

(L)IO-360-M1A Illustrated Parts Catalog

February 2016

PC-(L)IO-360-M1A (Supersedes PC-306-14)

LYCOMING™ © 2016

652 Oliver Street
Williamsport, PA 17701

(L)IO-360-M1A Illustrated Parts Catalog

Lycoming Part Number: PC-(L)IO-360-M1A (Supersedes PC-306-14)

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TABLE OF CONTENTS

| <u>Subject</u> | <u>Chapter - Section</u> | <u>Page</u> |
|---|---------------------------------|--------------------|
| Frontal | | |
| Record of Revisions | | iii |
| Table of Contents..... | | v |
| Introduction | | vii |
| Abbreviations and Acronyms..... | | xi |
| Oversize and Undersize Part Listing | | xiii |
| Electrical Power | 24-00 | |
| AC Generation | 24-20 | |
| 1. Alternator and Compressor Attaching Parts | | 0-5 |
| Reciprocating Engine | 72-00 | |
| Front Section | 72-10 | |
| 1. Propeller Governor Drive..... | | 6-7 |
| Power Section | 72-20 | |
| 1. Crankcase Assembly | | 8-9 |
| 2. Crankcase Related Parts | | 10-11 |
| 3. Crankshaft Assembly and Related Parts | | 12-13 |
| 4. Crankshaft Idler Gears, Tachometer Drive and Camshaft | | 14-15 |
| 5. Crankcase Attaching Parts..... | | 16-17 |
| Cylinder Section | 72-30 | |
| 1. Connecting Rods, Pistons and Ring Assemblies | | 18-19 |
| 2. Cylinder Assembly | | 20-21 |
| 3. Cylinder Related Parts | | 22-23 |
| 4. Valve Assembly and Related Parts | | 24-25 |
| 5. Cylinder Head Drain Tube, Intercylinder Cooling Baffle and Rocker Box Cover..... | | 26-27 |
| 6. Intake Pipes Assembly..... | | 28-29 |
| Lubrication System | 72-50 | |
| 1. Oil Sump and Induction Housing Assembly..... | | 30-31 |
| Accessory Drives | 72-60 | |
| 1. Accessory Housing Assembly | | 32-33 |
| 2. Oil Pump Assembly and Accessory Housing Attaching Parts..... | | 34-35 |
| 3. Fuel Pump Assembly and Attaching Parts | | 36-37 |
| 4. Oil Filter Assembly, Oil Cooler Bypass Valve and Fittings | | 38-39 |
| 5. Vacuum Pump Covers | | 40-41 |

| <u>Subject</u> | <u>Chapter - Section</u> | <u>Page</u> |
|--|--------------------------|-------------|
| Engine and Fuel Control _____ | 73-00 _____ | |
| Fuel Distribution | 73-10 | |
| 1. Fuel Injector, Fuel Manifold and Injection Nozzles | | 42-43 |
| 2. Fuel Lines and Attaching Parts | | 44-47 |
| Ignition Distribution System _____ | 74-00 _____ | |
| Distribution | 74-20 | |
| 1. Magnetos, Magneto Drives, Harnesses and Spark Plugs | | 48-49 |
| 2. Alternator Assembly..... | | 50-51 |
| Starting _____ | 80-00 _____ | |
| Cranking | 80-10 | |
| Starter Attaching Parts..... | | 52-54 |
| Back Section _____ | | |
| Service Kit Section | | 55-60 |
| Numerical Index | | 61-67 |

Cross-Reference List of Manufacturer Parts to Standard Part Number**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.

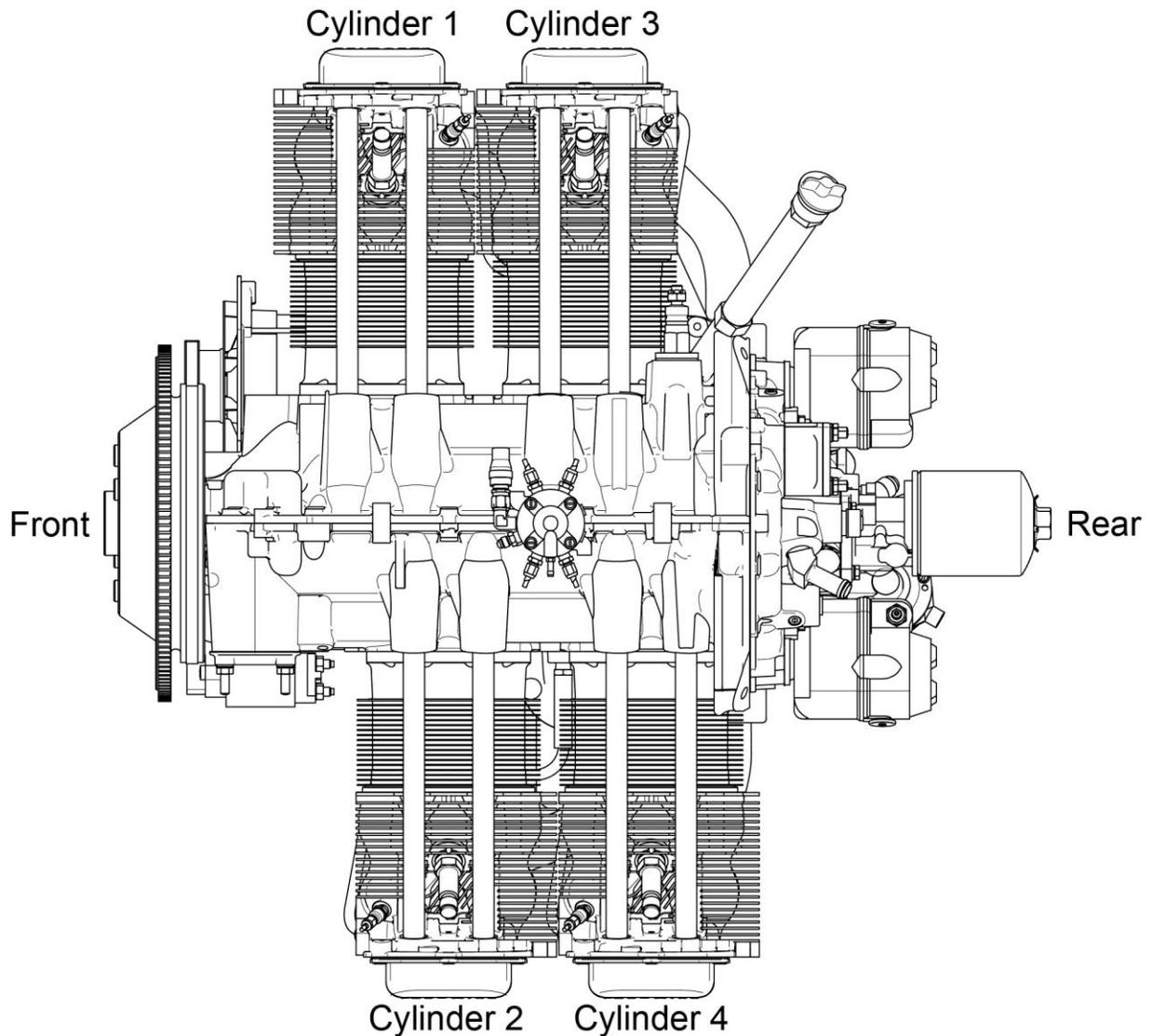
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Perspective of References

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 four-cylinder engine is 1-3-2-4.



Top View of Engine

How to Order Parts and Publications

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

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

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

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ABBREVIATIONS AND ACRONYMS

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

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OVERSIZE AND UNDERSIZE PARTS LISTING

| PART NO. | DESCRIPTION | OVERSIZE (IN.) | | | | | UNDERSIZE (IN.) | | |
|----------|-------------|----------------|-------------|-------------|-------------|-------------|-----------------|-------------|-------------|
| | | P05 .005 | P10 .010 | P15 .015 | P20 .020 | P50 .050 | M03 .003 | M06 .006 | M10 .010 |
| 61681 | GUIDE | X | X | | | | | | |
| 66610 | BUSHING | X | X | | | | | | |
| 66796 | INSERT | | X | | | | | | |
| 69796 | DOWEL | | X | | | | | | |
| 72057 | SEAT | | X | | | | | | |
| 72058 | SEAT | | X | | | | | | |
| 72155-S | BUSHING | X | X | | | | | | |
| 74241 | RING | | X | | | | | | |
| 75656-S | BUSHING | | X | X | | | | | |
| 75657-S | BUSHING | | X | X | | | | | |
| 14H21950 | RING | | X | | | | | | |
| 16R22291 | GUIDE | X | X | | | | | | |
| 18A26093 | BEARING | | | | | | X | X | |
| 18M26105 | BEARING | | | | | | X | X | |
| 18D26098 | BEARING | | | | | | X | X | |
| LW-13792 | SEAL | | | | | X | | | |
| STD-1065 | DOWEL | | X | | | | | | |

NOTE

When ordering oversize and undersize parts, be sure to specify the required oversize and undersize dimension with the proper part number. For example, to order bearing P/N 18A26093 in .003 undersize, order P/N 18A26093-M03. Oversize code letter is "P" while undersize code letter is "M". These letters are then followed by the number designating the size in thousandths of an inch.

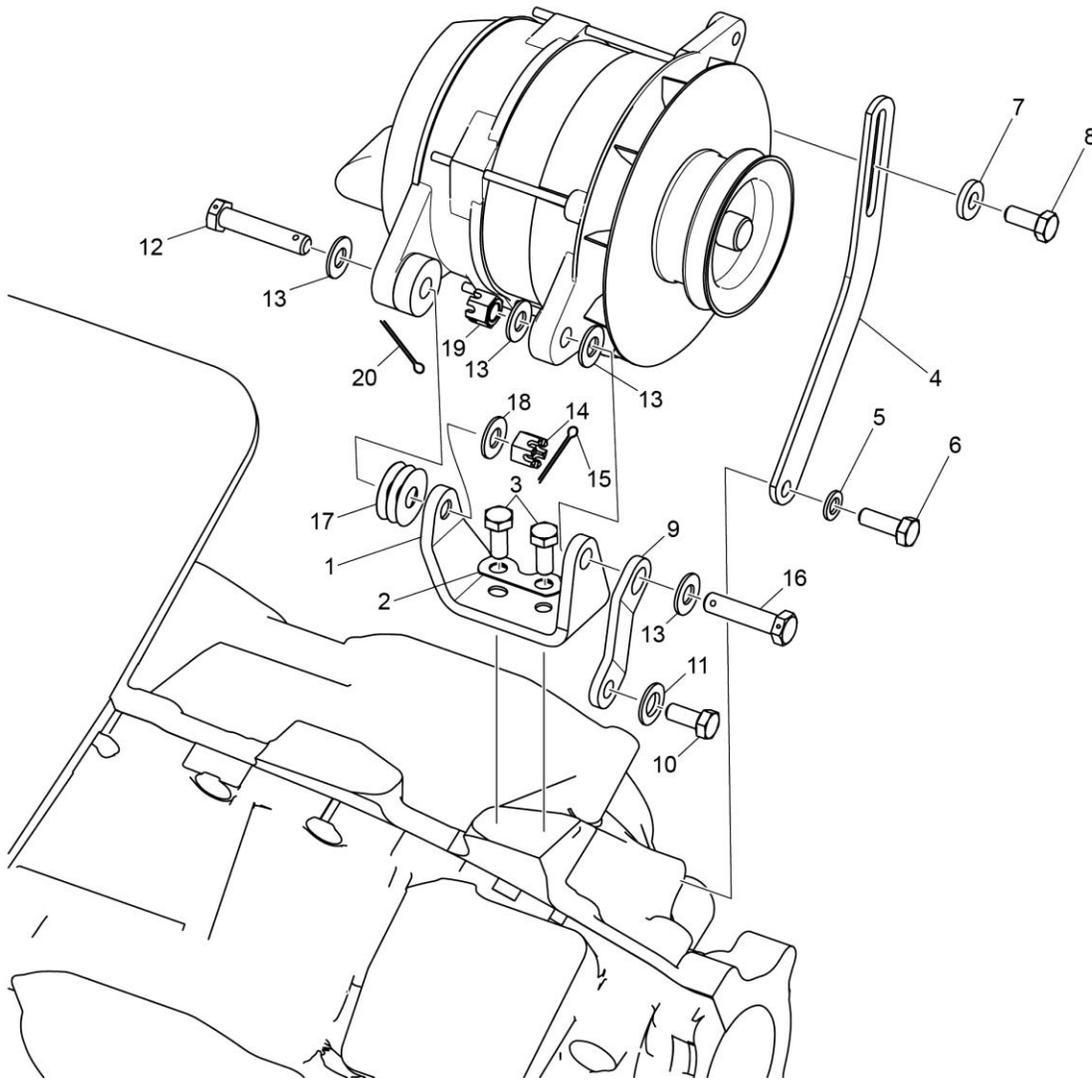


Figure 1
Alternator and Compressor Attaching Parts

Figure 1 - Alternator and Compressor Attaching Parts

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|-------------|------|-------------|---|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 1 | | 07A19474 | BRACKET, Alternator | 1 | 1 |
| 2 | | 73383 | LOCKPLATE, 5/16 bolt x 1.00 spacing | 1 | 1 |
| 3 | | LW-31-0.94 | BOLT, 5/16-18 x 15/16 long, hex. head | 2 | 2 |
| 4 | | 75380 | LINK, Alternator adjusting | 1 | 1 |
| 5 | | STD-35 | WASHER, 5/16 plain | 1 | 1 |
| 6 | | LW-31H0.75 | BOLT, 5/16-18 x 3/4 long, hex. head | 1 | 1 |
| 7 | | STD-1727 | WASHER, Plain, 3/4 O.D. x 11/32 I.D. x 1/8 thick | 1 | 1 |
| 8 | | LW-31H0.75 | BOLT, 5/16-18 x 3/4 long, hex. head | 1 | 1 |
| 9 | | 07F23268 | STRUT, Alternator support | 1 | 1 |
| 10 | | LW-31H0.75 | BOLT, 5/16-18 x 3/4 long, hex. head | 1 | 1 |
| 11 | | STD-690 | WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick | 1 | 1 |
| 12 | | AN6-17 | BOLT, 3/8-24 x 1-61/64 long, hex. head, drilled end | 1 | 1 |
| 13 | | STD-690 | WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick | 3 | 3 |
| 14 | | STD-872 | NUT, 3/8-24 slotted | 1 | 1 |
| 15 | | STD-713 | COTTER PIN, 3/32 diameter x 3/4 long | 1 | 1 |
| 16 | | AN6-16 | BOLT, 3/8-24 x 1-53/64 long, hex. head, drilled end | 1 | 1 |
| 17 | | 76534 | SHIM, 1/8 O.D. x 13/32 I.D. x .005 thick | 5 | 5 |
| 18 | | STD-690 | WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick | 3 | 3 |
| 19 | | STD-872 | NUT, 3/8-24 slotted | 1 | 1 |
| 20 | | STD-713 | COTTER PIN, 3/32 diameter x 3/4 long | 1 | 1 |

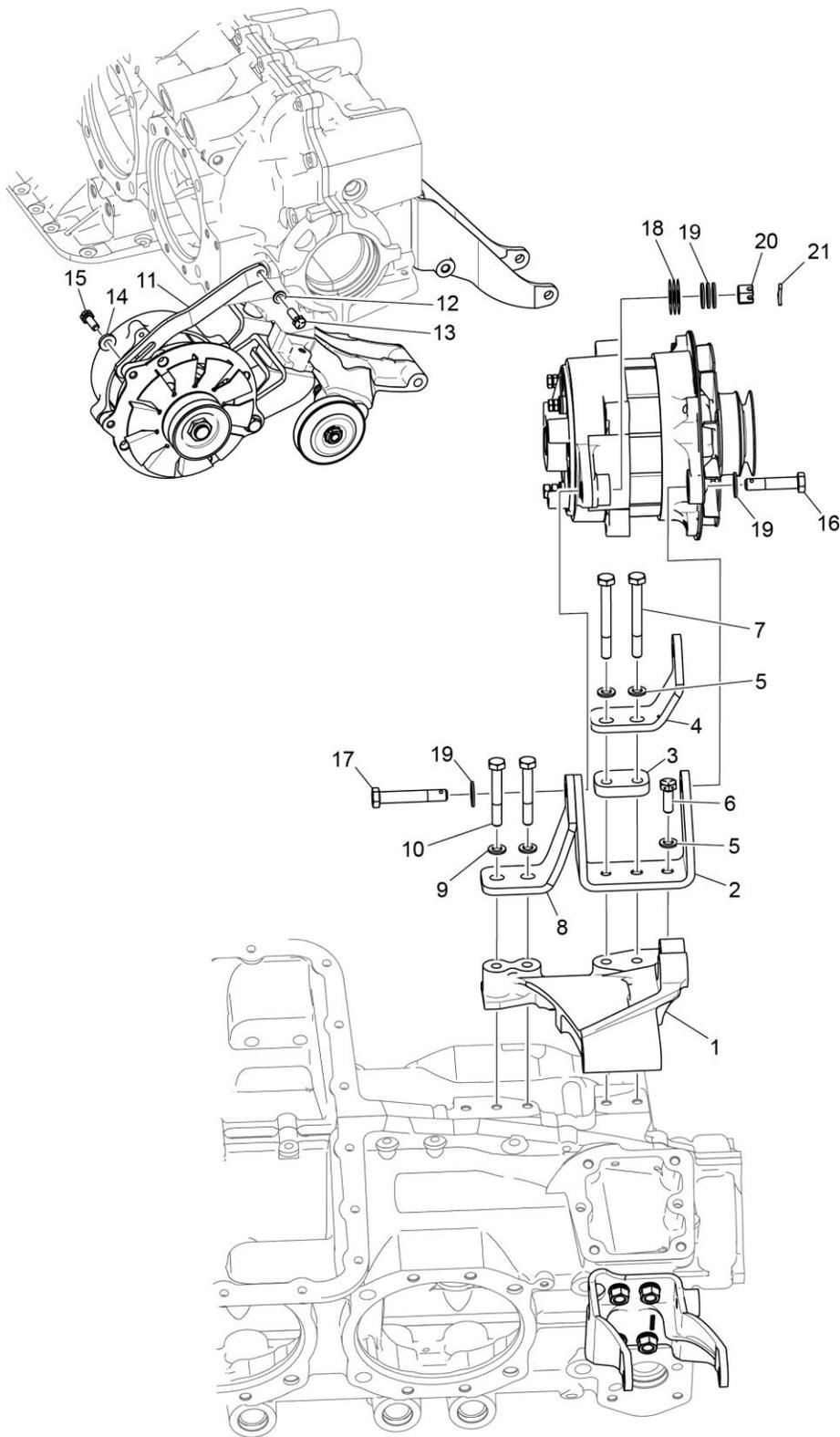


Figure 1A
Alternator and Compressor Attaching Parts

Figure 1A – Alternator and Compressor Attaching Parts

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|-------------|------|-------------|--|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 1 | | 07A22097 | BRACKET, Alternator | 1 | 0 |
| 2 | | 07A19880 | BRACKET, Alternator, right | 1 | 0 |
| 3 | | 01L21909 | SPACER, Alt. bkt, inner (Malibu) | 1 | 0 |
| 4 | | 07A21908 | BRACKET, Alternator, inner (Malibu) | 1 | 0 |
| 5 | | STD-35 | WASHER, 5/16 plain | 3 | 0 |
| 6 | | LW-31H0.88 | BOLT, 5/16-18 x 7/8 long, hex. dr. | 1 | 0 |
| 7 | | LW-31H2.75 | BOLT, 5/16-18 x 2-3/4 long, hex. dr. | 2 | 0 |
| 8 | | 07A21910 | BRACKET, Alternator, aft (Malibu) | 1 | 0 |
| 9 | | STD-35 | WASHER, 5/16 plain | 2 | 0 |
| 10 | | LW-31H2.13 | BOLT, 5/16-18 x 2-1/8 long, hex. dr. | 2 | 0 |
| 11 | | 07F21298 | LINK, Alternator, adjusting | 1 | 0 |
| 12 | | STD-35 | WASHER, 5/16 plain | 1 | 0 |
| 13 | | LW-31H0.88 | BOLT, 5/16-18 x 7/8 long, hex. dr. | 1 | 0 |
| 14 | | STD-1727 | WASHER, Plain, 3/4 O.D. x 11/32 I.D. x 1/8 thick | 1 | 0 |
| 15 | | LW-31H0.88 | BOLT, 5/16-18 x 7/8 long, hex. dr. | 1 | 0 |
| 16 | | AN6-15 | BOLT-.375-24 UNF X 1.70 lg., dr. shank end | 1 | 0 |
| 17 | | AN6-21 | BOLT-.375-24 UNF X 2.20 lg., dr. shank end | 1 | 0 |
| 18 | | 76534 | SHIM, 1-1/8 OD X 13/32 I.D. X 0.005 thick | 5 | 0 |
| 19 | | STD-690 | WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick | 4 | 0 |
| 20 | | STD-872 | NUT, 3/8-24 slotted | 1 | 0 |
| 21 | | STD-713 | COTTER PIN, 3/32 diameter x 3/4 long | 1 | 0 |

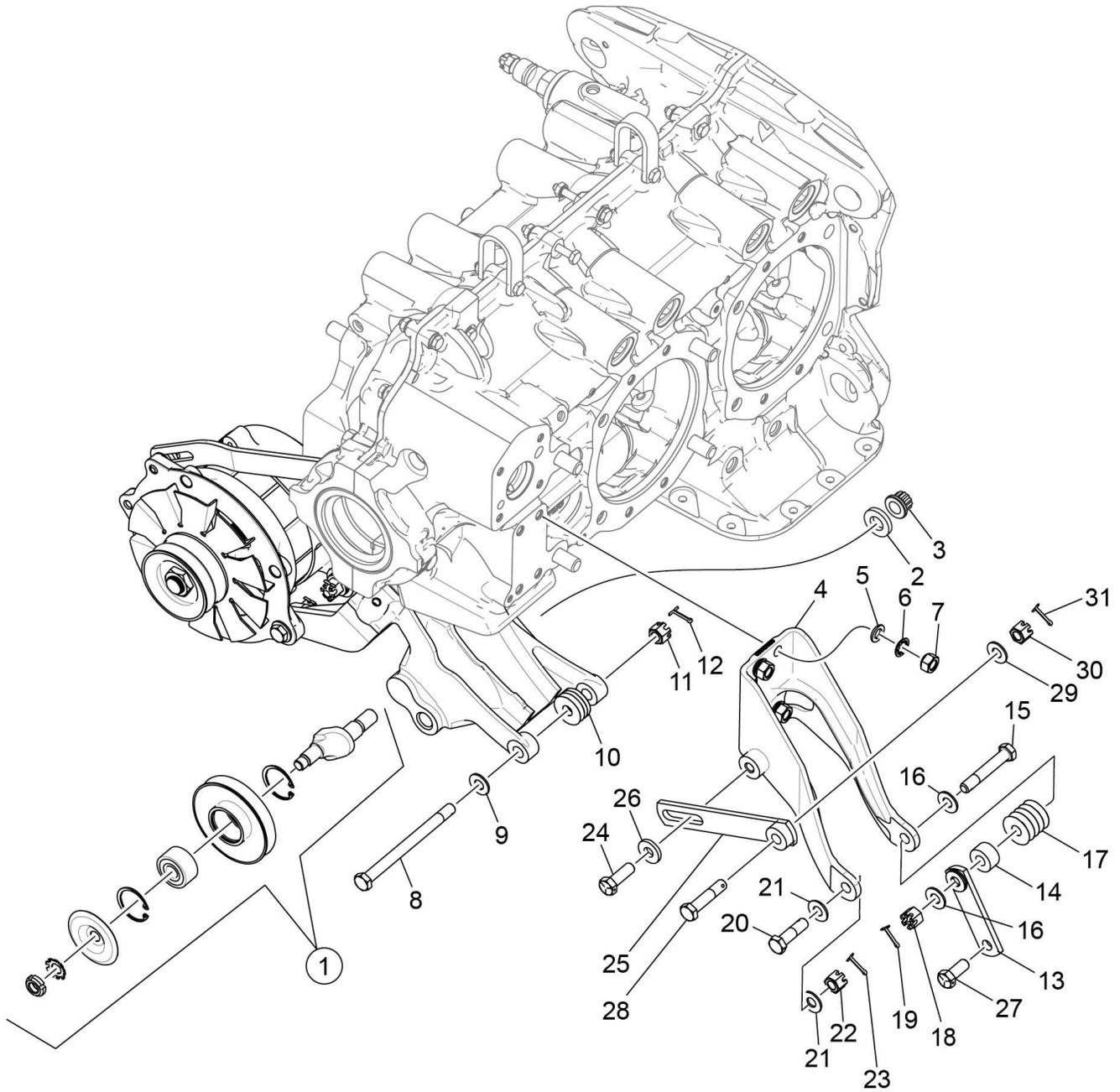


Figure 1B
Alternator and Compressor Attaching Parts

Figure 1B – Alternator and Compressor Attaching Parts

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|-------------|------|-------------|---|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 1 | | 36A19951 | PULLEY AND SHAFT ASSY. Idler | 1 | 0 |
| 2 | | STD-669 | WASHER, 0.52 I.D. X 1.00 O.D. X 1/8 | 1 | 0 |
| 3 | | STD-2221 | NUT, 1/2-20 self locking | 1 | 0 |
| 4 | | 07A21030 | BRACKET, Compressor | 1 | 0 |
| 5 | | STD-33 | WASHER, 3/8 plain | 4 | 0 |
| 6 | | STD-678 | WASHER, 3/8 lock, internal teeth | 4 | 0 |
| 7 | | 383-B | NUT, 3/8-24 plain | 4 | 0 |
| 8 | | AN7-46 | BOLT, 7/16-20 X 4.84 long, hex. | 1 | 0 |
| 9 | | STD-632 | WASHER, 7/16 plain | 1 | 0 |
| 10 | | LW-14650 | SHIM, 7/8 O.D. X 15/32 I.D. X 0.005 thick | 4 | 0 |
| 11 | | AN310-7 | NUT, 7/16-20 plain, slotted | 1 | 0 |
| 12 | | STD-713 | PIN, Cotter, 0.09 DIA X 3/4 long | 1 | 0 |
| 13 | | 07F28735 | BRACE, Alternator | 1 | 0 |
| 14 | | 01L21916 | SPACER, Alternator (Prestolite) | 1 | 0 |
| 15 | | AN6-21 | BOLT, 3/8-24 UNF X 2.20 long, dr. shank end | 1 | 0 |
| 16 | | STD-690 | WASHER, 0.81 O.D. X 0.39 I.D. X 0.06 thick | 5 | 0 |
| 17 | | 76534 | SHIM, 1-1/8 O.D. X 0.41 I.D. X 0.005 thick | 7 | 0 |
| 18 | | STD-872 | NUT, 3/8-24 Slotted | 1 | 0 |
| 19 | | STD-713 | PIN, Cotter, 0.09 dia. X 3/4 long | 1 | 0 |
| 20 | | AN6-12 | BOLT, 3/8-24 X 1.33 lg. hex. head | 1 | 0 |
| 21 | | STD-690 | WASHER, 13/16 O.D. X 0.39 I.D. X 1/16 thick | 2 | 0 |
| 22 | | STD-872 | NUT, 3/8-24 slotted | 1 | 0 |
| 23 | | STD-713 | PIN, Cotter, 0.09 dia. X 3/4 long | 1 | 0 |
| 24 | | LW-31H1.06 | BOLT, 5/16-18 X 1-1/16 long hex. dr. | 1 | 0 |
| 25 | | 07F28736 | LINK, Freon compressor | 1 | 0 |
| 26 | | STD-1342 | WASHER, 7/8 O.D. X 0.39 I.D. X 1/8 thick | 1 | 0 |
| 27 | | LW-38H1.09 | BOLT, 3/8-16 X 1.09 long hex. dr. | 1 | 0 |
| 28 | | AN6-15 | BOLT, 3/8-24 UNF X 1.70 long, dr. shank | 1 | 0 |
| 29 | | STD-690 | WASHER, 13/16 O.D. X 0.39 I.D. X 1/16 thick | 3 | 0 |
| 30 | | STD-872 | NUT, 3/8-24, slotted | 1 | 0 |
| 31 | | STD-713 | PIN, Cotter, 0.09 dia. X 3/4 long | 1 | 0 |

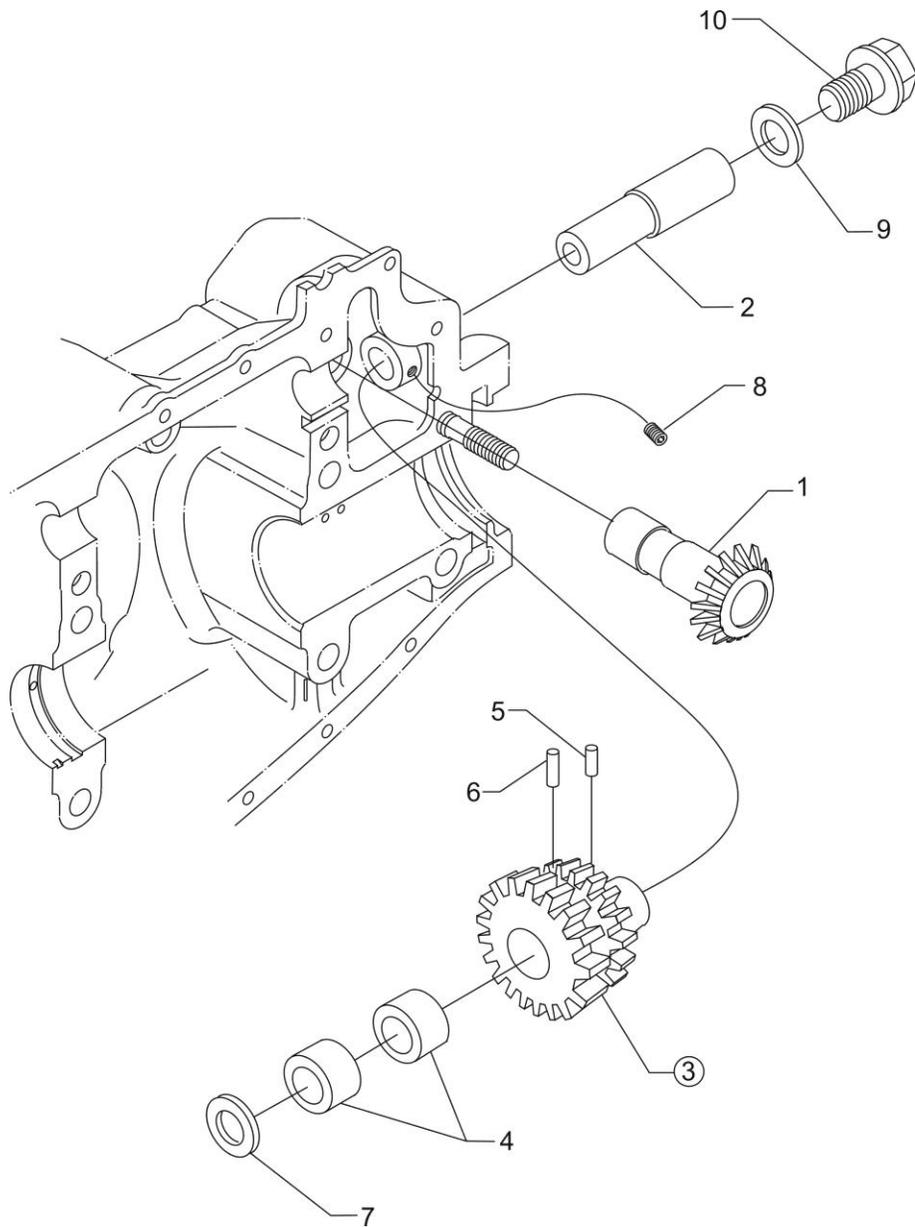


Figure 2
Propeller Governor Drive Assembly

Figure 2 – Propeller Governor Drive Assembly

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|-----------------------|------|--------------|--|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 1 | | 77875 | GEAR, Propeller governor driven | 1 | |
| 2 | | LW-14021 | SHAFT, Propeller governor idler gear | 1 | |
| 3 | | 77874 | GEAR ASSEMBLY, Propeller governor idler | 1 | |
| 4 | | 77872 | BUSHING, Propeller governor idler gear | 2 | |
| 5 | | STD-19 | DOWEL, 3/32 diameter. x 7/32 long | 1 | |
| 6 | | STD-798 | DOWEL, 3/32 diameter. x 9/32 long | 1 | |
| 7 | | 73249 | WASHER, Thrust (.0585 -.0595 thick) | AR | |
| | | 73250 | WASHER, Thrust (.062 - .063 thick) | AR | |
| | | 73251 | WASHER, Thrust (.0655 – .0665 thick) | AR | |
| | | 73252 | WASHER, Thrust (.069 - .070 thick) | AR | |
| | | 01L21418 | WASHER, Thrust (.055 – .065 thick) | AR | |
| 8 | | AN565B1032H5 | SET SCREW, No. 10-32 x 5/16 long | 1 | |
| 9 | | 70455 | GASKET, 25/32 I.D. x 1-1/8 O.D. x 1/16 thick | 1 | |
| 10 | | LW-13896 | PLUG, 3/4-16 hex. head | 1 | |
| AR as required | | | | | |

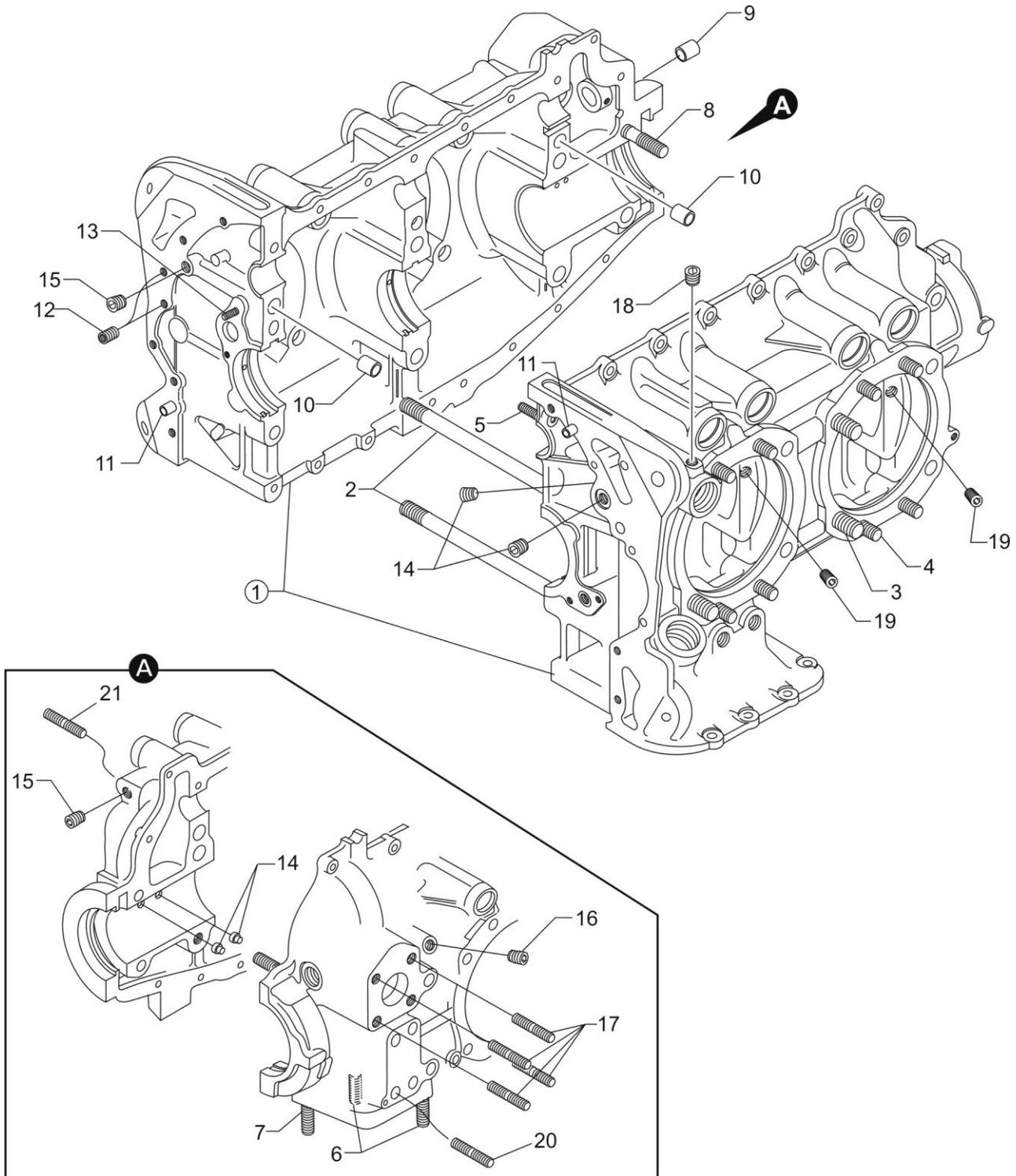


Figure 3
Crankcase Assembly

Figure 3 - Crankcase Assembly

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|--|----------|----------------|--|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 1 | * | 11D22549-S | KIT, Crankcase assembly | 1 | |
| | P | 11D22549 | CRANKCASE ASSEMBLY | 1 | |
| | * | 11D28751-1S1-S | KIT, Crankcase assembly (Roller tappet engines) | 1 | 1 |
| | P | 11D28751-1S1 | CRANKCASE ASSEMBLY (Roller tappet engines) | 1 | 1 |
| | * | 11D28751-1S3-S | KIT, Crankcase assembly (Roller tappet engines) | 1 | |
| | P | 11D28751-1S3 | CRANKCASE ASSEMBLY (Roller tappet engines) | 1 | |
| 2 | | 75154 | STUD, 1/2-13 x 10-1/32 long | 2 | 2 |
| 3 | | 50-15 | STUD, 1/2-13 x 1-7/8 long | 8 | 8 |
| 4 | | 38-13 | STUD, 3/8-16 x 1-5/8 long | 13 | 13 |
| 5 | | 38D-17 | STUD, 3/8-16 x 2-1/8 long, drilled | 1 | 1 |
| 6 | | 31C-12 | STUD, 5/16-18 x 1-1/2 long | 2 | 2 |
| 7 | | 31C-13 | STUD, 5/16-18 x 1-5/8 long | 1 | 1 |
| 8 | | 38-22 | STUD, 3/8-16 x 2-3/4 long | 1 | 1 |
| 9 | | 72158 | BUSHING, Governor drive idler shaft | 1 | 1 |
| 10 | | STD-557 | DOWEL, 1/2 diameter x 11/16 long, hollow | 2 | 2 |
| 11 | | STD-514 | DOWEL, 5/16 diameter x 1/2 long | 2 | 2 |
| 12 | | STD-1623 | INSERT, 1/4-20 Heli-coil x 3/8 long | 2 | 2 |
| 13 | | LW-13793 | STUD, 5/16-18 x 15/16 long, drilled | 1 | 1 |
| 14 | | 69796 | DOWEL, Crankshaft bearing | 2 | 2 |
| 15 | | 1102 | PLUG, 1/8-27 NPT, Allen head | 4 | 4 |
| 16 | | STD-1339 | PLUG, 1/16-27 NPT, Allen head | 1 | 1 |
| 17 | | 31C-17 | STUD, 5/16-18 x 2-1/8 long | 4 | 4 |
| 18 | | 1102 | PLUG, 1/8-27 NPT, Allen head | 5 or 1 | 5 |
| 19 | | STD-1339 | PLUG, 1/16-27 NPT, Allen head | 5 or 4 | 5 |
| 20 | | 38-13 | STUD, 3/8-16 x 1-5/8 long | 4 | 4 |
| 21 | | 31C-19 | STUD, 5/16-18 x 2-3/8 long | 4 | 4 |
| * Refer to Service Kits Section for kit list. | | | | | |
| P Lycoming proprietary part. Listed for reference purposes only, cannot be purchased. | | | | | |

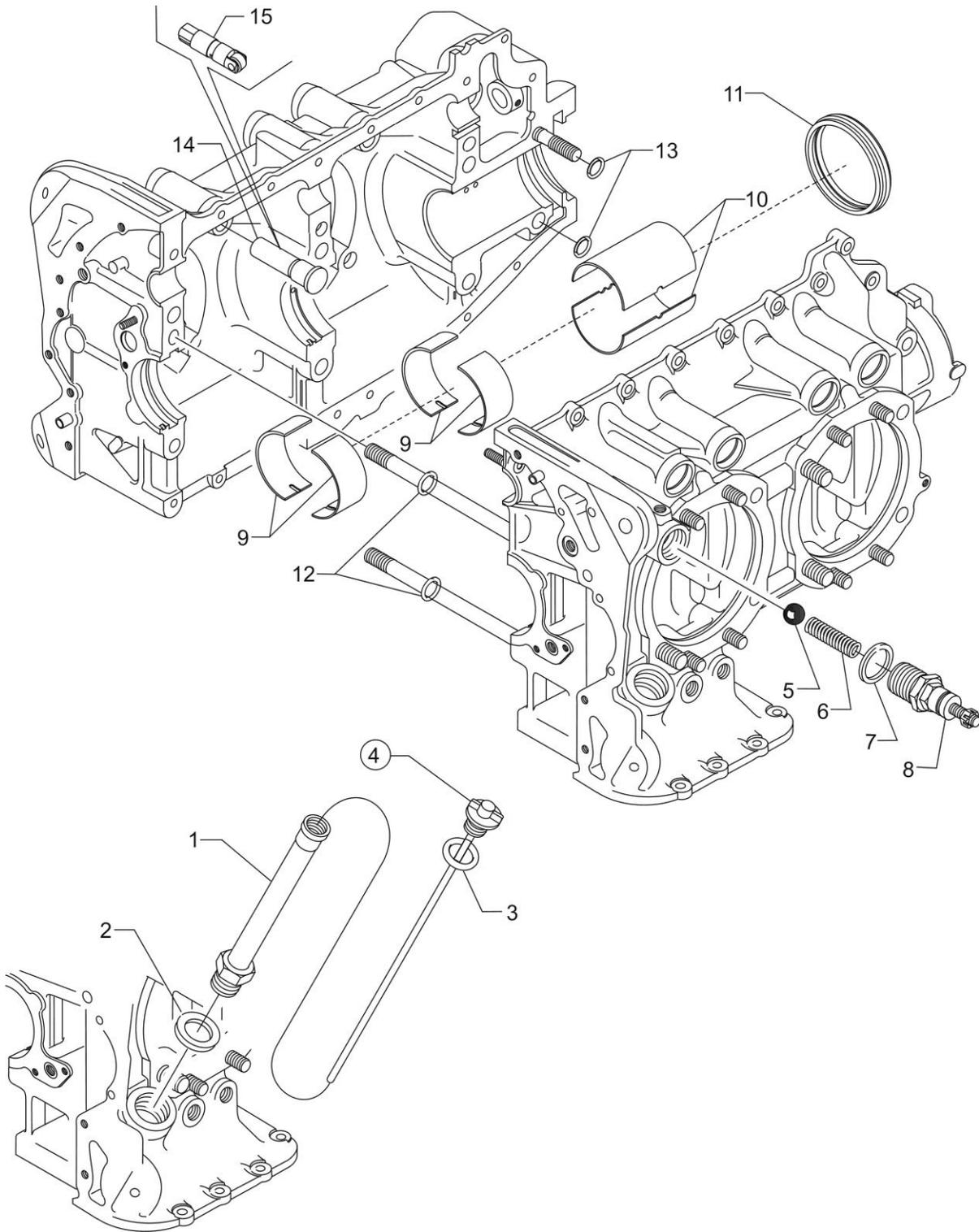


Figure 4
Crankcase Related Parts

Figure 4 - Crankcase Related Parts

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|-------------|------|---------------|---|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 1 | | 75736 | TUBE, Oil level gage | 1 | |
| | | 75767 | TUBE, Oil level gage | 1 | 1 |
| | | 56C23075 | TUBE, Oil level gage (long) | 1 | |
| 2 | | 72059 | GASKET, Oil level gage | 1 | 1 |
| 3 | | 74068 | RING, Oil level gage seal | 1 | |
| | | 74065 | RING, Oil level gage seal | 1 | 1 |
| 4 | | LW-14760 | GAGE ASSEMBLY, Oil level | 1 | |
| | | LW-16783-18 | GAGE ASSEMBLY, Oil level | 1 | |
| | | LW-14769 | GAGE ASSEMBLY, Oil level | 1 | 1 |
| | | LW-14763 | GAGE ASSEMBLY, Oil level | 1 | |
| 5 | | 1028-B | BALL, 11/16 diameter | 1 | 1 |
| 6 | * | 61084 | SPRING, Oil pressure relief valve | 1 | 1 |
| | * | 68668 | SPRING, Oil pressure relief valve | 1 | 1 |
| | * | 77467 | SPRING, Oil pressure relief valve | 1 | 1 |
| | * | LW-11713 | SPRING, Oil pressure relief valve | 1 | 1 |
| | * | LW-18085 | SPRING, Oil pressure relief valve | 1 | 1 |
| 7 | | 06E19769-1.25 | GASKET, 1-1/4 I.D. x 1-1/2 O.D. x 3/32 annular | 1 | 1 |
| 8 | | 77808 | VALVE ASSEMBLY, Oil pressure relief valve, adjustable | 1 | 1 |
| 9 | | 18D26098 | BEARING, Crankshaft | 4 | 4 |
| 10 | | 18A26093 | BEARING, Crankshaft, front | 2 | 2 |
| 11 | ** | LW-13792 | SEAL, Crankshaft oil, solid | 1 | 1 |
| 12 | | 72075 | SEAL, Oil, 3/32 section x 7/16 I.D. | 2 | 2 |
| 13 | | 72091 | RING, Oil seal, 23/64 I.D. x 7/64 diameter | 2 | 2 |
| 14 | *** | 15B26262 | BODY, Hydraulic tappet | 8 | |
| 15 | *** | LRT23381 | BODY, Hydraulic tappet (Roller tappet engines) | 8 | 8 |

* Select spring to give a minimum of three threads exposed on adjusting screw to allow field adjustment. Reference latest revision of Lycoming Engines Table of Limits SSP-1776, Part I for spring identification.

** Refer to the latest revision of Lycoming Engines Service Instruction No. 1324 for installation.

*** Refer to the latest revision of Lycoming Engines Service Instruction Nos. 1011 and 1514 for installation.

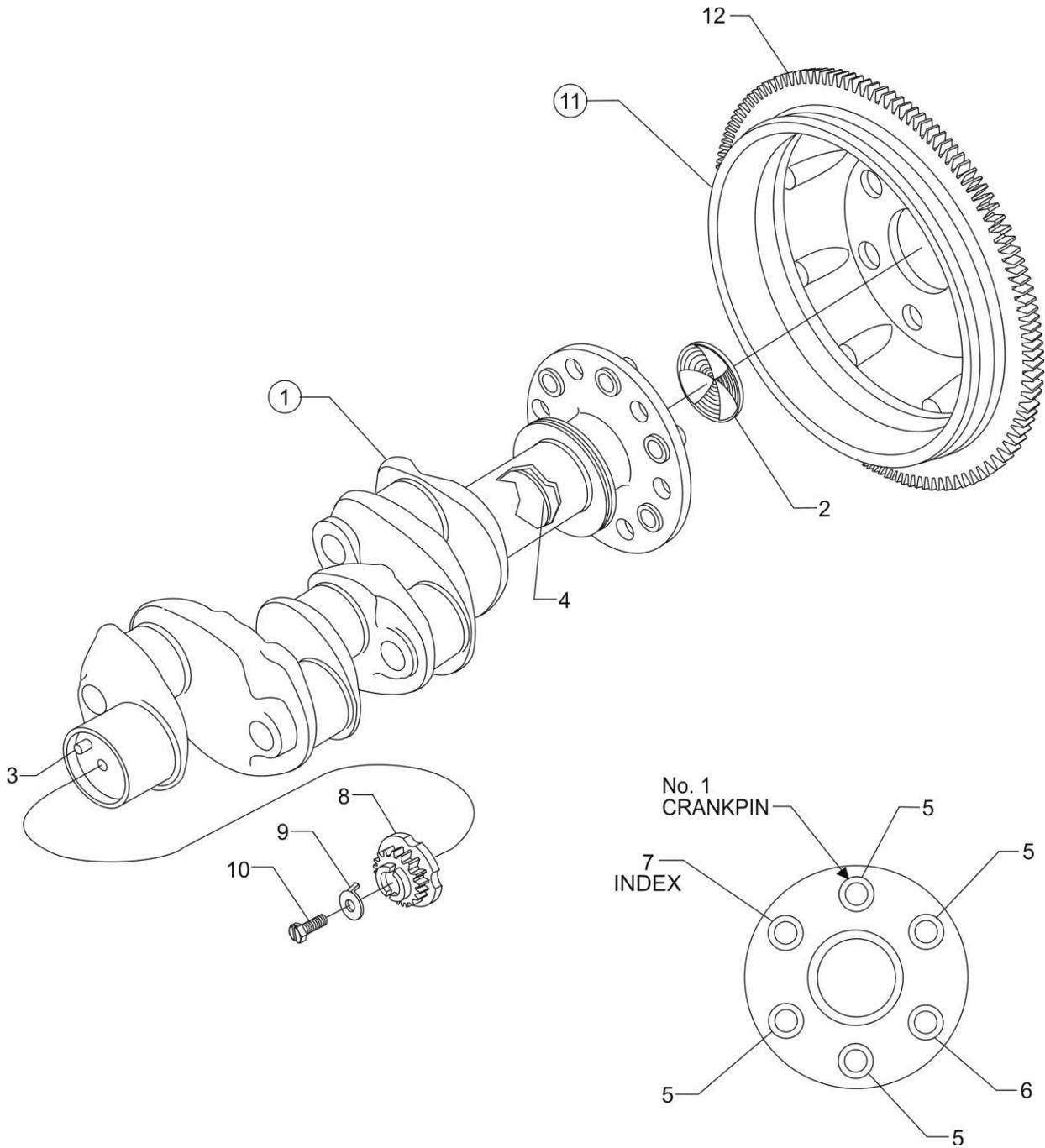


Figure 5
Crankshaft Assembly and Related Parts

Figure 5 - Crankshaft Assembly and Related Parts

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|-------------|------|-------------|---|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 1 | | 13B47120 | CRANKSHAFT ASSEMBLY | 1 | |
| | | 13B47144 | CRANKSHAFT ASSEMBLY | | 1 |
| 2 | | STD-1211 | PLUG, 2.00 diameter expansion | 1 | 1 |
| 3 | | STD-1065 | DOWEL, Stepped, 5/16 & 1/4 diameter. x 35/64 long | 1 | 1 |
| 4 | | 61510 | PLUG, 1-3/4 O.D. | 1 | 1 |
| 5 | * | 75656-S | BUSHING, Propeller flange, long | 4 | 4 |
| 6 | * | 72155-S | BUSHING, Propeller flange, short | 1 | 1 |
| 7 | * | 75657-S | BUSHING, Propeller flange, indexing | 1 | 1 |
| 8 | | 13S19646 | GEAR, Crankshaft | 1 | 1 |
| 9 | | LW-18639 | LOCKPLATE, Crankshaft gear | 1 | 1 |
| 10 | | STD-2246 | BOLT, 5/16-24 x 1.00 long | 1 | 1 |
| 11 | | LW-16471 | SUPPORT ASSEMBLY, Starter ring gear, 12/14 pitch | 1 | |
| | | LW-11519 | SUPPORT ASSEMBLY, Starter ring gear, 12/14 pitch | | 1 |
| | | 31M19861 | SUPPORT ASSEMBLY, Starter ring gear, 12/14 pitch | 1 | |
| 12 | | 72566 | GEAR, Starter ring | 1 | |
| | | LW-10551 | GEAR, Starter ring | | 1 |

* Refer to the latest revision of Lycoming Engines Service Instruction No. 1098 for additional details.

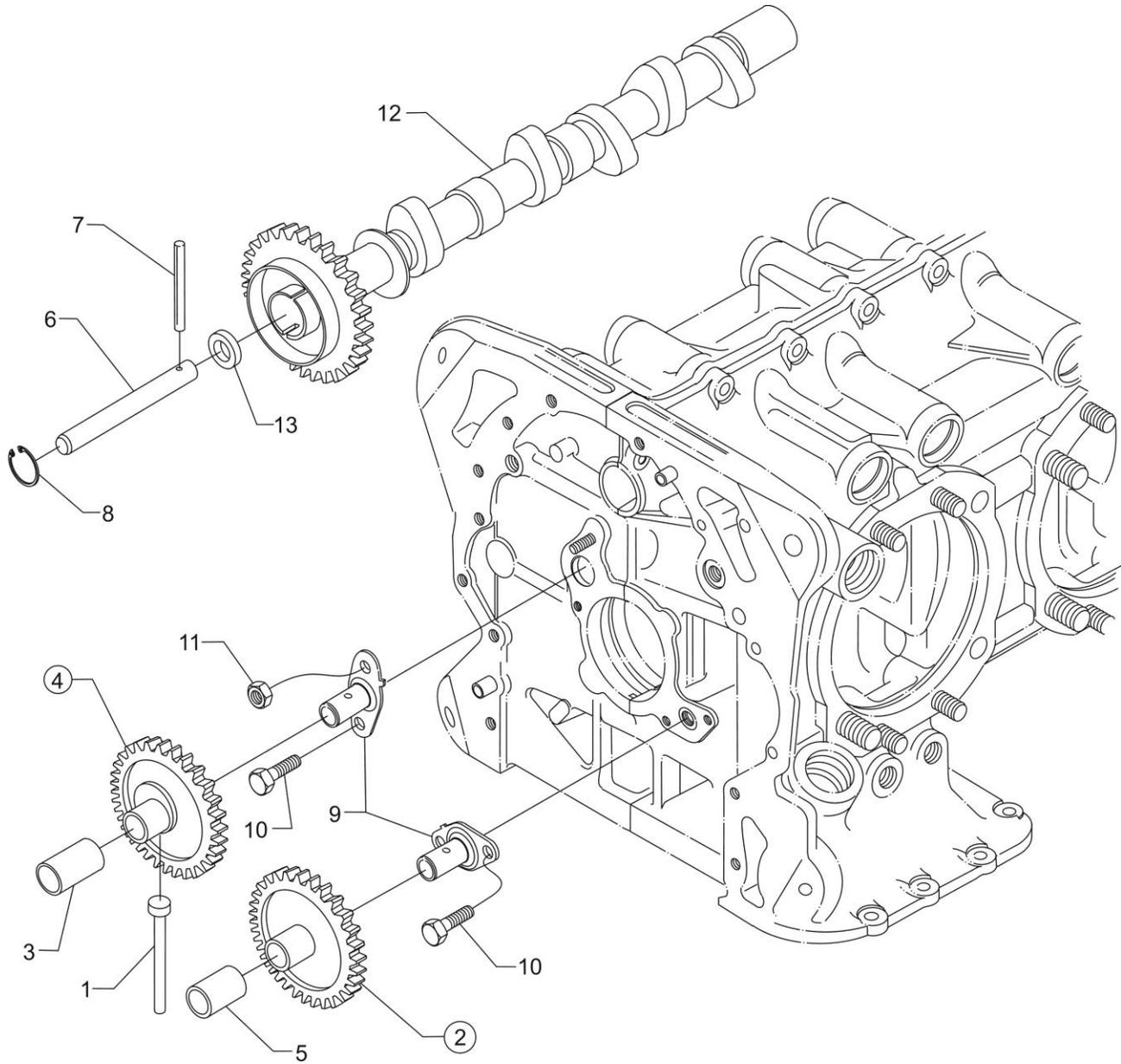


Figure 6
Crankshaft Idler Gears, Tachometer Drive and Camshaft

Figure 6 - Crankshaft Idler Gears, Tachometer Drive and Camshaft

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|-------------|------|-------------|--|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 1 | | 23D26777 | PLUNGER, Fuel pump, long | 1 | 1 |
| 2 | | 74996 | GEAR ASSEMBLY, Crankshaft idler, plain | 1 | 1 |
| 3 | | 77309 | BUSHING, Crankshaft idler gear | 1 | 1 |
| 4 | | 75072 | GEAR ASSEMBLY, Crankshaft idler | 1 | 1 |
| 5 | | 77309 | BUSHING, Crankshaft idler gear | 1 | 1 |
| 6 | | 76121 | SHAFT ASSEMBLY, Tachometer | 1 | 1 |
| 7 | | LW-18667 | PIN, 3/16 diameter x 2-21/64 long | 1 | 1 |
| 8 | | STD-2231 | RING, Internal retaining | 1 | 1 |
| 9 | | LW-13796 | SHAFT, Crankshaft idler gear | 2 | 2 |
| 10 | | LW-31H0.88 | BOLT, 5/16-18 x 7/8 long, hex. head, drilled | 3 | 3 |
| 11 | | STD-2168 | NUT, 5/16-18 NC-3 slotted shear | 1 | 1 |
| 12 | | LW-18845 | CAMSHAFT ASSEMBLY | | 1 |
| | | LW-18843 | CAMSHAFT ASSEMBLY | 1 | |
| | | 15M23456 | CAMSHAFT ASSEMBLY (Roller tappet engines) | 1 | |
| | | 15M23454 | CAMSHAFT ASSEMBLY (Roller tappet engines) | | 1 |
| 13 | | 76118 | SPACER, Tachometer shaft centering | 1 | 1 |

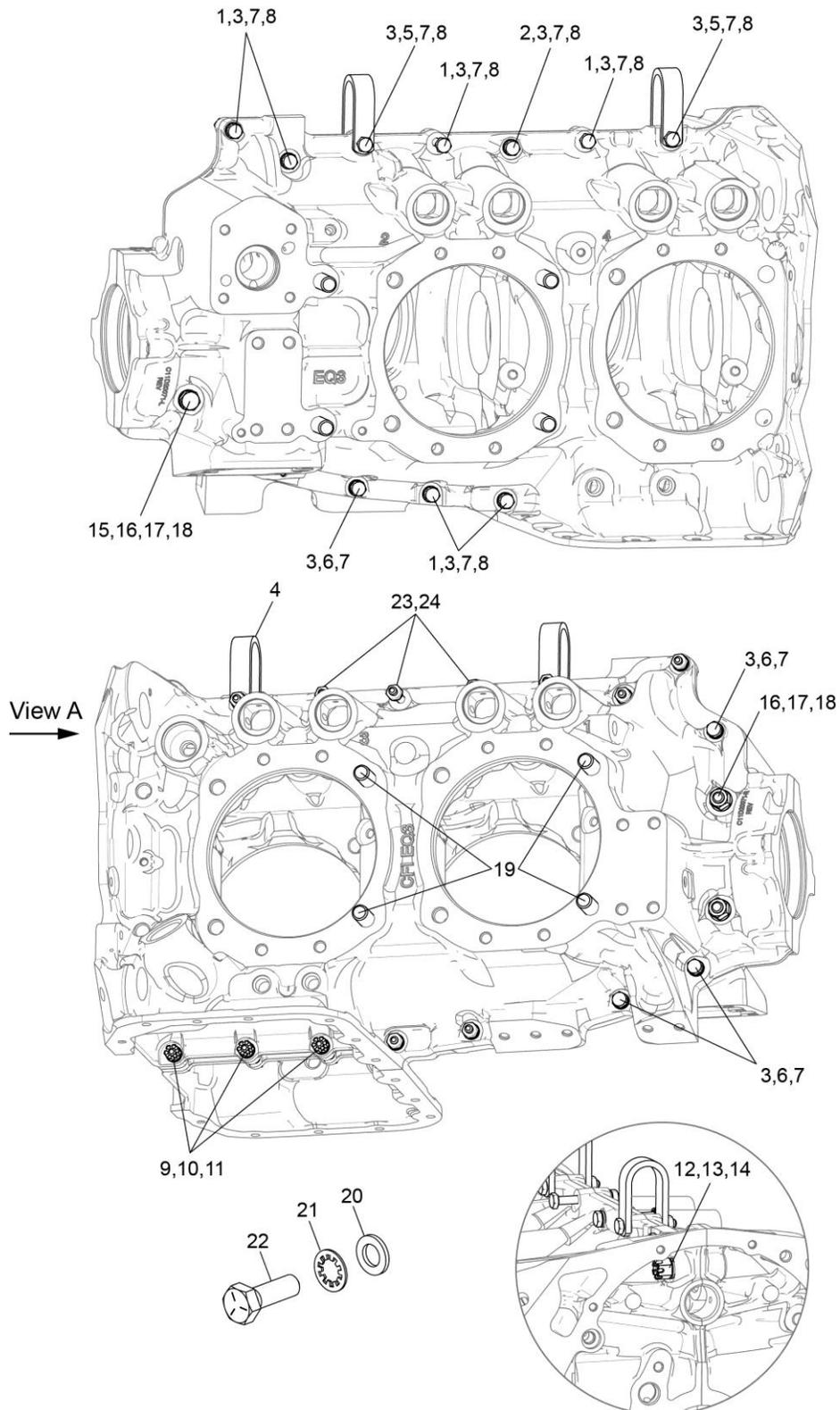


Figure 7
Crankcase Attaching Parts

Figure 7 - Crankcase Attaching Parts

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|-------------|------|-------------|---|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 1 | | LW-25-1.50 | BOLT, 1/4-20 x 1-1/2 long, hex. head | 5 or 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 | 17 or 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 or 13 | |
| 8 | | STD-1411 | NUT, 1/4-20 plain | 9 | |
| 9 | | LW-25S1.50 | BOLT, 1/4-20 x 1-1/2 long, hex. head, drilled end | 3 | |
| 10 | | STD-8 | WASHER, 1/4 plain (max. 9) | AR | |
| 11 | | STD-2249 | NUT, 1/4-20 slotted shear | 3 | |
| 12 | | STD-33 | WASHER, 3/8 plain, 1/16 thick | 2 or 3 | |
| 13 | | AN960-616L | WASHER, 3/8 plain, 1/32 thick | 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 or 3 | |
| 17 | | STD-678 | WASHER, 3/8 lock internal teeth | 2 | |
| 18 | | STD-596 | NUT, 3/8-24 plain | 2 | |
| 19 | | 76220 | STUD, 1/2-20 x 10-45/64 long | 4 | |
| 20 | * | STD-35 | WASHER, 5/16 plain | 5 | |
| 21 | * | STD-475 | WASHER, 5/16 lock, internal teeth | 1 | |
| 22 | * | LW-31-0.94 | BOLT, 5/16-18 x 15/16 long | 1 | |
| 23 | | LW-25-2.13 | BOLT, 1/4-20 x 2-1/8 long, hex. head | 2 | |
| 24 | | LW-25-1.75 | BOLT, 1/4-20 x 1-3/4 long, hex. head | 2 | |

AR as required
* These parts are shipped loose.

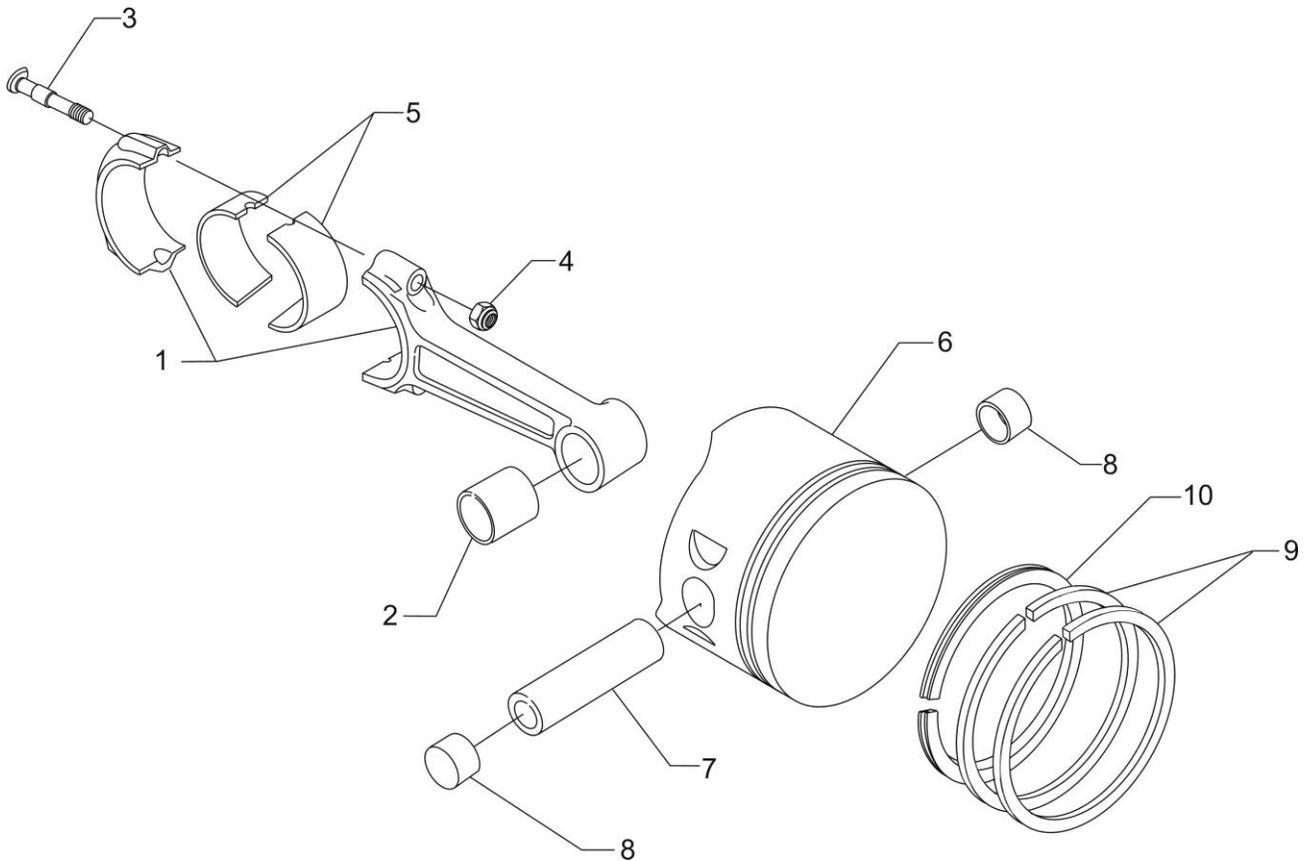


Figure 8
Connecting Rods, Pistons and Ring Assemblies

Figure 8 - Connecting Rods, Pistons and Ring Assemblies

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|--|----------|-------------|---|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 1 | | LW-11750-S | CONNECTING ROD ASSEMBLY | 4 | |
| 2 | | LW-13923 | BUSHING, Connecting rod, upper | 4 | |
| 3 | P | 14S23890 | BOLT, Connecting rod | 8 | |
| | * | 75061 | BOLT, Connecting rod | 8 | |
| 4 | | LW-12186 | NUT, Connecting rod bolt | 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 | | 14H21950 | RING, Piston, oil regulating, expander type | 4 | |
| <p>P Lycoming proprietary part. Listed for reference purpose only, cannot be purchased.</p> <p>* Service use only.</p> <p>** Refer to the latest revision of Lycoming Service Instruction No. 1267.</p> | | | | | |

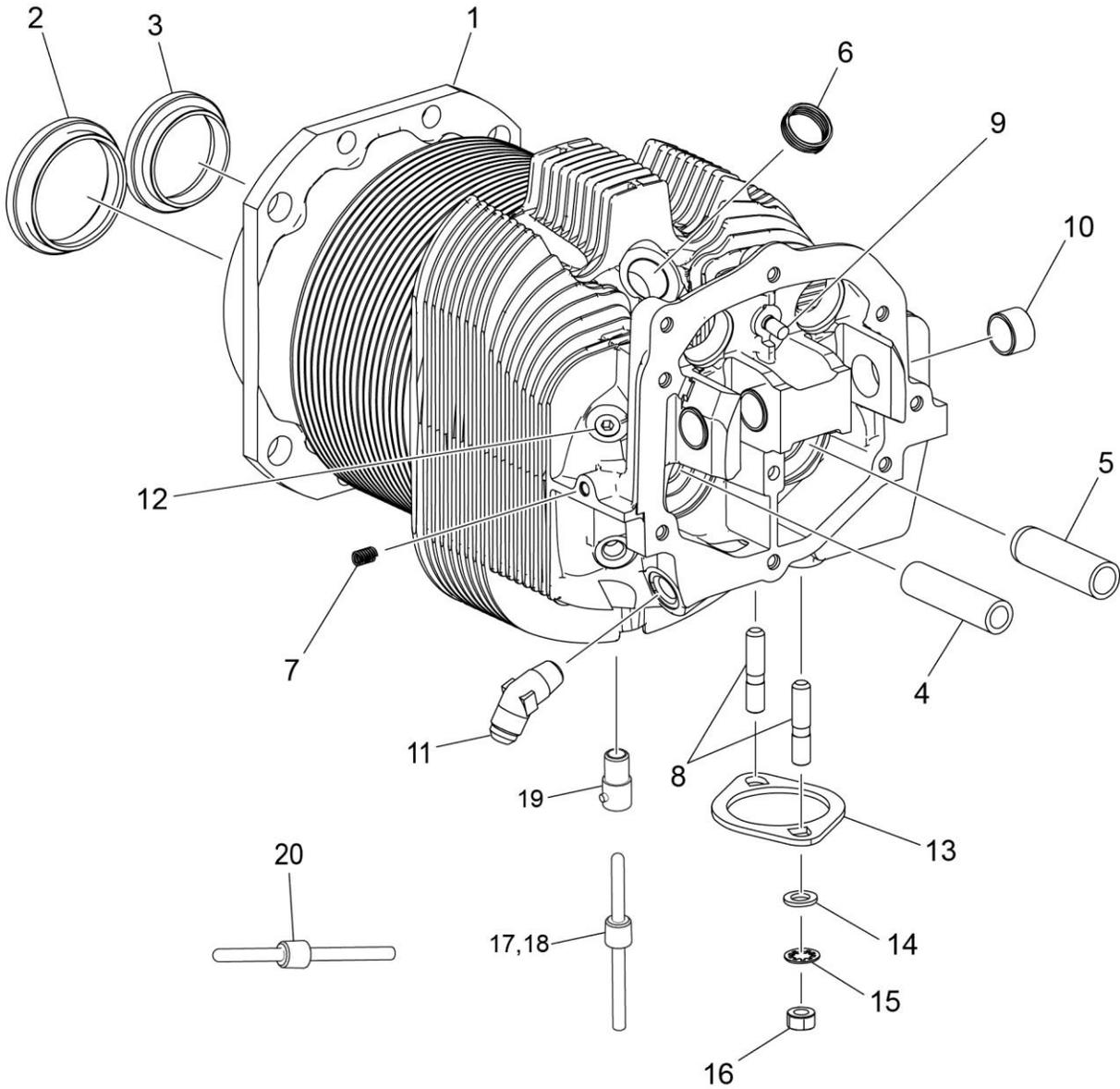


Figure 9
Cylinder Assembly

Figure 9 - Cylinder Assembly

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|-------------|------------|-------------|--|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 1 | | LW-12427 | CYLINDER AND HEAD ASSEMBLY, Nitrided | 4 | 4 |
| 2 | | 72057 | SEAT, Intake valve | 4 | 4 |
| 3 | | 72058 | SEAT, Exhaust valve | 4 | 4 |
| 4 | P * | 76943 | GUIDE, Valve, intake, flanged | 4 | 4 |
| 5 | P * | 16R22126 | GUIDE, Valve, exhaust, flanged | 4 | 4 |
| 6 | | 66796 | INSERT, Spark plug, 18-1.5 MM | 8 | 8 |
| 7 | | STD-1353 | INSERT, No. 10-24 Heli-coil x 3/8 long | 4 | 4 |
| 8 | | 31C-12 | STUD, 5/16-18 x 1-1/2 long | 8 | 8 |
| 9 | | 25C-8 | STUD, 1/4-20 x 1.00 long | 4 | 4 |
| 10 | | 66610 | BUSHING, Rocker shaft | 16 | 16 |
| 11 | | MS20823-6D | ELBOW, 45°, 3/8 flared tube | 4 | 4 |
| 12 | | 1102 | PLUG, 1/8-27 NPT, Allen head | 4 | 4 |
| 13 | | 77611 | GASKET, Exhaust flange | 4 | 4 |
| 14 | | STD-35 | WASHER, 5/16 plain | 8 | 8 |
| 15 | | STD-475 | WASHER, 5/16 lock, internal teeth | 8 | 8 |
| 16 | | STD-1410 | NUT, 5/16-18 plain | 8 | 8 |
| 17 | | 05U22561 | THERMOCOUPLE, Installation, K type | 2 | 0 |
| 18 | | 05U22562 | THERMOCOUPLE, Installation, K type | 4 | 0 |
| 19 | | AN4076-1 | FITTING, Temp. measuring element | 4 | 0 |
| 20 | | LW-18752 | THERMOCOUPLE, K, cyl. head bayonet | 4 | 0 |

P Lycoming proprietary part. Listed for reference purpose only, cannot be purchased.
***** Refer to the latest revision of Lycoming Service Instruction No. 1256 for service valve guides.

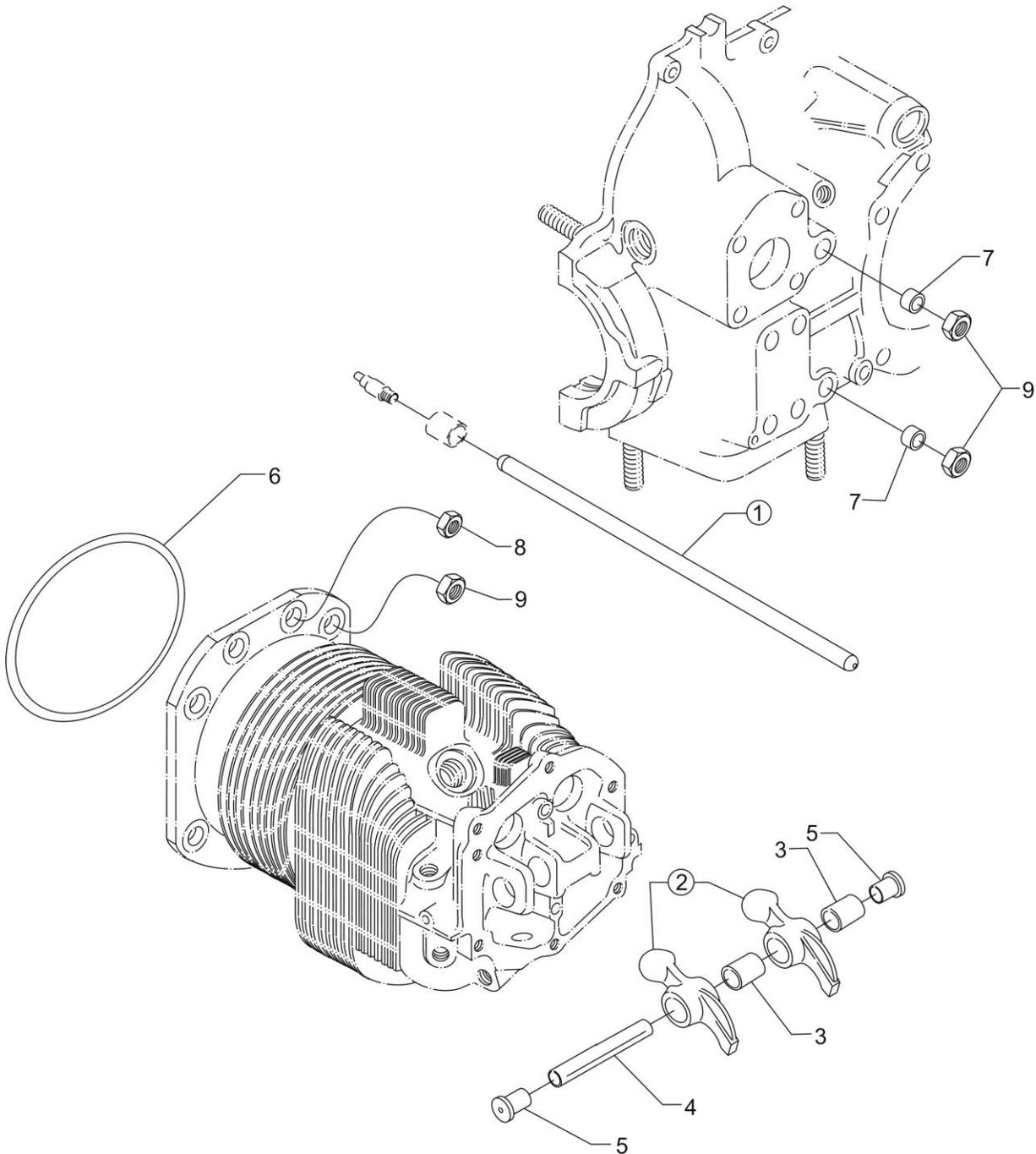


Figure 10
Cylinder Related Parts

Figure 10 - Cylinder Related Parts

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|--|------|-------------|--|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 1 | * | 15F19957-28 | ROD ASSEMBLY, Push - RT | AR | |
| | * | 15F19957-29 | ROD ASSEMBLY, Push - RT | AR | |
| | * | 15F19957-30 | ROD ASSEMBLY, Push - RT | AR | |
| | * | 15F19957-31 | ROD ASSEMBLY, Push - RT | AR | |
| | * | 15F19957-32 | ROD ASSEMBLY, Push - RT | AR | |
| | * | 15F19957-33 | ROD ASSEMBLY, Push - RT | AR | |
| | * | 15F19957-34 | ROD ASSEMBLY, Push - RT | AR | |
| | * | 15F19957-35 | ROD ASSEMBLY, Push | AR | |
| | * | 15F19957-36 | ROD ASSEMBLY, Push | AR | |
| | * | 15F19957-37 | ROD ASSEMBLY, Push | 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 | |
| <p>AR as required</p> <p>* Refer to the latest revision of Service Instruction No. 1060 for push rod application.</p> <p>** Due to the size of the area where the part number is stamped, the last five digits may be all that is shown (19357).</p> <p>NOTE: Various push rod lengths are used to set valve clearances.</p> | | | | | |

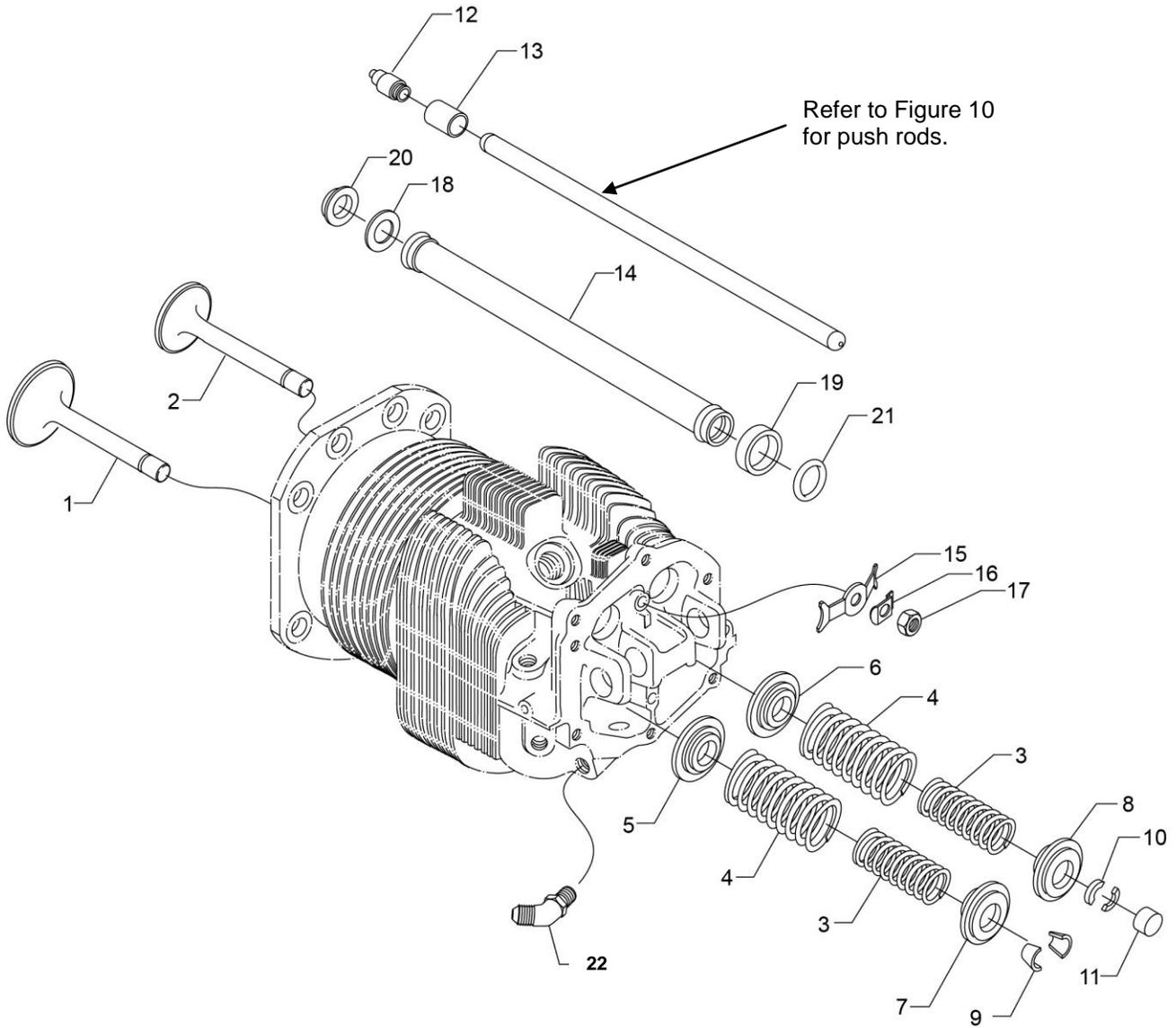


Figure 11
Valve Assembly and Related Parts

Figure 11 – Valve Assembly and Related Parts

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|-------------|------|-------------|---|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 1 | | 17A23938 | VALVE, Intake | 4 | 4 |
| 2 | | 17B23936 | VALVE, Exhaust | 4 | 4 |
| 3 | | LW-11795 | SPRING, Valve, inner | 8 | 8 |
| 4 | | LW-11800 | SPRING, Valve, outer | 8 | 8 |
| 5 | | 65441 | SEAT, Valve spring, lower intake | 4 | 4 |
| 6 | | LW-13323 | SEAT, Valve spring, lower exhaust | 4 | 4 |
| 7 | | LW-10077 | SEAT, Valve spring, upper intake | 4 | 4 |
| 8 | | LW-16475 | SEAT, Valve spring, upper exhaust (rotator type) | 4 | 4 |
| 9 | | 60009 | KEY, Valve intake | 8 | 8 |
| 10 | | 17C21191 | KEY, Valve exhaust (rotator type) | 8 | 8 |
| 11 | | 17C19386 | CAP, Valve stem, exhaust (rotator type) | 4 | 4 |
| 12 | | 15B26066 | PLUNGER ASSEMBLY, Hydraulic tappet | 8 | 8 |
| 13 | | 15B21319 | SOCKET, Hydraulic tappet | 8 | 8 |
| 14 | | LW-11485 | SHROUD TUBE ASSEMBLY, Push rod | 8 | |
| | | 15G23461 | SHROUD TUBE ASSEMBLY, Push rod (Roller tappet engines) | 8 | 8 |
| 15 | | LW-14995 | SPRING, Shroud tube | 4 | 4 |
| 16 | | LW-12272 | LOCKPLATE, Shroud tube | 4 | 4 |
| 17 | | STD-1411 | NUT, 1/4-20 plain | 4 | 4 |
| 18 | | 01L23459 | WASHER, 25/32 I.D. x 1-3/8 O.D. x 1/32 thick (Roller tappet engines) | 8 | 8 |
| 19 | | LW-18661 | SEAL, Shroud tube | 8 | |
| 20 | | 06A23493 | SEAL, Shroud tube (Roller tappet engines) | 8 | 8 |
| 21 | | 70310 | SEAL, Shroud tube | 8 | 8 |
| 22 | | MS20823-6D | ELBOW, 45 degree, 3/8 flared tube | 4 | 4 |

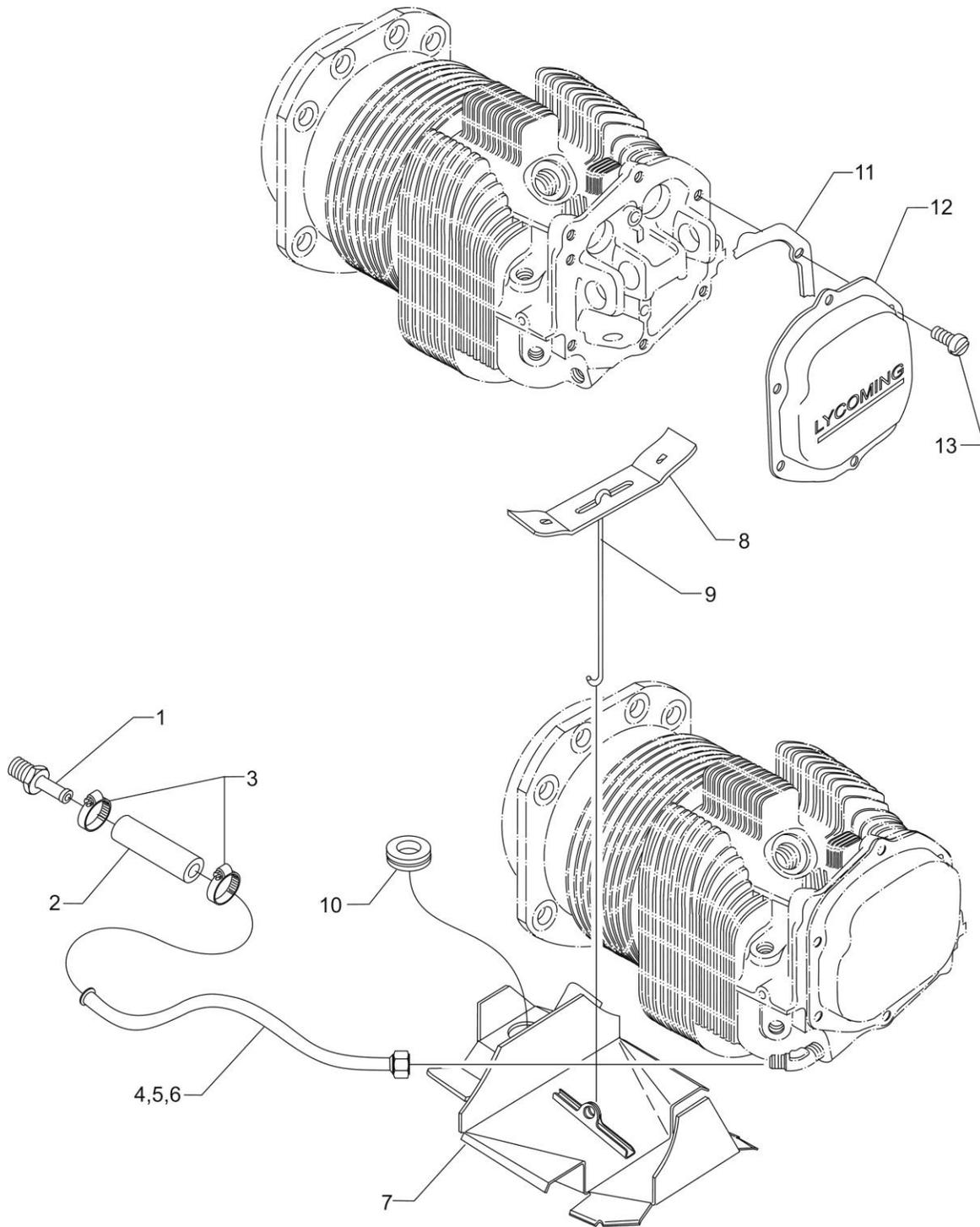


Figure 12
Cylinder Head Drain Tubes, Intercylinder Cooling Baffles
and Rocker Box Covers

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

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|---|------|---------------|--|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 1 | | STD-684 | NIPPLE, Straight, 3/8 I.D. hose | 4 | |
| 2 | | STD-1821 | HOSE, 3/8 x 2-1/2 long | 4 | |
| 3 | | LW-15592-5-05 | CLAMP, Hose | 8 | |
| 4 | | 68759 | TUBE ASSEMBLY, Cylinder head oil drain, cyl. no. 1 | 1 | |
| 5 | | 68760 | TUBE ASSEMBLY, Cylinder head oil drain, cyl. no. 2 | 1 | |
| 6 | | 68761 | TUBE ASSEMBLY, Cylinder head oil drain, cyl. 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 (on baffle) | 1 | |
| 11 | | 75906 | GASKET, Rocker box cover | 4 | |
| 12 | | 61247 | COVER, Rocker box | 4 | |
| 13 | | STD-1925 | SCREW, 1/4-20 x 5/8 long, pan. head, self-locking | 24 | |
| * Install on left side between no. 2 and no. 4 cylinders. | | | | | |
| ** Install on right side between no. 1 and no. 3 cylinders. | | | | | |

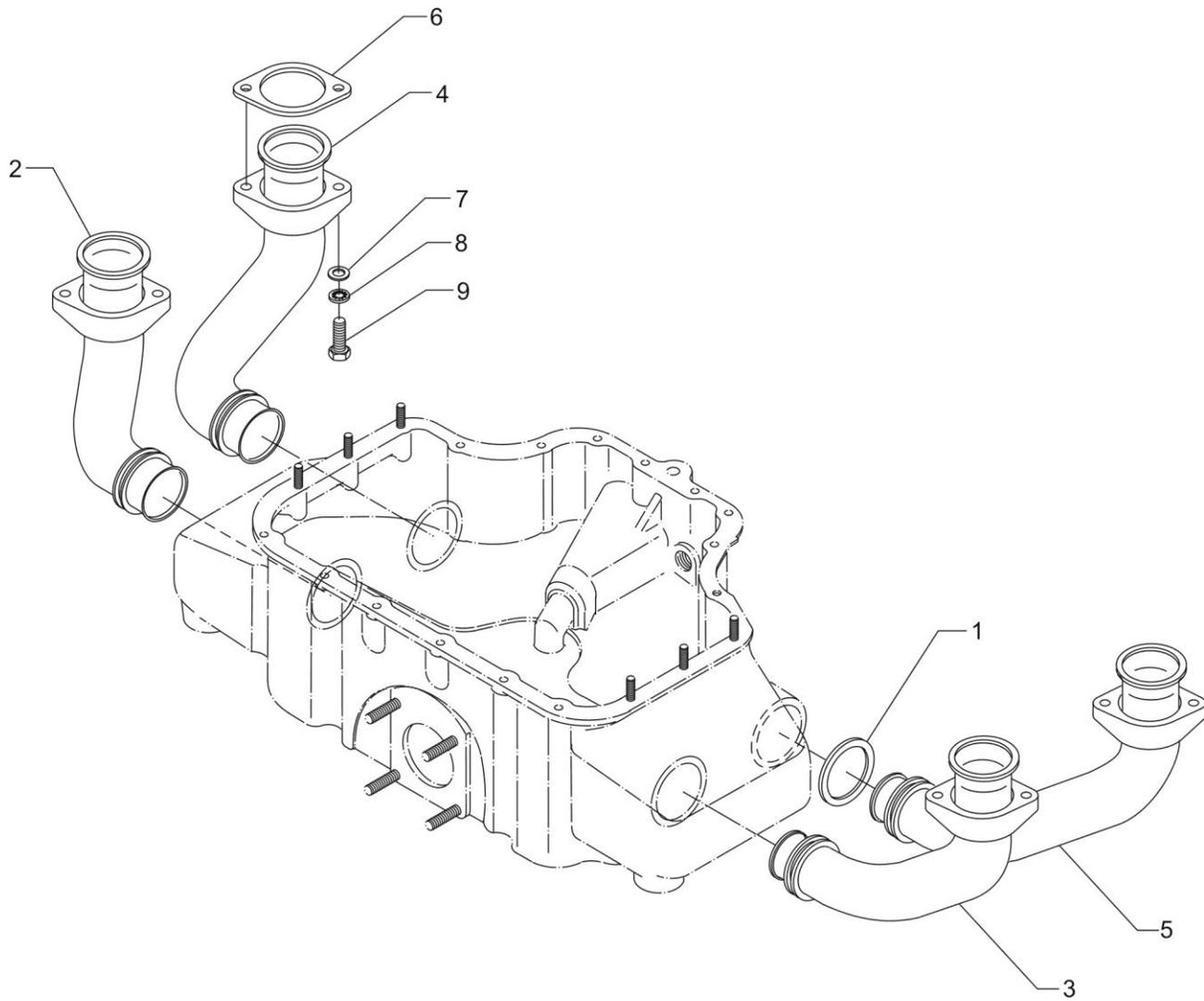


Figure 13
Intake Pipes Assembly

Figure 13 – Intake Pipes Assembly

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|-------------|------|-------------|-----------------------------------|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 1 | | 77569 | RING, Seal, intake pipes | | 4 |
| 2 | | 42E22611 | PIPE, Intake, cylinder no. 1 | | 1 |
| 3 | | 42E22612 | PIPE, Intake, cylinder no. 2 | | 1 |
| 4 | | 42E22613 | PIPE, Intake, cylinder no. 3 | | 1 |
| 5 | | 42E22614 | PIPE, Intake, cylinder no. 4 | | 1 |
| 6 | | 71973 | GASKET, 2 bolt flange, 1-3/4 I.D. | | 4 |
| 7 | | STD-8 | WASHER, 1/4 plain | | 8 |
| 8 | | STD-160 | WASHER 1/4 lock, internal teeth | | 8 |
| 9 | | LW-25-1.25 | BOLT, 1/4-20 x 1-1/4 long | | 8 |

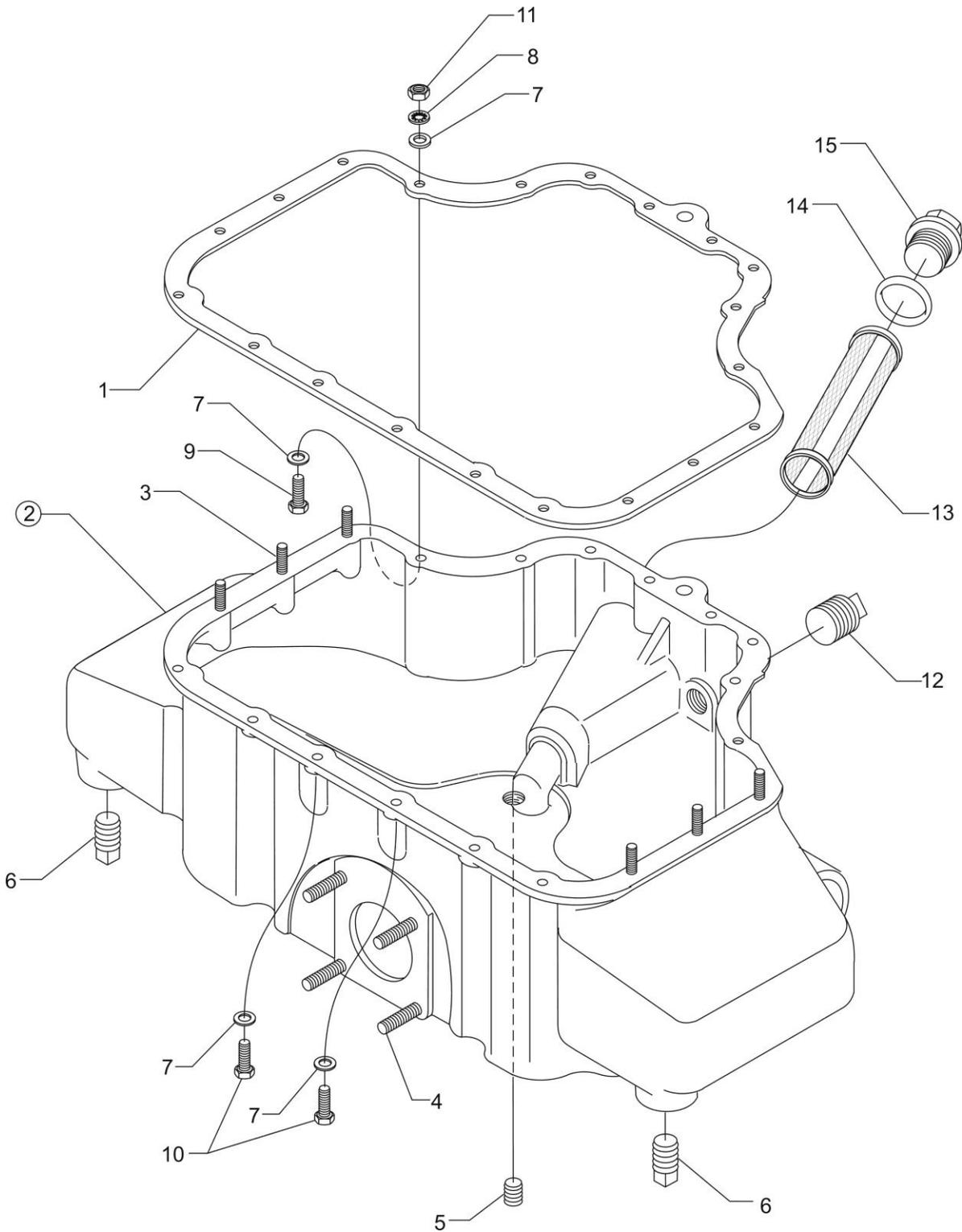


Figure 14
Oil Sump and Induction Housing Assembly

Figure 14 – Oil Sump and Induction Housing Assembly

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|-------------|------|---------------|---|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 1 | | LW-13353 | GASKET, Oil sump | | 1 |
| 2 | | LW-13864 | SUMP ASSEMBLY, Oil | | 1 |
| 3 | | 61400 | STUD, 1/4-20 x 1-3/16 long | | 6 |
| 4 | | 31C-14 | STUD, 5/16-18 x 1-3/4 long | | 4 |
| 5 | | 1102 | PLUG, 1/8-27 NPT, Allen head | | 1 |
| 6 | | STD-551 | PLUG, 1/2-14 NPT, square head, drilled | | 2 |
| 7 | | STD-8 | WASHER, 1/4 plain | | 26 |
| 8 | | STD-160 | WASHER, 1/4 lock, internal teeth | | 20 |
| 9 | | LW-25-0.94 | BOLT, 1/4-20 x 15/16 long, hex. head | | 6 |
| 10 | | LW-25-1.13 | BOLT, 1/4-20 x 1-1/8 long, hex. head | | 2 |
| 11 | | STD-1411 | NUT, 1/4-20 plain | | 12 |
| 12 | | STD-2229 | PLUG, 1/2 NPT, Allen head | | 1 |
| 13 | | 70484 | SCREEN, Oil suction | | 1 |
| 14 | | 06E19769-1.00 | GASKET, 1.00 I.D. x 1-1/4 O.D. x 3/32 annular | | 1 |
| 15 | | LW-12545 | PLUG, 5/8 hex. head x 1.00-20 thread | | 1 |

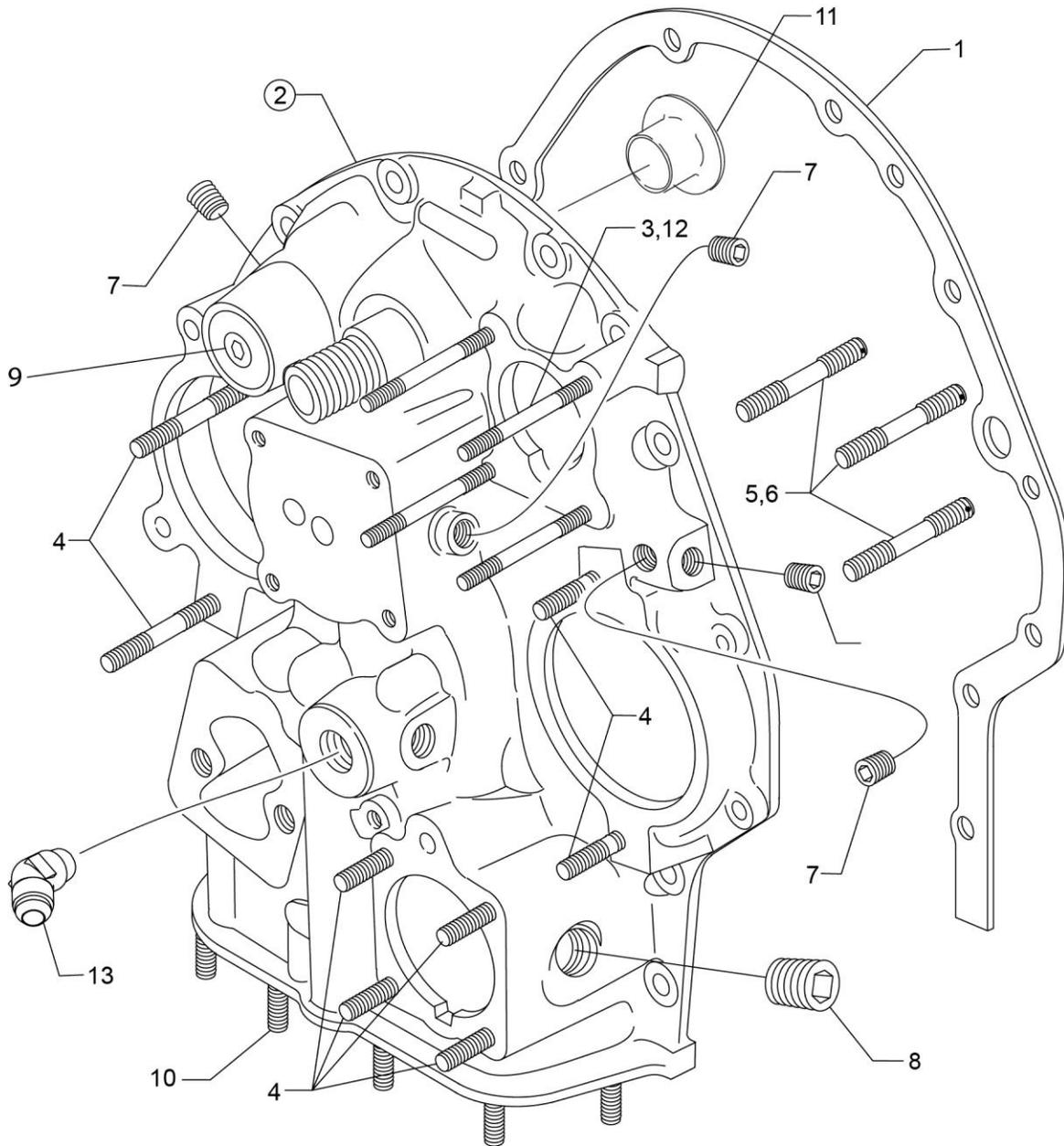


Figure 15
Accessory Housing Assembly

Figure 15 – Accessory Housing Assembly

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|-------------|------|-------------|---|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 1 | | 73818 | GASKET, Accessory housing | 1 | 1 |
| 2 | | 21A21533-21 | HOUSING ASSEMBLY, Accessory | 1 | |
| | | 21A21533-33 | HOUSING ASSEMBLY, Accessory | 1 | |
| | | 21A21651-05 | HOUSING ASSEMBLY, Accessory | | 1 |
| 3 | | 25C-22 | STUD, 1/4-20 x 2-3/4 long | 4 | 4 |
| 4 | | 31C-12 | STUD, 5/16-18 x 1-1/2 long | 8 | 8 |
| 5 | | 31CD-17 | STUD, 5/16-18 x 2-1/8 long, drilled | 3 | 2 |
| 6 | | 31CD-22 | STUD, 5/16-18 x 2-3/4 long, drilled | | 1 |
| 7 | | 1102 | PLUG, 1/8-27 NPT, Allen head | 4 | 4 |
| 8 | | STD-784 | PLUG, 3/8-18 NPT, Allen head | 1 | 1 |
| 9 | | STD-783 | PLUG, 1/4-18 NPT, Allen head | | 1 |
| 10 | | 75888 | STUD, 1/4-20 x 1-1/4 long | 6 | 6 |
| 11 | | 76119 | SHIELD, Accessory breather oil | 1 | 1 |
| 12 | | 61400 | STUD, 1/4-20 x 1-3/16 long | 4 | |
| 13 | | MS20823-8 | ELBOW, 3/8 NPT to 1/2 flare tube, 45 deg. | 1 | |
| | | MS20823-4 | ELBOW, 1/8 NPT to 1/4 flare tube, 45 deg. | 1 | |

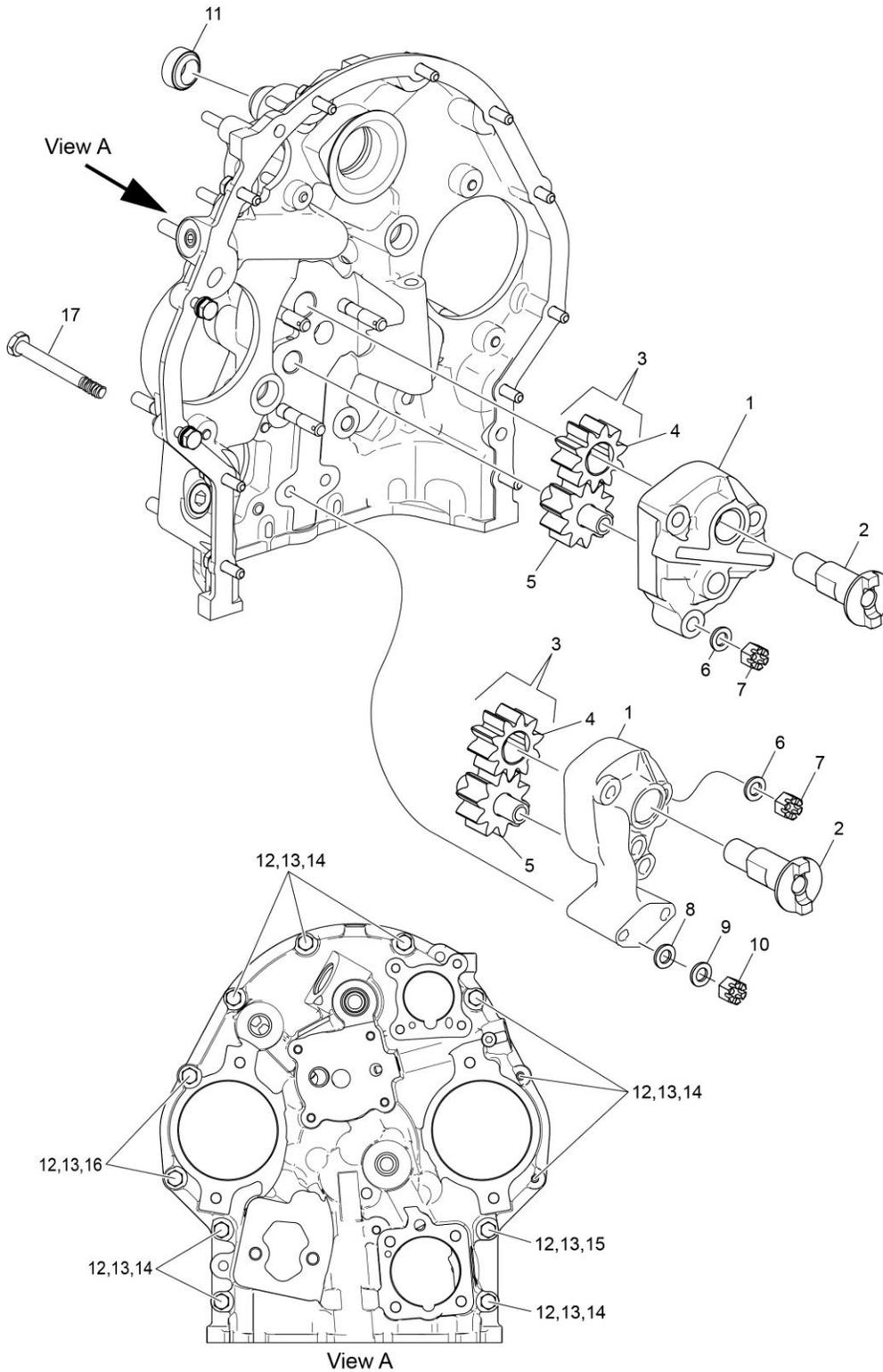


Figure 16
Oil Pump Assembly and Accessory Housing Attaching Parts

Figure 16 – Oil Pump Assembly and Accessory Housing Attaching Parts

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|--|------------|-------------|---|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 1 | | 78531 | BODY ASSEMBLY, Oil pump | 1 | |
| | | LW-11839 | BODY ASSEMBLY, Oil pump | | 1 |
| 2 | | 61174 | SHAFT, Oil pump drive | 1 | 1 |
| 3 | | 05K19423-S | IMPELLER KIT | 1 | 1 |
| 4 | P * | LW-18109 | IMPELLER, Oil pump, driving | 1 | 1 |
| 5 | P * | LW-18110 | IMPELLER ASSEMBLY, Oil pump, driven | 1 | 1 |
| 6 | | STD-35 | WASHER, 5/16 plain | 3 | 3 |
| 7 | | STD-1420 | NUT, 5/16-18 slotted | 3 | 3 |
| 8 | | STD-1227 | WASHER, 1/4 plain | | 2 |
| 9 | | STD-8 | WASHER, 1/4 plain | | 2 |
| 10 | | STD-2249 | NUT, 1/4-20 slotted shear | | 2 |
| 11 | | LW-14260 | SEAL, Tachometer drive, oil | 1 | 1 |
| 12 | | STD-8 | WASHER, 1/4 plain | 12 | 12 |
| 13 | | STD-160 | WASHER, 1/4 lock, internal teeth | 12 | 12 |
| 14 | | LW-25-0.94 | BOLT, 1/4-20 x 15/16 long, hex. head | 9 | 9 |
| 15 | | LW-25-1.13 | BOLT, 1/4-20 x 1-1/8 long, hex. head | 1 | 1 |
| 16 | | LW-25-1.44 | BOLT, 1/4-20 x 1-7/16 long, hex. head | 2 | 2 |
| 17 | | LW-25S2.75 | BOLT, 1/4-20 x 2-3/4 long, hex. head, drilled end | | 2 |
| <p>P Lycoming proprietary part - for reference only, cannot be purchased. * To ensure impellers are replaced together, oil pump impellers available in kit form only.</p> | | | | | |

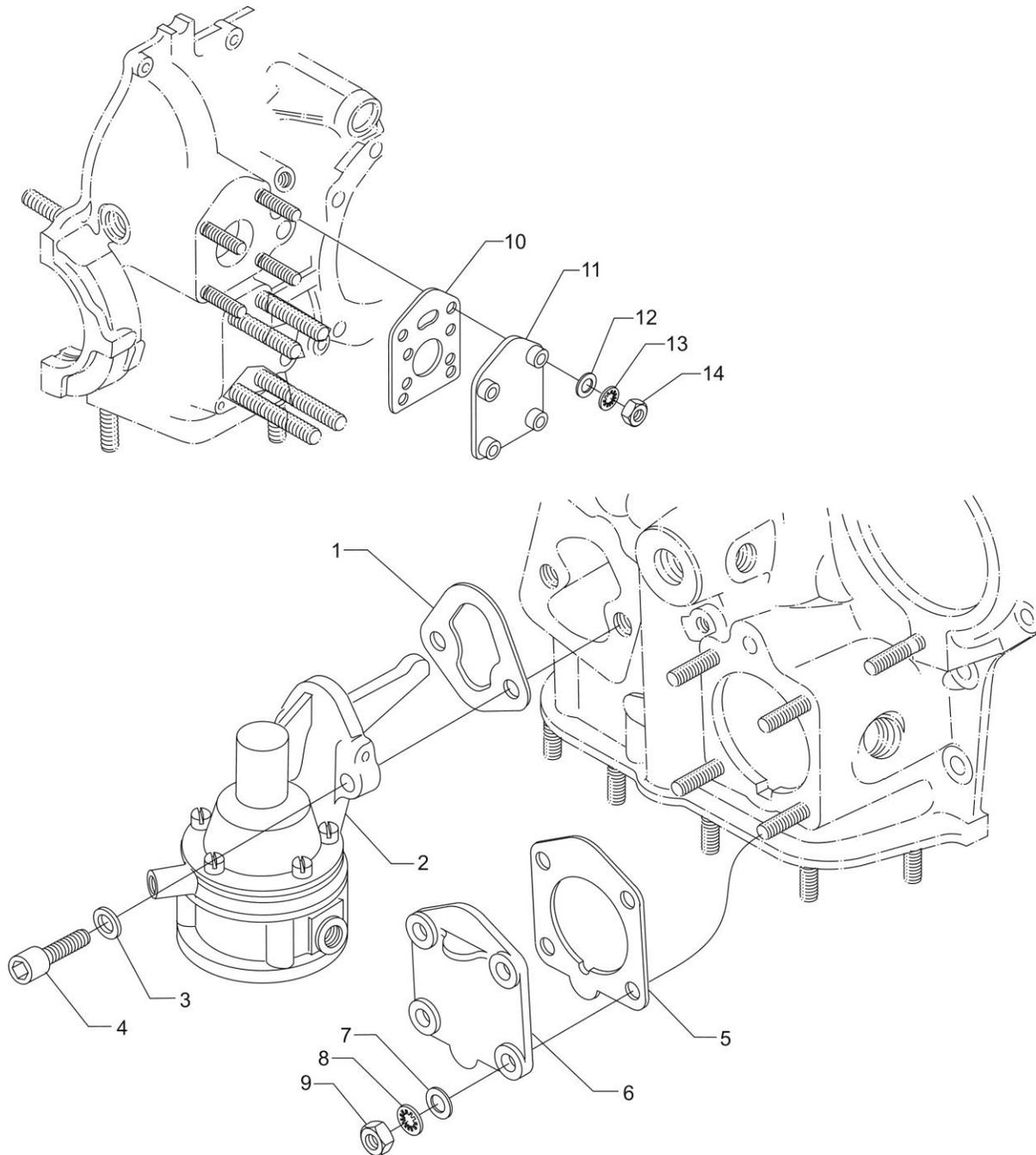


Figure 17
Fuel Pump Assembly and Attaching Parts

Figure 17 - Fuel Pump Assembly and Attaching Parts

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|-------------|------|-------------|---|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 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 dr. | | 2 |
| 5 | | 69551 | GASKET, Accessory drive adapter | | 1 |
| 6 | | 69106 | COVER, Governor drive adapter pad | | 1 |
| 7 | | STD-35 | WASHER, 5/16 plain | | 4 |
| 8 | | STD-475 | WASHER, 5/16 lock, internal teeth | | 4 |
| 9 | | STD-1410 | NUT, 5/16-18 plain | | 4 |
| 10 | | 72053 | GASKET, Governor | | 1 |
| 11 | | 72378 | COVER, Governor drive | | 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 |

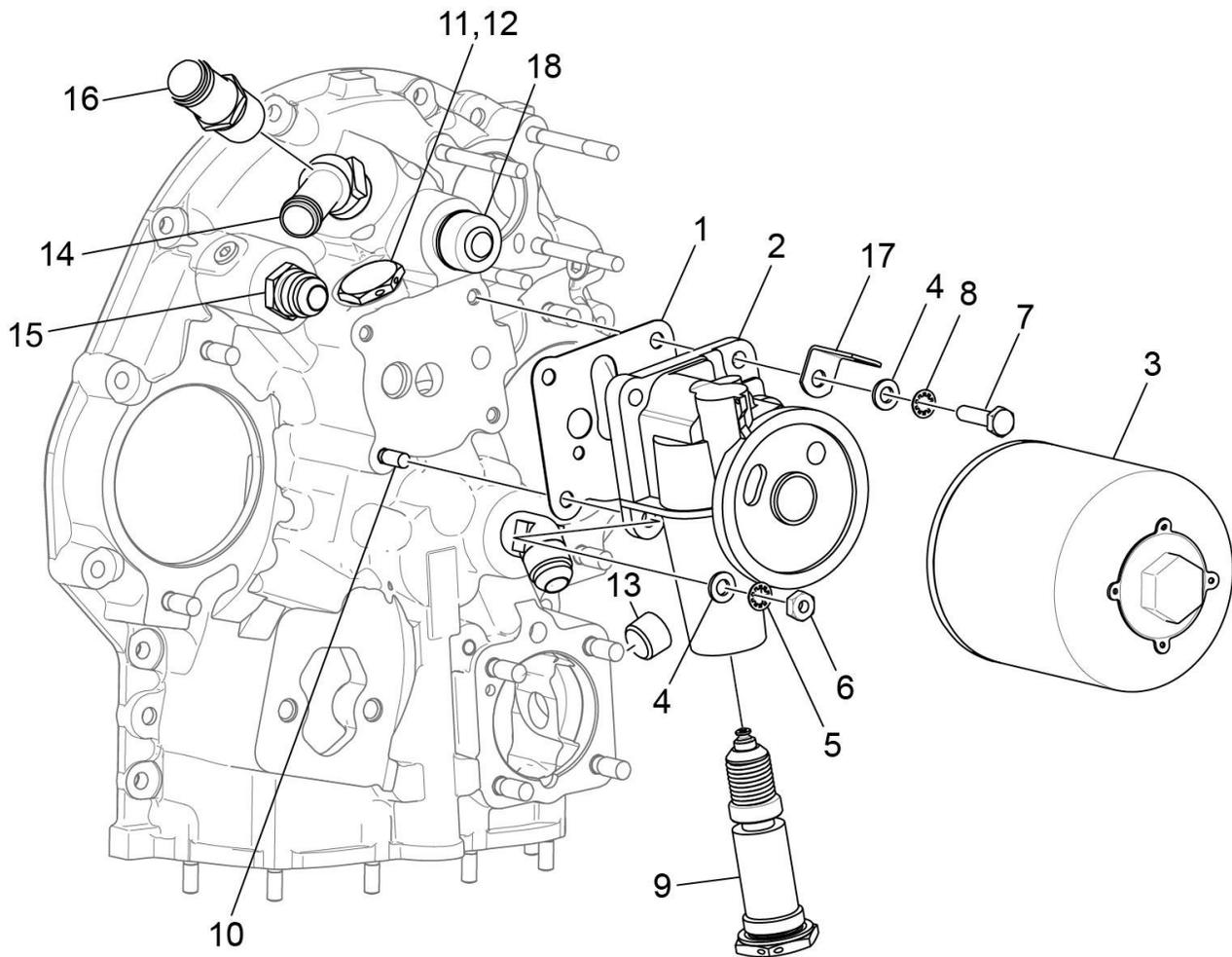


Figure 18
Oil Filter Assembly, Oil Cooler Bypass Valve and Fittings

Figure 18 – Oil Filter Assembly, Oil Cooler Bypass Valve and Fittings

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|-------------|------|---------------|---|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 1 | | 06B23862 | GASKET, Oil filter adapter | | 1 |
| 2 | | 77852 | OIL FILTER BASE ASSEMBLY | | 1 |
| 3 | | LW-13215 | OIL FILTER, Short, Spin-on | | 1 |
| 4 | | STD-8 | WASHER, 1/4 plain | | 4 |
| 5 | | STD-160 | WASHER, 1/4 lock, internal teeth | | 1 |
| 6 | | STD-1411 | NUT, 1/4-20 plain | | 1 |
| 7 | | LW-25-1.00 | BOLT, 1/4-20 x 1.00 long, hex. head | | 3 |
| 8 | | STD-160 | WASHER, 1/4 lock, internal teeth | | 3 |
| 9 | | 53E22144 | VALVE ASSEMBLY, Temp. control oil cooler bypass w/ gasket | | 1 |
| 10 | | 25C-10 | STUD, 1/4-20 x 1-1/4 long | | 1 |
| 11 | | 06E19769-0.63 | GASKET, 7/8 O.D. x 5/8 I.D. x 3/32 annular | | 1 |
| 12 | | 62417 | PLUG, Oil cooler bypass | | 1 |
| 13 | | STD-784 | PLUG, 3/8-18 NPT, Allen | | 1 |
| 14 | | AN844-10D | ELBOW, Pipe | | 1 |
| 15 | | AN816-8 | NIPPLE, 1/2 flared tube | | 1 |
| 16 | | 71140 | FITTING, Breather | | 1 |
| 17 | | 73136 | BRACKET, Extension, fuel injection line | | 1 |
| 18 | | 62732 | CAP, Tachometer drive | | 1 |

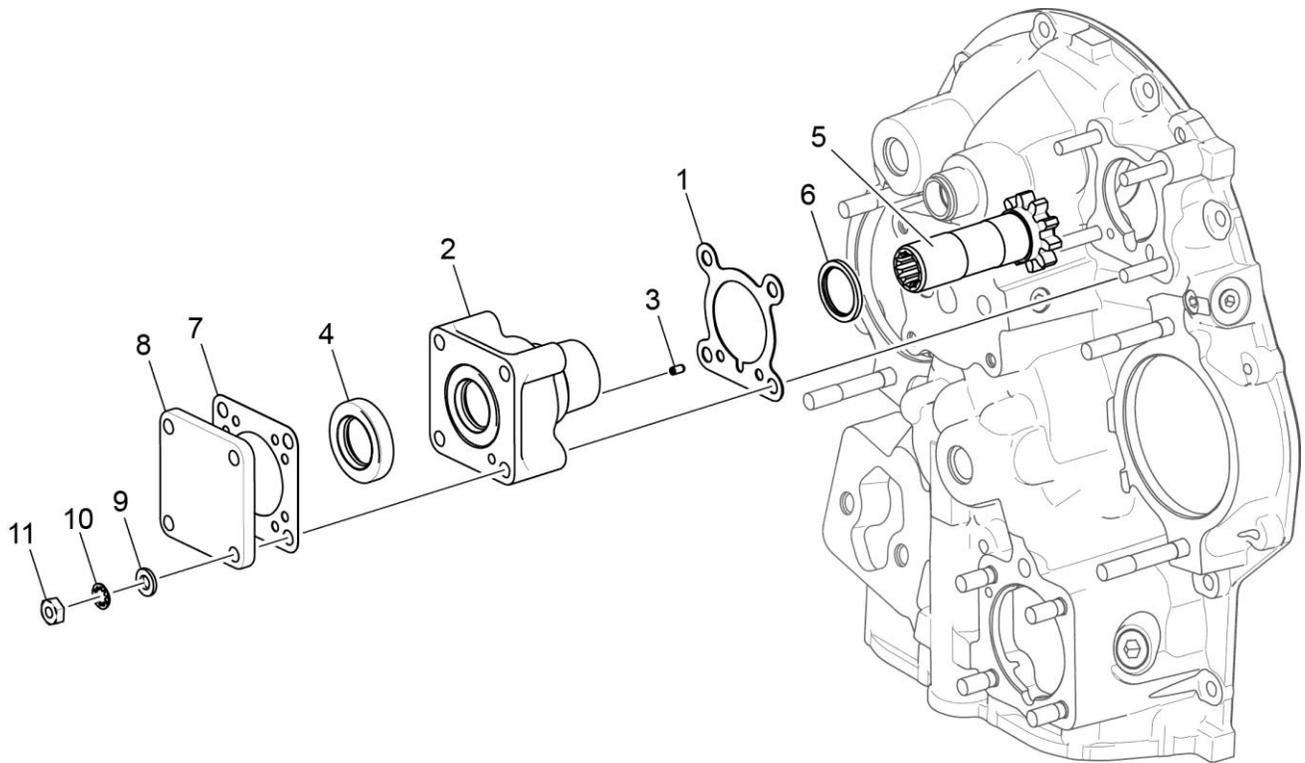


Figure 19
Vacuum Pump Drive and Cover

Figure 19 – Vacuum Pump Drive and Cover

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|-------------|------|-------------|---|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 1 | | 61183 | GASKET, Vacuum pump | | 1 |
| 2 | | 61098 | ADAPTER ASSEMBLY, Vacuum pump | | 1 |
| 3 | | STD-1774 | PIN, 1/8 diameter x 1/4 long | | 1 |
| 4 | | 06A19956 | OIL SEAL, 7/8 I.D. x 1-1/2 O.D. x 5/16 wide | | 1 |
| 5 | | 72970 | GEAR ASSY., 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 |

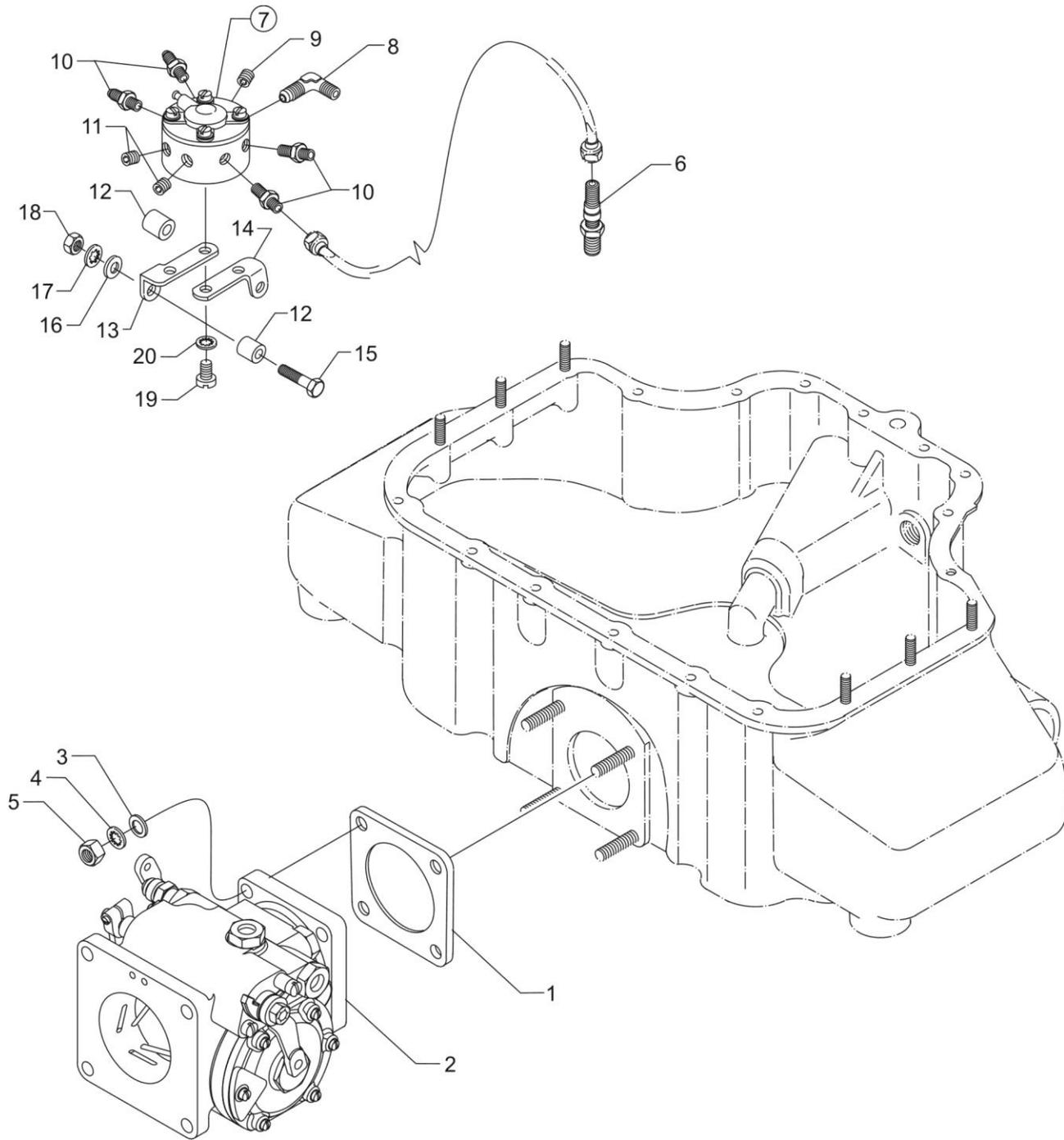


Figure 20
Fuel Injector, Fuel Manifold and Injection Nozzles

Figure 20 – Fuel Injector, Fuel Manifold and Injection Nozzles

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|-------------|------|-------------|---|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 1 | | 66224 | GASKET | 1 | 1 |
| 2 | | 61J26423 | FUEL INJECTOR (P/N 2576568-1, Model RSA-5AD1) | 1 | 1 |
| | | 61J26823 | FUEL INJECTOR (P/N 2581100, Model RSA-5AD1) | 1 | |
| 3 | | STD-35 | WASHER, 5/16 plain | 4 | 4 |
| 4 | | STD-475 | WASHER, 5/16 lock, internal teeth | 4 | 4 |
| 5 | | STD-1410 | NUT, 5/16-18 plain | 4 | 4 |
| 6 | | 63C26450 | NOZZLE, Injection (2524864-2) | 4 | 4 |
| 7 | | 63B28106 | MANIFOLD ASSEMBLY, Fuel | 1 | |
| | | 63B26757 | MANIFOLD ASSEMBLY, Fuel | | 1 |
| | | 63B28207 | MANIFOLD ASSEMBLY, Fuel | 1 | |
| 8 | | MS20822-4 | ELBOW, 1/4 tube, 1/8 NPT, 90° | 1 | 1 |
| 9 | | 02G21382 | NIPPLE, Nozzle pressure | 1 | |
| | | AN816-4 | NIPPLE, 1/8 NPT to 1/4 tube | 1 | |
| 10 | | STD-148 | NIPPLE, Union, 1/8 NPT | 4 | 4 |
| 11 | | 1102 | PLUG, 1/8-27 NPT, Allen head | 2 or 3 | 3 |
| 12 | | 73966 | SPACER, Fuel manifold bracket | 2 | 2 |
| 13 | | 07A23031 | BRACKET, Fuel manifold | 1 | 1 |
| | | 07A22995 | BRACKET, Fuel manifold | 1 | |
| 14 | | 07A23032 | BRACKET, Fuel manifold | 1 | 1 |
| | | 07A22996 | BRACKET, Fuel manifold | 1 | |
| 15 | | LW-25-2.00 | BOLT, 1/4-20 x 2.00 long, hex. head | 2 | 2 |
| 16 | | STD-8 | WASHER, 1/4 plain | 2 | 2 |
| 17 | | STD-160 | WASHER, 1/4 lock, internal teeth | 2 | 2 |
| 18 | | STD-1411 | NUT, 1/4-20 plain | 2 | 2 |
| 19 | | STD-82 | SCREW, No. 10-24 x 1/2 long, fill. head | 4 | 4 |
| 20 | | STD-251 | WASHER, No. 10 lock, internal teeth | 4 | 4 |
| | * | 77504 | GASKET, Fuel injector | 1 | 1 |

* Install between the fuel injector and the airframe air box

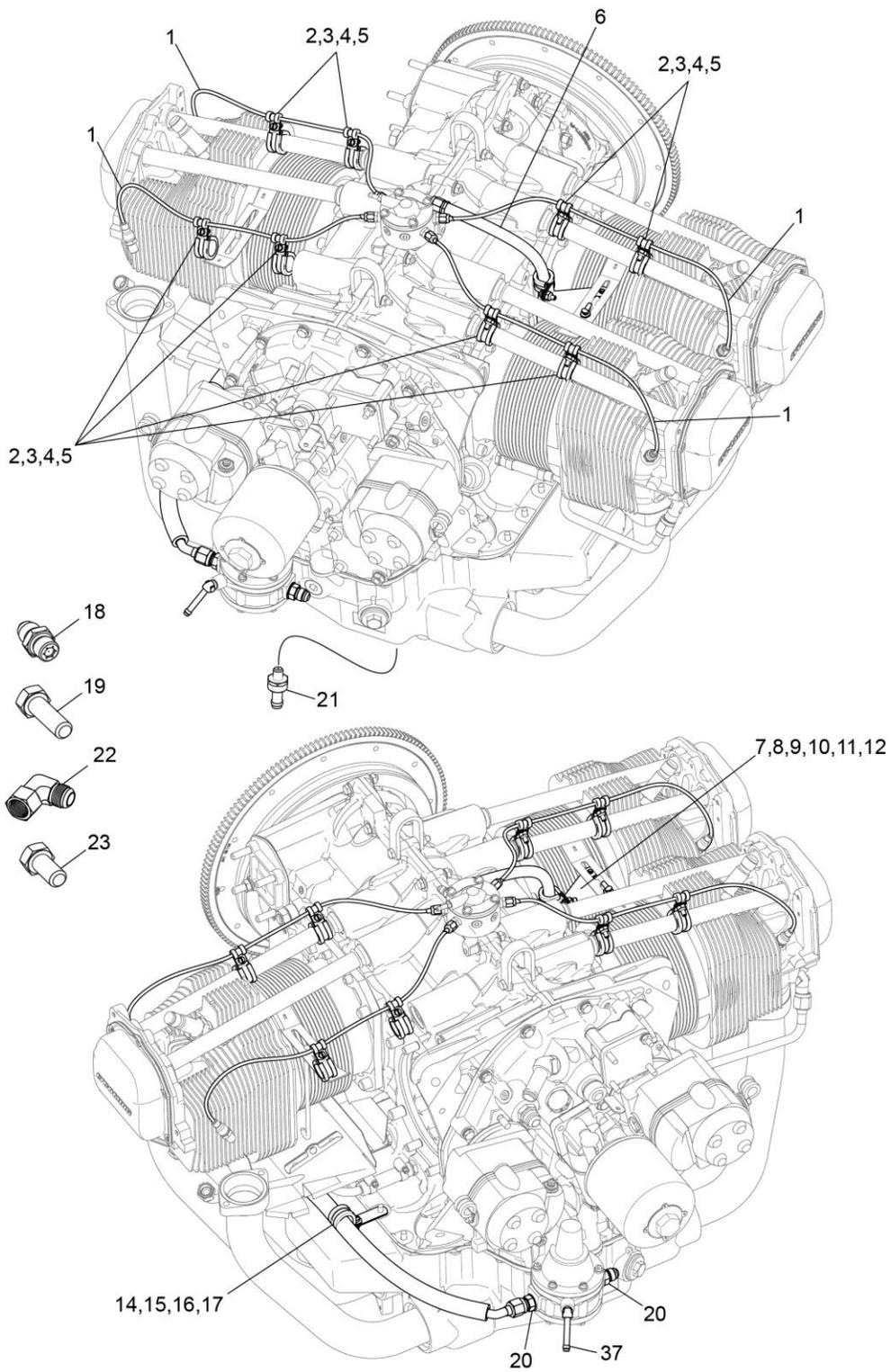


Figure 21
Fuel Lines and Attaching Parts

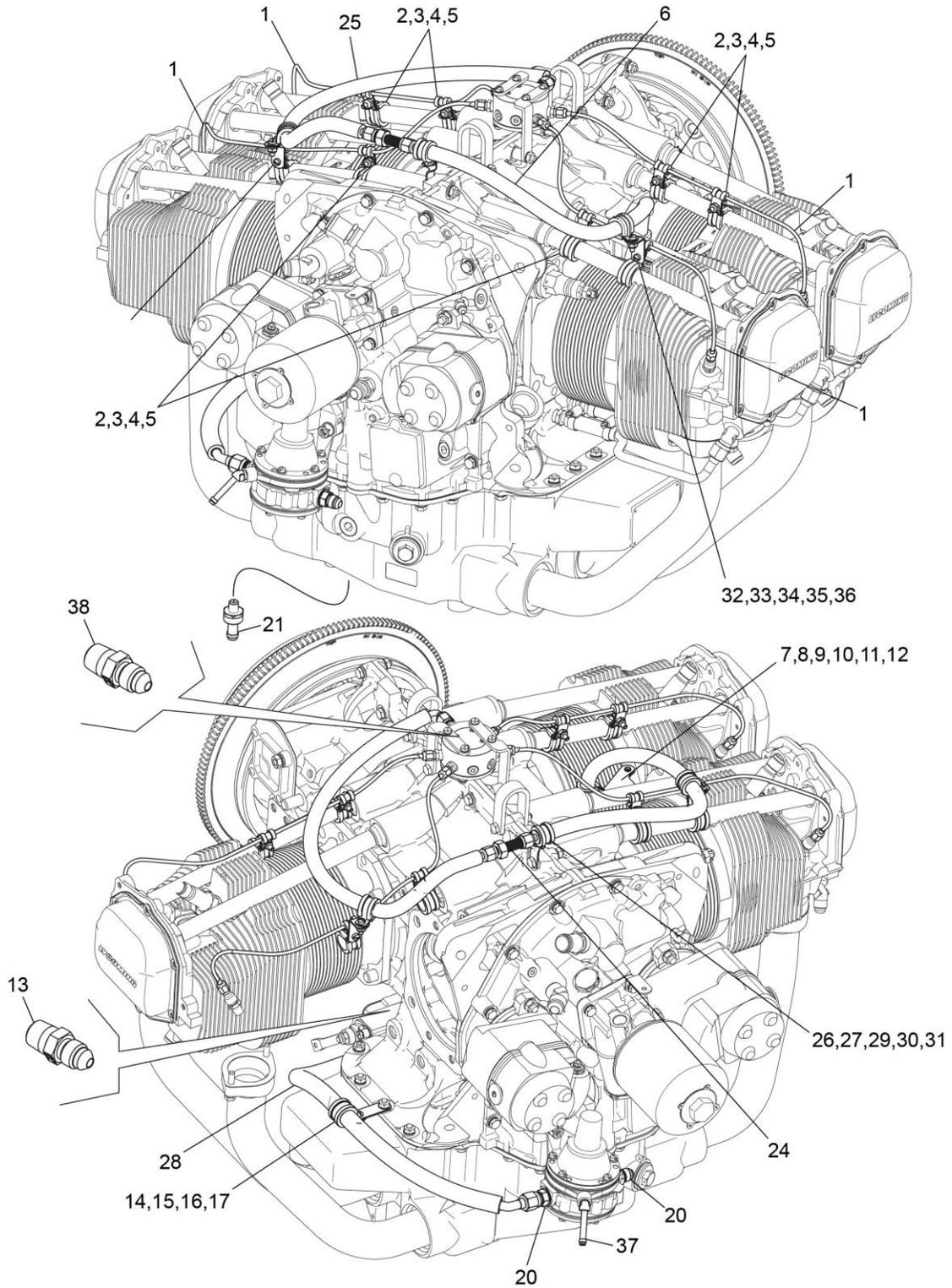


Figure 21
Fuel Lines and Attaching Parts

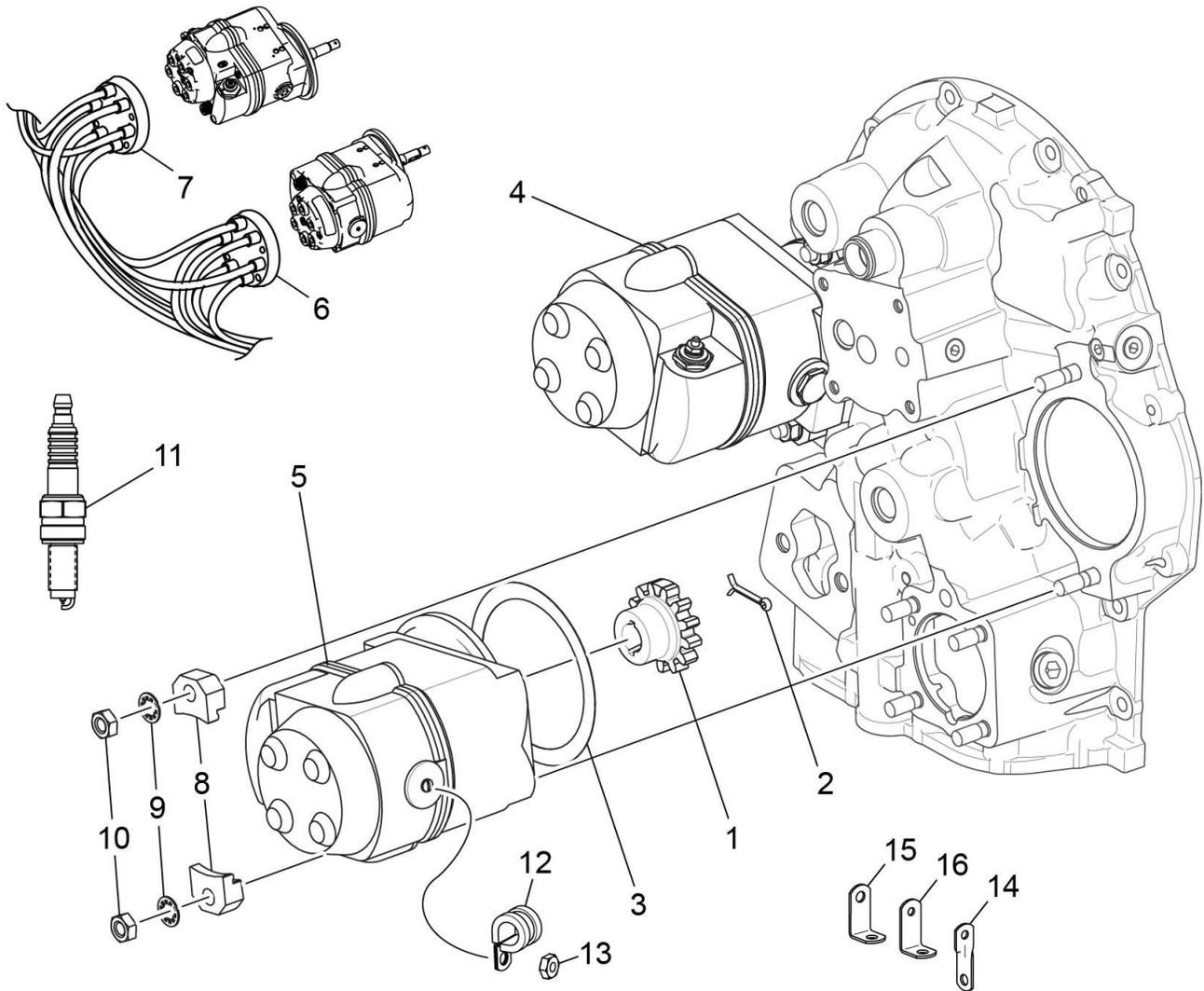
Figure 21 – Fuel Lines and Attaching Parts

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|-------------|------|----------------|---|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 1 | | LW-12098-0-170 | TUBE ASSEMBLY, Fuel | 2 | |
| | | LW-12098-0-180 | TUBE ASSEMBLY, Fuel manifold to nozzles | 4 | |
| | | LW-12098-0-190 | TUBE ASSEMBLY, Fuel injector line | 2 | |
| 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 | | LW12876-4S224 | HOSE ASSEMBLY, 1/4 hose, 90° elbow | 1 | |
| | | 02M28209 | HOSE ASSEMBLY, Teflon 1/4 hose, straight fittings | 1 | |
| 7 | | 74278 | BRACKET ASSEMBLY, Fuel line support | 1 | |
| 8 | | STD-692 | SCREW, No. 10-32 x 1/2 long, round head | 2 | |
| 9 | | STD-425 | WASHER, No. 10 plain | 3 | |
| 10 | | STD-670 | LOCKNUT, No. 10-32 | 1 | |
| 11 | | STD-860 | SCREW, No. 10-32 x 5/8 long, fill. head | 1 | |
| 12 | | LW-16266-25-63 | CLAMP, 5/8 I.D. x 1/4 diameter | 1 | |
| | | LW-16266-25-50 | CLAMP | 1 | |
| 13 | * | 75739 | NIPPLE, 3/8 flared tube | 1 | |
| 14 | ** | 73152 | BRACKET, Support clamp | 1 | |
| 15 | ** | LW-16266-10-75 | CLAMP | 1 | |
| 16 | ** | STD-860 | SCREW, No. 10-32 x 5/8 long, fill. head | 1 | |
| 17 | ** | STD-670 | LOCKNUT, No. 10-32 | 1 | |
| 18 | ** | 02G22973 | NIPPLE, 1/4 Tube to 7/16-20 straight | 1 | |
| 19 | | LW-38-0.75 | BOLT, 3/8-16 X 3/4 long hex | 10 | |
| 20 | | LW-16562 | NIPPLE, 3/8 flared | 2 | |
| 21 | | 75444 | ADAPTER ASSY, Fuel drain valve | 1 | |
| 22 | | 74200 | ELBOW, 1/4 tube, 90 degree | 1 | |

* Requires P/N MS29512-06 O-ring.
 ** Hose Assembly may not be supplied.

Figure 21 – Fuel Lines and Attaching Parts (Cont.)

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|-------------|------|----------------|---|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 23 | | LW-25-0.56 | BOLT, 1/4-20 X 9/16 long | 2 | 2 |
| 24 | | AS5406-04 | UNION, 1/4 fl. tube bulkhead | 1 | 0 |
| 25 | | 02M28210 | HOSE ASSEMBLY, Teflon 1/4 hose, 90 deg. elbow | 1 | 0 |
| 26 | | 72815 | BRACKET, Support clamp, 90 deg. | 1 | 0 |
| 27 | | LW-16266-10-63 | CLAMP | 1 | 0 |
| 28 | | 02M28208 | HOSE ASSEMBLY, Teflon 3/8 hose, 45 deg. elbow | 1 | 0 |
| 29 | | STD-692 | SCREW, #10-32 X 1/2 long rd. head | 1 | 0 |
| 30 | | STD-425 | WASHER, #10 plain | 1 | 0 |
| 31 | | STD-670 | LOCKNUT, #10-32 | 1 | 0 |
| 32 | | 73136 | BRACKET, Extension, fuel inj. line | 2 | 0 |
| 33 | | LW-16266-10-63 | CLAMP, 5/8 I.D. X #10 screw | 2 | 0 |
| 34 | | STD-860 | SCREW, #10-32 X 5/8 long, fill. head | 2 | 0 |
| 35 | | STD-425 | WASHER, #10 plain | 2 | 0 |
| 36 | | STD-670 | LOCKNUT, #10-32 | 2 | 0 |
| 37 | | AN844-4D | ELBOW, Pipe to hose | 1 | 0 |
| 38 | | 02G21382 | NIPPLE, Nozzle pressure gauge | 1 | 0 |



| BAG-HARNESS ATTACHING | | P/N 01P19762-1-1 | |
|-----------------------|---|------------------|--|
| PART NO. | NAME | QTY | |
| LW-16266-25-25 | CLAMP-ONE WIRE | 4 | |
| LW-14060 | CLIP-TWO WIRE | 3 | |
| STD-B | WASHER-.250 PLAIN | 8 | |
| STD-1874 | SCREW-.250-20 X .81 LG. FILL. | 6 | |
| 76734 | ZIP STRAP | 8 | |
| LW-16266-25-50 | CLAMP | 1 | |
| STD-1411 | NUT-.250-20 PLAIN | 2 | |
| STD-696 | WASHER-.250 PLAIN (THIN) | 4 | |
| STD-1916 | SCREW-.250-20 X 1.13 LG. FIL HD | 3 | |
| LW-M-2375 | SET OF 2 PLATES-SPARK PLUG CABLE-2 WIRE | 2 | |

| BAG-HARNESS ATTACHING | | P/N 01P19762-2-7 | |
|-----------------------|---|------------------|--|
| PART NO. | NAME | QTY | |
| LW-16266-25-25 | CLAMP-ONE WIRE | 4 | |
| LW-14060 | CLIP-TWO WIRE | 4 | |
| STD-B | WASHER-.250 PLAIN | 8 | |
| 77410 | BRACKET-90 DEGREES | 1 | |
| STD-1874 | SCREW-.250-20 X .81 LG. FILL. | 4 | |
| 76734 | ZIP STRAP | 12 | |
| LW-16266-25-50 | CLAMP | 3 | |
| STD-1411 | NUT-.250-20 PLAIN | 1 | |
| STD-696 | WASHER-.250 PLAIN (THIN) | 4 | |
| STD-1916 | SCREW-.250-20 X 1.13 LG. FIL HD | 1 | |
| STD-1925 | SCREW-.250-20 X .63 LG. PAN HD | 2 | |
| 72815 | BRACKET-SUPPORT CLAMP-90 DEGRE | 3 | |
| 73152 | BRACKET SUPPORT CLAMP | 2 | |
| STD-692 | SCREW-#10-32 X .50 LG. RD. HD. | 5 | |
| STD-425 | WASHER-#10 PLAIN | 5 | |
| STD-670 | LOCKNUT-#10-32 | 5 | |
| LW-M-2375 | SET OF 2 PLATES-SPARK PLUG CABLE-2 WIRE | 2 | |

Figure 22
Magnetos, Magneto Drives, Harnesses and Spark Plugs

Figure 22 – Magnetos, Magneto Drives, Harnesses and Spark Plugs

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|-------------|------|----------------|---|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 1 | | 68C19622 | GEAR, Magneto | 2 | 2 |
| 2 | | MS9245-44 | COTTER PIN, 3/32 diameter x 5/8 long | 2 | 2 |
| 3 | | LW-12681 | GASKET, Magneto | 2 | 2 |
| 4 | • | 66GP-0SANN | MAGNETO, Plain, Slick Model 4370 | 1 | |
| | • | 66GP-0RANN | MAGNETO, Plain, Slick Model 4302 | | 1 |
| 5 | • | 66GR25SANN | MAGNETO, Retard, Slick Model 4347 | 1 | |
| | • | 66GR25RANN | MAGNETO, Retard, Slick Model 4348 | | 1 |
| 6 | | 67P20428 | HARNESS ASSEMBLY, Right, Slick Model M-2990 | 1 | 1 |
| | | 67P20412 | HARNESS ASSEMBLY, Right, Slick Model M-4020 | 1 | |
| 7 | | 67P20429 | HARNESS ASSEMBLY, Left, Slick Model M-2989 | 1 | 1 |
| | | 67P20413 | HARNESS ASSEMBLY, Left, Slick Model M-4019 | 1 | |
| 8 | | 66M21195 | CLAMP, Magneto | 4 | 4 |
| 9 | | STD-475 | WASHER, 5/16 lock, internal teeth | 4 | 4 |
| 10 | | STD-1410 | NUT, 5/16-18 plain | 4 | 4 |
| 11 | * | 1182-E7 | SPARK PLUG, Champion (REM38E) | 8 | 8 |
| | * | 1182-S4 | SPARK PLUG, Unison (UREM38E) | 8 | |
| 12 | | LW-16266-25-50 | CLAMP | 2 | |
| 13 | | STD-1411 | NUT, 1/4-20 plain | 2 | |
| 14 | | 72815 | BRACKET, Support clamp, 90 deg. | 5 | |
| 15 | | 73136 | BRACKET, Extension, fuel injection line | 3 | |
| 16 | | 77410 | BRACKET, 90 deg. | 2 | |
| | ** | 01P19762-1-1 | BAG, Magneto harness attaching | 1 | 1 |
| | ** | 01P19762-2-7 | BAG, Magneto harness attaching | 1 | |

- See latest revision of Lycoming Service Instruction No. 1443 for complete listing of approved magnetos.
- * Refer to the latest revision of Lycoming Service Instruction No. 1042 for complete listing of all approved spark plugs.
- ** See page 48 for a breakdown of individual parts contained in the magneto and harness attaching parts bag. These parts to be attached by customer per engine line drawing included in each bag.

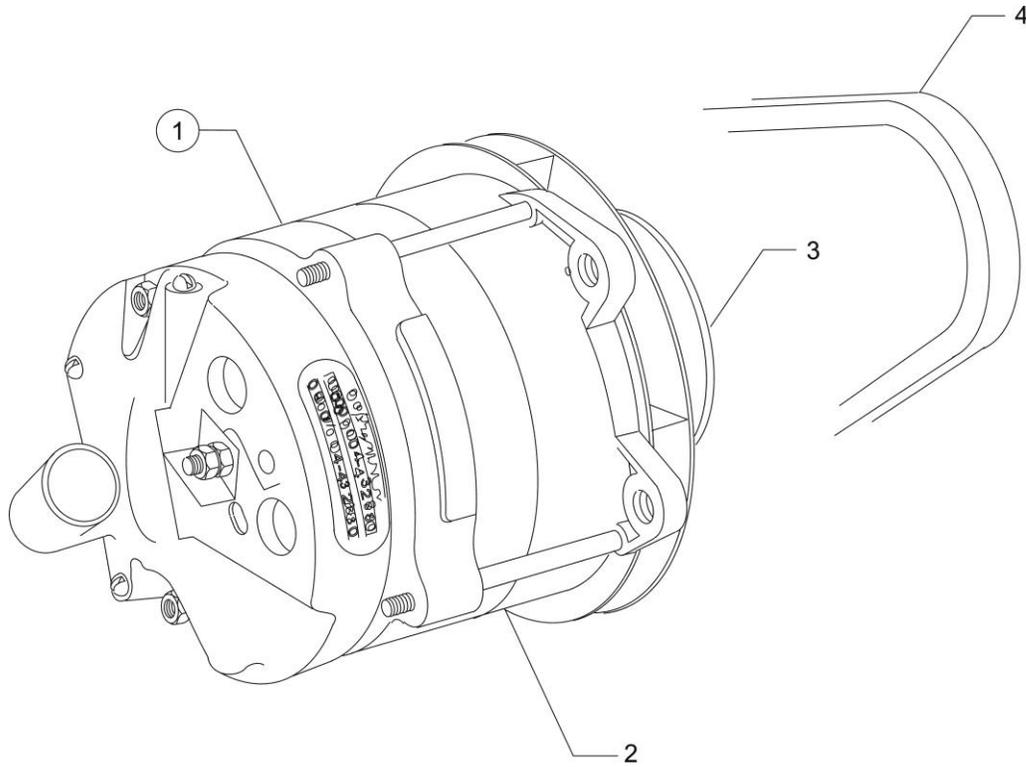


Figure 23
Alternator Assembly

Figure 23 - Alternator Assembly

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|-------------|----------|--------------|--------------------------------------|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 1 | | 32C19553 | ALTERNATOR ASSEMBLY, 24 volt, 70 amp | 1 | 1 |
| | | 32C19568 | ALTERNATOR ASSEMBLY, 24 volt, 70 amp | 1 | |
| 2 | P | LW-14326 | ALTERNATOR, (ALU-8521-LS) | 1 | 1 |
| | P | LW-14328 | ALTERNATOR, (ALU-8521-LS) | 1 | |
| 3 | | 36B19484 | PULLEY, Alternator | 1 | 1 |
| 4 | | 37A19773-376 | BELT, Alternator, 3/8 wide | 1 | 1 |
| | | 37A19773-390 | BELT, Alternator, 3/8 wide | 1 | |
| | | 37A19773-470 | BELT, Alternator, 3/8 wide | 1 | |
| | | 37B19774-482 | BELT, Compressor drive , 1/2 wide | 1 | |

NOTE: See latest revision of Lycoming Service Instruction No. 1154 for complete listing of FAA approved starters and alternators.
P Lycoming proprietary part. Listed for reference purposes only, cannot be purchased.

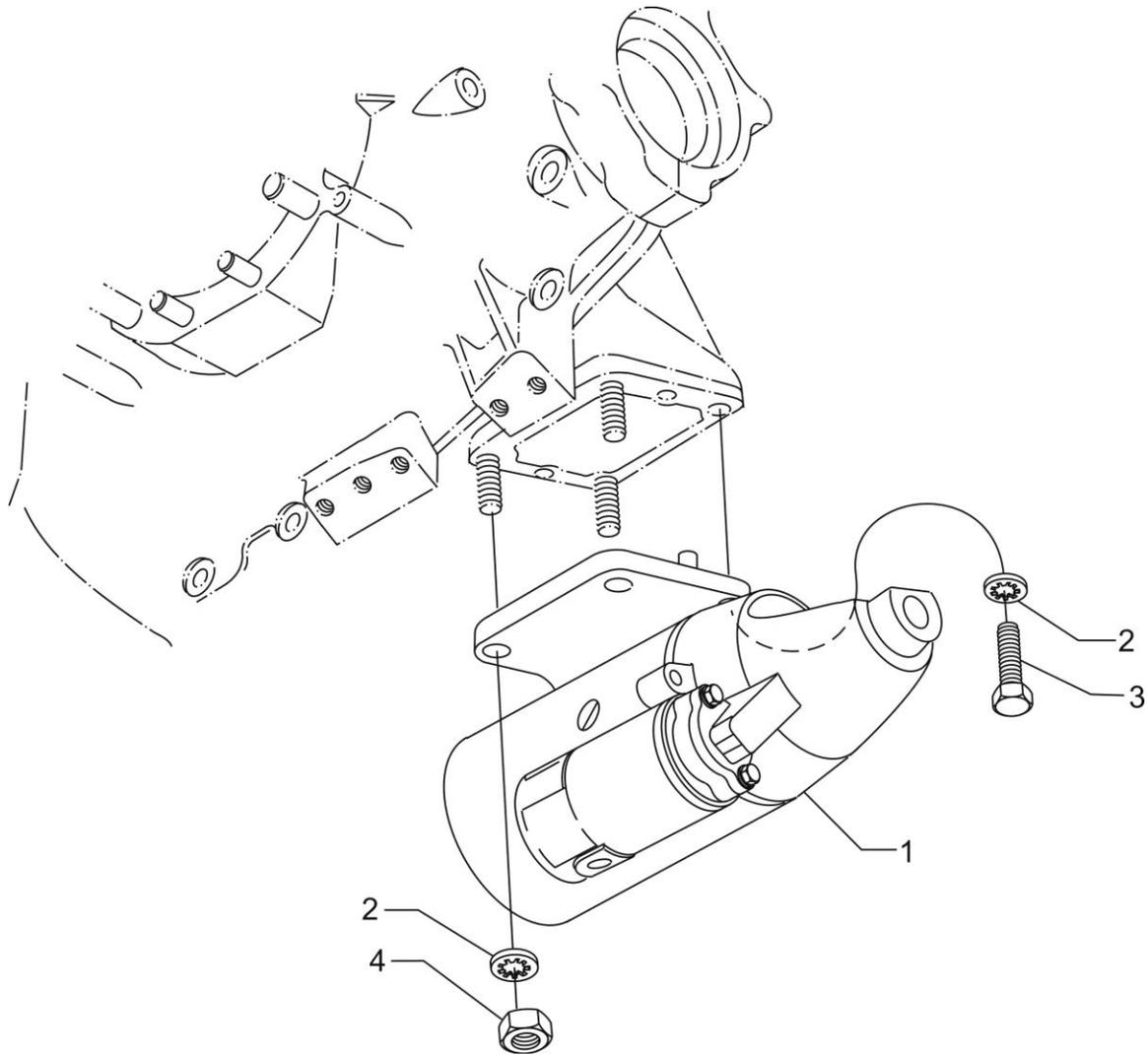


Figure 24
Starter Attaching Parts

Figure 24 - Starter Attaching Parts

| Figure Item | Code | Part Number | Description | Units per Assembly | |
|---|------|-------------|---------------------------------------|--------------------|---------|
| | | | | IO-360 | LIO-360 |
| 1 | | 31B22105 | STARTER, Sky-Tec (149-24LS) | 1 | |
| | | 31B22116 | STARTER, Sky-Tec (149-24HT/EC) | 1 | |
| | | 31B26554 | STARTER, Sky-Tec (149NL/EC) | 1 | |
| | | 31B22115 | STARTER, Sky-Tec (149-24HTL) | | 1 |
| 2 | | STD-475 | WASHER, 5/16 lock, internal teeth | 4 | 4 |
| 3 | | LW-31-0.94 | BOLT, 5/16-18 x 15/16 long, hex. head | 1 | 1 |
| 4 | | STD-1410 | NUT, 5/16-18 plain | 3 | 3 |
| NOTE: See latest revision of Lycoming Service Instruction No. 1154 for complete listing of FAA approved starters and alternators. | | | | | |

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Service Kit Section
Seal and Gasket Set

| PART NO. | PART NAME | Qty. |
|-----------------|-----------------------------------|-------------|
| 75439-1 | SEAL AND GASKET SET | 1 |
| AN901-8A | GASKET, Metal tube connect seal | 1 |
| LW-10332 | LOCKPLATE, Crankshaft gear | 1 |
| LW-12272 | LOCKPLATE, Shroud tube | 4 |
| LW-12681 | GASKET, Magneto | 2 |
| 06B23862 | GASKET, Oil filter adapter | 1 |
| LW-13353 | GASKET, Oil sump | 1 |
| LW-13792 * | SEAL, Crankshaft oil | 1 |
| LW-14260 | SEAL, Tachometer drive oil | 1 |
| LW-14995 | SPRING, Shroud tube | 4 |
| LW-18639 | LOCKPLATE, Crankshaft gear | 1 |
| LW-18661 | SEAL, Shroud tube | 8 |
| STD-475 | WASHER, 5/16 lock, internal teeth | 4 |
| STD-213 | SEAL, Oil | 1 |
| 06A19956 | SEAL, Oil | 1 |
| 06E19769-0.63 | GASKET | 2 |
| 06E19769-1.00 | GASKET | 1 |
| 06E19769-1.25 | GASKET | 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 | 1 |
| 71481 | RING, Oil seal | 4 |
| 71973 | GASKET, 2 bolt flange | 4 |
| 72053 | GASKET, Governor | 2 |
| 72059 | GASKET, Oil level gage | 1 |
| 72075 | SEAL, Oil | 6 |
| 72078 | LOCKPLATE | 2 |
| 72091 | RING, Oil seal | 2 |
| 72220 | GASKET, Oil level gage | 1 |

Seal and Gasket Set (Cont.)

| PART NO. | PART NAME | Qty. |
|-----------------|------------------------------------|-------------|
| 72312 | RING, Oil seal | 1 |
| 72829 | LOCKPLATE | 1 |
| 73383 | LOCKPLATE | 2 |
| 73817 | LOCKPLATE | 2 |
| 73818 | GASKET, Accessory housing | 1 |
| 74065 | RING, Oil level gage seal | 1 |
| 74068 | RING, Oil level gage plug | 1 |
| 75906 | GASKET, Rocker box cover | 4 |
| 76510 | GASKET, Oil cooler by-pass valve | 1 |
| 76940 | SEAL, Crankshaft oil | 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, 0.351 I.D. x 0.072 section | 1 |
| 06A23493 | SEAL, Shroud tube | 8 |
| SSP-115 | STICKER | 1 |

* Refer to latest revision of Lycoming Service Instruction No. 1324 for application.

Cylinder, Piston and Ring Assembly

| PART NO. | PART NAME | Qty. |
|-----------------|---|-------------|
| 05K21104 | KIT – CYLINDER, PISTON AND RING ASSEMBLY | 1 |
| LW-12427 | CYLINDER AND HEAD ASSEMBLY | 1 |
| 72057 | SEAT, Valve intake | 1 |
| 72058 | SEAT, Valve, exhaust | 1 |
| 76943 | GUIDE, Valve, intake | 1 |
| 16R22126 | GUIDE, Valve, exhaust | 1 |
| 66796 | INSERT, Spark plug | 2 |
| STD-1353 | INSERT, No. 10-24 | 1 |
| 31C-12 | STUD, 5/16-18 x 1-1/2 long | 2 |
| 25C-8 | STUD, 1/4-20 x 1.00 long | 1 |
| MS20823-6D | ELBOW, 45°, 3/8 flared tube | 1 |
| 66610 | BUSHING, Rocker shaft | 4 |
| 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 |
| 14D23912 | PISTON | 1 |
| 74241 | RING, Piston, compression | 2 |
| 14H21950 | RING, Piston, oil regulating | 1 |
| LW-14078 | PIN, Piston | 1 |
| 71481 | RING, Oil seal | 1 |
| LW-18661 | SEAL, Shroud tube | 2 |
| 70310 | SEAL, Shroud tube | 2 |
| 06A23493 | SEAL, Shroud tube | 2 |
| 75906 | GASKET, Rocker box cover | 1 |
| 72198 | PLUG, Piston pin | 2 |
| 77611 | GASKET, Exhaust flange | 1 |
| 71973 | GASKET, 2 bolt | 1 |
| LW-12272 | LOCKPLATE, Shroud tube | 1 |
| SSP-299 | TAG | 1 |

Cylinder, Piston and Ring Assembly (Cont.)

| PART NO. | PART NAME | Qty. |
|-----------------|------------------|-------------|
| 71195 | COINTAINER | 1 |
| 1102 | PLUG | 2 |
| SSP-115 | STICKER | 1 |

Crankcase Assembly and Thru-Stud Kits

| PART NO. | PART NAME | Qty. |
|-------------------|---|-------------|
| 11D22549-S | KIT – CRANKCASE ASSEMBLY AND THRU-STUD | 1 |
| 11D22549 | CRANKCASE ASSEMBLY | 1 |
| STD-2090 | NUT, 1/2-20 plain | 2 |
| 31C-17 | STUD, 5/16-18 x 2-1/8 long | 4 |
| 74887 | SPACER | 2 |
| 76220 | STUD, 1/2-20 x 10-45/64 long | 4 |
| AN565B1032H4 | SET SCREW | 1 |
| AN565B1032H5 | SET SCREW | 1 |
| SSP-582 | TAG | 1 |
| SSP-1576 | TAG | 1 |

Crankcase Assembly and Thru-Stud Kits

| PART NO. | PART NAME | Qty. |
|-----------------------|---|-------------|
| 11D28751-1S1-S | KIT – CRANKCASE ASSEMBLY AND THRU-STUD | 1 |
| 11D28751-1S1 | CRANKCASE ASSEMBLY | 1 |
| STD-2090 | NUT, 1/2-20 plain | 2 |
| 31C-17 | STUD, 5/16-18 x 2-1/8 long | 4 |
| 74887 | SPACER | 2 |
| 76220 | STUD, 1/2-20 x 10-45/64 long | 4 |
| AN565B1032H4 | SET SCREW | 1 |
| AN565B1032H5 | SET SCREW | 1 |
| SSP-582 | TAG | 1 |
| SSP-1576 | TAG | 1 |

Crankcase Assembly and Thru-Stud Kits

| PART NO. | PART NAME | Qty. |
|-----------------------|---|-------------|
| 11D28751-1S3-S | KIT – CRANKCASE ASSEMBLY AND THRU-STUD | 1 |
| 11D28751-1S3 | CRANKCASE ASSEMBLY | 1 |
| STD-1411 | NUT, 1/2-20 plain | 9 |
| 31C-19 | STUD, 5/16-18 x 2-3/8 long | 4 |
| 1102 | PLUG | 5 |
| 76220 | STUD, 1/2-20 x 10-45/64 long | 4 |
| STD-1339 | PLUG | 1 |
| 73772 | NOZZLE | 4 |
| LW-25-1.50 | BOLT | 5 |
| LW-25-2.13 | BOLT | 2 |
| STD-160 | WASHER | 14 |
| STD-8 | WASHER | 14 |
| AN565B1032H5 | SET SCREW | 1 |
| SSP-582 | TAG | 1 |

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Numerical Index

| PART NO. | PART NAME | PAGE NO. | PART NO. | PART NAME | PAGE NO. |
|-----------------|------------------|-----------------|-----------------|------------------|-----------------|
| AN565B1032H5 | SET SCREW | 7 | LW-13323 | SEAT | 25 |
| AN6-12 | BOLT | 5 | LW-13353 | GASKET | 31 |
| AN6-15 | BOLT | 3 | LW-13389 | BAFFLE ASSEMBLY | 27 |
| AN6-15 | BOLT | 5 | LW-13790 | SHAFT | 23 |
| AN6-16 | BOLT | 1 | LW-13792 | SEAL | 11 |
| AN6-17 | BOLT | 1 | LW-13793 | STUD | 9 |
| AN6-21 | BOLT | 3 | LW-13796 | SHAFT | 15 |
| AN6-21 | BOLT | 5 | LW-13864 | SUMP ASSEMBLY | 31 |
| AN6-34A | BOLT | 17 | LW-13896 | PLUG | 7 |
| AN7-46 | BOLT | 5 | LW-13923 | BUSHING | 19 |
| AN310-7 | NUT | 5 | LW-14021 | SHAFT | 7 |
| AN816-4 | NIPPLE | 43 | LW-14078 | PIN | 19 |
| AN816-8 | NIPPLE | 39 | LW-14260 | SEAL | 35 |
| AN844-4D | ELBOW | 47 | LW-14326 | ALTERNATOR | 51 |
| AN844-10D | ELBOW | 39 | LW-14328 | ALTERNATOR | 51 |
| AN960-616L | WASHER | 17 | LW-14650 | SHIM | 5 |
| AN4076-1 | FITTING | 21 | LW-14760 | GAGE ASSEMBLY | 11 |
| AS5406-04 | UNION | 47 | LW-14763 | GAGE ASSEMBLY | 11 |
| LRT23381 | BODY | 11 | LW-14769 | GAGE ASSEMBLY | 11 |
| LW-10077 | SEAT | 25 | LW-14995 | SPRING | 25 |
| LW-10551 | GEAR | 13 | LW-15592-5-05 | CLAMP | 27 |
| LW-11485 | SHRD TUBE ASSY | 25 | LW-16266-10-13 | CLAMP | 46 |
| LW-11519 | SUPPORT ASSY | 13 | LW-16266-10-63 | CLAMP | 47 |
| LW-11713 | SPRING | 11 | LW-16266-10-63 | CLAMP | 47 |
| LW-11750-S | CONN. ROD ASSY | 19 | LW-16266-10-75 | CLAMP | 46 |
| LW-11795 | SPRING | 25 | LW-16266-10-75 | CLAMP | 46 |
| LW-11800 | SPRING | 25 | LW-16266-25-50 | CLAMP | 46 |
| LW-11839 | BODY ASSEMBLY | 35 | LW-16266-25-50 | CLAMP | 49 |
| LW-12098-0-170 | TUBE ASSEMBLY | 46 | LW-16266-25-63 | CLAMP | 46 |
| LW-12098-0-180 | TUBE ASSEMBLY | 46 | LW-16471 | SUPPORT ASSY | 13 |
| LW-12098-0-190 | TUBE ASSEMBLY | 46 | LW-16475 | SEAT | 25 |
| LW-12186 | NUT | 19 | LW-16562 | NIPPLE | 46 |
| LW-12272 | LOCKPLATE | 25 | LW-16783-18 | GAGE ASSEMBLY | 11 |
| LW-12427 | CYL & HD ASSY | 21 | LW-18085 | SPRING | 11 |
| LW-12545 | PLUG | 31 | LW-18109 | IMPELLER | 35 |
| LW-12681 | GASKET | 49 | LW-18110 | IMPELLER ASSY | 35 |
| LW12876-4S224 | HOSE ASSEMBLY | 46 | LW-18639 | LOCKPLATE | 13 |
| LW-12892 | THRUST BUTTON | 23 | LW-18661 | SEAL | 25 |
| LW-13215 | OIL FILTER | 39 | LW-18752 | THERMOCOUPLE | 21 |

| PART NO. | PART NAME | PAGE NO. | PART NO. | PART NAME | PAGE NO. |
|------------|---------------|----------|-------------|------------|----------|
| LW-18667 | PIN | 15 | MS20823-6D | ELBOW | 25 |
| LW-18843 | CAMSHAFT ASSY | 15 | MS35489-20X | GROMMET | 27 |
| LW-18845 | CAMSHAFT ASSY | 15 | MS9245-44 | COTTER PIN | 49 |
| LW-25-0.94 | BOLT | 31 | STD-8 | WASHER | 17 |
| LW-25-0.94 | BOLT | 35 | STD-8 | WASHER | 17 |
| LW-25-1.00 | BOLT | 39 | STD-8 | WASHER | 29 |
| LW-25-1.13 | BOLT | 17 | STD-8 | WASHER | 31 |
| LW-25-1.13 | BOLT | 31 | STD-8 | WASHER | 35 |
| LW-25-1.13 | BOLT | 35 | STD-8 | WASHER | 35 |
| LW-25-1.25 | BOLT | 29 | STD-8 | WASHER | 39 |
| LW-25-1.44 | BOLT | 35 | STD-8 | WASHER | 41 |
| LW-25-1.50 | BOLT | 17 | STD-8 | WASHER | 43 |
| LW-25-1.63 | BOLT | 17 | STD-19 | DOWEL | 7 |
| LW-25-1.75 | BOLT | 17 | STD-33 | WASHER | 5 |
| LW-25-1.88 | BOLT | 17 | STD-33 | WASHER | 17 |
| LW-25-2.00 | BOLT | 43 | STD-33 | WASHER | 17 |
| LW-25-2.13 | BOLT | 17 | STD-33 | WASHER | 37 |
| LW-25S1.50 | BOLT | 17 | STD-35 | WASHER | 1 |
| LW-25S2.75 | BOLT | 35 | STD-35 | WASHER | 3 |
| LW-31-0.94 | BOLT | 1 | STD-35 | WASHER | 3 |
| LW-31-0.94 | BOLT | 17 | STD-35 | WASHER | 3 |
| LW-31-0.94 | BOLT | 53 | STD-35 | WASHER | 17 |
| LW-31H0.75 | BOLT | 1 | STD-35 | WASHER | 21 |
| LW-31H0.75 | BOLT | 1 | STD-35 | WASHER | 35 |
| LW-31H0.75 | BOLT | 1 | STD-35 | WASHER | 37 |
| LW-31H0.88 | BOLT | 3 | STD-35 | WASHER | 37 |
| LW-31H0.88 | BOLT | 3 | STD-35 | WASHER | 43 |
| LW-31H0.88 | BOLT | 3 | STD-82 | SCREW | 43 |
| LW-31H0.88 | BOLT | 15 | STD-148 | NIPPLE | 43 |
| LW-31H1.06 | BOLT | 5 | STD-160 | WASHER | 17 |
| LW-31H2.13 | BOLT | 3 | STD-160 | WASHER | 29 |
| LW-31H2.75 | BOLT | 3 | STD-160 | WASHER | 31 |
| LW-38-0.75 | BOLT | 46 | STD-160 | WASHER | 35 |
| LW-38H1.09 | BOLT | 5 | STD-160 | WASHER | 39 |
| MS20822-4 | ELBOW | 43 | STD-160 | WASHER | 39 |
| MS20823-4 | ELBOW | 33 | STD-160 | WASHER | 41 |
| MS20823-8 | ELBOW | 33 | STD-160 | WASHER | 43 |
| MS20823-6D | ELBOW | 21 | STD-251 | WASHER | 43 |

| PART NO. | PART NAME | PAGE NO. | PART NO. | PART NAME | PAGE NO. |
|----------|------------|----------|----------|-----------|----------|
| STD-425 | WASHER | 46 | STD-783 | PLUG | 33 |
| STD-425 | WASHER | 47 | STD-784 | PLUG | 33 |
| STD-425 | WASHER | 47 | STD-784 | PLUG | 39 |
| STD-475 | WASHER | 17 | STD-798 | DOWEL | 7 |
| STD-475 | WASHER | 21 | STD-860 | SCREW | 46 |
| STD-475 | WASHER | 37 | STD-860 | SCREW | 46 |
| STD-475 | WASHER | 37 | STD-860 | SCREW | 46 |
| STD-475 | WASHER | 43 | STD-860 | SCREW | 47 |
| STD-475 | WASHER | 49 | STD-872 | NUT | 1 |
| STD-475 | WASHER | 53 | STD-872 | NUT | 1 |
| STD-514 | DOWEL | 9 | STD-872 | NUT | 3 |
| STD-551 | PLUG | 31 | STD-872 | NUT | 5 |
| STD-557 | DOWEL | 9 | STD-872 | NUT | 5 |
| STD-596 | NUT | 17 | STD-872 | NUT | 5 |
| STD-632 | WASHER | 5 | STD-872 | NUT | 17 |
| STD-669 | WASHER | 5 | STD-1065 | DOWEL | 13 |
| STD-670 | LOCKNUT | 46 | STD-1211 | PLUG | 13 |
| STD-670 | LOCKNUT | 46 | STD-1227 | WASHER | 35 |
| STD-670 | LOCKNUT | 46 | STD-1339 | PLUG | 9 |
| STD-670 | LOCKNUT | 47 | STD-1339 | PLUG | 9 |
| STD-670 | LOCKNUT | 47 | STD-1342 | WASHER | 5 |
| STD-678 | WASHER | 5 | STD-1353 | INSERT | 21 |
| STD-678 | WASHER | 17 | STD-1410 | NUT | 21 |
| STD-684 | NIPPLE | 27 | STD-1410 | NUT | 37 |
| STD-690 | WASHER | 1 | STD-1410 | NUT | 37 |
| STD-690 | WASHER | 1 | STD-1410 | NUT | 43 |
| STD-690 | WASHER | 1 | STD-1410 | NUT | 49 |
| STD-690 | WASHER | 3 | STD-1410 | NUT | 53 |
| STD-690 | WASHER | 5 | STD-1411 | NUT | 17 |
| STD-690 | WASHER | 5 | STD-1411 | NUT | 25 |
| STD-690 | WASHER | 5 | STD-1411 | NUT | 31 |
| STD-692 | SCREW | 46 | STD-1411 | NUT | 39 |
| STD-692 | SCREW | 47 | STD-1411 | NUT | 41 |
| STD-713 | COTTER PIN | 1 | STD-1411 | NUT | 43 |
| STD-713 | COTTER PIN | 1 | STD-1411 | NUT | 49 |
| STD-713 | COTTER PIN | 3 | STD-1420 | NUT | 35 |
| STD-713 | COTTER PIN | 5 | STD-1623 | INSERT | 9 |
| STD-713 | COTTER PIN | 5 | STD-1727 | WASHER | 1 |
| STD-713 | COTTER PIN | 5 | STD-1727 | WASHER | 3 |
| STD-713 | COTTER PIN | 5 | STD-1774 | PIN | 41 |

| PART NO. | PART NAME | PAGE NO. | PART NO. | PART NAME | PAGE NO. |
|--------------|-----------------|----------|---------------|----------------|----------|
| STD-1821 | HOSE | 27 | 02M28208 | HOSE ASSEMBLY | 47 |
| STD-1882 | SCREW | 37 | 02M28209 | HOSE ASSEMBLY | 46 |
| STD-1925 | SCREW | 27 | 02M28210 | HOSE ASSEMBLY | 47 |
| STD-2090 | NUT | 23 | 05K19423-S | IMPELLER KIT | 35 |
| STD-2168 | NUT | 15 | 05U22561 | THERMOCOUPLE | 21 |
| STD-2221 | NUT | 5 | 05U22562 | THERMOCOUPLE | 21 |
| STD-2229 | PLUG | 31 | 06A19956 | OIL SEAL | 41 |
| STD-2231 | RING | 15 | 06A23493 | SEAL | 25 |
| STD-2246 | BOLT | 13 | 06B23862 | GASKET | 39 |
| STD-2249 | NUT | 17 | 06E19769-0.63 | GASKET | 39 |
| STD-2249 | NUT | 35 | 06E19769-1.00 | GASKET | 31 |
| 25C-8 | STUD | 21 | 06E19769-1.25 | GASKET | 11 |
| 25C-10 | STUD | 39 | 07A19474 | BRACKET | 1 |
| 25C-22 | STUD | 33 | 07A19880 | BRACKET | 3 |
| 31C-12 | STUD | 9 | 07A21030 | BRACKET | 5 |
| 31C-12 | STUD | 21 | 07A21908 | BRACKET | 3 |
| 31C-12 | STUD | 33 | 07A21910 | BRACKET | 3 |
| 31C-13 | STUD | 9 | 07A22097 | BRACKET | 3 |
| 31C-14 | STUD | 31 | 07A23031 | BRACKET | 43 |
| 31C-17 | STUD | 9 | 07A23032 | BRACKET | 43 |
| 31C-19 | STUD | 9 | 07F21298 | LINK | 3 |
| 31CD-17 | STUD | 33 | 07F23268 | STRUT | 1 |
| 31CD-22 | STUD | 33 | 07F28735 | BRACE | 5 |
| 38D-17 | STUD | 9 | 07F28736 | LINK | 5 |
| 383-B | NUT | 5 | 11D22549 | CRANKCASE ASSY | 9 |
| 383-B | NUT | 23 | 11D28751-1S1 | CRANKCASE ASSY | 9 |
| 1028-B | BALL | 11 | 11D28751-1S3 | CRANKCASE ASSY | 9 |
| 1182-E7 | SPARK PLUG | 49 | 13B47120 | CKSHAFT ASS'Y | 13 |
| 1182-S4 | SPARK PLUG | 49 | 13B47144 | CKSHAFT ASS'Y | 13 |
| 01L21418 | WASHER | 7 | 13S19646 | GEAR | 13 |
| 01L21909 | SPACER | 3 | 14D23912 | PISTON | 19 |
| 01L21916 | SPACER | 5 | 14H21950 | RING | 19 |
| 01L23459 | WASHER | 25 | 14S23890 | BOLT | 19 |
| 01P19762-1-1 | HARNESS ATT BAG | 49 | 15B21319 | SOCKET | 25 |
| 01P19762-2-7 | HARNESS ATT BAG | 49 | 15B26066 | PLUNGER ASSY | 25 |
| 02G21382 | NIPPLE | 43 | 15B26262 | BODY | 11 |
| 02G21382 | NIPPLE | 47 | 15F19957-28 | ROD ASSEMBLY | 23 |
| 02G22973 | NIPPLE | 46 | 15F19957-29 | ROD ASSEMBLY | 23 |

| PART NO. | PART NAME | PAGE NO. | PART NO. | PART NAME | PAGE NO. |
|--------------|----------------|----------|------------|----------------|----------|
| 15F19957-30 | ROD ASSEMBLY | 23 | 42E22611 | PIPE | 29 |
| 15F19957-31 | ROD ASSEMBLY | 23 | 42E22612 | PIPE | 29 |
| 15F19957-32 | ROD ASSEMBLY | 23 | 42E22613 | PIPE | 29 |
| 15F19957-33 | ROD ASSEMBLY | 23 | 42E22614 | PIPE | 29 |
| 15F19957-34 | ROD ASSEMBLY | 23 | 53E22144 | VALVE ASSEMBLY | 39 |
| 15F19957-35 | ROD ASSEMBLY | 23 | 56C23075 | TUBE | 11 |
| 15F19957-36 | ROD ASSEMBLY | 23 | 61J26423 | FUEL INJECTOR | 43 |
| 15F19957-37 | ROD ASSEMBLY | 23 | 61J26823 | FUEL INJECTOR | 43 |
| 15G23461 | SHRD TUBE ASSY | 25 | 62B26931 | FUEL PUMP | 37 |
| 15M23454 | CAMSHAFT ASSY | 15 | 63B26757 | MANIFOLD ASSY | 43 |
| 15M23456 | CAMSHAFT ASSY | 15 | 63B28106 | MANIFOLD ASSY | 43 |
| 16R22126 | GUIDE | 21 | 63B28207 | MANIFOLD ASSY | 43 |
| 17A23938 | VALVE | 25 | 63C26450 | NOZZLE | 43 |
| 17B23936 | VALVE | 25 | 66M21195 | CLAMP | 49 |
| 17C19386 | CAP | 25 | 66GP-0RANN | MAGNETO | 49 |
| 17C21191 | KEY | 25 | 66GP-0SANN | MAGNETO | 49 |
| 17F19357 | ROCKER ASSY | 23 | 66GR25RANN | MAGNETO | 49 |
| 18A19441 | BEARING | 11 | 66GR25SANN | MAGNETO | 49 |
| 18A26093 | BEARING | 11 | 67P20412 | HARNESS ASSY | 49 |
| 18D23135 | BEARING | 11 | 67P20413 | HARNESS ASSY | 49 |
| 18D26098 | BEARING | 11 | 67P20428 | HARNESS ASSY | 49 |
| 18M19389 | BEARING | 19 | 67P20429 | HARNESS ASSY | 49 |
| 18M26105 | BEARING | 19 | 68C19622 | GEAR | 49 |
| 21A21533-21 | HOUSING ASSY | 33 | 38-13 | STUD | 9 |
| 21A21533-33 | HOUSING ASSY | 33 | 38-13 | STUD | 9 |
| 21A21651-05 | HOUSING ASSY | 33 | 38-22 | STUD | 9 |
| 23D26777 | PLUNGER | 15 | 50-15 | STUD | 9 |
| 31B22105 | STARTER | 53 | 1102 | PLUG | 9 |
| 31B22115 | STARTER | 53 | 1102 | PLUG | 9 |
| 31B22116 | STARTER | 53 | 1102 | PLUG | 21 |
| 31B26554 | STARTER | 53 | 1102 | PLUG | 31 |
| 31M19861 | SUPPORT ASSY | 13 | 1102 | PLUG | 33 |
| 32C19553 | ALTERNATOR ASY | 51 | 1102 | PLUG | 43 |
| 32C19568 | ALTERNATOR ASY | 51 | 8313 | GASKET | 41 |
| 36A19951 | PULLEY ASSY | 5 | 60009 | KEY | 25 |
| 36B19484 | PULLEY | 51 | 60096 | GASKET | 37 |
| 37A19773-376 | BELT | 51 | 60430 | COVER | 41 |
| 37A19773-390 | BELT | 51 | 60803 | STRAP | 17 |
| 37A19773-470 | BELT | 51 | 61084 | SPRING | 11 |
| 37B19774-482 | BELT | 51 | 61098 | ADAPTER ASSY | 41 |

| PART NO. | PART NAME | PAGE NO. | PART NO. | PART NAME | PAGE NO. |
|----------|---------------|----------|----------|-----------------|----------|
| 61174 | SHAFT | 35 | 72566 | GEAR | 13 |
| 61183 | GASKET | 41 | 72815 | BRACKET | 47 |
| 61247 | COVER | 27 | 72815 | BRACKET | 49 |
| 61400 | STUD | 31 | 72970 | GEAR ASSY | 41 |
| 61400 | STUD | 33 | 73136 | BRACKET | 39 |
| 61510 | PLUG | 13 | 73136 | BRACKET | 47 |
| 62417 | PLUG | 39 | 73136 | BRACKET | 49 |
| 62732 | CAP | 39 | 73152 | BRACKET | 46 |
| 65441 | SEAT | 25 | 73249 | WASHER | 7 |
| 66224 | GASKET | 43 | 73250 | WASHER | 7 |
| 66610 | BUSHING | 21 | 73251 | WASHER | 7 |
| 66796 | INSERT | 21 | 73252 | WASHER | 7 |
| 68668 | SPRING | 11 | 73383 | LOCKPLATE | 1 |
| 68759 | TUBE ASSEMBLY | 27 | 73818 | GASKET | 33 |
| 68760 | TUBE ASSEMBLY | 27 | 73966 | SPACER | 43 |
| 68761 | TUBE ASSEMBLY | 27 | 74065 | RING | 11 |
| 69106 | COVER | 37 | 74068 | RING | 11 |
| 69551 | GASKET | 37 | 74200 | ELBOW | 46 |
| 69796 | DOWEL | 9 | 74241 | RING | 19 |
| 70310 | SEAL | 25 | 74278 | BRACKET ASSY | 46 |
| 70455 | GASKET | 7 | 74637 | BUSHING | 23 |
| 70484 | SCREEN | 31 | 74887 | SPACER | 23 |
| 71140 | FITTING | 39 | 74996 | GEAR ASSEMBLY | 15 |
| 71481 | RING | 23 | 75061 | BOLT | 19 |
| 71596 | WASHER | 41 | 75072 | GEAR ASSEMBLY | 15 |
| 71610 | HOOK | 27 | 75154 | STUD | 9 |
| 71611 | RETAINER | 27 | 75339 | BAFFLE ASSEMBLY | 27 |
| 71973 | GASKET | 29 | 75380 | LINK | 1 |
| 72053 | GASKET | 37 | 75444 | ADAPTER ASSY | 46 |
| 72057 | SEAT | 21 | 75656-S | BUSHING | 13 |
| 72058 | SEAT | 21 | 75657-S | BUSHING | 13 |
| 72059 | GASKET | 11 | 75736 | TUBE | 11 |
| 72075 | SEAL | 11 | 75739 | NIPPLE | 46 |
| 72091 | RING | 11 | 75767 | TUBE | 11 |
| 72155-S | BUSHING | 13 | 75888 | STUD | 33 |
| 72158 | BUSHING | 9 | 75906 | GASKET | 27 |
| 72198 | PLUG | 19 | 76118 | SPACER | 15 |
| 72378 | COVER | 37 | 76119 | SHIELD | 33 |

| PART NO. | PART NAME | PAGE NO. | PART NO. | PART NAME | PAGE NO. |
|----------|----------------|----------|----------|-------------------|----------|
| 76121 | SHAFT ASSEMBLY | 15 | 77504 | GASKET | 43 |
| 76220 | STUD | 17 | 77569 | RING | 29 |
| 76534 | SHIM | 1 | 77611 | GASKET | 21 |
| 76534 | SHIM | 3 | 77808 | VALVE ASSEMBLY | 11 |
| 76534 | SHIM | 5 | 77852 | OIL FILT BSE ASSY | 39 |
| 76943 | GUIDE | 21 | 77872 | BUSHING | 7 |
| 77309 | BUSHING | 15 | 77874 | GEAR ASSSEMBLY | 7 |
| 77309 | BUSHING | 15 | 77875 | GEAR | 7 |
| 77410 | BRACKET | 49 | 78531 | BODY ASSEMBLY | 35 |
| 77467 | SPRING | 11 | | | |