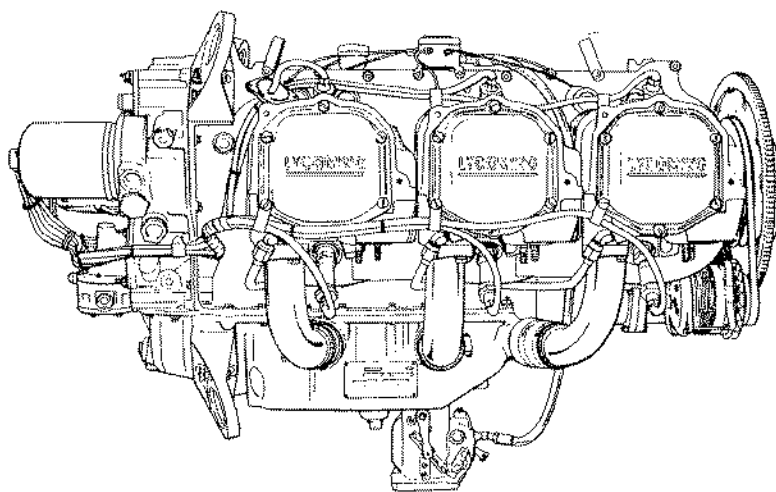


# LYCOMING PARTS CATALOG

IO-540-(W.C.F.) MODELS  
AIRCRAFT ENGINES



PC-615

OCTOBER, 1979

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**TEXTRON** Lycoming

Reciprocating Engine Division/  
Subsidiary of Textron Inc.

652 Oliver Street  
Williamsport, PA 17701 U.S.A.

# TECHNICAL PUBLICATION SUPPLEMENT

| SUPPLEMENT No. | ENGINE MODEL  | PUBLICATION No. | PUBLICATION DATE |
|----------------|---------------|-----------------|------------------|
| SSP-192        | IO-540 Series | PC-615          | October, 1979    |

Insert in front of catalog for usage of subject matter.

Revised January, 1992

Page 4-3

Figure 20: Slick Magnetos, Harnesses, Drives And Spark Plugs

List page added for IO-540-C4D5

Page 4-4

Figure 20: Slick Magneto, Harnesses, Drives And Spark Plugs

Illustration page added for IO-540-C4D5

#### NOTE

For all other IO-540-C4D5 parts, refer to IO-540-C4B5 in this catalog.

**IGNITION SYSTEM**  
 SLICK MAGNETOS, HARNESSSES, DRIVES AND SPARK PLUGS

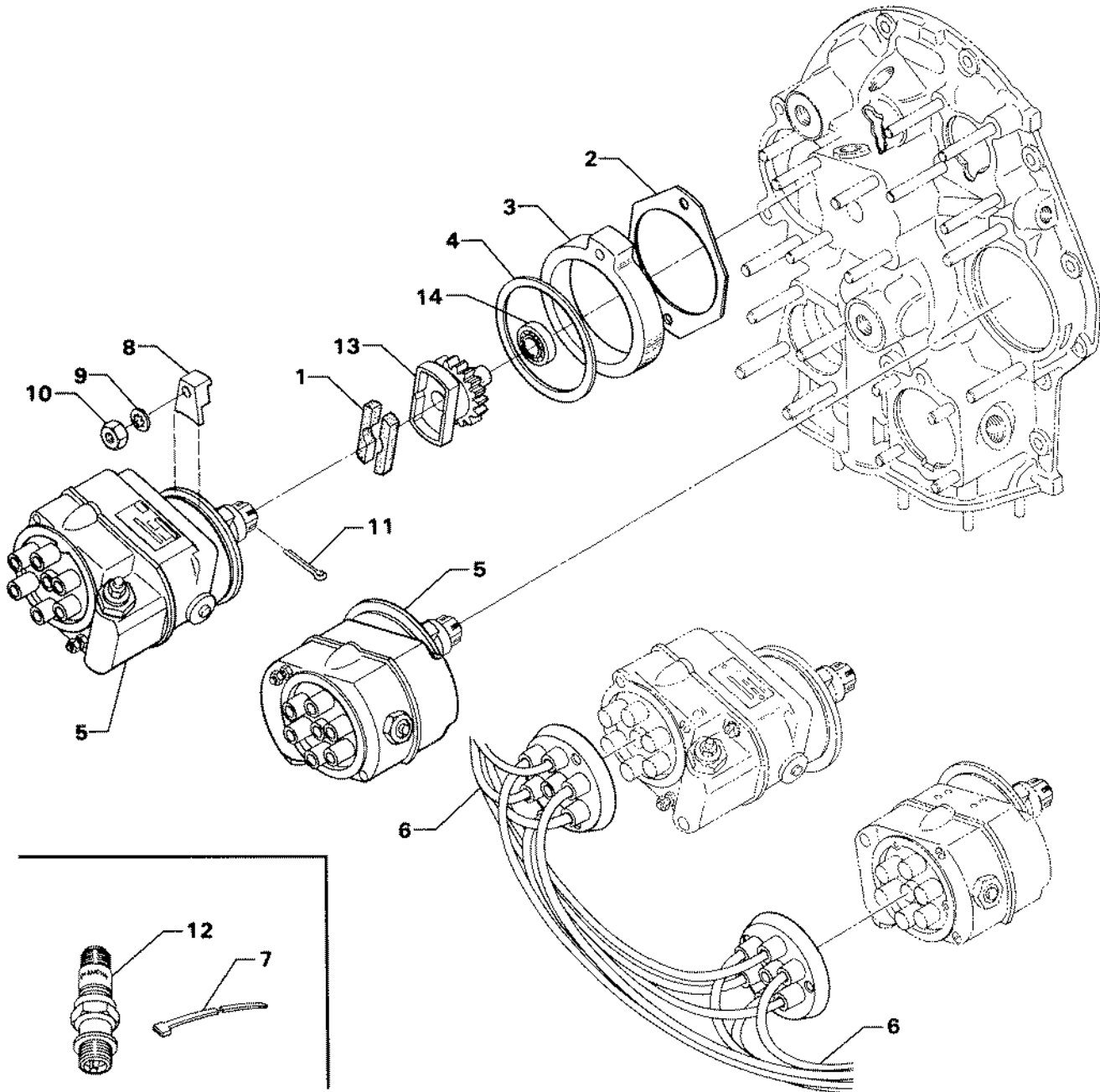
| FIG. REF. 20 | PART NUMBER  | DESCRIPTION                             | QUANTITY PER ASSEMBLY |
|--------------|--------------|-----------------------------------------|-----------------------|
| 1            | LW-13641     | CUSHION, Magneto drive                  | 4                     |
| 2            | 62224        | GASKET, Magneto adapter                 | 2                     |
| 3            | LW-12707     | ADAPTER, Magneto, impulse coupling      | 2                     |
| 4            | LW-12681     | GASKET, Magneto                         | 2                     |
| 5            | 66JC35SDNN * | MAGNETO, Impulse coupling (6251)        | 2                     |
| 6            | 67U20639     | HARNESS ASSY., Ignition, right (M-2961) | 1                     |
|              | 67U20638     | HARNESS ASSY., Ignition, left (M-2962)  | 1                     |
| 7            | 76734        | ZIP STRAP                               | AR                    |
| 8            | 66M21195     | CLAMP, Magneto                          | 4                     |
| 9            | STD-475      | WASHER, 5/16 lock, internal teeth       | 4                     |
| 10           | STD-1410     | NUT, 5/16-18 plain                      | 4                     |
| 11           | STD-713      | PIN, Cotter, 3/32 x 3/4 long            | 2                     |
| 12           | 1182-B3 * *  | SPARK PLUG (Champion REM-40E)           | 12                    |
| 13           | LW-19096     | GEAR RETAINER ASSEMBLY                  | 2                     |
| 14           | 67542        | BEARING, Ball                           | 2                     |

\* See latest edition of Service Instruction No. 1143 for complete listing of approved Slick Magnetos.  
 \* \* See latest edition of Textron Lycoming Service Instruction No. 1042 for complete listing of all approved spark plugs.

**BAG - MAGNETO HARNESS ATTACHING**

P/N 01P19762-4

| Part No.       | Part Name                        | Qty. |
|----------------|----------------------------------|------|
| 01P19762-4     | BAG - MAGNETO HARNESS ATTACHING  | 1    |
| LW-16266-25-25 | CLIP, 1 wire                     | 4    |
| LW-14060       | CLIP, 2 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 | CLIP, 6 wire                     | 2    |
| LW-16266-25-44 | CLIP, 4 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, Twist                   | 4    |
| STD-692        | SCREW, No. 10 (bracket to clip)  | 4    |
| STD-425        | WASHER, No. 10 (bracket to clip) | 4    |
| STD-670        | NUT, No. 10 (bracket to clip)    | 4    |
| LW-M-2375      | PLATE, 3 wire                    | 2    |



3304

Figure 20. SLICK MAGNETOS, HARNESSES, DRIVES AND SPARK PLUGS

# TECHNICAL PUBLICATION SUPPLEMENT

| SUPPLEMENT No. | ENGINE MODEL  | PUBLICATION No. | PUBLICATION DATE |
|----------------|---------------|-----------------|------------------|
| SSP-290        | IO-540 Series | PC-615          | October, 1979    |

This supplement is arranged in the same basic format as the original parts catalog  
Insert in front of catalog for useage of subject matter.

Revised April, 1990

Page 1-7

Figure 5: Crankshaft, Camshaft And Related Parts

List page added for IO-540-K2A5.

Page 1-8

Figure 5: Crankshaft, Camshaft And Related Parts

Illustration page added for IO-540-K2A5.

#### NOTE

For all other parts, refer to IO-540-K1A5 in this catalog.

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

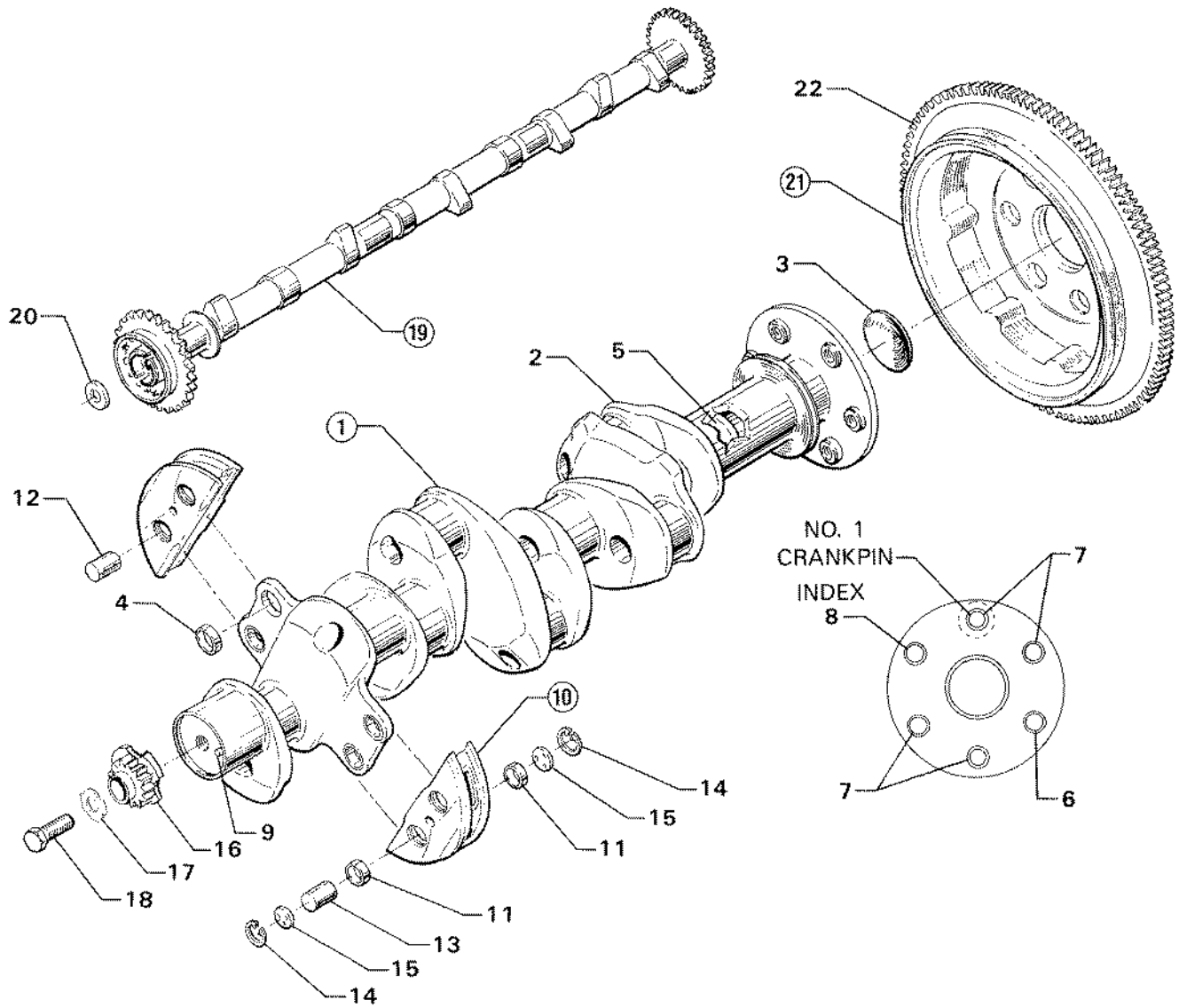
| FIG. REF. 5 | PART NUMBER  | DESCRIPTION                                      | QUANTITY PER ASSEMBLY |
|-------------|--------------|--------------------------------------------------|-----------------------|
| 1           | 13F17792     | CRANKSHAFT AND COUNTERWEIGHT ASSEMBLY            | 1                     |
| 2           | 13F17767     | CRANKSHAFT AND PLUG ASSEMBLY                     | 1                     |
| 3           | STD-1211     | PLUG, 2.00 dia. expansion                        | 1                     |
| 4           | 73810 *      | BUSHING, Crankshaft dynamic counterweight        | 4                     |
| 5           | 60945        | PLUG, 1-1/4 diameter                             | 1                     |
| 6           | 75656-S      | BUSHING, Propeller flange, long                  | 1                     |
| 7           | 72156-S      | BUSHING, Propeller flange, long                  | 4                     |
| 8           | 75657-S      | BUSHING, Propeller flange, indexing              | 1                     |
| 9           | STD-1065     | DOWEL, Stepped, 5/16 x 1/4 dia. x 35/64 long     | 1                     |
| 10          | LW-19210 * * | COUNTERWEIGHT ASSEMBLY                           | 2                     |
| 11          | 71903 *      | BUSHING, Dynamic counterweight                   | 8                     |
| 12          | 76788 * *    | ROLLER, Dynamic counterweight, 6.3 order         | 2                     |
| 13          | 73648 * *    | ROLLER, Dynamic counterweight, 5.1 order         | 2                     |
| 14          | LW-14820     | RING, Internal retaining                         | 8                     |
| 15          | 71907        | WASHER, Dynamic counterweight                    | 8                     |
| 16          | 13S19647 ●   | GEAR, Crankshaft                                 | 1                     |
| 17          | LW-18638     | LOCKPLATE, Crankshaft gear                       | 1                     |
| 18          | STD-2209     | BOLT, 5/16-24 x 1-3/4 long, hex. head            | 1                     |
| 19          | LW-19340     | CAMSHAFT ASSEMBLY                                | 1                     |
| 20          | 76118        | SPACER, Tachometer shaft centering               | 1                     |
| 21          | 74997        | SUPPORT ASSEMBLY, Starter ring gear, 12/14 pitch | 1                     |
| 22          | 72566        | GEAR, Starter ring, 12/14 pitch                  | 1                     |

\* See latest edition of Service Instruction No. 1142 for application.

\* \* See latest edition of Service Instruction No. 1012 for application.

★ See latest edition of Service Instruction No. 1143 for application.

● See latest edition of Service Bulletin No. 475 for application.



3247

Figure 5. CAMSHAFT, CRANKSHAFT AND RELATED PARTS

# TECHNICAL PUBLICATION SUPPLEMENT

| SUPPLEMENT No. | ENGINE MODEL  | PUBLICATION No. | PUBLICATION DATE |
|----------------|---------------|-----------------|------------------|
| SSP. 1084-1    | IO-540 Series | PC-615          | October, 1979    |

This supplement is arranged in the same basic format as the original parts catalog.  
Insert in front of catalog for usage of subject matter.

Revised January, 1985

Page 1

Figure 27A Oil Sump Assembly and Aerobatic  
Components list page added for AEIO models.

Revised January, 1985

Page 2

Figure 27A Oil Sump Assembly and Aerobatic  
Components illustration page added for AEIO models.





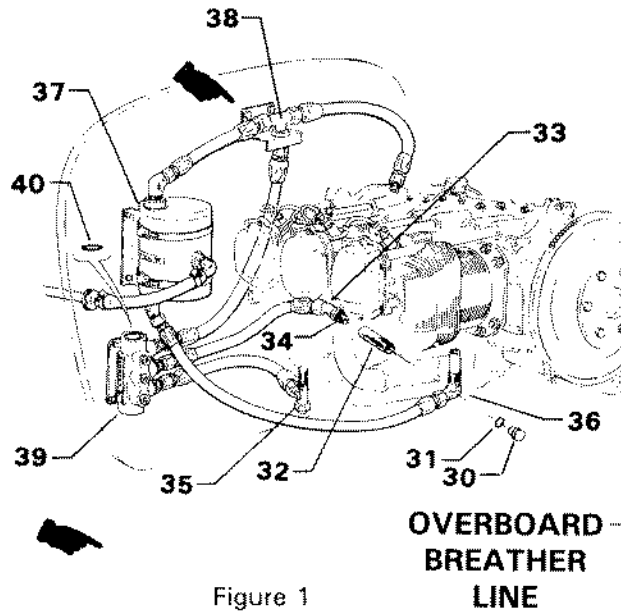
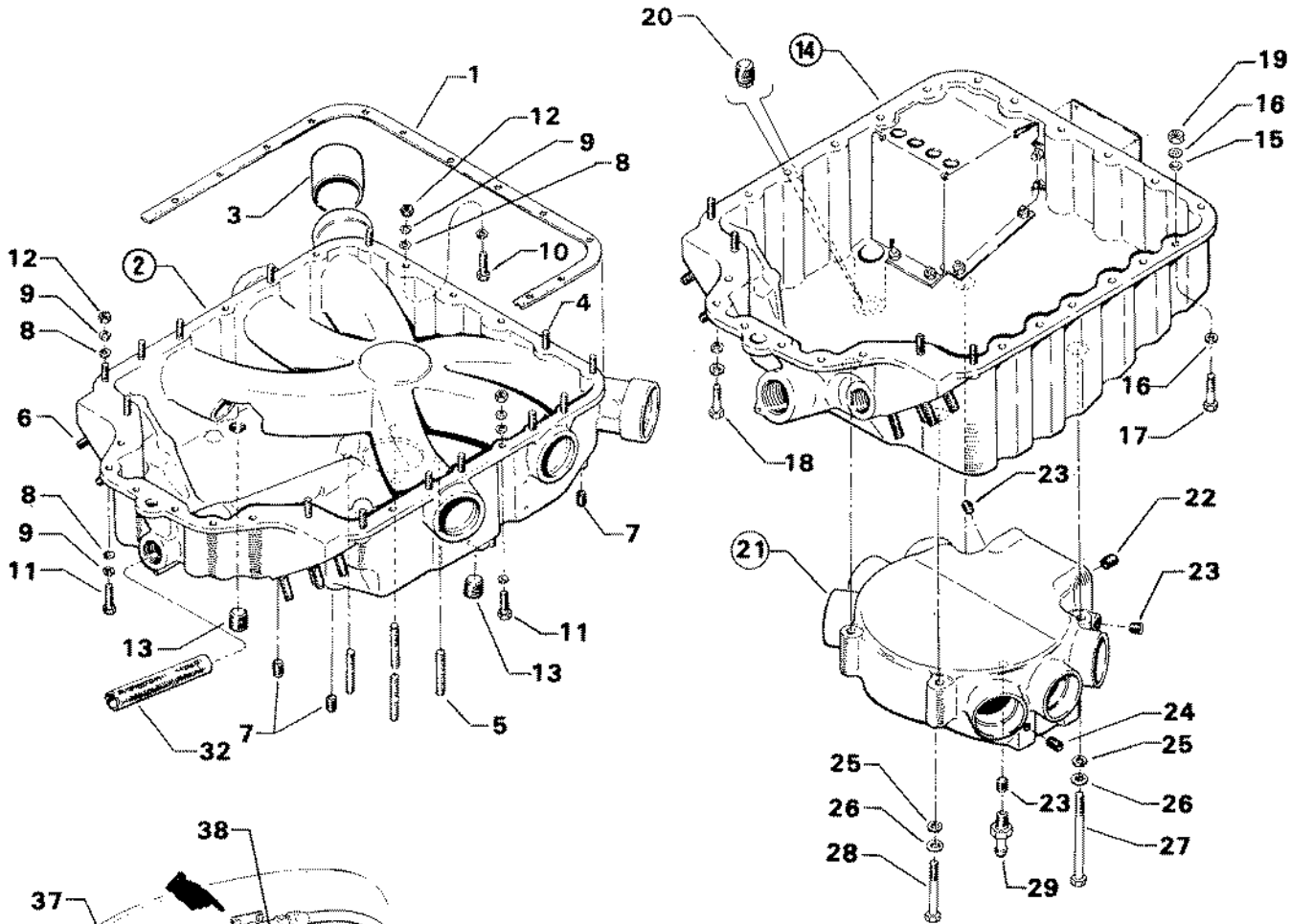


Figure 1

Inverted Oil System With Breather Tee

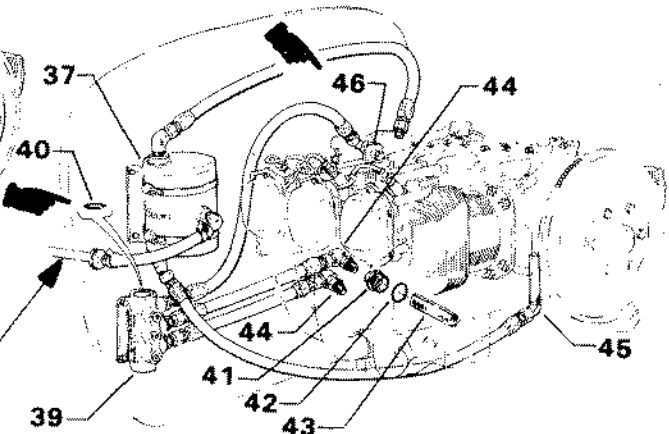


Figure 2

Inverted Oil System With Breather Adapter

Figure 27A. Oil Sump Assembly, Suction Screen and Aerobatic Components

## **SUPPLEMENTAL PARTS LIST SSP881**

To Provide Parts Coverage for Avco Lycoming Model  
IO-540-W1A5D and AEIO-540-L1B5D Aircraft Engines

This parts supplement follows the same basic format as PC-615 with which it is used. All parts peculiar to the IO-540-W1A5D and AEIO-540-L1B5D models are listed in this supplement.

In cases where the IO-540-W1A5D differs from the AEIO-540-L1B5D it is so noted under the column Model Usage. No designation under this column indicates parts apply to both models.

IO-540-W1A5D and AEIO-540-L1B5D

SECTION 1  
CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

Page 1-1 - Figure 1  
Crankcase Assembly

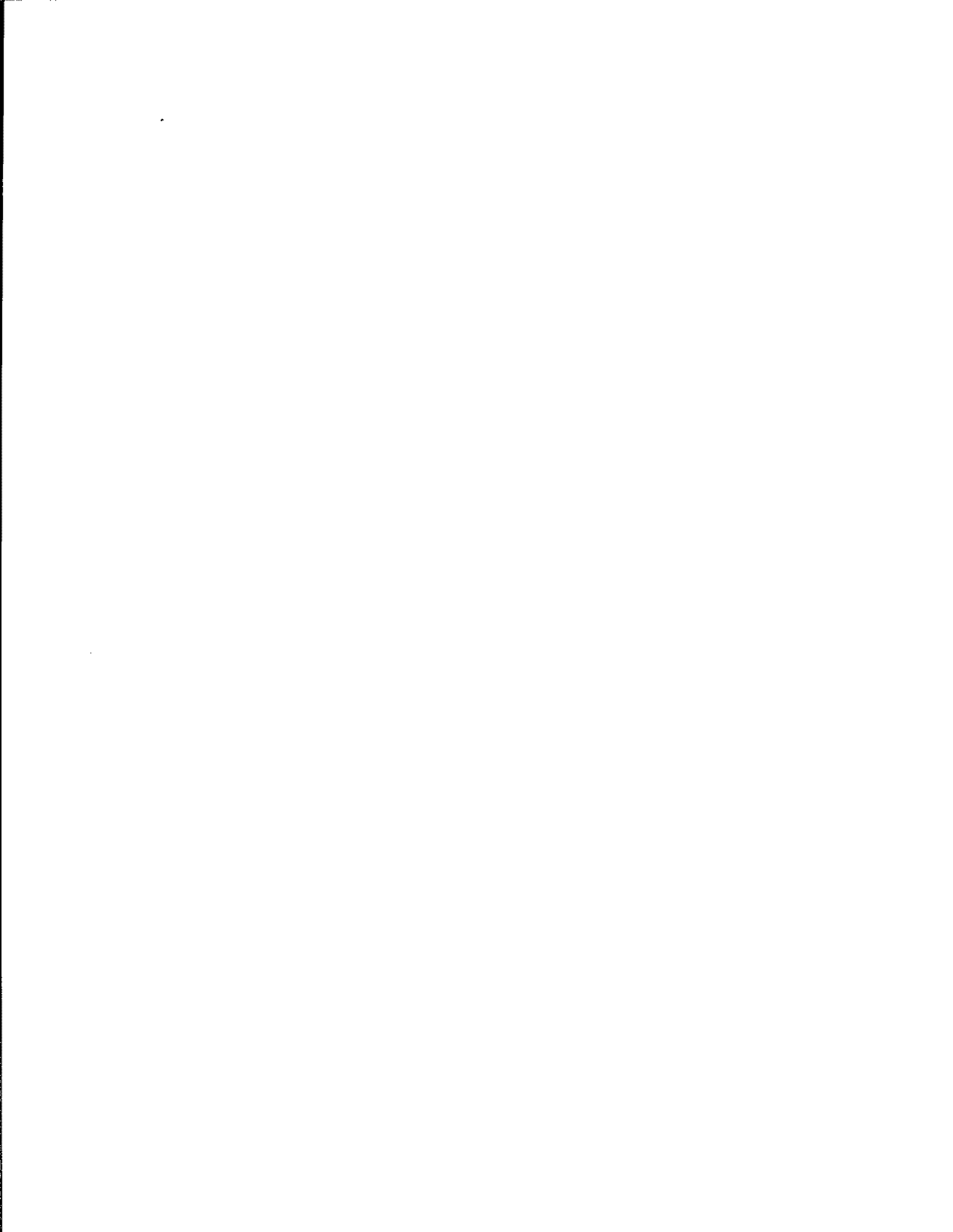
| Ref. No. | Part No. | Description                        | Qty. Per Eng. | Model Usage |
|----------|----------|------------------------------------|---------------|-------------|
| 1        | LW-14675 | CRANKCASE ASSEMBLY                 | 1             | -W1A5D      |
|          | LW-18093 | CRANKCASE ASSEMBLY                 | 1             | -L1B5D      |
| 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 x 2-1/8 long, drilled | 1             |             |
| 8        | 50-15    | STUD, 1/2-20 x 1-7/8 long          | 12            |             |
| 10       | 69796    | DOWEL, Crankshaft 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       | STD-1339 | PLUG, 1/16-27 pipe, Allen          | 1             |             |
| 15       | 1102     | PLUG, 1/8 pipe, Allen              | 4             |             |
| 16       | 65007    | RETAINER, Shroud tube seal         | 12            |             |
| 17       | 72158    | BUSHING, Gov. drive idler shaft    | 1             |             |
| 18       | 31C-16   | STUD, 5/16-18 x 2.00 long          | 4             |             |
| 19       | 73772    | NOZZLE ASSEMBLY, Piston cooling    | 6             | -L1B5D      |

Page 1-3 - Figure 2  
Oil Level Gages and Engine Mounting Brackets

|   |          |                                         |    |        |
|---|----------|-----------------------------------------|----|--------|
| 1 | 70457    | GASKET, Oil filler extension            | 1  |        |
| 2 | 75675    | EXTENSION, Oil filler, 2-3/16 long      | 1  |        |
| 3 | 72220    | GASKET, Oil level gage                  | 1  |        |
| 4 | LW-14800 | GAGE ASSY., Oil level (75675 extension) | 1  | -W1A5D |
|   | LW-14799 | GAGE ASSY., Oil level (75675 extension) | 1  | -L1B5D |
| 5 | 72306    | BRACKET, Engine mounting                | 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 |        |

Page 1-5 - Figure 3  
Crankcase Related Parts

|   |          |                                               |    |        |
|---|----------|-----------------------------------------------|----|--------|
| 1 | 1028-B   | BALL, 11/16 dia.                              | 1  |        |
| 2 | 61084    | SPRING, Oil pressure relief valve             | 1  |        |
| 3 | STD-425  | WASHER, No. 10 plain (Max. 9)                 | un | -W1A5D |
| 4 | STD-1045 | GASKET, 1-1/4 ID x 1-1/2 OD x<br>3/32 annular | 1  |        |
| 5 | 76529    | PLUG, Oil relief valve                        | 1  | -W1A5D |



IO-540-W1A5D and AEIO-540-L1B5D

SECTION 1 (CONT.)  
CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

Page 1-5 - Figure 3 (Cont.)  
Crankcase Related Parts

| Ref. No. | Part No. | Description                                | Qty. Per Eng. | Model Usage |
|----------|----------|--------------------------------------------|---------------|-------------|
| 6        | 77808    | VALVE ASSY., Oil pressure relief, adj.     | 1             | -L1B5D      |
| 7        | LW-15278 | BEARING, Crankshaft                        | 6             | -W1A5D      |
|          | LW-14830 | BEARING, Crankshaft                        | 6             | -L1B5D      |
| 8        | LW-13884 | BEARING, Crankshaft, front                 | 2             | -W1A5D      |
|          | LW-13885 | BEARING, Crankshaft, front                 | 2             | -L1B5D      |
| 9        | LW-13792 | SEAL, Crankshaft, oil                      | 1             | -W1A5D      |
|          | LW-15628 | SEAL, Crankshaft, oil                      | 1             | -L1B5D      |
| 10       | 72091    | RING, Oil seal, 23/64 ID x 7/64 dia. sect. | 2             |             |
| 11       | 72877    | BODY, Hydraulic tappet                     | 12            |             |

Page 1-6 - Figure 4  
Propeller Governor Drive Assembly

|    |              |                                          |    |  |
|----|--------------|------------------------------------------|----|--|
| 1  | LW-10442     | GEAR, Propeller governor drive           | 1  |  |
| 2  | LW-14021     | SHAFT, Prop. governor idler gear         | 1  |  |
| 3  | LW-10541     | GEAR ASSEMBLY, Prop. governor idler      | 1  |  |
| 4  | 77872        | BUSHING, Prop. 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                           | un |  |
|    | 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 ID x 1-1/8 OD 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, internal teeth        | 4  |  |
| 15 | STD-1410     | NUT, 5/16-18 plain                       | 4  |  |

Page 1-7 - Figure 5  
Crankshaft, Camshaft and Related Parts

|   |          |                                    |   |        |
|---|----------|------------------------------------|---|--------|
| 1 | LW-17682 | CRANKSHAFT AND COUNTERWEIGHT ASSY. | 1 | -W1A5D |
|   | LW-17783 | CRANKSHAFT AND COUNTERWEIGHT ASSY. | 1 | -L1B5D |
| 2 | LW-17652 | CRANKSHAFT ASSY.                   | 1 | -W1A5D |
|   | LW-17758 | CRANKSHAFT ASSY.                   | 1 | -L1B5D |
| 3 | STD-1211 | PLUG, 2.00 dia. expansion          | 1 |        |

IO-540-W1A5D and AEIO-540-L1B5D

SECTION 1 (CONT.)  
CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

Page 1-7 - Figure 5 (Cont.)  
Crankshaft, Camshaft and Related Parts

| Ref. No. | Part No. | Description                              | Qty. Per Eng. | Model Usage |
|----------|----------|------------------------------------------|---------------|-------------|
| 4        | 73810    | BUSHING, Crankshaft counterweight        | 4             |             |
| 5        | 61510    | PLUG, 1-3/4 dia.                         | 1             | -W1A5D      |
|          | 60945    | PLUG, 1-1/4 dia.                         | 1             | -L1B5D      |
| 6        | 72062    | BUSHING, Propeller flange, long          | 4             | -W1A5D      |
| 7        | 72061    | BUSHING, Propeller flange, short         | 1             | -W1A5D      |
| 8        | 72060    | BUSHING, Propeller flange, indexing      | 1             | -W1A5D      |
| 9        | 75656    | BUSHING, Propeller flange, long          | 4             | -L1B5D      |
| 10       | 72155    | BUSHING, Propeller flange, short         | 1             | -L1B5D      |
| 11       | 75657    | BUSHING, Propeller flange, indexing      | 1             | -L1B5D      |
| 12       | STD-2078 | DOWEL, 3/8 OD x 1/2 long                 | 1             |             |
| 13       | 72801    | COUNTERWEIGHT ASSY.                      | 2             | -W1A5D      |
|          | 73644    | COUNTERWEIGHT ASSY.                      | 2             | -L1B5D      |
| 14       | 71903    | BUSHING, Dynamic counterweight           | 8             |             |
| 15       | 72797    | ROLLER, Dynamic counterweight, 6.3 order | 2             | -W1A5D      |
|          | 76788    | ROLLER, Dynamic counterweight, 6.3 order | 2             | -L1B5D      |
| 16       | 72965    | ROLLER, Dynamic counterweight, 5.1 order | 2             | -W1A5D      |
|          | 76787    | ROLLER, Dynamic counterweight, 5.1 order | 2             | -L1B5D      |
| 17       | LW-14820 | RING, Internal retaining                 | 8             |             |
| 18       | 71907    | WASHER, Dynamic counterweight            | 8             |             |
| 19       | LW-10284 | GEAR, Crankshaft                         | 1             |             |
| 20       | LW-10332 | LOCKPLATE, Crankshaft gear               | 1             |             |
| 21       | AN8-14A  | BOLT, 1/2-20 x 1-19/32 long              | 1             |             |
| 22       | LW-13908 | CAMSHAFT                                 | 1             | -W1A5D      |
|          | 76148    | CAMSHAFT                                 | 1             | -L1B5D      |
| 23       | LW-16470 | SUPPORT ASSY., Starter ring gear         | 1             | -W1A5D      |
|          | 77579    | SUPPORT ASSY., Starter ring gear         | 1             | -L1B5D      |
| 24       | 72566    | GEAR, Starter ring, 12/14 pitch          | 1             |             |

Page 1-9 - Figure 6  
Crankshaft Idler Gears and Tachometer Drive

|   |          |                                         |   |        |
|---|----------|-----------------------------------------|---|--------|
| 4 | LW-10290 | GEAR ASSY., Crankshaft idler (pump cam) | 1 | -W1A5D |
|   | LW-10292 | GEAR ASSY., Crankshaft idler, plain     | 1 | -L1B5D |
|   | LW-10299 | SHAFT, Crankshaft idler gear            | 1 |        |
|   | LW-10659 | GEAR ASSY., Crankshaft idler            | 1 | -W1A5D |
|   | LW-10299 | SHAFT, Crankshaft idler gear            | 1 | -W1A5D |
| 5 | LW-10297 | GEAR ASSY., Crankshaft idler (heavy)    | 1 | -L1B5D |
|   | LW-10300 | SHAFT, Crankshaft idler                 | 1 | -L1B5D |
|   | LW-10325 | SPACER, Idler gear                      | 1 |        |
| 6 | LW-10324 | GEAR ASSY., Fuel pump idler             | 1 | -L1B5D |
|   | LW-10299 | SHAFT, Crankshaft idler gear            | 1 | -L1B5D |

IO-540-W1A5D and AEIO-540-L1B5D

SECTION 1 (CONT.)  
CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

Page 1-9 - Figure 6 (Cont.)  
Crankshaft Idler Gears and Tachometer Drive

| Ref. No. | Part No.     | Description                        | Qty. Per Eng. | Model Usage |
|----------|--------------|------------------------------------|---------------|-------------|
|          | LW-10325     | SPACER, Idler gear                 | 1             | -L1B5D      |
| 10       | 76155        | SHAFT ASSY., Tachometer            | 1             |             |
| 11       | 78368        | PIN, 3/16 x 2-5/16 long            | 1             |             |
| 12       | 76118        | SPACER, Tachometer shaft centering | 1             |             |
| 13       | MS16625-1081 | RING, Internal retaining           | 1             |             |
| 14       | 61544        | PLUNGER, Fuel pump                 | 1             | -W1A5D      |

Page 1-10 - Figure 7  
Crankcase Attaching Parts

|    |          |                                                 |    |        |
|----|----------|-------------------------------------------------|----|--------|
| 1  | STD-1414 | BOLT, 1/4-20 x 1-1/2 long, hex. hd.             | 7  | -W1A5D |
|    | STD-1414 | BOLT, 1/4-20 x 1-1/2 long, hex. hd.             | 11 | -L1B5D |
| 2  | STD-1931 | BOLT, 1/4-20 x 1-7/8 long, hex. hd.             | 1  | -W1A5D |
| 3  | STD-1646 | BOLT, 1/4-20 x 2.00 long, hex. hd.              | 2  | -W1A5D |
| 4  | STD-8    | WASHER, 1/4 plain                               | 25 | -W1A5D |
|    | STD-8    | WASHER, 1/4 plain                               | 27 | -L1B5D |
| 5  | 60803    | STRAP, Lifting                                  | 2  |        |
| 6  | STD-2084 | BOLT, 1/4-20 x 1-3/4 long, hex. hd.             | 1  | -W1A5D |
|    | STD-2084 | BOLT, 1/4-20 x 1-3/4 long, hex. hd.             | 1  | -L1B5D |
| 7  | STD-1419 | 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 | STD-1416 | BOLT, 1/4-20 x 1-1/2 long, hex. hd.,<br>dr. end | 6  |        |
| 11 | STD-8    | WASHER, 1/4 plain (Max. 18)                     | un |        |
| 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  |        |
| 20 | 76220    | STUD, 1/2-20 x 10-45/64 long                    | 8  |        |

SECTION 2  
ACCESSORY HOUSING AND RELATED PARTS

Page 2-1 - Figure 8  
Accessory Housing Assembly

|   |       |                           |   |  |
|---|-------|---------------------------|---|--|
| 1 | 73818 | GASKET, Accessory housing | 1 |  |
|---|-------|---------------------------|---|--|



IO-540-W1A5D and AEIO-540-L1B5D

SECTION 2 (CONT.)  
ACCESSORY HOUSING AND RELATED PARTS

Page 2-1 - Figure 8 (Cont.)  
Accessory Housing Assembly

| Ref. No. | Part No. | Description                            | Qty. Per Eng. | Model Usage |
|----------|----------|----------------------------------------|---------------|-------------|
| 3        | LW-10908 | HOUSING ASSEMBLY, Accessory            | 1             | -W1A5D      |
|          | LW-10905 | HOUSING ASSEMBLY, Accessory            | 1             | -L1B5D      |
| 5        | 31CD-20  | STUD, 5/16-18 x 2-1/2 long, drilled    | 3             |             |
|          | 31C-13   | STUD, 5/16-18 x 1-5/8 long             | 2             |             |
| 7        | 31C-19   | STUD, 5/16-18 x 2-3/8 long             | 4             | -L1B5D      |
| 9        | 25C-12   | STUD, 1/4-20 x 1-1/2 long              | 8             |             |
| 13       | STD-1339 | PLUG, 1/16 NPT, Allen                  | 1             | -L1B5D      |
| 14       | LW-10341 | INSERT, 1.00-14 x 3/8 long, Heli-coil  | 1             |             |
| 15       | LW-12589 | INSERT, 5/8-18 x 3/8 long, Heli-coil   | 1             |             |
| 16       | MS124703 | INSERT, 3/4-16 x 1-1/8 long, Heli-coil | 1             |             |
|          | 76156    | SHIELD, Oil accessory breather         | 1             |             |
|          | STD-2206 | DOWEL, 27/64 dia. x 1/2 long           | 1             | -L1B5D      |
|          | 1102     | PLUG, 1/8-27 NPT, Allen                | 1             | -W1A5D      |

Page 2-3 - Figure 9  
Oil Pump Assembly and Accessory Housing Attaching Parts

|    |          |                                     |    |  |
|----|----------|-------------------------------------|----|--|
| 11 | LW-10344 | BODY ASSEMBLY, Oil pump             | 1  |  |
|    | 60329    | SHAFT, Oil pump idler               | 1  |  |
|    | STD-714  | PIN, 1/8 dia. x 1.00 long, cotter   | 1  |  |
| 12 | 61297    | IMPELLER, Oil pump driving          | 1  |  |
| 13 | 61298    | IMPELLER, Oil pump driven           | 1  |  |
| 14 | LW-10318 | GEAR ASSEMBLY, Oil pump drive       | 1  |  |
|    | 61166    | THRUST BUTTON, Oil pump drive gear  | 1  |  |
| 15 | STD-35   | WASHER, 5/16 plain                  | 3  |  |
| 16 | STD-1420 | NUT, 5/16-18 slotted                | 3  |  |
| 17 | LW-14260 | SEAL, Tachometer drive, oil         | 1  |  |
| 18 | STD-8    | WASHER, 1/4 plain                   | 12 |  |
| 19 | STD-160  | WASHER, 1/4 lock, internal          | 12 |  |
| 20 | STD-1204 | BOLT, 1/4-20 x 15/16 long, hex. hd. | 9  |  |
| 23 | STD-1875 | BOLT, 1/4-20 x 13/16 long, hex. hd. | 2  |  |
| 24 | STD-1215 | BOLT, 1/4-20 x 1-1/4 long, hex. hd. | 1  |  |

Page 2-5 - Figure 10  
Oil Filter Assembly and Oil Cooler Bypass Valve

|    |              |                                 |   |        |
|----|--------------|---------------------------------|---|--------|
| 12 | LW-10321     | SPRING, Oil filter bypass valve | 1 |        |
| 13 | 76539        | SEAT, Oil relief valve          | 1 |        |
| 14 | LW-10320     | SLEEVE, Oil filter bypass valve | 1 |        |
| 15 | MS16625-1100 | RING, Internal retaining        | 1 |        |
| 16 | LW-13906     | OIL FILTER ASSEMBLY, Short      | 1 | -W1A5D |

IO-540-W1A5D and AEIO-540-L1B5D

SECTION 2 (CONT.)  
ACCESSORY HOUSING AND RELATED PARTS

Page 2-5 - Figure 10 (Cont.)  
Oil Filter Assembly and Oil Cooler Bypass Valve

| Ref. No. | Part No. | Description                                  | Qty. Per Eng. | Model Usage |
|----------|----------|----------------------------------------------|---------------|-------------|
|          | LW-10660 | OIL FILTER ASSEMBLY                          | 1             | -L1B5D      |
| 17       | LW-13904 | KIT, Converter plate, oil filter             | 1             | -W1A5D      |
| 18       | 75944    | VALVE ASSY., Temp. control oil cooler bypass | 1             |             |

Page 2-7 - Figure 11  
Vacuum Pump Drive, Oil Cooler Fittings and Breather Fittings

|    |            |                                         |   |        |
|----|------------|-----------------------------------------|---|--------|
| 6  | 71596      | WASHER, Accessory drive gear            | 1 | -W1A5D |
| 7  | LW-10307   | GEAR ASSEMBLY, Accessory driven         | 1 | -W1A5D |
| 9  | STD-208    | OIL SEAL, 7/8 ID x 1-1/2 OD x 5/16 wide | 1 | -W1A5D |
| 10 | 8313       | GASKET, Vacuum pump                     | 1 |        |
| 11 | 60430      | COVER, Vacuum pump                      | 1 | -W1A5D |
|    | LW-16878   | ADAPTER, Breather                       | 1 | -L1B5D |
| 12 | STD-8      | WASHER, 1/4 plain                       | 4 |        |
| 13 | STD-160    | WASHER, 1/4 lock, internal teeth        | 4 |        |
| 14 | STD-1411   | NUT, 1/4-20 plain                       | 4 |        |
| 19 | 72996      | FITTING, Breather                       | 1 | -W1A5D |
| 20 | MS29512-10 | SEAL, Oil, 3/32 section x 45/64 ID      | 1 | -W1A5D |
|    | MS29512-10 | SEAL, Oil, 3/32 section x 45/64 ID      | 2 | -L1B5D |
| 21 | AN814-10L  | PLUG, 7/8-14 thd.                       | 1 |        |
| 22 | LW-14178   | PLUG, 7/8-14 thd.                       | 1 | -L1B5D |
|    | MS29512-10 | SEAL, Oil, 3/32 section x 45/64 ID      | 2 |        |
| 27 | LW-14828   | REDUCER, 1/2 tubing to 5/8 tubing       | 2 |        |

Page 2-9 - Figure 12  
Hydraulic Pump Drive and Covers

|    |          |                                         |   |        |
|----|----------|-----------------------------------------|---|--------|
| 13 | 8313     | GASKET, Hydraulic pump                  | 1 |        |
| 14 | 60430    | COVER, Hydraulic pump                   | 1 |        |
| 15 | STD-8    | WASHER, 1/4 plain                       | 4 |        |
| 16 | STD-160  | WASHER, 1/4 lock, internal teeth        | 4 |        |
| 17 | STD-1411 | NUT, 1/4-20 plain                       | 4 |        |
| 19 | LW-10313 | GEAR ASSEMBLY, Accessory driven         | 1 | -L1B5D |
| 20 | 71596    | WASHER, Accessory drive gear            | 1 | -L1B5D |
| 21 | STD-208  | OIL SEAL, 7/8 ID x 1-1/2 OD x 5/16 wide | 1 | -L1B5D |

Page 2-11 - Figure 13  
Fuel Pump and Fuel Pump Drives

|   |          |           |   |        |
|---|----------|-----------|---|--------|
| 1 | LW-15473 | FUEL PUMP | 1 | -W1A5D |
|---|----------|-----------|---|--------|

IO-540-W1A5D and AEIO-540-L1B5D

SECTION 2 (CONT.)  
ACCESSORY HOUSING AND RELATED PARTS

Page 2-11 - Figure 13 (Cont.)  
Fuel Pump and Fuel Pump Drives

| Ref. No. | Part No. | Description                                          | Qty. Per Eng. | Model Usage |
|----------|----------|------------------------------------------------------|---------------|-------------|
| 2        | 60096    | GASKET, Fuel pump                                    | 1             | -W1A5D      |
| 3        | STD-33   | WASHER, 3/8 plain                                    | 2             | -W1A5D      |
| 4        | STD-1882 | SCREW, 3/8-16 x 1-9/32 long,<br>socket. hd., dr. hd. | 2             | -W1A5D      |
| 5        | LW-10799 | SPACER, Fuel pump insulating                         | 1             | -L1B5D      |
| 6        | LW-12534 | PUMP, Fuel                                           | 1             | -L1B5D      |
| 7        | STD-35   | WASHER, 5/16 plain                                   | 4             | -L1B5D      |
| 8        | STD-475  | WASHER, 5/16 lock, internal teeth                    | 4             | -L1B5D      |
| 9        | STD-1410 | NUT, 5/16-18 plain                                   | 4             | -L1B5D      |
|          | 72377    | ELBOW, 3/8 tubing, adjustable, 90°                   | 2             | -W1A5D      |
| 13       | LW-10324 | GEAR ASSY., Fuel pump idler                          | 1             | -L1B5D      |
|          | LW-10299 | SHAFT, Crankshaft idler gear                         | 1             | -L1B5D      |
| 17       | 69164    | GASKET, Fuel pump adapter                            | 1             | -L1B5D      |
| 19       | 69159    | ADAPTER ASSY., Fuel pump drive                       | 1             | -L1B5D      |
| 20       | STD-1774 | PIN, 1/8 dia. x 1/4 long                             | 1             | -L1B5D      |
| 21       | STD-213  | SEAL, Oil, 3/4 ID x 1-3/8 OD                         | 1             | -L1B5D      |
| 22       | LW-10329 | SHAFTGEAR ASSY., Fuel pump drive                     | 1             | -L1B5D      |

SECTION 3  
CYLINDER, PISTON AND VALVE TRAIN

Page 3-1 - Figure 14  
Connecting Rod, Piston and Ring Assemblies

|    |          |                                                |    |        |
|----|----------|------------------------------------------------|----|--------|
| 1  | LW-13865 | CONNECTING ROD ASSEMBLY                        | 6  | -W1A5D |
|    | LW-10646 | CONNECTING ROD ASSEMBLY                        | 6  | -L1B5D |
| 2  | LW-13923 | BUSHING, Connecting rod, upper                 | 6  |        |
| 3  | 75061    | BOLT, Connecting rod                           | 12 | -W1A5D |
|    | 75060    | BOLT, Connecting rod                           | 12 | -L1B5D |
| 4  | LW-12186 | NUT, Connecting rod                            | 12 |        |
| 5  | LW-13521 | BEARING, Connecting rod                        | 12 | -W1A5D |
|    | LW-14954 | BEARING, Connecting rod                        | 12 | -L1B5D |
| 6  | LW-13396 | PISTON, Compression ratio, 8.50:1              | 6  | -W1A5D |
|    | LW-10207 | PISTON, Compression ratio, 8.7:1               | 6  | -L1B5D |
| 7  | 74241    | RING, Piston, compression                      | 12 |        |
| 8  | 73857    | RING, Piston, oil regulating,<br>expander type | 6  |        |
| 9  | LW-14068 | PIN, Piston                                    | 6  | -W1A5D |
|    | LW-14078 | PIN, Piston                                    | 6  | -L1B5D |
| 10 | 60828    | PLUG, Piston pin                               | 12 |        |

IO-540-W1A5D and AEIO-540-L1B5D

SECTION 3 (CONT.)  
CYLINDER, PISTON AND VALVE TRAIN

Page 3-4 - Figure 15  
Cylinder Assembly

| Ref. No. | Part No.   | Description                               | Qty. Per Eng. | Model Usage |
|----------|------------|-------------------------------------------|---------------|-------------|
| 1        | LW-13870   | CYLINDER AND HEAD ASSY., Nitrided         | 6             | -W1A5D      |
|          | LW-12987   | CYLINDER AND HEAD ASSY., Nitrided         | 6             | -L1B5D      |
| 2        | 72057      | SEAT, Intake valve                        | 6             | -W1A5D      |
|          | LW-12688   | SEAT, Intake valve                        | 6             | -L1B5D      |
| 3        | 72058      | SEAT, Exhaust valve                       | 6             | -W1A5D      |
|          | 71894      | SEAT, Exhaust valve                       | 6             | -L1B5D      |
| 4        | 76943      | GUIDE, Valve, intake                      | 6             | -W1A5D      |
|          | LW-11956   | GUIDE, Valve, intake                      | 6             | -L1B5D      |
| 5        | 77160      | GUIDE, Valve, exhaust                     | 6             | -W1A5D      |
|          | LW-11957   | GUIDE, Valve, exhaust                     | 6             | -L1B5D      |
| 6        | 66796      | INSERT, Spark plug, 18-1.5 MM             | 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             | -W1A5D      |
| 10       | 25C-8      | STUD, 1/4-20 x 1.00 long                  | 24            | -L1B5D      |
| 11       | 66610      | BUSHING, Rocker shaft                     | 24            | -W1A5D      |
|          | 66670      | BUSHING, Rocker shaft                     | 24            | -L1B5D      |
| 12       | MS20823-6D | ELBOW, 45° x 3/8 flared tube              | 6             |             |
| 13       | 72343      | STABILIZER, Cyl. head fins - 15 teeth     | 6             | -L1B5D      |
|          | 72344      | STABILIZER, Cyl. head fins - 26 teeth     | 6             | -L1B5D      |
|          | 1102       | PLUG, 1/8-27 NPT, Allen                   | 6             |             |

Page 3-5 - Figure 16  
Valve Assembly

|   |          |                                                  |    |        |
|---|----------|--------------------------------------------------|----|--------|
| 1 | 73938    | VALVE, Intake                                    | 6  | -W1A5D |
|   | LW-13622 | VALVE, Intake                                    | 6  | -L1B5D |
| 2 | 74541    | VALVE, Exhaust, rotator type                     | 6  | -W1A5D |
|   | 73111    | VALVE, Exhaust, rotator type                     | 6  | -L1B5D |
| 3 | LW-11795 | SPRING, Valve, inner                             | 12 | -W1A5D |
|   | LW-11797 | SPRING, Valve, inner                             | 12 | -L1B5D |
| 4 | LW-11800 | SPRING, Valve, outer                             | 12 | -W1A5D |
|   | LW-11796 | SPRING, Valve, outer                             | 12 | -L1B5D |
| 5 | 65441    | SEAT, Valve spring, lower, intake                | 6  | -W1A5D |
|   | LW-13321 | SEAT, Valve spring, lower, intake                | 6  | -L1B5D |
| 6 | LW-10077 | SEAT, Valve spring, upper, intake                | 6  | -W1A5D |
|   | 69532    | SEAT, Valve spring, upper, intake                | 6  | -L1B5D |
| 7 | LW-13323 | SEAT, Valve spring, lower, exhaust               | 6  | -W1A5D |
|   | LW-13322 | SEAT, Valve spring, lower, exhaust               | 6  | -L1B5D |
| 8 | LW-16475 | SEAT, Valve spring, upper, exhaust, rotator type | 6  |        |

IO-540-W1A5D and AEIO-540-L1B5D

SECTION 3 (CONT.)  
CYLINDER, PISTON AND VALVE TRAIN

Page 3-5 - Figure 16 (Cont.)  
Valve Assembly

| Ref. No. | Part No.  | Description                               | Qty. Per Eng. | Model Usage |
|----------|-----------|-------------------------------------------|---------------|-------------|
| 9        | 60009     | KEY, Valve, intake                        | 12            | -W1A5D      |
|          | 72050     | KEY, Valve, intake                        | 12            | -L1B5D      |
| 10       | 62388     | CAP, Valve stem                           | 6             | -L1B5D      |
| 11       | MS13997-3 | KEY, Valve, exhaust, rotator type         | 12            |             |
| 12       | MS13998-3 | CAP, Valve stem, exhaust, rotator type    | 6             |             |
| 13       | 78290     | PLUNGER ASSY., Hydraulic tappet           | 12            |             |
| 14       | 78524     | SOCKET, Push rod, hydraulic tappet        | 12            |             |
| 15       | LW-11485  | TUBE, Push rod, shroud                    | 12            | -W1A5D      |
|          | 72255     | SHROUD TUBE ASSY., Push rod               | 12            | -L1B5D      |
| 16       | LW-14995  | SPRING, Shroud tube                       | 6             | -W1A5D      |
|          | LW-13077  | SPRING, Shroud tube                       | 24            | -L1B5D      |
| 17       | LW-12272  | LOCKPLATE, Shroud tube                    | 6             | -W1A5D      |
| 18       | STD-1411  | NUT, 1/4-20 plain                         | 6             | -W1A5D      |
| 19       | 66728     | WASHER, 3/4 ID x 1-1/4 OD x<br>1/32 thick | 24            | -L1B5D      |
| 20       | 61503     | SLEEVE, Shroud tube seal                  | 12            | -L1B5D      |
| 21       | 70310     | SEAL, Shroud tube                         | 12            | -W1A5D      |
| 22       | 62922     | SEAL, Shroud tube                         | 12            | -W1A5D      |
|          | 62922     | SEAL, Shroud tube                         | 24            | -L1B5D      |

Page 3-7 - Figure 17  
Cylinder Related Parts

|    |       |                                 |    |        |
|----|-------|---------------------------------|----|--------|
| 1  | 73434 | ROD ASSEMBLY, Push - A total    | un | -W1A5D |
|    | 73435 | ROD ASSEMBLY, Push - of 12      | un | -W1A5D |
|    | 73436 | ROD ASSEMBLY, Push - push rods  | un | -W1A5D |
|    | 73437 | ROD ASSEMBLY, Push - required   | un | -W1A5D |
|    | 73455 | ROD ASSEMBLY, Push - A total    | un | -L1B5D |
|    | 73456 | ROD ASSEMBLY, Push - of 12      | un | -L1B5D |
|    | 73457 | ROD ASSEMBLY, Push - push rods  | un | -L1B5D |
|    | 73458 | ROD ASSEMBLY, Push - required   | un | -L1B5D |
| 2  | 69444 | ROCKER ASSEMBLY, Valve, intake  | 6  | -W1A5D |
| 3  | 60398 | BUSHING, Valve rocker, intake   | 6  | -W1A5D |
| 4  | 67113 | ROCKER ASSEMBLY, Valve, intake  | 6  | -L1B5D |
| 5  | 67114 | BUSHING, Valve rocker           | 6  | -L1B5D |
| 6  | 74636 | ROCKER ASSEMBLY, Valve, exhaust | 6  | -W1A5D |
| 7  | 74637 | BUSHING, Valve rocker, exhaust  | 6  | -W1A5D |
| 8  | 67112 | ROCKER ASSEMBLY, Valve, exhaust | 6  | -L1B5D |
| 9  | 67114 | BUSHING, Valve rocker           | 6  | -L1B5D |
| 10 | 71549 | WASHER, Valve rocker            | 12 | -L1B5D |
| 11 | 72626 | SHAFT, Valve rocker             | 12 | -L1B5D |

**IO-540-W1A5D and AEIO-540-L1B5D**

SECTION 3 (CONT.)  
CYLINDER, PISTON AND VALVE TRAIN

Page 3-7 - Figure 17 (Cont.)  
Cylinder Related Parts

| Ref. No. | Part No. | Description                                      | Qty. Per Eng. | Model Usage |
|----------|----------|--------------------------------------------------|---------------|-------------|
| 12       | LW-13790 | SHAFT, Valve rocker                              | 12            | -W1A5D      |
| 13       | LW-12892 | THRUST BUTTON, Rocker shaft                      | 12            | -W1A5D      |
| 14       | 66732    | GASKET, Valve rocker shaft cover                 | 12            | -L1B5D      |
| 15       | 66731    | COVER, Valve rocker shaft                        | 12            | -L1B5D      |
| 16       | STD-160  | WASHER, 1/4 lock, internal teeth                 | 24            | -L1B5D      |
| 17       | STD-1411 | NUT, 1/4-20 plain                                | 24            | -L1B5D      |
| 18       | 75906    | GASKET, Rocker box cover                         | 6             | -W1A5D      |
|          | 67193    | GASKET, Rocker box cover                         | 6             | -L1B5D      |
| 19       | 61247    | COVER, Rocker box                                | 6             | -W1A5D      |
|          | 68795    | COVER ASSY., Rocker box                          | 6             | -L1B5D      |
| 20       | STD-1925 | SCREW, 1/4-20 x 5/8 long, pan. hd., self-locking | 36            | -W1A5D      |
|          | STD-1925 | SCREW, 1/4-20 x 5/8 long, pan hd., self-locking  | 48            | -L1B5D      |
| 21       | 74494    | PLATE, Spark plug reach caution                  | 6             | -L1B5D      |
| 22       | 71481    | RING, Oil seal, 3/32 dia, x 4-27/32 ID           | 6             |             |
| 23       | 77906    | SPACER, 1/2 ID x 7/8 OD x 1/8 thick              | 2             |             |
| 24       | 74887    | SPACER, 1/2 ID x 7/8 OD x 3/8 thick              | 2             |             |
| 25       | 383-B    | NUT, 3/8-24 plain                                | 24            |             |
| 26       | STD-2090 | NUT, 1/2-20 plain                                | 28            |             |
| 27       | 65321    | GASKET, Exhaust flange                           | 6             | -W1A5D      |
|          | 75118    | GASKET, Exhaust flange                           | 12            | -L1B5D      |
| 28       | 67195    | FLANGE, Exhaust                                  | 6             | -L1B5D      |
| 29       | STD-35   | WASHER, 5/16 plain                               | 12            |             |
| 30       | STD-475  | WASHER, 5/16 lock, internal teeth                | 12            |             |
| 31       | STD-1410 | NUT, 5/16 plain                                  | 12            |             |

Page 3-9 - Figure 18  
Cylinder Head Drain Tubes and Intercylinder Cooling Baffles

|   |               |                                             |    |        |
|---|---------------|---------------------------------------------|----|--------|
| 1 | STD-684       | NIPPLE, Straight, 3/8 ID hose               | 6  |        |
| 2 | STD-1821      | HOSE, 3/8 ID x 2-1/2 long                   | 6  | -W1A5D |
|   | STD-2180      | HOSE, 3/8 ID x 1-13/16 long                 | 6  | -L1B5D |
| 3 | LW-15592-5-05 | CLAMP, Hose                                 | 12 |        |
| 4 | 68759         | TUBE ASSY., No. 1 cyl. head oil drain       | 1  | -W1A5D |
|   | 71737         | TUBE ASSY., No. 2 cyl. head oil drain       | 1  | -W1A5D |
|   | 68761         | TUBE ASSY., No. 3,4,5,6 cyl. head oil drain | 4  | -W1A5D |
|   | 72702         | TUBE ASSY., No. 1 cyl. head oil drain       | 1  | -L1B5D |
|   | 72703         | TUBE ASSY., No. 2 cyl. head oil drain       | 1  | -L1B5D |
|   | 73027         | TUBE ASSY., No. 3,4,5,6 cyl. head oil drain | 4  | -L1B5D |
| 5 | LW-15839      | BAFFLE ASSY., Intercylinder                 | 3  | -W1A5D |

IO-540-W1A5D and AEIO-540-L1B5D

SECTION 3 (CONT.)  
CYLINDER, PISTON AND VALVE TRAIN

Page 3-9 - Figure 18 (Cont.)  
Cylinder Head Drain Tubes and Intercylinder Cooling Baffles

| Ref. No. | Part No.    | Description                             | Qty. Per Eng. | Model Usage |
|----------|-------------|-----------------------------------------|---------------|-------------|
|          | LW-16838    | BAFFLE ASSY., Intercylinder, cyl. 1 & 3 | 1             | -W1A5D      |
|          | 75338       | BAFFLE ASSY., Intercylinder             | 3             | -L1B5D      |
|          | LW-13430    | BAFFLE ASSY., Intercylinder, cyl. 2 & 4 | 1             | -L1B5D      |
| 8        | 71611       | RETAINER, Intercylinder baffle          | 4             |             |
| 9        | 71629       | HOOK, Intercylinder baffle              | 4             | -W1A5D      |
|          | 71610       | HOOK, Intercylinder baffle              | 4             | -L1B5D      |
| 10       | 72834       | COVER, Baffle ignition cable hole       | 4             | -L1B5D      |
| 11       | STD-692     | SCREW, No. 10-32 x 1/2 long, rd. hd.    | 8             | -L1B5D      |
| 12       | STD-670     | NUT, No. 10-32 self-locking             | 8             | -L1B5D      |
| 13       | 65614       | PLUG, Baffle attaching                  | 4             | -L1B5D      |
| 14       | STD-251     | WASHER, No. 10 lock, internal teeth     | 4             | -L1B5D      |
| 15       | STD-1686    | SCREW, No. 10-32 x 7/16 long, fill. hd. | 4             | -L1B5D      |
| 16       | AN931-12S17 | GROMMET, 3/4 ID x 1-3/8 OD x 3/8 thick  | 1             | -W1A5D      |
|          | AN931-14-20 | GROMMET, 7/8 ID x 1-5/8 OD x 7/16 thick | 1             | -L1B5D      |

SECTION 4  
IGNITION SYSTEM

Page 4-1 - Figure 19  
Magneto Drives and Magnetos

|    |               |                                           |    |        |
|----|---------------|-------------------------------------------|----|--------|
| 1  | LW-13899      | GEAR, Retainer, magneto drive             | 1  | -W1A5D |
|    | LW-13642      | GEAR, Retainer, magneto drive             | 1  | -L1B5D |
| 2  | LW-13641      | CUSHION, Magneto drive                    | 2  |        |
| 3  | LW-12681      | GASKET, Magneto                           | 1  |        |
| 4  | LW-685126-105 | MAGNETO, Ignition system (D6LN-3031)      | 1  | -W1A5D |
|    | LW-682560-11  | MAGNETO, Ignition                         | 1  | -W1A5D |
|    | LW-684602-303 | HARNESS, Ignition                         | 1  | -W1A5D |
|    | LW-385126-107 | MAGNETO, Ignition system (D6LN-2031)      | 1  | -L1B5D |
|    | LW-382560-13  | MAGNETO, Ignition                         | 1  | -L1B5D |
|    | LW-684602-303 | HARNESS, Ignition                         | 1  | -L1B5D |
| 5  | 75965         | CLAMP, Magneto                            | 2  |        |
| 6  | STD-475       | WASHER, 5/16 lock, internal teeth         | 2  |        |
| 7  | STD-1410      | NUT, 5/16-18 plain                        | 2  |        |
| 9  | LW-620026-2   | CLIP, 1 wire for 1/4 screw (bottom leads) | 4  |        |
| 10 | LW-14057      | CLIP, 1 wire for 1/4 screw (top leads)    | 2  |        |
|    | STD-8         | WASHER, 1/4 plain                         | 14 |        |
| 11 | LW-620028-2   | CLIP, 2 wire for 1/4 screw (bottom leads) | 1  |        |
| 12 | LW-620028-3   | CLIP, 2 wire for 1/4 screw (top leads)    | 2  |        |
| 13 | LW-620029-6   | CLIP, 3 wire for 1/4 screw (bottom leads) | 3  |        |
| 14 | LW-620037-4   | CLIP, 6 wire for 10-32 screw              | 1  |        |

IO-540-W1A5D and AEIO-540-L1B5D

SECTION 4 (CONT.)  
IGNITION SYSTEM

Page 4-1 - Figure 19 (Cont.)  
Magneto Drives and Magnetos

| Ref. No. | Part No.       | Description                              | Qty. Per Eng. | Model Usage |
|----------|----------------|------------------------------------------|---------------|-------------|
| 16       | LW-620036-4    | CLIP, 6 wire for 10-32 screw             | 1             |             |
| 17       | LW-620032-7    | CLAMP, Ignition harness                  | 1             |             |
| 18       | LW-14875       | BRACKET, Extension                       | 1             |             |
| 19       | STD-2029       | BOLT, 1/4-20 x 1-1/8 long                | 2             | -L1B5D      |
| 20       | STD-692        | SCREW, No. 10-32                         | 2             |             |
| 21       | STD-670        | NUT, Self-locking                        | 2             |             |
| 22       | LW-16266-10-75 | CLAMP                                    | 1             |             |
| 23       | 76734          | ZIP STRAP                                | 26            |             |
| 25       | STD-696        | WASHER, 1/4 plain (thin)                 | un            |             |
| 26       | STD-1874       | SCREW, 1/4-20 x 13/16 long               | 7             |             |
| 27       | STD-1925       | SCREW, 1/4-20 self-locking               | 2             |             |
| 28       | 10-720631-48   | REPLACEMENT LEAD, Bendix harness, 48 in. | un            |             |
|          | 10-720631-78   | REPLACEMENT LEAD, Bendix harness, 78 in. | un            |             |
| 29       | LW-382698      | KIT, Magneto terminal                    | 2             |             |

Page 4-3

This page is not applicable to IO-540-W1A5D and AEIO-540-L1B5D model engines.

Page 4-5 - Figure 21  
Spark Plugs

|    |         |                             |    |  |
|----|---------|-----------------------------|----|--|
| 32 | 1182-D4 | SPARK PLUG, Champion RHM38E | 12 |  |
|----|---------|-----------------------------|----|--|

SECTION 5  
ELECTRICAL SYSTEM

Page 5-1 - Figure 22  
Alternator Mounting Brackets

|   |           |                                             |   |  |
|---|-----------|---------------------------------------------|---|--|
| 1 | LW-13039  | BRACKET, Alternator                         | 1 |  |
| 3 | 73383     | LOCKPLATE, 5/16 bolt x 1.00 spacing         | 1 |  |
| 4 | STD-1838  | BOLT, 5/16-18 x 15/16 long, hex. hd.        | 2 |  |
| 5 | 75380     | LINK, Alternator adjusting                  | 1 |  |
|   | STD-35    | WASHER, 5/16 plain                          | 1 |  |
|   | LW-31H.75 | BOLT, 5/16-18 x 3/4 long, hex. hd. dr.      | 1 |  |
| 8 | STD-1727  | WASHER, Plain, 3/4 OD x 5/16 ID x 1/8 thick | 1 |  |
|   | LW-31H.75 | BOLT, 5/16-18 x 3/4 long, hex. hd. dr.      | 1 |  |
|   | 74323     | STRUT, Alternator support                   | 1 |  |
|   | LW-31H.75 | BOLT, 5/16-18 x 3/4 long, hex. hd. dr.      | 1 |  |
|   | STD-690   | WASHER, 13/16 OD x 3/8 ID x 1/16 thick      | 1 |  |



IO-540-W1A5D and AEIO-540-L1B5D

SECTION 5 (CONT.)  
ELECTRICAL SYSTEM

Page 5-1 - Figure 22 (Cont.)  
Alternator Mounting Brackets

| Ref. No. | Part No. | Description                                       | Qty. Per Eng. | Model Usage |
|----------|----------|---------------------------------------------------|---------------|-------------|
| 26       | AN6-14   | BOLT, 3/8-24 x 1-19/32 long, hex. hd.,<br>dr. end | 1             |             |
| 27       | STD-690  | WASHER, 13/16 OD x 3/8 ID x 1/16<br>thick         | un            |             |
| 28       | STD-872  | NUT, 3/8-24 slotted                               | 1             |             |
| 29       | STD-713  | PIN, Cotter, 3/32 x 3/4 long                      | 1             |             |
| 30       | AN6-13   | BOLT, 3/8-24 x 1-7/16 long, hex. hd.,<br>dr. end  | 1             | -W1A5D      |
| 31       | AN6-16   | BOLT, 3/8-24 x 1-13/16 long, hex. hd.,<br>dr. end | 1             | -L1B5D      |
| 32       | 76534    | SHIM, 1-1/8 OD x 7/16 ID x .005<br>thick          | un            |             |
|          | STD-690  | WASHER, 13/16 OD x 3/8 ID x 1/16 thick            | un            |             |
|          | STD-872  | NUT, 3/8-24 slotted                               | 1             |             |
|          | STD-713  | PIN, Cotter, 3/32 x 3/4 long                      | 1             |             |

Page 5-3 - Figure 23  
Alternators, Regulators and Drive Belts

|   |          |                                                                            |   |        |
|---|----------|----------------------------------------------------------------------------|---|--------|
| 1 | LW-14308 | ALTERNATOR, 12V - 60 Amp., 3.25:1 ratio,<br>externally grounded (ALY-8420) | 1 | -W1A5D |
|   | LW-14324 | ALTERNATOR, 12V - 70 Amp., 3.25:1 ratio,<br>externally grounded (ALU-8421) | 1 | -L1B5D |
| 2 | 76026    | BELT, Alternator drive (3/8 wide)                                          | 1 |        |
| 3 | LW-10185 | REGULATOR, 12V (VSF-7203)                                                  | 1 | -W1A5D |
|   | LW-10179 | REGULATOR, 12V (VSF-7403)                                                  | 1 | -L1B5D |
|   | 78059    | OVERVOLTAGE RELAY, 12V (FOC-4002A)                                         | 1 | -W1A5D |
|   | 78060    | OVERVOLTAGE RELAY, 24V (FOC-4003A)                                         | 1 | -L1B5D |

Page 5-4 - Figure 24  
Starting Motor and Magnetic Switch

|   |          |                                                                     |   |        |
|---|----------|---------------------------------------------------------------------|---|--------|
| 1 | LW-15571 | STARTER, 12V (3.38:1 internal reduction)<br>12/14 pinion, MZ-4222   | 1 | -W1A5D |
|   | LW-15572 | STARTER, 24V. (3.38:1 internal reduction)<br>12/14 pinion, MHB-4016 | 1 | -L1B5D |
| 2 | STD-35   | WASHER, 5/16 plain                                                  | 4 |        |
| 3 | STD-475  | WASHER, 5/16 lock, internal teeth                                   | 4 |        |
| 4 | STD-2156 | BOLT, 5/16-18 x 1-5/32 long, hex. hd.                               | 1 |        |
| 5 | STD-1410 | NUT, 5/16-18 plain                                                  | 3 |        |
| 6 | LW-12083 | SWITCH, Magnetic 12V (SAZ-4201E-1)                                  | 1 | -W1A5D |
|   | LW-12085 | SWITCH, Magnetic 24V (SAZ-4401C)                                    | 1 | -L1B5D |

**IO-540-W1A5D and AEIO-540-L1B5D**

**SECTION 6  
OIL SUMP AND INDUCTION SYSTEM**

| Ref. No. | Part No. | Description | Qty. Per Eng. | Model Usage |
|----------|----------|-------------|---------------|-------------|
|----------|----------|-------------|---------------|-------------|

Page 6-1

This page is not applicable to IO-540-W1A5D and AEIO-540-L1B5D model engines.

Page 6-3 - Figure 26  
Oil Sump Assembly

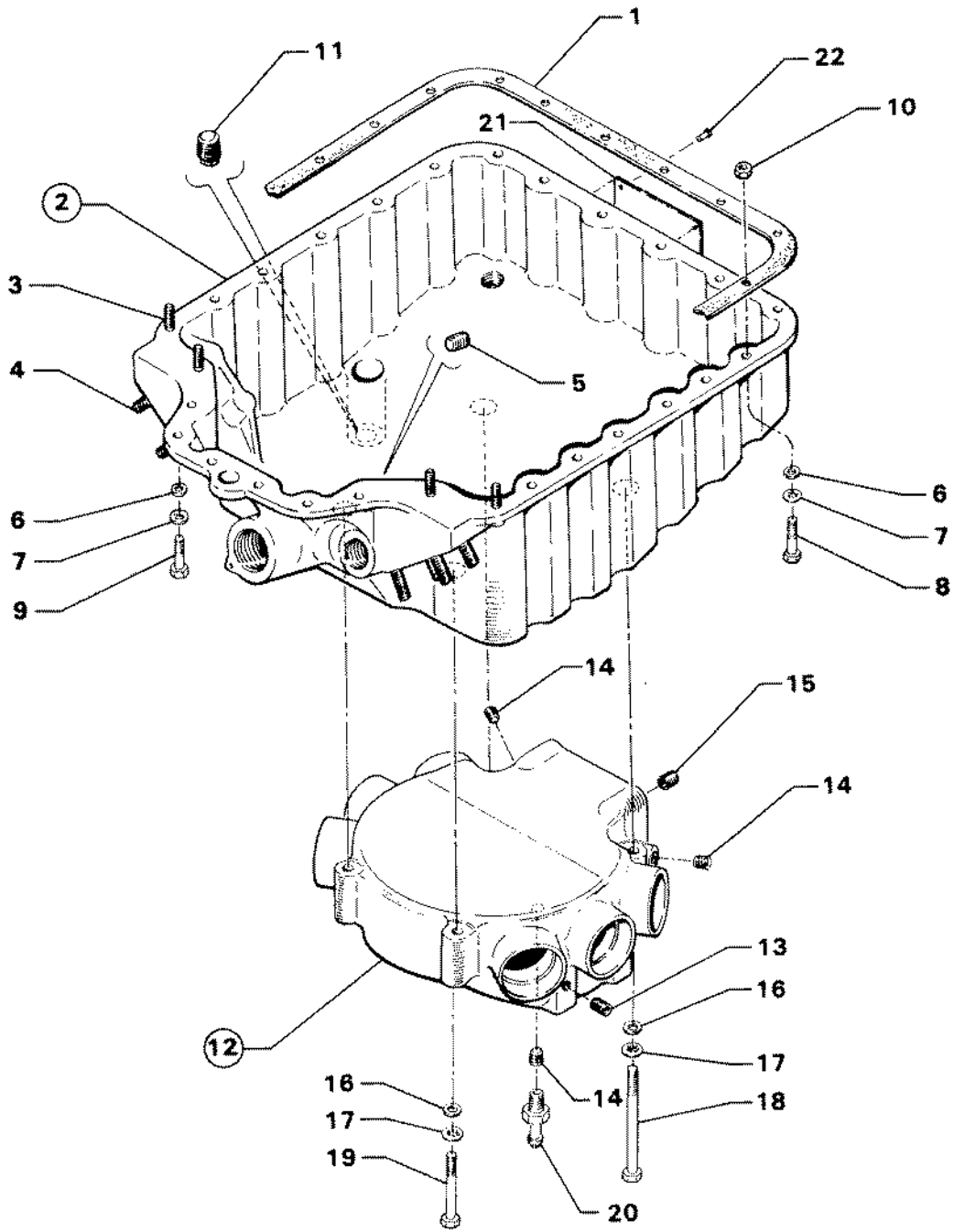
|    |          |                                              |    |        |
|----|----------|----------------------------------------------|----|--------|
| 1  | LW-13306 | GASKET, Oil sump                             | 1  | -W1A5D |
| 2  | LW-15715 | SUMP ASSY., Oil                              | 1  | -W1A5D |
| 3  | STD-2184 | PLUG, 1-1/4 NPT, Allen hd.                   | 1  | -W1A5D |
| 4  | 71699    | CONNECTOR, Intake pipe                       | 6  | -W1A5D |
| 5  | 25C-11   | STUD, 1/4-20 x 1-3/8 long                    | 14 | -W1A5D |
| 6  | 38-15    | STUD, 3/8-16 x 1-7/8 long                    | 8  | -W1A5D |
| 7  | STD-1164 | INSERT, 5/16-18 x 5/8 long, Heli-coil        | 4  | -W1A5D |
| 9  | 1102     | PLUG, 1/8 NPT, Allen hd.                     | 1  | -W1A5D |
| 10 | STD-8    | WASHER, 1/4 plain                            | 34 | -W1A5D |
| 11 | STD-160  | WASHER, 1/4 internal lock                    | 27 | -W1A5D |
| 12 | STD-1419 | BOLT, 1/4-20 x 1-1/8 long, hex. hd.          | 7  | -W1A5D |
| 13 | STD-1688 | BOLT, 1/4-20 x 1.00 long, hex. hd.           | 6  | -W1A5D |
| 14 | STD-1411 | NUT, 1/4-20 plain                            | 21 | -W1A5D |
| 15 | STD-551  | PLUG, 1/2-14 NPT, Sq. hd. dr.                | 2  | -W1A5D |
| 16 | 70484    | SCREEN, Oil suction                          | 1  | -W1A5D |
| 17 | STD-111  | GASKET, 1.00 ID x 1-1/4 OD x 3/32<br>annular | 1  | -W1A5D |
| 18 | LW-12545 | PLUG, 5/8 hex. hd. x 1.00-20 thd.            | 1  | -W1A5D |
|    | 61548    | NAMEPLATE                                    | 1  | -W1A5D |
|    | STD-1901 | DRIVE STUD, No. 4 x 3/16 long, rd. hd.       | 4  | -W1A5D |

Page 6-4

This page is not applicable to IO-540-W1A5D and AEIO-540-L1B5D model engines.

*Oil Sump Assembly (AEIO-540-L1B5D) (See Page 14a for illustration).*

|    |          |                                       |    |  |
|----|----------|---------------------------------------|----|--|
| 1  | LW-13306 | GASKET, Oil sump                      | 1  |  |
| 2  | LW-16890 | SUMP ASSY., Oil                       | 1  |  |
| 3  | 25C-11   | STUD, 1/4-20 x 1-3/8 long             | 4  |  |
| 4  | 38-15    | STUD, 3/8-16 x 1-7/8 long             | 8  |  |
| 5  | STD-784  | PLUG, 3/8-18 NPT, Allen hd.           | 1  |  |
| 6  | STD-8    | WASHER, 1/4 plain                     | 44 |  |
| 7  | STD-160  | WASHER, 1/4 lock, internal teeth      | 27 |  |
| 8  | STD-1419 | BOLT, 1/4-20 x 1-1/8 long, hex. hd.   | 17 |  |
| 9  | STD-1688 | BOLT, 1/4-20 x 1.00 long, hex. hd.    | 6  |  |
| 10 | STD-1411 | NUT, 1/4-20 plain                     | 21 |  |
| 11 | STD-551  | PLUG, 1/2-14 NPT, Sq. hd., drilled    | 1  |  |
| 12 | LW-16899 | HOUSING ASSY., Induction              | 1  |  |
| 13 | STD-1164 | INSERT, 5/16-18 x 5/8 long, Heli-coil | 4  |  |



Oil Sump Assembly

IO-540-W1A5D and AEIO-540-L1B5D

SECTION 6 (CONT.)  
OIL SUMP AND INDUCTION SYSTEM

*Oil Sump Assembly (AEIO-540-L1B5D) (Cont.)*

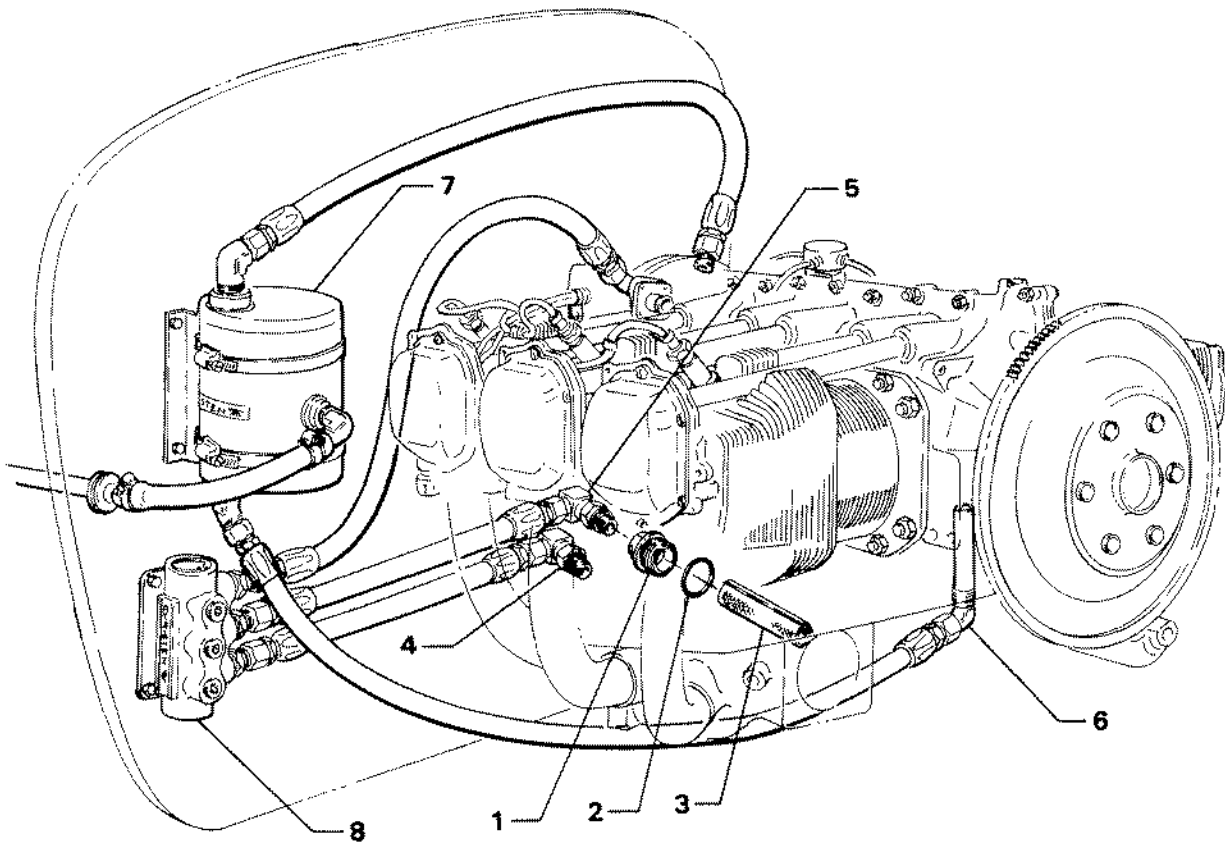
| Ref. No. | Part No. | Description                               | Qty. Per Eng. | Model Usage |
|----------|----------|-------------------------------------------|---------------|-------------|
| 14       | 1102     | PLUG, 1/8-27 NPT, Allen hd.               | 3             |             |
| 15       | STD-1173 | INSERT, 1/4-20 x 1/2 long, Heli-coil      | 4             |             |
| 16       | STD-8    | WASHER, 1/4 plain                         | 4             |             |
| 17       | STD-160  | WASHER, 1/4 lock, internal teeth          | 4             |             |
| 18       | STD-2026 | BOLT, 1/4-20 NC-3 x 3-7/8 long, hex. hd.  | 2             |             |
| 19       | STD-2025 | BOLT, 1/4-20 NC-3 x 2-7/16 long, hex. hd. | 2             |             |
| 20       | 75444    | ADAPTER ASSY., Fuel drain valve           | 2             |             |
| 21       | 61548    | NAMEPLATE                                 | 1             |             |
| 22       | STD-1901 | DRIVE STUD, No. 4 x 3/16 long, rd. hd.    | 4             |             |

*Inverted Oil System (AEIO-540-L1B5D) (See Page 15a for illustration).*

|   |          |                                                      |   |  |
|---|----------|------------------------------------------------------|---|--|
| 1 | LW-16339 | ADAPTER, Oil screen, 1-1/2-18 to 7/8-14 thd.         | 1 |  |
| 2 | STD-1272 | GASKET, 1-1/2 ID x 1-3/4 OD x 3/32 thick             | 1 |  |
| 3 | 77644    | SCREEN, Oil suction                                  | 1 |  |
| 4 | 77155    | ELBOW, 5/8 flared tube, 90° adjustable               | 1 |  |
| 5 | 77155    | ELBOW, 5/8 flared tube, 90° adjustable (oil suction) | 1 |  |
| 6 | LW-16918 | FITTING, Sump, oil return, 90°                       | 1 |  |
| 7 | LW-13749 | OIL SEPARATOR                                        | 1 |  |
| 8 | LW-13750 | OIL VALVE                                            | 1 |  |

Page 6-5 - Figure 28  
Intake Pipes and Air Inlet Housing

|    |               |                                         |    |        |
|----|---------------|-----------------------------------------|----|--------|
| 1  | 70485         | PIPE, Intake                            | 6  | -W1A5D |
| 2  | 69603         | HOSE, 1-3/4 ID x 2-3/16 OD x 1-3/4 long | 6  | -W1A5D |
| 3  | LW-15592-8-28 | CLAMP, Hose                             | 12 | -W1A5D |
| 4  | 71973         | GASKET, 2 bolt flange, 1-7/8 ID         | 6  |        |
| 5  | 73346         | FLANGE, Intake pipe, upper              | 6  | -W1A5D |
| 6  | STD-8         | WASHER, 1/4 plain                       | 12 |        |
| 7  | STD-160       | WASHER, 1/4 lock, internal teeth        | 12 |        |
| 8  | STD-1215      | BOLT, 1/4-20 x 1-1/4 long, hex. hd.     | 12 |        |
| 9  | 72711         | RING, Seal, intake pipes                | 6  | -L1B5D |
| 10 | LW-16341      | PIPE, Intake, cyl. no. 1                | 1  | -L1B5D |
| 11 | LW-16342      | PIPE, Intake, cyl. no. 2                | 1  | -L1B5D |
| 12 | LW-16343      | PIPE, Intake, cyl. no. 3                | 1  | -L1B5D |
| 13 | LW-16344      | PIPE, Intake, cyl. no. 4                | 1  | -L1B5D |
|    | LW-16345      | PIPE, Intake, cyl. no. 5                | 1  | -L1B5D |
| 14 | LW-16346      | PIPE, Intake, cyl. no. 6                | 1  | -L1B5D |
| 15 | 74360         | FLANGE, Intake pipe, upper              | 6  | -L1B5D |



**Inverted Oil System**

IO-540-W1A5D and AEIO-540-L1B5D

SECTION 6 (CONT.)  
OIL SUMP AND INDUCTION SYSTEM

Page 6-7 - Figure 29  
Fuel Injectors, Fuel Manifolds and Injection Nozzles

| Ref. No. | Part No.  | Description                           | Qty. Per Eng. | Model Usage |
|----------|-----------|---------------------------------------|---------------|-------------|
| 1        | 66224     | GASKET, Fuel injector                 | 1             | -W1A5D      |
| 2        | 73032     | GASKET, Inlet housing                 | 1             | -L1B5D      |
| 4        | 73937     | FUEL INJECTOR, (2524054-8)            | 1             | -W1A5D      |
|          | 77442     | FUEL INJECTOR, (2524318-8)            | 1             | -L1B5D      |
| 5        | STD-35    | WASHER, 5/16 plain                    | 4             |             |
| 7        | STD-475   | WASHER, 1/4 lock, internal teeth      | 4             |             |
| 10       | STD-1201  | BOLT, 5/16-18 x 1-1/4 long, hex. hd.  | 4             | -W1A5D      |
|          | STD-1828  | BOLT, 5/16-18 x 1-5/16 long, hex. hd. | 4             | -L1B5D      |
| 11       | LW-18265  | NOZZLE, Injection                     | 6             | -W1A5D      |
|          | LW-18265  | NOZZLE, Injector                      | 6             | -L1B5D      |
| 13       | MS29512-6 | SEAL, Oil, 5/64 dia. sect. x 15/32 ID | 1             | -L1B5D      |
| 14       | AN919-6   | REDUCER, Flared tube (1/4 tubing)     | 1             | -L1B5D      |

Page 6-8 - Figure 30  
Fuel Injectors, Fuel Manifolds and Injection Nozzles

|    |           |                                           |   |        |
|----|-----------|-------------------------------------------|---|--------|
| 15 | 79007     | MANIFOLD ASSY., Fuel                      | 1 | -W1A5D |
|    | 77418     | MANIFOLD ASSY., Fuel                      | 1 | -L1B5D |
| 16 | MS20823-4 | ELBOW, 1/4 tube, 1/4 NPT, 45°             | 1 | -W1A5D |
|    | MS20822-4 | ELBOW, 1/4 tube, 1/8 NPT, 90°             | 1 | -L1B5D |
| 17 | STD-148   | NIPPLE, Union, 1/8 NPT                    | 6 |        |
| 18 | 75447     | NIPPLE, 3/16 tube to 1/8 NPT (restricted) | 1 | -W1A5D |
| 23 | LW-12604  | NIPPLE, 1/8 tube to 1/8 NPT (restricted)  | 1 | -L1B5D |
| 24 | 73966     | SPACER, Fuel manifold bracket             | 2 |        |
| 25 | 73965     | BRACKET, Fuel manifold                    | 2 |        |
| 26 | STD-251   | WASHER, No. 10 lock, internal teeth       | 4 |        |
| 27 | STD-82    | SCREW, No. 10-24 x 1/2 long, dr. hd.      | 4 |        |

Page 6-9 - Figure 31  
Fuel Lines, Fuel Hoses and Attaching Parts

|    |                |                                                    |    |        |
|----|----------------|----------------------------------------------------|----|--------|
| 1  | LW-12098-0-200 | TUBE ASSY., Fuel manifold to nozzle, cyls. 1,2,5,6 | 4  |        |
|    | LW-12098-0-170 | TUBE ASSY., Fuel manifold to nozzle, cyls. 3 & 4   | 2  |        |
| 2  | LW-16266-10-75 | CLAMP                                              | 12 |        |
| 3  | LW-16266-10-13 | CLAMP                                              | 12 |        |
| 4  | STD-860        | SCREW, No. 10-32 x 5/8 long, fill. hd.             | 14 |        |
| 5  | STD-425        | WASHER, No. 10 plain                               | 2  |        |
| 6  | STD-670        | NUT, No. 10-32 self-locking                        | 14 |        |
| 7  | 73136          | BRACKET, 90°                                       | 2  | -L1B5D |
|    | 73136          | BRACKET, 90°                                       | 4  | -W1A5D |
| 10 | 74278          | BRACKET ASSY., Fuel line support                   | 1  |        |

**IO-540-W1A5D and AEIO-540-L1B5D**

**SECTION 6 (CONT.)  
OIL SUMP AND INDUCTION SYSTEM**

Page 6-9 - Figure 31 (Cont.)  
Fuel Lines, Fuel Hoses and Attaching Parts

| Ref. No. | Part No.       | Description                               | Qty. Per Eng. | Model Usage |
|----------|----------------|-------------------------------------------|---------------|-------------|
| 11       | LW-16266-25-50 | CLAMP                                     | 1             | -W1A5D      |
| 12       | LW-16266-25-63 | CLAMP                                     | 1             | -L1B5D      |
|          | STD-860        | SCREW, No. 10-32 x 5/8 long, fill. hd.    | 1             |             |
| 13       | STD-692        | SCREW, No. 10-32 x 1/2 long, fill. hd.    | 2             |             |
|          | STD-425        | WASHER, No. 10 plain                      | 3             |             |
|          | STD-670        | NUT, No. 10-32 self-locking               | 1             |             |
|          | 77468          | CLIP, 7/8 ID for 1/4 screw (cushion type) | 2             | -L1B5D      |
|          | LW-16266-25-75 | CLIP, 3/4 dia. with 1/4 screw             | 2             | -W1A5D      |
| 16       | MS20822-6      | ELBOW, 3/8 flared tube & 1/4 NPT, 90°     | 1             | -L1B5D      |

Page 6-10 - Figure 32  
Fuel Lines, Fuel Hoses and Attaching Parts

|                |                                            |   |        |
|----------------|--------------------------------------------|---|--------|
| LW-12798-4S242 | HOSE ASSY., Fuel injector to fuel manifold | 1 |        |
| LW-13193-6S322 | HOSE, Fuel pump to injector                | 1 | -L1B5D |
| LW-12799-6S270 | HOSE, Fuel pump to injector                | 1 | -W1A5D |

## **SUPPLEMENTAL PARTS LIST SSP1080**

### **To Provide Parts Coverage for Lycoming IO-540-AA1A5 & -M1B5D Model Aircraft Engines**

This supplement offers a complete list for the IO-540-AA1A5 and the -M1B5D model engine. Page figure and reference numbers herein correspond to page, figure and reference numbers in PC-615.

When reference numbers in PC-615 are not listed here, it indicates those parts are not applicable to IO-540-AA1A5 & -M1B5D engines. Where parts are listed in this supplement without reference numbers, it indicates those parts are not illustrated in PC-615.

Use the Table of Contents in the original parts catalog PC-615 to find the page number and illustration of the desired parts. The corresponding page in this supplement lists the parts for the IO-540-AA1A5 & -M1B5D model engines.



IO-540-AA1A5 & -M1B5D

SECTION 1

Page 1-1  
Crankcase Assembly

| Ref. No. | Part No. | Description                        | Qty. Per Assy. |        |
|----------|----------|------------------------------------|----------------|--------|
|          |          |                                    | -AA1A5         | -M1B5D |
| 1        | LW-13781 | CRANKCASE ASSEMBLY                 | 1              |        |
|          | LW-14598 | CRANKCASE ASSEMBLY                 |                | 1      |
| 2        | 31C-12   | STUD, 5/16-18 x 1-1/2 long         | 2              | 2      |
| 3        | 31C-13   | STUD, 3/8-16 x 1-5/8 long          | 1              | 1      |
| 4        | 38-13    | STUD, 3/8-16 x 1-5/8 long          | 24             | 28     |
| 5        | 38-16    | STUD, 3/8-16 x 2.00 long           | 8              | 8      |
| 6        | 38-22    | STUD, 3/8-16 x 2-3/4 long          | 1              | 1      |
| 7        | 38D-17   | STUD, 3/8-16 x 2-1/8 long, drilled | 1              | 1      |
| 8        | 50-15    | STUD, 1/2-20 x 1-7/8 long          | 12             | 12     |
| 9        | LW-13794 | STUD, 5/16-18 x 1.00 long, drilled | 1              |        |
| 10       | 69796    | DOWEL, Crankshaft bearing          | 2              | 2      |
| 11       | LW-10647 | DOWEL, Crankshaft bearing          | 6              |        |
| 12       | STD-514  | DOWEL, 5/16 dia. x 1/2 long        | 2              | 2      |
| 13       | STD-557  | DOWEL, 1/2 dia. x 11/16 long       | 2              | 2      |
| 14       | STD-1339 | PLUG, 1/16-27 NPT                  | 1              | 1      |
| 15       | 1102     | PLUG, 1/8-27 NPT                   | 4              | 4      |
| 16       | 65007    | RETAINER, Shroud tube seal         | 12             | 12     |
| 17       | 72158    | BUSHING, Gov. drive idler shaft    | 1              | 1      |
| 18       | 31C-14   | STUD, 5/16-18 x 1-3/4              | 4              | 4      |
| 19       | 73772    | NOZZLE ASSY., Piston cooling       | 6              | 6      |

Page 1-3  
Oil Level Gages and Engine Mounting Brackets

|   |            |                                           |    |    |
|---|------------|-------------------------------------------|----|----|
| 1 | 70457      | GASKET, Oil filler extension              | 1  | 1  |
| 2 | 77527      | EXTENSION, Oil filler (short)             | 1  | 1  |
|   | 74313      | EXTENSION, Oil filler (short) (alternate) | 1  | 1  |
| 3 | 72312      | RING, Oil seal - 1.00 ID x 1/8 sect.      | 1  | 1  |
| 4 | LW-14729   | GAGE ASSEMBLY, Oil level                  | 1  |    |
|   | LW-16782-1 | GAGE ASSEMBLY, Oil level                  |    | 1  |
| 5 | 72306      | BRACKET, Engine mounting                  | 4  |    |
|   | 77289      | BRACKET, Engine mounting                  |    | 3  |
|   | 77291      | BRACKET, Engine mounting                  |    | 1  |
| 6 | STD-33     | WASHER, 3/8 plain                         | 16 | 16 |
| 7 | STD-678    | WASHER, 3/8 lock                          | 16 | 16 |
| 8 | STD-596    | NUT, 3/8 plain                            | 16 | 16 |

Page 1-5  
Crankcase Related Parts

|   |        |                  |   |   |
|---|--------|------------------|---|---|
| 1 | 1028-B | BALL, 11/16 dia. | 1 | 1 |
|---|--------|------------------|---|---|

IO-540-AA1A5 & -M1B5D

SECTION 1 (Cont.)

Page 1-5 (Cont.)  
Crankcase Related Parts

| Ref.<br>No. | Part No.   | Description                                 | Qty. Per Assy. |        |
|-------------|------------|---------------------------------------------|----------------|--------|
|             |            |                                             | -AA1A5         | -M1B5D |
| 2           | LW-11713   | SPRING, Oil pressure relief valve           | 1              |        |
|             | 61084      | SPRING, Oil pressure relief valve           |                | 1      |
| 4           | STD-1045   | GASKET, 1-1/4 ID x 1-3/64 OD x 3/32 annular | 1              | 1      |
| 5           | 76159      | PLUG, Oil relief valve - adj.               | 1              | 1      |
| 6           | 77808      | VALVE ASSY., Oil pressure relief, adj.      | 1              | 1      |
|             | 76162      | INSERT, Oil pressure relief valve           | 1              | 1      |
|             | 76161      | CAP, Oil pressure relief valve              | 1              | 1      |
|             | 77807      | SCREW, Oil pressure, adj.                   | 1              | 1      |
|             | AN310-6    | NUT, 3/8-24 NF-3 (castellated)              | 1              | 1      |
|             | MS9048-100 | PIN, Spring - 1/8 dia. x 1/2 long           | 1              | 1      |
| 7           | LW-11575   | BEARING, Crankshaft                         | 6              |        |
|             | LW-14830   | BEARING, Crankshaft (clevite)               |                | 6      |
| 8           | LW-13885   | BEARING, Crankshaft, front                  | 2              | 2      |
| 9           | LW-15628   | SEAL, Crankshaft oil                        | 1              | 1      |
| 10          | 72091      | RING, Oil seal, 23/64 ID x 7/64 dia. sect.  | 2              | 2      |
| 11          | 72877      | BODY, Hydraulic tappet                      | 12             | 12     |

Page 1-6

Propeller Governor Drive Assembly

|    |              |                                          |    |    |
|----|--------------|------------------------------------------|----|----|
| 1  | LW-10442     | GEAR, Propeller governor drive           | 1  | 1  |
| 2  | LW-14021     | SHAFT, Propeller governor idler gear     | 1  | 1  |
| 3  | LW-10541     | GEAR ASSY., Propeller governor idler     | 1  | 1  |
| 4  | 77872        | BUSHING, Propeller governor idler gear   | 2  | 2  |
| 5  | STD-19       | DOWEL, 3/32 dia. x 7/32 long             | 1  | 1  |
| 6  | STD-798      | DOWEL, 3/32 dia. x 9/32 long             | 1  | 1  |
| 7  | 73249        | WASHER, Thrust                           | 1  | 1  |
|    | 73250        | WASHER, Thrust                           | un | un |
|    | 73251        | WASHER, Thrust                           | un | un |
|    | 73252        | WASHER, Thrust                           | un | un |
| 8  | AN565B1032H5 | SET SCREW, No. 10-32 x 5/16 long         | 1  | 1  |
| 9  | 70455        | GASKET, 25/32 ID x 1-1/8 OD x 1/16 thick | 1  | 1  |
| 10 | LW-13896     | PLUG, 3/4-16 Hex hd.                     | 1  | 1  |
| 11 | 72053        | GASKET, Governor                         | 1  | 1  |
| 12 | 72378        | COVER, Governor drive                    | 1  | 1  |
| 13 | STD-35       | WASHER, 5/16 plain                       | un | un |
| 14 | STD-475      | WASHER, 5/16 lock                        | 4  | 4  |
| 15 | STD-1410     | NUT, 5/16-18 plain                       | 4  | 4  |

Page 1-7

Crankshaft, Camshaft and Related Parts

|   |          |                                  |   |  |
|---|----------|----------------------------------|---|--|
| 1 | LW-17775 | CRANKSHAFT & COUNTERWEIGHT ASSY. | 1 |  |
|---|----------|----------------------------------|---|--|

IO-540-AA1A5 & -M1B5D

SECTION 1 (Cont.)

Page 1-7 (Cont.)  
Crankshaft, Camshaft and Related Parts

| Ref.<br>No. | Part No. | Description                                   | Qty. Per Assy. |        |
|-------------|----------|-----------------------------------------------|----------------|--------|
|             |          |                                               | -AA1A5         | -M1B5D |
|             | LW-17783 | CRANKSHAFT & COUNTERWEIGHT ASSY.              |                | 1      |
| 2           | LW-17750 | CRANKSHAFT ASSY.                              | 1              |        |
|             | LW-17758 | CRANKSHAFT ASSY.                              |                | 1      |
| 3           | STD-1211 | PLUG, 2.00 dia. expansion                     | 1              | 1      |
| 4           | 73810    | BUSHING, Crankshaft dynamic counterweight     | 4              | 4      |
| 5           | 60945    | PLUG, 1-1/4 dia.                              | 1              | 1      |
| 9           | 75656    | BUSHING, Propeller flange, long               | 4              | 4      |
| 10          | 72155    | BUSHING, Propeller flange, short              | 1              | 1      |
| 11          | 79024    | BUSHING, Propeller flange, indexing           | 1              |        |
|             | 75657    | BUSHING, Propeller flange, indexing           |                | 1      |
| 12          | STD-1065 | DOWEL, Stepped, 5/16 x 1/4 dia. x 1/2 long    | 1              |        |
|             | STD-2078 | DOWEL, 3/8 OD x 1/2 long                      |                | 1      |
| 13          | 73644    | COUNTERWEIGHT ASSY.                           | 2              | 2      |
| 14          | 71903    | BUSHING, Dynamic counterweight                | 8              | 8      |
| 15          | 76788    | ROLLER, Dynamic counterweight - 6.3 order     | 2              | 2      |
| 16          | 76787    | ROLLER, Dynamic counterweight - 5.1 order     | 2              | 2      |
| 17          | LW-14820 | RING, Internal retaining                      | 8              | 8      |
| 18          | 71907    | WASHER, Dynamic counterweight                 | 8              | 8      |
| 19          | LW-10284 | GEAR, Crankshaft                              |                | 1      |
|             | 76786    | GEAR, Crankshaft                              | 1              |        |
| 20          | 67516    | LOCKPLATE, Crankshaft gear                    | 1              |        |
|             | LW-10332 | LOCKPLATE, Crankshaft gear                    |                | 1      |
| 21          | STD-1937 | SCREW, 5/16-24 x 1-3/4 long                   | 1              |        |
|             | AN8-14A  | BOLT, 1/2-20 x 1-19/32 long                   |                | 1      |
| 22          | 76148    | CAMSHAFT                                      | 1              | 1      |
| 23          | 75030    | SUPPORT ASSY., Starter ring gear, 12/14 pitch | 1              |        |
|             | 77579    | SUPPORT ASSY., Starter ring gear, 12/14 pitch |                | 1      |
|             | 74977    | SUPPORT ASSY., Starter ring gear, 12/14 pitch |                | 1      |
| 24          | 72566    | GEAR, Starter ring, 12/14 pitch               | 1              | 1      |

Page 1-9  
Crankshaft Idler Gears and Tachometer Drive

|    |          |                                            |   |   |
|----|----------|--------------------------------------------|---|---|
| 2  | 71668    | GEAR ASSY., Crankshaft idler, plain        | 2 |   |
| 3  | 67530    | BUSHING, Crankshaft idler gear             | 2 |   |
| 4  | LW-10290 | GEAR ASSY., Crankshaft idler               |   | 1 |
| 5  | LW-10297 | GEAR ASSY., Crankshaft idler (heavy idler) |   | 1 |
|    | LW-10325 | SPACER, Idler gear                         |   | 1 |
| 7  | LW-13795 | SHAFT, Crankshaft idler gear               | 2 |   |
| 8  | STD-2167 | SCREW, 5/16-18 x 7/8 long, hex hd. dr.     | 3 |   |
| 9  | STD-2168 | NUT, 5/16-18 NC-3 slotted shear            | 1 |   |
| 10 | 76155    | SHAFT ASSY., Tachometer                    | 1 | 1 |
| 11 | 78368    | PIN, 3/16 dia. x 2-21/64 long              | 1 | 1 |

IO-540-AA1A5 & -M1B5D

SECTION 1 (Cont.)

Page 1-9 (Cont.)  
Crankshaft Idler Gears and Tachometer Drive

| Ref. No. | Part No.     | Description                        | Qty. Per Assy. |        |
|----------|--------------|------------------------------------|----------------|--------|
|          |              |                                    | -AA1A5         | -M1B5D |
| 12       | 76118        | SPACER, Tachometer shaft centering | 1              | 1      |
| 13       | MS16625-1081 | RING, Internal retaining           | 1              | 1      |
| 14       | 61544        | PLUNGER, Fuel pump                 |                | 1      |

Page 1-10  
Crankcase Attaching Parts

|    |          |                                            |    |    |
|----|----------|--------------------------------------------|----|----|
| 1  | STD-1414 | BOLT, 1/4-20 x 1-1/2 long                  | 11 | 11 |
| 4  | STD-8    | WASHER, 1/4 plain                          | 27 | 27 |
| 5  | 60803    | STRAP, Lifting                             | 2  | 2  |
| 6  | STD-2084 | BOLT, 1/4-20 x 1-3/4                       | 2  | 2  |
| 7  | STD-1419 | BOLT, 1/4-20 x 1-1/8 long                  | 4  | 4  |
| 8  | STD-160  | WASHER, 1/4 internal lock                  | 16 | 16 |
| 9  | STD-1411 | NUT, 1/4-20 plain                          | 12 | 12 |
| 10 | STD-1416 | BOLT, 1/4-20 x 1-1/2 long, hex hd. dr. end | 6  | 6  |
| 11 | STD-8    | WASHER, 1/4 plain, max.                    | 6  | 18 |
| 12 | STD-1409 | NUT, 1/4-20 slotted shear                  | 6  | 6  |
| 13 | STD-33   | WASHER, 3/8 plain                          | 1  | 1  |
| 14 | STD-872  | NUT, 3/8-24 slotted shear                  | 1  | 1  |
| 15 | AN6-34A  | BOLT, 3/8-24 x 3-1/2 long, hex hd.         | 1  | 1  |
| 16 | STD-33   | WASHER, 3/8 plain                          | 3  | 3  |
| 17 | STD-678  | WASHER, 3/8 lock, internal lock            | 2  | 2  |
| 18 | STD-596  | NUT, 3/8-24 plain                          | 2  | 2  |
| 20 | 76220    | STUD, 1/2-20 x 10-45/64                    | 8  | 8  |

SECTION 2

Page 2-1  
Accessory Housing Assembly

|    |          |                                 |   |   |
|----|----------|---------------------------------|---|---|
| 1  | 73818    | GASKET, Accessory housing       | 1 | 1 |
| 2  | LW-10641 | HOUSING ASSY., Accessory        | 1 |   |
| 3  | LW-10916 | HOUSING ASSY., Accessory        |   | 1 |
|    | LW-10917 | HOUSING ASSY., Accessory        | 1 |   |
| 4  | 61261    | STUD, 5/16-18 x 2-1/8 long      | 4 |   |
| 5  | 31CD-20  | STUD, 5/16-18 x 2-1/2 long, dr. | 3 | 3 |
| 6  | 31C-21   | STUD, 5/16-18 x 2-5/8 long      | 4 | 2 |
| 7  | 31C-19   | STUD, 5/16-18 x 2-3/8 long      | 4 |   |
| 8  | 25C-21   | STUD, 1/4-20 x 2-5/8 long       | 4 |   |
| 9  | 25C-12   | STUD, 1/4-20 x 1-1/2 long       |   | 8 |
| 10 | 67528    | STUD, 5/16-18 x 1-5/8 long      |   | 3 |
| 11 | STD-784  | PLUG, 3/8 NPT                   | 1 |   |
| 12 | 1102     | PLUG, 1/8-27 NPT                | 1 | 1 |

IO-540-AA1A5 & -M1B5D

SECTION 2 (Cont.)

Page 2-1 (Cont.)  
Accessory Housing Assembly

| Ref. No. | Part No. | Description                      | Qty. Per Assy. |        |
|----------|----------|----------------------------------|----------------|--------|
|          |          |                                  | -AA1A5         | -M1B5D |
| 14       | LW-10341 | INSERT, Heli-coil 1.00-14 x 3/8  |                | 1      |
| 15       | LW-12589 | INSERT, Heli-coil 5/8-18 x 3/8   |                | 1      |
| 16       | MS124703 | INSERT, Heli-coil 3/8-16 x 1-1/8 |                | 1      |

Page 2-3

Oil Pump Assembly and Accessory Housing Attaching Parts

|    |          |                            |    |    |
|----|----------|----------------------------|----|----|
| 6  | 75287    | BODY ASSY., Oil pump       | 1  |    |
| 7  | STD-1339 | PLUG, 1/16-27 NPT          | 1  |    |
| 8  | 61297    | IMPELLER, Oil pump driving | 1  | 1  |
| 9  | 61298    | IMPELLER, Oil pump driven  | 1  | 1  |
| 10 | 76784    | SHAFT, Oil pump drive      | 1  |    |
| 11 | LW-10344 | BODY ASSY., Oil pump       |    | 1  |
| 12 | 61297    | IMPELLER, Oil pump driving | 1  | 1  |
| 13 | 61298    | IMPELLER, Oil pump driving | 1  | 1  |
| 14 | LW-10318 | GEAR ASSY., Oil pump drive |    | 1  |
| 15 | STD-35   | WASHER, 5/16 plain         | 3  | 3  |
| 16 | STD-1420 | NUT, 5/16-18 slotted shear | 3  | 3  |
| 17 | LW-14260 | SEAL, Tachometer drive oil | 1  | 1  |
| 18 | STD-8    | WASHER, 1/4 plain          | 10 | 12 |
| 19 | STD-160  | WASHER, 1/4 lock           | 12 | 12 |
| 10 | STD-1204 | BOLT, 1/4-20 x 15/16 long  | 9  | 9  |
| 21 | STD-1419 | BOLT, 1/4-20 x 1-1/8 long  | 1  |    |
| 22 | STD-1931 | BOLT, 1/2-20 x 1-7/8 long  | 2  |    |
| 23 | STD-1875 | BOLT, 1/4-20 x 13/16 long  |    | 2  |
| 24 | STD-1215 | BOLT, 1/4-20 x 1-1/4 long  |    | 1  |

Page 2-5

Oil Filter Assembly and Oil Cooler Bypass Valve

|    |              |                                  |   |   |
|----|--------------|----------------------------------|---|---|
| 2  | LW-12795     | GASKET, Oil filter adapter       | 2 |   |
| 5  | 77852        | OIL FILTER BASE ASSEMBLY         | 1 |   |
| 6  | 25C-10       | STUD, 1/4-20 x 1-1/4 long        | 1 |   |
| 7  | STD-8        | WASHER, 1/4 plain                | 4 |   |
| 8  | STD-160      | WASHER, 1/4 lock                 | 1 |   |
| 9  | STD-1856     | SCREW, 1/4-20 x 1.00 long        | 3 |   |
| 10 | STD-1411     | NUT, 1/4-20 plain                | 1 |   |
| 12 | LW-10321     | SPRING, Oil filter bypass valve  |   | 1 |
| 13 | 76539        | SEAT, Oil relief valve           |   | 1 |
| 14 | LW-10320     | SLEEVE, Oil filter bypass valve  |   | 1 |
| 15 | MS16625-1100 | RING, Internal retaining         |   | 1 |
| 16 | LW-13905     | OIL FILTER, long (spin-on type)  |   | 1 |
|    | LW-13215     | OIL FILTER, short (spin-on type) | 1 |   |

IO-540-AA1A5 & -M1B5D

SECTION 2 (Cont.)

Page 2-5 (Cont.)

Oil Filter Assembly and Oil Cooler Bypass Valve

| Ref. No. | Part No.    | Description                              | Qty. Per Assy. |        |
|----------|-------------|------------------------------------------|----------------|--------|
|          |             |                                          | -AA1A5         | -M1B5D |
| 17       | LW-13904    | KIT, Converter plate, oil filter         |                | 1      |
| 18       | 75944       | VALVE ASSY., Temp. control               | 1              | 1      |
|          | MS29513-138 | SEAL, "O" ring, 2-7/64 ID x 7/64 section | 1              |        |
|          | LW-14445-11 | VALVE ASSY., Absolute pressure relief    | 1              |        |

Page 2-7

Vacuum Pump Drive Oil Cooler Fittings and Breather Fittings

|    |            |                                          |   |   |
|----|------------|------------------------------------------|---|---|
| 1  | 61183      | GASKET, Accessory adapter                | 1 |   |
| 2  | 67536      | ADAPTER ASSY., Vacuum pump               | 1 |   |
| 3  | STD-1774   | DOWEL, 1/8 dia. x 1/4 long               | 1 |   |
| 4  | STD-208    | SEAL, Oil 7/8 ID x 1-1/2 OD x 5/16 thick | 1 | 1 |
| 5  | 72974      | GEAR ASSY., Vacuum pump driven           | 1 |   |
| 6  | 71596      | WASHER, Accessory driven gear            | 1 | 1 |
| 7  | LW-10307   | GEAR ASSY., Vacuum pump driven           |   | 1 |
| 10 | 8313       | GASKET, Vacuum pump pad                  | 1 | 1 |
| 11 | 60430      | COVER, Vacuum pump                       | 1 | 1 |
| 12 | STD-8      | WASHER, 1/4 plain                        | 4 | 4 |
| 13 | STD-160    | WASHER, 1/4 lock                         | 4 | 4 |
| 14 | STD-1411   | NUT, 1/4-20 plain                        | 4 | 4 |
| 15 | STD-294    | GASKET, 7/8 OD x 5/8 ID                  | 1 |   |
| 18 | 62417      | PLUG, Oil cooler bypass                  | 1 |   |
| 19 | 71651      | FITTING, Breather                        |   | 1 |
|    | AN844-16D  | FITTING, Breather 1.00 ID hose 45°       | 1 |   |
| 20 | MS29512-10 | SEAL, Oil 3/32 section x 45/64 ID        |   | 1 |
| 21 | AN814-10L  | PLUG, 7/18-14 thd.                       |   | 1 |
| 23 | MS20823-8  | ELBOW, 1/2 flared tube 45°               | 2 |   |

Page 2-9

Hydraulic Pump Drive and Covers

|    |          |                                     |   |  |
|----|----------|-------------------------------------|---|--|
| 3  | 72964    | GEAR ASSY., Hydraulic               | 1 |  |
| 4  | 71596    | WASHER, Accessory drive gear        | 1 |  |
| 5  | 68315    | GASKET, Accessory drive gear        | 1 |  |
| 6  | LW-10807 | ADAPTER ASSY., Hydraulic pump       | 1 |  |
| 7  | STD-208  | SEAL, 7/8 ID x 1-1/2 OD x 5/16 wide | 1 |  |
| 8  | 25C-32   | STUD, 1/4-20 x 1-1/2 long           | 4 |  |
| 9  | STD-1774 | PIN, 1/8 dia. x 1/4 long            | 1 |  |
| 10 | STD-35   | WASHER, 5/16 plain                  | 4 |  |
| 11 | STD-475  | WASHER, 5/16 lock                   | 4 |  |
| 12 | STD-1410 | NUT, 5/16-18 plain                  | 4 |  |
| 13 | 8313     | GASKET, Hydraulic pump              | 1 |  |
| 14 | 60430    | COVER, Hydraulic pump               | 1 |  |

IO-540-AA1A5 & -M1B5D

SECTION 2 (Cont.)

Page 2-9 (Cont.)  
Hydraulic Pump Drive and Covers

| Ref. No. | Part No. | Description                             | Qty. Per Assy. |        |
|----------|----------|-----------------------------------------|----------------|--------|
|          |          |                                         | -AA1A5         | -M1B5D |
| 15       | STD-8    | WASHER, 1/4 plain                       | 4              |        |
| 16       | STD-160  | WASHER, 1/4 lock                        | 4              |        |
| 17       | STD-1411 | NUT, 1/4-20 plain                       | 4              |        |
| 18       | LW-10806 | SPACER, Hydraulic pump stud             | 4              |        |
| 19       | LW-10671 | GEAR ASSY., Accessory driven            |                | 1      |
| 20       | 71596    | WASHER, Accessory driven gear           |                | 1      |
| 21       | STD-208  | SEAL, Oil 7/8 ID x 1-1/2 OD x 5/16 wide |                | 1      |
| 22       | AN123857 | "O" RING, 9/64 ID x 5/64 section        |                | 1      |
| 23       | LW-14819 | ADAPTER ASSY., Hydraulic pump           |                | 1      |
| 24       | STD-1631 | DOWEL, 11/64 dia. x 11/32 long          |                | 1      |
| 25       | STD-8    | WASHER, 1/4 plain                       |                | 4      |
| 26       | STD-160  | WASHER, 1/4 lock                        |                | 4      |
| 27       | STD-1411 | NUT, 1/4-20 plain                       |                | 4      |
| 28       | STD-35   | WASHER, 5/16 plain                      |                | 1      |
| 29       | STD-475  | WASHER, 5/16 lock                       |                | 1      |
| 30       | STD-1410 | NUT, 5/16-18 plain                      |                | 1      |
| 31       | 20415    | GASKET, Hydraulic pump                  |                | 1      |
| 32       | 72412    | COVER, Hydraulic pump                   |                | 1      |
| 33       | STD-1828 | BOLT, 5/16-18 x 1-5/16 long             |                | 2      |
|          | STD-35   | WASHER, 5/16 plain                      |                | 6      |
|          | STD-475  | WASHER, 5/16 lock                       |                | 4      |
|          | STD-1410 | NUT, 5/16-18 plain                      |                | 4      |

Page 2-11  
Fuel Pump and Fuel Pump Drives

|    |          |                                                      |   |   |
|----|----------|------------------------------------------------------|---|---|
| 1  | LW-15473 | FUEL PUMP (6441234)                                  |   | 1 |
| 2  | 60096    | GASKET, Fuel pump                                    |   | 1 |
| 3  | STD-33   | WASHER, 3/8 plain                                    |   | 2 |
| 4  | STD-1882 | SCREW, 3/8-16 x 1-9/32 long, socket hd. dr. hd.      |   | 2 |
| 5  | LW-10799 | SPACER, Fuel pump insulating                         | 1 |   |
| 6  | LW-13909 | PUMP, Fuel (RG9080-J4A)                              | 1 |   |
| 7  | STD-35   | WASHER, 23/64 plain                                  | 4 |   |
| 8  | STD-475  | WASHER, 23/64 internal lock                          | 4 |   |
| 9  | STD-1410 | NUT, 23/64-18 plain                                  | 4 |   |
| 10 | 72246    | SHAFT, Fuel pump idler gear                          | 1 |   |
| 11 | 71667    | LOCKPLATE                                            | 1 |   |
| 12 | STD-705  | SCREW, 1/4-20 x 11/16 long, hex hd.                  | 2 |   |
| 13 | 71664    | GEAR ASSY., Fuel pump idler                          | 1 |   |
| 14 | 77309    | BUSHING, Crankshaft idler gear                       | 1 |   |
| 15 | 70474    | WASHER, Fuel pump gear thrust                        | 1 |   |
| 16 | STD-1737 | RING, 37/64 ID dia. x 3/64 thick, external retaining | 1 |   |
| 17 | 69164    | GASKET, Fuel pump adapter                            | 1 |   |

**IO-540-AA1A5 & -M1B5D**

SECTION 2 (Cont.)

Page 2-11 (Cont.)  
Fuel Pump and Fuel Pump Drives

| Ref.<br>No. | Part No. | Description                       | Qty. Per Assy. |        |
|-------------|----------|-----------------------------------|----------------|--------|
|             |          |                                   | -AA1A5         | -M1B5D |
| 18          | 72972    | SHAFT GEAR ASSY., Fuel pump drive | 1              |        |
| 19          | 69159    | ADAPTER ASSY., Fuel pump drive    | 1              |        |
| 20          | STD-1774 | PIN, 1/8 dia. x 1/4 long          | 1              |        |
| 21          | STD-213  | SEAL, Oil, 3/4 ID x 1-3/8 OD      | 1              |        |

**SECTION 3**

Page 3-1  
Connecting Rod, Piston and Ring Assemblies

|    |          |                                  |    |    |
|----|----------|----------------------------------|----|----|
| 1  | LW-10646 | CONNECTING ROD ASSY.             | 6  | 6  |
| 2  | LW-13923 | BUSHING, Connecting rod          | 6  | 6  |
| 3  | 75061    | BOLT, Connecting rod             | 12 | 12 |
|    | 75060    | BOLT, Connecting rod             | 12 | 12 |
| 4  | LW-12186 | NUT, Connecting rod bolt         | 12 | 12 |
| 5  | LW-14954 | BEARING, Connecting rod          | 12 | 12 |
| 6  | LW-10545 | PISTON, Compression ratio 7.30:1 | 6  |    |
|    | LW-10207 | PISTON, Compression ratio 8.7:1  |    | 6  |
| 7  | 74241    | RING, Piston compression         | 12 | 12 |
| 8  | 73857    | RING, Piston oil regulating      | 6  | 6  |
| 9  | LW-14078 | PIN, Piston                      | 6  | 6  |
| 10 | 60828    | PLUG, Piston pin                 | 12 | 12 |

Page 3-3  
Cylinder Assembly

|    |            |                                                        |    |    |
|----|------------|--------------------------------------------------------|----|----|
| 1  | LW-12997   | CYLINDER & HEAD ASSY., Nitrided                        |    | 6  |
|    | LW-12988   | CYLINDER & HEAD ASSY., Nitrided                        | 6  |    |
| 2  | LW-12688   | SEAT, Intake valve                                     | 6  | 6  |
| 3  | 71894      | SEAT, Exhaust valve                                    | 6  | 6  |
| 4  | LW-11956   | GUIDE, Valve intake                                    | 6  | 6  |
| 5  | LW-11957   | GUIDE, Valve exhaust                                   |    | 6  |
|    | LW-11958   | GUIDE, Valve exhaust, ni-resist                        | 6  |    |
| 6  | 69260      | INSERT, Spark plug, long reach                         | 12 | 12 |
| 7  | STD-1872   | INSERT, 1/8-27 Heli-coil NPT                           | 6  | 6  |
|    | 72706      | INSERT, Heli-coil, 1/4-20 NC x 3/8 long (self locking) |    | 24 |
| 8  | 31C-13     | STUD, 5/16-18 x 1-5/8 long                             | 12 |    |
|    | 31C-10     | STUD, 5/16-18 x 1-1/4 long                             |    | 18 |
| 10 | 25C-8      | STUD, 1/4-20 x 1.00 long                               | 24 |    |
| 11 | 66610      | BUSHING, Rocker shaft                                  |    | 6  |
|    | 66670      | BUSHING, Rocker shaft                                  | 24 | 18 |
| 12 | MS20823-6D | ELBOW, 45° x 3/8 flared tube                           | 6  | 6  |



IO-540-AA1A5 & -M1B5D

SECTION 3 (Cont.)

Page 3-3 (Cont.)  
Cylinder Assembly

| Ref. No. | Part No. | Description                               | Qty. Per Assy. |        |
|----------|----------|-------------------------------------------|----------------|--------|
|          |          |                                           | -AA1A5         | -M1B5D |
| 13       | 72343    | STABILIZER, Cylinder head fins - 15 teeth | 6              |        |
|          | 72344    | STABILIZER, Cylinder head fins - 26 teeth | 6              |        |
|          | 75151    | STABILIZER, Cylinder head fins            |                | 6      |
|          | 75152    | STABILIZER, Cylinder head fins            |                | 6      |
|          | 75164    | STABILIZER, Cylinder head fins            |                | 6      |
|          | 1102     | PLUG, 1/8-27 NPT, Allen                   | 6              | 6      |

Page 3-5  
Valve Assembly

|    |           |                                                  |    |    |
|----|-----------|--------------------------------------------------|----|----|
| 1  | LW-13622  | VALVE, Intake                                    | 6  | 6  |
| 2  | 73111     | VALVE, Exhaust rotator type                      |    | 6  |
|    | LW-11167  | VALVE, Exhaust rotator type                      | 6  |    |
| 3  | LW-11797  | SPRING, Valve inner                              | 12 | 12 |
| 4  | LW-11796  | SPRING, Valve outer                              | 12 | 12 |
| 5  | LW-13321  | SEAT, Valve spring, lower intake                 | 6  | 6  |
| 6  | 69532     | SEAT, Valve spring, upper intake                 | 6  | 6  |
| 7  | LW-13322  | SEAT, Valve spring, lower exhaust                | 6  | 6  |
| 8  | LW-16475  | SEAT, Valve spring, upper exhaust (rotator type) | 6  | 6  |
| 9  | 72050     | KEY, Valve intake                                | 12 | 12 |
| 10 | 62388     | CAP, Valve stem                                  | 6  | 6  |
| 11 | MS13997-3 | KEY, Valve exhaust (rotator type)                | 12 | 12 |
| 12 | MS13998-3 | CAP, Valve stem exhaust (rotator type)           | 6  | 6  |
| 13 | 78290     | PLUNGER ASSY., Hydraulic tappet                  | 12 | 12 |
| 14 | 78524     | SOCKET, Push rod hydraulic tappet                | 12 | 12 |
| 15 | 72255     | SHROUD TUBE ASSY., Push rod                      | 12 | 6  |
|    | 72257     | SHROUD TUBE ASSY., Push rod (exhaust)            |    | 6  |
| 16 | LW-13077  | SPRING, Shroud tube                              | 24 | 24 |
| 19 | 66728     | WASHER, 3/4 ID x 1-1/4 OD x 1/32 (Max. 24)       | 24 | 24 |
| 20 | 61503     | SLEEVE, Shroud tube seal                         | 12 | 12 |
| 22 | 62922     | SEAL, Shroud tube                                | 24 | 24 |

Page 3-7  
Cylinder Related Parts

|   |       |                              |    |    |
|---|-------|------------------------------|----|----|
| 1 | 73455 | ROD ASSEMBLY, Push (intake)  | un | un |
|   | 73456 | ROD ASSEMBLY, Push (intake)  | un | un |
|   | 73457 | ROD ASSEMBLY, Push (intake)  | un | un |
|   | 73458 | ROD ASSEMBLY, Push (intake)  | un | un |
|   | 73445 | ROD ASSEMBLY, Push (exhaust) | un | un |
|   | 73446 | ROD ASSEMBLY, Push (exhaust) | un | un |
|   | 73447 | ROD ASSEMBLY, Push (exhaust) | un | un |

IO-540-AA1A5 & -M1B5D

SECTION 3 (Cont.)

Page 3-7 (Cont.)  
Cylinder Related Parts

| Ref.<br>No. | Part No. | Description                         | Qty. Per Assy. |        |
|-------------|----------|-------------------------------------|----------------|--------|
|             |          |                                     | -AA1A5         | -M1B5D |
|             | 73448    | ROD ASSEMBLY, Push (exhaust)        | un             | un     |
| 4           | 67113    | ROCKER ASSY., Valve intake          | 6              | 6      |
| 5           | 67114    | BUSHING, Valve rocker intake        | 6              | 6      |
| 8           | 67112    | ROCKER ASSY., Exhaust valve         | 6              |        |
|             | 72630    | ROCKER ASSY., Exhaust valve         |                | 6      |
| 9           | 67114    | BUSHING, Valve rocker exhaust       | 6              |        |
|             | 72705    | BUSHING, Valve rocker exhaust       |                | 6      |
| 10          | 71549    | WASHER, Valve rocker                | 12             | 12     |
| 11          | 72626    | SHAFT, Valve rocker                 | 12             | 12     |
| 14          | 66732    | GASKET, Valve rocker shaft cover    | 12             | 12     |
| 15          | 66731    | COVER, Valve rocker shaft           | 12             |        |
|             | 72710    | COVER, Valve rocker shaft           |                | 12     |
| 16          | STD-160  | WASHER, 1/4 lock                    | 24             |        |
| 17          | STD-1411 | NUT, 1/4-20 plain                   | 24             |        |
| 18          | 71450    | GASKET, Rocker box cover            |                | 6      |
|             | 67193    | GASKET, Rocker box cover            | 6              |        |
| 19          | 72242    | COVER, Rocker box                   |                | 6      |
|             | 68795    | COVER ASSY., Rocker box             | 6              |        |
| 20          | STD-1925 | SCREW, 1/4-20 x 5/8 self-locking    | 48             | 54     |
|             | 72709    | SCREW, 1/4-20 x 5/8 self-locking    |                | 24     |
| 21          | 74494    | PLATE, Spark plug reach caution     | 6              | 6      |
| 22          | 71481    | RING, Oil seal                      | 6              | 6      |
| 23          | 77906    | SPACER, 1/2 ID x 7/8 OD x 1/8 thick | 2              | 2      |
| 24          | 74887    | SPACER, 1/2 ID x 7/8 OD x 3/8 thick | 2              | 2      |
| 25          | 383-B    | NUT, 3/8-24 plain                   | 24             | 24     |
| 26          | STD-290  | NUT, 1/2-20 plain                   | 28             | 28     |
| 27          | 65321    | GASKET, Exhaust flange              | 6              |        |
|             | 77611    | GASKET, Exhaust flange              | 6              |        |
| 28          | 61260    | FLANGE, Exhaust, stainless          | 6              |        |
| 29          | STD-35   | WASHER, 5/16 plain                  | 12             |        |
| 30          | STD-475  | WASHER, 5/16 lock                   | 12             |        |
| 31          | STD-1410 | NUT, 5/16-18 plain                  | 12             |        |

Page 3-9

Cylinder Head Drain Tubes and Intercylinder Cooling Baffles

|   |               |                                                 |    |    |
|---|---------------|-------------------------------------------------|----|----|
| 1 | STD-684       | NIPPLE, Straight, 3/8 ID hose                   | 6  | 6  |
| 2 | STD-2180      | HOSE, 3/8 ID x 1-13/16 long                     | 6  | 6  |
| 3 | LW-15592-5-05 | CLAMP, Hose                                     | 12 | 12 |
| 4 | 72702         | TUBE ASSY., No. 1 cylinder                      | 1  | 1  |
|   | 72703         | TUBE ASSY., No. 2 cylinder                      | 1  | 1  |
|   | 73027         | TUBE ASSY., No. 3,4,5,6 cylinder head oil drain | 4  | 4  |

IO-540-AA1A5 & -M1B5D

SECTION 3 (Cont.)

Page 3-9 (Cont.)

Cylinder Head Drain Tubes and Intercylinder Cooling Baffles

| Ref.<br>No. | Part No. | Description                             | Qty. Per Assy. |        |
|-------------|----------|-----------------------------------------|----------------|--------|
|             |          |                                         | -AA1A5         | -M1B5D |
| 5           | 72918    | BAFFLE ASSY., Intercylinder coding      |                | 4      |
|             | LW-10610 | BAFFLE & CLIP ASSY., Cyls. No. 1 & 6    | 2              |        |
|             | LW-10611 | BAFFLE & CLIP ASSY., Cyls. No. 2 & 5    | 2              |        |
|             | 74718    | BAFFLE ASSY., Intercylinder             | 2              |        |
| 6           | LW-10608 | CLIP, Intercylinder baffle              | 4              |        |
| 7           | LW-10609 | RIVET, Baffle clip                      | 4              |        |
| 8           | 71611    | RETAINER, Intercylinder baffle          | 4              | 4      |
| 9           | 71610    | HOOK, Intercylinder baffle              | 4              | 4      |
| 10          | 72834    | COVER, Baffle ignition hole             | 4              | 4      |
| 11          | STD-692  | SCREW, No. 10-32 x 1/2 long             | 8              | 8      |
| 12          | STD-670  | NUT, No. 10-32 self-locking             | 8              |        |
| 13          | 65614    | PLUG, Baffle attaching                  | 4              |        |
| 14          | STD-251  | WASHER, No. 10 lock                     | 4              |        |
| 15          | STD-1686 | SCREW, No. 10-32 x 7/16 long, fill. hd. | 4              |        |

SECTION 4

Page 4-1

Magneto Drives and Magnetos

|    |               |                                      |  |    |
|----|---------------|--------------------------------------|--|----|
| 1  | LW-13642      | GEAR RETAINER, Magneto drive         |  | 1  |
| 2  | LW-13641      | CUSHION, Magneto drive               |  | 2  |
| 3  | LW-12681      | GASKET, Magneto                      |  | 1  |
| 4  | LW-685126-109 | MAGNETO, Ignition system (D6LN-3031) |  | 1  |
|    | LW-682560-13  | MAGNETO, Ignition                    |  | 1  |
|    | LW-684604-103 | HARNES, Ignition                     |  | 1  |
| 5  | 75965         | CLAMP, Magneto                       |  | 2  |
| 6  | STD-475       | WASHER, 5/16 lock                    |  | 2  |
| 7  | STD-1410      | NUT, 5/16-18 plain                   |  | 2  |
|    | MS25082-6     | NUT, 3/8-24 UNF-3 (thin)             |  | 2  |
| 10 | LW-14057      | CLIP, 1 wire for 1/4 screw           |  | 6  |
|    | LW-620028-3   | CLIP, 2 wire for 1/4 screw           |  | 6  |
| 13 | LW-620029-6   | CLIP, 3 wire for 10-32 screw         |  | 1  |
|    | LW-320472-3   | CLIP, 6 wire                         |  | 2  |
| 14 | LW-620037-4   | CLIP, 6 wire for 10-32 screw         |  | 1  |
|    | LW-620036-1   | CLIP, 6 wire                         |  | 3  |
| 20 | STD-692       | SCREW, 10-32                         |  | 1  |
| 21 | STD-670       | NUT, 10-32                           |  | 1  |
|    | 76505         | BRACKET                              |  | 1  |
| 23 | 76734         | ZIP STRAP                            |  | 31 |
| 27 | STD-1925      | SCREW, 1/4-20 self-locking           |  | 12 |
| 29 | LW-382698     | KIT, Magneto ground terminal         |  | 2  |

IO-540-AA1A5 & -M1B5D

SECTION 4 (Cont.)

Page 4-3  
Magneto Drives and Magnetos

| Ref.<br>No. | Part No.    | Description                       | Qty. Per Assy. |        |
|-------------|-------------|-----------------------------------|----------------|--------|
|             |             |                                   | -AA1A5         | -M1B5D |
| 1           | 67542       | BEARING, Ball                     |                | 2      |
| 2           | 74830       | GEAR RETAINER, Magneto drive      |                | 2      |
| 3           | LW-12136    | CUSHION, Magneto drive            |                | 4      |
| 4           | 62224       | GASKET, Magneto adapter           |                | 2      |
| 5           | LW-12707    | ADAPTER, Magneto                  |                | 2      |
| 6           | LW-12681    | GASKET, Magneto                   |                | 2      |
| 7           | 73000       | COUPLING, Magneto drive           |                | 1      |
|             | 73636       | COUPLING, Magneto (right magneto) |                | 1      |
| 8           | LW-349290-1 | MAGNETO, S6LN-1208                |                | 1      |
|             | LW-349310-1 | MAGNETO, S6LN-1209                |                | 1      |
| 9           | 75965       | CLAMP, Magneto                    |                | 4      |
| 11          | STD-475     | WASHER, 5/16 lock                 |                | 4      |
| 12          | STD-1410    | NUT, 5/16-18 plain                |                | 4      |

Page 4-5  
Ignition Harness and Spark Plugs

|    |             |                                        |  |    |
|----|-------------|----------------------------------------|--|----|
| 21 | STD-696     | WASHER, 1/4 plain (thin)               |  | un |
| 31 | LW-720515-3 | HARNESS ASSY., Ignition                |  | 1  |
| 32 | 1182-K4     | SPARK PLUG, (Champion RHB36W), iridium |  | 12 |
|    | 1182-W5     | SPARK PLUG, (Champion RHB37E)          |  | 12 |

SECTION 5

Page 5-1  
Alternator Mounting Brackets  
(Prestolite 24V - 100 Amp. Dual Belt)\*

| Ref.<br>No. | Part No.   | Description                           | Qty. Per Assy. |        |         |
|-------------|------------|---------------------------------------|----------------|--------|---------|
|             |            |                                       | -AA1A5         | -M1B5D | -M1B5D* |
| 1           | LW-13039   | BRACKET, Alternator                   |                | 1      |         |
| 2           | 77756      | BRACKET, Alternator                   | 1              |        |         |
|             | LW-14141   | BRACKET, Alternator - front           |                |        | 1       |
|             | LW-14142   | BRACKET, Alternator - rear            |                |        | 1       |
| 3           | 73383      | LOCKPLATE, 5/16 bolt x 1.00 spacing   | 1              | 1      | 2       |
| 4           | STD-1838   | BOLT, 5/16-18 x 15/16 long            | 2              | 2      | 4       |
| 5           | 75380      | LINK, Alternator, adjusting           |                | 1      |         |
|             | 74323      | STRUT, Alternator support             |                | 1      |         |
|             | LW-3111.75 | BOLT, 5/16-18 x 3/4 long, hex hd. dr. |                | 3      |         |
|             | STD-35     | WASHER, 5/16 plain                    |                | 1      |         |
| 7           | 77757      | BRACKET, Alternator belt, adjusting   | 1              |        |         |

IO-540-AA1A5 & -M1B5D

SECTION 5 (Cont.)

Page 5-1 (Cont.)  
 Alternator Mounting Brackets  
 (Prestolite 24V - 100 Amp. Dual Belt)\*

| Ref.<br>No. | Part No.     | Description                                      | Qty. Per Assy. |        |         |
|-------------|--------------|--------------------------------------------------|----------------|--------|---------|
|             |              |                                                  | -AA1A5         | -M1B5D | -M1B5D* |
| 8           | LW-11147     | BRACKET, Alternator belt adjusting               |                |        | 1       |
|             | STD-1727     | WASHER, Plain, 3/4 OD x 5/16 ID x 1/8 thick      | 1              | 1      | 1       |
| 9           | LW-14637     | SHIM, 13/16 OD x 15/16 ID x .005 thick           | un             |        | un      |
| 10          | LW-14649     | SHIM, 13/16 OD x 5/16 ID x .010 thick            | un             |        | un      |
| 11          | STD-1889     | BOLT, 5/16-18 x 1-1/4 long, drilled              | 1              |        | 1       |
| 12          | 78639        | PULLEY & SHAFT ASSY., Alternator belt adj.       | 1              |        |         |
|             | LW-10578     | PULLEY & SHAFT ASSY., Alternator dual belt, adj. |                |        | 1       |
| 13          | 78614        | PULLEY, Alternator belt adj.                     | 1              |        |         |
|             | 76420        | PULLEY, Alternator idler, dual                   |                |        | 1       |
|             | LW-10576     | SHAFT, Alternator dual belt idler                |                |        | 1       |
|             | LW-10970     | STRUT, Alternator support                        |                |        | 1       |
|             | LW-31H.75    | BOLT, 5/16-18 x 3/4 long, hex hd. drilled        |                |        | 1       |
|             | LW-14650     | SHIM, 7/8 OD x 15/32 ID x .005 thick             |                |        | un      |
|             | AN7-14       | BOLT, 7/16-20 UNF-3A x 1-19/32 long, drilled end |                |        | 1       |
|             | STD-632      | WASHER, 7/16 plain                               |                |        | un      |
|             | AN310-7      | NUT, 7/16-20 plain, slotted                      |                |        | 2       |
|             | STD-761      | PIN, Cotter, 3/32 dia. x 1.00 lg.                |                |        | 2       |
|             | AN7-12       | BOLT, 7/16-20 UNF-3A x 1-11/32 lg. drilled end   |                |        | 1       |
| 14          | 78629        | BALL BEARING, Alternator idler pulley            | 1              |        | 1       |
| 15          | MS16625-1125 | RING, Internal retaining                         | 2              |        | 2       |
| 16          | 78617        | IDLER SHAFT, Alternator belt, adj.               | 1              |        |         |
| 17          | 76768        | LOCKWASHER, Alternator idler pulley bearing      | 1              |        | 1       |
| 18          | 76769        | LOCKNUT, Alternator idler pulley bearing         | 1              |        | 1       |
| 19          | STD-669      | WASHER, 1/2 ID x 1.00 OD x 1/8 thick             | 1              |        | 1       |
| 20          | STD-676      | NUT, 1/2-20 self-locking                         | 1              |        | 1       |
| 21          | STD-1727     | WASHER, Plain, 3/4 OD x 5/16 ID x 1/8 thick      | 1              |        | 1       |
| 22          | LW-14637     | SHIM, 13/16 OD x 5/16 ID x .005 thick            | un             |        | un      |
| 23          | STD-1889     | BOLT, 5/16-18 x 1-1/4 long, drilled              | 1              |        | 1       |

IO-540-AA1A5 & -M1B5D

SECTION 5 (Cont.)

Page 5-1 (Cont.)  
 Alternator Mounting Brackets  
 (Prestolite 24V - 100 Amp. Dual Belt)\*

| Ref. No. | Part No. | Description                               | Qty. Per Assy. |        |         |
|----------|----------|-------------------------------------------|----------------|--------|---------|
|          |          |                                           | -AA1A5         | -M1B5D | -M1B5D* |
| 24       | LW-10952 | SHIM, 13/16 OD x 7/16 ID<br>x .005 thick  | un             |        |         |
| 25       | AN6-12   | BOLT, 3/8-24 x 1-5/16 drilled<br>end      | 1              |        |         |
| 26       | AN6-14   | BOLT, 3/8-24 x 1-19/32 drilled<br>end     |                | 1      |         |
| 27       | STD-690  | WASHER, 13/16 OD x 3/8 ID<br>x 1/16 thick | un             | un     |         |
| 28       | STD-872  | NUT, 3/8-24 slotted                       | 2              | 2      |         |
| 29       | STD-713  | PIN, Cotter, 3/32 x 3/4 long              | 2              | 2      |         |
| 31       | AN6-16   | BOLT, 3/8-24 x 1-13/16<br>drilled end     | 1              | 1      |         |
| 32       | 76534    | SHIM, 1-1/8 OD x 7/16 ID<br>x .005 thick  | un             |        |         |

Page 5-3  
 Alternators, Regulators and Drive Belts

| Ref. No. | Part No. | Description                                                              | Qty. Per Assy. |        |
|----------|----------|--------------------------------------------------------------------------|----------------|--------|
|          |          |                                                                          | -AA1A5         | -M1B5D |
| 1        | LW-14308 | ALTERNATOR, 24 volt - 70 Amp. (ALU-8421)<br>(externally grounded)        |                | 1      |
|          | LW-10967 | ALTERNATOR ASSY., 24 volt - 100 Amp.                                     |                | 1      |
| 2        | 76421    | ALTERNATOR PULLEY, Dual belt                                             |                | 1      |
|          | 76026    | BELT, Alternator drive (3/8 wide)                                        |                | 1      |
|          | 74519    | BELT, Alternator drive (3/8 wide)                                        | 1              |        |
|          | LW-10971 | BELT, Alternator drive, dual idler pulley take-up<br>(two matched belts) |                | 1      |
| 3        | LW-10179 | REGULATOR, 24 volt - full transistor (VSF-7403)                          |                | 1      |

Page 5-4  
 Starting Motor and Magnetic Switch

|   |          |                                                                             |   |   |
|---|----------|-----------------------------------------------------------------------------|---|---|
| 1 | LW-15572 | STARTER, 24 volt (3.38:1 internal reduction)(12/14<br>p. pinion) (MHB-4016) | 1 | 1 |
| 2 | STD-35   | WASHER, 5/16 plain                                                          | 4 | 4 |
| 3 | STD-475  | WASHER, 5/16 lock, internal teeth                                           | 4 | 4 |
| 4 | STD-2156 | BOLT, 5/16-18 x 1-5/32                                                      | 1 | 1 |
| 5 | STD-1410 | NUT, 5/16-18 plain                                                          | 3 | 3 |

IO-540-AA1A5 & -M1B5D

SECTION 6

Page 6-1  
Oil Sump Assembly

| Ref.<br>No. | Part No. | Description                                     | Qty. Per Assy. |        |
|-------------|----------|-------------------------------------------------|----------------|--------|
|             |          |                                                 | -AA1A5         | -M1B5D |
| 1           | LW-13306 | GASKET, Oil sump                                | 1              | 1      |
| 2           | LW-13232 | HOUSING ASSY., Oil sump & induction             |                | 1      |
|             | LW-14946 | HOUSING ASSY., Oil sump & induction             | 1              |        |
| 3           | STD-514  | DOWEL, 5/16 dia. x 1/2                          | 2              | 2      |
| 4           | 72179    | STUD, Intake pipe extensions                    | 3              | 3      |
| 5           | 72167    | PIPE, Extension - intake cylinders no. 1 & 2    | 2              | 2      |
| 6           | 72168    | PIPE, Extension - intake cylinders no. 3 & 4    | 2              | 2      |
| 7           | 72169    | PIPE, Extension - intake cylinders no. 5 & 6    | 2              | 2      |
| 8           | LW-11273 | CLAMP, Intake pipe extension                    | 3              | 3      |
| 9           | 25C-9    | STUD, 1/4-20 x 1-1/8 long                       | 4              | 4      |
| 10          | 25C-11   | STUD, 1/2-20 x 1-3/8 long                       | 15             | 15     |
| 11          | 38-15    | STUD, 3/8-16 x 1-7/8 long                       |                | 8      |
|             | 38-17    | STUD, 3/8-16 x 2-1/8 long                       | 8              |        |
| 12          | 72706    | INSERT, Heli-coil, 1/4-20 x 3/8 long, self-lock | 14             | 14     |
| 13          | 1102     | PLUG, 1/8 NPT Allen head                        | 5              | 2      |
| 14          | STD-91   | PLUG, 1/2-14 NPT Allen head                     | 1              | 1      |
| 15          | STD-784  | PLUG, 3/8-18 NPT Allen head                     | 1              | 1      |
| 16          | STD-355  | PLUG, 3/4-14 NPT Allen head                     | 2              | 2      |
| 17          | STD-8    | WASHER, 1/4 plain                               | 29             | 29     |
| 18          | STD-160  | WASHER, Lock, internal teeth                    | 23             | 23     |
| 19          | STD-1646 | BOLT, 1/4-20 x 2.00 long, hex head              | 2              | 2      |
| 20          | STD-1688 | BOLT, 1/4-20 x 1.00 long, hex head              | 10             | 10     |
| 21          | STD-1411 | NUT, 1/4 plain                                  | 13             | 13     |
| 22          | STD-589  | GASKET, Annular, 1-1/8 OD x 29/32 ID x 1/16     | 1              | 1      |
| 24          | 72960    | PLUG, 7/8-14 x 5/8 hex head                     | 1              | 1      |
| 25          | STD-1875 | BOLT, 1/4-20 x 13/16 long                       | 4              | 4      |
| 26          | STD-8    | WASHER, 1/4 plain                               | 37             | 37     |
| 27          | STD-160  | WASHER, Lock, internal teeth                    | 23             | 23     |
| 28          | STD-1419 | BOLT, 1/4-20 x 1-1/8 long, hex head             | 6              | 6      |
| 29          | STD-1688 | BOLT, 1/4-20 x 1.00 long, hex head              | 8              | 8      |
| 30          | STD-1411 | NUT, 1/4-20 plain                               | 25             | 25     |
| 31          | STD-551  | PLUG, 1/2-14 NPT sq. hd., drilled               | 2              | 2      |
| 32          | LW-13383 | BAFFLE, Oil sump                                | 1              | 1      |
| 33          | LW-13384 | SUPPORT, Oil sump baffle                        | 4              | 4      |
| 34          | LW-13385 | SUPPORT, Oil sump baffle                        | 2              | 2      |
| 35          | STD-425  | WASHER, 7/16 OD x 13/64 ID x 1/16 thick         | 6              | 6      |
| 36          | STD-1686 | SCREW, No. 10-32 x 7/16 long, fill. hd.         | 6              | 6      |
| 37          | 75444    | ADAPTER ASSY., Fuel drain valve                 |                | 2      |
|             | LW-13807 | ADAPTER ASSY., Fuel drain valve                 | 1              |        |
| 38          | 60422    | SCREEN, Oil suction                             | 1              | 1      |
| 39          | STD-111  | GASKET, 1.00 ID x 1-1/4 OD x 3/32               | 1              | 1      |
| 40          | LW-12545 | PLUG, 5/8 hex hd. x 1.00-20 thread              | 1              | 1      |

IO-540-AA1A5 & -M1B5D

SECTION 6 (Cont.)

Page 6-4  
Oil Sump Assembly

| Ref.<br>No. | Part No. | Description                              | Qty. Per Assy. |        |
|-------------|----------|------------------------------------------|----------------|--------|
|             |          |                                          | -AA1A5         | -M1B5D |
| 14          | 61548    | NAMEPLATE                                | 1              | 1      |
| 15          | STD-1901 | DRIVE STUD, No. 4 x 3/16 long, round hd. | 4              | 4      |

Page 6-5  
Intake Pipes and Air Inlet Housing

|    |          |                                    |    |    |
|----|----------|------------------------------------|----|----|
| 4  | 71973    | GASKET, 2 bolt flange - 1-7/8 ID   | 6  | 6  |
| 5  | 74360    | FLANGE, Intake pipe, upper         | 6  | 6  |
| 6  | STD-8    | WASHER, 1/4 plain                  | 12 | 12 |
| 7  | STD-160  | WASHER, 1/4 lock, internal teeth   | 12 | 12 |
| 8  | STD-1215 | BOLT, 1/4-20 x 1-1/4 long, hex hd. | 12 | 12 |
| 9  | 72711    | RING, Seal, intake pipes           | 6  | 6  |
| 10 | LW-12191 | PIPE, Intake - cylinder no. 1      | 1  | 1  |
| 11 | LW-12192 | PIPE, Intake - cylinder no. 2      | 1  | 1  |
| 12 | LW-12193 | PIPE, Intake - cylinder no. 3      | 1  | 1  |
| 13 | LW-12194 | PIPE, Intake - cylinder no. 4 & 5  | 2  | 2  |
| 14 | LW-12195 | PIPE, Intake - cylinder no. 6      | 1  | 1  |
| 16 | 72210    | GASKET, Air throttle housing       | 1  | 1  |
| 17 | 73031    | HOUSING ASSY., Air inlet           |    | 1  |
| 20 | LW-15730 | HOUSING ASSY., Air inlet           | 1  |    |
| 21 | 31C-14   | STUD, 5/16-18 x 1-3/4 long         | 4  | 4  |
| 22 | 1102     | PLUG, 1/8 pipe, Allen head         | 1  |    |
| 23 | STD-8    | WASHER, 1/4 plain                  |    | 6  |
| 24 | STD-1875 | BOLT, 1/4-20 x 13/16 long, hex hd. | 6  | 6  |

Page 6-7  
Fuel Injectors, Fuel Manifolds and Injector Nozzles

|    |           |                                              |   |   |
|----|-----------|----------------------------------------------|---|---|
| 2  | 73032     | GASKET, Air inlet housing                    | 1 | 1 |
| 4  | 79034     | FUEL INJECTOR, (2524422-7)                   |   | 1 |
|    | LW-16954  | FUEL INJECTOR, (2524846-1)                   | 1 |   |
| 5  | STD-35    | WASHER, 5/16                                 |   | 3 |
| 6  | STD-1727  | WASHER, Plain, 3/4 OD x 21/64 ID x 1/8 thick |   | 1 |
|    | STD-1727  | WASHER, 1/8 thick                            | 4 |   |
| 7  | STD-475   | WASHER, 5/16 internal lock                   |   | 4 |
| 8  | STD-1410  | NUT, 5/16-18 plain                           | 4 | 4 |
| 9  | STD-1763  | LOCKNUT, 5/16 palnut                         | 4 |   |
| 12 | LW-10476  | NOZZLE ASSY., Manifold air bleed (2524369-1) |   | 6 |
|    | LW-10475  | NOZZLE ASSY., Manifold air bleed (2524370-1) | 6 |   |
| 13 | MS29512-6 | SEAL, Oil, 5/64 dia. section x 15/32 ID      |   | 1 |
| 14 | AN919-6   | REDUCER, Flared tube (1/4 tubing)            |   | 1 |
|    | AN924-6   | NUT, Flared tube, bulkhead fitting           |   | 1 |



IO-540-AA1A5 & -M1B5D

SECTION 6 (Cont.)

Page 6-7 (Cont.)

Fuel Injectors, Fuel Manifolds and Injector Nozzles

| Ref. No. | Part No. | Description                         | Qty. Per Assy. |        |
|----------|----------|-------------------------------------|----------------|--------|
|          |          |                                     | -AA1A5         | -M1B5D |
|          | 76779    | ADAPTER, Injector - fuel outlet     |                | 1      |
| 15       | 76364    | ELBOW & BUSHING ASSY., 45°          |                | 1      |
|          | AN929-3  | CAP ASSY., 3/16 flared tube fitting |                | 1      |

Page 6-8

Fuel Injectors, Fuel Manifolds and Injector Nozzles

|    |               |                                              |    |    |
|----|---------------|----------------------------------------------|----|----|
| 15 | 79007         | MANIFOLD ASSY., Fuel                         | 1  |    |
| 16 | MS20823-4     | ELBOW, 1/4 tube, 1/8 NPT 45°                 | 1  |    |
| 17 | AN780-2       | NIPPLE, Union, 1/8 NPT                       | 6  |    |
| 18 | 75447         | NIPPLE, 3/16 tube to 1/8 NPT, restricted     | 1  |    |
| 24 | 73966         | SPACER, Fuel manifold bracket                | 2  |    |
| 25 | 73965         | BRACKET, Fuel manifold                       | 2  |    |
| 26 | STD-251       | WASHER, No. 10 lock, internal teeth          | 4  |    |
| 27 | STD-82        | SCREW, No. 10-24 x 1/2 long, fill hd. dr.    | 4  |    |
| 28 | 75414         | BRACKET, Fuel manifold                       |    | 2  |
| 29 | STD-160       | WASHER, 1/4 lock, internal teeth             |    | 2  |
| 30 | STD-1411      | NUT, 1/4-20 plain                            |    | 2  |
|    | 76778         | MANIFOLD ASSY., Fuel, right                  |    | 1  |
|    | AN780-2       | NIPPLE, Union, 1/8 tube                      |    | 4  |
|    | MS20822-4     | ELBOW, 1/4 flared tube, 1/8 NPT 90°          |    | 2  |
|    | STD-2166      | ELBOW, Union                                 |    | 2  |
|    | 76777         | MANIFOLD ASSY., Fuel, left                   |    | 1  |
|    | LW-25-0.75    | BOLT, 1/4-20 x 3/4 long, hex hd.             |    | 2  |
|    | STD-8         | WASHER, 1/4 plain                            |    | 2  |
|    | STD-160       | WASHER, 1/4 lock, internal teeth             |    | 2  |
|    | STD-1411      | NUT, 1/4-20 plain                            |    | 2  |
|    | LW-18028      | MANIFOLD, Right, injector nozzle vent        | 1  |    |
|    | LW-16599      | MANIFOLD, Left, injector nozzle vent         | 1  |    |
|    | 74493         | HOSE, 3/16 ID x 7/16 OD x 2-1/2 long         | 6  |    |
|    | LW-15592-5-04 | CLAMP, 7/16 ID x 5/16 wide                   | 12 |    |
|    | 74655         | SPACER, 9/32 ID x 1/2 OD x 3/8 long          | 5  |    |
|    | MS9025-5      | CLIP, 3/8 ID x 1/4 screw                     | 5  |    |
|    | STD-160       | WASHER, 1/4 internal lock                    | 5  |    |
|    | STD-1688      | BOLT, 1/4-20 x 1.00 long, hex hd.            | 5  |    |
|    | STD-1339      | PLUG, 1/16-27 NPT Allen                      | 2  | 2  |
|    | AN821-6C      | ELBOW, 3/8 flared tube coupling 90° manifold |    | 2  |
|    | 75340         | MANIFOLD, Right, outer, injector nozzle vent |    | 1  |
|    | 75332         | MANIFOLD, Left, outer, injector nozzle vent  |    | 1  |
|    | 76772         | HOSE, 3/16 ID x 7/16 OD x 1-7/8 long         |    | 6  |
|    | LW-15592-5-04 | CLAMP, 7/16 ID x 5/16 wide                   |    | 12 |
|    | 74832         | BRACKET, Nozzle vent, manifold               |    | 4  |

IO-540-AA1A5 & -M1B5D

SECTION 6 (Cont.)

Page 6-8 (Cont.)

Fuel Injectors, Fuel Manifolds and Injection Nozzles

| Ref.<br>No. | Part No. | Description                          | Qty. Per Assy. |        |
|-------------|----------|--------------------------------------|----------------|--------|
|             |          |                                      | -AA1A5         | -M1B5D |
|             | STD-860  | SCREW, No. 10-32 x 5/8 long, rd. hd. |                | 4      |
|             | STD-670  | NUT, No. 10-32 self-locking          |                | 4      |

Page 6-9

Fuel Lines, Fuel Hoses and Attaching Parts

|   |                |                                                        |    |   |
|---|----------------|--------------------------------------------------------|----|---|
| 1 | LW-12098-0-200 | TUBE ASSY., Fuel manifold to nozzle, cyls. no. 1-2-5-6 | 4  |   |
|   | LW-12098-0-170 | TUBE ASSY., Fuel manifold to nozzle, cyls. no. 3-4     | 2  |   |
|   | LW-12098-1-170 | TUBE ASSY., Fuel manifold to nozzle, cyls. no. 2-5     |    | 2 |
|   | LW-12098-0-100 | TUBE ASSY., Fuel manifold to nozzle, cyls. no. 1-3-4-6 |    | 4 |
|   | LW-16266-10-75 | CLAMP                                                  | 10 |   |
|   | LW-16266-25-63 | CLAMP                                                  |    | 2 |
|   | STD-8          | WASHER, 1/4 plain                                      |    | 2 |
|   | STD-160        | WASHER, Lock, internal teeth                           |    | 2 |
|   | STD-1411       | NUT, 1/4-20 plain                                      |    | 2 |
|   | LW-16266-10-13 | CLAMP                                                  | 12 |   |
| 4 | STD-860        | SCREW, No. 10-32 x 5/8 long, fill. hd.                 | 15 | 2 |
| 5 | STD-425        | WASHER, No. 10 plain                                   | 3  |   |
| 6 | STD-670        | NUT, No. 10-32 self-locking                            | 15 | 2 |
| 7 | 73136          | BRACKET, 90°                                           | 4  | 1 |
| 8 | 73152          | BRACKET, Support clamp                                 | 1  | 1 |
|   | LW-16266-25-63 | CLAMP                                                  | 2  |   |
|   | LW-16266-10-25 | CLAMP                                                  |    | 2 |

Page 6-10

Fuel Lines, Fuel Hoses and Attaching Parts

|    |                |                                             |   |   |
|----|----------------|---------------------------------------------|---|---|
| 3  | 72377          | ELBOW, 3/8 flared tube, adj. 90°            |   | 2 |
|    | LW-12879-6S120 | HOSE, Fuel pump to injector                 |   | 1 |
| 12 | LW-12876-4S344 | HOSE ASSY., Fuel injector to fuel manifold  | 1 |   |
| 15 | LW-12877-65051 | HOSE ASSY., Fuel pump to injector           | 1 |   |
|    | MS20822-6      | ELBOW, 3/8 flared tube, 1/4 NPT - 90°       | 1 |   |
|    | LW-12878-4S176 | HOSE, Fuel injector to fuel manifold, right |   | 1 |
|    | LW-12798-4S242 | HOSE, Fuel injector to fuel manifold, left  |   | 1 |

New Page

Exhaust Pipe Assembly

|  |          |                                |  |    |
|--|----------|--------------------------------|--|----|
|  | LW-15619 | GASKET, Exhaust flange         |  | 12 |
|  | LW-14197 | MANIFOLD ASSY., Exhaust, right |  | 1  |
|  | LW-10159 | PIPE, Exhaust, cyl. no. 1      |  | 1  |
|  | LW-10160 | PIPE, Exhaust, cyl. no. 3      |  | 1  |

IO-540-AA1A5 & -M1B5D

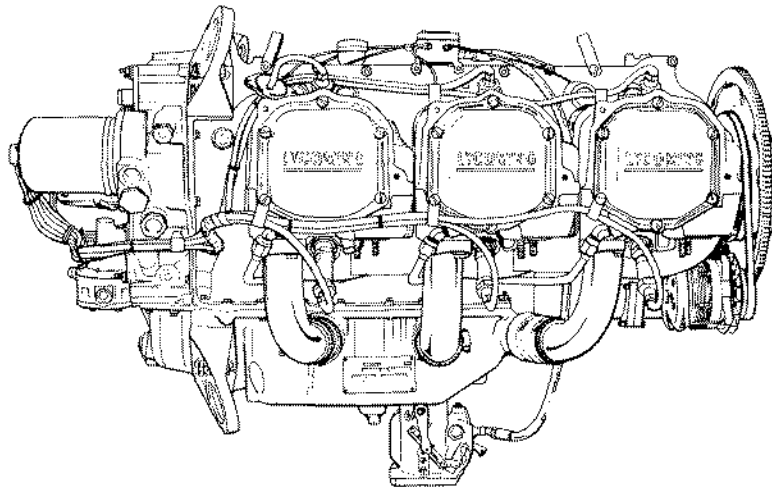
SECTION 6 (Cont.)

New Page (Cont.)  
Exhaust Pipe Assembly

| Ref.<br>No. | Part No. | Description                       | Qty. Per Assy. |        |
|-------------|----------|-----------------------------------|----------------|--------|
|             |          |                                   | -AA1A5         | -M1B5D |
|             | LW-10161 | PIPE, Exhaust, cyl. no. 5         | 1              |        |
|             | LW-14198 | MANIFOLD ASSY., Exhaust, left     | 1              |        |
|             | LW-10164 | PIPE, Exhaust, cyl. no. 2         | 1              |        |
|             | LW-10163 | PIPE, Exhaust cyl. no. 4          | 1              |        |
|             | LW-10162 | PIPE, Exhaust, cyl. no. 6         | 1              |        |
|             | STD-475  | WASHER, 5/16 lock, internal teeth | 18             |        |
|             | STD-1410 | NUT, 5/16-18 plain                | 18             |        |

# LYCOMING PARTS CATALOG

IO-540-(W.C.F.) MODELS  
AIRCRAFT ENGINES



PC-615

OCTOBER, 1979

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**TEXTRON** Lycoming

Reciprocating Engine Division/  
Subsidiary of Textron Inc.

652 Oliver Street  
Williamsport, PA 17701 U.S.A.

## INTRODUCTION

This illustrated parts catalog contains a complete parts listing for the Lycoming IO-540-C4B5, -D4A5, -G1D5, -K1A5, -K1A5D, -K1B5, -K1D5, -K1E5, -K1F5, -K1F5D, -K1J5, -K1J5D, -S1A5, -T4A5D and -T4B5D 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 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 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 Lycoming distributors or from the the factory by subscription. Consult the latest edition of Service Letter No. L114 for subscription information.

# IO-540 SERIES

## TABLE OF CONTENTS

| SECTION                                                               | PAGE |
|-----------------------------------------------------------------------|------|
| Introduction . . . . .                                                | i    |
| Table of Contents . . . . .                                           | ii   |
| Oversize and Undersize Parts . . . . .                                | iii  |
| <b>1 - CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP</b>                   |      |
| Crankcase Assembly . . . . .                                          | 1-1  |
| Oil Level Gages and Engine Mounting Brackets . . . . .                | 1-3  |
| Crankcase Related Parts . . . . .                                     | 1-5  |
| Propeller Governor Drive Assembly . . . . .                           | 1-6  |
| Crankshaft, Camshaft and Related Parts . . . . .                      | 1-7  |
| Crankshaft, Idler and Tachometer Drive . . . . .                      | 1-9  |
| Crankcase Attaching Parts . . . . .                                   | 1-10 |
| <b>2 - ACCESSORY HOUSING AND RELATED PARTS</b>                        |      |
| Accessory Housing Assembly . . . . .                                  | 2-1  |
| Oil Pump Assembly and Accessory Housing Attaching Parts . . . . .     | 2-3  |
| Oil Filter Assembly and Oil Cooler Bypass Valve . . . . .             | 2-5  |
| Vacuum Pump Drive Oil Cooler Fitting and Breather Fittings . . . . .  | 2-7  |
| Hydraulic Pump Drive and Covers . . . . .                             | 2-9  |
| Fuel Pump and Fuel Pump Drives . . . . .                              | 2-11 |
| <b>3 - CYLINDER, PISTON AND VALVE TRAIN</b>                           |      |
| Connecting Rod, Piston and Ring Assemblies . . . . .                  | 3-1  |
| Cylinder Assembly . . . . .                                           | 3-3  |
| Valve Assembly . . . . .                                              | 3-5  |
| Cylinder Related Parts . . . . .                                      | 3-7  |
| Cylinder Head Drain Tubes and Intercylinder Cooling Baffles . . . . . | 3-9  |
| <b>4 - IGNITION SYSTEM</b>                                            |      |
| Magneto Drives and Magnetos . . . . .                                 | 4-1  |
| Magneto Drives and Magnetos . . . . .                                 | 4-3  |
| Ignition Harness and Spark Plugs . . . . .                            | 4-5  |
| <b>5 - ELECTRICAL SYSTEM</b>                                          |      |
| Alternator Mounting Brackets . . . . .                                | 5-1  |
| Alternators, Regulators and Drive Belts . . . . .                     | 5-3  |
| Starting Motor and Magnetic Switch . . . . .                          | 5-4  |
| <b>6 - OIL SUMP AND INDUCTION SYSTEM</b>                              |      |
| Oil Sump Assembly . . . . .                                           | 6-1  |
| Oil Sump Assembly . . . . .                                           | 6-3  |
| Oil Sump Assembly . . . . .                                           | 6-4  |
| Intake Pipes and Air Inlet Housing . . . . .                          | 6-5  |
| Fuel Injectors, Fuel Manifolds and Injection Nozzles . . . . .        | 6-7  |
| Fuel Injectors, Fuel Manifolds and Injection Nozzles . . . . .        | 6-8  |
| Fuel Lines, Fuel Hoses and Attaching Parts . . . . .                  | 6-9  |
| Fuel Lines, Fuel Hoses and Attaching Parts . . . . .                  | 6-10 |
| <b>7 - SERVICE KIT SECTION</b> . . . . .                              | 7-1  |
| <b>8 - SUPERSEDURES SECTION</b> . . . . .                             | 8-1  |
| <b>9 - NUMERICAL INDEX</b> . . . . .                                  | 9-1  |

## OVERSIZE AND UNDERSIZE PARTS LIST

### IO-540 Wide Cylinder Flange Series

| PART NO. | DESCRIPTION                                          | OVERSIZE                                   |      |        |      |     |     |     |     | UNDERSIZE |     |     |
|----------|------------------------------------------------------|--------------------------------------------|------|--------|------|-----|-----|-----|-----|-----------|-----|-----|
|          |                                                      | P05                                        | P075 | P10    | P125 | P15 | P20 | P30 | P40 | M03       | M06 | M10 |
| 76943    | GUIDE, Valve intake                                  | X                                          |      | X      |      |     | X   | X   | X   |           |     |     |
| LW-11956 | GUIDE, Valve intake                                  |                                            |      |        |      |     |     | X   | X   |           |     |     |
| 77160    | GUIDE, Valve exhaust                                 | X                                          |      | X      |      |     | X   | X   | X   |           |     |     |
| LW-11957 | GUIDE, Valve exhaust                                 | X                                          |      | X      |      |     | X   | X   | X   |           |     |     |
| LW-11958 | GUIDE, Valve exhaust                                 | X                                          |      | X      |      |     | X   | X   | X   |           |     |     |
| 66610    | BUSHING, Rocker shaft                                | X                                          |      | X      |      |     |     |     |     |           |     |     |
| 66670    | BUSHING, Rocker shaft inner                          | X                                          |      | X      |      |     |     |     |     |           |     |     |
| 66260    | INSERT, Spark plug<br>INSERT Spark plug (long reach) |                                            |      | X<br>X |      |     |     |     |     |           |     |     |
| 69796    | DOWEL, Crankshaft bearing                            | X                                          |      |        |      |     |     |     |     |           |     |     |
| LW-10647 | DOWEL, Crankshaft bearing                            | X                                          |      | X      |      |     |     |     |     |           |     |     |
| 71903-B  | BUSHING, Counterweight                               | SEE SERVICE INSTRUCTION NO. 1143 FOR SIZE. |      |        |      |     |     |     |     |           |     |     |
| 72057    | SEAT, Intake, valve                                  |                                            |      | X      |      |     | X   | X   |     |           |     |     |
| LW-12688 | SEAT, Intake, valve                                  |                                            |      | X      |      |     | X   | X   |     |           |     |     |
| 72058    | SEAT, Exhaust, valve                                 |                                            |      | X      |      |     | X   | X   |     |           |     |     |
| 71894    | SEAT, Exhaust, valve                                 |                                            |      | X      |      |     | X   | X   |     |           |     |     |
| 75656    | BUSHING, Propeller flange - long                     | X                                          |      | X      |      | X   | X   |     |     |           |     |     |
| 72155    | BUSHING, Propeller flange - short                    | X                                          |      | X      |      | X   | X   |     |     |           |     |     |
| 75657    | BUSHING, Propeller flange - indexing                 | X                                          |      | X      |      |     | X   |     |     |           |     |     |
| 73810    | BUSHING, Crankshaft dynamic counterweight            | X                                          | X    | X      | X    | X   |     |     |     |           |     |     |
| LW-13511 | BEARING, Connecting rod                              |                                            |      | X      |      |     |     |     |     | X         | X   | X   |
| LW-13884 | BEARING, Crankshaft, front                           |                                            |      |        |      |     |     |     |     | X         | X   | X   |
| LW-13885 | BEARING, Crankshaft, front                           |                                            |      |        |      |     |     |     |     | X         | X   | X   |
| LW-11575 | BEARING, Crankshaft                                  |                                            |      |        |      |     |     |     |     | X         | X   | X   |
| LW-11021 | BEARING, Crankshaft                                  |                                            |      |        |      |     |     |     |     | X         | X   | X   |

Stud available in P03, P07 and P12.

#### NOTE

*When ordering oversize or undersize parts, be sure to specify the required oversize or undersize dimension along with the proper part number. For example: to order bearing LW-13511 in .003 undersize, order part number LW-13511-M3. Oversize code is "P" while undersize code letter is "M". These letters are then followed by the numbers designating the size in thousandths of an inch.*





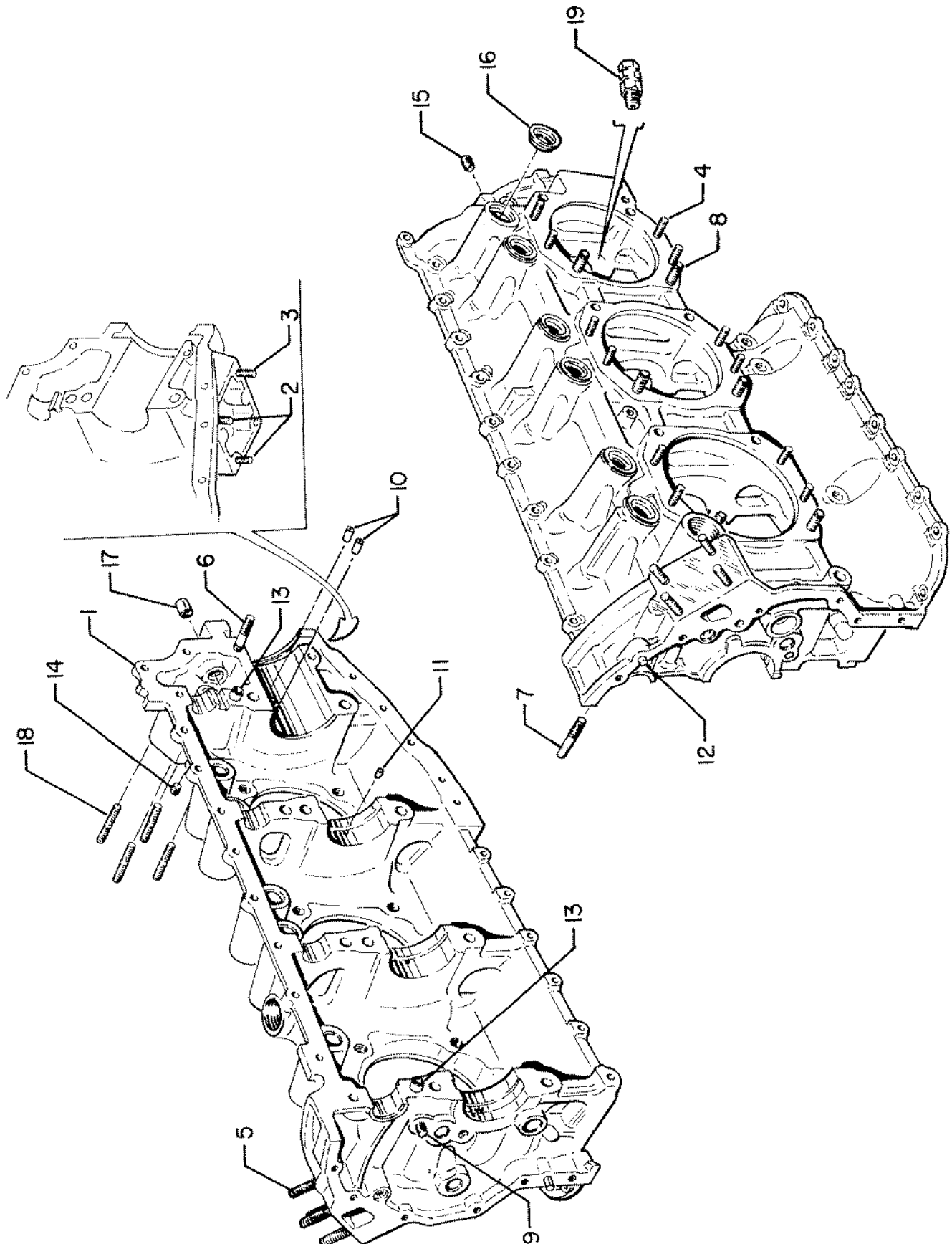


Figure 1 - Crankcase Assembly



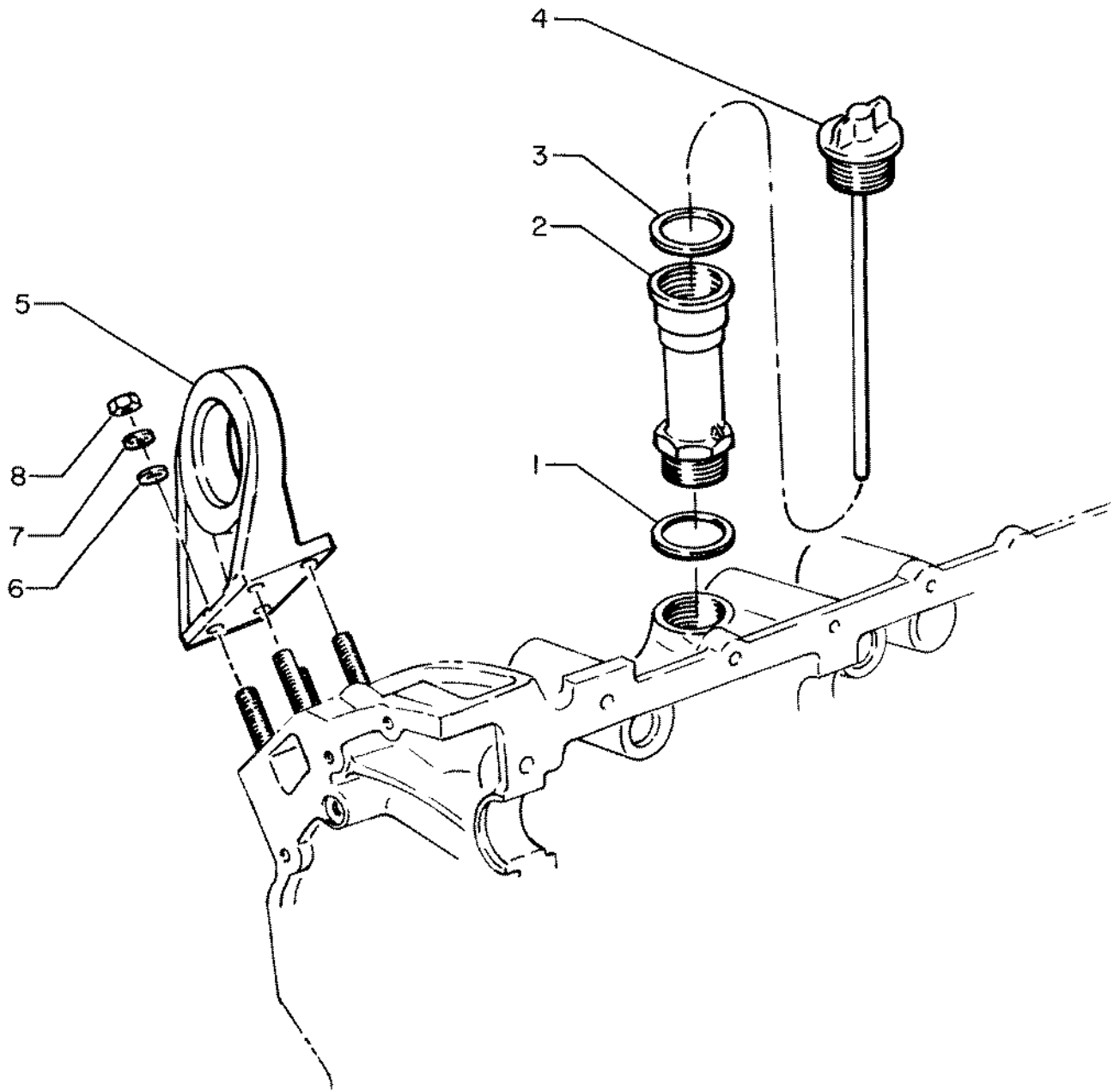


Figure 2 - Oil Level Gages and Engine Mounting Brackets







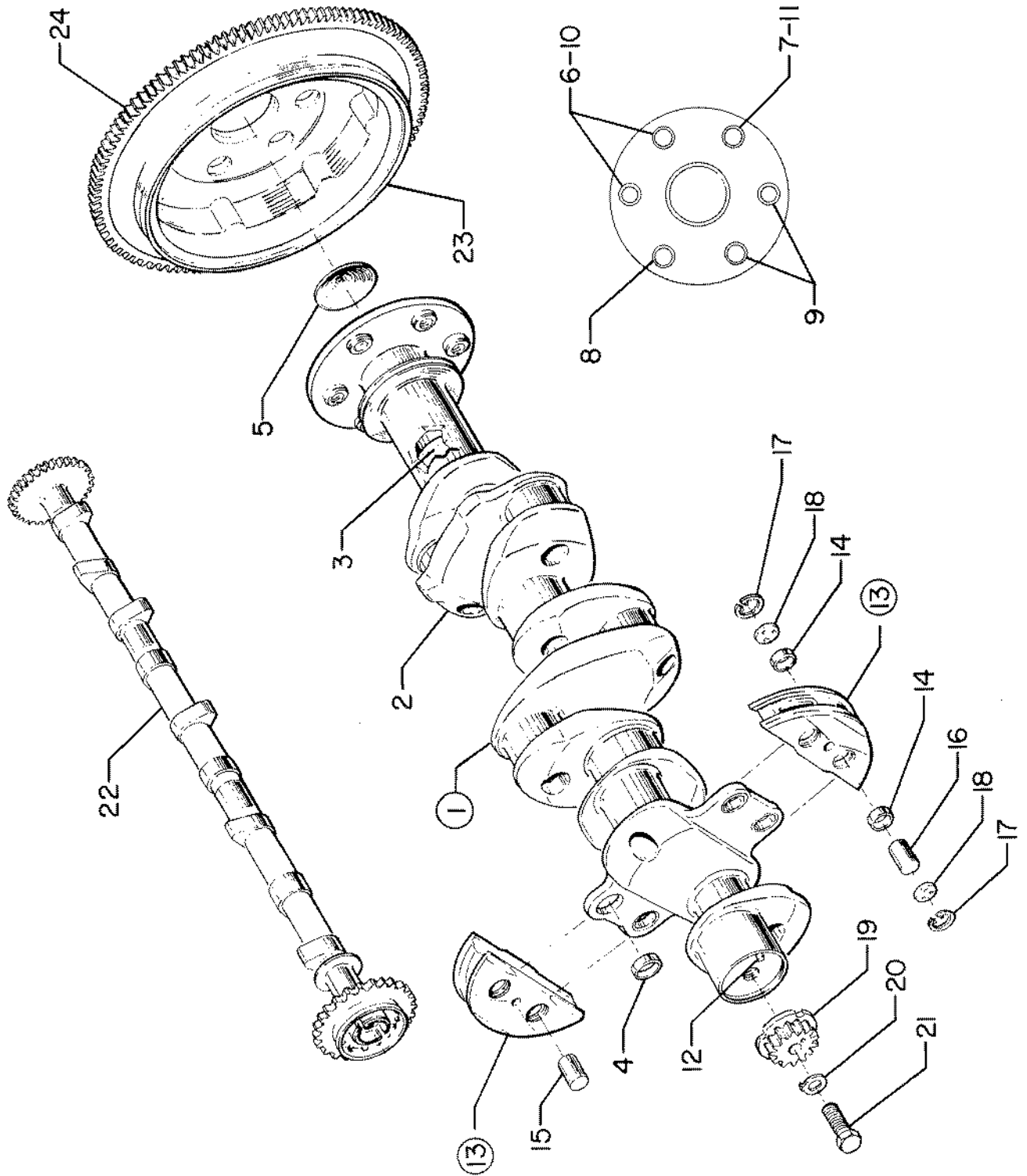


Figure 5 - Crankshaft, Camshaft and Related Parts

# LYCOMING IO-540 SERIES PARTS CATALOG

WIDE CYLINDER FLANGE CRANKCASE MODEL ENGINES

## CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

### CRANKSHAFT IDLER GEARS AND TACHOMETER DRIVE

| FIG. REF. | PART NUMBER  | DESCRIPTION                             | ON ALL | QUANTITY PER ASSEMBLY |      |      |      |       |      |      |      |      |       |      |       |      |       |      |       |       |       |
|-----------|--------------|-----------------------------------------|--------|-----------------------|------|------|------|-------|------|------|------|------|-------|------|-------|------|-------|------|-------|-------|-------|
|           |              |                                         |        | CAB5                  | DAB5 | GID5 | KIAB | KIABD | KIB5 | KID5 | KIE5 | KIF5 | KIF5D | KIG5 | KIG5D | KIIS | KIISD | SIAS | SIASD | TAB5D | TAB5D |
| 1         | 71652        | GEAR ASSY., Crankshaft idler (pump cam) |        |                       |      | 1    | 1    |       |      |      |      |      |       | 1    | 1     |      |       |      |       |       |       |
| 2         | 71668        | GEAR ASSY., Crankshaft idler plain      |        |                       |      | 1    | 1    | 2     | 2    | 2    | 2    | 2    | 2     | 1    | 1     | 2    |       |      |       |       |       |
| 3         | 67530        | BUSHING, Crankshaft idler gear          |        |                       |      | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2     | 2    | 2     | 2    |       |      |       |       |       |
| 4         | LW-10290     | GEAR ASSY., Crankshaft idler (pump cam) |        |                       |      |      |      |       |      |      |      |      |       | 1    | 1     | 1    | 1     |      |       |       |       |
|           | LW-10292     | GEAR ASSY., Crankshaft idler plain      |        |                       |      |      |      |       | 1    |      |      |      | 1     |      |       |      |       |      |       |       |       |
| 5         | LW-10297     | GEAR ASSY., Crankshaft idler (heavy)    |        |                       |      |      |      |       | 1    |      |      |      | 1     | 1    | 1     | 1    | 1     |      |       |       |       |
| 6         | LW-10324     | GEAR ASSY., Fuel pump idler             |        |                       |      |      |      |       | 1    |      |      |      | 1     |      |       |      |       |      |       |       |       |
| 7         | LW-13795     | SHAFT, Crankshaft idler gear            |        |                       |      | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2     | 2    | 2     | 2    |       |      |       |       |       |
| 8         | STD-2167     | SCREW, 5/16-18 x 7/8 long, dr. hd.      |        |                       |      | 3    | 3    | 3     | 3    | 3    | 3    | 3    | 3     | 3    | 3     |      |       |      |       |       |       |
| 9         | STD-2168     | NUT, 5/16-18 NC-3 Slotted shear         |        |                       |      | 1    | 1    | 1     | 1    | 1    | 1    | 1    | 1     | 1    | 1     | 1    |       |      |       |       |       |
| 10        | 76155        | SHAFT ASSY., Tachometer                 | 1      |                       |      |      |      |       |      |      |      |      |       |      |       |      |       |      |       |       |       |
| 11        | 78368        | PIN, 3/16 x 2-5/16 long                 | 1      |                       |      |      |      |       |      |      |      |      |       |      |       |      |       |      |       |       |       |
| 12        | 76118        | SPACER, Tachometer shaft centering      | 1      |                       |      |      |      |       |      |      |      |      |       |      |       |      |       |      |       |       |       |
| 13        | MS16625-1081 | RING, Internal retaining                | 1      |                       |      |      |      |       |      |      |      |      |       |      |       |      |       |      |       |       |       |
| 14        | 61544        | PLUNGER, Fuel pump long                 |        |                       |      | 1    | 1    |       |      |      |      |      |       | 1    | 1     | 1    | 1     | 1    | 1     | 1     | 1     |

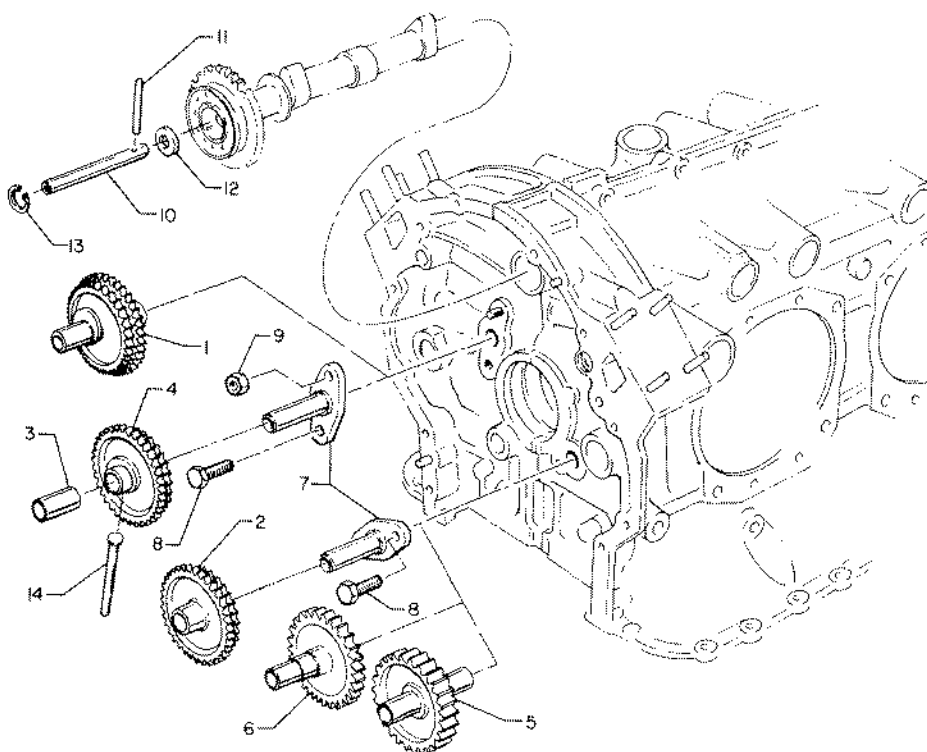


Figure 6.







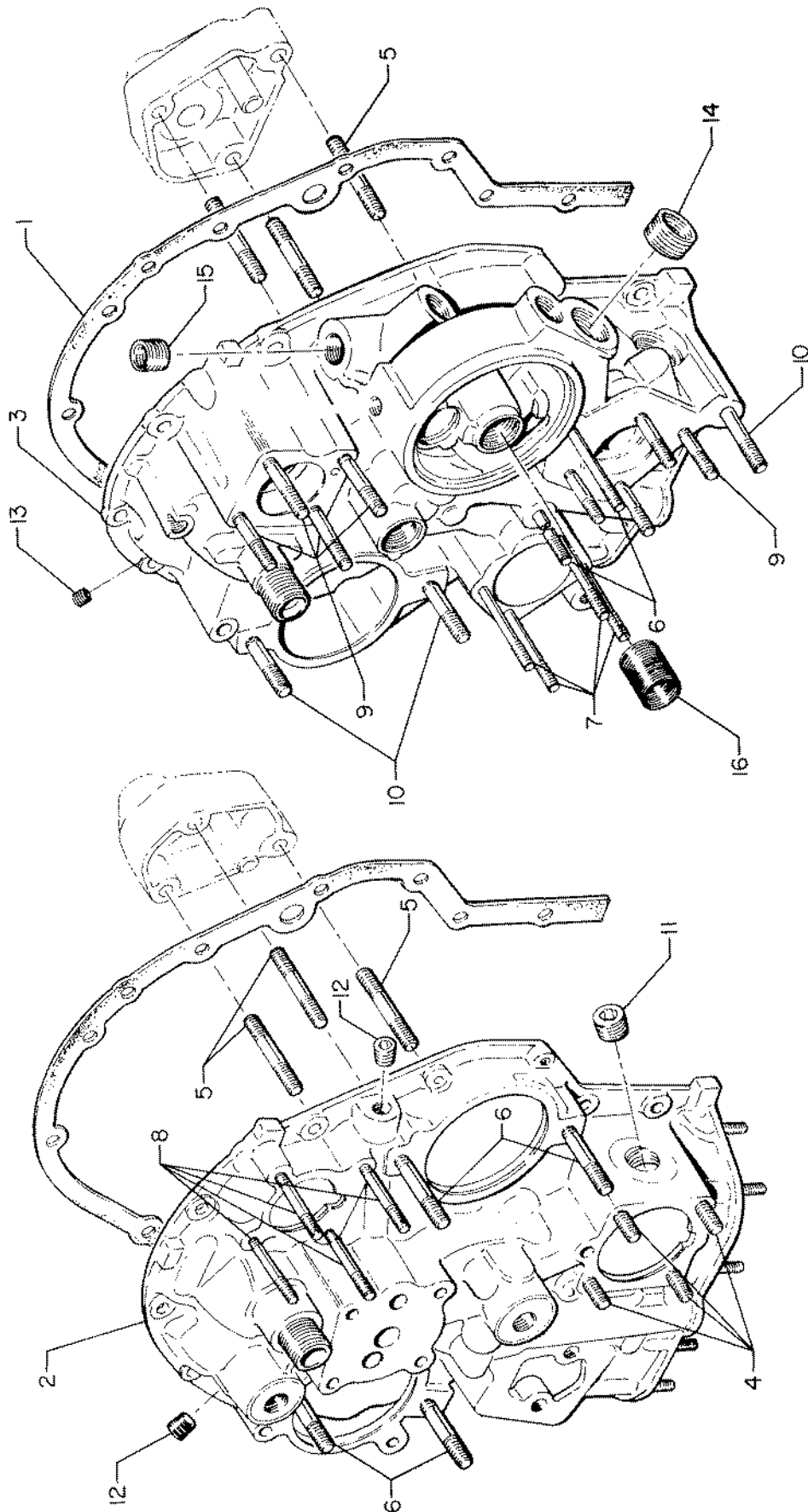


Figure 8 - Accessory Housing Assembly

ACCESSORY HOUSING AND RELATED PARTS

OIL PUMP ASSEMBLY AND ACCESSORY HOUSING ATTACHING PARTS

| FIG. REF. | PART NUMBER | DESCRIPTION                     | ON ALL | QUANTITY PER ASSEMBLY |      |      |      |      |      |      |      |       |      |      |       |      |       |      |      |
|-----------|-------------|---------------------------------|--------|-----------------------|------|------|------|------|------|------|------|-------|------|------|-------|------|-------|------|------|
|           |             |                                 |        | CA85                  | DA85 | GI05 | KA15 | KA5D | KI85 | KI05 | KI15 | KI15D | KI3D | KI65 | KI65D | KI75 | KI75D | SI15 | TA5D |
| 1         | 78528       | BODY ASSY., Oil Pump            |        |                       | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1     | 1    | 1    | 1     |      |       |      |      |
| 2         | STD-1339    | PLUG, 1/16-27 NPT               |        |                       | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1     | 1    | 1    | 1     |      |       |      |      |
| 3         | LW-13775    | IMPELLER ASSY., Oil pump driven |        |                       | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1     | 1    | 1    | 1     |      |       |      |      |
| 4         | 60746       | IMPELLER, Oil pump drive        |        |                       | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1     | 1    | 1    | 1     |      |       |      |      |
| 5         | 74641       | SHAFT, Oil pump drive           |        |                       | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1     | 1    | 1    | 1     |      |       |      |      |
| 6         | 75287       | BODY ASSY., Oil pump            |        |                       |      |      |      |      |      |      | 1    |       |      |      |       |      |       | 1    |      |
| 7         | STD-1339    | PLUG, 1/16-27 NPT               |        |                       |      |      |      |      |      |      | 1    |       |      |      |       |      |       | 1    |      |
| 8         | 61297       | IMPELLER, Oil pump driving      |        |                       |      |      |      |      |      |      | 1    |       |      |      |       |      |       | 1    |      |
| 9         | 61298       | IMPELLER, Oil pump driven       |        |                       |      |      |      |      |      |      | 1    |       |      |      |       |      |       | 1    |      |
| 10        | 76784       | SHAFT, Oil pump drive           |        |                       |      |      |      |      |      |      | 1    |       |      |      |       |      |       | 1    |      |
| 11        | LW-10344    | BODY ASSY., Oil pump            |        |                       |      |      |      | 1    |      |      |      | 1     | 1    | 1    | 1     | 1    | 1     | 1    |      |
| 12        | 61297       | IMPELLER, Oil pump driving      |        |                       |      |      |      | 1    |      |      |      | 1     | 1    | 1    | 1     | 1    | 1     | 1    |      |
| 13        | 61298       | IMPELLER, Oil pump driven       |        |                       |      |      |      | 1    |      |      |      | 1     | 1    | 1    | 1     | 1    | 1     | 1    |      |
| 14        | LW-10318    | GEAR ASSY., Oil pump drive      |        |                       |      |      |      | 1    |      |      |      | 1     | 1    | 1    | 1     | 1    | 1     | 1    |      |
| 15        | STD-35      | WASHER, 5/16 plain              | 3      |                       |      |      |      |      |      |      |      |       |      |      |       |      |       |      |      |
| 16        | STD-1420    | NUT, 5/16-18 Slotted shear      | 3      |                       |      |      |      |      |      |      |      |       |      |      |       |      |       |      |      |
| 17        | LW-14260    | SEAL, Tachometer drive oil      | 1      |                       |      |      |      |      |      |      |      |       |      |      |       |      |       |      |      |
| 18        | STD-8       | WASHER, 1/4 plain               |        | 10                    | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10    | 10   | 10   | 10    | 10   | 10    | 10   |      |
| 19        | STD-160     | WASHER, 1/4 lock                |        | 12                    | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12    | 12   | 12   | 12    | 12   | 12    | 12   |      |
| 20        | STD-1204    | BOLT, 1/4-20 x 15/16 long       |        | 9                     | 9    | 9    | 9    | 9    | 9    | 9    | 9    | 9     | 9    | 9    | 9     | 9    | 9     | 9    |      |
| 21        | STD-1419    | BOLT, 1/4-20 x 1-1/8 long       |        | 1                     | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1     | 1    | 1    | 1     | 1    | 1     | 1    |      |
| 22        | STD-1931    | BOLT, 1/2-20 x 1-7/8 long       |        | 2                     | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2     | 2    | 2    | 2     | 2    | 2     | 2    |      |
| 23        | STD-1875    | BOLT, 1/4-20 x 13/16 long       |        |                       |      |      |      | 2    |      |      | 2    | 2     | 2    | 2    | 2     | 2    | 2     | 2    |      |
| 24        | STD-1215    | BOLT, 1/4-20 x 1-1/4 long       |        |                       |      |      |      | 1    |      |      | 1    | 1     | 1    | 1    | 1     | 1    | 1     | 1    |      |

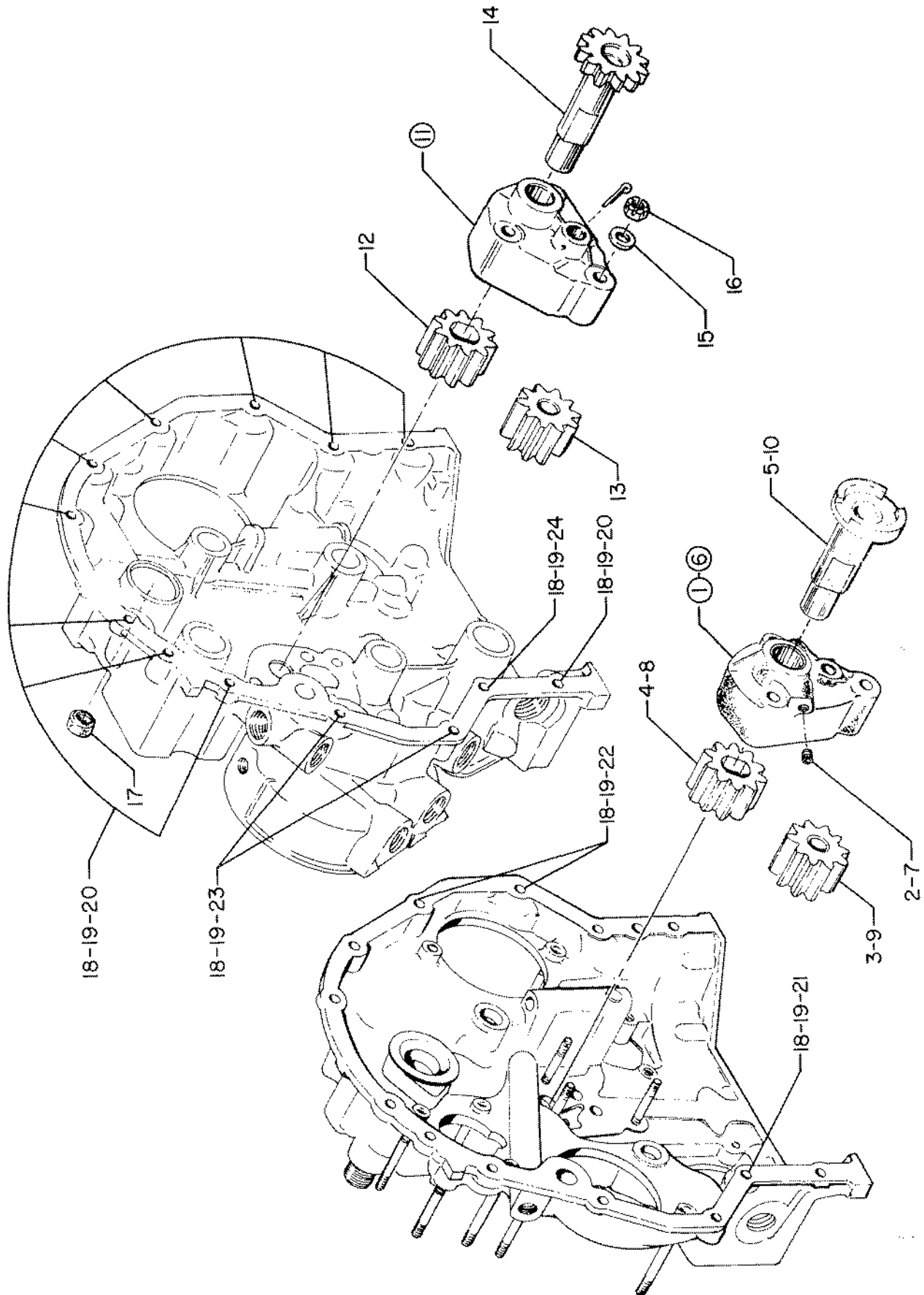


Figure 9 - Oil Pump Assembly and Accessory Housing Attaching Parts

ACCESSORY HOUSING AND RELATED PARTS

OIL FILTER ASSEMBLY AND OIL COOLER BYPASS VALVE

| FIG. REF. | PART NUMBER  | DESCRIPTION                                   | ON ALL | QUANTITY PER ASSEMBLY |      |      |      |       |      |      |      |      |       |      |       |      |       |      |       |
|-----------|--------------|-----------------------------------------------|--------|-----------------------|------|------|------|-------|------|------|------|------|-------|------|-------|------|-------|------|-------|
|           |              |                                               |        | CAB5                  | OAB5 | G105 | K1A5 | K1A5D | K1B5 | K1D5 | K1E5 | K1F5 | K1F5D | K1G5 | K1G5D | K1J5 | K1J5D | S1A5 | TAB5D |
| 1         | 61173        | GASKET, Oil pressure housing                  |        |                       | 1    | 1    | 1    |       |      | 1    |      |      |       |      |       |      |       |      |       |
| 2         | LW-12795     | GASKET, Oil filter adapter                    |        |                       | 1    |      | 1    |       |      | 1    | 1    | 1    | 1     | 1    | 1     | 1    |       |      |       |
| 3         | 62817        | SCREEN ASSY., Oil pressure                    |        |                       | 1    | 1    | 1    |       |      | 1    |      |      |       |      |       |      |       |      |       |
| 4         | 69510        | HOUSING, Thermostatic valve & pressure screen |        |                       | 1    | 1    | 1    |       |      | 1    |      |      |       |      |       |      |       |      |       |
| 5         | 77852        | OIL FILTER BASE ASSEMBLY                      |        |                       | 1    |      | 1    |       |      | 1    | 1    | 1    | 1     | 1    | 1     | 1    | 1     |      |       |
| 6         | 25C-10       | STUD, 1/4-20 x 1-1/4 long                     |        |                       | 1    |      | 1    |       |      | 1    | 1    | 1    | 1     | 1    | 1     | 1    | 1     |      |       |
| 7         | STD-8        | WASHER, 1/4 plain                             |        |                       | 4    | 4    | 4    |       |      | 4    | 4    | 4    | 4     | 4    | 4     | 4    | 4     |      |       |
| 8         | STD-160      | WASHER, 1/4 lock                              |        |                       | 1    |      | 1    |       |      | 1    | 1    | 1    | 1     | 1    | 1     | 1    | 1     |      |       |
| 9         | STD-1856     | SCREW, 1/4-20 x 1.00 long                     |        |                       | 3    | 4    | 4    | 3     |      | 4    | 3    | 3    | 3     | 3    | 3     | 3    | 3     |      |       |
| 10        | STD-1411     | NUT, 1/4-20 plain                             |        |                       | 1    |      | 1    |       |      | 1    | 1    | 1    | 1     | 1    | 1     | 1    | 1     |      |       |
| 11        | STD-294      | GASKET, 7/8 OD x 5/8 ID x 3/32 ann.           | 1      |                       |      |      |      |       |      |      |      |      |       |      |       |      |       |      |       |
| 12        | LW-10321     | SPRING, Oil filter bypass valve               |        |                       |      |      |      |       |      | 1    |      | 1    | 1     | 1    | 1     | 1    | 1     | 1    | 1     |
| 13        | 76539        | SEAT, Oil relief valve                        |        |                       |      |      |      |       |      | 1    |      | 1    | 1     | 1    | 1     | 1    | 1     | 1    | 1     |
| 14        | LW-10320     | SLEEVE, Oil filter bypass valve               |        |                       |      |      |      |       |      | 1    |      | 1    | 1     | 1    | 1     | 1    | 1     | 1    | 1     |
| 15        | MS16625-1100 | RING, Internal retaining                      |        |                       |      |      |      |       |      | 1    |      | 1    | 1     | 1    | 1     | 1    | 1     | 1    | 1     |
| 16        | 77853        | OIL FILTER HOUSING ASSEMBLY                   |        |                       | 1    |      | 1    |       |      | 1    | 1    | 1    | 1     | 1    | 1     | 1    | 1     |      |       |
|           | LW-13215     | OIL FILTER, Short spin-on                     |        |                       | 1    |      | 1    |       |      | 1    | 1    | 1    | 1     | 1    | 1     | 1    | 1     |      |       |
|           | LW-10660     | OIL FILTER ASSEMBLY                           |        |                       |      |      |      |       |      | 1    |      | 1    | 1     | 1    | 1     | 1    | 1     | 1    | 1     |
|           | LW-13906     | OIL FILTER, Short spin-on                     |        |                       |      |      |      |       |      | 1    |      | 1    | 1     | 1    | 1     | 1    | 1     | 1    | 1     |
| 17        | LW-13904     | KIT, Converter plate - oil filter             |        |                       |      |      |      |       |      | 1    |      | 1    | 1     | 1    | 1     | 1    | 1     | 1    | 1     |
| 18        | 75944        | VALVE ASSY., Temp. control oil cooler bypass  | 1      |                       |      |      |      |       |      |      |      |      |       |      |       |      |       |      |       |
| 19        | MS28775-147  | SEAL "O" RING, 2-43/64 ID x 7/64 sect.        |        |                       |      |      |      |       |      |      |      |      |       |      |       |      |       |      |       |
| 20        | LW-11476     | ADAPTER, Remote oil filter                    |        |                       |      |      |      |       |      |      |      |      |       |      |       |      |       |      |       |
| 21        | AN901-8C     | WASHER, 3/4 ID x 1.00 OD x 1/16 thick         |        |                       |      |      |      |       |      |      |      |      |       |      |       |      |       |      |       |
| 22        | LW-11477     | BOLT, Remote oil filter adapter               |        |                       |      |      |      |       |      |      |      |      |       |      |       |      |       |      |       |
| 23        | LW-11483     | ADAPTER ASSY., Oil filter remote mounted      |        |                       |      |      |      |       |      |      |      |      |       |      |       |      |       |      |       |
| 24        | STD-1849     | INSERT, 3/4-16 x 3/4 long                     |        |                       |      |      |      |       |      |      |      |      |       |      |       |      |       |      |       |

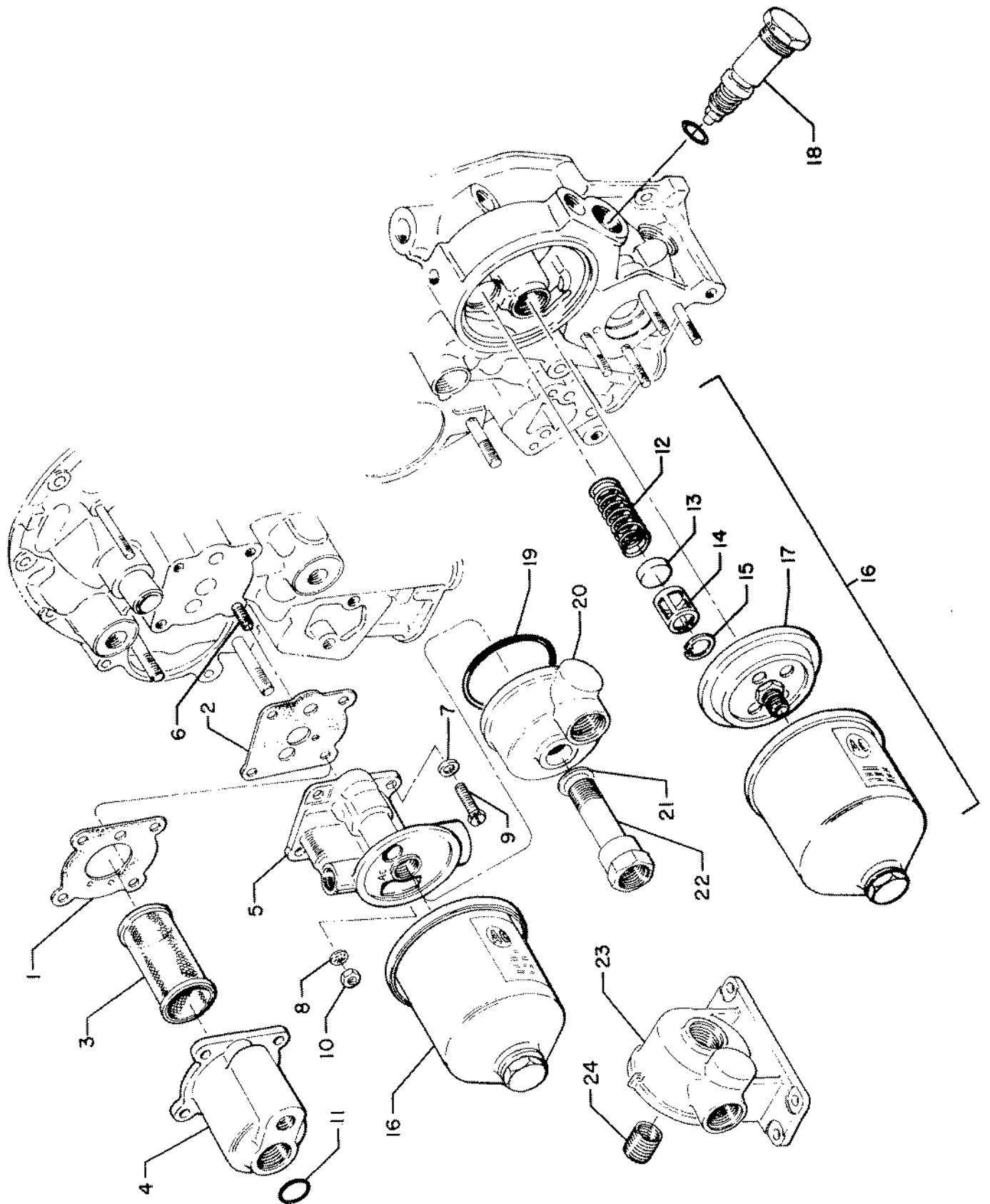


Figure 10 - Oil Filter Assembly and Oil Cooler Bypass Valve

ACCESSORY HOUSING AND RELATED PARTS

VACUUM PUMP DRIVE OIL COOLER FITTINGS AND BREATHER FITTINGS

| FIG. REF. | PART NUMBER | DESCRIPTION                                   | ON ALL | QUANTITY PER ASSEMBLY |      |      |      |        |      |      |      |      |       |      |       |      |       |      |       |
|-----------|-------------|-----------------------------------------------|--------|-----------------------|------|------|------|--------|------|------|------|------|-------|------|-------|------|-------|------|-------|
|           |             |                                               |        | CAB5                  | DAB5 | GID5 | KIAB | KIAB5D | KIB5 | KID5 | KIE5 | KIF5 | KIF5D | KIG5 | KIG5D | KIJ5 | KIJ5D | SIAB | TAB5D |
| 11        |             |                                               |        |                       |      |      |      |        |      |      |      |      |       |      |       |      |       |      |       |
| 1         | 61183       | GASKET, Accessory adapter                     |        |                       |      | 1    | 1    | 1      | 1    | 1    | 1    | 1    | 1     | 1    | 1     | 1    | 1     | 1    | 1     |
| 2         | 67536       | ADAPTER ASSEMBLY, Vacuum pump                 |        |                       |      | 1    | 1    | 1      |      |      | 1    | 1    | 1     | 1    | 1     | 1    | 1     | 1    | 1     |
| 3         | STD-1774    | DOWEL, 1/8 dia. x 1/4 long                    |        |                       |      | 1    | 1    | 1      |      |      | 1    | 1    | 1     | 1    | 1     | 1    | 1     | 1    | 1     |
| 4         | STD-208     | SEAL, Oil 7/8 ID x 1-1/2 OD x 5/16 thick      |        |                       |      | 1    | 1    | 1      |      |      | 1    | 1    | 1     | 1    | 1     | 1    | 1     | 1    | 1     |
| 5         | 72974       | GEAR ASSEMBLY, Vacuum pump driven             |        |                       |      | 1    | 1    | 1      |      |      | 1    | 1    | 1     | 1    | 1     | 1    | 1     | 1    | 1     |
| 6         | 71596       | WASHER, Accessory driven gear                 |        |                       |      | 1    | 1    | 1      | 1    | 1    | 1    | 1    | 1     | 1    | 1     | 1    | 1     | 1    | 1     |
| 7         | LW-10307    | GEAR ASSEMBLY, Vacuum pump driven             |        |                       |      |      |      | 1      |      |      |      |      | 1     |      |       |      | 1     | 1    | 1     |
| 8         | LW-10303    | PLUG, Vacuum pump drive                       |        |                       |      |      |      |        |      |      |      | 1    |       |      |       | 1    |       |      |       |
| 9         | STD-208     | SEAL, Oil 7/8 ID x 1-1/2 OD x 5/16 thick      |        |                       |      |      |      | 1      |      |      |      |      | 1     |      |       |      | 1     | 1    | 1     |
| 10        | 8313        | GASKET, Vacuum pump pad                       |        |                       |      | 1    | 1    | 1      | 1    | 1    | 1    | 1    | 1     | 1    | 1     | 1    | 1     | 1    | 1     |
| 11        | 60430       | COVER, Vacuum pump                            | 1      |                       |      |      |      |        |      |      |      |      |       |      |       |      |       |      |       |
| 12        | STD-8       | WASHER, 1/4 plain                             | 4      |                       |      |      |      |        |      |      |      |      |       |      |       |      |       |      |       |
| 13        | STD-160     | WASHER, 1/4 lock                              | 4      |                       |      |      |      |        |      |      |      |      |       |      |       |      |       |      |       |
| 14        | STD-1411    | NUT, 1/4-20 plain                             | 4      |                       |      |      |      |        |      |      |      |      |       |      |       |      |       |      |       |
| 15        | STD-294     | GASKET, 7/8 OD x 5/8 ID x 3/32 ann.           |        |                       |      | 1    | 1    | 1      | 1    | 1    | 1    | 1    | 1     | 1    | 1     | 1    | 1     | 2    | 2     |
| 16        | 69675       | CONNECTOR, Accessory Hsg. to oil cooler inlet |        |                       |      | 1    | 1    | 1      | 1    |      |      | 1    |       |      |       |      |       |      |       |
| 17        | STD-784     | PLUG, 3/8 NPT                                 |        |                       |      | 2    | 2    | 2      | 2    |      |      | 2    | 2     | 2    | 2     |      |       |      |       |
| 18        | 62417       | PLUG, Oil cooler bypass                       |        |                       |      | 1    |      | 1      | 1    | 1    |      | 1    | 1     | 1    | 1     | 1    | 1     | 1    | 1     |
| 19        | 71651       | FITTING, Breather                             |        |                       |      | 1    | 1    | 1      | 1    |      |      | 1    | 1     | 1    |       |      | 1     | 1    | 1     |
|           | 72996       | FITTING, Breather (short)                     |        |                       |      |      |      | 1      | 1    | 1    | 1    |      |       | 1    | 1     |      |       |      |       |
|           | AN844-16D   | FITTING, Breather 1.00 ID hose 45°            |        |                       |      |      |      |        |      |      |      | 1    |       |      | 1     |      | 1     |      |       |
| 20        | MS29512-10  | SEAL, Oil 3/32 sect. x 45/64 ID               |        |                       |      |      |      | 2      |      |      |      | 2    | 1     | 1    | 1     | 1    | 3     | 3    |       |
| 21        | AN814-10L   | PLUG, 7/18-14 thd.                            |        |                       |      |      |      | 1      |      |      |      | 1    | 1     | 1    | 1     | 1    | 1     | 1    | 1     |
| 22        | LW-14178    | PLUG, Turbo drain back                        |        |                       |      |      |      | 1      |      |      |      | 1    |       |      |       |      |       |      |       |
| 23        | MS20823-8   | ELBOW, 1/2 flared tube 45°                    |        |                       |      |      |      |        |      |      |      | 1    |       |      | 1     |      | 2     |      |       |
| 24        | AN822-8     | ELBOW, 1/2 flared tube 3/8 NPT 90°            |        |                       |      |      |      |        |      |      | 1    |      | 1     |      | 1     |      |       |      |       |
| 25        | AN816-8     | NIPPLE, 1/2 flared tube 3/8 NPT               |        |                       |      |      |      |        |      |      | 1    |      |       |      | 1     |      |       |      |       |
| 26        | 1540        | PLUG, Thermometer well                        |        |                       |      |      |      |        |      |      |      |      |       |      |       |      |       | 2    | 2     |
| 27        | LW-14828    | REDUCER, 1/2 tubing to 5/8 tubing             |        |                       |      |      |      |        |      |      |      |      |       |      |       |      |       | 2    | 2     |



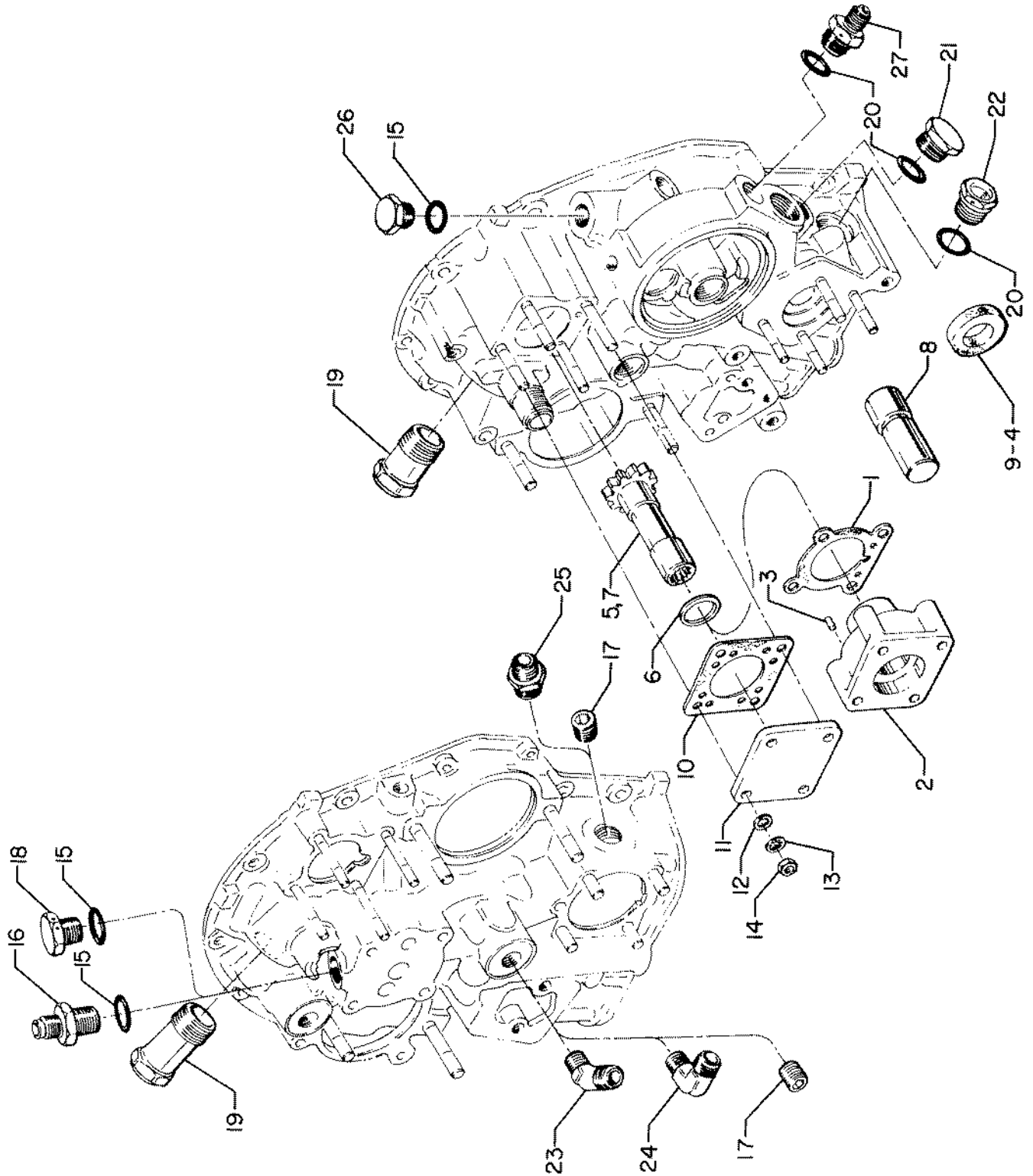


Figure 11 - Vacuum Pump Drive Oil Cooler Fittings and Breather Fittings



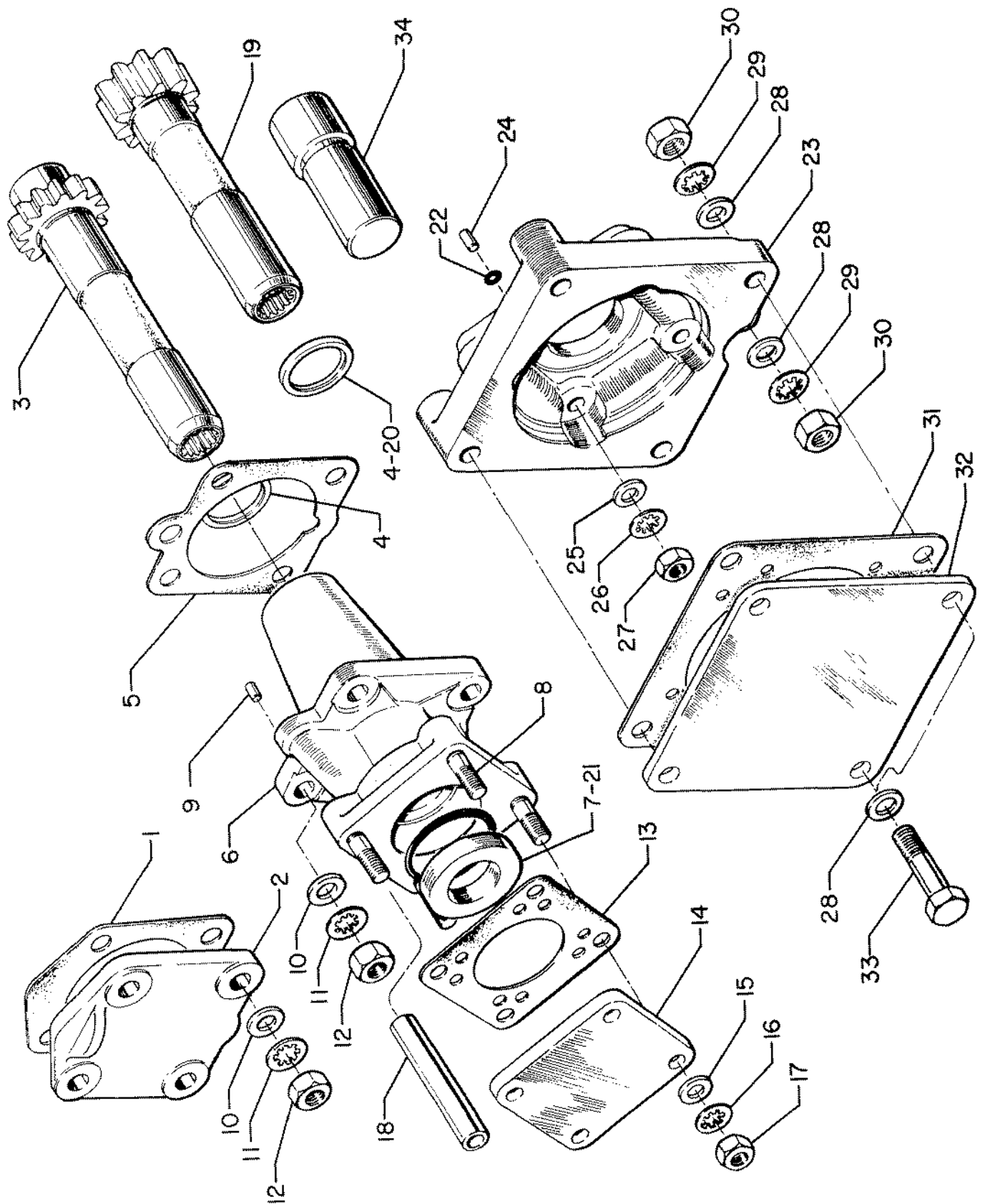


Figure 12 - Hydraulic Pump Drive and Covers



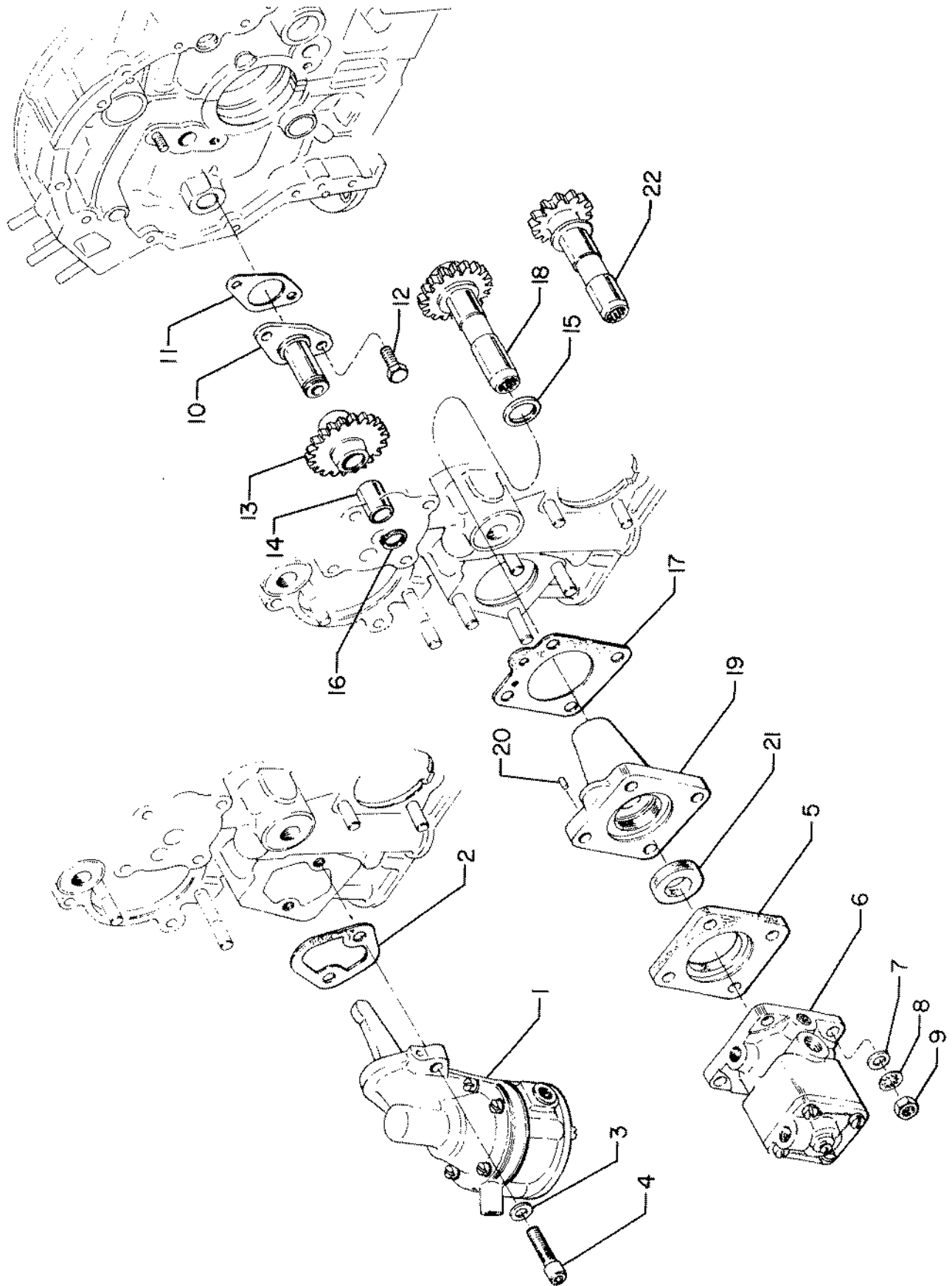


Figure 13 - Fuel Pump and Fuel Pump Drives



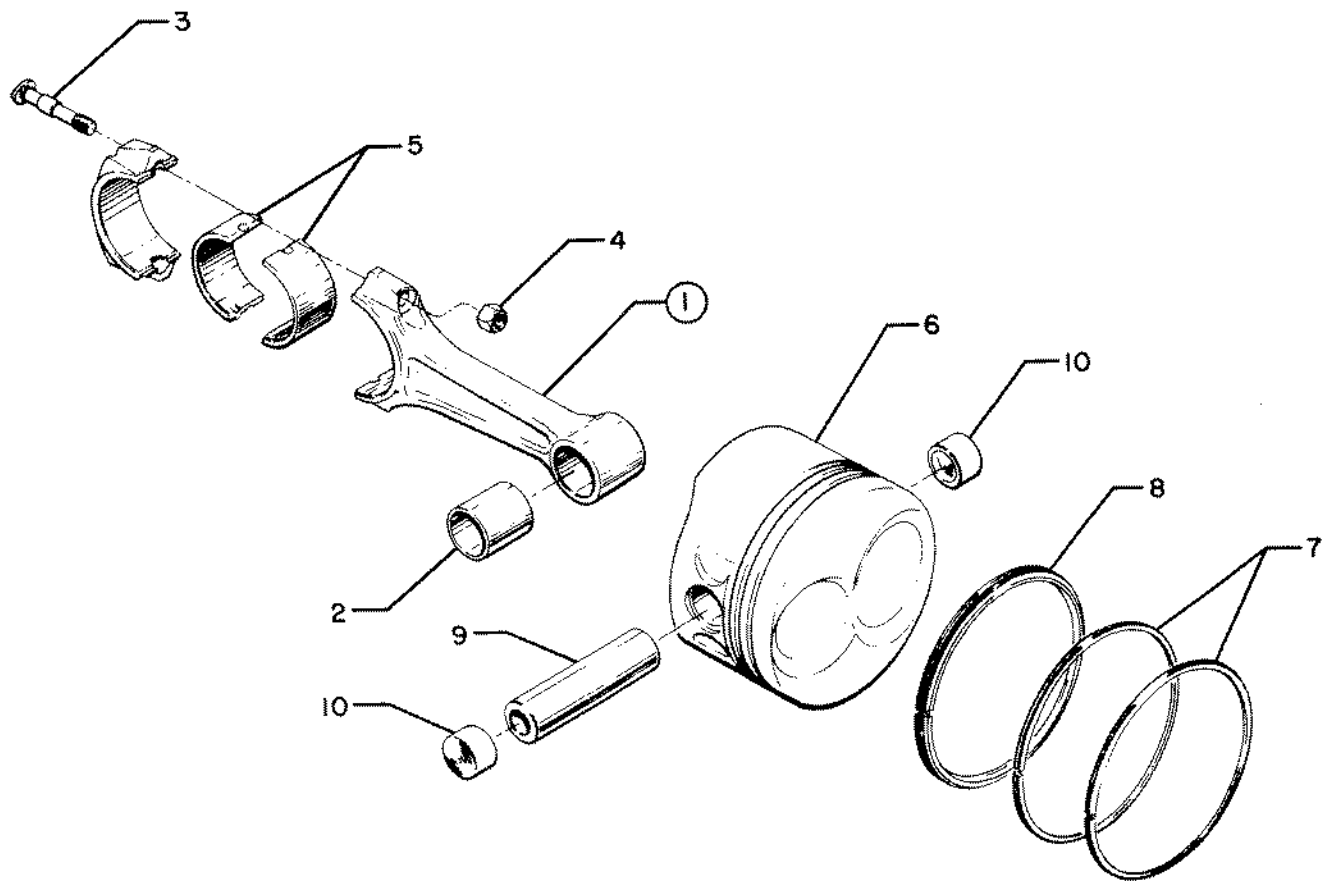


Figure 14 - Connecting Rod, Piston and Ring Assemblies  
3-2





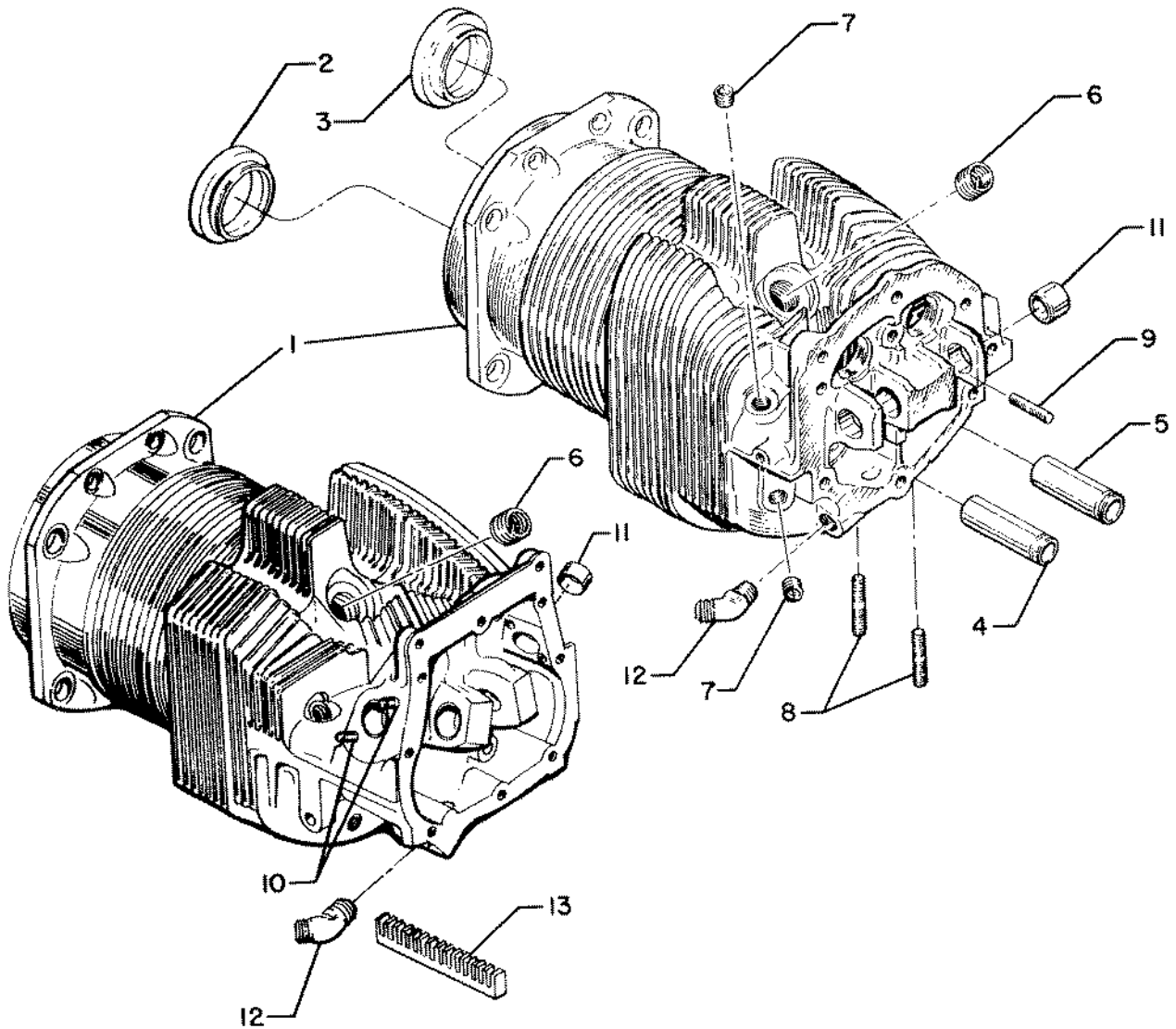


Figure 15 - Cylinder Assembly



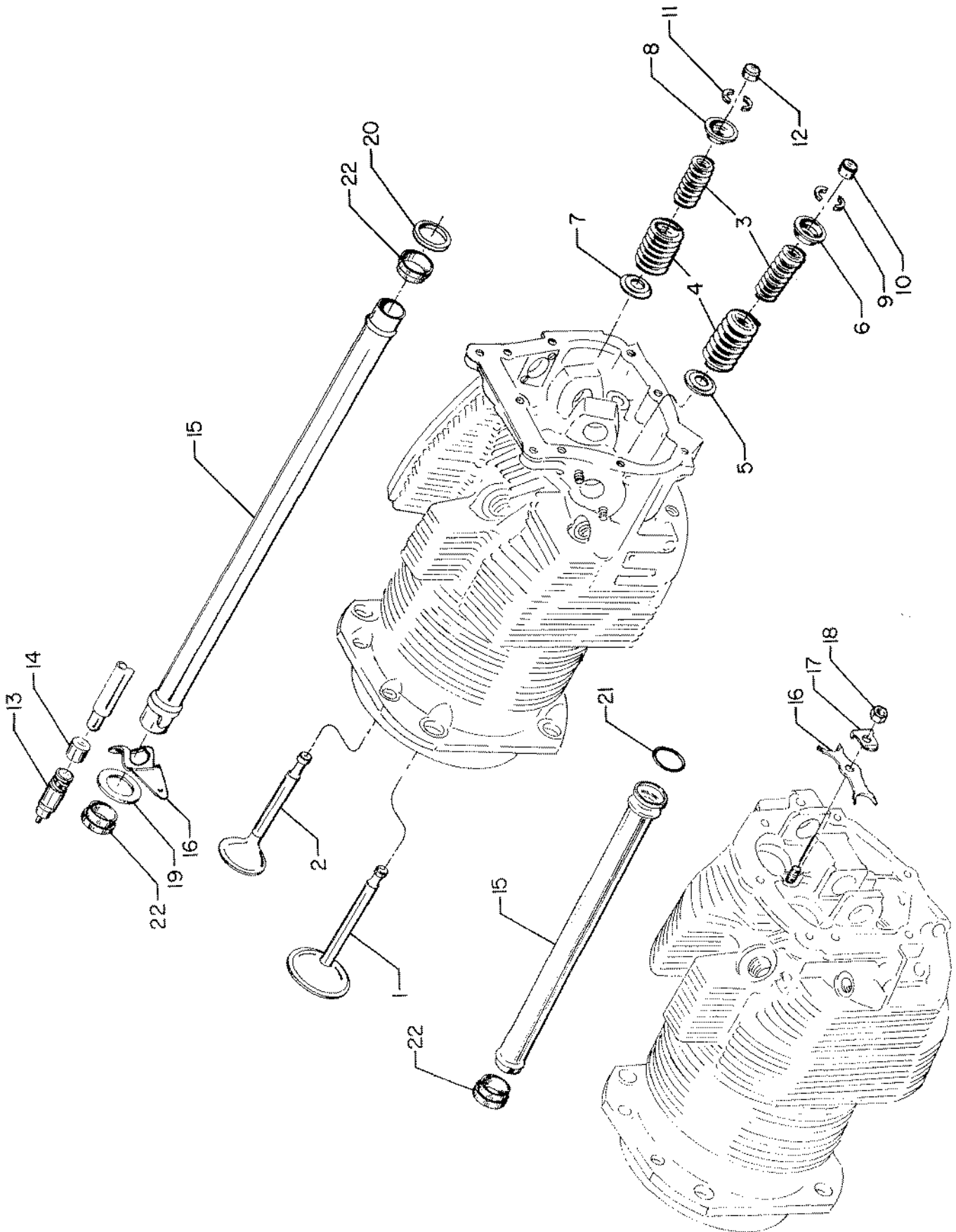


Figure 16 - Valve Assembly

CYLINDER, PISTON AND VALVE TRAIN

CYLINDER RELATED PARTS

| FIG. REF. | PART NUMBER | DESCRIPTION                         | ON ALL | QUANTITY PER ASSEMBLY |      |      |      |       |      |      |      |       |      |       |      |       |      |       |
|-----------|-------------|-------------------------------------|--------|-----------------------|------|------|------|-------|------|------|------|-------|------|-------|------|-------|------|-------|
|           |             |                                     |        | CAB5                  | DAB5 | GAB5 | K1A5 | K1A5D | K1B5 | K1D5 | K1E5 | K1E5D | K1G5 | K1G5D | K1J5 | K1J5D | L1A5 | L1A5D |
| 17        | 73434       | ROD ASSEMBLY, Push                  |        | un                    | un   |      |      |       |      |      |      |       |      |       |      |       | un   | un    |
|           | 73435       | ROD ASSEMBLY, Push                  |        | un                    | un   |      |      |       |      |      |      |       |      |       |      |       | un   | un    |
|           | 73436       | ROD ASSEMBLY, Push                  |        | un                    | un   |      |      |       |      |      |      |       |      |       |      |       | un   | un    |
|           | 73455       | ROD ASSEMBLY, Push                  |        |                       |      | un   | un   | un    | un   | un   | un   | un    | un   | un    | un   | un    | un   | un    |
|           | 73456       | ROD ASSEMBLY, Push                  |        |                       |      | un   | un   | un    | un   | un   | un   | un    | un   | un    | un   | un    | un   | un    |
|           | 73457       | ROD ASSEMBLY, Push                  |        |                       |      | un   | un   | un    | un   | un   | un   | un    | un   | un    | un   | un    | un   | un    |
|           | 73458       | ROD ASSEMBLY, Push                  |        |                       |      | un   | un   | un    | un   | un   | un   | un    | un   | un    | un   | un    | un   | un    |
| 2         | 69444       | ROCKER ASSEMBLY, Valve intake       |        | 6                     | 6    |      |      |       |      |      |      |       |      |       |      |       | 6    | 6     |
| 3         | 60398       | BUSHING, Valve rocker intake        |        | 6                     | 6    |      |      |       |      |      |      |       |      |       |      |       | 6    | 6     |
| 4         | 67113       | ROCKER ASSEMBLY, Valve intake       |        |                       |      | 6    | 6    | 6     | 6    | 6    | 6    | 6     | 6    | 6     | 6    | 6     | 6    | 6     |
| 5         | 67114       | BUSHING, Valve rocker intake        |        |                       |      | 6    | 6    | 6     | 6    | 6    | 6    | 6     | 6    | 6     | 6    | 6     | 6    | 6     |
| 6         | 74636       | ROCKER ASSEMBLY, Exhaust valve      |        | 6                     | 6    |      |      |       |      |      |      |       |      |       |      |       | 6    | 6     |
| 7         | 74637       | BUSHING, Valve rocker exhaust       |        | 6                     | 6    |      |      |       |      |      |      |       |      |       |      |       | 6    | 6     |
| 8         | 67112       | ROCKER ASSEMBLY, Exhaust valve      |        |                       |      | 6    | 6    | 6     | 6    | 6    | 6    | 6     | 6    | 6     | 6    | 6     | 6    | 6     |
| 9         | 67114       | BUSHING, Valve rocker exhaust       |        |                       |      | 6    | 6    | 6     | 6    | 6    | 6    | 6     | 6    | 6     | 6    | 6     | 6    | 6     |
| 10        | 71549       | WASHER, Valve rocker                |        |                       |      | 12   | 12   | 12    | 12   | 12   | 12   | 12    | 12   | 12    | 12   | 12    | 12   | 12    |
| 11        | 72626       | SHAFT, Valve rocker                 |        |                       |      | 12   | 12   | 12    | 12   | 12   | 12   | 12    | 12   | 12    | 12   | 12    | 12   | 12    |
| 12        | LW-13790    | SHAFT, Valve rocker                 |        | 6                     | 6    |      |      |       |      |      |      |       |      |       |      |       | 6    | 6     |
| 13        | LW-12892    | THRUST BUTTON, Rocker shaft         |        | 12                    | 12   |      |      |       |      |      |      |       |      |       |      |       | 12   | 12    |
| 14        | 66732       | GASKET, Valve rocker shaft cover    |        |                       |      | 12   | 12   | 12    | 12   | 12   | 12   | 12    | 12   | 12    | 12   | 12    | 12   | 12    |
| 15        | 66731       | COVER, Valve rocker shaft           |        |                       |      | 12   | 12   | 12    | 12   | 12   | 12   | 12    | 12   | 12    | 12   | 12    | 12   | 12    |
| 16        | STD-160     | WASHER, 1/4 lock                    |        |                       |      | 24   | 24   | 24    | 24   | 24   | 24   | 24    | 24   | 24    | 24   | 24    | 24   | 24    |
| 17        | STD-1411    | NUT, 1/4-20 plain                   |        |                       |      | 24   | 24   | 24    | 24   | 24   | 24   | 24    | 24   | 24    | 24   | 24    | 24   | 24    |
| 18        | 75906       | GASKET, Rocker box cover            |        | 6                     | 6    |      |      |       |      |      |      |       |      |       |      |       | 6    | 6     |
|           | 67193       | GASKET, Rocker box cover            |        |                       |      | 6    | 6    | 6     | 6    | 6    | 6    | 6     | 6    | 6     | 6    | 6     | 6    | 6     |
| 19        | 61247       | COVER, Rocker box                   |        | 6                     | 6    |      |      |       |      |      |      |       |      |       |      |       | 6    | 6     |
|           | 68795       | COVER ASSY., Rocker box             |        |                       |      | 6    | 6    | 6     | 6    | 6    | 6    | 6     | 6    | 6     | 6    | 6     | 6    | 6     |
| 20        | STD-1925    | SCREW, 1/4-20 x 5/8 self-locking    |        | 36                    | 36   | 48   | 48   | 48    | 48   | 48   | 48   | 48    | 48   | 48    | 48   | 48    | 36   | 36    |
| 21        | 74494       | PLATE, Spark plug reach caution     |        |                       |      | 6    | 6    | 6     | 6    |      | 6    | 6     | 6    | 6     | 6    | 6     | 6    | 6     |
| 22        | 71481       | RING, Oil seal                      | 6      |                       |      |      |      |       |      |      |      |       |      |       |      |       |      |       |
| 23        | 77906       | SPACER, 1/2 ID x 7/8 OD x 1/8 thick | 2      |                       |      |      |      |       |      |      |      |       |      |       |      |       |      |       |
| 24        | 74887       | SPACER, 1/2 ID x 7/8 OD x 3/8 thick | 2      |                       |      |      |      |       |      |      |      |       |      |       |      |       |      |       |
| 25        | 383-B       | NUT, 3/8-24 plain                   | 24     |                       |      |      |      |       |      |      |      |       |      |       |      |       |      |       |
| 26        | STD-2090    | NUT, 1/2-20 plain                   | 28     |                       |      |      |      |       |      |      |      |       |      |       |      |       |      |       |
| 27        | 65321       | GASKET, Exhaust flange              |        | 6                     | 6    |      |      |       |      |      |      |       |      |       |      |       | 6    | 6     |
|           | 75118       | GASKET, Exhaust flange              |        |                       |      | 12   | 12   | 12    | 12   | 12   | 12   | 12    | 12   | 12    | 12   | 12    | 12   | 12    |
| 28        | 61260       | EXHAUST Flange                      |        | 6                     | 6    |      |      |       |      |      |      |       |      |       |      |       | 6    | 6     |
|           | 67195       | EXHAUST Flange                      |        |                       |      | 6    | 6    | 6     | 6    | 6    | 6    | 6     | 6    | 6     | 6    | 6     | 6    | 6     |
| 29        | STD-35      | WASHER, 5/16 plain                  | 12     |                       |      |      |      |       |      |      |      |       |      |       |      |       |      |       |
| 30        | STD-475     | WASHER, 5/16 lock                   | 12     |                       |      |      |      |       |      |      |      |       |      |       |      |       |      |       |
| 31        | STD-1410    | NUT, 5/16-18 plain                  | 12     |                       |      |      |      |       |      |      |      |       |      |       |      |       |      |       |
|           | STD-2043    | NUT, 5/16-18 self-locking           | 12     |                       |      |      |      |       |      |      |      |       |      |       |      |       |      |       |

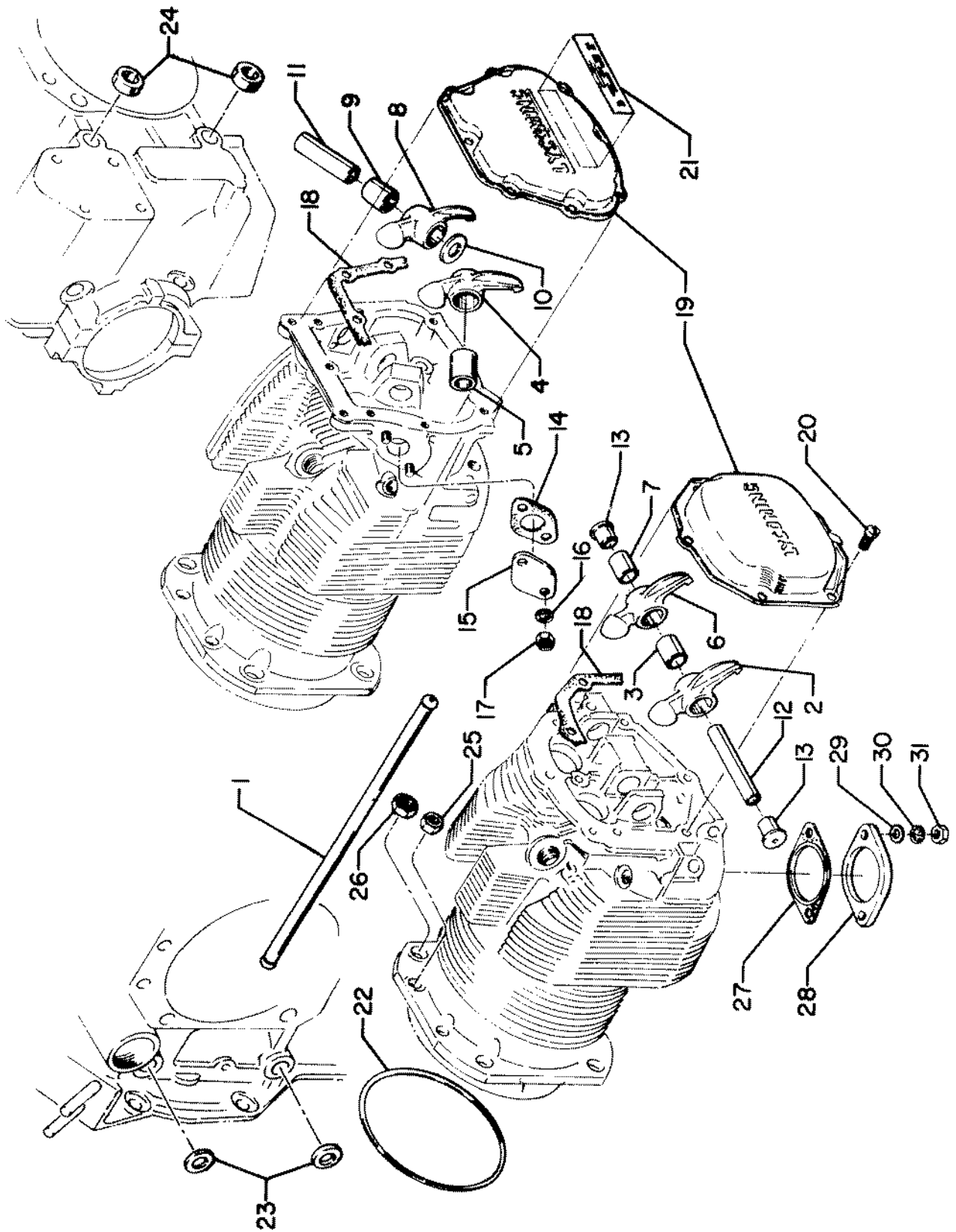


Figure 17 - Cylinder Related Parts

CYLINDER, PISTON AND VALVE TRAIN

CYLINDER HEAD DRAIN TUBES AND INTERCYLINDER COOLING BAFFLES

| FIG. REF. | PART NUMBER   | DESCRIPTION                                               | ON ALL | QUANTITY PER ASSEMBLY |      |     |      |       |      |      |      |      |       |      |       |      |       |      |       |
|-----------|---------------|-----------------------------------------------------------|--------|-----------------------|------|-----|------|-------|------|------|------|------|-------|------|-------|------|-------|------|-------|
|           |               |                                                           |        | CAB5                  | DA45 | GD5 | K1A5 | K1A5D | K1B5 | K1D5 | K1E5 | K1E5 | K1E5D | K1G5 | K1G5D | K1J5 | K1J5D | S1A5 | T1A5D |
| 1         | STD-684       | NIPPLE, Straight 3/8 ID Hose                              | 6      |                       |      |     |      |       |      |      |      |      |       |      |       |      |       |      |       |
| 2         | STD-1821      | HOSE, 3/8 ID x 2-1/2 long                                 |        |                       | 6    | 6   |      |       |      |      |      |      |       |      |       |      |       | 6    | 6     |
|           | STD-2180      | HOSE, 3/8 ID x 1-13/16 long                               |        |                       |      |     | 6    | 6     | 6    | 6    | 6    | 6    | 6     | 6    | 6     | 6    | 6     |      |       |
| 3         | LW-15592-5-05 | CLAMP, Hose                                               | 12     |                       |      |     |      |       |      |      |      |      |       |      |       |      |       |      |       |
| 4         | 68759         | TUBE ASSY., No. 1 Cylinder<br>head oil drain              |        |                       | 1    | 1   |      |       |      |      |      |      |       |      |       |      |       | 1    | 1     |
|           | 71737         | TUBE ASSY., No. 2 Cylinder<br>head oil drain              |        |                       | 1    | 1   |      |       |      |      |      |      |       |      |       |      |       | 1    | 1     |
|           | 68761         | TUBE ASSY., No. 3,4,5,6<br>Cylinder head oil drain        |        |                       | 4    | 4   |      |       |      |      |      |      |       |      |       |      |       | 4    | 4     |
|           | 72702         | TUBE ASSY., No. 1 Cylinder<br>head oil drain              |        |                       |      |     | 1    | 1     | 1    | 1    | 1    | 1    | 1     | 1    | 1     | 1    | 1     | 1    | 1     |
|           | 72703         | TUBE ASSY., No. 2 Cylinder<br>head oil drain              |        |                       |      |     | 1    | 1     | 1    | 1    | 1    | 1    | 1     | 1    | 1     | 1    | 1     | 1    | 1     |
|           | 73027         | TUBE ASSY., No. 3,4,5,6<br>Cylinder head oil drain        |        |                       |      |     | 4    | 4     | 4    | 4    | 4    | 4    | 4     | 4    | 4     | 4    | 4     | 4    | 4     |
| 5         | 75339         | BAFFLE ASSY., Intercylinder<br>cooling                    |        |                       | 3    | 3   |      |       |      |      |      |      |       |      |       |      |       | 4    | 4     |
|           | 73975         | BAFFLE ASSY., Intercylinder<br>cooling                    |        |                       | 1    | 1   |      |       |      |      |      |      |       |      |       |      |       |      |       |
|           | 75338         | BAFFLE ASSY., Intercylinder<br>cooling                    |        |                       |      |     | 4    | 4     | 4    | 4    | 4    | 4    | 4     | 4    | 4     | 4    | 4     |      |       |
|           | LW-10610      | BAFFLE AND CLIP ASSY., Cyls.<br>No. 1 & 6                 |        |                       |      |     |      |       |      |      |      | 2    |       |      | 2     |      | 2     |      |       |
|           | LW-10611      | BAFFLE AND CLIP ASSY., Cyls.<br>No. 2 & 5                 |        |                       |      |     |      |       |      |      |      | 2    |       |      | 2     |      | 2     |      |       |
|           | 74718         | BAFFLE ASSY., Intercylinder<br>CLIP, Intercylinder baffle |        |                       |      |     |      |       |      |      |      | 4    |       |      | 4     |      | 4     |      |       |
| 6         | LW-10608      | RIVET, Baffle clip                                        |        |                       |      |     |      |       |      |      |      | 8    |       |      | 8     |      | 8     |      |       |
| 7         | LW-10609      | RETAINER, Intercylinder baffle                            | 4      |                       |      |     |      |       |      |      |      | 8    |       |      | 8     |      | 8     |      |       |
| 8         | 71611         | HOOK, Intercylinder baffle                                | 4      |                       |      |     |      |       |      |      |      |      |       |      |       |      |       |      |       |
| 10        | 72834         | COVER, Baffle ignition hole                               |        |                       |      |     | 4    | 4     | 4    | 4    | 4    | 4    | 4     | 4    | 4     | 4    | 4     | 4    | 4     |
| 11        | STD-692       | SCREW, No. 10-32 x 1/2 long                               |        |                       |      |     | 8    | 8     | 8    | 8    | 8    | 8    | 8     | 8    | 8     | 8    | 8     | 8    | 8     |
| 12        | STD-670       | NUT, No. 10-32 self-locking                               |        |                       |      |     | 8    | 8     | 8    | 8    | 8    | 8    | 8     | 8    | 8     | 8    | 8     | 8    | 8     |
| 13        | 65614         | PLUG, Baffle attaching                                    |        |                       |      |     | 4    |       | 4    | 4    | 4    |      |       |      | 4     | 4    | 4     |      |       |
| 14        | STD-251       | WASHER, No. 10 lock                                       |        |                       |      |     | 4    |       | 4    | 4    | 4    |      |       |      | 4     | 4    | 4     |      |       |
| 15        | STD-1686      | SCREW, No. 10-32 x 7/16 long                              |        |                       |      |     | 4    |       | 4    | 4    | 4    |      |       |      | 4     | 4    | 4     |      |       |
| 16        | AN931-12S17   | GROMMET, 3/4 ID x 1-3/8 OD x<br>3/8 thick                 |        |                       | 1    | 1   |      |       |      |      |      |      |       |      |       |      |       |      |       |

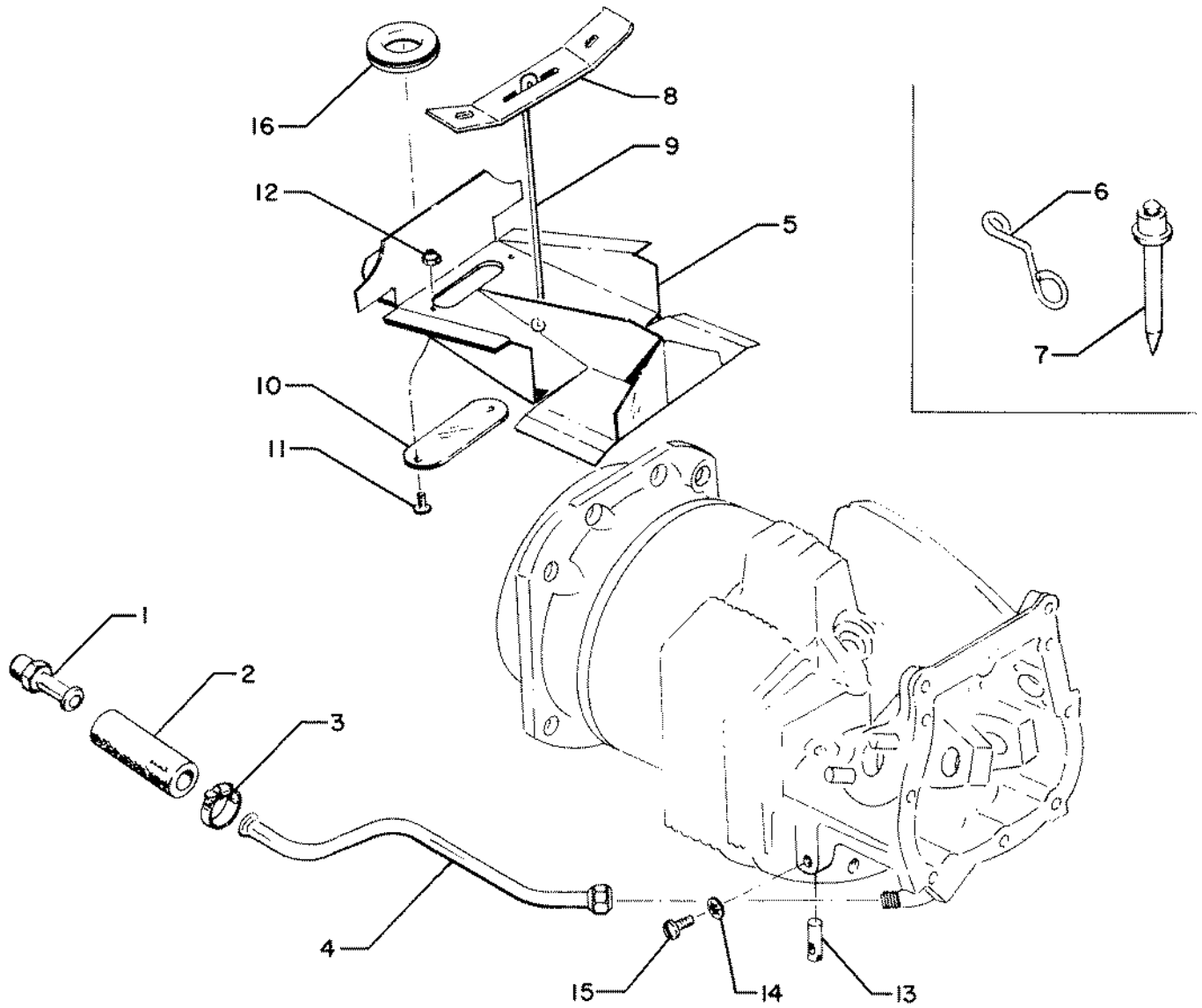


Figure 18 - Cylinder Head Drain Tubes and Intercylinder Cooling Baffles





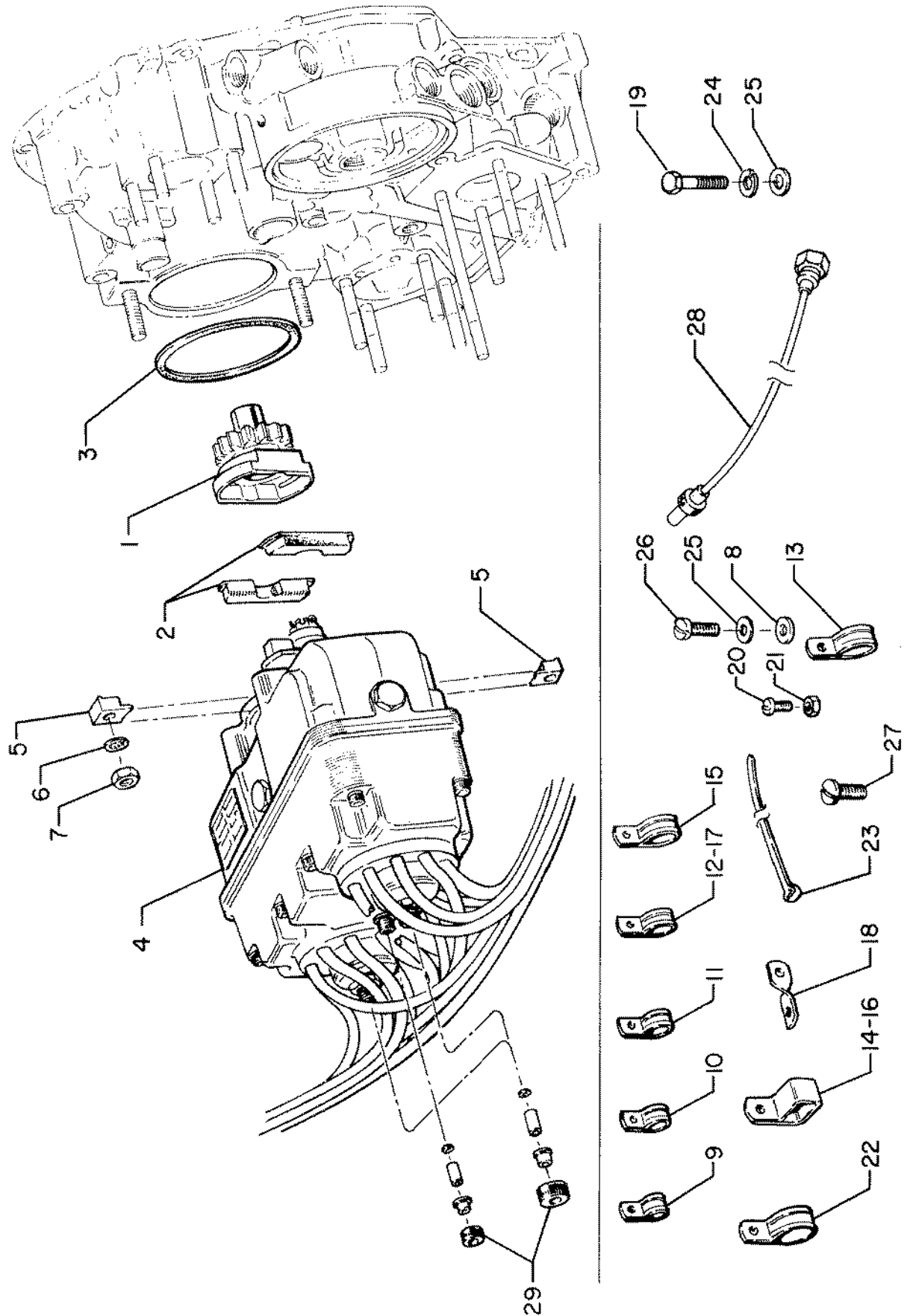


Figure 19 - Magneto Drives and Magnetos

IGNITION SYSTEM

MAGNETO DRIVES AND MAGNETOS

| FIG. REF. | PART NUMBER  | DESCRIPTION                         | ON ALL | QUANTITY PER ASSEMBLY |      |      |      |      |      |      |      |      |       |      |       |      |      |      |      |      |      |      |  |
|-----------|--------------|-------------------------------------|--------|-----------------------|------|------|------|------|------|------|------|------|-------|------|-------|------|------|------|------|------|------|------|--|
|           |              |                                     |        | CA85                  | DA45 | GI05 | K1A5 | KA5D | K1B5 | K1D5 | K1E5 | K1F5 | K1G5D | K1G5 | K1H5D | K1H5 | LA5F | LA5D | LA5D | LA5D | LA5D | LA5D |  |
| 1         | 67542        | BEARING, Ball                       |        |                       | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2     | 2    | 2     | 2    | 2    |      |      |      |      |      |  |
| 2         | 74830        | GEAR RETAINER, Magneto drive        |        |                       | 2    | 2    | 2    | 2    | 2    | 2    | 1    | 2    | 2     | 2    | 2     | 2    |      |      |      |      |      |      |  |
|           | 75124        | GEAR RETAINER, Magneto drive, right |        |                       |      |      |      |      |      |      | 1    |      |       |      |       |      |      |      |      |      |      |      |  |
| 3         | LW-12136     | CUSHION, Magneto drive              |        |                       | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4     | 4    | 4     | 4    | 4    |      |      |      |      |      |  |
| 4         | 62224        | GASKET, Magneto adapter             |        |                       | 4    | 4    | 2    | 2    | 2    | 4    | 2    | 2    | 2     | 2    | 2     | 2    | 2    |      |      |      |      |      |  |
| 5         | LW-12707     | ADAPTER, Magneto                    |        |                       | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2     | 2    | 2     | 2    | 2    |      |      |      |      |      |  |
| 6         | LW-12681     | GASKET, Magneto                     |        |                       |      |      | 2    | 2    |      |      | 2    | 2    | 2     | 2    | 2     | 2    |      |      |      |      |      |      |  |
| 7         | 73000        | COUPLING, Magneto drive             |        |                       | 1    | 1    |      |      |      |      |      | 1    |       |      |       | 1    |      |      |      |      |      |      |  |
|           | 73013        | COUPLING, Magneto (retard breaker)  |        |                       | 1    | 1    |      |      |      |      |      |      |       |      |       |      |      |      |      |      |      |      |  |
|           | 73636        | COUPLING, Magneto (right magneto)   |        |                       |      |      |      |      |      |      |      | 1    |       |      |       | 1    |      |      |      |      |      |      |  |
| 8         | LW-163050-9  | MAGNETO                             |        |                       | 1    | 1    |      |      |      |      | 1    |      |       |      |       |      |      |      |      |      |      |      |  |
|           | LW-163010-10 | MAGNETO                             |        |                       | 1    | 1    |      |      |      |      | 1    |      |       |      |       |      |      |      |      |      |      |      |  |
|           | LW-349290-1  | MAGNETO, S6LN-1208                  |        |                       |      |      |      |      |      |      |      | 1    |       |      | 1     |      |      |      |      |      |      |      |  |
|           | LW-349310-1  | MAGNETO, S6LN-1209                  |        |                       |      |      |      | 1    |      |      |      | 1    | 1     | 1    | 1     | 1    |      |      |      |      |      |      |  |
|           | LW-349370-4  | MAGNETO, S6LN-1227                  |        |                       |      |      | 1    | 1    | 1    |      | 2    |      | 1     |      |       |      |      |      |      |      |      |      |  |
|           | LW-349310-8  | MAGNETO, S6LN-1209 electric tach.   |        |                       |      |      | 1    |      | 1    |      |      |      |       |      |       |      |      |      |      |      |      |      |  |
| 9         | 75965        | CLAMP, Magneto                      |        |                       |      |      | 4    | 4    | 4    | 4    | 4    | 4    | 4     | 4    | 4     | 4    |      |      |      |      |      |      |  |
| 10        | STD-1727     | WASHER, 3/4 OD x 5/16 ID x 1/8      |        |                       | 4    | 4    |      |      |      | 4    |      |      |       |      |       |      |      |      |      |      |      |      |  |
| 11        | STD-475      | WASHER, 5/16 lock                   |        |                       | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4     | 4    | 4     | 4    | 4    |      |      |      |      |      |  |
| 12        | STD-1410     | NUT, 5/16-18 plain                  |        |                       | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4     | 4    | 4     | 4    | 4    |      |      |      |      |      |  |
|           | LW-157209    | KIT, Magneto ground terminal        |        |                       | 2    | 2    |      |      |      | 2    |      |      |       |      |       |      |      |      |      |      |      |      |  |
|           | LW-157208    | KIT, Magneto retard terminal        |        |                       | 1    | 1    |      |      |      | 1    |      |      |       |      |       |      |      |      |      |      |      |      |  |

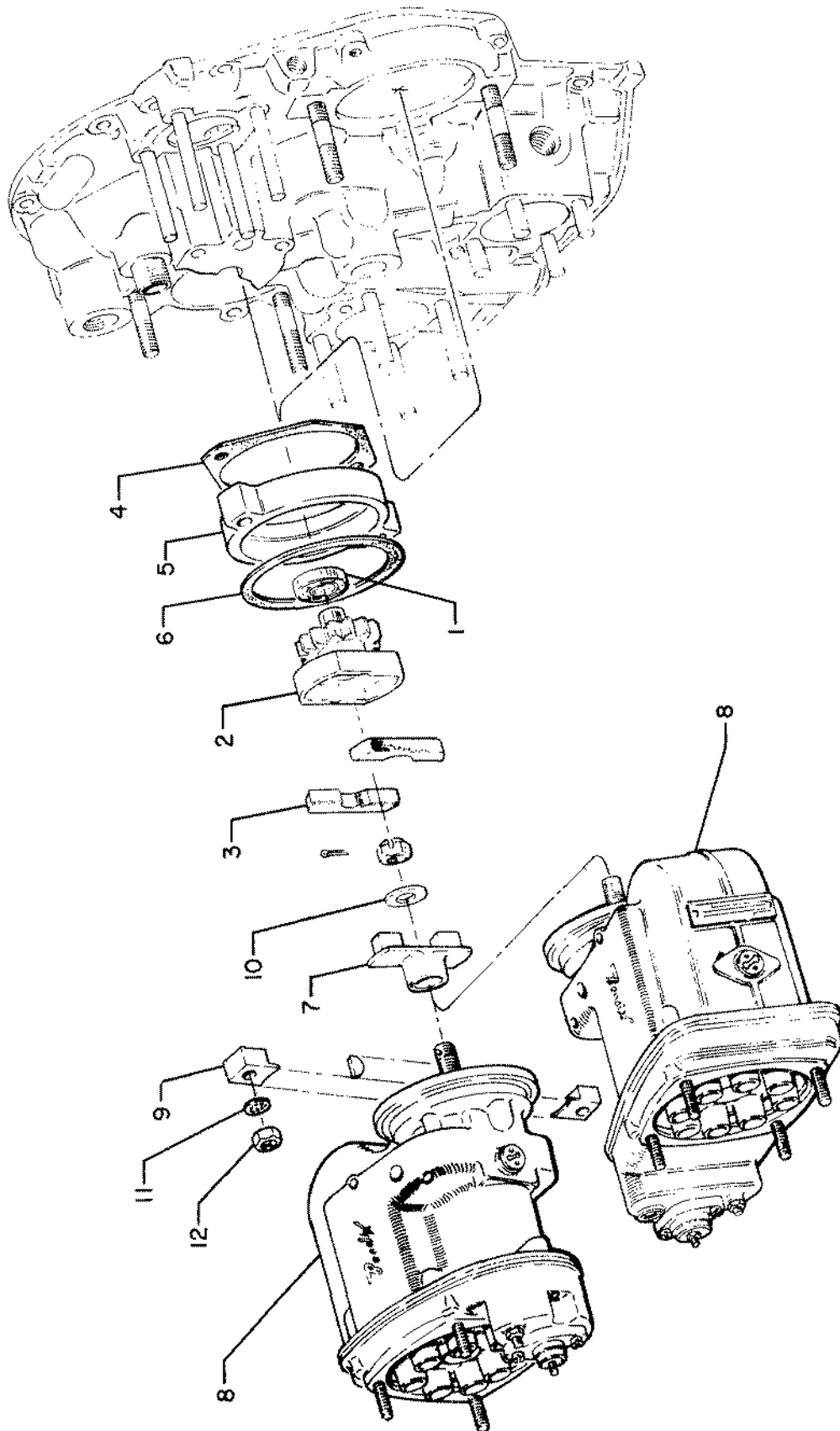


Figure 20 - Magneto Drives and Magnets



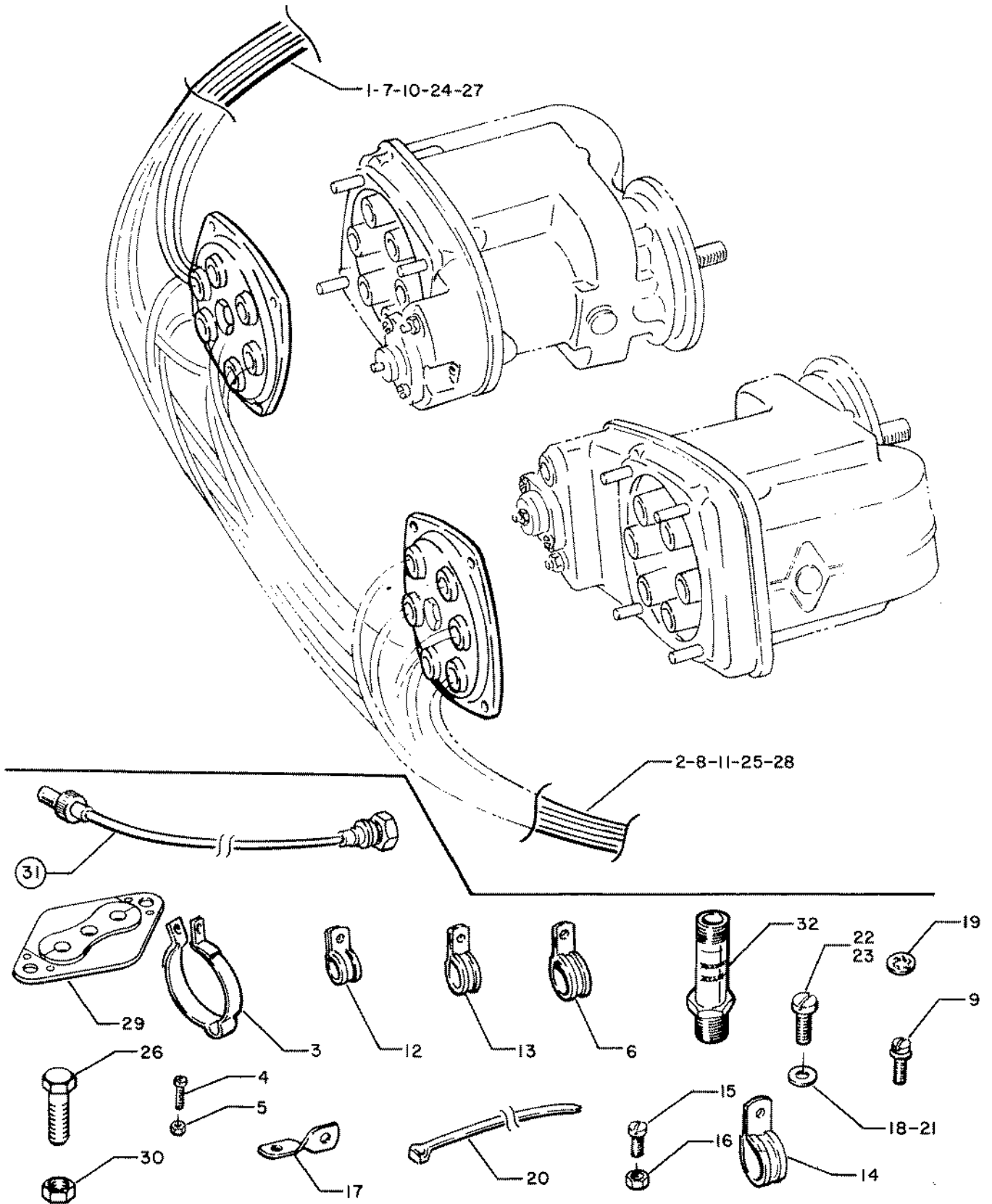


Figure 21 - Ignition Harness, Lead Assembly and Spark Plugs



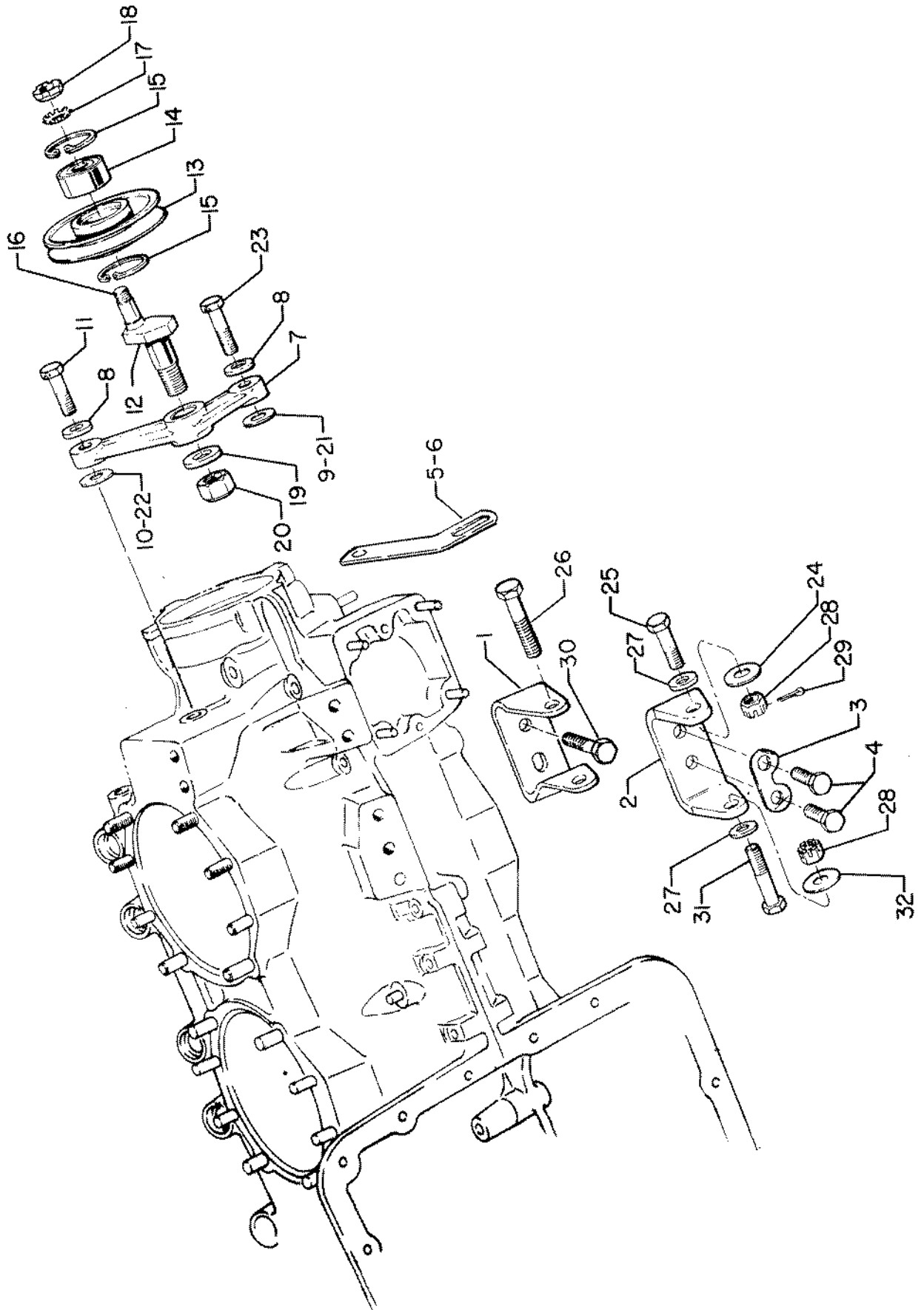


Figure 22 - Alternator Mounting Brackets





# LYCOMING IO-540 SERIES PARTS CATALOG

WIDE CYLINDER FLANGE CRANKCASE MODEL ENGINES

## ELECTRICAL SYSTEM

### STARTING MOTOR AND MAGNETIC SWITCH

| FIG. REF. | PART NUMBER | DESCRIPTION                         | ON ALL | QUANTITY PER ASSEMBLY |      |      |      |       |      |      |      |      |       |      |       |      |       |      |       |
|-----------|-------------|-------------------------------------|--------|-----------------------|------|------|------|-------|------|------|------|------|-------|------|-------|------|-------|------|-------|
|           |             |                                     |        | CAB5                  | DAB5 | G1D5 | K1A5 | K1A5D | K1B5 | K1D5 | K1E5 | K1F5 | K1F5D | K1G5 | K1G5D | K1J5 | K1J5D | S1A5 | TAB5D |
| 1         | LW-15571    | STARTER, 12V. (3.38:1 Int. red.)    |        |                       |      |      |      |       |      |      |      |      |       |      |       |      |       |      |       |
|           |             | 12/14 pinion, MZ-4222               |        |                       | 1    | 1    |      | 1     | 1    | 1    | 1    | 1    | 1     | 1    | 1     |      |       |      | 1     |
|           | LW-15572    | STARTER, 24V. (3.38:1 Int. red.)    |        |                       |      |      |      |       |      |      |      |      |       |      |       |      |       |      |       |
|           |             | 12/14 pinion, MZ-4016               |        |                       | 1    | 1    | 1    | 1     |      | 1    | 1    |      | 1     | 1    | 1     |      | 1     | 1    | 1     |
| 2         | STD-35      | WASHER, 5/16 plain                  | 4      |                       |      |      |      |       |      |      |      |      |       |      |       |      |       |      |       |
| 3         | STD-475     | WASHER, 5/16 lock                   | 4      |                       |      |      |      |       |      |      |      |      |       |      |       |      |       |      |       |
| 4         | STD-2156    | BOLT, 5/16-18 x 1-5/32              | 1      |                       |      |      |      |       |      |      |      |      |       |      |       |      |       |      |       |
| 5         | STD-1410    | NUT, 5/16-18 plain                  | 3      |                       |      |      |      |       |      |      |      |      |       |      |       |      |       |      |       |
| 6         | LW-12083    | SWITCH, Magnetic 12V. (SAZ-4201E-1) |        |                       |      |      |      |       |      |      |      |      |       |      |       |      |       |      |       |
|           | LW-12085    | SWITCH, Magnetic 24V. (SAZ-4401C)   |        |                       |      |      |      |       |      |      |      |      |       |      |       |      |       |      |       |

**NOTE**

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

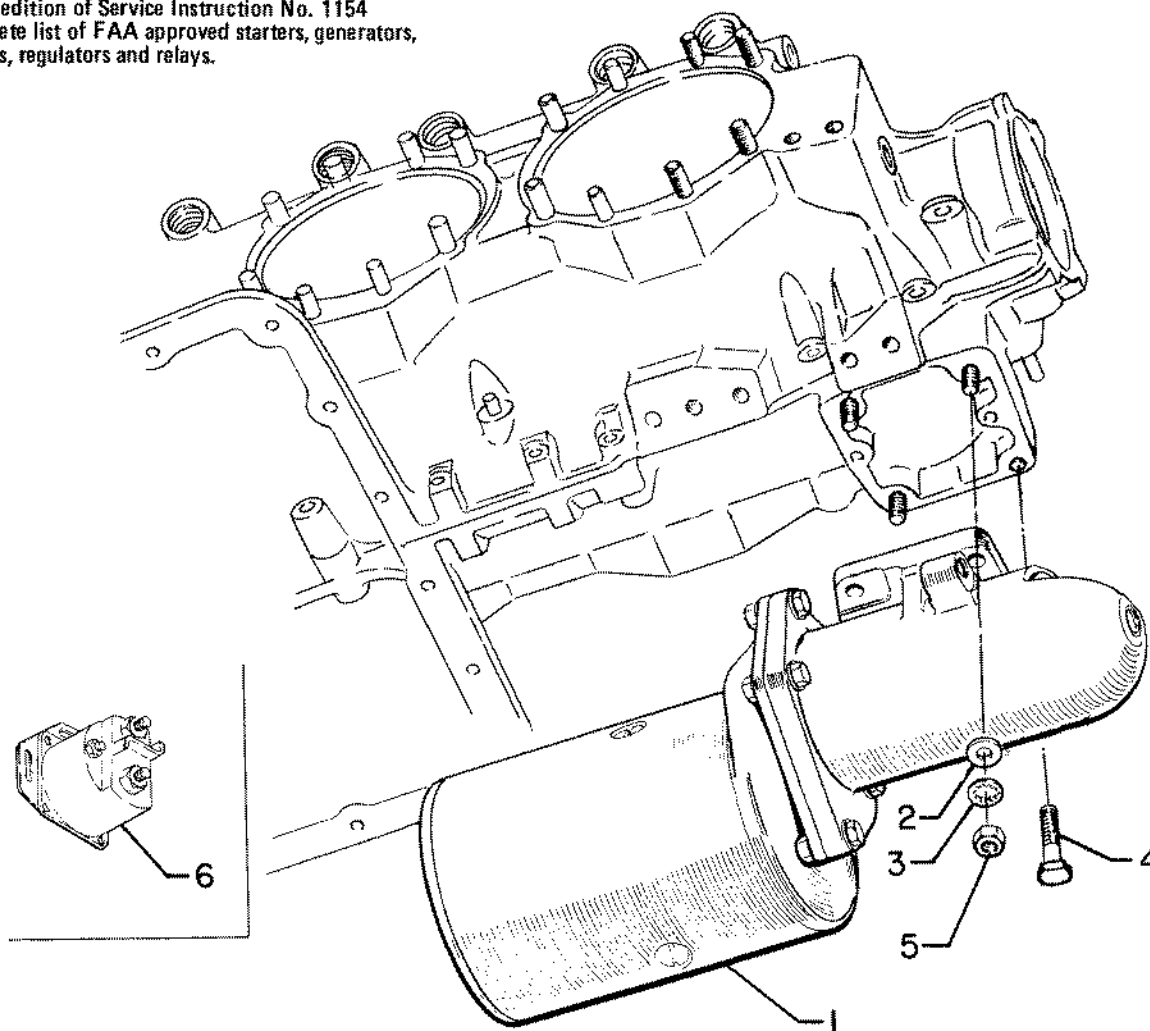


Figure 24.



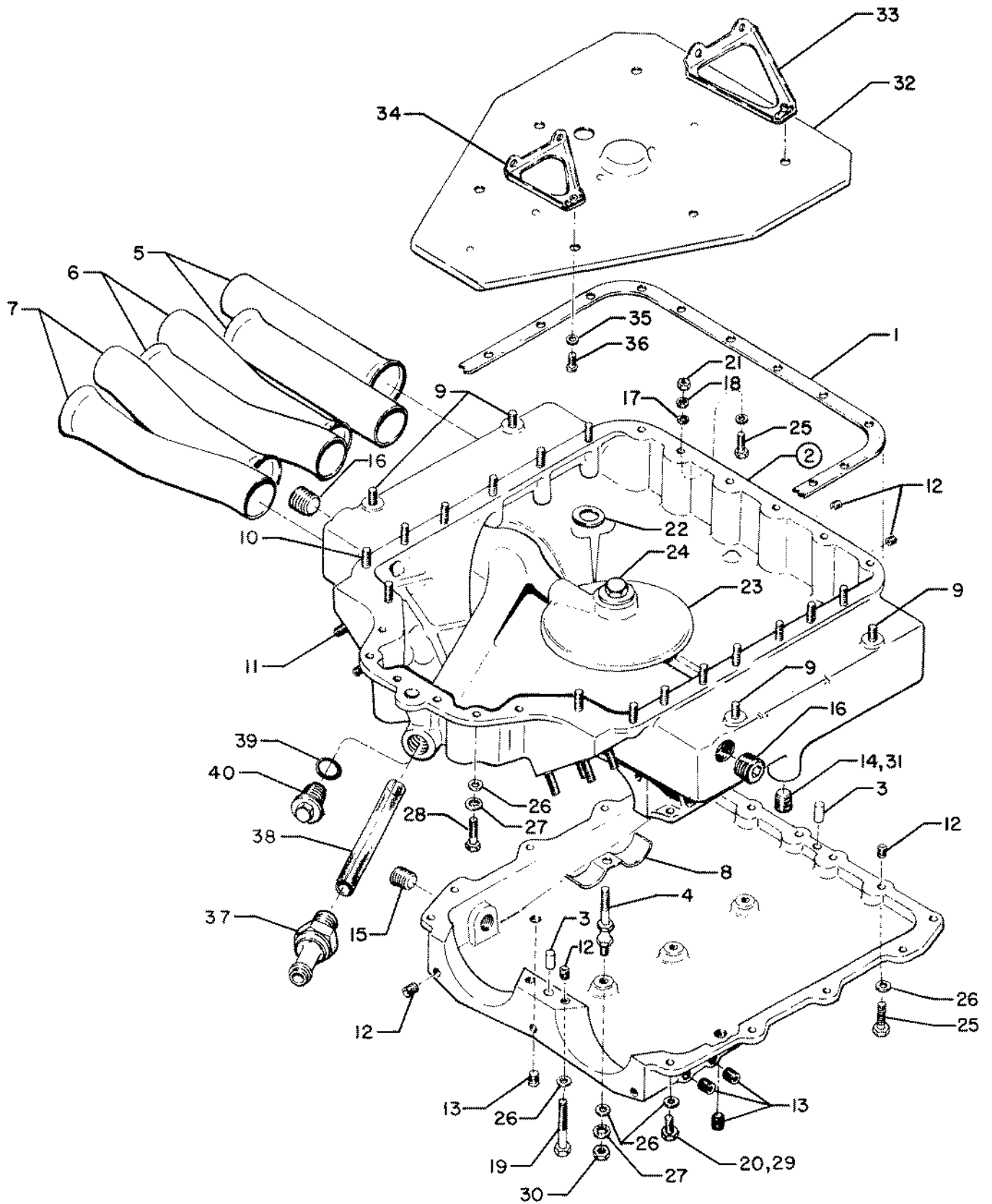


Figure 25 - Oil Sump Assembly





OIL SUMP AND INDUCTION SYSTEM

INTAKE PIPES AND AIR INLET HOUSING

| FIG. REF. | PART NUMBER   | DESCRIPTION                           | ON ALL | QUANTITY PER ASSEMBLY |      |      |      |       |      |      |      |       |      |       |      |       |       |       |       |
|-----------|---------------|---------------------------------------|--------|-----------------------|------|------|------|-------|------|------|------|-------|------|-------|------|-------|-------|-------|-------|
|           |               |                                       |        | CAB5                  | DA45 | GI15 | K1A5 | K1A5D | K1B5 | K1D5 | K1E5 | K1E5D | K1G5 | K1G5D | K1J5 | K1J5D | K1L5D | L1A5D | L1B5D |
| 1         | 70485         | PIPE, Intake                          |        |                       |      | 6    | 6    |       |      |      |      |       |      |       |      |       |       | 6     | 6     |
| 2         | 69603         | HOSE, 1-3/4 ID x 2-3/16 OD<br>x 1-3/4 |        |                       |      | 6    | 6    |       |      |      |      |       |      |       |      |       |       | 6     | 6     |
| 3         | LW-15592-8-28 | CLAMP, Hose                           |        |                       |      | 12   | 12   |       |      |      |      |       |      |       |      |       |       | 12    | 12    |
| 4         | 71973         | GASKET, 2 bolt 1-7/8 ID               | 6      |                       |      |      |      |       |      |      |      |       |      |       |      |       |       |       |       |
| 5         | 73346         | FLANGE, Intake pipe upper             |        |                       |      | 6    | 6    |       |      |      |      |       |      |       |      |       |       | 6     | 6     |
| 6         | STD-8         | WASHER, 1/4 plain                     | 12     |                       |      |      |      |       |      |      |      |       |      |       |      |       |       |       |       |
| 7         | STD-160       | WASHER, 1/4 lock                      | 12     |                       |      |      |      |       |      |      |      |       |      |       |      |       |       |       |       |
| 8         | STD-1215      | BOLT, 1/4-20 x 1-1/4                  | 12     |                       |      |      |      |       |      |      |      |       |      |       |      |       |       |       |       |
| 9         | 72711         | RING, Seal intake pipe                |        |                       |      | 6    | 6    | 6     | 6    | 6    | 6    | 6     | 6    | 6     | 6    | 6     | 6     | 6     | 6     |
| 10        | LW-12191      | PIPE, Intake Cyl. no. 1               |        |                       |      | 1    | 1    | 1     | 1    | 1    | 1    | 1     | 1    | 1     | 1    | 1     | 1     | 1     | 1     |
| 11        | LW-12192      | PIPE, Intake Cyl. no. 2               |        |                       |      | 1    | 1    | 1     | 1    | 1    | 1    | 1     | 1    | 1     | 1    | 1     | 1     | 1     | 1     |
| 12        | LW-12193      | PIPE, Intake Cyl. no. 3               |        |                       |      | 1    | 1    | 1     | 1    | 1    | 1    | 1     | 1    | 1     | 1    | 1     | 1     | 1     | 1     |
| 13        | LW-12194      | PIPE, Intake Cyl. no. 4<br>& 5        |        |                       |      | 2    | 2    | 2     | 2    | 2    | 2    | 2     | 2    | 2     | 2    | 2     | 2     | 2     | 2     |
| 14        | LW-12195      | PIPE, Intake Cyl. no. 6               |        |                       |      | 1    | 1    | 1     | 1    | 1    | 1    | 1     | 1    | 1     | 1    | 1     | 1     | 1     | 1     |
| 15        | 74630         | FLANGE, Intake pipe upper             |        |                       |      | 6    | 6    | 6     | 6    | 6    | 6    | 6     | 6    | 6     | 6    | 6     | 6     | 6     | 6     |
| 16        | 72210         | GASKET, Air inlet housing             |        |                       |      | 1    | 1    | 1     | 1    | 1    | 1    | 1     | 1    | 1     | 1    | 1     | 1     | 1     | 1     |
| 17        | 73031         | HOUSING ASSY., Air inlet              |        |                       |      |      |      |       |      | 1    |      |       |      |       |      |       |       |       |       |
| 18        | 78100         | HOUSING ASSY., Air inlet              |        |                       |      |      | 1    | 1     |      |      |      |       | 1    | 1     |      |       |       |       |       |
| 19        | 77653         | HOUSING ASSY., Air inlet              |        |                       |      | 1    |      |       | 1    | 1    |      | 1     | 1    |       | 1    | 1     |       |       |       |
| 20        | LW-15730      | HOUSING ASSY., Air inlet              |        |                       |      |      |      |       |      |      |      |       |      |       |      |       |       |       | 1     |
| 21        | 31C-16        | STUD, 5/16-18 x 2.00                  |        |                       |      | 4    |      |       | 4    | 4    |      | 4     | 4    |       | 4    | 4     |       |       |       |
|           | 31C-14        | STUD, 5/16-18 x 1-3/4                 |        |                       |      |      | 4    | 4     |      | 4    |      |       | 4    | 4     |      |       |       | 4     |       |
| 22        | 1102          | PLUG, 1/8-27 NPT                      |        |                       |      |      | 1    | 1     |      |      |      |       | 1    | 1     |      |       |       | 1     |       |
| 23        | STD-8         | WASHER, 1/4 plain                     |        |                       |      | 6    | 6    | 6     | 6    | 6    | 6    | 6     | 6    | 6     | 6    | 6     | 6     | 6     | 6     |
| 24        | STD-1875      | BOLT, 1/4-20 x 1-3/16                 |        |                       |      | 6    | 6    | 6     | 6    | 6    | 6    | 6     | 6    | 6     | 6    | 6     | 6     | 6     | 6     |

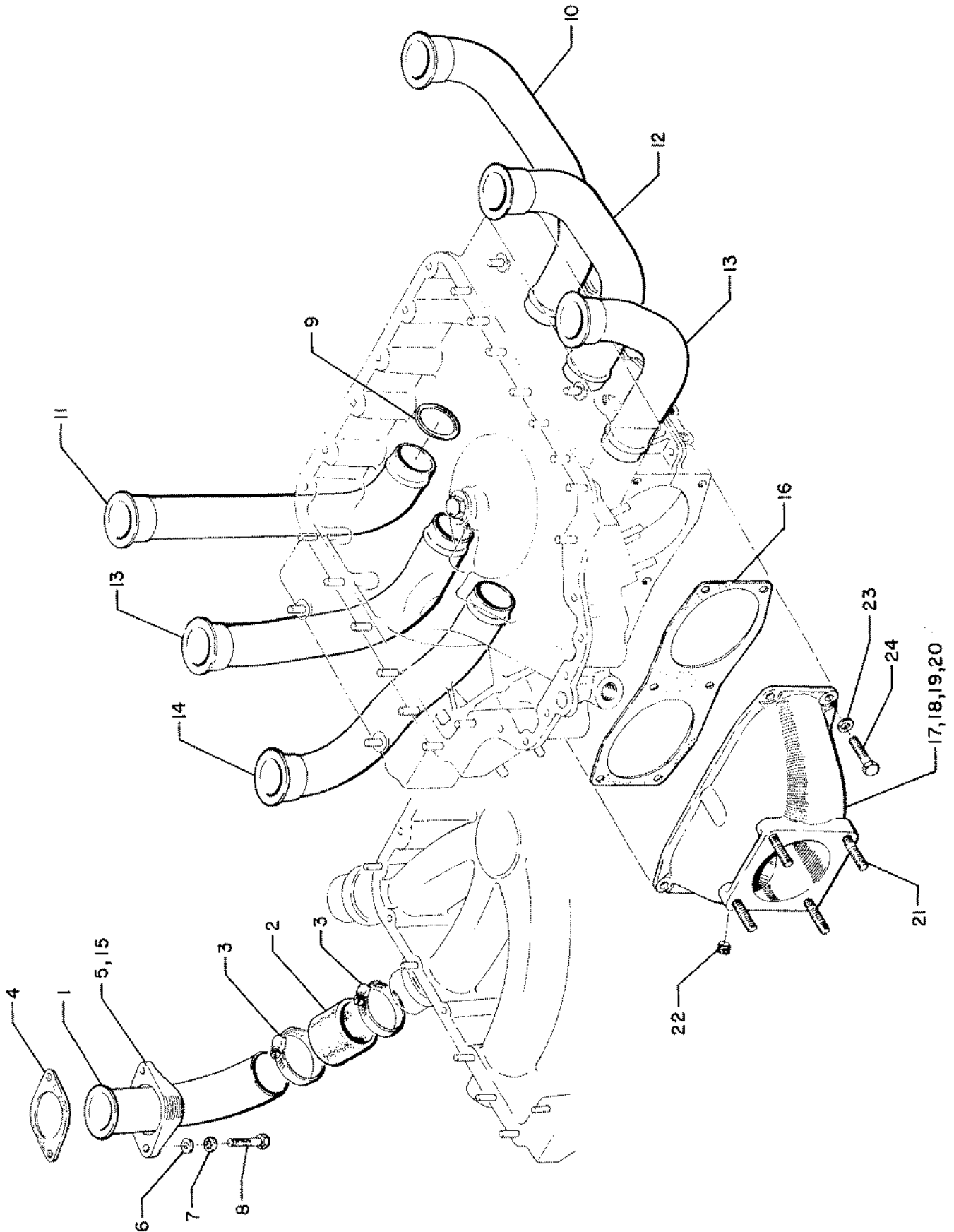


Figure 28 - Intake Pipes and Air Inlet Housing

# LYCOMING IO-540 SERIES PARTS CATALOG

WIDE CYLINDER FLANGE CRANKCASE MODEL ENGINES

## OIL SUMP AND INDUCTION SYSTEM

### FUEL INJECTORS, FUEL MANIFOLDS AND INJECTION NOZZLES

| FIG. REF. | PART NUMBER | DESCRIPTION                          | ON ALL | QUANTITY PER ASSEMBLY |     |     |      |      |      |      |      |      |      |      |       |      |       |      |      |      |   |   |
|-----------|-------------|--------------------------------------|--------|-----------------------|-----|-----|------|------|------|------|------|------|------|------|-------|------|-------|------|------|------|---|---|
|           |             |                                      |        | CBS                   | DAS | GD5 | K1A5 | K1A5 | K1B5 | K1D5 | K1E5 | K1E5 | K1E5 | K1G5 | K1G5D | K1J5 | K1J5D | S1A5 | TASD | TASD |   |   |
| 1         | 66224       | GASKET, Fuel injector                |        |                       |     | 1   | 1    |      |      |      |      |      |      |      |       |      |       |      | 1    | 1    |   |   |
| 2         | 73032       | GASKET, Inlet housing                |        |                       |     |     |      | 2    | 1    | 1    | 2    | 2    | 1    | 2    | 2     | 1    | 2     | 2    | 1    |      |   |   |
| 3         | 77654       | SPACER, Fuel injector                |        |                       |     |     | 1    |      |      |      | 1    | 1    |      |      |       | 1    | 1     |      |      |      |   |   |
| 4         | 73937       | FUEL INJECTOR, (2524054-7)           |        |                       |     | 1   |      |      |      |      |      |      |      |      |       |      |       |      |      |      |   |   |
|           | 75176       | FUEL INJECTOR, (2524213-7)           |        |                       |     | 1   |      |      |      |      |      |      |      |      |       |      |       |      |      |      |   |   |
|           | 75567       | FUEL INJECTOR, (2524273-8)           |        |                       |     |     |      | 1    | 1    |      |      |      | 1    |      | 1     | 1    |       |      |      |      |   |   |
|           | 77003       | FUEL INJECTOR, (2524298-8)           |        |                       |     |     | 1    |      |      |      |      |      |      |      |       |      |       |      |      |      |   |   |
|           | LW-10976    | FUEL INJECTOR, (2524470-2)           |        |                       |     |     |      |      |      |      |      | 1    |      |      |       |      |       |      |      |      |   |   |
|           | 79034       | FUEL INJECTOR, (2524422-5)           |        |                       |     |     |      |      |      |      |      |      | 1    |      |       |      | 1     |      |      |      |   |   |
|           | LW-11924    | FUEL INJECTOR, (2524556-5)           |        |                       |     |     |      |      |      | 1    |      |      |      |      |       |      |       |      |      |      |   |   |
|           | LW-11218    | FUEL INJECTOR, (2524491-6)           |        |                       |     |     |      |      |      |      |      |      |      |      |       |      | 1     |      | 1    |      |   |   |
|           | LW-14184    | FUEL INJECTOR, (2524673-4)           |        |                       |     |     |      |      |      |      |      |      |      |      |       |      |       |      |      | 1    | 1 |   |
| 5         | STD-35      | WASHER, 5/16 plain                   |        | 4                     | 4   | 4   | 2    | 2    | 4    | 4    | 4    | 4    | 2    | 4    | 4     | 4    | 2     | 4    | 4    | 4    | 4 |   |
| 6         | STD-1727    | WASHER, 3/4 OD x 5/16 ID x 1/8 thick |        |                       |     |     | 2    | 2    |      |      |      | 2    |      |      |       | 2    |       | 4    |      |      |   |   |
| 7         | STD-475     | WASHER, 5/16 internal lock           |        |                       |     |     |      |      |      |      |      |      |      |      |       |      |       |      |      | 4    | 4 |   |
| 8         | STD-1410    | NUT, 5/16-18 plain                   |        | 4                     | 4   | 4   | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4     | 4    | 4     | 4    | 4    | 4    | 4 |   |
| 9         | STD-1763    | LOCKNUT, 5/16 palnut                 |        | 4                     | 4   | 4   | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4     | 4    | 4     | 4    | 4    | 4    | 4 |   |
| 10        | STD-1201    | BOLT, 5/16-18 x 1-1/4                |        |                       |     |     |      |      |      |      |      |      |      |      |       |      |       |      |      |      | 4 | 4 |
| 11        | 74151       | NOZZLE, Injection                    |        | 6                     | 6   | 6   | 6    | 6    | 6    | 6    | 6    | 6    | 6    | 6    | 6     | 6    | 6     | 6    | 6    | 6    | 6 |   |
| 12        | LW-10475    | NOZZLE ASSY., Manifold air bleed     |        |                       |     |     |      |      |      |      |      |      |      |      |       |      |       |      |      |      | 6 |   |
| 13        | MS29512-6   | SEAL, Oil 5/64 dia. sect. x 15/32    |        |                       |     | 1   |      |      | 1    | 1    |      |      | 1    |      |       | 1    | 1     | 1    |      |      |   |   |
| 14        | AN919-6     | REDUCER, Flared tube                 |        |                       |     | 1   |      |      | 1    | 1    |      |      | 1    |      |       | 1    | 1     | 1    |      |      |   |   |
| 15        | 76304       | ELBOW, 45° adj.                      |        |                       |     |     |      | 1    | 1    |      |      |      | 1    |      | 1     | 1    |       |      |      |      |   |   |
| 16        | AN822-4     | ELBOW, 1/4 flared tube 1/8 NPT 90°   |        |                       |     |     |      |      |      |      |      |      | 1    |      |       |      |       |      |      |      |   |   |

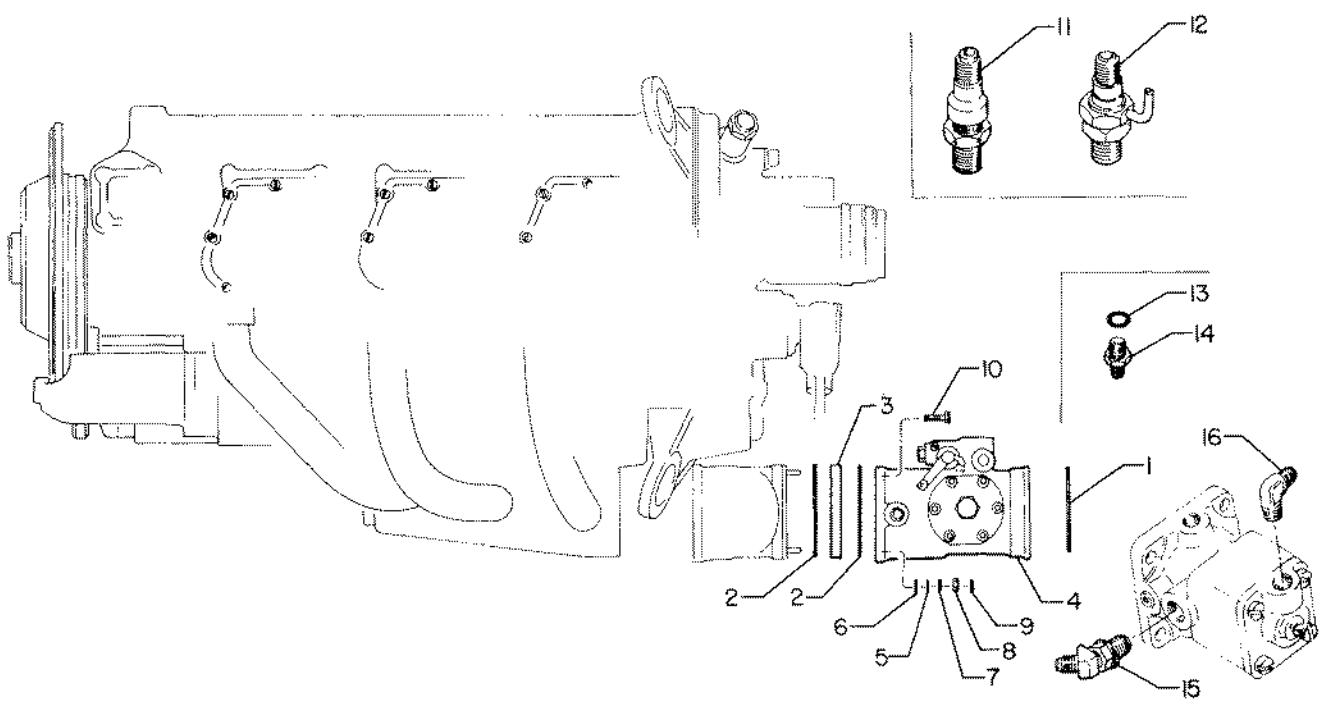


Figure 29.



OIL SUMP AND INDUCTION SYSTEM

FUEL INJECTORS, FUEL MANIFOLDS AND INJECTION NOZZLES

| FIG. REF. | PART NUMBER | DESCRIPTION                               | ON ALL | QUANTITY PER ASSEMBLY |      |      |      |       |      |      |      |       |      |       |      |       |      |       |
|-----------|-------------|-------------------------------------------|--------|-----------------------|------|------|------|-------|------|------|------|-------|------|-------|------|-------|------|-------|
|           |             |                                           |        | CAB5                  | DAB5 | GLD5 | K1A5 | K1A5D | K1B5 | K1D5 | K1E5 | K1E5D | K1G5 | K1G5D | K1J5 | K1J5D | S1A5 | T4A5D |
| 1         | 75283       | MANIFOLD ASSY., Fuel                      |        |                       |      | 1    | 1    | 1     |      |      | 1    | 1     |      |       |      |       |      |       |
| 2         | MS20823-4   | ELBOW, 1/4 tube, 1/8 NPT 45°              |        |                       |      | 1    | 1    | 1     |      |      | 1    | 1     |      |       |      |       |      |       |
| 3         | AN780-2     | NIPPLE, Union 1/8 NPT                     |        |                       |      | 6    | 6    | 6     |      |      | 6    | 6     |      |       |      |       |      |       |
| 4         | LW-12604    | NIPPLE, 1/8 tube to 1/8 NPT (restricted)  |        |                       |      | 1    | 1    | 1     |      |      | 1    | 1     |      |       |      |       |      |       |
| 5         | 75573       | MANIFOLD ASSY., Fuel                      |        |                       |      |      |      |       | 1    |      |      |       | 1    |       |      |       |      |       |
| 6         | AN816-4     | NIPPLE, 1/4 tube to 1/8 NPT               |        |                       |      |      |      |       | 1    |      |      |       | 1    |       |      |       |      |       |
| 7         | AN791-2     | ELBOW, Union 45° 1/8 tube                 |        |                       |      |      |      |       | 2    |      |      |       | 2    |       |      |       |      |       |
| 8         | AN780-2     | NIPPLE, Union 1/8 NPT                     |        |                       |      |      |      |       | 4    |      |      |       | 4    |       |      |       |      |       |
| 9         | LW-12604    | NIPPLE, 1/8 tube to 1/8 NPT (restricted)  |        |                       |      |      |      |       | 1    |      |      |       | 1    |       |      |       |      |       |
| 10        | 78924       | MANIFOLD ASSY., Fuel                      |        |                       |      |      |      |       | 1    | 1    |      |       | 1    | 1     |      |       |      |       |
| 11        | AN816-4     | NIPPLE, 1/4 tube x 1/8 NPT                |        |                       |      |      |      |       | 1    | 1    |      |       | 1    | 1     |      |       |      |       |
| 12        | AN780-2     | NIPPLE, Union 1/8 NPT                     |        |                       |      |      |      |       | 4    | 4    |      |       | 4    | 4     |      |       |      |       |
| 13        | AN791-2     | ELBOW, Union 45° 1/8 tube                 |        |                       |      |      |      |       | 2    | 2    |      |       | 2    | 2     |      |       |      |       |
| 14        | 75447       | NIPPLE, 3/16 tube to 1/8 NPT              |        |                       |      |      |      |       | 1    | 1    |      |       | 1    | 1     |      |       |      |       |
| 15        | 79007       | MANIFOLD ASSY., Fuel                      |        |                       |      |      |      |       | 1    |      |      |       | 1    |       | 1    | 1     | 1    | 1     |
| 16        | MS20823-4   | ELBOW, 1/4 tube 1/8 NPT 45°               |        |                       |      |      |      |       | 1    |      |      |       | 1    |       | 1    | 1     | 1    | 1     |
| 17        | AN780-2     | NIPPLE, Union 1/8 NPT                     |        |                       |      |      |      |       | 6    |      |      |       | 6    |       | 6    | 6     | 6    | 6     |
| 18        | 75447       | NIPPLE, 3/16 tube to 1/8 NPT (restricted) |        |                       |      |      |      |       | 1    |      |      |       | 1    |       | 1    | 1     | 1    | 1     |
| 19        | LW-13518    | MANIFOLD ASSY., Fuel                      |        |                       |      |      |      |       |      |      |      |       | 1    |       | 1    |       |      |       |
| 20        | MS20823-4   | ELBOW, 1/4 tube 1/8 NPT 45°               |        |                       |      |      |      |       |      |      |      |       | 1    |       | 1    |       |      |       |
| 21        | AN791-2     | ELBOW, Union 1/8 NPT 45°                  |        |                       |      |      |      |       |      |      |      |       | 2    |       | 2    |       |      |       |
| 22        | AN780-2     | NIPPLE, Union 1/8 NPT                     |        |                       |      |      |      |       |      |      |      |       | 4    |       | 4    |       |      |       |
| 23        | LW-12604    | NIPPLE, 1/8 tube to 1/8 NPT (restricted)  |        |                       |      |      |      |       |      |      |      |       | 1    |       | 1    |       |      |       |
| 24        | 73966       | SPACER, Fuel manifold bracket             |        |                       |      | 2    | 2    | 2     |      |      | 2    | 2     | 2    |       | 2    | 2     | 2    | 2     |
| 25        | 73965       | BRACKET, Fuel manifold                    |        |                       |      | 2    | 2    | 2     |      |      | 2    | 2     | 2    |       | 2    | 2     | 2    | 2     |
| 26        | STD-251     | WASHER, No. 10 lock                       |        |                       |      | 4    | 4    | 4     | 4    | 4    | 4    | 4     | 4    | 4     | 4    | 4     | 4    | 4     |
| 27        | STD-82      | SCREW, No. 10-24 x 1/2 dr. hd.            |        |                       |      | 4    | 4    | 4     | 4    | 4    | 4    | 4     | 4    | 4     | 4    | 4     | 4    | 4     |
| 28        | 75009       | BRACKET, Fuel manifold                    |        |                       |      |      |      |       | 1    | 1    |      |       | 1    | 1     | 1    | 1     | 1    | 1     |
| 29        | STD-160     | WASHER, 1/4 lock                          |        |                       |      |      |      |       | 1    | 1    |      |       | 1    | 1     | 1    | 1     | 1    | 1     |
| 30        | STD-1499    | BOLT, 1/4-20 x 1/2                        |        |                       |      |      |      |       | 1    | 1    |      |       | 1    | 1     | 1    | 1     | 1    | 1     |

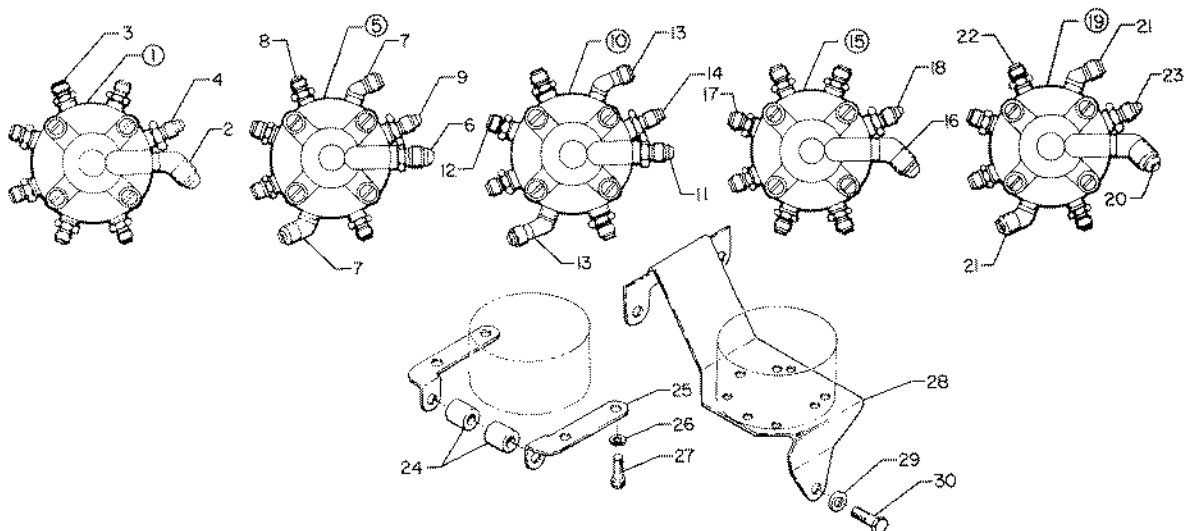


Figure 30.

OIL SUMP AND INDUCTION SYSTEM

FUEL LINES, FUEL HOSES AND ATTACHING PARTS

| FIG. REF. | PART NUMBER    | DESCRIPTION                                        | ON ALL | QUANTITY PER ASSEMBLY |      |      |      |       |      |      |      |      |      |       |      |       |       |       |    |    |    |
|-----------|----------------|----------------------------------------------------|--------|-----------------------|------|------|------|-------|------|------|------|------|------|-------|------|-------|-------|-------|----|----|----|
|           |                |                                                    |        | CARS                  | D1A5 | D1D5 | F1A5 | F1A5D | F1B5 | F1D5 | F1E5 | F1F5 | F1G5 | F1G5D | F1J5 | F1J5D | F1A5D | TAB5D |    |    |    |
| 1         | LW-12098-0-200 | TUBE ASSY., Fuel manifold to nozzles cyls. 1-2-5-6 |        |                       | 4    | 4    | 4    |       |      | 4    | 4    | 4    | 4    |       |      | 4     | 4     | 4     | 4  |    |    |
|           | LW-12098-0-200 | TUBE ASSY., Fuel manifold to nozzles cyl. 1        |        |                       |      |      |      | 1     | 1    |      |      | 1    | 1    | 1     | 1    | 1     |       |       |    |    |    |
|           | LW-12098-0-170 | TUBE ASSY., Fuel manifold to nozzles cyls. 3 & 4   |        |                       | 2    | 2    | 2    |       |      | 2    | 2    | 2    | 2    |       |      | 2     | 2     | 2     | 2  |    |    |
|           | LW-12098-0-276 | TUBE ASSY., Fuel manifold to nozzles cyl. 2        |        |                       |      |      |      | 1     | 1    |      |      | 1    | 1    | 1     | 1    | 1     |       |       |    |    |    |
|           | LW-12098-0-134 | TUBE ASSY., Fuel manifold to nozzles cyls. 3 & 5   |        |                       |      |      |      | 2     | 2    |      |      | 2    | 2    | 2     | 2    | 2     |       |       |    |    |    |
|           | LW-12098-0-210 | TUBE ASSY., Fuel manifold to nozzles cyls. 4 & 6   |        |                       |      |      |      | 2     | 2    |      |      | 2    | 2    | 2     | 2    | 2     |       |       |    |    |    |
| 2         | MS21919-G12    | CLIP, 3/4 dia. for No. 10 screw                    |        | 12                    | 12   | 10   | 8    | 8     | 10   | 10   | 10   | 10   | 10   | 8     | 8    | 8     | 10    | 8     | 10 | 12 | 12 |
| 3         | LW-12516       | CLIP, 1/16 ID for No. 10 screw                     |        | 12                    | 12   | 12   | 12   | 12    | 12   | 12   | 12   | 12   | 10   | 10    | 10   | 12    | 10    | 12    | 12 | 12 |    |
| 4         | STD-860        | SCREW, No. 10-32 x 5/8                             |        | 15                    | 15   | 15   | 13   | 13    | 15   | 15   | 15   | 15   | 13   | 13    | 13   | 15    | 13    | 15    | 15 | 15 |    |
| 5         | STD-425        | WASHER, No. 10 plain                               |        | 5                     | 5    | 3    | 2    | 3     | 3    | 3    | 3    | 3    | 2    | 2     | 3    | 3     | 3     | 3     | 3  | 3  |    |
| 6         | STD-670        | NUT, No. 10-32 self-locking                        |        | 15                    | 15   | 15   | 13   | 13    | 15   | 15   | 15   | 15   | 13   | 13    | 13   | 15    | 13    | 15    | 15 | 15 |    |
| 7         | 73136          | BRACKET, 90°                                       |        | 2                     | 2    | 4    | 4    | 4     |      | 4    | 4    | 4    |      | 4     | 4    | 4     |       |       |    |    |    |
| 8         | 73152          | BRACKET, Support clamp                             |        |                       |      | 1    |      |       | 1    | 1    | 1    |      |      |       | 1    | 1     |       |       |    |    |    |
| 9         | 76735          | BRACKET, Support clamp 90°                         |        |                       |      |      |      |       |      |      |      |      | 1    |       |      | 1     |       |       | 1  | 1  |    |
| 10        | 74278          | BRACKET ASSY., Fuel line support                   |        | 1                     | 1    |      |      |       |      |      |      |      |      |       |      |       |       |       |    |    |    |
| 11        | 73971          | CLAMP, 1/2 ID cushion type 1/4 screw               |        | 1                     | 1    | 2    | 1    | 1     | 1    | 2    | 2    | 1    |      | 1     | 1    |       |       |       |    |    |    |
| 12        | 73751          | CLAMP, 5/8 ID cushion type 1/4 screw               |        |                       |      |      |      |       | 2    |      |      | 2    | 2    |       |      | 2     | 2     | 2     | 2  | 2  |    |
| 13        | STD-692        | SCREW, No. 10-32 x 1/2                             |        | 2                     | 2    |      |      |       |      |      |      |      |      |       |      |       |       |       |    |    |    |
| 14        | 74070          | ELBOW, 3/8 tubing adj. 45°                         |        | 1                     |      |      | 1    |       |      |      |      | 1    |      |       |      |       |       |       |    |    |    |
| 15        | MS20823-6      | ELBOW, 3/8 flared 1/4 NPT, 45°                     |        |                       |      |      | 1    |       |      |      |      | 1    |      |       |      |       |       |       |    |    |    |
| 16        | MS20822-6      | ELBOW, 3/8 flared 1/4 NPT, 90°                     |        |                       |      |      | 1    | 1     | 1    | 2    |      |      |      |       |      |       | 1     |       |    |    |    |
| 17        | 77369          | TUBE ASSY., Fuel pump to injector                  |        |                       |      |      | 1    |       | 1    | 1    |      |      |      |       |      |       |       |       |    |    |    |

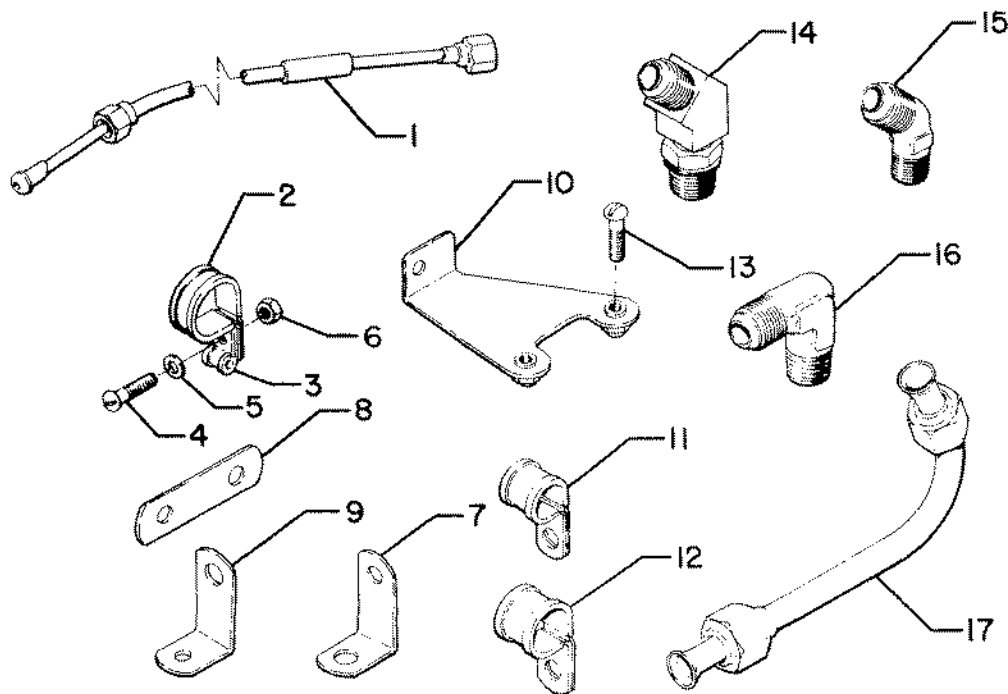


Figure 31.

OIL SUMP AND INDUCTION SYSTEM

FUEL LINES, FUEL HOSES AND ATTACHING PARTS

| FIG. REF. | PART NUMBER     | DESCRIPTION                                         | ON ALL | QUANTITY PER ASSEMBLY |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-----------|-----------------|-----------------------------------------------------|--------|-----------------------|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|           |                 |                                                     |        | CAS                   | DAS | GLD | KJAS | KJAD | KJBS | KJDS | KJES | KJFS | KJGD | KJGS | KJGS | KJJS | KJJD | KJAS | KJAS | TASD | TASD |
| 1         | 78523           | ELBOW, 3/8 flared 1/2 NPT 90°<br>(pump outlet)      |        |                       |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 2         | 76422           | ELBOW, 1/2 flared 1/2 NPT 90°<br>(pump inlet)       |        |                       |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 3         | 72377           | ELBOW, 3/8 flared adj. 90°<br>(pump outlet)         |        |                       |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 4         | 75739           | NIPPLE, 3/8 tube 9/16-18 st. thd.<br>(pump inlet)   |        |                       |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 5         | LW-10446        | ELBOW, 3/8 tube 90° swivel<br>(fuel injector inlet) |        |                       |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 6         | LW-13175-303    | HOSE ASSY., Fuel injector to fuel manifold          |        |                       |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 7         | LW-13175-4-274  | HOSE ASSY., Fuel injector to fuel manifold          |        |                       |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 8         | LW-13181-6-254  | HOSE, Fuel pump to injector                         |        |                       |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 9         | LW-13175-4-340  | HOSE ASSY., Fuel injector to fuel manifold          |        |                       |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 10        | LW-12799-6S-110 | HOSE ASSY., Fuel pump to fuel injector              |        |                       |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 11        | LW-13177-4-334  | HOSE ASSY., Fuel injector to fuel manifold          |        |                       |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 12        | LW-12876-4S-344 | HOSE ASSY., Fuel injector to fuel manifold          |        |                       |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 13        | LW-11925        | TUBE ASSY., Fuel pump to injector                   |        |                       |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 14        | LW-12877-6-124  | HOSE, Fuel pump to injector                         |        |                       |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 15        | LW-12877-6S-051 | HOSE ASSY., Fuel pump to injector                   |        |                       |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 16        | LW-12798-4-340  | HOSE ASSY., Fuel injector to fuel manifold          |        |                       |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 17        | LW-14183        | TUBE ASSY., Fuel pump to injector                   |        |                       |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |

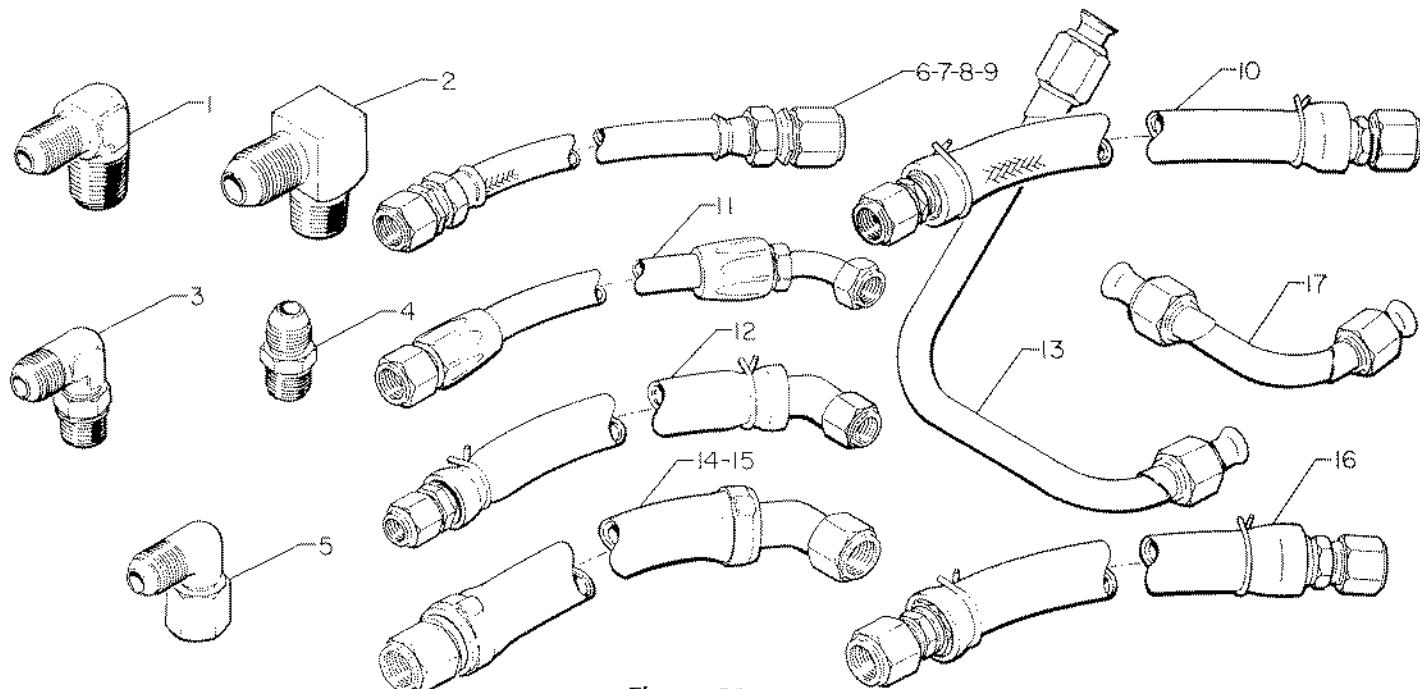


Figure 32.

## SERVICE KIT SECTION

## SEAL AND GASKET SET

IO-540-T4A5D, -T4B5D (Parallel Head) Wide Cylinder Flange Model

| PART<br>NUMBER | DESCRIPTION                       | QTY.<br>PER<br>ENG. |
|----------------|-----------------------------------|---------------------|
| LW-13377       | SEAL AND GASKET SET               | 1                   |
| MS29512-6      | SEAL, Oil                         | 1                   |
| MS29512-10     | SEAL, Oil                         | 1                   |
| MS16625-1081   | RING, Internal retaining          | 1                   |
| STD-111        | GASKET, Oil suction screen        | 1                   |
| STD-1045       | GASKET, Oil pressure relief valve | 1                   |
| 8313           | GASKET, Vacuum and hydraulic pump | 3                   |
| 60096          | GASKET, Fuel pump                 | 1                   |
| LW-14260       | SEAL, Tachometer drive            | 1                   |
| 62922          | SEAL, Shroud tube                 | 12                  |
| 66224          | GASKET, Fuel injector             | 1                   |
| 70310          | SEAL, Shroud tube                 | 12                  |
| 70455          | GASKET, Prop. drive gear plug     | 1                   |
| 70457          | GASKET, Oil filter extension      | 1                   |
| 71481          | Ring, Cylinder base seal          | 6                   |
| LW-14820       | RING, Internal retaining          | 8                   |
| 71973          | GASKET, Internal pipe flange      | 6                   |
| 72053          | GASKET, Governor                  | 1                   |
| 72091          | RING, Oil seal                    | 2                   |
| 72312          | RING, Oil seal oil level gage     | 1                   |
| 73383          | LOCKPLATE, Alternator bracket     | 1                   |
| 73818          | GASKET, Accessory housing         | 1                   |
| 75118          | GASKET, Exhaust flange            | 12                  |
| 75906          | GASKET, Rocker box cover          | 6                   |
| LW-15028       | 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                         | 6                   |
| 71193          | BOX, Set-up                       | 1                   |
| 72220          | GASKET                            | 1                   |
| 77154          | GASKET                            | 1                   |
| STD-294        | GASKET                            | 1                   |
| 65321          | GASKET                            | 6                   |
| STD-1733       | "O" RING                          | 1                   |
| MS9068-009     | RING, Oil seal                    | 1                   |
| 72059          | GASKET                            | 1                   |

SERVICE KIT SECTION

CYLINDER, PISTON AND RING KIT  
 IO-540-C4B5, -D4A5, -T4A5D and -T4B5D Wide Cylinder Flange Models

| PART<br>NUMBER | DESCRIPTION                                                                 | QTY.<br>PER<br>ENG. |
|----------------|-----------------------------------------------------------------------------|---------------------|
| 76296          | CYLINDER, PISTON AND RING KIT                                               | 1                   |
| STD-1411       | NUT, Plain, 1/4-20                                                          | 1                   |
| STD-1925       | SCREW                                                                       | 6                   |
| 60009          | KEY, Valve intake                                                           | 2                   |
| 62922          | SEAL, Shroud tube                                                           | 2                   |
| LW-13790       | SHAFT, Valve rocker                                                         | 1                   |
| 60828          | PLUG, Piston pin                                                            | 2                   |
| 75906          | GASKET, Rocker box cover                                                    | 1                   |
| 61247          | COVER, Rocker box                                                           | 1                   |
| MS13998-3      | CAP, Valve stem exhaust (rotator type)                                      | 1                   |
| LW-11800       | SPRING, Valve outer                                                         | 2                   |
| 65441          | SEAT, Valve spring lower (intake)                                           | 1                   |
| LW-11795       | SPRING, Valve inner                                                         | 2                   |
| LW-10077       | SEAT, Valve spring inner (intake)                                           | 1                   |
| LW-14995       | SPRING, Shroud tube                                                         | 1                   |
| LW-12272       | LOCKPLATE, Shroud tube                                                      | 1                   |
| 69444          | ROCKER ASSEMBLY, Valve intake                                               | 1                   |
| LW-10076       | SEAT, Valve spring, upper (exhaust) (rotator type)                          | 1                   |
| LW-14077       | PIN, Piston                                                                 | 1                   |
| 70310          | SEAL, Shroud tube                                                           | 2                   |
| 71195          | BOX, Set-up                                                                 | 1                   |
| 71481          | SEAL, Cylinder base                                                         | 1                   |
| 74541          | VALVE, Exhaust (rotator type) sodium cooled chrome stem                     | 1                   |
| MS13997-3      | KEY, Valve, exhaust (rotator type)                                          | 2                   |
| 73857          | RING, Piston, oil regulating (Ch.) (expander type)                          | 1                   |
| 73938          | VALVE, Intake                                                               | 1                   |
| 74241          | RING, Piston compression                                                    | 2                   |
| LW-12427       | CYLINDER AND HEAD ASSY., Wide deck<br>(Nitrided Cyls., Straight Valve Head) | 1                   |
| 75089          | PISTON                                                                      | 1                   |
| 74636          | ROCKER ASSY., Exhaust                                                       | 1                   |
| LW013323       | SEAT, Valve spring, lower (exhaust)                                         | 1                   |
| LW012892       | THRUST BUTTON                                                               | 2                   |
| STD-1215       | BOLT                                                                        | 2                   |
| 72198          | PLUG                                                                        | 2                   |
| SSP672         | TAG                                                                         | 1                   |
| LW-11775       | PLUG, Piston pin (Alum.)                                                    | 2                   |
| SSP2472        | TAG                                                                         | 1                   |

## SERVICE KIT SECTION

CYLINDER, PISTON AND RING KIT  
 IO-540-G1D5, -K1A5, -K1A5D, -K1B5, -K1D5, -K1E5, -K1F5, -K1F5D,  
 -K1G5, -K1J5 and -K1J5D Wide Cylinder Flange

| PART<br>NUMBER | DESCRIPTION                          | QTY.<br>PER<br>ENG. |
|----------------|--------------------------------------|---------------------|
| LW-13115       | CYLINDER, PISTON AND RING KIT        | 1                   |
| STD-160        | WASHER                               | 4                   |
| STD-1215       | BOLT                                 | 2                   |
| STD-1411       | NUT                                  | 4                   |
| STD-1925       | SCREW                                | 8                   |
| MS13997-3      | KEY, Exhaust (rotator type)          | 2                   |
| MS13998-3      | CAP, Valve stem, exhaust             | 1                   |
| 72050          | KEY, Valve intake                    | 2                   |
| 60828          | PLUG, Piston pin                     | 2                   |
| 62922          | SEAL, Shroud tube                    | 4                   |
| 66731          | COVER, Valve rocker shaft            | 2                   |
| 66732          | GASKET, Valve rocker shaft cover     | 2                   |
| 67193          | GASKET, Rocker box cover             | 1                   |
| LW-13321       | SEAT, Valve spring, lower (intake)   | 1                   |
| 68795          | COVER ASSY., Rocker box              | 1                   |
| LW-13446       | PIN, Piston pin                      | 1                   |
| LW-14077       | PIN, Piston pin                      | 1                   |
| 71195          | BOX, Set-up                          | 1                   |
| 71265          | ROCKER ASSY., Exhaust valve          | 1                   |
| 71266          | ROCKER ASSY., Intake valve           | 1                   |
| 71481          | SEAL, Cylinder base                  | 1                   |
| 71549          | WASHER, Valve rocker thrust          | 2                   |
| 72626          | SHAFT, Valve rocker                  | 2                   |
| 73111          | VALVE, Exhaust 1/2" sodium cooled    | 1                   |
| 73112          | SEAT, Valve spring, lower            | 1                   |
| LW-13322       | SEAT, Valve spring, lower            | 1                   |
| LW-13622       | VALVE, Intake (small hd.)            | 1                   |
| 73857          | RING, Piston, oil regulating, chrome | 1                   |
| LW-12328       | RING, Piston, oil regulating, chrome | 1                   |
| 74241          | RING, Piston compression (chrome)    | 2                   |
| LW-10076       | SEAT, Valve spring, upper (exhaust)  | 1                   |
| 69532          | SEAT, Valve spring, upper (intake)   | 1                   |
| LW-10207-S     | PISTON (3 Ring)                      | 1                   |
| LW-11796       | SPRING, Valve outer                  | 2                   |
| LW-11797       | SPRING, Valve inner                  | 2                   |
| LW-12987       | CYLINDER ASSY., Nitrided             | 1                   |
| LW-11775       | PLUG, Piston pin                     | 2                   |
| SSP2272        | TAG                                  | 1                   |
| 62388          | CAP                                  | 1                   |

## SERVICE KIT SECTION

CYLINDER, PISTON AND RING KIT  
IO-540-S1A5 Wide Cylinder Flange Models

| PART<br>NUMBER | DESCRIPTION                      | QTY.<br>PER<br>ENG. |
|----------------|----------------------------------|---------------------|
| LW-14718       | CYLINDER, PISTON AND RING KIT    | 1                   |
| 72050          | KEY, Valve                       | 2                   |
| 60828          | PLUG, Piston pin                 | 2                   |
| 62922          | SEAL, Shroud tube                | 4                   |
| 66731          | COVER, Valve rocker shaft        | 2                   |
| 66732          | GASKET, Valve rocker shaft cover | 2                   |
| 67112          | ROCKER ASSY., Exhaust valve      | 1                   |
| 67113          | ROCKER ASSY., Intake valve       | 1                   |
| 67193          | GASKET, Rocker box cover         | 1                   |
| LW-13321       | SEAT, Valve spring, lower        | 1                   |
| 68795          | COVER ASSY., Rocker box          | 1                   |
| 71195          | BOX, Set-up                      | 1                   |
| 71481          | RING, Oil seal                   | 1                   |
| 71549          | WASHER, Valve rocker             | 2                   |
| 72626          | SHAFT, Valve rocker              | 2                   |
| 73857          | RING, Oil regulating             | 1                   |
| 73112          | SEAT, Valve spring, lower        | 1                   |
| LW-13322       | SEAT, Valve spring, lower        | 1                   |
| LW-13622       | VAVLE INTAKE                     | 1                   |
| 74241          | RING, Piston                     | 2                   |
| 74802          | VALVE, Exhaust                   | 1                   |
| LW-10076       | SEAT, Valve spring               | 1                   |
| 69532          | SEAT, Valve spring               | 1                   |
| LW-11775       | PLUG, Piston pin                 | 2                   |
| LW-11796       | SPRING, Valve outer              | 2                   |
| LW-11797       | SPRING, Valve auxiliary          | 2                   |
| LW-10207-S     | PISTON                           | 1                   |
| LW-13446       | PISTON PIN                       | 1                   |
| LW-14077       | PISTON PIN                       | 1                   |
| LW-12988       | CYLINDER ASSY.                   | 1                   |
| MS13997-3      | KEY, Valve                       | 2                   |
| MS13998-3      | CAP, Valve stem                  | 1                   |
| STD-160        | WASHER, Internal lock            | 4                   |
| STD-1411       | NUT, Plain                       | 4                   |
| STD-1215       | BOLT                             | 2                   |
| STD-1925       | SCREW                            | 9                   |
| SSP2272        | TAG                              | 1                   |
| 62388          | CAP                              | 2                   |

## SERVICE KIT SECTION

SEAL AND GASKET SET  
 IO-540-C4B5, -D4A5 (Parallel Valve Head) Conventional and  
 Wide Cylinder Flange Models

| PART<br>NUMBER | DESCRIPTION                     | QTY.<br>PER<br>ENG. |
|----------------|---------------------------------|---------------------|
| 71569-1        | SEAL AND GASKET SET             | 1                   |
| STD-111        | GASKET                          | 1                   |
| STD-208        | SEAL, Oil                       | 2                   |
| STD-213        | SEAL, Oil                       | 1                   |
| STD-294        | GASKET, Annular                 | 2                   |
| STD-1045       | GASKET, Annular                 | 1                   |
| 1691-C         | GASKET, Fuel pump               | 1                   |
| 8313           | GASKET, Vacuum pump             | 2                   |
| 60096          | GASKET, Fuel pump               | 1                   |
| LW-14260       | SEAL, Tachometer drive oil      | 1                   |
| 61173          | GASKET, Oil pressure housing    | 1                   |
| 61183          | GASKET, Accessory adapter       | 1                   |
| 62224          | GASKET, Magneto adapter         | 4                   |
| 62922          | SEAL, Shroud tube               | 12                  |
| 66224          | GASKET, Carburetor              | 1                   |
| 67516          | LOCKPLATE, Crankshaft gear      | 1                   |
| 68315          | GASKET, Accessory drive adapter | 1                   |
| LW-12272       | LOCKPLATE, Shroud tube          | 6                   |
| 69164          | GASKET, Fuel pump adapter       | 1                   |
| 69551          | GASKET, Accessory drive adapter | 1                   |
| 70310          | SEAL, Shroud tube               | 12                  |
| 70455          | GASKET                          | 1                   |
| 70457          | GASKET                          | 1                   |
| 71193          | BOX, Set-up                     | 1                   |
| 71481          | RING, Oil seal                  | 6                   |
| 71667          | LOCKPLATE, Fuel pump idler gear | 1                   |
| 71973          | GASKET, 2 bolt flange           | 6                   |
| 72053          | GASKET, Governor                | 1                   |
| 72059          | GASKET                          | 1                   |
| 72075          | RING, Oil seal                  | 8                   |
| 72078          | LOCKPLATE, Cam gear             | 2                   |
| 72091          | RING, Oil seal                  | 2                   |
| 72210          | GASKET                          | 1                   |
| 72220          | GASKET, Oil level gage          | 1                   |
| 72312          | RING, Oil seal                  | 1                   |
| LW-13306       | GASKET, Oil sump                | 1                   |
| 73383          | LOCKPLATE, Generator bracket    | 2                   |
| 73818          | GASKET, Accessory housing       | 1                   |
| 74305          | SEAL                            | 1                   |
| 75906          | GASKET, Rocker box cover        | 6                   |
| 76510          | GASKET                          | 1                   |
| LW-12795       | GASKET                          | 1                   |
| 76940          | SEAL, Crankshaft oil            | 1                   |
| LW-12681       | GASKET                          | 2                   |
| LW-15628       | SEAL, Crankshaft                | 1                   |
| LW-13792       | SEAL, Crankshaft oil            | 1                   |
| 69345          | SPACER                          | 6                   |
| LW-14995       | SPRING                          | 6                   |
| MS16625-1081   | RING, Internal retaining        | 1                   |
| 65321          | GASKET                          | 6                   |



## SERVICE KIT SECTION

## SEAL AND GASKET SET

IO-540-G1D5, -K1A5, -K1A5D, -K1B5, -K1D5, -K1E5, -K1F5, -K1F5D, -K1G5,  
-K1G5D, -K1J5, -K1J5D, -S1A5 (Angle hd. valve) Wide Cylinder Flange Models

| PART<br>NUMBER | DESCRIPTION                      | QTY.<br>PER<br>ENG. |
|----------------|----------------------------------|---------------------|
| 73185-1        | SEAL AND GASKET SET              | 1                   |
| MS29512-6      | SEAL                             | 1                   |
| MS29512-8      | SEAL, Oil                        | 1                   |
| STD-111        | GASKET, Annular                  | 2                   |
| STD-208        | SEAL, Oil                        | 1                   |
| STD-213        | SEAL, Oil (Fuel pump drive)      | 1                   |
| STD-294        | GASKET, Annular                  | 2                   |
| STD-1045       | GASKET, Annular                  | 1                   |
| STD-1441       | GASKET, Annular                  | 6                   |
| 1691-C         | GASKET, Fuel pump pad            | 1                   |
| 8313           | GASKET, Vacuum pump              | 2                   |
| LW-14260       | SEAL, Tachometer                 | 1                   |
| 61173          | GASKET, Oil pressure housing     | 1                   |
| 61183          | GASKET, Accessory adapter        | 1                   |
| 62224          | GASKET, Magneto                  | 4                   |
| 62922          | SEAL, Shroud tubw                | 24                  |
| 66732          | GASKET, Valve rocker shaft cover | 12                  |
| 67193          | GASKET, Rocker box cover         | 6                   |
| 67516          | LOCKPLATE, Crankshaft gear       | 1                   |
| 68315          | GASKET, Accessory drive adapter  | 1                   |
| 69164          | GASKET, Fuel pump adapter        | 1                   |
| 69551          | GASKET, Accessory pad cover      | 1                   |
| 70455          | GASKET                           | 1                   |
| 70457          | GASKET, Oil level gage           | 1                   |
| 72210          | GASKET, Air throttle housing     | 1                   |
| 71450          | GASKET, Rocker box               | 6                   |
| 71481          | RING, Oil seal                   | 6                   |
| 71667          | LOCKPLATE, Crankshaft idler gear | 2                   |
| 71973          | GASKET, Intake flange            | 6                   |
| 72053          | GASKET, Governor drive pad       | 1                   |
| 72075          | SEAL, Oil                        | 8                   |
| 72078          | LOCKPLATE, Camshaft gear         | 2                   |
| 72091          | RING, Oil seal                   | 2                   |
| 72220          | GASKET, Oil filler plug          | 1                   |
| 72312          | RING, Oil seal                   | 1                   |
| 72711          | RING, Oil seal intake pipe       | 6                   |
| LW-13306       | GASKET, Oil sump                 | 1                   |
| 73032          | GASKET, Air inlet housing        | 1                   |
| 73383          | LOCKPLATE                        | 2                   |
| 73818          | GASKET, Accessory housing        | 1                   |
| 74305          | SEAL, Crankshaft oil             | 1                   |
| 75233          | "O" RING                         | 24                  |
| 76510          | GASKET                           | 1                   |
| 76940          | SEAL, Crankshaft oil             | 1                   |
| LW-15628       | SEAL, Crankshaft                 | 1                   |
| LW-13792       | SEAL, Crankshaft oil             | 1                   |
| LW-12681       | GASKET, Magneto                  | 2                   |
| LW-12795       | GASKET,                          | 1                   |
| STD-589        | GASKET                           | 1                   |
| STD-1737       | RING                             | 1                   |
| 71193          | BOX                              | 1                   |

## SERVICE KIT SECTION

SEAL AND GASKET SET  
IO-540-K1A5D, -K1G5D (Angle head) Wide Cylinder Flange Models

| PART<br>NUMBER | DESCRIPTION                       | QTY.<br>PER<br>ENG. |
|----------------|-----------------------------------|---------------------|
| LW-13367       | SEAL AND GASKET SET               | 1                   |
| MS29512-10     | SEAL, Oil                         | 2                   |
| MS16625-1081   | RING, Internal retaining          | 1                   |
| STD-111        | GASKET, Oil suction screen        | 1                   |
| STD-208        | SEAL, Oil                         | 1                   |
| STD-1045       | GASKET, Oil pressure relief valve | 1                   |
| 1691-C         | GASKET, Fuel pump                 | 1                   |
| 8313           | GASKET, Vacuum and hydraulic pump | 2                   |
| LW-14260       | SEAL, Tachometer drive            | 1                   |
| 62922          | SEAL, Shroud tube                 | 24                  |
| 66732          | GASKET, Valve rocker shaft cover  | 12                  |
| 67193          | GASKET, Rocker box cover          | 6                   |
| 69164          | GASKET, Fuel pump adapter         | 1                   |
| 70455          | GASKET, Prop. drive gear plug     | 1                   |
| 70457          | GASKET, Oil filter extension      | 1                   |
| 71450          | GASKET, Rocker box cover          | 6                   |
| 71481          | RING, Cylinder base seal          | 6                   |
| LW-14820       | RING, Internal retaining          | 8                   |
| 71973          | GASKET, Intake pipe flange        | 6                   |
| 72053          | GASKET, Governor                  | 1                   |
| 72091          | RING, Oil seal                    | 2                   |
| 72210          | GASKET, Air throttle housing      | 1                   |
| 72220          | GASKET, Oil level gage            | 1                   |
| 72312          | RING, Oil seal, oil level gage    | 1                   |
| 72711          | RING, Seal intake pipe            | 6                   |
| 73032          | GASKET, Inlet housing             | 1                   |
| 73383          | LOCKPLATE, Alternator bracket     | 1                   |
| 73818          | GASKET, Accessory housing         | 1                   |
| LW-15619       | GASKET, Exhaust                   | 12                  |
| 75118          | GASKET, Exhaust flange            | 12                  |
| LW-15628       | SEAL, Crankshaft oil              | 1                   |
| LW-10332       | LOCKPLATE, Crankshaft gear        | 1                   |
| LW-12681       | GASKET, Magneto                   | 1                   |
| LW-13077       | SPRING, Shroud tube               | 24                  |
| LW-13306       | GASKET, Oil sump                  | 1                   |
| STD-589        | GASKET                            | 1                   |
| 71193          | BOX                               | 1                   |
| 60096          | GASKET, Fuel pump accessory       | 1                   |

SECTION 8  
PARTS SUPERSEDURES

## SECTION 1

| Part No.           | Superseded by | Name            | Remarks                                                        |
|--------------------|---------------|-----------------|----------------------------------------------------------------|
| Reference Page 1-1 |               |                 |                                                                |
| LW-13802           | LW-13838      | Crankcase Assy. | Due to increased flange thickness at bottom parting line.      |
| 61261              | 31C-12        | Stud            | Parts standardization.                                         |
| 67528              | 31C-13        | Stud            | Parts standardization.                                         |
| 38-15              | 38-16         | Stud            | Product improvement.                                           |
| 38-17              | 38-16         | Stud            | Product improvement.                                           |
| LW-13794           | 31C-8         | Stud            | Product improvement.                                           |
| 68316              | 31C-14        | Stud            | Product improvement.                                           |
| 67556              | 31C-16        | Stud            | Parts standardization.                                         |
| Reference Page 1-3 |               |                 |                                                                |
| 72051              | 75737         | Extension       | Product improvement.                                           |
| 75759              | 77527         | Extension       | Product improvement.                                           |
| 73680              | 75675         | Extension       | Product improvement.                                           |
| 72043              | LW-14756      | Gage Assy.      | Parts standardization.                                         |
| 74702              | LW-14732      | Gage Assy.      | Parts standardization.                                         |
| 74731              | LW-14754      | Gage Assy.      | Parts standardization.                                         |
| 76897              | LW-14729      | Gage Assy.      | Parts standardization.                                         |
| 79071              | LW-14737      | Gage Assy.      | Parts standardization.                                         |
| LW-13010           | LW-14730      | Gage Assy.      | Parts standardization.                                         |
| LW-14770           | 75133         | Gage Assy.      | Parts standardization.                                         |
| 71045              | 70456         | Bracket         | Product improvement.                                           |
| 72307              | 72306         | Bracket         | Product improvement.                                           |
| STD-690            | STD-33        | Washer          | Product improvement.                                           |
| Reference Page 1-5 |               |                 |                                                                |
| STD-28             | STD-425       | Washer          | To improve clamp on shroud tube.                               |
| 71714              | 76529         | Plug            | Machined for new adjustable oil pressure relief valve.         |
| 76163              | 77808         | Valve Assy.     | To use valve assy. having hex rather than slot for adjustment. |
| LW-10124           | LW-11021      | Bearing         | New bearing has larger dowel hole.                             |

SECTION 8  
PARTS SUPERSEDURES

## SECTION 1 (CONT).

| Part No.                   | Superseded by | Name                        | Remarks                                                     |
|----------------------------|---------------|-----------------------------|-------------------------------------------------------------|
| Reference Page 1-5 (Cont.) |               |                             |                                                             |
| 73049                      | LW-10124      | Bearing                     | New bearing has larger dowel hole.                          |
| 74303                      | LW-11575      | Bearing                     | To incorporate straight main bearing dowels.                |
| 77044                      | LW-13884      | Bearing                     | Product improvement.                                        |
| 75210                      | 77044         | Bearing                     | Product improvement.                                        |
| 71637                      | 75210         | Bearing                     | Product improvement.                                        |
| 78319                      | LW-13885      | Bearing                     | Product improvement.                                        |
| 74304                      | 78319         | Bearing                     | Product improvement.                                        |
| LW-12077                   | LW-13792      | Seal                        | Has glue retention grooves for use on direct drive engines. |
| 77377                      | LW-12077      | Seal                        | Product improvement.                                        |
| 76940                      | 77377         | Seal                        | Product improvement.                                        |
| 77377                      | LW-11997      | Seal                        | Product improvement.                                        |
| 78443                      | LW-15628      | Seal                        | Product improvement.                                        |
| 74305                      | 78443         | Seal                        | Product improvement.                                        |
| 69529                      | 72877         | Body, Hydraulic Tappet      | Product improvement.                                        |
| Reference Page 1-6         |               |                             |                                                             |
| 77876                      | LW-14021      | Shaft                       | Product improvement.                                        |
| 70395                      | 73249         | Washer                      | Product improvement.                                        |
| 70394                      | 73250         | Washer                      | Product improvement.                                        |
| 70393                      | 73251         | Washer                      | Product improvement.                                        |
| MS-9048-111                | AN565B1032H5  | Set Screw                   | Product improvement.                                        |
| 70454                      | LW-13896      | Plug                        | Shorter hex head.                                           |
| Reference Page 1-7         |               |                             |                                                             |
| 74576                      | 75079         | Crankshaft and Ct'wt. Assy. | Product improvement                                         |
| 73997                      | 74576         | Crankshaft and Ct'wt. Assy. | Product improvement.                                        |
| 72803                      | 73997         | Crankshaft and Ct'wt. Assy. | Center damper lug eliminated.                               |
| 74957                      | 75040         | Crankshaft and Ct'wt. Assy. | Product improvement.                                        |

SECTION 8  
PARTS SUPERSEDURES

## SECTION 1 (CONT.)

| Part No.                   | Superseded by | Name             | Remarks              |
|----------------------------|---------------|------------------|----------------------|
| Reference Page 1-7 (Cont.) |               |                  |                      |
| 70256                      | 73810         | Bushing          | Product improvement. |
| 71327                      | 72062         | Bushing          | Product improvement. |
| 69837                      | 71327         | Bushing          | Product improvement. |
| 68700                      | 69837         | Bushing          | Product improvement. |
| 71326                      | 72061         | Bushing          | Product improvement. |
| 69836                      | 71326         | Bushing          | Product improvement. |
| 62530                      | 69836         | Bushing          | Product improvement. |
| 71325                      | 72060         | Bushing          | Product improvement. |
| 69838                      | 71325         | Bushing          | Product improvement. |
| 68886                      | 69838         | Bushing          | Product improvement. |
| 72071                      | 72074         | Bushing          | Product improvement. |
| 71325                      | 72071         | Bushing          | Product improvement. |
| 69838                      | 71325         | Bushing          | Product improvement. |
| 68886                      | 69838         | Bushing          | Product improvement. |
| 75657                      | 79024         | Bushing          | Product improvement. |
| 71906                      | LW-14820      | Ring, Internal   | Changes size.        |
| STD-1559                   | STD-1937      | Bolt             | Product improvement. |
| 75190                      | 76148         | Camshaft         | Product improvement. |
| 75030                      | 77579         | Support Assy.    | Product improvement. |
| Reference Page 1-9         |               |                  |                      |
| LW-10575                   | LW-13795      | Crankshaft       | Product improvement. |
| 73014                      | LW-10575      | Crankshaft       | Product improvement. |
| 73010                      | 73014         | Crankshaft       | Product improvement. |
| STD-1926                   | STD-2167      | Screw            | Product improvement. |
| STD-1409                   | STD-1926      | Screw            | Product improvement. |
| STD-1410                   | STD-2168      | Nut              | Product improvement. |
| 71643                      | 76155         | Crankshaft Assy. | Product improvement. |
| 75709                      | 78368         | Pin              | Product improvement. |
| 68753                      | 76118         | Spacer           | Product improvement. |

SECTION 8  
PARTS SUPERSEDURES

## SECTION 1 (CONT.)

| Part No.            | Superseded by | Name       | Remarks              |
|---------------------|---------------|------------|----------------------|
| Reference Page 1-10 |               |            |                      |
| STD-1415            | STD-1931      | Bolt       | Product improvement. |
| LW-25H-2.00         | STD-1646      | Bolt       | Product improvement. |
| STD-1415            | STD-2084      | Bolt       | Product improvement. |
| STD-1197            | AN-6-34A      | Bolt       | Product improvement. |
| STD-38              | STD-596       | Nut        | Product improvement. |
| LW-10941            | LW-11866      | Spacer Nut | Product improvement. |

## SECTION 2

|                    |          |                   |                                  |
|--------------------|----------|-------------------|----------------------------------|
| Reference Page 2-1 |          |                   |                                  |
| 61352              | 73818    | Gasket            | Product improvement.             |
| 75367              | 76152    | Accessory Housing | To provide positive lubrication. |
| 71648              | 75367    | Accessory Housing | To provide outboard support.     |
| 76487              | 78490    | Accessory Housing | To provide positive lubrication. |
| LW-10915           | LW-10916 | Accessory Housing | Product improvement.             |
| LW-10913           | LW-10917 | Accessory Housing | Product improvement.             |
| 61265              | 31CD-17  | Stud              | Parts standardization.           |
| 70470              | 31C-21   | Stud              | Parts standardization.           |
| 61668              | 31C-19   | Stud              | Parts standardization.           |
| 61238              | 25C-21   | Stud              | Parts standardization.           |
| 61262              | 25C-12   | Stud              | Parts standardization.           |
| 69942              | 25C-12   | Stud              | Parts standardization.           |
| STD-453            | STD-784  | Plug              | Product improvement.             |
| STD-405            | 1102     | Plug              | Product improvement.             |
| MS-124662          | LW-12589 | Insert            | Product improvement.             |
| Reference Page 2-3 |          |                   |                                  |
| 76354              | 78528    | Body, Oil Pump    | Product improvement.             |
| 69183              | 76354    | Body, Oil Pump    | Product improvement.             |
| 78532              | LW-13775 | Impeller Assy.    | Product improvement.             |
| 67512              | 74641    | Shaft, Oil Pump   | Reduce stress.                   |
| 78619              | 74641    | Shaft, Oil Pump   | Reduce stress.                   |
| 69183              | 75287    | Body Assy.        | Product improvement.             |

SECTION 8  
PARTS SUPERSEDURES

## SECTION 2 (CONT.)

| Part No.                   | Superseded by | Name             | Remarks                      |
|----------------------------|---------------|------------------|------------------------------|
| Reference Page 2-3 (Cont.) |               |                  |                              |
| 73872                      | 61297         | Impeller         | Product improvement.         |
| 73873                      | 61298         | Impeller         | Product improvement.         |
| 61165                      | LW-14260      | Seal             | Product improvement.         |
| STD-1415                   | STD-1931      | Bolt             | Increased thread engagement. |
| STD-705                    | STD-1875      | Bolt             | Product improvement.         |
| Reference Page 2-5         |               |                  |                              |
| 76691                      | LW-12795      | Gasket           | Product improvement.         |
| 74904                      | 76691         | Gasket           | Product improvement.         |
| 61400                      | 25C-10        | Stud             | Longer stud.                 |
| STD-1884                   | STD-1856      | Screw            | Product improvement.         |
| 74911                      | 77853         | Oil Filter       | Product improvement.         |
| LW-13217                   | LW-13904      | Converter Plate  | Product improvement.         |
| LW-13215                   | LW-13906      | Oil Filter Assy. | Product improvement.         |
| 69451                      | 75944         | Valve            | Product improvement.         |
| Reference Page 2-7         |               |                  |                              |
| STD-1177                   | STD-1774      | Roll Pin         | Product improvement.         |
| 67537                      | 72974         | Gear Assy.       | Parts standardization.       |
| 60869                      | 71596         | Washer           | Interchangeability.          |
| AN-4045-1                  | 8313          | Gasket           | Product improvement.         |
| 69675                      | 62417         | Plug             | Product improvement.         |
| Reference Page 2-9         |               |                  |                              |
| 71673                      | 72964         | Gear Assy.       | Parts standardization.       |
| 60869                      | 71596         | Washer           | Parts standardization.       |
| 68531                      | 71675         | Adapter Assy.    | Product improvement.         |
| 61262                      | 25C-12        | Stud             | Parts standardization.       |
| 69942                      | 25C-12        | Stud             | Parts standardization.       |
| STD-1177                   | STD-1174      | Roll Pin         | Product improvement.         |
| AN-4045-1                  | 8313          | Gasket           | Product improvement.         |
| 20414                      | 72412         | Cover            | Product improvement.         |

SECTION 8  
PARTS SUPERSEDURES

## SECTION 2 (CONT.)

| Part No.            | Superseded by | Name          | Remarks                |
|---------------------|---------------|---------------|------------------------|
| Reference Page 2-11 |               |               |                        |
| 75247               | LW-15473      | Fuel Pump     | New cable is heavier.  |
| 75131               | 75247         | Fuel Pump     | Product improvement.   |
| 74999               | 75131         | Fuel Pump     | Product improvement.   |
| 73870               | 74999         | Fuel Pump     | Product improvement.   |
| 73973               | 73870         | Fuel Pump     | Product improvement.   |
| 73036               | 73973         | Fuel Pump     | Product improvement.   |
| 73160               | LW-10799      | Spacer        | Parts standardization. |
| LW-11970            | LW-13920      | Pump          | Parts standardization. |
| 76537               | LW-13909      | Pump          | Parts standardization. |
| 77443               | LW-13909      | Pump          | Parts standardization. |
| 76846-1             | 76537         | Pump          | Product improvement.   |
| 61154               | 77309         | Bushing       | Parts standardization. |
| 72247               | 72972         | Gear Assy.    | Parts standardization. |
| 73310               | 69159         | Adapter Assy. | Product improvement.   |
| STD-1177            | STD-1774      | Roll Pin      | Product improvement.   |

## SECTION 3

Reference Page 3-1

|          |          |                      |                        |
|----------|----------|----------------------|------------------------|
| LW-11457 | LW-11750 | Connecting Rod Assy. | Interchangeable.       |
| LW-10722 | LW-11457 | Connecting Rod Assy. | Product improvement.   |
| 74502    | LW-10722 | Connecting Rod Assy. | Product improvement.   |
| 71987    | 74502    | Connecting Rod Assy. | Product improvement.   |
| 71092    | 71987    | Connecting Rod Assy. | Product improvement.   |
| 65819    | LW-13923 | Bushing              | Product improvement.   |
| 74644    | 75061    | Bolt                 | Parts standardization. |
| 71087    | 74644    | Bolt                 | Parts standardization. |
| 73171    | 74644    | Bolt                 | Parts standardization. |
| 45307    | 71087    | Bolt                 | Parts standardization. |
| 74645    | 75060    | Bolt                 | Parts standardization. |
| 73172    | 74645    | Bolt                 | Parts standardization. |
| 72794    | 73172    | Bolt                 | Parts standardization. |



SECTION 8  
PARTS SUPERSEDURES

## SECTION 3 (CONT.)

| Part No.                   | Superseded by | Name                    | Remarks                            |
|----------------------------|---------------|-------------------------|------------------------------------|
| Reference Page 3-1 (Cont.) |               |                         |                                    |
| 74646                      | LW-12186      | Nut                     | Parts standardization.             |
| 71950                      | 74646         | Nut                     | Parts standardization.             |
| STD-872                    | 71950         | Nut                     | Parts standardization.             |
| 69460                      | 71950         | Nut                     | Parts standardization.             |
| 72218                      | LW-13521      | Bearing                 | Product improvement.               |
| 74530                      | 75089         | Piston                  | Product improvement.               |
| 72967                      | 74530         | Piston                  | Product improvement.               |
| 78203                      | LW-10207      | Piston                  | Product improvement.               |
| 75617                      | 78203         | Piston                  | Product improvement.               |
| 73264                      | 75617         | Piston                  | Product improvement.               |
| 73947                      | 75617         | Piston                  | Product improvement.               |
| 73023                      | 73264         | Piston                  | Product improvement.               |
| 72249                      | 73947         | Piston                  | Product improvement.               |
| 69457                      | 73857         | Ring                    | Parts standardization.             |
| 68509                      | 69457         | Ring                    | Parts standardization.             |
| Reference Page 3-3         |               |                         |                                    |
| 75874                      | LW-12427      | Cylinder and Head Assy. | Product improvement.               |
| 74973                      | 75874         | Cylinder and Head Assy. | Product improvement.               |
| 74974                      | LW-12987      | Cylinder and Head Assy. | To incorporate small intake valve. |
| 77344                      | LW-12988      | Cylinder and Head Assy. | To incorporate small intake valve. |
| 76496                      | 77344         | Alternator              | Product improvement.               |
| 72212                      | LW-12688      | Seat, Valve             | Parts standardization.             |
| 71408                      | 72212         | Seat, Valve             | Parts standardization.             |
| 69530                      | 72058         | Seat, Valve             | Parts standardization.             |
| 66527                      | 72058         | Seat, Valve             | Parts standardization.             |
| 67835                      | 71894         | Seat, Valve             | Parts standardization.             |
| 71407                      | 71894         | Seat, Valve             | Parts standardization.             |

SECTION 8  
PARTS SUPERSEDURES

## SECTION 3 (CONT.)

| Part No.                   | Superseded by | Name          | Remarks                   |
|----------------------------|---------------|---------------|---------------------------|
| Reference Page 3-3 (Cont.) |               |               |                           |
| 61250                      | 76943         | Guide, Valve  | Flangeless exhaust valve. |
| 60028                      | 76943         | Guide, Valve  | Flangeless exhaust valve. |
| 66713                      | LW-11956      | Guide, Valve  | Flangeless exhaust valve. |
| 74230                      | 77160         | Guide, Valve  | Flangeless exhaust valve. |
| 69533                      | 74230         | Guide, Valve  | Flangeless exhaust valve. |
| 72897                      | LW-11957      | Guide, Valve  | Flangeless exhaust valve. |
| 69693                      | 72897         | Guide, Valve  | Flangeless exhaust valve. |
| 69358                      | 69693         | Guide, Valve  | Flangeless exhaust valve. |
| 75838                      | LW-11958      | Guide, Valve  | Flangeless exhaust valve. |
| 66796                      | 69260         | Insert        | Parts standardization.    |
| 61261                      | 31C-12        | Stud          | Parts standardization.    |
| 31C-13                     | 31C-12        | Stud          | Parts standardization.    |
| 67528                      | 31C-13        | Stud          | Parts standardization.    |
| 68510                      | 25C-9         | Stud          | Parts standardization.    |
| 71451                      | 66610         | Bushing       | Parts standardization.    |
| AN-823-6D                  | MS-20823-6D   | Elbow         | Parts standardization.    |
| 73640                      | AN-823-6D     | Elbow         | Product improvement.      |
| 72034                      | 72344         | Stabilizer    | Product improvement.      |
| Reference Page 3-5         |               |               |                           |
| 72625                      | 73938         | Valve, Intake | Product improvement.      |
| 67905                      | 72625         | Valve, Intake | Product improvement.      |
| 73129                      | LW-13622      | Valve, Intake | Product improvement.      |
| LW-12949                   | LW-13622      | Valve, Intake | Product improvement.      |
| 72612                      | 73129         | Valve, Intake | Rotator type.             |
| 73117                      | LW-12949      | Valve, Intake | Rotator type.             |
| 71953                      | 73117         | Valve, Intake | Parts standardization.    |
| 67518                      | 71953         | Valve, Intake | Parts standardization.    |
| 67518                      | 72612         | Valve, Intake | Interchangeable.          |
| 71595                      | 74541         | Valve, Intake | Product improvement.      |

SECTION 8  
PARTS SUPERSEDURES

## SECTION 3 (CONT.)

| Part No.                   | Superseded by | Name           | Remarks                |
|----------------------------|---------------|----------------|------------------------|
| Reference Page 3-5 (Cont.) |               |                |                        |
| 69534                      | 71595         | Valve, Intake  | Product improvement.   |
| 66531                      | 69534         | Valve, Intake  | Change to chrome stem. |
| 71381                      | 73111         | Valve, Exhaust | Change to chrome stem. |
| 66714                      | 71381         | Valve, Exhaust | Sodium cooled.         |
| 74802                      | LW-11167      | Valve, Exhaust | Chrome stem.           |
| 74052                      | 74802         | Valve, Exhaust | Product improvement.   |
| 73111                      | 74052         | Valve, Exhaust | Rotator type.          |
| 71381                      | 73111         | Valve, Exhaust | Change to chrome stem. |
| 66714                      | 71381         | Valve, Exhaust | Sodium cooled.         |
| 65567                      | LW-11795      | Spring Valve   | Product improvement.   |
| 68328                      | LW-11797      | Spring Valve   | Dimensional change.    |
| LW-11799                   | LW-11797      | Spring Valve   | Dimensional change.    |
| 76352                      | LW-11799      | Spring Valve   | Dimensional change.    |
| 76994                      | LW-11800      | Spring Valve   | Dimensional change.    |
| 65427                      | 76994         | Spring Valve   | Dimensional change.    |
| 68326                      | LW-11796      | Spring Valve   | Dimensional change.    |
| LW-11798                   | LW-11796      | Spring Valve   | Dimensional change.    |
| 76351                      | LW-11798      | Spring Valve   | Dimensional change.    |
| 68325                      | LW-13321      | Seat           | Dimensional change.    |
| 68327                      | LW-10077      | Seat           | Dimensional change.    |
| 74554                      | LW-13323      | Seat           | Dimensional change.    |
| 73112                      | LW-13322      | Seat           | Dimensional change.    |
| 73115                      | LW-10076      | Seat           | Dimensional change.    |
| 69532                      | 73115         | Seat           | Dimensional change.    |
| 62387                      | 72050         | Key            | Dimensional change.    |
| 60009                      | 72050         | Key            | Dimensional change.    |
| 72050                      | MS13997-3     | Key            | Dimensional change.    |
| 62387                      | 72050         | Key            | Dimensional change.    |
| 69697                      | MS13998-3     | Cap            | Dimensional change.    |

SECTION 8  
PARTS SUPERSEDURES

## SECTION 3 (CONT.)

| Part No.                   | Superseded by | Name          | Remarks                |
|----------------------------|---------------|---------------|------------------------|
| Reference Page 3-5 (Cont.) |               |               |                        |
| 76290                      | 78290         | Plunger Assy. | Dimensional change.    |
| 78289                      | 78290         | Plunger Assy. | Dimensional change.    |
| 76289                      | 78289         | Plunger Assy. | Dimensional change.    |
| 72876                      | 76289         | Plunger Assy. | Dimensional change.    |
| 71791                      | 72876         | Plunger Assy. | Dimensional change.    |
| 68312                      | 71791         | Plunger Assy. | Dimensional change.    |
| 68324                      | 71791         | Plunger Assy. | Dimensional change.    |
| 73062                      | 76290         | Plunger Assy. | Dimensional change.    |
| 72876                      | 73062         | Plunger Assy. | Dimensional change.    |
| 65074                      | 78524         | Socket        | Parts standardization. |
| 71083                      | LW-11485      | Tube          | Parts standardization. |
| 75774                      | 71083         | Tube          | Parts standardization. |
| 71928                      | 72255         | Tube Assy.    | Parts standardization. |
| 66739                      | 71928         | Tube Assy.    | Parts standardization. |
| LW-13428                   | LW-14995      | Spring        | Product improvement.   |
| LW-12273                   | LW-13428      | Spring        | Product improvement.   |
| 68517                      | LW-12273      | Spring        | Product improvement.   |
| 79051                      | LW-13077      | Spring        | Product improvement.   |
| 66717                      | 79051         | Spring        | Product improvement.   |
| 71449                      | 79051         | Spring        | Product improvement.   |
| 74939                      | 79051         | Spring        | Product improvement.   |
| 68518                      | LW-12272      | Lockplate     | Product improvement.   |
| 60053                      | 62922         | Seal          | Product improvement.   |
| Reference Page 3-7         |               |               |                        |
| 71135                      | 73434         | Rod Assy.     | Interchangeability.    |
| 71136                      | 73435         | Rod Assy.     | Interchangeability.    |
| 71137                      | 73436         | Rod Assy.     | Interchangeability.    |
| 70282                      | 73455         | Rod Assy.     | Interchangeability.    |
| 70283                      | 73456         | Rod Assy.     | Interchangeability.    |

SECTION 8  
PARTS SUPERSEDURES

## SECTION 3 (CONT.)

| Part No.                   | Superseded by | Name         | Remarks                |
|----------------------------|---------------|--------------|------------------------|
| Reference Page 3-7 (Cont.) |               |              |                        |
| 70284                      | 73457         | Rod Assy.    | Interchangeability.    |
| 66719                      | 71549         | Washer       | Dimensional change.    |
| 68806                      | 72626         | Shaft, Valve | Parts standardization. |
| 60401                      | LW-13790      | Shaft, Valve | Parts standardization. |
| 61246                      | 75906         | Gasket       | Parts standardization. |
| STD-1826                   | STD-1925      | Screw        | Product improvement.   |
| 67498                      | 71481         | Ring         | Interchangeability.    |
| 77907                      | 74887         | Spacer       | Parts standardization. |
| STD-38                     | 383-B         | Nut          | Parts standardization. |
| STD-528                    | STD-2090      | Nut          | Parts standardization. |
| STD-2063                   | STD-2090      | Nut          | Parts standardization. |
| 73720                      | 75118         | Gasket       | Parts standardization. |
| 67196                      | 73720         | Gasket       | Parts standardization. |
| STD-2                      | STD-2043      | Nut          | Parts standardization. |
| MS20500-524                | STD-2043      | Nut          | Parts standardization. |
| STD-50                     | STD-2         | Nut          | Parts standardization. |
| Reference Page 3-9         |               |              |                        |
| AN816-6                    | STD-684       | Nipple       | Product improvement.   |
| AN816-6D                   | AN816-6       | Nipple       | Product improvement.   |
| STD-347                    | STD-2180      | Hose         | Product improvement.   |
| STD-1821                   | STD-347       | Hose         | Product improvement.   |
| STD-2188                   | LW-15592-5-05 | Clamp        | Product improvement.   |
| STD-1924                   | LW-15592-5-05 | Clamp        | Product improvement.   |
| STD-1252                   | STD-2188      | Clamp        | Product improvement.   |
| STD-1252                   | STD-1924      | Clamp        | Product improvement.   |
| STD-1914                   | STD-1252      | Clamp        | Product improvement.   |
| STD-1924                   | STD-1914      | Clamp        | Product improvement.   |
| 72704                      | 73027         | Tube Assy.   | Product improvement.   |
| 72152                      | 75339         | Baffle       | Dimensional change.    |

SECTION 8  
PARTS SUPERSEDURES

## SECTION 3 (CONT.)

| Part No.                   | Superseded by | Name    | Remarks              |
|----------------------------|---------------|---------|----------------------|
| Reference Page 3-9 (Cont.) |               |         |                      |
| 71104                      | 72152         | Baffle  | Dimensional change.  |
| 74718                      | 75338         | Baffle  | Dimensional change.  |
| 71578                      | 74718         | Baffle  | Dimensional change.  |
| 73708                      | 74718         | Baffle  | Dimensional change.  |
| 71629                      | 71610         | Hook    | Dimensional change.  |
| STD-860                    | STD-692       | Screw   | Product improvement. |
| AN931-12-17                | AN931-12S17   | Grommet | Product improvement. |

## SECTION 4

## Reference Page 4-1

|               |               |         |                       |
|---------------|---------------|---------|-----------------------|
| LW-10302      | DW-13642      | Gear    | Product improvement.  |
| LW-12136      | LW-13741      | Cushion | Product improvement.  |
| 68874         | LW-12136      | Cushion | Product improvement.  |
| 78292         | LW-12681      | Gasket  | Product improvement.  |
| 73820         | 78292         | Gasket  | Product improvement.  |
| LW-384602-303 | LW-684602-303 | Harness | Interchangeability.   |
| LW-384602-303 | LW-384602-307 | Harness | Interchangeability.   |
| LW-320297-2   | LW-620026-2   | Clip    | Dimensional change.   |
| LW-320297-3   | LW-14057      | Clip    | To provide clearance. |
| 73650         | LW-14057      | Clip    | To provide clearance. |
| 62254         | 73650         | Clip    | Product improvement.  |
| 65530         | 62254         | Clip    | Product improvement.  |
| LW-14060      | LW-320298-2   | Clip    | Product improvement.  |
| LW-320298-3   | LW-14060      | Clip    | Product improvement.  |
| LW-320299-6   | LW-620029-6   | Clip    | Product improvement.  |
| LW-320472-4   | LW-620037-4   | Clip    | Product improvement.  |
| LW-320299-5   | 62255         | Clip    | Product improvement.  |
| LW-320232     | LW-620036-4   | Clip    | Product improvement.  |
| 62255         | LW-320232     | Clip    | Product improvement.  |
| LW-89027-17   | LW-14875      | Bracket | Product improvement.  |

SECTION 8  
PARTS SUPERSEDURES

## SECTION 4 (CONT.)

| Part No.                   | Superseded by | Name             | Remarks                    |
|----------------------------|---------------|------------------|----------------------------|
| Reference Page 4-1 (Cont.) |               |                  |                            |
| LW-12202                   | MS21919-G12   | Clamp            | Product improvement.       |
| MS21919-F12                | LW-12202      | Clamp            | Product improvement.       |
| 72036                      | LW-12202      | Clamp            | Product improvement.       |
| STD-705                    | STD-1925      | Screw            | Product improvement.       |
| 71571                      | LW-157208     | Kit, Magneto     | Parts standardization.     |
| LW-12147                   | LW-382698     | Kit, Magneto     | Parts standardization.     |
| Reference Page 4-3         |               |                  |                            |
| 73008                      | 74830         | Gear             | Product improvement.       |
| 73009                      | 74830         | Gear             | Product improvement.       |
| 74881                      | 75124         | Gear             | Product improvement.       |
| 74882                      | 75124         | Gear             | Product improvement.       |
| 72282                      | 74881         | Gear             | Product improvement.       |
| 70391                      | 72282         | Gear             | Product improvement.       |
| 68874                      | LW-12136      | Cushion, Magneto | Product improvement.       |
| 78292                      | LW-12681      | Gasket, Magneto  | Product improvement.       |
| 73820                      | 78292         | Gasket, Magneto  | Product improvement.       |
| 71601                      | 73000         | Coupling         | To provide 20° advance.    |
| 71601                      | 73013         | Coupling         | To provide 20° advance.    |
| 73038                      | LW-163050-9   | Magneto          | Interchangeability.        |
| 72522                      | 73038         | Magneto          | Product improvement.       |
| 73669                      | LW-163010-10  | Magneto          | Interchangeability.        |
| 73039                      | 73669         | Magneto          | To provide 37-1/2° retard. |
| 72523                      | 73039         | Magneto          | Interchangeability.        |
| 75454                      | LW-349290-1   | Magneto          | Interchangeability.        |
| 75753                      | LW-349310-1   | Magneto          | Interchangeability.        |
| 75653                      | LW-349370-4   | Magneto          | Interchangeability.        |
| LW-10172                   | LW-349310-8   | Magneto          | Interchangeability.        |
| 71571                      | LW-157208     | Kit, Magneto     | Parts standardization.     |
| 71574                      | LW-157209     | Kit, Magneto     | Parts standardization.     |

SECTION 8  
PARTS SUPERSEDURES

## SECTION 4 (CONT.)

| Part No.           | Superseded by | Name              | Remarks                |
|--------------------|---------------|-------------------|------------------------|
| Reference Page 4-5 |               |                   |                        |
| LW-M-2123          | LW-M-2469     | Harness Assy.     | Product improvement.   |
| LW-M-2122          | LW-M-2470     | Harness Assy.     | Product improvement.   |
| 1068-B             | 71910         | Clamp             | Product improvement.   |
| STD-2011           | STD-553       | Screw             | Parts standardization. |
| AN3650632C         | AN365-632A    | Nut               | Self-locking.          |
| LW-320299-5        | 62255         | Clip              | Product improvement.   |
| STD-178            | 72351         | Screw             | Self-locking.          |
| STD-860            | 72351         | Screw             | Self-locking.          |
| LW-M-2159          | LW-M-2460     | Harness Assy.     | Product improvement.   |
| LW-M-2158          | LW-M-2361     | Harness Assy.     | Product improvement.   |
| LW-320297-3        | LW-14057      | Clip              | Product improvement.   |
| 73650              | LW-14057      | Clip              | Product improvement.   |
| 62254              | 73650         | Clip              | Product improvement.   |
| LW-320298-3        | LW-14060      | Clip              | Product improvement.   |
| STD-860            | STD-692       | Screw             | Product improvement.   |
| 76735              | 72815         | Bracket           | Product improvement.   |
| 73152              | 76735         | Bracket           | Product improvement.   |
| LW-620515-3        | LW-720515-3   | Harness, Ignition | Product improvement.   |
| 78552              | LW-620515-3   | Harness, Ignition | Product improvement.   |
| 1182-U1            | 1182-B3       | Spark Plug        | Product improvement.   |
| 1182-M1            | 1182-B3       | Spark Plug        | Product improvement.   |
| 1182-U2            | 1182-Y3       | Spark Plug        | Long reach plugs.      |
| 1182-J4            | 1182-W5       | Spark Plug        | Product improvement.   |

## SECTION 5

Reference Page 5-1

|          |          |                  |                        |
|----------|----------|------------------|------------------------|
| 76533    | LW-13039 | Bracket          | Dimensional change.    |
| STD-1823 | 73383    | Lockplate        | Parts standardization. |
| 73276    | 75380    | Link             | Parts standardization. |
| 75574    | 78639    | Pulley and Shaft | Product improvement.   |



SECTION 8  
PARTS SUPERSEDURES

## SECTION 5 (CONT.)

| Part No.                   | Superseded by | Name              | Remarks                       |
|----------------------------|---------------|-------------------|-------------------------------|
| Reference Page 5-1 (Cont.) |               |                   |                               |
| 74517                      | 78614         | Alternator Pulley | Product improvement.          |
| 74520                      | 78629         | Ball Bearing      | Parts standardization.        |
| LW-10577                   | 78629         | Ball Bearing      | Parts standardization.        |
| MS-16625-1112              | MS-16625-1125 | Ring              | Parts standardization.        |
| 74516                      | 78617         | Idler Shaft       | Parts standardization.        |
| STD-33                     | STD-690       | Washer            | Product improvement.          |
| STD-761                    | STD-713       | Pin               | Product improvement.          |
| Reference Page 5-3         |               |                   |                               |
| 78407                      | LW-14308      | Alternator        | Product improvement.          |
| 78310                      | LW-14316      | Alternator        | Product improvement.          |
| 77470                      | 78310         | Alternator        | To incorporate new slip ring. |
| 78312                      | LW-14319      | Alternator        | Product improvement.          |
| 78314                      | LW-14324      | Alternator        | Product improvement.          |
| 77751                      | 78314         | Alternator        | To incorporate new slip ring. |
| 74322                      | 76026         | Belt              | To incorporate dacron fiber.  |
| 77347                      | LW-10179      | Regulator         | Product improvement.          |
| Reference Page 5-4         |               |                   |                               |
| LW-14207                   | LW-15571      | Starter           | Product improvement.          |
| 76211                      | LW-14207      | Starter           | Product improvement.          |
| 74092                      | 76211         | Starter           | Product improvement.          |
| 73269                      | 74092         | Starter           | Product improvement.          |
| 72567                      | 73269         | Starter           | Product improvement.          |
| LW-14208                   | LW-15572      | Starter           | Product improvement.          |
| 76212                      | LW-14208      | Starter           | Product improvement.          |
| 72462                      | 76212         | Starter           | Product improvement.          |
| 73270                      | 72462         | Starter           | Product improvement.          |
| 71452                      | 73270         | Starter           | Product improvement.          |
| STD-2085                   | STD-2156      | Bolt              | Product improvement.          |
| STD-1323                   | STD-2156      | Bolt              | Product improvement.          |

SECTION 8  
PARTS SUPERSEDURES

SECTION 5 (CONT.)

| Part No.                   | Superseded by | Name   | Remarks              |
|----------------------------|---------------|--------|----------------------|
| Reference Page 5-4 (Cont.) |               |        |                      |
| STD-1202                   | STD-1323      | Bolt   | Product improvement. |
| 76773                      | LW-12083      | Switch | Product improvement. |
| 61427                      | 76773         | Switch | Product improvement. |
| 76775                      | LW-12085      | Switch | Product improvement. |

SECTION 6

|                    |          |            |                                |
|--------------------|----------|------------|--------------------------------|
| Reference Page 6-1 |          |            |                                |
| 72812              | LW-13306 | Gasket     | Product improvement.           |
| 72345              | 74833    | Sump       | Parts standardization.         |
| 74833              | LW-13232 | Sump       | Product improvement.           |
| 72180              | LW-11273 | Clamp      | Wider bearing surface.         |
| 68510              | 25C-9    | Stud       | Parts standardization.         |
| 69943              | 25C-11   | Stud       | Parts standardization.         |
| 61279              | 69943    | Stud       | Parts standardization.         |
| STD-51             | 1102     | Plug       | Parts standardization.         |
| STD-453            | STD-784  | Plug       | Parts standardization.         |
| STD-740            | STD-355  | Plug       | Parts standardization.         |
| LW-25H-200         | STD-1646 | Bolt       | Parts standardization.         |
| STD-705            | STD-1875 | Bolt       | Parts standardization.         |
| 69335              | LW-12545 | Plug       | Product improvement.           |
| Reference Page 6-3 |          |            |                                |
| 72812              | LW-13306 | Gasket     | Product improvement.           |
| LW-14136           | LW-14900 | Sump Assy. | To provide airframe clearance. |
| AN-932-D8          | STD-2184 | Plug       | Product improvement.           |
| 69943              | 25C-11   | Stud       | Product improvement.           |
| 25C-12             | 25C-11   | Stud       | Product improvement.           |
| 69942              | 25C-12   | Stud       | Product improvement.           |
| 61262              | 25C-12   | Stud       | Product improvement.           |
| 61279              | 69943    | Stud       | Product improvement.           |
| STD-51             | 1102     | Plug       | Product improvement.           |

SECTION 8  
PARTS SUPERSEDURES

## SECTION 6 (CONT.)

| Part No.                   | Superseded by | Name            | Remarks                          |
|----------------------------|---------------|-----------------|----------------------------------|
| Reference Page 6-3 (Cont.) |               |                 |                                  |
| STD-50                     | STD-8         | Washer          | Product improvement.             |
| LW-13808                   | 70484         | Screen          | Product improvement.             |
| LW-11050                   | LW-13808      | Crankcase Assy. | Interchangeability.              |
| LW-11022                   | LW-11050      | Crankcase Assy. | Interchangeability.              |
| 78222                      | LW-11022      | Crankcase Assy. | Interchangeability.              |
| 76605                      | 78222         | Crankcase Assy. | Interchangeability.              |
| 75102                      | 76605         | Crankcase Assy. | Interchangeability.              |
| 76895                      | 75102         | Crankcase Assy. | Interchangeability.              |
| 69335                      | LW-12545      | Plug            | New length.                      |
| Reference Page 6-4         |               |                 |                                  |
| 72812                      | LW-13306      | Gasket          | Product improvement.             |
| 71697                      | 72056         | Sump Assy.      | To increase thread engagement.   |
| 67747                      | 71697         | Sump Assy.      | To change location of nameplate. |
| 69943                      | 25C-11        | Stud            | Parts standardization.           |
| 25C-12                     | 25C-11        | Stud            | Parts standardization.           |
| 69942                      | 25C-12        | Stud            | Parts standardization.           |
| 61262                      | 25C-12        | Stud            | Parts standardization.           |
| 61279                      | 69943         | Stud            | Parts standardization.           |
| 68437                      | 31C-15        | Stud            | Parts standardization.           |
| 68316                      | 31C-15        | Stud            | Parts standardization.           |
| 67528                      | 68316         | Stud            | Parts standardization.           |
| AN-535-4-3                 | STD-1901      | Drive Stud      | Parts standardization.           |
| STD-1820                   | AN-535-4-3    | Screw           | Parts standardization.           |
| 69335                      | LW-12545      | Plug            | New length.                      |
| Reference Page 6-5         |               |                 |                                  |
| AN-737-TW74                | LW-15592-8-28 | Clamp           | Product improvement.             |
| 60131                      | 71973         | Gasket          | Product improvement.             |
| 60064                      | 73346         | Flange          | Product improvement.             |
| STD-50                     | STD-8         | Washer          | Product improvement.             |

SECTION 8  
PARTS SUPERSEDURES

SECTION 6 (CONT.)

| Part No.                   | Superseded by | Name          | Remarks                |
|----------------------------|---------------|---------------|------------------------|
| Reference Page 6-5 (Cont.) |               |               |                        |
| 73921                      | LW-12191      | Intake Pipe   | Interchangeability.    |
| LW-12455                   | LW-12191      | Intake Pipe   | Interchangeability.    |
| 72753                      | 73921         | Intake Pipe   | Interchangeability.    |
| 72754                      | LW-12192      | Intake Pipe   | Interchangeability.    |
| 73922                      | LW-12193      | Intake Pipe   | Interchangeability.    |
| LW-12453                   | LW-12193      | Intake Pipe   | Interchangeability.    |
| 72755                      | 73922         | Intake Pipe   | Interchangeability.    |
| 73923                      | LW-12194      | Intake Pipe   | Interchangeability.    |
| LW-12454                   | LW-12194      | Intake Pipe   | Interchangeability.    |
| 72756                      | 73923         | Intake Pipe   | Interchangeability.    |
| 75223                      | LW-12195      | Intake Pipe   | Interchangeability.    |
| 72192                      | 73031         | Housing Assy. | Interchangeability.    |
| 76972                      | 78100         | Housing Assy. | Interchangeability.    |
| LW-10456                   | LW-15730      | Housing Assy. | Product improvement.   |
| 67556                      | 31C-16        | Stud          | Product improvement.   |
| 68316                      | 31C-14        | Stud          | Product improvement.   |
| 67528                      | 68316         | Stud          | Product improvement.   |
| STD-51                     | 1102          | Plug          | Parts standardization. |
| STD-50                     | STD-8         | Washer        | Product improvement.   |
| STD-705                    | STD-1875      | Bolt          | Product improvement.   |
| Reference Page 6-7         |               |               |                        |
| 65060                      | 66224         | Gasket        | Product improvement.   |
| 76083                      | 75176         | Fuel Injector | Product improvement.   |
| 73758                      | 74151         | Nozzle        | Parts standardization. |
| 73029                      | 73758         | Nozzle        | Parts standardization. |
| 72841                      | 73029         | Nozzle        | Parts standardization. |
| 74591                      | LW-10475      | Nozzle        | Parts standardization. |
| AN-919-6D                  | AN-919-6      | Reducer       | Product improvement.   |
| 75952                      | 76304         | Elbow         | Product improvement.   |
| AN-816-4                   | AN-822-4      | Elbow         | Product improvement.   |

SECTION 8  
PARTS SUPERSEDURES

## SECTION 6 (CONT.)

| Part No.           | Superseded by  | Name           | Remarks                |
|--------------------|----------------|----------------|------------------------|
| Reference Page 6-8 |                |                |                        |
| 73969              | 75283          | Manifold Assy. | Customer request.      |
| AN-823-4           | MS-20823-4     | Elbow          | Product improvement.   |
| AN-824-4           | AN-823-4       | Elbow          | Product improvement.   |
| AN-823-4           | AN-816-4       | Nipple         | Product improvement.   |
| 1102               | 75447          | Nipple         | Product improvement.   |
| LW-12604           | 75447          | Nipple         | Product improvement.   |
| 75283              | 79007          | Manifold Assy. | Customer request.      |
| 73969              | 75283          | Manifold Assy. | Customer request.      |
| 75573              | LW-13518       | Manifold Assy. | Customer request.      |
| AN-500-A10-8       | STD-82         | Screw          | Parts standardization. |
| STD-1897           | STD-1499       | Bolt           | Parts standardization. |
| Reference Page 6-9 |                |                |                        |
| LW-12098-1-200     | LW-12098-0-200 | Tube Assy.     | Product improvement.   |
| 73963              | LW-12098-1-200 | Tube Assy.     | Product improvement.   |
| LW-12098-1-170     | LW-12098-0-170 | Tube Assy.     | Product improvement.   |
| LW-12098-2-276     | LW-12098-0-276 | Tube Assy.     | Product improvement.   |
| LW-12098-2-264     | LW-12098-2-276 | Tube Assy.     | Product improvement.   |
| LW-12098-1-134     | LW-12098-0-134 | Tube Assy.     | Product improvement.   |
| 73796              | LW-12098-1-134 | Tube Assy.     | Product improvement.   |
| LW-12098-2-210     | LW-12098-0-210 | Tube Assy.     | Product improvement.   |
| LW-12202           | MS-21919-G12   | Clip           | Product improvement.   |
| MS-21919-F12       | LW-12202       | Clip           | Product improvement.   |
| 72036              | MS-21919-F12   | Clip           | Product improvement.   |
| LW-12145           | LW-12516       | Clip           | Product improvement.   |
| 73152              | 76735          | Bracket        | Product improvement.   |
| LW-320300-4        | 73971          | Clamp          | Product improvement.   |
| 73971              | 73751          | Clip           | Product improvement.   |
| AN-823-6           | MS-20823-6     | Elbow          | Product improvement.   |
| AN-823-4           | AN-823-6       | Elbow          | Product improvement.   |

SECTION 8  
PARTS SUPERSEDURES

## SECTION 6 (CONT.)

| Part No.                   | Superseded by   | Name       | Remarks              |
|----------------------------|-----------------|------------|----------------------|
| Reference Page 6-9 (Cont.) |                 |            |                      |
| AN-824-4                   | AN-823-4        | Elbow      | Product improvement. |
| AN-822-6-8                 | MS-20822-6      | Elbow      | Product improvement. |
| Reference Page 6-10        |                 |            |                      |
| 76870                      | 78523           | Elbow      | Interchangeability.  |
| AN-822-8                   | 76422           | Elbow      | Interchangeability.  |
| AN-822-6                   | 72377           | Elbow      | Interchangeability.  |
| AN-815-6                   | 75739           | Nipple     | Interchangeability.  |
| AN-816-6                   | AN-815-6        | Nipple     | Interchangeability.  |
| AN-816-6D                  | AN-816-6        | Nipple     | Interchangeability.  |
| LW-10049                   | LW-10446        | Elbow      | Interchangeability.  |
| 77369                      | LW-10049        | Elbow      | Interchangeability.  |
| 73974                      | LW-13175-4-274  | Hose Assy. | Product improvement. |
| 74222                      | LW-13181-6-254  | Hose Assy. | Product improvement. |
| 72467                      | 74222           | Hose Assy. | Product improvement. |
| 74532                      | LW-13175-4-340  | Hose Assy. | Product improvement. |
| LW-12799-6-110             | LW-12799-6S-110 | Hose Assy. | Product improvement. |
| 73320                      | LW-12799-6-110  | Hose Assy. | Product improvement. |
| 75203                      | LW-13177-4-334  | Hose Assy. | Product improvement. |
| 72863                      | 75203           | Hose Assy. | Product improvement. |
| LW-12877-6-051             | LW-12877-6S-051 | Hose Assy. | Product improvement. |
| LW-10445                   | LW-12877-6-051  | Hose Assy. | Product improvement. |
| 77958                      | LW-12798-4-340  | Hose Assy. | Product improvement. |

## NUMERICAL INDEX

| PART NO.     | PART NAME             | PAGE NO. | PART NO.       | PART NAME                  | PAGE NO. |
|--------------|-----------------------|----------|----------------|----------------------------|----------|
| AN6-12       | Bolt                  | 5-1      | LW-10647       | Dowel                      | 1-1      |
| AN6-13       | Bolt                  | 5-1      | LW-10660       | Oil Filter Assy.           | 2-5      |
| AN6-14       | Bolt                  | 5-1      | LW-10671       | Gear Assy.                 | 2-9      |
| AN6-16       | Bolt                  | 5-1      | LW-10799       | Spacer                     | 2-11     |
| AN6-34A      | Bolt                  | 1-10     | LW-10806       | Spacer                     | 2-9      |
| AN8-14A      | Bolt                  | 1-7      | LW-10807       | Adapter Assy.              | 2-9      |
| AN365-632A   | Nut                   | 4-5      | LW-10843       | Crankshaft Assy.           | 1-7      |
| AN565B1032H5 | Set Screw             | 1-6      | LW-10844       | Crankshaft and C'wt. Assy. | 1-7      |
| AN780-2      | Nipple                | 6-8      | LW-10904       | Housing Assy.              | 2-1      |
| AN791-2      | Elbow                 | 6-8      | LW-10908       | Housing Assy.              | 2-1      |
| AN814-10L    | Plug                  | 2-7      | LW-10916       | Housing Assy.              | 2-1      |
| AN816-4      | Nipple                | 6-8      | LW-10917       | Housing Assy.              | 2-1      |
| AN816-8      | Nipple                | 2-7      | LW-10952       | Shim                       | 5-1      |
| AN822-4      | Elbow                 | 6-7      | LW-10975       | Gage Assy.                 | 1-3      |
| AN822-8      | Elbow                 | 2-7      | LW-10976       | Fuel Injector              | 6-7      |
| AN844-16D    | Fitting Breather      | 2-7      | LW-11021       | Bearing                    | 1-5      |
| AN901-8C     | Washer                | 2-5      | LW-11166       | Fuel Pump                  | 2-11     |
| AN919-6      | Reducer               | 6-7      | LW-11167       | Valve                      | 3-5      |
| AN931-12S17  | Grommet               | 3-9      | LW-11218       | Fuel Injector              | 6-7      |
| AN123857     | "O" Ring              | 2-9      | LW-11273       | Clamp                      | 6-1      |
| LW-10076     | Seat                  | 3-5      | LW-11476       | Adapter                    | 2-5      |
| LW-10077     | Seat                  | 3-5      | LW-11477       | Bolt                       | 2-5      |
| LW-10091     | Link Alternator       | 5-1      | LW-11483       | Adapter Assy. Oil Filter   | 2-5      |
| LW-10179     | Regulator             | 5-3      | LW-11485       | Tube                       | 3-5      |
| LW-10185     | Regulator             | 5-3      | LW-11575       | Bearing                    | 1-5      |
| LW-10207     | Piston                | 3-1      | LW-11713       | Spring                     | 1-5      |
| LW-10284     | Gear                  | 1-7      | LW-11750       | Connecting Rod Assy.       | 3-1      |
| LW-10290     | Gear Assy.            | 1-9      | LW-11795       | Spring                     | 3-5      |
| LW-10292     | Gear Assy.            | 1-9      | LW-11796       | Spring                     | 3-5      |
| LW-10303     | Plug                  | 2-7      | LW-11797       | Spring                     | 3-5      |
| LW-10307     | Gear Assy.            | 2-7      | LW-11800       | Spring                     | 3-5      |
| LW-10318     | Gear Assy.            | 2-3      | LW-11866       | Spacer Nut                 | 1-10     |
| LW-10320     | Sleeve                | 2-5      | LW-11924       | Fuel Injector              | 6-7      |
| LW-10321     | Spring                | 2-5      | LW-11925       | Tube Assy.                 | 6-10     |
| LW-10324     | Gear Assy.            | 1-9      | LW-11942       | Crankshaft Assy.           | 1-7      |
| LW-10329     | Shaftgear Assy.       | 2-11     | LW-11943       | Crankshaft and C'wt. Assy. | 1-7      |
| LW-10331     | Adapter Assy.         | 2-9      | LW-11956       | Guide                      | 3-3      |
| LW-10332     | Lockplate             | 1-7      | LW-11957       | Guide                      | 3-3      |
| LW-10341     | Insert                | 2-1      | LW-11958       | Guide                      | 3-3      |
| LW-10344     | Body Assy.            | 2-3      | LW-12083       | Switch                     | 5-4      |
| LW-10442     | Gear                  | 1-6      | LW-12085       | Switch                     | 5-4      |
| LW-10446     | Elbow                 | 6-10     | LW-12098-0-134 | Tube Assy.                 | 6-9      |
| LW-10454     | Housing Assy.         | 6-1      | LW-12098-0-170 | Tube Assy.                 | 6-9      |
| LW-10541     | Gear Assy.            | 1-6      | LW-12098-0-200 | Tube Assy.                 | 6-9      |
| LW-10608     | Clip                  | 3-9      | LW-12098-0-210 | Tube Assy.                 | 6-9      |
| LW-10609     | Rivet                 | 3-9      | LW-12098-0-276 | Tube Assy.                 | 6-9      |
| LW-10610     | Baffle and Clip Assy. | 3-9      | LW-12136       | Cushion                    | 4-3      |
| LW-10611     | Baffle and Clip Assy. | 3-9      | LW-12186       | Nut                        | 3-1      |
| LW-10641     | Housing Assy.         | 2-1      | LW-12191       | Pipe                       | 6-5      |
| LW-10646     | Connecting Rod Assy.  | 3-1      | LW-13642       | Gear Retainer              | 4-1      |

NUMERICAL INDEX

| PART NO. | PART NAME       | PAGE NO. | PART NO.        | PART NAME                  | PAGE NO. |
|----------|-----------------|----------|-----------------|----------------------------|----------|
| LW-13775 | Impeller Assy.  | 2-3      | LW-12193        | Pipe                       | 6-5      |
| LW-13781 | Crankcase Assy. | 1-1      | LW-12194        | Pipe                       | 6-5      |
| LW-13790 | Shaft           | 3-7      | LW-12195        | Pipe                       | 6-5      |
| LW-13792 | Seal            | 1-5      | LW-12272        | Lockplate                  | 3-5      |
| LW-13794 | Stud            | 1-1      | LW-12427        | Cylinder and Head Assy.    | 3-3      |
| LW-13795 | Shaft           | 1-9      | LW-12516        | Clip                       | 6-9      |
| LW-13831 | Crankcase Assy. | 1-1      | LW-12545        | Plug                       | 6-1      |
| LW-13837 | Crankcase Assy. | 1-1      | LW-12545        | Plug                       | 6-3      |
| LW-13838 | Crankcase Assy. | 1-1      | LW-12545        | Plug                       | 6-4      |
| LW-13844 | Crankcase Assy. | 1-1      | LW-12561        | Crankshaft Assy.           | 1-7      |
| LW-13847 | Crankcase Assy. | 1-1      | LW-12562        | Crankshaft and C'wt. Assy. | 1-7      |
| LW-13884 | Bearing         | 1-5      | LW-12582        | Crankshaft Assy.           | 1-7      |
| LW-13885 | Bearing         | 1-5      | LW-12583        | Crankshaft and C'wt. Assy. | 1-7      |
| LW-13896 | Plug            | 1-6      | LW-12589        | Insert                     | 2-1      |
| LW-13904 | Kit, Oil Filter | 2-5      | LW-12604        | Nipple                     | 6-8      |
| LW-13906 | Oil Filter      | 2-5      | LW-12681        | Gasket                     | 4-1      |
| LW-13909 | Fuel Pump       | 2-11     | LW-12681        | Gasket                     | 4-3      |
| LW-13920 | Fuel Pump       | 2-11     | LW-12688        | Seat                       | 3-3      |
| LW-13923 | Bushing         | 3-1      | LW-12707        | Adapter                    | 4-3      |
| LW-14021 | Shaft           | 1-6      | LW-12795        | Gasket                     | 2-5      |
| LW-14057 | Clip            | 4-1      | LW-12798-4-340  | Hose Assy.                 | 6-10     |
| LW-14057 | Clip            | 4-5      | LW-12799-6S-110 | Hose Assy.                 | 6-10     |
| LW-14060 | Clip            | 4-1      | LW-12876-4S-344 | Hose Assy.                 | 6-10     |
| LW-14060 | Clip            | 4-5      | LW-12877-6-124  | Hose                       | 6-10     |
| LW-14178 | Plug            | 2-7      | LW-12877-6S-051 | Hose Assy.                 | 6-10     |
| LW-14183 | Tube Assy.      | 6-10     | LW-12892        | Thrust Button              | 3-7      |
| LW-14184 | Fuel Injector   | 6-7      | LW-12987        | Cylinder and Head Assy.    | 3-3      |
| LW-14260 | Seal            | 2-3      | LW-12988        | Cylinder and Head Assy.    | 3-3      |
| LW-14308 | Alternator      | 5-3      | LW-13039        | Bracket                    | 5-1      |
| LW-14316 | Alternator      | 5-3      | LW-13077        | Spring                     | 3-5      |
| LW-14319 | Alternator      | 5-3      | LW-13175-4-274  | Hose Assy.                 | 6-10     |
| LW-14324 | Alternator      | 5-3      | LW-13175-4-340  | Hose Assy.                 | 6-10     |
| LW-14637 | Shim            | 5-1      | LW-13177-4-334  | Hose Assy.                 | 6-10     |
| LW-14649 | Shim            | 5-1      | LW-13181-6-254  | Hose                       | 6-10     |
| LW-14729 | Gage Assy.      | 1-3      | LW-13215        | Oil Filter                 | 2-5      |
| LW-14730 | Gage Assy.      | 1-3      | LW-13232        | Housing Assy.              | 6-1      |
| LW-14732 | Gage Assy.      | 1-3      | LW-13306        | Gasket                     | 6-1      |
| LW-14737 | Gage Assy.      | 1-3      | LW-13306        | Gasket                     | 6-3      |
| LW-14740 | Gage Assy.      | 1-3      | LW-13306        | Gasket                     | 6-4      |
| LW-14754 | Gage Assy.      | 1-3      | LW-13321        | Seat                       | 3-5      |
| LW-14756 | Gage Assy.      | 1-3      | LW-13322        | Seat                       | 3-5      |
| LW-14820 | Ring            | 1-7      | LW-13323        | Seat                       | 3-5      |
| LW-14828 | Reducer         | 2-7      | LW-13383        | Baffle                     | 6-1      |
| LW-14875 | Bracket         | 4-1      | LW-13384        | Support                    | 6-1      |
| LW-14900 | Sump Assy.      | 6-3      | LW-13385        | Support                    | 6-1      |
| LW-14954 | Bearing         | 3-1      | LW-13518        | Manifold Assy.             | 6-8      |
| LW-14995 | Spring          | 3-5      | LW-13521        | Bearing                    | 3-1      |
| LW-15473 | Fuel Pump       | 2-11     | LW-13622        | Valve                      | 3-5      |
| LW-15571 | Starter         | 5-4      | LW-13641        | Cushion                    | 4-1      |
| LW-12192 | Pipe            | 6-5      | LW-15572        | Starter                    | 5-4      |



## NUMERICAL INDEX

| PART NO.      | PART NAME               | PAGE NO. | PART NO.     | PART NAME      | PAGE NO. |
|---------------|-------------------------|----------|--------------|----------------|----------|
| LW-15592-505  | Clamp                   | 3-9      | MS-20823-6   | Elbow          | 6-9      |
| LW-15592-8-28 | Clamp                   | 6-5      | MS-20823-6D  | Elbow          | 3-3      |
| LW-15628      | Seal                    | 1-5      | MS-20823-8   | Elbow          | 2-7      |
| LW-15730      | Housing Assy.           | 6-5      | MS-21919-G12 | Clip           | 6-9      |
| LW-13175-303  | Hose Assy.              | 6-10     | MS-21919-G12 | Clip           | 4-1      |
| LW-157208     | Kit, Magneto            | 4-1      | MS-28775-147 | Seal, "O" Ring | 2-5      |
| LW-157208     | Kit, Magneto            | 4-3      | MS-29512-6   | Seal, Oil      | 6-7      |
| LW-157209     | Kit, Magneto            | 4-3      | MS-29512-10  | Seal, Oil      | 2-7      |
| LW-163050-9   | Magneto                 | 4-3      | STD-8        | Washer         | 1-10     |
| LW-320298-2   | Clip                    | 4-1      | STD-8        | Washer         | 2-3      |
| LW-320472-4   | Clip                    | 4-5      | STD-8        | Washer         | 2-5      |
| LW-349290-1   | Magneto                 | 4-3      | STD-8        | Washer         | 2-7      |
| LW-349310-1   | Magneto                 | 4-3      | STD-8        | Washer         | 2-9      |
| LW-349310-8   | Magneto                 | 4-3      | STD-8        | Washer         | 4-1      |
| LW-349370-4   | Magneto                 | 4-3      | STD-8        | Washer         | 4-5      |
| LW-382560-11  | Magneto                 | 4-1      | STD-8        | Washer         | 6-1      |
| LW-382560-13  | Magneto                 | 4-1      | STD-8        | Washer         | 6-3      |
| LW-382610-13  | Magneto                 | 4-1      | STD-8        | Washer         | 6-4      |
| LW-382698     | Kit, Magneto            | 4-1      | STD-8        | Washer         | 6-5      |
| LW-384602-307 | Harness                 | 4-1      | STD-19       | Dowel          | 1-6      |
| LW-385126-105 | Magneto                 | 4-1      | STD-33       | Washer         | 1-3      |
| LW-385126-107 | Magneto                 | 4-1      | STD-33       | Washer         | 1-10     |
| LW-385146-111 | Magneto                 | 4-1      | STD-33       | Washer         | 2-11     |
| LW-620026-2   | Clip                    | 4-1      | STD-35       | Washer         | 1-6      |
| LW-620029-6   | Clip                    | 4-1      | STD-35       | Washer         | 2-3      |
| LW-620036-4   | Clip                    | 4-1      | STD-35       | Washer         | 2-9      |
| LW-620037-4   | Clip                    | 4-1      | STD-35       | Washer         | 2-11     |
| LW-684602-303 | Harness                 | 4-1      | STD-35       | Washer         | 3-7      |
| LW-720515-3   | Harness Assy.           | 4-5      | STD-35       | Washer         | 5-4      |
| LW-M-2376     | Plate, Spark Plug Cable | 4-5      | STD-35       | Washer         | 6-7      |
| LW-M-2454     | Harness Assy.           | 4-5      | STD-71       | Plug           | 6-3      |
| LW-M-2455     | Harness Assy.           | 4-5      | STD-82       | Screw          | 6-8      |
| LW-M-2460     | Harness Assy.           | 4-5      | STD-91       | Plug           | 6-1      |
| LW-M-2461     | Harness Assy.           | 4-5      | STD-111      | Gasket         | 6-1      |
| LW-M-2463     | Harness Assy.           | 4-5      | STD-111      | Gasket         | 6-3      |
| LW-M-2464     | Harness Assy.           | 4-5      | STD-111      | Gasket         | 6-4      |
| LW-M-2466     | Harness Assy.           | 4-5      | STD-160      | Washer         | 1-10     |
| LW-M-2467     | Harness Assy.           | 4-5      | STD-160      | Washer         | 2-3      |
| LW-M-2469     | Harness Assy.           | 4-5      | STD-160      | Washer         | 2-5      |
| LW-M-2470     | Harness Assy.           | 4-5      | STD-160      | Washer         | 2-7      |
| MS-124703     | Insert                  | 2-1      | STD-160      | Washer         | 2-9      |
| M-1985-48     | Replacement Lead        | 4-5      | STD-160      | Washer         | 3-7      |
| M-1985-72     | Replacement Lead        | 4-5      | STD-160      | Washer         | 4-1      |
| M-13997-3     | Key, Valve              | 3-5      | STD-160      | Washer         | 4-5      |
| MS-13998-3    | Cap, Valve              | 3-5      | STD-160      | Washer         | 6-1      |
| MS-16625-1081 | Ring                    | 1-9      | STD-160      | Washer         | 6-3      |
| MS-16625-1100 | Ring                    | 2-5      | STD-160      | Washer         | 6-4      |
| MS-16625-1125 | Ring                    | 5-1      | STD-160      | Washer         | 6-5      |
| MS-20822-6    | Elbow                   | 6-9      | STD-160      | Washer         | 6-8      |
| MS-20823-4    | Elbow                   | 6-8      | STD-208      | Seal           | 2-7      |

## NUMERICAL INDEX

| PART NO. | PART NAME  | PAGE NO. | PART NO. | PART NAME | PAGE NO. |
|----------|------------|----------|----------|-----------|----------|
| STD-208  | Seal       | 2-9      | STD-860  | Screw     | 6-9      |
| STD-213  | Seal       | 2-11     | STD-872  | Nut       | 1-10     |
| STD-251  | Washer     | 3-9      | STD-872  | Nut       | 5-1      |
| STD-251  | Washer     | 6-8      | STD-1045 | Gasket    | 1-5      |
| STD-294  | Gasket     | 2-5      | STD-1065 | Dowel     | 1-7      |
| STD-294  | Gasket     | 2-7      | STD-1164 | Insert    | 6-3      |
| STD-355  | Plug       | 6-1      | STD-1173 | Insert    | 6-4      |
| STD-425  | Washer     | 1-5      | STD-1201 | Bolt      | 6-7      |
| STD-425  | Washer     | 6-1      | STD-1204 | Bolt      | 2-3      |
| STD-425  | Washer     | 6-9      | STD-1211 | Plug      | 1-7      |
| STD-475  | Washer     | 1-6      | STD-1215 | Bolt      | 2-3      |
| STD-475  | Washer     | 2-9      | STD-1215 | Bolt      | 6-5      |
| STD-475  | Washer     | 2-11     | STD-1339 | Plug      | 1-1      |
| STD-475  | Washer     | 3-7      | STD-1339 | Plug      | 2-1      |
| STD-475  | Washer     | 4-1      | STD-1339 | Plug      | 2-3      |
| STD-475  | Washer     | 4-3      | STD-1409 | Nut       | 1-10     |
| STD-475  | Washer     | 5-4      | STD-1410 | Nut       | 1-6      |
| STD-475  | Washer     | 6-7      | STD-1410 | Nut       | 2-9      |
| STD-514  | Dowel      | 1-1      | STD-1410 | Nut       | 2-11     |
| STD-514  | Dowel      | 6-1      | STD-1410 | Nut       | 3-7      |
| STD-551  | Plug       | 6-1      | STD-1410 | Nut       | 4-1      |
| STD-551  | Plug       | 6-3      | STD-1410 | Nut       | 4-3      |
| STD-551  | Plug       | 6-4      | STD-1410 | Nut       | 5-4      |
| STD-553  | Screw      | 4-5      | STD-1410 | Nut       | 6-7      |
| STD-557  | Dowel      | 1-1      | STD-1411 | Nut       | 1-10     |
| STD-589  | Gasket     | 6-1      | STD-1411 | Nut       | 2-5      |
| STD-596  | Nut        | 1-3      | STD-1411 | Nut       | 2-7      |
| STD-596  | Nut        | 1-10     | STD-1411 | Nut       | 2-9      |
| STD-669  | Washer     | 5-1      | STD-1411 | Nut       | 3-5      |
| STD-670  | Nut        | 3-9      | STD-1411 | Nut       | 3-7      |
| STD-670  | Nut        | 4-1      | STD-1411 | Nut       | 4-5      |
| STD-670  | Nut        | 4-5      | STD-1411 | Nut       | 6-1      |
| STD-670  | Nut        | 6-9      | STD-1411 | Nut       | 6-3      |
| STD-676  | Nut        | 5-1      | STD-1411 | Nut       | 6-4      |
| STD-678  | Washer     | 1-3      | STD-1414 | Bolt      | 1-10     |
| STD-678  | Washer     | 1-10     | STD-1416 | Bolt      | 1-10     |
| STD-684  | Nipple     | 3-9      | STD-1419 | Bolt      | 1-10     |
| STD-690  | Washer     | 5-1      | STD-1419 | Bolt      | 2-3      |
| STD-692  | Screw      | 3-9      | STD-1419 | Bolt      | 6-1      |
| STD-692  | Screw      | 4-1      | STD-1419 | Bolt      | 6-3      |
| STD-692  | Screw      | 4-5      | STD-1419 | Bolt      | 6-4      |
| STD-692  | Screw      | 6-9      | STD-1420 | Nut       | 2-3      |
| STD-696  | Washer     | 4-1      | STD-1499 | Bolt      | 6-8      |
| STD-696  | Washer     | 4-5      | STD-1631 | Dowel     | 2-9      |
| STD-705  | Bolt       | 2-11     | STD-1646 | Bolt      | 1-10     |
| STD-713  | Cotter Pin | 5-1      | STD-1646 | Bolt      | 6-1      |
| STD-784  | Plug       | 2-1      | STD-1686 | Screw     | 3-9      |
| STD-784  | Plug       | 2-7      | STD-1686 | Screw     | 6-1      |
| STD-784  | Plug       | 6-1      | STD-1688 | Bolt      | 6-1      |
| STD-798  | Dowel      | 1-6      | STD-1688 | Bolt      | 6-3      |

## NUMERICAL INDEX

| PART NO. | PART NAME  | PAGE NO. | PART NO. | PART NAME  | PAGE NO. |
|----------|------------|----------|----------|------------|----------|
| STD-1688 | Bolt       | 6-4      | 25C-22   | Stud       | 2-9      |
| STD-1727 | Washer     | 4-3      | 31C-12   | Stud       | 1-1      |
| STD-1727 | Washer     | 5-1      | 31C-12   | Stud       | 3-3      |
| STD-1727 | Washer     | 6-7      | 31C-13   | Stud       | 1-1      |
| STD-1737 | Ring       | 2-11     | 31C-13   | Stud       | 3-3      |
| STD-1763 | Locknut    | 6-7      | 31C-14   | Stud       | 1-1      |
| STD-1774 | Dowel      | 2-7      | 31C-14   | Stud       | 6-5      |
| STD-1774 | Pin        | 2-9      | 31C-15   | Stud       | 6-4      |
| STD-1774 | Pin        | 2-11     | 31C-16   | Stud       | 1-1      |
| STD-1821 | Hose       | 3-9      | 31C-16   | Stud       | 6-5      |
| STD-1828 | Bolt       | 2-9      | 31C-19   | Stud       | 2-1      |
| STD-1838 | Bolt       | 5-1      | 31C-21   | Stud       | 2-1      |
| STD-1849 | Insert     | 2-5      | 31CD-17  | Stud       | 2-1      |
| STD-1856 | Screw      | 2-5      | 31CD-20  | Stud       | 2-1      |
| STD-1872 | Insert     | 3-3      | 38-13    | Stud       | 1-1      |
| STD-1874 | Screw      | 4-1      | 38-15    | Stud       | 1-1      |
| STD-1874 | Screw      | 4-5      | 38-15    | Stud       | 6-1      |
| STD-1875 | Bolt       | 2-3      | 38-15    | Stud       | 6-3      |
| STD-1875 | Bolt       | 6-1      | 38-15    | Stud       | 6-4      |
| STD-1875 | Bolt       | 6-5      | 38-16    | Stud       | 1-1      |
| STD-1882 | Screw      | 2-11     | 38-22    | Stud       | 1-1      |
| STD-1889 | Bolt       | 5-1      | 38D-17   | Stud       | 1-1      |
| STD-1901 | Drive Stud | 6-4      | 383-B    | Nut        | 3-7      |
| STD-1925 | Screw      | 3-7      | 50-15    | Stud       | 1-1      |
| STD-1925 | Screw      | 4-1      | 1028-B   | Ball       | 1-5      |
| STD-1925 | Screw      | 4-5      | 1102     | Plug       | 1-1      |
| STD-1931 | Bolt       | 1-10     | 1102     | Plug       | 2-1      |
| STD-1931 | Bolt       | 2-3      | 1102     | Plug       | 6-1      |
| STD-1937 | Screw      | 1-7      | 1102     | Plug       | 6-3      |
| STD-2029 | Bolt       | 4-1      | 1102     | Plug       | 6-5      |
| STD-2029 | Bolt       | 4-5      | 1182-B3  | Spark Plug | 4-5      |
| STD-2043 | Nut        | 3-7      | 1182-D4  | Spark Plug | 4-5      |
| STD-2078 | Dowel      | 1-7      | 1182-J3  | Spark Plug | 4-5      |
| STD-2084 | Bolt       | 1-10     | 1182-K4  | Spark Plug | 4-5      |
| STD-2090 | Nut        | 3-7      | 1182-W5  | Spark Plug | 4-5      |
| STD-2156 | Bolt       | 5-4      | 1182-Y3  | Spark Plug | 4-5      |
| STD-2167 | Screw      | 1-9      | 1540     | Plug       | 2-7      |
| STD-2168 | Nut        | 1-9      | 8313     | Gasket     | 2-7      |
| STD-2180 | Hose       | 3-9      | 8313     | Gasket     | 2-9      |
| STD-2184 | Plug       | 6-3      | 20415    | Gasket     | 2-9      |
| 25C-8    | Stud       | 3-3      | 60009    | Key, Valve | 3-5      |
| 25C-9    | Stud       | 3-3      | 60096    | Gasket     | 2-11     |
| 25C-9    | Stud       | 6-1      | 60398    | Bushing    | 3-7      |
| 25C-10   | Stud       | 2-5      | 60422    | Screen     | 6-1      |
| 25C-11   | Stud       | 6-1      | 60430    | Cover      | 2-7      |
| 25C-11   | Stud       | 6-3      | 60430    | Cover      | 2-9      |
| 25C-11   | Stud       | 6-4      | 60746    | Impeller   | 2-3      |
| 25C-12   | Stud       | 2-1      | 60803    | Strap      | 1-10     |
| 25C-12   | Stud       | 2-9      | 60945    | Plug       | 1-7      |
| 25C-21   | Stud       | 2-1      | 61084    | Spring     | 1-5      |

## NUMERICAL INDEX

| PART NO. | PART NAME          | PAGE NO. | PART NO. | PART NAME        | PAGE NO. |
|----------|--------------------|----------|----------|------------------|----------|
| 61173    | Gasket             | 2-5      | 69532    | Seat             | 3-5      |
| 61183    | Gasket             | 2-7      | 69551    | Gasket           | 2-9      |
| 61247    | Cover              | 3-7      | 69603    | Hose             | 6-5      |
| 61260    | Exhaust            | 3-7      | 69675    | Connector        | 2-7      |
| 61261    | Stud               | 2-1      | 69796    | Dowel            | 1-1      |
| 61297    | Impeller           | 2-3      | 70310    | Seal             | 3-5      |
| 61298    | Impeller           | 2-3      | 70455    | Gasket           | 1-6      |
| 61503    | Sleeve             | 3-5      | 70456    | Bracket          | 1-3      |
| 61544    | Plunger            | 1-9      | 70457    | Gasket           | 1-3      |
| 61548    | Nameplate          | 6-4      | 70474    | Washer           | 2-11     |
| 62224    | Gasket             | 4-3      | 70484    | Screen           | 6-3      |
| 62255    | Clip               | 4-1      | 70484    | Screen           | 6-4      |
| 62255    | Clip               | 4-5      | 70485    | Pipe             | 6-5      |
| 62417    | Plug               | 2-7      | 71481    | Ring, Oil Seal   | 3-7      |
| 62817    | Screen Assy.       | 2-5      | 71549    | Washer           | 3-7      |
| 65321    | Gasket             | 3-7      | 71596    | Washer           | 2-7      |
| 62388    | Cap, Valve Stem    | 3-5      | 71596    | Washer           | 2-9      |
| 62922    | Seal               | 3-5      | 71610    | Hook             | 3-9      |
| 65007    | Retainer           | 1-1      | 71611    | Retainer         | 3-9      |
| 65441    | Seat               | 3-5      | 71640    | Plug             | 1-7      |
| 65614    | Plug               | 3-9      | 71651    | Fitting Breather | 2-7      |
| 66224    | Gasket             | 6-7      | 71652    | Gear Assy.       | 1-9      |
| 66610    | Bushing            | 3-3      | 71664    | Gear Assy.       | 2-11     |
| 66670    | Bushing            | 3-3      | 71667    | Lockplate        | 2-11     |
| 66728    | Washer             | 3-5      | 71668    | Gear Assy.       | 1-9      |
| 66731    | Cover              | 3-7      | 71675    | Adapter Assy.    | 2-9      |
| 66732    | Gasket             | 3-7      | 71699    | Connector        | 6-3      |
| 66796    | Insert, Spark Plug | 3-3      | 71699    | Connector        | 6-4      |
| 67112    | Rocker Assy.       | 3-7      | 71737    | Tube Assy.       | 3-9      |
| 67113    | Rocker Assy.       | 3-7      | 71894    | Seat             | 3-3      |
| 67114    | Bushing            | 3-7      | 71903    | Bushing          | 1-7      |
| 67193    | Gasket             | 3-7      | 71907    | Washer           | 1-7      |
| 67195    | Exhaust            | 3-7      | 71910    | Clamp            | 4-5      |
| 67514    | Gear               | 1-7      | 71973    | Gasket           | 6-5      |
| 67516    | Lockplate          | 1-7      | 72050    | Key, Valve       | 3-5      |
| 67528    | Stud               | 2-1      | 72053    | Gasket           | 1-6      |
| 67530    | Bushing            | 1-9      | 72056    | Sump Assy.       | 6-4      |
| 67536    | Adapter Assy.      | 2-7      | 72057    | Seat             | 3-3      |
| 67542    | Ball Bearing       | 4-3      | 72058    | Seat             | 3-3      |
| 68315    | Gasket             | 2-9      | 72059    | Gasket           | 1-3      |
| 68668    | Spring             | 1-5      | 72060    | Bushing          | 1-7      |
| 68759    | Tube Assy.         | 3-9      | 72061    | Bushing          | 1-7      |
| 68761    | Tube Assy.         | 3-9      | 72062    | Bushing          | 1-7      |
| 68795    | Cover              | 3-7      | 72074    | Bushing          | 1-7      |
| 69106    | Cover              | 2-9      | 72091    | Ring, Oil Seal   | 1-5      |
| 69159    | Adapter Assy.      | 2-11     | 72155    | Bushing          | 1-7      |
| 69164    | Gasket             | 2-11     | 72158    | Bushing          | 1-1      |
| 69260    | Insert, Spark Plug | 3-3      | 72167    | Pipe, Extension  | 6-1      |
| 69444    | Rocker Assy.       | 3-7      | 72168    | Pipe, Extension  | 6-1      |
| 69510    | Housing            | 2-5      | 72169    | Pipe, Extension  | 6-1      |

## NUMERICAL INDEX

| PART NO. | PART NAME             | PAGE NO. | PART NO. | PART NAME                  | PAGE NO. |
|----------|-----------------------|----------|----------|----------------------------|----------|
| 72179    | Stud                  | 6-1      | 73455    | Rod Assy.                  | 3-7      |
| 72210    | Gasket                | 6-5      | 73456    | Rod Assy.                  | 3-7      |
| 72220    | Gasket                | 1-3      | 73457    | Rod Assy.                  | 3-7      |
| 72245    | Support Assy.         | 1-7      | 73458    | Rod Assy.                  | 3-7      |
| 72246    | Shaft                 | 2-11     | 73636    | Coupling                   | 4-3      |
| 72255    | Shroud Tube Assy.     | 3-5      | 73644    | Counterweight Assy.        | 1-7      |
| 72306    | Bracket               | 1-3      | 73751    | Clamp                      | 6-9      |
| 72312    | Ring, Oil Seal        | 1-3      | 73772    | Nozzle Assy.               | 1-1      |
| 72343    | Stabilizer            | 3-3      | 73810    | Bushing                    | 1-7      |
| 72344    | Stabilizer            | 3-3      | 73818    | Gasket                     | 2-1      |
| 72351    | Screw                 | 4-5      | 73857    | Ring                       | 3-1      |
| 72377    | Elbow                 | 6-10     | 73937    | Fuel Injector              | 6-7      |
| 72378    | Cover                 | 1-6      | 73938    | Valve                      | 3-5      |
| 72412    | Cover                 | 2-9      | 73965    | Bracket                    | 6-8      |
| 72566    | Gear                  | 1-7      | 73966    | Spacer                     | 6-8      |
| 72626    | Shaft                 | 3-7      | 73971    | Clamp                      | 6-9      |
| 72702    | Tube Assy.            | 3-9      | 73075    | Baffle Assy.               | 3-9      |
| 72703    | Tube Assy.            | 3-9      | 74070    | Elbow                      | 6-9      |
| 72706    | Insert                | 6-1      | 74151    | Nozzle Assy.               | 6-7      |
| 72711    | Ring                  | 6-5      | 74241    | Ring                       | 3-1      |
| 72797    | Roller                | 1-7      | 74278    | Bracket Assy.              | 6-9      |
| 72801    | Counterweight Assy.   | 1-7      | 74494    | Plate                      | 3-7      |
| 72815    | Bracket               | 4-5      | 74519    | Alternator Belt            | 5-3      |
| 72834    | Cover                 | 3-9      | 74541    | Valve                      | 3-5      |
| 72877    | Hydraulic Tappet Body | 1-5      | 74630    | Flange                     | 6-5      |
| 72958    | Baffle                | 6-1      | 74636    | Rocker Assy.               | 3-7      |
| 72960    | Plug                  | 6-1      | 74637    | Bushing                    | 3-7      |
| 72964    | Gear Assy.            | 2-9      | 74641    | Shaft                      | 2-3      |
| 72965    | Roller                | 1-7      | 74718    | Baffle Assy.               | 3-9      |
| 72972    | Shaftgear Assy.       | 2-11     | 74830    | Gear Retainer              | 4-3      |
| 72974    | Gear Assy.            | 2-7      | 74833    | Housing Assy.              | 6-1      |
| 72996    | Fitting Breather      | 2-7      | 74887    | Spacer                     | 3-7      |
| 73000    | Coupling              | 4-3      | 75009    | Bracket                    | 6-8      |
| 73013    | Coupling              | 4-3      | 75030    | Support Assy.              | 1-7      |
| 73027    | Tube Assy.            | 3-9      | 75039    | Crankshaft Assy.           | 1-7      |
| 73031    | Housing Assy.         | 6-5      | 75040    | Crankshaft and C'wt. Assy. | 1-7      |
| 73032    | Gasket                | 6-7      | 75060    | Bolt                       | 3-1      |
| 73050    | Clip                  | 4-1      | 75061    | Bolt                       | 3-1      |
| 73136    | Bracket               | 6-9      | 75078    | Crankshaft Assy.           | 1-7      |
| 73152    | Bracket               | 6-9      | 75079    | Crankshaft and C'wt. Assy. | 1-7      |
| 73249    | Washer                | 1-6      | 75089    | Piston                     | 3-1      |
| 73250    | Washer                | 1-6      | 75118    | Gasket                     | 3-7      |
| 73251    | Washer                | 1-6      | 75124    | Gear Retainer              | 4-3      |
| 73252    | Washer                | 1-6      | 75133    | Gage Assy.                 | 1-3      |
| 73111    | Valve                 | 3-5      | 75283    | Manifold Assy.             | 6-8      |
| 73346    | Flange                | 6-5      | 75287    | Body Assy.                 | 2-3      |
| 73383    | Lockplate             | 5-1      | 75338    | Baffle Assy.               | 3-9      |
| 73434    | Rod Assy.             | 3-7      | 75339    | Baffle Assy.               | 3-9      |
| 73435    | Rod Assy.             | 3-7      | 75380    | Link Alternator            | 5-1      |
| 73436    | Rod Assy.             | 3-7      | 75444    | Adapter                    | 6-1      |

NUMERICAL INDEX

| PART NO. | PART NAME                  | PAGE NO. | PART NO.     | PART NAME                | PAGE NO. |
|----------|----------------------------|----------|--------------|--------------------------|----------|
| 75447    | Nipple                     | 6-8      | 77160        | Guide                    | 3-3      |
| 75567    | Fuel Injector              | 6-7      | 77309        | Bushing                  | 2-11     |
| 75573    | Manifold Assy.             | 6-8      | 77369        | Tube                     | 6-9      |
| 75656    | Bushing                    | 1-7      | 77467        | Spring                   | 1-5      |
| 75657    | Bushing                    | 1-7      | 77527        | Extension                | 1-3      |
| 75675    | Extension                  | 1-3      | 77579        | Support Assy.            | 1-7      |
| 75737    | Extension                  | 1-3      | 77653        | Housing Assy.            | 6-5      |
| 75739    | Nipple                     | 6-10     | 77654        | Spacer                   | 6-7      |
| 75906    | Gasket                     | 3-7      | 77756        | Bracket                  | 5-1      |
| 75944    | Valve Assy.                | 2-5      | 77757        | Bracket                  | 5-1      |
| 75965    | Clamp                      | 4-1      | 77770        | Extension                | 1-3      |
| 75965    | Clamp                      | 4-3      | 77808        | Valve Assy.              | 1-5      |
| 76026    | Alternator Belt            | 5-3      | 77852        | Oil Filter Base Assy.    | 2-5      |
| 76118    | Spacer                     | 1-9      | 77853        | Oil Filter Housing Assy. | 2-5      |
| 76148    | Camshaft                   | 1-7      | 77872        | Bushing                  | 1-6      |
| 76152    | Housing Assy.              | 2-1      | 77906        | Spacer                   | 3-7      |
| 76155    | Shaft Assy.                | 1-9      | 78059        | Overvoltage Relay        | 5-3      |
| 76220    | Stud                       | 1-10     | 78060        | Overvoltage Relay        | 5-3      |
| 76304    | Elbow                      | 6-7      | 78100        | Housing Assy.            | 6-5      |
| 76422    | Elbow                      | 6-10     | 78290        | Plunger Assy.            | 3-5      |
| 76486    | Fuel Pump                  | 2-11     | 78368        | Pin                      | 1-9      |
| 76529    | Plug                       | 1-5      | 78490        | Housing Assy.            | 2-1      |
| 76534    | Shim                       | 5-1      | 78523        | Elbow                    | 6-10     |
| 76539    | Seat                       | 2-5      | 78524        | Socket                   | 3-5      |
| 76734    | Zip Strap                  | 4-1      | 78528        | Body Assy.               | 2-3      |
| 76734    | Zip Strap                  | 4-5      | 78614        | Pulley                   | 5-1      |
| 76735    | Bracket                    | 6-9      | 78617        | Idler Shaft              | 5-1      |
| 76768    | Lockwasher                 | 5-1      | 78629        | Ball Bearing             | 5-1      |
| 76769    | Locknut                    | 5-1      | 78639        | Pulley and Shaft Assy.   | 5-1      |
| 76784    | Shaft                      | 2-3      | 78924        | Manifold Assy.           | 6-8      |
| 76786    | Gear                       | 1-7      | 78993        | Fuel Pump                | 2-11     |
| 76787    | Roller                     | 1-7      | 79007        | Manifold Assy.           | 6-8      |
| 76788    | Roller                     | 1-7      | 79024        | Bushing                  | 1-7      |
| 76799    | Crankshaft Assy.           | 1-7      | 79034        | Fuel Injector            | 6-7      |
| 76801    | Crankshaft and C'wt. Assy. | 1-7      | 10-720631-48 | Replacement Lead         | 4-1      |
| 76943    | Guide                      | 3-3      | 10-720631-48 | Replacement Lead         | 4-5      |
| 77003    | Fuel Injector              | 6-7      | 10-720631-78 | Replacement Lead         | 4-1      |
|          |                            |          | 10-720631-78 | Replacement Lead         | 5-4      |