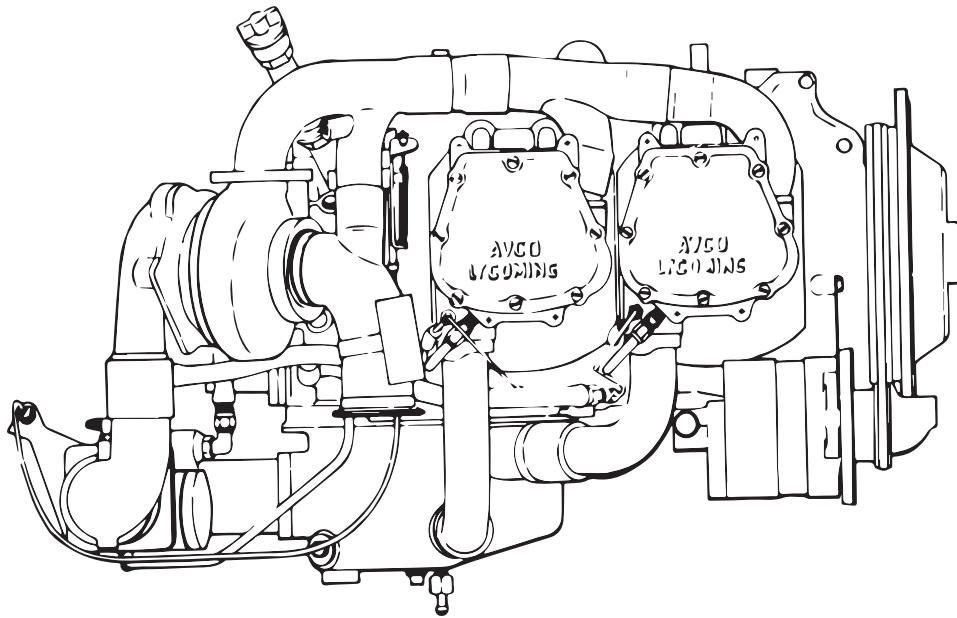


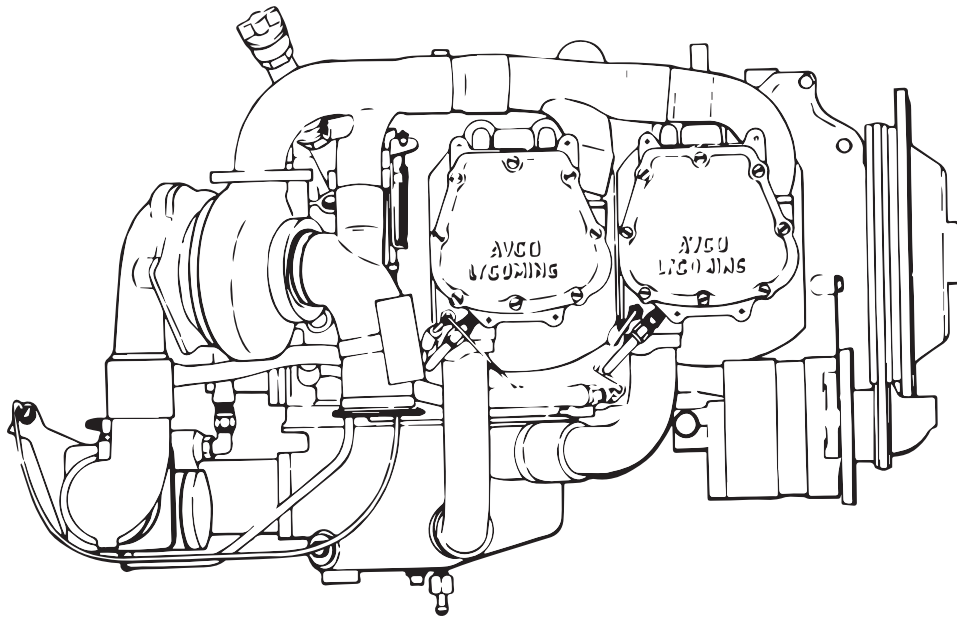
Lycoming Aircraft Engines Parts Catalog



TIO-360-C1A6D **Wide Cylinder Flange Models**

LYCOMING

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INTRODUCTION

This illustrated parts catalog contains a complete parts listing for the Lycoming TIO-360-C1A6D wide cylinder flange model aircraft engines.

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

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

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

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

NOTE

The illustrations, pictures and drawings 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.

SERVICE BULLETINS, INSTRUCTIONS AND LETTERS

Although the information contained in this parts catalog is up-to-date at time of publication, users are urged to keep abreast of later information through all Lycoming distributors or from the 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.

TABLE OF CONTENTS

SECTION	PAGE
Introduction	i
Table of Contents	ii
Oversize and Undersize Parts	iii
1. CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP	
Crankcase Assembly	1-1
Oil Level Gage Assembly	1-3
Crankshaft, Camshaft and Related Parts	1-5
Crankcase Related Parts	1-7
Propeller Governor Drive Assembly	1-9
Crankshaft and Fuel Pump Idler Gears	1-11
Crankcase Attaching Parts	1-13
2. ACCESSORY HOUSING AND RELATED PARTS	
Accessory Housing Assembly	2-1
Oil Pump Assembly and Accessory Housing Attaching Parts	2-3
Fuel Pump Assembly and Attaching Parts	2-5
Vacuum Pump Drive and Cover	2-6
Oil Filter Assembly and Oil Cooler Bypass Valve	2-7
3. CYLINDER, PISTON AND VALVE TRAIN	
Connecting Rods, Pistons and Ring Assemblies	3-1
Cylinder Assembly	3-3
Cylinder Related Parts	3-5
Valve Assembly	3-7
Cylinder Head Drain Tubes and Intercylinder Cooling Baffles	3-9
4. IGNITION SYSTEM	
Dual Magneto, Magneto Drive and Spark Plugs	4-1
5. ELECTRICAL COMPONENTS	
Alternator and Belt	5-1
Starter Motor and Attaching Parts	5-2
70 Amp Alternator Mounting and Attaching Parts	5-3
100 Amp Alternator Mounting and Attaching Parts	5-5
6. OIL SUMP AND INDUCTION SYSTEM	
Oil Sump Assembly and Oil Suction Screen	6-1
Intake Pipes and Adapter Assembly	6-3
Fuel Injector, Fuel Manifolds and Injection Nozzles	6-5
Nozzle Vent Manifolds and Attachments	6-7
7. TURBOCHARGER AND EXHAUST SYSTEM	
Exhaust Manifolds and Transition Assembly	7-1
Turbocharger, Support and Attaching Parts	7-3
Turbocharger Hoses, Duct and Related Parts	7-5
Turbocharger Hardware and Related Parts	7-7
8. SERVICE KIT SECTION	8-1
9. NUMERICAL INDEX	9-1

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
66670	BUSHING		X	X								
69260	INSERT			X								
69796	DOWEL		X									
71894	SEAT			X		X	X					
71903	BUSHING	SEE LATEST EDITION OF SERVICE INSTRUCTION NO. 1143 FOR APPLICATION.										
72155-S	BUSHING		X	X	X	X						
73810	BUSHING	SEE LATEST EDITION OF SERVICE INSTRUCTION NO. 1142 FOR APPLICATION.										
73857	RING			X		X						
74241	RING			X								
75656-S	BUSHING		X	X	X	X						
75657-S	BUSHING		X	X		X						
LW-12688	SEAT			X		X	X					
LW-13683	BEARING									X		
LW-13885	BEARING									X	X	X
LW-14045-P05S*	GUIDE, EXHAUST		X									
LW-14045-P10S*	GUIDE, EXHAUST			X								
LW-14045-P20S*	GUIDE, EXHAUST					X						
LW-14045-P30S*	GUIDE, EXHAUST						X					
LW-14045-P40S*	GUIDE, EXHAUST							X				
LW-15628	SEAL								X			
LW-18753-P05S**	GUIDE, INTAKE		X									
LW-18753-P10S**	GUIDE, INTAKE			X								
LW-18753-P20S**	GUIDE, INTAKE					X						
LW-18753-P30S**	GUIDE, INTAKE						X					
LW-18753-P40S**	GUIDE, INTAKE							X				
STD-2078	DOWEL	X	X	X	X							

Studs available in P03, P07 and P12.

* Supplied with P/N LW-19299 Retaining Ring.

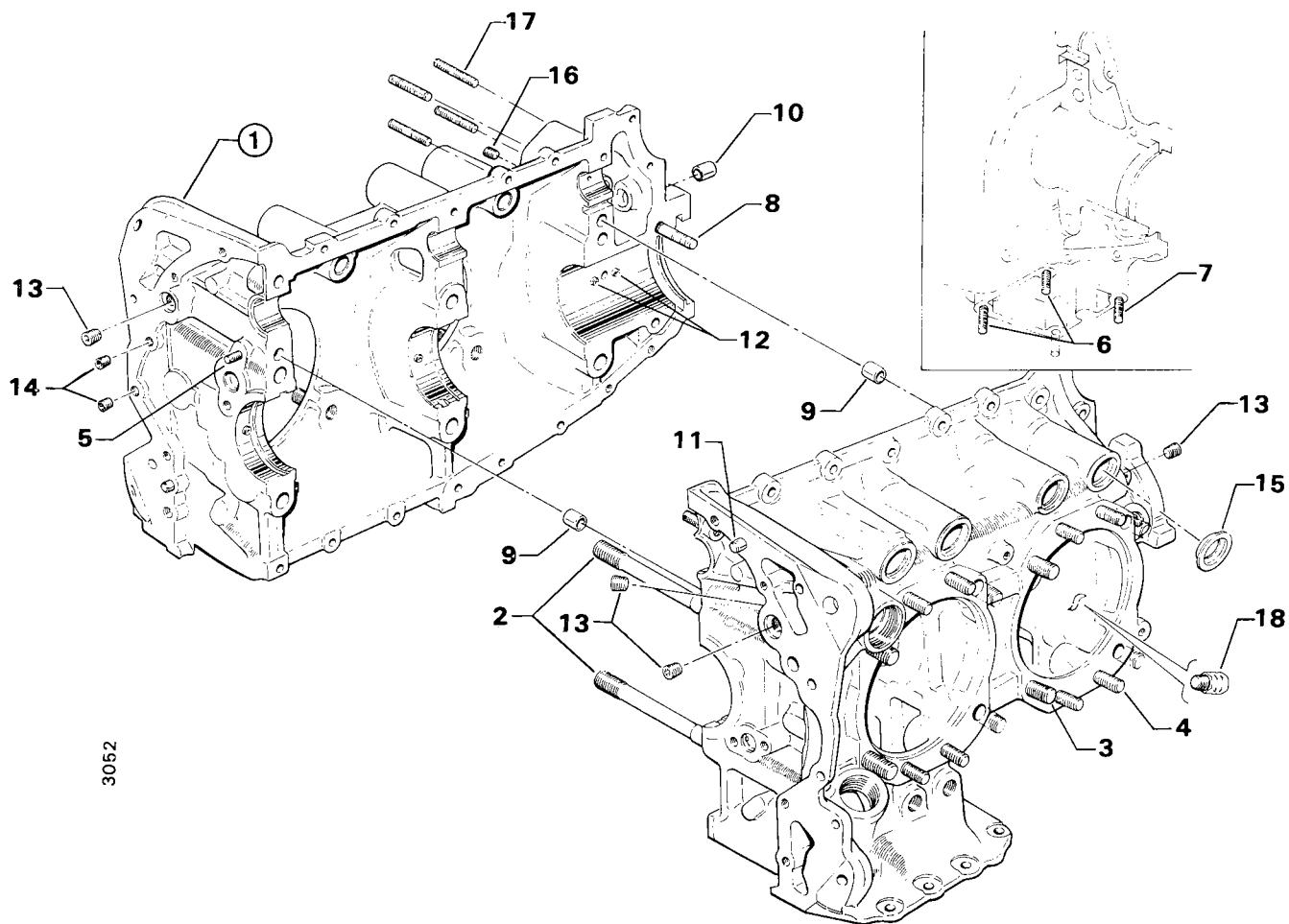
** Supplied with P/N LW-19298 Retaining Ring.

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-13885 in .003 undersize, order part number LW-13885-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	QUANTITY PER ASSEMBLY
1	LW-14666S	CRANKCASE ASSEMBLY	1
2	75154	STUD, 1/2-13 x 10-1/32 long	2
3	50-15	STUD, 1/2-20 x 1-7/8 long	8
4	38-13	STUD, 3/8-16 x 1-5/8 long	16
5	38D-17	STUD, 3/8-16 x 2-1/8 long, drilled	1
6	31C-12	STUD, 5/16-18 x 1-1/2 long	2
7	31C-13	STUD, 5/16-18 x 1-5/8 long	1
8	38-22	STUD, 3/8-16 x 2-3/4 long	1
9	STD-557	DOWEL, 1/2 dia. x 19/32 long, hollow	2
10	72158	BUSHING, Governor drive idler shaft	1
11	STD-514	DOWEL, 5/16 dia. x 1/2 long	2
12	69796	DOWEL, Crankshaft bearing	2
13	1102	PLUG, 1/8-27 NPT, Allen head	4
14	STD-1623	INSERT, 1/4-20 Heli-coil x 3/8 long	2
15	65007	RETAINER, Shroud tube seal	8
16	STD-1339	PLUG, 1/16-27 NPT, Allen head	1
17	31C-16	STUD, 5/16-18 x 2.00 long (driven height of studs, 1.31)	4
18	73772	NOZZLE ASSY., Piston cooling	4



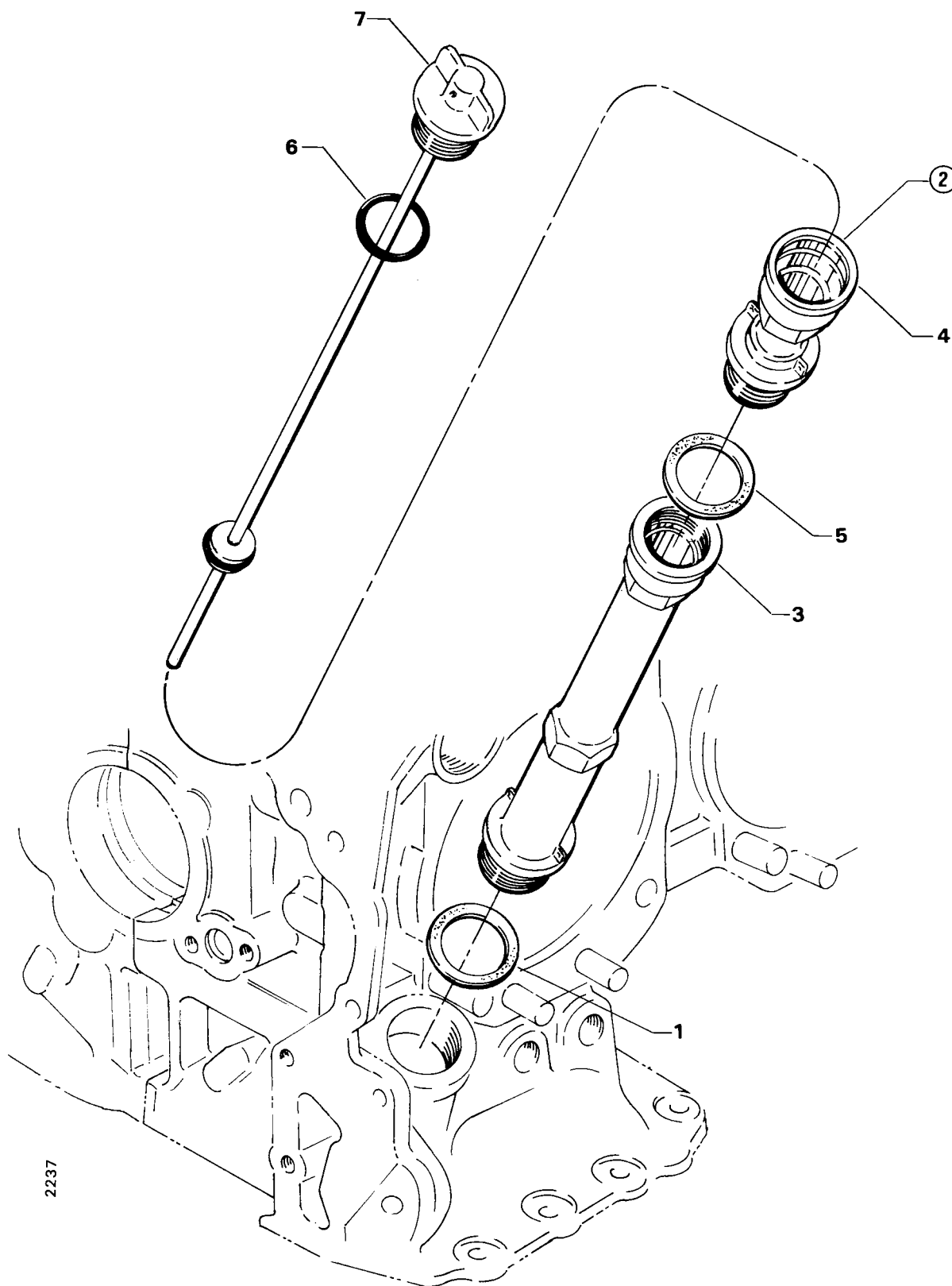
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Figure 1. CRANKCASE ASSEMBLY

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

OIL LEVEL GAGE ASSEMBLY

FIG. REF. 2	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	72059	GASKET, Oil level gage	1
2	LW-12789	TUBE ASSY., Oil level gage	1
3	75767	TUBE, Oil level gage	1
4	77527	EXTENSION, Oil filler	1
5	72220	GASKET, Oil level gage	1
6	72312	RING, Oil seal, 1.00 I.D. x 1/8 section	1
7	LW-14748	GAGE ASSY., Oil level	1



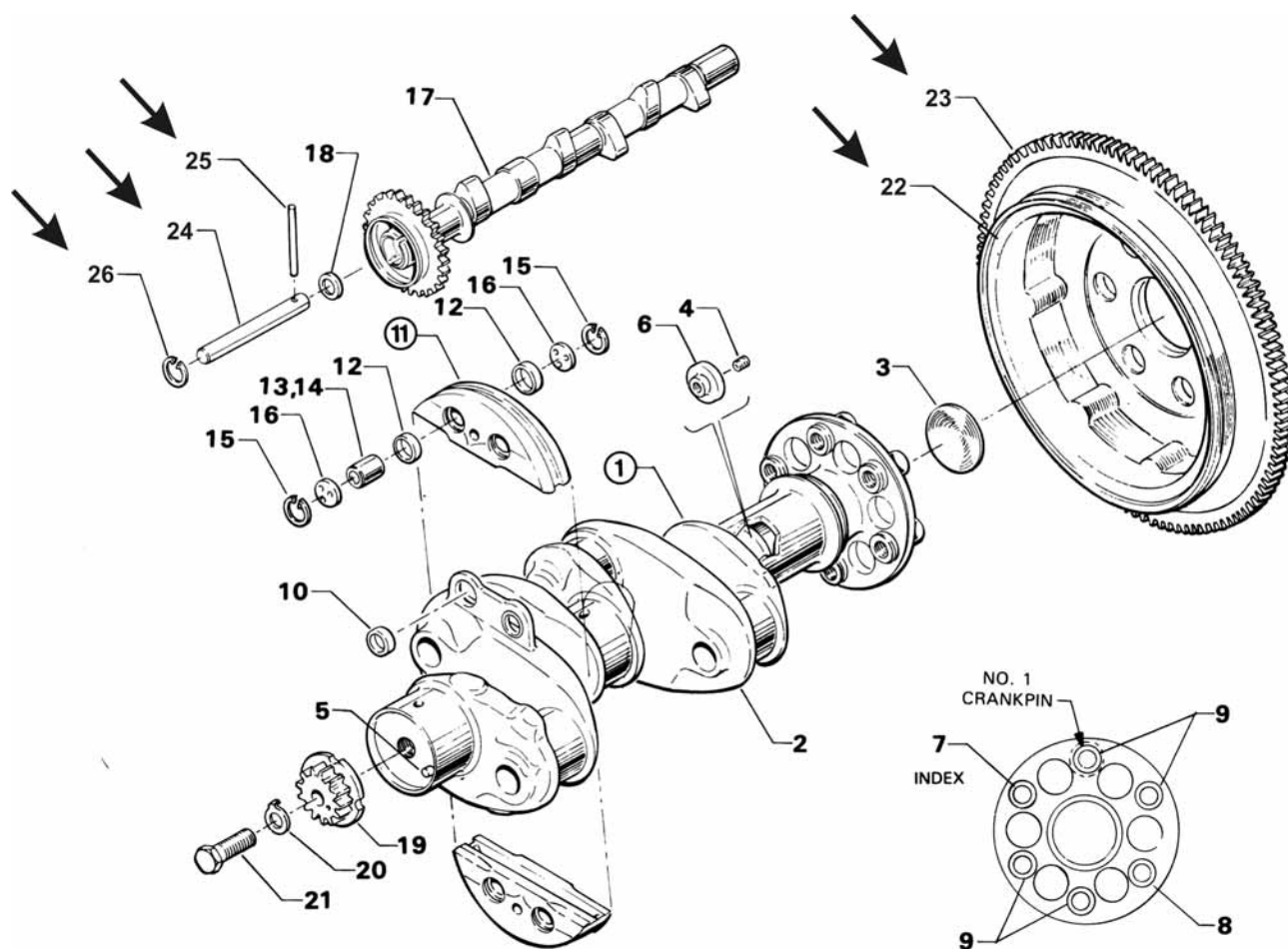
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Figure 2. OIL LEVEL GAGE ASSEMBLY

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

FIG. REF. 3	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	13C37338	CRANKSHAFT AND COUNTERWEIGHT ASSEMBLY	1
2	13C37314	CRANKSHAFT ASSEMBLY	1
3	LW-14529	PLUG, 2-1/16 diameter expansion	1
4	1102	PLUG, 1/8-27 NPT, Allen head	1
5	STD-2078	DOWEL, 3/8 O.D. x 1/2 long	1
6	74711	PLUG, 1-1/4 O.D., 1/8 NPT	1
7	75657-S	BUSHING, Propeller flange, indexing	1
8	72155-S	BUSHING, Propeller flange, short	1
9	75656-S	BUSHING, Propeller flange, long	4
10	73810	BUSHING, Crankshaft dynamic counterweight	4
11	LW-19227	COUNTERWEIGHT ASSEMBLY	2
12	71903-A	BUSHING, Dynamic counterweight	8
13	14W21696	ROLLER, Dynamic counterweight, 8 th order	2
14	72797	ROLLER, Dynamic counterweight, 6.3 order	2
15	LW-14820	RING, Internal retaining	8
16	71907	WASHER, Dynamic counterweight	8
17	LW-18847	CAMSHAFT ASSEMBLY	1
18	76118	SPACER, Tachometer shaft centering	1
19	13S19649*	GEAR, Crankshaft	1
20	LW-10332	LOCKPLATE, Crankshaft gear	1
21	STD-2251	BOLT, 1/2-20 x 1-19/32 long, hex. head	1
22	LW-16471	SUPPORT ASSEMBLY, Starter ring gear, 12/14 pitch	1
23	72566	GEAR, Starter ring, 12/14 pitch	1
24	76121	SHAFT ASSEMBLY, Tachometer	1
25	LW-18667	PIN, 3/16 diameter x 2-21/64 long	1
26	STD-2231	RING, Internal retaining	1

* - See latest revision of Service Bulletin No. 475 for application.

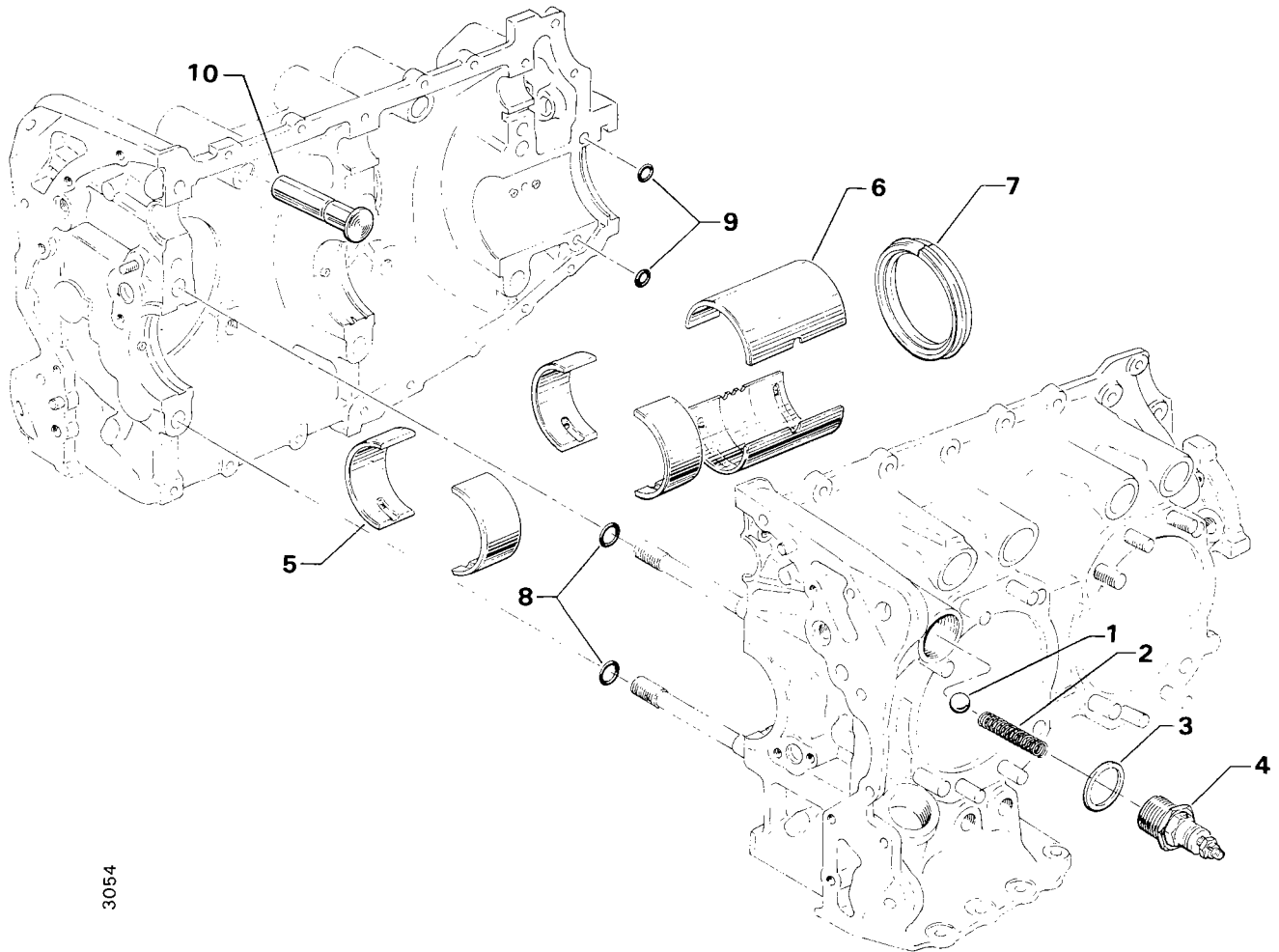
**FIGURE 3. CRANKSHAFT, CAMSHAFT AND RELATED PARTS**

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

CRANKCASE RELATED PARTS

FIG. REF. 4	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	1028B	BALL, 11/16 dia.	1
2	61084*	SPRING, Oil pressure relief valve	1
	LW-11713*	SPRING, Oil pressure relief valve	1
	68668*	SPRING, Oil pressure relief valve	1
	77467*	SPRING, Oil pressure relief valve	1
	LW-18085*	SPRING, Oil pressure relief valve	1
3	STD-1045	GASKET, 1-1/4 I.D. x 1-1/2 O.D. x 3/32 annular	1
4	77808	VALVE ASSY., Oil pressure relief, adjustable	1
5	LW-13683	BEARING, Crankshaft	4
6	LW-13885	BEARING, Crankshaft, front	2
7	LW-15628	SEAL, Crankshaft oil, solid	1
	78443	SEAL, Crankshaft oil, split	1
8	72075	SEAL, Oil, 3/32 section x 15/32 I.D.	2
9	72091	RING, Oil seal, 23/64 I.D. x 3/32 dia. section	2
10	73061	BODY, Hydraulic tappet	8

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



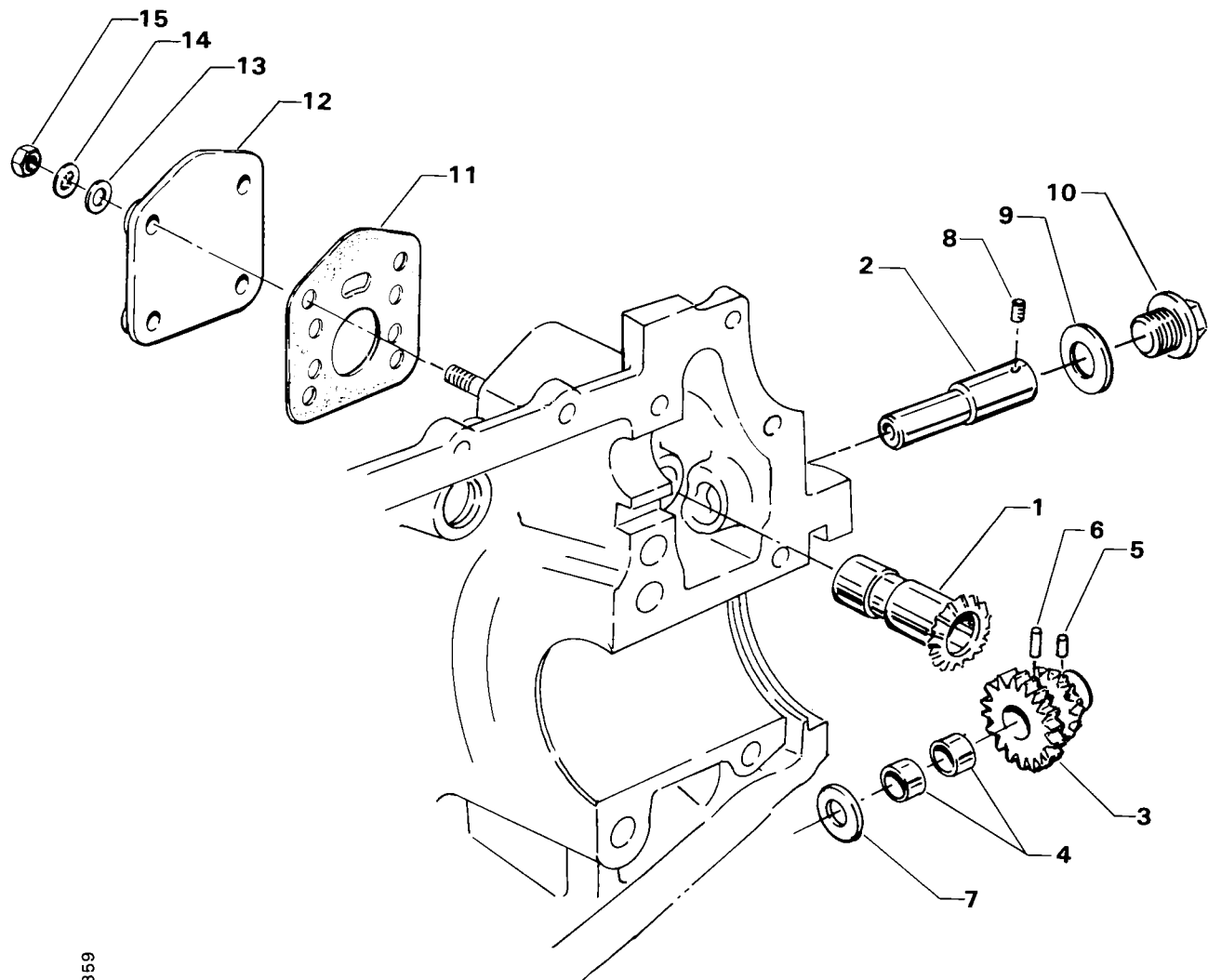
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Figure 4. CRANKCASE RELATED PARTS

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

PROPELLER GOVERNOR DRIVE ASSEMBLY

FIG. REF. 5	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	77875	GEAR, Prop. governor driven	1
2	LW-14021	SHAFT, Prop. governor idler gear	1
3	77874	GEAR ASSY., Prop. governor idler	1
4	77872	BUSHING, Prop. governor idler gear	2
5	STD-19	DOWEL, 3/32 dia. x 7/32 long	1
6	STD-798	DOWEL, 3/32 dia. x 9/32 long	1
7	73249	WASHER, Thrust	AR
	73250	WASHER, Thrust	AR
	73251	WASHER, Thrust	AR
	73252	WASHER, Thrust	AR
8	AN565B1032H5	SET SCREW, No. 10-32 x 5/16 long	1
9	70455	GASKET, 25/32 I.D. x 1-1/8 O.D. x 1/16 thick	1
10	LW-13896	PLUG, 3/4-16 hex. head	1
11	72053	GASKET, Governor	1
12	72378	COVER, Governor drive	1
13	STD-35	WASHER, 5/16 plain	4
14	STD-475	WASHER, 5/16 lock, internal teeth	4
15	STD-1410	NUT, 5/16-18 plain	4

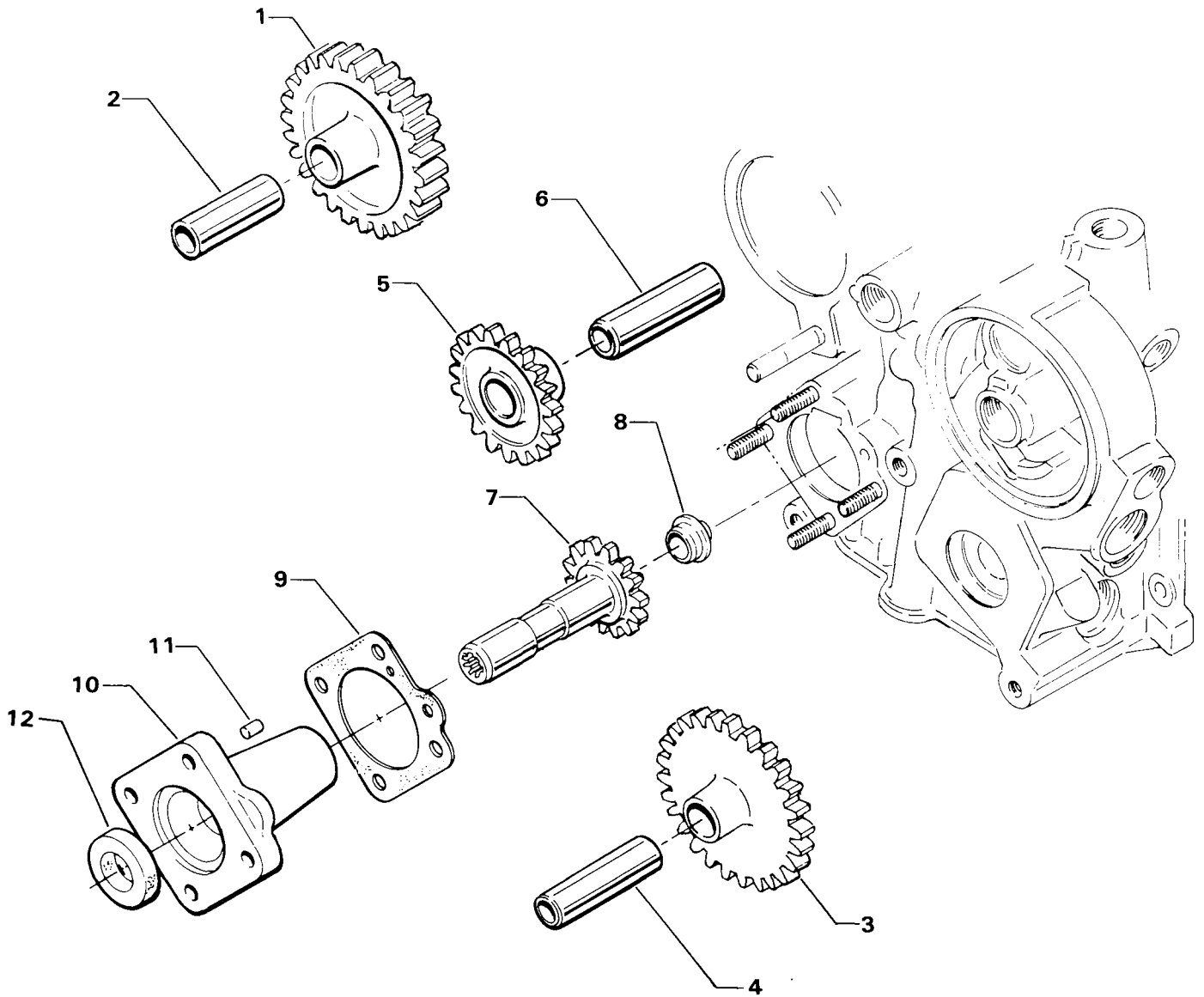


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Figure 5. PROPELLER GOVERNOR DRIVE ASSEMBLY

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

FIG. REF. 6	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-10296	GEAR ASSY., Crankshaft idler	1
2	LW-10299	SHAFT, Crankshaft idler	1
3	LW-10288	GEAR ASSY., Crankshaft idler	1
4	LW-10298	SHAFT, Crankshaft idler	1
5	LW-10323	GEAR ASSY., Fuel pump idler	1
6	LW-10298	SHAFT, Fuel pump idler	1
7	LW-10327	SHAFT GEAR ASSY., Fuel pump drive	1
8	61166	THRUST BUTTON	1
9	69164	GASKET, Fuel pump adapter	1
10	69159	ADAPTER ASSY., Fuel pump drive	1
11	STD-1774	PIN, 1/8 dia. x 1/4 long	1
12	STD-213	SEAL, Oil, 3/4 I.D. x 1-3/8 O.D.	1



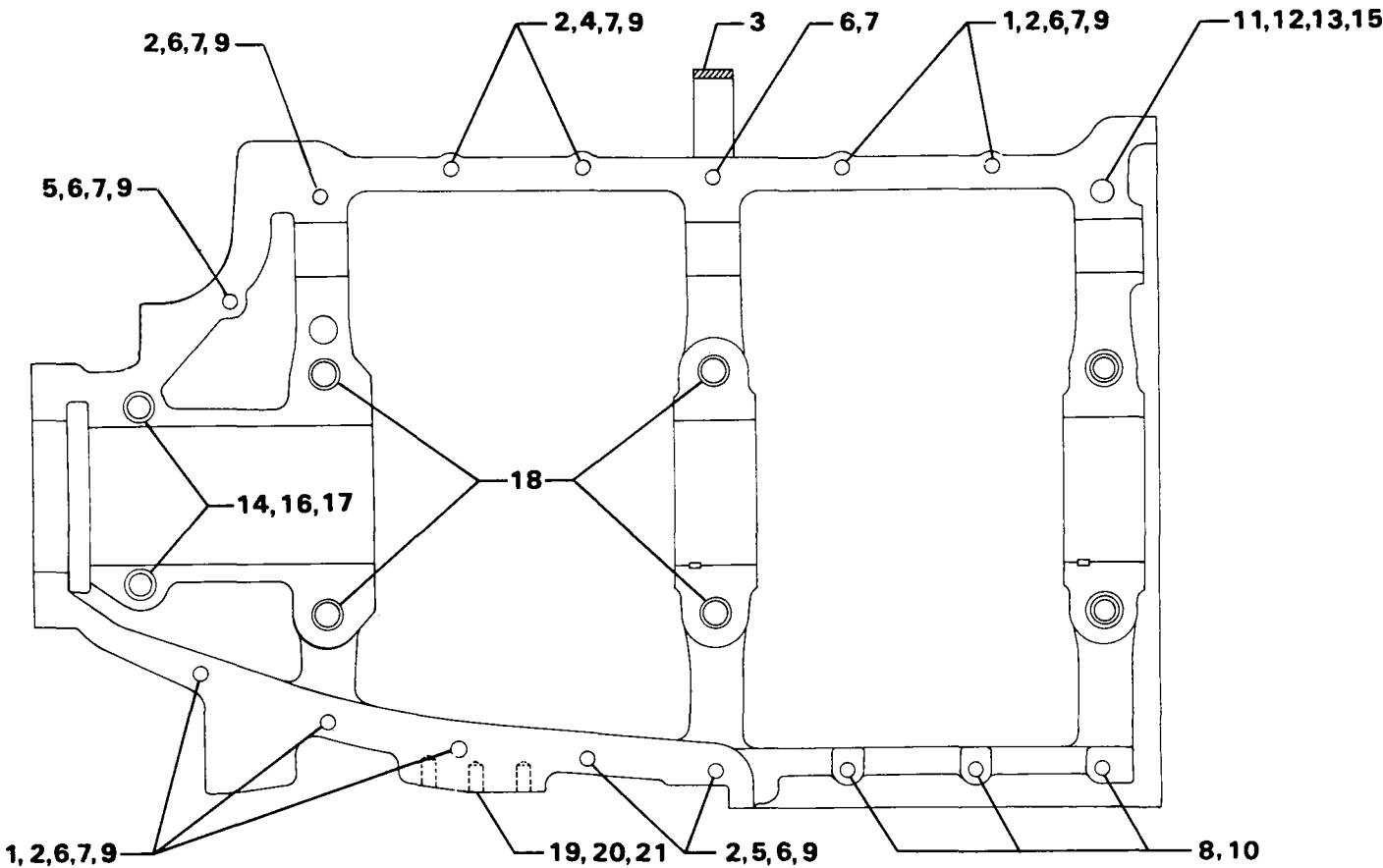
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Figure 6. CRANKSHAFT AND FUEL PUMP IDLER GEARS

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP
CRANKCASE ATTACHING PARTS

FIG. REF. 7	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-25-1.50	BOLT, 1/4-20 x 1-1/2 long, hex. hd.	7
2	STD-8	WASHER, 1/4 plain	20
3	60803	STRAP, Lifting	2
4	LW-25-1.75	BOLT, 1/4-20 x 1-3/4 long, hex. hd.	2
5	LW-25-1.13	BOLT, 1/4-20 x 1-1/8 long, hex. hd.	4
6	STD-160	WASHER, 1/4 lock, internal teeth	12
7	STD-1411	NUT, 1/4-20 plain	9
8	LW-25S1.50	BOLT, 1/4-20 x 1-1/2 long, hex. hd. dr. end	3
9	STD-8	WASHER, 1/4 plain (max. 9)	AR
10	STD-1409	NUT, 1/4-20 slotted shear	3
11	STD-33	WASHER, 3/8 plain	3
12	AN960-616L	WASHER, 3/8 plain (thick) (max. 3)	AR
13	STD-872	NUT, 3/8-24 slotted	1
14	AN6-34A	BOLT, 3/8-24 x 3-37/64 long, hex. hd.	2
15	STD-33	WASHER, 3/8 plain	2
16	STD-678	WASHER, 3/8 lock, internal teeth	2
17	STD-596	NUT, 3/8-24 plain	2
18	76220	STUD, 1/2-20 x 10-45/64 long	4
19	STD-35*	WASHER, 5/16 plain	5
20	STD-475*	WASHER, 5/16 lock, internal teeth	1
21	STD-1838*	BOLT, 5/16-18 x 15/16 long, hex. hd.	1

* Install in center hole at rear alternator attaching pad.



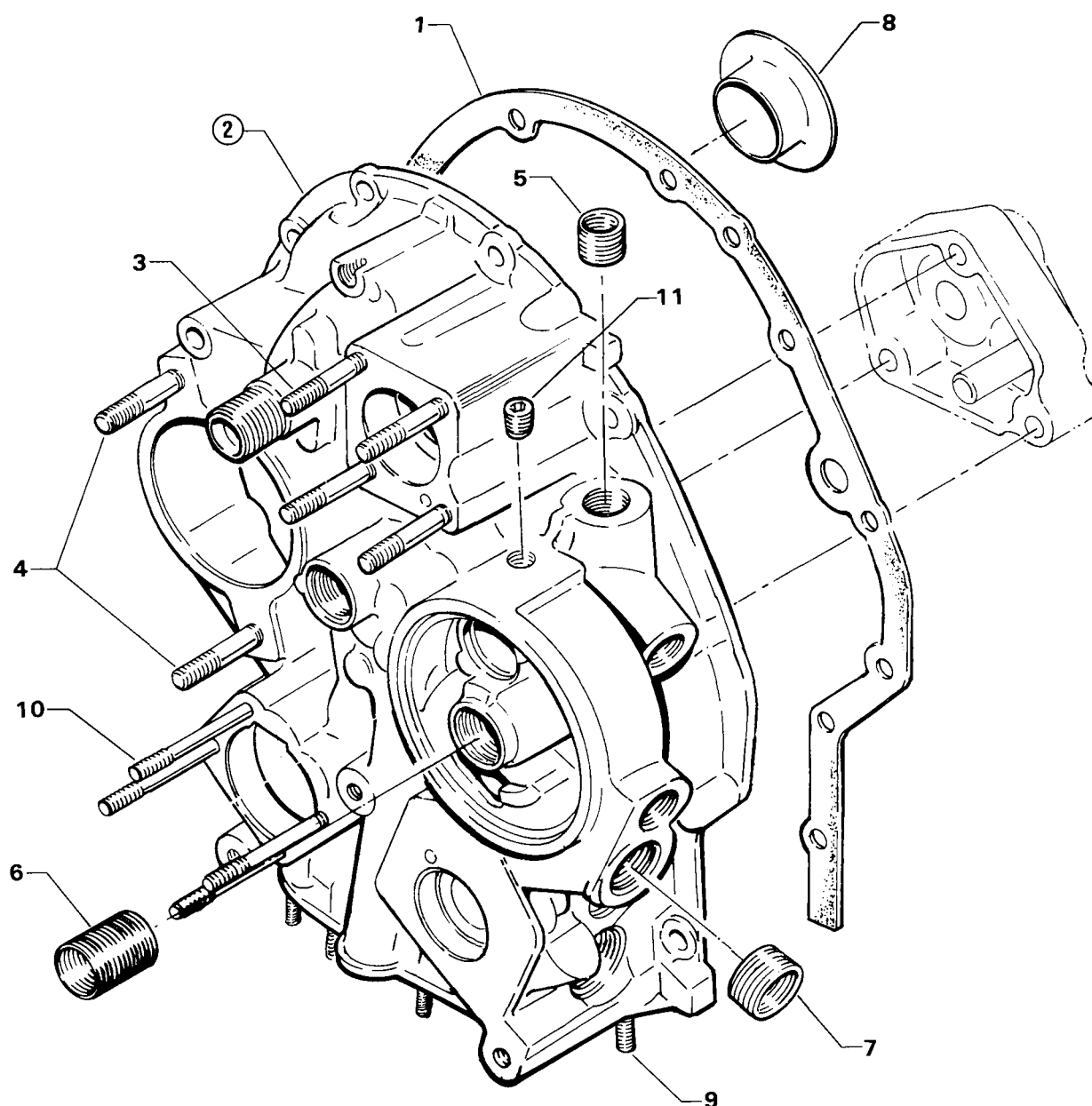
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Figure 7. CRANKCASE ATTACHING PARTS

ACCESSORY HOUSING AND RELATED PARTS

ACCESSORY HOUSING ASSEMBLY

FIG. REF. 8	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	73818	GASKET, Accessory housing	1
2	LW-10888	HOUSING ASSEMBLY, Accessory	1
3	25C-12	STUD, 1/4-20 x 1-1/2 long	4
4	31C-13	STUD, 5/16-18 x 1-5/8 long	2
5	LW-12589	INSERT, Heli-coil, 5/8-18 x 3/8 long	1
6	MS124703	INSERT, Heli-coil, 3/4-16 x 1-1/8 long	1
7	LW-10341	INSERT, Heli-coil, 1.00-14 x 3/8 long	1
8	76119	SHIELD, Accessory breather, oil	1
9	75888	STUD, 1/4-20 x 1-1/4 long	6
10	31C-19	STUD, 5/16-18 x 2-3/8 long	4
11	STD-1339	PLUG, 1/16-27 NPT, Allen head	1

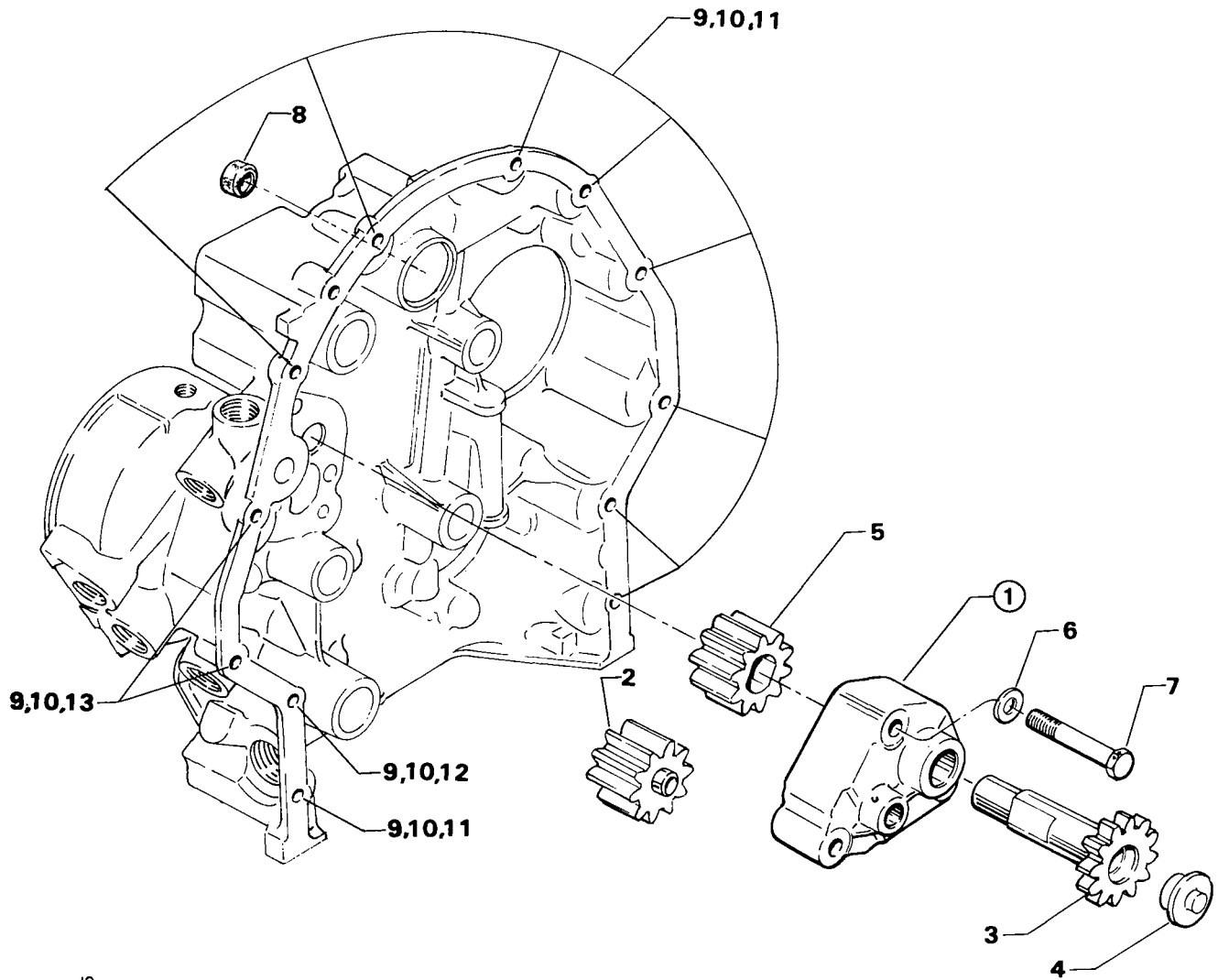


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Figure 8. ACCESSORY HOUSING ASSEMBLY

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

FIG. REF. 9	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-10342	BODY, Oil pump	1
2	LW-18110	IMPELLER ASSY., Oil pump driven	1
3	LW-14040	GEAR ASSY., Oil pump drive	1
4	61166	THRUST BUTTON	1
5	LW-18109	IMPELLER, Oil pump driving	1
6	STD-35	WASHER, 5/16 plain	3
7	LW-31H1.75	BOLT, 5/16-18 x 1-3/4 long	3
8	LW-14260	SEAL, Oil, tachometer drive	1
9	STD-8	WASHER, 1/4 plain	12
10	STD-160	WASHER, 1/4 lock, internal teeth	12
11	LW-25-0.94	BOLT, 1/4-20 x 15/16 long, hex. head	9
12	LW-25-1.25	BOLT, 1/4-20 x 1-1/4 long, hex. head	1
13	LW-25-0.81	BOLT, 1/4-20 x 13/16 long, hex. head	2



3055

Figure 9. OIL PUMP ASSEMBLY AND ACCESSORY HOUSING ATTACHING PARTS

ACCESSORY HOUSING AND RELATED PARTS

FUEL PUMP ASSEMBLY AND ATTACHING PARTS

FIG. REF. 10	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-10799	SPACER, Fuel pump insulating	1
2	LW-11166	FUEL PUMP, Fuel (RG17980-K)	1
3	STD-35	WASHER, 5/16 plain	4
4	STD-475	WASHER, 5/16 lock, internal teeth	4
5	STD-1410	NUT, 5/16-18 plain	4
6	AN816-6	NIPPLE, 3/8 tube, 1/4 NPT (fuel pump inlet)	1
7	MS20823-6	ELBOW, 3/8 tube, 1/4 NPT (fuel pump outlet) 45°	1
	MS20822-6	ELBOW, 3/8 tube, 1/4 NPT (fuel pump outlet) 90°	1
8	78067	ELBOW, 1/8 NPT, 1/4 tube, restricted 90°	1

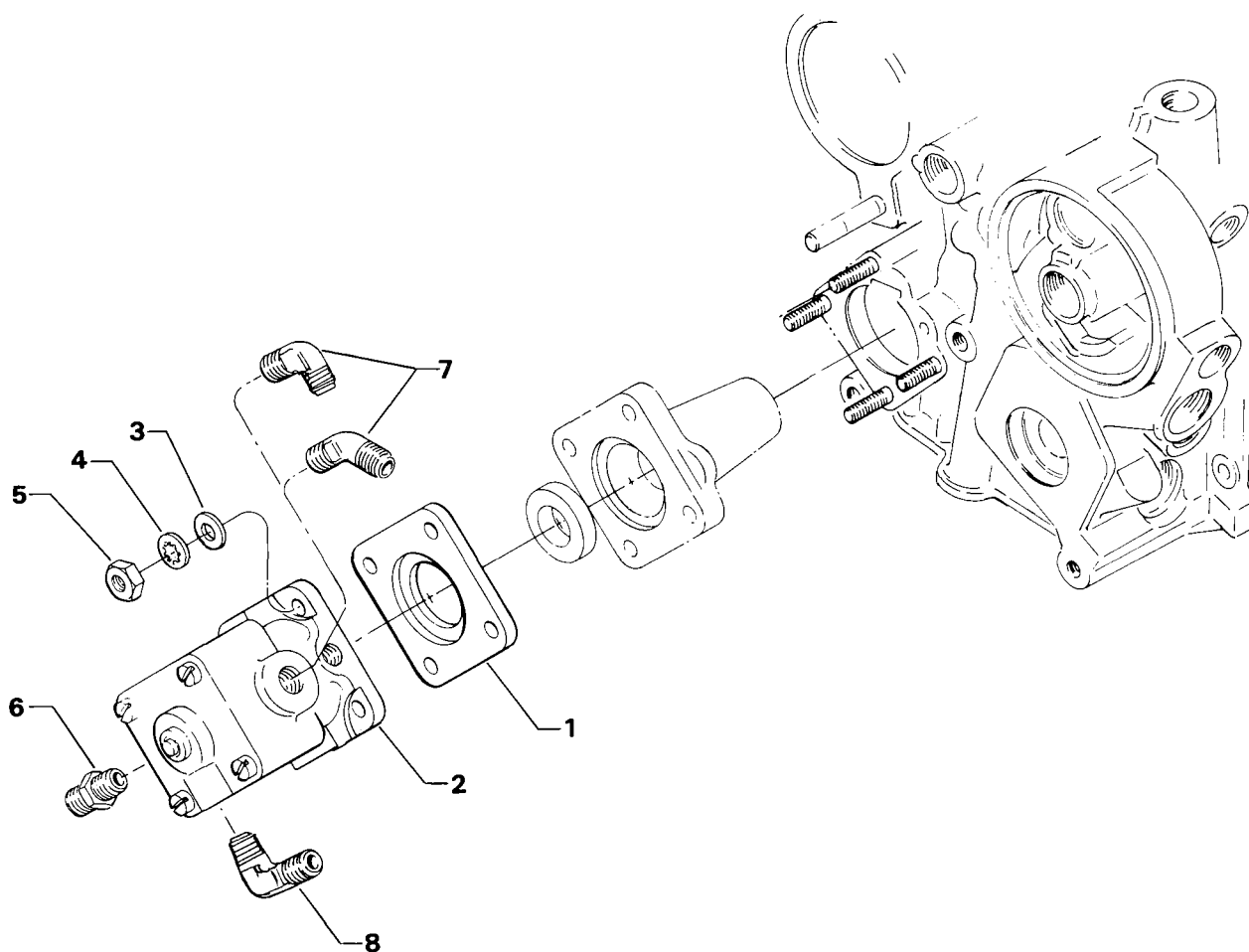
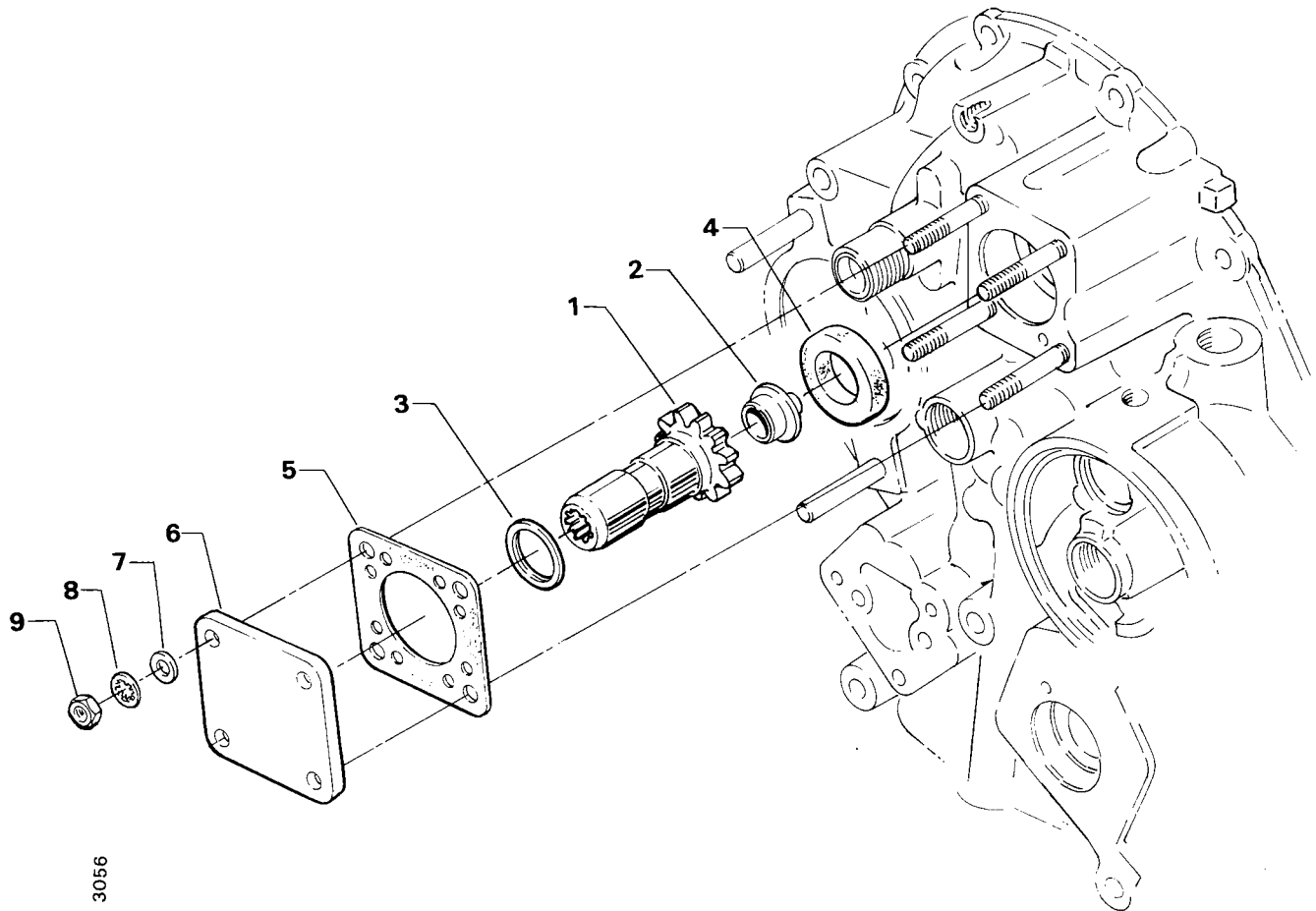


Figure 10. FUEL PUMP ASSEMBLY AND ATTACHING PARTS

ACCESSORY HOUSING AND RELATED PARTS
VACUUM PUMP DRIVE AND COVER

FIG. REF. 11	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-10305	GEAR ASSY., Accessory driven	1
2	61166	THRUST BUTTON	1
3	71596	WASHER, Accessory driven gear	1
4	STD-2217	SEAL, Oil, 7/8 I.D. x 1-1/2 O.D. x 5/16 wide	1
5	8313	GASKET, Vacuum pump	1
6	60430	COVER, Vacuum pump	1
7	STD-8	WASHER, 1/4 plain	4
8	STD-160	WASHER, 1/4 lock, internal teeth	4
9	STD-1411	NUT, 1/4-20 plain	4



3056

Figure 11. VACUUM PUMP DRIVE AND COVER

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

FIG. REF. 12	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	72413	FITTING, Breather, 120° elbow	1
2	MS29512-10	SEAL, Oil, 3/32 section x 45/64 I.D.	1
3	AN814-10L	PLUG, Turbo drain back	1
4	STD-294	GASKET, 7/8 O.D. x 5/8 I.D. x 3/32 annular	2
5	1540	PLUG, Thermometer well	2
6	LW-11999	REDUCER, 7/8-14 to 9/16-18 straight thread	1
7	72377	ELBOW, 3/8 tube, adjustable 90°	1
8	02A19460	NIPPLE, 3/8 tube, 7/8 thread	1
9	LW-10321	SPRING, Oil filter bypass valve	1
10	76539	SEAT, Oil relief valve	1
11	LW-10320	SLEEVE, Oil filter bypass valve	1
12	MS16625-1100	RING, Internal retaining	1
13	LW-16286	FILTER ASSY., Oil, short	1
14	LW-13904	KIT, Converter plate, oil filter	1
15	75944	VALVE ASSY., Temp. control, oil cooler bypass	1
16	76510	GASKET, Valve assembly	1

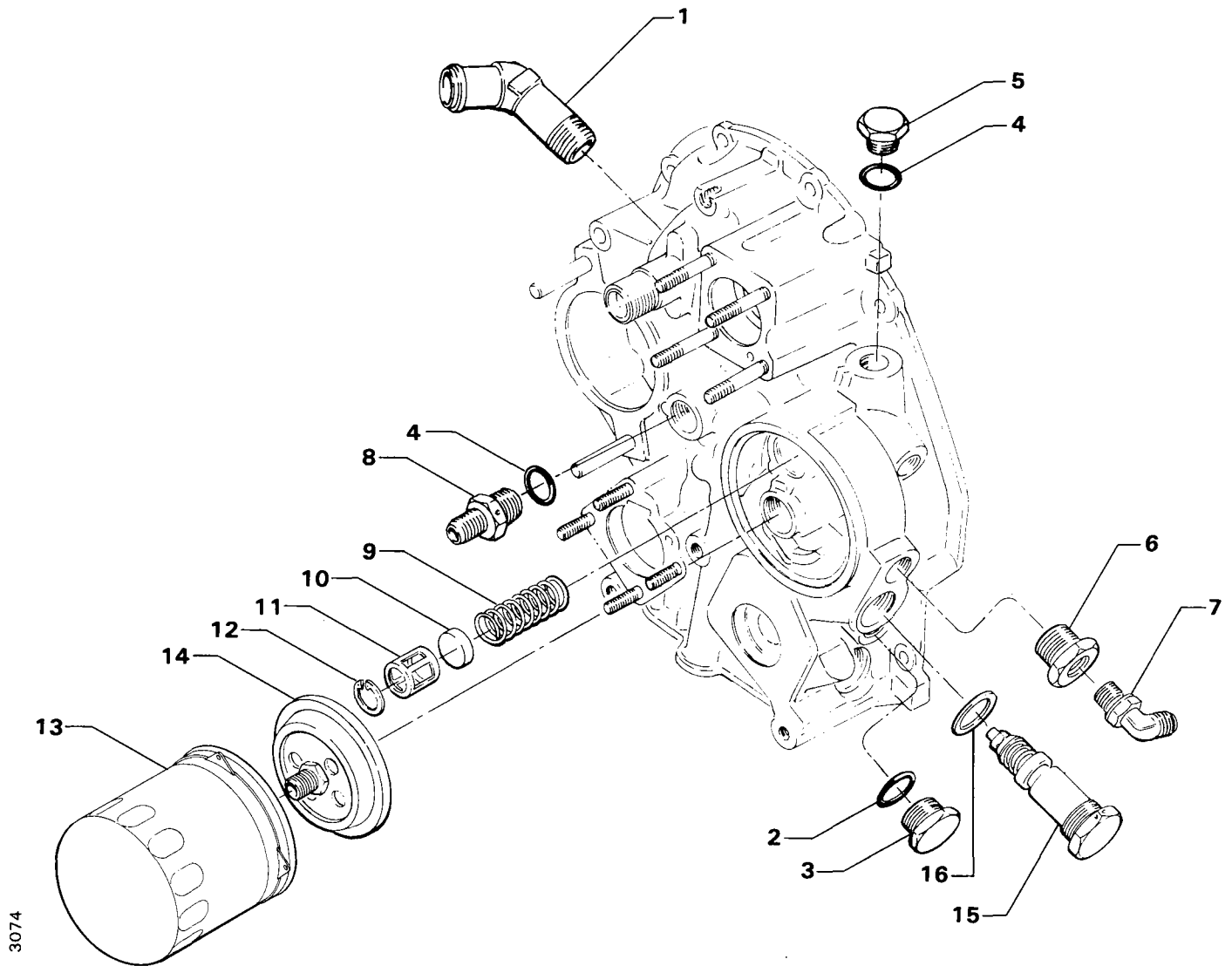
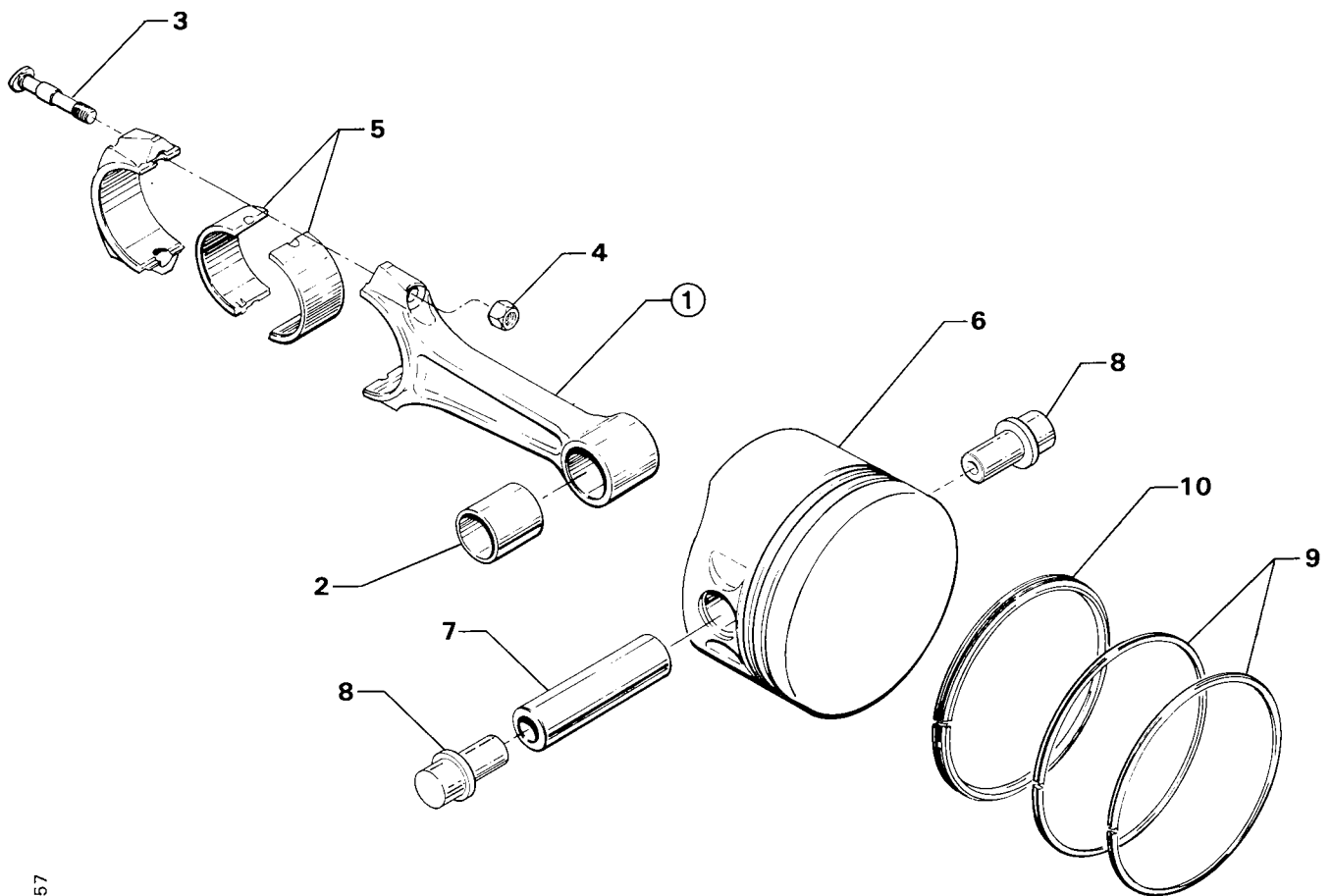


Figure 12. OIL FILTER ASSEMBLY AND OIL COOLER BYPASS VALVE

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

FIG. REF. 13	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-13422	ROD ASSY., Connecting	4
2	LW-13923	BUSHING, Connecting rod, upper	4
3	LW-12596	BOLT, Connecting rod	8
4	LW-12186	NUT, Connecting rod bolt	8
5	LW-13209	BEARING, Connecting rod	8
6	LW-10545	PISTON, Compression ratio 7.3:1	4
7	LW-14077	PIN, Piston	4
8	LW-11775	PLUG, Piston pin	8
9	74241	RING, Piston, compression	8
10	73857	RING, Piston, oil regulator (expander type)	4



3057

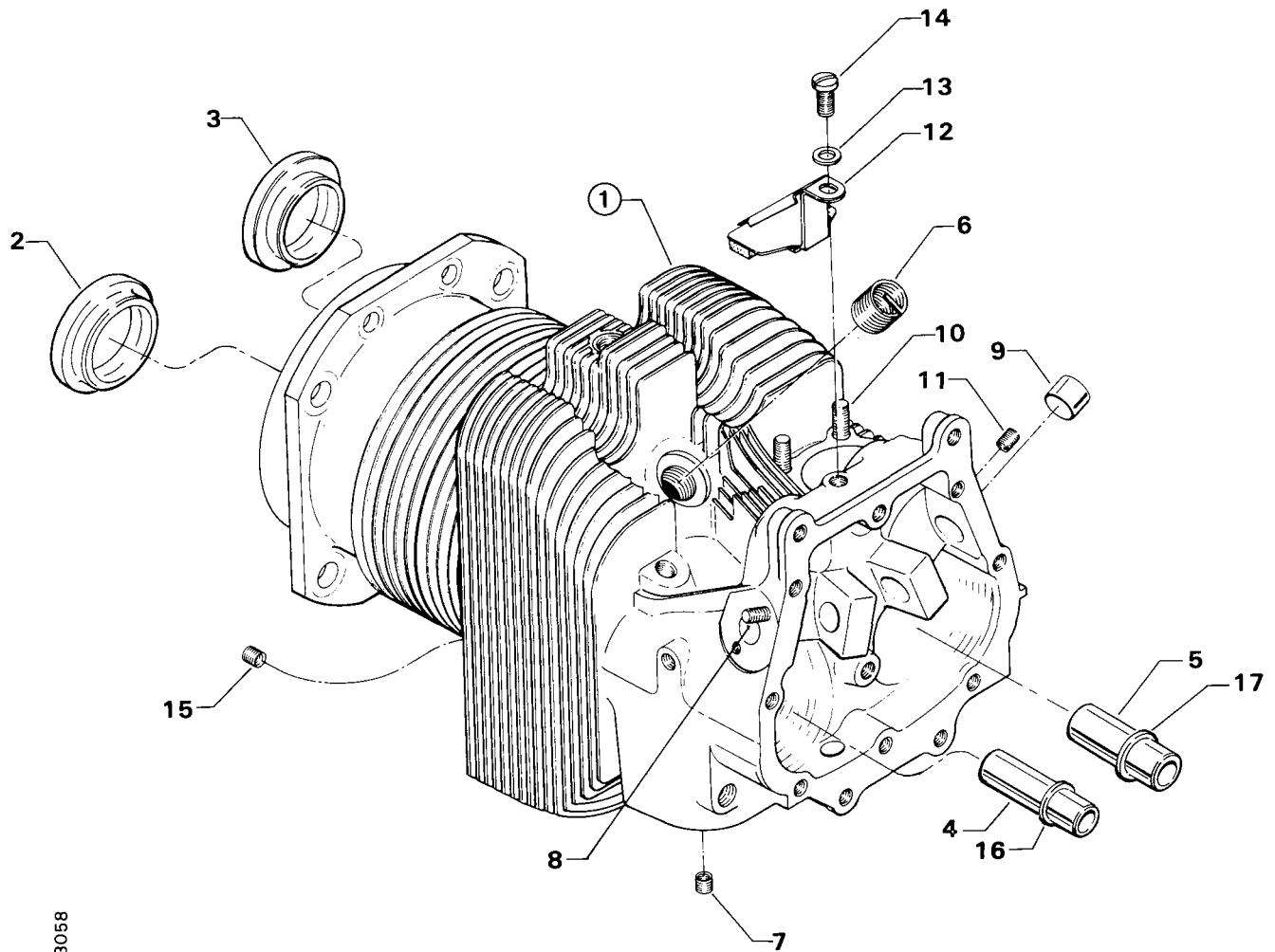
Figure 13. CONNECTING RODS, PISTONS AND RING ASSEMBLIES

CYLINDER, PISTON AND VALVE TRAIN CYLINDER ASSEMBLY

FIG. REF. 14	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-13964	CYLINDER AND HEAD ASSY., Nitrided	4
2	LW-12688	SEAT, Intake valve	4
3	71894	SEAT, Exhaust valve	4
4	LW-18753*	GUIDE, Valve, intake	4
5	LW-14045**	GUIDE, Valve, exhaust (ni-resist)	4
6	69260	INSERT, Spark plug (long reach)	8
7	72706	INSERT, Heli-coil, 1/4-20 NC x 3/8 long, self-locking	8
8	25C-8	STUD, 1/4-20 x 1.00 long	8
9	66670	BUSHING, Rock shaft, inner	16
10	25C-10	STUD, 1/4-20 x 1-1/4 long	16
11	STD-1353	INSERT, Heli-coil, 10-24 x 3/8 long, notched	8
12	LW-13123	BAFFLE, Center fin pack	4
13	STD-8	WASHER, 1/4 plain	4
14	STD-1925	SCREW, 1/4-20 x 5/8 long, pan hd. self-locking	4
15	1102	PLUG, 1/8 pipe	8
16	LW-19298	RING, Retaining	4
17	LW-19299	RING, Retaining	4

* Used with P/N LW-19298 Retaining Ring purchased separately.

** Used with P/N LW-19299 Retaining Ring purchased separately.



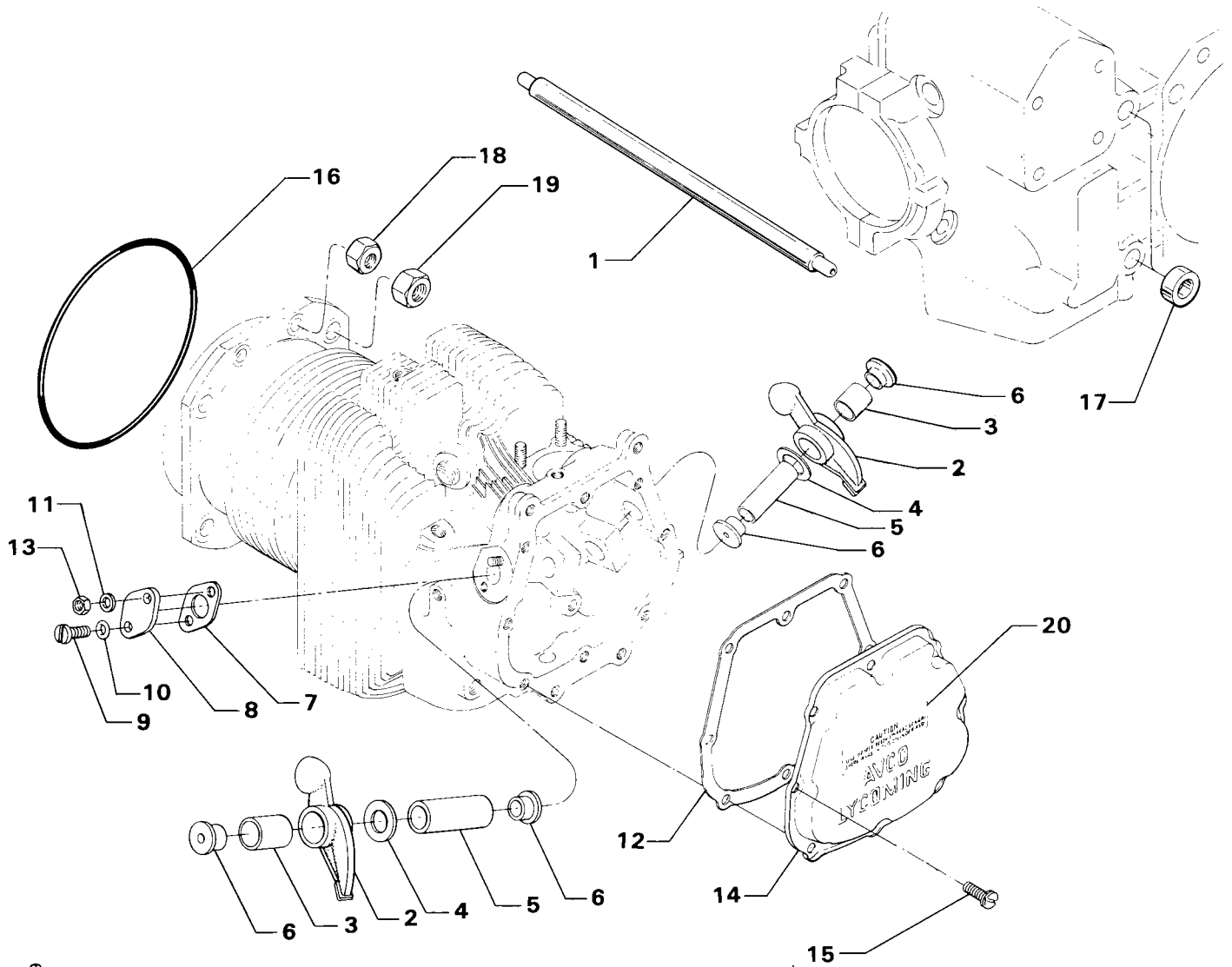
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Figure 14. CYLINDER ASSEMBLY

CYLINDER, PISTON AND VALVE TRAIN CYLINDER RELATED PARTS

FIG. REF. 15	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	73462*	ROD ASSEMBLY, Push	AR
	73463*	ROD ASSEMBLY, Push	AR
	73464*	ROD ASSEMBLY, Push	AR
2	76266	ROCKER ASSEMBLY, Valve	8
3	76242	BUSHING, Valve rocker	8
4	71549	WASHER, Valve rocker thrust	8
5	72626	SHAFT, Valve rocker	8
6	LW-11665	THRUST BUTTON, Rocker shaft	16
7	66732	GASKET, Valve rocker shaft cover	8
8	72710	COVER, Valve rocker shaft	8
9	72709	SCREW, 1/4-20 x 5/8 long, self-sealing, slotted head	8
10	75233	SEAL, 'O' Ring, rocker shaft cover screw	16
11	STD-160	WASHER, 1/4 lock	8
12	76036	GASKET, Rocker box cover	4
13	STD-1411	NUT, 1/4-20 plain	8
14	LW-14433	COVER ASSY., Rocker box	4
15	STD-1925	SCREW, 1/4-20 x 5/8 long, pan hd. self-locking	32
16	71481	RING, Oil seal, 3/32 dia. x 4-27/32 I.D.	4
17	74887	SPACER, 33/64 I.D. x 7/8 O.D. x 3/8 thick	2
18	383-B	NUT, 3/8-24 plain	16
19	STD-2090	NUT, 1/2-20 plain	18
20	74494	PLATE, Spark plug reach caution	4

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

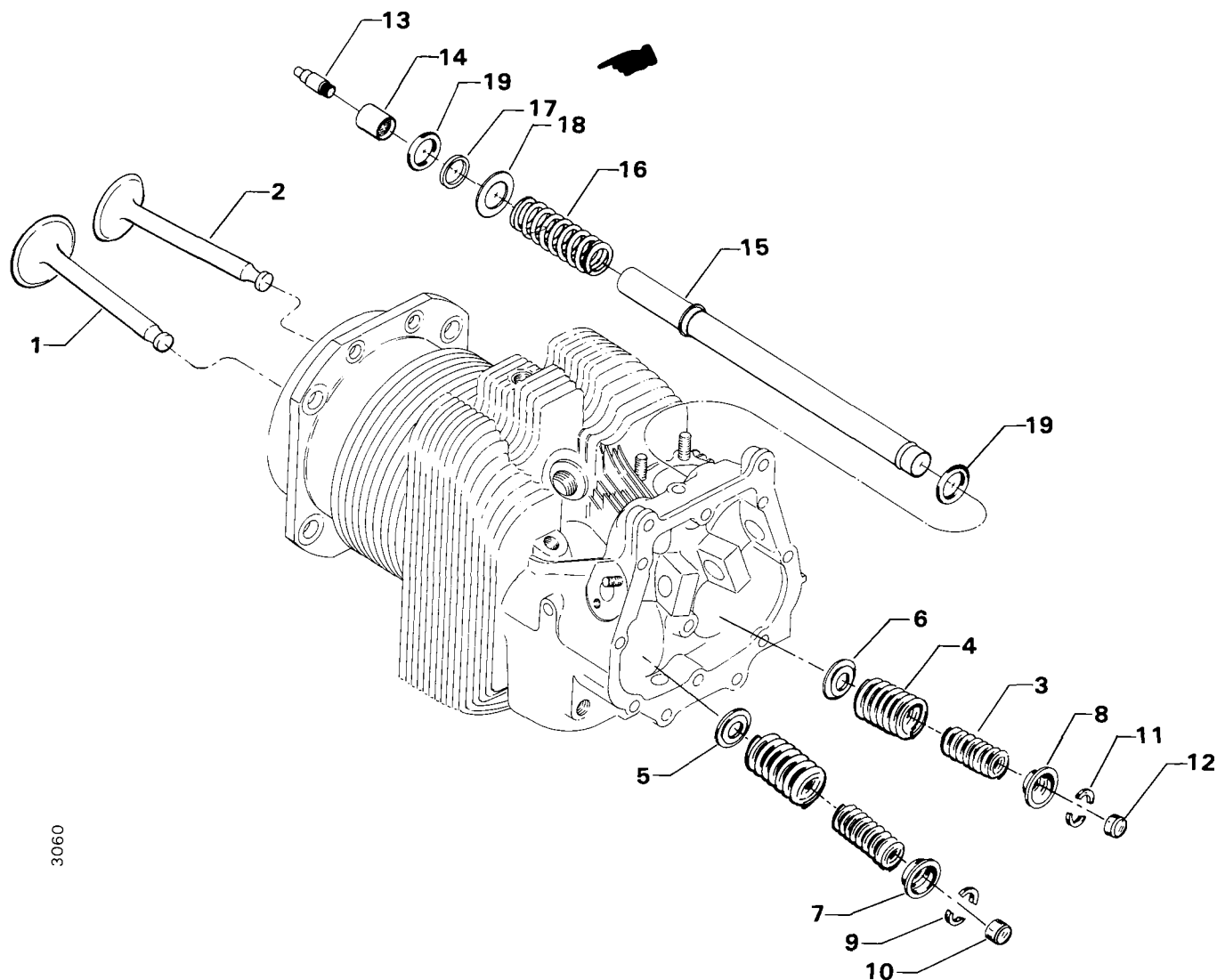


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Figure 15. CYLINDER RELATED PARTS

**CYLINDER, PISTON AND VALVE TRAIN
VALVE ASSEMBLY**

FIG. REF. 16	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-13262	VALVE, Intake (hollow stem) rotator type	4
2	LW-18497	VALVE, Exhaust (rotator type)	4
3	LW-11797	SPRING, Valve, auxiliary	8
4	LW-11796	SPRING, Valve, outer	8
5	LW-14893	SEAT, Valve spring, lower, intake	4
6	LW-14894	SEAT, Valve spring, lower, exhaust	4
7	69532	SEAT, Valve spring, upper, intake	4
8	LW-16475	SEAT, Valve spring, upper, exhaust (rotator type)	4
9	72050	KEY, Valve, intake	8
10	62388	CAP, Valve stem	4
11	MS13997-3	KEY, Valve, exhaust (rotator type)	8
12	MS13998-3	CAP, Valve stem, exhaust (rotator type)	4
13	78290	PLUNGER ASSY., Hydraulic tappet	8
14	78524	SOCKET, Push rod, hydraulic tappet	8
15	LW-14018	TUBE ASSY., Push rod shroud	8
16	LW-13565	SPRING, Shroud tube	8
17	LW-13618	SPACER, Shroud tube	8
18	LW-13619	WASHER, 25/32 I.D. x 1-1/4 O.D. x .040-.046 thick	8
19	70310	SEAL, Shroud tube	16

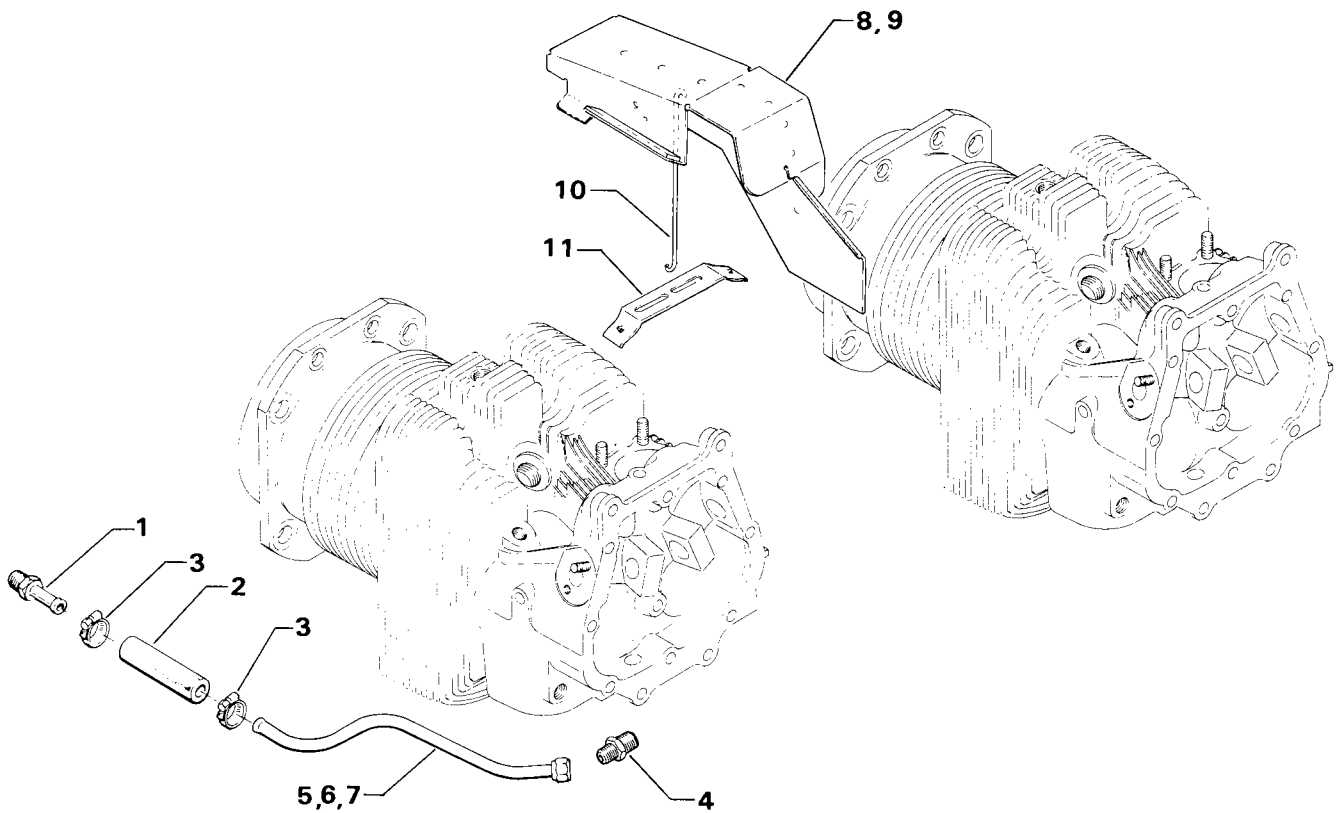


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Figure 16. VALVE ASSEMBLY

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

FIG. REF. 17	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	STD-684	NIPPLE, Straight, 3/8 I.D. hose	4
2	STD-2180	HOSE, 3/8 I.D. x 1-13/16 long	4
3	LW-15592-5-05	CLAMP, Hose	8
4	STD-1223	NIPPLE, 3/8 tube x 1/4 NPT	4
5	LW-13976	TUBE ASSY., Cyl. head oil drain, cyl. no. 1	1
6	LW-13977	TUBE ASSY., Cyl. head oil drain, cyl. no. 2	1
7	LW-13978	TUBE ASSY., Cyl. head oil drain, cyls. no. 3 and 4	2
8	LW-14833	BAFFLE ASSY., Intercylinder	1
9	LW-15695	BAFFLE ASSY., Intercylinder, no. 1 and 3 cyls.	1
10	71610	HOOK, Intercylinder baffle retainer	2
11	71611	RETAINER, Intercylinder baffle	2



3061

Figure 17. CYLINDER HEAD DRAIN TUBES AND INTERCYLINDER COOLING BAFFLES

IGNITION SYSTEM

DUAL MAGNETO, MAGETO DRIVE AND SPARK PLUGS

FIG. REF. 18	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-13643	GEAR, Retainer, magneto drive	1
2	LW-13641	CUSHION, Magneto drive	2
3	LW-12681	GASKET, Magneto	1
4	LW-685124-118	MAGNETO, Ignition system, impulse D4LN-3021	1
5	LW-682555-13	MAGNETO, Ignition	1
6	LW-684407-303	HARNESS, Ignition, 3/4-20 spark plug term. st. fittings	1
7	66M19385	CLAMP, Magneto	2
8	STD-475	WASHER, 5/16 lock, internal teeth	2
9	STD-1410	NUT, 5/16-18 plain	2
10	76734	ZIP STRAP	26
11	LW-620028-2	CLIP, Two wire for 1/4 screw	2
12	LW-16266-25-50	CLAMP	2
13	STD-1874	SCREW, 1/4-20 x 7/8 long	2
14	STD-8	WASHER, 1/4 plain	4
15	1182-U5*	SPARK PLUG, (Champion RHB-32E) long reach	8
16	LW-382698	KIT, Magneto ground terminal	2

* Item No. 15 spark plug is used in current production only; this list does not include additional spark plugs that are approved for use in these engines. See latest edition of Service Instruction No. 1042 for complete listing of all approved spark plugs.

NOTE

Individual spark plug leads may be replaced by ordering either 10-720633-48 (2T, 4T, 1B, 2B, 3B, 4B) or 10-720633-72 (1T, 3T).

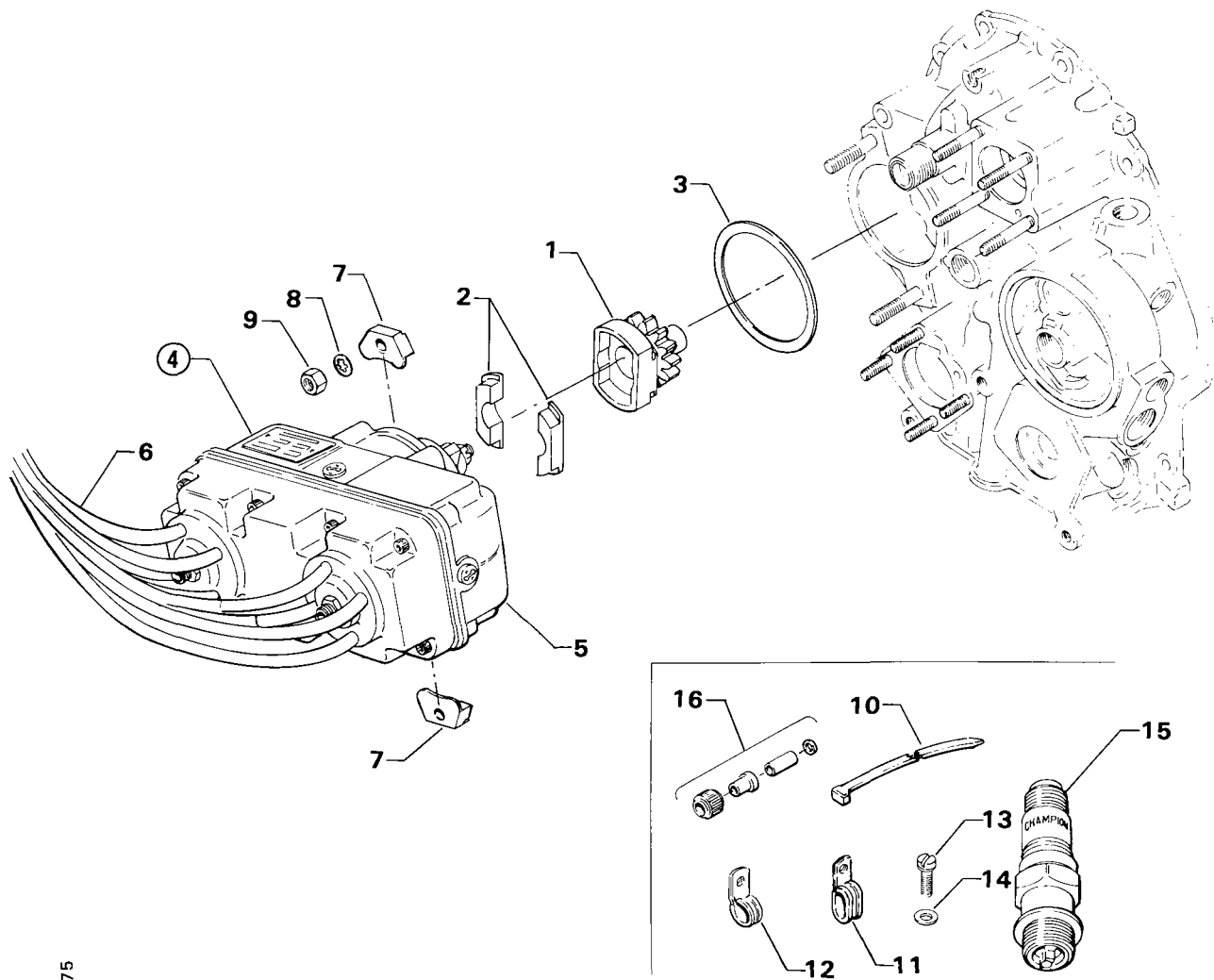


Figure 18. DUAL MAGNETO, MAGNETO DRIVE AND SPARK PLUGS

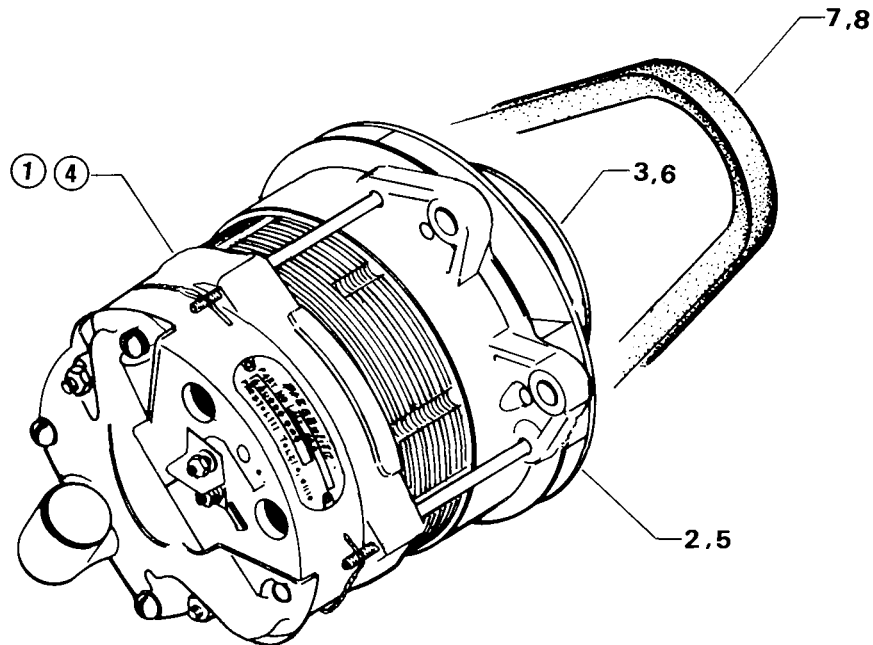
ELECTRICAL COMPONENTS

ALTERNATOR AND BELT

FIG. REF. 19	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	32B19553	ALTERNATOR ASSY., 24 v.-70 amp., 3.20:1 ratio	1
2	LW-14326	ALTERNATOR, 24 v.-70 amp., (ALU-8421-LS)	1
3	36B19484	PULLEY, Alternator, 3.20:1 ratio	1
4	LW-10979	ALTERNATOR ASSY., 24 v.-100 amp., 3.25:1 ratio	1
5	LW-10544	ALTERNATOR, 24 v.-100 amp., (ALV-6403LS)	1
6	76421	PULLEY, Alternator, 3.25:1 ratio	1
7	72026	BELT, Alternator drive (3/8 wide)	1
8	LW-10971	BELT, Alternator, dual idler (2 matched belts)	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 19. ALTERNATOR AND BELT

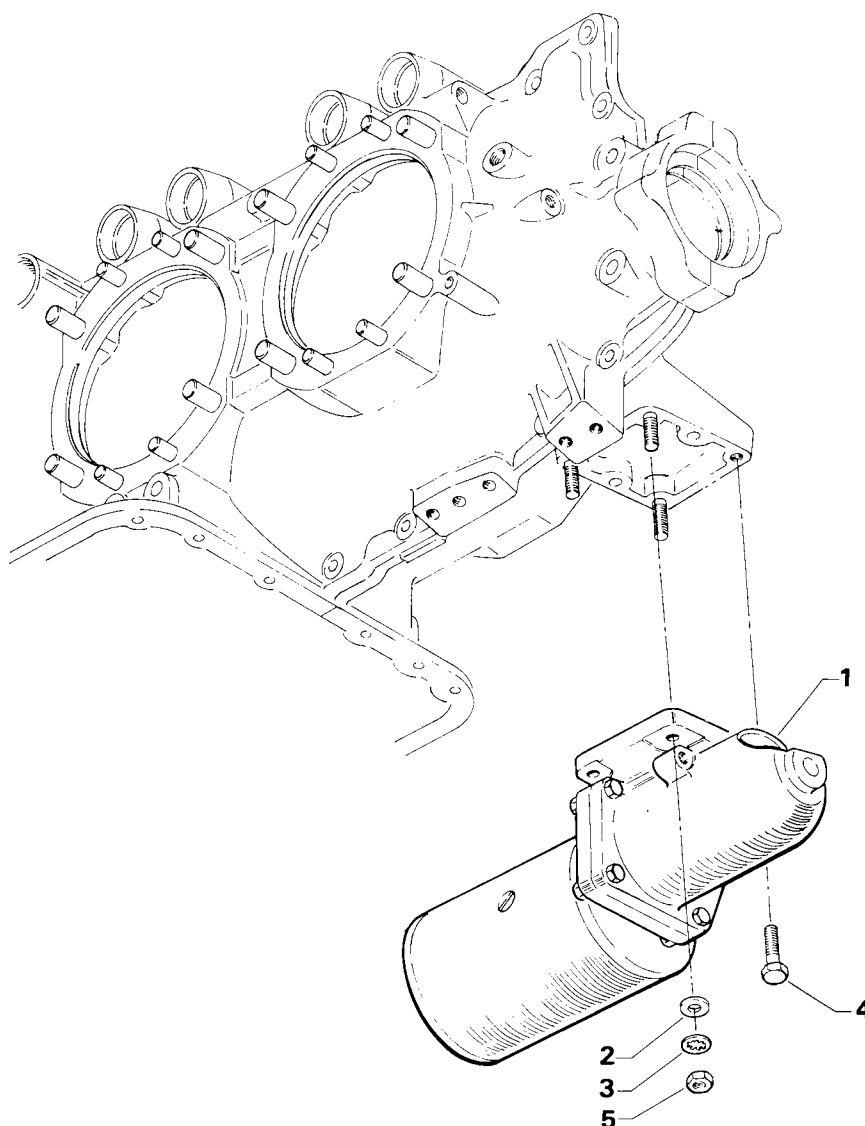
ELECTRICAL COMPONENTS

STARTER MOTOR AND ATTACHING PARTS

FIG. REF. 20	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-15572	STARTER, 24 volt, 3.38:1 internal reduction, 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.

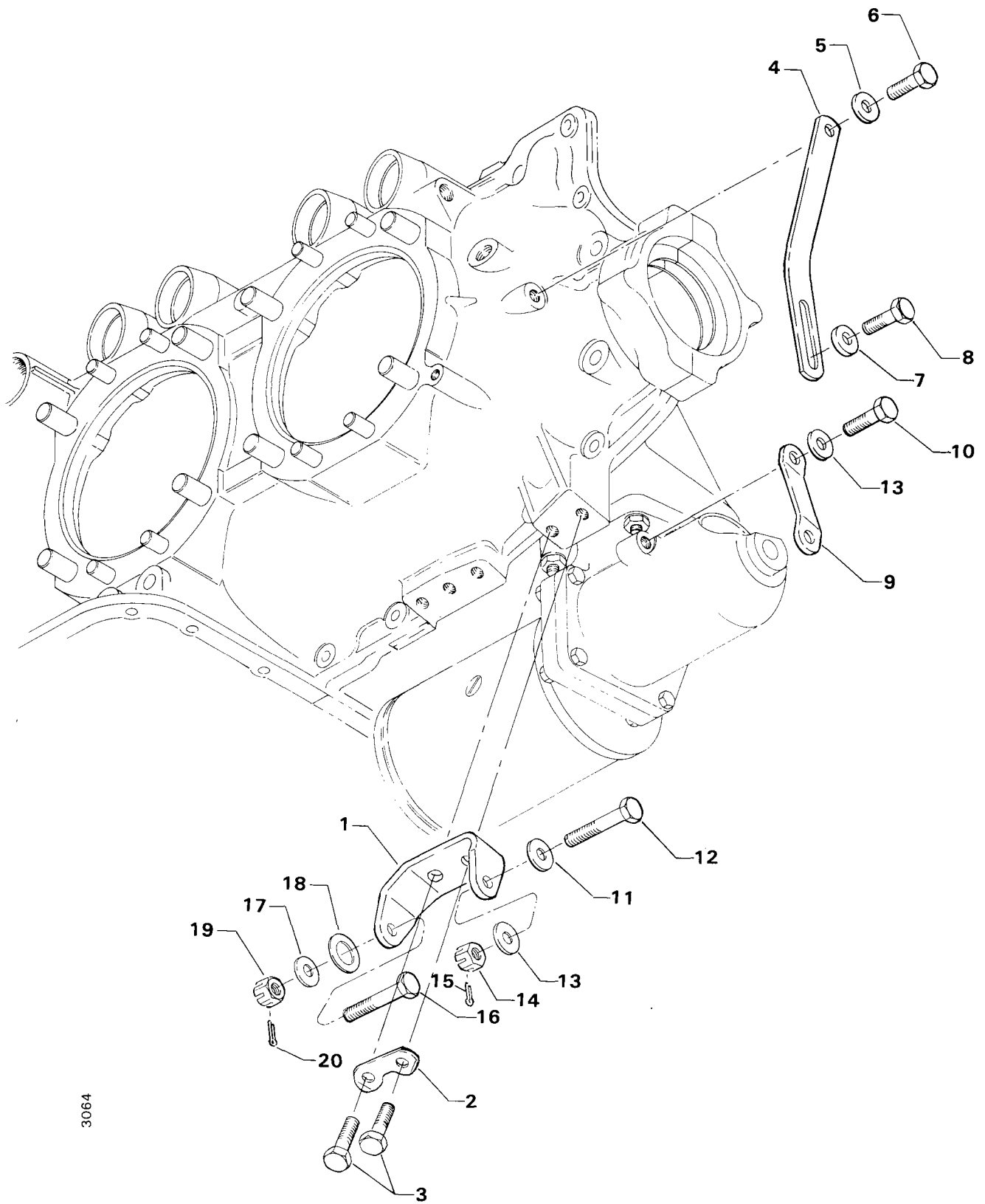


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Figure 20. STARTER MOTOR AND ATTACHING PARTS

ELECTRICAL COMPONENTS
70 AMP ALTERNATOR MOUNTING AND ATTACHING PARTS

FIG. REF. 21	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	07A19474	BRACKET, Alternator	1
2	73383	LOCKPLATE, 5/16 bolt x 1.00 spacing	1
3	STD-1838	BOLT, 5/16-18 x 15/16 long, hex. hd.	2
4	75380	LINK, Alternator adjusting	1
5	STD-35	WASHER, 5/16 plain	1
6	LW-31H.75	BOLT, 5/16-18 x 3/4 long, hex. hd. drive	1
7	STD-1727	WASHER, Plain, 3/4 O.D. x 11/32 I.D. x 1/8 thick	1
8	LW-31H.75	BOLT, 5/16-18 x 3/4 long, hex. hd. drive	1
9	74323	STRUT, Alternator support	1
10	LW-31H.75	BOLT, 5/16-18 x 3/4 long, hex. hd. drive	1
11	STD-690	WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick	1
12	AN6-17	BOLT, 3/8-24 x 1-61/64 lg., hex. hd., drilled end	1
13	STD-690	WASHER, 13/16 O.D. x 25/16 I.D. x 1/16 thick	AR
14	STD-872	NUT, 3/8-24 slotted	1
15	STD-713	PIN, Cotter, 3/32 dia. x 3/4 long	1
16	AN6-16	BOLT, 3/8-24 x 1-53/64 long, hex. hd., drilled end	1
17	76534	SHIM, 1-1/8 O.D. x 13/32 I.D. x .005 thick	AR
18	STD-690	WASHER, 13/16 O.D. x 25/64 I.D. x 1/16 thick	AR
19	STD-872	NUT, 3/8-24, slotted	1
20	STD-713	PIN, Cotter, 3/32 dia. x 3/4 long	1



3064

Figure 21. 70 AMP ALTERNATOR MOUNTING AND ATTACHING PARTS

ELECTRICAL COMPONENTS

100 AMP ALTERNATOR MOUNTING AND ATTACHING PARTS

FIG. REF. 22	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-14141	BRACKET, Alternator, front	1
2	LW-14142	BRACKET, Alternator, rear	1
3	73383	LOCKPLATE, 5/16 bolt x 1.00 spacing	2
4	STD-1838	BOLT, 5/16-18 x 15/16 long, hex. hd.	4
5	LW-11147	BRACKET, Alternator belt adjusting	1
6	STD-1727	WASHER, Plain, 3/4 O.D. x 11/32 I.D. x 1/8 thick	1
7	LW-14637*	SHIM, 13/16 O.D. x 11/32 I.D. x .005 thick	AR
8	LW-14649*	SHIM, 13/16 O.D. x 11/32 I.D. x .010 thick	AR
9	LW-31H1.22	BOLT, 5/16-18 x 1-7/32 long, hex. hd., drilled	1
10	LW-19265	PULLEY & SHAFT ASSY., Alternator dual belt adjusting	1
11	76420	PULLEY, Alternator idler, dual	1
12	78629	BALL BEARING, Double row, alt. idler pulley	1
13	MS16625-1125	RING, Internal retaining, 1-1/4 diameter	2
14	LW-19238	SHAFT, Alternator dual belt idler	1
15	76768	LOCKWASHER, Alternator idler pulley bearing	1
16	76769	LOCKNUT, Alternator 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	STD-1727	WASHER, Plain 3/4 O.D. x 11/32 I.D. x 1/8 thick	1
21	LW-31H1.22	BOLT, 5/16-18 x 1-7/32 lg., hex. hd., drilled	1
22	LW-14637 *	SHIM, 13/16 O.D. x 11/32 I.D. x .005 thick	AR
23	LW-10970	STRUT, Alternator support	1
24	LW-31H.75	BOLT, 5/16-18 x 3/4 long, hex. hd. drilled	1
25	LW-14650*	SHIM, 7/8 O.D. x 15/32 I.D. x .005 thick	AR
26	AN7-14	BOLT, 7/16-20 UNF-3A x 1-19/32 long, drilled end	1
27	STD-632	WASHER, 7/16 plain	AR
28	AN310-7	NUT, 7/16-20 plain, slotted	1
29	STD-761	PIN, Cotter, 3/32 dia. x 1.00 long	1
30	AN7-12	BOLT, 7/16-20 UNF-3A x 1-11/32 long, drilled end	1
31	STD-632	WASHER, 7/16 plain	AR
32	AN310-7	NUT, 7/16-20 plain, slotted	1
33	STD-761	PIN, Cotter, 3/32 dia. x 1.00 long	1

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

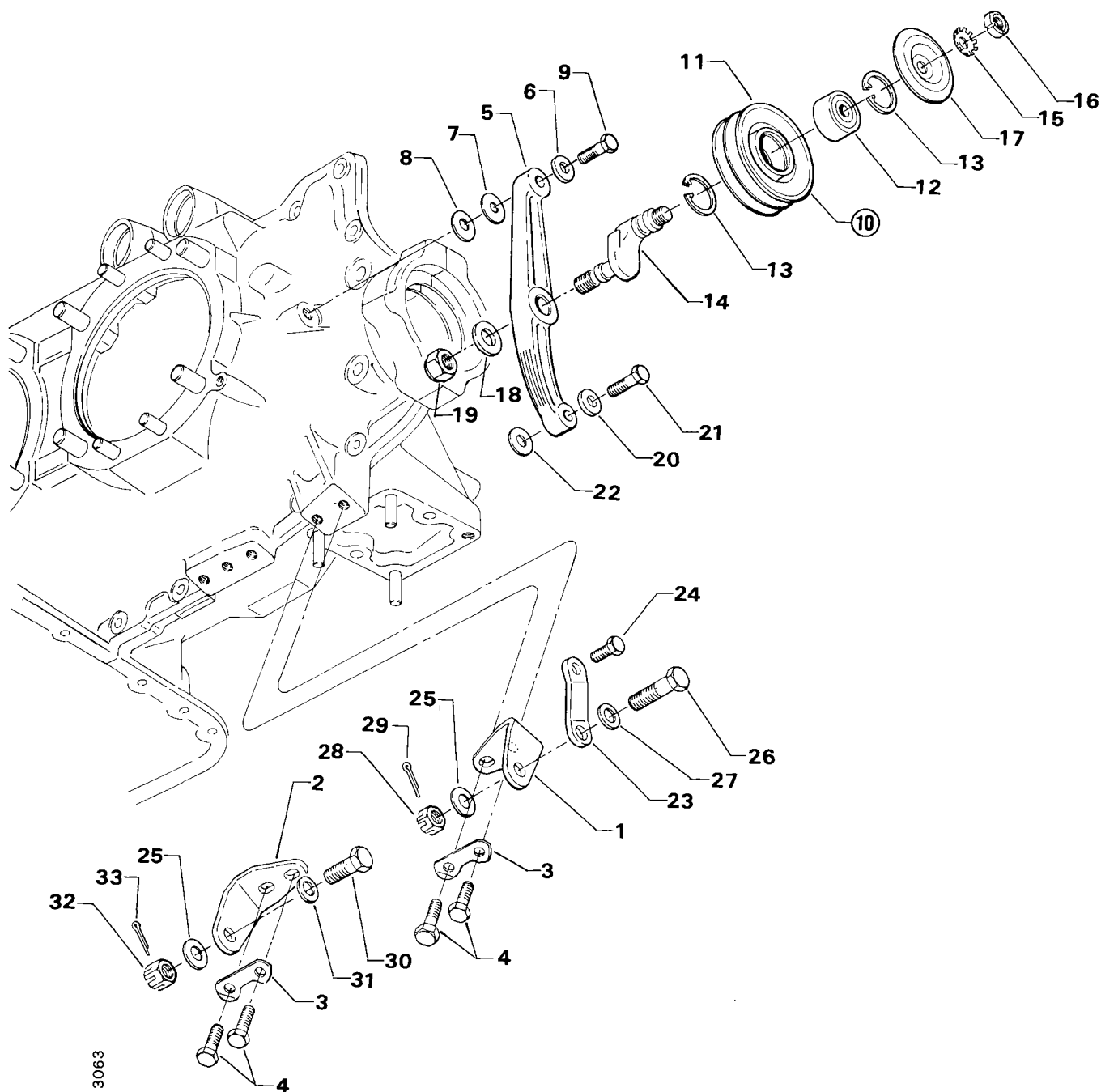


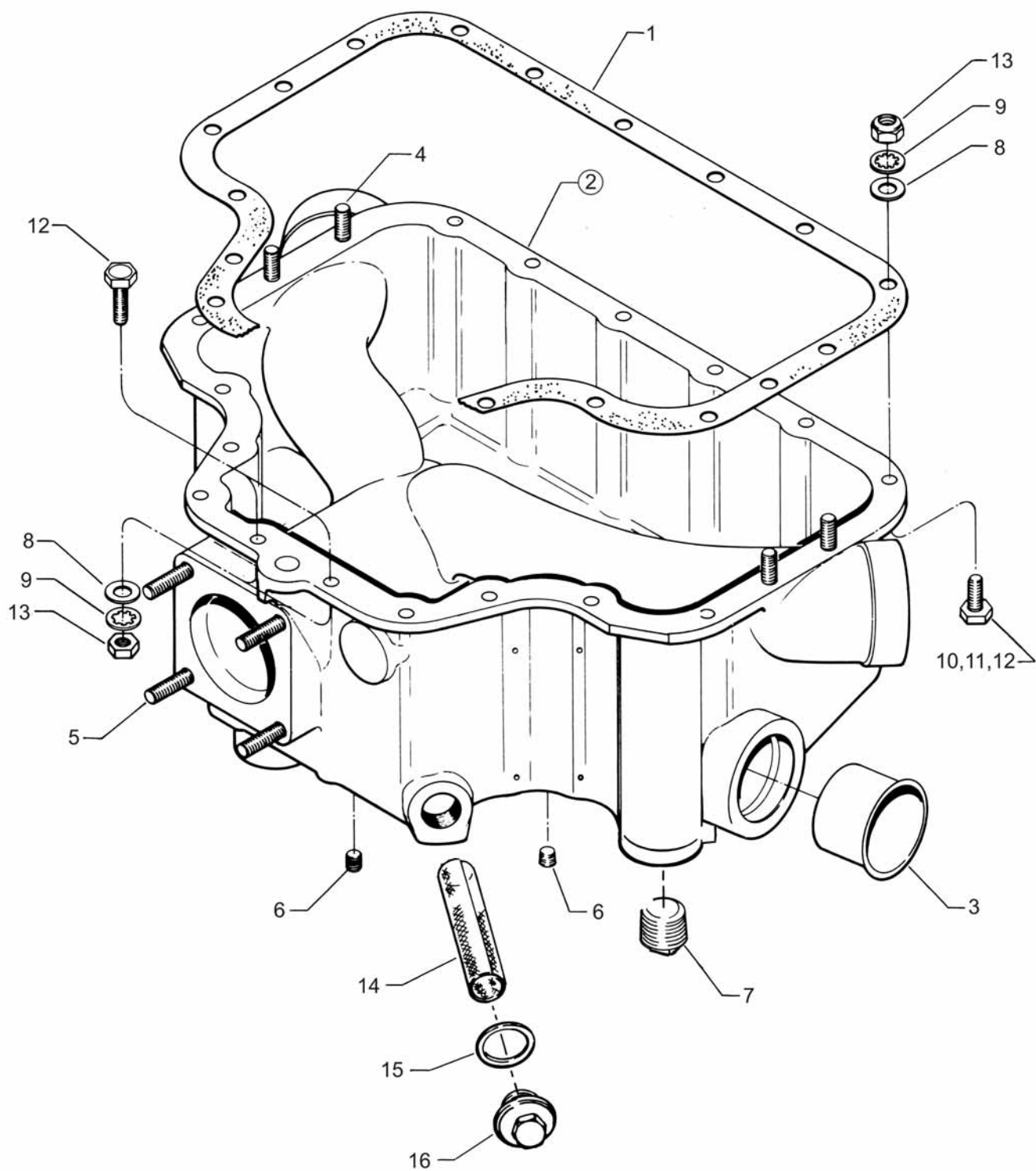
Figure 22. 100 AMP ALTERNATOR MOUNTING AND ATTACHING PARTS

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

FIG. REF. 23	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-13353	GASKET, Oil sump	1
2	LW-15796	SUMP ASSEMBLY, Oil	1
3	69602	CONNECTION, Intake pipe	4
4	61400	STUD, 1/4-20 x 1-3/16 long	4
5	31C-14	STUD, 5/16-18 x 1-3/4 long	4
6	1102	PLUG, 1/8-27 NPT, Allen head	2
7	STD-551	PLUG, 1/2-14 NPT, square head, drilled	2
8	STD-8	WASHER, 1/4 plain	32
9	SD-160	WASHER, 1/4 lock, internal teeth	20
10	LW-25-0.94	BOLT, 1/4-20 x 15/16 long, hex. head	4
11	LW-25-1.25*	BOLT, 1/4-20 x 1-1/4 long, hex. head	2
12	LW-25-1.13**	BOLT, 1/4-20 x 1-1/8 long, hex. head	4
13	STD-1411	NUT, 1/4-20 plain	18
14	70484	SCREEN, Oil suction	1
15	06E19769-1.00	GASKET, 1.00 I.D. x 1-1.4 O.D. x 3/32 annular	1
16	LW-12545	PLUG, 5/8 hex. head x 1.00-20 thread	1

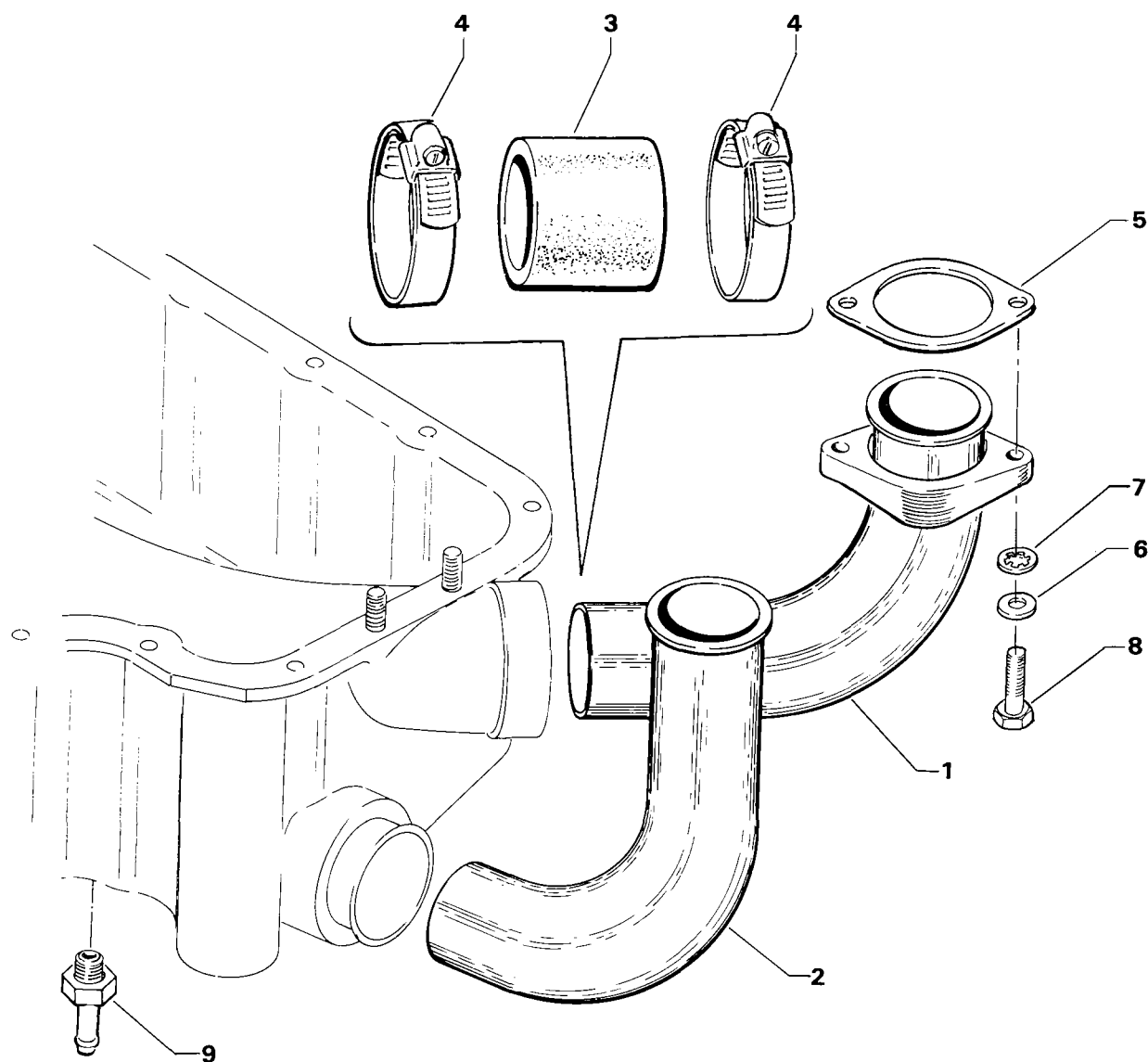
* - At sump flange for manifold bracket attachment.

** - Sump flange forward front of engine.

**FIGURE 23. OIL SUMP ASSEMBLY AND OIL SUCTION SCREEN**

OIL SUMP AND INDUCTION SYSTEM
INTAKE PIPES AND ADAPTER ASSEMBLY

FIG. REF. 24	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-13944	PIPE, Intake, cylinder nos. 1 and 2	2
2	LW-13945	PIPE, Intake, cylinder nos. 3 and 4	2
3	69603	HOSE, 1-3/4 I.D. x 2-3/16 O.D. x 1-3/4 long	4
4	LW-15592-8-28	CLAMP, Hose	8
5	71973	GASKET, 2 bolt flange, 1-7/8 I.D.	4
6	STD-8	WASHER, 1/4 plain	8
7	STD-160	WASHER, 1/4 lock, internal teeth	8
8	LW-25-1.25	BOLT, 1/4-20 x 1-1/4 long, hex. hd.	8
9	LW-13807	ADAPTER ASSY., Fuel drain valve	2



3070

Figure 24. INTAKE PIPES AND ADAPTER ASSEMBLY

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

FIG. REF. 25	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	66224	GASKET, Fuel injector adapter	1
2	77154	GASKET, Fuel injector adapter	1
3	LW-18939	ADAPTER ASSEMBLY, Fuel injector	1
4	STD-1164	INSERT, 5/16-18 Heli-coil	4
5	STD-35	WASHER, 5/16 plain	4
6	STD-475	WASHER, 5/16 lock, internal teeth	4
7	STD-1410	NUT, 5/16-18 plain	4
8	LW-18943	FUEL INJECTOR, RSA5AD1 (2524939-2)	1
9	STD-35	WASHER, 5/16 plain	4
10	STD-475	WASHER, 5/16 lock, internal teeth	4
11	LW-31-1.16	BOLT, 5/16-18 x 1-5/32 long, hex. head	4
12	LW-18854	NOZZLE ASSEMBLY	4
13	74200	ELBOW, 1/4 tube, 90° restricted	1
14	LW-16572	NIPPLE, 1/4 tube to 7/16-20 straight thread	1
15	LW-12876-4S224	HOSE ASSEMBLY, 1/4 hose, 90° elbow	1
16	73136	BRACKET, Extension, fuel injector line	2
17	73152	BRACKET, Support clamp	1
18	63B21374	MANIFOLD ASSEMBLY, Fuel	1
19	MS20822-4	ELBOW, 1/4 tube, 90°	1
20	STD-148	NIPPLE, Union, 1/8 tube	1
21	AN791-2	ELBOW, Union, 45°, 1/8 tube	1
22	STD-2166	ELBOW, Union, 90°, 1/8 NPT	2
23	1102	PLUG, 1/8-27 NPT, Allen head	2
24	02G21382	NIPPLE, Nozzle pressure gauge	1
25	07A21373	BRACKET, Fuel manifold	1
26	STD-251	WASHER, No. 10, internal lock	4
27	STD-82	SCREW, No. 10-24 x 1/2 long, fill. head	4
28	LW-12098-0-180	TUBE ASSEMBLY, Fuel manifold to nozzle, cylinder no. 1	1
29	LW-12098-0-260	TUBE ASSEMBLY, Fuel manifold to nozzle, cylinder no. 2	1
30	LW-12098-0-210	TUBE ASSEMBLY, Fuel manifold to nozzle, cylinder no. 3	1
31	LW-12098-0-240	TUBE ASSEMBLY, Fuel manifold to nozzle, cylinder no. 4	1
32	LW-16266-10-13	CLAMP, 1/8 diameter for no. 10 screw	10
33	LW-16266-10-38	CLAMP, 3/8 diameter for no. 10 screw	2
34	LW-16266-10-25	CLIP, 1/4 I.D. for no. 10 screw	1
35	STD-860	SCREW, No. 10-32 x 5/8 long, fill head	6
36	STD-670	NUT, No. 10-32 self-locking	6
37	LW-16266-25-63	CLAMP, Cushion type (nozzle vent line)	1
38	LW-14714	CONNECTOR, Push-pull cable	1
39	MS3650-304	NUT, No. 10-32	1
40	05R19950	ROD END, Female, no. 10-32	1
41	STD-63	NUT, No. 10-32 plain	1
42	AN3-7	BOLT, No. 10-32 x 29/32 long, hex. head	1
43	STD-122	WASHER, No. 10 plain	3
44	STD-303	NUT, No. 10-32 slotted	1
45	STD-68	PIN, Cotter, 1/16 diameter x 1/2 long	1

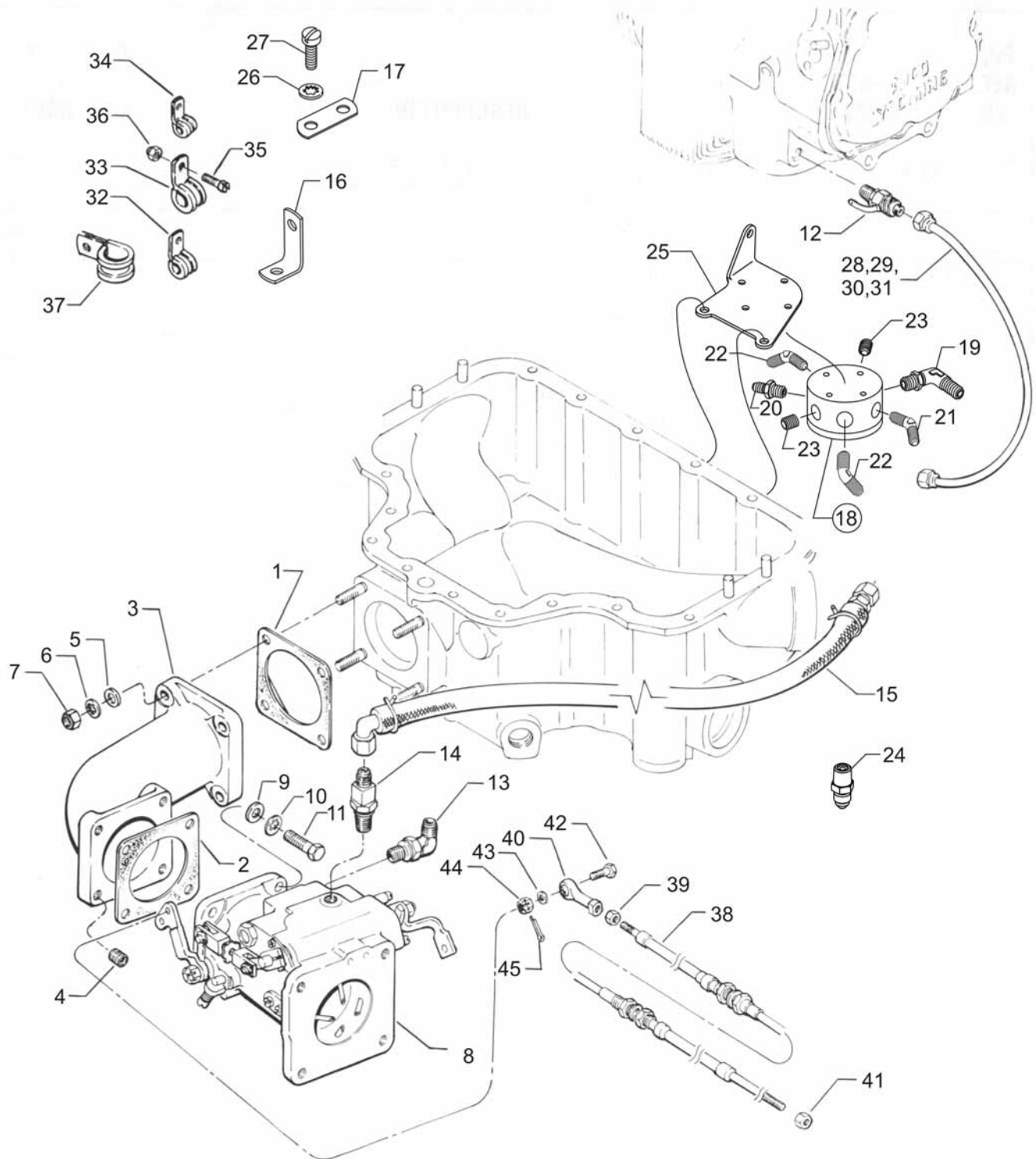


FIGURE 25. FUEL INJECTOR, FUEL MANIFOLD AND INJECTION NOZZLES

OIL SUMP AND INDUCTION SYSTEM
NOZZLE VENT MANIFOLDS AND ATTACHMENTS

FIG. REF. 26	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-18961	MANIFOLD, Right, injector nozzle vent	1
2	LW-18962	MANIFOLD, Left, injector nozzle vent	1
3	STD-1339	PLUG, 1/16-27 NPT	2
4	LW-18545	HOSE, 3/16 I.D. x 7/16 O.D. x 2-7/8 long	4
5	LW-15592-5-04	CLAMP, 7/16 O.D. hose	8
6	MS51505B4S	ELBOW, 1/4 tube (90°) on vent tube end	2
7	LW-12784-4-160	HOSE ASSY., Right nozzle vent to housing tee	1
8	LW-12784-4-274	HOSE ASSY., Left nozzle vent to housing tee	1
9	76734	ZIP STRAP	2
10	LW-16266-10-38	CLAMP, Right nozzle vent line	1
11	MS21333-99	CLAMP, Left nozzle vent line	1
12	STD-1930	HOSE, Left nozzle vent line	1

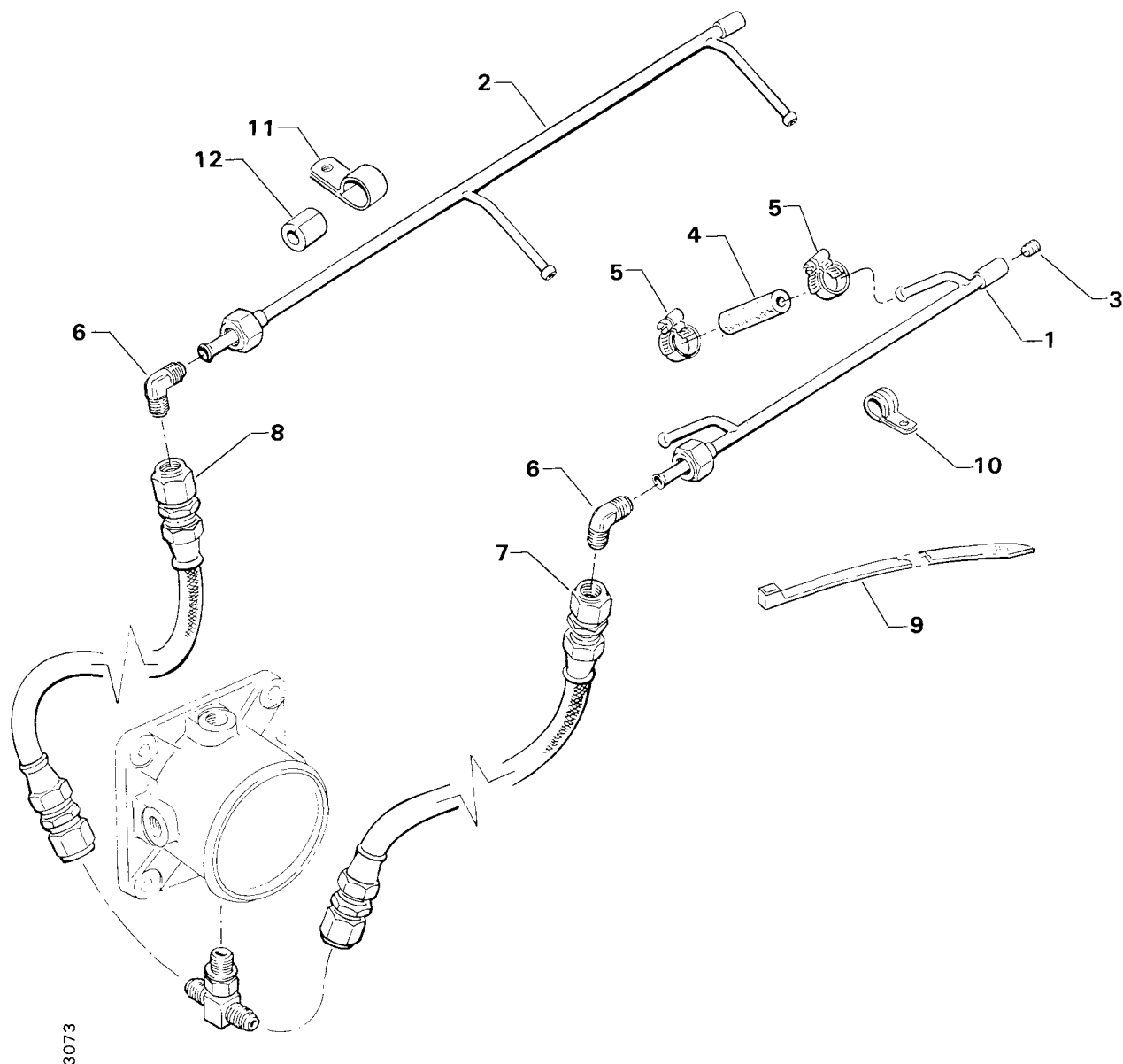


Figure 26. NOZZLE VENT MANIFOLDS AND ATTACHMENTS

TURBOCHARGER AND EXHAUST SYSTEM
EXHAUST MANIFOLDS AND TRANSITION ASSEMBLY

FIG. REF. 27	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-13938	GASKET, Exhaust flange	8
2	LW-15691	MANIFOLD ASSY., Exhaust, right	1
3	LW-14001	PIPE, Exhaust, cylinder no. 1	1
4	LW-15689	PIPE, Exhaust, cylinder no. 3	1
5	LW-15690	PIPE, Exhaust, intermediate	1
6	LW-11400	ADAPTER, Exhaust pipe	1
7	LW-16222	CLAMP, Exhaust pipe	1
8	LW-18095	STRAP, Exhaust pipe	1
9	STD-160	WASHER, 1/4 internal lock	1
10	LW-25-0.50	BOLT, 1/4-20 x 1/2 long, hex. hd.	1
11	LW-25-0.63	BOLT, 1/4-20 x 5/8 long, hex. hd.	1
12	STD-2044	NUT, 1/4-20 UNF, self-locking	1
13	LW-13998	MANIFOLD ASSY., Exhaust, left	1
14	LW-14002	PIPE, Exhaust, cylinder no. 2	1
15	LW-14004	PIPE, Exhaust, cylinder no. 4	1
16	LW-11400	ADAPTER, Exhaust pipe	1
17	STD-2044	NUT, 1/4-20 self-locking	16
18	LW-19347	PIPE, Exhaust, tail	1
19	LW-13997	SHIELD, Heat	1
20	LW-15592-8-24	CLAMP, Hose	2
21	LW-14485	GASKET, Turbocharger inlet	2
22	LW-13464	CLAMP, 3-11/16 diameter, "V" Band	2
23	LW-15765	ROD END, 10-32 (stainless steel)	1
24	AN960C-10L	WASHER, #10 (stainless steel)	3
25	AN3C-7	BOLT, 10-32 (stainless steel)	1
26	AN320-C3	NUT, 10-32 (stainless steel)	1
27	STD-68	PIN, Cotter, 1/16 x 1/2 long	1
28	LW-18947	SHIELD, Heat, exhaust pipe	1
29	LW-15592-8-36	CLAMP	1
30	LW-16863	TRANSITION AND WASTEGATE ASSEMBLY	1
31	LW-13671	SPRING, Wastegate	1
32	AN501-10-12	SCREW, 10-32 x 3/4 long, fill. head	1
33	STD-63	NUT, 10-32 plain	1
34	LW-13991	SUPPORT, Linkage control	1
35	LW-16759	SPACER, Support, linkage control	2
36	STD-160	WASHER, 1/4 internal lock	2
37	LW-25-1.13	SCREW, 1/4-20 x 1-1/8 long, hex. head	2
38	STD-1411	NUT, 1/4-20 plain	2

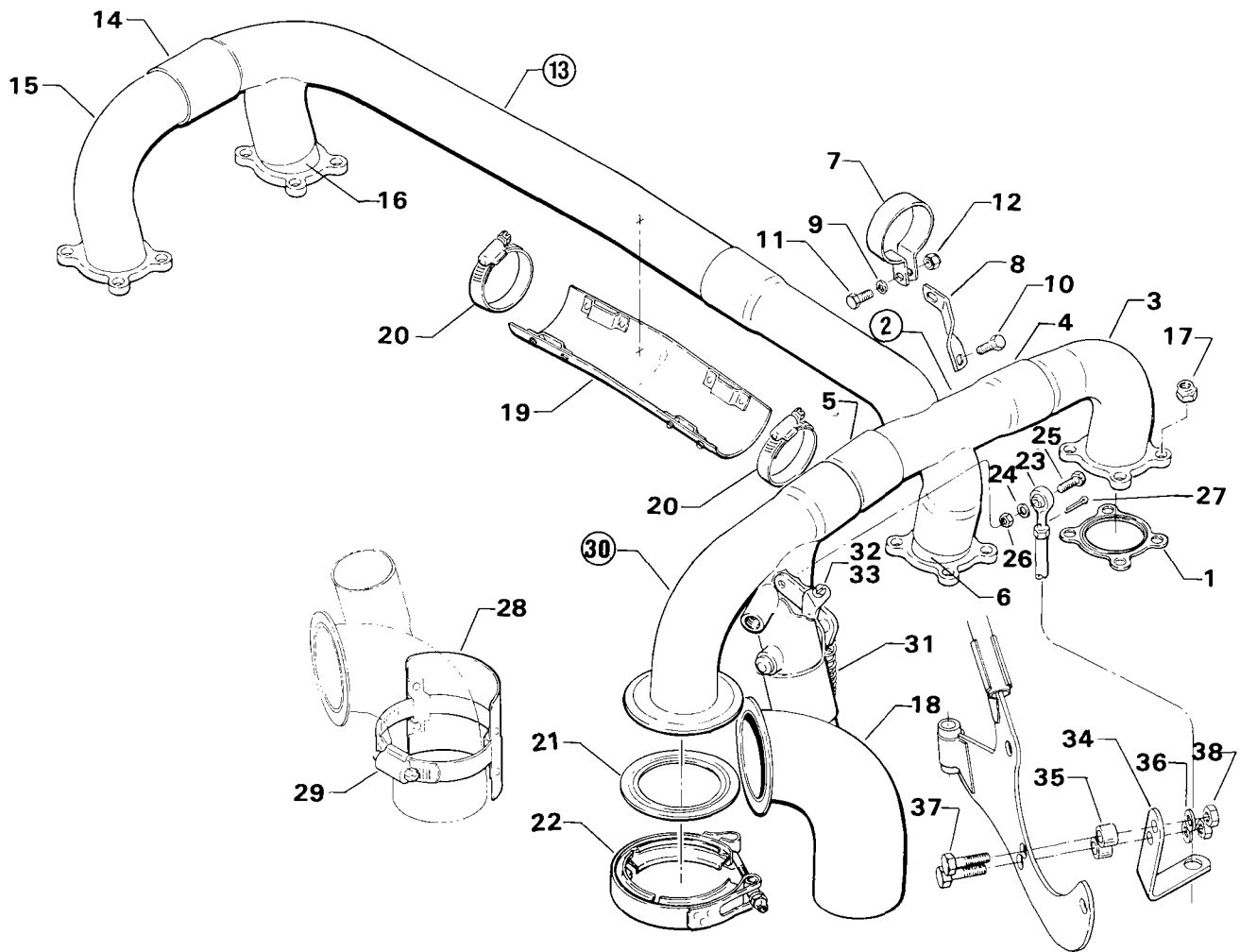
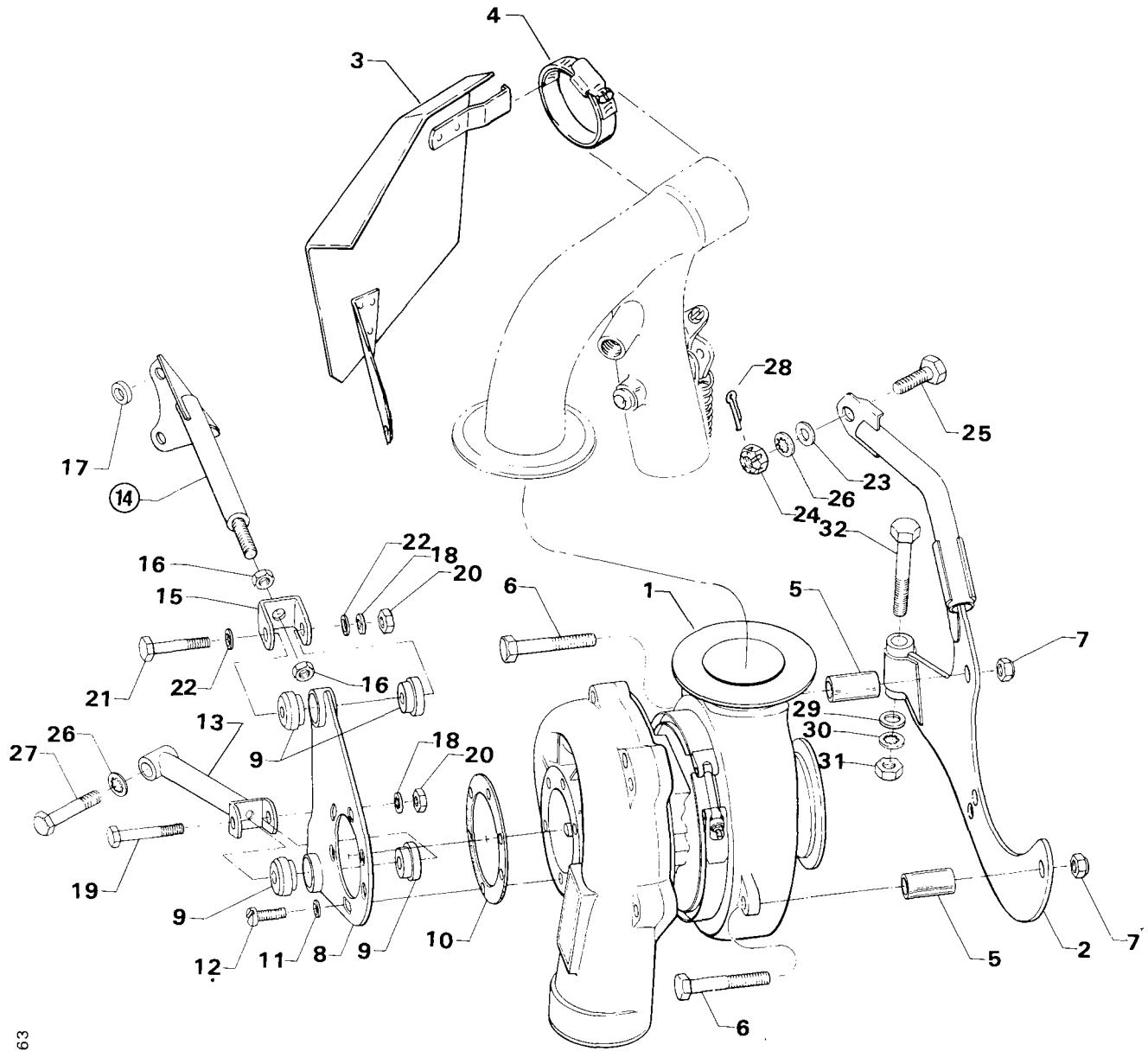


Figure 27. EXHAUST MANIFOLDS AND TRANSITION ASSEMBLY

TURBOCHARGER AND EXHAUST SYSTEM
TURBOCHARGER, SUPPORT AND ATTACHING PARTS

FIG. REF. 28	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	46A21184	TURBOCHARGER (Model 3BT5EE10J2)	1
2	LW-16757	BRACKET, Turbo	1
3	LW-14017	BAFFLE, Turbo	1
4	LW-15592-8-28	CLAMP, Hose	1
5	LW-16760	SPOOL, Turbo (bracket to turbo attaching)	2
6	LW-31SS2.50	BOLT, 5/16-18 x 2-1/2 long (bracket to turbo attaching)	2
7	STD-2043	NUT, 5/16-18 self-lock (bracket to turbo attaching)	2
8	LW-18605	MOUNT ASSEMBLY, Turbo compressor inlet	1
9	LW-15692	BUSHING, Turbocharger mount	4
10	LW-13476	GASKET, Turbocharger compressor inlet	2
11	STD-28	WASHER, No. 10 plain	6
12	STD-82	SCREW, 10-24 x 1/2 long	6
13	LW-13957	STRUT, Turbocharger, lower front	1
14	07F23147	STRUT ASSEMBLY, Turbocharger, upper rear	1
15	LW-18603	SUPPORT, Bushing, turbo strut	1
16	STD-596	NUT, 3/8-24 plain	2
17	LW-15555	SPACER, Turbo strut	1
18	STD-160	WASHER, 1/4 internal lock (lower rear strut to mount)	2
19	LW-25-150	BOLT, 1/4-20 x 1-1/2 long, hex. hd. (lower rear strut to mount)	1
20	STD-1411	NUT, 1/4-20 plain (lower rear strut to mount)	2
21	LW-25-1.75	BOLT, 1/4-20 x 1-3/4 long (upper rear strut to mount)	1
22	STD-2201	WASHER, 1/4 plain (upper rear strut to mount)	2
23	STD-35	WASHER, 5/16 plain (turbo bracket to crankcase)	1
24	STD-1420	NUT, 5/16-18 slotted (turbo bracket to crankcase)	1
25	LW-31S-1.25	BOLT, 5/16-18 x 1-1/4 long, hex. hd., dr. shank	1
26	STD-475	WASHER, 5/16 internal lock (strut LW-13957 to accy. hsg.)	1
27	LW-31-1.31	BOLT, 5/16-18 x 1-5/16 lg., hex. hd. (strut LW-13957 to accy. hsg.)	1
28	MS9245-27	PIN, Cotter, 1/16 dia. x 5/8 long	1
29	STD-8	WASHER, 1/4 plain (turbo bracket to sump flange)	1
30	STD-160	WASHER, 1/4 internal lock (turbo bracket to sump flange)	1
31	STD-1411	NUT, 1/4-20 plain (turbo bracket to sump flange)	1
32	LW-25-2.69	BOLT, 1/4-20 x 2-11/16 lg., hex. hd. (turbo bracket to sump flange)	1

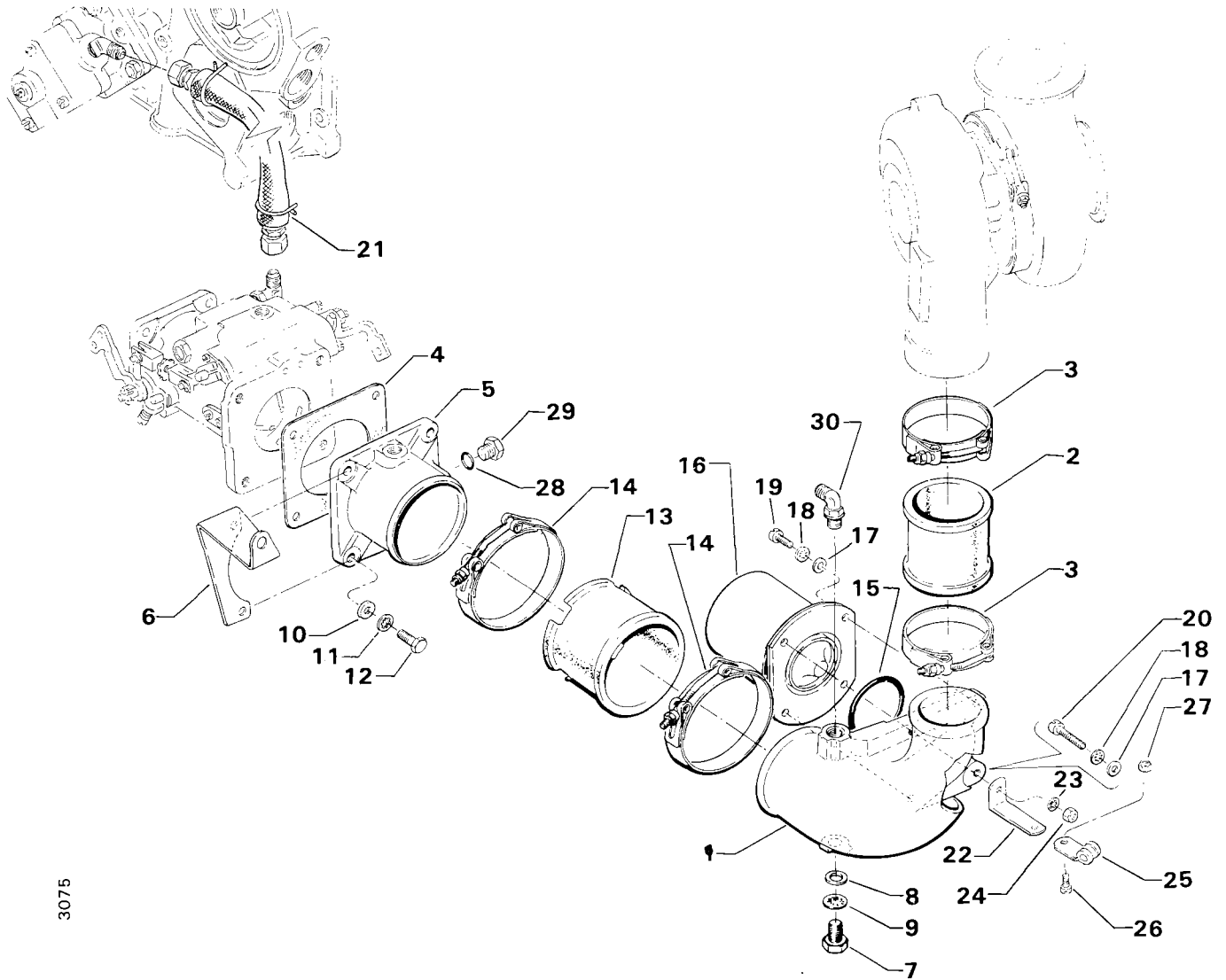


3063

Figure 28. TURBOCHARGER, SUPPORT AND ATTACHING PARTS

TURBOCHARGER AND EXHAUST SYSTEM
TURBOCHARGER HOSES, DUCT AND RELATED PARTS

FIG. REF. 29	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-14488	DUCT, Air inlet	1
2	LW-15490	HOSE, 2-1/4 I.D. x 2-1/2 long	1
3	LW-15858-62-269	CLAMP, "T" bolt	2
4	77504	GASKET, Fuel injector	1
5	LW-18941	ADAPTER, Fuel injector inlet	1
6	LW-18942	BRACKET, Injector linkage	1
7	LW-38-0.59	BOLT, 3/8-16 x 19/32 long, hex. head	1
8	STD-33	WASHER, 3/8 plain	1
9	STD-678	WASHER, 3/8 internal lock	1
10	STD-8	WASHER, 1/4 plain	2
11	STD-160	WASHER, 1/4 lock, internal teeth	4
12	LW-25-0.81	BOLT, 1/4-20 x 13/16 long, hex. head	4
13	LW-15859	HOSE, 3.00 I.D. x 2-1/2 long	1
14	LW-15858-62-350	CLAMP, Hose, 3-1/2 I.D. x 9/16 wide	2
15	MS29513-138	SEAL, "O" Ring, 2-7/64 I.D. x 3/32 section	1
16	LW-14445-3	VALVE ASSY., Absolute pressure relief	1
17	STD-425	WASHER, #10 plain	4
18	STD-251	WASHER, #10 lock, internal teeth	4
19	STD-375	SCREW, 10-24 x 5/8 long, fill. head	3
20	AN500-10-18	SCREW, 10-24 x 1-1/8 long, fill. head	1
21	LW-12877-6S-066	HOSE ASSY., Fuel pump to injector (6-3/4 long)	1
	LW-12799-6S-070	HOSE ASSY., Fuel pump to injector (7.00 long)	1
22	LW-14724	BRACKET, Linkage	1
23	STD-251	WASHER, #10 internal lock (bracket to valve screw)	1
24	AN365-1024	NUT, 10-24 self-locking (bracket to valve screw)	1
25	LW-16266-25-25	CLAMP, Cushion type (linkage to bracket)	1
26	STD-860	SCREW, 10-32 x 5/8 long, fill. hd. (linkage to bracket)	1
27	STD-670	NUT, 10-32 self-locking (linkage to bracket)	1
28	MS29512-4	SEAL, Oil, 5/64 dia. section x 11/32 I.D. (injector inlet adapter)	1
29	AN814-4L	PLUG, 7/16-20 thread (injector inlet adapter)	1
30	72376	ELBOW, 1/4 tube adj. 90° (assemble in air inlet duct)	1



3075

Figure 29. TURBOCHARGER HOSES, DUCT AND RELATED PARTS

TURBOCHARGER AND EXHAUST SYSTEM TURBOCHARGER HARDWARE AND RELATED PARTS

FIG. REF. 30	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY
1	LW-14528	GASKET, Turbocharger oil drain	1
2	LW-16036	FLANGE, Turbocharger oil drain	1
3	STD-33	WASHER, 3/8 plain	2
4	STD-678	WASHER, 3/8 lock, internal teeth	2
5	LW-38-1.00	BOLT, 3/8-16 x 1.00 long, hex. head	2
6	1102★	PLUG, 1/8 NPT, Allen head	1
7	02A19416	FITTING ASSEMBLY, Turbocharger	1
8	02A19417	ELBOW, 1/4 tube x 1/8 NPT, 90°	1
9	02G19418	NIPPLE, Turbocharger	1
10	LW-13478	ELBOW, 1/4 tube x 1/8 NPT, 90° (turbo oil inlet)	1
11	LW-12798-4S095	HOSE ASSY., 9-5/8 long (turbo oil inlet)	1
	LW-12798-4S111	HOSE ASSY., 11-1/8 long (turbo oil inlet)	1
12	76734★★	ZIP STRAP	1
13	LW-18977	ELBOW, 5/8 I.D. hose x 1/2 NPT, 45° (in oil sump)	1
14	LW-16716	TUBE, Turbo oil drain	1
15	LW-14394	HOSE, Turbo oil drain	2
16	LW-15592-8-08	CLAMP, Hose	4
17	LW-16266-10-88	CLAMP, Cushion type	1
18	STD-969	SCREW, 10-32 x 1/2 long, fill. head drive head	1
19	STD-425	WASHER, #10 plain	1
20	STD-670	NUT, 10-32 self-locking	1
21	LW-12056	SPACER, Oil pressure fitting	1
22	AN901-8A	GASKET, 3/4 I.D. x 1.00 O.D.	1
23	LW-16012	BOLT, Oil temperature pressure fitting	1
24	73944★	ELBOW, 1/4 flared tube, 45°	1
25	LW-12784-4-102	HOSE, Fuel pump vent	1
26	75948●	TEE, 1/4 tubing, adjustable w/straight thd. on side	1
27	77627‡	ELBOW, 1/4 tube x 1/8 NPT, restricted	1
28	1102■	PLUG, 1/8 NPT, Allen head	2

* Assemble in accessory housing above oil filter pad.

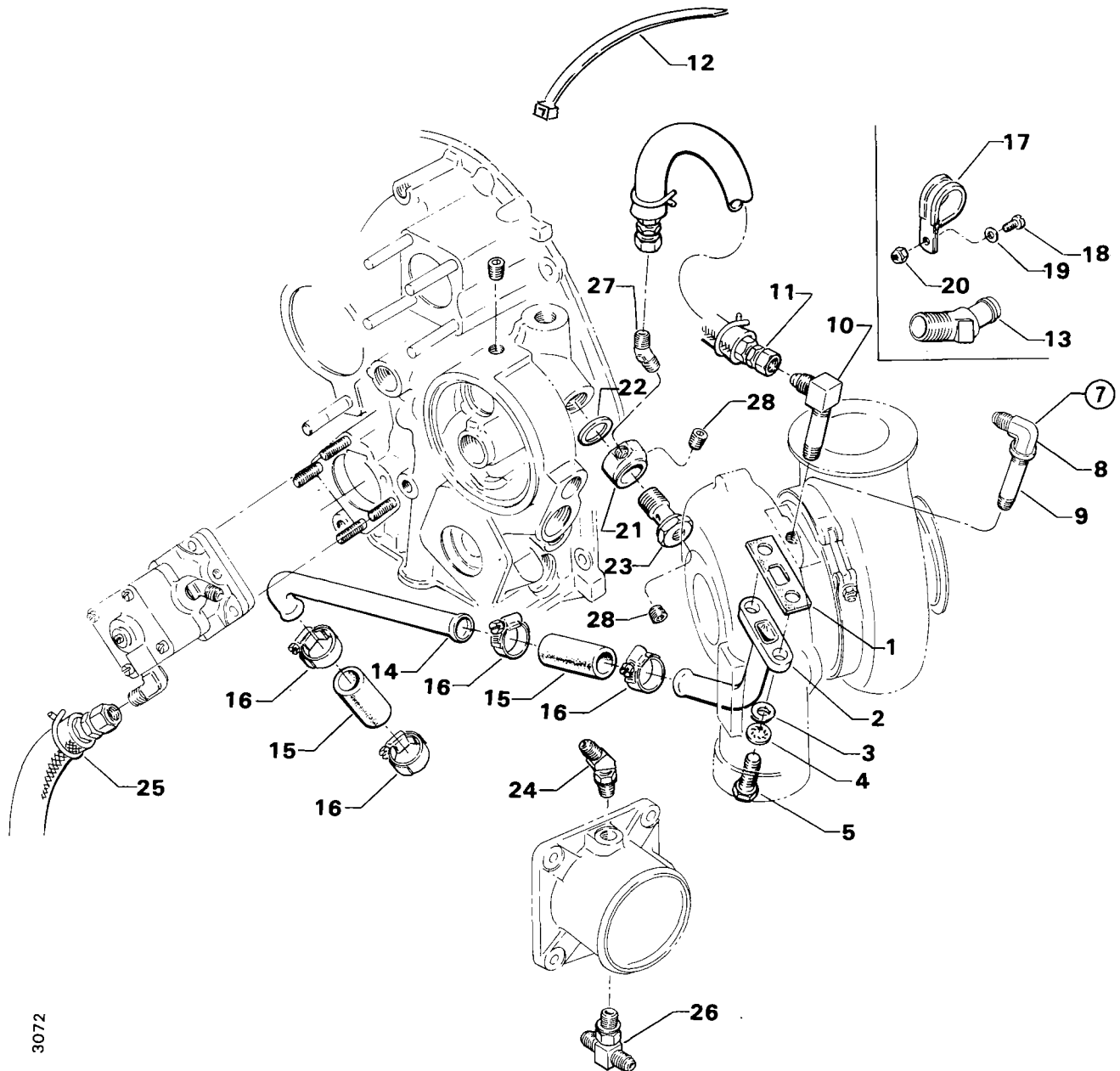
★★ To attach turbo oil inlet hose to top turbo strut.

★ Injector inlet adapter for fuel pump vent.

● Injector inlet adapter for nozzle vent.

‡ Assemble in LW-12056 spacer.

■ Assemble in LW-12056 spacer and LW-16012 bolt.



3072

Figure 30. TURBOCHARGER HARDWARE AND RELATED PARTS

SERVICE KIT SECTION

CYLINDER, PISTON AND RING ASSY.

Part No.	Part Name	Qty.
LW-14977	CYLINDER, PISTON AND RING ASSY.	1
STD-160	WASHER	2
STD-1215	BOLT	2
STD-1925	SCREW	8
MS13997-3	KEY, Valve, exhaust	2
MS13998-3	CAP, Valve, exhaust	1
LW-16475	SEAT, Valve spring upper	1
LW-18497	VALVE, Exhaust	1
LW-11665	THRUST BUTTON	4
LW-11775	PLUG, Piston pin	2
LW-11796	SPRING, Valve outer	2
LW-11797	SPRING, Valve inner	2
LW-13262	VALVE, Intake	1
LW-13964	CYLINDER ASSY., Nitrided	1
LW-14077	PIN, Piston	1
LW-14433	COVER ASSY., Rocker box	1
LW-14893	SEAT, Valve spring lower, intake	1
LW-14894	SEAT, Valve spring lower, exhaust	1
LW-10545-S	PISTON	1
62388	CAP, Valve stem, intake	1
66732	GASKET, Rocker shaft cover	2
69532	SEAT, Valve spring upper, intake	1
70310	SEAL, Shroud tube	4
71481	SEAL, Cylinder base	1
71549	WASHER, Valve washer thrust	2
72050	KEY, Valve, intake	2
72626	SHAFT, Valve rocker	2
72710	COVER, Rocker shaft	2
73857	RING, Piston, oil reg.	1
74241	RING, Piston, comp.	2
76036	GASKET, Rocker box cover	1
76266	ROCKER ASSY., Valve	2
72709	SCREW	2
STD-1411	NUT	2

SERVICE KIT SECTION

SEAL AND GASKET SET

Part No.	Part Name	Qty.
LW-14976	SEAL AND GASKET SET	1
AN901-8A	GASKET	1
MS28795-015	SEAL, "O" Ring	2
MS29512-4	SEAL, Oil	1
MS29512-10	SEAL, Oil	3
MS29513-138	SEAL, "O" Ring	1
STD-111	GASKET	1
STD-213	SEAL, Oil	1
STD-294	GASKET	2
STD-1045	GASKET	1
STD-2217	SEAL, Oil	1
8313	GASKET, Vacuum pump	2
60096	GASKET	1
66224	GASKET, Fuel injector	1
66732	GASKET, Rocker shaft cover	8
69164	GASKET, Fuel pump adapter	1
70310	SEAL, Shroud tube	16
70455	GASKET	1
71481	SEAL, Shroud tube	4
71973	GASKET, Intake flange	4
72053	GASKET, Governor	1
72059	GASKET	1
72075	RING, Oil seal	6
72091	RING, Oil seal	2
72220	GASKET, Oil level gage	1
72312	RING, Oil seal	1
73383	LOCKPLATE	2
73818	GASKET, Accessory housing	1
74065	RING, Oil level gage	1
76036	GASKET, Rocker box cover	4
77154	GASKET, Carburetor	2
77504	GASKET, Fuel injector	1
LW-10332	LOCKPLATE, Crankshaft	1
LW-11665	THRUST BUTTON	16
LW-12681	GASKET, Magneto	1
LW-13353	GASKET, Oil sump	1
LW-13473	GASKET, Carburetor inlet adapter	1
LW-13476	GASKET, Turbo compressor inlet	2
LW-13938	GASKET, Exhaust flange	8
LW-14063	GASKET, V-Band coupling	1
LW-14260	SEAL, Tachometer drive	1
LW-14485	GASKET, Turbo inlet	2
LW-14528	GASKET, Turbo oil drain	1
LW-15628	SEAL, Solid, crankshaft oil	1
78443	SEAL, Split, crankshaft oil	1

SECTION 9
NUMERICAL INDEX

PART NO.	PART NAME	PAGE NO.	PART NO.	PART NAME	PAGE NO.
AN3-7	Bolt	6-5	LW-12098-1-180	Tube Assy.	6-5
AN3C-7	Bolt	7-1	LW-12098-1-210	Tube Assy.	6-5
AN310-7	Nut	5-5	LW-12098-1-240	Tube Assy.	6-5
AN320-C3	Nut	7-1	LW-12098-1-260	Tube Assy.	6-5
AN365-1024	Nut	7-5	LW-12186	Nut	3-1
AN500-10-18	Screw	7-5	LW-12545	Plug	6-1
AN501-10-12	Screw	7-1	LW-12589	Insert	2-1
AN565B1032H5	Set Screw	1-9	LW-12596	Bolt	3-1
AN6-16	Bolt	5-3	LW-12681	Gasket	4-1
AN6-17	Bolt	5-3	LW-12688	Seat	3-3
AN6-34A	Bolt	1-13	LW-12784-4-102	Hose	7-7
AN7-12	Bolt	5-5	LW-12784-4-160	Hose Assy.	6-7
AN7-14	Bolt	5-5	LW-12784-4-274	Hose Assy.	6-7
AN814-4L	Plug	7-5	LW-12789	Tube Assy.	1-3
AN814-10L	Plug	2-7	LW-12798-4S095	Hose Assy.	7-7
AN816-6	Nipple	2-5	LW-12798-4S111	Hose Assy.	7-7
AN901-8A	Gasket	7-7	LW-12799-6S-070	Hose Assy.	7-5
AN960-10L	Washer	7-1	LW-12876-4S224	Hose Assy.	6-5
AN960-616L	Washer	1-13	LW-12877-6S-066	Hose Assy.	7-5
LW-10288	Gear Assy.	1-11	LW-13123	Baffle	3-3
LW-10296	Gear Assy.	1-11	LW-13209	Bearing	3-1
LW-10298	Shaft	1-11	LW-13262	Valve	3-7
LW-10299	Shaft	1-11	LW-13353	Gasket	6-1
LW-10305	Gear Assy.	2-6	LW-13422	Rod Assy.	3-1
LW-10320	Sleeve	2-7	LW-13464	Clamp	7-1
LW-10321	Spring	2-7	LW-13476	Gasket	7-3
LW-10323	Gear Assy.	1-11	LW-13478	Elbow	7-7
LW-10332	Lockplate	1-5	LW-13565	Spring	3-7
LW-10327	Shaft Gear	1-11	LW-13618	Spacer	3-7
LW-10341	Insert	2-1	LW-13619	Washer	3-7
LW-10342	Body	2-3	LW-13641	Cushion	4-1
LW-10544	Alternator	5-1	LW-13643	Gear	4-1
LW-10545	Piston	3-1	LW-13671	Spring	7-1
LW-10799	Spacer	2-5	LW-13683	Bearing	1-7
LW-10888	Housing Assy.	2-1	LW-13807	Adapter Assy.	6-3
LW-10970	Strut	5-5	LW-13885	Bearing	1-7
LW-10971	Belt	5-1	LW-13896	Plug	1-9
LW-10977	Roller	1-5	LW-13904	Kit	2-7
LW-10979	Alternator Assy.	5-1	LW-13923	Bushing	3-1
LW-11147	Bracket	5-5	LW-13938	Gasket	7-1
LW-11166	Fuel Pump	2-5	LW-13944	Pipe	6-3
LW-11400	Adapter	7-1	LW-13945	Pipe	6-3
LW-11635	Shield	5-5	LW-13957	Strut	7-3
LW-11665	Thrust Button	3-5	LW-13964	Cylinder Assy.	3-3
LW-11713	Spring	1-7	LW-13976	Tube Assy.	3-9
LW-11775	Plug	3-1	LW-13977	Tube Assy.	3-9
LW-11796	Spring	3-7	LW-13978	Tube Assy.	3-9
LW-11797	Spring	3-7	LW-13991	Support	7-1
LW-11999	Reducer	2-7	LW-13997	Shield	7-1
LW-12056	Spacer	7-7	LW-13998	Manifold Assy.	7-1

NUMERICAL INDEX (CONT.)

PART NO.	PART NAME	PAGE NO.	PART NO.	PART NAME	PAGE NO.
LW-14001	Pipe	7-1	LW-15858-62-350	Clamp	7-5
LW-14002	Pipe	7-1	LW-15859	Hose	7-5
LW-14004	Pipe	7-1	LW-16012	Bolt	7-7
LW-14017	Baffle	7-3	LW-16036	Flange	7-7
LW-14018	Tube Assy.	3-7	LW-16222	Clamp	7-1
LW-14021	Shaft	1-9	LW-16266-10-13	Clamp	6-5
LW-14040	Gear Assy.	2-3	LW-16266-10-25	Clamp	6-5
LW-14045	Guide	3-3	LW-16266-10-38	Clamp	6-5
LW-14077	Pin	3-1	LW-16266-10-38	Clamp	6-7
LW-14141	Bracket	5-5	LW-16266-10-88	Clamp	7-7
LW-14142	Bracket	5-5	LW-16266-25-25	Clamp	7-5
LW-14260	Seal	2-3	LW-16266-25-50	Clamp	4-1
LW-14326	Alternator	5-1	LW-16266-25-63	Clamp	6-5
LW-14394	Hose	7-7	LW-16286	Filter Assy.	2-7
LW-14433	Cover Assy.	3-5	LW-16471	Support Assy.	1-5
LW-14445-3	Valve Assy.	7-5	LW-16572	Nipple	6-5
LW-14485	Gasket	7-1	LW-16475	Seat	3-7
LW-14488	Duct	7-5	LW-16716	Tube	7-7
LW-14528	Gasket	7-7	LW-16757	Bracket	7-3
LW-14529	Plug	1-5	LW-16759	Spacer	7-1
LW-14637	Shim	5-5	LW-16760	Spool	7-3
LW-14649	Shim	5-5	LW-16863	Trans. & Waste Assy.	7-1
LW-14650	Shim	5-5	LW-18085	Spring	1-7
LW-14666-S	Crankcase Assy.	1-1	LW-18095	Strap	7-1
LW-14714	Connector	6-6	LW-18109	Impeller	2-3
LW-14724	Bracket	7-5	LW-18110	Impeller Assy.	2-3
LW-14728	Gage Assy.	1-3	LW-18497	Valve	3-7
LW-14820	Ring	1-5	LW-18545	Hose	6-7
LW-14833	Baffle Assy.	3-9	LW-18603	Support	7-3
LW-14893	Seat	3-7	LW-18605	Mount Assy.	7-3
LW-14894	Seat	3-7	LW-18667	Pin	1-5
LW-15490	Hose	7-5	LW-18753	Guide	3-3
LW-15555	Spacer	7-3	LW-18847	Camshaft Assy.	1-5
LW-15572	Starter	5-2	LW-18854	Nozzle Assy.	6-5
LW-15592-5-04	Clamp	6-7	LW-18939	Adapter Assy.	6-5
LW-15592-5-05	Clamp	3-9	LW-18941	Adapter	7-5
LW-15592-8-08	Clamp	7-7	LW-18942	Bracket	7-5
LW-15592-8-24	Clamp	7-1	LW-18943	Fuel Injector	6-5
LW-15592-8-28	Clamp	6-3	LW-18947	Shield	7-1
LW-15592-8-28	Clamp	7-3	LW-18961	Manifold	6-7
LW-15592-8-36	Clamp	7-1	LW-18962	Manifold	6-7
LW-15628	Seal	1-7	LW-18977	Elbow	7-7
LW-15689	Pipe	7-1	LW-19227	Counterweight Assy.	1-5
LW-15690	Pipe	7-1	LW-19238	Shaft	5-5
LW-15691	Manifold Assy.	7-1	LW-19265	Pulley & Shaft Assy.	5-5
LW-15692	Bushing	7-3	LW-19298	Ring	3-3
LW-15695	Baffle Assy.	3-9	LW-19299	Ring	3-3
LW-15765	Rod End	7-1	LW-19347	Pipe	7-1
LW-15796	Sump Assy.	6-1	LW-25-0.50	Bolt	7-1
LW-15858-62-269	Clamp	7-5	LW-25-0.63	Bolt	7-1

NUMERICAL INDEX (CONT.)

PART NO.	PART NAME	PAGE NO.	PART NO.	PART NAME	PAGE NO.
LW-25-0.81	Bolt	2-3	STD-8	Washer	4-1
LW-25-0.81	Bolt	7-5	STD-8	Washer	6-1
LW-25-0.94	Bolt	2-3	STD-8	Washer	6-3
LW-25-0.94	Bolt	6-1	STD-8	Washer	7-3
LW-25-1.13	Bolt	1-13	STD-8	Washer	7-5
LW-25-1.13	Screw	7-1	STD-19	Dowel	1-9
LW-25-1.25	Bolt	2-3	STD-28	Washer	7-3
LW-25-1.25	Bolt	6-1	STD-33	Washer	1-13
LW-25-1.25	Bolt	6-3	STD-33	Washer	7-5
LW-25-1.50	Bolt	1-13	STD-33	Washer	7-7
LW-25-1.50	Bolt	7-3	STD-35	Washer	1-9
LW-25S1.50	Bolt	1-13	STD-35	Washer	1-13
LW-25-1.75	Bolt	1-13	STD-35	Washer	2-3
LW-25-1.75	Bolt	7-3	STD-35	Washer	2-5
LW-25-2.69	Bolt	7-3	STD-35	Washer	5-2
LW-31-1.16	Bolt	5-2	STD-35	Washer	5-3
LW-31-1.16	Bolt	6-5	STD-35	Washer	6-5
LW-31S-1.25	Bolt	7-3	STD-35	Washer	7-3
LW-31-1.31	Bolt	7-3	STD-63	Nut	6-5
LW-31H.75	Bolt	5-3	STD-63	Nut	7-1
LW-31H.75	Bolt	5-5	STD-68	Pin	6-5
LW-31H1.22	Bolt	5-5	STD-68	Pin	7-1
LW-31H1.75	Bolt	2-3	STD-82	Screw	6-5
LW-31SS2.50	Bolt	7-3	STD-82	Screw	7-3
LW-38-0.59	Bolt	7-5	STD-122	Washer	6-5
LW-38-1.00	Bolt	7-7	STD-148	Nipple	6-5
LW-382698	Kit	4-1	STD-160	Washer	1-13
LW-620028-2	Clip	4-1	STD-160	Washer	2-3
LW-682555-13	Magneto	4-1	STD-160	Washer	2-6
LW-684407-303	Harness	4-1	STD-160	Washer	3-5
LW-685124-118	Magneto	4-1	STD-160	Washer	6-1
MS124703	Insert	2-1	STD-160	Washer	6-3
MS13997-3	Key	3-7	STD-160	Washer	7-1
MS13998-3	Cap	3-7	STD-160	Washer	7-3
MS16625-1100	Ring	2-7	STD-160	Washer	7-5
MS16625-1125	Ring	5-5	STD-213	Seal	1-11
MS20822	Elbow	6-5	STD-251	Washer	6-5
MS20822-6	Elbow	2-5	STD-251	Washer	7-5
MS20823-6	Elbow	2-5	STD-294	Gasket	2-7
MS21333-99	Clamp	6-7	STD-303	Nut	6-6
MS29512-4	Seal	7-5	STD-375	Screw	7-5
MS29512-10	Seal	2-7	STD-425	Washer	7-5
MS29513-138	Seal	7-5	STD-425	Washer	7-7
MS3650-304	Nut	6-5	STD-475	Washer	1-9
MS51505B4S	Elbow	6-7	STD-475	Washer	1-13
MS9245-27	Pin	7-3	STD-475	Washer	2-5
STD-8	Washer	1-13	STD-475	Washer	4-1
STD-8	Washer	2-3	STD-475	Washer	5-2
STD-8	Washer	2-6	STD-475	Washer	6-5
STD-8	Washer	3-3	STD-475	Washer	7-3

NUMERICAL INDEX (CONT.)

PART NO.	PART NAME	PAGE NO.	PART NO.	PART NAME	PAGE NO.
STD-514	Dowel	1-1	STD-1874	Screw	4-1
STD-551	Plug	6-1	STD-1925	Screw	3-3
STD-557	Dowel	1-1	STD-1925	Screw	3-5
STD-596	Nut	1-13	STD-1930	Hose	6-7
STD-596	Nut	7-3	STD-2043	Nut	7-3
STD-732	Washer	5-5	STD-2044	Nut	7-1
STD-669	Washer	5-5	STD-2078	Dowel	1-5
STD-670	Nut	6-5	STD-2090	Nut	3-5
STD-670	Nut	7-5	STD-2166	Elbow	6-5
STD-670	Nut	7-7	STD-2180	Hose	3-9
STD-678	Washer	1-13	STD-2201	Washer	7-3
STD-678	Washer	7-5	STD-2217	Seal	2-6
STD-678	Washer	7-7	STD-2221	Nut	5-5
STD-684	Nipple	3-9	STD-2231	Ring	1-5
STD-690	Washer	5-3	STD-2251	Bolt	1-5
STD-713	Pin	5-3	25C-8	Stud	3-3
STD-761	Pin	5-5	25C-10	Stud	3-3
STD-798	Dowel	1-9	25C-12	Stud	2-1
STD-860	Screw	6-5	31C-12	Stud	1-1
STD-860	Screw	7-5	31C-13	Stud	1-1
STD-872	Nut	1-13	31C-13	Stud	2-1
STD-872	Nut	5-3	31C-14	Stud	6-1
STD-969	Screw	7-7	31C-16	Stud	1-1
STD-1045	Gasket	1-7	31C-19	Stud	2-1
STD-1164	Insert	6-5	38-13	Stud	1-1
STD-1223	Nipple	3-9	38-22	Stud	1-1
STD-1339	Plug	1-1	38D-17	Stud	1-1
STD-1339	Plug	2-1	50-15	Stud	1-1
STD-1339	Plug	6-7	383-B	Nut	3-5
STD-1353	Insert	3-3	1028-B	Ball	1-7
STD-1409	Nut	1-13	1102	Plug	1-1
STD-1410	Nut	1-9	1102	Plug	1-5
STD-1410	Nut	2-5	1102	Plug	3-3
STD-1410	Nut	4-1	1102	Plug	6-1
STD-1410	Nut	5-2	1102	Plug	6-5
STD-1410	Nut	6-5	1102	Plug	7-7
STD-1411	Nut	1-13	1182-U5	Spark Plug	4-1
STD-1411	Nut	2-6	1540	Plug	2-7
STD-1411	Nut	3-5	8313	Gasket	2-6
STD-1411	Nut	6-1	60430	Cover	2-6
STD-1411	Nut	7-1	60803	Strap	1-13
STD-1411	Nut	7-3	61084	Spring	1-7
STD-1420	Nut	7-3	61166	Thrust Button	1-11
STD-1623	Insert	1-1	61166	Thrust Button	2-3
STD-1727	Washer	5-3	61166	Thrust Button	2-6
STD-1727	Washer	5-5	61400	Stud	6-1
STD-1774	Pin	1-11	62388	Cap	3-7
STD-1838	Bolt	1-13	65007	Retainer	1-1
STD-1838	Bolt	5-3	66224	Gasket	6-5
STD-1838	Bolt	5-5	66670	Bushing	3-3

NUMERICAL INDEX (CONT.)

PART NO.	PART NAME	PAGE NO.	PART NO.	PART NAME	PAGE NO.
66732	Gasket	3-5	73463	Rod Assy.	3-5
68668	Spring	1-7	73464	Rod Assy.	3-5
69159	Adapter Assy.	1-11	73772	Nozzle Assy.	1-1
69164	Gasket	1-11	73810	Bushing	1-5
69260	Insert	3-3	73818	Gasket	2-1
69532	Seat	3-7	73857	Ring	3-1
69602	Connection	6-1	73944	Elbow	7-7
69603	Hose	6-3	74200	Elbow	6-5
69796	Dowel	1-1	74241	Ring	3-1
70310	Seal	3-7	74323	Strut	5-3
70455	Gasket	1-9	74494	Plate	3-5
70484	Screen	6-1	74711	Plug	1-5
71481	Ring	3-5	74887	Spacer	3-5
71549	Washer	3-5	75154	Stud	1-1
71596	Washer	2-6	75233	Seal	3-5
71610	Hook	3-9	75380	Link	5-3
71611	Retainer	3-9	75656-S	Bushing	1-5
71894	Seat	3-3	75657-S	Bushing	1-5
71903	Bushing	1-5	75767	Tube	1-3
71907	Washer	1-5	75888	Stud	2-1
71973	Gasket	6-3	75944	Valve Assy.	2-7
72026	Belt	5-1	75948	Tee	7-7
72050	Key	3-7	76036	Gasket	3-5
72053	Gasket	1-9	76118	Spacer	1-5
72059	Gasket	1-3	76119	Shield	2-1
72075	Seal	1-7	76121	Shaft Assy.	1-5
72091	Ring	1-7	76220	Stud	1-13
72155-S	Bushing	1-5	76242	Bushing	3-5
72158	Bushing	1-1	76266	Rocker Assy.	3-5
72220	Gasket	1-3	76420	Pulley	5-5
72312	Ring	1-3	76421	Pulley	5-1
72376	Elbow	7-5	76510	Gasket	2-7
72377	Elbow	2-7	76534	Shim	5-3
72378	Cover	1-9	76539	Seat	2-7
72413	Fitting	2-7	76734	Zip Strap	4-1
72626	Shaft	3-5	76734	Zip Strap	6-7
72706	Insert	3-3	76734	Zip Strap	7-7
72709	Screw	3-5	76768	Lockwasher	5-5
72710	Cover	3-5	76769	Locknut	5-5
72797	Roller	1-5	77154	Gasket	6-5
73061	Body	1-7	77467	Spring	1-7
73136	Bracket	6-5	77504	Gasket	7-5
73152	Bracket	6-5	77527	Extension	1-3
73249	Washer	1-9	77627	Elbow	7-7
73250	Washer	1-9	77808	Valve Assy.	1-7
73251	Washer	1-9	77872	Bushing	1-9
73252	Washer	1-9	77874	Gear Assy.	1-9
73383	Lockplate	5-3	77875	Gear	1-9
73383	Lockplate	5-5	78067	Elbow	2-5
73462	Rod Assy.	3-5	78290	Plunger Assy.	3-7

NUMERICAL INDEX (CONT.)

PART NO.	PART NAME	PAGE NO.	PART NO.	PART NAME	PAGE NO.
78443	Seal	1-7	07A21373	Bracket	6-5
78524	Socket	3-7	07F23147	Strut Assy.	7-3
78629	Ball Bearing	5-5	13C37314	Crankshaft Assy.	1-5
02A19416	Fitting Assy.	7-7	13C37338	Cr'shft. & Ct'wt. Assy.	1-5
02A19417	Elbow	7-7	13S19649	Gear	1-5
02A19460	Nipple	2-7	14W21696	Roller	1-5
02G19418	Nipple	7-7	32B19553	Alternator Assy.	5-1
02G21382	Nipple	6-5	36B19484	Pulley	5-1
05R19950	Rod End	6-5	46A21184	Turbocharger	7-3
06E19769-1.00	Gasket	6-1	63B21374	Manifold Assy.	6-5
07A19474	Bracket	5-3	66M19385	Clamp	7-3

Lycoming

TIO-360-C1A6D PARTS CATALOG
WIDE CYLINDER FLANGE CRANKCASE MODEL ENGINE

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Blank**