

INTRODUCTION

This illustrated parts catalog contains a complete parts listing for the Avco Lycoming IO-540-C4D5D wide cylinder flange 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 Avco Lycoming engines may be found in the appropriate Vendor's Parts Catalog. A list of these publications appear in the latest edition of Service Letter No. L114.

NOTE

The illustrations, pictures and drawings shown in this publication are typical of the subject matter they portray; in no instance are they to be interpreted as examples of any specific engine, equipment or part thereof.

SERVICE BULLETINS, INSTRUCTIONS AND LETTERS

Although the information contained in this parts catalog is up-to-date at time of publication, users are urged to keep abreast of later information through all Avco Lycoming distributors or from the factory by subscription. Consult the latest edition of Service Letter No. L114 for subscription information.

IO-540-C4D5D

TABLE OF CONTENTS

| SECTION | PAGE |
|--|------|
| Introduction | i |
| Table of Contents | ii |
| Oversize and Undersize Parts | iii |
| 1. CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP | |
| Crankcase Assembly and Related Parts | 1-1 |
| Crankshaft, Camshaft and Related Parts | 1-3 |
| Propeller Governor Drive and Crankcase Attaching Parts | 1-5 |
| 2. ACCESSORY HOUSING AND RELATED PARTS | |
| Accessory Housing Assembly, Fuel Pump, Drives and Covers | 2-1 |
| Oil Pump Tachometer Drive and Oil Filter Assembly | 2-3 |
| 3. CYLINDER, PISTON AND VALVE TRAIN | |
| Cylinder, Valve Assembly and Attaching Parts | 3-1 |
| Piston, Rocker and Intercylinder Baffle Assemblies | 3-3 |
| 4. IGNITION SYSTEM | |
| Magneto Drives and Magnetos | 4-1 |
| 5. ELECTRICAL SYSTEM | |
| Alternator, Starter and Attaching Parts | 5-1 |
| 6. OIL SUMP AND INDUCTION SYSTEM | |
| Oil Sump Assembly, Intake Pipes and Attaching Parts | 6-1 |
| Fuel Injector, Manifold, Lines, Hoses, and Attaching Parts | 6-3 |
| 7. SERVICE KIT SECTION | 7-1 |
| 8. NUMERICAL INDEX | 8-1 |

IO-540-C4D5D WIDE CYLINDER FLANGE SERIES

Oversize and Undersize Parts Listing

| PART NO. | DESCRIPTION | OVERSIZE | | | | | | | | | UNDERSIZE | | | | |
|----------|----------------|----------|-----|---|-----|-----|-----|-----|-----|------|-----------|-----|-----|--|--|
| | | P02 | P05 | P10 | P15 | P20 | P30 | P75 | P50 | P125 | M03 | M06 | M10 | | |
| LW-10647 | DOWEL | | X | X | | | | | | | | | | | |
| LW-11021 | BEARING | | | | | | | | | | X | X | X | | |
| LW-13521 | BEARING | | | X | | | | | | | X | X | X | | |
| LW-13884 | BEARING | | | | | | | | | | X | X | X | | |
| STD-2078 | DOWEL | X | X | X | X | | | | | | | | | | |
| 66610 | BUSHING | | X | X | | | | | | | | | | | |
| 66796 | INSERT | | | X | | | | | | | | | | | |
| 69796 | DOWEL | X | | | | | | | | | | | | | |
| 71903 | BUSHING -A, -B | | | SEE SERVICE INSTRUCTION NO. 1143 FOR SIZE | | | | | | | | | | | |
| 72057 | SEAT | | | X | | X | X | | | | | | | | |
| 72058 | SEAT | | | X | | X | X | | | | | | | | |
| 72060 | BUSHING | | X | X | X | X | | | | | | | | | |
| 72061 | BUSHING | | X | X | X | X | | | | | | | | | |
| 72062 | BUSHING | | X | X | X | X | | | | | | | | | |
| 73810 | BUSHING | | X | X | X | | | X | | X | | | | | |
| 73857 | RING | | | X | | X | | | | | | | | | |
| 74241 | RING | | | X | | | | | | | | | | | |
| 75089 | PISTON | | | X | | X | | | | | | | | | |
| LW-13792 | SEAL | | | | | | | | | X | | | | | |
| 74230 | GUIDE | | X | X | | X | X | | | | | | | | |
| 61681 | GUIDE | | X | X | | X | X | | | | | | | | |

Studs available in P03, P07 and 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-13521 in .003 undersize, order part number LW-13521-M3. 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 AND RELATED PARTS

| FIG. REF. 1 | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY |
|----------------------------|------------------------|--|--------------------------------------|
| 1 | LW-13847 | CRANKCASE ASSY. | 1 |
| 2 | 31C-12 | STUD, 5/16-18 x 1-1/2 long | 2 |
| 3 | 31C-13 | STUD, 5/16-18 x 1-5/8 long | 1 |
| 4 | 38-13 | STUD, 3/8-16 x 1-5/8 long | 24 |
| 5 | 38-16 | STUD, 3/8-16 x 2.00 long | 8 |
| 6 | 38-22 | STUD, 3/8-16 x 2-3/4 long | 1 |
| 7 | 38D-17 | STUD, 3/8-16 2-1/8 long drilled | 1 |
| 8 | 50-15 | STUD, 1/2-20 x 1-7/8 long | 12 |
| 9 | 69796 | DOWEL, Crankshaft bearing | 2 |
| 10 | LW-10647 | DOWEL, Crankshaft bearing | 6 |
| 11 | STD-514 | DOWEL, 5/16 dia. x 1/2 long | 2 |
| 12 | STD-557 | DOWEL, 1/2 dia. x 11/16 long | 2 |
| 13 | STD-1339 | PLUG, 1/16-27 NPT | 1 |
| 14 | 1102 | PLUG, 1/8-27 NPT | 4 |
| 15 | 65007 | RETAINER, Shroud tube seal | 12 |
| 16 | 72158 | BUSHING, Gov. drive idler shaft | 1 |
| 17 | 31C-16 | STUD, 5/16-18 x 2.00 long | 4 |
| 18 | 70457 | GASKET, Oil filler extension | 1 |
| 19 | 75761 | EXTENSION, Oil filler, long | 1 |
| | 75675 | EXTENSION, Oil filler, (short), 2-3/16 long | 1 |
| 20 | 72220 | GASKET, Oil level gage | 1 |
| 21 | 73120 | GAGE ASSY., Oil level | 1 |
| | LW-14771 | GAGE ASSY., Oil level, (short) | 1 |
| 22 | 72306 | BRACKET, Engine mounting, (Dynafoval) | 4 |
| 23 | STD-33 | WASHER, 3/8 plain | 16 |
| 24 | STD-678 | WASHER, 3/8 lock | 16 |
| 25 | STD-596 | NUT, 3/8-24 plain | 16 |
| 26 | 1028-B | BALL, 11/16 dia. | 1 |
| 27 | 61084* | SPRING, Oil pressure relief valve | un |
| 28 | STD-425 | WASHER, No. 10 plain, (Max. 9) | un |
| 29 | STD-1045 | GASKET, 1-1/4 I.D. x 1-1/2 O.D. x 3/32 annular | 1 |
| 30 | 76529 | PLUG, Oil relief valve | 1 |
| 31 | LW-11021 | BEARING CRANKSHAFT | 6 |
| 32 | LW-13884 | BEARING CRANKSHAFT FRONT | 2 |
| 33 | LW-13792 | SEAL, Crankshaft oil | 1 |
| 34 | 72091 | RING, Oil seal 23/64 I.D. x 7/64 dia. section | 2 |
| 35 | 72877 | BODY, Hydraulic tappet | 12 |

* Select spring to give a minimum of three threads exposed on adjusting screw to allow field adjustment.

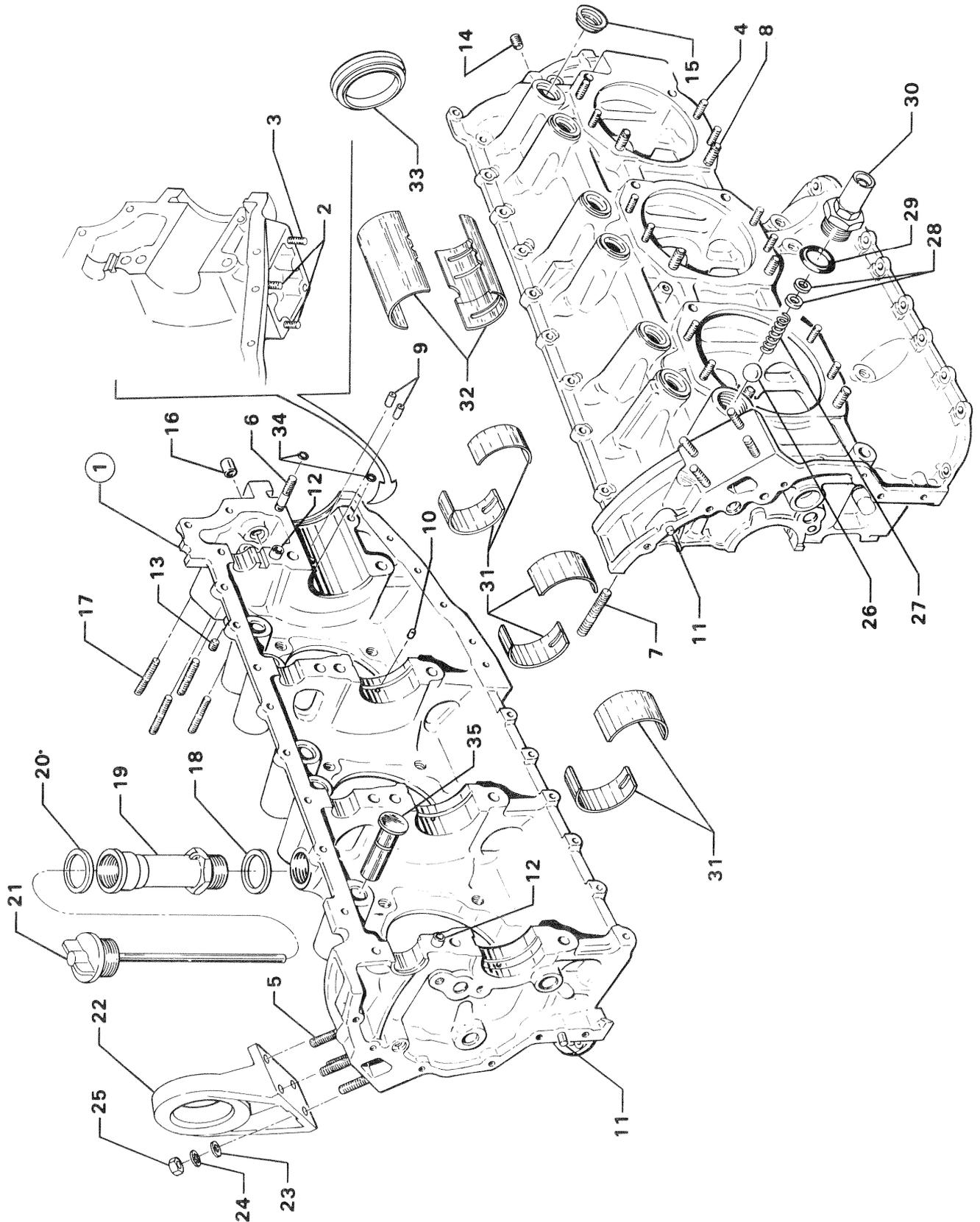


Figure 1. Crankcase Assembly and Related Parts

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

| FIG. REF. 2 | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY |
|----------------------------|------------------------|---|--------------------------------------|
| 1 | LW-17680 | CRANKSHAFT & COUNTERWEIGHT ASSY. | 1 |
| 2 | LW-17651 | CRANKSHAFT & PLUG ASSY. | 1 |
| 3 | STD-1211 | PLUG, 2.00 dia. expansion | 1 |
| 4 | 73810 | BUSHING, Crankshaft dynamic counterweight | 4 |
| 5 | 71640 | PLUG, 1-3/8 dia. | 1 |
| 6 | 72062 | BUSHING, Propeller flange, long | 4 |
| 7 | 72061 | BUSHING, Propeller flange, short | 1 |
| 8 | 72060 | BUSHING, Propeller flange, indexing | 1 |
| 9 | STD-2078 | DOWEL, 3/8 O.D. x 1/2 long | 1 |
| 10 | 72801 | COUNTERWEIGHT ASSY. | 2 |
| 11 | 71903 | BUSHING, Dynamic counterweight | 8 |
| 12 | 72797 | ROLLER, Dynamic counterweight, 6.3 order | 2 |
| 13 | 72965 | ROLLER, Dynamic counterweight, 5.1 order | 2 |
| 14 | LW-14820 | RING, Internal retaining | 8 |
| 15 | 71907 | WASHER, Dynamic counterweight | 8 |
| 16 | LW-10284 | GEAR, Crankshaft | 1 |
| 17 | LW-10332 | LOCKPLATE, Crankshaft gear | 1 |
| 18 | AN8-14A | BOLT, 1/2-20 x 1-19/32 long | 1 |
| 19 | 76148 | CAMSHAFT | 1 |
| 20 | 77579 | SUPPORT ASSY., Starter ring gear, 12/14 pitch | 1 |
| 21 | 72566 | GEAR, Starter ring, 12/14 pitch | 1 |
| 22 | LW-10290 | GEAR ASSY., Crankshaft idler | 1 |
| 23 | LW-10297 | GEAR ASSY., Crankshaft idler (heavy) | 1 |
| 24 | LW-10299 | SHAFT CRANKSHAFT IDLER GEAR | 1 |
| 25 | LW-10300 | SHAFT CRANKSHAFT IDLER GEAR | 1 |
| 26 | LW-10325 | SPACER, Idler gear | 1 |
| 27 | 76155 | SHAFT ASSY., Tachometer | 1 |
| 28 | 78368 | PIN, 3/16 x 2-6/16 long | 1 |
| 29 | 76118 | SPACER, Tachometer shaft centering | 1 |
| 30 | MS16625-1081 | RING, Internal retaining | 1 |
| 31 | 61544 | PLUNGER, Fuel pump | 1 |

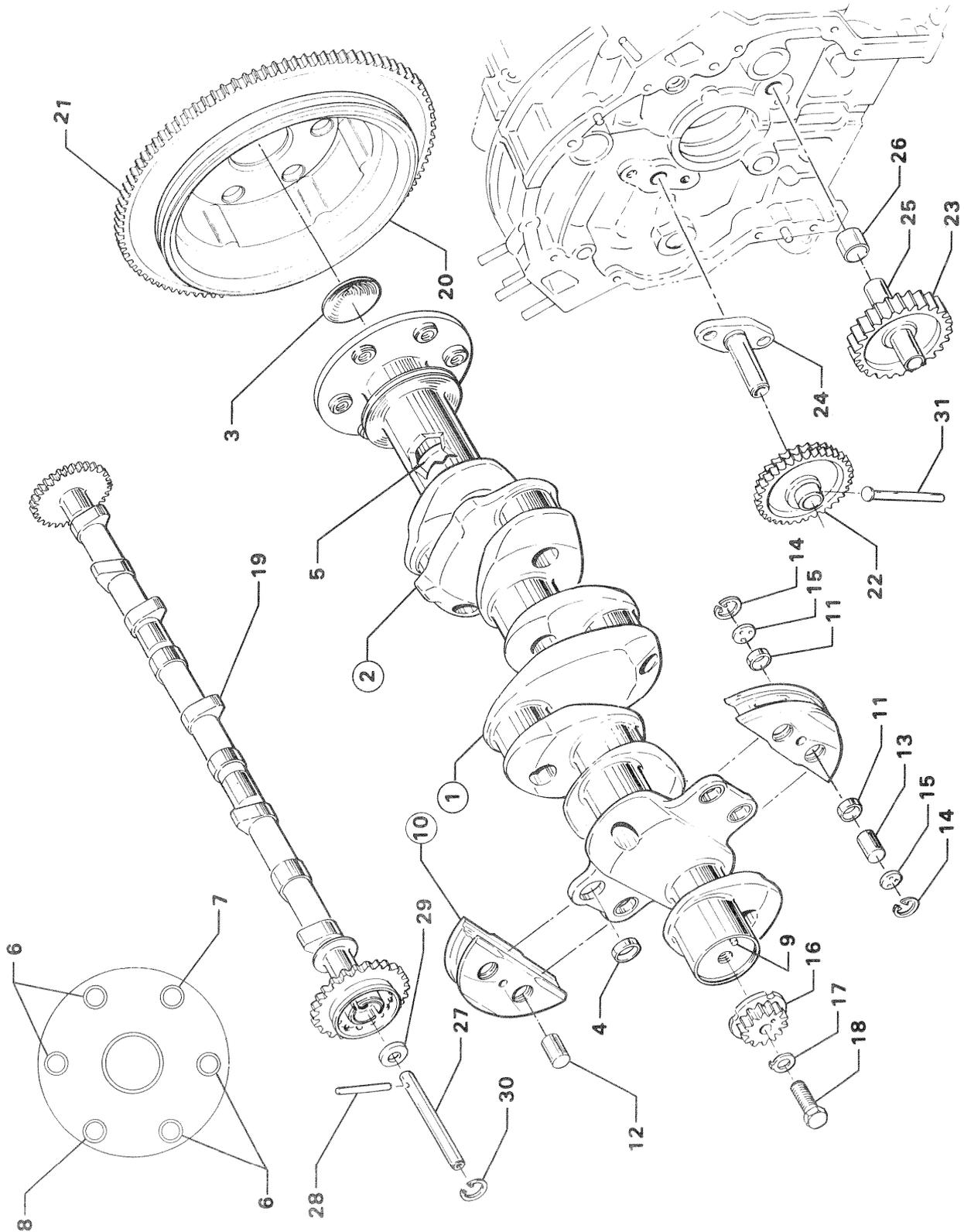


Figure 2. Crankshaft, Camshaft and Related Parts

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP
PROPELLER GOVERNOR DRIVE AND CRANKCASE ATTACHING PARTS

| FIG. REF. | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY |
|------------------|--------------------|--|------------------------------|
| 3 | | | |
| 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 | 1 |
| | 73250 | WASHER, Thrust | un |
| | 73251 | WASHER, Thrust | un |
| | 73252 | WASHER, Thrust | un |
| 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. hd. | 1 |
| 11 | 72053 | GASKET, Governor | 1 |
| 12 | 72378 | COVER, Governor drive | 1 |
| 13 | STD-35 | WASHER, 5/16 plain | un |
| 14 | STD-475 | WASHER, 5/16 lock | 4 |
| 15 | STD-1410 | NUT, 5/16-18 plain | 4 |
| 16 | STD-1414 | BOLT, 1/4-20 x 1-1/2 long | 7 |
| 17 | STD-1931 | BOLT, 1/4-20 x 1-7/8 long | 1 |
| 18 | STD-1646 | BOLT, 1/4-20 x 2.00 long | 2 |
| 19 | STD-8 | WASHER, 1/4 plain | 25 |
| 20 | 60803 | STRAP, Lifting | 2 |
| 21 | STD-2084 | BOLT, 1/4-20 x 1-3/4 long | 1 |
| 22 | STD-1419 | BOLT, 1/4-20 x 1-1/8 long | 4 |
| 23 | STD-160 | WASHER, 1/4 internal lock | 16 |
| 24 | STD-1411 | NUT, 1/4-20 plain | 12 |
| 25 | STD-1416 | BOLT, 1/4-20 x 1-1/2 long, dr. end | 6 |
| 26 | STD-8 | WASHER, 1/4 plain (max. 18) | un |
| 27 | STD-1409 | NUT, 1/4-20 slotted shear | 6 |
| 28 | STD-33 | WASHER, 3/8 plain | 1 |
| 29 | STD-872 | NUT, 3/8-24 slotted shear | 1 |
| 30 | AN6-34A | BOLT, 3/8-24 x 3-37/64 long | 1 |
| 31 | STD-33 | WASHER, 3/8 plain | 3 |
| 32 | STD-678 | WASHER, 3/8 lock | 2 |
| 33 | STD-596 | NUT, 3/8-24 plain | 2 |
| 34 | 76220 | STUD, 1/2-20 x 10-45/64 long | 8 |

NOTE

Two STD-8 washers and one STD-1931 bolt assembled in rear top hole in crankcase.

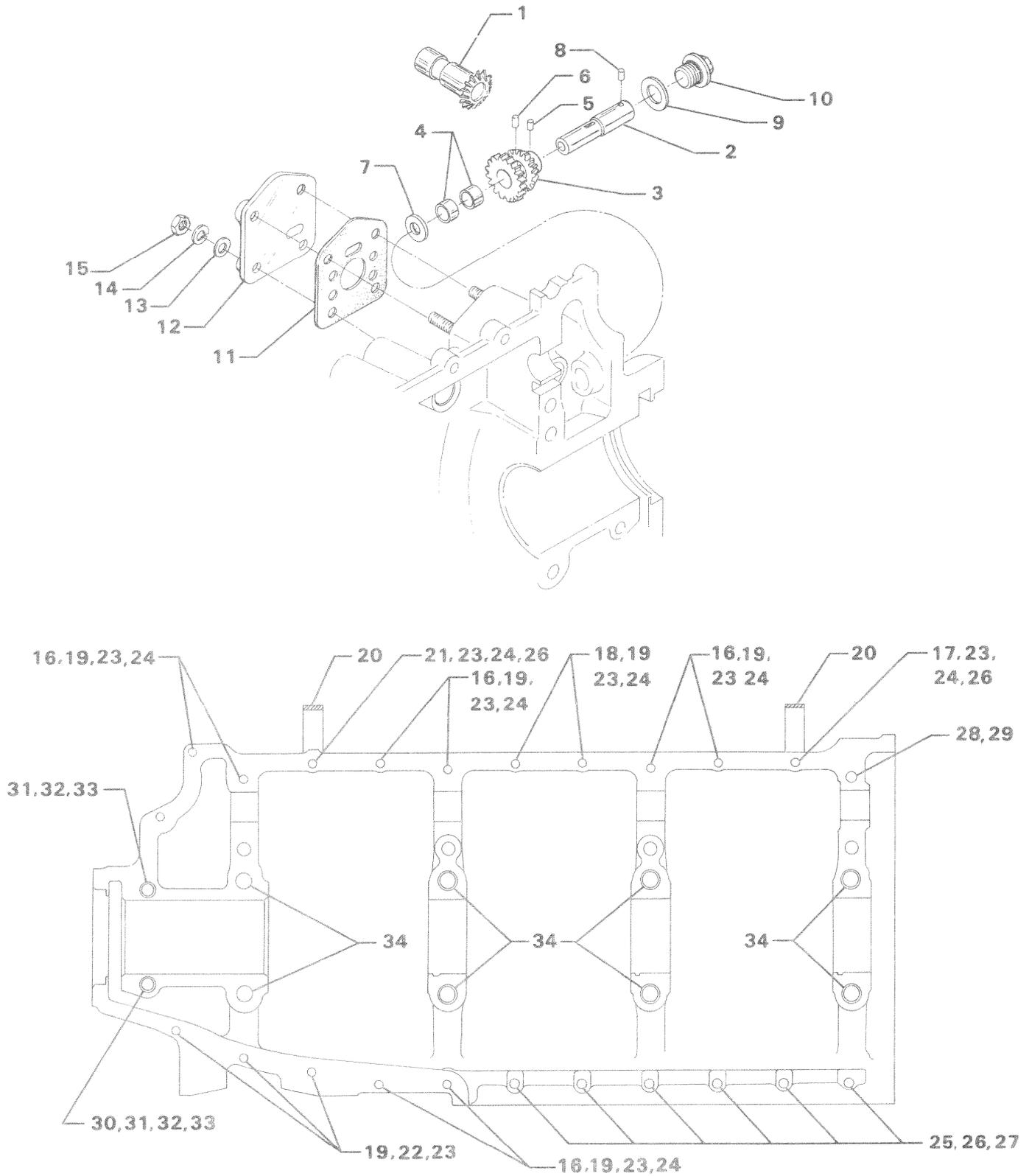


Figure 3. Propeller Governor Drive and Crankcase Attaching Parts

ACCESSORY HOUSING AND RELATED PARTS
ACCESSORY HOUSING ASSEMBLY, FUEL PUMP, DRIVES AND COVERS

| FIG. REF. 4 | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY |
|----------------------------|------------------------|---|--------------------------------------|
| 1 | 73818 | GASKET, Accessory housing | 1 |
| 2 | LW-10908 | HOUSING ASSY., Accessory | 1 |
| 3 | 31CD-20 | STUD, 5/16-18 x 2-1/2 long, drill | 3 |
| 4 | 25C-12 | STUD, 1/4-20 x 1-1/2 long | 8 |
| 5 | 31C-13 | STUD, 5/16-18 x 1-5/8 long | 2 |
| 6 | LW-10341 | INSERT, Heli-coil, 1.00-14 x 3/8 long | 1 |
| 7 | LW-12589 | INSERT, Heli-coil, 5/8-18 x 3/8 long | 1 |
| 8 | MS-124703 | INSERT, Heli-coil, 3/4-16 x 1-1/8 long | 1 |
| 9 | 1102 | PLUG, 1/8-27 NPT, Alien head | 1 |
| 10 | 71651 | FITTING, Breather | 1 |
| 11 | MS29512-10 | SEAL, Oil 7/64 section x 23/32 I.D. | 1 |
| 12 | AN814-10L | PLUG, 7/8-14 thd. | 1 |
| 13 | STD-294 | GASKET, 7/8 O.D. x 5/8 I.D. x 3/32 annular | 2 |
| 14 | 1540 | PLUG, Thermometer well | 2 |
| 15 | MS29512-10 | SEAL, Oil, 3/32 section x 45/64 I.D. | 2 |
| 16 | LW-14828 | REDUCER, 1/2 tubing to 5/8 tubing | 2 |
| 17 | LW-10307 | GEAR ASSY., Accessory driven | 1 |
| 18 | 71596 | WASHER, Accessory drive gear | 1 |
| 19 | STD-208 | OIL SEAL, 7/8 I.D. x 1-1/2 O.D. x 5/16 wide | 1 |
| 20 | 8313 | GASKET, Vacuum pump | 1 |
| 21 | 60430 | COVER, Vacuum pump | 1 |
| 22 | STD-8 | WASHER, 1/4 plain | 4 |
| 23 | STD-160 | WASHER, 1/4 lock, internal teeth | 4 |
| 24 | STD-1411 | NUT, 1/4-20 plain | 4 |
| 25 | LW-10303 | PLUG, Vacuum pump drive | 1 |
| 26 | 8313 | GASKET, Vacuum pump | 1 |
| 27 | 60430 | COVER, Vacuum pump | 1 |
| 28 | STD-8 | WASHER, 1/4 plain | 4 |
| 29 | STD-160 | WASHER, 1/4 lock, internal teeth | 4 |
| 30 | STD-1411 | NUT, 1/4-20 plain | 4 |
| 31 | 60096 | GASKET, Fuel pump | 1 |
| 32 | LW-15473 | FUEL PUMP, (6441234) | 1 |
| 33 | STD-33 | WASHER, 3/8 plain | 2 |
| 34 | STD-1882 | SCREW, 3/8-16 x 1-9/32 long, socket hd. dr. hd. | 2 |

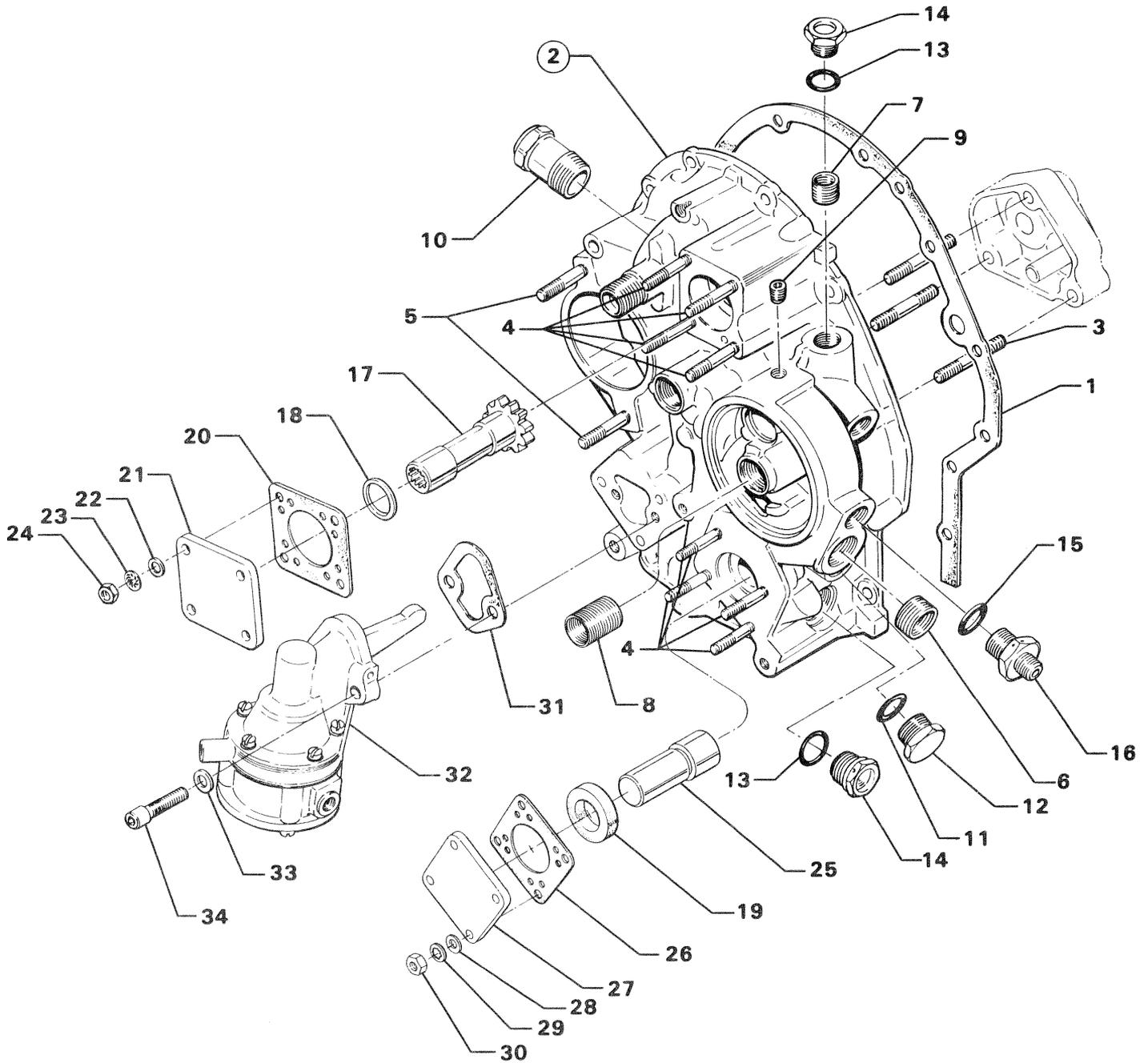


Figure 4. Accessory Housing Assembly, Fuel Pump, Drives and Covers

ACCESSORY HOUSING AND RELATED PARTS

OIL PUMP, TACHOMETER DRIVE AND OIL FILTER ASSEMBLY

| FIG. REF. 5 | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY |
|------------------------------|--------------------|--|------------------------------|
| 1 | LW-10344 | BODY ASSY., Oil pump | 1 |
| 2 | 60329 | SHAFT, Oil pump idler | 1 |
| 3 | STD-714 | PIN, 1/8 dia. x 1.00 long cotter | 1 |
| 4 | LW-10318 | GEAR ASSY., Oil pump drive | 1 |
| 5 | 61297 | IMPELLER, Oil pump driving | 1 |
| 6 | 61298 | IMPELLER, Oil pump driven | 1 |
| 7 | STD-35 | WASHER, 5/16 plain | 3 |
| 8 | STD-1420 | NUT, 5/16-18 slotted | 3 |
| 9 | LW-14260 | SEAL, Tachometer drive, oil | 1 |
| 10 | STD-8 | WASHER, 1/4 plain | 12 |
| 11 | STD-160 | WASHER, 1/4 lock, internal | 12 |
| 12 | STD-1204 | BOLT, 1/4-20 x 15/16 long, hex. hd. | 9 |
| 13 | STD-1215 | BOLT, 1/4-20 x 1-1/4 long, hex hd. | 1 |
| 14 | STD-1875 | BOLT, 1/4-20 x 13/16 long, hex hd. | 2 |
| 15 | LW-10321 | SPRING, Oil filter, bypass valve | 1 |
| 16 | 76539 | SEAT, Oil relief valve | 1 |
| 17 | MS16625-1100 | RING, Internal retaining | 1 |
| 18 | LW-13906 | FILTER ASSY., Oil, short (Champion) | 1 |
| 19 | LW-13904 | KIT, Converter plate, oil filter | 1 |
| 20 | 75944 | VALVE ASSY., Temp. control oil cooler bypass | 1 |

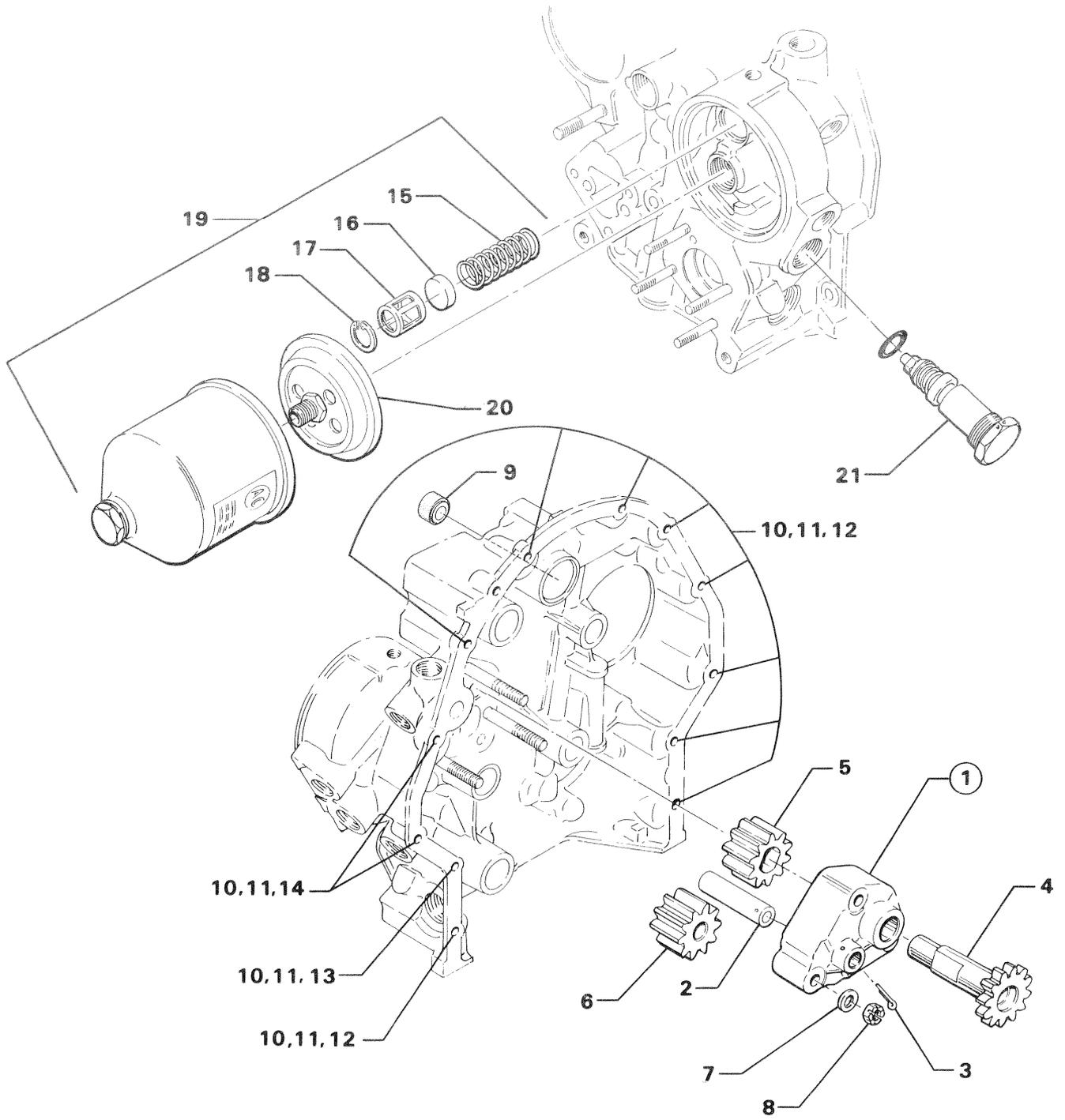


Figure 5. Oil Pump Tachometer Drive and Oil Filter Assembly

CYLINDER, PISTON AND VALVE TRAIN
CYLINDER, VALVE ASSEMBLY AND ATTACHING PARTS

| FIG. REF. 6 | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY |
|----------------------------|------------------------|---|--------------------------------------|
| 1 | LW-12427 | CYLINDER AND HEAD ASSY., Nitrided | 6 |
| 2 | 72057 | SEAT, Intake valve | 6 |
| 3 | 72058 | SEAT, Exhaust valve | 6 |
| 4 | 76943 | GUIDE, Valve, intake | 6 |
| 5 | 77160 | GUIDE, Valve, exhaust | 6 |
| 6 | 66796 | INSERT, Spark plug, 18-1.5MM | 12 |
| 7 | STD-1872 | INSERT, 1/8-27 Heli-coil taper pipe thd. | 12 |
| 8 | 31C-12 | STUD, 5/16-18 x 1-1/2 long | 12 |
| 9 | 25C-9 | STUD, 1/4-20 x 1-1/8 long | 6 |
| 10 | MS20823-6D | ELBOW, 45°, 3/8 flared tube | 6 |
| 11 | 66610 | BUSHING, Rocker shaft | 24 |
| 12 | 73938 | VALVE, Intake | 6 |
| 13 | 74541 | VALVE, Exhaust rotator type | 6 |
| 14 | LW-11795 | SPRING, Valve, inner | 12 |
| 15 | LW-11800 | SPRING, Valve, outer | 12 |
| 16 | 65441 | SEAT, Valve spring, lower, intake | 6 |
| 17 | LW-10077 | SEAT, Valve spring, upper, intake | 6 |
| 18 | LW-13323 | SEAT, Valve spring, lower, exhaust | 6 |
| 19 | LW-16475 | SEAT, Valve spring, upper, exhaust rotator type | 6 |
| 20 | 60009 | KEY, Valve intake | 12 |
| 21 | MS-13997-3 | KEY, Valve exhaust (rotator type) | 12 |
| 22 | MS-13998-3 | CAP, Valve stem, exhaust (rotator type) | 6 |
| 23 | 78290 | PLUNGER ASSY., Hydraulic tappet | 12 |
| 24 | 78524 | SOCKET, Push rod, hydraulic tappet | 12 |
| 25 | LW-11485 | TUBE, Push rod shroud | 12 |
| 26 | LW-14995 | SPRING, Shroud tube | 6 |
| 27 | LW-12272 | LOCKPLATE, Shroud tube | 6 |
| 28 | STD-1411 | NUT, 1/4-20 plain | 6 |
| 29 | 62922 | SEAL, Shroud tube | 12 |
| 30 | 70310 | SEAL, Shroud tube | 12 |

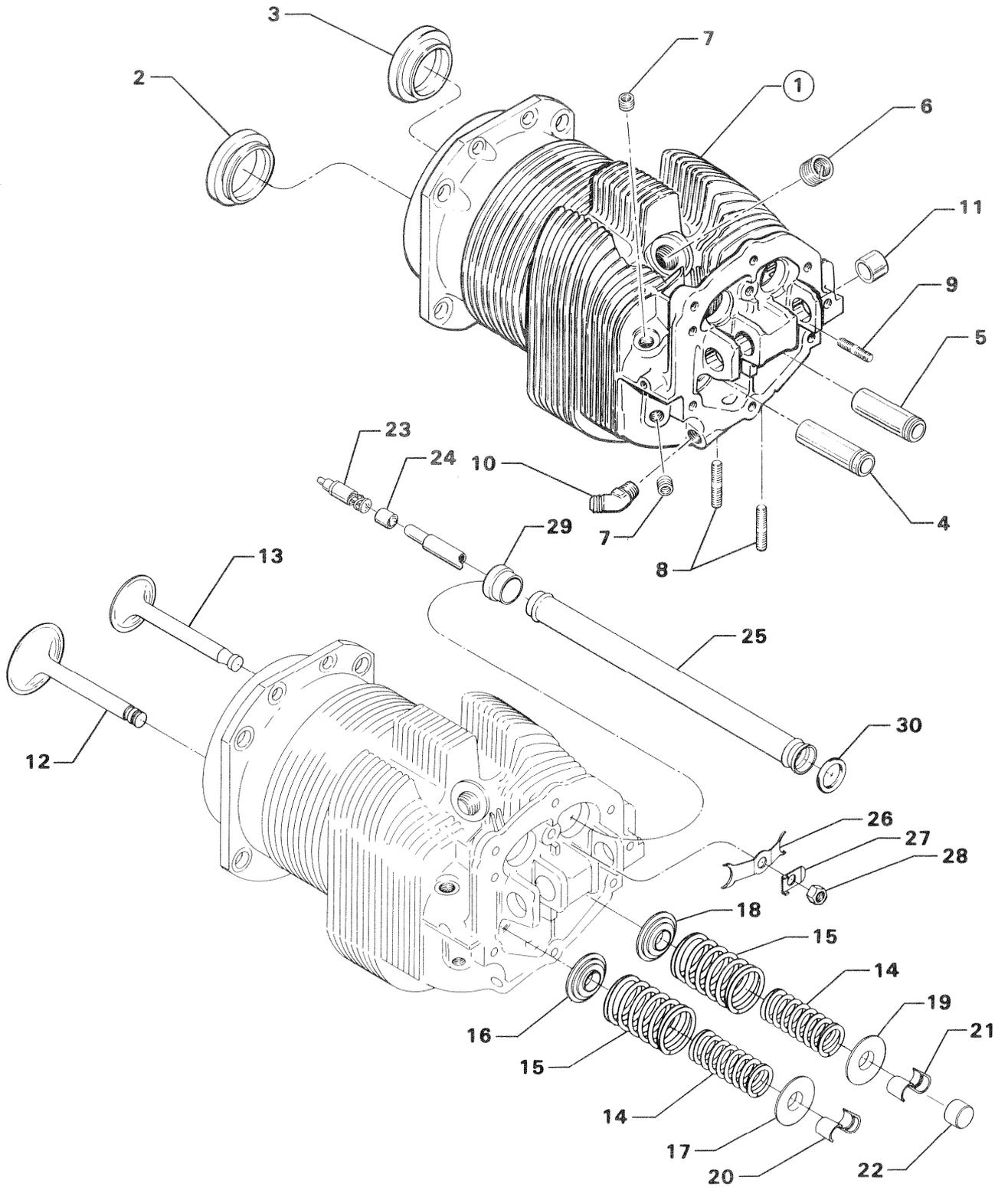


Figure 6. Cylinder, Valve Assembly and Attaching Parts

CYLINDER, PISTON AND VALVE TRAIN
CONNECTING ROD, PISTON, ROCKER AND INTERCYLINDER BAFFLE ASSEMBLIES

| FIG. REF. | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY |
|------------------|--------------------|---|------------------------------|
| 7 | | | |
| 1 | LW-11750 | CONNECTING ROD ASSY., Machining | 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 | 75089 | PISTON, Compression ratio 8.50:1 | 6 |
| 7 | LW-14078 | PIN, Piston | 6 |
| 8 | 60828 | PLUG, Piston pin | 12 |
| 9 | 74241 | RING, Piston compression | 12 |
| 10 | 73857 | RING, Piston, oil regulating, expander type | 6 |
| 11 | 73434 | ROD ASSY., Push | un |
| | 73435 | ROD ASSY., Push | un |
| | 73436 | ROD ASSY., Push | un |
| | 73437 | ROD ASSY., Push | un |
| 12 | 69444 | ROCKER ASSY., Valve, intake | 6 |
| 13 | 60398 | BUSHING, Valve rocker, intake | 6 |
| 14 | 74636 | ROCKER ASSY., Valve, exhaust | 6 |
| 15 | 74637 | BUSHING, Valve rocker, exhaust | 6 |
| 16 | LW-13790 | SHAFT, Valve rocker | 6 |
| 17 | LW-12892 | THRUST BUTTON, Rocker shaft | 12 |
| 18 | 75906 | GASKET, Rocker box cover | 6 |
| 19 | 61247 | COVER, Rocker box | 6 |
| 20 | STD-1925 | SCREW, 1/4-20 x 5/8 long, pan head, self-locking | 36 |
| 21 | 71481 | RING, Oil seal, 3/32 dia. x 4-27/32 I.D. | 6 |
| 22 | 77906 | SPACER, 33/64 I.D. x 7/8 x 1/8 thick (rear of c'case) | 2 |
| 23 | 74887 | SPACER, 33/64 I.D. x 7/8 O.D. x 3/8 thick (front of c'case) | 2 |
| 24 | 383-B | NUT, 3/8-24 plain | 24 |
| 25 | STD-2090 | NUT, 1/2-20 plain | 28 |
| 26 | 65321 | GASKET, Exhaust flange | 6 |
| 27 | 61260 | FLANGE, Exhaust, stainless | 6 |
| 28 | 1102 | PLUG | 6 |
| 29 | STD-684 | NIPPLE, Straight 3/8 I.D. hose | 6 |
| 30 | STD-1821 | HOSE, 3/8 I.D. x 2-1/2 long | 6 |
| 31 | LW-15592-5-05 | CLAMP, Hose | 12 |
| 32 | 68759 | TUBE ASSY., Cyl. head oil drain, cyl. no. 1 | 1 |
| | 71737 | TUBE ASSY., Cyl. head oil drain, cyl. no. 2 | 1 |
| | 68761 | TUBE ASSY., Cyl. head oil drain, cyl. nos. 3, 4, 5, 6 | 4 |
| 33 | 75339 | BAFFLE ASSY., Intercylinder | 3 |
| | 73975 | BAFFLE ASSY., Intercylinder | 1 |
| 34 | 71611 | RETAINER, Intercylinder baffle | 4 |
| 35 | 71610 | HOOK, Intercylinder baffle retainer | 4 |
| 36 | AN931-12517 | GROMMET, 3/4 I.D. x 1-3/8 O.D. x 3/8 thick | 1 |

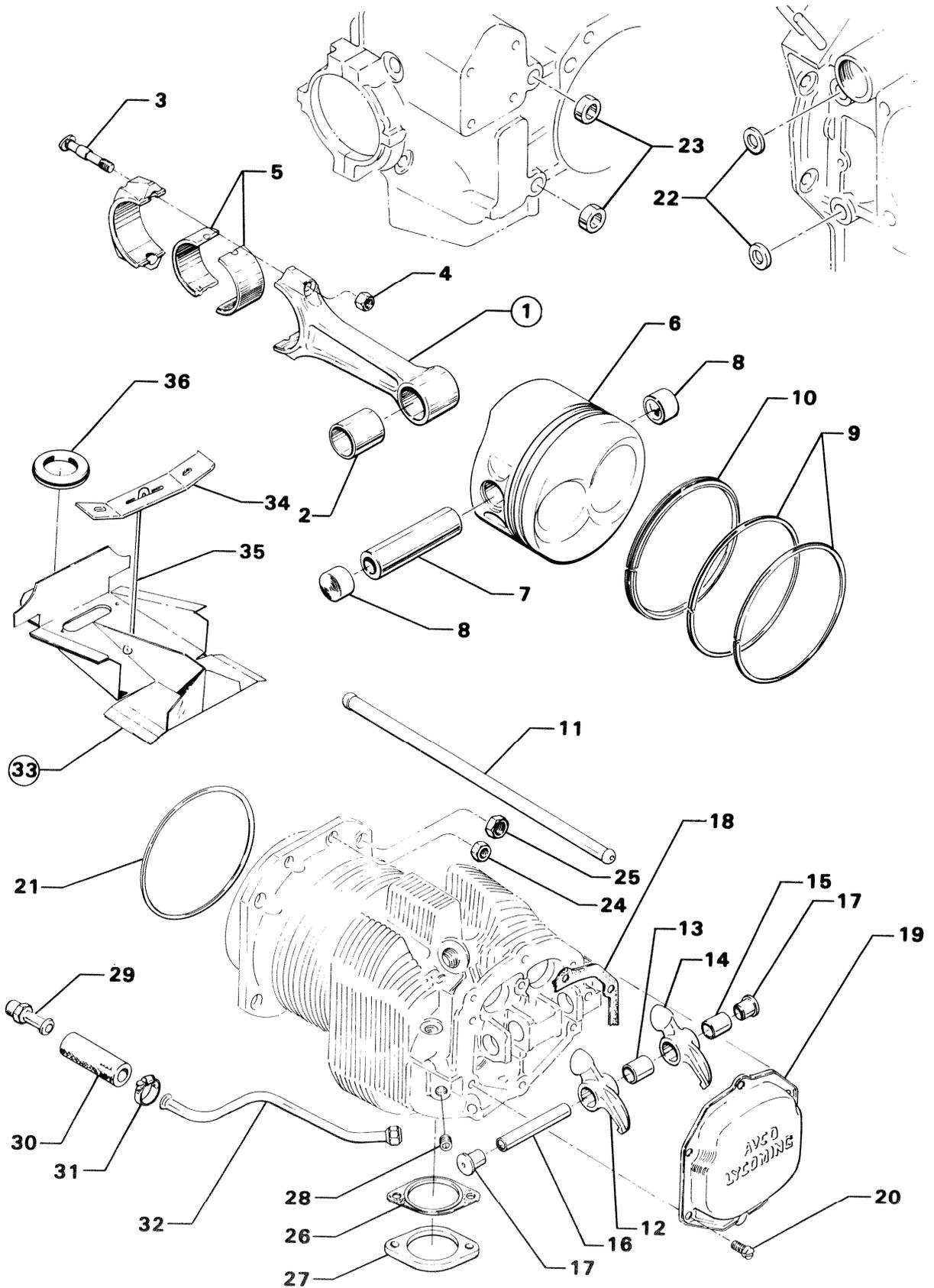


Figure 7. Connecting Rod, Piston, Rocker and Intercylinder Baffle Assemblies

IGNITION SYSTEM
MAGNETO DRIVES AND MAGNETOS

| FIG. REF. 8 | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY |
|----------------------------|------------------------|--|--------------------------------------|
| 1 | LW-13642 | GEAR, Retainer, magneto drive | 1 |
| 2 | LW-13641 | CUSHION, Magneto drive | 2 |
| 3 | LW-12681 | GASKET, Magneto | 1 |
| 4 | LW-685126-105 | MAGNETO, Ignition system (D6LN-3031) | 1 |
| | LW-682560-11 | MAGNETO, Ignition | 1 |
| | LW-684602-303 | HARNESS, Ignition | 1 |
| 5 | 75965 | CLAMP, Magneto | 2 |
| 6 | STD-475 | WASHER, 5/16 lock, internal teeth | 2 |
| 7 | STD-1410 | NUT, 5/16-18 plain | 2 |
| 8 | LW-620026-2 | CLIP, One wire for 1/4 screw (bottom leads) | 4 |
| 9 | LW-620026-2 | CLIP, One wire (top leads) | 2 |
| 10 | STD-8 | WASHER, 1/4 plain | 14 |
| 11 | LW-620028-2 | CLIP, Two wire for 1/4 screw (bottom leads) | 1 |
| 12 | LW-620028-3 | CLIP, Two wire for 1/4 screw (top leads) | 2 |
| 13 | LW-620029-6 | CLIP, Three wire for #10-32 screw (bottom leads) | 1 |
| 14 | LW-620029-6 | CLAMP, Three wire (bottom leads) | 2 |
| 15 | LW-620037-4 | CLIP, Six wire for #10-32 screw | 1 |
| 16 | LW-620036-4 | CLIP, Six wire for #10-32 screw | 1 |
| 17 | LW-620032-7 | CLAMP, Ignition harness | 1 |
| 18 | LW-14875 | BRACKET, Extension | 1 |
| 19 | STD-692 | SCREW, #10-32 | 2 |
| 20 | STD-670 | NUT, Self-locking | 2 |
| 21 | LW-16266-10-75 | CLAMP | 1 |
| 22 | 76734 | ZIP STRAP | 26 |
| 23 | STD-696 | WASHER, 1/4 plain (thin) | un |
| 24 | STD-1874 | SCREW, 1/4-20 x 13/16 long | 7 |
| 25 | STD-1925 | SCREW, 1/4-20 self-locking | 2 |
| 26 | STD-2029 | BOLT, 1/4-20 x 1-1/8 long, hex. hd. | 2 |
| 27 | 10-720631-48 | REPLACEMENT LEAD, Bendix harness, 48", (4T,6T,4B,6B) | un |
| | 10-720631-78 | REPLACEMENT LEAD, Bendix harness, 78", (1T,2T,3T,5T,1B,2B,3B,5B) | un |
| 28 | LW-382698 | KIT, Magneto ground terminal | 2 |
| 29 | 1182-D4 | SPARK PLUG, Champion (RHM38E) | 12 |

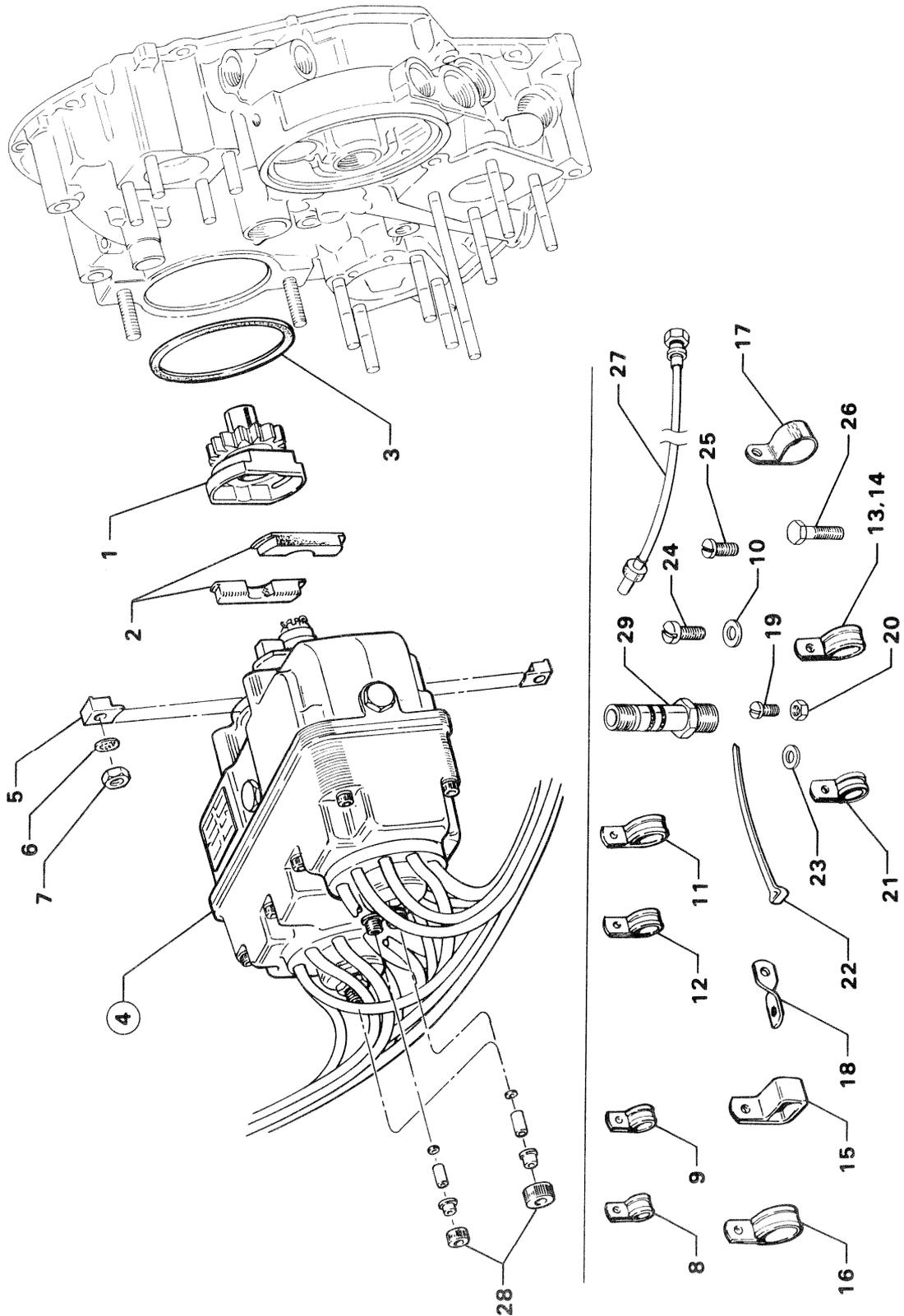


Figure 8. Magneto Drives and Magnetos

ELECTRICAL SYSTEM
STARTER, ALTERNATOR AND ATTACHING PARTS

| FIG. REF. | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY |
|------------------|--------------------|--|------------------------------|
| 9 | | | |
| 1 | LW-13039 | BRACKET, Alternator | 1 |
| 2 | 73383 | LOCKPLATE, 5/16 bolt x 1.00 spacing | 1 |
| 3 | STD-1838 | BOLT, 5/16-18 x 15/16 long, hex. hd. | 2 |
| 4 | 75380 | LINK, Alternator adjusting | 1 |
| 5 | STD-35 | WASHER, 5/16 plain | 1 |
| 6 | LW-31H.75 | BOLT, 5/16-18 x 3/4 long, hex. hd. dr. | 1 |
| 7 | STD-1727 | WASHER, Plain 3/4 O.D. x 11/32 I.D. x 1/8 thick | 1 |
| 8 | LW-31H.75 | BOLT, 5/16-18 x 3/4 long, hex. hd. dr. | 1 |
| 9 | 74323 | STRUT, Alternator support | 1 |
| 10 | LW-31H.75 | BOLT, 5/16-18 x 3/4 long, hex. hd. dr. | 1 |
| 11 | STD-690 | WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick | 1 |
| 12 | AN6-14 | BOLT, 3/8-24 x 1-37/64 long, hex. hd., drilled end | 1 |
| 13 | STD-690 | WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick | un |
| 14 | STD-872 | NUT, 3/8-24 slotted | 1 |
| 15 | STD-713 | PIN, Cotter, 3/32 dia. x 3/4 long | 1 |
| 16 | AN6-16 | BOLT, 3/8-24 x 1-53/64 long, hex. hd., drilled end | 1 |
| 17 | 76534 | SHIM, 1-1/8 O.D. x 13/32 x 1/64 thick | un |
| 18 | STD-690 | WASHER, 13/16 O.D. x 25/64 x 1/16 thick | un |
| 19 | STD-82 | NUT, 3/8-24 slotted | 1 |
| 20 | STD-713 | PIN, Cotter, 3/32 dia. x 3/4 long | 1 |
| 21 | LW-12840 | ALTERNATOR ASSY., 12V-70A (3.25:1 ratio) (internally grounded) | 1 |
| 22 | 76026 | BELT, Alternator drive (3/8 wide) | 1 |
| 23 | LW-15571 | STARTER, 12 volt (3.38:1 internal reduction) 12/14 pinion (MZ-422) | 1 |
| 24 | STD-35 | WASHER, 5/16 plain | 4 |
| 25 | STD-475 | WASHER, 5/16 lock, internal teeth | 4 |
| 26 | STD-2156 | BOLT, 5/16-18 x 1-5/32 long, hex. hd. | 1 |
| 27 | STD-1410 | NUT, 5/16-18 plain | 3 |
| 28 | LW-12083 | SWITCH, Magnetic, 12 volt (SAZ-4201E-1) | 1 |

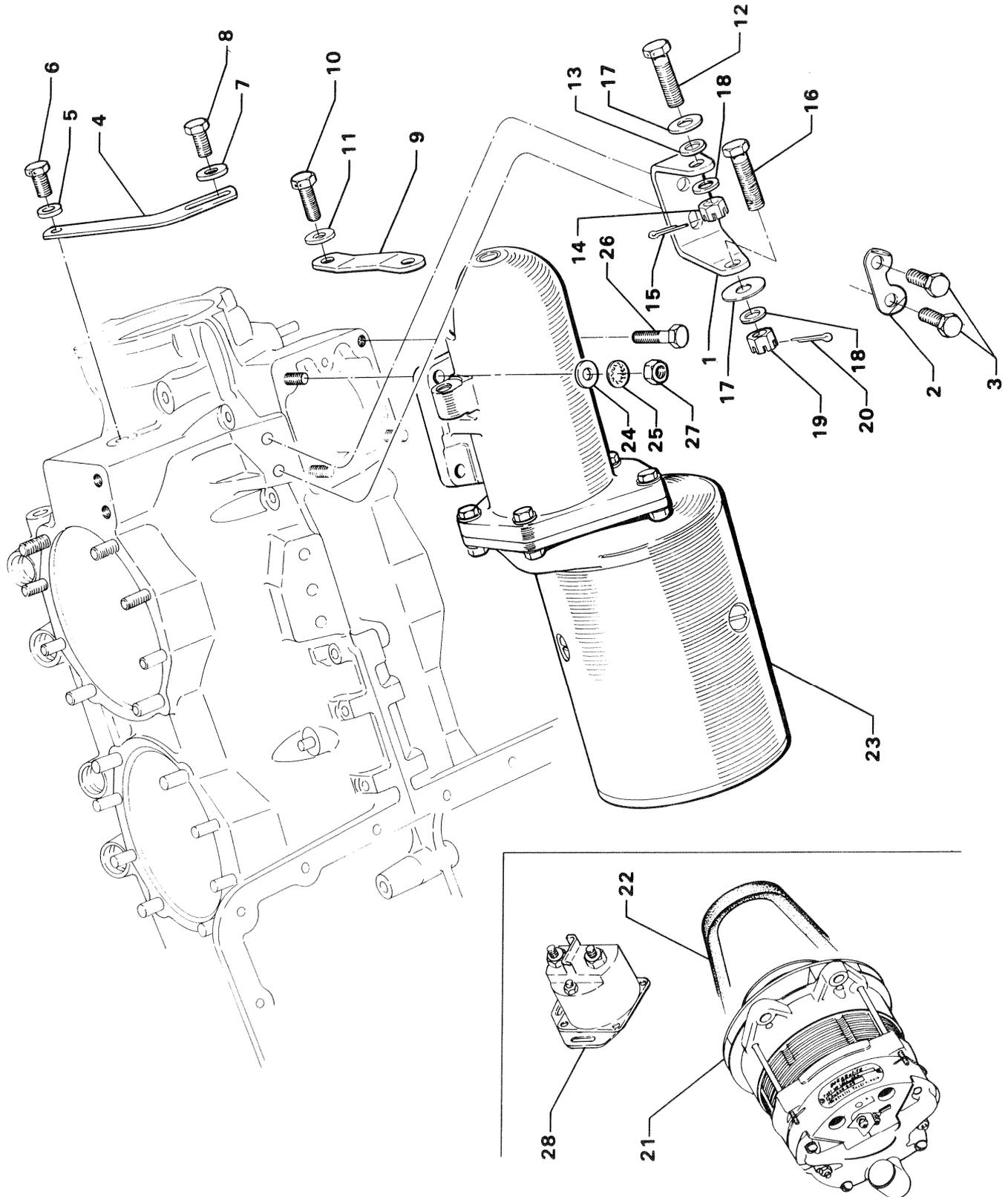


Figure 9. Starter, Alternator and Attaching Parts

OIL SUMP AND INDUCTION SYSTEM
OIL SUMP ASSEMBLY, INTAKE PIPES AND ATTACHING PARTS

| FIG. REF. 10 | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY |
|---------------------|--------------------|---|------------------------------|
| 1 | LW-13306 | GASKET, Oil sump | 1 |
| 2 | 72056 | SUMP ASSY., Oil | 1 |
| 3 | 71699 | CONNECTION, Intake pipe | 6 |
| 4 | 25C-11 | STUD, 1/4-20 x 1-3/8 long | 14 |
| 5 | 31C-15 | STUD, 5/16-18 x 1-7/8 long | 4 |
| 6 | 38-15 | STUD, 3/8-16 x 1-7/8 long | 8 |
| 7 | STD-1173 | INSERT, 1/4-20 Heli-coil x 1/2 long | 4 |
| 8 | STD-8 | WASHER, 1/4 plain | 34 |
| 9 | STD-160 | WASHER, 1/4 lock, internal teeth | 27 |
| 10 | STD-1419 | BOLT, 1/4-20 x 1-1/8 long, hex. hd. | 7 |
| 11 | STD-1688 | BOLT, 1/4-20 x 1.00 long, hex. hd. | 6 |
| 12 | STD-1411 | NUT, 1/4-20 plain | 21 |
| 13 | STD-551 | PLUG, 1/2-14 NPT, sq. head, drilled | 2 |
| 14 | 70484 | SCREEN, Oil suction | 1 |
| 15 | STD-111 | GASKET, 1.00 I.D. x 1-1/4 O.D. x 3/32 annular | 1 |
| 16 | LW-12545 | PLUG, 5/8 hex. hd. x 1.00-20 thd. | 1 |
| 17 | 61548 | PLATE, Name | 1 |
| 18 | STD-1901 | DRIVE STUD, No. 4 x 3/16 long, round hd. | 4 |
| 19 | 70485 | PIPE, Intake | 6 |
| 20 | 69603 | HOSE, 1-3/4 I.D. x 2-3/16 O.D. x 1-3/4 | 6 |
| 21 | LW-15592-8-28 | CLAMP, Hose | 12 |
| 22 | 71973 | GASKET, 2-bolt flange, 1-7/8 I.D. | 6 |
| 23 | 72346 | FLANGE, Intake pipe (upper) | 6 |
| 24 | STD-8 | WASHER, 1/4 plain | 12 |
| 25 | STD-160 | WASHER, 1/4 lock, internal teeth | 12 |
| 26 | STD-1215 | Bolt, 1/4-20 x 1-1/4 long, hex. hd. | 12 |

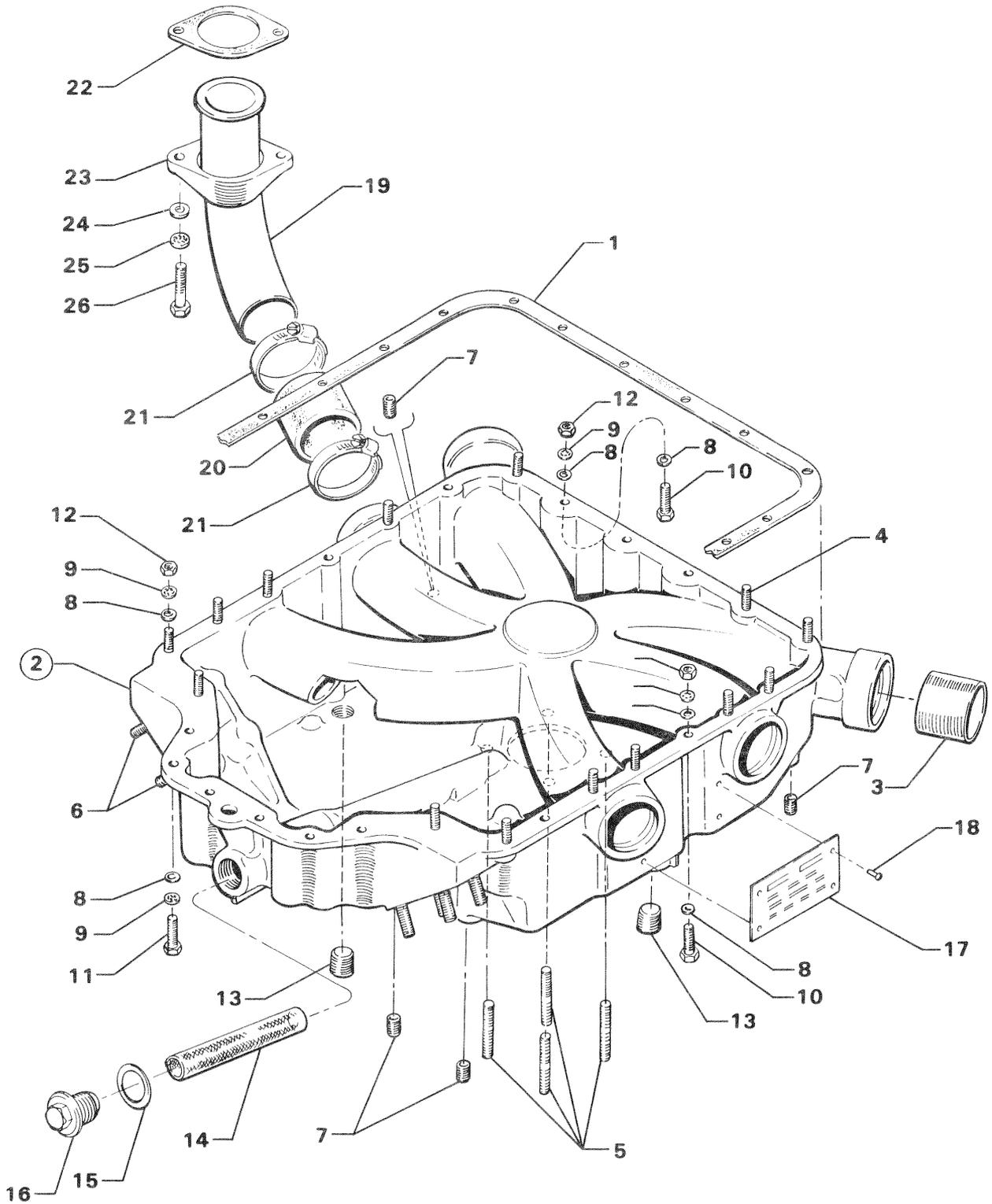


Figure 10. Oil Sump Assembly, Intake Pipes and Attaching Parts

OIL SUMP AND INDUCTION SYSTEM
FUEL INJECTOR, MANIFOLD, LINES, HOSES AND ATTACHING PARTS

| FIG. REF. 11 | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY |
|-------------------------------|--------------------|--|------------------------------|
| 1 | 66224 | GASKET, Fuel injector | 1 |
| 2 | 73937 | FUEL INJECTOR, (Bendix), 2524054-9 | 1 |
| 3 | STD-35 | WASHER, 5/16 plain | 4 |
| 4 | STD-1410 | NUT, 5/16-18 plain | 4 |
| 5 | STD-1763 | LOCKNUT, 5/16 Plain | 4 |
| 6 | LW-18265 | NOZZLE, Injection (2524864) | 6 |
| 7 | 75283 | MANIFOLD ASSY., Fuel | 1 |
| 8 | MS20823-4 | ELBOW, 1/4 tube 1/8 NPT, 45° | 1 |
| 9 | STD-148 | NIPPLE, Union 1/8 NPT | 6 |
| 10 | LW-12604 | NIPPLE, 1/8 tube to 1/8 NPT (restricted) | 1 |
| 11 | 73966 | SPACER, Fuel manifold bracket | 2 |
| 12 | 73965 | BRACKET, Fuel manifold | 2 |
| 13 | STD-251 | WASHER, No. 10 lock, internal teeth | 4 |
| 14 | STD-82 | SCREW, No. 10-24 x 1/2 long, hd. dr. | 4 |
| 15 | LW-12098-0-200 | TUBE ASSY., Fuel manifold to nozzle cyls. 1, 2, 5, 6 | 4 |
| 16 | LW-12098-0-170 | TUBE ASSY., Fuel manifold to nozzle cyls. 3, 4 | 2 |
| 17 | LW-16266-10-75 | CLAMP | 12 |
| 18 | LW-16266-10-13 | CLAMP | 12 |
| 19 | STD-860 | SCREW, No. 10-32 x 5/8 long, fill. hd. | 14 |
| 20 | STD-425 | WASHER, No. 10 plain | 2 |
| 21 | STD-670 | NUT, No. 10-32 self-locking | 14 |
| 22 | 73136 | BRACKET, 90° | 2 |
| 23 | LW-12798-4S-274 | HOSE ASSY., Fuel injector to fuel manifold | 1 |
| 24 | 74278 | BRACKET ASSY., Fuel line support | 1 |
| 25 | STD-1891 | CLINCH NUT, No. 10-32 self-locking | 2 |
| 26 | LW-16266-25-63 | CLAMP | 1 |
| 27 | STD-860 | SCREW, No. 10-32 x 5/8 long, fill. hd. | 1 |
| 28 | STD-692 | SCREW, No. 10-32 x 1/2 long, round hd. | 2 |
| 29 | STD-425 | WASHER, No. 10 plain | 3 |
| 30 | STD-670 | NUT, No. 10-32 self-locking | 1 |
| 31 | LW-12799-6S-254 | HOSE, Fuel pump to injector | 1 |
| 32 | 74070 | ELBOW, 3/8 tubing, adjustable 45° | 1 |

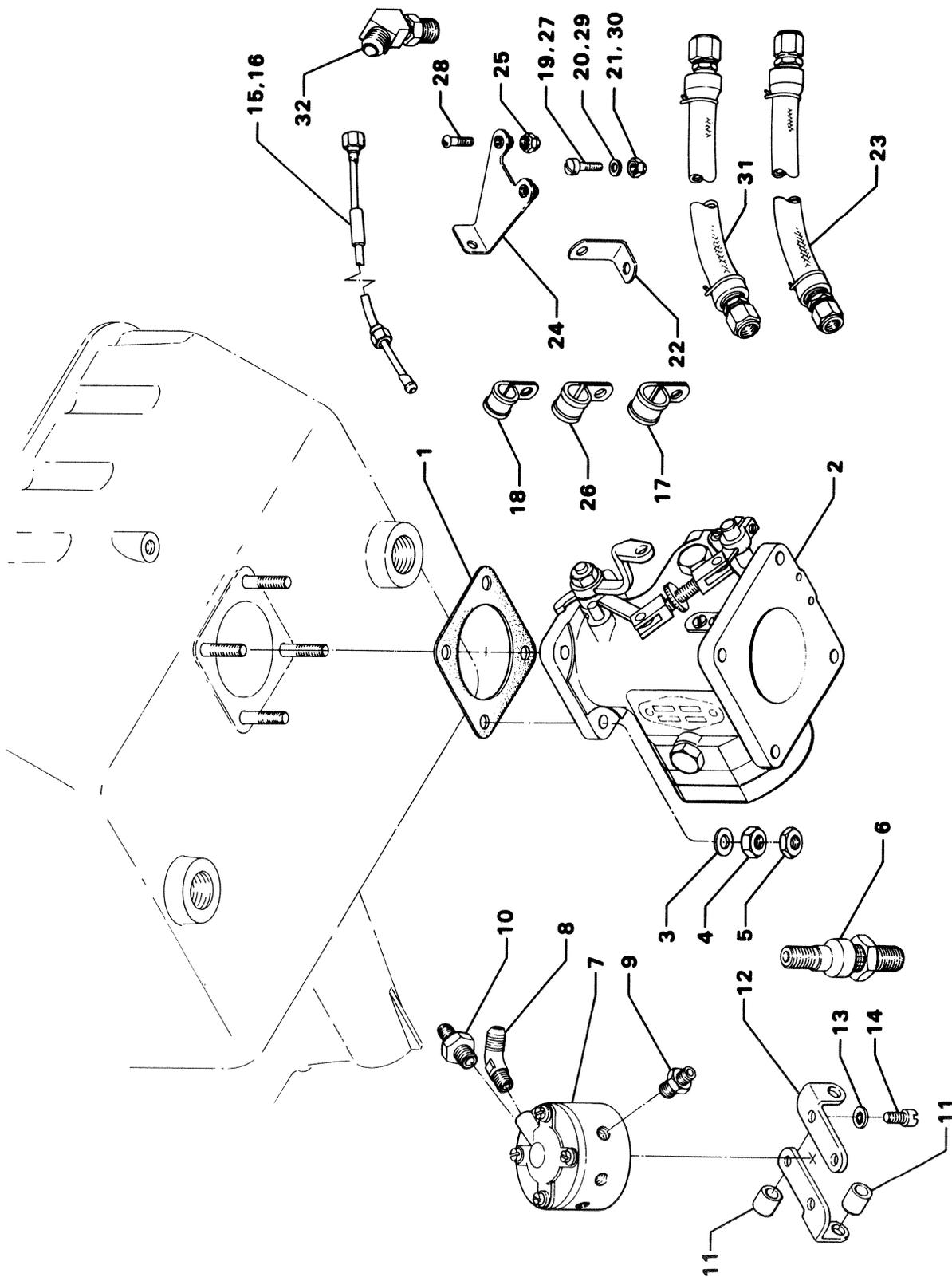


Figure 11. Fuel Injector, Manifold, Lines, Hoses, and Attaching Parts

SERVICE KIT SECTION

SEAL AND GASKET SET

IO-540-C4D5D (Parallel Head) Wide Cylinder Flange Model

| Part No. | Part Name | Qty. |
|--------------|---------------------------------|------|
| LW-13377 | SEAL AND GASKET SET | 1 |
| MS29512-6 | SEAL, Oil | 1 |
| MS29512-10 | SEAL, Oil | 3 |
| MS16625-1081 | RING, Internal ret. | 1 |
| STD-111 | GASKET, Oil suction screen | 1 |
| STD-1045 | GASKET, Oil press. relief valve | 1 |
| 8313 | GASKET, Vac. & hyd. pump | 3 |
| 60096 | GASKET, Fuel pump | 1 |
| LW-14260 | SEAL, Tach. dr. | 1 |
| LW-18661 | SEAL, Shroud tube | 12 |
| 66224 | GASKET, Fuel inj. | 1 |
| 70310 | SEAL, Shroud tube | 12 |
| 70455 | GASKET, Prop. dr. gear plug | 1 |
| 70457 | GASKET, Oil filler ext. | 1 |
| 71481 | RING, Cyl. base seal | 6 |
| LW-14820 | RING, Internal ret. | 8 |
| 71973 | GASKET, Int. pipe flange | 6 |
| 72053 | GASKET, Governor | 1 |
| 72091 | RING, Oil seal | 2 |
| 72312 | RING, Oil seal oil level gage | 1 |
| 73383 | LOCKPLATE, Alt. bracket | 1 |
| 73818 | GASKET, Acc. hsg. | 1 |
| 75118 | GASKET, Exh. flange | 12 |
| 75906 | GASKET, Rocker box cover | 6 |
| LW-15628 | SEAL, Crankshaft oil | 1 |
| LW-10332 | LOCKPLATE, Crankshaft gear | 1 |
| LW-13792 | SEAL, Crankshaft | 1 |
| LW-12681 | GASKET, Magneto | 1 |
| LW-12272 | LOCKPLATE, Shroud tube | 6 |
| LW-13306 | GASKET, Oil sump | 1 |
| LW-14995 | SPRING, Shroud tube | 6 |
| STD-208 | SEAL, Oil | 1 |
| 71193 | BOX, Set-up | 1 |
| 72220 | GASKET | 1 |
| 77154 | GASKET | 1 |
| STD-294 | GASKET | 1 |
| 65321 | GASKET | 6 |
| STD-1733 | "O" RING | 1 |
| MS-9068-009 | RING, Oil seal | 1 |
| 72059 | GASKET | 1 |

SERVICE KIT SECTION

CYLINDER, PISTON AND RING KIT
IO-540-C4D5D Wide Cylinder Flange Models

| Part No. | Part Name | Qty. |
|----------------------|------------------------------------|------|
| 76296 | CYLINDER, PISTON AND RING KIT | 1 |
| MS-13997-3 | KEY, Valve exhaust | 2 |
| MS-13998-3 | CAP, Valve stem, exhaust | 1 |
| STD-1215 | BOLT | 2 |
| STD-1411 | NUT, Plain, 1/4-20 | 1 |
| STD-1925 | SCREW | 6 |
| 60009 | KEY, Valve, intake | 2 |
| 60828 | PLUG, Piston pin | 2 |
| 61247 | COVER, Rocker box | 1 |
| LW-18661 | SEAL, Shroud tube | 2 |
| 65441 | SEAT, Valve spring, lower (intake) | 1 |
| 69444 | ROCKER ASSY., Valve, intake | 1 |
| 70310 | SEAL, Shroud tube | 2 |
| 71195 | BOX, Set-up | 1 |
| 71481 | SEAL, Cylinder base | 1 |
| 72198 | PLUG, Piston | 2 |
| 73857 or LW-12328 | RING, Piston, oil reg. | 1 |
| 73938 | VALVE, Intake | 1 |
| 74241 | RING, Piston, compression | 2 |
| 74541 | VALVE, Exhaust | 1 |
| 74636 | ROCKER ASSY., Exhaust | 1 |
| 75089 | PISTON | 1 |
| 75906 | GASKET, Rocker box cover | 1 |
| LW-10077 | SEAT, Valve spring upper (intake) | 1 |
| LW-11775 | PLUG, Piston pin (aluminum) | 2 |
| LW-11795 | SPRING, Valve inner | 2 |
| LW-11800 | SPRING, Valve outer | 2 |
| LW-12272 | LOCKPLATE, Shroud tube | 1 |
| LW-12427 | CYLINDER ASSY., Nitrided | 1 |
| LW-12892 | THRUST BUTTON | 2 |
| LW-13323 | SEAT, Valve spring lower (exhaust) | 1 |
| LW-13790 | SHAFT, Valve rocker | 1 |
| LW-14077 | PIN, Piston | 1 |
| LW-14995 | SPRING, Shroud tube | 1 |
| LW-16475 | SEAT, Valve spring upper (exhaust) | 1 |
| SSP-672 | TAG | 1 |
| SSP-2472 | TAG | 1 |

NUMERICAL INDEX

| PART NO. | PART NAME | PAGE NO. | PART NO. | PART NAME | PAGE NO. |
|-----------------|---------------|----------|----------------|-----------------|----------|
| AN6-14 | Bolt | 5-1 | LW-13790 | Shaft | 3-3 |
| AN6-16 | Bolt | 5-1 | LW-13792 | Seal | 1-1 |
| AN6-34A | Bolt | 1-5 | LW-13847 | Crankcase Assy. | 1-1 |
| AN8-14A | Bolt | 1-3 | LW-13884 | Bearing | 1-1 |
| AN565B1032H5 | Set Screw | 1-5 | LW-13896 | Plug | 1-5 |
| AN814-10L | Plug | 2-1 | LW-13904 | Kit | 2-3 |
| AN931-12S17 | Grommet | 3-3 | LW-13906 | Filter Assy. | 2-3 |
| LW-31H.75 | Bolt | 5-1 | LW-13923 | Bushing | 3-3 |
| LW-10077 | Seal | 3-1 | LW-14021 | Shaft | 1-5 |
| LW-10284 | Gear | 1-3 | LW-14078 | Pin | 3-3 |
| LW-10290 | Gear Assy. | 1-3 | LW-14260 | Seal | 2-3 |
| LW-10297 | Gear Assy. | 1-3 | LW-14316 | Alternator | 5-1 |
| LW-10299 | Shaft | 1-3 | LW-14771 | Gage | 1-1 |
| LW-10300 | Shaft | 1-3 | LW-14774 | Gage | 1-1 |
| LW-10303 | Plug | 2-1 | LW-14820 | Ring | 1-3 |
| LW-10307 | Gear | 2-1 | LW-14828 | Reducer | 2-1 |
| LW-10318 | Gear | 2-3 | LW-14875 | Bracket | 4-1 |
| LW-10321 | Spring | 2-3 | LW-14995 | Spring | 3-1 |
| LW-10325 | Spacer | 1-3 | LW-15473 | Fuel Pump | 2-1 |
| LW-10332 | Lockplate | 1-3 | LW-15571 | Starter | 5-1 |
| LW-10341 | Insert | 2-1 | LW-15592-5-05 | Clamp | 3-3 |
| LW-10344 | Oil Pump | 2-3 | LW-15592-8-28 | Clamp | 6-1 |
| LW-10442 | Gear | 1-5 | LW-15895 | Regulator | 5-1 |
| LW-10541 | Gear Assy. | 1-5 | LW-16266-10-13 | Clamp | 6-3 |
| LW-10647 | Dowel | 1-1 | LW-16266-10-75 | Clamp | 4-1 |
| LW-10908 | Housing | 2-1 | LW-16266-10-75 | Clamp | 6-3 |
| LW-11021 | Bearing | 1-1 | LW-16266-25-63 | Clamp | 6-3 |
| LW-11485 | Tube | 3-1 | LW-16475 | Seat | 3-1 |
| LW-11750 | Rod | 3-3 | LW-17651 | Crankshaft | 1-3 |
| LW-11795 | Spring | 3-1 | LW-17680 | Crankshaft | 1-3 |
| LW-11800 | Spring | 3-1 | LW-18265 | Nozzle | 6-3 |
| LW-12083 | Switch | 5-1 | LW-382698 | Kit | 4-1 |
| LW-12098-0-170 | Tube | 6-3 | LW-620026-2 | Clip | 4-1 |
| LW-12098-0-200 | Tube | 6-3 | LW-620028-2 | Clip | 4-1 |
| LW-12186 | Nut | 3-3 | LW-620028-3 | Clip | 4-1 |
| LW-12272 | Lockplate | 3-1 | LW-620029-6 | Clamp | 4-1 |
| LW-12427 | Cylinder | 3-1 | LW-620032-7 | Clamp | 4-1 |
| LW-12545 | Plug | 6-1 | LW-620036-4 | Clip | 4-1 |
| LW-12589 | Insert | 2-1 | LW-620037-4 | Clip | 4-1 |
| LW-12604 | Nipple | 6-3 | LW-682560-11 | Magneto | 4-1 |
| LW-12681 | Gasket | 4-1 | LW-684602-303 | Harness | 4-1 |
| LW-12798-4S-274 | Hose | 6-3 | LW-685126-105 | Magneto | 4-1 |
| LW-12799-6S-254 | Hose | 6-3 | MS-13997-3 | Key | 3-1 |
| LW-12892 | Thrust | 3-3 | MS-13998-3 | Cap | 3-1 |
| LW-13039 | Bracket | 5-1 | MS-16625-1081 | Ring | 1-3 |
| LW-13306 | Gasket | 6-1 | MS16625-1100 | Ring | 2-3 |
| LW-13323 | Seat | 3-1 | MS20823-4 | Elbow | 6-3 |
| LW-13521 | Bearing | 3-3 | MS20823-6D | Elbow | 3-1 |
| LW-13641 | Cushion | 4-1 | MS29512-10 | Seal | 2-1 |
| LW-13642 | Gear Retainer | 4-1 | MS29512-10 | Seal | 2-1 |

NUMERICAL INDEX (Cont.)

| PART NO. | PART NAME | PAGE NO. | PART NO. | PART NAME | PAGE NO. |
|-----------|-----------|----------|--------------|-----------|----------|
| MS-124703 | Insert | 2-1 | STD-872 | Nut | 5-1 |
| STD-8 | Washer | 1-5 | STD-1045 | Gasket | 1-1 |
| STD-8 | Washer | 2-1 | STD-1173 | Insert | 6-1 |
| STD-8 | Washer | 2-3 | STD-1204 | Bolt | 2-3 |
| STD-8 | Washer | 4-1 | STD-1211 | Plug | 1-3 |
| STD-8 | Washer | 6-1 | STD-1215 | Bolt | 2-3 |
| STD-19 | Dowel | 1-5 | STD-1215 | Bolt | 6-1 |
| STD-33 | Washer | 1-1 | STD-1339 | Plug | 2-3 |
| STD-33 | Washer | 1-5 | STD-1409 | Nut | 1-5 |
| STD-33 | Washer | 2-1 | STD-1410 | Nut | 1-5 |
| STD-33 | Washer | 1-5 | STD-1410 | Nut | 4-1 |
| STD-35 | Washer | 1-5 | STD-1410 | Nut | 5-1 |
| STD-35 | Washer | 2-3 | STD-1410 | Nut | 6-3 |
| STD-35 | Washer | 5-1 | STD-1411 | Nut | 1-5 |
| STD-35 | Washer | 6-3 | STD-1411 | Nut | 2-1 |
| STD-82 | Nut | 5-1 | STD-1411 | Nut | 3-1 |
| STD-82 | Screw | 6-3 | STD-1411 | Nut | 6-1 |
| STD-111 | Gasket | 6-1 | STD-1414 | Bolt | 1-5 |
| STD-148 | Nipple | 6-3 | STD-1416 | Bolt | 1-5 |
| STD-160 | Washer | 1-5 | STD-1419 | Bolt | 1-5 |
| STD-160 | Washer | 2-1 | STD-1419 | Bolt | 6-1 |
| STD-160 | Washer | 2-3 | STD-1420 | Nut | 2-3 |
| STD-160 | Washer | 6-1 | STD-1646 | Bolt | 1-5 |
| STD-208 | Oil Seal | 2-1 | STD-1688 | Bolt | 6-1 |
| STD-251 | Washer | 6-3 | STD-1727 | Washer | 5-1 |
| STD-294 | Gasket | 2-1 | STD-1763 | Locknut | 6-3 |
| STD-425 | Washer | 1-1 | STD-1821 | Hose | 3-3 |
| STD-425 | Washer | 6-3 | STD-1838 | Bolt | 5-1 |
| STD-475 | Washer | 1-5 | STD-1872 | Insert | 3-1 |
| STD-475 | Washer | 4-1 | STD-1874 | Screw | 4-1 |
| STD-475 | Washer | 5-1 | STD-1875 | Bolt | 2-3 |
| STD-514 | Dowel | 1-1 | STD-1882 | Screw | 2-1 |
| STD-551 | Plug | 6-1 | STD-1891 | Nut | 6-3 |
| STD-557 | Dowel | 1-1 | STD-1901 | Stud | 6-1 |
| STD-596 | Nut | 1-1 | STD-1925 | Screw | 3-3 |
| STD-596 | Nut | 1-5 | STD-1931 | Bolt | 1-5 |
| STD-670 | Nut | 4-1 | STD-2029 | Bolt | 4-1 |
| STD-670 | Nut | 6-3 | STD-2078 | Dowel | 1-3 |
| STD-678 | Washer | 1-1 | STD-2084 | Bolt | 1-5 |
| STD-678 | Washer | 1-5 | STD-2090 | Nut | 3-3 |
| STD-684 | Nipple | 3-3 | STD-2156 | Bolt | 5-1 |
| STD-690 | Washer | 5-1 | 10-720631-48 | Lead | 4-1 |
| STD-692 | Screw | 4-1 | 10-720631-78 | Lead | 4-1 |
| STD-692 | Screw | 6-3 | 25C-9 | Stud | 3-1 |
| STD-696 | Washer | 4-1 | 25C-11 | Stud | 6-1 |
| STD-713 | Pin | 5-1 | 25C-12 | Stud | 2-1 |
| STD-714 | Pin | 2-3 | 31C-12 | Stud | 3-1 |
| STD-798 | Dowel | 1-5 | 31C-12 | Stud | 3-3 |
| STD-860 | Screw | 6-3 | 31C-13 | Stud | 1-1 |
| STD-872 | Nut | 1-5 | 31C-13 | Stud | 2-1 |

NUMERICAL INDEX (Cont.)

| PART NO. | PART NAME | PAGE NO. | PART NO. | PART NAME | PAGE NO. |
|----------|------------|----------|----------|---------------------|----------|
| 31C-15 | Stud | 6-1 | 71610 | Hook | 3-3 |
| 31C-16 | Stud | 1-1 | 71611 | Retainer | 3-3 |
| 31CD-20 | Stud | 2-1 | 71640 | Plug | 1-3 |
| 38-15 | Stud | 6-1 | 71651 | Fitting | 2-1 |
| 38-16 | Stud | 1-1 | 71699 | Pipe | 6-1 |
| 38-22 | Stud | 1-1 | 71737 | Tube | 3-3 |
| 38D-17 | Stud | 1-1 | 71903 | Bushing | 1-3 |
| 50-15 | Stud | 1-1 | 71907 | Washer | 1-3 |
| 383-B | Nut | 3-3 | 71973 | Gasket | 6-1 |
| 1028-B | Ball | 1-1 | 72053 | Gasket | 1-5 |
| 1102 | Plug | 1-1 | 72056 | Sump | 6-1 |
| 1102 | Plug | 2-1 | 72057 | Seat | 3-1 |
| 1102 | Plug | 3-3 | 72058 | Seat | 3-1 |
| 1182-D4 | Spark Plug | 4-1 | 72060 | Bushing | 1-3 |
| 1540 | Plug | 2-1 | 72061 | Bushing | 1-3 |
| 8313 | Gasket | 2-1 | 72062 | Bushing | 1-3 |
| 60009 | Key | 3-1 | 72091 | Ring, Oil seal | 1-1 |
| 60096 | Gasket | 2-1 | 72158 | Bushing | 1-1 |
| 60329 | Shaft | 2-3 | 72220 | Gasket | 1-1 |
| 60398 | Bushing | 3-3 | 72306 | Bracket | 1-1 |
| 60430 | Cover | 2-1 | 72378 | Cover | 1-5 |
| 60803 | Strap | 1-5 | 72566 | Gear | 1-3 |
| 60828 | Plug | 3-3 | 72797 | Roller | 1-3 |
| 61084 | Spring | 1-1 | 72801 | Counterweight Assy. | 1-3 |
| 61247 | Cover | 3-3 | 72877 | Body, Hyd. tappet | 1-1 |
| 61260 | Flange | 3-3 | 72965 | Roller | 1-3 |
| 61297 | Impeller | 2-3 | 73136 | Bracket | 6-3 |
| 61298 | Impeller | 2-3 | 73249 | Washer | 1-5 |
| 61544 | Plunger | 1-3 | 73250 | Washer | 1-5 |
| 61548 | Plate | 6-1 | 73251 | Washer | 1-5 |
| 61681 | Guide | 3-1 | 73252 | Washer | 1-5 |
| 62922 | Seal | 3-1 | 73346 | Flange | 6-1 |
| 65007 | Retainer | 1-1 | 73383 | Lockplate | 5-1 |
| 65321 | Gasket | 3-3 | 73434 | Rod | 3-3 |
| 65441 | Seat | 3-1 | 73435 | Rod | 3-3 |
| 66224 | Gasket | 6-3 | 73436 | Rod | 3-3 |
| 66610 | Bushing | 3-1 | 73437 | Rod | 3-3 |
| 66796 | Insert | 3-1 | 73810 | Bushing | 1-3 |
| 68759 | Tube | 3-3 | 73818 | Gasket | 2-1 |
| 68761 | Tube | 3-3 | 73857 | Ring | 3-3 |
| 69444 | Rocker | 3-3 | 73937 | Fuel injector | 6-3 |
| 69603 | Hose | 6-1 | 73938 | Valve | 3-1 |
| 69796 | Dowel | 1-1 | 73965 | Bracket | 6-3 |
| 70310 | Seal | 3-1 | 73966 | Spacer | 6-3 |
| 70455 | Gasket | 1-5 | 73975 | Baffle | 3-3 |
| 70457 | Gasket | 1 1 | 74070 | Elbow | 6-3 |
| 70484 | Screen | 6-1 | 74230 | Guide | 3-1 |
| 70485 | Pipe | 6-1 | 74241 | Ring | 3-3 |
| 71481 | Ring | 3-3 | 74278 | Bracket | 6-3 |
| 71596 | Washer | 2-1 | 74323 | Strut | 5-1 |

NUMERICAL INDEX (Cont.)

| PART NO. | PART NAME | PAGE NO. | PART NO. | PART NAME | PAGE NO. |
|----------|-----------|----------|----------|---------------|----------|
| 74541 | Valve | 3-1 | 76118 | Spacer | 1-3 |
| 74636 | Rocker | 3-3 | 76148 | Camshaft | 1-3 |
| 74637 | Bushing | 3-3 | 76155 | Shaft Assy. | 1-3 |
| 74887 | Spacer | 3-3 | 76220 | Stud | 1-5 |
| 75061 | Bolt | 3-3 | 76529 | Plug | 1-1 |
| 75089 | Piston | 3-3 | 76534 | Shim | 5-1 |
| 75283 | Manifold | 6-3 | 76539 | Seat | 2-3 |
| 75339 | Baffle | 3-3 | 76734 | Zip Strap | 4-1 |
| 75380 | Link | 5-1 | 77579 | Support Assy. | 1-3 |
| 75675 | Extension | 1-1 | 77872 | Bushing | 1-5 |
| 75761 | Extension | 1-1 | 77906 | Spacer | 3-3 |
| 75906 | Gasket | 3-3 | 78059 | Relay | 5-1 |
| 75944 | Valve | 2-3 | 78290 | Plunger | 3-1 |
| 75965 | Clamp | 4-1 | 78368 | Pin | 1-3 |
| 76026 | Belt | 5-1 | 78524 | Socket | 3-1 |

