

# TEO-540-C1A Engine Illustrated Parts Catalog

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**August 2023**

**| PC-TEO-540-C1A Rev. 5**

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652 Oliver Street  
Williamsport, PA 17701

# TEO-540-C1A Engine Illustrated Parts Catalog

Lycoming Part Number: PC-TEO-540-C1A Rev. 5

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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	January 2019
Rev. 1	<p><b>Chapter 72-30</b></p> <ul style="list-style-type: none"> <li>• Revised Figure 9 to add Fuel Injector O-Rings and Fuel Injector Retainer</li> <li>• Revised parts list for Figure 9 to add item 12, P/N 06C29094-CT Fuel Injector O-Ring Kit and item 13, P/N 03A29095-CT Fuel Injector Retainer</li> </ul> <p><b>Chapter 72-50</b></p> <ul style="list-style-type: none"> <li>• Revised the parts list for Figure 17 - Changed P/N LW-16783-12 to LW-16783-32</li> <li>• Revised Figure 18 to indicate 4 - LW-25-1.25 and 6 - LW-25-1.00 will be installed in the induction housing instead of 10 – LW-25-1.00 bolts and added a NOTE to show the installation location of the four LW-25-1.25 bolts</li> <li>• Revised the parts list for Figure 18: <ul style="list-style-type: none"> <li>○ Changed the quantity of item 11, P/N 1102 from 3 to 4</li> <li>○ Changed the quantity of item 29, P/N LW-25-1.00 from 10 to 6</li> <li>○ Added a new item 30, P/N LW-25-1.25 with a quantity of 4</li> <li>○ Added a NOTE to indicate installation location of the four LW-25-1.25 bolts</li> </ul> </li> </ul> <p><b>Chapter 72-60</b></p> <ul style="list-style-type: none"> <li>• Revised Figure 19 to add item 18, O-Ring P/N AS3209-151</li> <li>• Revised parts list for Figure 19 to add item 18, P/N O-Ring P/N AS3209-151</li> </ul> <p><b>Chapter 73-10</b></p> <ul style="list-style-type: none"> <li>• Revised Figure 25 to indicate correct installation of items 18 and 19, Fuel injector fire sleeves</li> <li>• Revised the parts list for Figure 25: <ul style="list-style-type: none"> <li>○ Added additional explanation for installation of items 18 and 19, Fuel injector fire sleeves</li> <li>○ Changed the part number for item 22, Fuel regulator adapter manifold assembly from 02K26300 to 02K29101</li> </ul> </li> </ul> <p><b>Chapter 73-20</b></p> <ul style="list-style-type: none"> <li>• Revised Figure 26 to show new sensor assembly with lead an connector</li> <li>• Revised the parts list for Figure 26: <ul style="list-style-type: none"> <li>○ Changed the part number for item 1, Regulator assembly from 02K26300 to 02K29101</li> <li>○ Changed the part number for item 6, Sensor from 60E26311-CT to 60E29080</li> </ul> </li> </ul>	May 2019

Rev No.	Revision Changes	Issue Date
Rev. 1 (Cont.)	<p><b>Chapter 74-20</b></p> <ul style="list-style-type: none"> <li>• Revised the parts list for Figure 27:                             <ul style="list-style-type: none"> <li>○ Changed the part number for item 6, Sensor from 60E26311-CT to 60E29080</li> <li>○ Changed the part number for item 7, Sensor from 60E26312-CT to 60E29081</li> <li>○ Changed the part number for item 9, Sensor from 60E26661-CT to 60E29082</li> </ul> </li> <li>• Revised the parts list for Figure 29, changed ECU Assembly P/N from 60B29098 to 60B29156</li> <li>• Revised Figures 30A and 30B to indicate change to item 1, Wiring Harness</li> <li>• Revised the parts list for Figures 30A and 30B:                             <ul style="list-style-type: none"> <li>○ Changed the part number for item 1, Wiring Harness from 60A28332 to 60A29063</li> <li>○ Deleted item 24, LW-16266-10-19</li> </ul> </li> </ul> <p><b>Chapter 80-10</b></p> <ul style="list-style-type: none"> <li>• Revised Figure 33 to show the engine in a normal, upright position</li> </ul>	May 2019
Rev. 2	<p><b>Chapter 72-20</b></p> <ul style="list-style-type: none"> <li>• Corrected the descriptions of items 21 and 22 in the parts list for Figure 5 to indicate the camshaft was for use with flat tappets</li> </ul> <p><b>Chapter 72-30</b></p> <ul style="list-style-type: none"> <li>• Revised Figure 9 to show stud P/N 31C-13, insert P/N 69260 and identify stud P/N 25C-8</li> <li>• Revised the parts list for Figure 9 to add part number 16A30200-01 as an approved alternate to item 1 and added items 5, 6, and 7 and renumbered remaining items in list</li> <li>• Revised Figure 10 to indicate correct position of item 18, Washer P/N 66728</li> </ul> <p><b>Chapter 72-40</b></p> <ul style="list-style-type: none"> <li>• Revised Figure 13 to show a single V-Band Coupling P/N LW-12093-6 as the coupling to attach the tailpipe to the wastegate exit</li> <li>• Changed the part number for item 1 in the parts list for Figure 13 from 07E28327 to 07E29522</li> <li>• Changed the quantity for item 25 from 2 to 1 in the parts list for Figure 13</li> <li>• Revised the footnote regarding item 25, the V-Band Coupling P/N LW-12093-6 in the parts list for Figure 13</li> <li>• Revised Figure 14 to show the solenoid o-rings</li> <li>• Changed the part number for item 19 from 03D28330 to 03D29691 in the parts list for Figure 15</li> <li>• Revised Figure 16 to indicate availability of sensor, transducer, hose, and clamps</li> <li>• Revised the parts list for Figure 16 to add items 7 thru 10 - sensor, transducer, hose, and clamps</li> </ul> <p><b>Chapter 72-50</b></p> <ul style="list-style-type: none"> <li>• Revised the part number for item 4 – Oil Level Gage Assembly</li> </ul>	June 2021

Rev No.	Revision Changes	Issue Date
Rev. 2 (Cont.)	<p><b>Chapter 72-60</b></p> <ul style="list-style-type: none"> <li>• Revised Figure 21 to indicate an item number for the fuel filter O-Ring</li> <li>• Revised the parts list for Figure 21, adding a new item number 9 and renumbering the remainder of the list</li> </ul> <p><b>Chapter 73-10</b></p> <ul style="list-style-type: none"> <li>• Revised the part number for item 6 to LW-25-0.63</li> <li>• Added new Fuel Injector P/N 61X29461-CT as an approved alternate for P/N 61X26294-CT</li> <li>• Added a footnote for instructions when replacing Fuel Injector P/N 61X26294-CT with P/N 61X29461-CT</li> </ul> <p><b>Chapter 74-20</b></p> <ul style="list-style-type: none"> <li>• Revised the parts list for Figure 27: <ul style="list-style-type: none"> <li>○ Changed the P/N for the Fuel Pressure Sensor from 60E29080 to 60E29660</li> <li>○ Changed the P/N for the Oil Pressure Sensor from 60E29081 to 60E29661</li> <li>○ Changed the P/N for the Air Pressure Sensor from 60E29082 to 60E29662</li> </ul> </li> <li>• Revised the parts list for Figure 29: <ul style="list-style-type: none"> <li>○ Changed ECU Assembly P/N from 60B29156 to 60B29438</li> <li>○ Added a new ECU Assembly P/N 60B29659</li> <li>○ Added a footnote for application of the two different ECU Assembly part numbers</li> </ul> </li> <li>• Revised the Quantity of items 51 and 52 in the parts list for Figure 30A, B</li> <li>• Added new P/N 1182-Q4 for Spark Plugs in the parts list for Figure 30A, B</li> <li>• Revised the parts list for Figure 31, added a new alternator assembly for optional 3.65:1 drive ratio</li> </ul> <p><b>Service Kit Section</b></p> <ul style="list-style-type: none"> <li>• Added P/N 16A30200-0101 as an approved alternate to P/N 16G26682-01 for the Cylinder, Piston, and Ring Assembly Kit P/N <b>05K26774</b></li> </ul>	June 2021
Rev. 3	<p><b>Information Page (back of Title Page)</b></p> <ul style="list-style-type: none"> <li>• Revised the contact information for Product Support</li> </ul> <p><b>Introduction</b></p> <ul style="list-style-type: none"> <li>• Revised the CAUTION at the beginning of the chapter</li> <li>• Revised the How to Order Parts section</li> </ul> <p><b>Chapter 24-30</b></p> <ul style="list-style-type: none"> <li>• Revised Figure 1 to indicate more accurate representation of alternator bracket configuration</li> <li>• Moved Alternator Assembly and Belts from Chapter 74-20 to Chapter 24-30 and renumbered subsequent figures accordingly</li> </ul>	August 2021

Rev No.	Revision Changes	Issue Date
Rev. 3 (Cont.)	<p><b>Chapter 72-20</b></p> <ul style="list-style-type: none"> <li>Revised the footnote regarding oil pressure relief valve spring selection in the parts list for Figure 5</li> </ul> <p><b>Chapter 72-30</b></p> <ul style="list-style-type: none"> <li>Revised the parts list for Figure 10 to change the P/N for item 13 – Fuel Injector Adapter from 02E26267 to 02E29797</li> </ul> <p><b>Chapter 72-40</b></p> <ul style="list-style-type: none"> <li>Revised Figure 15 to add O-rings P/N MS29512-04 and MS29512-06 and adjusted item numbering to account for added parts</li> <li>Revised the parts list for Figure 15:                             <ul style="list-style-type: none"> <li>Added a new Solenoid Valve P/N 02L29677</li> <li>Added O-rings P/N MS29512-04 and MS29512-06 and adjusted parts list item numbering to account for added parts</li> <li>Added a footnote for application of the two different Solenoid Valve part numbers</li> </ul> </li> </ul> <p><b>Chapter 72-60</b></p> <ul style="list-style-type: none"> <li>Revised Figure 20 excluding the Permanent Magnet Alternator</li> <li>Revised the parts list for Figure 20 excluding the Permanent Magnet Alternator, fastening hardware, and PMA O-ring</li> </ul> <p><b>Chapter 73-10</b></p> <ul style="list-style-type: none"> <li>Revised the parts list for Figure 26 to change the P/N for item 1 – Fuel Injector Adapter from 02E26267 to 02E29797</li> </ul> <p><b>Chapter 74-20</b></p> <ul style="list-style-type: none"> <li>Added new Figure 32 and parts list for Permanent Magnet Alternator</li> </ul> <p><b>Service Kit Section</b></p> <ul style="list-style-type: none"> <li>Revised the parts list for the Cylinder, Piston and Ring Assembly to change the P/N for the Fuel Injector Adapter from 02E26267 to 02E29797</li> </ul>	August 2021
Rev. 4	<p><b>Chapter 24-30</b></p> <ul style="list-style-type: none"> <li>Added the HET P/N to the description for the alternator, Lycoming P/N 32C28550, in the parts list for Figure 2</li> </ul> <p><b>Chapter 72-30</b></p> <ul style="list-style-type: none"> <li>Revised Figure 10 and the parts list for Figure 10 to indicate fuel injector differences</li> <li>Added part number LW-15592-5-04 to the parts list for Figure 12</li> <li>Added new footnote to the parts list for Figure 12</li> </ul> <p><b>Chapter 72-40</b></p> <ul style="list-style-type: none"> <li>Revised Figure 16 to show more detail for item 4 and reverse the numerical identifiers for items 4 and 5</li> </ul> <p><b>Chapter 72-50</b></p> <ul style="list-style-type: none"> <li>Changed the P/N for item 4 in the parts list for Figure 18 from LW-16783-33 to LW-16783-34</li> </ul>	November 2021

Rev No.	Revision Changes	Issue Date
Rev. 4 (Cont.)	<p><b>Chapter 72-60</b></p> <ul style="list-style-type: none"> <li>• Changed the part number for item 6 in the parts list for Figure 24 from 53E22144 to 53E29909</li> </ul> <p><b>Chapter 73-10</b></p> <ul style="list-style-type: none"> <li>• Revised the parts list for Figure 25: <ul style="list-style-type: none"> <li>○ Changed the part number for item 18 from 01M26558 to 01M29868</li> <li>○ Changed the part number for item 19 from 01M26622 to 01M29869</li> </ul> </li> <li>• Revised the parts list for Figure 26: <ul style="list-style-type: none"> <li>○ Changed the part number for item 17 from 01M26558 to 01M29868</li> <li>○ Changed the part number for item 18 from 01M26622 to 01M29869</li> </ul> </li> </ul> <p><b>Chapter 74-20</b></p> <ul style="list-style-type: none"> <li>• Added a new ECU Assembly P/N 60B29726 to the parts list for Figure 30</li> <li>• Added alternate DLU P/N 60B29462 to the parts list for Figure 30</li> </ul>	November 2021
Rev. 5	<p><b>Chapter 24-30</b></p> <ul style="list-style-type: none"> <li>• Revised the Description for alternator belt part number 37C28529-985</li> <li>• Added new alternator belt part number 37C28529-955 for use with pulley P/N 36B29585</li> </ul> <p><b>Chapter 72-30</b></p> <ul style="list-style-type: none"> <li>• Revised the part number for item 9, Piston Ring, in the parts list for Figure 9</li> <li>• Revised the part number for item 11, knock sensor, in the parts list for Figure 10</li> <li>• Revised the part number for item 18, Fuel Injector from 61X26294-CT to 61X29461-CT, in the parts list for Figure 10</li> <li>• Revised the part numbers for items 3 and 4, valve springs, in the parts list for Figure 11</li> </ul> <p><b>Chapter 72-40</b></p> <ul style="list-style-type: none"> <li>• Revised Figure 13</li> <li>• Changed the part number for item 24, Exhaust Bypass Valve, from LW-12778 to 47E29907 in the parts list for Figure 14</li> <li>• Revised Figure 15</li> <li>• Changed the quantity for O-ring P/N MS29512-04 from 1 to 2 in the parts list for Figure 15</li> <li>• Changed the part number for item 4, clamp, from LW-15570 to 07C29900 in the parts list for Figure 16</li> </ul> <p><b>Chapter 72-60</b></p> <ul style="list-style-type: none"> <li>• Added a new Oil Pump Body Assembly P/N 51A29876 to the parts list for Figure 21</li> <li>• Changed the part number for item 5, oil filter, from LW-13215 to LW-13216 in the parts list for Figure 25</li> <li>• Added part number 53E22144 as an alternate for item 6 in the parts list for Figure 25</li> </ul>	August 2023

Rev No.	Revision Changes	Issue Date
Rev. 5 (cont.)	<p><b>Chapter 73-20</b></p> <ul style="list-style-type: none"> <li>• Revised Figure 27 to add 3 O Rings</li> <li>• Revised parts list for Figure 27 to add 3 O Rings</li> <li>• Changed the part number for item 7, Fuel pressure sensor, from 60E29080 to 60E29660 in the parts list for Figure 27</li> </ul> <p><b>Chapter 74-20</b></p> <ul style="list-style-type: none"> <li>• Revised Figure 28 to indicate new item 9, O-ring and renumbered subsequent items</li> <li>• Revised the part numbers for items 3 and 4, sensor, in the parts list for Figure 28 Revised the parts list for Figure 28 to add new item 9, O-ring P/N AS3209-017 and renumbered subsequent items</li> <li>• Revised Figure 30 to add new item 4</li> <li>• Revised the part number for item 1, from 60B29438 to 60B29705, in the parts list for Figure 30</li> <li>• Changed the descriptions of both DLU Assemblies, item 3, in the parts list for Figure 30</li> <li>• Added new item 4 to the parts list for Figure 30</li> </ul> <p><b>Service Kit Section</b></p> <ul style="list-style-type: none"> <li>• Deleted items from Seal and Gasket Set Parts List</li> <li>• Changed item number 14H21990 to 14H29889 in the Cylinder, Piston, and Ring Assembly parts list</li> <li>• Deleted 02E29797 from the Cylinder, Piston, and Ring Assembly parts list</li> </ul>	August 2023



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## Introduction

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

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

### **Purpose of this Catalog**

This Illustrated Parts Catalog (IPC) contains a complete list of spare parts for the Lycoming TEO-540-C1A engine model.

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

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

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

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

The ATA format specifies the subject matter for each chapter-section. According to the ATA Standards, the following chapters apply to the TEO-540-C1A Illustrated Parts Catalog:

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

**EXAMPLE:      74      —      20**

Chapter                                  Section

**Ignition                                  Distribution**

**NOTICE:** Refer to the IPC Table of Contents for the sub-systems identified in each section.

### **Numerical Index**

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

### **Description column**

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

### Units per Assembly Column

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

### Lockwire, Safety Cable

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

### Vendor Accessories

Parts coverage of Vendor Accessories used on Lycoming engines 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.

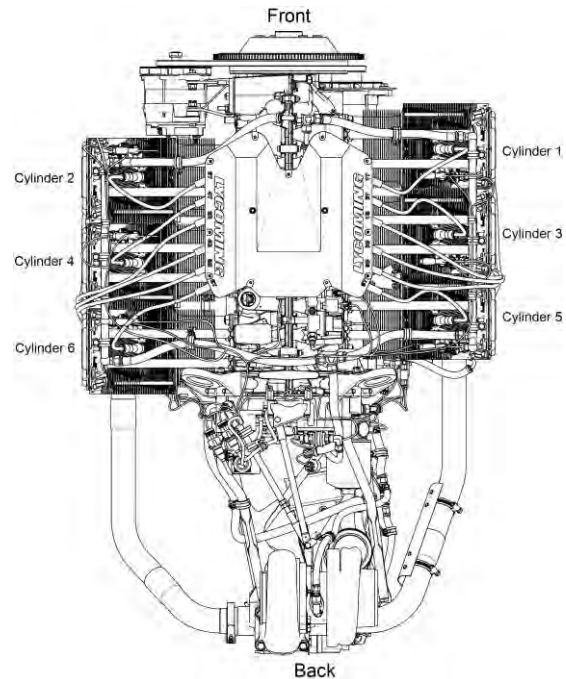
Any reference in this document to the suppliers/part manufacturer’s product, by name, trademark, part number or other description is solely for the purpose of identification and does not indicate or infer that Lycoming accepts responsibility for quality control and/or airworthiness of parts, which do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

### Environmental Compliance

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

### Perspective of References

In this manual, all references to locations of various components will be designated as if viewing the engine from the rear (or anti-propeller) end. the front of the engine is the propeller end and the oil sump is on the bottom of the engine. Cylinders are numbered from front to rear with the odd-numbered cylinders on the right-hand side. the firing order for this engine is 1-4-5-2-3-6.



**Top View of Engine**

## How to Order Parts

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

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

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

### **NOTE:**

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

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## Abbreviations and Acronyms

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

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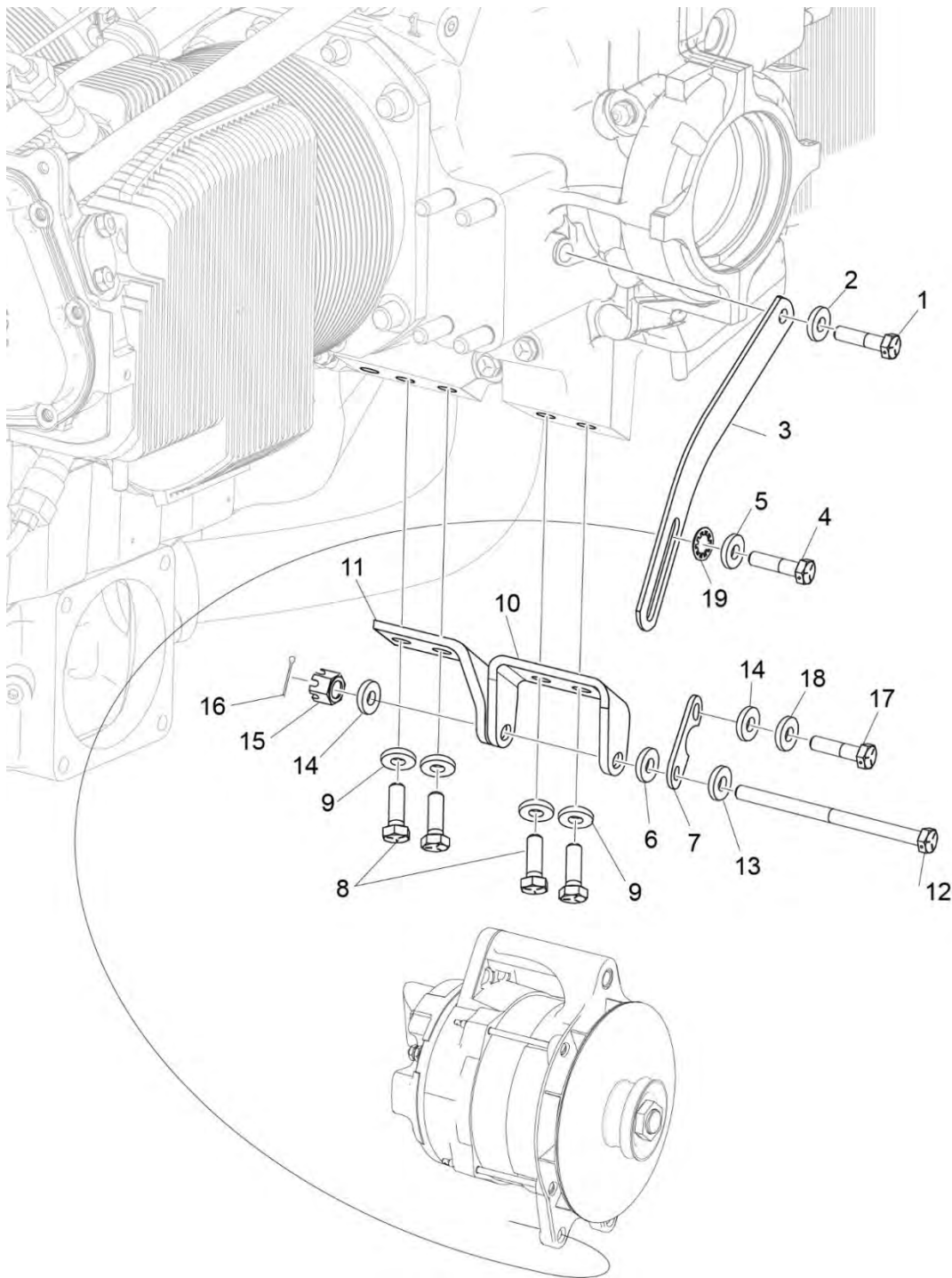


### Oversize and Undersize Parts Listing

PART NO.	DESCRIPTION	OVERSIZE (IN.)					UNDERSIZE (IN.)		
		P05 .005	P10 .010	P20 .020	P30 .030	P50 .050	M03 .003	M06 .006	M10 .010
18B23885	BEARING, Front Crankshaft						X	X	X
18E23886	BEARING, Crankshaft						X	X	X
18N26106	BEARING, Connecting Rod						X	X	X
71903-A †	BUSHING, Counterweight Dynamic	--	--	--	--	--	--	--	--
72155-S	BUSHING, Prop Flange, short	X							
75656-S	BUSHING, Prop Flange, long	X							
75657-S	BUSHING, Prop Flange indexing	X							
66670	BUSHING, Rocker Shaft		X						
STD-1065	DOWEL, Crankshaft		X						
69796	DOWEL, Crankshaft bearing	X							
75838	GUIDE, Valve exhaust				X				
66713	GUIDE, Valve intake				X				
LW-15628	SEAL, Crankshaft oil					X			
66796	INSERT, Spark Plug		X						

† - 71903-A is the undersize part number. When ordering, do not specify an undersize code letter

**NOTICE:** When ordering oversize and undersize parts, be sure to specify the required oversize and undersize dimension along with the proper part number. For example, to order bearing Part Number (P/N) 18E23886 bearing in 0.003 in. undersize, order P/N 18E23886-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.



031BT

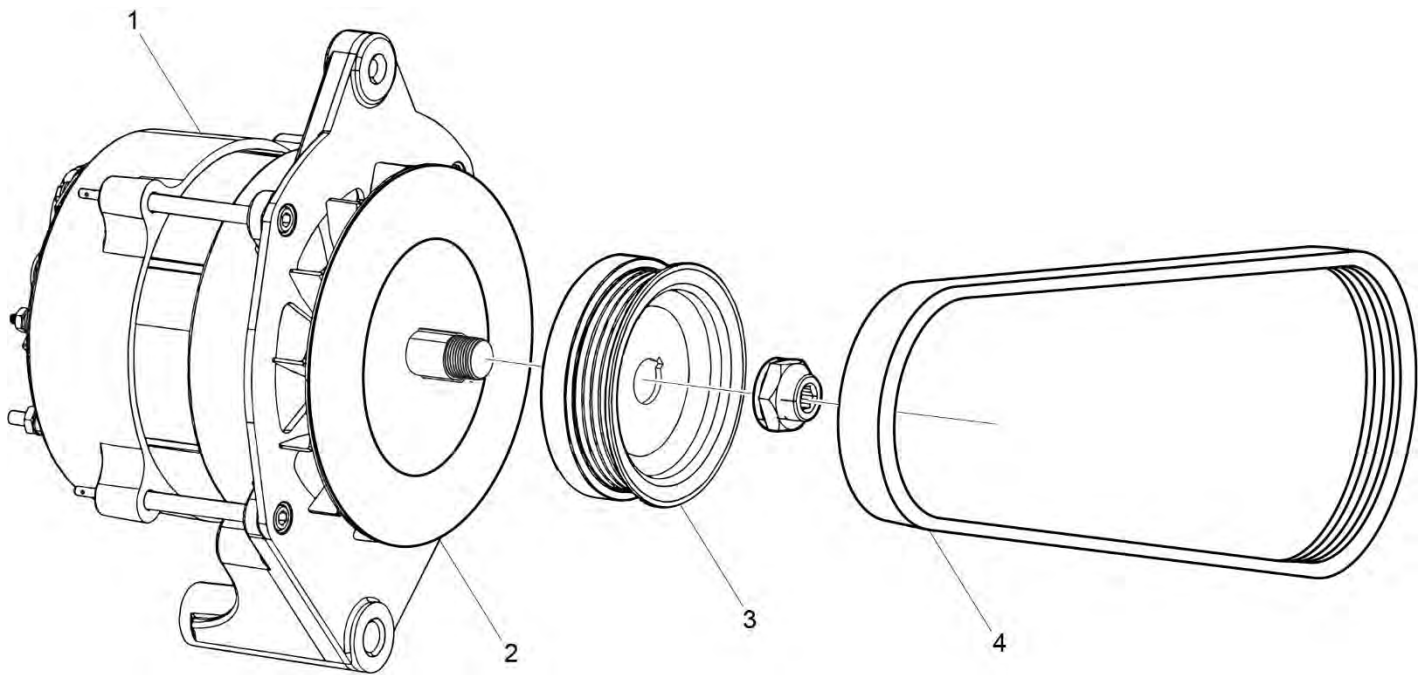
**Figure 1**

**Alternator Mounting and Attaching Parts**

**NOTE:** For Permanent Magnetic Alternator, Refer to 74-20  
(Ignition Distribution System)

**DC GENERATION**  
**Figure 1 - Alternator Mounting and Attaching Parts**

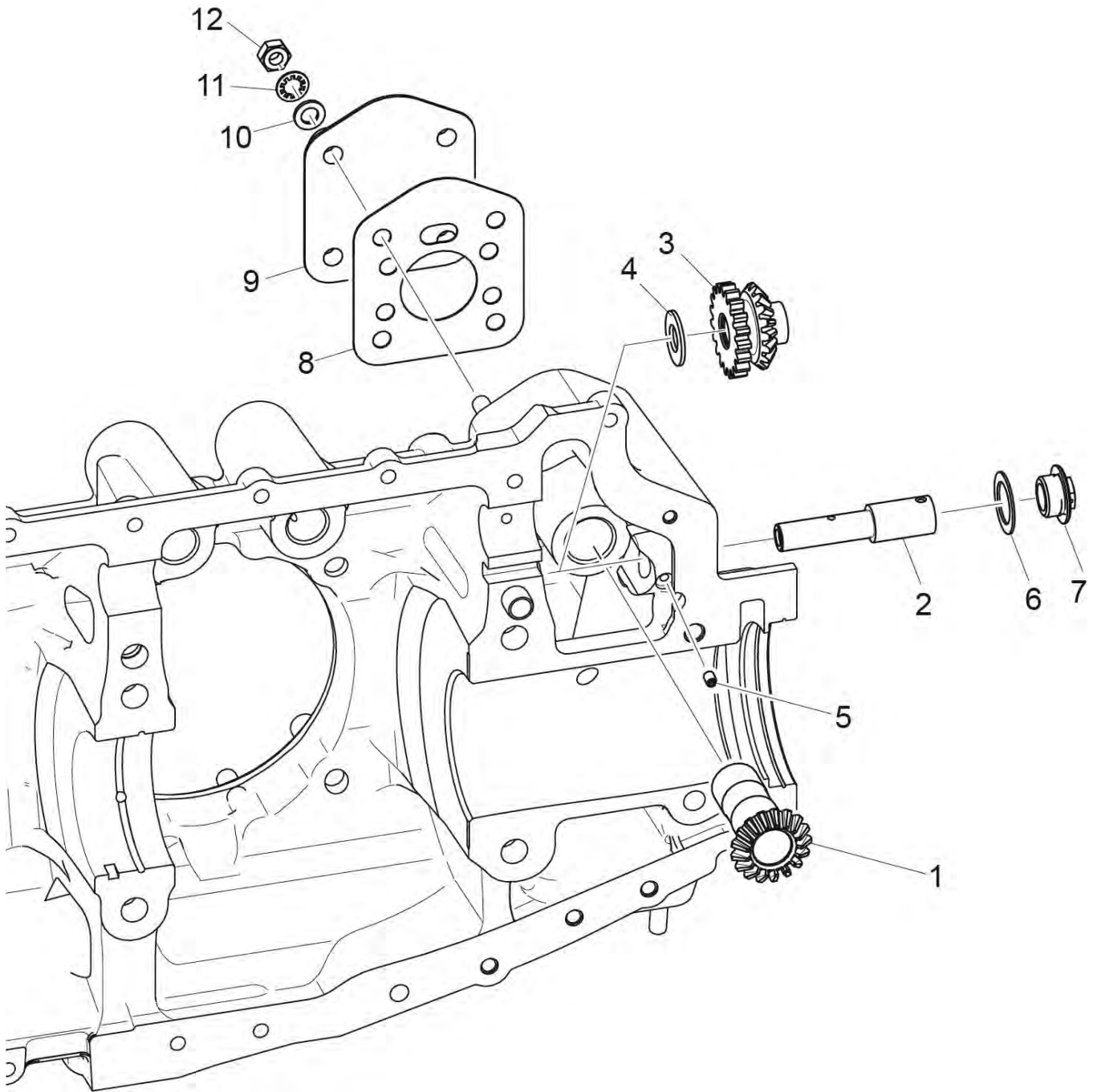
Figure Item	Code	Part Number	Description	Units per Assembly
1		LW-31H0.88	BOLT, 5/16-18 x 7/8 long, hex. head, drilled	1
2		STD-35	WASHER, 5/16 plain	1
3		07F28508	LINK, Alternator adjusting	1
4		LW-38H1.09	BOLT, 3/8-16 X 1 3/32 long, hex drilled	1
5		STD-1342	WASHER, 7/8 O.D. x 0.39 I.D. x 1/8 thick	1
6		LW-10952	SHIM, 13/16 O.D. x 0.41 I.D. x 0.005 thick	5
7		07F21160	STRUT, Alternator Support	1
8		LW-31H0.88	BOLT, 5/16-18 x 7/8 long, hex. head, drilled	4
9		STD-35	WASHER, 5/16 plain	4
10		07A21156	BRACKET, Alternator	1
11		07A26130	BRACKET, Alternator, aft	1
12		AN7-44	BOLT, 7/16-20 x 4-19/32 long, hex. head	1
13		STD-632	WASHER, 7/16 plain	1
14		LW-14650	SHIM, 7/8 OD x 15/32 ID X .005 TH	10
15		AN310-7	NUT, 7/16-20 plain slotted	1
16		STD-713	PIN, Cotter, 3/32 dia. X 3/4 long	1
17		LW-31H1.06	BOLT, 5/16-18 X 1-1/16 long, hex. head, drilled	1
18		STD-1354	WASHER, 5/16 plain	1
19		STD-475	WASHER, 5/16 lock, internal teeth	1



032CR, 033AC, 033AE  
**Figure 2**  
**Alternator Assembly and Belts**

**DC GENERATION**  
**Figure 2 - Alternator Assembly and Belts**

Figure Item	Code	Part Number	Description	Units per Assembly
1		32C28600	ALTERNATOR ASSEMBLY, 24V-140 amp	1
2		32C28550	ALTERNATOR, 24V-140 amp (HET P/N ES-14024B-3)	1
3		36B28509	PULLEY, Alternator, V-ribbed pk-section, 3.1:1 ratio (3.42 O.D.)	1
	*	32C28603	ALTERNATOR ASSEMBLY, 24V-140 amp	1
	*	32C28550	ALTERNATOR, 24V-140 amp (HET P/N ES-14024B-3)	1
	*	36B29585	PULLEY, Alternator, V-ribbed pk-section, 3.65:1 ratio (2.98 O.D.)	1
4		37C28529-985	BELT, 14mm wide (use with PULLEY P/N 36B28509)	1
	*	37C28529-955	BELT, 14mm wide (use with PULLEY P/N 36B29585)	1
* Optional for 3.65:1 drive ratio				



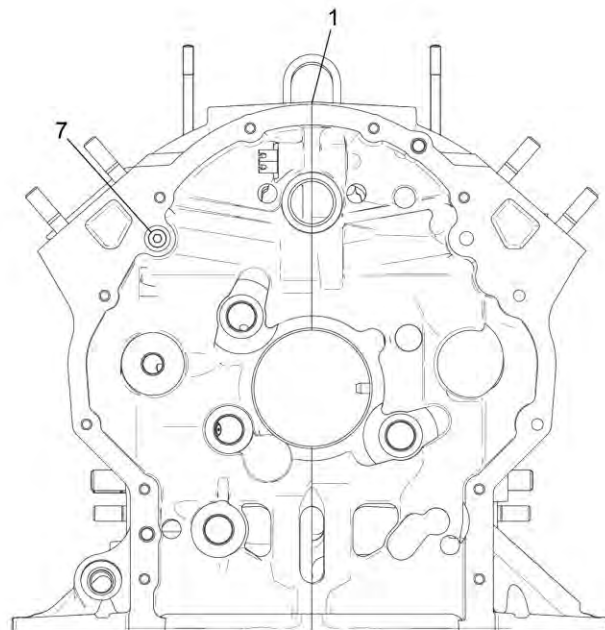
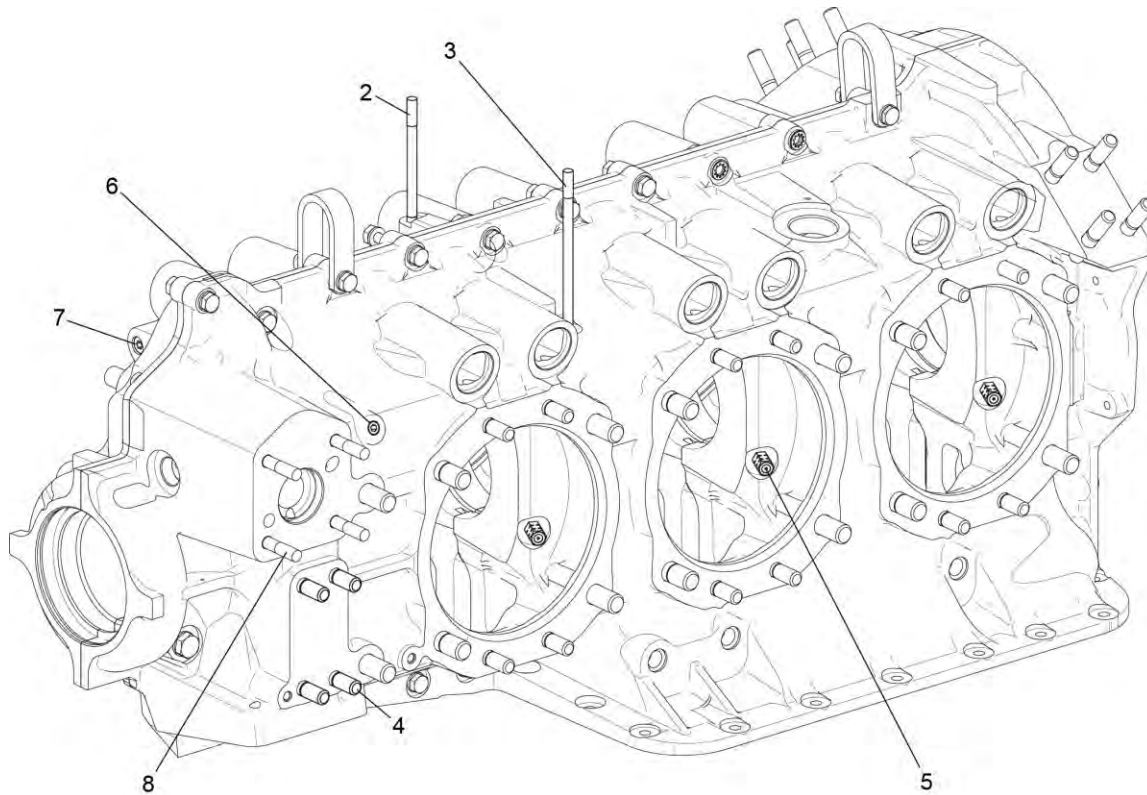
008

**Figure 3**

**Propeller Governor Drive Assembly**

**FRONT SECTION**  
**Figure 3 - Propeller Governor Drive Assembly**

Figure Item	Code	Part Number	Description	Units per Assembly
1		LW-10442	GEAR, Propeller governor driven	1
2		LW-14021	SHAFT, Propeller governor idler gear	1
3		LW-10541	GEAR ASSEMBLY, Propeller governor idler	1
4	<b>AR</b>	73249	WASHER, Thrust (0.0585 - 0 .0595 thick)	<b>AR</b>
	<b>AR</b>	73250	WASHER, Thrust (0.062 - 0.063 thick)	<b>AR</b>
	<b>AR</b>	73251	WASHER, Thrust (0.0655 - 0.0665 thick)	<b>AR</b>
	<b>AR</b>	73252	WASHER, Thrust (0.069 - 0.070 thick)	<b>AR</b>
	<b>AR</b>	01L21418	WASHER, Thrust (0.055 - 0.056 thick)	<b>AR</b>
5		AN565B1032H5	SET SCREW, No. 10-32 x 5/16 long	1
6		70455	GASKET, 25/32 I.D. x 1-1/8 O.D. x 1/16 thick	1
7		LW-13896	PLUG, 3/4-16 hex. head	1
8		72053	GASKET, Propeller	1
9		72378	COVER, Governor drive	1
10		STD-35	WASHER, 5/16 plain	4
11		STD-475	WASHER, 5/16 lock, internal teeth	4
12		STD-1410	NUT, 5/16-18 plain	4
<b>AR</b> as required				



001EX

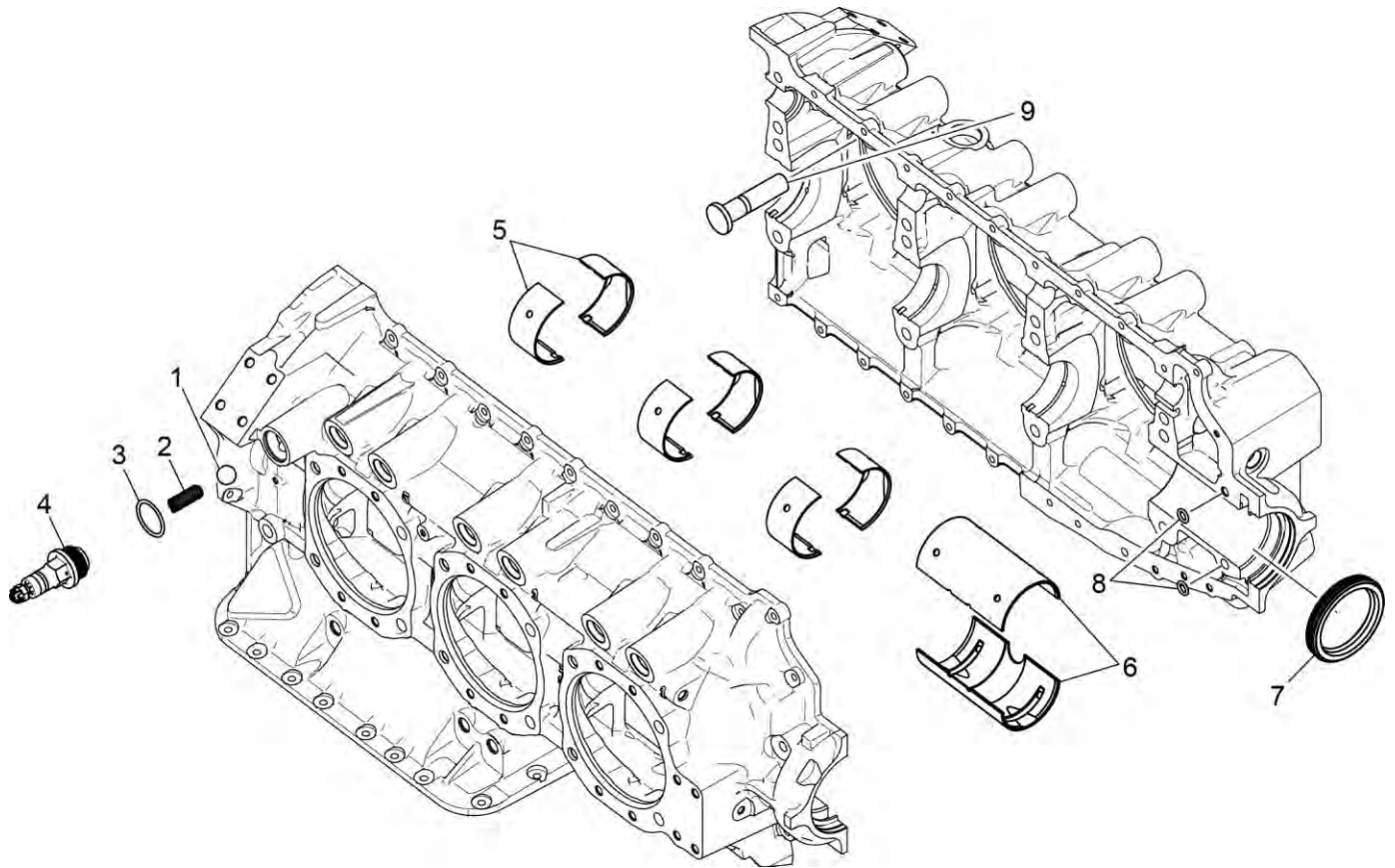
**Figure 4**  
**Crankcase Assembly**



**POWER SECTION**  
**Figure 4 - Crankcase Assembly**

Figure Item	Code	Part Number	Description	Units per Assembly
1	<b>P</b>	11F24028-E3	CRANKCASE ASSEMBLY, Studding	1
2		25C-31	STUD, 1/4-20 x 3-7/8 long	1
3		25C-39	STUD, 1/4-20 x 4-7/8 long	1
4		38-13	STUD, 3/8-16 x 1-5/8 long	4
5		73772	NOZZLE ASSEMBLY, Piston cooling	6
6		STD-1339	PLUG, 1/16-27 NPT	1
7		1102	PLUG, 1/8 pipe	2
8		31C-17	STUD, 5/16-18 x 2-1/8 long	4

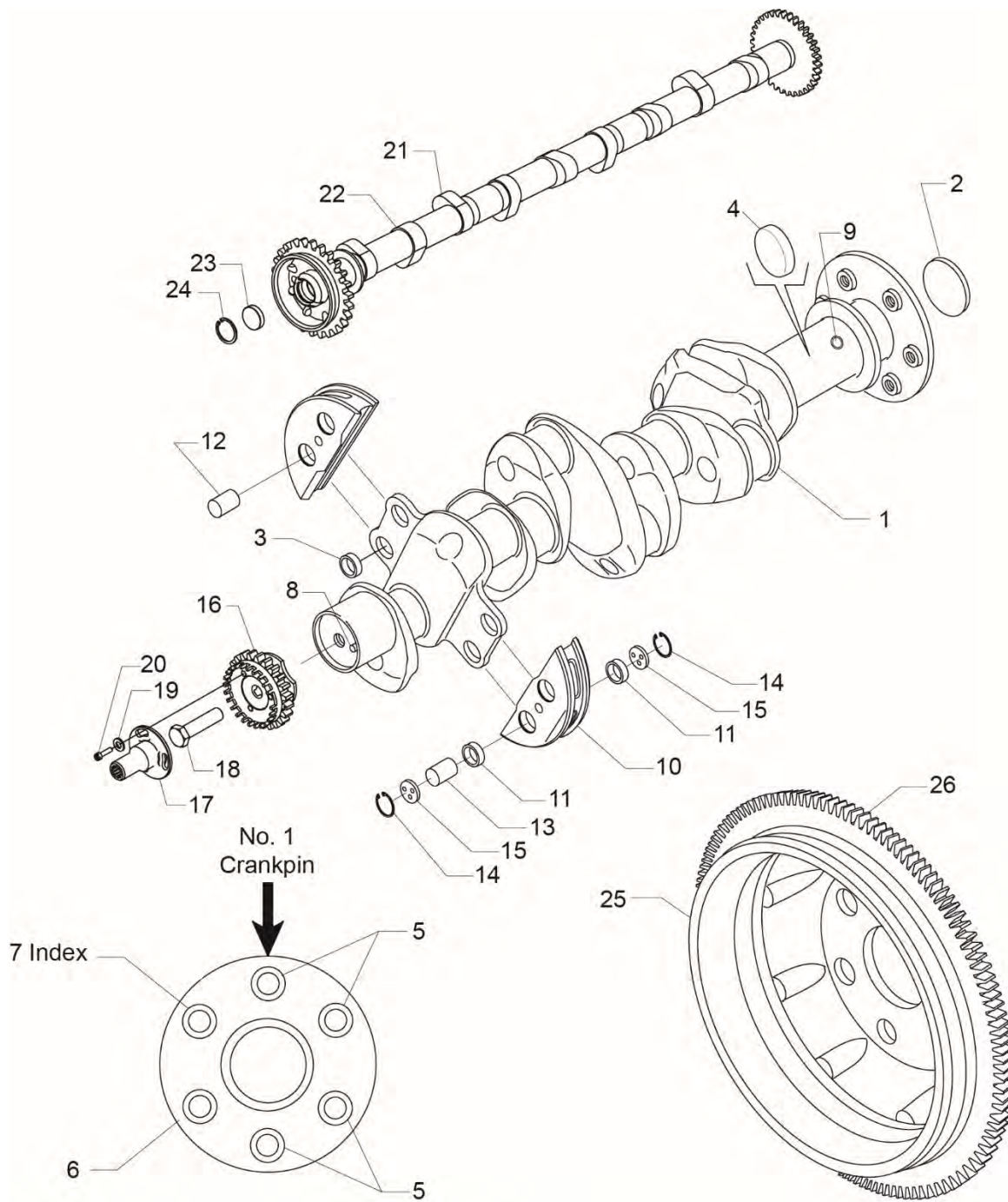
**P** Lycoming proprietary part - for reference purposes only, cannot be purchased.



002F & 003F  
**Figure 5**  
**Crankcase Related Parts**

**POWER SECTION**  
**Figure 5 - Crankcase Related Parts**

Figure Item	Code	Part Number	Description	Units per Assembly
1		1028-B	BALL, 11/16 diameter	1
2	*	68668	SPRING, Oil pressure relief valve	1
	*	61084	SPRING, Oil pressure relief valve	1
	*	77467	SPRING, Oil pressure relief valve	1
	*	LW-11713	SPRING, Oil pressure relief valve	1
	*	LW-18085	SPRING, Oil pressure relief valve	1
3		06E19769-1.25	GASKET, 1-1/4 I.D. annular	1
4		77808	VALVE ASSEMBLY, Oil pressure relief	1
5		18E23886	BEARING, Crankshaft	6
6		18B23885	BEARING, Crankshaft, front	2
7		LW-15628	SEAL, Crankshaft oil	1
8		72091	RING, Oil seal, 23/64 ID x 1/10 diameter	2
9		15B26262	BODY, Hydraulic tappet	12
<p>* Select spring to give a minimum of three threads exposed on adjusting screw to allow field adjustment. Reference latest revision of SSP-1776, Part I for spring identification. Refer to the latest revision of Service Letter L287 and select a spring that provides recommended oil pressure for optimum wastegate solenoid and engine performance.</p>				



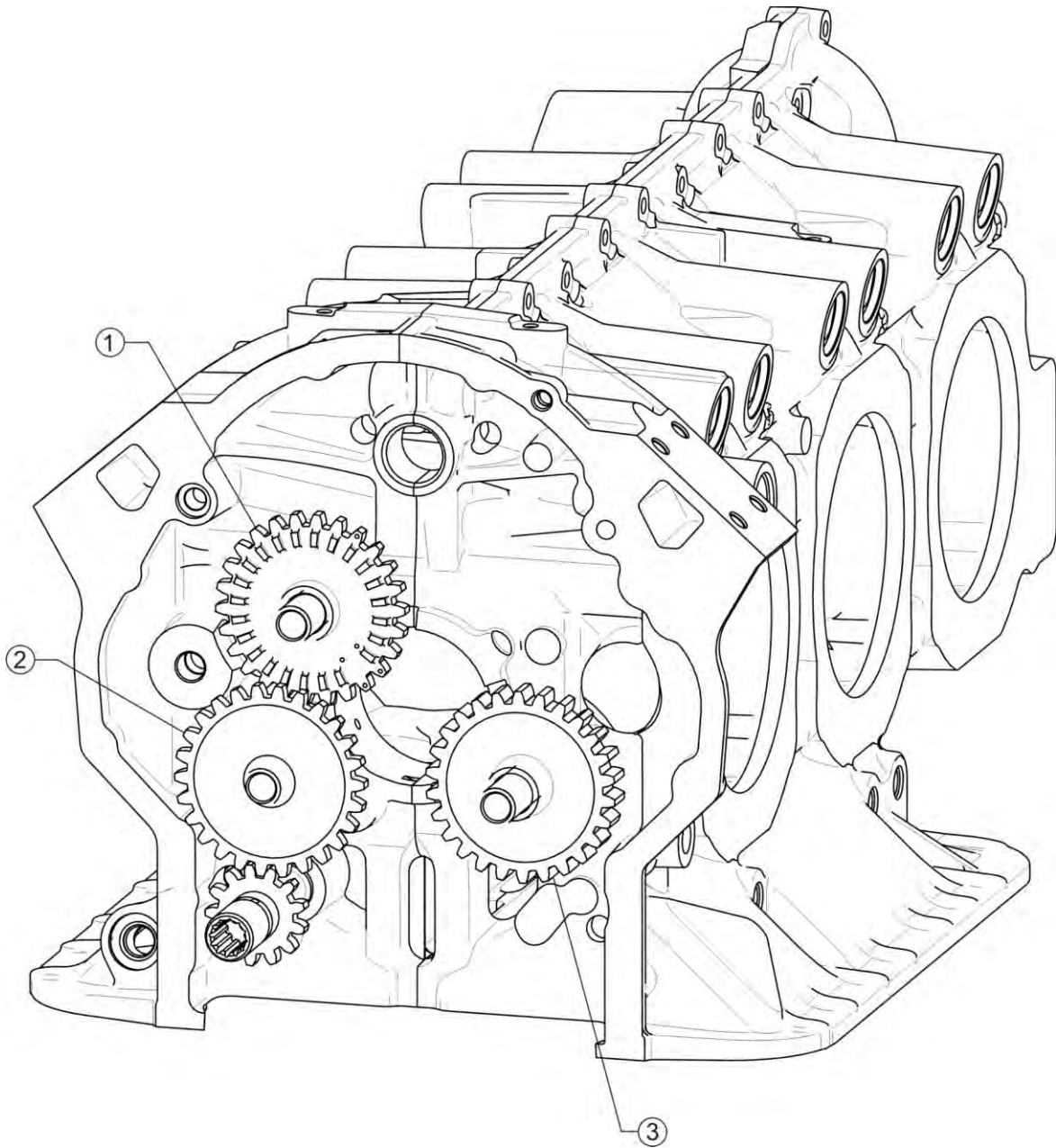
004CR, 005E, 007N, 028AV

**Figure 6**

**Crankshaft, Counterweight, Camshaft and Related Parts**

**POWER SECTION****Figure 6 - Crankshaft, Counterweight, Camshaft and Related Parts**

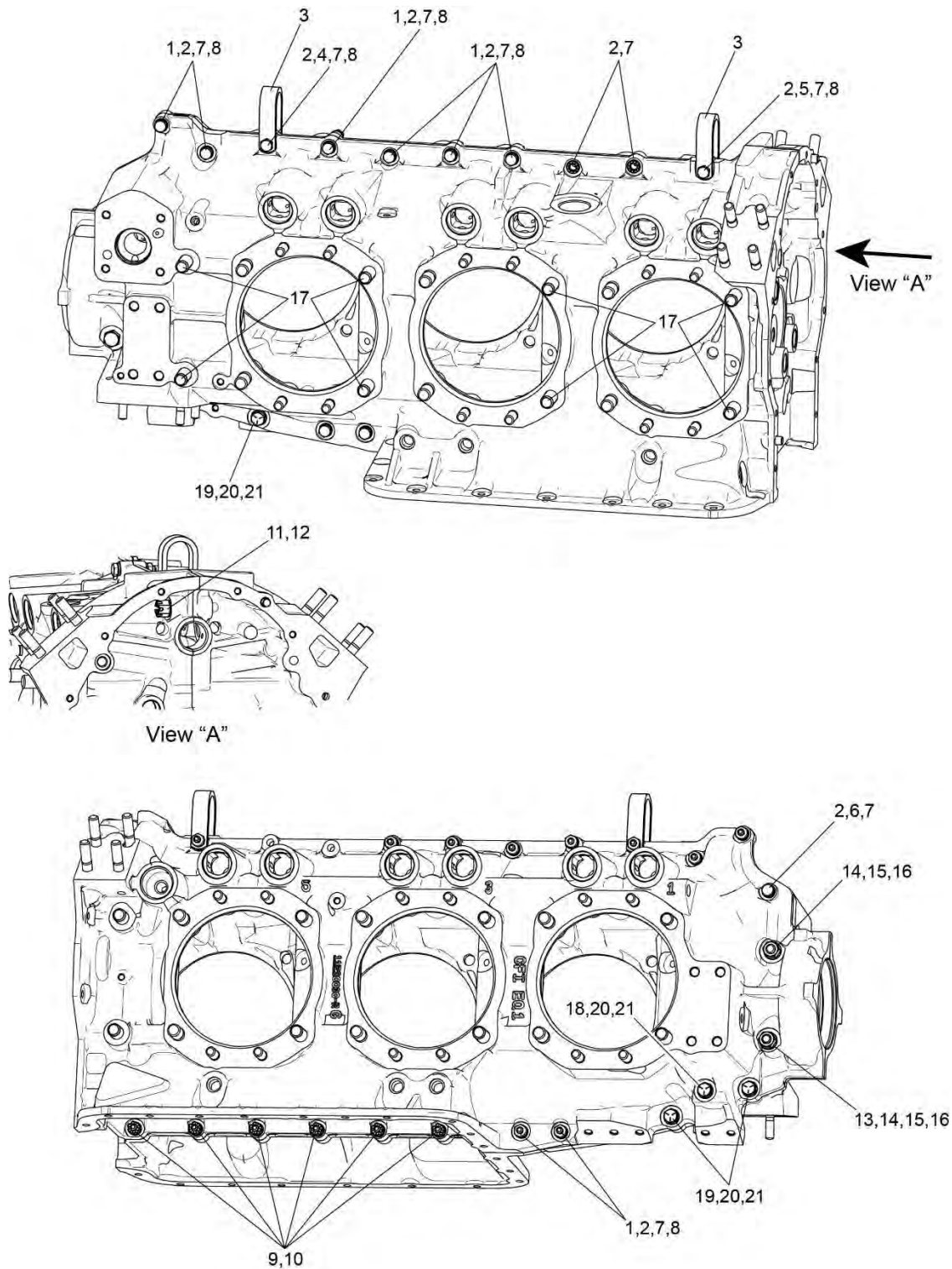
Figure Item	Code	Part Number	Description	Units per Assembly
1		13F47735	CRANKSHAFT ASSEMBLY	1
2		STD-1211	PLUG, 2.00 diameter expansion	1
3		73810	BUSHING, Crankshaft counterweight	4
4		60945	PLUG, 1-1/4 diameter	1
5		75656-S	BUSHING, Propeller flange, long	4
6		72155-S	BUSHING, Propeller flange, short	1
7		79024-S	BUSHING, Propeller flange, indexing	1
8		STD-2078	DOWEL, Stepped, 3/8 O.D. x 1/2 long	1
9		74306	TUBE, crankshaft prop, oil	1
10		LW-19210	COUNTERWEIGHT ASSEMBLY	2
11		71903-A	BUSHING, Dynamic counterweight	4
12		76788	ROLLER, Dynamic counterweight, 6.3 order	2
13		73648	ROLLER, Dynamic counterweight, 5.1 order	2
14		LW-14820	RING, Internal retaining	8
15		71907	WASHER, Dynamic counterweight	8
16		26G26265	CRANKSHAFT GEAR ASSEMBLY,	1
17		23A26268	SHAFT DRIVE, Fuel pump	1
18		01C26131	BOLT, 1/2-20 x 1-3/4 long, hex. head	1
19		STD-8	WASHER, 1/4 plain	3
20		NAS1352C4H10	SCREW, 1/4-20 x 5/8 long, drilled head	3
21		15N28398	CAMSHAFT ASSEMBLY, flat tappet	1
22		LW-13908	CAMSHAFT	1
23		01L26665	SPACER, Camshaft	1
24		STD-2231	RING, Internal retaining	1
25		31M22045	SUPPORT ASSEMBLY, Starter ring gear	1
26		72566	GEAR, Starter ring, 12/14 pitch	1



011W  
**Figure 7**  
**Crankshaft Idler Gears and EEC Gear Set**

**POWER SECTION**  
**Figure 7 - Crankshaft Idler Gears and EEC Gear Set**

<b>Figure Item</b>	<b>Code</b>	<b>Part Number</b>	<b>Description</b>	<b>Units per Assembly</b>
1		26A26269	GEAR ASSEMBLY, Crankshaft idler	1
2		25B26274	GEAR ASSEMBLY, High speed idler	1
3		LW-10296	GEAR ASSEMBLY, Crankshaft idler	1

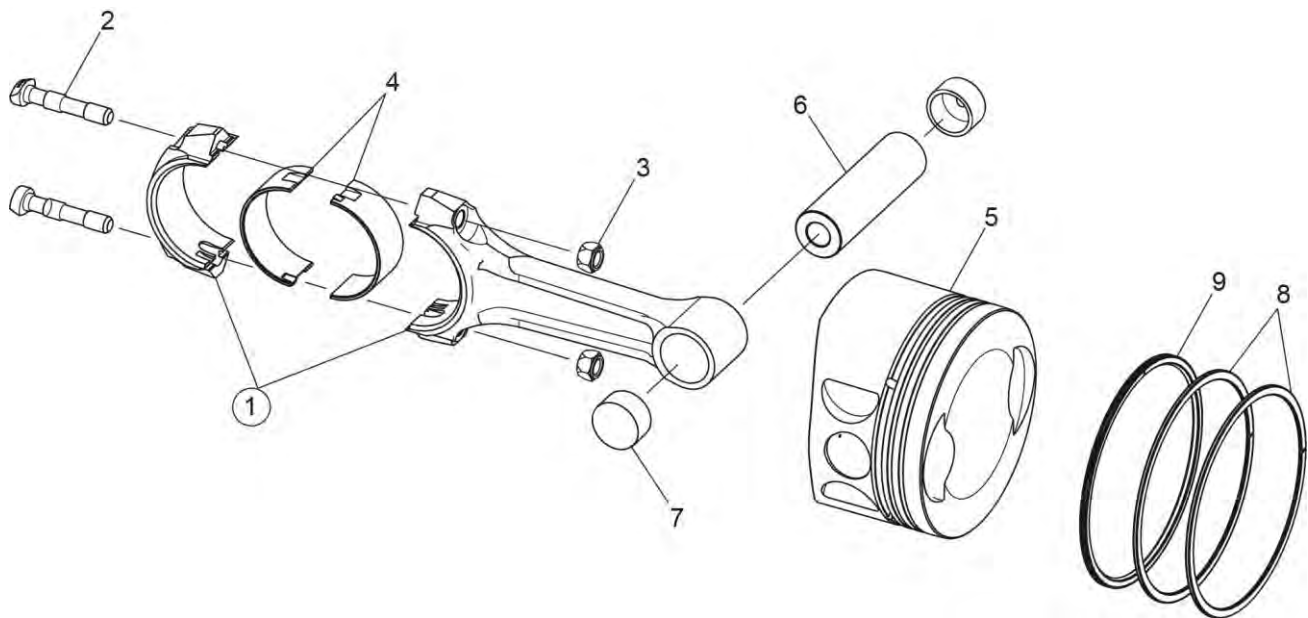


009AG  
**Figure 8**  
**Crankcase Attaching Parts**



**POWER SECTION**  
**Figure 8 - Crankcase Attaching Parts**

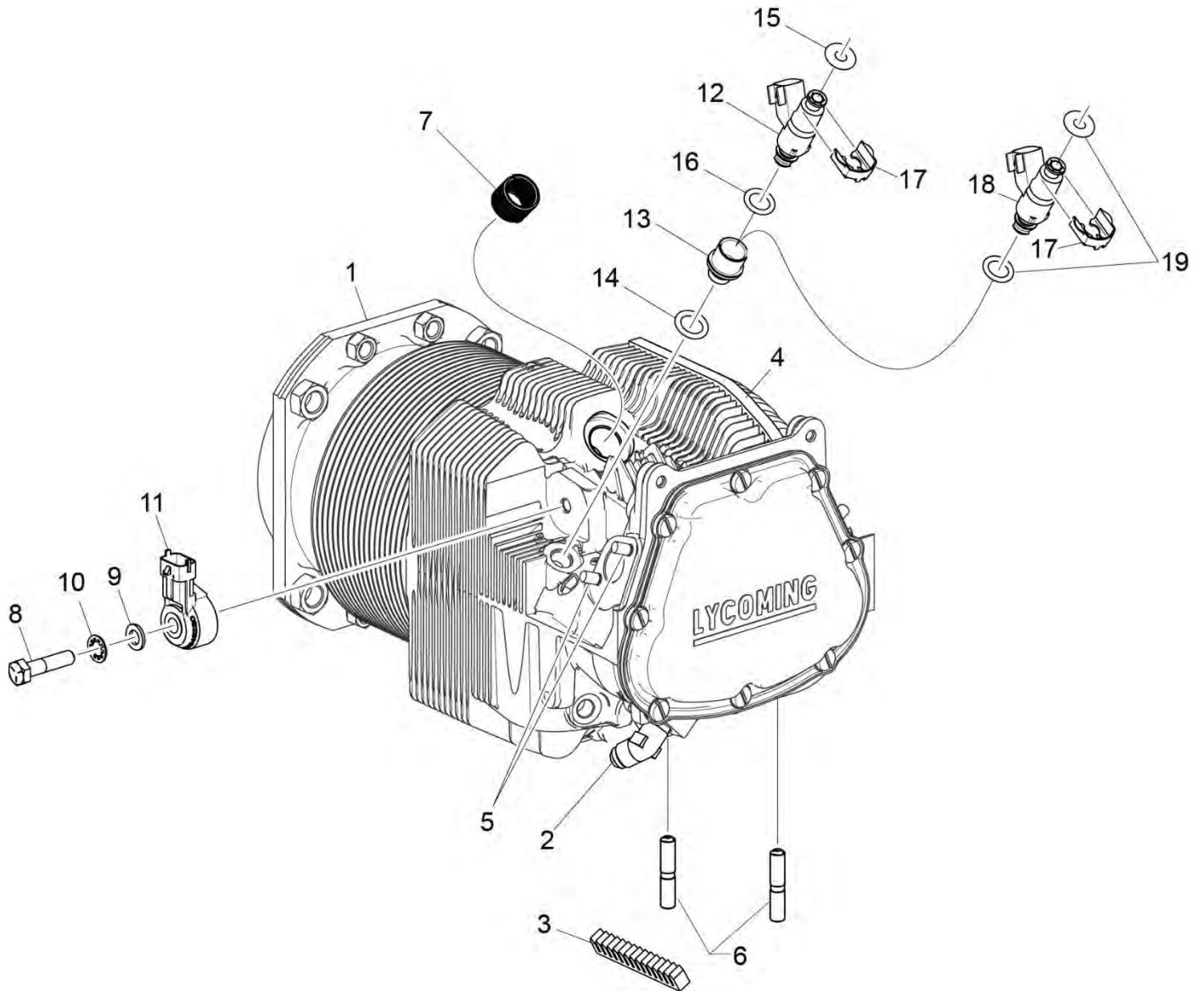
Figure Item	Code	Part Number	Description	Units per Assembly
1		LW-25-1.50	BOLT, 1/4-20 x 1-1/2 long, hex. head	10
2		STD-8	WASHER, 1/4 plain	27
3		60803	STRAP, Lifting	2
4		LW-25-1.75	BOLT, 1/4-20 x 1-3/4 long, hex. head	1
5		LW-25-1.88	BOLT, 1/4-20 x 1-7/8 long, hex. head	1
6		LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. head	1
7		STD-160	WASHER, 1/4 lock, internal teeth	16
8		STD-1411	NUT, 1/4-20 plain	13
9		LW-25S1.50	BOLT, 1/4-20 x 1-1/2 long, hex. head, drilled	6
10		STD-2249	NUT, 1/4-20 slotted	6
11		STD-33	WASHER, 3/8 plain	1
12		STD-872	NUT, 3/8 slotted	1
13		AN6-34A	BOLT, 3/8-24 x 3-1/2 long, hex. head	1
14		STD-33	WASHER, 3/8 plain	3
15		STD-678	WASHER, 3/8 lock, internal teeth	2
16		STD-596	NUT, 3/8-24 plain	2
17		76220	STUD, 1/2-20 x 10-11/16 long	8
18		LW-31-2.75	BOLT, 5/16-18 x 2-3/4 long, hex.	1
19		LW-31-1.16	BOLT, 5/16-18 x 1-5/32 long, hex.	3
20		STD-35	WASHER, 5/16 plain	4
21		STD-475	WASHER, 5/16 lock, internal teeth	4



006A & 022AE  
**Figure 9**  
**Connecting Rods, Pistons, and Ring Assemblies**

**CYLINDER SECTION**  
**Figure 9 - Connecting Rods, Pistons, and Ring Assemblies**

Figure Item	Code	Part Number	Description	Units per Assembly
1		LW-19332-S	CONNECTING ROD ASSEMBLY	6
2	*	LW-12596	BOLT, Connecting rod	12
3		LW-12186	NUT, Connecting rod bolt	12
4		18N26106	BEARING, Connecting rod	12
5		14D23907	PISTON, Compression ratio, 7.30:1	6
6		LW-14078	PIN, Piston	6
7		72198	PLUG, Piston pin	12
8		74241	RING, Piston compression	12
9		14H29889	RING, Piston, oil regulating, expander type	6
* Service use only. Refer to the latest revision of Service Instruction S.I. 1458				

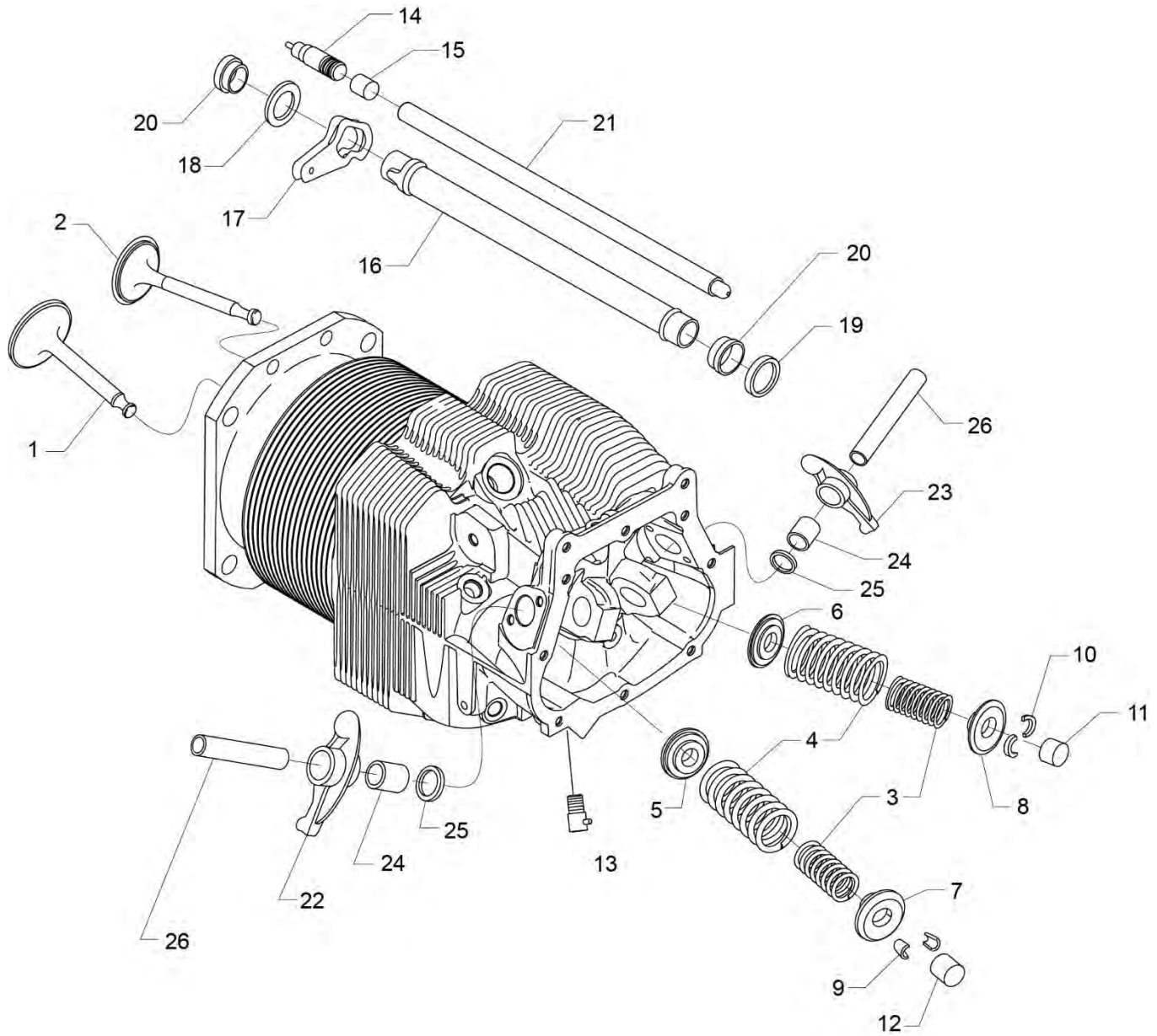


023AH & 040DG  
**Figure 10**  
Cylinder Assembly

**CYLINDER SECTION**  
**Figure 10 - Cylinder Assembly**

Figure Item	Code	Part Number	Description	Units per Assembly
1		16A26347	CYLINDER AND HEAD ASSEMBLY, Nitrided	6
		16A30200-01	CYLINDER AND HEAD ASSEMBLY, Nitrided (Approved alternate for P/N 16A26347)	6
2		MS20823-6D	ELBOW, 45°, 3/8 flared tube	6
3		72343	STABILIZER, Cylinder head fins, 15 teeth	6
4		72344	STABILIZER, Cylinder head fins, 26 teeth	6
5		25C-8	STUD, 1/4-20 x 1.00 long	24
6		31C-13	STUD, 5/16-18 x 1-5/8 long	12
7		69260	INSERT, Spark plug, 18-1.5 mm	12
8		LW-31-1.31	BOLT, 5/16-18 x 1-5/16 long, hex. head	6
9		STD-35	WASHER, 5/16 plain	6
10		STD-475	WASHER, 5/16 lock, internal teeth	6
11		60F29464-CT	SENSOR, Knock, detonation (same on all cyls.) (Replacement for P/N 60F26317-CT)	6
12	*	61X29461-CT	FUEL INJECTOR (Replacement for P/N 61X26294-CT)	6
13		02E29797	ADAPTER, Fuel injector	6
14		06E19769-0.50	GASKET, Annular, 1/2 I.D.	6
15		06C29879-CT	O-RING, Fuel injector, upper (for use with fuel injector P/N 61X29461-CT)	6
16		06C29878-CT	O-RING, Fuel injector, lower (for use with fuel injector P/N 61X29461-CT)	6
17		03A29095-CT	RETAINER, Fuel injector	6
18		61X29461-CT	FUEL INJECTOR	6
19		06C29094-CT	KIT, Fuel injector O-ring for use with P/N 61X26294-CT (includes upper O-ring and lower O-ring)	6

\* Refer to the latest revisions of Service Instructions No. 1573 and No. 1582 when replacing fuel injectors part number 61X26294-CT with fuel injectors part number 61X29461-CT.



023AH, 024F, 025K, & 150H  
**Figure 11**  
**Valve Assembly and Related Parts**

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

Figure Item	Code	Part Number	Description	Units per Assembly
1		17A23937	VALVE, Intake	6
2		17B23935	VALVE, Exhaust	6
3		17D29057	SPRING, Valve, inner	12
4		17D29056	SPRING, Valve, outer	12
5		LW-13321	SEAT, Valve spring, lower intake	6
6		LW-13322	SEAT, Valve spring, lower exhaust	6
7		69532	SEAT, Valve spring, upper intake	6
8		LW-16475	SEAT, Valve spring, upper exhaust	6
9		72050	KEY, Valve, intake	12
10		17C21191	KEY, Valve, exhaust	12
11		17C19386	CAP, Valve stem, exhaust (rotator type)	6
12		62388	CAP, Valve stem	6
13		AN4076-1	FITTING, Temperature measuring element	6
14		15B26066	PLUNGER ASSEMBLY, Hydraulic lifter	12
15		15B21319	SOCKET, Hydraulic tappet	12
16		72255	SHROUD TUBE ASSEMBLY, Push rod	12
17		15H21201	SPRING, Shroud tube	24
18		66728	WASHER, 25/32 I.D. x 1-1/4 O.D. x 1/32 thick	12
19		61503	SLEEVE, Shroud tube seal	12
20		LW-18661	SEAL, Shroud tube	24

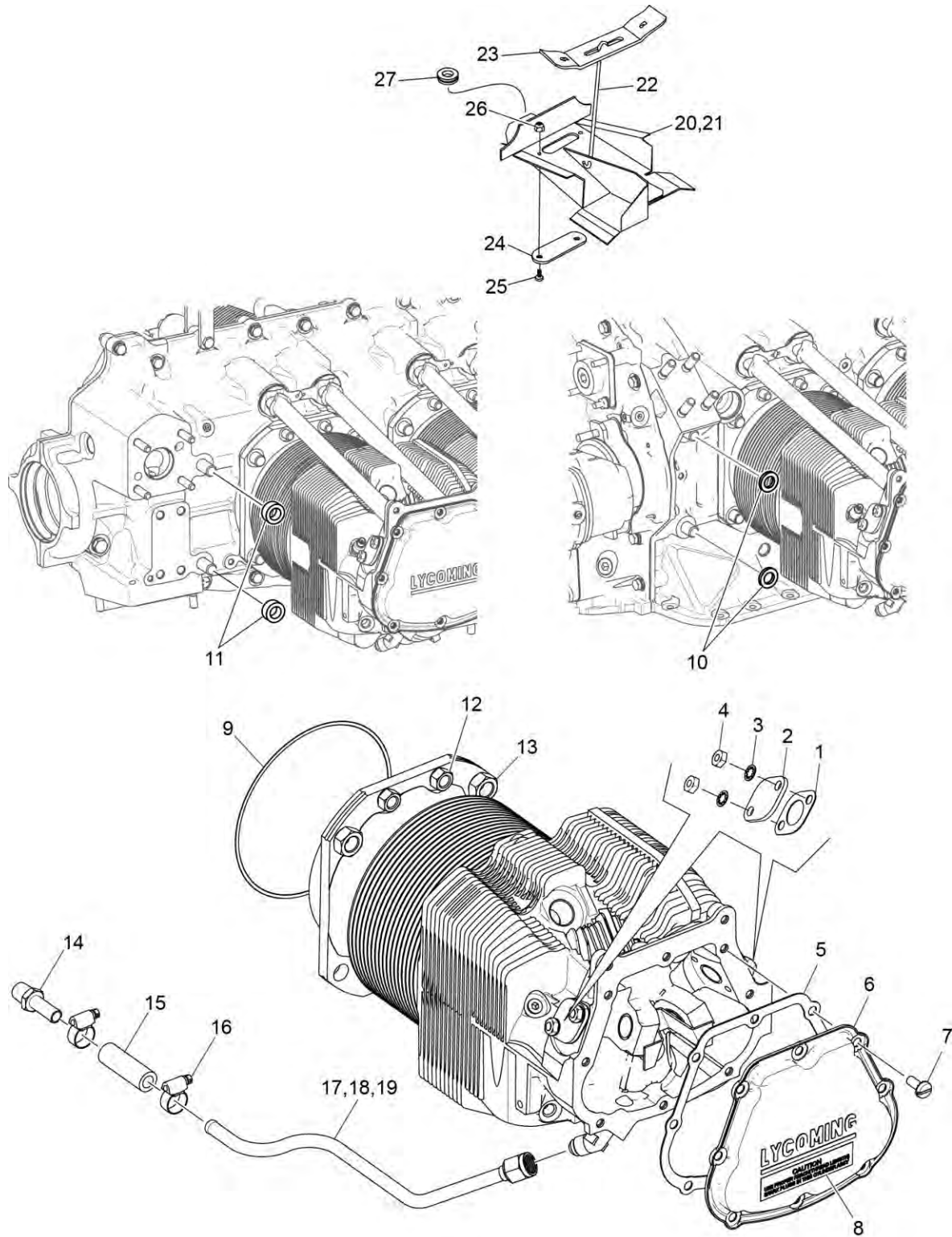
(continued on next page)

**Figure 11 - Valve Assembly and Related Parts (Cont.)**

Figure Item	Code	Part Number	Description	Units per Assembly
21	AR	15F28835-52	ROD ASSEMBLY, Push (A total of 12 required)	AR
	AR	15F28835-53	ROD ASSEMBLY, Push (A total of 12 required)	AR
	AR	15F28835-54	ROD ASSEMBLY, Push (A total of 12 required)	AR
	AR	15F28835-55	ROD ASSEMBLY, Push (A total of 12 required)	AR
	AR	15F28835-56	ROD ASSEMBLY, Push (A total of 12 required)	AR
	AR	15F28835-57	ROD ASSEMBLY, Push (A total of 12 required)	AR
	AR	15F28835-58	ROD ASSEMBLY, Push (A total of 12 required)	AR
	AR	15F28864-18	ROD ASSEMBLY, Push (A total of 12 required)	AR
	AR	15F28864-19	ROD ASSEMBLY, Push (A total of 12 required)	AR
	AR	15F28864-20	ROD ASSEMBLY, Push (A total of 12 required)	AR
	AR	15F28864-21	ROD ASSEMBLY, Push (A total of 12 required)	AR
	AR	15F28864-22	ROD ASSEMBLY, Push (A total of 12 required)	AR
	AR	15F28864-23	ROD ASSEMBLY, Push (A total of 12 required)	AR
	AR	15F28864-24	ROD ASSEMBLY, Push (A total of 12 required)	AR
22	*	17F21186	ROCKER ASSEMBLY, Valve, intake	6
23	*	17F21185	ROCKER ASSEMBLY, Valve, exhaust	6
24		74389	BUSHING, Valve rocker	12
25		71549	WASHER, Valve rocker	12
26		72626	SHAFT, Valve rocker	12
<p><b>NOTICE:</b> Various push rod lengths are used to set valve clearances.  <b>AR</b> as required                      * Due to the size of the area where the number is stamped, the last five digits may be all that is shown (21186 or 21185).</p>				



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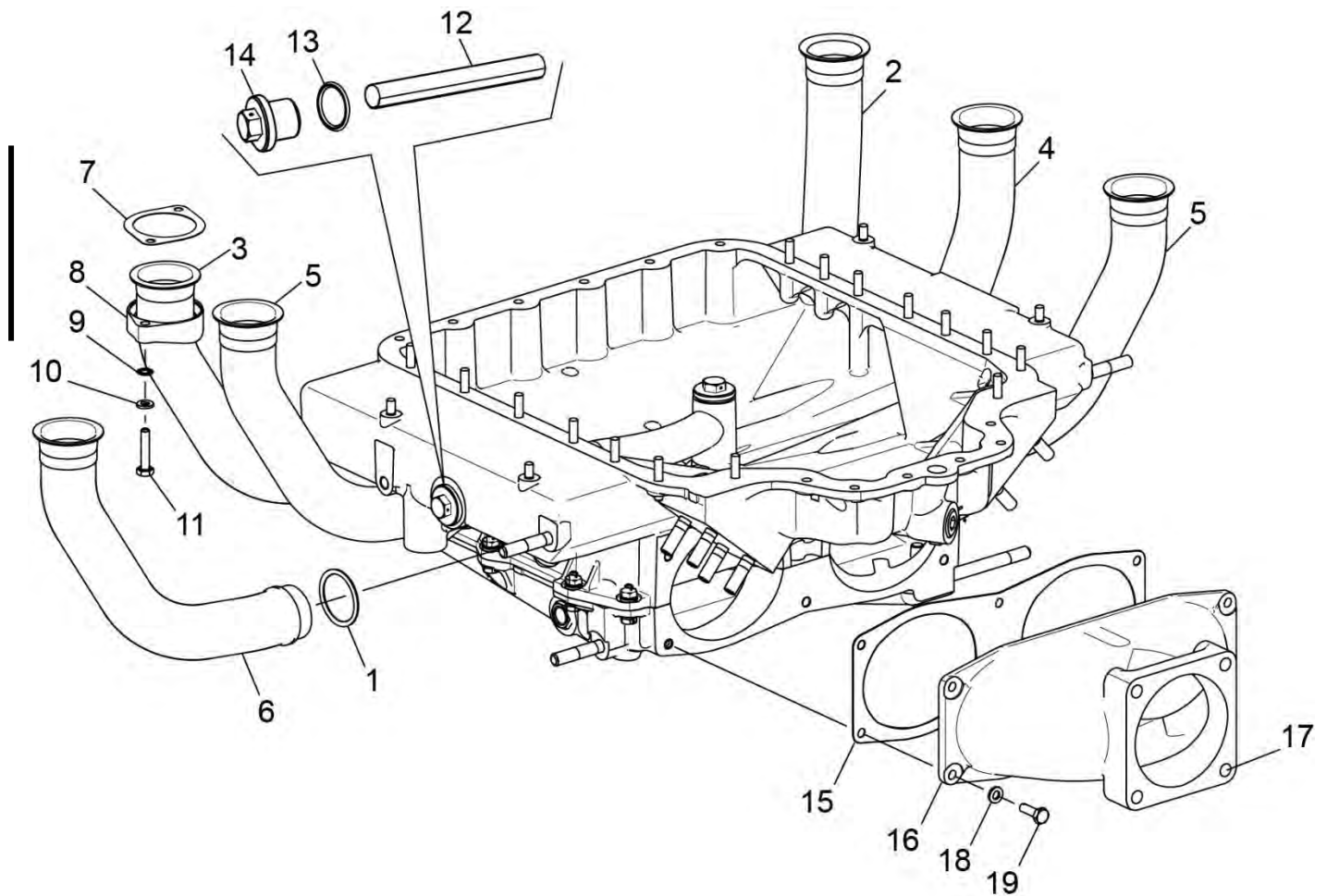


023AH, 025AK, 026A, 036P

**Figure 12**  
**Cylinder Related Parts**

**CYLINDER SECTION**  
**Figure 12 - Cylinder Related Parts**

Figure Item	Code	Part Number	Description	Units per Assembly
1		66732	GASKET, Valve rocker shaft cover	12
2		72710	COVER, Valve rocker shaft	12
3		STD-160	WASHER, 1/4 lock, internal teeth	24
4		STD-1411	NUT, 1/4-20 plain	24
5		06B26811	GASKET, Rocker box cover - silicone	6
6		68795	COVER ASSEMBLY, Rocker box	6
7		STD-1925	SCREW, 1/4-20 x 5/8 long, pan. head, self-locking	48
8		74494	PLATE, Spark plug reach caution	6
9		71481	RING, Oil seal, 3/32 diameter x 4-27/32 I.D.	6
10		77906	SPACER, 33/64 I.D. x 7/8 O.D. x 1/8 thick	2
11		74887	SPACER, 33/64 I.D. x 7/8 O.D. x 3/8 thick	2
12		383-B	NUT, 3/8-24 plain	24
13		STD-2090	NUT, 1/2-20 plain	28
14		STD-684	NIPPLE, Straight, 3/8 I.D. hose	6
15		STD-2180	HOSE, 3/8 I.D. x 1-13/16 long	6
16	**	LW-15592-5-04	CLAMP, Hose, 7/16 O.D.	12
	**	LW-15592-5-05	CLAMP, Hose	12
17		72702	TUBE ASSEMBLY, Cyl. hd. oil drain, cyl. No.1	1
18		72703	TUBE ASSEMBLY, Cyl. hd. oil drain, cyl. No. 2	1
19		73027	TUBE ASSEMBLY, Cyl. hd. oil drain, cyls. No. 3, 4, 5, and 6	4
20	*	LW-13430	BAFFLE ASSEMBLY, Intercylinder	1
21	*	75338	BAFFLE ASSEMBLY, Intercylinder	3
22		71610	HOOK, Intercylinder baffle retainer	4
23		71611	RETAINER, Intercylinder baffle	4
24		72834	COVER, Baffle, ignition cable hole	4
25		STD-692	SCREW, No. 10-32 x 1/2 long, round head	8
26		STD-670	LOCK NUT, No. 10-32	8
27		MS34589-22X	GROMMET	1
<p>* P/N LW-13430 is between cylinders No. 2 and 4. P/N 75338 is between the remaining cylinders.</p> <p>** Use only in complete sets of the same part number</p>				



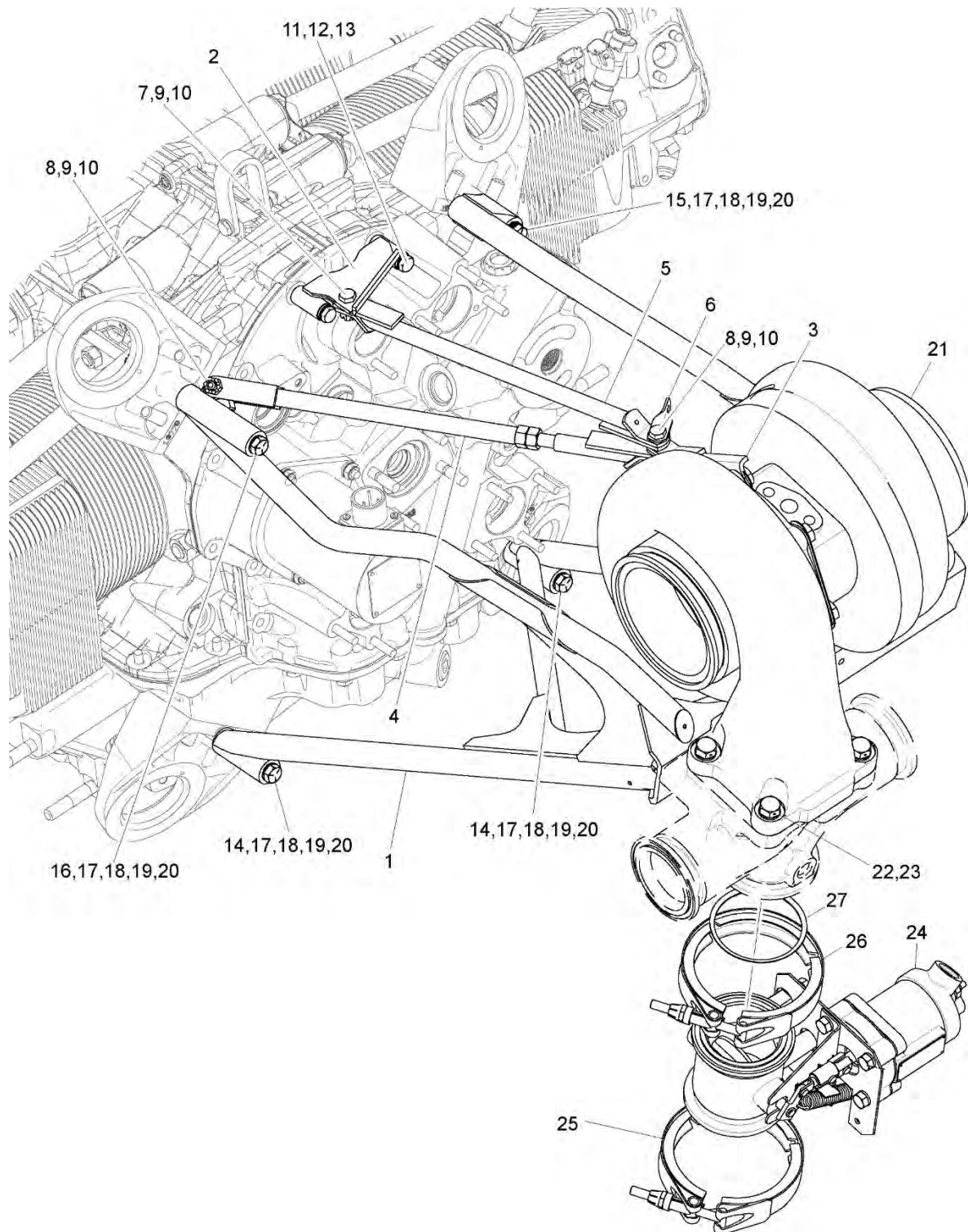
020C, 021A, & 027A

**Figure 13**

**Intake Pipes, Oil Suction Screen, and Air Inlet Housing**

**TURBOCHARGER SYSTEM**  
**Figure 13 - Intake Pipes, Oil Suction Screen, and Air Inlet Housing**

Figure Item	Code	Part Number	Description	Units per Assembly
1		72711	RING, Seal, intake pipes	6
2		LW-12191	PIPE, Intake, cylinder No. 1	1
3		LW-12192	PIPE, Intake, cylinder No. 2	1
4		LW-12193	PIPE, Intake, cylinder No. 3	1
5		LW-12194	PIPE, Intake, cylinders No. 4 and 5	2
6		LW-12195	PIPE, Intake, cylinder No. 6	1
7		71973	GASKET, 2 bolt flange, 1-13/16 I.D.	6
8		74360	FLANGE, Intake pipe, upper	6
9		STD-8	WASHER, 1/4 plain	12
10		STD-160	WASHER, 1/4 lock, internal teeth	12
11		LW-25-1.25	BOLT, 1/4-20 x 1-1/4 long, hex. head	12
12		60422	SCREEN, Oil suction	1
13		06E19769-1.00	GASKET, Annular, 1.00 I.D.	1
14		LW-12545	PLUG, 5/8 hex. head x 1.00-20 thread	1
15		72210	GASKET, Air throttle housing	1
16		77998	HOUSING ASSEMBLY, Air inlet	1
17		STD-1164	INSERT, 5/16-18 x 5/8 long	4
18		STD-8	WASHER, 1/4 plain	6
19		LW-25-0.81	BOLT, 1/4-20 x 13/16 long, hex. head	6

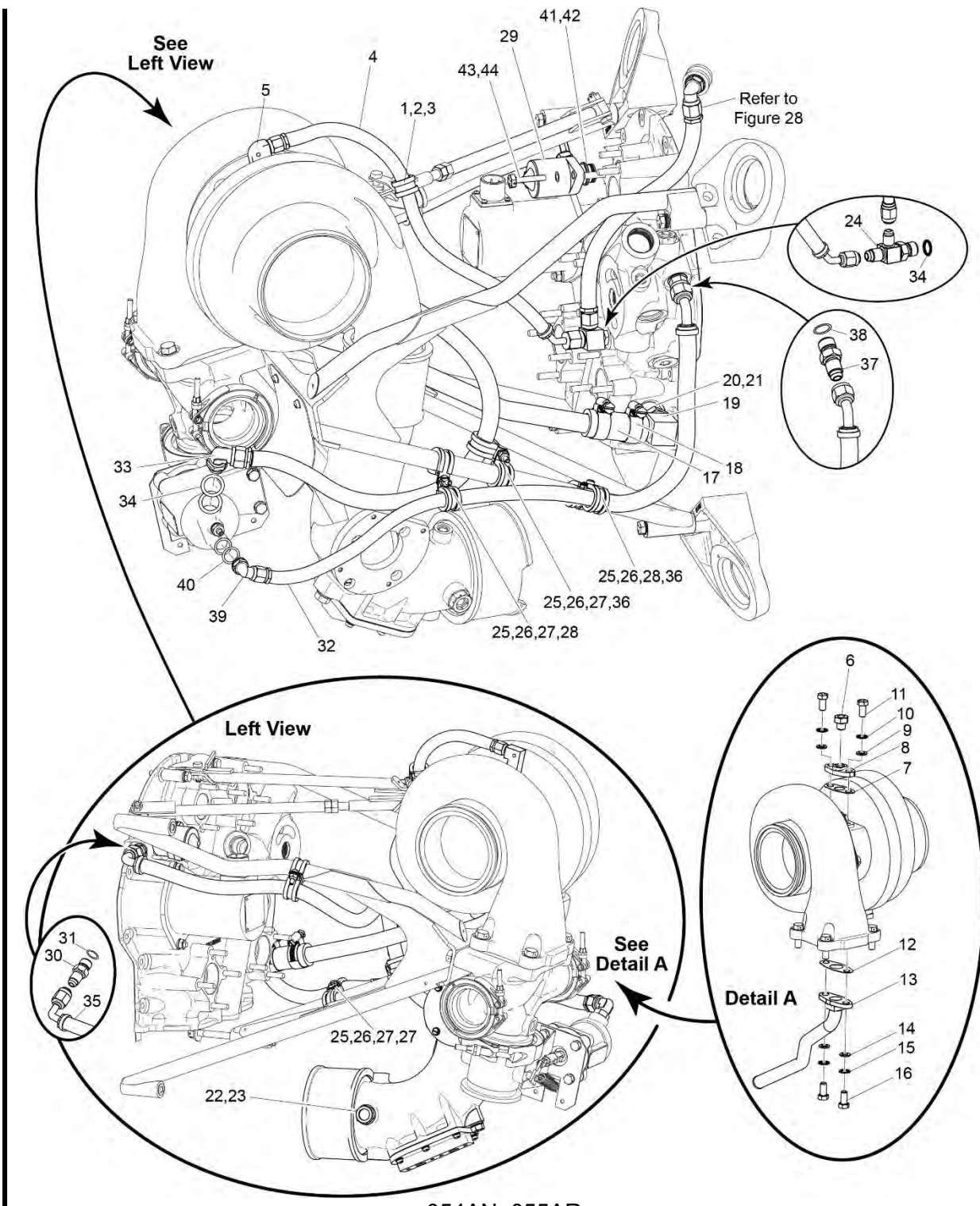


052T  
**Figure 14**  
**Turbocharger, Supports, and Attaching Parts**

**TURBOCHARGER SYSTEM**  
**Figure 14 - Turbocharger, Supports, and Attaching Parts**

Figure Item	Code	Part Number	Description	Units per Assembly
1		07E29522	SUPPORT ASSEMBLY, Turbocharger J, TIO-540	1
2		LW-18459	BRACKET, Support rod, turbo	1
3		LW-12435	PLATE, Top support	1
4		LW-16965	ROD, Top support, left	1
5		LW-18248	ROD, Top support, right	1
6		72815	BRACKET, Support clamp, 90°	1
7		LW-25S0.77	BOLT, 1/4-20 x 49/64 long, drilled end	1
8		LW-25S1.14	BOLT, 1/4-20 x 1-9/64 long, drilled end	2
9		STD-1864	NUT, 1/4-20 slotted	3
10		STD-68	PIN, 1/16 diameter x 1/2 long	3
11		STD-8	WASHER, 1/4 plain	2
12		LW-25-2.00	BOLT, 1/4-20 x 2.00 long, hex. head	2
13		STD-160	WASHER, 1/4 lock, internal teeth	2
14		LW-31S4.56	BOLT, 5/16-18 x 4-7/16 long, drilled end	2
15		LW-31S3.94	BOLT, 5/16-18 x 3-15/16 long, drilled end	1
16		LW-31S5.44	BOLT, 5/16-18 x 5-7/16 long, drilled end	1
17		STD-2205	WASHER, Plain 5/16, thin	4
18		STD-2197	WASHER, 21/64 I.D. x 13/64 O.D. x 1/16	4
19		STD-1420	NUT, 5/16-18 slotted	4
20		STD-68	PIN, Cotter, 1/16 diameter x 1/2 long	4
21		LW-12463	TURBOCHARGER	1
22		AN960C616	WASHER, 3/8 plain	6
23		STD-2145	BOLT, 3/8-16 x 1-3/16 long hex. head	6
24		47E29907	VALVE, Exhaust bypass	1
25	*	LW-12093-6	COUPLING, V-band, 2-1/4 O.D. tube	1
26		LW-12125-3	COUPLING, V-band, 2-1/4 O.D. tube	1
27		75845	GASKET, V-band coupling, 2-1/4	1

\* V-band coupling P/N LW-12093-6 to attach the tailpipe to the wastegate exit is shipped loose with the engine.



054AN, 055AR  
**Figure 15**  
**Turbocharger Hoses and Related Parts - Right Side View**



**TURBOCHARGER SYSTEM**  
**Figure 15 - Turbocharger Hoses and Related Parts**

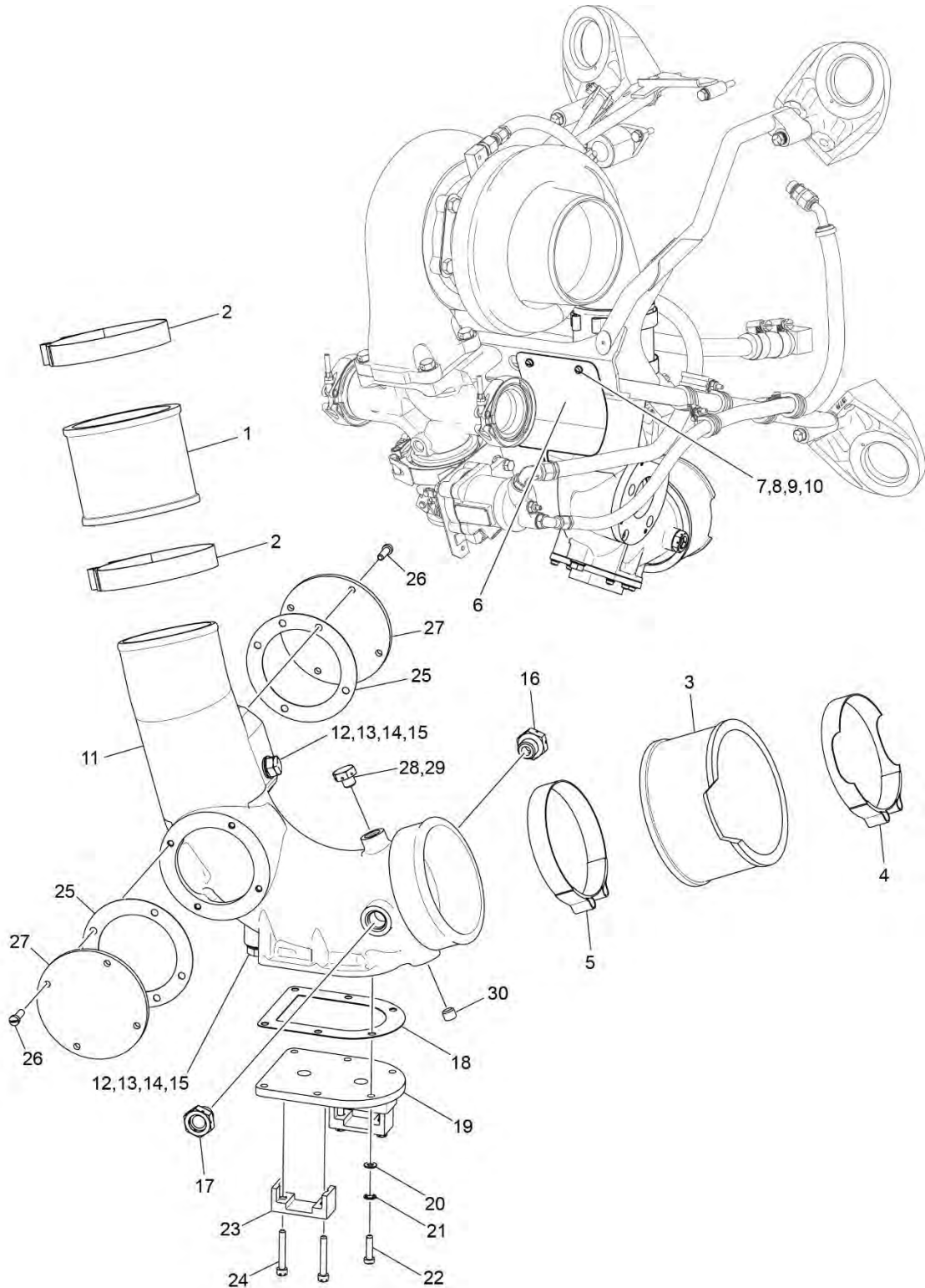
Figure Item	Code	Part Number	Description	Units per Assembly
1		LW-16266-10-63	CLAMP, 5/8 I.D. x No. 10 screw	1
2		STD-860	SCREW, No. 10-32 x 5/8 long, fill. head	1
3		STD-670	LOCK NUT, No. 10-32	1
4		LW-12878-4S170	HOSE ASSEMBLY, 1/4 hose, 45° elbow	1
5		LW-12690	ELBOW, 90° tube to male	1
6		STD-1932	BUSHING, 1/4 to 1/8 NPT	1
7		75371	GASKET, Turbo oil inlet adapter	1
8		LW-14465	ADAPTER, Turbo oil	1
9		STD-33	WASHER, 3/8 plain	2
10		STD-678	WASHER, 3/8 lock, internal teeth	2
11		LW-38-0.75	BOLT, 3/8-16 x 3/4 long, hex. head	2
12		78903	GASKET, Turbo oil drain	1
13		LW-18307	TUBE ASSEMBLY, Turbo oil drain	1
14		STD-33	WASHER, 3/8 plain	2
15		STD-678	WASHER, 3/8 lock, internal teeth	2
16		LW-38-0.75	BOLT, 3/8-16 x 3/4 long, hex. head	2
17		73781	HOSE, 3/4 I.D. x 2-1/2 long	1
18		LW-15592-8-12	CLAMP, Hose	2
19		LW-18231	ELBOW, Hose to universal 90°	1
20		LW-13487	NUT, Turbo oil drain	1
21		MS29512-10	SEAL, Oil, 7/64 dia. sect. x 3/4 I.D.	1
22		AN814-6L	PLUG, 9/16-18, hex. head	1
23		MS29512-06	O-RING, 15/32 I.D. x 5/64 section	1
24		74369	TEE, 1/4 TUB-Adj.w/ straight thd. on run.	1
25		STD-860	SCREW, No. 10-32 x 5/8 long, fill. head	4
26		STD-670	LOCK NUT, No. 10-32	4
27		LW-16266-10-75	CLAMP, 3/4 I.D. x No. 10 screw	4
28		LW-16266-10-63	CLAMP, 5/8 I.D. x No. 10 screw	2

(continued on next page)

**Figure 15 - Turbocharger Hoses and Related Parts (Cont.)**

Figure Item	Code	Part Number	Description	Units per Assembly
29	◆	02L26305	VALVE, Solenoid, 2-way	1
	◆	02L29677	VALVE, Solenoid, 2-way	1
30		LW-16561	NIPPLE, 1/4 tube to 9/16-18	1
31		MS29512-06	O-RING	1
32		LW-12878-4S260	HOSE ASSEMBLY, 1/4 hose, 45° elbow	1
33		72376	90° ELBOW, 1/4 tube x 7/16	1
34		MS29512-04	O-RING	2
35		LW-12877-6S330	HOSE ASSEMBLY, Teflon 3/8 hose, 90° elbow with straight fitting	1
36		LW-16266-10-75	CLAMP, 3/4 I.D. x No. 10 screw	2
37		LW-16562	NIPPLE, 3/8 flared tube, 9/16-18	1
38		MS29512-06	O-RING	1
39		72377	ELBOW, 3/8 flared tube adjustable	1
40		MS29512-06	O-RING	1
41		MS28775-018	O-RING	1
42		MS28775-021	O-RING	1
43		LW-25H1.00	BOLT, 1/4-20 x 1.00 long, hex. head, drilled	1
44		STD-8	WASHER, 1/4 plain	1
◆ Refer to the latest revision of Service Instruction No. 1573 for Solenoid Valve Part Numbers, ECU Part Numbers, Fuel Injector Part Numbers, and Calibration Tables that must be used together				

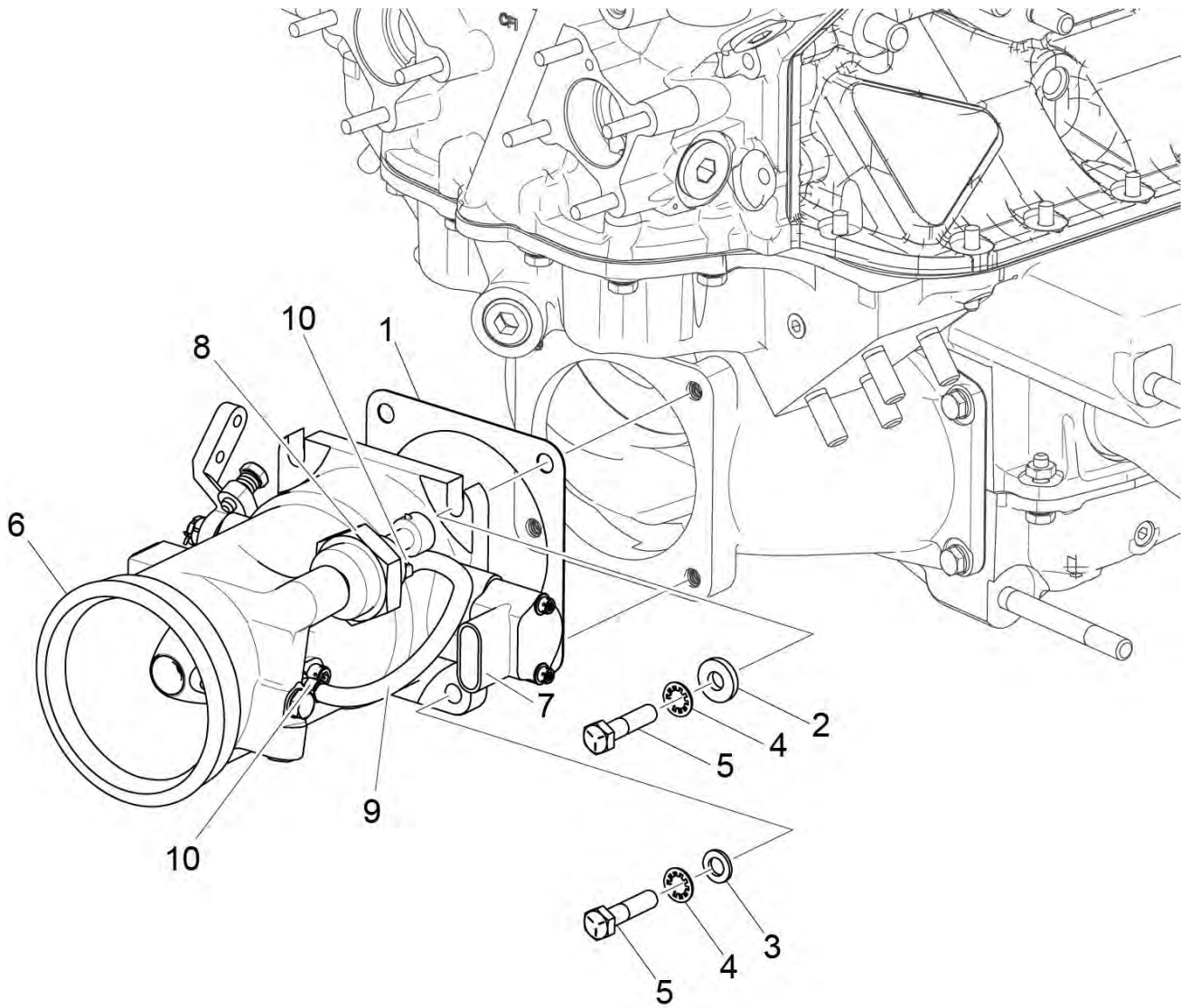
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053AN  
**Figure 16**  
**Rear Turbo Air Inlet Housing**

**TURBOCHARGER SYSTEM**  
**Figure 16 - Rear Turbo Air Inlet Housing**

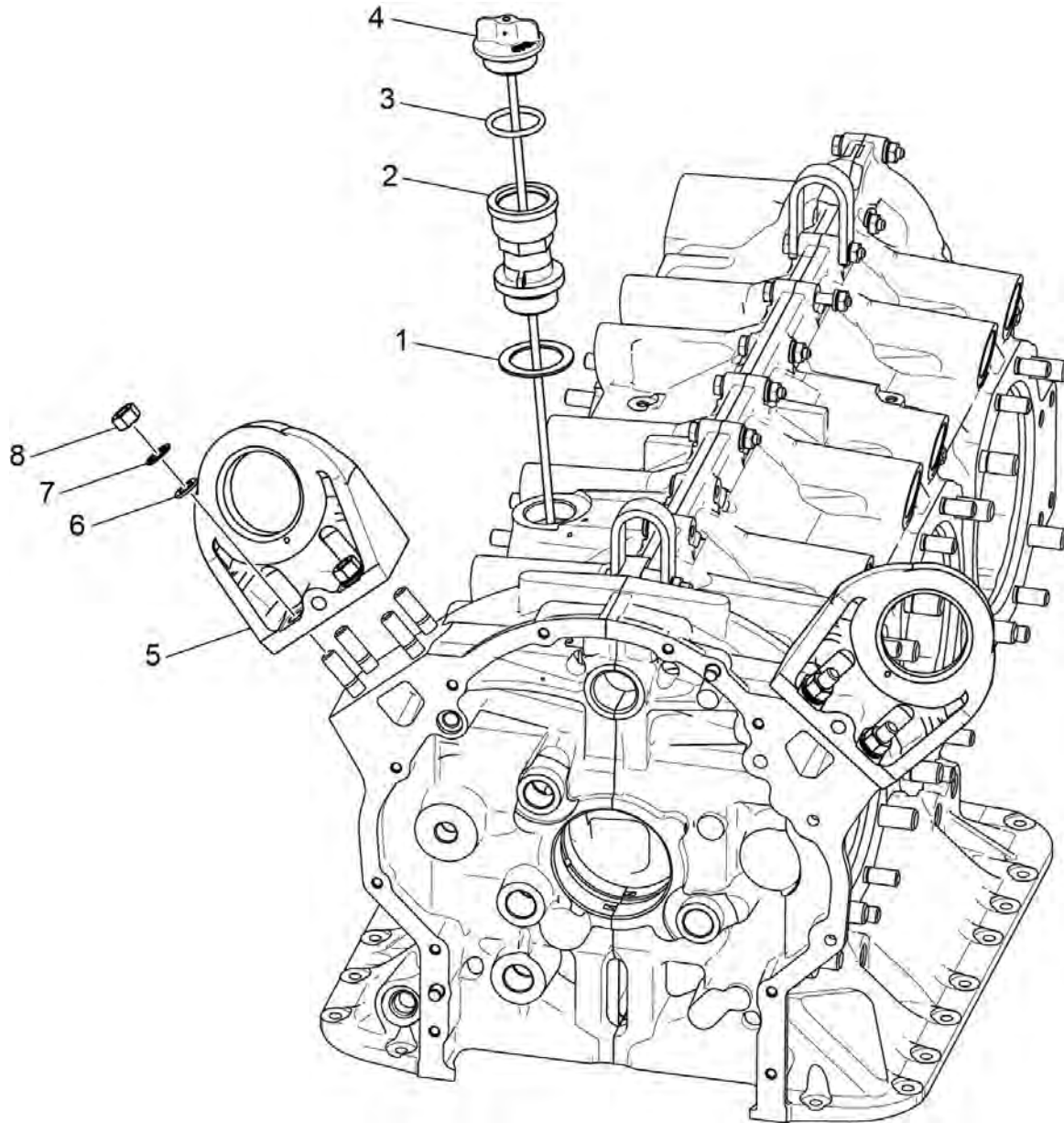
Figure Item	Code	Part Number	Description	Units per Assembly
1		LW-12434	HOSE, 3.00 I.D. x 2-15/16 long	1
2		LW-15858-62-350	CLAMP, T-bolt	2
3		LW-15569	HOSE, Fuel injector inlet	1
4		07C29900	CLAMP, T-bolt, 4-3/8 dia.	1
5		LW-15858-62-443	CLAMP, T-bolt	1
6		76791	BAFFLE, Transition, turbocharger	1
7		STD-110	SCREW, No. 10-24 x 1/2 long, fill. head	2
8		STD-251	WASHER, No. 10 lock, internal lock	2
9		STD-420	NUT, No. 10-24 plain	2
10		STD-425	WASHER, No. 10 plain	2
11		LW-12466	BOX, Air inlet	1
12		LW-38-0.59	BOLT, 3/8-16 x 19/32 long, hex. head	2
13		STD-33	WASHER, 3/8 plain	2
14		STD-678	WASHER, 3/8 lock, internal teeth	2
15		MS29512-06	O-RING, 15/32 I.D. x 5/64 section	2
16		AN814-6L	PLUG, 9/16-18 hex. head	1
17		74797	FITTING, 9/16-18 x 1/8-27 NPT	1
18		77723	GASKET, Turbocharge by-pass	1
19		03D29691	COVER, Air inlet housing	1
20		STD-28	WASHER, No. 10 plain	14
21		STD-251	WASHER, No. 10, internal lock	6
22		STD-1501	SCREW, No. 10-24 x 3/4 long fill. head	6
23		07C26303	HOLD DOWN, Deck pressure sensor	2
24		NAS1352C3H20	SCREW, No. 10-24 x 1-1/4 long, socket	4
25		73314	GASKET, Density and differential	2
26		STD-375	SCREW, No. 10-24 x 5/8 long fill. head	8
27		42B26926	COVER, Induction	2
28		MS29512-03	O-RING, 19/64 I.D. x .1/16 section	1
29		AN814-3L	PLUG AND BLEEDER, 3/8-24 UNF dr.	1
30		1102	PLUG, 1/8-27 NPT, allen head	1



039EW  
**Figure 17**  
**Electronic Throttle Body**

**TURBOCHARGER SYSTEM**  
**Figure 17 - Electronic Throttle Body**

Figure Item	Code	Part Number	Description	Units per Assembly
1		73032	GASKET, Air inlet housing	1
2		STD-1727	WASHER, Plain, 3/4 O.D. x 11/32 I.D. x 1/8 thick	2
3		STD-35	WASHER, 5/16 plain	2
4		STD-475	WASHER, 5/16 lock, internal teeth	4
5		LW-31-1.31	BOLT, 5/16-18 x 1-5/16 long	4
6		65T28321	THROTTLE BODY ASSEMBLY	1
7		60D26319-CT	SENSOR, Throttle position	1
8		60E26316-CT	SENSOR, Low pressure transducer	1
9		02M26336	HOSE, Throttle body, 5/16 O.D. x 3/16 I.D.	1
10		07C26344-CT	CLAMP, Fuel line	2

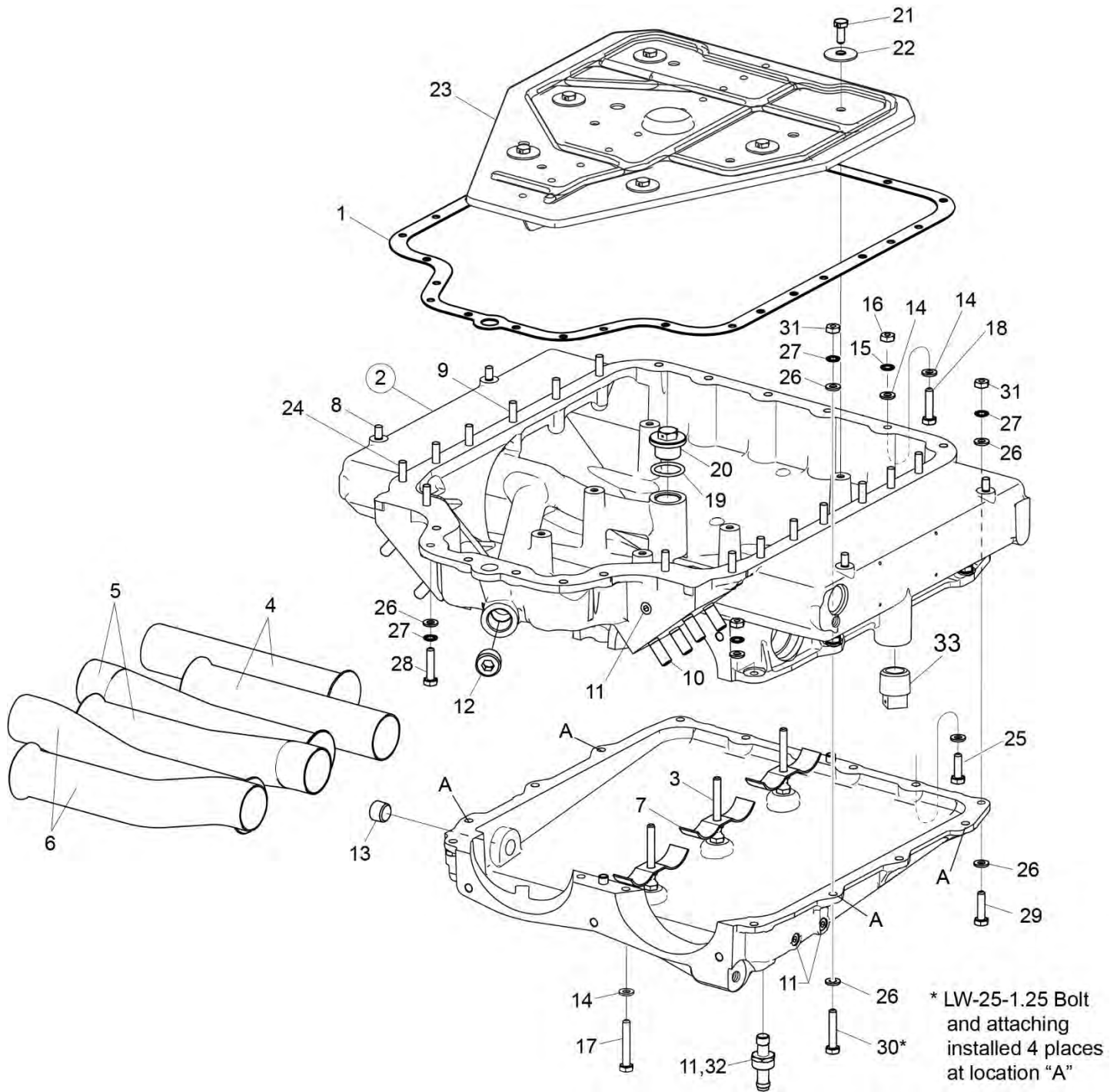


061AM, 064AC  
**Figure 18**  
**Oil Level Gage and Engine Mounting Brackets**



**LUBRICATION SYSTEM**  
**Figure 18 - Oil Level Gage and Engine Mounting Brackets**

Figure Item	Code	Part Number	Description	Units per Assembly
1		70457	GASKET, Oil filler extension	1
2		75675	EXTENSION, Oil filler (2-3/16 long)	1
3		74065	RING, Oil level gage seal	1
4		LW-16783-34	GAGE ASSEMBLY, Oil level	1
5		12A19770	BRACKET, Engine mounting (dynafocal)	4
6		STD-33	WASHER, 3/8 plain	16
7		STD-678	WASHER, 3/8 lock, internal teeth	16
8		STD-596	NUT, 3/8-24 plain	16

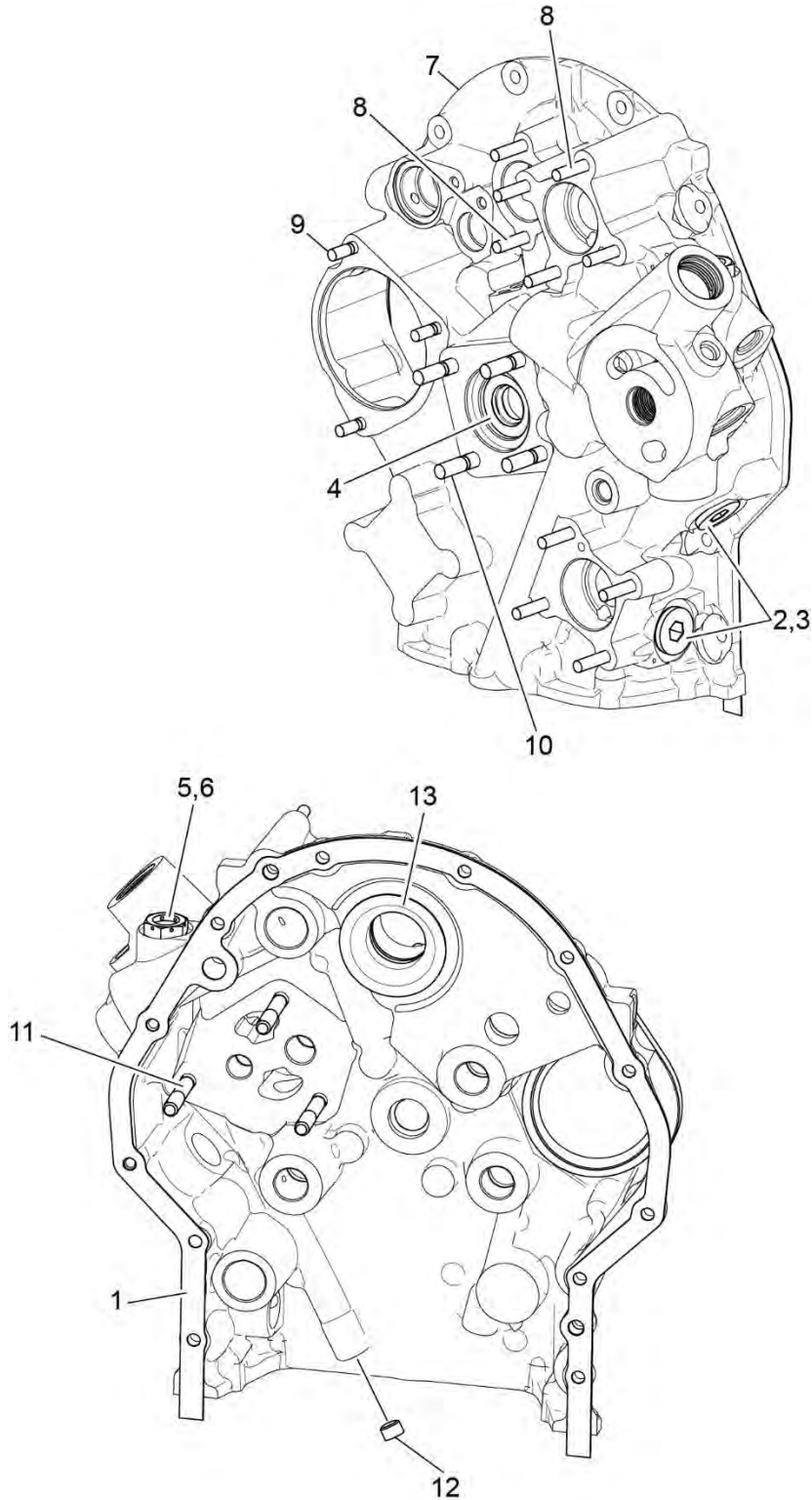


019BT  
**Figure 19**  
**Oil Sump and Induction Housing Assembly**

**LUBRICATION SYSTEM**  
**Figure 19 - Oil Sump and Induction Housing Assembly**

Figure Item	Code	Part Number	Description	Units per Assembly
1		06B21326	GASKET, Oil sump	1
2		56A26781-03	HOUSING ASSEMBLY, Oil sump and induction	1
3		72179	STUD, Intake pipe, extension pipe	3
4		72167	PIPE, Extension, intake, cyl. No. 1 and 2	2
5		72168	PIPE, Extension, intake, cyl. No. 3 and 4	2
6		72169	PIPE, Extension, intake, cyl. No. 5 and 6	2
7		LW-11273	CLAMP, Intake pipe extension	3
8		25C-9	STUD, 1/4-20 x 1-1/8 long	4
9		25C-11	STUD, 1/4-20 x 1-3/8 long	13
10		38-17	STUD, 3/8-16 x 2-1/8 long	8
11		1102	PLUG, 1/8-27 NPT, allen head	4
12		STD-91	PLUG, 1/2-14 NPT, allen head	1
13		STD-784	PLUG, 3/8-18 NPT, allen head	1
14		STD-8	WASHER, 1/4 plain	29
15		STD-160	WASHER, 1/4 lock, internal teeth	13
16		STD-1411	NUT, 1/4-20 plain	13
17		LW-25-2.00	BOLT, 1/4-20 x 2.00 long, hex. head	2
18		LW-25-1.00	BOLT, 1/4-20 x 1.00 long, hex. head	6
19		06E19769-0.91	GASKET, Annular, 29/32 I.D.	1
20		72960	PLUG, 7/8-14 x 5/8, hex. head	1
21		LW-25H0.63	BOLT, 1/4-20 x 5/8 long, hex. head	6
22		AN970-4	WASHER, Flat, 17/64 I.D. x 1-1/8 O.D. x 1/16	6
23		56G28031	BAFFLE, Oil sump	1
24		25C-12	STUD, 1/4-20 x 1-1/2 long	2
25		LW-25-0.81	BOLT, 1/4-20 x 13/16 long, hex. head	4
26		STD-8	WASHER, 1/4 plain	33
27		STD-160	WASHER, 1/4 lock, internal teeth	27
28		LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. head	6
29		LW-25-1.00	BOLT, 1/4-20 x 1.00 long, hex. head	6
30*		LW-25-1.25	BOLT, 1/4-20 x 1-1/4 long, hex. head	4
31		STD-1411	NUT, 1/4-20 plain	21
32		LW-13807	ADAPTER ASSEMBLY, Fuel drain valve	1
33		STD-551	PLUG, 1/2-14 NPT, square head, drilled	2

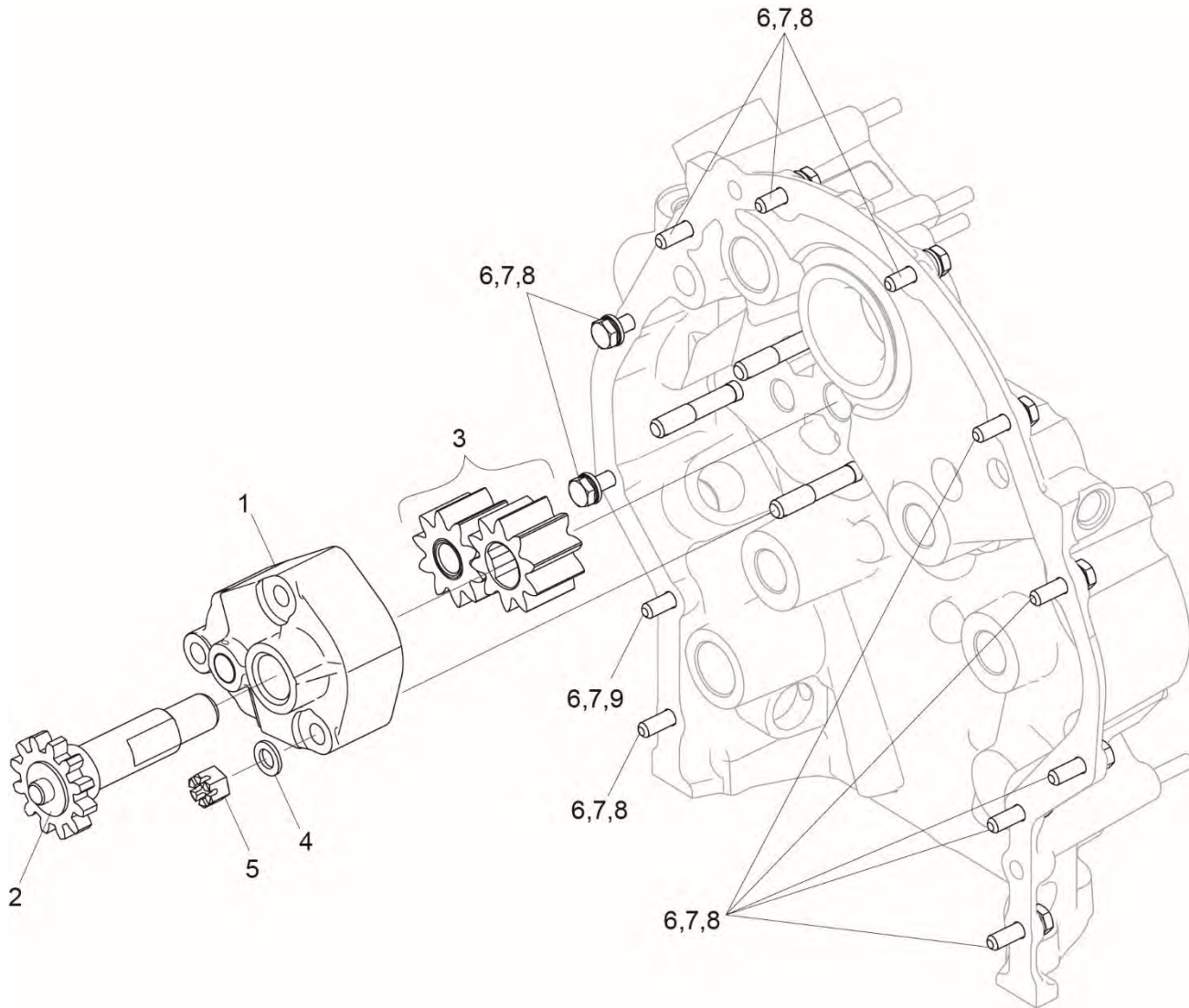
\* LW-25-1.25 bolts installed in 4 locations, designated "A" in Figure 18



012BN  
**Figure 20**  
**Accessory Housing Assembly**

**ACCESSORY DRIVES**  
**Figure 20 - Accessory Housing Assembly**

Figure Item	Code	Part Number	Description	Units per Assembly
1		06B26276	GASKET, Accessory housing	1
2		03C21720	PLUG, 7/8-14 thread	2
3		MS29512-10	SEAL, Oil, 3/32 section x 45/64 I.D.	2
4		06A26277	SEAL, Fuel pump, 3/4 I.D. x 1-3/8 O.D.	1
5		AN814-6L	PLUG, 9/16-18 hex. head	1
6		MS29512-06	O-RING, 15/32 I.D. x 5/64 section	1
7		21H26254-01	ACCESSORY HOUSING, Studding	1
8		25C-12	STUD, 1/4-20 x 1-1/2 long	10
9		25C-10	STUD, 1/4-20 x 1-1/4 long	3
10		31C-14	STUD, 5/16-18 x 1-3/4 long	4
11		31CD-20	STUD, 5/16-18 x 2-1/2 long, drilled	3
12		1102	PLUG, 1/8-27 NPT, Allen head	1
13		76156	SHIELD, Oil accessory breather	1



013J

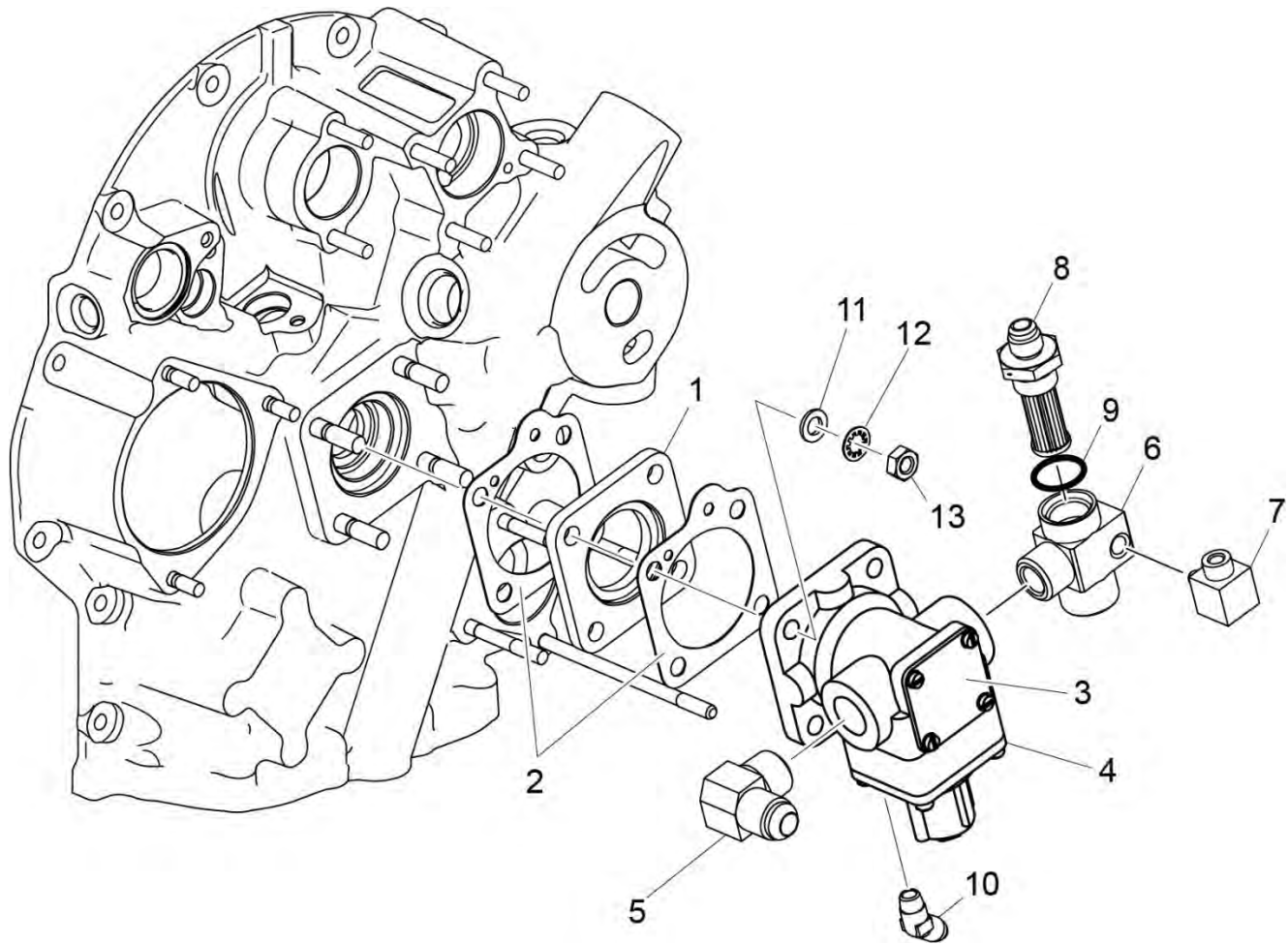
**Figure 21**

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

## ACCESSORY DRIVES

**Figure 21 - Oil Pump Assembly and Accessory Housing Attaching Parts**

Figure Item	Code	Part Number	Description	Units per Assembly
1		51A29876	BODY ASSEMBLY, Oil pump	1
		LW-10344	BODY ASSEMBLY, Oil pump	1
2		LW-10318	GEAR ASSEMBLY, Oil pump drive	1
3		05K23463	IMPELLER KIT	1
	*	51C23290	IMPELLER ASSEMBLY, Oil pump driven	1
	*	51B23274	IMPELLER, Oil pump driving	1
4		STD-35	WASHER, 5/16 plain	3
5		STD-1420	NUT, 5/16-18 slotted	3
6		STD-8	WASHER, 1/4 plain	12
7		STD-160	WASHER, 1/4 lock, internal teeth	12
8		LW-25-0.94	BOLT, 1/4-20 x 15/16 long, hex. head	11
9		LW-25-1.25	BOLT, 1/4-20 x 1-1/4 long, hex. head	1
* Sold in complete sets only (Kit P/N 05K23463).				

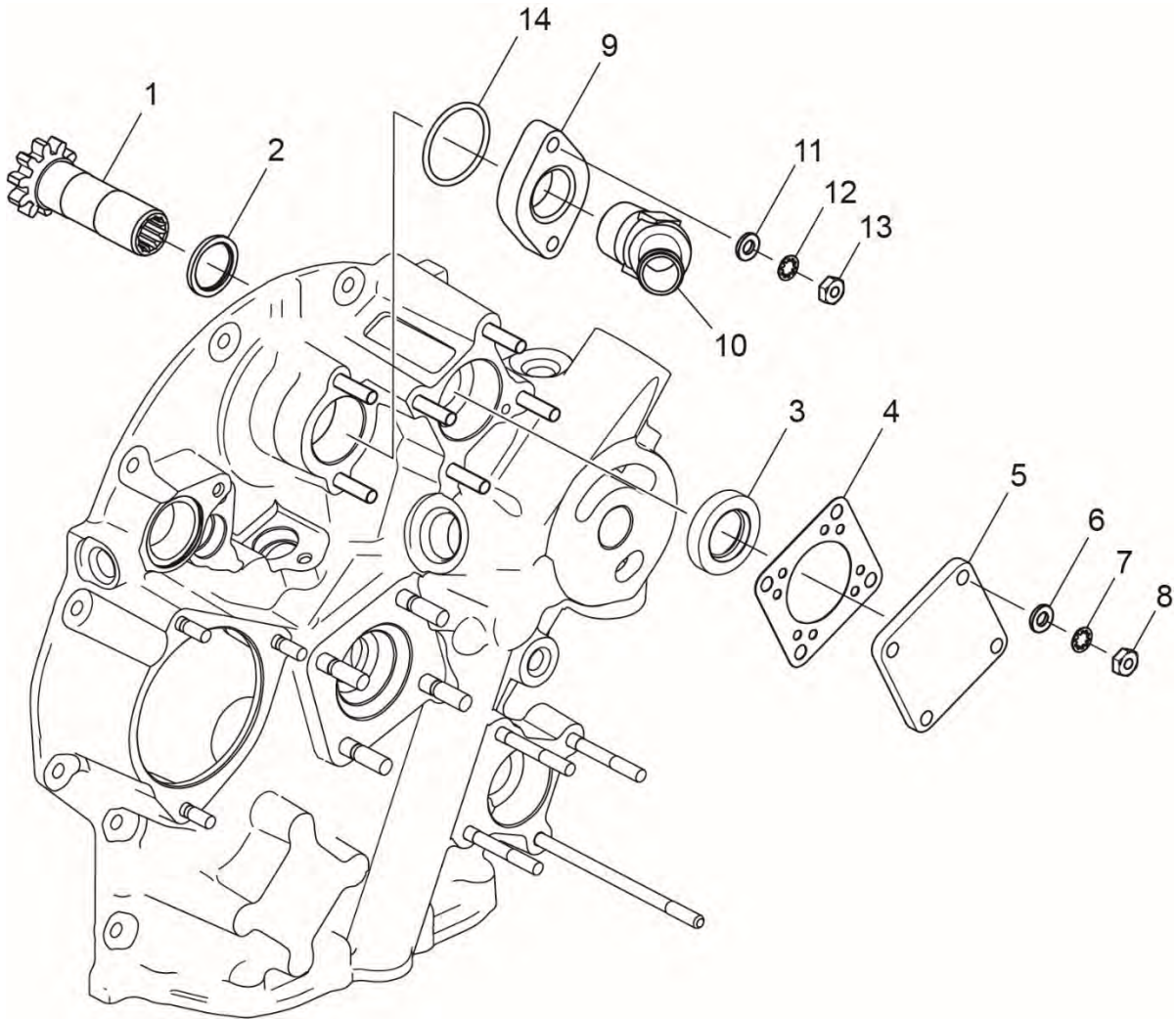


035BA  
**Figure 22**  
**Fuel Pump Assembly and Attaching Parts**



**ACCESSORY DRIVES**  
**Figure 22 - Fuel Pump Assembly and Attaching Parts**

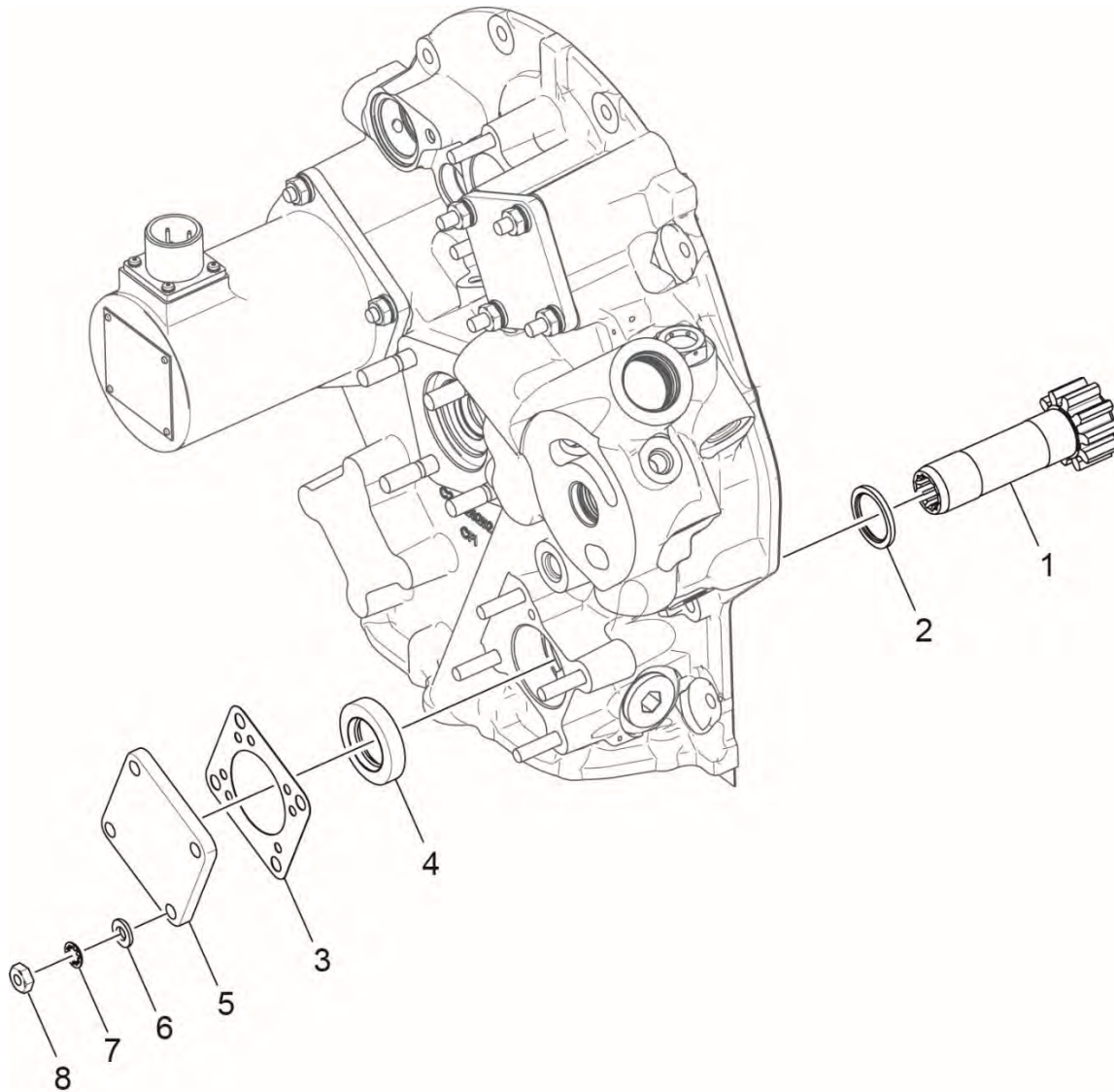
Figure Item	Code	Part Number	Description	Units per Assembly
1		LW-10799	SPACER, Fuel pump, insulating	1
2		69164	GASKET, Fuel pump adapter	2
3		62F26562	ASSEMBLY, Fuel pump	1
4	<b>V</b>	62E23191	FUEL PUMP (V 200F-5007)	1
5		LW-11882	ELBOW, 90° inlet	1
6		02E26278	ADAPTER, Fuel filter and pressure sensor	1
7		LW-11867	ELBOW, 1/8 NPT, intake and exhaust, 90°	1
8		61U26301	FILTER, Fuel pump	1
9		M25988/1-016	O-RING, Fluorosilicone, 39/64 ID X 1/16	1
10		MS20823-4	ELBOW, 1/8 NPT to 1/4 tube	1
11		STD-35	WASHER, 5/16 plain	4
12		STD-475	WASHER, 5/16 lock, internal teeth	4
13		STD-1410	NUT, 5/16-18 plain	4
<b>V</b> Vendor Prime Manufacturer part				



016P, 014BZ  
**Figure 23**  
**Vacuum Pump Drive and Breather Fitting**

**ACCESSORY DRIVES**  
**Figure 23 - Vacuum Pump Drive and Breather Fitting**

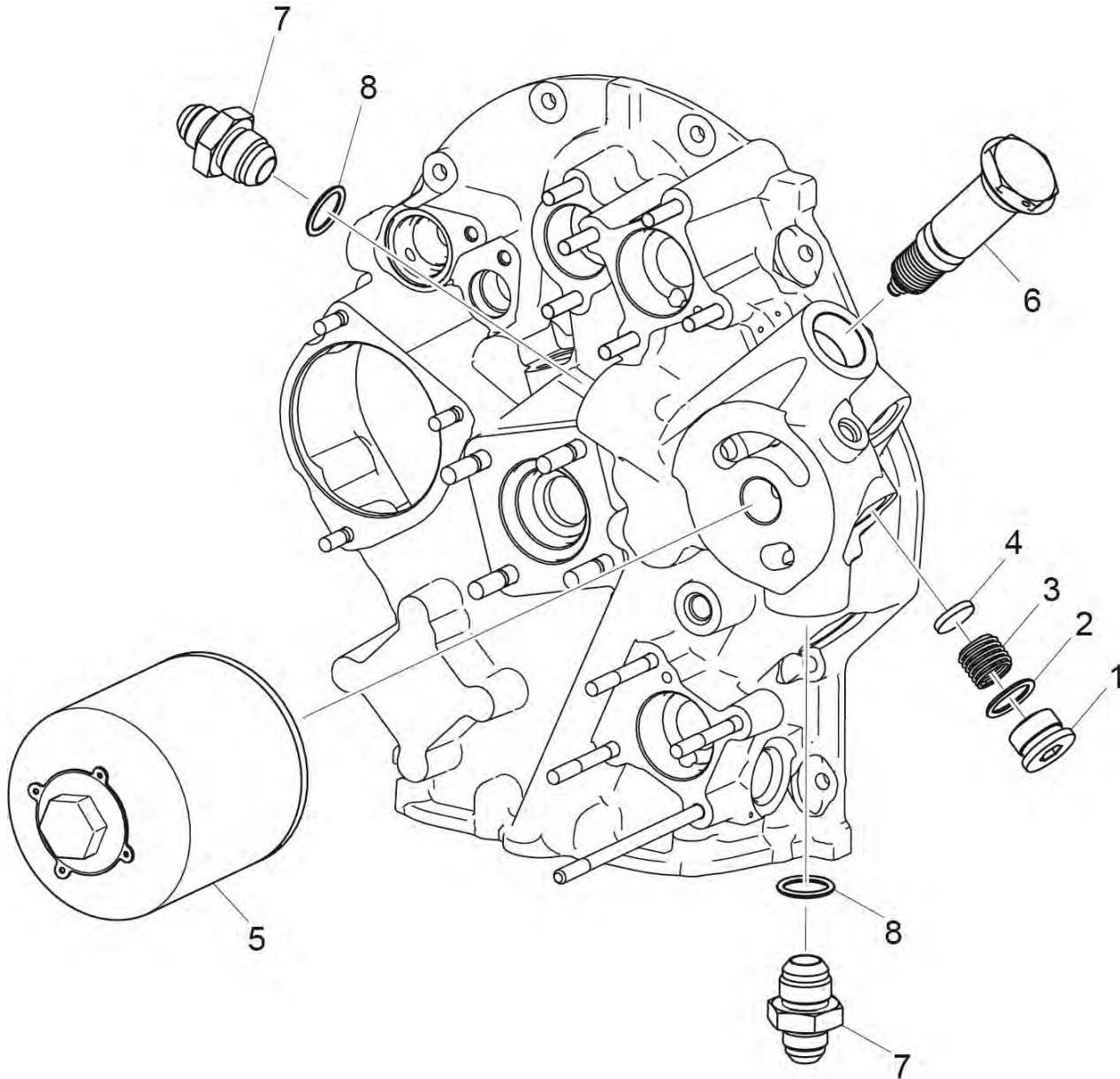
Figure Item	Code	Part Number	Description	Units per Assembly
1		LW-10307	GEAR ASSEMBLY, Accessory driven	1
2		71596	WASHER, Accessory drive gear	1
3		06A19956	OIL SEAL, 7/8 I.D. x 1-1/2 O.D. x 5/16 wide	1
4		8313	GASKET, Vacuum pump	1
5		60430	COVER, Vacuum pump	1
6		STD-8	WASHER, 1/4 plain	4
7		STD-160	WASHER, 1/4 lock, internal teeth	4
8		STD-1411	NUT, 1/4-20 plain	4
9		03D26282	COVER, Breather	1
10		AN844-12D	ELBOW, 3/4 NPT to 3/4 I.D. hose	1
11		STD-8	WASHER, 1/4 plain	2
12		STD-160	WASHER, 1/4 lock, internal teeth	2
13		STD-1411	NUT, 1/4-20 plain	2
14		MS28775-126	O-RING	1



017AB  
**Figure 24**  
**High Speed Drive**

**ACCESSORY DRIVES**  
**Figure 24 - High Speed Drive**

Figure Item	Code	Part Number	Description	Units per Assembly
1		LW-16448	GEAR ASSEMBLY, Accessory driven	1
2		71596	WASHER, Accessory drive gear	1
3		8313	GASKET, Vacuum pump	1
4		06A19956	OIL SEAL, 7/8 I.D. x 1-1/2 O.D. x 5/16 wide	1
5		60430	COVER, Vacuum pump	1
6		STD-8	WASHER, 1/4 plain	4
7		STD-160	WASHER, 1/4 lock, internal teeth	4
8		STD-1411	NUT, 1/4-20 plain	4

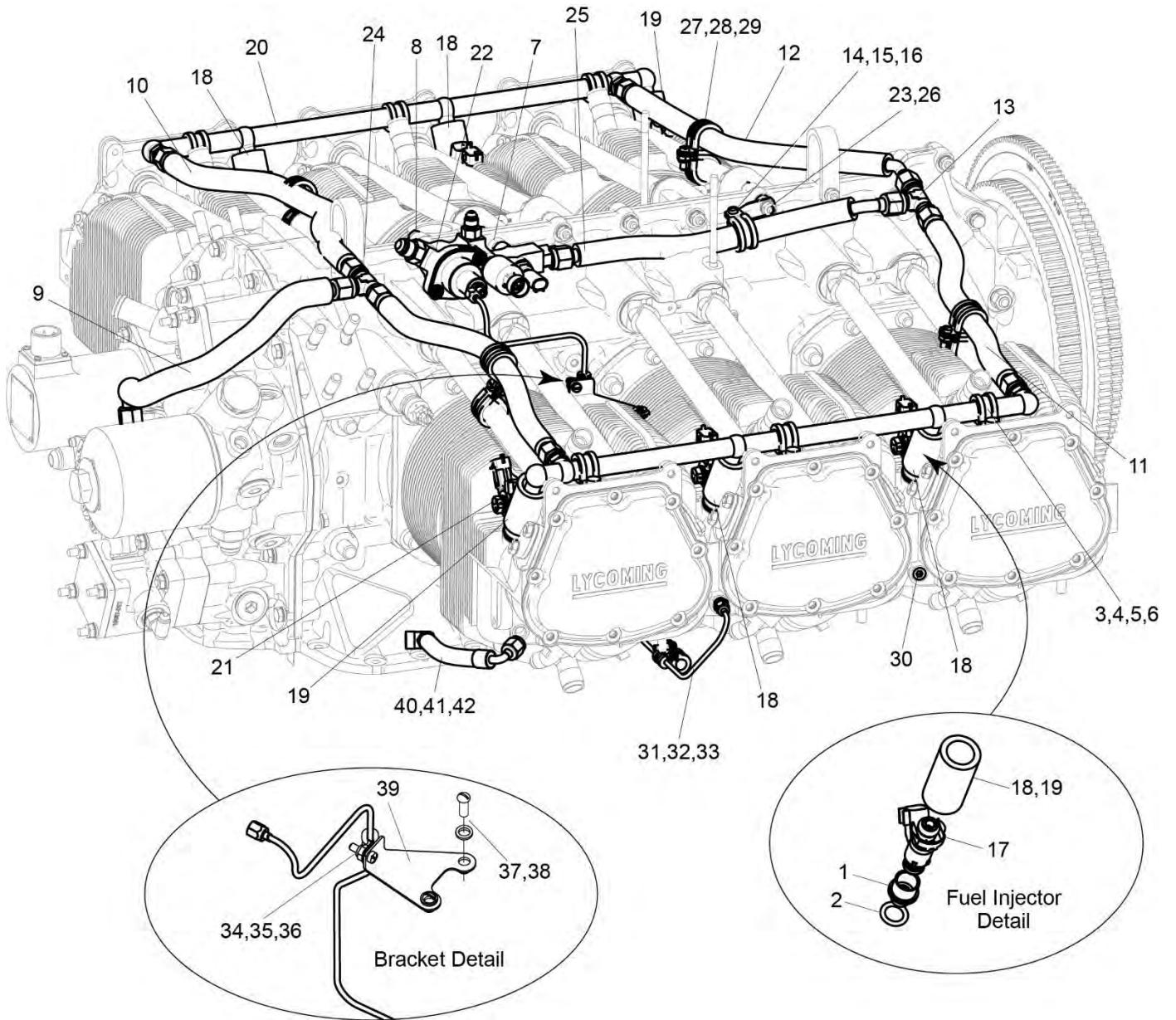


015AE  
**Figure 25**  
**Oil Filter Assembly and Oil Cooler Bypass Valve**

## ACCESSORY DRIVES

**Figure 25 - Oil Filter Assembly and Oil Cooler Bypass Valve**

Figure Item	Code	Part Number	Description	Units per Assembly
1		03C21720	PLUG, 7/8-14 thread	1
2		MS29512-10	SEAL, Oil, 3/32 section x 45/64	1
3		55C26775	SPRING	1
4		55H26776	VALVE	1
5	<b>V*</b>	LW-13216	OIL FILTER, Long, <b>V</b> CH48111-1	1
6		53E29909	VALVE ASSEMBLY, Temp. control, oil cooler bypass	1
		53E22144	VALVE ASSEMBLY, Temp. control, oil cooler bypass	1
7		AN919-15	REDUCER, External, 5/8 flared tube to 1/2	2
8		MS29512-10	SEAL, Oil, 3/32 section x 45/64	2
<b>V</b> Vendor Prime Manufacturer part <b>*</b> Shipped loose with engine.				



040DG, 062H

**Figure 26**

**Fuel Injector, Fuel Lines, Manifold Assembly, and Pressure Line**



**FUEL DISTRIBUTION****Figure 26 - Fuel Injector, Fuel Lines, Manifold Assembly, and Pressure Line**

Figure Item	Code	Part Number	Description	Units per Assembly
1		02E29797	ADAPTER, Fuel injector	6
2		06E19769-0.50	GASKET, Annular, 1/2 I.D.	6
3		LW-16266-25-63	CLAMP, 5/8 I.D. x 1/4 diameter screw	6
4		STD-160	WASHER, 1/4 lock, internal teeth	6
5		STD-8	WASHER, 1/4 plain	6
6		LW-25-0.63	BOLT, 1/4-20 x 5/8 long, hex. head	6
7		LW-25-2.00	BOLT, 1/4-20 x 2.00 long, hex. head	1
8		LW-25-1.63	BOLT, 1/4-20 x 1-5/8 long, hex. head	1
9		LW-12877-6S110	HOSE ASSEMBLY, 3/8 hose, 90° elbow	1
10		LW-12799-6S180	HOSE ASSEMBLY, 3/8 hose, straight	1
11		LW-12799-6S110	HOSE ASSEMBLY, 3/8 hose, straight	2
12		LW-12879-6S162	HOSE ASSEMBLY, 3/8 hose, 45° elbow	1
13		AN824-6	TEE, 3/8 flared tube	2
14		LW-16266-10-75	CLAMP	1
15		STD-860	SCREW, No. 10-32 x 5/8 long, fill. head	1
16		STD-670	LOCK NUT, No. 10-32	1
17		61X26294-CT	FUEL INJECTOR (Obsolete)	6
	*	61X29461-CT	FUEL INJECTOR (Replacement for P/N 61X26294-CT)	6
18		01M29868	FIRE SLEEVE, Fuel injector (installed on fuel injectors for cylinders 1, 3, 4, and 6)	4
19		01M29869	FIRE SLEEVE, Fuel injector (installed on fuel injectors for cylinders 2 and 5)	2
20		63P26360	RAIL ASSEMBLY, Fuel injector	2
21		LW-31-1.31	BOLT, 5/16-18 x 1-5/16 long, hex. head	6
22		02K29101	MANIFOLD ASSEMBLY, Fuel regulator adapter	1
23		74655	SPACER, Exhaust manifold	1
24		LW-25-1.88	BOLT, 1/4-20 x 1-7/8 long, hex. head	1
25		LW-12879-6S110	HOSE ASSEMBLY, 3/8 hose, 45° elbow	1
26		72815	BRACKET, Support clamp, 90°	1

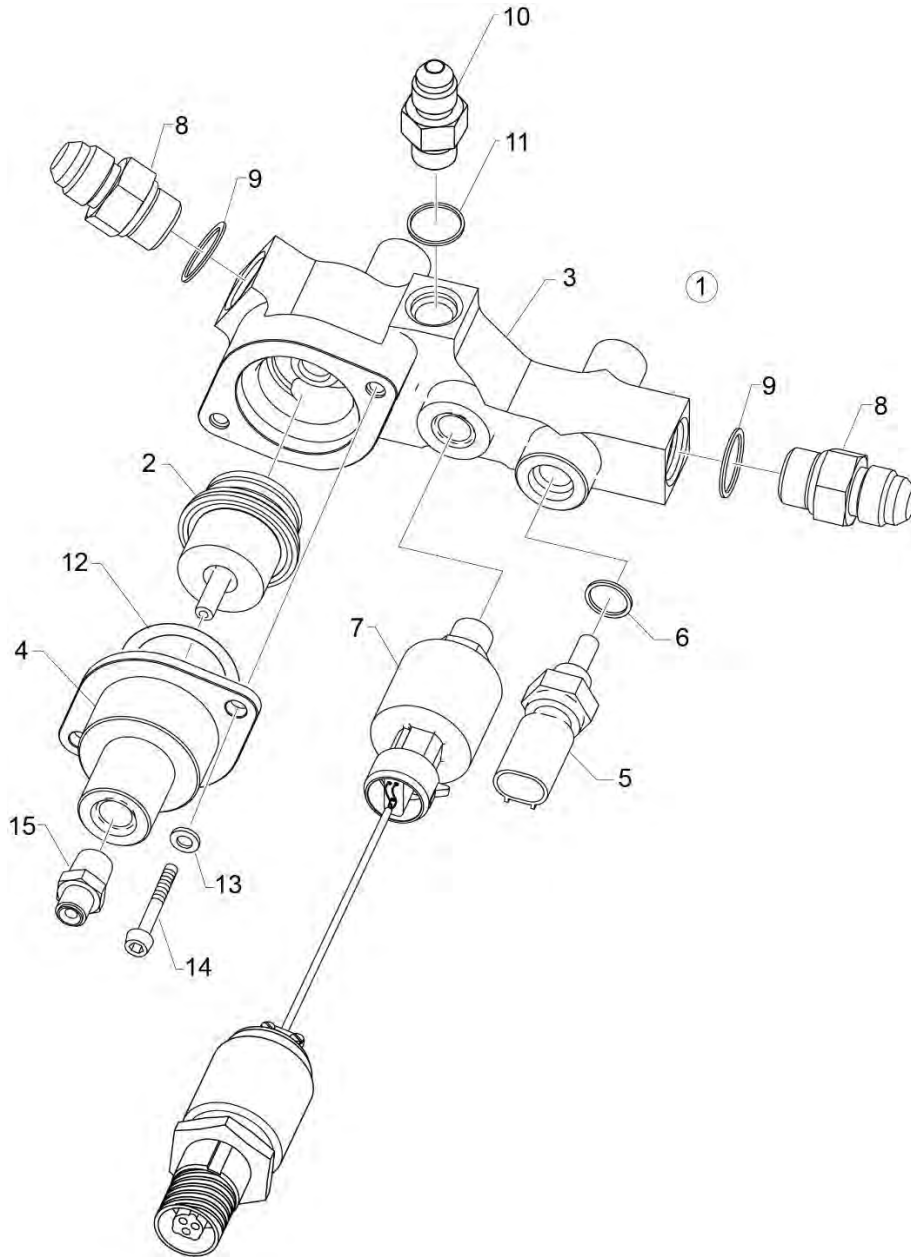
\* Refer to the latest revisions of Service Instructions No. 1573 and No. 1582 when replacing fuel injectors part number 61X26294-CT with fuel injectors part number 61X29461-CT.

(continued on next page)

**Figure 26 - Fuel Injector, Fuel Lines, Manifold Assembly, and Pressure Line (Cont.)**

Figure Item	Code	Part Number	Description	Units per Assembly
27		LW-16266-10-75	CLAMP	8
28		STD-860	SCREW, No. 10-32 x 5/8 long, fill. head	1
29		STD-670	LOCK NUT, No. 10-32	1
30		1102	PLUG, 1/8-27 NPT, Allen head	4
31		02E26306	NIPPLE, Restricted, 1/8 tube	1
32		LW-12098-0-280	TUBE ASSEMBLY, Fuel injector line	1
33		LW-16266-10-38	CLAMP, 3/8 diameter for No. 10 screw	1
34		LW-16266-10-13	CLAMP, 1/8 diameter for No. 10 screw	2
35		STD-860	SCREW, No. 10-32 x 5/8 long, fill. head	4
36		STD-670	LOCK NUT, No. 10-32	4
37		STD-692	SCREW, No. 10-32 x 1/2 long, round head	2
38		STD-425	WASHER, No. 10 plain	2
39		07A28507	BRACKET ASSEMBLY, Fuel line support	1
40		MS20823-4	ELBOW, 1/8 NPT to 1/4 tube	1
41		LW-12798-4S130	HOSE ASSEMBLY, 1/4 hose, straight	1
42		02A19417	ELBOW, 1/4 tube x 1/4 NPT, 90°	1

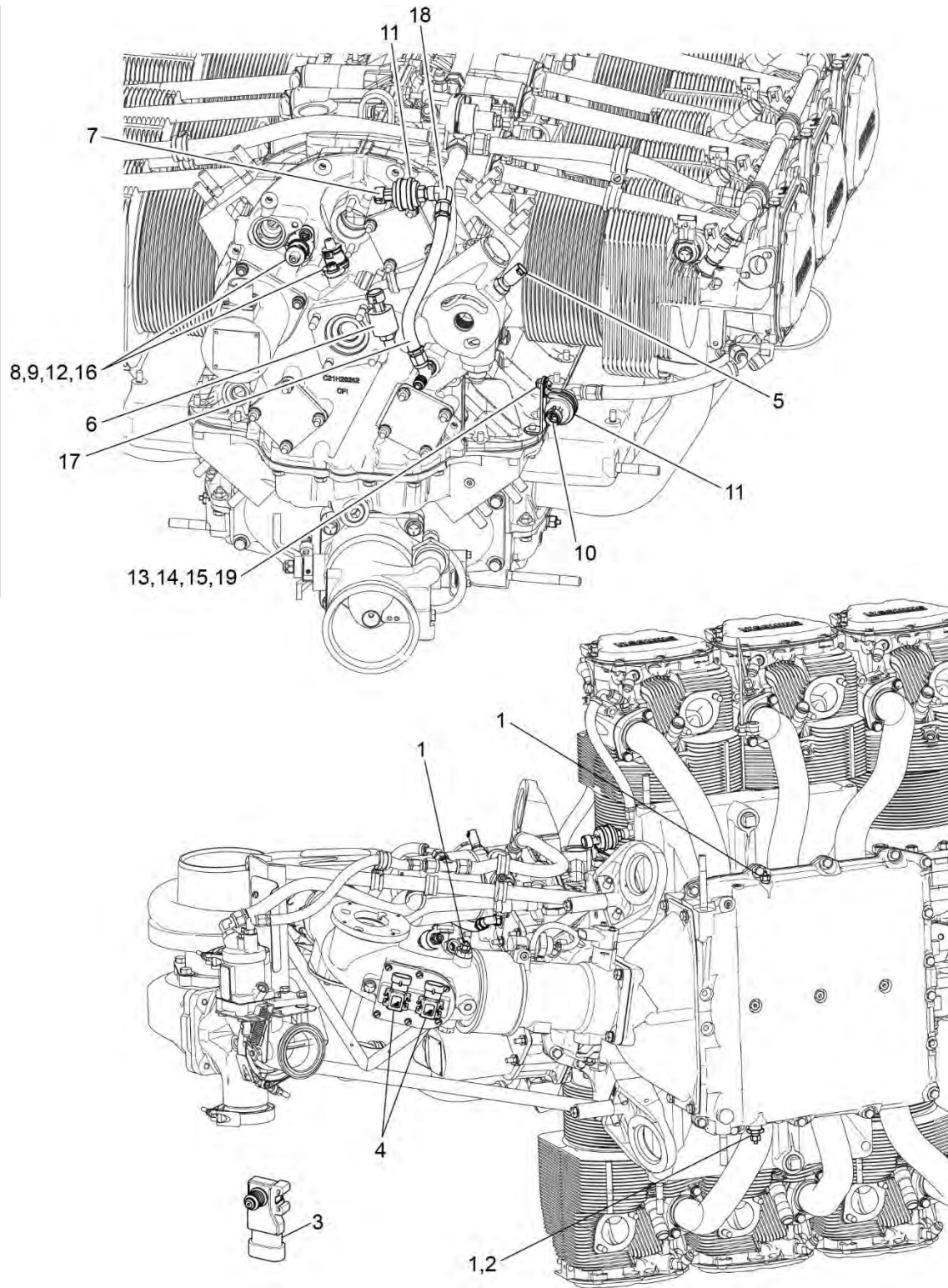
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040DG  
Figure 27  
Fuel Pressure Regulator

**FUEL CONTROL SYSTEM**  
**Figure 27 – Fuel Pressure Regulator**

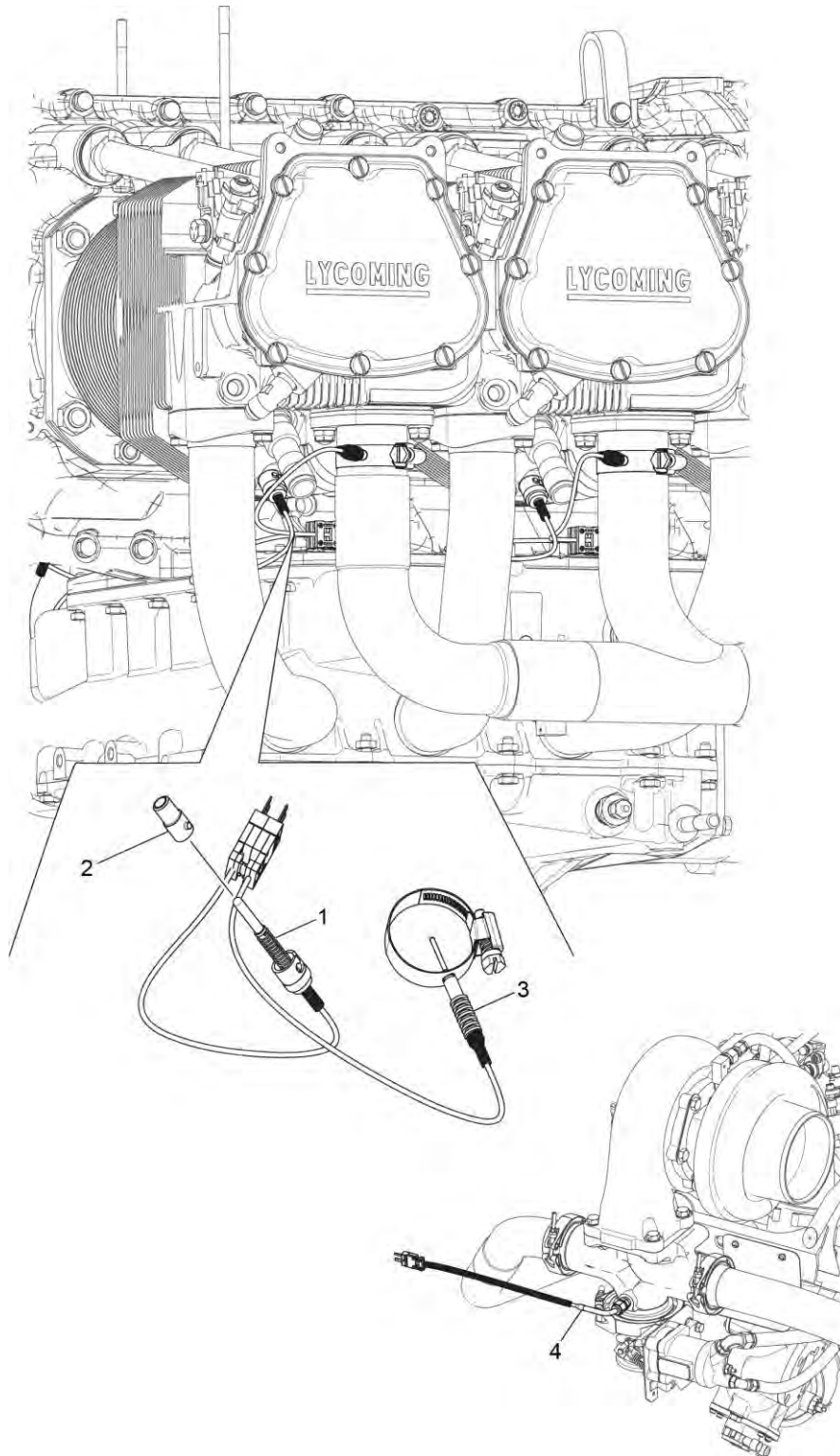
Figure Item	Code	Part Number	Description	Units per Assembly
1		02K29101	ASSEMBLY, regulator	
2		63K26299-CT	REGULATOR, Fuel pressure	1
3		02K26662	MANIFOLD, Fuel pressure regulator	1
4		02E26641	ADAPTER, Fuel pressure regulator	1
5		60C26310-CT	SENSOR, Temperature	1
6		AS5729-012	O RING, 3/8 ID X 1/16 SECT-	
7		60E29660	SENSOR, Fuel pressure, with lead and connector	1
8		75739	NIPPLE, 3/8 tube, 9/16-18 UNF-2A thread	2
9		MS29512-06	O-RING, 15/32 ID X 1/16 SECT-.	
10		LW-16572	NIPPLE, 1/4 tube, 7/16-20 UNF-2A thread	1
11		MS29512-04	O-RING, 11/32 ID X 1/16 SECT-.	
12		MS29513-028	O-RING, Fuel resistant, 1-23/64 I.D. x 1/16 thick	1
13		NAS1149E0332P	WASHER, No. 10, flat, 1/32 thick	2
14		NAS1352C3H10	SCREW, No. 10-64 x 5/8 long, drilled head	2
15		STD-148	NIPPLE, 1/8 tube, union	1



150H  
**Figure 28**  
**Sensors (Accessory Housing View)**

**IGNITION DISTRIBUTION**  
**Figure 28 - Sensors (Accessory Housing View)**

Figure Item	Code	Part Number	Description	Units per Assembly
1		60C28409	SENSOR, Air temperature	3
2		AN912-3D	BUSHING, Reducer, 3/8 NPT	1
3	*	60E29474-CT	SENSOR, Pressure, 1 bar	2
4		60E29475-CT	SENSOR, Pressure, 2 bar	2
5		60C26310-CT	SENSOR, Temperature	1
6		60E29660	SENSOR, Fuel pressure, with lead and connector	1
7		60E29661	SENSOR, Oil pressure, with lead and connector	1
8		60D26318-CT	SENSOR, Cam and crank	2
9		AS3209-017	O-RING, 0.667- 0.685 I.D.	2
10		60E29662	SENSOR, Air pressure, with lead and connector	1
11		LW-16266-25-1.00	CLAMP, 1.00 diameter for 1/4 screw	2
12		NAS1352C4H10	SCREW, Socket head cap, 1/4-20 x 5/8 long, corrosion resistant, drilled head	2
13		STD-692	SCREW, No. 10-32 x 1/2 long, round head	1
14		STD-670	LOCK NUT, No. 10-32	1
15		07A28331	BRACKET, Extension	1
16		STD-8	WASHER, 1/4 plain	2
17		LW-12798-4S074	HOSE ASSEMBLY, 1/4 hose, straight	1
18		02A19417	ELBOW, 1/4 tube x 1/8 NPT, 90°	1
19		STD-425	WASHER, No. 10 plain	1
* Shipped loose with engine				

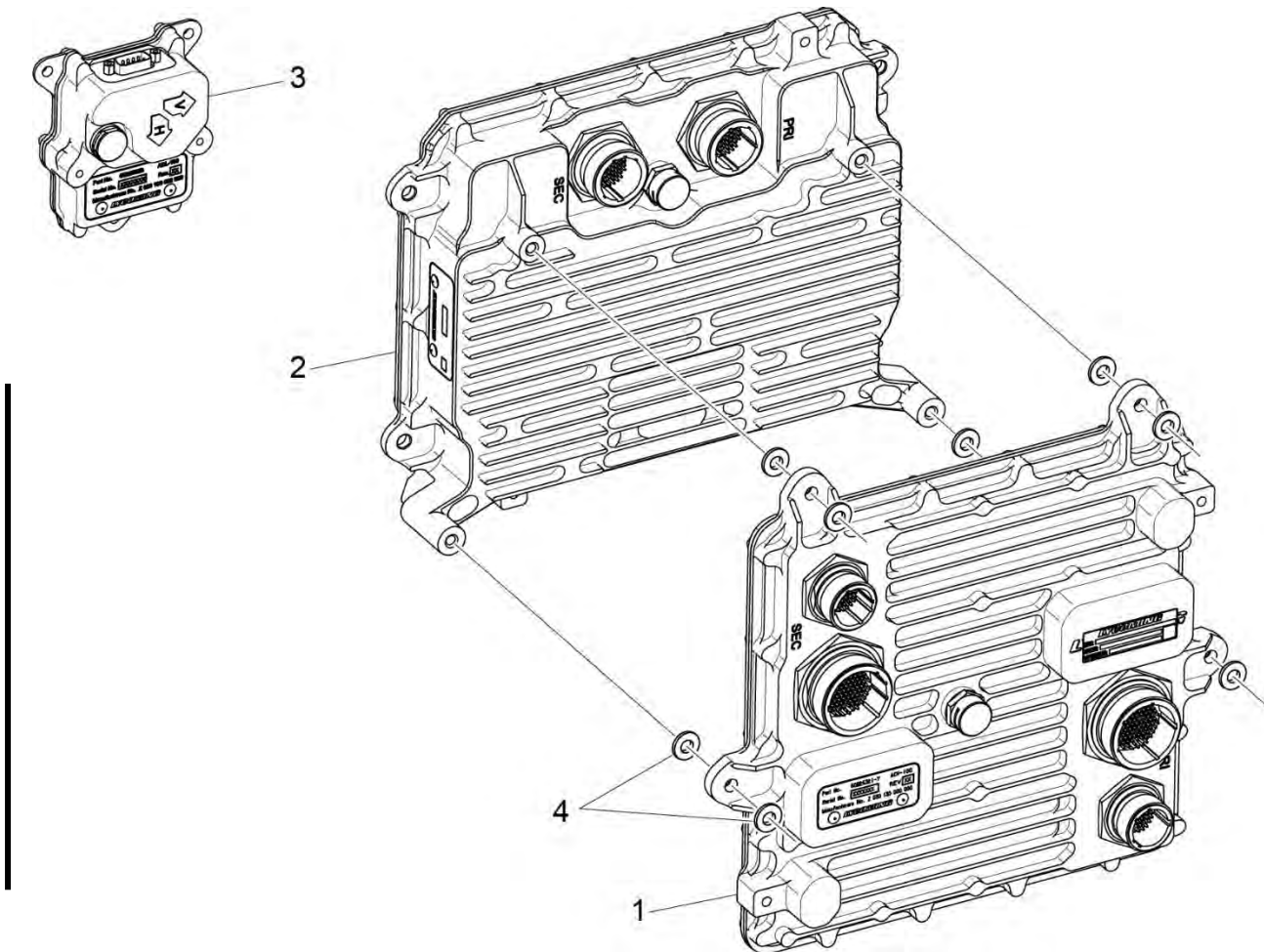


150H  
**Figure 29**  
**Sensors (Rear Left View)**



**IGNITION DISTRIBUTION**  
**Figure 29 - Sensors (Rear Left View)**

Figure Item	Code	Part Number	Description	Units per Assembly
1		60C26313	SENSOR, Cylinder head temperature (same on all cylinders)	6
2		AN4076-1	FITTING, Temperature measuring element	6
3		60C26314	SENSOR, Exhaust gas temperature	6
4		60C26763	SENSOR, Turbine inlet temperature	1



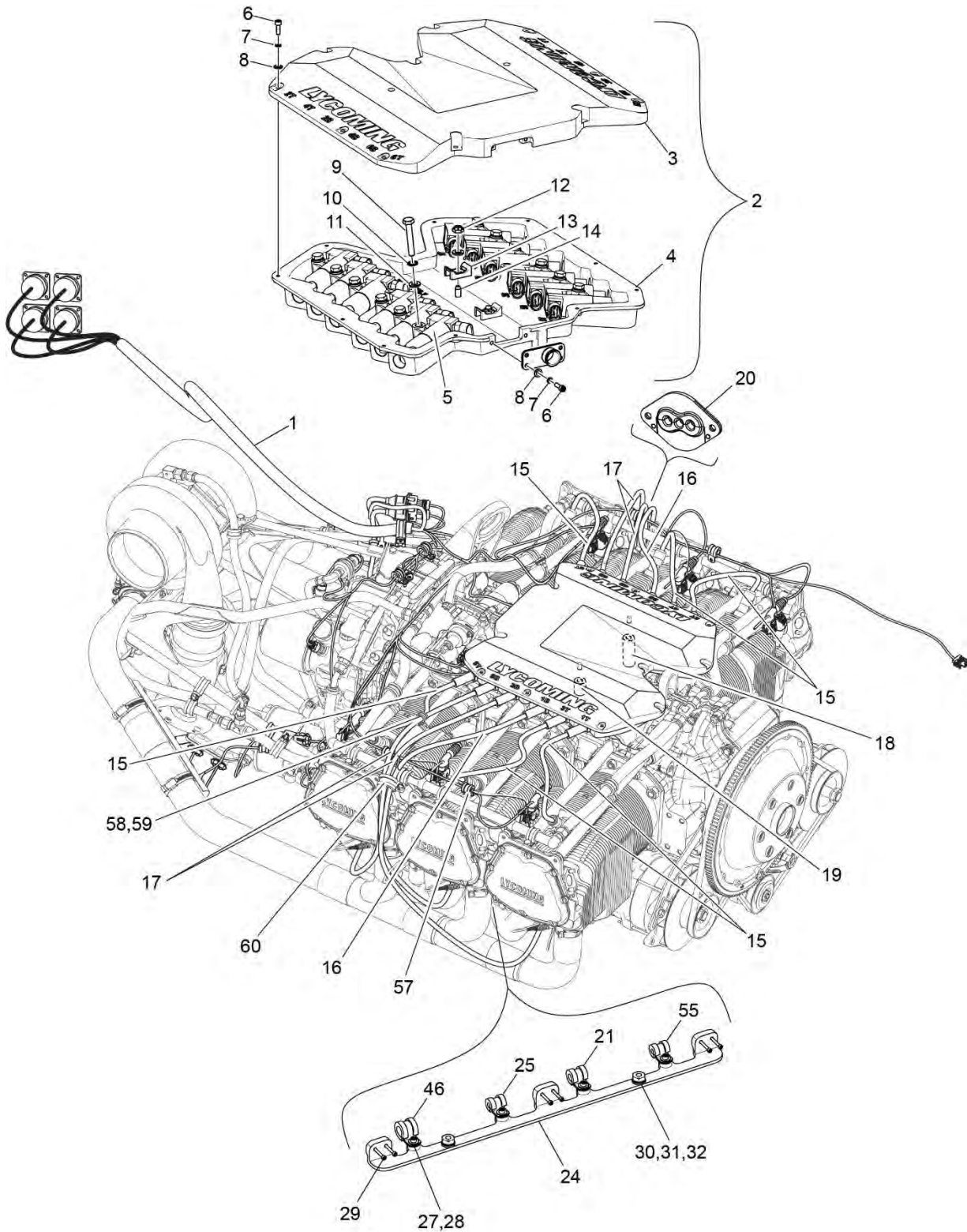
170D

**Figure 30**

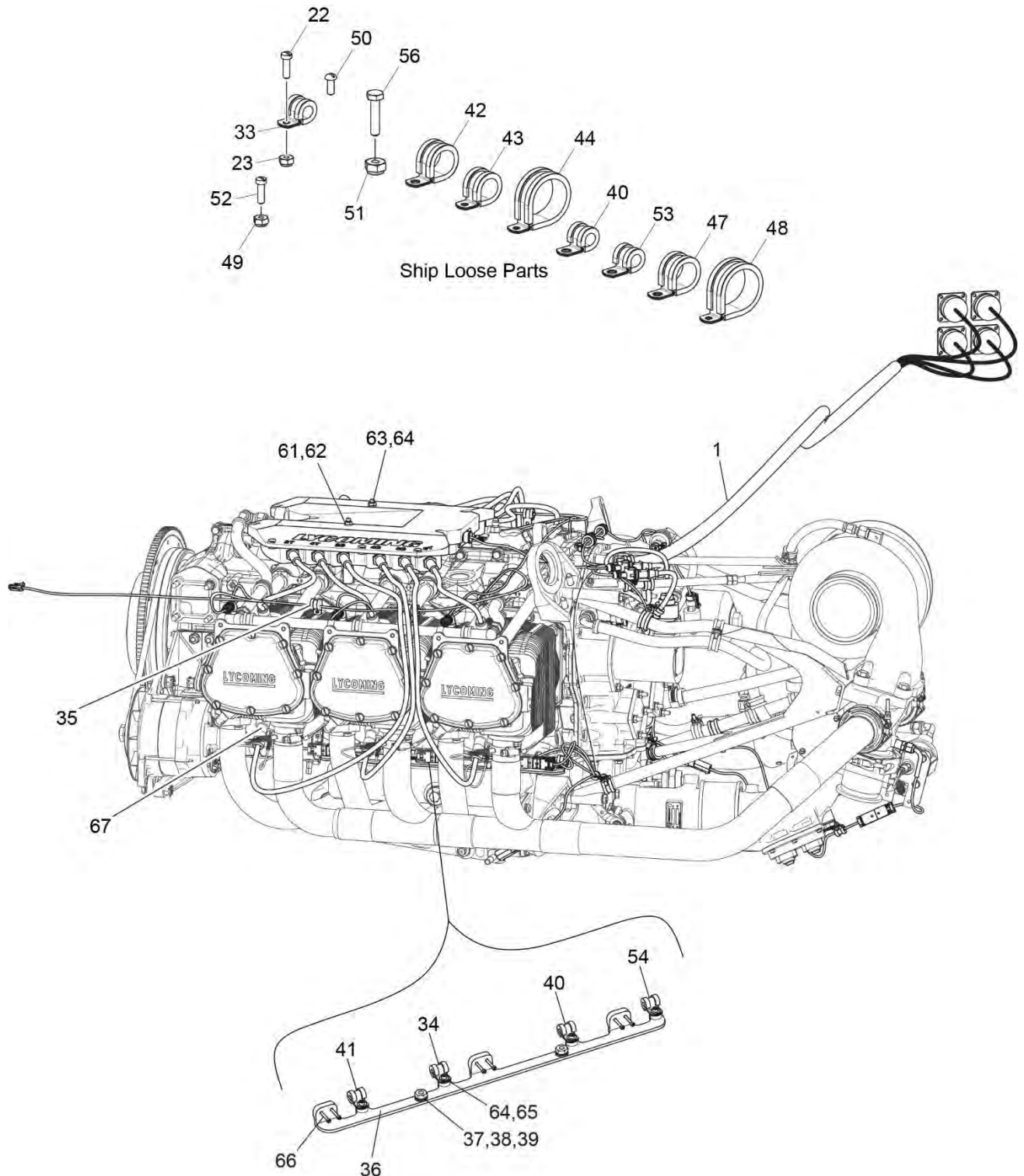
**Engine Control Unit, Power Box, and Data Logger**

**IGNITION DISTRIBUTION**  
**Figure 30 - Engine Control Unit, Power Box, and Data Logger**

Figure Item	Code	Part Number	Description	Units per Assembly
1	* ♦	60B29705	ECU ASSEMBLY, Tecnam	1
	* ♦	60B29659	ECU ASSEMBLY, Tecnam	1
	* ♦	60B29726	ECU ASSEMBLY, Tecnam	1
2	*	60B26322	POWER BOX	1
3	*	60B29079	DLU ASSEMBLY FOR IE2 (DATA LOGGER) (Replaced by 60B29462)	1
	*	60B29462	DLU ASSEMBLY FOR IE2 (DATA LOGGER)	1
4		01L29970	WASHER, Insulating, ECU Mounting	8
<p>* Shipped loose with engine            ♦ Refer to the latest revision of Service Instruction No. 1573 for ECU Part Numbers, Solenoid Valve Part Numbers, Fuel Injector Part Numbers, and Calibration Tables that must be used together</p>				



**Figure 31A**  
**EEC Harness, Coil Box, and Spark Plugs (Right Side)**



160K  
**Figure 31B**  
**EEC Harness, Coil Box, and Spark Plugs (Top Left Front)**

**IGNITION DISTRIBUTION**  
**Figure 31A, B - EEC Harness, Coil Box, and Spark Plugs**

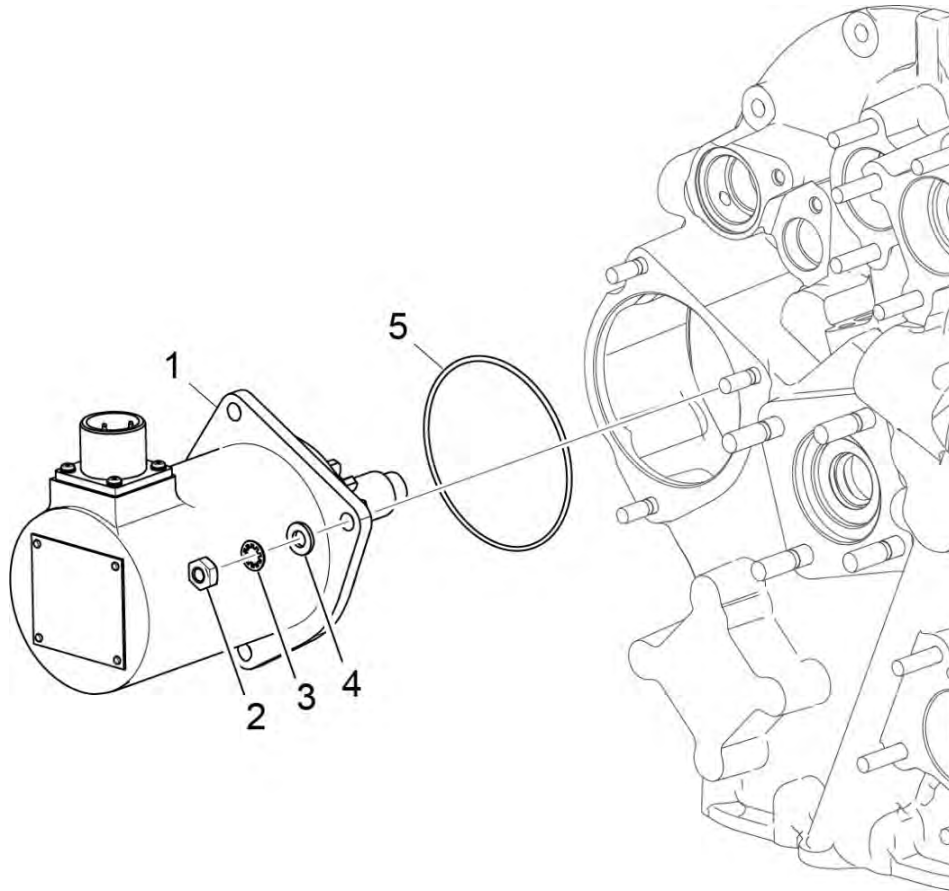
Figure Item	Code	Part Number	Description	Units per Assembly
1		60A29063	WIRING HARNESS	1
2		60B28333	COIL BOX ASSEMBLY	1
3		60B26779	COIL BOX, Lid, 6 cylinder	1
4		60B26778	COIL BOX, Base	1
5		60B26349	IGNITION COIL ASSEMBLY	12
6		NAS1352-08-8	SCREW, Socket head cap, 8-32 x 1/2 long	15
7		STD-250	WASHER, No. 8, spring lock	15
8		STD-249	WASHER, No. 8 plain	15
9		LW-25-1.63	BOLT, 1/4-20 x 1-5/8 long, hex. head	12
10		STD-160	WASHER, 1/4 lock, internal teeth	12
11		STD-8	WASHER, 1/4 plain	14
12		STD-2079	NUT, 1/4-20 UNC	2
13		STD-2254	MOUNT, Cable Tie	2
14		NASM24693-S95	SCREW, Flat countersunk head 1/4-20 x 5/8	2
15		67W26289-101	LEAD, High tension spark plug, CH1K012-DS-1	6
16		67W26289-330	LEAD, High tension spark plug	2
17		67W26289-250	LEAD, High tension spark plug CH1K012-DS-2	4
18		01L26374	SPACER, Coil box	1
19		01L26373	SPACER, Coil box	1
20	*	LW-M-2376	PLATES, Spark plug cable, 3 wire	2
21		LW-16266-10-31	CLAMP, 5/16 diameter for No. 10 screw	1
22	*	STD-860	SCREW, No. 10-32 x 5/8 long	1
23	*	STD-670	LOCK NUT, No. 10-32	1
24		07A28334	BRACKET, Wire harness, right hand	1
25		LW-16266-10-25	CLAMP, 1/4 I.D. for No. 10 screw, cushion	2
26		LW-16266-10-31	CLAMP, 5/16 diameter for No. 10 screw	1
27		STD-243	WASHER, No. 6 plain	3
28		NAS1352-06-6	SCREW, Socket head cap, 6-32 x 3/8 long	3
29		NAS1352-03-14	SCREW, Socket head cap, 3-48 x 7/8 long	6
30		STD-8	WASHER, 1/4 plain	2
31		STD-160	WASHER, 1/4 lock, internal teeth	2
32		STD-1411	NUT, 1/4-20 plain	2
33		LW-16266-10-25	CLAMP, 1/4 I.D. for No. 10 screw, cushion	1
34		LW-16266-10-38	CLAMP, 3/8 dia. for No. 10 screw	1

\* Shipped loose with engine

(continued on next page)

**Figure 31A, B - EEC Harness, Coil Box, and Spark Plugs (Cont.)**

Figure Item	Code	Part Number	Description	Units per Assembly
35		LW-16266-10-31	CLAMP, 5/16 diameter for No. 10 screw	2
36		07A28335	BRACKET, Wire harness, left hand	1
37		STD-8	WASHER, 1/4 plain	2
38		STD-160	WASHER, 1/4 lock, internal teeth	2
39		STD-1411	NUT, 1/4-20 plain	2
40		LW-16266-10-25	CLAMP, 1/4 I.D. for No. 10 screw, cushion	1
41	**	LW-16266-10-38	CLAMP, 3/8 dia. for No. 10 screw	8
42	*	LW-16266-10-1.25	CLAMP, 1/4 I.D. for No. 10 screw, cushion	4
43	*	LW-16266-10-50	CLAMP, 1/2 dia. for No. 10 screw	2
44		LW-16266-10-63	CLAMP, 5/8 I.D. for No. 10 screw	6
45	*	LW-16266-10-88	CLAMP	3
46		LW-16266-25-44	CLAMP, 7/16 I.D. x 1/4 dia. screw	1
47		LW-16266-25-50	CLAMP	1
48		LW-16266-25-75	CLAMP, 3/4 I.D. x 1/4 dia. screw	1
49		STD-670	LOCK NUT, No. 10-32	6
50		STD-692	SCREW, No. 10-32 x 1/2 long, round head	6
51	*	STD-670	LOCK NUT, No. 10-32	5
52	*	STD-860	SCREW, NO. 10-32 x 5/8 long fill. head	5
53		LW-16266-25-38	CLAMP, 3/8 I.D. x 1/4 dia. screw	1
54		LW-16266-10-1.25	CLAMP, 1/4 I.D. for No. 10 screw, cushion	1
55		LW-16266-10-50	CLAMP, 1/2 dia. for No. 10 screw	1
56		STD-860	SCREW, NO. 10-32 x 5/8 long fill. head	1
57		STD-670	LOCK NUT, No. 10-32	1
58		LW-16266-10-75	CLAMP, 3/4 dia. for No. 10 screw	5
59		LW-16266-10-63	CLAMP, 5/8 I.D. for No. 10 screw	1
60		LW-16266-10-31	CLAMP, 5/16 diameter for No. 10 screw	2
61		STD-2079	NUT, 1/4-20 UNC	2
62		STD-8	WASHER, 1/4 plain	2
63		STD-670	LOCK NUT, No. 10-32	2
64		STD-243	WASHER, No. 6 plain	3
65		NAS1352-06-6	SCREW, Socket head cap 6-32 x 3/8 long	3
66		NAS1352-03-14	SCREW, Socket head cap, 3-48 x 7/8 long	6
67		1182-Q4	SPARK PLUG, Champion, URHB37E	12
* Shipped loose with the engine				
** Two of the clamps P/N LW-16266-10-38 are shipped loose with the engine.				



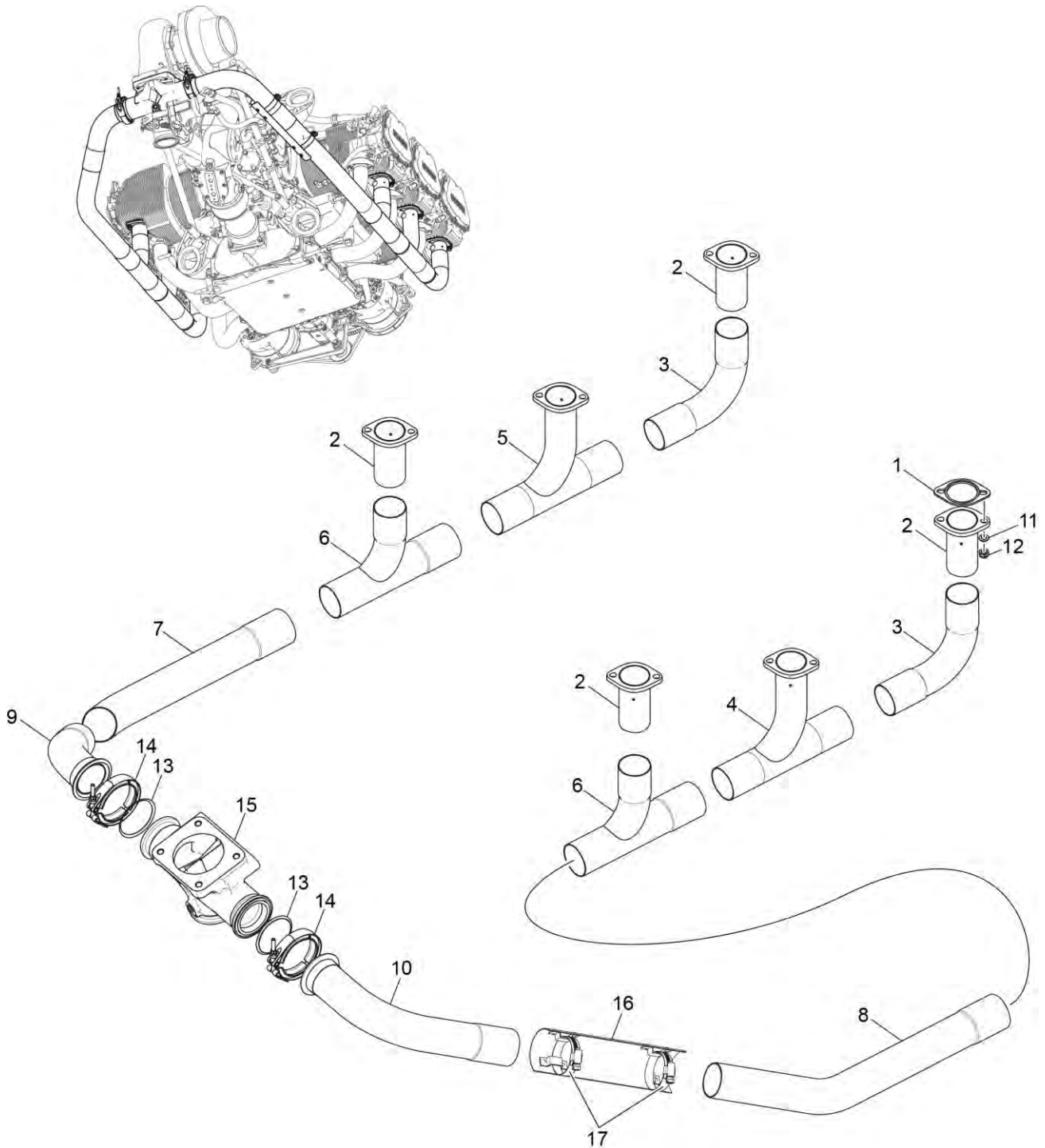
130

**Figure 32**  
**Permanent Magnet Alternator**



**IGNITION DISTRIBUTION**  
**Figure 32 – Permanent Magnet Alternator**

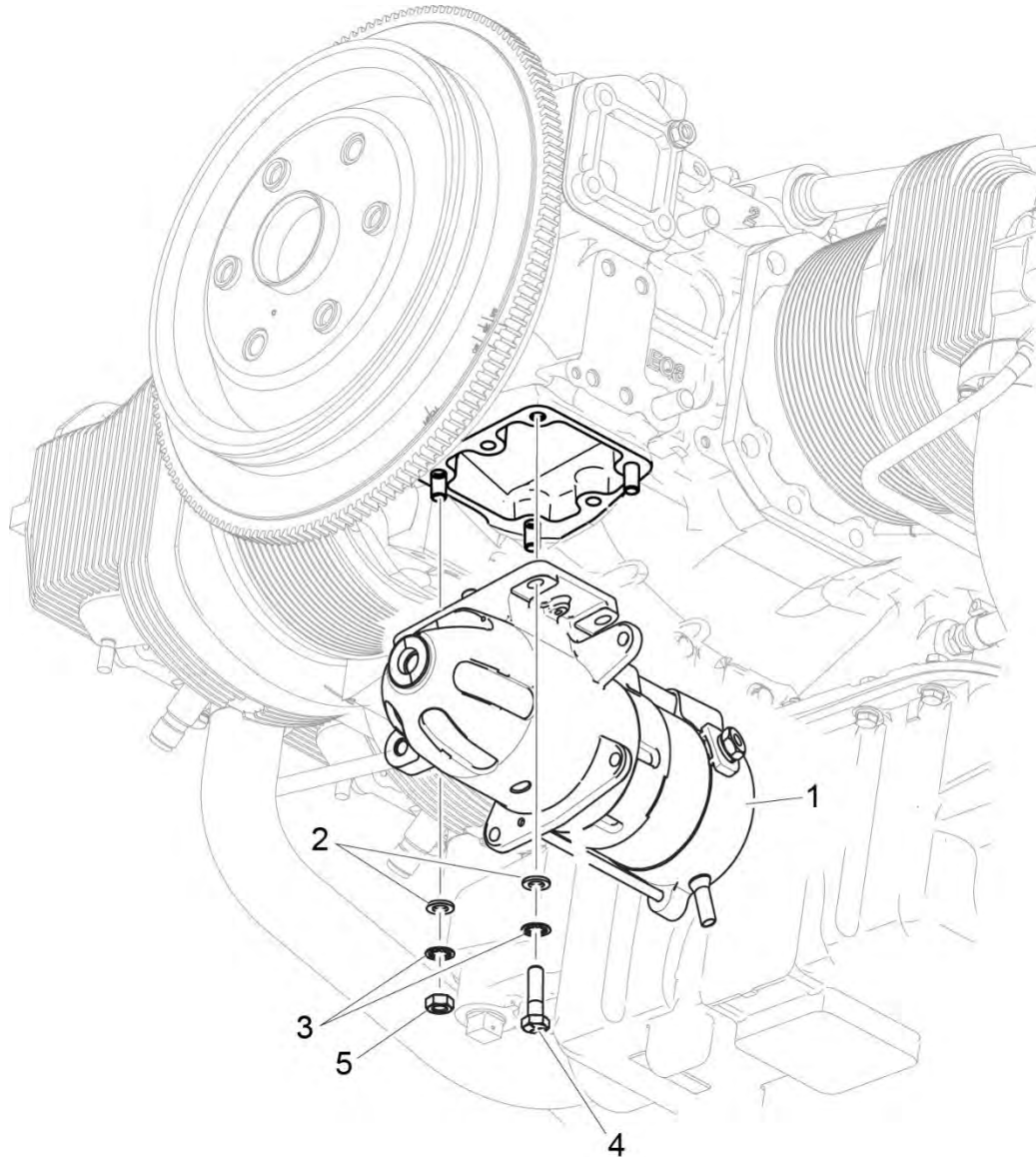
<b>Figure Item</b>	<b>Code</b>	<b>Part Number</b>	<b>Description</b>	<b>Units per Assembly</b>
1		32T23324	ALTERNATOR, Permanent magnet	1
2		STD-1411	NUT, 1/4-20 plain	3
3		STD-160	WASHER, 1/4 lock, internal teeth	3
4		STD-8	WASHER, 1/4 plain	3
5		AS3209-151	O-RING, 0.103 x 2.987 Viton	1



051BB  
**Figure 33**  
**Exhaust Crossover Pipes and Transition Assembly**

**EXHAUST SYSTEM**  
**Figure 33 - Exhaust Crossover Pipes and Transition Assembly**

Figure Item	Code	Part Number	Description	Units per Assembly
1		77611	GASKET, Exhaust flange	6
2		40G28371	ADAPTER, Exhaust pipe, cylinders No. 1,2,5,6	4
3		40B19844	PIPE, Exhaust, cylinder No. 1	2
4		40B28372	PIPE, Exhaust, cylinder No. 3	1
5		40B28373	PIPE, Exhaust, cylinder No. 4	1
6		40B26922	PIPE, Exhaust, cylinders No. 5 and 6	2
7		40B26923	PIPE, Exhaust, rear intermediate left	1
8		40B26924	PIPE, Exhaust, rear intermediate right	1
9		LW-16790	PIPE, Exhaust, left rear	1
10		LW-16620	PIPE, Exhaust, right	1
11		AN960C516	WASHER, 5/16 plain	12
12		STD-2233	LOCK NUT, 5/16-18 hex. head	12
13		78083	GASKET, V-band coupling, 2.00 O.D. tube	2
14		LW-12093-5	COUPLING, V-band-2.00 O.D. tube	2
15		LW-12437	TRANSITION, Turbocharger	1
16		LW-16406	HEAT SHIELD	1
17		LW-15592-8-28	CLAMP, Hose	2



034BF  
**Figure 34**  
**Starter Motor and Attaching Parts**

## CRANKING

**Figure 34 - Starter Motor and Attaching Parts**

Figure Item	Code	Part Number	Description	Units per Assembly
1	V	31B26554	STARTER, 24V., 12/14 pitch, 149NL/EC	1
2		STD-35	WASHER, 5/16 plain	4
3		STD-475	WASHER, 5/16 lock, internal teeth	4
4		LW-31-1.16	BOLT, 5/16-18 x 1-5/32 long, hex. head	1
5		STD-1410	NUT, 5/16-18 plain	3

V Vendor Prime Manufacturer part

**NOTICE:** Refer to the latest revision of Service Instruction No. 1154 for complete listing of FAA approved starters.

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## Service Kit Section

### Seal and Gasket Set

PART NO.	PART NAME	Qty.
<b>05K29134</b>	<b>KIT - SEAL AND GASKET SET</b>	<b>1</b>
LW-15628	SEAL-CRANKSHAFT-OIL	1
72091	RING-OIL SEAL-.36ID X.10 DIA	2
06E19769-1.25	GASKET-ANNULAR-1.250 ID	1
70455	GASKET-.78 ID X 1.13 OD X .030	1
72053	GASKET-GOVERNOR	1
72378	COVER-GOVERNOR DRIVE	1
06B26276	GASKET - ACCESSORY HOUSING	1
MS29512-10	SEAL OIL-.097 SECTION X .706 I	2
06A26277	SEAL - FUEL PUMP .750 ID X 1.375 OD X .312 THK	1
MS29512-06	O RING-.468 ID X .078 SECT.-.	1
MS28775-126	O-RING - 1.362 NOM ID X .103 NOM WIDTH	1
MS29512-10	SEAL OIL-.097 SECTION X .706 I	1
MS29512-10	SEAL OIL-.097 SECTION X .706 I	2
06A19956	OIL SEAL-.875ID X 1.50 OD X.31	1
8313	GASKET-VACUUM PUMP	1
06A19956	OIL SEAL-.875ID X 1.50 OD X.31	1
8313	GASKET-VACUUM PUMP	1
06B21326	GASKET-OIL SUMP	1
06E19769-0.91	GASKET-ANNULAR-.906 ID	1
72210	GASKET-AIR THROTTLE HOUSING	1
06E19769-1.00	GASKET-ANNULAR-1.000 ID	1
71481	RING-OIL SEAL-.09 DIA X 4.84ID	6
LW-18661	SEAL-SHROUD TUBE	24
66732	GASKET-VALVE ROCKER SHAFT COVR	12
06B26811	GASKET - ROCKER BOX COVER (SILICONE)	6
72711	RING-SEAL-INTAKE PIPES	6
71973	GASKET-2 BOLT FLANGE-1.81 ID	6
69164	GASKET-FUEL PUMP ADAPTER	2
73032	GASKET-AIR INLET HOUSING	1
06E19769-0.50	GASKET-ANNULAR-.500 ID	6
MS29513C-028	O-RING - FUEL RESISTANT - 1.364 ID X .070 W	1
77611	GASKET-EXHAUST FLANGE	6
78083	GASKET-V BAND COUPLING-2.00 OD	2
75845	GASKET-V BAND COUPLING-2.25	1

**Service Kit Section (Cont.)****Seal and Gasket Set (Cont.)**

<b>05K29134</b>	<b>KIT - SEAL AND GASKET SET (CONT.)</b>	<b>1</b>
MS29512-06	O RING-.468 ID X .078 SECT-.	2
MS29512-03	O RING-.301 ID X .064 SECT-.	1
77723	GASKET-TURBOCHARGE BY-PASS	1
73314	GASKET-DENSITY & DIFFERENTIAL	2
75371	GASKET-TURBO OIL INLET ADAPTER	1
78903	GASKET-TURBO OIL DRAIN	1
MS29512-10	SEAL OIL-.097 SECTION X .706 I	1
MS29512-06	O RING-.468 ID X .078 SECT-.	1
MS28775-018	O-RING	1
MS28775-021	O-RING	1
70457	GASKET-OIL FILLER EXTENSION	1
74065	RING-OIL LEVEL GAGE SEAL	1
MS28775-015	O RING-.551 ID X .07 DIA	1
06A23493	SEAL, Shroud tube	8



## Service Kit Section (Cont.)

### Cylinder, Piston and Ring Assembly

PART NO.	PART NAME	Qty.
<b>05K26774</b>	<b>KIT - CYLINDER, PISTON AND RING ASSEMBLY</b>	<b>1</b>
14D23907	PISTON - COMPRESSION RATIO 7.30:1	1
74241	RING-PISTON-COMP-5.125 BORE	2
14H29889	RING-PISTON-OIL-5.125 BORE	1
LW-14078	PIN-PISTON	1
72198	PLUG-PISTON PIN	2
66732	GASKET-VALVE ROCKER SHAFT COVR	2
06B26811	GASKET - ROCKER BOX COVER (SILICONE)	1
LW-18661	SEAL-SHROUD TUBE	4
71481	RING-OIL SEAL-.09 DIA X 4.84ID	1
SSP-299	TAG: USE OF PISTON PIN PLUGS	1
71195	CONTAINER	1
77611	GASKET-EXHAUST FLANGE	1
71973	GASKET-2 BOLT FLANGE-1.81 ID	1
AV951391	PACKING, PRE-FORMED	2
16G26682-01	CYLINDER HEAD AND VALVE ASSY	1
16A30200-0101	CYLINDER HEAD AND VALVE ASSY, Nitrided (Approved alternate for P/N 16G26682-01)	1
06A23493	SEAL-SHROUD TUBE	2
1102	PLUG-.125 PIPE	2
06E19769-0.50	GASKET-ANNULAR-.500 ID	1
SSP-115	STICKER	1

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**NUMERICAL INDEX**

<b>PART NO.</b>	<b>PART NAME</b>	<b>PAGE NO.</b>	<b>PART NO.</b>	<b>PART NAME</b>	<b>PAGE NO.</b>
01C26131	BOLT	11	06E19769-1.00	GASKET	27
01L21418	WASHER	5	06E19769-1.25	GASKET	9
01L26373	SPACER	68	07A21156	BRACKET	1
01L26374	SPACER	68	07A26130	BRACKET	1
01L26665	SPACER	11	07A28331	BRACKET	61
01L29970	WASHER	65	07A28334	BRACKET	68
01M29868	FIRE SLEEVE	55	07A28335	BRACKET	69
01M29869	FIRE SLEEVE	55	07A28507	BRACKET ASSY	56
02A19417	ELBOW	56	07C26303	HOLD DOWN	35
02A19417	ELBOW	61	07C26344-CT	CLAMP	37
02E26278	ADAPTER	47	07C29900	CLAMP	35
02E26306	NIPPLE	56	07E29522	SUPPORT ASSY	29
02E26641	ADAPTER	59	07F21160	STRUT	1
02E29797	ADAPTER	19	07F28508	LINK	1
02E29797	ADAPTER	55	1028-B	BALL	9
02K26662	MANIFOLD	59	1102	PLUG	7
02K29101	MANIFOLD ASSY	55	1102	PLUG	35
02K29101	REGULATOR	59	1102	PLUG	41
02L26305	VALVE	31	1102	PLUG	43
02L29677	VALVE	31	1102	PLUG	56
02M26336	HOSE	37	1182-Q4	SPARK PLUG	69
03A29095-CT	RETAINER	19	11F24028-E3	C'CASE ASSY	7
03C21720	PLUG	43	12A19770	BRACKET	39
03C21720	PLUG	53	13F47735	C'SHAFT ASSY	11
03D26282	COVER	49	14D23907	PISTON	17
03D29691	COVER	35	14H29889	RING	17
05K23463	IMPELLER KIT	45	15B21319	SOCKET	21
06A19956	OIL SEAL	49	15B26066	PLUNGER ASSY	21
06A19956	OIL SEAL	51	15B26262	BODY	9
06A26277	SEAL	43	15F28835-52	ROD ASSEMBLY	22
06B21326	GASKET	41	15F28835-53	ROD ASSEMBLY	22
06B26276	GASKET	43	15F28835-54	ROD ASSEMBLY	22
06B26811	GASKET	25	15F28835-55	ROD ASSEMBLY	22
06C29094-CT	KIT	19	15F28835-56	ROD ASSEMBLY	22
06E19769-0.50	GASKET	19	15F28835-57	ROD ASSEMBLY	22
06E19769-0.50	GASKET	55	15F28835-58	ROD ASSEMBLY	22
06E19769-0.91	GASKET	41	15F28864-18	ROD ASSEMBLY	22

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15F28864-21	ROD ASSEMBLY	22	32C28550	ALTERNATOR	3
15F28864-22	ROD ASSEMBLY	22	32C28600	ALT. ASSY	3
15F28864-23	ROD ASSEMBLY	22	32C28603	ALT. ASSY	3
15F28864-24	ROD ASSEMBLY	22	32T23324	PMA	71
15H21201	SPRING	21	36B28509	PULLEY	3
15N28398	CAMSHAFT ASSY	11	36B29585	PULLEY	3
16A26347	CYL HEAD ASSY	19	37C28529-955	BELT	3
16A30200-01	CYL HEAD ASSY	19	37C28529-985	BELT	3
17A23937	VALVE	21	38-13	STUD	7
17B23935	VALVE	21	38-17	STUD	41
17C19386	CAP	21	383-B	NUT	25
17C21191	KEY	21	40B19844	PIPE	73
17D29056	SPRING	21	40B26922	PIPE	73
17D29057	SPRING	21	40B26923	PIPE	73
17F21185	ROCKER ASSY	22	40B26924	PIPE	73
17F21186	ROCKER ASSY	22	40B28372	PIPE	73
18B23885	BEARING	9	40B28373	PIPE	73
18E23886	BEARING	9	40G28371	ADAPTER	73
18N26106	BEARING	17	42B26926	COVER	35
21H26254-01	ACC HOUSING	43	47E29907	VALVE	29
23A26268	SHAFT DRIVE	11	51A29876	BODY ASSEMBLY	45
25B26274	GEAR ASSEMBLY	13	51B23274	IMPELLER	45
25C-10	STUD	43	51C23290	IMPELLER ASSY	45
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26G26265	C'SHAFT GEAR	11	60430	COVER	51
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31C-17	STUD	7	60B26322	POWER BOX	65

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60B29462	DLU ASSEMBLY	65	68795	COVER ASSY	25
60B29659	ECU ASSEMBLY	65	69164	GASKET	47
60B29705	ECU ASSEMBLY	65	69260	INSERT	19
60B29726	ECU ASSEMBLY	65	69532	SEAT	21
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60E26316-CT	SENSOR	37	71973	GASKET	27
60E29660	SENSOR	59	72050	KEY	21
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61X29461-CT	FUEL INJECTOR	19	72210	GASKET	27
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73250	WASHER	5	8313	GASKET	51
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73772	NOZZLE ASSY	7	AN6-34A	BOLT	15
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