

IO-360-B4A Illustrated Parts Catalog

July 2026

| PC-IO-360-B4A Rev 2



652 Oliver Street
Williamsport, PA 17701

IO-360-B4A Illustrated Parts Catalog

| Lycoming Part Number: PC-IO-360-B4A Rev 2

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Record of Revisions

NOTICE: Service Documents with a later release date than this parts catalog override parts information in this document.

Rev No.	Revision Changes	Issue Date
New	Initial Release of PC-IO-360-B4A (Supersedes PC-406-1)	February 2026
Rev. 1	<p>Chapter 73-10</p> <ul style="list-style-type: none"> • Added new Figure 20A and new parts list for Figure 20A • Changed Figure 20 to Figure 20B and changed parts list for Figure 20 to Figure 20B • Added new Figure 21A and new parts list for Figure 21A • Changed Figure 21 to Figure 21B and changed parts list for Figure 21 to Figure 21B • Changed Figure 22 to Figure 21C and changed parts list for Figure 22 to Figure 21C <p>Chapter 74-20</p> <ul style="list-style-type: none"> • Changed Figure 23 to Figure 22 and changed parts list for Figure 23 to Figure 22 <p>Chapter 80-10</p> <ul style="list-style-type: none"> • Changed Figure 24 to Figure 23 and changed parts list for Figure 24 to Figure 23 	March 2026
Rev. 2	<p>Chapter 74-20</p> <ul style="list-style-type: none"> • Changed parts list for Figure 22 <p>Chapter 72-20</p> <ul style="list-style-type: none"> • Added part number to parts list for Figure 4 • Added footnote to parts list for Figure 4 	July 2026

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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.

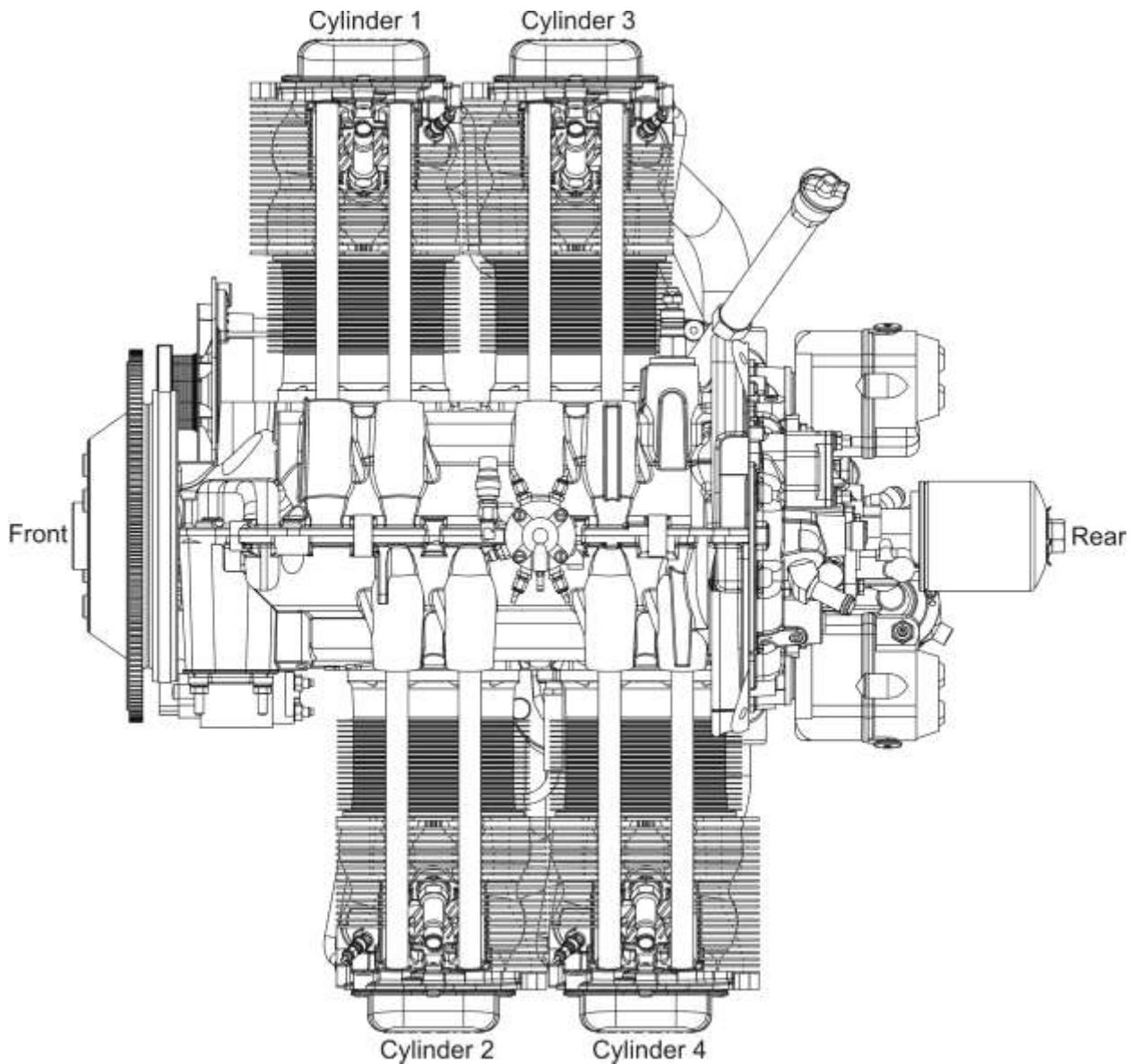
Any reference in this document to the supplier’s/part manufacturer’s product, by name, trademark, part number or other description is solely for the purpose of identification and does not indicate or infer that Lycoming accepts responsibility for quality control and/or airworthiness of parts, which do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

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	
F	Flat Tappet
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
RT	Roller Tappet

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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
18D26098	BEARING									X	X
18A26093	BEARING									X	X
18M26105	BEARING									X	X
LW-13792	SEAL								X		
72155-S	BUSHING		X	X	X	X					
75656-S	BUSHING		X	X	X	X					
75657-S	BUSHING		X	X	X	X					
STD-1065	DOWEL	X	X	X	X						
74241	RING			X							
14H29884	RING			X		X					
72057	SEAT		X	X		X	X				
72058	SEAT		X	X		X	X				
61681*	GUIDE		X	X		X	X	X			
16R22291*	GUIDE		X	X		X	X	X			
66610	BUSHING		X	X							

* - Reference Figure 9 items no. 4 and 5 for valve guides.

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 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.

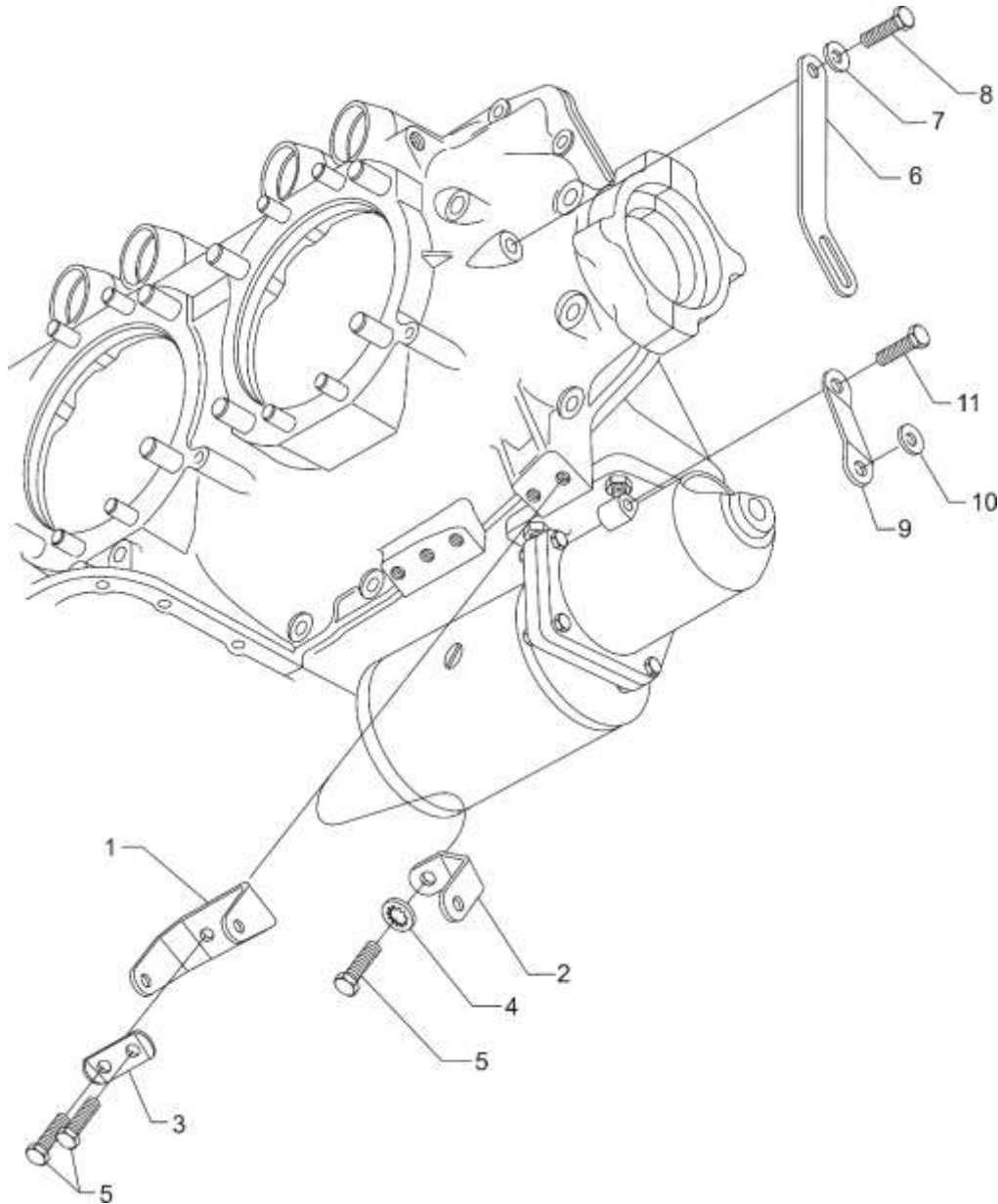


Figure 1
Alternator Mounting and Attaching Parts

DC Generation

FIGURE 1 – ALTERNATOR MOUNTING AND ATTACHING PARTS

Figure Item	Code	Part Number	Description	Units per Assembly
1		07A21443	BRACKET, Alternator	1
2		LW-13365	BRACE, Alternator bracket	1
3		73383	LOCKPLATE, 5/16 bolt x 1.00	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		07F29604	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	*	STD-2197	WASHER, 5/16 I.D. x 13/16 O.D. x 1/16	1
11		LW-31H1.06	BOLT, 5/16-18 x 1-1/16 long, hex. head, drilled	1

* Shim 76908 strut with STD-2197 washer.
NOTE: Alternator is not supplied for this configuration.

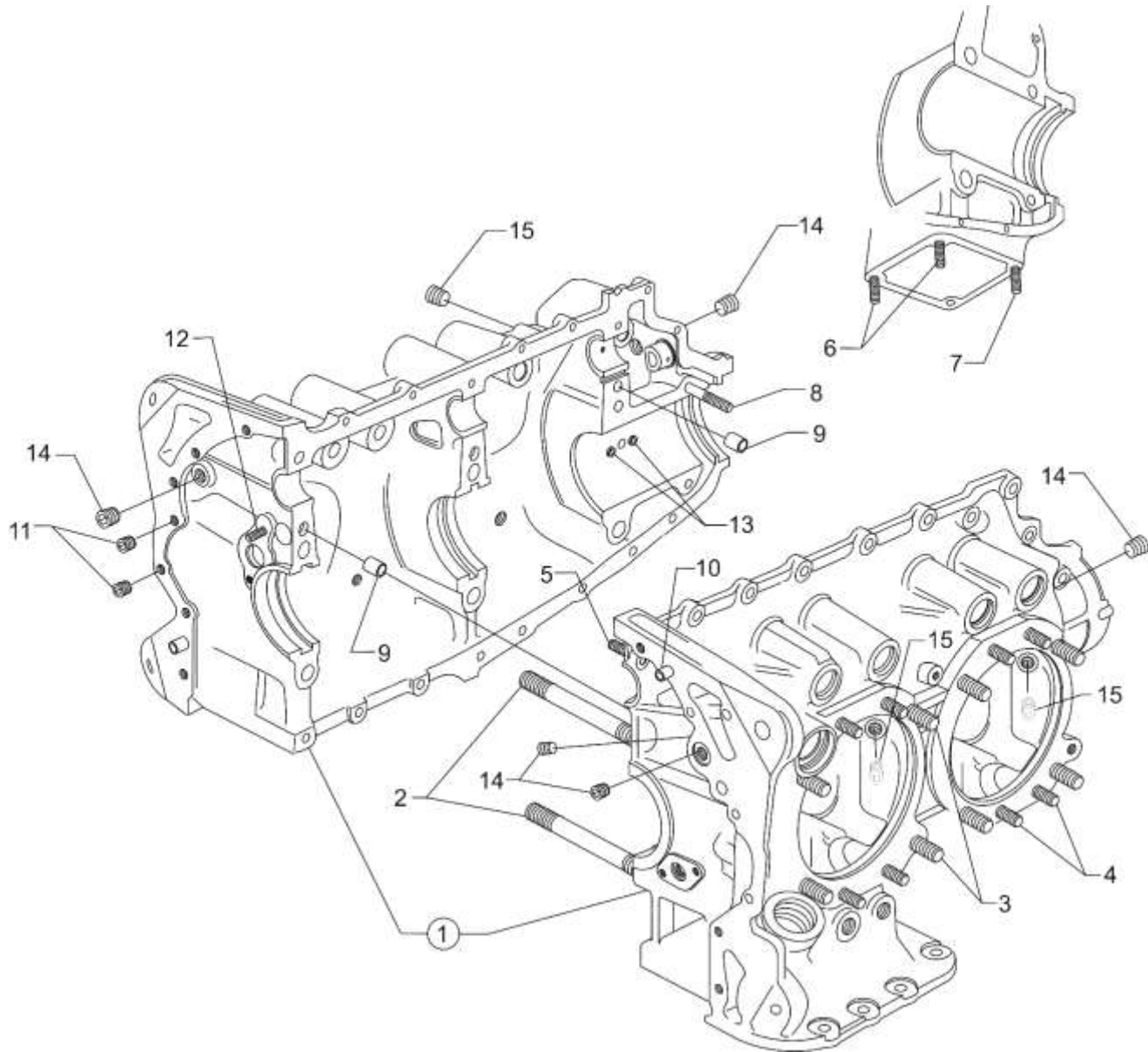


Figure 2
Crankcase Assembly

Power Section
FIGURE 2 – CRANKCASE ASSEMBLY

Figure Item	Code	Part Number	Description	Units per Assembly
1	*	LW-18402-5	CRANKCASE ASSEMBLY KIT (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	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 Heli-coil 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	5
* Refer to Service Kits Section for applicable Crankcase Assembly and Governor Thru-Stud Kit Part Numbers.				

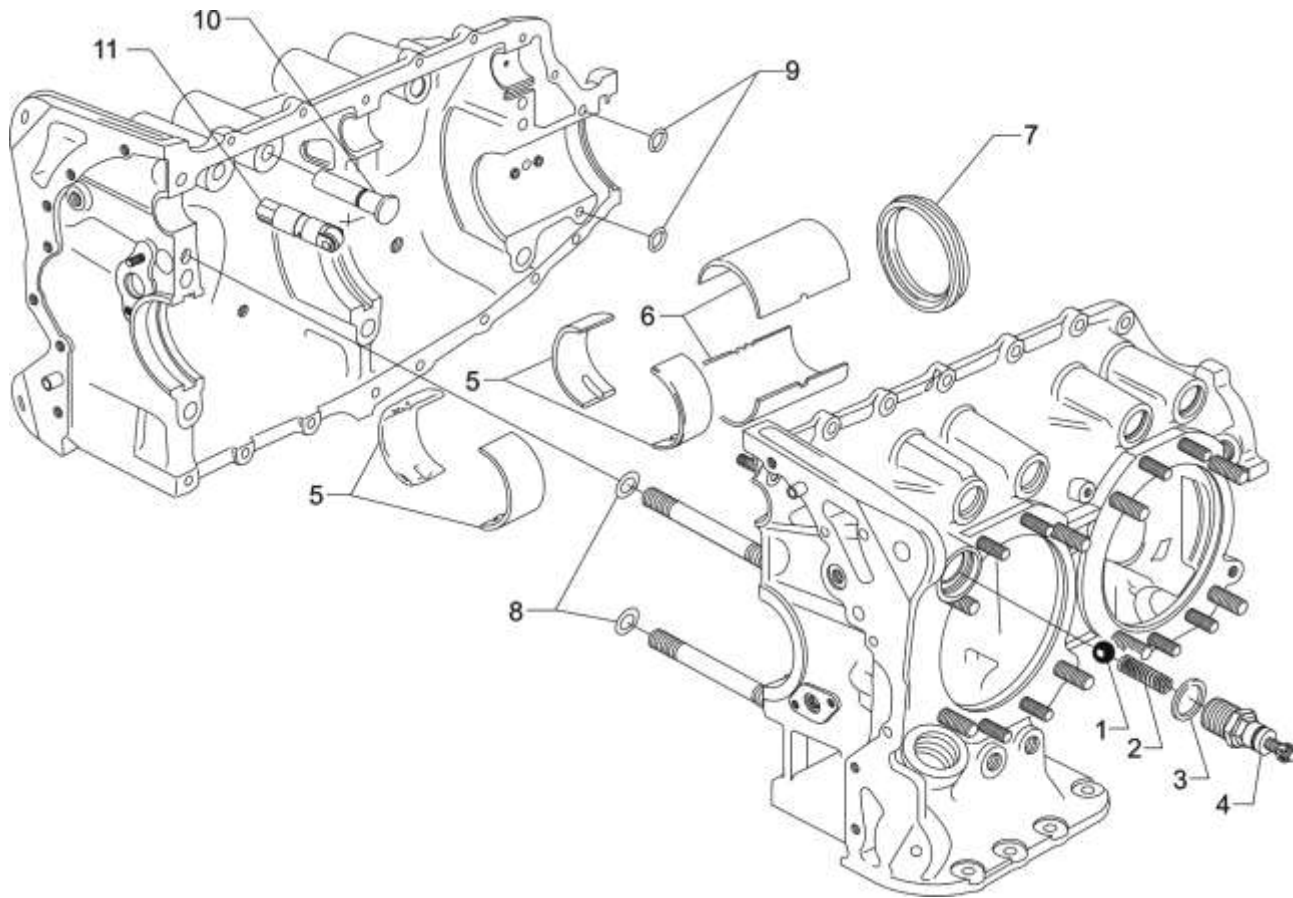


Figure 3
Crankcase Related Parts

Power Section

FIGURE 3 - CRANKCASE RELATED PARTS

Figure Item	Code	Part Number	Description	Units per Assembly
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, Annular, 1-1/4 I.D.	1
4		77808	VALVE ASSEMBLY, Oil pressure relief valve, adjustable	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
11	**	LRT23381	BODY ASSEMBLY, Hydraulic tappet (Roller tappet engines)	8
<p>* Select spring to give a minimum of three threads exposed on adjusting screw to allow field adjustment. Reference latest revision of Lycoming Table of Limits SSP-1776, Part I for spring identification.</p> <p>** Refer to the latest revision of Service Instruction No. SI 1011 for tappet details and crankcase requirements</p>				

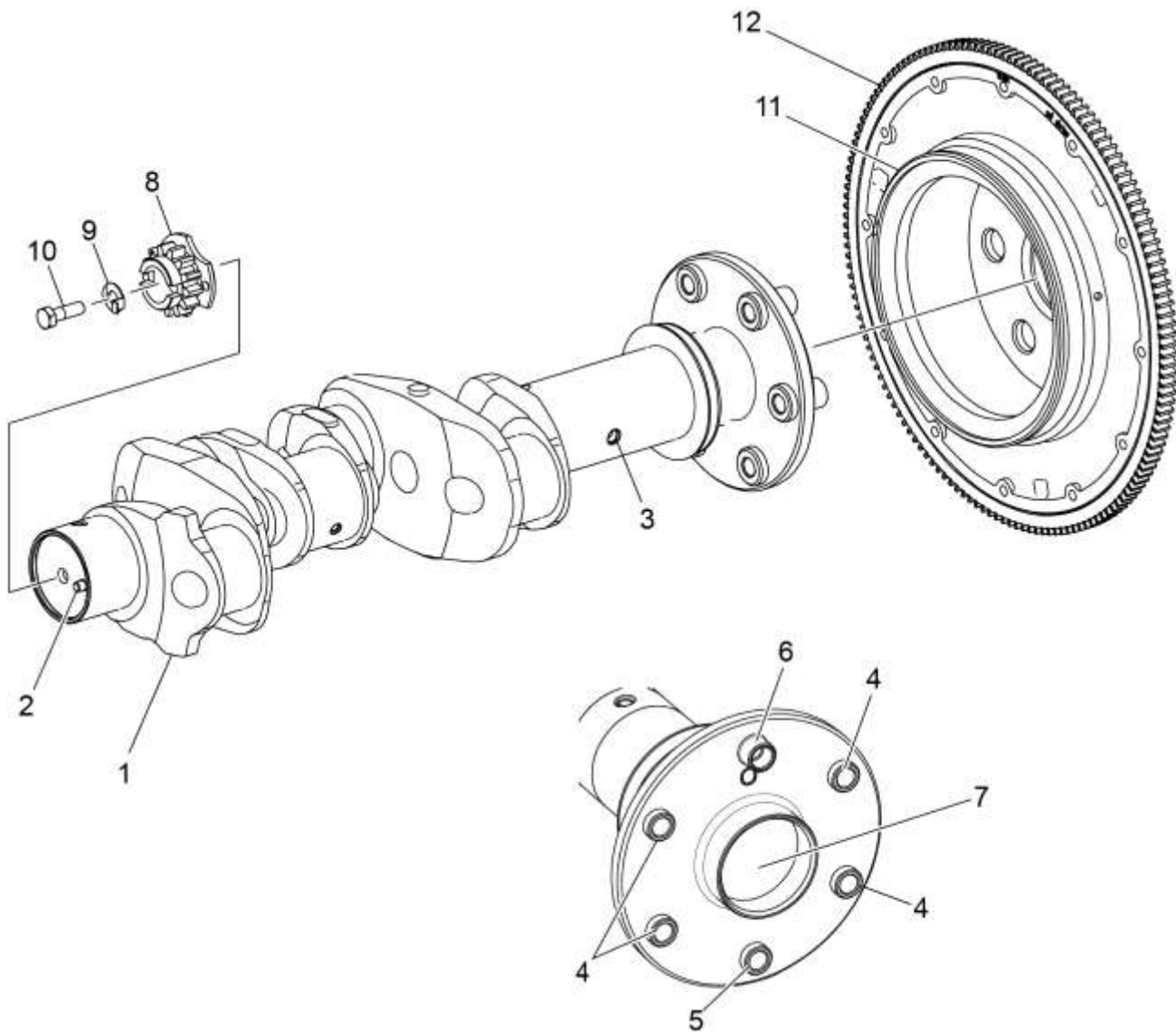


Figure 4
Crankshaft Assembly and Related Parts

Power Section

FIGURE 4 - CRANKSHAFT ASSEMBLY AND RELATED PARTS

Figure Item	Code	Part Number	Description	Units per Assembly
1		13B47121	CRANKSHAFT ASSEMBLY	1
2		STD-1065	DOWEL, Stepped, 5/16 & 1/4 diameter	1
3		68484	TUBE, Crankshaft prop, oil	1
4		75656-S	BUSHING, Propeller flange, long	4
5		72155-S	BUSHING, Propeller flange, short	1
6		75657-S	BUSHING, Propeller flange, indexing	1
7		STD-1211	PLUG, 2.00 diameter expansion	1
8	SB*	13S19646	GEAR, Crankshaft	1
9		LW-18639	LOCKPLATE, Crankshaft gear	1
10		STD-2246	BOLT, 5/16-24 x 1.00 long	1
11		74977	SUPPORT ASSEMBLY, Starter ring gear	
	•	31M22045	SUPPORT ASSEMBLY, Starter ring gear	1
12		72566	GEAR, Starter ring, 12/14 pitch	1

SB Referencing Service Bulletin
* Refer to the latest revision of Lycoming Service Bulletin No. 475 for proper installation.
• Used for ENPL-RT11232 only.

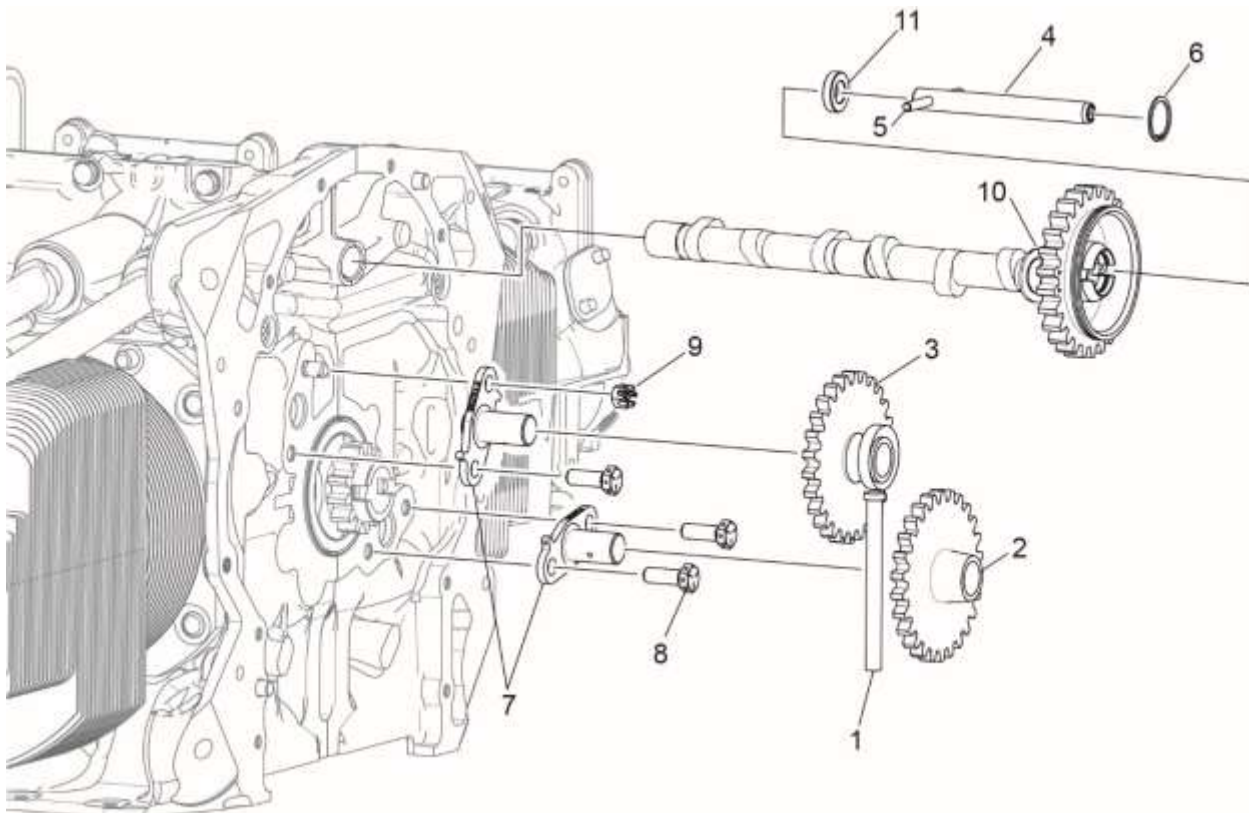


Figure 5
Crankshaft Idler Gears, Tachometer Drive and Camshaft

Power Section

FIGURE 5 - CRANKSHAFT IDLER GEARS, TACHOMETER DRIVE 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		76121	SHAFT ASSEMBLY, Tachometer	1
5		LW-18667	PIN, 3/16 diameter x 2-11/32 long	1
6		STD-2231	RING, Internal retaining (13/16)	1
7		LW-13796	SHAFT, Crankshaft idler gear	2
8		LW-31H0.88	BOLT, 5/16-18 x 7/8 long, hex. head, drilled	3
9		STD-2168	NUT, 5/16-18 NC-3 slotted shear	1
10		15M23452	CAMSHAFT ASSEMBLY (Roller tappet engines)	1
11		76118	SPACER, Tachometer shaft centering	1

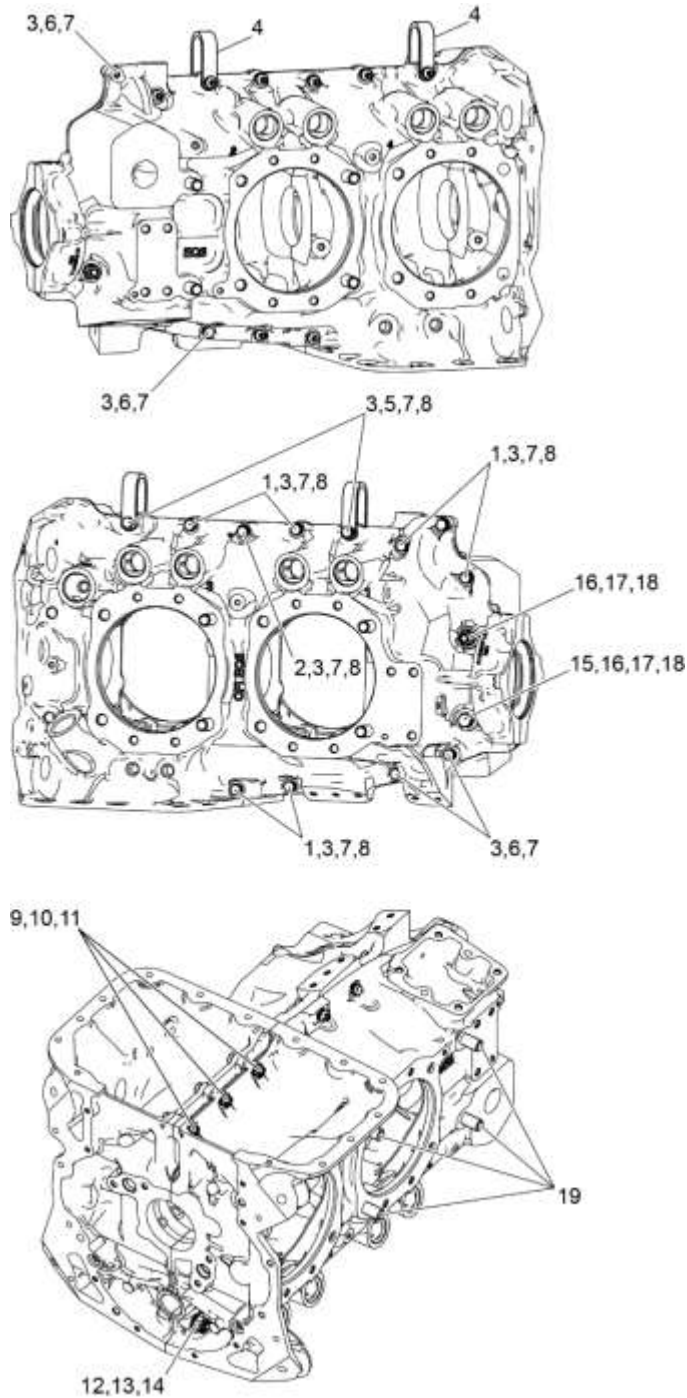


Figure 6
Crankcase Attaching Parts

Power Section

FIGURE 6 - 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	6
2		LW-25-1.63	BOLT, 1/4-20 x 1-5/8 long, hex. head	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. head	2
6		LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. head	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, drilled end	3
10		STD-8	WASHER, 1/4-20 plain (max. 9)	AR
11		STD-2249	NUT, 1/4-20 slotted	3
12		STD-33	WASHER, 3/8 plain	3
13		NAS1149F0632P	WASHER, 3/8 plain (thin)	3
14		STD-872	NUT, 3/8-24 slotted	1
15		AN6-34A	BOLT, 3/8-24 x 3-37/64 long, hex. head	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 10-11/16 long	4
AR as required				

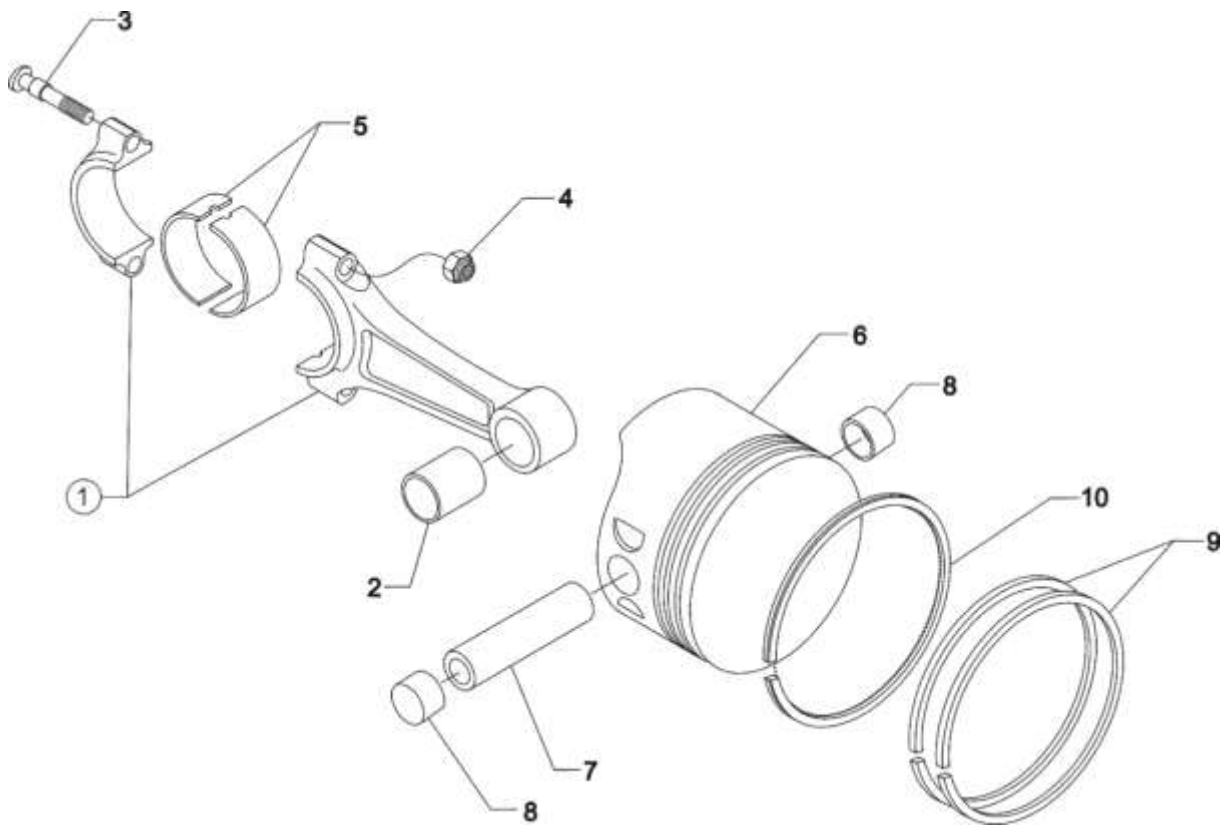


Figure 7
Connecting Rods, Pistons and Ring Assemblies

Cylinder Section

FIGURE 7 - CONNECTING RODS, PISTONS AND RING ASSEMBLIES

Figure Item	Code	Part Number	Description	Units per Assembly
1		LW-11750	CONNECTING ROD ASSEMBLY	4
2		01K28983	BUSHING, Connecting rod, upper	4
3	*	75061	BOLT, Connecting rod	8
	P	14S23890	BOLT, Connecting rod	8
4		LW-12186	NUT, Connecting rod	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		14H29884	RING, Piston, oil	4
<p>P Lycoming proprietary part. Listed for reference purposes only, cannot be purchased. * Service use only.</p>				

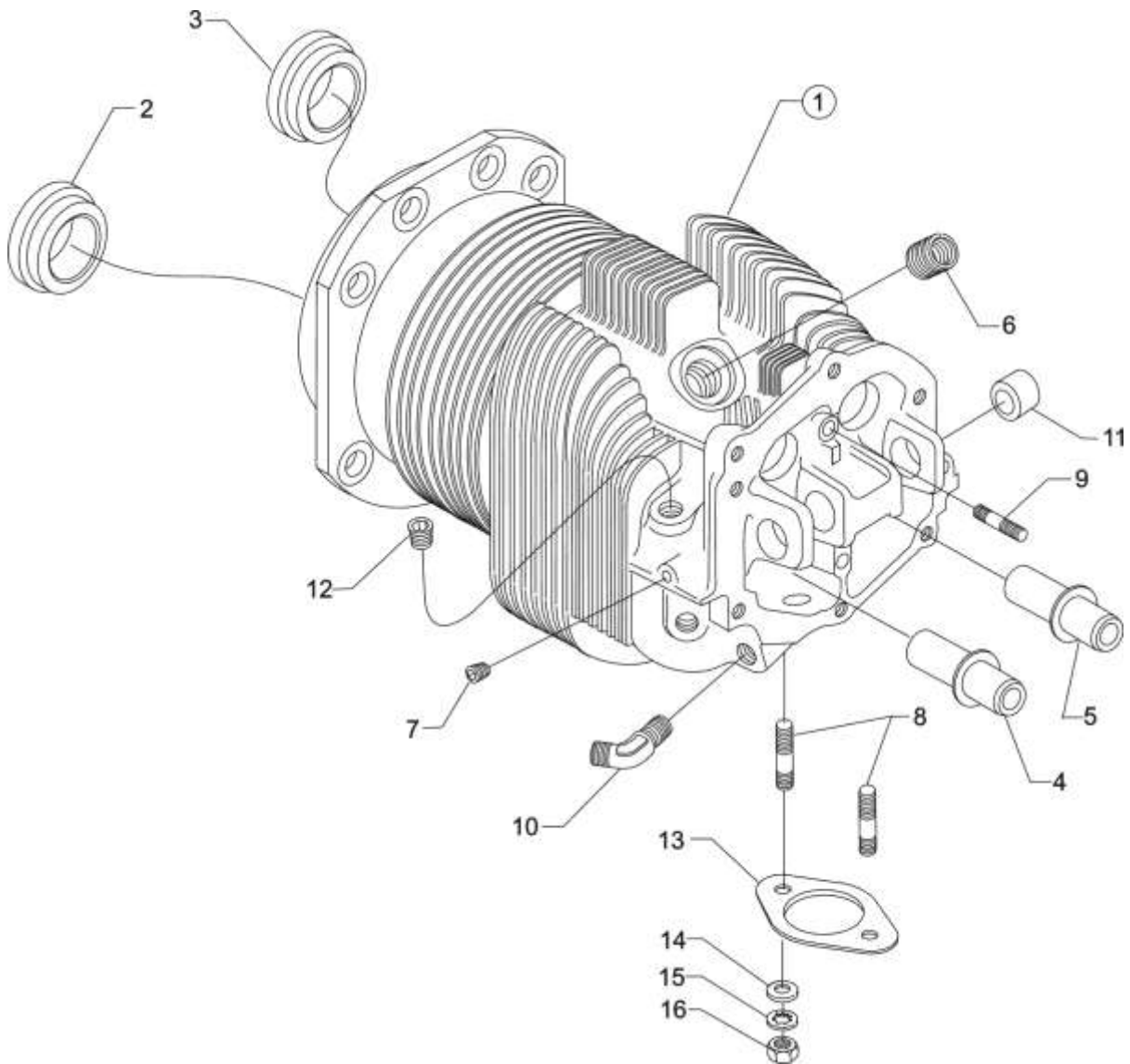


Figure 8
Cylinder Assembly

Cylinder Section
FIGURE 8 - CYLINDER ASSEMBLY

Figure Item	Code	Part Number	Description	Units per Assembly
1		16A30080-01	CYLINDER ASSEMBLY, Nitrided	4
2		72057	SEAT, Intake valve	4
3		72058	SEAT, Exhaust valve	4
4		76943	GUIDE, Valve, intake	4
5		16R22126	GUIDE, Valve, exhaust	4
6		66796	INSERT, Spark plug, 1.5 MM	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
* Used on installations without priming lines.				

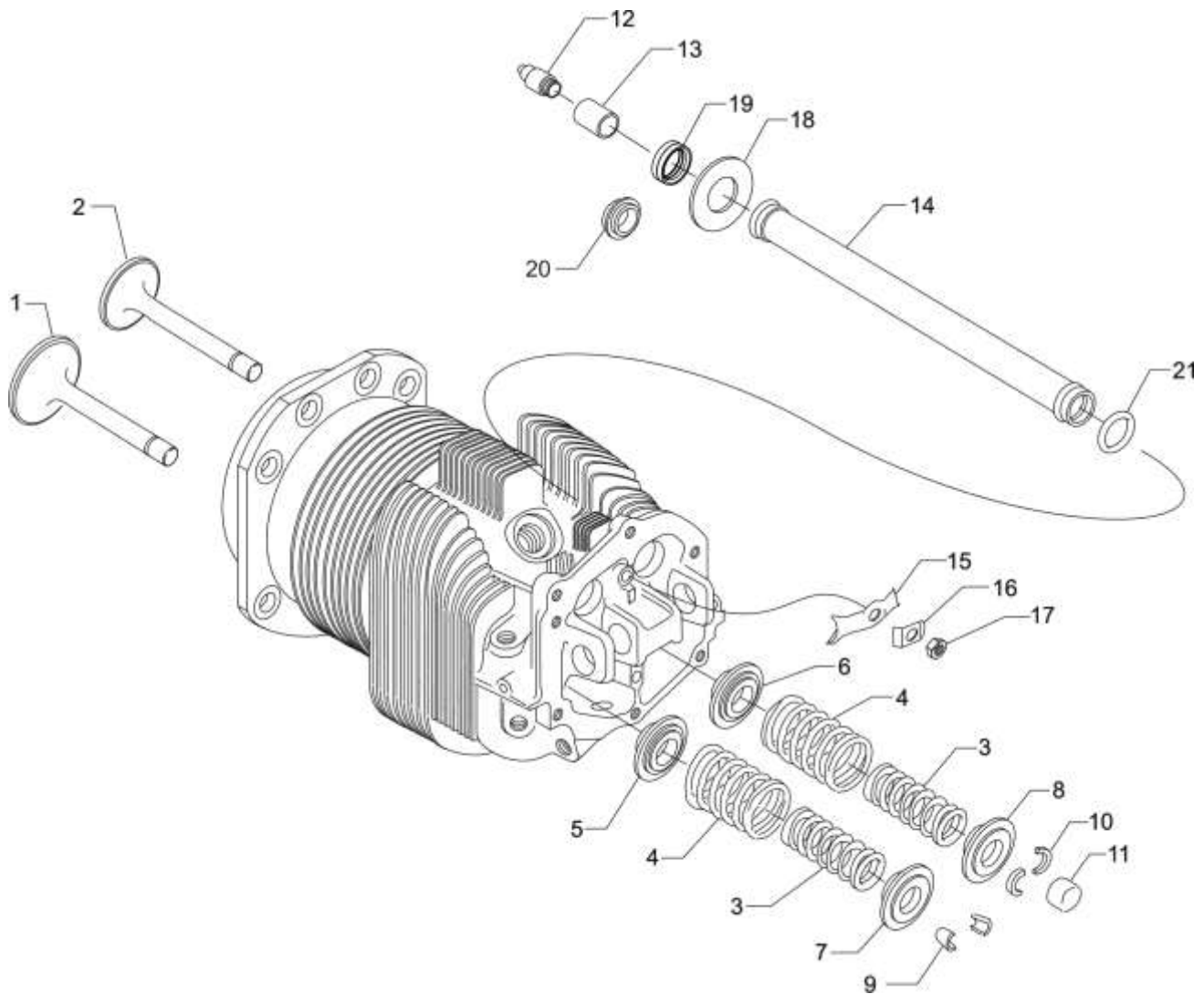


Figure 9
Valve Assembly and Related Parts

Cylinder Section

FIGURE 9 – 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		17D29055	SPRING, Valve, inner	8
4		17D29060	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		15G23461	SHROUD TUBE ASSEMBLY, Push rod (Roller tappet engines)	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 (Roller tappet engines)	8
20		06A23493	SEAL, Shroud tube (Roller tappet engines)	8
21	**	70310	SEAL, Shroud tube	8

* This seal is used on flat tappet engines only.
** This seal is used on both flat tappet and roller tappet engines.

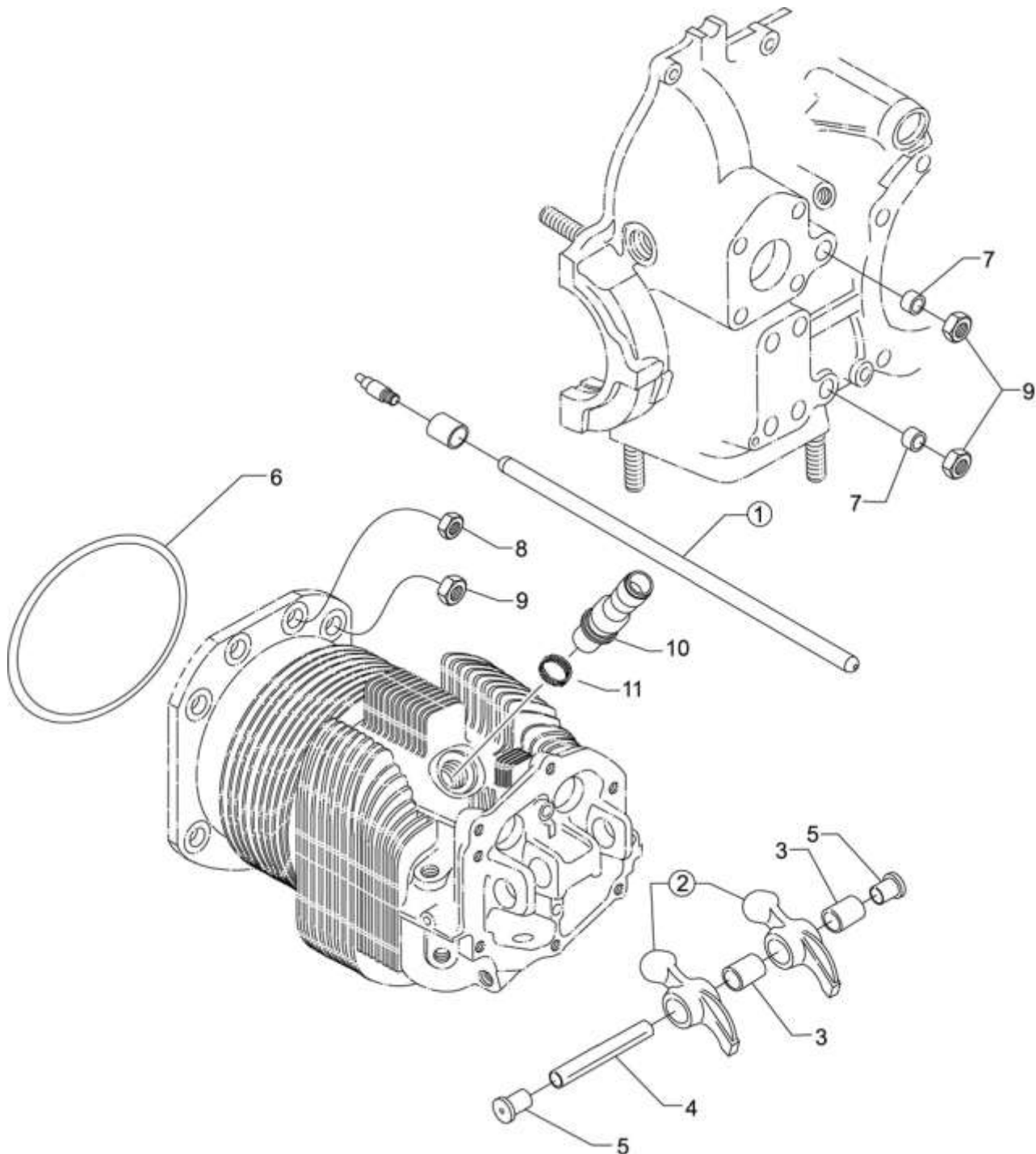


Figure 10
Cylinder Related Parts and Spark Plugs

Cylinder Section

FIGURE 10 – CYLINDER RELATED PARTS AND SPARK PLUGS

Figure Item	Code	Part Number	Description	Units per Assembly
1	*♦	15F28835-28	ROD ASSEMBLY, Push (A total of 8 required) RT	AR
	*♦	15F28835-29	ROD ASSEMBLY, Push (A total of 8 required) RT	AR
	*♦	15F28835-30	ROD ASSEMBLY, Push (A total of 8 required) RT	AR
	*♦	15F28835-31	ROD ASSEMBLY, Push (A total of 8 required) RT	AR
	*♦	15F28835-32	ROD ASSEMBLY, Push (A total of 8 required) RT	AR
	*♦	15F28835-33	ROD ASSEMBLY, Push (A total of 8 required) RT	AR
	†♦	15F28835-34	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
10	V#	1182-E7	SPARK PLUG, Champion V REM38E	8

AR as required

* These push rods are not to be used on flat tappet engines.

† This push rod can be used on both flat tappet and roller tappet engines.

‡ These push rods are not to be used on roller tappet engines.

♦ See latest revision of 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).

V Vendor Prime Manufacturer part

Item No. 1182-E7 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.

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

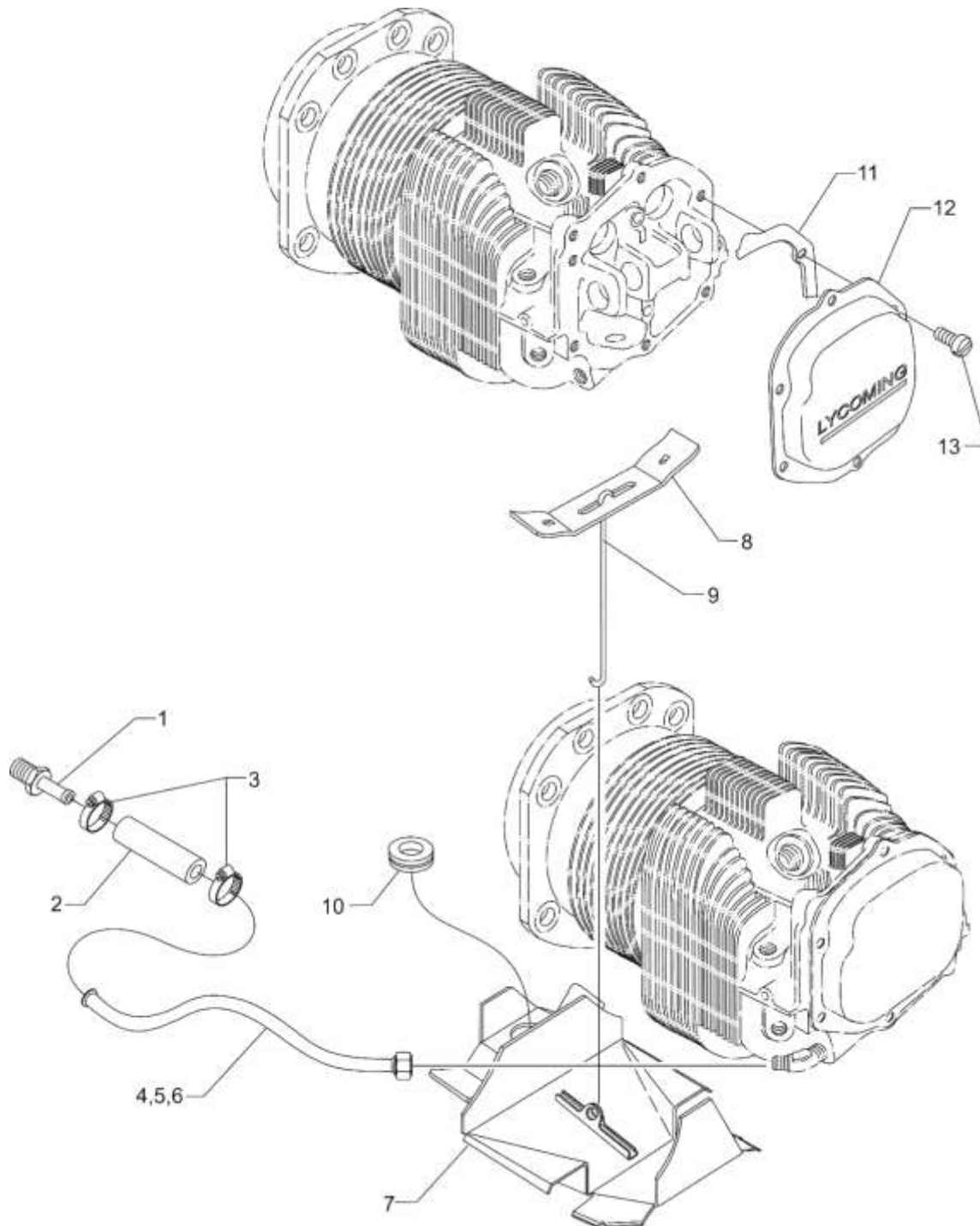


Figure 11
Cylinder Head Drain Tubes, Intercylinder Cooling Baffles and Rocker Box Covers

Cylinder Section

**FIGURE 11 –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 I.D. x 2-1/2 long	4
3		LW-15592-5-04	CLAMP, 7/16 O.D. Hose	8
4		68759	TUBE ASSEMBLY, Oil drain, cylinder no. 1	1
5		68760	TUBE ASSEMBLY, Oil drain, cylinder no. 2	1
6		68761	TUBE ASSEMBLY, Oil drain, cylinders no. 3 & 4	2
7	*	75339	BAFFLE ASSEMBLY, Intercylinder	1
	**	LW-13389	BAFFLE ASSEMBLY, Intercylinder	1
8		71611	RETAINER, Intercylinder baffle	2
9		71610	HOOK, Intercylinder baffle retainer	2
10		MS35489-20X	GROMMET	1
11		06B26669	GASKET, Rocker box cover (Silicone)	4
12		61247	COVER, Rocker box	4
13		STD-1925	SCREW, 1/4-20 x 5/8 long, pan. head, self-locking	24
<p>* Install on left side between no. 2 and no. 4 cylinders. ** Install on right side between no. 1 and no. 3 cylinders. ♦ Used with chrome rocker box cover.</p>				

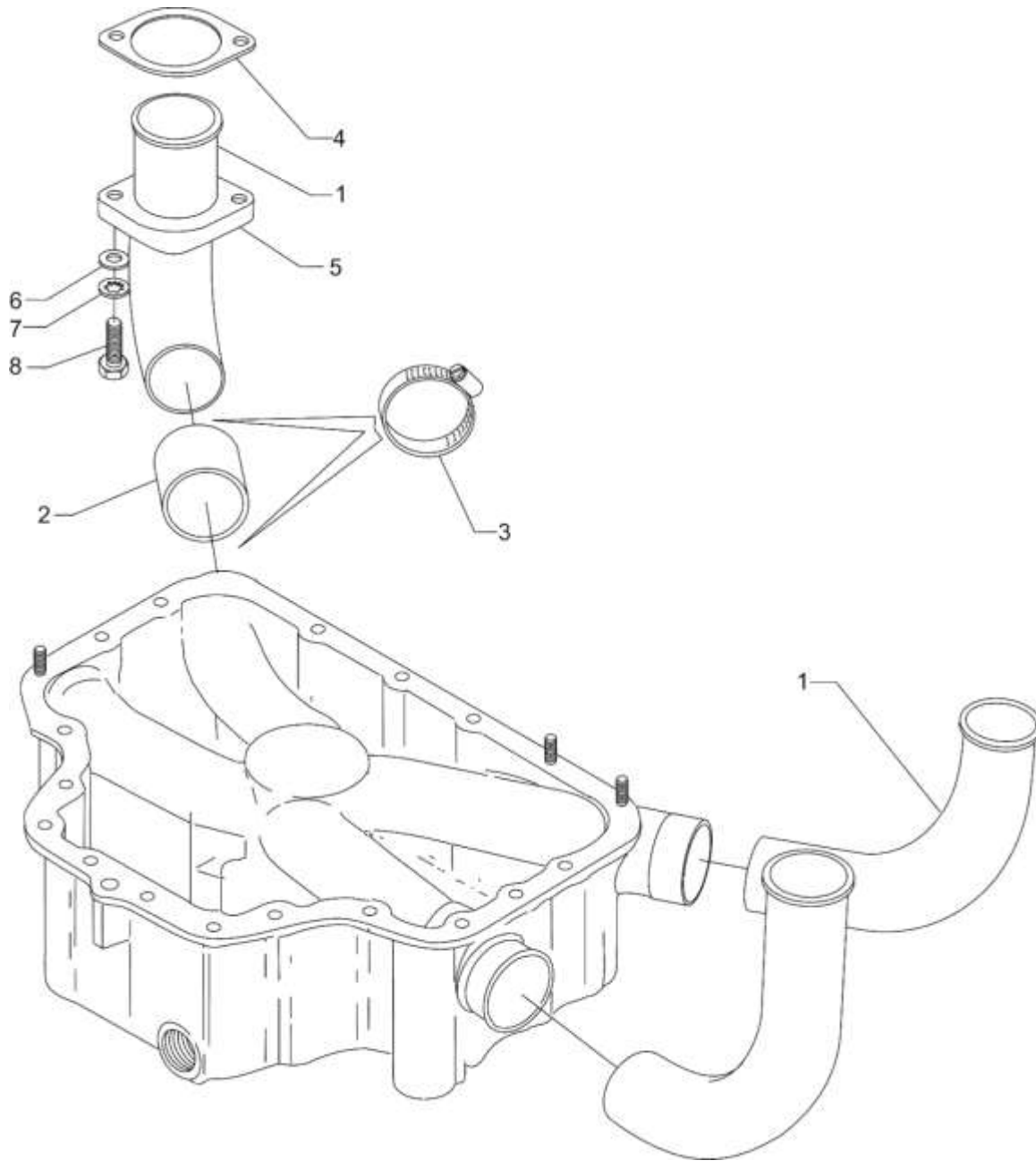


Figure 12
Intake Pipes and Attaching Parts

Cylinder Section

FIGURE 12 – INTAKE PIPES AND ATTACHING PARTS

Figure Item	Code	Part Number	Description	Units per Assembly
1		70485	PIPE, Intake	4
2		69603	HOSE, 1-3/4 I.D. x 2-3/16 O.D. x 1-3/4	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. head	8

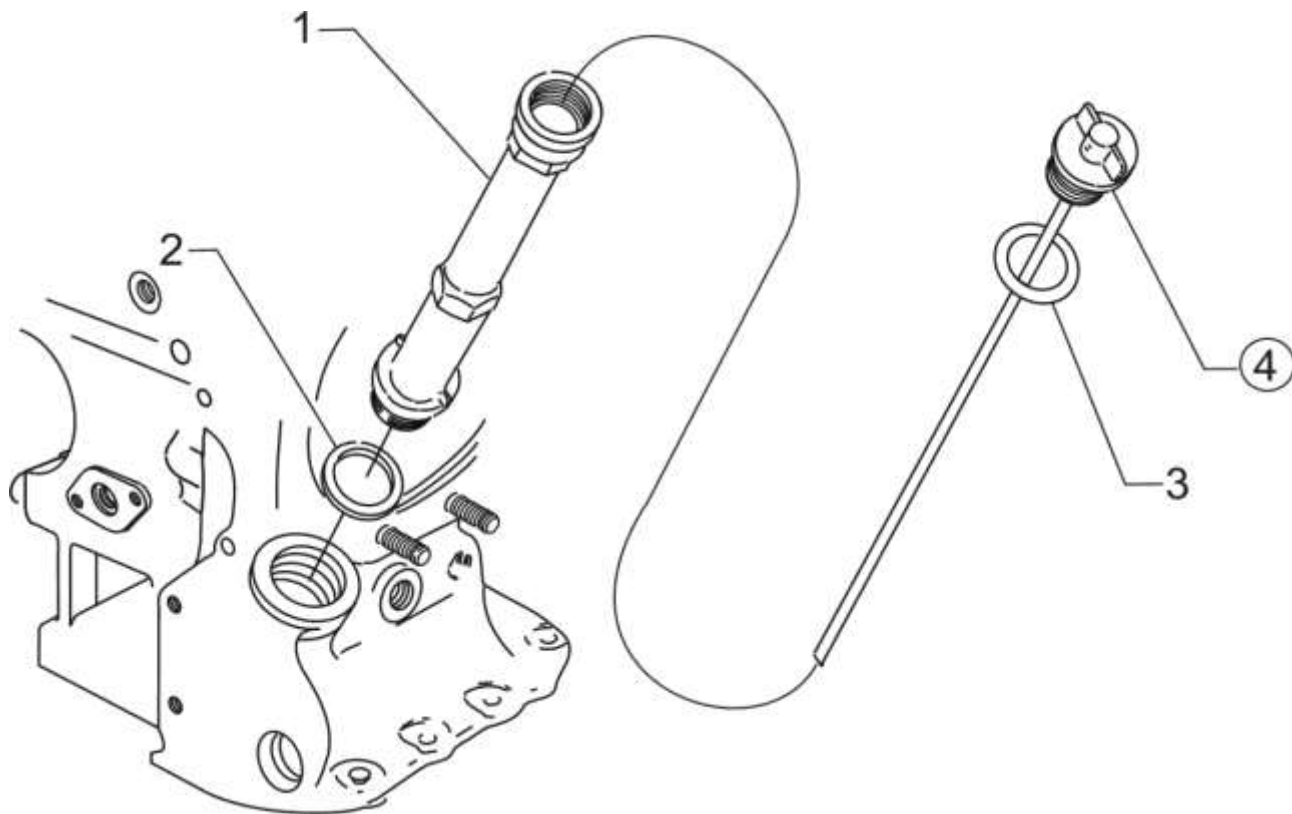


Figure 13
Oil Level Gage

Lubrication System

FIGURE 13 – OIL LEVEL GAGE

Figure Item	Code	Part Number	Description	Units per Assembly
1		56C23075	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

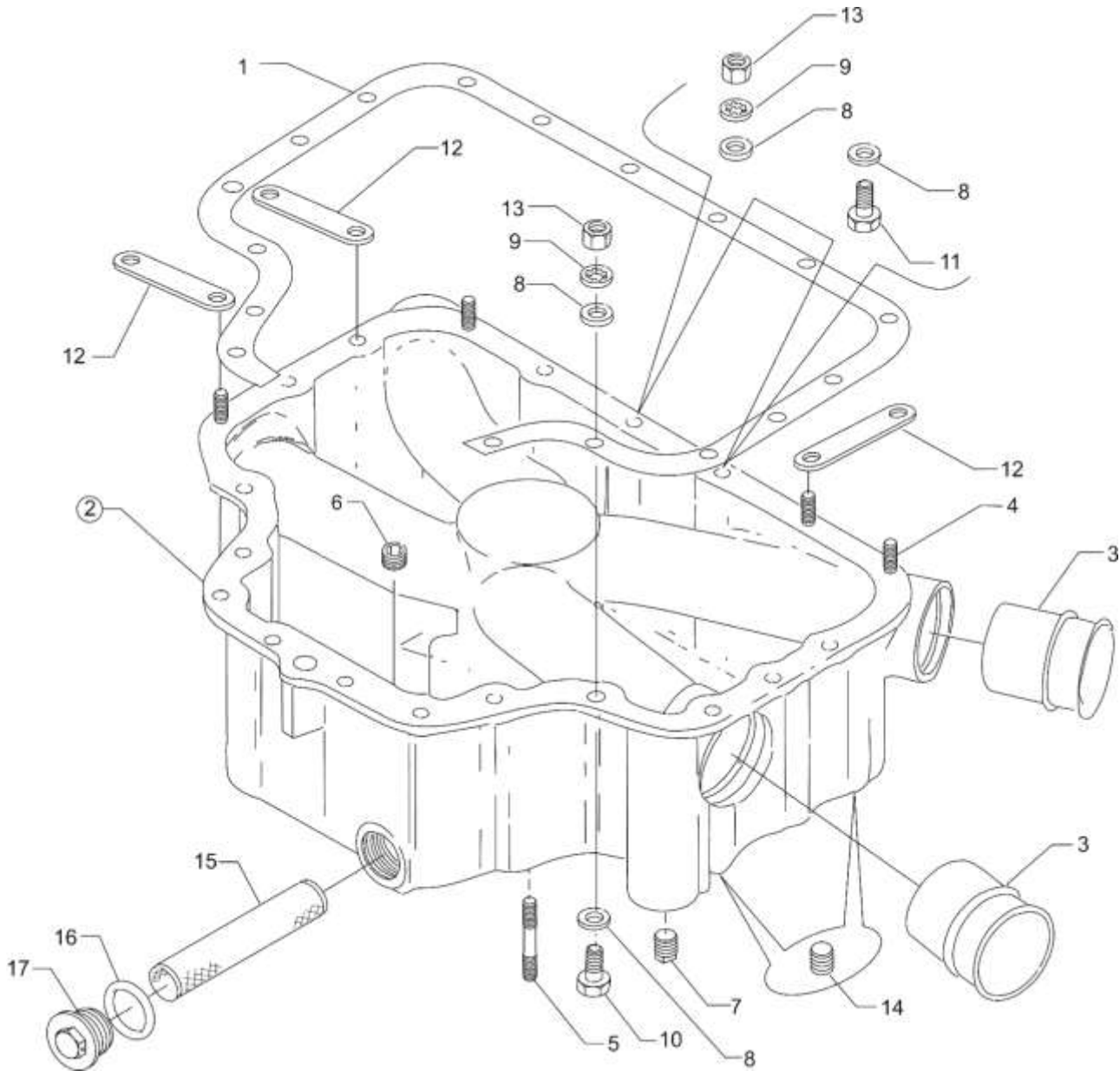


Figure 14
Oil Sump Assembly and Oil Suction Screen

Lubrication System

FIGURE 14 – OIL SUMP ASSEMBLY AND OIL SUCTION SCREEN

Figure Item	Code	Part Number	Description	Units per Assembly
1		LW-13353	GASKET, Oil sump	1
2		LW-13861	SUMP ASSEMBLY, Oil	1
3		78914	CONNECTION, Intake pipe	4
4		25C-10	STUD, 1/4-20 x 1-1/4 long	4
5		31C-17	STUD, 5/16-18 x 2-1/8 long	4
6		STD-91	PLUG, 1/2-14 NPT, allen head	1
7		STD-551	PLUG, 1/2-14 NPT, square head	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	13
11		LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. head	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, Annular, 1.00 I.D.	1
17		LW-12545	PLUG, 5/8 hex. head x 1.00-20	1

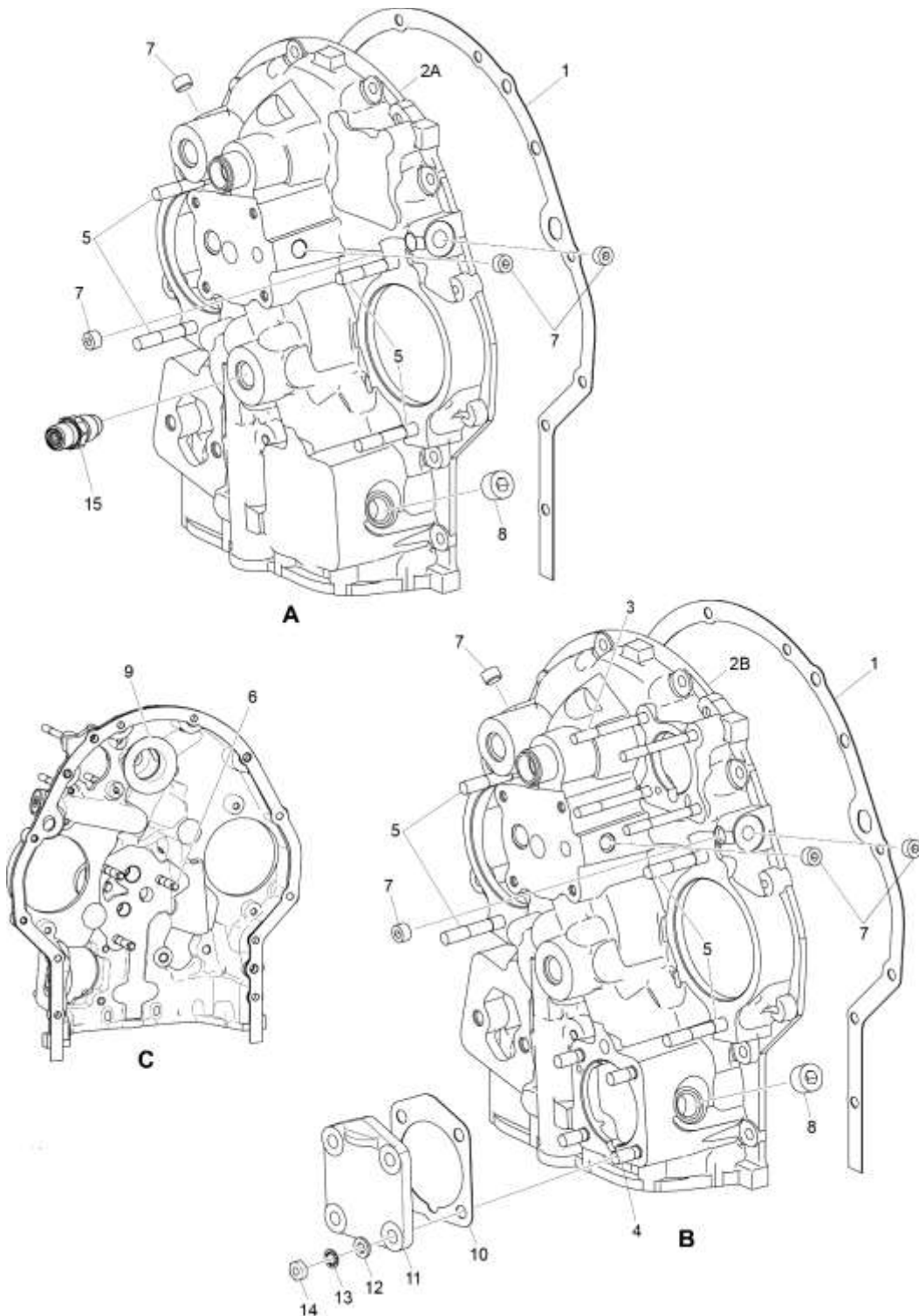


Figure 15
Accessory Housing Assembly

Accessory Drives

FIGURE 15 – ACCESSORY HOUSING ASSEMBLY

Figure Item	Code	Part Number	Description	Units per Assembly
1		73818	GASKET, Accessory housing	1
2A		21A26242-35	HOUSING ASSEMBLY, Accessory	1
2B		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 2-1/8 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
9		76119	SHIELD, Accessory breather oil	1
10		69551	GASKET, Accessory drive adapter	1
11		69106	COVER, Governor drive adapter pad	1
12		STD-35	WASHER, 5/16 plain	4
13		STD-475	WASHER, 5/16 lock, internal teeth	4
14		STD-1410	NUT, 5/16-18 plain	4
15		LW-14914	NIPPLE, 1/8 NPT TO 1/4 TUBE	1

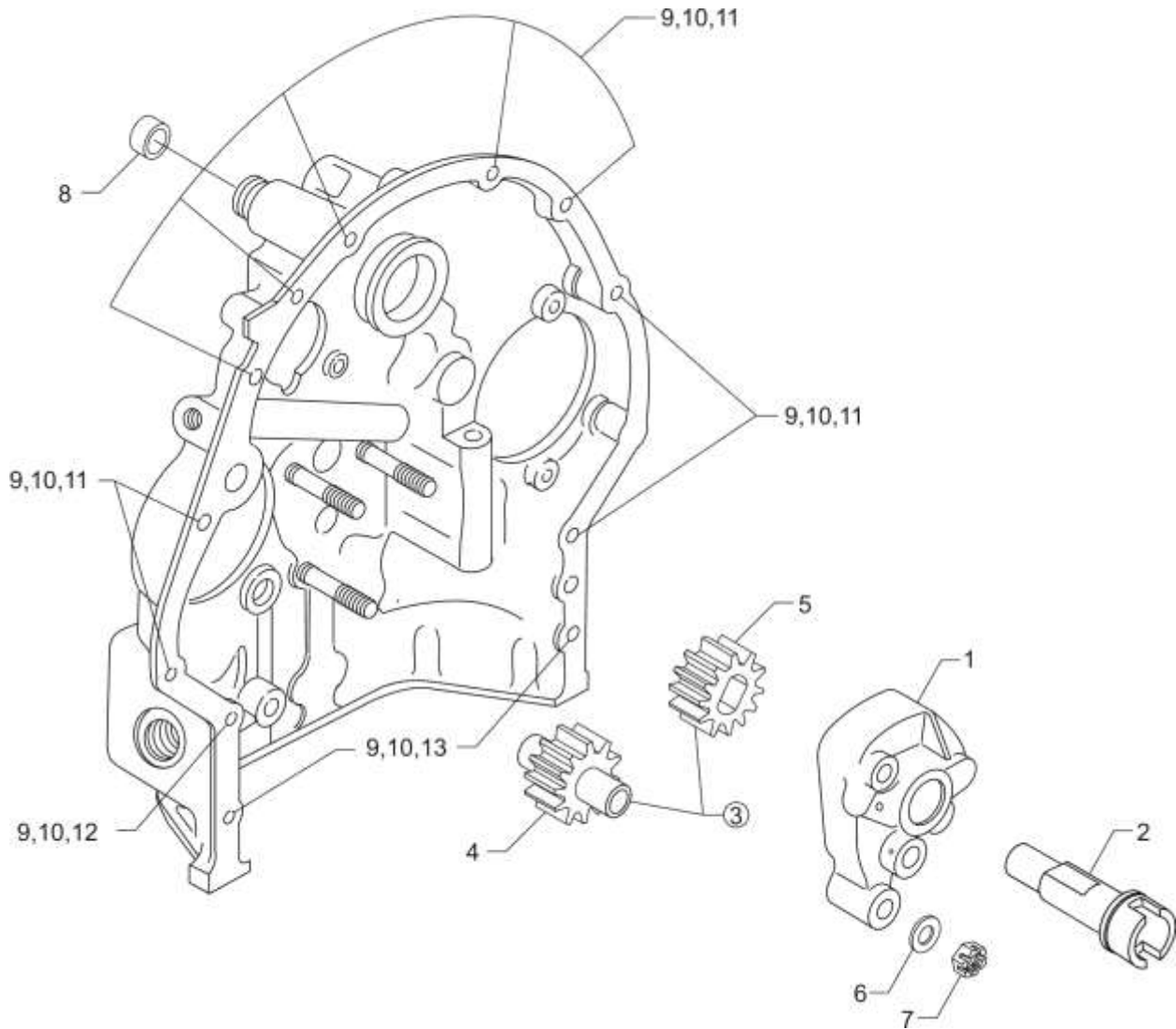


Figure 16
Oil Pump Assembly and Accessory Housing Attaching Parts

Accessory Drives

FIGURE 16 – OIL PUMP ASSEMBLY AND ACCESSORY HOUSING ATTACHING PARTS

Figure Item	Code	Part Number	Description	Units per Assembly
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-18109	IMPELLER, Oil pump driven	1
5		STD-35	WASHER, 5/16 plain	3
6		STD-1420	NUT, 5/16-18 slotted	3
7		LW-14260	SEAL, Oil, tachometer drive	1
8		STD-8	WASHER, 1/4 plain	12
9		STD-160	WASHER, 1/4 lock, internal teeth	12
10		LW-25-0.94	BOLT, 1/4-20 x 15/16 long, hex. head	9
11		LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. head	1
12		LW-25-1.44	BOLT, 1/4-20 x 1-7/16 long, hex. head	2

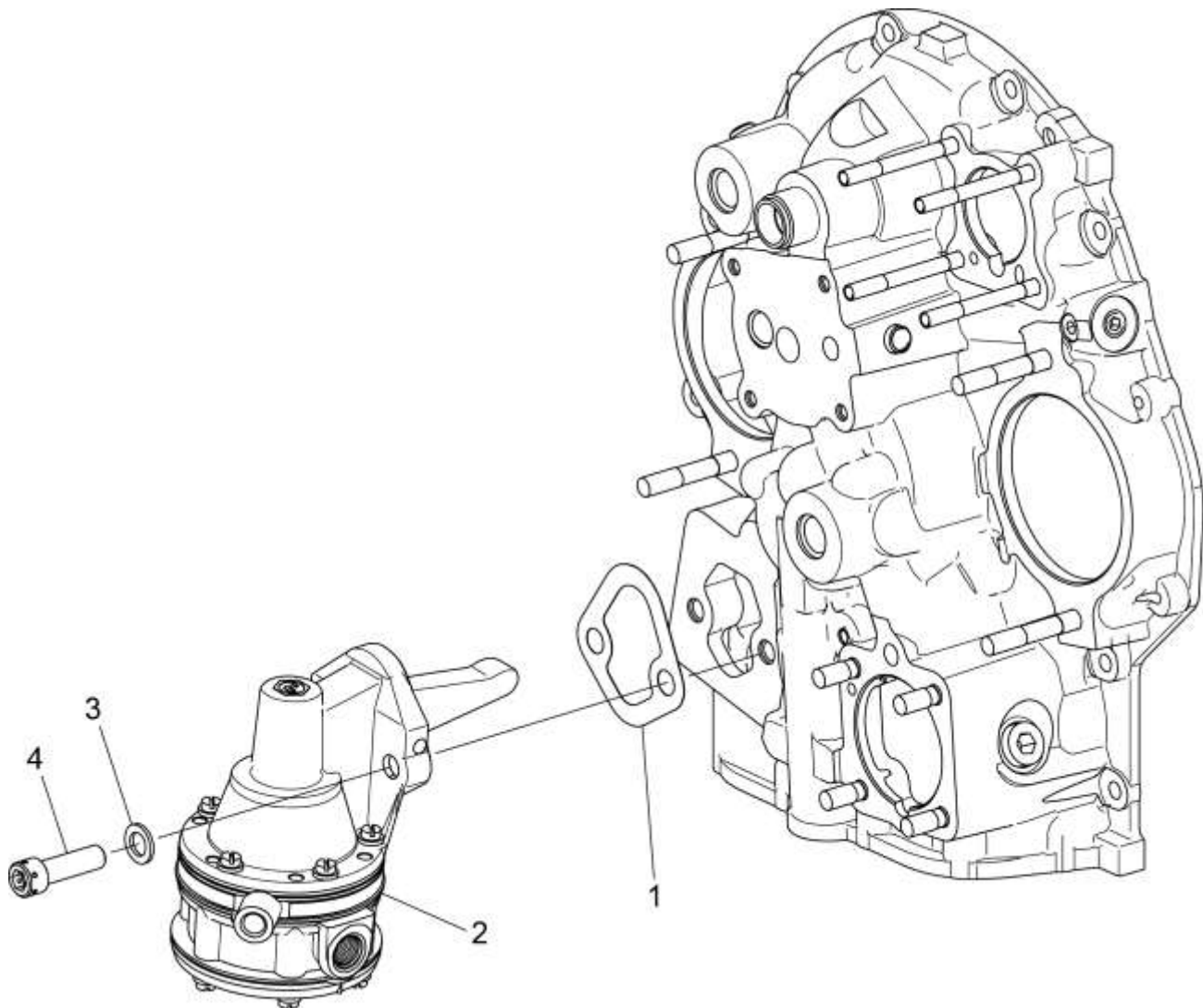


Figure 17
Fuel Pump Assembly and Attaching Parts

Accessory Drives

FIGURE 17 – 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 head, drilled	2

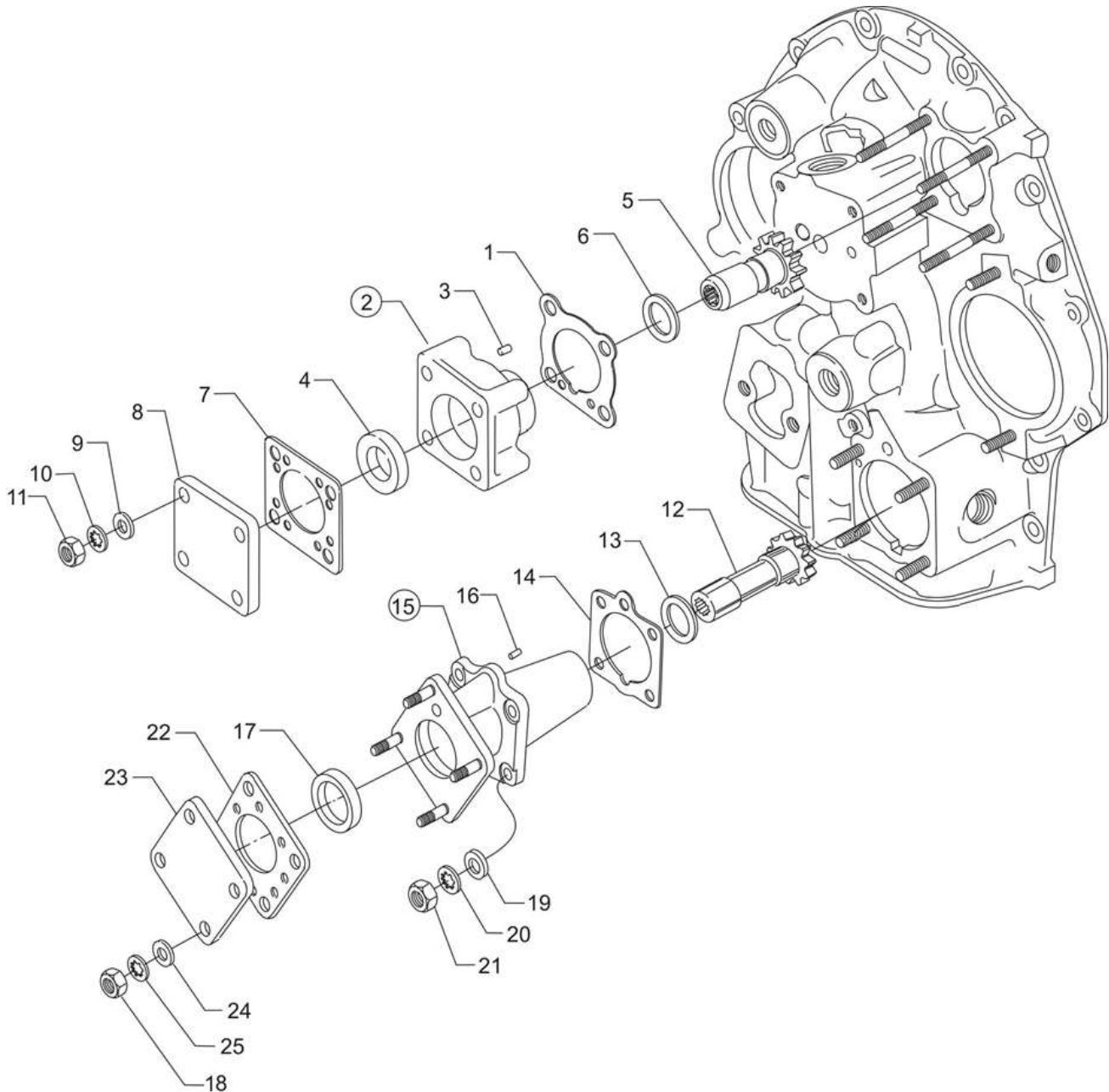


Figure 18
Vacuum and Hydraulic Pump Drives and Covers

Accessory Drives

FIGURE 18 – VACUUM AND HYDRAULIC PUMP DRIVES AND COVERS

Figure Item	Code	Part Number	Description	Units per Assembly
1		61183	GASKET, Accessory adapter	1
2		28F21254	ADAPTER ASSEMBLY, Vacuum pump	1
3		STD-1774	PIN, 1/8 diameter x 1/4 long	1
4		06A19956	OIL SEAL, 7/8 I.D. x 1-1/2 O.D. x 5/16	1
5		72970	GEAR ASSEMBLY, 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 ASSEMBLY, Hydraulic pump driven	1
13		71596	WASHER, Accessory drive gear	1
14		68315	GASKET, Accessory drive adapter	1
15		27D21252	ADAPTER ASSEMBLY, Hydraulic pump	1
16		STD-1774	PIN, 1/8 diameter 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		STD-1411	NUT, 1/4-20 plain	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

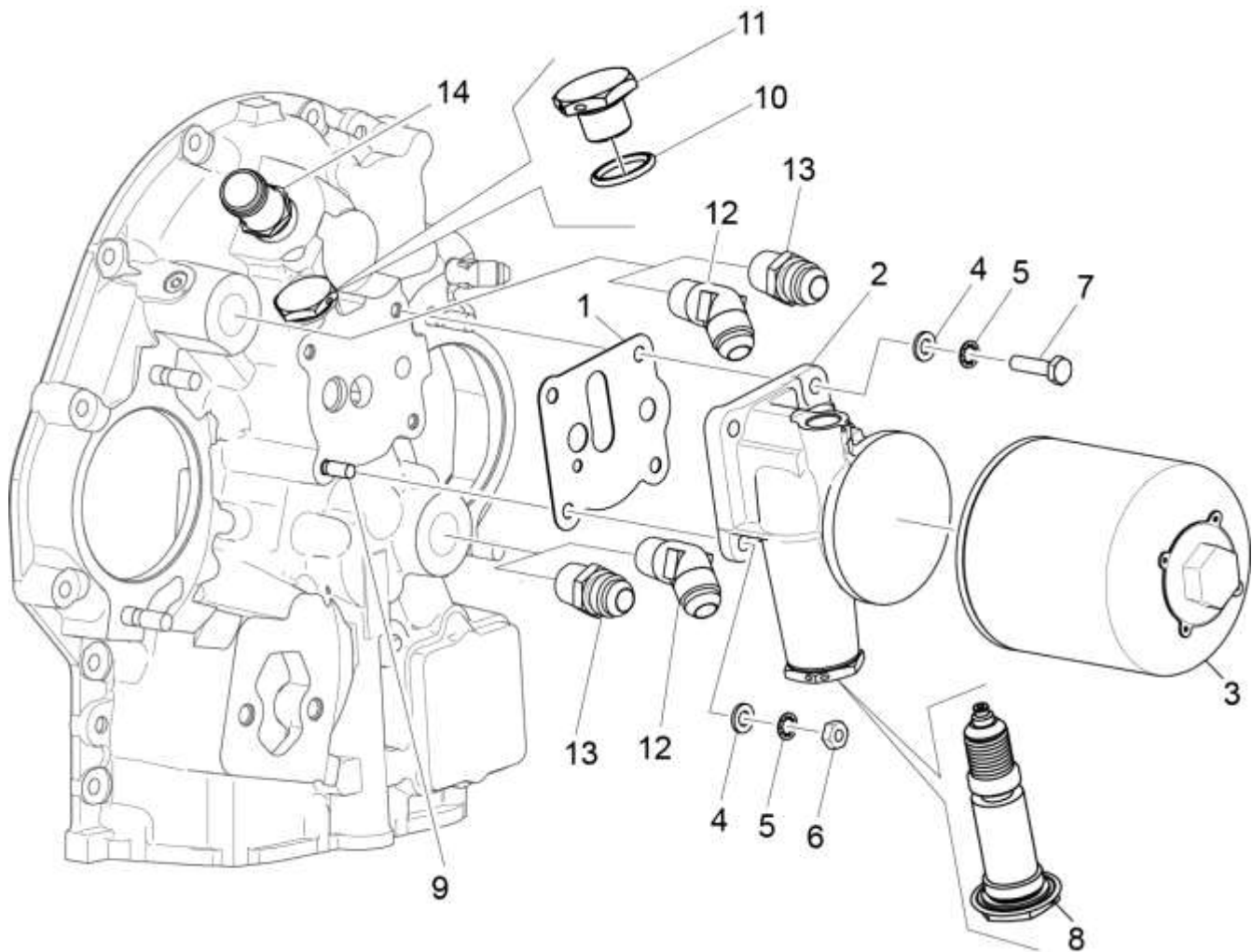


Figure 19
Oil Filter Assembly, Oil Cooler Bypass Valve and Breather Fitting

Accessory Drives

**FIGURE 19 – OIL FILTER ASSEMBLY, OIL COOLER BYPASS VALVE
AND BREATHER FITTING**

Figure Item	Code	Part Number	Description	Units per Assembly
1		06B23862	GASKET, Oil filter adapter	1
2		77852	OIL FILTER BASE ASSEMBLY	1
3		LW-13215	OIL FILTER, Short	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 with gasket	1
9		25C-10	STUD, 1/4-20 x 1-1/4 long	1
10		06E19769-0.63	GASKET, Annular, 5/8 I.D.	1
11		62417	PLUG, Oil cooler bypass	1
*12		MS20823-8	ELBOW, 3/8 NPT, 1/2 flared tube	1
*13		AN816-8	NIPPLE, 1/2 flared tube	1
14		71140	FITTING, Breather	2

NOTE: Refer to latest revision of Lycoming SSP-885 for oil filter kits and replacement filters.

* Some configurations of the IO-360-B4A will have the elbow P/N MS20823-8 installed in the upper oil cooler boss and the nipple P/N AN816-8 installed in the lower oil cooler boss. Other configurations will have the nipple P/N AN816-8 installed in the upper oil cooler boss and the elbow P/N MS20823-8 installed in the lower oil cooler boss

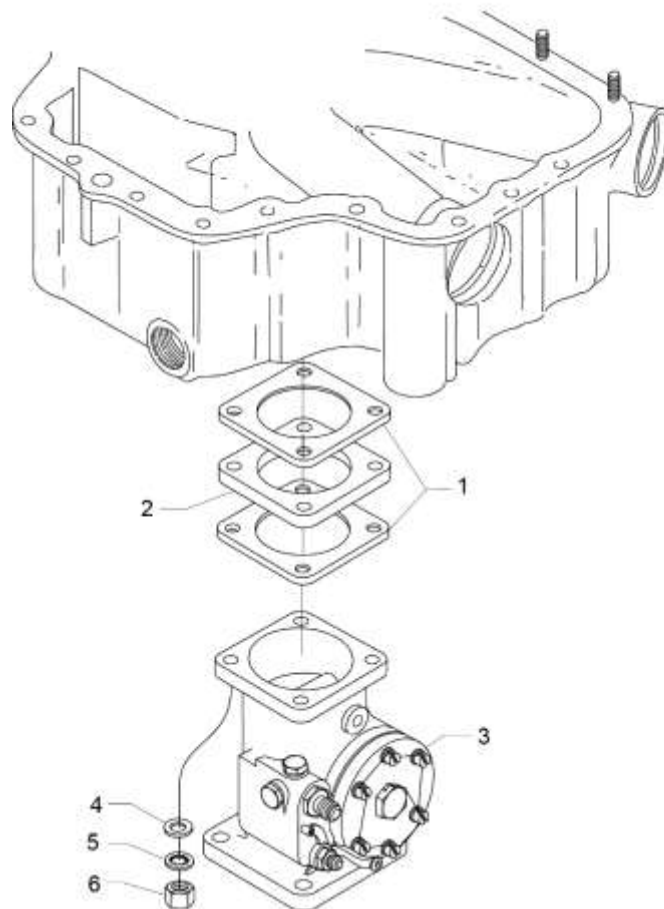
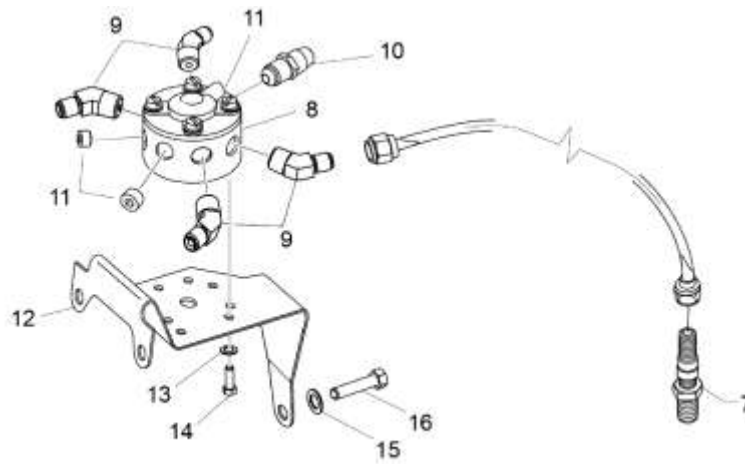


Figure 20A
Fuel Injector, Fuel Manifold and Brackets

Fuel Distribution

FIGURE 20A – FUEL INJECTOR, FUEL MANIFOLD AND BRACKETS

Figure Item	Code	Part Number	Description	Units per Assembly
1		66224	GASKET, Fuel injector	2
2		73161	SPACER, Fuel injector	1
3	V *	61J28702	INJECTOR, Fuel, LFR-NNSS5, AV 2581600	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		63C26450	NOZZLE, Injection	4
8		63B28703	MANIFOLD ASSEMBLY, Fuel	1
9		AN791-2	ELBOW, Union 45 degree, 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		75009	BRACKET, Fuel manifold	1
13		STD-251	WASHER, No. 10 lock, internal teeth	4
14		STD-82	SCREW, No. 10-24 x 1/2 long, fill. head	4
15		STD-160	WASHER, 1/4 lock, internal teeth	1
16		LW-25-0.50	BOLT, 1/4-20 x 1/2 long, hex head	1
<p>V Vendor Prime Manufacturer part * Refer to SI 1532 for a list of approved alternate Fuel Injectors.</p>				

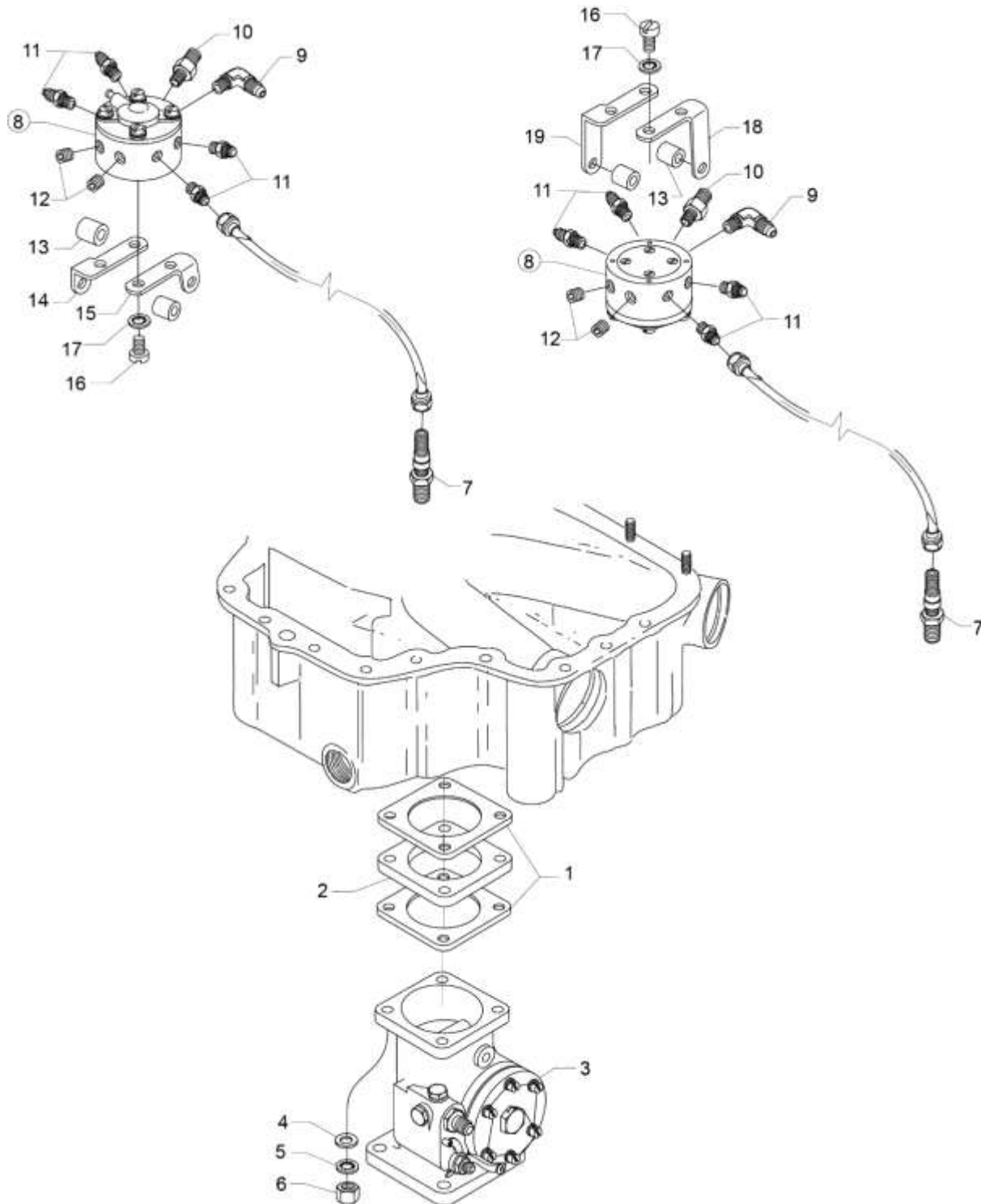


Figure 20B
Fuel Injector, Fuel Manifold and Brackets

Fuel Distribution

FIGURE 20B – FUEL INJECTOR, FUEL MANIFOLD AND BRACKETS

Figure Item	Code	Part Number	Description	Units per Assembly
1		66224	GASKET, Fuel injector	2
2		73161	SPACER, Fuel injector	1
3	V *	61J26428	FUEL INJECTOR, RSA-5AD1, V AV 2576536-2	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		63C26450	NOZZLE, Injection	4
8		63B26449	MANIFOLD ASSEMBLY, Fuel	1
10		02G21382	NIPPLE, Nozzle pressure gage	1 or 0
11		STD-148	NIPPLE, Union, 1/8 NPT	4
12		1102	PLUG, 1/8-27 NPT, allen head	2 or 3
13		73966	SPACER, Fuel manifold	2
14		07A23031	BRACKET, Fuel manifold	1
15		07A23032	BRACKET, Fuel manifold	1
16		STD-82	SCREW, No. 10-24 x 1/2 long, fill. Head	4
17		STD-251	WASHER, No. 10 lock, internal teeth	4
18	**	07A22995	BRACKET, Fuel manifold	1
19	**	07A22996	BRACKET, Fuel manifold	1

V Vendor Prime Manufacturer part
***** Refer to SI 1532 for a list of approved alternate Fuel Injectors.
****** Use brackets 07A22995 and 07A22996 for inverted fuel manifold. Refer to the latest revision of Service Instruction No. 1502 for additional details.

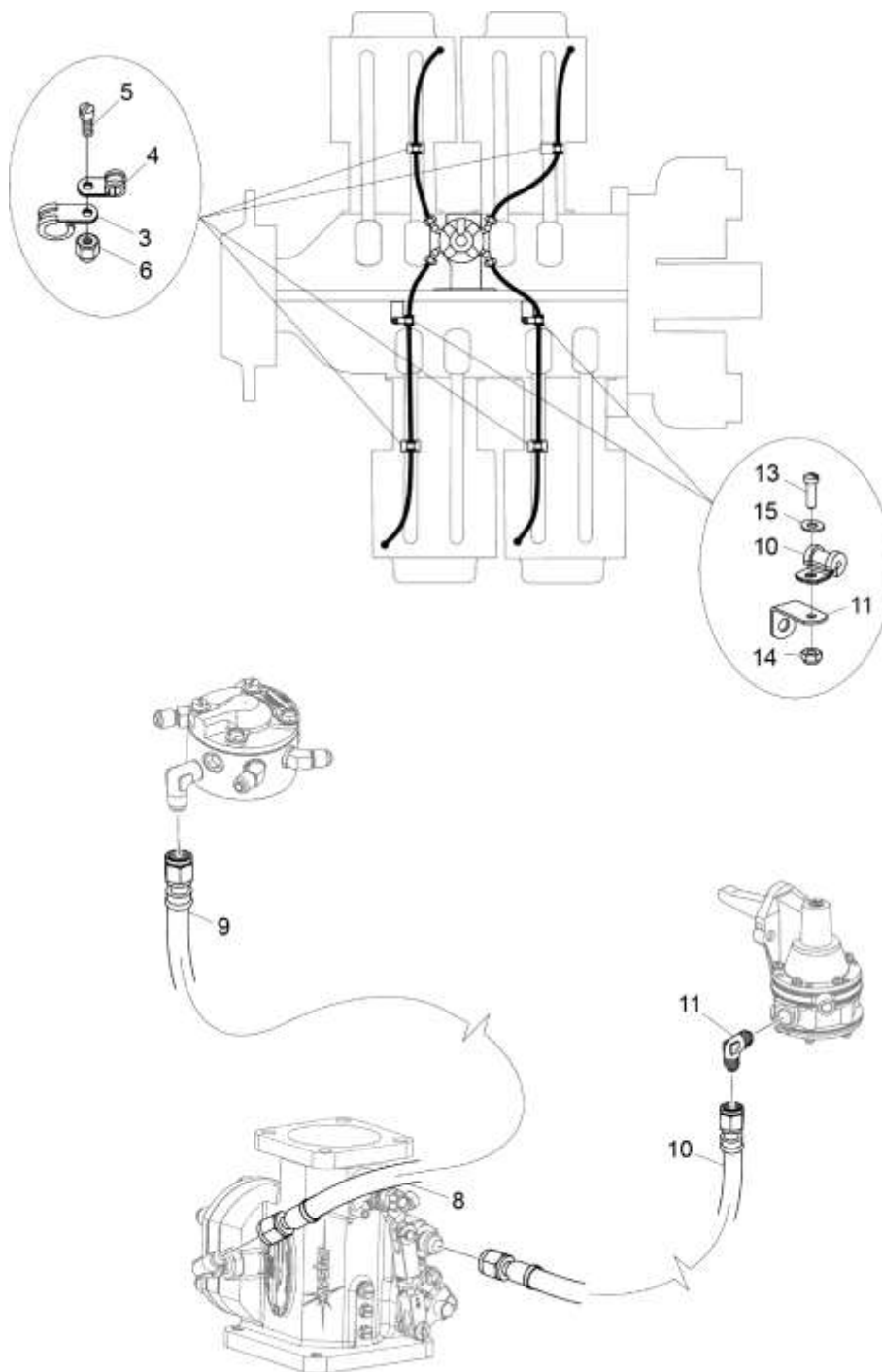


Figure 21A
Fuel Lines, Fuel Hoses and Attaching Parts

Fuel Distribution

FIGURE 21A - FUEL LINES, FUEL HOSES 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, 3/4 ID x no. 10 screw	4
4		LW-16266-10-13	CLAMP, 1/8 diameter x 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 injector line	2
8		LW-12798-4S340	HOSE ASSEMBLY, 1/4 hose, straight	1
9		LW-12798-4S130	HOSE ASSEMBLY, 1/4 hose, straight	1
10		LW-12799-6S180	HOSE ASSEMBLY, 3/8 hose, straight	1
11		72377-CT	ELBOW, 3/8 flared tube, adjustable	1

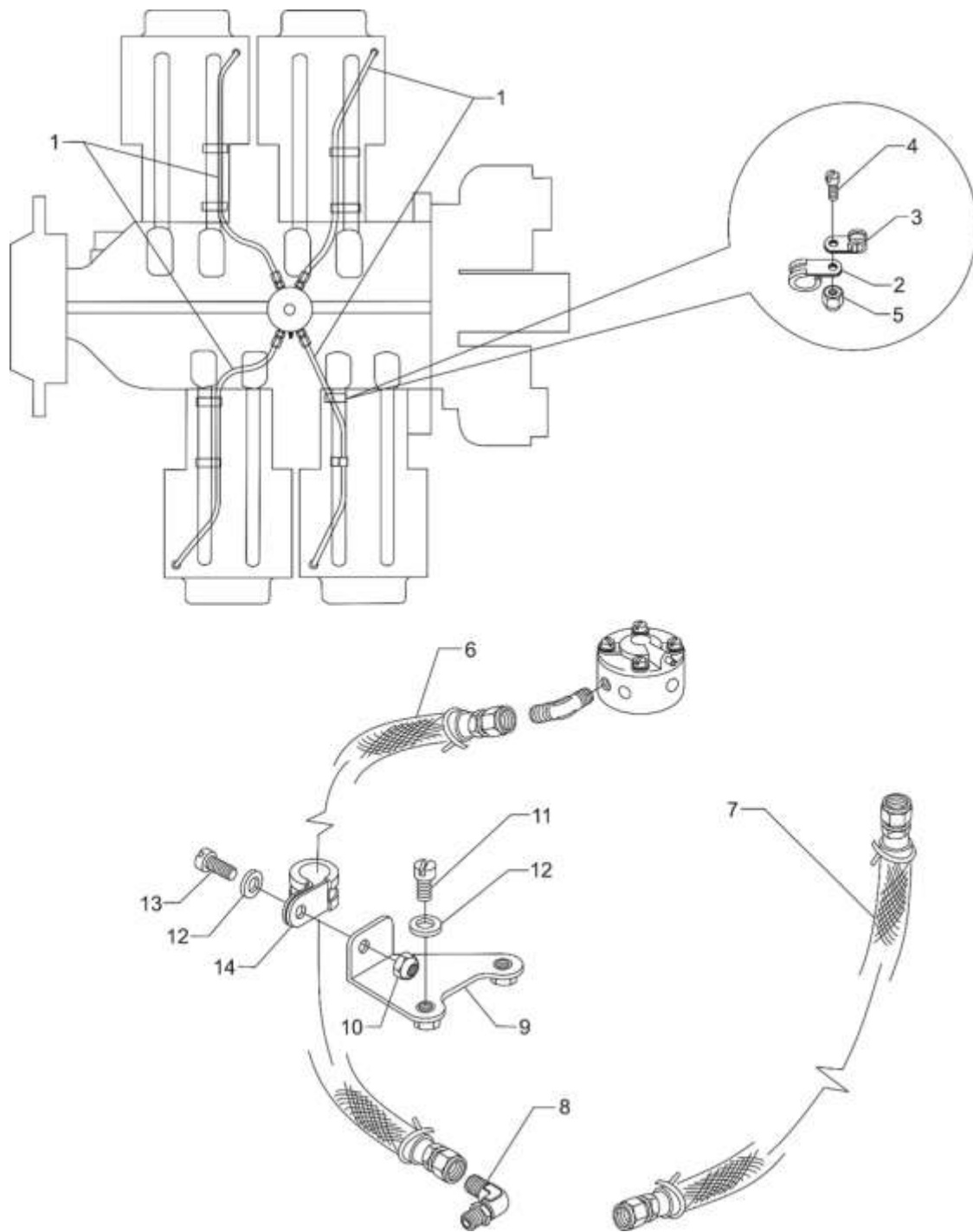


Figure 21B
Fuel Lines, Fuel Hoses and Attaching Parts

Fuel Distribution

FIGURE 21B - FUEL LINES, FUEL HOSES AND ATTACHING PARTS

Figure Item	Code	Part Number	Description	Units per Assembly
1		LW-12098-0-180	TUBE ASSEMBLY, Fuel manifold to nozzle	4
2		LW-16266-10-75	CLAMP	8
3		LW-16266-10-13	CLAMP, 1/8 diameter for no. 10 screw	8
4		STD-860	SCREW, No. 10-32 x 5/8 long, fill. head	8
5		STD-670	LOCKNUT, No. 10-32	8
6		LW-12798-4S370	HOSE ASSEMBLY, 1/4 hose, straight	1
7		LW-12799-6S180	HOSE ASSEMBLY, 3/8 hose, straight	1
8		72377-CT	ELBOW, 3/8 flared tube, adjustable	1
9		07A28507	BRACKET ASSEMBLY, Fuel line support	1
10		STD-670	LOCKNUT, No. 10-32	1
11		STD-692	SCREW, No. 10-32 x 1/2 long, round head	2
12		STD-425	WASHER, No. 10 plain	3
13		STD-860	SCREW, No. 10-32 x 5/8 long, fill head	1
14		LW-16266-10-63	CLAMP	1

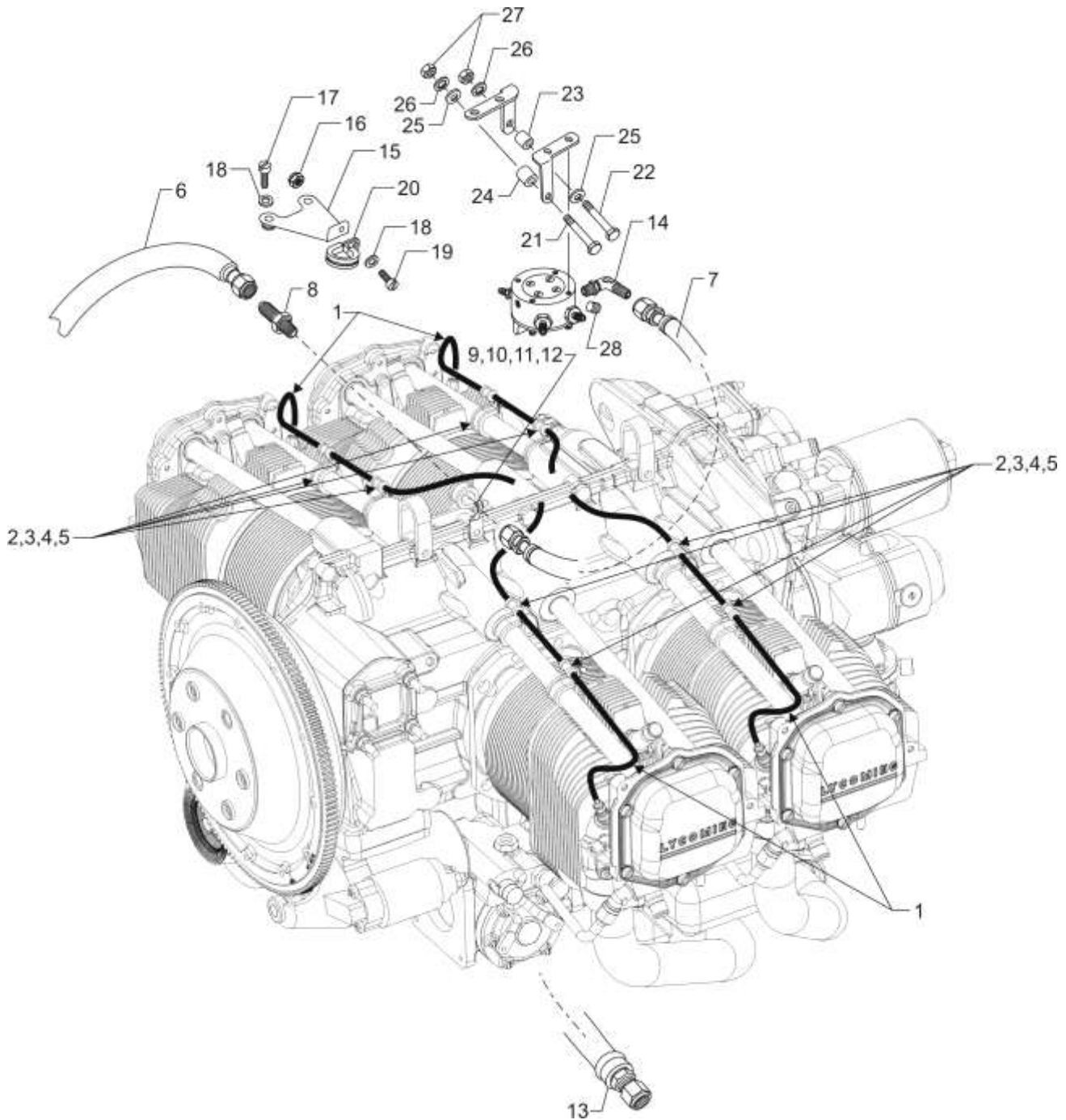


Figure 21C
Fuel Lines, Fuel Hoses and Attaching Parts (Inverted Manifold)

Fuel Distribution

FIGURE 21C - FUEL LINES, FUEL HOSES AND ATTACHING PARTS (INVERTED MANIFOLD)

Figure Item	Code	Part Number	Description	Units per Assembly
1		LW-12098-0-180	TUBE ASSEMBLY, Fuel manifold to nozzle	4
2		LW-16266-10-75	CLAMP	8
3		LW-16266-10-13	CLAMP, 1/8 diameter for no. 10 screw	8
4		STD-860	SCREW, No. 10-32 x 5/8 long, fill. head	8
5		STD-670	LOCKNUT, No. 10-32	8
6		LW-12798-4S370	HOSE ASSEMBLY, 1/4 hose, straight	1
7		LW-12798-4S172	HOSE ASSEMBLY, 1/4 hose, straight	1
8		AN815-4	UNION, 1/4 flared tube	1
9		72815	BRACKET, Support clamp, 90°	1
10		STD-860	SCREW, No. 10-32 x 5/8 long, fill. head	1
11		STD-670	LOCKNUT, No. 10-32	1
12		LW-16266-10-63	CLAMP, 5/8 I.D. x no. 10 screw	1
13		LW-12799-6S180	HOSE ASSEMBLY, 3/8 hose, straight	1
14		72377	ELBOW, 3/8 flared tube, adjustable	1
15		07A28507	BRACKET ASSEMBLY, Fuel line support	1
16		STD-670	LOCKNUT, No. 10-32	1
17		STD-692	SCREW, No. 10-32 x 1/2 long, round head	2
18		STD-425	WASHER, No. 10 plain	3
19		STD-860	SCREW, No. 10-32 x 5/8 long, fill. head	1
20		LW-16266-10-63	CLAMP	1
21		LW-25-2.31	BOLT, 1/4-20 x 2-5/16 long, hex. head	1
22		LW-25-2.00	BOLT, 1/4-20 x 2.00 long, hex. head	1
23		74655	SPACER, Fuel manifold bracket	1
24		73966	SPACER, Fuel manifold bracket	1
25		STD-8	WASHER, 1/4 plain	4
26		STD-160	WASHER, 1/4 lock, internal teeth	2
27		STD-1411	NUT, 1/4-20 plain	2
28		1102	PLUG, 1/8-27 NPT, allen head	1

Distribution

FIGURE 22 -MAGNETOS, MAGNETO DRIVES AND HARNESSSES

Figure Item	Code	Part Number	Description	Units per Assembly
1		61665	GEAR, Magneto, impulse	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, impulse coupling	2
5		LW-12681	GASKET, Magneto	2
6	V	66GC25SFNN	MAGNETO, Impulse, right and left, Slick V 4373	2
	*	66GHC25SANN	MAGNETO, (ES4373)	2
7	V	67P20408	HARNESS ASSEMBLY, Right, Slick V M2512R	1
	V	67P20409	HARNESS ASSEMBLY, Left, Slick V M2513R	1
8		66M21195	CLAMP, Magneto	4
9		STD-475	WASHER, 5/16 lock, internal teeth	4
10		STD-1410	NUT, 5/16-18 plain	4
	**	76734	ZIP STRAP	4
	**	72815	BRACKET, Support clamp, 90°	1
	**	71824	CLAMP, Rubber dip, Two wire	3
	**	LW-16266-25-25	CLAMP, One wire	2
<p>* Refer to the latest revision of Service Instruction No. 1443 for a listing of approved alternate ignition systems.</p> <p>V Vendor Prime Manufacturer part</p> <p>** These parts are shipped loose.</p>				

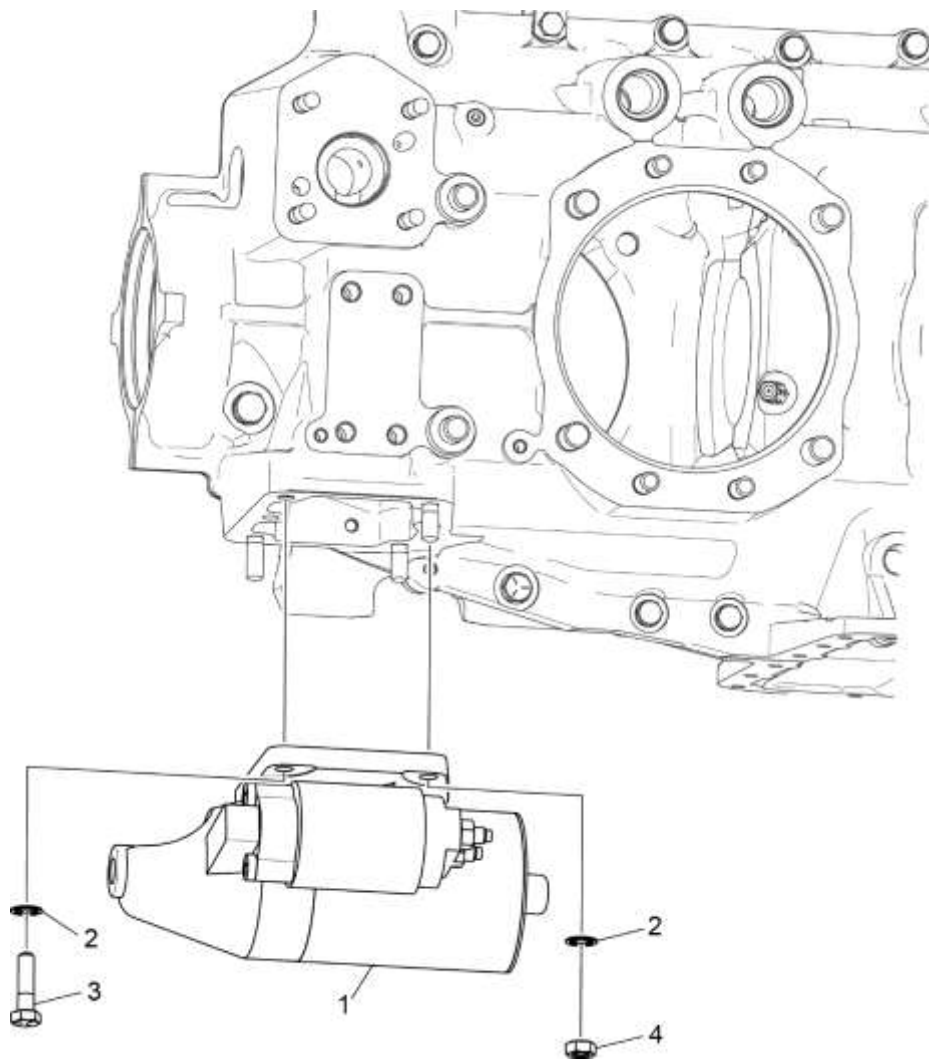


Figure 23
Starter Motor and Attaching Parts

Cranking

FIGURE 23 - STARTER MOTOR AND ATTACHING PARTS

Figure Item	Code	Part Number	Description	Units per Assembly
1	V	31A22104	STARTER, Sky-Tec, V 149-12LS	1
	V	31B22105	STARTER, Sky-Tec, V 149-24LS	1
	V	31B26554	STARTER, Sky-Tec, V 149NL/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
<p>V Vendor Prime Manufacturer part</p> <p>NOTE: See latest revision of Lycoming Service Instruction No. 1154 for complete listing of FAA approved starters, generators, alternators, regulators and relays.</p>				

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SERVICE KIT SECTION
SEAL AND GASKET SET

PART NO.	PART NAME	Qty.
75439-1	KIT - SEAL AND GASKET SET	1
AN901-8A	GASKET, Metal tube connect seal	1
LW-10332	LOCKPLATE, Crankshaft gear	1
LW-12272	LOCKPLATE, Shroud tube	4
LW-12681	GASKET, Magneto	2
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, 3/4 I.D. x 1-3/8 O.D.	1
06A19956	SEAL, Oil, 7/8 I.D. x 1-1/2 O.D.	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, 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, 3/4 I.D. x 1-1/8 O.D.	1
71481	RING, Oil seal, 3/32 diameter x 4-27/32 I.D.	4
71973	GASKET, 2 bolt flange	4
72053	GASKET, Governor	2
72059	GASKET, Oil level gage	1
72075	SEAL, Oil, 3/32 section x 29/64 I.D.	6

SERVICE KIT SECTION (CONT.)**SEAL AND GASKET SET (CONT.)**

75439-1	KIT – SEAL AND GASKET SET (CONT.)	1
72078	LOCKPLATE, 5/16 bolt	2
72091	RING, Oil seal, 3/8 I.D. x 7/64 diameter	2
72220	GASKET, 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
06B26669	GASKET, Rocker box cover (Silicone)	4
76510	GASKET, Oil cooler bypass valve	1
76940	SEAL, Crankshaft	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	1
06A23493	SEAL, Shroud tube	8

SERVICE KIT SECTION (CONT.)
CYLINDER, PISTON AND RING ASSEMBLY

PART NO.	PART NAME	Qty.
05K21104	KIT - CYLINDER, PISTON AND RING ASSEMBLY	1
16A30080-01	CYLINDER AND HEAD ASSEMBLY	1
17B23936	VALVE, Exhaust	1
17A23938	VALVE, Intake	1
17D29060	SPRING, Valve, outer	2
17D29055	SPRING, Valve, auxillary	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
MS20823-6D	ELBOW, 45°, 3/8 flared tube	1
1102	PLUG, 1/8-27 NPT, allen head	2
14D23912	PISTON	1
74241	RING, Piston, compression	2
14H29884	RING, Piston, oil regulating	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
06B26669	GASKET, Rocker box cover (Silicone)	1
72198	PLUG, Piston pin	2
77611	GASKET, Exhaust flange	1
71973	GASKET, 2 bolt flange	1
06A23493	SEAL, Shroud tube	2
LW-12272	LOCKPLATE, Shroud tube	1
SSP-299	TAG, Use of piston pin plugs	1

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06E19769-1.25	GASKET	5
07A21443	BRACKET	1
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07A22996	BRACKET	41
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