

IO-390-A Series Engine Illustrated Parts Catalog

July 2016

PC-IO-390-A (Supersedes PC-409-1)

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652 Oliver Street
Williamsport, PA 17701

IO-390-A Series Engine Illustrated Parts Catalog

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Introduction



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

Purpose of this Catalog

This Illustrated Parts Catalog (IPC) contains a complete list of spare parts for the Lycoming IO-390-A series engine models.

How to Use this Catalog

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

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

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

The ATA format specifies the subject matter for each chapter-section. According to the ATA Standards, the following chapters apply to the IO-390-A Series 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: See the IPC Table of Contents for the sub-systems 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 listed for reference.

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.

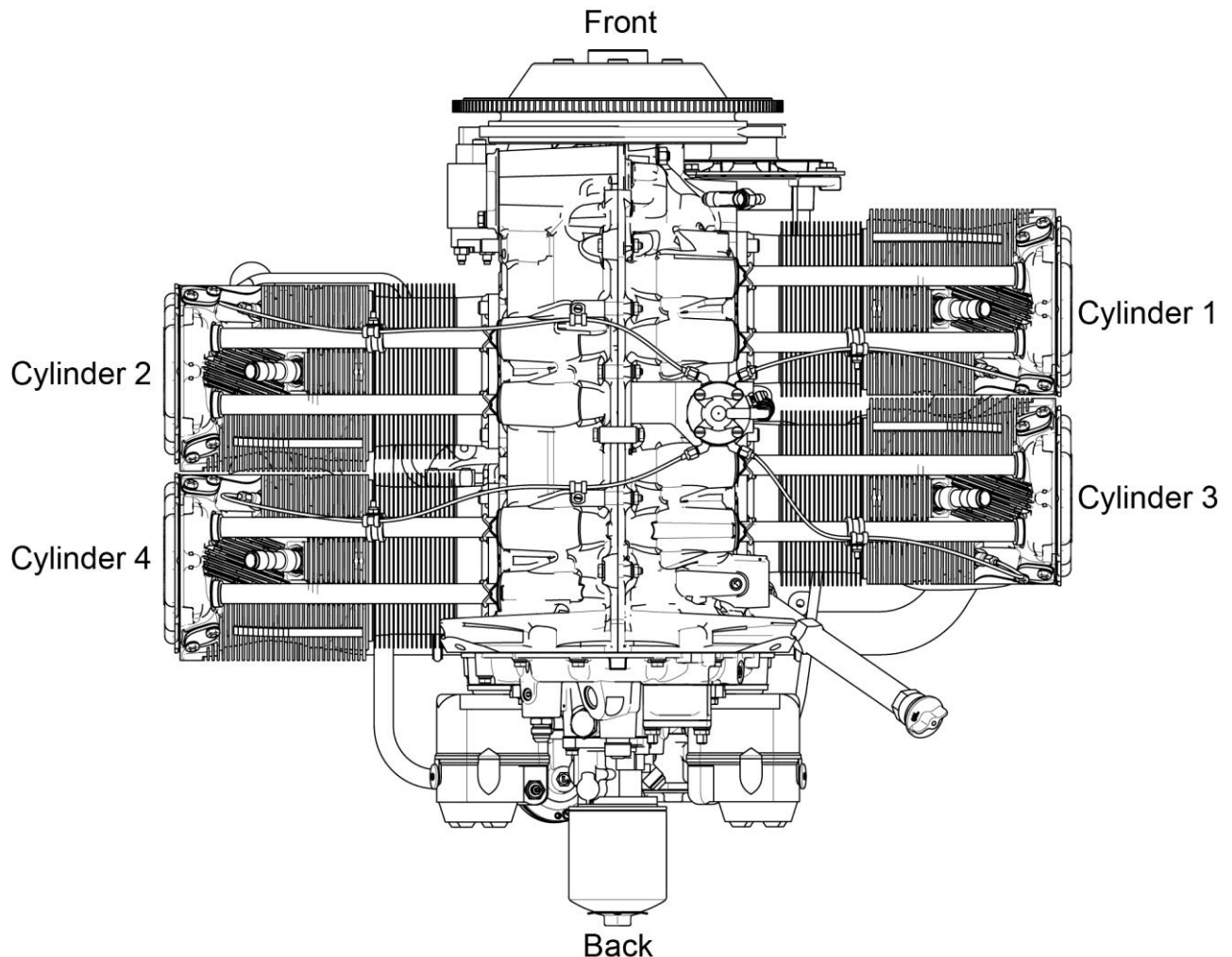
Any reference in this document to the suppliers/part manufacturer's product, by name, trademark, part number or other description is solely for the purpose of identification and does not indicate or infer that Lycoming accepts responsibility for quality control and/or airworthiness of parts, which do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

**Top View of Engine**

How to Order Parts and Publications

An Oversize and Undersize Parts List is included in the front section of this catalog as an aid to order parts.

Although the information contained in this parts catalog is up-to-date at time of publication, users are advised to procure current information through all Lycoming distributors or from the factory by subscription. Refer to the latest revision of Service Letter No. L114 for subscription information.

1. For correct, expedited part shipments without delay:
 - A. Always give the model and serial number of your engine.
 - B. Always give the part number, nomenclature, and quantity.

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

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

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

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

NOTICE: The owner of the manual must give notification to Lycoming Engines for a change of address.

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

Call - 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 – Friday.

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Abbreviations and Acronyms

| A | |
|----------|------------------------------|
| AR | As Required |
| Assy. | Assembly |
| ATA | Air Transport Association |
| C | |
| Cyl. | Cylinder |
| F | |
| Fill. | Fillister |
| H | |
| Hd. | Head |
| Hex. | Hexagon |
| I | |
| I.D. | Inside Diameter |
| in. | Inch |
| IPC | Illustrated Parts Catalog |
| M | |
| mm | Millimeter |
| N | |
| No. | Number |
| NPT | National Pipe Taper (thread) |
| O | |
| O.D. | Outside Diameter |
| P | |
| P | Lycoming Proprietary Part |
| P/N | Part Number |
| Q | |
| Qty. | Quantity |
| R | |
| RF | Reference |
| S | |
| SB | Service Bulletin |
| SI | Service Instruction |
| SSP | Special Service Publication |

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Oversize and Undersize Parts Listing

| PART NO. | DESCRIPTION | OVERSIZE (IN.) | | | | UNDERSIZE (IN.) | |
|----------|-------------|----------------|-------------|-------------|-------------|-----------------|-------------|
| | | P05 .005 | P10 .010 | P30 .030 | P50 .050 | M03 .003 | M06 .006 |
| 66670 | BUSHING | | X | | | | |
| 66713 | GUIDE | | | X | | | |
| 66796 | INSERT | | X | | | | |
| 69796 | DOWEL | | X | | | | |
| 72155-S | BUSHING | | X | | | | |
| 73810 | BUSHING | | X | | | | |
| 75656-S | BUSHING | | X | | | | |
| 75657-S | BUSHING | | X | | | | |
| 75838 | GUIDE | | | 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 Part Number (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.

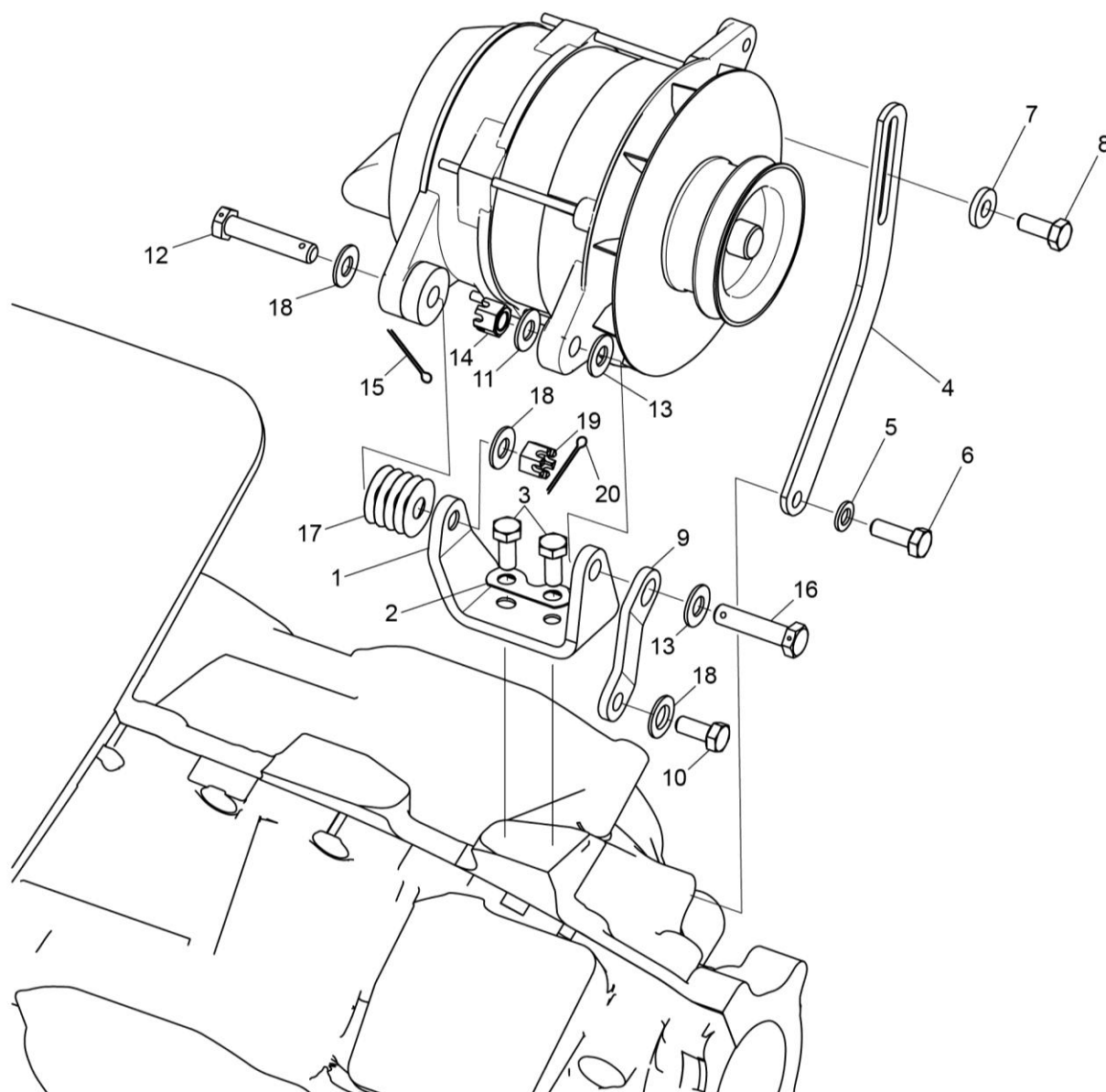


Figure 1A
Alternator Attaching Parts

Figure 1A - Alternator Attaching Parts

| Figure Item | Code | Part Number | Description | Units per Assembly | | | |
|-------------|------|-------------|---|--------------------|------------------|------------------|------------------|
| | | | | A 1 A 6 | A 3 A 6 | A 1 B 6 | A 3 B 6 |
| 1 | | 07A19474 | BRACKET, Alternator | 1 | | 1 | 1 |
| 2 | | 73383 | LOCKPLATE, 5/16 bolt x 1.00 spacing | 1 | | 1 | 1 |
| 3 | | LW-31-0.94 | BOLT, 5/16-18 x 15/16 long, hex. head | 2 | | 2 | 2 |
| 4 | | 75380 | LINK, Alternator, adjusting | 1 | | 1 | 1 |
| 5 | | STD-35 | WASHER, 5/16 plain | 1 | | 1 | 1 |
| 6 | | LW-31H0.75 | BOLT, 5/16-18 x 3/4 long, hex. head | 1 | | 1 | 1 |
| 7 | | STD-1727 | WASHER, Plain, 3/4 O.D. x 11/32 I.D. x 1/8 thick | 1 | | 1 | 1 |
| 8 | | LW-31H0.75 | BOLT, 5/16-18 x 3/4 long, hex. head | 1 | | 1 | 1 |
| 9 | | 07F23268 | STRUT, Alternator support | 1 | | 1 | 1 |
| 10 | | LW-31H0.75 | BOLT, 5/16-18 x 3/4 long, hex. head | 1 | | 1 | 1 |
| 11 | | STD-690 | WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick | 1 | | 1 | 1 |
| 12 | | AN6-17 | BOLT, 3/8-24 x 1-61/64 long, hex. head, drilled end | 1 | | 1 | 1 |
| 13 | | STD-690 | WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick | 3 | | 3 | 3 |
| 14 | | STD-872 | NUT, 3/8-24 slotted | 1 | | 1 | 1 |
| 15 | | STD-713 | COTTER PIN, 3/32 diameter x 3/4 long | 1 | | 1 | 1 |
| 16 | | AN6-16 | BOLT, 3/8-24 x 1-53/64 long, hex. head | 1 | | 1 | 1 |
| 17 | | 76534 | SHIM, 1-1/8 O.D. x 13/32 I.D. x .005 thick | 5 | | 5 | 5 |
| 18 | | STD-690 | WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick | 3 | | 3 | 3 |
| 19 | | STD-872 | NUT, 3/8-24 slotted | 1 | | 1 | 1 |
| 20 | | STD-713 | COTTER PIN, 3/32 diameter x 3/4 long | 1 | | 1 | 1 |

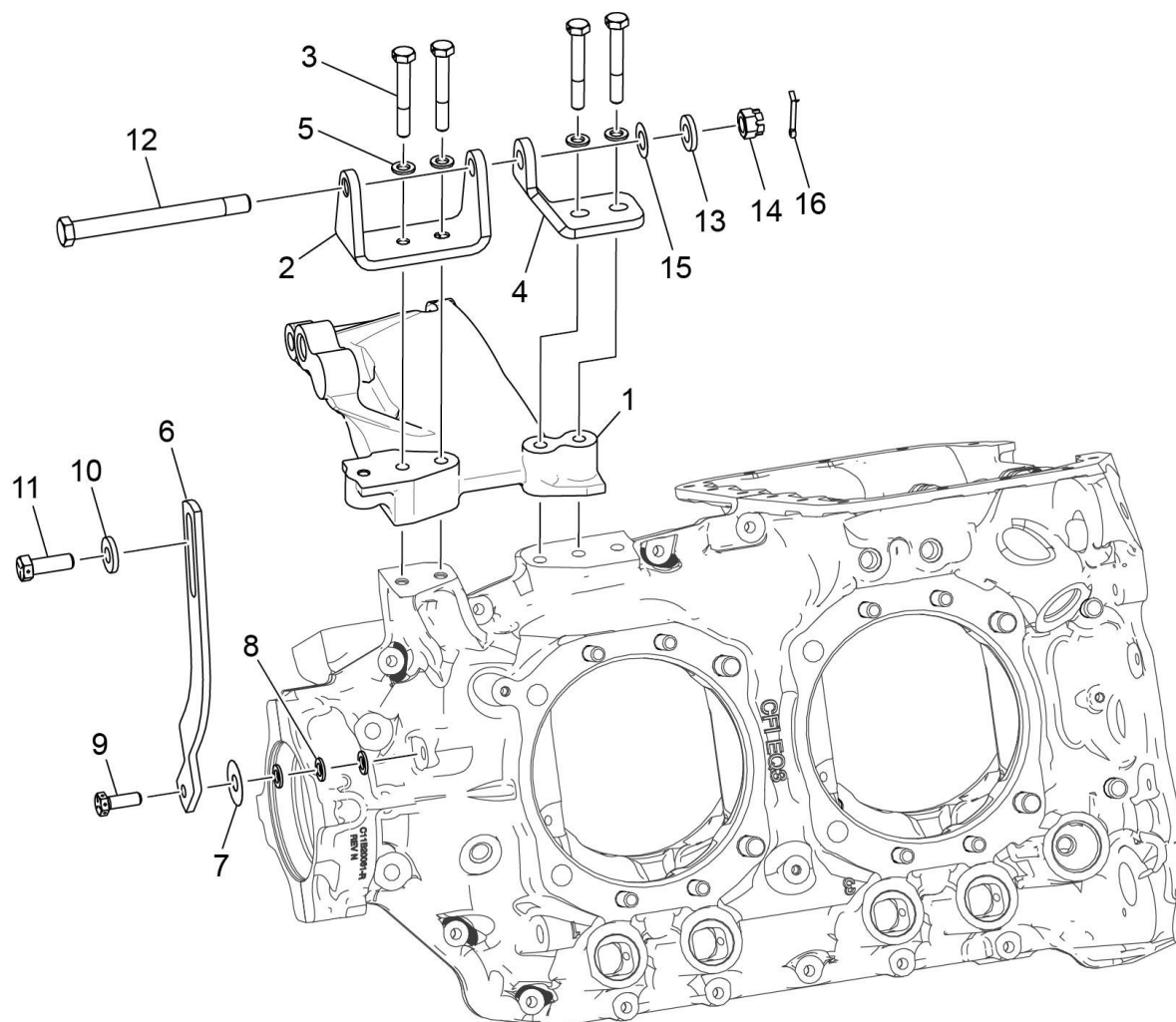


Figure 1B
Alternator Attaching Parts

Figure 1B - Alternator Attaching Parts

| Figure Item | Code | Part Number | Description | Units per Assembly | | | |
|-------------|------|-------------|---|--------------------|------------------|------------------|------------------|
| | | | | A 1 A 6 | A 3 A 6 | A 1 B 6 | A 3 B 6 |
| 1 | | 07A22097 | BRACKET, Alternator | | | 1 | |
| 2 | | 07A22002 | BRACKET, Alternator, Ford, right | | | 1 | |
| 3 | | LW-31H2.13 | BOLT, 5/16-18 x 2-1/8 long hex. head D | | | 4 | |
| 4 | | 07A22125 | BRACKET, Alternator, aft | | | 1 | |
| 5 | | STD-35 | WASHER, 5/16 plain | | | 4 | |
| 6 | | 07F21998 | LINK, Alternator adjusting, Ford, right | | | 1 | |
| 7 | | 76534 | SHIM, 1-1/8 O.D. x 13/32 I.D. x 0.005 thick | | | 1 | |
| 8 | | STD-35 | WASHER, 5/16 plain | | | 3 | |
| 9 | | LW-31H0.88 | BOLT, 5/16-18 x 7/8 long, hex. head | | | 1 | |
| 10 | | STD-1342 | WASHER, 7/8 O.D. x 25/64 I.D. x 1/8 thick | | | 1 | |
| 11 | | LW-38H1.09 | BOLT, 3/8-16 x 1 1/10 long hex. head, drilled | | | 1 | |
| 12 | | AN7-44 | BOLT, 7/16-20 x 4-19/32 long, hex. head | | | 1 | |
| 13 | | STD-2092 | WASHER, 29/64 I.D. x 7/8 O.D. x 1/8 thick | | | 1 | |
| 14 | | AN310-7 | NUT, 7/16-20 plain slotted | | | 2 | |
| 15 | | LW-14650 | SHIM, 7/8 O.D. x 23/50 I.D. x 0.005 thick | | | 1 | |
| 16 | | STD-713 | PIN, Cotter, 3/32 diameter x 3/4 long | | | 3 | |

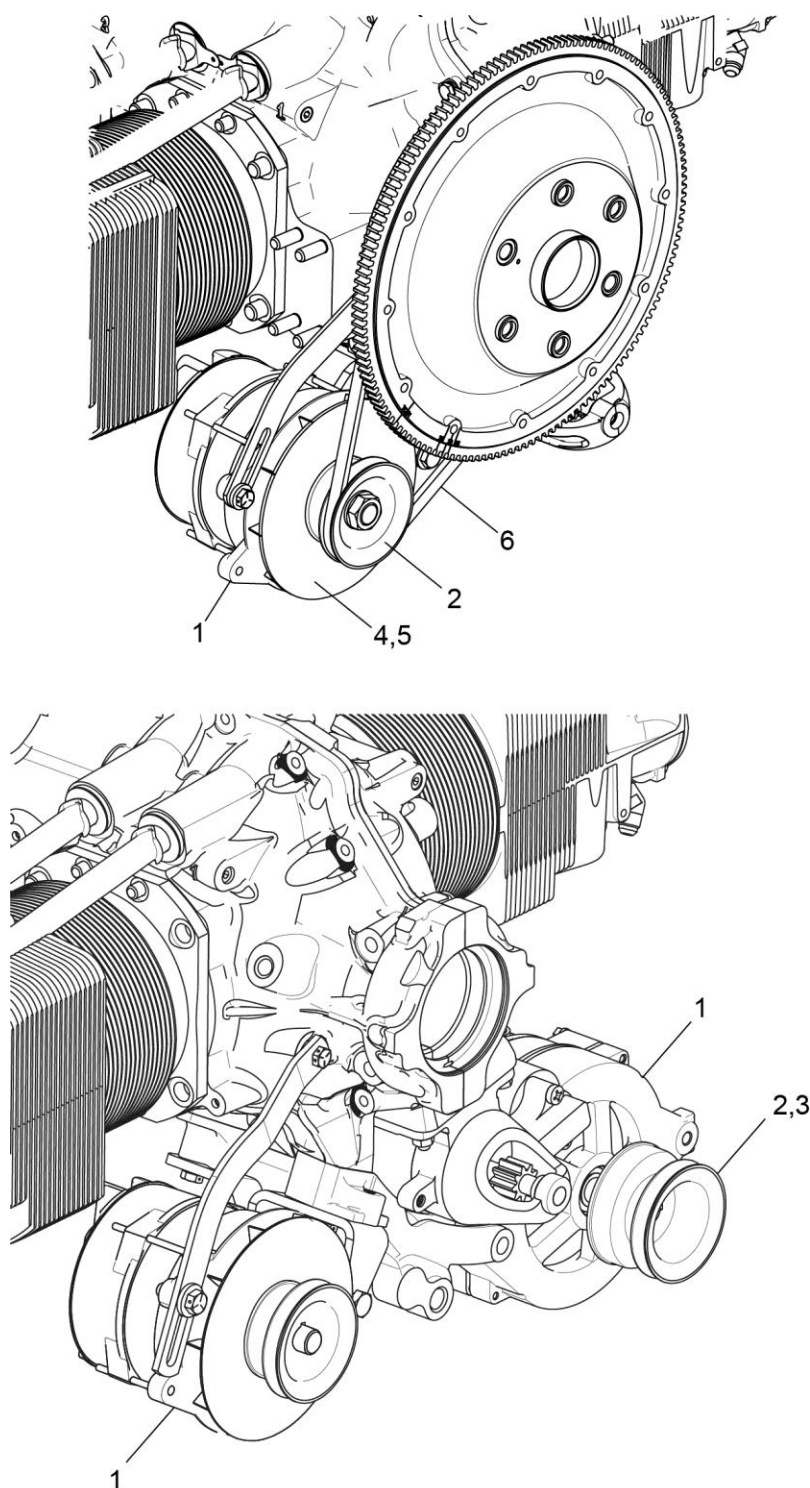


Figure 2
Alternator Assembly and Belt

Figure 2 - Alternator Assembly And Belt

| Figure Item | Code | Part Number | Description | Units per Assembly | | | |
|---|------|--------------|---|--------------------|---------|---------|---------|
| | | | | A 1 A 6 | A 3 A 6 | A 1 B 6 | A 3 B 6 |
| 1 | | 32B19549 | ALTERNATOR ASSEMBLY, 12V (ALX-8521LS) | 1 | | | |
| | | 32C19553 | ALTERNATOR ASSEMBLY, 24V (ALU8521LS) | | | 1 | |
| | | 32B19567 | ALTERNATOR ASSEMBLY, 12V, 70 AMP, Thermocoupled (Type K) (ALX-8521LS) | | | 1 | 1 |
| | | 32C26767 | ALTERNATOR ASSEMBLY, 28V-90A (ES4011-LS) | | | 1 | |
| | | 32C26768 | ALTERNATOR ASSEMBLY, 28V-70A (ES-4018LS) | | | 1 | |
| 2 | | 36B19484 | PULLEY, Alternator | 1 | | 1 | 1 |
| | | 36B21996 | PULLEY, Alternator | | | 1 | |
| | | 36B22008 | PULLEY, Alternator | | | 1 | |
| 3 | | 32F21674 | SPACER, Alternator fan | | | 1 | |
| | | 32F21668 | SPACER, Alternator fan | | | 1 | |
| 4 | | 32G21675 | FAN, Alternator | | | 1 | |
| | | 32G21669 | FAN, Alternator | | | 1 | |
| 5 | | 32R21676 | BACK PLATE, Alternator fan | | | 1 | |
| | | 32R21670 | BACK PLATE, Alternator fan | | | 1 | |
| 6 | | 37A19773-376 | BELT, Alternator drive, 3/8 wide | 1 | | 1 | 1 |
| | | 37A19773-390 | BELT, Alternator, 3/8 wide, 39.000 long | | | | 1 |
| | | 37A19773-470 | BELT, Alternator drive 3/8 wide | | | 1 | 1 |
| | | 37D21992 | BELT, Alternator drive 11 mm | | | 1 | |
| | | 37B19774-482 | BELT, Compressor drive 1/2 wide | | | | 1 |
| NOTICE: Refer to the latest revision of Lycoming Service Instruction No. 1154 for complete listing of FAA approved starters and alternators. | | | | | | | |

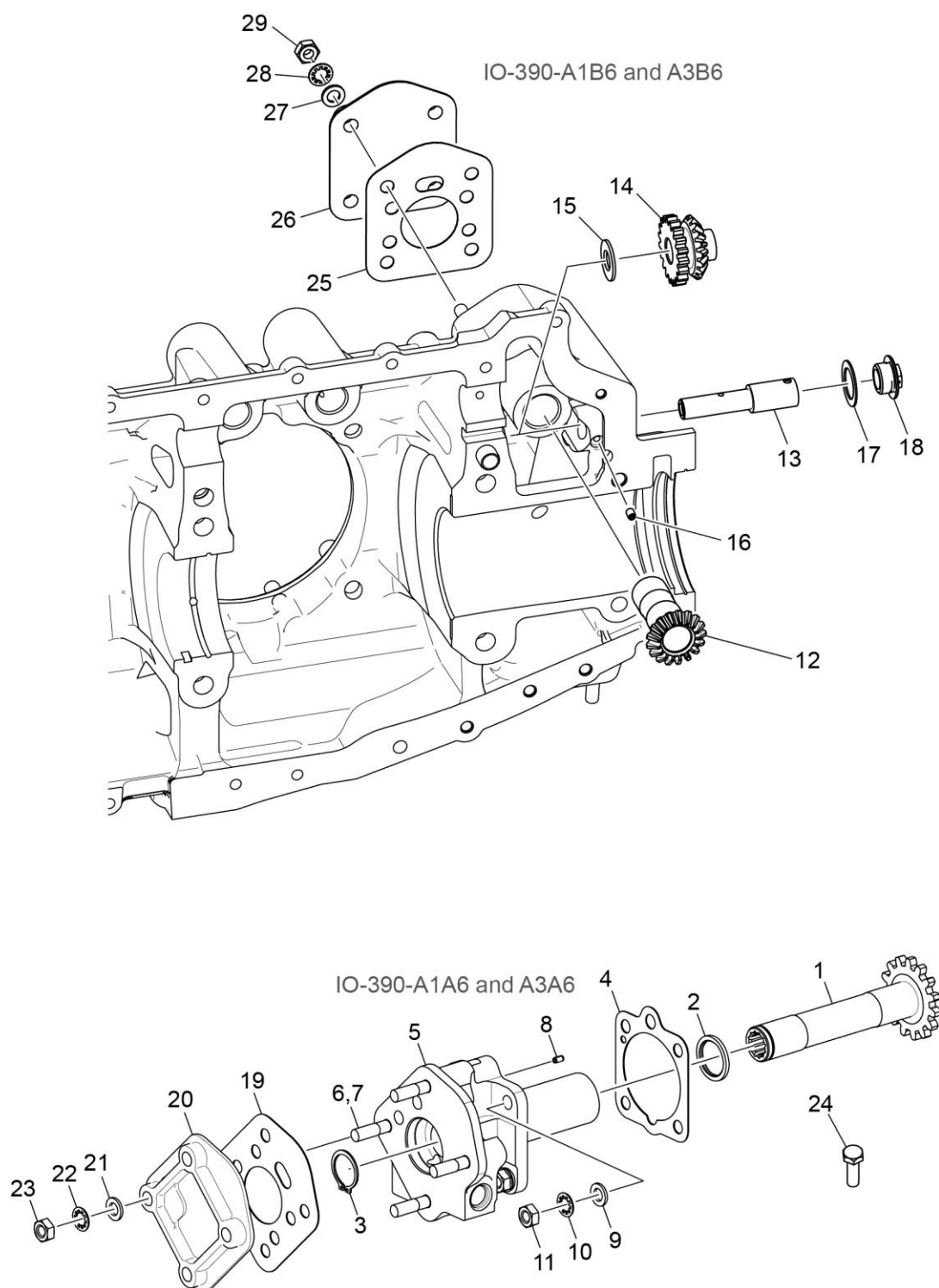


Figure 3
Propeller Governor Drive Assembly, Adapter Assembly, Covers, and Related Parts

Figure 3 – Propeller Governor Drive Assembly, Adapter Assembly, Covers, and Related Parts

| Figure Item | Code | Part Number | Description | Units per Assembly | | | |
|----------------|------|--------------|--|--------------------|------------|------------|------------|
| | | | | A 1 A 6 | A 3 A 6 | A 1 B 6 | A 3 B 6 |
| 1 | | 68317 | SHAFTGEAR, Propeller governor drive | 1 | 1 | | |
| 2 | | 71596 | WASHER, Accessory drive gear | 1 | 1 | | |
| 3 | | STD-1221 | RING, 13/16 diameter x 1/32 thick | 1 | 1 | | |
| 4 | | 68315 | GASKET, Accessory drive adapter | 1 | 1 | | |
| 5 | | 78594 | ADAPTER ASSEMBLY, Propeller governor driven | 1 | 1 | | |
| | | 75153 | ADAPTER ASSEMBLY, Propeller governor driven | 1 | 1 | | |
| 6 | | STD-1164 | INSERT, 5/16-18 x 5/8 long, heli-coil | 4 | 4 | | |
| 7 | | 31C-16 | STUD, 5/16-18 x 2.00 long | 4 | 4 | | |
| 8 | | STD-1774 | PIN, 1/8 diameter x 1/4 long | 1 | 1 | | |
| 9 | | STD-35 | WASHER, 5/16 plain | 4 | 4 | | |
| 10 | | STD-475 | WASHER, 5/16 lock, internal teeth | 4 | 4 | | |
| 11 | | STD-1410 | NUT, 5/16-18 plain | 4 | 4 | | |
| 12 | | 77875 | GEAR, Propeller governor driven | | | 1 | 1 |
| 13 | | LW-14021 | SHAFT, Propeller governor idler gear | | | 1 | 1 |
| 14 | | 77874 | GEAR ASSEMBLY, Propeller governor idler | | | 1 | 1 |
| 15 | | 73249 | WASHER, Thrust (0.0585 - 0.0595 thick) | | | AR | AR |
| | | 73250 | WASHER, Thrust (0.062 - 0.063 thick) | | | AR | AR |
| | | 73251 | WASHER, Thrust (0.0655 - 0.0665 thick) | | | AR | AR |
| | | 73252 | WASHER, Thrust (0.069 - 0.070 thick) | | | AR | AR |
| | | 01L21418 | WASHER, Thrust (0.055 - 0.056 thick) | | | AR | AR |
| 16 | | AN565B1032H5 | SET SCREW, No. 10-32 x 5/16 long | | | 1 | 1 |
| 17 | | 70455 | GASKET, 25/32 I.D. x 1-1/8 O.D. x 1/32 thick | | | 1 | 1 |
| 18 | | LW-13896 | PLUG, 3/4-16 hex. head | | | 1 | 1 |
| 19 | | 72053 | GASKET, Governor | 1 | 1 | 1 | 1 |
| 20 | | 72378 | COVER, Governor drive | 1 | 1 | 1 | 1 |
| AR as required | | | | | | | |

(continued on next page)

**Figure 3 – Propeller Governor Drive Assembly, Adapter Assembly, Covers, and Related Parts
(Cont.)**

| Figure Item | Code | Part Number | Description | Units per Assembly | | | |
|-------------|------|-------------|-----------------------------------|--------------------|------------------|------------------|------------------|
| | | | | A 1 A 6 | A 3 A 6 | A 1 B 6 | A 3 B 6 |
| 21 | | STD-35 | WASHER, 5/16 plain | 4 | 4 | 4 | 4 |
| 22 | | STD-475 | WASHER, 5/16 lock, internal teeth | 4 | 4 | 4 | 4 |
| 23 | | STD-1410 | NUT, 5/16-18 plain | 4 | 4 | 4 | 4 |
| 24 | | LW-31H1.22 | BOLT, 5/16-18 x 1-7/32 long | 4 | 4 | | |
| 25 | | 69551 | GASKET, Accessory drive adapter | | | 1 | 1 |
| 26 | | 69106 | COVER, Governor drive adapter pad | | | 1 | 1 |
| 27 | | STD-35 | WASHER, 5/16 plain | | | 4 | 4 |
| 28 | | STD-475 | WASHER, 5/16 lock, internal teeth | | | 4 | 4 |
| 29 | | STD-1410 | NUT, 5/16-18 plain | | | 4 | 4 |

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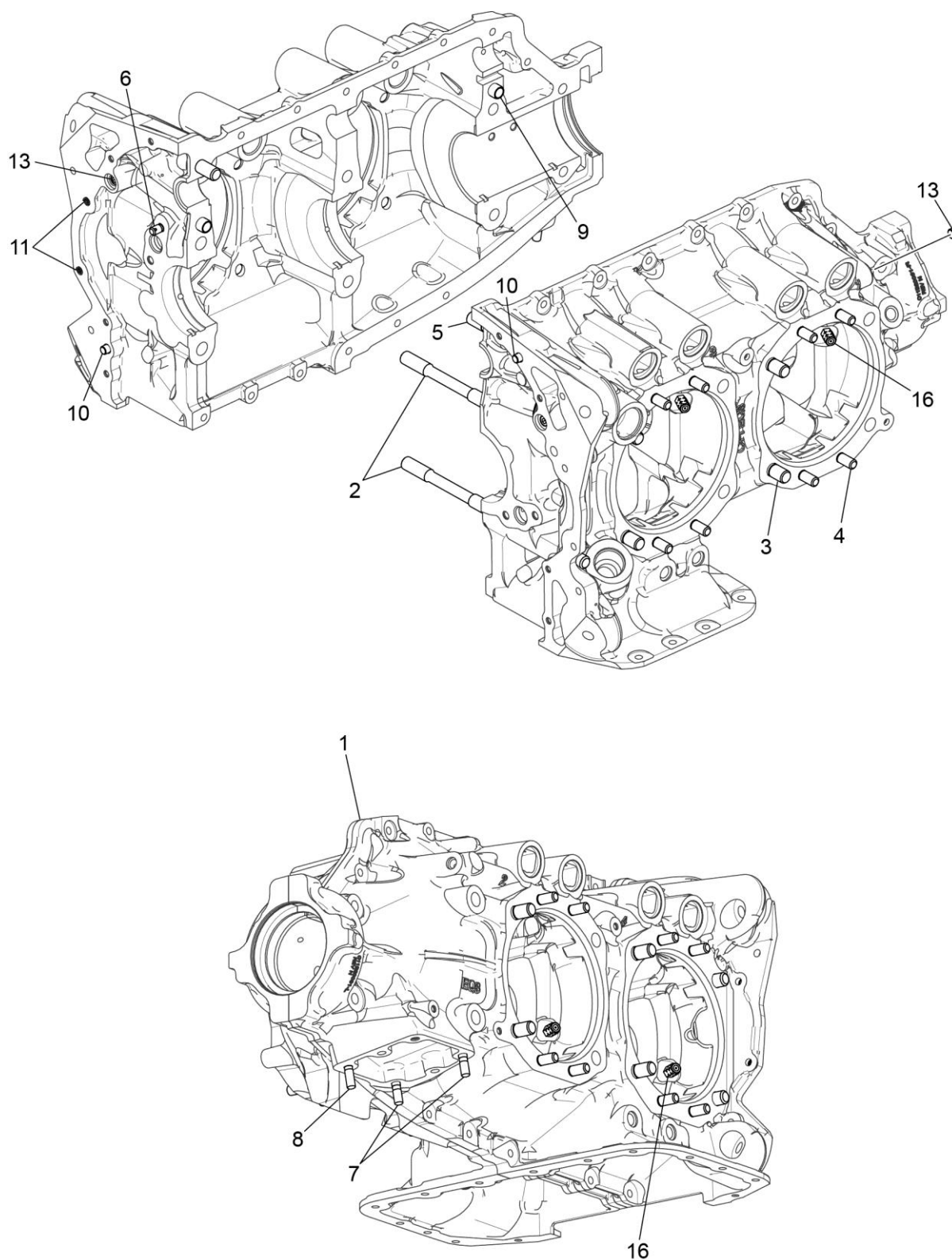


Figure 4A
Crankcase Assembly - A1A6 and A3A6

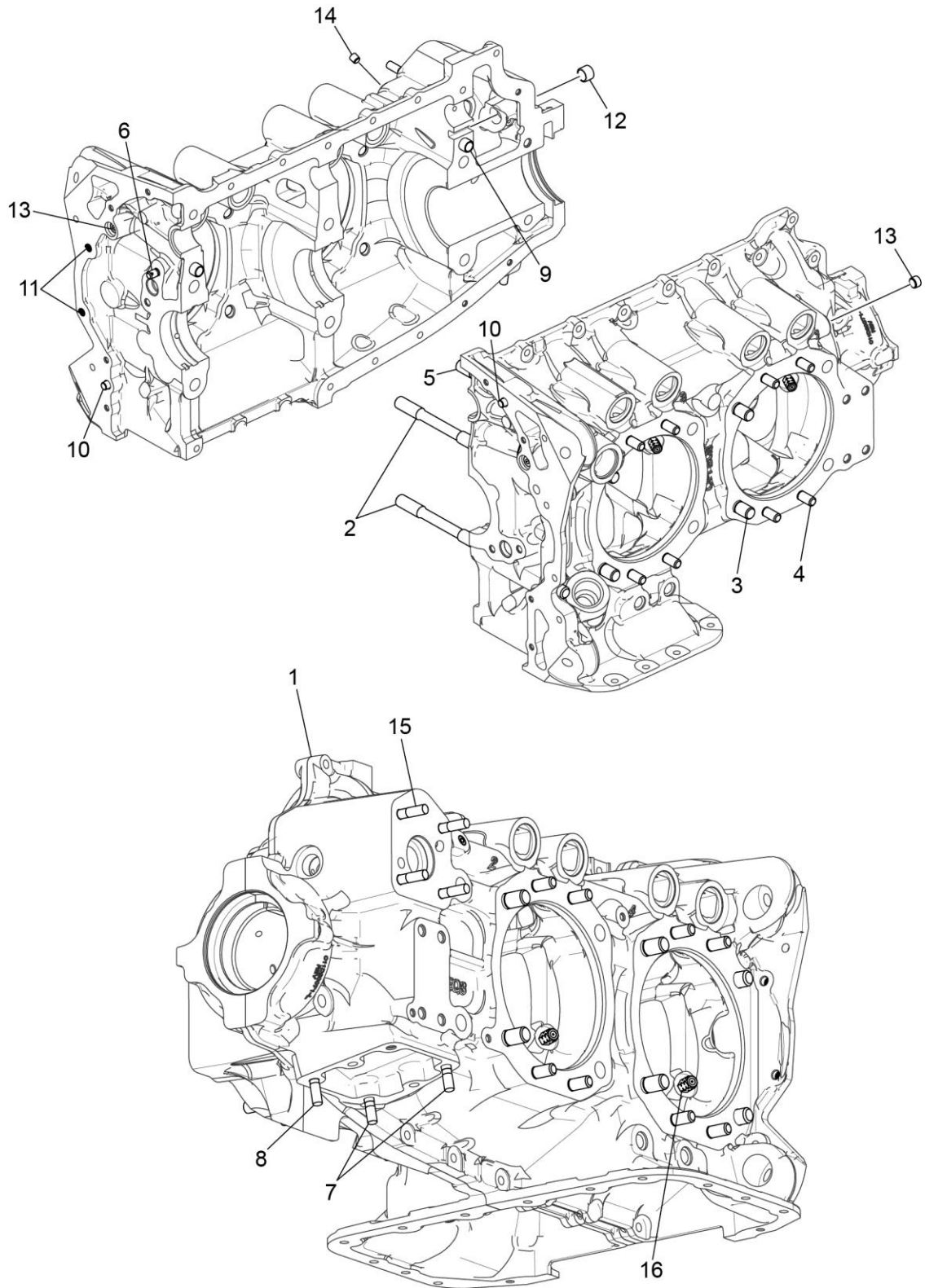


Figure 4B
Crankcase Assembly - A1B6 and A3B6

Figure 4 - Crankcase Assembly

| Figure Item | Code | Part Number | Description | Units per Assembly | | | |
|-------------|------|-------------|--|--------------------|------------------|------------------|------------------|
| | | | | A 1 A 6 | A 3 A 6 | A 1 B 6 | A 3 B 6 |
| 1 | | 11U20391-1S | CRANKCASE ASSEMBLY | 1 | 1 | | |
| | | 11U28750-1S | CRANKCASE ASSEMBLY | | | 1 | 1 |
| 2 | | 01A23544 | STUD, 1/2-13 x 9-27/32 long | 2 | 2 | 2 | 2 |
| 3 | | 50-15 | STUD, 1/2-13 x 1-7/8 long | 8 | 8 | 8 | 8 |
| 4 | | 38-13 | STUD, 3/8-16 x 1-5/8 long | 13 | 13 | 13 | 13 |
| 5 | | 38D-17 | STUD, 3/8-16 x 2-1/8 long, drilled | 1 | 1 | 1 | 1 |
| 6 | | LW-13793 | STUD, 5/16-18 x 15/16 long, drilled | 1 | 1 | 1 | 1 |
| 7 | | 31C-12 | STUD, 5/16-18 x 1-1/2 long | 2 | 2 | 2 | 2 |
| 8 | | 31C-13 | STUD, 5/16-18 x 1-5/8 long | 1 | 1 | 1 | 1 |
| 9 | | STD-557 | DOWEL, 1/2 diameter x 11/16 long, hollow | 2 | 2 | 2 | 2 |
| 10 | | STD-514 | DOWEL, 5/16 diameter x 1/2 long | 2 | 2 | 2 | 2 |
| 11 | | STD-1623 | INSERT, 1/4-20 UNC x 3/8 long | 2 | 2 | 2 | 2 |
| 12 | | 72158 | BUSHING, Governor drive idler shaft | 1 | 1 | 1 | 1 |
| 13 | | 1102 | PLUG, 1/8-27 NPT, Allen head | 6 | 6 | 5 | 5 |
| 14 | | STD-1339 | PLUG, 1/16-27 NPT, Allen head | | | 1 | 1 |
| 15 | | 31C-16 | STUD, 5/16-18 x 2.00 long | | | 4 | 4 |
| | | 31C-19 | STUD, 5/16-18 x 2-3/8 long | | | | 4 |
| 16 | | 12E23021 | NOZZLE ASSEMBLY, Piston cooling | 4 | 4 | 4 | 4 |

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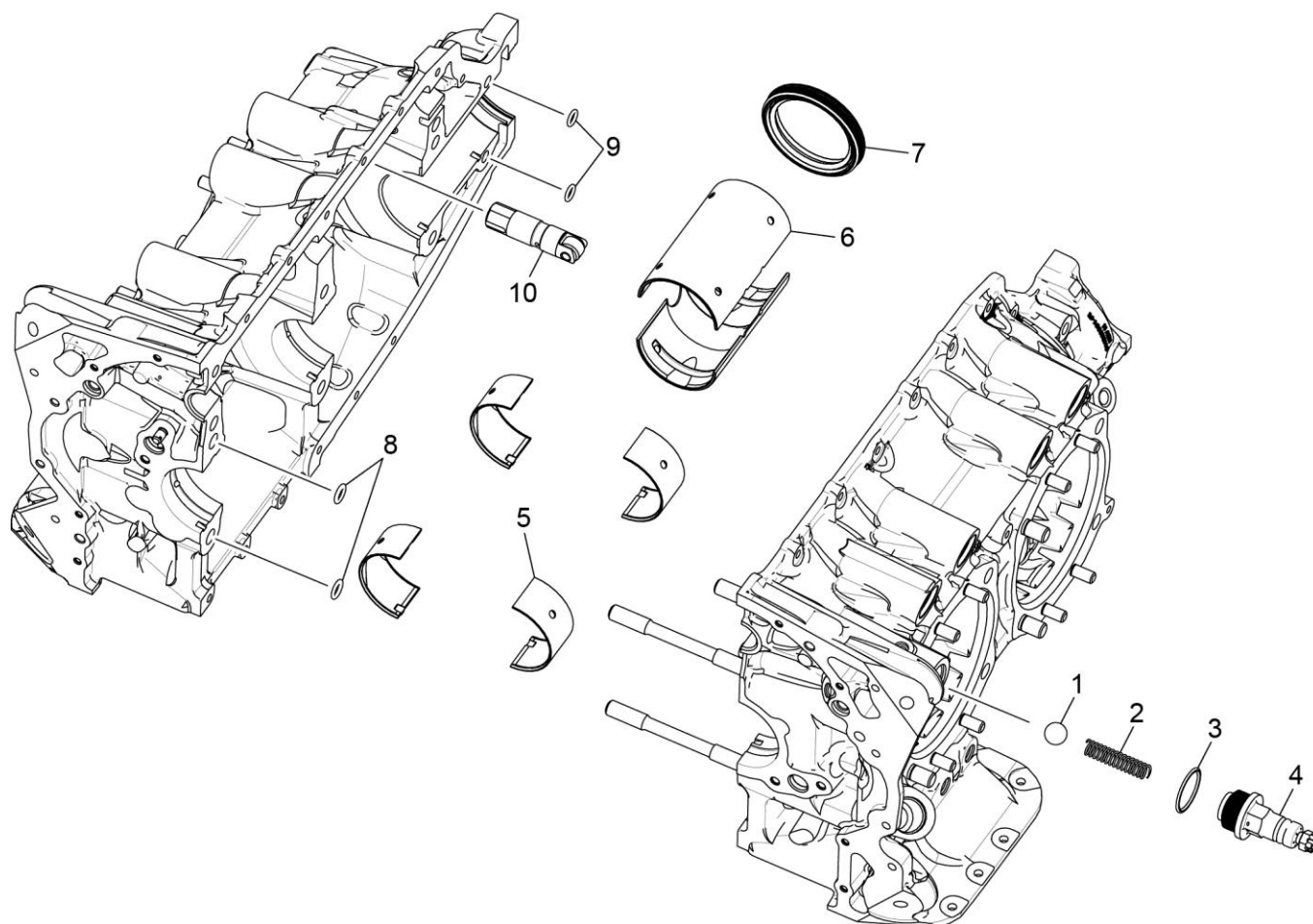


Figure 5
Crankcase Related Parts

Figure 5 - 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, 1-1/4 I.D. x 1-1/2 O.D. x 3/32 annular | 1 |
| 4 | | 77808 | VALVE ASSEMBLY, Oil pressure relief valve | 1 |
| 5 | | 18E23886 | BEARING, Crankshaft | 4 |
| 6 | | 18B23885 | BEARING, Crankshaft, front | 2 |
| 7 | ** | LW-15628 | 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 1/10 diameter | 2 |
| 10 | *** | LRT23381 | BODY ASSEMBLY, Hydraulic roller tappet | 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 latest revision of Lycoming Service Instruction No. 1324 for installation.</p> <p>*** Sold as exchange part only.</p> | | | | |

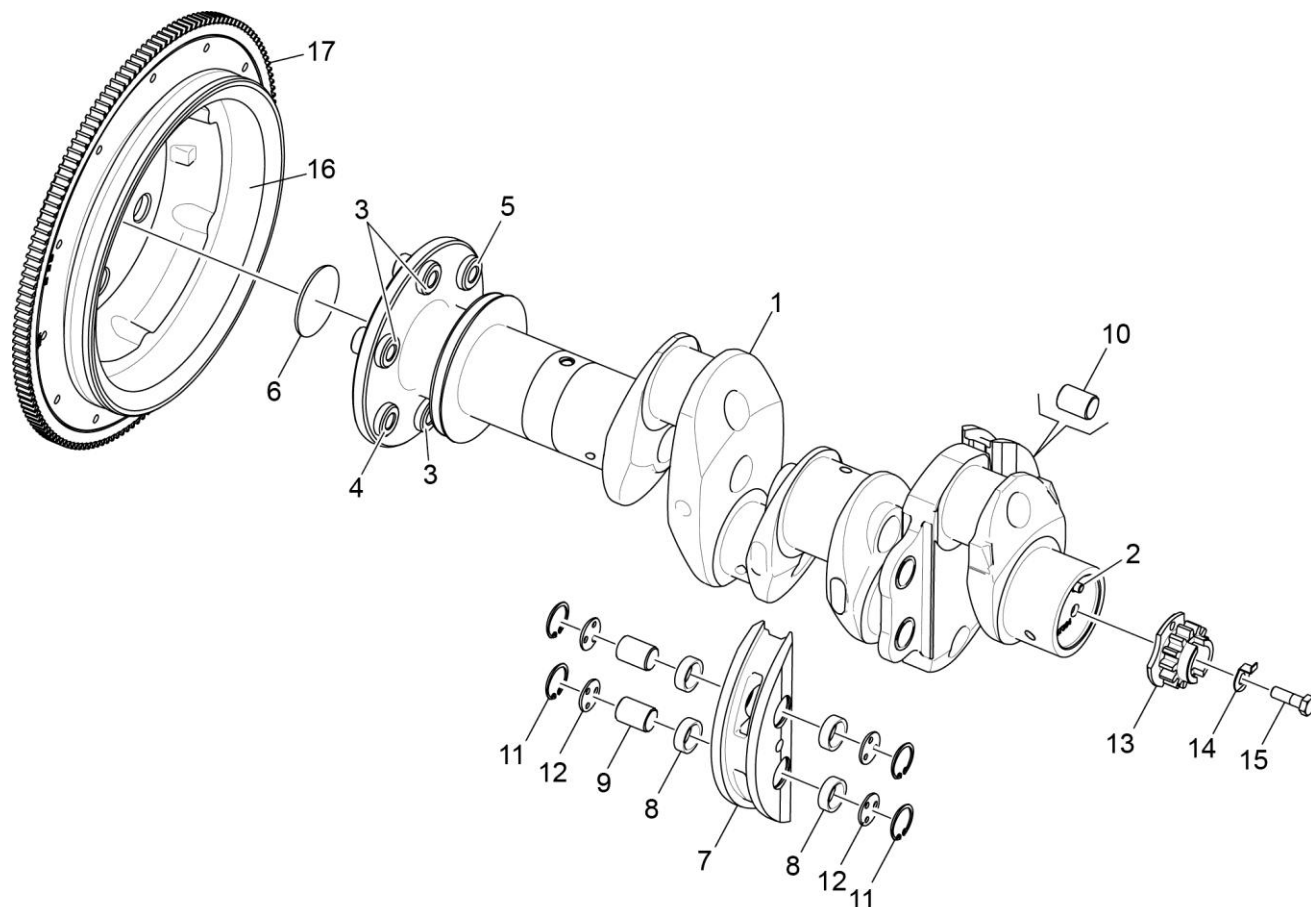


Figure 6
Crankshaft and Counterweight Assembly and Related Parts

Figure 6 - Crankshaft and Counterweight Assembly and Related Parts

| Figure Item | Code | Part Number | Description | Units per Assembly | | | |
|---|------|-------------|--|--------------------|------------------|------------------|------------------|
| | | | | A 1 A 6 | A 3 A 6 | A 1 B 6 | A 3 B 6 |
| 1 | | 13C47317 | CRANKSHAFT AND BUSHING ASSEMBLY | 1 | | 1 | |
| | | 13C47318 | CRANKSHAFT AND BUSHING ASSEMBLY | | 1 | | 1 |
| 2 | | STD-1065 | DOWEL, Stepped, 5/16 & 1/4 diameter | 1 | 1 | 1 | 1 |
| 3 | | 75656-S | BUSHING, Prop flange, long | 3 | 4 | 3 | 4 |
| 4 | | 72155-S | BUSHING, Prop flange, short | 2 | 1 | 2 | 1 |
| 5 | | 79024-S | BUSHING, Propeller flange, indexing | 1 | | 1 | |
| | | 75657-S | BUSHING, Propeller flange, indexing | | 1 | | 1 |
| 6 | | LW-14529 | PLUG, 2-1/16 diameter expansion | 1 | 1 | 1 | 1 |
| 7 | | LW-19227 | COUNTERWEIGHT ASSY | 2 | 2 | 2 | 2 |
| 8 | | 71903-A | BUSHING, Dynamic counterweight | 4 | 4 | 4 | 4 |
| 9 | | 14W21696 | ROLLER, Dynamic counterweight | 2 | 2 | 2 | 2 |
| 10 | | 72797 | ROLLER, Dynamic counterweight, 6.3 order | 2 | 2 | 2 | 2 |
| 11 | | LW-14820 | RING, Internal retaining | 8 | 8 | 8 | 8 |
| 12 | | 71907 | WASHER, Counterweight | 8 | 8 | 8 | 8 |
| 13 | * | 13S19646 | GEAR, Crankshaft | 1 | 1 | 1 | 1 |
| 14 | | LW-18639 | LOCKPLATE, Crankshaft gear | 1 | 1 | 1 | 1 |
| 15 | | STD-2246 | BOLT, 5/16-24 x 1.00 long | 1 | 1 | 1 | 1 |
| 16 | | LW-16471 | SUPPORT ASSEMBLY, Starter ring gear | 1 | 1 | 1 | 1 |
| | | 31M19861 | SUPPORT ASSEMBLY, Starter ring gear | | | | 1 |
| | | 31M21994 | SUPPORT ASSEMBLY, Starter ring gear | | | 1 | |
| 17 | | 72566 | GEAR, Starter ring, 12/14 pitch | 1 | 1 | 1 | 1 |
| * Refer to the latest revision of Service Bulletin No. 475 for proper installation. | | | | | | | |

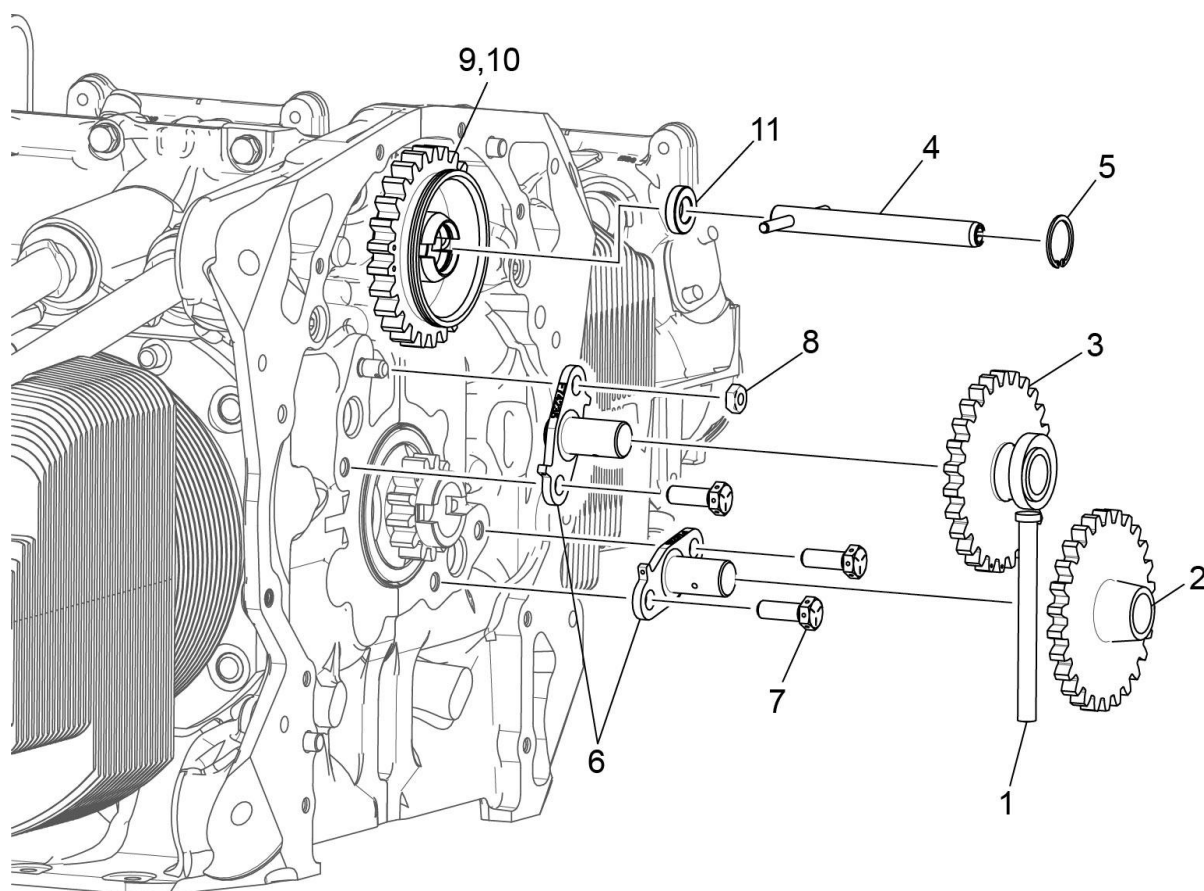


Figure 7
Crankshaft Idler Gears, Tachometer Drive, and Camshaft

Figure 7 - Crankshaft Idler Gears, Tachometer Drive, and Camshaft

| Figure Item | Code | Part Number | Description | Units per Assembly | | | |
|-------------|------|-------------|--|--------------------|------------------|------------------|------------------|
| | | | | A 1 A 6 | A 3 A 6 | A 1 B 6 | A 3 B 6 |
| 1 | | 23D26777 | PLUNGER, Fuel pump, long | 1 | 1 | 1 | 1 |
| 2 | | 74996 | GEAR ASSEMBLY, Crankshaft idler, plain | 1 | 1 | 1 | 1 |
| 3 | | 75072 | GEAR ASSEMBLY, Crankshaft idler | 1 | 1 | 1 | 1 |
| 4 | | 76121 | SHAFT ASSEMBLY, Tachometer | 1 | 1 | 1 | 1 |
| 5 | | STD-2231 | RING, Internal retaining | 1 | 1 | 1 | 1 |
| 6 | | LW-13796 | SHAFT, Crankshaft idler gear | 2 | 2 | 2 | 2 |
| 7 | | LW-31H0.88 | BOLT, 5/16-18 x 7/8 long, hex. head, drilled | 3 | 3 | 3 | 3 |
| 8 | | STD-2168 | NUT, 5/16-18 NC-3 slotted shear | 1 | 1 | 1 | 1 |
| 9 | | 15M23452 | CAMSHAFT ASSEMBLY | 1 | 1 | | |
| 10 | | 15M23456 | CAMSHAFT ASSEMBLY | | | 1 | 1 |
| 11 | | 76118 | SPACER, Tachometer shaft centering | 1 | 1 | 1 | 1 |

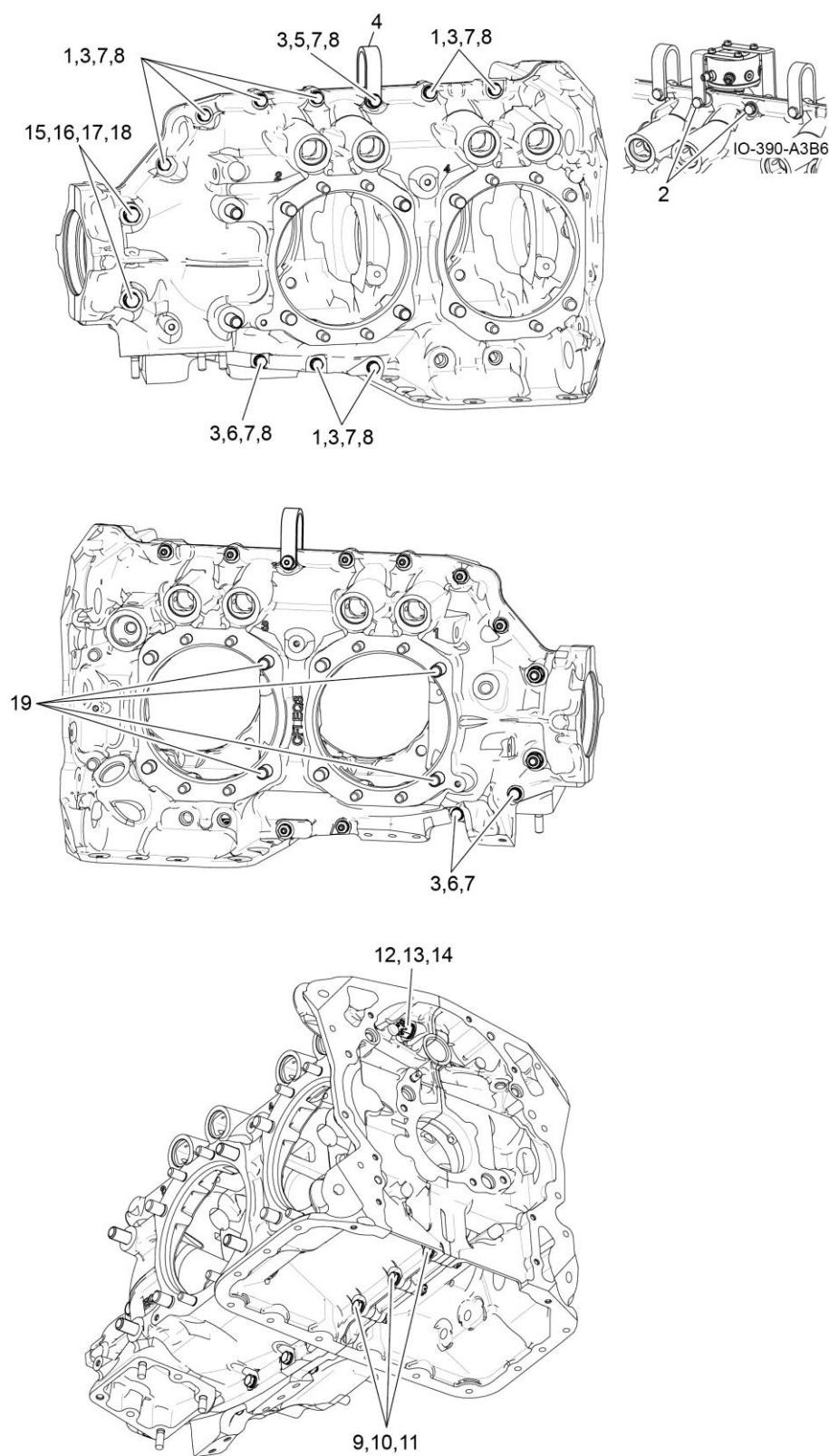


Figure 8
Crankcase Attaching Parts

Figure 8 - Crankcase Attaching Parts

| Figure Item | Code | Part Number | Description | Units per Assembly | | | |
|-----------------------|-----------|-------------|---|--------------------|------------------|------------------|------------------|
| | | | | A 1 A 6 | A 3 A 6 | A 1 B 6 | A 3 B 6 |
| 1 | | LW-25-1.50 | BOLT, 1/4-20 x 1-1/2 long, hex. head | 8 | 8 | 8 | 5 or 8 |
| 2 | | LW-25-2.13 | BOLT, 1/4-20 x 2-1/8 long hex. head | | | | 2 |
| 3 | | STD-8 | WASHER, 1/4 plain | 19 | 19 | 20 | 17 or 20 |
| 4 | | 60803 | STRAP, Lifting | 1 | 1 | 1 | 1 or 2 |
| 5 | | LW-25-1.75 | BOLT, 1/4-20 x 1-3/4 long, hex. head | 1 | 1 | 1 | 1 or 2 |
| 6 | | LW-25-1.13 | BOLT, 1/4-20 x 1-1/8 long, hex. head | 3 | 3 | 4 | 4 |
| 7 | | STD-160 | WASHER, 1/4 lock, internal teeth | 12 | 12 | 13 | 13 |
| 8 | | STD-1411 | NUT, 1/4-20 plain | 9 | 9 | 9 | 9 |
| 9 | | LW-25S1.50 | BOLT, 1/4-20 x 1-1/2 long, hex. head, drilled | 3 | 3 | 3 | 3 |
| 10 | AR | STD-8 | WASHER, 1/4 plain | 9 | 9 | 9 | 9 |
| 11 | | STD-2249 | NUT, 1/4-20 slotted | 3 | 3 | 3 | 3 |
| 12 | | STD-33 | WASHER, 3/8 plain | 1 | 1 | 1 | 1 or 2 |
| 13 | | AN960-616L | WASHER, 3/8 plain, thin | 1 | 1 | 1 | 1 or 3 |
| 14 | | STD-872 | NUT, 3/8-24 slotted | 1 | 1 | 1 | 1 |
| 15 | | AN6-34A | BOLT, 3/8-24 x 3-37/64 long, hex. head | 2 | 2 | 1 | 1 |
| 16 | | STD-33 | WASHER, 3/8 plain | 4 | 4 | 3 | 3 |
| 17 | | STD-678 | WASHER, 3/8 lock, internal teeth | 2 | 2 | 2 | 2 |
| 18 | | STD-596 | NUT, 3/8-24 plain | 2 | 2 | 2 | 2 |
| 19 | | 01A22453 | STUD, 1/2-20 x 10-1/2 long | 4 | 4 | 4 | 4 |
| AR as required | | | | | | | |

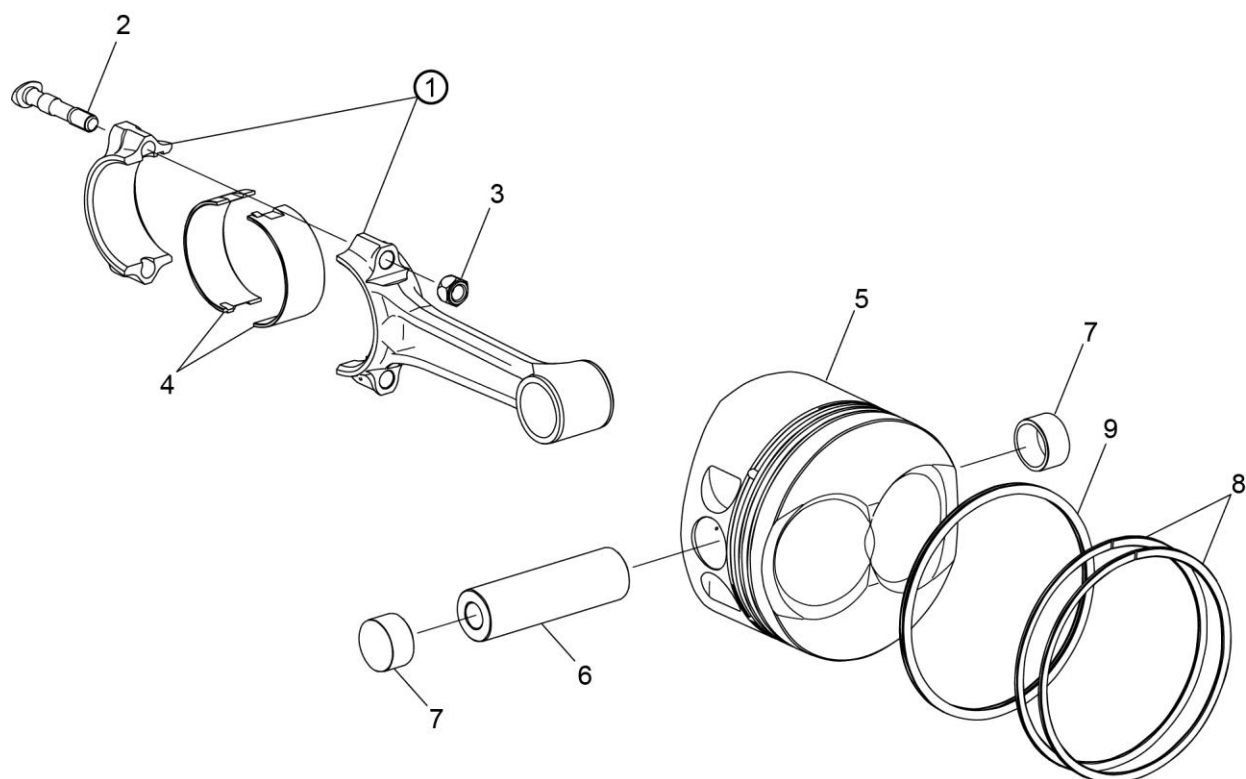


Figure 9
Connecting Rods, Pistons, and Ring Assemblies

Figure 9 - Connecting Rods, Pistons, and Ring Assemblies

| Figure Item | Code | Part Number | Description | Units per Assembly |
|---|------|-------------|--|--------------------|
| 1 | | 77450 | CONNECTING ROD ASSEMBLY | 4 |
| 2 | * | 75061 | BOLT, Connecting rod | 8 |
| 3 | | LW-12186 | NUT, Connecting rod bolt | 8 |
| 4 | | 18M23887 | BEARING, Connecting rod | 8 |
| 5 | | 14E23911 | PISTON, Compression ratio 8.90:1 | 4 |
| 6 | ** | 14J22048 | PIN, Piston | 4 |
| 7 | | 72198 | PLUG, Piston pin | 8 |
| 8 | | 14G22050 | RING, Piston compression | 8 |
| 9 | | 14H23148 | RING, Piston oil regulating, expander type | 4 |
| <p>* Service use only.</p> <p>** Refer to the latest revision of Lycoming Service Instruction No. 1267.</p> | | | | |

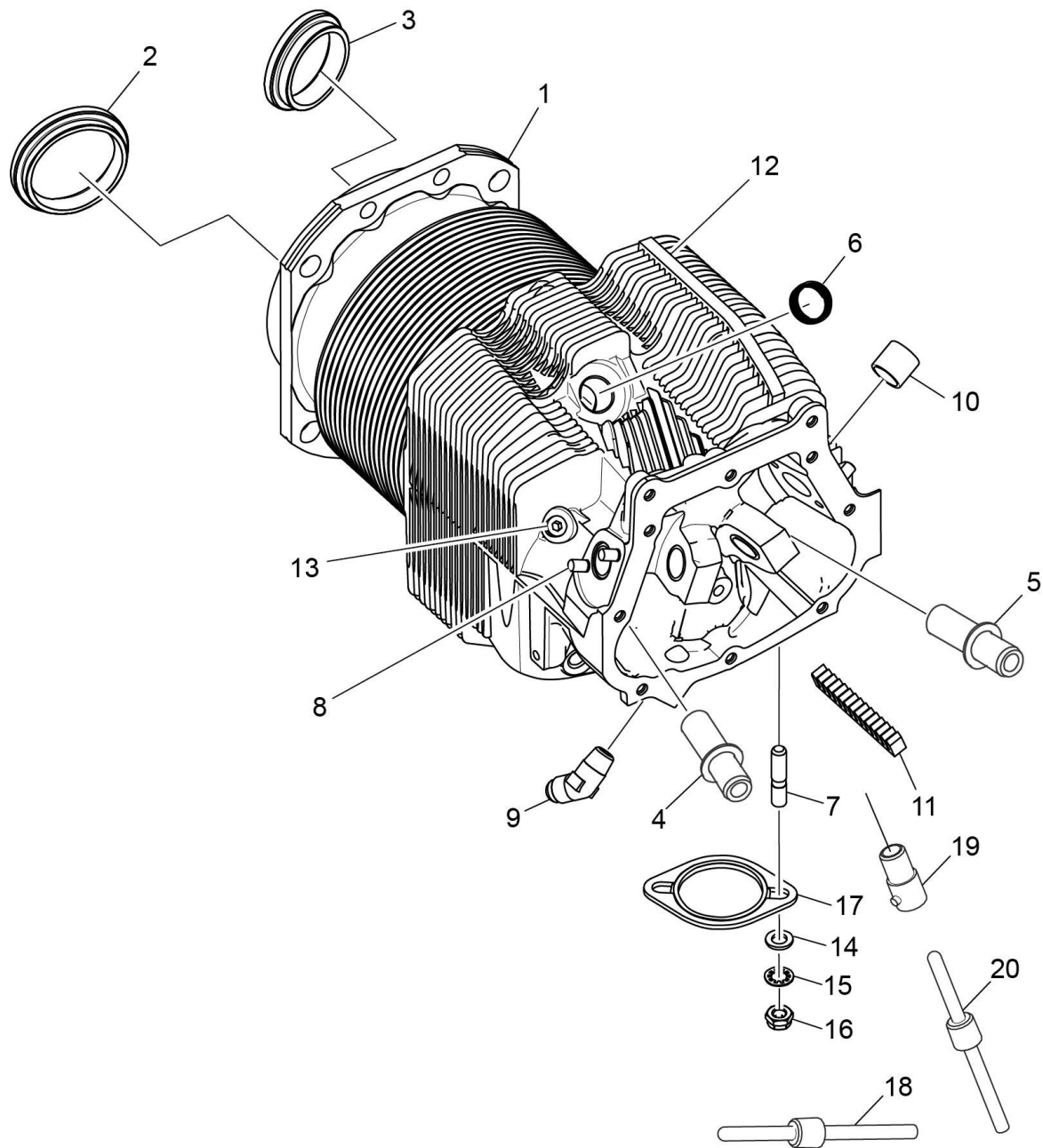


Figure 10
Cylinder Assembly

Figure 10 - Cylinder Assembly

| Figure Item | Code | Part Number | Description | Units per Assembly | | | |
|---|------|-------------|--|--------------------|------------------|------------------|------------------|
| | | | | A 1 A 6 | A 3 A 6 | A 1 B 6 | A 3 B 6 |
| 1 | | 16A26081 | CYLINDER AND HEAD ASSEMBLY, Nitrided | 4 | 4 | 4 | 4 |
| 2 | | 72212 | SEAT, Intake valve | 4 | 4 | 4 | 4 |
| 3 | | 16T19468 | SEAT, Valve, exhaust | 4 | 4 | 4 | 4 |
| 4 | | LW-11956 | GUIDE, Valve, intake | 4 | 4 | 4 | 4 |
| 5 | | LW-11958 | GUIDE, Valve, exhaust | 4 | 4 | 4 | 4 |
| 6 | | 66796 | INSERT, Spark plug, 18-1.5 MM | 8 | 8 | 8 | 8 |
| 7 | | 31C-13 | STUD, 5/16-18 x 1-5/8 long | 8 | 8 | 8 | 8 |
| 8 | | 25C-8 | STUD, 1/4-20 x 1.00 long | 16 | 16 | 16 | 16 |
| 9 | | MS20823-6D | ELBOW, 45°, 3/8 flared tube | 4 | 4 | 4 | 4 |
| 10 | | 66670 | BUSHING, Rocker shaft, inner | 16 | 16 | 16 | 16 |
| 11 | | 72343 | STABILIZER, Cylinder head fins, 15 teeth | 4 | 4 | 4 | 4 |
| 12 | | 72344 | STABILIZER, Cylinder head fins, 26 teeth | 4 | 4 | 4 | 4 |
| 13 | | 1102 | PLUG, 1/8-27 NPT, Allen head | 4 | 4 | 4 | 4 |
| 14 | | STD-35 | WASHER, 5/16 plain | 8 | 8 | 8 | 8 |
| 15 | | STD-475 | WASHER, 5/16 lock, internal teeth | 8 | 8 | 8 | 8 |
| 16 | | STD-1410 | NUT, 5/16-18 plain | 8 | 8 | 8 | 8 |
| 17 | * | 75118 | GASKET, Exhaust flange | 8 | 8 | 8 | 8 |
| | * | 77611 | GASKET, Exhaust flange | | | | 8 |
| 18 | | 05U22561 | THERMOCOUPLE, Installation, K type | | | | 2 |
| 19 | | AN4076-1 | FITTING, Temp. measuring element | | | | 4 |
| 20 | | LW-18752 | THERMOCOUPLE, K, cyl. head bayonet | | | | 4 |
| * This part is shipped loose with the engine. | | | | | | | |

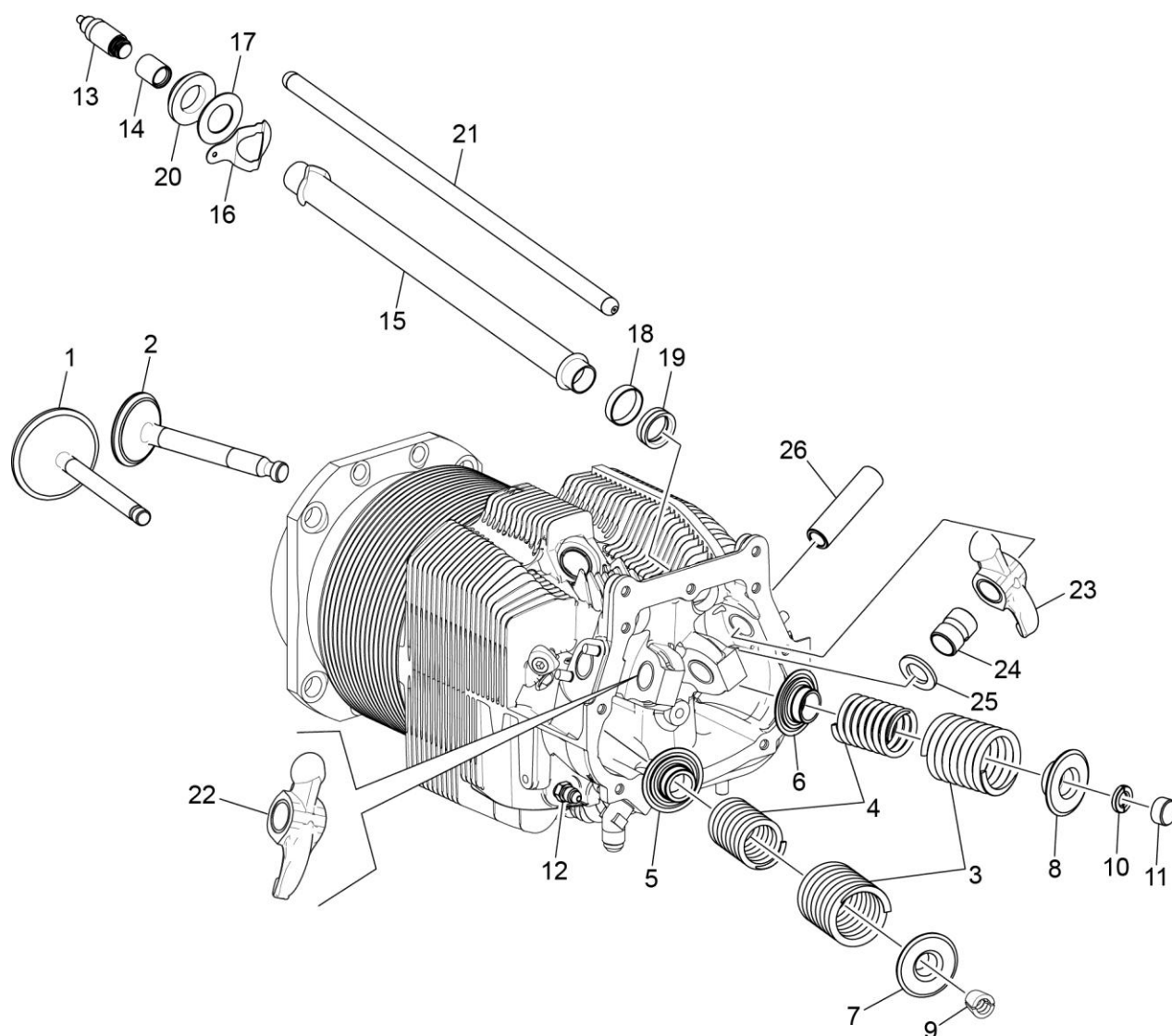


Figure 11
Valve Assembly and Related Parts

Figure 11 – Valve Assembly and Related Parts

| Figure Item | Code | Part Number | Description | Units per Assembly | | | |
|-------------|------|-------------|--------------------------------------|--------------------|------------------|------------------|------------------|
| | | | | A 1 A 6 | A 3 A 6 | A 1 B 6 | A 3 B 6 |
| 1 | | 17A23946 | VALVE, Intake | 4 | 4 | 4 | 4 |
| 2 | | 17B23935 | VALVE, Exhaust | 4 | 4 | 4 | 4 |
| 3 | | LW-11796 | SPRING, Valve, outer | 8 | 8 | 8 | 8 |
| 4 | | LW-11797 | SPRING, Valve, inner | 8 | 8 | 8 | 8 |
| 5 | | LW-13321 | SEAT, Valve spring, lower intake | 4 | 4 | 4 | 4 |
| 6 | | LW-13322 | SEAT, Valve spring, lower exhaust | 4 | 4 | 4 | 4 |
| 7 | | LW-10077 | SEAT, Valve spring, upper intake | 4 | 4 | 4 | 4 |
| 8 | | LW-16475 | SEAT, Valve spring, upper exhaust | 4 | 4 | 4 | 4 |
| 9 | | 60009 | KEY, Valve, intake | 8 | 8 | 8 | 8 |
| 10 | | 17C21191 | KEY, Valve, exhaust | 8 | 8 | 8 | 8 |
| 11 | | 17C19386 | CAP, Valve stem, exhaust | 4 | 4 | 4 | 4 |
| 12 | | 02G21382 | NIPPLE, Nozzle pressure gauge | | | | 1 |
| 13 | | 15B26066 | PLUNGER ASSEMBLY, Hydraulic tappet | 8 | 8 | 8 | 8 |
| 14 | | 15B21319 | SOCKET, Hydraulic tappet | 8 | 8 | 8 | 8 |
| 15 | | 15G23462 | SHROUD TUBE ASSEMBLY, Push rod | 8 | 8 | 8 | 8 |
| 16 | | 15H21201 | SPRING, Shroud tube | 16 | 16 | 16 | 16 |
| 17 | | 01L23459 | WASHER, 3/4 I.D. x 1-3/8 O.D. x 1/32 | 8 | 8 | 8 | 8 |
| 18 | | 61503 | SLEEVE, Shroud tube | 8 | 8 | 8 | 8 |
| 19 | | LW-18661 | SEAL, Shroud tube | 8 | 8 | 8 | 8 |
| 20 | | 06A23493 | SEAL, Shroud tube | 8 | 8 | 8 | 8 |

(continued on next page)

Figure 11 – Valve Assembly and Related Parts (Cont.)

| Figure Item | Code | Part Number | Description | Units per Assembly | | | |
|--|------|-------------|---|--------------------|------------------|------------------|------------------|
| | | | | A 1 A 6 | A 3 A 6 | A 1 B 6 | A 3 B 6 |
| 21 | | 15F19957-51 | ROD ASSEMBLY, Push (A total of 8 required) RT | AR | AR | AR | AR |
| | | 15F19957-52 | ROD ASSEMBLY, Push (A total of 8 required) RT | AR | AR | AR | AR |
| | | 15F19957-53 | ROD ASSEMBLY, Push (A total of 8 required) RT | AR | AR | AR | AR |
| | | 15F19957-54 | ROD ASSEMBLY, Push (A total of 8 required) RT | AR | AR | AR | AR |
| | | 15F19957-55 | ROD ASSEMBLY, Push (A total of 8 required) RT | AR | AR | AR | AR |
| | | 15F19957-56 | ROD ASSEMBLY, Push (A total of 8 required) RT | AR | AR | AR | AR |
| | | 15F21362-17 | ROD ASSEMBLY, Push (A total of 8 required) RT | AR | AR | AR | AR |
| | | 15F21362-18 | ROD ASSEMBLY, Push (A total of 8 required) RT | AR | AR | AR | AR |
| | | 15F21362-19 | ROD ASSEMBLY, Push (A total of 8 required) RT | AR | AR | AR | AR |
| | | 15F21362-20 | ROD ASSEMBLY, Push (A total of 8 required) RT | AR | AR | AR | AR |
| | | 15F21362-21 | ROD ASSEMBLY, Push (A total of 8 required) RT | AR | AR | AR | AR |
| | | 15F21362-22 | ROD ASSEMBLY, Push (A total of 8 required) RT | AR | AR | AR | AR |
| 22 | * | 17F21188 | ROCKER ASSEMBLY, Valve, intake | 4 | 4 | 4 | 4 |
| 23 | * | 17F21187 | ROCKER ASSEMBLY, Valve, exhaust | 4 | 4 | 4 | 4 |
| 24 | | 74389 | BUSHING, Valve rocker | 8 | 8 | 8 | 8 |
| 25 | | 71549 | WASHER, Thrust, valve rocker | 8 | 8 | 8 | 8 |
| 26 | | 72626 | SHAFT, Valve rocker | 8 | 8 | 8 | 8 |
| AR As Required RT Roller tappet * 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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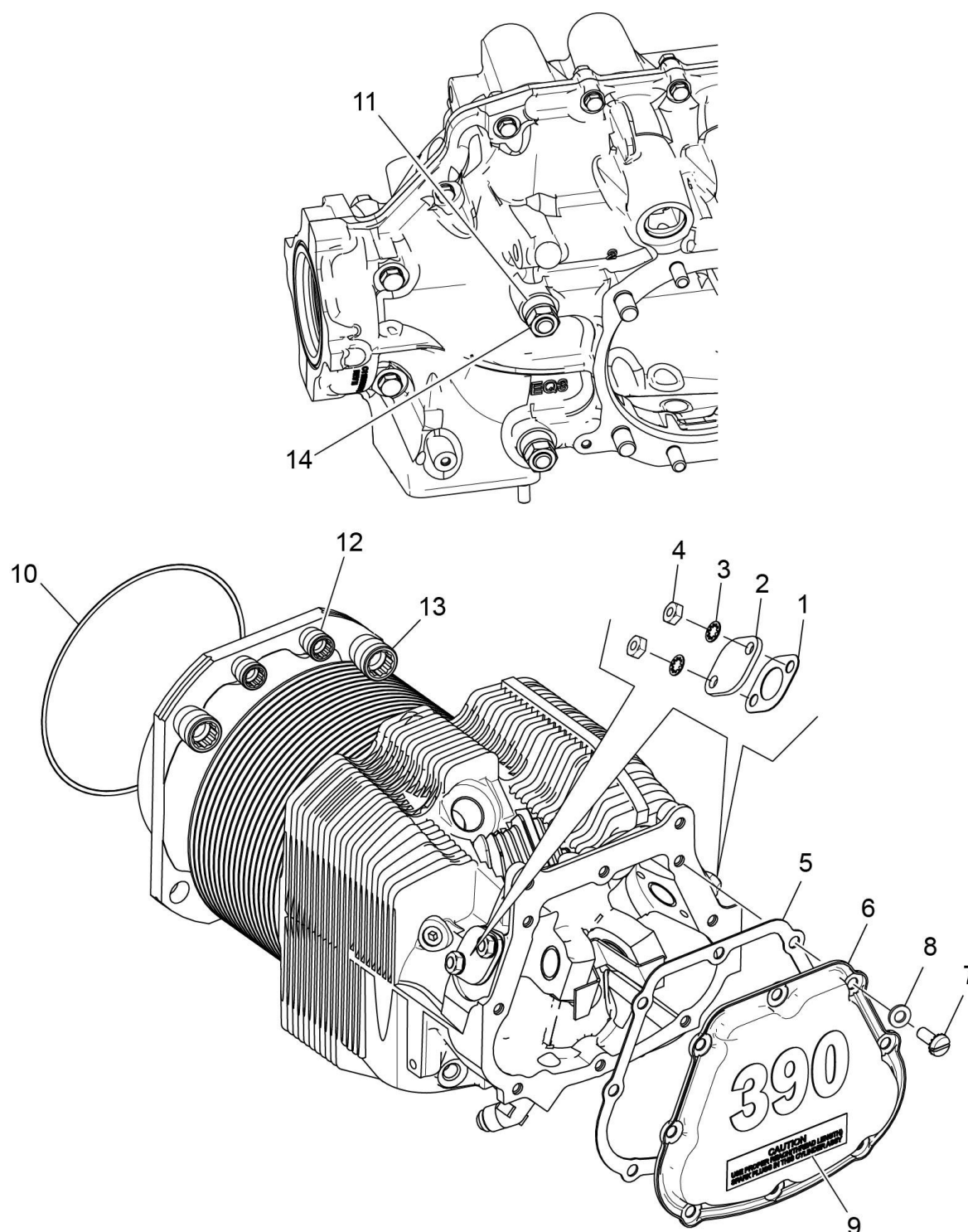


Figure 12
Cylinder Related Parts

Figure 12 - Cylinder Related Parts

| Figure Item | Code | Part Number | Description | Units per Assembly | | | |
|-------------|------|-------------|---|--------------------|------------------|------------------|------------------|
| | | | | A 1 A 6 | A 3 A 6 | A 1 B 6 | A 3 B 6 |
| 1 | | 66732 | GASKET, Valve rocker shaft cover | 8 | 8 | 8 | 8 |
| 2 | | 72710 | COVER, Valve rocker shaft | 4 | 4 | 4 or 8 | 4 |
| 3 | | STD-160 | WASHER, 1/4 lock, internal teeth | 16 | 16 | 16 | 16 |
| 4 | | STD-1411 | NUT, 1/4-20 plain | 16 | 16 | 16 | 16 |
| 5 | | 67193 | GASKET, Rocker box cover | 4 | 4 | 4 | 4 |
| | | 06B26811 | GASKET, Rocker box cover, silicone | | | | 4 |
| 6 | | 17J26469 | COVER ASSEMBLY, Rocker box | 4 | 4 | 4 | 4 |
| 7 | | STD-1925 | SCREW, 1/4-20 x 5/8 long, pan hd., self- | 32 | 32 | 32 | 32 |
| 8 | | MS35335-33 | WASHER | | | 32 | |
| 9 | | 74494 | PLATE, Spark plug reach caution | 4 | 4 | 4 | 4 |
| 10 | | 71481 | RING, Oil seal, 3/32 diameter x 4-27/32 | 4 | 4 | 4 | 4 |
| 11 | | 74887 | SPACER, 33/64 I.D. x 7/8 O.D. x 3/8 thick | 2 | 2 | 2 | 2 |
| 12 | | 71134 | NUT, 3/8-24 NF-3 | 16 | 16 | 16 | 16 |
| 13 | | 71133 | NUT, 1/2-20 NF-3 | 16 | 16 | 16 | 16 |
| 14 | | STD-2090 | NUT, 1/2-20 plain | 2 | 2 | 2 | 2 |

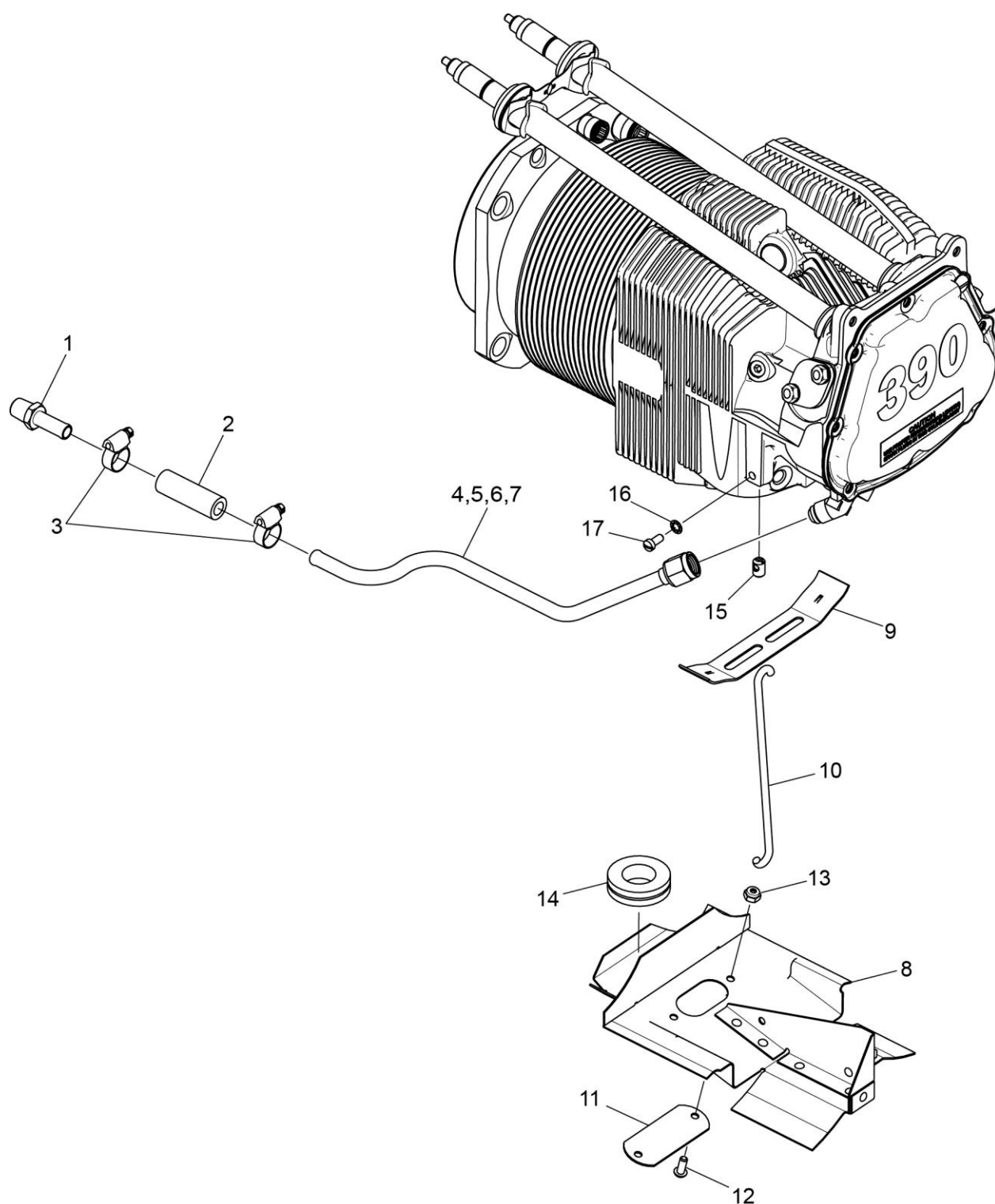


Figure 13
Cylinder Head Drain Tubes and Intercylinder Cooling Baffles

Figure 13 - Cylinder Head Drain Tubes and Intercylinder Cooling Baffles

| Figure Item | Code | Part Number | Description | Units per Assembly |
|--|------|---------------|--|--------------------|
| 1 | | STD-684 | NIPPLE, Straight, 3/8 I.D. hose | 4 |
| 2 | | STD-2180 | HOSE, 3/8 x 1-13/16 long | 4 |
| 3 | | LW-15592-5-05 | CLAMP, Hose | 8 |
| 4 | | 72702 | TUBE ASSEMBLY, Cyl. head oil drain, cyl. No. 1 | 1 |
| 5 | | 72703 | TUBE ASSEMBLY, Cyl. head oil drain, cyl. No. 2 | 1 |
| 6 | | 74808 | TUBE ASSEMBLY, Cyl. head oil drain, cyl. No. 3 | 1 |
| 7 | | 73027 | TUBE ASSEMBLY, Cyl. head oil drain, cyl. No. 4 | 1 |
| 8 | * | 75338 | BAFFLE ASSEMBLY, Intercylinder | 1 |
| | ** | 75337 | BAFFLE ASSEMBLY, Intercylinder | 1 |
| 9 | | 71611 | RETAINER, Intercylinder baffle | 2 |
| 10 | | 17M23284 | HOOK, Intercylinder baffle retainer | 2 |
| 11 | | 72834 | COVER, Baffle ignition cable hole | 2 |
| 12 | | STD-692 | SCREW, No. 10-32 x 1/2 long, round head | 4 |
| 13 | | STD-670 | LOCK NUT, No. 10-32 | 4 |
| 14 | ** | MS35489-20X | GROMMET | 1 |
| 15 | | 65614 | PLUG, Baffle attaching | 4 |
| 16 | | STD-251 | WASHER, No. 10, internal lock | 4 |
| 17 | | STD-1686 | SCREW, No. 10-32 x 7/16 long | 4 |
| * Install on left side cylinders No. 2 and 4 | | | | |
| ** Install on right side between cylinders No. 1 and 3 | | | | |

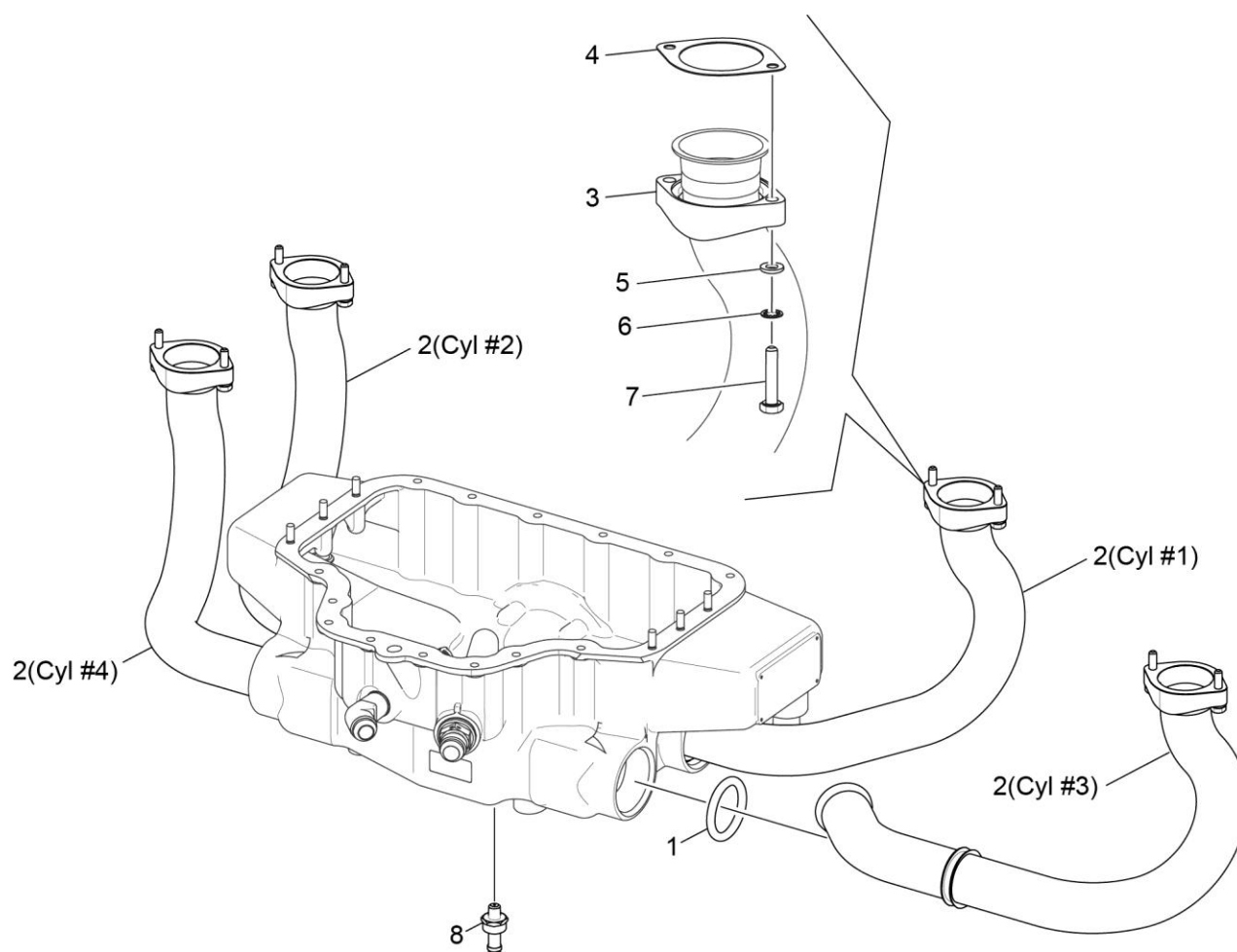


Figure 14
Intake Pipes Assembly

Figure 14 – Intake Pipes Assembly

| Figure Item | Code | Part Number | Description | Units per Assembly | | | |
|-------------|------|-------------|--------------------------------------|--------------------|------------------|------------------|------------------|
| | | | | A 1 A 6 | A 3 A 6 | A 1 B 6 | A 3 B 6 |
| 1 | | 77569 | SEAL, Intake pipe | 4 | 4 | 4 | 4 |
| 2 | | 78741 | PIPE, Intake, cylinder No. 1 | 1 | 1 | 1 | 1 |
| | | 78742 | PIPE, Intake, cylinder No. 2 | 1 | 1 | 1 | 1 |
| | | 78743 | PIPE, Intake, cylinder No. 3 | 1 | 1 | 1 | 1 |
| | | 78744 | PIPE, Intake, cylinder No. 4 | 1 | 1 | 1 | 1 |
| 3 | | 74360 | FLANGE, Intake pipe, upper | 4 | 4 | 4 | 4 |
| 4 | | 71973 | GASKET, 2 bolt flange, 1-3/4 I.D. | 4 | 4 | 4 | 4 |
| 5 | | STD-8 | WASHER, 1/4 plain | 8 | 8 | 8 | 8 |
| 6 | | STD-160 | WASHER, 1/4 lock, internal teeth | 8 | 8 | 8 | 8 |
| 7 | | LW-25-1.25 | BOLT, 1/4-20 x 1-1/4 long, hex. head | 8 | 8 | 8 | 8 |
| 8 | | 75444 | ADAPTER ASSEMBLY, Fuel drain valve | 1 | 1 | 1 | 1 |

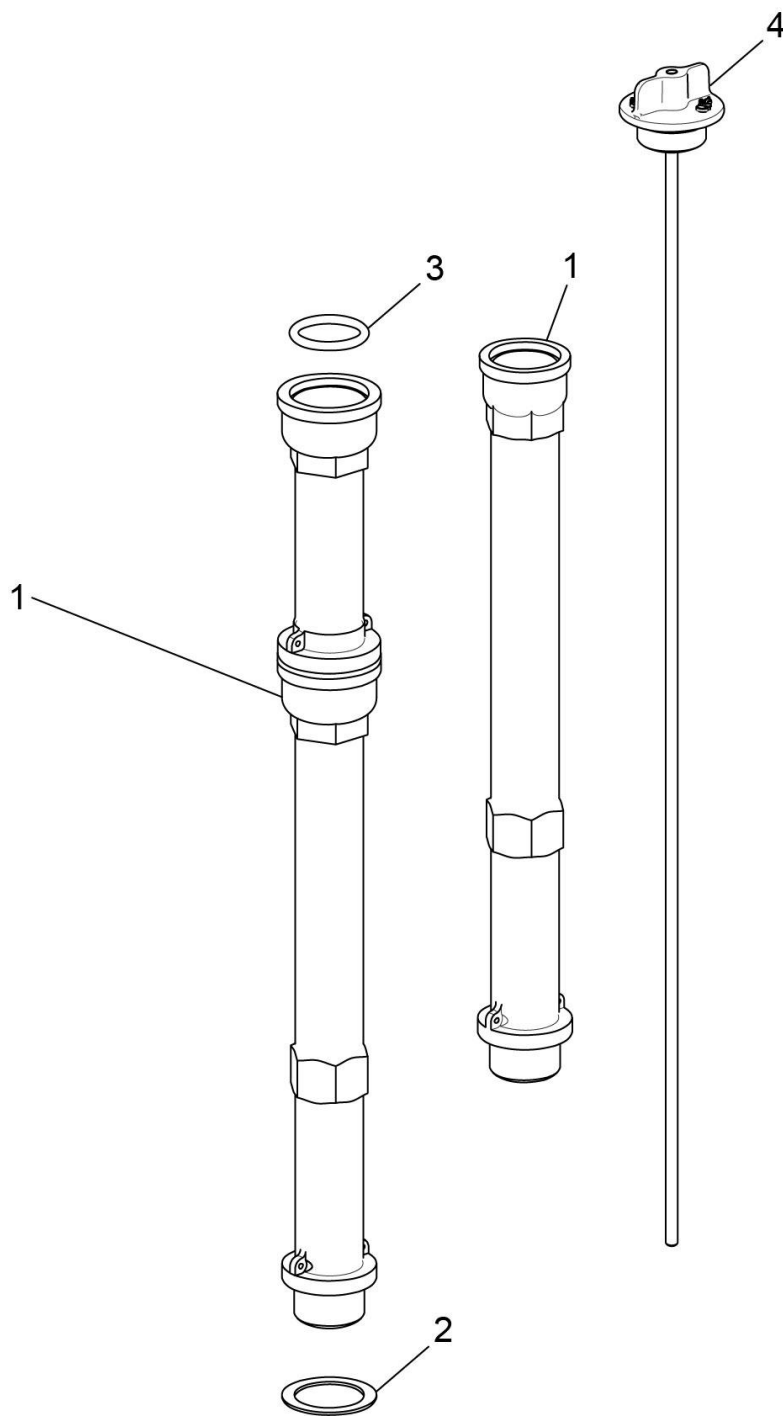


Figure 15
Oil Level Gage

Figure 15 - Oil Level Gage

| Figure Item | Code | Part Number | Description | Units per Assembly | | | |
|-------------|------|-------------|-------------------------------|--------------------|------------------|------------------|------------------|
| | | | | A 1 A 6 | A 3 A 6 | A 1 B 6 | A 3 B 6 |
| 1 | | 75736 | TUBE, Oil level gage | 1 | 1 | 1 | 1 |
| | | 56C23075 | TUBE ASSEMBLY, Oil level gage | 1 | | | 1 |
| 2 | | 72059 | GASKET, Oil level gage | 1 | 1 | 1 | 1 |
| 3 | | 74068 | RING, Oil level gage plug | 1 | 1 | 1 | 1 |
| | | 74065 | O-RING, Oil level gage | 1 | | | 1 |
| 4 | | LW-14760 | GAGE ASSEMBLY, Oil level | 1 | 1 | 1 | 1 |
| | | LW-14763 | GAGE ASSEMBLY, Oil level | 1 | | | 1 |

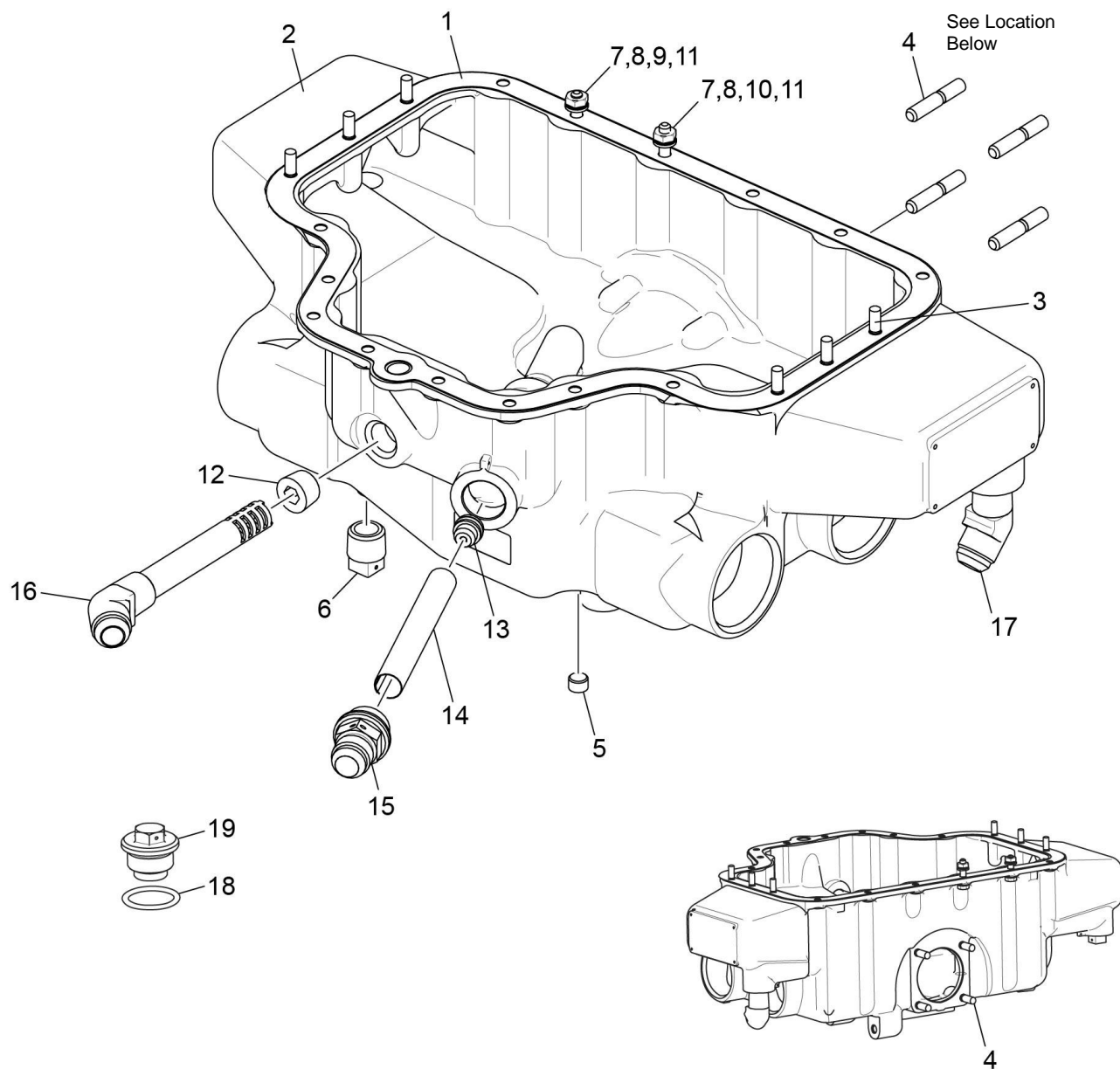


Figure 16
Oil Sump Assembly and Oil Suction Screen

Figure 16 – Oil Sump Assembly and Oil Suction Screen

| Figure Item | Code | Part Number | Description | Units per Assembly | | | |
|-------------|------|---------------|--|--------------------|------------------|------------------|------------------|
| | | | | A 1 A 6 | A 3 A 6 | A 1 B 6 | A 3 B 6 |
| 1 | | LW-13353 | GASKET, Oil sump | 1 | 1 | 1 | 1 |
| 2 | | LW-13864 | SUMP ASSEMBLY, Oil | 1 | 1 | 1 | 1 |
| 3 | | 61400 | STUD, 1/4-20 x 1-3/16 long | 6 | 6 | 6 | 6 |
| 4 | | 31C-14 | STUD, 5/16-18 x 1-3/4 long | 4 | 4 | 4 | 4 |
| 5 | | 1102 | PLUG, 1/8 pipe | 1 | 1 | 1 | 1 |
| 6 | | STD-551 | PLUG, 1/2-14 NPT, square head, drilled | 2 | 2 | 2 | 2 |
| 7 | | STD-8 | WASHER, 1/4 plain | 26 | 26 | 26 | 26 |
| 8 | | STD-160 | WASHER, 1/4 lock, internal teeth | 20 | 20 | 20 | 20 |
| 9 | | LW-25-0.94 | BOLT, 1/4-20 x 15/16 long, hex. head | 12 | 12 | 12 | 12 |
| 10 | | LW-25-1.13 | BOLT, 1/4-20 x 1-1/8 long, hex. head | 2 | 2 | 2 | 2 |
| 11 | | STD-1411 | NUT, 1/4-20 plain | 12 | 12 | 12 | 12 |
| 12 | | STD-2229 | PLUG, 1/2 NPT, Allen head | 1 | 1 | 1 | 1 |
| 13 | | LW-13752 | PLUG, Sump | | 1 | 1 | 1 |
| 14 | | 70484 | SCREEN, Oil suction | 1 | 1 | 1 | 1 |
| 15 | | LW-14035 | FITTING, Sump oil suction | | 1 | 1 | 1 |
| 16 | | LW-15394 | FITTING, Sump oil strainer | | 1 | 1 | 1 |
| 17 | | LW-14148 | FITTING, Sump oil return | | 1 | 1 | 1 |
| 18 | | 06E19769-1.00 | GASKET, Annular, 1.00 I.D. | 1 | 1 | 1 | 1 |
| 19 | | LW-12545 | PLUG, 5/8 hex. head x 1.00-20 thread | 1 | 1 | 1 | 1 |

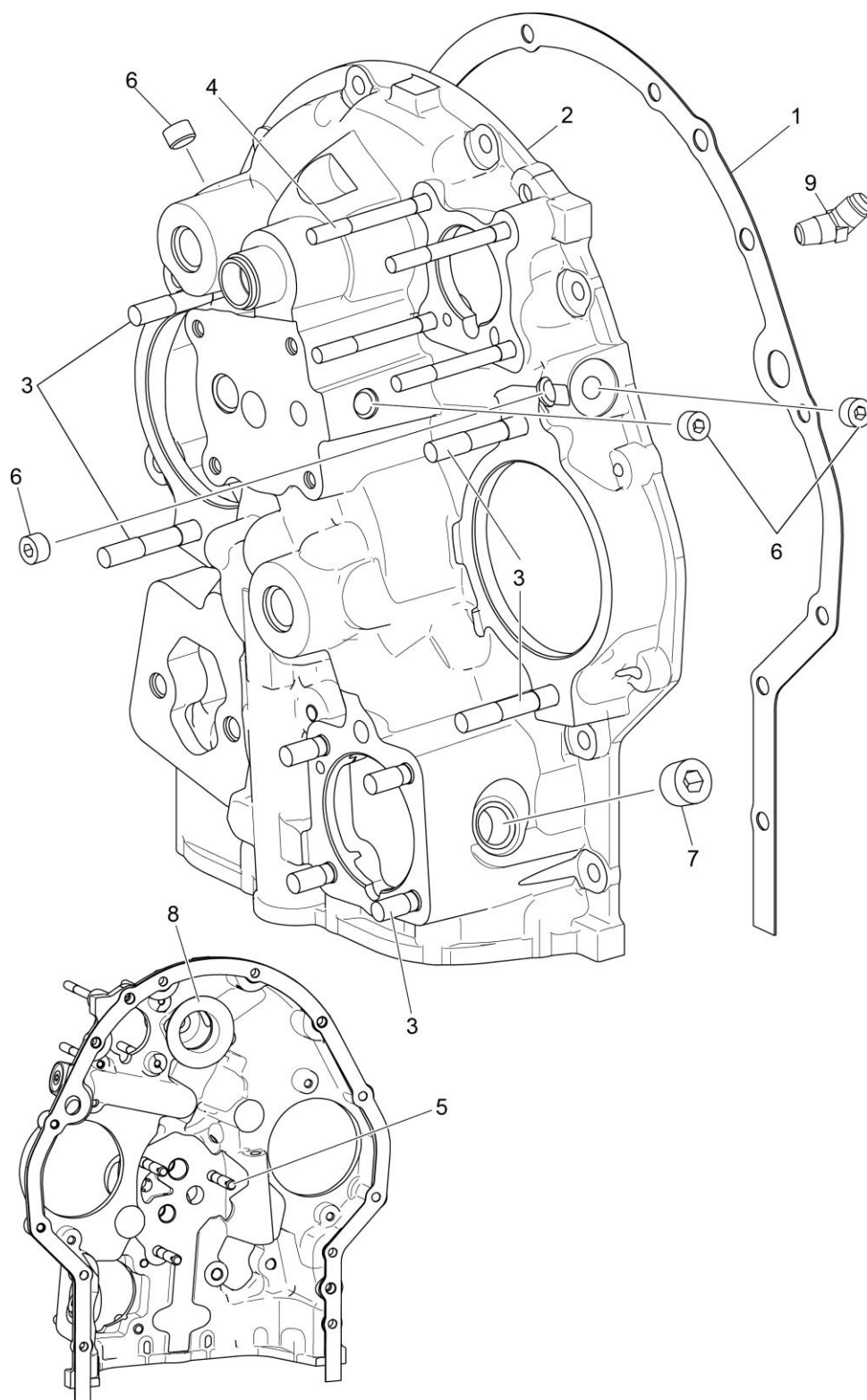


Figure 17
Accessory Housing Assembly

Figure 17 – Accessory Housing Assembly

| Figure Item | Code | Part Number | Description | Units per Assembly | | | |
|-------------|------|-------------|---------------------------------------|--------------------|------------------|------------------|------------------|
| | | | | A 1 A 6 | A 3 A 6 | A 1 B 6 | A 3 B 6 |
| 1 | | 73818 | GASKET, Accessory housing | 1 | 1 | 1 | 1 |
| 2 | | 21A21533-30 | ACCESSORY HOUSING ASSEMBLY, Studding | 1 | 1 | 1 | 1 |
| | | 21A21533-33 | HOUSING ASSEMBLY, Accessory, studding | | | | 1 |
| 3 | | 31C-12 | STUD, 5/16-18 x 1-1/2 long | 8 | 8 | 8 | 8 |
| 4 | | 25C-22 | STUD, 1/4-20 x 2-3/4 long | 4 | 4 | 4 | 4 |
| | | 61400 | STUD, 1/4-20 x 1-3/16 long | | | | 4 |
| 5 | | 31CD-17 | STUD, 5/16-18 x 2-1/8 long drilled | 3 | 3 | 3 | 3 |
| 6 | | 1102 | PLUG, 1/8 pipe | 4 | 4 | 4 | 4 |
| 7 | | STD-784 | PLUG, 3/8-18 NPT, Allen head | 1 | 1 | 1 | 1 |
| 8 | | 76119 | SHIELD, Accessory breather oil | 1 | 1 | 1 | 1 |
| 9 | | MS20823-4 | ELBOW, 1/8 NPT to 1/4 flared tube | | | | 1 |

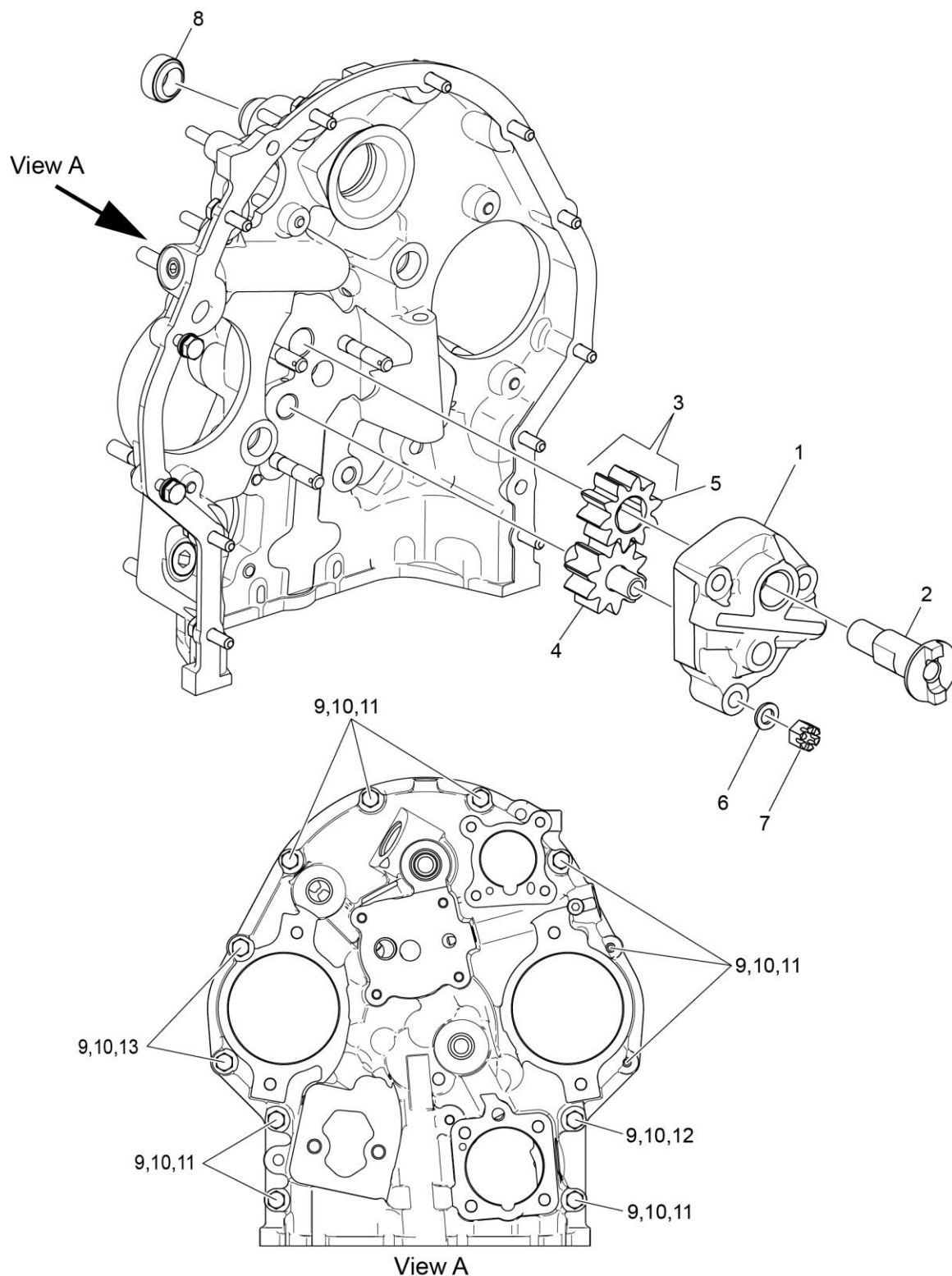


Figure 18
Oil Pump Assembly and Accessory Housing Attaching Parts

Figure 18 – 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 | | 05K19423-S | IMPELLER KIT | 1 |
| 4 | | LW-18110 | IMPELLER ASSEMBLY, Oil pump driven | 1 |
| 5 | | LW-18109 | IMPELLER, Oil pump driven | 1 |
| 6 | | STD-35 | WASHER, 5/16 plain | 3 |
| 7 | | STD-1420 | NUT, 5/16-18 slotted | 3 |
| 8 | | LW-14260 | SEAL, Tachometer drive, oil | 1 |
| 9 | | STD-8 | WASHER, 1/4 plain | 12 |
| 10 | | STD-160 | WASHER, 1/4 lock, internal teeth | 12 |
| 11 | | LW-25-0.94 | BOLT, 1/4-20 x 15/16 long, hex. head | 9 |
| 12 | | LW-25-1.13 | BOLT, 1/4-20 x 1-1/8 long, hex. head | 1 |
| 13 | | LW-25-1.44 | BOLT, 1/4-20 x 1-7/16 long, hex. head | 2 |

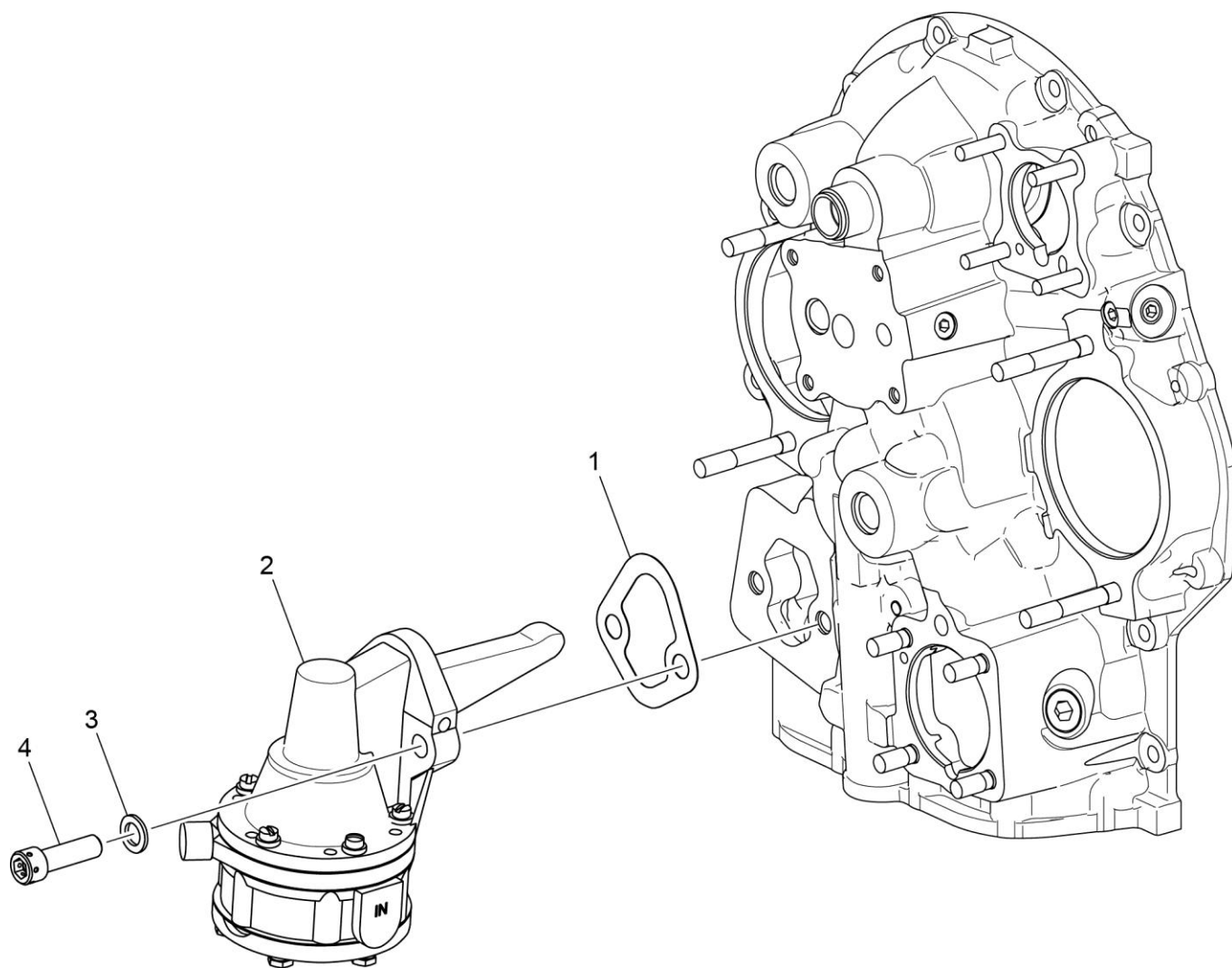


Figure 19
Fuel Pump and Attaching Parts

Figure 19 - Fuel Pump 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 |

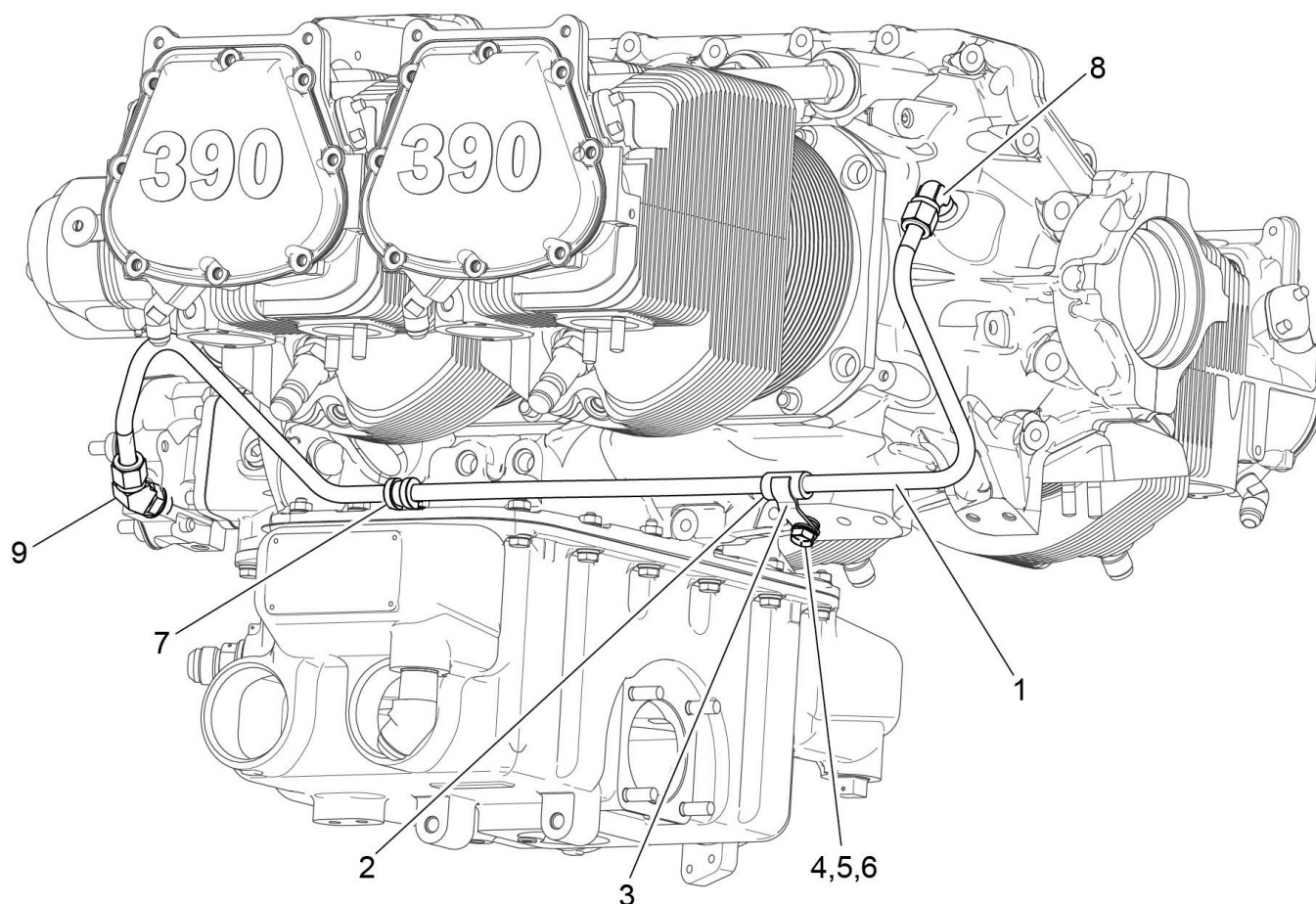


Figure 20
Propeller Governor Oil Line Tube Assembly and Attaching Parts

Figure 20 - Propeller Governor Oil Line Tube Assembly and Attaching Parts

| Figure Item | Code | Part Number | Description | Units per Assembly | | | |
|-------------|------|----------------|--|--------------------|------------------|------------------|------------------|
| | | | | A 1 A 6 | A 3 A 6 | A 1 B 6 | A 3 B 6 |
| 1 | | 75167 | TUBE ASSEMBLY, Propeller governor oil line | 1 | | | |
| | | 75730 | TUBE ASSEMBLY, Propeller governor oil line | | 1 | | |
| 2 | | STD-1930 | HOSE, 3/8 I.D. x 1.00 long | 1 | 1 | | |
| 3 | | 75165 | CLIP, Propeller governor oil line support | 1 | 1 | | |
| 4 | | STD-35 | WASHER, 5/16 plain | 3 | 3 | | |
| 5 | | STD-475 | WASHER, 5/16 lock, internal teeth | 1 | 1 | | |
| 6 | | LW-31-0.94 | BOLT, 5/16-18 x 15/16 long, hex. head | 1 | 1 | | |
| 7 | | LW-16266-25-38 | CLAMP, 3/8 I.D. x 1/4 diameter screw | 1 | 1 | | |
| 8 | | MS20822-6 | ELBOW, 1/4 NPT to 3/8 flared tube, 90° | 1 | 1 | | |
| 9 | | 74070 | ELBOW, 3/8 flared tube and 9/16-18 | 1 | 1 | | |

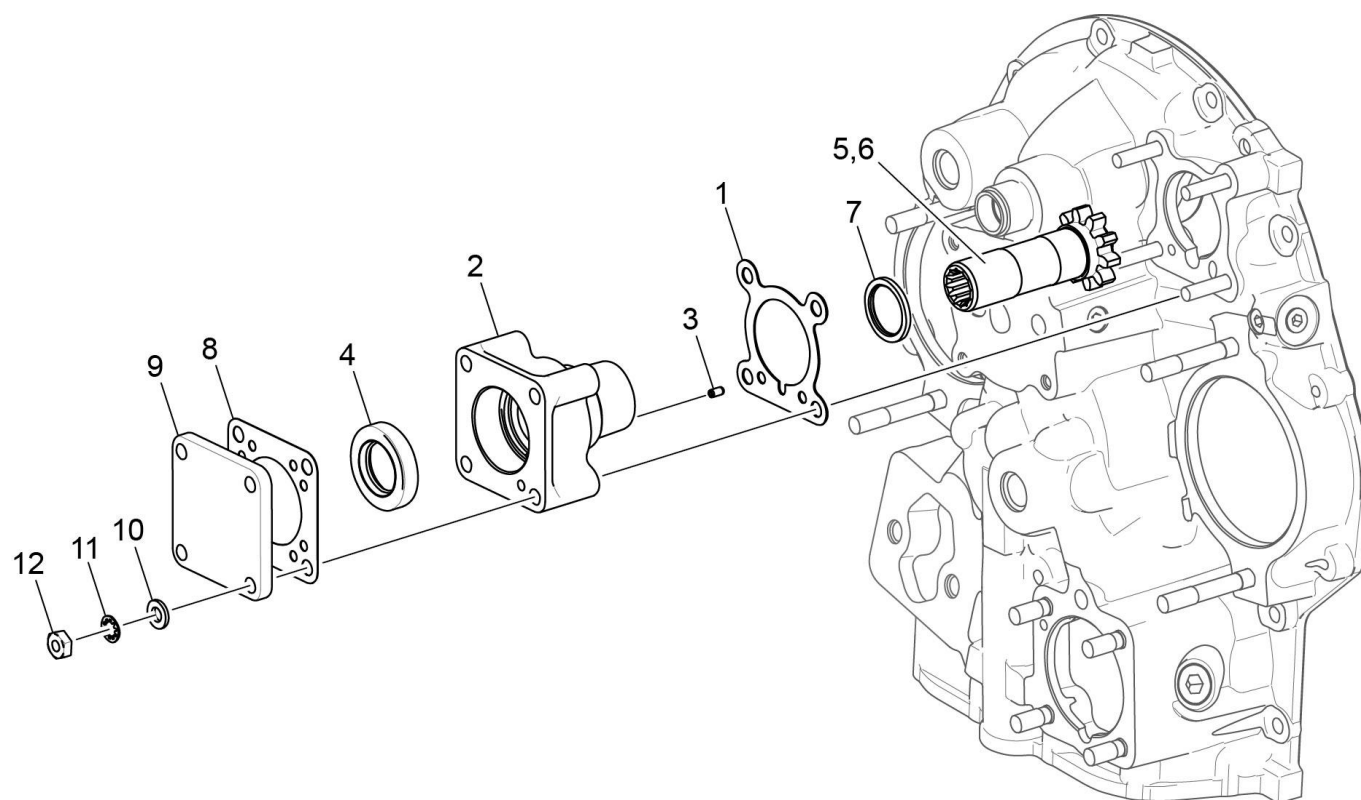


Figure 21
Vacuum Pump Drive and Cover

Figure 21 – Vacuum Pump Drive and Cover

| Figure Item | Code | Part Number | Description | Units per Assembly |
|-------------|------|-------------|--|--------------------|
| 1 | | 61183 | GASKET, Accessory adapter | 1 |
| 2 | | 61098 | 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 | | 72962 | THRUST BUTTON, Vacuum pump gear | 1 |
| 7 | | 71596 | WASHER, Accessory drive gear | 1 |
| 8 | | 8313 | GASKET, Vacuum pump | 1 |
| 9 | | 60430 | COVER, Vacuum pump | 1 |
| 10 | | STD-8 | WASHER, 1/4 plain | 4 |
| 11 | | STD-160 | WASHER, 1/4 lock, internal teeth | 4 |
| 12 | | STD-1411 | NUT, 1/4-20 plain | 4 |

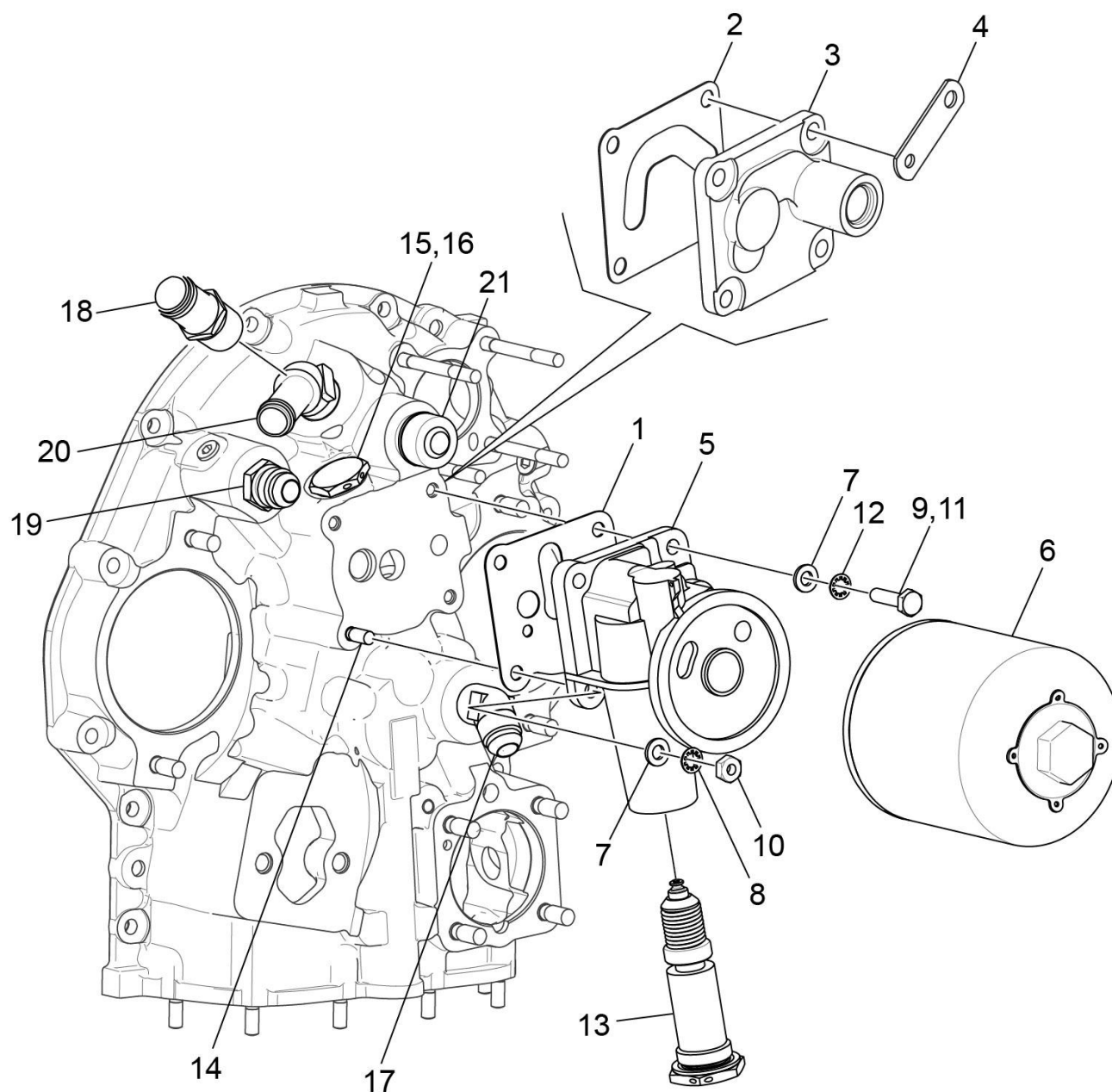


Figure 22
Oil Filter Assembly, Oil Cooler Bypass Valve, and Fittings

Figure 22 – Oil Filter Assembly, Oil Cooler Bypass Valve, and Fittings

| Figure Item | Code | Part Number | Description | Units per Assembly | | | |
|--|------|---------------|--|--------------------|------------------|------------------|------------------|
| | | | | A 1 A 6 | A 3 A 6 | A 1 B 6 | A 3 B 6 |
| 1 | * | 06B23862 | GASKET, Oil filter adapter | 2 | 2 | 2 | 2 |
| 2 | | 06B21644 | GASKET, Oil filter base cover | | | 1 | |
| 3 | | 21M23736 | COVER, Oil filter base | | | 1 | |
| 4 | | 73152 | BRACKET, Support clamp | | | | 1 |
| 5 | | 77852 | OIL FILTER BASE ASSEMBLY | 1 | 1 | 1 | 1 |
| 6 | | LW-13215 | OIL FILTER, Short, CH48110-1 | 1 | 1 | 1 | 1 |
| 7 | | STD-8 | WASHER, 1/4 plain | 4 | 4 | 4 | 4 |
| 8 | | STD-160 | WASHER, 1/4 lock, internal teeth | 1 | 1 | 1 or 4 | 1 |
| 9 | | LW-25-0.94 | BOLT, 1/4-20 x 15/16 long, hex. head | | | 3 | |
| 10 | | STD-1411 | NUT, 1/4-20 plain | 1 | 1 | 1 | 1 |
| 11 | | LW-25-1.00 | BOLT, 1/4-20 x 1.00 long, hex. head | 3 | 3 | 1 or 3 | 3 |
| 12 | | STD-160 | WASHER, 1/4 lock, internal teeth | 3 | 3 | 3 | 3 |
| 13 | | 53E22144 | VALVE ASSEMBLY, Temp. control, oil cooler bypass | 1 | 1 | 1 | 1 |
| 14 | | 25C-10 | STUD, 1/4-20 x 1-1/4 long | 1 | 1 | 1 | 1 |
| 15 | | 06E19769-0.63 | GASKET, Annular, 5/8 I.D. | 1 | 1 | 1 | 1 |
| 16 | | 62417 | PLUG, Oil cooler bypass | 1 | 1 | 1 | 1 |
| 17 | | MS20823-8 | ELBOW, 3/8 NPT, 1/2 flared tube | 1 | 1 | 1 | 1 |
| 18 | | 71140 | FITTING, Breather | 1 | | 1 | 1 |
| 19 | | AN816-8 | NIPPLE, 1/2 flared tube | 1 | 1 | 1 | 1 |
| 20 | | AN844-10D | ELBOW, Pipe | 1 | 1 | | |
| 21 | | 62732 | CAP, Tachometer drive | 1 | 1 | 1 | 1 |
| * One of the oil filter adapter gaskets P/N 06B23862 is shipped loose with the engine. | | | | | | | |

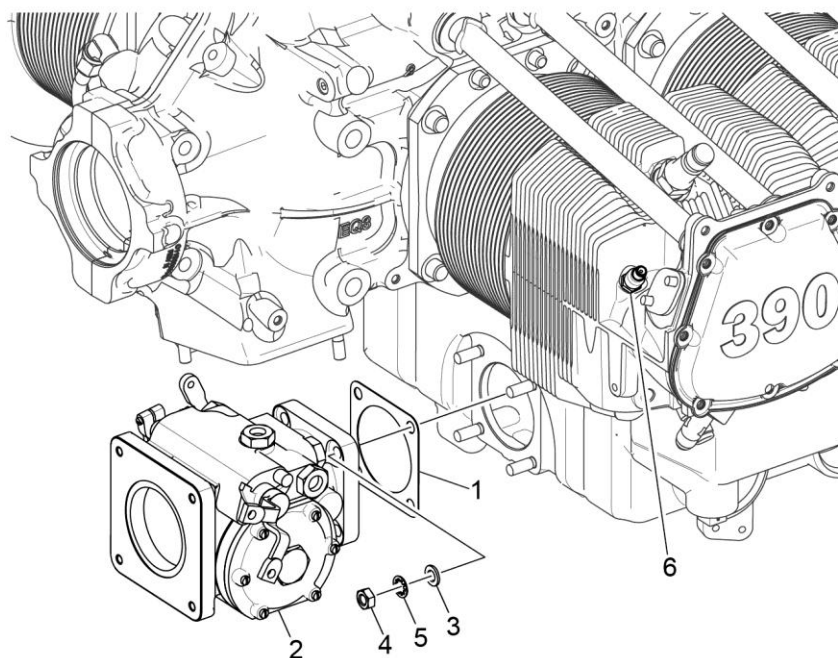
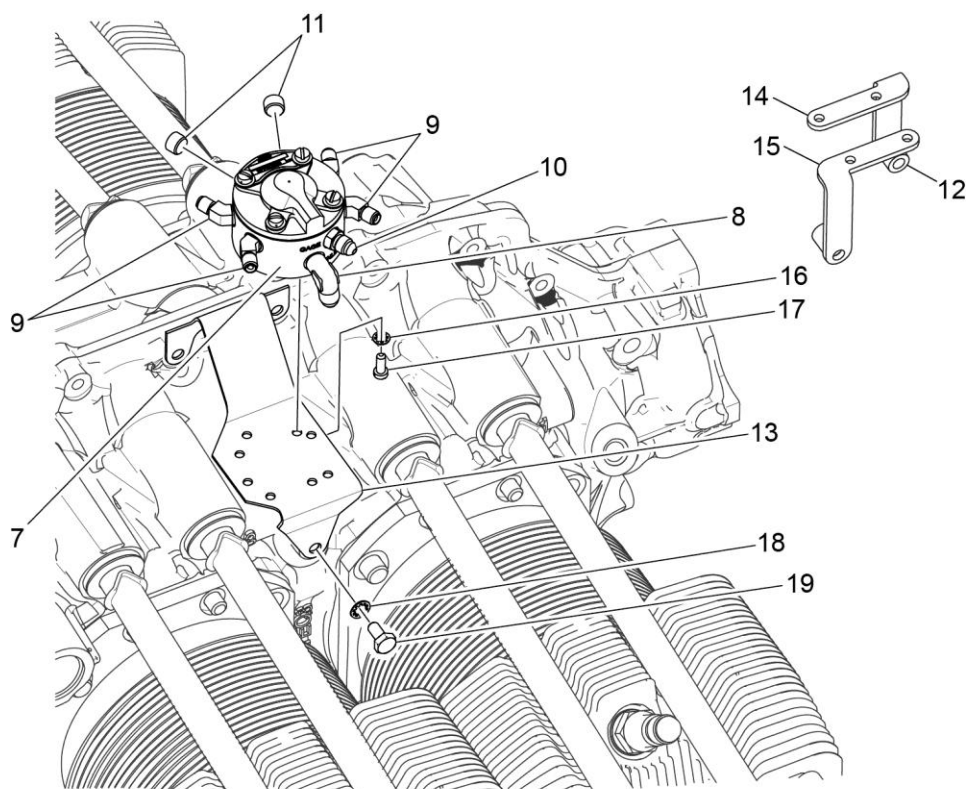


Figure 23
Fuel Injector, Fuel Manifold Assembly, and Brackets

Figure 23 – Fuel Injector, Fuel Manifold Assembly, and Brackets

| Figure Item | Code | Part Number | Description | Units per Assembly | | | |
|---|------|-------------|---|--------------------|------------------|------------------|------------------|
| | | | | A 1 A 6 | A 3 A 6 | A 1 B 6 | A 3 B 6 |
| 1 | | 66224 | GASKET, Carburetor | 1 | 1 | 1 | 1 |
| 2 | | LW-11848 | FUEL INJECTOR, 2524550-8 | | | 1 | |
| | | 61J26426 | FUEL INJECTOR, RSA-5AD1, AV 2524054-11 | 1 | 1 | 1 | 1 |
| | | 61J28175 | FUEL INJECTOR, RSA-5AD1, AV2581000 | | | | 1 |
| 3 | | STD-35 | WASHER, 5/16 plain | 4 | 4 | 4 | 4 |
| 4 | | STD-1410 | NUT, 5/16-18 plain | 4 | 4 | 4 | 4 |
| 5 | | STD-475 | WASHER, 5/16 lock, internal teeth | 4 | 4 | 4 | 4 |
| 6 | | 63C26450 | NOZZLE, Injection, low, AV2524864-2 | 4 | 4 | 4 | 4 |
| 7 | | LW-18476 | MANIFOLD ASSEMBLY, Fuel | | 1 | | |
| | | 75279 | MANIFOLD ASSEMBLY, Fuel | 1 | | 1 | 1 |
| | | 63B26702 | MANIFOLD ASSEMBLY | 1 | | 1 | 1 |
| | | 63B26724 | MANIFOLD ASSEMBLY, Fuel | | 1 | | |
| | | 63B28207 | MANIFOLD ASSEMBLY, Fuel (4 PSI) | | | | 1 |
| 8 | | MS20822-4 | ELBOW, 1/8 NPT to 1/4 tube, 90° | 1 | 1 | 1 | 1 |
| 9 | | AN791-2 | ELBOW, Union 45°, 1/8 tube | 4 | 4 | 4 | 4 |
| 10 | | 02G21382 | NIPPLE, Nozzle pressure gauge | 1 | | 1 | 1 |
| | | STD-148 | NIPPLE, Union, 1/8 NPT | | | | 4 |
| | | AN816-4 | NIPPLE, 1/8 NPT to 1/4 tube | | | | 1 |
| 11 | | 1102 | PLUG, 1/8 pipe | 2 | 3 | 2 | 2 or 3 |
| 12 | | 73966 | SPACER, Fuel manifold bracket | | | | 2 |
| 13 | | 75009 | BRACKET, Fuel manifold | 1 | 1 | 1 | 1 |
| 14 | | 07A22995 | BRACKET, Fuel manifold | | | | 1 |
| 15 | | 07A22996 | BRACKET, Fuel manifold | | | | 1 |
| 16 | | STD-251 | WASHER, No. 10, internal lock | 4 | 4 | 4 | 4 |
| 17 | | STD-82 | SCREW, No. 10-24 x 1/2 long, fill. head | 4 | 4 | 4 | 4 |
| 18 | | STD-160 | WASHER, 1/4 lock, internal teeth | 1 | 1 | 1 | 1 |
| 19 | | LW-25-0.50 | BOLT, 1/4-20 x 1/2 long, hex. head | 1 | 1 | 1 | 1 |
| | * | 77504 | GASKET, Fuel injector | | | | 1 |
| * Install gasket P/N 77504 between the fuel injector and the airframe air box | | | | | | | |

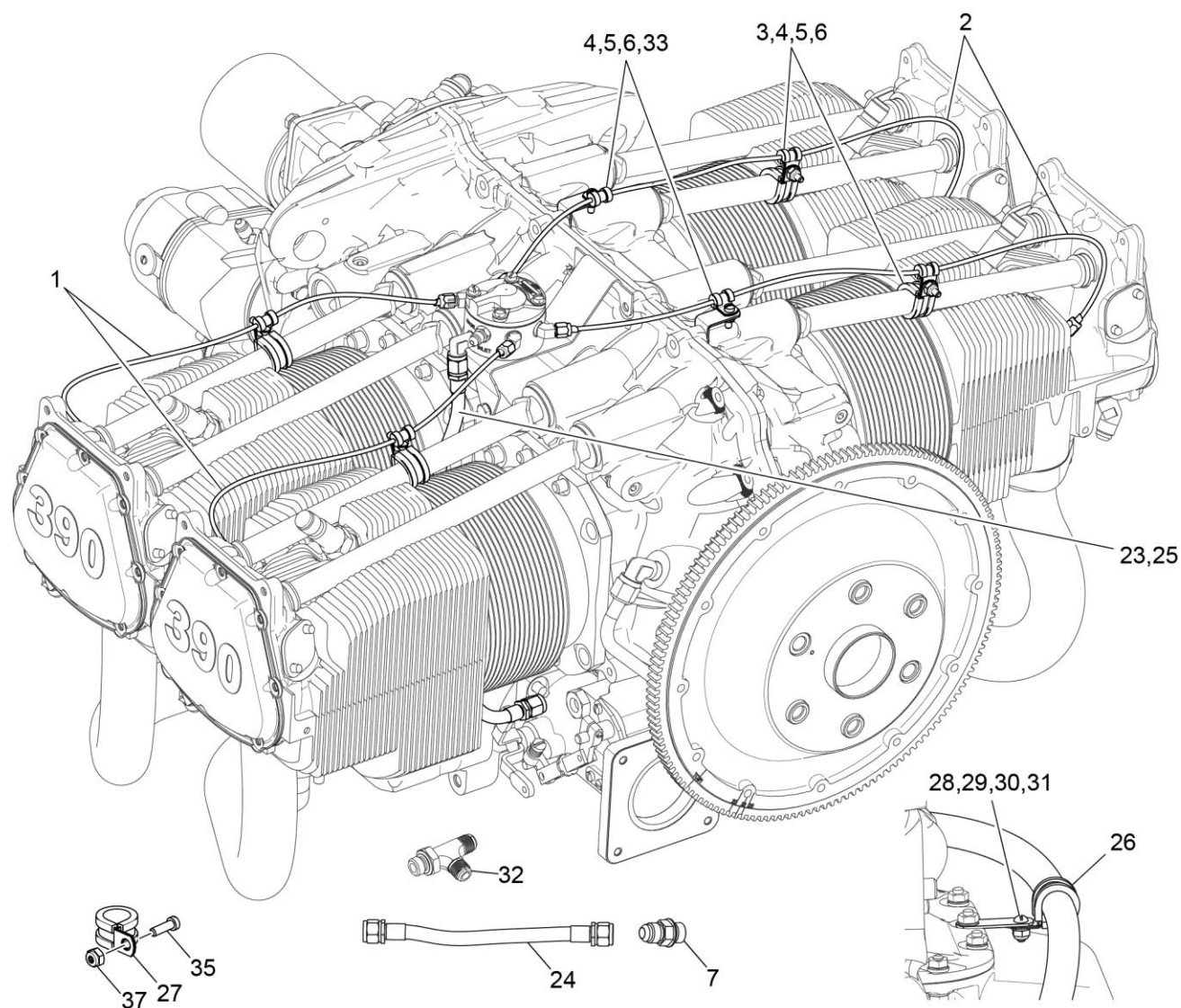


Figure 24A
Fuel Lines, Fuel Hoses, and Attaching Parts

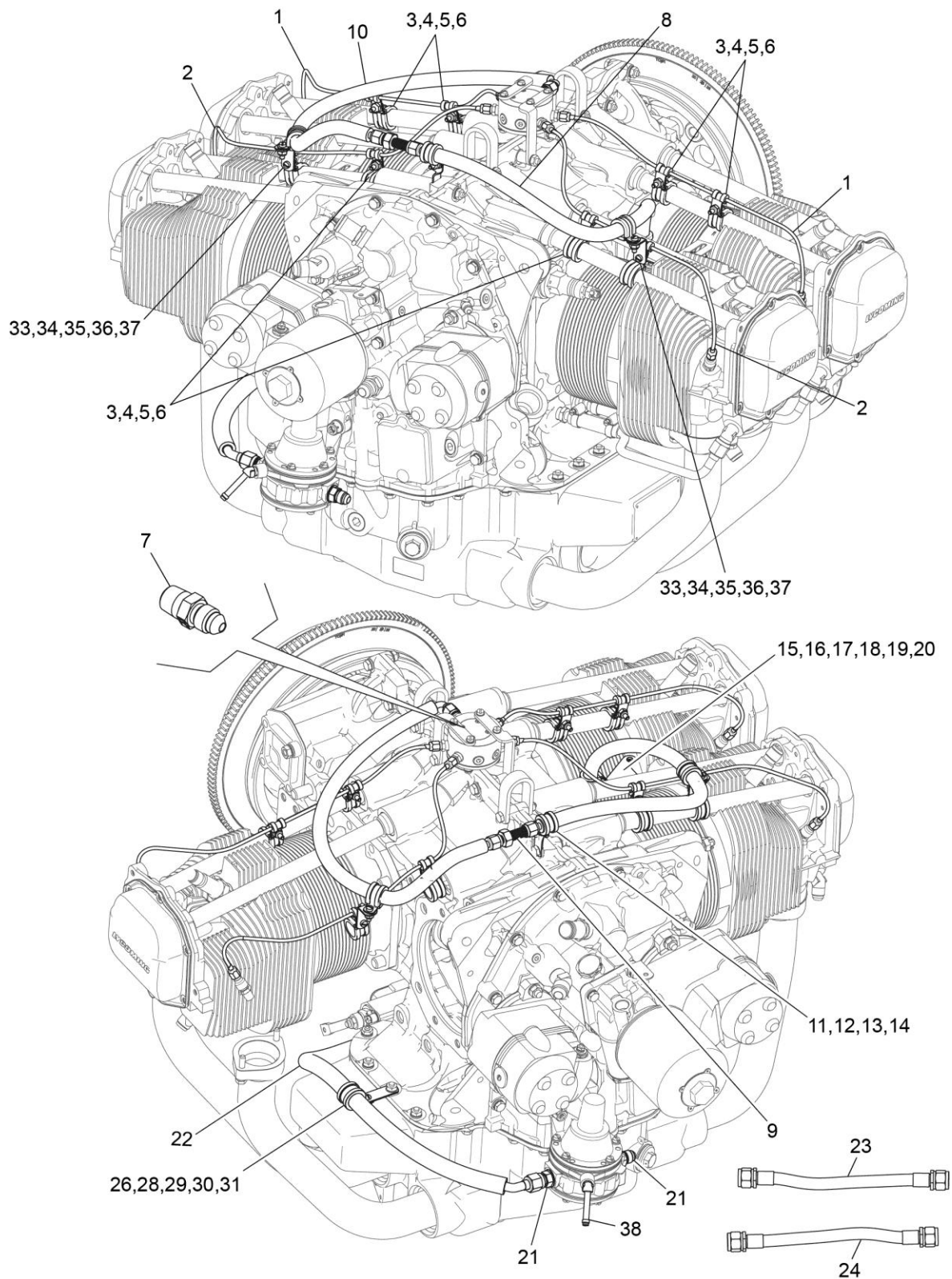


Figure 24B
Fuel Lines, Fuel Hoses, and Attaching Parts

Figure 24 – Fuel Lines, Fuel Hoses, and Attaching Parts

| Figure Item | Code | Part Number | Description | Units per Assembly | | | |
|-------------|------|----------------|--|--------------------|------------------|------------------|------------------|
| | | | | A 1 A 6 | A 3 A 6 | A 1 B 6 | A 3 B 6 |
| 1 | | LW-12098-0-170 | TUBE ASSEMBLY, Fuel | | | | 2 |
| | | LW-12098-0-140 | TUBE ASSEMBLY, Fuel | 2 | 2 | 2 | 2 |
| 2 | | LW-12098-0-190 | TUBE ASSEMBLY, Fuel injector line | | | | 2 |
| | | LW-12098-0-210 | TUBE ASSEMBLY, Fuel injector line | 2 | 2 | 2 | 2 |
| 3 | | LW-16266-10-75 | CLAMP | 4 | 4 | 4 | 4 or 8 |
| 4 | | LW-16266-10-13 | CLAMP, 1/8 diameter for No.10 screw | 6 | 6 | 6 | 6 or 8 |
| 5 | | STD-860 | SCREW, No. 10-32 x 5/8 long, fill. head | 6 | 6 | 6 | 6 or 8 |
| 6 | | STD-670 | LOCK NUT, No. 10-32 | 6 | 6 | 6 | 6 or 8 |
| 7 | | LW-16562 | NIPPLE, 3/8 flared tube, 9/16-18 | 1 | 1 | 1 | 1 |
| 8 | | 02M28209 | HOSE ASSEMBLY, Teflon 1/4 hose, straight | | | | 1 |
| 9 | | AN815-4 | UNION, 1/4 flared tube | | | | 1 |
| 10 | | 02M28210 | HOSE ASSEMBLY, Teflon 1/4 hose, 90° | | | | 1 |
| 11 | | 72815 | BRACKET, Support clamp, 90° | | | | 1 |
| 12 | | STD-860 | SCREW, No. 10-32 x 5/8 long, fill. head | | | | 1 |
| 13 | | STD-670 | LOCK NUT, No. 10-32 | | | | 1 |
| 14 | | LW-16266-10-63 | CLAMP, 5/8 I.D. x No. 10 screw | | | | 1 |
| 15 | | 74278 | BRACKET ASSEMBLY, Fuel line support | | | | 1 |
| 16 | | STD-670 | LOCK NUT, 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-16266-25-50 | CLAMP | | | | 1 |
| 21 | | LW-16562 | NIPPLE, 3/8 flared tube, 9/16-18 | | | | 2 |

(continued on next page)

Figure 24 – Fuel Lines, Fuel Hoses, and Attaching Parts (Cont.)

| Figure Item | Code | Part Number | Description | Units per Assembly | | | |
|-------------|------|----------------|---|--------------------|------------------|------------------|------------------|
| | | | | A 1 A 6 | A 3 A 6 | A 1 B 6 | A 3 B 6 |
| 22 | | 02M28208 | HOSE ASSEMBLY, Teflon 3/8 hose, 45° | | | | 1 |
| 23 | | LW-12799-6S254 | HOSE ASSEMBLY, 3/8 hose, straight | 1 | 1 | 1 | 1 |
| 24 | | LW-12798-4S172 | HOSE ASSEMBLY, 1/4 hose, straight | 1 | 1 | 1 | 1 |
| 25 | | LW-12799-6S254 | HOSE ASSEMBLY, 3/8 hose, straight | | | 1 | |
| 26 | | LW-16266-10-75 | CLAMP | 1 | 1 | 1 | 1 |
| 27 | | LW-16266-25-75 | CLAMP, 3/4 I.D. x 1/4 dia. screw | | | 1 | |
| 28 | | 73152 | BRACKET, Support clamp | 1 | 1 | 1 | 1 |
| 29 | | STD-692 | SCREW, No. 10-32 x 1/2 long, round head | 1 | 1 | 1 | 1 |
| 30 | | STD-425 | WASHER, No. 10 plain | 1 | 1 | 1 | 1 |
| 31 | | STD-670 | LOCK NUT, No. 10-32 | 1 | 1 | 1 | 1 |
| 32 | | 76355 | TEE, 3/8 tube with 9/16 thread | | | 1 | |
| 33 | | 73136 | BRACKET, Extension, fuel injector | 2 | 2 | 2 | 2 |
| 34 | | LW-16266-10-63 | CLAMP, 5/8 I.D. x No. 10 screw | | | | 2 |
| 35 | | STD-860 | SCREW, No. 10-32 x 5/8 long, fill. head | | | 1 | 2 |
| 36 | | STD-425 | WASHER, No. 10 plain | | | | 2 |
| 37 | | STD-670 | LOCK NUT, No. 10-32 | | | 1 | 2 |
| 38 | | AN844-4D | ELBOW, Pipe to hose | | | | 1 |

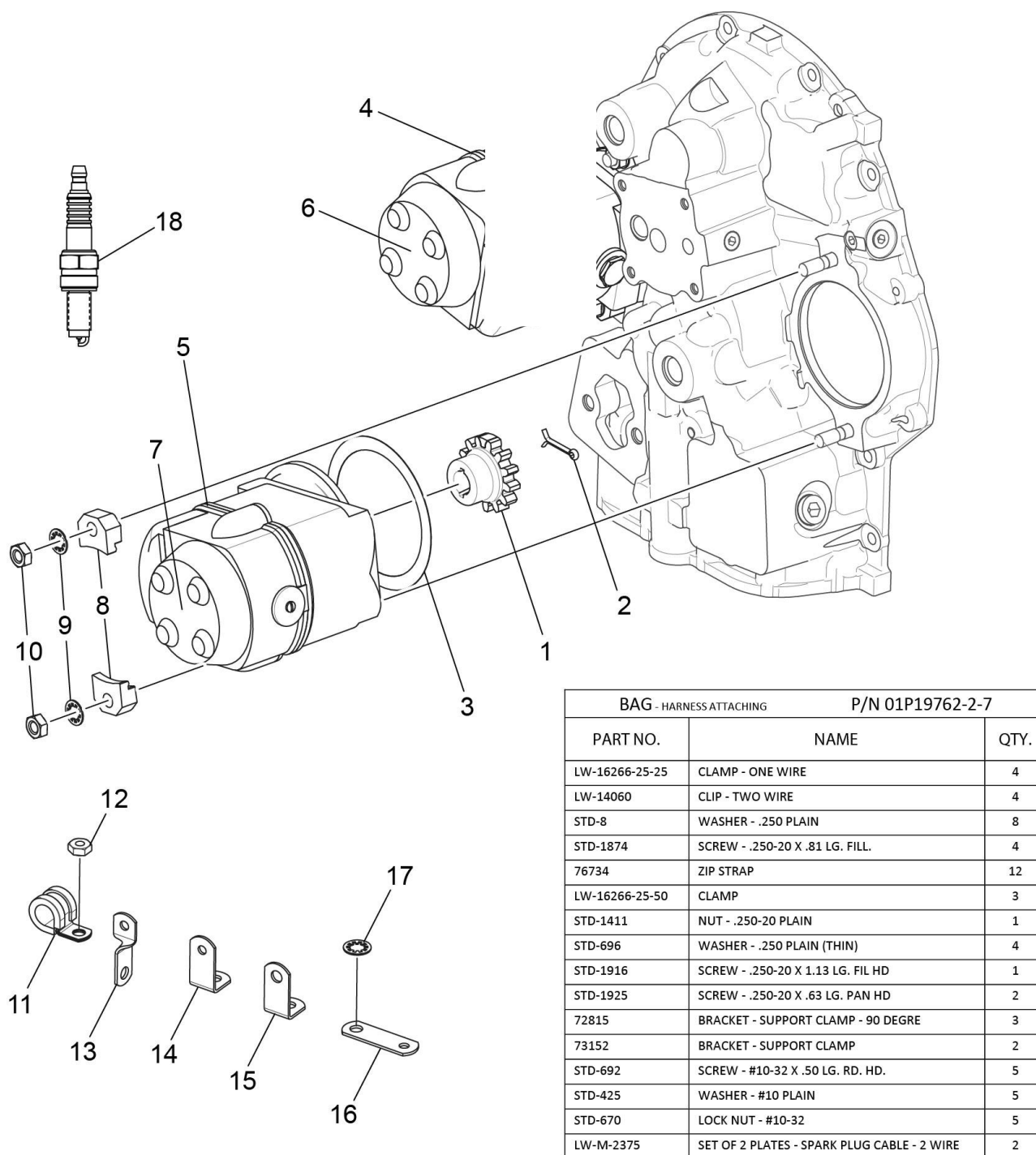


Figure 25
Magnetos, Magneto Drives, Harnesses, and Spark Plugs

Figure 25 – Magnetos, Magneto Drives, Harnesses, and Spark Plugs

| Figure Item | Code | Part Number | Description | Units per Assembly | | | |
|---|------------|----------------|---|--------------------|------------|------------|------------|
| | | | | A 1 A 6 | A 3 A 6 | A 1 B 6 | A 3 B 6 |
| 1 | | 68C19622 | GEAR, Magneto | 2 | 2 | 2 | 2 |
| 2 | | MS9245-44 | COTTER PIN, 3/32 diameter x 5/8 long | 2 | 2 | 2 | 2 |
| 3 | | LW-12681 | GASKET, Magneto | 2 | 2 | 2 | 2 |
| 4 | | 66GP-0SANN | MAGNETO, Plain 4370 | 1 | 1 | 1 | 1 |
| 5 | | 66GR25SANN | MAGNETO, Retard 4347 | 1 | 1 | 1 | 1 |
| 6 | V | 67P20413 | HARNESS ASSEMBLY, Slick, Left, V M4019 | 1 | 1 | 1 | 1 |
| 7 | V | 67P20412 | HARNESS ASSEMBLY, Slick, Right, V M4020 | 1 | 1 | 1 | 1 |
| 8 | | 66M21195 | CLAMP, Magneto | 4 | 4 | 4 | 4 |
| 9 | | STD-475 | WASHER, 5/16 lock, internal teeth | 4 | 4 | 4 | 4 |
| 10 | | STD-1410 | NUT, 5/16-18 plain | 4 | 4 | 4 | 4 |
| 11 | | LW-16266-25-50 | CLAMP | | | | 2 |
| 12 | | STD-1411 | NUT, 1/4-20 plain | | | | 2 |
| 13 | | 72815 | BRACKET, Support clamp, 90° | | | | 5 |
| 14 | | 73136 | BRACKET, Extension, fuel injector line | | | | 3 |
| 15 | | 77410 | BRACKET, 90° | | | | 2 |
| 16 | | 73152 | BRACKET, Support clamp | | | | 4 |
| 17 | | STD-475 | WASHER, 5/16 lock, internal teeth | | | | 4 |
| 18 | V * | 1182-G7 | SPARK PLUG, Champion, REB37E | 8 | 8 | 8 | 8 |
| ** | | 01P19762-2-7 | BAG, Harness attaching | 1 | 1 | 1 | 1 |
| V Vendor Prime Manufacturer part * Refer to the latest revision of Lycoming Service Instruction No. 1042 for a complete listing of all approved spark plugs. ** See Page 58 for a breakdown of individual parts contained in the magneto and harness attaching parts bag. These parts to be attached by customer per engine line drawing included in each bag. | | | | | | | |

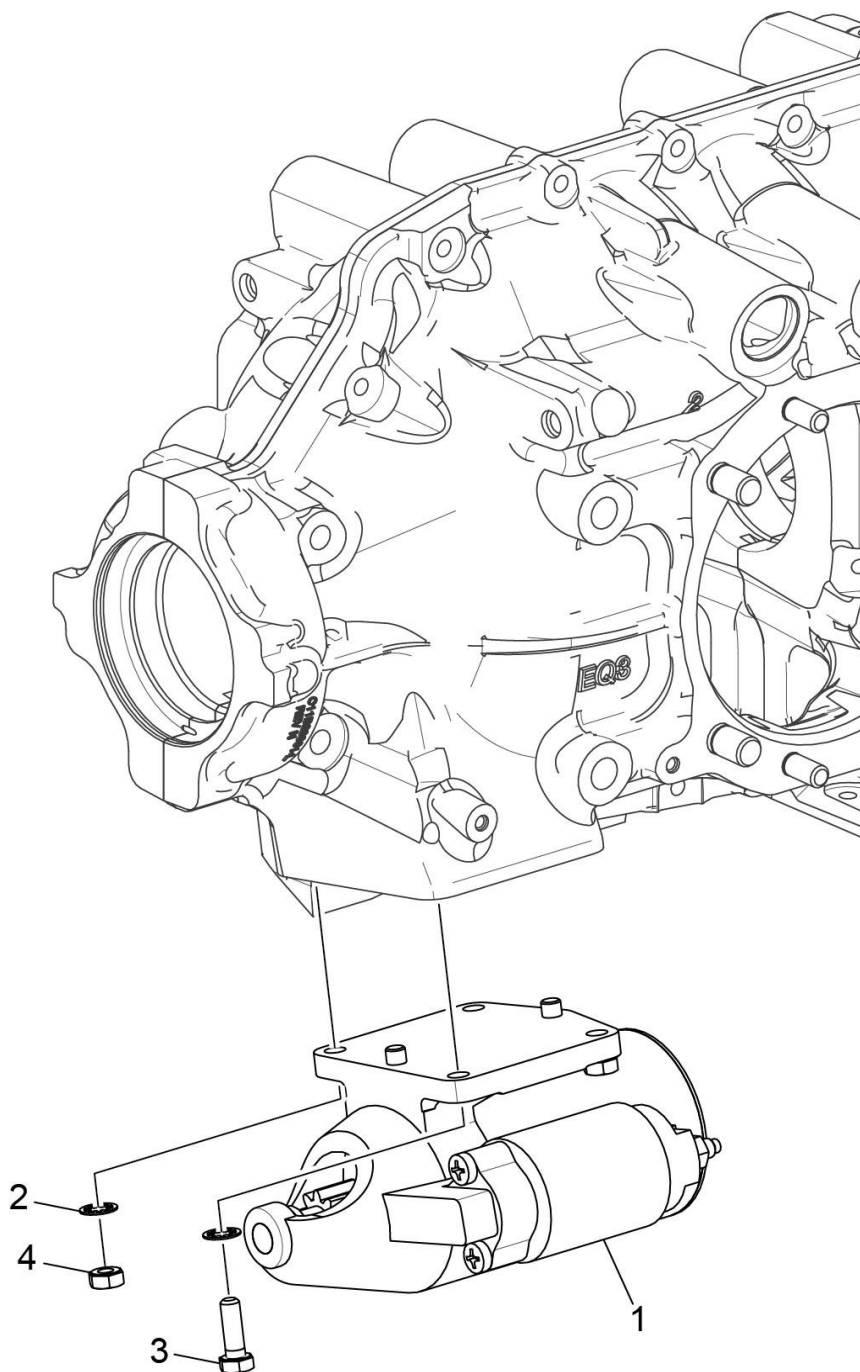


Figure 26
Starter Motor and Attaching Parts

Figure 26 - Starter Motor and Attaching Parts

| Figure Item | Code | Part Number | Description | Units per Assembly | | | |
|--|------|-------------|--|--------------------|------------------|------------------|------------------|
| | | | | A 1 A 6 | A 3 A 6 | A 1 B 6 | A 3 B 6 |
| 1 | | 31B23592 | STARTER, 12/24, 12/14P (149NL Sky-Tec) | 1 | 1 | | |
| | | 31B26554 | STARTER, Sky-Tec (149NL/EC) | | | | 1 |
| | | 31B22105 | STARTER, Sky-Tec (149-24LS) | 1 | | 1 | |
| 2 | | STD-475 | WASHER, 5/16 lock, internal teeth | 4 | 4 | | 4 |
| 3 | | LW-31-0.94 | BOLT, 5/16-18 x 15/16 long, hex.head | 1 | 1 | | 1 |
| 4 | | STD-1410 | NUT, 5/16-18 plain | 3 | 3 | | 3 |
| NOTICE: Refer to the latest revision of Service Instruction No. 1154 for complete listing of FAA-approved starters, alternators, generators, regulators and relays. | | | | | | | |

Service Kit Section**Seal and Gasket Set**

| Part No. | Part Name | Qty. |
|---------------|--|------|
| 05K28420 | KIT - SEAL AND GASKET SET | 1 |
| AN901-8A | GASKET, Metal tube connect seal | 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-14995 | SPRING, Shroud tube | 4 |
| LW-18639 | LOCKPLATE, Crankshaft gear | 1 |
| STD-475 | WASHER, 5/16 lock, internal teeth | 24 |
| STD-713 | COTTER PIN, 3/32 diameter x 3/4 long | 2 |
| 06A23493 | SEAL, Shroud tube | 8 |
| 06B26669-Y | GASKET, Rocker box cover | 4 |
| 06E19769-0.63 | GASKET, Annular, 5/8 I.D. | 2 |
| 06E19769-1.00 | GASKET, Annular, 1.00 I.D. | 1 |
| 06E19769-1.25 | GASKET, 1-1/4 I.D. x 1-1/2 O.D. x 3/32 annular | 1 |
| 60096 | GASKET, Fuel pump | 1 |
| 66224 | GASKET, Carburetor | 2 |
| 70310 | SEAL, Shroud tube | 8 |
| 70455 | GASKET, 25/32 I.D. x 1-1/8 O.D. x 1/32 thick | 1 |
| 71481 | RING, Oil seal, 4-27/32 I.D. x 3/32 diameter section | 4 |
| 71973 | GASKET, 2 bolt flange, 1-3/4 I.D. | 4 |
| 72053 | GASKET, Governor | 2 |
| 72059 | GASKET, Oil level gage | 1 |
| 72075 | SEAL, Oil, 3/32 section x 7/16 I.D. | 6 |
| 72091 | RING, Oil seal, 0.36 I.D. x 0.10 diameter | 2 |
| 72220 | GASKET, Oil level gage | 1 |
| 73818 | GASKET, Accessory housing | 1 |
| 74065 | RING, Oil level gage seal | 1 |
| 77504 | GASKET, Fuel injector | 1 |
| 77611 | GASKET, Exhaust flange | 4 |
| 77569 | RING, Seal, intake pipe | 4 |
| MS16625-1125 | RING, Internal retaining, 1-1/4 diameter | 2 |
| MS9245-44 | PIN, 3/32 diameter x 5/8 long, cotter style D | 2 |

Cylinder, Piston and Ring Assembly

| Part No. | Part Name | Qty. |
|-----------------|--|-------------|
| 05K21745 | KIT - CYLINDER, PISTON AND RING ASSEMBLY | 1 |
| 16G23262-06 | CYLINDER HEAD AND VALVE ASSEMBLY | 1 |
| 1102 | PLUG, 1/8 pipe | 2 |
| 71481 | RING, Oil seal, 3/32 diameter x 4-27/32 I.D. | 1 |
| 14D23912 | PISTON, Compression ratio 8.50:1 | 1 |
| 74241 | RING, Piston, compression, 5-1/8 bore | 2 |
| 14H21950 | RING, Piston, oil, 5-1/8 bore | 1 |
| LW-14078 | PIN, Piston | 1 |
| 72198 | PLUG, Piston pin | 2 |
| 06B26669 | GASKET, Rocker box cover | 1 |
| LW-12272 | LOCKPLATE, Shroud tube | 1 |
| 71195 | Container | 1 |
| LW-18661 | SEAL, Shroud tube | 2 |
| 70310 | SEAL, Shroud tube | 2 |
| SSP-299 | TAG, Use of piston pin plugs | 1 |
| 77611 | GASKET, Exhaust flange | 1 |
| 71973 | GASKET, 2 bolt flange, 1-13/16 I.D. | 1 |
| 06A23493 | SEAL, Shroud tube | 2 |

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Numerical Index

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