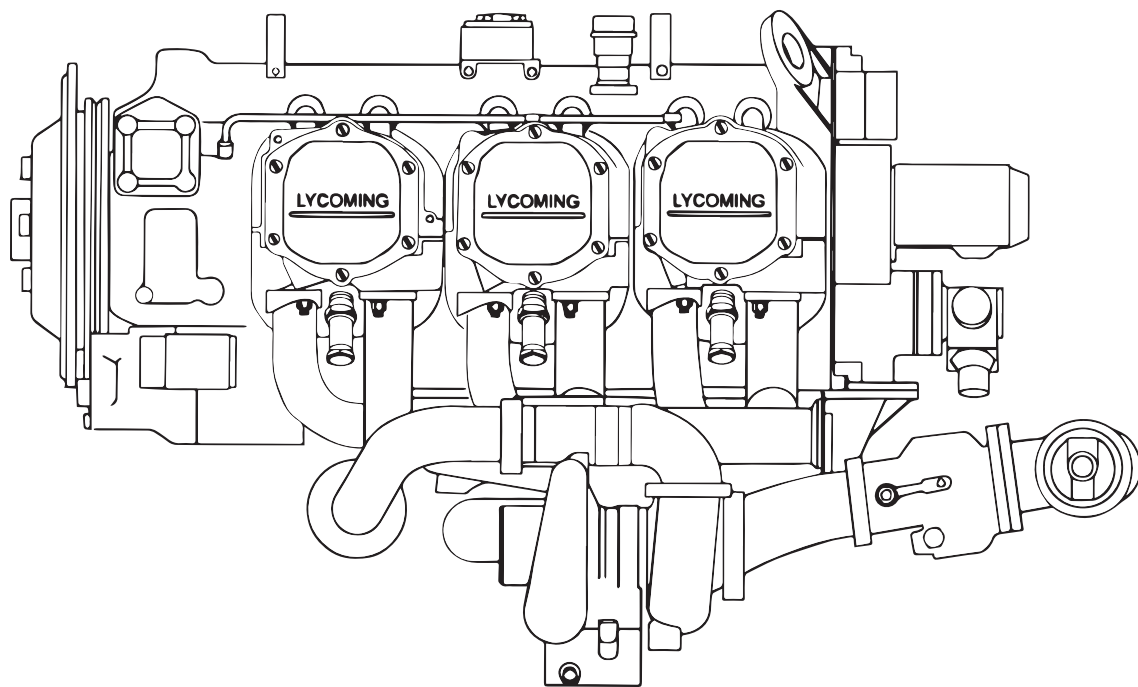


Lycoming Aircraft Engines Parts Catalog

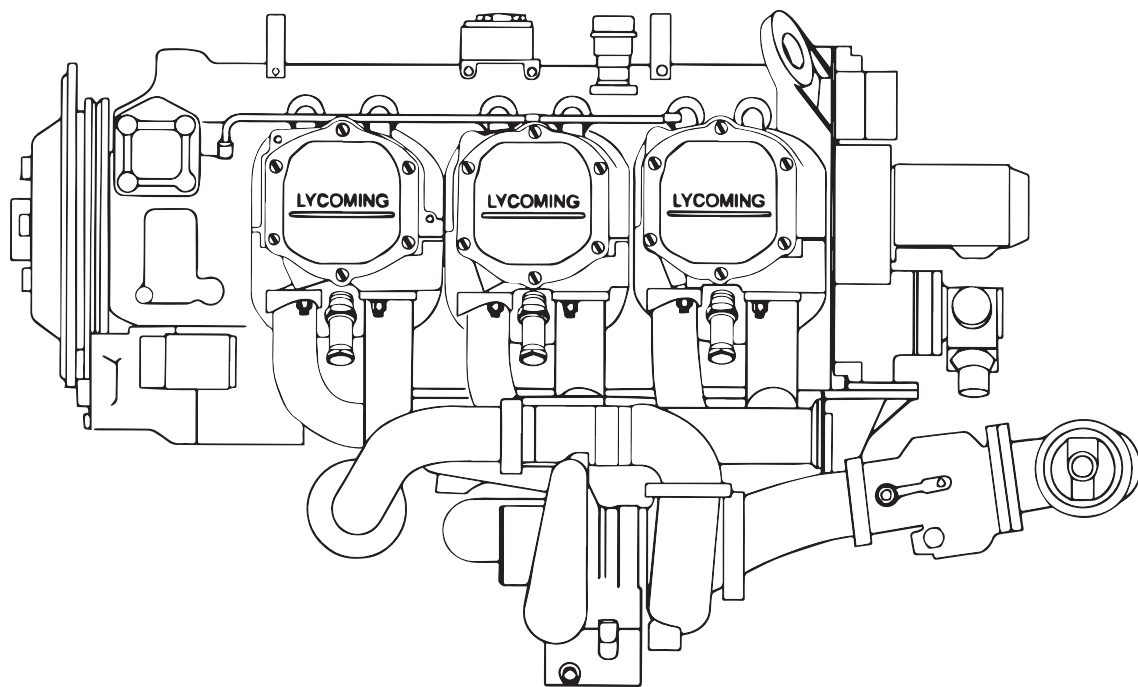


TIO-540 AG1A

Wide Cylinder Flange Crankcase Model Engines

LYCOMING

Lycoming Aircraft Engines Parts Catalog



TIO-540 AG1A

Wide Cylinder Flange Crankcase Model Engines

LYCOMING

This illustrated parts catalog contains a complete parts listing for the Lycoming TIO-540-AG1A wide cylinder flange crankcase model aircraft engines.

Major assembly and sub-assembly parts of the engines are listed in the Group Assembly sections in the general sequence of engine build up.

A Service Kits section and Oversize and Undersize Parts List are included to aid in ordering parts as necessary during overhaul.

The Numerical Index is provided for convenience in finding parts when only the part number is known.

Parts coverage of Vendor Accessories used on Lycoming engines may be found in the appropriate Vendor's Parts Catalog. A list of addresses of where to obtain these publications appears in the latest edition of Service Letter No. L114.

NOTE

The illustrations, pictures and drawings shown in the publication are typical of the subject matter they portray.

This catalog, when used in conjunction with the appropriate overhaul manual, shall be used for parts identification only. Under no circumstances shall this catalog be used as an assembly or installation document.

Any reference in this document to a suppliers/parts manufacturer's product, by name, trademark, part number or other description is solely for the purposes 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.

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SERVICE BULLETINS, INSTRUCTIONS AND LETTERS

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. Consult the latest edition of Service Letter No. L114 for subscription information.

HOW TO ORDER PARTS

In ordering parts for your engine, observe the following instructions which will expedite shipment of correct parts required without delay.

- a. Always specify the model and serial number of your engine.
- b. Always specify part number, nomenclature and quantity required.

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Oversize and Undersize Parts Listing

| Part No. | Description | Oversize | | | | | | | | Undersize | | |
|-----------|-------------|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | P02 .002 | P05 .005 | P10 .010 | P15 .015 | P20 .020 | P30 .030 | P40 .040 | P50 .050 | M03 .003 | M06 .006 | M10 .010 |
| 61681 | GUIDE | See Latest Edition of Service Instruction No. 1256. | | | | | | | | | | |
| 66610 | BUSHING | | X | X | | | | | | | | |
| 69260 | INSERT | | | X | | | | | | | | |
| 69796 | DOWEL | | X | | | | | | | | | |
| 71903-A,B | BUSHING | See Latest Edition of Service Instruction No. 1143. | | | | | | | | | | |
| 72057 | SEAT | | X | X | | X | X | | | | | |
| 72058 | SEAT | | | X | | X | X | | | | | |
| 72155-S | BUSHING | | X | X | X | X | | | | | | |
| 73810 | BUSHING | See Latest Edition of Service Instruction No. 1142. | | | | | | | | | | |
| 75656-S | BUSHING | | X | X | X | X | | | | | | |
| 75657-S | BUSHING | | X | X | | X | | | | | | |
| LW-11997 | SEAL | See Latest Edition of Service Instruction No. 1324. | | | | | | | | | | |
| LW-13792 | SEAL | See Latest Edition of Service Instruction No. 1324. | | | | | | | | | | |
| LW-13884 | BEARING | | | | X | | | | | X* | X* | X* |
| LW-16711 | BEARING | | | | X | | | | | X | X | X |
| STD-1065 | DOWEL | X | X | X | X | | | | | | | |
| 16R22127 | GUIDE | See Latest Edition of Service Instruction No. 1256. | | | | | | | | | | |
| 18A19441 | BEARING | | | | X | | | | | X | X | X |

* Also available in P15 oversize.

In addition to the above, studs are available in P03, P07 & P12.

NOTE

When ordering oversize and undersize parts, be sure to specify the required oversize and undersize dimension along with the proper part number. For example, to order bearing LW-13884 in .003 undersize, order part number LW-13884-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.

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP CRANKCASE ASSEMBLY

| FIG. REF. 1 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|-------------------|----------------|-------------------------------------|----------------------|
| 1 | 11E20003-S3 | CRANKCASE ASSEMBLY (See Note) | 1 |
| 2 | LW-13794 | STUD, 5/16-18 x 1.00 long | 1 |
| 3 | 38-13 | STUD, 3/8-16 x 1-5/8 long | 4 |
| 4 | 31C-12 | STUD, 5/16-18 x 1-1/2 long | 2 |
| 5 | 31C-13 | STUD, 5/16-18 x 1-5/8 long | 1 |
| 6 | 38-13 | STUD, 3/8-16 x 1-5/8 long | 24 |
| 7 | 50-15 | STUD, 1/2-13 x 1-7/8 long | 12 |
| 8 | 38-22 | STUD, 3/8-16 x 2-3/4 long | 1 |
| 9 | 38D-17 | STUD, 3/8-16 x 2-1/8 long, drilled | 1 |
| 10 | 38-15 | STUD, 3/8-16 x 1-7/8 long | 8 |
| 11 | 69796 | DOWEL, Crankshaft, front bearing | 2 |
| 12 | STD-514 | DOWEL, 5/16 dia. x 1/2 long | 2 |
| 13 | STD-557 | DOWEL, 1/2 dia. x 11/16 long | 2 |
| 14 | 72158 | BUSHING, Governor drive idler shaft | 1 |
| 15 | STD-1339 | PLUG, 1/16-27 NPT | 1 |
| 16 | 1102 | PLUG, 1/8 pipe x 3/8 long | 4 |
| 17 | 31C-16 | STUD, 5/16-18 x 2.00 long | 4 |
| 18 | 73772 | NOZZLE ASSY., Piston cooling | 6 |

NOTE

This part is not available as a service item. Refer to Service Kits, Section 8 for applicable Crankcase Assembly and Governor Stud Kit Part Number.

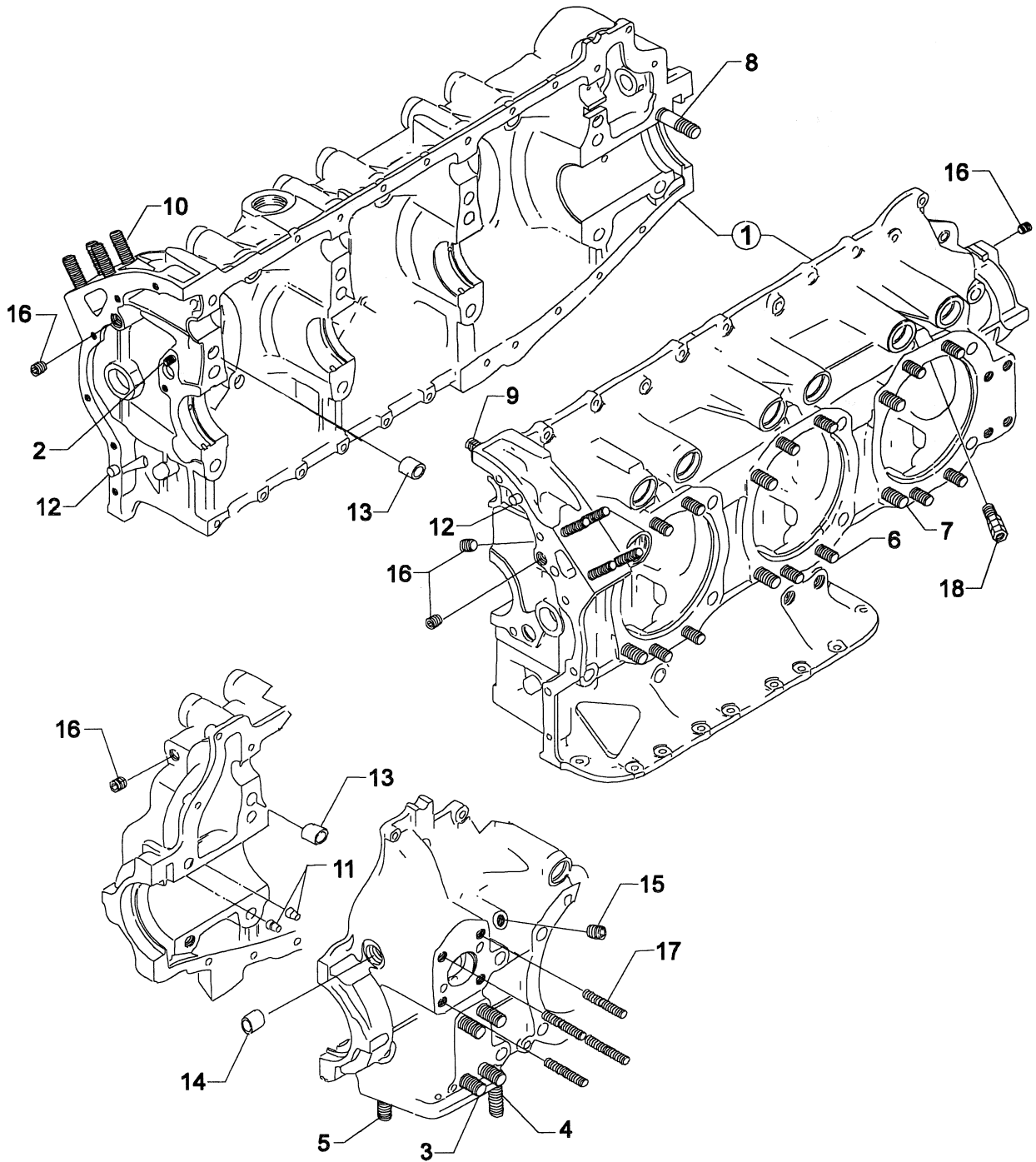


Figure 1. CRANKCASE ASSEMBLY

**CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP
OIL LEVEL GAGE AND ENGINE MOUNTING BRACKETS**

| FIG. REF. 2 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|-------------------|----------------|--------------------------------------|----------------------|
| 1 | 70457 | GASKET, Oil filler extension | 1 |
| 2 | 75737 | EXTENSION, Oil filler | 1 |
| 3 | 74068 | "O" RING, Oil level gage | 1 |
| 4 | LW-16783-14 | GAGE ASSY., Oil level | 1 |
| 5 | 70456 | BRACKET, Engine mounting (dynafocal) | 4 |
| 6 | STD-33 | WASHER, 3/8 plain | 16 |
| 7 | STD-678 | WASHER, 3/8 lock, internal teeth | 16 |
| 8 | STD-596 | NUT, 3/8-24 plain | 16 |

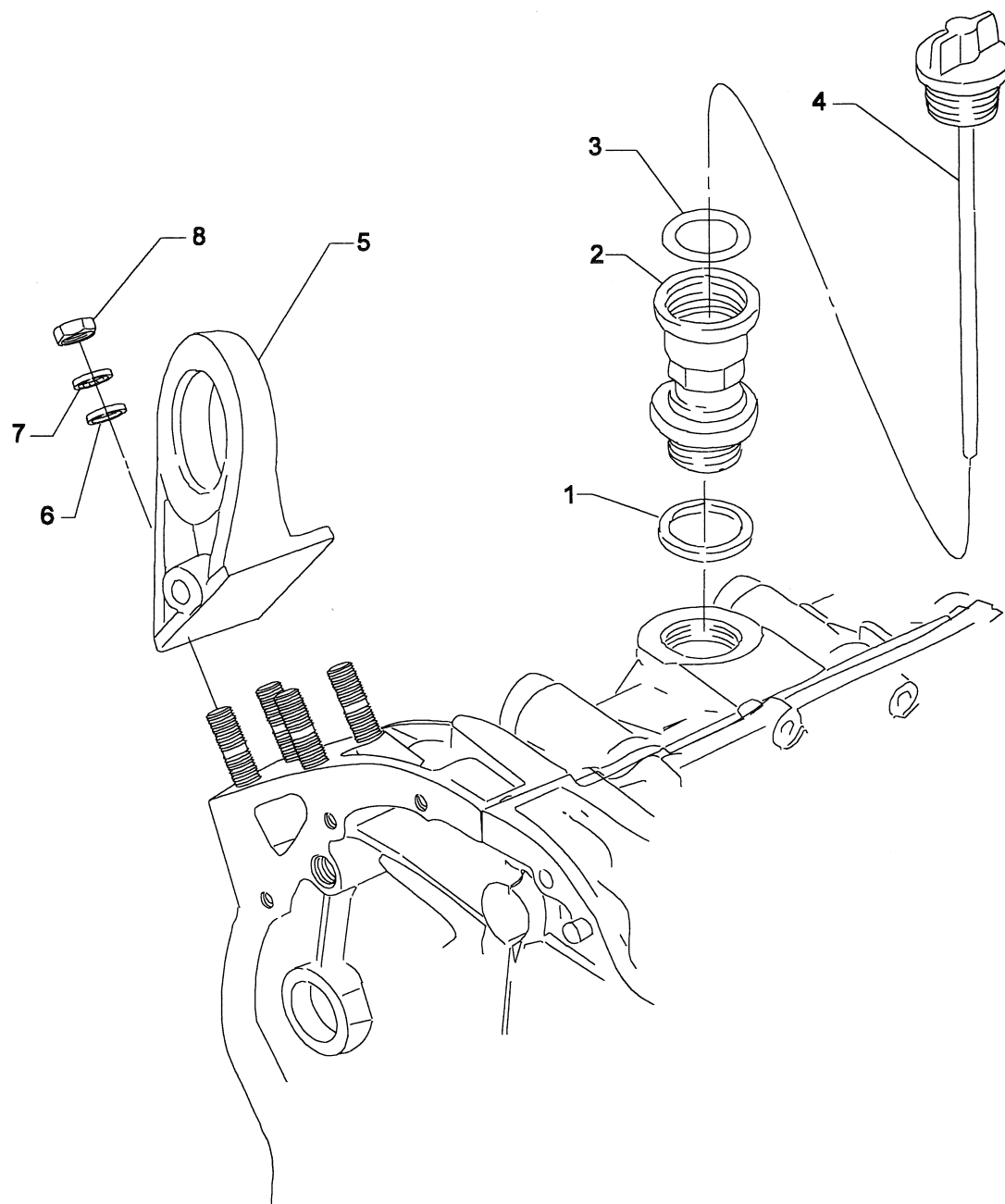


Figure 2. OIL LEVEL GAGE AND ENGINE MOUNTING BRACKETS

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP CRANKCASE RELATED PARTS

| FIG. REF. 3 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|----------------|---------------|--|----------------|
| 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. x 1-1/2 O.D. x 3/32 annular | 1 |
| 4 | 77808 | VALVE ASSY., Oil pressure relief, adjustable | 1 |
| 5 | LW-16711 | BEARING, Crankshaft | 6 |
| 6 | LW-13884 | BEARING, Crankshaft, front | 2 |
| | 18A19441 | BEARING, Crankshaft, front (alternate) | 2 |
| 7 | LW-13792** | SEAL, Crankshaft oil, solid | 1 |
| | LW-11997** | SEAL, Crankshaft oil, split | 1 |
| 8 | 72091 | RING, Oil seal, 23/64 I.D. x 7/64 diameter | 2 |
| 9 | 72877 | BODY, Hydraulic tappet | 12 |

* Select spring to give a maximum of three threads exposed on adjusting screw to allow field adjustment. Reference latest revision of Lycoming Table of Limits SSP-1776, Part 1 for spring identification.

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

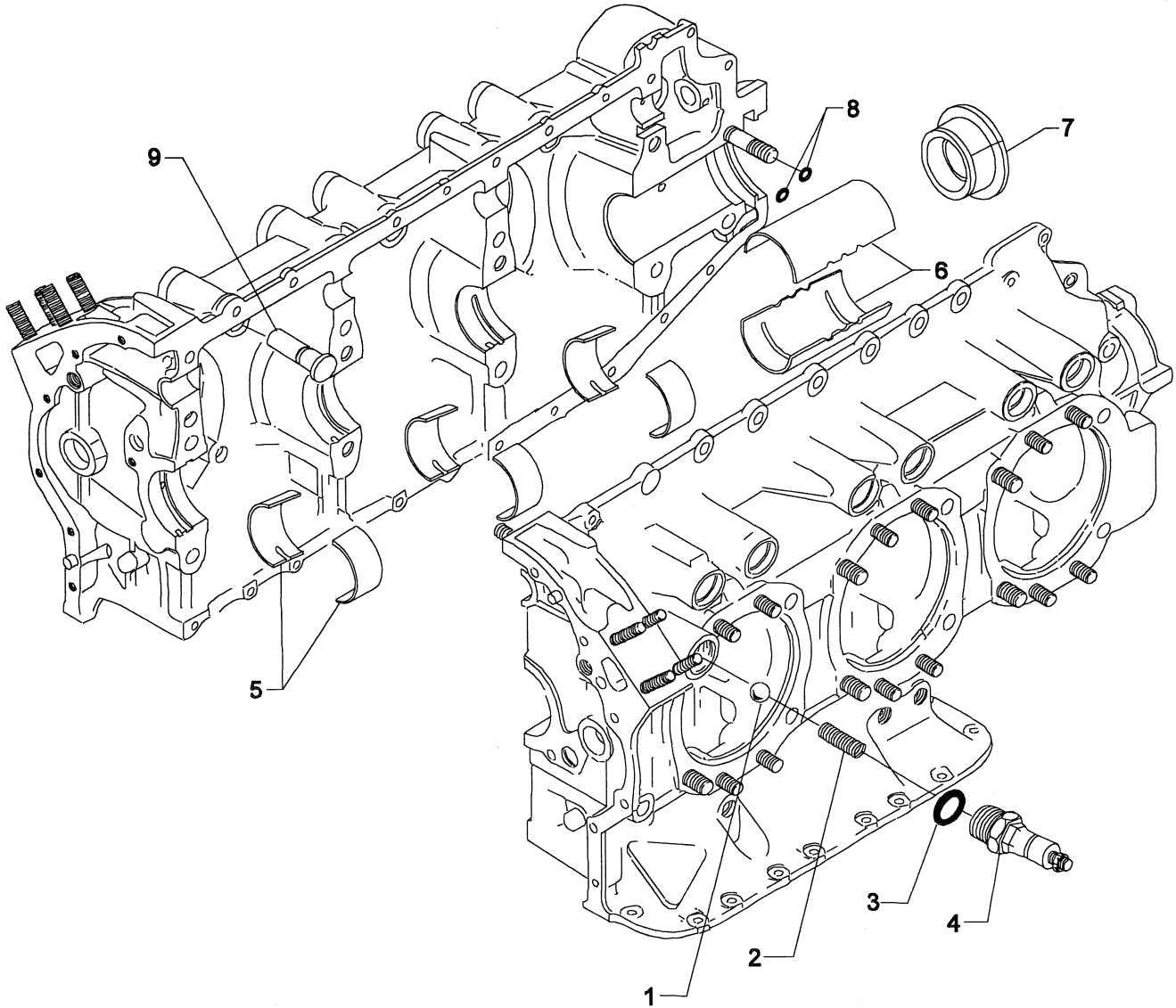


Figure 3. CRANKCASE RELATED PARTS

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP CAMSHAFT, CRANKSHAFT AND RELATED PARTS

| FIG. REF. 4 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|----------------|-------------|--|----------------|
| 1 | 13E27622 | CRANKSHAFT & BUSHING ASSEMBLY | 1 |
| 2 | 73810* | BUSHING, Crankshaft dyn. counterweight | 4 |
| 3 | STD-1065 | DOWEL, Stepped, 5/16 x 1/4 dia. x 35/64 long | 1 |
| 4 | 71640 | PLUG, 1-3/8 diameter | 1 |
| 5 | 75656-S | BUSHING, Propeller flange, long | 4 |
| 6 | 72155-S | BUSHING, Propeller flange, short | 1 |
| 7 | 75657-S | BUSHING, Propeller flange, indexing | 1 |
| 8 | STD-1211 | PLUG, 2.00 dia. expansion | 1 |
| 9 | LW-19227** | COUNTERWEIGHT ASSEMBLY | 2 |
| 10 | 71903 + | BUSHING, Dynamic counterweight | 8 |
| 11 | 72965** | ROLLER, Dyn. counterweight, 5.1 order | 2 |
| 12 | 72797** | ROLLER, Dyn. counterweight, 6.3 order | 2 |
| 13 | 71907 | WASHER, Dynamic counterweight | 8 |
| 14 | LW-14820 | RING, Internal retaining | 8 |
| 15 | 13S19648 ++ | GEAR, Crankshaft | 1 |
| 16 | LW-18638 | LOCKPLATE, Crankshaft gear | 1 |
| 17 | STD-2209 | BOLT, 5/16-24 x 1-3/4 long, hex. head | 1 |
| 18 | LW-19340 | CAMSHAFT ASSEMBLY | 1 |
| 19 | 76118 | SPACER, Tachometer shaft centering | 1 |
| 20 | 76155 | SHAFT ASSY., Tachometer | 1 |
| 21 | LW-18667 | PIN, 3/16 dia. x 2-21/64 long | 1 |
| 22 | STD-2231 | RING, Internal retaining | 1 |
| 23 | 31M21994 | SUPPORT ASSY., Starter ring gear | 1 |
| 24 | 72566 | GEAR, Starter ring | 1 |

* See latest edition of

** See latest edition of

+ See latest edition of

++ See latest edition of

Lycoming Service Instruction No. 1142 for application.

Lycoming Service Instruction No. 1012 for application.

Lycoming Service Instruction No. 1143 for application.

Lycoming Service Bulletin No. 475 for application.

CRANKSHAFT & COUNTERWEIGHT ASSEMBLY, Kit P/N 05K27676 available.

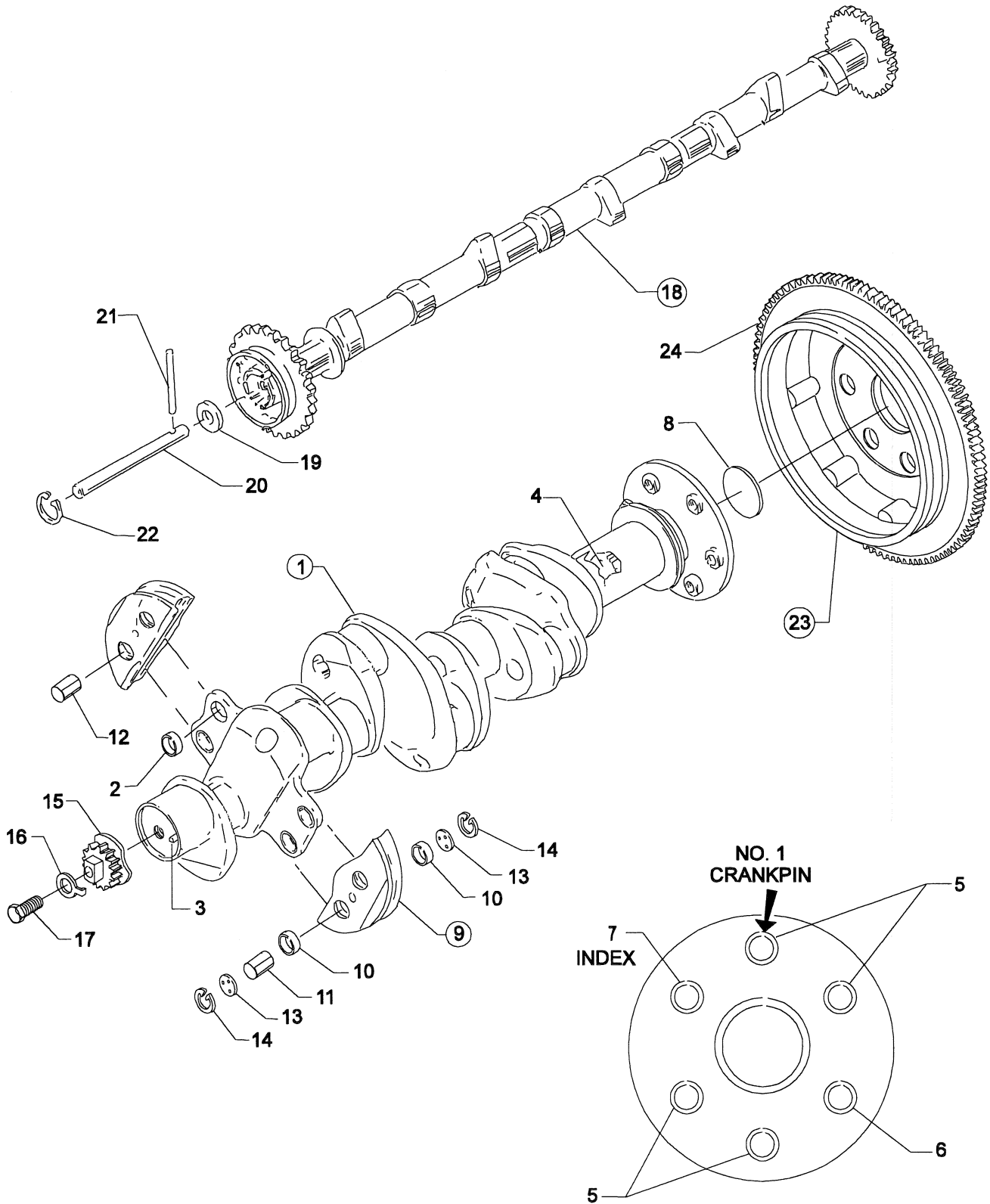


Figure 4. CAMSHAFT, CRANKSHAFT AND RELATED PARTS

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP PROPELLER GOVERNOR DRIVE ASSEMBLY

| FIG. REF. 5 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|-------------------|----------------|--|----------------------|
| 1 | LW-10442 | GEAR, Propeller governor drive | 1 |
| 2 | LW-14021 | SHAFT, Propeller governor idler gear | 1 |
| 3 | LW-10541 | GEAR ASSY., Propeller governor idler | 1 |
| 4 | 77872 | BUSHING, Propeller governor idler gear | 2 |
| 5 | STD-19 | DOWEL, 3/32 dia. x 7/32 long | 1 |
| 6 | STD-798 | DOWEL, 3/32 dia. x 9/32 long | 1 |
| 7 | 73249 | WASHER, Thrust | AR |
| | 73250 | WASHER, Thrust | AR |
| | 73251 | WASHER, Thrust | AR |
| | 73252 | WASHER, Thrust | AR |
| | 01L21418 | WASHER, Thrust | 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 |
| 11 | 72053 | GASKET, Governor | 1 |
| 12 | 72378 | COVER, Governor drive | 1 |
| 13 | STD-35 | WASHER, 5/16 plain (Woodward governor) | 20 |
| | STD-35 | WASHER, 5/16 plain (AN governor) | 4 |
| 14 | STD-475 | WASHER, 5/16 lock, internal teeth | 4 |
| 15 | STD-1410 | NUT, 5/16-18 plain | 4 |

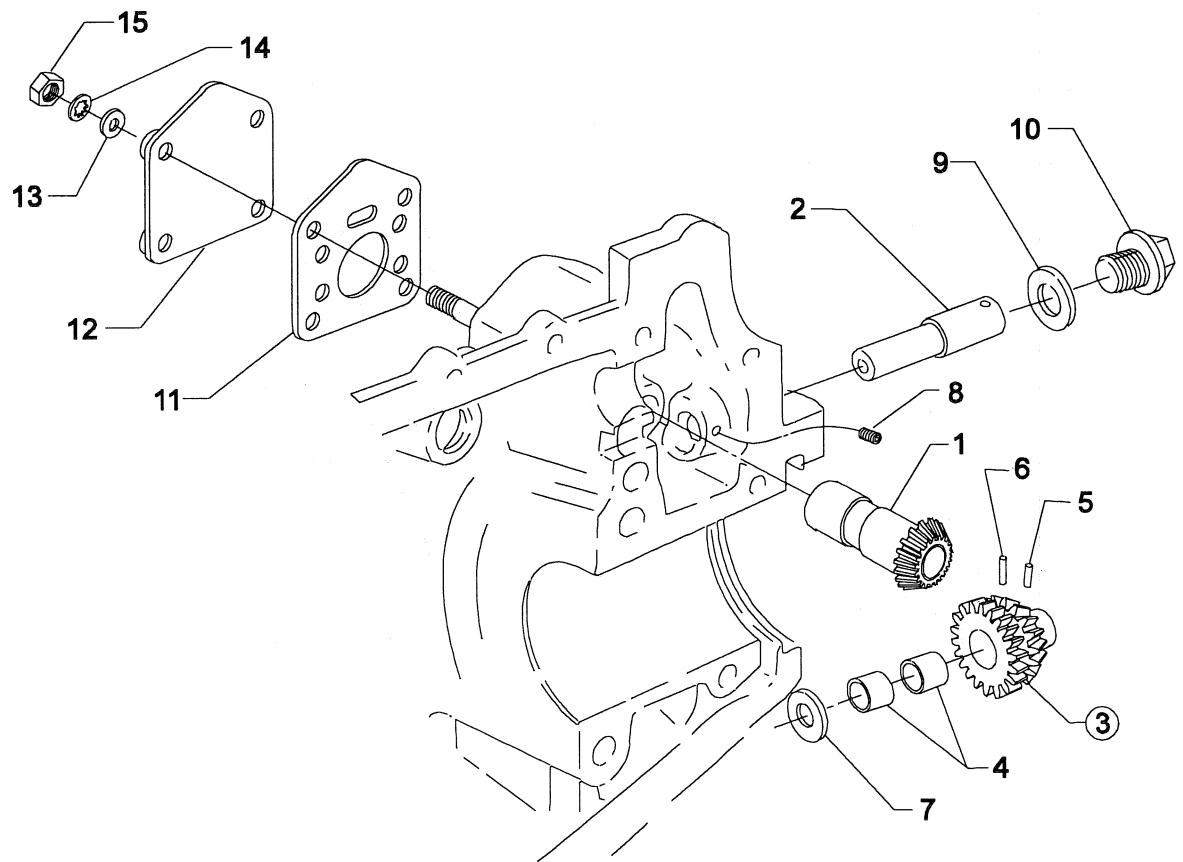


Figure 5. PROPELLER GOVERNOR DRIVE ASSEMBLY

**CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP
CRANKSHAFT AND FUEL PUMP IDLER GEARS**

| FIG. REF. 6 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|----------------|-------------|---|----------------|
| 1 | LW-13795 | SHAFT, Crankshaft idler gear | 2 |
| 2 | LW-31H0.88 | BOLT, 5/16-18 x 7/8 long, hex. hd. | 3 |
| 3 | STD-2168 | NUT, 5/16-18 NC-3 slotted shear | 1 |
| 4 | 72246 | SHAFT, Fuel pump idler gear | 1 |
| 5 | 71667 | LOCKPLATE, 1/4 bolt x 1-3/4 spacing (offset) | 1 |
| 6 | LW-25-0.63 | SCREW, 1/4-20 x 5/8 long, hex. hd. | 2 |
| 7 | 71664 | GEAR ASSY., Fuel pump idler | 1 |
| 8 | 77309 | BUSHING, Crankshaft idler gear | 1 |
| 9 | 70474 | WASHER, Fuel pump idler thrust | 1 |
| 10 | STD-1737 | RING, 37/64 dia. x 3/64 thick, external retaining | 1 |
| 11 | 71668 | GEAR ASSY., Crankshaft idler, plain | 2 |
| 12 | 67530 | BUSHING, Crankshaft idler gear | 1 |
| 13 | 72972 | SHAFTGEAR ASSY., Fuel pump drive | 1 |
| 14 | 72962 | THRUST BUTTON, Shaftgear | 1 |
| 15 | 69164 | GASKET, Fuel pump adapter | 1 |
| 16 | 69159 | ADAPTER ASSY., Fuel pump drive | 1 |
| 17 | STD-1774 | PIN, 1/8 dia. x 1/4 long | 1 |
| 18 | STD-213 | OIL SEAL, 3/4 I.D. x 1-3/8 O.D. | 1 |

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP
CRANKCASE ATTACHING PARTS

| FIG. REF. 7 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|----------------|--------------|---------------------------------------|----------------|
| 1 | LW-25-1.50 | BOLT, 1/4-20 x 1-1/2 long, hex.hd. | 8 |
| 2 | LW-25-1.88* | BOLT, 1/4-20 x 1-7/8 long, hex, hd. | 1 |
| 3 | LW-25-2.00** | BOLT, 1/4-20 x 2.00 long, hex. hd. | 2 |
| 4 | STD-8 | WASHER, 1/4 plain | 25 |
| 5 | 60803 | STRAP, Lifting | 2 |
| 6 | LW-25-1.75 | BOLT, 1/4-20 x 1-3/4 long, hex. hd. | 1 |
| 7 | LW-25-1.13 | BOLT, 1/4-20 x 1-1/8 long, hex. hd. | 4 |
| 8 | STD-160 | WASHER, 1/4 lock, internal teeth | 16 |
| 9 | STD-1411 | NUT, 1/4-20 plain | 12 |
| 10 | LW-25S1.50 | BOLT, 1/4-20 x 1-1/2 long, dr. end | 6 |
| 11 | STD-8 | WASHER, 1/4 plain | 18 |
| 12 | STD-1409 | NUT, 1/4-20 slotted shear | 6 |
| 13 | STD-33 | WASHER, 3/8 plain | 1 |
| 14 | STD-872 | NUT, 3/8-24 slotted | 1 |
| 15 | AN6-34A | BOLT, 3/8-24 x 3-37/64 long, hex. hd. | 1 |
| 16 | STD-33 | WASHER, 3/8 plain | 3 |
| 17 | STD-678 | WASHER, 3/8 lock, internal teeth | 2 |
| 18 | STD-596 | NUT, 3/8-24 plain | 2 |
| 19 | 76220 | STUD, 1/2-20 x 10-45/64 long | 8 |

* Two STD-8 washers and one LW-25-1.88 bolt assembled in rear top hole in crankcase.

** To attach fuel manifold bracket.

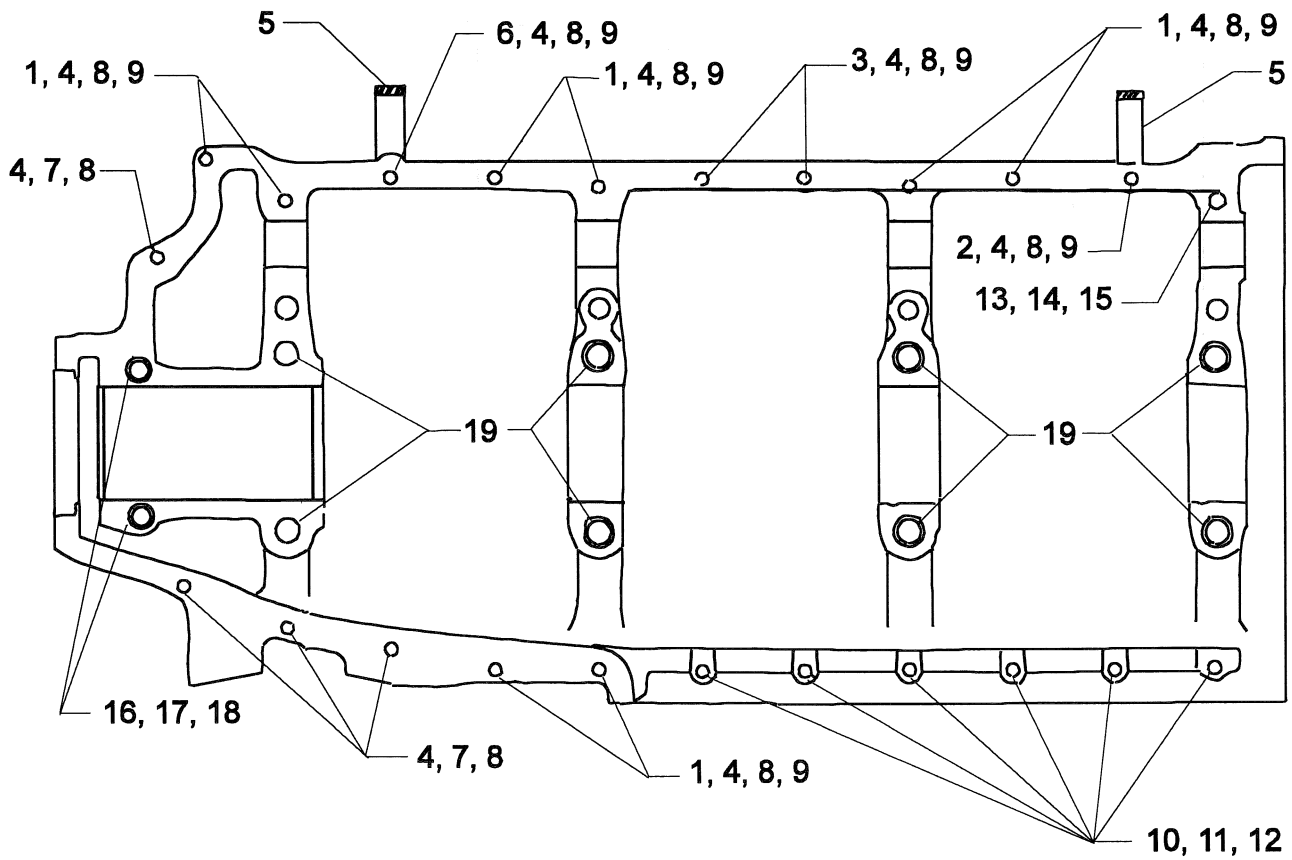


Figure 7. CRANKCASE ATTACHING PARTS

**ACCESSORY HOUSING AND RELATED PARTS
ACCESSORY HOUSING ASSEMBLY**

| FIG. REF. 8 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|-------------------|----------------|-------------------------------------|----------------------|
| 1 | 73818 | GASKET, Accessory housing | 1 |
| 2 | 21C21542-04 | HOUSING ASSY., Accessory | 1 |
| 3 | 31C-19 | STUD, 5/16-18 x 2-3/8 long | 4 |
| 4 | 31C-12 | STUD, 5/16-18 x 1-1/2 long | 4 |
| 5 | 31C-21 | STUD, 5/16-18 x 2-5/8 long | 4 |
| 6 | 25C-21 | STUD, 1/4-20 x 2-5/8 long | 4 |
| 7 | 31CD-20 | STUD, 5/16-18 x 2-1/2 long, drilled | 3 |
| 8 | 1102 | PLUG, 1/8 pipe | 2 |
| 9 | LW-18696 | TEE, 1/4 tube (restricted on run) | 1 |
| 10 | AN932-6 | PLUG, 3/4-14 NPT, Allen head | 1 |

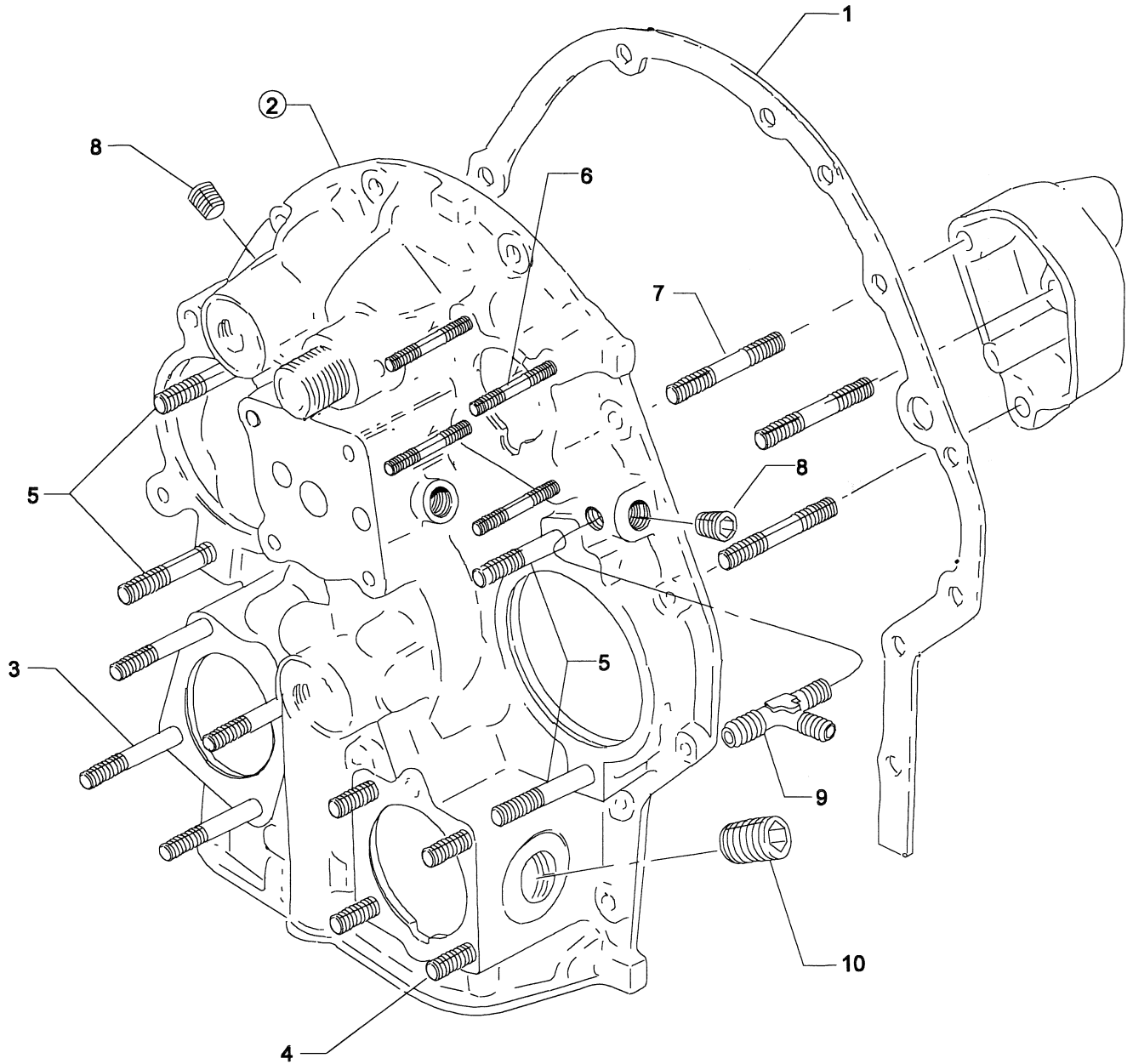


Figure 8. ACCESSORY HOUSING ASSEMBLY

ACCESSORY HOUSING AND RELATED PARTS OIL PUMP ASSEMBLY AND ACCESSORY HOUSING ATTACHING PARTS

| FIG . REF. 9 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|--------------------|----------------|-------------------------------------|----------------------|
| 1 | 75287 | BODY ASSEMBLY, Oil pump | 1 |
| 2 | 60329 | SHAFT, Oil pump idler | 1 |
| 3 | STD-714 | PIN, 1/8 dia. x 1.00 long, cotter | 1 |
| 4 | STD-1339 | PLUG, 1/16-27 NPT | 1 |
| 5 | 76784 | SHAFT, Oil pump drive | 1 |
| 6 | 61297 | IMPELLER, Oil pump, driving | 1 |
| 7 | 61298 | IMPELLER, Oil pump, driven | 1 |
| 8 | STD-35 | WASHER, 5/16 plain | 3 |
| 9 | STD-1420 | NUT, 5/16-18 slotted | 3 |
| 10 | LW-14260 | SEAL, Tachometer drive, oil | 1 |
| 11 | STD-8 | WASHER, 1/4 plain | 10 |
| 12 | STD-160 | WASHER, 1/4 lock, internal teeth | 12 |
| 13 | LW-25-0.94 | BOLT, 1/4-20 x 15/16 long, hex. hd. | 9 |
| 14 | LW-25-1.13 | BOLT, 1/4-20 x 1-1/8 long, hex. hd. | 1 |
| 15 | LW-25-1.50 | BOLT, 1/4-20 x 1-1/2 long, hex. hd. | 2 |

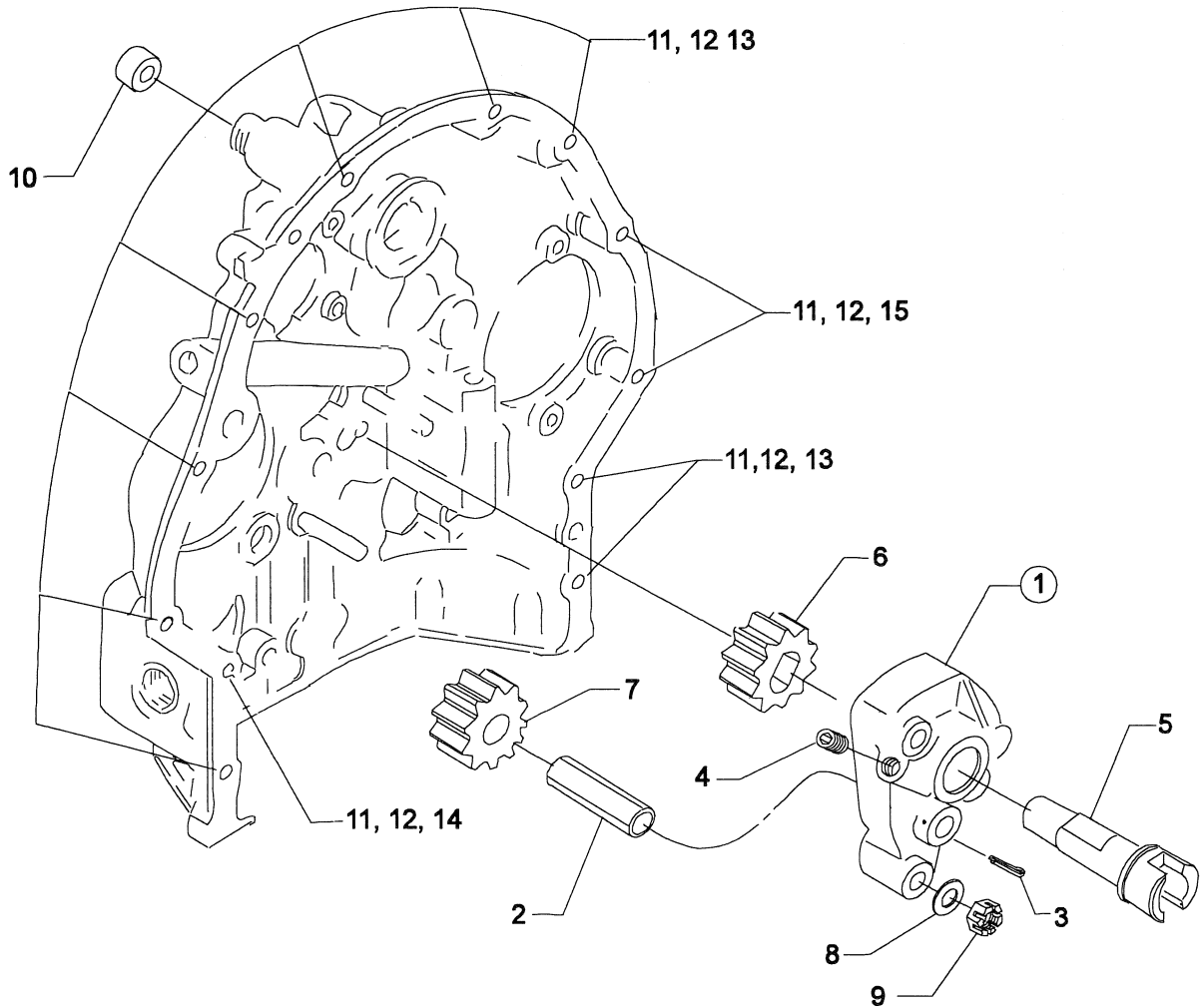


Figure 9. OIL PUMP ASSEMBLY AND ACCESSORY HOUSING ATTACHING PARTS

**ACCESSORY HOUSING AND RELATED PARTS
FUEL PUMP ASSEMBLY AND ATTACHING PARTS**

| FIG. REF. 10 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|-----------------|-------------|---|----------------|
| 1 | LW-10799 | SPACER, Fuel pump, insulating | 1 |
| 2 | 62D21153 | FUEL PUMP (RG17980-U) | 1 |
| 3 | STD-35 | WASHER, 5/16 plain | 4 |
| 4 | STD-475 | WASHER, 5/16 lock, internal teeth | 4 |
| 5 | STD-1410 | NUT, 5/16-18 plain | 4 |
| 6 | 02A21171 | TEE, 1/4 tube with 1/8 NPT | 1 |
| 7 | AN816-6 | NIPPLE, 3/8 flared tube x 1/4 NPT | 1 |
| 8 | 77433 | ELBOW, 1/2 dia. flared tube, 1/4 NPT, 90° | 1 |

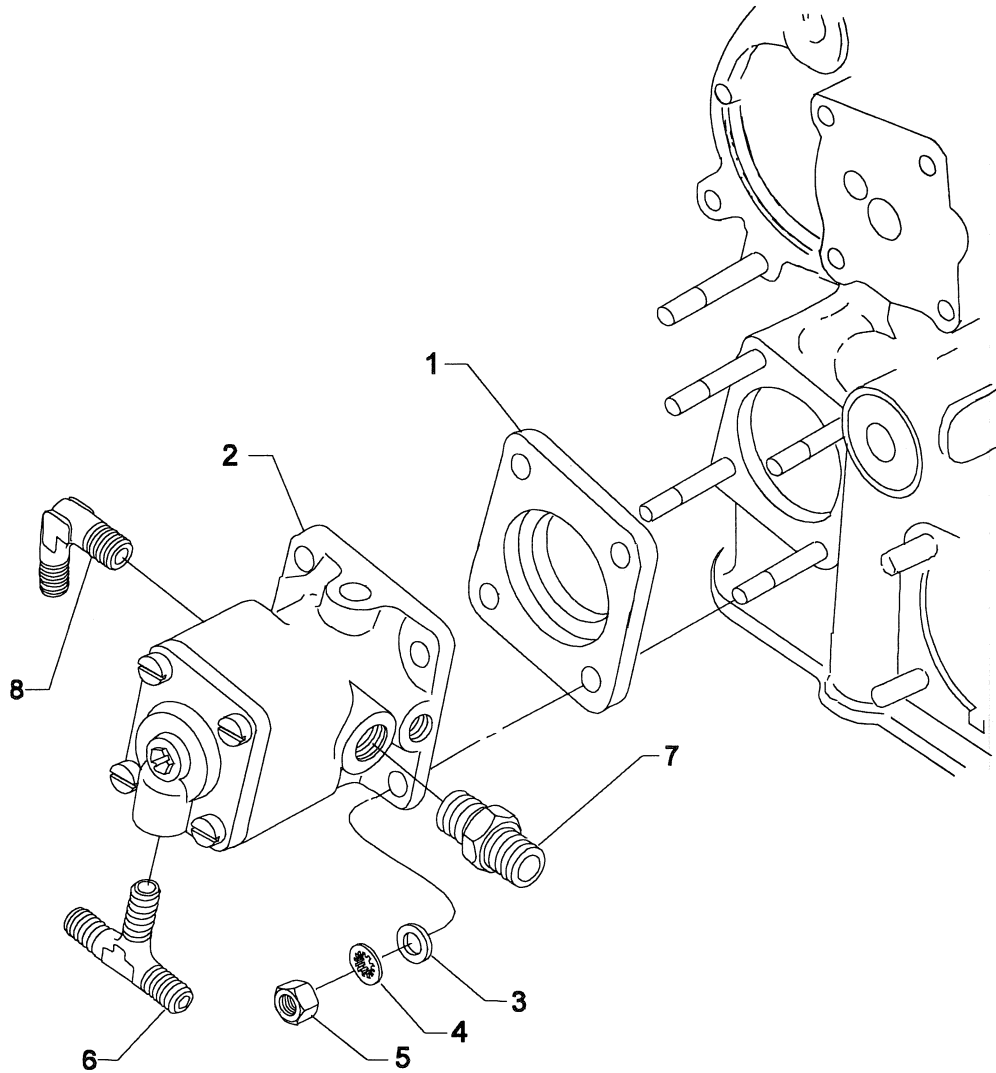


Figure 10. FUEL PUMP ASSEMBLY AND ATTACHING PARTS

**ACCESSORY HOUSING AND RELATED PARTS
VACUUM PUMP DRIVE, OIL COOLER AND BREATHER FITTINGS**

| FIG . REF. 11 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|---------------------|----------------|---|----------------------|
| 1 | 61183 | GASKET, Accessory adapter | 1 |
| 2 | 67536 | ADAPTER ASSY., Vacuum pump | 1 |
| 3 | STD-1774 | PIN, 1/8 dia. 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 | 72974 | 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 |
| 12 | 06E19769-0.63 | GASKET, 7/8 O.D. x 5/8 I.D. x 3/32 annular | 1 |
| 13 | 62417 | PLUG, Oil cooler bypass | 1 |
| 14 | STD-784 | PLUG, 3/8-18 NPT, Allen head | 2 |
| 15 | 71651 | FITTING, Breather | 1 |
| 16 | 62732 | CAP, Tachometer drive | 1 |

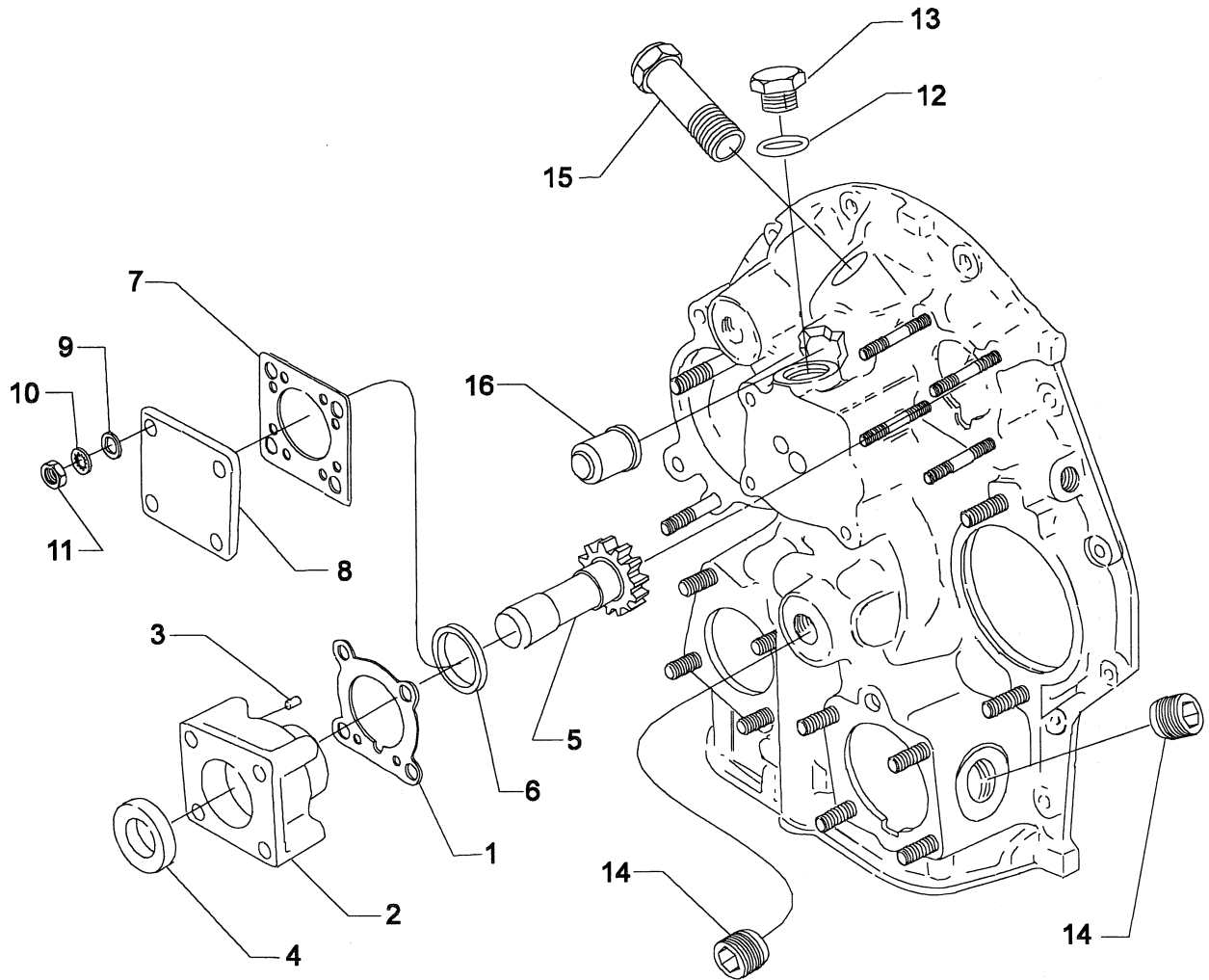


Figure 11. VACUUM PUMP DRIVE, OIL COOLER AND BREATHER FITTINGS

ACCESSORY HOUSING AND RELATED PARTS TURBO SCAVENGE PUMP AND HYDRAULIC PUMP DRIVE AND COVER

| FIG. REF. 12 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|--------------|-----------------|--|----------------|
| 1 | 68315 | GASKET, Accessory drive adapter | 1 |
| 2 | 29A21372 | DRIVE ASSY., Turbo scavenge & hydraulic pump | 1 |
| 3 | 29A21358 | ADAPTER ASSY., Turbo scavenge pump | 1 |
| 4 | 25C-11 | STUD, 1/4-20 x 1-3/8 long | 4 |
| 5 | STD-1774 | PIN, 1/8 dia. x 1/4 long | 2 |
| 6 | 01N19833-218 | PLUG, Pin | 1 |
| 7 | 29D21310 | ADAPTER, Hydraulic pump | 1 |
| 8 | LW-RF2.239-0.70 | RING, Oil seal | 1 |
| 9 | LW-15853 | SHAFT, Hydraulic pump drive | 1 |
| 10 | STD-95 | KEY, 1/8 x 1/2 Woodruff | 1 |
| 11 | LW-15550 | GENERATOR PUMP | 1 |
| 12 | 06A19956 | OIL SEAL, 7/8 I.D. x 1-1/2 O.D. x 5/16 wide | 1 |
| 13 | 77825 | SHAFTGEAR, Hydraulic pump drive | 1 |
| 14 | 77708 | WASHER, Retaining shaftgear | 1 |
| 15 | MS16562-28 | PIN, 3/32 dia. x 3/4 long, slotted | 1 |
| 16 | STD-8 | WASHER, 1/4 plain | 4 |
| 17 | STD-160 | WASHER, 1/4 lock, internal teeth | 4 |
| 18 | STD-1411 | NUT, 1/4-20 plain | 4 |
| 19 | 25C-12 | STUD, 1/4-20 x 1-1/2 long | 4 |
| 20 | STD-35 | WASHER, 5/16 plain | 4 |
| 21 | STD-475 | WASHER, 5/16 lock, internal teeth | 4 |
| 22 | STD-1410 | NUT, 5/16-18 plain | 4 |
| 23 | 8313 | GASKET, Pump | 1 |
| 24 | 60430 | COVER, Pump | 1 |
| 25 | STD-8 | WASHER, 1/4 plain | 4 |
| 26 | STD-160 | WASHER, 1/4 lock, internal teeth | 4 |
| 27 | STD-1411 | NUT, 1/4-20 plain | 4 |

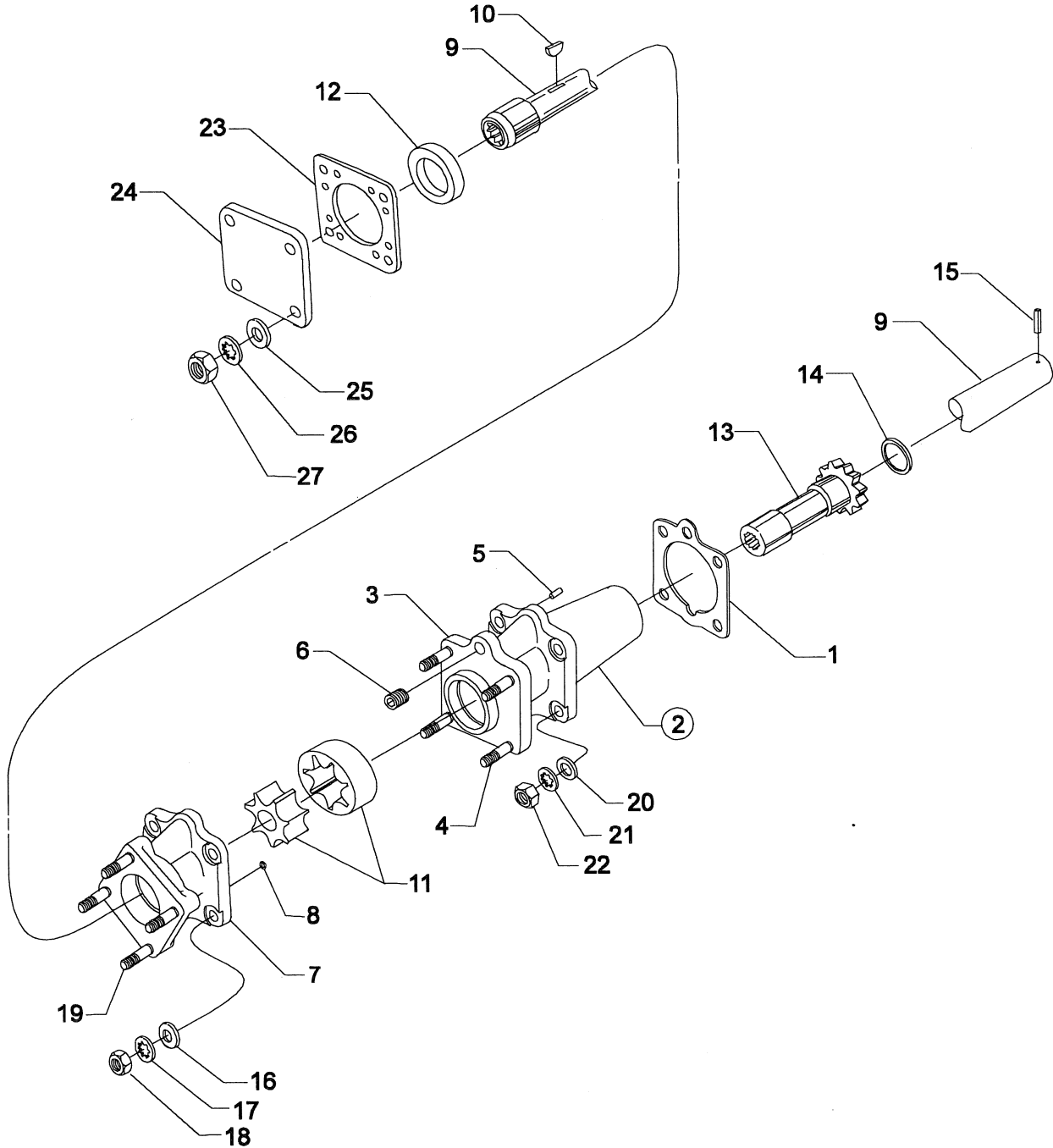


Figure 12. TURBO SCAVENGE PUMP AND HYDRAULIC PUMP DRIVE AND COVER

ACCESSORY HOUSING AND RELATED PARTS OIL FILTER ASSEMBLY AND OIL COOLER BYPASS VALVE

| FIG. REF. 13 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|-----------------|-------------|---------------------------------------|----------------|
| 1 | LW-12795* | GASKET, Oil filter adapter | 2 |
| 2 | 77852 | OIL FILTER BASE ASSEMBLY | 1 |
| 3 | 54D19625** | OIL FILTER, Textron (short with stud) | 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 | STD-1856 | SCREW, 1/4-20 x 1.00 long, hex. hd. | 3 |
| 8 | 53E22144 | VALVE ASSY., Temp. control oil cooler | 1 |
| 9 | 76510 | GASKET, Valve assembly | 1 |
| 10 | 25C-10 | STUD, 1/4-20 x 1-1/4 long | 1 |

* Extra gasket, shipped as loose part, with engine.

** Refer to the latest edition of Lycoming SSP-885 for oil filter kits and replacement filters.

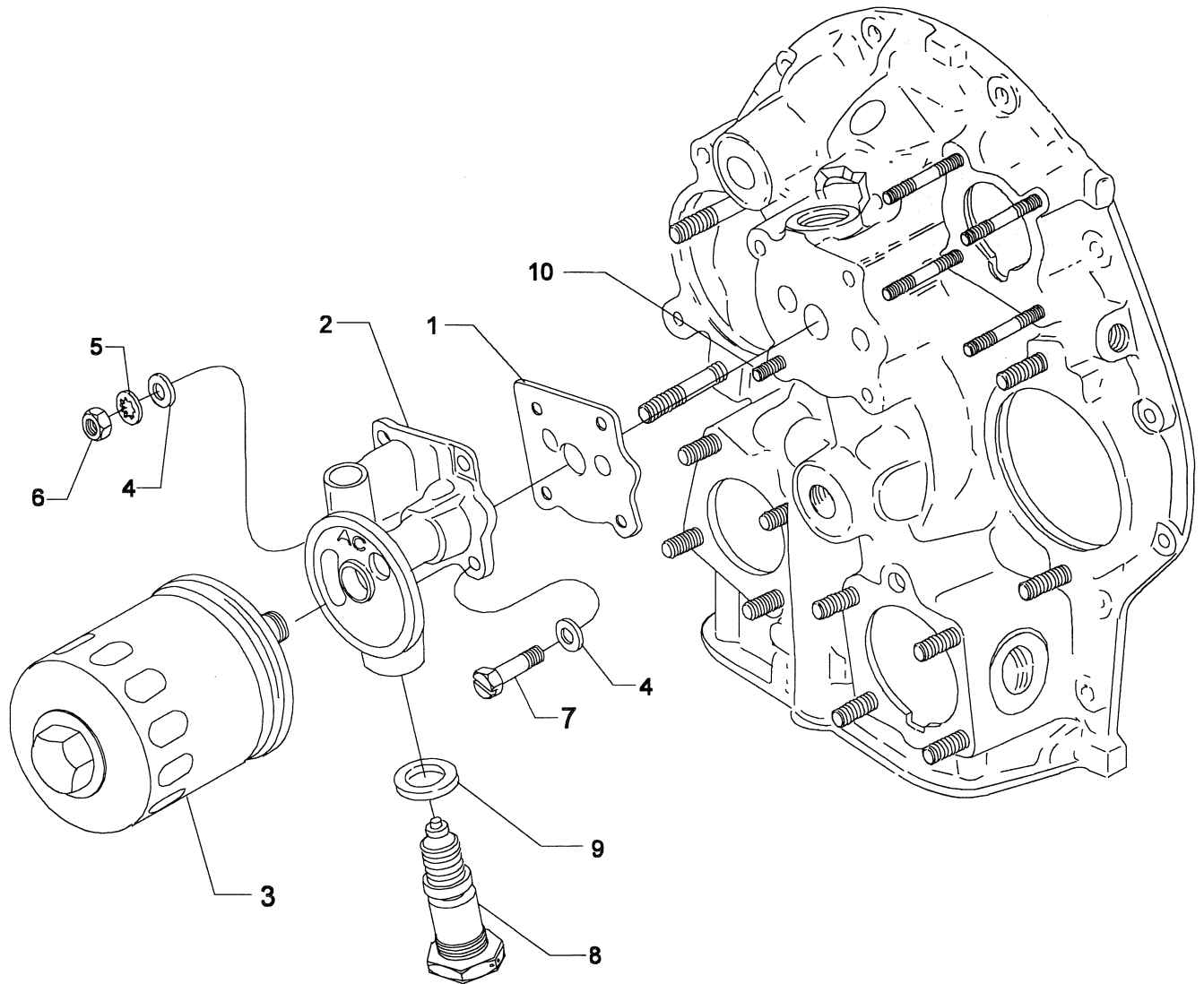


Figure 13. OIL FILTER ASSEMBLY AND OIL COOLER BYPASS VALVE

**CYLINDER, PISTON AND VALVE TRAIN
CONNECTING RODS, PISTONS AND RING ASSEMBLIES**

| FIG. REF. 14 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|-----------------|-------------|---|----------------|
| 1 | LW-11750 | CONNECTING ROD ASSEMBLY | 6 |
| 2 | LW-13923 | BUSHING, Connecting rod, upper | 6 |
| 3 | 75061 | BOLT, Connecting rod | 12 |
| 4 | LW-12186 | NUT, Connecting rod bolt | 12 |
| 5 | LW-13521 | BEARING, Connecting rod | 12 |
| 6 | LW-12733 | PISTON, Compression ratio, 8.00:1 | 6 |
| 7 | LW-14077 | PIN, Piston | 6 |
| 8 | LW-11775 | PLUG, Piston pin | 12 |
| 9 | 74241 | RING, Piston, compression | 12 |
| 10 | 14H21950 | RING, Piston, oil regulating, expander type | 6 |

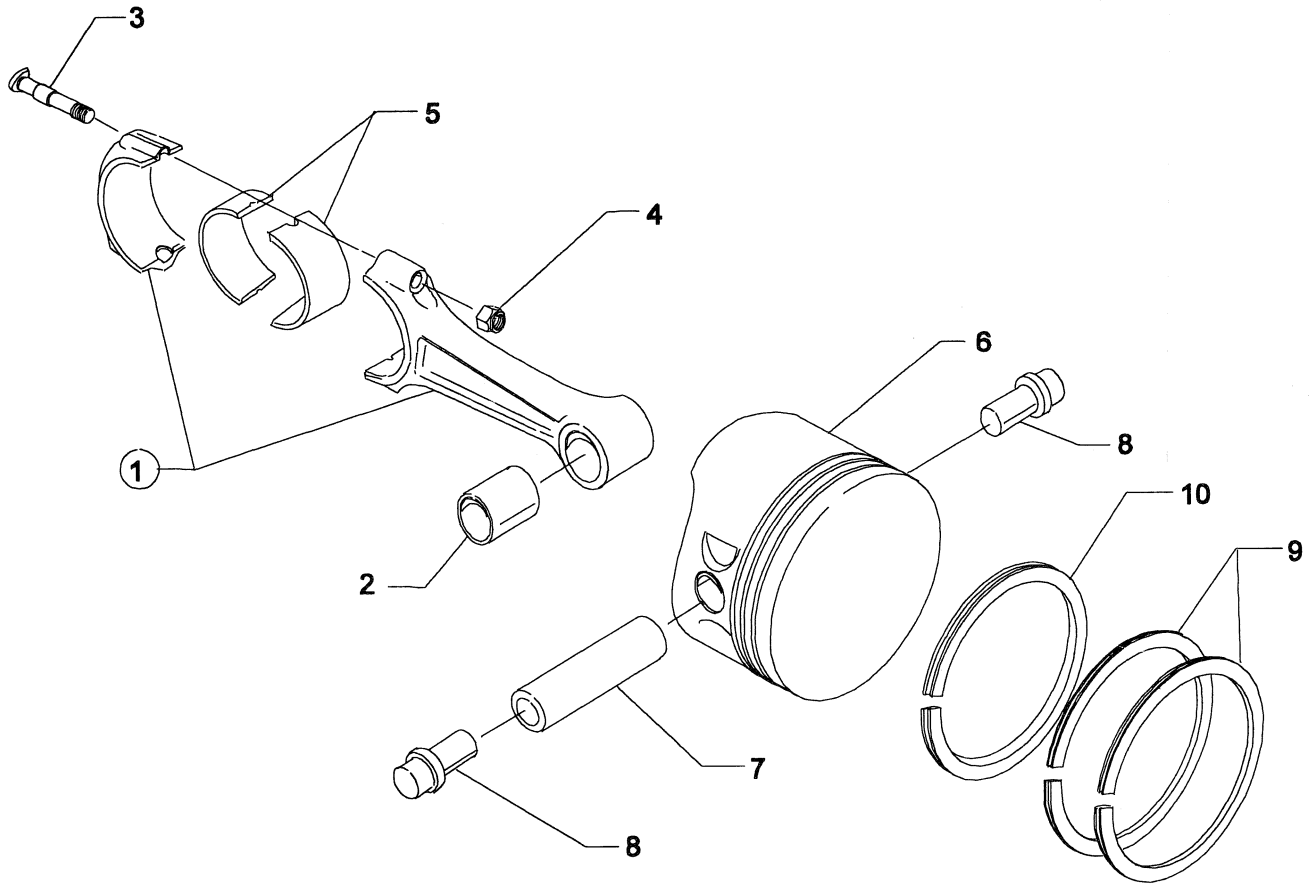


Figure 14. CONNECTING RODS, PISTONS AND RING ASSEMBLIES

CYLINDER, PISTON AND VALVE TRAIN CYLINDER ASSEMBLY

| FIG. REF. 15 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|--------------------|----------------|---------------------------------------|----------------------|
| 1 | 16A22130 | CYLINDER AND HEAD ASSY., Nitrided | 6 |
| 2 | 72057 | SEAT, Intake valve | 6 |
| 3 | 72058 | SEAT, Exhaust valve | 6 |
| 4 | 61681* | GUIDE, Intake valve, flanged | 6 |
| 5 | 16R22127* | GUIDE, Exhaust valve, flanged | 6 |
| 6 | 69260 | INSERT, Spark plug, 18-1.5 MM | 12 |
| 7 | STD-1353 | INSERT, No. 10-24 Helicoil x 3/8 long | 6 |
| 8 | 31C-12 | STUD, 5/16-18 x 1-1/2 long | 12 |
| 9 | 25C-8 | STUD, 1/4-20 x 1.00 long | 6 |
| 10 | MS20823-6D | ELBOW, 45°, 3/8 flared tube | 6 |
| 11 | 66610 | BUSHING, Rocker shaft | 24 |
| 12 | 1102 | PLUG, 1/8-27 NPT, Allen head | 6 |

* Refer to the latest edition of

Lycoming Service Instruction No. 1256.

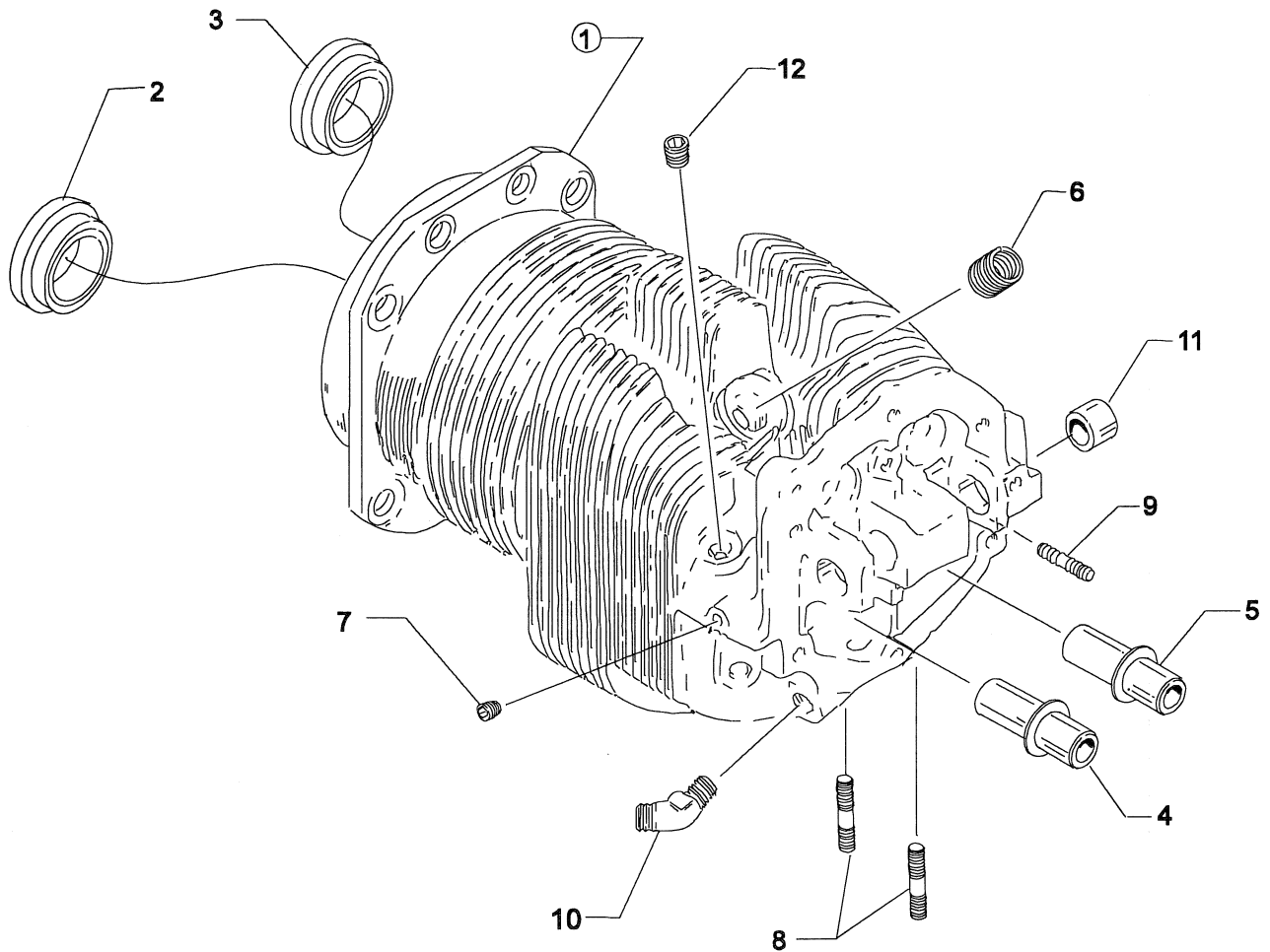


Figure 15. CYLINDER ASSEMBLY

CYLINDER, PISTON AND VALVE TRAIN VALVE ASSEMBLY AND RELATED PARTS

| FIG. REF. 16 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|--------------------|----------------|--|----------------------|
| 1 | 73938 | VALVE, Intake | 6 |
| 2 | LW-19001 | VALVE, Exhaust (rotator type) | 6 |
| 3 | LW-11795 | SPRING, Valve, inner | 12 |
| 4 | LW-11800 | SPRING, Valve, outer | 12 |
| 5 | LW-10077 | SEAT, Valve spring, upper intake | 6 |
| 6 | 65441 | SEAT, Valve spring, lower intake | 6 |
| 7 | LW-16475 | SEAT, Valve spring, upper exhaust (rotator type) | 6 |
| 8 | LW-13323 | SEAT, Valve spring, lower exhaust | 6 |
| 9 | 60009 | KEY, Valve intake | 12 |
| 10 | 17C21191 | KEY, Valve exhaust | 12 |
| 11 | 17C19386 | CAP, Valve stem, exhaust (rotator type) | 6 |
| 12 | 78290 | PLUNGER ASSY., Hydraulic tappet | 12 |
| 13 | 15B21319 | SOCKET, Hydraulic tappet | 12 |
| 14 | LW-11485 | SHROUD TUBE ASSY., Push rod | 12 |
| 15 | LW-14995 | SPRING, Shroud tube | 6 |
| 16 | LW-12272 | LOCKPLATE, Shroud tube | 6 |
| 17 | STD-1411 | NUT, 1/4-20 plain | 6 |
| 18 | LW-18661 | SEAL, Shroud tube | 12 |
| 19 | 70310 | SEAL, Shroud tube | 12 |
| 20 | 15F19957-34* | ROD ASSEMBLY, Push (A total of 3 required) | AR |
| | 15F19957-35* | ROD ASSEMBLY, Push (A total of 3 required) | AR |
| | 15F19957-36* | ROD ASSEMBLY, Push (A total of 3 required) | AR |
| | 73437* | ROD ASSEMBLY, Push (A total of 3 required) | AR |
| 21 | 17F19357** | ROCKER ASSY., Valve | 12 |
| 22 | 74637 | BUSHING, Valve rocker | 12 |
| 23 | LW-13790 | SHAFT, Valve rocker | 6 |
| 24 | LW-12892 | THRUST BUTTON, Rocker shaft | 12 |

* See latest edition of Lycoming Service Instruction No. 1060 for complete push rod application.

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

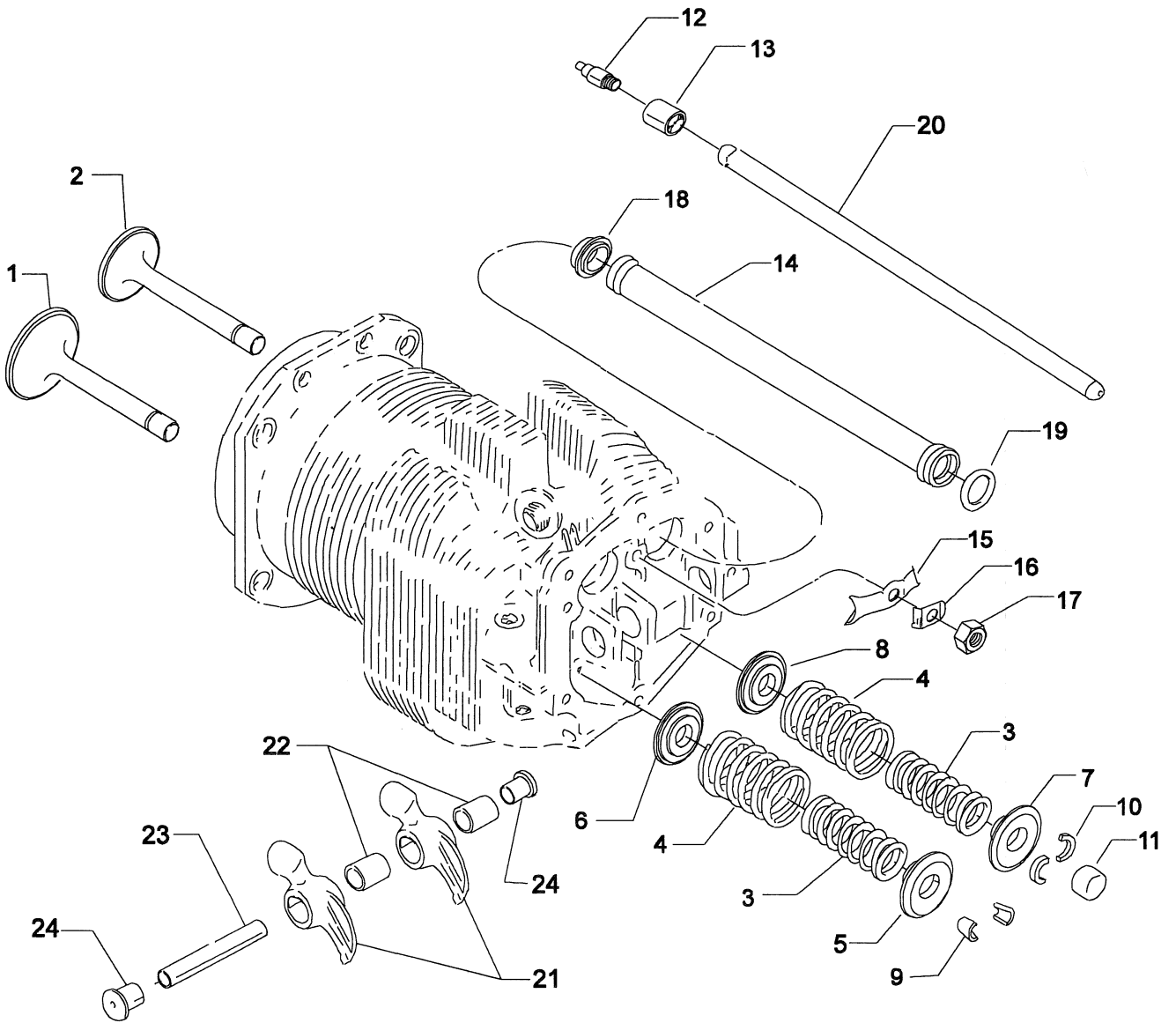


Figure 16. VALVE ASSEMBLY AND RELATED PARTS

**CYLINDER, PISTON AND VALVE TRAIN
CYLINDER RELATED PARTS**

| FIG. REF. 17 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|-----------------|---------------|--|----------------|
| 1 | 75906 | GASKET, Rocker box cover | 6 |
| 2 | 61247 | COVER, Rocker box | 6 |
| 3 | STD-1925 | SCREW, 1/4-20 x 5/8 long, pan. hd. | 36 |
| 4 | 74494 | PLATE, Spark plug reach caution | 6 |
| 5 | 71481 | RING, Oil seal, 3/32 dia. section x 4-27/32 I.D. | 6 |
| 6 | 77906 | SPACER, 33/64 I.D. x 7/8 O.D. x 1/8 thick | 2 |
| 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 | 24 |
| 9 | STD-2090 | NUT, 1/2-20 plain | 28 |
| 10 | STD-684 | NIPPLE, Straight, 3/8 I.D. hose | 6 |
| 11 | STD-1821 | HOSE, 3/8 I.D. x 2-1/2 long | 6 |
| 12 | LW-15592-5-05 | CLAMP, Hose | 12 |
| 13 | 68759 | TUBE ASSY., Cyl. head oil drain, cyl. no. 1 | 1 |
| 14 | 71737 | TUBE ASSY., Cyl. head oil drain, cyl. no. 2 | 1 |
| 15 | 68761 | TUBE ASSY., Cyl. head oil drain, cyls. no. 3,4,5,6 | 4 |
| 16 | 75339 | BAFFLE ASSY., Intercylinder | 4 |
| 17 | 71611 | RETAINER, Intercylinder baffle | 4 |
| 18 | 71610 | HOOK, Intercylinder baffle | 4 |

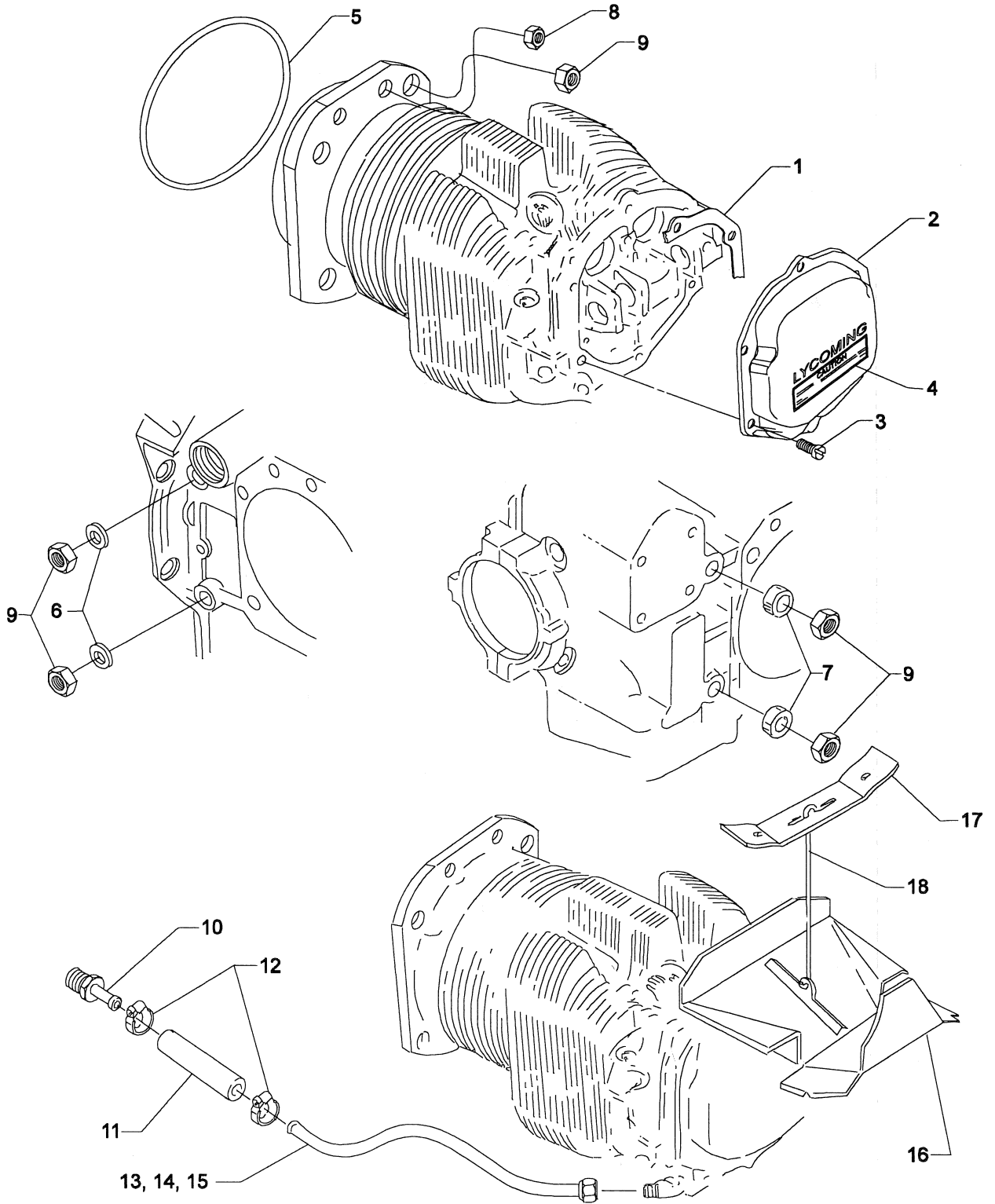


Figure 17. CYLINDER RELATED PARTS

IGNITION SYSTEM

PRESSURIZED MAGNETOS (SLICK), MAGNETO DRIVES, HARNESSSES AND SPARK PLUGS

| FIG. REF. 18 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|--------------|----------------|--|----------------|
| 1 | 73000 | COUPLING, Magneto drive | 1 |
| 2 | LW-13641 | CUSHION, Magneto drive | 4 |
| 3 | LW-19096 | GEAR RETAINER ASSY. | 2 |
| 4 | 67542 | BEARING, Ball | 2 |
| 5 | 62224 | GASKET, Magneto adapter | 1 |
| 6 | LW-12707 | ADAPTER, Magneto, right | 1 |
| 7 | LW-13926 | ADAPTER, Magneto, left, impulse coupling | 1 |
| 8 | LW-12681 | GASKET, Magneto | 2 |
| 9 | 66LP-0SCNP | MAGNETO, Right, Slick Model No. 6360 | 1 |
| 10 | 66LC35SDNP | MAGNETO, Left, (Impulse), Slick Model No. 6361 | 1 |
| 11 | 67J20608-P | HARNESS ASSY., Right, Slick P/N M-2966 | 1 |
| 12 | 67J20609-P | HARNESS ASSY., Left, Slick P/N M-2965 | 1 |
| 13 | 66M21195 | CLAMP, Magneto | 4 |
| 14 | STD-475 | WASHER, 5/16 lock, internal teeth | 4 |
| 15 | STD-1410 | NUT, 5/16-18 plain | 4 |
| 16 | STD-713 | COTTER PIN, 3/32 dia. x 3/4 long | 2 |
| 17 | STD-2007 | WASHER, 3/8 dia. seal | 1 |
| 18 | STD-33 | WASHER, 3/8 plain | 1 |
| 19 | LW-13227 | ADAPTER, Magneto pressurization | 1 |
| 20 | LW-13226 | NUT, 3/8-16 NC, plain | 1 |
| 21 | AN826-4 | TEE, 1/4 tube x 1/8 NPT | 1 |
| 22 | LW-12798-4S160 | HOSE ASSY., Right magneto to tee | 1 |
| 23 | LW-12798-4S111 | HOSE ASSY., Left magneto to tee | 1 |
| 24 | 66N21020 | VALVE ASSY., Relief | 1 |
| 25 | MS29512-04 | "O" RING | 1 |
| 26 | MS20822-4 | ELBOW, 1/4 tube to 1/8 NPT, 90° | 2 |
| 27 | 1182-H7* | SPARK PLUG, Champion (RHB37E) or Auburn (273) | 12 |
| ** | 01P19762-4-17 | BAG, Magneto harness attaching | 1 |

* Item No. 27 spark plugs are used in current production. See latest edition of Lycoming Service Instruction No. 1042 for complete listing of all approved spark plugs.

** See Page 4-2 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.

P/N 01P19762-4-17

| Part No. | Part Name | Qty. |
|----------------|------------------------------|------|
| LW-16266-25-25 | CLIP, One wire | 4 |
| LW-14060 | CLIP, Two wire | 4 |
| STD-8 | WASHER, 1/4 plain | 12 |
| STD-160 | WASHER, 1/4 lock, | 10 |
| STD-1874 | SCREW, 1/4 lock (rocker box) | 6 |
| 76734 | ZIP STRAP | 12 |
| LW-16266-10-75 | CLAMP | 1 |
| LW-16266-25-44 | CLIP, Three wire | 5 |
| STD-696 | WASHER, 1/4 thin | 6 |
| AN500-416-18 | SCREW, 1/4 x 1-1/8 long | 2 |
| STD-1925 | SCREW, 1/4 x 5/8 long | 4 |
| 72815 | BRACKET, Support clamp, 90° | 4 |
| STD-692 | SCREW, No. 10-32 x 1/2 long | 4 |
| STD-425 | WASHER, No. 10 plain | 4 |
| STD-670 | LOCKNUT, No. 10-32 | 4 |
| LW-M-2376 | PLATE, Spark plug cable | 2 |

ATTACHING HARDWARE

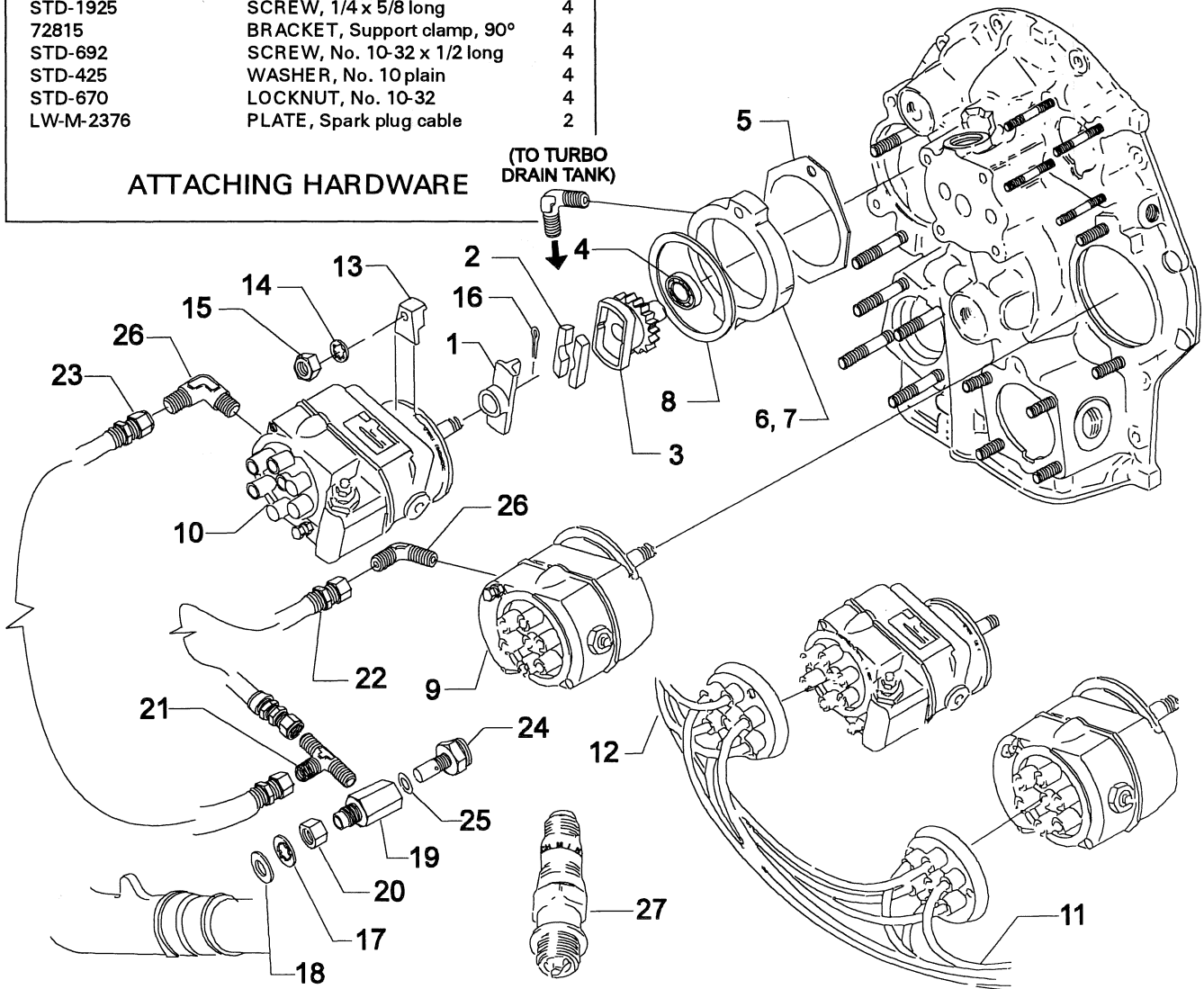


Figure 18. PRESSURIZED MAGNETOS (SLICK), MAGNETO DRIVES, HARNESSSES AND SPARK PLUGS

ELECTRICAL SYSTEM LIGHTWEIGHT STARTER AND ATTACHING PARTS

| FIG. REF. 19 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|-----------------|-------------|--|----------------|
| 1 | 05K21302-2* | KIT, Lightweight starter, 24 volt, 12/14 pitch | 1 |
| 2 | LW-16152 | SPACER, Starter/crankcase | 1 |
| 3 | 05K21194** | KIT, Shim, lightweight starter | 1 |
| 4 | STD-35 | WASHER, 5/16 plain | 4 |
| 5 | STD-475 | WASHER, 5/16 lock, internal teeth | 4 |
| 6 | LW-31-1.16 | BOLT, 5/16-18 x 1-5/32 long, hex. hd. | 1 |
| 7 | STD-1410 | NUT, 5/16-18 plain | 3 |

* See latest edition of Lycoming Starter Maintenance Manual SSP-490 for complete parts breakdown.

** See latest edition of Lycoming Service Instruction No. 1447 for shim application.

NOTE

See latest edition of Lycoming Service Instruction No. 1154 for complete listing of FAA approved starters, generators, alternators, regulators and relays.

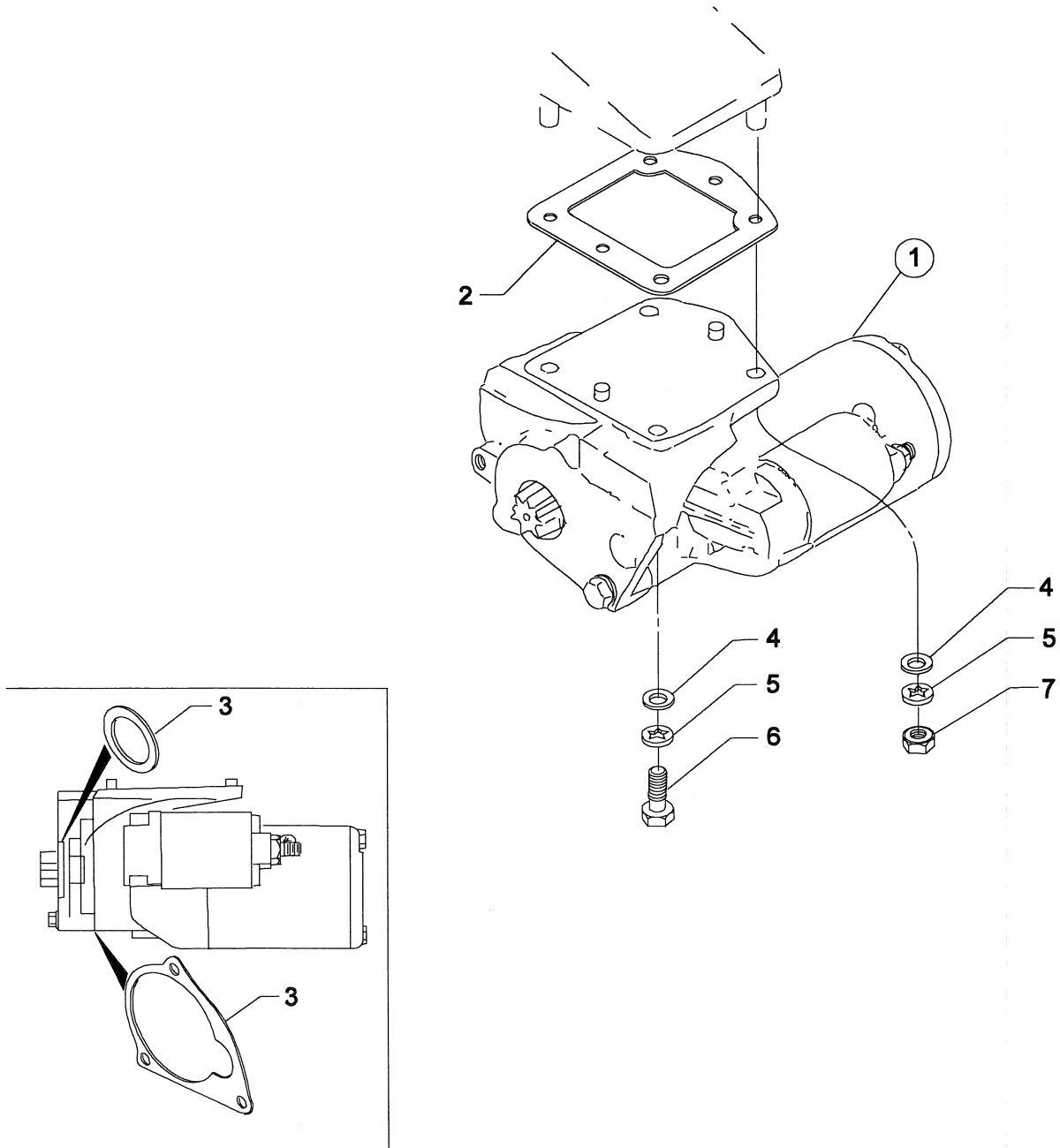


Figure 19. LIGHTWEIGHT STARTER AND ATTACHING PARTS

ELECTRICAL COMPONENTS (DUAL) ALTERNATOR MOUNTING AND ATTACHING PARTS

| FIG. REF. 20 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|-----------------|--------------|--|----------------|
| 1 | 07A22097 | BRACKET, Alternator | 1 |
| 2 | 07A22002 | BRACKET, Alternator, Ford, right | 1 |
| 3 | 07A22125 | BRACKET, Alternator, aft | 1 |
| 4 | STD-35 | WASHER, 5/16 plain | 4 |
| 5 | LW-31H2.13 | BOLT, 5/16-18 x 2-1/8 long, hex. hd. | 4 |
| 6 | 07F21998 | LINK, Alternator, Ford, left | 1 |
| 7 | 76534 | SHIM, 1-1/8 O.D. x 13/32 I.D. x .005 thick | AR |
| 8 | STD-35 | WASHER, 5/16 plain | 1 |
| 9 | LW-31H0.88 | BOLT, 5/16-18 x 7/8 long, hex. hd. | 1 |
| 10 | STD-1342 | WASHER, Plain, 7/8 O.D. x 25/64 I.D. x 1/8 thick | 1 |
| 11 | LW-38H1.09 | BOLT, 3/8-18 x 1-3/32 hex. hd., dr. hd. | 1 |
| 12 | AN7-44 | BOLT, 7/16-20 x 4-19/32 long, hex. hd., dr. end | 1 |
| 13 | STD-2092 | WASHER, 29/64 I.D. x 7/8 O.D. x 1/8 thick | 2 |
| 14 | AN310-7 | NUT, 7/16-20 slotted | 1 |
| 15 | LW-14650 | SHIM, 7/8 O.D. x 15/32 I.D. x .005 thick | AR |
| 16 | STD-713 | COTTER PIN, 3/32 dia. x 3/4 long | 1 |
| 17 | 07A21292 | BRACKET, Alternator (Dual) | 1 |
| 18 | STD-33 | WASHER, 3/8 plain | 2 |
| 19 | STD-678 | WASHER, 3/8 lock, internal teeth | 2 |
| 20 | 383-B | NUT, 3/8-24 plain | 2 |
| 21 | STD-632 | WASHER, 7/16 plain | 1 |
| 22 | AN7-46 | BOLT, 7/16-20 x 4-27/32 long, hex. hd. | 1 |
| 23 | LW-14650 | SHIM, 7/8 O.D. x 15/32 I.D. x .005 thick | AR |
| 24 | AN310-7 | NUT, 7/16-20 slotted | 1 |
| 25 | STD-713 | COTTER PIN, 3/32 dia. x 3/4 long | 1 |
| 26 | STD-669 | WASHER, 33/64 I.D. x 1.00 O.D. x 1/8 thick | 1 |
| 27 | STD-2221 | NUT, 1/2-20 self locking | 1 |
| 28 | 36A19951 | PULLEY & SHAFT ASSY., Idler | 1 |
| 29 | 78614 | PULLEY, Idler | 1 |
| 30 | 78629 | BALL BEARING, Alternator idler pulley | 1 |
| 31 | MS16625-1125 | RING, Internal retaining | 2 |
| 32 | LW-19238 | SHAFT, Alternator dual belt idler | 1 |
| 33 | LW-11635 | SHIELD, Alternator idler bearing | 1 |
| 34 | 76768 | LOCKWASHER, Alternator idler pulley bearing | 1 |
| 35 | 76769 | LOCKNUT, Alternator idler pulley bearing | 1 |
| 36 | 07F19875 | LINK, Alternator, Ford, left | 1 |
| 37 | 76534 | SHIM, 1-1/8 O.D. x 13/32 I.D. x .005 thick | AR |
| 38 | AN6-13 | BOLT, 3/8-24 x 1-29/64 long, hex. hd. | 1 |
| 39 | 01L21504 | SPACER, 13/32 I.D. x 7/8 O.D. x 31/64 long | 1 |
| 40 | STD-713 | COTTER PIN, 3/32 dia. x 3/4 long | 1 |
| 41 | LW-38H1.31 | BOLT, 3/8-16 x 1-5/16 long | 1 |
| 42 | STD-872 | NUT, 3/8-24 slotted | 1 |

NOTES: See latest edition of Lycoming Service Instruction No. 1154 for complete listing of FAA approved starters, generators, alternators, regulators, and relays.

Dual Alternator Package, Kit P/N 05J22183 available.

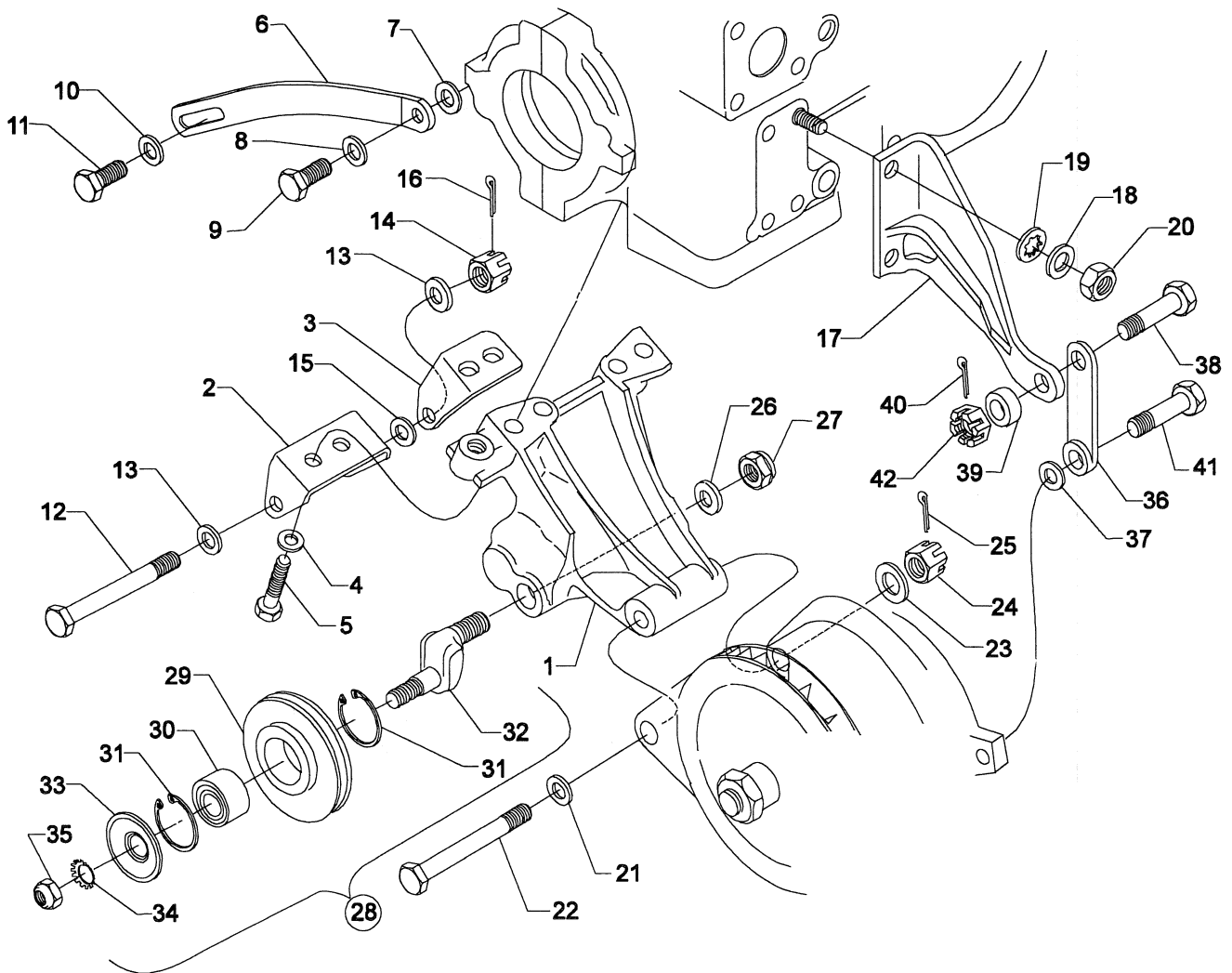


Figure 20. (DUAL) ALTERNATOR MOUNTING AND ATTACHING PARTS

**OIL SUMP AND INDUCTION SYSTEM
OIL SUMP ASSEMBLY AND ATTACHMENTS**

| FIG. REF. 21 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|--------------------|----------------|--|----------------------|
| 1 | 06B21326 | GASKET, Oil sump | 1 |
| 2 | 56A22004 | SUMP ASSY., Oil | 1 |
| 3 | 71699 | CONNECTION, Intake pipe | 6 |
| 4 | 25C-11 | STUD, 1/4-20 x 1-3/8 long | 13 |
| 5 | 25C-16 | STUD, 1/4-20 x 2.00 long | 1 |
| 6 | 38-15 | STUD, 3/8-16 x 1-7/8 long | 8 |
| 7 | 31C-14 | STUD, 5/16-18 x 1-3/4 long | 4 |
| 8 | STD-71 | PLUG, 3/8-18 NPT, Socket head | 1 |
| 9 | 1102 | PLUG, 1/8 pipe | 2 |
| 10 | 06E19769-1.63 | GASKET, 1-7/8 O.D. x 1-5/8 I.D. x 3/32 annular | 1 |
| 11 | LW-18434 | PLUG, Oil sump, 1-5/8 dia. | 1 |
| 12 | STD-1164 | INSERT, 5/16-18 Helicoil x 5/8 long | 1 |
| 13 | STD-1171 | INSERT, 3/8-16 Helicoil x 3/4 long | 3 |
| 14 | STD-8 | WASHER, 1/8 plain | 34 |
| 15 | STD-160 | WASHER, 1/4 lock, internal teeth | 27 |
| 16 | LW-25-1.13 | BOLT, 1/4-20 x 1-1/8 long, hex. hd. | 6 |
| 17 | LW-25-1.00 | BOLT, 1/4-20 x 1.00 long, hex. hd. | 6 |
| 18 | LW-25-1.63 | BOLT, 1/4-20 x 1-5/8 long, hex. hd. | 1 |
| 19 | STD-1411 | NUT, 1/4-20 plain | 21 |
| 20 | STD-551 | PLUG, 1/2-14 NPT, Sq. hd., drilled | 2 |
| 21 | 74655 | SPACER, Exhaust manifold bracket | 2 |
| 22 | 07H21150 | BRACKET, Exhaust manifold cable retainer | 1 |
| 23 | LW-19191 | BRACKET, Exhaust manifold cable | 1 |
| 24 | LW-13807 | ADAPTER ASSY., Fuel drain valve | 1 |
| 25 | 70484 | SCREEN, Oil suction | 1 |
| 26 | 06E19769-1.00 | GASKET, 1.00 I.D. x 1-1/4 O.D. x 3/32 annular | 1 |
| 27 | LW-12545 | PLUG, 5/8 hex. hd. x 1.00-20 thd. | 1 |

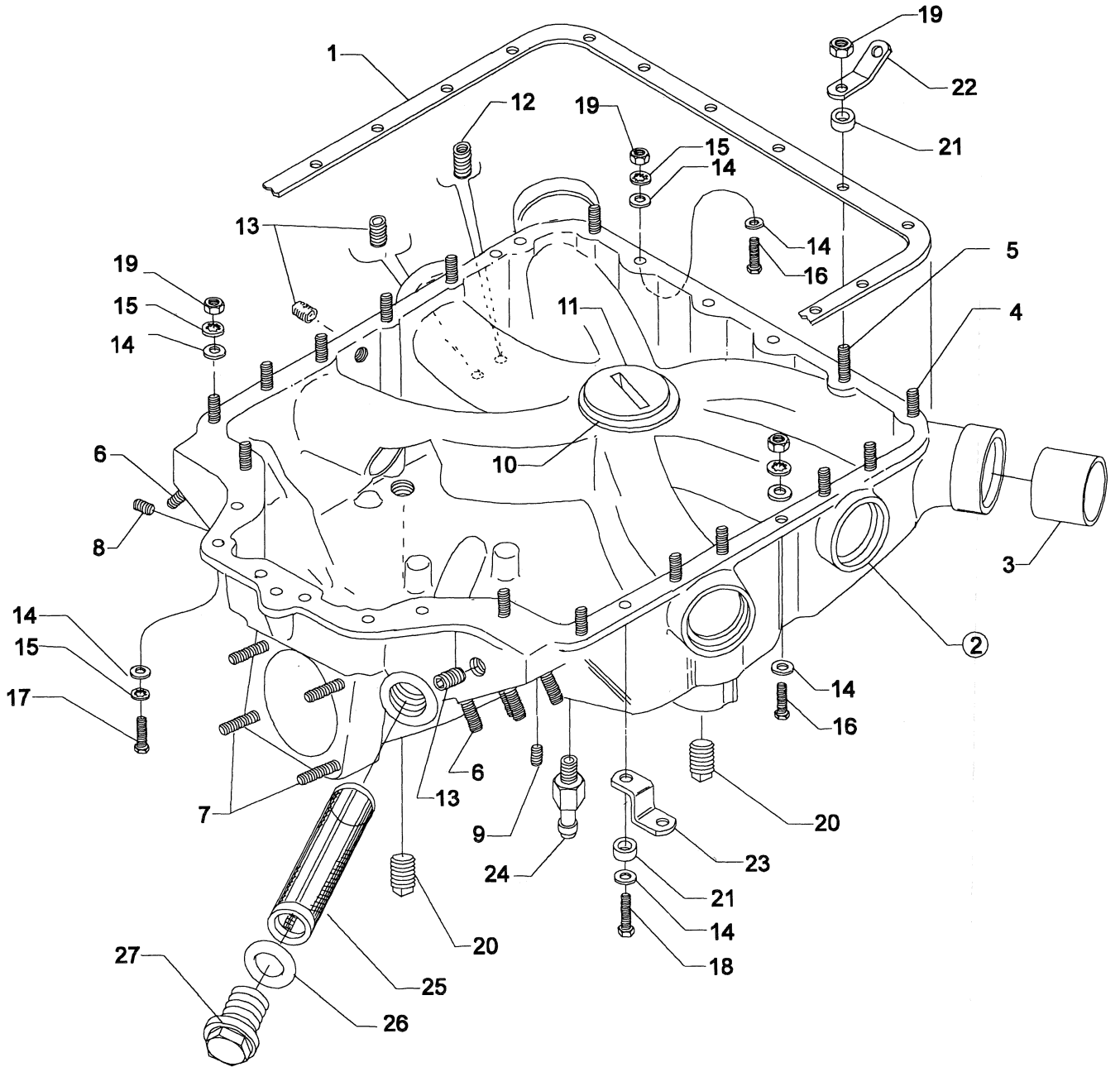


Figure 21. OIL SUMP ASSEMBLY AND ATTACHMENTS

**OIL SUMP AND INDUCTION SYSTEM
FUEL INJECTOR, FUEL MANIFOLD AND INJECTION NOZZLES**

| FIG. REF. 22 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|-----------------|----------------|--|----------------|
| 1 | 66224* | GASKET, Fuel injector | 1 |
| 2 | 61J22120 | FUEL INJECTOR (2576538-1) | 1 |
| 3 | STD-35 | WASHER, 5/16 plain | 4 |
| 4 | STD-475 | WASHER, 5/16 lock, internal teeth | 4 |
| 5 | STD-1410 | NUT, 5/16-18 plain | 4 |
| 6 | LW-18854 | NOZZLE ASSY., Manifold air bleed | 6 |
| 7 | 951391 | "O" RING (2 per assy.) | 12 |
| 8 | 63B21127 | MANIFOLD ASSY., Fuel | 1 |
| 9 | AN816-4 | NIPPLE, 1/4 tube & 1/8 NPT | 1 |
| 10 | STD-148 | NIPPLE, Union, 1/8 NPT | 6 |
| 11 | 02G21382 | NIPPLE, Nozzle pressure gauge | 1 |
| 12 | 73966 | SPACER, Fuel manifold bracket | 2 |
| 13 | 73965 | BRACKET, Fuel manifold | 2 |
| 14 | STD-82 | SCREW, No. 10-24 x 1/2 long, fill. hd. | 4 |
| 15 | STD-251 | WASHER, No. 10, internal lock | 4 |
| 16 | LW-12098-0-210 | TUBE ASSY., Fuel manifold to nozzle, cyls. 1,2,5,6 | 4 |
| 17 | LW-12098-0-170 | TUBE ASSY., Fuel manifold to nozzle, cyls. 3 & 4 | 2 |
| 18 | LW-16266-10-75 | CLAMP | 12 |
| 19 | LW-16266-10-13 | CLAMP | 12 |
| 20 | STD-860 | SCREW, No. 10-32 x 5/8 long, fill. hd. | 14 |
| 21 | STD-425 | WASHER, No. 10 plain | 2 |
| 22 | STD-670 | LOCKNUT, No. 10-32 | 14 |
| 23 | 73136 | BRACKET, 90° | 2 |
| 24 | LW-12798-4S340 | HOSE ASSY., Fuel injector to fuel manifold | 1 |
| 25 | 73136 | BRACKET, Fuel injector to fuel manifold hose support | 1 |
| 26 | LW-16266-10-63 | CLAMP (attach to bracket) | 1 |
| 27 | STD-860 | SCREW, No. 10-32 x 5/8 long, fill. hd. | 1 |
| 28 | STD-670 | LOCKNUT, No. 10-32 | 1 |

* Gasket is shipped loose; P/N 08C21936 cover plate is installed after engine test before engine is preserved.

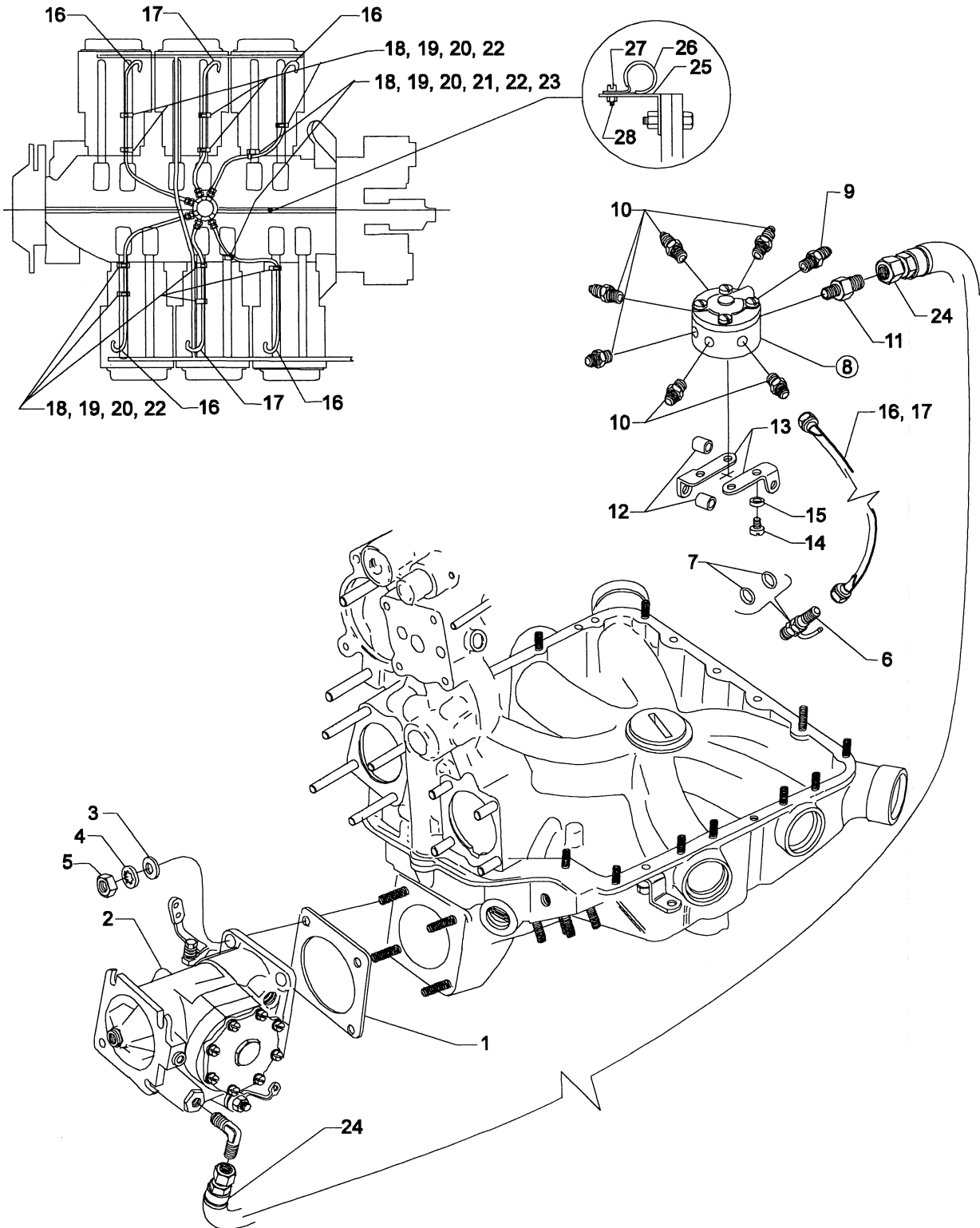


Figure 22. FUEL INJECTOR, FUEL MANIFOLD AND INJECTION NOZZLES

OIL SUMP AND INDUCTION SYSTEM INTAKE PIPES, HEAT SHIELDS AND AIR INLET DUCT

| FIG. REF. 23 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|-----------------|---------------|--|----------------|
| 1 | 70485 | PIPE, Intake | 6 |
| 2 | 69603 | HOSE, 1-3/4 I.D. x 2-3/16 O.D. x 1-3/4 long | 6 |
| 3 | LW-15592-8-28 | CLAMP, Hose | 12 |
| 4 | 71973 | GASKET, 2 bolt flange, 1-3/4 I.D. | 6 |
| 5 | 73346 | FLANGE, Intake pipe, upper | 6 |
| 6 | STD-8 | WASHER, 1/4 plain | 12 |
| 7 | STD-160 | WASHER, 1/4 lock, internal teeth | 12 |
| 8 | LW-25-1.25 | BOLT, 1/4-20 x 1-1/4 long, hex. hd. | 12 |
| 9 | 78366 | HEAT SHIELD, Intake pipes (Nos. 1,2,3,4 & 5) | 5 |
| 10 | 40J21989 | HEAT SHIELD, Intake pipe (No. 6) | 1 |
| 11 | LW-15592-8-24 | CLAMP, Hose, 1-13/16 dia. x 9/16 wide | 12 |
| 12 | 77504 | GASKET, Air inlet | 1 |
| 13 | 41A21968 | DUCT, Air inlet | 1 |
| 14 | STD-8 | WASHER, 1/4 plain | 4 |
| 15 | STD-160 | WASHER, 1/4 lock, internal teeth | 4 |
| 16 | LW-25-1.00 | BOLT, 1/4-20 x 1.00 long, hex. hd. | 4 |
| 17 | 02P21973 | TUBE, Air inlet, rear | 1 |
| 18 | 02P21972 | TUBE, Air inlet, front | 1 |
| 19 | LW-15490 | HOSE, 2-1/4 I.D. x 2-5/8 O.D. x 2-3/8 long | 1 |
| 20 | LW-14246 | HOSE, 2-1/2 to 2-1/4 I.D. x 3.00 long | 2 |
| 21 | LW-15592-8-36 | CLAMP, Hose | 4 |
| 22 | LW-15592-8-40 | CLAMP, Hose | 2 |
| 23 | 07E21978 | SUPPORT, Air inlet tube, front | 1 |
| 24 | 07C21979 | CLAMP, 2-1/4 I.D. x 5/8 wide | 2 |
| 25 | LW-19189 | CABLE, Retainer | 1 |
| 26 | STD-1411 | NUT, 1/4-20 plain | 2 |
| 27 | LW-25SS-0.63 | BOLT, 1/4-20 x 5/8 long, hex. hd. | 2 |
| 28 | STD-2044 | NUT, 1/4-20 self-locking | 2 |
| 29 | STD-475 | WASHER, 5/16 lock, internal teeth | 1 |
| 30 | LW-31-1.25 | BOLT, 5/16-18 x 1-1/4 long, hex. hd. | 1 |

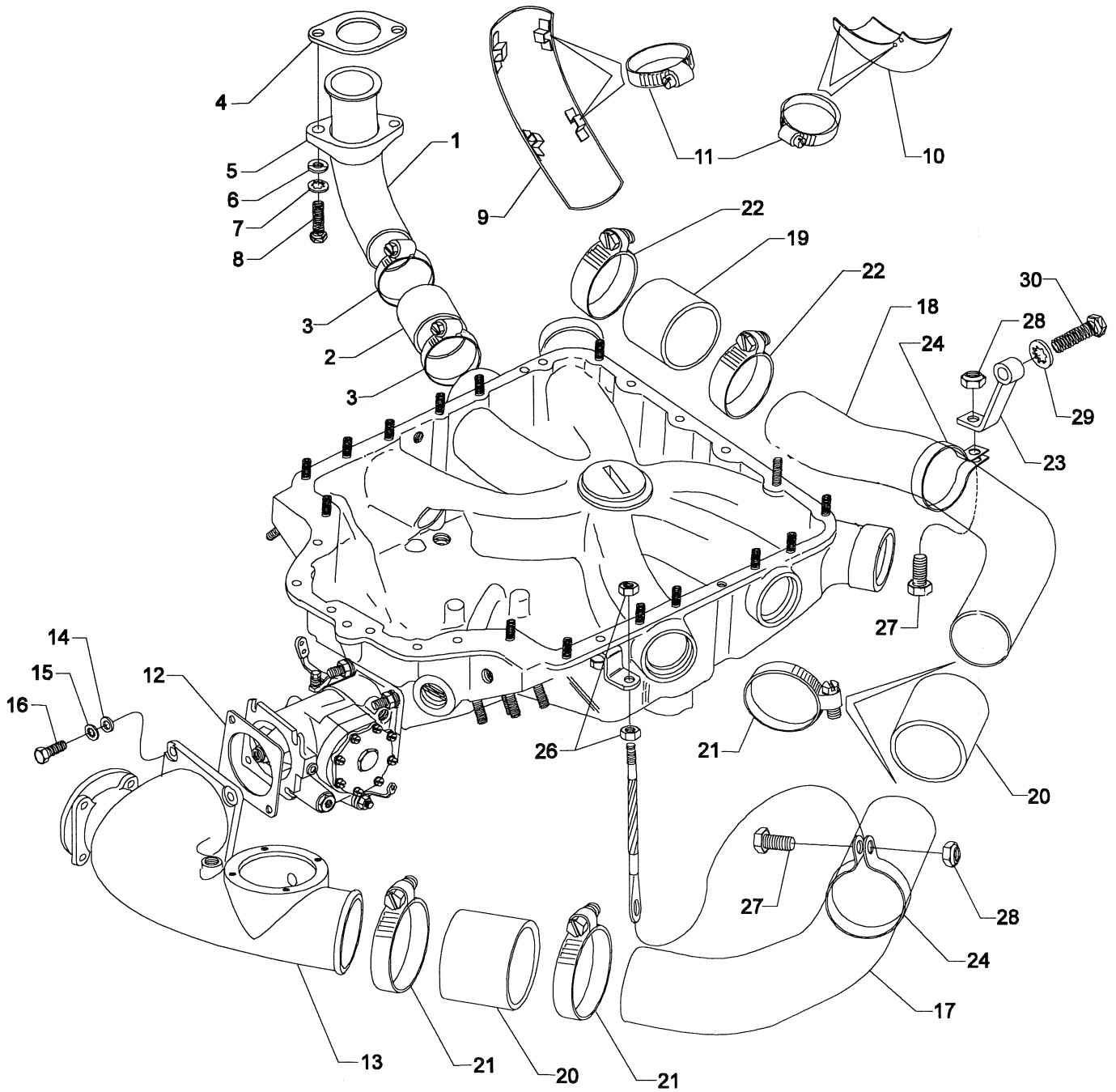


Figure 23. INTAKE PIPES, HEAT SHIELDS AND AIR INLET DUCT

OIL SUMP AND INDUCTION SYSTEM INJECTOR NOZZLE VENT MANIFOLDS, HOSES AND ATTACHMENTS

| FIG. REF. 24 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|--------------------|----------------|---|----------------------|
| 1 | 63E21054 | MANIFOLD, Right, injection nozzle vent | 1 |
| 2 | 63E21046 | MANIFOLD, Left, injection nozzle vent | 1 |
| 3 | LW-18737 | HOSE, 3/16 I.D. x 7/16 O.D. x 2.00 long | 6 |
| 4 | LW-15592-5-04 | CLAMP, 7/16 O.D. hose | 12 |
| 5 | 78127 | TUBE, Crossover, injection nozzle vent manifold | 1 |
| 6 | STD-2048 | HOSE, 1/4 I.D. x 19/32 O.D. x 2-7/16 long | 2 |
| 7 | LW-15592-5-04 | CLAMP, 7/16 O.D. hose | 4 |
| 8 | LW-16266-10-25 | CLIP, 1/4 I.D. for No. 10 screw | 4 |
| 9 | 73152 | BRACKET, Support clamp | 4 |
| 10 | STD-1856 | SCREW, 1/4-20 x 1.00 long, hex. hd. | 4 |
| 11 | STD-1685 | NUT, 1/4-20 self-locking | 4 |
| 12 | LW-16266-25-25 | CLIP, One wire | 2 |
| 13 | 78753 | BRACKET, Injector nozzle vent crossover | 1 |
| 14 | STD-692 | SCREW, No. 10-32 x 1/2 long, rd. hd. | 5 |
| 15 | STD-425 | WASHER, No. 10 plain | 5 |
| 16 | STD-670 | LOCKNUT, No. 10-32. | 5 |
| 17 | STD-1339 | PLUG, 1/16-27 NPT | 3 |
| 18 | AN821-4 | ELBOW, 1/4 flared tube, 90° | 1 |
| 19 | LW-12798-4S172 | HOSE ASSY., Left side | 1 |
| 20 | MS20822-4 | ELBOW, 1/4 tube & 1/8 NPT, 90° | 1 |
| 21 | LW-12798-4S111 | HOSE ASSY., Right side | 1 |

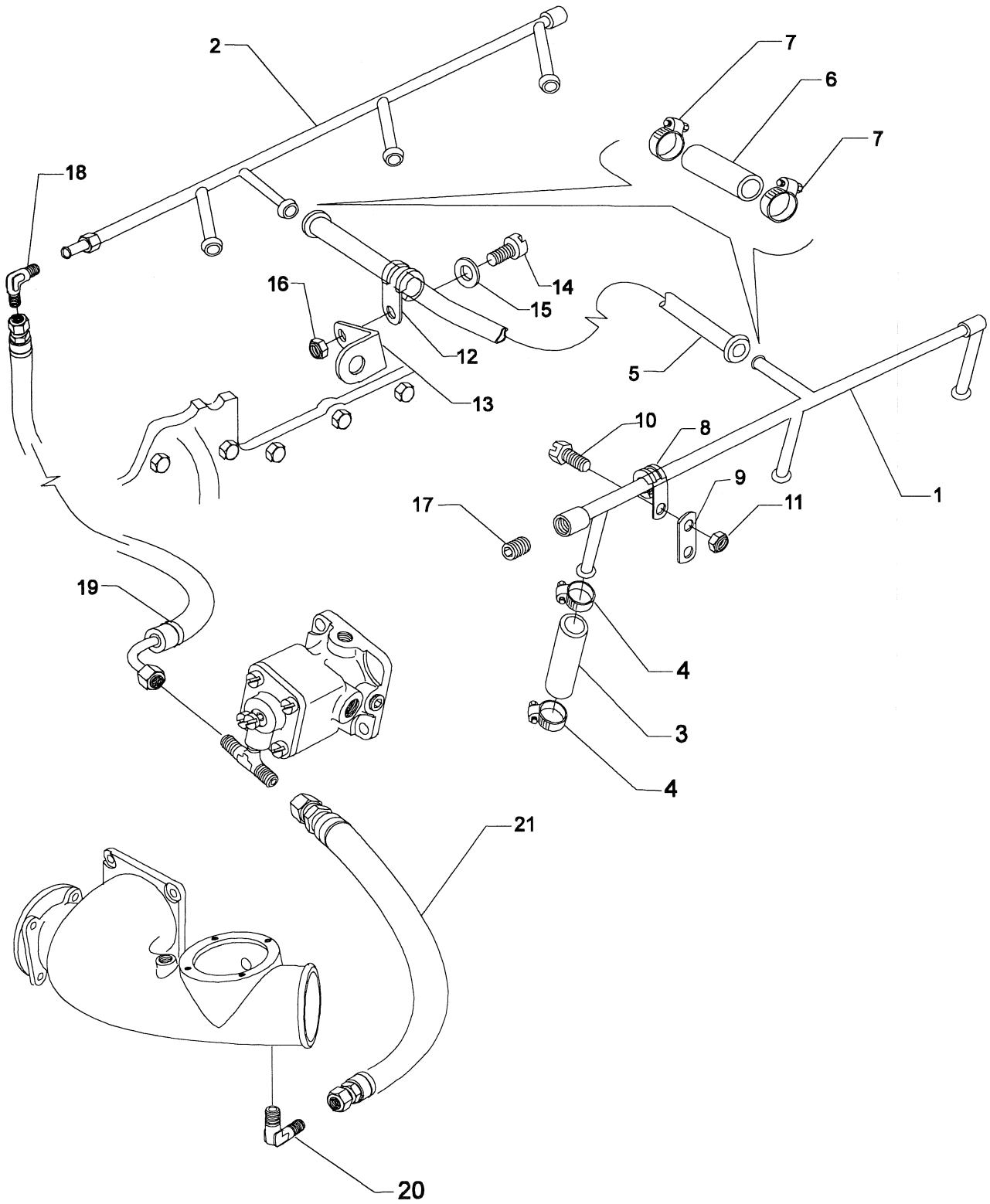


Figure 24. INJECTOR NOZZLE VENT MANIFOLDS, HOSES AND ATTACHMENTS

**TURBOCHARGER AND EXHAUST SYSTEMS
EXHAUST PIPES AND TRANSITION ASSEMBLY**

| FIG. REF. 25 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|--------------------|----------------|---|----------------------|
| 1 | 77611 | GASKET, Exhaust flange | 6 |
| 2 | LW-12728 | ADAPTER, Exhaust pipe | 1 |
| 3 | 40B19822 | PIPE, Exhaust, cyls. nos. 1 & 3 | 1 |
| 4 | 40B19825 | PIPE, Exhaust, cyl. no. 5 | 1 |
| 5 | 40B21964 | PIPE, Exhaust, cyl. no. 2 & crossover | 1 |
| 6 | 40G21969 | ADAPTER, Exhaust pipe, cyls. nos. 4 & 6 | 2 |
| 7 | 40B21967 | PIPE, Exhaust, cyls. nos. 4 & 6 | 2 |
| 8 | 40C19819 | FLANGE, V-band coupling, 2.00 tube | 1 |
| 9 | 78084 | GASKET, V-band coupling, 2.00 tube | 1 |
| 10 | LW-12093-5 | COUPLING, V-band | 1 |
| 11 | STD-2233 | LOCKNUT, 5/16-18 hex. | 12 |
| 12 | AN960C516 | WASHER, 5/16 plain | 12 |
| 13 | 47C21963 | TRANSITION, Exhaust | 1 |
| 14 | LW-19189 | CABLE, Exhaust manifold retainer | 1 |
| 15 | STD-1411 | NUT, 1/4-20 plain | 2 |
| 16 | LW-25SS-0.63 | BOLT, 1/4-20 x 5/8 long, hex. hd. | 1 |
| 17 | STD-2044 | NUT, 1/4-20 self-locking | 1 |
| 18 | LW-14525 | CLAMP, Exhaust pipe | 1 |

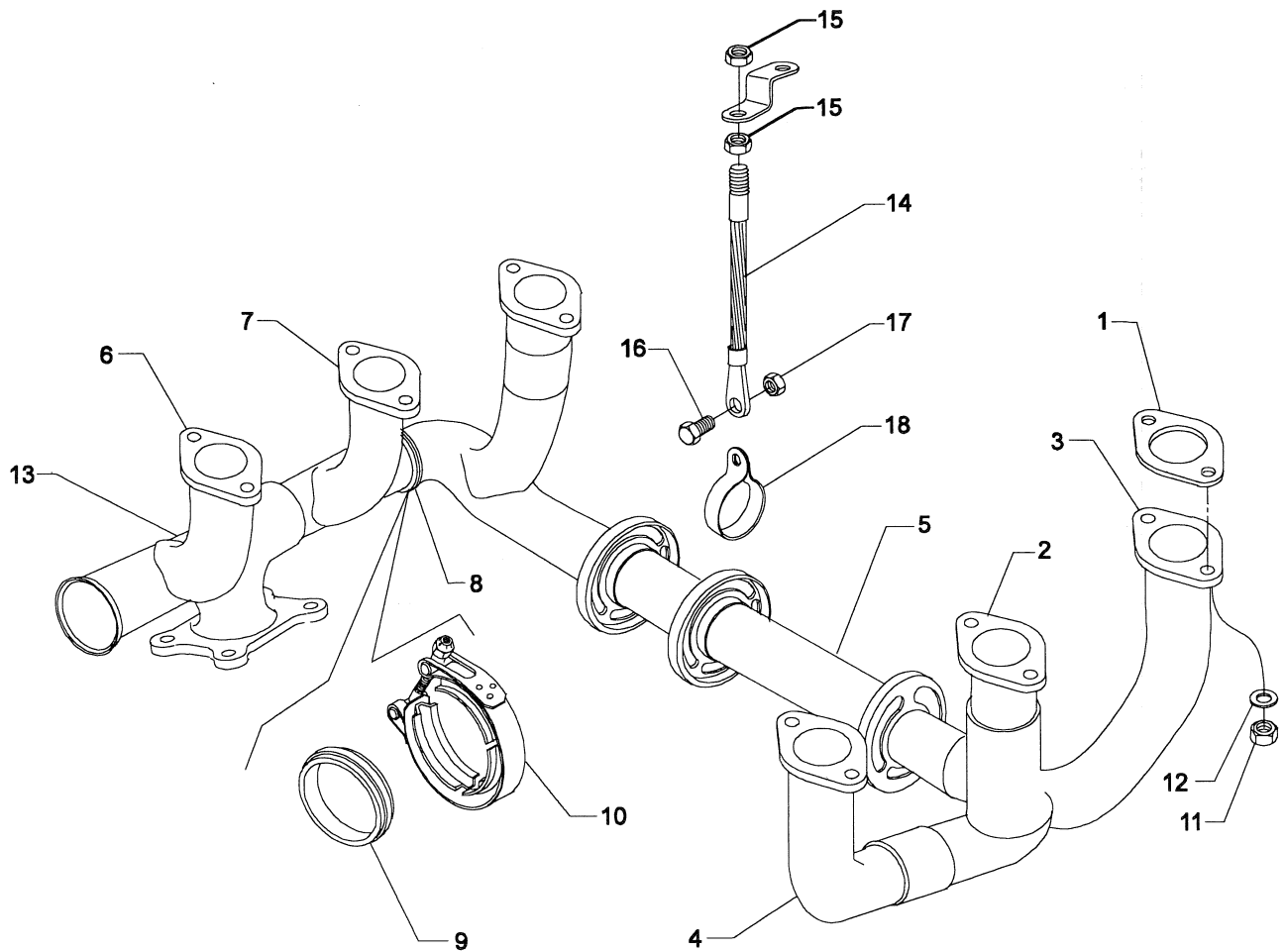


Figure 25. EXHAUST PIPES AND TRANSITION ASSEMBLY

**TURBOCHARGER AND EXHAUST SYSTEMS
TURBOCHARGER, SUPPORT AND ATTACHING PARTS**

| FIG. REF. 26 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|-----------------|--------------|--|----------------|
| 1 | 07A21962 | BRACKET, Turbocharger mounting | 1 |
| 2 | STD-678 | WASHER, 3/8 lock, internal teeth | 2 |
| 3 | LW-38-2.94 | BOLT, 3/8-16 x 2-15/16 long, hex. hd. | 2 |
| 4 | 07F21995 | STRUT, Turbo mounting | 1 |
| 5 | STD-2032 | WASHER, 3/4 O.D. x 25/64 I.D. x 3/32 thick | 1 |
| 6 | STD-678 | WASHER, 3/8 lock, internal teeth | 1 |
| 7 | LW-38-1.13 | BOLT, 3/8-16 x 1-1/8 long, hex. hd. | 1 |
| 8 | STD-475 | WASHER, 5/16 lock, internal teeth | 1 |
| 9 | LW-31-1.69 | BOLT, 5/16-18 x 1-11/16 long, hex. hd. | 1 |
| 10 | STD-1410 | NUT, 5/16-18 plain | 1 |
| 11 | 46C19836 | TURBOCHARGER (TA0413) (466011-2) | 1 |
| 12 | AN960C616 | WASHER, 3/8 plain | 4 |
| 13 | MS9321-12 | WASHER, 3/8 I.D. x 3/4 O.D. x 5/64 thick | 4 |
| 14 | AN6C12A | BOLT, 3/8-24 UNF x 1-21/64 long | 4 |
| 15 | AN960C516 | WASHER, 5/16 plain | 2 |
| 16 | STD-475 | WASHER, 5/16 lock, internal teeth | 2 |
| 17 | LW-31SS-0.88 | BOLT, 5/16-18 x 7/8 long, hex. hd. | 2 |
| 18 | MS20500-624 | NUT, 3/8-24 UNF, self-locking | 4 |
| 19 | LW-18861 | VALVE, Exhaust bypass | 1 |
| 20 | LW-12125-3 | COUPLING, V-band, 2-1/4 O.D. tube | 1 |
| 21 | 75845 | GASKET, V-band coupling, 2-1/4 O.D. tube | 1 |

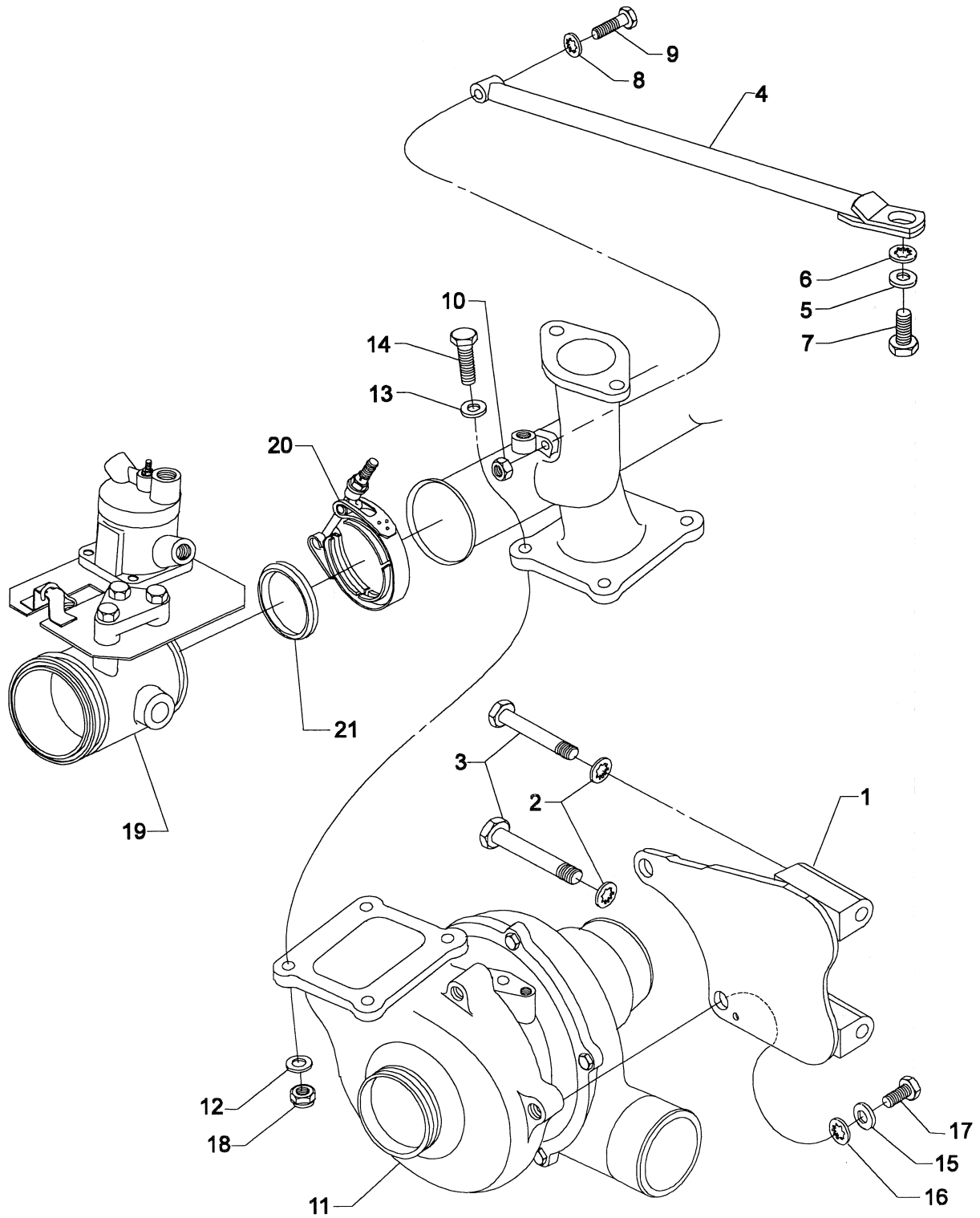


Figure 26. TURBOCHARGER, SUPPORT AND ATTACHING PARTS

TURBOCHARGER AND EXHAUST SYSTEMS TURBO OIL DRAIN TANK AND RELATED PARTS

| FIG. REF. 27 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|-----------------|----------------|--|----------------|
| 1 | 77813 | GASKET, Turbo oil inlet adapter | 1 |
| 2 | LW-12287 | ADAPTER, Turbo oil inlet | 1 |
| 3 | STD-35 | WASHER, 5/16 plain | 2 |
| 4 | STD-475 | WASHER, 5/16 lock, internal teeth | 2 |
| 5 | LW-31-0.94 | BOLT, 5/16-18 x 15/16 long, hex. hd. | 2 |
| 6 | 78212 | CHECK VALVE ASSY. | 1 |
| 7 | LW-12878-4S373 | HOSE ASSY., 1/4 hose, 45° elbow | 1 |
| 8 | LW-16266-25-63 | CLAMP, 5/8 I.D. x 1/4 dia. | 1 |
| 9 | LW-18038 | GASKET, Turbo oil drain adapter | 1 |
| 10 | 58B21913 | TANK, Turbo oil drain | 1 |
| 11 | STD-33 | WASHER, 3/8 plain | 2 |
| 12 | STD-678 | WASHER, 3/8 lock, internal teeth | 2 |
| 13 | LW-38-0.75 | BOLT, 3/8-16 x 3/4 long, hex. hd. | 2 |
| 14 | MS20822-8 | ELBOW, 1/2 flared tube, 3/8 NPT | 1 |
| 15 | MS20822-4 | ELBOW, 1/4 tube & 1/8 NPT, 90° | 1 |
| 16 | LW-10637 | ELBOW, 1/2 tube, 3/4-16, 90° | 1 |
| 17 | MS29512-08 | "O" RING, 41/64 I.D. x 5/64 section | 1 |
| 18 | LW-14848-8S360 | HOSE ASSY., 1/2 hose, 90° elbow | 1 |
| 19 | MS20822-4 | ELBOW, 1/4 tube & 1/8 NPT, 90° | 1 |
| 20 | LW-12798-4S274 | HOSE ASSY., 1/4 hose, straight | 1 |
| 21 | 07A21987 | BRACKET, Turbo oil drain tank | 1 |
| 22 | STD-425 | WASHER, No. 10 plain | 2 |
| 23 | STD-670 | LOCKNUT, No. 10-32 | 1 |
| 24 | STD-251 | WASHER, No. 10, internal lock | 1 |
| 25 | STD-63 | NUT, No. 10-32 plain | 1 |
| 26 | STD-860 | SCREW, No. 10-32 x 5/8 long, fill. hd. | 1 |
| 27 | STD-692 | SCREW, No. 10-32 x 1/2 long, rd. hd. | 1 |
| 28 | 72376 | ELBOW, 1/4 tube, 90° | 1 |
| 29 | MS29512-04 | "O" RING | 1 |

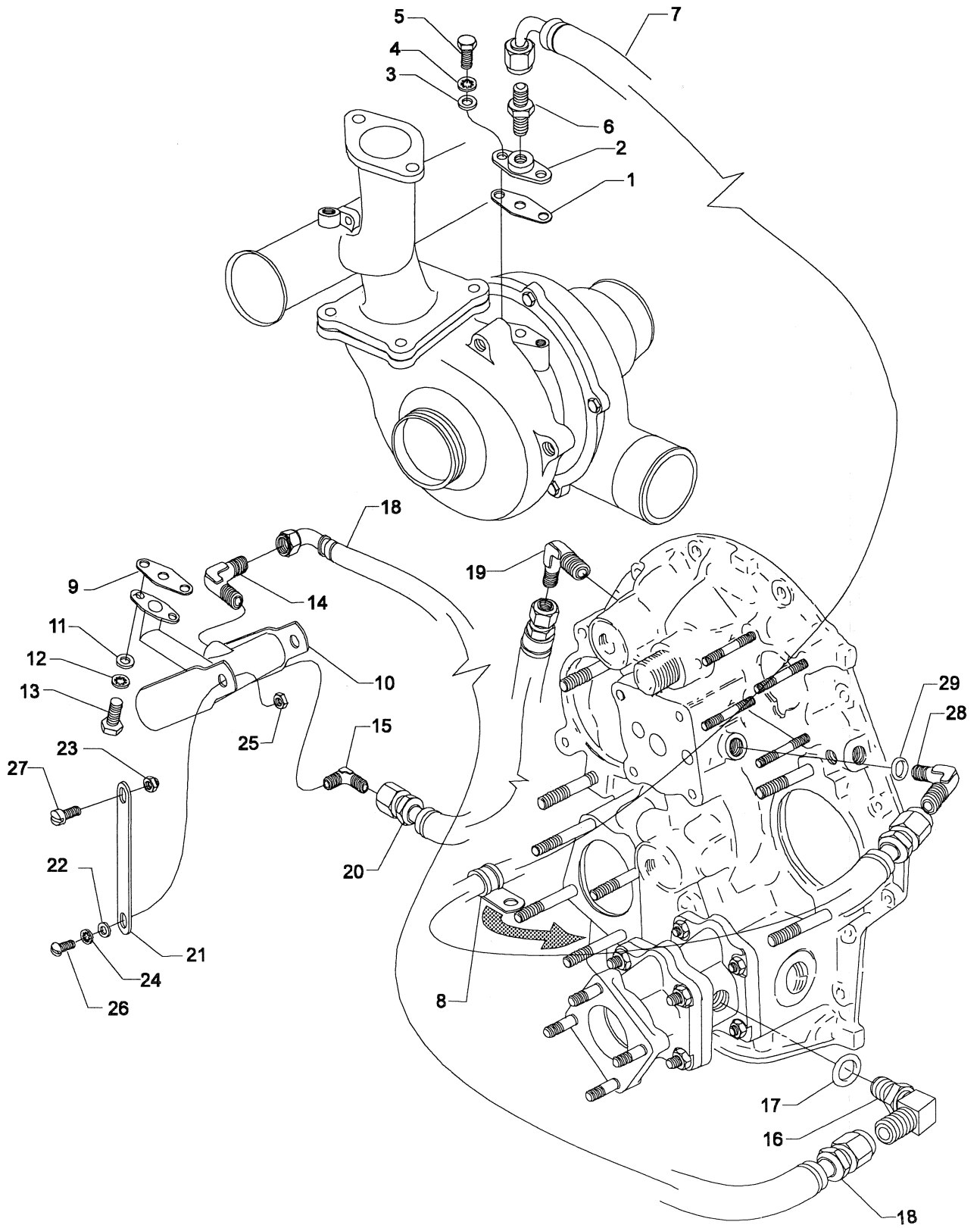


Figure 27. TURBO OIL DRAIN TANK AND RELATED PARTS

TURBOCHARGER AND EXHAUST SYSTEMS TURBOCHARGER CONTROLLERS, WASTEGATE AND HOSES

| FIG. REF. 28 | PART NUMBER | DESCRIPTION | QTY. PER ASSY. |
|-----------------|----------------|--|----------------|
| 1 | 72376*** | ELBOW, 1/4 tube, 90° | 1 |
| 2 | LW-12798-4S313 | HOSE ASSY., 1/4 hose, straight | 1 |
| 3 | 72377** | ELBOW, 3/8 flared tube, adj. | 1 |
| 4 | LW-12879-6S170 | HOSE ASSY., 3/8 hose, 45° elbow | 1 |
| 5 | LW-15476** | TEE | 1 |
| 6 | LW-12877-6S110 | HOSE ASSY., 3/8 hose, 90° elbow | 1 |
| 7 | 77461** | TEE, 3/8 tube | 1 |
| 8 | 72377** | ELBOW, 3/8 flared tube, adj. | 1 |
| 9 | AN893-12 | BUSHING, Reducer, 3/4-16 to 9/16 | 1 |
| 10 | MS29512-08 | "O" RING, 41/64 I.D. x 5/64 section | 1 |
| 11 | 72377** | ELBOW, 3/8 flared tube, adj. | 1 |
| 12 | LW-12877-6S142 | HOSE ASSY., 3/8 hose, 90° elbow | 1 |
| 13 | LW-12879-6S120 | HOSE ASSY., 3/8 hose, 45° elbow | 1 |
| 14 | AN912-9 | BUSHING, Reducer, 3/4 NPT | 1 |
| 15 | AN816-6 | NIPPLE, 3/8 flared tube x 1/4 NPT | 1 |
| 16 | AN816-4 | NIPPLE, 1/4 tube & 1/8 NPT | 1 |
| 17 | STD-1932 | BUSHING, 1/4 to 1/8 NPT | 1 |
| 18 | 73143 | ELBOW, 1/4 to 1/8 NPT, 90° | 1 |
| 19 | LW-12876-4S120 | HOSE ASSY., 1/4 hose, 90° elbow | 1 |
| 20 | LW-16572*** | NIPPLE, 1/4 tube to 7/16-20 | 1 |
| 21 | LW-12798-4S130 | HOSE ASSY., 1/4 hose, straight | 1 |
| 22 | AN814-4L | PLUG & BLEEDER, 7/16-20 UNF | 1 |
| 23 | MS29512-04 | "O" RING, 23/64 I.D. x 5/64 section | 1 |
| 24 | LW-16561** | NIPPLE, 1/4 tube to 9/16-18 | 1 |
| 25 | AN929-4* | CAP ASSY., 1/4 tube, pressure seal | 1 |
| 26 | 73314 | GASKET, Density & differential | 2 |
| 27 | LW-10682 | CONTROLLER, Density | 1 |
| 28 | 48B21935 | CONTROLLER, Differential pressure | 1 |
| 29 | STD-28 | WASHER, No. 10 plain | 8 |
| 30 | STD-1566 | SCREW, No. 10-24 x 3/4 long, fill. hd. | 8 |

* Install on LW-16561 Nipple.

** - Requires P/N MS29512-06 "O" Ring.

*** - Requires P/N MS29512-04 "O" Ring.

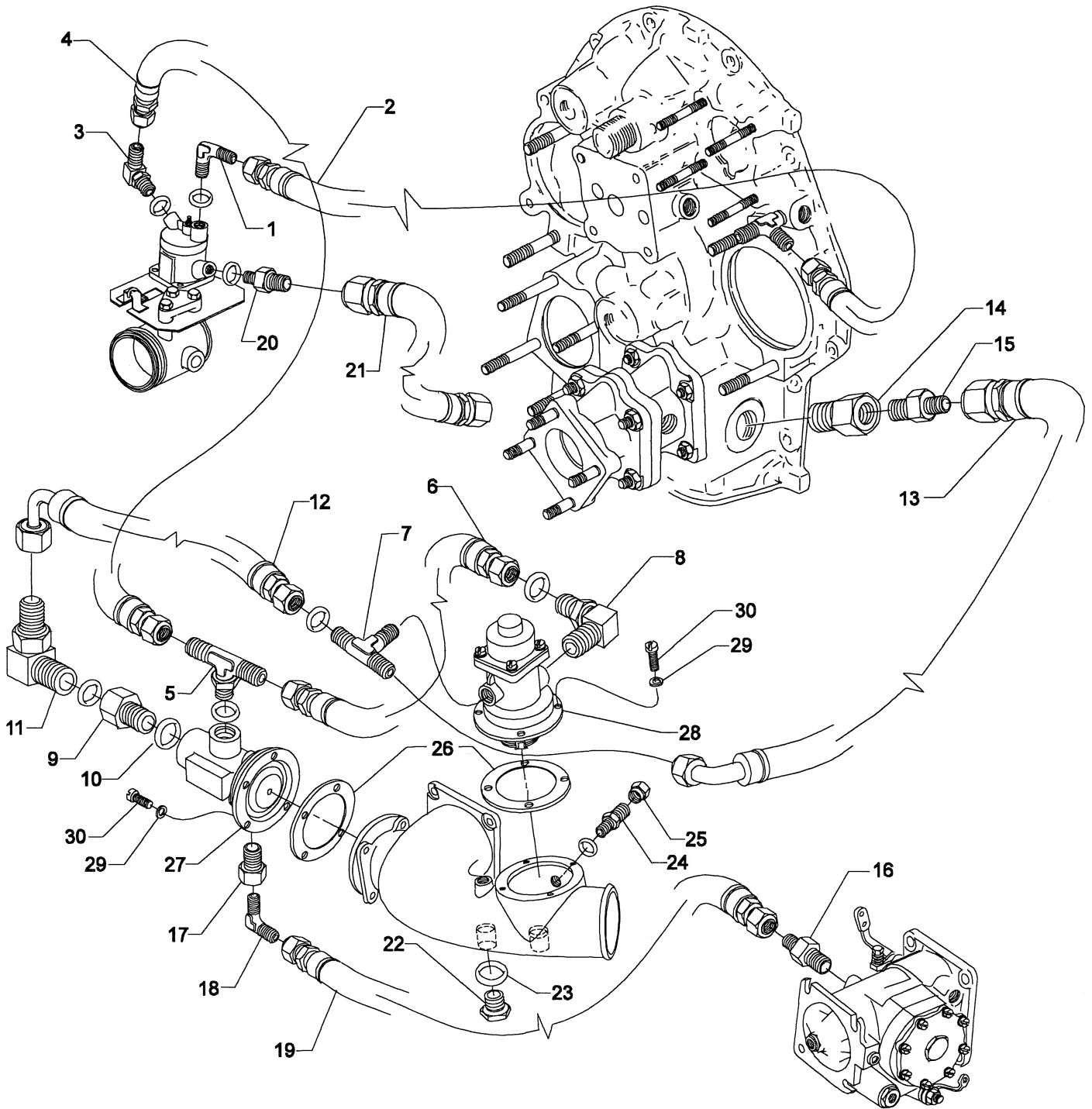


Figure 28. TURBOCHARGER CONTROLLERS, WASTEGATE AND HOSES

| |
|---|
| SERVICE KIT SECTION SEAL AND GASKET KIT |
|---|

| Part No. | Part Name | Qty. |
|----------------|----------------------------------|------|
| 05K21173 | SEAL AND GASKET SET | 1 |
| LW-12272 | LOCKPLATE, Shroud tube | 6 |
| LW-12681 | GASKET, Magneto | 2 |
| LW-12795 | GASKET, Oil filter adapter | 1 |
| 06B21326 | GASKET, Oil sump | 1 |
| LW-13792 | SEAL, Crankshaft oil | 1 |
| LW-14260 | SEAL, Tachometer drive oil | 1 |
| LW-14995 | SPRING, Shroud tube | 6 |
| LW-18038 | GASKET, Turbo. oil drain adapter | 1 |
| LW-18638 | LOCKPLATE, Crankshaft gear | 1 |
| LW-18661 | SEAL, Shroud tube | 12 |
| MS9068-009 | RING, Oil seal | 1 |
| STD-2231 | RING, Internal retaining | 1 |
| MS29512-04 | SEAL, "O" Ring | 2 |
| STD-213 | SEAL, Fuel pump adapter | 1 |
| 06A19956 | SEAL, Vac. and hyd. pump adapter | 1 |
| 8313 | GASKET, Vacuum pump | 2 |
| 61183 | GASKET, Accessory adapter | 1 |
| 62224 | GASKET, Magneto adapter | 1 |
| 66224 | GASKET, Fuel injector | 2 |
| 68315 | GASKET, Accessory drive adapter | 1 |
| 69164 | GASKET, Fuel pump adapter | 1 |
| 70310 | SEAL, Shroud tube | 12 |
| 70455 | GASKET, Prop. drive plug | 1 |
| 70457 | GASKET, Oil filler adapter | 1 |
| 71481 | RING, Seal, cylinder base | 6 |
| 71667 | LOCKPLATE, Fuel idler gearshaft | 1 |
| 71973 | GASKET, Intake flange | 6 |
| 72053 | GASKET, Governor | 1 |
| 72091 | RING, Oil seal | 2 |
| 73314 | GASKET, Density controller | 2 |
| 73818 | GASKET, Accessory housing | 1 |
| 74068 | SEAL, Oil level gage | 1 |
| 75845 | GASKET, V-Band (2.25 tube) | 1 |
| 75906 | GASKET, Rocker box cover | 6 |
| 77504 | GASKET, Fuel injector | 1 |
| 77611 | GASKET, Exhaust flange | 6 |
| 77813 | GASKET, Turbo. oil inlet adapter | 1 |
| 78084 | GASKET, V-Band (2.00 tube) | 1 |
| 06E 19769-0.63 | GASKET, Oil cooler bypass | 1 |
| 06E 19769-1.00 | GASKET, Oil suction screen | 1 |
| 06E 19769-1.25 | GASKET, Oil pressure relief | 1 |
| 06E 19769-1.63 | GASKET, Oil sump plug | 1 |
| MS29512-08 | SEAL, "O" Ring | 2 |

SERVICE KIT SECTION CYLINDER, PISTON AND RING ASSY.

| Part No. | Part Name | Qty. |
|------------|--------------------------------------|------|
| 05K22025 | KIT, CYLINDER, PISTON AND RING ASSY. | 1 |
| 16A22023 | CYLINDER ASSEMBLY | 1 |
| LW-19001 | VALVE, Exhaust | 1 |
| 73938 | 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 |
| 17E22020 | SEAT, Valve spring, lower exhaust | 1 |
| 65441 | SEAT, Valve spring, lower intake | 1 |
| 60009 | KEY, Valve, intake | 2 |
| 17C21191 | KEY, Valve, exhaust | 2 |
| 17C19386 | CAP, Valve stem, exhaust | 1 |
| LW-12733 | PISTON (8.00:1 compression) | 1 |
| 74241 | RING, Piston, compression | 2 |
| 14H21950 | RING, Piston, oil regulating | 1 |
| LW-14077 | PIN, Piston | 1 |
| 60828 | PLUG, Piston pin | 2 |
| LW-11775 | PLUG, Piston pin | 2 |
| 71481 | RING, Cylinder base seal | 1 |
| 70310 | SEAL, Shroud tube | 2 |
| LW-18661 | SEAL, Shroud tube | 2 |
| 75906 | GASKET, Rocker box cover | 1 |
| SSP-2472-1 | TAG | 1 |
| SSP-2272 | TAG | 1 |
| 77611 | GASKET, Exhaust flange | 1 |
| 71973 | GASKET, 2 bolt flange | 1 |

SERVICE KIT SECTION CRANKCASE ASSY. AND THRU STUD KIT

| Part No. | Part Name | Qty. |
|---------------|-----------------------------------|------|
| 11E20003-S3-S | CRANKCASE ASSY. AND THRU STUD KIT | 1 |
| 11E20003-S3* | CRANKCASE ASSEMBLY | 1 |
| 76220 | THRU STUD | 8 |
| 31C-14 | STUD, AN Governor | 4 |
| 31C-16 | STUD, Woodward Governor | 4 |
| STD-1339 | PLUG | 7 |
| AN565B1032H4 | SET SCREW | 1 |
| AN565B1032H5 | SET SCREW | 1 |
| SSP-272 | TAG, Piston cooling nozzles | 1 |
| SSP-582 | TAG, Thin wall bearings | 1 |
| SSP-1576 | TAG, Governor drive idler shaft | 1 |
| SSP-1769 | TAG, Governor drive pad studs | 1 |
| 1102 | PLUG, 1/8 pipe, oil pressure | 4 |

* See Figure 1, Page 1-1 for component parts.

NUMERICAL INDEX

| PART NO. | PART NAME | PAGE NO. | PART NO. | PART NAME | PAGE NO. |
|--------------|----------------|----------|-----------------|-------------------|----------|
| AN310-7 | Nut | 5-3 | LW-31-1.69 | Bolt | 7-3 |
| AN565B1032H5 | Set Screw | 1-9 | LW-31H0.88 | Bolt | 1-11 |
| AN6-13 | Bolt | 5-3 | LW-31H0.88 | Bolt | 5-3 |
| AN6-34A | Bolt | 1-13 | LW-31H2.13 | Bolt | 5-3 |
| AN6C12A | Bolt | 7-3 | LW-31SS-0.88 | Bolt | 7-3 |
| AN7-44 | Bolt | 5-3 | LW-38-0.75 | Bolt | 7-5 |
| AN7-46 | Bolt | 5-3 | LW-38-1.13 | Bolt | 7-3 |
| AN814-4L | Plug & Bleeder | 7-7 | LW-38-2.94 | Bolt | 7-3 |
| AN816-4 | Nipple | 6-3 | LW-38H1.09 | Bolt | 5-3 |
| AN816-4 | Nipple | 7-7 | LW-38H1.31 | Bolt | 5-3 |
| AN816-6 | Nipple | 2-5 | LW-RF2.239-0.70 | Ring | 2-9 |
| AN816-6 | Nipple | 7-7 | LW-10077 | Seat | 3-5 |
| AN821-4 | Elbow | 6-7 | LW-10442 | Gear | 1-9 |
| AN826-4 | Tee | 4-1 | LW-10541 | Gear Assy. | 1-9 |
| AN893-12 | Bushing | 7-7 | LW-10637 | Elbow | 7-5 |
| AN912-9 | Bushing | 7-7 | LW-10682 | Density | |
| AN929-4 | Cap Assy. | 7-7 | | Controller | 7-7 |
| AN932-6 | Plug | 2-1 | LW-10799 | Spacer | 2-5 |
| AN960C516 | Washer | 7-1 | LW-11485 | Shroud Tube Assy. | 3-5 |
| AN960C516 | Washer | 7-3 | LW-11635 | Shield | 5-3 |
| AN960C616 | Washer | 7-3 | LW-11713 | Spring | 1-5 |
| LW-25-0.63 | Screw | 1-11 | LW-11750 | Conn. Rod. Assy. | 3-1 |
| LW-25-0.94 | Bolt | 2-3 | LW-11775 | Plug | 3-1 |
| LW-25-1.00 | Bolt | 6-1 | LW-11795 | Spring | 3-5 |
| LW-25-1.00 | Bolt | 6-5 | LW-11800 | Spring | 3-5 |
| LW-25-1.13 | Bolt | 1-13 | LW-11997 | Seal | 1-5 |
| LW-25-1.13 | Bolt | 2-3 | LW-12093-5 | Coupling | 7-1 |
| LW-25-1.13 | Bolt | 6-1 | LW-12098-0-170 | Tube Assy. | 6-3 |
| LW-25-1.25 | Bolt | 6-5 | LW-12098-0-210 | Tube Assy. | 6-3 |
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