

LIO-360-B1G6 Illustrated Parts Catalog

July 2017

PC-LIO-360-B1G6

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LIO-360-B1G6 Illustrated Parts Catalog

Lycoming Part Number: PC-LIO-360-B1G6

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Roller Tappets

As a product improvement, Lycoming is installing roller tappets on its aircraft engines. Wide deck engines with roller tappets are identified with an “E” suffix after the serial number dash number (Example – L-*****-48E.) On rebuilt and Lycoming overhauled wide deck engines with roller tappets, the letter “A” suffix is replaced with the letter “E” suffix on the engine serial number.

The new parts include roller tappet body assembly, crankcase, camshaft, shorter push rods, shroud tubes and shroud tube seal. The engines use the same hydraulic units and the dry tappet clearance does not change. Refer to Reference 618 in the Table of Limits (SSP-1776) for dry tappet clearance values.

At this time, roller tappets are not installed in narrow deck engines.

ROLLER TAPPET PARTS ARE NOT INTERCHANGEABLE WITH CURRENT FLAT FACED TAPPETS.

If it is necessary to remove the roller tappet bodies prior to overhaul, they **must be reinstalled in the same location in the crankcase**. The roller tappets are indexed with flats in the new crankcase. It is possible to assemble the roller tappet bodies in two different orientations 180 degrees apart. Either orientation is acceptable while reinstalling. Lubricate all tappet bores, cam lobes and roller tappets with engine oil mixture only. (Refer to the latest revision of Service Instruction No. 1059.) Install the shroud tube seal in the crankcase, then install the shroud tube.

THE ROLLER TAPPETS ARE NOT FIELD REPAIRABLE AND NO DISASSEMBLY IS ALLOWED. THEREFORE, MAGNAFLUX OR ZYGLO INSPECTIONS ARE NOT ALLOWED. A VISUAL INSPECTION FOR INTEGRITY AND FREE ROTATION OF THE ROLLER ACTION IS ACCEPTABLE TO RETURN AN IN-USE ROLLER TAPPET TO SERVICE; HOWEVER, IT IS MANDATORY TO REPLACE ROLLER TAPPETS AT OVERHAUL.

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.

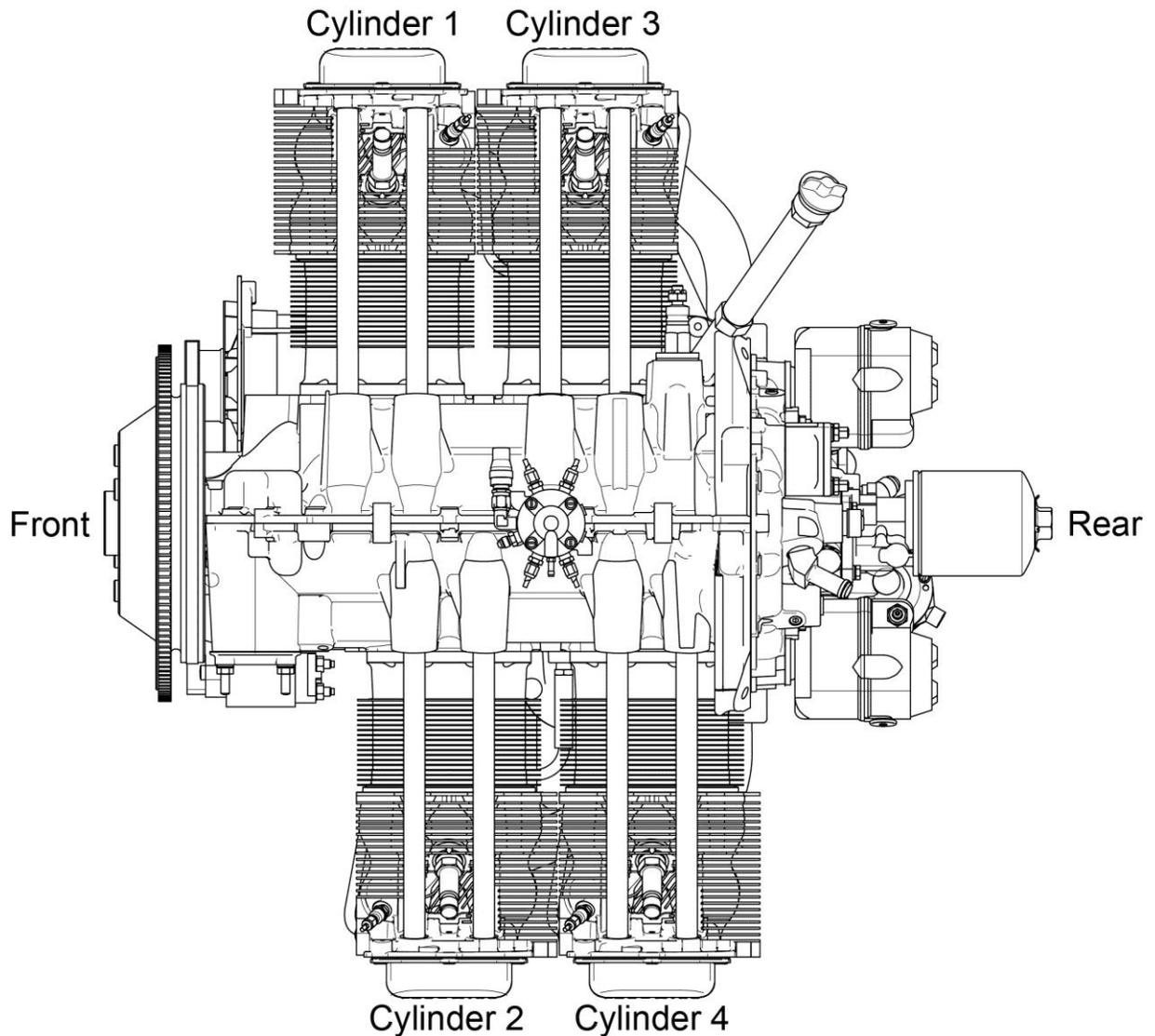
Any reference in this document to the supplier's/part manufacturer's product, by name, trademark, part number or other description is solely for the purpose of identification and does not indicate or infer that Lycoming accepts responsibility for quality control and/or airworthiness of parts, which do 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 on 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 1-4-2-3.

**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.

To order parts:

1. Contact the applicable Customer Service Hot Lines:
U.S. and Canada toll free - +1-800-258-3279
International Customers - +1-570-323-6181
8:00 A.M. – 5:00 P.M. EST (-5GMT) Monday through Friday
2. Give the model and serial number of your engine.
3. Give the part number, nomenclature, and quantity.

This publication eventually will be available for viewing and download on the Lycoming.com website.

To supply any comments, suggestions, or corrections to this parts catalog, go online to the Lycoming.com website on the internet.

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

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ABBREVIATIONS AND ACRONYMS

A	
Adj.	Adjustable
amp.	Ampere
Assy	Assembly
F	
Fill.	Fillister
H	
Hex.	Hexagon
I	
I.D.	Inside Diameter
M	
mm	Millimeter
N	
No.	Number
NPT	National Pipe Taper (thread)
O	
O.D.	Outside Diameter
P	
P/N	Part Number
psi	Pounds per square inch
R	
RT	Roller Tappet

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OVERSIZE AND UNDERSIZE PARTS LISTING

PART NO.	DESCRIPTION	OVERSIZE (IN.)					UNDERSIZE (IN.)	
		P05 .005	P10 .010	P20 .020	P30 .030	P50 .050	M03 .003	M06 .006
18A26093	BEARING, Front Crankshaft							X
18D26098	BEARING, Crankshaft							X
18M26105	BEARING, Connecting Rod							X
71903-A ❖	BUSHING, Counterweight Dynamic	--	--	--	--	--	--	--
72155-S	BUSHING, Prop Flange, short	X						
75656-S	BUSHING, Prop Flange, long	X						
75657-S	BUSHING, Prop Flange indexing	X						
66610	BUSHING, Rocker Shaft		X					
STD-1065	DOWEL, Crankshaft		X					
61681	GUIDE, Intake Valve				X			
16R22291	GUIDE, Exhaust Valve				X			
66796	INSERT, Spark Plug		X					
72057	SEAT, Intake Valve			X				
72058	SEAT, Exhaust Valve			X				
LW-13792	SEAL, Crankshaft Oil					X		
❖ 71903-A is the undersize part number. When ordering, do not specify an undersize code letter.								

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 P/N 18A26093 in .003 undersize, order P/N 18A26093-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.

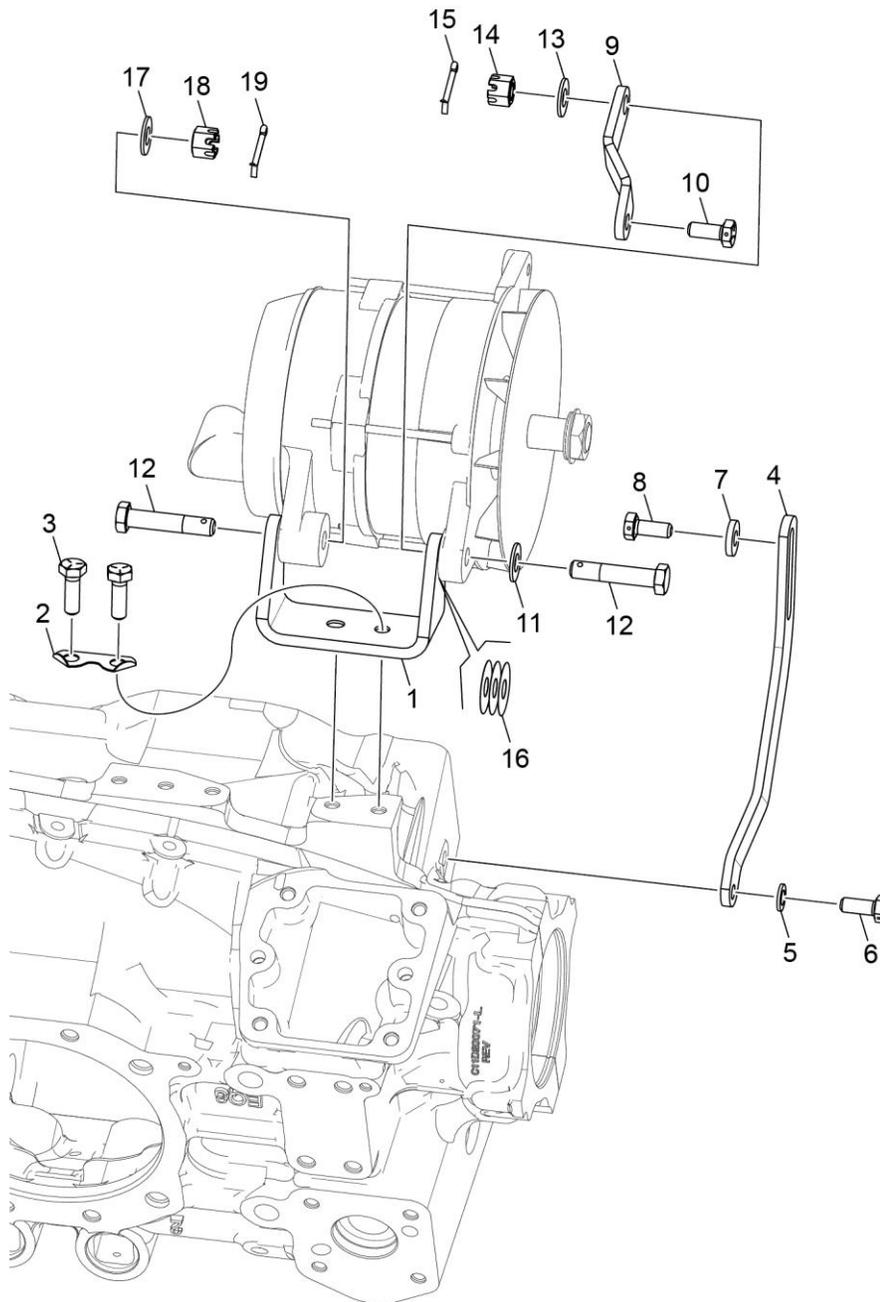


Figure 1
Alternator Attaching Parts

AC GENERATION**Figure 1 - Alternator and Compressor Attaching Parts**

Figure Item	Code	Part Number	Description	Units per Assembly
1		07A21097	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. head	2
4		07F21098	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. head	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. head	1
9		07F21099	STRUT, Alternator support	1
10		LW-31H0.75	BOLT, 5/16-18 x 3/4 long, hex. head	1
11		STD-690	WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick	1
12		AN6-16	BOLT, 3/8-24 x 1-53/64 long, hex. head, drilled end	2
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 diameter x 3/4 long	1
16		76534	SHIM, 1/8 O.D. x 13/32 I.D. x .005 thick	AR
17		STD-690	WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick	1
18		STD-872	NUT, 3/8-24 slotted	1
19		STD-713	COTTER PIN, 3/32 diameter x 3/4 long	1

AR – as Required

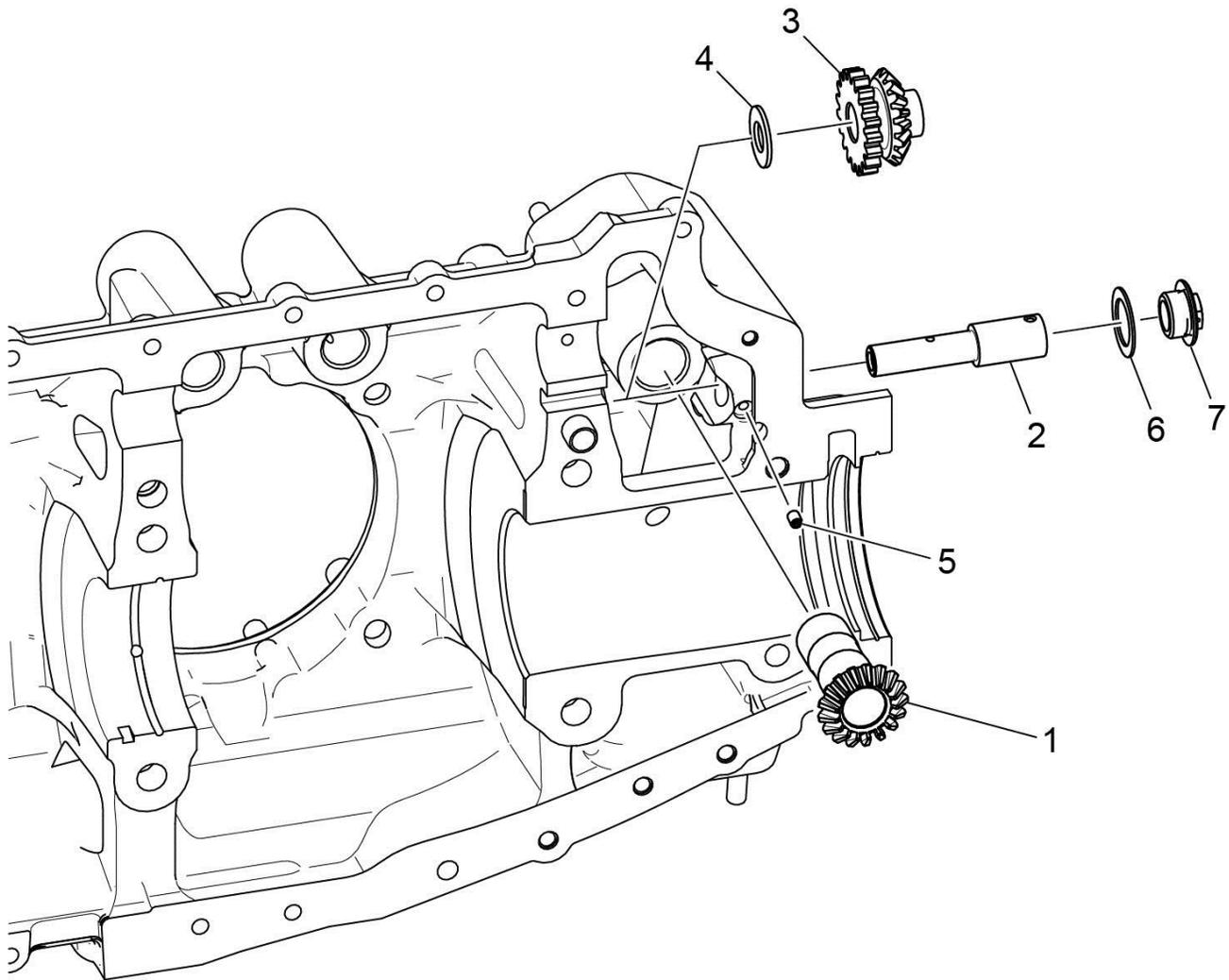


Figure 2
Propeller Governor Drive Assembly

FRONT SECTION**Figure 2 – Propeller Governor Drive Assembly**

Figure Item	Code	Part Number	Description	Units per Assembly
1		77875	GEAR, Propeller governor driven	1
2		LW-14021	SHAFT, Propeller governor idler gear	1
3		77874	GEAR ASSEMBLY, Propeller governor idler	1
4		73249	WASHER, Thrust (0.0585 - 0.0595 thick)	AR
		73250	WASHER, Thrust (0.062 - 0.063 thick)	AR
		73251	WASHER, Thrust (0.0655 - 0.0665 thick)	AR
		73252	WASHER, Thrust (0.069 - 0.070 thick)	AR
		01L21418	WASHER, Thrust (0.055 - 0.065 thick)	AR
5		AN565B1032H5	SET SCREW, No. 10-32 x 5/16 long	1
6		70455	GASKET, 25/32 I.D. x 1-1/8 O.D. x 1/16 thick	1
7		LW-13896	PLUG, 3/4-16 hex. head	1
AR - as required				

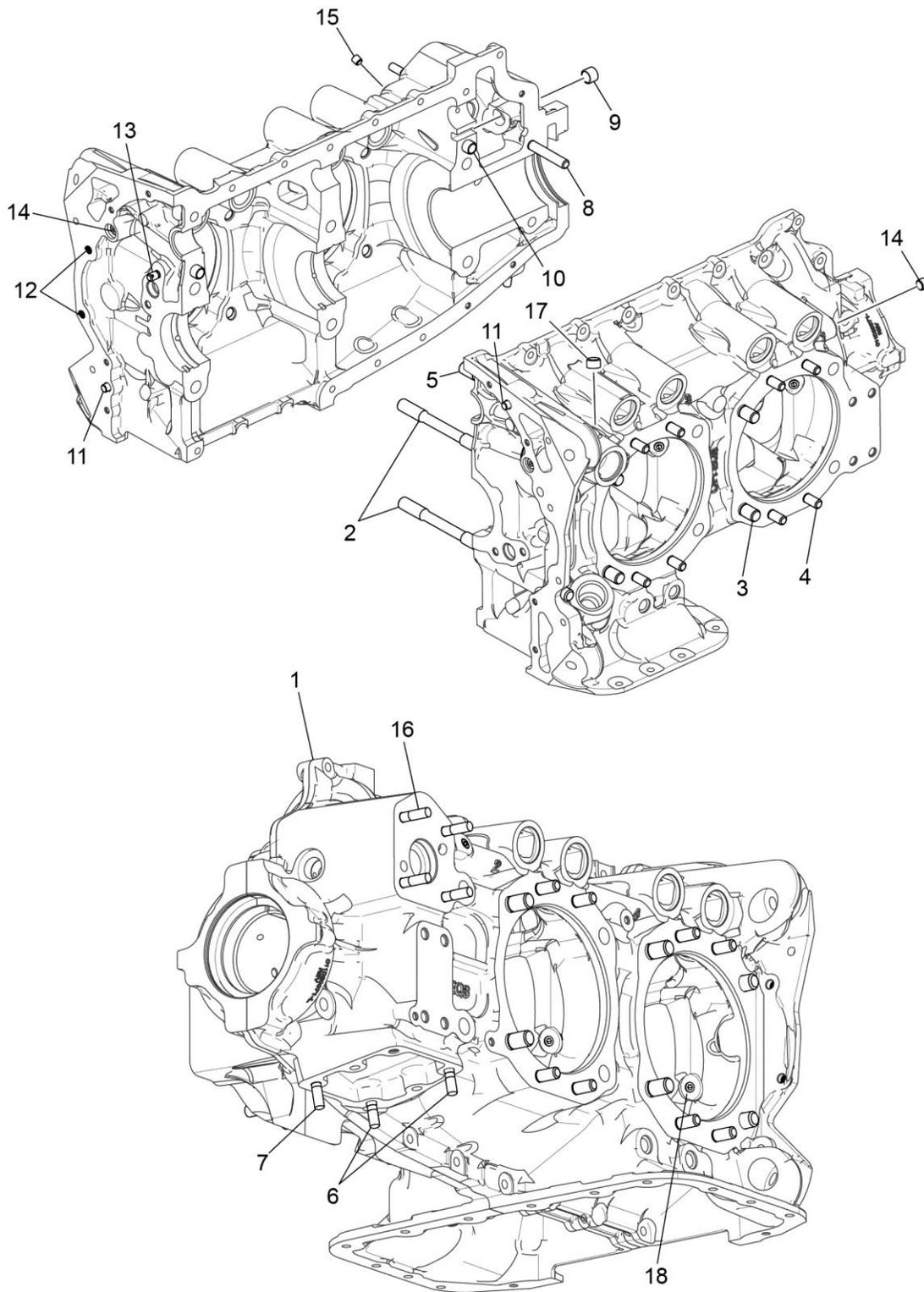


Figure 3
Crankcase Assembly

POWER SECTION**Figure 3 - Crankcase Assembly**

Figure Item	Code	Part Number	Description	Units per Assembly
1		11D28751-1S1	CRANKCASE ASSEMBLY (roller tappet engine)	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	13
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		72158	BUSHING, Governor drive idler shaft	1
10		STD-557	DOWEL, 1/2 diameter x 11/16 long, hollow	2
11		STD-514	DOWEL, 5/16 diameter x 1/2 long	2
12		STD-1623	INSERT, 1/4-20 Heli-coil x 3/8 long	2
13		LW-13793	STUD, 5/16-18 x 15/16 long, drilled	1
14		1102	PLUG, 1/8-27 NPT, Allen head	4
15		STD-1339	PLUG, 1/16-27 NPT, Allen head	1
16		31C-17	STUD, 5/16-18 x 2-1/8 long	4
17		1102	PLUG, 1/8-27 NPT, Allen head	5
18		STD-1339	PLUG, 1/16-27 NPT, Allen head	5

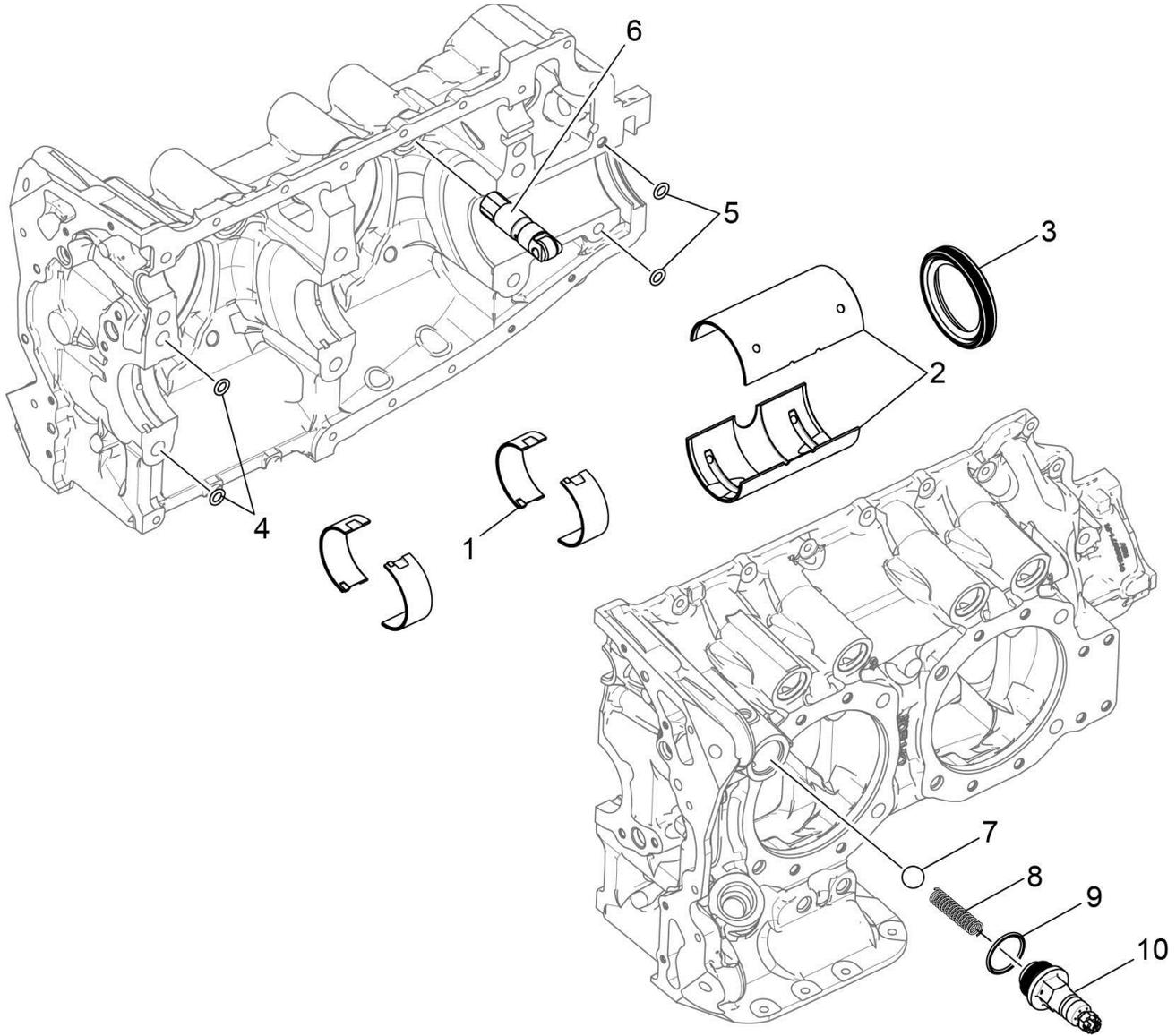


Figure 4
Crankcase Related Parts

POWER SECTION**Figure 4 - Crankcase Related Parts**

Figure Item	Code	Part Number	Description	Units per Assembly
1		18D26098	BEARING, Crankshaft Hi-crush thin wall	4
2		18A26093	BEARING, Crankshaft, front	2
3	▲	LW-13792	SEAL, Crankshaft oil, solid	1
4		72075	SEAL, Oil, 3/32 section x 7/16 I.D.	2
5		72091	RING, Oil seal, 23/64 I.D. x 7/64 diameter	2
6	•	LRT23381	BODY ASSEMBLY, Hydraulic roller tappet	8
7		1028-B	BALL, 11/16 diameter	1
8	❖	61084	SPRING, Oil pressure relief valve	AR
	❖	68668	SPRING, Oil pressure relief valve	AR
	❖	77467	SPRING, Oil pressure relief valve	AR
	❖	LW-11713	SPRING, Oil pressure relief valve	AR
	❖	LW-18085	SPRING, Oil pressure relief valve	AR
9		06E19769-1.25	GASKET, 1-1/4 I.D. x 1-1/2 O.D. x 3/32 annular	1
10		77808	VALVE ASSEMBLY, Oil pressure relief valve, adjustable	1

AR - as Required

- ❖ Select spring to give a minimum of three threads exposed on adjusting screw to allow field adjustment. Reference latest revision of Lycoming Engines Table of Limits SSP-1776, Part I for spring identification.
- ▲ Refer to the latest revision of Lycoming Engines Service Instruction No. 1324 for installation.
- Refer to the latest revision of Lycoming Engines Service Instruction Nos. 1011 and 1514 for installation.

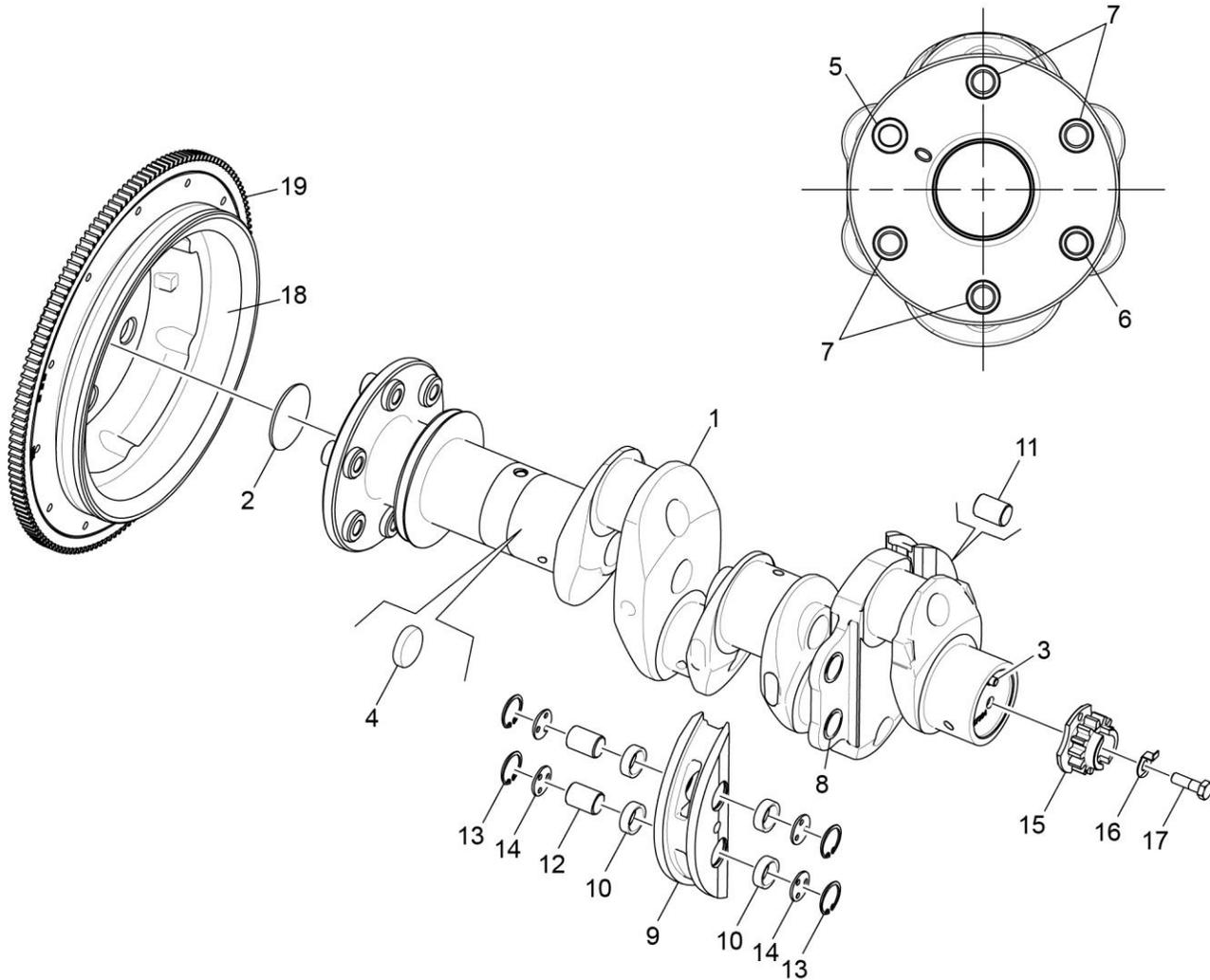


Figure 5
Crankshaft Assembly and Related Parts

POWER SECTION**Figure 5 - Crankshaft Assembly and Related Parts**

Figure Item	Code	Part Number	Description	Units per Assembly
1		13B47231	CRANKSHAFT AND BUSHING ASSEMBLY	1
2		STD-1211	PLUG, 2.00 diameter 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		75657-S	BUSHING, Propeller flange, indexing	1
6		72155-S	BUSHING, Propeller flange, short	1
7		75656-S	BUSHING, Propeller flange, long	4
8	❖	73810	BUSHING, Crankshaft, dynamic counterweight	4
9	▲	LW-19227	COUNTERWEIGHT ASSEMBLY	2
10	●	71903-A	BUSHING, Dynamic counterweight	8
11		14W21696	ROLLER, Dynamic counterweight, 8 th order	2
12	▲	72797	ROLLER, Dynamic counterweight, 6.3 order	2
13		LW-14820	RING, Internal retaining	8
14		71907	WASHER, Dynamic counterweight	8
15	SB ◆	13S19646	GEAR, Crankshaft	1
16		LW-18639	LOCKPLATE, Crankshaft gear	1
17		STD-2246	BOLT, 5/16-24 x 1.00 long	1
18		LW-18506	SUPPORT ASSEMBLY, Starter ring gear	1
19		LW-10551	GEAR, Starter ring	1

SB Referencing Service Bulletin

- ❖ See latest revision of Service Instruction No. 1142 for application.
- ▲ See latest revision of Service Instruction No. 1012 for application.
- See latest revision of Service Instruction No. 1143 for application.
- ◆ See latest revision of Service Bulletin No. 475 for application.

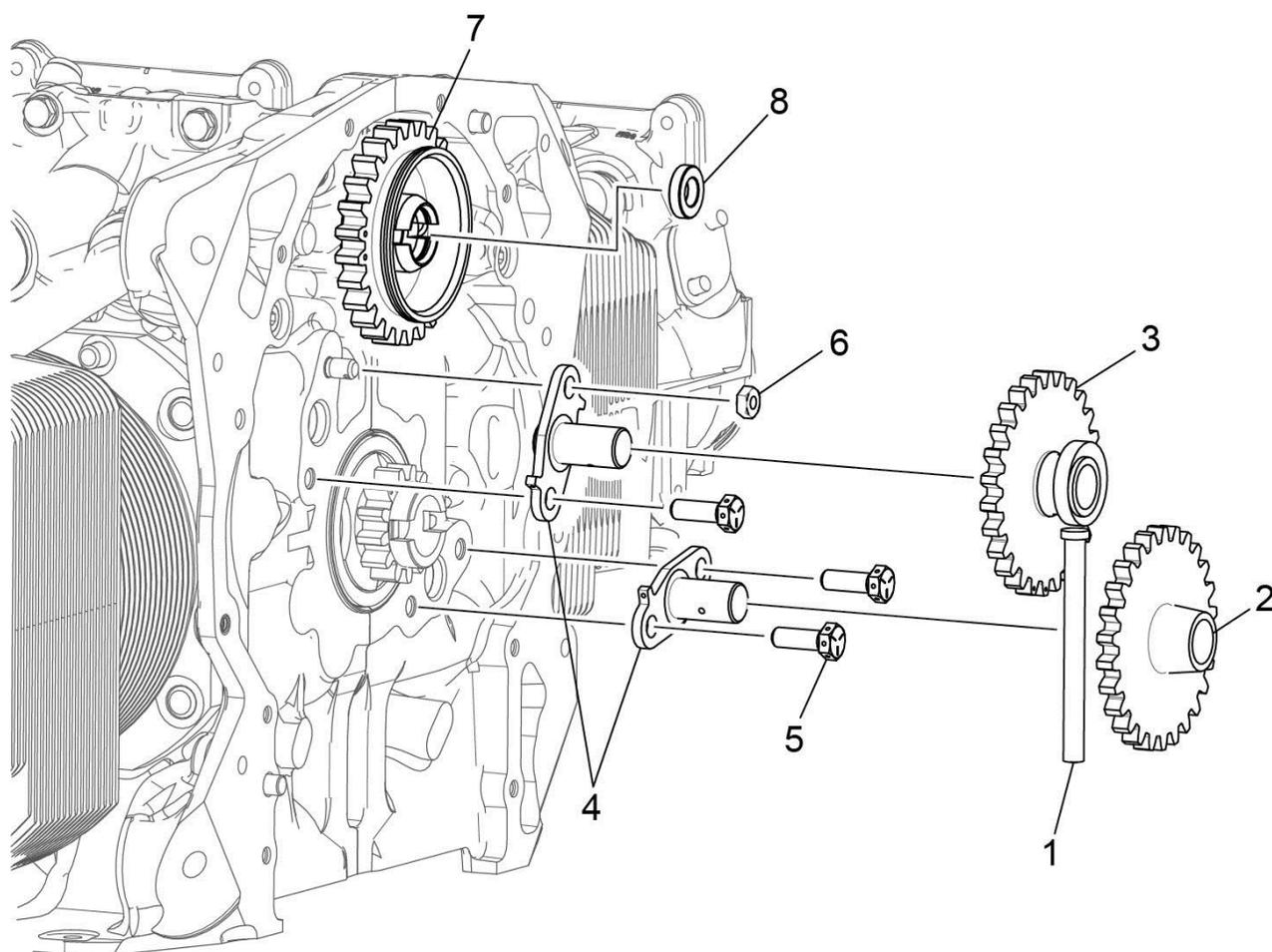


Figure 6
Crankshaft Idler Gears and Camshaft

POWER SECTION**Figure 6 - Crankshaft Idler Gears and Camshaft**

Figure Item	Code	Part Number	Description	Units per Assembly
1		23D26777	PLUNGER, Fuel pump, long	1
2		74996	GEAR ASSEMBLY, Crankshaft idler, plain	1
3		75072	GEAR ASSEMBLY, Crankshaft idler	1
4		LW-13796	SHAFT, Crankshaft idler gear	2
5		LW-31H0.88	BOLT, 5/16-18 x 7/8 long, hex. head, drilled	3
6		STD-2168	NUT, 5/16-18 NC-3 slotted shear	1
7		15M23454	CAMSHAFT ASSEMBLY (RT)	1
8		76118	SPACER, Tachometer shaft centering	1

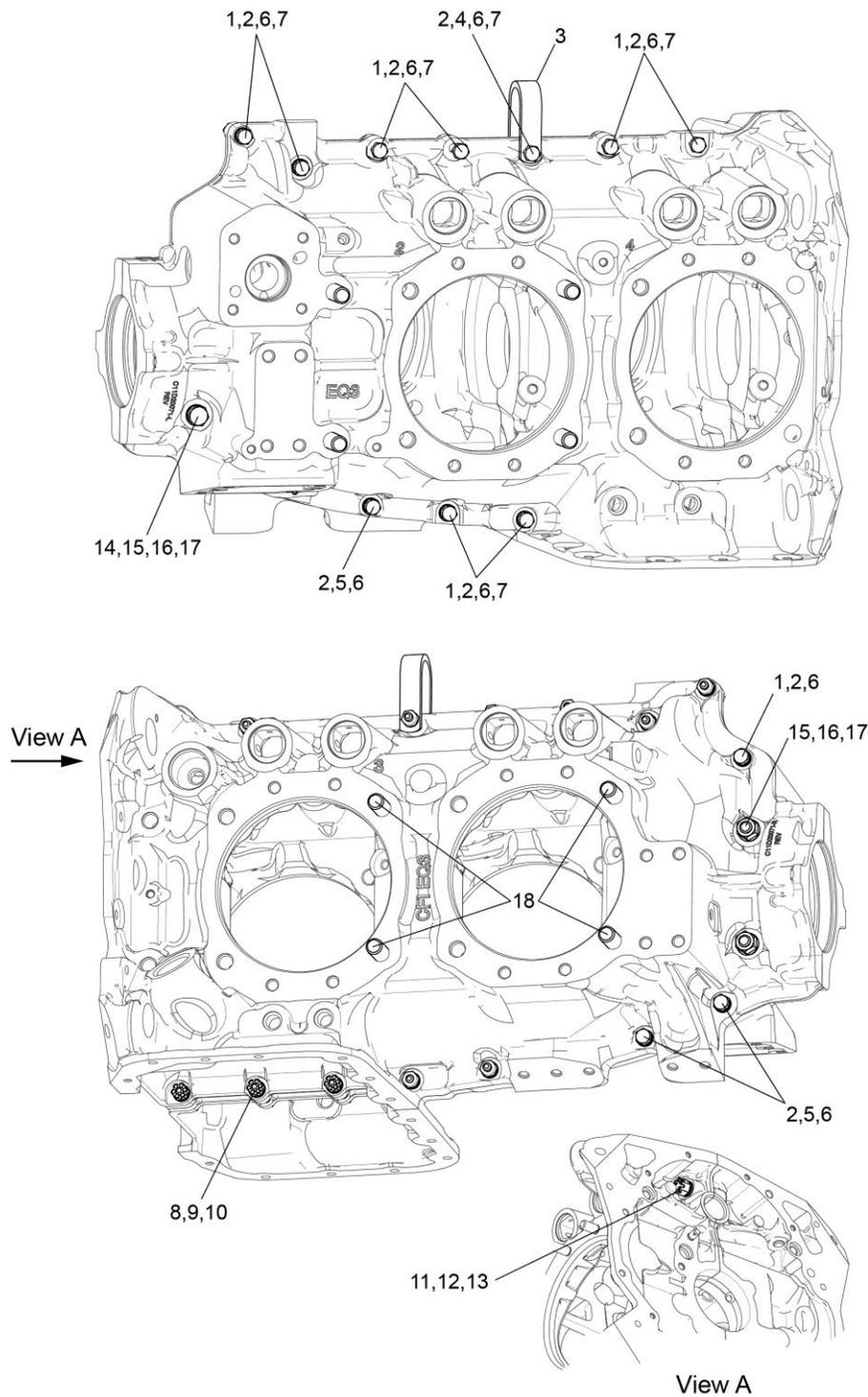
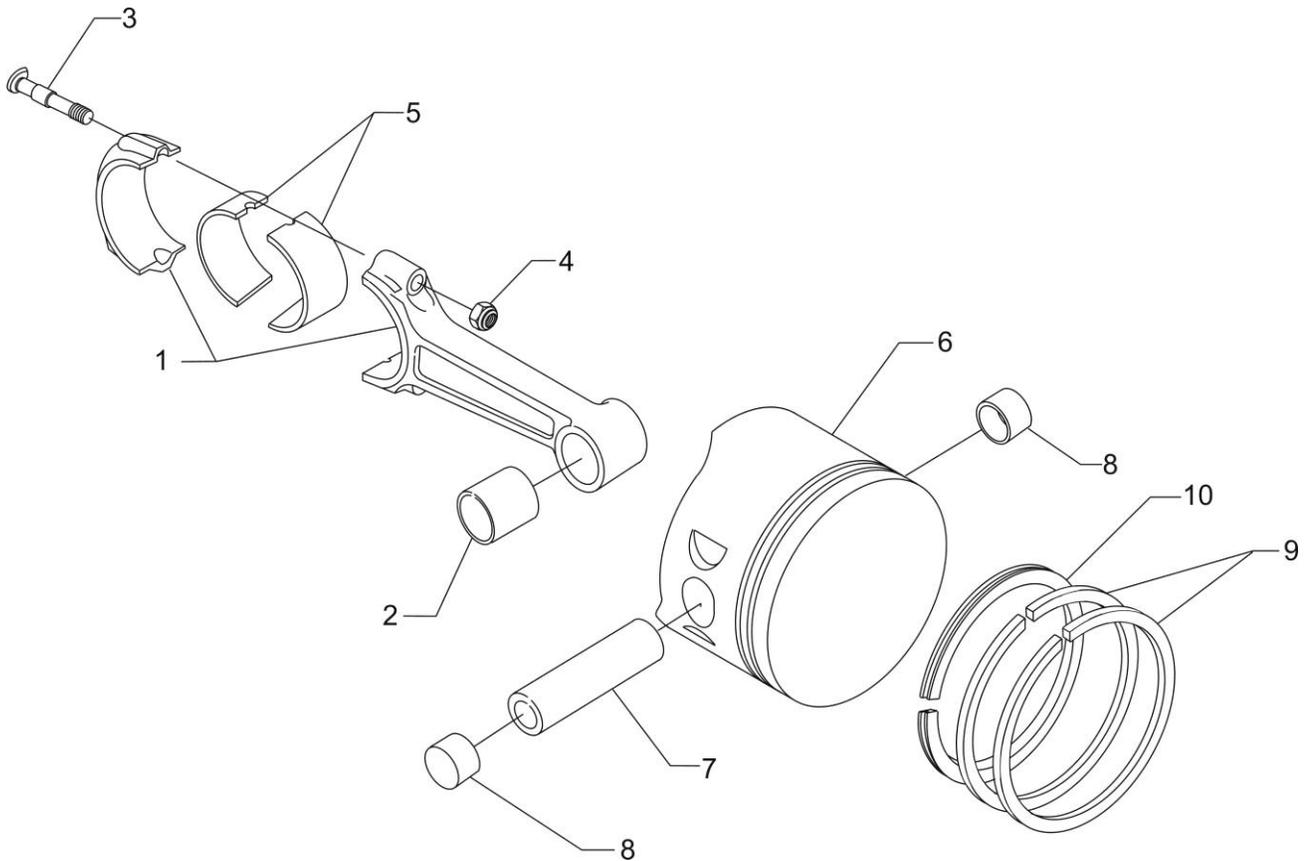


Figure 7
Crankcase Attaching Parts

POWER SECTION**Figure 7 - Crankcase Attaching Parts**

Figure Item	Code	Part Number	Description	Units per Assembly
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	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 end	3
9		STD-8	WASHER, 1/4 plain (max. 9)	AR
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 (thin)	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 10-45/64 long	4
AR - as required				



Connecting Rods, Pistons and Ring Assemblies

CYLINDER SECTION**Figure 8 - Connecting Rods, Pistons and Ring Assemblies**

Figure Item	Code	Part Number	Description	Units 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		18M26105	BEARING, Connecting rod	8
6		14D23912	PISTON, Compression ratio, 8.50:1	4
7	❖	LW-14078	PIN, Piston	4
8	❖	72198	PLUG, Piston pin	8
9		74241	RING, Piston compression	8
10		14H21950	RING, Piston, oil regulating, expander type	4

❖ Refer to the latest revision of Lycoming Service Instruction No. 1267.

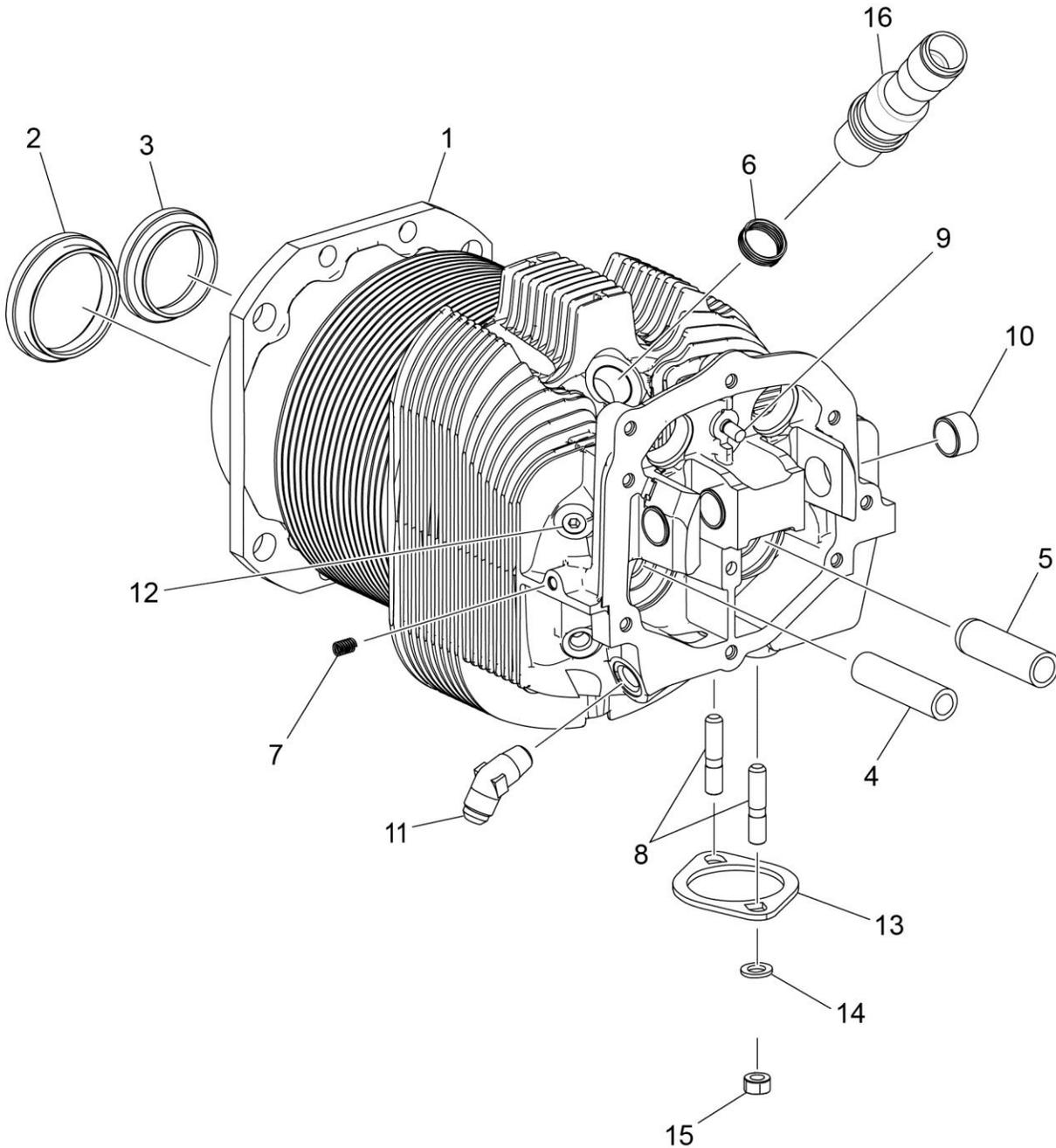


Figure 9
Cylinder Assembly

CYLINDER SECTION**Figure 9 - Cylinder Assembly**

Figure Item	Code	Part Number	Description	Units per Assembly
1		LW-12427	CYLINDER ASSEMBLY	4
2		72057-P20	SEAT, Intake valve	4
3		72058-P20	SEAT, Exhaust valve	4
4	❖	61681-P30	GUIDE, Valve, intake, flanged	4
5	❖	16R22291-P30	GUIDE, Valve, exhaust, flanged	4
6		66796-P10	INSERT, Spark Plug, 18-1.5 MM	1
7		STD-1353	INSERT, No. 10-24 Heli-coil x 3/8 long	4
8		31C-12	STUD, 5/16-18 x 1-1/2 long	8
9		25C-8	STUD, 1/4-20 x 1.00 long	4
10		66610	BUSHING, Rocker shaft	16
11		MS20823-6D	ELBOW, 45°, 3/8 flared tube	4
12	●	1102	PLUG, 1/8-27 NPT, Allen head	4
13		77611	GASKET, Exhaust flange	4
14		STD-35	LOCKNUT, 5/16-18 hex	8
15		STD-2233	WASHER, 5/16 lock, internal teeth	8
16	▲	1182-B7	SPARK PLUG	8

❖ Refer to the latest revision of Lycoming Service Instruction No. 1256 for service valve guides.

▲ Refer to the latest revision of Lycoming Service Instruction No. 1042 for complete listing of all approved spark plugs.

● Used on installations without injector or priming lines

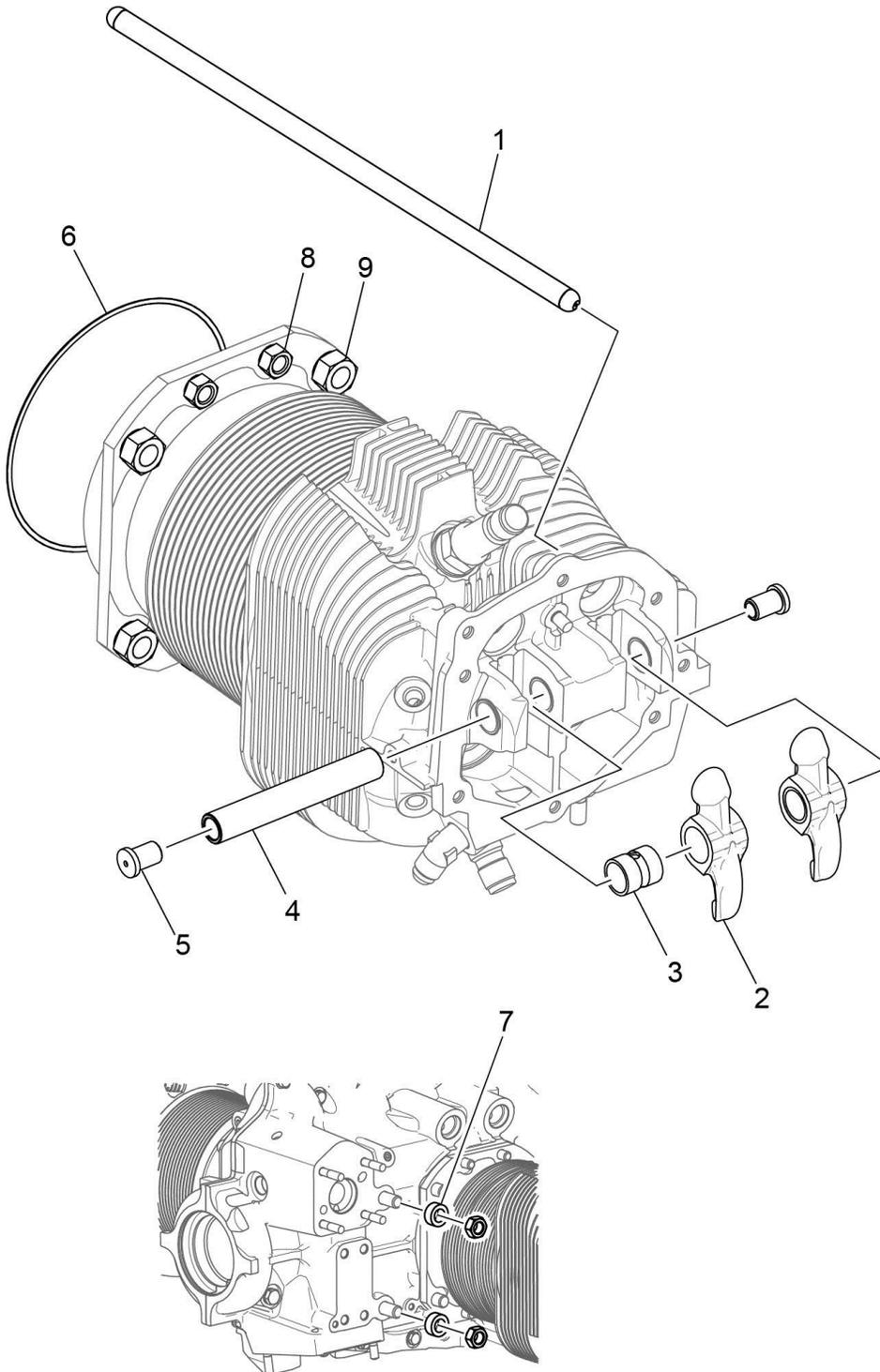


Figure 10
Cylinder Related Parts

CYLINDER SECTION**Figure 10 - Cylinder Related Parts**

Figure Item	Code	Part Number	Description	Units per Assembly
1	❖	15F28835-28	ROD ASSEMBLY, Push (RT)	AR
	❖	15F28835-29	ROD ASSEMBLY, Push (RT)	AR
	❖	15F28835-30	ROD ASSEMBLY, Push (RT)	AR
	❖	15F28835-31	ROD ASSEMBLY, Push (RT)	AR
	❖	15F28835-32	ROD ASSEMBLY, Push (RT)	AR
	❖	15F28835-33	ROD ASSEMBLY, Push (RT)	AR
	❖	15F28835-34	ROD ASSEMBLY, Push (RT)	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 dia. x 4-27/32 I.D.	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

AR as required

❖ Refer to the latest revision of Service Instruction No. 1060 for 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 (19957).

NOTE: Various push rod lengths are used to set valve clearances.

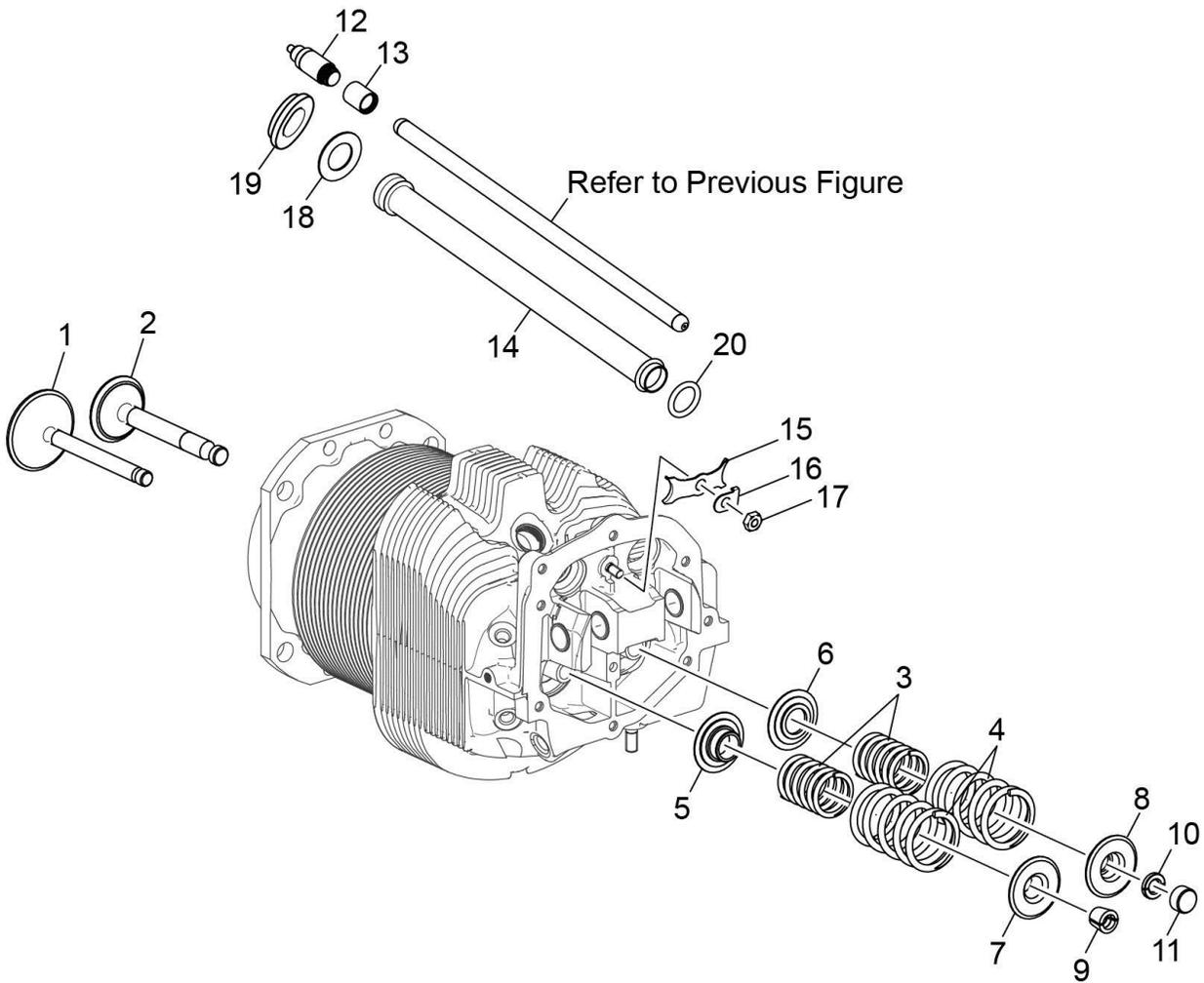


Figure 11
Valve Assembly and Related Parts

CYLINDER SECTION**Figure 11 – Valve Assembly and Related Parts**

Figure Item	Code	Part Number	Description	Units per Assembly
1		17A23938	VALVE, Intake	4
2		17B23936	VALVE, Exhaust	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 tappet	8
13		15B21319	SOCKET, Hydraulic tappet	8
14		15G23461	SHROUD TUBE ASSEMBLY, Push rod (RT)	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 1-3/8 O.D. x 1/32 thick (RT)	8
19		06A23493	SEAL, Shroud tube (RT)	8
20		70310	SEAL, Shroud tube	8

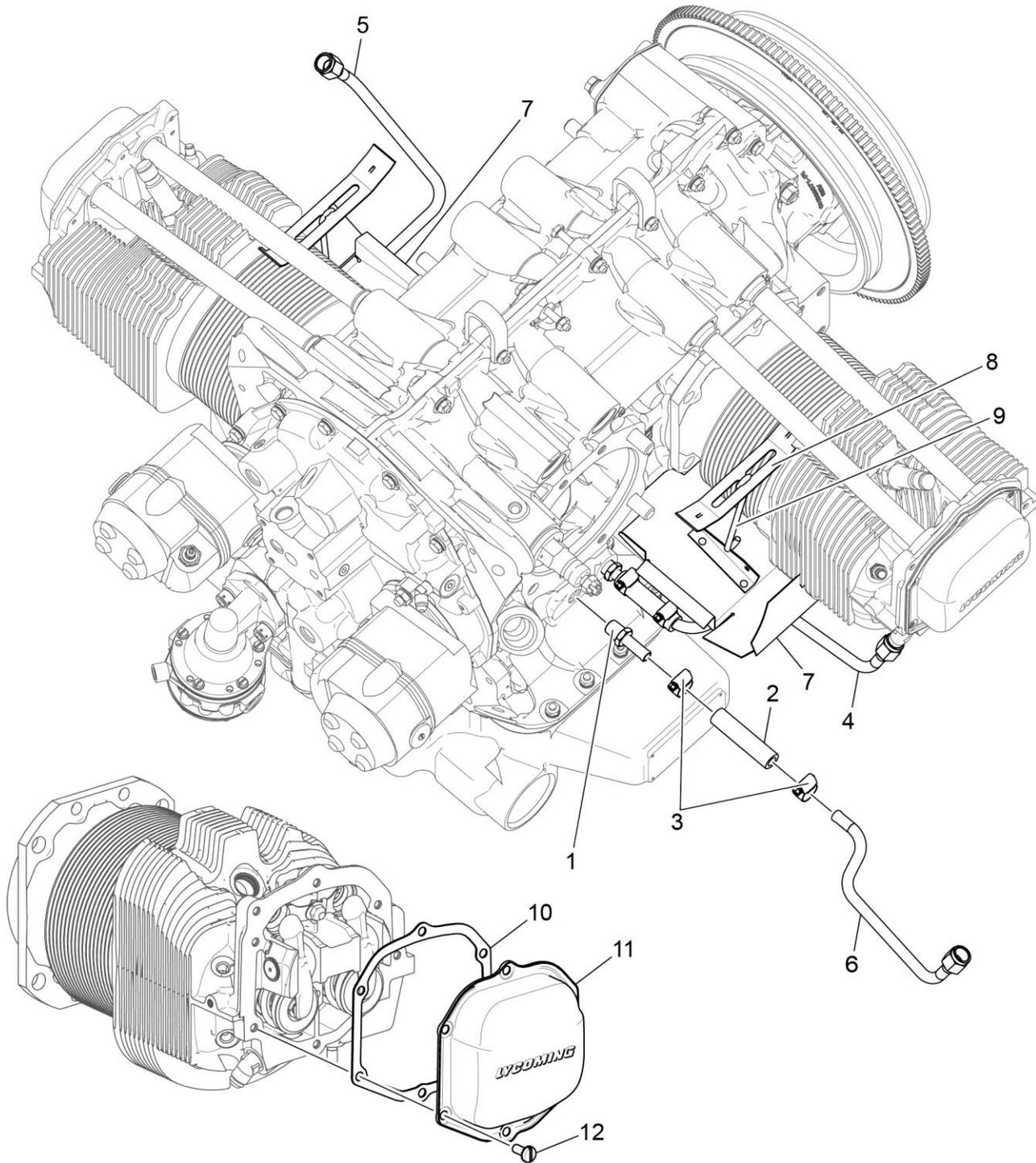


Figure 12
Cylinder Head Drain Tubes, Intercylinder Cooling Baffles
and Rocker Box Covers

CYLINDER SECTION**Figure 12 - Cylinder Head Drain Tubes, Intercylinder Cooling Baffles
and Rocker Box Covers**

Figure Item	Code	Part Number	Description	Units 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 ASSEMBLY, Cylinder head oil drain, cyl. no. 1	1
5		68760	TUBE ASSEMBLY, Cylinder head oil drain, cyl. no. 2	1
6		68761	TUBE ASSEMBLY, Cylinder head oil drain, cyl. 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

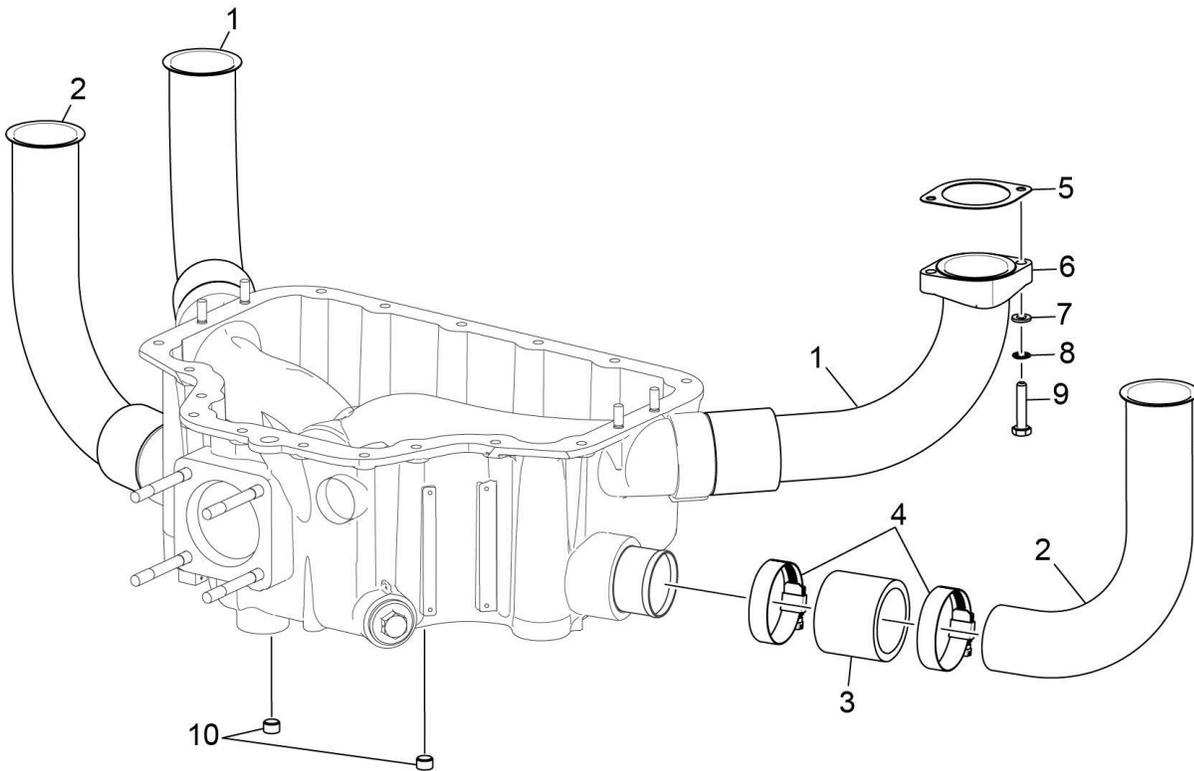


Figure 13
Intake Pipes Assembly

CYLINDER SECTION**Figure 13 – Intake Pipes Assembly**

Figure Item	Code	Part Number	Description	Units per Assembly
1		71712	PIPE, Intake, cylinder no. 1 and 2	2
2		71713	PIPE, Intake, cylinder no. 3 and 4	2
3		69603	HOSE-1.75 ID X 2.188 OD X 1.75	4
4		LW-15592-8-28	CLAMP, HOSE	8
5		71973	GASKET, 2 bolt flange, 1-3/4 I.D.	4
6		73346	FLANGE, Intake pipe upper (dark gray)	4
7		STD-8	WASHER, 1/4 plain	8
8		STD-160	WASHER 1/4 lock, internal teeth	8
9		LW-25-1.25	BOLT, 1/4-20 x 1-1/4 long	8
10		1102	PLUG, 1/8 pipe	2

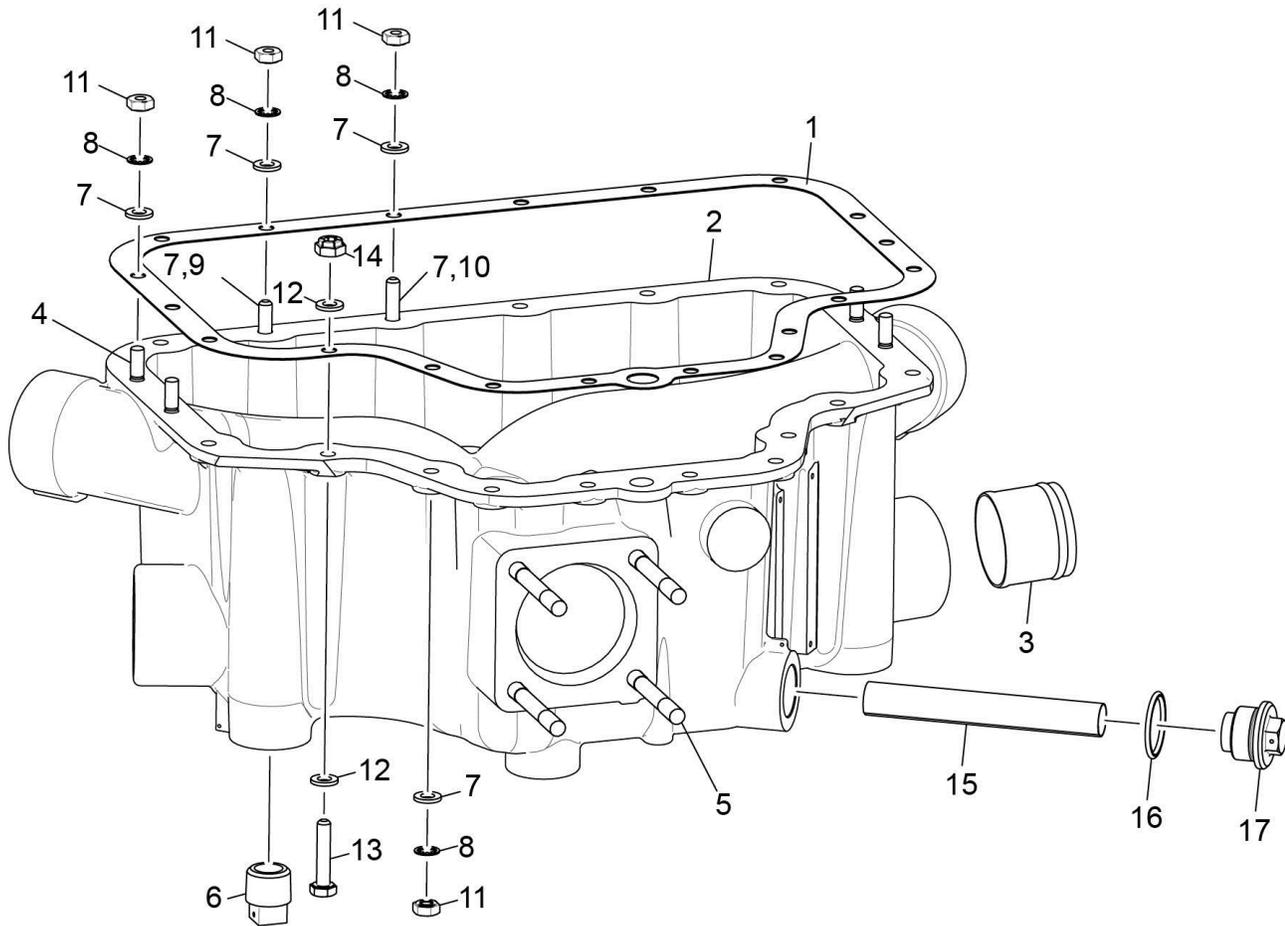


Figure 14
Oil Sump and Induction Housing

LUBRICATION SYSTEM**Figure 14 – Oil Sump and Induction Housing Assembly**

Figure Item	Code	Part Number	Description	Units per Assembly
1		LW-13353	GASKET, Oil sump	1
2	❖	78778	SUMP ASSEMBLY	1
3		69602	CONNECTION, Intake pipe	4
4		61400	STUD, 1/4-20 x 1-3/16 long	4
5		31C-24	STUD, 5/16-18 x 3.00 long	4
6		STD-551	PLUG, 1/2-14 NPT, square head, drilled	1
7		STD-8	WASHER, 1/4 plain	27
8		STD-160	WASHER, 1/4 lock, internal teeth	19
9		LW-25-0.94	BOLT, 1/4-20 x 15/16 long, hex. head	7
10		LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. head	2
11		STD-1411	NUT, 1/4-20 plain	17
12		STD-8	WASHER, 1/4 plain	4
13		LW-25-1.25	BOLT-1/4-20 x 1-1/4 long hex	1
14		STD-2044	NUT-1/4-20 self locking	1
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. head x 1.00-20 thread	1
❖ This sump has horizontal rear mounted fuel injector.				

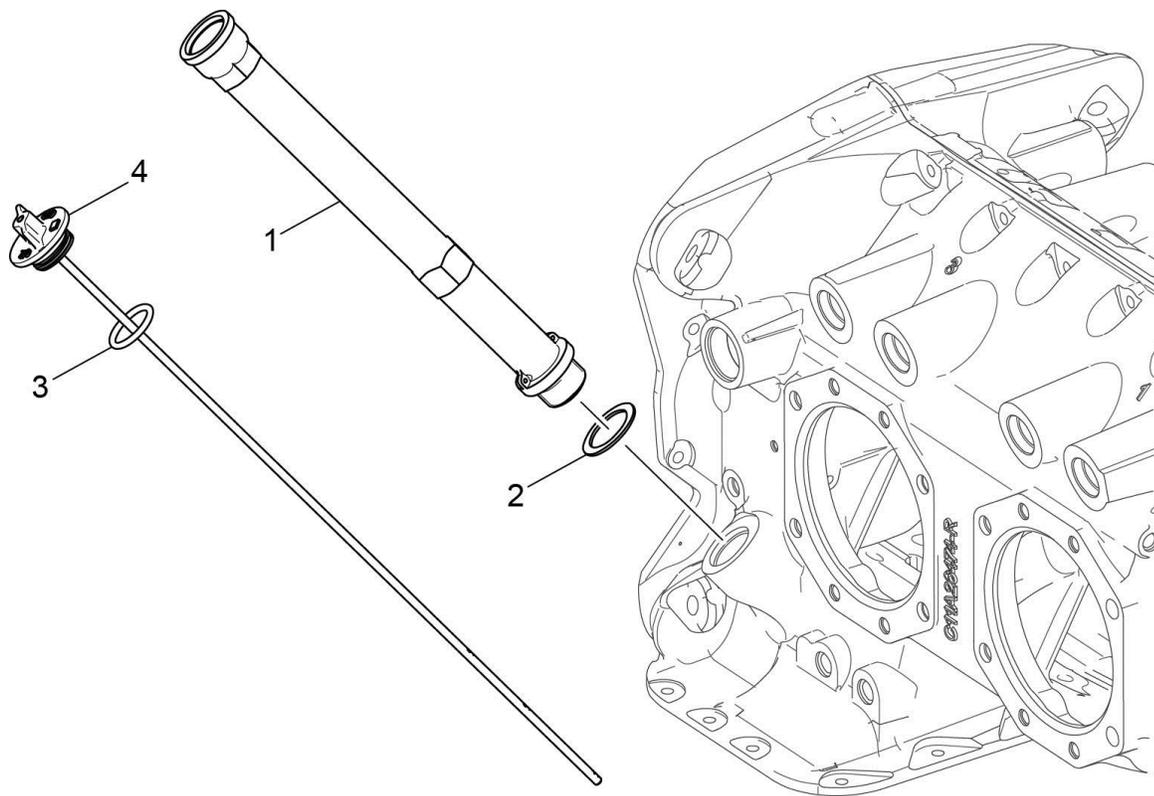


Figure 15
Oil Level Gage

LUBRICATION SYSTEM**Figure 15 – Oil Level Gage**

Figure Item	Code	Part Number	Description	Units per Assembly
1		75736	TUBE, Oil level gage	1
2		72059	GASKET, Oil level gage	1
3		74068	RING, Oil level gage seal	1
4		LW-16783-16	GAGE ASSEMBLY, Oil level	1

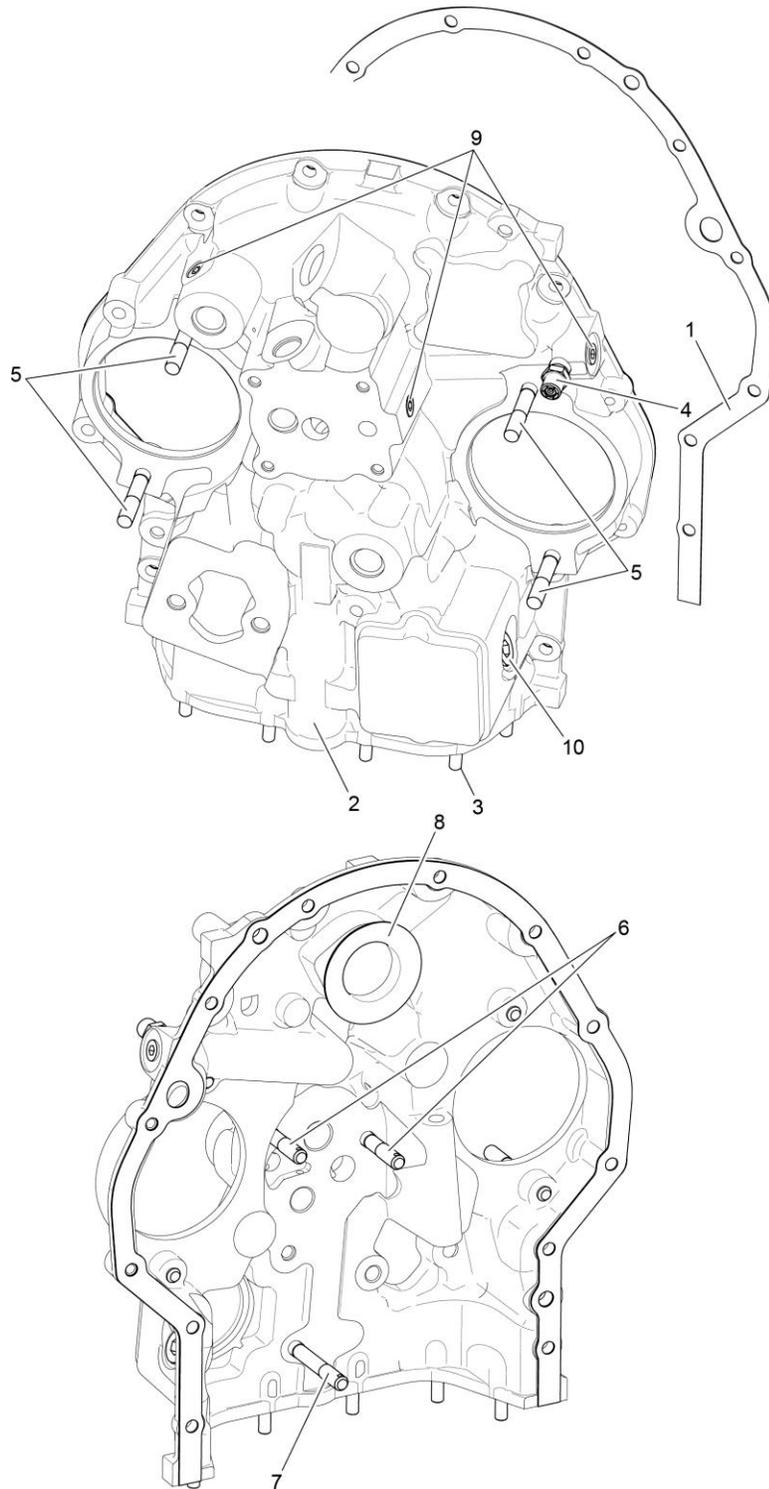


Figure 16
Accessory Housing Assembly

ACCESSORY DRIVES**Figure 16 – Accessory Housing Assembly**

Figure Item	Code	Part Number	Description	Units per Assembly
1		73818	GASKET, Accessory housing	1
2		21A28704-02	HOUSING ASSEMBLY, Accessory	1
3		75888	STUD, 1/4-20 x 1-1/4 long	6
4		LW-14914	NIPPLE, 1/8 NPT to 1/4 tube	1
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	2
7		31CD-22	STUD, 5/16-18 x 2-3/4 long, drilled	1
8		76119	SHIELD, Accessory breather oil	1
9		1102	PLUG, 1/8-27 NPT, Allen head	3
10		STD-784	PLUG, 3/8-18 NPT, Allen head	1

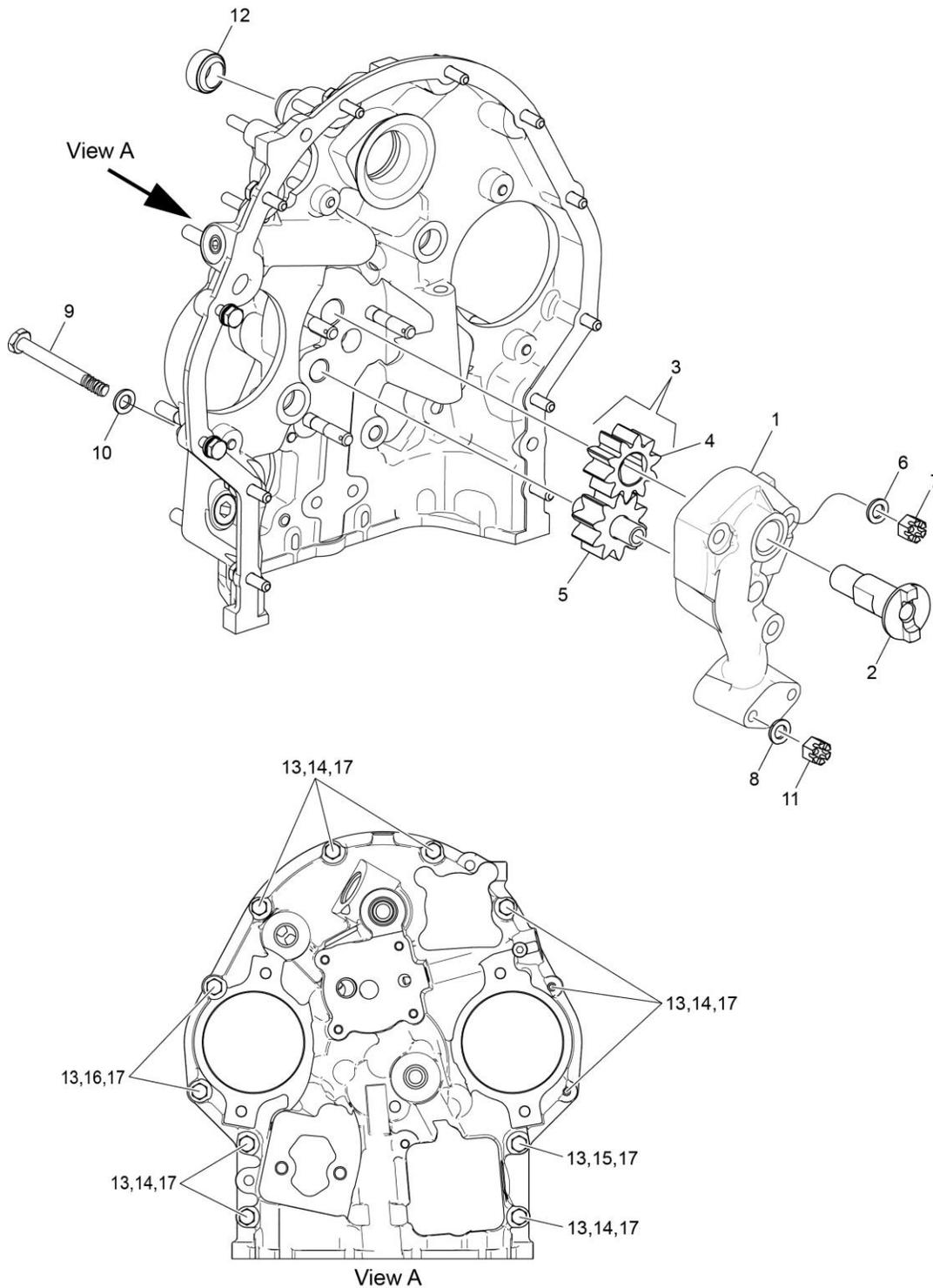


Figure 17
Oil Pump Assembly and Accessory Housing Attaching Parts

ACCESSORY DRIVES**Figure 17 – Oil Pump Assembly and Accessory Housing Attaching Parts**

Figure Item	Code	Part Number	Description	Units per Assembly
1		LW-11839	BODY ASSEMBLY, Oil pump	1
2		61174	SHAFT, Oil pump drive	1
3		05K19423-S	KIT-OIL PUMP IMPELLER	1
4	❖	LW-18109	IMPELLER, Oil pump, driving	1
5	❖	LW-18110	IMPELLER ASSEMBLY, Oil pump, driven	1
6		STD-35	WASHER, 5/16 plain	3
7		STD-1420	NUT, 5/16-18 slotted	3
8		STD-1227	WASHER, 1/4 plain	2
9		LW-25S2.75	BOLT, 1/4-20 x 2-3/4 long, hex. head, drilled end	2
10		STD-8	WASHER, 1/4 plain	2
11		STD-2249	NUT, 1/4-20 slotted shear	2
12		LW-14260	SEAL, Tachometer drive, oil	1
13		STD-160	WASHER, 1/4 lock, internal teeth	12
14		LW-25-0.94	BOLT, 1/4-20 x 15/16 long, hex. head	9
15		LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. head	1
16		LW-25-1.44	BOLT, 1/4-20 x 1-7/16 long, hex. head	2
17		STD-8	WASHER, 1/4 plain	12
❖ To ensure impellers are replaced together, oil pump impellers available in kit form only.				

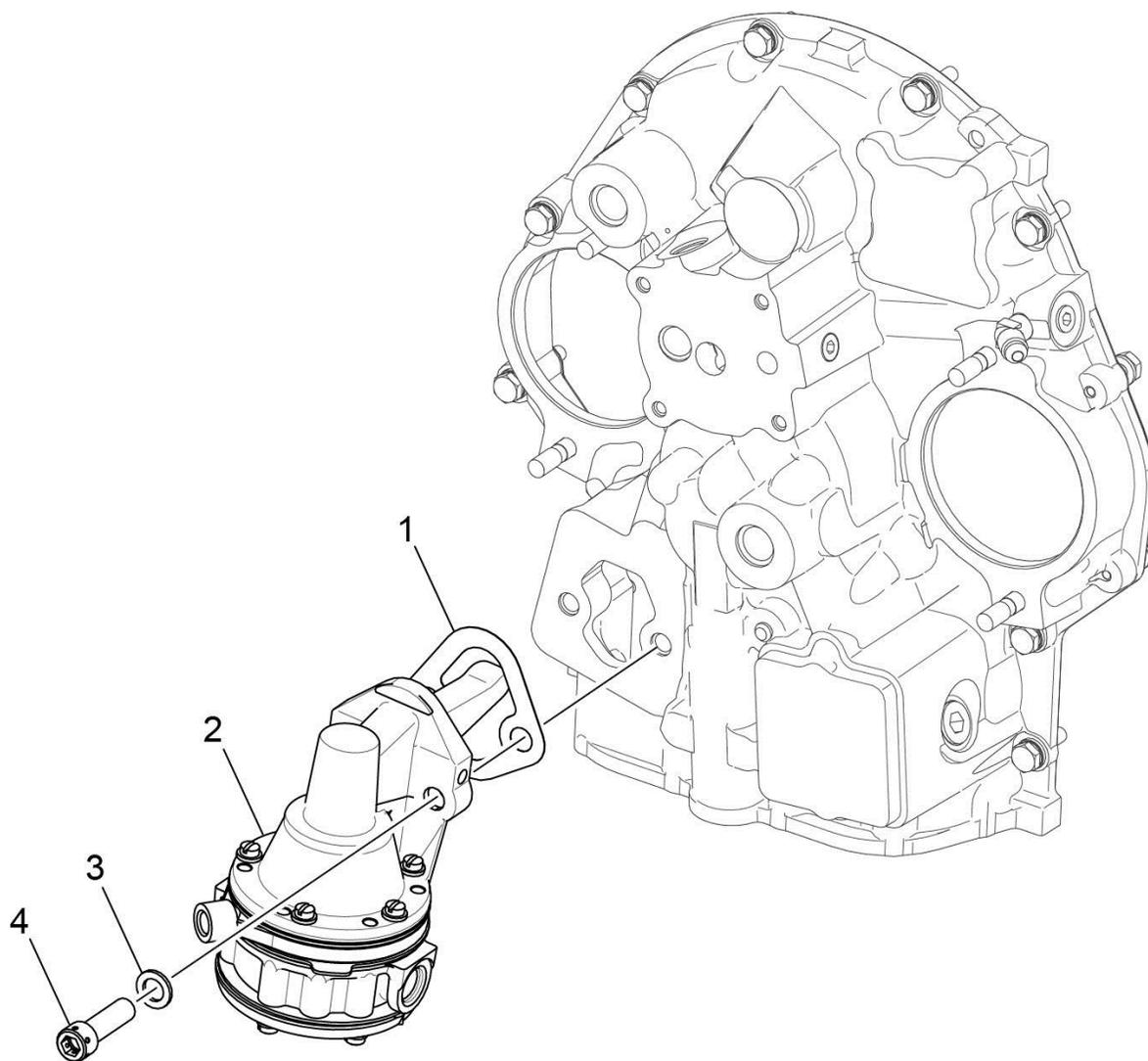


Figure 18
Fuel Pump Assembly and Attaching Parts

LUBRICATION SYSTEM

Figure 18 - Fuel Pump Assembly and Attaching Parts

Figure Item	Code	Part Number	Description	Units per Assembly
1		60096	GASKET, Fuel pump	1
2		62B26931	FUEL PUMP, high pressure	1
3		STD-33	WASHER, 3/8 Plain	2
4		STD-1882	SCREW, 3/8-16 x 1-9/32 long, socket dr.	2

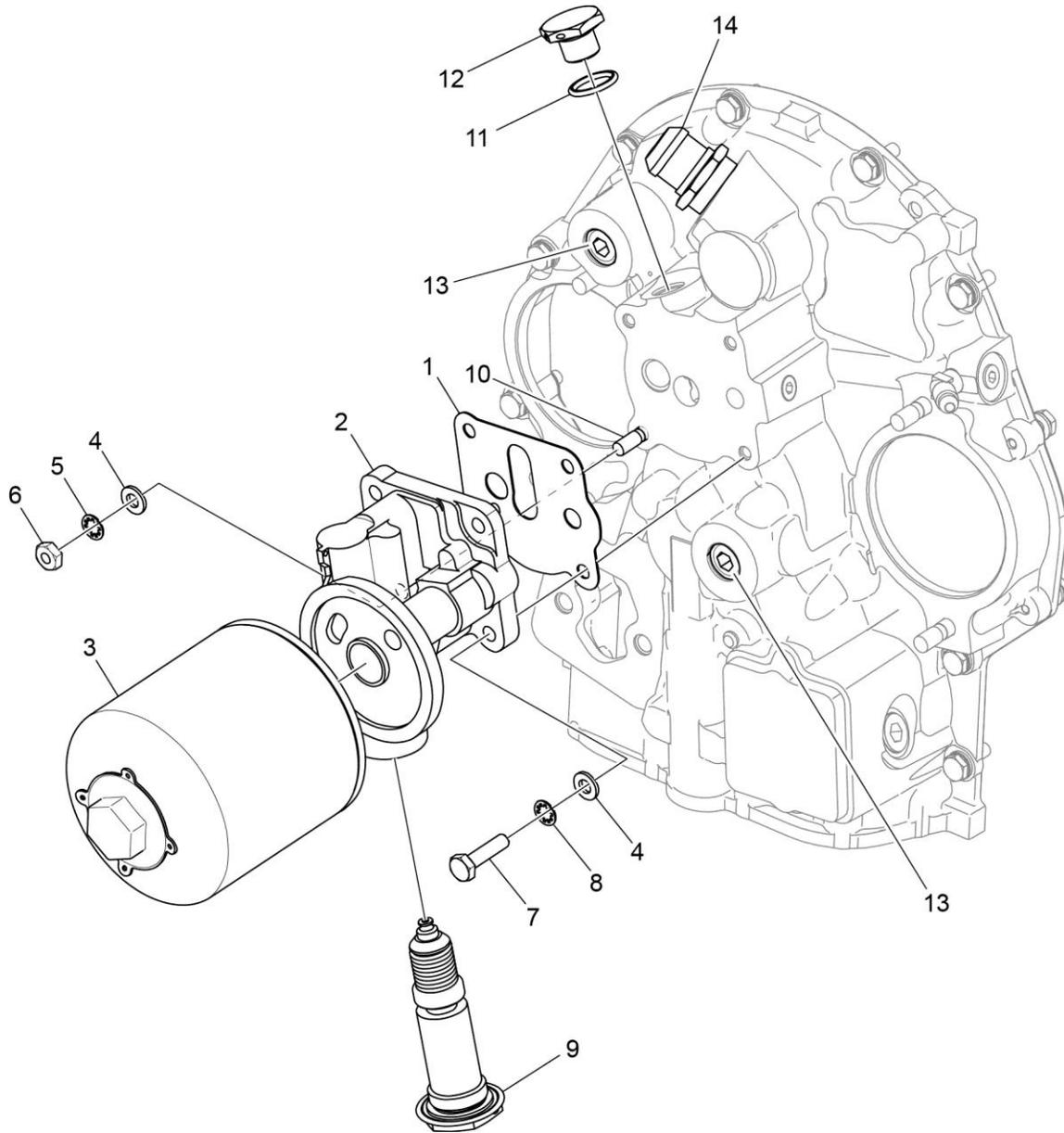


Figure 19
Oil Filter Assembly, Oil Cooler Bypass Valve and Fittings

LUBRICATION SYSTEM**Figure 19 – Oil Filter Assembly, Oil Cooler Bypass Valve and Fittings**

Figure Item	Code	Part Number	Description	Units per Assembly
1		06B23862	GASKET, Oil filter adapter	1
		06B23862	GASKET, Oil filter adapter (shipped loose)	1
2		77852	OIL FILTER BASE ASSEMBLY	1
3		LW-13216	OIL FILTER, long CH48111-1	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		LW-25-1.00	BOLT, 1/4-20 x 1.00 long, hex. head	3
8		STD-160	WASHER, 1/4 lock, internal teeth	3
9		53E22144	VALVE ASSEMBLY, Temp. control oil cooler bypass w/ gasket	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		STD-784	PLUG, 3/8-18 NPT, Allen	2
14		71140	FITTING, Breather	1

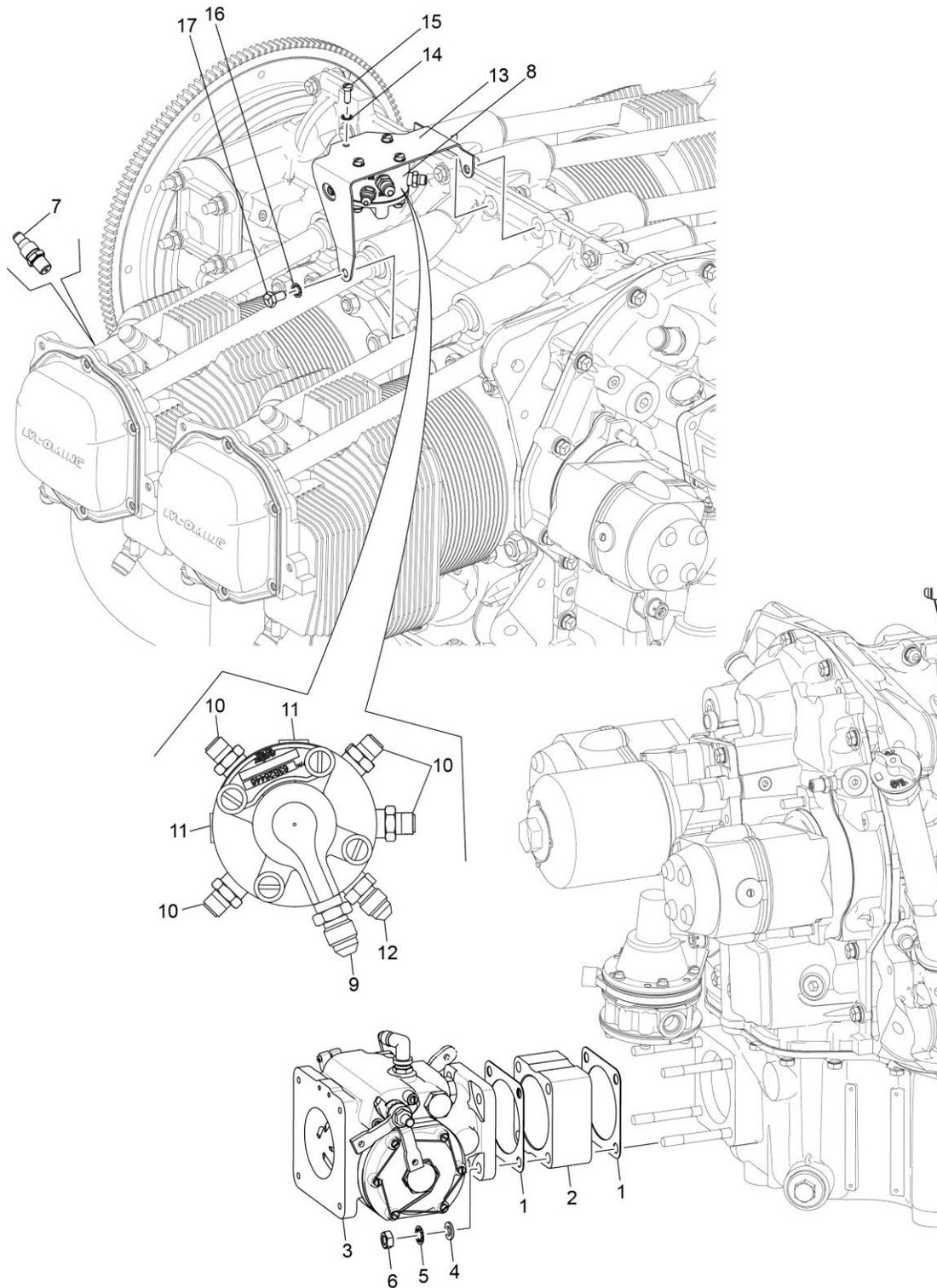


Figure 20
Fuel Injector, Fuel Manifold and Injection Nozzles

FUEL DISTRIBUTION**Figure 20 – Fuel Injector, Fuel Manifold and Injection Nozzles**

Figure Item	Code	Part Number	Description	Units per Assembly
1		66224	GASKET	2
2		73161	SPACER, Fuel Injector	1
3	V	61J28702	FUEL INJECTOR, (P/N AV 2581600) (RSA-5AD1)	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	V	63C26450	NOZZLE, Injection low (AV 2524864-2)-one groove on jet O.D.	4
8		63B28703	MANIFOLD ASSEMBLY, Fuel	1
9		AN791-2	ELBOW, Union 45 deg. 1/8 tube	4
10		AN816-4	NIPPLE, 1/8 NPT to 1/4 tube	1
11		1102	PLUG, 1/8-27 NPT, Allen head	3
12		02G21382	NIPPLE, Nozzle pressure	1
13		75009	BRACKET, Fuel manifold	1
14		STD-82	SCREW, No. 10-24 x 1/2 long, fill. head	4
15		STD-251	WASHER, No. 10 lock, internal teeth	4
16		LW-25-0.50	BOLT, 1/4-20 x 1/2 long, hex. head	1
17		STD-160	WASHER, 1/4 lock, internal teeth	1

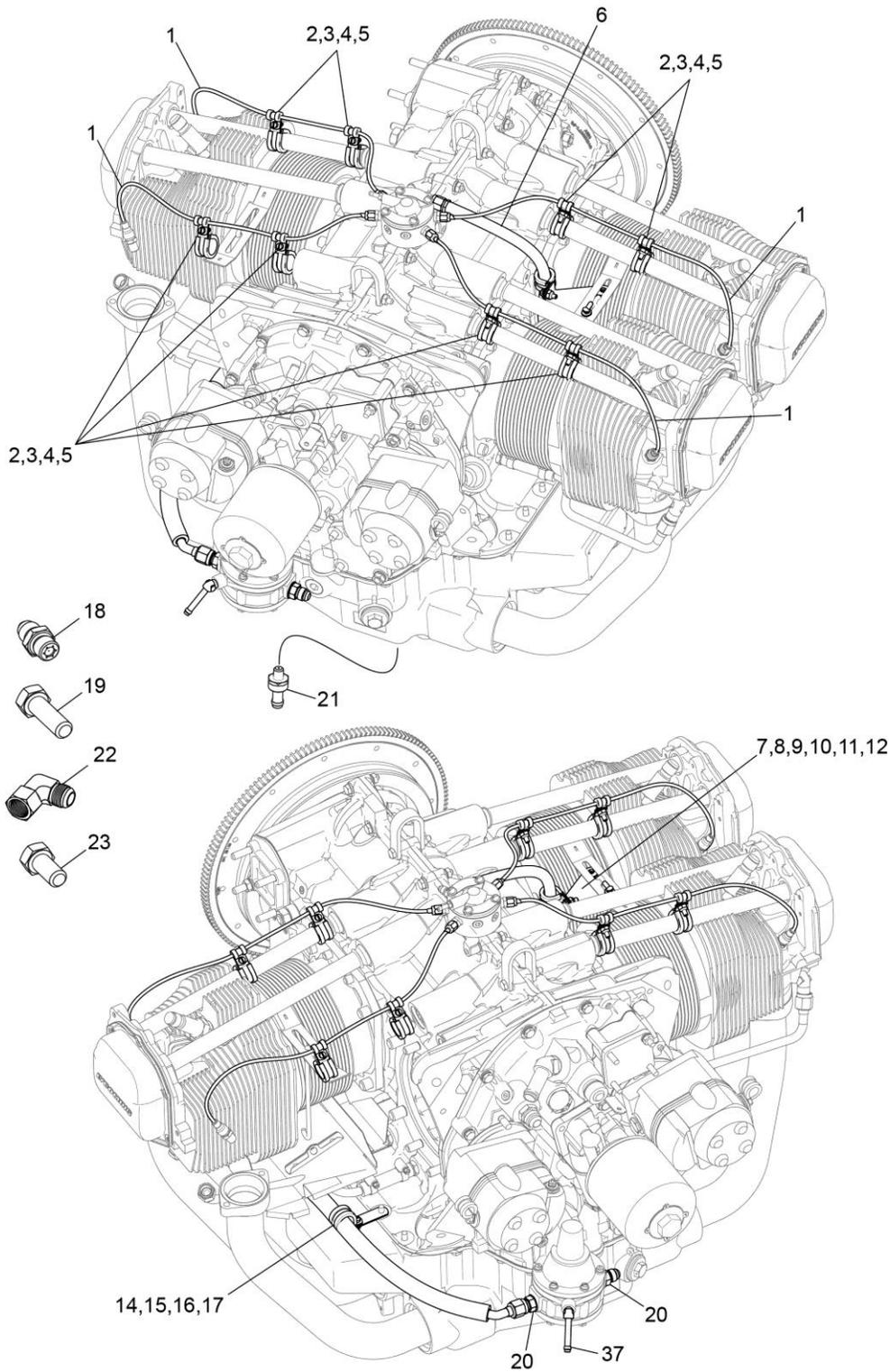
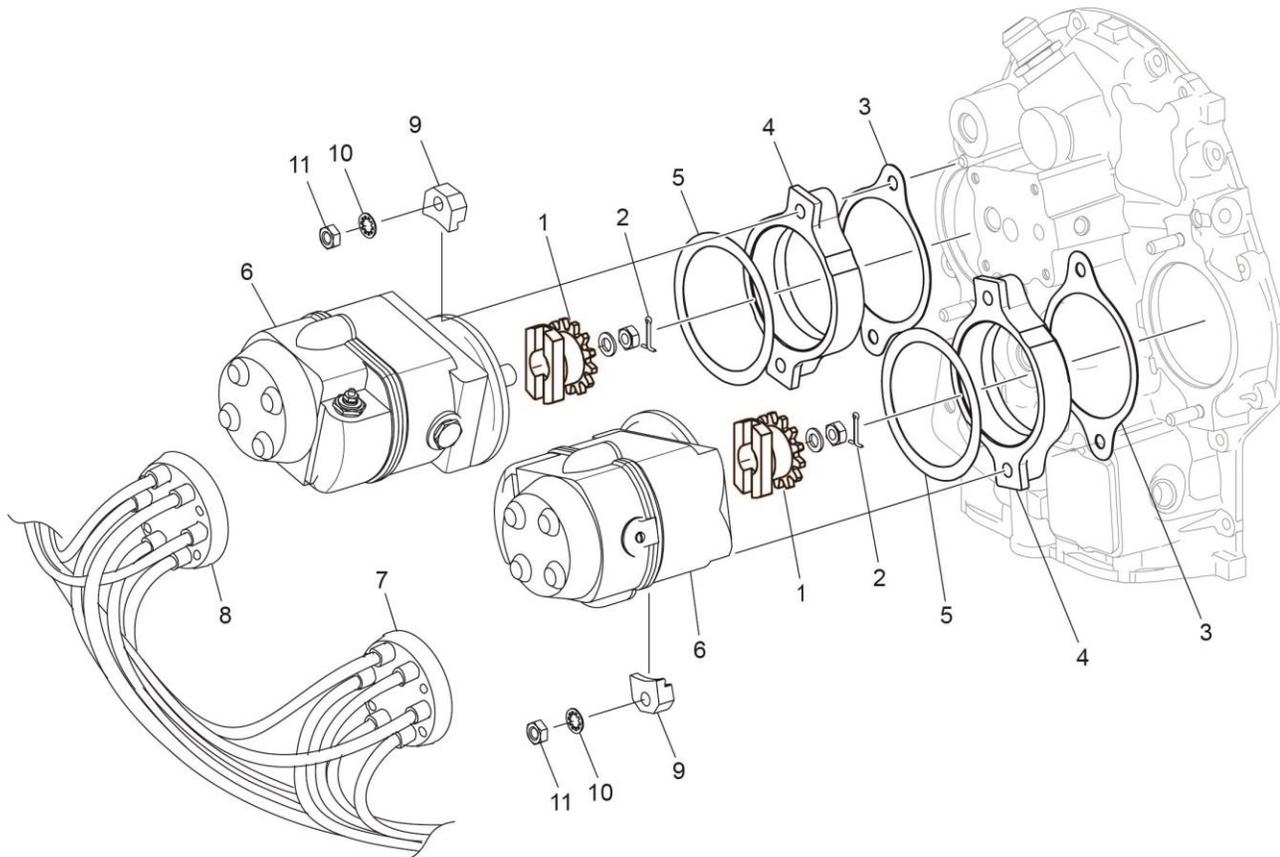


Figure 21
Fuel Lines and Attaching Parts

FUEL DISTRIBUTION**Figure 21 – Fuel Lines and Attaching Parts**

Figure Item	Code	Part Number	Description	Units per Assembly
1		LW-12098-0-140	TUBE ASSEMBLY, Fuel line	2
2		LW-12098-0-210	TUBE ASSEMBLY, Fuel injector line	2
3		LW-16266-10-75	CLAMP	4
4		LW-16266-10-13	CLAMP, 1/8 diameter for no. 10 screw	6
5		STD-860	SCREW, No. 10-32 x 5/8 long, fill. head	6
6		STD-670	LOCKNUT, No. 10-32	6
7		73136	BRACKET, Extension, fuel inj. line	2
8		LW-12798-4S340	HOSE, 1/4 hose straight	1
9		LW-12798-4S130	HOSE, 1/4 hose straight	1
10		75414	BRACKET, Fuel manifold	1
11		LW-16266-10-63	CLAMP, 5/8 I.D. x #10 screw	1
12		72815	BRACKET, support clamp 90 deg.	1
13		LW-16266-25-63	CLAMP, 5/8 I.D. x 1/4 dia. screw	1
14		STD-425	WASHER, #10 plain	1
15		STD-425	WASHER, #10 plain	2
16		STD-860	SCREW, #10-32 x 5/8 long	1
17		STD-670	LOCKNUT, No. 10-32	1
18		LW-16266-10-75	CLAMP, 5/8 I.D. x 1/4 dia. screw	1
19		STD-860	SCREW, #10-32 x 5/8 long	2
20		STD-670	LOCKNUT, No. 10-32	2
21		LW-12799-6S180	HOSE ASSY, 3/8 hose, straight	1
22		72377	ELBOW, 3/8 flared tube	1
23		LW-16266-10-75	CLAMP, 5/8 I.D. x 1/4 dia. screw	1
24		LW-16266-10-13	CLAMP, 1/8 dia. for #10 screw	1
25		STD-860	SCREW, #10-32 x 5/8 long	2
26		STD-670	LOCKNUT, #10-32	2
27		75414	BRACKET, Fuel Manifold	1



01P19762-1-2 – Bag, Magneto Harness Attaching

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 lock (rocker box)	6
76734	ZIP STRAP	8
LW-16266-25-50	CLIP, Four wire	1
STD-696	WASHER, 1/4 plain	4
STD-1916	SCREW, 1/4-20 x 1-1/8 long, fill. head	3
LW-M-2375	SET OF 2 PLATES, spark plug cable- 2 wire	2

Figure 22
Magnetos, Magneto Drives, Harnesses and Spark Plugs

DISTRIBUTION**Figure 22 – Magnetos, Magneto Drives, Harnesses and Spark Plugs**

Figure Item	Code	Part Number	Description	Units per Assembly
1		61665	GEAR, Magneto Impulse coupling	2
2		MS9245-44	COTTER PIN, 3/32 diameter x 5/8 long	2
3		62224	GASKET, Magneto adapter	2
4		LW-12706	ADAPTER, Magneto impeller coupling	2
5		LW-12681	GASKET, Magneto	2
6	❖	66GC25RFNN	MAGNETO, impulse 4330 reverse rotation	2
	•	66GP-0RANN	MAGNETO, plain 4302 reverse rotation, right	1
7		67P20414	HARNESS ASSY-SLICK-RIGHT-M2982	1
8		67P20415	HARNESS ASSY-SLICK-LEFT-M2981	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
	▲	01P19762-1-2	BAG, Magneto harness attaching	1

❖ See latest revision of Lycoming Service Instruction No. 1443 for complete listing of approved magnetos.

▲ See previous page 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.

• Optional – A plain 4302 reverse rotation magneto can be used on the right with an impulse 4330 reverse rotation magneto on the left.

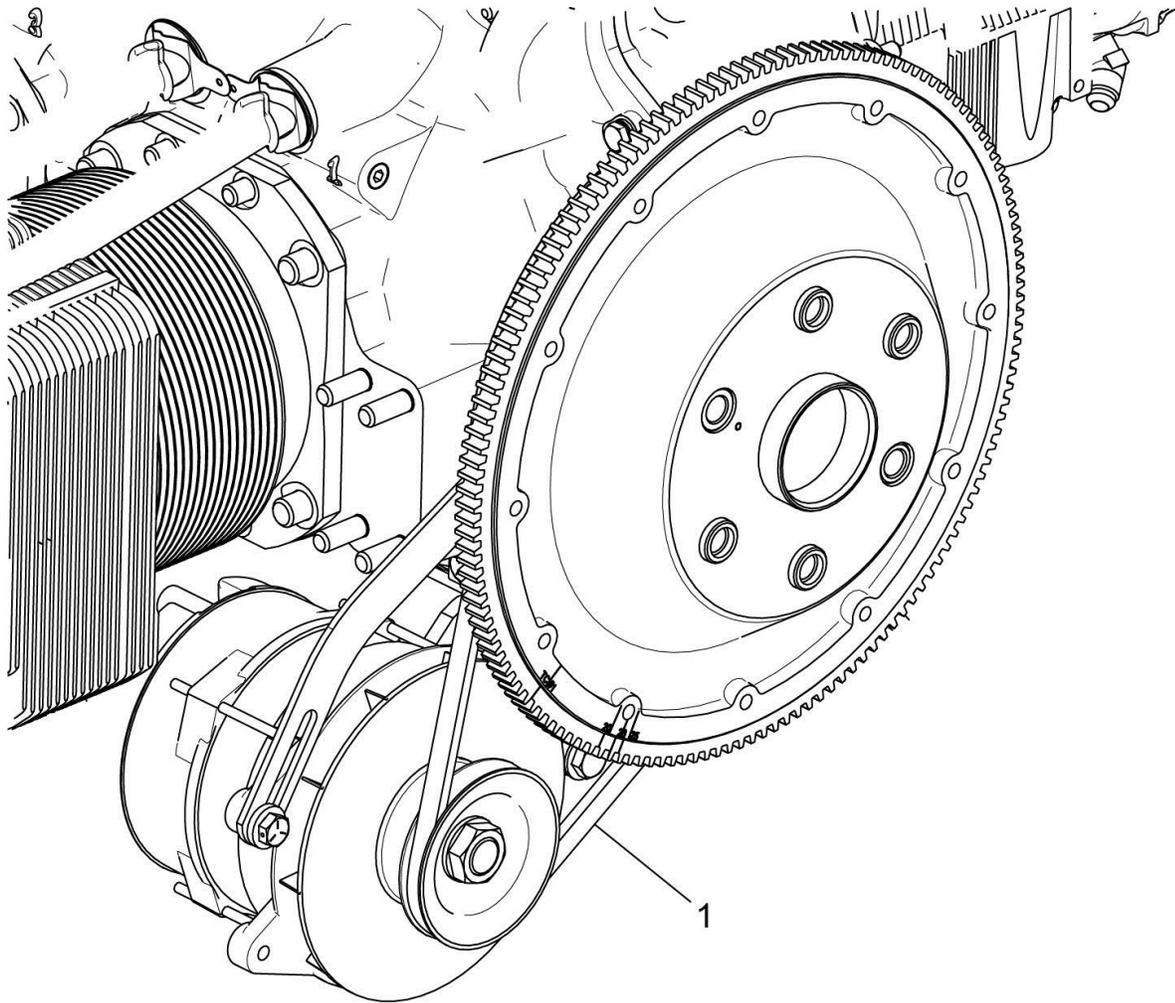


Figure 23
Alternator Assembly

DISTRIBUTION**Figure 23 - Alternator Assembly**

Figure Item	Code	Part Number	Description	Units per Assembly
4		37A19773-376	BELT, Alternator, 3/8 wide	1
NOTE: See latest revision of Lycoming Service Instruction No. 1154 for complete listing of FAA approved starters and alternators.				

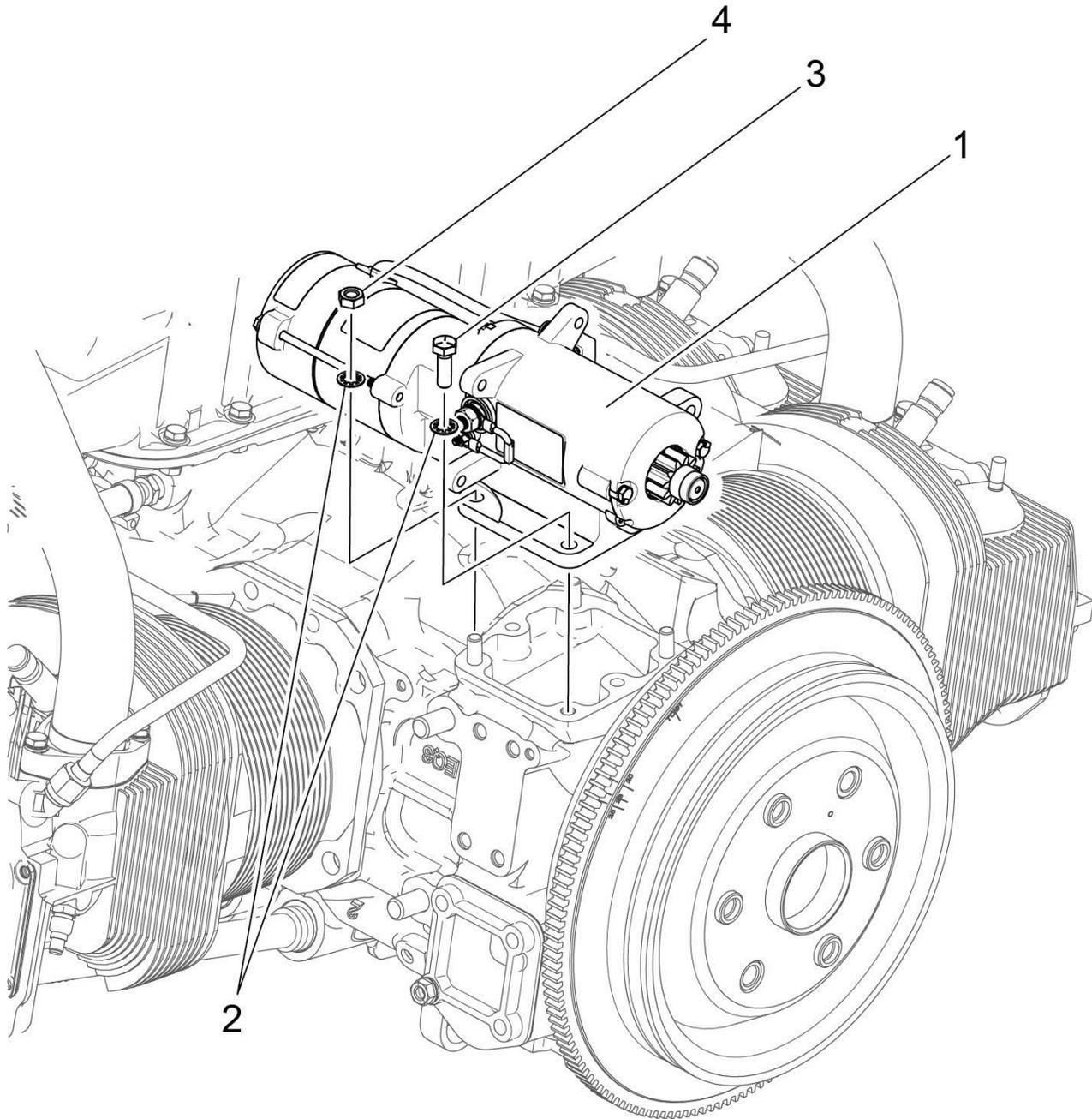


Figure 24
Starter Attaching Parts

CRANKING**Figure 24 - Starter Attaching Parts**

Figure Item	Code	Part Number	Description	Units per Assembly
1		31B26555	STARTER, SKY-TEC 12/14 pitch 24V 149NLR/EC	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. head	1
4		STD-1410	NUT, 5/16-18 plain	3

NOTE: See latest revision of Lycoming Service Instruction No. 1154 for complete listing of FAA approved starters and alternators.

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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-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	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, Fuel injector	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

Seal and Gasket Set (Cont.)

PART NO.	PART NAME	Qty.
72312	RING, Oil seal	1
72829	LOCKPLATE	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
76510	GASKET, Oil cooler by-pass 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, 0.351 I.D. x 0.072 section	1
06A23493	SEAL, Shroud tube	8
SSP-115	STICKER	1

❖ Refer to latest revision of Lycoming Service Instruction No. 1324 for application.

SERVICE KIT SECTION
Cylinder, Piston and Ring Assembly

PART NO.	PART NAME	Qty.
05K21104	KIT – CYLINDER, PISTON AND RING ASSEMBLY	1
LW-12427	CYLINDER AND HEAD ASSEMBLY	1
14D23912	PISTON	1
74241	RING, Piston, compression	2
14H21950	RING, Piston, oil regulating	1
LW-14078	PIN, Piston	1
71481	RING, Oil seal	1
LW-18661	SEAL, Shroud tube	2
70310	SEAL, Shroud tube	2
06A23493	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
LW-12272	LOCKPLATE, Shroud tube	1
1102	PLUG	2
SSP-115	STICKER	1
SSP-299	TAG	1

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02G21382	NIPPLE	39	15F28835-29	ROD ASSEMBLY	19
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05K21104	KIT	51	15F28835-31	ROD ASSEMBLY	19
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06A23493	SEAL	21	15F28835-34	ROD ASSEMBLY	19
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06A23493	SEAL	51	15M23454	CAMSHAFT ASSY	11
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06E19769-1.00	GASKET	27	17A23938	VALVE	51
06E19769-1.00	GASKET	49	17B23936	VALVE	21
06E19769-1.25	GASKET	7	17B23936	VALVE	51
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07A21097	BRACKET	1	17C19386	CAP	51
07F21098	LINK	1	17C21191	KEY	21
07F21099	STRUT	1	17C21191	KEY	51
1028-B	BALL	7	17F19357	ROCKER ASSY	19
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1102	PLUG	17	18D26098	BEARING	7
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