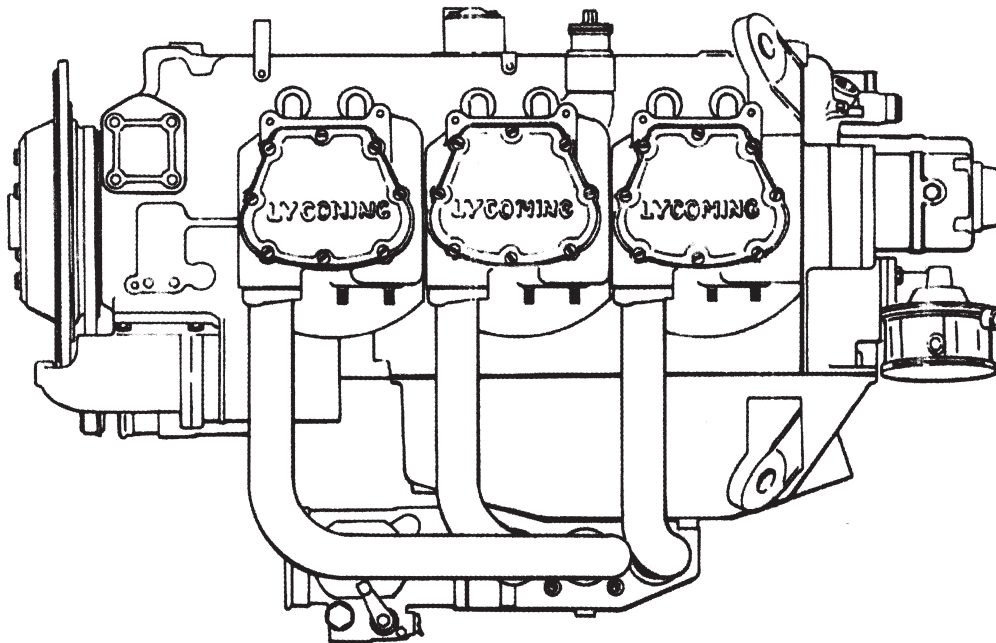


Lycoming Aircraft Engines Parts Catalog



IO-540-J, K, M, N, P and R Series Standard Cylinder Flange Crankcase Model Engines

LYCOMING

SUPPLEMENTAL PARTS LIST SSP-593

JUNE 1993

To Provide Parts Coverage for Lycoming Model
IO-540-K1F5 and IO-540-S1A5 Aircraft Engines
When Used in Conjunction With PC-215-2:
IO-540-J, -K, -M, -N, -P and R Series Parts Catalog
dated June 1993

This supplement is arranged in the same basic format
as PC-215-2. The Reference Numbers match the Text
and Illustration Pages or they are marked as "Not
Applicable.

Lycoming

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

SECTION 1 ... CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

Figure 1 - CRANKCASE ASSEMBLY, Pages 1-1 & 1-2

			Both	K1F5	S1A5
1	LW-11964*	CRANKCASE ASSEMBLY		1	
	LW-13549	CRANKCASE ASSEMBLY (See Note)			1
2	STD-557	DOWEL, 1/2 dia. x 11/16 long, hollow	2		
3	75302	DOWEL, Crankcase thru stud	4		
4	66734	STUD, 1/2-13 x 9-7/8 long	4		
5	50-15	STUD, 1/2-13 x 1-7/8 long	12		
6	38-13	STUD, 3/8-16 x 1-5/8 long	24		
7	69679	STUD, 9/16-18 x 10-21/32 long	4		
8	1102	PLUG, 1/8 pipe x 3/8 long	5		
9	38-15	STUD, 3/8-16 x 1-7/8 long		8	
10	38-16**	STUD, 3/8-16 x 2.00 long			8
11	38-22	STUD, 3/8-16 x 2-3/4 long	1		
12	STD-1339	PLUG, 1/16-27 pipe, Allen head	1		
13	31C-12	STUD, 5/16-18 x 1-1/2 long	2		
14	31C-13	STUD, 5/16-18 x 1-5/8 long	1		
15	65007 ★	RETAINER, Shroud tube seal	12		
16	69796	DOWEL, Crankshaft bearing	2		
17	LW-10647	DOWEL, Crankshaft bearing	6		
18	STD-514	DOWEL, 5/16 dia. x 1/2 long	2		
19	31C-14 ●	STUD, 5/16-18 x 1-3/4 long	4		
20		Not Applicable			
21	73772	NOZZLE ASSY., Piston cooling	6		

* No longer available for purchase through Lycoming. Reference latest edition of Lycoming Service Letter L220.

** Longer mount studs.

★ Early crankcases used item no. 15, P/N 65007 retainer, installed in shroud tube bosses. Later crankcases are machined as a product improvement to accept shroud tubes without retainers. This part is a service item only.

● "AN" governor.

NOTE

This part is not available as a service item. Refer to Service Kit Section 7 for applicable Crankcase Assy. and Governor Stud Kit part number.

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SECTION 1 ... CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

Figure 2 - OIL LEVEL GAGES AND ENGINE MOUNTING BRACKETS, Pages 1-3 & 1-4

			Both	K1F5	S1A5
1	70457	GASKET, Oil filler extension	1		
2		Not Applicable			
3	77527*	EXTENSION, Oil filler, short (2-3/16")	1		
4		Not Applicable			
5	72312*	RING, Oil seal, 1.00 I.D. x 1/8 section	1		
6	LW-14729	GAGE ASSY., Oil level (cam action)	1		
7	12A19770	BRACKET, Engine mounting	4		
8	STD-33	WASHER, 3/8 plain	16		
9	STD-678	WASHER, 3/8 lock, internal teeth	16		
10	STD-596	NUT, 3/8-24 plain, 21/64 thick	16		

* Used with cam action oil level gage assembly.

SECTION 1 ... CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

Figure 3 - CRANKCASE RELATED PARTS, Pages 1-5 & 1-6

			Both	K1F5	S1A5
1	1028-B	BALL, 11/16 diameter	1		
2	61084*	SPRING, Oil pressure relief valve	1		
	68668*	SPRING, Oil pressure relief valve	1		
	77467*	SPRING, Oil pressure relief valve	1		
	LW-11713*	SPRING, Oil pressure relief valve	1		
	LW-18085*	SPRING, Oil pressure relief valve	1		
3		Not Applicable			
4	06E19769-1.25	GASKET, 1-1/4 I.D. x 1-1/2 O.D. x 3/32 annular	1		
5		Not Applicable			
6	77808	VALVE ASSY., Oil pressure relief, adj.	1		
7	LW-11575	BEARING, Crankshaft	6		
	18E19396	BEARING, Crankshaft (alternate)	6		
8	LW-13885	BEARING, Crankshaft, front	2		
	18A19399	BEARING, Crankshaft, front (alternate)	2		
9	LW-15628**	SEAL, Crankshaft oil, solid	1		
	78443**	SEAL, Crankshaft oil, split	1		
10	72075	SEAL, Oil, 3/32 section x 15/32 I.D.	4		
11	72091	RING, Oil seal, 23/64 I.D. x 7/64 dia.	2		
12	72877	BODY, Hydraulic tappet	12		
13	78290	PLUNGER ASSY., Hydraulic tappet	12		
14	15B21319	SOCKET, Push rod, hydraulic tappet	12		

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

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

SECTION 1 ... CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

Figure 4 - CRANKSHAFT AND RELATED PARTS, Pages 1-7 & 1-8

			Both	K1F5	S1A5
1	13F17775	CRANKSHAFT & COUNTERWEIGHT ASSEMBLY	1		
2	13F17750	CRANKSHAFT & PLUG ASSEMBLY	1		
3	STD-1211	PLUG, 2.00 dia. expansion	1		
4	73810*	BUSHING, Crankshaft dyn. c'wt.	4		
5	60945	PLUG, 1-1/4 diameter	1		
6		Not Applicable			
7		Not Applicable			
8		Not Applicable			
9		Not Applicable			
10	75656	BUSHING, Propeller flange, long	4		
11	72155	BUSHING, Propeller flange, short	1		
12	79024	BUSHING, Propeller flange, indexing	1		
13		Not Applicable			
14	STD-1065	DOWEL, Stepped, 5/16 x 1/4 dia. x 35/64 long	1		
15	LW-19210★	COUNTERWEIGHT ASSEMBLY	2		
16	71903**	BUSHING, Dynamic counterweight	8		
17	76788★	ROLLER, Dynamic counterweight, 6.3 order	2		
18	73648★	ROLLER, Dynamic counterweight, 5.1 order	2		
19	LW-14820	RING, Internal retaining	8		
20	71907	WASHER, Dynamic counterweight	8		
21	13S19647●	GEAR, Crankshaft		1	
	13S19648●	GEAR, Crankshaft			1
22	LW-18638	LOCKPLATE, Crankshaft gear	1		
23	STD-2209	BOLT, 5/16-24 x 1-3/4 long, hex. hd.	1		
24	75030■	SUPPORT ASSY., Starter ring gear, 12/14 pitch	1		
25	72566	GEAR, Starter ring	1		

- * See latest edition of Lycoming Service Instruction No. 1142 for application.
- ** See latest edition of Lycoming Service Instruction No. 1143 for application.
- ★ See latest edition of Lycoming Service Instruction No. 1012 for application.
- See latest edition of Lycoming Service Bulletin No. 475 for application.
- Provision for 3.25:1 drive for alternator w/ de-icing.

SECTION 1 ... CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

Figure 5 - CAMSHAFT AND RELATED PARTS, Page 1-9

			Both	K1F5	S1A5
1	LW-19340	CAMSHAFT ASSEMBLY	1		
2	76118	SPACER, Tachometer shaft centering	1		
3	76155	SHAFT ASSEMBLY, Tachometer	1		
4	LW-18667	PIN, 3/16 dia. x 2-21/64 long	1		
5	STD-2231	RING, Internal retaining	1		

Figure 6 - PROPELLER GOVERNOR DRIVE ASSEMBLY, Page 1-10

			Both	K1F5	S1A5
1	70389	GEAR, Propeller governor driven	1		
2	70384	SHAFT, Propeller governor idler gear	1		
3	70388	GEAR, Propeller governor idler	1		
4	STD-737	KEY, 3/32 x 1/2 Woodruff	1		
5	73249	WASHER, Thrust	AR		
	73250	WASHER, Thrust	AR		
	73251	WASHER, Thrust	AR		
	73252	WASHER, Thrust	AR		
	01L21418	WASHER, Thrust	AR		
6	70455	GASKET, 25/32 I.D. x 1-1/8 O.D. x 1/32 to 3/64 thick	1		
7	LW-13896	PLUG, 3/4-16 hex. hd.	1		
8	72053	GASKET, Governor	1		
9	72378	COVER, Governor drive	1		
10	STD-35	WASHER, 5/16 plain (AN governor)	4		
11	STD-475	WASHER, 5/16 lock, internal teeth	4		
12	STD-1410	NUT, 5/16-18 plain	4		

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SECTION 1 ... CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

Figure 7 - CRANKSHAFT AND FUEL PUMP IDLER GEARS, Pages 1-11 & 1-12

			Both	K1F5	S1A5
1		Not Applicable			
2		Not Applicable			
3		Not Applicable			
4		Not Applicable			
5		Not Applicable			
6	71668	GEAR ASSY., Crankshaft idler, plain	2		
7	67530	BUSHING, Crankshaft idler gear	2		
8		Not Applicable			
9		Not Applicable			
10	LW-13795	SHAFT, Crankshaft idler gear	2		
11	STD-2167	SCREW, 5/16-18 x 7/8 long, hex. hd.	4		
12	71664	GEAR ASSY., Fuel pump, idler	1		
13	77309	BUSHING, Fuel pump idler gear	1		
14	72246	SHAFT, Fuel pump idler gear	1		
15	70474	WASHER, Fuel pump gear thrust	1		
16	STD-1737	RING, 37/64 dia. x 1/32 thick, external retaining	1		
17	71667	LOCKPLATE, 1/4 bolt x 1-3/4 spacing	1		
18	LW-25-0.63	SCREW, 1/4-20 x 5/8 long, hex. hd.	2		
19	72972	SHAFTGEAR ASSY., Fuel pump drive	1		
20	72962	THRUST BUTTON, Accy. drive gear	1		
21	69164	GASKET, Fuel pump adapter	1		
22	69159	ADAPTER ASSY., Fuel pump drive	1		
23	STD-1774	PIN, 1/8 dia. x 1/4 long	1		
24	STD-213	SEAL, Oil, 3/4 I.D. x 1-3/8 O.D.	1		

SECTION 1 ... CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

Figure 8 - CRANKCASE ATTACHING PARTS, Pages 1-13 & 1-14

			Both	K1F5	S1A5
1		Not Applicable			
2	LW-25-1.50	BOLT, 1/4-20 x 1-1/2 long, hex. hd.			8
3	LW-25-1.50	BOLT, 1/4-20 x 1-1/2 long, hex. hd.		7	
4	LW-25-1.88*	BOLT, 1/4-20 x 1-7/8 long, hex. hd.		1	
5	LW-25-2.00	BOLT, 1/4-20 x 2.00 long, hex. hd.	2		
6	STD-8	WASHER, 1/4 plain		25	24
7		Not Applicable			
8	LW-25-1.75	BOLT, 1/4-20 x 1-3/4 long, hex. hd.	2		
9	LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. hd.	4		
10	STD-160	WASHER, 1/4 lock, internal teeth	16		
11	STD-1411	NUT, 1/4-20 plain	12		
12	LW-25S1.50	BOLT, 1/4-20 x 1-1/2 long, hex. hd., dr. end	6		
13	STD-8	WASHER, 1/4 plain (max. 18)	AR		
14	STD-1409	NUT, 1/4-20 slotted shear	6		
15	AN6-21	BOLT, 3/8-24 x 2-13/64 long, hex. hd.	1		
16	STD-33	WASHER, 3/8 plain	2		
17	STD-872	NUT, 3/8-24 slotted	1		
18	60803	STRAP, Lifting	2		
19		Not Applicable			
20	AN6-34A	BOLT, 3/8-24 x 3-37/64 long, hex. hd.	1		
21	STD-33	WASHER, 3/8 plain	3		
22	STD-678	WASHER, 3/8 lock, internal teeth	2		
23	STD-596	NUT, 3/8-24 plain	2		

* Two STD-8 washers and one LW-25-1.88 bolt assembled in rear top hole of crankcase to prevent bending of lifting strap.

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IO-540-K1F5 & -S1A5 Supplement

SECTION 2 ... ACCESSORY HOUSING AND RELATED PARTS

Figure 9 - ACCESSORY HOUSING ASSEMBLY, Pages 2-1 & 2-2

			Both	K1F5	S1A5
1	73818	GASKET, Accessory housing	1		
2	78490	HOUSING ASSY., Accessory		1	
	LW-10641*	HOUSING ASSY., Accessory			1
3	31C-12	STUD, 5/16-18 x 1-1/2 long	4		
4	31CD-17	STUD, 5/16-18 x 2-1/8 long, drilled		3	
5	31CD-20*	STUD, 5/16-18 x 2-1/2 long, drilled			3
6	31C-21	STUD, 5/16-18 x 2-5/8 long	4		
7	31C-19	STUD, 5/16-18 x 2-3/8 long	4		
8	25C-21	STUD, 1/4-20 x 2-5/8 long	4		
9	STD-784	PLUG, 3/8 pipe, Allen head	1		
10	1102	PLUG, 1/8-27 NPT, Allen head		2	3

* This accessory housing employs longer studs, P/N 31CD-20, for large oil pump.

SECTION 2 ... ACCESSORY HOUSING AND RELATED PARTS

Figure 10 - OIL PUMP ASSEMBLY AND ACCESSORY HOUSING ATTACHING PARTS,
Pages 2-3 & 2-4

			Both	K1F5	S1A5
1		Not Applicable			
2	78528	BODY ASSY., Oil pump		1	
3	STD-1339	PLUG, 1/16-27 NPT, Allen head		1	
4	75287	BODY ASSY., Oil pump			1
5	60329	SHAFT, Oil pump idler			1
6	STD-714	PIN, 1/8 dia. x 1.00 long, cotter			1
7	STD-1339	PLUG, 1/16-27 NPT, Allen head			1
8	05K19423-S*	OIL PUMP IMPELLER KIT		1	
9	74641	SHAFT, Oil pump drive		1	
10	76784	SHAFT, Oil pump drive			1
11	61297	IMPELLER, Oil pump driving			1
12	61298	IMPELLER, Oil pump driven			1
13	STD-35	WASHER, 5/16 plain	3		
14	STD-1420	NUT, 5/16-18 slotted	3		
15	LW-14260	SEAL, Tachometer drive, oil	1		
16	STD-8	WASHER, 1/4 plain	10		
17	STD-160	WASHER, 1/4 lock, internal teeth	12		
18	LW-25-0.94	BOLT, 1/4-20 x 15/16 long, hex. hd.	9		
19	LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. hd.	1		
20	LW-25-1.88	BOLT, 1/4-20 x 1-7/8 long, hex. hd.	2		

* Refer to the latest edition of Lycoming Service Bulletin No. 456.

SECTION 2 ... ACCESSORY HOUSING AND RELATED PARTS

Figure 11 - FUEL PUMP ASSEMBLY, Pages 2-5 & 2-6

			Both	K1F5	S1A5
1		Not Applicable			
2		Not Applicable			
3		Not Applicable			
4	LW-10799	SPACER, Fuel pump insulating	1		
5	78993	FUEL PUMP (RG-17980-J)	1		
6	STD-35	WASHER, 5/16 plain	4		
7	STD-475	WASHER, 5/16 lock, internal teeth	4		
8	STD-1410	NUT, 5/16-18 plain	4		
9		Not Applicable			
10		Not Applicable			
11		Not Applicable			
12		Not Applicable			

SECTION 2 ... ACCESSORY HOUSING AND RELATED PARTS

Figure 12 - OIL PRESSURE SCREEN, OIL FILTER AND OIL COOLER BYPASS VALVE,
Pages 2-7 & 2-8

			Both	K1F5	S1A5
1		Not Applicable			
2		Not Applicable			
3		Not Applicable			
4		Not Applicable			
5		Not Applicable			
6		Not Applicable			
7		Not Applicable			
8		Not Applicable			
9	LW-12795	GASKET, Oil filter adapter	2		
10	77853*	HOUSING ASSY., Oil filter	1		
11	77852	BASE ASSY., Oil filter	1		
12	STD-8	WASHER, 1/4 plain	4		
13	STD-160	WASHER, 1/4 lock, internal teeth	1		
14	STD-1411	NUT, 1/4-20 plain	1		
15	STD-1856	SCREW, 1/4-20 x 1.00 long, hex. hd.	3		
16	53E19600	VALVE ASSY., Temp. control, oil cooler bypass	1		
17	76510	GASKET, Valve assembly	1		
18	25C-10	STUD, 1/4-20 x 1-1/4 long	1		
19	54D19625**	OIL FILTER, (short w/ stud)	1		

* This complete Oil Filter Housing Assembly is no longer available. Lycoming will continue to supply a Filter Element Kit P/N LW-14089 which includes (1) element, (1) square gasket, (1) copper gasket and (1) flat gasket.

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

SECTION 2 ... ACCESSORY HOUSING AND RELATED PARTS

Figure 13 - VACUUM PUMP DRIVE, OIL COOLER AND BREATHER FITTINGS,
Pages 2-9 & 2-10

			Both	K1F5	S1A5
1	61183	GASKET, Accessory adapter	1		
2	67536	ADAPTER ASSY., Vacuum pump	1		
3	STD-1774	DOWEL, 1/8 dia. x 1/4 long	1		
4	06A19956	OIL SEAL, 7/8 I.D. x 1-1/2 O.D. x 5/16 wide	1		
5	72974	GEAR ASSY., Vacuum pump driven	1		
6	71596	WASHER, Accessory driven gear	1		
7	8313	GASKET, Vacuum pump	1		
8	60430	COVER, Vacuum pump	1		
9		Not Applicable			
10		Not Applicable			
11	STD-8	WASHER, 1/4 plain	4		
12	STD-160	WASHER, 1/4 lock, internal teeth	4		
13	STD-1411	NUT, 1/4-20 plain	4		
14	06E19769-0.63	GASKET, 7/8 O.D. x 5/8 I.D. x 3/32 annular	1		
15	62417	PLUG, Oil cooler bypass	1		
16		Not Applicable			
17		Not Applicable			
18		Not Applicable			
19		Not Applicable			
20	MS20822-8	ELBOW, 1/2 flared tube, 3/8 NPT, 90°	1		
21	MS20823-8	ELBOW, 1/2 flared tube, 3/8 NPT, 45°	1		
22	AN844-16D	ELBOW, 3/4 pipe thd. - 1.00 hose, 45°	1		
23		Not Applicable			

SECTION 2 ... ACCESSORY HOUSING AND RELATED PARTS

Figure 14 - HYDRAULIC PUMP DRIVE, ADAPTER AND COVERS,
Pages 2-11 & 2-12

			Both	K1F5	S1A5
1	72964	GEAR ASSY., Hydraulic pump driven			1
2	71596	WASHER, Accessory driven gear			1
3		Not Applicable			
4	68315	GASKET, Accessory drive adapter			1
5	LW-10807**	ADAPTER ASSY., Hydraulic pump			1
6	06A19956	SEAL, Oil, 7/8 I.D. x 1-1/2 O.D. x 5/16 wide			1
7	25C-32**	STUD, 1/4-20 x 4.00 long			4
8	STD-1774	PIN, 1/8 dia. x 1/4 long			1
9	STD-35	WASHER, 5/16 plain			4
10	STD-475	WASHER, 5/16 lock, internal teeth			4
11	STD-1410	NUT, 5/16-18 plain			4
12	8313	GASKET, Hydraulic pump			1
13	60430	COVER, Hydraulic pump			1
14	LW-10806	SPACER, Hydraulic pump stud			4
15	STD-8	WASHER, 1/4 plain			4
16	STD-160	WASHER, 1/4 lock, internal teeth			4
17	STD-1411	NUT, 1/4-20 plain			4
18	69551	GASKET, Hydraulic pump adapter pad		1	
19	69106	COVER, Hydraulic pump adapter pad		1	
20	STD-35	WASHER, 5/16 plain		4	
21	STD-475	WASHER, 5/16 lock, internal teeth		4	
22	STD-1410	NUT, 5/16-18 plain		4	

** Hydraulic pump adapter with longer studs.

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SECTION 3 ... CYLINDER, PISTON AND VALVE TRAIN

Figure 15 - CONNECTING RODS, PISTONS AND RING ASSEMBLIES

Pages 3-1 & 3-2

			Both	K1F5	S1A5
1	LW-19332	CONNECTING ROD ASSEMBLY	6		
2	LW-13923	BUSHING, Connecting rod, upper	6		
3	LW-12596	BOLT, Connecting rod	12		
4	LW-12186	NUT, Connecting rod bolt	12		
5	74309	BEARING, Connecting rod	12		
	LW-14954	BEARING, Connecting rod (alternate)	12		
6	LW-10207	PISTON, Compression ratio 8.70:1	6		
7	LW-14078	PIN, Piston	6		
	LW-14077*	PIN, Piston	6		
8	60828	PLUG, Piston pin	12		
	LW-11775*	PLUG, Piston pin	12		
9	74241	RING, Piston, top compression	12		
10	73857	RING, Piston, oil regulating (expander type)	6		

* Piloted piston pin plug. Refer to the latest edition of 1267.

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SECTION 3 ... CYLINDER, PISTON AND VALVE TRAIN

Figure 16 - CYLINDER ASSEMBLY, Pages 3-3 & 3-4

			Both	K1F5	S1A5
1	LW-13530	CYLINDER AND HEAD ASSEMBLY, Nitrided		6	
	LW-13534	CYLINDER AND HEAD ASSEMBLY, Nitrided			6
2	LW-12688	SEAT, Intake valve	6		
3	16T19468	SEAT, Exhaust valve	6		
4	66713*	GUIDE, Intake valve, flanged	6		
5	75838**	GUIDE, Exhaust valve, flanged	6		
6	66796	INSERT, Spark plug, 18 - 1.5 MM		12	
	69260	INSERT, Spark plug (long reach)			12
7	STD-1872	INSERT, 1/8-27 Helicoil, taper pipe thd.			6
	STD-1872	INSERT, 1/8-27 Helicoil, taper pipe thd.		12	
8		Not Applicable			
9	31C-12	STUD, 5/16-18 x 1-1/2 long	12		
10	25C-8	STUD, 1/4-20 x 1.00 long	24		
11		Not Applicable			
12	66670	BUSHING, Rocker shaft	24		
13		Not Applicable			
14	MS20823-6D	ELBOW, 3/8 flared tube, 1/4 pipe thd., 45°	6		
15		Not Applicable			
16		Not Applicable			
17	72343	STABILIZER, Cyl. head fins, 15 teeth	6		
	72344	STABILIZER, Cyl. head fins, 26 teeth	6		
18	1102	PLUG, 1/8-27 NPT, Allen head	6		

* See latest edition of Lycoming Service Instruction No. 1256.

** See latest edition of Lycoming Service Instructions Nos. 1256 and 1430.

SECTION 3 ... CYLINDER, PISTON AND VALVE TRAIN

Figure 17 - VALVE ASSEMBLY, Pages 3-5 & 3-6

			Both	K1F5	S1A5
1	LW-13622	VALVE, Intake	6		
2	LW-16740	VALVE, Exhaust (rotator type)	6		
3	LW-13322	SEAT, Valve spring, lower exhaust	6		
4	LW-13321	SEAT, Valve spring, lower intake	6		
5	69532	SEAT, Valve spring, upper intake	6		
6	LW-16475	SEAT, Valve spring, upper exhaust			
		(rotator type)	6		
7	LW-11796	SPRING, Valve, outer	12		
8	LW-11797	SPRING, Valve, inner	12		
9	72050	KEY, Valve, intake	12		
10	17C21191	KEY, Valve, exhaust (rotator type)	12		
11	17C19386	CAP, Valve stem, exhaust (rotator type)	6		
	62388	CAP, Valve stem	6		
12		Not Applicable			
13	72255	SHROUD TUBE ASSY., Push rod	12		
14		Not Applicable			
15		Not Applicable			
16	LW-13077	SPRING, Shroud tube	24		
17	66728	WASHER, 25/32 I.D. x 1-1/4 O.D. x 1/32 thick	24		
18	61503	SLEEVE, Shroud tube seal	12		
19	LW-18661	SEAL, Shroud tube	24		
20		Not Applicable			
21		Not Applicable			
22		Not Applicable			

SECTION 3 ... CYLINDER, PISTON AND VALVE TRAIN

Figure 18 - CYLINDER RELATED PARTS, Pages 3-7 & 3-8

			Both	K1F5	S1A5
1	15F19957-55*	ROD ASSEMBLY, Push (A total of 12 reqd)	AR		
	73456*	ROD ASSEMBLY, Push (A total of 12 reqd)	AR		
	15F19957-57*	ROD ASSEMBLY, Push (A total of 12 reqd)	AR		
	15F19957-58*	ROD ASSEMBLY, Push (A total of 12 reqd)	AR		
	73556*	ROD ASSEMBLY, Push (A total of 12 reqd)	AR		
	15F21362-23*	ROD ASSEMBLY, Push (A total of 12 reqd)	AR		
	73555*	ROD ASSEMBLY, Push (A total of 12 reqd)	AR		
	15F21362-24*	ROD ASSEMBLY, Push (A total of 12 reqd)	AR		
2	71481	RING, Oil seal, 3/32 dia. x 4-27/32 I.D.	6		
3	69531	PLATE, Cylinder hold down nut	12		
4	71133	NUT, 1/2-20 NF-3, cylinder hold down	24		
5	71134	NUT, 3/8-24 NF-3, cylinder hold down	24		
6	71549	WASHER, Valve rocker	12		
7	72626	SHAFT, Valve rocker	12		
8		Not Applicable			
9		Not Applicable			
10	17F21186 ★	ROCKER ASSY., Valve, intake	6		
11	17F21185 ★	ROCKER ASSY., Valve, exhaust	6		
12	74389	BUSHING, Valve rocker	12		
13		Not Applicable			
14		Not Applicable			

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

★ Due to the size of the area where the part number is stamped, the last five digits may be all that is shown (21185, 21186).

SECTION 3 ... CYLINDER, PISTON AND VALVE TRAIN

Figure 19 - CYLINDER HEAD DRAIN TUBES, INTERCYLINDER COOLING BAFFLES AND RELATED PARTS, Pages 3-9 & 3-10

			Both	K1F5	S1A5
1	66732	GASKET, Valve rocker shaft cover	12		
2	72710	COVER, Valve rocker shaft	12		
3	75233	"O" RING	24		
4		Not Applicable			
5	STD-160	WASHER, 1/4 lock, internal teeth	24		
6	STD-1411	NUT, 1/4-20 plain	24		
7	67193	GASKET, Rocker box cover	6		
8	68795	COVER ASSY., Rocker box	6		
9	STD-1925	SCREW, 1/4-20 x 5/8 long, pan. hd.	48		
10	74494	PLATE, Spark plug reach caution	6		
11	STD-35	WASHER, 5/16 plain	12		
12	STD-475	WASHER, 5/16 shakeproof lock	12		
13	STD-1410	NUT, 5/16-18 plain	12		
14	STD-684	NIPPLE, Straight, 3/8 I.D. hose	6		
15	STD-2180	HOSE, 3/8 I.D. x 1-13/16 long	6		
16	LW-15592-5-05	CLAMP, Hose	12		
17	72702	TUBE ASSY., Cyl. head oil drain, cyl. no. 1	1		
	72703	TUBE ASSY., Cyl. head oil drain, cyl. no. 2	1		
	73027	TUBE ASSY., Cyl. head oil drain, cyls. no. 3,4,5,6	4		
18	LW-16362	BAFFLE & CLIP ASSY., Intercylinder, cyls. 1 & 6	2		
	LW-16363	BAFFLE & CLIP ASSY., Intercylinder, cyls. 2 & 5	2		
19	71610	HOOK, Intercylinder baffle retainer	4		
20	71611	RETAINER, Intercylinder baffle	4		
21	72834	COVER, Baffle ignition cable hole	4		
22	STD-692	SCREW, No. 10-32 x 1/2 long, rd. hd.	8		
23	STD-670	NUT, No. 10-32 self-locking	8		
24		Not Applicable			
25	65614	PLUG, Baffle attaching	4		
26	STD-251	WASHER, No. 10 lock, internal teeth	4		
27	STD-1686	SCREW, No. 10-32 x 7/16 long	4		

SECTION 4 ... IGNITION SYSTEM

Figure 20 - BENDIX MAGNETOS AND MAGNETO DRIVES, Pages 4-1 & 4-2

			Both	K1F5	S1A5
1	LW-13641	CUSHION, Magneto drive	4		
2	62224	GASKET, Magneto adapter	2		
3	LW-12681	GASKET, Magneto	2		
4	LW-12707	ADAPTER, Magneto	2		
5	73000	COUPLING, Magneto drive, left	1		
	73636	COUPLING, Magneto drive, right	1		
6	LW-19096	GEAR RETAINER ASSEMBLY	2		
7	67542	BEARING, Ball	2		
8	LW-349310-8*	MAGNETO, (S6LN-1209)			1
	LW-349290-1	MAGNETO, (S6LN-1208)			1
	LW-349310-1	MAGNETO, (S6LN-1209)	1		
	LW-349290-1	MAGNETO, (S6LN-1208)	1		
9		Not Applicable			
10	STD-475	WASHER, 5/16 lock, internal teeth	4		
11	STD-1410	NUT, 5/16-18 plain	4		
12	66M19385	CLAMP, Magneto	4		

* Electric tachometer pickup.

SECTION 4 ... IGNITION SYSTEM

Figure 21 - SLICK MAGNETOS AND MAGNETO DRIVES, Pages 4-3 & 4-4

			Both	K1F5	S1A5
1	73000	COUPLING, Magneto drive	1		
2	LW-13641	CUSHION, Magneto drive	4		
3	62224	GASKET, Magneto adapter	2		
4	LW-12707	ADAPTER, Magneto, impulse coupling	2		
5	LW-12681	GASKET, Magneto	2		
6	LW-19096	GEAR RETAINER ASSEMBLY	2		
7	67542	BEARING, Ball	2		
8	66LP-OSCNN*	MAGNETO, Right, Slick Model No. 6350	1		
	66LR37SCNN*	MAGNETO, Left, Slick Model No. 6393	1		
9	66M21195	CLAMP, Magneto	4		
10	STD-475	WASHER, 5/16 lock, internal teeth	4		
11	STD-1410	NUT, 5/16-18 plain	4		
12	STD-713 or	COTTER PIN, 3/32 x 3/4 long			
	STD-761	COTTER PIN, 3/32 x 1.00 long	2		

* See latest edition of Slick Magnetos.

Lycoming Service Instruction No. 1443 for complete listing of approved

SECTION 4 ... IGNITION SYSTEM

Figure 22 - IGNITION HARNESSSES, SPARK PLUGS AND ATTACHING PARTS,
Pages 4-5 & 4-6

			Both	K1F5	S1A5
1	67U20600	HARNESS, Right, Slick No. M-6007	1		
	67U20601	HARNESS, Left, Slick No. M-6006	1		
	67U20630	HARNESS, Right, Slick No. M-6026	1		
	67U20631	HARNESS, Left, Slick No. M-6025	1		
	67U20634	HARNESS, Right, Slick No. M-6009	1		
	67U20635	HARNESS, Left, Slick No. M-6008	1		
	67J20640	HARNESS, Right, Slick No. M-2964	1		
	67J20641	HARNESS, Left, Slick No. M-2963	1		
	67J20643	HARNESS, Right, Slick No. M-6010	1		
	67J20644	HARNESS, Left, Slick No. M-6011	1		
	67J20645	HARNESS, Left, Slick No. 6012	1		
	67J20646	HARNESS, Right, Slick No. 6013	1		
2	1182-F7*	SPARK PLUG, Champion (RHM38E) or Auburn (HSR86)		12	
	1182-L7*	SPARK PLUG, Champion (RHB36S) or Auburn (281)			12
**	01P19762-4-17	BAG, Magneto harness attaching	1		
**	01P19762-4-44	BAG, Magneto harness attaching	1		

* Item No. 2 spark plugs are used in current production. See latest edition of Service Instruction No. 1042 for complete listing of all approved spark plugs.

Lycoming

** See page 4-6 for a breakdown of individual parts contained in the magneto and harness attaching parts bag. These parts to be attached by customer per engine line drawing included in each bag.

SECTION 5 ... ELECTRICAL COMPONENTS

Figure 23 - PRESTOLITE STARTERS AND ATTACHING PARTS, Page 5-1

			Both	K1F5	S1A5
1	LW-15572	STARTER, 24 volt, 12/14 pitch pinion (MHB-4016)	1		
2	STD-35	WASHER, 5/16 plain	4		
3	STD-475	WASHER, 5/16 lock, internal teeth	4		
4	LW-31-1.16	BOLT, 5/16-18 x 1-5/32 long, hex. hd.	1		
5	STD-1410	NUT, 5/16-18 plain	3		

NOTE

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

Figure 24 - LYCOMING LIGHTWEIGHT STARTERS AND ATTACHING PARTS, Page 5-2

			Both	K1F5	S1A5
1	05K21302-2*	KIT, Lightweight starter, 24 volt, 12/14 pitch	1		
2	LW-16152	SPACER, Starter/crankcase	1		
3	05K21194**	KIT, Shim, lightweight starter	1		
4	STD-35	WASHER, 5/16 plain	4		
5	STD-475	WASHER, 5/16 lock, internal teeth	4		
6	LW-31-1.16	BOLT, 5/16-18 x 1-5/32 long, hex. hd.	1		
7	STD-1410	NUT, 5/16-18 plain	3		

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

** Refer to the latest edition of Lycoming Service Instruction No. 1447 for shim application.

NOTE

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

SECTION 5 ... ELECTRICAL COMPONENTS

Figure 25 - ALTERNATOR ASSEMBLIES AND BELTS, Pages 5-3 & 5-4

			Both	K1F5	S1A5
1	32C19553	ALTERNATOR ASSY., 24 volt - 70 amp.	1		
2	LW-14326	ALTERNATOR, 24 volt - 70 amp. (ALU-8421-LS)	1		
3	36B19484	PULLEY, Alternator	1		
4		Not Applicable			
5		Not Applicable			
6		Not Applicable			
7		Not Applicable			
8		Not Applicable			
9		Not Applicable			
10	37A19773-382	BELT, Alternator drive, 3/8 wide	1		

NOTE

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

Figure 26. ALTERNATOR MOUNTING AND ATTACHING PARTS Pages 5-5 & 5-6

THIS FIGURE DOES NOT APPLY TO THE IO-540-K1F5 OR IO-540-S1A5 MODEL AIRCRAFT ENGINES ... FOR ALTERNATOR MOUNTING ON THESE MODELS, REFER TO FIGURE 27.

SECTION 5 ... ELECTRICAL COMPONENTS

Figure 27 - ALTERNATOR MOUNTING AND ATTACHING PARTS, Pages 5-7 & 5-8

			Both	K1F5	S1A5
1	77756*	BRACKET, Alternator	1		
2	73383	LOCKPLATE, 5/16 bolt x 1.00 spacing	1		
3	LW-31-0.94	BOLT, 5/16-18 x 15/16 long, hex. hd.	2		
4	LW-18759*	BRACKET, Alternator belt adjusting	1		
5	STD-1727*	WASHER, Plain, 3/4 O.D. x 11/32 I.D. x 1/8 thick	2		
6	LW-14637 ★	SHIM, 13/16 O.D. x 11/32 I.D. x .005 thick	AR		
7	LW-14649 ★	SHIM, 13/16 O.D. x 11/32 I.D. x .010 thick	AR		
8	LW-31H1.31*	BOLT, 5/16-18 x 1-5/16 long, hex. hd., drilled	2		
9	LW-10952*, ★	SHIM, 13/16 O.D. x 13/32 I.D. x .005 thick	AR		
10	LW-19262	PULLEY & SHAFT ASSY., Alternator belt adj.	1		
11	78614	PULLEY, Alternator belt adjusting	1		
12	78629	BALL BEARING, Alternator idler pulley	1		
13	MS16625-1125	RING, Internal retaining, 1-1/4 dia.	2		
14	LW-19237	IDLER SHAFT, Alternator belt adjusting	1		
15	76768	LOCKWASHER, Alternator idler pulley bearing	1		
16	76769	LOCKNUT, Alt. idler pulley bearing	1		
17	LW-11635	SHIELD, Idler shaft	1		
18	STD-669	WASHER, 33/64 I.D. x 1.00 O.D. x 1/8 thick	1		
19	STD-2221	NUT, 1/2-20 self-locking	1		
20		Not Applicable			
21		Not Applicable			
22		Not Applicable			
23		Not Applicable			
24		Not Applicable			
25	AN6-12*	BOLT, 3/8-24 x 1-21/64 long, hex. hd., dr. end	1		
26		Not Applicable			
27	STD-690	WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick	AR		
28	STD-872	NUT, 3/8-24 slotted	1		
29	STD-713	PIN, Cotter, 3/32 dia. x 3/4 long	1		
30		Not Applicable			
31		Not Applicable			
32	76534 ★	SHIM, 1-1/8 O.D. x 13/32 I.D. x .005 thick	AR		
33	AN6-16*	BOLT, 3/8-24 x 1-53/64 long, hex. hd., d. end	1		
34	STD-690*	WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick	AR		

(Continued on Next Page)

SECTION 5 ... ELECTRICAL COMPONENTS

Figure 27 - ALTERNATOR MOUNTING AND ATTACHING PARTS, Pages 5-7 & 5-8
(Continued)

			Both	K1F5	S1A5
35	STD-872*	NUT, 3/8-24 slotted	1		
36	STD-713*	PIN, Cotter, 3/32 dia. x 3/4 long	1		

* Used with Prestolite installation.

★ Shim as required for belt alignment between crankcase, idler adjusting bracket, alternator and alternator bracket.

Figure 28. GENERATOR MOUNTING AND ATTACHING PARTS
Pages 5-9 & 5-10

THIS FIGURE DOES NOT APPLY TO THE IO-540-K1F5 OR IO-540-S1A5
MODEL AIRCRAFT ENGINES.

SECTION 6 ... OIL SUMP AND INDUCTION SYSTEM

Figure 29. OIL SUMP ASSEMBLY AND OIL SUCTION SCREEN
Pages 6-1 & 6-2

THIS FIGURE DOES NOT APPLY TO THE IO-540-K1F5 OR IO-540-S1A5
MODEL AIRCRAFT ENGINES FOR OIL SUMP AND INDUCTION
HOUSING ASSEMBLY AND OIL SUCTION SCREEN ON THESE MODELS,
REFER TO FIGURE 30.

SECTION 6 ... OIL SUMP AND INDUCTION SYSTEM

Figure 30 - OIL SUMP AND INDUCTION HOUSING ASSEMBLY AND OIL SUCTION SCREEN, Pages 6-3 & 6-4

			Both	K1F5	S1A5
1	06B21326	GASKET, Oil sump	1		
2	74833	HOUSING ASSY., Oil sump & induction		1	
	LW-10454	HOUSING ASSY., Oil sump & induction			1
3	LW-18291	COVER, Induction housing	1		
4	STD-514	DOWEL, 5/16 dia. x 1/2 long	2		
5	72179	STUD, Intake pipe extension	3		
6	72167	PIPE, Extension, intake cyls., nos. 1 & 2	2		
7	72168	PIPE, Extension, intake cyls., nos. 3 & 4	2		
8	72169	PIPE, Extension, intake cyls., nos. 5 & 6	2		
9	LW-11273	CLAMP, Intake pipe extension	3		
10	25C-9	STUD, 1/4-20 x 1-1/8 long	4		
11	25C-11	STUD, 1/4-20 x 1-3/8 long	15		
12	38-15	STUD, 3/8-16 x 1-7/8 long		8	
	38-17	STUD, 3/8-16 x 2-1/8 long			8
13	72706	INSERT, Helicoil, 1/4-20 x 3/8 long, self-lock	14		
14	STD-91	PLUG, 1/2-14 NPT, Allen head	1		
15	1102	PLUG, 1/8 pipe, Allen head	5		
16	STD-784	PLUG, 3/8-18 NPT, Allen head	1		
17	STD-355	PLUG, 3/4-14 NPT, Allen head	2		
18	STD-8	WASHER, 1/4 plain	29		
19	STD-160	WASHER, 1/4 lock, internal teeth	23		
20	LW-25-2.00	BOLT, 1/4-20 x 2.00 long, hex. hd.	2		
21	LW-25-1.00	BOLT, 1/4-20 x 1.00 long, hex. hd.	10		
22	STD-1411	NUT, 1/4 plain	13		
23	06E19769-0.91	GASKET, 1-1/8 O.D. x 29/32 I.D. x 1/16 ann.	1		
24	72958	BAFFLE, Oil sump	1		
25	72960	PLUG, 7/8-14 x 5/8 hex. hd.	1		
26	LW-25-0.81	BOLT, 1/4-20 x 13/16 long	4		
27	STD-8	WASHER, 1/4 plain	37		
28	STD-160	WASHER, 1/4 lock, internal teeth	23		
29	LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. hd.	6		
30	LW-25-1.00	BOLT, 1/4-20 x 1.00 long, hex. hd.	8		
31	STD-1411	NUT, 1/4-20 plain	25		
32	STD-551	PLUG, 1/2-14 NPT, Sq. hd., drilled	2		
33	60422	SCREEN, Oil suction	1		
34	06E19769-1.00	GASKET, 1.00 I.D. x 1-1/4 O.D. x 3/32 thick	1		
35	LW-12545	PLUG, 1.00-20 thd. x 5/8 hex. hd.	1		
36	75444	ADAPTER ASSY., Fuel drain valve	2		

SECTION 6 ... OIL SUMP AND INDUCTION SYSTEM

Figure 31 - INTAKE PIPES AND AIR INLET HOUSING, Pages 6-5 & 6-6

			Both	K1F5	S1A5
1	72711	RING, Seal, intake pipes	6		
2	LW-12191	PIPE, Intake, cylinder no. 1	1		
3	LW-12192	PIPE, Intake, cylinder no. 2	1		
4	LW-12193	PIPE, Intake, cylinder no. 3	1		
5	LW-12194	PIPE, Intake, cylinders no. 4 & 5	2		
6	LW-12195	PIPE, Intake, cylinder no. 6	1		
7	71973	GASKET, 2 bolt flange, 1-7/8 I.D.	6		
8	74360	FLANGE, Intake pipe, upper	6		
9	STD-8	WASHER, 1/4 plain	12		
10	STD-160	WASHER, 1/4 lock, internal teeth	12		
11	LW-25-1.25	BOLT, 1/4-20 x 1-1/4 long, hex. hd.	12		
12		Not Applicable			
13		Not Applicable			
14		Not Applicable			
15		Not Applicable			
16		Not Applicable			
17		Not Applicable			
18		Not Applicable			
19		Not Applicable			
20	72210	GASKET, Air throttle housing	1		
21	77653	HOUSING ASSY., Air inlet		1	
	LW-15730	HOUSING ASSY., Air inlet			1
22		Not Applicable			
23	31C-14	STUD, 5/16-18 x 1-3/4 long			4
	31C-16	STUD, 5/16-18 x 2.00 long		4	
24	1102	PLUG, 1/8 pipe x 3/8 long, Allen head			1
25		Not Applicable			
26	STD-8	WASHER, 1/4 plain	6		
27	LW-25-0.81	BOLT, 1/4-20 x 13/16 long	6		

SECTION 6 ... OIL SUMP AND INDUCTION SYSTEM

Figure 32. FUEL INJECTOR, FUEL MANIFOLD, FUEL LINES, HOSES & INJECTION NOZZLES (IO-540-M1A5)

Pages 6-7 & 6-8

THIS FIGURE DOES NOT APPLY TO THE IO-540-K1F5 OR IO-540-S1A5 MODEL AIRCRAFT ENGINES .. FOR FUEL INJECTORS AND ACCESSORIES ON THESE MODELS, REFER TO FIGURES 33, 34 & 35.

Figure 33 - FUEL INJECTORS AND FUEL HOSES (IO-540-J, K, N, P, R)
Pages 6-9 & 6-10

			Both	K1F5	S1A5
1		Not Applicable			
2	73032	GASKET, Air inlet housing			1
	73032	GASKET, Air inlet housing		2	
3	77654	SPACER, Fuel injector		1	
4	LW-11007	FUEL INJECTOR (2524477-12)			1
	LW-11218	FUEL INJECTOR (2524491-9)		1	
5		Not Applicable			
6	MS29512-06	SEAL, Oil, 5/64 dia. section x 15/32 I.D.	1		
7	AN919-6	REDUCER, Flared tube (1/4 tubing)	1		
8		Not Applicable			
9		Not Applicable			
10	STD-35	WASHER, 5/16 plain		4	
11	STD-1727	WASHER, 3/4 O.D. x 21/64 I.D. x 1/8 plain			4
12	STD-1410	NUT, 5/16-18 plain	4		
13	STD-1763	LOCKNUT, 5/16 palnut	4		
14	LW-12876-4S334	HOSE ASSY., Fuel injector to fuel manifold	1		
15a	LW-12877-6S051	HOSE ASSY., Fuel pump to fuel injector	1		
16		Not Applicable			
17	LW-16266-25-63	CLAMP	2		
18		Not Applicable			

SECTION 6 ... OIL SUMP AND INDUCTION SYSTEM

Figure 34 - FUEL MANIFOLDS, BRACKETS AND INJECTION NOZZLES
(IO-540-J, K, N, P, R) Pages 6-11 & 6-12

			Both	K1F5	S1A5
1	79007	MANIFOLD ASSY., Fuel	1		
2	MS20823-4	ELBOW, 1/4 tube, 1/8 NPT, 45°	1		
3		Not Applicable			
4		Not Applicable			
5	STD-148	NIPPLE, Union, 1/8 NPT	6		
6	02G21382	NIPPLE, 3/16 tube to 1/8 NPT, restricted	1		
7		Not Applicable			
8	LW-18265	NOZZLE, Injection		6	
	LW-18854	NOZZLE ASSY., Manifold air bleed			6
9	951391	"O" RING			12
10	73966	SPACER, Fuel manifold bracket	2		
11	73965	BRACKET, Fuel manifold	2		
12		Not Applicable			
13	STD-251	WASHER, No. 10 lock, internal teeth	4		
14	STD-82	SCREW, No. 10-24 x 1/2 long, rd. hd.	4		
15		Not Applicable			
16		Not Applicable			

SECTION 6 ... OIL SUMP AND INDUCTION SYSTEM

Figure 35 - FUEL LINES AND ATTACHING PARTS (IO-540-J, K, N, P, R),
Pages 6-13 & 6-14

			Both	K1F5	S1A5
1	LW-12098-0-210	TUBE ASSY., Fuel man. to noz., cyls. no. 1-2-5-6	4		
2	LW-12098-0-170	TUBE ASSY., Fuel man. to noz., cyls. no. 3 & 4	2		
3		Not Applicable			
4		Not Applicable			
5		Not Applicable			
6	LW-16266-10-75	CLAMP	10		
7	LW-16266-10-13	CLAMP	12		
8	73136	BRACKET, 90°	4		
9	STD-860	SCREW, No. 10-32 x 5/8 long	14		
10	STD-425	WASHER, No. 10 plain	2		
11	STD-670	NUT, No. 10-32 self-locking	14		

NOTE

For more information on fuel line and clamping diagrams, installation and inspections, refer to the latest edition of Lycoming Service Bulletin No. 342.

SECTION 7 SERVICE KIT SECTION

Seal and Gasket Set	Both	73185-1, See page 7-2
Cylinder, Piston and Ring Assy. ...	K1F5 ...	05K21112, See page 7-4
	... S1A5 ...	05K21204, See page 7-5

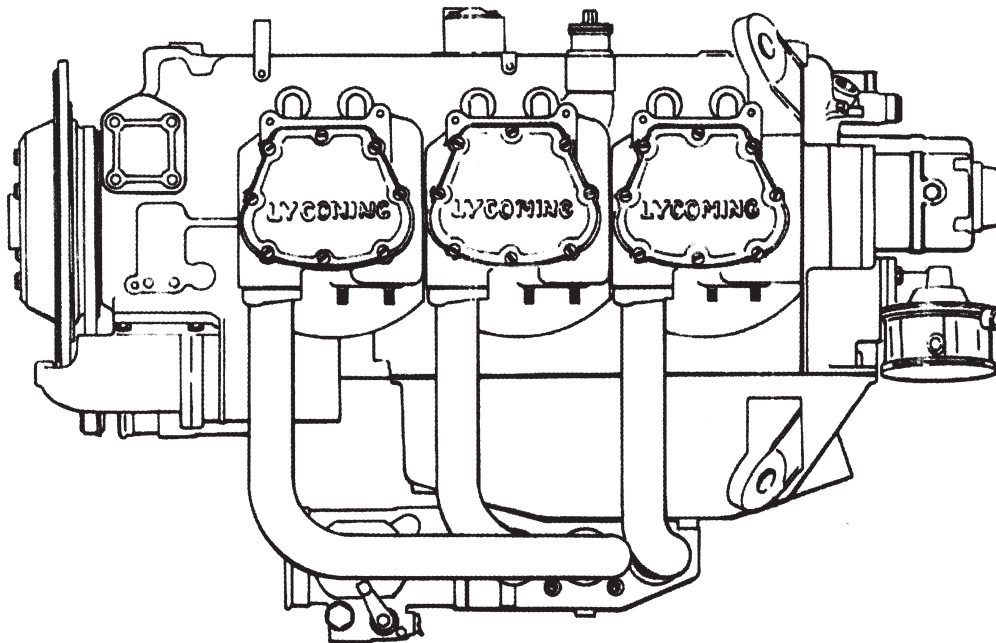
CRANKCASE ASSY. & GOVERNOR STUD KIT ..	LW-13549-S
Crankcase Assembly	LW-13549
Stud (AN Governor)	31C-14
Stud (Woodward Governor)	31C-16

To: PARTS MANAGER

This Parts Catalog PC-215-2 dated June 1993 incorporates current updated information relevant to the IO-540-J, K, M, N, P and R Series Standard Cylinder Flange Crankcase Model Aircraft Engines.

Previous to this publication, the models listed in this catalog were published in PC-215 Parts Catalog dated May 1972.

Lycoming Aircraft Engines Parts Catalog



IO-540-J, K, M, N, P and R Series Standard Cylinder Flange Crankcase Model Engines

LYCOMING

INTRODUCTION

This illustrated parts catalog contains a complete parts listing for the Lycoming IO-540-J, K, M, N, P and R Series standard cylinder flange crankcase model aircraft engines.

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

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

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

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

NOTE

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

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

Any reference in this document to a suppliers/parts manufacturers' product, by name, trademark, part number or other description is solely for the purposes of identification and does not indicate or infer that Lycoming accepts responsibility for quality control and/or airworthiness of parts which do not pass through the Lycoming quality control system.

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SERVICE BULLETINS, INSTRUCTIONS AND LETTERS

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

HOW TO ORDER PARTS

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

- a. Always specify the model and serial number of your engine.
- b. Always specify Part Number, Nomenclature and quantity required.

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Oversize and Undersize Parts Listing

PART NO.	DESCRIPTION	OVERSIZE								UNDERSIZE		
		P02 .002	P05 .005	P10 .010	P15 .015	P20 .020	P30 .030	P40 .040	P50 .050	M03 .003	M06 .006	M10 .010
61681	GUIDE		X	X		X	X	X				
66610	BUSHING		X	X								
66713	GUIDE		X	X		X	X	X				
66796	INSERT			X								
69796	DOWEL		X									
71903-A, -B	BUSHING	SEE LATEST EDITION OF SERVICE INSTRUCTION NO. 1143 FOR APPLICATION.										
72057	SEAT		X	X		X	X					
72058	SEAT			X		X	X					
72060	BUSHING		X	X	X	X						
72061	BUSHING		X	X	X	X						
72062	BUSHING		X	X	X	X						
72074	BUSHING		X	X		X						
72155	BUSHING		X	X	X	X						
73810	BUSHING	SEE LATEST EDITION OF SERVICE INSTRUCTION NO. 1142 FOR APPLICATION.										
74230	GUIDE		X	X		X	X	X				
75302	DOWEL		X	X								
75656	BUSHING		X	X	X	X						
75657	BUSHING		X	X		X						
75838	GUIDE		X	X		X	X	X				
78443	SEAL	SEE LATEST EDITION OF SERVICE INSTRUCTION NO. 1324 FOR APPLICATION.										
79024	BUSHING		X	X	X	X						
LW-10647	DOWEL		X	X								
LW-11021	BEARING				X					X*	X*	X*
LW-11575	BEARING				X					X*	X*	X*
LW-11997	SEAL	SEE LATEST EDITION OF SERVICE INSTRUCTION NO. 1324 FOR APPLICATION.										
LW-12688	SEAT			X		X	X					
LW-13792	SEAL	SEE LATEST EDITION OF SERVICE INSTRUCTION NO. 1324 FOR APPLICATION.										
LW-13884	BEARING				X					X*	X*	X*
LW-13885	BEARING				X					X	X	X
LW-15628	SEAL	SEE LATEST EDITION OF SERVICE INSTRUCTION NO. 1324 FOR APPLICATION.										
LW-16047	BEARING				X					X	X	X
STD-1065	DOWEL	X	X	X	X							
16T19468	SEAT			X		X	X					
18A19399	BEARING				X					X	X	X
18A19441	BEARING				X					X	X	X
18D19394	BEARING				X					X	X	X
18E19396	BEARING				X					X	X	X

* Also available in P15 oversize.

In addition to the above, studs are available in P01, P02, P03, P05, P07, P10 & P12.

NOTE

When ordering oversize and undersize parts, be sure to specify the required oversize and undersize dimension along with the proper part number. For example, to order bearing LW-13884 in .003 undersize, order part number LW-13884-M3. Oversize code letter is "P" while undersize code letter is "M". These letters are then followed by the number designating the size in thousandths of an inch.

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP CRANKCASE ASSEMBLY

FIG. REF. 1	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY																
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5							
1	LW-11037	CRANKCASE ASSEMBLY (See note)		1																
	LW-11221	CRANKCASE ASSEMBLY (See note)																		1
	LW-11964 *	CRANKCASE ASSEMBLY			1	1	1	1	1	1			1							1
	LW-12030 *	CRANKCASE ASSEMBLY											1							
	LW-13433	CRANKCASE ASSEMBLY (See note)			1															
2	STD-557	DOWEL, 1/2 dia. x 11/16 long, hollow	2																	
3	75302	DOWEL, Crankcase thru stud	4																	
4	66734	STUD, 1/2-13 x 9-7/8 long	4																	
5	50-15	STUD, 1/2-13 x 1-7/8 long	12																	
6	38-13	STUD, 3/8-16 x 1-5/8 long	24																	
7	69679	STUD, 9/16-18 x 10-21/32 long	4																	
8	1102	PLUG, 1/8 pipe x 3/8 long	5																	
9	38-15	STUD, 3/8-16 x 1-7/8 long		8	8	8	8	8	8	8					8					8
	38-15	STUD, 3/8-16 x 1-7/8 long			16															
10	38-16 * *	STUD, 3/8-16 x 2.00 long											8							8
11	38-22	STUD, 3/8-16 x 2-3/4 long	1																	
12	STD-1339	PLUG, 1/16-27 pipe, Allen head	1																	
13	31C-12	STUD, 5/16-18 x 1-1/2 long	2																	
14	31C-13	STUD, 5/16-18 x 1-5/8 long	1																	
15	65007 *	RETAINER, Shroud tube seal			12	12	12	12	12	12	12	12	12							12
16	69796	DOWEL, Crankshaft bearing	2																	
17	LW-10647	DOWEL, Crankshaft bearing	6																	
18	STD-514	DOWEL, 5/16 dia. x 1/2 long	2																	
19	31C-14 ●	STUD, 5/16-18 x 1-3/4 long		4	4	4	4						4	4	4	4				4
	31C-16 †	STUD, 5/16-18 x 2.00 long			4	4		4	4											
20	STD-1339	PLUG, 1/16-27 NPT, Allen head																		6
21	73772	NOZZLE ASSY., Piston cooling		6	6	6	6	6	6	6										6 6

- * No longer available for purchase through Lycoming. Reference latest edition of Lycoming Service Letter L220.
- ** Longer mount studs.
- ★ Early crankcases used item no. 15, P/N 65007 retainer, installed in shroud tube bosses. Later crankcases are machined as a product improvement to accept shroud tubes without retainers. This part is a service item only.
- "AN" governor.
- † Woodward governor.

NOTE

This part is not available as a service item. Refer to Service Kit Section 7 for applicable Crankcase Assy. and Governor Stud Kit part number.

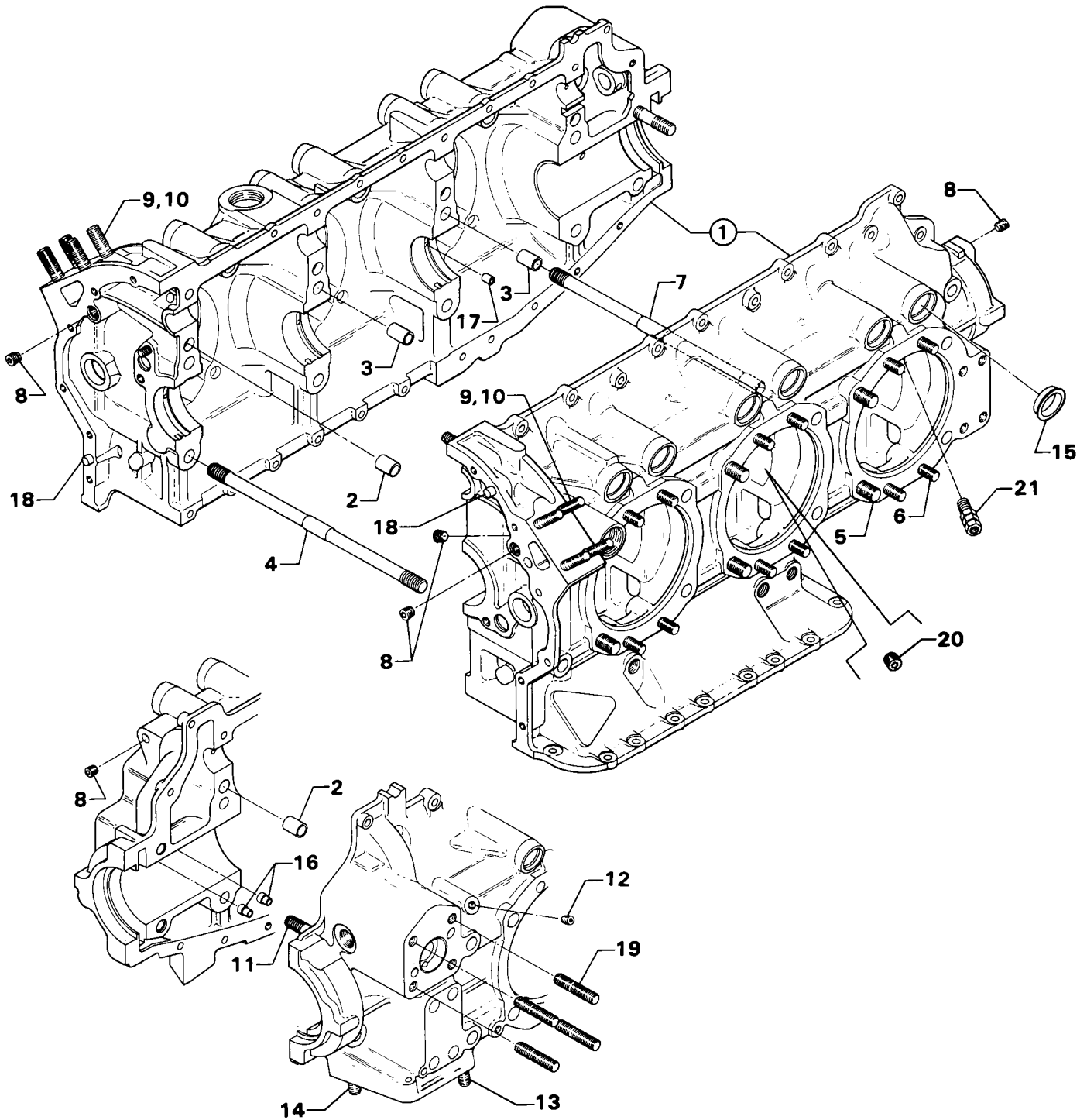


Figure 1. CRANKCASE ASSEMBLY

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP OIL LEVEL GAGES AND ENGINE MOUNTING BRACKETS

FIG. REF. 2	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY																
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5							
1	70457	GASKET, Oil filler extension	1																	
2	75761	EXTENSION, Oil filler, long (4-1/2")			1															
	77770 *	EXTENSION, Oil filler, long (6-5/16")			1	1														
3	75675	EXTENSION, Oil filler, short (2-3/16")			1		1		1											
	77527 *	EXTENSION, Oil filler, short (2-3/16")		1	1	1	1	1			1	1	1	1						
	74313 *	EXTENSION, Oil filler, short (2-3/16") (alternate to P/N 77527 extension)		1	1		1	1			1	1	1	1						
4	74065	"O" RING, Oil level gage			1		1		1											
5	72312 *	RING, Oil seal, 1.00 I.D. x 1/8 section		1	1	1	1	1			1	1	1	1						
6	LW-14728	GAGE ASSY., Oil level (cam action)									1									
	LW-14729	GAGE ASSY., Oil level (cam action)				1	1	1	1							1				
	LW-14732	GAGE ASSY., Oil level (cam action)		1											1					1
	LW-14737	GAGE ASSY., Oil level (cam action)				1	1													
	LW-14767	GAGE ASSY., Oil level									1									
	LW-14770	GAGE ASSY., Oil level				1														
	LW-14773	GAGE ASSY., Oil level						1												
	LW-14775	GAGE ASSY., Oil level				1														
7	77289	BRACKET, Engine mounting												3						
	77291	BRACKET, Engine mounting												1						
	70456	BRACKET, Engine mounting				4	4	4		4		4								4
	12A19770	BRACKET, Engine mounting		4	4		4	4								4				
8	STD-33	WASHER, 3/8 plain	16																	
9	STD-678	WASHER, 3/8 lock, internal teeth	16																	
10	STD-596	NUT, 3/8-24 plain, 21/64 thick	16																	

* Used with cam action oil level gage assembly.

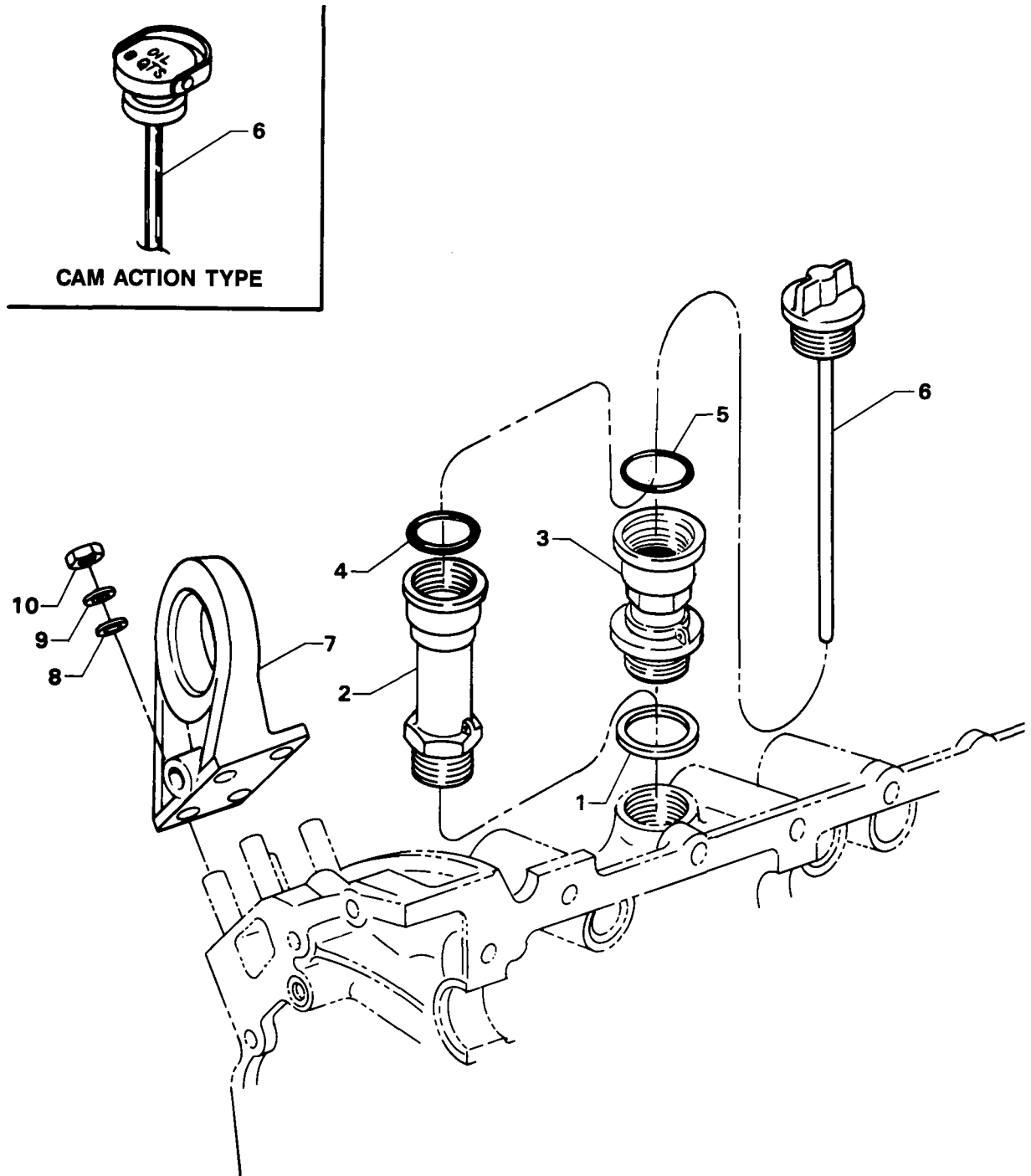


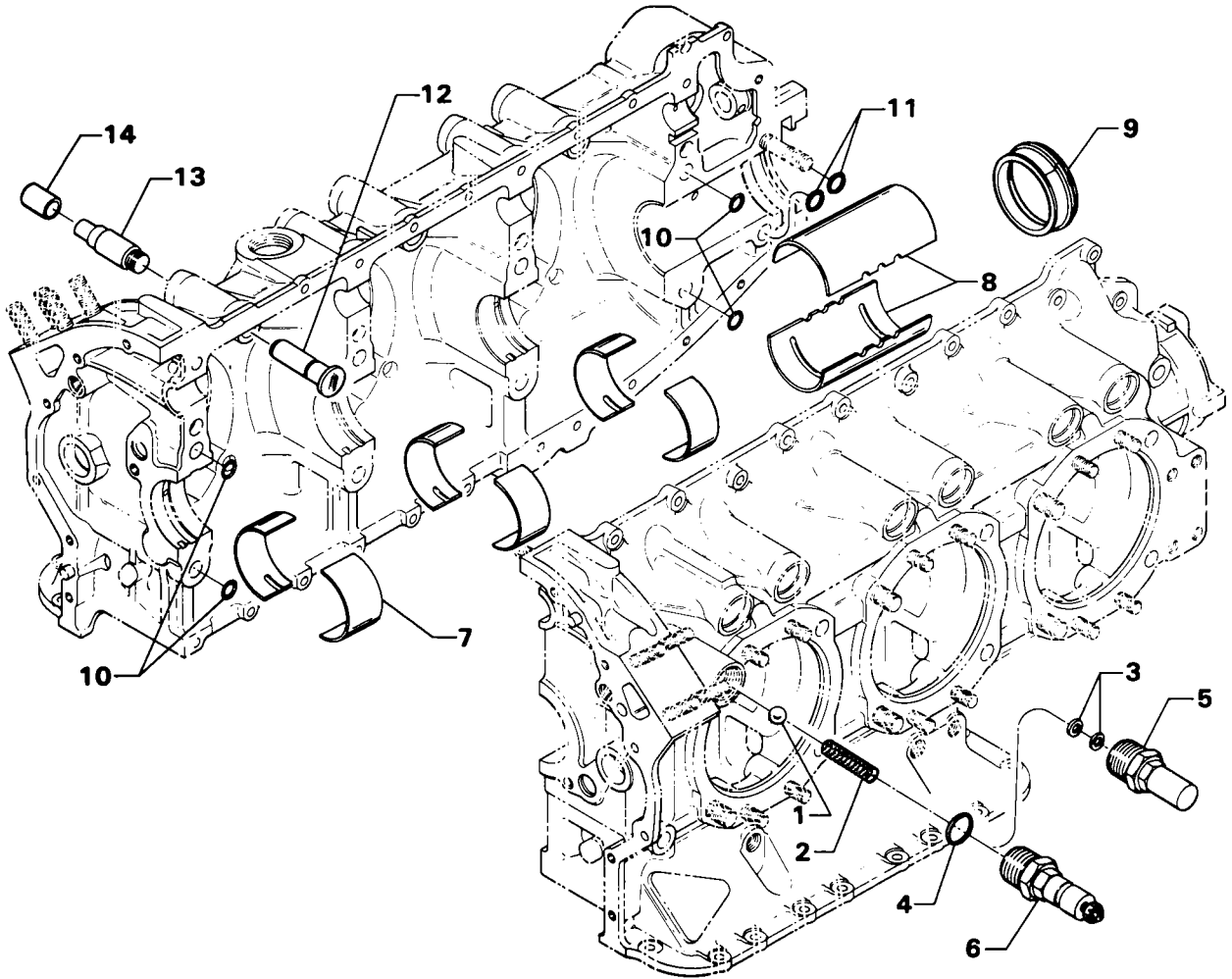
Figure 2. OIL LEVEL GAGES AND ENGINE MOUNTING BRACKETS

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP CRANKCASE RELATED PARTS

FIG. REF. 3	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY																
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5							
1	1028-B	BALL, 11/16 diameter	1																	
2	61084 *	SPRING, Oil pressure relief valve	1																	
	68668 *	SPRING, Oil pressure relief valve	1																	
	77467 *	SPRING, Oil pressure relief valve	1																	
	LW-11713 *	SPRING, Oil pressure relief valve	1																	
	LW-18085 *	SPRING, Oil pressure relief valve	1																	
3	STD-425	WASHER, No. 10 plain		AR	AR	AR	AR	AR	AR	AR	AR	AR	AR							
4	06E19769-1.25	GASKET, 1-1/4 I.D. x 1-1/2 O.D. x 3/32 annular	1																	
5	76529	PLUG, Oil relief valve		1	1	1	1	1	1	1	1	1	1							
6	77808	VALVE ASSY., Oil pressure relief, adj.		1	1		1				1						1		1	
7	18D19394	BEARING, Crankshaft		6														6		
	LW-16047	BEARING, Crankshaft (alternate)		6														6		
	LW-11021	BEARING, Crankshaft (alternate)		6														6		
	LW-11575	BEARING Crankshaft (alternate)			6	6	6	6	6	6	6	6	6						6	
	18E19396	BEARING, Crankshaft (alternate)			6	6	6	6	6	6	6	6	6						6	
8	LW-13884	BEARING, Crankshaft, front		2														2		
	18A19441	BEARING, Crankshaft, front (alternate)		2														2		
	LW-13885	BEARING, Crankshaft, front			2	2	2	2	2	2	2	2	2						2	
	18A19399	BEARING, Crankshaft, front (alternate)			2	2	2	2	2	2	2	2	2						2	
9	LW-13792 * *	SEAL, Crankshaft oil, solid		1															1	
	LW-11997 * *	SEAL, Crankshaft oil, split		1															1	
	LW-15628 * *	SEAL, Crankshaft oil, solid			1	1	1	1	1	1	1	1	1						1	
	78443 * *	SEAL, Crankshaft oil, split			1	1	1	1	1	1	1	1	1						1	
10	72075	SEAL, Oil, 3/32 section x 15/32 I.D.		4																
11	72091	RING, Oil seal, 23/64 I.D. x 7/64 dia.		2																
12	72877	BODY, Hydraulic tappet		12																
13	78290	PLUNGER ASSY., Hydraulic tappet		12																
14	15B21319	SOCKET, Push rod, hydraulic tappet		12																

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

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



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Figure 3. CRANKCASE RELATED PARTS

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP CRANKSHAFT AND RELATED PARTS

FIG. REF. 4	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY																
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5							
1	13E17676	CRANKSHAFT AND COUNTERWEIGHT ASSEMBLY	1																	
	13E17679	CRANKSHAFT AND COUNTERWEIGHT ASSEMBLY																	1	
	13F17775	CRANKSHAFT AND COUNTERWEIGHT ASSEMBLY					1													
	13F17776	CRANKSHAFT AND COUNTERWEIGHT ASSEMBLY										1								
	13F17777	CRANKSHAFT AND COUNTERWEIGHT ASSEMBLY			1	1		1	1	1										
	13F17778	CRANKSHAFT AND COUNTERWEIGHT ASSEMBLY															1		1	
2	13E17648	CRANKSHAFT AND PLUG ASSEMBLY	1																	
	13E17650	CRANKSHAFT AND PLUG ASSEMBLY																	1	
	13F17750	CRANKSHAFT AND PLUG ASSEMBLY					1													
	13F17751	CRANKSHAFT AND PLUG ASSEMBLY										1								
	13F17752	CRANKSHAFT AND PLUG ASSEMBLY			1	1		1	1	1										
	13F17753	CRANKSHAFT AND PLUG ASSEMBLY															1		1	
3	STD-1211	PLUG, 2.00 dia. expansion	1																	
4	73810*	BUSHING, Crankshaft dynamic counterweight	4																	
5	71640	PLUG, 1-3/8 diameter	1																1	
	60945	PLUG, 1-1/4 diameter			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	72062	BUSHING, Propeller flange, long	4																4	
7	72061	BUSHING, Propeller flange, short	1																1	
8	72060	BUSHING, Propeller flange, indexing	1																	
9	72074	BUSHING, Propeller flange, indexing																	1	
10	75656	BUSHING, Propeller flange, long			4	4	4	4	4	4	4	3							3	
11	72155	BUSHING, Propeller flange, short			1	1	1	1	1	1	1	2							2	
12	79024	BUSHING, Propeller flange, indexing					1				1	1							1	
13	75657	BUSHING, Propeller flange, indexing			1	1		1	1	1										
14	STD-1065	DOWEL, Stepped, 5/16 x 1/4 dia. x 35/64 long	1																	
15	LW-19210★	COUNTERWEIGHT ASSEMBLY			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	LW-19227★	COUNTERWEIGHT ASSEMBLY		2															2	
16	71903* *	BUSHING, Dynamic counterweight	8																	
17	76788★	ROLLER, Dynamic counterweight, 6.3 order			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	72797★	ROLLER, Dynamic counterweight, 6.3 order		2															2	
18	73648★	ROLLER, Dynamic counterweight, 5.1 order			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	72965★	ROLLER, Dynamic counterweight, 5.1 order		2															2	
19	LW-14820	RING, Internal retaining	8																	
20	71907	WASHER, Dynamic counterweight	8																	
21	13S19647●	GEAR, Crankshaft		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	13S19648●	GEAR, Crankshaft				1													1	
22	LW-18638	LOCKPLATE, Crankshaft gear	1																	
23	STD-2209	BOLT, 5/16-24 x 1-3/4 long, hex. hd.	1																	
24	72245‡	SUPPORT ASSY., Starter ring gear, 12/14 pitch			1	1														
	75030■	SUPPORT ASSY., Starter ring gear, 12/14 pitch		1	1		1		1	1	1	1	1	1	1	1	1	1	1	1
	77378§	SUPPORT ASSY., Starter ring gear, 12/14 pitch		1																
	77579▶	SUPPORT ASSY., Starter ring gear, 12/14 pitch		1	1	1		1								1				1
	78446◀	SUPPORT ASSY., Starter ring gear, 12/14 pitch					1													
25	72566	GEAR, Starter ring	1																	

- * See latest edition of Lycoming Service Instruction No. 1142 for application.
- * * See latest edition of Lycoming Service Instruction No. 1143 for application.
- ★ See latest edition of Lycoming Service Instruction No. 1012 for application.
- See latest edition of Lycoming Service Bulletin No. 475 for application.
- ± Provision for 2.50:1 drive.
- Provision for 3.25:1 drive for alternator w/ de-icing.
- § Provision for 3.25:1 drive for alternator w/ electric de-icing.
- ▼ Provision for 3.25:1 drive for alternator, no de-icing.
- ▲ Provision for 3.25:1 drive for alternator w/ de-icer holes for 3 bladed propeller.

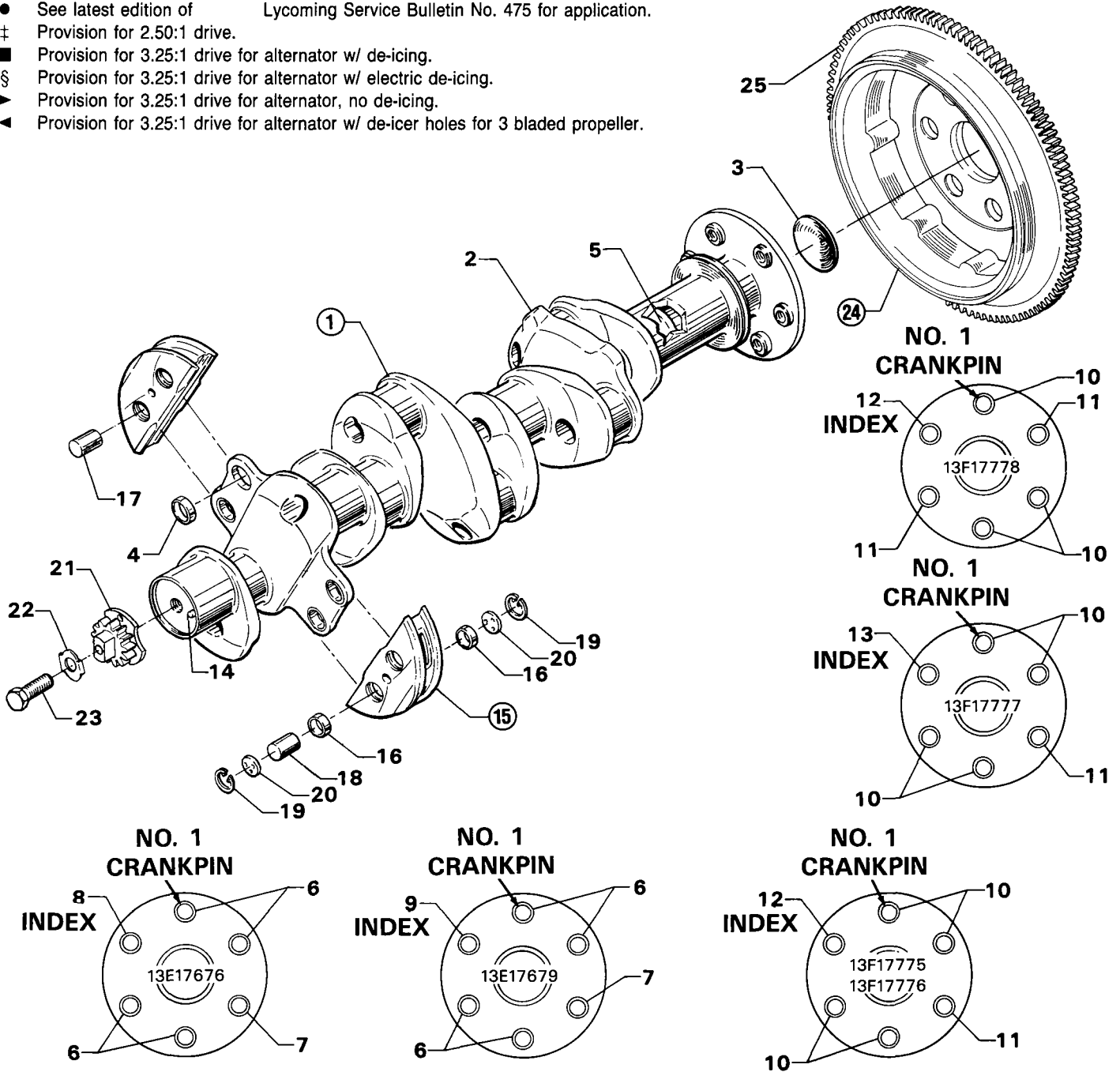
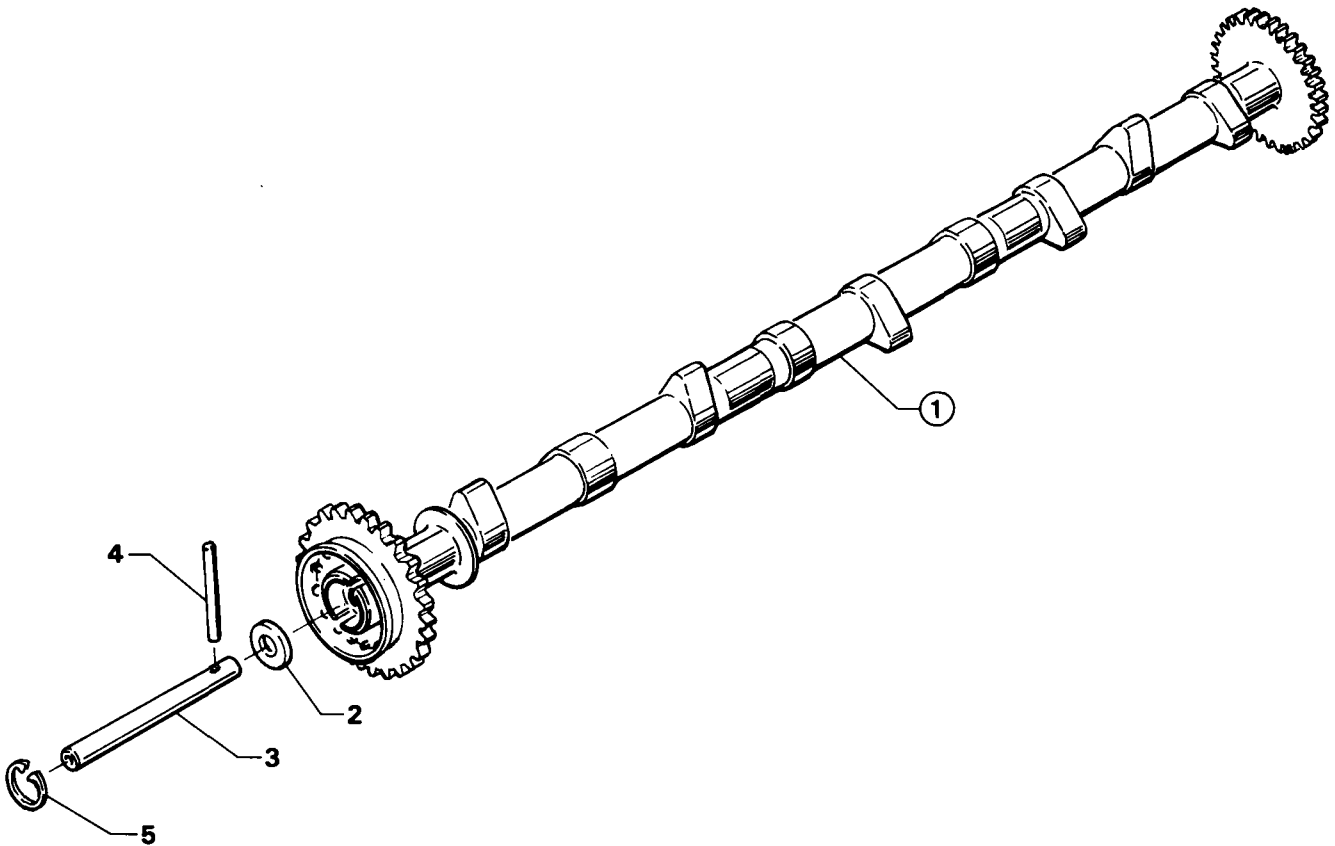


Figure 4. CRANKSHAFT AND RELATED PARTS

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP CAMSHAFT AND RELATED PARTS

FIG. REF. 5	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY																
				J	K	K	K	K	K	M	N	P	R							
				4	1	1	1	1	1	1	1	1	1							
1	LW-19340	CAMSHAFT ASSEMBLY	1																	
2	76118	SPACER, Tachometer shaft centering	1																	
3	76155	SHAFT ASSEMBLY, Tachometer	1																	
4	LW-18667	PIN, 3/16 dia. x 2-21/64 long	1																	
5	STD-2231	RING, Internal retaining	1																	



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Figure 5. CAMSHAFT AND RELATED PARTS

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

PROPELLER GOVERNOR DRIVE ASSEMBLY

FIG. REF. 6	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY																
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5							
1	70389	GEAR, Propeller governor driven	1																	
2	70384	SHAFT, Propeller governor idler gear	1																	
3	70388	GEAR, Propeller governor idler	1																	
4	STD-737	KEY, 3/32 x 1/2 Woodruff	1																	
5	73249	WASHER, Thrust	AR																	
	73250	WASHER, Thrust	AR																	
	73251	WASHER, Thrust	AR																	
	73252	WASHER, Thrust	AR																	
	01L21418	WASHER, Thrust	AR																	
6	70455	GASKET, 25/32 I.D. x 1-1/8 O.D. x 1/32 to 3/64 thick	1																	
7	LW-13896	PLUG, 3/4-16 hex. head	1																	
8	72053	GASKET, Governor	1																	
9	72378	COVER, Governor drive	1																	
10	STD-35	WASHER, 5/16 plain (Woodward governor)			20	20		20	20											
	STD-35	WASHER, 5/16 plain (AN governor)		4	4	4	4				4	4	4	4						
11	STD-475	WASHER, 5/16 lock, internal teeth	4																	
12	STD-1410	NUT, 5/16-18 plain	4																	

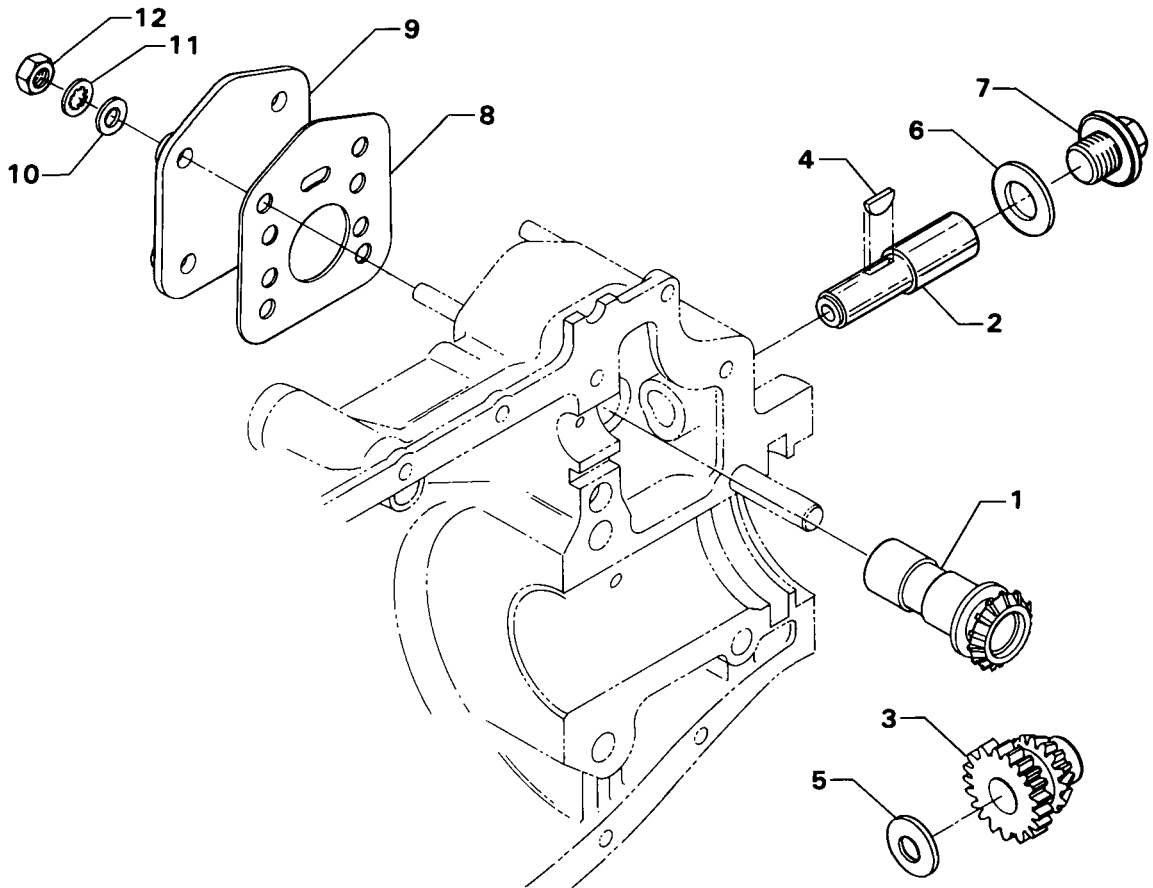
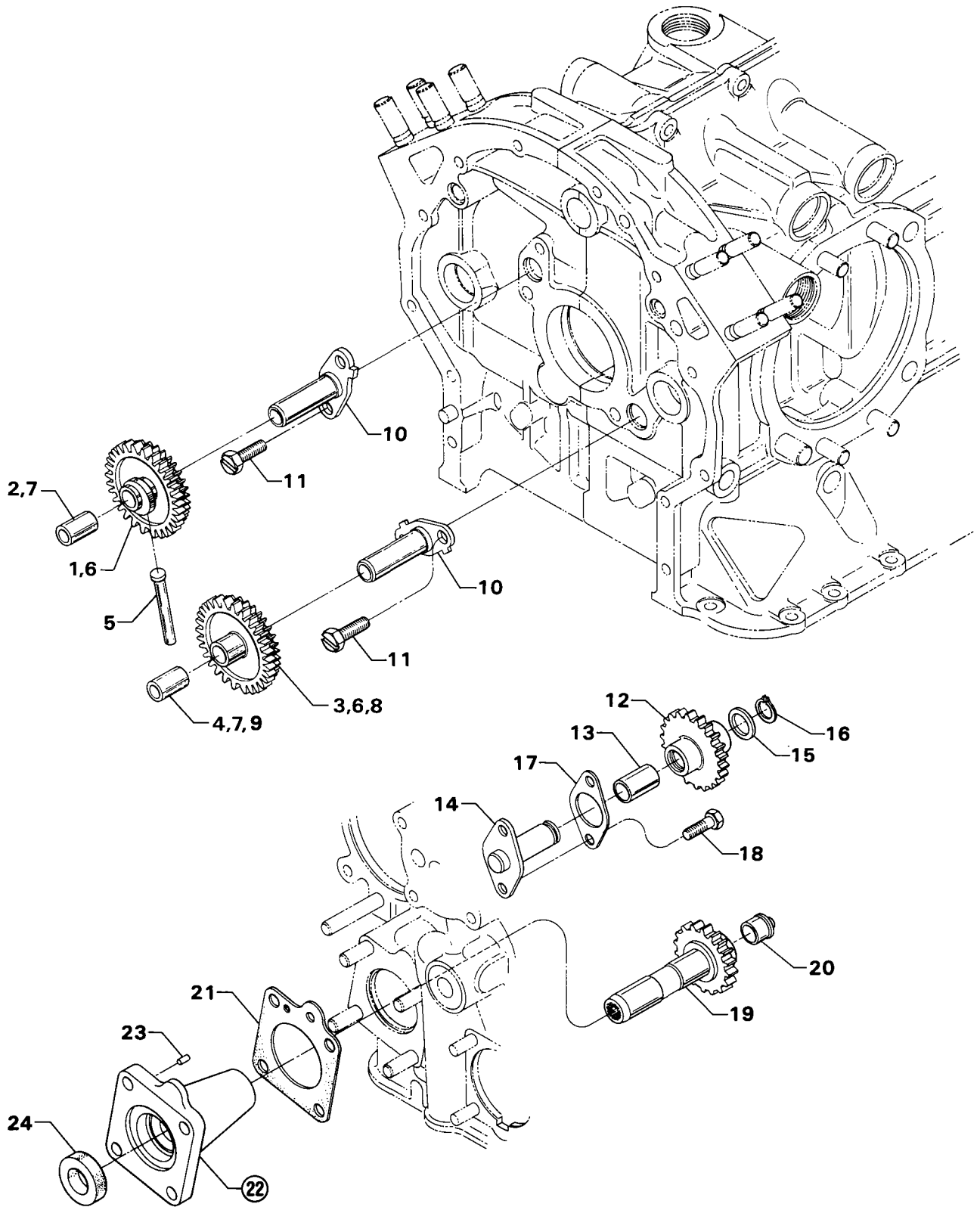


Figure 6. PROPELLER GOVERNOR DRIVE ASSEMBLY



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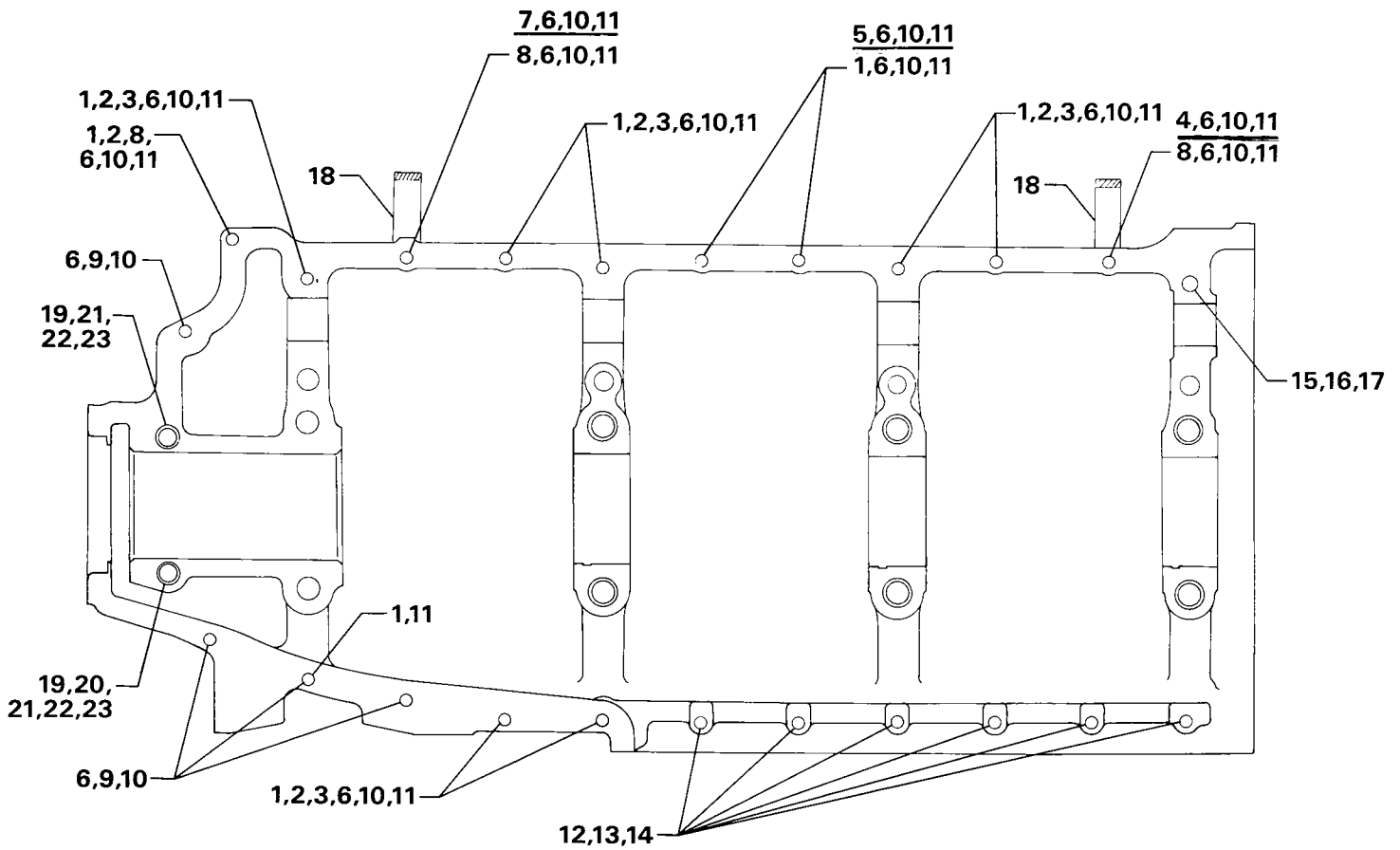
Figure 7. CRANKSHAFT AND FUEL PUMP IDLER GEARS

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP CRANKCASE ATTACHING PARTS

FIG. REF. 8	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY																
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5							
1	LW-25-1.50	BOLT, 1/4-20 x 1-1/2 long, hex. hd.			11	11		11		11										
2	LW-25-1.50	BOLT, 1/4-20 x 1-1/2 long, hex. hd.																		8
3	LW-25-1.50	BOLT, 1/4-20 x 1-1/2 long, hex. hd.		7	7		7		7		7									7
4	LW-25-1.88 *	BOLT, 1/4-20 x 1-7/8 long, hex. hd.		1	1		1		1		1									1
5	LW-25-2.00	BOLT, 1/4-20 x 2.00 long, hex. hd.		2	2		2		2		2		2	2	2	2	2			2
6	STD-8	WASHER, 1/4 plain			27	27		27		27										
	STD-8	WASHER, 1/4 plain		25	25		25		25		25		25							25
	STD-8	WASHER, 1/4 plain																		24
7	LW-25-1.75	BOLT, 1/4-20 x 1-3/4 long, hex. hd.			1	1		1		1										
8	LW-25-1.75	BOLT, 1/4-20 x 1-3/4 long, hex. hd.		2	2		2		2		2		2							2
9	LW-25-1.13	BOLT, 1/4-20 x 2.00 long, hex. hd.	4																	
10	STD-160	WASHER, 1/4 lock, internal teeth	16																	
11	STD-1411	NUT, 1/4-20 plain	12																	
12	LW-25S1.50	BOLT, 1/4-20 x 1-1/2 long, hex. hd., dr. end	6																	
13	STD-8	WASHER, 1/4 plain (max. 18)	AR																	
14	STD-1409	NUT, 1/4-20 slotted shear	6																	
15	AN6-21	BOLT, 3/8-24 x 2-13/64 long, hex. hd.	1																	
16	STD-33	WASHER, 3/8 plain	2																	
17	STD-872	NUT, 3/8-24 slotted	1																	
18	60803	STRAP, Lifting	2																	
19	LW-11866 * *	SPACER NUT, Compressor			2															
20	AN6-34A	BOLT, 3/8-24 x 3-37/64 long, hex. hd.	1																	
	AN6-34A * *	BOLT, 3/8-24 x 3-37/64 long, hex. hd.			1															
21	STD-33	WASHER, 3/8 plain	3																	
	STD-33 * *	WASHER, 3/8 plain			4															
22	STD-678	WASHER, 3/8 lock, internal teeth	2																	
23	STD-596	NUT, 3/8-24 plain	2																	

* Two STD-8 washers and one LW-25-1.88 bolt assembled in rear top hole of crankcase to prevent bending of lifting strap.

* * Engines employing optional freon compressor (not sold by Lycoming).



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Figure 8. CRANKCASE ATTACHING PARTS

ACCESSORY HOUSING AND RELATED PARTS

ACCESSORY HOUSING ASSEMBLY

FIG. REF. 9	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY														
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5					
1	73818	GASKET, Accessory housing	1															
2	76152	HOUSING ASSY., Accessory											1					
	76153	HOUSING ASSY., Accessory		1	1		1		1									1
	78490	HOUSING ASSY., Accessory			1	1	1	1	1	1	1							
	LW-10641 *	HOUSING ASSY., Accessory				1										1		
3	31C-12	STUD, 5/16-18 x 1-1/2 long	4															
4	31CD-17	STUD, 5/16-18 x 2-1/8 long, drilled		3	3	3	3	3	3	3	3	3						3
5	31CD-20 *	STUD, 5/16-18 x 2-1/2 long, drilled				3											3	
6	31C-21	STUD, 5/16-18 x 2-5/8 long	4															
7	31C-19	STUD, 5/16-18 x 2-3/8 long		4	4	4	4	4	4	4	4					4	4	
8	25C-21	STUD, 1/4-20 x 2-5/8 long	4															
9	STD-784	PLUG, 3/8 pipe, Allen head	1															
10	1102	PLUG, 1/8-27 NPT, Allen head	2															
	1102	PLUG, 1/8-27 NPT, Allen head				3											3	

* This accessory housing employs longer studs, P/N 31CD-20, for large oil pump.

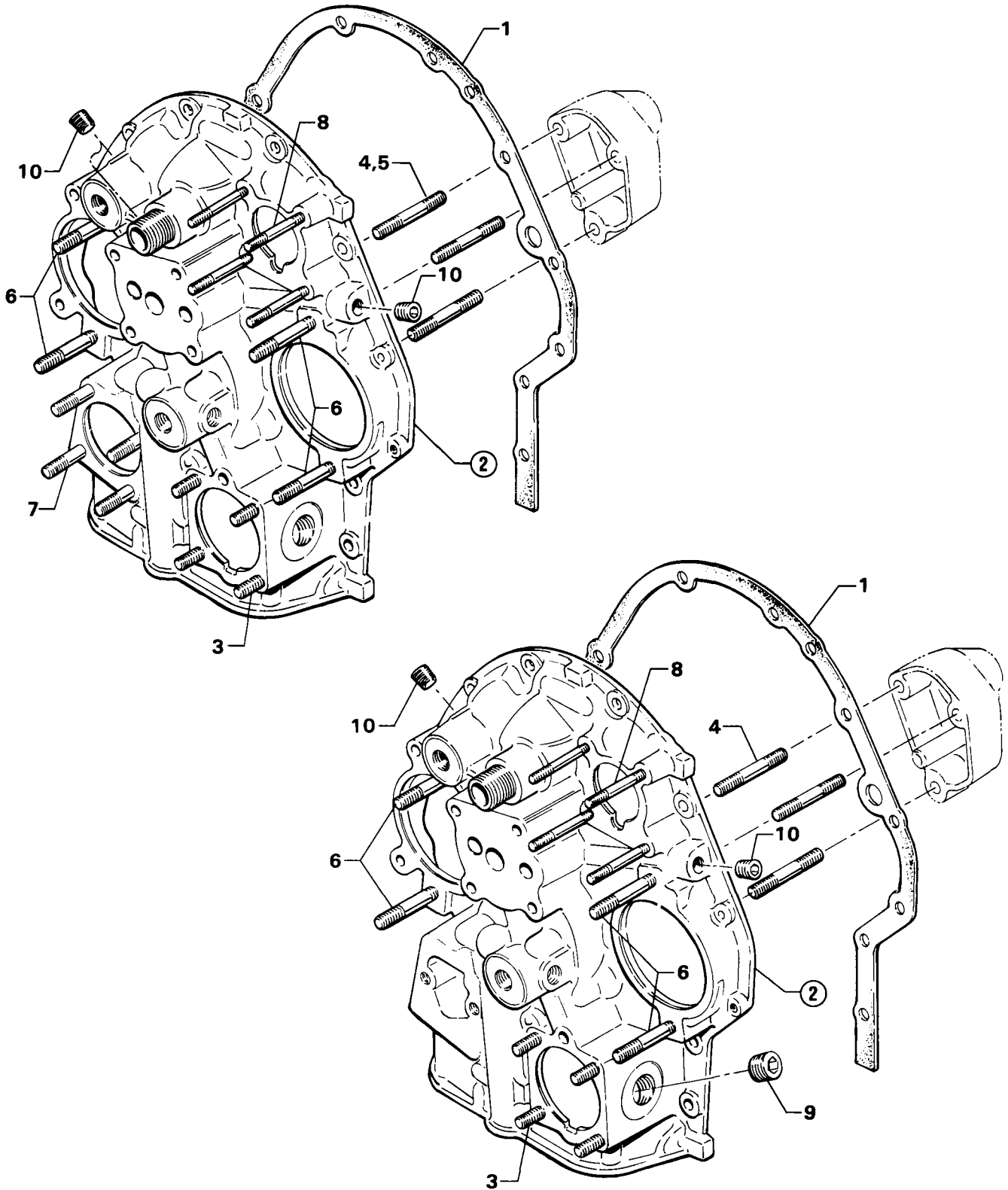


Figure 9. ACCESSORY HOUSING ASSEMBLY

ACCESSORY HOUSING AND RELATED PARTS

OIL PUMP ASSEMBLY AND ACCESSORY HOUSING ATTACHING PARTS

FIG. REF. 10	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY												
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5			
1	78531	BODY, Oil pump												1		
2	78528	BODY ASSY., Oil pump		1	1	1	1	1	1	1	1					1
3	STD-1339	PLUG, 1/16-27 NPT, Allen head		1	1	1	1	1	1	1	1					1
4	75287	BODY ASSY., Oil pump				1									1	
5	60329	SHAFT, Oil pump idler				1									1	
6	STD-714	PIN, 1/8 dia. x 1.00 long, cotter				1									1	
7	STD-1339	PLUG, 1/16-27 NPT, Allen head				1									1	
8	05K19423-S*(**)	OIL PUMP IMPELLER KIT		1	1	1	1	1	1	1	1	1	1			1
9	74641**	SHAFT, Oil pump drive		1	1	1	1	1	1	1	1	1	1			1
10	76784★	SHAFT, Oil pump drive				1									1	
11	61297★	IMPELLER, Oil pump driving				1									1	
12	61298★	IMPELLER, Oil pump driven				1									1	
13	STD-35	WASHER, 5/16 plain	3													
14	STD-1420	NUT, 5/16-18 slotted	3													
15	LW-14260	SEAL, Tachometer drive, oil	1													
16	STD-8	WASHER, 1/4 plain	10													
17	STD-160	WASHER, 1/4 lock, internal teeth	12													
18	LW-25-0.94	BOLT, 1/4-20 x 15/16 long, hex. hd.	9													
19	LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. hd.	1													
20	LW-25-1.88	BOLT, 1/4-20 x 1-7/8 long, hex. hd.	2													

- * Refer to the latest edition of Lycoming Service Bulletin No. 456.
- ** K1B5 — Use with P/N 78528 Body Assy.
- ★ K1B5 — Use with P/N 75287 Body Assy.

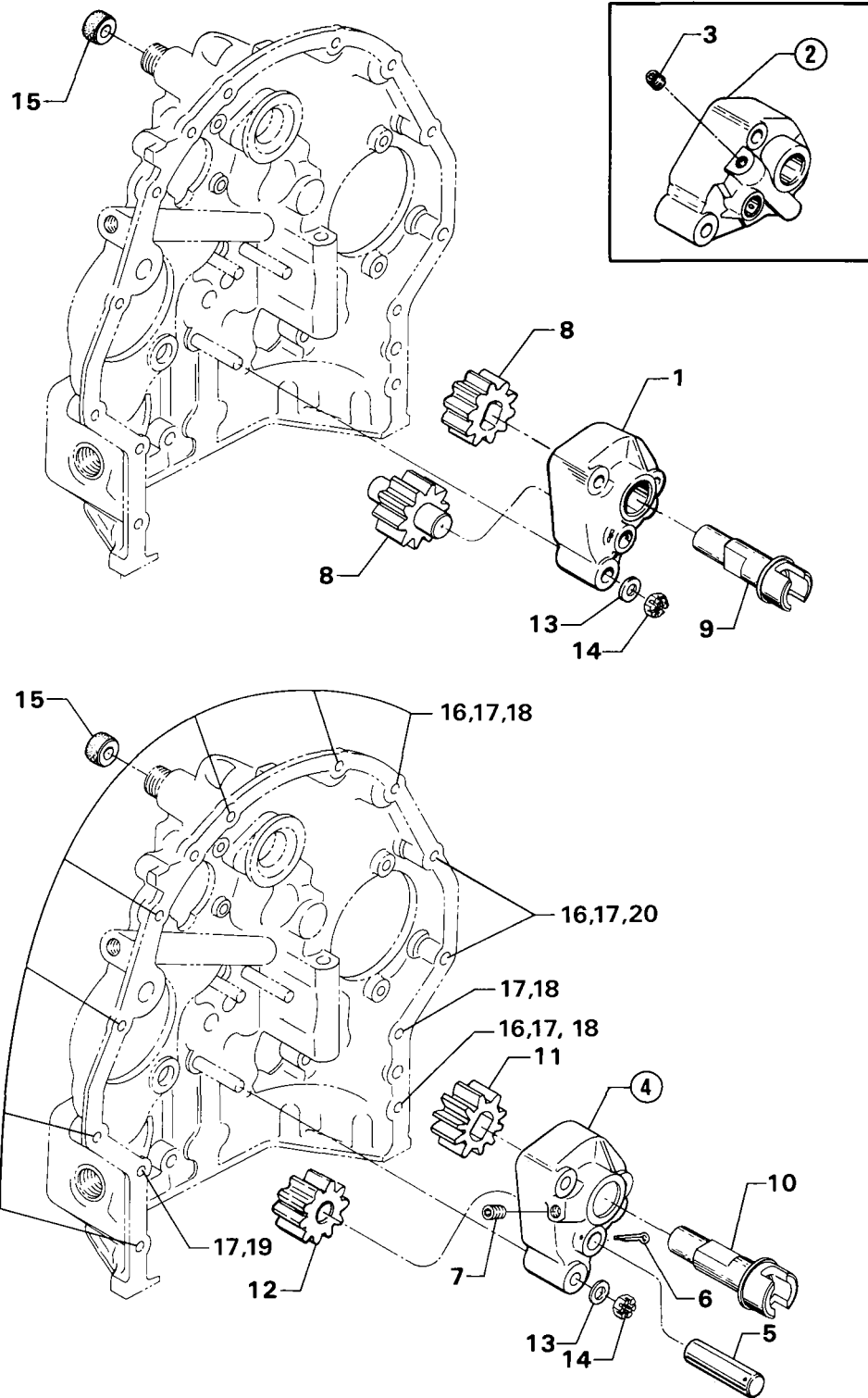


Figure 10. OIL PUMP ASSEMBLY AND ACCESSORY HOUSING ATTACHING PARTS

ACCESSORY HOUSING AND RELATED PARTS FUEL PUMP ASSEMBLY

FIG. REF. 11	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY												
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5			
1	1691-C	GASKET, Fuel pump		1	1			1		1						1
2	60431	COVER, Fuel pump					1		1							
3	74547	FUEL PUMP (RG-17980)		1	1											1
4	LW-10799	SPACER, Fuel pump, insulating			1	1	1	1			1				1	
5	78993	FUEL PUMP (RG-17980-J)					1	1			1				1	
	76486	FUEL PUMP (RG-17980-D)			1	1										
6	STD-35	WASHER, 5/16 plain		4	4	4	4	4	4	4	4				4	4
7	STD-475	WASHER, 5/16 lock, internal teeth		4	4	4	4	4	4	4	4				4	4
8	STD-1410	NUT, 5/16-18 plain		4	4	4	4	4	4	4	4				4	4
9	60096	GASKET, Fuel pump													1	
10	LW-15473	FUEL PUMP (6441234)													1	
11	STD-33	WASHER, 3/8 plain													2	
12	STD-1882	SCREW, 3/8-16 x 1-9/32 long, socket hd., dr. hd.													2	

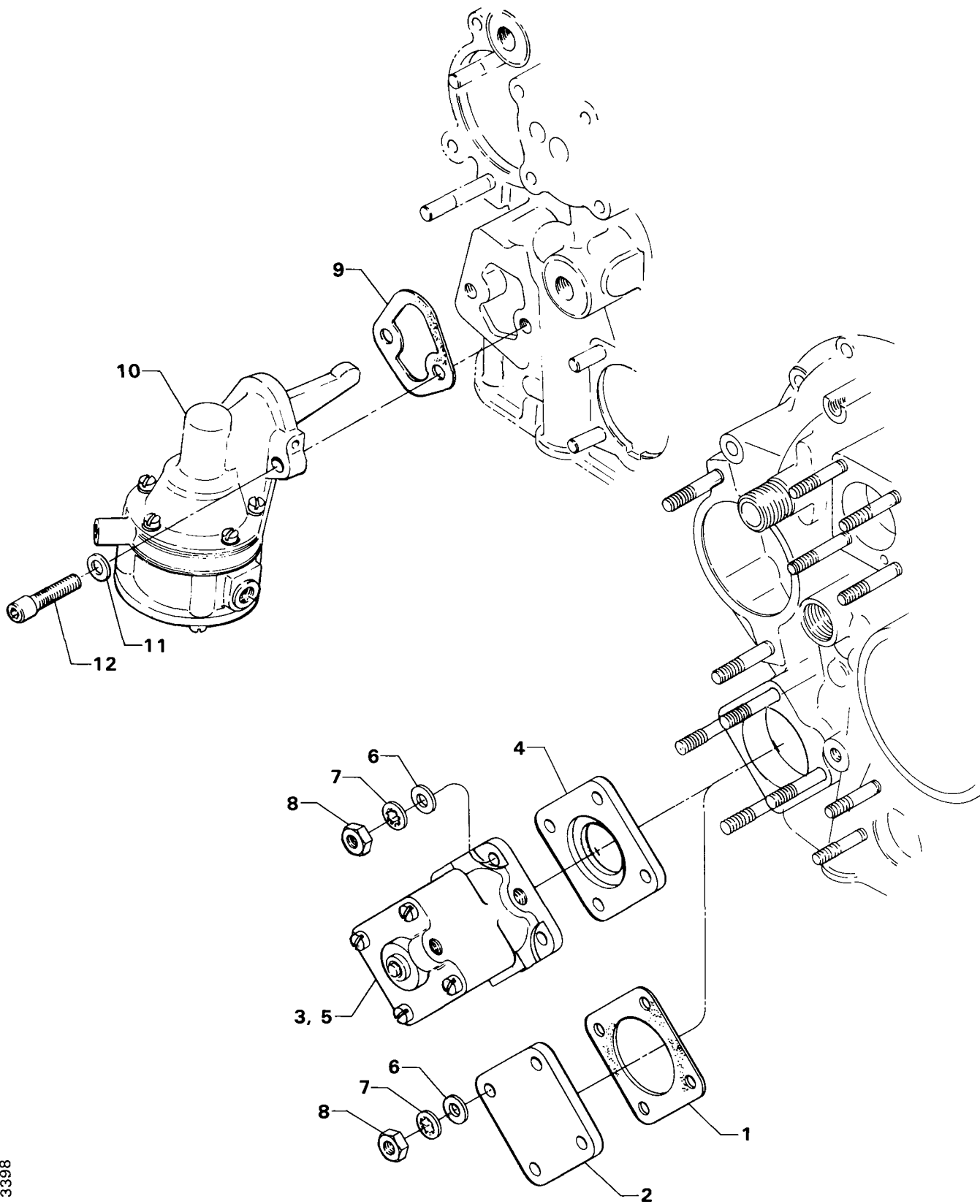


Figure 11. FUEL PUMP ASSEMBLY

ACCESSORY HOUSING AND RELATED PARTS

OIL PRESSURE SCREEN, OIL FILTER AND OIL COOLER BYPASS VALVE

FIG. REF. 12	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY																
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5							
1	62817	SCREEN ASSY., Oil pressure		1	1	1		1												
2	61173	GASKET, Oil pressure housing		1	1	1		1												
3	69510	HOUSING, Thermostatic valve & oil pressure screen		1	1	1		1												
4	STD-8	WASHER, 1/4 plain		4	4	1		1												
5	STD-1856	SCREW, 1/4-20 x 1.00 long, hex. hd.		4	4	1		1												
6	06E19769-0.63	GASKET, 7/8 O.D. x 5/8 I.D. x 3/32 annular		1	1	1		1												
7	53E19600	VALVE ASSY., Temp. control, oil cooler bypass		1	1	1		1												
8	76510	GASKET, Valve assembly		1	1	1		1												
9	LW-12795	GASKET, Oil filter adapter	2																	
10	77853 *	HOUSING ASSY., Oil filter	1																	
11	77852	BASE ASSY., Oil filter	1																	
12	STD-8	WASHER, 1/4 plain	4																	
13	STD-160	WASHER, 1/4 lock, internal teeth	1																	
14	STD-1411	NUT, 1/4-20 plain	1																	
15	STD-1856	SCREW, 1/4-20 x 1.00 long, hex. hd.	3																	
16	53E19600	VALVE ASSY., Temp. control, oil cooler bypass	1																	
17	76510	GASKET, Valve assembly	1																	
18	25C-10	STUD, 1/4-20 x 1-1/4 long	1																	
19	54D19625 * *	OIL FILTER, (short w/ stud)	1																	

* This complete Oil Filter Housing Assembly is no longer available. Lycoming will continue to supply a Filter Element Kit P/N LW-14089 which includes (1) element, (1) square gasket, (1) copper gasket and (1) flat gasket.

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

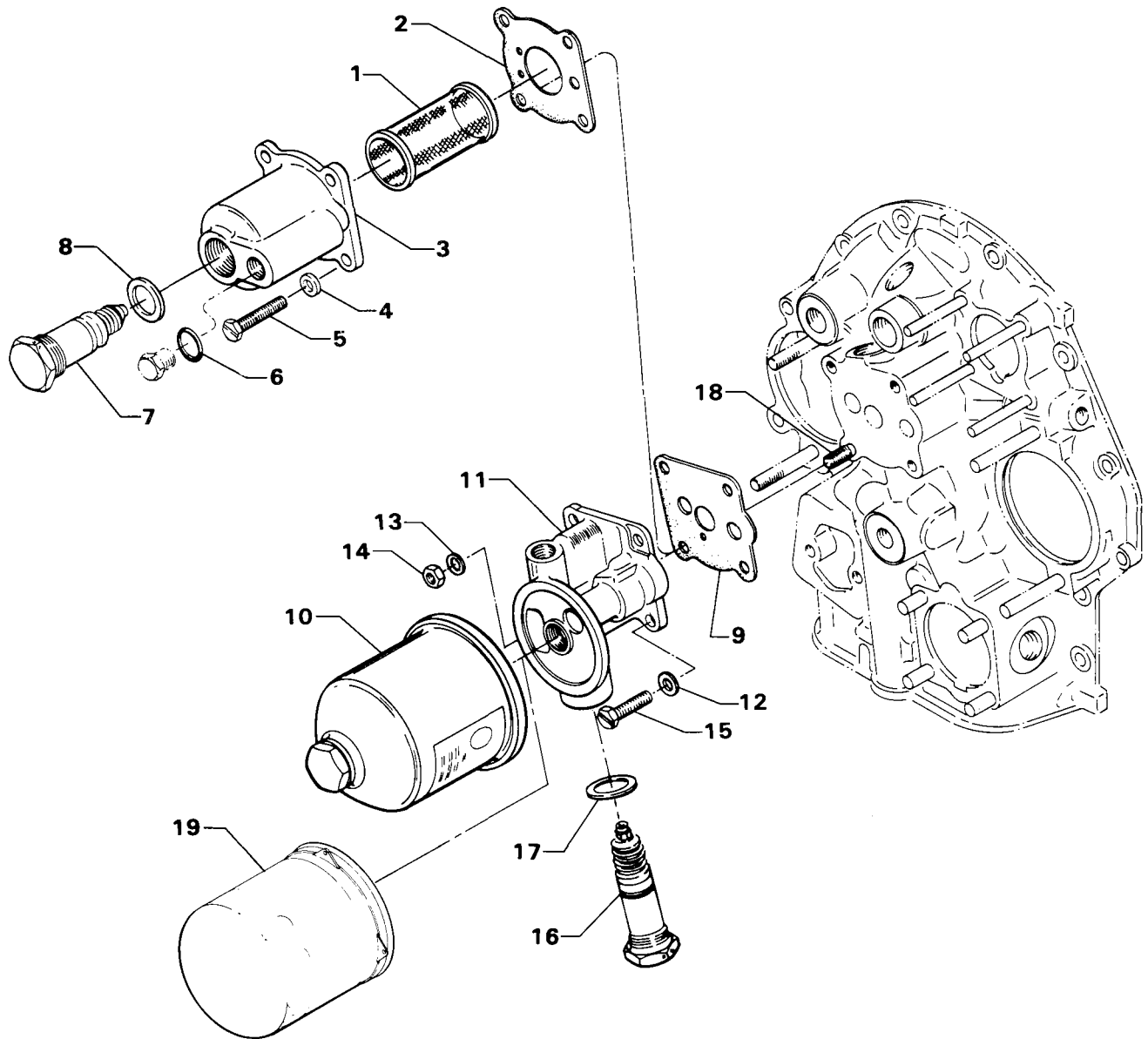
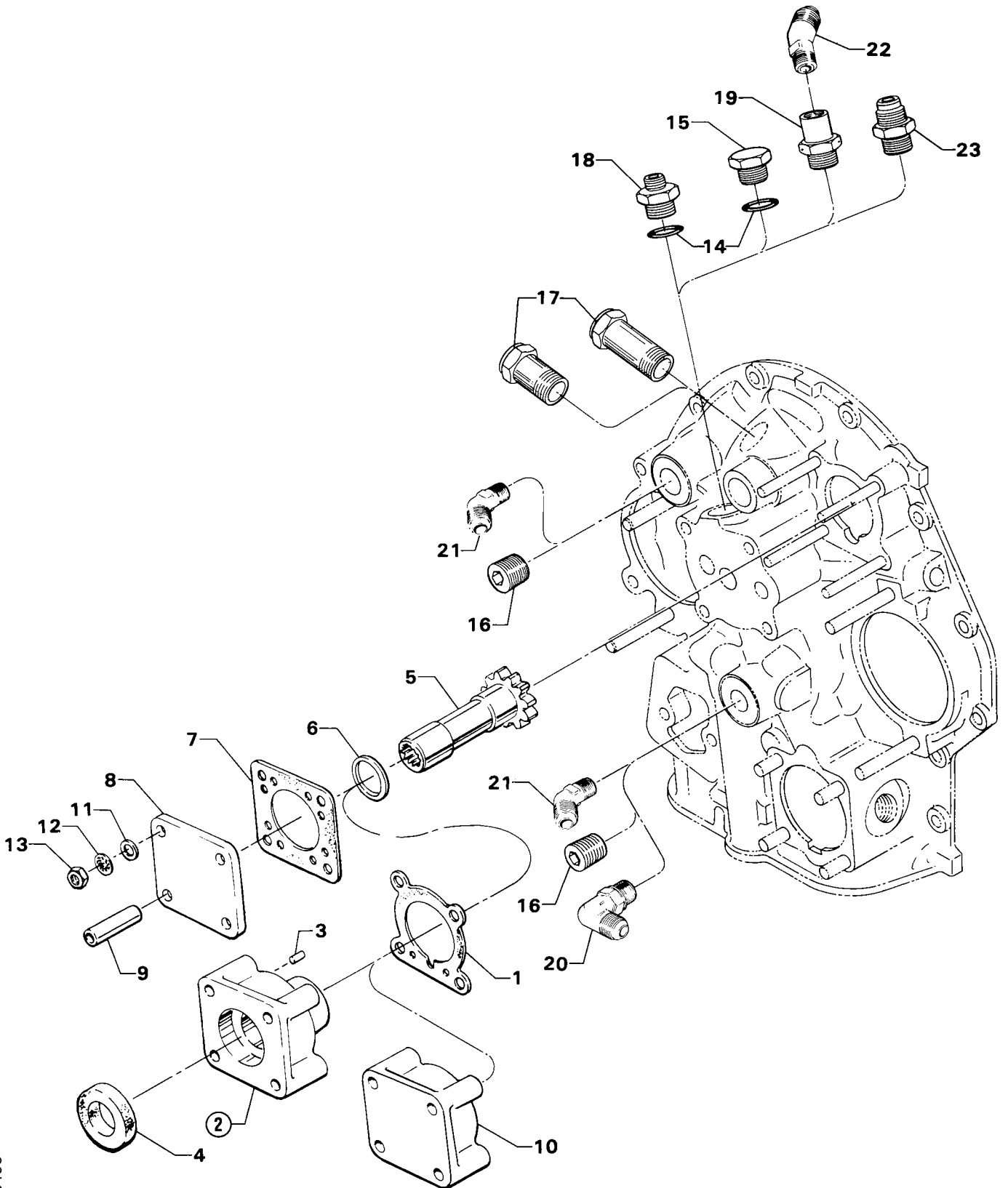


Figure 12. OIL PRESSURE SCREEN, OIL FILTER AND OIL COOLER BYPASS VALVE

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

FIG. REF. 13	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY																
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5							
1	61183	GASKET, Accessory adapter	1																	
2	67536	ADAPTER ASSY., Vacuum pump		1	1	1	1	1	1	1	1	1	1	1						1
3	STD-1774	DOWEL, 1/8 dia. x 1/4 long		1	1	1	1	1	1	1	1	1	1	1						1
4	06A19956	OIL SEAL, 7/8 I.D. x 1-1/2 O.D. x 5/16 wide		1	1	1	1	1	1	1	1	1	1	1						1
5	72974	GEAR ASSY., Vacuum pump driven		1	1	1	1	1	1	1	1	1	1	1						1
6	71596	WASHER, Accessory driven gear		1	1	1	1	1	1	1	1	1	1	1						1
7	8313	GASKET, Vacuum pump		1	1	1	1	1	1	1	1	1	1	1						1
8	60430	COVER, Vacuum pump		1	1	1	1	1	1	1	1	1	1	1						1
9	68593	SPACER, Vacuum pump stud				4	4	4	4											
10	79017	SPACER, Vacuum pump pad						1											1	
11	STD-8	WASHER, 1/4 plain	4																	
12	STD-160	WASHER, 1/4 lock, internal teeth	4																	
13	STD-1411	NUT, 1/4-20 plain	4																	
14	06E19769-0.63	GASKET, 7/8 O.D. x 5/8 I.D. x 3/32 annular	1																	
15	62417	PLUG, Oil cooler bypass	1																	
16	STD-784	PLUG, 3/8-18 NPT, Allen head		2	2	2	2	2	2	2	2	2	2	2						2
17	71651	FITTING, Breather		1	1	1	1	1	1	1	1	1	1	1						1
	72996	FITTING, Breather (short)				1	1		1											
18	69675	CONNECTOR, Acc. hsg. to oil cooler inlet hose				1	1	1	1											
19	71600	ADAPTER, Oil cooler connection				1														
20	MS20822-8	ELBOW, 1/2 flared tube, 3/8 NPT, 90°						1	1											1
21	MS20823-8	ELBOW, 1/2 flared tube, 3/8 NPT, 45°							1						1					1
	MS20823-8	ELBOW, 1/2 flared tube, 3/8 NPT, 45°																		2
22	AN844-16D	ELBOW, 3/4 pipe thd. - 1.00 hose, 45°							1											1
23	AN816-8	NIPPLE, 1/2 flared tube, 3/8 NPT						1												



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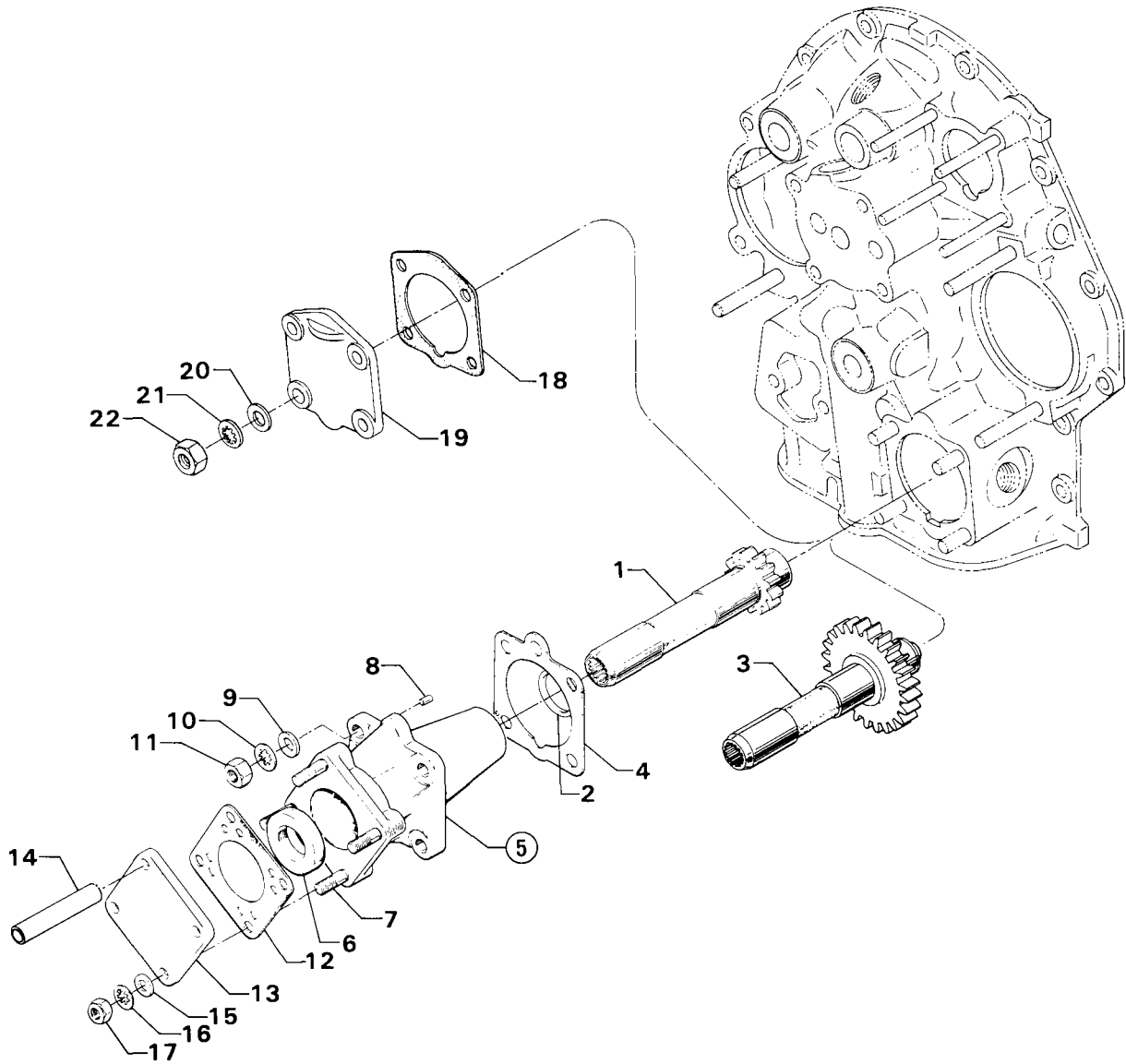
Figure 13. VACUUM PUMP DRIVE, OIL COOLER AND BREATHER FITTINGS

ACCESSORY HOUSING AND RELATED PARTS HYDRAULIC PUMP DRIVE, ADAPTER AND COVERS

FIG. REF. 14	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY											
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5		
1	72964	GEAR ASSY., Hydraulic pump driven		1	1	1	1	1	1	1				1	1
2	71596	WASHER, Accessory driven gear		1	1	1	1	1	1	1				1	1
3	76743 *	GEAR ASSY., Hydraulic pump drive					1								
4	68315	GASKET, Accessory drive adapter		1	1	1	1	1	1	1				1	1
5	71675	ADAPTER ASSY., Hydraulic pump		1	1	1	1	1	1	1					1
	76713 *	ADAPTER ASSY., Hydraulic pump					1								
	LW-10807 **	ADAPTER ASSY., Hydraulic pump												1	
6	06A19956	SEAL, Oil, 7/8 I.D. x 1-1/2 O.D. x 5/16 wide		1	1	1	1	1	1	1				1	1
7	25C-12	STUD, 1/4-20 x 1-1/2 long		4	4	4	4	4	4	4					4
	25C-32 **	STUD, 1/4-20 x 4.00 long												4	
8	STD-1774	PIN, 1/8 dia. x 1/4 long		1	1	1	1	1	1	1				1	1
9	STD-35	WASHER, 5/16 plain		4	4	4	4	4	4	4				4	4
10	STD-475	WASHER, 5/16 lock, internal teeth		4	4	4	4	4	4	4				4	4
11	STD-1410	NUT, 5/16-18 plain		4	4	4	4	4	4	4				4	4
12	8313	GASKET, Hydraulic pump		1	1	1	1	1	1	1				1	1
13	60430	COVER, Hydraulic pump		1	1	1	1	1	1	1				1	1
14	LW-10806	SPACER, Hydraulic pump stud												4	
15	STD-8	WASHER, 1/4 plain		4	4	4	4	4	4	4				4	4
16	STD-160	WASHER, 1/4 lock, internal teeth		4	4	4	4	4	4	4				4	4
17	STD-1411	NUT, 1/4-20 plain		4	4	4	4	4	4	4				4	4
18	69551	GASKET, Hydraulic pump adapter pad		1	1	1	1						1		1
19	69106	COVER, Hydraulic pump adapter pad		1	1	1	1						1		1
20	STD-35	WASHER, 5/16 plain		4	4	4	4						4		4
21	STD-475	WASHER, 5/16 lock, internal teeth		4	4	4	4						4		4
22	STD-1410	NUT, 5/16-18 plain		4	4	4	4						4		4

* .48:1 ratio hydraulic pump drive.

** Hydraulic pump adapter with longer studs.



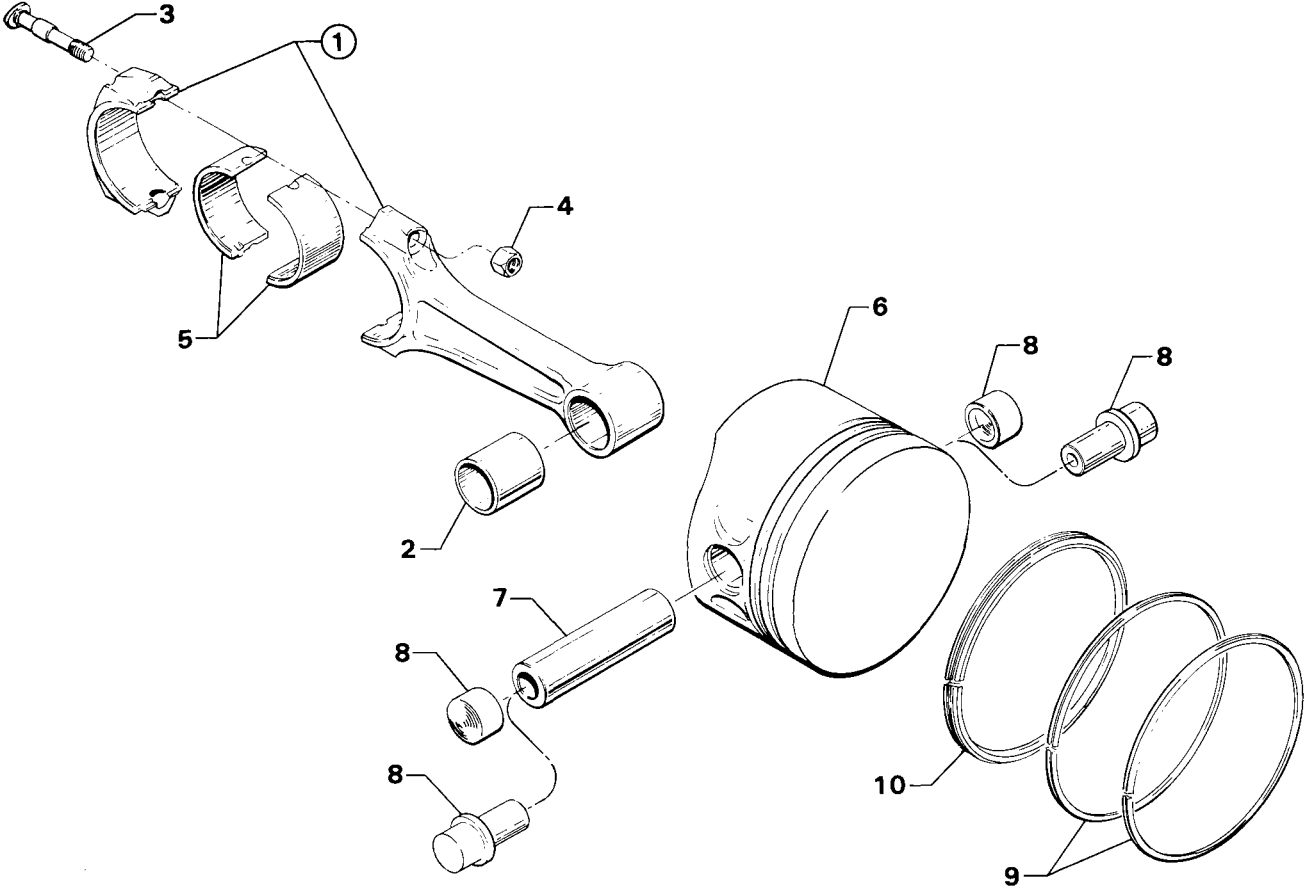
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Figure 14. HYDRAULIC PUMP DRIVE, ADAPTER AND COVERS

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

FIG. REF. 15	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY											
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5		
1	LW-11750	CONNECTING ROD ASSEMBLY	6										6	6	6
	LW-19332	CONNECTING ROD ASSEMBLY			6	6	6	6	6	6					
2	LW-13923	BUSHING, Connecting rod, upper	6												
3	75061	BOLT, Connecting rod	12										12	12	12
	LW-12596	BOLT, Connecting rod			12	12	12	12	12	12					
4	LW-12186	NUT, Connecting rod bolt	12												
5	LW-13521	BEARING, Connecting rod	12										12	12	12
	LW-16048	BEARING, Connecting rod (alternate)	12										12	12	12
	LW-13522	BEARING, Connecting rod (alternate)	12										12	12	12
	74309	BEARING, Connecting rod			12	12	12	12	12	12					
	LW-14954	BEARING, Connecting rod (alternate)			12	12	12	12	12	12					
6	75089	PISTON, Compression ratio 8.50:1	6										6		6
	LW-10207	PISTON, Compression ratio 8.70:1			6	6	6	6	6	6			6		
7	LW-14078	PIN, Piston	6												
	LW-14077 *	PIN, Piston	6												
8	60828	PLUG, Piston pin	12												
	LW-11775 *	PLUG, Piston pin	12												
9	74241	RING, Piston, top compression	12												
10	73857	RING, Piston, oil regulator (expander type)	6												

* Piloted piston pin plug. Refer to latest edition of Service Instruction No. 1267.



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Figure 15. CONNECTING RODS, PISTONS AND RING ASSEMBLIES

CYLINDER, PISTON AND VALVE TRAIN CYLINDER ASSEMBLY

FIG. REF. 16	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY										
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5	
1	LW-12425	CYLINDER AND HEAD ASSEMBLY, Nitrided										6		
	LW-13533	CYLINDER AND HEAD ASSEMBLY, Nitrided										6		
	LW-13530	CYLINDER AND HEAD ASSEMBLY, Nitrided			6	6	6	6						
	LW-13534	CYLINDER AND HEAD ASSEMBLY, Nitrided				6	6		6				6	
	LW-12433	CYLINDER AND HEAD ASSEMBLY, Nitrided		6										6
2	72057	SEAT, Intake valve		6								6		6
	LW-12688	SEAT, Intake valve			6	6	6	6	6	6			6	
3	72058	SEAT, Exhaust valve		6								6		6
	16T19468	SEAT, Exhaust valve			6	6	6	6	6	6			6	
4	61681 *	GUIDE, Intake valve, flanged		6								6		6
	66713 *	GUIDE, Intake valve, flanged			6	6	6	6	6	6			6	
5	74230 **	GUIDE, Exhaust valve, flanged		6								6		6
	75838 **	GUIDE, Exhaust valve, flanged			6	6	6	6	6	6			6	
6	66796	INSERT, Spark plug, 18-1.5 MM			12	12	12	12				12		
	69260	INSERT, Spark plug (long reach)		12		12	12		12	12			12	12
7	STD-1872	INSERT, 1/8-27 Helicoil, taper pipe thd.		6		6	6		6	6			6	6
	STD-1872	INSERT, 1/8-27 Helicoil, taper pipe thd.			12	12	12	12				12		
8	31C-10	STUD, 5/16-18 x 1-1/4 long										18		
9	31C-12	STUD, 5/16-18 x 1-1/2 long		12	12	12	12	12	12			12	12	12
10	25C-8	STUD, 1/4-20 x 1.00 long			24	24	24	24	24				24	
11	25C-9	STUD, 1/4-20 x 1-1/8 long		6								6		6
12	66670	BUSHING, Rocker shaft			24	24	24	24	24	18			24	
13	66610	BUSHING, Rocker shaft		24						6	24			24
14	MS20823-6D	ELBOW, 3/8 flared tube, 1/4 pipe thd.	6											
15	72706	INSERT, Helicoil, 1/4-20 NC x 3/8 long								24				
16	STD-1353	INSERT, No. 10-24 Helicoil, taper pipe thd.		6								6		6
17	72343	STABILIZER, Cyl. head fins, 15 teeth			6	6	6	6	6				6	
	72344	STABILIZER, Cyl. head fins, 26 teeth			6	6	6	6	6				6	
	75151	STABILIZER, Cyl. head fins, 11 teeth									6			
	75152	STABILIZER, Cyl. head fins, 7 teeth									6			
	75164	STABILIZER, Cyl. head fins, 13 teeth									6			
18	1102	PLUG, 1/8-27 NPT, Allen head			6	6	6	6	6	6	6	6	6	6

* See latest edition of
** See latest edition of

Lycoming Service Instruction No. 1256.
Lycoming Service Instructions Nos. 1256 and 1430.

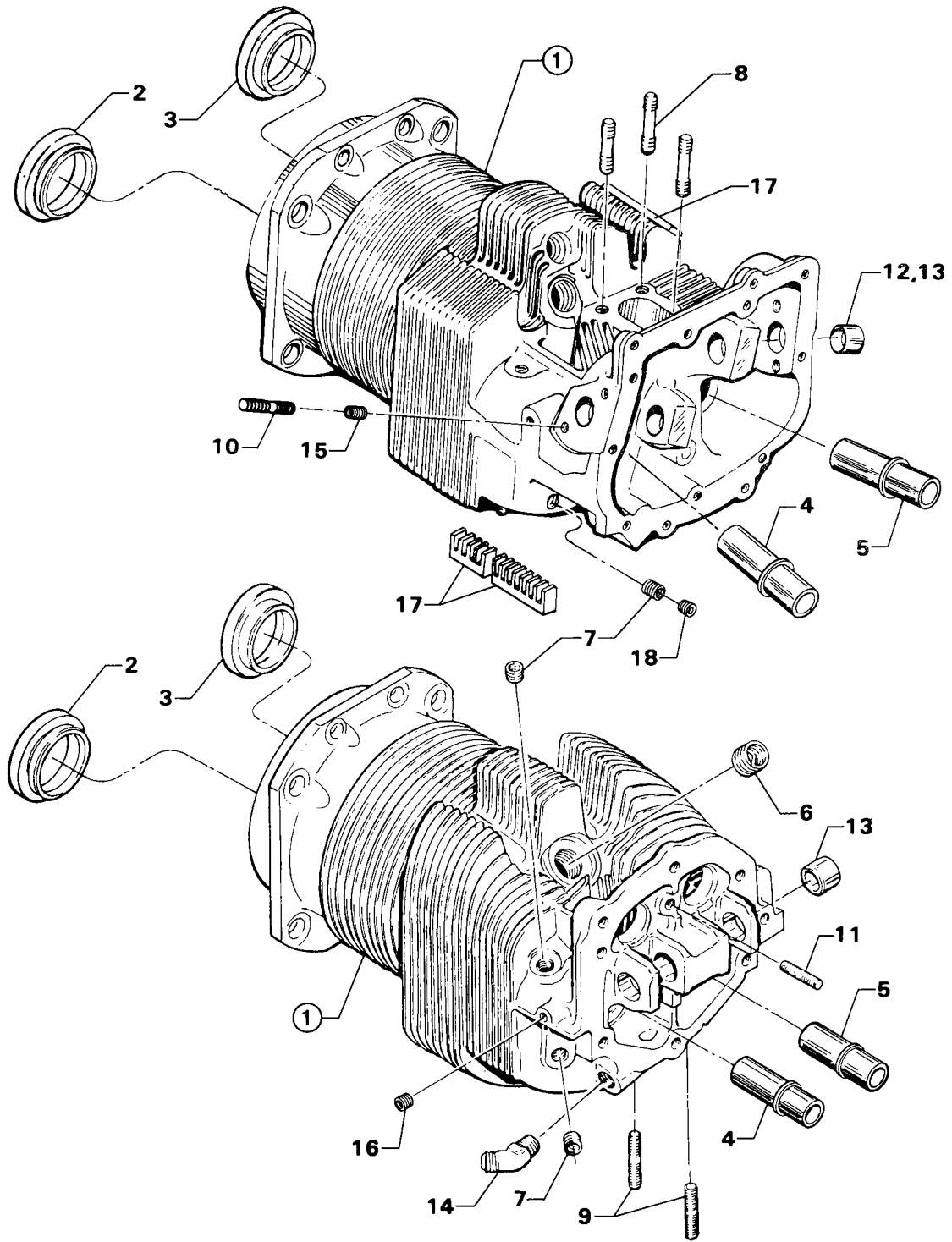
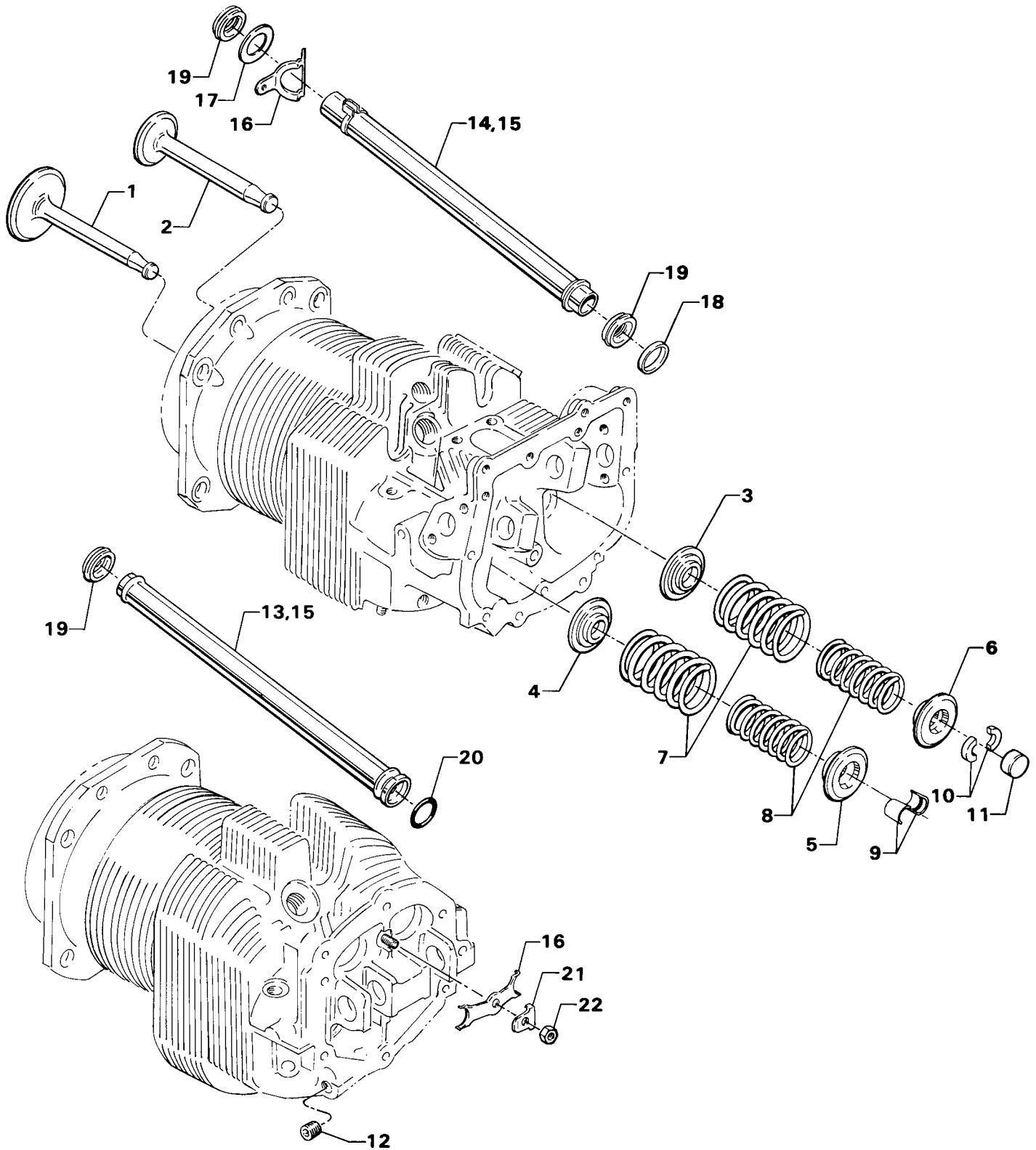


Figure 16. CYLINDER ASSEMBLY

CYLINDER, PISTON AND VALVE TRAIN VALVE ASSEMBLY

FIG. REF. 17	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY										
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5	
1	LW-13622	VALVE, Intake			6	6	6	6	6	6			6	
	73938	VALVE, Intake		6									6	6
2	LW-16740	VALVE, Exhaust (rotator type)			6	6	6	6	6	6			6	
	LW-19001	VALVE, Exhaust (rotator type)		6									6	6
3	LW-13322	SEAT, Valve spring, lower exhaust			6	6	6	6	6	6			6	
	LW-13323	SEAT, Valve spring, lower exhaust		6									6	6
4	LW-13321	SEAT, Valve spring, lower intake			6	6	6	6	6	6			6	
	65441	SEAT, Valve spring, lower intake		6									6	6
5	69532	SEAT, Valve spring, upper intake			6	6	6	6	6	6			6	
	LW-10077	SEAT, Valve spring, upper intake		6									6	6
6	LW-16475	SEAT, Valve spring, upper exhaust (rotator type)	6											
7	LW-11796	SPRING, Valve, outer			12	12	12	12	12	12			12	
	LW-11800	SPRING, Valve, outer		12									12	12
8	LW-11797	SPRING, Valve, inner			12	12	12	12	12	12			12	
	LW-11795	SPRING, Valve, inner		12									12	12
9	72050	KEY, Valve, intake			12	12	12	12	12	12			12	
	60009	KEY, Valve, intake		12									12	12
10	17C21191	KEY, Valve, exhaust (rotator type)	12											
11	17C19386	CAP, Valve stem, exhaust (rotator type)	6											
	62388	CAP, Valve stem			6	6	6	6	6	6			6	
12	1102	PLUG, 1/8 pipe x 3/8 long		6									6	6
13	72255	SHROUD TUBE ASSY., Push rod (intake)			12	12	12	12	12	6			12	
14	72257	SHROUD TUBE ASSY., Push rod (exhaust)								6				
15	LW-11485	TUBE, Push rod shroud		12									12	12
16	LW-13077	SPRING, Shroud tube			24	24	24	24	24	24			24	
	LW-14995	SPRING, Shroud tube		6									6	6
17	66728	WASHER, 25/32 I.D. x 1-1/4 O.D. x 1/32 thick			24	24	24	24	24	24			24	
18	61503	SLEEVE, Shroud tube seal			12	12	12	12	12	12			12	
19	LW-18661	SEAL, Shroud tube, 5/16 wide		12	24	24	24	24	24	24			12	24
20	70310	SEAL, Shroud tube, 23/32 I.D. x 1/8 dia. sect.		12									12	12
21	LW-12272	LOCKPLATE, Shroud tube		6									6	6
22	STD-1411	NUT, 1/4-20 plain		6									6	6



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Figure 17. VALVE ASSEMBLY

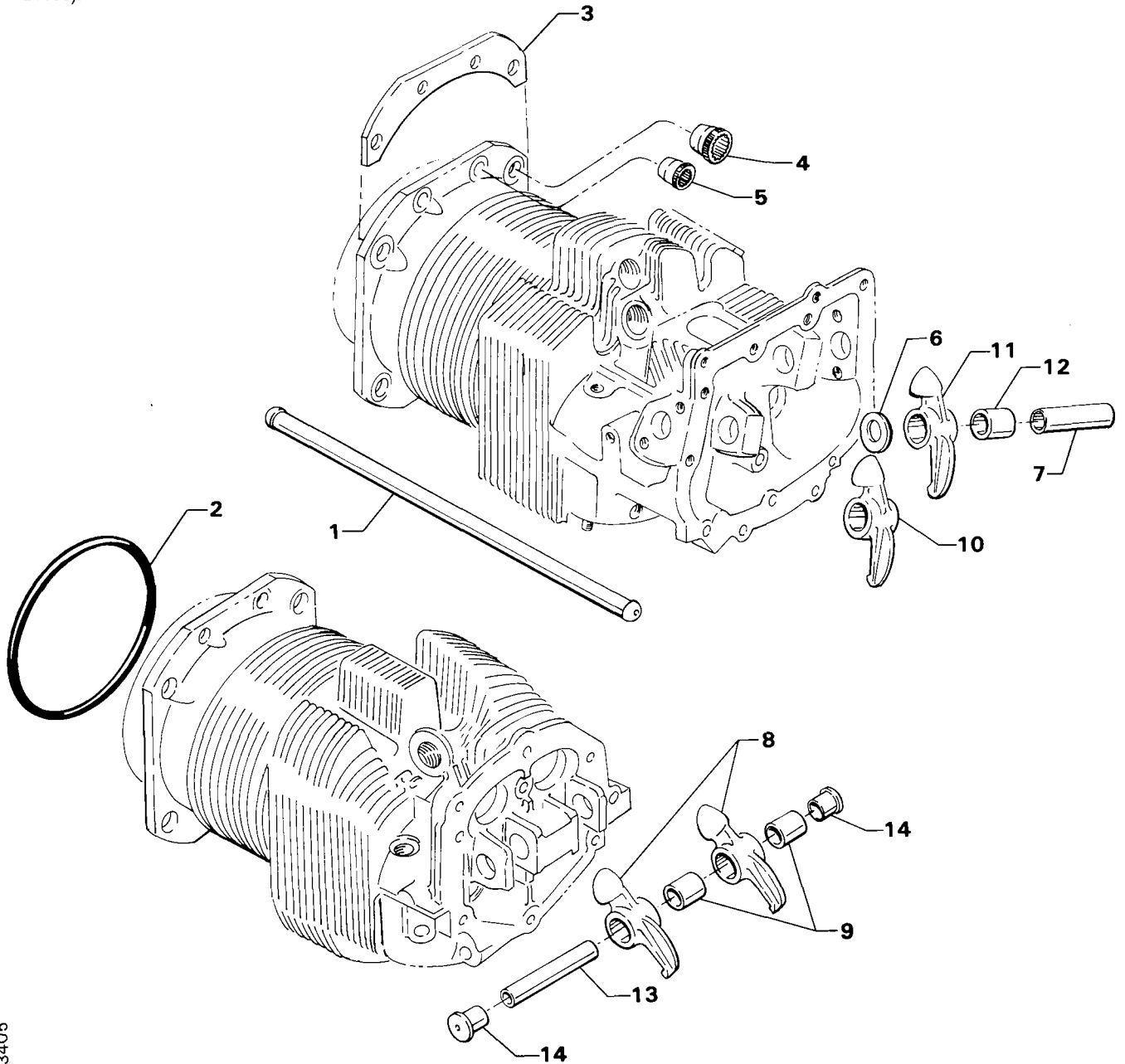
CYLINDER, PISTON AND VALVE TRAIN CYLINDER RELATED PARTS

FIG. REF. 18	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5
1	73434 *	ROD ASSEMBLY, Push (a total of 12 required)	AR									AR	AR
	15F19957-35 *	ROD ASSEMBLY, Push (a total of 12 required)	AR									AR	AR
	15F19957-36 *	ROD ASSEMBLY, Push (a total of 12 required)	AR									AR	AR
	73437 *	ROD ASSEMBLY, Push (a total of 12 required)	AR									AR	AR
	15F19957-55 *	ROD ASSEMBLY, Push, intake (a total of 6 required)									AR		
	73456 *	ROD ASSEMBLY, Push, intake (a total of 6 required)									AR		
	15F19957-57 *	ROD ASSEMBLY, Push, intake (a total of 6 required)									AR		
	15F19957-58 *	ROD ASSEMBLY, Push, intake (a total of 6 required)									AR		
	73556 *	ROD ASSEMBLY, Push, intake (a total of 6 required)									AR		
	15F21362-23 *	ROD ASSEMBLY, Push, intake (a total of 6 required)									AR		
	73555 *	ROD ASSEMBLY, Push, intake (a total of 6 required)									AR		
	15F21362-24 *	ROD ASSEMBLY, Push, intake (a total of 6 required)									AR		
	73446 *	ROD ASSEMBLY, Push, exhaust (a total of 6 required)									AR		
	15F19957-45 *	ROD ASSEMBLY, Push, exhaust (a total of 6 required)									AR		
	15F19957-47 *	ROD ASSEMBLY, Push, exhaust (a total of 6 required)									AR		
	73448 *	ROD ASSEMBLY, Push, exhaust (a total of 6 required)									AR		
	73546 *	ROD ASSEMBLY, Push, exhaust (a total of 6 required)									AR		
	15F21362-13 *	ROD ASSEMBLY, Push, exhaust (a total of 6 required)									AR		
	73548 *	ROD ASSEMBLY, Push, exhaust (a total of 6 required)									AR		
	73545 *	ROD ASSEMBLY, Push, exhaust (a total of 6 required)									AR		
	15F19957-55 *	ROD ASSEMBLY, Push (a total of 12 required)		AR	AR	AR	AR	AR				AR	
	73456 *	ROD ASSEMBLY, Push (a total of 12 required)		AR	AR	AR	AR	AR				AR	
	15F19957-57 *	ROD ASSEMBLY, Push (a total of 12 required)		AR	AR	AR	AR	AR				AR	
	15F19957-58 *	ROD ASSEMBLY, Push (a total of 12 required)		AR	AR	AR	AR	AR				AR	
	73556 *	ROD ASSEMBLY, Push (a total of 12 required)		AR	AR	AR	AR	AR				AR	
	15F21362-23 *	ROD ASSEMBLY, Push (a total of 12 required)		AR	AR	AR	AR	AR				AR	
	73555 *	ROD ASSEMBLY, Push (a total of 12 required)		AR	AR	AR	AR	AR				AR	
	15F21362-24 *	ROD ASSEMBLY, Push (a total of 12 required)		AR	AR	AR	AR	AR				AR	
2	71481	RING, Oil seal, 3/32 dia. x 4-27/32 I.D.	6										
3	69531	PLATE, Cylinder hold down nut	12		12	12	12	12	12	12	12	12	12
	69531	PLATE, Cylinder hold down nut			11	11		11					
	74327 * *	PLATE, Cylinder hold down nut			1	1		1					
4	71133	NUT, 1/2-20 NF-3, cylinder hold down	24										
5	71134	NUT, 3/8-24 NF-3, cylinder hold down	24										
6	71549	WASHER, Valve rocker			12	12	12	12	12	12		12	
7	72626	SHAFT, Valve rocker			12	12	12	12	12	12		12	
8	17F19353 *	ROCKER ASSEMBLY, Valve intake & exhaust	12									12	12
9	74637	BUSHING, Valve rocker	12									12	12
10	17F21186 *	ROCKER ASSY., Valve, intake			6	6	6	6	6	6		6	
11	17F21185 *	ROCKER ASSY., Valve, exhaust			6	6	6	6	6			6	
	17F21190 *	ROCKER ASSY., Valve, exhaust								6			
12	74389	BUSHING, Valve rocker			12	12	12	12	12			12	
	74389	BUSHING, Valve rocker									6		
	LW-12588	BUSHING, Valve rocker									6		
13	LW-13790	SHAFT, Valve rocker	6									6	6

CYLINDER, PISTON AND VALVE TRAIN CYLINDER RELATED PARTS (Continued)

FIG. REF. 18	PART NUMBER	DESCRIPTION	O N A L	QUANTITY PER ASSEMBLY									
				J	K	K	K	K	K	M	N	P	R
				4	1	1	1	1	1	1	1	1	1
14	LW-12892	THRUST BUTTON, Rocker shaft	12									12	12

- * See latest edition of Lycoming Service Instruction No. 1060 for complete push rod application.
- ** Assemble on topside of no. 5 cylinder.
- * Due to the size of the area where the part number is stamped, the last five digits may be all that is shown (19353, 21185, 21186, 21190).



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CYLINDER, PISTON AND VALVE TRAIN CYLINDER HEAD DRAIN TUBES, INTERCYLINDER COOLING BAFFLES AND RELATED PARTS

FIG. REF. 19	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY										
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5	
1	66732	GASKET, Valve rocker shaft cover			12	12	12	12	12	12	12		12	
2	72710	COVER, Valve rocker shaft			12	12	12	12	12	12	12		12	
3	75233	"O" RING			24	24	24	24	24	24	24		24	
4	72709	SCREW, 1/4-20 x 5/8 long, self-sealing								24				
5	STD-160	WASHER, 1/4 lock, internal teeth			24	24	24	24	24				24	
6	STD-1411	NUT, 1/4-20 plain			24	24	24	24	24				24	
7	71450	GASKET, Rocker box cover								6				
	75906	GASKET, Rocker box cover	6									6		6
	67193	GASKET, Rocker box cover		6	6	6	6	6	6				6	
8	72242	COVER ASSY., Rocker box								6				
	61247	COVER, Rocker box	6									6		6
	68795	COVER ASSY., Rocker box		6	6	6	6	6	6				6	
9	STD-1925	SCREW, 1/4-20 x 5/8 long, pan. hd.		31	48	48	48	48	48	54	36	48	31	
10	74494	PLATE, Spark plug reach caution		6	6	6	6	6	6	6	6		6	6
11	STD-35	WASHER, 5/16 plain		12	12	12	12	12	12	18	12	12	12	
12	STD-475	WASHER, 5/16 shakeproof lock		12	12	12	12	12	12	18	12	12	12	
13	STD-1410	NUT, 5/16-18 plain		12	12	12	12	12	12	18	12	12	12	
14	STD-684	NIPPLE, Straight, 3/8 I.D. hose	6											
15	STD-1821	HOSE, 3/8 I.D. x 2-1/2 long		6					6		6			6
	STD-2180	HOSE, 3/8 I.D. x 1-13/16 long			6	6	6	6	6	6			6	
16	LW-15592-5-05	CLAMP, Hose	12											
17	72702	TUBE ASSY., Cyl. head oil drain, cyl. no. 1			1	1	1	1	1	1			1	
	72703	TUBE ASSY., Cyl. head oil drain, cyl. no. 2			1	1	1	1	1	1			1	
	73027	TUBE ASSY., Cyl. head oil drain, cyls. no. 3, 4, 5, 6			4	4	4	4	4	4			4	
	68759	TUBE ASSY., Cyl. head oil drain, cyl. no. 1		1					1		1		1	
	71737	TUBE ASSY., Cyl. head oil drain, cyl. no. 2		1					1		1		1	
	68761	TUBE ASSY., Cyl. head oil drain, cyls. no. 3, 4, 5, 6		4					4		4		4	
18	74718	BAFFLE ASSY., Intercylinder			4	4	4	4	4					
	LW-18106	BAFFLE ASSY., Intercylinder								4				
	72152	BAFFLE ASSY., Intercylinder	3									3		3
	73975	BAFFLE ASSY., Intercylinder	1									1		1
	LW-16362	BAFFLE & CLIP ASSY., Intercylinder, cyls. 1 & 6					2						2	
	LW-16363	BAFFLE & CLIP ASSY., Intercylinder, cyls. 2 & 5					2						2	
19	71610	HOOK, Intercylinder baffle retainer	4											
20	71611	RETAINER, Intercylinder baffle	4											
21	72834	COVER, Baffle ignition cable hole			4	4	4	4	4	4			4	
22	STD-692	SCREW, No. 10-32 x 1/2 long, rd. hd.			8	8	8	8	8	8			8	
23	STD-670	NUT, No. 10-32 self-locking			8	8	8	8	8				8	
24	AN931-12S17	GROMMET, 3/4 I.D. x 1-3/8 O.D. x 3/8 thick	1									1		1
25	65614	PLUG, Baffle attaching			4	4	4	4	4				4	
26	STD-251	WASHER, No. 10 lock, internal teeth			4	4	4	4	4				4	
27	STD-1686	SCREW, No. 10-32 x 7/16 long			4	4	4	4	4				4	

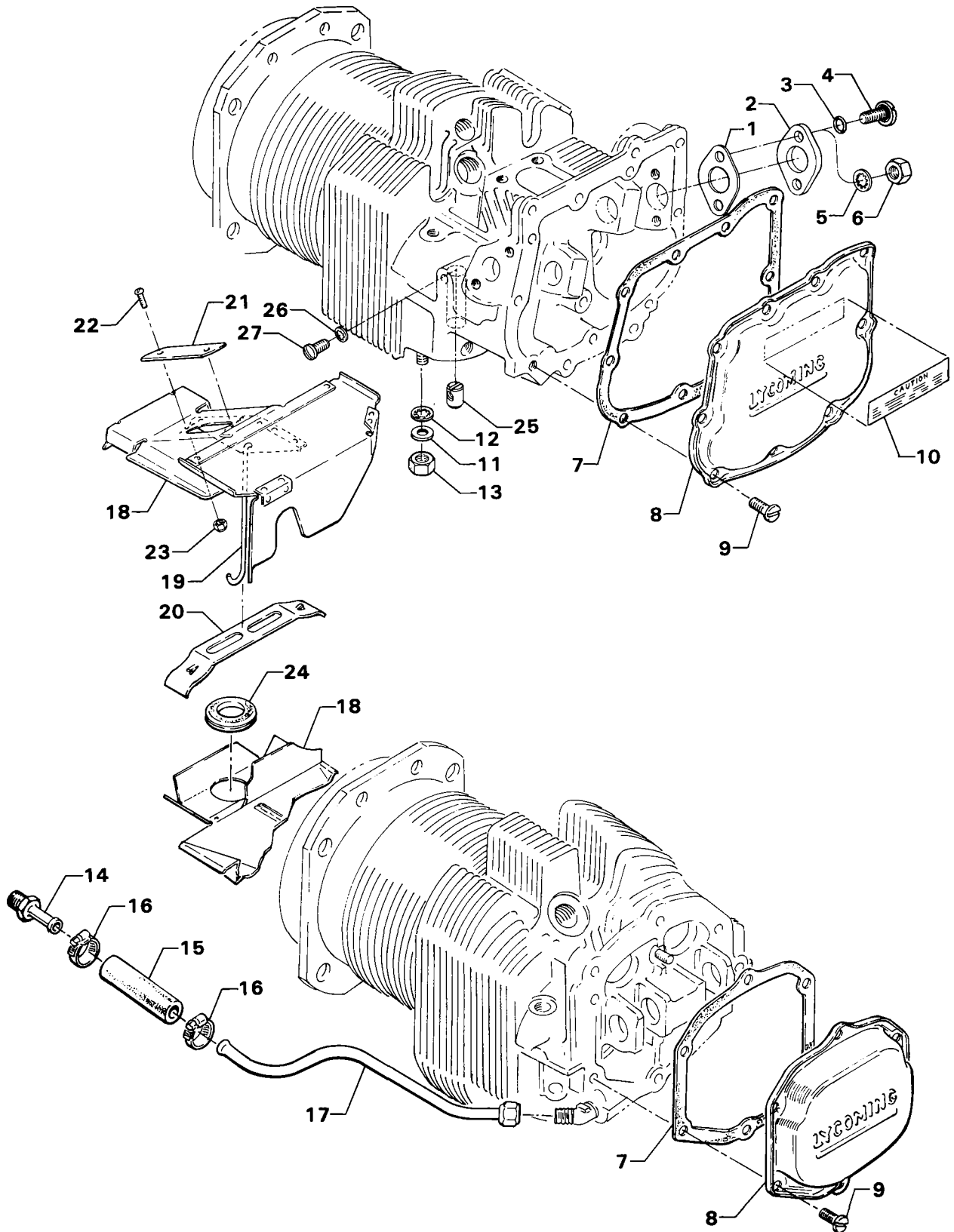
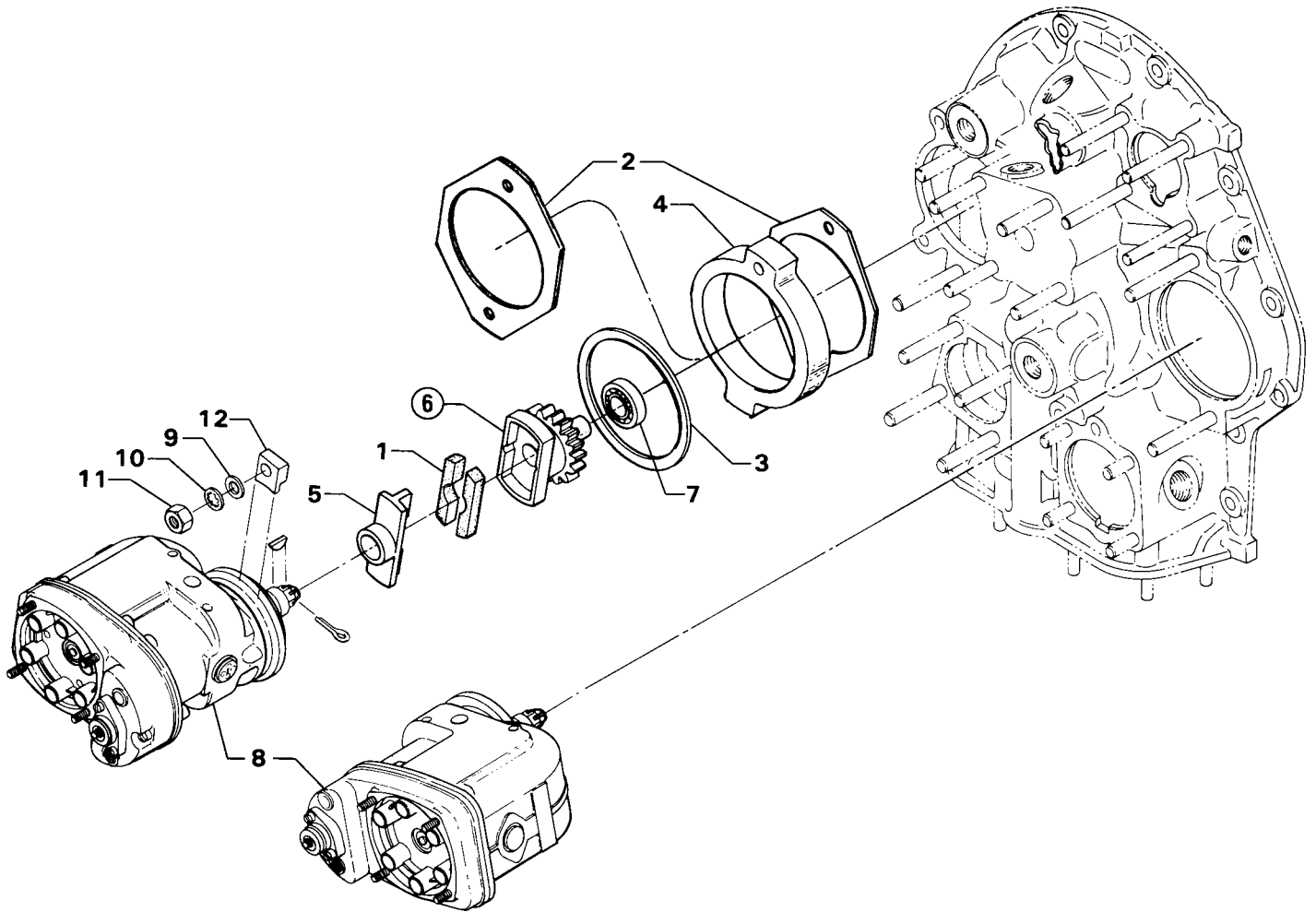


Figure 19. CYLINDER HEAD DRAIN TUBES, INTERCYLINDER COOLING BAFFLES AND RELATED PARTS

IGNITION SYSTEM BENDIX MAGNETOS AND MAGNETO DRIVES

FIG. REF. 20	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY																
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5							
1	LW-13641	CUSHION, Magneto drive	4																	
2	62224	GASKET, Magneto adapter		2	2	2	2		2	2					2	2				
	62224	GASKET, Magneto adapter			4		4	4						4						4
3	LW-12681	GASKET, Magneto		2	2	2	2		2	2					2	2				2
4	LW-12707	ADAPTER, Magneto	2																	
5	73000	COUPLING, Magneto drive		1	1	1	1	1				1	1	1	1					1
	73013	COUPLING, Magneto drive		1											1					1
	73636	COUPLING, Magneto drive					1	1			1				1					
6	LW-19096	GEAR RETAINER ASSEMBLY	2																	
7	67542	BEARING, Ball	2																	
8	LW-349310-8 *	MAGNETO, (S6LN-1209)				1														
	LW-349370-4	MAGNETO, (S6LN-1227)				1														
	LW-349310-1	MAGNETO, (S6LN-1209)				1	1													
	LW-349370-4	MAGNETO, (S6LN-1227)				1	1													
	LW-349370-4	MAGNETO, (S6LN-1227)					2			2										
	LW-349290-1	MAGNETO, (S6LN-1208)		1			1					1			1				1	1
	LW-349310-1	MAGNETO, (S6LN-1209)		1			1					1			1				1	1
	LW-163050-9	MAGNETO, (S6LN-204)				1														
	LW-51365-57	MAGNETO, (S6LN-21)				1														
	LW-163050-9	MAGNETO, (S6LN-204)				1		1	1						1					1
	LW-163010-10	MAGNETO, (S6LN-200)				1		1	1						1					1
9	STD-1727	WASHER, 3/4 O.D. x 21/64 I.D. x 1/8 thick				4		4	4						4					4
10	STD-475	WASHER, 5/16 lock, internal teeth	4																	
11	STD-1410	NUT, 5/16-18 plain	4																	
12	66M19385	CLAMP, Magneto		4	4	4	4			4	4				4	4			4	4

* Electric tachometer pickup.



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Figure 20. BENDIX MAGNETOS AND MAGNETO DRIVES

IGNITION SYSTEM SLICK MAGNETOS AND MAGNETO DRIVES

FIG. REF. 21	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY																
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5							
1	73000	COUPLING, Magneto drive	1																	
2	LW-13641	CUSHION, Magneto drive	4																	
3	62224	GASKET, Magneto adapter	2																	
4	LW-12707	ADAPTER, Magneto, impulse coupling	2																	
5	LW-12681	GASKET, Magneto	2																	
6	LW-19096	GEAR RETAINER ASSEMBLY	2																	
7	67542	BEARING, Ball	2																	
8	66LP-0SCNN *	MAGNETO, Right, Slick Model No. 6350			1	1														
	66JC35SDNN *	MAGNETO, Left, Slick Model No. 6351			1	1														
	66LP-0SCNN *	MAGNETO, Right, Slick Model No. 6350		1			1	1			1	1	1	1	1	1	1	1	1	1
	66LR37SCNN *	MAGNETO, Left, Slick Model No. 6393		1			1	1			1	1	1	1	1	1	1	1	1	1
	66JC35SDNN *	MAGNETO, Right & Left, Slick Model No. 6351									2									
9	66M21195	CLAMP, Magneto	4																	
10	STD-475	WASHER, 5/16 lock, internal teeth	4																	
11	STD-1410	NUT, 5/16-18 plain	4																	
12	STD-713	COTTER PIN, 3/32 x 3/4 long			2	2				2										
	STD-761	COTTER PIN, 3/32 x 1.00 long		2			2	2			2	2	2	2	2	2	2	2	2	2

* See latest edition of Lycoming Service Instruction No. 1443 for complete listing of approved Slick magnetos.

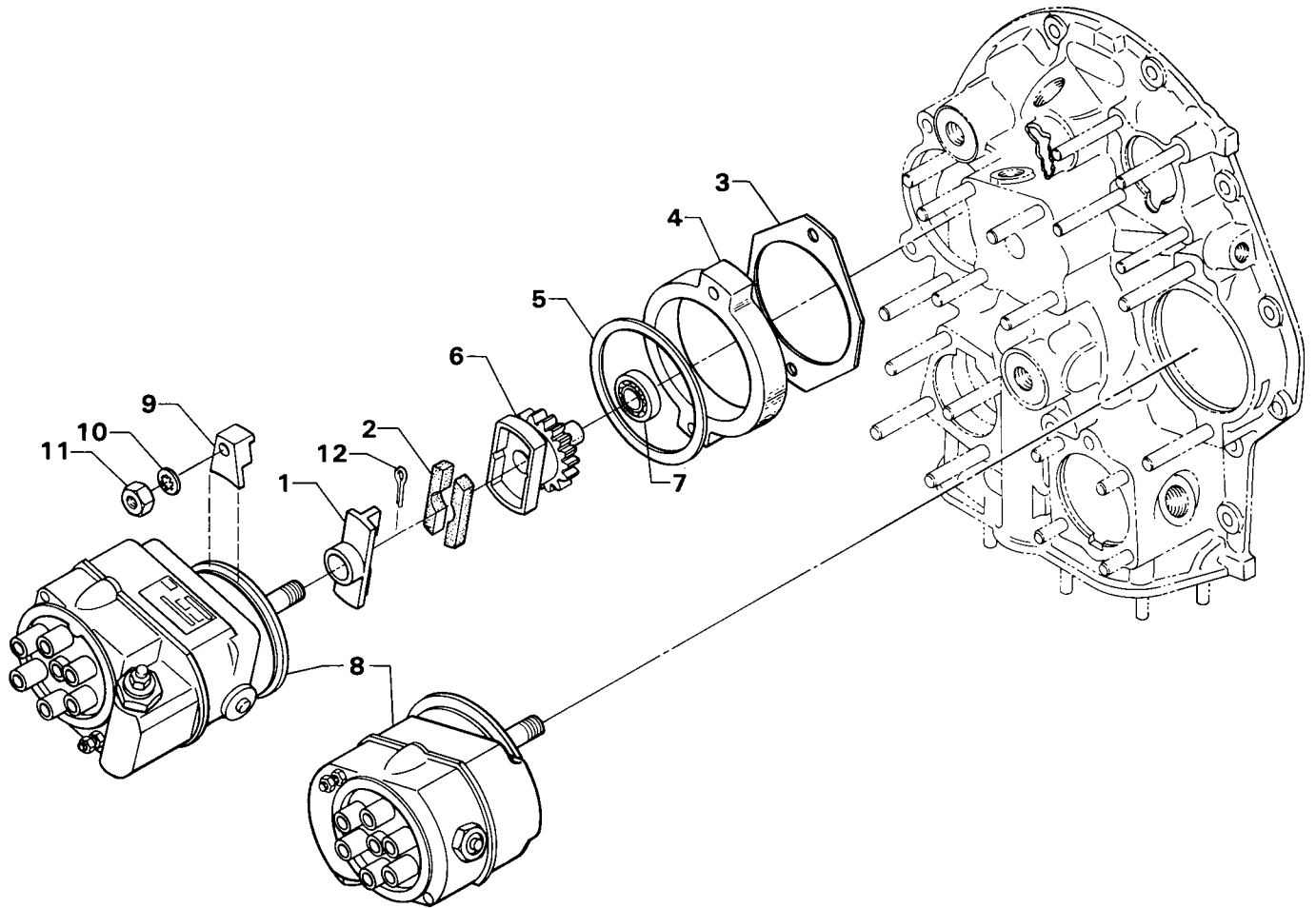


Figure 21. SLICK MAGNETOS AND MAGNETO DRIVES

IGNITION SYSTEM IGNITION HARNESSSES, SPARK PLUGS AND ATTACHING PARTS.

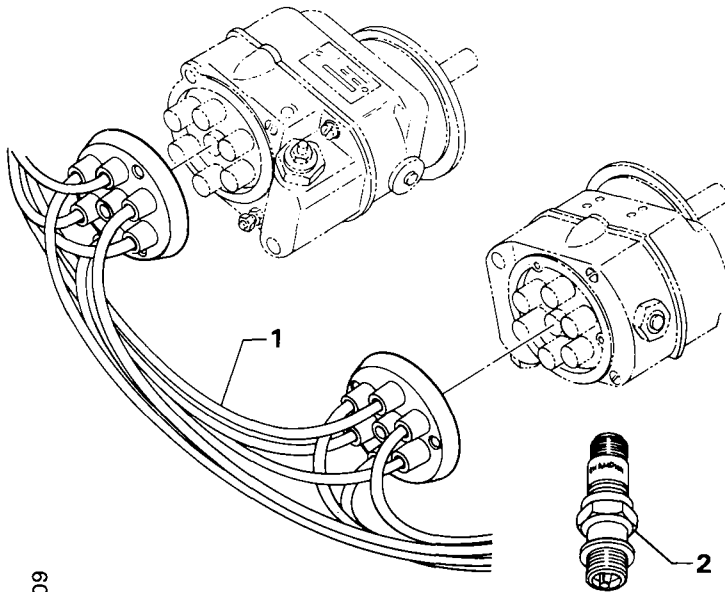
FIG. REF. 22	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY									
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5
1	67U20600	HARNESS, Right, Slick No. M-6007		1			1			1		1	1
	67U20601	HARNESS, Left, Slick No. M-6006		1			1			1		1	1
	67U20608	HARNESS, Right, Slick No. M-2878					1	1			1		1
	67U20609	HARNESS, Left, Slick No. M-2877					1	1			1		1
	67U20610	HARNESS, Right, Slick No. M-6028					1	1			1		1
	67U20611	HARNESS, Left, Slick No. M-6029					1	1			1		1
	67U20612	HARNESS, Right, Slick No. M-2956					1	1			1		1
	67U20613	HARNESS, Left, Slick No. M-6027					1	1			1		1
	67U20630	HARNESS, Right, Slick No. M-6026		1			1			1		1	1
	67U20631	HARNESS, Left, Slick No. M-6025		1			1			1		1	1
	67U20632	HARNESS, Right, Slick No. M-6024				1							
	67U20633	HARNESS, Left, Slick No. M-6023				1							
	67U20634	HARNESS, Right, Slick No. M-6009		1			1			1		1	1
	67U20635	HARNESS, Left, Slick No. M-6008		1			1			1		1	1
	67U20638	HARNESS, Right, Slick No. M-2962			1	1							
	67U20639	HARNESS, Left, Slick No. M-2961			1	1							
	67J20640	HARNESS, Right, Slick No. M-2964		1		1	1		1	1		1	1
	67J20641	HARNESS, Left, Slick No. M-2963		1		1	1		1	1		1	1
	67J20643	HARNESS, Left, Slick No. M-6010		1			1			1		1	1
	67J20644	HARNESS, Right, Slick No. M-6011		1			1			1		1	1
	67J20645	HARNESS, Left, Slick No. M-6012		1			1			1		1	1
	67J20646	HARNESS, Right, Slick No. M-6013		1			1			1		1	1
2	1182-E7 *	SPARK PLUG, Champion (REM38E) or Auburn (SR87)			12	12		12			12		
	1182-F7 *	SPARK PLUG, Champion (RHM38E) or Auburn (HSR86)					12						
	1182-G7 *	SPARK PLUG, Champion (REB37E) or Auburn (171)		12								12	12
	1182-H7 *	SPARK PLUG, Champion (RHB37E) or Auburn (273)							12	12		12	
	1182-L7 *	SPARK PLUG, Champion (RHB36S) or Auburn (281)				12	12						
**	01P19762-3-13	BAG, Magneto harness attaching					1	1			1		1
**	01P19762-4-16	BAG, Magneto harness attaching					1						
**	01P19762-4-17	BAG, Magneto harness attaching		1	1	1	1			1		1	1
**	01P19762-4-18	BAG, Magneto harness attaching					1		1				
**	01P19762-4-44	BAG, Magneto harness attaching		1			1			1		1	1

* Item No. 2 spark plugs are used in current production. See latest edition of Service Instruction No. 1042 for complete listing of all approved spark plugs.

** See page 4-6 for a breakdown of individual parts contained in the magneto and harness attaching parts bag. These parts to be attached by customer per engine line drawing included in each bag.

BAG - MAGNETO HARNESS ATTACHING

P/N 01P19762-3-13			P/N 01P19762-4-17		
Part No.	Part Name	Qty.	Part No.	Part Name	Qty.
LW-16266-25-25	CLAMP, 1 wire	2	LW-16266-25-25	CLAMP, 1 wire	4
LW-14060	CLIP, 2 wire	3	LW-14060	CLIP, 2 wire	4
STD-8	WASHER, 1/4 plain	10	STD-8	WASHER, 1/4 plain	12
STD-160	WASHER, 1/4 lock	8	STD-160	WASHER, 1/4 lock	10
STD-1874	SCREW, 1/4 lock (rocker box)	8	STD-1874	SCREW, 1/4 lock (rocker box)	6
76734	ZIP STRAP	8	76734	ZIP STRAP	12
LW-16266-25-44	CLAMP, 4 wire	3	LW-16266-10-75	CLAMP, 6 wire	2
STD-1411	NUT, 1/4 plain	4	LW-16266-25-44	CLAMP, 4 wire	5
STD-696	WASHER 1/4 thin	6	STD-696	WASHER, 1/4 thin	6
LW-M-2376	PLATE, 3 wire	2	AN500-416-18	SCREW, 1/4 x 1-1/8 long	2
P/N 01P19762-4-16			STD-1925	SCREW, 1/4 x 5/8 long	4
Part No.	Part Name	Qty.	72815	BRACKET, Twist	4
LW-16266-25-25	CLAMP, 1 wire	4	STD-692	SCREW, No. 10	4
LW-14060	CLIP, 2 wire	4	STD-425	WASHER, No. 10	4
STD-8	WASHER, 1/4 plain	12	STD-670	NUT, No. 10	4
STD-160	WASHER, 1/4 lock	10	LW-M-2376	PLATE, 3 wire	2
STD-1874	SCREW, Rocker box	6	P/N 01P19762-4-18		
76734	ZIP STRAP	12	Part No.	Part Name	Qty.
LW-16266-10-75	CLAMP, 6 wire	2	LW-16266-25-25	CLAMP, 1 wire	4
LW-16266-25-44	CLAMP, 4 wire	5	LW-14060	CLIP, 2 wire	4
STD-696	WASHER, 1/4 thin	6	STD-8	WASHER, 1/4 plain	12
AN500-416-18	SCREW, 1/4 x 1-1/8 long	2	STD-160	WASHER, 1/4 lock	10
STD-1925	SCREW, 1/4 x 5/8 long	4	STD-1874	SCREW, 1/4 lock (rocker box)	6
72815	BRACKET, Twist	4	76734	ZIP STRAP	12
STD-692	SCREW, No. 10	4	LW-16266-25-50	CLAMP, 4 wire	5
STD-425	WASHER, No. 10	4	STD-696	WASHER, 1/4 thin	6
STD-670	NUT, No. 10	4	AN500-416-18	SCREW, 1/4 x 1-1/8 long	2
LW-M-2376	PLATE, 3 wire	2	STD-1925	SCREW, 1/4 x 5/8 long	4
			72815	BRACKET, Twist	4
			STD-692	SCREW, No. 10	4
			STD-425	WASHER, No. 10	4
			STD-670	NUT, No. 10	4
			LW-M-2375	PLATE, 3 wire	2
			P/N 01P19762-4-44		
			Part No.	Part Name	Qty.
			LW-16266-25-25	CLAMP, 1 wire	4
			LW-14060	CLIP, 2 wire	4
			STD-8	WASHER, 1/4 plain	12
			STD-160	WASHER, 1/4 lock	10
			STD-1874	SCREW, 1/4 lock (rocker box)	6
			76734	ZIP STRAP	12
			LW-16266-10-75	CLAMP, 6 wire	2
			LW-16266-25-44	CLAMP, 4 wire	5
			STD-696	WASHER, 1/4 thin	6
			AN500-416-18	SCREW, 1/4 x 1-1/8 long	2
			STD-1925	SCREW, 1/4 x 5/8 long	4
			72815	BRACKET, Twist	4
			STD-692	SCREW, No. 10	4
			STD-425	WASHER, No. 10	4
			STD-670	NUT, No. 10	4
			LW-M-2376	PLATE, 3 wire	2



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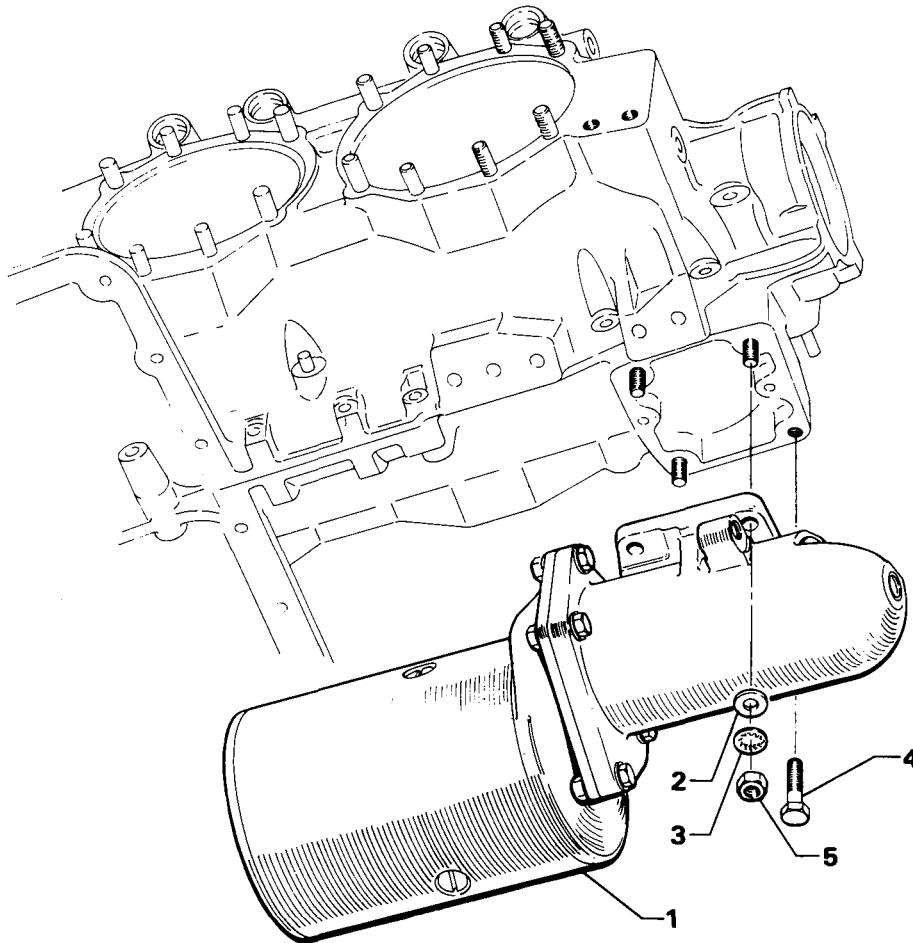
Figure 22. IGNITION HARNESSES, SPARK PLUGS AND ATTACHING PARTS

ELECTRICAL COMPONENTS PRESTOLITE STARTERS AND ATTACHING PARTS

FIG. REF. 23	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY										
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5	
1	LW-15571	STARTER, 12 volt, 12/14 pitch pinion (MZ-4222)		1	1	1				1	1	1		1
	LW-15572	STARTER, 24 volt, 12/14 pitch pinion (MHB-4016)		1	1	1	1	1			1			1
2	STD-35	WASHER, 5/16 plain	4											
3	STD-475	WASHER, 5/16 lock, internal teeth	4											
4	LW-31-1.16	BOLT, 5/16-18 x 1-5/32 long, hex. hd.	1											
5	STD-1410	NUT, 5/16-18 plain	3											

NOTE

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



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Figure 23. PRESTOLITE STARTERS AND ATTACHING PARTS

ELECTRICAL COMPONENTS LYCOMING LIGHTWEIGHT STARTERS AND ATTACHING PARTS

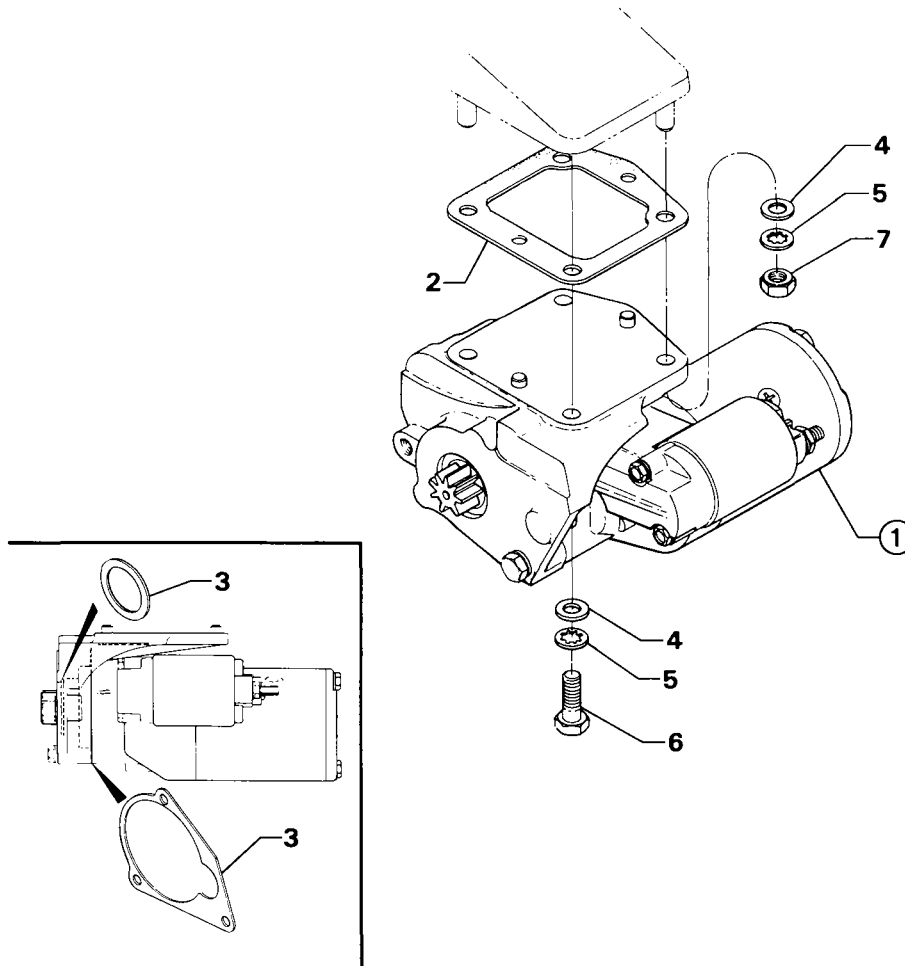
FIG. REF. 24	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY										
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5	
1	05K21302-1 *	KIT, Lightweight starter, 12 volt, 12/14 pitch		1	1	1				1	1	1		1
	05K21302-2 *	KIT, Lightweight starter, 24 volt, 12/14 pitch		1	1	1	1	1			1			1
2	LW-16152	SPACER, Starter/crankcase	1											
3	05K21194 **	KIT, Shim, lightweight starter	1											
4	STD-35	WASHER, 5/16 plain	4											
5	STD-475	WASHER, 5/16 lock, internal teeth	4											
6	LW-31-1.16	BOLT, 5/16-18 x 1-5/32 long, hex. hd.	1											
7	STD-1410	NUT, 5/16-18 plain	3											

* Refer to latest edition of
** Refer to latest edition of

Lycoming Starter Maintenance Manual SSP-490 for complete parts breakdown.
Lycoming Service Instruction No. 1447 for shim application.

NOTE

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



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Figure 24.

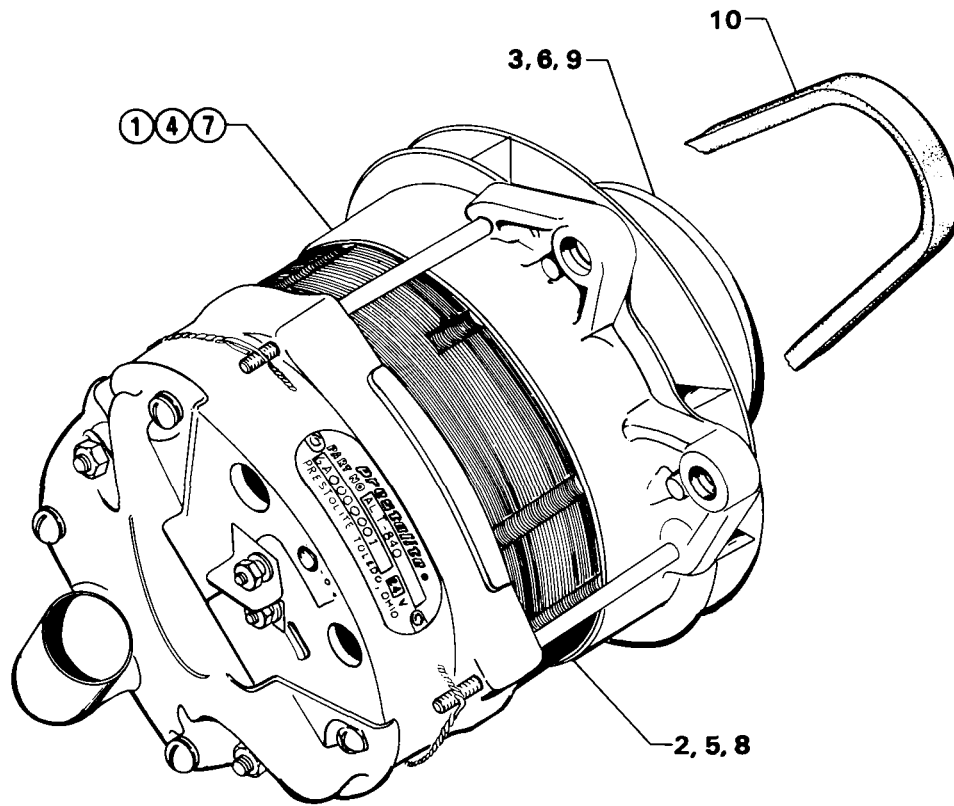
LYCOMING LIGHTWEIGHT STARTERS AND ATTACHING PARTS

ELECTRICAL COMPONENTS ALTERNATOR ASSEMBLIES AND BELTS

FIG. REF. 25	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY										
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5	
1	32C19553	ALTERNATOR ASSY., 24 volt-70 Amp.		1	1	1	1	1		1		1		
2	LW-14326	ALTERNATOR, 24 volt, 70 Amp. (ALU-8421-LS)		1	1	1	1	1		1		1		
3	36B19484	PULLEY, Alternator		1	1	1	1	1		1		1		
4	32B19549	ALTERNATOR ASSY., 12 volt-70 Amp.		1	1	1					1		1	
5	LW-14318	ALTERNATOR, 12 volt-70 Amp. (ALX-8421-LS)		1	1	1					1		1	
6	36B19484	PULLEY, Alternator		1	1	1					1		1	
7	LW-14371	ALTERNATOR ASSY., 12 volt-60 Amp.							1					
8	LW-14313	ALTERNATOR, 12 volt-60 Amp. (ALY-8420-LS)							1					
9	36B19484	PULLEY, Alternator							1					
10	37A19773-367	BELT, Alternator drive, 3/8 wide		1							1		1	
	37A19773-376	BELT, Alternator drive, 3/8 wide		1	1	1	1	1	1					
	37A19773-382	BELT, Alternator drive, 3/8 wide			1		1			1		1		
	72270	BELT, Generator drive			1	1								

NOTE

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



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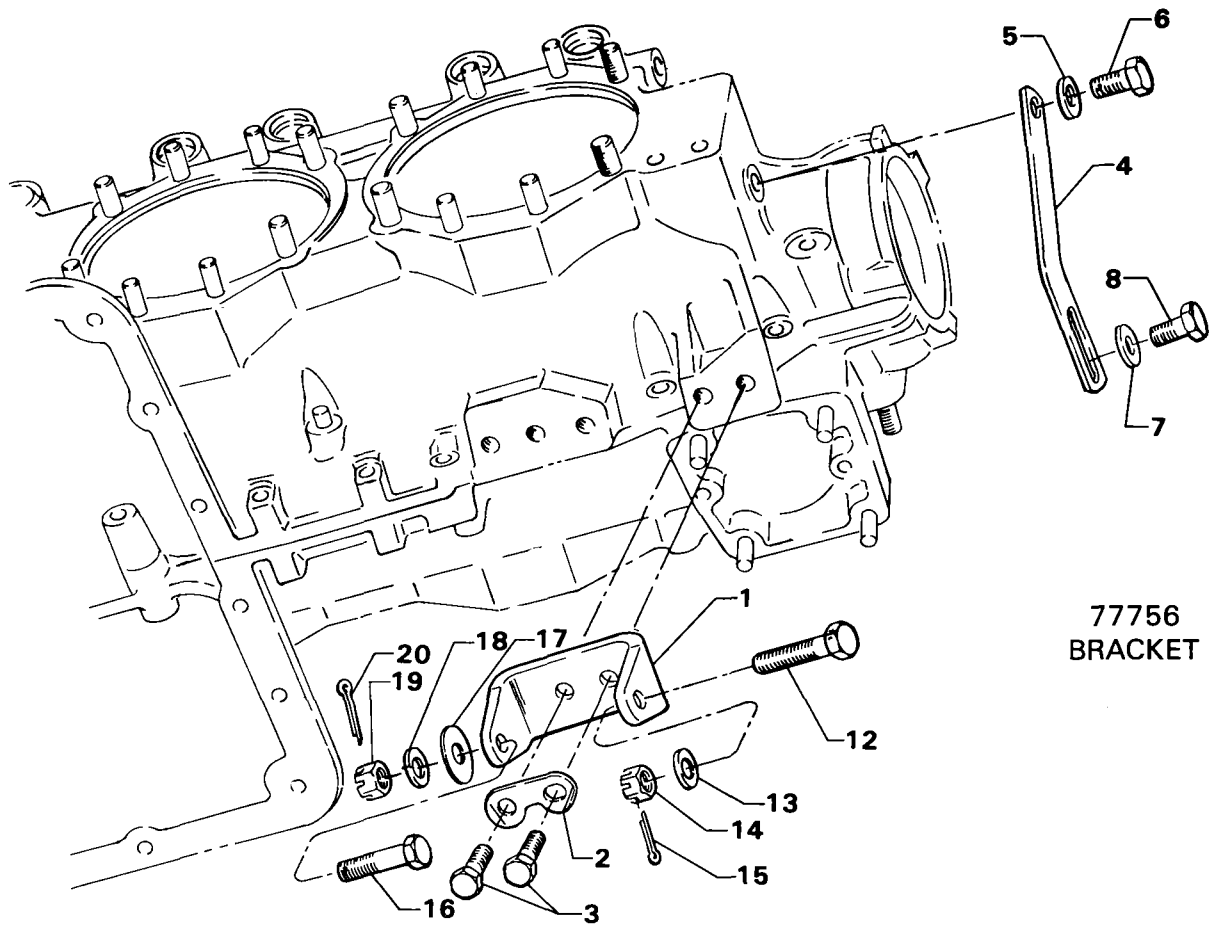
Figure 25. ALTERNATOR ASSEMBLIES AND BELTS

ELECTRICAL COMPONENTS

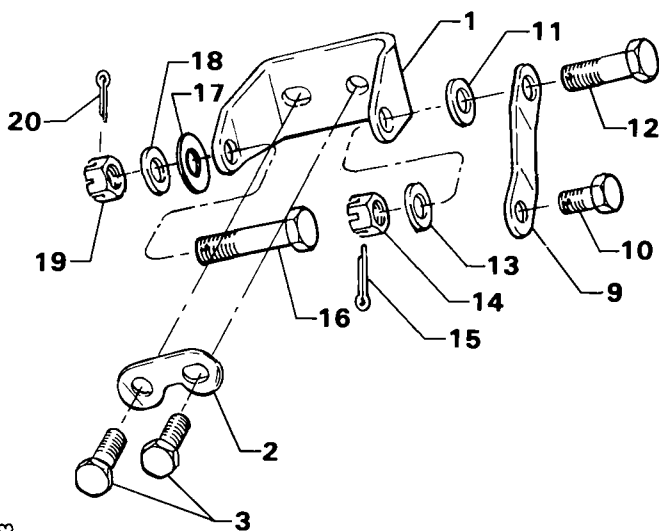
ALTERNATOR MOUNTING AND ATTACHING PARTS

FIG. REF. 26	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY																
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5							
1	07A19474	BRACKET, Alternator		1	1	1	1	1	1	1										
	77756 *	BRACKET, Alternator		1									1							1
	74324	BRACKET, Alternator		1																
2	73383	LOCKPLATE, 5/16 bolt x 1.00 spacing		1	1	1	1	1	1	1			1							1
3	LW-31-0.94	BOLT, 5/16-18 x 15/16 long, hex. hd.		2	2	2	2	2	2	2			2							2
4	75380	LINK, Alternator adjusting		1	1	1	1	1	1	1										
	LW-10091 *	LINK, Alternator adjusting		1									1							1
	74325 ●	LINK, Alternator adjusting		1																
5	STD-35	WASHER, 5/16 plain		1	1	1	1	1	1	1			1							1
6	LW-31H0.75	BOLT, 5/16-18 x 3/4 long, hex. hd.		1	1	1	1	1	1	1			1							1
7	STD-1727	WASHER, Plain, 3/4 O.D. x 11/32 I.D. x 1/8 thick		1	1	1	1	1	1	1			1							1
8	LW-31H0.75	BOLT, 5/16-18 x 3/4 long, hex. hd.		1	1	1	1	1	1	1			1							1
9	74323	STRUT, Alternator support		1	1	1	1	1	1	1										
10	LW-31H0.75	BOLT, 5/16-18 x 3/4 long, hex. hd.		1	1	1	1	1	1	1										
11	STD-690	WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick		1	1	1	1	1	1	1										
12	AN6-12 *	BOLT, 3/8-24 x 1-21/64 long, hex. hd., dr. end		1									1							1
	AN6-14 * *	BOLT, 3/8-24 x 1-37/64 long, hex. hd., dr. end			1					1										
	AN6-17 ★	BOLT, 3/8-24 x 1-61/64 long, hex. hd., dr. end		1	1	1	1	1	1											
	AN6-32 ●	BOLT, 3/8-24 x 3-21/64 long, hex. hd., dr. end		1																
13	STD-690	WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick		AR	AR	AR	AR	AR	AR	AR			AR							AR
14	STD-872	NUT, 3/8-24 slotted		1	1	1	1	1	1	1			1							1
15	STD-713	PIN, Cotter, 3/32 dia. x 3/4 long		1	1	1	1	1	1	1			1							1
16	AN6-16	BOLT, 3/8-24 x 1-53/64 long, hex. hd., dr. end		1	1	1	1	1	1	1			1							1
17	76534	SHIM, 1-1/8 O.D. x 13/32 I.D. x 1/64 thick		AR	AR	AR	AR	AR	AR	AR			AR							AR
18	STD-690	WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick		AR	AR	AR	AR	AR	AR	AR			AR							AR
19	STD-872	NUT, 3/8-24 slotted		1	1	1	1	1	1	1			1							1
20	STD-713	PIN, Cotter, 3/32 dia. x 3/4 long		1	1	1	1	1	1	1			1							1

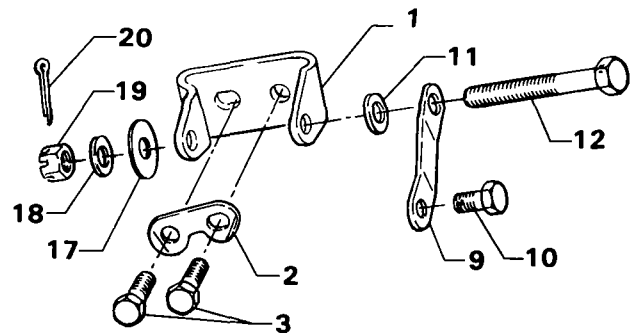
- * Special link and bracket for Piper Aircraft installations.
- * * Attaching 12V-70 Amp., 24V-50 Amp. & 24V-70 Amp. alternators.
- ★ Attaching 12V-40 Amp. alternators only.
- Used with P/N 74324 alternator bracket.



07A19474 BRACKET



74324 BRACKET



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Figure 26. ALTERNATOR MOUNTING AND ATTACHING PARTS

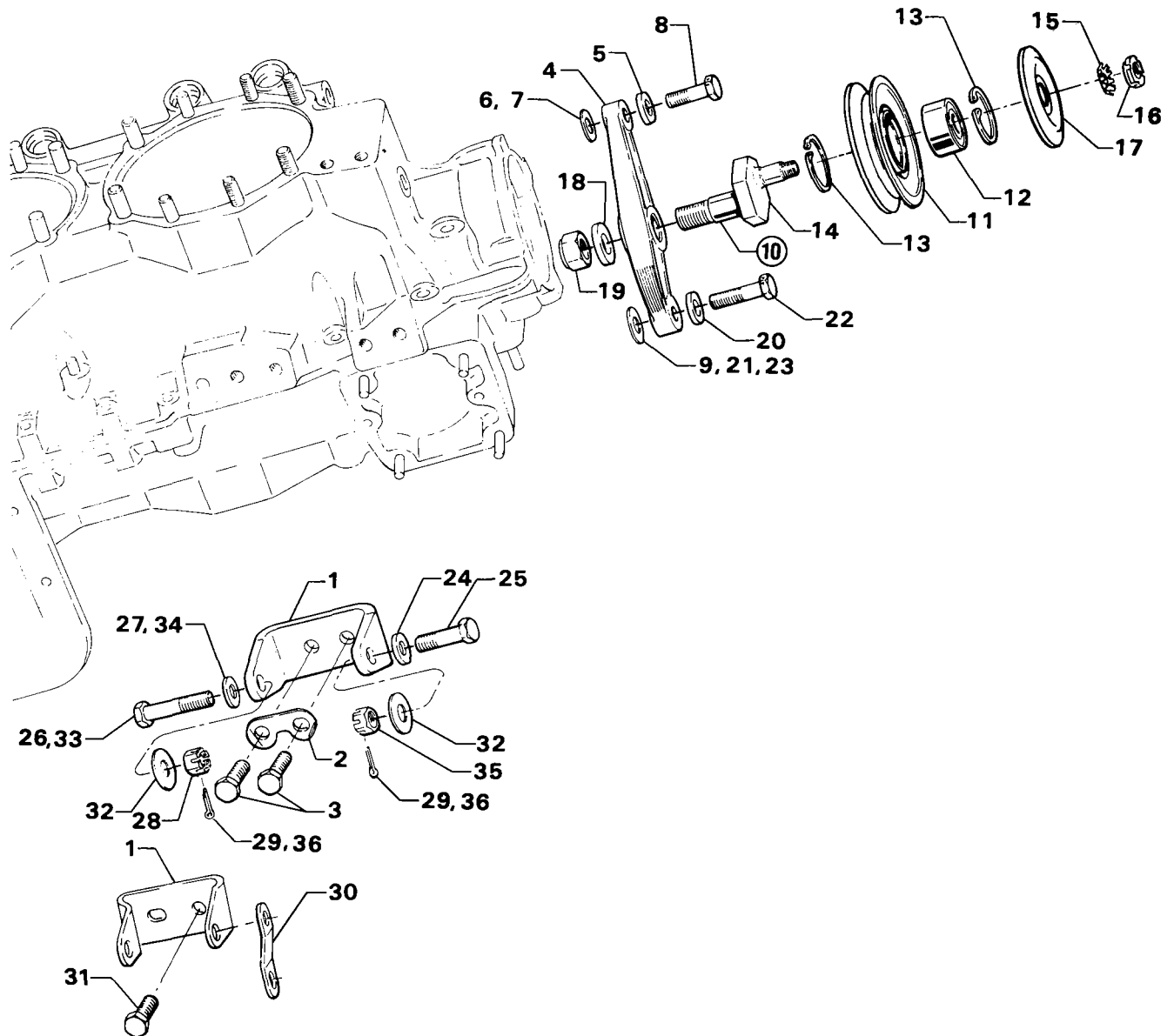
ELECTRICAL COMPONENTS ALTERNATOR MOUNTING AND ATTACHING PARTS

FIG. REF. 27	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY										
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5	
1	77756 *	BRACKET, Alternator			1		1				1		1	
	74324 **	BRACKET, Alternator									1			
2	73383	LOCKPLATE, 5/16 bolt x 1.00 spacing			1		1				1		1	
3	LW-31-0.94	BOLT, 5/16-18 x 15/16 long, hex. hd.			2		2				2		2	
4	LW-18759 *	BRACKET, Alternator belt adjusting			1		1				1		1	
	74518 **	BRACKET, Alternator belt adjusting									1			
5	STD-1727 *	WASHER, Plain, 3/4 O.D. x 11/32 I.D. x 1/8 thick			2		2				2		2	
	STD-1727 **	WASHER, Plain, 3/4 O.D. x 11/32 I.D. x 1/8 thick									1			
6	LW-14637 *	SHIM, 13/16 O.D. x 11/32 I.D. x .005 thick			AR		AR				AR		AR	
7	LW-14649 *	SHIM, 13/16 O.D. x 11/32 I.D. x .010 thick			AR		AR				AR		AR	
8	LW-31H1.31 *	BOLT, 5/16-18 x 1-5/16 long, hex. hd., drilled			2		2				2		2	
	LW-31H1.22 **	BOLT, 5/16-18 x 1-7/32 long, hex. hd., drilled									1			
9	LW-10952 *, *	SHIM, 13/16 O.D. x 13/32 I.D. x .005 thick			AR		AR				AR		AR	
10	LW-19262	PULLEY & SHAFT ASSY., Alternator belt adj.			1		1				1		1	
11	78614	PULLEY, Alternator belt adjusting			1		1				1		1	
12	78629	BALL BEARING, Alternator idler pulley			1		1				1		1	
13	MS16625-1125	RING, Internal retaining, 1-1/4 diameter			2		2				2		2	
14	LW-19237	IDLER SHAFT, Alternator belt adjusting			1		1				1		1	
15	76768	LOCKWASHER, Alternator idler pulley bearing			1		1				1		1	
16	76769	LOCKNUT, Alternator idler pulley bearing			1		1				1		1	
17	LW-11635	SHIELD, Idler shaft			1		1				1		1	
18	STD-669	WASHER, 33/64 I.D. x 1.00 O.D. x 1/8 thick			1		1				1		1	
19	STD-2221	NUT, 1/2-20 self-locking			1		1				1		1	
20	STD-1727 **	WASHER, Plain, 3/4 O.D. x 11/32 I.D. x 1/8 thick									1			
21	LW-14637 **, *	SHIM, 13/16 O.D. x 11/32 I.D. x .005 thick									AR			
22	LW-31H1.22 **	BOLT, 5/16-18 x 1-7/32 long, hex. hd., drilled									1			
23	LW-10952 **, *	SHIM, 13/16 O.D. x 13/32 I.D. x .005 thick									AR			
24	STD-690 **	WASHER, 13/16 O.D. x 25/64 I.D. x 1/8 thick									1			
25	AN6-12 *	BOLT, 3/8-24 x 1-21/64 long, hex. hd., dr. end			1		1				1		1	
26	AN6-32 **	BOLT, 3/8-24 x 3-21/64 long, hex. hd., dr. end									1			
27	STD-690	WASHER, 13/16 O.D. x 25/64 I.D. x 1/8 thick			AR		AR				AR		AR	
28	STD-872	NUT, 3/8-24 slotted			1		1				1		1	
29	STD-713	PIN, Cotter, 3/32 dia. x 3/4 long			1		1				1		1	
30	74323 **	STRUT, Alternator support									1			
31	LW-31H0.75 **	BOLT, 5/16-18 x 3/4 long, hex. hd., drilled									1			
32	76534 *	SHIM, 1-1/8 O.D. x 13/32 I.D. x .005 thick			AR		AR				AR		AR	
33	AN6-16 *	BOLT, 3/8-24 x 1-53/64 long, hex. hd., dr. end			1		1				1		1	
34	STD-690 *	WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick			AR		AR				AR		AR	
35	STD-872 *	NUT, 3/8-24 slotted			1		1				1		1	
36	STD-713 *	PIN, Cotter, 3/32 dia. x 3/4 long			1		1				1		1	

* Used with Prestolite installation.

** Used with Delco-Remy installation.

* Shim as required for belt alignment between crankcase, idler adj. bracket, alternator and alternator bracket.



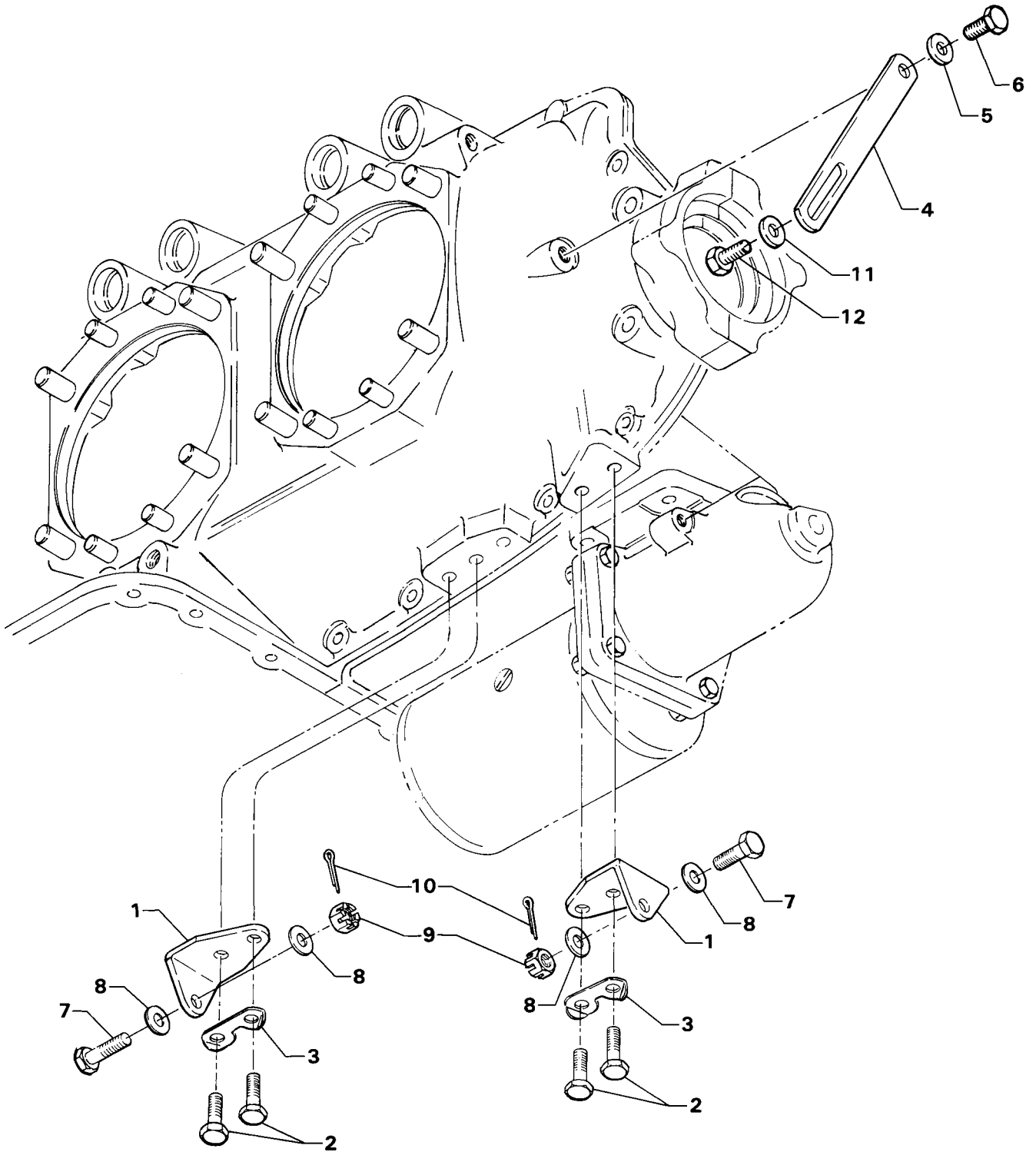
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Figure 27. ALTERNATOR MOUNTING AND ATTACHING PARTS

ELECTRICAL COMPONENTS

GENERATOR MOUNTING AND ATTACHING PARTS

FIG. REF. 28	PART NUMBER	DESCRIPTION	O N A L	QUANTITY PER ASSEMBLY														
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5					
1	70419	BRACKET, Generator				2												
2	LW-31-0.94	BOLT, 5/16-18 x 15/16 long, hex. hd.				4												
3	73383	LOCKPLATE, 5/16 bolt x 1.00 spacing				2												
4	76028	LINK, Generator adjusting				1												
5	STD-35	WASHER, 5/16 plain				1												
6	LW-31H0.75	BOLT, 5/16-18 x 3/4 long, hex. hd.				1												
7	LW-31S1.16	BOLT, 5/16-18 x 1-5/32 long, dr. end				2												
8	STD-35	WASHER, 5/16 plain				AR												
9	STD-1420	NUT, 5/16-18 slotted				2												
10	STD-68	PIN, Cotter				2												
11	STD-1727	WASHER, Plain, 3/4 O.D. x 11/32 I.D. x 1/8 thick				1												
12	LW-31H0.75	BOLT, 5/16-18 x 3/4 long, hex. hd.				1												

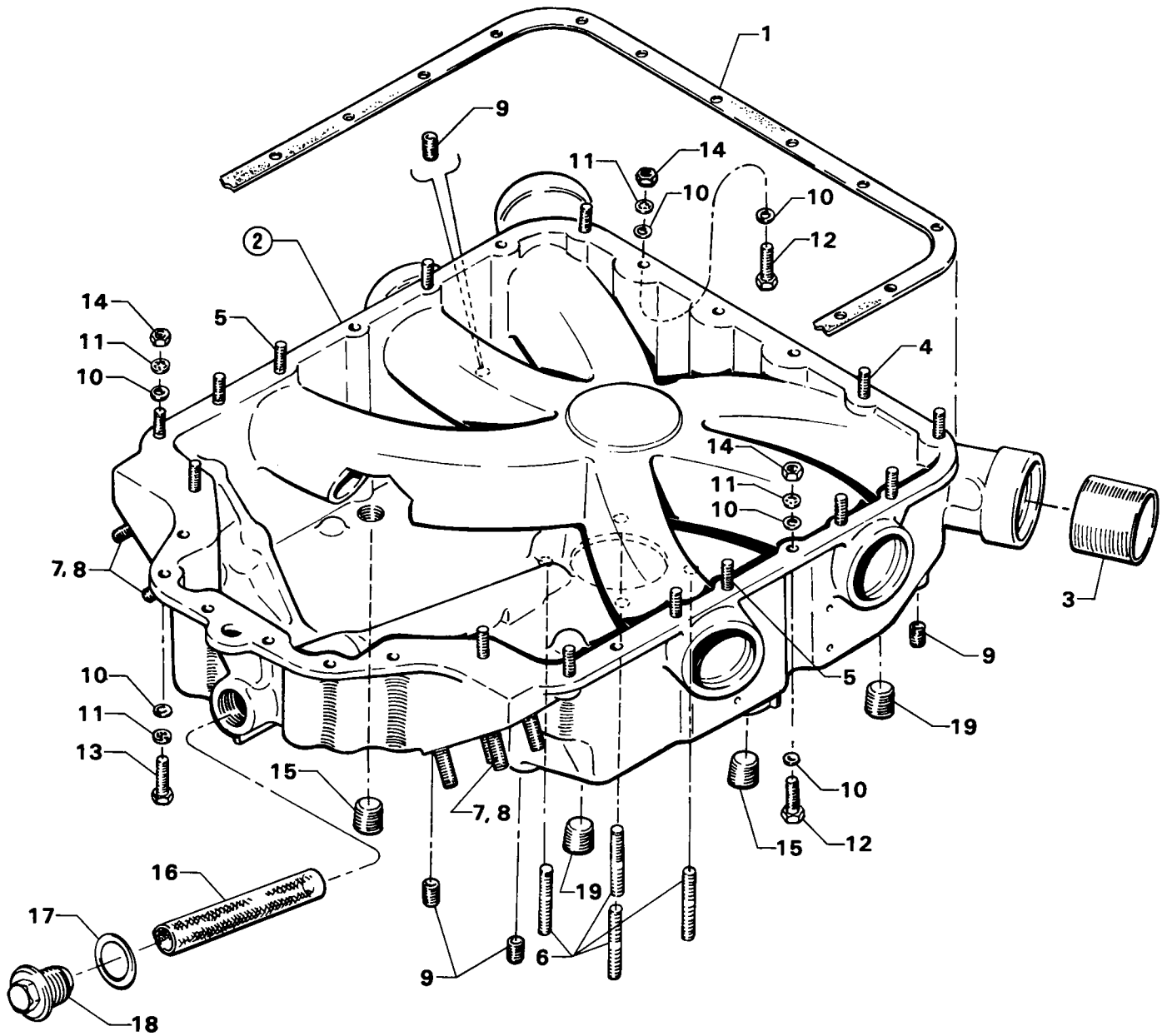


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Figure 28. GENERATOR MOUNTING AND ATTACHING PARTS

OIL SUMP AND INDUCTION SYSTEM OIL SUMP ASSEMBLY AND OIL SUCTION SCREEN

FIG. REF. 29	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY										
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5	
1	06B21326	GASKET, Oil sump		1								1		1
2	78590	SUMP ASSEMBLY, Oil		1										1
	LW-13901	SUMP ASSEMBLY, Oil		1								1		
3	71699	CONNECTION, Intake pipe		6								6		6
4	25C-11	STUD, 1/4-20 x 1-3/8 long		14								14		
	25C-11	STUD, 1/4-20 x 1-3/8 long		12										12
5	25C-13	STUD, 1/4-20 x 1-5/8 long		2										2
6	31C-15	STUD, 5/16-18 x 1-7/8 long		4								4		4
7	38-16	STUD, 3/8-16 x 2.00 long		4										4
8	38-15	STUD, 3/8-16 x 1-7/8 long		4										4
	38-15	STUD, 3/8-16 x 1-7/8 long		8								8		
9	STD-1173	INSERT, 1/4-20 Helicoil x 1/2 long		4								4		4
10	STD-8	WASHER, 1/4 plain		34								34		34
11	STD-160	WASHER, 1/4 lock, internal teeth		27								27		27
12	LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. hd.		7								7		7
13	LW-25-1.00	BOLT, 1/4-20 x 1.00 long, hex. hd.		6								6		6
14	STD-1411	NUT, 1/4-20 plain		21								21		21
15	STD-551	PLUG, 1/2-14 NPT, Sq. hd., drilled		2										2
	STD-2229	PLUG, 1/2-14 NPT, Allen head										2		
16	70484	SCREEN, Oil suction		1								1		1
17	06E19769-1.00	GASKET, 1.00 I.D. x 1-1/4 O.D. x 3/32 thick		1								1		1
18	LW-12545	PLUG, 1.00-20 thd. x 5/8 hex. hd.		1								1		1
19	STD-2229	PLUG, 1/2-14 NPT, Allen head		2										2
	STD-2229	PLUG, 1/2-14 NPT, Allen head										4		



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Figure 29. OIL SUMP ASSEMBLY AND OIL SUCTION SCREEN

OIL SUMP AND INDUCTION SYSTEM

OIL SUMP AND INDUCTION HOUSING ASSEMBLY AND OIL SUCTION SCREEN

FIG. REF. 30	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY											
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5		
1	06B21326	GASKET, Oil sump				1	1	1	1	1	1			1	
2	74833	HOUSING ASSY., Oil sump & induction				1	1	1	1	1	1				
	LW-10454	HOUSING ASSY., Oil sump & induction												1	
3	LW-18291	COVER, Induction housing				1	1	1	1	1	1			1	
4	STD-514	DOWEL, 5/16 dia. x 1/2 long				2	2	2	2	2	2			2	
5	72179	STUD, Intake pipe extension				3	3	3	3	3	3			3	
6	72167	PIPE, Extension, intake cyls. no. 1 & 2				2	2	2	2	2	2			2	
7	72168	PIPE, Extension, intake cyls. no. 3 & 4				2	2	2	2	2	2			2	
8	72169	PIPE, Extension, intake cyls. no. 5 & 6				2	2	2	2	2	2			2	
9	LW-11273	CLAMP, Intake pipe extension				3	3	3	3	3	3			3	
10	25C-9	STUD, 1/4-20 x 1-1/8 long				4	4	4	4	4	4			4	
11	25C-11	STUD, 1/4-20 x 1-3/8 long				15	15	15	15	15	15			15	
12	38-15	STUD, 3/8-16 x 1-7/8 long				8	8	8	8	8	8				
	38-17	STUD, 3/8-16 x 2-1/8 long												8	
13	72706	INSERT, Helicoil, 1/4-20 x 3/8 long, self-lock				14	14	14	14	14	14			14	
14	STD-91	PLUG, 1/2-14 NPT, Allen head				1	1	1	1	1	1			1	
15	1102	PLUG, 1/8 pipe, Allen head				5	5	5	5	5	5			5	
16	STD-784	PLUG, 3/8-18 NPT, Allen head				1	1	1	1	1	1			1	
17	STD-355	PLUG, 3/4-14 NPT, Allen head				2	2	2	2	2	2			2	
18	STD-8	WASHER, 1/4 plain				29	29	29	29	29	29			29	
19	STD-160	WASHER, 1/4 lock, internal teeth				23	23	23	23	23	23			23	
20	LW-25-2.00	BOLT, 1/4-20 x 2.00 long, hex. hd.				2	2	2	2	2	2			2	
21	LW-25-1.00	BOLT, 1/4-20 x 1.00 long, hex. hd.				10	10	10	10	10	10			10	
22	STD-1411	NUT, 1/4 plain				13	13	13	13	13	13			13	
23	06E19769-0.91	GASKET, 1-1/8 O.D. x 29/32 I.D. x 1/16 annular				1	1	1	1	1	1			1	
24	72958	BAFFLE, Oil sump				1	1	1	1	1	1			1	
25	72960	PLUG, 7/8-14 x 5/8 hex. hd.				1	1	1	1	1	1			1	
26	LW-25-0.81	BOLT, 1/4-20 x 13/16 long				4	4	4	4	4	4			4	
27	STD-8	WASHER, 1/4 plain				37	37	37	37	37	37			37	
28	STD-160	WASHER, 1/4 lock, internal teeth				23	23	23	23	23	23			23	
29	LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. hd.				6	6	6	6	6	6			6	
30	LW-25-1.00	BOLT, 1/4-20 x 1.00 long, hex. hd.				8	8	8	8	8	8			8	
31	STD-1411	NUT, 1/4-20 plain				25	25	25	25	25	25			25	
32	STD-551	PLUG, 1/2-14 NPT, Sq. hd., drilled				2	2	2	2	2	2			2	
33	60422	SCREEN, Oil suction				1	1	1	1	1	1			1	
34	06E19769-1.00	GASKET, 1.00 I.D. x 1-1/4 O.D. x 3/32 thick				1	1	1	1	1	1			1	
35	LW-12545	PLUG, 1.00-20 thd. x 5/8 hex. hd.				1	1	1	1	1	1			1	
36	75444	ADAPTER ASSY., Fuel drain valve				2	2	2	2					2	

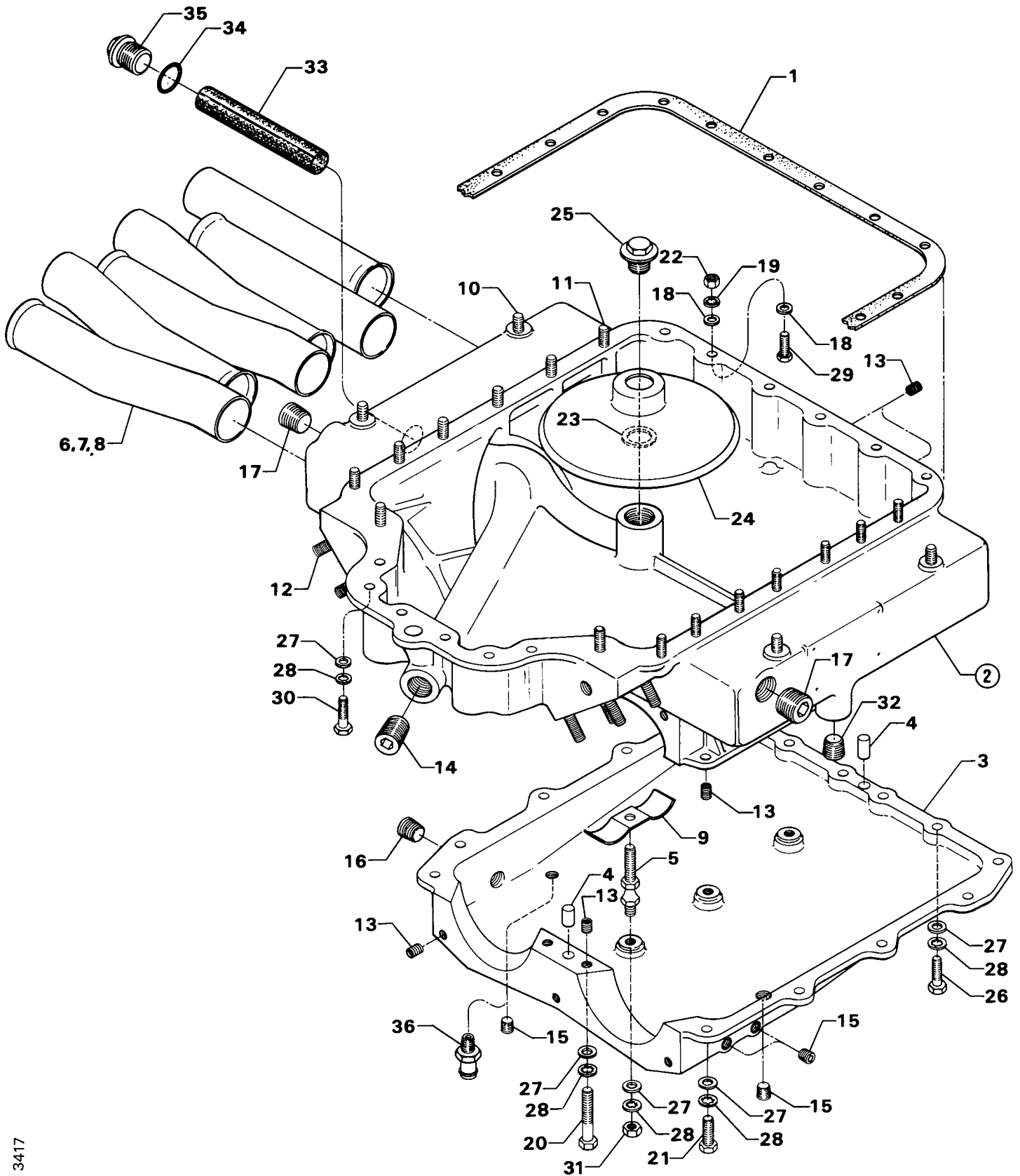
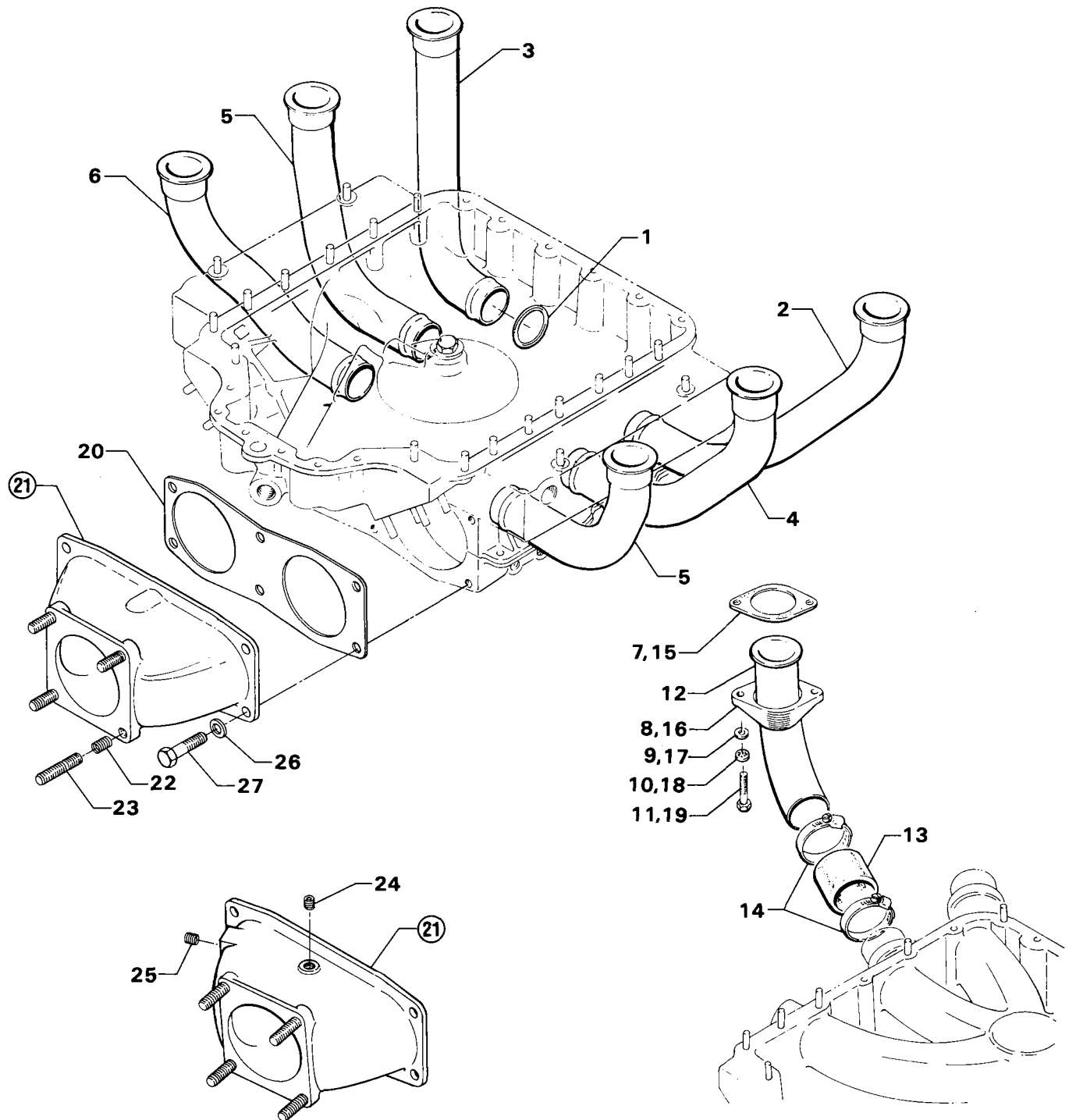


Figure 30. OIL SUMP AND INDUCTION HOUSING ASSEMBLY AND OIL SUCTION SCREEN

OIL SUMP AND INDUCTION SYSTEM INTAKE PIPES AND AIR INLET HOUSING

FIG. REF. 31	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY										
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5	
1	72711	RING, Seal, intake pipes			6	6	6	6	6	6			6	
2	LW-12191	PIPE, Intake, cylinder no. 1			1	1	1	1	1	1			1	
3	LW-12192	PIPE, Intake, cylinder no. 2			1	1	1	1	1	1			1	
4	LW-12193	PIPE, Intake, cylinder no. 3			1	1	1	1	1	1			1	
5	LW-12194	PIPE, Intake, cylinders no. 4 & 5			2	2	2	2	2	2			2	
6	LW-12195	PIPE, Intake, cylinder no. 6			1	1	1	1	1	1			1	
7	71973	GASKET, 2 bolt flange, 1-7/8 I.D.			6	6	6	6	6	6			6	
8	74360	FLANGE, Intake pipe, upper			6	6	6	6	6	6			6	
9	STD-8	WASHER, 1/4 plain			12	12	12	12	12	12			12	
10	STD-160	WASHER, 1/4 lock, internal teeth			12	12	12	12	12	12			12	
11	LW-25-1.25	BOLT, 1/4-20 x 1-1/4 long, hex. hd.			12	12	12	12	12	12			12	
12	70485	PIPE, Intake		6									6	6
13	69603	HOSE, 1-3/4 I.D. x 2-3/16 O.D. x 1-3/4 long		6									6	6
14	LW-15592-8-28	CLAMP, Hose		12									12	12
15	71973	GASKET, 2 bolt flange, 1-7/8 I.D.		6									6	6
16	73346	FLANGE, Intake pipe, upper		6									6	6
17	STD-8	WASHER, 1/4 plain		12									12	12
18	STD-160	WASHER, 1/4 lock, internal teeth		12									12	12
19	LW-25-1.25	BOLT, 1/4-20 x 1-1/4 long, hex. hd.		12									12	12
20	72210	GASKET, Air throttle housing			1	1	1	1	1	1			1	
21	77998	HOUSING ASSY., Air inlet									1			
	77653	HOUSING ASSY., Air inlet			1	1	1	1						
	78100	HOUSING ASSY., Air inlet			1									
	LW-15730	HOUSING ASSY., Air inlet											1	
	73031	HOUSING ASSY., Air inlet				1	1		1					
22	STD-1164	INSERT, 5/16-18 Helicoil, 5/8 long									4			
23	31C-14	STUD, 5/16-18 x 1-3/4 long			4	4	4		4				4	
	31C-16	STUD, 5/16-18 x 2.00 long			4	4	4	4						
24	1102	PLUG, 1/8 pipe x 3/8 long, Allen hd.			1								1	
25	STD-1353	INSERT, No. 10-24 Helicoil x 3/8 long			2									
26	STD-8	WASHER, 1/4 plain			6	6	6	6	6	6			6	
27	LW-25-0.81	BOLT, 1/4-20 x 13/16 long			6	6	6	6	6	6			6	



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Figure 31. INTAKE PIPES AND AIR INLET HOUSING

OIL SUMP AND INDUCTION SYSTEM

FUEL INJECTOR, FUEL MANIFOLD, FUEL LINES, HOSES & INJECTION NOZZLES (IO-540-M1A5)

FIG. REF. 32	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY																
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5							
1	73032	GASKET, Air inlet housing										1								
2	77293	FUEL INJECTOR (2524311-10)										1								
3	AN825-4	TEE, 1/4 flared tube, 1/8 pipe thd.										1								
4	MS29512-06	SEAL, Oil, 5/64 dia. section x 15/32 I.D.										1								
5	AN924-6	NUT, Flared tube, bulkhead fitting										1								
6	76779	ADAPTER, Injector, fuel outlet										1								
7	LW-11867	ELBOW, 1/8 pipe thd., 90°										1								
8	02A21377	ELBOW & BUSHING ASSY., 45°										1								
9	STD-35	WASHER, 5/16 plain										3								
10	STD-475	WASHER, 5/16-18 internal lock										4								
11	LW-31-1.31	BOLT, 5/16-18 x 1-5/16 long, hex. hd.										4								
12	STD-1727	WASHER, Plain, 3/4 O.D. x 21/64 I.D. x 1/8 thick										1								
13	AN929-3	CAP ASSY., 3/16 flared tube fitting										1								
14	LW-12879-6S120	HOSE, Fuel pump to injector										1								
15	LW-18265	NOZZLE, Injection (2524864-2)										6								
16	75414	BRACKET, Fuel manifold										2								
17	STD-160	WASHER, 1/4 lock, internal teeth										2								
18	STD-1411	NUT, 1/4-20 plain										2								
19	76778	MANIFOLD ASSY., Fuel, right										1								
20	STD-148	NIPPLE, Union, 1/8 tube										2								
21	MS20822-4	ELBOW, 1/4 flared tube, 1/8 NPT, 90°										1								
22	STD-2166	ELBOW, Union										1								
23	76777	MANIFOLD ASSY., Fuel, left										1								
24	STD-148	NIPPLE, Union, 1/8 tube										2								
25	MS20822-4	ELBOW, 1/4 flared tube, 1/8 NPT, 90°										1								
26	STD-2166	ELBOW, Union										1								
27	LW-25-0.75	BOLT, 1/4-20 x 3/4 long, hex. hd.										2								
28	STD-8	WASHER, 1/4 plain										2								
29	STD-160	WASHER, 1/4 lock, internal teeth										2								
30	STD-1411	NUT, 1/4-20 plain										2								
31	LW-12878-4S176	HOSE, Fuel injector to fuel manifold, right										1								
	LW-12798-4S242	HOSE, Fuel injector to fuel manifold, left										1								
32	LW-16266-25-63	CLAMP										2								
33	STD-8	WASHER, 1/4 plain										2								
34	STD-160	WASHER, 1/4 lock, internal teeth										2								
35	STD-1411	NUT, 1/4-20 plain										2								
36	LW-12098-0-100	TUBE ASSY., Fuel man. to noz., cyls. 1-3-4-6										4								
37	LW-12098-0-170	TUBE ASSY., Fuel man. to noz. cyls. 2 & 5										2								
38	73152	BRACKET, Support clamp										1								
39	73136	BRACKET, Extension (angle)										1								
40	LW-16266-10-13	CLAMP										7								
41	LW-16266-10-38	CLAMP										5								
42	STD-860	SCREW, No. 10-32 x 5/8 long										7								
43	STD-670	NUT, No. 10-32 self-locking										7								

NOTE

For more information on fuel line and clamping diagrams, installation and inspections, refer to the latest edition of Lycoming Service Bulletin No. 342.

OIL SUMP AND INDUCTION SYSTEM FUEL INJECTORS AND FUEL HOSES (IO-540-J, K, N, P, R)

FIG. REF. 33	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY											
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5		
1	66224	GASKET, Fuel injector		1									1		1
2	73032	GASKET, Air inlet housing			1	1	1		1					1	
	73032	GASKET, Air inlet housing			2	2	2	2	2						
3	77654	SPACER, Fuel injector			1	1	1	1	1						
4	73967	FUEL INJECTOR (391821-6)					1								
	75567	FUEL INJECTOR (2524273-12)			1	1									
	77003	FUEL INJECTOR (2524298-12)			1	1			1						
	79034	FUEL INJECTOR (2524422-9)						1							
	LW-10976	FUEL INJECTOR (2524470-5)							1						
	LW-11007	FUEL INJECTOR (2524477-12)												1	
	LW-11218	FUEL INJECTOR (2524491-9)					1								
	LW-11220	FUEL INJECTOR (2524492-9)												1	
	LW-11924	FUEL INJECTOR (2524556-9)				1									
5	75176	FUEL INJECTOR (2524213-11)		1											
	LW-10622	FUEL INJECTOR (2524459-9)											1		1
6	MS29512-06	SEAL, Oil, 5/64 dia. section x 15/32 I.D.			1	1	1	1	1	1				1	
7	AN919-6	REDUCER, Flared tube (1/4 tubing)			1	1	1	1	1	1				1	
8	MS20822-4	ELBOW, 1/4 flared tube & 1/8 NPT, 90°					1		1						
9	76304	ELBOW, Adjustable, 45°			1	1									
10	STD-35	WASHER, 5/16 plain		4	4	4	4	4	4	4			4		4
	STD-35	WASHER, 5/16 plain			2	2									
11	STD-1727	WASHER, 3/4 O.D. x 21/64 I.D. x 1/8 plain			2	2									
12	STD-1410	NUT, 5/16-18 plain		4	4	4	4	4	4	4			4	4	4
13	STD-1763	LOCKNUT, 5/16 palnut		4	4	4	4	4	4	4			4	4	4
14	LW-12784-4-303	HOSE ASSY., Fuel injector to fuel manifold					1		1						
	LW-12784-4-340	HOSE ASSY., Fuel injector to fuel manifold			1	1									
	LW-12876-4S334	HOSE ASSY., Fuel injector to fuel manifold				1	1							1	
	LW-12785-4-334	HOSE ASSY., Fuel injector to fuel manifold			1	1		1							
15	LW-12799-6S110	HOSE ASSY., Fuel pump to fuel injector			1	1									
16	LW-12784-4-352	HOSE ASSY., Fuel injector to fuel manifold											1		1
	LW-12784-4-274	HOSE ASSY., Fuel injector to fuel manifold		1											
17	LW-16266-25-50	CLAMP		1	1	1	1	1	1	1			1		1
	LW-16266-25-63	CLAMP				1	1							1	
18	LW-16266-10-13	CLAMP			1	1									

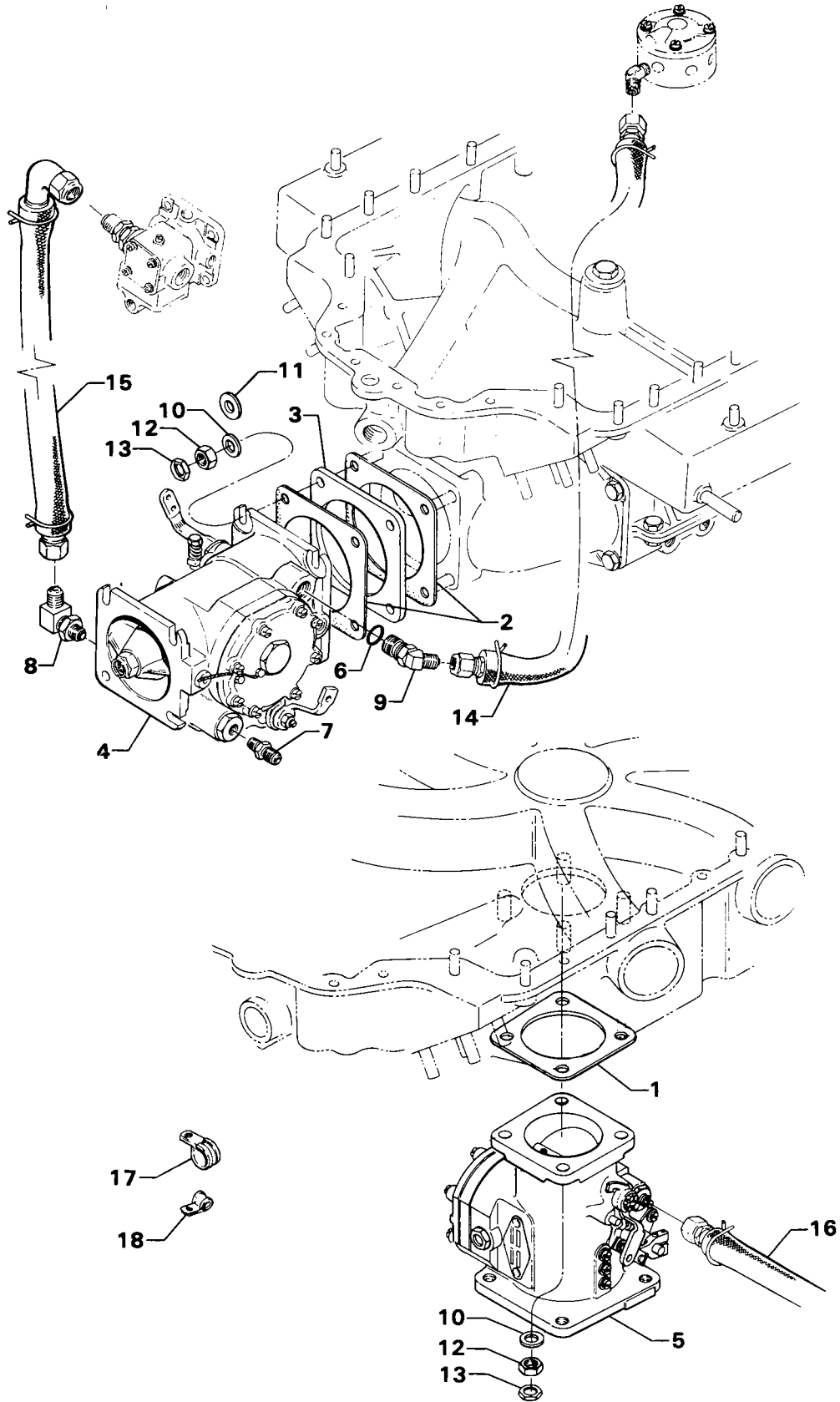


Figure 33. FUEL INJECTORS AND FUEL HOSES (IO-540-J, K, N, P, R)

OIL SUMP AND INDUCTION SYSTEM FUEL MANIFOLDS, BRACKETS AND INJECTION NOZZLES (IO-540-J, K, N, P, R)

FIG. REF. 34	PART NUMBER	DESCRIPTION	O N A L	QUANTITY PER ASSEMBLY										
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5	
1	75283	MANIFOLD ASSY., Fuel		1	1	1	1	1	1	1		1		1
	75573	MANIFOLD ASSY., Fuel			1	1								
	78924	MANIFOLD ASSY., Fuel			1									
	79007	MANIFOLD ASSY., Fuel				1	1					1		
2	MS20823-4	ELBOW, 1/4 tube, 1/8 NPT, 45°		1	1	1	1	1	1			1	1	1
	AN816-4	NIPPLE, 1/4 tube & 1/8 NPT			1	1								
4	AN791-2	ELBOW, Union, 45°, 1/8 tube			2	2								
	STD-148	NIPPLE, Union, 1/8 NPT			4	4								
6	STD-148	NIPPLE, Union, 1/8 NPT		6	6	6	6	6	6			6	6	6
	02G21382	NIPPLE, 3/16 tube to 1/8 NPT, restricted			1	1	1						1	
7	02G21446	NIPPLE, 1/8 tube to 1/8 NPT, restricted		1	1	1	1	1	1			1		1
	LW-18265	NOZZLE, Injection			6	6	6	6	6			6		
8	LW-18854	NOZZLE ASSY., Manifold air bleed		6	6	6							6	6
	951391	"O" RING		12	12	12							12	12
10	73966	SPACER, Fuel manifold bracket		2	2	2	2	2	2			2	2	2
	73965	BRACKET, Fuel manifold		2	2	2	2	2	2			2	2	2
12	74326	BRACKET, Fuel manifold			1	1								
	STD-251	WASHER, No. 10 lock, internal		4	4	4	4	4	4			4	4	4
14	STD-82	SCREW, No. 10-24 x 1/2 long, rd. hd.		4	4	4	4	4	4			4	4	4
	STD-160	WASHER, 1/4 lock, internal teeth			1	1								
16	STD-1897	BOLT, 1/4-28 x 17/64 long, hex. hd.			1	1								

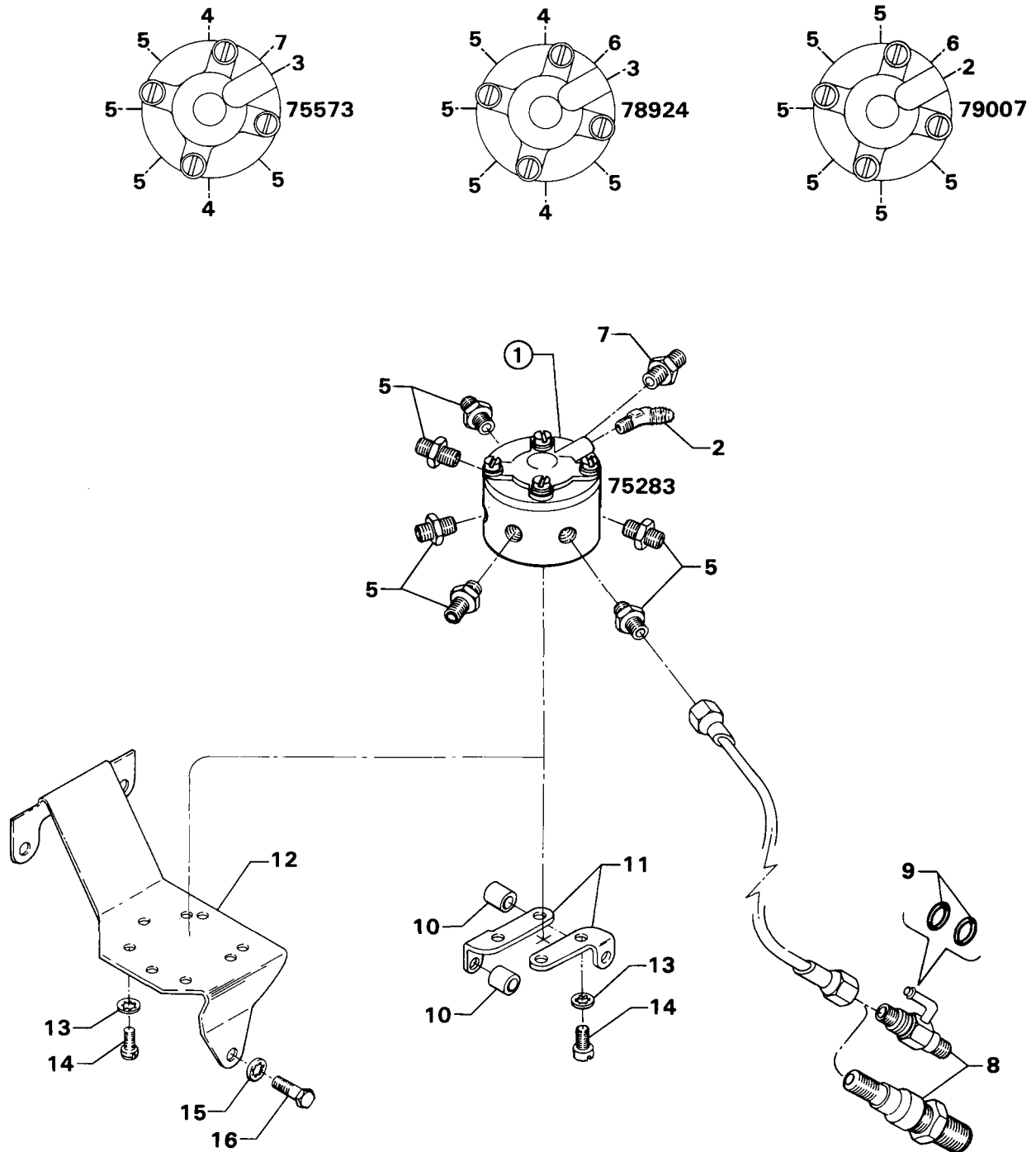


Figure 34. FUEL MANIFOLDS, BRACKETS AND INJECTION NOZZLES (IO-540-J, K, N, P, R)

OIL SUMP AND INDUCTION SYSTEM

FUEL LINES AND ATTACHING PARTS (IO-540-J, K, N, P, R)

FIG. REF. 35	PART NUMBER	DESCRIPTION	O N A L L	QUANTITY PER ASSEMBLY										
				J 4 A 5	K 1 A 5	K 1 B 5	K 1 C 5	K 1 D 5	K 1 E 5	M 1 A 5	N 1 A 5	P 1 A 5	R 1 A 5	
1	LW-12098-0-210	TUBE ASSY., Fuel man. to noz., cyls. 1-2-5-6		4	4	4	4	4	4			4	4	4
2	LW-12098-0-170	TUBE ASSY., Fuel man. to noz., cyls. 3 & 4		2	2	2	2	2	2			2	2	2
3	LW-12098-0-210	TUBE ASSY., Fuel man. to noz., cyls. 1-4-6				3	3							
4	LW-12098-0-140	TUBE ASSY., Fuel man. to noz., cyls. 3 & 5				2	2							
5	LW-12098-0-280	TUBE ASSY., Fuel man. to noz., cyl. 2				1	1							
6	LW-16266-10-75	CLAMP		12								12		12
	LW-16266-10-75	CLAMP				10	10	10	10	10			10	
	LW-16266-10-75	CLAMP				8	8							
7	LW-16266-10-13	CLAMP		12	12	12	12	12	12			12	12	12
	LW-16266-10-13	CLAMP				10	10							
8	73136	BRACKET, 90°		4	4	4	4	4	4			4	4	4
	73136	BRACKET, 90°				4	4							
9	STD-860	SCREW, No. 10-32 x 5/8 long		14	14	14	14	14	14			14	14	14
	STD-860	SCREW, No. 10-32 x 5/8 long				13	13							
10	STD-425	WASHER, No. 10 plain		2	2	2	2	2	2			2	2	2
	STD-425	WASHER, No. 10 plain				2	2							
11	STD-670	NUT, No. 10-32 self-locking		14	14	14	14	14	14			14	14	14
	STD-670	NUT, No. 10-32 self-locking				13	13							

NOTE

For more information on fuel line and clamping diagrams, installation and inspections, refer to the latest edition of Lycoming Service Bulletin No. 342.

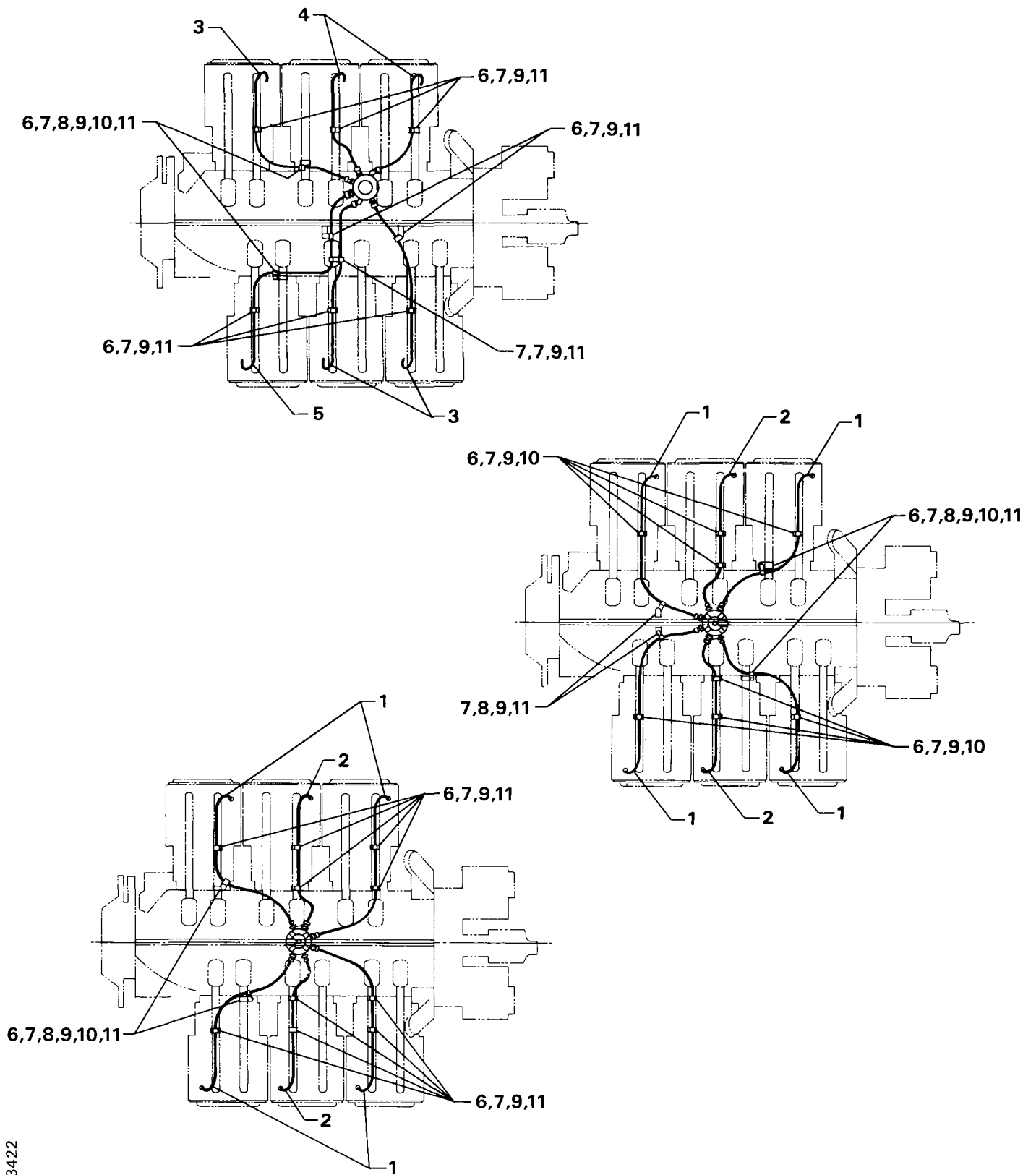


Figure 35. FUEL LINES AND ATTACHING PARTS (IO-540-J, K, N, P, R)

SERVICE KIT SECTION

SEAL AND GASKET SET

IO-540-J4A5, -N1A5, -R1A5

Part No.	Part Name	Qty.
71569-1	SEAL AND GASKET SET	1
LW-12272	LOCKPLATE, Shroud tube	6
LW-12681	GASKET, Magneto	2
LW-12795	GASKET, Oil filter adapter	1
06B21326	GASKET, Oil sump	1
LW-13792	SEAL, Crankshaft oil	1
LW-14260	SEAL, Tachometer drive oil	1
LW-14995	SPRING, Shroud tube	6
LW-15628	SEAL, Crankshaft	1
LW-18638	LOCKPLATE, Crankshaft gear	1
LW-18661	SEAL, Shroud tube	12
MS16625-1081	RING, Internal retaining	1
06E19769-1.00	GASKET, Oil suction screen	1
STD-213	SEAL, Oil	1
06E19769-0.63	GASKET, Annular	2
06E19769-1.25	GASKET, Annular	1
06A19956	SEAL, Oil	2
1691-C	GASKET, Fuel pump	1
8313	GASKET, Vacuum pump	2
60096	GASKET, Fuel pump	1
61173	GASKET, Oil pressure housing	1
61183	GASKET, Accessory adapter	1
62224	GASKET, Magneto adapter	4
LW-19296	GASKET, Exhaust flange	6
66224	GASKET, Carburetor	1
68315	GASKET, Accessory drive adapter	1
69164	GASKET, Fuel pump adapter	1
69345	SPACER	6
69551	GASKET, Accessory drive adapter	1
70310	SEAL, Shroud tube	12
70455	GASKET	1
70457	GASKET	1
71481	RING, Oil seal	6
71667	LOCKPLATE, Fuel pump idler gear	1
71973	GASKET, 2 Bolt flange	6
72053	GASKET, Governor	1
72059	GASKET, Oil filler extension	1
72075	RING, Oil seal	8
72078	LOCKPLATE, Cam gear	2
72091	RING, Oil seal	2
72210	GASKET	1
72312	RING, Oil seal	1
73383	LOCKPLATE, Generator bracket	2
73818	GASKET, Accessory housing	1
74065	"O" RING, Oil level gage	1
74068	"O" RING	1
74305	SEAL	1
75906	GASKET, Rocker box cover	6
76510	GASKET	1
76940	SEAL, Crankshaft oil	1

SERVICE KIT SECTION

SEAL AND GASKET SET

IO-540-K Series; IO-540-M1A5, -P1A5

Part No.	Part Name	Qty.
73185-1	SEAL AND GASKET SET	1
LW-12681	GASKET, Magneto	2
LW-12795	GASKET	1
06B21326	GASKET, Oil sump	1
LW-13792	SEAL, Crankshaft oil	1
LW-14260	SEAL, Tachometer	1
LW-15628	SEAL, Crankshaft	1
LW-18638	LOCKPLATE, Crankshaft gear	1
LW-18661	SEAL, Shroud tube	24
MS29512-6	SEAL	1
MS29512-8	SEAL, Oil	1
06E19769-1.00	GASKET, Annular	2
STD-213	SEAL, Oil	1
06E19769-0.63	GASKET, Annular	2
06E19769-0.91	GASKET	1
06E19769-1.25	GASKET, Annular	1
06E19769-0.50	GASKET, Annular	6
STD-1737	RING	1
06A19956	SEAL, Oil	1
1691-C	GASKET, Fuel pump pad	1
8313	GASKET, Vacuum pump	2
61173	GASKET, Oil pressure housing	1
61183	GASKET, Accessory adapter	1
62224	GASKET, Magneto	4
66732	GASKET, Valve rocker shaft cover	12
67193	GASKET, Rocker box cover	6
68315	GASKET, Accessory drive adapter	1
69164	GASKET, Fuel pump adapter	1
69551	GASKET, Accessory pad cover	1
70455	GASKET	1
70457	GASKET, Oil level gage	1
71450	GASKET, Rocker box	6
71481	RING, Oil seal	6
71667	LOCKPLATE, Crankshaft idler gear	2
71973	GASKET, Intake flange	6
72053	GASKET, Governor drive pad	1
72075	SEAL, Oil	8
72078	LOCKPLATE, Camshaft gear	2
72091	RING, Oil seal	2
72210	GASKET, Air throttle housing	1
72312	RING, Oil seal	1
72711	RING, Oil seal intake pipe	6
73032	GASKET, Air inlet housing	1
73383	LOCKPLATE	2
73818	GASKET, Accessory housing	1
74065	"O" RING, Oil filler plug	1
74305	SEAL, Crankshaft oil	1
75118	GASKET, Exhaust flange	12
75233	"O" RING	24
76510	GASKET	1
76940	SEAL, Crankshaft oil	1
60096	GASKET, Fuel pump	1

SERVICE KIT SECTION

CYLINDER, PISTON AND RING ASSEMBLY

IO-540-N1A5

Part No.	Part Name	Qty.
05K21102	KIT - CYLINDER, PISTON AND RING ASSY.	1
LW-12425	CYLINDER AND HEAD ASSEMBLY	1
LW-19001	VALVE, Exhaust	1
73938	VALVE, Intake	1
LW-11800	SPRING, Valve, outer	2
LW-11795	SPRING, Valve, inner	2
LW-10077	SEAT, Valve spring, upper, intake	1
LW-16475	SEAT, Valve spring, upper, exhaust	1
65441	SEAT, Valve spring, lower, intake	1
LW-13323	SEAT, Valve spring, lower, exhaust	1
60009	KEY, Valve, intake	2
17C21191	KEY, Valve, exhaust	2
17C19386	CAP, Valve stem, exhaust	1
75089	PISTON	1
74241	RING, Piston, compression	2
73857	RING, Piston, oil regulating	1
LW-14077	PIN, Piston	1
LW-11775	PLUG, Piston pin	2
60828	PLUG, Piston pin	2
71481	RING, Cylinder base seal	1
LW-18661	SEAL, Shroud tube	2
70310	SEAL, Shroud tube	2
75906	GASKET, Rocker box cover	1
SSP-2272	TAG	1
SSP-2472	TAG	1

SERVICE KIT SECTION

CYLINDER, PISTON AND RING ASSEMBLY

IO-540-K1A5, -K1B5, -K1D5

Part No.	Part Name	Qty.
05K21112	KIT - CYLINDER, PISTON AND RING ASSY.	1
LW-13530	CYLINDER AND HEAD ASSEMBLY	1
LW-16740	VALVE, Exhaust	1
LW-13622	VALVE, Intake	1
LW-11796	SPRING, Valve, outer	2
LW-11797	SPRING, Valve, inner	2
69532	SEAT, Valve spring, upper, intake	1
LW-16475	SEAT, Valve spring, upper, exhaust	1
LW-13321	SEAT, Valve spring, lower, intake	1
LW-13322	SEAT, Valve spring, lower, exhaust	1
71481	RING, Cylinder base seal	1
72050	KEY, Valve, intake	2
17C21191	KEY, Valve, exhaust	2
62388	CAP, Valve stem, intake	1
17C19386	CAP, Valve stem, exhaust	1
LW-10207-S	PISTON	1
74241	RING, Piston, compression	2
73857	RING, Piston, oil regulating	1
LW-13446 or LW-14077	PIN, Piston	1
60828	PLUG, Piston pin	2
LW-11775	PLUG, Piston pin	2
66732	GASKET, Valve rocker shaft cover	2
67193	GASKET, Rocker box cover	1
LW-18661	SEAL, Shroud tube	4
SSP-2272	TAG	1

SERVICE KIT SECTION

CYLINDER, PISTON AND RING ASSEMBLY

IO-540-K1B5, -K1C5, -K1E5, -P1A5

Part No.	Part Name	Qty.
05K21204	KIT - CYLINDER, PISTON AND RING ASSY.	1
LW-13534	CYLINDER AND HEAD ASSEMBLY	1
LW-16740	VALVE, Exhaust	1
LW-13622	VALVE, Intake	1
LW-11796	SPRING, Valve, outer	2
LW-11797	SPRING, Valve, inner	2
69532	SEAT, Valve spring, upper, intake	1
LW-16475	SEAT, Valve spring, upper, exhaust	1
LW-13321	SEAT, Valve spring, lower, intake	1
LW-13322	SEAT, Valve spring, lower, exhaust	1
72050	KEY, Valve, intake	2
17C21191	KEY, Valve, exhaust	2
62388	CAP, Valve stem, intake	1
17C19386	CAP, Valve stem, exhaust	1
LW-10207-S	PISTON	1
74241	RING, Piston, compression	2
73857	RING, Piston, oil regulating	1
LW-14077	PIN, Piston	1
60828	PLUG, Piston pin	2
LW-11775	PLUG, Piston pin	2
66732	GASKET, Valve rocker shaft cover	2
67193	GASKET, Rocker box cover	1
LW-18661	SEAL, Shroud tube	4
71481	RING, Cylinder base seal	1
SSP-2272	TAG	1

SERVICE KIT SECTION

CYLINDER, PISTON AND RING ASSEMBLY

IO-540-M1A5

Part No.	Part Name	Qty.
05K21226	KIT - CYLINDER, PISTON AND RING ASSY.	1
LW-13533	CYLINDER AND HEAD ASSEMBLY	1
LW-16740	VALVE, Exhaust	1
LW-13622	VALVE, Intake	1
LW-11796	SPRING, Valve, outer	2
LW-11797	SPRING, Valve, inner	2
69532	SEAT, Valve spring, upper, intake	1
LW-16475	SEAT, Valve spring, upper, exhaust	1
LW-13321	SEAT, Valve spring, lower, intake	1
LW-13322	SEAT, Valve spring, lower, exhaust	1
72050	KEY, Valve, intake	2
17C21191	KEY, Valve, exhaust	2
62388	CAP, Valve stem, intake	1
17C19386	CAP, Valve stem, exhaust	1
LW-10207-S	PISTON	1
74241	RING, Piston, compression	2
73857	RING, Piston, oil regulating	1
LW-14077	PIN, Piston	1
60828	PLUG, Piston pin	2
LW-11775	PLUG, Piston pin	2
66732	GASKET, Valve rocker shaft cover	2
71450	GASKET, Rocker box cover	1
LW-18661	SEAL, Shroud tube	4
71481	RING, Cylinder base seal	1
SSP-2272	TAG	1

SERVICE KIT SECTION

CYLINDER, PISTON AND RING ASSEMBLY

IO-540-J4A5, -R1A5

Part No.	Part Name	Qty.
05K21241	KIT - CYLINDER, PISTON AND RING ASSY.	1
LW-12433	CYLINDER AND HEAD ASSEMBLY	1
LW-19001	VALVE, Exhaust	1
73938	VALVE, Intake	1
LW-11800	SPRING, Valve, outer	2
LW-11795	SPRING, Valve, inner	2
LW-10077	SEAT, Valve spring, upper, intake	1
LW-16475	SEAT, Valve spring, upper, exhaust	1
65441	SEAT, Valve spring, lower, intake	1
LW-13323	SEAT, Valve spring, lower, exhaust	1
60009	KEY, Valve, intake	1
17C21191	KEY, Valve, exhaust	2
17C19386	CAP, Valve stem, exhaust	1
75089	PISTON	1
74241	RING, Piston, compression	2
73857	RING, Piston, oil regulating	1
LW-14077	PIN, Piston	1
60828	PLUG, Piston pin	2
LW-11775	PLUG, Piston pin	2
71481	RING, Cylinder base seal	1
70310	SEAL, Shroud tube (top)	2
LW-18661	SEAL, Shroud tube (bottom)	2
75906	GASKET, Rocker box cover	1
SSP-2272	TAG	1
SSP-2472	TAG	1

SERVICE KIT SECTION**CRANKCASE ASSEMBLY AND GOVERNOR STUD KITS**

Part No.	Part Name	Qty.
LW-11037-S	CRANKCASE ASSY. AND GOVERNOR STUD KIT	1
LW-11037*	CRANKCASE ASSEMBLY	1
31C-14	STUD (AN governor)	4
31C-16	STUD (Woodward governor)	4

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

Part No.	Part Name	Qty.
LW-11221-S	CRANKCASE ASSY. AND GOVERNOR STUD KIT	1
LW-11221*	CRANKCASE ASSEMBLY	1
31C-14	STUD (AN Governor)	4
31C-16	STUD (Woodward Governor)	4

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

Part No.	Part Name	Qty.
LW-13433-S	CRANKCASE ASSY. AND GOVERNOR STUD KIT	1
LW-13433*	CRANKCASE ASSEMBLY	1
31C-14	STUD (AN Governor)	4
31C-16	STUD (Woodward Governor)	4

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

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