

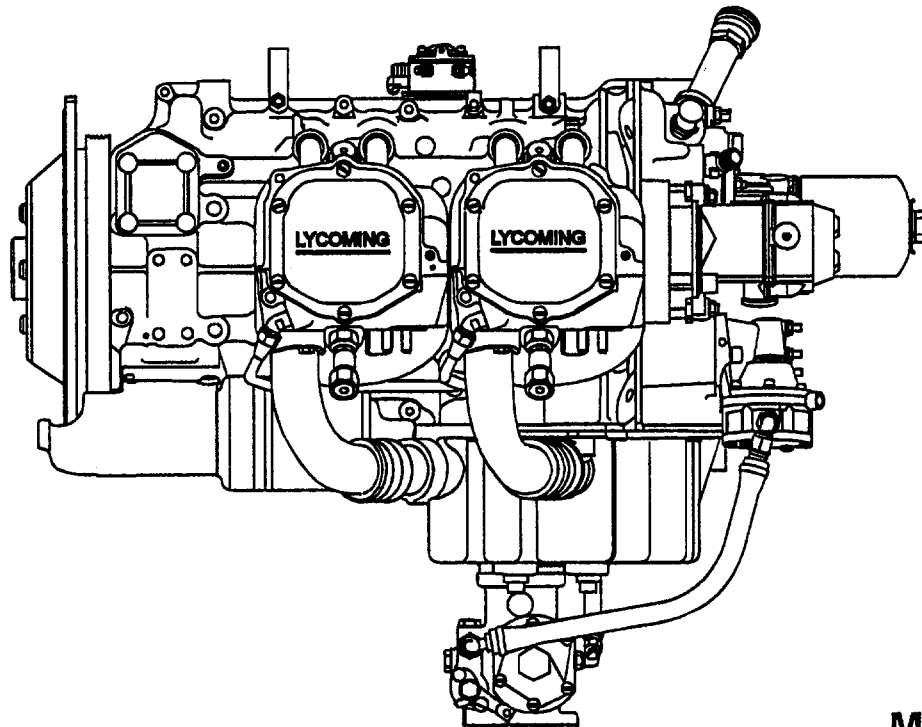
# TEXTRON Lycoming AIRCRAFT ENGINES

**IO-360-L2A**

**Wide Cylinder Flange Crankcase Model Engine**

**PARTS CATALOG**

**PC-306-12**



**MAY 1996**

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**TEXTRON Lycoming**

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717/323-6181

# TECHNICAL PUBLICATION REVISION

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<b>PC-306-12A</b>	<b>IO-360-L2A Engines</b>	<b>PC-306-12</b>	<b>MAY, 1996</b>
This page(s) furnished herewith are intended to replace the corresponding page(s) of the publication indicated above.			
Previous revisions to this publication	This revision consists of: -		
<u>None</u>	<u>September, 1998</u>  Page 1-9 Figure 5. Text Change Page 1-10 Figure 5. Illustration Change Page 3-9 Figure 15. Text Change Page 5-3 Figure 19. Text Change		

This illustrated parts catalog contains a complete parts listing for the Textron Lycoming IO-360-L2A 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 Textron 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 Textron Lycoming accepts responsibility for quality control and/or airworthiness of parts which do not pass through the Textron 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 Textron 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	See Latest Edition of Service Instruction No. 1256.										
66610	BUSHING		X	X								
66796	INSERT			X								
69796	DOWEL		X									
72057	SEAT		X	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.										
75656-S	BUSHING		X	X	X	X						
75657-S	BUSHING		X	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
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.

**SECTION**

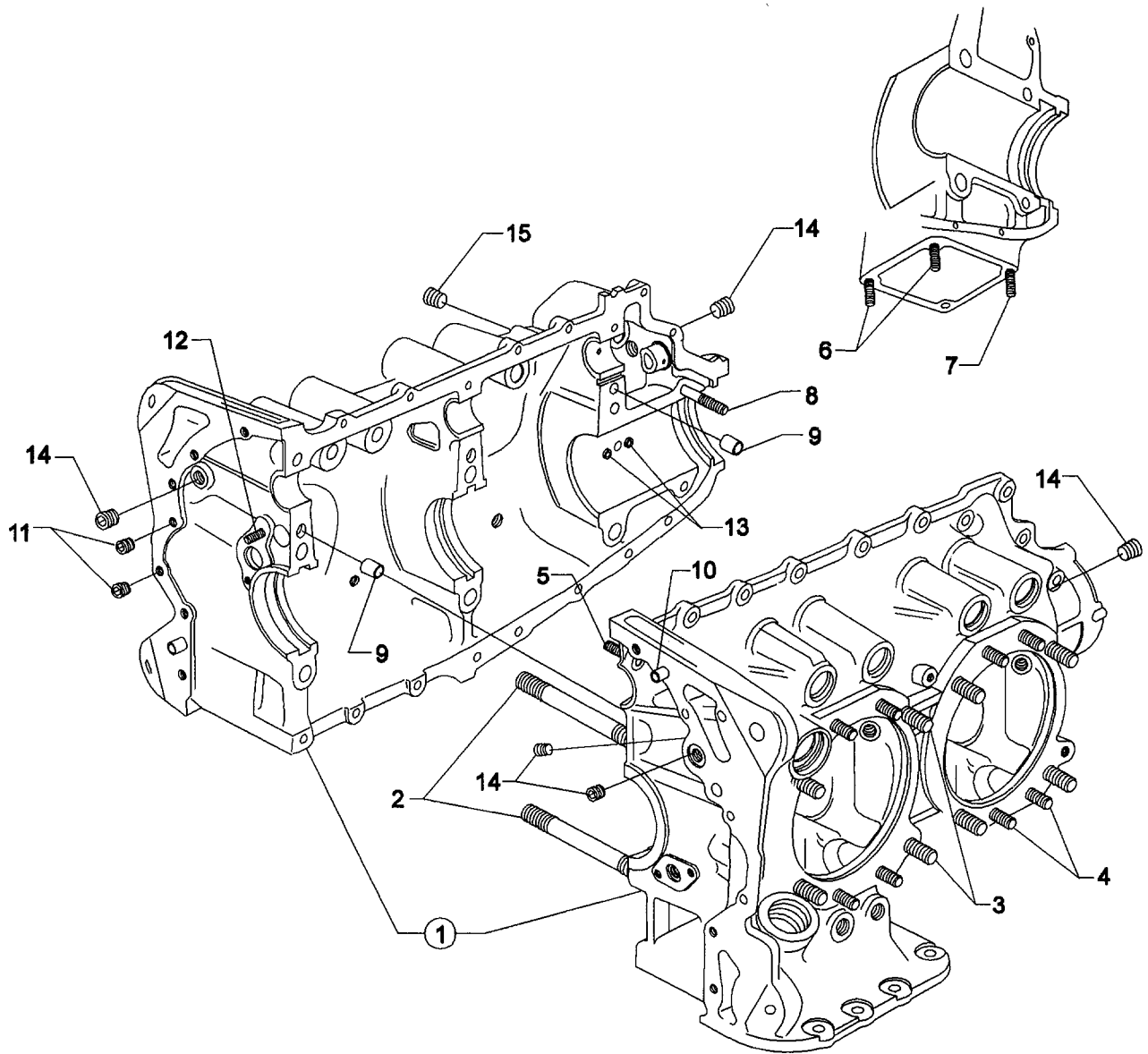
**1**

**CRANKCASE,  
CRANKSHAFT AND  
CAMSHAFT GROUP**

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

FIG REF. 1	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	LW-18402-2	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	19
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	38-22	STUD, 3/8-16 x 2-3/4 long	1
9	STD-557	DOWEL, 1/2 dia. x 11/16 long, hollow	2
10	STD-514	DOWEL, 5/16 dia. x 1/2 long	2
11	STD-1623	INSERT, 1/4-20 Helicoil x 3/8 long	2
12	LW-13793	STUD, 5/16-18 x 15/16 long, drilled	1
13	69796	DOWEL, Crankshaft bearing	2
14	1102	PLUG, 1/8-27 NPT, Allen head	5
15	STD-1339	PLUG, 1/16-27 NPT, Allen head	1

This crankcase assembly 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**

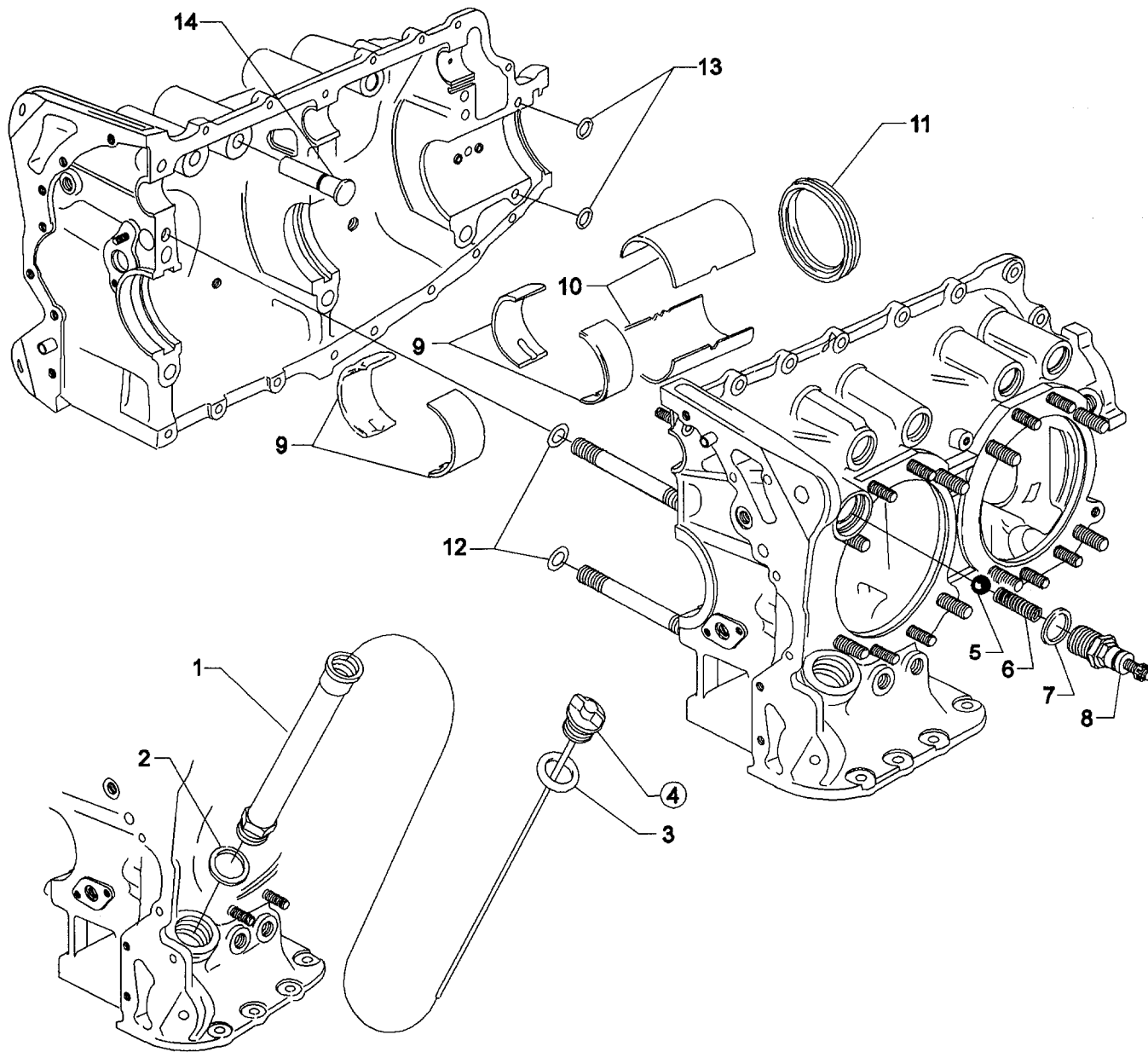


**CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP  
OIL LEVEL GAGE ASSEMBLY AND CRANKCASE RELATED PARTS**

FIG REF. 2	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	78626	TUBE, Oil level gage	1
2	72059	GASKET, Oil level gage	1
3	74065	RING, Oil level gage seal	1
4	LW-14768	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 Textron Lycoming Table of Limits SSP-1776, Part I for spring identification.

\*\* See latest edition of Textron 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	13B27121	CRANKSHAFT AND BUSHING ASSEMBLY	1
2	STD-1211	PLUG, 2.00 dia. expansion	1
3	75656-S	BUSHING, Propeller flange, long	4
4	72155-S	BUSHING, Propeller flange, short	1
5	75657-S	BUSHING, Propeller flange, indexing	1
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	31M22045	SUPPORT ASSY., Starter ring gear, 12/14 pitch	1
10	72566	GEAR, Starter ring	1

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

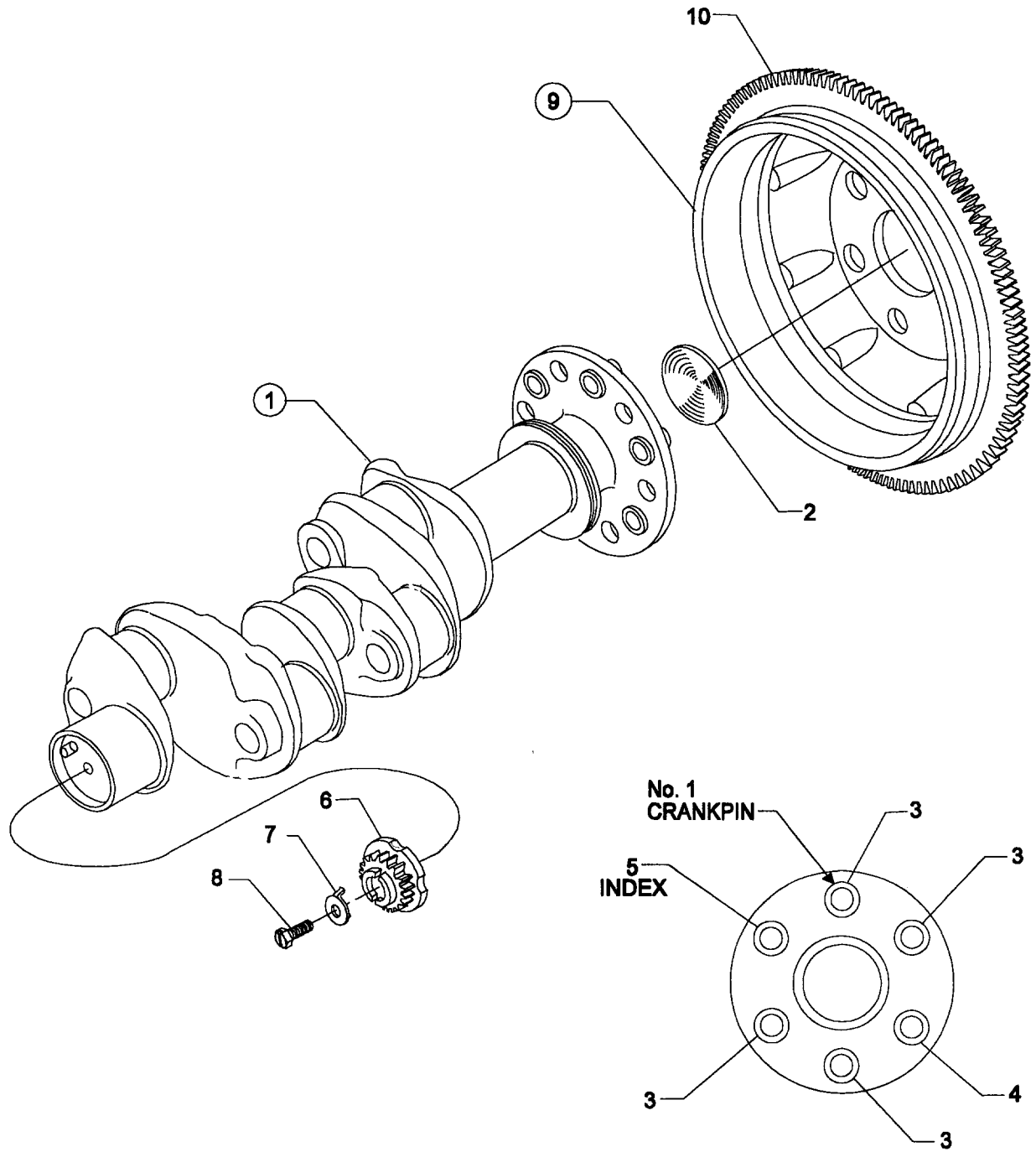


Figure 3. CRANKSHAFT ASSEMBLY AND RELATED PARTS

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

FIG REF. 4	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	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, Tach. shaft centering	1

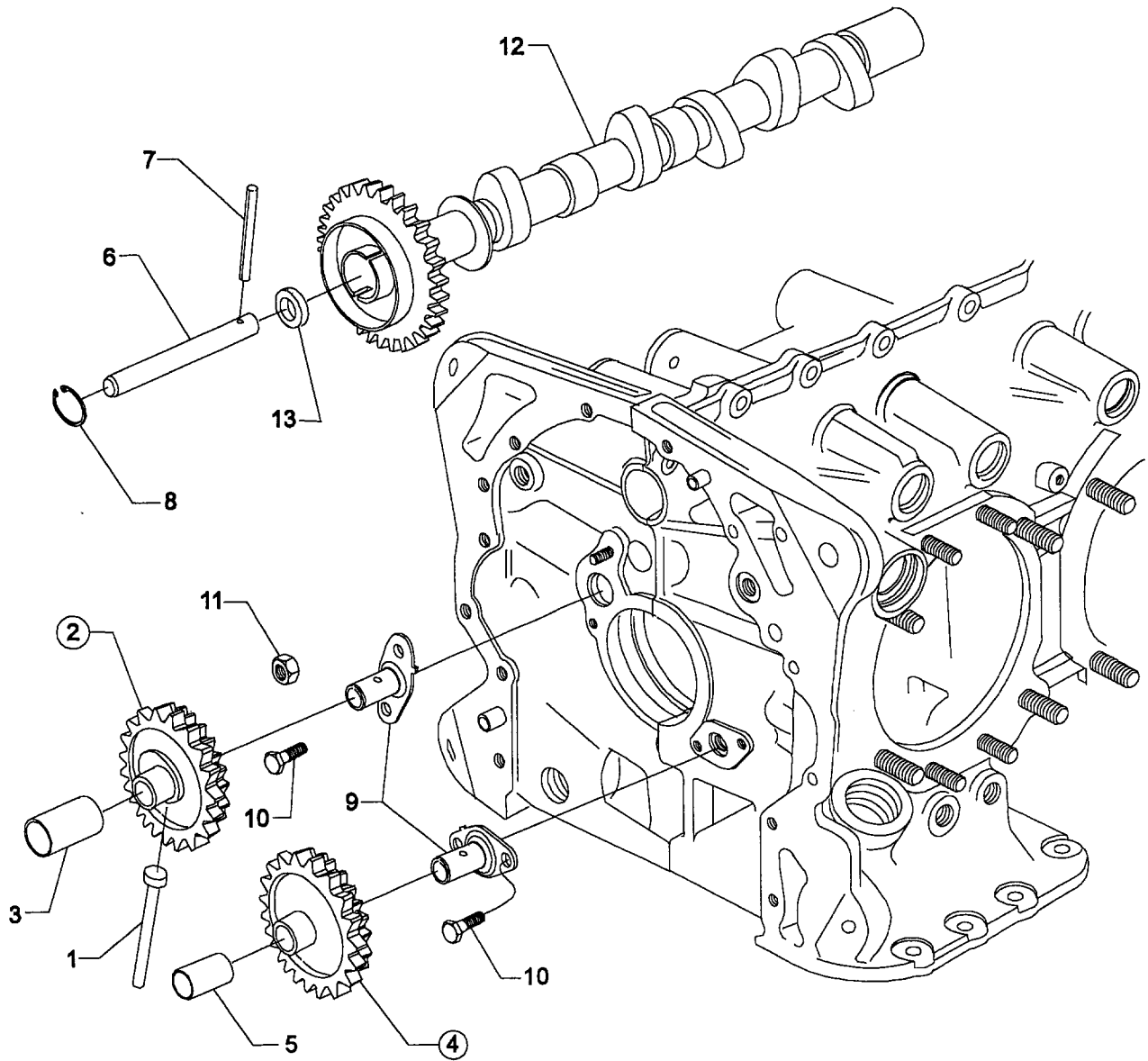


Figure 4. CRANKSHAFT IDLER GEARS, TACHOMETER DRIVE AND CAMSHAFT

**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.	6
2	LW-25-1.63	BOLT, 1/4-20 x 1-5/8 long, hex. hd.	1
3	STD-8	WASHER, 1/4 plain	22
4	60803	STRAP, Lifting	2
5	LW-25-1.88	BOLT, 1/4-20 x 1-7/8 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	12
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-1409	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	3
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

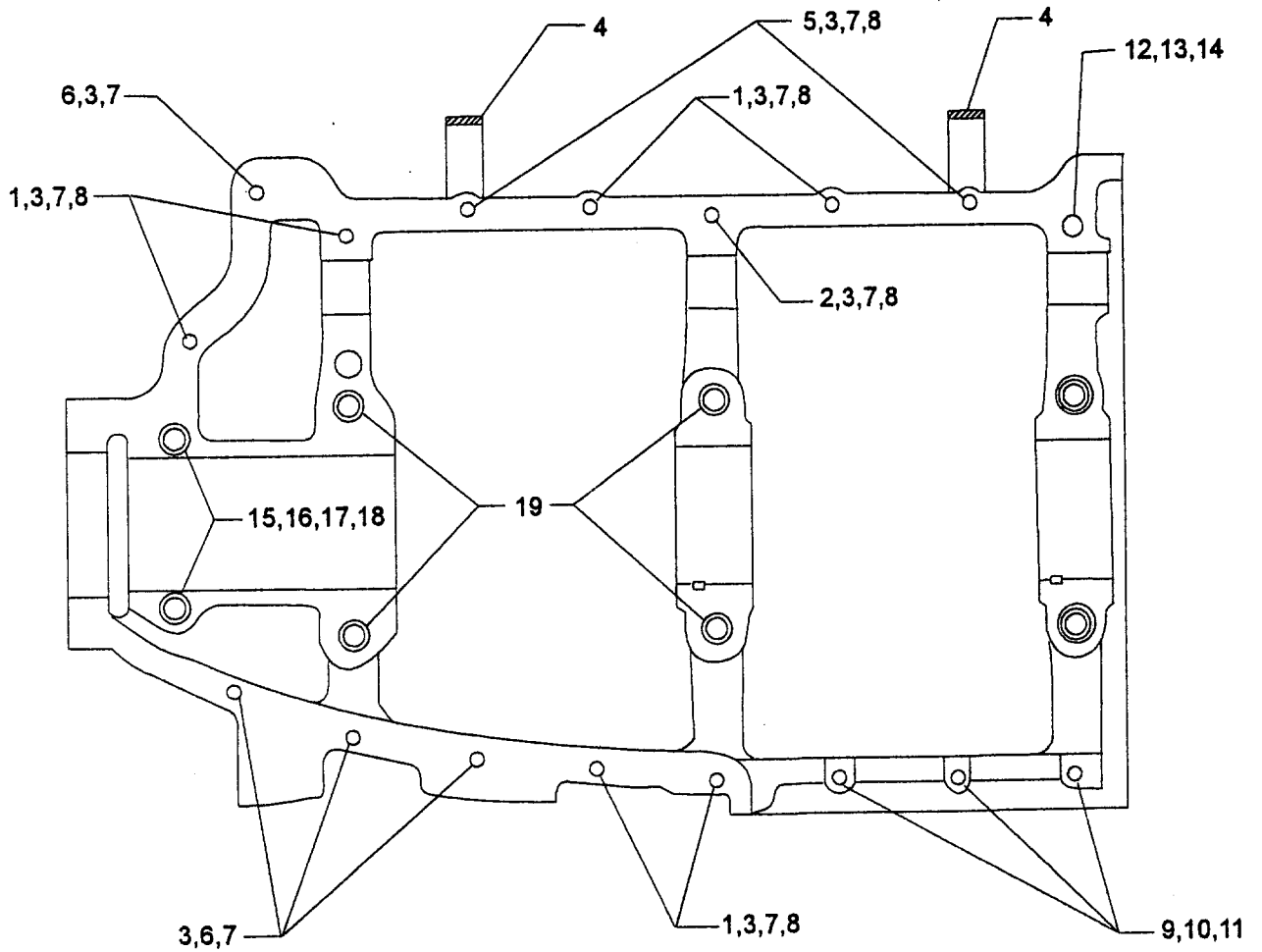


Figure 5. CRANKCASE ATTACHING PARTS



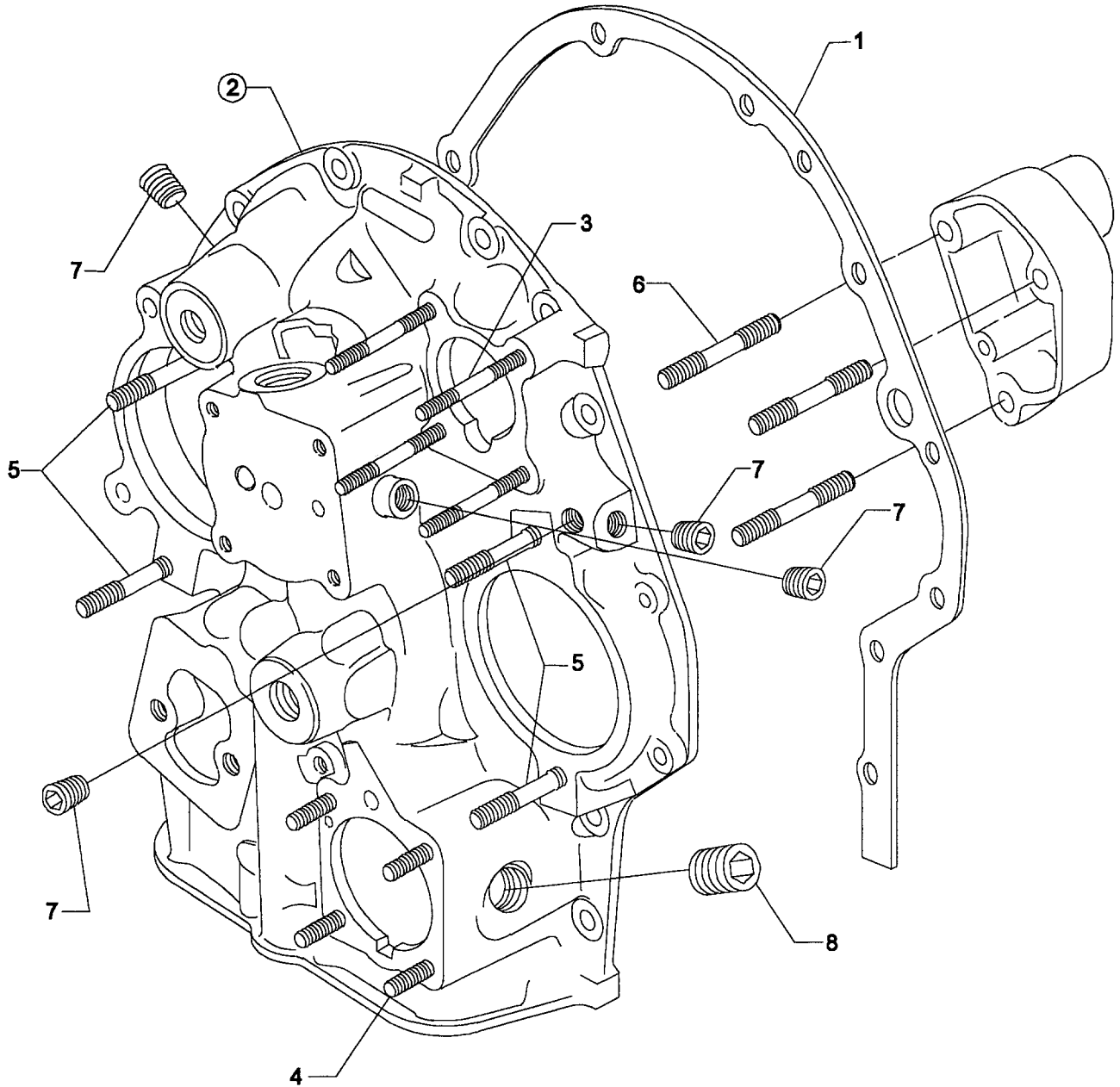
**SECTION**

**2**

**ACCESSORY  
HOUSING AND  
RELATED 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	21A21533-05	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	4
5	31C-19	STUD, 5/16-18 x 2-3/8 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

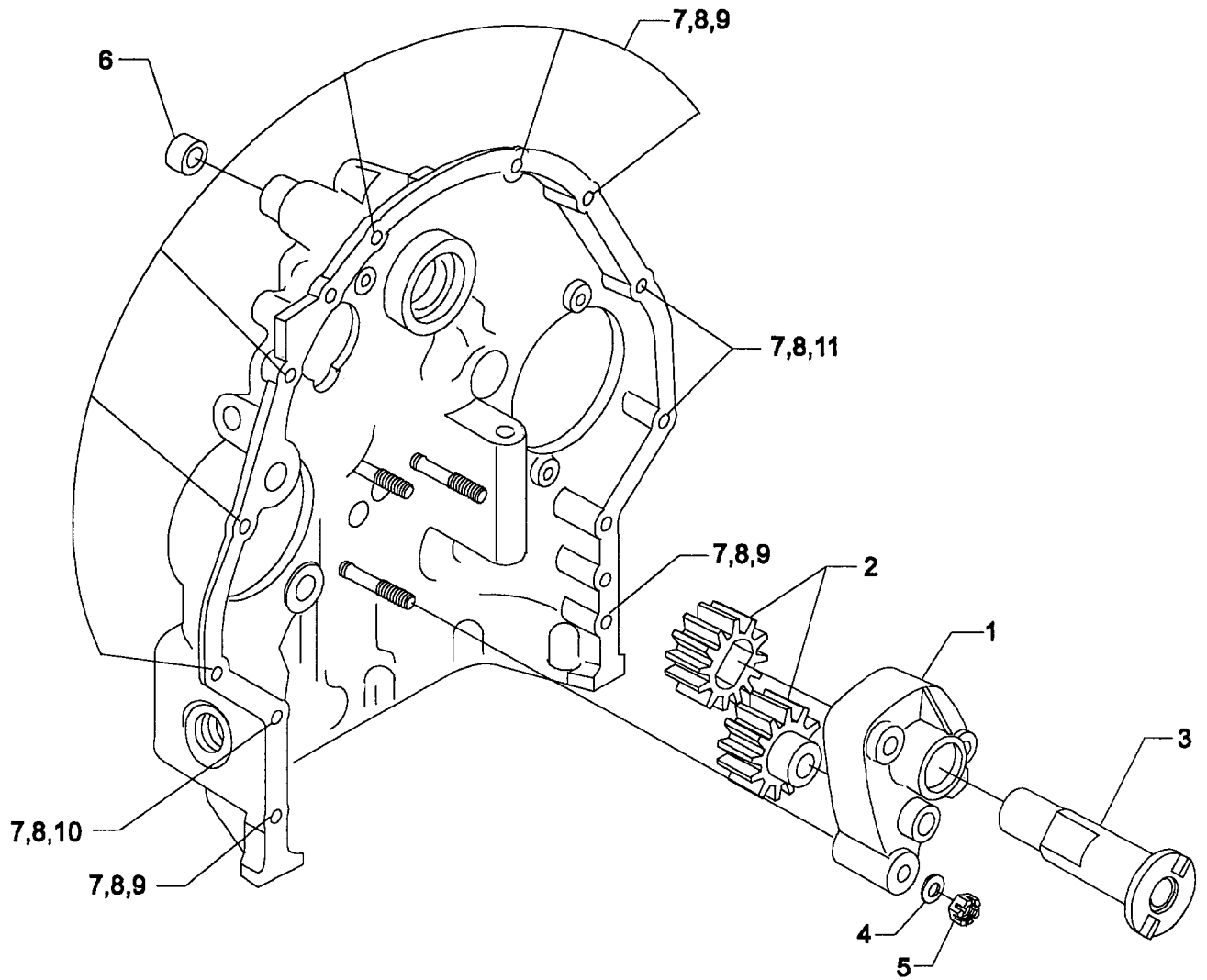


**Figure 6. ACCESSORY HOUSING ASSEMBLY**

**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 Textron Lycoming Service Bulletin No. 524.

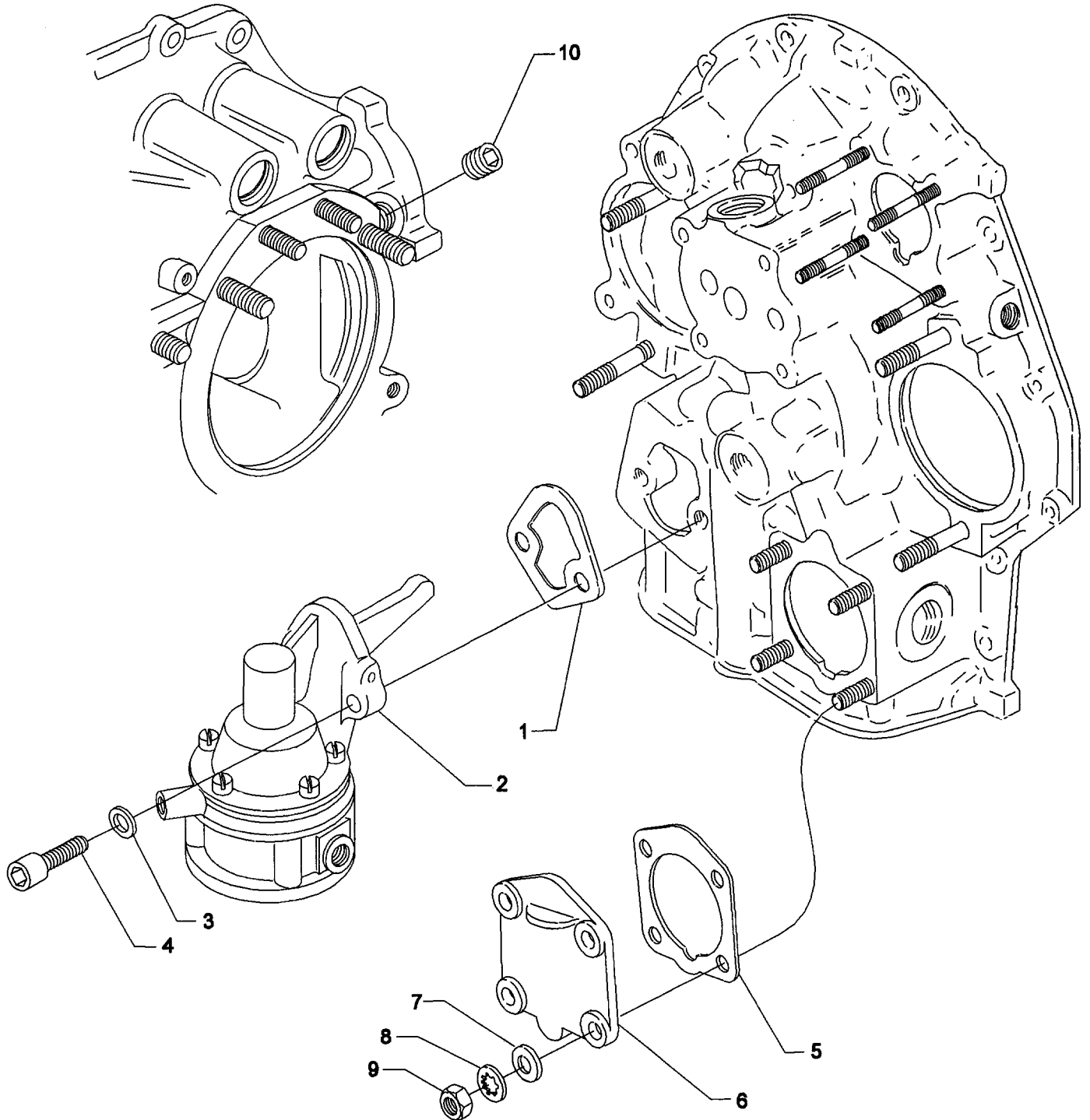


**Figure 7. OIL PUMP AND ACCESSORY HOUSING ATTACHING PARTS**

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

FIG REF. 8	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
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 dr.	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	STD-783*	PLUG, 1/4-18 NPT, Allen head	1

\* Used when no propeller governor oil line is used.



**Figure 8. FUEL PUMP AND PROPELLER GOVERNOR DRIVE COVER**

**ACCESSORY HOUSING AND RELATED PARTS  
 VACUUM AND HYDRAULIC PUMP DRIVES AND COVERS**

FIG REF. 9	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
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	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
12	27A22099	GEAR ASSY., Hydraulic pump driven	1
13	71596	WASHER, Accessory drive gear	1
14	68315	GASKET, Accessory drive adapter	1
15	LW-12540	ADAPTER ASSY., Hydraulic pump	1
16	STD-1774	PIN, 1/8 dia. x 1/4 long	1
17	06A19956	OIL SEAL, 7/8 I.D. x 1-1/2 O.D. x 5/16 wide	1
18	25C-12	STUD, 1/4-20 x 1-1/2 long	4
19	STD-35	WASHER, 5/16 plain	4
20	STD-475	WASHER, 5/16 lock, internal teeth	4
21	STD-1410	NUT, 5/16-18 plain	4
22	8313	GASKET, Hydraulic pump	1
23	60430	COVER, Hydraulic pump	1
24	STD-8	WASHER, 1/4 plain	4
25	STD-160	WASHER, 1/4 lock, internal teeth	4
26	STD-1411	NUT, 1/4-20 plain	4



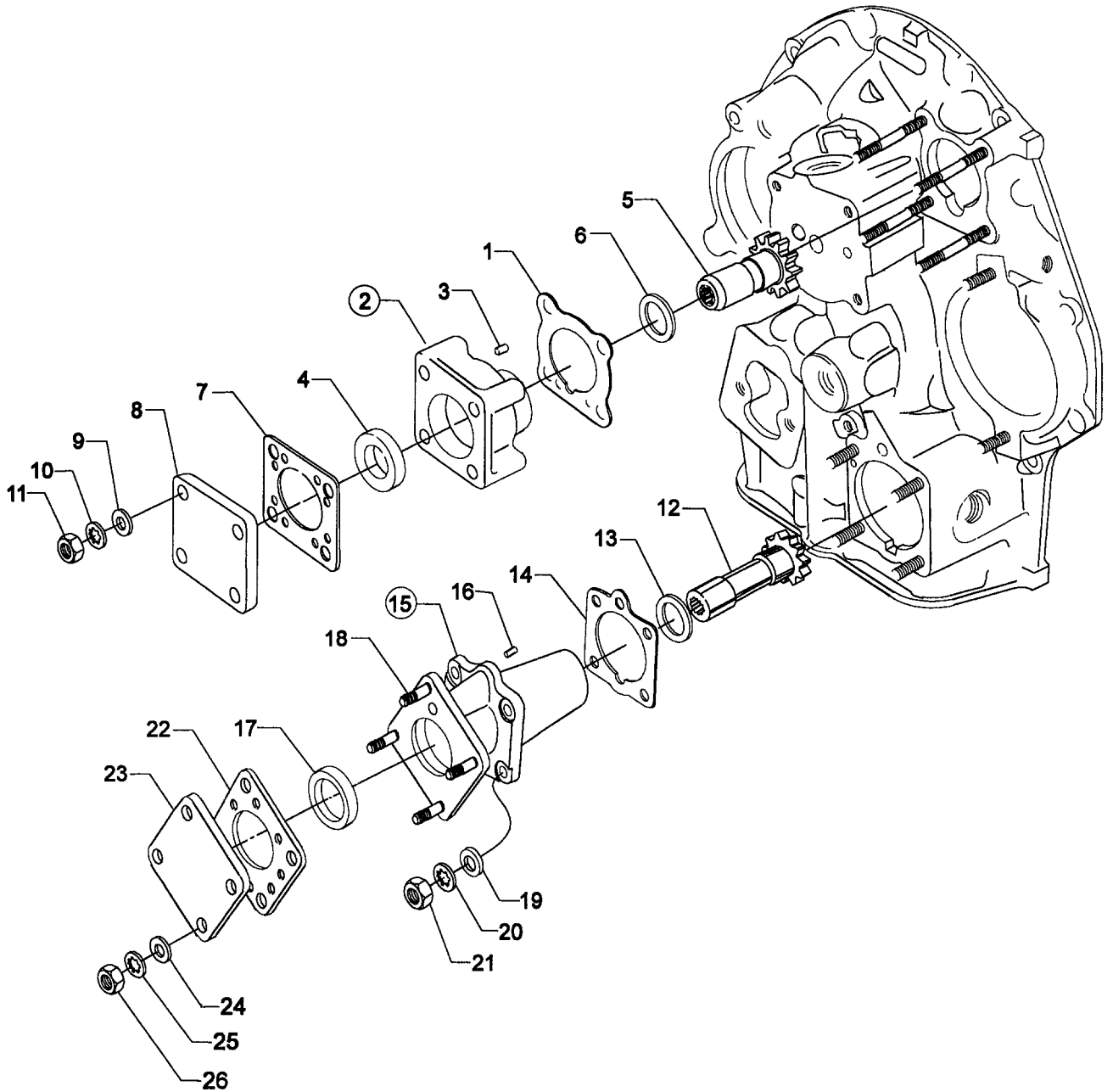


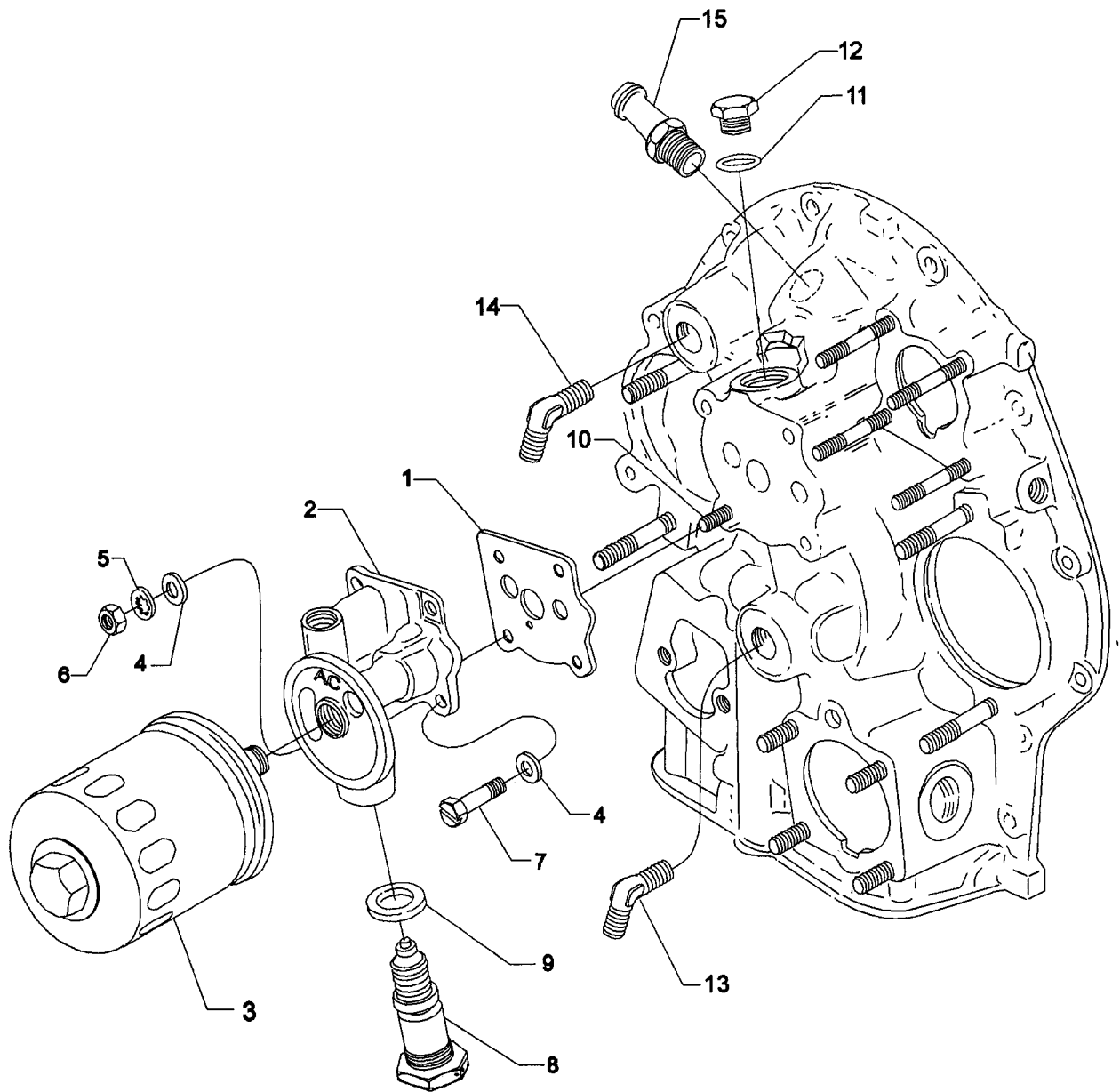
Figure 9. VACUUM AND HYDRAULIC PUMP DRIVES AND COVERS

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

FIG REF. 10	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	LW-12795	GASKET, Oil filter adapter	1
2	77852	OIL FILTER BASE ASSEMBLY	1
3	LW-13215	OIL FILTER, Short, Spin-on	1
4	STD-8	WASHER, 1/4 plain	4
5	STD-160	WASHER, 1/4 lock, internal teeth	1
6	STD-1411	NUT, 1/4-20 plain	1
7	STD-1856	SCREW, 1/4-20 x 1.00 long, hex. hd.	3
8	53E22144	VALVE ASSY., Temp. control oil cooler bypass	1
9	76510	GASKET, Valve assembly	1
10	25C-10	STUD, 1/4-20 x 1-1/4 long	1
11	06E19769-0.63	GASKET, 7/8 O.D. x 5/8 I.D. x 3/32 annular	1
12	62417	PLUG, Oil cooler bypass	1
13	MS20823-8	ELBOW, 3/8 NPT, 1/2 flared tube	1
14	MS20822-8	ELBOW, 3/8 NPT, 1/2 flared tube	1
15	71140	FITTING, Breather	1

## NOTE

Reference latest edition of Textron Lycoming SSP-885 for oil filter kits and replacement filters.



**Figure 10. OIL FILTER ASSEMBLY, OIL COOLER BYPASS VALVE AND BREATHER FITTING**

**SECTION**

**3**

**CYLINDER, PISTON  
AND VALVE TRAIN**

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

FIG REF. 11	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 Textron Lycoming Service Instruction No. 1267.

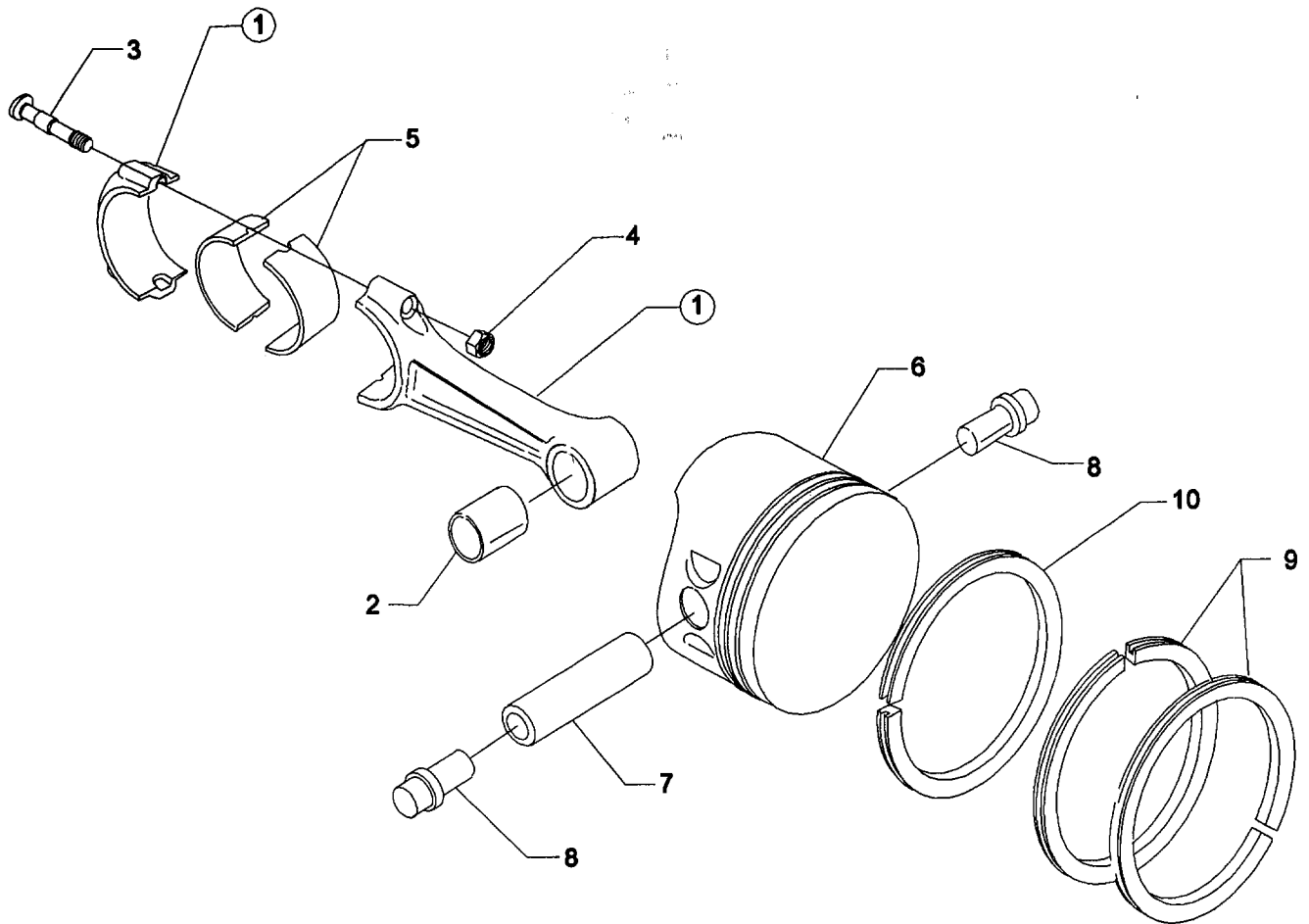


Figure 11. CONNECTING RODS, PISTONS AND RING ASSEMBLIES

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

FIG REF. 12	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	LW-12427	CYLINDER & HEAD ASSY., Nitrided	4
2	72057	SEAT, Intake valve	4
3	75058	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 Helicoil 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	LW-19296	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

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

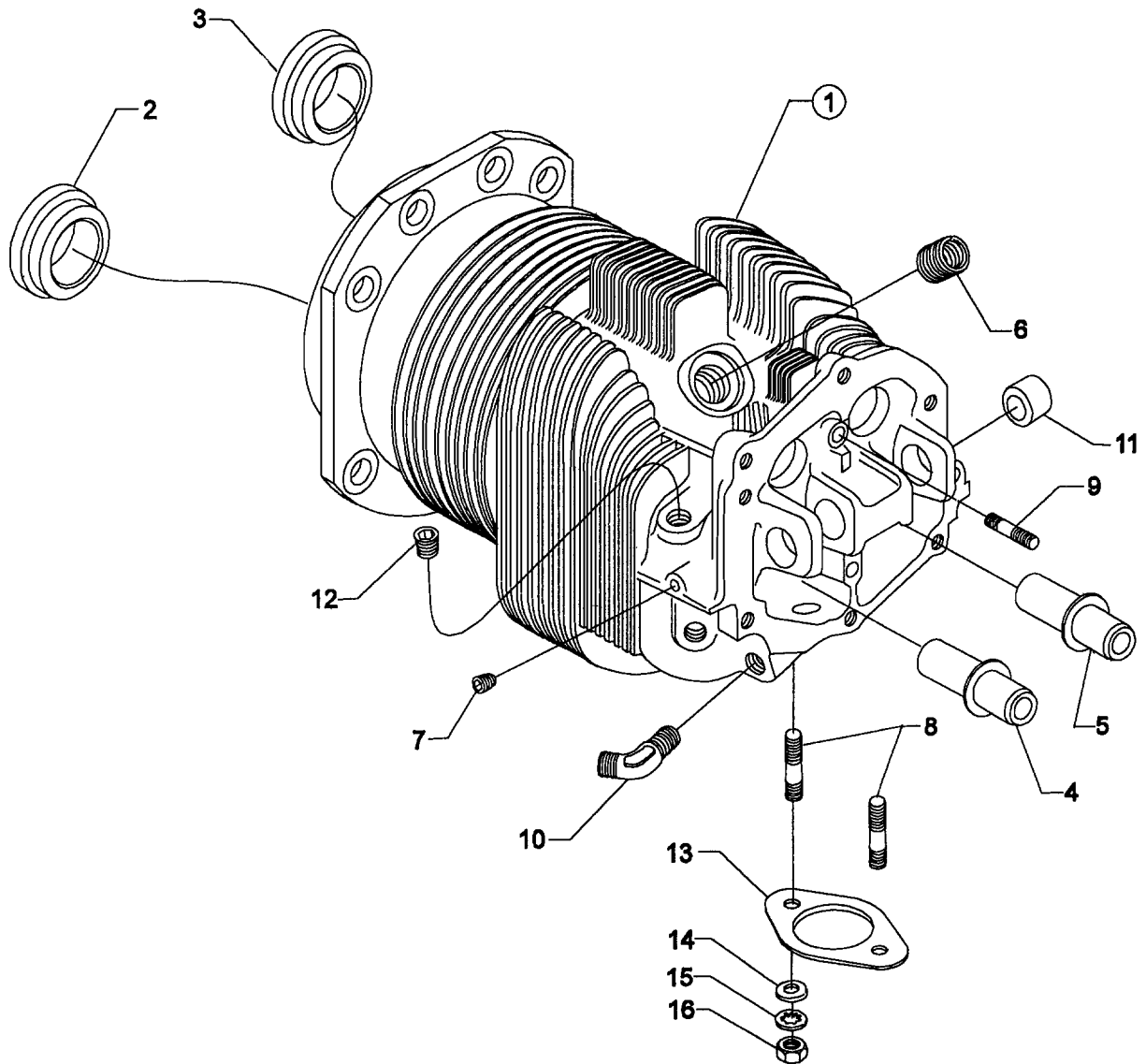


Figure 12. CYLINDER ASSEMBLY



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

FIG REF. 13	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 Textron 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).

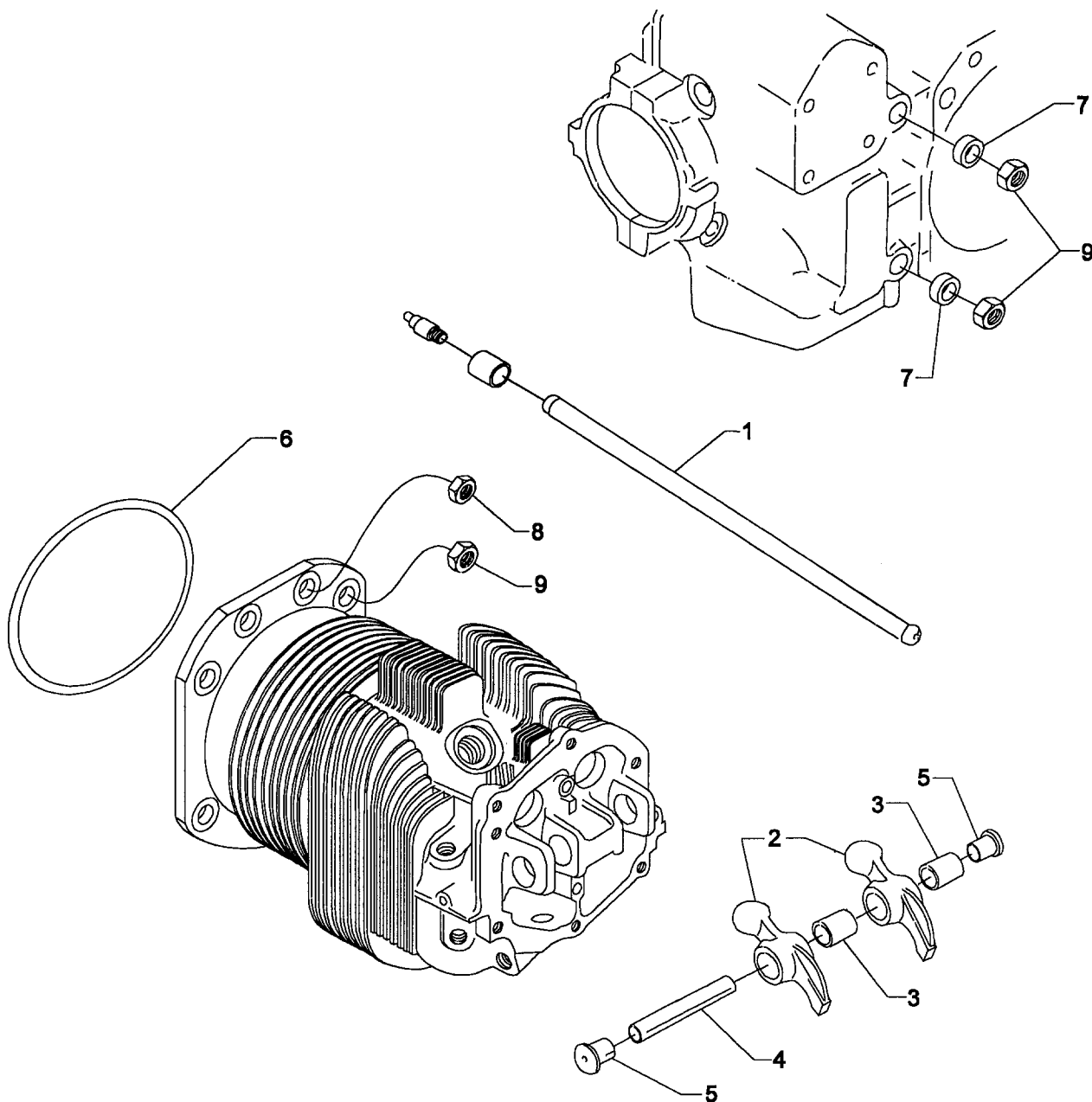


Figure 13. CYLINDER RELATED PARTS

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

FIG REF. 14	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

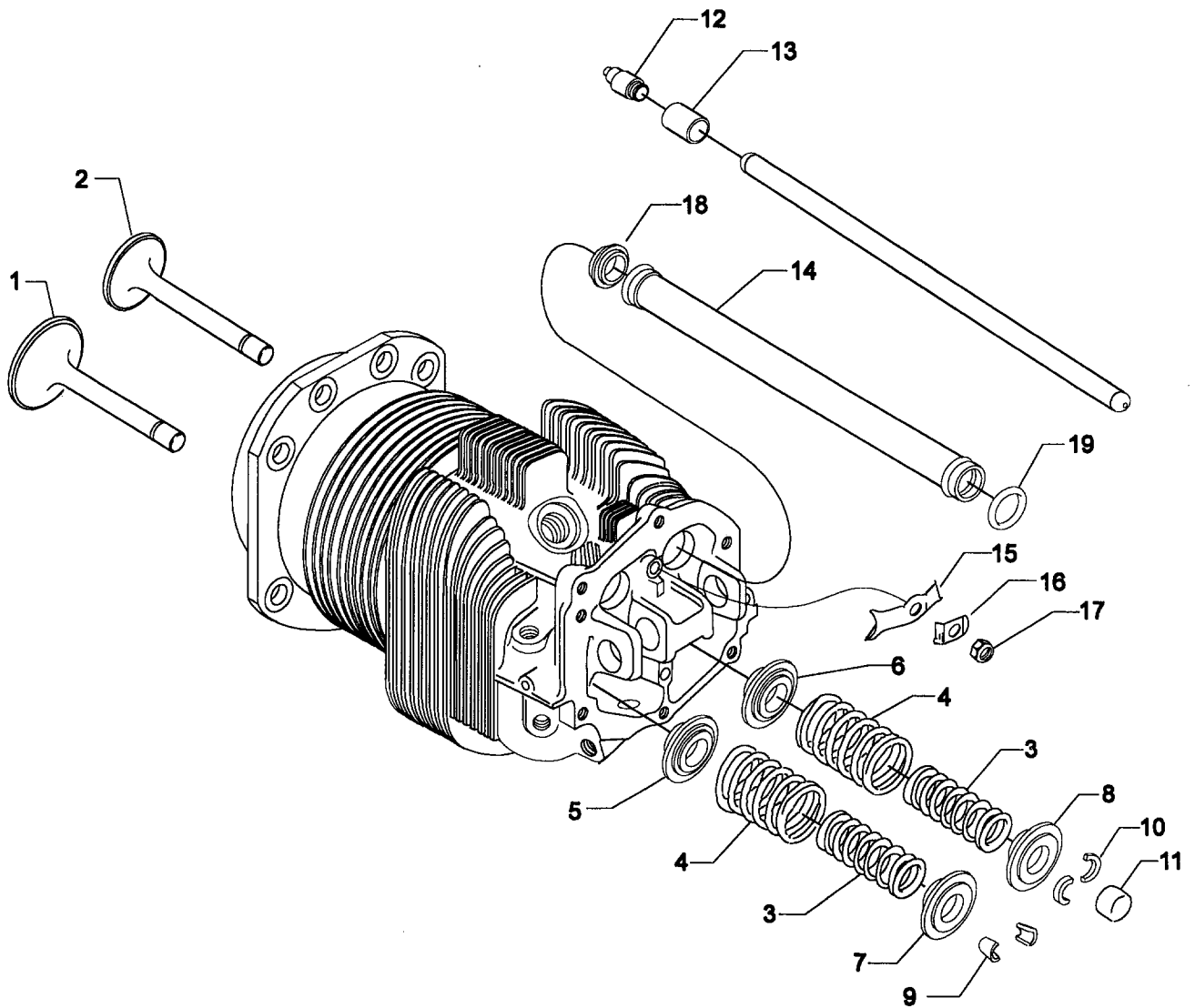


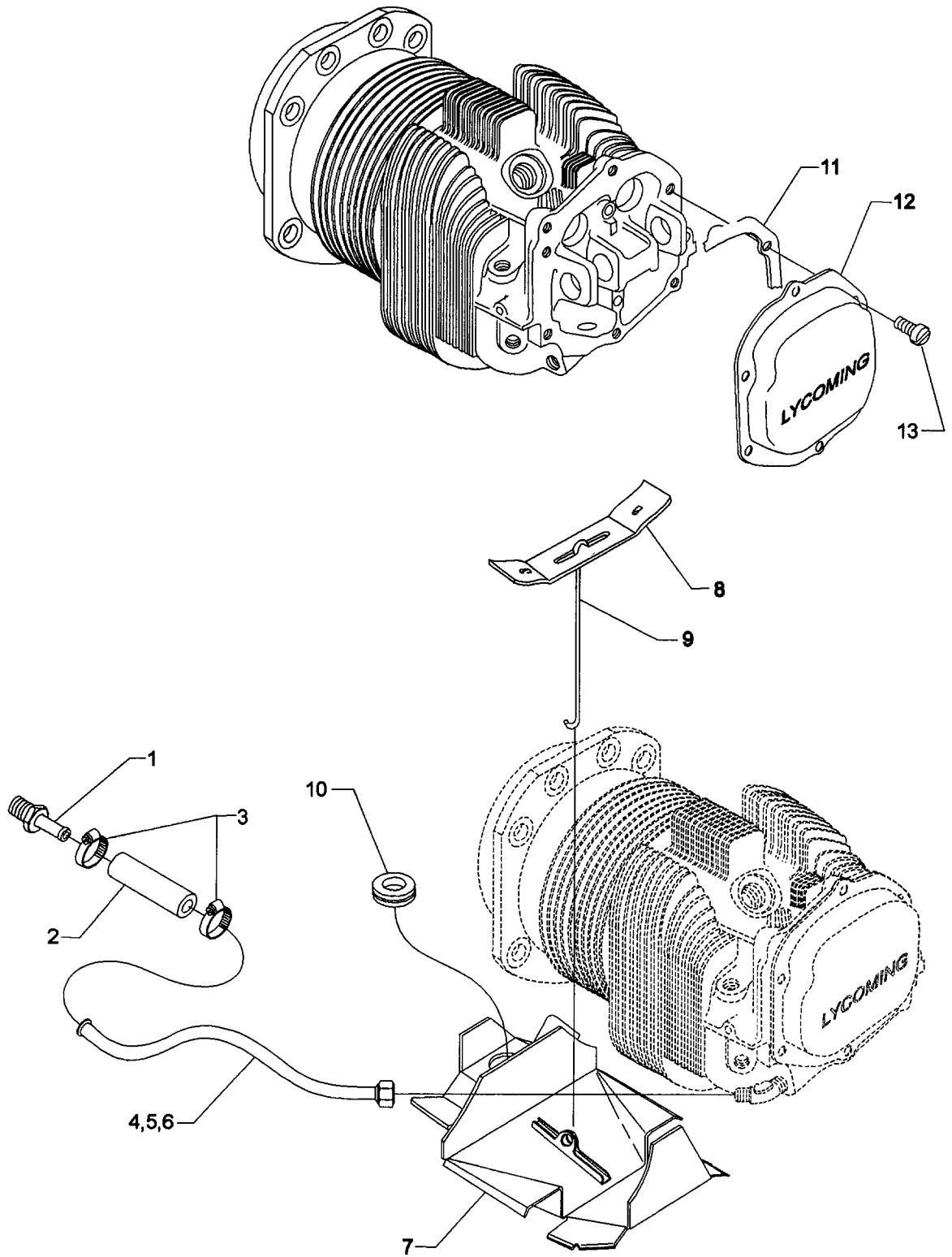
Figure 14. VALVE ASSEMBLY

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

FIG REF. 15	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	1
	LW-13389 *	BAFFLE ASSY., Intercylinder	1
8	71611	RETAINER, Intercylinder baffle	2
9	71610	HOOK, Intercylinder baffle retainer	2
10	MS35489-20X	GROMMET	1
11	75906	GASKET, Rocker box cover	4
12	61247	COVER, Rocker box	4
13	STD-1925	SCREW, 1/4-20 x 5/8 long, pan. hd., self-locking	24

\* Install on right side between no. 1 and no. 3 cylinders.

\*\* Install on left side between no. 2 and no. 4 cylinders.



**Figure 15. CYLINDER HEAD DRAIN TUBES, INTERCYLINDER COOLING BAFFLES AND ROCKER BOX COVERS**

**SECTION**

**4**

**IGNITION SYSTEM**

**IGNITION SYSTEM**  
**MAGNETOS, MAGNETO DRIVES, HARNESSES AND SPARK PLUGS**

FIG REF. 16	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
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, Impulse, Rt. & Lt., Slick Model 4371	2
7	67P20408	HARNESS ASSY, Right, Slick Model M-2512	1
	67P20409	HARNESS ASSY., Left, Slick Model M-2513	1
8	66M21195	CLAMP, Magneto	4
9	STD-475	WASHER, 5/16 lock, internal teeth	4
10	STD-1727	WASHER, Plain, 3/4 O.D. x 21/64 I.D. x 1/8 thick	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 Textron 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 magneo 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**

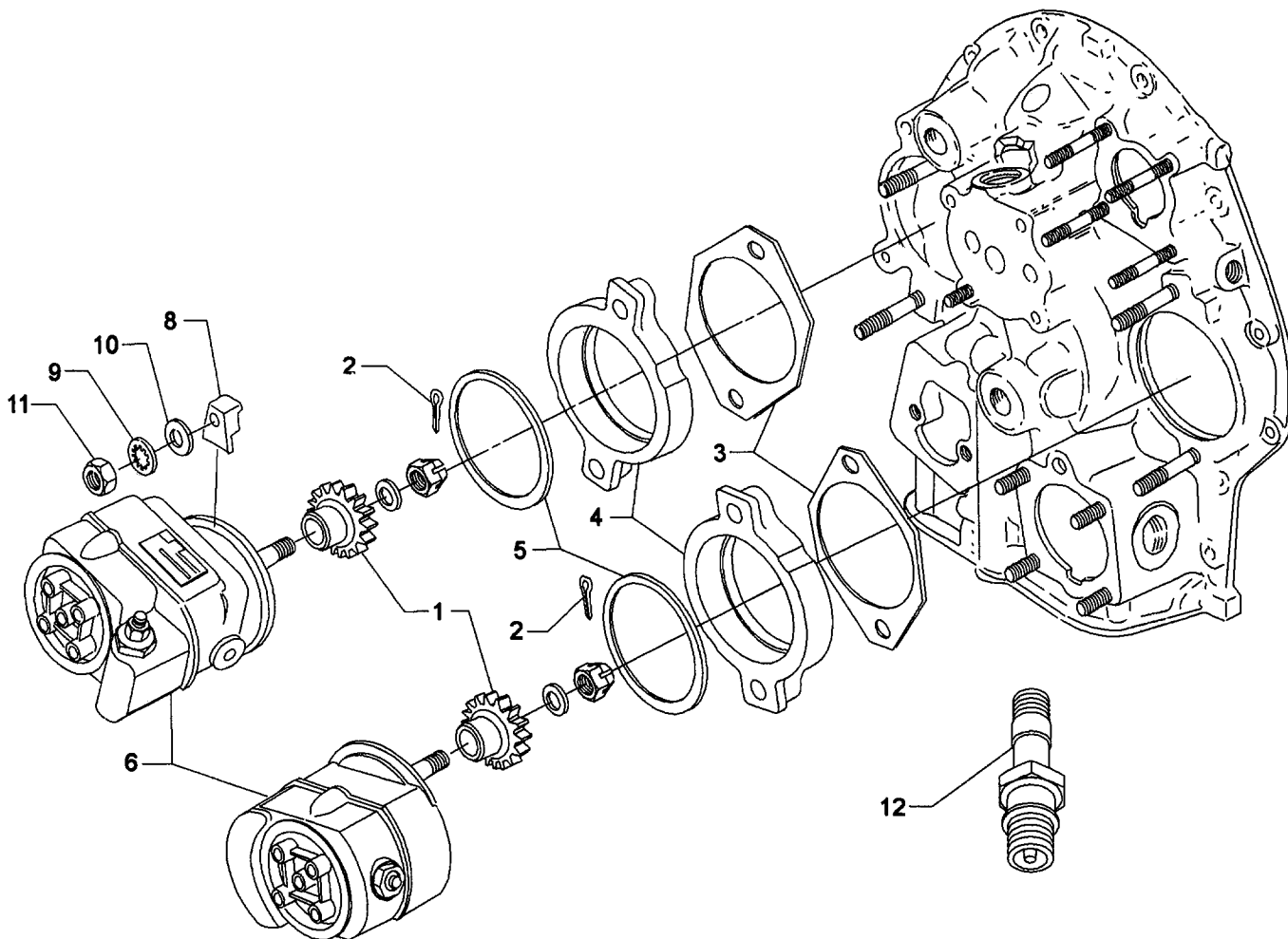
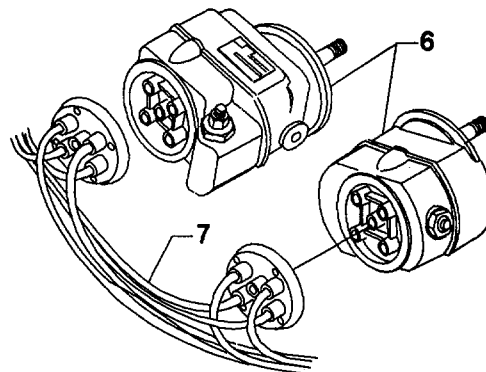


Figure 16. MAGNETOS, MAGNETO DRIVES, HARNESSSES AND SPARK PLUGS

**SECTION**

**5**

**ELECTRICAL SYSTEM**

**ELECTRICAL SYSTEM  
PRESTOLITE STARTER AND ATTACHING PARTS**

FIG REF. 17	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	LW-15572	STARTER, 24 volt, 12/14 pitch pinion (MHB-4016)	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 Textron Lycoming Service Instruction No. 1154 for complete listing of FAA approved starters, generators, alternators, regulators and relays.

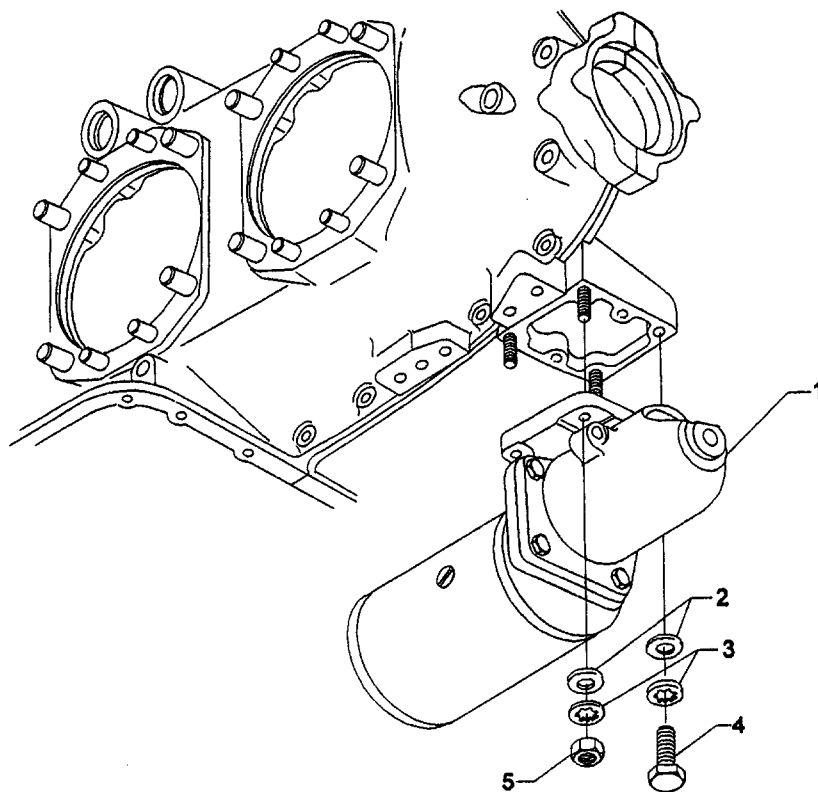


Figure 17. PRESTOLITE STARTER AND ATTACHING PARTS

**ELECTRICAL SYSTEM  
LAMAR STARTER AND ATTACHING PARTS**

FIG. REF. 18	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	31B22207	STARTER, Lamar 24 volt, 12/14 pitch	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

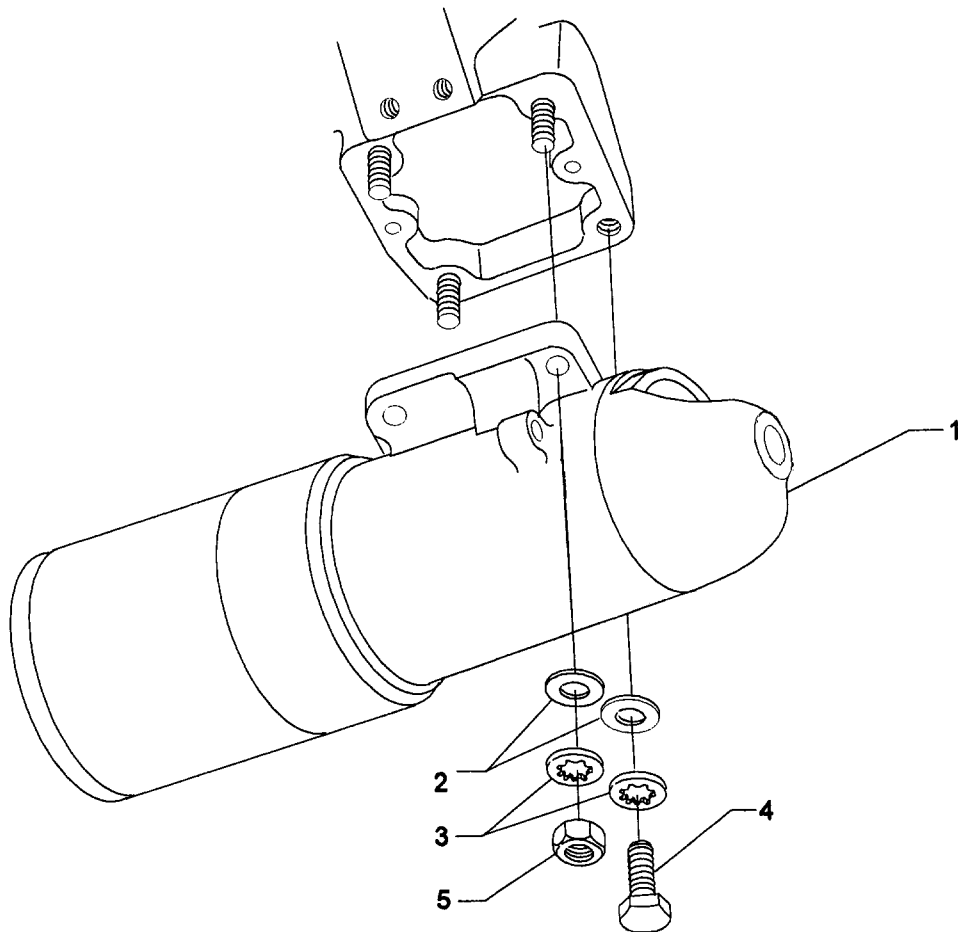
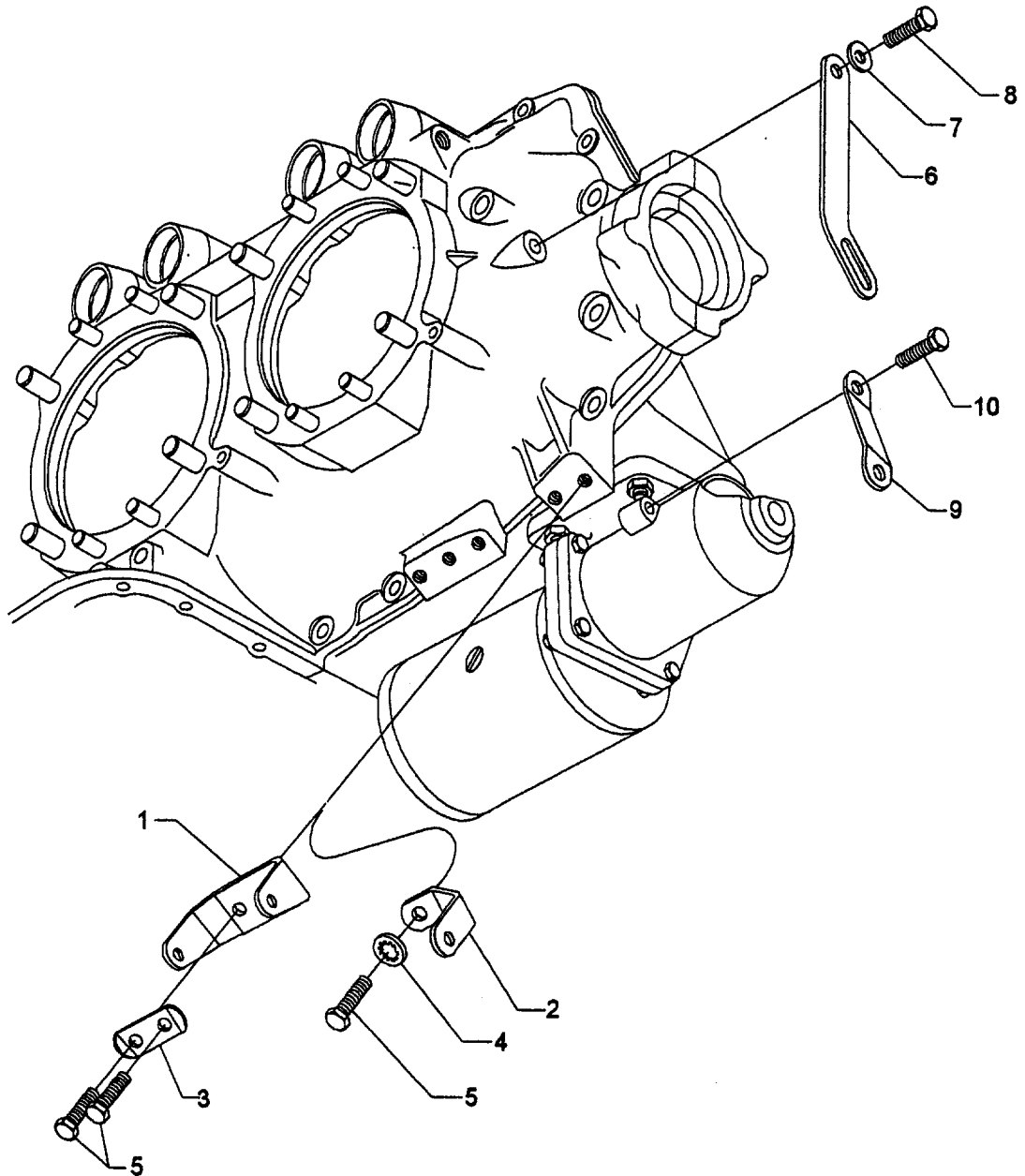


Figure 18. LAMAR STARTER AND ATTACHING PARTS

**ELECTRICAL SYSTEM  
ALTERNATOR MOUNTING AND ATTACHING PARTS**

FIG REF. 19	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	07A21443	BRACKET, Alternator	1
2	LW-13365	BRACE, Alternator bracket	1
3	73383	LOCKPLATE, 5/16 bolt x 1.00 long	1
4	STD-475	WASHER, 5/16 lock, internal teeth	1
5	LW-31-0.94	BOLT, 5/16-18 x 15/16 long, hex. hd.	3
6	LW-10729	LINK, Alternator adjusting	1
7	STD-35	WASHER, 5/16 plain	1
8	LW-31H0.88	BOLT, 5/16-18 x 7/8 long, hex. hd. dr.	1
9	76908	STRUT, Alternator support	1
10	LW-31H1.06	BOLT, 5/16-18 x 1-1/16 long, hex. hd.. dr.	1



**Figure 19. ALTERNATOR MOUNTING AND ATTACHING PARTS**

**SECTION**

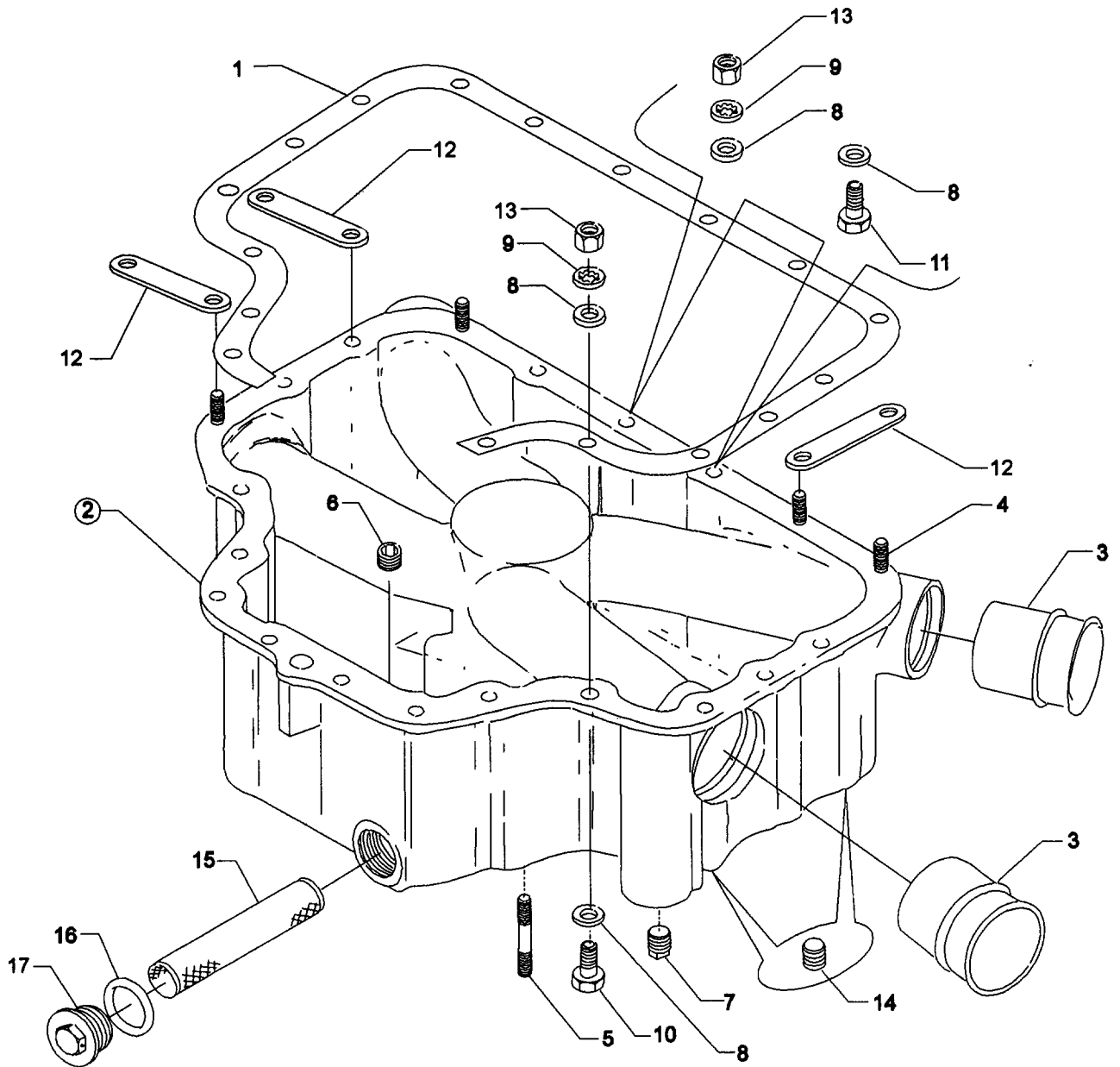
**6**

**OIL SUMP AND  
INDUCTION SYSTEM**

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

FIG REF. 20	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	LW-13353	GASKET, Oil sump	1
2	LW-13861	SUMP ASSEMBLY, Oil	1
3	78914	CONNECTION, Intake pipe	4
4	61400	STUD, 1/4-20 x 1-3/16 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-551	PLUG, 1/2-14 NPT, Sq. hd., drilled	2
8	STD-8	WASHER, 1/4 plain	29
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.	13
11	LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. hd.	3
12	73152	BRACKET, Support clamp	3
13	STD-1411	NUT, 1/4-20 plain	12
14	STD-2229	PLUG, 1/2 NPT, Allen head	2
15	70484	SCREEN, Oil suction	1
16	06E19769-1.00	GASKET, 1.00 I.D. x 1-1/4 O.D. x 3/32 annular	1
17	LW-12545	PLUG, 5/8 hex. hd. x 1.00-20 thread	1

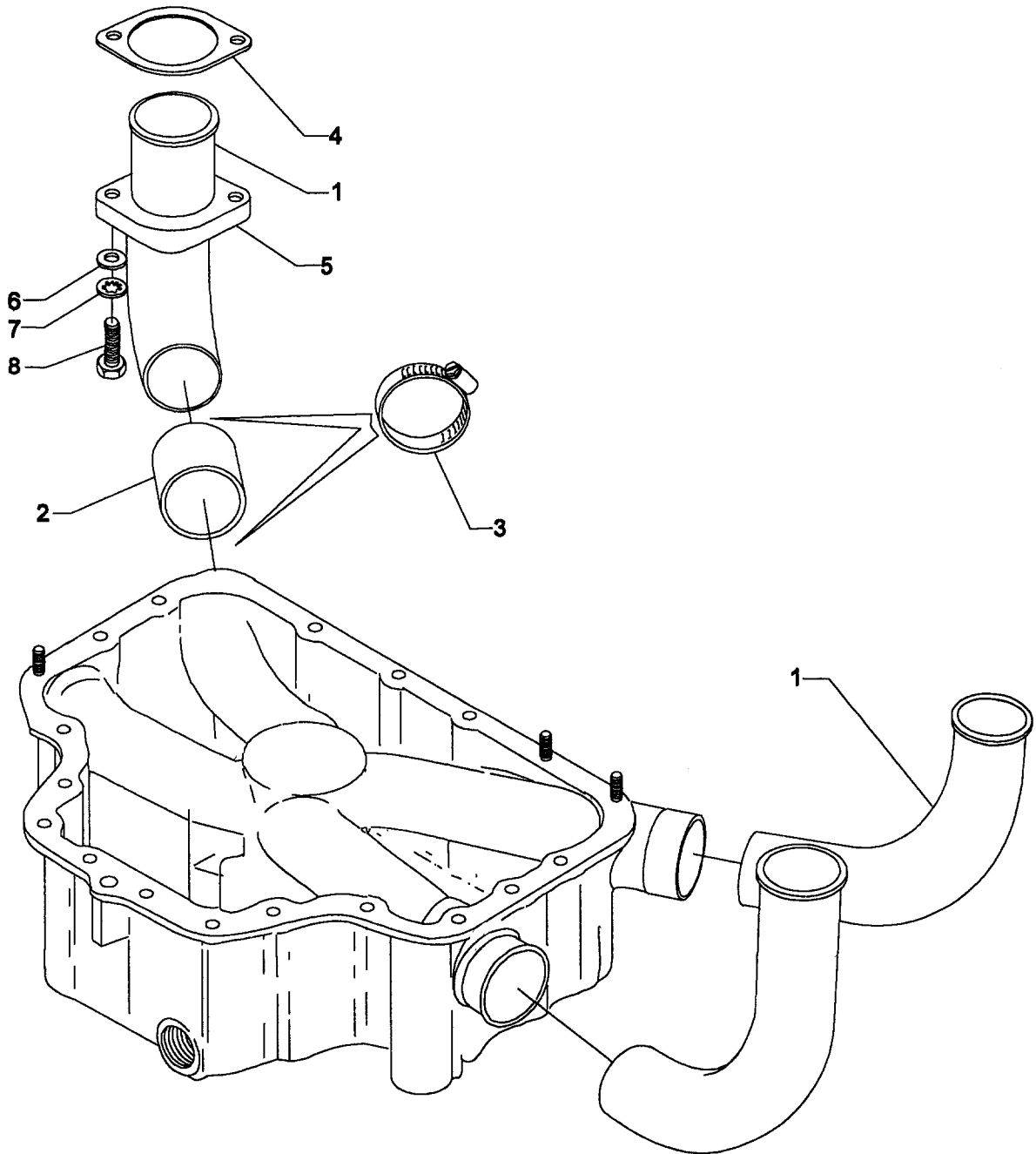




**Figure 20. OIL SUMP ASSEMBLY AND OIL SUCTION SCREEN**

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

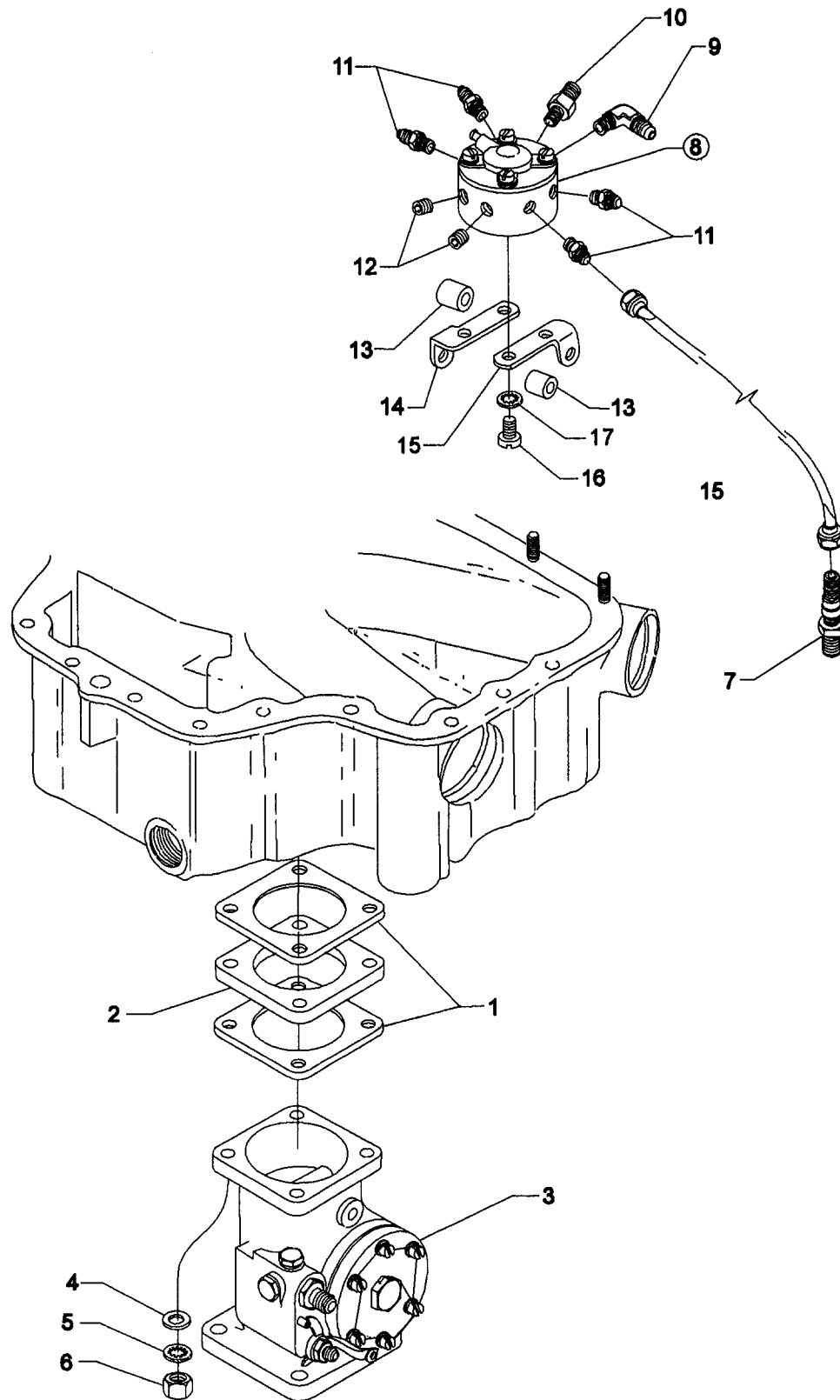
FIG REF. 21	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	70485	PIPE, Intake, all cylinders	4
2	69603	HOSE, 1-3/4 I.D. x 2-3/16 O.D. x 1-3/4 long	4
3	LW-15592-8-28	CLAMP, Hose	8
4	71973	GASKET, 2 bolt flange, 1-3/4 I.D.	4
5	73346	FLANGE, Intake pipe, upper	4
6	STD-8	WASHER, 1/4 plain	8
7	STD-160	WASHER, 1/4 lock, internal teeth	8
8	LW-25-1.25	BOLT, 1/4-20 x 1-1/4 long, hex. hd.	8



**Figure 21. INTAKE PIPES AND ATTACHING PARTS**

**OIL SUMP AND INDUCTION SYSTEM  
FUEL INJECTOR, FUEL MANIFOLD AND BRACKETS**

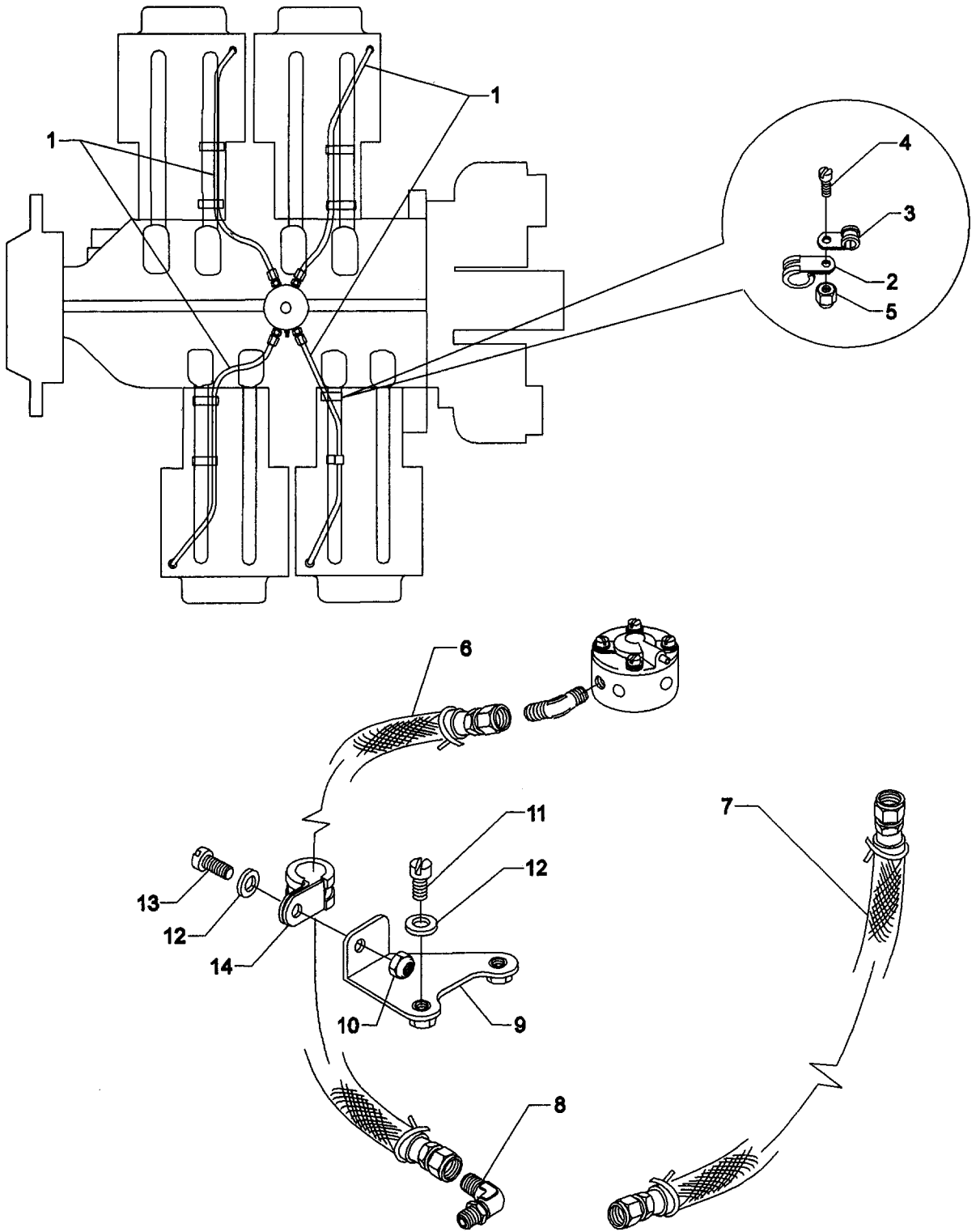
FIG REF. 22	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	66224	GASKET, Fuel injector	2
2	73161	SPACER, Fuel injector	1
3	61J22088	FUEL INJECTOR, RSA-5AD1 (2576536-1)	1
4	STD-35	WASHER, 5/16 plain	4
5	STD-475	WASHER, 5/16 lock, internal teeth	4
6	STD-1410	NUT, 5/16-18 plain	4
7	LW-18265	NOZZLE, Injection	4
8	63B22196	MANIFOLD ASSY., Fuel	1
9	MS20822-4	ELBOW, 1/4 tube, 1/8 NPT, 90°	1
10	02G21382	NIPPLE, 3/16 tube to 1/8 NPT, restricted	1
11	STD-148	NIPPLE, Union, 1/8 NPT	4
12	1102	PLUG, 1/8-27 NPT, Allen	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 22. FUEL INJECTOR, FUEL MANIFOLD AND BRACKETS**

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

FIG REF. 23	PART NUMBER	DESCRIPTION	QTY. PER ASSY.
1	LW-12098-0-180	TUBE ASSY., Fuel manifold to nozzles	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-12798-4S370	HOSE ASSY., Straight	1
7	LW-12799-6S180	HOSE ASSY., 3/8 Hose, Straight	1
8	72377	ELBOW, 3/8 flared tube, adjustable	1
9	74278	BRACKET ASSY., Fuel line support	1
10	STD-670	LOCKNUT, No. 10-32	1
11	STD-692	SCREW, No. 10-32 x 1/2 long, rd. hd.	2
12	STD-425	WASHER, No. 10 plain	3
13	STD-860	SCREW, No. 10-32 x 5/8 long, fill. hd.	1
14	LW-16266-25-50	CLAMP	1



**Figure 23. FUEL LINES, FUEL HOSES AND ATTACHING PARTS**

**SECTION**

**7**

**SERVICE KIT  
SECTION**



**SERVICE KIT SECTION ..... SEAL AND GASKET SET**

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-11997*	SEAL, Crankshaft oil	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 oil	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 adapter	1
69164	GASKET, Fuel pump adapter	1
69345	SPACER	4
69551	GASKET, Accessory drive adapter	1
70310	SEAL, Shroud tube	8
70455	GASKET	1
71481	RING, Oil seal	4
71973	GASKET, 2 bolt flange	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

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

**SERVICE KIT SECTION ..... SEAL AND GASKET SET**

Part No.	Part Name	Qty.
75439-1	SEAL AND GASKET SET (CONT.)	
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
76510	GASKET, Oil cooler bypass valve	1
77154	GASKET, Carburetor	1
77611	GASKET, Exhaust flange	4
8313	GASKET, Vacuum pump	1

**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
72198	PLUG, Piston pin	2
77611	GASKET, Exhaust flange	1
71973	GASKET, 2 bolt	1

**SERVICE KIT SECTION ..... CRANKCASE ASSY. AND THRU STUD KIT**

Part No.	Part Name	Qty.
LW-18402-S	CRANKCASE ASSY. AND THRU STUD KIT	1
LW-18402-2	CRANKCASE ASSY.	1
STD-2090	NUT	2
74887	SPACER	2
76220	THRU STUD	4

**SECTION**

**8**

**NUMERICAL INDEX**

**NUMERICAL INDEX**

PART NO.	PART NAME	PAGE NO.	PART NO.	PART NAME	PAGE NO.
AN6-34A	Bolt	1-9	LW-13353	Gasket	6-1
AN960-616L	Washer	1-9	LW-13365	Brace	5-3
LW-25-0.94	Bolt	2-3	LW-13389	Baffle Assy.	3-9
LW-25-0.94	Bolt	6-1	LW-13521	Bearing	3-1
LW-25-1.13	Bolt	1-9	LW-13790	Shaft	3-5
LW-25-1.13	Bolt	2-3	LW-13792	Seal	1-3
LW-25-1.13	Bolt	6-1	LW-13793	Stud	1-1
LW-25-1.25	Bolt	6-3	LW-13796	Shaft	1-7
LW-25-1.50	Bolt	1-9	LW-13861	Sump Assy.	6-1
LW-25-1.50	Bolt	2-3	LW-13884	Bearing	1-3
LW-25S1.50	Bolt	1-9	LW-13923	Bushing	3-1
LW-25-1.75	Bolt	1-9	LW-14077	Pin	3-1
LW-31H0.88	Bolt	1-7	LW-14260	Seal	2-3
LW-31H0.88	Bolt	5-3	LW-14768	Gage Assy.	1-3
LW-31-0.94	Bolt	5-3	LW-14995	Spring	3-7
LW-31-1.09	Bolt	5-2	LW-15473	Fuel Pump	2-5
LW-31-1.16	Bolt	5-1	LW-15572	Starter	5-1
LW-10077	Seat	3-7	LW-15592-5-05	Hose	3-9
LW-10729	Link	5-3	LW-15592-8-28	Clamp	6-3
LW-11485	Shroud Tube Assy.	3-7	LW-16266-10-13	Clamp	6-7
LW-11713	Spring	1-3	LW-16266-10-75	Clamp	6-7
LW-11750-S	Conn. Rod Assy.	3-1	LW-16266-25-50	Clamp	6-7
LW-11775	Plug	3-1	LW-16475	Seat	3-7
LW-11795	Spring	3-7	LW-16711	Bearing	1-3
LW-11800	Spring	3-7	LW-18085	Spring	1-3
LW-11997	Seal	1-3	LW-18402-2	Crankcase Assy.	1-1
LW-12098-0-180	Tube Assy.	6-7	LW-18265	Injection Nozzle	6-5
LW-12186	Nut	3-1	LW-18639	Lockplate	1-5
LW-12272	Lockplate	3-7	LW-18661	Seal	3-7
LW-12427	Cyl. & Head Assy.	3-3	LW-18667	Pin	1-7
LW-12540	Adapter Assy.	2-7	LW-18840	Camshaft Assy.	1-7
LW-12545	Plug	6-1	LW-19001	Valve	3-7
LW-12681	Gasket	4-1	LW-19296	Gasket	3-3
LW-12706	Adapter	4-1	MS20822-4	Elbow	6-5
LW-12795	Gasket	2-9	MS20822-8	Elbow	2-9
LW-12798-4S370	Hose Assy.	6-7	MS20823-6D	Elbow	3-3
LW-12799-6S180	Hose Assy.	6-7	MS20823-8	Elbow	2-9
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LW-13215	Oil Filter	2-9	STD-8	Washer	1-9
LW-13323	Seat	3-7	STD-8	Washer	2-3

**NUMERICAL INDEX (Continued)**

PART NO.	PART NAME	PAGE NO.	PART NO.	PART NAME	PAGE NO.
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STD-33	Washer	1-9	STD-1211	Plug	1-5
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