

TECHNICAL PUBLICATION SUPPLEMENT

| | | | |
|---------------------------|---|---------------------------|---------------------------------|
| SUPPLEMENT No. SSP-488 | ENGINE MODEL O-320, IO-320 and LIO-320 Series | PUBLICATION No. PC-103 | PUBLICATION DATE April, 1970 |
|---------------------------|---|---------------------------|---------------------------------|

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

August, 1988
Page 1 of 1
Figure 1-3, Crankshaft Assembly

| Superseded Engine Model | Propeller Bushings | Superseded By | Engine Model | Propeller Bushings |
|--|-----------------------|------------------|-----------------|-----------------------|
| O-320* <small>No Letter Designation</small> | 3/8 inch | ----- | O-320-A3A** | 7/16 inch |
| O-320-A1A | 3/8 inch | ----- | O-320-A3A** | 7/16 inch |
| O-320-A1B | 3/8 inch | ----- | O-320-A3B** | 7/16 inch |
| O-320-B1A | 3/8 inch | ----- | O-320-B3A** | 7/16 inch |
| O-320-B1B | 3/8 inch | ----- | O-320-B3B** | 7/16 inch |

* Same as O-320-A1A.

** Parts for this engine are currently listed in PC-103 Parts Catalog dated April, 1970.

NOTE

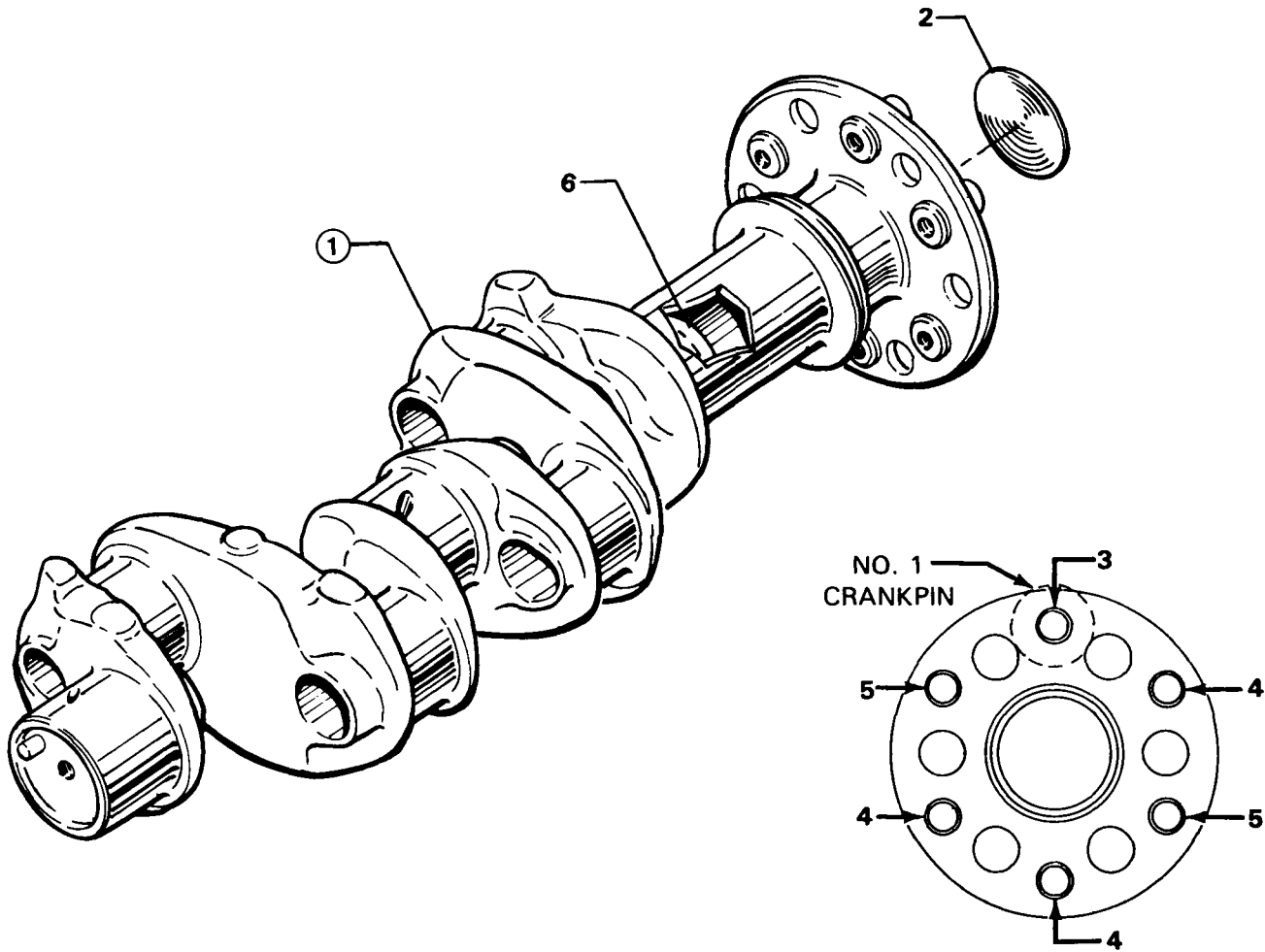
This supplemental parts list and illustration provides an engine parts comparison between current and superseded engine models.

All parts for engine models in the above chart marked with an asterisk (*) are the same as parts for the superseded engine models with the exception of the Crankshaft Assy. and propeller mounting bushings and locations.

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP
CRANKSHAFT AND RELATED PARTS

| FIG. REF. 1-3 | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY | | | | | | | | | | | | | | | | | | | |
|------------------|-------------|----------------------------------|------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | | O-320, O-320-A1A, A1B, B1A and B1B | | | | | | | | | | | | | | | | | | | |
| 1 | 68864 * | CRANKSHAFT ASSEMBLY | 1 | | | | | | | | | | | | | | | | | | | |
| 2 | STD-1211 | PLUG, 2.00 dia. expansion | 1 | | | | | | | | | | | | | | | | | | | |
| 3 | 72066-S | BUSHING, Propeller flange, index | 1 | | | | | | | | | | | | | | | | | | | |
| 4 | 72067-S | BUSHING, Propeller flange | 3 | | | | | | | | | | | | | | | | | | | |
| 5 | 72068-S | BUSHING, Propeller flange, short | 2 | | | | | | | | | | | | | | | | | | | |
| 6 | 61510 | PLUG, 1-3/4 O.D. | 1 | | | | | | | | | | | | | | | | | | | |

* No longer available. Order Crankshaft Assembly Part No. 75011 as a replacement. Refer to latest edition of Service Instruction No. 1098 for bushing application.



SUPPLEMENTAL PARTS LIST

To Provide Parts Coverage for Model
O-320-E2G Lycoming Aircraft Engines

This supplemental parts list is written to provide an engine parts comparison between the O-320-E2D as listed in Lycoming PC-103, and engine model O-320-E2G. It is written to follow PC-103 page by page and part by part. Figure reference numbers, part numbers and page numbers follow exact construction of PC-103. Where necessary, because of numerous changes, all parts applicable to O-320-E2G model engines are listed.

If a part number in this supplement does not have a figure reference number, it denotes a new part, or a part not figure referenced in PC-103, or parts that are peculiar to O-320-E2G model engines. If a page in PC-103 is not applicable to O-320-E2G model engines, it is so designated in this supplement.

NOTICE

The spark plugs listed herein, are those used in current production only; this listing does not include additional spark plugs that are approved for use in these engines. See latest edition of Service Instruction No. 1042 for complete listing of all spark plugs.

O-320-E2G

SECTION 1
CRANKCASE ASSEMBLY

Page 1-1

| Ref. No. | Part No. | Description | Qty. Per Assy. |
|----------|----------|--------------------------------------|----------------|
| | LW-13812 | CRANKCASE ASSEMBLY | 1 |
| 2 | 75154 | STUD, 1/2-13 x 10.02 in.long | 2 |
| 4 | 50-15 | STUD, 1/2-13 x 1-7/8 in.long | 8 |
| 5 | 38-13 | STUD, 3/8-16 x 1-5/8 in.long | 16 |
| 8 | STD-1102 | PLUG, Allen head, 1/8-27 NPT | 5 |
| 9 | 65007 | RETAINER, Shroud tube seal | 8 |
| 10 | 61261 | STUD, 5/16-18 x 1-1/2 in.long | 2 |
| 11 | 67528 | STUD, 5/16-18 x 1-5/8 in.long | 1 |
| 12 | 69796 | DOWEL, Crankshaft bearing | 8 |
| 13 | STD-514 | DOWEL, 5/16 in.dia. x 1/2 in.long | 2 |
| 14 | STD-1623 | INSERT, Heli-coil, 1/4-20 x 3/8 long | 2 |
| 15 | 38D-17 | STUD, 3/8-16 x 2-1/8 in.drilled | 1 |
| 16 | LW-13793 | STUD, 5/16-18 x 15/16 in.drilled | 1 |

Parts listed above comprise crankcase assembly for O-320-E2G model engines. O-320-E2G model engines have #1 dynafocal mounting.

Page 1-2

| | | | |
|----|----------|--|---|
| 1 | 67447 | BEARING, Crankshaft | 8 |
| | 68763 | BEARING, Crankshaft (alternate) | 8 |
| 3 | LW-13792 | SEAL, Crankshaft, oil | 1 |
| 7 | 72075 | SEAL, Oil, .090 in.section x 15/32 in.ID | 2 |
| 8 | 72091 | RING, Oil seal, 23/64 in.ID x 7/64 in.dia. | 2 |
| 11 | 61084 | SPRING, Oil pressure relief valve | 1 |

For all other parts, except for those listed above, for O-320-E2G model engines, use figure reference numbers 9, 10, 12, 13 and 15.

Page 1-3

Use column headed O-320-E2D for all parts necessary for O-320-E2G.

Page 1-4

| | | | |
|---|----------|--------------------------------|---|
| 1 | 78030 | ROD ASSEMBLY, Connecting | 4 |
| 2 | LW-13923 | BUSHING, Connecting rod, upper | 4 |
| 3 | 78027 | BOLT, Connecting rod | 8 |
| 4 | LW-12186 | NUT, Connecting rod bolt | 8 |
| 5 | 69373 | BEARING, Connecting rod | 8 |
| 6 | 76097 | CAMSHAFT | 1 |

Use only above listed parts for O-320-E2G model engines.

O-320-E2G

SECTION 1 (CONT.)
CRANKCASE ASSEMBLY

Page 1-5

| Ref. No. | Part No. | Description | Qty. Per Assy. |
|----------|----------|---------------------------------------|----------------|
| 1 | AN6-34A | BOLT,Hex.hd.,3/8-24 x 3-37/64 in.long | 2 |

For all other parts, except that listed above,use column headed -E2D for O-320-E2G model engines. Do not use STD-2090 nut or 77907 spacer.

Page 1-6

| | | | |
|----|----------|---|---|
| 15 | LW-13796 | SHAFT,Crankshaft idler gear | 2 |
| 17 | STD-2167 | SCREW,Hex.hd.,drilled,5/16-18 x 7/8 in.long | 3 |
| 18 | STD-2168 | NUT,Slotted shear,5/16-18 NC-3 | 1 |

For all other parts,except those listed above,use column under -E2D marked "with integral camshaft and gear" and "WCF".

Page 1-7

For all parts applicable to O-320-E2G model engines,use column headed -E2D.

SECTION 2
ACCESSORY HOUSING AND DRIVES

Page 2-1

This page is not applicable to O-320-E2G model engines.

Page 2-2

For all parts applicable to O-320-E2G model engines use columns headed -B2B and 76103. Stud P/N 61238, 4 pcs. on O-320-E2G.

Page 2-3

| | | | |
|----|----------|--------------------------------|----|
| | 78528 | BODY ASSEMBLY,Oil pump | 1 |
| | 78532 | IMPELLER ASSY.,Oil pump driven | 1 |
| | STD-1339 | PLUG | 1 |
| | 61174 | SHAFT,Oil pump drive | 1 |
| 9 | LW-14260 | SEAL,Tachometer drive,oil | 1 |
| 10 | STD-8 | WASHER,Plain,1/4 in. | 12 |
| 10 | STD-160 | WASHER,Internal lock,1/4 in. | 12 |

Do not use figure reference numbers 2 and 6 but all other figure reference numbers under column headed -E2D except those listed above are applicable to O-320-E2G model engines.

O-320-E2G

SECTION 2 (CONT.)
ACCESSORY HOUSING AND DRIVES

Page 2-4

| Ref. No. | Part No. | Description | Qty. Per Assy. |
|----------|----------|------------------------|----------------|
| | STD-784 | PLUG,Allen hd.,3/8 in. | 2 |

Figure reference numbers 9 thru 26 and 34 are not applicable to -E2G model engines. For all other parts,except that listed above,use column headed -E2D.

Page 2-5

For all parts applicable to O-320-E2G model engines,use column headed -E2D.

Page 2-6

Only figure reference numbers 1-2-3-4-5 under column headed -E2D are applicable to O-320-E2G model engines.

Page 2-7

For all parts applicable to O-320-E2G model engines, use column headed -E2D.

Page 2-8

This page is not applicable to O-320-E2G model engines.

Page 2-9

| | | | |
|----|----------|---|--------|
| 1 | LW-13353 | GASKET,Oil sump | 1 |
| 2 | 72362 | SUMP ASSEMBLY,Oil | 1 |
| 4 | 61376 | CONNECTION,Intake pipe,front | 2 |
| 5 | 61377 | CONNECTION,Intake pipe,rear | 2 |
| | 68437 | STUD,5/16-18 x 1-7/8 in.long | 4 |
| 9 | STD-551 | PLUG,Sq.hd.,drilled,1/2-14 NPT | 1 |
| 15 | STD-1411 | NUT,Plain,1/4-20 | 14 |
| | STD-1419 | BOLT,Hex.hd.,1/4-20 x 1-1/8 in.long | 2 |
| | 60820 | GASKET,Oil suction tube flange | 1 |
| | 61381 | TUBE ASSEMBLY,Oil suction | 1 |
| | STD-1227 | WASHER,Plain,copper,1/4 in. | 2 |
| | STD-1433 | BOLT,Drilled end,hex.hd.,1/4-20 x 1-1/2 in.long | 2 |
| | STD-8 | WASHER,Plain,1/4 in. | Max. 4 |
| | STD-1409 | NUT,Slotted shear,1/4-20 | 2 |
| | STD-1204 | BOLT,1/4-20 x .94 long,hex.hd. | 16 |

O-320-E2G

SECTION 2 (CONT.)
ACCESSORY HOUSING AND DRIVES

Page 2-9 (Cont.)

| Ref. No. | Part No. | Description | Qty. Per Assy. |
|----------|----------|--|----------------|
| | STD-68 | PIN,Cotter,1/16 in.dia.x 1/2 in.long | 2 |
| | 61378 | SCREEN,Oil suction | 1 |
| | STD-1045 | GASKET,Annular,1/8 in.ID x 1-1/2 in.OD x 3/32 thick | 1 |
| | 61358 | PLUG,.150 hex.hd.,x 1-1/4-12 thd. | 1 |

SECTION 3
CYLINDER,PISTON AND VALVE TRAIN

NOTE

See actual catalog page for proper cylinder and piston parts for O-320-E2G model engines.

Page 3-1

| | | | |
|---|----------|---------------------------------|---|
| 1 | 75413 | PISTON,Compression ratio 7.00:1 | 4 |
| | 74989 | RING,Piston,top compression | 8 |
| | 73857 | RING,Piston,oil regulating | 4 |
| 5 | LW-14068 | PIN,Piston | 4 |
| 6 | 60828 | PLUG,Piston pin | 8 |

Page 3-2

| | | | |
|----|------------|---------------------------------------|---|
| 1 | LW-12417 | CYLINDER ASSY.,Plain | 4 |
| 4 | 76943 | GUIDE,Valve,intake | 4 |
| 5 | 77160 | GUIDE,Valve,exhaust | 4 |
| 9 | 68510 | STUD,1/4-20 x 1-1/16 in.long | 4 |
| 10 | MS20823-6D | ELBOW,Flared tube coupling,3/8 in.45° | 4 |

For all other parts applicable to O-320-E2G model engines,use column headed -E2D.

Page 3-3

| | | | |
|----|----------|---|---|
| 2 | 74541 | VALVE,Exhaust,rotator type (1/2 in.stem dia.) | 4 |
| 3 | LW-11795 | SPRING,Valve,inner | 8 |
| 4 | LW-11800 | SPRING,Valve,outer | 8 |
| 6 | LW-13323 | SEAT,Valve spring lower,exhaust | 4 |
| 13 | 78524 | SOCKET,Push rod,hydraulic tappet | 8 |
| 14 | 68987 | TUBE,Push rod,shroud | |

O-320-E2G

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

Page 3-3 (Cont.)

| Ref. No. | Part No. | Description | Qty. Per Assy. |
|----------|----------|------------------------|----------------|
| 16 | LW-13428 | SPRING, Shroud tube | 4 |
| 17 | LW-12272 | LOCKPLATE, Shroud tube | 4 |
| 19 | 62922 | SEAL, Shroud tube | 8 |

For all other parts applicable to O-320-E2G model engines, use column headed -E2D. Do not use figure reference number 15. Disregard note for 7/16 in. stem dia. exhaust valves.

Page 3-4

| | | | |
|----|----------|--|----|
| 6 | LW-13790 | SHAFT, Valve rocker | 4 |
| | LW-12892 | THRUST BUTTON, Rocker shaft | 8 |
| | 74887 | SPACER, 0.52 ID x 7/8 OD x 3/8 in. thick | 2 |
| 15 | STD-2090 | NUT, Plain, 1/2-20 | 18 |
| 18 | STD-2174 | CLAMP, 5/8 in. dia. | 4 |
| 20 | 61363 | PIPE, Intake, cylinders #1 and #2 | 2 |
| | 61365 | PIPE, Intake, cylinder #3 | 1 |
| | 61364 | PIPE, Intake, cylinder #4 | 1 |
| 21 | STD-1196 | HOSE, 1-1/2 in. ID x 1-7/8 OD x 1-1/2 in. long | 4 |
| 22 | STD-1530 | CLAMP, Hose, 1-3/4 ID x 9/16 in. wide | 8 |

For all other parts, except those listed above, applicable to O-320-E2G model engines, use column headed -E2D.

SECTION 4
IGNITION SYSTEM

Page 4-1

| | | | |
|---|----------|--|---|
| 3 | LW-12681 | GASKET, Magneto | 2 |
| | STD-761 | PIN, Cotter, 3/32 in. dia. x 1.00 in. long | 1 |
| 4 | LW-12706 | ADAPTER, Magneto, impulse coupling | 1 |
| | 76734 | ZIP STRAPS | 8 |

For all other parts, except those listed above, applicable to O-320-E2G model engines, use column headed -E2D.

Page 4-2

This page is not applicable to O-320-E2G model engines.

O-320-E2G

SECTION 4 (CONT.)
IGNITION SYSTEM

Page 4-3

| Ref. No. | Part No. | Description | Qty. Per Assy. |
|-------------|----------|-------------|-------------------|
|-------------|----------|-------------|-------------------|

This page is not applicable to O-320-E2G model engines.

Page 4-4

This page is not applicable to O-320-E2G model engines.

Page 4-5

This page is not applicable to O-320-E2G model engines.

Page 4-6

This page is not applicable to O-320-E2G model engines.

Page 4-7

| | | | |
|---|---------|-----------------------------|---|
| 2 | 1182-B6 | SPARK PLUG,Champion (EM41E) | 8 |
| 3 | STD-295 | GASKET,Spark plug | 8 |

SECTION 5
ELECTRICAL SYSTEM

Page 5-1

This page is not applicable to O-320-E2G model engines.

Page 5-2

| | | | |
|----|----------|--|---|
| 38 | STD-1858 | BOLT,Hex.hd.,drilled,5/16-18 x 29/32 long | 1 |
|----|----------|--|---|

For all other parts,except that listed above,applicable to O-320-E2G model engines,use column headed -E2D.

Page 5-3

O-320-E2G model engines are shipped without alternator assemblies.

Page 5-4

| | | | |
|---|----------|--|---|
| 1 | LW-14207 | STARTER ASSY.,3.38:1 ratio,12/14 pitch pinion | 1 |
| 4 | STD-2156 | BOLT,Hex.hd.,5/16-18 x 1-5/32 in.long | 1 |

O-320-E2G

SECTION 5 (CONT.)
ELECTRICAL SYSTEM

Page 5-4 (Cont.)

| Ref. No. | Part No. | Description | Qty. Per Assy. |
|----------|----------|-------------|----------------|
|----------|----------|-------------|----------------|

O-320-E2G model engines are shipped without alternator drive belts and magnetic starter switches. All other parts, applicable to O-320-E2G model engines, except those listed on page 7, use column headed -E2D.

Page 5-5

O-320-E2G model engines are shipped without voltage regulators and relays.

SECTION 6
FUEL INDUCTION SYSTEM

Page 6-1

Only figure reference numbers 1 thru 5 under column -E2D are applicable to O-320-E2G model engines.

Page 6-2

Use carburetor Avco Lycoming P/N 78728, Marvel-Schebler P/N 10-5009, and all other parts under column headed -E2D for O-320-E2G model engines.

Page 6-3

This page is not applicable to O-320-E2G model engines. Use 4 P/N 1102 pipe plugs.

Page 6-4

This page is not applicable to O-320-E2G model engines.

Page 6-5

| | | | |
|---|----------------|--|---|
| 1 | LW-12098-1-170 | TUBE ASSY.,Cylinders 1 and 2 | 2 |
| 2 | LW-12098-1-116 | TUBE ASSY.,Cylinders 3 and 4 | 2 |
| 3 | LW-12098-0-100 | TUBE ASSY.,Intermediate | 2 |
| 4 | LW-12293 | CLIP,Cushion type,3/16 ID for 1/4 in. dia.screw | 4 |
| | 71909 | CLAMP,1-1/2 ID with 1/4 in.dia.offset | 4 |

For all other parts,except those listed above,for O-320-E2G model engines,use column headed -E2D.

O-320-E2G

SECTION 7
COOLING BAFFLES, EXHAUST, OIL GAGES AND PROPELLER GOVERNOR OIL LINES

Page 7-1

| Ref. No. | Part No. | Description | Qty. Per Assy. |
|----------|----------|-------------|----------------|
|----------|----------|-------------|----------------|

For those parts applicable to O-320-E2G model engines use column headed -E2D.

Page 7-2

Use column headed -E2D for all parts applicable to O-320-E2G model engines.

Page 7-3

| | | | |
|---|----------|------------------------------------|---|
| 1 | 75736 | TUBE, Oil level gage, long | 1 |
| 2 | 72059 | GASKET, Oil level gage | 1 |
| 3 | 74068 | RING, Oil level gage | 1 |
| 4 | LW-14758 | GAGE ASSEMBLY, Oil level | 1 |
| 5 | 72842 | PLUG, Oil level gage | 1 |
| 6 | STD-366 | PIN, 1/16 in. dia. x 7/16 in. long | 1 |

Page 7-4

This page is not applicable to O-320-E2G model engines.

NOTE

Order seal and gasket kit Avco Lycoming P/N 69371-1 and cylinder, piston and ring kit, P/N 76659 for O-320-E2G model engines.

LYCOMING WILLIAMSPORT DIVISION
CORPORATION
WILLIAMSPORT, PENNSYLVANIA 17701

SUPPLEMENTAL PARTS LIST SSP975

To Provide Parts Coverage for Lycoming
AEIO-320 Series Aircraft Engines

This parts supplement contains the parts that are used in place of, or in addition to the parts listed in Parts Catalog PC-103 for the comparable IO-320 model.

Those parts which set apart the AEIO-320 models from their comparable IO-320 models are the accessory housing, oil sump and associated fittings. Following is a list of these parts.

| Part No. | Description | Qty. | Model Application |
|----------|-----------------------------|------|-------------------|
| LW-14009 | ACCESSORY HSG. ASSY. | 1 | AEIO-320-E1B |
| LW-14047 | ACCESSORY HSG. ASSY. | 1 | AEIO-320-E2B |
| STD-551 | PLUG, 1/2-14 NPT | 1 | |
| LW-13863 | SUMP ASSY. , Oil | 1 | |
| LW-13871 | FITTING, Sump - oil suction | 1 | |
| AN932-5 | PLUG, 1/2-14 allen hd. | 1 | |
| LW-13753 | FITTING, Sump oil strainer | 1 | |
| LW-13754 | FITTING, Sump oil return | 1 | |
| LW-13749 | OIL SEPARATOR | 1 | |
| LW-13755 | BREATHER TEE | 1 | |
| LW-13750 | OIL VALVE | 1 | |

SUPPLEMENTAL PARTS LIST

**To provide parts coverage for Model
O-320-E3D Lycoming Aircraft Engines**

This parts list is arranged in the same basic format as Parts Catalog PC-103. Page numbers here correspond to page numbers in PC-103. Reference numbers here correspond to reference numbers in PC-103.

Where reference numbers listed in PC-103 are not used in this parts list it indicates those references are not applicable to O-320-E3D engines. Where parts are listed in this parts list without reference numbers it indicates those parts are not illustrated in PC-103.

Use all parts, but only those parts listed in this parts list for model O-320-E3D engines.

Where the notation "use column O-320-E2D" for a particular page appears (eg. : Page 1-7), all parts applicable to O-320-E2D engines also apply to O-320-E3D engines.

Where pages in PC-103 are not applicable to model O-320-E3D engines they are so designated.

SECTION 1

CRANKCASE, CRANKSHAFT AND CAMSHAFT

Page 1-1

| Ref. No. | Part No. | Description | Qty. Per Engine |
|----------|----------|-------------------------------------|-----------------|
| | LW-11062 | CRANKCASE ASSY. | 1 |
| 1 | STD-557 | DOWEL, 1/2 dia. x .60 long, hollow | 2 |
| 2 | 75154 | STUD, 1/2-13 x 10-1/32 long | 2 |
| 4 | 50-15 | STUD, 1/2-20 x 1-7/8 long | 8 |
| 5 | 38-13 | STUD, 3/8-16 x 1-5/8 long | 16 |
| 8 | 1102 | PLUG, 1/8-27 NPT, allen | 5 |
| 9 | 65007 | RETAINER, Shroud tube seal | 6 |
| 10 | 61261 | STUD, 5/16-18 x 15/16 long | 1 |
| 11 | 67528 | STUD, 5/16-18 x 1-5/8 long | 1 |
| 12 | 69796 | DOWEL, Crankshaft bearing | 8 |
| 13 | STD-514 | DOWEL, 5/16 dia. x 1/2 long | 2 |
| 14 | STD-1623 | INSERT, 1/4-20 heli-coil x 3/8 long | 2 |
| 15 | 38D-17 | STUD, 3/8-16 x 2-1/8 long, drilled | 1 |
| 16 | 75156 | STUD, 5/16-18 x 15/16 long | 1 |

Page 1-2

| | | | |
|----|----------|--|----|
| 1 | 67447 | BEARING, Crankshaft | 8 |
| 3 | LW-11997 | SEAL, Crankshaft, oil | 1 |
| 7 | 72075 | SEAL, Oil, 3/32 sect. x 15/32 ID | 2 |
| 8 | 72091 | RING, Oil seal, 23/64 ID x 3/32 dia. | 2 |
| 9 | 72877 | BODY, Hydraulic tappet | 8 |
| 10 | 1028-B | BALL, 11/16 dia. | 1 |
| 11 | 61084 | SPRING, Oil pressure relief valve | 1 |
| 12 | STD-425 | WASHER, No. 10 plain (max. 9) | AR |
| 13 | STD-1045 | GASKET, 1-1/4 ID x 1-1/2 OD x 3/32 annular | 1 |
| 15 | 76529 | PLUG, Oil relief valve | 1 |

Page 1-3

| | | | |
|---|------------|-----------------------|---|
| 1 | 75010* | CRANKSHAFT ASSY. | 1 |
| 1 | LW-10496* | CRANKSHAFT ASSY. | 1 |
| 1 | LW-11854** | CRANKSHAFT ASSY. | 1 |
| 4 | 72065* | BUSHING, Prop. flange | 1 |

* - On some Piper applications.

** - On Beech and some Piper applications.

Page 1-3 (Cont.)

| Ref. No. | Part No. | Description | Qty. Per Engine |
|----------|----------|----------------------------|-----------------|
| 4 | 72063* | BUSHING, Prop. flange | 3 |
| 4 | 72066** | BUSHING, Prop. flange | 1 |
| 5 | 72067** | BUSHING, Prop. flange | 5 |
| 6 | 72064* | BUSHING, Prop. flange | 2 |
| 7 | 61510* | PLUG, 1-9/16 dia. | 1 |
| 9 | 61155 | GEAR, Crankshaft | 1 |
| 10 | 61156 | LOCKPLATE, Crankshaft gear | 1 |
| 11 | STD-847 | SCREW, 5/16-24 x 1.00 long | 1 |

* - On some Piper applications.

** - On Beech and some Piper applications.

Page 1-4

| | | | |
|---|----------|-------------------------------|---|
| 1 | 78030 | ROD ASSY., Connecting | 4 |
| 2 | 65819 | BUSHING, Connecting rod upper | 4 |
| 3 | 78027 | BOLT, Connecting rod | 8 |
| 4 | LW-12186 | NUT, Connecting rod | 8 |
| 5 | 69373 | BEARING, Connecting rod | 8 |
| 6 | 76097 | CAMSHAFT | 1 |

Page 1-5

| | | | |
|---|-----------|-------------------------------------|----|
| 1 | AN6-34A | BOLT, 3/8-24 x 3-37/64 long | 2 |
| 1 | STD-33 | WASHER, 3/8 plain | 2 |
| 1 | STD-33* | WASHER, 3/8 plain | 6 |
| 1 | STD-678** | WASHER, 3/8 internal lock | 2 |
| 1 | STD-596** | NUT, 3/8-24 plain | 2 |
| 2 | STD-1414 | BOLT, 1/4-20 x 1-1/2 long, hex. hd. | 8 |
| 2 | STD-8 | WASHER, 1/4 plain | 16 |
| 2 | STD-160 | WASHER, 1/4 internal lock | 8 |
| 2 | STD-1411 | NUT, 1/4-20 plain | 8 |
| 3 | STD-2084 | BOLT, 1/4-20 x 1-3/4 long | 1 |
| 3 | STD-160 | WASHER, 1/4 internal lock | 1 |
| 3 | STD-1411 | NUT, 1/4-20 plain | 1 |
| 5 | STD-1419 | BOLT, 1/4-20 x 1-1/8 long | 3 |
| 5 | STD-8 | WASHER, 1/4 plain | 3 |
| 5 | STD-160 | WASHER, 1/4 internal lock | 3 |

* - Piper applications only.

** - Beech applications only.

Page 1-5 (Cont.)

| Ref. No. | Part No. | Description | Qty. Per Engine |
|----------|------------|-----------------------------------|-----------------|
| 6 | STD-1416 | BOLT, 1/4-20 x 1-1/2 long | 3 |
| 6 | STD-8 | WASHER, 1/4 plain | AR |
| 6 | STD-1409 | NUT, 1/4-20 slotted shear | 3 |
| 8 | STD-872 | NUT, 3/8-24 slotted | 1 |
| 8 | STD-33 | WASHER, 3/8 plain | 3 |
| | AN960-616L | WASHER, 3/8 plain, thick (max. 3) | AR |
| 9 | 60803 | STRAP, Lifting | 1 |
| 10 | LW-11866* | SPACER NUT, Compressor | 2 |
| 11 | 76220 | STUD, 1/2-20 x 10.70 long | 4 |

* - Piper applications only.

Page 1-6

| | | | |
|----|--------------|---|---|
| 1 | 68867* | SUPPORT ASSY., Starter ring gear 10/12 pitch, 1.91:1 drive | 1 |
| 1 | 76944* | SUPPORT ASSY., Starter ring gear 10/12 pitch, 3.25:1 drive | 1 |
| 1 | 76628** | SUPPORT ASSY., Starter ring gear 12/14 pitch | 1 |
| 2 | 60882* | GEAR, Starter ring, 10/12 pitch | 1 |
| 2 | 72566** | GEAR, Starter ring, 12/14 pitch | 1 |
| 8 | 76121 | SHAFT ASSY., Tachometer | 1 |
| 9 | 78368 | PIN, 3/16 dia. x 2.33 long | 1 |
| 10 | 76118 | SPACER, Tachometer shaft centering | 1 |
| 14 | MS16625-1081 | RING, Internal retaining | 1 |
| 15 | 75158 | SHAFT, Crankshaft idler gear | 2 |
| 16 | 71646 | LOCKPLATE, 5/16 bolt x 1-3/4 spacing | 2 |
| 17 | STD-1926 | BOLT, 5/16-18 x 43/64 long, hex. hd. | 3 |
| 18 | STD-1410 | NUT, 5/16-18 plain | 1 |

* - On some Piper applications.

** - Beech applications only.

Page 1-7

Use column O-320-E2D.

SECTION 2

ACCESSORY HOUSING AND DRIVES

Page 2-1

Not applicable.

Page 2-2

Use column O-320-E2D.

Page 2-3

| Ref. No. | Part No. | Description | Qty. Per Engine |
|-----------------|-----------------|-------------------------------------|------------------------|
| | 78528 | BODY ASSY., Oil pump | 1 |
| 3 | STD-1339 | PLUG, 1/16-27 NPT, allen | 1 |
| 4 | 75288 | SHAFT, Oil pump drive | 1 |
| 5 | LW-12897 | IMPELLER, Oil pump driving | 1 |
| 6 | 78532 | IMPELLER ASSY., Oil pump driven | 1 |
| 7 | STD-35 | WASHER, 5/16 plain | 3 |
| 8 | STD-1420 | NUT, 5/16-18 slotted | 3 |
| 9 | 61165 | SEAL, Tachometer drive, oil | 1 |
| 10 | STD-8 | WASHER, 1/4 plain | 12 |
| 10 | STD-160 | WASHER, 1/4 internal lock | 12 |
| 10 | STD-1204 | BOLT, 1/4-20 x 15/16 long, hex. hd. | 10 |
| 11 | STD-1414 | BOLT, 1/4-20 x 1-1/2 long, hex. hd. | 2 |
| | STD-1973 | KEY, 1/8 x 3/4 dia. woodruff | 1 |

Page 2-4

| | | | |
|----|----------|---|---|
| 2 | 69510 | HOUSING, Thermostatic valve and oil pressure screen | 1 |
| 3 | 61173 | GASKET, Oil pressure housing | 1 |
| 4 | 62817 | SCREEN ASSY., Oil pressure | 1 |
| 5 | STD-294 | GASKET, 7/8 OD x 5/8 ID x 3/32 annular | 1 |
| 6 | STD-8 | WASHER, 1/4 plain | 4 |
| 7 | STD-1856 | SCREW, 1/4-20 x 31/32-1.00 long, hex. hd., slotted | 4 |
| 8 | 75944 | VALVE ASSY., Temp. control oil cooler bypass | 1 |
| 23 | 62417* | PLUG, Oil cooler bypass | 1 |

* - Piper applications only.

Page 2-4 (Cont.)

| Ref. No. | Part No. | Description | Qty. Per Engine |
|----------|------------|--|-----------------|
| 24 | STD-294* | GASKET, 7/8 OD x 5/8 ID x 3/32 annular | 1 |
| 29 | 71620 | BOLT, Oil cooler fitting | 1 |
| 30 | AN901-8A | GASKET, Metal tube connecting seal | 1 |
| 31 | AN777-8D | ELBOW, Universal, 75° | 1 |
| 32 | 71623 | WASHER, Oil cooler fitting | 1 |
| 33 | AN844-10D* | ELBOW, Pipe thd. and 5/8 ID hose, 45° | 1 |
| 34 | 72413 | FITTING, Breather, 120° | 1 |

* - Piper applications only.

Page 2-5

Use column O-320-E2D.

Page 2-6

Use O-320-E2D references 1 thru 5 only on Piper applications.
Use O-320-E2D references 6 thru 11 only on Beech applications.

Page 2-7

Not applicable.

Page 2-8

Not applicable.

Page 2-9

| | | | |
|----|----------|-------------------------------------|----|
| 1 | 68972 | GASKET, Oil sump | 1 |
| 2 | LW-10828 | SUMP ASSY., Oil | 1 |
| 4 | 78914 | CONNECTION, Intake pipe | 4 |
| 6 | 61400 | STUD, 1/4-20 x 1-3/16 long | 4 |
| 7 | 68437 | STUD, 5/16-18 x 1-7/8 long | 4 |
| 9 | STD-551 | PLUG, 1/2-14 NPT, sq. hd., drilled | 2 |
| 10 | STD-91 | PLUG, 1/2-14 NPT, allen | 1 |
| 12 | STD-8 | WASHER, 1/4 plain | 8 |
| 12 | STD-160 | WASHER, 1/4 internal lock | 8 |
| 14 | STD-160 | WASHER, 1/4 internal lock | 4 |
| 15 | STD-1204 | BOLT, 1/4-20 x 15/16 long, hex. hd. | 14 |
| 15 | STD-8 | WASHER, 1/4 plain | 20 |

| Ref. No. | Part No. | Description | Qty. Per Engine |
|----------|----------|---|-----------------|
| 15 | STD-160 | WASHER, 1/4 internal lock | 8 |
| 15 | STD-1411 | NUT, 1/4-20 plain | 12 |
| | STD-1419 | BOLT, 1/4-20 x 1-1/8 long, hex. hd. | 2 |
| 16 | 70484 | SCREEN, Oil suction | 1 |
| 17 | STD-11 | GASKET, 1.00 ID x 1-1/4 OD x 3/32 annular | 1 |
| 18 | LW-12545 | PLUG, 5/8 hex. hd. x 1.00-20 thd. | 1 |
| 19 | 61548 | PLATE, Name | 1 |
| 20 | STD-1901 | DRIVE STUD, No. 4 x 3/16 long, rd. hd. | 4 |

SECTION 3

CYLINDER, PISTON AND VALVE TRAIN

Page 3-1

| Ref. No. | Part No. | Description | Qty. Per Engine |
|----------|----------|--|-----------------|
| 1 | 75413 | PISTON, 7.00:1 ratio | 4 |
| 2 | 77857 | PIN, Piston | 4 |
| 3 | 60828 | PLUG, Piston pin | 8 |
| 4 | 74989 | RING, Piston, compression | 8 |
| 5 | 73857 | RING, Piston, oil regulating, expander | 4 |

Page 3-2

| | | | |
|----|----------|--------------------------------------|----|
| 1 | LW-12417 | CYLINDER AND HEAD ASSY. | 4 |
| 2 | 72057 | SEAT, Intake valve | 4 |
| 3 | 72058 | SEAT, Exhaust valve | 4 |
| 4 | 76943 | GUIDE, Intake valve | 4 |
| 5 | 77160 | GUIDE, Exhaust valve | 4 |
| 6 | 66796 | INSERT, Spark plug, 18-1.5 MM | 8 |
| 7 | 61261 | STUD, 5/16-18 x 1-1/2 long | 8 |
| 9 | 68510 | STUD, 1/4-20 x 1-1/16 long | 4 |
| 10 | AN823-6D | ELBOW, 3/8 flared tube coupling, 45° | 4 |
| 11 | 66610 | BUSHING, Rocker shaft | 16 |
| | 1102* | PLUG, 1/8-27 NPT, allen | 4 |

* - On Beech and some Piper applications.

| Ref. No. | Part No. | Description | Qty. Per Engine |
|----------|-----------|------------------------------------|-----------------|
| 1 | 73938 | VALVE, Intake | 4 |
| 2 | 75068 | VALVE, Exhaust, rotator | 4 |
| 3 | LW-11795 | SPRING, Valve, inner | 8 |
| 4 | LW-11800 | SPRING, Valve, outer | 8 |
| 5 | 65441 | SEAT, Valve spring, lower, intake | 4 |
| 6 | 74554 | SEAT, Valve spring, lower, exhaust | 4 |
| 7 | LW-10077 | SEAT, Valve spring, upper, intake | 4 |
| 8 | LW-10076 | SEAT, Valve spring, upper, exhaust | 4 |
| 9 | 60009 | KEY, Valve, intake | 8 |
| 10 | MS13997-3 | KEY, Valve, exhaust, rotator | 8 |
| 11 | MS13998-3 | CAP, Valve stem, exhaust, rotator | 4 |
| 12 | 78290 | PLUNGER ASSY., Hydraulic tappet | 8 |
| 13 | 78524 | SOCKET, Push rod, hydraulic tappet | 8 |
| 14 | 68987 | TUBE, Push rod, shroud | 8 |
| 16 | LW-13428 | SPRING, Shroud tube | 4 |
| 17 | LW-12272 | LOCKPLATE, Shroud tube | 4 |
| 18 | STD-1411 | NUT, 1/4-20 plain | 4 |
| 19 | 62922 | SEAL, Shroud tube | 8 |
| 20 | 70310 | SEAL, Shroud tube | 8 |

Use column O-320- E2D and

| | | | |
|----|----------|-------------------------------------|----|
| 15 | STD-2090 | NUT, 1/2-20 plain | 18 |
| | 74887 | SPACER, 33/64 ID x 7/8 OD 3/8 thick | 2 |

SECTION 4

IGNITION SYSTEM

| Ref. No. | Part No. | Description | Qty. Per Engine |
|----------|----------|---|-----------------|
| | 77742 | MAGNETO AND HARNESS ASSY., Right | 1 |
| 1 | 76949 | MAGNETO, Right (Slick model 4050) | 1 |
| | 77744 | MAGNETO AND HARNESS ASSY., Left | 1 |
| 1 | 76950 | MAGNETO, Left (Slick model 4051 - impulse coupling) | 1 |

Page 4-1 (Cont.)

| Ref. No. | Part No. | Description | Qty. Per Engine |
|----------|----------|--|-----------------|
| 2 | 61665 | GEAR, Magneto, impulse coupling | 1 |
| | STD-761 | COTTER PIN | 1 |
| 2 | 61163 | GEAR, Magneto | 1 |
| 3 | 62224 | GASKET, Magneto adapter and magneto | 1 |
| 4 | LW-12706 | ADAPTER, Magneto impulse coupling | 1 |
| | LW-12681 | GASKET, Magneto | 2 |
| 5 | 76961 | CLAMP, Magneto | 4 |
| 6 | STD-1727 | WASHER, Plain, 3/4 OD x 11/32 ID x 1/8 thick | 4 |
| 7 | STD-475 | WASHER, 5/16 internal lock | 4 |
| 8 | STD-1410 | NUT, 5/16-18 plain | 4 |
| | 76734 | ZIP STRAPS | 8 |

Page 4-2

Not applicable.

Page 4-3

Not applicable.

Page 4-4

Not applicable.

Page 4-5

Not applicable.

Page 4-6

Use column O-320-E2D.

Page 4-7

| | | | |
|---|---------|----------------------------|---|
| 1 | 1182-B6 | SPARK PLUG, Champion EM41E | 8 |
|---|---------|----------------------------|---|

SECTION 5
ELECTRICAL SYSTEM

Page 5-1

Not applicable.

Page 5-2

| Ref. No. | Part No. | Description | Qty. Per Engine |
|-------------|----------|-------------|--------------------|
|-------------|----------|-------------|--------------------|

Use column O-320-E2D and the following on Beech applications only.

| | | | |
|----|----------|--|---|
| 38 | STD-1858 | BOLT, 5/16-18 x 29/32 long, hex. hd. dr. | 1 |
|----|----------|--|---|

The following parts apply to Piper O-320-E3D engines which were equipped with alternators, alternator brackets and attaching parts at Lycoming.

| | | |
|----------|--|----|
| LW-13039 | BRACKET, Alternator | 1 |
| 73383 | LOCKPLATE, 5/16 bolt x 1.00 spacing | 1 |
| STD-1838 | BOLT, 5/16-18 x 15/16 long, hex. hd. | 2 |
| 75380 | LINK, Alternator belt adjusting | 1 |
| STD-35 | WASHER, 5/16 plain | 1 |
| STD-1817 | BOLT, 5/16-18 x 3/4 long, hex. hd., dr. | 2 |
| STD-1727 | WASHER, Plain, 3/4 OD x 11/32 ID x 1/8 thick | 1 |
| 74323 | STRUT, Alternator support | 1 |
| STD-1817 | BOLT, 5/16-18 x 3/4 long, hex. hd., dr. | 1 |
| STD-33 | WASHER, 3/8 plain | 1 |
| AN6-14 | BOLT, 3/8-24 x 1-37/64 long, hex. hd., dr. end | 1 |
| STD-33 | WASHER, 3/8 plain | AR |
| STD-872 | NUT, 3/8-24, slotted | 1 |
| STD-713 | COTTER PIN | 1 |
| AN6-13 | BOLT, 3/8-24 x 1-29/64 long, hex. hd., dr. end | 1 |
| 76534 | SHIM, 1-1/8 OD x 13/32 ID x .005 thick | AR |
| STD-33 | WASHER, 3/8 plain | AR |
| STD-872 | NUT, 3/8-24 slotted | 1 |
| STD-713 | COTTER PIN | 1 |

Page 5-3

Not applicable.

| Ref. No. | Part No. | Description | Qty. Per Engine |
|----------|------------|---------------------------------------|-----------------|
| 1 | 76210 | STARTER, 12 volt, 10/12 pitch | 1 |
| 1 | 76211* | STARTER, 12 volt, 12/14 pitch | 1 |
| 2 | STD-35 | WASHER, 5/16 plain | 4 |
| 3 | STD-475 | WASHER, 5/16 internal lock | 4 |
| 4 | LW-31-1.09 | BOLT, 5/16-18 x 1-3/32 long, hex. hd. | 1 |
| 4 | STD-2156* | BOLT, 5/16-18 | 1 |
| 5 | STD-1410 | NUT, 5/16-18 plain | 1 |

* - Beech applications only.

Not applicable.

SECTION 6

FUEL INDUCTION SYSTEM

Use references 1 thru 5 only.

| Ref. No. | Part No. | Description | Qty. Per Engine |
|----------|----------|--------------------------|-----------------|
| 1 | 66224 | GASKET, Carburetor | 1 |
| 2 | 72394* | CARBURETOR, (10-3678-32) | 1 |
| 2 | 78728 | CARBURETOR, (10-5009) | 1 |
| 3 | STD-35 | WASHER, 5/16 plain | 4 |
| 4 | STD-1410 | NUT, 5/16-18 plain | 4 |
| 5 | STD-1763 | LOCKNUT, 5/16 palnut | 4 |

* - Beech applications.

Not applicable.

Page 6-4

Not applicable.

Page 6-5
Piper Applications

| Ref. No. | Part No. | Description | Qty. Per Engine |
|--------------------|------------|--|-----------------|
| | 1102 | PLUG, 1/8-27 NPT, allen | 4 |
| Beech Applications | | | |
| 1 | 61581-9 | TUBE ASSY., Primer, 16-11/16 long, cyls. 1 and 2 | 2 |
| 2 | 61581-2 | TUBE ASSY., Primer, 11-11/16 long, cyls. 3 and 4 | 2 |
| 3 | 61581-3 | TUBE ASSY., Primer, 10-5/16 long, intermediate | 2 |
| 4 | 62254 | CLIP, 3/16 ID for 1/4 dia. screw | 4 |
| 5 | 71910 | CLAMP, 1-3/4 ID with 1/4 dia. offset | 4 |
| 6 | STD-553 | SCREW, No. 6-32 x 1/2 long, rd. hd. | 4 |
| 7 | AN365-632C | NUT, No. 6-32, self lock | 4 |
| 8 | STD-853 | TEE, Union, 1/8 tube | 3 |
| 9 | 74225 | NIPPLE ASSY., Primer | 4 |

SECTION 7

COOLING BAFFLES, EXHAUST, OIL GAGE
AND PROPELLER GOVERNOR OIL LINE

Page 7-1

Use column O-320-E2D.

Page 7-2

| Ref. No. | Part No. | Description | Qty. Per Engine |
|----------|----------|----------------------------|-----------------|
| 1 | 65321* | GASKET, Exhaust flange | 4 |
| 1 | 77611** | GASKET, Exhaust flange | 4 |
| 2 | STD-35 | WASHER, 5/16 plain | 8 |
| 3 | STD-475 | WASHER, 5/16 internal lock | 8 |
| 4 | STD-1410 | NUT, 5/16-18 plain | 8 |

* - Piper applications.

** - Beech applications.

Page 7-3
Piper Applications

| Ref. No. | Part No. | Description | Qty. Per Engine |
|-------------|----------|----------------------------|--------------------|
| 2 | 75736 | TUBE, Oil level gage, long | 1 |
| | 72059 | GASKET, Oil level gage | 1 |
| 3 | 74068 | RING, Oil level gage | 1 |
| 5 | 69116 | GAGE ASSY., Oil level | 1 |
| 7 | 72842 | PLUG, Oil level gage | 1 |
| | STD-366 | PIN, 1/16 dia. x 7/16 long | 1 |

Beech Applications

| | | | |
|--|----------|---|---|
| | 72059 | GASKET, Oil level gage | 1 |
| | LW-12789 | TUBE ASSY., Oil level gage, 12-13/16 long | 1 |
| | 75767 | TUBE, Oil level gage | 1 |
| | 77527 | EXTENSION, Oil filler | 1 |
| | 72312 | RING, Oil seal, 1.00 ID x 1/8 section | 1 |
| | LW-12791 | GAGE ASSY., Oil level | 1 |
| | STD-406 | DOWEL, 3/16 dia. x 1/2 long | 2 |
| | 74217 | RING, Plug, oil level gage | 1 |
| | 74524 | RING, Oil level gage bushing | 1 |

Page 7-4

Not applicable.

SUPPLEMENTAL PARTS LIST SSP2872

**TO PROVIDE PARTS COVERAGE FOR LYCOMING
MODEL O-320-D1F and O-320-E1F ENGINES**

This parts supplement is not arranged in the same format as PC-103, but it is based on the same page and reference numbers listed in PC-103.

The departure appears when O-320-D1F or E1F engine parts are referred to under a particular column on the original catalog page. Parts listed under that column are the same on both D1F and E1F engines unless otherwise specified.

Example: Parts on page 1-7 under column O-320-E2C are the same as on both O-320-D1F and O-320-E1F engines.

Only those parts which are different, new, or require a different quantity than in PC-103 are listed. Pages in the original parts catalog which do not apply to O-320-D1F or O-320-E1F engines are so designated.

**O-320-D1F, -E1F WIDE CYLINDER
FLANGE AIRCRAFT ENGINES**

SECTION 1

CRANKCASE, CRANKSHAFT AND CAMSHAFT

| Ref. No. | Part Number | Description | Qty. Per Engine | Model Usage |
|----------|-------------|---|-----------------|-------------|
| Page 1-1 | | | | |
| | LW-11026 | CRANKCASE ASSEMBLY | 1 | -D1F, -E1F |
| 1 | STD-557 | DOWEL, Hollow, 1/2 in. dia. x 39/64 long | 2 | -D1F, -E1F |
| 2 | 75154 | STUD, 1/2-20 x 10-1/16 in. long | 2 | -D1F, -E1F |
| 4 | 50-15 | STUD, 1/2-20 x 1-7/8 in. long | 8 | -D1F, -E1F |
| 5 | 38-13 | STUD, 3/8-16 x 1-5/8 in. long | 16 | -D1F, -E1F |
| 8 | 1102 | PLUG, Allen Hd., 1/8-27 NPT | 4 | -D1F, -E1F |
| 9 | 65007 | RETAINER, Shroud Tube Seal | 8 | -D1F, -E1F |
| 10 | 61261 | STUD, 5/16-18 x 15/16 in. long | 2 | -D1F, -E1F |
| 11 | 67528 | STUD, 5/16-18 x 1-5/8 in. long | 1 | -D1F, -E1F |
| 12 | 69796 | DOWEL, Crankshaft Bearing | 2 | -D1F, -E1F |
| 12 | LW-10647 | DOWEL, Crankshaft Bearing | 4 | -D1F, -E1F |
| 13 | STD-514 | DOWEL, 5/16 in. dia. x 1/2 in. lg. | 2 | -D1F, -E1F |
| 14 | STD-1623 | INSERT, Heli-Coil, 1/4-20 x 3/8 in. long | 2 | -D1F, -E1F |
| 15 | 38D-17 | STUD, Drilled, 3/8-16 x 2-1/8 in. long | 1 | -D1F, -E1F |
| 16 | 75156 | STUD, 5/16-18 x 15/16 in. long | 1 | -D1F, -E1F |
| | STD-1339 | PLUG, Allen Hd., 1/16-27 NPT | 1 | -D1F, -E1F |
| | 68316 | STUD, 5/16-18 x 1-11/16 in. long | 4 | -D1F, -E1F |
| | 67556* | STUD, 5/16-18 x 2.00 in. long | 4 | -D1F |

Driven Height for P/N 68316 is .96 - 1.00 in.

Driven Height for P/N 67556 is 1.31 in.

* 38 model -D1F engines were manufactured with the 2 in. long stud.
Use only parts listed above for crankcase assembly.

Page 1-2

| | | | | |
|----|----------|--|---|------------|
| 1 | LW-11021 | BEARING, Crankshaft | 4 | -D1F, -E1F |
| 2 | 77044 | BEARING, Crankshaft, front | 2 | -D1F, -E1F |
| 3 | LW-11997 | SEAL, Crankshaft oil | 1 | -D1F, -E1F |
| 7 | 72075 | SEAL, Oil, 0.090 in. section x 15/32 in. dia. | 2 | -D1F, -E1F |
| 11 | 61084 | SPRING, Oil pressure relief valve | 1 | -D1F, -E1F |
| 15 | 76529 | PLUG, Oil pressure relief valve | 1 | -D1F, -E1F |

**O-320-D1F, -E1F WIDE CYLINDER
FLANGE AIRCRAFT ENGINES**

SECTION 1 (CONT.)

CRANKCASE, CRANKSHAFT AND CAMSHAFT

| Ref. No. | Part Number | Description | Qty. Per Engine | Model Usage |
|-------------|----------------|-------------|--------------------|----------------|
|-------------|----------------|-------------|--------------------|----------------|

Page 1-2 (cont.)

For other parts applicable to O-320-D1F, - E1F model engines use figure reference numbers 8-9-10-12-13.

Page 1-3

For all parts on page 1-3 applicable to O-320-D1F, -E1F model engines use column under O-320-D1A (WCF) listings. Use illustration Ref. 1-B for prop. flange bushing locations.

Page 1-4

| | | | | |
|---|----------|---------------------|---|------------|
| 4 | LW-12186 | NUT, Connecting Rod | 8 | -D1F, -E1F |
| 6 | 78717 | CAMSHAFT | 1 | -D1F, -E1F |

For other parts applicable to O-320-D1F, -E1F model engines use column under O-320-D1A.

Page 1-5

| | | | | |
|----|------------|--|----|------------|
| 1 | STD-33 | WASHER, Plain, 3/8 in. | 5 | -D1F, -E1F |
| | AN960-616L | WASHER, Plain (Thick) 3/8 in. | AR | -D1F, -E1F |
| | AN6-34A | BOLT, Hex. Hd., 3/8-24 x 3-37/64 long | 1 | -D1F, -E1F |
| 10 | 76220 | STUD, 1/2-20 x 10-45/64 in. long | 4 | -D1F, -E1F |

For other parts applicable to O-320-D1F, -E1F model engines use column under O-320-D1A (WCF).

Page 1-6

| | | | | |
|---|-------|---------------------------------|---|------------|
| 2 | 72566 | GEAR, Starter Ring, 12/14 Pitch | 1 | -D1F, -E1F |
|---|-------|---------------------------------|---|------------|

For other parts applicable to O-320-D1F, -E1F model engines use column under O-320-D2A except for those figure references marked "C" and 15-16-17.

Page 1-7

For all parts on this page applicable to O-320-D1F, -E1F model engines use column under O-320-D1A.

O-320-D1F, -E1F WIDE CYLINDER
FLANGE AIRCRAFT ENGINES

SECTION 2

ACCESSORY HOUSING AND DRIVES

| Ref. No. | Part Number | Description | Qty. Per Engine | Model Usage |
|----------|-------------|-------------|-----------------|-------------|
|----------|-------------|-------------|-----------------|-------------|

Page 2-1

Page 2-1 does not apply to O-320-D1F, -E1F model engines.

Page 2-2

For accessory housing P/N applicable to O-320-D1F, -E1F model engines, use column under O-320-D1A. For remaining parts use column under 76110.

Page 2-3

| | | | | |
|----|----------|--|----|------------|
| | 78528 | BODY ASSY., Oil pump | 1 | -D1F, -E1F |
| 3 | STD-1339 | PLUG, 1/16-27 NPT allen hd. | 1 | -D1F, -E1F |
| 4 | 75288 | SHAFT, Oil pump drive | 1 | -D1F, -E1F |
| 5 | LW-12897 | IMPELLER, Oil pump driving | 1 | -D1F, -E1F |
| 6 | 78532 | IMPELLER ASSY., Oil pump driven | 1 | -D1F, -E1F |
| 7 | STD-35 | WASHER, 5/16 plain | 3 | -D1F, -E1F |
| 8 | STD-1420 | NUT, 5/16-18 slotted | 3 | -D1F, -E1F |
| 9 | 61165 | SEAL, tachometer drive, oil | 1 | -D1F, -E1F |
| 10 | STD-8 | WASHER, 1/4 plain | 12 | -D1F, -E1F |
| 10 | STD-1204 | BOLT, 1/4-20 x 15/16 long, hex. hd. | 10 | -D1F, -E1F |
| 11 | STD-160 | WASHER, 1/4 internal lock | 12 | -D1F, -E1F |
| 11 | STD-1414 | BOLT, 1/4-20 x 1-1/2 long, hex. hd. | 2 | -D1F, -E1F |
| | STD-1973 | KEY, 1/8 x 3/4 dia. Woodruff | 1 | -D1F, -E1F |

Page 2-4

| | | | | |
|--|---------|-----------------------|---|------------|
| | STD-784 | PLUG, 3/8 pipe, Allen | 2 | -D1F, -E1F |
|--|---------|-----------------------|---|------------|

For other parts use O-320-E2D. Refs. 2, 3, 4, 5, 6, 7, 8, 27, 28 and 34.
Do not use Refs. 9 thru 22.

43 O-320-D1F engines were built with P/N 72413 (Ref. 34)

Page 2-5

Use column under O-320-D1A and:

| | | | | |
|--|--------|----------------------------------|---|------------|
| | 77875 | GEAR, Propeller governor, driven | 1 | -D1F, -E1F |
| | 77876 | SHAFT, Prop. gov. idler gear | 1 | -D1F, -E1F |
| | 77874 | GEAR ASSY., Prop gov. idler | 1 | -D1F, -E1F |
| | STD-19 | DOWEL, .0907 dia. x .22 long | 1 | -D1F, -E1F |
| | 77872 | BUSHING | 1 | -D1F, -E1F |

O-320-D1F, -E1F WIDE CYLINDER
FLANGE AIRCRAFT ENGINES

SECTION 2 (CONT.)

ACCESSORY HOUSING AND DRIVES

| Ref. No. | Part Number | Description | Qty. Per Engine | Model Usage |
|----------|-------------|--|-----------------|-------------|
| | STD-798 | DOWEL, .09 dia. x .28 long | 1 | D1F, -E1F |
| | 73249 | WASHER, Thrust | AR | D1F, -E1F |
| | 73250 | WASHER, Thrust | AR | D1F, -E1F |
| | 73251 | WASHER, Thrust | AR | D1F, -E1F |
| | 73252 | WASHER, Thrust | AR | D1F, -E1F |
| | MS9048-111 | PIN, Spring, 1/8 dia. x 1-3/8 long | 1 | D1F, -E1F |
| | 70455 | GASKET, .78 ID x 1-1/8 OD x .06 thick | 1 | D1F, -E1F |
| | 70454 | PLUG, 3/4-16 hex hd. | 1 | D1F, -E1F |

Page 2-6

Use column under O-320-D1A, References 1 thru 5 only.

Page 2-7

Use column under O-320-D1A (WCF) References 9 thru 18 only. Do not use P/N STD-783.

Page 2-8

Page 2-8 does not apply to model O-320-D1F or O-320-E1F engines.

Page 2-9

| | | | | |
|----|----------|------------------------------------|----|-----------|
| 2 | LW-10828 | SUMP ASSY., Oil | 1 | D1F, -E1F |
| 4 | 78914 | CONNECTION, Intake Pipe | 4 | D1F, -E1F |
| 12 | STD-1204 | BOLT, Hex. hd. 1/4-20 x 15/16 lg. | 14 | D1F, -E1F |
| 13 | STD-8 | WASHER, 1/4 plain | 28 | D1F, -E1F |
| 14 | STD-160 | WASHER, 1/4 internal lock | 20 | D1F, -E1F |
| 15 | STD-1411 | NUT, 1/4-20 plain | 12 | D1F, -E1F |
| | STD-1419 | BOLT, 1/4-20 x 1-1/8 long, hex hd. | 2 | D1F, -E1F |
| 18 | LW-12545 | PLUG, 5/8 x 1.00-20 thd., hex hd. | 1 | D1F, -E1F |

For other parts use column under O-320-D1A.

SECTION 3

CYLINDER, PISTON, AND VALVE TRAIN

Page 3-1

| | | | | |
|---|-------|----------------|---|------|
| 1 | 75089 | PISTON, 8.50:1 | 4 | -D1F |
|---|-------|----------------|---|------|

O-320-D1F, -E1F WIDE CYLINDER
FLANGE AIRCRAFT ENGINES

SECTION 3 (CONT.)

CYLINDER, PISTON, AND VALVE TRAIN

| Ref. No. | Part Number | Description | Qty. Per Engine | Model Usage |
|------------------|-------------|---|-----------------|-------------|
| Page 3-1 (Cont.) | | | | |
| 1 | 75413 | PISTON, 7.00:1 | 4 | -E1F |
| 2 | 74241 | RING, Piston, Compression | 4 | -D1F |
| 3 | 74241 | RING, Piston, Compression | 4 | -D1F |
| 2 | 74989 | RING, Piston, Compression | 4 | -E1F |
| 3 | 74989 | RING, Piston, Compression | 4 | -E1F |
| 4 | 73857 | RING, Piston, Oil Regulating, Expander | 4 | -D1F, -E1F |
| 5 | 69650 | PIN, Piston | 4 | -D1F |
| 5 | 77857 | PIN, Piston | 4 | -E1F |
| 6 | 60828 | PLUG, Piston pin | 8 | -D1F, -E1F |

Use above parts only.

| | | | | |
|----------|----------|--|---|------------|
| Page 3-2 | | | | |
| 1 | LW-12416 | CYLINDER & HEAD ASSY., Nitrided | 4 | -D1F |
| 1 | LW-12417 | CYLINDER & HEAD ASSY., Nitrided | 4 | -E1F |
| 4 | 76943 | GUIDE, Valve, Intake | 4 | -D1F, -E1F |
| 5 | 77160 | GUIDE, Valve, Exhaust | 4 | -D1F, -E1F |
| 8 | STD-1872 | INSERT, 1/8-27 helicoil taper pipe thd. | 8 | -D1F |
| | 1102 | PLUG, 1/8-27 NPT, Allen | 4 | -D1F, -E1F |

For other parts use column under O-320-D1A.

| | | | | |
|----------|----------|---------------------------------------|---|------------|
| Page 3-3 | | | | |
| 3 | LW-11795 | SPRING, Valve, Inner | 8 | -D1F, -E1F |
| 4 | LW-11800 | SPRING, Valve, Outer | 8 | -D1F, -E1F |
| 13 | 65074 | SOCKET, Push Rod, hydraulic tappet | 8 | -D1F, -E1F |
| 13 | 78524 | SOCKET, Push Rod, hydraulic tappet | 8 | -D1F, -E1F |
| 14 | 68987 | TUBE, Push Rod, Shroud | 8 | -D1F, -E1F |
| 16 | LW-12273 | SPRING, Shroud tube | 8 | -D1F, -E1F |
| 17 | LW-12272 | LOCKPLATE | 4 | -D1F, -E1F |
| 19 | 62922 | SEAL, Shroud tube | 8 | -D1F, -E1F |

For other parts on model O-320-D1F use O-320-D1A. For other parts on model O-320-E1F use O-320-E1A but do not use Ref. 15.

**O-320-D1F, -E1F WIDE CYLINDER
FLANGE AIRCRAFT ENGINES**

SECTION 3 (CONT.)

CYLINDER, PISTON, AND VALVE TRAIN

| Ref. No. | Part Number | Description | Qty. Per Engine | Model Usage |
|----------|-------------|---------------------------------------|-----------------|-------------|
| | | Page 3-4 | | |
| 15 | STD-2090 | NUT, 1/2-20 plain | 18 | -D1F, -E1F |
| | 74887 | SPACER, 33/64 ID x 7/8 OD x 7/8 thick | 2 | -D1F, -E1F |

For other parts use O-320-D1A (WCF) only.

SECTION 4

IGNITION SYSTEM

| | | | | |
|---|-------------|---------------------------------------|---|------------|
| | | Page 4-1 | | |
| 1 | LW-349305-1 | MAGNETO, S4LN-1209 | 1 | -D1F, -E1F |
| 1 | LW-349365-3 | MAGNETO, Impulse coupling (S4LN-1227) | 1 | -D1F, -E1F |
| 3 | LW-12681 | GASKET, Magneto | 2 | -D1F, -E1F |

For other parts use magneto P/N 75897. Do not use Reference 3.

Page 4-2

Does not apply.

Page 4-3

| | | | | |
|---|--------------|---------------------------------------|----|------------|
| | LW-10811 | TERMINALS, Spark Plug Wire | 8 | -D1F, -E1F |
| | LW-10814 | SPRING, Spark Plug Terminal | 8 | -D1F, -E1F |
| 2 | LW-10812 | COLLAR (Silicone) Spark Plug Terminal | 8 | -D1F, -E1F |
| | STD-8 | WASHER, Plain, 1/4 in. | 8 | -D1F, -E1F |
| | STD-160 | WASHER, Internal Lock, 1/4 in. | 4 | -D1F, -E1F |
| | AN500-416-12 | SCREW, 1/4-20 x 3/4 in. long | 4 | -D1F, -E1F |
| | STD-696 | WASHER, Plain, Thin | AR | -D1F, -E1F |

For all other parts except those listed above, use column under O-320-D2C. Do not use P/N 76753.

Pages 4-4, 4-5, 4-6 Do not apply

O-320-D1F, -E1F WIDE CYLINDER
FLANGE AIRCRAFT ENGINES

SECTION 4 (CONT.)

IGNITION SYSTEM

| Ref. No. | Part Number | Description | Qty. Per Engine | Model Usage |
|----------|-------------|-------------|-----------------|-------------|
| | | Page 4-7 | | |
| 1 | 1182-B3 | SPARK PLUG | 8 | -D1F |
| 1 | 1182-B6 | SPARK PLUG | 8 | -E1F |

Use above parts only.

SECTION 5

ELECTRICAL SYSTEM

Page 5-1
Does not apply.

Page 5-2
Use column O-320-D2A References 16 thru 45 only.

| Page 5-3 | | | | |
|----------|--|----------------------------|---|------------|
| 78308 | | ALTERNATOR, 12 volt-40 amp | 1 | -D1F, -E1F |
| 78407* | | ALTERNATOR, 12 volt-40 amp | 1 | -D1F |

* 15 O-320-D1F engines were built equipped with this alternator. Use the above parts only.

| Page 5-4 | | | | |
|----------|----------|--------------------------------------|---|------------|
| 4 | STD-2156 | BOLT, 5/16-18 x 1-5/32 long, hex hd. | 1 | -D1F, -E1F |
| | LW-12083 | SWITCH, Magnetic, 12 volt | 1 | -D1F, -E1F |

For all other parts use column O-320-E2B.

| Page 5-5 | | | | |
|----------|--|----------------------------|---|------------|
| LW-10185 | | REGULATOR, 12 volt | 1 | -D1F, -E1F |
| 78059 | | OVERVOLTAGE RELAY, 12 volt | 1 | -D1F, -E1F |

SECTION 6

FUEL INDUCTION SYSTEM

Page 6-1
Use O-320-A2A Refs. 1 thru 4 only.

O-320-D1F, -E1F WIDE CYLINDER
FLANGE AIRCRAFT ENGINES

SECTION 6

FUEL INDUCTION SYSTEM

| Ref. No. | Part Number | Description | Qty. Per Engine | Model Usage |
|----------|-------------|---|-----------------|-------------|
| | | Page 6-1 Use O-320-A2A Refs. 1 thru 4 only. | | |
| 2 | 78728 | Page 6-2 CARBURETOR, Model MA-4SPA Marvel-Schebler 10-5009-WCF For other parts use O-320-A2A | 1 | -D1F, -E1F |
| | | Pages 6-3, 6-4, 6-5 - Do not apply. | | |

SECTION 7

COOLING BAFFLES, EXHAUST, AND OIL GAGE

| | | | | |
|---|-------|------------------------------------|---|------------|
| | | Page 7-1 Use O-320-E2D | | |
| | | Page 7-2 Use O-320-D2C | | |
| | | Page 7-3 | | |
| 2 | 75767 | TUBE, Oil level gage, intermediate | 1 | -D1F |
| 2 | 75736 | TUBE, Oil level gage, long | 1 | -E1F |
| | 72059 | GASKET, Oil level gage | 1 | -D1F, -E1F |
| 3 | 74065 | RING, Oil level gage seal | 1 | -D1F |
| 3 | 74068 | RING, Oil level gage seal | 1 | -E1F |
| 5 | 72847 | GAGE ASSY., Oil level | 1 | -D1F |
| 5 | 69116 | GAGE ASSY., Oil level | 1 | -E1F |

Use above parts only.

Page 7-4
Does not apply.

SERVICE REPLACEMENT SETS

MODEL O-320-D1F AND O-320-E1F ENGINES

SEAL AND GASKET SET

| PART NO. | DESCRIPTION | QTY. PER ENGINE |
|----------|------------------------------------|--------------------|
| 72053 | GASKET, Governor drive | 2 |
| 8313 | GASKET, Vacuum pump | 2 |
| 62922 | SEAL, Shroud tube | 8 |
| 60096 | GASKET, Fuel pump | 1 |
| 71973 | GASKET, Intake flange | 4 |
| 60592 | GASKET, Carburetor | 1 |
| LW-11997 | SEAL, Crankshaft oil | 1 |
| 60820 | GASKET, Oil suction tube flange | 1 |
| 74068 | RING, Oil level gage seal | 1 |
| 61165 | SEAL, Tachometer shaft | 1 |
| 61173 | GASKET, Oil pressure housing | 1 |
| 61183 | GASKET, Accessory adapter | 1 |
| 75906 | GASKET, Rocker box cover | 4 |
| 73818 | GASKET, Accessory housing | 1 |
| 68972 | GASKET, Oil sump | 1 |
| 61531 | GASKET, Hydraulic valve | 1 |
| 62224 | GASKET, Magneto adapter | 4 |
| 65321 | GASKET, Exhaust flange | 4 |
| 66224 | GASKET, Carburetor | 1 |
| 71481 | SEAL, Oil | 4 |
| 68315 | GASKET, Accessory drive adapter | 1 |
| 70310 | SEAL, Shroud tube | 8 |
| STD-208 | SEAL, Oil | 1 |
| STD-294 | GASKET, Annular | 2 |
| 72075 | SEAL, Oil | 6 |
| 72091 | RING, Oil seal | 2 |
| STD-1045 | GASKET, Annular | 2 |
| 61523 | CONTAINER | 1 |
| 69551 | GASKET, Accessory pad cover | 1 |
| 69720 | GASKET, Dual Accessory drive cover | 1 |
| 69827 | GASKET, Governor spacer | 1 |
| STD-548 | SEAL, Oil | 1 |
| 66224 | GASKET, Carburetor | 1 |
| 74065 | RING, Oil level gage seal | 1 |
| 61156 | LOCKPLATE, Crankshaft gear | 1 |
| 76501 | GASKET | 1 |
| 72059 | GASKET | 1 |
| 69345 | SPACER | 4 |
| LW-12273 | SPRING | 4 |
| 72078 | LOCKPLATE, Camshaft gear | 2 |

SEAL AND GASKET SET (CONT.)

| PART NO. | DESCRIPTION | QTY. PER ENGINE |
|----------|--|-----------------|
| 73817 | LOCKPLATE, Crankshaft idler gear shaft | 2 |
| LW-12272 | LOCKPLATE, Shroud tube | 4 |
| LW-12795 | GASKET | 1 |
| STD-111 | GASKET | 1 |
| STD-213 | SEAL | 1 |
| 1691-C | GASKET | 1 |
| 69164 | GASKET | 1 |
| 71646 | LOCKPLATE | 2 |
| 72312 | RING, Oil seal | 1 |
| 73383 | LOCKPLATE | 2 |
| 74524 | RING, Oil seal | 1 |
| LW-12681 | MAGNETO GASKET | 2 |

CYLINDER, PISTON, AND RING ASSEMBLY KIT

O-320-D1F ENGINES

HIGH COMPRESSION CHROME CYLINDER SET

SET #76239

| | | |
|------------|---|---|
| MS-13997-3 | KEY, Valve, exhaust | 2 |
| MS-13998-3 | CAP, Valve stem | 1 |
| STD-1411 | NUT, 1/4-20 plain | 1 |
| STD-1925 | SCREW, 1/4-20 x 5/8 long, Fill hd., self lock | 6 |
| 60009 | KEY, Valve | 2 |
| 62922 | SEAL, Shroud tube | 2 |
| 60401 | SHAFT, Valve rocker | 1 |
| 61247 | COVER, Rocker box | 1 |
| LW-11800 | SPRING, Valve Outer | 2 |
| 65441 | SEAT, Valve spring, lower | 1 |
| LW-11795 | SPRING, Valve, Auxiliary | 2 |
| LW-10077 | SEAT, Valve spring | 1 |
| LW-12273 | SPRING, Shroud tube | 1 |
| LW-12272 | LOCKPLATE, Shroud tube | 1 |
| 69345 | SPACER, Shroud tube spring | 1 |
| 69444 | ROCKER ASSY., Valve, intake | 1 |
| 69650 | PIN, Piston | 1 |
| 70310 | SEAL, Shroud tube | 2 |
| 71195 | BOX, Set up | 1 |
| 71481 | RING, Oil seal, .09 dia. sect. x 4.84 ID | 1 |
| 72198 | PLUG, Piston pin (Alum. bronze) | 2 |
| LW-10076 | SEAT, Valve spring | 1 |

SET #76239 (CONT.)

| PART NO. | DESCRIPTION | QTY. PER ENGINE |
|----------|------------------------------------|--------------------|
| 73938 | VALVE, Intake | 1 |
| 73998* | RING, Piston, Oil regulating | 1 |
| 74541 | VALVE, Exhaust (rotator type) | 1 |
| 74554 | SEAT, Valve spring, lower, exhaust | 1 |
| 74636 | ROCKER ASSY., Valve, exhaust | 1 |
| 74673* | RING, Piston, compression | 2 |
| 75089 | PISTON | 1 |
| 75906 | GASKET, Rocker box cover | 1 |
| LW-12419 | CYLINDER AND HEAD ASSY. | 1 |
| STD-1215 | BOLT | 2 |
| 60828 | PLUG, Piston pin (Alum.) | 2 |
| SSP-2472 | TAG | 1 |

* - Half Wedge Rings

**O-320-D1F High Compression Nitrided Cylinder Set
SET #75401**

| | | |
|----------|-------------------------------------|---|
| 73857* | RING, Oil regulating, expander type | 1 |
| 74241* | RING, Piston, compression | 2 |
| LW-12416 | CYLINDER AND HEAD ASSY. | 1 |

All other parts are the same as in set #76239, but do not use P/N 72198-Piston Pin Plug.
* - Half Wedge Rings

**O-320-E1F Low Compression Steel Cylinder Sets
SET #76659**

| | | |
|----------|-------------------------------|---|
| 68710 | PIN, Piston | 1 |
| 73857* | RING, Oil regulating | 1 |
| 75068 | VALVE, Exhaust (Rotator type) | 1 |
| 74989* | RING, Piston, compression | 2 |
| 75413 | PISTON | 1 |
| LW-12417 | CYLINDER AND HEAD ASSY. | 1 |

All other parts are the same as in set #76239, but do not use P/N 72198-Piston Pin Plug.
* - Half Wedge Rings

SET #76659 - A

| | | |
|--------|-------------------------------|---|
| 77857 | PIN, Piston (Heavy) | 1 |
| 73857* | RING, Oil Regulating | 1 |
| 75068 | VALVE, Exhaust (Rotator type) | 1 |
| 74989* | RING, Piston, Compression | 2 |
| 75413 | PISTON | 1 |

SET #76659 - A (CONT.)

| PART NO. | DESCRIPTION | QTY. PER ENGINE |
|----------|-------------|--------------------|
|----------|-------------|--------------------|

| | | |
|--|-------------------------|---|
| LW-12417 | CYLINDER AND HEAD ASSY. | 1 |
| All other parts are the same as in set #76239, but do not use P/N 72198-Piston Pin Plug. | | |
| * - Half Wedge Rings | | |

O-320-E1F Low Compression Chrome Cylinder Sets
SET #78513

| | | |
|-------|-------------------------------|---|
| 68710 | PIN, Piston | 1 |
| 75068 | VALVE, Exhaust (rotator type) | 1 |
| 75413 | PISTON | 1 |

SET #78513-A

| | | |
|--|-------------------------------|---|
| 77857 | PIN, Piston (heavy) | 1 |
| 75068 | VALVE, Exhaust (rotator type) | 1 |
| 75413 | PISTON | 1 |
| All other parts are the same as in set #76239, but do not use P/N 72198-Piston Pin Plug. | | |

SUPPLEMENTAL PARTS LIST NO. SSP 2771

To provide parts coverage for Lycoming
IO-320-D1B MODEL ENGINES.

This parts supplement is not necessarily arranged in the same basic format as the original publication PC-103. However, it is arranged to provide parts coverage by using the same page as listed in the basic catalog. The departure, therefore, appears when IO-320-D1B engine parts are referred to a particular column on the basic catalog page. For example: The piston assembly for IO-320-D1B model engines may be referred to as under column headed by IO-320-D1A. This means that all parts listed under this heading also apply to IO-320-D1B model engines and the only listings present in the supplement will be those parts that are different, new or parts that require a different quantity per engine assembly. Any pages listed in the basic catalog, PC-103, not applicable to the IO-320-D1B model engine, will be so designated in this supplement.

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

IO-320-D1B MODEL ENGINES
SECTION 1
CRANKCASE, CRANKSHAFT AND CAMSHAFT

| REF. NO. | PART NUMBER | DESCRIPTION | | | | | QTY. PER ENG. | MODEL USAGE |
|-------------|----------------|-------------|---|---|---|---|---------------------|----------------|
| | | 1 | 2 | 3 | 4 | 5 | | |

Page 1-1

| | | | | | | | | |
|---|----------|--|--|--|--|--|----|--|
| | LW-11026 | CRANKCASE ASSEMBLY | | | | | 1 | |
| 4 | 50-15 | STUD, 1/2-20 x 1-7/8 in. long | | | | | 8 | |
| 5 | 38-13 | STUD, 3/8-16 x 1-5/8 in. long | | | | | 16 | |
| | 38-22 | STUD, 3/8-16 x 2-3/4 in. long | | | | | 1 | |
| | 72158 | BUSHING, Gov. drive idler shaft | | | | | 1 | |
| 8 | 1102 | PLUG, Allen, 1/8-27 NPT | | | | | 5 | |
| | STD-1339 | PLUG, Allen, 1/16-27 NPT | | | | | 1 | |
| | 68316 | STUD, 5/16-18 x 1-11/16 in. long (Driven height of studs 0.96-1.00 in. for crankcase service assembly) | | | | | 4 | |

For all other parts applicable to IO-320-D1B use column under IO-320-C1A except figure reference numbers 6, 7, 17 and 18.

Page 1-2

| | | | | | | | | |
|---|-------|--|--|--|--|--|---|--|
| 2 | 77044 | BEARING, Crankshaft front | | | | | 2 | |
| 7 | 72075 | SEAL, Oil, 0.090 in. section x 0.47 in. ID | | | | | 2 | |

For all other parts applicable to IO-320-D1B use column under IO-320-C1A except figure reference numbers 3**, 4**, 5** and 6**, 14 and 16 do not apply.

Page 1-3

Use column under IO-320-D1A for IO-320-D1B model engines.

Page 1-4

Figure references No. 1, P/N 61476-S and No. 3, P/N 74667 do not apply to IO-320-D1B model engines.

| | | | | | | | | |
|---|-------|-------------------|--|--|--|--|---|--|
| 6 | 78717 | CAMSHAFT ASSEMBLY | | | | | 1 | |
|---|-------|-------------------|--|--|--|--|---|--|

NOTE

Figure reference numbers 7 thru 12 do not apply to IO-320-D1B model engines.

Page 1-5

| | | | | | | | | |
|----|------------|---|--|--|--|--|----|--|
| 1 | AN6-34A | BOLT, Hex. hd., 3/8-24 x 3-37/64 in. long | | | | | 1 | |
| 1 | STD-33 | WASHER, Plain, 3/8 in. | | | | | 2 | |
| 2 | STD-8 | WASHER, Plain, 1/4 in. | | | | | 19 | |
| 2 | STD-160 | WASHER, Internal lock, 1/4 in. | | | | | 12 | |
| 2 | STD-1411 | NUT, Plain, 1/4-20 | | | | | 9 | |
| 7 | AN960-616L | WASHER, Plain, 3/8 in. (thick). Max. 3 pcs. | | | | | AR | |
| 10 | 76220 | STUD, 1/2-20 x 10-45/64 in. long | | | | | 4 | |

For other crankcase attaching parts except those listed above, use column headed IO-320-D1A. Item 10 does not apply to IO-320-D1B model engines.

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

IO-320-D1B MODEL ENGINES
SECTION 1 (CONT.)
CRANKCASE, CRANKSHAFT AND CAMSHAFT

| REF. NO. | PART NUMBER | | | | | | DESCRIPTION | QTY. PER ENG. | MODEL USAGE |
|-------------|----------------|---|---|---|---|---|-------------|---------------------|----------------|
| | | 1 | 2 | 3 | 4 | 5 | | | |

Page 1-6

NOTE

Figure reference numbers 3 thru 13 do not apply to IO-320-D1B model engines.

Use column headed IO-320-D1A for all other parts listed on Page 1-6.

Page 1-7

Figure reference numbers 6 thru 9 and listed in column headed IO-320-D1A are the only parts listed on Page 1-7 applicable to IO-320-D1B model engines.

SECTION 2

ACCESSORY HOUSING AND DRIVES

Page 2-2

Use column headed IO-320-D1A for IO-320-D1B model engines.

Page 2-3

| | | | | | | | | |
|----|----------|---|--|--|--|--|----|--|
| | 78528 | BODY ASSEMBLY, Oil pump | | | | | 1 | |
| 3 | STD-1339 | PLUG, Allen hd., 1/16-27 NPT | | | | | 1 | |
| | 78532 | IMPELLER ASSEMBLY, Oil pump driven | | | | | 1 | |
| 1 | 78530 | SHAFT, Oil pump idler | | | | | 1 | |
| 6 | 77272 | IMPELLER, Oil pump driven | | | | | 1 | |
| 4 | 75288 | SHAFT, Oil pump drive | | | | | 1 | |
| 5 | 77313 | IMPELLER, Oil pump driving | | | | | 1 | |
| | STD-1973 | KEY, Woodruff, 1/8 x 3/4 dia. | | | | | 1 | |
| 8 | STD-35 | WASHER, Plain, 5/16 in. | | | | | 3 | |
| 8 | STD-1420 | NUT, Slotted, 5/16-18 | | | | | 3 | |
| 9 | 61165 | SEAL, Tachometer drive, oil | | | | | 1 | |
| 10 | STD-8 | WASHER, Plain, 1/4 in. | | | | | 12 | |
| 10 | STD-160 | WASHER, Internal lock, 1/4 in. | | | | | 12 | |
| 10 | STD-1204 | BOLT, Hex. hd., 1/4-20 x 15/16 in. long | | | | | 10 | |
| 11 | STD-1414 | BOLT, Hex. hd., 1/4-20 x 1-1/2 in. long | | | | | 2 | |

Page 2-4

| | | | | | | | | |
|---|----------|--|--|--|--|--|---|--|
| 8 | LW-10269 | VALVE ASSEMBLY, Temp. control oil cooler by-pass | | | | | 1 | |
|---|----------|--|--|--|--|--|---|--|

NOTE

Figure reference numbers 10 thru 22 do not apply to IO-320-D1B model engines as shipped from the factory.

For all other parts applicable to IO-320-D1B model engines listed on Page 2-4 use column headed IO-320-D1A.

Page 2-5

Use column headed IO-320-D1A for IO-320-D1B model engines.

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

IO-320-D1B MODEL ENGINES
SECTION 2 (CONT.)
ACCESSORY HOUSING AND DRIVES

| REF. NO. | PART NUMBER | DESCRIPTION | | | | | QTY. PER ENG. | MODEL USAGE |
|-------------|----------------|-------------|---|---|---|---|---------------------|----------------|
| | | 1 | 2 | 3 | 4 | 5 | | |

Page 2-6

Use column headed IO-320-D1A for IO-320-B1B model engines.

NOTE

Figure reference numbers 6 thru 17 on Page 2-6 do not apply to IO-320-D1B model engines as shipped from the factory.

| | | |
|------------|--|----|
| 77875 | GEAR, Propeller governor driven | 1 |
| 77876 | SHAFT, Propeller gov. idler gear | 1 |
| 77874 | GEAR ASSEMBLY, Prop. gov. idler | 1 |
| 77872 | BUSHING, Prop. gov. idler gear | 2 |
| STD-19 | DOWEL, 0.0907 dia. x 7/32 in. long | 1 |
| STD-798 | DOWEL, 0.09 dia. x 9/32 in. long | 1 |
| 73249 | WASHER, Thrust | AR |
| 73250 | WASHER, Thrust | AR |
| 73251 | WASHER, Thrust | AR |
| 73252 | WASHER, Thrust | AR |
| MS9048-111 | PIN, Spring, 1/8 in. dia. x 1-3/8 in. long | 1 |
| 70455 | GASKET, 7/8 in. ID x 1-1/8 OD x 1/16 in. thick | 1 |
| 70454 | PLUG, 3/4 in. hex. hd., -16 thread | 1 |

Page 2-7

Figure reference numbers 1 thru 8 are not applicable to IO-320-D1B model engines. Use all figure reference numbers 9 thru 18 on IO-320-D1B model engines, if required.

Page 2-8

This page does not apply to IO-320-D1B model engines.

Page 2-9

| | | | |
|----|----------|---|----|
| 2 | LW-10830 | SUMP ASSEMBLY, Oil | 1 |
| 4 | 78914 | CONNECTION, Intake pipe | 4 |
| 12 | STD-1204 | BOLT, Hex. hd., 1/4-20 x 15/16 in. long | 14 |
| | STD-1419 | BOLT, Hex. hd., 1/4-20 x 1-1/8 in. long | 2 |

For all other parts listed on Page 2-9, which are applicable to IO-320-D1B model engines, use column headed IO-320-D1A.

SECTION 3

CYLINDER, PISTON AND VALVE TRAIN

Page 3-1

Use all columns opposite first listing of cylinder assembly, P/N 75042-N for IO-320-D1B model engines. On illustration page use light piston pin, P/N 6965Q and P/N 60828 piston pin plug for IO-320-D1B model engines.

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

IO-320-D1B MODEL ENGINES
SECTION 3 (CONT.)
CYLINDER, PISTON AND VALVE TRAIN

| REF. NO. | PART NUMBER | DESCRIPTION | | | | | QTY. PER ENG. | MODEL USAGE |
|--|-------------------|---|---|---|---|---|---------------------|----------------|
| | | 1 | 2 | 3 | 4 | 5 | | |
| Page 3-2 | | | | | | | | |
| | 68510 | STUD, 1/4-20 x 1-1/16 in. long | | | | | 4 | |
| For all other cylinder assembly parts, except that listed above, use column headed by IO-320-D1A for IO-320-D1B model engines. | | | | | | | | |
| Page 3-3 | | | | | | | | |
| 3 | LW-11795 | SPRING, Valve, inner | | | | | 8 | |
| 4 | LW-11800 | SPRING, Valve, outer | | | | | 8 | |
| 13 | 78524 | SOCKET, Push rod, hydraulic tappet | | | | | 8 | |
| 14 | 68987 | TUBE, Push rod shroud | | | | | 8 | |
| 19 | 62922 | SEAL, Shroud tube | | | | | 8 | |
| For all other related valve parts use column headed IO-320-D1A for IO-320-D1B model engines. | | | | | | | | |
| Page 3-4 | | | | | | | | |
| 15 | 74887 STD-2090 | SPACER, 33/64 ID x 7/8 OD x 3/8 in. thick NUT, Plain, 1/2-20 | | | | | 2 18 | |
| For all other related push rod and intake pipe parts use column headed IO-320-D1A for IO-320-D1B model engines. | | | | | | | | |
| SECTION 4 IGNITION SYSTEM | | | | | | | | |
| Page 4-1 | | | | | | | | |
| 1 | 75896 75897 | MAGNETO, S4LN-1209 MAGNETO, S4LN-1227, Impulse coupling | | | | | 1 1 | |
| For all magneto related parts use column headed P/N 75897 for IO-320-D1B model engines. | | | | | | | | |
| Page 4-2 | | | | | | | | |
| This page does not apply to IO-320-D1B model engines. | | | | | | | | |
| Page 4-3 | | | | | | | | |
| | 78546 | IGNITION HARNESS, 1200 series mags., straight valve head | | | | | 1 | |
| For related ignition harness parts use column headed IO-320-D1A for IO-320-D1B model engines. | | | | | | | | |
| NOTE | | | | | | | | |
| Following is a complete listing of harness attaching parts, which differs somewhat from basic catalog. | | | | | | | | |

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

IO-320-D1B MODEL ENGINES
SECTION 4 (CONT.)
IGNITION SYSTEM

| REF. NO. | PART NUMBER | DESCRIPTION | | | | | QTY. PER ENG. | MODEL USAGE |
|-------------|----------------|-------------|---|---|---|---|---------------------|----------------|
| | | 1 | 2 | 3 | 4 | 5 | | |

Page 4-3 (cont.)

| | | | | | | | | |
|--------------|---------------------------------------|--|--|--|--|--|----|--|
| 76734 | ZIP STRAPS | | | | | | 6 | |
| 68604 | CLAMP, Rubber dip, 1-wire | | | | | | 2 | |
| 71824 | CLAMP, Rubber dip, 2-wire | | | | | | 2 | |
| 73050 | CLAMP, Rubber dip, 4-wire | | | | | | 1 | |
| STD-8 | WASHER, Plain, 1/4 in. | | | | | | 8 | |
| 40239 | PROTECTOR, Ignition cable (top leads) | | | | | | 4 | |
| STD-160 | WASHER, Internal lock, 1/4 in. | | | | | | 4 | |
| AN500-416-12 | SCREW, 1/4-20 x 3/4 in. long | | | | | | 4 | |
| STD-696 | WASHER, Plain, 1/4 in., thin | | | | | | AR | |

Page 4-4 thru 4-6

These pages do not apply to IO-320-D1B model engines.

Page 4-7

Use column headed IO-320-D1A for IO-320-D1B model engines.

SECTION 5

ELECTRICAL SYSTEM

Page 5-1

This page does not apply to IO-320-D1B model engines.

Page 5-2

NOTE

Figure reference numbers 1 thru 15 do not apply to IO-320-D1B model engines. For figure reference numbers 16 thru 45 use column headed IO-320-D1A for IO-320-D1B model engines.

Page 5-3

| | | | | | | | | |
|---|-------|--|--|--|--|--|---|--|
| 2 | 78403 | ALTERNATOR ASSEMBLY, 12v-50 amp., 3.25:1 ratio | | | | | 1 | |
|---|-------|--|--|--|--|--|---|--|

Page 5-4

| | | | | | | | | |
|---|----------|---|--|--|--|--|---|--|
| 1 | 76026 | BELT, Alternator drive, 3/8 in. | | | | | 1 | |
| | 76211 | STARTER, 12 volt, 12/14 pitch, 3.38:1, internal reduction | | | | | 1 | |
| | LW-12083 | SWITCH, Magnetic | | | | | 1 | |

For all other parts except those listed above, use column headed IO-320-D1A for IO-320-D1B model engines.

Page 5-5

| | | | | | | | | |
|--|----------|-------------------------------------|--|--|--|--|---|--|
| | LW-10185 | REGULATOR, 12 volt, full transistor | | | | | 1 | |
| | 78059 | RELAY, Overvoltage, 12 volt | | | | | 1 | |

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

IO-320-D1B MODEL ENGINES
SECTION 6
FUEL INDUCTION SYSTEM

| REF. NO. | PART NUMBER | DESCRIPTION | | | | | QTY. PER ENG. | MODEL USAGE |
|-------------|----------------|-------------|---|---|---|---|---------------------|----------------|
| | | 1 | 2 | 3 | 4 | 5 | | |

Page 6-1

| | | | | | | | | |
|---|----------|--|--|--|--|--|---|--|
| 1 | 60096 | GASKET, Fuel pump | | | | | 1 | |
| 2 | 75247 | FUEL PUMP, Dual diaphragm | | | | | 1 | |
| 3 | STD-33 | WASHER, Plain, 3/8 in. | | | | | 2 | |
| 4 | STD-1882 | SCREW, Socket hd., drilled hd., 3/8-16 x 1-9/32 long | | | | | 2 | |
| 5 | 75686 | ELBOW, 5/16 in. tubing, 9/16-18 adjustable 90° (Assemble aft approx. 25° above centerline of fuel pump inlet) | | | | | 1 | |

NOTE

Parts listed above on Page 6-1 are only parts applicable to IO-320-D1B model engines.

Page 6-2

This page does not apply to IO-320-D1B model engines.

Page 6-3

Use column under IO-320-D1A for IO-320-D1B model engines.

Page 6-4

| | | | | | | | | |
|---|----------------|--|--|--|--|--|---|--|
| 1 | LW-12098-200 | TUBE ASSEMBLY, Fuel manifold to nozzle, Cyl. No. 1 and 3 (20 in. long) | | | | | 2 | |
| 2 | LW-12098-1-134 | TUBE ASSEMBLY, Fuel manifold to nozzle, Cyl. No. 2 and 4 | | | | | 2 | |
| 3 | 72036 | CLIP, 3/4 in. ID for 3/16 in. screw | | | | | 4 | |
| 5 | STD-860 | SCREW, Fill. hd., #10-32 x 5/8 in. long | | | | | 6 | |
| 7 | STD-670 | NUT, Self-locking, #10-32 | | | | | 6 | |
| | LW-12145 | CLIP, 1/8 in. ID for #10 screw | | | | | 2 | |
| | 73136 | BRACKET, 90° | | | | | 2 | |

For all other fuel injector plumbing, except those parts listed above, use column listed under IO-320-D1A for IO-320-D1B model engines.

Page 6-5

| | | | | | | | | |
|--|------|------------------------------|--|--|--|--|---|--|
| | 1102 | PLUG, Allen head, 1/8-27 NPT | | | | | 4 | |
|--|------|------------------------------|--|--|--|--|---|--|

SECTION 7

COOLING BAFFLES, EXHAUST, OIL GAGE
AND PROP. GOVERNOR OIL LINE

Page 7-1

Use column under IO-320-D1A for IO-320-D1B model engines.

Page 7-2

Use column under IO-320-D1A model engines for IO-320-D1B model engines.

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

IO-320-D1B MODEL ENGINES
SECTION 7 (CONT.)
COOLING BAFFLES, EXHAUST, OIL GAGE
AND PROP. GOVERNOR OIL LINE

| REF. NO. | PART NUMBER | 1 | 2 | 3 | 4 | 5 | DESCRIPTION | QTY. PER ENG. | MODEL USAGE |
|-------------|----------------|---|---|---|---|---|-------------|---------------------|----------------|
|-------------|----------------|---|---|---|---|---|-------------|---------------------|----------------|

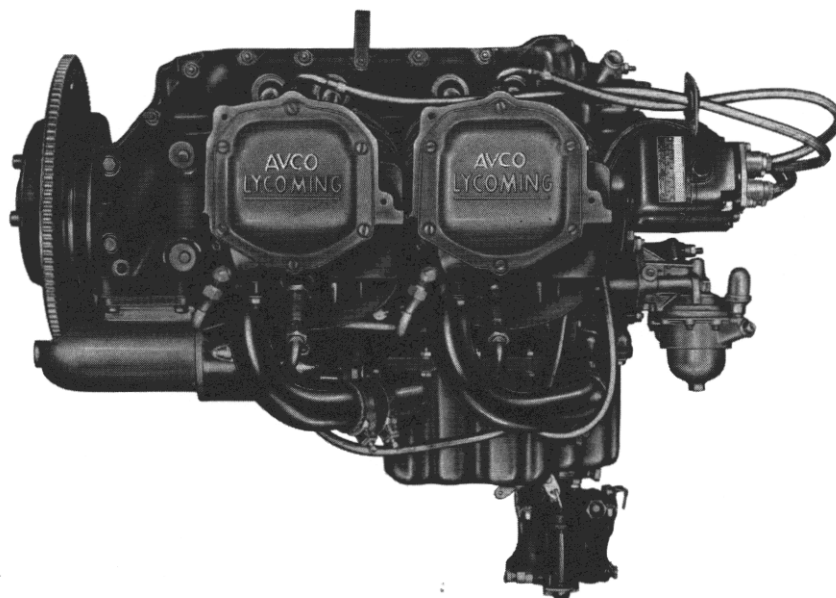
Page 7-3

Use column under IO-320-D1A model engines for
IO-320-D1B model engines.

Page 7-4

Page 7-4 is not applicable to IO-320-D1B model engines.

LYCOMING
PARTS CATALOG



O-320, IO-320 & LIO-320
SERIES
AIRCRAFT ENGINES

LYCOMING DIVISION
WILLIAMSPORT, PA.

PC-103

April 1970

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

O-320, IO-320, LIO-320 SERIES

INTRODUCTION

1. GENERAL.

This illustrated parts catalog lists and describes all procurable parts for the Lycoming engines listed herein.

2. SUPERSEDURE SECTION.

This section lists part numbers in numerical sequence, first by superseded number to the new, or superseding part number. The second portion of this section lists the superseding, or new part number to the old or superseded number.

3. GROUP ASSEMBLY PARTS LISTS.

This catalog is laid out in graph format indicating engine model number on each text page.

The sections of this catalog divide the engine into various assemblies and related parts. These parts are listed in the order of engine assembly at the factory. Illustrations are on the page directly opposite or beneath the part description.

The "Figure Reference Number" column (with heading "REF") provides cross reference to the part illustration. Those parts not numbered in this column are not illustrated.

The "Part Number" column contains the Lycoming, AN, MS, or vendor part number.

The "Description" column provides description or dimensional information required to describe the part. Sub-columns are employed here to differentiate parts of assemblies or sub-assemblies. Notes appearing in the text should be checked prior to ordering parts. All references to Lycoming Service Bulletins, Instructions and Letters should be fully observed. The letters (STD) appearing beside the part description means this part fits an engine manufactured with the Standard cylinder base flange. The letters (WCF) means this part fits an engine manufactured with the wide cylinder base flange. When neither appears in the description column, the part is applicable to either configuration.

The "Quantity Per Assembly" portion of the text page indicates by model number the quantity required to complete the assembly on that page.

4. SERVICE REPLACEMENT SET SECTION.

This section consists of the seal and gasket set applicable to the O-320 series engine. Individual parts contained in kits are also listed in the group assembly parts list and may be procured separately.

5. VENDOR ITEMS SECTION.

This section consists of assemblies produced by manufacturers other than Lycoming, for use on Lycoming engines. Numbers in "Part Number" column are those of the particular vendor. Parts for these assemblies can be obtained by ordering from Lycoming, Williamsport, Pa.

6. NUMERICAL INDEX.

This section lists all part numbers contained in the group assembly parts list (Sections 1 thru 7), in alpha-numerical sequence. Column headings are self-explanatory.

7. INSTRUCTIONS FOR ORDERING PARTS.

Use of this catalog is keyed to engine model number. The model number can best be determined by visual inspection of the name plate located on the oil sump. Series of engines identified by the letter "A" following the serial number suffix are manufactured with the wide cylinder base flange. Example: O-320-A, Serial Number L-12093-39A.

After engine model number and type cylinder flange is determined, look in the Table of Contents for the part, or for the assembly on which it would normally be found. If the part number is known, look in the numerical index (Section 10) in the back of the catalog. The illustrations can also be used to aid in finding the part.

8. OPTIONAL ITEMS.

Those optional items, such as electrical system components, vacuum and hydraulic dual drives etc., are catalogued by engine model number as the engine was assembled at the factory. See appropriate Service Instructions for further information. Use the illustrations to aid in determining the option you desire.

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

O-320, IO-320, LIO-320 SERIES

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LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

O-320, IO-320, LIO-320 SERIES

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LYCOMING PARTS CATALOG
O-320, IO-320 AND LIO-320 SERIES
SUPERSEDURE SECTION

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

SUPERSEDED PARTS

| SUPERSEDED P/N | SUPERSEDING P/N | SUPERSEDED P/N | SUPERSEDING P/N |
|-------------------|--------------------|-------------------|--------------------|
| 180G | 72378 | 69472 | 73414 |
| 179B | 72053 | 69529 | 72877 |
| STD-189 | 73726 | 69530 | 72058 |
| STD-336 | 72075 | 69533 | 74230 |
| STD-998 | 72091 | 69787 | 72500 |
| 45663 | 62224 | 69952 | 76210 |
| 60007 | 74667 | 71010 | 75722 |
| 60069 | 73346 | 71019 | 72501 |
| 60131 | 71973 | 71026 | 72502 |
| 60828 | 72198 | 71118 | 71840 |
| 60861 | 76028 | 71119 | 71841 |
| 60869 | 71596 | 71692 | 72153 |
| 60984 | 76354 | 71693 | 71844 |
| 61152 | 75072 | 71714 | 76529 |
| 61154 | 77309 | 71840 | 75183 |
| 61164 | 72970 | 71841 | 75184 |
| 61167 | 68974 | 71844 | 73149 |
| 61246 | 75906 | 71879 | 76940 |
| 61278 | 74996 | 71939 | 74673 |
| 61352 | 73818 | 71950 | 74646 |
| 61388 | 62833 | 71969 | 75188 |
| 61476-S | 78030-S | 72059 | 74068 |
| 61502 | 71398 | 72220 | 74065 |
| 61654 | 73246 | 72362 | 77965 |
| 61667 | 71397 | 72373 | 75767 |
| 61864 | 73817 | 72387 | 76517 |
| 62831 | 72205 | 72394 | 78728 |
| 65060 | 66224 | 72446 | 74241 |
| 65074 | 78524 | 72454 | 73857 |
| 65331 | 71909 | 72454 | 73998 |
| 65427 | 76994 | 72462 | 76212 |
| 66144 | 72078 | 72525 | 73360 |
| 66220 | 71913 | 72625 | 73938 |
| 66734 | 69377 | 72871 | 72000 |
| 67904 | 72057 | 73048 | 77034 |
| 67975 | 73729 | 73049 | LW-10124 |
| 68327 | LW-10077 | 73115 | LW-10076 |
| 68509 | 72454 | 73160 | LW-10799 |
| 68512 | 74989 | 73149 | 75361 |
| 68513 | 74989 | 73196 | 74059 |
| 68519 | 69444 | 73817 | 72829 |
| 68531 | 75545 | 73820 | 78292 |
| 68613 | 72079 | 74059 | 75413 |
| 68634 | 72498 | 74061 | 68512 |
| 68710 | 77857 | 74061 | 68513 |
| 68749 | 72230 | 74083 | LW-10828 |
| 68751 | 69679 | 74092 | 76211 |
| 68759 | 73317 | 74322 | 76026 |
| 68769 | 74167 | 74386 | 75278 |
| 68867 | 74414 | 74530 | 75089 |
| 68923 | 72150 | 74591 | LW-10475 |
| 68987 | 75772 | 74593 | 74732 |
| 69000 | 75153 | 74667 | 78027 |
| 69097 | 75735 | 74904 | 76691 |
| 69098 | 75736 | 75009 | 77547 |
| 69158 | 72231 | 75028 | 75012 |
| 69161 | 75924 | 75044 | 75317 |
| 69315 | 73231 | 75044 | 75042 |
| 69451 | 75944 | 75065 | 75010 |
| 69470 | 73412 | 75067 | 75011 |
| 69470-1 | 73411 | 75148 | 75246 |
| 69471 | 73413 | 75210 | 77044 |

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

SUPERSEDED PARTS

| SUPERSEDED P/N | SUPERSEDING P/N | SUPERSEDED P/N | SUPERSEDING P/N |
|-------------------|--------------------|-------------------|--------------------|
| 75317 | 75868 | 76907 | LW-10729 |
| 75674 | 77526 | 76954 | 78206 |
| 75709 | 78368 | 76991 | 78542 |
| 75854 | 75907 | 76992 | 78539 |
| 76082 | 77597 | 76995 | 78540 |
| 76163 | 77808 | 77096 | 78547 |
| 76290 | 78290 | 77344 | 78308 |
| 76436 | 76628 | 77345 | LW-10185 |
| 76588 | 78217 | 77346 | 78312 |
| 76590 | 78220 | 77347 | LW-10179 |
| 76602 | 78221 | 77470 | 78310 |
| 76721 | LW-10389 | 77751 | 78314 |
| 76722 | LW-10388 | 78206 | LW-11062 |
| 76726 | LW-10400 | 78218 | 78226 |
| 76855 | LW-10390 | 78219 | 78228 |
| 76871 | 78546 | | |

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

SUPERSEDED PARTS

| SUPERSEDING P/N | SUPERSEDED P/N | SUPERSEDING P/N | SUPERSEDED P/N |
|--------------------|-------------------|--------------------|-------------------|
| 62224 | 45663 | 74230 | 69533 |
| 62833 | 61388 | 74241 | 72446 |
| 66224 | 65060 | 74414 | 68867 |
| 68512 | 74061 | 74646 | 71950 |
| 68513 | 74061 | 74667 | 60007 |
| 68974 | 61167 | 74673 | 71939 |
| 69377 | 66734 | 74732 | 74593 |
| 69444 | 68519 | 74989 | 68512 |
| 69679 | 68751 | 74989 | 68513 |
| 71397 | 61667 | 74996 | 61278 |
| 71398 | 61502 | 75010 | 75065 |
| 71596 | 60869 | 75011 | 75067 |
| 71840 | 71118 | 75012 | 75028 |
| 71841 | 71119 | 75042 | 75044 |
| 71844 | 71693 | 75072 | 61152 |
| 71909 | 65331 | 75089 | 74530 |
| 71913 | 66220 | 75153 | 69000 |
| 71973 | 60131 | 75183 | 71840 |
| 72000 | 72871 | 75184 | 71841 |
| 72053 | 179B | 75188 | 71969 |
| 72057 | 67904 | 75246 | 75148 |
| 72058 | 69530 | 75278 | 74386 |
| 72075 | STD-336 | 75317 | 75044 |
| 72078 | 66144 | 75361 | 73149 |
| 72079 | 68613 | 75413 | 74059 |
| 72091 | STD-998 | 75545 | 68531 |
| 72150 | 68923 | 75722 | 71010 |
| 72153 | 71692 | 75735 | 69097 |
| 72198 | 60828 | 75736 | 69098 |
| 72205 | 62831 | 75767 | 72373 |
| 72230 | 68749 | 75772 | 68987 |
| 72231 | 69158 | 75868 | 75317 |
| 72378 | 180G | 75906 | 61246 |
| 72454 | 68509 | 75907 | 75854 |
| 72498 | 68634 | 75924 | 69161 |
| 72500 | 69787 | 75944 | 69451 |
| 72501 | 71019 | 76026 | 74322 |
| 72502 | 71026 | 76028 | 60861 |
| 72829 | 73817 | 76210 | 69952 |
| 72877 | 69529 | 76211 | 74092 |
| 72970 | 61164 | 76212 | 72462 |
| 73149 | 71844 | 76354 | 60984 |
| 73231 | 69315 | 76517 | 72387 |
| 73246 | 61654 | 76529 | 71714 |
| 73317 | 68759 | 76628 | 76436 |
| 73346 | 60069 | 76691 | 74904 |
| 73360 | 72525 | 76940 | 71879 |
| 73411 | 69470-1 | 76994 | 65427 |
| 73412 | 69470 | 77034 | 73048 |
| 73413 | 69471 | 77044 | 75210 |
| 73414 | 69472 | 77309 | 61154 |
| 73726 | STD-189 | 77526 | 75674 |
| 73729 | 67975 | 77547 | 75009 |
| 73817 | 61864 | 77597 | 76082 |
| 73818 | 61352 | 77808 | 76163 |
| 73857 | 72454 | 77857 | 68710 |
| 73938 | 72625 | 77965 | 72362 |
| 73998 | 72454 | 78027 | 74667 |
| 74059 | 73196 | 78030-S | 61476-S |
| 74065 | 72220 | 78206 | 76954 |
| 74068 | 72059 | 78217 | 76588 |
| 74167 | 68769 | 78220 | 76590 |

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

SUPERSEDED PARTS

| SUPERSEDING P/N | SUPERSEDED P/N | SUPERSEDING P/N | SUPERSEDED P/N |
|--------------------|-------------------|--------------------|-------------------|
| 78221 | 76602 | 78728 | 72394 |
| 78226 | 78218 | LW-10076 | 73115 |
| 78228 | 78219 | LW-10077 | 68327 |
| 78290 | 76290 | LW-10124 | 73049 |
| 78292 | 73820 | LW-10179 | 77347 |
| 78308 | 77344 | LW-10185 | 77345 |
| 78310 | 77470 | LW-10388 | 76722 |
| 78312 | 77346 | LW-10389 | 76721 |
| 78314 | 77751 | LW-10390 | 76855 |
| 78368 | 75709 | LW-10400 | 76726 |
| 78524 | 65074 | LW-10475 | 74591 |
| 78539 | 76992 | LW-10729 | 76907 |
| 78540 | 76995 | LW-10799 | 73160 |
| 78542 | 76991 | LW-10828 | 74083 |
| 78546 | 76871 | LW-11062 | 78206 |
| 78547 | 77096 | | |

LYCOMING PARTS CATALOG
O-320, IO-320 AND LIO-320 SERIES
SECTION 1
CRANKCASE, CRANKSHAFT AND CAMSHAFT

CRANKCASE ASSEMBLY

SECTION 1

QUANTITY PER ASSEMBLY

PAGE

O-320 SERIES

10-320

L10-320

1-1

| REF. | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY | | | | | | | | | | | | | | | | | | | | | | | | |
|------|-------------|--|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| | | | A2A | A2B | A2C | A3A | A3B | A3C | B2A | B2B | B2C | B3A | B3B | B3C | D7A | D7B | D7C | E7A | E7B | E7C | E7D | B7A | B7C | C7A | C7B | C7A | |
| | 78217* | CRANKCASE ASSY. - STD | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | |
| | 78222* | CRANKCASE ASSY. - WCF | | 1 | | 1 | 1 | | | 1 | 1 | | | | | | | 1 | 1 | | | | | | | 1 | |
| | 78226* | CRANKCASE ASSY. - STD | | | | | | | | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | |
| | 78223** | CRANKCASE ASSY. - WCF | | | | | | | | | | | | | | 1 | 1 | | 1 | 1 | 1 | 1 | | | | 1 | |
| | 78220** | CRANKCASE ASSY. - STD | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | |
| | 78228** | CRANKCASE ASSY. - STD | | | | | | | | | | | | | 1 | 1 | 1 | | | | | | | | | | |
| | 78206** | CRANKCASE ASSY. - WCF | | | | | | | | | | | | | | | | | | | 1 | | | | | | |
| | 78221+ | CRANKCASE ASSY. - STD | | | | | | | | | | | | | | | | | | | | | | 1 | | | |
| | 78224+ | CRANKCASE ASSY. - WCF | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | |
| | LW-11025+ | CRANKCASE ASSY. - WCF (Note 1) | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| | LW-11078+ | CRANKCASE ASSY. - WCF | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| | LW-11237+ | CRANKCASE ASSY. - WCF (Note 2) | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| | LW-11305+ | CRANKCASE ASSY. - WCF (Note 1) | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| | LW-11062** | CRANKCASE ASSY. - WCF (Note 3) | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| 1 | STD-557 | DOWEL, 1/2 in. dia. x 11/16 in. long | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 2 | 69377 | STUD, 1/2-13x9-11/16 in. long - STD | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | 2 | 2 | | | | | | | 2 | 2 |
| 2 | 75154 | STUD, 1/2-13x10-1/32 in. long - WCF | 2 | | | 2 | 2 | | | | | | | | | | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 2 | 66734 | STUD, 1/2-13x9-7/8 in. long - STD | | | | | | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 69377 | STUD, 1/2-13x9-11/16 in. long - STD | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | | 2 |
| 3 | 66734 | STUD, 1/2-13x9-7/8 in. long - STD | | | | | | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 75154 | STUD, 1/2-13x10.02 in. long - WCF | | 2 | | 2 | 2 | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 4 | 50-14 | STUD, 1/2-13x1-3/4 in. long - STD | 8 | 8 | 8 | 8 | 8 | 8 | | | | | | | | | | 8 | 8 | | | | | | | | 8 |
| 4 | 50-15 | STUD, 1/2-13x1-7/8 in. long - STD | | | | | | | | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 4 | 50-16 | STUD, 1/2-30x2.00 in. long - WCF | | 8 | | 8 | 8 | | | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 5 | 1025-B | STUD, 3/8-16x1-1/2 in. long - STD | 16 | 16 | 16 | 16 | 16 | 16 | | | | | | | | | | 16 | 16 | | | | | | | | 16 |
| 5 | 38-13 | STUD, 3/8-16x1-5/8 in. long - STD | | | | | | | | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| 5 | 38-14 | STUD, 3/8-16x1-3/4 in. long - WCF | | 16 | | 16 | 16 | | | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| 6 | 69376¢ | STUD, 1/2-20x10-17/64 in. long - STD | | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | 2 | 2 | | | | | | | | 2 |
| 6 | 69679¢ | STUD, 1/2-20x10-21/32 in. long - STD | | | | | | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | 2 |
| 6 | 75155¢ | STUD, 1/2-20x10-15/16 in. long - WCF | | 2 | | 2 | 2 | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 7 | 75302¢ | DOWEL, Crankcase thru stud - WCF | | | | 2 | 2 | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 8 | STD-1102 | PLUG, 1/8-27 NPT | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 9 | 65007 | RETAINER, Shroud tube seal | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 10 | 61261 | STUD, 5/16-18x1-1/2 in. long | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 11 | 67528 | STUD, 5/16-18x1-5/8 in. long | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 12 | 69796 | DOWEL, Crankshaft bearing - WCF | 6 | | | 6 | 6 | | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 12 | 69796 | DOWEL, Crankshaft bearing - WCF | | | | | | | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 12 | 69796 | DOWEL, Crankshaft bearing - WCF (See Note 1) | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| 12 | LW-10647 | DOWEL, Crankshaft bearing - WCF (See Note 1) | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| 12 | 67453 | DOWEL, Crankshaft bearing - STD | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 13 | STD-514 | DOWEL, 5/16 dia. x 1/2 in. long | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 14 | STD-1623 | INSERT, 1/4-20 helicoil x 3/8 in. | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 15 | 38D-17 | STUD, 3/8-16x2-1/8 in. long - WCF | 1 | | | 1 | 1 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 16 | 75156 | STUD, 5/8-18x15/16 in. long - WCF | 1 | | | 1 | 1 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 17 | 73772 | NOZZLE ASSY., Piston cooling - WCF | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| 18 | STD-783# | PLUG, 1/4-28 NPT, Allen | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 19 | 71032* | BUSHING, Engine support | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 20 | STD-619* | WASHER, Support bushing | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 21 | 61387& | SLEEVE, Oil relief valve | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

* - Conical mounting.

** - Type 1 dynafocal mounting.

+ - Type 2 dynafocal mounting.

¢ - See Service Bulletin No. 273.

- For engines without governor drive.

& - For crankcases with no provision for adjustable oil pressure relief valve. (Available in oversize P03).

NOTE 1

Crankcases LW-11025 and LW-11305 use 2 69796 crankshaft bearing dowels and 4 LW-10647 dowels. All others use 6 69796 dowels.

NOTE 2

Crankcase LW-11237 is no longer available. Order LW-11305.

NOTE 3

Ref. 2 - stud 75154. Ref. 6 - 75155 not used this crankcase. See page 1-5 for attaching bolts 76220. Ref. 4 - use stud 50-15 8 ea. and Ref. 5 - use stud 38-13, 16 ea.

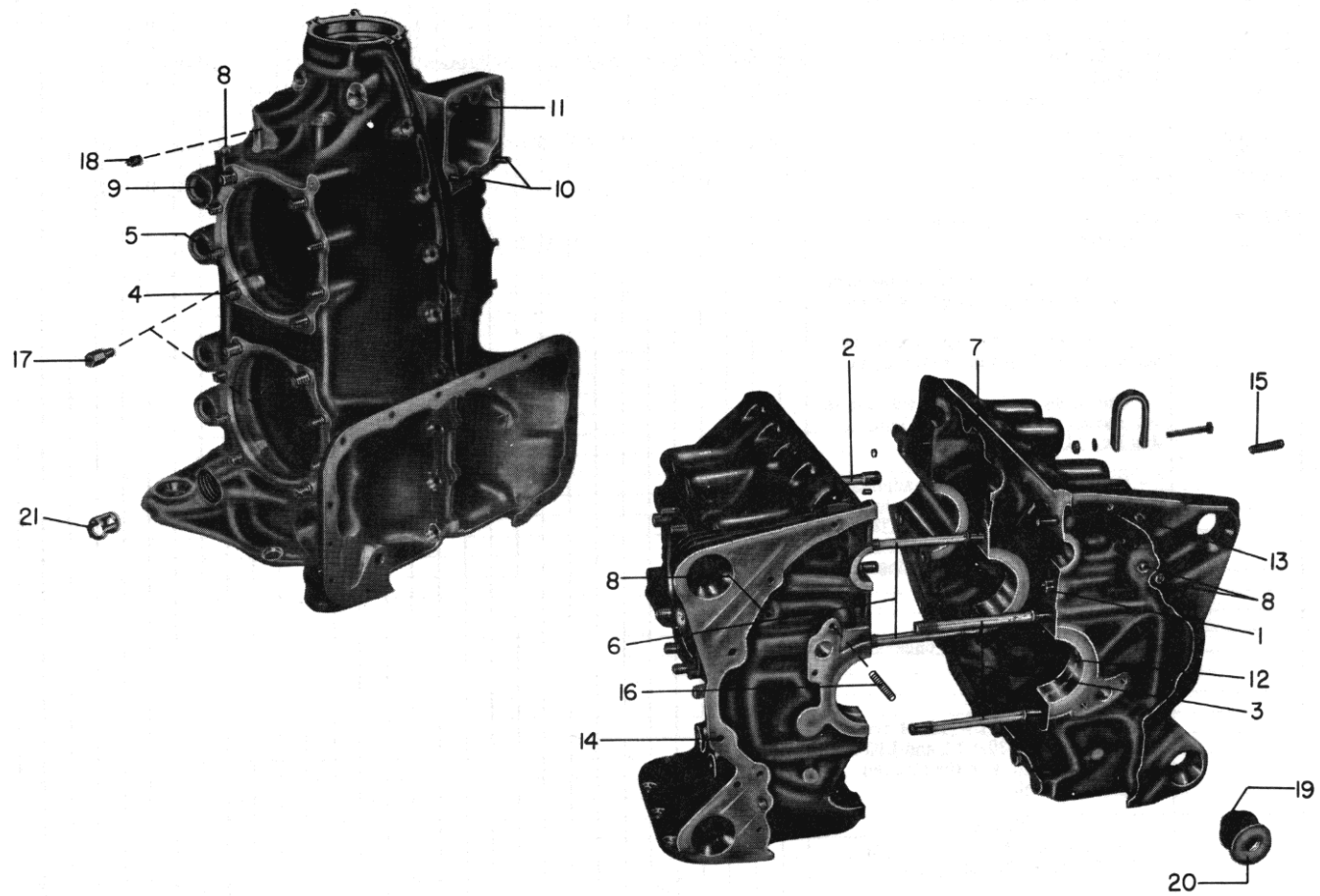
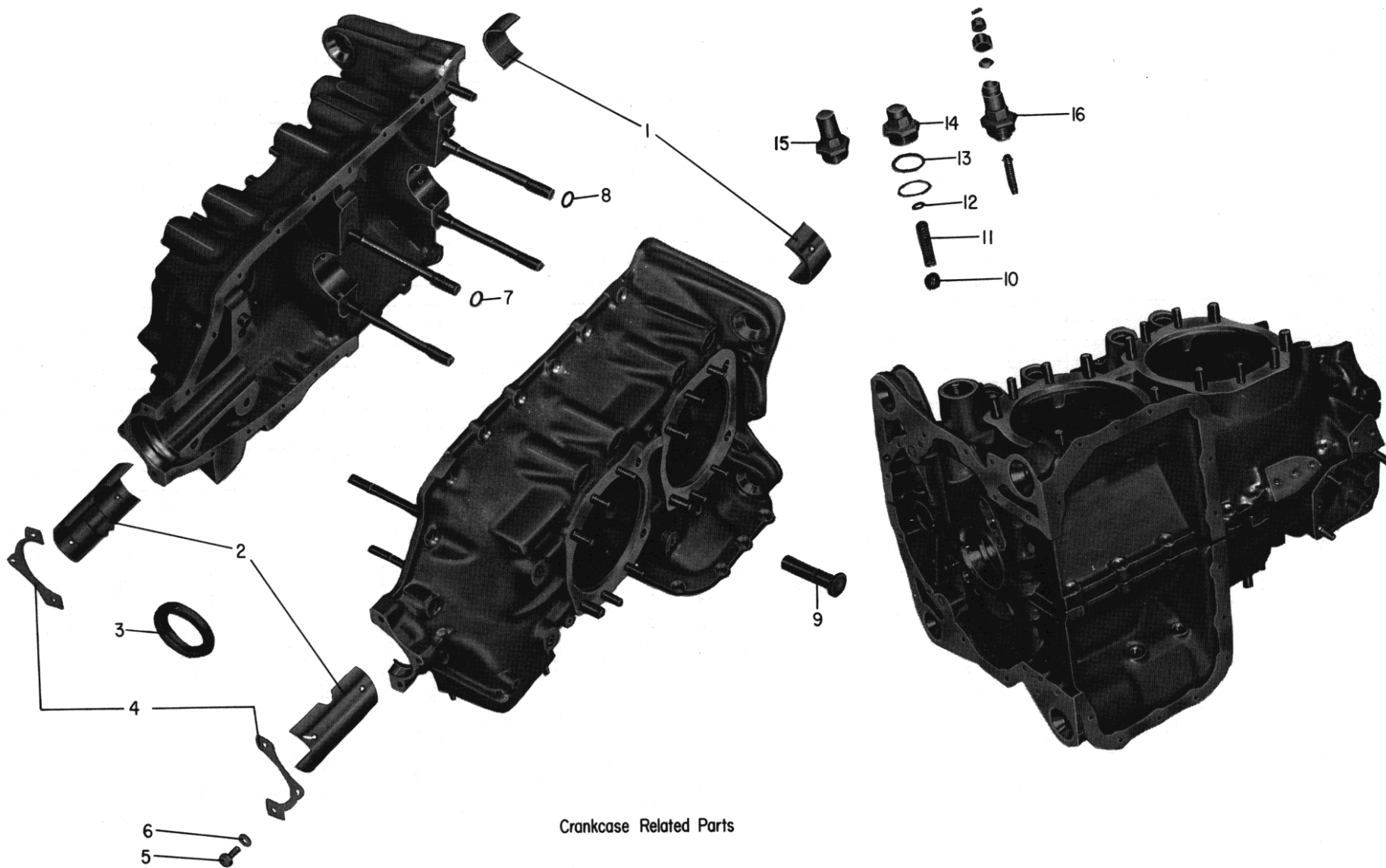


Figure 1-1. Crankcase Assembly

Figure 1-2. Crankcase Related Parts



Crankcase Related Parts

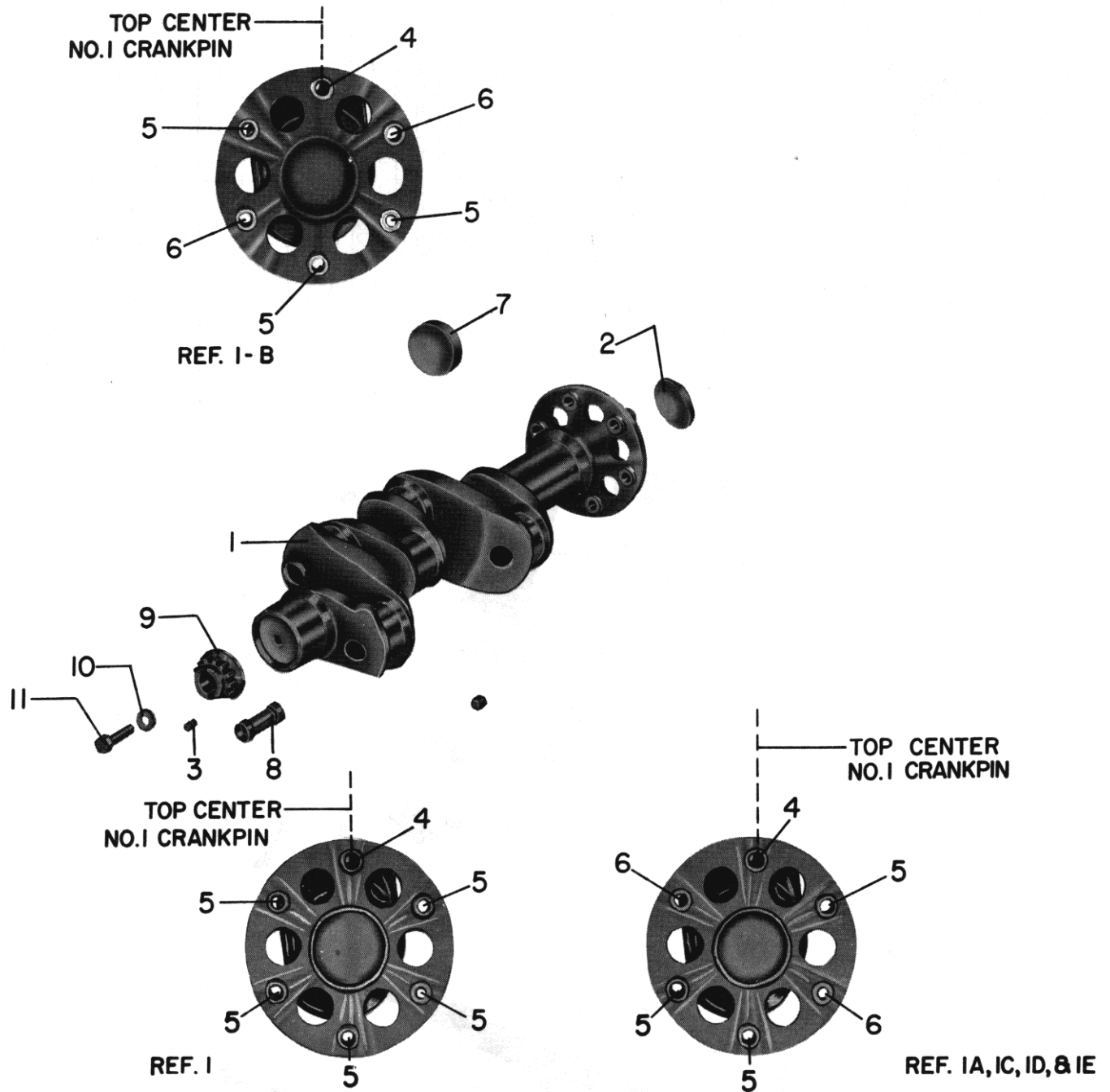


Figure 1-3. Crankshaft Assembly

CONNECTING ROD AND CAMSHAFT

SECTION 1

QUANTITY PER ASSEMBLY

PAGE 1-4

| REF. | PART NUMBER | DESCRIPTION | O-320 SERIES | | | | | | | | | | | | | | | | | | | | | | | | IO-320 | | | LIO-320 | |
|------|-------------|--|--------------|---------|-------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|-----|-----|---------|---|
| | | | A2A | A2B | A2C | A3A | A3B | A3C | B2A | B2B | B3A | B3B | B3C | D1A | D2A | D2B | D2C | E1A | E2A | E2B | E2C | E2D | BTA | BTC | C1A | D1A | E2A | BTA | C1A | | |
| | | | 1 | 78030-S | CONNECTING ROD (Supersedes 61476-S) | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 1 | 61476-S | CONNECTING ROD (Superseded by 78030-S) | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 2 | 65819 | BUSHING, Connecting rod | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | |
| 3 | 78027 | BOLT, Connecting rod (use with 78030 rod) | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | |
| 3 | 74667 | BOLT, Connecting rod, (use with 61476 rod) | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | |
| 4 | 74646 | NUT, Connecting rod | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | |
| 5 | 69373* | BEARING, Connecting rod | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | |
| 6 | 76097 | CAMSHAFT, Integral gear | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| 6 | 76098 | CAMSHAFT, Integral gear | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | LW-10566 | CAMSHAFT, Integral gear | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 74167** | CAMSHAFT ASSY. | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| 7 | 68769** | CAMSHAFT ASSY. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | STD-1065** | DOWEL | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| 9 | 68639** | GEAR, Camshaft | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| 10 | 72079** | SLINGER, Breather | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| 11 | 72078** | LOCKPLATE, 5/16 bolt | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | |
| 12 | STD-1791** | BOLT, 5/16-24 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | |

* - Available in undersize M03, M06 and M10.
 ** - Use these parts for camshafts forged without integral gears.

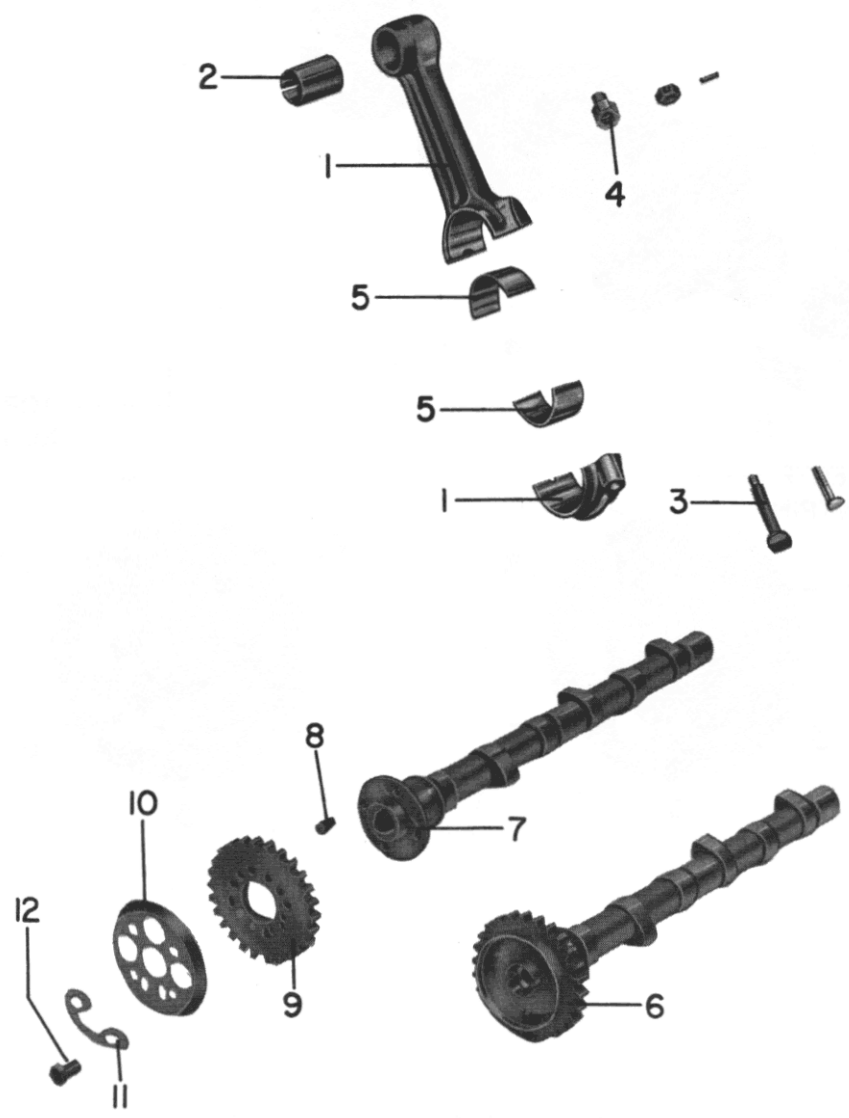


Figure 1-4. Connecting Rod and Camshaft

CRANKCASE ATTACHING PARTS

| REF. | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|-------------|--|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|-----|-----|-----|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | O-320 SERIES | | | | | | | | | | | | 10-320 | | | | L10-320 | | | | | | | | | |
| | | | A2A | A2B | A2C | A3A | A3B | A3C | B2A | B2B | B2C | B3A | B3B | B3C | D2A | D2B | D2C | E2A | E2B | E2C | E2D | B7A | B7C | C7A | D7A | E7A | B7A | C7A |
| 1 | STD-1197 | BOLT, 3/8-24 x 3-1/2 in. long | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 1 | STD-33 | WASHER, 3/8 plain - STD | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 1 | STD-33 | WASHER, 3/8 plain - WCF | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 |
| 1 | STD-678 | WASHER, 3/8 lock | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 1 | STD-596 | NUT, 3/8-24 plain | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 2 | STD-1414 | BOLT, 1/4-20 x 1-1/2 in. long | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 2 | STD-8 | WASHER, 1/4 plain | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| 2 | STD-160 | WASHER, 1/4 lock | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 2 | STD-1411 | NUT, 1/4-20 plain | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 3 | STD-2084 | BOLT, 1/4-20 x 1-3/4 in. long - STD | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | STD-2084 | BOLT, 1/4-20 x 1-3/4 in. long - WCF | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 |
| 3 | STD-160 | WASHER, 1/4 lock - STD | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | STD-160 | WASHER, 1/4 lock - WCF | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 |
| 3 | STD-1411 | NUT, 1/4-20 plain - STD | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | STD-1411 | NUT, 1/4-20 plain - WCF | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 |
| 4 | STD-1215 | BOLT, 1/4-20 x 1-1/4 in. long - STD | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 5 | STD-1419 | BOLT, 1/4-20 x 1-1/8 in. long - WCF | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 |
| 5 | STD-8 | WASHER, 1/4 plain - WCF | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 |
| 5 | STD-160 | WASHER, 1/4 lock - WCF | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 | | 3 |
| 6 | STD-1416 | BOLT, 1/4-20 x 1-1/2 in. long | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 6 | STD-8 | WASHER, 1/4 plain (maximum of 9) | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A |
| 6 | STD-1409 | NUT, 1/4-20 slotted | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 7 | STD-1205 | BOLT, 3/8-24 x 2-3/16 in. long - STD | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 7 | STD-33 | WASHER, 3/8 plain - STD | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 7 | STD-872 | NUT, 3/8-24 slotted - STD | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 8 | STD-872 | NUT, 3/8-24 slotted - WCF | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 |
| 8 | STD-33 | WASHER, 3/8 plain - WCF | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 |
| 9 | 60803 | STRAP, Lifting - | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 10 | STD-2090 | NUT, 1/2-20 plain (thru bolt at nose of crankcase) - WCF | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 |
| 10 | 77907 | SPACER, 33/64 ID x 7/8 in. OD | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 |
| 10 | 76220 | BOLT, 1/2-20 x 10.7 in. long - WCF | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 |
| 11 | 76220 | BOLT, 1/2-20 x 10.7 in. long | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 | | 2 |

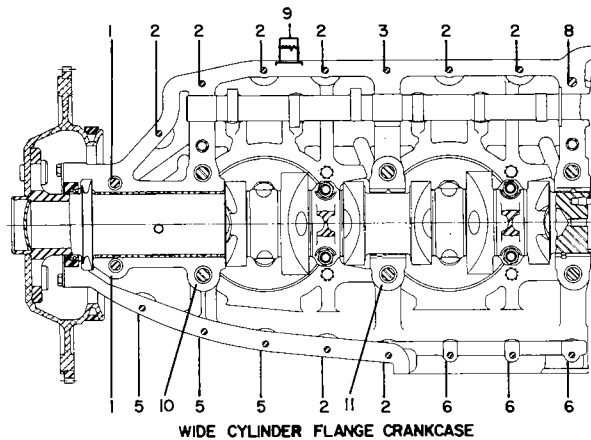
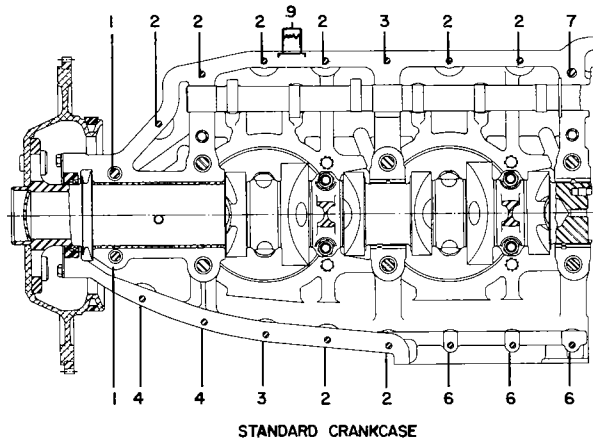


Figure 1-5. Crankcase Attaching Parts

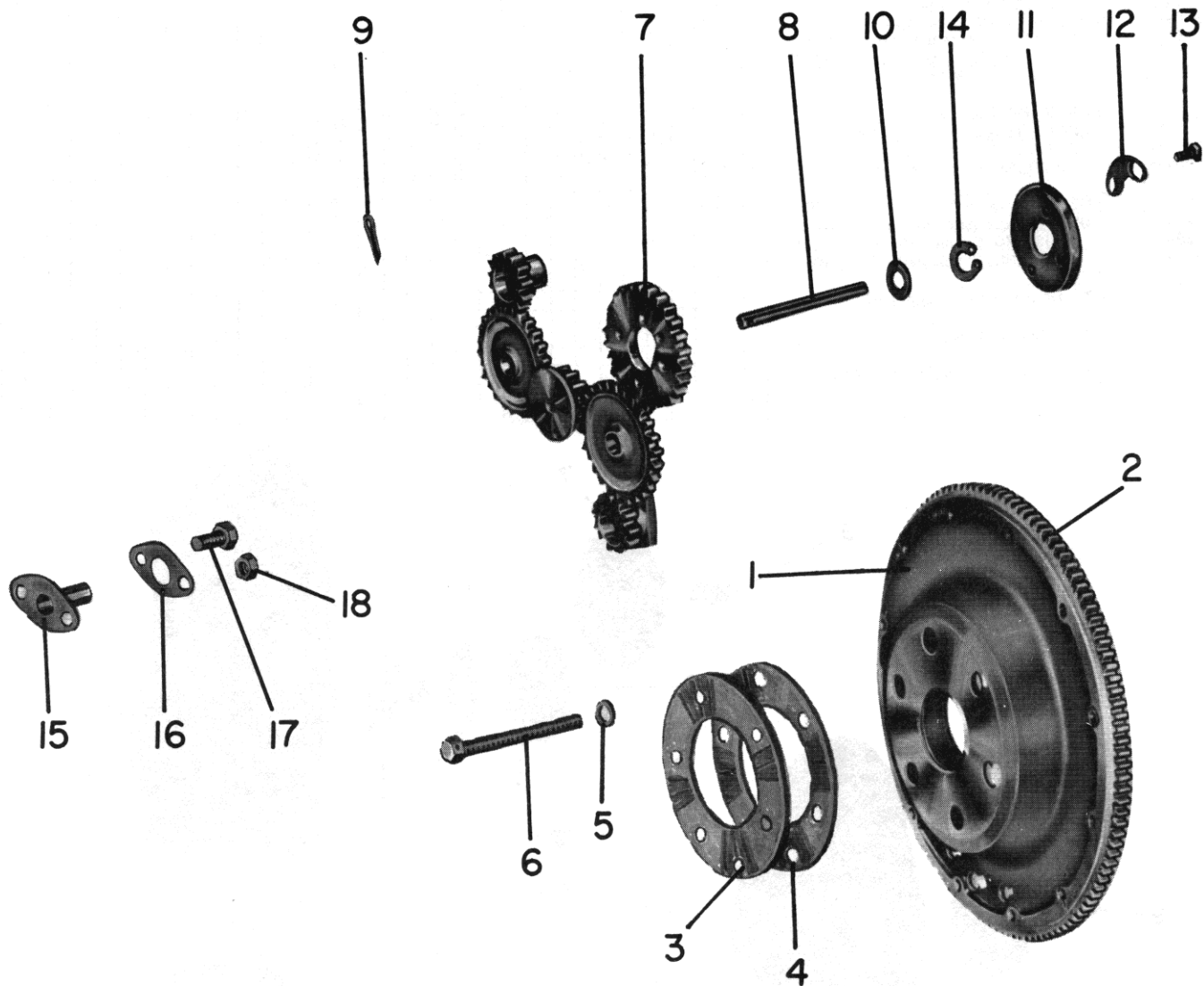


Figure 1-6. Support Assembly and Idler Shafts

FUEL PUMP DRIVES AND IDLER GEARS

| REF. | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY | | | | | | | | | | | | | | | | | SECTION | | | | | | | | | | |
|------|-------------|--------------------------------------|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|---------|------------------|-----|-----|-----|-----|-----|---|---|---|
| | | | O-320 SERIES | | | | | | | | | | | | | | | | | 10-320 | L10-320 | 1 PAGE 1-7 | | | | | | | | |
| | | | A2A | A2B | A2C | A3A | A3B | A3C | B2A | B2B | B3A | B3B | B3C | D2A | D2B | D2C | E2A | E2B | E2C | E2D | B7A | B7C | C7A | D7A | E7A | B7A | C7A | | | |
| 1 | 72230* | SHAFT, Fuel pump idler gear - WCF | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 2 | 72829* | LOCKPLATE, 1/4 in. bolt - WCF | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| 3 | STD-705* | SCREW, 1/4-20 x 11/16 in. long - WCF | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| 4 | 72231* | GEAR ASSY., Fuel pump idler - WCF | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| 5 | 77309* | BUSHING, Crankshaft idler gear - WCF | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| 7 | 74996* | GEAR ASSY., Crankshaft idler - WCF | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| 9 | 77309* | BUSHING, Crankshaft idler - WCF | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| 10 | 75924* | SHAFTGEAR, Fuel pump drive - WCF | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| 11 | 69164* | GASKET, Fuel pump adapter - WCF | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| 12 | 69159* | ADAPTER, Fuel pump drive - WCF | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| 13 | STD-1774* | PIN, 1/8 dia. x 1/4 in. long - WCF | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| 14 | STD-213* | SEAL, Oil - WCF | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| 6 | 61544** | PLUNGER, Fuel pump | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | 1 | |
| 7 | 74996** | GEAR, Crankshaft idler plain | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 8 | 75072** | GEAR, Crankshaft idler | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 9 | 77309** | BUSHING, Crankshaft idler | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 7 | 74996+ | GEAR, Crankshaft idler plain - STD | 2 | 2 | 2 | | | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | | | |
| 7 | 74996+ | GEAR, Crankshaft idler plain - WCF | | 2 | | | | | 2 | | | | | | | | 2 | | 2 | | | | | | | | | | | |
| 9 | 77309+ | BUSHING, Crankshaft idler - STD | 2 | 2 | 2 | | | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | | | |
| 9 | 77309+ | BUSHING, Crankshaft idler - WCF | | 2 | | | | | 2 | | | | | | | | 2 | | 2 | | | | | | | | | | | |

* - Geared fuel pump drive.
 ** - Plunger fuel pump drive.
 + - No fuel pump drive provided.

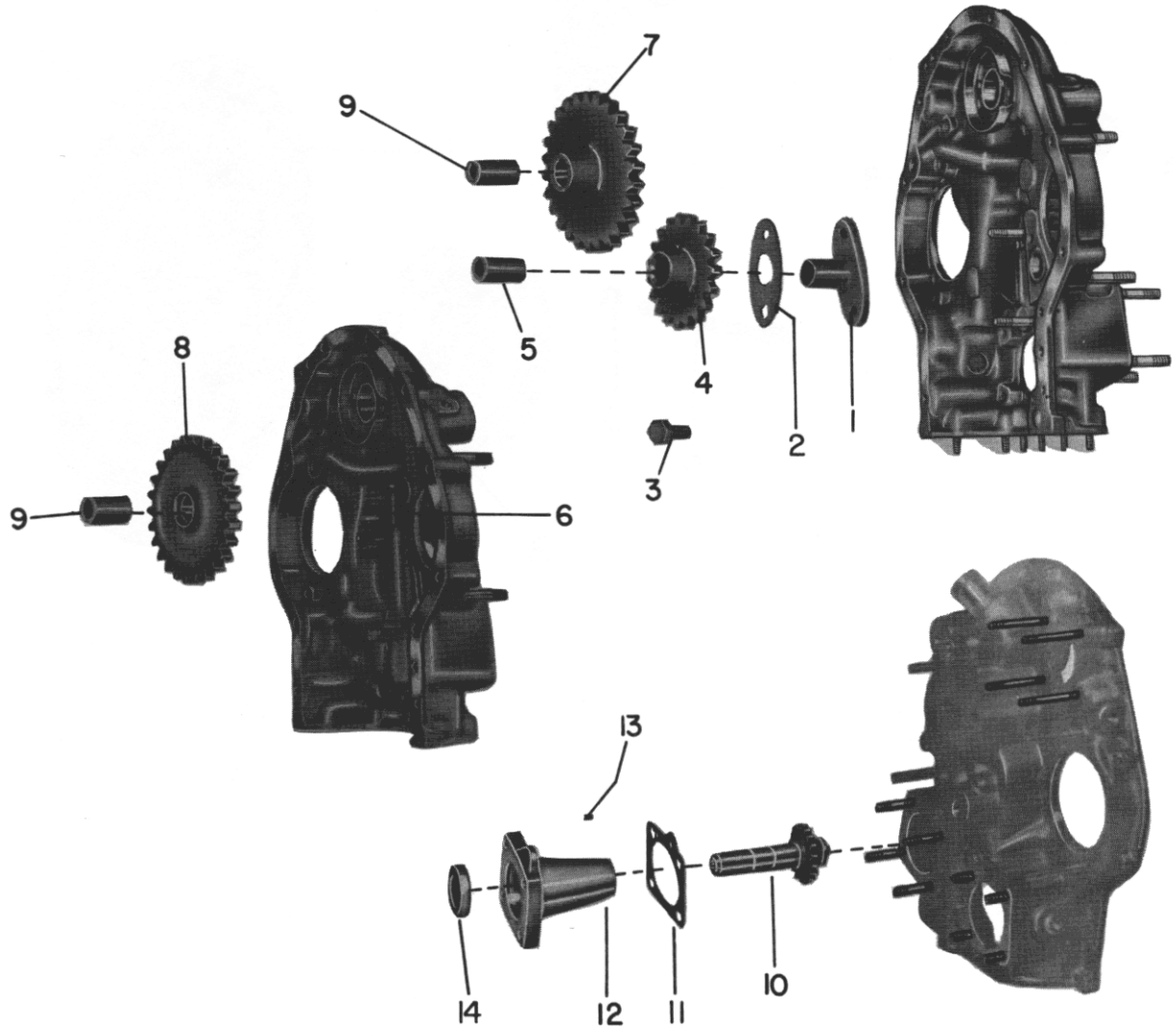


Figure 1-7. Fuel Pump Drives and Idler Gears

LYCOMING PARTS CATALOG
O-320, IO-320 AND LIO-320 SERIES
SECTION 2
ACCESSORY HOUSING AND DRIVES

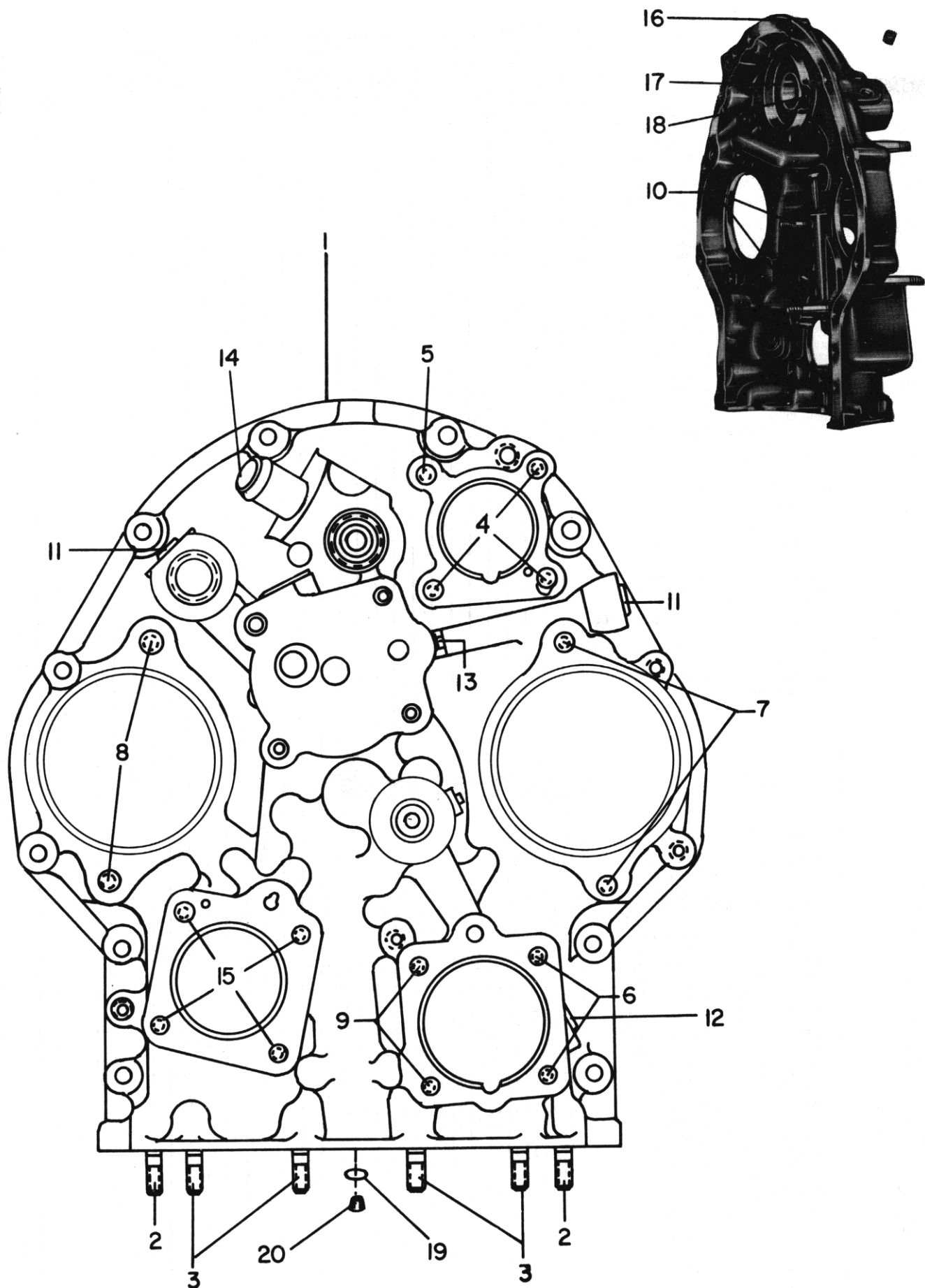


Figure 2-1. Accessory Housing - Separate Cam Gear

ACCESSORY HOUSING - INTEGRAL CAM GEAR

| REF. | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------|---|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|---------|---------|-----|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | O-320 SERIES | | | | | | | | | | | | 10-320 | | | 110-320 | | | | | | | | | |
| | | | A2A | A2B | A2C | A3A | A3B | A3C | B2A | B2B | B3A | B3B | B3C | D2A | D2B | D2C | E2A | E2B | E2C | E2D | BTA | BTC | CTA | DTA | E2A | BTA | CTA |
| 1 | 73818 | GASKET, Accessory housing | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 1 | 76103 | ACCESSORY HSG., (Plain S4LN-20 and impulse S4LN-21 magneto) | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | |
| 1 | 76105 | ACCESSORY HSG., (Two impulse S4LN-21 magnetos) | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 76104 | ACCESSORY HSG., (Plain S4LN-20 and impulse S4LN-21 magneto, vacuum and hyd. dual drive) - STD | | | | | | 1 | | | 1 | 1 | | | | | | | | | | | | | | | |
| 1 | 76104 | ACCESSORY HSG., (Plain S4LN-20 and impulse S4LN-21 magneto, vacuum and hyd. dual drive) - WCF | | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| 1 | 76106 | ACCESSORY HSG., (Plain S4LN-20 and impulse S4LN-21 magneto, vacuum and prop. gov. dual drive) - STD | 1 | | | | 1 | | | | | | | | | | | | | | | | | | | | |
| 1 | 76106 | ACCESSORY HSG., (Plain S4LN-20 and impulse S4LN-21 magneto, vacuum and prop. gov. dual drive) - WCF | | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 76107 | ACCESSORY HSG., (S4LN-200 and S4LN-204 magneto) - STD | | | 1 | | | 1 | 1 | | | 1 | | | | | | | | | | | | | | | |
| 1 | 76108 | ACCESSORY HSG., (S4LN-200 and S4LN-204 magneto, vacuum and hyd. dual drive) | | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| 1 | 76110 | ACCESSORY HSG., (Plain S4LN-20 and impulse S4LN-21 mag.) | 1 | | | | | | | | | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | | | | 1 | | | | |
| 1 | 76111 | ACCESSORY HSG., (S4LN-200 and S4LN-204 magneto) | | | | | | | | | | | | | 1 | | | 1 | | | | | | | | | |
| 1 | 76112 | ACCESSORY HSG., (Two impulse S4LN-21 magnetos) | | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| 1 | 76116* | ACCESSORY HSG., (Two impulse S4LN-21 magnetos) | | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| 1 | 76113** | ACCESSORY HSG., (Plain S4LN-20 and impulse S4LN-21 magneto) | | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| 1 | 76927 | ACCESSORY HSG., (Machined for vacuum pump pad and fuel pump pad, governor pad un-machined) | | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| 1 | LW-10105+ | ACCESSORY HSG., (Two impulse S4LN-21 magnetos) | | | | | | | | | | | | | | | | | | | | | | 1 | | | |
| | LW-10501 | ACCESSORY HSG., (Two impulse S4RN-21 magnetos) | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| | LW-11165+ | ACCESSORY HSG., (Two impulse S4RN-21 magnetos) | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| ACCESSORY HOUSING PART NUMBER | | | 76103 | 76104 | 76105 | 76106 | 76107 | 76108 | 76110 | 76111 | 76112 | 76113 | 76116 | LW10105 | LW10501 | LW11165 | | | | | | | | | | | |
| ACCESSORY HOUSING RELATED PARTS: | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 61400 | STUD, 1/4-20 x 1.19 in. long | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | | |
| 2 | 75888 | STUD, 1/4-20 x 1-1/4 in. long | | | | | | | | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | |
| 3 | 75888 | STUD, 1/4-20 x 1-1/4 in. long | | | | | | | | | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | | | | | | |
| 4 | 61238 | STUD, 1/4-20 x 2.78 in. long | 3 | | 3 | | | 3 | | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | | | | | | | |
| 4 | 69740 | STUD, 1/4-20 x 3-7/8 in. long | | 3 | | | | 3 | | | | | | | | | | | | | | | | | | | |
| 5 | 61238 | STUD, 1/4-20 x 2.78 in. long | 1 | | 1 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | |
| 5 | 69943 | STUD, 1/4-20 x 1-3/8 in. long | | 1 | | 1 | | 1 | | | | | | | | | | | | | | | | | | | |
| 6 | 61261 | STUD, 5/16-18 x 1-1/2 in. long | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | |
| 6 | 67528 | STUD, 5/16-18 x 1-5/8 in. long | | | | | | | | | | 2 | | | | | | | | | | | | | | | |
| 7 | 61261 | STUD, 5/16-18 x 1-1/2 in. long | 2 | 2 | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | |
| 7 | 61668 | STUD, 5/16-18 x 2-3/8 in. long | | | 2 | | | | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | |
| 8 | 61668 | STUD, 5/16-18 x 2-3/8 in. long | 2 | 2 | 2 | 2 | | | 2 | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | |
| 8 | 61261 | STUD, 5/16-18 x 1-1/2 in. long | | | | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | |
| 9 | 61261 | STUD, 5/16-18 x 1-1/2 in. long | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | |
| 10 | 61265 | STUD, 5/16-18 x 2.19 in. long | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | |
| 11 | 61265 | STUD, 5/16-18 x 2.19 in. long | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | |
| 11 | 31CD-22 | STUD, 5/16-18 x 2-3/4 in. long | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | |
| 12 | STD-1102 | PLUG, 1/8-27 NPT, Allen | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | |
| 13 | STD-784 | PLUG, 3/8-18 NPT, Allen | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | |
| 14 | STD-1102 | PLUG, 1/8-27 NPT, Allen | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | |
| 15 | 73117 | TUBE, Accessory breather | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | |
| 16 | 31C-38 | STUD, 5/16-18 x 4-3/4 in. long | | | | | | | | | | 4 | | | | | | | | | | | | | | | |
| 16 | 31C-40 | SUTD, 5/16-18 x 5 in. long | | | | | | | | | | | | | 4 | | | | | | | | | | 4 | | |
| 17 | STD-1006 | RING, Oil seal | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | |
| 18 | 75626 | PLUG, 5/8 OD x 3/4 in. long | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | |
| 19 | STD-783 | PLUG, 1/4-18 NPT, Allen | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | |
| | 76119 | SHIELD, Accessory breather, oil | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | |
| * - Long studs at fuel pump pad. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ** - Standard cylinder flange only (10-320-B1A). | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| + - Long studs at fuel pump pad for pump and spacer. | | | | | | | | | | | | | | | | | | | | | | | | | | | |

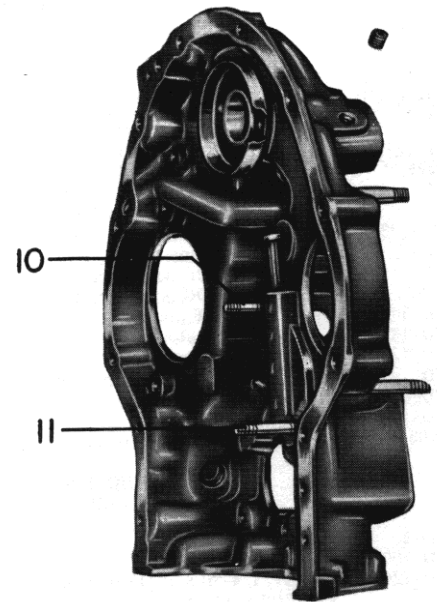
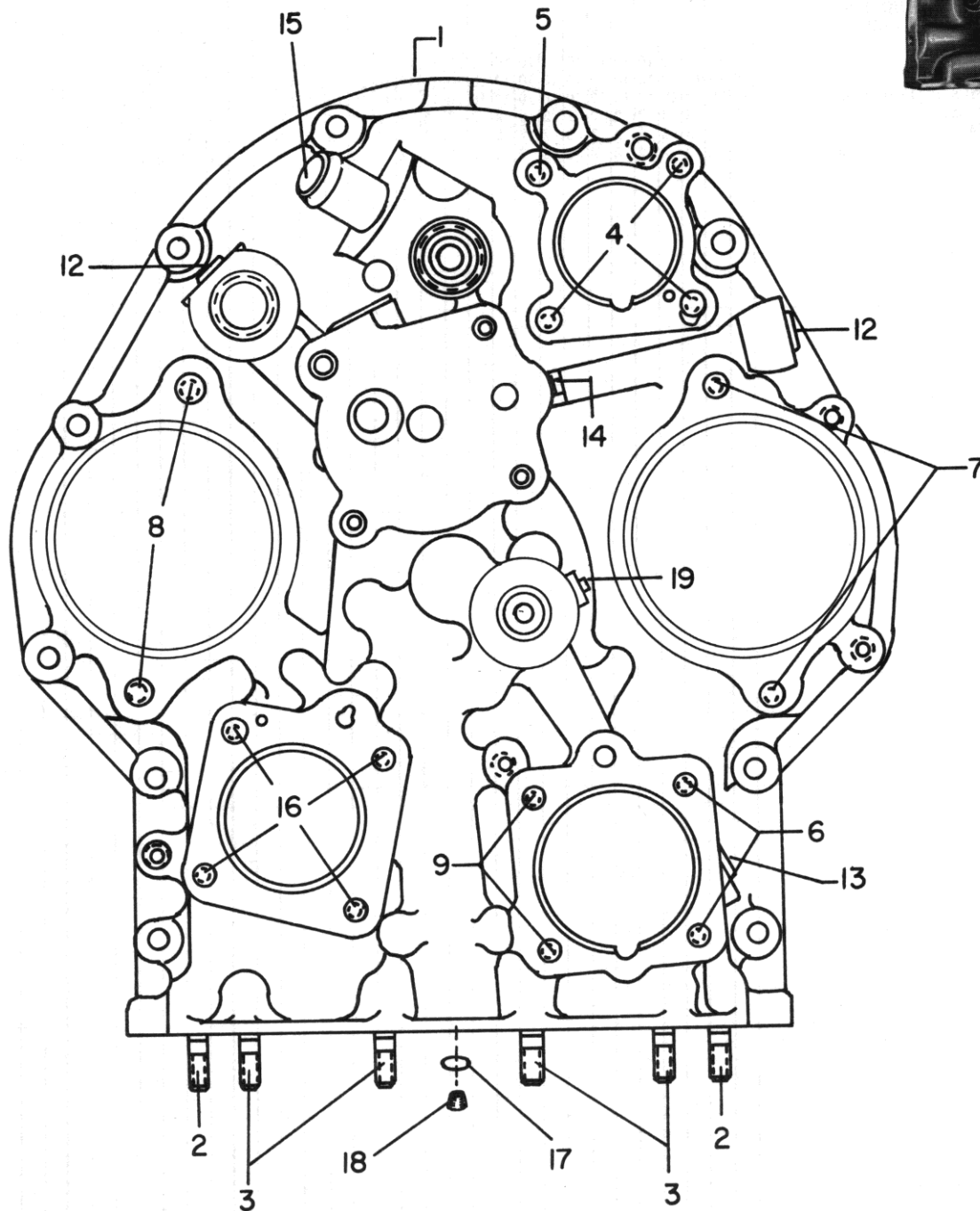


Figure 2-2. Accessory Housing - Integral Cam Gear

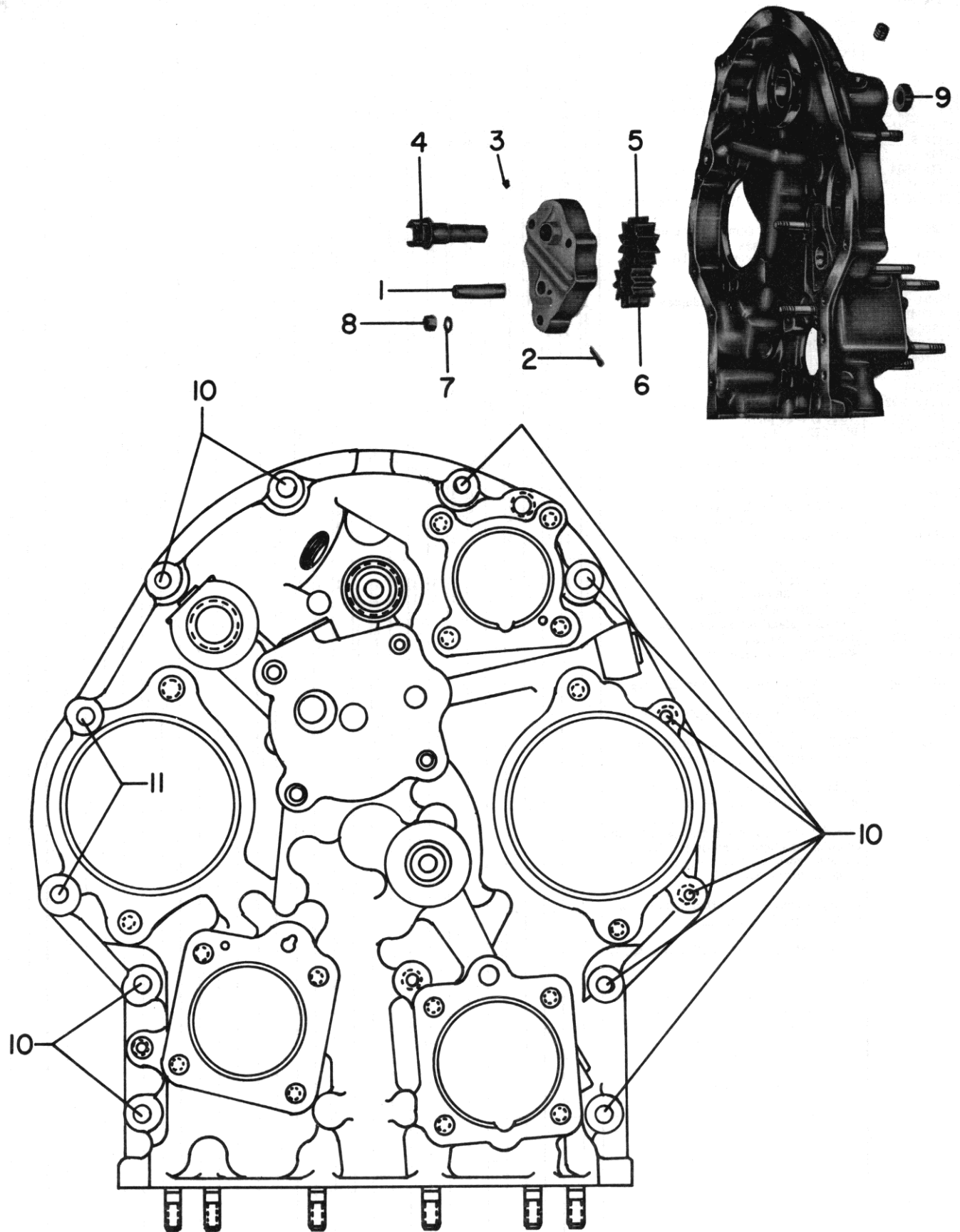
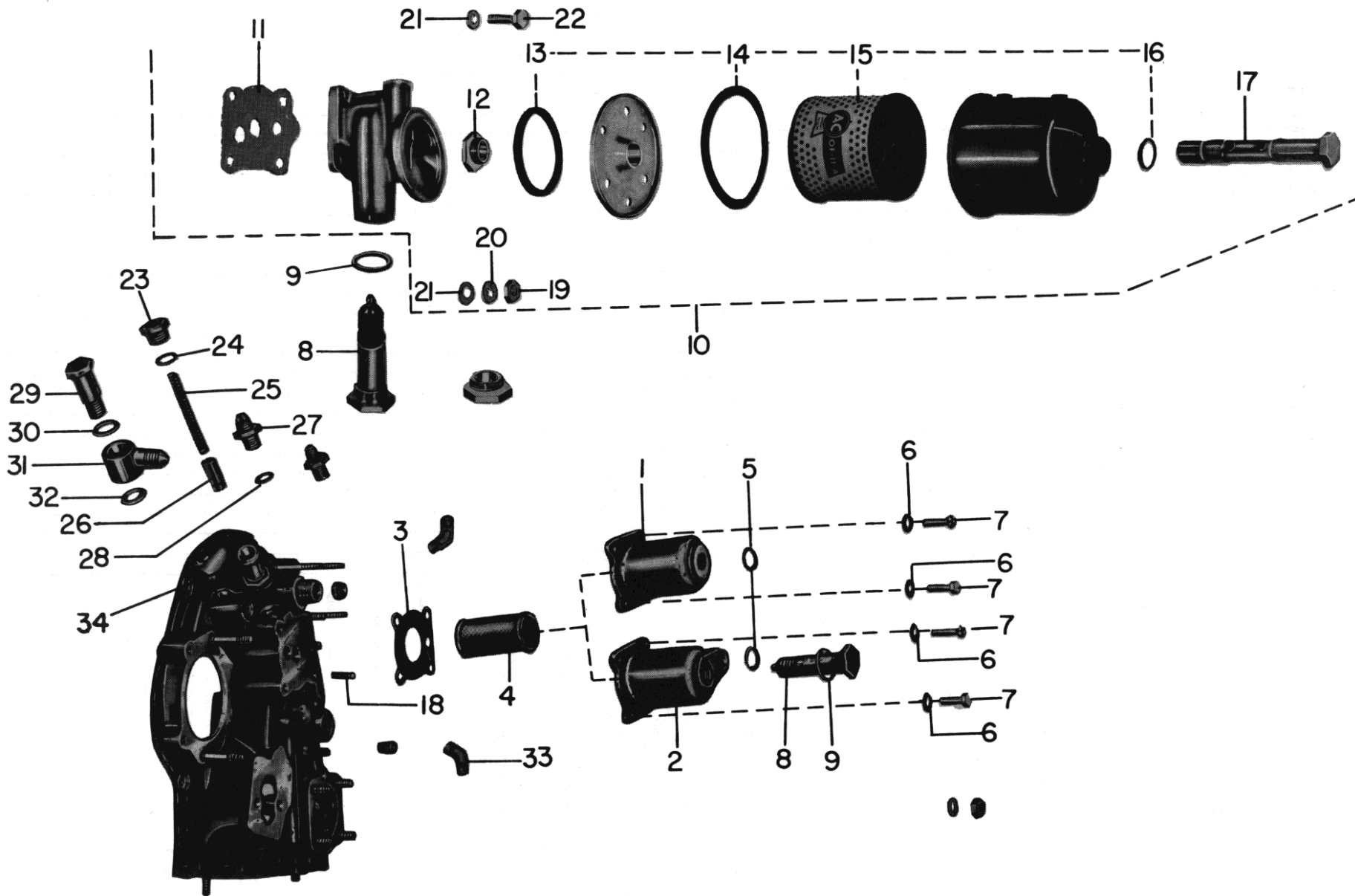


Figure 2-3. Oil Pump and Accessory Housing Attaching Parts

Figure 2-4. Oil Cooler and Filter



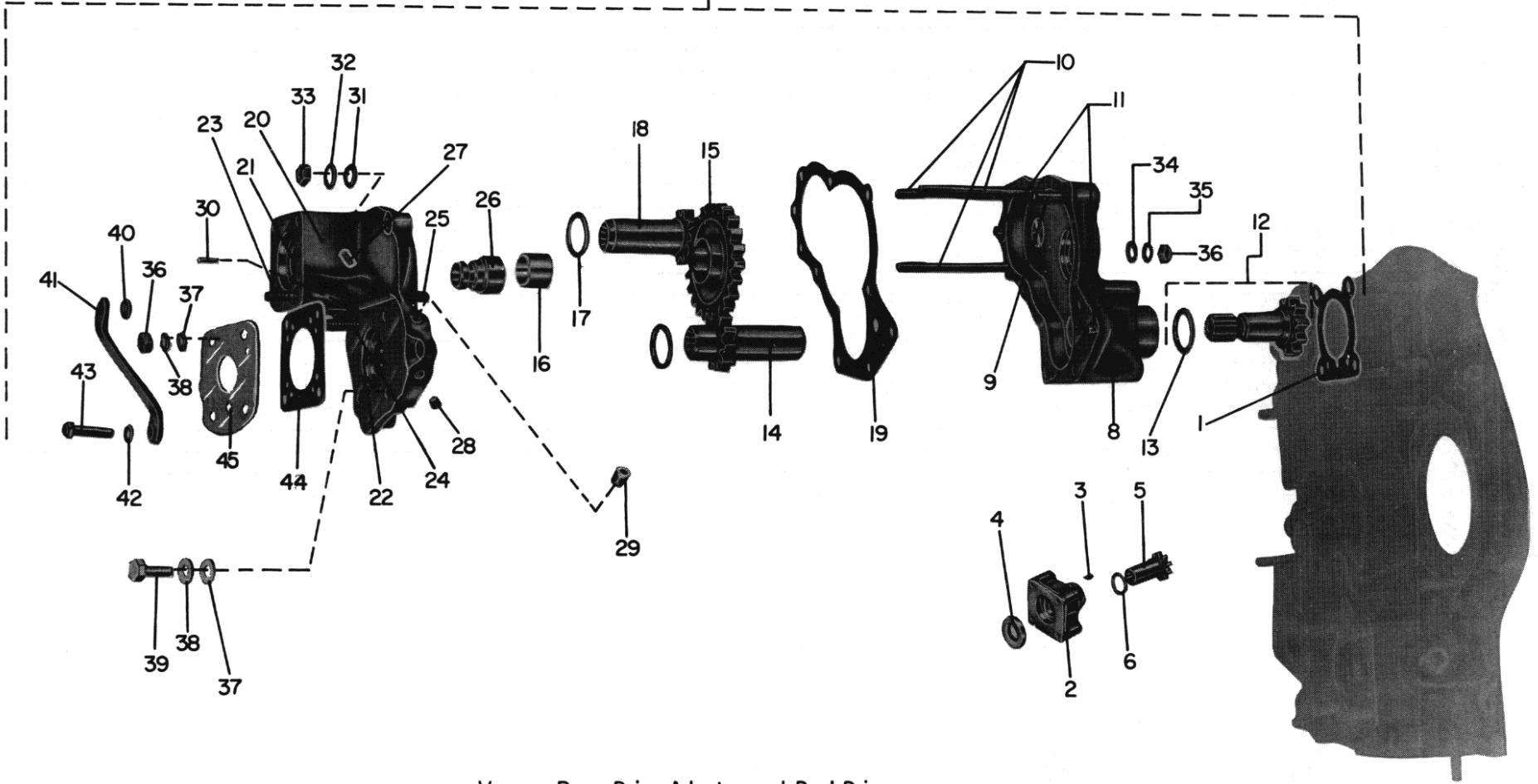


Figure 2-5. Vacuum Pump Drive Adapter and Dual Drives

Vacuum Pump Drive Adapter and Dual Drives

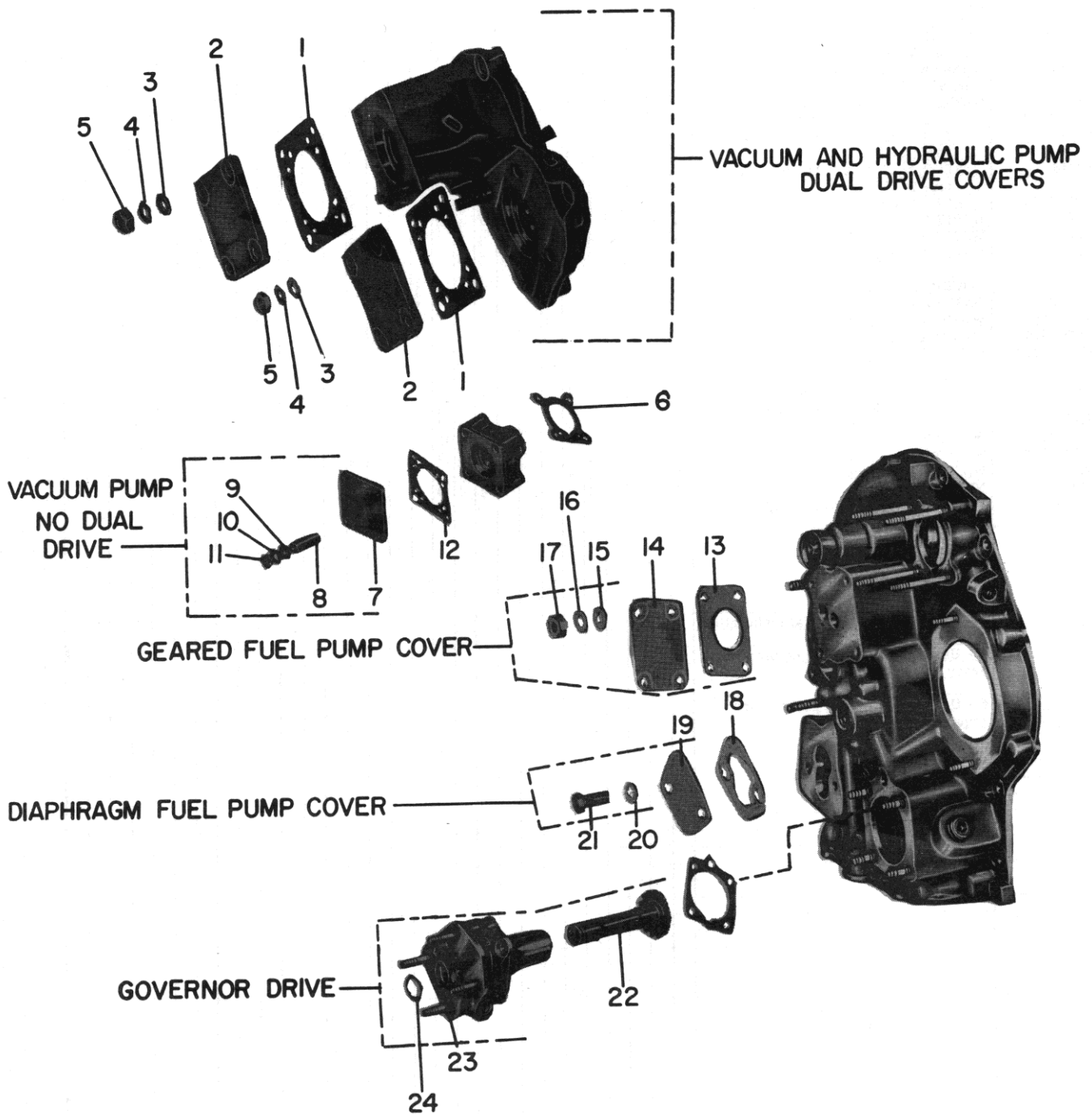


Figure 2-6. Propeller Governor Drive and Covers

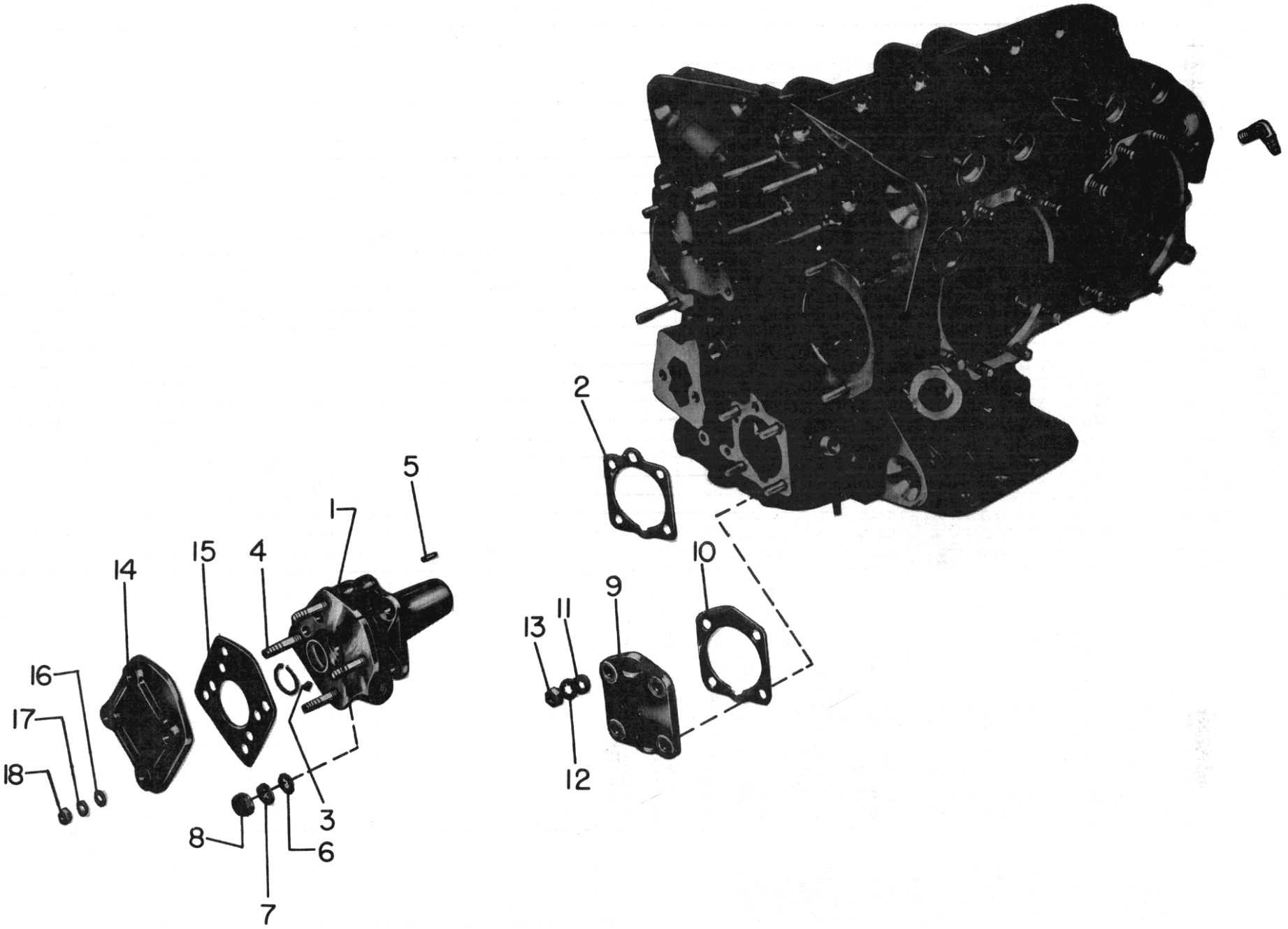


Figure 2-7. Propeller Governor Adapter and Covers

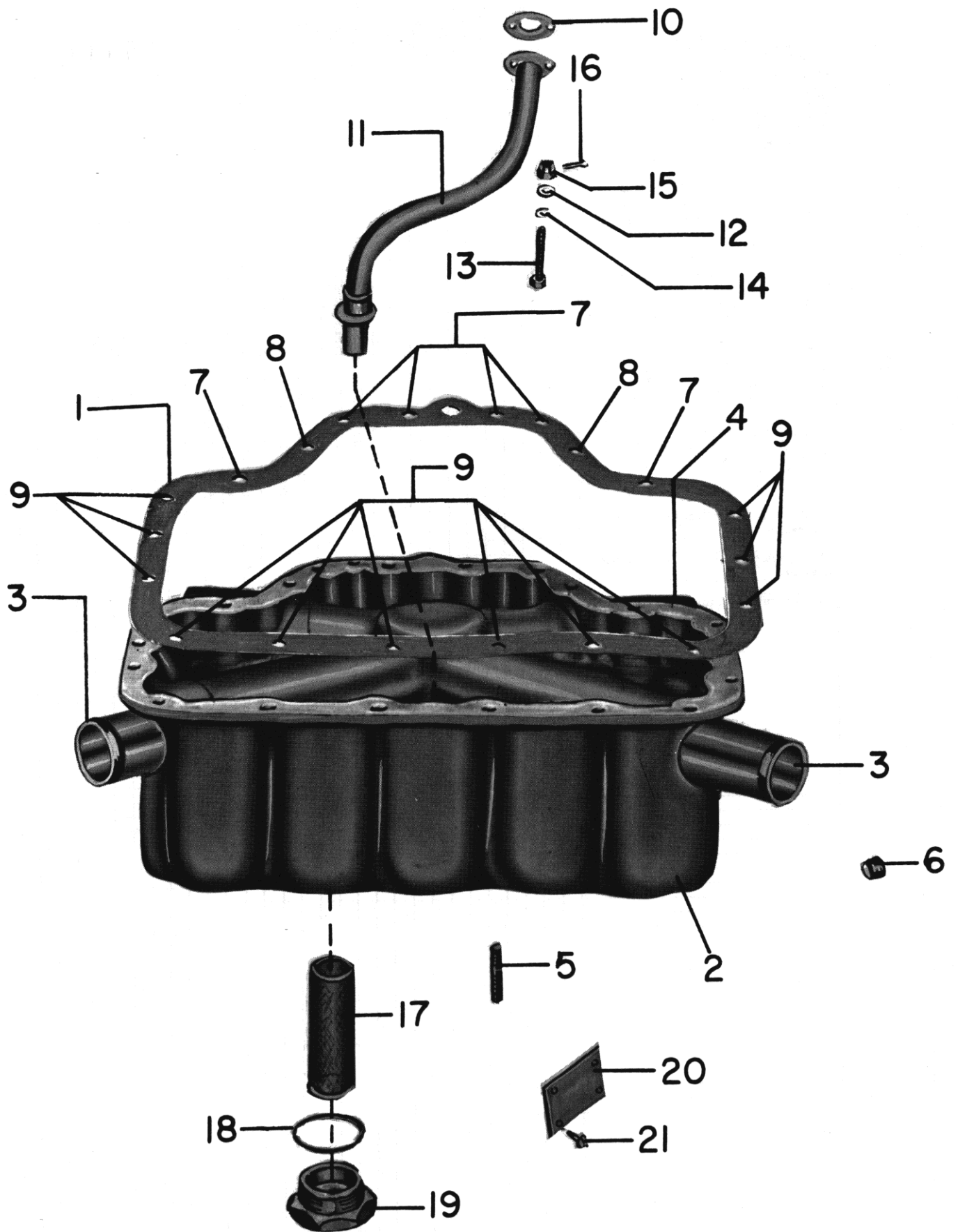


Figure 2-8. Sump Assembly

SUMP ASSEMBLY

| REF. | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|-------------|-----------------------------------|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|-----|-----|-----|-----|-----|---------|-----|-----|-----|-----|-----|-----|---|--|--|--|--|---|---|
| | | | O-320 SERIES | | | | | | | | | | | | IO-320 | | | | | | LIO-320 | | | | | | | | | | | | | |
| | | | A1A | A1B | A1C | A3A | A3B | A3C | B3A | B3B | B3C | D1A | D2A | D2B | D2C | E1A | E2A | E2B | E2C | E2D | B1A | B1C | C1A | D1A | E1A | B1A | C1A | | | | | | | |
| 1 | 68972 | GASKET, Oil sump | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | 1 | 1 | 1 | 1 | 1 | | | | | 1 | 1 |
| 2 | 74083* | SUMP ASSEMBLY, Oil - STD | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | |
| 2 | 74083* | SUMP ASSEMBLY, Oil - WCF | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | |
| 2 | LW-10751** | SUMP ASSEMBLY, Oil - WCF | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 74513+ | SUMP ASSEMBLY, Oil - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 76299+ | SUMP ASSEMBLY, Oil | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 70482 | CONNECTION, Intake pipe | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 69602 | CONNECTION, Intake pipe | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 61400 | STUD, 1/4-20 x 1-3/16 in. long | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 68437 | STUD, 5/16-18 x 1-7/8 in. long | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 61261 | STUD, 5/16-18 x 1-1/2 in. long | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 61850 | STUD, 5/16-18 x 3.13 in. long | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | STD-551 | PLUG, 1/2-14 NPT, square head | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | STD-91 | PLUG, 1/2-14 NPT, Allen | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | STD-1102 | PLUG, 1/8-27 NPT, Allen | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | STD-1204 | BOLT, 1/4-20 x 15/16 in. long | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | STD-8 | WASHER, 1/4 plain | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | STD-160 | WASHER, 1/4 lock | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | STD-8 | WASHER, 1/4 plain - STD only | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | STD-1411 | NUT, 1/4-20 plain | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | STD-160 | WASHER, 1/4 lock | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | STD-8 | WASHER, 1/4 plain | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | STD-1204 | BOLT, 1/4-20 x 15/16 in. long | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | STD-8 | WASHER, 1/4 plain | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | STD-160 | WASHER, 1/4 lock | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | STD-1411 | NUT, 1/4-20 plain | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | 70484 | SCREEN, Oil suction | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | STD-111 | GASKET, 1.00 ID x 1-1/4 in. OD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | 69335 | PLUG, 5/8 in. hex. x 1.00-20 thd. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | 61548 | NAMEPLATE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | STD-1901 | DRIVE STUD, No. 4 x .19 long | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* - Dynafocal mounting. For use with carburetor.

** - Dynafocal mounting. For use with injector.

+ - Rear inlet fuel injection.

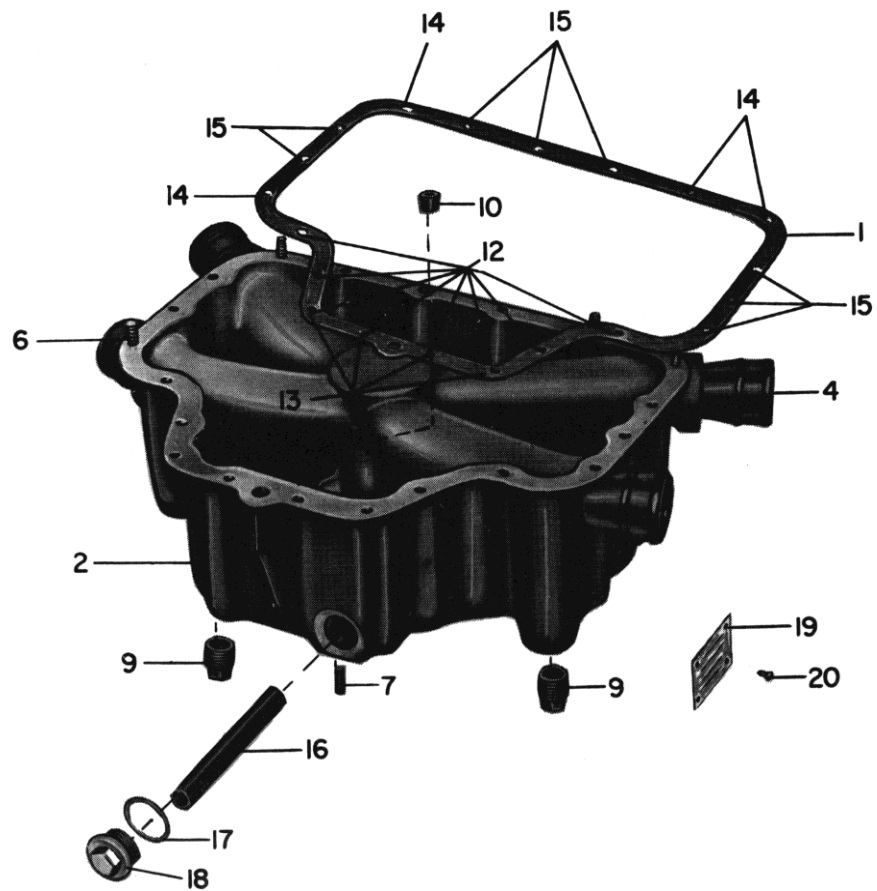
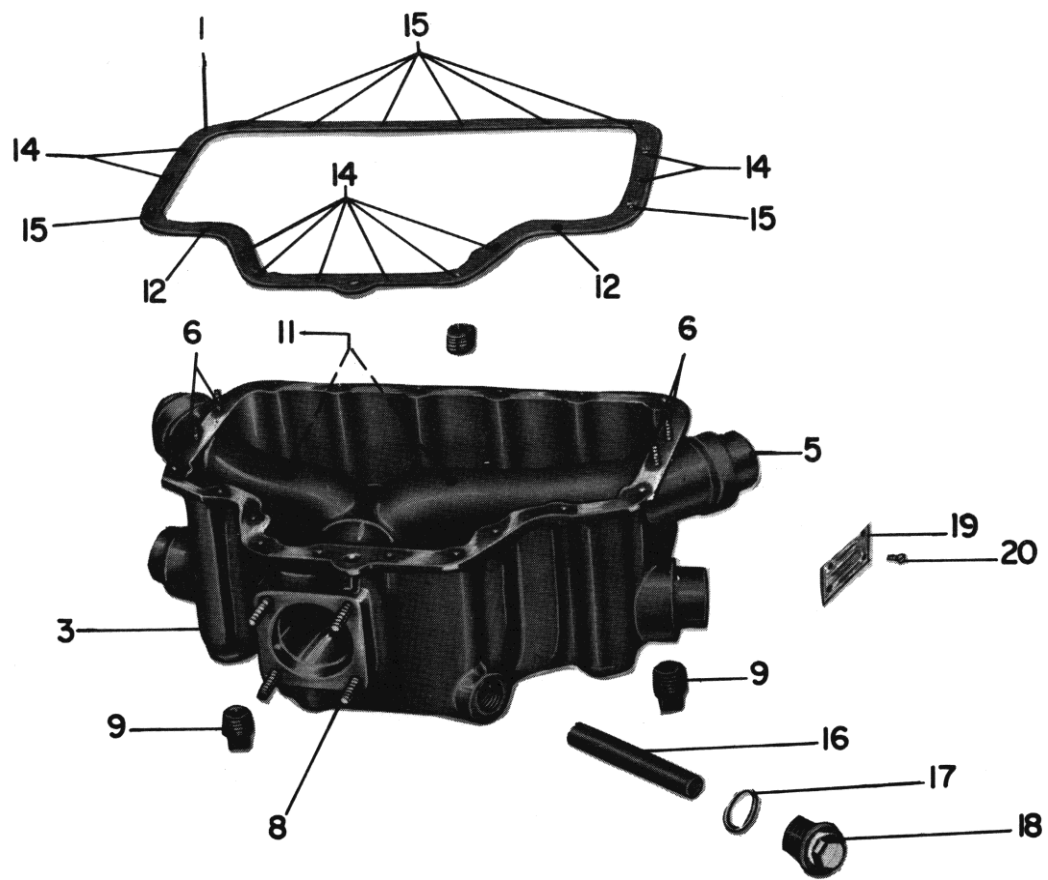


Figure 2-9. Sump Assembly

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

LYCOMING PARTS CATALOG

O-320, IO-320 AND LIO-320 SERIES

SECTION 3

CYLINDER, PISTON AND VALVE TRAIN

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

| with this cylinder | on this model | use this piston | with this top ring | this 2nd ring | this oil ring | this exhaust valve | this intake valve | and service with this kit | |
|--------------------------|---|-----------------------|-----------------------------|---------------------|---------------------|--------------------------|-------------------------|------------------------------------|----------|
| 71840C | O-320-A, -E | 75413 | 74673 | 74673 | 73998 | 75068 | 73938 | None | |
| 71840C | O-320-A, -E | 74059FW | 71556 | 71556 | 72454 | 75068 | 73938 | None | See Note |
| 71841P | O-320-A, -E | 75413 | 74989 | 74989 | 73857 | 75068 | 73938 | None | |
| 71841P | O-320-A, -E | 74059FW | 68513 | 68512 | 72454 | 75068 | 73938 | None | See Note |
| 71844P | O-320-B, -D | 71594FW | 68513 | 68513 | 69457 | 74541 | 73938 | None | |
| 71844P | O-320-B, -D | 75089 | 74989 | 74989 | 73857 | 74541 | 73938 | None | |
| 71969C | O-320-B, -D | 71594FW | 71556 | 71556 | 72454 | 74541 | 73938 | None | |
| 71969C | O-320-B, -D | 75089 | 74673 | 74673 | 73998 | 74541 | 73938 | None | |
| 73149N | O-320-B, -D | 75089 | 74241 | 74241 | 73857 | 74541 | 73938 | None | |
| 74468N | IO-320-B1A | 75089 | 74241 | 74241 | 73857 | 74541 | 73938 | 75403 | |
| 75042N* | O-320-B, -D and LIO-320-B IO-320-B, -D | 75089 | 74241 | 74241 | 73857 | 74541 | 73938 | 75401 | |
| 75042N* | O-320-E2A, -E2C IO-320-E2A | 75413 | 74241 | 74241 | 73857 | 75068 | 73938 | 77462 | |
| 75044N* | O-320-B, -D | 75089 | 74241 | 74241 | 73857 | 74541 | 73938 | None | |
| 75183C | O-320-A, -E | 75413 | 74673 | 74673 | 73998 | 75068 | 73938 | 76500 | |
| 75183C | O-320-A, -E | 74059 | 71556 | 71556 | 72454 | 75068 | 73938 | None | See Note |
| 75184P | O-320-A, -E | 75413 | 74989 | 74989 | 73857 | 75068 | 73938 | 76658 | |
| 75184P | O-320-A, -E | 74059 | 68513 | 68512 | 72454 | 75068 | 73938 | None | See Note |
| 75188C | O-320-B, -D | 75089 | 74673 | 74673 | 73998 | 74541 | 73938 | 76236 | |
| 75188C | O-320-B, -D | 71594FW | 71556 | 71556 | 72454 | 74541 | 73938 | 76234 | |
| 75317P* | O-320-A, -E | 74059FW | 68513 | 68512 | 72454 | 75068 | 73938 | None | |
| 75361N | O-320-B, -D | 75089 | 74241 | 74241 | 73857 | 74541 | 73938 | 76235 | |
| 75868P* | O-320-A, -E | 75413 | 74989 | 74989 | 73857 | 75068 | 73938 | 76659 | |
| 75868P* | O-320-A, -E | 74059FW | 68513 | 68512 | 72454 | 75068 | 73938 | None | See Note |
| 75907C* | O-320-A, -E | 75413 | 74673 | 74673 | 73998 | 75068 | 73938 | 78513 | |
| 75907C* | O-320-B, -D | 75089 | 74673 | 74673 | 73998 | 74541 | 73938 | 76239 | |
| 75907C | O-320-A, -E | 74059FW | 71556 | 71556 | 72454 | 75068 | 73938 | None | See Note |
| 76086N* | IO-320-C1A and LIO-320-C1A | 75089 | 74241 | 74241 | 73857 | 76081 | 73938 | 76449 | |
| 77476P | O-320-B, -D | 75089 | 74989 | 74989 | 73857 | 74541 | 73938 | 78515 | |
| 77476P | O-320-B, -D | 71594FW | 68513 | 68513 | 69457 | 74541 | 73938 | 78516 | |
| 75854C* | O-320-A2B | 75413 | 74673 | 74673 | 73998 | 75068 | 73938 | None | |

* - Wide Cylinder Flange.

C - Chrome

P - Plain

N - Nitrided

FW - Full Wedge Rings

NOTE: Piston P/N 74059 and P/N 75413 are interchangeable singly or in sets - with proper ring combination. Piston 74059 is no longer available. Pistons and rings are available in oversize P10 and P20, for use in plain cylinder barrels only.

See latest edition of Service Instruction No. 1037

7/16" exhaust valves are no longer available. See latest edition of Service Instruction No. 1136.

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

O-320, IO-320, LIO-320 SERIES
3-1 - PISTON AND RINGS

| REF. NO. | PART NUMBER | 1 | 2 | 3 | 4 | 5 | DESCRIPTION | QTY. PER ENG. | MODEL USAGE |
|----------|--------------|---|---|---|---|---|---|---------------|---|
| 1 | See chart | | | | | | PISTON | 4 | See chart opposite for model application. |
| 2 | opposite for | | | | | | RING, Piston, top | 4 | |
| 3 | part | | | | | | RING, Piston, 2nd | 4 | |
| 4 | numbers | | | | | | RING, Piston, oil regulating | 4 | |
| 5* | 77857 | | | | | | PIN, Piston (heavy) | 4 | |
| 5 | 69650 | | | | | | PIN, Piston | 4 | |
| 6 | 60828 | | | | | | PLUG, Piston pin - use with plain or nitrided cylinder assemblies | 8 | |
| 6 | 72198 | | | | | | PLUG, Piston pin - use with chrome cylinder assemblies | 8 | |

* - O-320-A and -E (low compression) only.



Figure 3-1. Piston and Rings

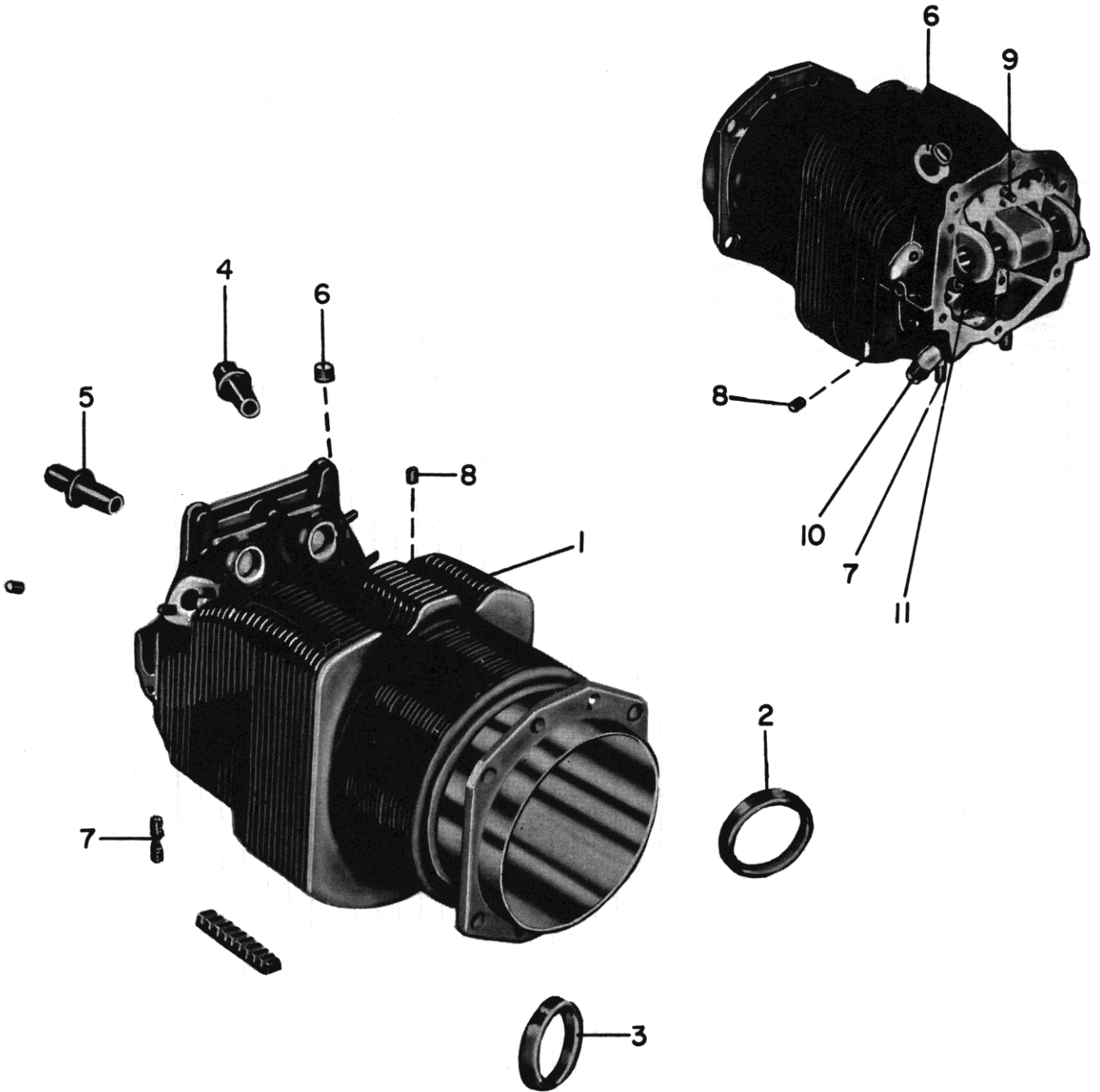
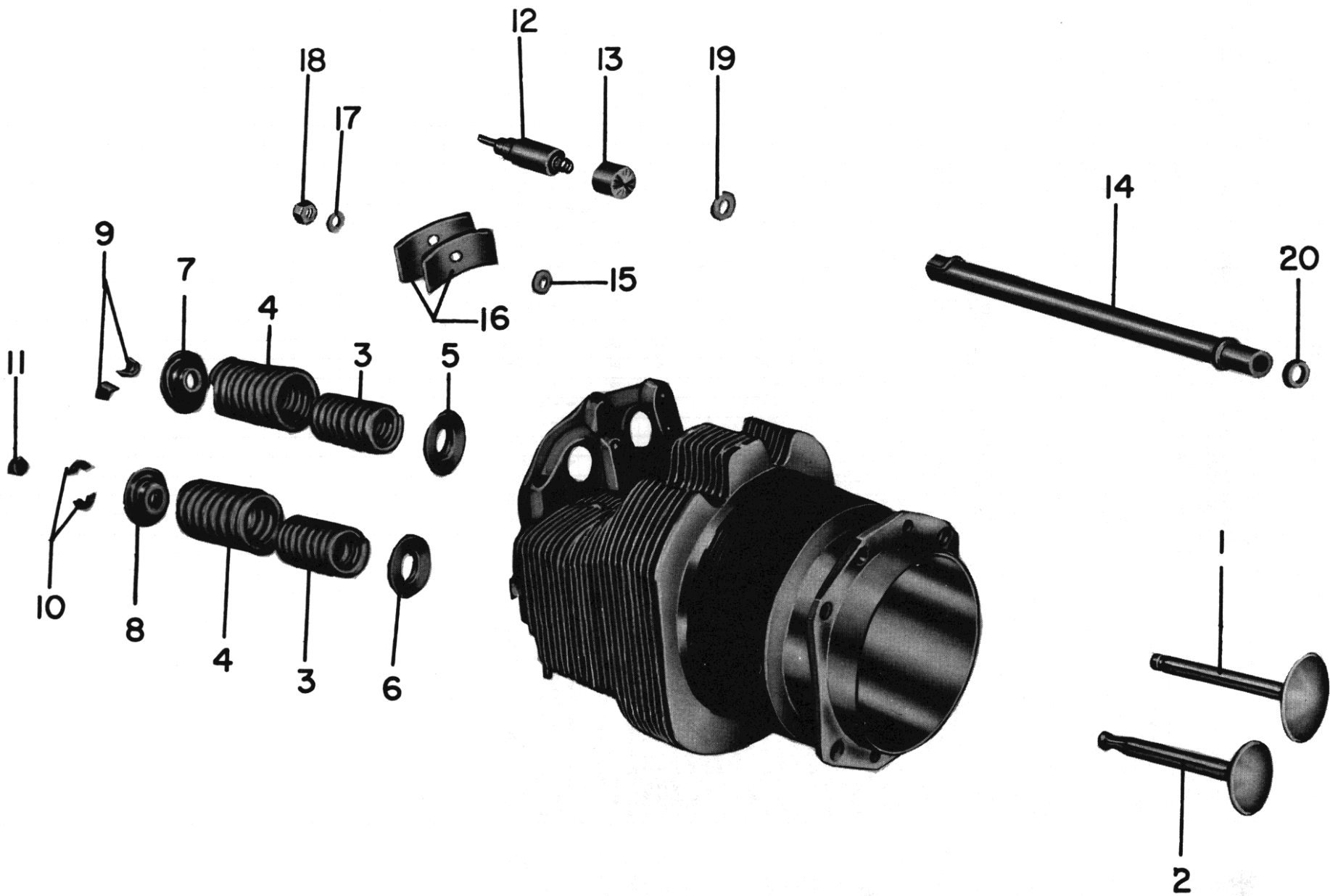


Figure 3-2. Cylinder Assembly

Figure 3-3. Valves and Plungers



ROCKERS, PUSH RODS, INTAKE PIPES AND OIL DRAIN TUBES

| REF. | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|-------------------|---|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|-----|-----|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | O-320 SERIES | | | | | | | | | | | | 10-320 | | | L10-320 | | | | | | | | | | |
| | | | A2A | A2B | A2C | A3A | A3B | A3C | B2A | B2B | B2C | B3A | B3B | B3C | D2A | D2B | D2C | E2A | E2B | E2C | E2D | B7A | B7C | C7A | D7A | E7A | B7A | C7A |
| 1 | 73411 | ROD ASSY., Push Total | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR |
| 1 | 73412 | ROD ASSY., Push of | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR |
| 1 | 73413 | ROD ASSY., Push 8 | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR |
| 1 | 73414 | ROD ASSY., Push required | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR |
| 2 | 69444 | ROCKER ASSY., Valve, intake | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 3 | 60398 | BUSHING, Valve rocker intake | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 4 | 74636* | ROCKER ASSY., Valve, exhaust | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 5 | 74637 | BUSHING, Valve rocker, exhaust | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 6 | 60401 | SHAFT, Valve rocker | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 7 | 75906 | GASKET, Rocker box cover | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 8 | 61247 | COVER, Rocker box | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 9 | STD-1925 | SCREW, 1/4-20 x 5/8 in. long | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | |
| 10 | 71481 | RING, Oil seal | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 11 | 69531 | PLATE, Cylinder hold down - STD only | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | 74327 | PLATE, Cylinder hold down (top side, no. 2 cyl.) - STD only | | | | | | | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | | | | | | | | |
| 12 | 71133 | NUT, 1/4-20 NF3, cyl. hold down - STD | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | | | | | | | | |
| 13 | 71134 | NUT, 3/8-24 NF3, cyl. hold down - STD | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | | | | | | | | |
| 14 | 383-B | NUT, 3/8-24 plain - WCF | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | | | | | | | | |
| 15 | STD-2090 74494 | NUT, 1/2-20 plain - WCF PLATE, Spark plug, long reach, caution | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | | | | | | | | |
| 16 | STD-684 | NIPPLE, Straight, 3/8 hose | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | | | | | | | |
| 17 | STD-347 | HOSE, 3/8 in. ID x 1-13/16 in. long | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | | | | | | | |
| 18 | STD-1924 | CLAMP, Hose, 3/4 ID x .56 wide | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | | | | | | | | |
| 19 | 68759 | TUBE ASSY., Oil drain, cyl. no. 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | |
| 19 | 68760 | TUBE ASSY., Oil drain, cyl. no. 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | |
| 19 | 68761 | TUBE ASSY., Oil drain, cyl. no. 3 and 4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | |
| 20 | 61363 | PIPE, Intake, no. 1 and no. 2 cyl. - STD | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | |
| 20 | 61363 | PIPE, Intake, no. 1 and no. 2 cyl. - WCF | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | |
| 20 | 61365 | PIPE, Intake, no. 3 cyl. - STD | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | |
| 20 | 61365 | PIPE, Intake, no. 3 cyl. - WCF | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | |
| 20 | 61364 | PIPE, Intake, no. 4 cyl. - STD | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | |
| 20 | 61364 | PIPE, Intake, no. 4 cyl. - WCF | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | |
| 20 | 74084 | PIPE, Intake - STD | | | | | | | | | | | | | | 4 | 4 | 4 | 4 | 4 | | | | | | | | |
| 20 | 74084 | PIPE, Intake - WCF | | | | | | | | | | | | | 4 | 4 | 4 | 4 | 4 | 4 | | | | | | | | |
| 20 | 74521 | PIPE, Intake, no. 1 and no. 2 cyl. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 74522 | PIPE, Intake, no. 3 and no. 4 cyl. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | STD-1196 | HOSE, 1-1/2 ID x 1-7/8 OD x 1-1/2 long | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | | | | | | | |
| 21 | 69603 | HOSE, 1-3/4 ID x 2.19 OD x 1-3/4 long | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | | | | | | | |
| 22 | STD-1530 | CLAMP, Hose, 1-3/4 in. ID x 9/16 in. wide | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | | | | | | | | |
| 22 | STD-1269 | CLAMP, Hose, 1-7/8 - 2-1/4 ID x 9/16 wide | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | | | | | | | | |
| 23 | 73346 | FLANGE, Intake pipe, upper | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | | | | | | | |
| 24 | 71973 | GASKET, 2 volt flange | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | | | | | | | |
| 25 | STD-8 | WASHER, 1/4 plain | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | | | | | | | | |
| 26 | STD-160 | WASHER, 1/4 lock | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | | | | | | | | |
| 27 | STD-1215 | BOLT, 1/4-20 x 1-1/4 in. long | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | | | | | | | | |

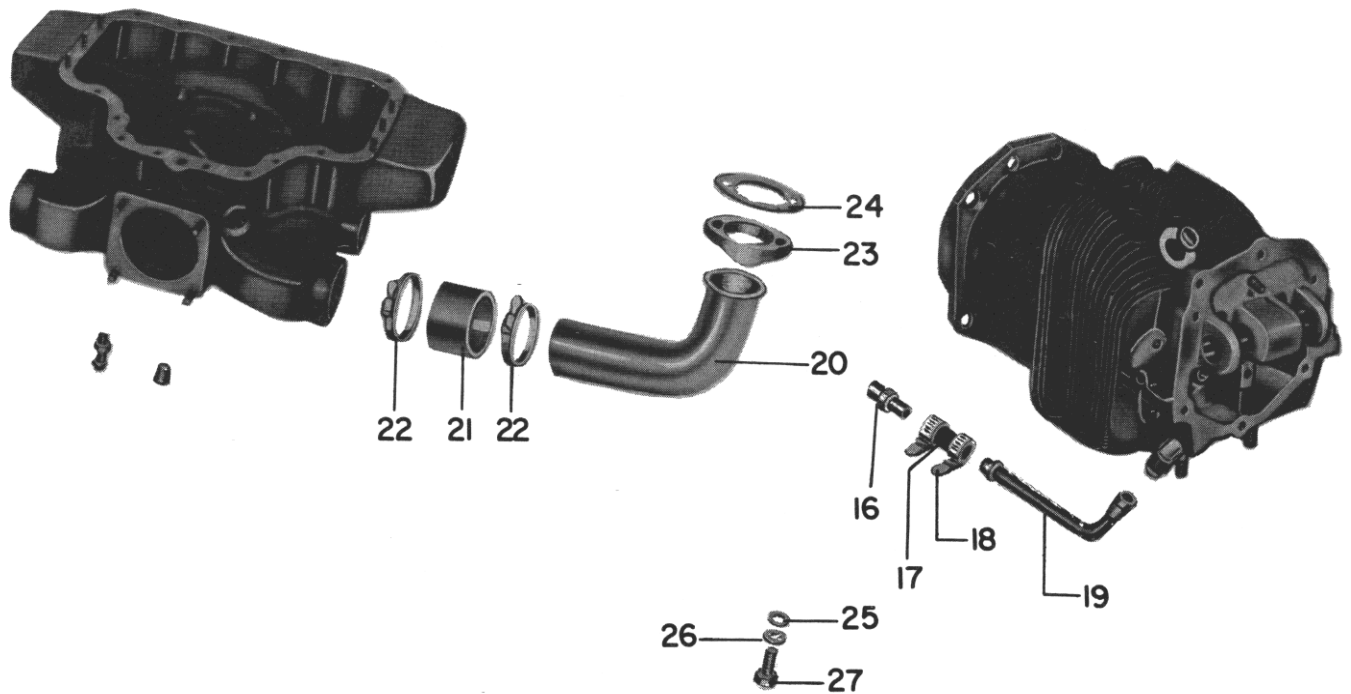
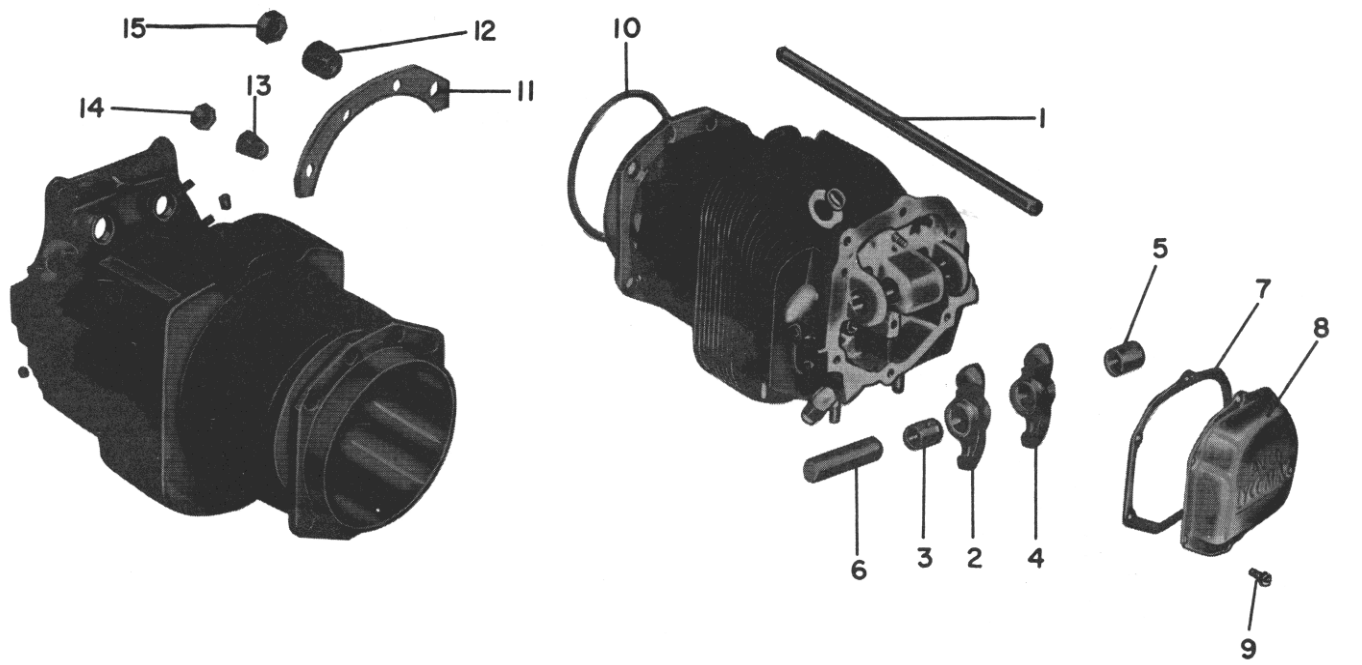


Figure 3-4. Rockers, Push Rods, Intake Pipes and Oil Drain Tubes

LYCOMING PARTS CATALOG
O-320, IO-320 AND LIO-320 SERIES
SECTION 4
IGNITION SYSTEM

UNSHIELDED IGNITION HARNESS

QUANTITY PER ASSEMBLY

SECTION
4
PAGE
4-2

| REF. | PART NUMBER | DESCRIPTION | O-320 SERIES | | | | | | | | | | | | | | | | | | | | | | | | 10-320 | | | L10-320 | |
|------|--------------|---|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|--|--|---------|--|
| | | | A2A | A2B | A2C | A3A | A3B | A3C | B2A | B2B | B3A | B3B | B3C | D2A | D2B | D2C | E2A | E2B | E2C | E2D | B1A | B1C | C1A | D1A | E1A | B1A | C1A | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 73729 | CABLE AND PLATE ASSY., Ignition, unshielded - STD | 1 | 1 | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | |
| | 73729 | CABLE AND PLATE ASSY., Ignition, unshielded - WCF | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 45664 | CABLE, Spark plug | AR | AR | | AR | | | | AR | AR | | | | | | | | | | | | | | | | | | | | |
| 2 | 73726 | LOCKCLIP | 8 | 8 | | 8 | | | | 8 | 8 | | | | | | | | | | | | | | | | | | | | |
| 3 | 73245 | EYELET | 8 | 8 | | 8 | | | | 8 | 8 | | | | | | | | | | | | | | | | | | | | |
| 4 | 61546 | SLEEVE | 12 | 12 | | 12 | | | | 12 | 12 | | | | | | | | | | | | | | | | | | | | |
| 5 | STD-957 | GROMMET, .27 ID | 4 | 4 | | 4 | | | | 4 | 4 | | | | | | | | | | | | | | | | | | | | |
| 6 | 60670 | PLATE, Spark plug cable | 2 | 2 | | 2 | | | | 2 | 2 | | | | | | | | | | | | | | | | | | | | |
| 7 | 73246 | KIT ASSY., Ignition cable | 2 | 2 | | 2 | | | | 2 | 2 | | | | | | | | | | | | | | | | | | | | |
| 8 | 61561 | PLATE, Ignition cable outlet | 2 | 2 | | 2 | | | | 2 | 2 | | | | | | | | | | | | | | | | | | | | |
| 9 | 61559 | GROMMET, Ignition cable | 2 | 2 | | 2 | | | | 2 | 2 | | | | | | | | | | | | | | | | | | | | |
| 10 | 73245 | EYELET | 8 | 8 | | 8 | | | | 8 | 8 | | | | | | | | | | | | | | | | | | | | |
| 11 | 72351 | SCREW, No. 10-32 | 8 | 8 | | 8 | | | | 8 | 8 | | | | | | | | | | | | | | | | | | | | |
| 12 | 71913 | CLAMP, 1-1/2 ID with .34 dia. offset | 4 | 4 | | 4 | | | | 4 | 4 | | | | | | | | | | | | | | | | | | | | |
| 13 | STD-553 | SCREW, No. 6-32 x 1/2 in. long | 4 | 4 | | 4 | | | | 4 | 4 | | | | | | | | | | | | | | | | | | | | |
| 14 | AN365-632C | NUT, No. 6-32, self-locking | 4 | 4 | | 4 | | | | 4 | 4 | | | | | | | | | | | | | | | | | | | | |
| 15 | 61385 | CLIP, Ignition cable | 2 | 2 | | 2 | | | | 2 | 2 | | | | | | | | | | | | | | | | | | | | |
| 16 | STD-8 | WASHER, 1/4 plain | 2 | 2 | | 2 | | | | 2 | 2 | | | | | | | | | | | | | | | | | | | | |
| 17 | STD-160 | WASHER, 1/4 lock | 2 | 2 | | 2 | | | | 2 | 2 | | | | | | | | | | | | | | | | | | | | |
| 18 | AN500-416-12 | SCREW, 1/4-20 x 3/4 in. long - STD | 2 | 2 | | 2 | | | | 2 | 2 | | | | | | | | | | | | | | | | | | | | |
| 18 | AN500-416-18 | SCREW, 1/4-20 x 1.13 in. long | 2 | 2 | | 2 | | | | 2 | 2 | | | | | | | | | | | | | | | | | | | | |
| 19 | STD-1411 | NUT, 1/4-20 plain | 2 | 2 | | 2 | | | | 2 | 2 | | | | | | | | | | | | | | | | | | | | |
| | 40239 | PROTECTOR, Ignition cable (top leads) | 4 | 4 | | 4 | | | | 4 | 4 | | | | | | | | | | | | | | | | | | | | |

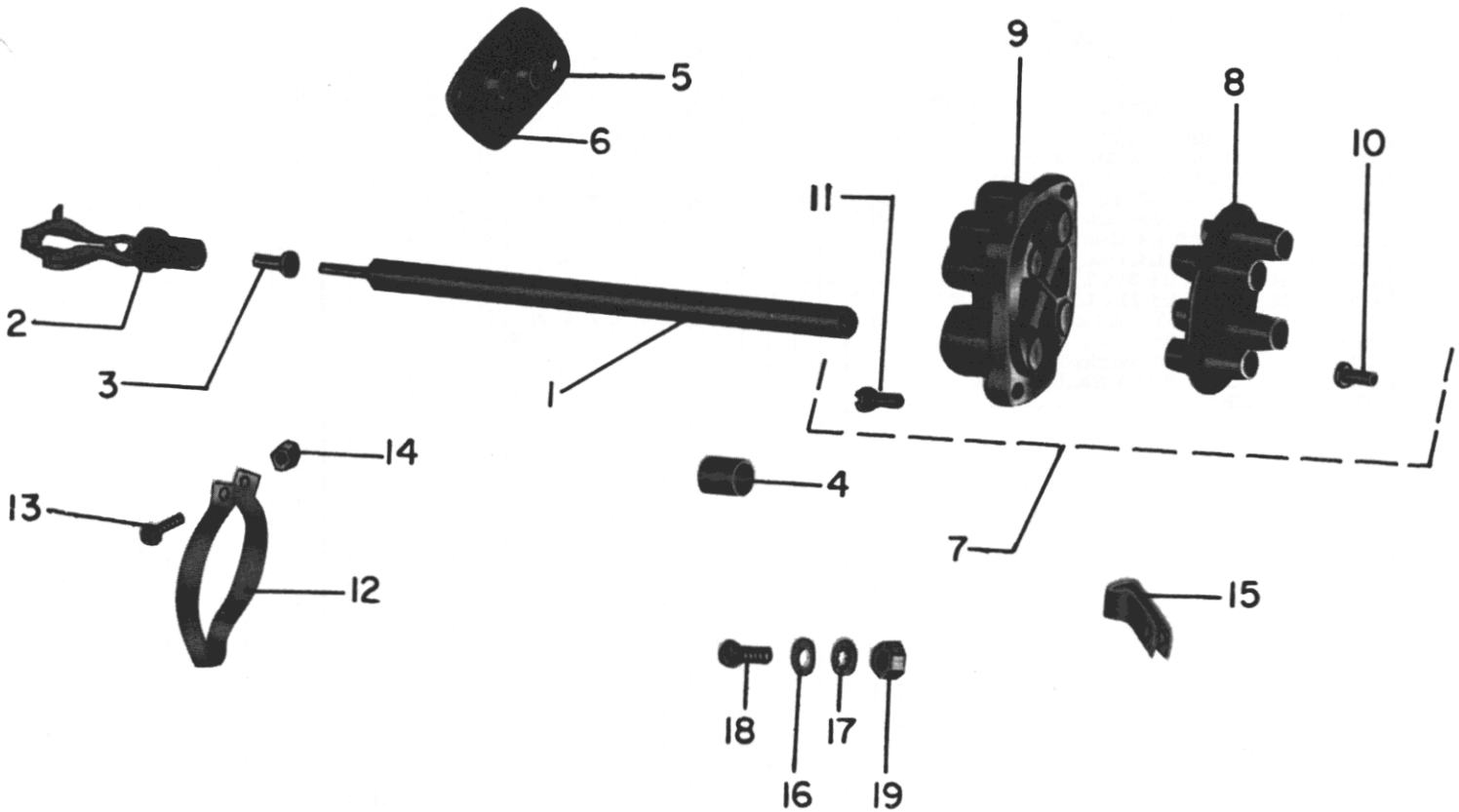


Figure 4-2. Unshielded Ignition Harness

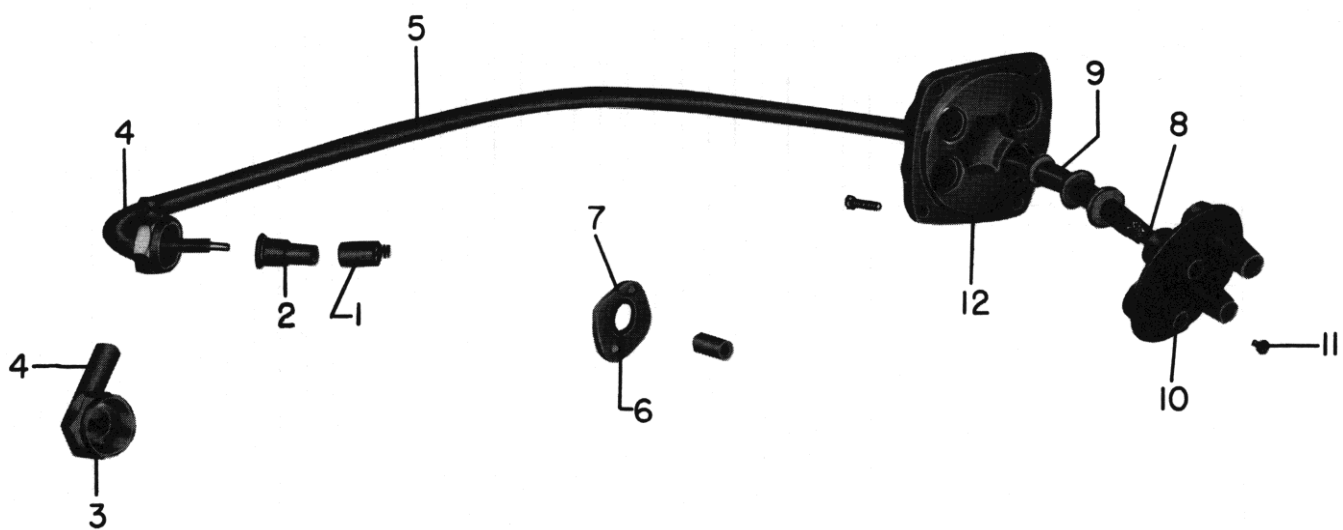


Figure 4-3. Shielded Ignition Cable - Avco Lycoming 5MM

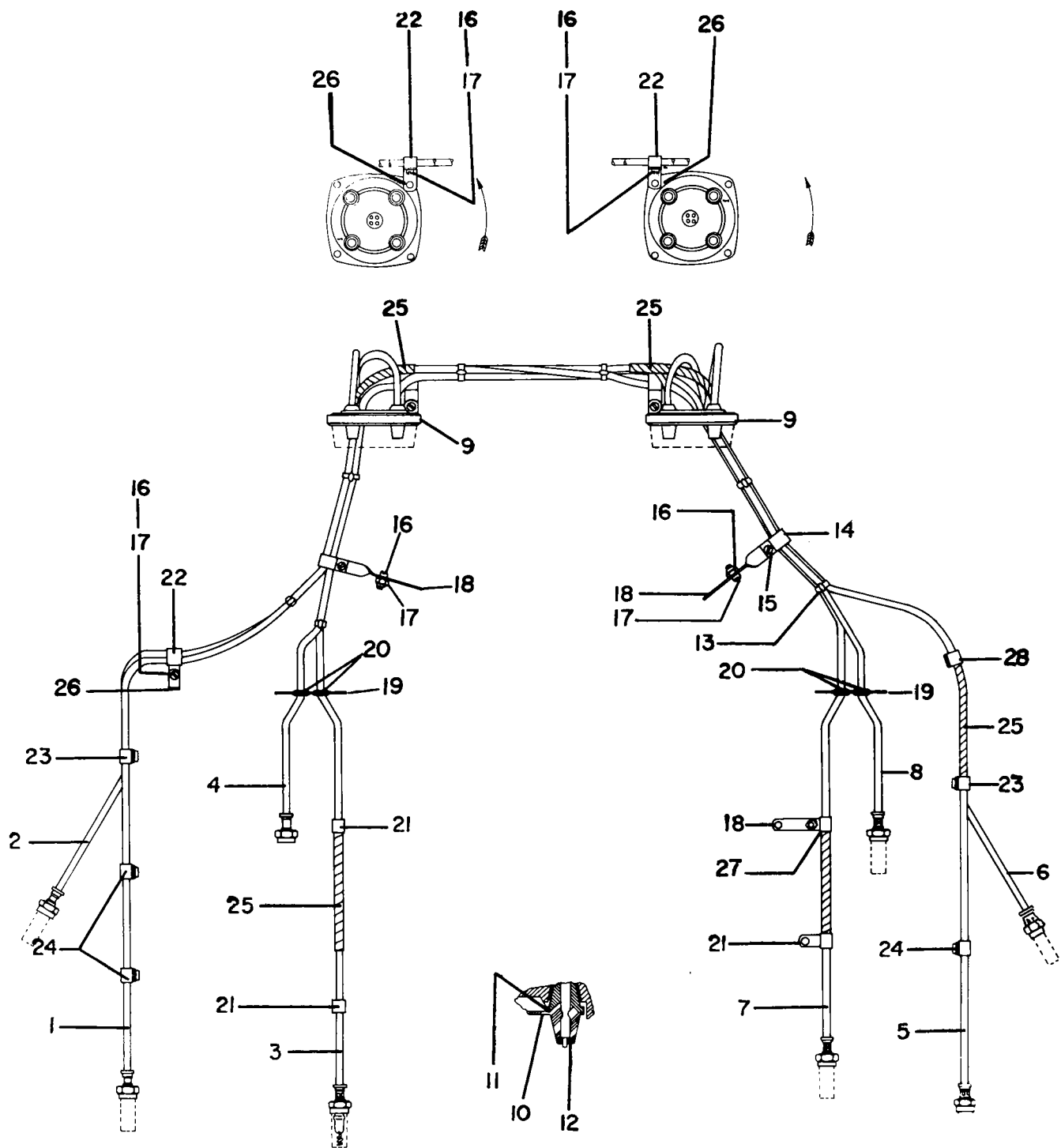


Figure 4-4. Harness Assembly, Scintilla -1200 Series Magnet

HARNESS ASSEMBLY, IGNITION, SCINTILLA, -200 SERIES MAGNETOS

SECTION
4
PAGE
4-5

| REF. | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|--------------|---|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|-----|-----|-----|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | O-320 SERIES | | | | | | | | | | 10-320 | | | | L10-320 | | | | | | | | | |
| | | | A2A | A2B | A2C | A3A | A3B | A3C | B2A | B2B | B3B | B3C | D2A | D2B | E2A | E2B | E2C | E2D | B7A | B7C | C7A | D7A | E7A | B7A | C7A | |
| LW-620326-2 | | HARNESS ASSY., Ignition, Scintilla, -200 series magnetos | | | | | | | | | | | | | | | | | | | 1 | 1 | | | 1 | 1 |
| 1 | 10-320610-72 | LEAD ASSY., Cyl. no. 1B | | | | | | | | | | | | | | | | | | | 1 | 1 | | | 1 | 1 |
| 2 | 10-320610-60 | LEAD ASSY., Cyl. no. 3B | | | | | | | | | | | | | | | | | | | 1 | 1 | | | 1 | 1 |
| 3 | 10-320610-79 | LEAD ASSY., Cyl. no. 1T | | | | | | | | | | | | | | | | | | | 1 | 1 | | | 1 | 1 |
| 4 | 10-320610-69 | LEAD ASSY., Cyl. no. 3T | | | | | | | | | | | | | | | | | | | 1 | 1 | | | 1 | 1 |
| 5 | 10-320610-78 | LEAD ASSY., Cyl. no. 4T | | | | | | | | | | | | | | | | | | | 1 | 1 | | | 1 | 1 |
| 6 | 10-320610-87 | LEAD ASSY., Cyl. no. 2T | | | | | | | | | | | | | | | | | | | 1 | 1 | | | 1 | 1 |
| 7 | 10-320610-68 | LEAD ASSY., Cyl. no. 4B | | | | | | | | | | | | | | | | | | | 1 | 1 | | | 1 | 1 |
| 8 | 10-320610-82 | LEAD ASSY., Cyl. no. 2B | | | | | | | | | | | | | | | | | | | 1 | 1 | | | 1 | 1 |
| 9 | 10-35936-6 | SCREW | | | | | | | | | | | | | | | | | | | 8 | 8 | | | 8 | 8 |
| 10 | 10-90404-4 | NUT | | | | | | | | | | | | | | | | | | | 8 | 8 | | | 8 | 8 |
| 11 | 10-320283 | CLAMP | | | | | | | | | | | | | | | | | | | 8 | 8 | | | 8 | 8 |
| 12 | 10-320297-2 | CLAMP | | | | | | | | | | | | | | | | | | | 8 | 8 | | | 8 | 8 |
| 13 | 10-320298-1 | CLAMP | | | | | | | | | | | | | | | | | | | 1 | 1 | | | 1 | 1 |
| 14 | 10-320471 | TUBING, Spiral | | | | | | | | | | | | | | | | | | | 3 | 3 | | | 3 | 3 |
| 15 | 10-320298-2 | CLAMP | | | | | | | | | | | | | | | | | | | 653 | 653 | | | 653 | 653 |
| 16 | 10-320050 | GROMMET | | | | | | | | | | | | | | | | | | | 2 | 2 | | | 2 | 2 |
| 17 | 10-320394 | PLATE | | | | | | | | | | | | | | | | | | | 2 | 2 | | | 2 | 2 |
| 18 | 10-320300-1 | CLAMP | | | | | | | | | | | | | | | | | | | 2 | 2 | | | 2 | 2 |
| 19 | 10-91431-8 | SCREW | | | | | | | | | | | | | | | | | | | 1 | 1 | | | 1 | 1 |
| 20 | 10-13799 | NUT | | | | | | | | | | | | | | | | | | | 1 | 1 | | | 1 | 1 |
| 21 | 10-89027-4 | BRACKET | | | | | | | | | | | | | | | | | | | 1 | 1 | | | 1 | 1 |
| 22 | 10-163011 | FERRULE | | | | | | | | | | | | | | | | | | | 1 | 1 | | | 1 | 1 |
| 23 | 10-163012 | EYELET | | | | | | | | | | | | | | | | | | | 8 | 8 | | | 8 | 8 |
| 24 | 10-320412-3 | CLAMP | | | | | | | | | | | | | | | | | | | 8 | 8 | | | 8 | 8 |
| 25 | 10-320411 | SCREW | | | | | | | | | | | | | | | | | | | 1 | 1 | | | 1 | 1 |
| 26 | 10-209328 | TIE, Cable | | | | | | | | | | | | | | | | | | | 1 | 1 | | | 1 | 1 |
| 27 | 10-320297-2 | CLAMP | | | | | | | | | | | | | | | | | | | 5 | 5 | | | 5 | 5 |
| | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | 1 | 1 |
| 28 | 72351 | SCREW, No. 10-32 self-locking | | | | | | | | | | | | | | | | | | | 8 | 8 | | | 8 | 8 |
| | STD-1874 | SCREW, 1/4-20 x 7/8 in. long | | | | | | | | | | | | | | | | | | | 3 | 3 | | | 3 | 3 |
| | 40239 | PROTECTOR, Ignition cable (top leads) | | | | | | | | | | | | | | | | | | | 4 | 4 | | | 4 | 4 |
| 29 | 10-32326 | SPRING | | | | | | | | | | | | | | | | | | | 8 | 8 | | | 8 | 8 |
| 30 | 10-320473 | SLEEVE | | | | | | | | | | | | | | | | | | | 8 | 8 | | | 8 | 8 |

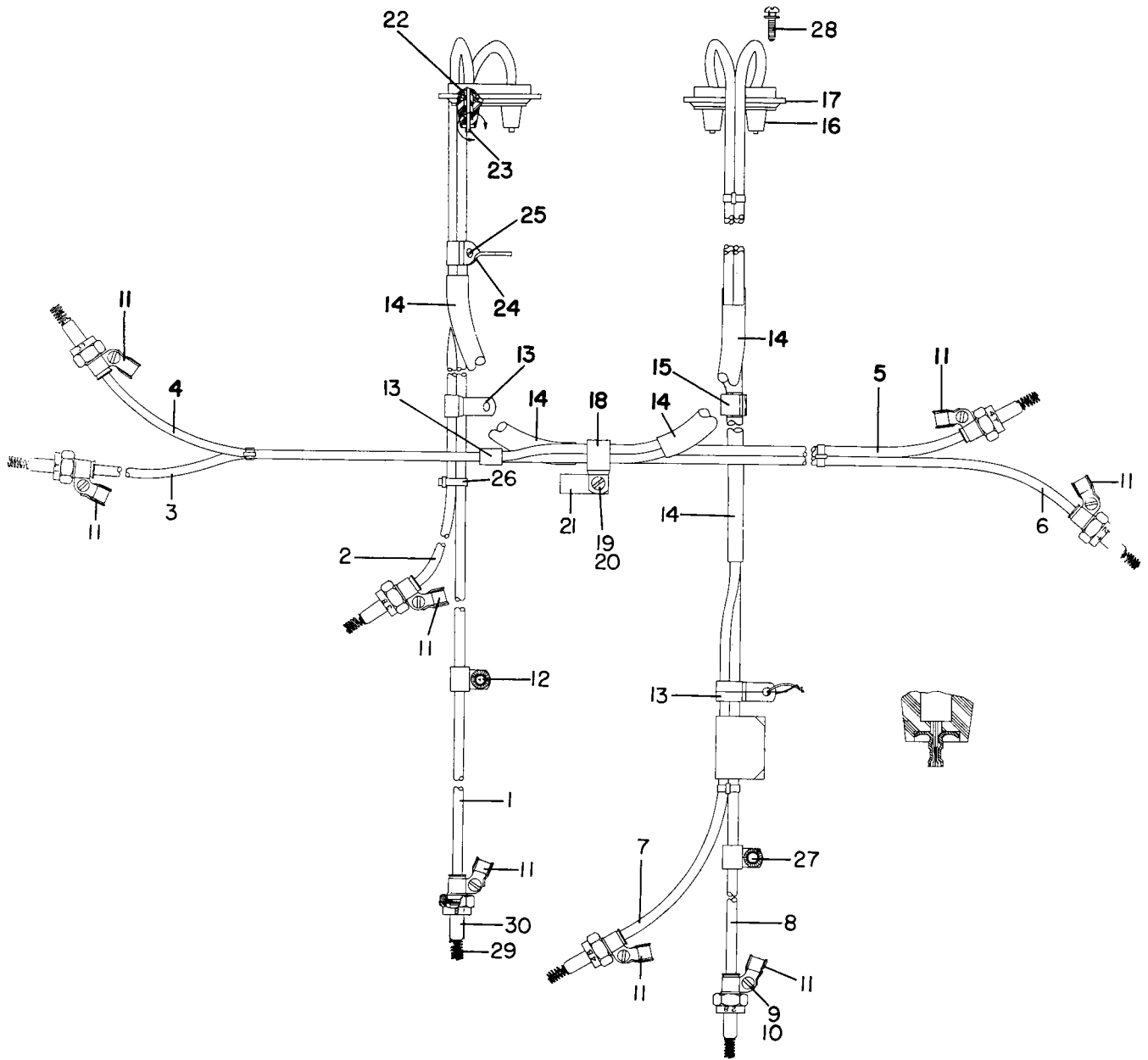


Figure 4-5. Harness Assembly, Scintilla -200 Series Magneto

HARNESS ASSEMBLY, IGNITION, SLICK

| REF. | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY | | | | | | | | | | | | | | | | | | | | | SECTION | | | | | |
|------|-------------|---|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|--------|-----|-----|---------|-----|-----|-----|-----|-----|-----|-----|-----|---------|-----|-----|-----|-----|--|
| | | | O-320 SERIES | | | | | | | | | 10-320 | | | L10-320 | | | 4 | | | | | | | | | | | |
| | | | A2A | A2B | A2C | A3A | A3B | A3C | B2A | B2B | B3A | B3B | B3C | D2A | D2B | D2C | E2A | E2B | E2C | E2D | B7A | B7C | C7A | D7A | E7A | B7A | C7A | 4-6 | |
| | 77743 | HARNESS ASSY., Ignition, right, Slick magneto | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | |
| | 77745 | HARNESS ASSY., Ignition, left, Slick magneto | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | |
| 1 | M-1735-22 | LEAD ASSY., Cyl. no. B-3 | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | |
| 1 | M-1735-32 | LEAD ASSY., Cyl. no. T-3 | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | |
| 2 | M-1735-29 | LEAD ASSY., Cyl. no. B-1 | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | |
| 2 | M-1735-38 | LEAD ASSY., Cyl. no. T-1 | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | |
| 3 | M-1735-29 | LEAD ASSY., Cyl. no. T-4 | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | |
| 3 | M-1735-23 | LEAD ASSY., Cyl. no. B-4 | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | |
| 4 | M-1735-36 | LEAD ASSY., Cyl. no. T-2 | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | |
| 4 | M-1735-30 | LEAD ASSY., Cyl. no. B-2 | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | |
| 5 | M-1671 | FERRULE | | | | | | | | | | | | | | | | | 4 | | | | | | | | | | |
| 6 | M-1677 | SLEEVE | | | | | | | | | | | | | | | | | 4 | | | | | | | | | | |
| 7 | M-1455 | SPRING | | | | | | | | | | | | | | | | | 4 | | | | | | | | | | |
| 8 | M-1498 | ELECTRODE SCREW | | | | | | | | | | | | | | | | | 4 | | | | | | | | | | |
| 9 | M-1458 | FERRULE | | | | | | | | | | | | | | | | | 4 | | | | | | | | | | |
| 10 | M-1673 | NUT | | | | | | | | | | | | | | | | | 4 | | | | | | | | | | |
| 11 | M-1738 | SLEEVE | | | | | | | | | | | | | | | | | 4 | | | | | | | | | | |
| | 76734 | ZIP STRAP | | | | | | | | | | | | | | | | | 8 | | | | | | | | | | |

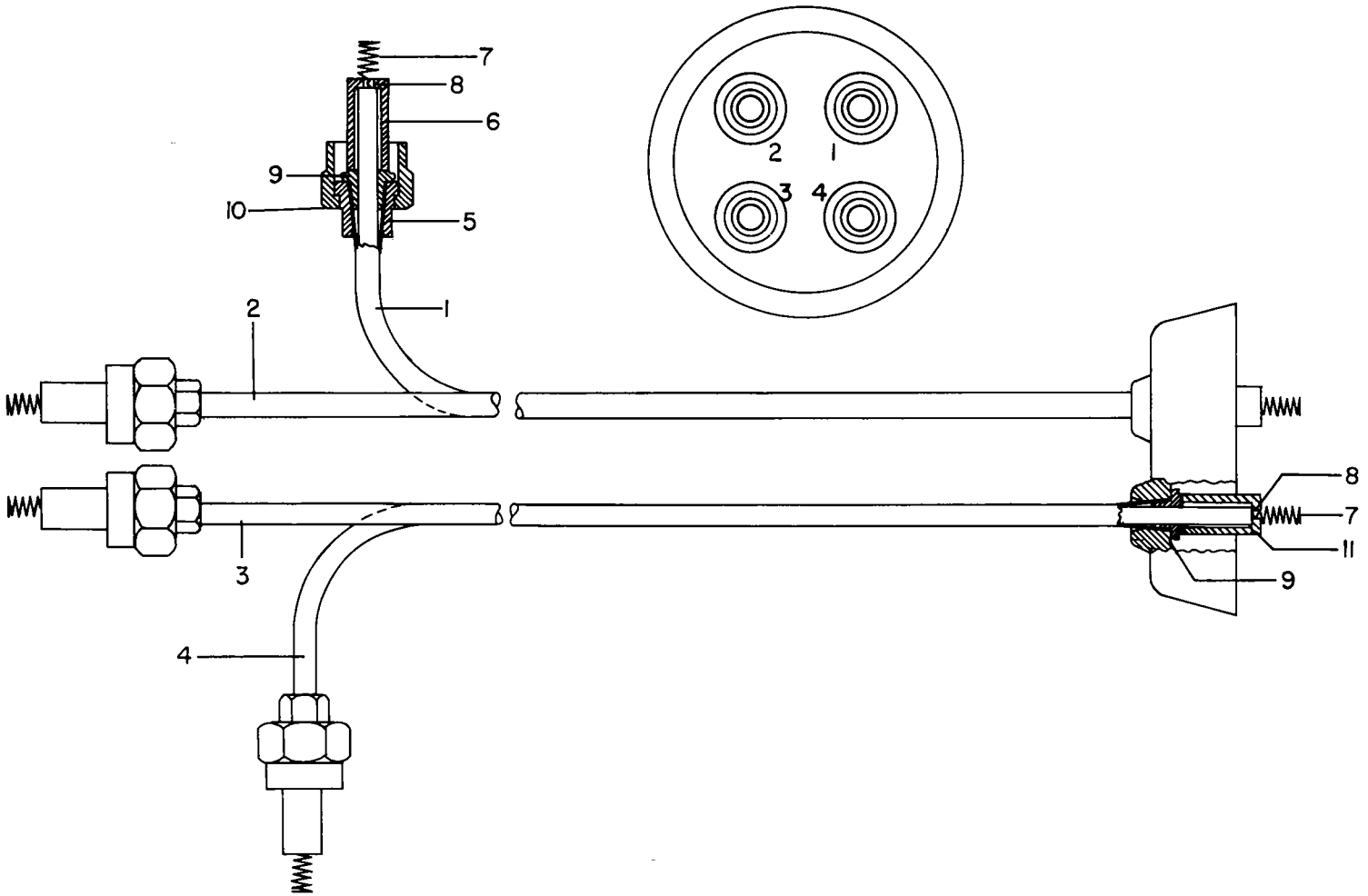


Figure 4-6. Harness Assembly, Ignition, Slick

SPARK PLUG

| REF. | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------|--|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|-----|-----|-----|-----|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | O-320 SERIES | | | | | | | | | | 10-320 | | | | | L10-320 | | | | | | | | | | | |
| | | | A2A | A2B | A2C | A3A | A3B | A3C | B2A | B2B | B3A | B3B | B3C | D1A | D2A | D2B | D2C | E1A | E2A | E2B | E2C | E2D | B1A | B1C | C1A | D1A | E2A | B1A | C1A |
| 1 | 1182-L3 | SPARK PLUG, Short reach, unshielded, AC A-88 | 8 | 8 | | | | | 8 | 8 | | | | | | | | | | | | | | | | | | | |
| 1 | 1182-V1 | SPARK PLUG, Short reach, unshielded, Champion M41N | 8 | 8 | | | | | 8 | 8 | | | | | | | | | | | | | | | | | | | |
| 2 | 1182-B3 | SPARK PLUG, Short reach, shielded, Champion REM-40E | | | | | | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | | | 8 | 8 | 8 | | | | 8 |
| 2 | 1182-E3 | SPARK PLUG, Short reach, shielded, AC S-88 | | | | | | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | | | 8 | 8 | 8 | | | | 8 |
| 2 | 1182-F3 | SPARK PLUG, Short reach, shielded, AC SR-88 | | | | | | | | | | | | | | | | 8 | | | | | | | | | | | |
| 2 | 1182-P2 | SPARK PLUG, Short reach, shielded, AC SR83P | | | | | | | | | | | | | 8 | | | | 8 | | | | | | | | | | |
| 2 | 1182-F5 | SPARK PLUG, Short reach, shielded, Autolite PH26 | | | | | | | | | | | | | 8 | | | | 8 | | | | | | | | | | |
| 2 | 1182-N3 | SPARK PLUG, Short reach, shielded, Champion REM38P | | | | | | | | | | | | | 8 | | | | 8 | | | | | | | | | | |
| 2 | 1182-X2 | SPARK PLUG, Short reach, shielded, Champion EM42E | 8 | 8 | 8 | 8 | 8 | 8 | | | | | | | | | | 8 | 8 | 8 | 8 | 8 | | | | | | | 8 |
| 2 | 1182-T4 | SPARK PLUG, Short reach, shielded, Autolite SH-20A | 8 | 8 | 8 | 8 | 8 | 8 | | | | | | | | | | 8 | 8 | 8 | 8 | 8 | | | | | | | 8 |
| 2 | 1182-U4 | SPARK PLUG, Short reach, shielded, Autolite SH-15 | 8 | 8 | 8 | 8 | 8 | 8 | | | | | | | | | | 8 | 8 | 8 | 8 | 8 | | | | | | | 8 |
| 2 | 1182-J5 | SPARK PLUG, Short reach, shielded, Autolite, SH-15, Cessna crafted | | | | | | | | | | | | | | | | | | | | 8 | | | | | | | |
| 2 | 1182-N4 | SPARK PLUG, Long reach, shielded, Champion REB-37E | | | | | | | | | | | | | | | | | | | | | | | | 8 | | | 8 |
| 2 | 1182-M4 | SPARK PLUG, Long reach, shielded, AC 171 | | | | | | | | | | | | | | | | | | | | | | | | 8 | | | 8 |
| 3 | STD-295 | GASKET, Spark plug | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| NOTE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| See latest Service Instruction No. 1042. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAUTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Do not use long reach plugs in any cylinder unless identified by yellow paint on the fins above the spark plug hole. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

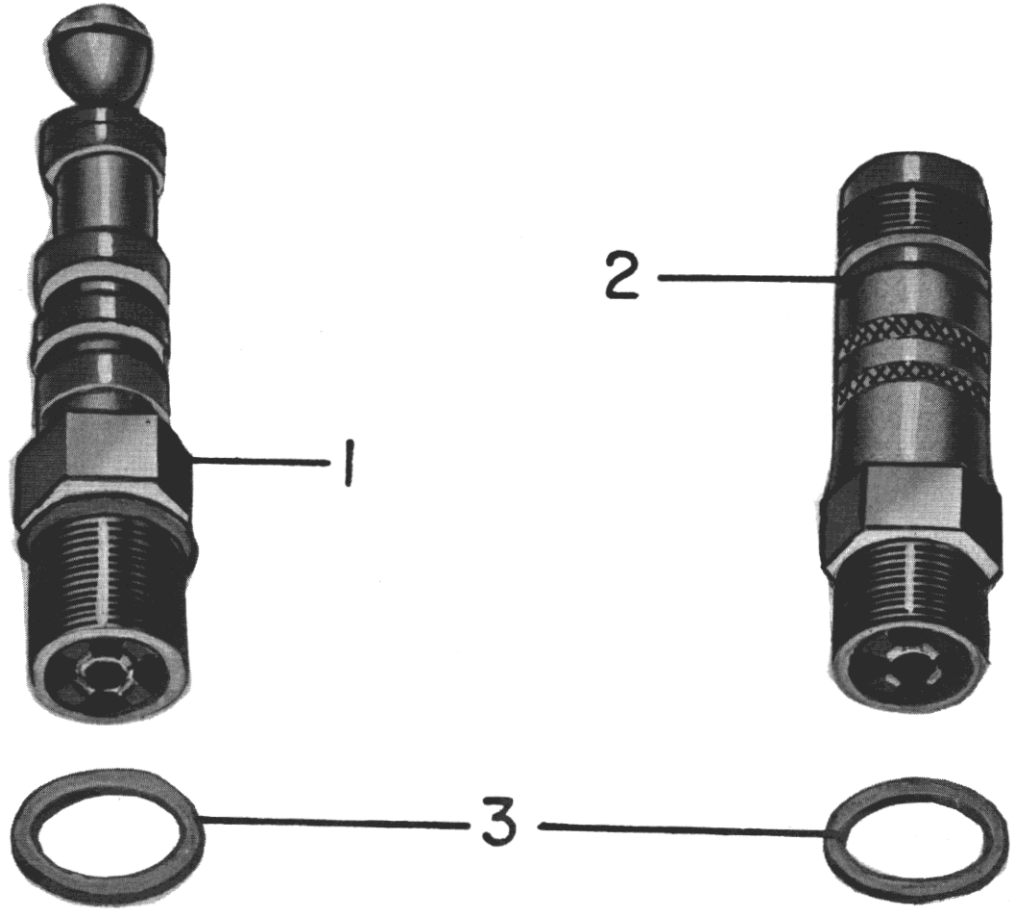


Figure 4-7. Spark Plugs

LYCOMING PARTS CATALOG
O-320, IO-320 AND LIO-320 SERIES
SECTION 5
ELECTRICAL SYSTEM

GENERATOR/ALTERNATOR BRACKET - STD. CYLINDER FLANGE ENGINES

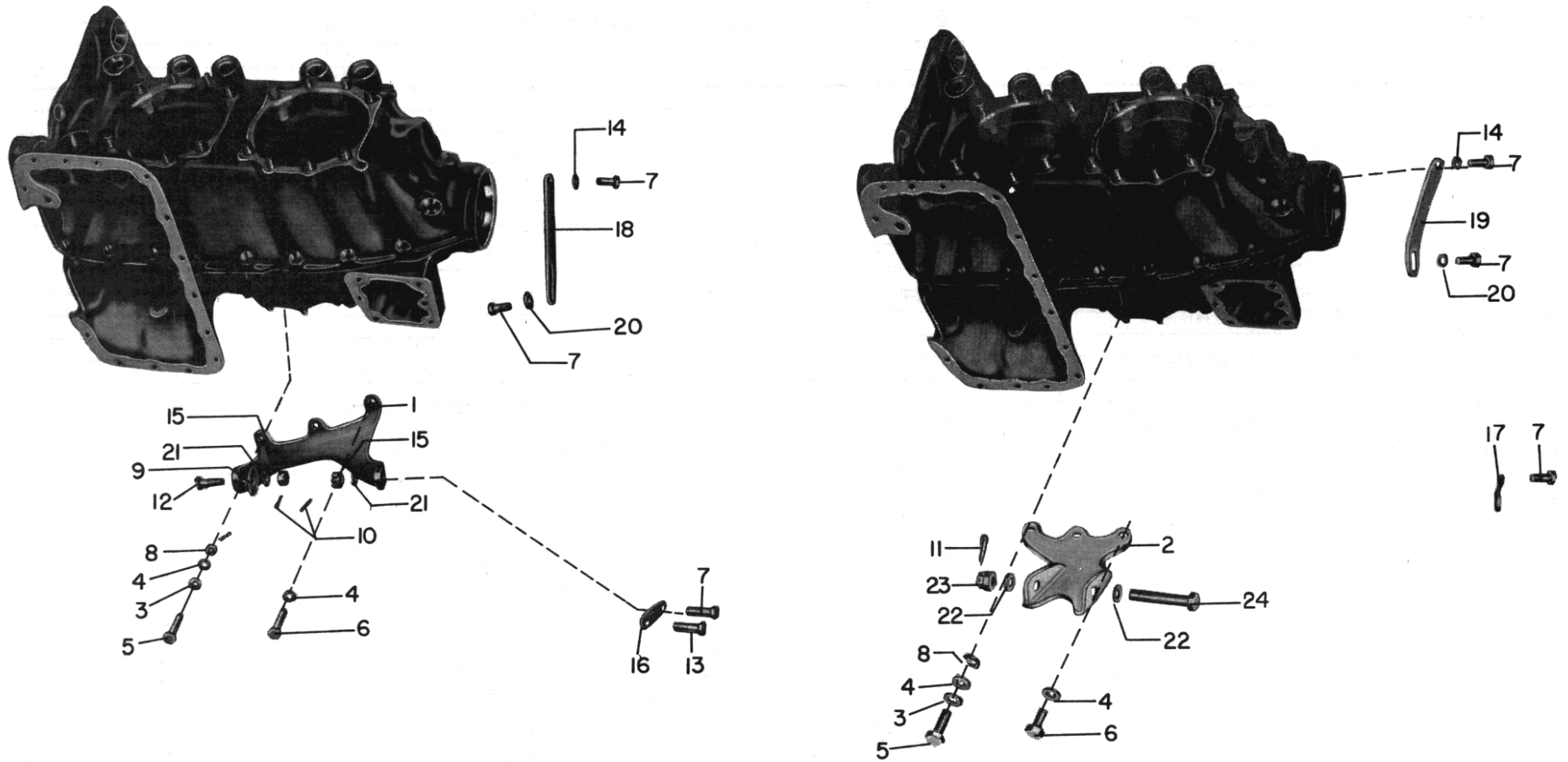
SECTION 5

PAGE 5-1

| REF. | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|-------------|--|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|-----|-----|---------|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|--|
| | | | O-320 SERIES | | | | | | | | | | | | | IO-320 | | | LIO-320 | | | | | | | | | | | | | | | | | | | |
| | | | A2A | A2B | A2C | A3A | A3B | A3C | B2A | B2B | B3A | B3B | B3C | D2A | D2B | D2C | E2A | E2B | E2C | E2D | BTA | BTC | CTA | ETA | BTB | CTB | | | | | | | | | | | | |
| 1 | 69113 | BRACKET, Generator, for generator 68764 | 1 | 1 | | | 1 | 1 | | 1 | 1 | | | 1 | 1 | | | 1 | | | | | | | | | | | | | | | | | | | | |
| 1 | 69452 | BRACKET, Generator, for generators 68765, 68767 or 71744 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | |
| 1 | 68870 | BRACKET, Generator, for generator 68871 | | 1 | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 76273 | BRACKET, Alternator | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | |
| 3 | STD-8 | WASHER, 1/4 plain | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | |
| 4 | STD-160 | WASHER, 1/4 lock | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | | | | | | | | | | | | | | | | | |
| 5 | STD-2084 | BOLT, 1/4-20 x 1-3/4 in. long | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | |
| 6 | STD-1215 | BOLT, 1/4-20 x 1-1/4 in. long | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | |
| 7 | STD-1817 | BOLT, 5/16-18 x 3/4 in. long | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | | | | | | | | | | | | | | | | | |
| 8 | STD-1411 | NUT, 1/4-20 plain | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | |
| 9 | 60733* | SHIM, 1.13 OD x .34 ID | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | | |
| 10 | STD-68** | PIN, Cotter, .06 dia. x 1/2 in. long | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | |
| 11 | STD-713+ | PIN, Cotter, .09 dia. x 3/4 in. long | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | |
| 12 | STD-1834** | BOLT, 5/16-18 x 1.06 long | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | |
| 12 | STD-1836Ç | BOLT, 5/16-18 x 1.91 long | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | |
| 13 | STD-1835** | BOLT, 5/16-18 x 1.36 long | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | |
| 13 | STD-1837Ç | BOLT, 5/16-18 x 2.28 long | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | |
| 14 | STD-35 | WASHER, 5/16 plain | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | |
| 15 | STD-1420 | NUT, 5/16-18 slotted | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | |
| 16 | 69951 | STRUT, Generator support | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | |
| 17 | 74323 | STRUT, Alternator support | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | |
| 18 | 76028 | LINK, Generator adjusting | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | |
| 19 | 74325 | LINK, Alternator adjusting | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | |
| 20 | STD-1727 | WASHER, Plain, 3/4 OD x .34 ID | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | |
| 21 | STD-35** | WASHER, 5/16 plain | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | | |
| 22 | STD-33+ | WASHER, 3/8 plain | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | AR | |
| 23 | STD-872+ | NUT, 3/8-24 slotted | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | |
| 24 | AN6-32+ | BOLT, 3/8-24 x 3.33 in. long | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | |

* - For generator brackets 69452 and 68870.
 ** - Generator brackets.
 + - Alternator bracket.
 Ç - For generator brackets 69113 and 69452.

Figure 5-1. Generator/Alternator Bracket - Std. Cylinder Flange Engines



Generator / Alternator Brackets - Standard Cylinder Flange Engines

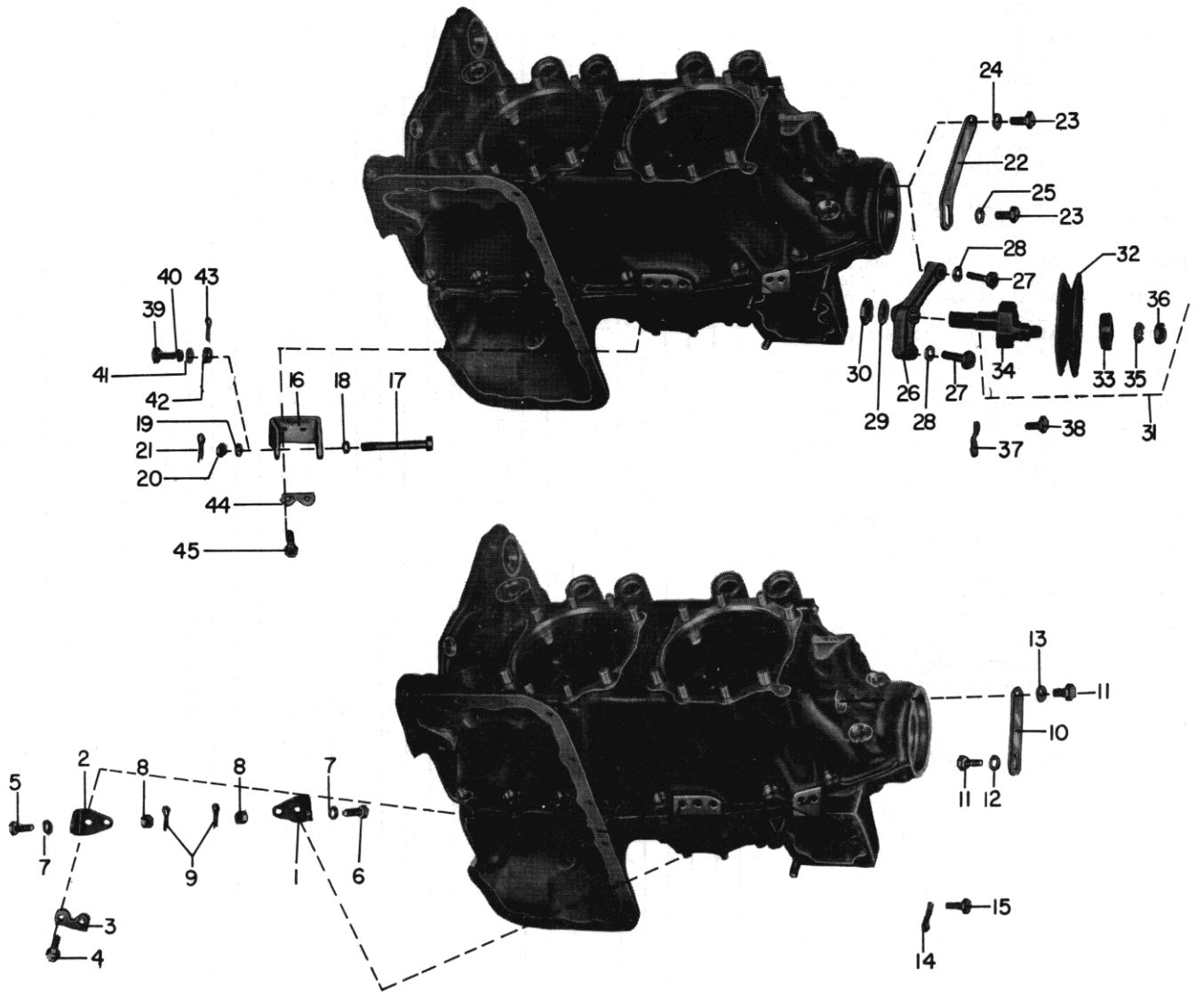
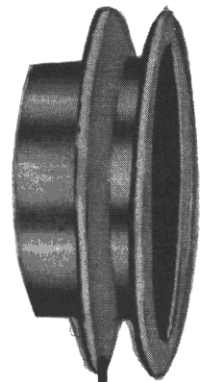
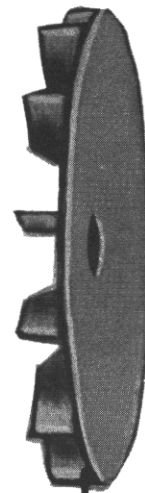
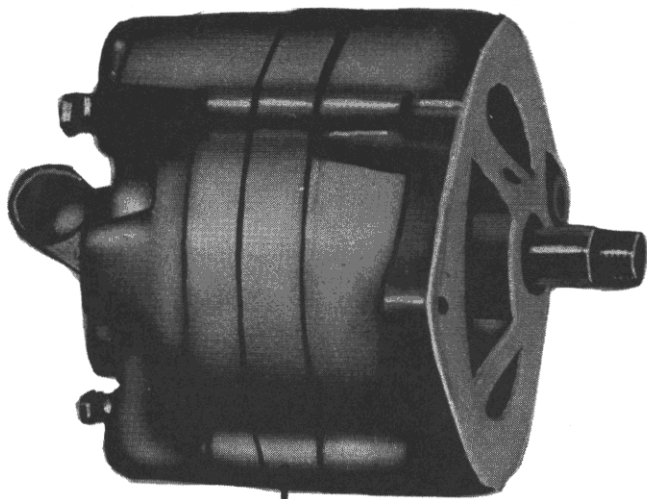
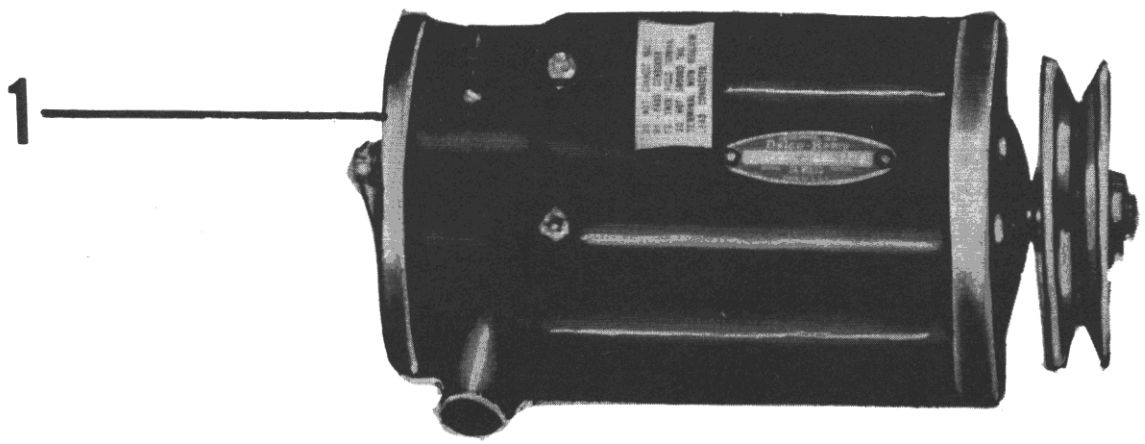


Figure 5-2. Generator/Alternator Bracket - Wide Cylinder Flange Engines



2

4

3

Figure 5-3. Generator and Alternator

GENERATOR/ALTERNATOR DRIVE BELT, STARTER AND SWITCH
QUANTITY PER ASSEMBLY

SECTION
5
PAGE
5-4

| REF. | PART NUMBER | DESCRIPTION | O-320 SERIES | | | | | | | | | | | | | | | | | | | | | | | | 10-320 | | | L10-320 | |
|------|-------------|--|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|---|--|---------|--|
| | | | A2A | A2B | A2C | A3A | A3B | A3C | B2A | B2B | B3A | B3B | B3C | D2A | D2B | E2A | E2B | E2C | E2D | B7A | B7C | C7A | C7B | E7A | E7B | B7A | C7A | | | | |
| | 60886 | BELT, Generator drive - 1.91:1 (less than 24V-40A) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | |
| | 71579 | BELT, Generator drive - 1.91:1 (24V-40A and up) | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | |
| | 76026 | BELT, Alternator drive (without idler pulley) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 74519 | BELT, Alternator drive (with idler pulley) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 76210 | STARTER, 12V, 10-12 pitch, Prestolite MZ-4204 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 76211 | STARTER, 12V, 12-14 pitch, Prestolite MZ-4206 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| 1 | 76212 | STARTER, 24V, 12-14 pitch, Prestolite MHB-4001 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | LW-10556 | STARTER, 12V, 12-14 pitch, 3.38:1 internal reduction, reverse rotation, Prestolite MZ-4216 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | STD-35 | WASHER, 5/16 pldin | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | | |
| 3 | STD-475 | WASHER, 5/16 lock | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | | |
| 4 | STD-1202* | BOLT, 5/16-18 x 1.09 long | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | STD-1323** | BOLT, 5/16-18 x 1.16 long | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | |
| 5 | STD-1410 | NUT, 5/16-18, plain | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | | |
| | 76773 | SWITCH, Magnetic, 12 volt | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | |
| | 76775 | SWITCH, Magnetic, 24 volt | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* - Use with starter 76210

** - Use with starter 76211, 76212 and LW-10556.

See latest edition of Service Instruction No. 1154 for model application.

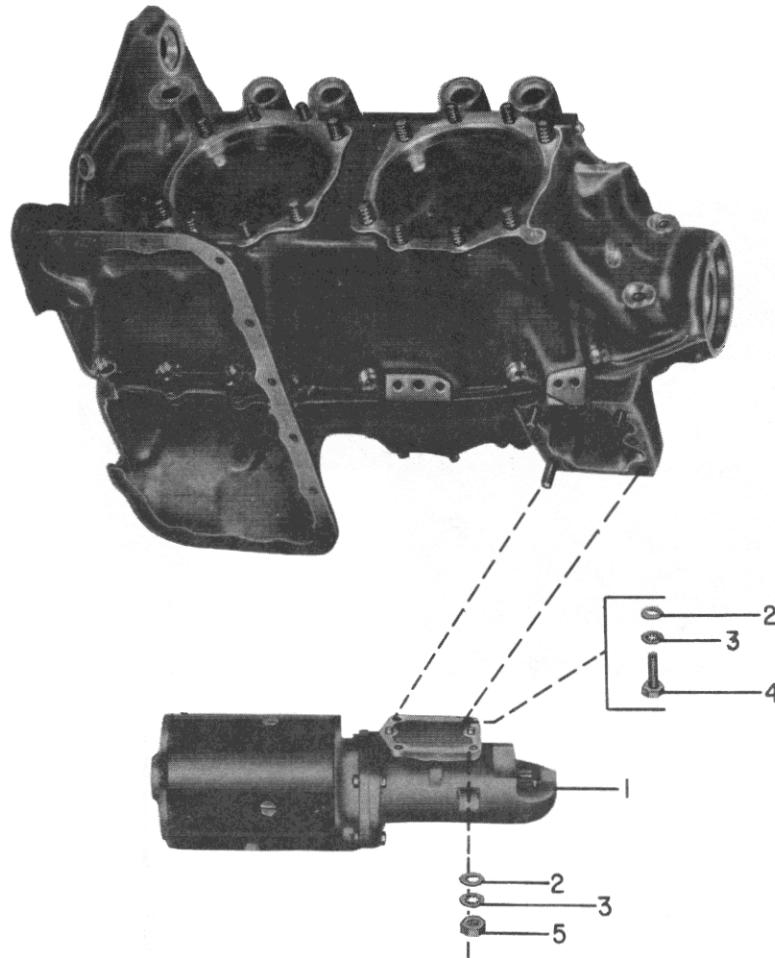


Figure 5-4. Generator/Alternator Drive Belt, Starter and Switch

LYCOMING PARTS CATALOG
O-320, IO-320 AND LIO-320 SERIES
SECTION 6
FUEL INDUCTION SYSTEM

CARBURETOR

| REF. | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------|---|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|-----|-----|-----|---------|-----|-----|-----|-----|-----|-----|-----|
| | | | O-320 SERIES | | | | | | | | | | | 10-320 | | | | L10-320 | | | | | | | |
| | | | A2A | A2B | A3A | A3B | A3C | B2A | B2B | B3A | B3B | B3C | D2A | D2B | D2C | E2A | E2B | E2C | E2D | BTA | BTC | CTA | DTA | E2A | BTA |
| 1 | 66224 | GASKET, Carburetor | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | |
| 2 | 69250 | CARBURETOR, Model MA-4SPA, Marvel-Schebler 10-3678-12 (stand- ard sump) - STD | 1 | 1 | | 1 | | | 1 | | 1 | | | | | | | | | | | | | | |
| 2 | 69250 | CARBURETOR, Model MA-4SPA, Marvel-Schebler 10-3678-12 (stand- ard sump) - WCF | | | | 1 | | | | | | | 1 | | | | | | | | | | | | |
| 2 | 72394 | CARBURETOR, Model MA-4SPA, Marvel-Schebler 10-3678-32 (straight riser sump) - STD | 1 | 1 | | 1 | 1 | | 1 | | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | | | | | | | |
| 2 | 72394 | CARBURETOR, Model MA-4SPA, Marvel-Schebler 10-3678-32 (straight riser sump) - WCF | 1 | | | 1 | | | 1 | | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | | | | | | | |
| 2 | 77279 | CARBURETOR, Model MA-4SPA, Marvel-Schebler 10-4910 (straight riser sump, 6%-7% leaner setting) - WCF | | | | | | | | 1 | | | 1 | | | | 1 | | | | | | | | |
| 2 | 78728* | CARBURETOR, Model MA-4SPA, Marvel-Schebler 10-5009 - WCF | | | | 1 | | | | 1 | | | | | 1 | 1 | 1 | | 1 | 1 | | | | | |
| 2 | LW-11222 | CARBURETOR, Model MA-4SPA, Marvel Schebler 10-5062 (30° throttle arm position) | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | STD-35 | WASHER, 5/16 plain | | | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 4 | 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 | 4 | 4 |
| 5 | STD-1763 | LOCKNUT, 5/16 palnut | | | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| * - This carburetor engineered to eliminate roughness at cruise and to provide smooth acceleration in hot weather. | | | | | | | | | | | | | | | | | | | | | | | | | |

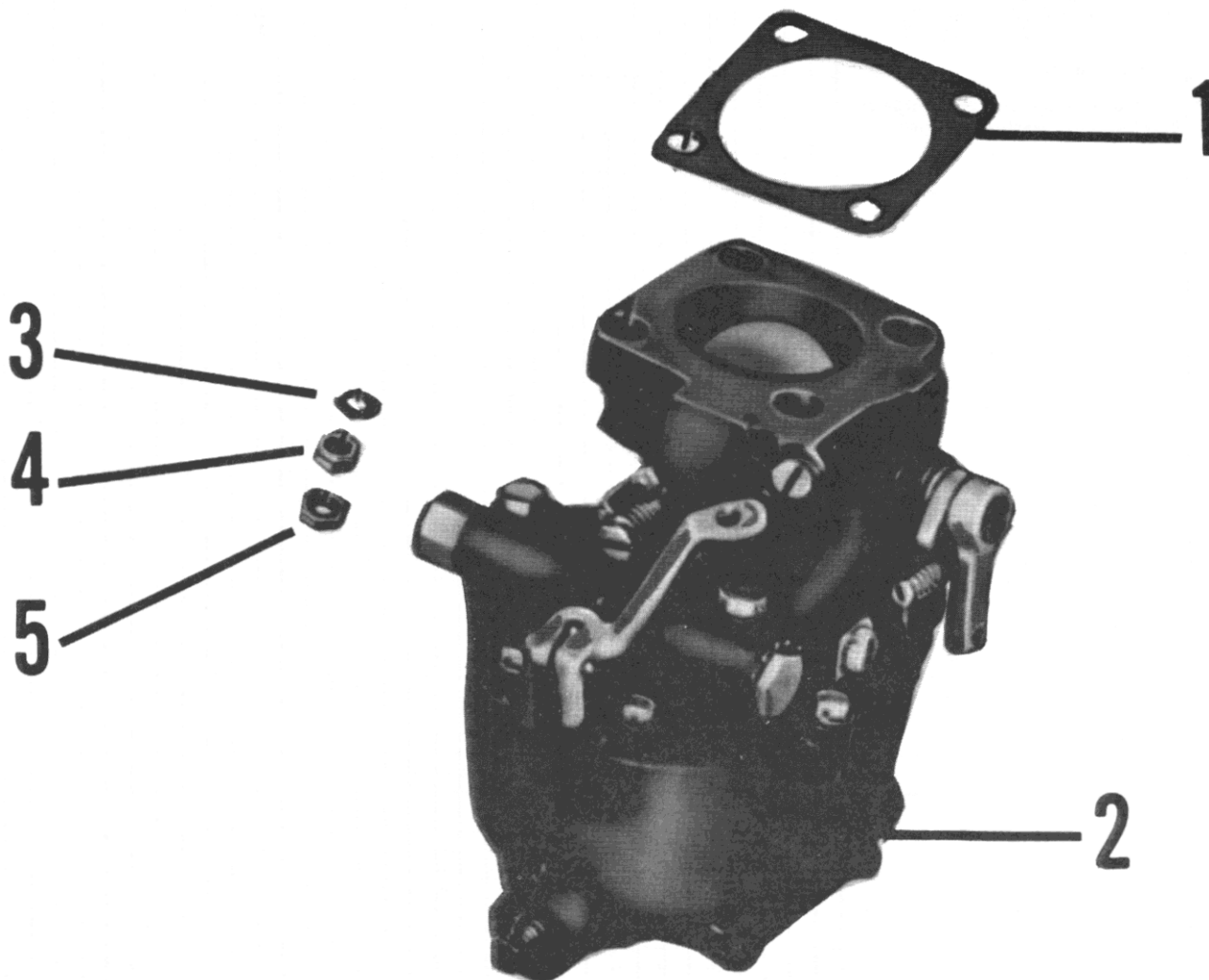
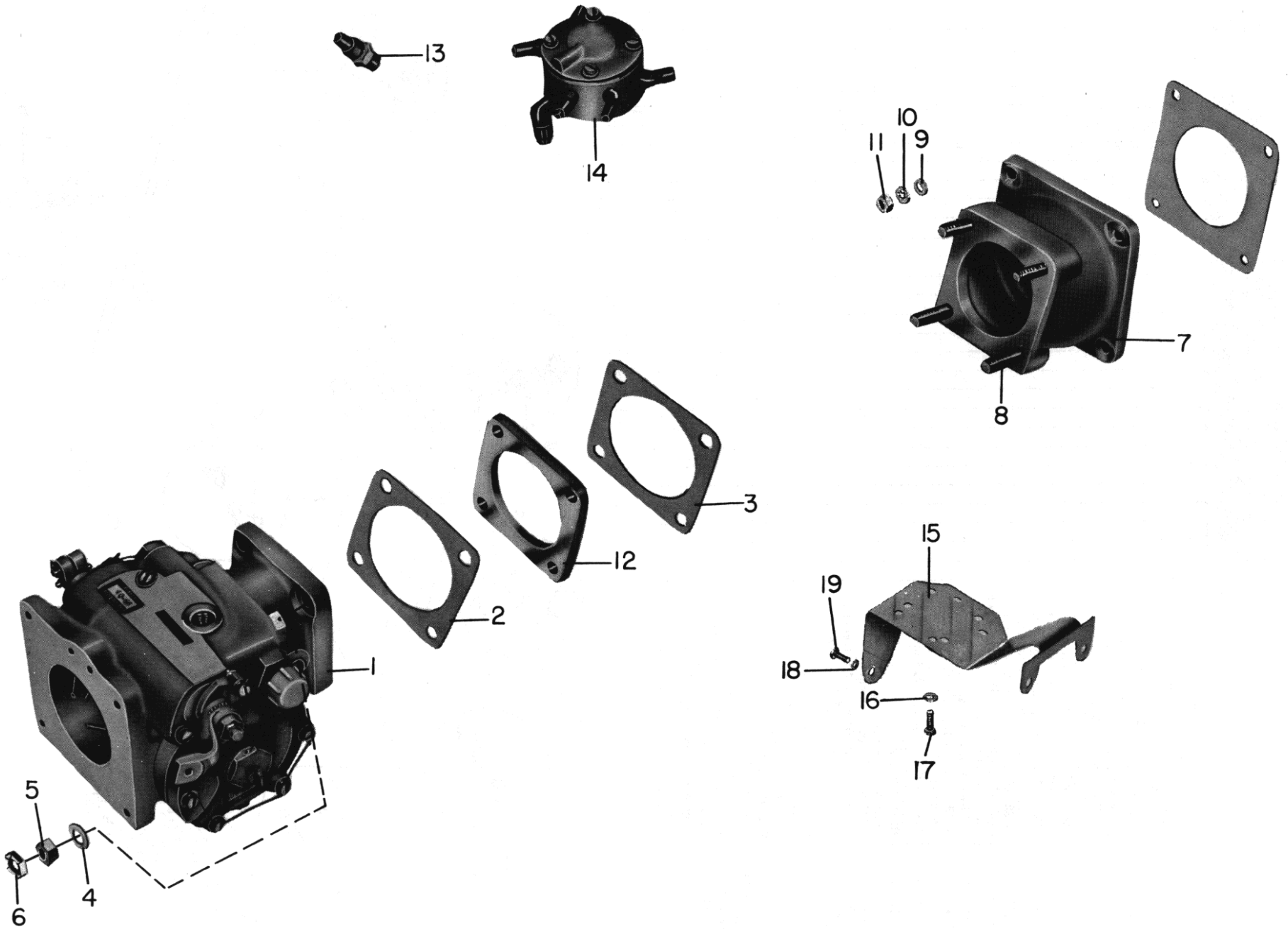


Figure 6-2. Carburetor

Figure 6-3. Fuel Injector



FUEL INJECTION TUBES

| REF. | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|-------------|--|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|-----|---------|-----|-----|-----|-----|-----|-----|-----|---|---|---|--|--|--|--|--|--|--|--|---|---|---|---|---|---|
| | | | O-320 SERIES | | | | | | | | | | | | 10-320 | | L10-320 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | A2A | A2B | A2C | A3A | A3B | A3C | B2A | B2B | B3A | B3B | B3C | D2A | D2B | D2C | E2A | E2B | E2C | E2D | BTA | BTC | CTA | CTB | | | | | | | | | | | | | | | | | |
| 1 | 73963 | TUBE ASSY., Fuel manifold to nozzle, cyls. no. 1 and 3 | | | | | | | | | | | | | | | | | | | | | 2 | 2 | 2 | 2 | 2 | | | | | | | | | 2 | 2 | | | | |
| 2 | 73796 | TUBE ASSY., Fuel manifold to nozzle, cyls. no. 2 and 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2 | |
| 3 | MS21919F12 | CLIP, 3/4 ID for 3/16 in. dia. screw | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 4 | | |
| 4 | 73650 | CLIP, 1/4 ID for 1/4 dia. screw | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 4 | | |
| 5 | STD-860 | SCREW, No. 10-32 x 5/8 in. long | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 4 | | |
| 6 | STD-425 | WASHER, No. 10 plain | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 4 | | |
| 7 | STD-670 | NUT, No. 10-32 self-locking | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 4 | | |
| 8 | 74732 | HOSE ASSY., Fuel pump to injector | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | |
| 8 | 74586 | HOSE ASSY., Fuel pump to injector | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | |
| 8 | 75251 | HOSE ASSY., Fuel pump to injector | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| 8 | 74543 | HOSE ASSY., Fuel pump to injector | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| 8 | 76517 | HOSE ASSY., Fuel pump to injector | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| 9 | 75252 | ELBOW, 1/4 tubing, 9/16-18 adjustable 90° (fuel pump outlet) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | |
| | MS29512-6 | SEAL, Oil, 5/64 dia. x 15/32 in. ID | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | |
| 9 | AN822-4-4 | ELBOW, 1/4 tubing, 1/4 NPT, 90° (fuel pump outlet) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | |
| | AN919-6 | REDUCER, 1/4 tubing - 3/8 tubing, (fuel pump outlet) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| | MS29512-6 | SEAL, Oil, 5/64 dia. x 15/32 in. ID | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| 10 | 72815 | BRACKET, Support clamp | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| 11 | 73152 | BRACKET, Support clamp | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 |
| 12 | 73971 | CLAMP, 1/2 in. ID for 1/4 dia. screw | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| | STD-860 | SCREW, No. 10-32 x 5/8 in. long | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| | STD-425 | WASHER, No. 10 plain | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| | STD-670 | NUT, No. 10-32 self-locking | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| | STD-460 | SCREW, 1/4-20 x 3/4 in. long | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| | STD-8 | WASHER, 1/4 plain | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| | STD-160 | WASHER, 1/4 lock | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| | STD-1411 | NUT, 1/4-20 plain | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| 13 | 74532 | HOSE ASSY., Injector to manifold | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| 13 | 73970 | HOSE ASSY., Injector to manifold | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| 13 | 73974 | HOSE ASSY., Injector to manifold | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| 14 | 73136 | BRACKET, Extension (prevents interference of injector to manifold hose with sump and crankcase, attached to 73971 clamp) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |

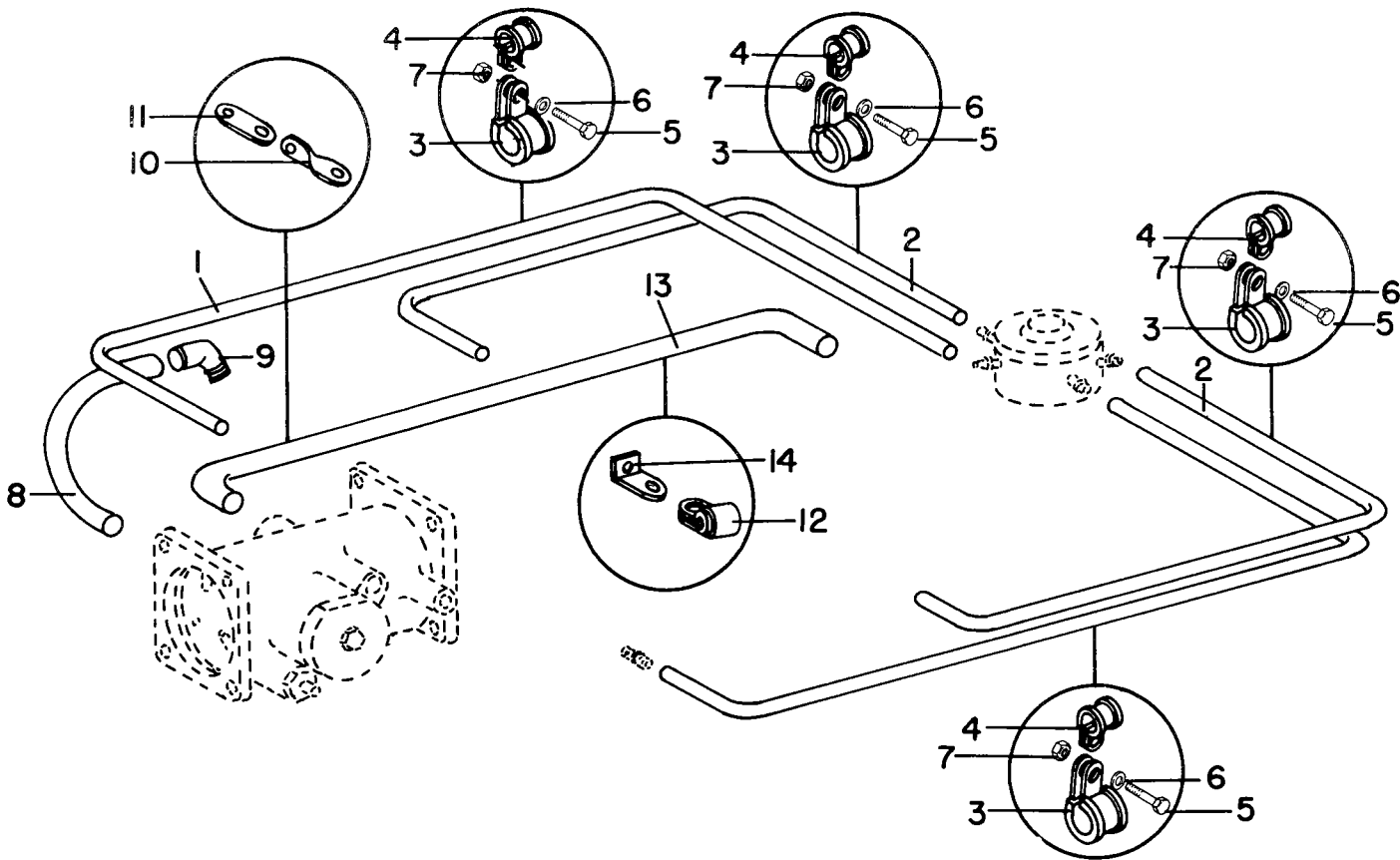


Figure 6-4. Fuel Injection Tubes

PRIMING SYSTEM

| REF. | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|-------------|---|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|-----|-----|-----|-----|-----|---------|-----|-----|-----|-----|-----|-----|-----|---|
| | | | O-320 SERIES | | | | | | | | | | | | 10-320 | | | | | | L10-320 | | | | | | | | |
| | | | A2A | A2B | A2C | A3A | A3B | A3C | B2A | B2B | B2C | B3A | B3B | B3C | D2A | D2B | D2C | E2A | E2B | E2C | E2D | B1A | B1C | C1A | D1A | E1A | B1A | C1A | |
| 1 | 61581-9 | TUBE ASSY., Primer, 16-11/16 in. long, cyls. no. 1 and 2 | 2 | 2 | 2 | 2 | 2 | | | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | 2 | 2 |
| 2 | 61581-2 | TUBE ASSY., Primer, 11-11/16 in. long, cyls. no. 3 and 4 | 2 | 2 | 2 | 2 | 2 | | | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | 2 | 2 |
| 3 | 61581-3 | TUBE ASSY., Primer, 10-5/16 in. long, intermediate - STD | 2 | 2 | 2 | 2 | 2 | | | | | 2 | 2 | 2 | | | | | | | | | | | | | 2 | 2 | |
| 3 | 61581-3 | TUBE ASSY., Primer, 10-5/16 in. long, intermediate - WCF | | | 1 | | | | | | | 1 | 1 | | 1 | | | | 1 | 1 | 1 | | | | | | | | |
| 4 | 62254 | CLIP, 3/16 ID, for 1/4 dia. screw | 4 | 4 | 4 | 4 | 4 | | | | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | | | | | | 4 | 4 | |
| 5 | 71909 | CLAMP, 1-1/2 ID with 1/4 in. dia. off-set | 4 | 4 | 4 | 4 | 4 | | | | | 4 | 4 | 4 | | | | | | | | | | | | | | | |
| 5 | 71910 | CLAMP, 1-3/4 ID with 1/4 in. dia. off-set | | | | | | | | | | | | | 4 | | | | 4 | 4 | 4 | | | | | | | | |
| 6 | STD-553 | SCREW, No. 6-32 x 1/2 in. long | 4 | 4 | 4 | 4 | 4 | | | | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | | | | | | 4 | 4 | |
| 7 | AN365-632C | NUT, No. 6-32, self-locking | 4 | 4 | 4 | 4 | 4 | | | | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | | | | | | 4 | 4 | |
| 8 | STD-853 | TEE, Union, 1/8 in. tube | 3 | 3 | 3 | 3 | 3 | | | | | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | | | | | | 3 | 3 | |
| 9 | 74225 | NIPPLE ASSY., Primer | 4 | 4 | 4 | 4 | 4 | | | | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | | | | | | 4 | 4 | |
| | STD-1102 | PLUG, 1/8-27 NPT, Allen (assembled in cylinder heads on engines not equipped with priming system) | | | | | | 4 | 4 | | | | | 4 | | | | | | | | | | | | | | | |

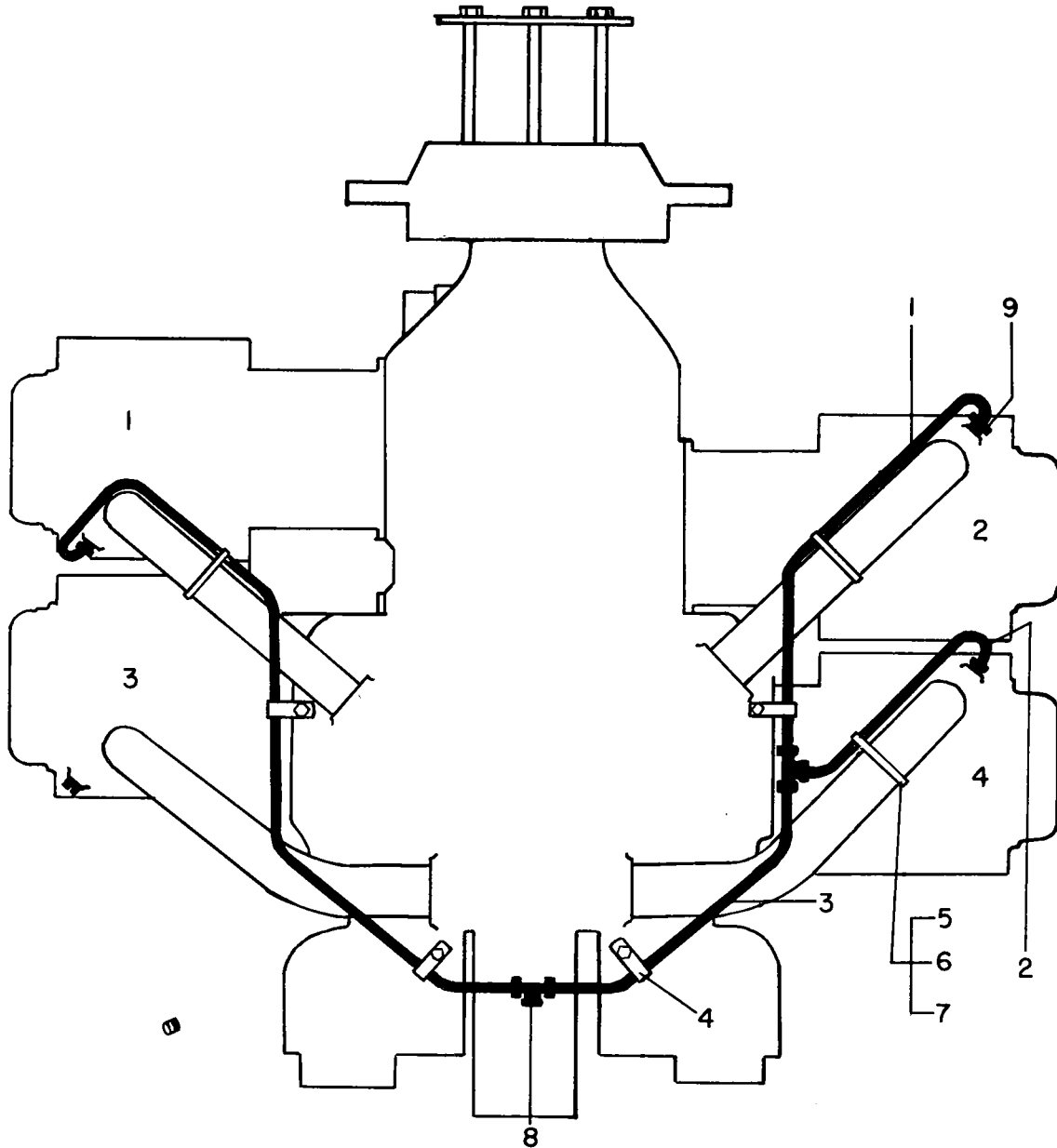


Figure 6-5. Priming System

LYCOMING PARTS CATALOG

O-320, IO-320 AND LIO-320 SERIES

SECTION 7

COOLING BAFFLES, EXHAUST, OIL GAGE
AND PROP GOVERNOR OIL LINE

INTERCYLINDER COOLING BAFFLES

SECTION
7
PAGE
7-1

| REF. | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY | | | | | | | | | | | | | | | | | | | | | | | |
|------|-------------|-------------------------------------|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|-----|-----|-----|---------|-----|-----|-----|-----|-----|-----|-----|
| | | | O-320 SERIES | | | | | | | | | | | | 10-320 | | | | L10-320 | | | | | | | |
| | | | A2A | A2B | A2C | A3A | A3B | A3C | B2A | B2B | B3A | B3B | B3C | D2A | D2B | D2C | E2A | E2B | E2C | E2D | B7A | B7C | D7A | E7A | B7A | C7A |
| 1 | 72150 | BAFFLE ASSY., Intercylinder - STD | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | |
| 1 | 72153 | BAFFLE ASSY., Intercylinder - STD | | | | | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | |
| 1 | 72569 | BAFFLE ASSY., Intercylinder - WCF | | 2 | | 2 | 2 | | 2 | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | |
| 2 | 71611 | RETAINER, Intercylinder baffle | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 3 | 71610 | HOOK, Intercylinder baffle retainer | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | |

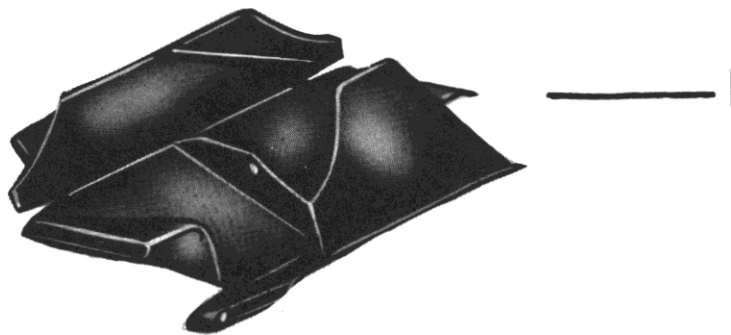
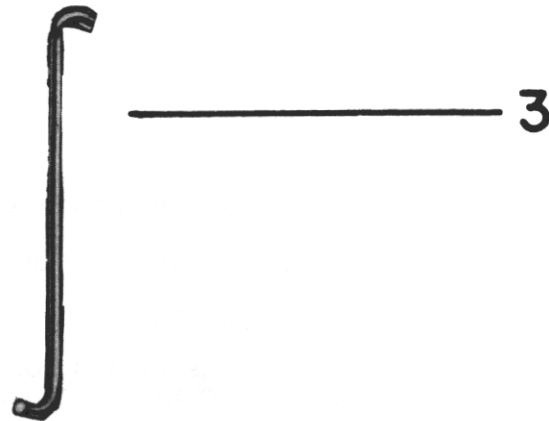
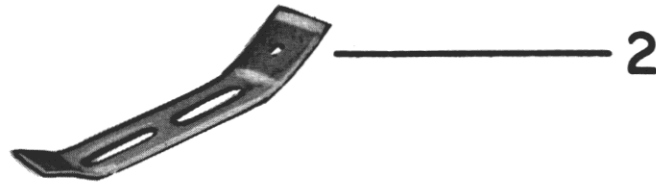


Figure 7-1. Intercylinder Cooling Baffles

PROP. GOVERNOR OIL LINE

SECTION 7
PAGE 7-4

| REF. | PART NUMBER | DESCRIPTION | QUANTITY PER ASSEMBLY | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|-------------|---|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|-----|-----|-----|-----|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | O-320 SERIES | | | | | | | | | | 10-320 | | | | | L10-320 | | | | | | | | | | | |
| | | | A2A | A2B | A2C | A3A | A3B | A3C | B2A | B2B | B3A | B3B | B3C | D1A | D2A | D2B | D2C | E1A | E2A | E2B | E2C | E2D | B1A | B1C | C1A | D1A | E2A | B1A | C1A |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 68532 | TUBE ASSY., Prop. governor oil line - STD | | | | 1 | 1 | 1 | | | | 1 | 1 | 1 | | | | 1 | | | | | | | | | | | |
| 1 | 71011 | TUBE ASSY., Prop. governor oil line, (colonial installation) - STD | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | |
| 1 | 71622 | TUBE ASSY., Prop. governor oil line - STD | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | STD-8 | WASHER, 1/4 plain - STD | 1 | 1 | | 1 | 1 | 1 | | | | 1 | 1 | 1 | 1 | | | 1 | | | | | | | | | | | |
| 2 | 68604 | CLIP, 5/16 ID, for 1/4 dia. screw - STD | 2 | 2 | | 2 | 2 | 2 | | | | 2 | 2 | 2 | 2 | | | 2 | | | | | | | | | | | |
| 2 | 71621 | CLIP, 3/8 ID, for 1/4 dia. screw - STD | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 75167* | TUBE ASSY., Prop. governor oil line - WCF | | | | 1 | 1 | | | | | 1 | | | | | | 1 | | 1 | | | | | 1 | 1 | 1 | 1 | 1 |
| 3 | 75166** | TUBE ASSY., Prop. governor oil line - WCF | | | | | | 1 | | | | | | 1 | | | | | | | | | | | | | | | |
| 3 | 75730+ | TUBE ASSY., Prop. governor oil line - WCF | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | STD-1930 | HOSE, 3/8 ID x 1.00 in. long - WCF | | | | 1 | 1 | | | | | 1 | 1 | | | | | 1 | | 1 | | | | 1 | 1 | 1 | 1 | 1 | |
| 5 | 75165 | CLIP, Oil line support - WCF | | | | 1 | 1 | | | | | 1 | 1 | | | | | 1 | | 1 | | | | 1 | 1 | 1 | 1 | 1 | |
| 6 | 71621 | CLIP, 3/8 ID for 1/4 dia. screw - WCF | | | | 1 | 1 | | | | | 1 | 1 | | | | | 1 | | 1 | | | | 1 | 1 | 1 | 1 | 1 | |
| 7 | STD-35 | WASHER, 5/16 plain - WCF | | | | | | 3 | | | | 3 | | | | | | 3 | | 3 | | | | 3 | 3 | 3 | 3 | 3 | |
| 8 | STD-475 | WASHER, 5/16 lock - WCF | | | | | | 1 | | | | 1 | | | | | | 1 | | 1 | | | | 1 | 1 | 1 | 1 | 1 | |
| 9 | STD-1838 | BOLT, 5/16-18 x .94 long - WCF | | | | | | 1 | | | | 1 | | | | | | 1 | | 1 | | | | 1 | 1 | 1 | 1 | 1 | |
| 10 | AN822-5-4Dç | ELBOW, 5/16 tube x 1/4 NPT, 90° - STD | 1 | 1 | | 1 | 1 | 1 | | | | 1 | 1 | 1 | 1 | | | 1 | | | | | | | | | | | |
| 10 | STD-700ç | ELBOW, 3/8 tube x 1/4 NPT, 90° - STD | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | STD-700ç | ELBOW, 3/8 tube x 1/4 NPT, 90° - WCF | | | | 1 | 1 | | | | | 1 | 1 | | | | | 1 | | 1 | | | | 1 | 1 | 1 | 1 | 1 | |
| | 74070# | ELBOW, 3/8 tube, 9/16-18 straight thd. 45° adjustable - WCF | | | | 1 | 1 | | | | | 1 | | | | | | 1 | | 1 | | | | 1 | 1 | 1 | 1 | 1 | |
| | MS29512-6 | "O" RING | | | | 1 | 1 | | | | | 1 | | | | | | 1 | | 1 | | | | 1 | 1 | 1 | 1 | 1 | |
| | 75739# | NIPPLE, 3/8 tube, 9/16-18 straight thread - WCF | | | | | | 1 | | | | | | 1 | | | | | | | | | | | | | | | |
| | MS29512-6 | "O" RING | | | | | | 1 | | | | | | 1 | | | | | | | | | | | | | | | |
| | | * - 45° elbow at governor adapter for generator or alternator installation. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | ** - 3/8 nipple at governor adapter for generator installation. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | + - 45° elbow at governor adapter for alternator installation. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | ç - Assembled in right crankcase, front. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | # - Assembled in prop. governor adapter. | | | | | | | | | | | | | | | | | | | | | | | | | | | |

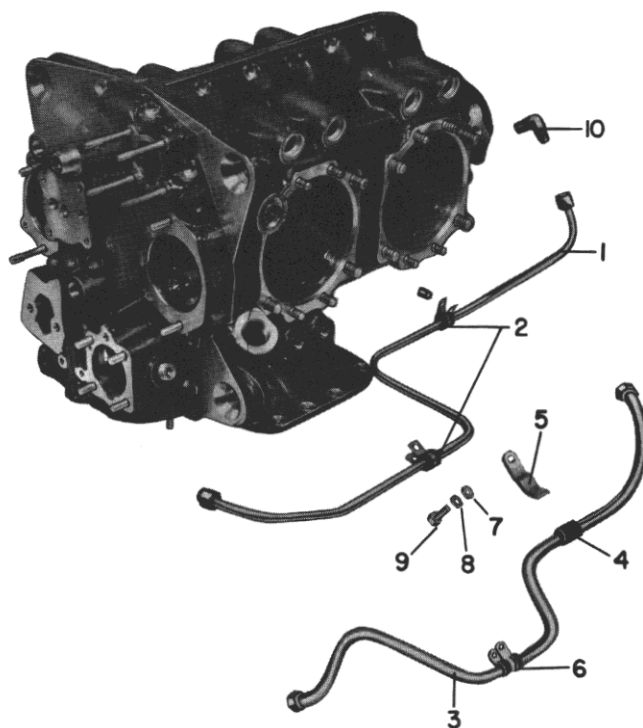


Figure 7-4. Propeller Governor Oil Line

LYCOMING PARTS CATALOG
O-320, IO-320 AND LIO-320 SERIES
SECTION 8
SERVICE REPLACEMENT SET SECTION

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

O-320

SERVICE REPLACEMENT SET SECTION

Part Number

Part Name

69371-1

SEAL AND GASKET SET

ALL MODELS

Consisting of:

| | | |
|----|---------------|---|
| 2 | 72053 | Gasket - Governor Drive |
| 2 | 8313 | Gasket - Vacuum Pump |
| 16 | 60053 | Seal - Shroud Tube |
| 1 | 60096 | Gasket - Fuel Pump |
| 4 | 71973 | Gasket - Intake Flange |
| 1 | 60592 | Gasket - Carburetor |
| 1 | 76940 - 77377 | Seal - Crankshaft Oil |
| 1 | 60820 | Gasket - Oil Suction Tube Flange |
| 1 | 74068 | Ring - Oil Level Gage Seal |
| 1 | 61165 | Seal - Tachometer Shaft |
| 1 | 61173 | Gasket - Oil Pressure Housing |
| 1 | 61183 | Gasket - Accessory Adapter |
| 4 | 75906 | Gasket - Rocker Box Cover |
| 1 | 73818 | Gasket - Accessory Housing |
| 1 | 68972 | Gasket - Oil Sump |
| 1 | 61531 | Gasket - Hydraulic Valve |
| 4 | 62224 | Gasket - Magneto Adapter |
| 4 | 65321 | Gasket - Exhaust Flange |
| 1 | 66224 | Gasket - Carburetor |
| 4 | 71481 | Seal - Oil |
| 1 | 68315 | Gasket - Accessory Drive Adapter |
| 8 | 70310 | Seal - Shroud Tube |
| 1 | STD-208 | Seal - Oil |
| 2 | STD-294 | Gasket - Annular |
| 6 | 72075 | Seal - Oil |
| 2 | 72091 | Ring - Oil Seal |
| 2 | STD-1045 | Gasket - Annular |
| 1 | 61523 | Container |
| 1 | 69551 | Gasket - Accessory Pad Cover |
| 1 | 69720 | Gasket - Dual Accessory Drive Cover |
| 1 | 69827 | Gasket - Governor Spacer |
| 1 | STD-548 | Seal - Oil |
| 1 | 66224 | Gasket - Carburetor |
| 1 | 74065 | Ring - Oil Level Gage Seal |
| 1 | 61156 | Lockplate - Crankshaft Gear |
| 2 | 72078 | Lockplate - Camshaft Gear |
| 2 | 73817 | Lockplate - Crankshaft Idler Gear Shaft |
| 4 | 68518 | Lockplate - Shroud Tube |
| 1 | 76691 | Gasket |
| 1 | STD-111 | Gasket |
| 1 | STD-213 | Seal |
| 1 | 1691-C | Gasket |
| 1 | 69164 | Gasket |
| 1 | 71646 | Lockplate |
| 1 | 72312 | Ring - Oil Seal |
| 2 | 73383 | Lockplate |
| 1 | 74524 | Ring - Oil Seal |
| 2 | 78292 | Gasket - Magneto |
| 1 | 76510 | Gasket |

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

LYCOMING PARTS CATALOG
O-320, IO-320 AND LIO-320 SERIES
SECTION 9
VENDOR ACCESSORIES

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

O-320, IO-320, LIO-320 SERIES
SECTION 9 - VENDOR ACCESSORY SECTION
9-1 - DELCO-REMY GENERATORS

| REF. NO. | PART NUMBER | 1 | 2 | 3 | 4 | 5 | DESCRIPTION | QTY. PER ENG. | MODEL USAGE |
|-------------|----------------|---|---|---|---|---|---|---------------------|------------------|
| | 1101899 | | | | | | GENERATOR, 12V-20A, Avco Lycoming 68764 | 1 | A |
| | 1101900 | | | | | | GENERATOR, 12V-25A, Avco Lycoming 68767 | 1 | B |
| | 1101901 | | | | | | GENERATOR, 24V-15A, Avco Lycoming 68765 | 1 | C |
| | 1101905 | | | | | | GENERATOR, 24V-25A, Avco Lycoming 68871 | 1 | D |
| | 1101915 | | | | | | GENERATOR, 12V-50A, Avco Lycoming 71744 | 1 | E |
| | 1105052 | | | | | | GENERATOR, 24V-40A, Avco Lycoming 71980 | 1 | F |
| | 1105055 | | | | | | GENERATOR, 24V-50A, Avco Lycoming 72695 | 1 | G |
| 1 | 1927842 | | | | | | ARMATURE | 1 | A |
| 1 | 1928664 | | | | | | ARMATURE | 1 | B |
| 1 | 1928648 | | | | | | ARMATURE | 1 | C |
| 1 | 1930314 | | | | | | ARMATURE | 1 | D |
| 1 | 1945122 | | | | | | ARMATURE | 1 | E |
| 1 | 1945105 | | | | | | ARMATURE | 1 | F |
| 1 | 1952240 | | | | | | ARMATURE | 1 | G |
| 2 | 1928813 | | | | | | FIELD COIL SET (2 coils) | 1 | A |
| 2 | 1925031 | | | | | | FIELD COIL SET (2 coils) | 1 | B, E |
| 2 | 1917288 | | | | | | FIELD COIL SET (2 coils) | 1 | C |
| 2 | 1929703 | | | | | | FIELD COIL SET (2 coils) | 1 | D |
| 2 | 1945098 | | | | | | FIELD COIL SET (2 coils) | 1 | F |
| 2 | 1952237 | | | | | | FIELD COIL SET (2 coils) | 1 | G |
| 3 | 1943590 | | | | | | FRAME, C. E. | 1 | A, B, C, D, E |
| 3 | 1952232 | | | | | | FRAME, C. E. | 1 | F, G |
| 4 | 1925832 | | | | | | FRAME, D. E. | 1 | A, B, C, D, E |
| 4 | 1945101 | | | | | | FRAME, D. E. | 1 | F, G |
| 5 | 954162 | | | | | | BEARING, Ball C. E. | 1 | A, B, C, D, E |
| 5 | 900529 | | | | | | BEARING, Ball C. E. | 1 | F, G |
| 6 | 954143 | | | | | | BEARING, Ball D. E. | 1 | A, B, C, D |
| 6 | 954162 | | | | | | BEARING, Ball D. E. | 1 | E |
| 6 | 900529 | | | | | | BEARING, Ball D. E. | 1 | F, G |
| 7 | 1908999 | | | | | | PLATE, Brush | 1 | A, B, C, D, E |
| 8 | 1906984 | | | | | | BRUSH | 2 | A, B, C, D, E |
| 8 | 1906931 | | | | | | BRUSH | 2 | F, G |
| 9 | 1903720 | | | | | | SPRING, Brush | 2 | A, B, C, D, E |
| 9 | 1908829 | | | | | | SPRING, Brush | 2 | F, G |
| 10 | 1850759 | | | | | | ARM, Brush | 2 | A, B, C, D, E |
| 10 | 1944373 | | | | | | ARM, Brush | 2 | F, G |
| 11 | 1908843 | | | | | | PULLEY | 1 | |
| 12 | 1927844 | | | | | | PLATE, Bearing retainer | 1 | A, B, C, D, E, F |
| 12 | 1952245 | | | | | | PLATE, Bearing retainer | 1 | G |
| 13 | 1909159 | | | | | | TERMINAL STUD AND LEAD | 1 | A, B, C |
| 13 | 1858749 | | | | | | TERMINAL STUD | 1 | D |
| 13 | 1914186 | | | | | | TERMINAL STUD AND LEAD | 1 | E |
| 14 | 1858749 | | | | | | TERMINAL STUD | 1 | A, B, C, D, F, G |
| 14 | 1858751 | | | | | | TERMINAL STUD | 1 | E |
| 15 | 1908844 | | | | | | THRU BOLT | 2 | A |
| 15 | 1908680 | | | | | | THRU BOLT | 2 | B, C, E |
| 15 | 1886685 | | | | | | THRU BOLT | 2 | D, F, G |
| 16 | 1916747 | | | | | | SHOE POLE | 2 | A |
| 16 | 1914618 | | | | | | SHOE POLE | 2 | B, C, E |
| 16 | 1939902 | | | | | | SHOE POLE | 2 | D |
| 16 | 1918004 | | | | | | SHOE POLE | 2 | F, G |
| 17 | 1910131 | | | | | | BAND, Cover | 1 | A, B, C, D, E |
| 17 | 1962896 | | | | | | BAND, Cover | 1 | F, G |
| 18 | 1861591 | | | | | | COLLAR, Space, outside, D. E. | 1 | A, B, C, D, E |
| 18 | 1914198 | | | | | | COLLAR, Space, outside, D. E. | 1 | F, G |
| 19 | 1886684 | | | | | | DOWEL PIN, C. E. and D. E. | 2 | A, B, C, D, E, F |
| 19 | 809062 | | | | | | DOWEL PIN, C. E. and D. E. | 2 | G |
| | 1927843 | | | | | | COLLECTOR, Static | 1 | A, B, C, D, E |

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

O-320, IO-320, LIO-320 SERIES
SECTION 9 - VENDOR ACCESSORY SECTION
9-1 - DELCO-REMY GENERATORS (CONT.)

| REF. NO. | PART NUMBER | DESCRIPTION | | | | | QTY. PER ENG. | MODEL USAGE |
|----------|-------------|-------------|---|---|---|---|---------------|---------------|
| | | 1 | 2 | 3 | 4 | 5 | | |
| | 1920738 | | | | | | 1 | F |
| | 1952241 | | | | | | 1 | G |
| | 1952244 | | | | | | 1 | G |
| | 1916748 | | | | | | 2 | A |
| | 1914491 | | | | | | 2 | B, C |
| | 1912073 | | | | | | 2 | D |
| 20 | 200242 | | | | | | 1 | A, B, C, D |
| 20 | 200362 | | | | | | 2 | E, F, G |
| | 455613 | | | | | | 1 | A, B, C, D |
| 21 | 124545 | | | | | | 1 | A, B, C, D |
| | 1920734 | | | | | | 1 | A, B, C, D, F |

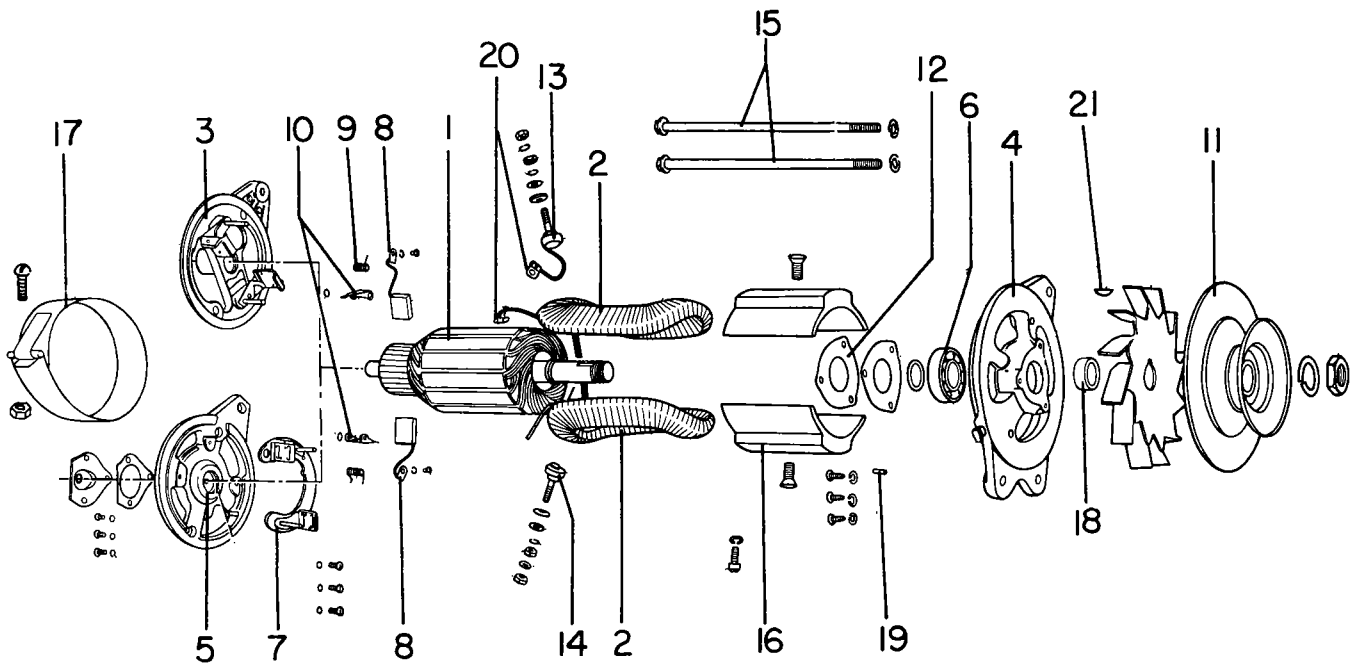


Figure 9-1. Delco-Remy Generator

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

O-320, IO-320, LIO-320 SERIES
SECTION 9 - VENDOR ACCESSORY SECTION
9-2 - DELCO-REMY ALTERNATORS

| REF. NO. | PART NUMBER | 1 | 2 | 3 | 4 | 5 | DESCRIPTION | QTY. PER ENG. | MODEL USAGE |
|-------------|----------------|---|---|---|---|---|--|---------------------|----------------|
| | 1100717 | | | | | | ALTERNATOR, 12V-70A, Avco Lycoming 74319 | 1 | A |
| | 1100718 | | | | | | ALTERNATOR, 24V-50A, Avco Lycoming 74816 | 1 | B |
| 1 | 1964858 | | | | | | FRAME, S. R. E. | 1 | |
| 2 | 1964512 | | | | | | ROTOR ASSEMBLY | 1 | A |
| 2 | 1964221 | | | | | | ROTOR ASSEMBLY | 1 | B |
| 3 | 1961531 | | | | | | STATOR ASSEMBLY | 1 | A |
| 3 | 1959531 | | | | | | STATOR ASSEMBLY | 1 | B |
| 4 | 1959917 | | | | | | FRAME, D. E. | 1 | |
| 5 | 1964354 | | | | | | DIODE | 1 | |
| 6 | 1964353 | | | | | | DIODE | 1 | |
| 7 | 1965276 | | | | | | BRUSH HOLDER AND BRUSH ASSEMBLY | 1 | |
| 8 | 1964117 | | | | | | SPRING, Brush | 1 | |
| 9 | 7451326 | | | | | | BEARING, S. R. E | 1 | |
| 10 | 905920 | | | | | | BEARING, D. E. | 1 | |
| 11 | 1959832 | | | | | | TERMINAL PKG. , Battery | 1 | |
| 12 | 1959833 | | | | | | TERMINAL PKG. , Ground | 1 | |
| 13 | 1959834 | | | | | | TERMINAL PKG. , Diode junction | 1 | |
| 14 | 1963213 | | | | | | BEARING RETAINER ASSEMBLY | 1 | |
| 15 | 1953211 | | | | | | COLLAR, Inside | 1 | |
| 16 | 1959991 | | | | | | COLLAR, Outside | 1 | B |
| 17 | 1961521 | | | | | | THRU BOLT | 4 | |
| 18 | 1959455 | | | | | | CAPACITOR | 1 | |
| 19 | 1959532 | | | | | | CLIP, Stator lead terminal | 3 | |
| 20 | 1964858 | | | | | | HEAT SINK ASSEMBLY | 1 | |
| | 1952241 | | | | | | COLLECTOR AND SPRING ASSY. , D. E. | 1 | |
| | 1959389 | | | | | | INSULATOR, Capacitor terminal screw | 1 | |
| 21 | 1959790 | | | | | | RETAINER AND FELT, S. R. E. | 1 | |
| | 1952244 | | | | | | RING, Collector, D. E. | 1 | |
| | 1961523 | | | | | | SPACER, D. E. | 1 | |
| 22 | 1960750 | | | | | | SPRING, Capacitor retaining | 1 | |

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

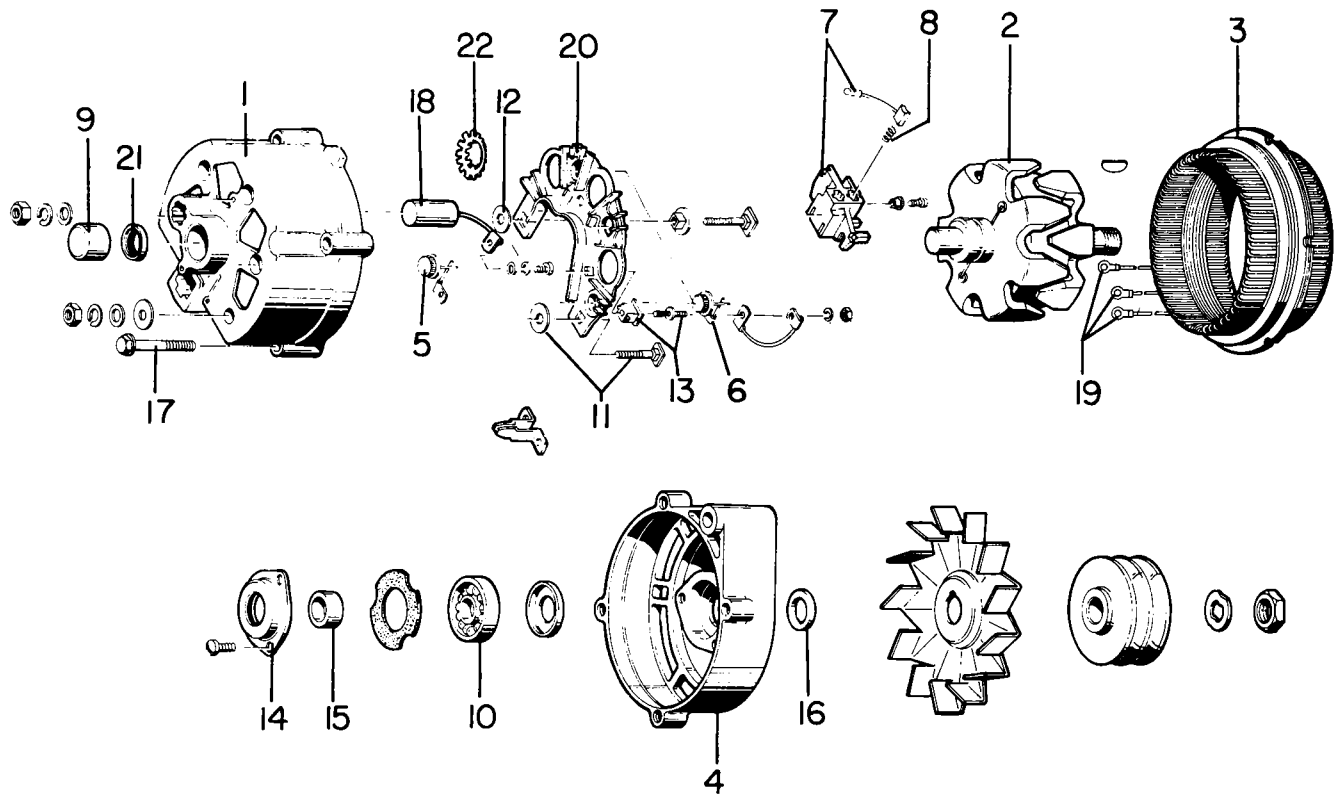


Figure 9-2. Delco-Remy Alternator

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

O-320, IO-320, LIO-320 SERIES
SECTION 9 - VENDOR ACCESSORY SECTION
9-3 - PRESTOLITE ALTERNATORS

| REF. NO. | PART NUMBER | 1 | 2 | 3 | 4 | 5 | DESCRIPTION | QTY. PER ENG. | MODEL USAGE |
|-------------|----------------|---|---|---|---|---|---|---------------------|------------------------|
| | ALE-8105A | | | | | | ALTERNATOR, 12V-40A, Avco Lycoming 76496 | 1 | A |
| | ALE-8406 | | | | | | ALTERNATOR, 12V-40A, Avco Lycoming 78308 | 1 | B |
| | ALX-8403 | | | | | | ALTERNATOR, 12V-70A, Avco Lycoming 78310 | 1 | C |
| | ALT-8404 | | | | | | ALTERNATOR, 24V-50A, Avco Lycoming 78312 | 1 | D |
| | ALU-8403 | | | | | | ALTERNATOR, 24V-70A, Avco Lycoming 78314 | 1 | E |
| | ALE-6406 | | | | | | ALTERNATOR, 12V-40A, Avco Lycoming 78401 | 1 | F |
| | ALZ-8401 | | | | | | ALTERNATOR, 12V-50A, Avco Lycoming 78403 | 1 | G |
| | ALY-8403 | | | | | | ALTERNATOR, 12V-50A, Avco Lycoming 78407 | 1 | H |
| | ALY-8405 | | | | | | ALTERNATOR, 12V-60A, Avco Lycoming LW-10372 | 1 | J |
| | P90-2014 | | | | | | BEARING AND SEAL PKG. , S. R. E. | 1 | B, C, D, E, F, G, H, J |
| | ALU-1045A | | | | | | BRUSH HOLDER ASSEMBLY | 1 | B, C, D, E, F, G, H, J |
| 1 | ALE-1012CS | | | | | | BRUSH SET, Service | 1 | A |
| 1 | ALE-1012NS | | | | | | BRUSH SET, Service | 1 | B, C, D, E, F, G, H, J |
| 2 | ALA-19S | | | | | | SPRING SET, Brush | 1 | |
| 3 | ALE-1062 | | | | | | COVER, Slip ring end | 1 | A |
| 3 | ALU-1062A | | | | | | COVER, Slip ring end | 1 | B, C, D, E, F, G, H |
| 3 | ALU-1062D | | | | | | COVER, Slip ring end | 1 | J |
| | P90-818 | | | | | | EYELET PKG. | 1 | B, C, D, E, F, G, H, J |
| 4 | PU-1605 | | | | | | FAN, Ventilating | 1 | A, B, D |
| 4 | PU-1605A | | | | | | FAN, Ventilating | 1 | C, E, F, G, H, J |
| 5 | ALE-1003E | | | | | | HEAD ASSEMBLY, Drive end | 1 | A |
| 5 | ALE-1003N | | | | | | HEAD ASSEMBLY, Drive end | 1 | B, C, D, E, F, G, H, J |
| 6 | X-3416 | | | | | | BEARING, Ball SAE No. 203 | 1 | |
| 7 | X-3417 | | | | | | BEARING, Roller | 1 | A |
| 8 | ALE-1002LS | | | | | | HEAD ASSEMBLY, Slip ring end | 1 | A |
| 8 | ALK-1032BS | | | | | | HEAD ASSEMBLY, Slip ring end | 1 | B, G, H, J |
| 8 | ALK-1032CS | | | | | | HEAD ASSEMBLY, Slip ring end | 1 | C, D, E, F |
| 9 | XA-944J | | | | | | RECTIFIER, Negative | 3 | |
| 10 | P90-33 | | | | | | NUT AND WASHER PKG. | 1 | |
| 11 | ALE-4 | | | | | | PLATE, Rectifier mounting | 1 | A |
| 11 | ALE-1054G | | | | | | PLATE, Rectifier mounting | 1 | B, C, D, E, F, G, H, J |
| 12 | PU-672 | | | | | | PULLEY, Drive | 1 | |
| 13 | XA-943F | | | | | | RECTIFIER, Positive | 3 | |
| 14 | GR-32 | | | | | | RETAINER, Drive end | 1 | |
| 15 | ALE-2016 | | | | | | ROTOR ASSEMBLY | 1 | A |
| 15 | ALE-2073S | | | | | | ROTOR ASSEMBLY | 1 | B, F, G, H, J |
| 15 | ALH-2028S | | | | | | ROTOR ASSEMBLY | 1 | C |
| 15 | ALU-2028S | | | | | | ROTOR ASSEMBLY | 1 | D, E |
| 16 | ALD-21 | | | | | | SPACER, Rotor shaft | 1 | |
| 17 | ALE-2008Z | | | | | | STATOR ASSEMBLY | 1 | A |
| 17 | ALE-2008AD | | | | | | STATOR ASSEMBLY | 1 | B, F |
| 17 | ALE-2008AB | | | | | | STATOR ASSEMBLY | 1 | C, E |
| 17 | ALE-2008AA | | | | | | STATOR ASSEMBLY | 1 | D |
| 17 | ALE-2008AG | | | | | | STATOR ASSEMBLY | 1 | G |
| 17 | ALE-2008AE | | | | | | STATOR ASSEMBLY | 1 | H, J |
| 18 | P90-356A | | | | | | TERMINAL STUD AND PARTS PKG. | 1 | A |
| 18 | P90-2030 | | | | | | TERMINAL STUD AND PARTS PKG. | 1 | B, C, D, E, G, H, J |
| 18 | P90-506 | | | | | | TERMINAL STUD AND PARTS PKG. | 1 | F |
| 19 | ALA-20FS | | | | | | THRU BOLT PKG. | 1 | A |
| 19 | ALA-20JS | | | | | | THRU BOLT PKG. | 1 | B, F, G, H, J |
| 19 | ALA-20GS | | | | | | THRU BOLT PKG. | 1 | C, D, E |

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

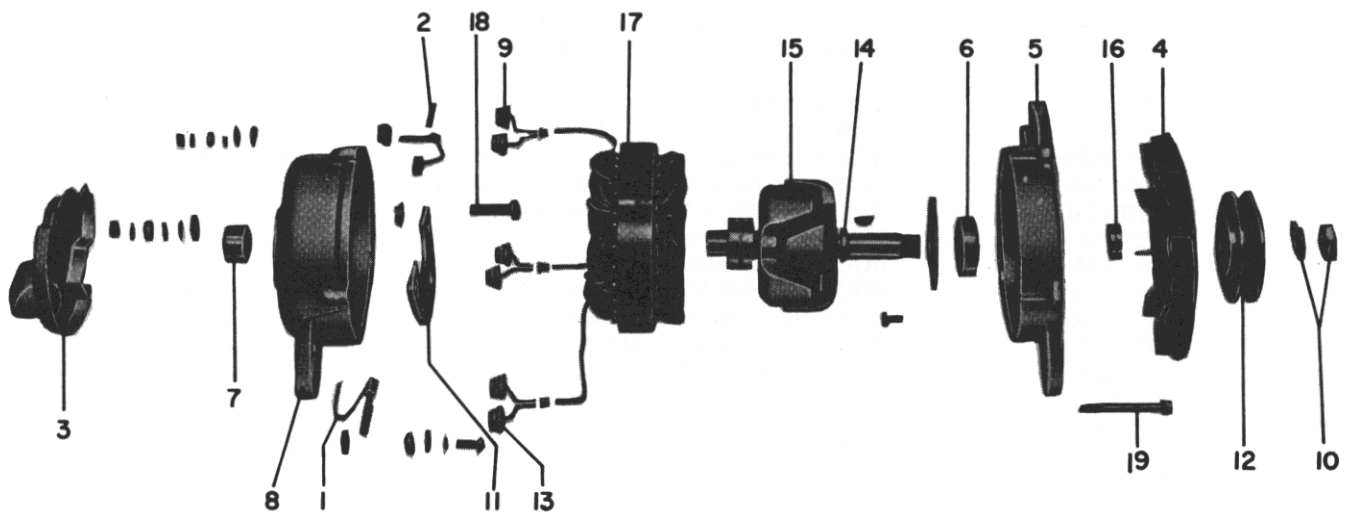


Figure 9-3. Prestolite Alternator

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

O-320, IO-320, LIO-320 SERIES
SECTION 9 - VENDOR ACCESSORY SECTION
9-4 - PRESTOLITE STARTERS

| REF. NO. | PART NUMBER | DESCRIPTION | | | | | QTY. PER ENG. | MODEL USAGE |
|-------------|----------------|-------------|---|---|---|---|---------------------|----------------|
| | | 1 | 2 | 3 | 4 | 5 | | |
| | MZ4204 | | | | | | 1 | A |
| | MZ4206 | | | | | | 1 | B |
| | MHB-4001 | | | | | | 1 | C |
| | MZ-4216 | | | | | | 1 | D |
| 1 | EBB-124A | | | | | | 1 | A |
| 1 | EBB-75A | | | | | | 1 | B, C |
| 1 | EBB-142A | | | | | | 1 | D |
| 2 | MZ-24A | | | | | | 1 | |
| 3 | MZ-393 | | | | | | 1 | B, C, D |
| 4 | MZ-394 | | | | | | 1 | B, C, D |
| 5 | MZ-396 | | | | | | 1 | B, C, D |
| 6 | MZ-1390 | | | | | | 1 | B, C, D |
| 7 | XA-997 | | | | | | 1 | B, C, D |
| 8 | XA-998 | | | | | | 1 | B, C, D |
| 9 | MZ-2385 | | | | | | 1 | A |
| 9 | MZ-2397 | | | | | | 1 | B, D |
| 9 | MHB-2397 | | | | | | 1 | C |
| 10 | MZ-2386 | | | | | | 1 | A |
| 10 | MZ-2399 | | | | | | 1 | B, D |
| 10 | MHB-2399 | | | | | | 1 | C |
| 11 | MZ-2002U | | | | | | 1 | A |
| 11 | MZ-2400 | | | | | | 1 | B, D |
| 11 | MHB-2400 | | | | | | 1 | C |
| 12 | MZ-19S | | | | | | 1 | |
| 13 | PS-1435 | | | | | | 1 | A |
| 13 | PS-1432 | | | | | | 1 | B, C, D |
| 14 | MG-77A | | | | | | 1 | A |
| 14 | MZ-389 | | | | | | 1 | B, C, D |
| 15 | MZ-1236 | | | | | | 1 | A |
| 15 | X-3212 | | | | | | 1 | B, C, D |
| 16 | P90-542 | | | | | | 1 | A |
| 16 | P90-601 | | | | | | 1 | B, C, D |
| 17 | MBG-2012S | | | | | | 1 | A, B, D |
| 17 | MHB-2012S | | | | | | 1 | C |
| | P90-876 | | | | | | 1 | D |

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

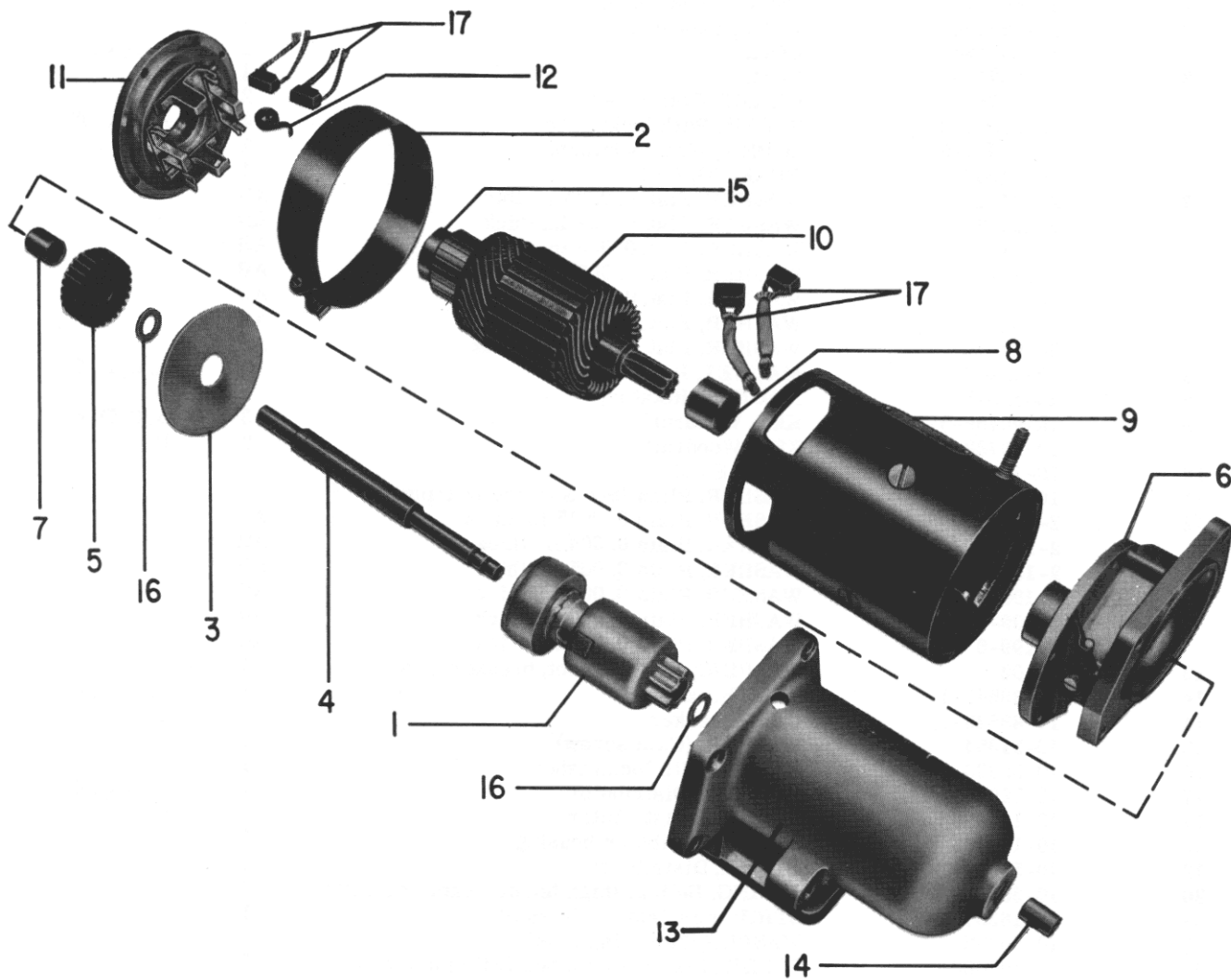


Figure 9-4. Prestolite Starter

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

O-320, IO-320, LIO-320 SERIES
SECTION 9 - VENDOR ACCESSORY SECTION
9-5 - BENDIX MAGNETOS, -20 SERIES

| REF. NO. | PART NUMBER | DESCRIPTION | | | | | QTY. PER ENG. | MODEL USAGE |
|-------------|----------------|-------------|---|---|---|---|---------------------|----------------|
| | | 1 | 2 | 3 | 4 | 5 | | |
| | 10-51360-25 | | | | | | 1 | A |
| | 10-51360-29 | | | | | | 1 | B |
| | 10-51360-30 | | | | | | 1 | C |
| | 10-51360-45 | | | | | | 1 | D |
| | 10-51360-46 | | | | | | 1 | E |
| 1 | 10-50727Y | | | | | | 1 | |
| 2 | 10-157134 | | | | | | 1 | |
| 3 | 10-357164 | | | | | | 1 | A, B, C, E |
| 3 | 10-357165 | | | | | | 1 | D |
| 4 | 10-50765 | | | | | | 2 | |
| 5 | 10-35937-8 | | | | | | 3 | A, B, C, E |
| 5 | 10-35937-8 | | | | | | 2 | D |
| 6 | 10-81806 | | | | | | 1 | |
| 7 | 2-161-1 | | | | | | AR | |
| | 2-161-2 | | | | | | AR | |
| | 2-161-3 | | | | | | AR | |
| | 2-161-4 | | | | | | AR | |
| | 2-161-5 | | | | | | AR | |
| | 2-161-6 | | | | | | AR | |
| | 2-161-7 | | | | | | AR | |
| 8 | 10-52947 | | | | | | 1 | A, C, D, E |
| 8 | 10-52945 | | | | | | 1 | B |
| 9 | 10-90788-5 | | | | | | 3 | A, C, D, E |
| 9 | 10-90788-5 | | | | | | 2 | B |
| 10 | 10-157123Y | | | | | | 1 | |
| 11 | 10-3503 | | | | | | 1 | |
| 12 | 2-199-1 | | | | | | AR | |
| | 2-199-2 | | | | | | AR | |
| | 2-199-3 | | | | | | AR | |
| | 2-199-4 | | | | | | AR | |
| | 2-199-5 | | | | | | AR | |
| | 2-199-6 | | | | | | AR | |
| 13 | 2-202 | | | | | | 1 | |
| 14 | 10-88543-1 | | | | | | 1 | A, B, C, E |
| 14 | 10-88543-5 | | | | | | 1 | D |
| 15 | 10-51354 | | | | | | 1 | |
| 16 | 10-35936-10 | | | | | | 1 | |
| 17 | 10-52917 | | | | | | 1 | A, B, C, E |
| 17 | 10-106498 | | | | | | 1 | D |
| 18 | 10-157135 | | | | | | 1 | |
| 19 | 10-52949 | | | | | | 1 | |
| 20 | 10-50737 | | | | | | 4 | |
| 21 | 10-163374 | | | | | | 1 | |
| 22 | 10-50752 | | | | | | 1 | |
| 23 | 10-102083 | | | | | | 3 | |
| 24 | 10-50746Y | | | | | | 1 | |
| 25 | 10-50753 | | | | | | 1 | |
| 26 | 10-92815-37 | | | | | | 1 | |
| 27 | 10-160844 | | | | | | 1 | |
| 28 | 10-157158 | | | | | | 5 | |
| 29 | 10-357174 | | | | | | 1 | A, B, C, E |
| 29 | 10-382585 | | | | | | 1 | D |
| 30 | 10-14268 | | | | | | 1 | |

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

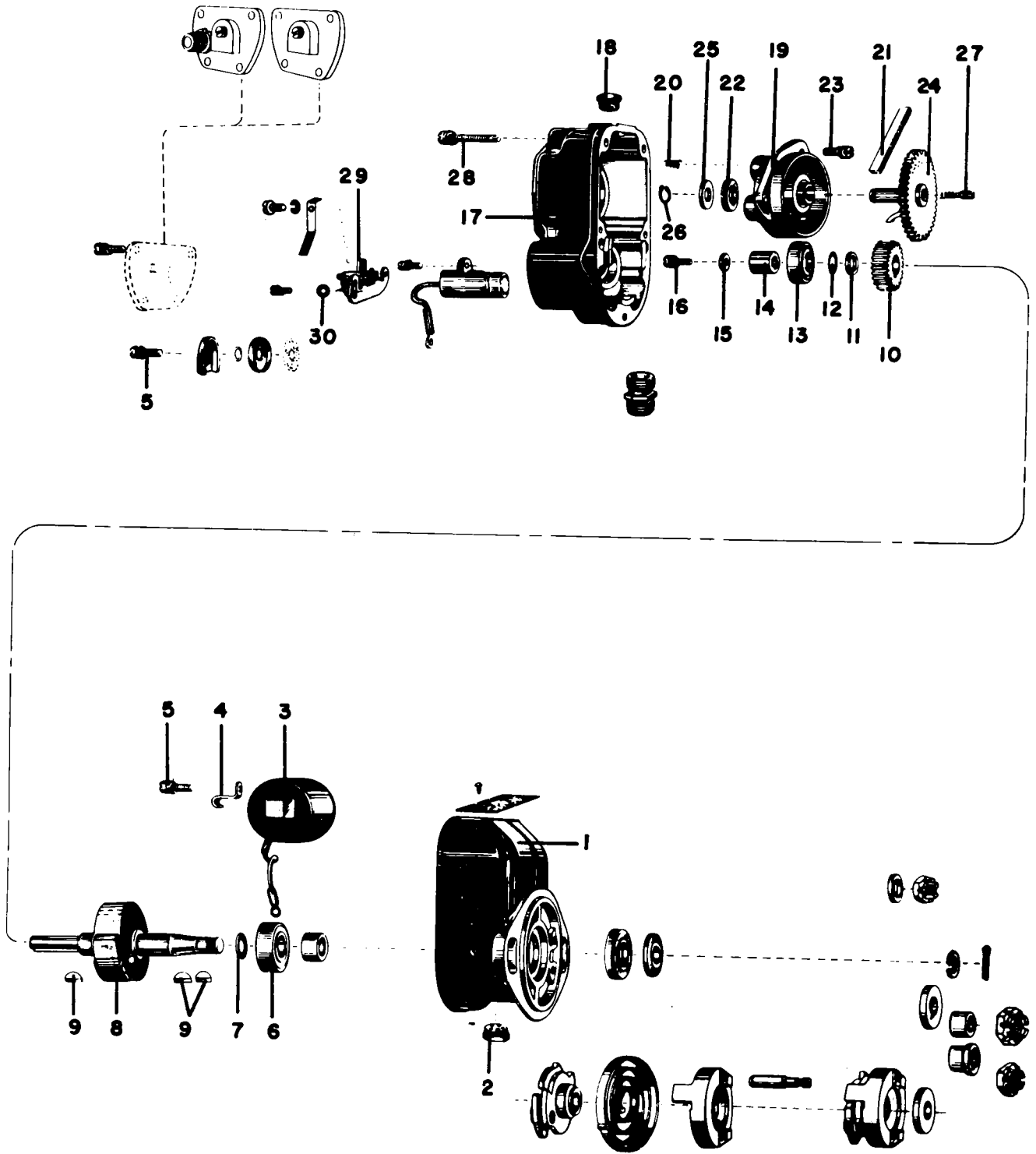


Figure 9-5. Bendix Magneto, -20 Series

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

O-320, IO-320, LIO-320 SERIES
SECTION 9 - VENDOR ACCESSORY SECTION
9-5A - BENDIX MAGNETOS, -20 SERIES (CONT.)

| REF. NO. | PART NUMBER | | | | | | DESCRIPTION | QTY. PER ENG. | MODEL USAGE |
|-------------|----------------|---|---|---|---|---|---|---------------------|----------------|
| | | 1 | 2 | 3 | 4 | 5 | | | |
| 1 | 10-35936-7 | | | | | | SCREW, With lockwasher (contact assy., securing) | 2 | A, B, C, E |
| 1 | 10-35936-7 | | | | | | SCREW, With lockwasher (capacitor) | 1 | A, B, C, E |
| | 10-35935-5 | | | | | | SCREW, With lockwasher | 2 | D |
| 2 | 10-51676 | | | | | | CAPACITOR | 1 | A, B, C, E |
| 2 | 10-163131 | | | | | | CAPACITOR | 1 | D |
| 3 | 10-102090 | | | | | | SPRING, (Ground terminal) | 1 | A, B, C, E |
| 4 | 2-194 | | | | | | WASHER, Lock (ground terminal screw) | 1 | A, B, C, E |
| 5 | 10-16476 | | | | | | SCREW, Fil. head (ground terminal) | 1 | A, B, C, E |
| 6 | 10-52939Y | | | | | | COVER, Breaker | 1 | A, B, C, E |
| 7 | 10-163136 | | | | | | COVER, Breaker | 1 | D |
| | 10-163177 | | | | | | NUT, Cap, round | 1 | D |
| | 10-163384 | | | | | | DISK, Neoprene | 1 | D |
| 8 | 10-9354 | | | | | | SCREEN, Ventilator (breaker cover) | 1 | A, B, C, E |
| 9 | 10-116197 | | | | | | RETAINER, Ventilator screen | 1 | A, B, C, E |
| 10 | 10-32438 | | | | | | WASHER, Ventilator shield | 1 | A, B, C, E |
| 11 | 10-9967 | | | | | | SHIELD, Ventilator (breaker cover) | 1 | A, B, C, E |
| 12 | 10-157161 | | | | | | SCREW, With lockwasher, 0.438 in. long (breaker cover) | 4 | A, B, C, E |
| 12 | 10-157160 | | | | | | SCREW, With lockwasher, 0.875 in. long (breaker cover) | 4 | D |
| 13 | 10-357078 | | | | | | BEARING, Sleeve (drive shaft) | 1 | |
| 14 | 10-27448 | | | | | | OIL SEAL, (Drive Shaft) | 1 | |
| 15 | 10-51678 | | | | | | DEFLECTOR, Oil, (drive shaft) | 1 | |
| 16 | 10-4093 | | | | | | WASHER, Plain (drive shaft nut) | 1 | B |
| 17 | 10-163151 | | | | | | NUT, Drive shaft | 1 | B |
| 18 | 10-56513 | | | | | | PIN, Stop, impulse coupling | 2 | A, C, D, E |
| 19 | 10-59477 | | | | | | IMPULSE COUPLING, 35° lag | 1 | A |
| 19 | 10-59474 | | | | | | IMPULSE COUPLING, 25° lag | 1 | C, D |
| 19 | 10-59473 | | | | | | IMPULSE COUPLING, 25° lag | 1 | E |
| 20 | 10-59471 | | | | | | CAM, Impulse coupling | 1 | A |
| 20 | 10-59437 | | | | | | CAM, Impulse coupling | 1 | C, D |
| 20 | 10-59436 | | | | | | CAM, Impulse coupling | 1 | E |
| 21 | 10-51324 | | | | | | SPRING, Main, impulse coupling | 1 | A, C, D, E |
| 22 | 10-52903 | | | | | | BODY, Impulse coupling | 1 | A, C, D |
| 22 | 10-51333 | | | | | | BODY, Impulse coupling | 1 | E |
| 23 | 10-51370 | | | | | | WASHER, Plain (impulse coupling) | 1 | A, C, D, E |
| 24 | 10-51659 | | | | | | BUSHING, Impulse coupling | 1 | A, C, D, E |
| 25 | 10-3793 | | | | | | WASHER, Lock (drive shaft nut) | 1 | A, C, D, E |
| 26 | 10-51643 | | | | | | NUT, Drive shaft | 1 | A, C, D, E |
| 27 | 10-90751-19 | | | | | | PIN, Cotter (drive shaft nut) | 1 | |
| 28 | 10-357012 | | | | | | PLATE, Identification | 1 | |
| 29 | 10-90500-5 | | | | | | SCREW, Drive (identification plate) | 2 | |

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

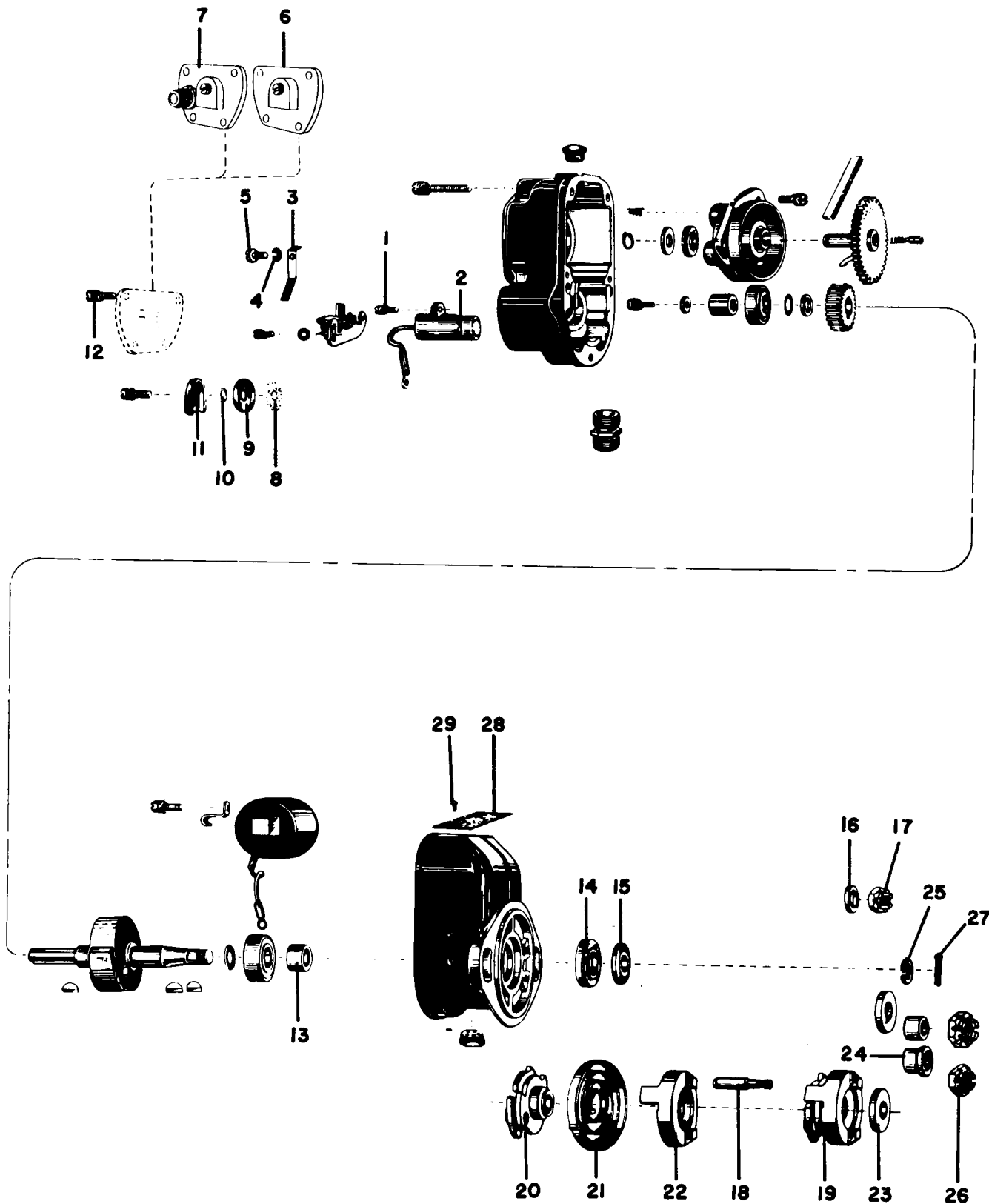


Figure 9-5A. Bendix Magneto, -20 Series

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

O-320, IO-320, LIO-320 SERIES
SECTION 9 - VENDOR ACCESSORY SECTION
9-6 - BENDIX MAGNETOS, -200 SERIES

| REF. NO. | PART NUMBER | 1 | 2 | 3 | 4 | 5 | DESCRIPTION | QTY. PER ENG. | MODEL USAGE |
|----------|-------------|---|---|---|---|---|---|---------------|-------------|
| | 10-163005-2 | | | | | | MAGNETO, S4LN-200, Avco Lycoming 73360 | 1 | A |
| | 10-163045-3 | | | | | | MAGNETO, S4LN-204, Avco Lycoming 72524 | 1 | B |
| | 10-163045-6 | | | | | | MAGNETO, S4LN-204, Avco Lycoming 78955 | 1 | C |
| 1 | 10-160858 | | | | | | HOUSING, Magneto | 1 | |
| 2 | 10-157134 | | | | | | PLUG, Ventilator, magneto housing | 1 | |
| 3 | 10-157165 | | | | | | COIL | 1 | |
| 4 | 10-50765 | | | | | | CLAMP, Coil core | 2 | |
| 5 | 10-35937-8 | | | | | | SCREW, With lockwasher (coil core clamp) | 2 | |
| 6 | 10-81806 | | | | | | BEARING, Ball (magnet, drive end) | 1 | |
| 7 | 2-161-1 | | | | | | WASHER, Flat, 0.0025 in. thick | AR | |
| 7 | 2-161-2 | | | | | | WASHER, Flat, 0.004 in. thick | AR | |
| 7 | 2-161-3 | | | | | | WASHER, Flat, 0.005 in. thick | AR | |
| 7 | 2-161-4 | | | | | | WASHER, Flat, 0.008 in. thick | AR | |
| 7 | 2-161-5 | | | | | | WASHER, Flat, 0.010 in. thick | AR | |
| 7 | 2-161-6 | | | | | | WASHER, Flat, 0.012 in. thick | AR | |
| 7 | 2-161-7 | | | | | | WASHER, Flat, 0.0015 in. thick | AR | |
| 8 | 10-52945 | | | | | | MAGNET, Rotating | 1 | |
| 9 | 10-90788-5 | | | | | | KEY, Woodruff | 2 | |
| 10 | 10-157123Y | | | | | | GEAR, Distributor, small | 1 | |
| 11 | 10-3503 | | | | | | WASHER, Plain (breaker end bearing) | 1 | |
| 12 | 2-199-1 | | | | | | WASHER, Flat, 0.0025 in. thick | AR | |
| 12 | 2-199-2 | | | | | | WASHER, Flat, 0.004 in. thick | AR | |
| 12 | 2-199-3 | | | | | | WASHER, Flat, 0.005 in. thick | AR | |
| 12 | 2-199-4 | | | | | | WASHER, Flat, 0.008 in. thick | AR | |
| 12 | 2-199-5 | | | | | | WASHER, Flat, 0.010 in. thick | AR | |
| 12 | 2-199-6 | | | | | | WASHER, Flat, 0.012 in. thick (breaker end bearing) | AR | |
| 13 | 2-202 | | | | | | BEARING, Ball (magnet, breaker end) | 1 | |
| 14 | 10-88543-5 | | | | | | CAM, Breaker | 1 | |
| 15 | 10-51354 | | | | | | WASHER, Plain (cam screw) | 1 | |
| 16 | 10-35936-10 | | | | | | SCREW, With lockwasher | 1 | |
| 17 | 10-106492 | | | | | | HOUSING, Distributor | 1 | A |
| 17 | 10-106498 | | | | | | HOUSING, Distributor | 1 | B, C |
| 18 | 10-157135 | | | | | | PLUG, Distributor housing | 1 | |
| 19 | 10-52949 | | | | | | BLOCK, Distributor | 1 | |
| 20 | 10-50737 | | | | | | SPRING, Helical | 4 | |
| 21 | 10-163374 | | | | | | STRIP, Felt (electrode side) | 1 | |
| 22 | 10-50752 | | | | | | WASHER, Felt (ring side) | 1 | |
| 23 | 10-102083 | | | | | | SCREW, With lock and plain washer | 3 | |
| 24 | 10-50746Y | | | | | | GEAR, Distributor large | 1 | |
| 25 | 10-50753 | | | | | | WASHER, Plain (distributor gear axle) | 1 | |
| 26 | 10-31282 | | | | | | RING, Retaining | 1 | |
| 27 | 10-160844 | | | | | | BRUSH, Carbon | 1 | |
| 28 | 10-157158 | | | | | | SCREW, With lockwasher | 5 | |
| 29 | 10-382584 | | | | | | CONTACT ASSEMBLY, (Tungsten R. H.) | 1 | A |
| 29 | 10-382585 | | | | | | CONTACT ASSEMBLY, (Tungsten L. H.) | 1 | B, C |
| 30 | 10-14268 | | | | | | WASHER, Plain | 2 | A |
| 30 | 10-14268 | | | | | | WASHER, Plain | 1 | B, C |
| 30 | 10-9858 | | | | | | WASHER, Plain | 2 | C |
| 31 | 10-35936-7 | | | | | | SCREW, With lockwasher | 4 | A, C |
| 31 | 10-35936-7 | | | | | | SCREW, With lockwasher | 2 | B |
| | 10-361624 | | | | | | PLATE, Breaker insulating | 1 | C |
| | 10-361639 | | | | | | BUSHING, Insulating | 2 | C |
| 32 | 10-163194 | | | | | | INSULATION SHEET | 1 | A |
| 33 | 10-157241 | | | | | | LEAD, Retard assembly | 1 | A |
| 34 | 10-163131 | | | | | | CAPACITOR | 1 | |
| 35 | 10-35935-5 | | | | | | SCREW, With lockwasher | 2 | |
| 36 | 10-163136 | | | | | | COVER, Breaker | 1 | A, B |

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

O-320, IO-320, LIO-320 SERIES
 SECTION 9 - VENDOR ACCESSORY SECTION
 9-6 - BENDIX MAGNETOS, -200 SERIES (CONT.)

| REF. NO. | PART NUMBER | DESCRIPTION | | | | | QTY. PER ENG. | MODEL USAGE |
|----------|-------------|-------------|---|---|---|---|---------------|-------------|
| | | 1 | 2 | 3 | 4 | 5 | | |
| 36 | 10-361637 | | | | | | 1 | C |
| 37 | 10-157160 | | | | | | 4 | |
| 38 | 10-163384 | | | | | | 1 | B, C |
| 39 | 10-163177 | | | | | | 1 | B |
| 40 | 10-25788 | | | | | | 1 | |
| 41 | 10-27448 | | | | | | 1 | |
| 42 | 10-51678 | | | | | | 1 | |
| 43 | 10-4093 | | | | | | 1 | |
| 44 | 10-163151 | | | | | | 1 | |
| 45 | 10-90751-19 | | | | | | 1 | |
| 46 | 10-357011 | | | | | | 1 | |
| 47 | 10-90500-5 | | | | | | 2 | |

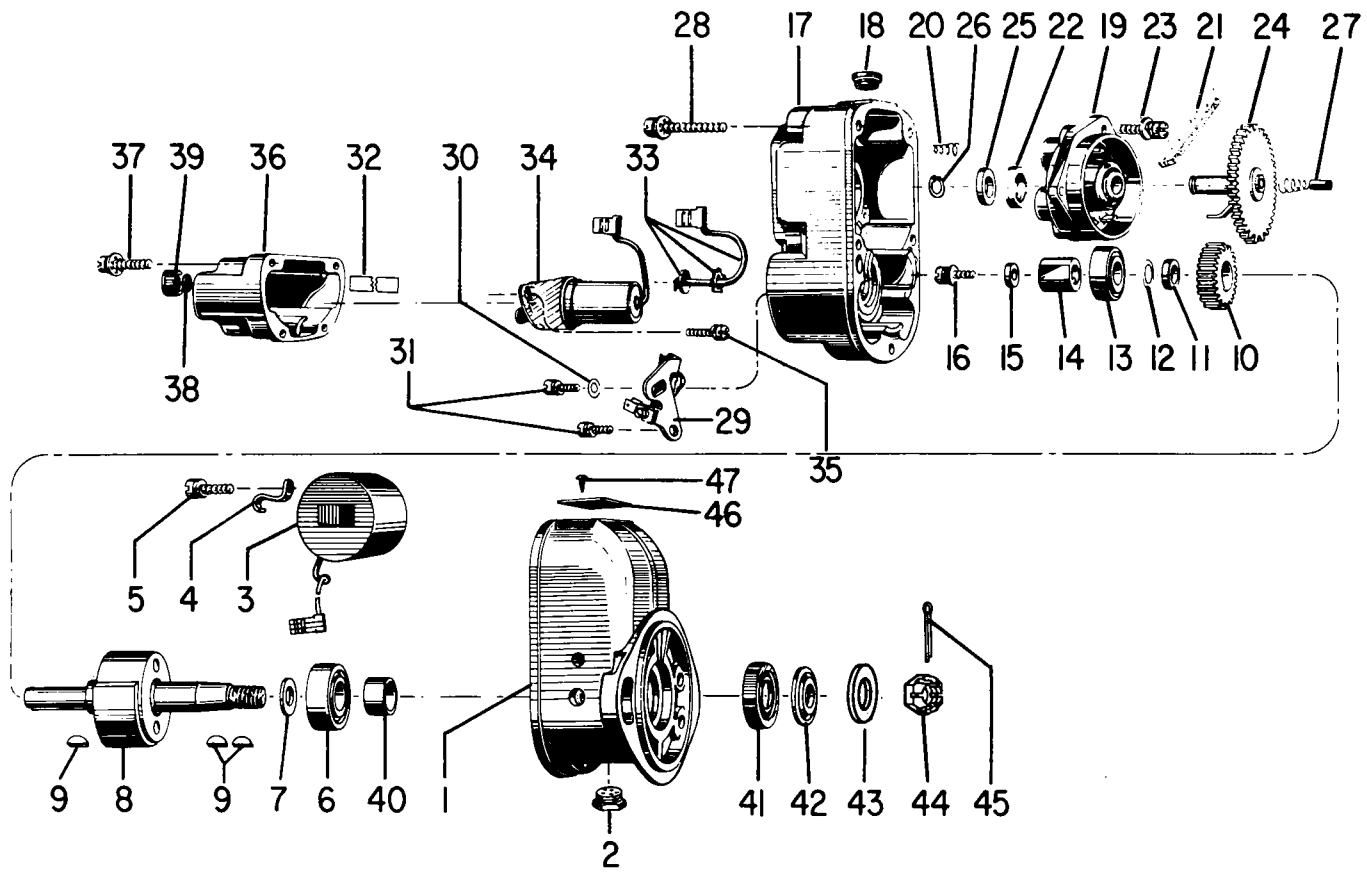


Figure 9-6. Bendix Magneto, -200 Series

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

O-320, IO-320, LIO-320 SERIES
SECTION 9 - VENDOR ACCESSORY SECTION
9-7 - BENDIX MAGNETOS, -1200 SERIES

| REF. NO. | PART NUMBER | 1 | 2 | 3 | 4 | 5 | DESCRIPTION | QTY. PER ENG. | MODEL USAGE |
|----------|--------------|---|---|---|---|---|--|---------------|-------------|
| | 10-349305-1 | | | | | | MAGNETO, Bendix, S4LN-1209, Avco Lycoming P/N 75896 | 1 | A |
| | 10-349365-2 | | | | | | MAGNETO, Bendix, S4LN-1227, Avco Lycoming P/N 75897 | 1 | B |
| 1 | 10-35937-24 | | | | | | SCREW, With lockwasher | 1 | |
| 2 | 10-92873-302 | | | | | | NUT, Stud and lead contact screw | 5 | |
| 3 | 10-90701-5 | | | | | | WASHER, (Stud, outside) | 8 | |
| 4 | 10-349393-2 | | | | | | COVER, Magneto | 1 | |
| 5 | 10-35935-6 | | | | | | SCREW, Capacitor securing | 2 | |
| 6 | 10-349276 | | | | | | CAPACITOR | 1 | |
| 7 | 10-349263 | | | | | | PACKING, (Capacitor mounting) | 1 | |
| 8 | 10-349221 | | | | | | STUD, Double end (distributor block securing) | 4 | |
| 9 | 10-78655 | | | | | | WASHER, (Stud securing) | 4 | |
| 10 | 10-92815-37 | | | | | | RING, Retaining, (gear axle) | 1 | |
| 11 | 10-349511 | | | | | | WASHER, (Gear axle) | 1 | |
| 12 | 10-50752 | | | | | | WASHER, Felt (gear axle) | 1 | |
| 13 | 10-349211 | | | | | | BLOCK, Distributor | 1 | |
| 14 | 10-50737 | | | | | | SPRING, Helical | 4 | |
| 15 | 10-163374 | | | | | | STRIP, Felt | 1 | |
| 16 | 10-349234 | | | | | | GEAR ASSEMBLY, Large | 1 | |
| 17 | 10-160844 | | | | | | BRUSH, Carbon | 1 | |
| 18 | 10-35936-7 | | | | | | SCREW, (Contact assy., and coil lead clamp) | 3 | |
| | 10-5752 | | | | | | CLIP CABLE (Not illustrated) | 1 | |
| 19 | 10-14268 | | | | | | WASHER, (Contact assy., securing screw) | 1 | |
| 20 | 10-382585 | | | | | | CONTACT ASSEMBLY, R. H. (Tungsten) | 1 | |
| 21 | 10-35936-10 | | | | | | SCREW, (Cam securing) | 1 | |
| 22 | 10-51354 | | | | | | WASHER, (Cam securing screw) | 1 | |
| 23 | 10-349243-1 | | | | | | CAM | 1 | |
| 24 | 10-349326 | | | | | | STRIP, Fish paper | 1 | |
| 25 | 10-349219 | | | | | | WEDGE, Coil | 2 | |
| 26 | 10-349271 | | | | | | COIL, Magneto (high tension) | 1 | |
| 27 | 10-90751-19 | | | | | | PIN, Cotter | 1 | |
| 28 | 10-163151 | | | | | | NUT, Castellated (drive shaft) | 1 | A |
| 29 | 10-51643 | | | | | | NUT, Castellated (drive shaft) | 1 | B |
| 30 | 10-3793 | | | | | | WASHER, Lock, (drive shaft nut) | 1 | B |
| 31 | 10-51659 | | | | | | BUSHING, Impulse coupling | 1 | B |
| 32 | 10-90788-5 | | | | | | KEY, Woodruff | 1 | A |
| 32 | 10-90788-5 | | | | | | KEY, Woodruff | 2 | B |
| 33 | 10-4093 | | | | | | WASHER, (Drive shaft nut) | 1 | A |
| 34 | 10-51370 | | | | | | WASHER, (Drive shaft nut) | 1 | B |
| 35 | 10-349359 | | | | | | IMPULSE COUPLING | 1 | B |
| 36 | 10-52903 | | | | | | BODY, Impulse coupling | 1 | B |
| 37 | 10-51324 | | | | | | SPRING, Main impulse coupling | 1 | B |
| 38 | 10-349357-2 | | | | | | CAM ASSEMBLY, Impulse coupling | 1 | B |
| 39 | 10-92815-62 | | | | | | RING, Retaining (drive shaft end) | 1 | |
| 40 | 10-349328 | | | | | | WASHER, Flat (flange) | 1 | |
| 41 | 10-349249 | | | | | | WASHER, Bowed (flange) | 1 | |
| 42 | 10-349248 | | | | | | SLINGER, Oil | 1 | |
| 43 | 10-349652 | | | | | | SCREW, (Flange securing) | 3 | |
| 44 | 10-53397 | | | | | | WASHER, (Flange securing screw) | 3 | |
| 45 | 10-349392-2 | | | | | | FLANGE, Short round (without stop pins) | 1 | A |
| 45 | 10-349392-6 | | | | | | FLANGE, Short round (with 2 stop pins) | 1 | B |
| 46 | 10-349438R | | | | | | STOP PIN, Flange | 2 | B |
| 47 | 10-353056 | | | | | | BEARING, (Magneto drive end) | 1 | |
| 48 | 10-349247 | | | | | | PLATE, (Bearing retaining) | 1 | |
| 49 | 10-349351-3 | | | | | | MAGNET, Rotating | 1 | A |
| 49 | 10-349351-1 | | | | | | MAGNET, Rotating | 1 | B |
| 50 | 10-349241 | | | | | | GEAR, Distributor, (small) | 1 | |

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

O-320, IO-320, LIO-320 SERIES
 SECTION 9 - VENDOR ACCESSORY SECTION
 9-7 - BENDIX MAGNETOS, -1200 SERIES (CONT.)

| REF. NO. | PART NUMBER | DESCRIPTION | | | | | QTY. PER ENG. | MODEL USAGE |
|----------|-------------|-------------|---|---|---|---|---------------|-------------|
| | | 1 | 2 | 3 | 4 | 5 | | |
| 51 | 10-157134 | | | | | | 1 | |
| 52 | 10-157135 | | | | | | 1 | |
| 53 | 10-90500-8 | | | | | | 2 | |
| 54 | 10-70616 | | | | | | 1 | |
| 55 | 10-353060 | | | | | | 1 | |
| 56 | 10-349394-3 | | | | | | 1 | |

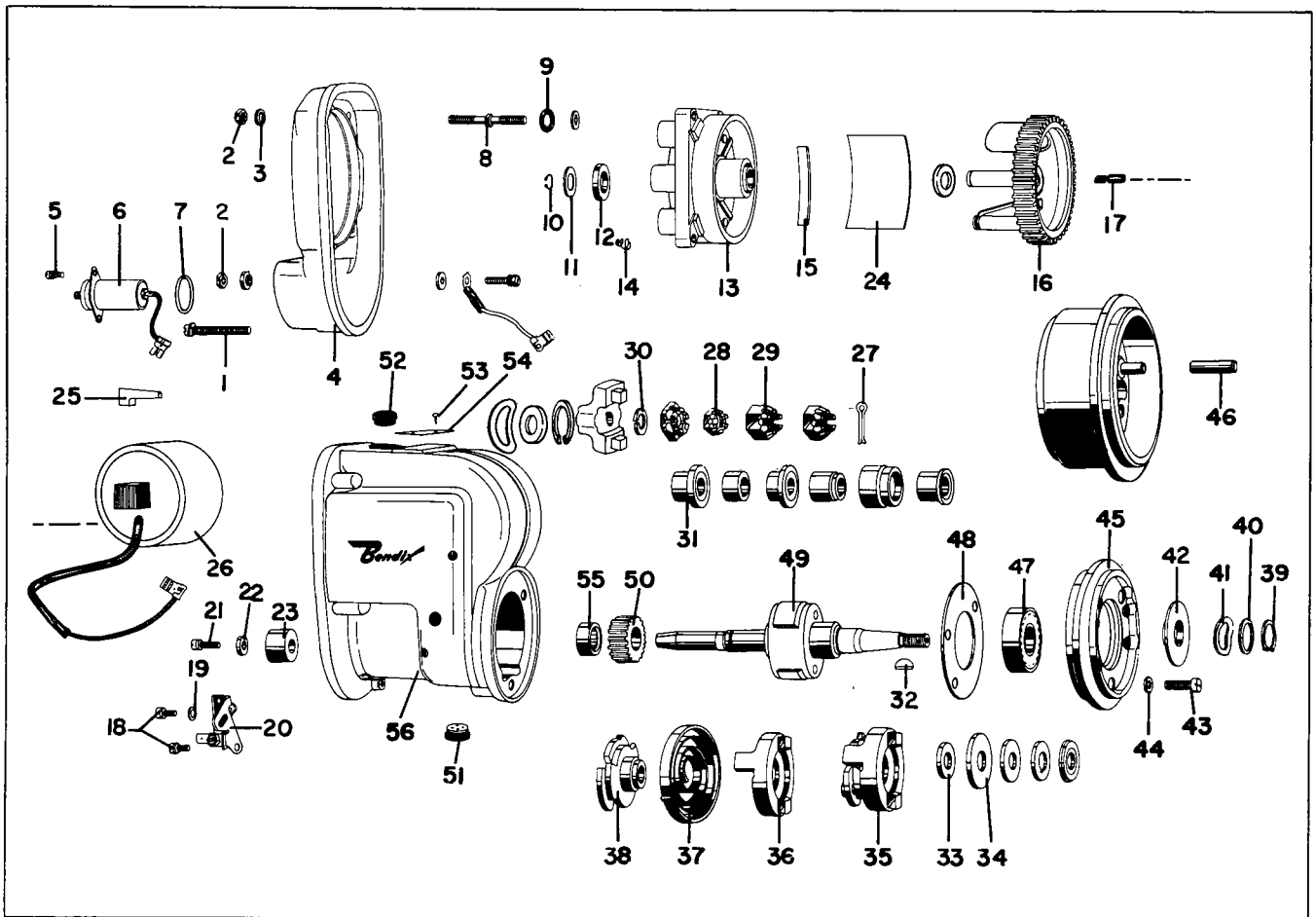


Figure 9-7. Bendix Magneto, -1200 Series

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

O-320, IO-320, LIO-320 SERIES
SECTION 9 - VENDOR ACCESSORY SECTION
9-8 - LEAR-SIEGLER FUEL PUMPS

| REF. NO. | PART NUMBER | 1 | 2 | 3 | 4 | 5 | DESCRIPTION | QTY. PER ENG. | MODEL USAGE |
|----------|--------------|---|---|---|---|---|--|---------------|-------------|
| | RG-17980 | | | | | | PUMP, Rotary power driven, fuel, Avco Lycoming 74547 | 1 | A |
| | RG-17980A | | | | | | PUMP, Rotary power driven, fuel, Avco Lycoming 76188 | 1 | B |
| | RG-17980D | | | | | | PUMP, Rotary power driven, fuel, Avco Lycoming 76486 | 1 | C |
| 1 | MS20995NC32 | | | | | | LOCKWIRE | AR | |
| 2 | RA7452 | | | | | | SEAL, Metallic | 1 | |
| | RB15997 | | | | | | COVER ASSEMBLY | 1 | |
| 3 | AN500A10-22 | | | | | | SCREW, (Attaching part) | 4 | |
| 4 | RA4105 | | | | | | WASHER, Flat (attaching part) | 4 | |
| 5 | RB15996 | | | | | | CAP, Valve | 1 | |
| 6 | AN501A10-10 | | | | | | SCREW | 1 | |
| 7 | RA7763 | | | | | | BALL | 1 | |
| 8 | RA7363 | | | | | | SPRING, Relief valve | 1 | |
| 9 | RB15985 | | | | | | VALVE ASSEMBLY, Safety relief | 1 | |
| 10 | RA5575 | | | | | | PLATE, Identification | 1 | |
| 11 | MS21318-1 | | | | | | SCREW, (Attaching) | 2 | |
| 12 | RA9099 | | | | | | PLATE, Instruction | 1 | |
| 13 | MS21318-1 | | | | | | SCREW, (Attaching) | 2 | |
| 14 | RG15982 | | | | | | HOUSING, Valve | 1 | |
| 15 | RA7427 | | | | | | VALVE, Bypass | 1 | |
| 16 | RA7424 | | | | | | SPRING, Bypass valve | 1 | |
| 17 | RA7425 | | | | | | GUIDE, Bypass valve | 1 | |
| 18 | RA15981 | | | | | | GASKET | 1 | |
| 19 | RA7438 | | | | | | PLATE, Thrust | 1 | |
| 20 | RA7491 | | | | | | BLADE, Pump | 2 | |
| 21 | MS16624-1062 | | | | | | RING, Retaining | 1 | |
| 22 | RB7779-2 | | | | | | SPLINE, Drive | 1 | A, B |
| 22 | RD7779-4 | | | | | | SPLINE, Drive | 1 | C |
| 23 | RA7791 | | | | | | ROTOR, Pump | 1 | |
| 24 | MS16625-1112 | | | | | | RING, Retaining | 1 | |
| 25 | RA6861 | | | | | | SEAL | 1 | |
| | RB16043 | | | | | | HOUSING ASSEMBLY | 1 | |
| 26 | RA7493 | | | | | | LINER | 1 | |
| 27 | RS16903-55 | | | | | | PIN, Straight, headless | 1 | |
| 28 | RA7754 | | | | | | BEARING | 1 | |
| 29 | RS16903-55 | | | | | | PIN, Straight, headless | 1 | |
| 30 | RD7492 | | | | | | HOUSING, Pump | 1 | |
| 31 | RA3485-1 | | | | | | PLUG, Pipe | 1 | A, C |
| | AN932C2 | | | | | | PLUG, Pipe | 3 | B |

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

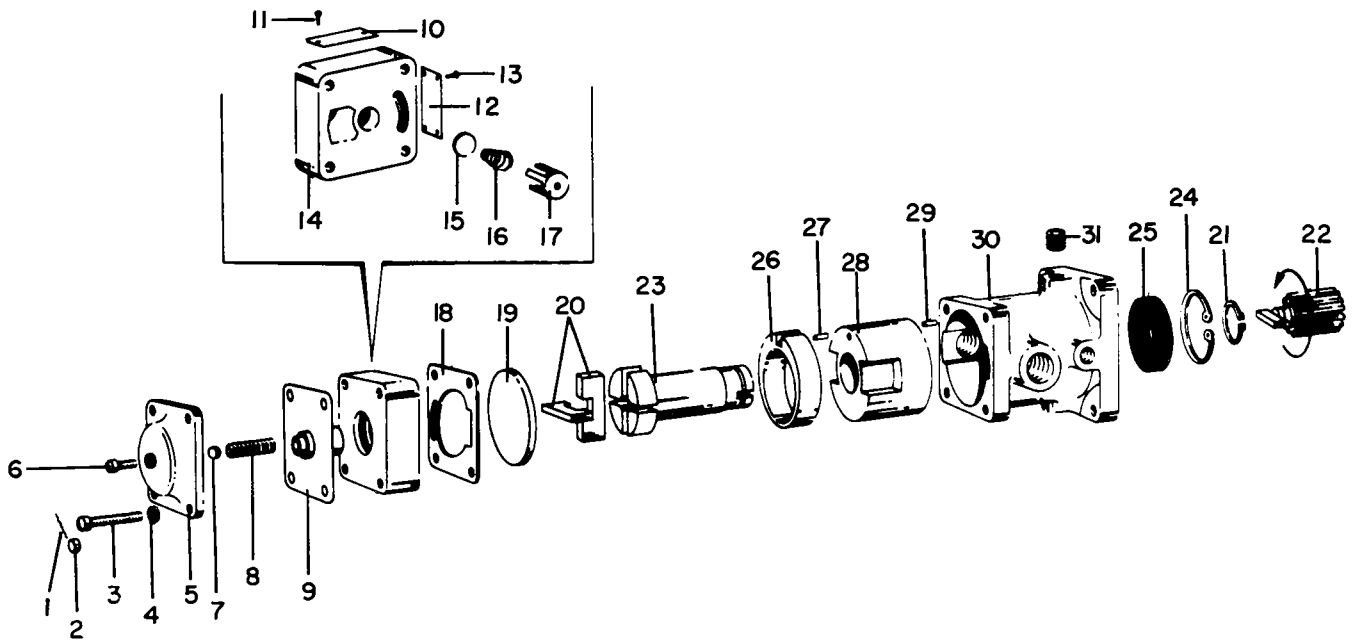


Figure 9-8. Lear-Siegler Fuel Pump

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

O-320, IO-320, LIO-320 SERIES
SECTION 9 - VENDOR ACCESSORY SECTION
9-9 - MARVEL-SCHEBLER CARBURETORS, MA-4SPA

| REF. NO. | PART NUMBER | DESCRIPTION | | | | | QTY. PER ENG. | MODEL USAGE |
|-------------|----------------|-------------|---|---|---|---|---------------------|----------------|
| | | 1 | 2 | 3 | 4 | 5 | | |
| | 10-3678-12 | | | | | | 1 | A |
| | 10-3678-32 | | | | | | 1 | B |
| | 10-4910 | | | | | | 1 | C |
| | 10-5009 | | | | | | 1 | D |
| 1 | 10-3689-1 | | | | | | 1 | A |
| 1 | 10-4331 | | | | | | 1 | B, C |
| 1 | 10-5018 | | | | | | 1 | D |
| 2 | 15-474 | | | | | | 4 | A, B |
| 2 | 15-B107 | | | | | | 4 | C, D |
| 3 | 15-A14 | | | | | | 1 | A, B |
| 3 | 15-A14 | | | | | | 2 | C, D |
| 4 | 16-222 | | | | | | 1 | |
| 5 | 16-224 | | | | | | 1 | A, B, C |
| 6 | 16-A16 | | | | | | 1 | |
| 7 | 16-A28 | | | | | | 1 | |
| 8 | 16-A107 | | | | | | 1 | |
| 9 | 17-372 | | | | | | 1 | |
| 10 | 24-432 | | | | | | 1 | |
| 11 | 36-525 | | | | | | 1 | |
| 12 | 36-540 | | | | | | 1 | |
| | 16-434 | | | | | | 1 | |
| 13 | 36-253 | | | | | | 1 | |
| 14 | 34-78 | | | | | | 1 | |
| 15 | 24-A60 | | | | | | 1 | |
| 16 | 36-247 | | | | | | 1 | |
| 17 | 99-8 | | | | | | 1 | A, B |
| 17 | 99-34 | | | | | | 1 | C, D |
| 18 | 37-7 | | | | | | 1 | |
| 19 | 47-741 | | | | | | 1 | A |
| 19 | 47-773 | | | | | | 1 | B |
| 19 | 47-806 | | | | | | 1 | C |
| 19 | 47-813 | | | | | | 1 | D |
| 20 | 78-5 | | | | | | 2 | A, B |
| 21 | 78-121 | | | | | | 2 | |
| 22 | 78-345* | | | | | | 4 | A |
| 22 | 78-358 | | | | | | 4 | B |
| 23 | 78-A110 | | | | | | 4 | C, D |
| 23 | 78-360 | | | | | | 4 | A |
| 24 | 82-9 | | | | | | 4 | A |
| 25 | 82-11* | | | | | | 1 | A, C, D |
| 25 | 82-11 | | | | | | 2 | B |
| 26 | 95-54 | | | | | | 1 | A, B, D |
| 27 | 99-8 | | | | | | 1 | A, B |
| 27 | 99-34 | | | | | | 1 | C, D |
| 28 | 110-173 | | | | | | 1 | |
| 29 | 194-581* | | | | | | 1 | |
| 30 | 221-76 | | | | | | 1 | |
| 31 | 229-587 | | | | | | 1 | |
| | 229-550 | | | | | | 1 | C |
| | 16-676 | | | | | | 1 | |
| | 286-1063 | | | | | | 1 | A |
| | 286-1285 | | | | | | 1 | B |
| | 286-1550 | | | | | | 1 | C |
| | 286-1568 | | | | | | 1 | D |

* - Indicates part of repair kit.

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

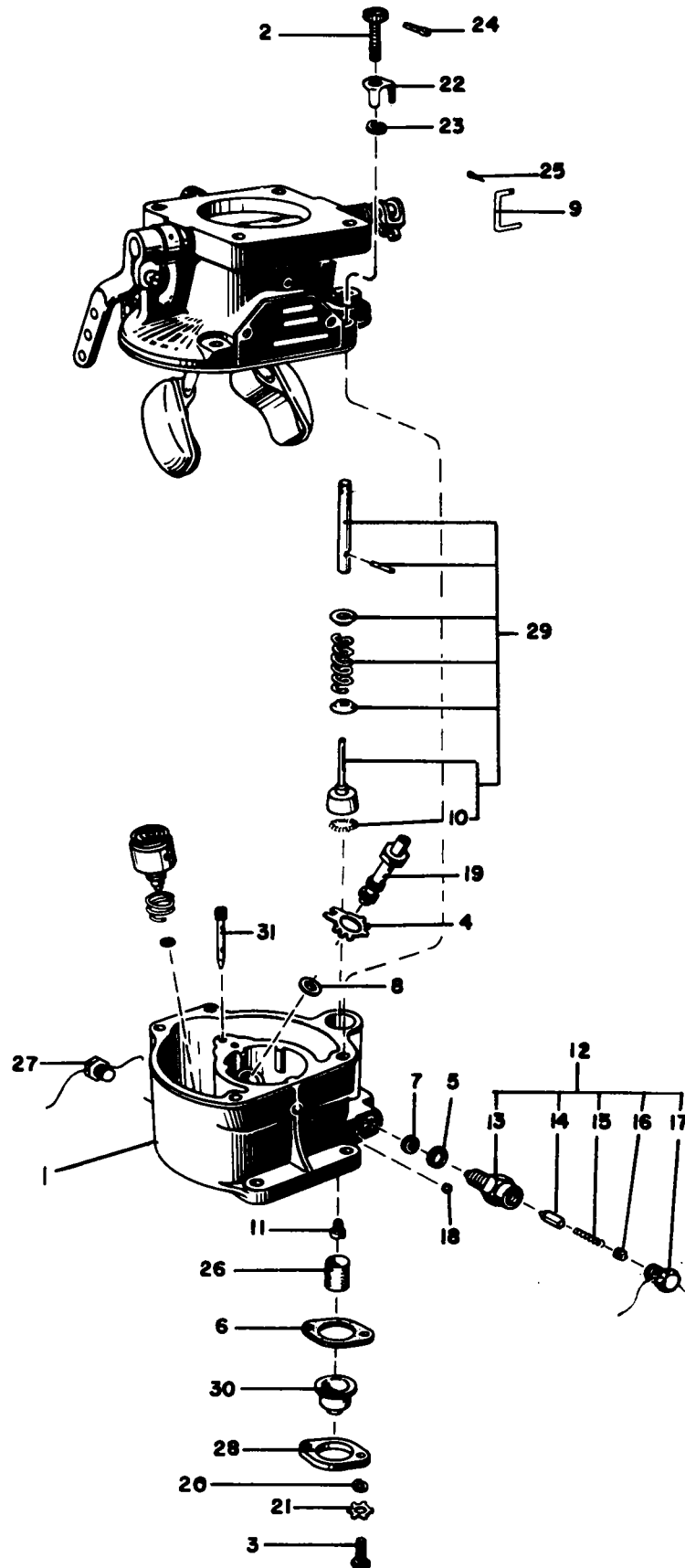


Figure 9-9. Marvel-Schebler Carburetor, MA-4SPA

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

O-320, IO-320, LIO-320 SERIES
SECTION 9 - VENDOR ACCESSORY SECTION
9-9A - MARVEL-SCHEBLER CARBURETORS, MA-4SPA (CONT.)

| REF. NO. | PART NUMBER | DESCRIPTION | | | | | QTY. PER ENG. | MODEL USAGE |
|-------------|----------------|-------------|---|---|---|---|---------------------|----------------|
| | | 1 | 2 | 3 | 4 | 5 | | |
| 1 | 227-1488 | | | | | | 1 | A |
| 1 | 227-1656 | | | | | | 1 | B, C |
| 1 | 227-1929 | | | | | | 1 | D |
| 2 | 12-1094 | | | | | | 1 | C |
| 2 | 12-798 | | | | | | 1 | A, B, D |
| 3 | 13-828* | | | | | | 1 | |
| 4 | 14-190 | | | | | | 1 | |
| 5 | 15-A21 | | | | | | 2 | |
| 6 | 15-42 | | | | | | 1 | |
| 7 | 15-483* | | | | | | 2 | |
| 8 | 15-493 | | | | | | 1 | A, B, C |
| 8 | 15-A297 | | | | | | 1 | D |
| 9 | 15-A1 | | | | | | 1 | |
| 10 | 15-A13 | | | | | | 1 | A, B |
| 10 | 15-B108 | | | | | | 1 | C, D |
| 11 | 16-224 | | | | | | 1 | A, B, C |
| 12 | 16-A28 | | | | | | 1 | A, B, C |
| 12 | 44-190 | | | | | | 1 | C, D |
| 13 | 16-471 | | | | | | 1 | |
| 14 | 16-A222 | | | | | | 1 | A, B |
| 14 | 16-A17 | | | | | | 1 | D |
| 14 | 16-B75 | | | | | | 1 | C |
| 15 | 16-A36 | | | | | | 1 | |
| 16 | 24-262 | | | | | | 1 | |
| 17 | 24-480 | | | | | | 1 | |
| 18 | 24-A56* | | | | | | 1 | |
| 19 | 24-A10 | | | | | | 1 | |
| 20 | 29-113 | | | | | | 3 | |
| 21 | 30-628 | | | | | | 1 | A, B |
| 21 | 30-759 | | | | | | 1 | C, D |
| 22 | 32-32 | | | | | | 1 | |
| 23 | 37-7 | | | | | | 1 | |
| 24 | 43-564 | | | | | | 1 | |
| 25 | 44-49 | | | | | | 1 | |
| 26 | 46-A33 | | | | | | 1 | |
| 27 | 46-A2 | | | | | | 1 | |
| 28 | 49-180 | | | | | | 1 | B, C |
| 29 | 55-270 | | | | | | 1 | A, B, D |
| 30 | 60-260 | | | | | | 2 | |
| 31 | 78-184 | | | | | | 1 | |
| 32 | 78-184 | | | | | | 1 | |
| 33 | 78-356 | | | | | | 1 | |
| 34 | 78-357 | | | | | | 1 | A, B |
| 34 | 78-A-109 | | | | | | 1 | C, D |
| 35 | 78-388 | | | | | | 1 | |
| 36 | 82-11 | | | | | | 1 | |
| 37 | 82-11 | | | | | | 1 | |
| 38 | 95-509 | | | | | | 1 | |
| 39 | 136-58 | | | | | | 1 | |
| 40 | 155-226 | | | | | | 1 | A, B, C |
| 41 | 155-597 | | | | | | 1 | |
| 42 | 233-583 | | | | | | 1 | A, B |
| 42 | 233-615 | | | | | | 1 | C, D |
| 43 | 242-514 | | | | | | 1 | |
| | 29-184 | | | | | | 1 | C |
| | 29-193 | | | | | | 1 | C, D |
| | 78A-128 | | | | | | 1 | D |

* - Indicates part of repair kit.

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

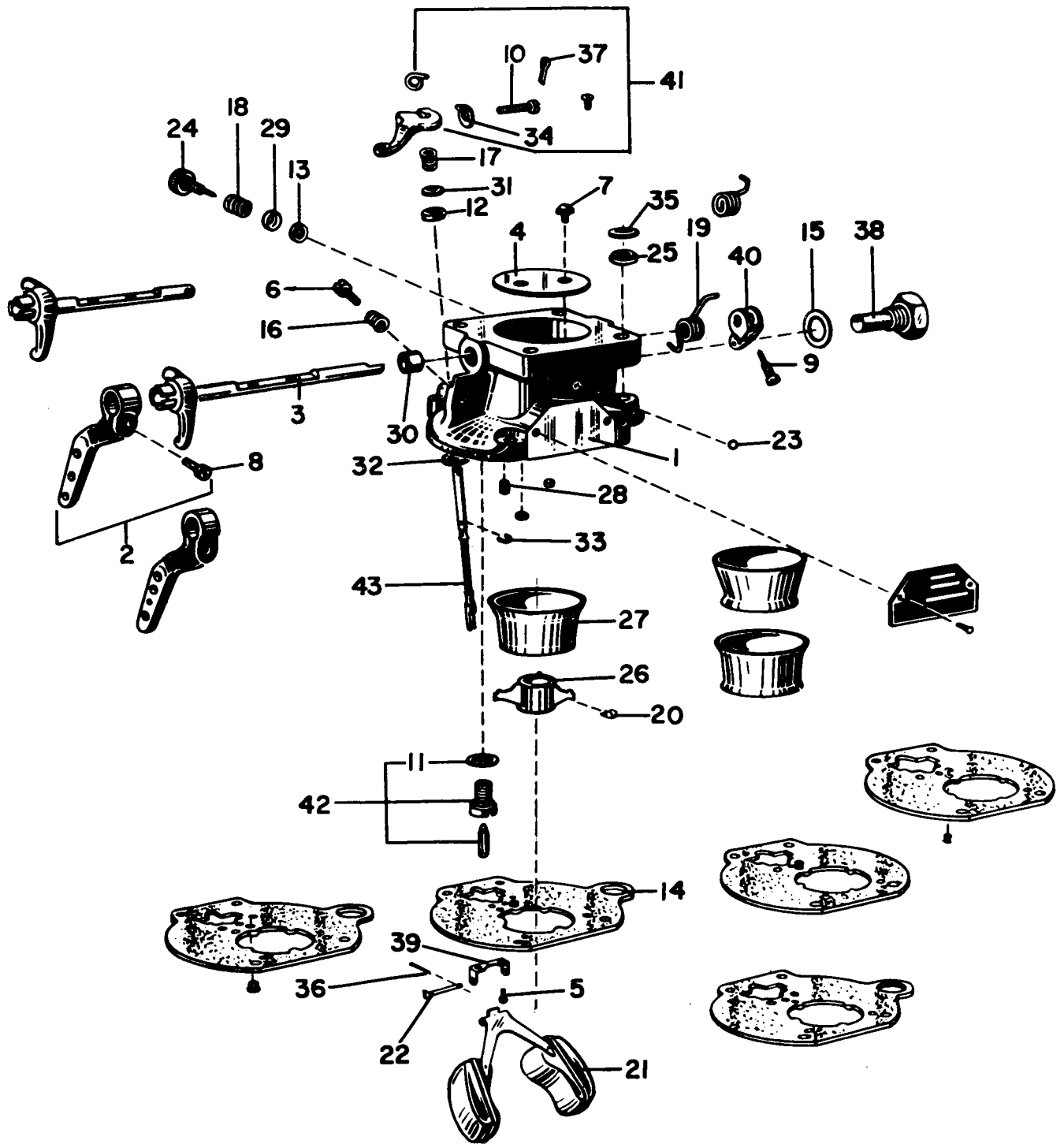


Figure 9-9A. Marvel-Schebler Carburetor, MA-4SPA

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

O-320, IO-320, LIO-320 SERIES
SECTION 9 - VENDOR ACCESSORY SECTION
9-10 - BENDIX FUEL INJECTORS, RSA5AD1

| REF. NO. | PART NUMBER | DESCRIPTION | | | | | QTY. PER ENG. | MODEL USAGE |
|-------------|----------------|--|---|---|---|---|---------------------|----------------|
| | | 1 | 2 | 3 | 4 | 5 | | |
| | 2524145-5 | FUEL INJECTOR, Bendix, Model RSA5AD1, Avco Lycoming P/N 74534 | | | | | 1 | A |
| | 2524242-3 | FUEL INJECTOR, Bendix, Model RSA5AD1, Avco Lycoming P/N 76082 | | | | | 1 | B |
| | 2524307-3 | FUEL INJECTOR, Bendix, Model RSA5AD1, Avco Lycoming P/N 77260 | | | | | 1 | C |
| | 2524328-3 | FUEL INJECTOR, Bendix, Model RSA5AD1, Avco Lycoming P/N 77543 | | | | | 1 | D |
| | 2524335-3 | FUEL INJECTOR, Bendix, Model RSA5AD1, Avco Lycoming 77597 | | | | | 1 | E |
| 1 | 328617 | SEAL, Aluminum | | | | | 1 | |
| 2 | 367828 | PLATE, Identification | | | | | 1 | |
| 3 | 186739 | SCREW, Self tapping | | | | | 2 | |
| 4 | 132906 | PLUG, Threaded, 7/16-20 | | | | | 2 | |
| 5 | 951787 | PACKING, Preformed | | | | | 2 | |
| 6 | 2522709 | PLUG, Machine thread | | | | | 1 | A, B, C, D |
| 7 | 2522712 | STRAINER ASSEMBLY | | | | | 1 | |
| 8 | 2522710 | ADAPTER | | | | | 1 | |
| 9 | 951789 | PACKING, Preformed | | | | | 2 | |
| 10 | P61195 | PLUG, Taper seat, 1/4-28 | | | | | 3 | |
| 11 | 367719 | ELBOW, Tube 90° | | | | | 1 | |
| 12 | 367720 | NUT, Universal fitting | | | | | 1 | |
| 13 | 951787 | PACKING | | | | | 1 | |
| 14 | 2525165 | SPRING, Helical extension | | | | | 1 | |
| 15 | 901200K1 | PIN, Cotter, 1/2 x 1/16 in. | | | | | 2 | |
| 16 | 911244 | WASHER, Flat | | | | | 1 | |
| 17 | 177718 | WASHER, Spring | | | | | 1 | |
| 18 | 2522022 | PIN, Straight headed | | | | | 1 | |
| 19 | 901200K1 | PIN, Cotter | | | | | 1 | |
| 20 | 911242 | WASHER, Flat | | | | | 1 | |
| 21 | P19821 | WASHER, Spring | | | | | 1 | |
| 22 | 2522021 | PIN, Straight headed | | | | | 1 | |
| 23 | 367418 | LINK | | | | | 1 | |
| 24 | 367547 | SCREW ASSEMBLY, Idle | | | | | 1 | |
| 25 | 367544 | LINK | | | | | 1 | |
| 26 | 2522004 | LEVER, Mixture control | | | | | 1 | |
| 27 | 187313 | NUT, Self locking, hex, 5/16-24 | | | | | 1 | |
| 28 | 399847 | SCREW, Machine, no. 10-24 x 3/4 in. | | | | | 1 | |
| 29 | 199596 | WASHER, Flat | | | | | 1 | |
| 30 | 2525318 | SPACER | | | | | 1 | |
| 31 | 188595 | WASHER, Flat | | | | | 2 | |
| 32 | 79216 | SCREW, Machine, no. 10-24 x 1/2 in. | | | | | 1 | |
| 33 | 2520879 | PLATE, Mixture | | | | | 1 | |
| 34 | 909281K35 | PIN, Spring | | | | | 1 | |
| 35 | 2523840 | BUSHING, Mixture control | | | | | 1 | |
| 36 | 338491 | WASHER, C | | | | | 1 | |
| 37 | 367694 | HOLDER, Spring | | | | | 1 | |
| 38 | 2523757 | SPRING, Helical compression | | | | | 1 | |
| 39 | 951401 | PACKING, Preformed | | | | | 1 | |
| 40 | 2520878 | BUSHING, Sleeve | | | | | 1 | |
| 41 | 953516-10 | PACKING, Preformed | | | | | 1 | |
| 42 | 2522591 | LEVER ASSEMBLY, Mixture control | | | | | 1 | |

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

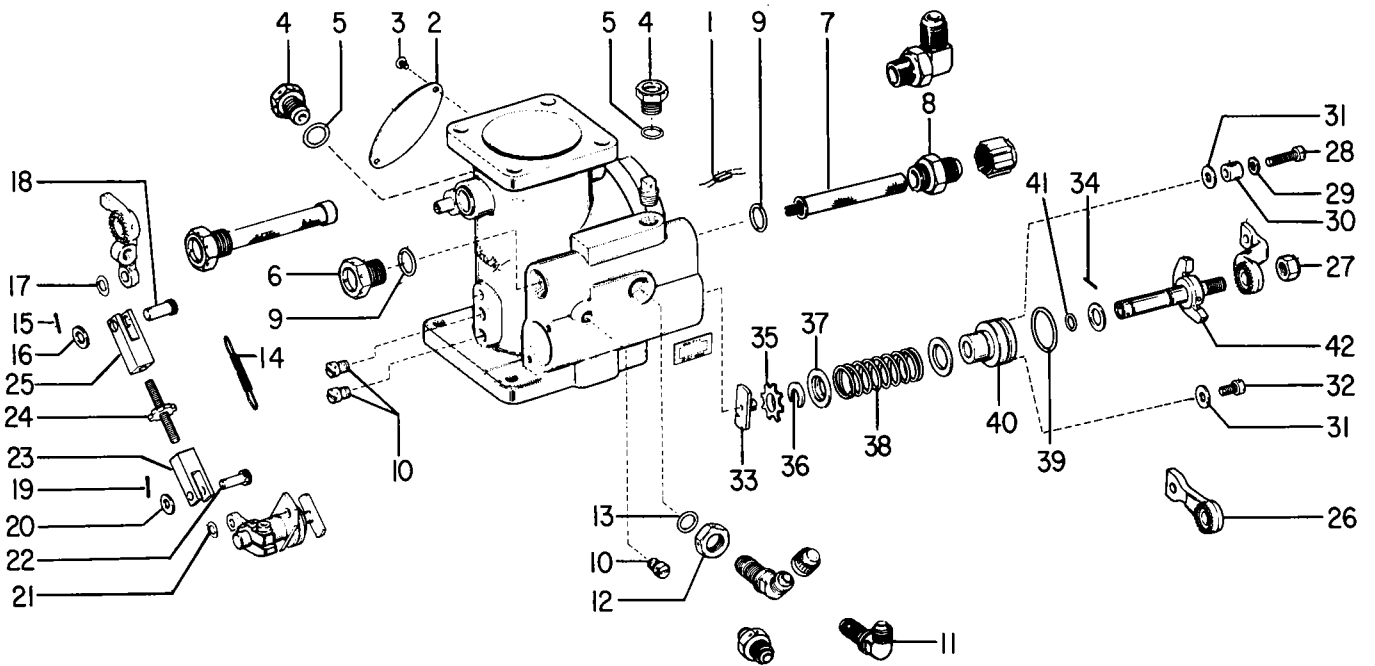


Figure 9-10. Bendix Fuel Injector, RSA-5AD1

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

O-320, IO-320, LIO-320 SERIES
SECTION 9 - VENDOR ACCESSORY SECTION
9-10A - BENDIX FUEL INJECTORS, RSA5AD1 (CONT.)

| REF. NO. | PART NUMBER | DESCRIPTION | | | | | QTY. PER ENG. | MODEL USAGE |
|-------------|----------------|-------------|---|---|---|---|---------------------|----------------|
| | | 1 | 2 | 3 | 4 | 5 | | |
| 1 | 2523718 | | | | | | 1 | A, B, C |
| 1 | 2525152 | | | | | | 1 | D, E |
| 2 | 79216 | | | | | | 2 | |
| 3 | 911242 | | | | | | 2 | |
| 4 | P21818 | | | | | | 1 | |
| 5 | P22198 | | | | | | 1 | |
| 6 | 909329K35 | | | | | | 1 | |
| 7 | 2526408 | | | | | | 1 | |
| 8 | 2522326 | | | | | | 1 | |
| 9 | 367757 | | | | | | 1 | |
| 10 | 953516-10 | | | | | | 1 | |
| 11 | 951400 | | | | | | 1 | |
| 12 | 2525195 | | | | | | 1 | |
| 13 | 951400 | | | | | | 1 | |
| 14 | 2525494 | | | | | | 1 | |
| 15 | 2521974 | | | | | | 1 | A, B, C, E |
| 15 | 2520626 | | | | | | 1 | D |
| 16 | 2537499 | | | | | | 1 | |
| 17 | 2537500 | | | | | | 1 | |
| 18 | 362842 | | | | | | 6 | |
| 19 | 911242 | | | | | | 6 | |
| 20 | 2537498 | | | | | | 1 | |
| 21 | 365533 | | | | | | 1 | |
| 22 | 2523501 | | | | | | 1 | |
| 23 | 178491 | | | | | | 1 | |
| 24 | 2529180 | | | | | | 1 | |
| 25 | 2529181 | | | | | | 1 | |
| 26 | 2520625 | | | | | | 1 | |
| 27 | 2529182 | | | | | | 1 | |
| 28 | 2529183 | | | | | | 1 | |
| 29 | 2529470 | | | | | | 1 | |
| 30 | 2520652 | | | | | | 1 | |
| 31 | 2520882 | | | | | | 1 | |
| 31 | 2523506 | | | | | | 1 | |
| 32 | 367727 | | | | | | AR | |
| 33 | 2529188 | | | | | | 1 | |
| 34 | 2529471 | | | | | | 1 | |
| 35 | 2529184 | | | | | | 1 | |
| 36 | 2529294 | | | | | | 1 | |
| 37 | P21819 | | | | | | 1 | |
| 38 | 911242 | | | | | | 1 | |
| 39 | 951437 | | | | | | 3 | |
| 40 | 367969 | | | | | | 1 | |
| 41 | P70249 | | | | | | 4 | |
| 42 | 2523509 | | | | | | 1 | |
| 43 | 367639 | | | | | | 1 | |
| 44 | P4235 | | | | | | 2 | |
| 45 | 901045K12 | | | | | | 2 | |
| 46 | 2521196 | | | | | | 1 | |
| 47 | 901209K1 | | | | | | 1 | |
| 48 | 900848K36 | | | | | | 1 | |
| 49 | 904269K1 | | | | | | 1 | C |
| 50 | 2523432 | | | | | | 1 | A, B, D, E |
| 51 | P60219 | | | | | | 1 | |
| 52 | 2521976 | | | | | | 1 | |
| 53 | 909329K35 | | | | | | 1 | |
| 54 | 367631 | | | | | | 1 | |
| 55 | 2521984 | | | | | | 1 | |

LYCOMING PARTS CATALOG
O-320, IO-320 AND LIO-320 SERIES
SECTION 10
NUMERICAL INDEX

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

O-320, IO-320, LIO-320 SERIES
 NUMERICAL INDEX PARTS SECTION

| PART NO. | FIG-REF. NO. | PART NAME | QTY. | PART NO. | FIG-REF. NO. | PART NAME | QTY. |
|--------------|-----------------|-----------|------|----------|-----------------|-----------|------|
| AN6-12 | 5-2-17 | Bolt | 1 | STD-8 | 2-6-9 | Washer | 4 |
| AN6-13 | 5-2-39 | Bolt | 1 | STD-8 | 2-8-7 | Washer | 6 |
| AN6-14 | 5-2-17 | Bolt | 1 | STD-8 | 2-8-8 | Washer | 2 |
| AN6-16 | 5-2-39 | Bolt | 1 | STD-8 | 2-8-9 | Washer | 24 |
| AN6-32 | 5-1-24 | Bolt | 1 | STD-8 | 2-8-14 | Washer | AR |
| AN6-32 | 5-2-17 | Bolt | 1 | STD-8 | 2-9-12 | Washer | 8 |
| AN365-632C | 4-2-14 | Nut | 4 | STD-8 | 2-9-13 | Washer | 4 |
| AN365-632C | 4-3 | Nut | 4 | STD-8 | 2-9-12 | Washer | 2 |
| AN365-632C | 6-5-7 | Nut | 4 | STD-8 | 2-9-14 | Washer | 10 |
| AN380C4-2 | 2-3-2 | Pin | 1 | STD-8 | 2-9-15 | Washer | 16 |
| AN456AD4-8 | 2-1-17 | Rivet | 1 | STD-8 | 3-4-25 | Washer | 8 |
| AN456AD4-22 | 2-1-18 | Rivet | 1 | STD-8 | 4-2-16 | Washer | 2 |
| AN500-416-12 | 4-2-18 | Screw | 2 | STD-8 | 4-3 | Washer | 2 |
| AN500-416-12 | 4-3 | Screw | 2 | STD-8 | 4-3 | Washer | 13 |
| AN500-416-18 | 4-2-18 | Screw | 2 | STD-8 | 5-1-3 | Washer | 1 |
| AN500-416-18 | 4-3 | Screw | 2 | STD-8 | 6-4 | Washer | 1 |
| AN777-8D | 2-4-31 | Elbow | 1 | STD-8 | 7-4 | Washer | 1 |
| AN822-4-4 | 6-4-9 | Elbow | 1 | STD-33 | 1-5-1 | Washer | 4 |
| AN822-5-4D | 7-4-10 | Elbow | 1 | STD-33 | 1-5-1 | Washer | 2 |
| AN823-6D | 3-2-10 | Elbow | 4 | STD-33 | 1-5-7 | Washer | 2 |
| AN844-10D | 2-4-33 | Elbow | 1 | STD-33 | 1-5-8 | Washer | 2 |
| AN901-8A | 2-4-30 | Gasket | 1 | STD-33 | 1-6-5 | Washer | 6 |
| AN919-6 | 6-4 | Reducer | 1 | STD-33 | 2-6-20 | Washer | 2 |
| MS13997-3 | 3-3-10 | Key | 8 | STD-33 | 5-1-22 | Washer | AR |
| MS13998-3 | 3-3-11 | Cap | 4 | STD-33 | 5-2-18 | Washer | 1 |
| MS16625-1081 | 1-6-14 | Ring | 1 | STD-33 | 5-2-18 | Washer | AR |
| MS16625-1125 | 5-2 | Ring | 2 | STD-33 | 5-2-19 | Washer | AR |
| MS21919F12 | 6-4-3 | Clip | 4 | STD-33 | 5-2-41 | Washer | AR |
| MS29512-6 | 6-1 | Seal | 1 | STD-33 | 6-1-3 | Washer | 2 |
| MS29512-6 | 6-1-23 | "O" Ring | 2 | STD-33 | 6-1-8 | Washer | 2 |
| MS29512-6 | 6-4 | Seal | 1 | STD-35 | 2-3-7 | Washer | 3 |
| MS29512-6 | 7-4 | "O" Ring | 1 | STD-35 | 2-6-15 | Washer | 4 |
| M-1455 | 4-6-7 | Spring | 4 | STD-35 | 2-7-6 | Washer | 4 |
| M-1458 | 4-6-9 | Ferrule | 4 | STD-35 | 2-7-11 | Washer | 4 |
| M-1498 | 4-6-8 | Electrode | 4 | STD-35 | 2-7-16 | Washer | 32 |
| M-1671 | 4-6-5 | Ferrule | 4 | STD-35 | 2-7-16 | Washer | 4 |
| M-1673 | 4-6-10 | Nut | 4 | STD-35 | 5-1-14 | Washer | 1 |
| M-1677 | 4-6-6 | Sleeve | 4 | STD-35 | 5-1-21 | Washer | AR |
| M-1735-22 | 4-6-1 | Lead | 1 | STD-35 | 5-2-7 | Washer | AR |
| M-1735-23 | 4-6-3 | Lead | 1 | STD-35 | 5-2-13 | Washer | 1 |
| M-1735-29 | 4-6-2 | Lead | 1 | STD-35 | 5-2-24 | Washer | 1 |
| M-1735-29 | 4-6-3 | Lead | 1 | STD-35 | 5-4-2 | Washer | 4 |
| M-1735-30 | 4-6-4 | Lead | 1 | STD-35 | 6-1-13 | Washer | 4 |
| M-1735-32 | 4-6-1 | Lead | 1 | STD-35 | 6-1-13 | Washer | 16 |
| M-1735-36 | 4-6-4 | Lead | 1 | STD-35 | 6-1-18 | Washer | 4 |
| M-1735-38 | 4-6-2 | Lead | 1 | STD-35 | 6-2-3 | Washer | 4 |
| M-1738 | 4-6-11 | Sleeve | 4 | STD-35 | 6-3-4 | Washer | 4 |
| STD-8 | 1-5-2 | Washer | 16 | STD-35 | 6-3-9 | Washer | 4 |
| STD-8 | 1-5-5 | Washer | 3 | STD-35 | 7-2-3 | Washer | 8 |
| STD-8 | 1-5-6 | Washer | AR | STD-35 | 7-4-7 | Washer | 3 |
| STD-8 | 2-3 | Washer | 2 | STD-68 | 2-8-16 | Pin | 2 |
| STD-8 | 2-3-10 | Washer | 10 | STD-68 | 5-1-10 | Pin | 2 |
| STD-8 | 2-3-11 | Washer | 2 | STD-68 | 5-2-9 | Pin | 2 |
| STD-8 | 2-4-6 | Washer | 3 | STD-82 | 6-3-17 | Screw | 4 |
| STD-8 | 2-4-6 | Washer | 4 | STD-91 | 2-9-10 | Plug | 1 |
| STD-8 | 2-4-21 | Washer | 4 | STD-111 | 2-9-17 | Gasket | 1 |
| STD-8 | 2-5-31 | Washer | 2 | STD-160 | 1-2-6 | Washer | 6 |
| STD-8 | 2-5-34 | Washer | 1 | STD-160 | 1-5-2 | Washer | 8 |
| STD-8 | 2-5-37 | Washer | 3 | STD-160 | 1-5-3 | Washer | 2 |
| STD-8 | 2-6-3 | Washer | 8 | STD-160 | 1-5-3 | Washer | 1 |
| STD-8 | 2-6-3 | Washer | 4 | STD-160 | 1-5-5 | Washer | 3 |

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

O-320, IO-320, LIO-320 SERIES
 SECTION 9 - VENDOR ACCESSORY SECTION
 9-10A - BENDIX FUEL INJECTORS, RSA5AD1 (CONT.)

| REF. NO. | PART NUMBER | DESCRIPTION | | | | | QTY. PER ENG. | MODEL USAGE |
|----------|-------------|-------------|---|---|---|-----------------|---------------|-------------|
| | | 1 | 2 | 3 | 4 | 5 | | |
| 56 | 2525969 | | | | | STOP, Throttle | 1 | |
| 57 | 909311K35 | | | | | PIN, Spring | 1 | |
| 58 | 367725 | | | | | BUSHING, Sleeve | 2 | |
| 59 | 384583 | | | | | INSERT | 4 | |

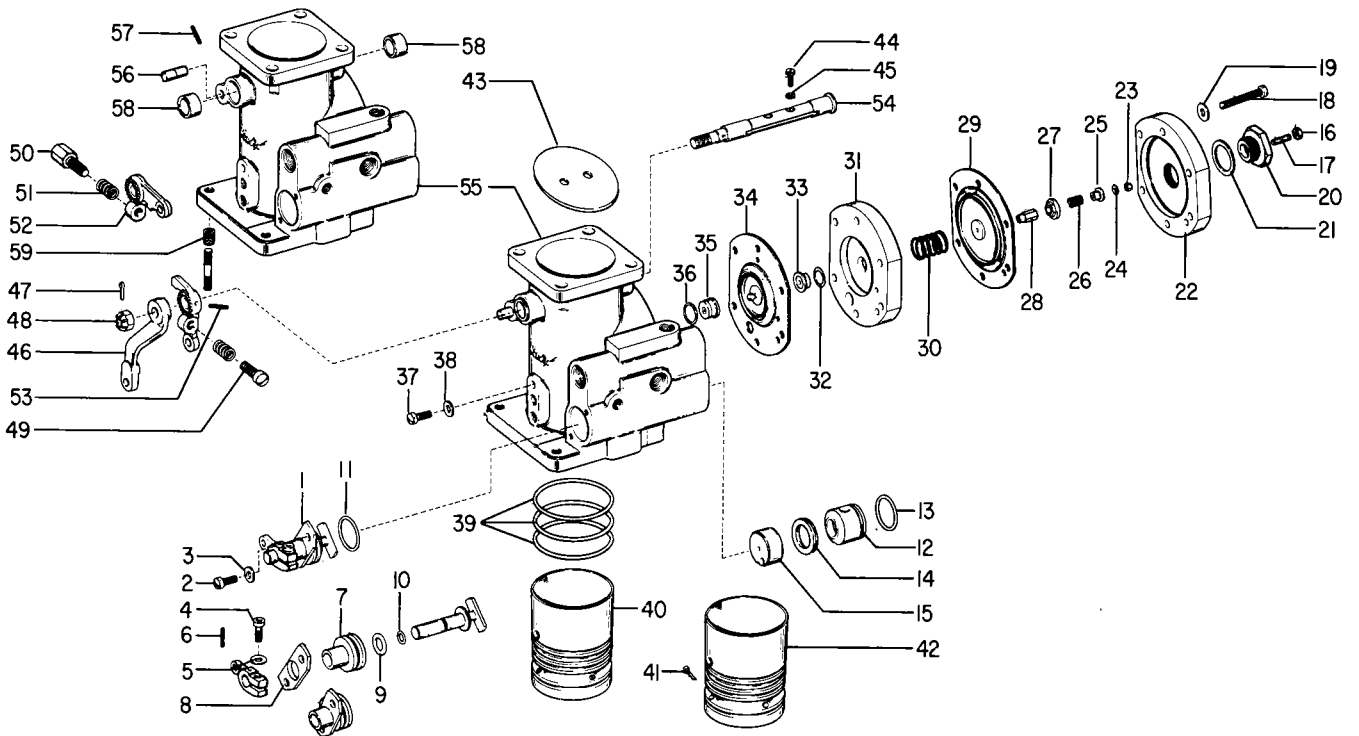


Figure 9-10A. Bendix Fuel Injector, RSA-5AD1

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

O-320, IO-320, LIO-320 SERIES
 NUMERICAL INDEX PARTS SECTION

| PART NO. | FIG-REF. NO. | PART NAME | QTY. | PART NO. | FIG-REF. NO. | PART NAME | QTY. |
|----------|-----------------|-----------|------|----------|-----------------|-----------|------|
| STD-160 | 2-3-10 | Washer | 10 | STD-619 | 1-1-20 | Bushing | 8 |
| STD-160 | 2-3-11 | Washer | 2 | STD-669 | 5-2-29 | Washer | 1 |
| STD-160 | 2-4-20 | Washer | 1 | STD-670 | 6-4-7 | Nut | 4 |
| STD-160 | 2-5-32 | Washer | 2 | STD-670 | 6-4 | Nut | 1 |
| STD-160 | 2-5-35 | Washer | 1 | STD-670 | 6-4 | Nut | 2 |
| STD-160 | 2-5-38 | Washer | 3 | STD-676 | 5-2-30 | Nut | 1 |
| STD-160 | 2-5-42 | Washer | 1 | STD-678 | 1-5-1 | Washer | 2 |
| STD-160 | 2-6-4 | Washer | 8 | STD-684 | 3-4-16 | Nipple | 4 |
| STD-160 | 2-6-4 | Washer | 4 | STD-696 | 2-5-40 | Washer | AR |
| STD-160 | 2-6-10 | Washer | 4 | STD-700 | 7-4-10 | Elbow | 1 |
| STD-160 | 2-8-7 | Washer | 6 | STD-705 | 1-6-17 | Screw | 4 |
| STD-160 | 2-8-8 | Washer | 2 | STD-705 | 1-7-3 | Screw | 2 |
| STD-160 | 2-8-9 | Washer | 12 | STD-713 | 5-1-11 | Pin | 1 |
| STD-160 | 2-9-12 | Washer | 8 | STD-713 | 5-2-21 | Pin | 1 |
| STD-160 | 2-9-14 | Washer | 4 | STD-713 | 5-2-43 | Pin | 1 |
| STD-160 | 2-9-14 | Washer | 10 | STD-714 | 2-3-2 | Pin | 1 |
| STD-160 | 2-9-15 | Washer | 8 | STD-783 | 1-1-18 | Plug | 1 |
| STD-160 | 2-9-12 | Washer | 2 | STD-783 | 2-2-19 | Plug | 1 |
| STD-160 | 3-4-26 | Washer | 8 | STD-783 | 2-7 | Plug | 1 |
| STD-160 | 4-2-17 | Washer | 2 | STD-784 | 2-1-12 | Plug | 1 |
| STD-160 | 4-3 | Washer | 2 | STD-784 | 2-2-13 | Plug | 1 |
| STD-160 | 4-4 | Washer | 1 | STD-847 | 1-3-11 | Screw | 1 |
| STD-160 | 5-1-4 | Washer | 3 | STD-853 | 6-5-8 | Tee | 3 |
| STD-160 | 6-3-18 | Washer | 1 | STD-860 | 6-4-5 | Screw | 4 |
| STD-160 | 6-4 | Washer | 1 | STD-860 | 6-4 | Screw | 1 |
| STD-208 | 2-5-4 | Oil Seal | 1 | STD-860 | 6-4 | Screw | 2 |
| STD-208 | 2-5-21 | Seal | 1 | STD-872 | 1-5-7 | Nut | 1 |
| STD-213 | 1-7-14 | Seal | 1 | STD-872 | 1-5-8 | Nut | 1 |
| STD-251 | 6-3-16 | Washer | 4 | STD-872 | 5-1-23 | Nut | 1 |
| STD-294 | 2-4-5 | Gasket | 1 | STD-872 | 5-2-20 | Nut | 1 |
| STD-294 | 2-4-5 | Gasket | 2 | STD-872 | 5-2-42 | Nut | 1 |
| STD-294 | 2-4-24 | Gasket | 1 | STD-938 | 2-5-27 | Dowel | 1 |
| STD-294 | 2-4-28 | Gasket | 1 | STD-957 | 4-2-5 | Grommet | 4 |
| STD-295 | 4-7-3 | Gasket | 8 | STD-1006 | 2-1-19 | Ring | 1 |
| STD-347 | 3-4-17 | Hose | 4 | STD-1006 | 2-2-17 | Ring | 1 |
| STD-406 | 7-3 | Dowel | 2 | STD-1045 | 1-2-13 | Gasket | 1 |
| STD-425 | 1-2-12 | Washer | AR | STD-1045 | 2-8-18 | Gasket | 1 |
| STD-425 | 6-4-6 | Washer | 4 | STD-1065 | 1-3-3 | Dowel | 1 |
| STD-425 | 6-4 | Washer | 1 | STD-1065 | 1-4-8 | Dowel | 1 |
| STD-425 | 6-4 | Washer | 2 | STD-1102 | 1-1-8 | Plug | 5 |
| STD-460 | 6-4 | Screw | 1 | STD-1102 | 2-1-11 | Plug | 2 |
| STD-475 | 2-6-16 | Washer | 4 | STD-1102 | 2-1-13 | Plug | 1 |
| STD-475 | 2-7-7 | Washer | 4 | STD-1102 | 2-2-12 | Plug | 2 |
| STD-475 | 2-7-12 | Washer | 4 | STD-1102 | 2-2-14 | Plug | 1 |
| STD-475 | 2-7-17 | Washer | 4 | STD-1102 | 2-5-29 | Plug | 1 |
| STD-475 | 4-1-7 | Washer | 4 | STD-1102 | 2-7-3 | Plug | 1 |
| STD-475 | 5-4-3 | Washer | 4 | STD-1102 | 2-9-11 | Plug | 2 |
| STD-475 | 6-1-14 | Washer | 4 | STD-1102 | 3-2 | Plug | 4 |
| STD-475 | 6-1-19 | Washer | 4 | STD-1102 | 6-5 | Plug | 4 |
| STD-475 | 6-3-10 | Washer | 4 | STD-1196 | 3-4-21 | Hose | 4 |
| STD-475 | 7-2-4 | Washer | 8 | STD-1197 | 1-5-1 | Bolt | 2 |
| STD-475 | 7-4-8 | Washer | 1 | STD-1198 | 1-6-6 | Bolt | 6 |
| STD-514 | 1-1-13 | Dowel | 2 | STD-1199 | 1-6-9 | Pin | 1 |
| STD-548 | 2-5-22 | Seal | 1 | STD-1202 | 5-4-4 | Bolt | 1 |
| STD-551 | 2-8-6 | Plug | 1 | STD-1204 | 2-3-10 | Bolt | 10 |
| STD-551 | 2-9-9 | Plug | 2 | STD-1204 | 2-8-7 | Bolt | 6 |
| STD-553 | 4-2-13 | Screw | 4 | STD-1204 | 2-8-9 | Bolt | 12 |
| STD-553 | 4-3 | Screw | 4 | STD-1204 | 2-9-12 | Bolt | 8 |
| STD-553 | 6-5-6 | Screw | 4 | STD-1204 | 2-9-15 | Bolt | 8 |
| STD-557 | 1-1-1 | Dowel | 2 | STD-1204 | 2-9-12 | Bolt | 2 |
| STD-596 | 1-5-1 | Nut | 2 | STD-1205 | 1-5-7 | Bolt | 1 |

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

O-320, IO-320, LIO-320 SERIES
 NUMERICAL INDEX PARTS SECTION

| PART NO. | FIG-REF. NO. | PART NAME | QTY. | PART NO. | FIG-REF. NO. | PART NAME | QTY. |
|----------|-----------------|-----------|------|----------|-----------------|------------|------|
| STD-1211 | 1-3-2 | Plug | 1 | STD-1623 | 1-1-14 | Insert | 2 |
| STD-1215 | 1-5-4 | Bolt | 2 | STD-1727 | 4-1-6 | Washer | 4 |
| STD-1215 | 2-5-43 | Bolt | 1 | STD-1727 | 5-1-20 | Washer | 1 |
| STD-1215 | 3-4-27 | Bolt | 8 | STD-1727 | 5-2-12 | Washer | 1 |
| STD-1215 | 5-1-6 | Bolt | 2 | STD-1727 | 5-2-25 | Washer | 1 |
| STD-1221 | 2-6-24 | Ring | 1 | STD-1727 | 5-2-28 | Washer | 2 |
| STD-1227 | 2-3 | Washer | 2 | STD-1763 | 6-2-5 | Locknut | 4 |
| STD-1227 | 2-8-12 | Washer | 2 | STD-1763 | 6-3-6 | Locknut | 4 |
| STD-1269 | 3-4-22 | Clamp | 8 | STD-1774 | 1-7-13 | Pin | 1 |
| STD-1323 | 5-4-4 | Bolt | 1 | STD-1774 | 2-5-3 | Pin | 1 |
| STD-1339 | 2-3-3 | Plug | 1 | STD-1774 | 2-5-30 | Pin | 1 |
| STD-1339 | 2-5-28 | Plug | 1 | STD-1774 | 2-7-5 | Pin | 1 |
| STD-1339 | 2-5-29 | Plug | 1 | STD-1791 | 1-4-12 | Bolt | 4 |
| STD-1409 | 1-5-6 | Nut | 3 | STD-1791 | 1-6-13 | Bolt | 4 |
| STD-1409 | 2-3 | Nut | 2 | STD-1817 | 5-1-7 | Bolt | 3 |
| STD-1409 | 2-8-15 | Nut | 2 | STD-1817 | 5-2-11 | Bolt | 2 |
| STD-1410 | 1-6-18 | Nut | 1 | STD-1817 | 5-2-15 | Bolt | 1 |
| STD-1410 | 2-6-17 | Nut | 4 | STD-1817 | 5-2-23 | Bolt | 2 |
| STD-1410 | 2-7-8 | Nut | 4 | STD-1817 | 5-2-38 | Bolt | 1 |
| STD-1410 | 2-7-13 | Nut | 4 | STD-1834 | 5-1-12 | Bolt | 1 |
| STD-1410 | 2-7-18 | Nut | 4 | STD-1835 | 5-1-13 | Bolt | 1 |
| STD-1410 | 4-1-8 | Nut | 4 | STD-1836 | 5-1-12 | Bolt | 1 |
| STD-1410 | 5-4-5 | Nut | 3 | STD-1836 | 5-2-5 | Bolt | 1 |
| STD-1410 | 6-1-15 | Nut | 4 | STD-1837 | 5-1-13 | Bolt | 1 |
| STD-1410 | 6-1-20 | Nut | 4 | STD-1837 | 5-2-6 | Bolt | 1 |
| STD-1410 | 6-2-4 | Nut | 4 | STD-1838 | 5-2-4 | Bolt | 4 |
| STD-1410 | 6-3-5 | Nut | 4 | STD-1838 | 5-2-45 | Bolt | 2 |
| STD-1410 | 6-3-11 | Nut | 4 | STD-1838 | 7-4-9 | Bolt | 1 |
| STD-1410 | 7-2-5 | Nut | 8 | STD-1851 | 5-2-5 | Bolt | 1 |
| STD-1411 | 1-5-2 | Nut | 8 | STD-1851 | 5-2-6 | Bolt | 1 |
| STD-1411 | 1-5-3 | Nut | 2 | STD-1856 | 2-4-7 | Screw | 4 |
| STD-1411 | 1-5-3 | Nut | 1 | STD-1856 | 2-4-22 | Screw | 3 |
| STD-1411 | 2-4-19 | Nut | 1 | STD-1858 | 5-2-23 | Bolt | 1 |
| STD-1411 | 2-5-33 | Nut | 2 | STD-1872 | 3-2-8 | Insert | 8 |
| STD-1411 | 2-5-36 | Nut | 1 | STD-1872 | 3-2-8 | Insert | 4 |
| STD-1411 | 2-6-5 | Nut | 8 | STD-1874 | 4-4 | Screw | 4 |
| STD-1411 | 2-6-5 | Nut | 4 | STD-1874 | 4-5 | Screw | 3 |
| STD-1411 | 2-6-11 | Nut | 4 | STD-1882 | 6-1-4 | Screw | 2 |
| STD-1411 | 2-8-8 | Nut | 2 | STD-1884 | 2-4-7 | Screw | 3 |
| STD-1411 | 2-8-9 | Nut | 12 | STD-1884 | 2-4-7 | Screw | 4 |
| STD-1411 | 2-9-14 | Nut | 4 | STD-1889 | 5-2-27 | Bolt | 2 |
| STD-1411 | 2-9-14 | Nut | 10 | STD-1897 | 6-3-19 | Bolt | 1 |
| STD-1411 | 2-9-15 | Nut | 8 | STD-1901 | 2-8-21 | Drive Stud | 4 |
| STD-1411 | 3-3-18 | Nut | 4 | STD-1901 | 2-9-20 | Drive Stud | 4 |
| STD-1411 | 4-2-19 | Nut | 2 | STD-1904 | 2-3 | Bolt | 2 |
| STD-1411 | 4-3 | Nut | 2 | STD-1916 | 4-4 | Screw | 1 |
| STD-1411 | 4-4 | Nut | 1 | STD-1919 | 1-2-5 | Screw | 6 |
| STD-1411 | 5-1-8 | Nut | 1 | STD-1924 | 3-4-18 | Clamp | 8 |
| STD-1411 | 6-4 | Nut | 1 | STD-1925 | 3-4-9 | Screw | 24 |
| STD-1414 | 1-5-2 | Bolt | 8 | STD-1925 | 4-4 | Screw | 3 |
| STD-1414 | 2-3-11 | Bolt | 2 | STD-1926 | 1-6-17 | Bolt | 3 |
| STD-1416 | 1-5-6 | Bolt | 3 | STD-1930 | 7-4-4 | Hose | 1 |
| STD-1419 | 1-5-5 | Bolt | 3 | STD-2032 | 6-1-3 | Washer | 2 |
| STD-1420 | 2-3-8 | Nut | 3 | STD-2033 | 5-2-6 | Bolt | 1 |
| STD-1420 | 5-1-15 | Nut | 2 | STD-2069 | 5-2-38 | Bolt | 1 |
| STD-1420 | 5-2-8 | Nut | 2 | STD-2072 | 2-5 | "O" Ring | 1 |
| STD-1433 | 2-8-13 | Bolt | 2 | STD-2084 | 1-5-3 | Bolt | 1 |
| STD-1499 | 6-3-19 | Bolt | 1 | STD-2084 | 1-5-3 | Bolt | 2 |
| STD-1530 | 3-4-22 | Clamp | 8 | STD-2084 | 5-1-5 | Bolt | 1 |
| STD-1592 | 2-6-21 | Bolt | 2 | STD-2090 | 1-5-10 | Nut | 2 |
| STD-1592 | 6-1-9 | Bolt | 2 | STD-2090 | 3-4-15 | Nut | 16 |

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| PART NO. | FIG-REF. NO. | PART NAME | QTY. | PART NO. | FIG-REF. NO. | PART NAME | QTY. |
|--------------|-----------------|-----------|------|----------|-----------------|------------|------|
| 10-13799 | 4-4-17 | Nut | 6 | 31C-40 | 2-2-16 | Stud | 4 |
| 10-13799 | 4-5-20 | Nut | 1 | 38-13 | 1-1-5 | Stud | 16 |
| 10-32326 | 4-5-29 | Spring | 8 | 38-14 | 1-1-5 | Stud | 16 |
| 10-35936-6 | 4-5-9 | Screw | 8 | 38D-17 | 1-1-15 | Stud | 1 |
| 10-78916 | 4-4-18 | Bracket | 3 | 50-14 | 1-1-4 | Stud | 8 |
| 10-89027-4 | 4-5-21 | Bracket | 1 | 50-15 | 1-1-4 | Stud | 8 |
| 10-91431-8 | 4-4-16 | Screw | 6 | 50-16 | 1-1-4 | Stud | 8 |
| 10-91431-8 | 4-5-19 | Screw | 1 | 383-B | 3-4-14 | Nut | 16 |
| 10-90404-4 | 4-5-10 | Nut | 8 | 1025-B | 1-1-5 | Stud | 16 |
| 10-163007 | 4-4-20 | Grommet | 4 | 1028-B | 1-2-10 | Ball | 1 |
| 10-163011 | 4-4-11 | Ferrule | 8 | 1691-C | 2-6-13 | Gasket | 1 |
| 10-163011 | 4-5-22 | Ferrule | 8 | 1691-C | 6-1 | Gasket | 1 |
| 10-163012 | 4-4-12 | Eyelet | 8 | 1691-C | 6-1-11 | Gasket | 2 |
| 10-163012 | 4-5-23 | Eyelet | 8 | 1182-B3 | 4-7-2 | Spark Plug | 8 |
| 10-209328 | 4-4-13 | Strap | 7 | 1182-E3 | 4-7-2 | Spark Plug | 8 |
| 10-209328 | 4-5-26 | Tie | 5 | 1182-F3 | 4-7-2 | Spark Plug | 8 |
| 10-320050 | 4-5-16 | Grommet | 2 | 1182-F5 | 4-7-2 | Spark Plug | 8 |
| 10-320283 | 4-5-11 | Clamp | 8 | 1182-J5 | 4-7-2 | Spark Plug | 8 |
| 10-320297-1 | 4-4-24 | Clamp | 3 | 1182-L3 | 4-7-1 | Spark Plug | 8 |
| 10-320297-1 | 4-4-27 | Clamp | 1 | 1182-M4 | 4-7-2 | Spark Plug | 8 |
| 10-320297-2 | 4-5-12 | Clamp | 1 | 1182-N3 | 4-7-2 | Spark Plug | 8 |
| 10-320297-2 | 4-5-27 | Clamp | 1 | 1182-N4 | 4-7-2 | Spark Plug | 8 |
| 10-320297-3 | 4-4-21 | Clamp | 3 | 1182-P2 | 4-7-2 | Spark Plug | 8 |
| 10-320298-1 | 4-4-22 | Clamp | 3 | 1182-T4 | 4-7-2 | Spark Plug | 8 |
| 10-320298-1 | 4-5-13 | Clamp | 3 | 1182-U4 | 4-7-2 | Spark Plug | 8 |
| 10-320298-2 | 4-4-23 | Clamp | 2 | 1182-V1 | 4-7-1 | Spark Plug | 8 |
| 10-320298-2 | 4-5-15 | Clamp | 2 | 1182-X2 | 4-7-2 | Spark Plug | 8 |
| 10-320298-3 | 4-4-28 | Clamp | 1 | 8313 | 2-6-1 | Gasket | 1 |
| 10-320300-1 | 4-5-18 | Clamp | 1 | 8313 | 2-6-1 | Gasket | 2 |
| 10-320328 | 4-4-26 | Bracket | 3 | 8313 | 2-6-12 | Gasket | 1 |
| 10-320394 | 4-5-17 | Plate | 2 | 40239 | 4-2 | Protector | 4 |
| 10-320401 | 4-4-19 | Plate | 2 | 40239 | 4-3 | Protector | 4 |
| 10-320411 | 4-4-15 | Screw | 2 | 40239 | 4-4 | Protector | 4 |
| 10-320411 | 4-5-25 | Screw | 1 | 40239 | 4-5 | Protector | 4 |
| 10-320412-1 | 4-4-14 | Clamp | 2 | 45664 | 4-2-1 | Cable | AR |
| 10-320412-3 | 4-5-24 | Clamp | 1 | 45688 | 1-6-4 | Flange | 1 |
| 10-320471 | 4-4-25 | Tubing | 23.2 | 60009 | 3-3-9 | Key | 8 |
| 10-320471 | 4-5-14 | Tubing | 65.3 | 60028 | 3-2-4 | Guide | 4 |
| 10-320473 | 4-5-30 | Sleeve | 8 | 60053 | 3-3-19 | Seal | 8 |
| 10-320610-58 | 4-4-2 | Lead | 1 | 60096 | 2-6-18 | Gasket | 1 |
| 10-320610-59 | 4-4-6 | Lead | 1 | 60096 | 6-1-2 | Gasket | 1 |
| 10-320610-60 | 4-5-2 | Lead | 1 | 60096 | 6-1-7 | Gasket | 1 |
| 10-320610-68 | 4-5-7 | Lead | 1 | 60329 | 2-3-1 | Shaft | 1 |
| 10-320610-69 | 4-5-4 | Lead | 1 | 60398 | 3-4-3 | Bushing | 4 |
| 10-320610-72 | 4-4-1 | Lead | 1 | 60401 | 3-4-6 | Shaft | 4 |
| 10-320610-72 | 4-4-4 | Lead | 1 | 60430 | 2-6-2 | Cover | 1 |
| 10-320610-72 | 4-5-1 | Lead | 1 | 60430 | 2-6-2 | Cover | 2 |
| 10-320610-75 | 4-4-5 | Lead | 1 | 60430 | 2-6-7 | Cover | 1 |
| 10-320610-75 | 4-4-8 | Lead | 1 | 60431 | 2-6-14 | Cover | 1 |
| 10-320610-78 | 4-5-5 | Lead | 1 | 60431 | 6-1-17 | Cover | 1 |
| 10-320610-79 | 4-5-3 | Lead | 1 | 60670 | 4-2-6 | Plate | 2 |
| 10-320610-82 | 4-5-8 | Lead | 1 | 60733 | 5-1-9 | Shim | AR |
| 10-320610-87 | 4-4-7 | Lead | 1 | 60746 | 2-3-5 | Impeller | 1 |
| 10-320610-87 | 4-5-6 | Lead | 1 | 60747 | 2-3-6 | Impeller | 1 |
| 10-320610-91 | 4-4-3 | Lead | 1 | 60803 | 1-5-9 | Strap | 1 |
| 10-349224 | 4-4-10 | Grommet | 2 | 60820 | 2-8-10 | Gasket | 1 |
| 10-349661-1 | 4-4-9 | Plate | 2 | 60828 | 3-1-6 | Plug | 8 |
| 25C-10-P03 | 2-4-18 | Stud | 1 | 60882 | 1-6-2 | Gear | 1 |
| 31C-38 | 2-1-15 | Stud | 4 | 60886 | 5-4 | Belt | 1 |
| 31C-38 | 2-2-16 | Stud | 4 | 61098 | 2-5-2 | Adapter | 1 |
| 31CD-22 | 2-2-11 | Stud | 1 | 61155 | 1-3-9 | Gear | 1 |

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| PART NO. | FIG-REF: NO. | PART NAME | QTY. | PART NO. | FIG-REF. NO. | PART NAME | QTY. |
|----------|-----------------|------------|------|-----------|-----------------|-----------|------|
| 61156 | 1-3-10 | Lockplate | 1 | 61668 | 2-1-7 | Stud | 2 |
| 61163 | 4-1-2 | Gear | 1 | 61668 | 2-1-8 | Stud | 2 |
| 61165 | 2-3-9 | Seal | 1 | 61668 | 2-2-7 | Stud | 2 |
| 61173 | 2-4-3 | Gasket | 1 | 61668 | 2-2-8 | Stud | 2 |
| 61174 | 2-3-4 | Shaft | 1 | 61850 | 2-9-8 | Stud | 4 |
| 61183 | 2-5-1 | Gasket | 1 | 62224 | 4-1-3 | Gasket | 3 |
| 61183 | 2-6-6 | Gasket | 1 | 62224 | 4-1-3 | Gasket | 4 |
| 61238 | 2-1-4 | Stud | 3 | 62224 | 4-1-3 | Gasket | 2 |
| 61238 | 2-1-5 | Stud | 1 | 62224 | 4-1-3 | Gasket | 1 |
| 61238 | 2-2-4 | Stud | 3 | 62254 | 6-5-4 | Clip | 4 |
| 61238 | 2-2-5 | Stud | 1 | 62281 | 7-3-4 | Gage | 1 |
| 61247 | 3-4-8 | Cover | 4 | 62388 | 3-3-11 | Cap | 4 |
| 61260 | 7-2-2 | Flange | 4 | 62415 | 2-4-26 | Plunger | 1 |
| 61261 | 1-1-10 | Stud | 2 | 62417 | 2-4-23 | Plug | 1 |
| 61261 | 2-1-6 | Stud | 2 | 62815 | 2-4-1 | Housing | 1 |
| 61261 | 2-1-7 | Stud | 2 | 62817 | 2-4-4 | Screen | 1 |
| 61261 | 2-1-8 | Stud | 2 | 62833 | 5-5 | Regulator | 1 |
| 61261 | 2-1-9 | Stud | 2 | 65007 | 1-1-9 | Retainer | 8 |
| 61261 | 2-2-6 | Stud | 2 | 65074 | 3-3-13 | Socket | 8 |
| 61261 | 2-2-7 | Stud | 2 | 65098 | 2-6-19 | Cover | 1 |
| 61261 | 2-2-8 | Stud | 2 | 65098 | 6-1-6 | Cover | 1 |
| 61261 | 2-2-9 | Stud | 2 | 65321 | 7-2-1 | Gasket | 4 |
| 61261 | 2-9-8 | Stud | 4 | 65441 | 3-3-5 | Seat | 4 |
| 61261 | 3-2-7 | Stud | 8 | 65441 | 3-3-6 | Seat | 4 |
| 61262 | 2-5-9 | Stud | 1 | 65567 | 3-3-3 | Spring | 8 |
| 61265 | 2-1-10 | Stud | 3 | 65819 | 1-4-2 | Bushing | 4 |
| 61265 | 2-2-10 | Stud | 2 | 66145 | 2-5-11 | Dowel | 2 |
| 61265 | 2-2-11 | Stud | 1 | 66224 | 6-2-1 | Gasket | 1 |
| 61358 | 2-8-19 | Plug | 1 | 66224 | 6-3-2 | Gasket | 1 |
| 61363 | 3-4-20 | Pipe | 2 | 66224 | 6-3-3 | Gasket | 1 |
| 61364 | 3-4-20 | Pipe | 1 | 66610 | 3-2-11 | Bushing | 16 |
| 61365 | 3-4-20 | Pipe | 1 | 66734 | 1-1-2 | Stud | 2 |
| 61376 | 2-8-3 | Connection | 2 | 66734 | 1-1-3 | Stud | 2 |
| 61377 | 2-8-4 | Connection | 2 | 66796-P10 | 3-2-6 | Insert | 8 |
| 61378 | 2-8-17 | Screen | 1 | 67447 | 1-2-1 | Bearing | 4 |
| 61381 | 2-8-11 | Tube | 1 | 67447 | 1-2-1 | Bearing | 8 |
| 61385 | 4-2-15 | Clip | 2 | 67453 | 1-1-12 | Dowel | 6 |
| 61385 | 4-3 | Clip | 2 | 67528 | 1-1-11 | Stud | 1 |
| 61387 | 1-1-21 | Sleeve | 1 | 67528 | 2-1-6 | Stud | 2 |
| 61400 | 2-1-2 | Stud | 2 | 67528 | 2-2-6 | Stud | 2 |
| 61400 | 2-2-2 | Stud | 2 | 67556 | 2-7-4 | Stud | 4 |
| 61400 | 2-9-6 | Stud | 4 | 68315 | 2-7-2 | Gasket | 1 |
| 61476-S | 1-4-1 | Conn. Rod | 4 | 68316 | 2-7-4 | Stud | 4 |
| 61510 | 1-3-7 | Plug | 1 | 68316 | 6-3-8 | Stud | 4 |
| 61544 | 1-7-6 | Plunger | 1 | 68317 | 2-6-22 | Shaftgear | 1 |
| 61544 | 6-1-5 | Plunger | 1 | 68437 | 2-8-5 | Stud | 4 |
| 61546 | 4-2-4 | Sleeve | 12 | 68437 | 2-9-7 | Stud | 4 |
| 61548 | 2-8-20 | Plate | 1 | 68510 | 3-2-9 | Stud | 4 |
| 61548 | 2-9-19 | Plate | 1 | 68512 | 3-1 | Ring | -- |
| 61559 | 4-2-9 | Grommet | 2 | 68513 | 3-1 | Ring | -- |
| 61561 | 4-2-8 | Plate | 2 | 68517 | 3-3-16 | Spring | 8 |
| 61566 | 4-1 | Kit | 2 | 68518 | 3-3-17 | Lockplate | 4 |
| 61566 | 4-1 | Kit | 1 | 68532 | 7-4-1 | Tube | 1 |
| 61581-2 | 6-5-2 | Tube Assy. | 2 | 68593 | 2-6-8 | Spacer | 4 |
| 61581-3 | 6-5-3 | Tube Assy. | 1 | 68604 | 4-3 | Clamp | 4 |
| 61581-3 | 6-5-3 | Tube Assy. | 2 | 68604 | 7-4-2 | Clip | 2 |
| 61581-9 | 6-5-1 | Tube Assy. | 2 | 68626 | 5-5 | Regulator | 1 |
| 61665 | 4-1-2 | Gear | 1 | 68628 | 5-5 | Relay | 1 |
| 61665 | 4-1-2 | Gear | 2 | 68633 | 2-1-16 | Shield | 1 |
| 61666 | 4-1-4 | Adapter | 1 | 68639 | 1-4-9 | Gear | 1 |
| 61666 | 4-1-4 | Adapter | 2 | 68639 | 1-6-7 | Gear | 1 |

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| PART NO. | FIG-REF. NO. | PART NAME | QTY. | PART NO. | FIG-REF. NO. | PART NAME | QTY. |
|-----------|-----------------|---------------|------|----------|-----------------|------------------|------|
| 68668 | 1-2-11 | Spring | 1 | 69742 | 2-5-20 | Cover | 1 |
| 68749 | 1-6-15 | Shaft | 2 | 69796 | 1-1-12 | Dowel | 6 |
| 68753 | 1-6-10 | Spacer | 1 | 69796 | 1-1-12 | Dowel | 8 |
| 68757 | 1-6-8 | Shaft | 1 | 69796 | 1-1-12 | Dowel | 2 |
| 68759 | 3-4-19 | Tube | 1 | 69827 | 2-5-44 | Gasket | 1 |
| 68760 | 3-4-19 | Tube | 1 | 69942 | 2-5-23 | Stud | 2 |
| 68761 | 3-4-19 | Tube | 2 | 69942 | 2-5-24 | Stud | 1 |
| 68764 | 5-3-1 | Generator | 1 | 69943 | 2-1-5 | Stud | 1 |
| 68765 | 5-3-1 | Generator | 1 | 69943 | 2-2-5 | Stud | 1 |
| 68767 | 5-3-1 | Generator | 1 | 69951 | 5-1-16 | Strut | 1 |
| 68769 | 1-4-7 | Camshaft | 1 | 70310 | 3-3-20 | Seal | 8 |
| 68867 | 1-6-1 | Support Assy. | 1 | 70347 | 2-5-7 | Dual Drive Assy. | 1 |
| 68870 | 5-1-1 | Bracket | 1 | 70348 | 2-5-7 | Dual Drive Assy. | 1 |
| 68872 | 5-5 | Regulator | 1 | 70419 | 5-2-1 | Bracket | 1 |
| 68939 | 1-6-3 | Spacer | 1 | 70419 | 5-2-2 | Bracket | 1 |
| 68942 | 1-6-1 | Support Assy. | 1 | 70482 | 2-9-4 | Connection | 4 |
| 68972 | 2-8-1 | Gasket | 1 | 70484 | 2-9-16 | Screen | 1 |
| 68972 | 2-9-1 | Gasket | 1 | 71011 | 7-4-1 | Tube | 1 |
| 68974 | 2-4-1 | Housing | 1 | 71023 | 2-5-41 | Brace | 1 |
| 69106 | 2-7-9 | Cover | 1 | 71032 | 1-1-19 | Bushing | 8 |
| 69113 | 5-1-1 | Bracket | 1 | 71133 | 3-4-12 | Nut | 16 |
| 69116 | 7-3-5 | Gage | 1 | 71134 | 3-4-13 | Nut | 16 |
| 69159 | 1-7-12 | Adapter | 1 | 71140 | 2-4-34 | Fitting | 1 |
| 69164 | 1-7-11 | Gasket | 1 | 71349 | 5-5 | Relay | 1 |
| 69250 | 6-2-2 | Carburetor | 1 | 71350 | 5-5 | Regulator | 1 |
| 69260-P10 | 3-2-6 | Insert | 8 | 71397 | 4-1-1 | Magneto | 1 |
| 69316 | 2-5-14 | Gear | 1 | 71397 | 4-1-1 | Magneto | 2 |
| 69318 | 2-5-26 | Shaft | 1 | 71398 | 4-1-1 | Magneto | 1 |
| 69319 | 2-5-12 | Gear | 1 | 71432 | 4-1-1 | Magneto | 2 |
| 69320 | 2-5-39 | Capscrew | 3 | 71481 | 3-4-10 | Ring | 4 |
| 69335 | 2-9-18 | Plug | 1 | 71489 | 4-3-1 | Plug | 8 |
| 69345 | 3-3-15 | Spacer | 4 | 71551 | 7-3-6 | Gage | 1 |
| 69370 | 2-8-2 | Sump | 1 | 71556 | 3-1 | Ring | -- |
| 69373 | 1-4-5 | Bearing | 8 | 71571 | 4-1 | Kit | 1 |
| 69376 | 1-1-6 | Stud | 2 | 71574 | 4-1 | Kit | 2 |
| 69377 | 1-1-2 | Stud | 2 | 71574 | 4-1 | Kit | 1 |
| 69377 | 1-1-3 | Stud | 2 | 71577 | 1-3-8 | Tube | 4 |
| 69436 | 2-4-25 | Spring | 1 | 71579 | 5-4 | Belt | 1 |
| 69444 | 3-4-2 | Rocker | 4 | 71594 | 3-1 | Piston | -- |
| 69452 | 5-1-1 | Bracket | 1 | 71596 | 2-5-17 | Washer | 2 |
| 69457 | 3-1 | Ring | -- | 71596 | 2-6-23 | Washer | 1 |
| 69510 | 2-4-2 | Housing | 1 | 71596 | 2-5-13 | Washer | 1 |
| 69531 | 3-4-11 | Plate | 7 | 71596 | 2-5-6 | Washer | 1 |
| 69531 | 3-4-11 | Plate | 8 | 71610 | 7-1-3 | Hook | 2 |
| 69532 | 3-3-8 | Seat | 4 | 71611 | 7-1-2 | Retainer | 2 |
| 69551 | 2-7-10 | Gasket | 1 | 71620 | 2-4-29 | Bolt | 1 |
| 69602 | 2-9-5 | Connection | 4 | 71621 | 7-4-2 | Clip | 2 |
| 69603 | 3-4-21 | Hose | 4 | 71621 | 7-4-6 | Clip | 1 |
| 69650 | 3-1-5 | Pin | 4 | 71622 | 7-4-1 | Tube | 1 |
| 69675 | 2-4-27 | Connector | 1 | 71623 | 2-4-32 | Washer | 1 |
| 69679 | 1-1-6 | Stud | 2 | 71646 | 1-6-16 | Lockplate | 2 |
| 69719 | 2-5-20 | Cover | 1 | 71714 | 1-2-14 | Plug | 1 |
| 69720 | 2-5-19 | Gasket | 1 | 71744 | 5-3-1 | Generator | 1 |
| 69722 | 2-5-25 | Stud | 1 | 71745 | 5-5 | Regulator | 1 |
| 69724 | 2-5-10 | Stud | 3 | 71824 | 4-3 | Clamp | 2 |
| 69725 | 2-5-8 | Adapter | 1 | 71840 | 3-1 | Cylinder | -- |
| 69730 | 2-5-15 | Gear | 1 | 71841 | 3-1 | Cylinder | -- |
| 69731 | 2-5-16 | Bushing | 1 | 71844 | 3-1 | Cylinder | -- |
| 69737 | 2-5-45 | Spacer | 1 | 71909 | 6-5-5 | Clamp | 4 |
| 69740 | 2-1-4 | Stud | 3 | 71910 | 6-5-5 | Clamp | 4 |
| 69740 | 2-2-4 | Stud | 3 | 71913 | 4-2-12 | Clamp | 4 |

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|----------|-----------------|------------|------|----------|-----------------|---------------|------|
| 71913 | 4-3 | Clamp | 4 | 73117 | 2-2-15 | Tube | 1 |
| 71969 | 3-1 | Cylinder | -- | 73136 | 6-4-14 | Bracket | 1 |
| 71973 | 3-4-24 | Gasket | 4 | 73149 | 3-1 | Cylinder | -- |
| 71979 | 5-5 | Regulator | 1 | 73152 | 6-4-11 | Bracket | 1 |
| 71980 | 5-3-1 | Generator | 1 | 73231 | 2-5-18 | Gear | 1 |
| 72050 | 3-3-10 | Seat | 8 | 73245 | 4-2-3 | Eyelet | 8 |
| 72053 | 2-7-15 | Gasket | 1 | 73245 | 4-2-10 | Eyelet | 8 |
| 72057 | 3-2-2 | Seat | 4 | 73245 | 4-3-11 | Eyelet | 8 |
| 72058 | 3-2-3 | Seat | 4 | 73246 | 4-2-7 | Kit | 2 |
| 72063 | 1-3-5 | Bushing | 3 | 73346 | 3-4-23 | Flange | 4 |
| 72063 | 1-3-5 | Bushing | 5 | 73360 | 4-1-1 | Magneto | 1 |
| 72064 | 1-3-6 | Bushing | 2 | 73383 | 5-2-3 | Lockplate | 2 |
| 72065 | 1-3-4 | Bushing | 1 | 73383 | 5-2-44 | Lockplate | 1 |
| 72066 | 1-3-4 | Bushing | 1 | 73411 | 3-4-1 | Rod | AR |
| 72067 | 1-3-5 | Bushing | 5 | 73412 | 3-4-1 | Rod | AR |
| 72067 | 1-3-5 | Bushing | 3 | 73413 | 3-4-1 | Rod | AR |
| 72068 | 1-3-6 | Bushing | 2 | 73414 | 3-4-1 | Rod | AR |
| 72075 | 1-2-7 | Seal | 6 | 73650 | 6-4-4 | Clip | 4 |
| 72077 | 5-5 | Regulator | 1 | 73726 | 4-2-2 | Lockclip | 8 |
| 72078 | 1-4-11 | Lockplate | 2 | 73729 | 4-2 | Cable & Plate | 1 |
| 72078 | 1-6-12 | Lockplate | 2 | 73772 | 1-1-17 | Nozzle Assy. | 4 |
| 72079 | 1-4-10 | Slinger | 1 | 73796 | 6-4-2 | Tube Assy. | 2 |
| 72079 | 1-6-11 | Slinger | 1 | 73817 | 1-6-16 | Lockplate | 2 |
| 72091 | 1-2-8 | Ring | 2 | 73818 | 2-1 | Gasket | 1 |
| 72150 | 7-1-1 | Baffle | 2 | 73818 | 2-2 | Gasket | 1 |
| 72153 | 7-1-1 | Baffle | 2 | 73857 | 3-1 | Ring | -- |
| 72198 | 3-1-6 | Plug | 8 | 73938 | 3-3-1 | Valve | 4 |
| 72205 | 5-5 | Regulator | 1 | 73952 | 1-2-4 | Plate | 1 |
| 72230 | 1-7-1 | Shaft | 1 | 73963 | 6-4-1 | Tube Assy. | 2 |
| 72231 | 1-7-4 | Gear | 1 | 73970 | 6-4-13 | Hose | 1 |
| 72311 | 5-5 | Regulator | 1 | 73971 | 6-4-12 | Clamp | 1 |
| 72312 | 7-3-3 | Ring | 1 | 73971 | 6-4-12 | Clamp | 2 |
| 72351 | 4-2-11 | Screw | 8 | 73972 | 2-1-1 | Housing | 1 |
| 72351 | 4-3 | Screw | 8 | 73974 | 6-4-13 | Hose | 1 |
| 72351 | 4-5-28 | Screw | 8 | 73998 | 3-1 | Ring | -- |
| 72362 | 2-8-2 | Sump | 1 | 74059 | 3-1 | Piston | -- |
| 72378 | 2-7-14 | Cover | 1 | 74065 | 7-3-3 | Ring | 1 |
| 72394 | 6-2-2 | Carburetor | 1 | 74068 | 7-3-3 | Ring | 1 |
| 72413 | 2-4-34 | Fitting | 1 | 74068 | 7-3-7 | Ring | 1 |
| 72453 | 4-3 | Clamp | 4 | 74070 | 7-4 | Elbow | 1 |
| 72454 | 3-1 | Ring | -- | 74083 | 2-9-2 | Sump | 1 |
| 72495 | 4-1-2 | Gear | 1 | 74084 | 3-4-20 | Pipe | 4 |
| 72498 | 2-1-1 | Housing | 1 | 74151 | 6-3-13 | Nozzle | 4 |
| 72500 | 2-1-1 | Housing | 1 | 74167 | 1-4-7 | Camshaft | 1 |
| 72501 | 2-1-1 | Housing | 1 | 74207 | 6-3-7 | Elbow | 1 |
| 72502 | 2-1-1 | Housing | 1 | 74217 | 7-3 | Ring | 1 |
| 72503 | 2-1-1 | Housing | 1 | 74225 | 6-5-9 | Nipple | 4 |
| 72504 | 2-1-1 | Housing | 1 | 74230 | 3-2-5 | Guide | 4 |
| 72506 | 2-1-1 | Housing | 1 | 74241 | 3-1 | Ring | -- |
| 72524 | 4-1-1 | Magneto | 1 | 74291 | 5-5 | Regulator | 1 |
| 72566 | 1-6-2 | Gear | 1 | 74292 | 5-5 | Regulator | 1 |
| 72569 | 7-1-1 | Baffle | 2 | 74314 | 7-3 | Plug | 1 |
| 72695 | 5-3-1 | Generator | 1 | 74323 | 5-1-17 | Strut | 1 |
| 72815 | 6-4-10 | Bracket | 1 | 74323 | 5-2-37 | Strut | 1 |
| 72829 | 1-7-2 | Lockplate | 1 | 74324 | 5-2-16 | Bracket | 1 |
| 72842 | 7-3 | Plug | 1 | 74325 | 5-1-19 | Link | 1 |
| 72847 | 7-3-5 | Gage | 1 | 74325 | 5-2-22 | Link | 1 |
| 72877 | 1-2-9 | Body | 8 | 74326 | 6-3-15 | Bracket | 1 |
| 72970 | 2-5-5 | Gear | 1 | 74327 | 3-4-11 | Plate | 1 |
| 73050 | 4-3 | Clamp | 1 | 74414 | 1-6-1 | Support Assy. | 1 |
| 73117 | 2-1-14 | Tube | 1 | 74468 | 3-1 | Cylinder | -- |

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|----------|-----------------|---------------|------|----------|-----------------|---------------|------|
| 74468 | 3-2-1 | Cylinder | 4 | 75302 | 1-1-7 | Dowel | 2 |
| 74494 | 3-4 | Plate | 4 | 75317 | 3-1 | Cylinder | -- |
| 74513 | 2-9-3 | Sump | 1 | 75361 | 3-1 | Cylinder | -- |
| 74515 | 2-1-1 | Housing | 1 | 75361 | 3-2-1 | Cylinder | 4 |
| 74519 | 5-4 | Belt | 1 | 75380 | 5-2-22 | Link | 1 |
| 74521 | 3-4-20 | Pipe | 2 | 75401 | 3-1 | Kit | -- |
| 74522 | 3-4-20 | Pipe | 2 | 75403 | 3-1 | Kit | -- |
| 74523 | 7-3-5 | Gage | 1 | 75413 | 3-1 | Piston | -- |
| 74524 | 7-3 | Ring | 1 | 75505 | 6-1-22 | Adapter | 2 |
| 74532 | 6-4-13 | Hose | 1 | 75506 | 6-1-21 | Kit | 1 |
| 74534 | 6-3-1 | Fuel Injector | 1 | 75507 | 6-1-21 | Kit | 1 |
| 74541 | 3-3-2 | Valve | 4 | 75511 | 5-2-1 | Bracket | 1 |
| 74543 | 6-4-8 | Hose | 1 | 75512 | 5-2-2 | Bracket | 1 |
| 74554 | 3-3-6 | Seat | 4 | 75528 | 2-4-10 | Kit | 1 |
| 74586 | 6-4-8 | Hose | 1 | 75545 | 2-7-1 | Adapter | 1 |
| 74636 | 3-4-4 | Rocker | 4 | 75626 | 2-1-20 | Plug | 1 |
| 74637 | 3-4-5 | Bushing | 4 | 75626 | 2-2-18 | Plug | 1 |
| 74646 | 1-4-4 | Nut | 8 | 75686 | 6-1 | Elbow | 1 |
| 74661 | 5-5 | Relay | 1 | 75722 | 2-7-1 | Adapter | 1 |
| 74667 | 1-4-3 | Bolt | 8 | 75730 | 7-4-3 | Tube | 1 |
| 74673 | 3-1 | Ring | -- | 75735 | 7-3-1 | Tube | 1 |
| 74732 | 6-4-8 | Hose | 1 | 75736 | 7-3-2 | Tube | 1 |
| 74804 | 5-5 | Relay | 1 | 75739 | 7-4 | Nipple | 1 |
| 74816 | 5-3-3 | Pulley | 1 | 75767 | 7-3-2 | Tube | 1 |
| 74842 | 6-3-12 | Spacer | 1 | 75772 | 3-3-14 | Tube | 8 |
| 74878 | 5-3-4 | Fan & Baffle | 1 | 75854 | 3-1 | Cylinder | -- |
| 74989 | 3-1 | Ring | -- | 75868 | 3-1 | Cylinder | -- |
| 74996 | 1-7-7 | Gear | 1 | 75868 | 3-2-1 | Cylinder | 4 |
| 74996 | 1-7-7 | Gear | 2 | 75888 | 2-1-2 | Stud | 2 |
| 75009 | 6-3-15 | Bracket | 1 | 75888 | 2-1-3 | Stud | 4 |
| 75010 | 1-3-1 | Crankshaft | 1 | 75888 | 2-2-2 | Stud | 2 |
| 75011 | 1-3-1A | Crankshaft | 1 | 75888 | 2-2-3 | Stud | 4 |
| 75012 | 1-3-1B | Crankshaft | 1 | 75896 | 4-1-1 | Magneto | 1 |
| 75042 | 3-1 | Cylinder | -- | 75897 | 4-1-1 | Magneto | 1 |
| 75042 | 3-2-1 | Cylinder | 4 | 75906 | 3-4-7 | Gasket | 4 |
| 75044 | 3-1 | Cylinder | -- | 75907 | 3-1 | Cylinder | -- |
| 75068 | 3-3-2 | Valve | 4 | 75907 | 3-2-1 | Cylinder | 4 |
| 75072 | 1-7-8 | Gear | 1 | 75919 | 2-1-1 | Housing | 1 |
| 75089 | 3-1 | Piston | -- | 75920 | 6-1-16 | Spacer | 4 |
| 75135 | 6-1 | Baffle | 1 | 75924 | 1-7-10 | Shaftgear | 1 |
| 75153 | 2-7-1 | Adapter | 1 | 75941 | 4-3 | Tape | 1 |
| 75154 | 1-1-2 | Stud | 2 | 75944 | 2-4-8 | Valve | 1 |
| 75154 | 1-1-3 | Stud | 2 | 75965 | 4-1-5 | Clamp | 4 |
| 75155 | 1-1-6 | Stud | 2 | 76026 | 5-4 | Belt | 1 |
| 75156 | 1-1-16 | Stud | 1 | 76028 | 5-1-18 | Link | 1 |
| 75158 | 1-6-15 | Shaft | 2 | 76028 | 5-2-10 | Link | 1 |
| 75165 | 7-4-5 | Clip | 1 | 76075 | 4-3-12 | Magneto Plate | 2 |
| 75166 | 7-4-3 | Tube | 1 | 76081 | 3-3-2 | Valve | 4 |
| 75167 | 7-4-3 | Tube | 1 | 76082 | 6-3-1 | Fuel Injector | 1 |
| 75183 | 3-1 | Cylinder | -- | 76086 | 3-1 | Cylinder | -- |
| 75183 | 3-2-1 | Cylinder | 4 | 76086 | 3-2-1 | Cylinder | 4 |
| 75184 | 3-1 | Cylinder | -- | 76097 | 1-4-6 | Camshaft | 1 |
| 75184 | 3-2-1 | Cylinder | 4 | 76098 | 1-4-6 | Camshaft | 1 |
| 75188 | 3-1 | Cylinder | -- | 76103 | 2-2-1 | Housing | 1 |
| 75188 | 3-2-1 | Cylinder | 4 | 76104 | 2-2-1 | Housing | 1 |
| 75220 | 5-3-2 | Alternator | 1 | 76105 | 2-2-1 | Housing | 1 |
| 75246 | 6-1-1 | Pump | 1 | 76106 | 2-2-1 | Housing | 1 |
| 75247 | 6-1-1 | Pump | 1 | 76107 | 2-2-1 | Housing | 1 |
| 75251 | 6-4-8 | Hose | 1 | 76108 | 2-2-1 | Housing | 1 |
| 75252 | 6-4-9 | Elbow | 1 | 76110 | 2-2-1 | Housing | 1 |
| 75278 | 6-3-14 | Manifold | 1 | 76111 | 2-2-1 | Housing | 1 |

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|----------|-----------------|---------------|------|----------|-----------------|----------------|------|
| 76112 | 2-2-1 | Housing | 1 | 77044 | 1-2-2 | Bearing | 1 |
| 76113 | 2-2-1 | Housing | 1 | 77260 | 6-3-1 | Fuel Injector | 1 |
| 76116 | 2-2-1 | Housing | 1 | 77279 | 6-2-2 | Carburetor | 1 |
| 76118 | 1-6-10 | Spacer | 1 | 77309 | 1-7-5 | Bushing | 1 |
| 76119 | 2-2 | Shield | 1 | 77309 | 1-7-9 | Bushing | 2 |
| 76121 | 1-6-8 | Shaft | 1 | 77377 | 1-2-3 | Seal | 1 |
| 76188 | 6-1-10 | Pump | 1 | 77462 | 3-1 | Kit | -- |
| 76210 | 5-4-1 | Starter | 1 | 77476 | 3-1 | Cylinder | -- |
| 76211 | 5-4-1 | Starter | 1 | 77526 | 7-3-2 | Tube | 1 |
| 76212 | 5-4-1 | Starter | 1 | 77543 | 6-3-1 | Fuel Injector | 1 |
| 76220 | 1-5-10 | Bolt | 2 | 77547 | 6-3-15 | Bracket | 1 |
| 76220 | 1-5-11 | Bolt | 2 | 77548 | 6-3-14 | Manifold | 1 |
| 76234 | 3-1 | Kit | -- | 77597 | 6-3-1 | Fuel Injector | 1 |
| 76235 | 3-1 | Kit | -- | 77718 | 5-2-14 | Strut | 1 |
| 76236 | 3-1 | Kit | -- | 77742 | 4-1 | Mag. & Harness | 1 |
| 76239 | 3-1 | Kit | -- | 77743 | 4-6 | Harness Assy. | 1 |
| 76273 | 5-1-2 | Bracket | 1 | 77744 | 4-1 | Mag. & Harness | 1 |
| 76299 | 2-9-3 | Sump | 1 | 77745 | 4-6 | Harness Assy. | 1 |
| 76354 | 2-3 | Body | 1 | 77756 | 5-2-16 | Bracket | 1 |
| 76449 | 3-1 | Kit | -- | 77757 | 5-2-26 | Bracket | 1 |
| 76486 | 6-1-10 | Pump | 1 | 77808 | 1-2-16 | Valve | 1 |
| 76496 | 5-3-2 | Alternator | 1 | 77808 | 1-2-16 | Valve | 1 |
| 76500 | 3-1 | Kit | -- | 77857 | 3-1-5 | Pin | 4 |
| 76510 | 2-4-9 | Gasket | 1 | 77907 | 1-5-10 | Spacer | 2 |
| 76517 | 6-4-8 | Hose | 1 | 77965 | 2-8-2 | Sump | 1 |
| 76529 | 1-2-15 | Plug | 1 | 77985 | 4-1-1 | Magneto | 1 |
| 76533 | 5-2-16 | Bracket | 1 | 78027 | 1-4-3 | Bolt | 8 |
| 76534 | 5-2-40 | Shim | AR | 78030-S | 1-4-1 | Conn. Rod | 4 |
| 76628 | 1-6-1 | Support Assy. | 1 | 78059 | 5-5 | Relay | 1 |
| 76648 | 4-3-10 | Grommet | 2 | 78060 | 5-5 | Relay | 1 |
| 76658 | 3-1 | Kit | -- | 78206 | 1-1 | Crankcase | 1 |
| 76659 | 3-1 | Kit | -- | 78217 | 1-1 | Crankcase | 1 |
| 76691 | 2-4-11 | Gasket | 1 | 78220 | 1-1 | Crankcase | 1 |
| 76728 | 4-3-9 | Sleeve | 8 | 78221 | 1-1 | Crankcase | 1 |
| 76734 | 4-3 | Zip Strap | 6 | 78222 | 1-1 | Crankcase | 1 |
| 76734 | 4-6 | Zip Strap | 8 | 78223 | 1-1 | Crankcase | 1 |
| 76753 | 4-3-6 | Sleeving Ring | 4 | 78224 | 1-1 | Crankcase | 1 |
| 76754 | 4-3-7 | Plate | 2 | 78225 | 1-1 | Crankcase | 1 |
| 76755 | 4-3-2 | Collar | 8 | 78226 | 1-1 | Crankcase | 1 |
| 76757 | 4-3-3 | Nut | 8 | 78228 | 1-1 | Crankcase | 1 |
| 76768 | 5-2-35 | Lockwasher | 1 | 78290 | 3-3-12 | Plunger | 8 |
| 76769 | 5-2-36 | Locknut | 1 | 78292 | 4-1-3 | Gasket | 2 |
| 76773 | 5-4 | Switch | 1 | 78308 | 5-3-2 | Alternator | 1 |
| 76775 | 5-4 | Switch | 1 | 78310 | 5-3-2 | Alternator | 1 |
| 76818 | 5-2-22 | Link | 1 | 78312 | 5-3-2 | Alternator | 1 |
| 76852 | 4-3-10 | Grommet | 2 | 78314 | 5-3-2 | Alternator | 1 |
| 76853 | 4-3-12 | Plate | 2 | 78368 | 1-6-9 | Pin | 1 |
| 76899 | 1-6-1 | Support Assy. | 1 | 78401 | 5-3-2 | Alternator | 1 |
| 76906 | 5-2-16 | Bracket | 1 | 78403 | 5-3-2 | Alternator | 1 |
| 76908 | 5-2-37 | Strut | 1 | 78405 | 5-3-2 | Alternator | 1 |
| 76923 | 4-3-5 | Cable | AR | 78407 | 5-3-2 | Alternator | 1 |
| 76927 | 2-2-1 | Housing | 1 | 78409 | 5-3-2 | Alternator | 1 |
| 76940 | 1-2-3 | Seal | 1 | 78513 | 3-1 | Kit | -- |
| 76944 | 1-6-1 | Support Assy. | 1 | 78515 | 3-1 | Kit | -- |
| 76949 | 4-1-1 | Magneto | 1 | 78516 | 3-1 | Kit | -- |
| 76950 | 4-1-1 | Magneto | 1 | 78539 | 4-3 | Cable Assy. | 1 |
| 76951 | 1-3-1D | Crankshaft | 1 | 78540 | 4-3 | Cable Assy. | 1 |
| 76961 | 4-1 | Clamp | 4 | 78542 | 4-3 | Cable Assy. | 1 |
| 76994 | 3-3-4 | Spring | 8 | 78546 | 4-3 | Cable Assy. | 1 |
| 76999 | 1-3-1C | Crankshaft | 1 | 78547 | 4-3 | Cable Assy. | 1 |
| 77034 | 1-2-1 | Bearing | 4 | 78614 | 5-2-32 | Pulley | 1 |

LYCOMING AIRCRAFT ENGINE GROUP ASSEMBLY PARTS LIST

O-320, IO-320, LIO-320 SERIES
 NUMERICAL INDEX PARTS SECTION

| PART NO. | FIG-REF. NO. | PART NAME | QTY. | PART NO. | FIG-REF. NO. | PART NAME | QTY. |
|----------|-----------------|-----------------|------|-------------|-----------------|---------------|------|
| 78616 | 7-3 | Gage | 1 | LW-10496 | 1-3-1E | Crankshaft | 1 |
| 78617 | 5-2-34 | Idler Shaft | 1 | LW-10501 | 2-2-1 | Accy. Housing | 1 |
| 78626 | 7-3 | Tube Assy. | 1 | LW-10518 | 4-1-1 | Magneto | 2 |
| 78629 | 5-2-33 | Bearing | 1 | LW-10551 | 1-6-2 | Gear | 1 |
| 78639 | 5-2-31 | Pulley & Shaft | 1 | LW-10552 | 1-6-1 | Support Assy. | 1 |
| 78728 | 6-2-2 | Carburetor | 1 | LW-10556 | 5-4 | Starter | 1 |
| 78881 | 5-3 | Extension Assy. | 1 | LW-10566 | 1-4-6 | Camshaft | 1 |
| 78955 | 4-1-1 | Magneto | 1 | LW-10647 | 1-1-12 | Dowel | 4 |
| 5579983 | 2-4-16 | Gasket | 1 | LW-10672 | 5-3-2 | Alternator | 1 |
| 6435683 | 2-4-15 | Filter | 1 | LW-10729 | 5-2-22 | Link | 1 |
| 6436048 | 2-4-12 | Nut | 1 | LW-10751 | 2-9-2 | Sump | 1 |
| 6436624 | 2-4-17 | Stud | 1 | LW-10799 | 6-1-12 | Spacer | 1 |
| 6436636 | 2-4-13 | Gasket | 1 | LW-11021 | 1-2-1 | Bearing | 4 |
| 6436638 | 2-4-14 | Gasket | 1 | LW-11025 | 1-1 | Crankcase | 1 |
| LW-10076 | 3-3-8 | Seat | 4 | LW-11062 | 1-1 | Crankcase | 1 |
| LW-10077 | 3-3-7 | Seat | 4 | LW-11078 | 1-1 | Crankcase | 1 |
| LW-10105 | 2-2-1 | Housing | 1 | LW-11123 | 4-3 | Spacer | 8 |
| LW-10124 | 1-2-1 | Bearing | 4 | LW-11139 | 5-5 | Regulator | 1 |
| LW-10179 | 5-5 | Regulator | 1 | LW-11140 | 5-5 | Regulator | 1 |
| LW-10185 | 5-5 | Regulator | 1 | LW-11145 | 4-1-1 | Magneto | 1 |
| LW-10372 | 5-3-2 | Alternator | 1 | LW-11165 | 2-2-1 | Accy. Housing | 1 |
| LW-10388 | 4-3-4 | Elbow | 2 | LW-11166 | 6-1-10 | Pump | 1 |
| LW-10389 | 4-3-4 | Elbow | 4 | LW-11222 | 6-2-2 | Carburetor | 1 |
| LW-10389 | 4-3-4 | Elbow | 8 | LW-11237 | 1-1 | Crankcase | 1 |
| LW-10389 | 4-3-4 | Elbow | 6 | LW-11305 | 1-1 | Crankcase | 1 |
| LW-10390 | 4-3-4 | Elbow | 4 | LW-11357 | 5-5 | Regulator | 1 |
| LW-10400 | 4-3-8 | Ferrule | 16 | LW-11395 | 5-3-2 | Alternator | 1 |
| LW-10475 | 6-3-13 | Nozzle | 4 | LW-11396 | 5-3-2 | Alternator | 1 |
| LW-10491 | 2-3 | Body Assy. | 1 | LW-620326-2 | 4-5 | Harness | 1 |
| | | | | LW-620505-1 | 4-4 | Harness | 1 |