

# **O-360-A4N Series Illustrated Parts Catalog**

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**May 2011**

**PC-306-3**

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***LYCOMING*** © 2011

652 Oliver Street  
Williamsport, PA 17701

## **O-360-A4N Series Illustrated Parts Catalog**

Lycoming Part Number: PC-306-3

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# INTRODUCTION



** CAUTION:** DO NOT USE THIS CATALOG AS AN ASSEMBLY OR INSTALLATION DOCUMENT. THIS CATALOG MUST ONLY BE USED TO IDENTIFY PARTS IN CONJUNCTION WITH THE APPLICABLE OVERHAUL MANUAL.

## Purpose of this Catalog

This Illustrated Parts Catalog (IPC) contains a complete parts listing for the Lycoming O-360-A4N wide cylinder flange model engine.

## How to Use this Catalog

This catalog is based on the Air Transport Association (ATA) Spec 100 format. In order to clarify illustrations, Lycoming has taken discretion to classify non-system related assemblies and components in the same chapters, because they are physically connected.

This catalog is frequently updated by Service Bulletins (SB) and Service Instructions (SI). The updated information will be incorporated into subsequent full revisions of this catalog.

The ATA two element numbering system provides consistency throughout various manuals. The bottom of each page (beyond the frontal section) contains a two element number (##-##). In the two element numbering, the first two digits represent a chapter, and the next two digits subdivide the material into a more specific section.

The ATA format specifies the subject matter for each chapter-section. According to the ATA Standards, the following chapters apply to the O-360-A4N Illustrated Parts Catalog:

72 (Reciprocating Engine), 73 (Engine and Fuel Control), 74 (Ignition), and 76 (Engine Controls).

**EXAMPLE:**      **74**      **—**      **20**  
Chapter                      Section  
**Ignition**                      **Distribution**

**NOTE:** See the IPC Table of Contents for the sub-systems listed in each section.

## Numerical Index

The Numerical Index is a single list of part numbers, names and their locations within the IPC. It is useful for locating parts when you only know the number or name of the part.

### Description column

Indentation of a part name represents a lower level of assembly. Attaching parts have the same indentation level and are listed below the parts grouping or assembly they attach to. This column is often referred to as the “Nomenclature” on other ATA Spec manuals.

**Units per Assembly Column**

Where more than one assembly exists, this column contains the quantity of a specific part required in the build sequence of only one next higher assembly. The Letters "AR" represent "as required" for bulk items or non-illustrated select-from-range-parts. "RF" represents items listed for reference purposes only.

**Cross-Reference List of Manufacturer Parts to Standard Part Number****Vendor Accessories**

Parts coverage of Vendor Accessories used on Lycoming engines may be found in the appropriate Vendor's Parts Catalog. A list of vendor's addresses appears in the latest revision of Lycoming Service Letter No. L114.

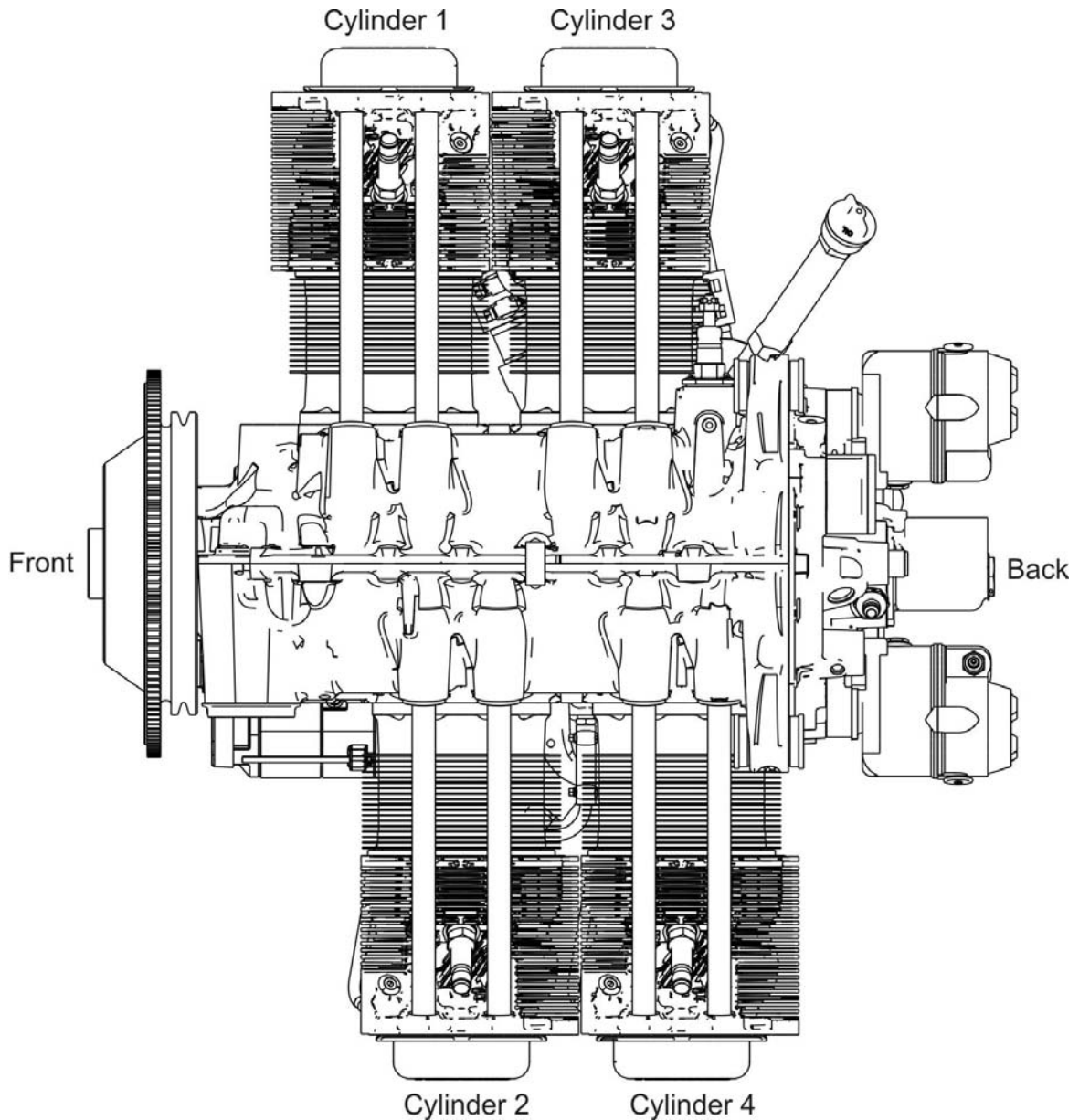
Any reference in this document to the suppliers/part manufacturer's product, by name, trademark, part number or other description is solely for the purpose of identification and does not indicate or infer that Lycoming accepts responsibility for quality control and/or airworthiness of parts, which do not pass through the Lycoming quality control system.

**Environmental Compliance**

Lycoming is concerned with preserving the environment. Lycoming strongly urges engine owners and repair/overhaul personnel to observe and comply with all federal, state, and local environmental regulations when solvents, paint, fuel, oil, chemicals, or other consumables are used in operating, maintaining, or overhauling an engine component. Please share our concern for, and commitment to a clean earth, clean water, and especially clean air for succeeding generations of flyers.

**Perspective of References**

In this manual, all references to locations of various components will be designated as if viewing the engine from the rear (or anti-propeller) end. The front of the engine is considered to be the propeller end and the oil sump is considered to be the bottom of the engine. Cylinders are numbered from front to rear with the odd-numbered cylinders on the right-hand side. The firing order for this four-cylinder engine is 1-3-2-4.

**Top View of Engine**

**How to Order Parts and Publications**

An Oversize and Undersize Parts List is included in the front section of this catalog to aid in ordering parts as necessary during overhaul.

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. Refer to the latest revision of Service Letter No. L114 for subscription information.

1. In order to expedite correct part shipments without delay:
  - a. Always specify the model and serial number of your engine.
  - b. Always specify part number, nomenclature, and quantity required.

The SB and SI documents are available from Lycoming distributors, the factory, or by subscription.

Full Revisions of the Illustrated Parts Catalog are available from Lycoming distributors or the factory.

Every effort has been made in preparing this manual to ensure its accuracy. However, any comments, suggestions, or corrections to this manual are welcome and must be directed in writing to:

**Technical Publications Coordinator**  
**Lycoming Engines**  
**652 Oliver Street**  
**Williamsport, PA 17701**

**NOTE:** The owner of the manual must give notification to the factory of a change of address.

Additionally, Lycoming has a Customer Service Hot Line to provide information and assistance to owners, operators, and maintenance personnel servicing Lycoming engines.

Call **(570) 323-6181**

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Monday – Friday

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**ABBREVIATIONS AND ACRONYMS**

<b>A</b>	
Adj.	Adjustable
<b>C</b>	
Cyl.	Cylinder
<b>F</b>	
Fill.	Fillister
<b>H</b>	
Hex.	Hexagon
<b>I</b>	
I.D.	Inside Diameter
<b>N</b>	
No.	Number
<b>O</b>	
O.D.	Outside Diameter
<b>S</b>	
Scav.	Scavenge
<b>T</b>	
Temp.	Temperature
<b>V</b>	
Vac.	Vacuum

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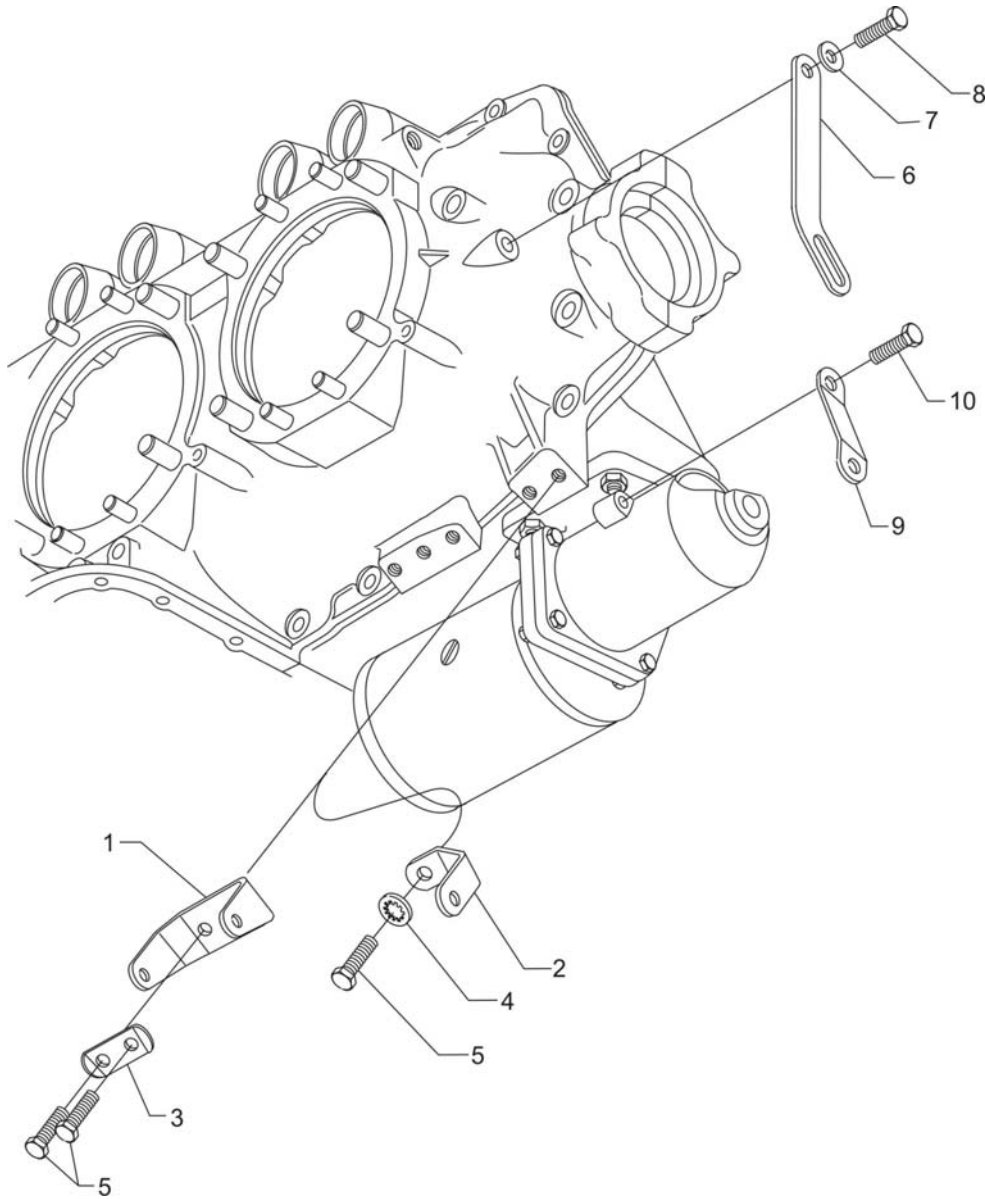


**OVERSIZE AND UNDERSIZE PARTS LISTING**

Part No.	Description	Oversize (in.)								Undersize (in.)		
		P02 .002	P05 .005	P10 .010	P15 .015	P20 .020	P30 .030	P40 .040	P50 .050	M03 .003	M06 .006	M10 .010
66610	BUSHING		X	X								
66796	INSERT		X									
69796	DOWEL		X									
72057	SEAT			X		X	X					
72058	SEAT			X		X	X					
75657-S	BUSHING		X	X	X	X						
75656-S	BUSHING		X	X	X	X						
72155-S	DOWEL		X	X	X	X						
74241	RING			X								
14H21950	RING			X								
76943-S	GUIDE	See latest revision of Service Instruction No. 1256.										
16R22126	GUIDE	See latest revision of Service Instruction No. 1256.										
18M26105	BEARING									X	X	X
LW-13792	SEAL	See latest revision of Service Instruction No. 1324.										
18A26093	BEARING									X	X	X
18D26098	BEARING									X	X	X
STD-1065	DOWEL	X	X	X	X							

## NOTE

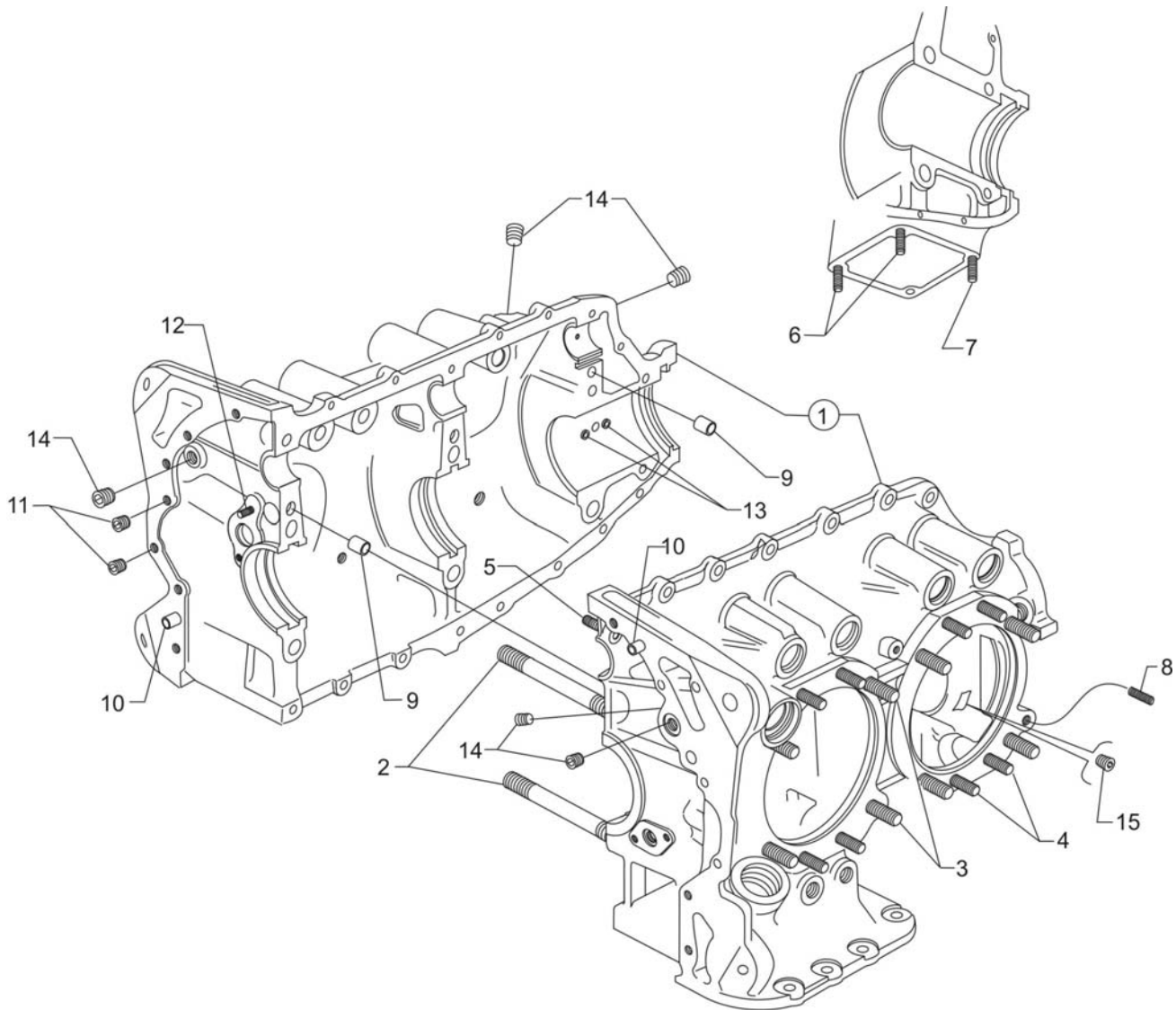
When ordering oversize and undersize parts, be sure to specify the required oversize and undersize dimension along with the proper part number. For example, to order bearing P/N 18D26098 bearing in .003 in. undersize, order P/N 18D26098-M03. Undersize code letter is "M" while oversize code letter is "P". These letters are then followed by the number designating the size in thousandths of an inch.



**Alternator Mounting and Attaching Parts**  
**Figure 1**

**ELECTRICAL POWER****FIGURE 1 – ALTERNATOR MOUNTING AND ATTACHING PARTS**

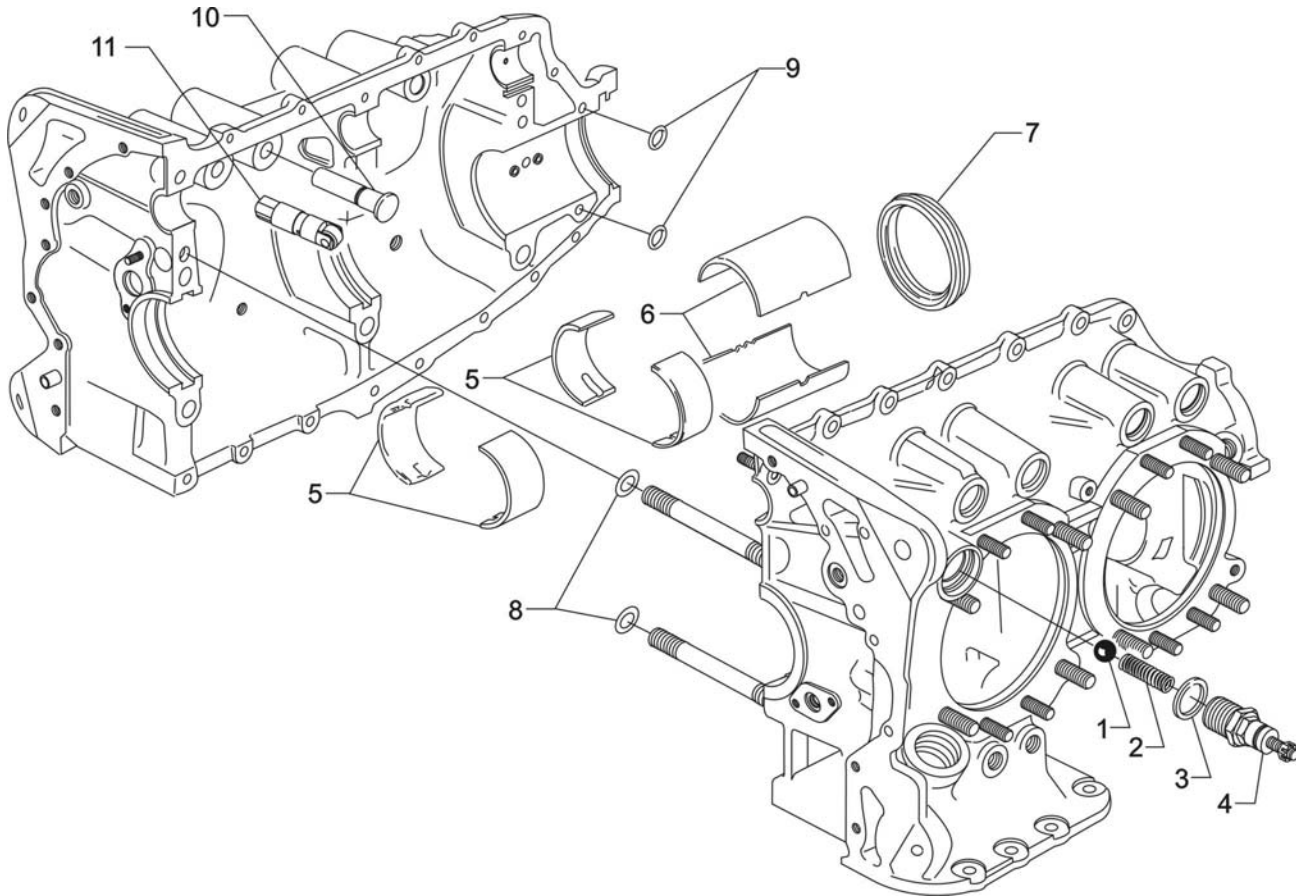
<b>Figure Item</b>	<b>Code</b>	<b>Part Number</b>	<b>Description</b>	<b>Units per Assembly</b>
1		07A21443	BRACKET, Alternator	1
2		LW-13365	BRACE, Alternator bracket	1
3		73383	LOCKPLATE, 5/16 bolt x 1.00 long	1
4		STD-475	WASHER, 5/16 lock, internal teeth	1
5		LW-31-0.94	BOLT, 5/16-18 x 15/16 long, hex. head	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. head, drilled	1
9		76908	STRUT, Alternator support	1
10		LW-31H0.88	BOLT, 5/16-18 x 7/8 long, hex. head, drilled	1
<b><u>NOTE:</u></b> The alternator is not supplied for this configuration.				



**Crankcase Assembly**  
**Figure 2**

**POWER SECTION****FIGURE 2 - CRANKCASE ASSEMBLY**

<b>Figure Item</b>	<b>Code</b>	<b>Part Number</b>	<b>Description</b>	<b>Units per Assembly</b>
1	<b>P</b>	LW-18770-1	CRANKCASE ASSEMBLY	1
	<b>P</b>	LW-18770-5	CRANKCASE ASSEMBLY (Roller tappet engines)	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		38-22	STUD, 3/8-16 x 2-3/4 long	1
9		STD-557	DOWEL, 1/2 diameter x 19/32 long, hollow	2
10		STD-514	DOWEL, 5/16 diameter x 1/2 long	2
11		STD-1623	INSERT, 1/4-20 x 3/8 long, Heli-coil	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
<b>P</b> Lycoming proprietary part. Listed for reference purposes only, cannot be purchased.				



**Crankcase Related Parts**  
**Figure 3**

**POWER SECTION****FIGURE 3 - CRANKCASE RELATED PARTS**

<b>Figure Item</b>	<b>Code</b>	<b>Part Number</b>	<b>Description</b>	<b>Units per Assembly</b>
1		1028-B	BALL, 11/16 diameter	1
2	*	61084	SPRING, Oil pressure relief valve	1
	*	68668	SPRING, Oil pressure relief valve	1
	*	77467	SPRING, Oil pressure relief valve	1
	*	LW-11713	SPRING, Oil pressure relief valve	1
		LW-18085*	SPRING, Oil pressure relief valve	1
3		06E19769-1.25	GASKET, 1-1/4 I.D. x 1-1/2 O.D. x 3/32 annular	1
4		77808	VALVE ASSEMBLY, Oil pressure relief valve, adj.	1
5		18D26098	BEARING, Crankshaft	4
6		18A26093	BEARING, Crankshaft	2
7	**	LW-13792	SEAL, Crankshaft oil	1
8		72075	SEAL, Oil, 3/32 section x 7/16 I.D.	2
9		72091	RING, Oil seal, 23/64 I.D. x 7/64 diameter	2
10		15B26064	BODY, Hydraulic tappet	8
11	♦	LRT23381	BODY ASSEMBLY, Hydraulic tappet ( <b>Roller tappet engines</b> )	8
<p>* Select spring to give a minimum of three threads exposed on adjusting screw to allow field adjustment. Reference latest revision of SSP-1776, Part I for spring identification.</p> <p>** See latest revision of Lycoming Service Instruction No. 1324 for installation.</p> <p>♦ Only sold as an exchange part.</p>				

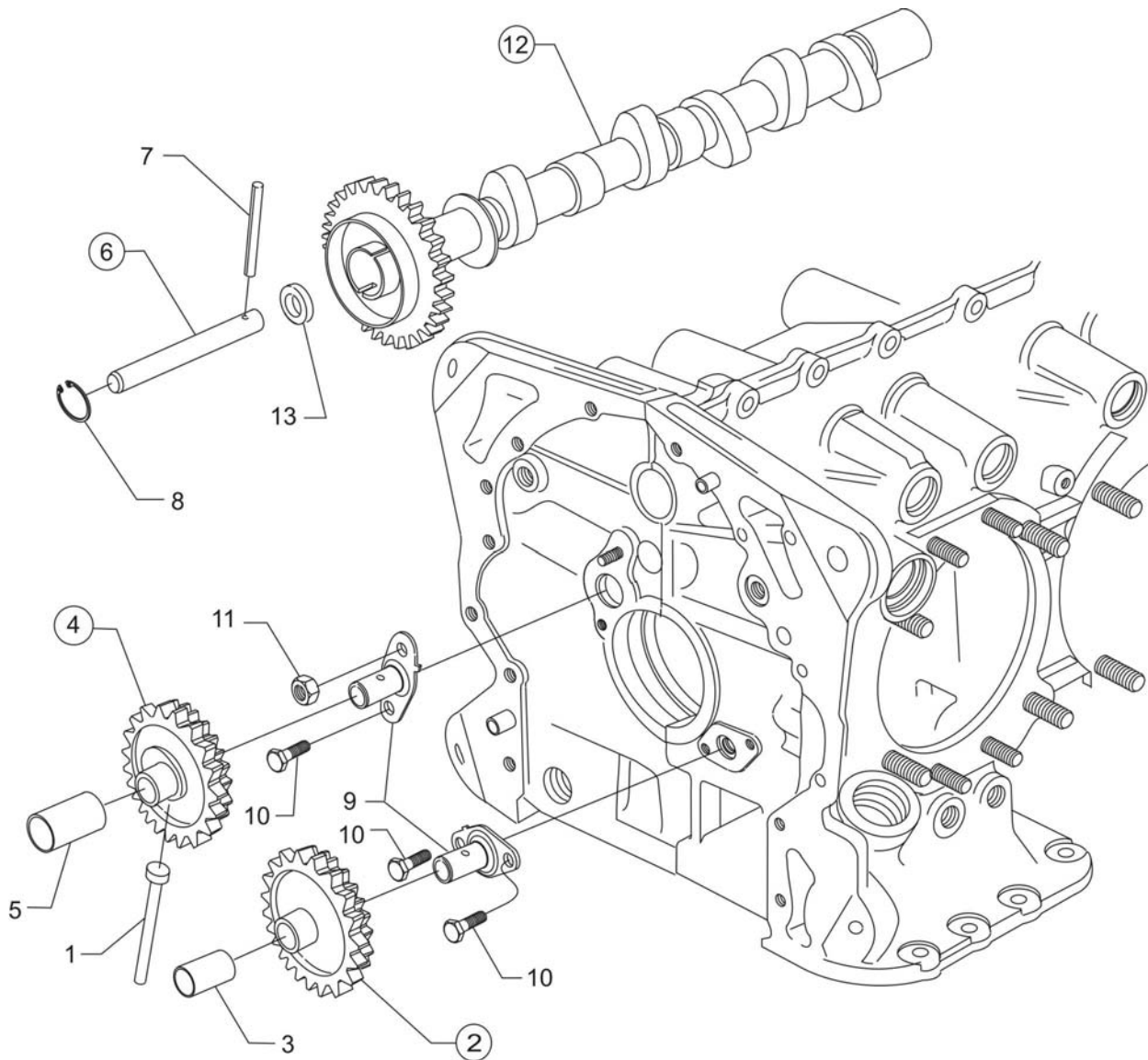






**POWER SECTION****FIGURE 4 - CRANKSHAFT ASSEMBLY AND RELATED PARTS**

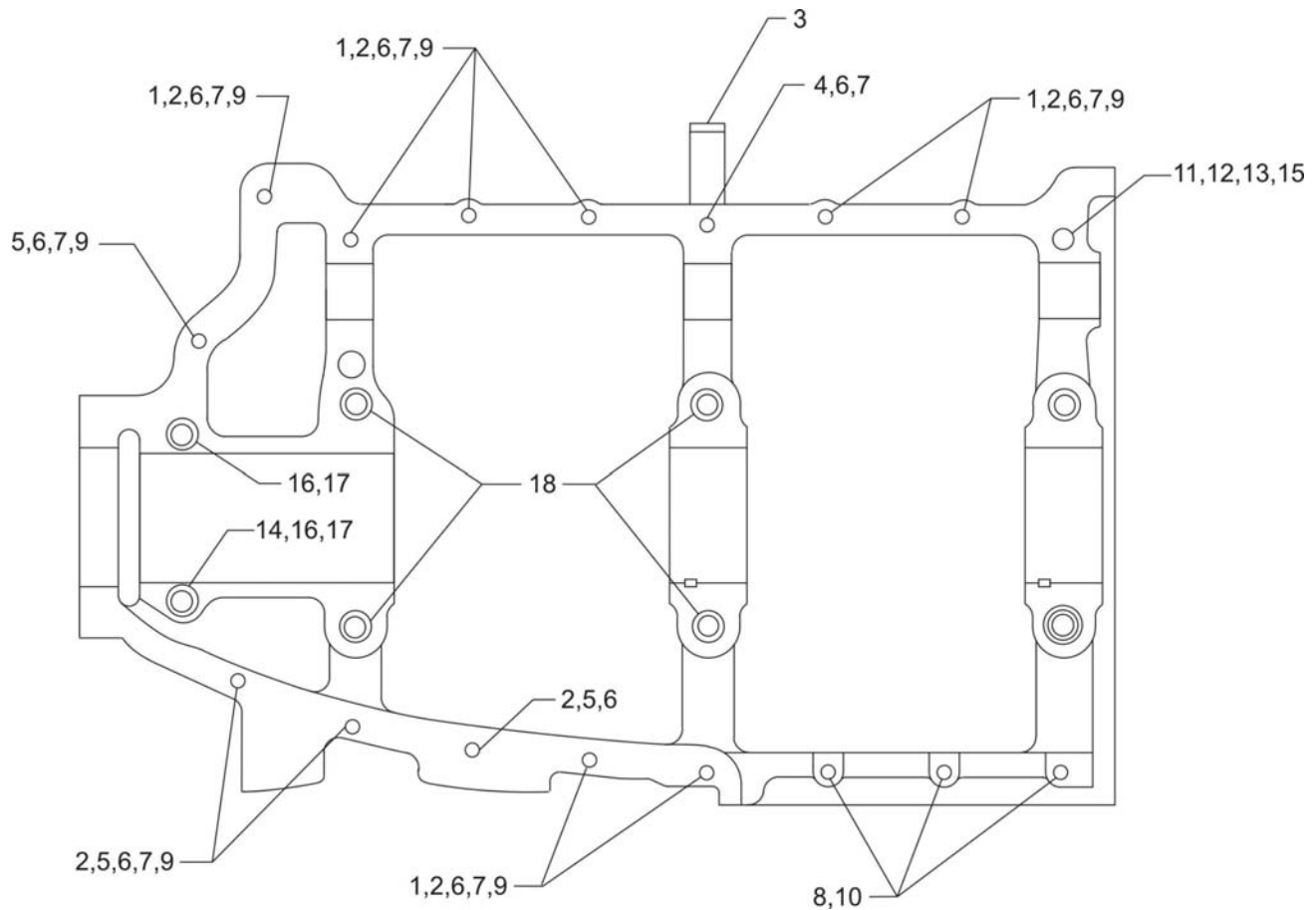
Figure Item	Code	Part Number	Description	Units per Assembly
1		13B47135	CRANKSHAFT ASSEMBLY	1
2		STD-1065	DOWEL, Stepped, 5/16 & 1/4 diameter x 35/64	1
3		75657-S	BUSHING, Propeller flange, indexing	1
4		72155-S	BUSHING, Propeller flange, short	1
5		75656-S	BUSHING, Propeller flange, long	4
6	<b>SB*</b>	13S19646	GEAR, Crankshaft	1
7		LW-18639	LOCKPLATE, Crankshaft gear	1
8		STD-2246	BOLT, 5/16-24 x 1.00 long	1
9		LW-16471	SUPPORT ASSEMBLY, Starter ring gear	1
10		72566	GEAR, Starter ring	1
<b>SB</b> Referencing Service Bulletin * Refer to latest revision of Service Bulletin No. 475 for proper installation.				



**Crankshaft Idler Gears, Tachometer Drive and Camshaft  
Figure 5**

**POWER SECTION****FIGURE 5 - CRANKSHAFT IDLER GEARS, TACHOMETER DRIVE AND CAMSHAFT**

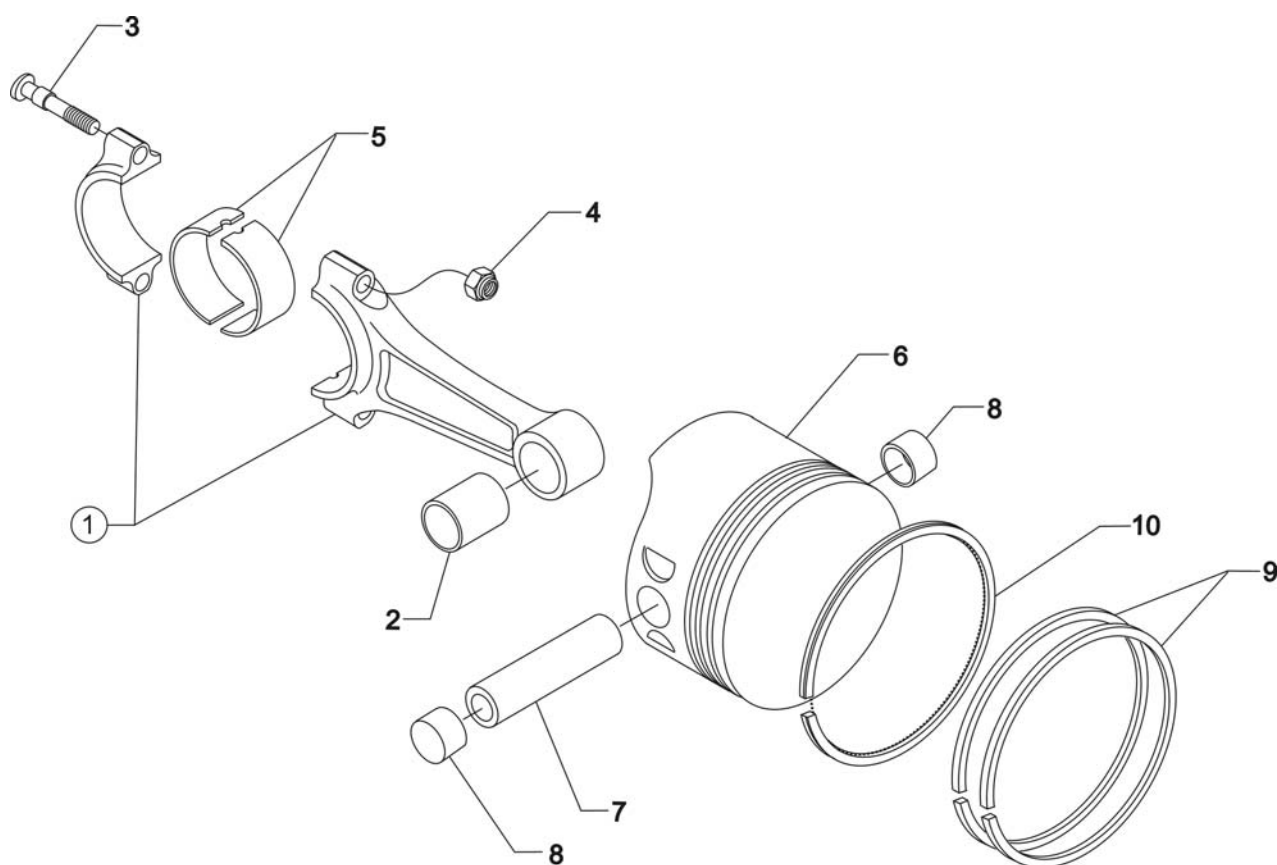
<b>Figure Item</b>	<b>Code</b>	<b>Part Number</b>	<b>Description</b>	<b>Units per Assembly</b>
1		61544	PLUNGER, Fuel pump, long	1
2		74996	GEAR ASSEMBLY, Crankshaft idler, plain	1
3		77309	BUSHING, Crankshaft idler gear	1
4		75072	GEAR ASSEMBLY, Crankshaft idler	1
5		77309	BUSHING, Crankshaft idler gear	1
6		76121	SHAFT ASSEMBLY, Tachometer	1
7		LW-18667	PIN, 3/16 diameter 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. head, drilled	3
11		STD-2168	NUT, 5/16-18 NC-3 slotted shear	1
12		LW-18840	CAMSHAFT ASSEMBLY	1
	*	15M23452	CAMSHAFT ASSEMBLY, Roller lifter <b>(Roller tappet engines)</b>	1
13		76118	SPACER, Tachometer shaft centering	1
* Only sold as an exchange part.				



**Crankcase Attaching Parts**  
**Figure 6**

**POWER SECTION****FIGURE 6 - CRANKCASE ATTACHING PARTS**

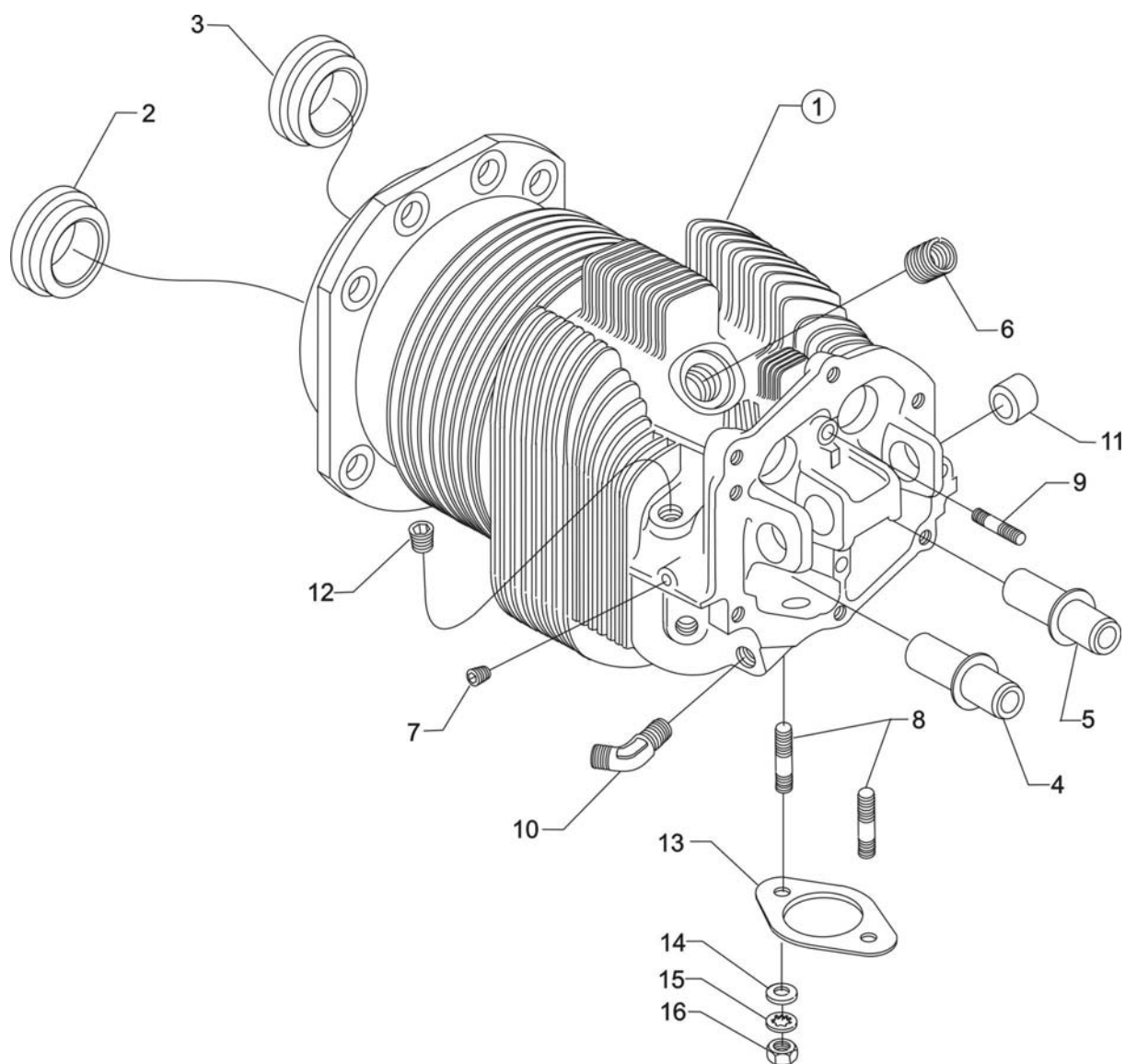
<b>Figure Item</b>	<b>Code</b>	<b>Part Number</b>	<b>Description</b>	<b>Units per Assembly</b>
1		LW-25-1.50	BOLT, 1/4-20 x 1-1/2 long, hex. head	8
2		STD-8	WASHER, 1/4 plain	20
3		60803	STRAP, Lifting	1
4		LW-25-1.75	BOLT, 1/4-20 x 1-3/4 long, hex. head	1
5		LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. head	4
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. head, drilled	3
9		STD-8	WASHER, 1/4 plain	9
10		STD-2249	NUT, 1/4-20 slotted shear	3
11		STD-33	WASHER, 3/8 plain, 1/16 thick	1
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. head	1
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 10-11/16 long	4



**Connecting Rods, Pistons and Ring Assemblies**  
**Figure 7**

**CYLINDER SECTION****FIGURE 7 - CONNECTING RODS, PISTONS AND RING ASSEMBLIES**

<b>Figure Item</b>	<b>Code</b>	<b>Part Number</b>	<b>Description</b>	<b>Units per Assembly</b>
1		LW-11750-S	CONNECTING ROD ASSEMBLY	4
2		LW-13923	BUSHING, Connecting rod, upper	4
3	<b>* P</b>	75061 14S23890	BOLT, Connecting rod	8
4		LW-12186	NUT, Connecting rod bolt	8
5		18M26105	BEARING, Connecting rod	8
6		75089	PISTON, 8.5:1 compression ratio	4
7	<b>**</b>	LW-14078	PIN, Piston	4
8		72198	PLUG, Piston pin	8
9		74241	RING, Piston, compression	8
10		14H21950	RING, Piston, oil regulating, expander type	4
<b>P</b> Lycoming proprietary part. Listed for reference purpose only, cannot be purchased. <b>*</b> Service use only. <b>**</b> See latest revision of Lycoming Service Instruction No. 1267.				

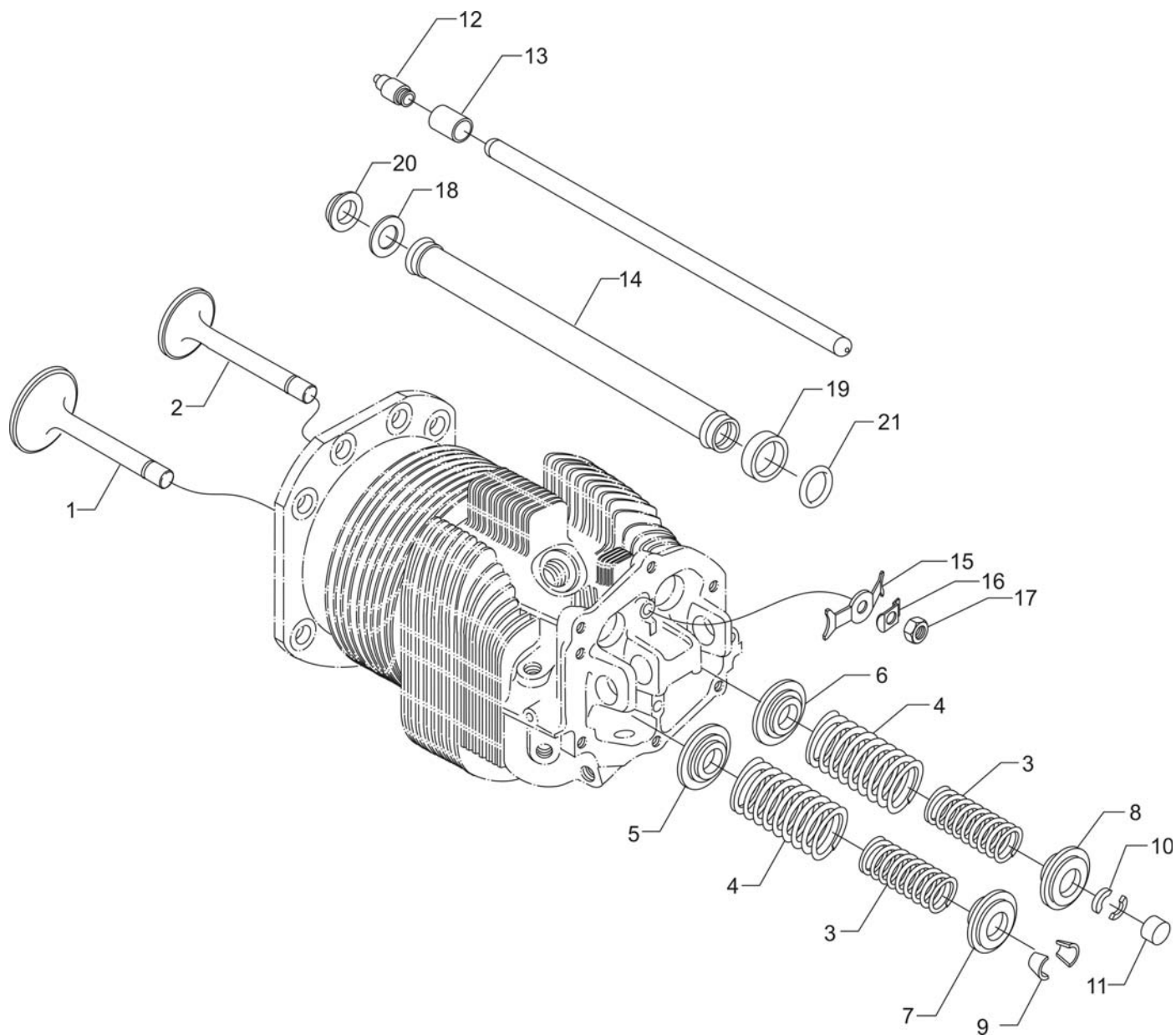


**Cylinder Assembly**  
**Figure 8**



**CYLINDER SECTION**  
**FIGURE 8 - CYLINDER ASSEMBLY**

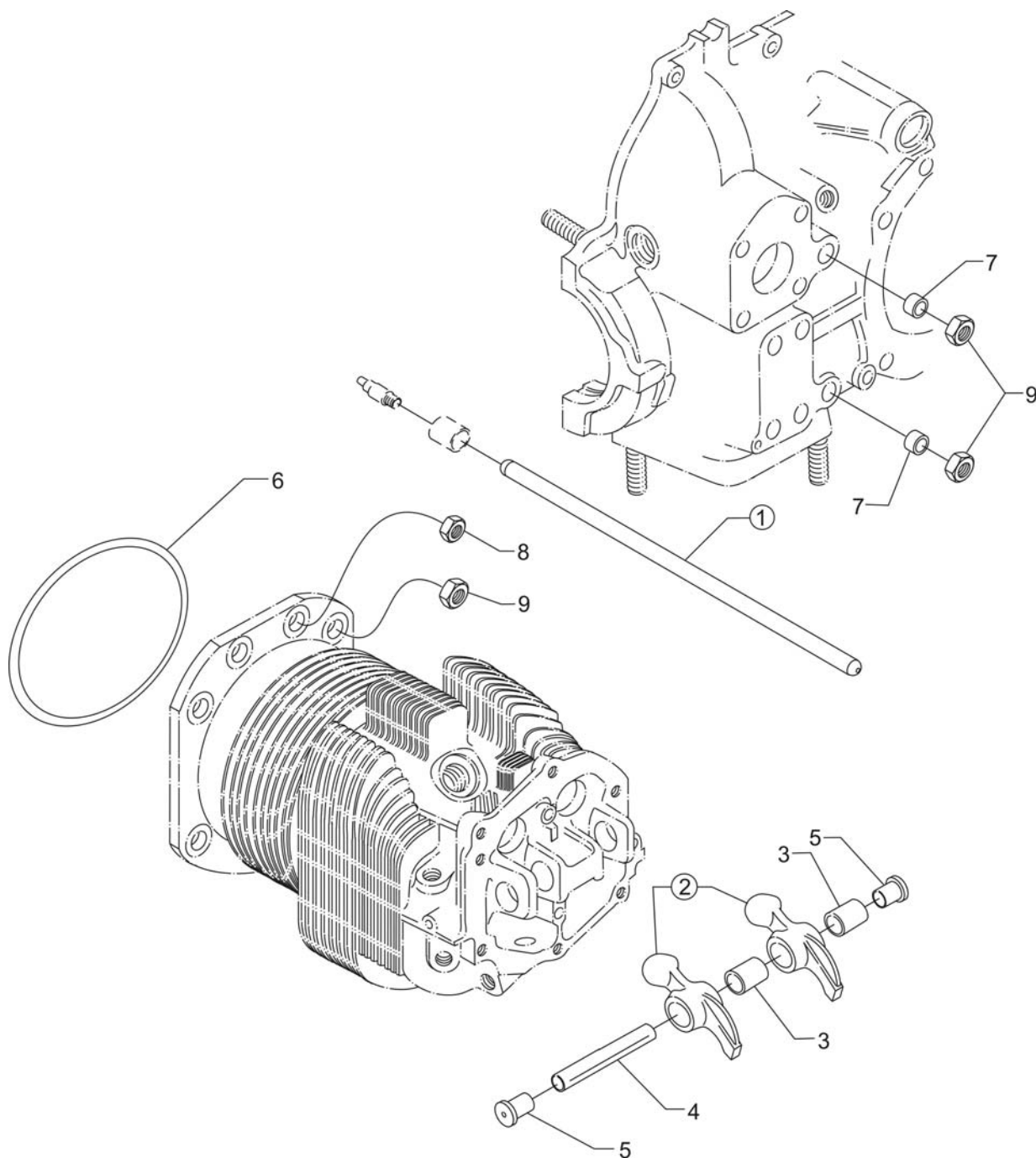
Figure Item	Code	Part Number	Description	Units per Assembly
1		LW-12427	CYLINDER ASSEMBLY, Nitrided	4
2		72057	SEAT, Valve, intake	4
3		72058	SEAT, Valve, exhaust	4
4	<b>P*</b>	76943	GUIDE, Valve, intake	4
5	<b>P*</b>	16R22126	GUIDE, Valve, exhaust	4
6	<b>P</b>	66796	INSERT, Spark plug, 18-1.5MM	8
7		STD-1353	INSERT, No. 10-24 UNC 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
<b>P</b> Lycoming proprietary part. Listed for reference purposes only, cannot be purchased. <b>*</b> See latest revision of Service Instruction No. 1256 for service valve guides.				



### Valve Assembly and Related Parts Figure 9

**CYLINDER SECTION****FIGURE 9 – VALVE ASSEMBLY AND RELATED PARTS**

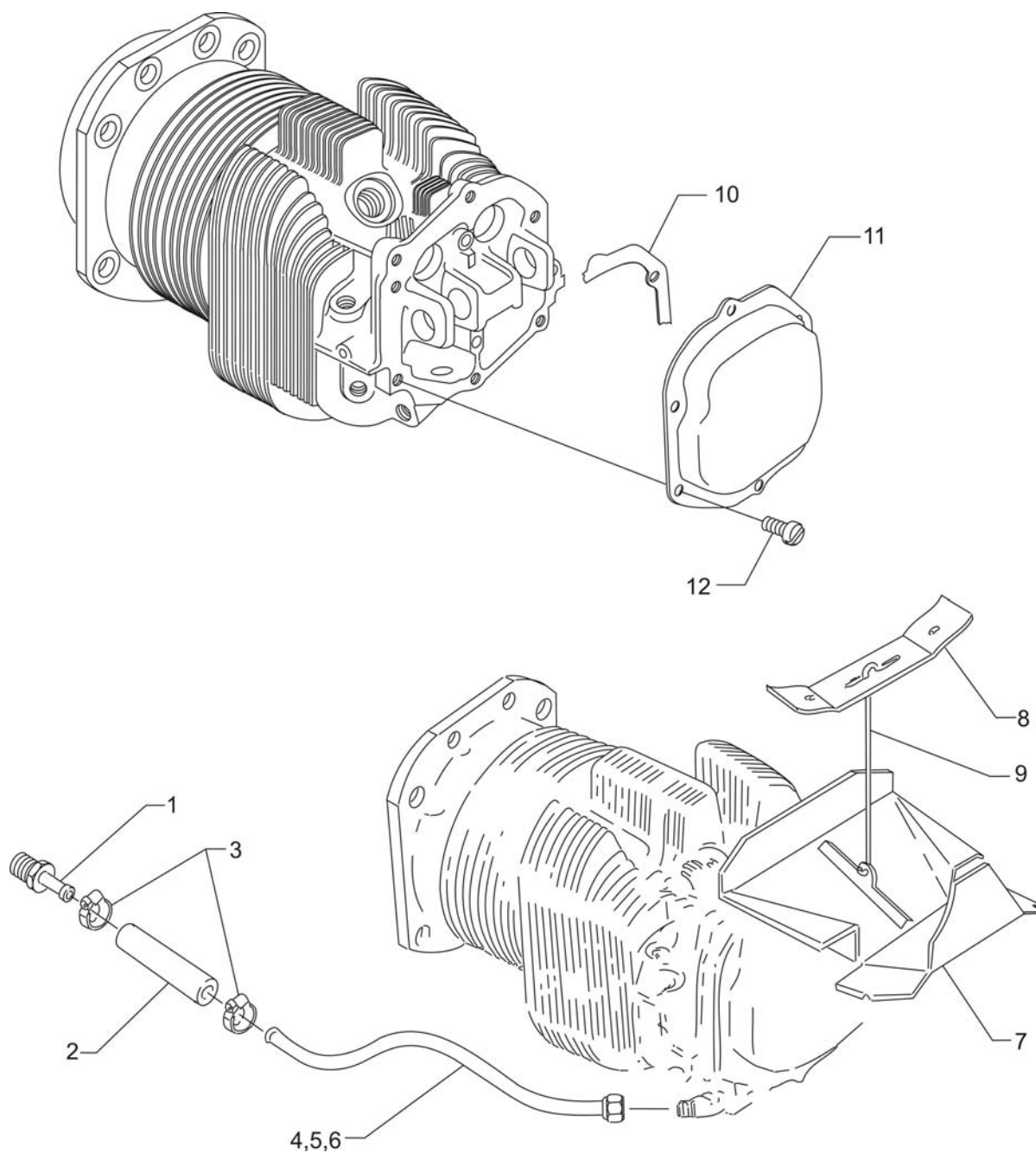
<b>Figure Item</b>	<b>Code</b>	<b>Part Number</b>	<b>Description</b>	<b>Units per Assembly</b>
1		17A23938	VALVE, Intake	4
2		17B23936	VALVE, Exhaust (rotator type)	4
3		LW-11795	SPRING, Valve, inner	8
4		LW-11800	SPRING, Valve, outer	8
5		65441	SEAT, Valve spring, lower intake	4
6		LW-13323	SEAT, Valve 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		15B26066	PLUNGER ASSEMBLY, Hydraulic lifter	8
13		15B21319	SOCKET, Hydraulic tappet	8
14		LW-11485	SHROUD TUBE ASSEMBLY, Push rod	8
		15G23461	SHROUD TUBE ASSEMBLY, Push rod <b>(Roller tappet engines)</b>	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		01L23459	WASHER, 25/32 I.D. x 3/8 O.D. x 1/32 thick <b>(Roller tappet engines)</b>	8
19		LW-18661	SEAL, Shroud tube	8
20		06A23493	SEAL, Shroud tube <b>(Roller tappet engines)</b>	8
21	*	70310	SEAL, Shroud tube	8
* This seal needs to be installed on both roller tappet engines and flat tappet engines				



**Cylinder Related Parts**  
**Figure 10**

**CYLINDER SECTION****FIGURE 10 – CYLINDER RELATED PARTS**

Figure Item	Code	Part Number	Description	Units per Assembly
1	*♦AR	15F19957-28	ROD ASSEMBLY, Push (A total of 8 required)	AR
	*♦AR	15F19957-29	ROD ASSEMBLY, Push (A total of 8 required)	AR
	*♦AR	15F19957-30	ROD ASSEMBLY, Push (A total of 8 required)	AR
	*♦AR	15F19957-31	ROD ASSEMBLY, Push (A total of 8 required)	AR
	*♦AR	15F19957-32	ROD ASSEMBLY, Push (A total of 8 required)	AR
	*♦AR	15F19957-33	ROD ASSEMBLY, Push (A total of 8 required)	AR
	†♦AR	15F19957-34	ROD ASSEMBLY, Push (A total of 8 required)	AR
	♦AR	15F19957-35	ROD ASSEMBLY, Push (A total of 8 required)	AR
	♦AR	15F19957-36	ROD ASSEMBLY, Push (A total of 8 required)	AR
	♦AR	15F19937-37	ROD ASSEMBLY, Push (A total of 8 required)	AR
2	**	17F19357	ROCKER ASSEMBLY, 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 diameter 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
<p><b>AR</b> as required</p> <p>* These push rods are not to be used on flat tappet engines.</p> <p>† This push rod can be used on both flat tappet and roller tappet engines.</p> <p>♦ See latest revision of Service Instruction No. 1060 for complete push rod application.</p> <p>** Due to the size of the area where the part number is stamped, the last five digits may be all that is shown (19357).</p> <p><b>NOTE:</b> Various push rod lengths are used to set valve clearances.</p>				

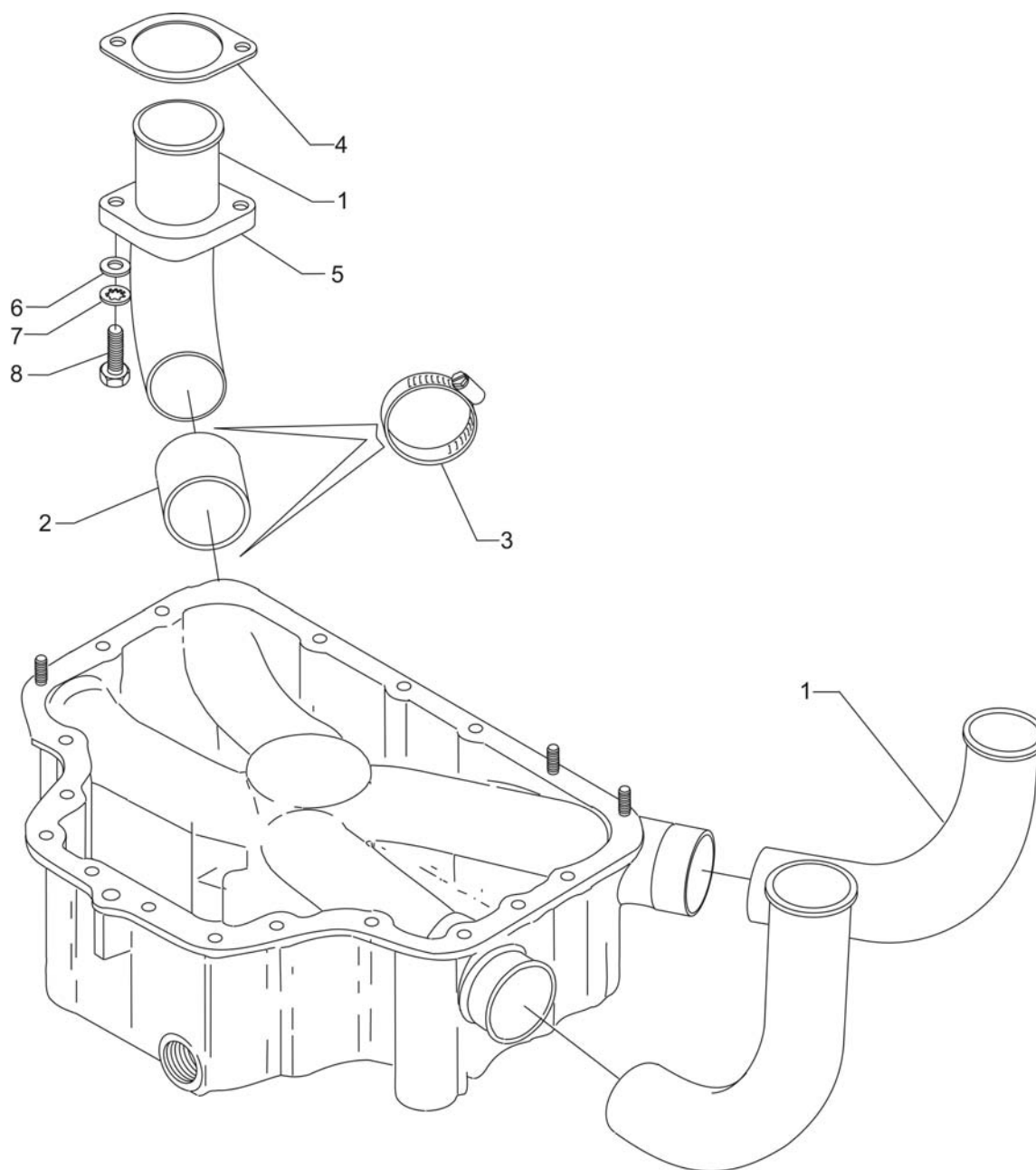


**Rocker Box Cover, Cylinder Head Drain Tubes,  
and Intercylinder Cooling Baffles**  
**Figure 11**

**CYLINDER SECTION****FIGURE 11– ROCKER BOX COVER, CYLINDER HEAD DRAIN TUBES,  
AND INTERCYLINDER COOLING BAFFLES**

<b>Figure Item</b>	<b>Code</b>	<b>Part Number</b>	<b>Description</b>	<b>Units per Assembly</b>
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., Cylinder head oil drain, cyl. no. 1	1
5		68760	TUBE ASSY., Cylinder head oil drain, cyl. no. 2	1
6		68761	TUBE ASSY., Cylinder head oil drain, cyls. no. 3, 4	2
7		75339	BAFFLE ASSEMBLY, 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. head, self-locking	24



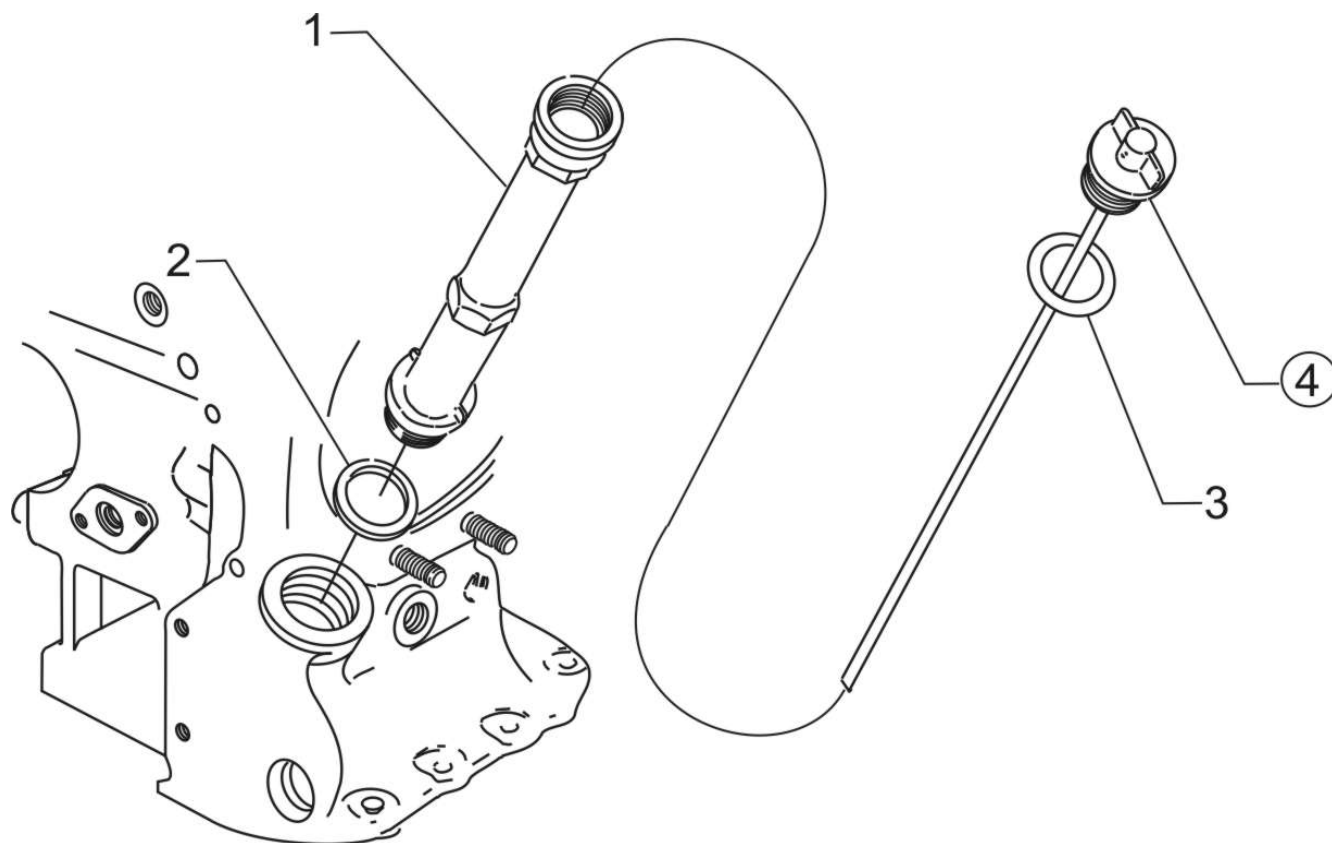


**Intake Pipes and Attaching Parts**  
**Figure 12**



**CYLINDER SECTION****FIGURE 12 – INTAKE PIPES AND ATTACHING PARTS**

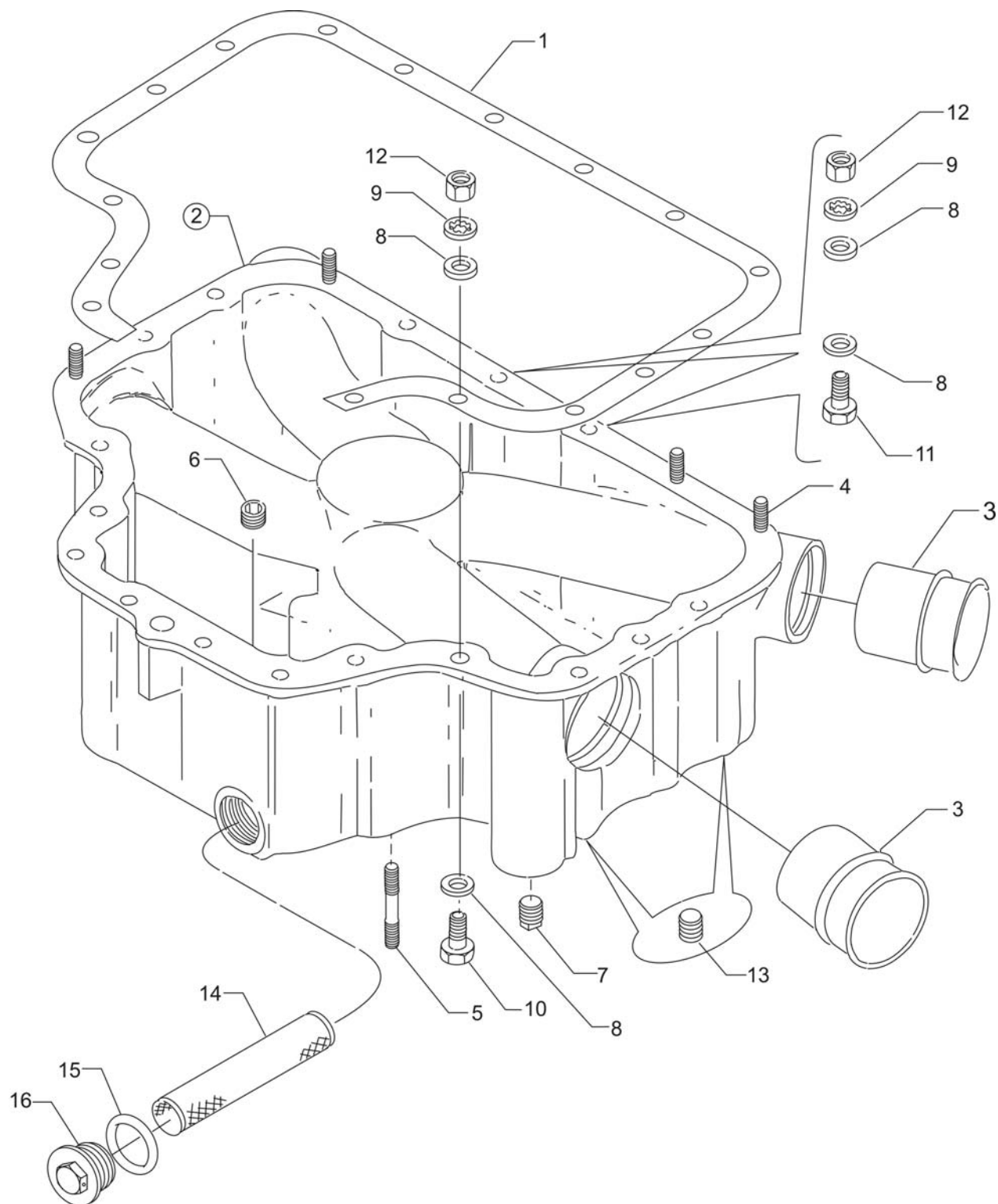
<b>Figure Item</b>	<b>Code</b>	<b>Part Number</b>	<b>Description</b>	<b>Units per Assembly</b>
1		70485	PIPE, Intake	4
2		69603	HOSE, 1-3/4 I.D. x 2-3/16 O.D. x 1-3/4 long	4
3		LW-15592-8-28	CLAMP, Hose	8
4		71973	GASKET, 2 bolt flange, 1-13/16 I.D.	4
5		73346	FLANGE, Intake pipe, upper	4
6		STD-8	WASHER, 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. head	8



**Oil Level Gage Assembly  
Figure 13**

**LUBRICATION SYSTEM****FIGURE 13 – OIL LEVEL GAGE ASSEMBLY**

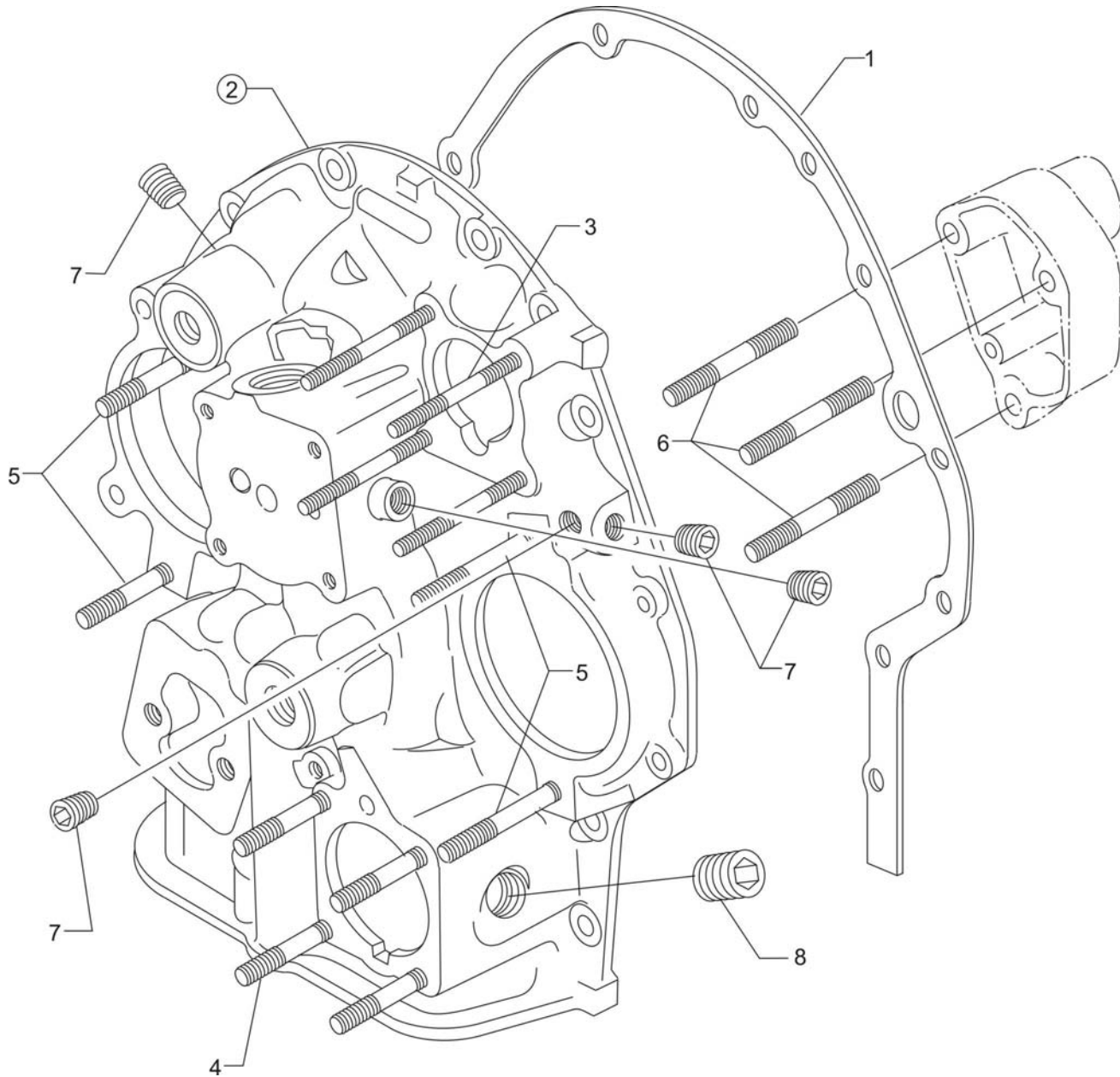
<b>Figure Item</b>	<b>Code</b>	<b>Part Number</b>	<b>Description</b>	<b>Units per Assembly</b>
1		75767	TUBE, Oil level gage , long	1
2		72059	GASKET, Oil level gage	1
3		74065	RING, Oil level gage seal	1
4		LW-14768	GAGE ASSEMBLY, Oil level	1



**Oil Sump Assembly and Oil Suction Screen**  
**Figure 14**

**LUBRICATION SYSTEM****FIGURE 14 – OIL SUMP ASSEMBLY AND OIL SUCTION SCREEN**

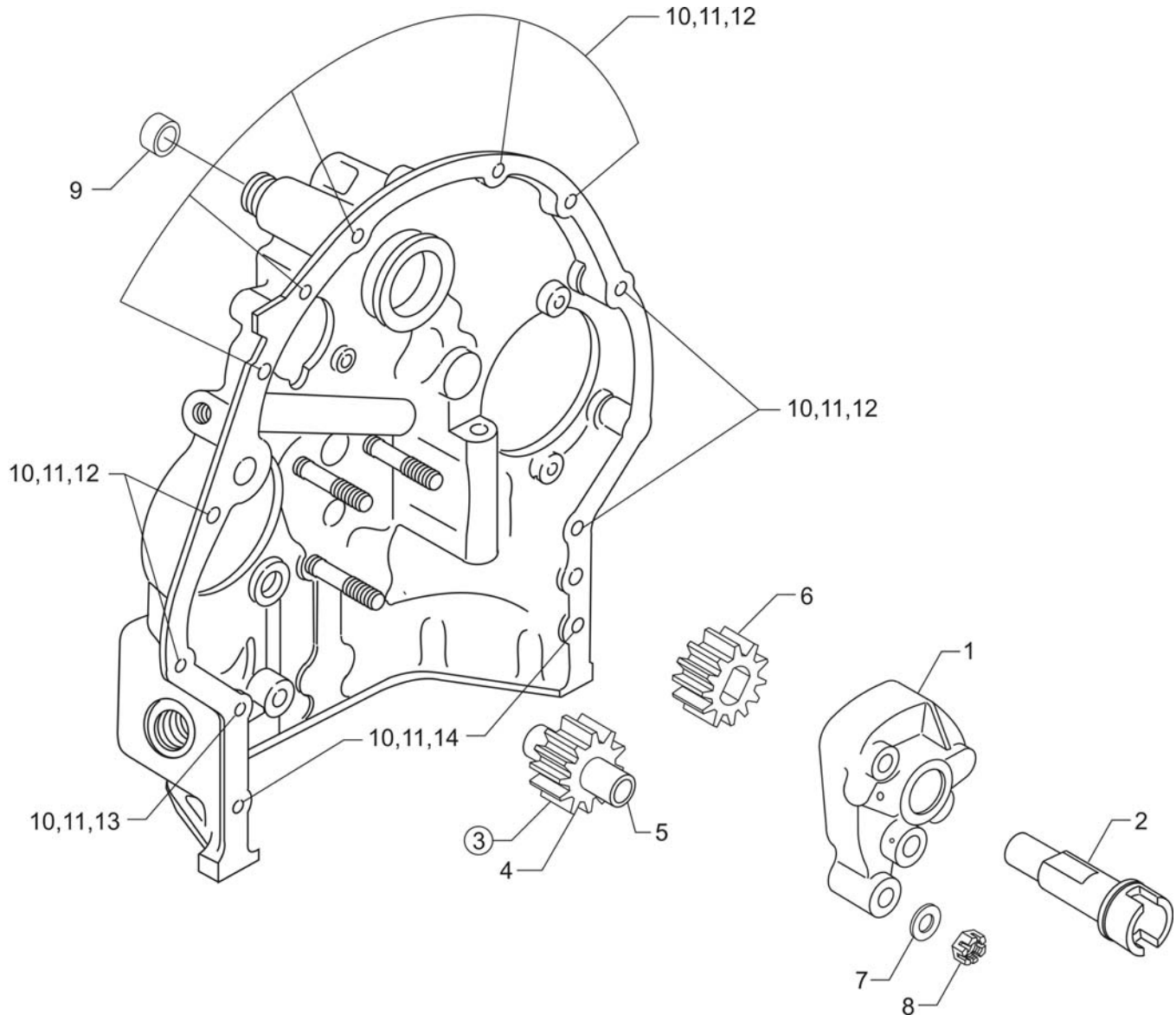
<b>Figure Item</b>	<b>Code</b>	<b>Part Number</b>	<b>Description</b>	<b>Units per Assembly</b>
1		LW-13353	GASKET, Oil sump	1
2		LW-18792	SUMP ASSEMBLY, Oil	1
3		78914	CONNECTION, Intake pipe	4
4		61400	STUD, 1/4-20 x 1-3/16 long	4
5		31C-15	STUD, 5/16-18 x 1-7/8 long	4
6		STD-91	PLUG, 1/2-14 NPT, allen head	1
7		STD-551	PLUG, 1/2-14 NPT, square head, 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. head	14
11		LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. head	2
12		STD-1411	NUT, 1/4-20 plain	12
13		STD-2229	PLUG, 1/2 NPT, allen head	2
14		70484	SCREEN, Oil suction	1
15		06E19769-1.00	GASKET, Annular, 1.00 I.D.	1
16		LW-12545	PLUG, 5/8 hex. head x 1.00-20 thread	1



**Accessory Housing Assembly  
Figure 15**

**ACCESSORY DRIVES****FIGURE 15 – ACCESSORY HOUSING ASSEMBLY**

<b>Figure Item</b>	<b>Code</b>	<b>Part Number</b>	<b>Description</b>	<b>Units per Assembly</b>
1		73818	GASKET, Accessory housing	1
2		21A21533-05	HOUSING ASSEMBLY, 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

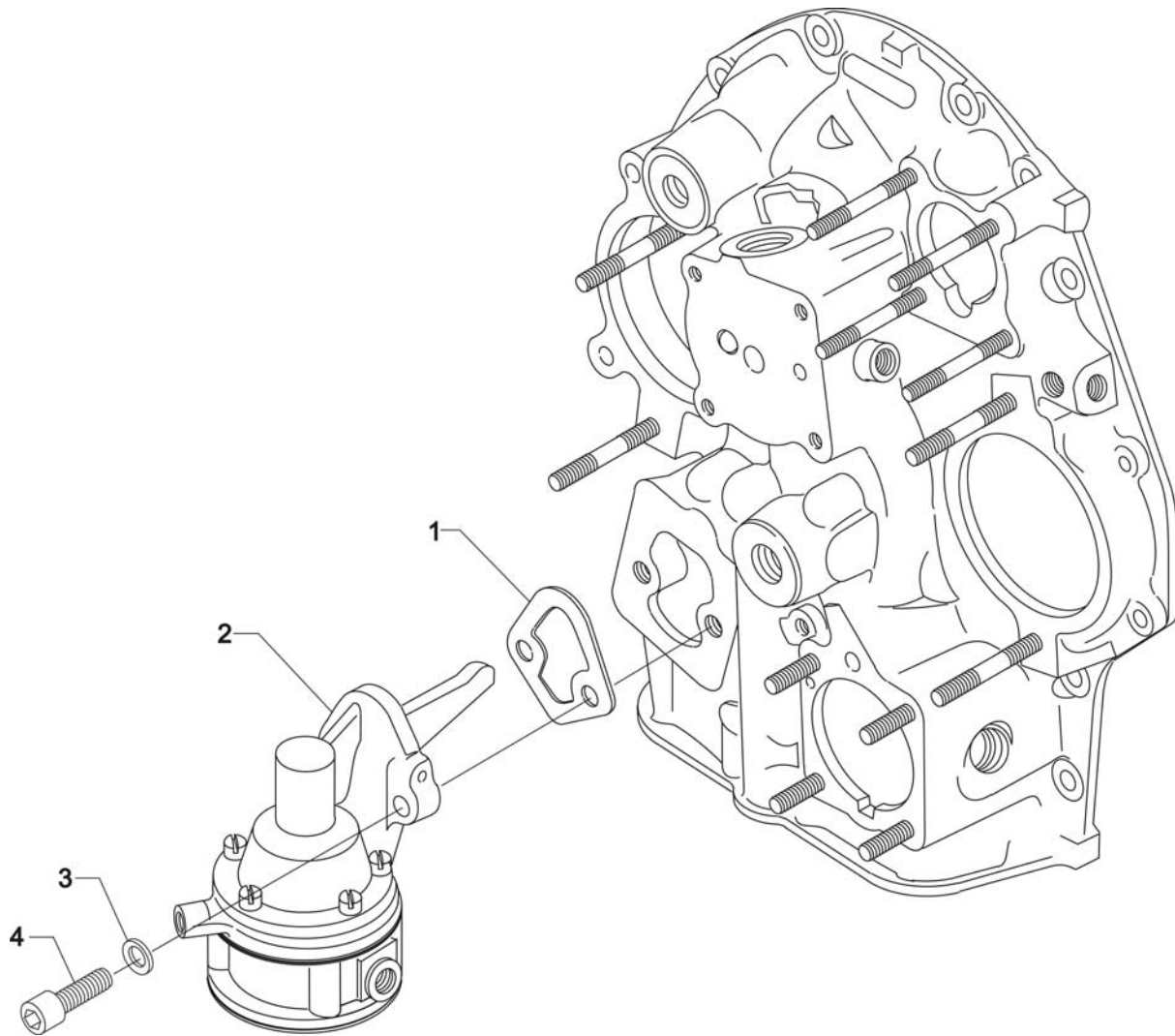


**Oil Pump Assembly and Accessory Housing Attaching Parts**  
**Figure 16**



**ACCESSORY DRIVES****FIGURE 16 – OIL PUMP ASSEMBLY AND ACCESSORY HOUSING ATTACHING PARTS**

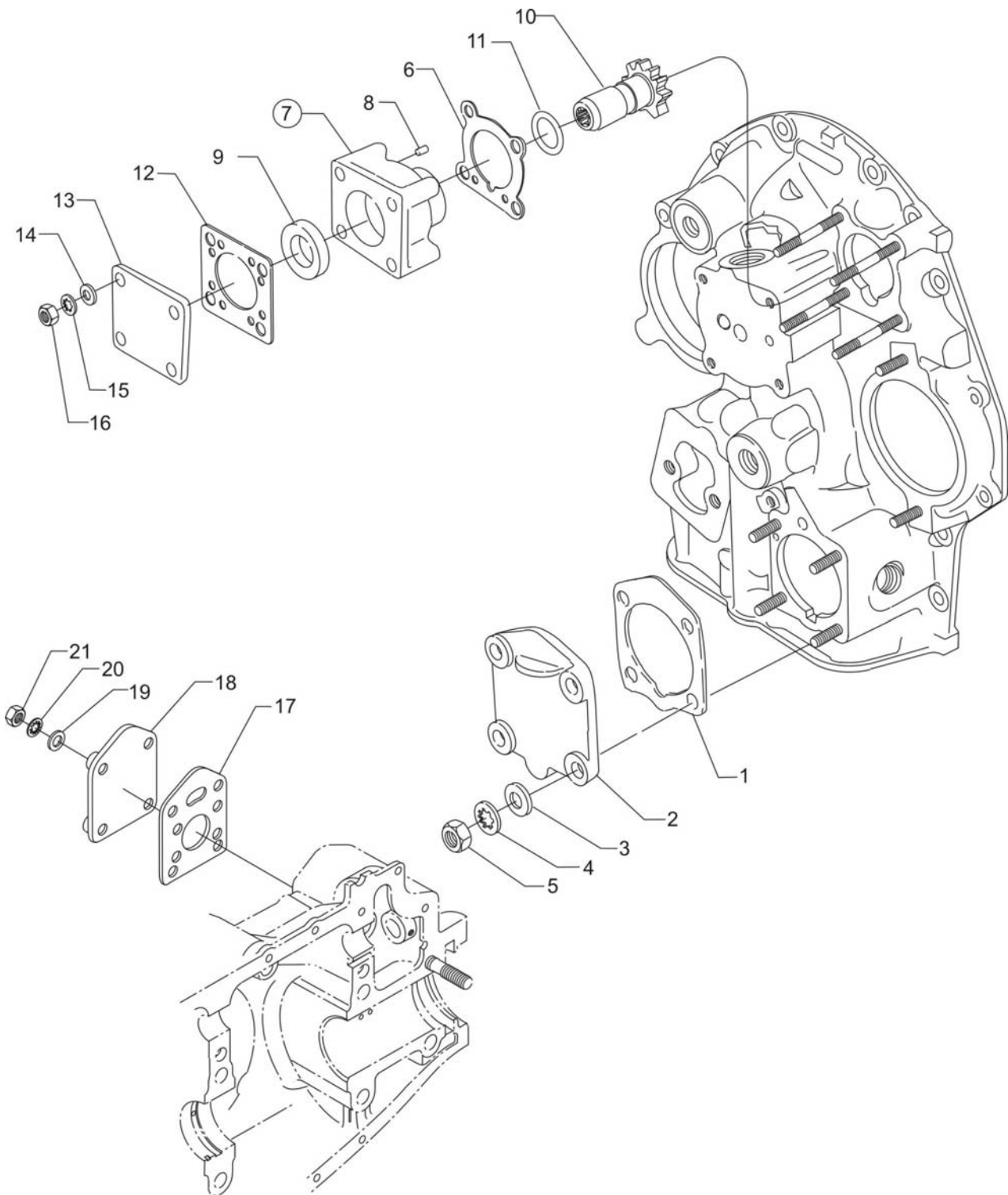
<b>Figure Item</b>	<b>Code</b>	<b>Part Number</b>	<b>Description</b>	<b>Units per Assembly</b>
1		78531	BODY ASSEMBLY, Oil pump	1
2		61174	SHAFT, Oil pump drive	1
3	*	LW-18110	IMPELLER ASSEMBLY, Oil pump driven	1
4		LW-18108	IMPELLER, Oil pump driven	1
5		78530	SHAFT, Oil pump drive	1
6	*	LW-18109	IMPELLER, Oil pump driven	1
7		STD-35	WASHER, 5/16 plain	3
8		STD-1420	NUT, 5/16-18 slotted	3
9		LW-14260	SEAL, Oil, tachometer drive	1
10		STD-8	WASHER, 1/4 plain	12
11		STD-160	WASHER, 1/4 lock, internal teeth	12
12		LW-25-0.94	BOLT, 1/4-20 x 15/16 long, hex. head	9
13		LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. head	1
14		LW-25-1.44	BOLT, 1/4-20 x 1-7/16 long, hex. head	2
* Sold in complete sets only (Kit P/N 05K19423-S).				



**Fuel Pump  
Figure 17**

**ACCESSORY DRIVES****FIGURE 17 – FUEL PUMP**

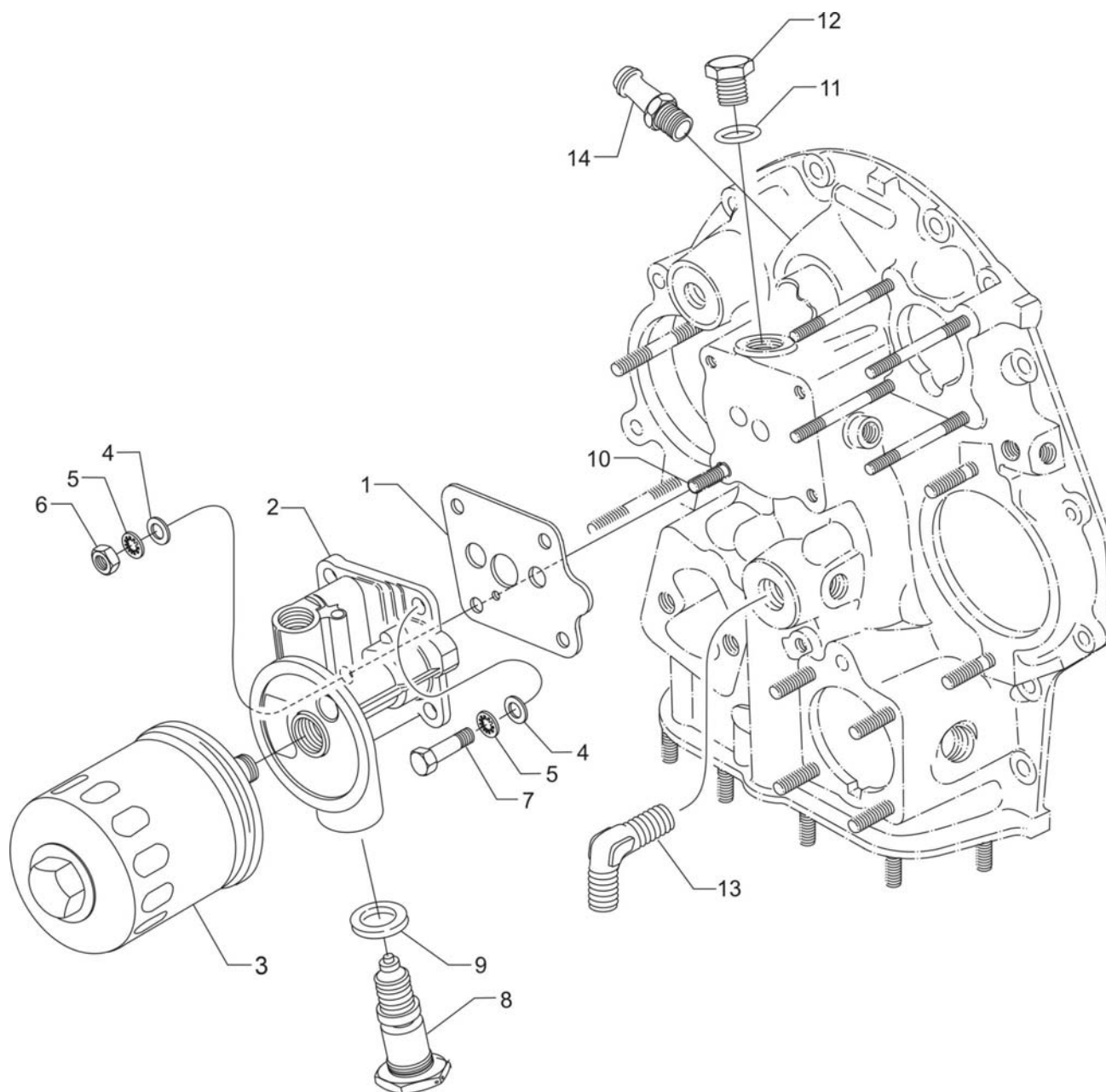
<b>Figure Item</b>	<b>Code</b>	<b>Part Number</b>	<b>Description</b>	<b>Units per Assembly</b>
1		60096	GASKET, Fuel pump	1
2		LW-15472	FUEL PUMP, Dual diaphragm, low pressure	1
3		STD-33	WASHER, 3/8 plain	2
4		STD-1882	SCREW, 3/8-16 x 1-9/32 long, socket drilled	2



**Propeller Governor Drive Cover, Vacuum Pump Drive and Cover  
Figure 18**

**ACCESSORY DRIVES****FIGURE 18 – PROPELLER GOVERNOR DRIVE COVER, VACUUM PUMP DRIVE AND COVER**

<b>Figure Item</b>	<b>Code</b>	<b>Part Number</b>	<b>Description</b>	<b>Units per Assembly</b>
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		61183	GASKET, Accessory adapter	1
7		61098	ADAPTER ASSEMBLY, Vacuum pump	1
8		STD-1774	PIN, 1/8 diameter x 1/4 long	1
9		06A19956	OIL SEAL, 7/8 I.D. x 1-1/2 O.D. x 5/16 wide	1
10		72970	GEAR ASSEMBLY, Vacuum pump driven	1
11		71596	WASHER, Accessory drive gear	1
12		8313	GASKET, Vacuum pump	1
13		60430	COVER, Vacuum pump	1
14		STD-8	WASHER, 1/4 plain	4
15		STD-160	WASHER, 1/4 lock, internal teeth	4
16		STD-1411	NUT, 1/4-20 plain	4
17		72053	GASKET, Governor	1
18		72378	COVER, Governor drive	1
19		STD-35	WASHER, 5/16 plain	32
20		STD-475	WASHER, 5/16 lock, internal teeth	4
21		STD-1410	NUT, 5/16-18 plain	4

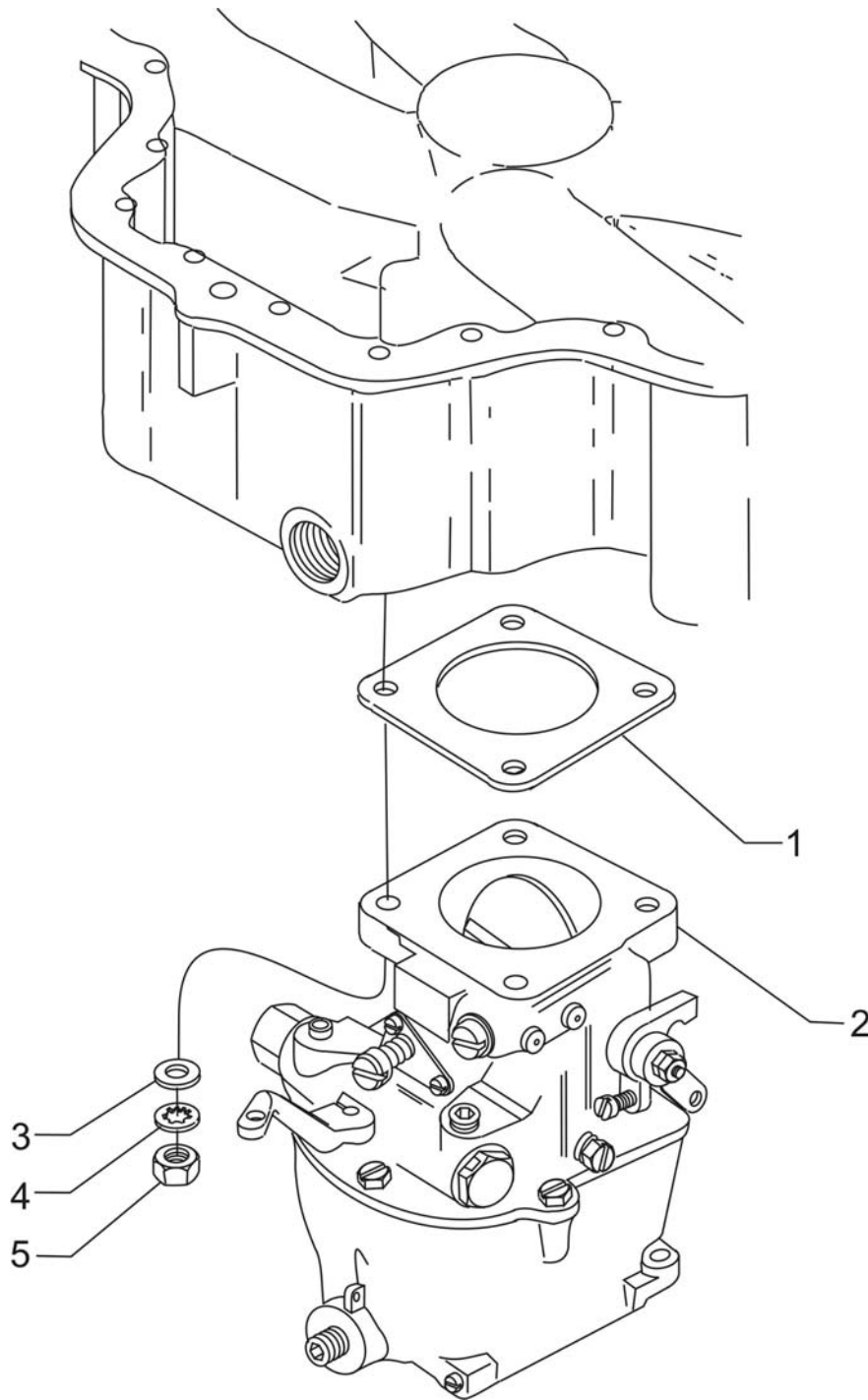


**Oil Filter Assembly, Oil Cooler Bypass Valve and Breather Fitting  
Figure 19**

**ACCESSORY DRIVES****FIGURE 19 – OIL FILTER ASSEMBLY, OIL COOLER BYPASS VALVE AND  
BREATHING FITTING**

<b>Figure Item</b>	<b>Code</b>	<b>Part Number</b>	<b>Description</b>	<b>Units per Assembly</b>
1		06B23862	GASKET, Oil filter adapter	1
2		77852	OIL FILTER BASE ASSEMBLY	1
3		LW-13216	OIL FILTER, Long	1
4		STD-8	WASHER, 1/4 plain	4
5		STD-160	WASHER, 1/4 lock, internal teeth	4
6		STD-1411	NUT, 1/4-20 plain	1
7		LW-25-1.00	BOLT, 1/4-20 x 1.00 long, hex. head	3
8		53E22144	VALVE ASSEMBLY, Temperature 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		71140	FITTING, Breather	1
<b><u>NOTE:</u></b> Reference latest revision of Lycoming SSP-885 for oil filter and replacement filters.				



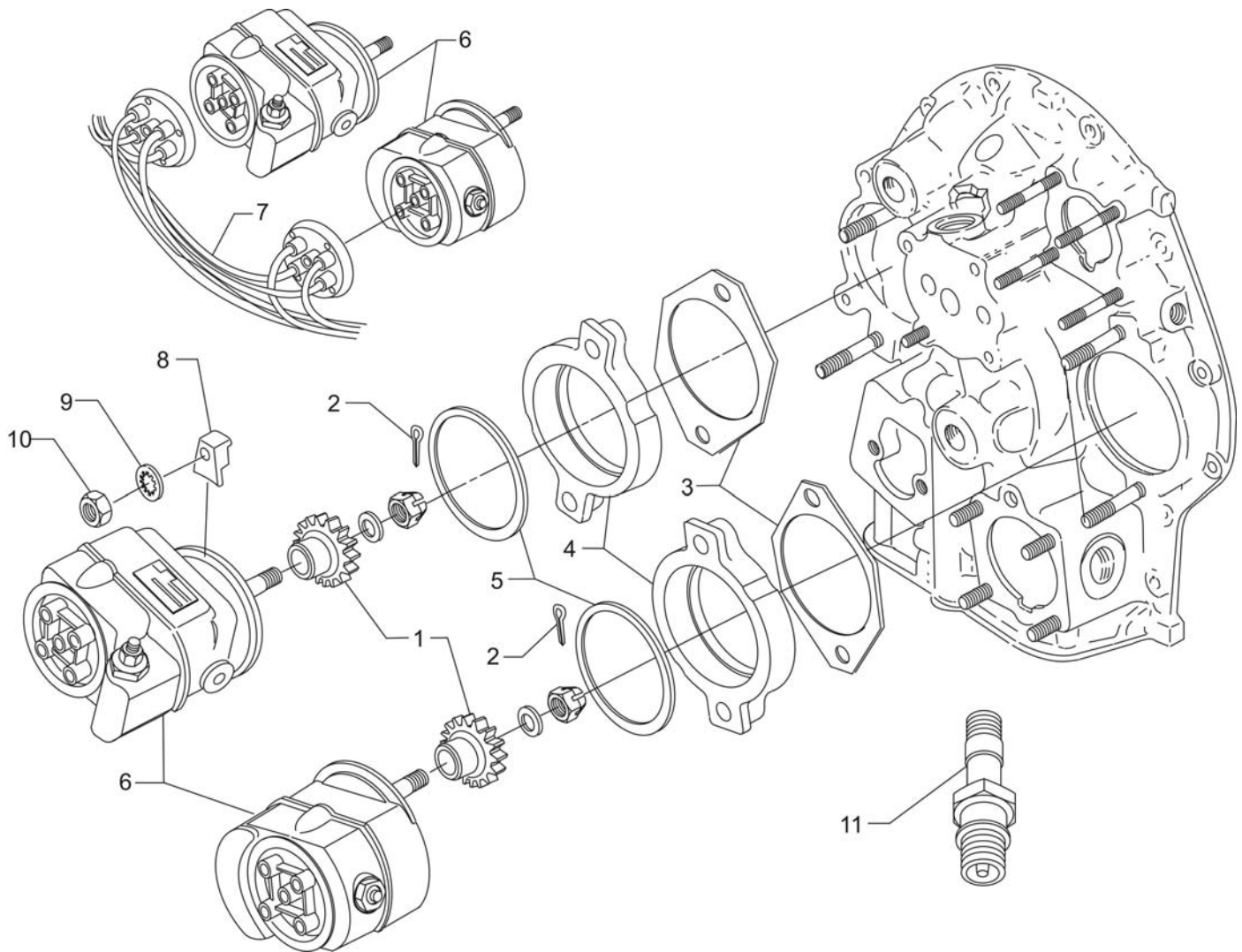


**Carburetor Assembly**  
**Figure 20**



**FUEL DISTRIBUTION****FIGURE 20 – CARBURETOR ASSEMBLY**

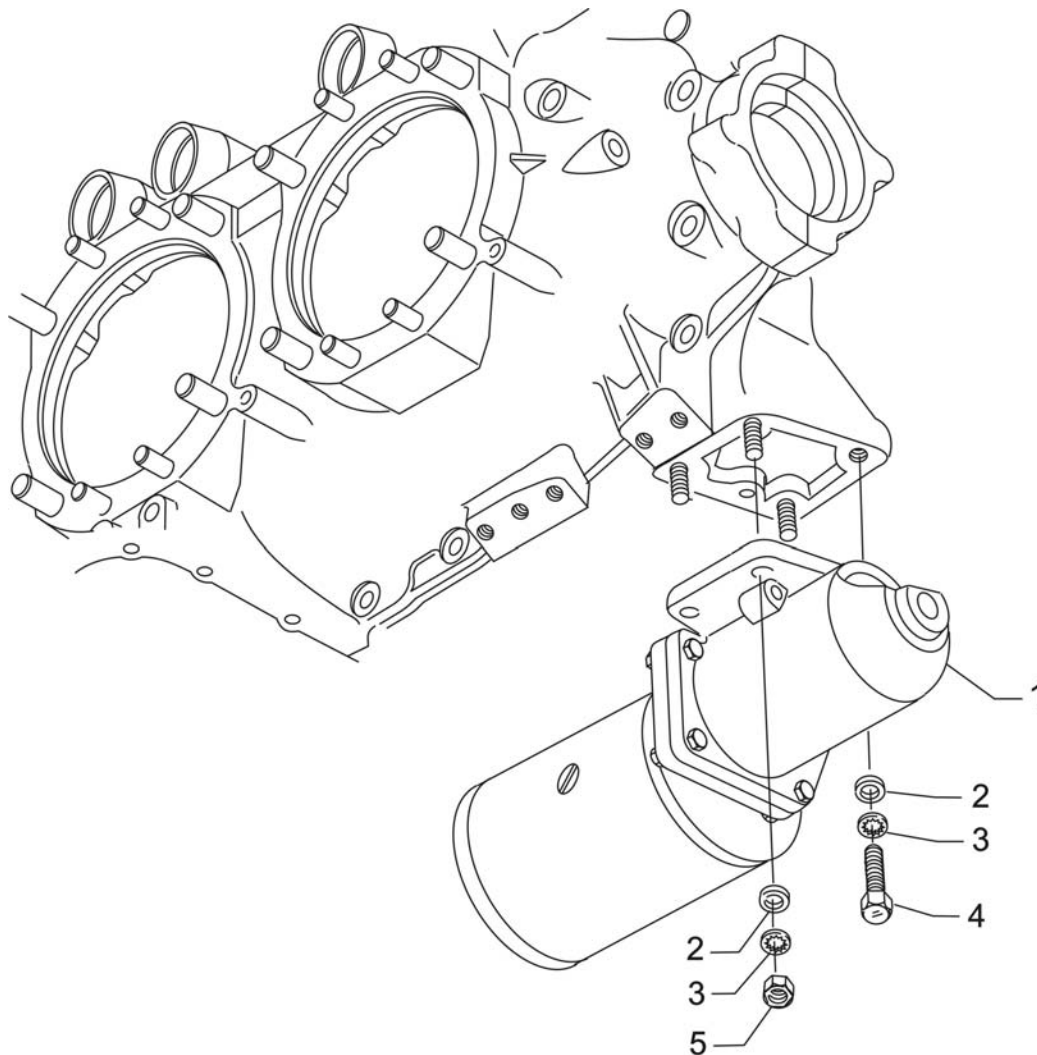
<b>Figure Item</b>	<b>Code</b>	<b>Part Number</b>	<b>Description</b>	<b>Units per Assembly</b>
1		66224	GASKET, Carburetor	1
2	<b>V</b>	61C26701	CARBURETOR, MA-4-5, <b>V</b> AV 10-5288	1
3		STD-35	WASHER, 5/16 plain	4
4		STD-475	WASHER, 5/16 lock, internal teeth	4
5		STD-1410	NUT, 5/16-18 plain	4
<b>V</b> Vendor Prime Manufacturer part				



**Magneto Drives, Harnesses and Spark Plugs**  
**Figure 21**

**IGNITION DISTRIBUTION SYSTEM****FIGURE 21 – MAGNETO DRIVES, HARNESES AND SPARK PLUGS**

Figure Item	Code	Part Number	Description	Units per Assembly
1		61665	GEAR, Magneto, impulse coupling	2
2		STD-713	COTTER PIN, 3/32 diameter x 3/4 long	2
3		62224	GASKET, Magneto adapter and magneto	2
4		LW-12706	ADAPTER, Magneto, impulse coupling	2
5		LW-12681	GASKET, Magneto	2
6	<b>V</b>	66C20SFNN	MAGNETO, Impulse, right and left, Slick <b>V</b> 4371	2
7	<b>V</b>	67P20409	HARNESS ASSEMBLY, Left, Slick <b>V</b> M2513	1
	<b>V</b>	67P20408	HARNESS ASSEMBLY, Right, Slick <b>V</b> M2512	1
8		66M21195	CLAMP, Harness	4
9		STD-475	WASHER, 5/16 lock, internal teeth	4
10		STD-1410	NUT, 5/16-18 plain	4
11	<b>*V</b>	1182-E7	SPARK PLUG, Champion <b>V</b> REM38E	8
	<b>**</b>	72815	BRACKET, Support	1
	<b>**</b>	LW-14060	CLIP, Two wire	3
	<b>**</b>	LW-16266-25-25	CLIP, One wire	2
<p><b>V</b> Vendor Prime Manufacturer part</p> <p><b>*</b> Item No. 11 spark plugs are used in current production only. Additional spark plugs are available for this engine. See latest revision of Lycoming Service Instruction No. 1042 for complete listing of all approved spark plugs.</p> <p><b>**</b> These parts are shipped loose.</p>				



**Starter Motor and Attaching Parts**  
**Figure 22**

**CRANKING SECTION****FIGURE 22 - STARTER MOTOR AND ATTACHING PARTS**

<b>Figure Item</b>	<b>Code</b>	<b>Part Number</b>	<b>Description</b>	<b>Units per Assembly</b>
1	<b>V</b>	31B26040	STARTER, 24V., 12/14 pitch, Kelly <b>V</b> ERB-8011	1
2		STD-35	WASHER, 5/16 plain	4
3		STD-475	WASHER, 5/16-18 lock, internal teeth	4
4		LW-31-1.16	BOLT, 5/16-18 x 1-5/32 long, hex. head	1
5		STD-1410	NUT, 5/16-18 plain	3

**V** Vendor Prime Manufacturer part

**NOTE:** See latest revision of Lycoming Service Instruction No. 1154 for complete listing of FAA approved starters, generators, regulators and relays.

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

PART NO.	PART NAME	Qty.
<b>75439-1</b>	<b>KIT - SEAL AND GASKET SET</b>	<b>1</b>
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
06B23862	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
STD-475	WASHER, 5/16 lock, internal teeth	4
STD-213	OIL SEAL, 3/4 I.D. x 1-3/8 O.D.	1
06A19956	OIL SEAL, 7/8 I.D. x 1-1/2 O.D. x 5/16	1
06E19769-0.63	GASKET, Annular, 5/8 I.D.	2
06E19769-1.00	GASKET, Annular, 1.00 I.D.	1
06E19769-1.25	GASKET, Annular, 1-1/4 I.D.	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, 25/32 I.D. x 1-1/8 O.D. x 1/32	1
71481	RING, Oil seal, 3/32 diameter x 4-27/32	4
71973	GASKET, 2 bolt flange, 1-13/16 I.D.	4
72053	GASKET, Governor	2
72059	GASKET, Oil level gage	1
72075	SEAL, Oil, 5/64 section x 29/64 I.D.	6

**SEAL AND GASKET SET (CONT.)**

<b>PART NO.</b>	<b>PART NAME</b>	<b>Qty.</b>
<b>75439-1</b>	<b>KIT - SEAL AND GASKET SET</b>	<b>1</b>
72078	LOCKPLATE, 5/16 bolt x 1-21/64	2
72091	RING, Oil seal, 23/64 I.D. x 7/64 diameter	2
72220	GASEKT, Oil level gage	1
72312	RING, Oil seal, 1.00 x 1-5/16	1
72829	LOCKPLATE, 1/4 bolt x 1-3/4	1
73383	LOCKPLATE, 5/16 bolt x 1.00	2
73817	LOCKPLATE, 1/4 bolt x 1-3/4	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
76510	GASKET, Oil cooler bypass valve	1
76940	SEAL, Crankshaft oil	1
77154	GASKET, Carburetor	1
77611	GASKET, Exhaust flange	4
8313	GASKET, Vacuum pump	1
77569	RING, Seal, intake pipe	4
MS29512-04	"O" RING, 11/32 I.D. x 1/16 section	1
06A23493	SEAL, Shroud tube	8

**CYLINDER, PISTON AND RING ASSEMBLY**

<b>PART NO.</b>	<b>PART NAME</b>	<b>Qty.</b>
<b>05K21104</b>	<b>KIT - CYLINDER, PISTON AND RING ASSEMBLY</b>	<b>1</b>
LW-12427	CYLINDER ASSEMBLY	1
17A23938	VALVE, Intake	1
17B23936	VALVE, Exhaust	1
65441	SEAT, Valve spring, lower intake	1
LW-13323	SEAT, Valve spring, lower	1
LW-11800	SPRING, Valve, outer	2
LW-11795	SPRING, Valve, inner	2
LW-10077	SEAT, Valve spring, upper	1
LW-16475	SEAT, Valve spring, upper exhaust	1
60009	KEY, Valve, intake	2
17C21191	KEY, Valve, exhaust	2
MS20823-6D	ELBOW, 45°, 3/8 flared tube	1
17C19386	CAP, Valve stem, exhaust (rotator)	1

**CYLINDER PISTON AND RING ASSEMBLY (CONT.)**

<b>PART NO.</b>	<b>PART NAME</b>	<b>Qty.</b>
<b>05K21104</b>	<b>KIT - CYLINDER, PISTON AND RING ASSEMBLY</b>	<b>1</b>
1102	PLUG, 1/8-27 NPT, Allen head	2
75089	PISTON	1
74241	RING, Piston, compression	2
14H21950	RING, Piston, oil	1
LW-14078	PIN, Piston	1
71481	RING, Oil seal, 3/32 diameter x 4-27/32 I.D.	1
LW-18661	SEAL, Shroud tube	2
70310	SEAL, Shroud tube	2
75906	GASKET, Rocker box cover	1
SSP-299	TAG, Use of piston pin plugs	1
72198	PLUG, Piston pin	2
77611	GASKET, Exhaust flange	1
71973	GASKET, 2 bolt flange	1
LW-12272	LOCKPLATE, Shroud tube	1
06A23493	SEAL, Shroud tube	2



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AN960-616L	Washer	11	LW-16266-25-25	Clip	41
LRT23381	Body Assy.	5	LW-16471	Support Assy.	7
LW-25-0.94	Bolt	27	LW-16475	Seat	17
LW-25-0.94	Bolt	31	LW-18085	Spring	5
LW-25-1.00	Bolt	37	LW-18108	Impeller	31
LW-25-1.13	Bolt	11	LW-18109	Impeller	31
LW-25-1.13	Bolt	27	LW-18110	Impeller Assy.	31
LW-25-1.13	Bolt	31	LW-18639	Lockplate	7
LW-25-1.25	Bolt	23	LW-18661	Seal	17
LW-25-1.44	Bolt	31	LW-18667	Pin	9
LW-25-1.50	Bolt	11	LW-18770-1	Crankcase Assy.	3
LW-25-1.75	Bolt	11	LW-18770-5	Crankcase Assy.	3
LW-25S1.50	Bolt	11	LW-18792	Sump Assy.	23
LW-31-0.94	Bolt	1	LW-18840	Camshaft Assy.	9
LW-31-1.16	Bolt	43	MS20823-6D	Elbow	15
LW-31H0.88	Bolt	1	MS20823-8	Elbow	37
LW-31H0.88	Bolt	9	STD-8	Washer	11
LW-10077	Seat	17	STD-8	Washer	23
LW-10729	Link	1	STD-8	Washer	27
LW-11485	Shroud Tube Assy.	17	STD-8	Washer	31
LW-11713	Spring	5	STD-8	Washer	35
LW-11750	Conn. Rod Assy.	13	STD-8	Washer	37
LW-11795	Spring	17	STD-33	Washer	11
LW-11800	Spring	17	STD-33	Washer	33
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LW-12272	Lockplate	17	STD-35	Washer	15
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LW-12706	Adapter	41	STD-35	Washer	43
LW-12892	Thrust Button	19	STD-91	Plug	27
LW-13216	Oil Filter	37	STD-160	Washer	11
LW-13323	Seat	17	STD-160	Washer	23
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LW-13792	Seal	5	STD-160	Washer	37
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LW-13796	Shaft	9	STD-475	Washer	15
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