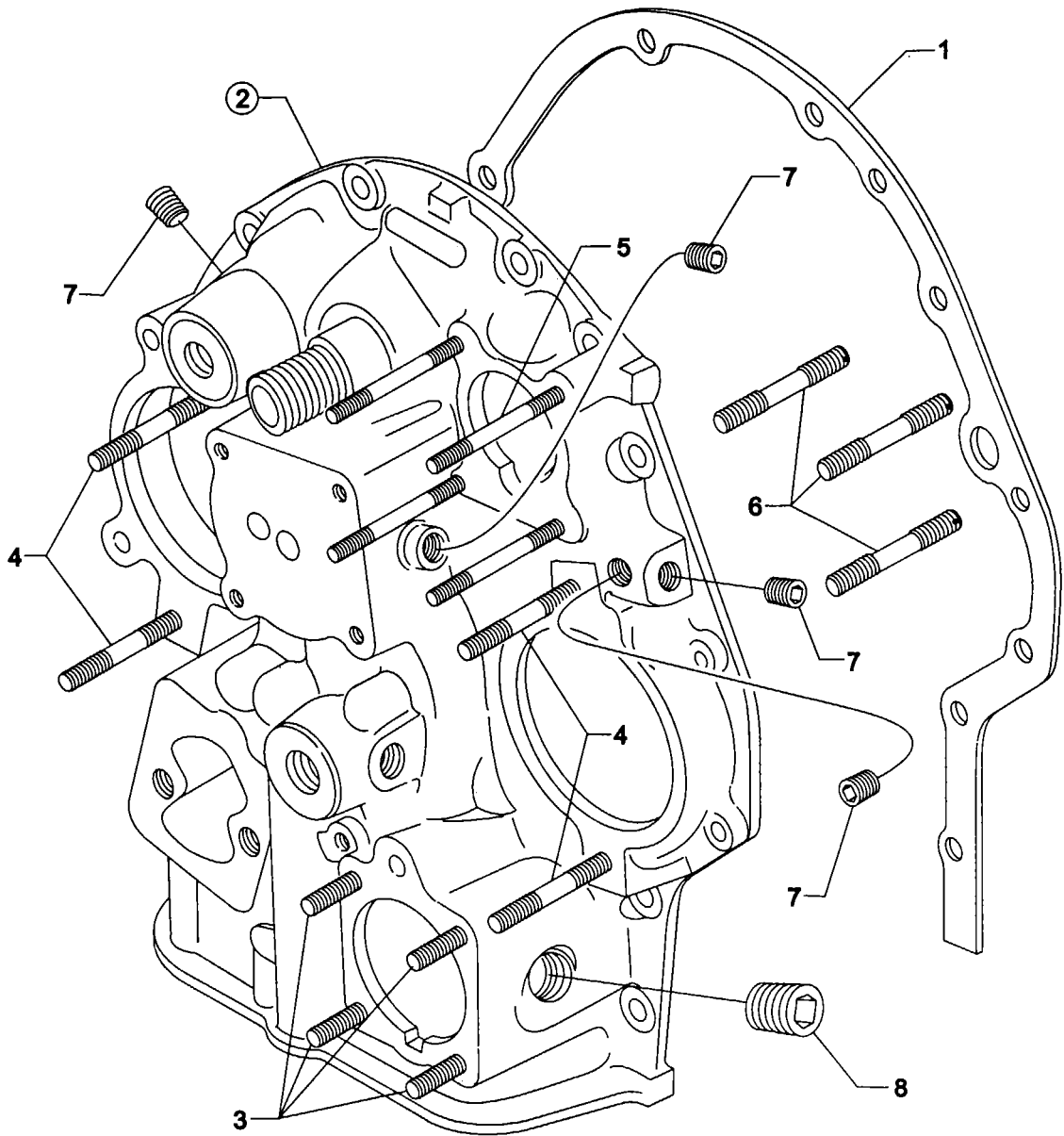


Figure 7. ACCESSORY HOUSING ASSEMBLY

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

FIG. REF. 8	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

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

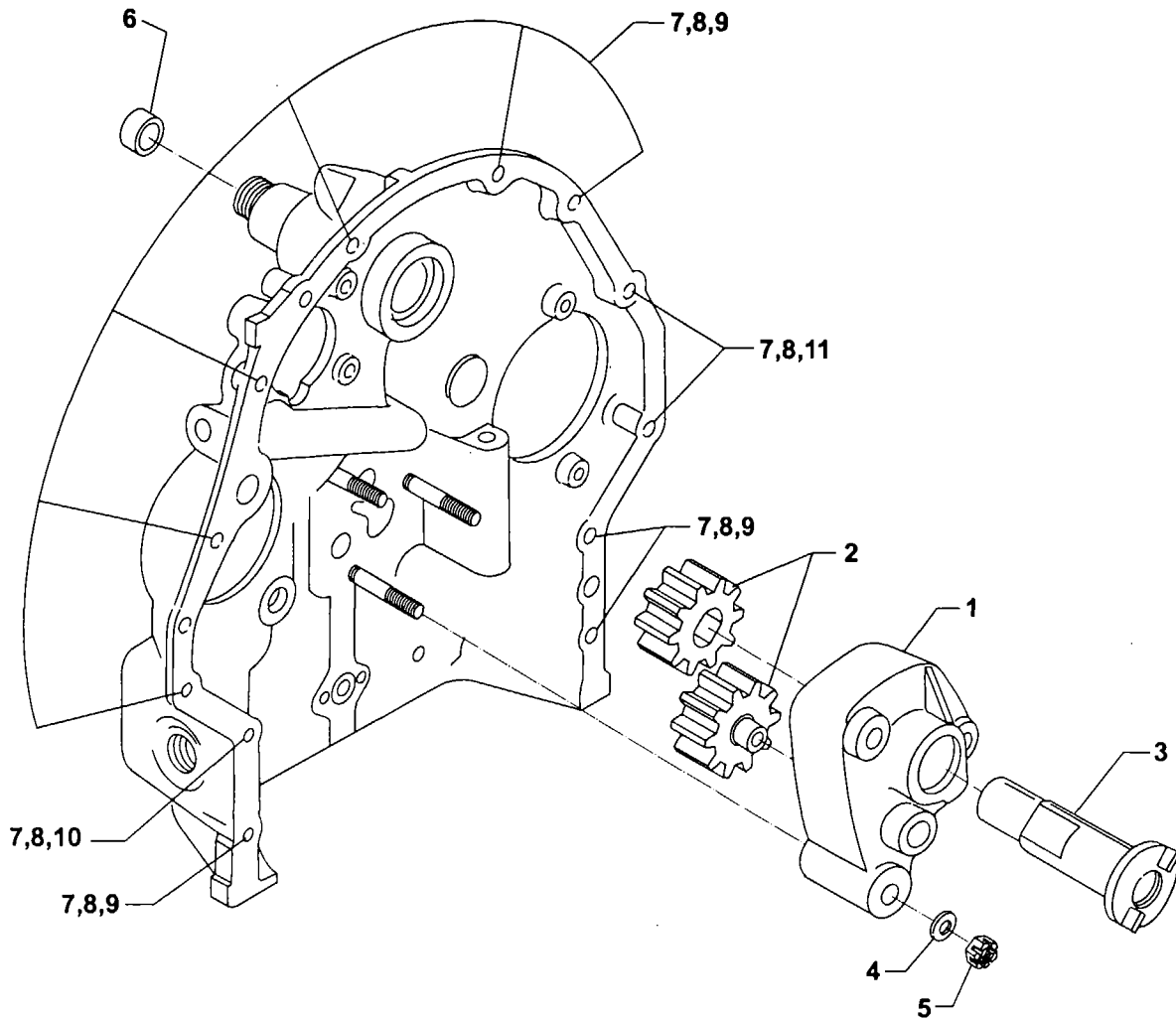


Figure 8. OIL PUMP ASSEMBLY AND ACCESSORY HOUSING ATTACHING PARTS

ACCESSORY HOUSING AND RELATED PARTS
FUEL PUMP AND PROPELLER GOVERNOR DRIVE COVER

FIG. REF. 9	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	60096	GASKET, Fuel pump	1
2	LW-15473	FUEL PUMP, Dual diaphragm (6441234)	1
3	STD-33	WASHER, 3/8 plain	2
4	STD-1882	SCREW, 3/8-16 x 1-9/32 long, socket drive	2
5	69551	GASKET, Accessory drive adapter	1
6	69106	COVER, Governor drive adapter pad	1
7	STD-35	WASHER, 5/16 plain	4
8	STD-475	WASHER, 5/16 lock, internal teeth	4
9	STD-1410	NUT, 5/16-18 plain	4
10	72053	GASKET, Governor	1
11	72378	COVER, Governor drive	1
12	STD-35	WASHER, 5/16 plain	32
13	STD-475	WASHER, 5/16 lock, internal teeth	4
14	STD-1410	NUT, 5/16-18 plain	4

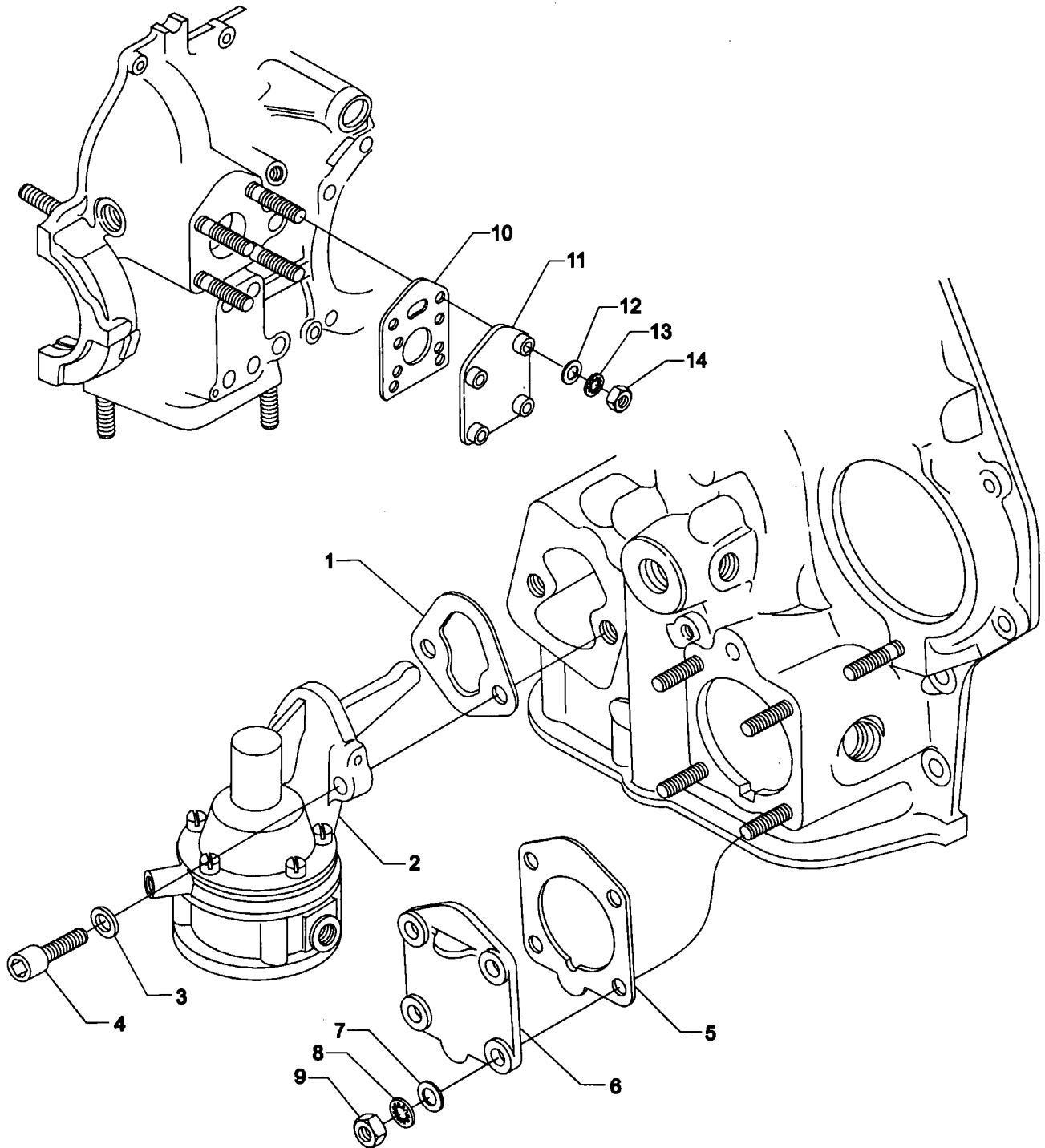


Figure 9. FUEL PUMP AND PROPELLER GOVERNOR DRIVE COVER

ACCESSORY HOUSING AND RELATED PARTS
VACUUM PUMP DRIVE AND COVER

FIG. REF. 10	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	61183	GASKET, Vacuum pump	1
2	61098	ADAPTER ASSY., Vacuum pump	1
3	STD-1774	PIN, 1/8 dia. x 1/4 long	1
4	06A19956	OIL SEAL, 7/8 I.D. x 1-1/2 O.D. x 5/16 wide	1
5	72970	GEAR ASSY., Vacuum pump driven	1
6	71596	WASHER, Accessory drive gear	1
7	8313	GASKET, Vacuum pump	1
8	60430	COVER, Vacuum pump	1
9	68593 *	SPACER, Vacuum pump	4
10	STD-8	WASHER, 1/4 plain	4
11	STD-160	WASHER, 1/4 lock, internal teeth	4
12	STD-1411	NUT, 1/4-20 plain	4

* Used only if no vacuum pump drive is installed.

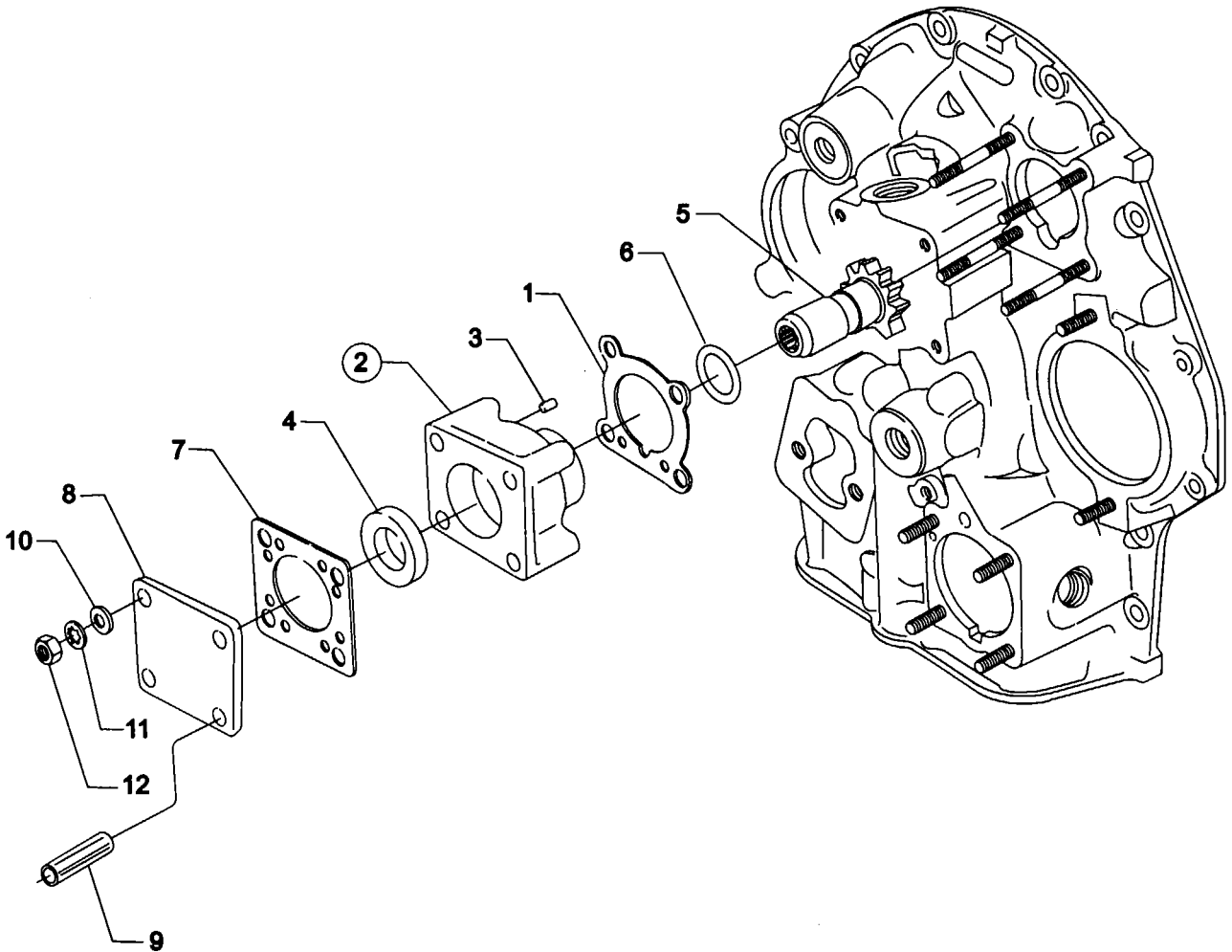


Figure 10. VACUUM PUMP DRIVE AND COVER

ACCESSORY HOUSING AND RELATED PARTS
OIL FILTER ASSEMBLY AND OIL COOLER BYPASS VALVE

FIG. REF. 11	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
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, Annular, 5/8 I.D.	1
5	STD-8	WASHER, 1/4 plain	4
6	STD-160	WASHER, 1/4 lock, internal teeth	4
7	LW-25-1.00	BOLT, 1/4-20 x 1.00 long, hex.	4
8	53E22144	VALVE ASSY., Temp. control oil cooler	1
9	76510	GASKET, Valve assembly	1
10	06E19769-0.63	GASKET, Annular, 5/8 I.D.	1
11	62417	PLUG, Oil cooler bypass	1
12	STD-784	PLUG, 3/8-18 NPT, Allen head	2

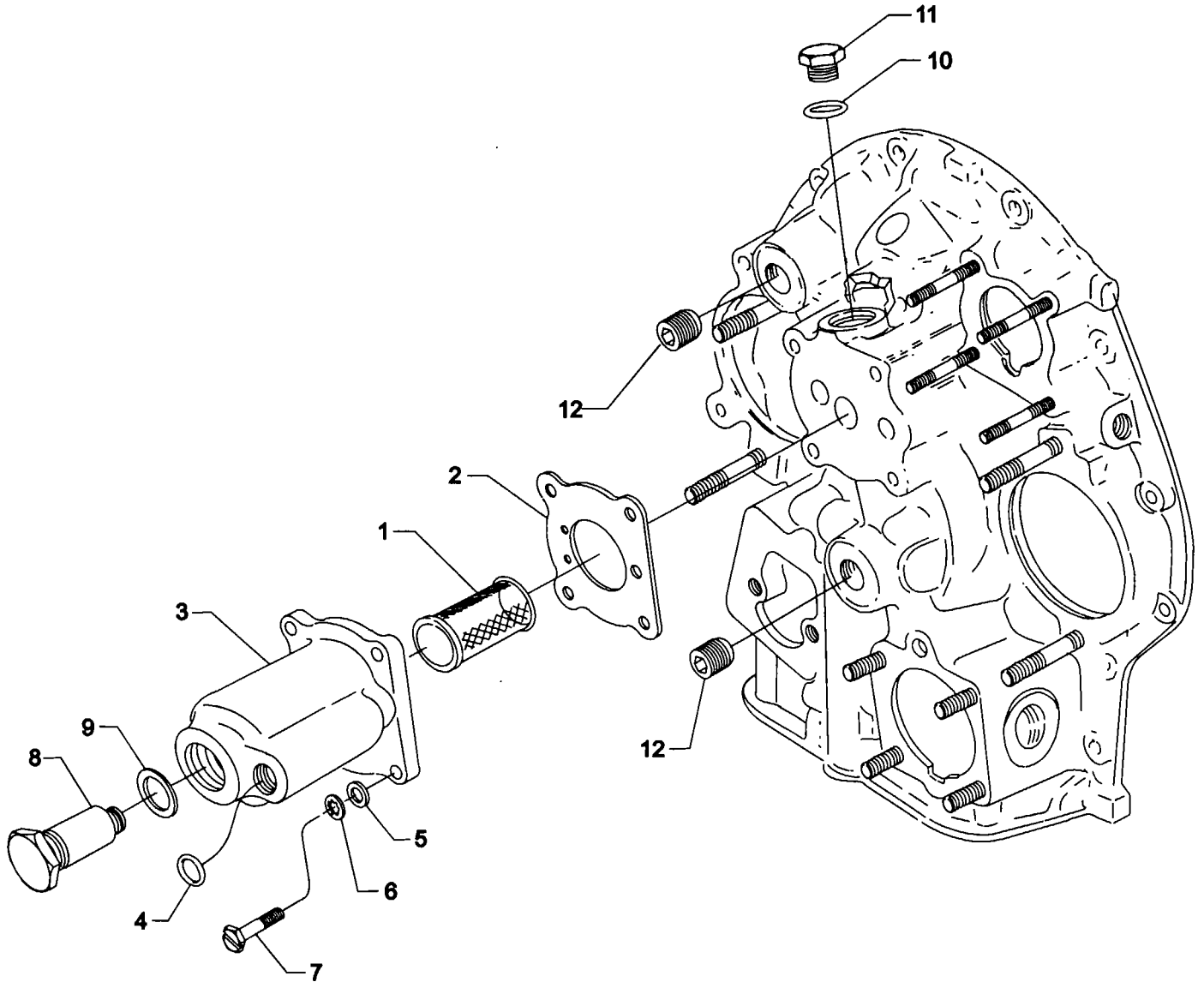


Figure 11. OIL FILTER ASSEMBLY AND OIL COOLER BYPASS VALVE

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

FIG. REF. 12	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
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	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	4

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

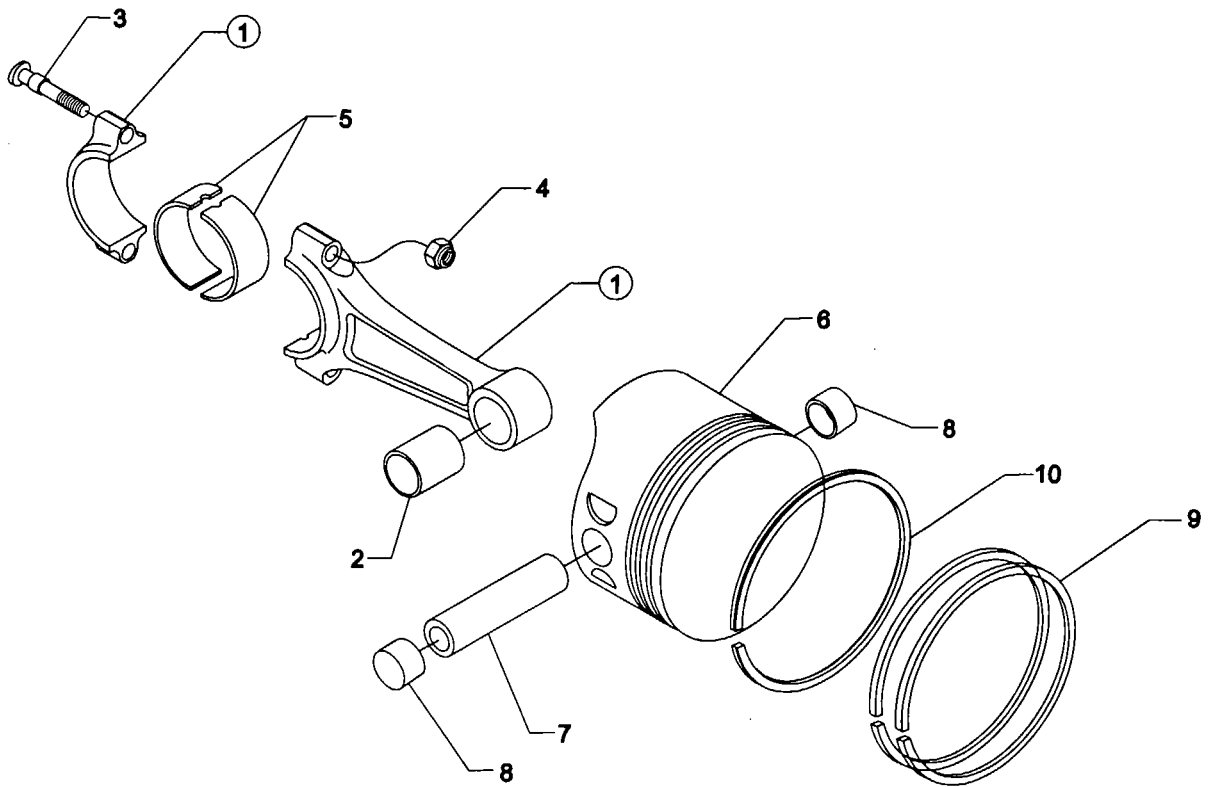


Figure 12. CONNECTING RODS, PISTONS AND RING ASSEMBLIES

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

FIG. REF. 13	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-12427	CYLINDER ASSEMBLY	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 Helicoil x 5/8 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 pipe	4
13	77611 **	GASKET, Exhaust	4
	LW-19296 **	GASKET, Exhaust	4
14	61260	FLANGE, Exhaust	4
15	STD-35	WASHER, 5/16 plain	8
16	STD-475	WASHER, 5/16 lock, internal teeth	8
17	STD-1410	NUT, 5/16-18 plain	8

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

** See latest edition of Lycoming Service Instruction No. 1204.

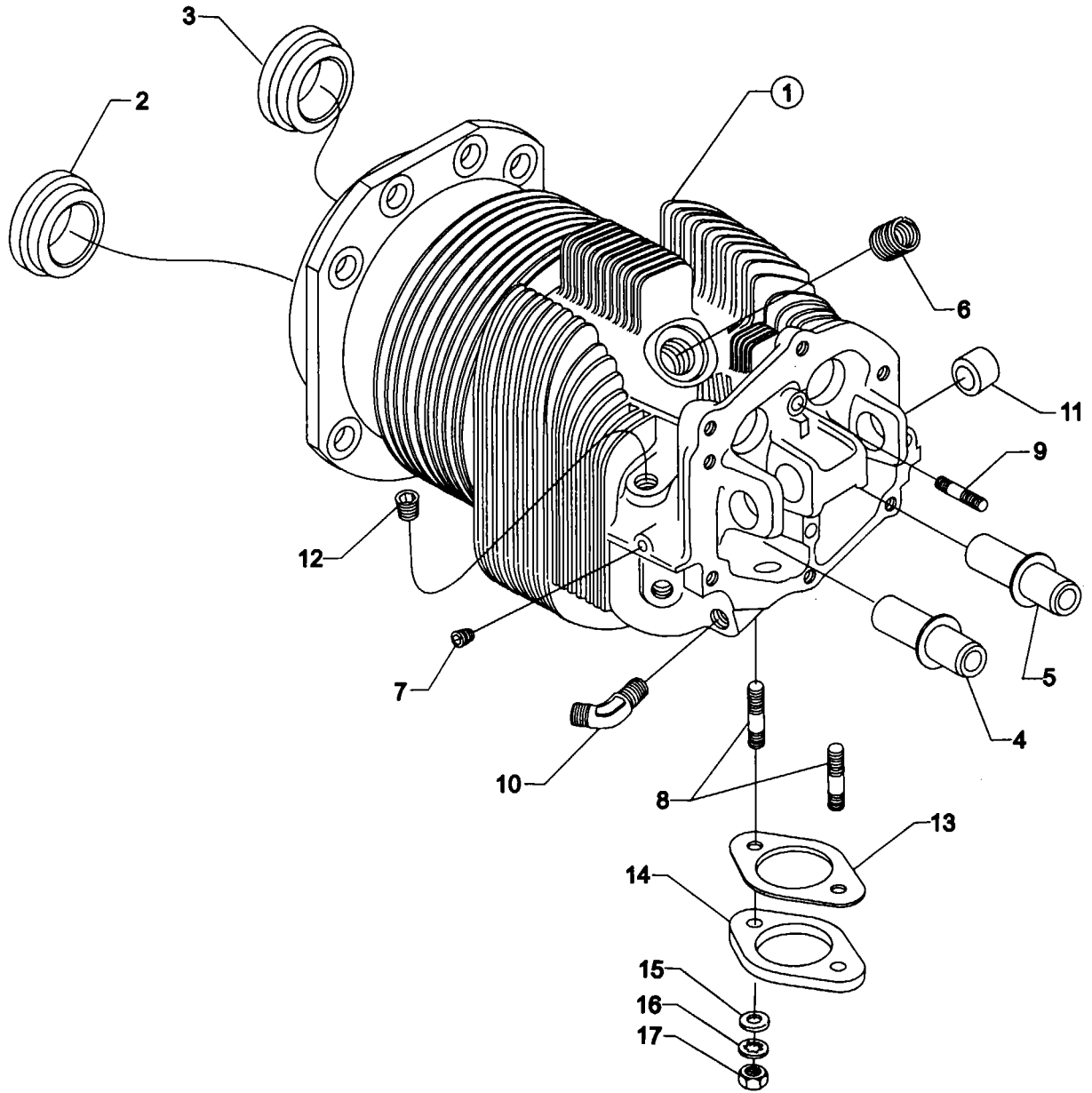


Figure 13. CYLINDER ASSEMBLY

CYLINDER, PISTON AND VALVE TRAIN
CYLINDER RELATED PARTS

FIG. REF. 14	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	15F19957-34 *	ROD ASSY., Push (A total of 8 reqd.)	AR
	15F19957-35 *	ROD ASSY., Push (A total of 8 reqd.)	AR
	15F19957-36 *	ROD ASSY., Push (A total of 8 reqd.)	AR
	15F19957-37 *	ROD ASSY., Push (A total of 8 reqd.)	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).

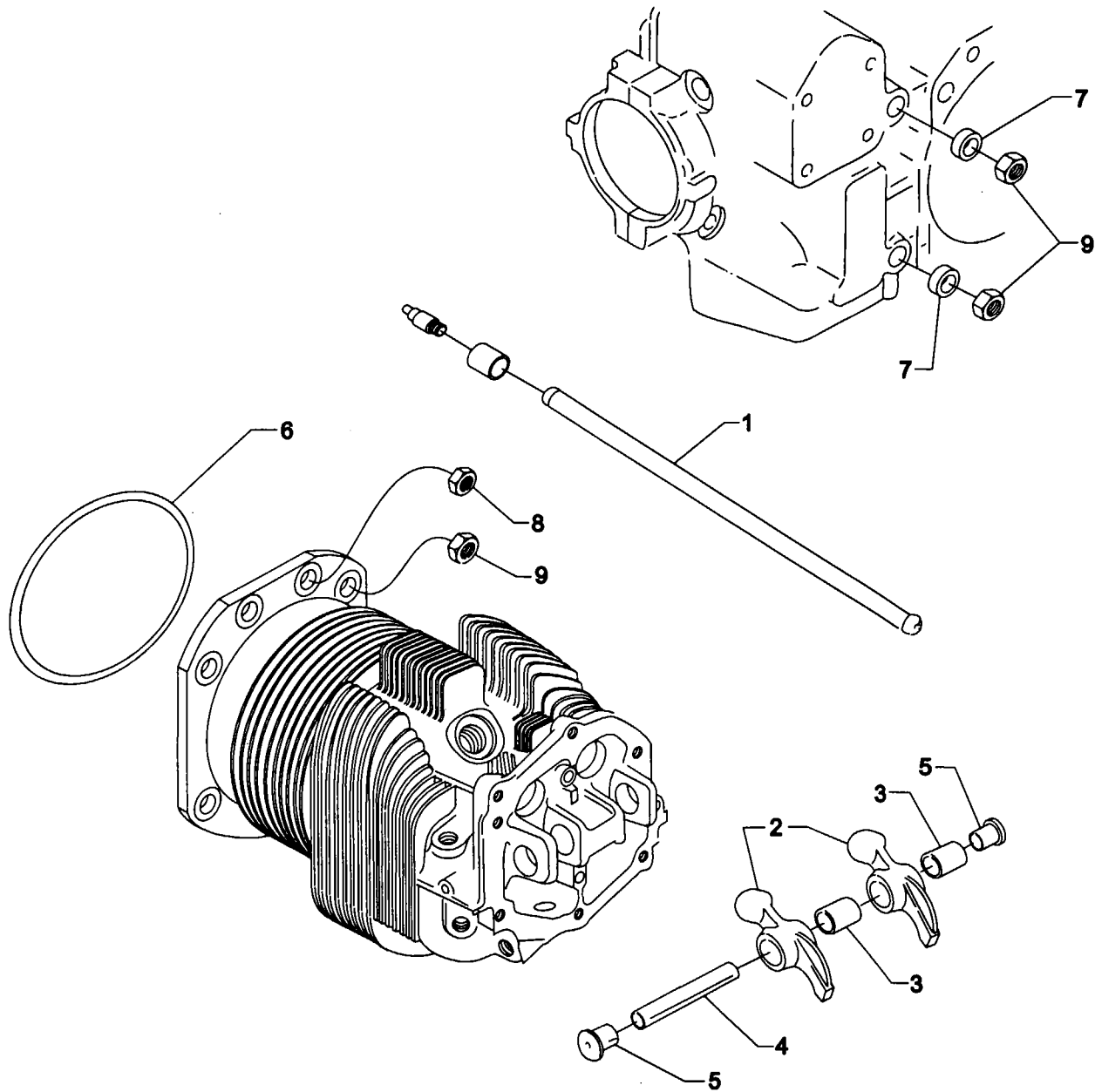
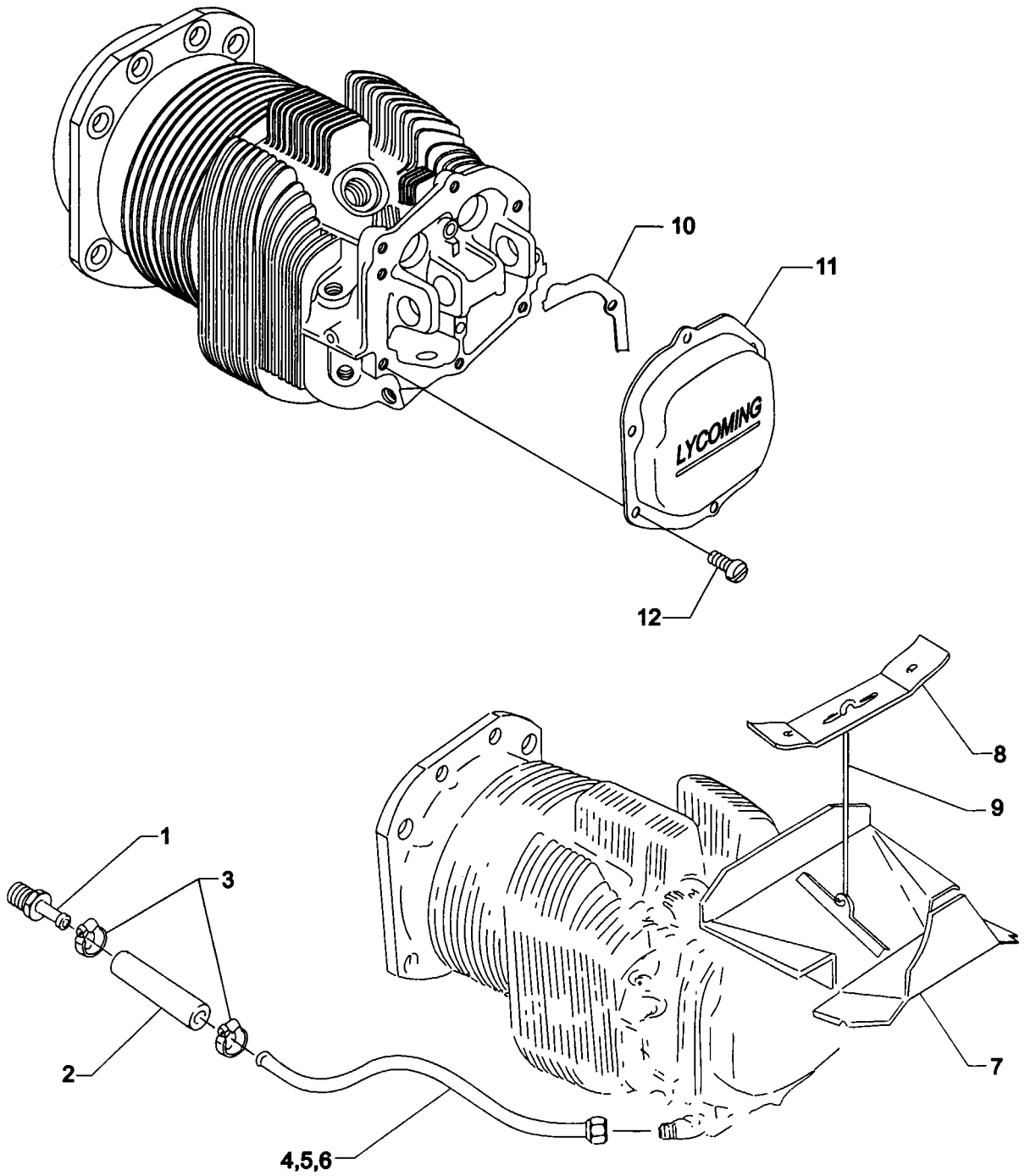


Figure 14. CYLINDER RELATED PARTS

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

FIG. REF. 15	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
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 15. CYLINDER HEAD DRAIN TUBES, INTERCYLINDER BAFFLES AND
ROCKER BOX COVERS**

CYLINDER, PISTON AND VALVE TRAIN
VALVE ASSEMBLY

FIG. REF. 16	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	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

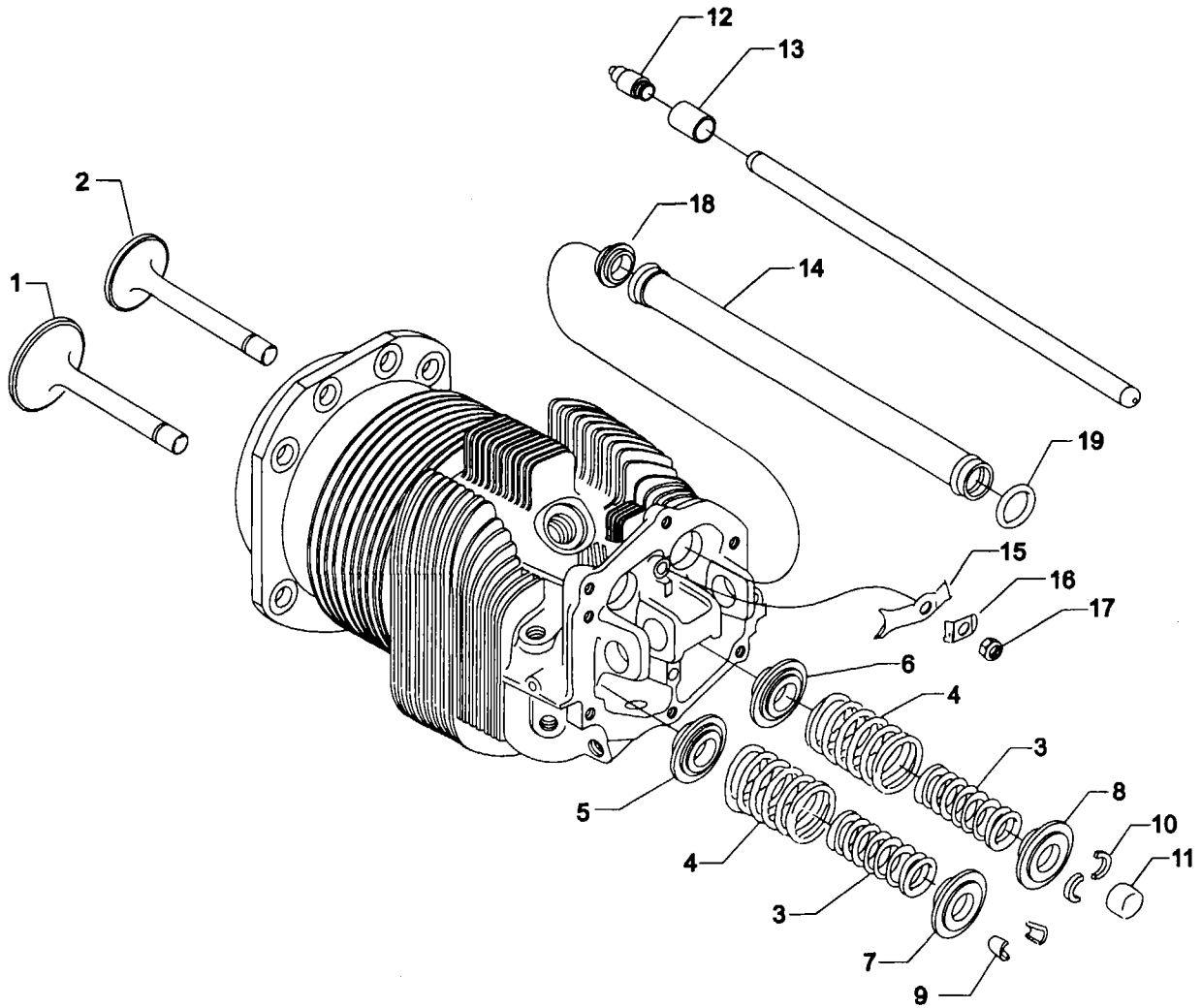


Figure 16. VALVE ASSEMBLY

IGNITION SYSTEM
SLICK MAGNETOS, MAGNETO DRIVES, SLICK HARNESSSES AND SPARK PLUGS

FIG. REF. 17	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	61665	GEAR, Magneto, impulse coupling	2
2	STD-713	COTTER PIN, 3/32 dia. x 3/4 long	2
3	62224	GASKET, Magneto adapter	2
4	LW-12706	ADAPTER, Magneto, impulse coupling	2
5	LW-12681	GASKET, Magneto	2
6	66GC20SFNN	MAGNETO, Slick, Impulse (4371)	2
7	67P20406	HARNESS ASSY., Right, Slick Model M-2992	1
8	67P20407	HARNESS ASSY., Left, Slick Model M-1795	1
9	66M21195	CLAMP, Magneto	4
10	STD-475	WASHER, 5/16 lock, internal teeth	4
11	STD-1410	NUT, 5/16-18 plain	4
12	1182-E7 *	SPARK PLUG, Champion (REM38E) or Auburn ((SR8)	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

LW-16266-25-25	CLIP, One wire	2
LW-14060	CLIP, Two wire	3
STD-8	WASHER, 1/4 plain	8
STD-1874	BOLT, 1/4-20 x 13/16 long	6
76734	ZIP STRAP	8
LW-16266-25-50	CLAMP	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

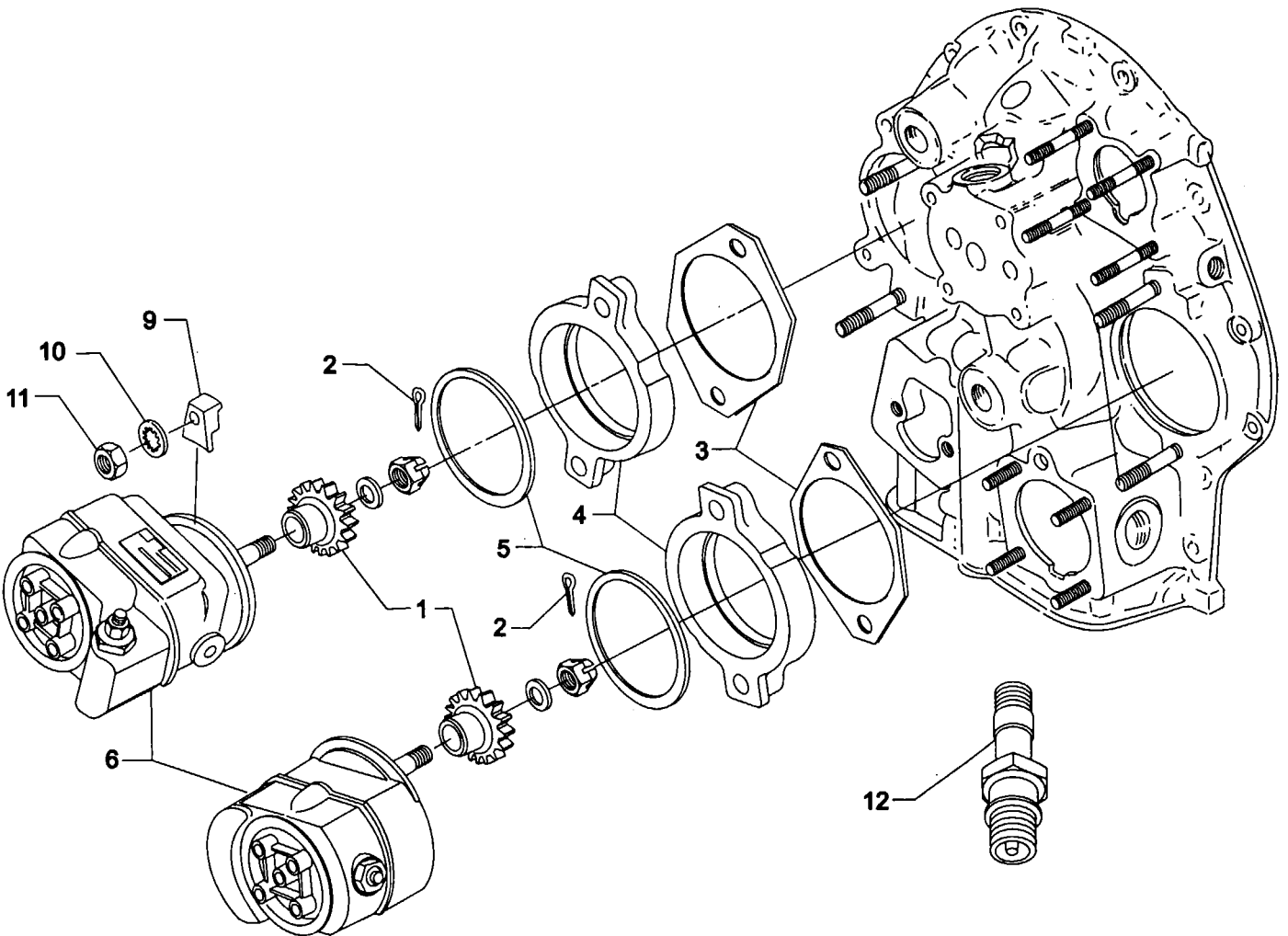
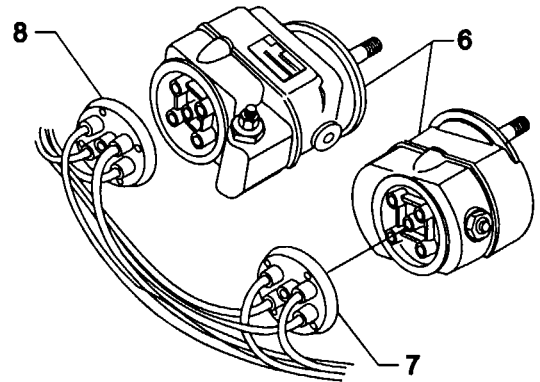


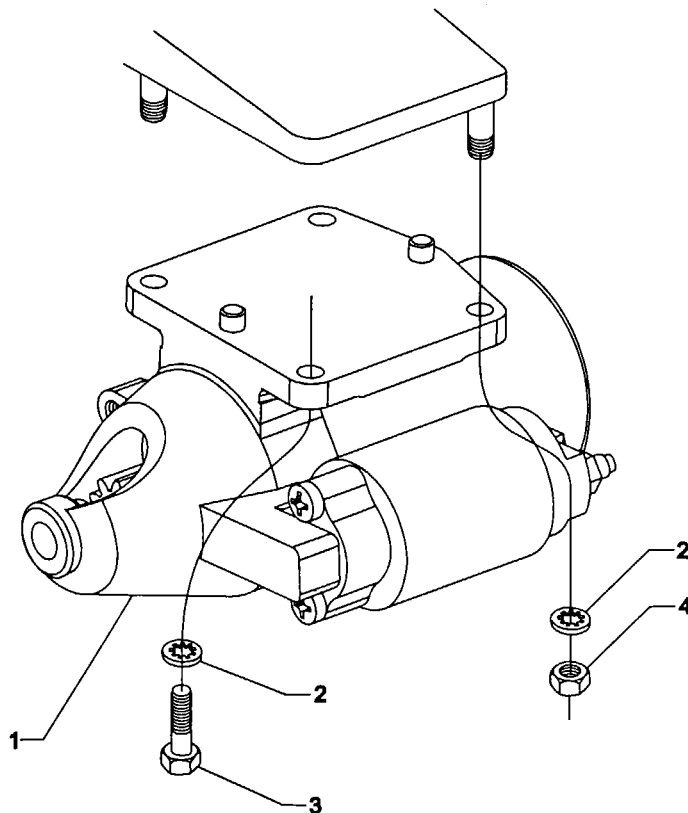
Figure 17. SLICK MAGNETOS, MAGNETO DRIVES, SLICK HARNESSSES AND SPARK PLUGS

**ELECTRICAL SYSTEM
SKY-TEC STARTER AND ATTACHING PARTS**

FIG. REF. 18	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	31A22104	STARTER, Sky-Tec (149-12LS)	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.

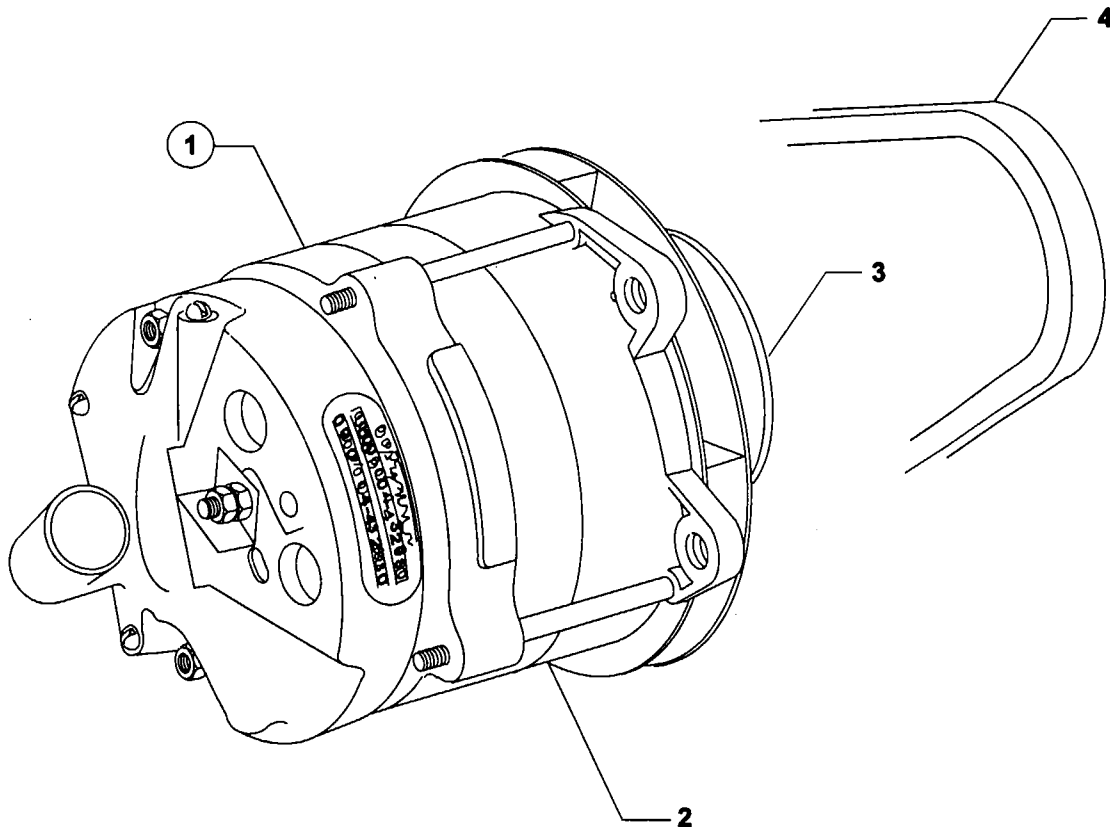
**Figure 18. SKY-TEC STARTER AND ATTACHING PARTS**

**ELECTRICAL SYSTEM
ALTERNATOR ASSEMBLY AND BELT**

FIG. REF. 19	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-14371	ALTERNATOR ASSY., 12 Volt, 60 Amp.	1
2	LW-14313	ALTERNATOR, (ALY-8520-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 19. ALTERNATOR ASSEMBLY AND BELT**

ELECTRICAL SYSTEM
ALTERNATOR MOUNTING AND ATTACHING PARTS

FIG. REF. 20	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	07A19474	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.	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	07F23268	STRUT, Alternator support	1
10	LW-31H0.75	BOLT, 5/16-18 x 3/4 long, hex. hd.	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 13/32 I.D. x .005 thick	AR
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	COTTER PIN, 3/32 dia. x 3/4 long	1

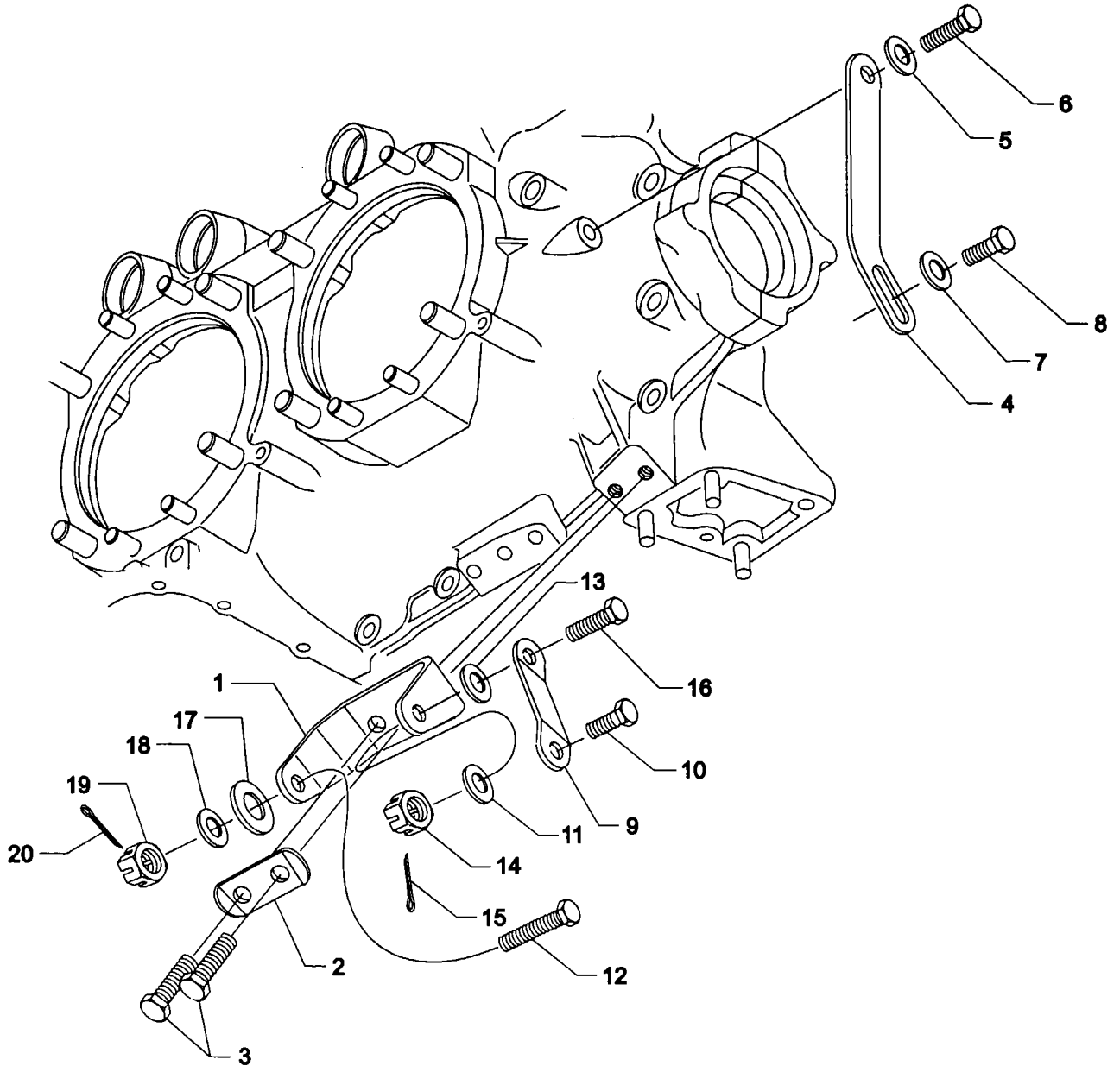


Figure 20. ALTERNATOR MOUNTING AND ATTACHING PARTS

OIL SUMP AND INDUCTION SYSTEM
OIL SUMP ASSEMBLY AND AEROBATIC COMPONENTS

FIG. REF. 21	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-13353	GASKET, Oil sump	1
2	LW-13861	SUMP ASSEMBLY., Oil	1
3	78914	CONNECTION, Intake pipe	4
4	25C-10	STUD, 1/4-20 x 1-1/4 long	4
5	31C-17	STUD, 5/16-18 x 2-1/8 long	4
6	STD-91	PLUG, 1/2-14 NPT, Allen head	1
7	STD-91	PLUG, 1/2-14 NPT, Allen head	4
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.	16
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	LW-13752	PLUG, Sump	1
14	70484	SCREEN, Oil suction	1
15	LW-14035	FITTING, Sump (oil suction)	1
16	LW-13753 *	FITTING, Sump. (oil strainer)	1
17	LW-13754 *	FITTING, Sump (oil return)	1
18	57A21009 *	OIL SEPARATOR	1
19	LW-13755 *	BREATHER, Tee	1
20	57B19829 *	OIL VALVE	1

* Shipped loose with engine.

WIDE CYLINDER FLANGE CRANKCASE MODEL ENGINES

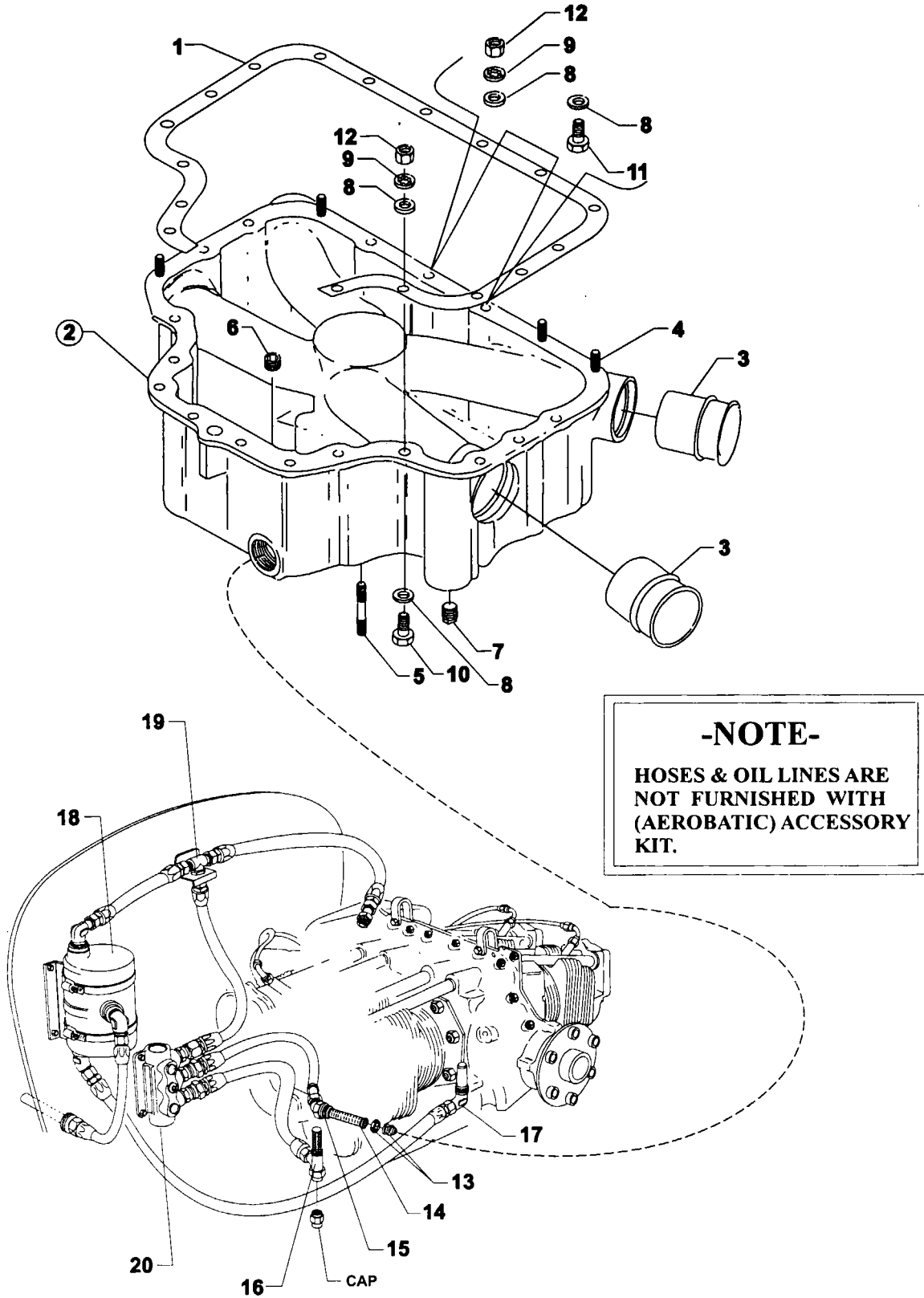


Figure 21. OIL SUMP ASSEMBLY AND AEROBATIC COMPONENTS

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

FIG. REF. 22	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	70485	PIPE, Intake	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

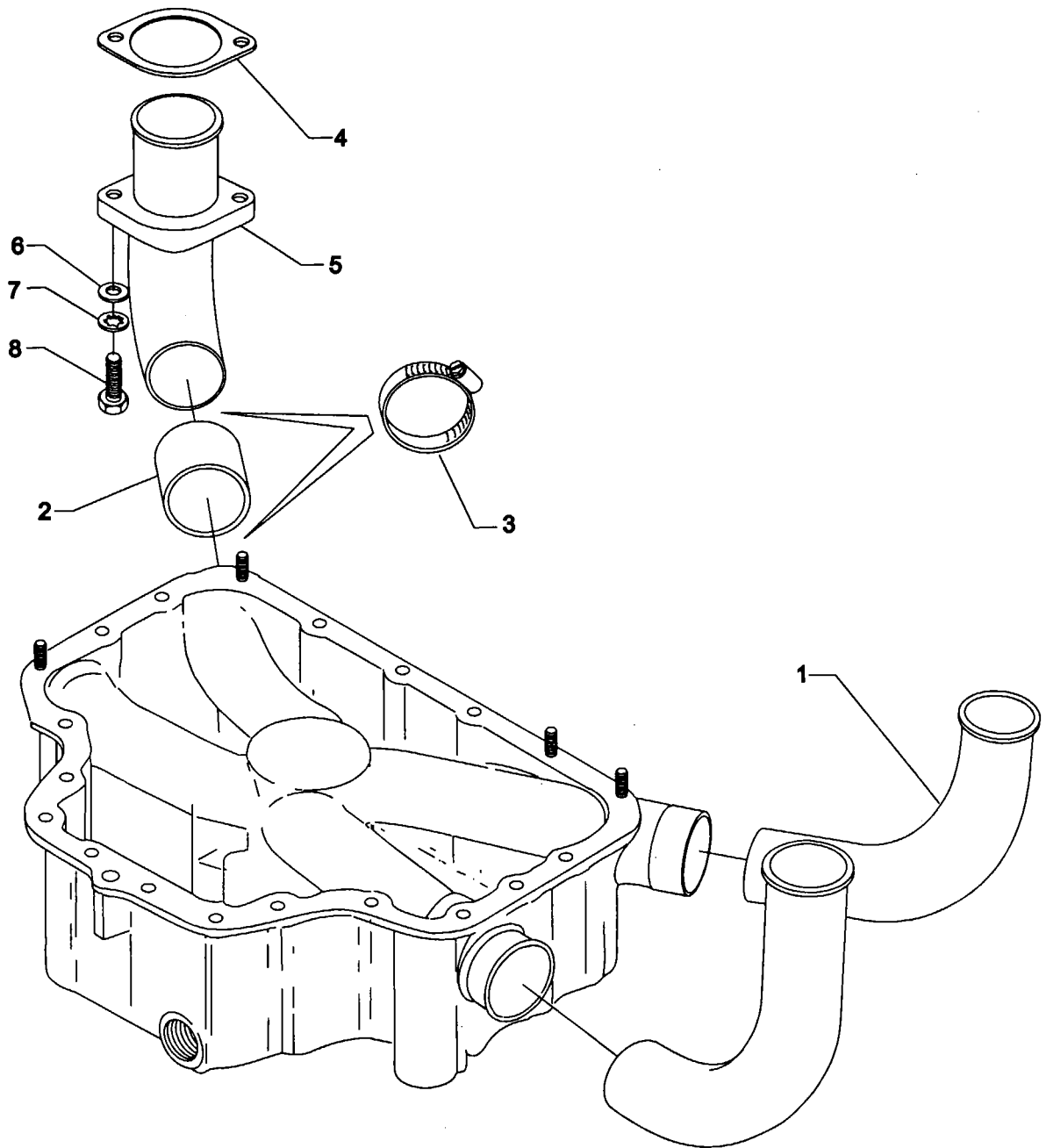


Figure 22. INTAKE PIPES AND ATTACHING PARTS

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

FIG. REF. 23	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	66224	GASKET, Fuel injector	2
2	73161	SPACER, Fuel injector	1
3	LW-15664	FUEL INJECTOR (2524752-7)	1
4	STD-35	WASHER, 5/16 plain	4
5	STD-1410	NUT, 5/16-18 plain	4
6	STD-475	WASHER, 5/16 lock, internal teeth	4
7	LW-18265	NOZZLE, Injection (2524864)	4
8	LW-15533	MANIFOLD ASSY., Fuel	1
9	MS20823-4	ELBOW, 1/8 NPT to 1/4 flared tube	1
10	STD-148	NIPPLE, Union, 1/8 NPT	4
11	02G21382	NIPPLE, Nozzle pressure gauge	1
12	1102	PLUG, 1/8 pipe	2
13	73966	SPACER, Fuel manifold bracket	2
14	74597	BRACKET, Fuel manifold	1
15	74598	BRACKET, Fuel manifold	1
16	STD-1907	SCREW, No. 10-24 x 9/16 long, flat hd.	4
17	STD-1908	WASHER, No. 10 lock, external teeth	4

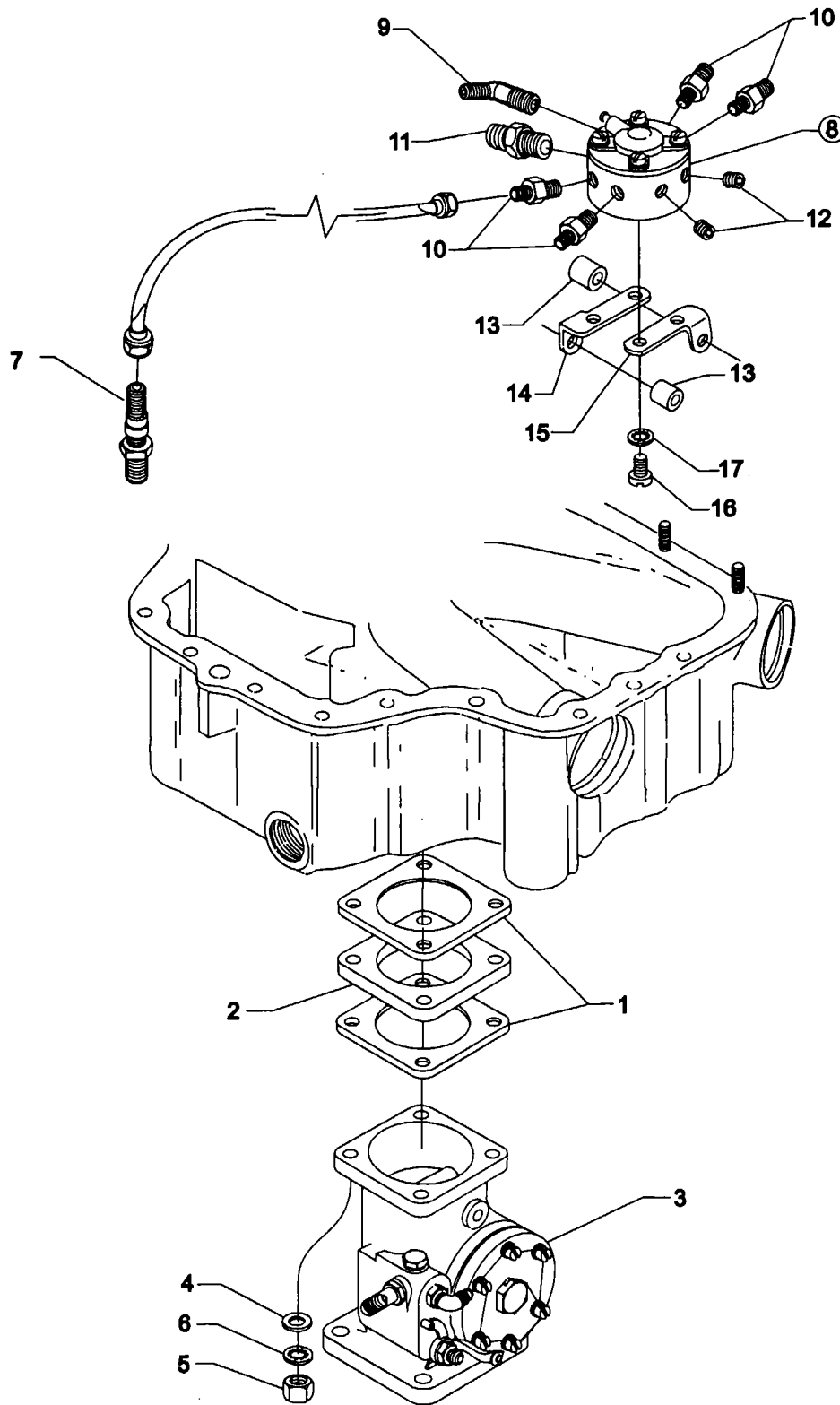


Figure 23. FUEL INJECTOR, FUEL MANIFOLD AND INJECTION NOZZLES

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

FIG. REF. 24	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-12098-0-170	TUBE ASSY., Fuel line	4
2	LW-16266-10-75	CLAMP	8
3	LW-16266-10-13	CLAMP, 1/8 dia. for No. 10 screw	8
4	STD-860	SCREW, No. 10-32 x 5/8 long, fill. hd.	8
5	STD-670	LOCKNUT, No. 10-32	8
6	LW-12798-4S334	HOSE ASSY., 1/4 hose, straight (injector to manifold)	1
7	LW-12877-6S161	HOSE ASSY., 3/8 hose, 90° elbow (pump to injector)	1
8	75686 *	ELBOW, 5/16 tubing, adj. (fuel pump inlet)	1
9	72377 *	ELBOW, 3/8 flared tube, adj. (fuel pump outlét)	1

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

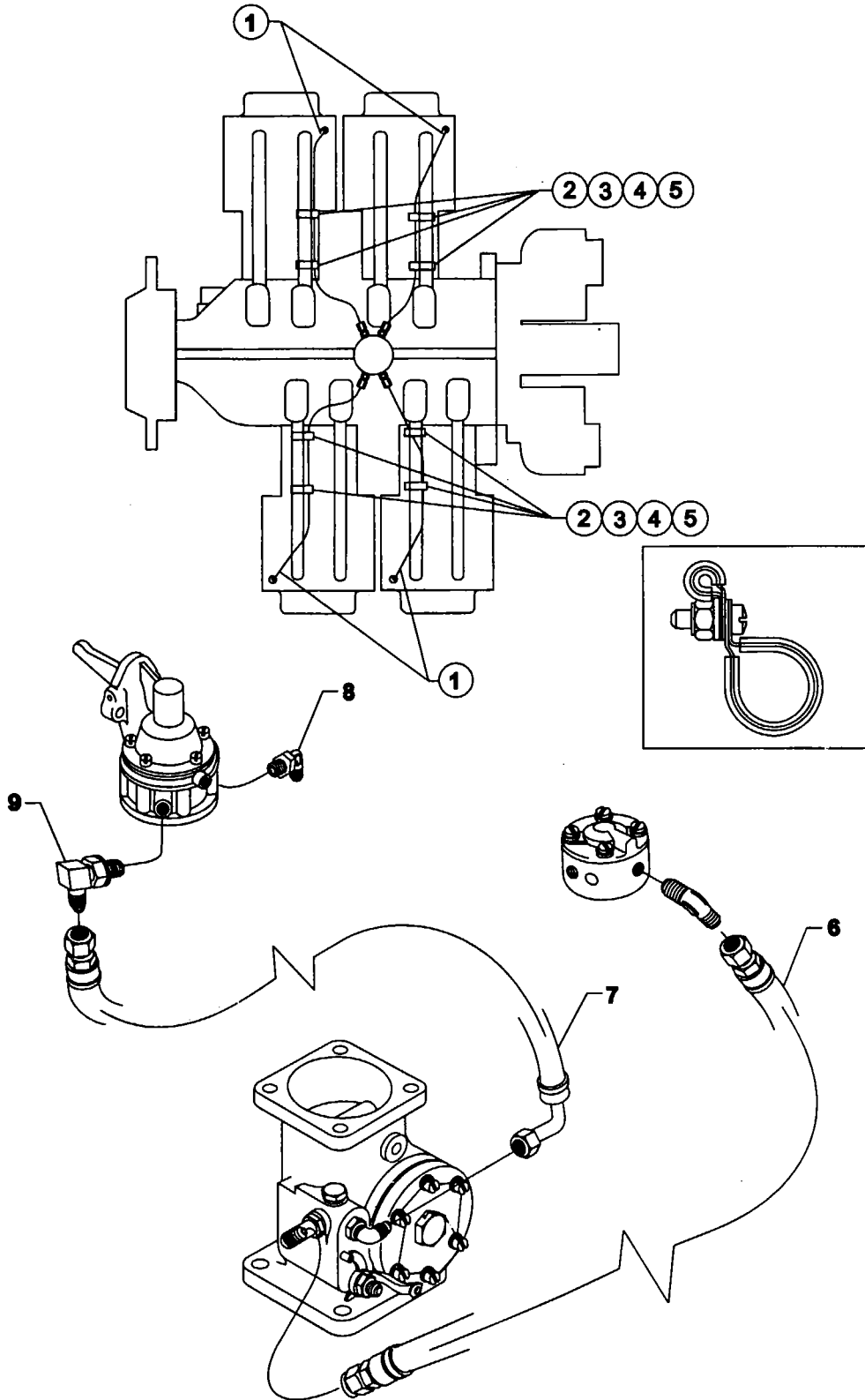


Figure 24. FUEL LINES AND ATTACHING PARTS

SERVICE KIT SECTION SEAL AND GASKET SET

Part No.	Part Name	Qty.
75439-1	KIT - 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
06E19769-0.63	GASKET	2
06E19769-1.00	GASKET	1
06E19769-1.25	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
74068	RING, Oil level gage plug	1
75906	GASKET, Rocker box cover	4

SERVICE KIT SECTION SEAL AND GASKET SET (Continued)

Part No.	Part Name	Qty.
75439-1	KIT – SEAL AND GASKET SET (Continued)	1
76510	GASKET, Oil cooler bypass	1
76940	SEAL, Crankshaft oil	1
77154	GASKET, Carburetor	1
77611	GASKET, Exhaust flange	1
8313	GASKET, Vacuum pump	1
77569	RING, Seal, intake pipe	4
MS29512-04	“O” RING, 11/32 ID x 1/16 section	1

SERVICE KIT SECTION CYLINDER, PISTON & RING ASSY. 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, Intake	1
LW-12272	LOCKPLATE, Shroud tube	1

SERVICE KIT SECTION CRANKCASE ASSY. AND THRU STUD KIT

Part No.	Part Name	Qty.
11B19524-S	CRANKCASE ASSY. AND THRU STUD KIT	1
11B19524-1	CRANKCASE ASSEMBLY	1
AN565B1032H4	SET SCREW, No. 10-32 x ¼ long	1
AN565B1032H5	SET SCREW, No. 10-32 x 5/16 long	1
STD-2090	NUT, ½-20 plain	2
31C-14	STUD, 5/16-18 x 1-3/4 long	4
31C-16	STUD, 5/16-18 x 2.00 long	4
74887	SPACER, 33/64 I.D. x 7/8 O.D. x 3/8 thick	2
76220	THRU STUD	4
SSP-582	TAG, Thin wall bearings	1
SSP-1576	TAG, Propeller governor set screws	1
SSP-1769	TAG, Propeller governor studs	1

NUMERICAL INDEX

PART NO.	PART NAME	PAGE NO.	PART NO.	PART NAME	PAGE NO.
AN565B1032H5	Set Screw	1-9	LW-13792	Crankshaft Seal	1-3
AN6-14	Bolt	5-3	LW-13793	Stud	1-1
AN6-16	Bolt	5-3	LW-13796	Shaft	1-7
AN6-34A	Bolt	1-11	LW-13861	Sump Assy.	6-1
AN960-616L	Washer	1-11	LW-13884	Bearing	1-3
LW-25-0.94	Bolt	2-3	LW-13896	Plug	1-9
LW-25-0.94	Bolt	6-1	LW-13923	Bushing	3-1
LW-25-1.00	Bolt	2-9	LW-14021	Shaft	1-9
LW-25-1.13	Bolt	1-11	LW-14035	Fitting	6-1
LW-25-1.13	Bolt	2-3	LW-14078	Piston Pin	3-1
LW-25-1.13	Bolt	6-1	LW-14260	Seal	2-3
LW-25-1.25	Bolt	6-3	LW-14313	Alternator	5-2
LW-25-1.44	Bolt	2-3	LW-14371	Alternator Assy.	5-2
LW-25-1.50	Bolt	1-11	LW-14780	Gage Assy.	1-3
LW-25-1.75	Bolt	1-11	LW-14995	Spring	3-9
LW-25-2.00	Bolt	1-11	LW-15473	Fuel Pump	2-5
LW-25S1.50	Bolt	1-11	LW-15533	Manifold Assy.	6-5
LW-31-0.94	Bolt	5-1	LW-15592-5-05	Clamp	3-7
LW-31-0.94	Bolt	5-3	LW-15592-8-28	Clamp	6-3
LW-31H0.75	Bolt	5-3	LW-15664	Fuel Injector	6-5
LW-31H0.88	Bolt	1-7	LW-16266-10-13	Clamp	6-7
LW-10077	Seat	3-9	LW-16266-10-75	Clamp	6-7
LW-11485	Shroud Tube Assy.	3-9	LW-16471	Support Assy.	1-5
LW-11713	Spring	1-3	LW-16475	Seat	3-9
LW-11750-S	Connecting Rod Assy.	3-1	LW-18085	Spring	1-3
LW-11795	Spring	3-9	LW-18265	Injection Nozzle	6-5
LW-11800	Spring	3-9	LW-18639	Lockplate	1-5
LW-11997	Crankshaft Seal	1-3	LW-18661	Seal	3-9
LW-12098-0-170	Tube Assy.	6-7	LW-18667	Pin	1-7
LW-12186	Nut	3-1	LW-18843	Camshaft Assy.	1-7
LW-12272	Lockplate	3-9	LW-19001	Valve	3-9
LW-12427	Cylinder Assy.	3-3	LW-19296	Gasket	3-3
LW-12681	Gasket	4-1	MS20823-4	Elbow	6-5
LW-12706	Adapter	4-1	MS20823-6D	Elbow	3-3
LW-12798-4S334	Hose Assy.	6-7	STD-8	Washer	1-11
LW-12877-6S161	Hose Assy.	6-7	STD-8	Washer	2-3
LW-12892	Thrust Button	3-5	STD-8	Washer	2-7
LW-13323	Seat	3-9	STD-8	Washer	2-9
LW-13353	Gasket	6-1	STD-8	Washer	6-1
LW-13752	Sump Plug	6-1	STD-8	Washer	6-3
LW-13753	Fitting	6-1	STD-19	Dowel	1-9
LW-13754	Fitting	6-1	STD-33	Washer	1-11
LW-13755	Breather Tee	6-1	STD-33	Washer	2-5
LW-13790	Shaft	3-5	STD-35	Washer	2-3

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PART NO.	PART NAME	PAGE NO.	PART NO.	PART NAME	PAGE NO.
STD-35	Washer	2-5	STD-1411	Nut	3-9
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