

TIO-540-AK1A Illustrated Parts Catalog

June 2025

PC-TIO-540-AK1A (Supersedes PC-315-13)



652 Oliver Street
Williamsport, PA 17701

TIO-540-AK1A Illustrated Parts Catalog

Lycoming Part Number: PC TIO-540-AK1A

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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-TIO-540-AK1A (Supersedes PC-315-13)	June 2025



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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 MAINTENANCE OR OVERHAUL MANUAL.

PART NUMBERS AND DESCRIPTIONS IN THIS PARTS CATALOG ARE NOT
AUTHORITATIVE AND CAN BE SUPERSEDED BY FAA APPROVED SERVICE
BULLETINS AND SERVICE INSTRUCTIONS.

Purpose of this Catalog

This Illustrated Parts Catalog (IPC) contains a complete list of spare parts for the Lycoming TIO-540-AK1A engine model.

How to Use this Catalog

This catalog is based on the Air Transport Association (ATA) Spec 100 format. 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 TIO-540-AK1A Illustrated Parts Catalog:

24 (Electrical Power), 72 (Reciprocating Engine), 73 (Engine and Fuel Control), 74 (Ignition), and 80 (Starting).

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

NOTICE: Refer to the IPC Table of Contents for the subsystems identified 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 below their associated parts grouping or assembly. 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” are for “as required” applicable to bulk items or non-illustrated select-from-range-parts. The letters “RF” identify items for reference.

Lockwire, Safety Cable

To maintain as assembled torque integrity Lockwire used is to be a one continuous strand twisted to keep tension on various internal fasteners ensuring a minimum torque is retained. Lockwire installed correctly will pull in the direction of fastener assembled tension. Lycoming Engines does not recommend the use of safety cable for retention of internal engine parts or assemblies. Refer to the latest revision of **Service Instruction No. 1566**.

Vendor Accessories

Parts coverage of Vendor Accessories used on Lycoming engines are found in the applicable Vendor's Parts Catalog. A list of vendors' addresses is included in the latest revision of Lycoming Service Letter No. L114.

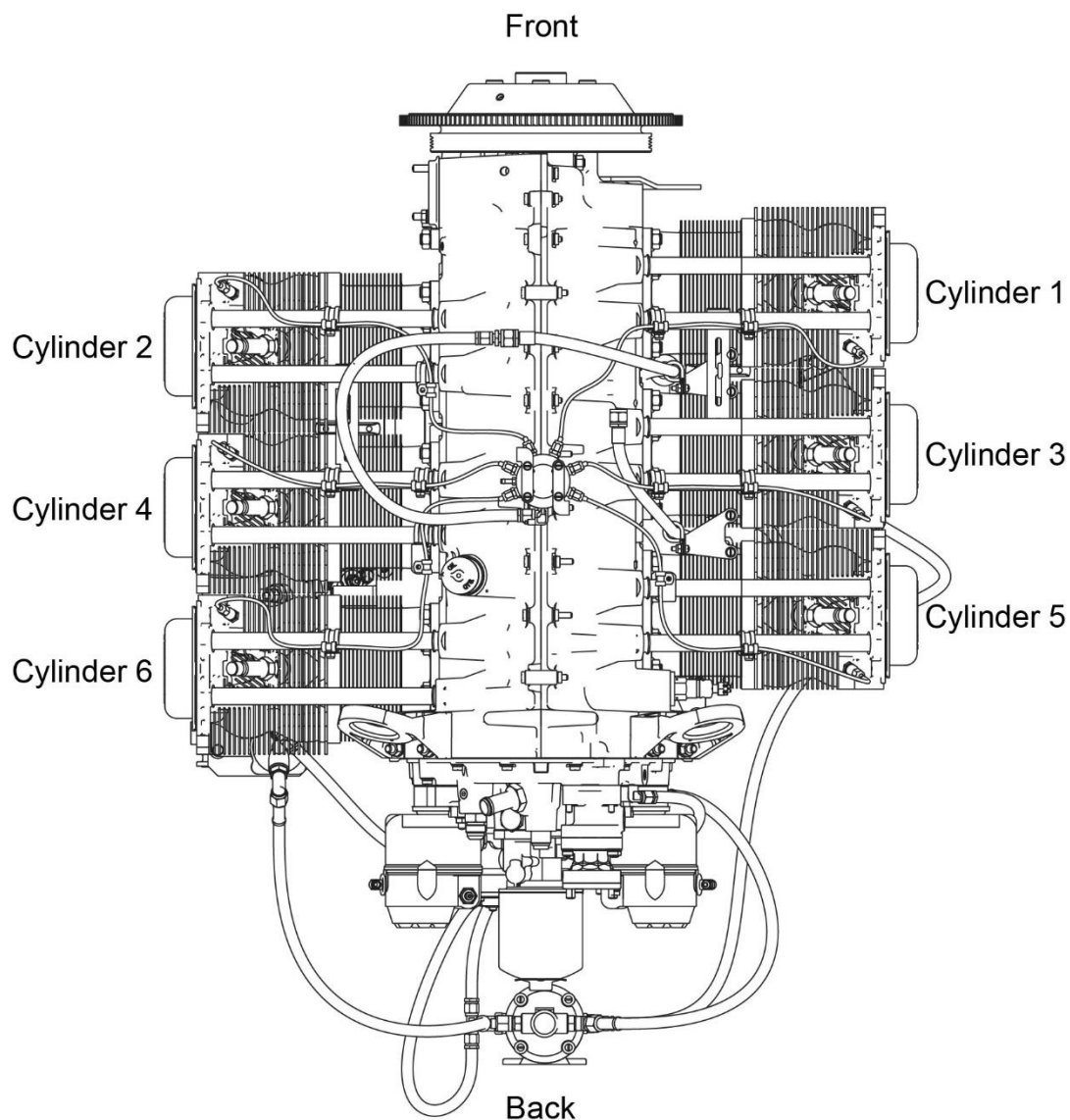
Any reference in this document to the suppliers/part manufacturer's product, by name, trademark, part number or other description is solely for the purpose of identification and does not indicate or infer that Lycoming accepts responsibility for quality control and/or airworthiness of parts, which do 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 the propeller end and the oil sump is 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 1-4-5-2-3-6.

**Top View of Engine**

How to Order Parts

To order parts from this parts catalog, contact an Authorized Lycoming Distributor with the part number(s), nomenclature, and quantity along with the model and serial number of your engine. Authorized Lycoming Distributors will have up-to-date part number supersedure, pricing, and availability information on parts listed in this parts catalog.

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

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

NOTE:

Lycoming recommends that owners of this manual sign up for email notification on the Technical Publications page of our website <https://www.lycoming.com/contact/knowledge-base/publications>. By submitting your email address, you will receive notification whenever Lycoming publishes a new or revised technical publication, including any revisions to this parts catalog.

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Abbreviations and Acronyms

A	
AR	As Required
Assy.	Assembly
ATA	Air Transport Association
C	
Cyl.	Cylinder
D	
dia.	Diameter
F	
Fill.	Fillister
H	
Hex.	Hexagon
I	
I.D.	Inside Diameter
in.	Inch
IPC	Illustrated Parts Catalog
N	
No.	Number
NPT	National Pipe Thread
O	
O.D.	Outside Diameter
P	
P	Lycoming Proprietary Part
P/N	Part Number
R	
RF	Reference
S	
SB	Service Bulletin
SI	Service Instruction
SSP	Special Service Publication
U	
UNF	Unified National Fine

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Oversize and Undersize Parts Listing

PART NO.	DESCRIPTION	OVERSIZE (IN.)			UNDERSIZE (IN.)	
		P05 .005	P10 .010	P50 .050	M03 .003	M06 .006
66670	BUSHING	X	X			
61681	GUIDE	X	X			
66796	INSERT	X	X			
69796	DOWEL	X				
72155-S	BUSHING	X	X			
73810	BUSHING	X				
75656-S	BUSHING	X	X			
75657-S	BUSHING	X	X			
16R22291	GUIDE	X	X			
LW-11997	SEAL			X		
LW-12688	SEAT		X			
18M26105	BEARING				X	X
LW-13792	SEAL			X		
STD-1065	DOWEL	X				
16T19468	SEAT		X			
18A26093	BEARING				X	X
18D26098	BEARING				X	X

NOTICE:

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 0.003 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.

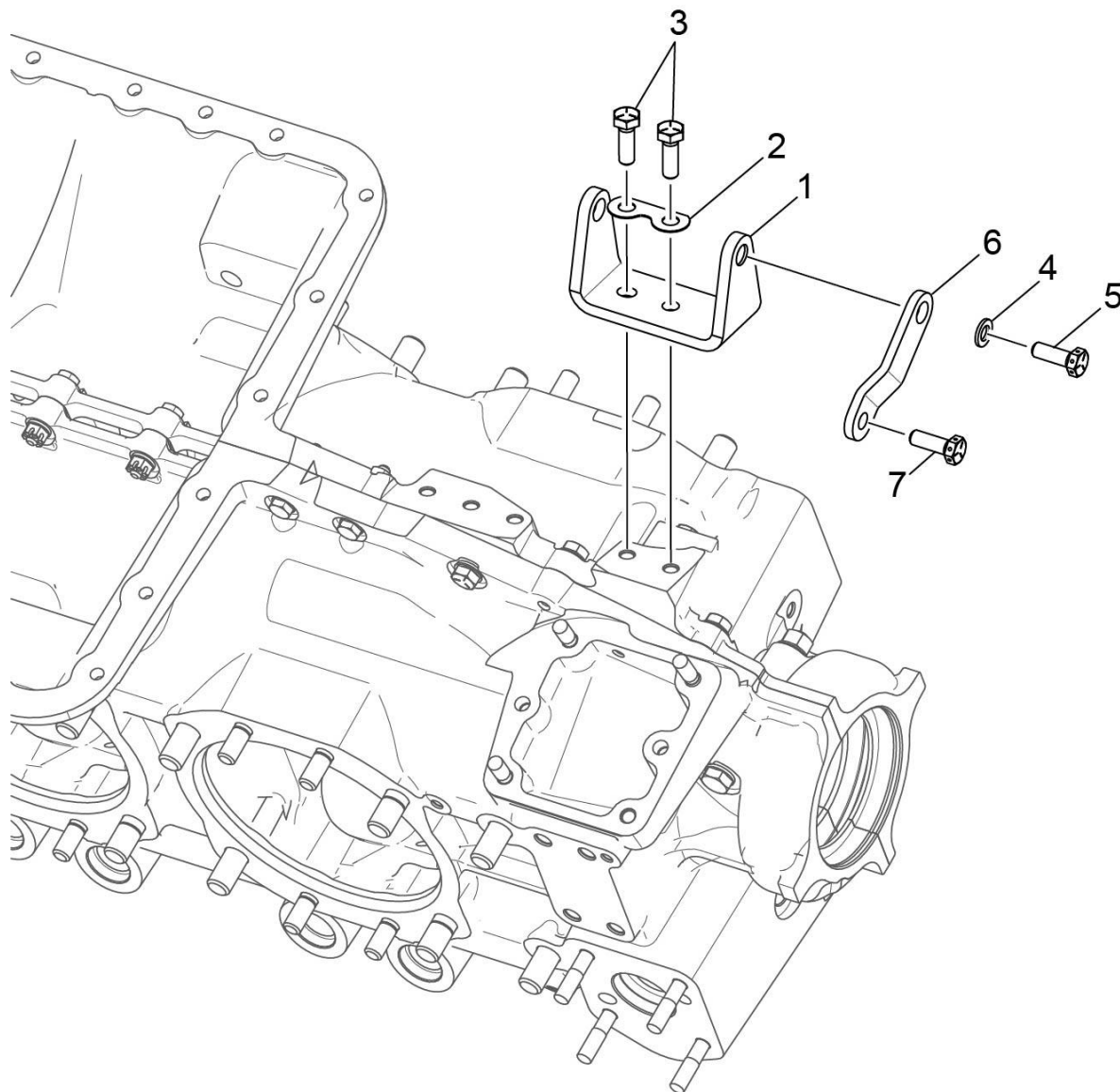


Figure 1
Alternator Mounting and Attaching Parts

Figure 1 - Alternator Mounting and Attaching Parts

Figure Item	Code	Part Number	Description	Units per Assembly
1		07A21443	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		STD-35	WASHER, 5/16 plain	1
5		LW-31H0.88	BOLT, 5/16-18 x 7/8 long, hex head, drilled	1
6		76908	STRUT, Alternator support	1
7		LW-31H0.88	BOLT, 5/16-18 x 7/8 long, hex head, drilled	1

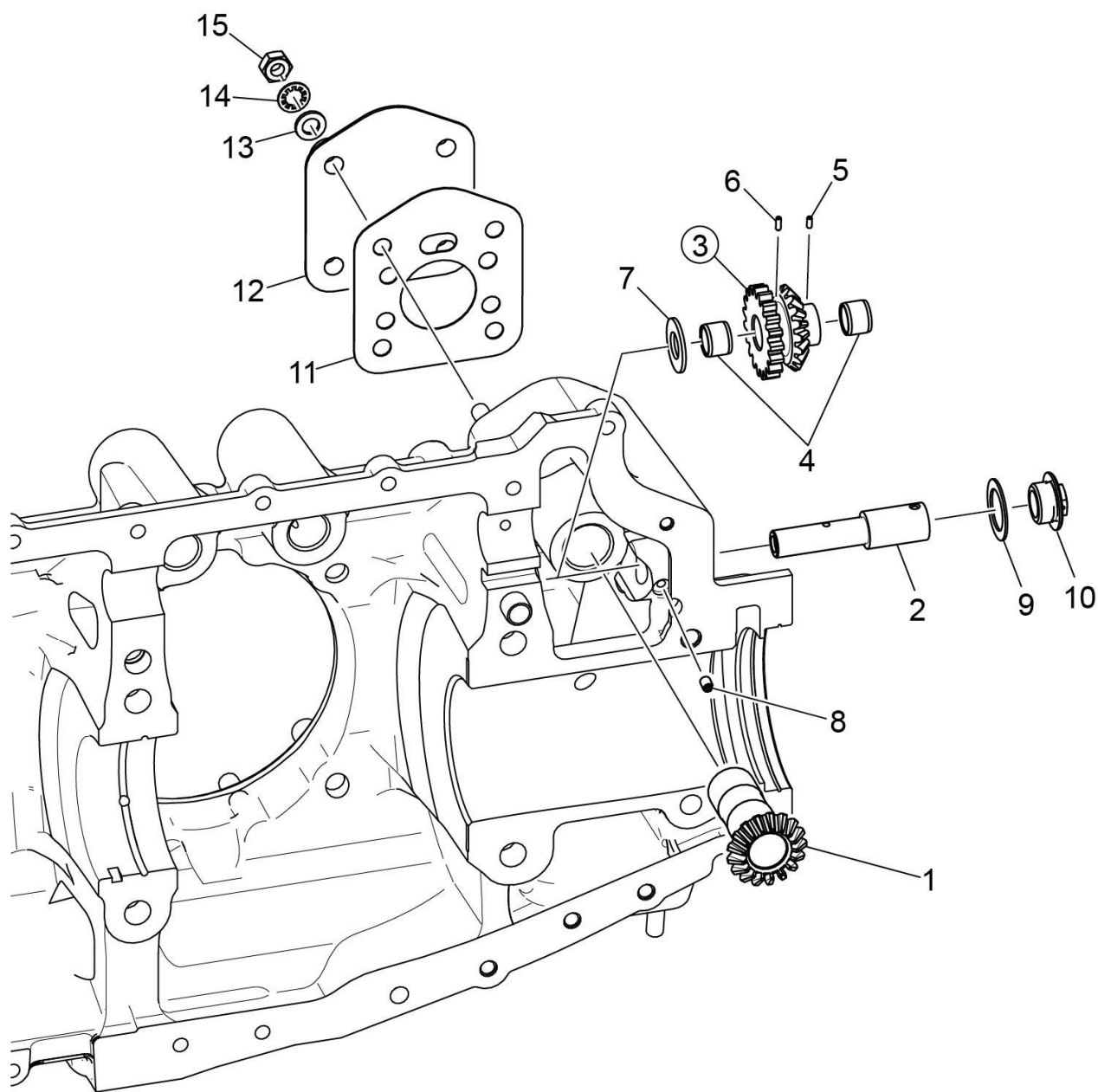


Figure 2
Propeller Governor Drive Assembly

Figure 2 – Propeller Governor Drive Assembly

Figure Item	Code	Part Number	Description	Units per Assembly
1		LW-10442	GEAR, Propeller governor driven	1
2		LW-14021	SHAFT, Propeller governor idler gear	1
3		LW-10541	GEAR ASSEMBLY, Propeller governor idler	1
4		77872	BUSHING, Propeller governor idler gear	2
5		STD-19	DOWEL, 3/32 diameter x 7/32 long	1
6		STD-798	DOWEL, 3/32 diameter x 9/32 long	1
7		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 - 0.056 thick)	AR
8		AN565B1032H5	SET SCREW, No.10-32 x 1/32 long	1
9		70455	GASKET, 25/32 I.D. x 1-1/8 O.D. x 1/32 thick	1
10		LW-13896	PLUG, 0.750-16 hex head	1
11		72053	GASKET, Governor	1
12		72378	COVER, Governor drive	1
13		STD-35	WASHER, 5/16 plain	4
14		STD-475	WASHER, 5/16 lock, internal teeth	4
15		STD-1410	NUT, 5/16-18 plain	4
AR as required				

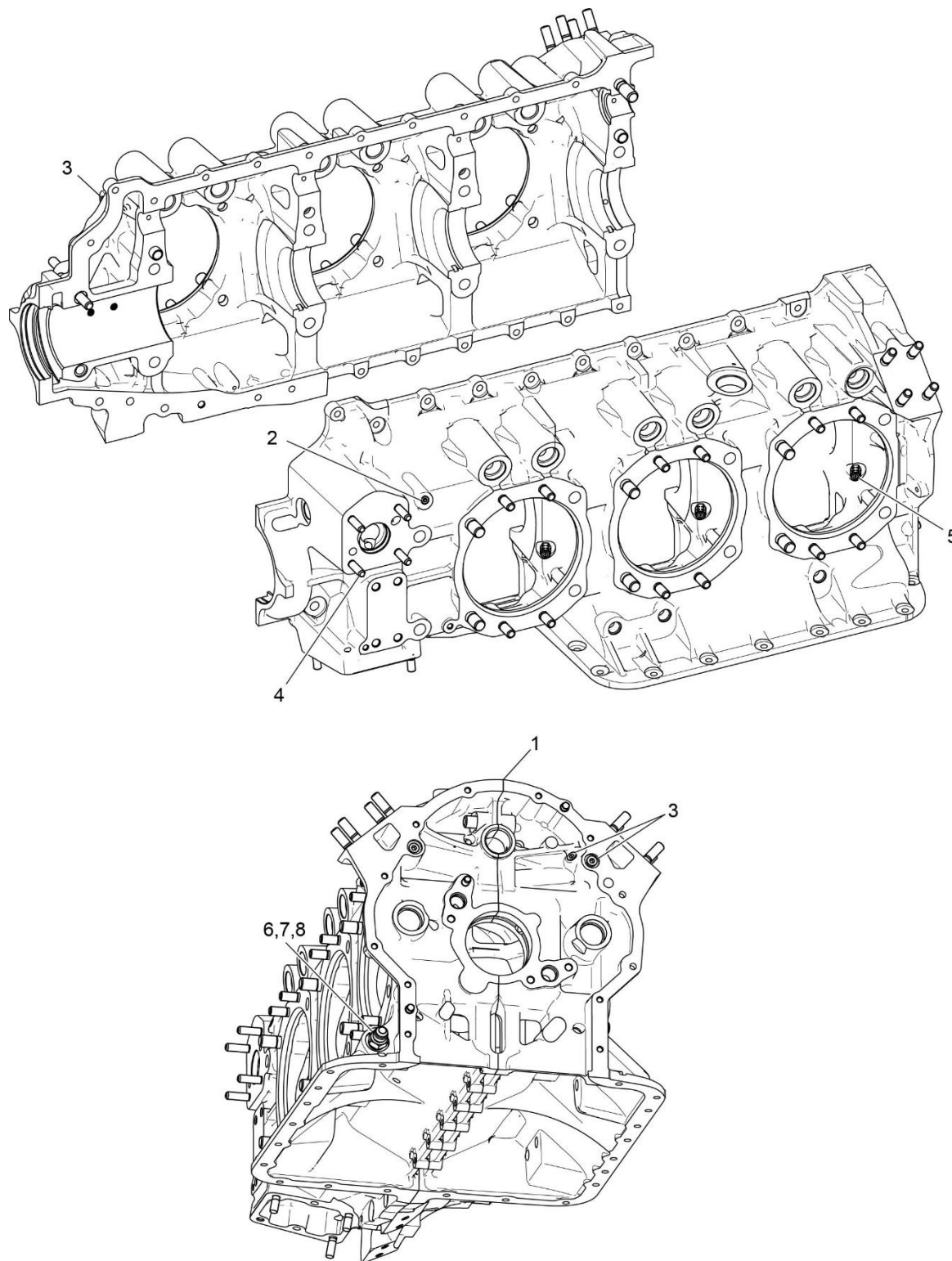


Figure 3
Crankcase Assembly

Figure 3 - Crankcase Assembly

Figure Item	Code	Part Number	Description	Units per Assembly
1		11E24105-S1-S	CRANKCASE ASSEMBLY KIT (roller tappet)	1
	P	11E24105-S1	CRANKCASE ASSEMBLY (roller tappet)	1
		11E24005-S1	CRANKCASE ASSEMBLY KIT (flat tappet)	
	P	11E24005-S	CRANKCASE ASSEMBLY (flat tappet)	
2		STD-1339	PLUG, 1/16-27 NPT	1
3		1102	PLUG, 1/8 pipe	4
4		31C-17	STUD, 5/16-18 x 2-1/8 long	4
5		73772	NOZZLE ASSEMBLY, Piston cooling	6
6		MS29512-06	O-RING, 15/32 I.D. x 5/64 section	1
7		AN814-6L	PLUG, 9/16-18 hex. head	1
8	*	75739	NIPPLE, 3/8 flared tube	1
P Lycoming proprietary part. Listed for reference purposes only, cannot be purchased * Uses a P/N MS29512-06 O-ring.				

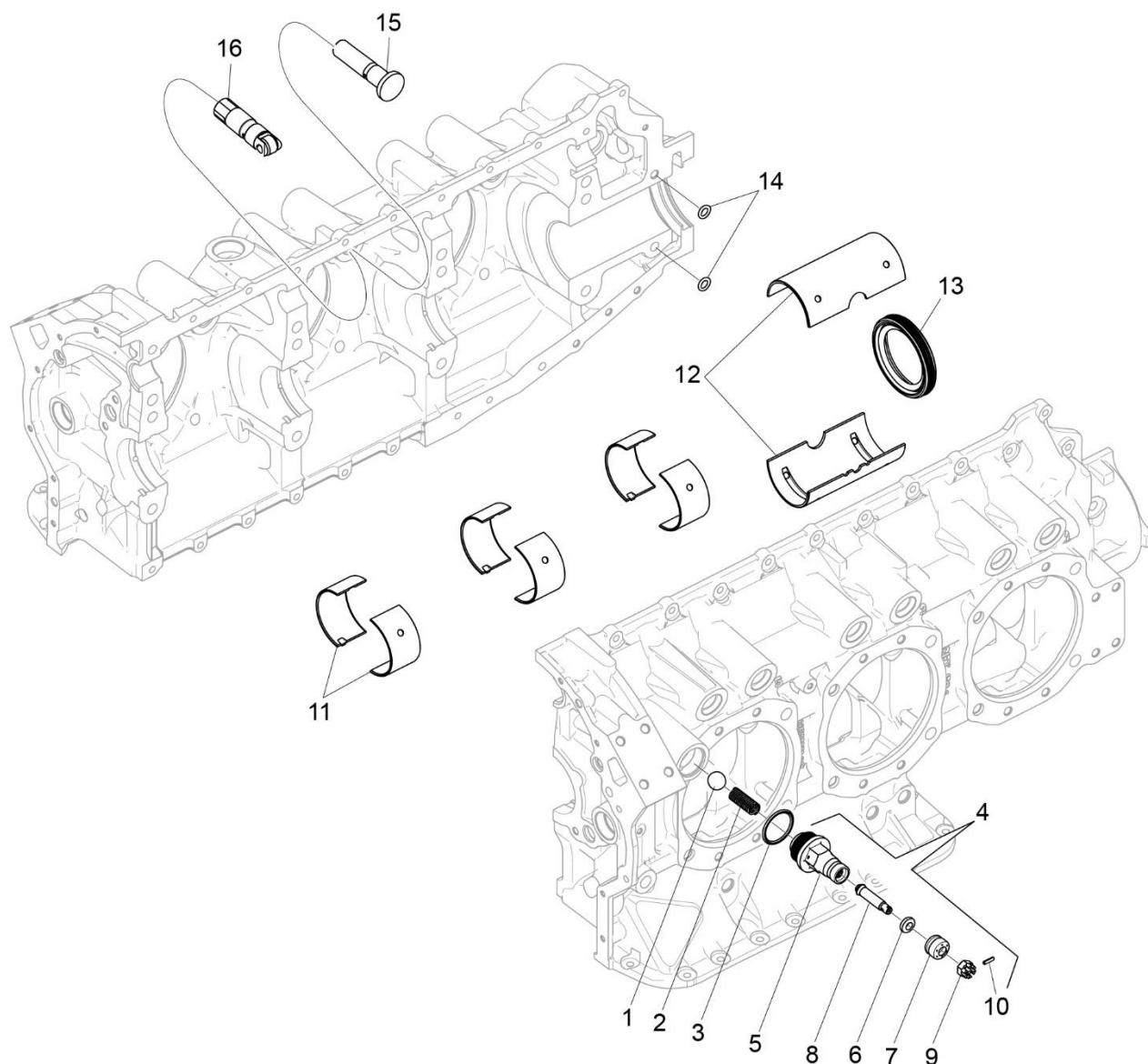


Figure 4
Crankcase Related Parts

Figure 4 - 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	1
5		76159	PLUG, Oil relief valve	1
6		76162	INSERT, Oil pressure relief valve	1
7		76161	CAP, Oil pressure relief valve	1
8		77807	SCREW, Oil pressure adjusting	1
9		AN310-6	NUT, 3/8-24 NF-3 (castellated)	1
10		MS171526	PIN SPRING, 1/8 diameter x 1/2 long	1
11		18D26098	BEARING, Crankshaft	6
12		18A26093	BEARING, Crankshaft	2
13		LW-13792	SEAL, Crankshaft, oil	1
14		72091	RING, Oil seal, 23/64 I.D. x 1/10 diameter	2
15		15B26588	BODY, Hydraulic, spherical, tappet	12
16		LRT23381	BODY, Hydraulic tappet, roller type	12
* Select the spring to give a minimum of three threads exposed, on adjusting screw, to allow field adjustment. Refer to the latest revision of SSP-1776, Part I for spring identification.				

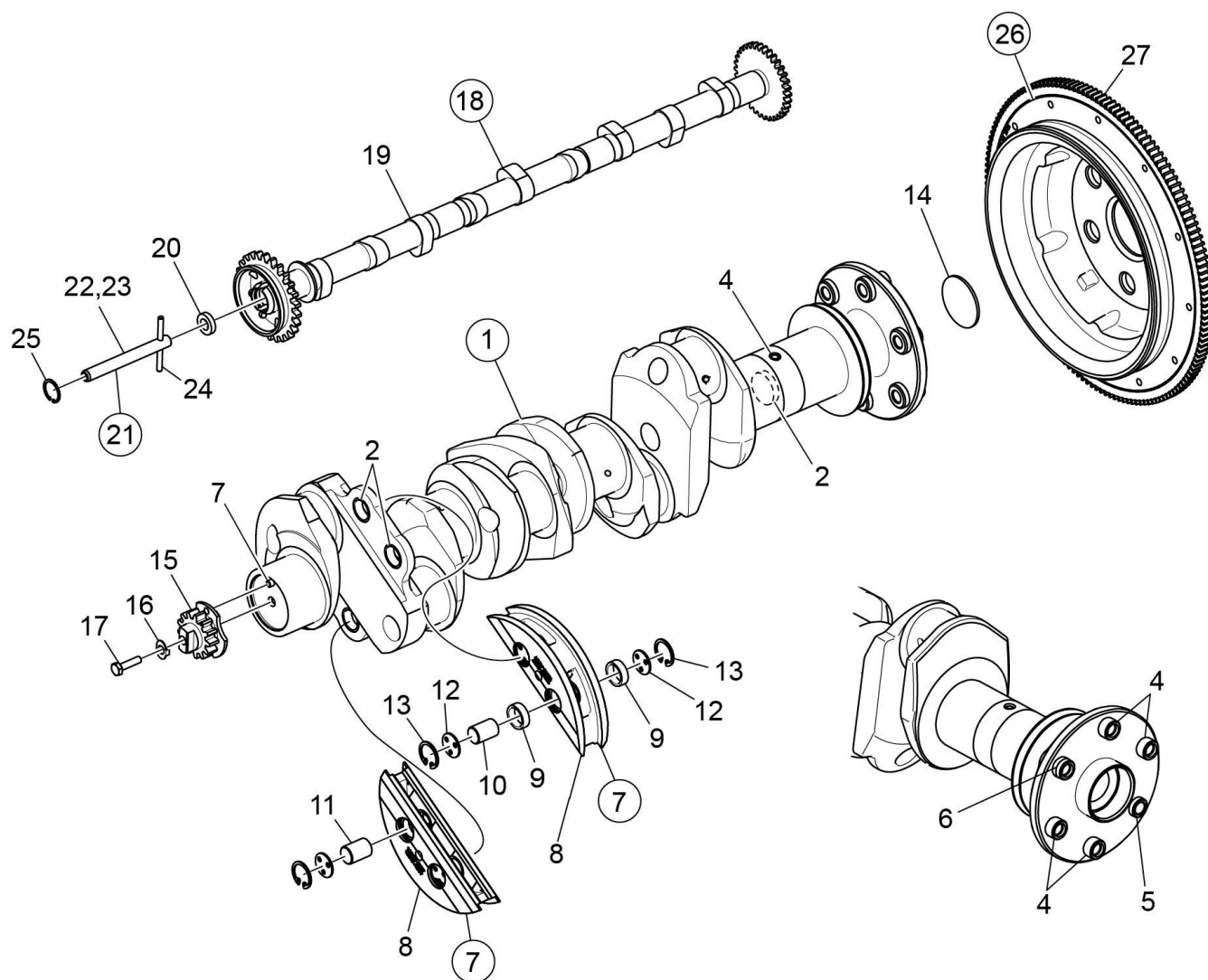


Figure 5
Crankshaft, Counterweight, Camshaft, and Related Parts

Figure 5 - Crankshaft, Counterweight, Camshaft, and Related Parts

Figure Item	Code	Part Number	Description	Units per Assembly
1		13E47622	CRANKSHAFT ASSEMBLY	1
2		71640	PLUG, 1.38 diameter expansion	1
3		68484	TUBE, Crankshaft propeller, oil	1
4		75656-S	BUSHING, Propeller flange, long	4
5		72155-S	BUSHING, Propeller flange, 0.7505-0.7510	1
6		75657-S	BUSHING, Propeller flange, 0.7818-0.7823	1
7	*	LW-19210	COUNTERWEIGHT ASSEMBLY	2
8		LW-19200	COUNTERWEIGHT, Dynamic	1
9	**	71903-A	BUSHING, Dynamic counterweight	4
10		LW-15558	ROLLER, Dynamic counterweight	2
11	*	76788	ROLLER, Dynamic counterweight, 6.3 order	2
12		71907	WASHER, Counterweight	8
13		LW-14820	RING, Internal retaining	8
14		STD-1211	PLUG, 2.00 diameter expansion	1
15	+	13S19648	GEAR, Crankshaft	1
16	+	LW-18638	LOCKPLATE, Crankshaft gear	1
17	+	STD-2247	BOLT, 5/16-24 x 1-3/4 long	1
18		15N23374	CAMSHAFT ASSEMBLY, (Roller lifter)	1
		LW-19340	CAMSHAFT ASSEMBLY, (Flat tappet)	1
19		15N23373	CAMSHAFT, Low speed (roller lifter)	1
		LW-13908	CAMSHAFT (flat tappet)	1
20		76118	SPACER, Tachometer shaft centering	1
21		76155	SHAFT ASSEMBLY, Tachometer	1
22		76154	SHAFT, Tachometer	1
23		60463	TUBE, Tachometer	1
24		LW-18667	PIN, 3/16 diameter x 2-1/3 long	1
25		STD-2231	RING, Internal retaining (13/16 diameter housing)	1
26		31M22993	SUPPORT ASSEMBLY, Starter ring gear	1
27		72566	GEAR, Starter ring, 12/14 pitch	1
* Refer to latest revision of Service Instruction No. 1012 for application. ** Refer to latest revision of Service Instruction No. 1143 for application. + Refer to latest revision of Service Instruction No. 475 for application.				

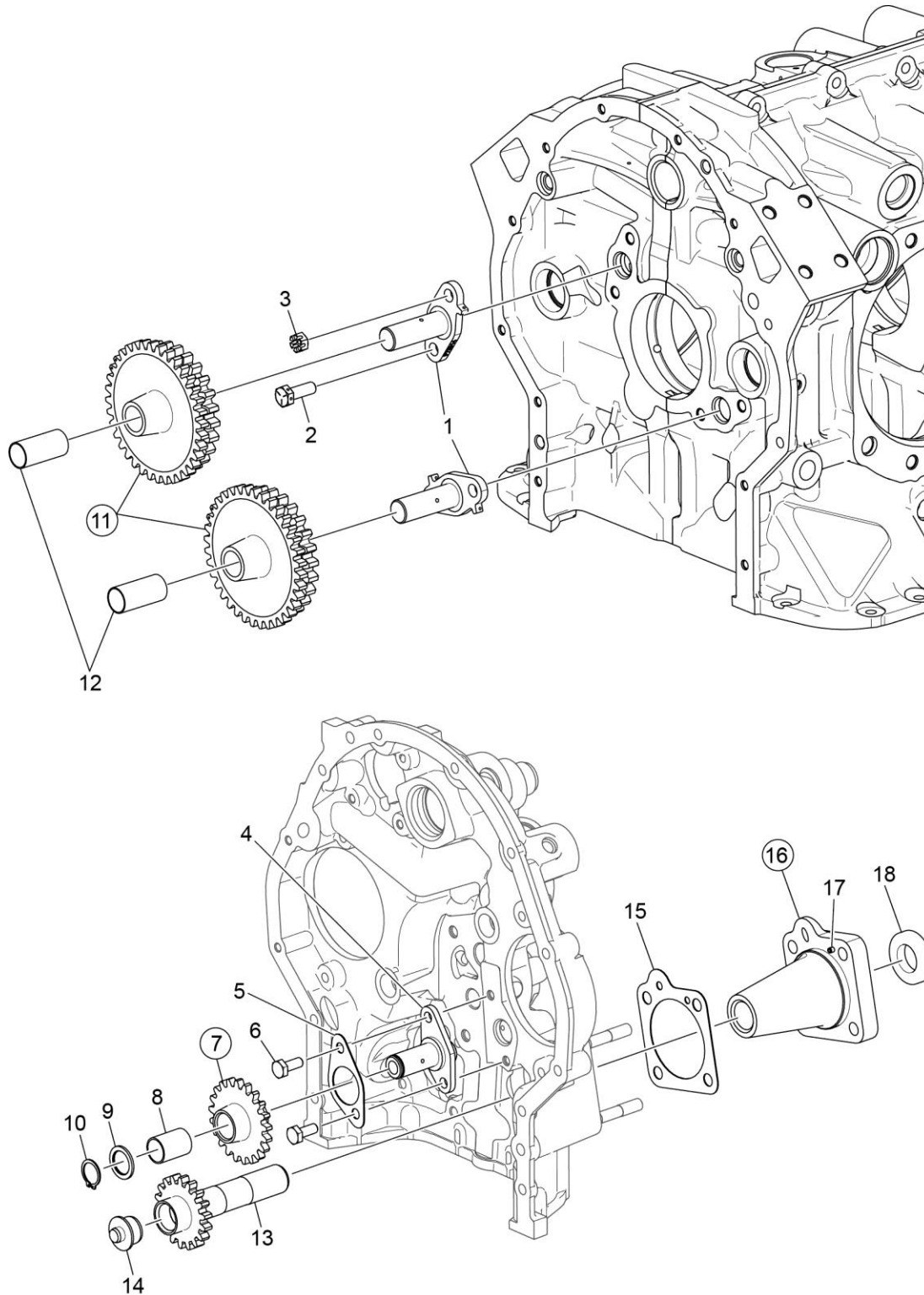


Figure 6
Crankshaft and Fuel Pump Idler Gears

Figure 6 - Crankshaft and Fuel Pump Idler Gears

Figure Item	Code	Part Number	Description	Units per Assembly
1		LW-13795	SHAFT, Crankshaft idler gear	2
2		LW-31H0.88	BOLT, 5/16-18 x 7/8 long, hex head, drilled	3
3		STD-2168	NUT, 5/16-18 NC, slotted, shear	1
4		72246	SHAFT, Fuel pump idler gear	1
5		71667	LOCKPLATE, 1/4 bolt x 1-3/4 spacing	1
6		LW-25-0.63	BOLT, 1/4-20 x 5/8 long, hex. head	2
7		71664	GEAR ASSEMBLY, Fuel pump idler	1
8		77309	BUSHING, Crankshaft idler gear	1
9		70474	WASHER, Fuel pump idler, thrust	1
10		STD-1737	RING, External retaining, 9/16 diameter	1
11		71668	GEAR ASSEMBLY, Crankshaft idler, plain	2
12		67530	BUSHING, Crankshaft idler gear	1
13		72972	SHAFTGEAR ASSEMBLY, Fuel pump drive	1
14		72962	THRUST BUTTON, Vacuum pump gear	1
15		69164	GASKET, Fuel pump adapter	1
16		69159	ADAPTER ASSEMBLY, Fuel pump drive	1
17		STD-1774	PIN, 1/8 diameter x 1/4 long	1
18		STD-213	OIL SEAL, 3/4 I.D. x 1-3/8 O.D.	1

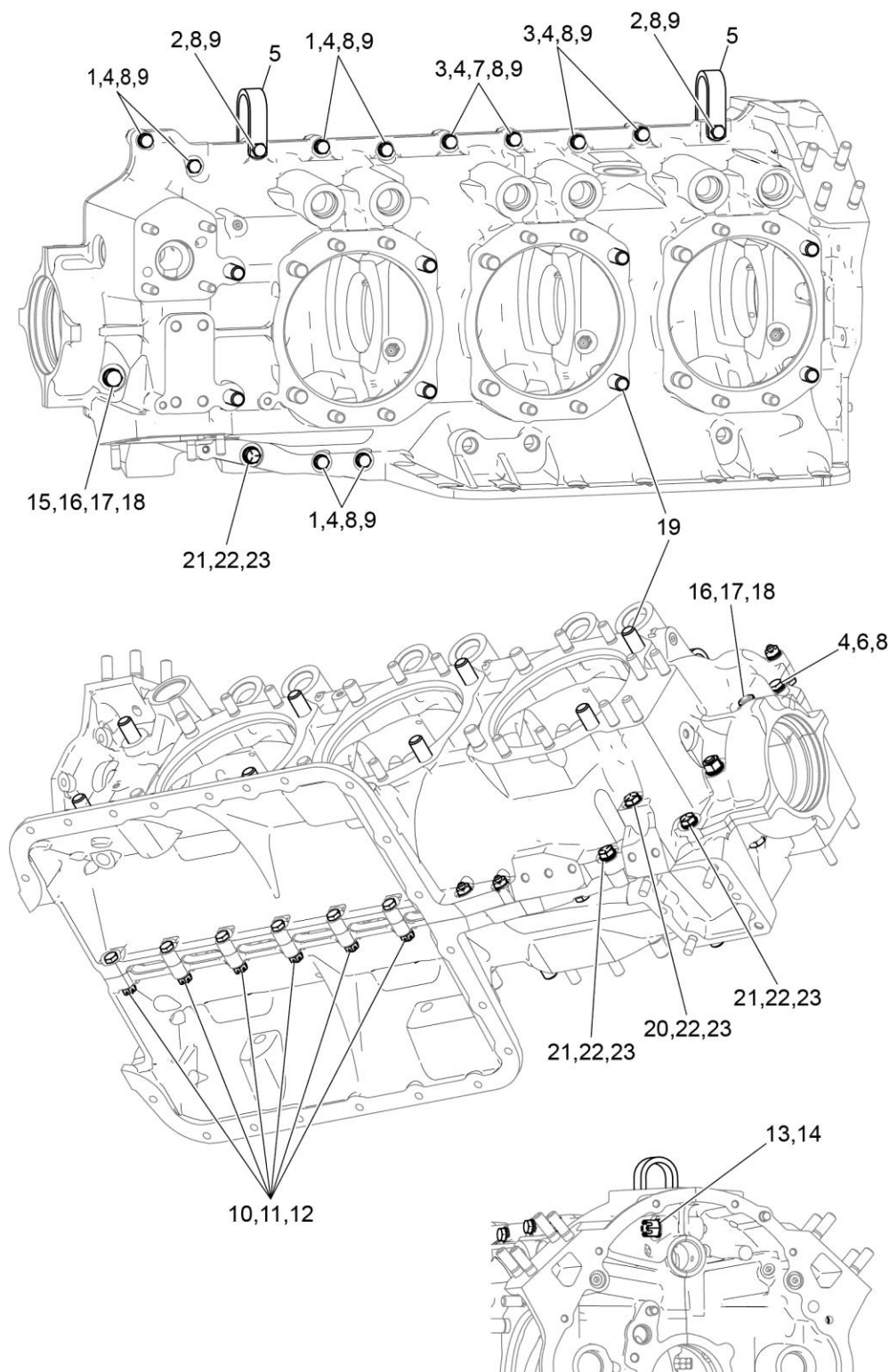


Figure 7
Crankcase Attaching Parts

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	7
2		LW-25-1.88	BOLT, 1/4-20 x 1-7/8 long, hex. head	2
3		LW-25-2.00	BOLT, 1/4-20 x 2.00 long, hex. head	4
4		STD-8	WASHER, 1/4 plain	24
5		60803	STRAP, Lifting	2
6		LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. head	1
7		73966	SPACER, Fuel manifold bracket	1
8		STD-160	WASHER, 1/4 lock, internal teeth	13
9		STD-1411	NUT, 1/4-20 plain	12
10		LW-25S1.50	BOLT, 1/4-20 x 1-1/2 long, hex. head, drilled	6
11		STD-8	WASHER, 1/4 plain	6
12		STD-2249	NUT, 1/4-20 slotted shear	6
13		STD-33	WASHER, 3/8 plain	1
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	3
17		STD-678	WASHER, 3/8 lock, internal teeth	2
18		STD-596	NUT, 3/8-24 plain	2
19		76220	STUD, 1/2-20 x 10-45/64 long	8
20		LW-31-2.75	BOLT, 5/16-18 x 2-3/4 long	1
21		LW-31-1.16	BOLT, 5-16-18 x 1-5/32 long	3
22		STD-35	WASHER, 5/16 plain	4
23		STD-475	WASHER, 5/16 lock, internal teeth	4

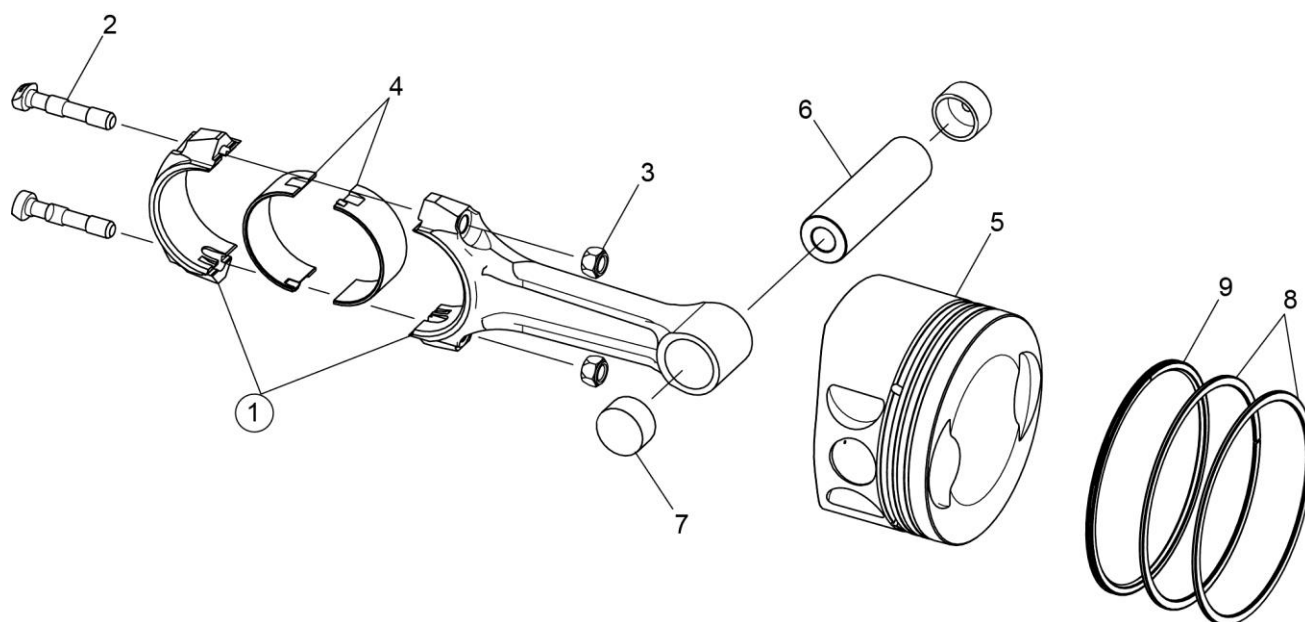


Figure 8
Connecting Rods, Pistons, and Ring Assemblies

Figure 8 - Connecting Rods, Pistons, and Ring Assemblies

Figure Item	Code	Part Number	Description	Units per Assembly
1		LW-11750-S	CONNECTING ROD ASSEMBLY	6
	P	LW-11750	CONNECTING ROD	6
2	P	14S23890	BOLT, Connecting rod	12
3		LW-12186	NUT, Connecting rod bolt	12
4		18M26105	BEARING, Connecting rod	12
5		14D23913	PISTON, Compression ratio 8.00:1, 5-1/8 bore,	6
6	*	LW-14078	PIN, Piston	6
7		72198	PLUG, Piston pin	12
8		74241	RING, Piston, compression, 5-1/8 bore	12
9		14H29889	RING, Piston, oil, 5-1/8 bore	6
P Lycoming proprietary part - for reference purposes only, cannot be purchased. * Refer to the latest revision of Lycoming Service Instruction No. 1267.				

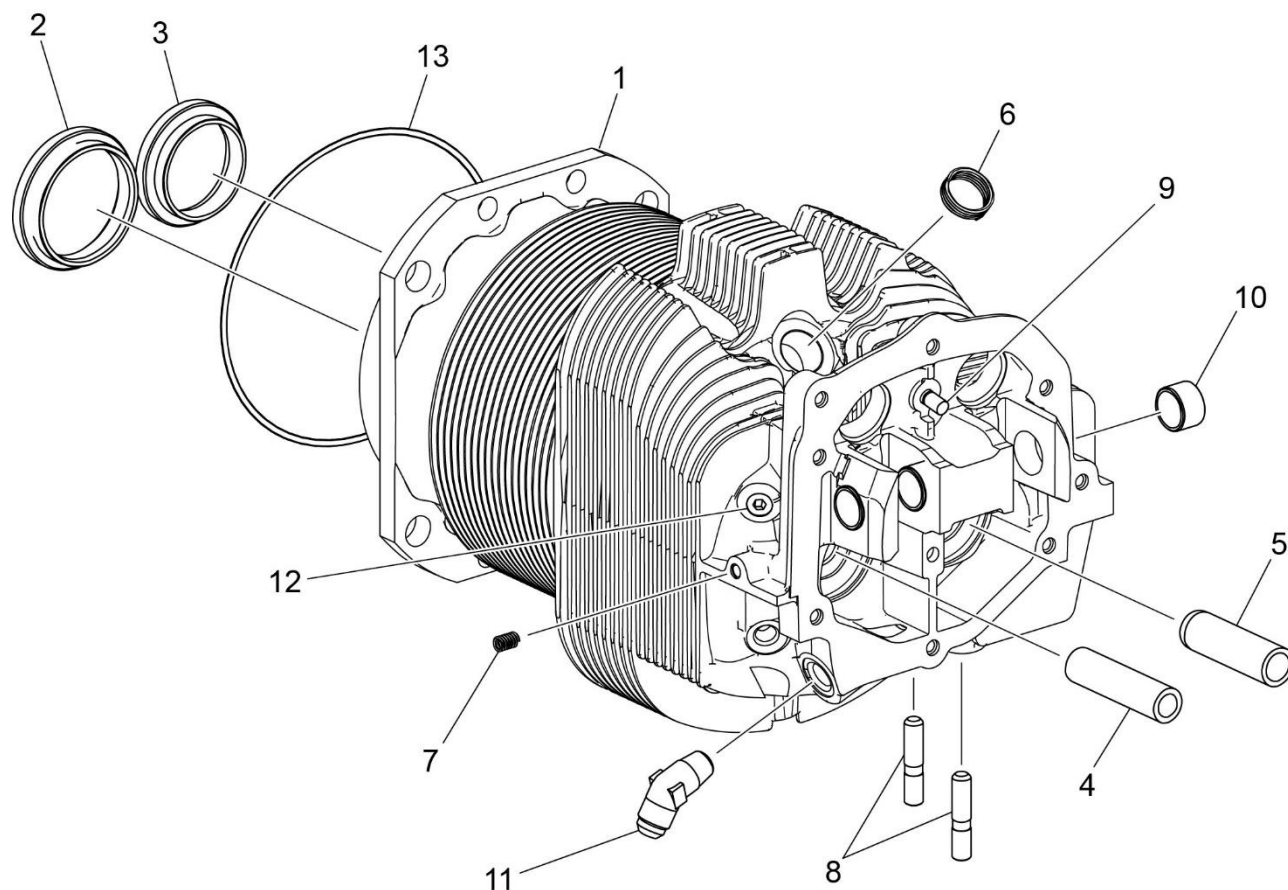


Figure 9
Cylinder Assembly

Figure 9 - Cylinder Assembly

Figure Item	Code	Part Number	Description	Units per Assembly
1		16A30100-01	CYLINDER & HEAD ASSEMBLY	6
2		72057	SEAT, Intake valve	6
3		72058	SEAT, Valve, exhaust	6
4	*	16R22126	GUIDE, Exhaust valve (NI-resist)	6
5	*	76943	GUIDE, Valve, intake	6
6		69260	INSERT, Spark plug, 18-1.5 mm	12
7		STD-1353	INSERT, 10-24 UNC x 3/8 long	6
8		31C-12	STUD, 5/16-18 x 1-1/2 long	12
9		25C-8	STUD, 1/4-20 x 1.00 long	6
10		66610	BUSHING, Rocker shaft	24
11		MS20823-6D	ELBOW, 45 deg, 3/8 flared tube	6
12		1102	PLUG, 1/8 PIPE	6
13		71481	RING, Oil seal	6
* Refer to the latest revision of Lycoming Service Instruction No. 1256 for valve guides for service use.				

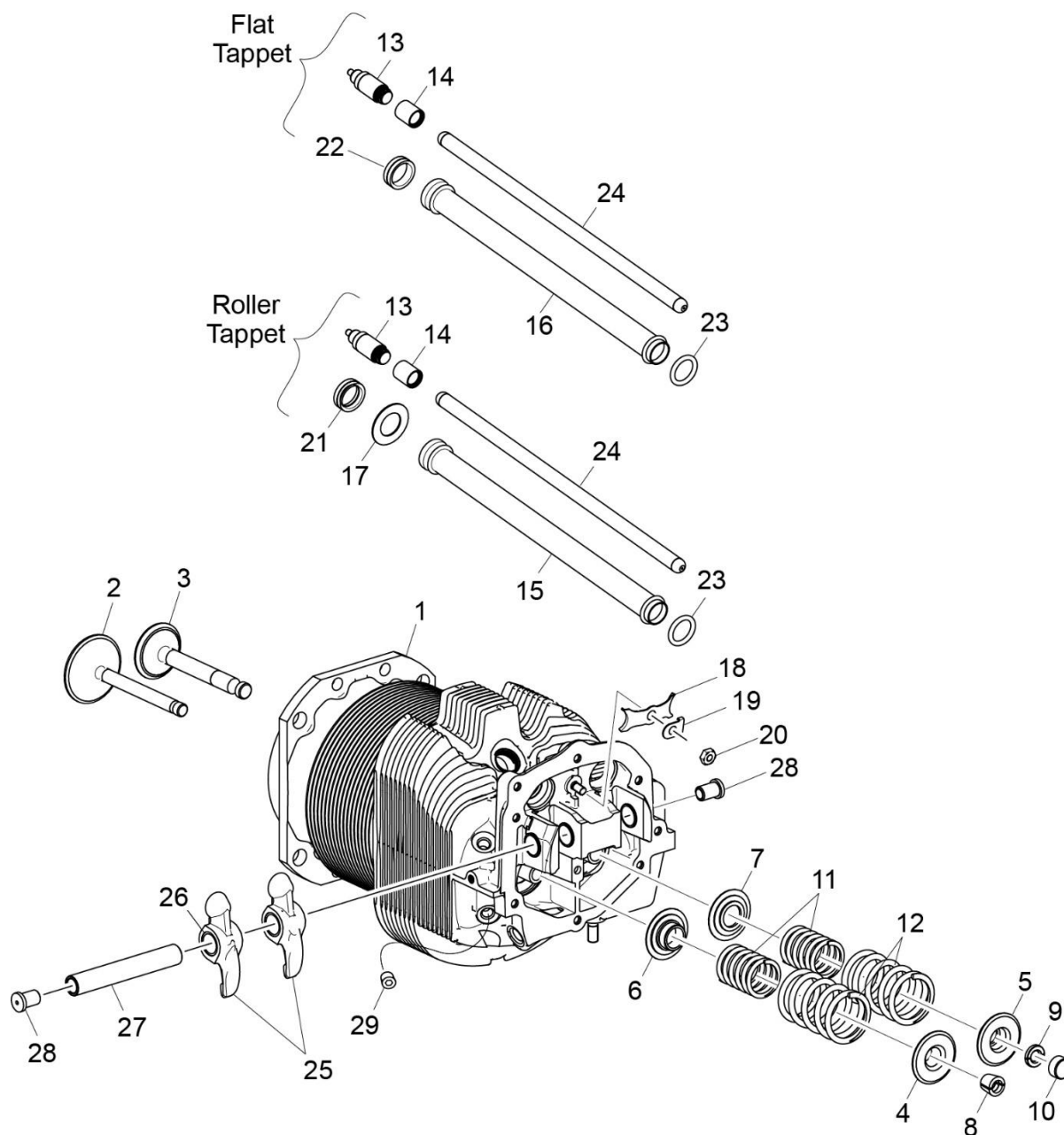


Figure 10
Valve Assembly and Related Parts

Figure 10 – Valve Assembly and Related Parts

Figure Item	Code	Part Number	Description	Units per Assembly
1		16A30100-01	CYLINDER AND HEAD ASSEMBLY, Nitrided	6
2		17A23938	VALVE, Intake	6
3		17B23936	VALVE, Exhaust (rotator type)	6
4		LW-10077	SEAT, Valve spring, upper intake	6
5		LW-16475	SEAT, Valve spring, upper exhaust (rotator type)	6
6		65441	SEAT, Valve spring, lower intake	6
7		LW-13323	SEAT, Valve spring, lower exhaust	6
8		60009	KEY, Valve, intake	12
9		17C21191	KEY, Valve, exhaust (rotator type)	12
10		17C19386	CAP, Valve stem, exhaust (rotator type)	6
11		17D29055	SPRING, Valve, inner	12
		LW-11795	SPRING, Valve, inner	12
12		17D29060	SPRING, Valve, outer	12
		LW-11800	SPRING, Valve, outer	12
13		15B26066	PLUNGER ASSEMBLY, Hydraulic tappet	12
14		15B21319	SOCKET, Push rod, hydraulic tappet	12
15		15G23461	SHROUD TUBE, Push rod (roller tappet)	12
16		LW-11485	SHROUD TUBE, Push rod (flat tappet)	12
17		01L23459	WASHER, 25/32 ID X 1 3/8 OD X 3/64	12
18		LW-14995	SPRING, Shroud tube	6
19		LW-12272	LOCKPLATE, Shroud tube	6
20		STD-1411	NUT, 1/4-20 plain	6
21		06A23493	SEAL, Shroud tube (roller tappet)	12
22		LW-18661	SEAL, Shroud tube (flat tappet)	12
23		70310	SEAL, Shroud tube	12
24	*	15F28835-28	ROD ASSEMBLY, Push (A total of 12 required)	AR
	*	15F28835-29	ROD ASSEMBLY, Push (A total of 12 required)	AR
	*	15F28835-30	ROD ASSEMBLY, Push (A total of 12 required)	AR
	*	15F28835-31	ROD ASSEMBLY, Push (A total of 12 required)	AR
	*	15F28835-32	ROD ASSEMBLY, Push (A total of 12 required)	AR
	*	15F28835-33	ROD ASSEMBLY, Push (A total of 12 required)	AR
	*	15F28835-34	ROD ASSEMBLY, Push (A total of 12 required)	AR
	*	15F28835-35	ROD ASSEMBLY, Push (A total of 12 required)	AR
	*	15F28835-36	ROD ASSEMBLY, Push (A total of 12 required)	AR
	*	15F28835-37	ROD ASSEMBLY, Push (A total of 12 required)	AR

(Continued on next page)

Figure 10 – Valve Assembly and Related Parts (Cont.)

Figure Item	Code	Part Number	Description	Units per Assembly
25	**	17F19357	ROCKER ASSEMBLY, Valve	12
26		74637	BUSHING, Valve rocker	12
27		LW-13790	SHAFT, Valve rocker	6
28		LW-12892	THRUST BUTTON, Rocker shaft	12
29		1102	PLUG, 1/8 pipe	6
AR as required * Refer to the 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 (19357) could be all that is shown of the part number.				

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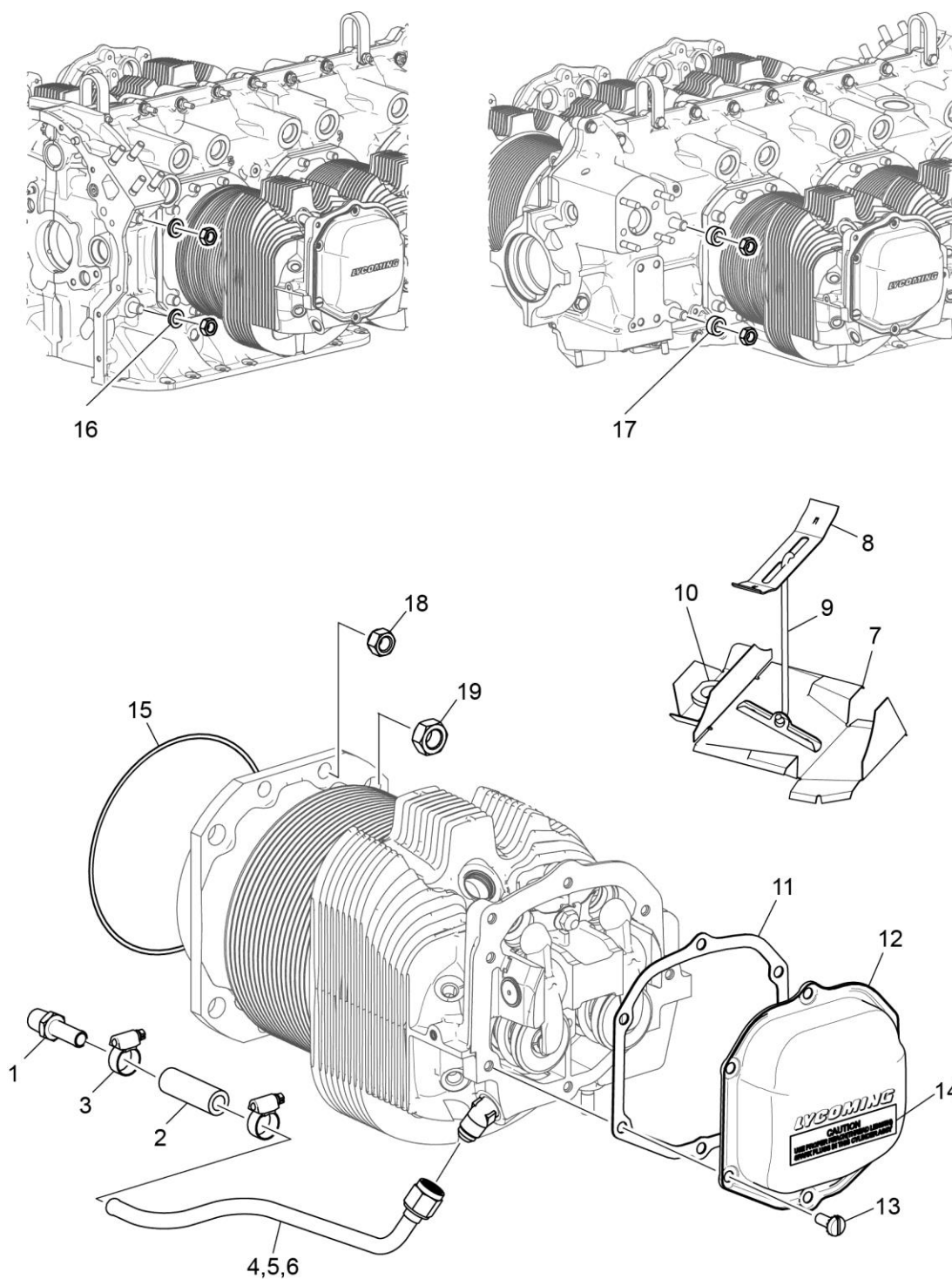


Figure 11
Cylinder Related Parts

Figure 11 – Cylinder Related Parts

Figure Item	Code	Part Number	Description	Units per Assembly
1		STD-684	NIPPLE, Straight, 3/8 I.D. hose	6
2		STD-1821	HOSE, 3/8 x 2-1/2 long	6
3		LW-15592-5-04	CLAMP, Hose, 7/16 OD	12
4		68759	TUBE ASSEMBLY, Cyl. head oil drain, cyl. No. 1	1
5		71737	TUBE ASSEMBLY, Cyl. head oil drain, cyl. No. 2	1
6		68761	TUBE ASSEMBLY, Cyl. head oil drain, cyl. No. 3, 4, 5, 6	4
7		LW-13389	BAFFLE ASSEMBLY, Intercylinder	2
8		71611	RETAINER, Intercylinder baffle	4
9		71610	HOOK, Intercylinder baffle retainer	4
10		MS35489-20X	GROMMET	2
11	*	06B26669	GASKET, Rocker box cover (Silicone)	6
	*	75906	GASKET, Rocker box cover	6
12		61247	COVER, Rocker Box	6
13		STD-1925	SCREW, 1/4-20 x 5/8 long, pan. Head, self-locking	36
14		74494	PLATE, Spark plug reach caution	6
15		71481	RING, Oil seal, 3/32 dia. x 4-27/32 I.D.	6
16		77906	SPACER, 33/64 I.D. x 7/8 O.D. x 1/8 thick	2
17		74887	SPACER, 33/64 I.D. x 7/8 O.D. x 3/8 thick	2
18		383-B	NUT, 3/8-24 plain	24
19		STD-2090	NUT, 1/2-20 plain	28
* Refer to the latest revisions of Service Letter No. 272 and Service Instruction No. 1588 for additional information.				

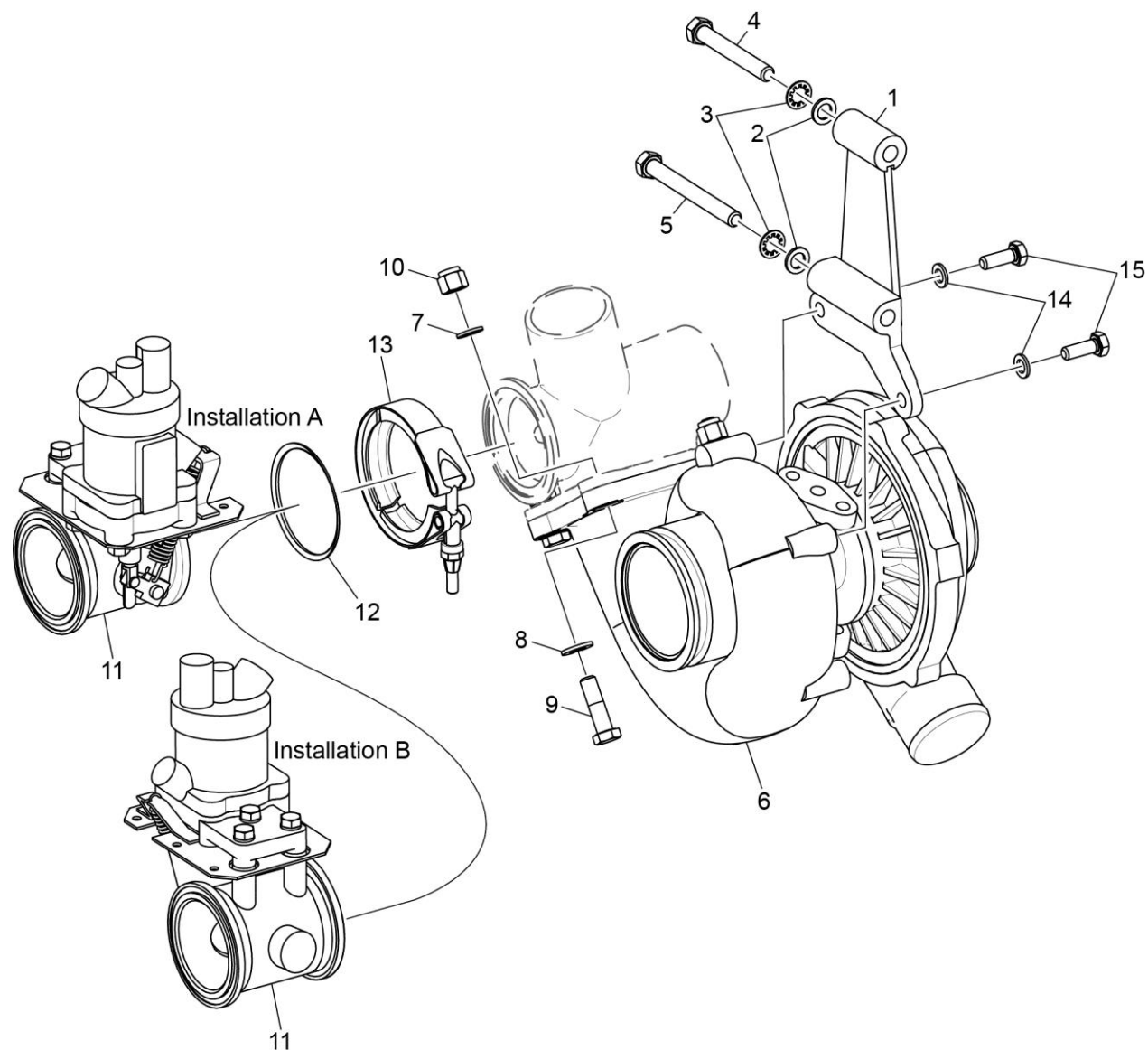


Figure 12
Turbocharger, Brackets, and Attaching Parts

Figure 12 - Turbocharger, Brackets, and Attaching Parts

Figure Item	Code	Part Number	Description	Units per Assembly
1		07A22810	BRACKET, Turbo mounting	1
2		STD-33	WASHER, 3/8 plain	2
3		STD-678	WASHER, 3/8 lock internal teeth	2
4		LW-38-2.75	BOLT, 3/8-16 x 2-3/4 long hex	1
5		LW-38-3.50	BOLT, 3/8-16 x 3-1/2 long hex	1
6		46C22924	TURBOCHARGER	1
7		AN960C616	WASHER, 3/8 plain	4
8		MS9321-12	WASHER, 3/8 I.D. x 3/4 O.D.	4
9		AN6C12A	BOLT, 3/8-24 UNF x 1-5/16 long	4
10		MS20500-624	NUT, 3/8-24 self-locking	4
11		LW-12960	*VALVE, Exhaust by-pass	1
12		75845	GASKET, V-band coupling, 2-1/4 tube	1
13		40D22383	COUPLING, V-band	1
14		AN960C516	WASHER, 3/8 plain	2
15		LW-31SSH0.88	BOLT, Hex head coarse thread	2

* Note that some engines are configured with the exhaust by-pass valve installed as shown in Installation A. Other engines are configured with the exhaust by-pass valve rotated 180° as shown in Installation B. Refer to parts lists for Figures 14A and 14B for changes to the hose part numbers required for each installation.

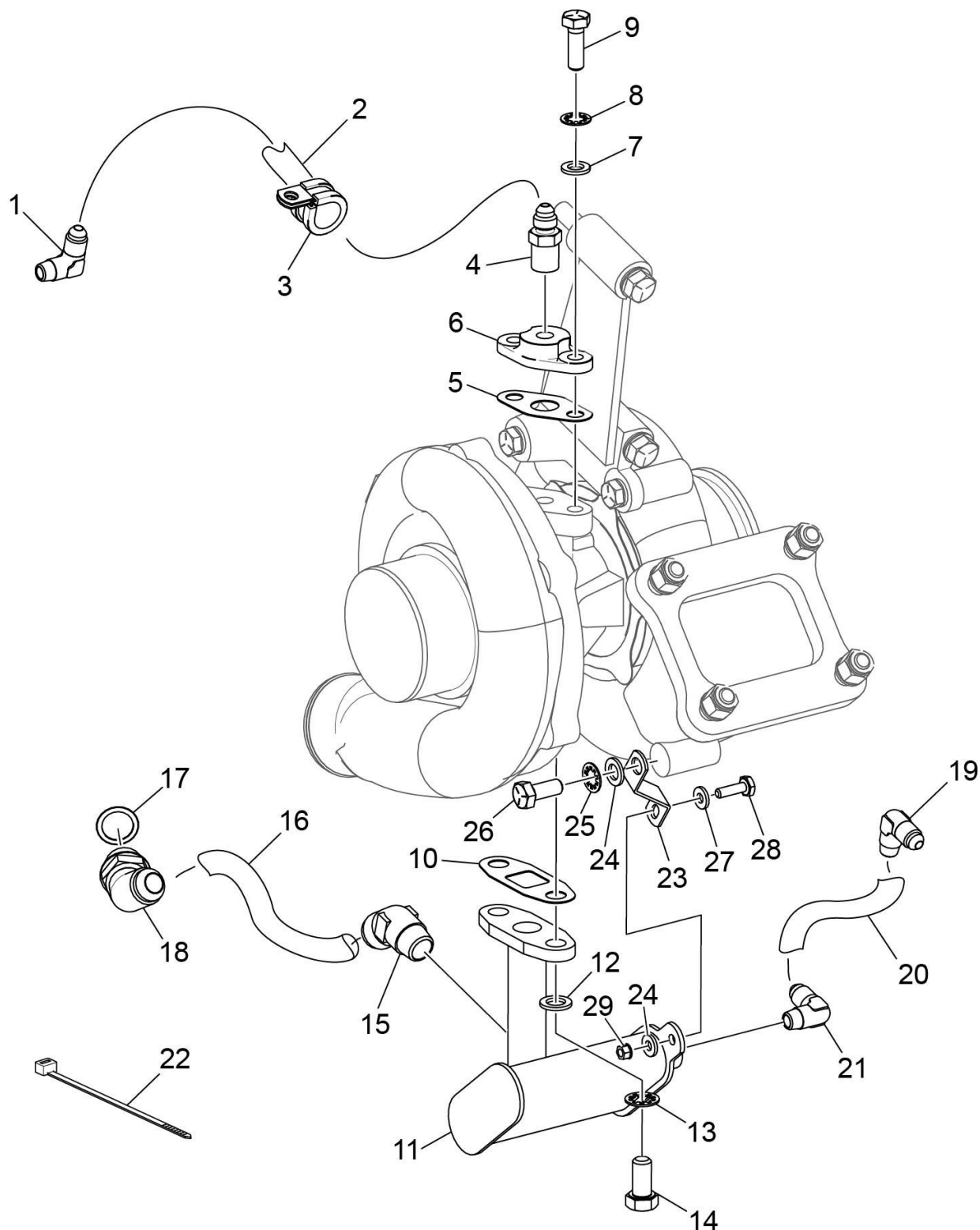


Figure 13
Turbo Oil Drain Tank, Hoses, and Attaching Parts

Figure 13 - Turbo Oil Drain Tank, Hoses, and Attaching Parts

Figure Item	Code	Part Number	Description	Units per Assembly
1		MS20822-4	ELBOW, 1/8 NPT to 1/4 tube 90°	1
2		LW-12878-4S373	HOSE ASSEMBLY	1
3		LW-16266-25-63	CLAMP, 5/8 I.D. x 1/4 diameter	1
4		78212	VALVE ASSEMBLY, Check	1
5		77813	GASKET, Turbo oil inlet adapter	1
6		LW-12287	ADAPTER, Turbo oil inlet	1
7		STD-35	WASHER, 5/16 plain	2
8		STD-475	WASHER, 5/16 lock, internal teeth	2
9		LW-31-0.94	BOLT, 5/16-18 x 15/16 long, hex. head	2
10		LW-18038	GASKET, Turbo oil drain	1
11		58B22954	TANK, Turbo oil drain, right	1
12		STD-33	WASHER, 3/8 plain	2
13		STD-678	WASHER, 3/8 lock, internal teeth	2
14		LW-38-0.75	BOLT, 3/8-16 x 3/4 long, hex. head	2
15		MS20823-8	ELBOW, 1/2 flared tube, 3/8 NPT	1
16		LW-14848-8S360	HOSE ASSEMBLY, 1/2 hose, 90° elbow	1
17		MS29512-08	O-RING, 41/64 I.D. x 5/64 section	1
18		LW-14685	ELBOW, 1/2 tube x 3/4-16	1
19		MS20822-4	ELBOW, 1/8 NPT to 1/4 tube 90°	1
20		LW-12878-4S373	HOSE ASSEMBLY	1
21		MS20822-4	ELBOW, 1/8 NPT to 1/4 tube 90°	1
22		76734	ZIP STRAP	2
23		07A22955	BRACKET, Turbo oil drain tank	1
24		AN960C516	WASHER, 5/16 plain	1
25		STD-475	WASHER, 5/16 lock, internal teeth	1
26		LW-31SS-0.75	BOLT, 5/16-18 x 3/4 long, hex. head	1
27		STD-425	WASHER, No. 10 plain	2
28		STD-1650	BOLT, No. 10-32 x 21/32 long, hex. head	1
29		MS21042-3	NUT, Self-locking	1

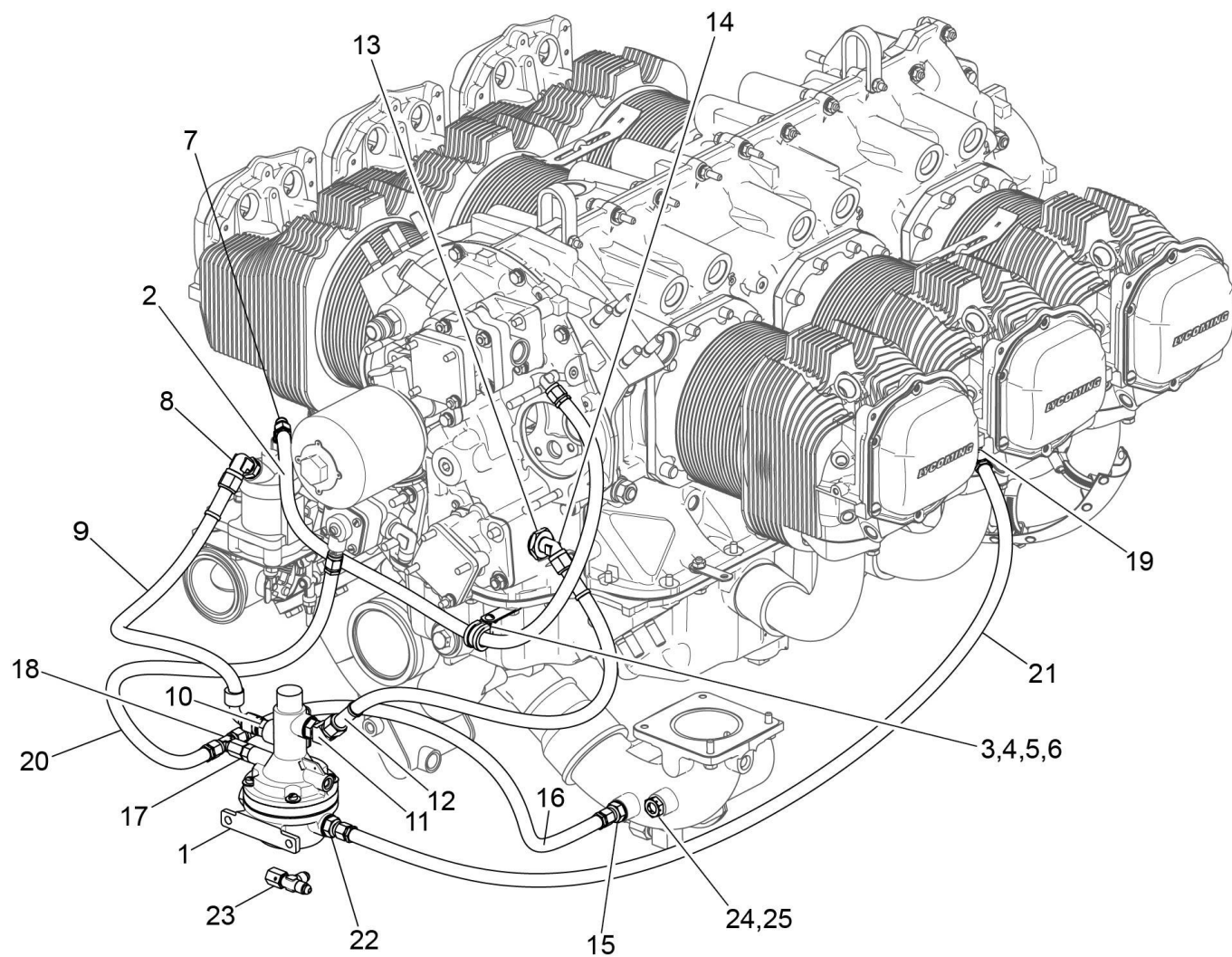


Figure 14A
Sloped Controller and Related Parts

Figure 14A - Sloped Controller and Related Parts

Figure Item	Code	Part Number	Description	Units per Assembly
1		48B22970	CONTROLLER, Sloped	1
2		LW-12798-4S274	HOSE ASSEMBLY, 1/4 hose, straight	1
3		73152	BRACKET, Support clamp	2
4		LW-16266-10-63	CLAMP, 5/8 I.D. x No.10 screw	2
5		STD-692	SCREW, No. 10	2
6		STD-670	LOCK NUT, No. 10	2
7	*	72376	ELBOW, 90°, 1/4 tube to 7/16 thread	1
8	**	72377	ELBOW, 3/8 flared tube, adjustable	1
9		LW-12877-6S161	HOSE ASSEMBLY, 3/8 hose, 90° elbow	1
10	**	LW-16562	NIPPLE, 9/16-18, 3/8 flared tube	1
11	**	74070	ELBOW, 3/8 flared tube, 9/16-18 thread	1
12		LW-12799-6S180	HOSE ASSEMBLY, 3/8 hose, straight	1
13		AN912-9	BUSHING, Reducer, 3/4 NPT	1
14		MS20823-6	ELBOW, 1/4 NPT to 3/8 flared tube	1
15	**	LW-16561	NIPPLE, 1/4 tube to 9/16-18	1
16		LW-12798-4S111	HOSE ASSEMBLY, 1/4 hose, straight	1
17	***	02G22466	NIPPLE, 5/16-24 to 7/16-20	1
18		78303	TEE, 1/4 O.D.	1
19		02G22988	NIPPLE, 1/4 flared tube to 1/8-27 NPT (Rest. 0.03)	1
20		LW-12798-4S130	HOSE ASSEMBLY, 1/4 hose, straight	1
21		LW-12798-4S303	HOSE ASSEMBLY, 1/4 hose straight	1
22	**	LW-16561	NIPPLE, 1/4 tube to 9/16-18	1
23	+	02A22992	TEE, 1/4 tube O.D. with swivel nut on one end	1
24		MS29512-04	O-RING, 11/32 I.D. x 1/16 section	1
25		AN814-4L	PLUG & BLEEDER, 7/16-20 UNF, drilled	1
Note: Use this parts list for engines with the exhaust by-pass valve installed as shown in Figure 12, Installation A. * Uses a P/N MS29512-02 O-ring. ** Uses a P/N MS29512-04 O-ring. *** Uses a P/N MS29512-06 O-ring. + Ship loose (Cessna oil separator).				

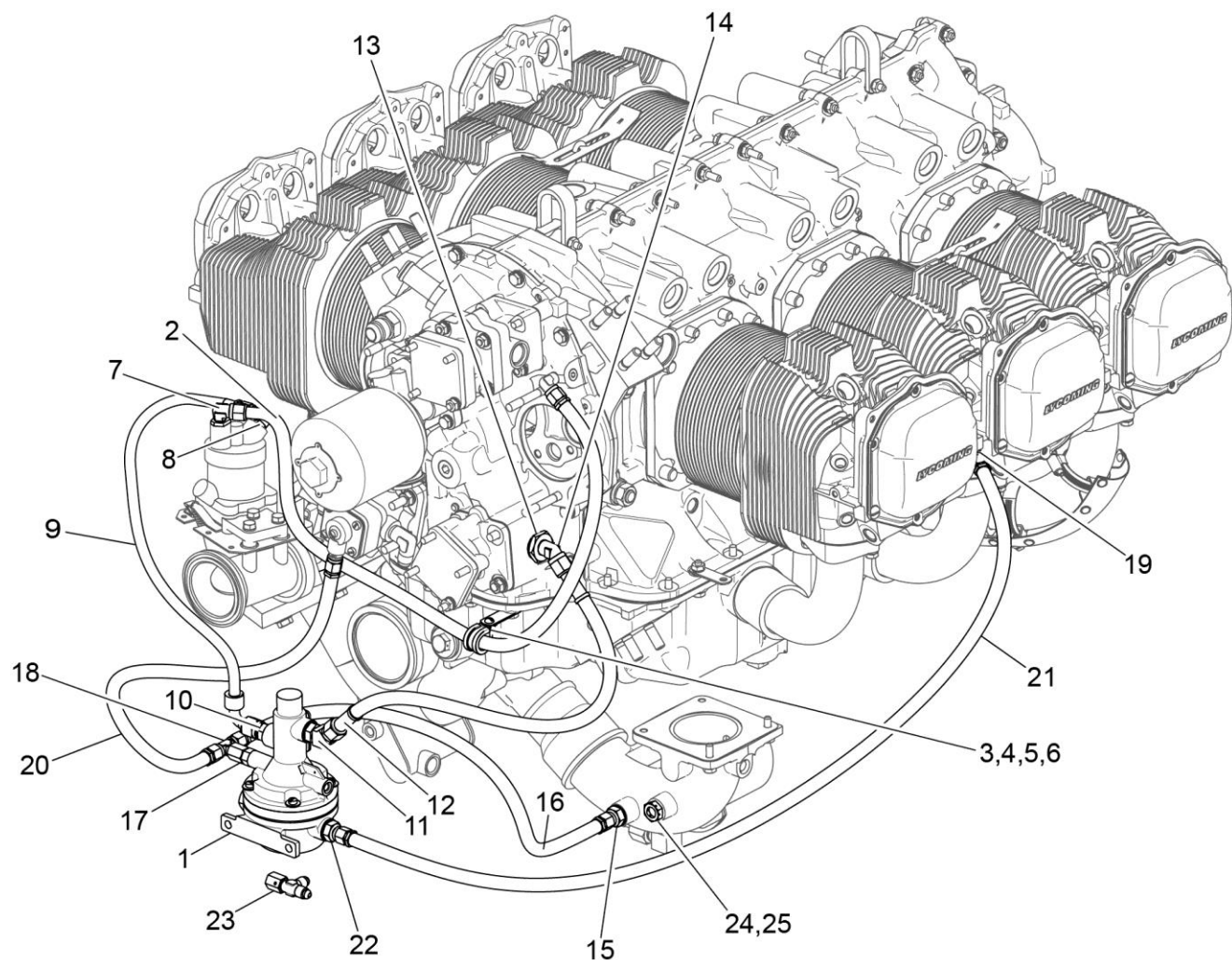


Figure 14B
Sloped Controller and Related Parts

Figure 14B - Sloped Controller and Related Parts

Figure Item	Code	Part Number	Description	Units per Assembly
1		48B22970	CONTROLLER, Sloped	1
2		LW-12798-4S370	HOSE ASSEMBLY, 1/4 hose, straight	1
3		73152	BRACKET, Support clamp	2
4		LW-16266-10-63	CLAMP, 5/8 I.D. x No.10 screw	2
5		STD-692	SCREW, No. 10	2
6		STD-670	LOCK NUT, No. 10	2
7	*	72376	ELBOW, 90°, 1/4 tube to 7/16 thread	1
8	**	72377	ELBOW, 3/8 flared tube, adjustable	1
9		LW-12877-6S161	HOSE ASSEMBLY, 3/8 hose, 90° elbow	1
10	**	LW-16562	NIPPLE, 9/16-18, 3/8 flared tube	1
11	**	74070	ELBOW, 3/8 flared tube, 9/16-18 thread	1
12		LW-12877-6S254	HOSE ASSEMBLY, 3/8 hose, 90° elbow	1
13		AN912-9	BUSHING, Reducer, 3/4 NPT	1
14		MS20823-6	ELBOW, 1/4 NPT to 3/8 flared tube	1
15	**	LW-16561	NIPPLE, 1/4 tube to 9/16-18	1
16		LW-12798-4S370	HOSE ASSEMBLY, 1/4 hose, straight	1
17	***	02G22466	NIPPLE, 5/16-24 to 7/16-20	1
18		78303	TEE, 1/4 O.D.	1
19		02G22988	NIPPLE, 1/4 flared tube to 1/8-27 NPT (Rest. 0.03)	1
20		LW-12798-4S204	HOSE ASSEMBLY, 1/4 hose, straight	1
21		LW-12798-4S340	HOSE ASSEMBLY, 1/4 hose straight	1
22	**	LW-16561	NIPPLE, 1/4 tube to 9/16-18	1
23	+	02A22992	TEE, 1/4 tube O.D. with swivel nut on one end	1
24		MS29512-04	O-RING, 11/32 I.D. x 1/16 section	1
25		AN814-4L	PLUG & BLEEDER, 7/16-20 UNF, drilled	1
Note: Use this parts list for engines with the exhaust by-pass valve installed as shown in Figure 12, Installation B. * Uses a P/N MS29512-02 O-ring. ** Uses a P/N MS29512-04 O-ring. *** Uses a P/N MS29512-06 O-ring. + Ship loose (Cessna oil separator).				

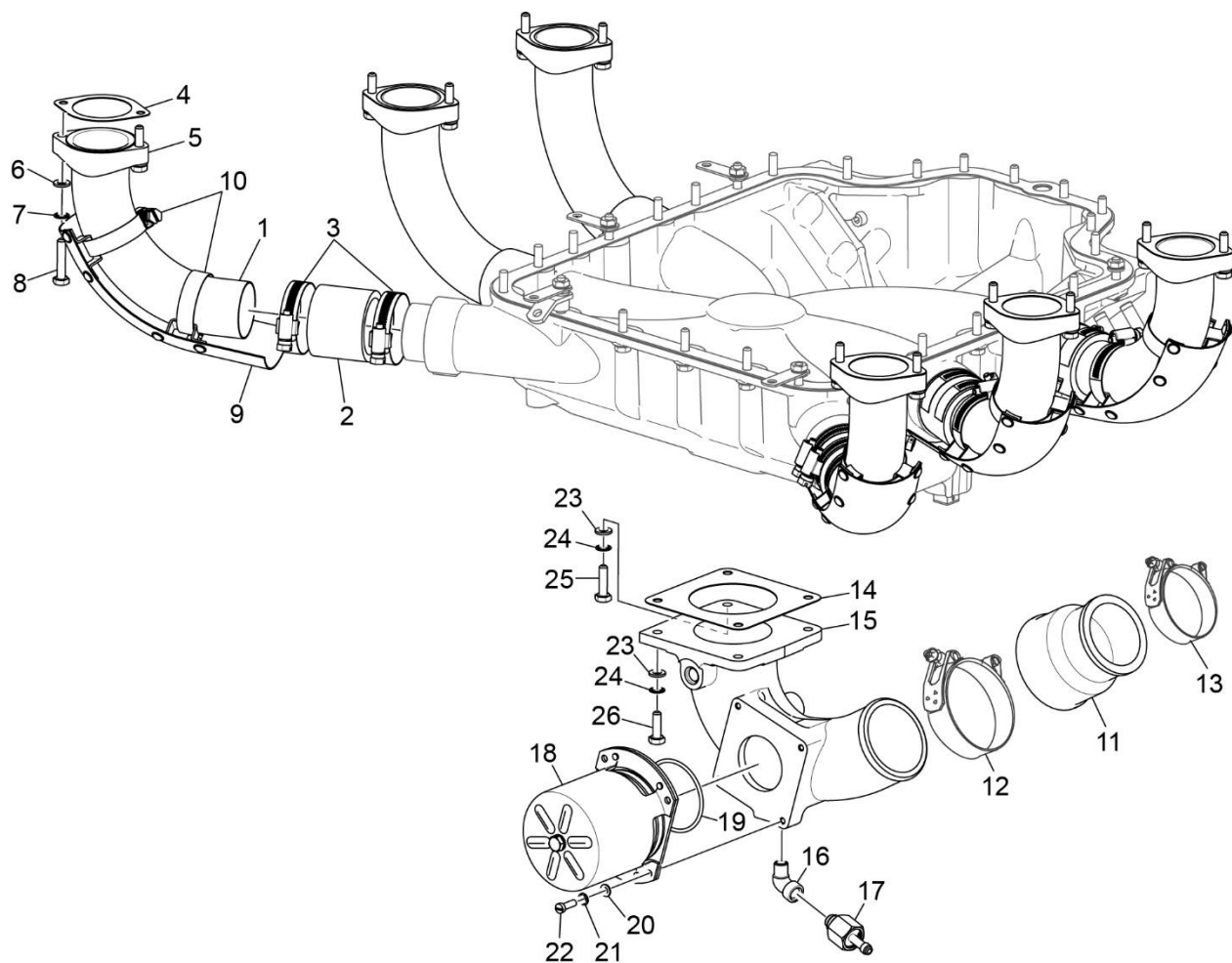


Figure 15
Intake Pipes, Air Inlet Housing, and Attaching Parts

Figure 15 – Intake Pipes, Air Inlet Housing, and Attaching Parts

Figure Item	Code	Part Number	Description	Units per Assembly
1		70485	PIPE, Intake	6
2		69603	HOSE, 1-3/4 I.D. x 2-3/16 O.D. x 1-3/4 long	6
3		LW-15592-8-28	CLAMP, Hose	12
4		71973	GASKET, 2 bolt flange, 1-3/4 I.D.	6
5		73346	FLANGE, Intake pipe, upper	6
6		STD-8	WASHER, 1/4 plain	12
7		STD-160	WASHER, 1/4 lock, internal teeth	12
8		LW-25-1.25	BOLT, 1/4-20 x 1-1/4 long, hex. head	12
9		78366	HEAT SHIELD, (1, 2, 4, & 6 intake pipes)	4
10		LW-15592-8-24	CLAMP, Hose, 1-13/16 dia. x 9/16 wide	8
11		02M22920	HOSE, 2.00 to 2-1/2 I.D. x 2-7/8 long	1
12		LW-15858-62-294	CLAMP, T-bolt	1
13		LW-15858-62-244	CLAMP, T-bolt	1
14		77504	GASKET, Fuel Injector	1
15		41A22811	HOUSING, Air inlet	1
16		02A22460	ELBOW, Street, 1/8-27 NPT, 45°	1
17		LW-13807	ADAPTER ASSEMBLY, Fuel drain valve	1
18		LW-14445-10	VALVE ASSEMBLY, Absolute pressure relief	1
19		MS29513-138	O-RING	1
20		STD-28	WASHER, No. 10 plain	4
21		STD-251	WASHER, No. 10, internal lock	4
22		STD-2248	SCREW, No. 10-24 x 5/8 long	4
23		STD-8	WASHER, 1/4 plain	4
24		STD-160	WASHER, 1/4 long, internal teeth	4
25		LW-25-0.94	BOLT, 1/4-20 x 15/16 long, hex. head	3
26		LW-25-0.81	BOLT, 1/4-20 x 13/16 long, hex. head	1

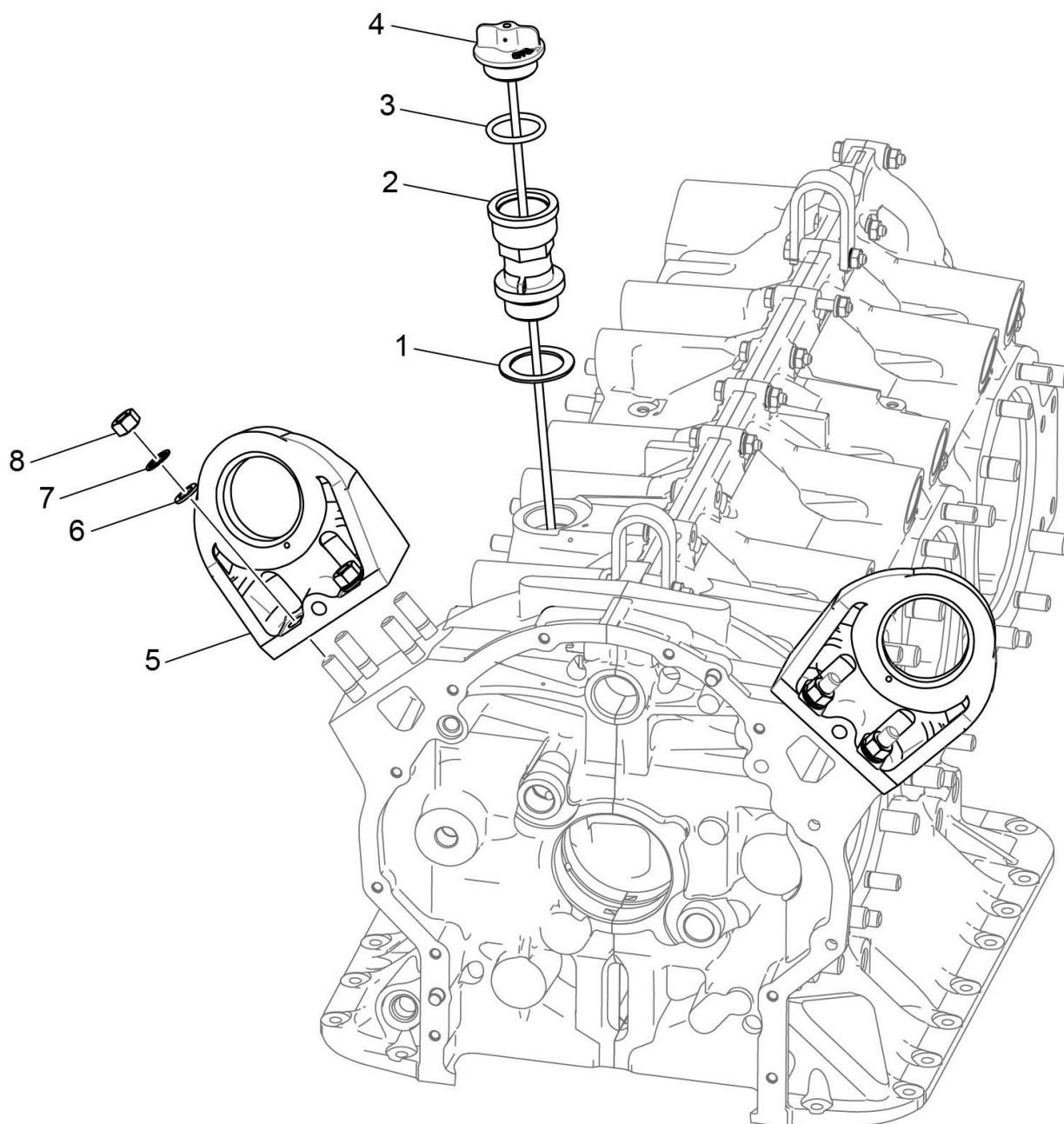


Figure 16
Oil Level Gage Assembly and Engine Mounting Brackets

Figure 16 - Oil Level Gage Assembly and Engine Mounting Brackets

Figure Item	Code	Part Number	Description	Units per Assembly
1		70457	GASKET, Oil filler extension	1
2		75675	EXTENSION, Oil filler, 2-3/16 long	1
3		74065	RING, Oil level gage seal	1
4		LW-16783-24	GAGE ASSEMBLY, Oil level	1
5		12A19770	BRACKET, Engine mounting, dynafocal	4
6		STD-33	WASHER, 3/8 plain	16
7		STD-678	WASHER, 3/8 lock, internal teeth	16
8		STD-596	NUT, 3/8-24 plain	16

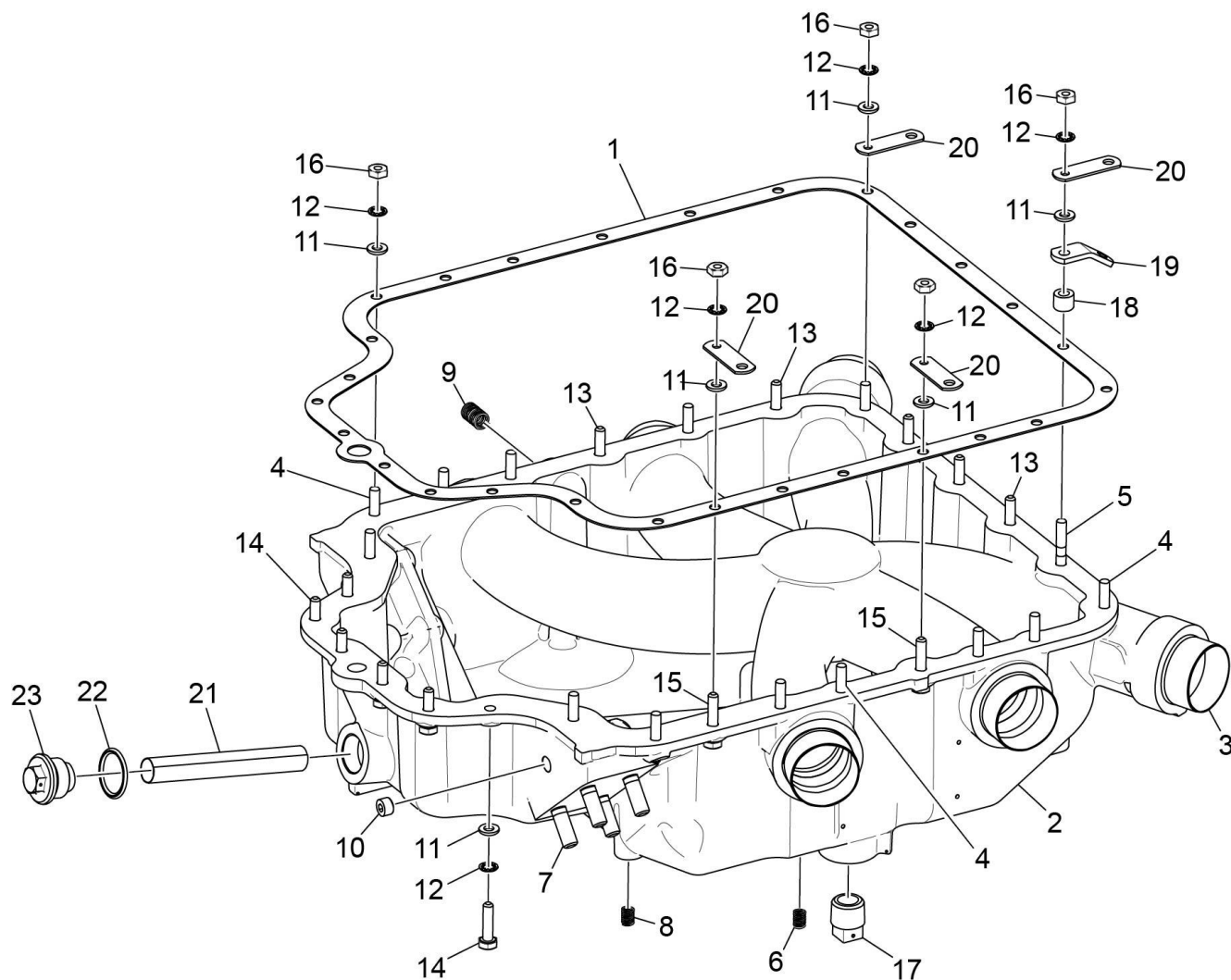


Figure 17
Oil Sump Assembly, Induction Housing, and Oil Suction Screen

Figure 17 – Oil Sump Assembly, Induction Housing, and Oil Suction Screen

Figure Item	Code	Part Number	Description	Units per Assembly
1		06B21326	GASKET, Oil sump	1
2		LW-19168	SUMP ASSEMBLY, Oil	1
3		71699	CONNECTION, Intake pipe	6
4		25C-11	STUD, 1/4-20 x 1-3/8 long	13
5		25C-14	STUD, 1/4-20 x 1-3/4 long	1
6		STD-1164	INSERT, 5/16-18 x 5/8 long, helicoil	4
7		38-15	STUD, 3/8-16 x 1-7/8 long	8
8		STD-1173	INSERT, 1/4-20 x 0.500 long	4
9		STD-1171	INSERT, 3/8-16 x 3/4 helicoil	3
10		1102	PLUG, 1/8-27 NPT, Allen head	1
11		STD-8	WASHER, 1/4 plain	34
12		STD-160	WASHER, 1/4 lock, internal teeth	27
13		LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. head	5
14		LW-25-1.00	BOLT, 1/4-20 x 1.00 long, hex. head	6
15		LW-25-1.25	BOLT, 1/4-20 x 1-1/4 long, hex. head	2
16		STD-1411	NUT, 1/4-20 plain	21
17		STD-551	PLUG, 1/2-14 NPT, square head	2
18		74655	SPACER, Exhaust manifold bracket	1
19		07H21150	BRACKET, Exhaust manifold cable retainer	1
20		73152	BRACKET, Support	4
21		70484	SCREEN, Oil suction	1
22		06E19769-1.00	GASKET, 1.00 I.D. x 1-1/4 O.D. x 3/32 annular	1
23		LW-12545	PLUG, 5/8 hex. head x 1.00-20 thread	1

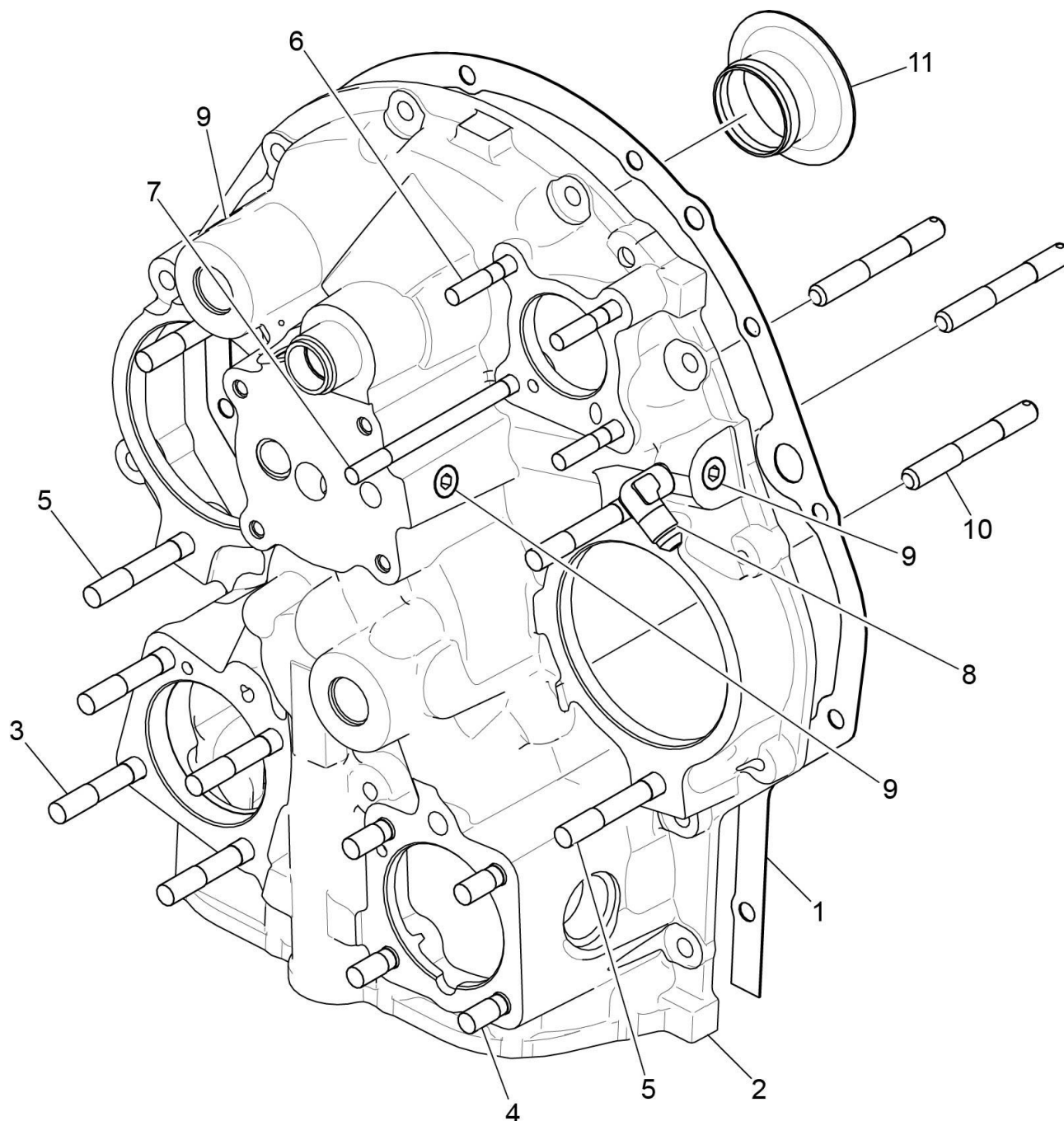


Figure 18
Accessory Housing Assembly

Figure 18 – Accessory Housing Assembly

Figure Item	Code	Part Number	Description	Units per Assembly
1		73818	GASKET, Accessory housing	1
2		21C21542-06	HOUSING ASSEMBLY, Accessory	1
3		31C-19	STUD, 5/16-18 x 2-3/8 long	4
4		31C-12	STUD, 5/16-18 x 1-1/2 long	4
5		31C-21	STUD, 5/16-18 x 2-5/8 long	4
6		25C-14	STUD, 1/4-20 x 2-3/8 long, drilled	3
7		25C-31	STUD, 1/4-20 x 2-5/8 long	1
8		MS-20822-4	ELBOW, 1/8 NPT to 1/4 tube, 90°	1
9		1102	PLUG, 1/8-27 NPT, Allen head	3
10		31CD-20	STUD, 5/16-18 x 2-1/2 long, drilled	3
11		76156	SHIELD, Oil Accessory Breather	1

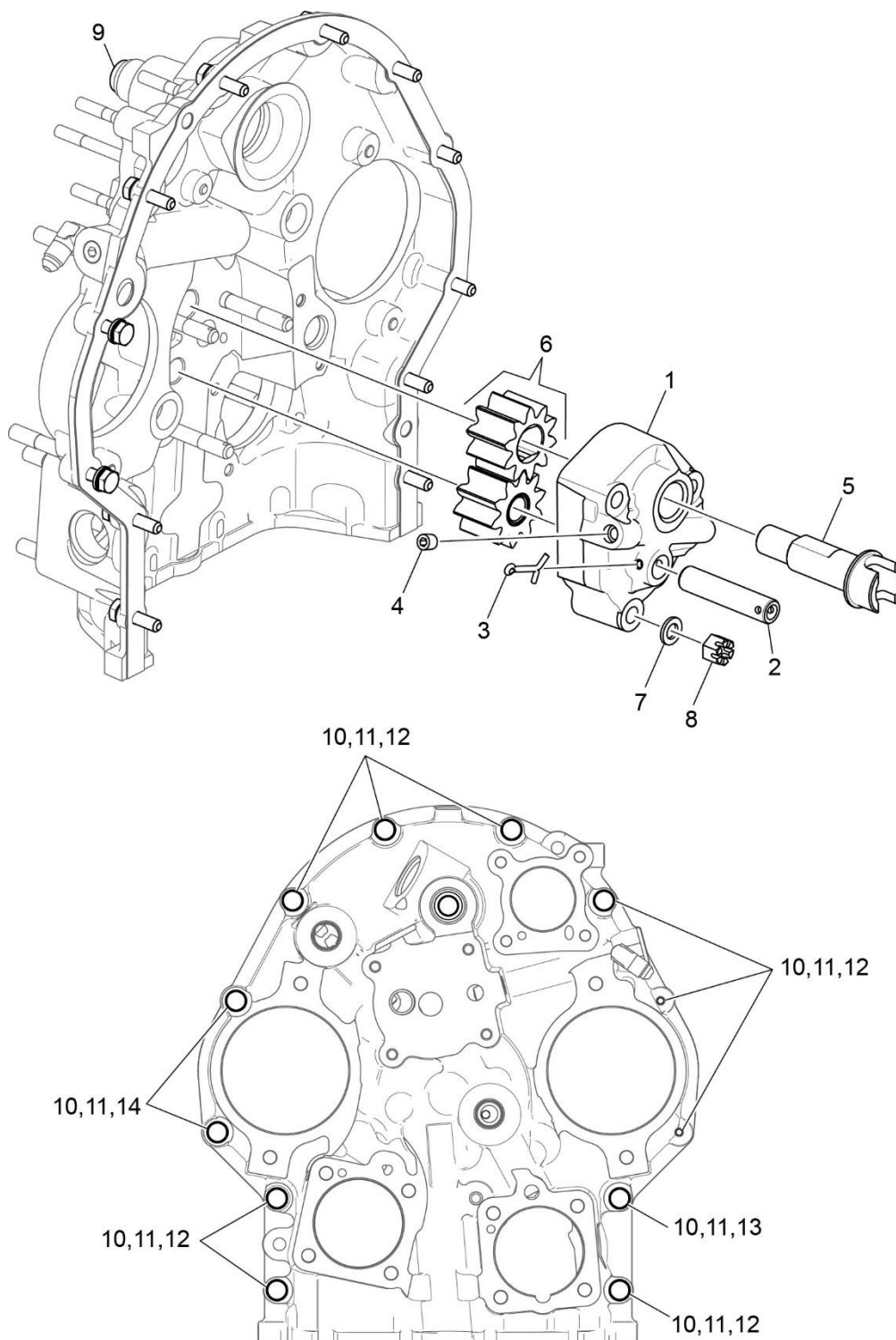


Figure 19
Oil Pump Assembly and Accessory Housing Attaching Parts

Figure 19 – Oil Pump Assembly and Accessory Housing Attaching Parts

Figure Item	Code	Part Number	Description	Units per Assembly
1		51A22618	BODY ASSEMBLY, Oil pump	1
2		51D22617	SHAFT, Oil pump drive	1
3		STD-714	COTTER PIN, 1/8 diameter x 1.00 long	1
4		STD-1339	PLUG, 1/16-27 NPT, Allen head	1
5		76784	SHAFT, Oil pump drive	1
6		05K23463	KIT, Oil pump impellers	1
	P	51B23274	IMPELLER, Oil pump, driving	1
	P	51C23290	IMPELLER ASSEMBLY, 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, Tachometer drive, oil	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
P Sold in complete sets only (Kit P/N 05K23463).				

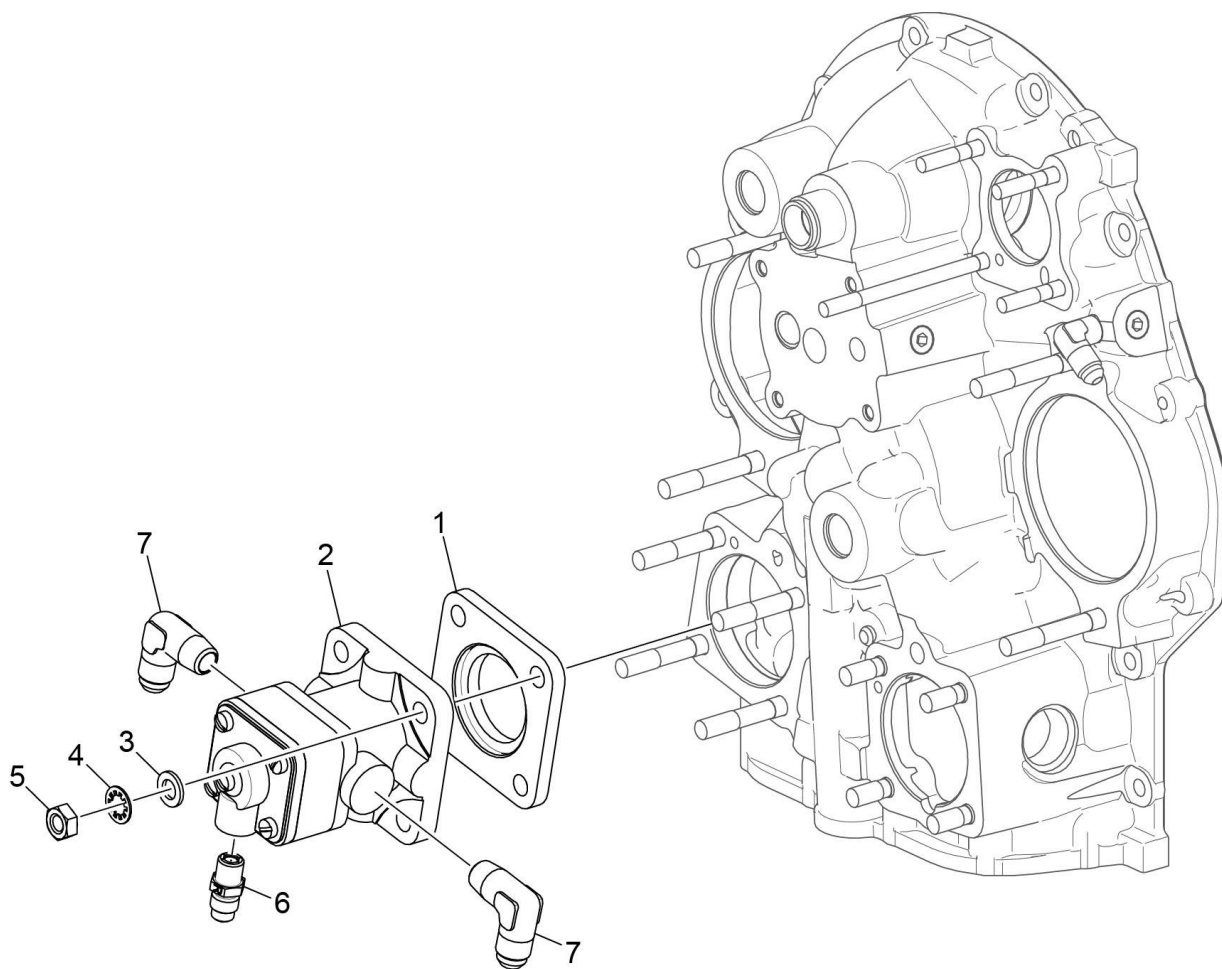


Figure 20
Fuel Pump Assembly and Attaching Parts

Figure 20 - Fuel Pump Assembly and Attaching Parts

Figure Item	Code	Part Number	Description	Units per Assembly
1		LW-10799	SPACER, Fuel pump insulating	1
2		62D26037	FUEL PUMP, HET 201F-5008	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		02G21379	NIPPLE, 1/8 NPT to 1/4 tube (Fuel pump vent)	1
7		MS20822-6	ELBOW, 1/4 NPT to 3/8 flared tube (inlet and outlet)	2

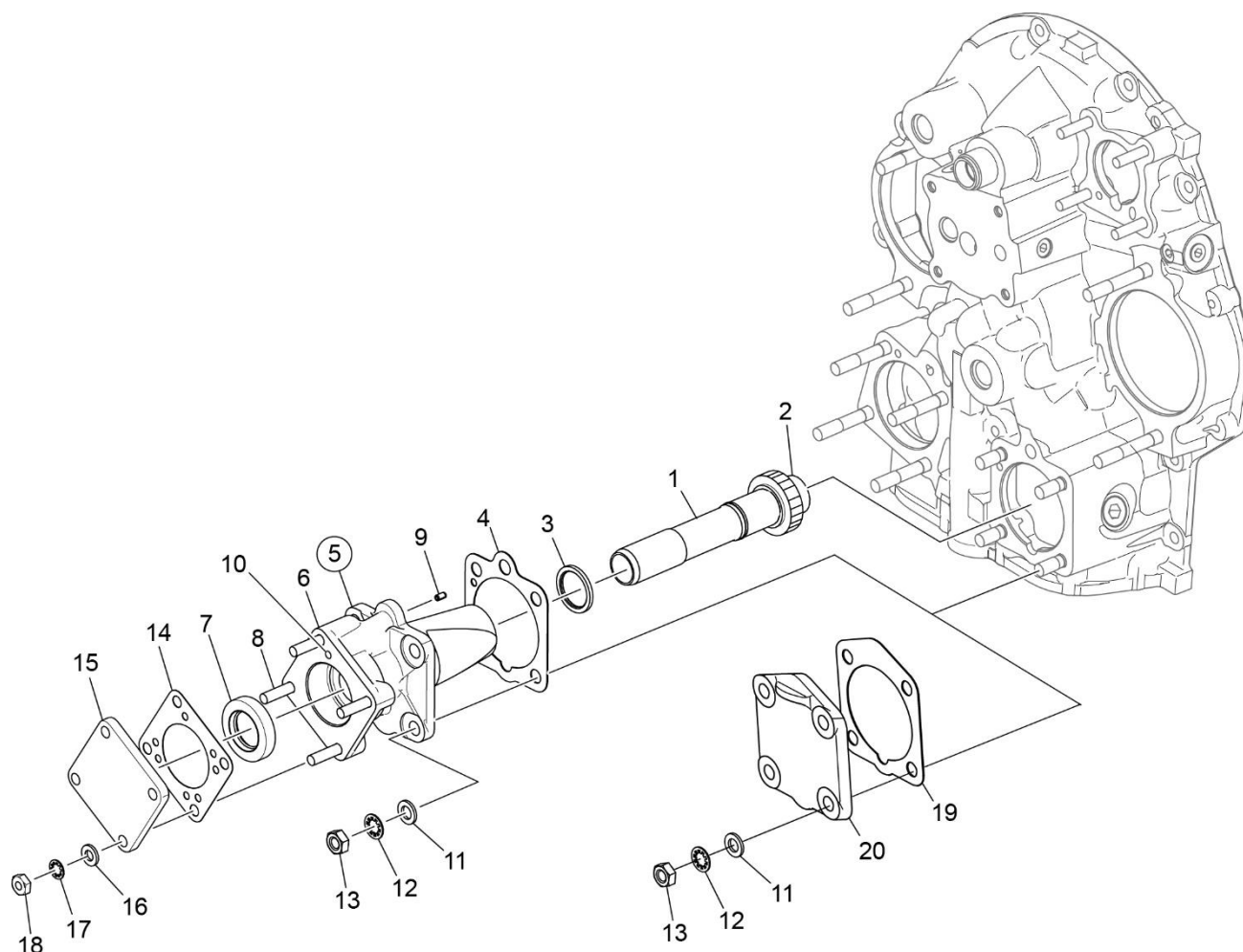


Figure 21
Hydraulic Pump Drive and Cover

Figure 21 – Hydraulic Pump Drive and Cover

Figure Item	Code	Part Number	Description	Units per Assembly
1		72964	GEAR ASSEMBLY, Hydraulic pump driven	1
2		72962	THRUST BUTTON, Vacuum pump gear	1
3		71596	WASHER, Accessory drive gear	1
4		68315	GASKET, Accessory drive adapter	1
5	*	27D21250	ADAPTER ASSEMBLY, Hydraulic pump	1
6		27D21249	ADAPTER, Hydraulic pump	1
7		06A19956	OIL SEAL, 7/8 I.D. x 1-1/2 O.D. x 5/16 wide	1
8		25C-12	STUD, 1/4-20 x 1-1/2 long	4
9		STD-1774	PIN, 1/8 diameter x 1/4 long	1
10		01N19833-187	PLUG, Pin	1
11		STD-35	WASHER, 5/16 plain	4
12		STD-475	WASHER, 5/16 lock, internal teeth	4
13		STD-1410	NUT, 5/16-18 plain	4
14		8313	GASKET, Vacuum pump	1
15		60430	COVER, Vacuum pump	1
16		STD-8	WASHER, 1/4 plain	4
17		STD-160	WASHER, 1/4 lock, internal teeth	4
18		STD-1411	NUT, 1/4-20 plain	4
19		69551	GASKET, Accessory drive adapter (flat tappet)	1
20		69106	COVER, Governor drive adapter pad (flat tappet)	1
* No provision for oil supply				

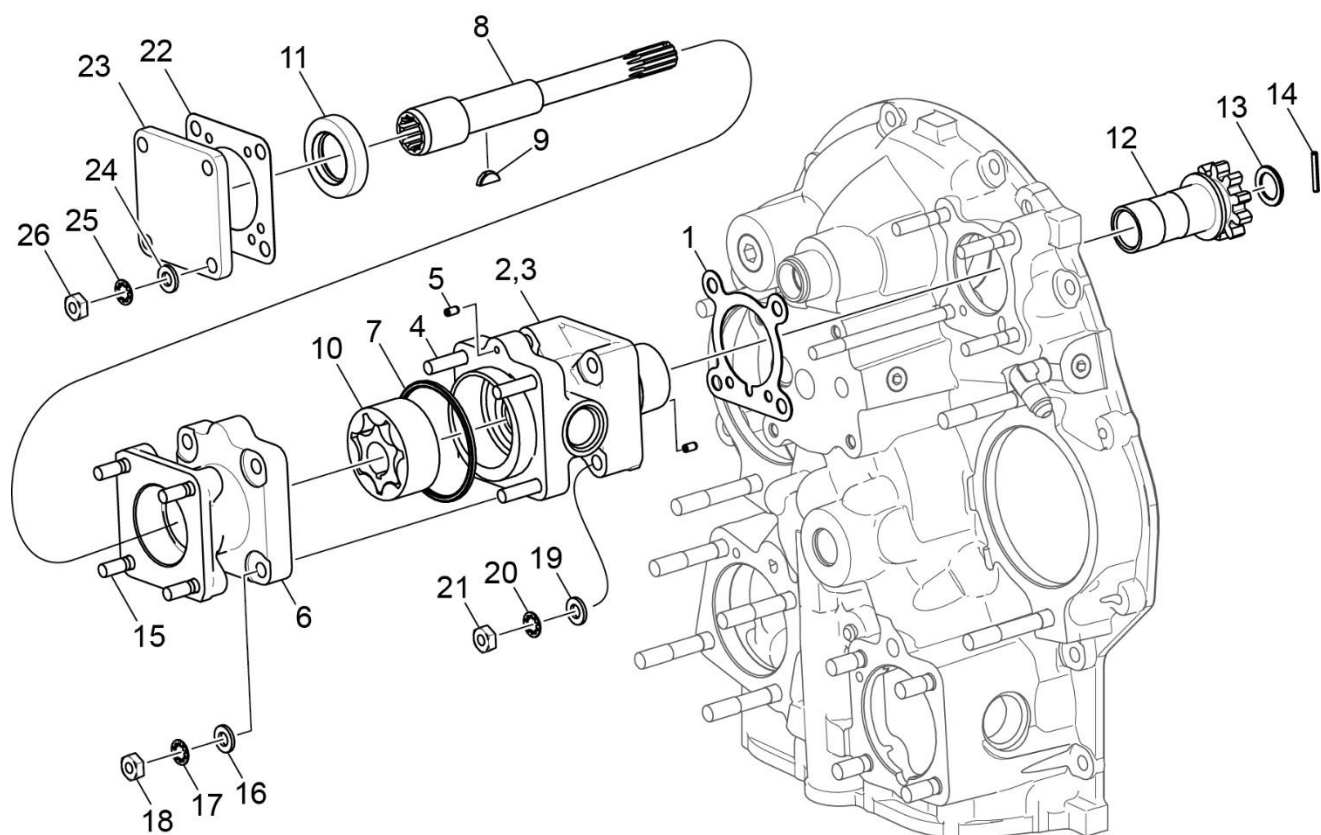


Figure 22
Turbo Scavenge Pump and Vacuum Pump Drive and Cover

Figure 22 – Turbo Scavenge Pump and Vacuum Pump Drive and Cover

Figure Item	Code	Part Number	Description	Units per Assembly
1		61183	GASKET, Accessory adapter	1
2		29A22457	DRIVE ASSEMBLY, Turbo scavenge & hydraulic pump	1
3		29A22456	ADAPTER ASSEMBLY, Turbo scavenge pump	1
4		25C-11	STUD, 1/4-20 x 1-38 long	3
5		STD-1774	PIN, 1/8 diameter x 1/4 long	2
6		29D22366	ADAPTER, Vacuum pump	1
7		MS28775-137	O-RING	1
8		29E22367	SHAFT, Vacuum pump drive	1
9		STD-95	KEY, 1/8 x 1/2 woodruff	1
10		LW-15550	GEROTOR PUMP	1
11		06A19956	OIL SEAL, 7/8 I.D. x 1-1/2 O.D. x 5/16 wide	1
12		29H22368	SHAFTGEAR, Vacuum pump drive	1
13		77708	WASHER, Retaining propeller governor drive	1
14		MS16562-28	PIN, 3/32 diameter x 3/4 long, slotted	1
15		25C--10	STUD, 1/4-20 x 1-1/2 long	4
16		STD-8	WASHER, 1/4 plain	3
17		STD-160	WASHER, 1/4 lock, internal teeth	3
18		STD-1411	NUT, 1/4-20 plain	3
19		STD-8	WASHER, 1/4 plain	4
20		STD-160	WASHER, 1/4 lock, internal teeth	4
21		STD-1411	NUT, 1/4-20 plain	4
22		8313	GASKET, Pump	1
23		60430	COVER, Pump	1
24		STD-8	WASHER, 1/4 plain	4
25		STD-160	WASHER, 1/4 lock, internal teeth	4
26		STD-1411	NUT, 1/4-20 plain	4

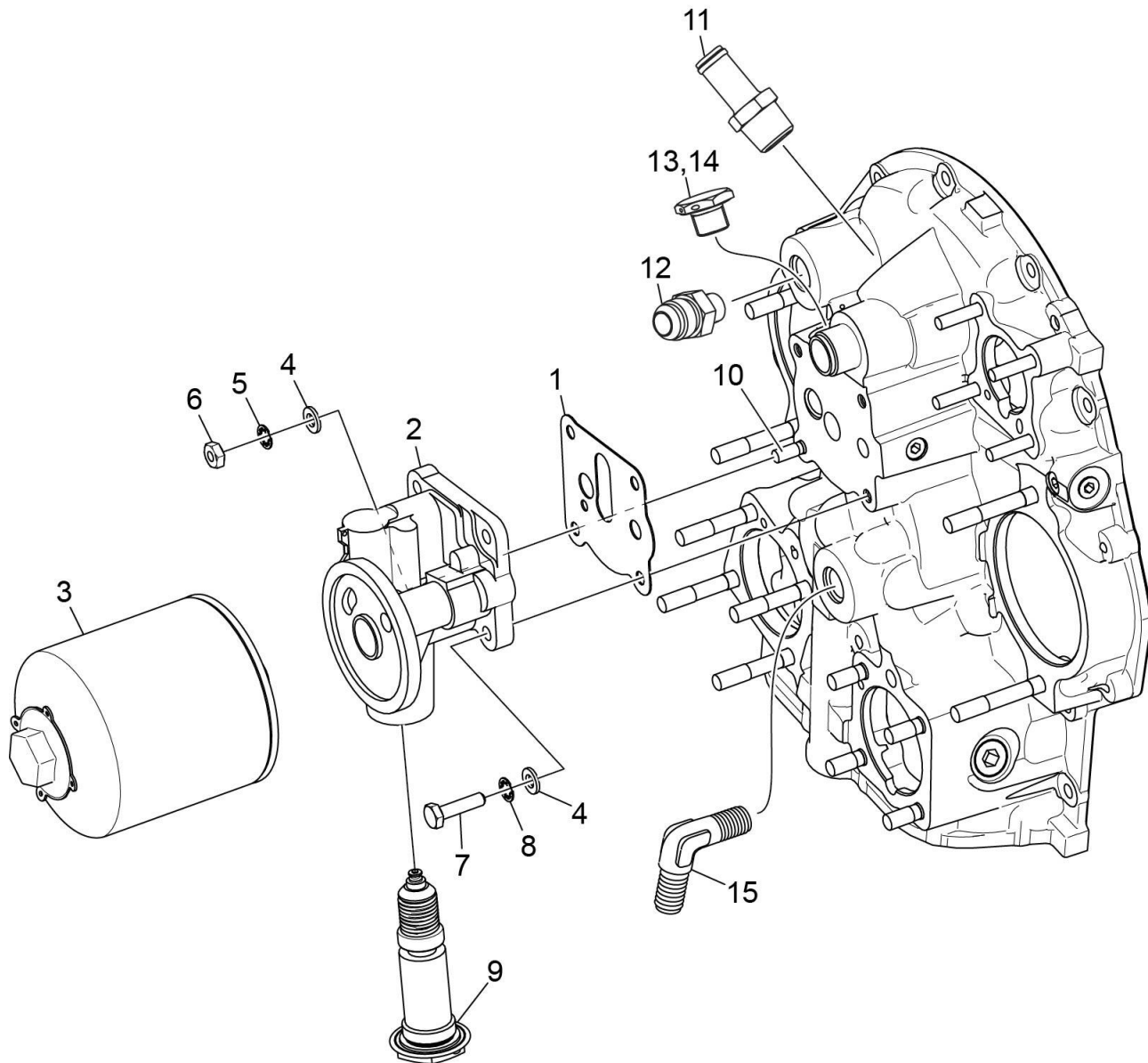


Figure 23
Oil Filter Assembly, Oil Cooler Bypass Valve, and Breather Fitting

Figure 23 – 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	2
2		77852	OIL FILTER BASE ASSEMBLY	1
3	**	LW-13215	OIL FILTER, Short, CH48110-1	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	3
8		STD-160	WASHER, 1/40 lock, internal teeth	3
9		53E22144	VALVE ASSEMBLY, Temperature control, oil cooler by-pass	1
10		25C-10	STUD, 1/4-20 x 1-1/4 long	1
11		AN840-12D	FITTING, Breather	1
12	+	STD-2238	NIPPLE, -10 to -6 special	2
13		06E19769-0.63	GASKET, Annular, 5/8 I.D.	1
14		62417	PLUG, Oil cooler bypass	1
15		02A23027	ELBOW, 45°, 3/8 NPT to 5/8 flared tube	1
* Extra gasket shipped as loose part with engine. ** Refer to latest edition of Textron Lycoming SSP-885 for oil filter kits and replacement filters. + Extra nipple shipped as loose part with engine.				

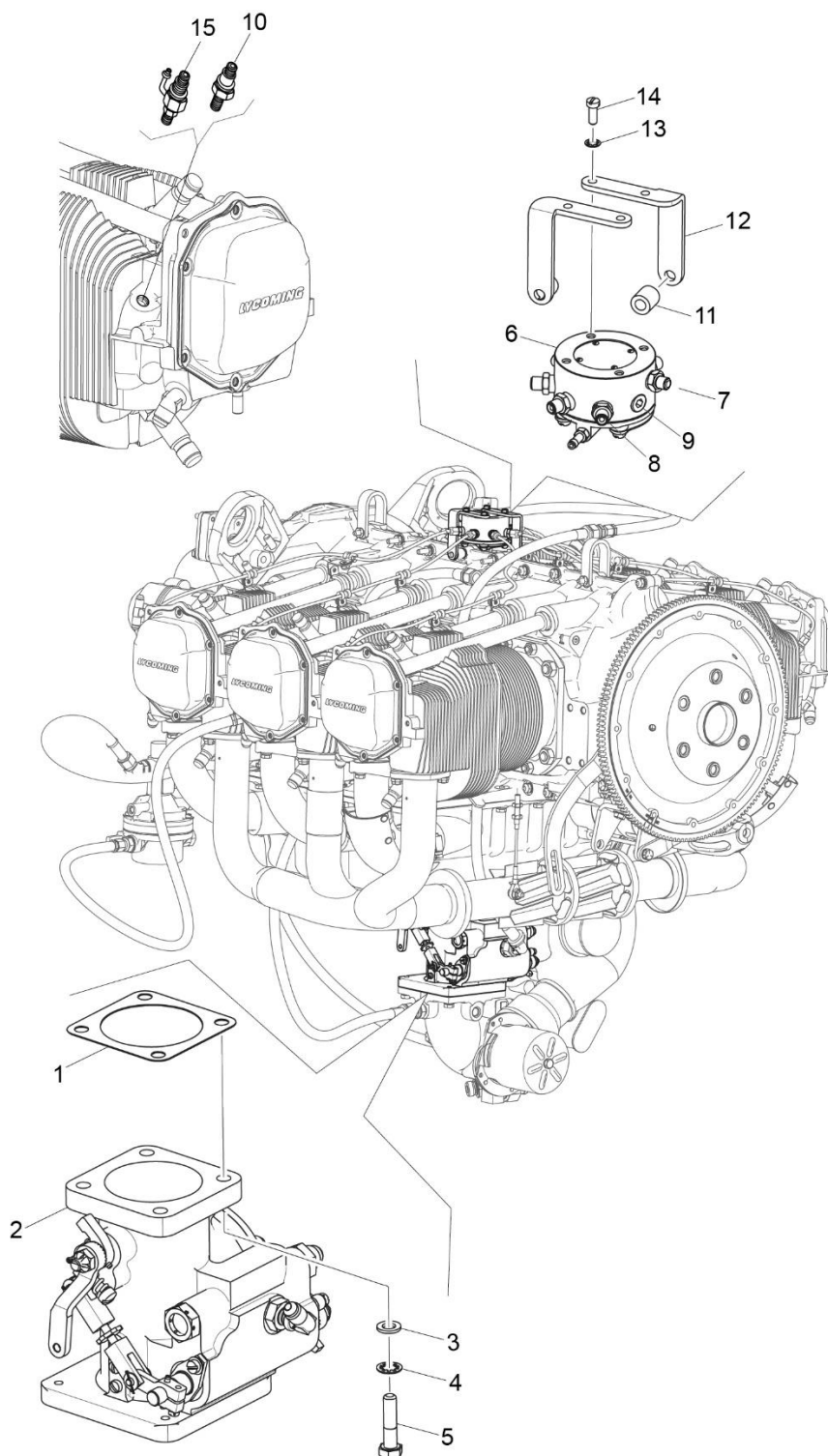


Figure 24
Fuel Injector, Fuel Manifold, and Injection Nozzles

Figure 24 – Fuel Injector, Fuel Manifold, and Injection Nozzles

Figure Item	Code	Part Number	Description	Units per Assembly
1		66224	GASKET, Carburetor	1
2		61J23431	FUEL INJECTOR , 2576592-2	1
3		STD-35	WASHER, 5/16 plain	4
4		STD-475	WASHER, 5/16 lock, internal teeth	4
5		LW-31-1.31	BOLT, 5/16-18 x 1-5/16 long hex	4
6		63B31561	MANIFOLD ASSEMBLY, Fuel	1
7		AN816-4	NIPPLE, 1/8 NPT to 1/4 tube	1
8		STD-148	NIPPLE, Union, 1/8 NPT	5
9		1102	PLUG, 1/8-27 NPT, Allen head	1
10		63C26453	NOZZLE ASSEMBLY, Manifold air bleed	6
11		73966	SPACER, Fuel manifold bracket	2
12		07A22995	BRACKET, Fuel manifold	2
13		STD-251	WASHER, No. 10 internal teeth	4
14		STD-82	SCREW, No. 10-24 x 1/2 long, fill. head	4

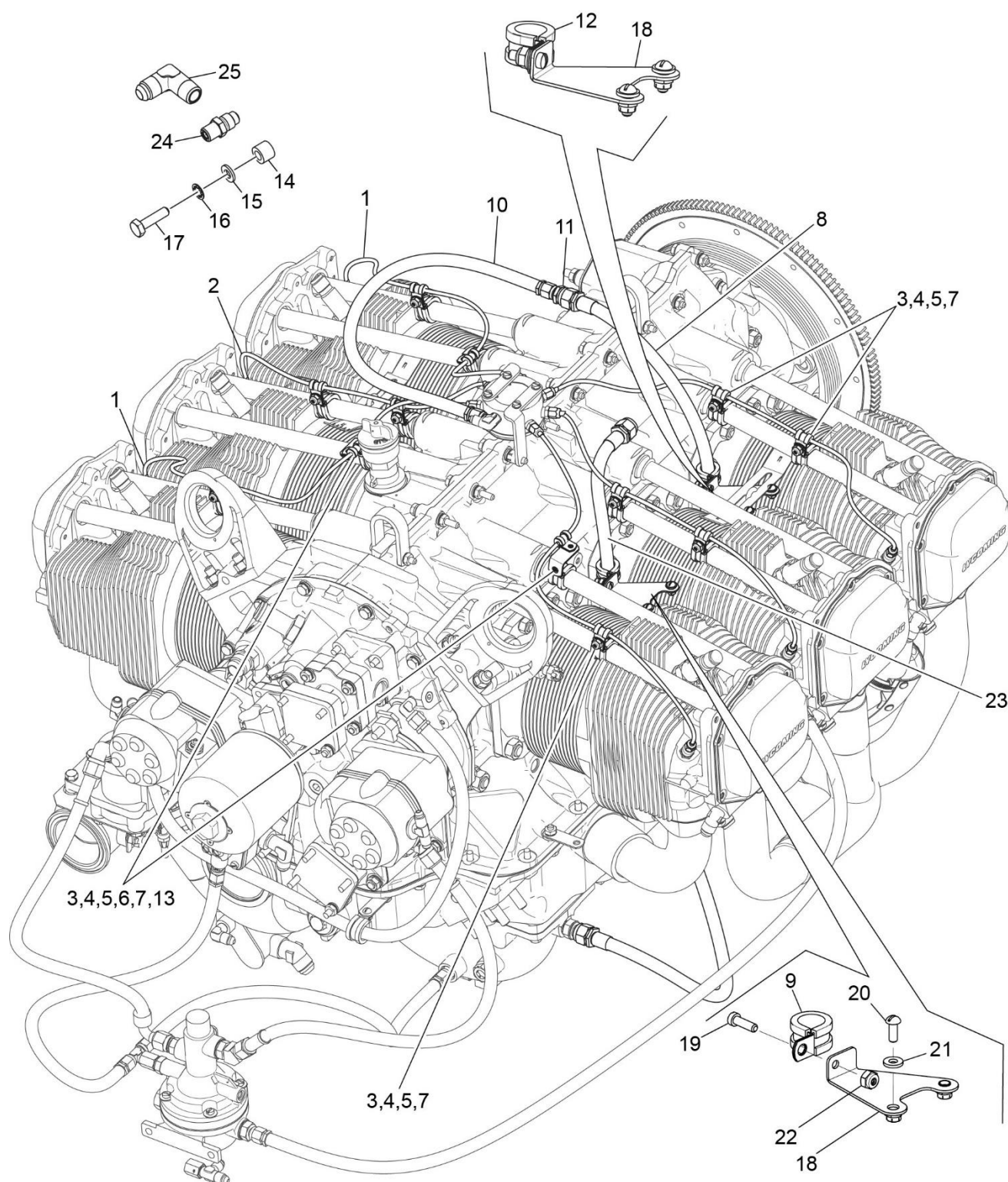
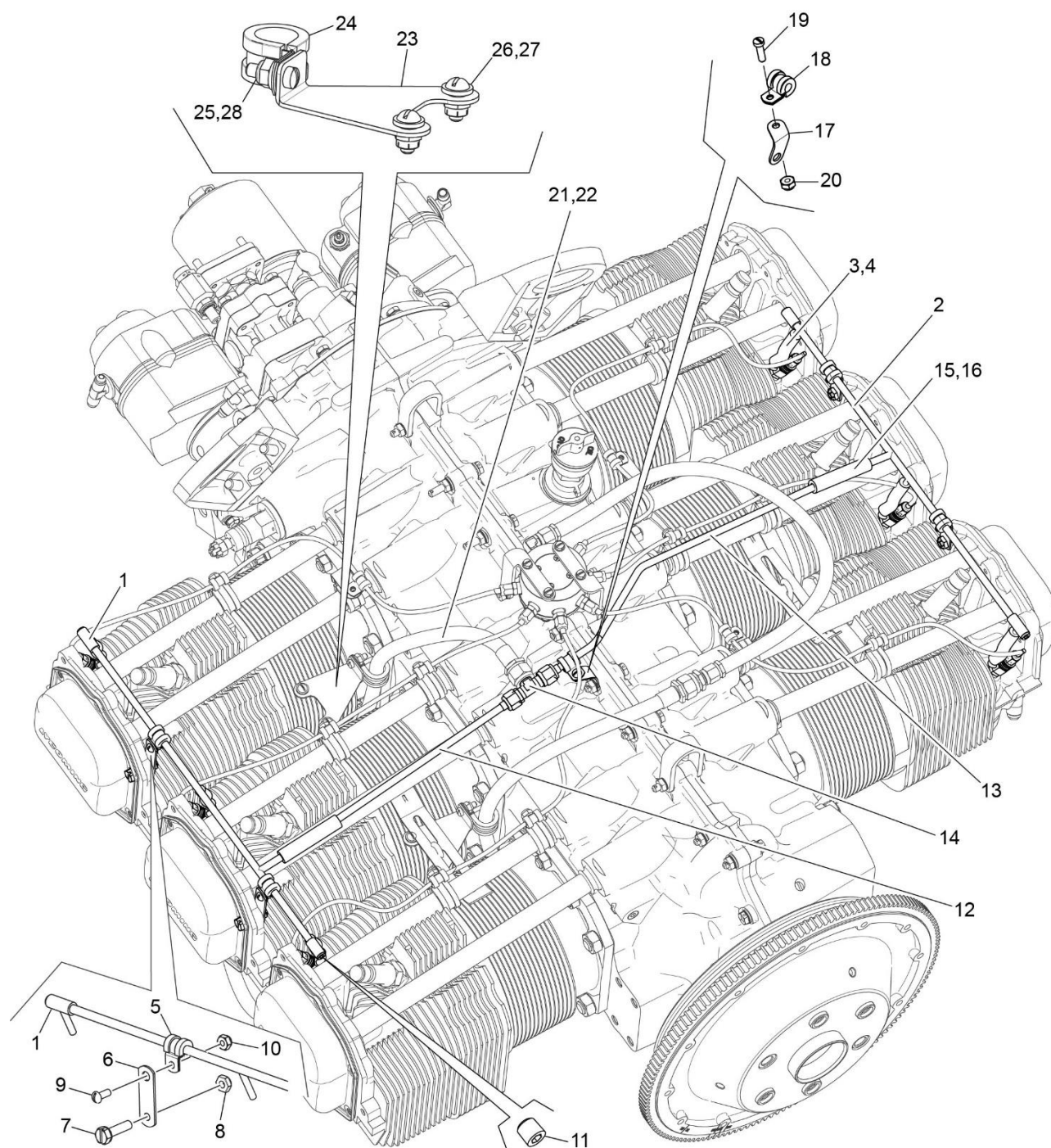


Figure 25
Fuel Lines and Attaching Parts

Figure 25 – Fuel Lines and Attaching Parts

Figure Item	Code	Part Number	Description	Units per Assembly
1		LW-12098-0-210	TUBE ASSEMBLY, Fuel injector line	4
2		LW-12098-0-170	TUBE ASSEMBLY, Fuel	2
3		LW-16266-10-75	CLAMP	12
4		LW-16266-10-13	CLAMP, 1/8 diameter for No. 10 screw	12
5		STD-860	SCREW, No. 10-32 x 5/8 long, fill. head	12
6		STD-425	WASHER, No.10 plain	2
7		STD-670	LOCK NUT, No. 10-32 self-locking	12
8		LW-12798-4S303	HOSE ASSEMBLY, 1/4 hose, straight	1
9		LW-16266-25-63	CLAMP, 5/8 I.D. x 1/4 diameter screw	1
10		LW-12798-4S150	HOSE ASSEMBLY, 3/8 hose, 45° elbow	1
11		AN815-4	UNION, 1/4 flared tube	1
12		LW-16266-10-63	CLAMP, 5/8 I.D. x No. 10 screw	1
13		73136	BRACKET, Extension	2
14		74655	SPACER, Exhaust manifold	1
15		STD-8	WASHER, 1/4 plain	1
16		STD-160	WASHER, 1/4 lock, internal teeth	1
17		LW-25-0.94	BOLT, 1/4-20 x 15/16 long hex.	1
18		07A28507	BRACKET ASSEMBLY, Fuel line support	2
19		STD-860	SCREW, No.10-32 x 5/8 long fill. head	1
20		STD-692	SCREW, No.10-32 x 1/2 long, round head	2
21		STD-425	WASHER, No.10 Plain	2
22		STD-670	LOCK NUT, No.10-32	1
23		LW-12879-6S262	HOSE ASSEMBLY, 3/8 hose, 45° elbow	1
24		02G21379	NIPPLE, 1/8 NPT to 1/4 tube	1
25		MS20822-6	ELBOW, 1/4 NPT to 3/8 flared tube	2



050AD

Figure 26
Injector Nozzle Vent Manifolds, Hoses and Attachments

FIGURE 26 – INJECTOR NOZZLE VENT MANIFOLDS, HOSES AND ATTACHMENTS

Figure Item	Code	Part Number	Description	Units per Assembly
1		63E21054	MANIFOLD, Injector nozzle vent, right	1
2		78109	MANIFOLD, Injector nozzle vent, left	1
3		LW-18737	HOSE, 3/16 I.D. x 7/16 O.D. x 2.00 long	6
4		LW-15592-5-03	CLAMP, 0.438 O.D. hose	12
5		LW-16266-10-25	CLAMP, 1/4 I.D. for #10 screw	4
6		73152	BRACKET, Support clamp	4
7		STD-1856	SCREW, 1/4-20 x 1.00 long, hex. head	4
8		STD-2079	NUT, 1/4-20 UNC	4
		01B31661-251	LOCKNUT-Prevailing torque, 1/4-20 UNC-2B, Thin	4
9		STD-692	SCREW, #10-32 x 1/2 long, round head	4
10		STD-670	LOCKNUT, 10-32 self-locking	4
11		STD-1339	PLUG, 1/16-27 NPT	4
12		63A22481	TUBE, Crossover, nozzle vent, man.	1
13		63A22482	TUBE, Crossover, nozzle vent, man.	1
14		AN824-4	TEE, 1/4 flared tube	1
15		STD-2048	HOSE, 1/4 I.D. x 0.59 O.D. x 2.44 long	2
16		LW-15592-5-03	CLAMP, 0.438 O.D. hose	4
17		78753	BRACKET, Injector nozzle vent crossover	1
18		LW-16266-10-25	CLAMP, 1/4 I.D. for #10 screw	1
19		STD-692	SCREW, #10-32 x 1/2 long, round head	1
20		STD-670	LOCKNUT, 10-32 self-locking	1
21		LW-12798-4S340	HOSE ASSY, 1/4 hose, straight	1
22		73944	1/4 tube, AFJ, 45 bypass valve	1
23		07A28507	BRACKET ASSY, Fuel line support	1
24		LW-16266-10-63	CLAMP, 5/8 I.D. for #10 screw	1
25		STD-860	SCREW, #10-32 x 5/8 long, fill. head	1
26		STD-692	SCREW, #10-32 x 1/2 long, round head	2
27		STD-425	WASHER, #10 plain	2
28		STD-670	LOCKNUT, 10-32 self-locking	1

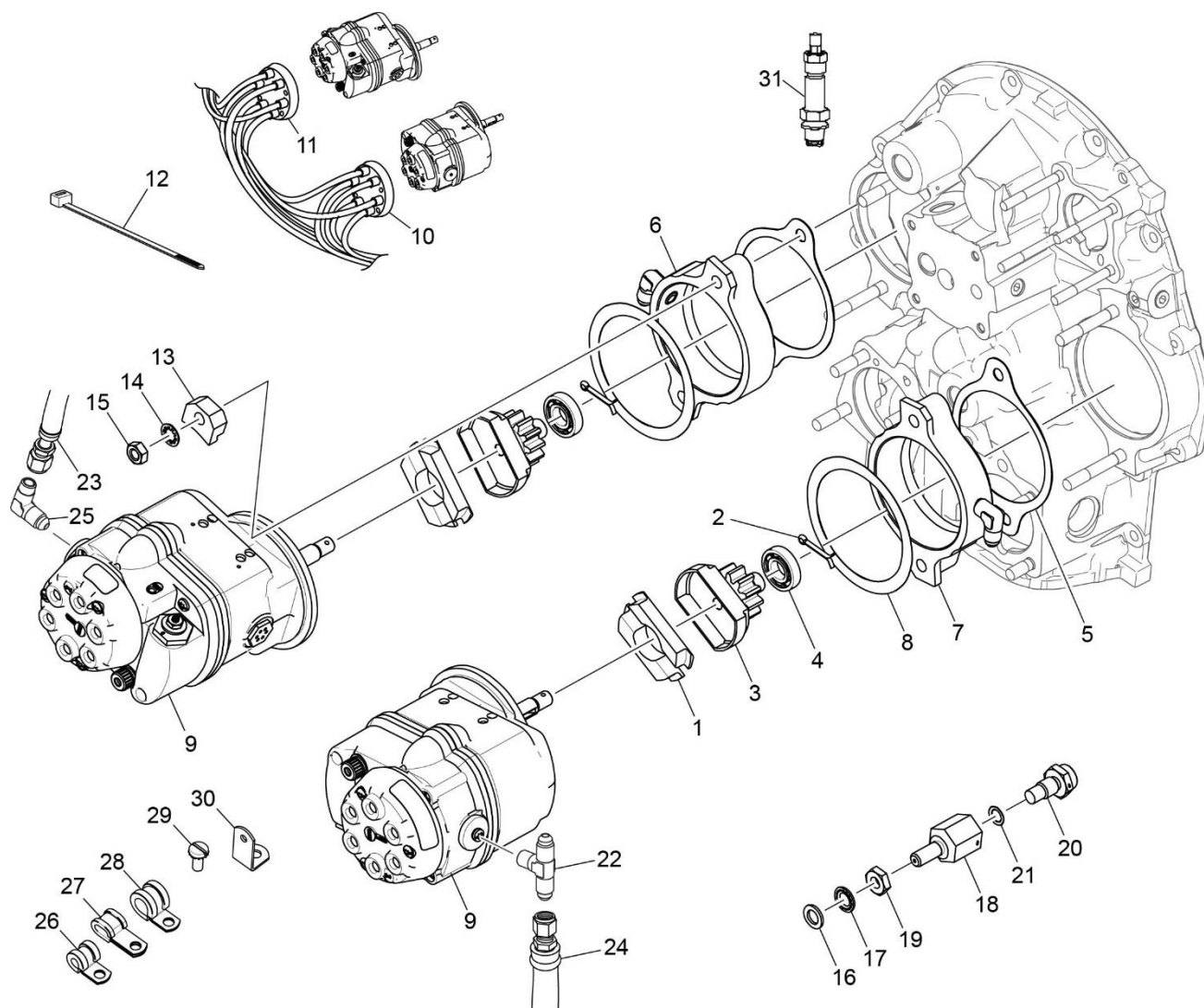


Figure 27
Magnetos, Magneto Drives, Harnesses, and Spark Plugs

Figure 27 – Magnetos, Magneto Drives, Harnesses, and Spark Plugs

Figure Item	Code	Part Number	Description	Units per Assembly
1		68H22624	CUSHION, Magneto drive	4
2		MS9245-44	COTTER PIN, 3/32 diameter x 5/8 long	2
3		LW-19096	GEAR RETAINER ASSEMBLY	1
4		67542	BALL BEARING	1
5		62224	GASKET, Magneto adapter	2
6		LW-12707	ADAPTER, Magneto, left, impulse coupling	1
7		LW-13926	ADAPTER, Magneto	1
8		LW-12681	GASKET, Magneto, right	2
9		66LC35SDNP	MAGNETO, Impulse 6361	2
10		67J20608-P	HARNESS, Right, Slick P/N M-2966	1
11		67J20609-P	HARNESS, Left, Slick P/N M-2965	1
12		76734	ZIP STRAP	4
13		66M21195	CLAMP, Magneto	4
14		STD-475	WASHER, 5/16 lock, internal teeth	4
15		STD-1410	NUT, 5/16-18 plain	4
16		STD-2007	WASHER, 3/8 diameter seal	1
17		STD-33	WASHER, 3/8 plain	7
18		LW-13227	ADAPTER, Magneto pressurization	1
19		LW-13226	NUT, 3/8-16 plain	1
20		66N21020	VALVE ASSEMBLY, Relief	1
21		MS29512-04	O-RING, 11/32 I.D. x 1/16 section	1
22		AN825-4	TEE, 1/4 flared tube x 1/8 NPT	1
23		LW-12798-4S204	HOSE ASSEMBLY, 1/4 hose, straight	1
24		LW-12798-4S303	HOSE ASSEMBLY, 1/4 hose, straight	1
25		MS20822-4	ELBOW, 1/8 NPT to 1/4 tube, 90°	1
26		LW-16266-25-25	CLAMP, One wire	2
27		71824	CLAMP, Rubber dip, two wire	2

(continued on next page)

Figure 27 – Magnetos, Magneto Drives, Harnesses, and Spark Plugs (Cont.)

Figure Item	Code	Part Number	Description	Units per Assembly
28		LW-16266-25-56	CLAMP, 7/16 I.D. x 1/4 diameter screw	3
29		STD-1925	SCREW, 1/4-20 x 5/8 long, pan head, self-locking	2
30		73136	BRACKET, Extension, fuel injector line	1
31	*	1182-H7	SPARK PLUG, Champion P/N RHB37E	12
* Refer to the latest revision of Lycoming Service Instruction No. 1042 for complete listing of all approved spark plugs.				

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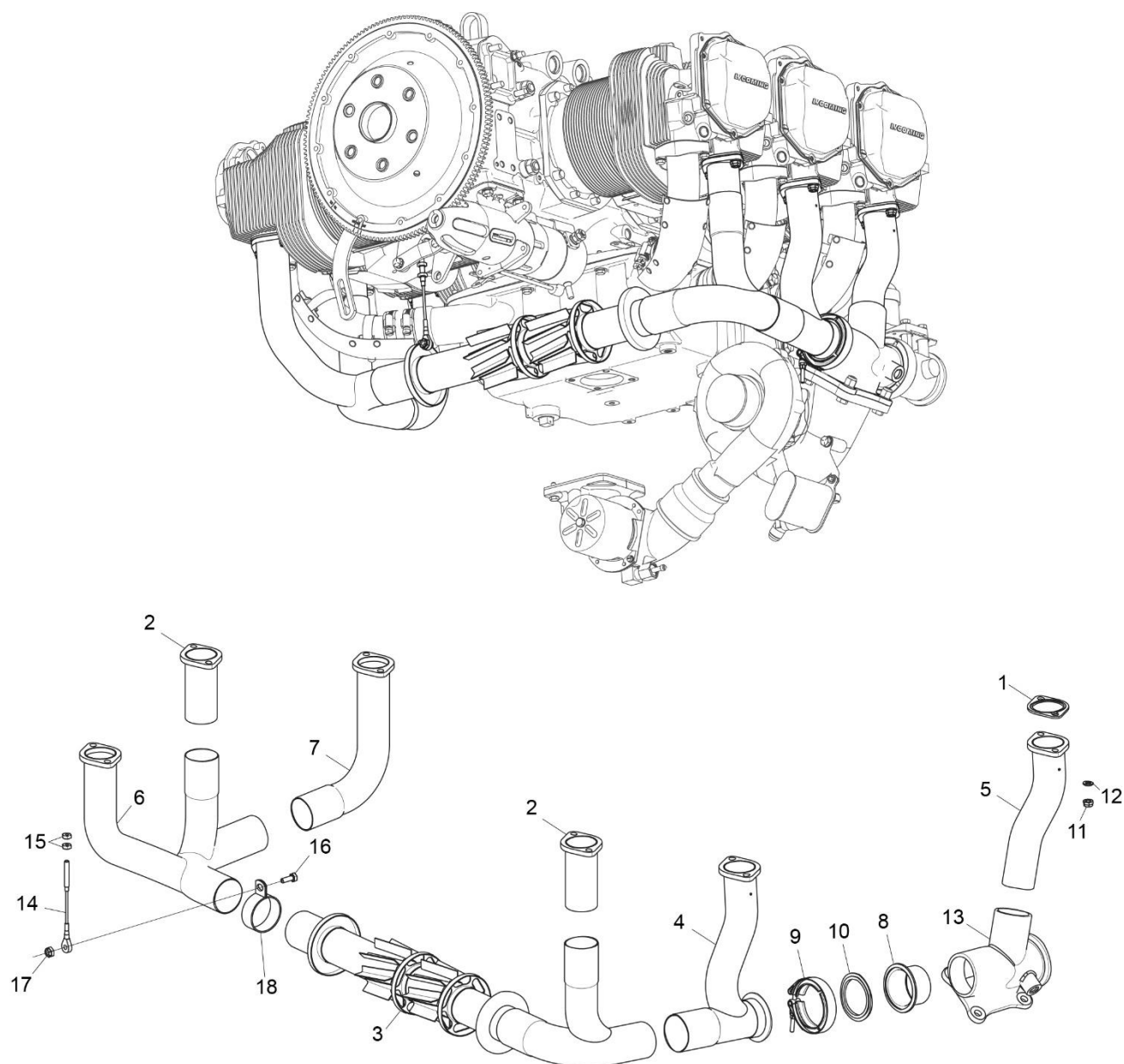


Figure 28
Exhaust Pipes and Transition Assembly

Figure 28 - Exhaust Pipes and Transition Assembly

Figure Item	Code	Part Number	Description	Units per Assembly
1		77611	GASKET, Exhaust flange	6
2		40G22959	PIPE, Exhaust adapter cyl. No. 2 & No. 3	2
		40G23394	PIPE, Exhaust adapter cyl. No. 2 & No. 3 (with EGT probe holes)	2
3		40B22962	PIPE, Exhaust, cyl. No. 2	1
4		40B22964	PIPE, Exhaust cyl. No. 4	1
		40B23391	PIPE, Exhaust cyl. No. 4 (with EGT probe holes)	1
5		40B22966	PIPE, Exhaust cyl. No. 6	1
		40B23390	PIPE, Exhaust cyl. No. 6 (with EGT probe holes)	1
6		40B22961	PIPE, Exhaust cyl. No.1 & 3	1
		40B23392	PIPE, Exhaust cyl. No.1 & 3 (with EGT probe holes)	1
7		40B22965	PIPE, Exhaust cyl. No. 5	1
		40B23393	PIPE, Exhaust cyl. No. 5 (with EGT probe holes)	1
8		40C22960	FLANGE, Exhaust transition	1
9		40D23026	COUPLING, V-band	1
10		78084	GASKET, V-band coupling 2.00 tube	1
11		STD-2233	NUT, 5/16-18 self-locking	12
12		AN960C516	WASHER, 5/16 plain	12
13		47C22923	TRANSITION, Exhaust	1
14		LW-19189	CABLE, Exhaust manifold retainer	1
15		STD-1411	NUT, 1/4-20 plain	2
16		LW-25SS-0.75	BOLT, 1/4-20 x 3/4 long, hex. head	1
17		STD-2044	NUT, 1/4-20 self-locking	1
18		07C23103	CLAMP, Exhaust pipe	1

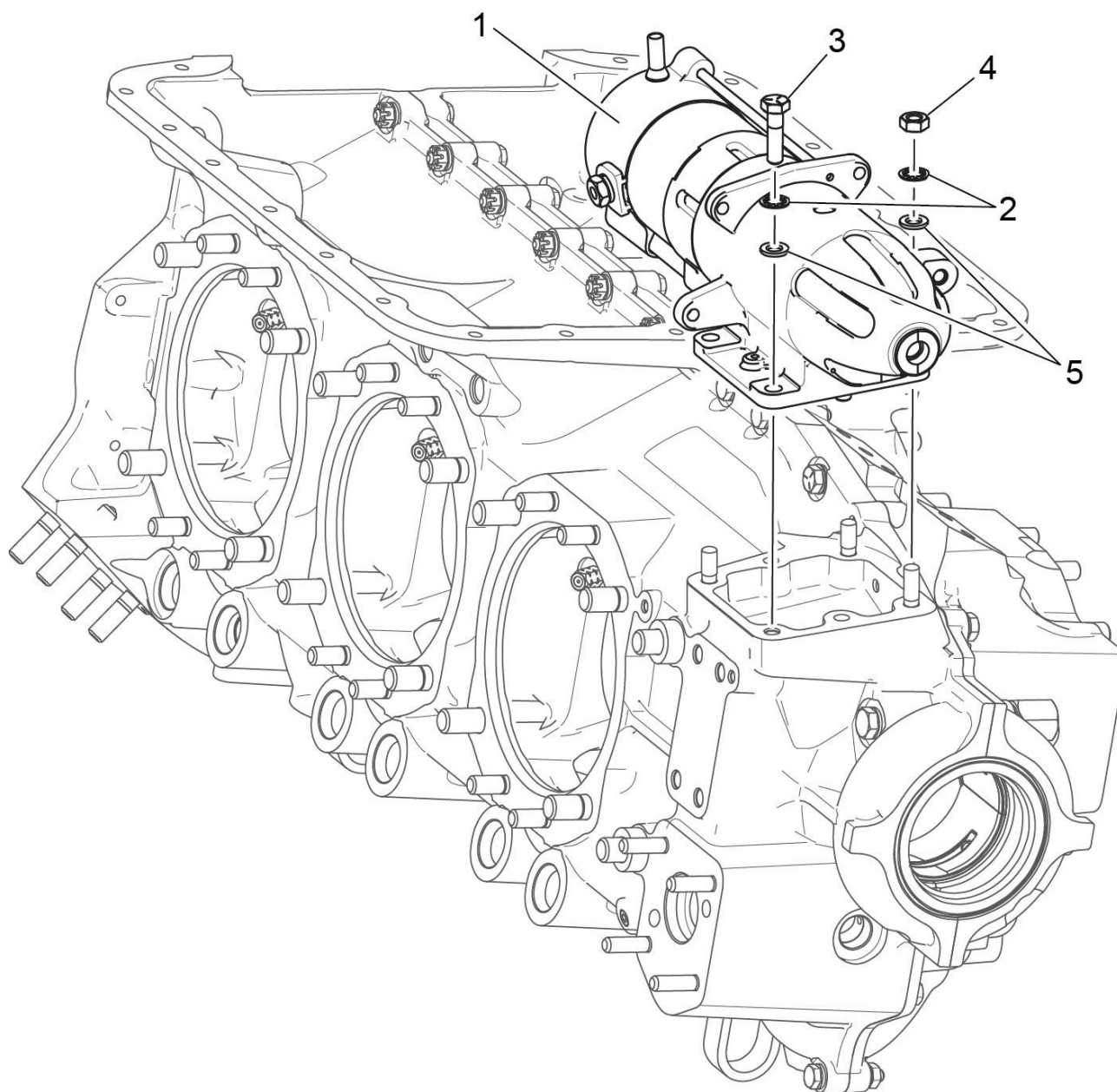


Figure 29
Starter Assembly and Attaching Parts

Figure 29 - Starter Assembly and Attaching Parts

Figure Item	Code	Part Number	Description	Units per Assembly
1	*	31B26040	STARTER ASSEMBLY, Kelly ERB-8011 - 24 VOLT, 12/14 pitch (roller tappet)	1
1		31B26554	STARTER, Sky Tec, 12/14 pitch, 24V, 149NL/EC (flat tappet)	1
2		STD-475	WASHER, 5/16 lock, internal teeth	4
3		LW-31-1.16	BOLT, 0.3125-18 x 1.16 long, hex head (roller tappet)	1
3		LW-31-0.94	BOLT, 0.3125-18 x .94 long, hex head (flat tappet)	1
4		STD-1410	NUT, 5/16-18 plain	3
5		STD-35	WASHER, 5/16 plain	4
* Refer to the latest revision of Service Instruction No. 1154 for a complete list of FAA-approved starters and alternators.				

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Service Kit Section**Seal and Gasket Set**

PART NO.	PART NAME	Qty.
05K22781	KIT - SEAL AND GASKET SET	1
LW-12272	LOCKPLATE, Shroud tube	6
LW-12681	GASKET, Magneto	2
06B23862	GASKET, Oil filter adapter	1
LW-14260	SEAL, Tachometer drive, oil	1
LW-14995	SPRING, Shroud tube	6
LW-15628	SEAL, Crankshaft, oil	1
LW-18234	GASKET, Exhaust flange	12
LW-18481	GASKET, Oil filler adapter	1
LW-18638	LOCKPLATE, Crankshaft gear	1
LW-18661	SEAL, Shroud tube	12
MS29512-06	O RING, 15/32 I.D. X 5/64 sect	12
STD-2180	HOSE, 3/8 I.D. X 1 7/8 long	6
STD-2231	RING, Internal retaining (13/16)	1
06A19956	OIL SEAL, 7/8 I.D. X 1 1/2 O.D. X 5/16	2
06B21326	GASKET, Oil sump	1
06E19769-0.63	GASKET, Annular, 5/8 I.D.	1
06E19769-1.25	GASKET, Annular, 1 1/4 I.D.	1
06E19769-1.50	GASKET, Annular, 1 1/2 I.D.	1
8313	GASKET, Vacuum pump	1
69164	GASKET, Fuel pump adapter	1
61183	GASKET, Accessory adapter	1
62224	GASKET, Magneto adapter	2
66732	GASKET, Valve rocker shaft cover	12
68315	GASKET, Accessory drive adapter	1
70310	SEAL, Shroud tube	12
70455	GASKET, 25/32 I.D. x 1-1/8 O.D. x 1/16 thick	1
71481	RING, Oil seal, 9/100 diameter x 4-27/32 I.D.	6
71973	GASKET, 2 bolt flange, 1-13/16 I.D.	6
72053	GASKET, Governor	1
72059	GASKET, Oil level gage	1
72091	RING, Oil seal, 23/64 I.D. x 1/10 diameter	2
72711	RING, Seal, intake pipes	6
73032	GASKET, Air inlet housing	1
73818	GASKET, Accessory housing	1
74068	RING, Oil level gage plug	1
74524	RING, Oil level gage bushing	1

Seal and Gasket Set (Cont.)

PART NO.	PART NAME	Qty.
74944	GASKET, Turbocharger controller adapter	1
06B28890	GASKET, Rocker box cover, (silicone)	6
LW-18737	HOSE, 3/16 I.D. x 7/16 O.D. x 2.00 long	6
MS28775-137	O-RING, 2-1/16 I.D. x 7/64 diameter section	1
MS29512-04	O-RING, 11/32 I.D. x 1/16 section	4
MS29512-08	O-RING, 41/64 I.D. x 5/64 section	1
MS29513-138	O-RING, 2-7/64 I.D. x 7/64 section	1
STD-213	OIL SEAL, 3/4 I.D. x 1-3/8 O.D.	1
06B22275	GASKET, Turbo drain tank	1
75371	GASKET, Turbo oil inlet adapter	1
02M22427	HOSE, 3/16 I.D. x 7/16 O.D. x 1-7/8	3
LW-18675-4	HOSE, 1/4 I.D. x 1/2 O.D. x 20-1/2 long	2
02M22269	HOSE, 2-3/4 to 3.00 I.D. x 3-1/2 long	2

Cylinder, Piston and Ring Assembly

PART NO.	PART NAME	Qty.
05K22680	KIT - CYLINDER, PISTON AND RING ASSEMBLY	1
16G23273-02	CYLINDER HEAD & VALVE ASSEMBLY	1
14D23907	PISTON, Compression ratio 7.30:1	1
74241	RING, Piston, compression, 5-1/8 bore	2
14H29884	RING, Piston, oil, 5-1/8 bore	1
LW-14078	PIN, Piston	1
72198	PLUG, Piston pin	2
66732	GASKET, Valve rocker shaft cover	2
06B28890	GASKET, Rocker box cover (silicone)	1
LW-18661	SEAL, Shroud tube	4
70310	SEAL, Shroud tube	2
LW-12272	LOCKPLATE, Shroud tube	1
71481	RING, Oil seal, 9/100 diameter x 4-27/32 I.D.	1
SSP-299	TAG	1
71195	CONTAINER	1
71973	GASKET, 2 bolt flange, 1-13/16 I.D.	1
LW-18234	GASKET, Exhaust flange	2
AV951391	PACKING, Pre-formed	2
06A23493	SEAL, Shroud tube	2
STD-148	NIPPLE, Union, 1/8 NPT	1
SSP-115	STICKER	
1102	PLUG, 1/8 pipe	1

Crankshaft and Counterweight Assembly Kit

PART NO.	PART NAME	Qty.
05K47793	KIT - CRANKSHAFT AND COUNTERWEIGHT ASSEMBLY	1
13F47743	CRANKSHAFT ASSEMBLY	1
LW-19210	COUNTERWEIGHT ASSEMBLY	2
73648	ROLLER, Dynamic counterweight, 5.1 order	2
76788	ROLLER, Dynamic counterweight, 6.3 order	2
71907	WASHER, Counterweight	8
LW-14820	RING, Internal retaining	8

NUMERICAL INDEX

PART NO.	PART NAME	PAGE NO.	PART NO.	PART NAME	PAGE NO.
01B31661-251	LOCKNUT	55	1182-H7	SPARK PLUG	56
01L21418	WASHER	3	11E24005-S	C'CASE ASSY	5
01L23459	WASHER	19	11E24005-S1	C'CASE ASSY	5
01N19833-187	PLUG	43	11E24105-S1	C'CASE ASSY	5
02A22460	ELBOW	31	12A19770	BRACKET	33
02A22992	TEE	29	13E47622	C'SHAFT ASSY	9
02A23027	ELBOW	47	13S19648	GEAR	9
02G21379	NIPPLE	41	14D23913	PISTON	15
02G21379	NIPPLE	51	14H29889	RING	15
02G22466	NIPPLE	29	14S23890	BOLT	15
02G22988	NIPPLE	29	15B21319	SOCKET	19
02M22920	HOSE	31	15B26066	PLUNGER ASSY	19
05K23463	KIT	39	15B26588	BODY	7
06A19956	OIL SEAL	43	15F28835-28	ROD ASSEMBLY	19
06A19956	OIL SEAL	45	15F28835-29	ROD ASSEMBLY	19
06A23493	SEAL	19	15F28835-30	ROD ASSEMBLY	19
06B21326	GASKET	35	15F28835-31	ROD ASSEMBLY	19
06B23862	GASKET	47	15F28835-32	ROD ASSEMBLY	19
06B26669	GASKET	23	15F28835-33	ROD ASSEMBLY	19
06E19769-0.63	GASKET	47	15F28835-34	ROD ASSEMBLY	19
06E19769-1.00	GASKET	35	15F28835-35	ROD ASSEMBLY	19
06E19769-1.25	GASKET	7	15F28835-36	ROD ASSEMBLY	19
07A21443	BRACKET	1	15F28835-37	ROD ASSEMBLY	19
07A22810	BRACKET	25	15G23461	SHROUD TUBE	19
07A22955	BRACKET	27	15N23373	CAMSHAFT	9
07A22995	BRACKET	49	15N23374	CAMSHAFT ASSY	9
07A28507	BRACKET ASSY	51	16A30100-01	CYL & HEAD ASSY	17
07A28507	BRACKET ASSY	53	16A30100-01	CYL & HEAD ASSY	19
07C23103	CLAMP	59	16R22126	GUIDE	17
07H21150	BRACKET	35	17A23938	VALVE	19
1028-B	BALL	7	17B23936	VALVE	19
1102	PLUG	5	17C19386	CAP	19
1102	PLUG	17	17C21191	KEY	19
1102	PLUG	20	17D29055	SPRING	19
1102	PLUG	35	17D29060	SPRING	19
1102	PLUG	37	17F19357	ROCKER ASSY	20
1102	PLUG	49	18A26093	BEARING	7

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18M26105	BEARING	15	40C22960	FLANGE	59
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25C-11	STUD	35	40G23394	PIPE	59
25C-11	STUD	45	41A22811	HOUSING	31
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27D21250	ADAPTER ASSY	43	51D22617	SHAFT	39
29A22456	ADAPTER ASSY	45	53E22144	VALVE ASSEMBLY	47
29A22457	DRIVE ASSEMBLY	45	58B22954	TANK	27
29D22366	ADAPTER	45	60009	KEY	19
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29H22368	SHAFTGEAR	45	60430	COVER	45
31B26040	STARTER ASSY	61	60463	TUBE	9
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31C-12	STUD	37	61183	GASKET	45
31C-17	STUD	5	61247	COVER	23
31C-19	STUD	37	61J23431	FUEL INJECTOR	49
31C-21	STUD	37	62224	GASKET	55
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40B22962	PIPE	59	63C26453	NOZZLE ASSY	49
40B22964	PIPE	59	63E21054	MANIFOLD	53
40B22965	PIPE	59	65441	SEAT	19
40B22966	PIPE	59	66224	GASKET	49
40B23390	PIPE	59	66610	BUSHING	17
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67J20609-P	HARNESS	55	72155-S	BUSHING	9
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68484	TUBE	9	72246	SHAFT	11
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68759	TUBE ASSEMBLY	23	72377	ELBOW	29
68761	TUBE ASSEMBLY	23	72378	COVER	3
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70457	GASKET	33	73152	BRACKET	53
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71481	RING	23	73346	FLANGE	31
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76118	SPACER	9	AN814-6L	PLUG	5
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