

# **IO-360-L2A**

## **Illustrated Parts Catalog**

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**June 2025**

**PC-IO-360-L2A (Supersedes PC-406-L2A)**

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652 Oliver Street  
Williamsport, PA 17701

## **IO-360-L2A Illustrated Parts Catalog**

Lycoming Part Number: PC-IO-360-L2A (Supersedes PC-406-L2A)

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## **Record of Revisions**

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

| Rev No. | Revision Changes                                         | Issue Date |
|---------|----------------------------------------------------------|------------|
| New     | Initial Release of PC-IO-360-L2A (Supersedes PC-406-L2A) | 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 OVERHAUL MANUAL.

### **Purpose of this Catalog**

This Illustrated Parts Catalog contains a complete list of spare parts for the Lycoming IO-360-L2A Certified Series wide cylinder flange model engines.

### **How to Use this Catalog**

This catalog is based on the Air Transport Association (ATA) Spec100 format.

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 100 format designates chapters by the numeric code. In the example below, Chapter 74 is for Ignition with a subsection 20 for Distribution.

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

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

### **Numerical Index**

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

### **Description column**

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

### **Units per Assembly Column**

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

## Roller Tappets

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

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

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

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

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

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

## Vendor Accessories

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

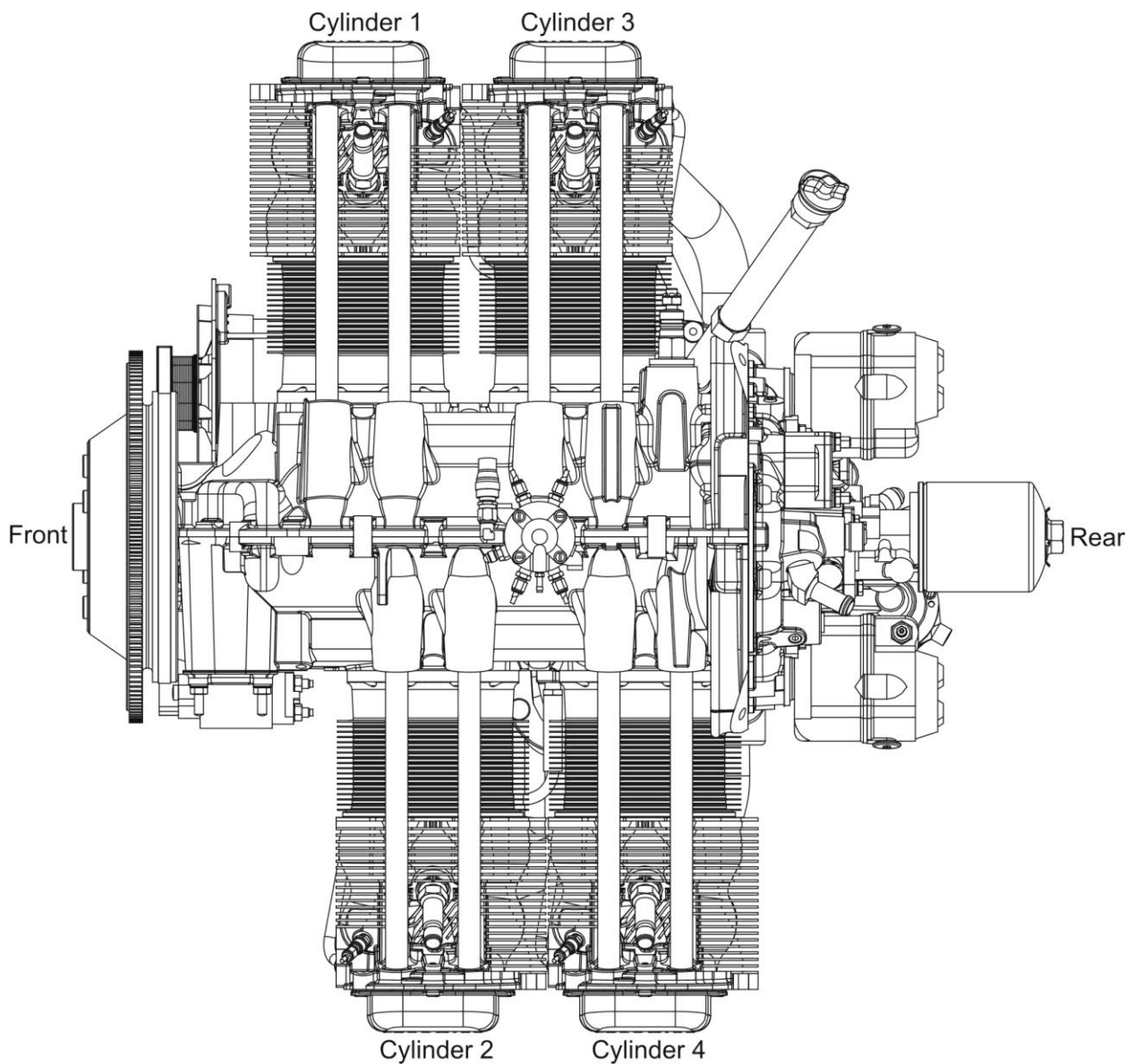
Any reference in this document to the supplier's/part manufacturer's product, by name, trademark, part number or other description is solely for the purpose of identification and does not indicate or infer that Lycoming accepts responsibility for quality control and/or airworthiness of parts, which do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

## Environmental Compliance

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

### Perspective of References

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



**Top View of Engine**

**How to Order Parts and Publications**

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

To order parts:

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

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

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

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

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**Abbreviations and Acronyms**

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

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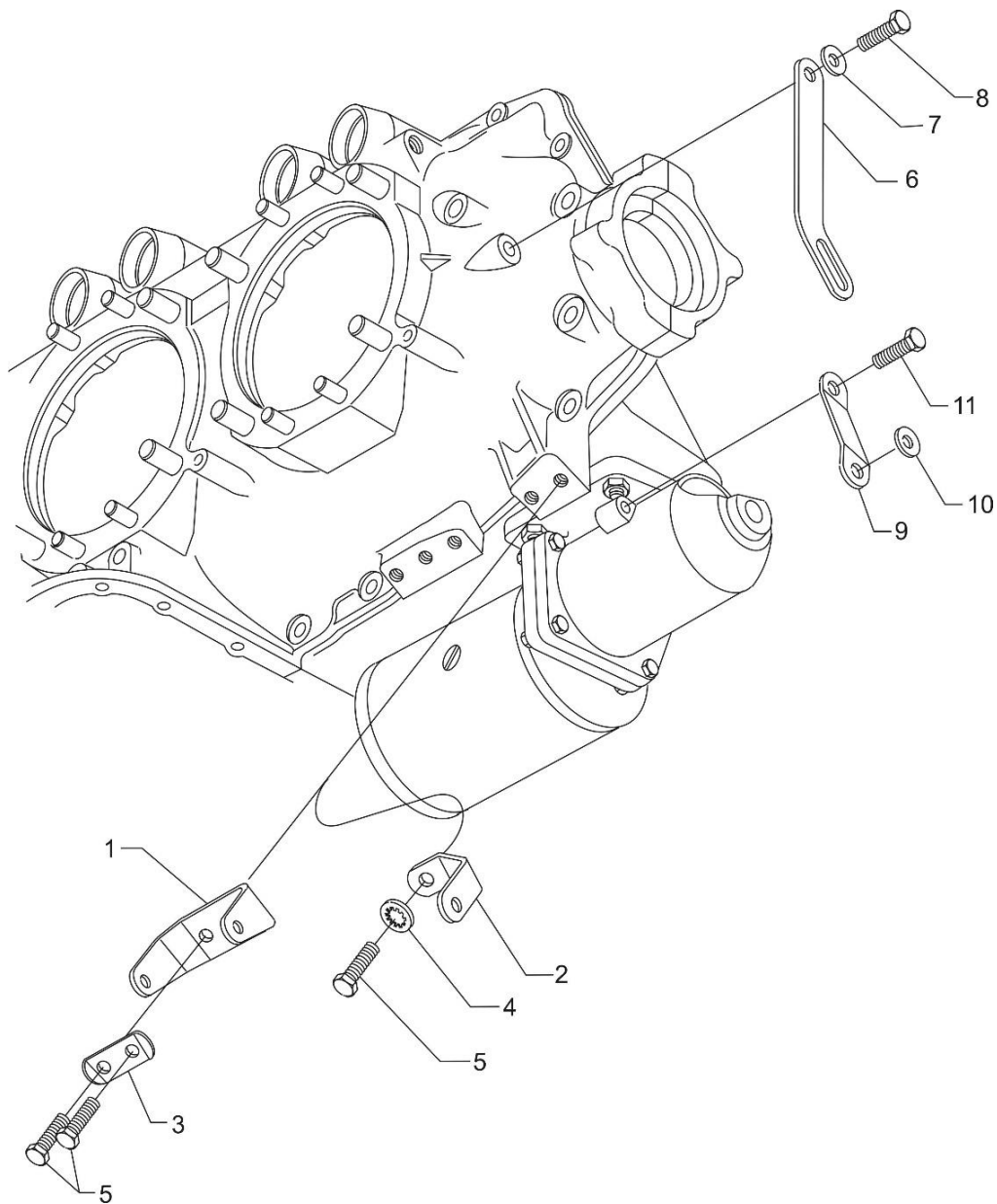
## OVERSIZE AND UNDERSIZE PARTS LISTING

| Part No.  | Description | Oversize (in.) |             |             |             |             |             |             |             | Undersize (in.) |             |
|-----------|-------------|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------|-------------|
|           |             | P02<br>.002    | P05<br>.005 | P10<br>.010 | P15<br>.015 | P20<br>.020 | P30<br>.030 | P40<br>.040 | P50<br>.050 | M03<br>.003     | M06<br>.006 |
| 18D26098  | BEARING     |                |             |             |             |             |             |             |             | X               | X           |
| 18A26093  | BEARING     |                |             |             |             |             |             |             |             | X               | X           |
| 18M26105  | BEARING     |                |             |             |             |             |             |             |             | X               | X           |
| LW-13792  | SEAL        |                |             |             |             |             |             |             | X           |                 |             |
| 72155-S   | BUSHING     |                | X           | X           | X           | X           |             |             |             |                 |             |
| 75656-S   | BUSHING     |                | X           | X           | X           | X           |             |             |             |                 |             |
| 75657-S   | BUSHING     |                | X           | X           | X           | X           |             |             |             |                 |             |
| STD-1065  | DOWEL       | X              | X           | X           | X           |             |             |             |             |                 |             |
| 74241     | RING        |                |             | X           |             |             |             |             |             |                 |             |
| 14H29884  | RING        |                |             | X           |             | X           |             |             |             |                 |             |
| 72057     | SEAT        |                | X           | X           |             | X           | X           |             |             |                 |             |
| 72058     | SEAT        |                | X           | X           |             | X           | X           |             |             |                 |             |
| 61681*    | GUIDE       |                | X           | X           |             | X           | X           | X           |             |                 |             |
| 16R22291* | GUIDE       |                | X           | X           |             | X           | X           | X           |             |                 |             |
| 66610     | BUSHING     |                | X           | X           |             |             |             |             |             |                 |             |

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

### NOTE

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

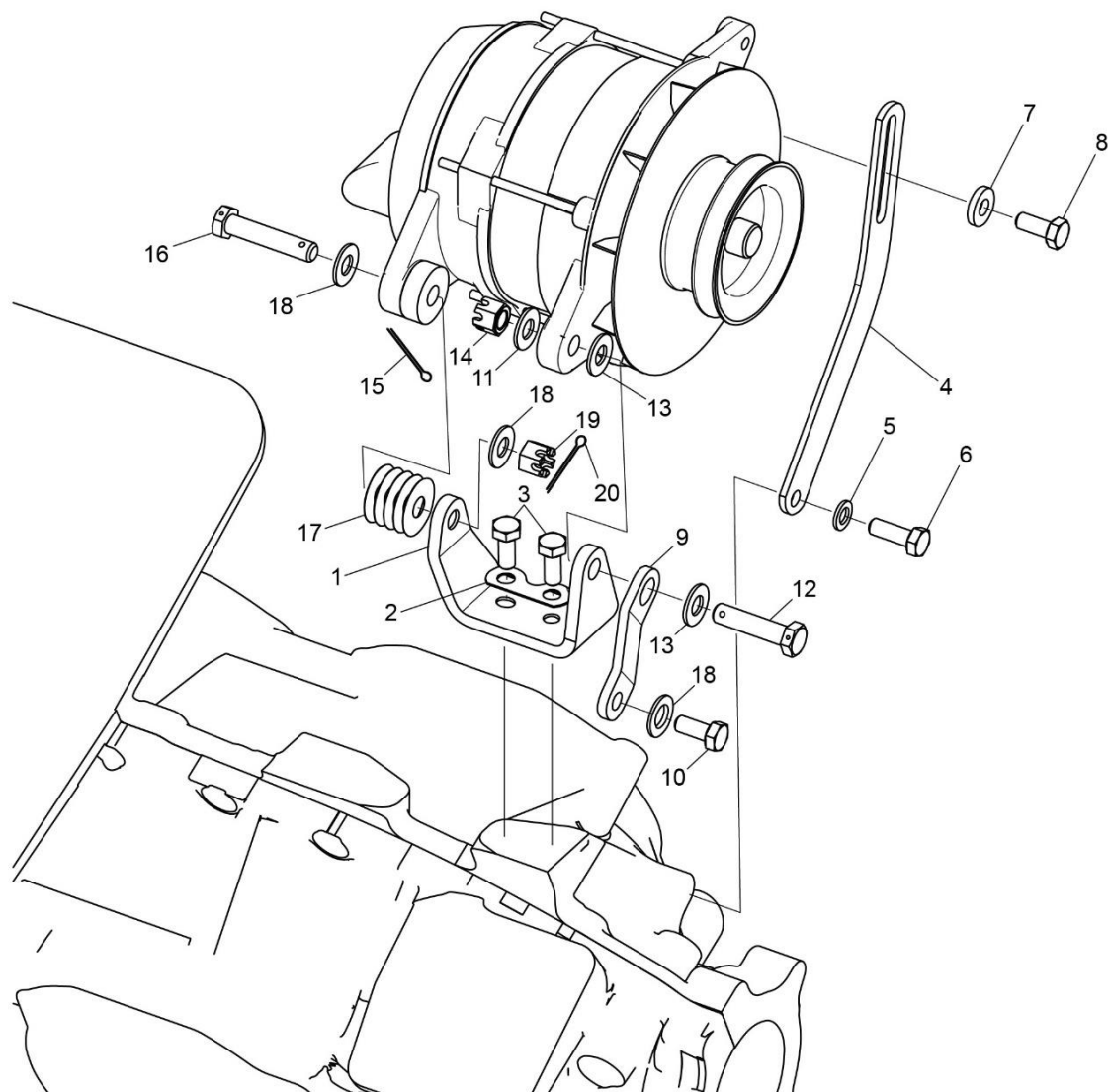


**Figure 1**  
**Alternator Mounting and Attaching Parts**

## DC Generation

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

| Figure Item                                                                                                 | Code | Part Number | Description                                     | Units per Assembly |
|-------------------------------------------------------------------------------------------------------------|------|-------------|-------------------------------------------------|--------------------|
| 1                                                                                                           |      | 07A21443    | BRACKET, Alternator                             | 1                  |
| 2                                                                                                           |      | LW-13365    | BRACE, Alternator bracket                       | 1                  |
| 3                                                                                                           |      | 73383       | LOCKPLATE, 5/16 bolt x 1.00                     | 1                  |
| 4                                                                                                           |      | STD-475     | WASHER, 5/16 lock, internal teeth               | 1                  |
| 5                                                                                                           |      | LW-31-0.94  | BOLT, 5/16-18 x 15/16 long, hex. head           | 3                  |
| 6                                                                                                           |      | 07F29604    | LINK, Alternator adjusting                      | 1                  |
| 7                                                                                                           |      | STD-35      | WASHER, 5/16 plain                              | 1                  |
| 8                                                                                                           |      | LW-31H0.88  | BOLT, 5/16-18 x 7/8 long, hex. head, drilled    | 1                  |
| 9                                                                                                           |      | 76908       | STRUT, Alternator support                       | 1                  |
| 10                                                                                                          | *    | STD-2197    | WASHER, 5/16 I.D. x 13/16 O.D. x 1/16           | 1                  |
| 11                                                                                                          |      | LW-31H1.06  | BOLT, 5/16-18 x 1-1/16 long, hex. head, drilled | 1                  |
| * Shim 76908 strut with STD-2197 washer.<br><b>NOTE:</b> Alternator is not supplied for this configuration. |      |             |                                                 |                    |

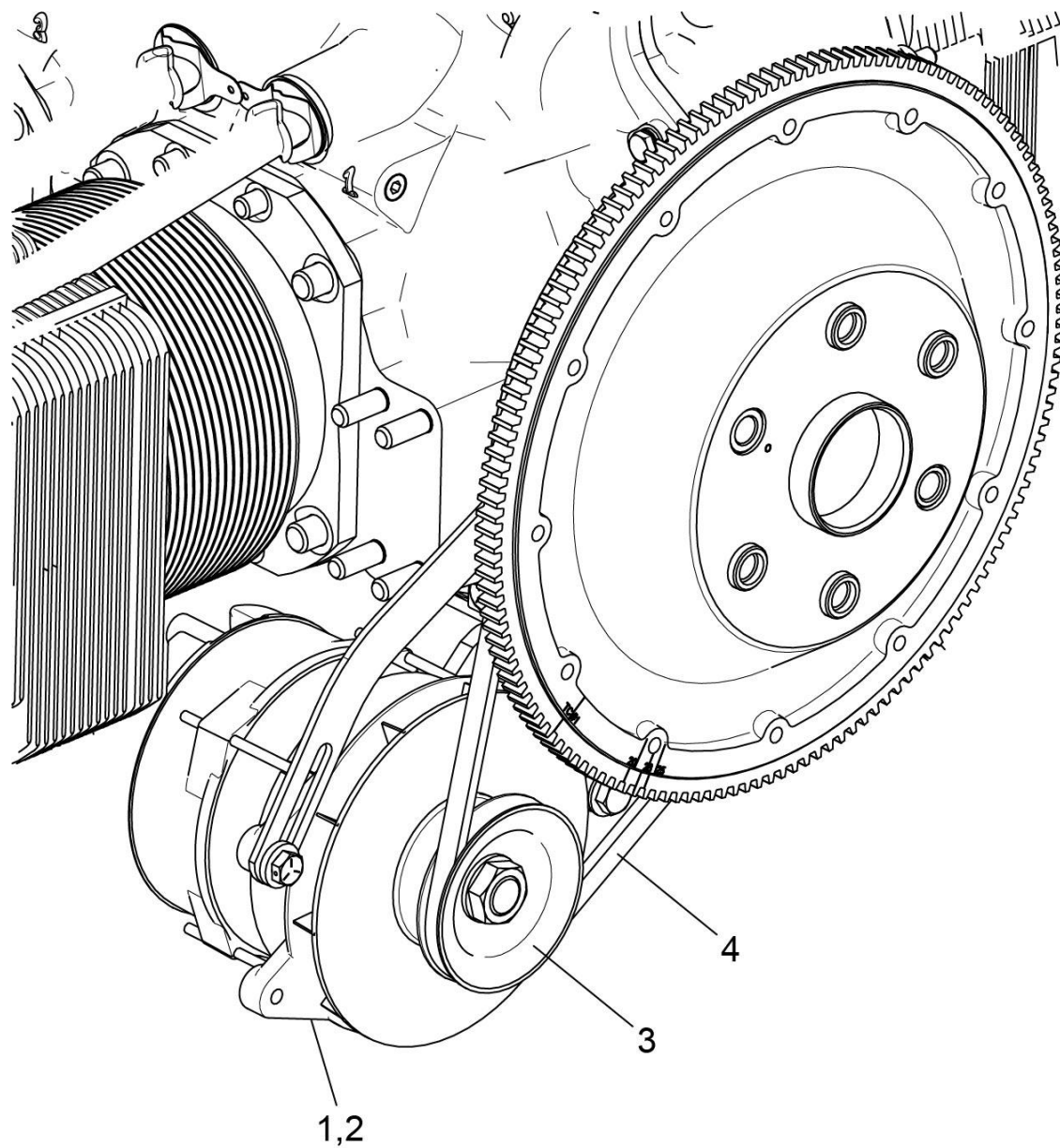


**Figure 2**  
**Alternator Mounting and Attaching Parts**

## DC Generation

**FIGURE 2 – ALTERNATOR MOUNTING AND ATTACHING PARTS**

| Figure Item                                                     | Code | Part Number | Description                                         | Units per Assembly |
|-----------------------------------------------------------------|------|-------------|-----------------------------------------------------|--------------------|
| 1                                                               |      | 07A19474    | BRACKET, Alternator                                 | 1                  |
| 2                                                               |      | 73383       | LOCKPLATE, 5/16 bolt x 1.00                         | 1                  |
| 3                                                               |      | LW-31-0.94  | BOLT, 5/16-18 x 15/16 long, hex. head               | 2                  |
| 4                                                               |      | 75380       | LINK, Alternator adjusting                          | 1                  |
| 5                                                               |      | STD-35      | WASHER, 5/16 plain                                  | 1                  |
| 6                                                               |      | LW-31H0.75  | BOLT, 5/16-18 x 3/4 long, hex. head, drilled        | 1                  |
| 7                                                               |      | STD-1727    | WASHER, Plain, 3/4 O.D. x 11/32 I.D. x 1/8          | 1                  |
| 8                                                               |      | LW-31H0.75  | BOLT, 5/16-18 x 3/4 long, hex. head, drilled        | 1                  |
| 9                                                               |      | 07F23268    | STRUT, Alternator support                           | 1                  |
| 10                                                              |      | LW-31H0.75  | BOLT, 5/16-18 x 3/4 long, hex. head, drilled        | 1                  |
| 11                                                              |      | STD-690     | WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick        | 1                  |
| 12                                                              |      | AN6-17      | BOLT, 3/8-24 x 1-15/16 long, hex. head              | 1                  |
| 13                                                              |      | STD-690     | WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick        | AR                 |
| 14                                                              |      | STD-872     | NUT, 3/8-24 slotted                                 | 1                  |
| 15                                                              |      | STD-713     | COTTER PIN, 3/32 diameter x 3/4 long                | 1                  |
| 16                                                              |      | AN6-16      | BOLT, 3/8-24 x 1-53/64 long, hex. head              | 1                  |
| 17                                                              |      | 76534       | SHIM, 1-1/8 O.D. x 13/32 I.D. x .005 thick (max. 5) | AR                 |
| 18                                                              |      | STD-690     | WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick        | AR                 |
| 19                                                              |      | STD-872     | NUT, 3/8-24 slotted                                 | 1                  |
| 20                                                              |      | STD-713     | COTTER PIN, 3/32 diameter x 3/4 long                | 1                  |
| AR as required                                                  |      |             |                                                     |                    |
| <b>NOTE:</b> Alternator is not supplied for this configuration. |      |             |                                                     |                    |

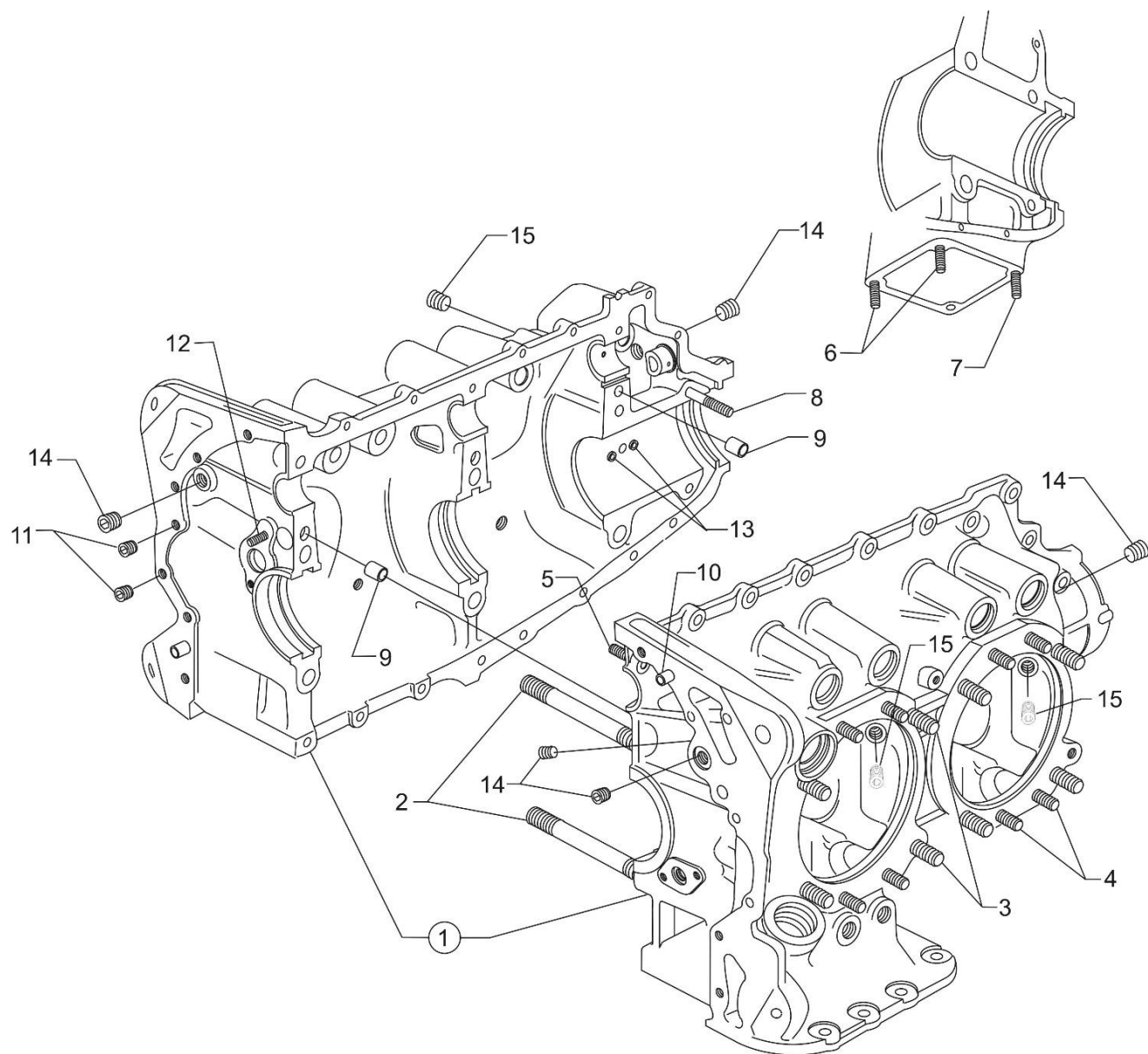


**Figure 3**  
**Alternator Assembly and Belt**

## DC Generation

**FIGURE 3 - ALTERNATOR ASSEMBLY AND BELT**

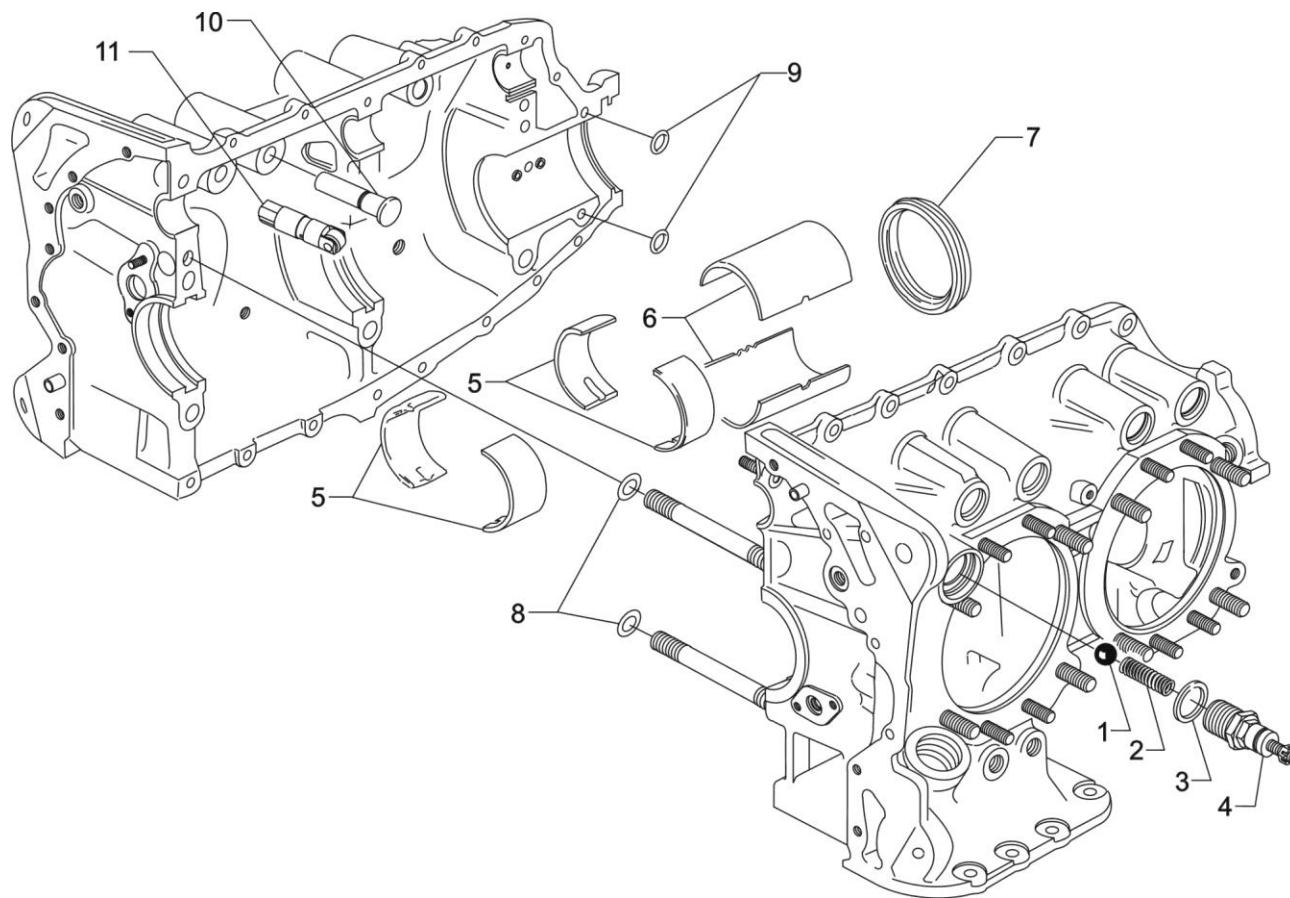
| Figure Item                                                                                                                                                                                                         | Code     | Part Number  | Description                                     | Units per Assembly |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------|-------------------------------------------------|--------------------|
| 1                                                                                                                                                                                                                   |          | 32C19553     | ALTERNATOR ASSEMBLY, 24V.-70 Amp.               | 1                  |
|                                                                                                                                                                                                                     |          | 32B19549     | ALTERNATOR ASSEMBLY, 12V.-70 Amp.               | 1                  |
| 2                                                                                                                                                                                                                   | <b>V</b> | LW-14326     | ALTERNATOR, 24V.-70 Amp.<br><b>V</b> ALU-8521LS | 1                  |
|                                                                                                                                                                                                                     | <b>V</b> | LW-14318     | ALTERNATOR, 12V.-70 Amp.<br><b>V</b> ALX-8521LS | 1                  |
| 3                                                                                                                                                                                                                   |          | 36B19484     | PULLEY, Alternator                              | 1                  |
| 4                                                                                                                                                                                                                   |          | 37A19773-376 | BELT, Alternator drive, 3/8 wide                | 1                  |
| <b>V</b> Vendor Prime Manufacturer part<br><b>NOTE:</b> See latest revision of Lycoming Service Instruction No. 1154 for complete listing of FAA approved starters, generators, alternators, regulators and relays. |          |              |                                                 |                    |



**Figure 3**  
**Crankcase Assembly**

**Power Section**  
**FIGURE 3 – CRANKCASE ASSEMBLY**

| Figure Item                                                                                                | Code | Part Number | Description                                       | Units per Assembly |
|------------------------------------------------------------------------------------------------------------|------|-------------|---------------------------------------------------|--------------------|
| 1                                                                                                          | *    | LW-18402-2  | CRANKCASE ASSEMBLY KIT                            | 1                  |
|                                                                                                            | *    | LW-18402-5  | CRANKCASE ASSEMBLY KIT<br>(Roller tappet engines) | 1                  |
| 2                                                                                                          |      | 75154       | STUD, 1/2-13 x 10-1/32 long                       | 2                  |
| 3                                                                                                          |      | 50-15       | STUD, 1/2-13 x 1-7/8 long                         | 8                  |
| 4                                                                                                          |      | 38-13       | STUD, 3/8-16 x 1-5/8 long                         | 19                 |
| 5                                                                                                          |      | 38D-17      | STUD, 3/8-16 x 2-1/8 long, drilled                | 1                  |
| 6                                                                                                          |      | 31C-12      | STUD, 5/16-18 x 1-1/2 long                        | 2                  |
| 7                                                                                                          |      | 31C-13      | STUD, 5/16-18 x 1-5/8 long                        | 1                  |
| 8                                                                                                          |      | 38-22       | STUD, 3/8-16 x 2-3/4 long                         | 1                  |
| 9                                                                                                          |      | STD-557     | DOWEL, 1/2 dia. x 11/16 long, hollow              | 2                  |
| 10                                                                                                         |      | STD-514     | DOWEL, 5/16 dia. x 1/2 long                       | 2                  |
| 11                                                                                                         |      | STD-1623    | INSERT, 1/4-20 Heli-coil x 3/8 long               | 2                  |
| 12                                                                                                         |      | LW-13793    | STUD, 5/16-18 x 15/16 long, drilled               | 1                  |
| 13                                                                                                         |      | 69796       | DOWEL, Crankshaft bearing                         | 2                  |
| 14                                                                                                         |      | 1102        | PLUG, 1/8-27 NPT, allen head                      | 5                  |
| 15                                                                                                         |      | STD-1339    | PLUG, 1/16-27 NPT, allen head                     | 5                  |
| * Refer to Service Kits Section for applicable Crankcase Assembly and Governor Thru-Stud Kit Part Numbers. |      |             |                                                   |                    |

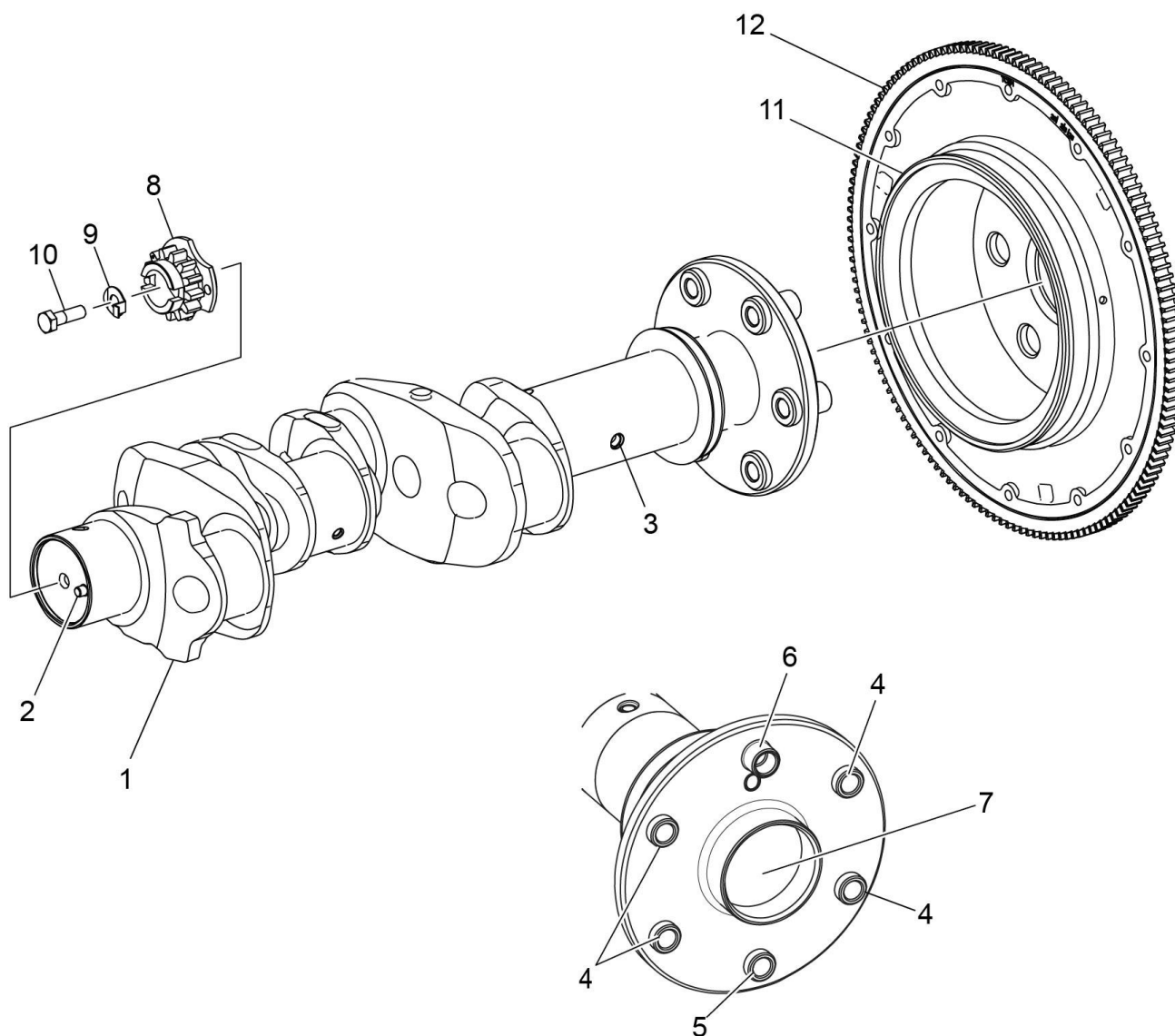


**Figure 4**  
**Crankcase Related Parts**

## Power Section

**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 valve, adjustable            | 1                  |
| 5                                                                                                                                                                                                                                                                                                                                         |      | 18D26098      | BEARING, Crankshaft                                              | 4                  |
| 6                                                                                                                                                                                                                                                                                                                                         |      | 18A26093      | BEARING, Crankshaft                                              | 2                  |
| 7                                                                                                                                                                                                                                                                                                                                         |      | LW-13792      | SEAL, Crankshaft oil                                             | 1                  |
| 8                                                                                                                                                                                                                                                                                                                                         |      | 72075         | SEAL, Oil, 3/32 section x 7/16 I.D.                              | 2                  |
| 9                                                                                                                                                                                                                                                                                                                                         |      | 72091         | RING, Oil seal, 23/64 I.D. x 7/64 diameter                       | 2                  |
| 10                                                                                                                                                                                                                                                                                                                                        | **   | 15B26262      | BODY, Hydraulic tappet ( <b>Flat tappet</b> )                    | 8                  |
| 11                                                                                                                                                                                                                                                                                                                                        | **   | LRT23381      | BODY ASSEMBLY, Hydraulic tappet ( <b>Roller tappet engines</b> ) | 8                  |
| <p>* Select spring to give a minimum of three threads exposed on adjusting screw to allow field adjustment. Reference latest revision of Lycoming Table of Limits SSP-1776, Part I for spring identification.</p> <p>** Refer to the latest revision of Service Instruction No. SI 1011 for tappet details and crankcase requirements</p> |      |               |                                                                  |                    |

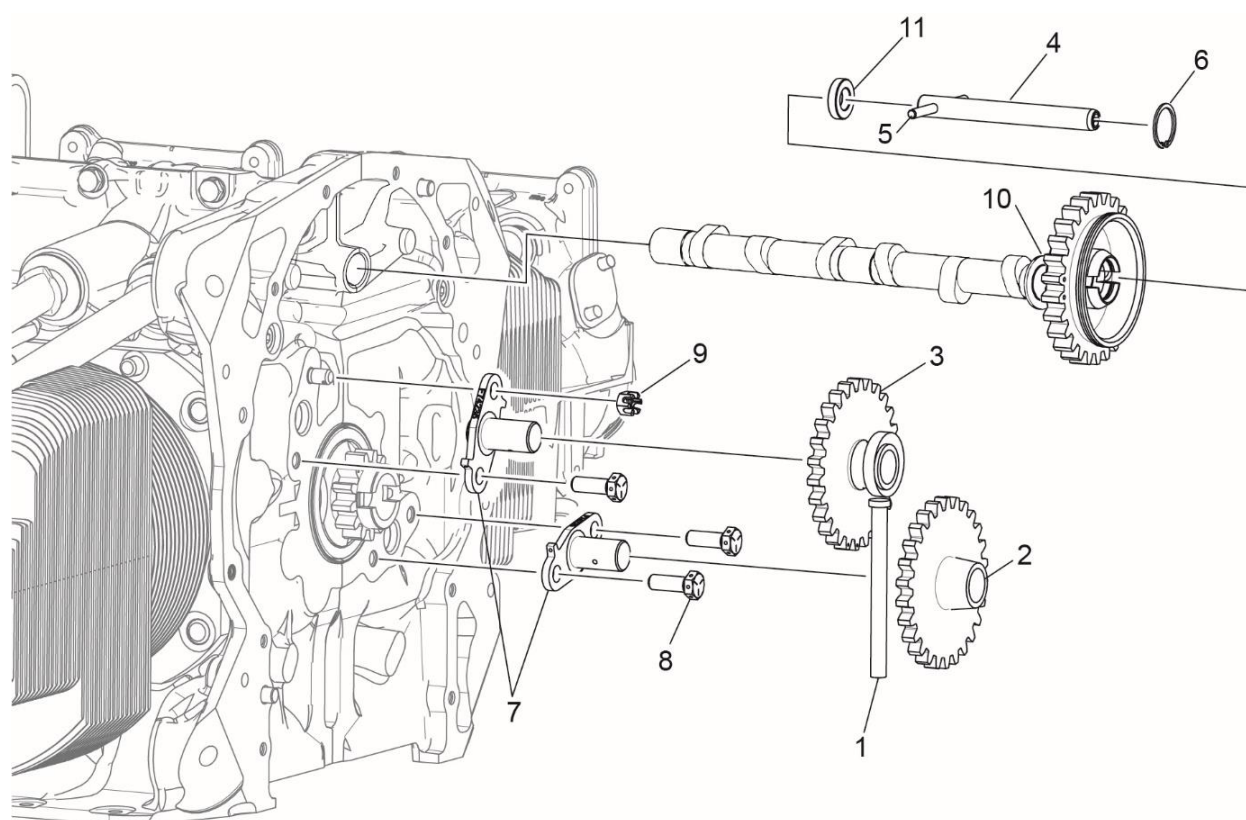


### Figure 5 Crankshaft Assembly and Related Parts

## Power Section

**FIGURE 5 - CRANKSHAFT ASSEMBLY AND RELATED PARTS**

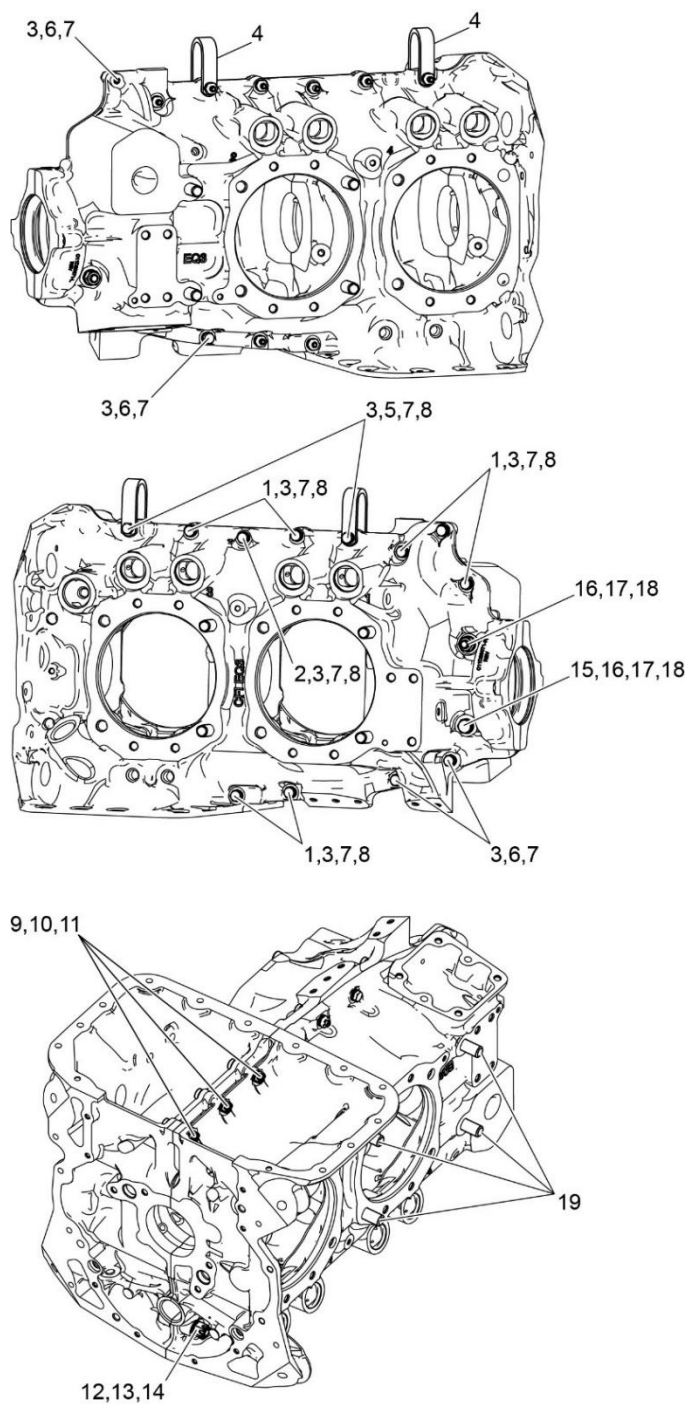
| Figure Item                                                                                                                            | Code       | Part Number | Description                         | Units per Assembly |
|----------------------------------------------------------------------------------------------------------------------------------------|------------|-------------|-------------------------------------|--------------------|
| 1                                                                                                                                      |            | 13B47121    | CRANKSHAFT ASSEMBLY                 | 1                  |
| 2                                                                                                                                      |            | STD-1065    | DOWEL, Stepped, 5/16 & 1/4 diameter | 1                  |
| 3                                                                                                                                      |            | 68484       | TUBE, Crankshaft prop, oil          | 1                  |
| 4                                                                                                                                      |            | 75656-S     | BUSHING, Propeller flange, long     | 4                  |
| 5                                                                                                                                      |            | 72155-S     | BUSHING, Propeller flange, short    | 1                  |
| 6                                                                                                                                      |            | 75657-S     | BUSHING, Propeller flange, indexing | 1                  |
| 7                                                                                                                                      |            | STD-1211    | PLUG, 2.00 diameter expansion       | 1                  |
| 8                                                                                                                                      | <b>SB*</b> | 13S19646    | GEAR, Crankshaft                    | 1                  |
| 9                                                                                                                                      |            | LW-18639    | LOCKPLATE, Crankshaft gear          | 1                  |
| 10                                                                                                                                     |            | STD-2246    | BOLT, 5/16-24 x 1.00 long           | 1                  |
| 11                                                                                                                                     |            | 31M22045    | SUPPORT ASSEMBLY, Starter ring gear | 1                  |
|                                                                                                                                        |            | LW-16471    | SUPPORT ASSEMBLY, Starter ring gear | 1                  |
| 12                                                                                                                                     |            | 72566       | GEAR, Starter ring, 12/14 pitch     | 1                  |
| <b>SB</b> Referencing Service Bulletin<br>* Refer to the latest revision of Lycoming Service Bulletin No. 475 for proper installation. |            |             |                                     |                    |



**Figure 6**  
**Crankshaft Idler Gears, Tachometer Drive and Camshaft**

**Power Section****FIGURE 6 - CRANKSHAFT IDLER GEARS, TACHOMETER DRIVE AND CAMSHAFT**

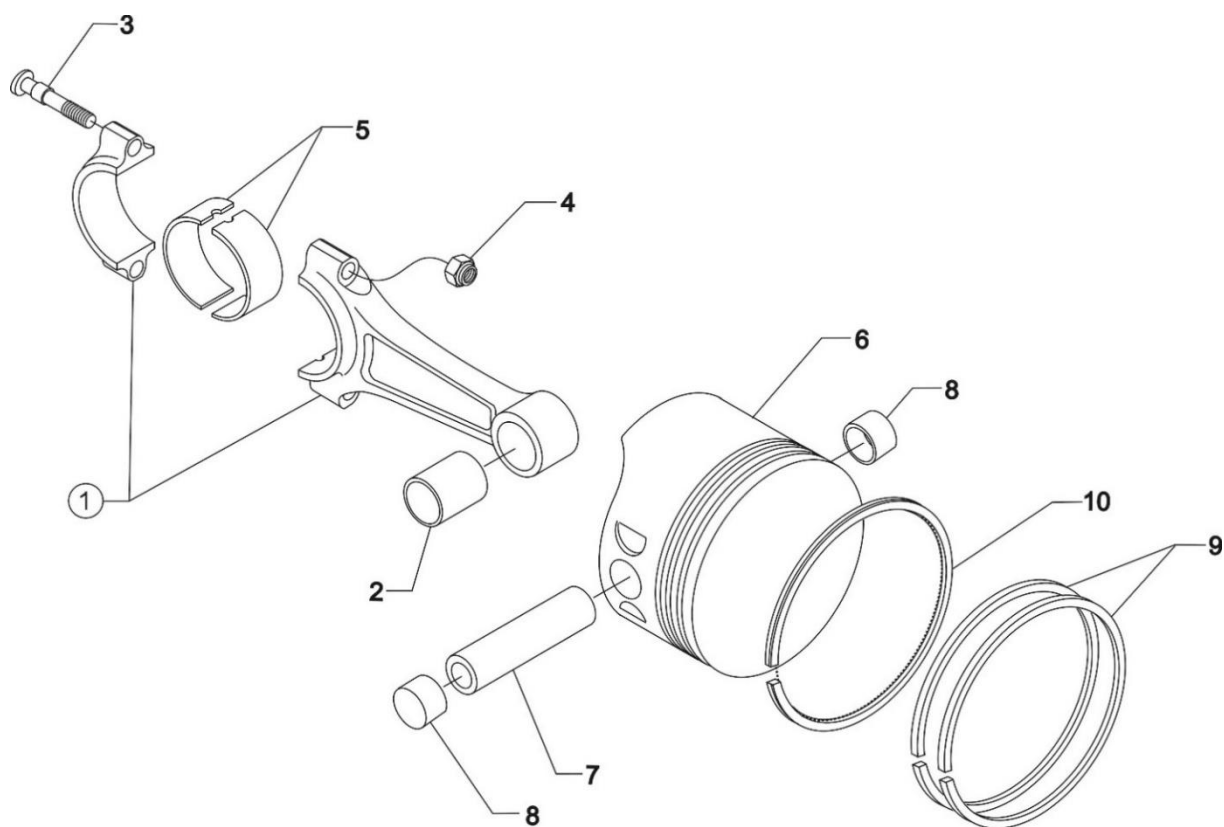
| <b>Figure Item</b> | <b>Code</b> | <b>Part Number</b> | <b>Description</b>                           | <b>Units per Assembly</b> |
|--------------------|-------------|--------------------|----------------------------------------------|---------------------------|
| 1                  |             | 23D26777           | PLUNGER, Fuel pump, long                     | 1                         |
| 2                  |             | 74996              | GEAR ASSEMBLY, Crankshaft idler, plain       | 1                         |
| 3                  |             | 75072              | GEAR ASSEMBLY, Crankshaft idler              | 1                         |
| 4                  |             | 76121              | SHAFT ASSEMBLY, Tachometer                   | 1                         |
| 5                  |             | LW-18667           | PIN, 3/16 diameter x 2-11/32 long            | 1                         |
| 6                  |             | STD-2231           | RING, Internal retaining (13/16)             | 1                         |
| 7                  |             | LW-13796           | SHAFT, Crankshaft idler gear                 | 2                         |
| 8                  |             | LW-31H0.88         | BOLT, 5/16-18 x 7/8 long, hex. head, drilled | 3                         |
| 9                  |             | STD-2168           | NUT, 5/16-18 NC-3 slotted shear              | 1                         |
| 10                 |             | LW-18840           | CAMSHAFT ASSEMBLY<br>(Flat tappet engines)   | 1                         |
|                    |             | 15M23452           | CAMSHAFT ASSEMBLY<br>(Roller tappet engines) | 1                         |
| 11                 |             | 76118              | SPACER, Tachometer shaft centering           | 1                         |



**Figure 7**  
**Crankcase Attaching Parts**

**Power Section****FIGURE 7 - CRANKCASE ATTACHING PARTS**

| <b>Figure Item</b>    | <b>Code</b> | <b>Part Number</b> | <b>Description</b>                     | <b>Units per Assembly</b> |
|-----------------------|-------------|--------------------|----------------------------------------|---------------------------|
| 1                     |             | LW-25-1.50         | BOLT, 1/4-20 x 1-1/2 long, hex. head   | 6                         |
| 2                     |             | LW-25-1.63         | BOLT, 1/4-20 x 1-5/8 long, hex. head   | 1                         |
| 3                     |             | STD-8              | WASHER, 1/4 plain                      | 22                        |
| 4                     |             | 60803              | STRAP, Lifting                         | 2                         |
| 5                     |             | LW-25-1.88         | BOLT, 1/4-20 x 1-7/8 long, hex. head   | 2                         |
| 6                     |             | LW-25-1.13         | BOLT, 1/4-20 x 1-1/8 long, hex. head   | 4                         |
| 7                     |             | STD-160            | WASHER, 1/4 lock, internal teeth       | 12                        |
| 8                     |             | STD-1411           | NUT, 1/4-20 plain                      | 9                         |
| 9                     |             | LW-25S1.50         | BOLT, 1/4-20 x 1-1/2 long, drilled end | 3                         |
| 10                    |             | STD-8              | WASHER, 1/4-20 plain (max. 9)          | <b>AR</b>                 |
| 11                    |             | STD-2249           | NUT, 1/4-20 slotted                    | 3                         |
| 12                    |             | STD-33             | WASHER, 3/8 plain                      | 3                         |
| 13                    |             | NAS1149F0632P      | WASHER, 3/8 plain (thin)               | 3                         |
| 14                    |             | STD-872            | NUT, 3/8-24 slotted                    | 1                         |
| 15                    |             | AN6-34A            | BOLT, 3/8-24 x 3-37/64 long, hex. head | 1                         |
| 16                    |             | STD-33             | WASHER, 3/8 plain                      | 2                         |
| 17                    |             | STD-678            | WASHER, 3/8 lock, internal teeth       | 2                         |
| 18                    |             | STD-596            | NUT, 3/8-24 plain                      | 2                         |
| 19                    |             | 76220              | STUD, 1/2-20 x 10-11/16 long           | 4                         |
| <b>AR as required</b> |             |                    |                                        |                           |

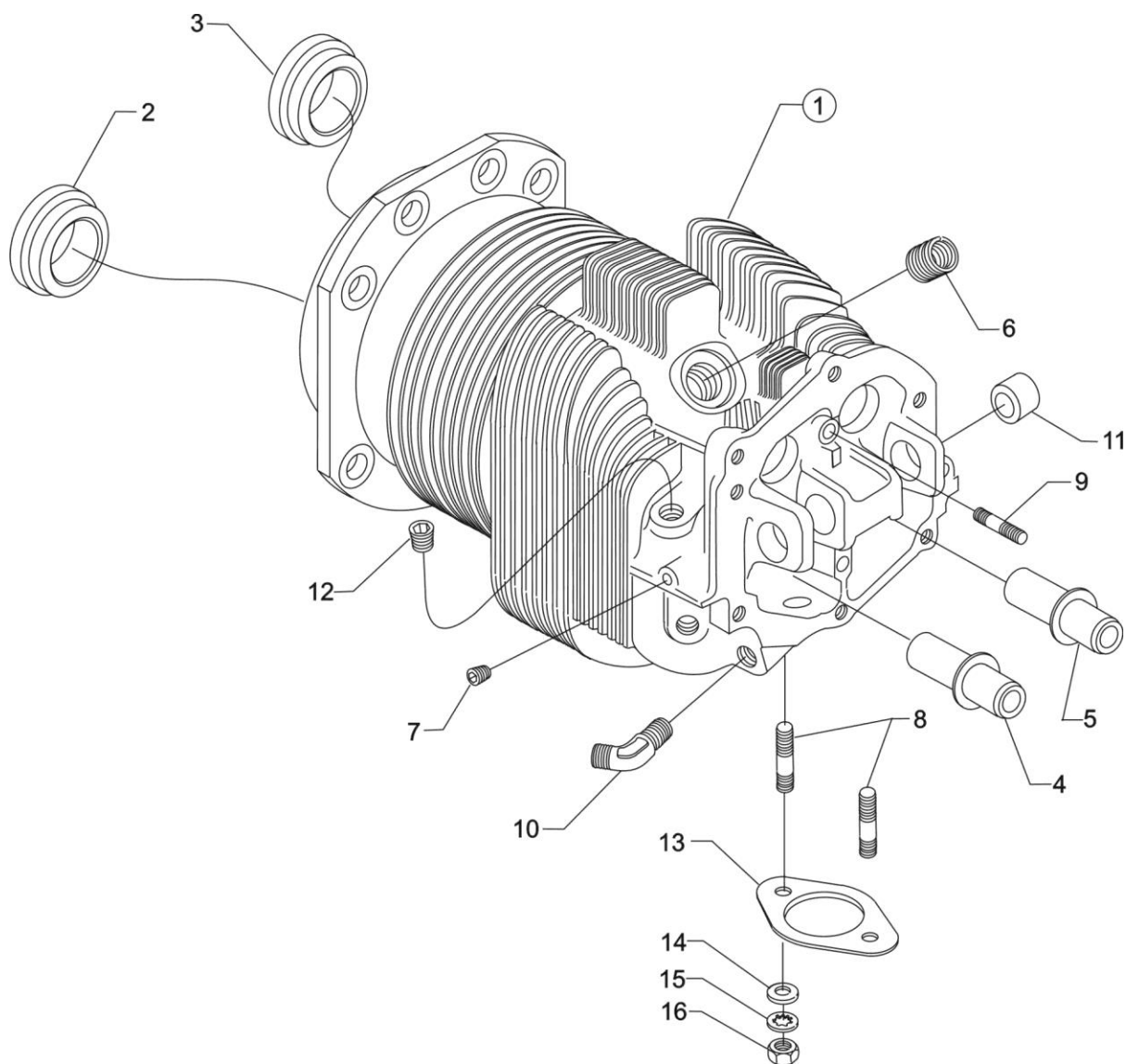


**Figure 8**  
**Connecting Rods, Pistons and Ring Assemblies**

## Cylinder Section

**FIGURE 8 - CONNECTING RODS, PISTONS AND RING ASSEMBLIES**

| Figure Item                                                                                                                | Code     | Part Number | Description                       | Units per Assembly |
|----------------------------------------------------------------------------------------------------------------------------|----------|-------------|-----------------------------------|--------------------|
| 1                                                                                                                          |          | LW-11750    | CONNECTING ROD ASSEMBLY           | 4                  |
| 2                                                                                                                          |          | LW-13923    | BUSHING, Connecting rod, upper    | 4                  |
| 3                                                                                                                          | *        | 75061       | BOLT, Connecting rod              | 8                  |
|                                                                                                                            | <b>P</b> | 14S23890    | BOLT, Connecting rod              | 8                  |
| 4                                                                                                                          |          | LW-12186    | NUT, Connecting rod               | 8                  |
| 5                                                                                                                          |          | 18M26105    | BEARING, Connecting rod           | 8                  |
| 6                                                                                                                          |          | 14D23912    | PISTON, Compression ratio, 8.50:1 | 4                  |
| 7                                                                                                                          |          | LW-14078    | PIN, Piston                       | 4                  |
| 8                                                                                                                          |          | 72198       | PLUG, Piston pin                  | 8                  |
| 9                                                                                                                          |          | 74241       | RING, Piston compression          | 8                  |
| 10                                                                                                                         |          | 14H29884    | RING, Piston, oil                 | 4                  |
| <b>P</b> Lycoming proprietary part. Listed for reference purposes only, cannot be purchased.<br><b>*</b> Service use only. |          |             |                                   |                    |

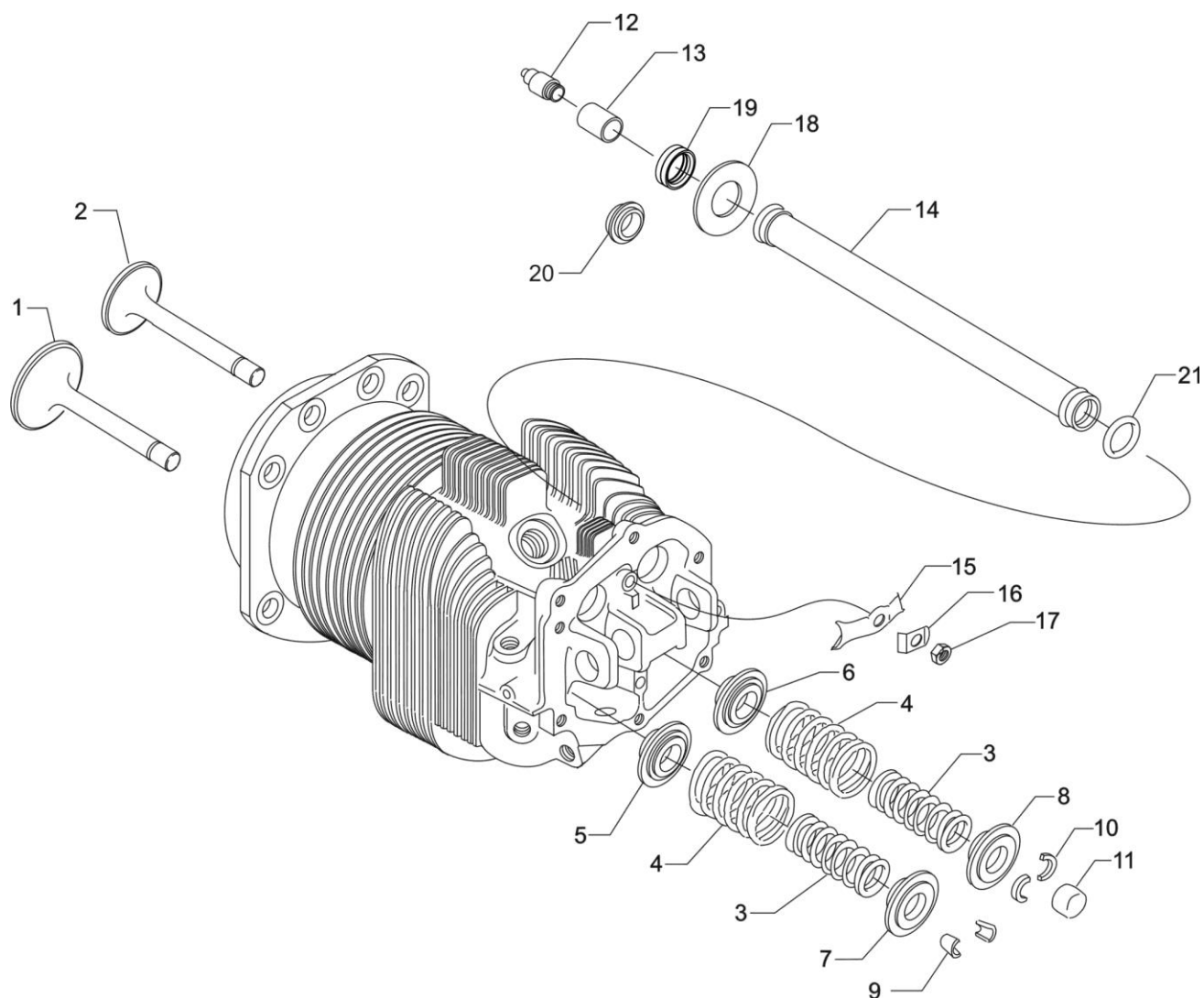


**Figure 9**  
**Cylinder Assembly**

## Cylinder Section

**FIGURE 9 - CYLINDER ASSEMBLY**

| Figure Item                                    | Code | Part Number  | Description                       | Units per Assembly |
|------------------------------------------------|------|--------------|-----------------------------------|--------------------|
| 1                                              |      | 16A30080-01  | CYLINDER ASSEMBLY, Nitrided       | 4                  |
| 2                                              |      | 72057-P20    | SEAT, Intake valve                | 4                  |
| 3                                              |      | 72058-P20    | SEAT, Exhaust valve               | 4                  |
| 4                                              |      | 76943-P30    | GUIDE, Valve, intake              | 4                  |
| 5                                              |      | 16R22126-P30 | GUIDE, Valve, exhaust             | 4                  |
| 6                                              |      | 66796        | INSERT, Spark plug, 1.5 MM        | 8                  |
| 7                                              |      | STD-1353     | INSERT, No. 10-24 UNC x 3/8 long  | 4                  |
| 8                                              |      | 31C-12       | STUD, 5/16-18 x 1-1/2 long        | 8                  |
| 9                                              |      | 25C-8        | STUD, 1/4-20 x 1.00 long          | 4                  |
| 10                                             |      | MS20823-6D   | ELBOW, 45°, 3/8 flared tube       | 4                  |
| 11                                             |      | 66610        | BUSHING, Rocker shaft             | 16                 |
| 12                                             | *    | 1102         | PLUG, 1/8-27 NPT, Allen head      | 4                  |
| 13                                             |      | 77611        | GASKET, Exhaust flange            | 4                  |
| 14                                             |      | STD-35       | WASHER, 5/16 plain                | 8                  |
| 15                                             |      | STD-475      | WASHER, 5/16 lock, internal teeth | 8                  |
| 16                                             |      | STD-1410     | NUT, 5/16-18 plain                | 8                  |
| * Used on installations without priming lines. |      |              |                                   |                    |

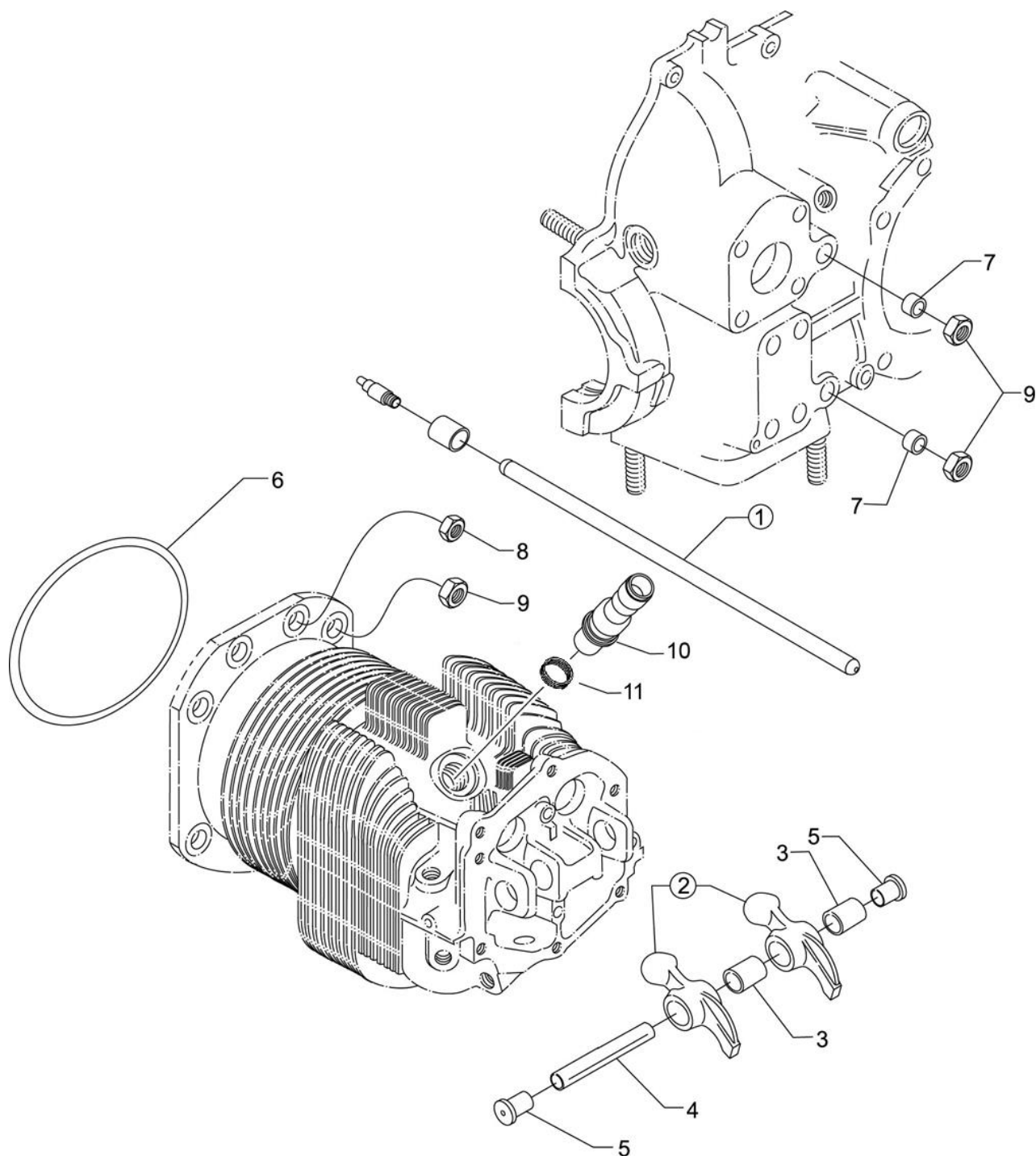


**Figure 10**  
**Valve Assembly and Related Parts**

## Cylinder Section

**FIGURE 10 – VALVE ASSEMBLY AND RELATED PARTS**

| Figure Item                                                                                                                        | Code | Part Number | Description                                                           | Units per Assembly |
|------------------------------------------------------------------------------------------------------------------------------------|------|-------------|-----------------------------------------------------------------------|--------------------|
| 1                                                                                                                                  |      | 17A23938    | VALVE, Intake                                                         | 4                  |
| 2                                                                                                                                  |      | 17B23936    | VALVE, Exhaust                                                        | 4                  |
| 3                                                                                                                                  |      | 17D29055    | SPRING, Valve, inner                                                  | 8                  |
| 4                                                                                                                                  |      | 17D29060    | SPRING, Valve, outer                                                  | 8                  |
| 5                                                                                                                                  |      | 65441       | SEAT, Valve spring, lower intake                                      | 4                  |
| 6                                                                                                                                  |      | LW-13323    | SEAT, Valve spring, lower exhaust                                     | 4                  |
| 7                                                                                                                                  |      | LW-10077    | SEAT, Valve spring, upper intake                                      | 4                  |
| 8                                                                                                                                  |      | LW-16475    | SEAT, Valve spring, upper exhaust (rotator type)                      | 4                  |
| 9                                                                                                                                  |      | 60009       | KEY, Valve, intake                                                    | 8                  |
| 10                                                                                                                                 |      | 17C21191    | KEY, Valve, exhaust (rotator type)                                    | 8                  |
| 11                                                                                                                                 |      | 17C19386    | CAP, Valve stem exhaust (rotator type)                                | 4                  |
| 12                                                                                                                                 |      | 15B26066    | PLUNGER ASSEMBLY, Hydraulic lifter                                    | 8                  |
| 13                                                                                                                                 |      | 15B21319    | SOCKET, Hydraulic tappet                                              | 8                  |
| 14                                                                                                                                 |      | LW-11485    | SHROUD TUBE ASSEMBLY, Push rod<br>(Flat tappet engines)               | 8                  |
|                                                                                                                                    |      | 15G23461    | SHROUD TUBE ASSEMBLY, Push rod<br>(Roller tappet engines)             | 8                  |
| 15                                                                                                                                 |      | LW-14995    | SPRING, Shroud tube                                                   | 4                  |
| 16                                                                                                                                 |      | LW-12272    | LOCKPLATE, Shroud tube                                                | 4                  |
| 17                                                                                                                                 |      | STD-1411    | NUT, 1/4-20 plain                                                     | 4                  |
| 18                                                                                                                                 |      | 01L23459    | WASHER, 25/32 I.D. x 3/8 O.D. x 1/32 thick<br>(Roller tappet engines) | 8                  |
| 19                                                                                                                                 | *    | LW-18661    | SEAL, Shroud tube (Flat tappet engines)                               | 8                  |
| 20                                                                                                                                 |      | 06A23493    | SEAL, Shroud tube (Roller tappet engines)                             | 8                  |
| 21                                                                                                                                 | **   | 70310       | SEAL, Shroud tube                                                     | 8                  |
| <p>* This seal is used on flat tappet engines only.</p> <p>** This seal is used on both flat tappet and roller tappet engines.</p> |      |             |                                                                       |                    |



**Figure 11**  
**Cylinder Related Parts and Spark Plugs**

## Cylinder Section

**FIGURE 11 – CYLINDER RELATED PARTS AND SPARK PLUGS**

| Figure Item | Code | Part Number | Description                                   | Units per Assembly |
|-------------|------|-------------|-----------------------------------------------|--------------------|
| 1           | *♦   | 15F28835-28 | ROD ASSEMBLY, Push (A total of 8 required) RT | AR                 |
|             | *♦   | 15F28835-29 | ROD ASSEMBLY, Push (A total of 8 required) RT | AR                 |
|             | *♦   | 15F28835-30 | ROD ASSEMBLY, Push (A total of 8 required) RT | AR                 |
|             | *♦   | 15F28835-31 | ROD ASSEMBLY, Push (A total of 8 required) RT | AR                 |
|             | *♦   | 15F28835-32 | ROD ASSEMBLY, Push (A total of 8 required) RT | AR                 |
|             | *♦   | 15F28835-33 | ROD ASSEMBLY, Push (A total of 8 required) RT | AR                 |
|             | †♦   | 15F28835-34 | ROD ASSEMBLY, Push (A total of 8 required)    | AR                 |
|             | ‡♦   | 15F28835-35 | ROD ASSEMBLY, Push (A total of 8 required)    | AR                 |
|             | ‡♦   | 15F28835-36 | ROD ASSEMBLY, Push (A total of 8 required)    | AR                 |
|             | ‡♦   | 15F28835-37 | ROD ASSEMBLY, Push (A total of 8 required)    | AR                 |
| 2           | **   | 17F19357    | ROCKER ASSEMBLY, Valve                        | 8                  |
| 3           |      | 74637       | BUSHING, Valve rocker                         | 8                  |
| 4           |      | LW-13790    | SHAFT, Valve rocker                           | 4                  |
| 5           |      | LW-12892    | THRUST BUTTON, Rocker shaft                   | 8                  |
| 6           |      | 71481       | RING, Oil seal, 3/32 diameter x 4-27/32 long  | 4                  |
| 7           |      | 74887       | SPACER, 33/64 I.D. x 7/8 O.D. x 3/8 thick     | 2                  |
| 8           |      | 383-B       | NUT, 3/8-24 plain                             | 16                 |
| 9           |      | STD-2090    | NUT, 1/2-20 plain                             | 18                 |
| 10          | V#   | 1182-E7     | SPARK PLUG, Champion V REM38E                 | 8                  |
| 11          |      | STD-295     | GASKET, Spark Plug                            | 8                  |

**AR** as required

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

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

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

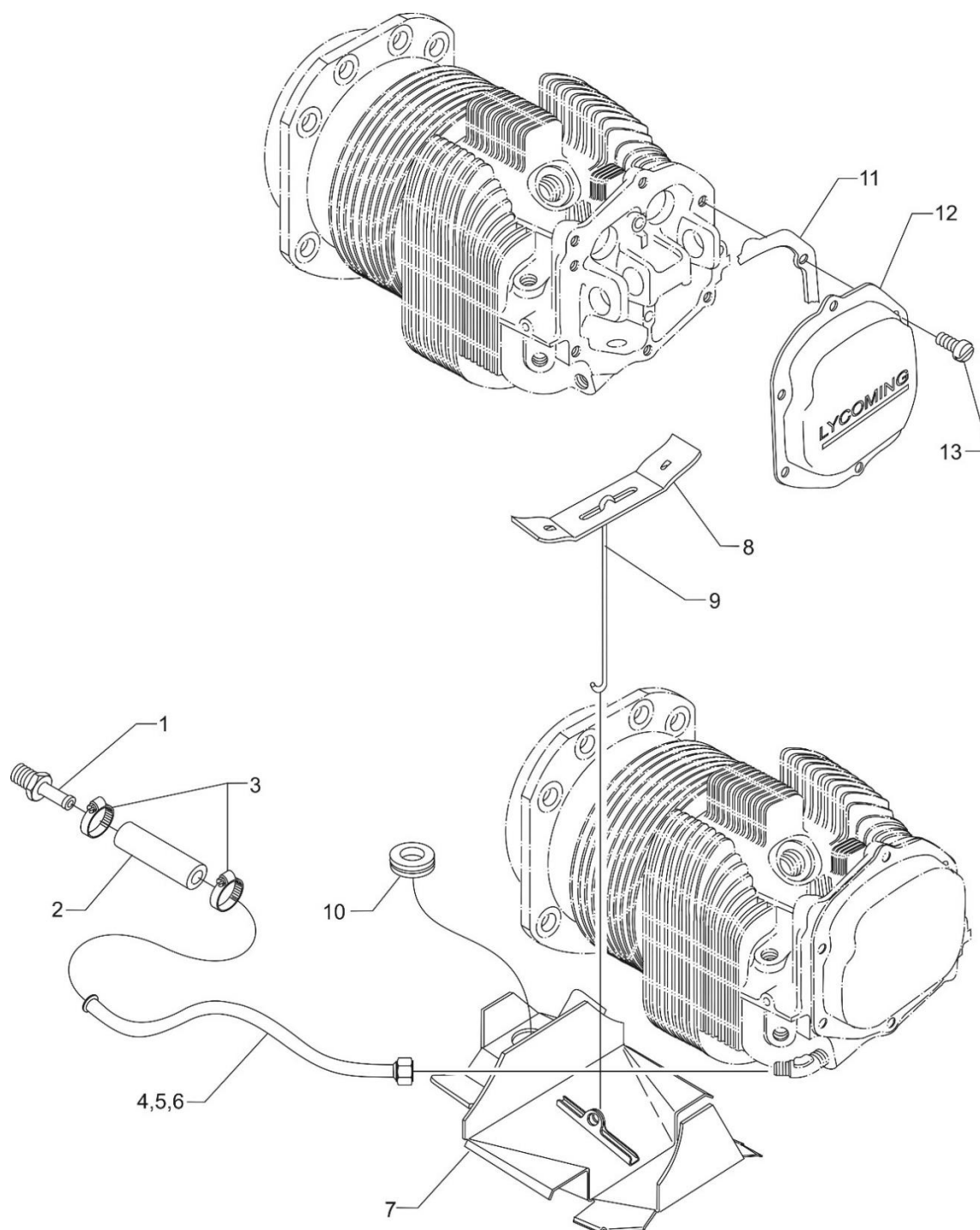
♦ See latest revision of Service Instruction No. 1060 for complete push rod application.

\*\* Due to the size of the area where the part number is stamped, the last five digits may be all that is shown (19357).

V Vendor Prime Manufacturer part

# Item No. 1182-E7 spark plugs are used in current production only. Additional spark plugs are available for this engine. See latest revision of Lycoming Service Instruction No. 1042 for complete listing of all approved spark plugs.

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

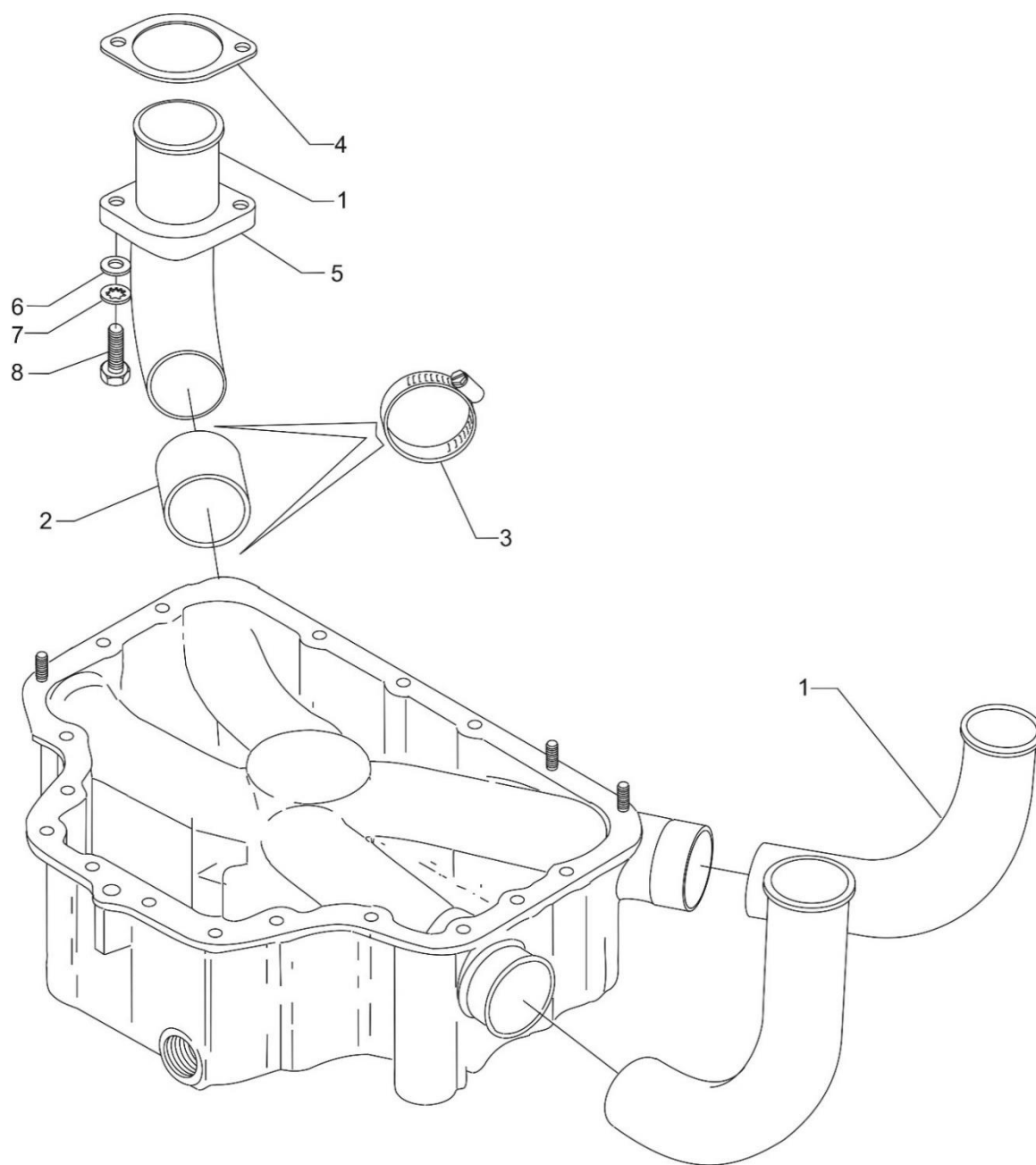


**Figure 12**  
**Cylinder Head Drain Tubes, Intercylinder Cooling Baffles and Rocker Box Covers**

## Cylinder Section

**FIGURE 12 –CYLINDER HEAD DRAIN TUBES, INTERCYLINDER COOLING BAFFLES  
AND ROCKER BOX COVERS**

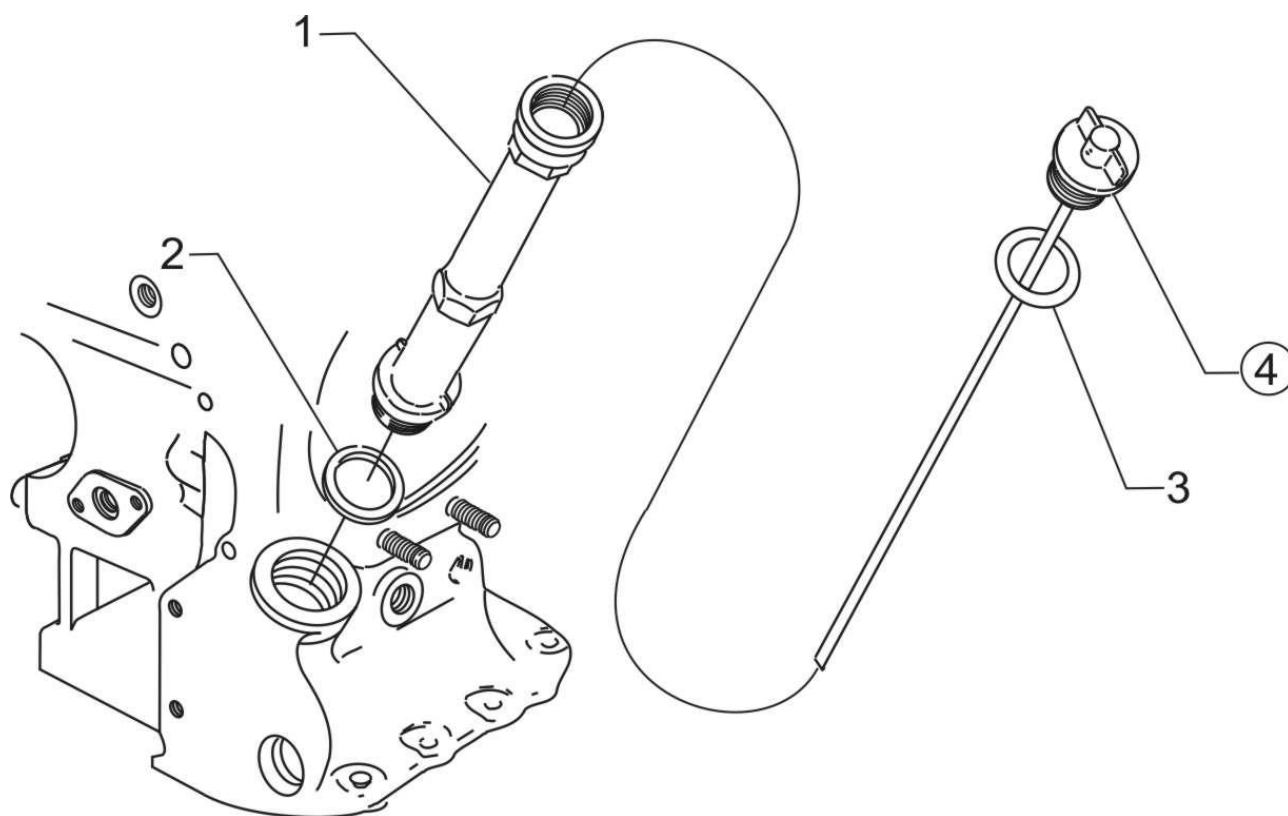
| Figure Item                                                                                                                                                      | Code | Part Number   | Description                                       | Units per Assembly |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---------------|---------------------------------------------------|--------------------|
| 1                                                                                                                                                                |      | STD-684       | NIPPLE, Straight, 3/8 I.D. hose                   | 4                  |
| 2                                                                                                                                                                |      | STD-1821      | HOSE, 3/8 I.D. x 2-1/2 long                       | 4                  |
| 3                                                                                                                                                                |      | LW-15592-5-04 | CLAMP, 7/16 O.D. Hose                             | 8                  |
| 4                                                                                                                                                                |      | 68759         | TUBE ASSEMBLY, Oil drain, cylinder no. 1          | 1                  |
| 5                                                                                                                                                                |      | 68760         | TUBE ASSEMBLY, Oil drain, cylinder no. 2          | 1                  |
| 6                                                                                                                                                                |      | 68761         | TUBE ASSEMBLY, Oil drain, cylinders no. 3 & 4     | 2                  |
| 7                                                                                                                                                                | *    | 75339         | BAFFLE ASSEMBLY, Intercylinder                    | 1                  |
|                                                                                                                                                                  | **   | LW-13389      | BAFFLE ASSEMBLY, Intercylinder                    | 1                  |
| 8                                                                                                                                                                |      | 71611         | RETAINER, Intercylinder baffle                    | 2                  |
| 9                                                                                                                                                                |      | 71610         | HOOK, Intercylinder baffle retainer               | 2                  |
| 10                                                                                                                                                               |      | MS35489-20X   | GROMMET                                           | 1                  |
| 11                                                                                                                                                               |      | 06B26669      | GASKET, Rocker box cover (Silicone)               | 4                  |
| 12                                                                                                                                                               |      | 61247         | COVER, Rocker box                                 | 4                  |
|                                                                                                                                                                  |      | 61247-C       | COVER, Rocker box, chrome                         | 4                  |
| 13                                                                                                                                                               |      | STD-1925      | SCREW, 1/4-20 x 5/8 long, pan. head, self-locking | 24                 |
|                                                                                                                                                                  | ♦    | 01F22880      | SCREW, 1/4-20 x 19/32 long, stainless             | 24                 |
|                                                                                                                                                                  | ♦    | MS35335-33    | WASHER                                            | 24                 |
| * Install on left side between no. 2 and no. 4 cylinders.<br>** Install on right side between no. 1 and no. 3 cylinders.<br>♦ Used with chrome rocker box cover. |      |               |                                                   |                    |



**Figure 13**  
**Intake Pipes and Attaching Parts**

**Cylinder Section****FIGURE 13 – INTAKE PIPES AND ATTACHING PARTS**

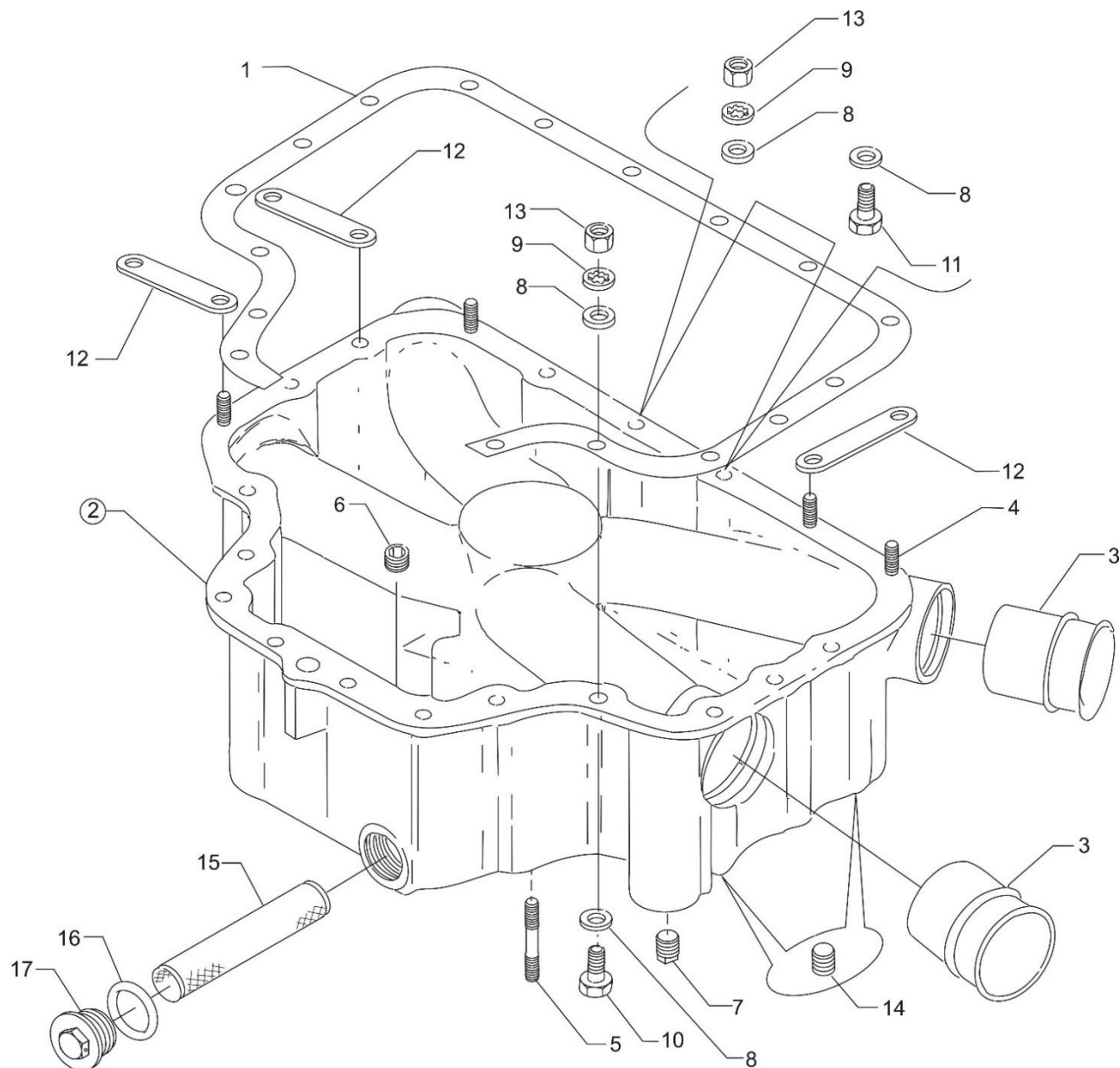
| <b>Figure Item</b> | <b>Code</b> | <b>Part Number</b> | <b>Description</b>                     | <b>Units per Assembly</b> |
|--------------------|-------------|--------------------|----------------------------------------|---------------------------|
| 1                  |             | 70485              | PIPE, Intake                           | 4                         |
| 2                  |             | 69603              | HOSE, 1-3/4 I.D. x 2-3/16 O.D. x 1-3/4 | 4                         |
| 3                  |             | LW-15592-8-28      | CLAMP, Hose                            | 8                         |
| 4                  |             | 71973              | GASKET, 2 bolt flange, 1-3/4 I.D.      | 4                         |
| 5                  |             | 73346              | FLANGE, Intake pipe, upper             | 4                         |
| 6                  |             | STD-8              | WASHER, 1/4 plain                      | 8                         |
| 7                  |             | STD-160            | WASHER, 1/4 lock, internal teeth       | 8                         |
| 8                  |             | LW-25-1.25         | BOLT, 1/4-20 x 1-1/4 long, hex. head   | 8                         |



**Figure 14**  
**Oil Level Gage**

**Lubrication System****FIGURE 14 – OIL LEVEL GAGE**

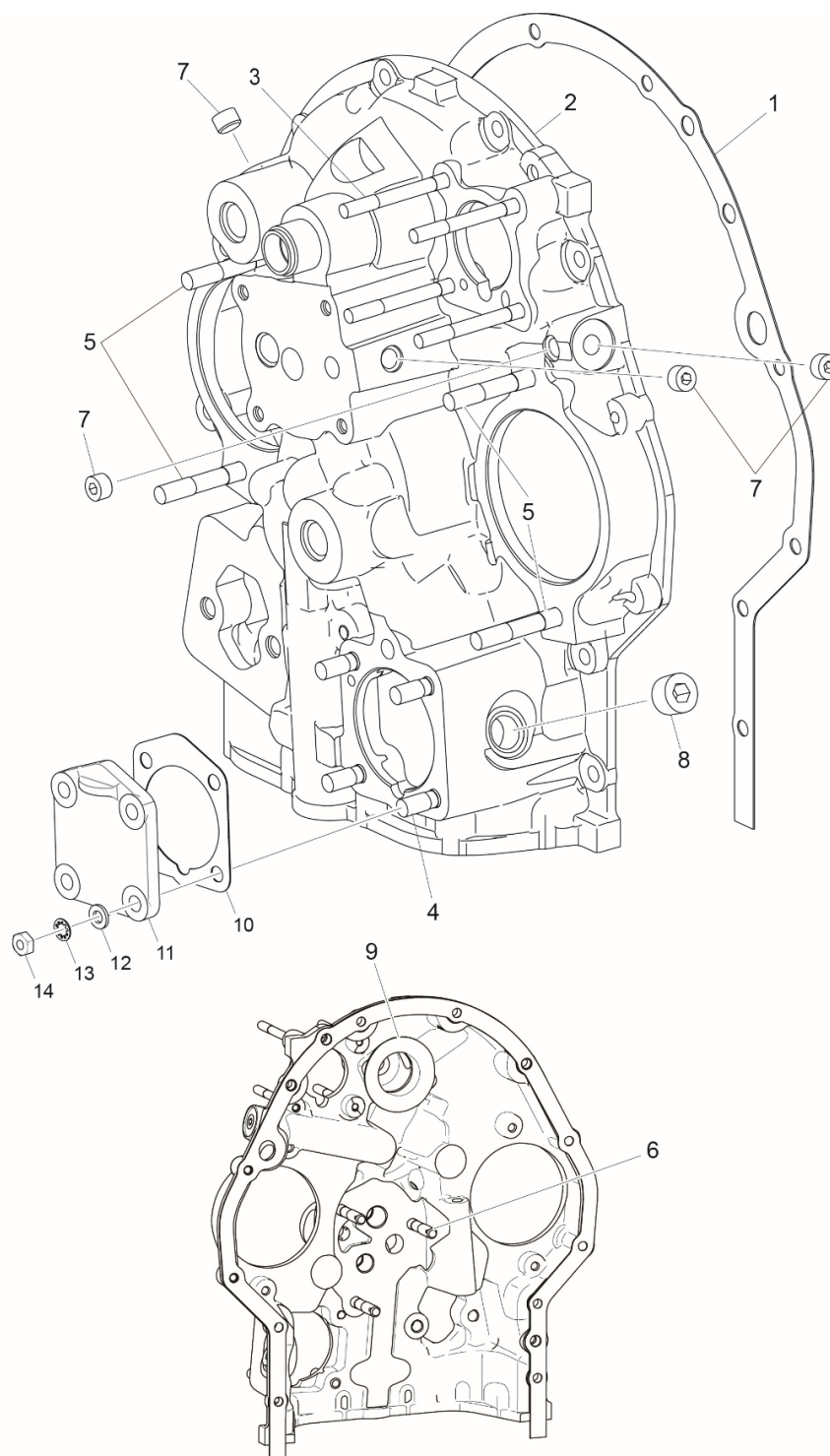
| <b>Figure Item</b> | <b>Code</b> | <b>Part Number</b> | <b>Description</b>         | <b>Units per Assembly</b> |
|--------------------|-------------|--------------------|----------------------------|---------------------------|
| 1                  |             | 56C23075           | TUBE, Oil level gage, long | 1                         |
| 2                  |             | 72059              | GASKET, Oil level gage     | 1                         |
| 3                  |             | 74065              | RING, Oil level gage seal  | 1                         |
| 4                  |             | LW-14768           | GAGE ASSEMBLY, Oil level   | 1                         |



**Figure 15**  
**Oil Sump Assembly and Oil Suction Screen**

**Lubrication System****FIGURE 15 – OIL SUMP ASSEMBLY AND OIL SUCTION SCREEN**

| Figure Item | Code | Part Number   | Description                          | Units per Assembly |
|-------------|------|---------------|--------------------------------------|--------------------|
| 1           |      | LW-13353      | GASKET, Oil sump                     | 1                  |
| 2           |      | LW-13861      | SUMP ASSEMBLY, Oil                   | 1                  |
| 3           |      | 78914         | CONNECTION, Intake pipe              | 4                  |
| 4           |      | 25C-10        | STUD, 1/4-20 x 1-1/4 long            | 4                  |
| 5           |      | 31C-17        | STUD, 5/16-18 x 2-1/8 long           | 4                  |
| 6           |      | STD-91        | PLUG, 1/2-14 NPT, allen head         | 1                  |
| 7           |      | STD-551       | PLUG, 1/2-14 NPT, square head        | 2                  |
| 8           |      | STD-8         | WASHER, 1/4 plain                    | 28                 |
| 9           |      | STD-160       | WASHER, 1/4 lock, internal teeth     | 20                 |
| 10          |      | LW-25-0.94    | BOLT, 1/4-20 x 15/16 long, hex. head | 13                 |
| 11          |      | LW-25-1.13    | BOLT, 1/4-20 x 1-1/8 long, hex. head | 3                  |
| 12          |      | 73152         | BRACKET, Support clamp               | 3                  |
| 13          |      | STD-1411      | NUT, 1/4-20 plain                    | 12                 |
| 14          |      | STD-2229      | PLUG, 1/2 NPT, allen head            | 2                  |
| 15          |      | 70484         | SCREEN, Oil suction                  | 1                  |
| 16          |      | 06E19769-1.00 | GASKET, Annular, 1.00 I.D.           | 1                  |
| 17          |      | LW-12545      | PLUG, 5/8 hex. head x 1.00-20        | 1                  |

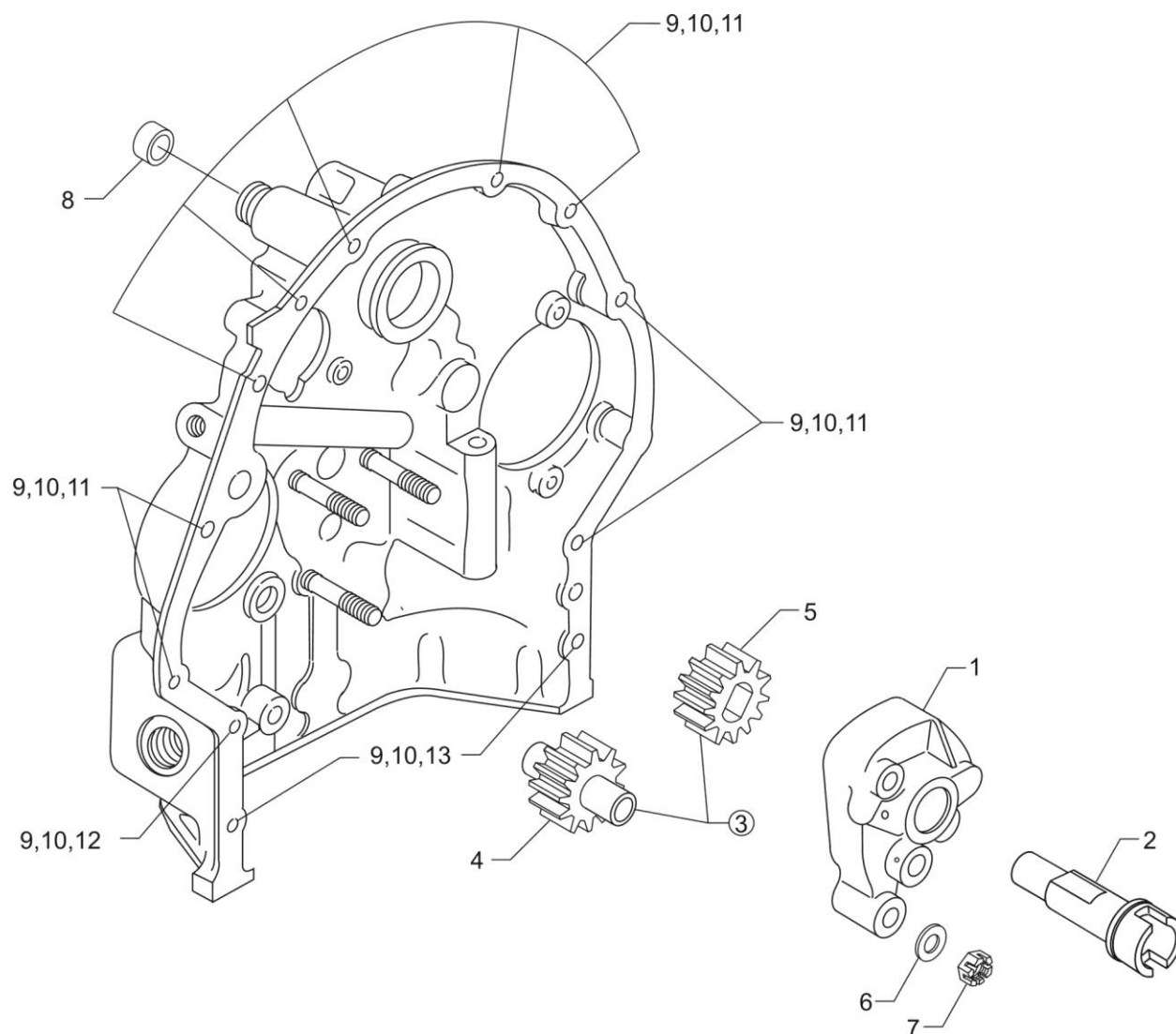


**Figure 16**  
**Accessory Housing Assembly**

## Accessory Drives

**FIGURE 16 – ACCESSORY HOUSING ASSEMBLY**

| Figure Item | Code | Part Number | Description                         | Units per Assembly |
|-------------|------|-------------|-------------------------------------|--------------------|
| 1           |      | 73818       | GASKET, Accessory housing           | 1                  |
| 2           |      | 21A21533-05 | HOUSING ASSEMBLY, Accessory         | 1                  |
| 3           |      | 25C-22      | STUD, 1/4-20 x 2-3/4 long           | 4                  |
| 4           |      | 31C-12      | STUD, 5/16-18 x 1-1/2 long          | 4                  |
| 5           |      | 31C-19      | STUD, 5/16-18 x 2-1/8 long          | 4                  |
| 6           |      | 31CD-17     | STUD, 5/16-18 x 2-1/8 long, drilled | 3                  |
| 7           |      | 1102        | PLUG, 1/8-27 NPT, allen head        | 4                  |
| 8           |      | STD-784     | PLUG, 3/8-18 NPT, allen head        | 1                  |
| 9           |      | 76119       | SHIELD, Accessory breather oil      | 1                  |
| 10          |      | 69551       | GASKET, Accessory drive adapter     | 1                  |
| 11          |      | 69106       | COVER, Governor drive adapter pad   | 1                  |
| 12          |      | STD-35      | WASHER, 5/16 plain                  | 4                  |
| 13          |      | STD-475     | WASHER, 5/16 lock, internal teeth   | 4                  |
| 14          |      | STD-1410    | NUT, 5/16-18 plain                  | 4                  |

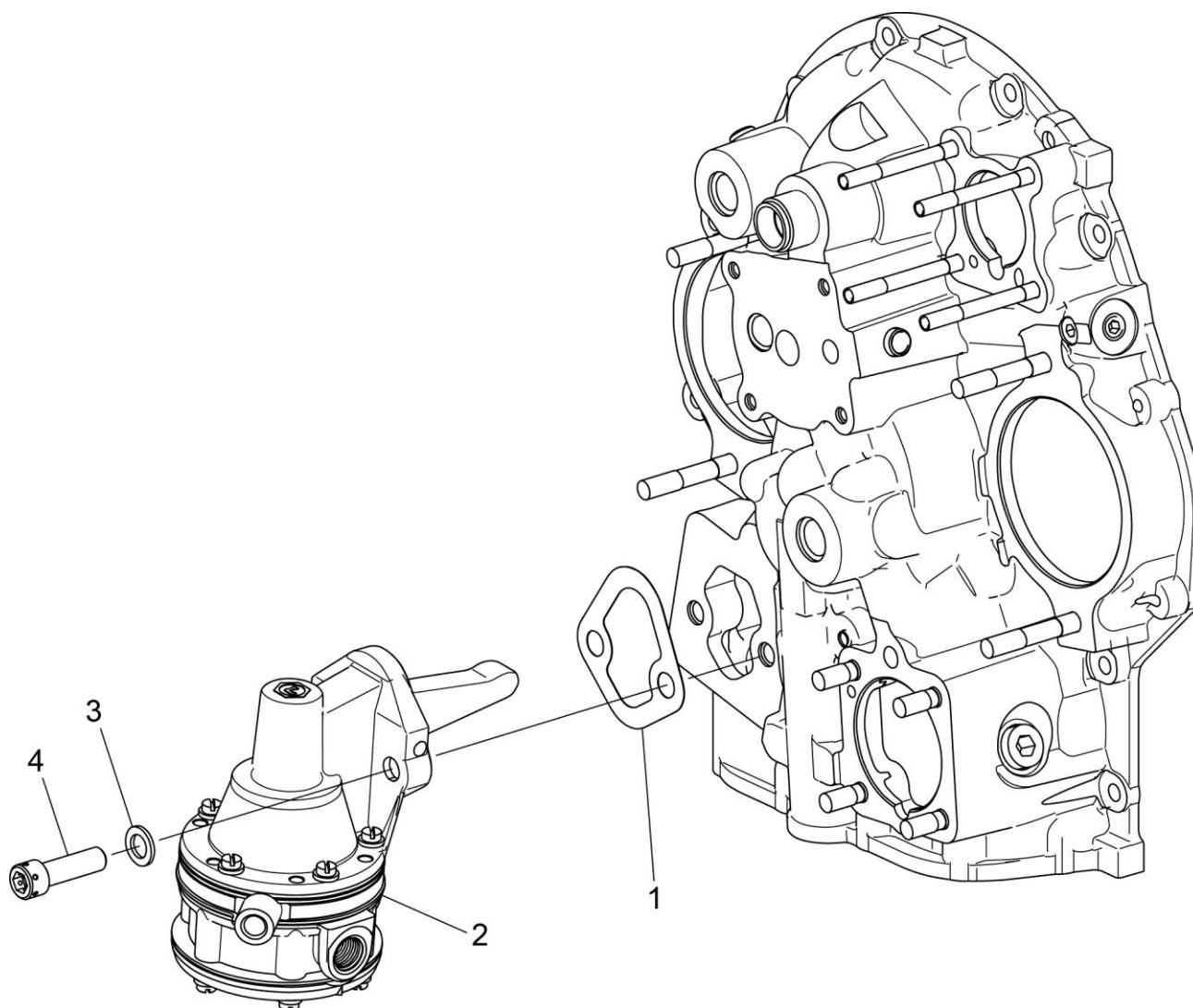


**Figure 17**  
**Oil Pump Assembly and Accessory Housing Attaching Parts**

## Accessory Drives

**FIGURE 17 – OIL PUMP ASSEMBLY AND ACCESSORY HOUSING ATTACHING PARTS**

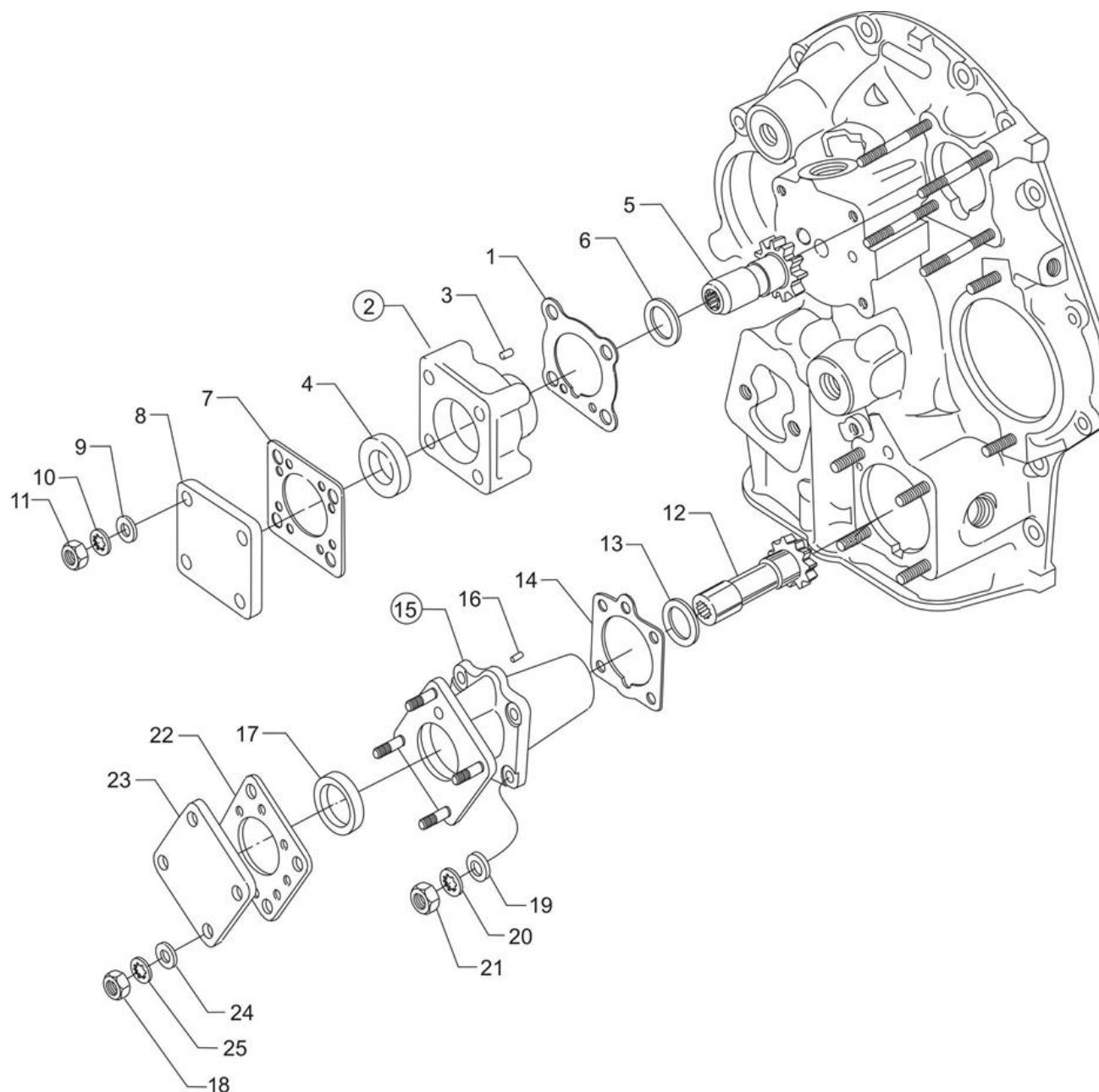
| Figure Item                                        | Code | Part Number | Description                           | Units per Assembly |
|----------------------------------------------------|------|-------------|---------------------------------------|--------------------|
| 1                                                  |      | 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, Oil, tachometer drive           | 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                  |
| * Sold in complete sets only (Kit P/N 05K19423-S). |      |             |                                       |                    |



**Figure 18**  
**Fuel Pump Assembly and Attaching Parts**

**Accessory Drives****FIGURE 18 – FUEL PUMP ASSEMBLY AND ATTACHING PARTS**

| <b>Figure Item</b> | <b>Code</b> | <b>Part Number</b> | <b>Description</b>                                | <b>Units per Assembly</b> |
|--------------------|-------------|--------------------|---------------------------------------------------|---------------------------|
| 1                  |             | 60096              | GASKET, Fuel pump                                 | 1                         |
| 2                  |             | 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                         |

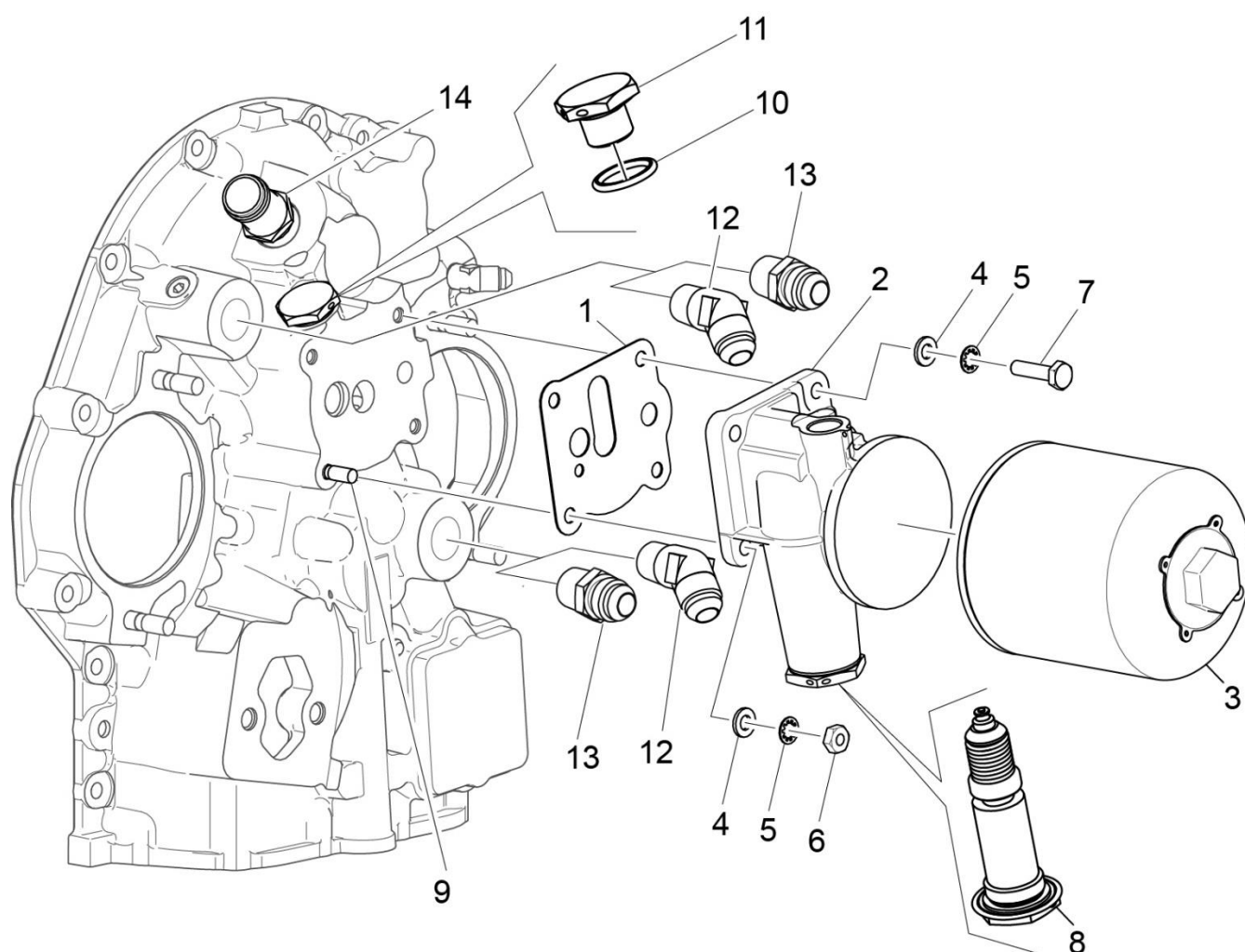


**Figure 19**  
**Vacuum and Hydraulic Pump Drives and Covers,**  
**Propeller Governor Drive Cover**

## Accessory Drives

**FIGURE 19 – VACUUM AND HYDRAULIC PUMP DRIVES AND COVERS,**  
**PROPELLER GOVERNOR DRIVE COVER**

| Figure Item | Code | Part Number | Description                                 | Units per Assembly |
|-------------|------|-------------|---------------------------------------------|--------------------|
| 1           |      | 61183       | GASKET, Accessory adapter                   | 1                  |
| 2           |      | 28F21254    | ADAPTER ASSEMBLY, Vacuum pump               | 1                  |
| 3           |      | STD-1774    | PIN, 1/8 diameter x 1/4 long                | 1                  |
| 4           |      | 06A19956    | OIL SEAL, 7/8 I.D. x 1-1/2 O.D. x 5/16      | 1                  |
| 5           |      | 72970       | GEAR ASSEMBLY, Vacuum pump driven           | 1                  |
| 6           |      | 71596       | WASHER, Accessory drive gear                | 1                  |
| 7           |      | 8313        | GASKET, Vacuum pump                         | 1                  |
| 8           |      | 60430       | COVER, Vacuum pump                          | 1                  |
| 9           |      | STD-8       | WASHER, 1/4 plain                           | 4                  |
| 10          |      | STD-160     | WASHER, 1/4 lock, internal teeth            | 4                  |
| 11          |      | STD-1411    | NUT, 1/4-20 plain                           | 4                  |
| 12          |      | 27A22099    | GEAR ASSEMBLY, Hydraulic pump driven        | 1                  |
| 13          |      | 71596       | WASHER, Accessory drive gear                | 1                  |
| 14          |      | 68315       | GASKET, Accessory drive adapter             | 1                  |
| 15          |      | 27D21252    | ADAPTER ASSEMBLY, Hydraulic pump            | 1                  |
| 16          |      | STD-1774    | PIN, 1/8 diameter x 1/4 long                | 1                  |
| 17          |      | 06A19956    | OIL SEAL, 7/8 I.D. x 1-1/2 O.D. x 5/16 wide | 1                  |
| 18          |      | STD-1411    | NUT, 1/4-20 plain                           | 4                  |
| 19          |      | STD-35      | WASHER, 5/16 plain                          | 4                  |
| 20          |      | STD-475     | WASHER, 5/16 lock, internal teeth           | 4                  |
| 21          |      | STD-1410    | NUT, 5/16-18 plain                          | 4                  |
| 22          |      | 8313        | GASKET, Hydraulic pump                      | 1                  |
| 23          |      | 60430       | COVER, Hydraulic pump                       | 1                  |
| 24          |      | STD-8       | WASHER, 1/4 plain                           | 4                  |
| 25          |      | STD-160     | WASHER, 1/4 lock, internal teeth            | 4                  |



**Figure 20**  
**Oil Filter Assembly, Oil Cooler Bypass Valve and Breather Fitting**

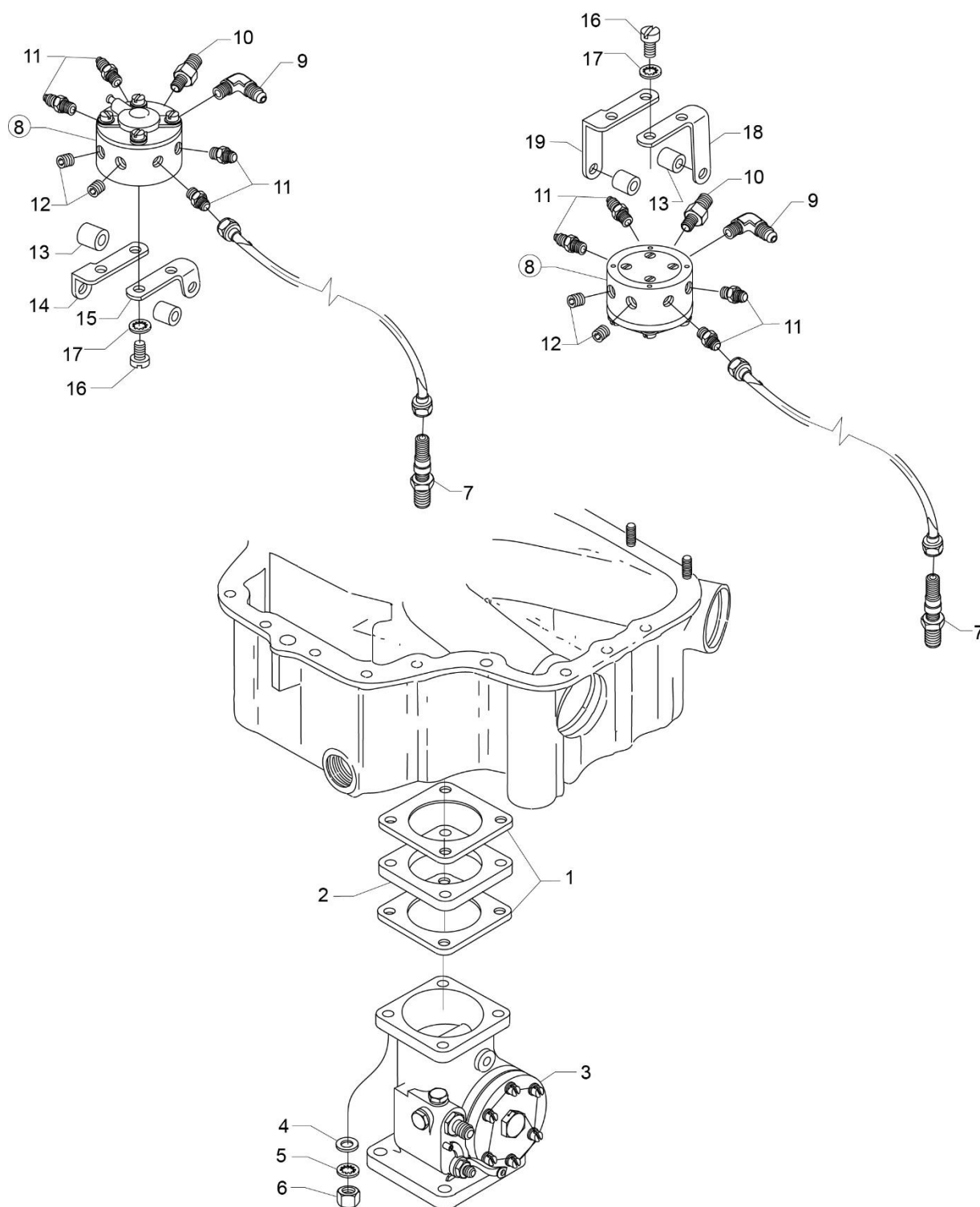
## Accessory Drives

**FIGURE 20 – OIL FILTER ASSEMBLY, OIL COOLER BYPASS VALVE  
AND BREATHER FITTING**

| Figure Item | Code | Part Number   | Description                                                       | Units per Assembly |
|-------------|------|---------------|-------------------------------------------------------------------|--------------------|
| 1           |      | 06B23862      | GASKET, Oil filter adapter                                        | 1                  |
| 2           |      | 77852         | OIL FILTER BASE ASSEMBLY                                          | 1                  |
| 3           |      | LW-13215      | OIL FILTER, Short                                                 | 1                  |
| 4           |      | STD-8         | WASHER, 1/4 plain                                                 | 4                  |
| 5           |      | STD-160       | WASHER, 1/4 lock, internal teeth                                  | 4                  |
| 6           |      | STD-1411      | NUT, 1/4-20 plain                                                 | 1                  |
| 7           |      | LW-25-1.00    | BOLT, 1/4-20 x 1.00 long, hex. head                               | 3                  |
| 8           |      | 53E22144      | VALVE ASSEMBLY, Temperature control oil cooler bypass with gasket | 1                  |
| 9           |      | 25C-10        | STUD, 1/4-20 x 1-1/4 long                                         | 1                  |
| 10          |      | 06E19769-0.63 | GASKET, Annular, 5/8 I.D.                                         | 1                  |
| 11          |      | 62417         | PLUG, Oil cooler bypass                                           | 1                  |
| *12         |      | MS20823-8     | ELBOW, 3/8 NPT, 1/2 flared tube                                   | 1                  |
| *13         |      | AN816-8       | NIPPLE, 1/2 flared tube                                           | 1                  |
| 14          |      | 71140         | FITTING, Breather                                                 | 2                  |

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

\* Some configurations of the IO-360-L2A will have the elbow P/N MS20823-8 installed in the upper oil cooler boss and the nipple P/N AN816-8 installed in the lower oil cooler boss. Other configurations will have the nipple P/N AN816-8 installed in the upper oil cooler boss and the elbow P/N MS20823-8 installed in the lower oil cooler boss

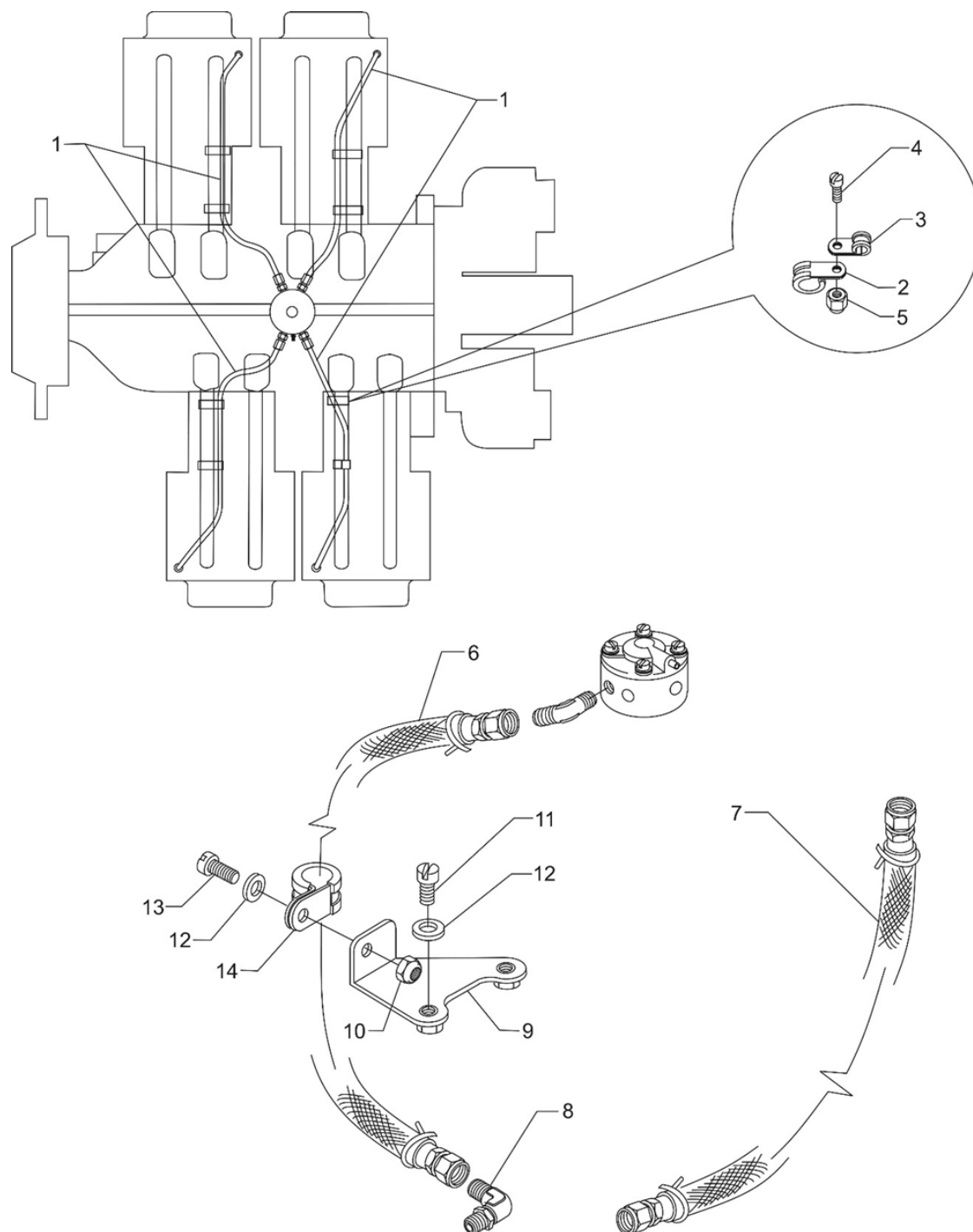


**Figure 21**  
**Fuel Injector, Fuel Manifold and Brackets**

### Fuel Distribution

**FIGURE 21 – FUEL INJECTOR, FUEL MANIFOLD AND BRACKETS**

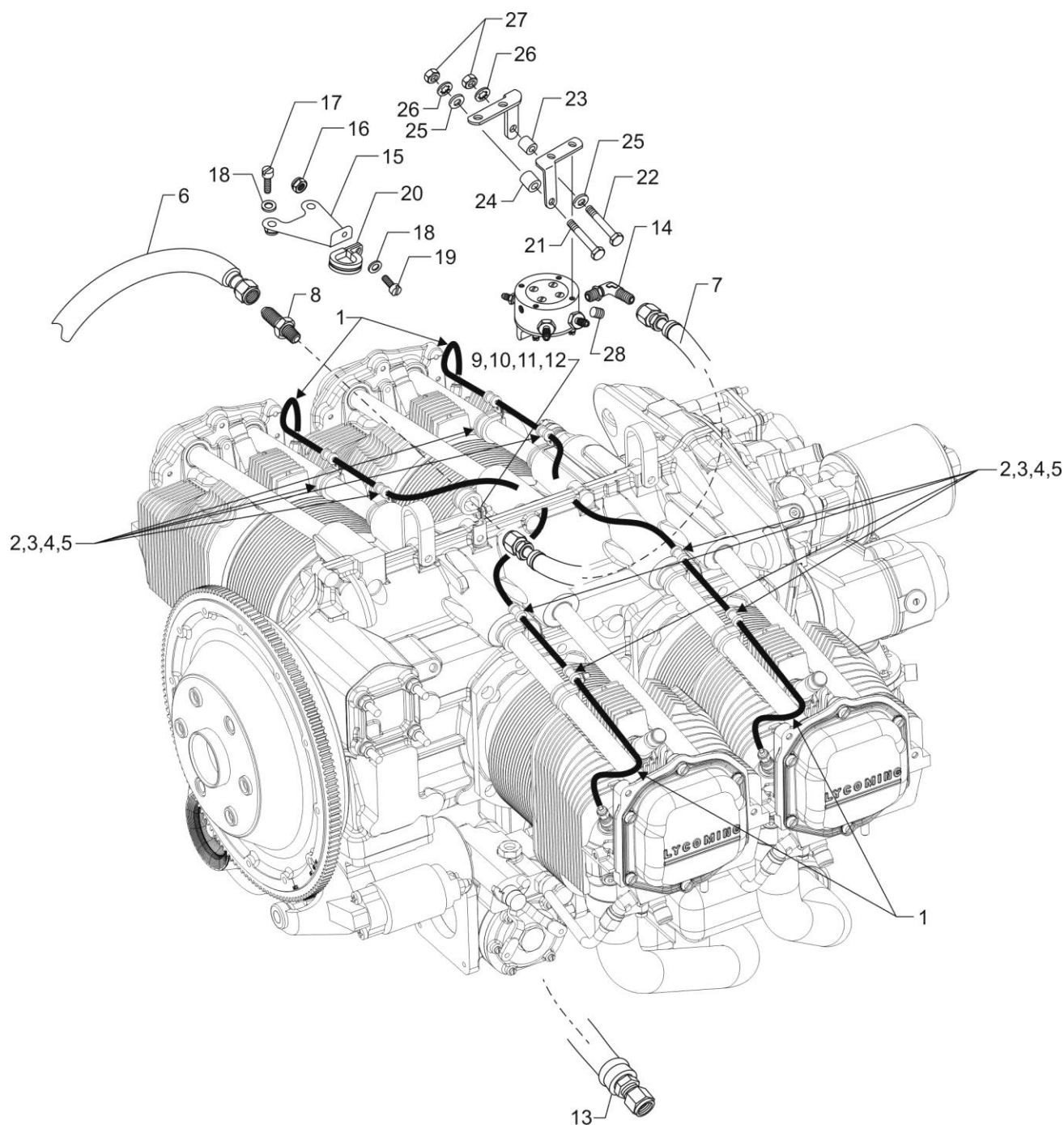
| Figure Item                                                                                                                                                                                                                                                                                           | Code | Part Number | Description                             | Units per Assembly |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------|-----------------------------------------|--------------------|
| 1                                                                                                                                                                                                                                                                                                     |      | 66224       | GASKET, Fuel injector                   | 2                  |
| 2                                                                                                                                                                                                                                                                                                     |      | 73161       | SPACER, Fuel injector                   | 1                  |
| 3                                                                                                                                                                                                                                                                                                     | V *  | 61J26428    | FUEL INJECTOR, RSA-5AD1, V AV 2576536-2 | 1                  |
| 4                                                                                                                                                                                                                                                                                                     |      | STD-35      | WASHER, 5/16 plain                      | 4                  |
| 5                                                                                                                                                                                                                                                                                                     |      | STD-475     | WASHER, 5/16 lock, internal teeth       | 4                  |
| 6                                                                                                                                                                                                                                                                                                     |      | STD-1410    | NUT, 5/16-18 plain                      | 4                  |
| 7                                                                                                                                                                                                                                                                                                     |      | 63C26450    | NOZZLE, Injection                       | 4                  |
| 8                                                                                                                                                                                                                                                                                                     |      | 63B26449    | MANIFOLD ASSEMBLY, Fuel                 | 1                  |
|                                                                                                                                                                                                                                                                                                       |      | 63B22997    | MANIFOLD ASSEMBLY, Fuel                 | 1                  |
|                                                                                                                                                                                                                                                                                                       |      | 63B26706    | MANIFOLD ASSEMBLY, Fuel                 | 1                  |
|                                                                                                                                                                                                                                                                                                       |      | 63B26716    | MANIFOLD ASSEMBLY, Fuel                 | 1                  |
|                                                                                                                                                                                                                                                                                                       |      | 63B26756    | MANIFOLD ASSEMBLY, Fuel                 | 1                  |
|                                                                                                                                                                                                                                                                                                       |      | 63B26715    | MANIFOLD ASSEMBLY, Fuel                 | 1                  |
| 9                                                                                                                                                                                                                                                                                                     |      | MS20822-4   | ELBOW, 1/4 tube, 1/8 NPT, 90°           | 1                  |
| 10                                                                                                                                                                                                                                                                                                    |      | 02G21382    | NIPPLE, Nozzle pressure gage            | 1 or 0             |
| 11                                                                                                                                                                                                                                                                                                    |      | STD-148     | NIPPLE, Union, 1/8 NPT                  | 4                  |
| 12                                                                                                                                                                                                                                                                                                    |      | 1102        | PLUG, 1/8-27 NPT, allen head            | 2 or 3             |
| 13                                                                                                                                                                                                                                                                                                    |      | 73966       | SPACER, Fuel manifold                   | 2                  |
| 14                                                                                                                                                                                                                                                                                                    |      | 07A23031    | BRACKET, Fuel manifold                  | 1                  |
| 15                                                                                                                                                                                                                                                                                                    |      | 07A23032    | BRACKET, Fuel manifold                  | 1                  |
| 16                                                                                                                                                                                                                                                                                                    |      | STD-82      | SCREW, No. 10-24 x 1/2 long, fill. Head | 4                  |
| 17                                                                                                                                                                                                                                                                                                    |      | STD-251     | WASHER, No. 10 lock, internal teeth     | 4                  |
| 18                                                                                                                                                                                                                                                                                                    | **   | 07A22995    | BRACKET, Fuel manifold                  | 1                  |
| 19                                                                                                                                                                                                                                                                                                    | **   | 07A22996    | BRACKET, Fuel manifold                  | 1                  |
| <p><b>V</b> Vendor Prime Manufacturer part</p> <p><b>*</b> Refer to SI 1532 for a list of approved alternate Fuel Injectors.</p> <p><b>**</b> Use brackets 07A22995 and 07A22996 for inverted fuel manifold. Refer to the latest revision of Service Instruction No. 1502 for additional details.</p> |      |             |                                         |                    |



**Figure 22**  
**Fuel Lines, Fuel Hoses and Attaching Parts**

**Fuel Distribution****FIGURE 22 - FUEL LINES, FUEL HOSES AND ATTACHING PARTS**

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

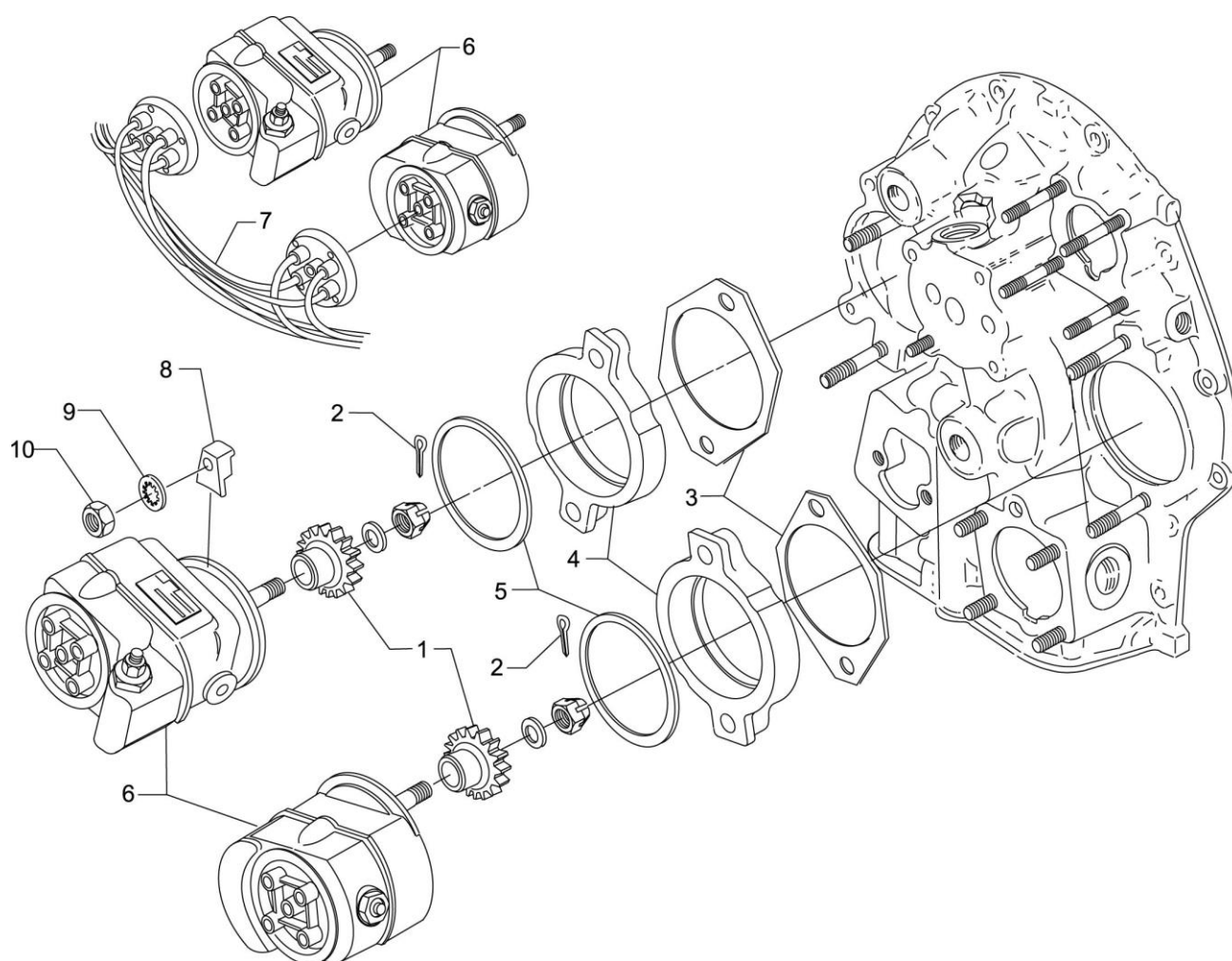


**Figure 23**  
**Fuel Lines, Fuel Hoses and Attaching Parts (Inverted Manifold)**

## Fuel Distribution

**FIGURE 23 - FUEL LINES, FUEL HOSES AND ATTACHING PARTS (INVERTED MANIFOLD)**

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

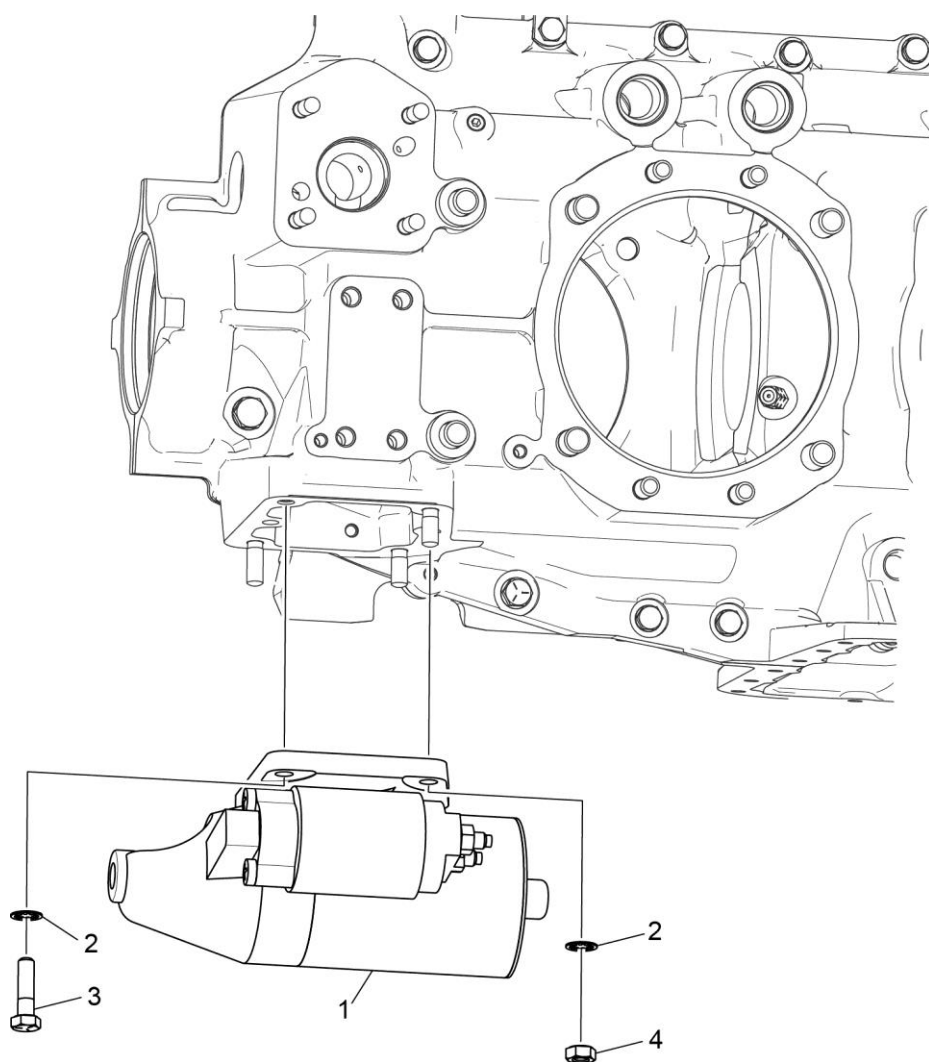


**Figure 24**  
**Magnetos, Magneto Drives, Harnesses and Spark Plugs**

## Distribution

**FIGURE 24 -MAGNETOS, MAGNETO DRIVES, HARNESSSES AND SPARK PLUGS**

| Figure Item                                                                                                                                                                                                                       | Code      | Part Number    | Description                                           | Units per Assembly |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------|-------------------------------------------------------|--------------------|
| 1                                                                                                                                                                                                                                 |           | 61665          | GEAR, Magneto, impulse                                | 2                  |
| 2                                                                                                                                                                                                                                 |           | MS9245-44      | COTTER PIN, 3/32 diameter x 5/8 long                  | 2                  |
| 3                                                                                                                                                                                                                                 |           | 62224          | GASKET, Magneto adapter                               | 2                  |
| 4                                                                                                                                                                                                                                 |           | LW-12706       | ADAPTER, Magneto, impulse coupling                    | 2                  |
| 5                                                                                                                                                                                                                                 |           | LW-12681       | GASKET, Magneto                                       | 2                  |
| 6                                                                                                                                                                                                                                 | <b>V</b>  | 66GC20SFNN     | MAGNETO, Impulse, right and left, Slick <b>V</b> 4371 | 2                  |
|                                                                                                                                                                                                                                   | <b>*</b>  | 66GHC20SANN    | MAGNETO, (ES4371)                                     | 2                  |
| 7                                                                                                                                                                                                                                 | <b>V</b>  | 67P20408       | HARNESS ASSEMBLY, Right, Slick <b>V</b> M2512         | 1                  |
|                                                                                                                                                                                                                                   | <b>V</b>  | 67P20409       | HARNESS ASSEMBLY, Left, Slick <b>V</b> M2513          | 1                  |
| 8                                                                                                                                                                                                                                 |           | 66M21195       | CLAMP, Magneto                                        | 4                  |
| 9                                                                                                                                                                                                                                 |           | STD-475        | WASHER, 5/16 lock, internal teeth                     | 4                  |
| 10                                                                                                                                                                                                                                |           | STD-1410       | NUT, 5/16-18 plain                                    | 4                  |
|                                                                                                                                                                                                                                   | <b>**</b> | 76734          | ZIP STRAP                                             | 4                  |
|                                                                                                                                                                                                                                   | <b>**</b> | 72815          | BRACKET, Support clamp, 90°                           | 1                  |
|                                                                                                                                                                                                                                   | <b>**</b> | 71824          | CLAMP, Rubber dip, Two wire                           | 3                  |
|                                                                                                                                                                                                                                   | <b>**</b> | LW-16266-25-25 | CLAMP, One wire                                       | 2                  |
| <p><b>*</b> Refer to the latest revision of Service Instruction No. 1443 for a listing of approved alternate ignition systems.</p> <p><b>V</b> Vendor Prime Manufacturer part</p> <p><b>**</b> These parts are shipped loose.</p> |           |                |                                                       |                    |



**Figure 26**  
**Starter Motor and Attaching Parts**

## Cranking

**FIGURE 26 - STARTER MOTOR AND ATTACHING PARTS**

| Figure Item                                                                                                                                                                                                                    | Code | Part Number | Description                           | Units per Assembly |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------|---------------------------------------|--------------------|
| 1                                                                                                                                                                                                                              | V    | 31A22104    | STARTER, Sky-Tec, V 149-12LS          | 1                  |
|                                                                                                                                                                                                                                | V    | 31B22105    | STARTER, Sky-Tec, V 149-24LS          | 1                  |
|                                                                                                                                                                                                                                | V    | 31B26554    | STARTER, Sky-Tec, V 149NL/EC          | 1                  |
| 2                                                                                                                                                                                                                              |      | STD-475     | WASHER, 5/16 lock, internal teeth     | 4                  |
| 3                                                                                                                                                                                                                              |      | LW-31-0.94  | BOLT, 5/16-18 x 15/16 long, hex. head | 1                  |
| 4                                                                                                                                                                                                                              |      | STD-1410    | NUT, 5/16-18 plain                    | 3                  |
| <p><b>V</b> Vendor Prime Manufacturer part</p> <p><b>NOTE:</b> See latest revision of Lycoming Service Instruction No. 1154 for complete listing of FAA approved starters, generators, alternators, regulators and relays.</p> |      |             |                                       |                    |

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## SERVICE KIT SECTION

### SEAL AND GASKET SET

| PART NO.       | PART NAME                                    | Qty.     |
|----------------|----------------------------------------------|----------|
| <b>75439-1</b> | <b>KIT - SEAL AND GASKET SET</b>             | <b>1</b> |
| AN901-8A       | GASKET, Metal tube connect seal              | 1        |
| LW-10332       | LOCKPLATE, Crankshaft gear                   | 1        |
| LW-12272       | LOCKPLATE, Shroud tube                       | 4        |
| LW-12681       | GASKET, Magneto                              | 2        |
| 06B23862       | GASKET, Oil filter adapter                   | 1        |
| LW-13353       | GASKET, Oil sump                             | 1        |
| LW-13792       | SEAL, Crankshaft oil                         | 1        |
| LW-14260       | SEAL, Tachometer drive oil                   | 1        |
| LW-14995       | SPRING, Shroud tube                          | 4        |
| LW-18639       | LOCKPLATE, Crankshaft gear                   | 1        |
| LW-18661       | SEAL, Shroud tube                            | 8        |
| STD-475        | WASHER, 5/16 lock, internal teeth            | 4        |
| STD-213        | SEAL, Oil, 3/4 I.D. x 1-3/8 O.D.             | 1        |
| 06A19956       | SEAL, Oil, 7/8 I.D. x 1-1/2 O.D.             | 1        |
| 06E19769-0.63  | GASKET, Annular, 5/8 I.D.                    | 2        |
| 06E19769-1.00  | GASKET, Annular, 1.00 I.D.                   | 1        |
| 06E19769-1.25  | GASKET, Annular, 1-1/4 I.D.                  | 1        |
| 1691-C         | GASKET, Fuel pump                            | 1        |
| 60096          | GASKET, Fuel pump                            | 1        |
| 61173          | GASKET, Oil pressure housing                 | 1        |
| 61183          | GASKET, Accessory adapter                    | 1        |
| 62224          | GASKET, Magneto adapter                      | 3        |
| 66224          | GASKET, Fuel injector                        | 2        |
| 68315          | GASKET, Accessory drive adapter              | 1        |
| 69164          | GASKET, Fuel pump adapter                    | 1        |
| 69345          | SPACER                                       | 4        |
| 69551          | GASKET, Accessory drive adapter              | 1        |
| 70310          | SEAL, Shroud tube                            | 8        |
| 70455          | GASKET, 3/4 I.D. x 1-1/8 O.D.                | 1        |
| 71481          | RING, Oil seal, 3/32 diameter x 4-27/32 I.D. | 4        |
| 71973          | GASKET, 2 bolt flange                        | 4        |
| 72053          | GASKET, Governor                             | 2        |
| 72059          | GASKET, Oil level gage                       | 1        |
| 72075          | SEAL, Oil, 3/32 section x 29/64 I.D.         | 6        |

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

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| <b>75439-1</b> | <b>KIT – SEAL AND GASKET SET (CONT.)</b> | <b>1</b> |
| 72078          | LOCKPLATE, 5/16 bolt                     | 2        |
| 72091          | RING, Oil seal, 3/8 I.D. x 7/64 diameter | 2        |
| 72220          | GASKET, Oil level gage                   | 1        |
| 72312          | RING, Oil seal, 1.00 x 1-5/16            | 1        |
| 72829          | LOCKPLATE, 1/4 bolt x 1-3/4              | 1        |
| 73383          | LOCKPLATE, 5/16 bolt x 1.00              | 2        |
| 73817          | LOCKPLATE, 1/4 bolt x 1-3/4              | 2        |
| 73818          | GASKET, Accessory housing                | 1        |
| 74065          | RING, Oil level gage seal                | 1        |
| 74068          | RING, Oil level gage plug                | 1        |
| 06B26669       | GASKET, Rocker box cover (Silicone)      | 4        |
| 76510          | GASKET, Oil cooler bypass valve          | 1        |
| 76940          | SEAL, Crankshaft                         | 1        |
| 77154          | GASKET, Carburetor                       | 1        |
| 77611          | GASKET, Exhaust flange                   | 4        |
| 8313           | GASKET, Vacuum pump                      | 1        |
| 77569          | RING, Seal, intake pipe                  | 4        |
| MS29512-04     | "O" RING                                 | 1        |
| 06A23493       | SEAL, Shroud tube                        | 8        |

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

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| 14D23912   | CYLINDER ASSEMBLY                            | 1    |
| 17B23936   | VALVE, Exhaust                               | 1    |
| 17A23938   | VALVE, Intake                                | 1    |
| LW-11800   | SPRING, Valve, outer                         | 2    |
| LW-11795   | SPRING, Valve, inner                         | 2    |
| LW-10077   | SEAT, Valve spring, upper, intake            | 1    |
| LW-16475   | SEAT, Valve spring, upper, exhaust           | 1    |
| 65441      | SEAT, Valve spring, lower, intake            | 1    |
| LW-13323   | SEAT, Valve spring, lower, exhaust           | 1    |
| 60009      | KEY, Valve, intake                           | 2    |
| 17C21191   | KEY, Valve, exhaust                          | 2    |
| 17C19386   | CAP, Valve stem, exhaust                     | 1    |
| MS20823-6D | ELBOW, 45°, 3/8 flared tube                  | 1    |
| 1102       | PLUG, 1/8-27 NPT, allen head                 | 2    |
| 14D23912   | PISTON                                       | 1    |
| 74241      | RING, Piston, compression                    | 2    |
| 14H29884   | RING, Piston, oil regulating                 | 1    |
| LW-14078   | PIN, Piston                                  | 1    |
| 71481      | RING, Oil seal, 3/32 diameter x 4-27/32 I.D. | 1    |
| LW-18661   | SEAL, Shroud tube                            | 2    |
| 70310      | SEAL, Shroud tube                            | 2    |
| 06B26669   | GASKET, Rocker box cover (Silicone)          | 1    |
| 72198      | PLUG, Piston pin                             | 2    |
| 77611      | GASKET, Exhaust flange                       | 1    |
| 71973      | GASKET, 2 bolt flange                        | 1    |
| 06A23493   | SEAL, Shroud tube                            | 2    |
| LW-12272   | LOCKPLATE, Shroud tube                       | 1    |
| SSP-299    | TAG, Use of piston pin plugs                 | 1    |

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