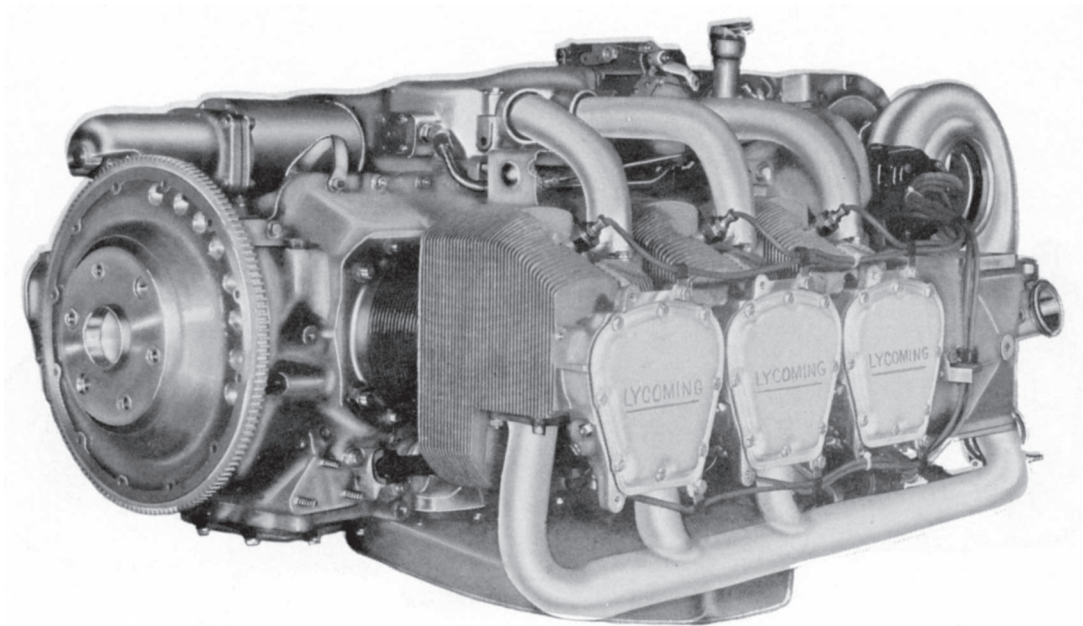


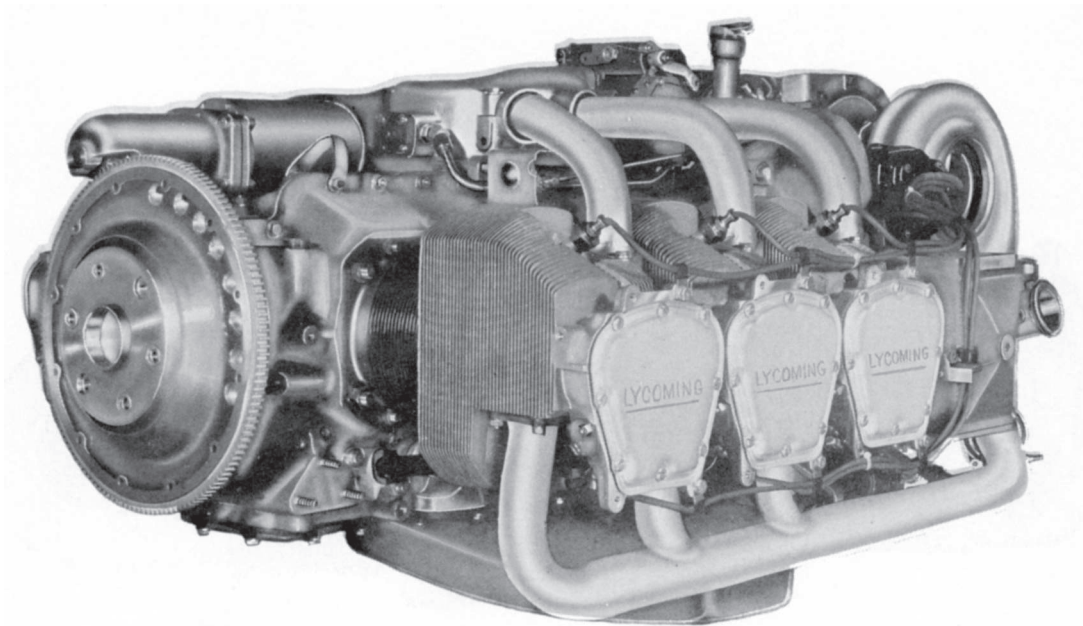
Lycoming Aircraft Engines Parts Catalog



TIO-541 Series

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TIO-541 Series

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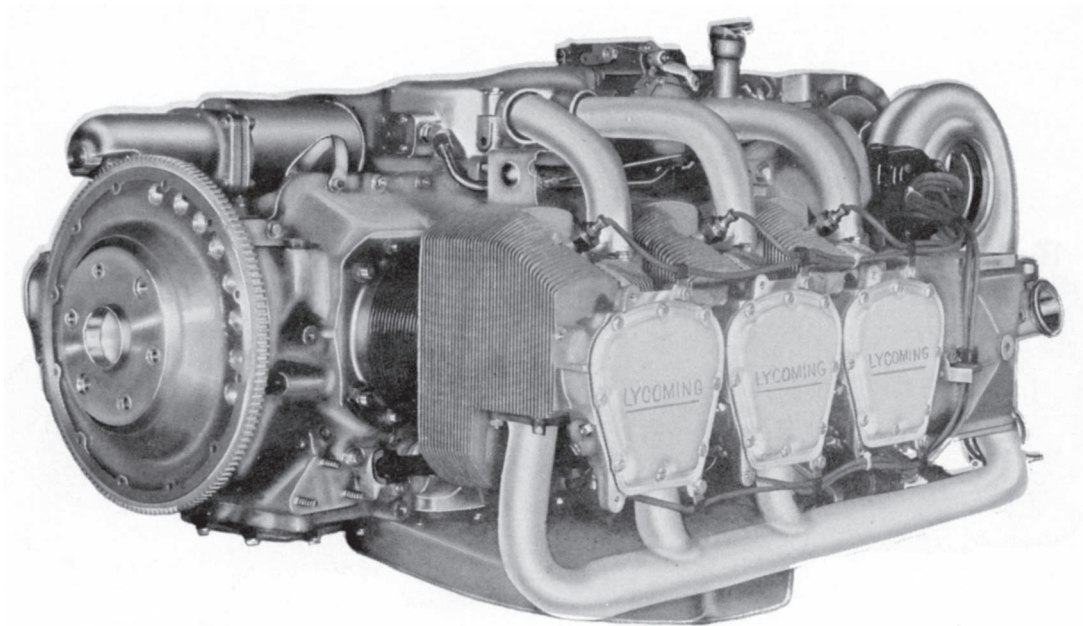
TECHNICAL PUBLICATION REVISION

REVISION No.	PUBLICATION	PUBLICATION No.	PUBLICATION DATE
PC-120-1	TIO-541 Series Parts Catalog	PC-120	Sept., 1974

The page(s) furnished herewith are intended to replace the corresponding page(s) of the publication indicated above. If additional copies of the revision are required they may be obtained from Avco Lycoming Williamsport Division. See latest edition of Service Letter No. L114 for further information on Avco Lycoming service publications.

Previous revisions to this publication	This revision consists of:-
	<p style="margin-left: 40px;">PC-120-1</p> <p style="margin-left: 40px;">Page 7-10, Figure 48</p> <p style="margin-left: 40px;">This revision to correct call out numbers on page 7-10, figure 48 only. For up-to-date information on subject Controller Assembly, see latest vendor publication of AiResearch Illustrated Parts Catalog.</p>

Lycoming Aircraft Engines Parts Catalog



TIO-541 Series

LYCOMING

INTRODUCTION

This illustrated parts catalog provides parts coverage for all current models of the Lycoming TIO-541 series aircraft engine. Part application throughout the catalog is by model designation, which may be found on the engine data plate located on the turbo controller adapter assembly.

Part Oversize and Undersize: Parts procurable oversize and undersize are so designated by suffix codes following the part number. Example: 67528 P03, P07, P12; 74801 M03, M06, M10. In these examples P stands for oversize and M stands for undersize followed by the amount over or under in thousandths of an inch.

Supersedures Section: This section lists by group sections former part numbers with their superseding part numbers and a brief description of the change.

Numerical Parts List: The use of this section provides an easy way to find a specific part in the catalog when the part number is known.

Vendor Accessories: Vendor accessories are found in the group assembly section where installed. Complete parts breakdown using vendor's part numbers is provided.

SERVICE BULLETINS, INSTRUCTIONS AND LETTERS

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

NOTE

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

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TIO-541 PARTS CATALOG

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

CRANKCASE ASSEMBLY

FIG. REF. 1	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																
			ON ALL	A1A	E1A2	E1B2	E1C2												
1	76219	CRANKCASE ASSEMBLY																	
	LW-11992	CRANKCASE ASSEMBLY										1	1	1					
2	69796,P05	DOWEL, Crankshaft bearing										8	2	2	2				
	LW-10647,P05,P10	DOWEL, Crankshaft bearing											6	6	6				
3	STD-1943	DOWEL, 11/16 OD x 9/16 ID x 11/16 in.long											3	2	2	2			
4	STD-1984	DOWEL, 11/16 OD x 11/16 in.long, solid												1	1	1			
5	38-14,P12	STUD, 3/8-16 x 1-3/4 in.long	24																
6	50-16,P03,P07,P12	STUD, 1/2-13 x 2 in.long	12																
7	50-29	STUD, 1/2-13 x 3-5/8 in.long	1																
8	67528,P03,P07,P12	STUD, 5/16-18 x 1-5/8 in.long	7																
9	68437,P03,P07,P12	STUD, 5/16-18 x 1-7/8 in.long	4																
10	61261,P03,P07,P12	STUD, 5/16-18 x 1-1/2 in.long	6																
11	69943,P03,P07,P12	STUD, 1/4-20 x 1-7/16 in.long	8																
12	25CD-18,P03,P07,P12	STUD, Drilled 1/4-20 x 2-1/4 in. long												1	6	6	6		
13	38-13,P03,P07,P12	STUD, 3/8-16 x 1-5/8 in.long												1					
14	31CD-20,P03,P07,P12	STUD, Drilled 5/16-18 x 2-1/2 in. long												1	4	4	4		
15	38-19,P03,P07,P12	STUD, 3/8-16 x 2-3/8 in.long	1																
16	68510,P03,P07,P12	STUD, 1/4-20 x 1-1/16 in.long												2	1	1	1		
17	38-26,P03,P07,P12	STUD, 3/8-16 x 3-1/4 in.long													1	1	1		
18	25C-24	STUD, 1/4-20 x 3 in.long													2	2	2		
19	25C-10,P03,P07	STUD, 1/4-20 x 1-1/2 in.long													1	1	1		
20	38-28,P03,P07,P12	STUD, 3/8-16 x 3-1/2 in.long													1	1	1		
21	38-18,P03	STUD, 3/8-16 x 2-1/4 in.long													1	1	1		
	STD-514	DOWEL, 5/16 x 1/2 long													1				
	STD-2035	DOWEL, 5/16 x 1/2 long														1	1	1	
22	STD-1339	PLUG, 1/16 x 27 pipe allen head													7	5	5	5	
23	STD-783	PLUG, 1/4 in. pipe x 7/16 in. long allen head													2	1	1	1	
24	STD-784	PLUG, 3/8 pipe allen hd.													5	4	4	4	
25	STD-405	PLUG, 1/8 pipe sq. hd.	1																
26	STD-355	PLUG, 3/4-14 NPT, allen hd.	2																
27	1102	PLUG, 1/8-27 allen hd.														2	2	2	
	AN932-7	PLUG, 1 in. pipe c'sink hex.hd.													1				
28	STD-1164	INSERT, 5/16 x 18 heli-coil x 5/8 in.long notch														3	4	4	
	STD-1173	INSERT, 1/4-20 x 1/2 in.long notch															1	1	
29	STD-1774	PIN, 1/8 in.dia.x 1/4 in.long	1																
	73063	SLEEVE, Oil relief valve													1				
30	73772	NOZZLE ASSY., Piston cooling													6				
31	67556,P03*,P07,P12	STUD, 5/16-18 x 2 in.long													4				
	STD-783	PLUG, 1/4 in.pipe x 7/16 in.long, allen head															1	1	
	AN822-4-4	ELBOW, 1/4 in.tube,90°														1	1	1	
	AN816-4	NIPPLE, 1/4 in.tube to 7/16														1	1	1	
32	78443	SEAL, Crankshaft oil														1	1	1	
	74305**	SEAL, Crankshaft oil														1			
33	74113	PLATE, Crankshaft oil seal retainer														2			
34	STD-1925	SCREW, 1/4-20 x 5/8 pan.hd.self-locking														6			

* - Driven height of stud 1-5/16 in.

** - For -A1A models not reworked to accept snap-in seal.

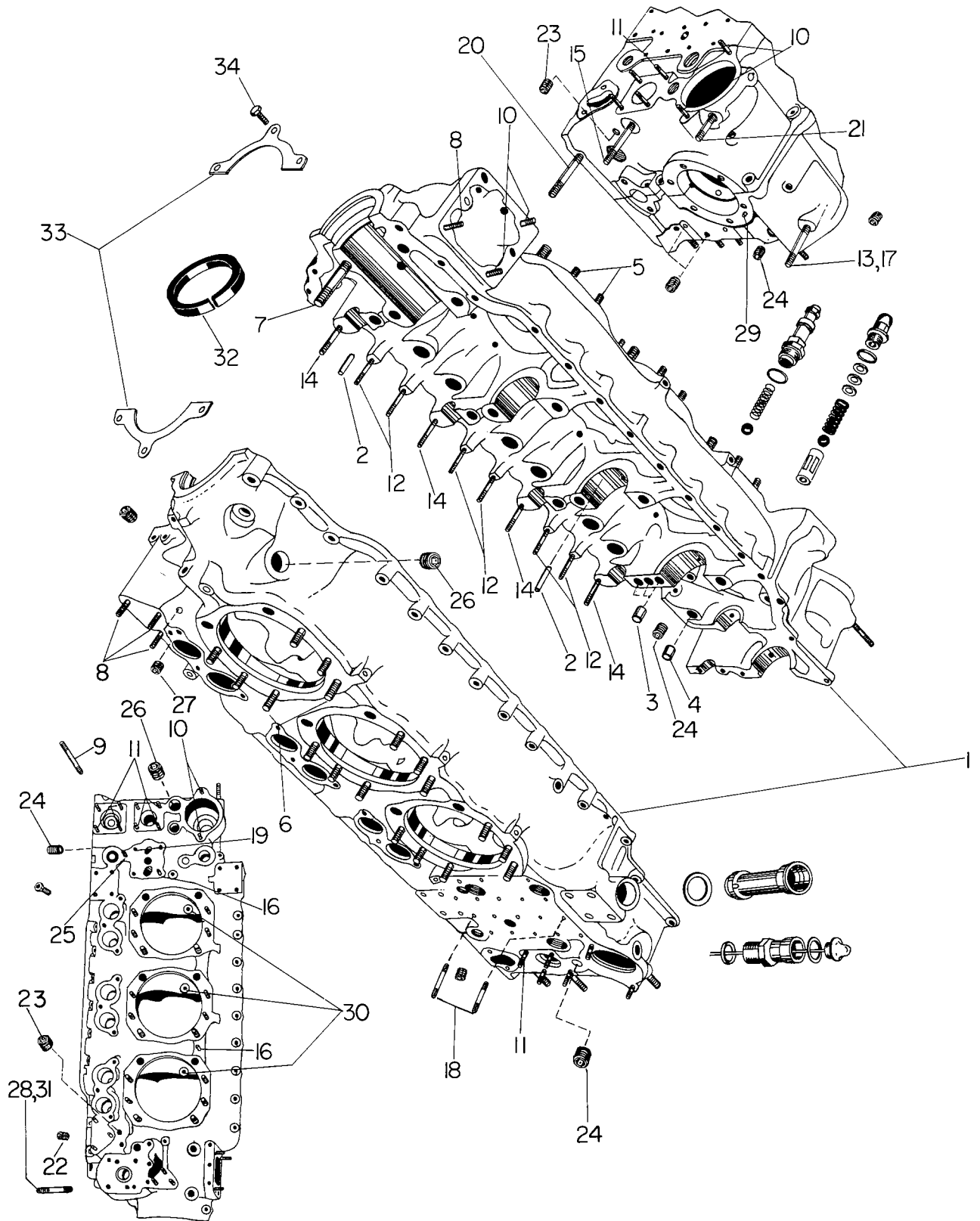


Figure 1 CRANKCASE ASSEMBLY

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TIO-541 PARTS CATALOG

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP OIL PRESSURE RELIEF VALVE AND OIL LEVEL GAGE ASSEMBLY

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																		
			ON ALL	A1A	E1A4	E1B2	E1C2														
1	1028-B	BALL, 11/16 dia.	1																		
2	LW-11138	SPRING, Oil pressure relief valve	1																		
3	STD-1045	GASKET, 1-1/4 ID x 1-1/2 OD x 3/32 annular	1																		
4	77808	VALVE ASSY., Oil Pressure relief, adjustable	1																		
5	70457	GASKET, Oil filler extension	1																		
6	75675	EXTENSION, Oil filler (short)		1																	
7	76840	EXTENSION, Oil filler 4-15/32 long			1	1	1														
8	72220	GASKET, Oil level gage		1																	
9	74935	GAGE ASSY., Oil level			1																
10	72312	RING, Seal 1.00 ID x 1/8 section				1	1	1													
NOTE																					
Some TIO-541-A1A models were built with 71714 oil relief valve plug. See Service Instruction No. 1172 for details.																					

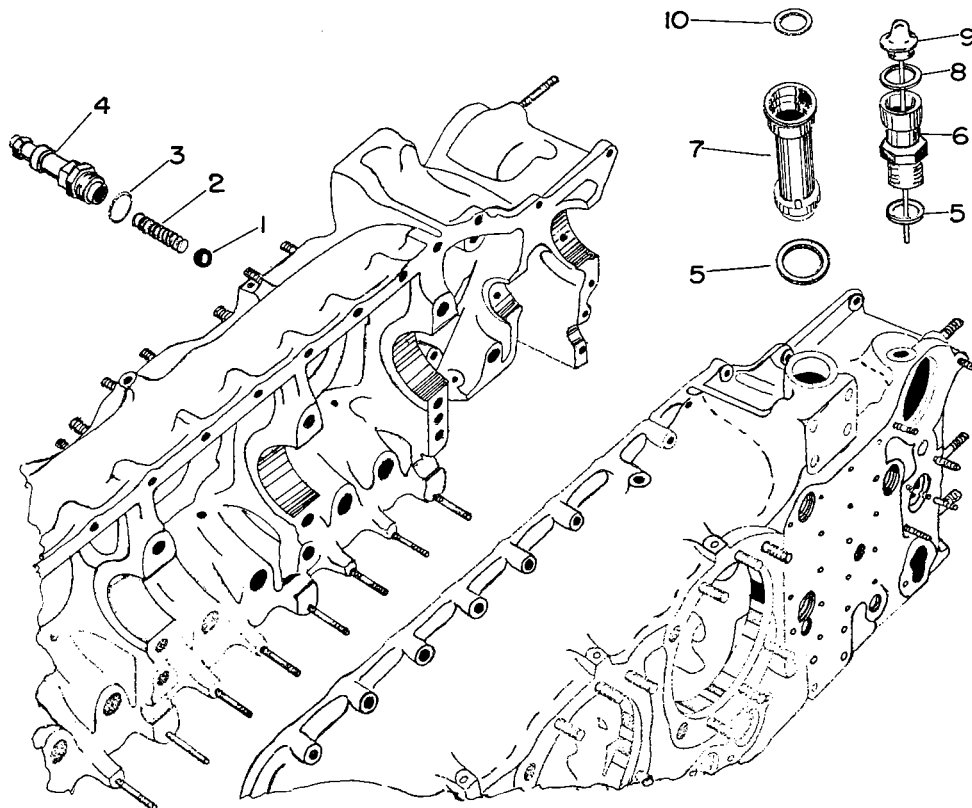


Figure 2
1-3

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																		
			ON ALL	A1A	E1A	E1A	E1A														
1	74699	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 .3	un																		
5	73250	WASHER, Thrust .4	un																		
5	73251	WASHER, Thrust .2	un																		
5	73252	WASHER, Thrust .1	un																		
6	70455	GASKET, 25/32 ID x 1-1/8 OD x .060 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	20																		
11	STD-475	WASHER, 5/16 internal lock	4																		
12	STD-1410	NUT, 5/16-18 plain	4																		

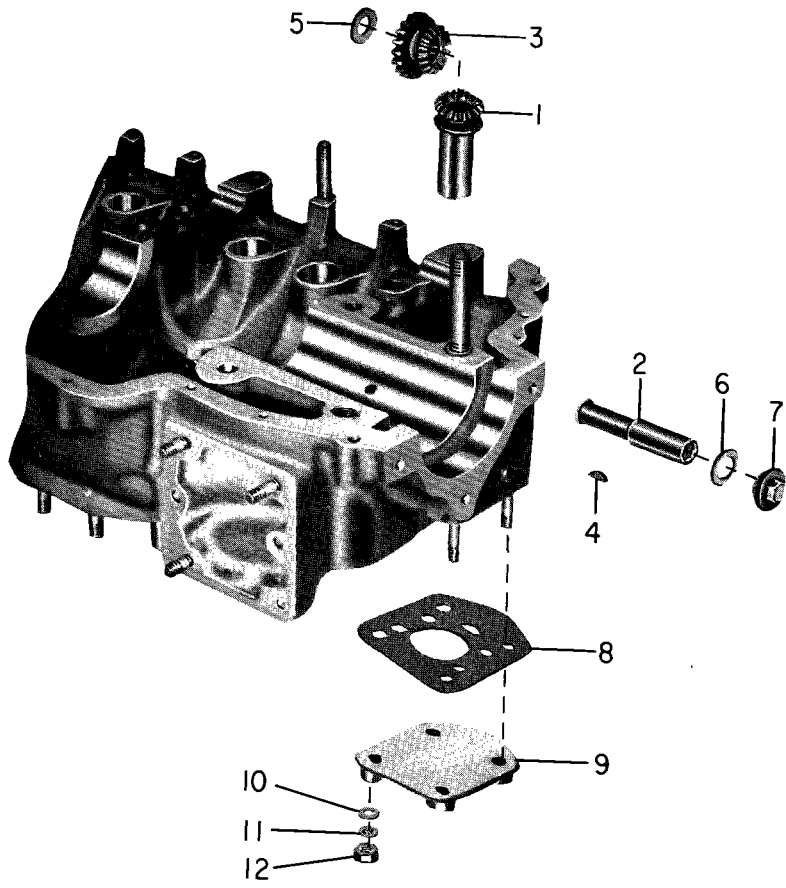


Figure 3
1-4

LYCOMING TIO-541 PARTS CATALOG

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP
CRANKSHAFT, COUNTERWEIGHT AND STARTER RING GEAR ASSEMBLY

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY												
			ON ALL	A1A	E1A	E1B	E1C								
	74955	CRANKSHAFT AND COUNTERWEIGHT ASSEMBLY				1									
	78989	CRANKSHAFT AND COUNTERWEIGHT ASSEMBLY							1	1	1				
1	74954	CRANKSHAFT ASSEMBLY				1									
	77886	CRANKSHAFT ASSEMBLY							1	1	1				
2	STD-1211	PLUG, 2.00 dia.expansion	1												
3	75656,P05	BUSHING, Prop.flange,long					4								
	72156,P05	BUSHING, Prop.flange,long							4	4	4				
4	72155,P05	BUSHING, Prop.flange,short	1												
5	75657,P05	BUSHING, Prop.flange,indexing							1						
	73811,P05	BUSHING, Prop.flange,indexing								1	1	1			
6	60945	PLUG, 1-1/4 dia.	1												
7	74768	GEAR, Crankshaft	1												
8	69641,P10,P20	DOWEL, Rear crankshaft gear	2												
9	74770	LOCKPLATE, Crankshaft gear	1												
10	STD-477	BOLT, 1/4-28 x 3/4 long,hex.hd.	2												
11	76044	COUNTERWEIGHT ASSY.	2												
	75637	COUNTERWEIGHT ASSY., Dynamic							1	1	1				
	78988	COUNTERWEIGHT ASSY., Dynamic							1	1	1				
12	71903	BUSHING, Dynamic counterweight							8	16	16	16			
13	77386	ROLLER, Dynamic counterweight, 3.5 order								2	2	2			
	77385	ROLLER, Dynamic counterweight, 4.1 order								2	2	2			
	76042	ROLLER, Dynamic counterweight, 5.1 order	2												
	76043	ROLLER, Dynamic counterweight, 6.3 order	2												
14	71907	WASHER, Dynamic counterweight							8	16	16	16			
15	71906	RING, Internal retaining							8	16	16	16			
16	74876,P05,P10, P15,P75,P125	BUSHING, Crankshaft dynamic counterweight							4	8	8	8			
17	74721	GEAR, Accessory drive							1						
	75508	GEAR, Accessory drive								1	1	1			
18	74303*	BEARING, Crankshaft							6						
	LW-11575,M3,M6, M10	BEARING, Crankshaft								6	6	6			
19	74801,M3,M6,M10	BEARING, Crankshaft,front	2												
20	75030	SUPPORT ASSY., Starter ring gear, 12/14 pitch								1					
	74977	SUPPORT ASSY., Starter ring gear, 12/14 pitch									1	1	1		
	78969**	SUPPORT ASSY., Starter ring gear, 12/14 pitch									1	1			
21	72566	GEAR, Starter ring,12/14 pitch	1												

* - Crankshaft main bearings 74303 are used only on those -A1A models still incorporating stepped main bearing dowels. See Service Instruction No. 1225.

** - With provisions for electric prop. de-icer.

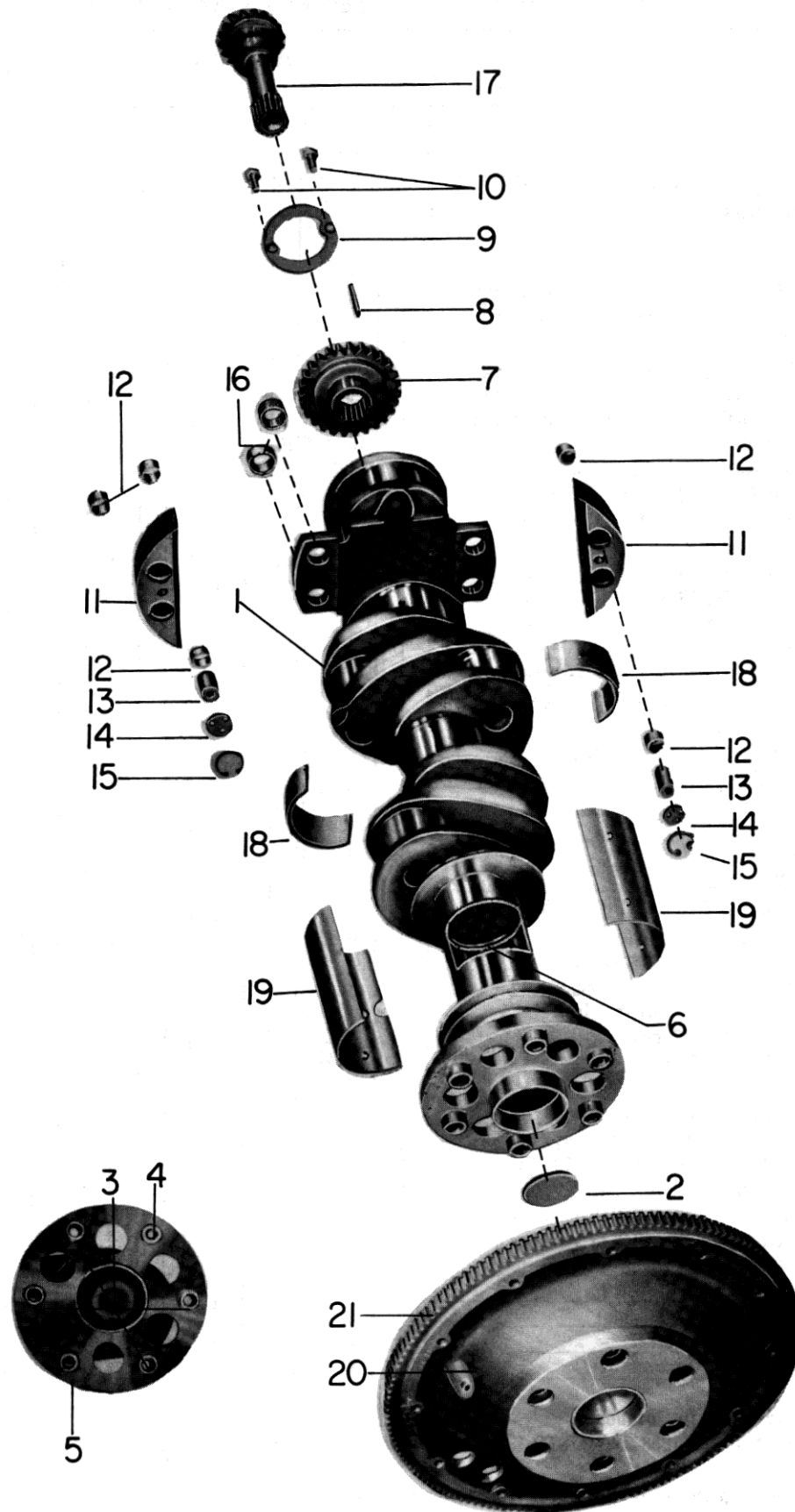


Figure 4 CRANKSHAFT, COUNTERWEIGHT AND STARTER RING GEAR ASSEMBLY

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TIO-541 PARTS CATALOG

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP MOUNTING BRACKETS LIFTING EYES AND ATTACHING PARTS

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																	
			ON ALL	A1A	E1A4	E1A4	E1A4													
	72570	BRACKET, Engine mount front			2															
	STD-35	WASHER, 5/16 plain			6															
	STD-475	WASHER, 5/16 internal lock			6															
	STD-1410	NUT, 5/16-18 plain			6															
	74354	BRACKET, Engine mount, right rear			1															
	74347	BRACKET, Engine mount, left rear			1															
1	75766	BRACKET, Engine mount, lower left				1	1	1												
2	75765	BRACKET, Engine mount, lower right				1	1	1												
3	75764	BRACKET, Engine mount, upper right				1	1	1												
4	75763	BRACKET, Engine mount, upper left				1	1	1												
5	STD-33	WASHER, 3/8 plain			8	16	16	16												
6	STD-678	WASHER, 3/8 internal lock			8	16	16	16												
	STD-1958	BOLT, 3/8-16 x 1-13/32 long,hex.hd.			6															
	STD-2109*	BOLT, 3/8-16 x 1-13/32 long,hex.hd. self-sealing				2														
7	STD-1958**	BOLT, 3/8-16 x 1-13/32 long,hex.hd.				6	6	6												
8	STD-1959**	BOLT, 3/8-16 x 1-5/8 long,hex.hd.				3	3	3												
8	STD-2108*	BOLT, 3/8-16 x 1-5/8 long,hex.hd., self-sealing				1	1	1												
9	STD-1960	BOLT, 3/8-16 x 4-9/32 long,hex.hd.				3	3	3												
9	STD-2110*	BOLT, 3/8-16 x 4-9/32 long,hex.hd., self-sealing				1	1	1												
10	STD-1961	BOLT, 3/8-16 x 6.00 long,hex.hd.				1	1	1												
10	STD-2127*	BOLT, 3/8-16 x 6.00 long,hex.hd., self-sealing				1	1	1												
	72707	EYE, Lifting rear				2														
11	LW-13147+	EYE, Lifting				1	1	1												
12	74368+	EYE, Lifting				2	2	2												
	STD-1822**	BOLT, 3/8-16 x 2-3/8 long,hex.hd.				2	2	2												
	STD-33	WASHER, 3/8 plain				3														
	STD-678	WASHER, 3/8 internal lock				3														
	STD-1946	BOLT, 3/8-16 x 7/8 long,hex.hd.				3														
13	STD-677	WASHER, 1/2 internal lock				2	2	2												
14	STD-143	WASHER, 1/2 plain				2	2	2												
15	STD-1974	NUT, 1/2-13 plain				2	2	2												
16	75688	STRAP, Lifting	1																	
17	74888	STUD, 1/2-20 x 11-1/2 long	6																	
18	75170	BOLT, 1/2-20 x 9-7/8 long	2																	
19	72075	SEAL, Oil,15/32 ID x 3/32 dia.	2																	
20	STD-1940	WASHER, 1/2 dia. (seal)	2																	
21	AN8-63A	BOLT, 1/2-20 x 6-7/16 long,hex.hd.				1														
	AN8-60A	BOLT, 1/2-20 x 6-3/32 long,hex.hd.					1	1	1											
22	STD-143	WASHER, 1/2 plain	3																	
23	STD-2090	NUT, 1/2-20	2																	
	STD-529	LOCKNUT, 1/2 palnut				2														
	77009	SUPPORT, Bracket				1														
	77010	SUPPORT, Bracket				1														

* - See Service Instruction No. 1248 for location.

** - Use STD-1822 in place of 1 STD-1958 and 1 STD-1959 when attaching LW-13147 lifting eye.

+ - LW-13147 lifting eye used in place of 74368 on upper right mount if engine is equipped with absolute pressure relief valve.

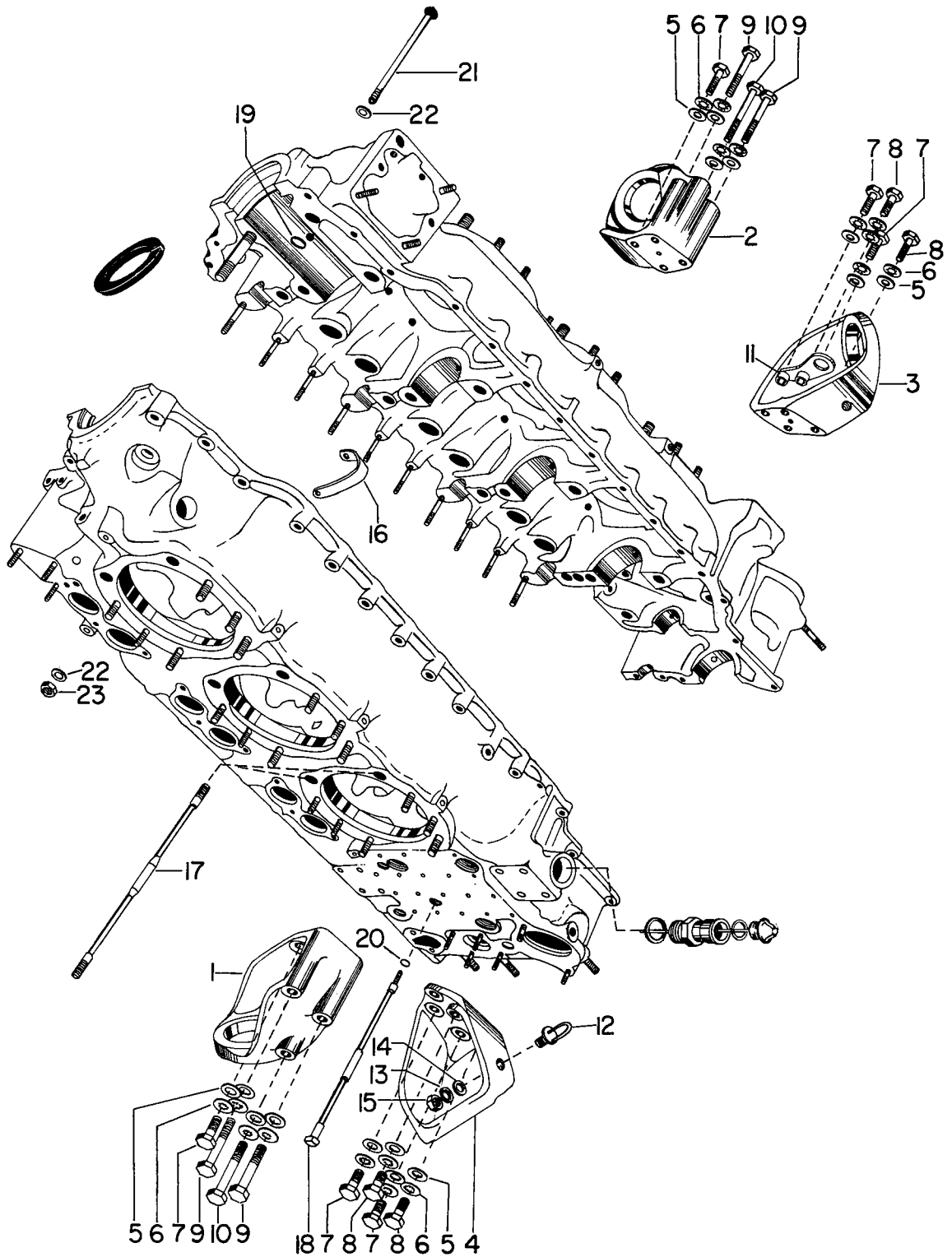


Figure 5 MOUNTING BRACKETS, LIFTING EYES AND ATTACHING PARTS

LYCOMING

TIO-541 PARTS CATALOG

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

CAMSHAFT ASSEMBLY

FIG. REF. 6	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY														
			ON ALL	A1A	E1A	E1A	E1A										
1	74349	CAMSHAFT AND GEAR ASSY.			1												
1	LW-12441	CAMSHAFT AND GEAR ASSY.				1	1	1									
2	STD-1732	RING, External retaining	2														
3	70387	GEAR, Camshaft governor drive	1														
4	STD-737	KEY, 3/32 x 1/2 Woodruff	1														
5	STD-1066	DOWEL, Stepped, 5/16 and 1/4 dia. x 13/32 long	1														
6	74769	GEAR, Camshaft	1														
7	72078	LOCKPLATE, 5/16 bolt x 1-21/64 spacing	2														
8	STD-679	BOLT, 5/16-24 x 27/64 long, hex.hd.	4														
9	74782	LIFTER, Hydraulic			12												
9	77672	LIFTER, Hydraulic				12	12	12									

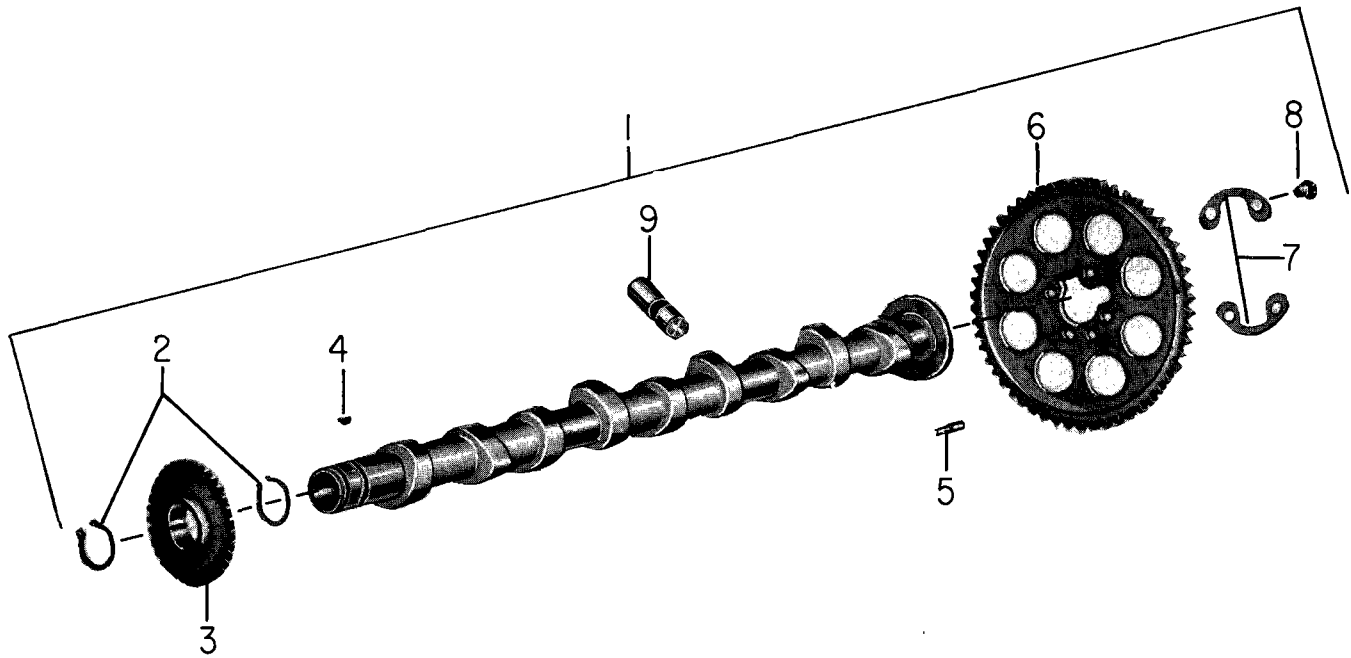


Figure 6

LYCOMING

TIO-541 PARTS CATALOG

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP CRANKCASE ATTACHING PARTS

FIG. REF. 7	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																	
			ON ALL	A1A	E1A	E1B	E1C													
1	STD-1948	BOLT, 1/4-20 x 2-1/16 long,hex.hd.			8	7	7	7												
2	STD-8	WASHER, 1/4 plain				37	40	40	40											
3	STD-160	WASHER, 1/4 internal lock				22	21	21	21											
4	STD-1411	NUT, 1/4 plain	15																	
5	STD-1414	BOLT, 1/4-20 x 1-1/2 long,hex.hd.	4																	
6	STD-2084	BOLT, 1/4-20 x 1-3/4 long,hex.hd.	2																	
7	STD-1419	BOLT, 1/4-20 x 1-1/8 long,hex.hd.	5																	
8	STD-1951	BOLT, 1/4-20 x 3-5/8 long,hex.hd.	1																	
9	STD-1952	BOLT, 1/4-20 x 2-1/8 long,hex.hd.	1																	
10	STD-1944	BOLT, 1/4-20 x 2-31/32 long,hex.hd.																		
		dr. end			4															
11	STD-1945	BOLT, 5/16-18 x 3-1/16 long,hex.hd.																		
		dr. end			2															
12	STD-1956	BOLT, 5/16-18 x 4-15/16 long,hex.hd.			1															
13	STD-1830	BOLT, 1/4-20 x 3-1/16 long,hex.hd.	1																	
14	STD-35	WASHER, 5/16 plain			7	4	4	4												
15	STD-475	WASHER, 5/16 internal lock			1															
16	STD-1410	NUT, 5/16-18 plain			1															
17	STD-1864	NUT, 1/4-20 slotted			5	6	6	6												
18	STD-1420	NUT, 5/16-18 slotted			3	4	4	4												

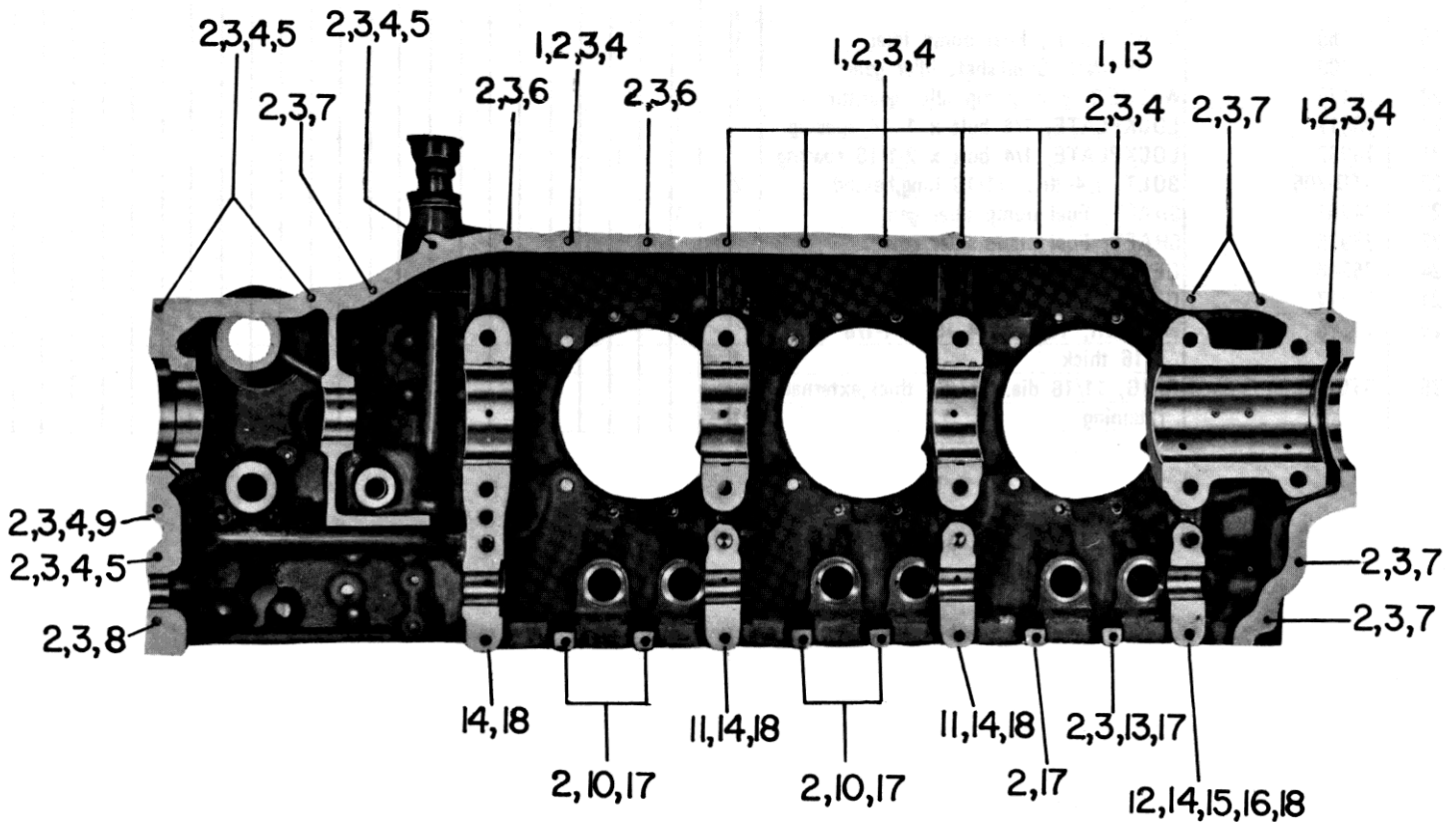


Figure 7
1-10

LYCOMING

TIO-541 PARTS CATALOG

ACCESSORY GROUP ACCESSORY DRIVES GEAR TRAIN

FIG. REF. 8	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY															
			ON ALL	A1A	E1A4	E1B4	E1C4											
1	74768	GEAR, Crankshaft	1															
2	69641	DOWEL, Crankshaft gear	2															
3	74770	LOCKPLATE, Crankshaft gear	1															
4	STD-477	BOLT, 1/4-28 x 3/4 long,hex.hd.	2															
5	74721	GEAR, Accessory drive			1													
5	75508	GEAR, Accessory drive				1	1	1										
6	74769	GEAR, Camshaft	1															
7	74857	SHAFT, Breather gear	1															
8	78034	GEAR, Breather slinger	1															
9	75222	WASHER, Thrust,5/8 ID x 1-1/4 OD x 3/32 thick	1															
10	74856	SHIELD, Breather	1															
11	71549-3	WASHER, Valve rocker,thrust	1															
12	STD-799	NUT, 5/8-18 slotted shear	1															
13	AN380C4-5	PIN, 1/8 dia.x 1-1/4 long,cotter	1															
14	74722	GEAR, Accessory drive,intermediate	1															
15	74545	GEAR, Accessory idler			1													
15	75747	GEAR, Accessory idler				1	1	1										
16	74749	SHAFTGEAR, Hydraulic and vacuum pump drive			1													
16	76996	SHAFTGEAR, Hydraulic and vacuum pump drive				1	1	1										
17	STD-1737	RING, 37/64 dia.x .035 thick,external retaining	1															
18	74755	GEAR ASSY., Fuel pump idler	1															
19	77309	BUSHING, Crankshaft idler gear	1															
20	70474	WASHER, Fuel pump idler gear,thrust	1															
21	73817	LOCKPLATE, 1/4 bolt x 1-3/4 spacing			1													
21	76967	LOCKPLATE, 1/4 bolt x 2-1/16 spacing				1	1	1										
22	STD-705	BOLT, 1/4-20 x 11/16 long,hex.hd.	2															
23	74757	SHAFT, Fuel pump idler gear			1													
23	76925	SHAFT, Fuel pump idler gear				1	1	1										
24	75248	GEAR ASSY., Fuel pump drive			1													
24	77217	GEAR ASSY., Fuel pump drive				1	1	1										
25	74926	WASHER, Thrust 3/4 ID x 1-1/8 OD x 1/16 thick	1															
26	STD-1800	RING, 11/16 dia.x 27/64 thick,external retaining	1															

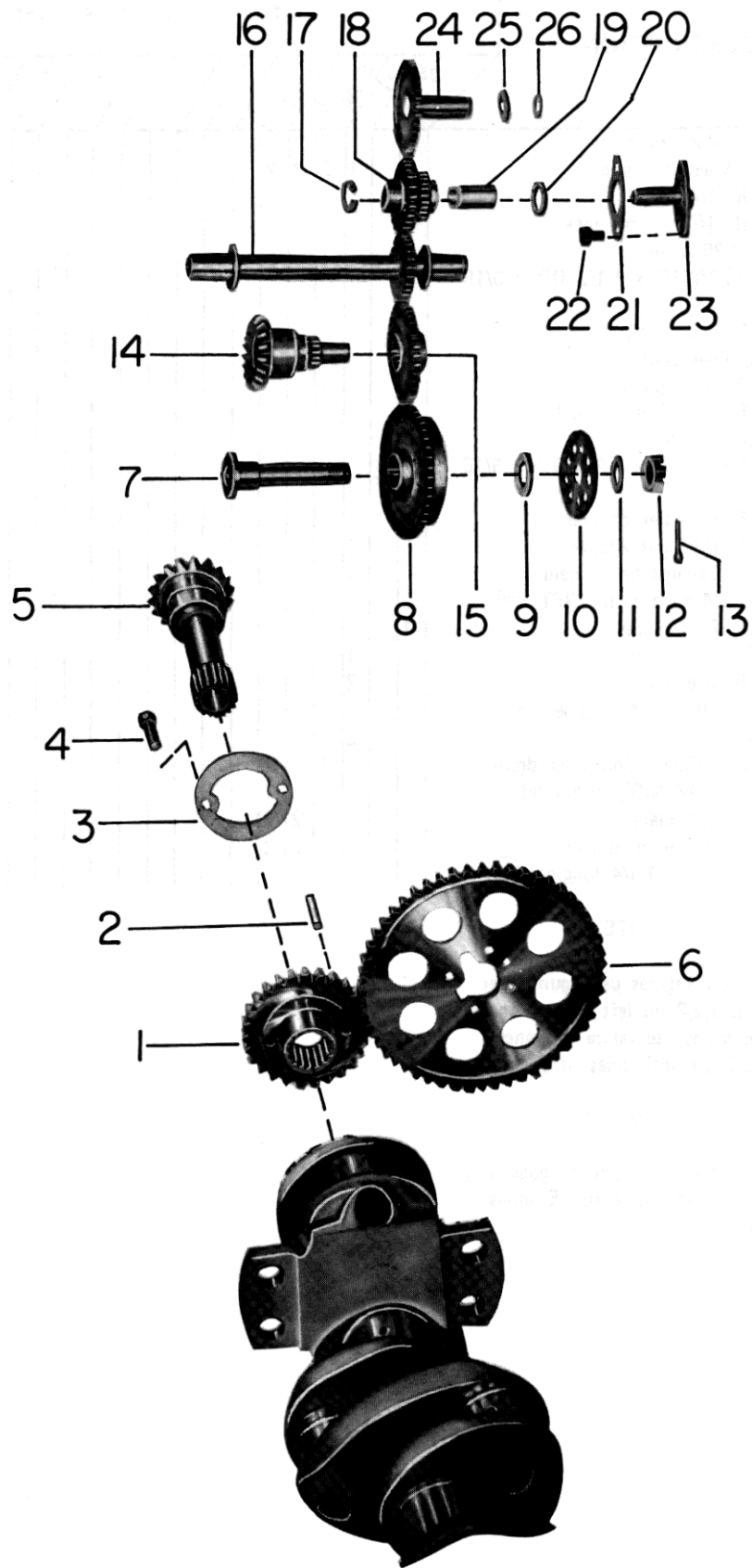


Figure 8 ACCESSORY DRIVE GEAR TRAIN

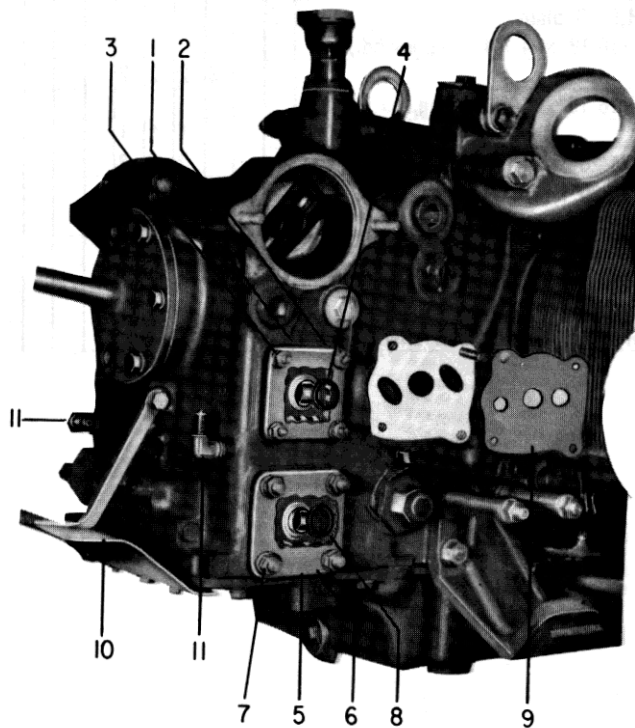
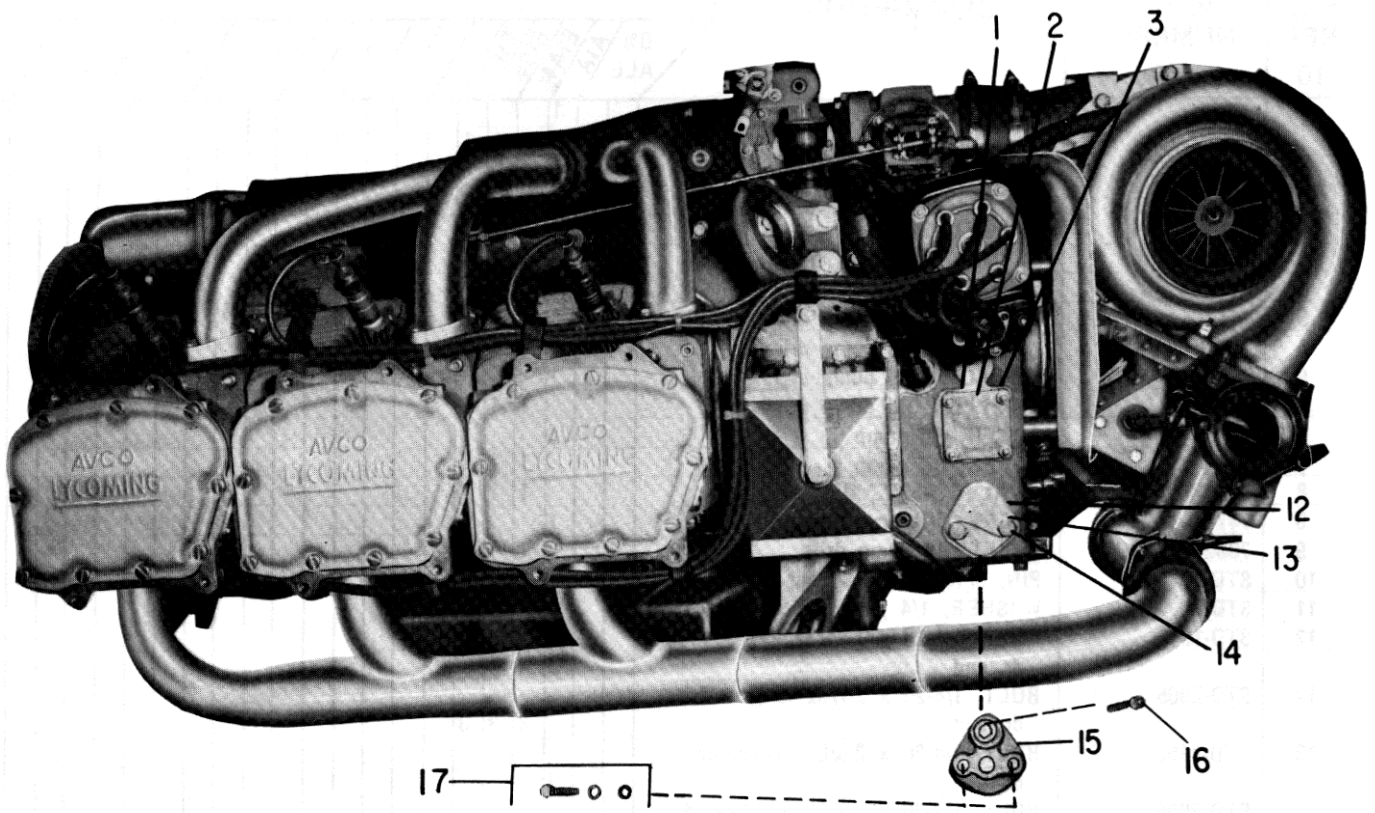


Figure 9 DRIVE COVERS

LYCOMING

TIO-541 PARTS CATALOG

ACCESSORY GROUP OIL PUMP ASSEMBLY

FIG. REF. 10	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																			
			ON ALL	A1A	E1A	E1A	E1A															
	75043	OIL PUMP ASSY.			1																	
	LW-13025	OIL PUMP ASSY.						1	1	1												
1	75346	BODY ASSY., Oil pump			1																	
1	76865	BODY ASSY., Oil pump						1	1	1												
2	75145	DOWEL, Oil pump outlet	1																			
3	76964	SHAFT, Oil pump idler	1																			
4	AN380C4-6	PIN, Cotter, 1/8 dia. x 1-1/2 long	1																			
5	74794	IMPELLER, Oil pump driven			1																	
5	76970	IMPELLER, Oil pump driven						1	1	1												
6	74795	IMPELLER, Oil pump driving			1																	
6	76971	IMPELLER, Oil pump driving						1	1	1												
7	74736	COVER, Oil pump			1																	
7	LW-13026	COVER, Oil pump						1	1	1												
8	LW-13022	VALVE ASSY., Oil relief						1	1	1												
9	74785	SHAFT, Oil pump drive			1																	
9	76824	SHAFT, Oil pump drive						1	1	1												
10	STD-1941	PIN, 3/16 dia. x 7/8 long	1																			
11	STD-8	WASHER, 1/4 plain	10																			
12	STD-1949	BOLT, 1/4-20 x 1-31/32 long, hex. hd., dr. end								3												
12	STD-2005	BOLT, 1/4-20 x 2-7/32 long, hex. hd., dr. end									3	3	3									
13	STD-1950	BOLT, 1/4-20 x 2-5/8 long, hex. hd., dr. end								2												
13	STD-2006	BOLT, 1/4-20 x 2-7/32 long, hex. hd., dr. end									2	2	2									
14	STD-1409	NUT, 1/4-20, slotted shear	5																			
15	MS28775-120	RING, Oil seal, 1.00 ID x 7/64 dia. sect.	1																			
16	74919	BAFFLE, Camshaft gear	1																			
17	STD-35	WASHER, 5/16 plain	2																			
18	STD-1955	BOLT, 5/16-18 x 4-1/4 long, hex. hd., dr. hd.								3	2	2	2									
19	STD-1991	BOLT, 5/16-18 x 4-5/16 long, hex. hd., dr. hd.									1	1	1									
20	LW-25H.75	BOLT, 1/4-20 x 3/4 long, hex. hd., dr. hd.									2	2	2									
20	STD-918	BOLT, 1/4-20 x 3/4 long, hex. hd.								2												
21	74769	GEAR, Camshaft	1																			
22	STD-8	WASHER, 1/4 plain	2																			
23	76860	SHAFT ASSY., Tachometer			1																	
24	MS16624-1043	RING, External retaining			1																	
25	74929	WASHER, Thrust, tachometer shaft			1																	

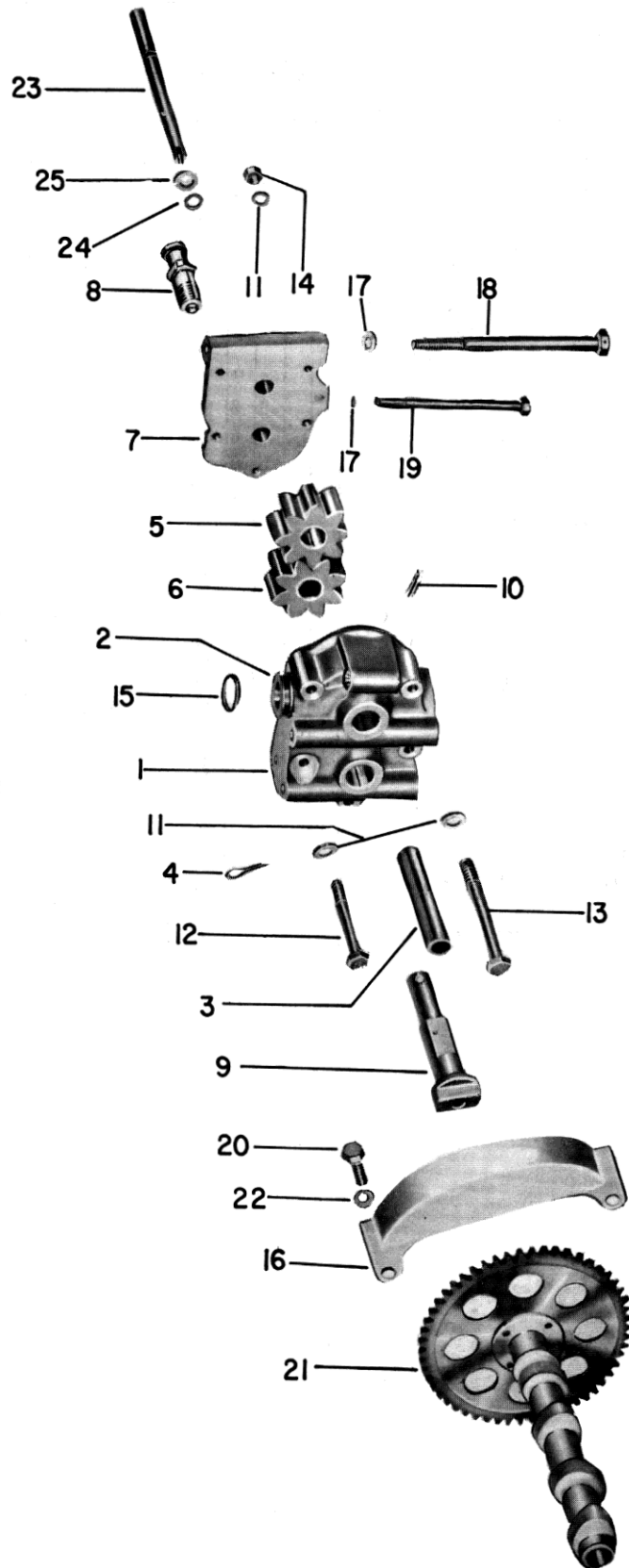


Figure 10 OIL PUMP ASSEMBLY

LYCOMING TIO-541 PARTS CATALOG

ACCESSORY GROUP COMPRESSOR DRIVE, MOUNTS, AND ATTACHING PARTS

FIG. REF. 11	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																		
			ON ALL	A1A	E1Aa	E1Ba	E1Ca														
1	78585	SHAFT, Compressor drive					1	1	1												
2	74845	GASKET, Crankcase, rear						1													
2	77707	GASKET, Crankcase, rear							1	1	1										
	76396	COVER, Crankcase, rear							1												
3	76240	ADAPTER ASSY., Compressor drive								1	1	1									
4	76230	BUSHING, 1.00 ID x 1-1/8 OD flanged									1	1	1								
5	STD-394	DOWEL, 3/16 dia.x 11/32 long									1	1	1								
6	STD-1934	SEAL, Oil, 1.00 ID x 1-5/8 OD x 3/8 wide										1	1	1							
7	STD-35	WASHER, 5/16 plain									6	6	6								
8	STD-475	WASHER, 5/16 internal lock									6	6	6								
9	LW-31-1.09	BOLT, 5/16-18 x 1-3/32 long, hex. hd.									6	6	6								
10	STD-2057	KEY, 5/32 x 5/8 Woodruff									1	1	1								
11	LW-10516	PULLEY, Compressor drive									1	1	1								
12	AN960-1216	WASHER, 49/64 ID x 1-5/16 OD x 3/32 thick										1	1	1							
13	STD-1035	NUT, 3/4-16 slotted shear										1	1	1							
14	STD-761	PIN, 3/32 dia.x 1.00 long, cotter										1	1	1							
15	LW-11904	BUSHING, Compressor mount											6								
16	LW-10961	WASHER, 1-3/8 OD x 25/64 ID x 1/8 thick											3								
17	LW-10074	PLATE, Compressor mounting											1								
18	LW-11134	RETAINER, Bushing											3								
19	STD-2091	BOLT, 3/8-24 NF x 2-7/16 long											3								
20	511	SPACER, Thrust bearing											3								
21	STD-2045	NUT, 3/8-24 self-locking											3								
22	LW-11010	SPACER, 7/8 OD x 3/8 ID x 19/32 thick											4								
23	LW-11905	SPACER, Compressor mount bushings											3								

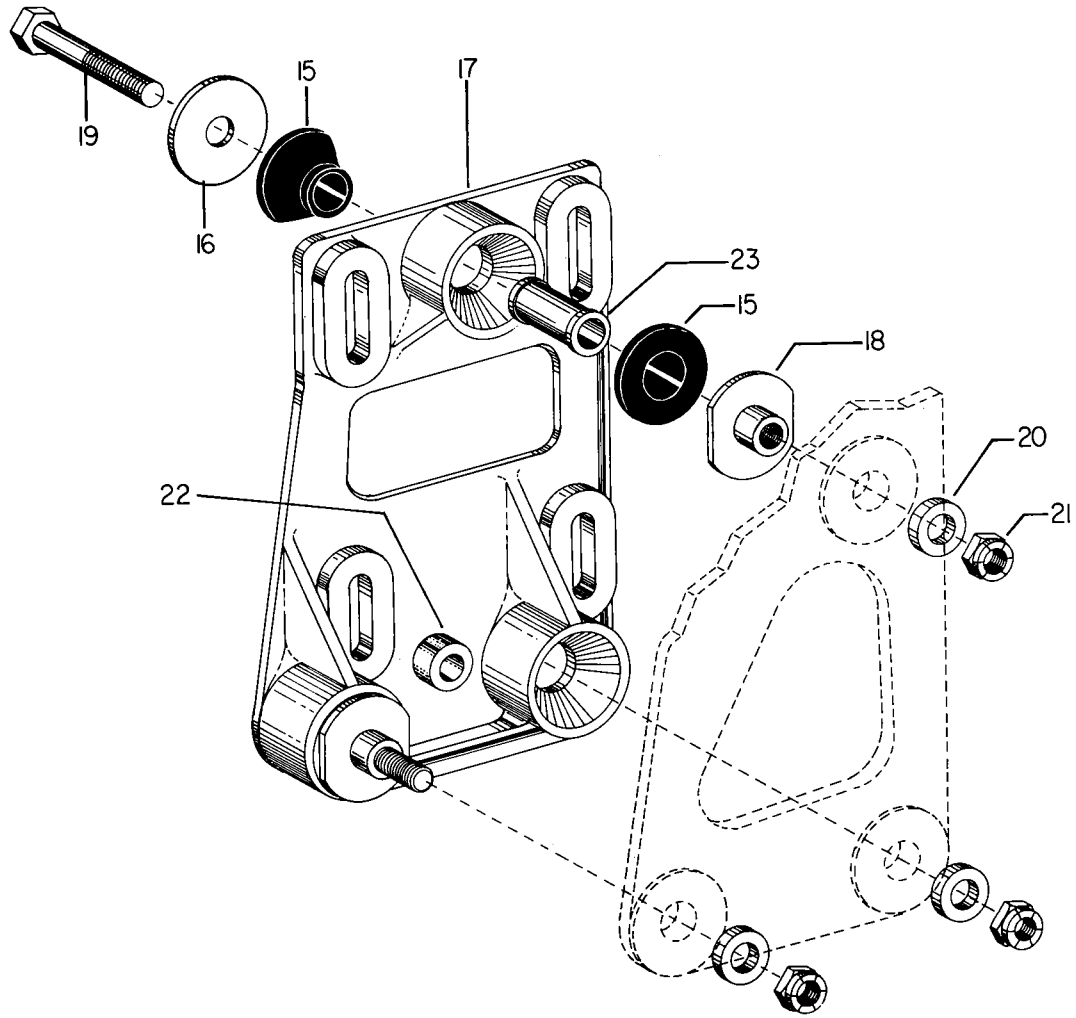
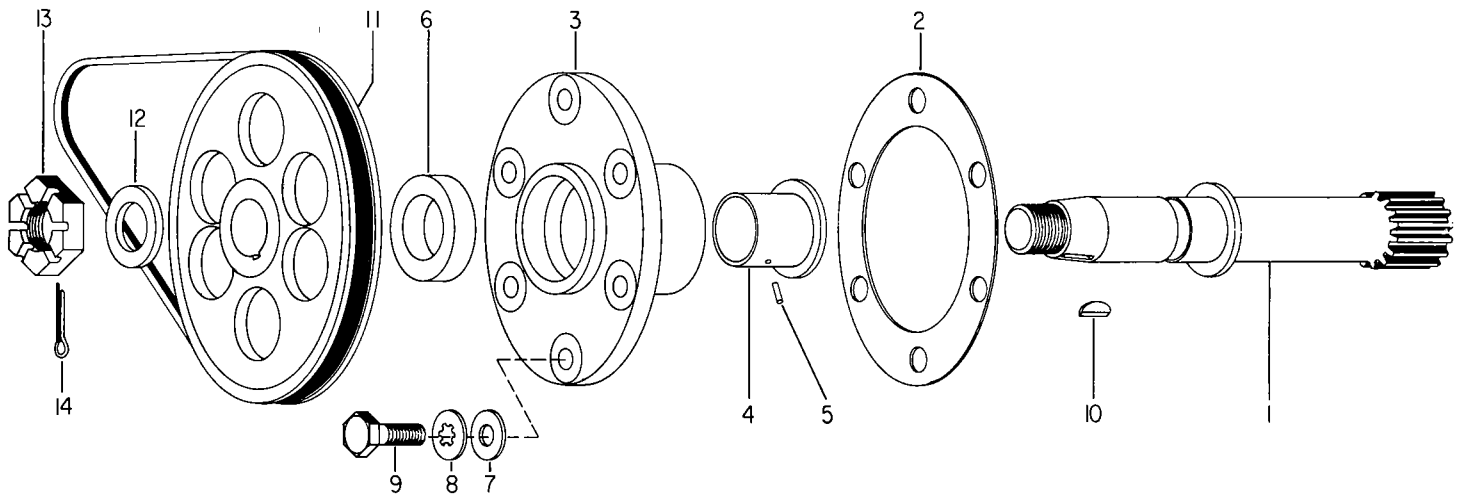


Figure 11 COMPRESSOR DRIVE MOUNTS AND ATTACHING PARTS

LYCOMING

TIO-541 PARTS CATALOG

ACCESSORY GROUP TACHOMETER DRIVE

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																			
			ON ALL	A1A	E1A2	E1B2	E1C2															
1	74800	SHAFT ASSY., Tachometer drive				1																
2	MS16624-1043	RING, Retaining,external,7/16 dia. x .025								1												
3	74929	WASHER, Thrust,tachometer shaft				1																
4	74342	GASKET, Tachometer adapter	1																			
5	77477	COVER, Tachometer,drive								1	1	1										
6	74818	ADAPTER, Tachometer								1												
7	61165	SEAL, Tachometer drive,oil								1												
8	STD-8	WASHER, 1/4 plain								2												
9	STD-160	WASHER, 1/4 internal lock	2																			
10	STD-1688	BOLT, 1/4-20 x 1.00 long,hex.hd.								2												
11	STD-1875	BOLT, 1/4-20 x 13/16 long,hex.hd.										2	2	2								
12	70455	GASKET, 25/32 ID x 1-1/8 OD x .060 thick	1																			
13	LW-13896	PLUG, 3/4-16 hex.hd.								1												
14	71651	FITTING, Breather								1												
15	75840	FITTING, Breather									1	1	1									
16	LW-13896	PLUG, 3/4-16 hex.hd.									1	1	1									

NOTE: 74800 and 74818 tach shaft assy. and adapter used with 76219 crankcase only.

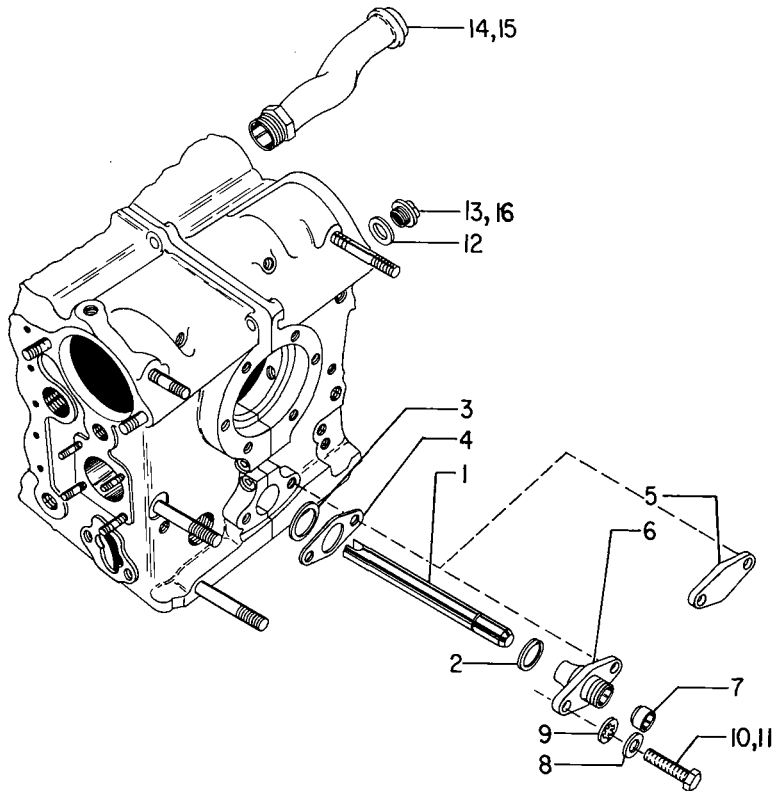


Figure 12

LYCOMING

TIO-541 PARTS CATALOG

CYLINDER, PISTON AND VALVE TRAIN CONNECTING ROD, PISTONS AND PISTON RINGS

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																	
			OW ALL	A1A	E1A	E1B	E1C													
13																				
1	LW-10646	CONNECTING ROD ASSY.	6																	
2	65819	BUSHING, Conn.rod upper	6																	
3	75060	BOLT, Conn.rod	12																	
4	LW-12186	NUT, Conn.rod bolt	12																	
5	74309	BEARING, Conn.rod	12																	
6	LW-10545	PISTON, Compression ratio 7.3:1	6																	
7	69650	PIN, Piston		6																
	LW-13444	PIN, Piston			6	6	6													
8	60828	PLUG, Piston pin		12																
	72198	PLUG, Piston pin			12	12	12													
9	74241	RING, Piston compression	12																	
10	73857	RING, Piston,oil regulating,expander type		6																
	LW-12328	RING, Piston,oil regulating			6	6	6													

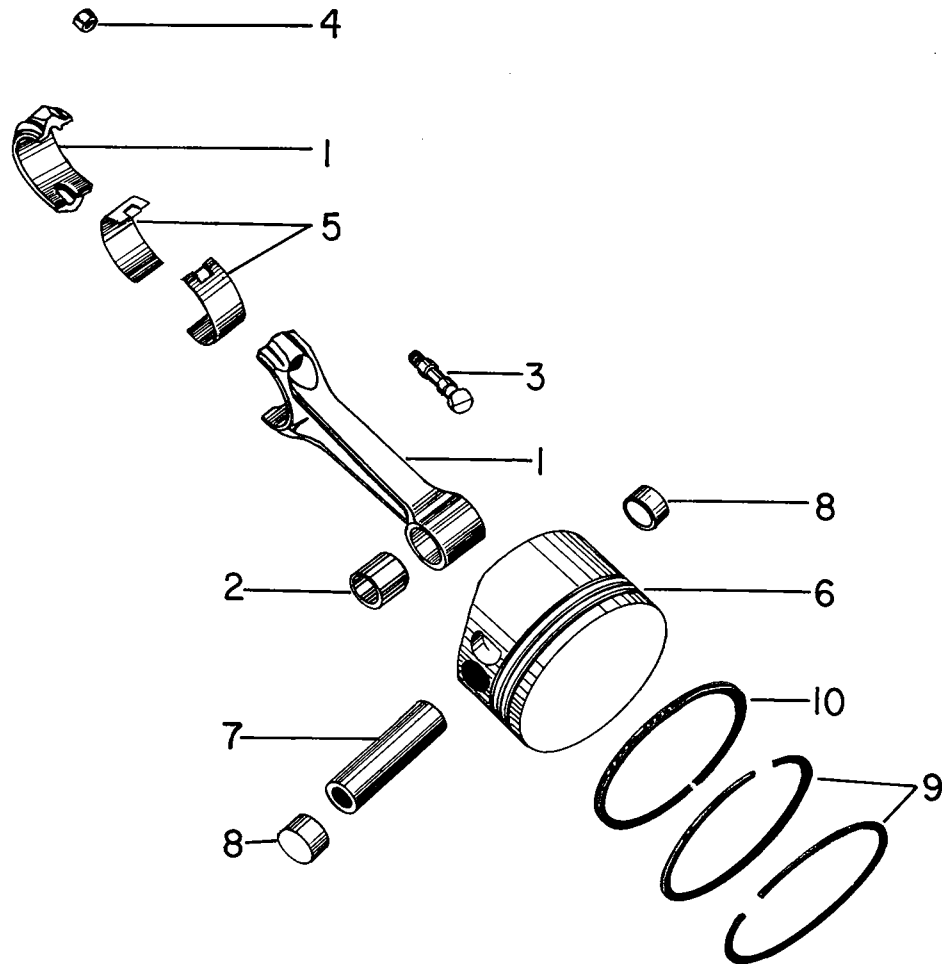


Figure 13
3-1

LYCOMING

TIO-541 PARTS CATALOG

CYLINDER, PISTON AND VALVE TRAIN CYLINDER ASSEMBLY

FIG. REF. 14	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																		
			ON ALL	A1A	E1A	E1B	E1C														
1	74781	CYLINDER AND HEAD ASSY., Nitrided, top exhaust			6																
	LW-13561*	CYLINDER AND HEAD ASSY., Nitrided, top exhaust				6	6	6													
2	72212,P05,P10,P20, P30	SEAT, Intake valve			6																
	LW-12688,P10,P20, P30	SEAT, Intake valve				6	6	6													
3	71894,P10,P20,P30	SEAT, Exhaust valve	6																		
4	LW-11956,P03,P05, P10,P20,P30	GUIDE, Valve intake			6																
	76077,P03,P05,P10, P20,P30	GUIDE, Valve intake				6	6	6													
5	LW-11958,P03,P05, P10,P20,P30	GUIDE, Valve exhaust (ni-resist)			6																
	79046,P03,P05,P10, P20,P30	GUIDE, Valve exhaust (ni-resist)				6	6	6													
6	69260,P10	INSERT, Spark plug 18-1.5 mm, long reach	12																		
7	31C-10,P03,P07, P12	STUD, 5/16-18 x 1-1/4 long			18																
8	25C-10,P03,P07	STUD, 1/4-20 x 1-1/4 long				24	24	24													
9	25C-8,P03,P07,P12	STUD, 1/4-20 x 1.00 long				12	12	12													
10	66670,P05,P10	BUSHING, Rocker shaft			18	24	24	24													
11	71451,P05,P10	BUSHING, Rocker shaft			6																
12	STD-783	PLUG, 1/4 NPT allen hd.			6																
13	1102	PLUG, 1/8 pipe x 3/4 long			6																
14	STD-1872	INSERT, 1/8-27 heli-coil NPT	6																		
15	72706	INSERT, Heli-coil 1/4-20 x 3/8 self-locking				24	12	12	12												
16	75151	STABILIZER, Cyl.hd.fins 11 teeth			6																
17	75152	STABILIZER, Cyl.hd.fins 8 teeth			6																
18	75164	STABILIZER, Cyl.hd.fins 13 teeth			6																
19	STD-2090	NUT, 1/2-20 plain	26																		
20	383-B	NUT, 3/8-24 plain	24																		
21	71481	RING, Oil seal,3/32 dia.sect.x 4-27/32 ID	6																		
	74887	SPACER, 7/8 OD x 17/32 ID x 3/8	2																		
22	STD-148	NIPPLE, Union	6																		
23	76423	BAFFLE, Center fin pack				6	6	6													
24	STD-1925	SCREW, 1/4-20 x 5/8 pan.hd.self-locking				6	6	6													
25	STD-8	WASHER, 1/4 plain				6	6	6													

* - E series engines with serial nos. 1072-59 and below were built with LW-13263 cylinder assemblies which may be serviced with the new LW-13561 assembly. See Service Instruction No. 1297.

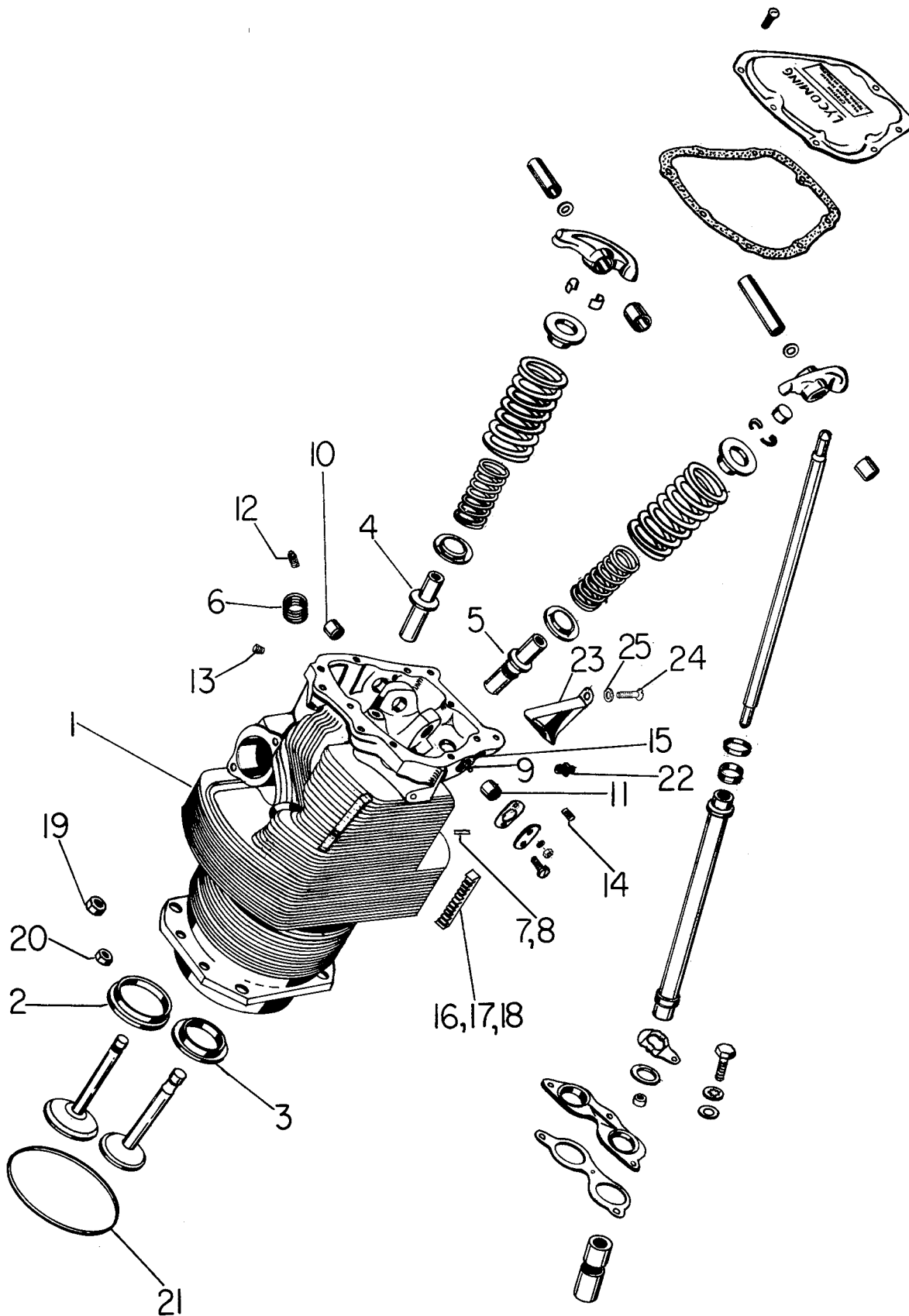


Figure 14 CYLINDER ASSEMBLY
3-3

LYCOMING

TIO-541 PARTS CATALOG

CYLINDER, PISTON AND VALVE TRAIN INTERCYLINDER BAFFLE ASSEMBLY

FIG. REF. 18	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																		
			OM ALL	A1A	E1A	E1B	E1C														
1	77426	BAFFLE ASSY., Intercylinder			1																
2	75684	BAFFLE ASSY., Intercylinder			3																
3	78692	BAFFLE ASSY., Intercylinder				4	4	4													
4	71610	HOOK, Intercylinder baffle retainer	4																		
5	71611	RETAINER, Intercylinder baffle	4																		
6	AN931-2S9	GROMMET, 1/8 ID x 9/16 OD			1																
7	76557	PLUG BUTTON, 1-5/32 OD				1	1	1													

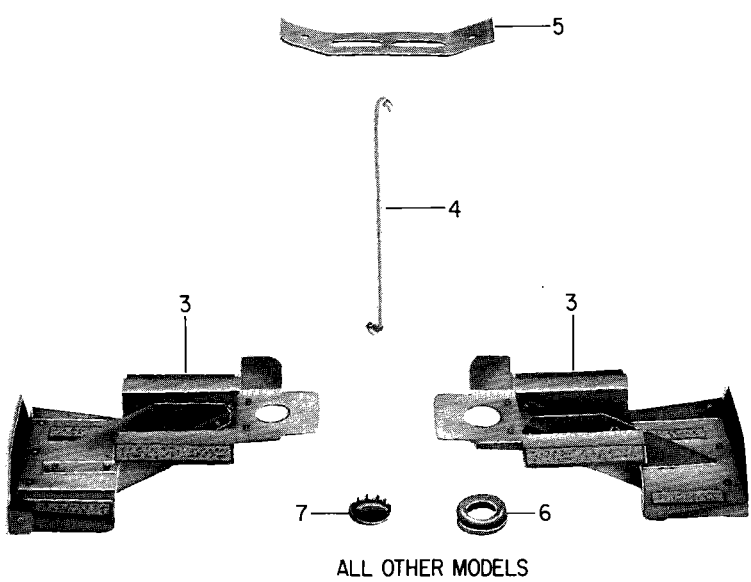
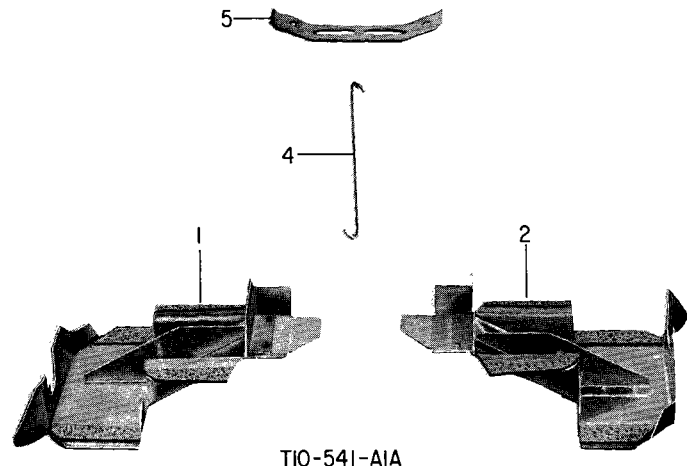


Figure 18
3-7

LYCOMING TIO-541 PARTS CATALOG

CYLINDER, PISTON AND VALVE TRAIN FUEL DRAIN SYSTEM (-A1A)

FIG. REF. 19	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY													
			ON ALL	A1A	E1A	E1B	E1C									
1	61581-30	TUBE ASSY., Cyl.no.1			1											
2	61581-36	TUBE ASSY., Cyl.no.2			1											
3	STD-853	TEE, 5/16-32,flared			1											
4	61581-37	TUBE ASSY., Fuel drain			1											
5	61581-32	TUBE ASSY., Cyl.no.3			1											
6	61581-33	TUBE ASSY., Cyl.no.4			1											
7	61581-22A	TUBE ASSY., Cyl.no.5			1											
8	61581-34	TUBE ASSY., Cyl.no.6			1											
9	61581-38	TUBE ASSY., Fuel drain			1											
10	STD-853	TEE, 5/16-32,flared			1											
11	61581-39	TUBE ASSY., Fuel drain			1											
12	77610	BUSHING, Reducer,7/16-20 int.thd. to 5/16-32			1											
13	LW-12098-1-092	TUBE ASSY., Fuel manifold to nozzle cylinder			1											
14	72815	BRACKET, Support clamp			1											
15	72036	CLIP, 3/4 ID for 3/16 dia.screw			7											
16	73650	CLIP, 1/4 ID for 1/4 dia.screw (cushion type)			14											
17	STD-860	SCREW, No.10-32 x 5/8 long			9											
18	STD-425	WASHER, No.10 plain			7											
19	STD-670	NUT, No.10 self-locking			10											
20	75085	GASKET, Fuel drain check valve			1											
21	75579	HOUSING ASSY., Fuel drain check valve			2											
22	AN790-2	ELBOW, Union 90°			2											
23	AN791-2	ELBOW, Union 45°			2											
24	STD-148	NIPPLE, Union			2											
25	75087	SPRING, Fuel drain check valve			1											
26	LW-13344	PLUNGER, Fuel drain check valve			1											
27	STD-1006	SEAL, "O" ring 7/16 ID x .10 dia.			1											
28	1102	PLUG, 1/8 pipe x 3/8 long (allen)			1											
29	STD-8	WASHER, 1/4 plain			2											
29	STD-160	WASHER, 1/4 internal lock			2											
29	STD-1411	NUT, 1/4 plain			1											
29	STD-1646	BOLT, 1/4-20 x 2.00 long hex.hd.			1											
30	STD-1499	BOLT, 1/4-20 x 1/2 long,hex.hd.			1											
30	STD-1411	NUT, 1/4 plain			1											
30	STD-160	WASHER, 1/4 internal lock			1											

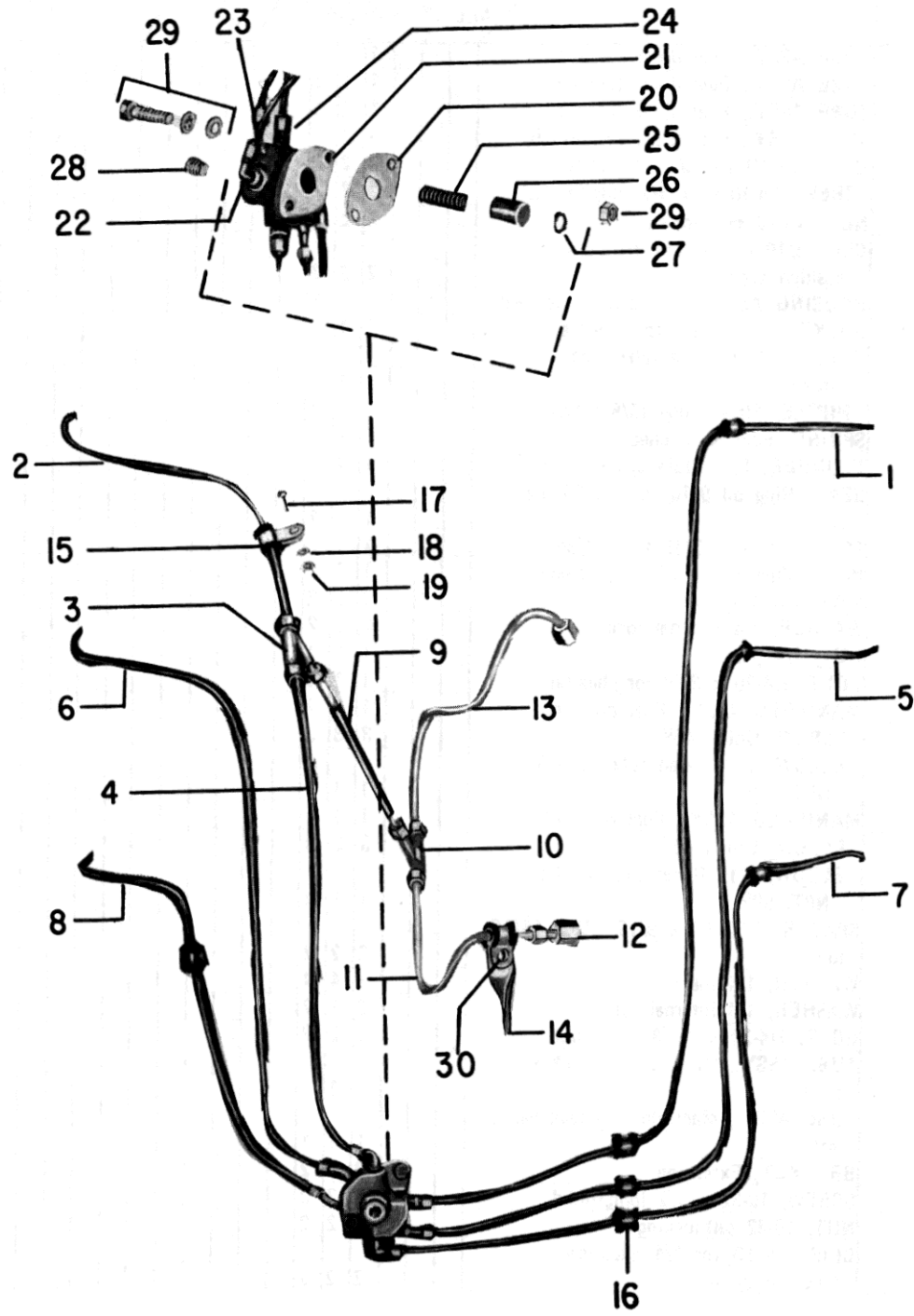


Figure 19 FUEL DRAIN SYSTEM (-A1A)

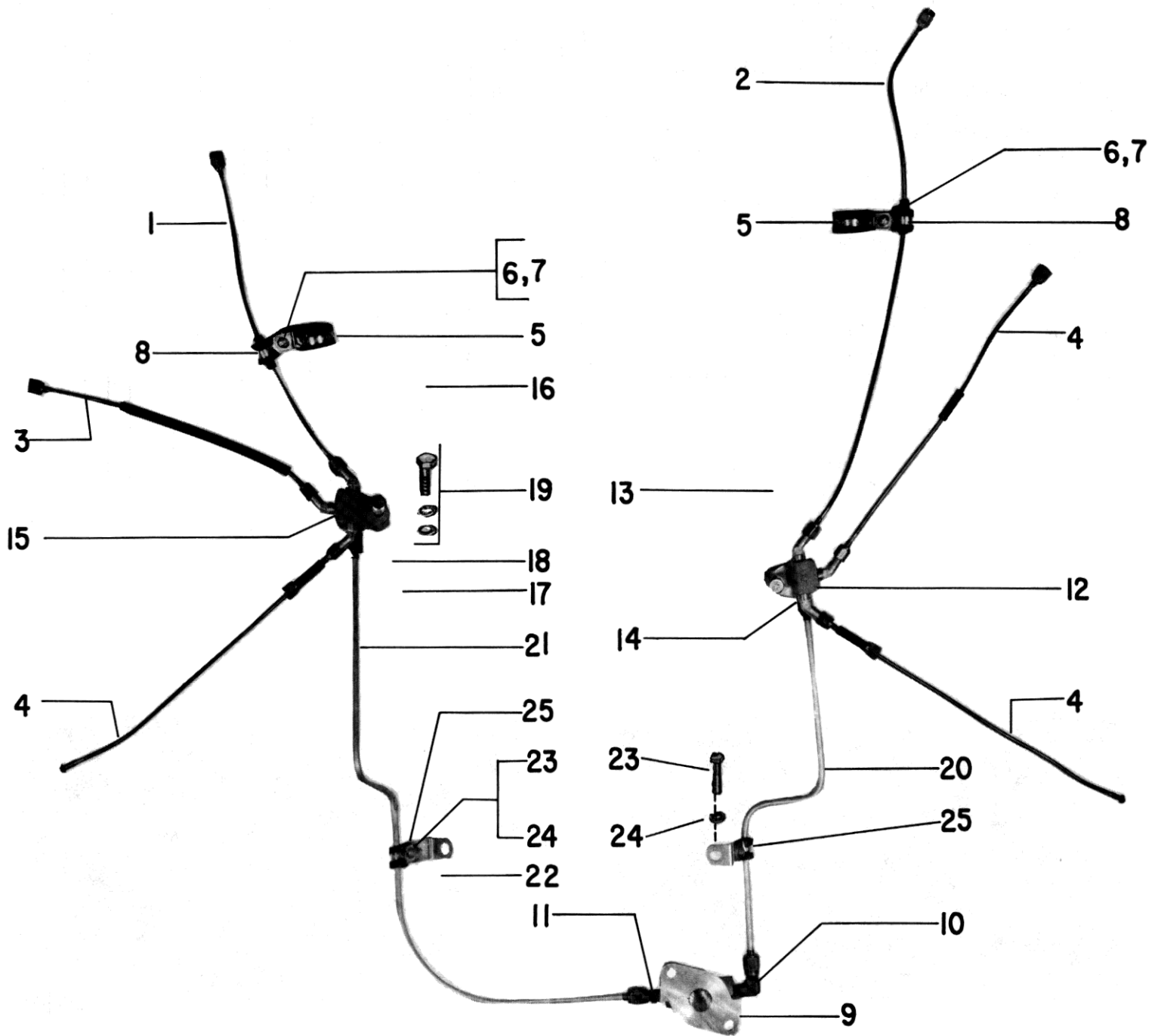


Figure 20 FUEL DRAIN SYSTEM (-E1A4, -E1B4, -E1C4)

LYCOMING

TIO-541 PARTS CATALOG

CYLINDER, PISTON AND VALVE TRAIN EXTERNAL PARTS FOR OIL COOLED EXHAUST VALVE GUIDES

FIG. REF. 21	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY				
			ON ALL	A1A	E1A	E1B	E1C
1	LW-10042	CONNECTOR, Exhaust valve oil line (in cylinder heads)			6	6	6
2	LW-10045	ELBOW, 90°, 1/4 tube to 7/16-20 self seat st. thd.			2	2	2
3	LW-10044	TEE, 1/4 tube with 7/16 self seat			4	4	4
4	LW-12876-4-066	HOSE ASSY.			4	4	4
5	LW-12876-4-224	HOSE ASSY.			1	1	1
6	LW-12798-4-204	HOSE ASSY.			1	1	1
7	AN931-11S16	GROMMET, 11/16 ID x 1-5/16 OD x 7/16 wide			2	2	2
8	73751	CLAMP, 5/8 ID for 1/4 screw			3	3	3
9	72815	BRACKET, 90° twist			1	1	1
10	STD-969	SCREW, No.10-32 x 1/2 long,fill.hd.			4	4	4
11	STD-425	WASHER, No.10 plain			4	4	4
12	STD-670	NUT, No.10,self-locking			5	5	5
13	76734	ZIP STRAP			1	1	1
14	LW-10043	BRACKET, Extension			1	1	1
15	74117	BRACKET, Angle,90°			1	1	1
16	STD-29	SCREW, No.10-32 x 3/8 long,rd.hd.			1	1	1
NOTE							
Figure reference nos. 7 thru 16 are shipped loose.							

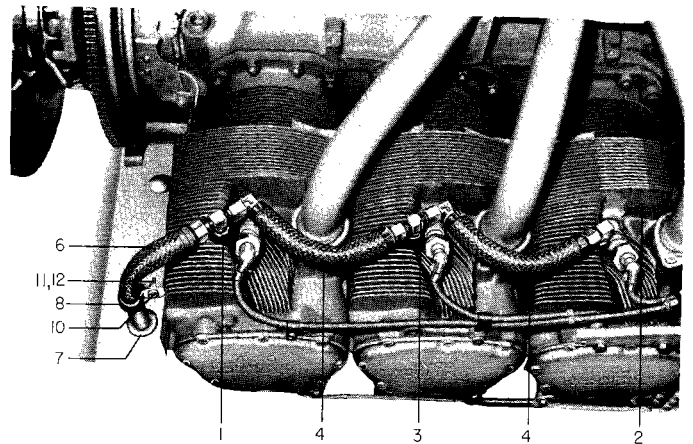
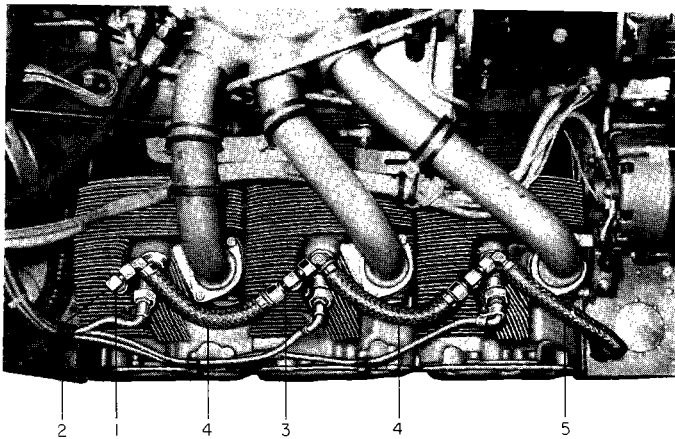


Figure 21
3-12

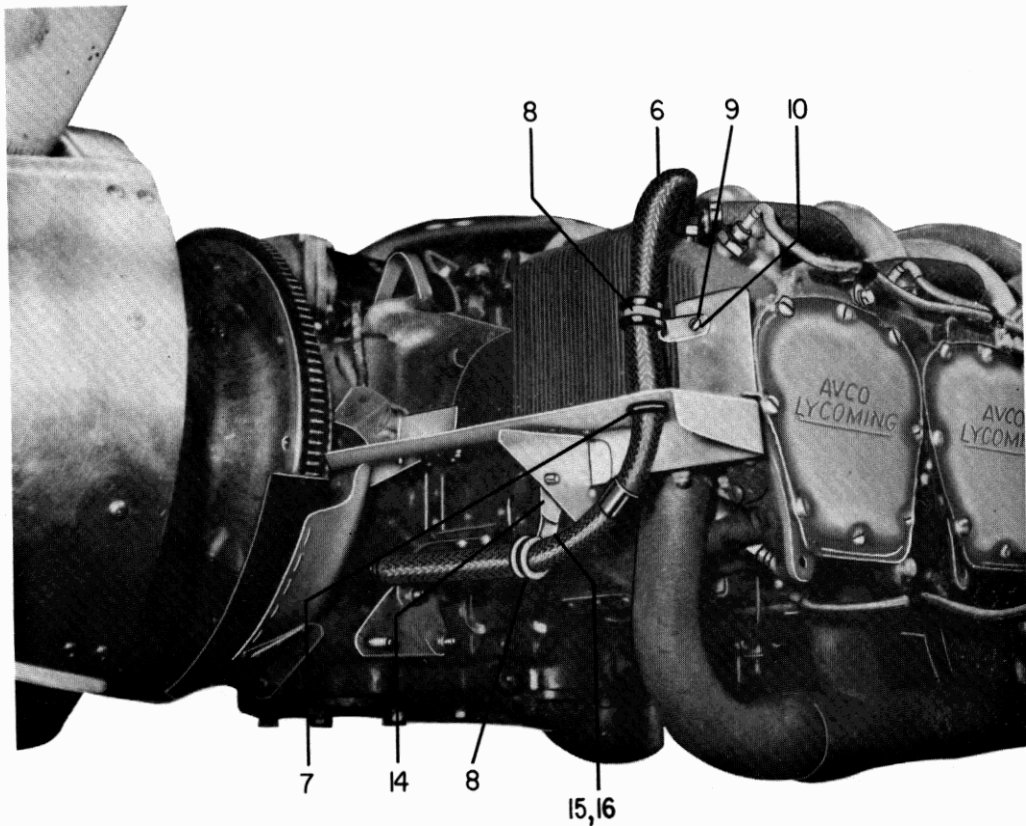
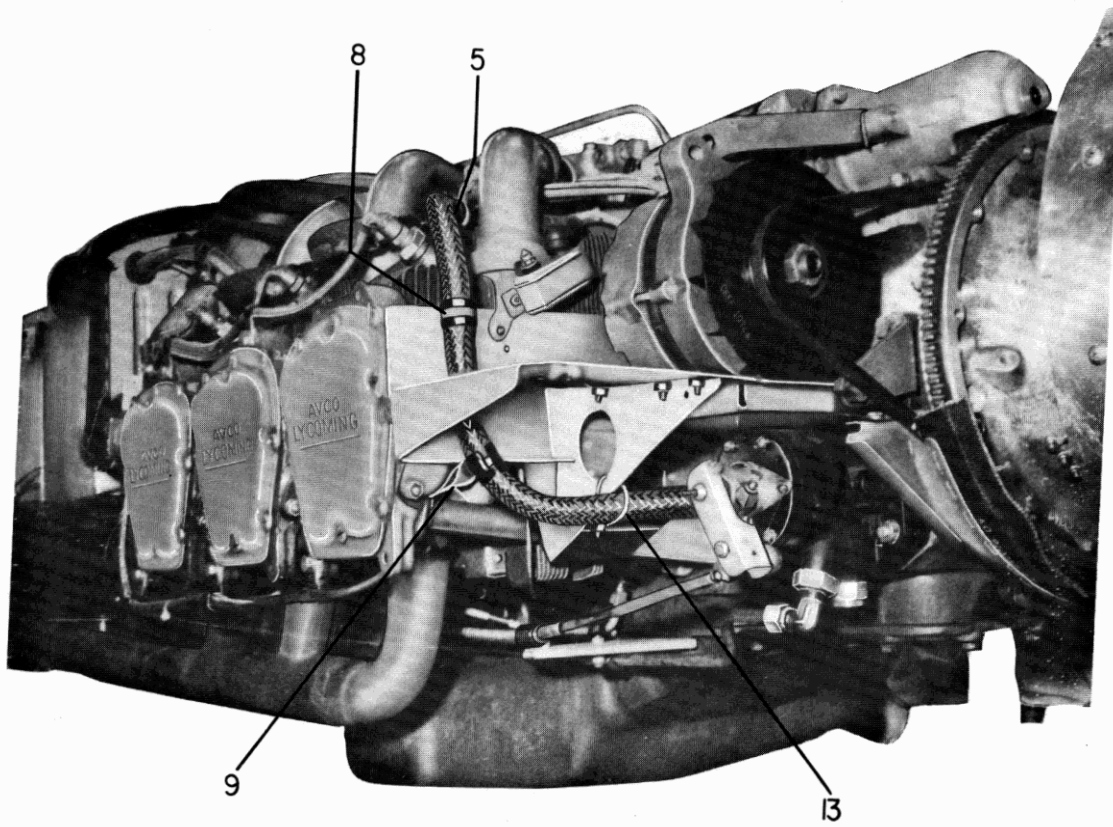


Figure 21 EXTERNAL PARTS FOR OIL COOLED EXHAUST VALVE GUIDES

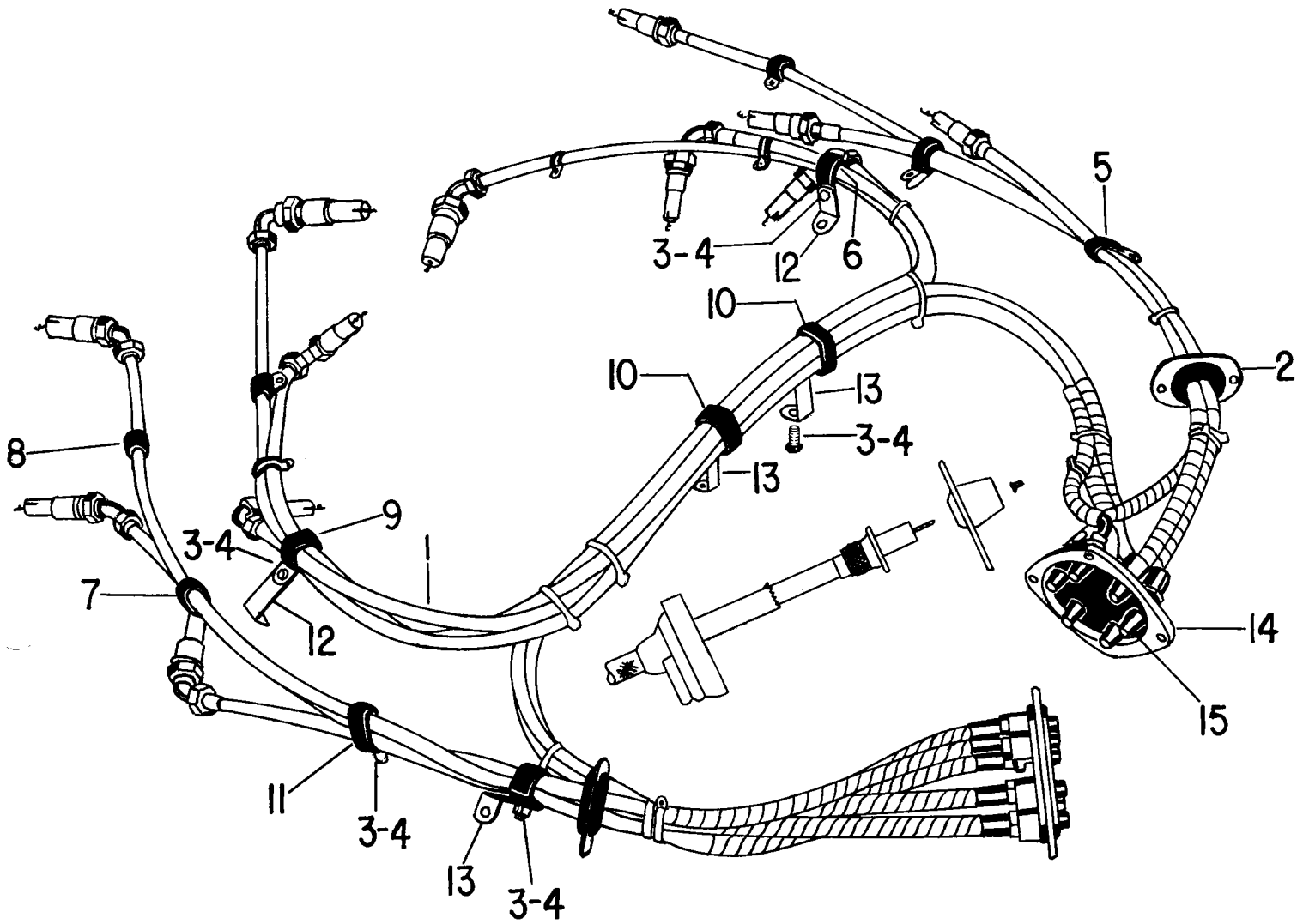


Figure 24 HARNESS ASSEMBLY

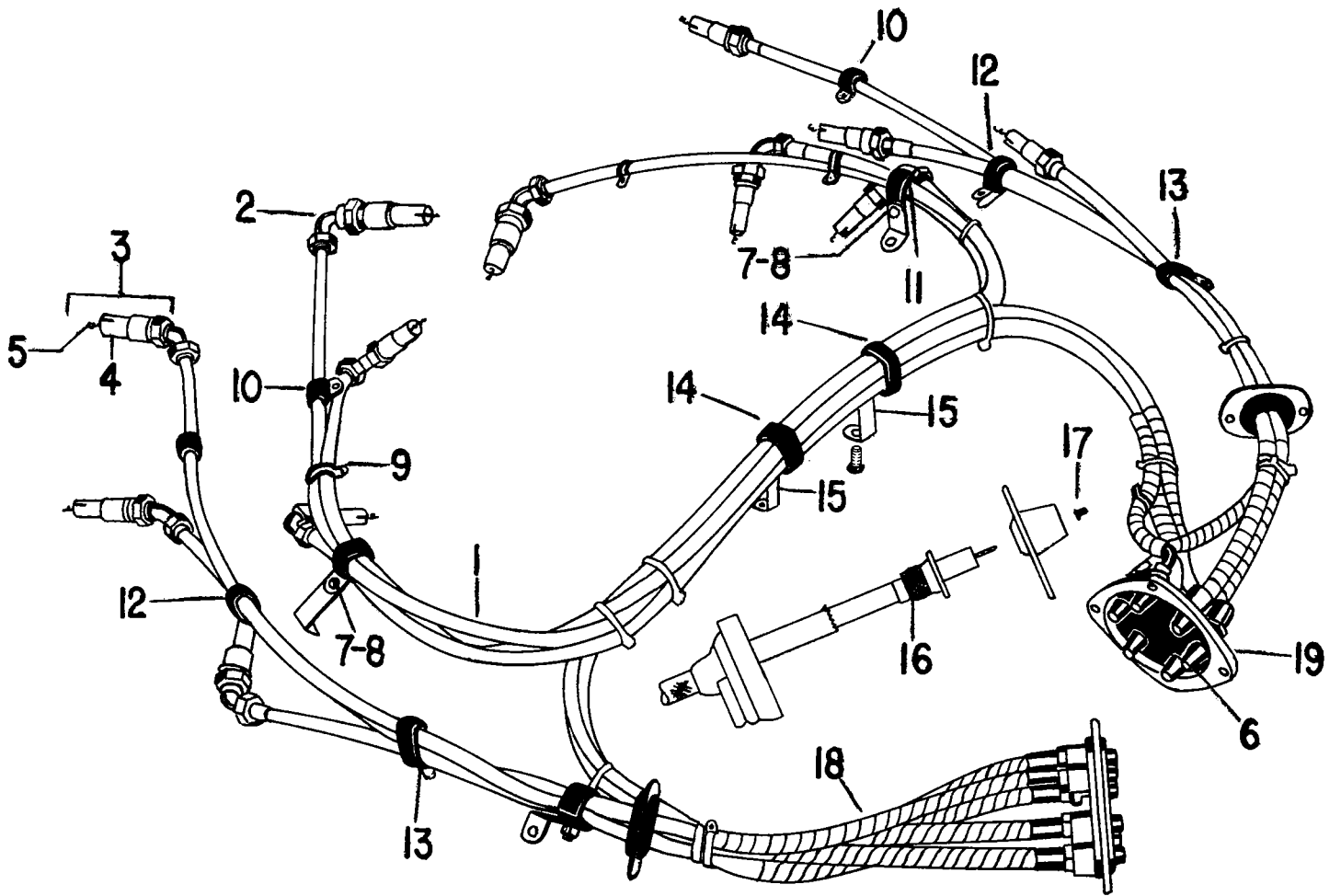


Figure 25 HARNESS ASSEMBLY
4-7

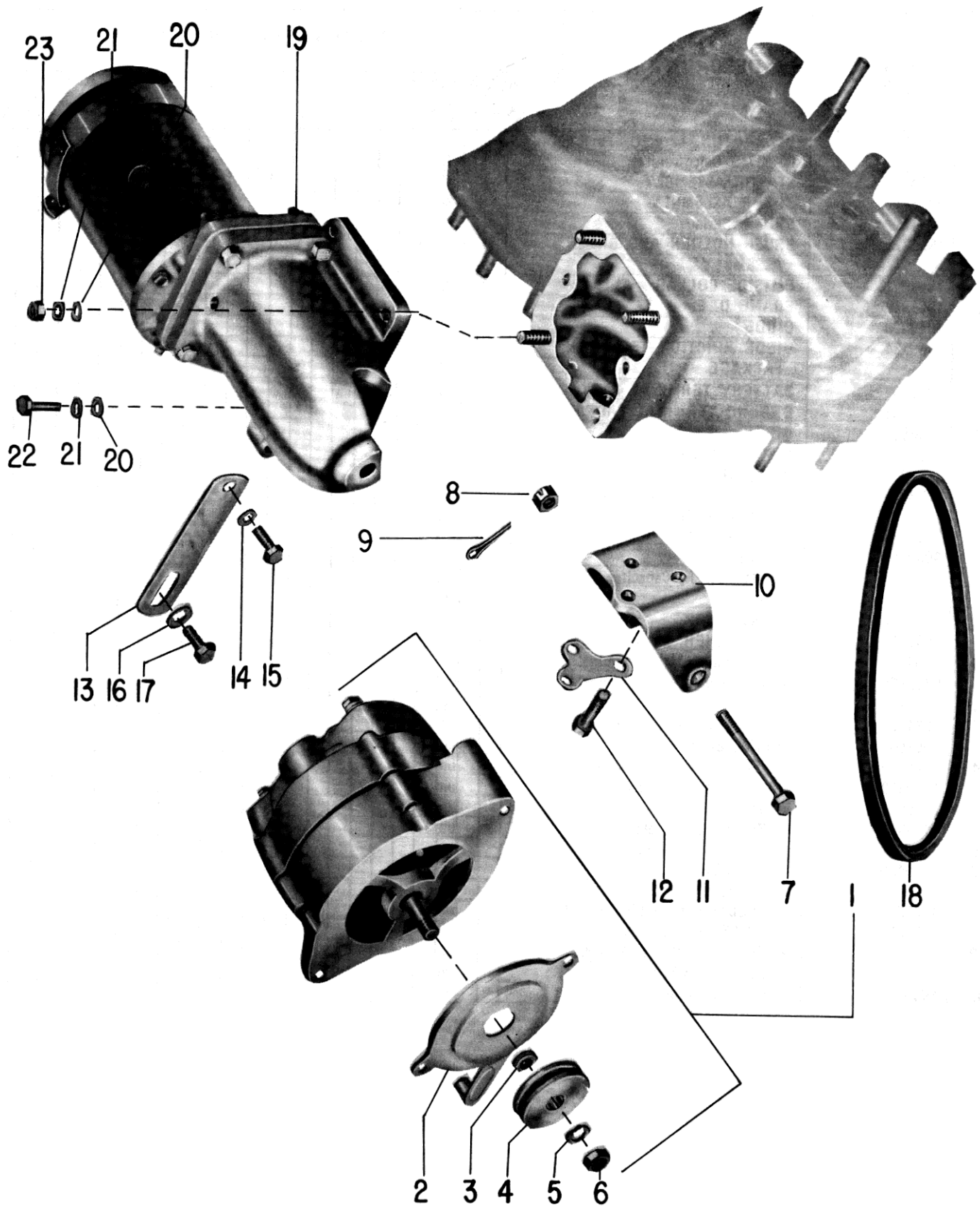


Figure 26 ALTERNATOR, STARTER, SWITCH AND REGULATOR
5-2

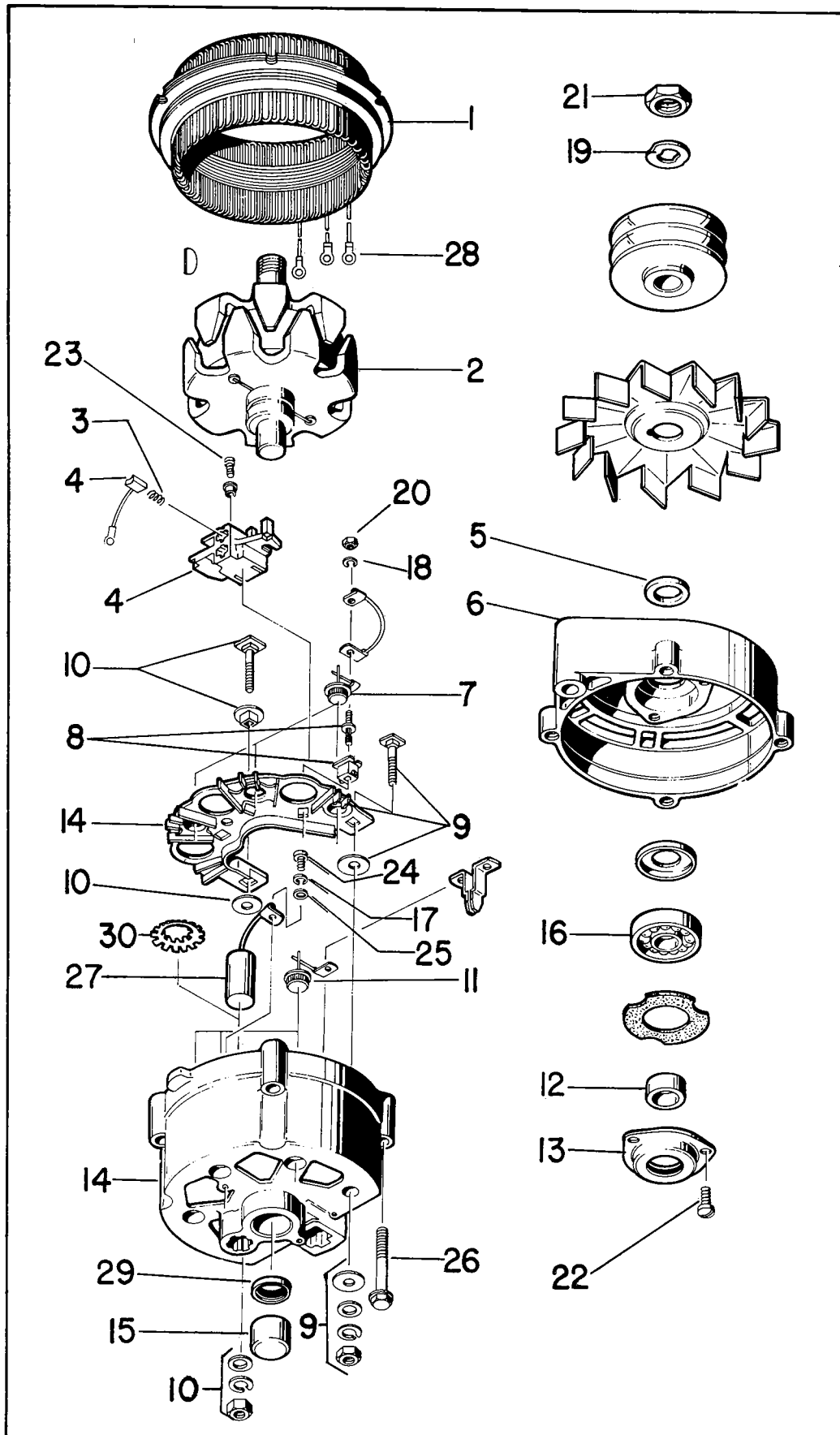
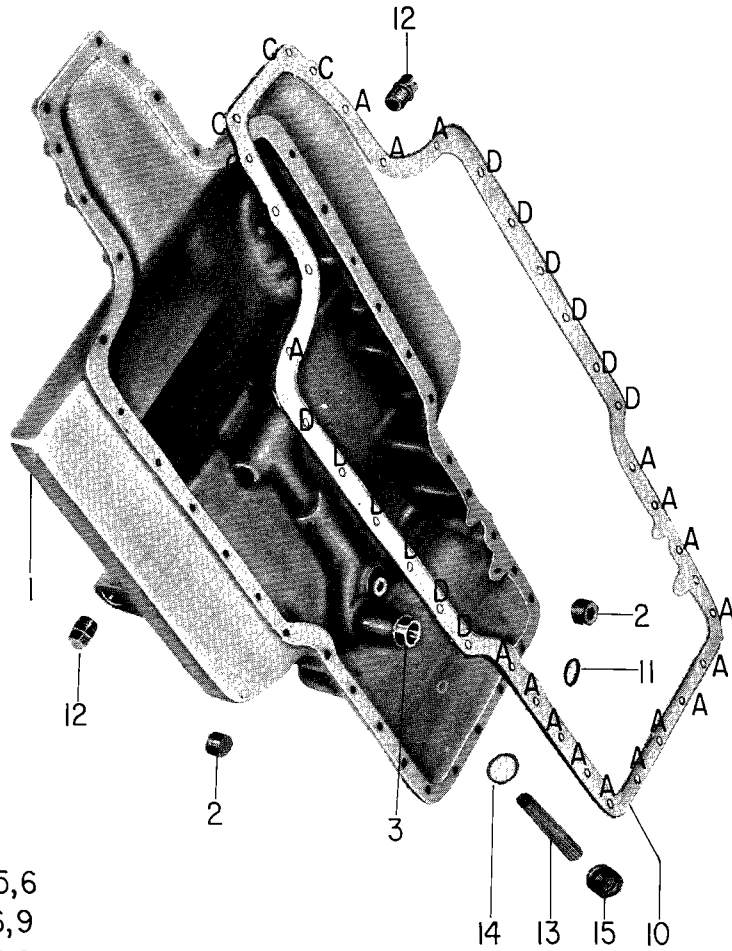


Figure 27 ALTERNATOR

T10-541-A1A



- "A" INCLUDES REFS. 4,5,6
- "B" INCLUDES REFS. 5,6,9
- "C" INCLUDES REFS. 5,6,8
- "D" INCLUDES REFS. 5,6,7

T10-541-E SERIES

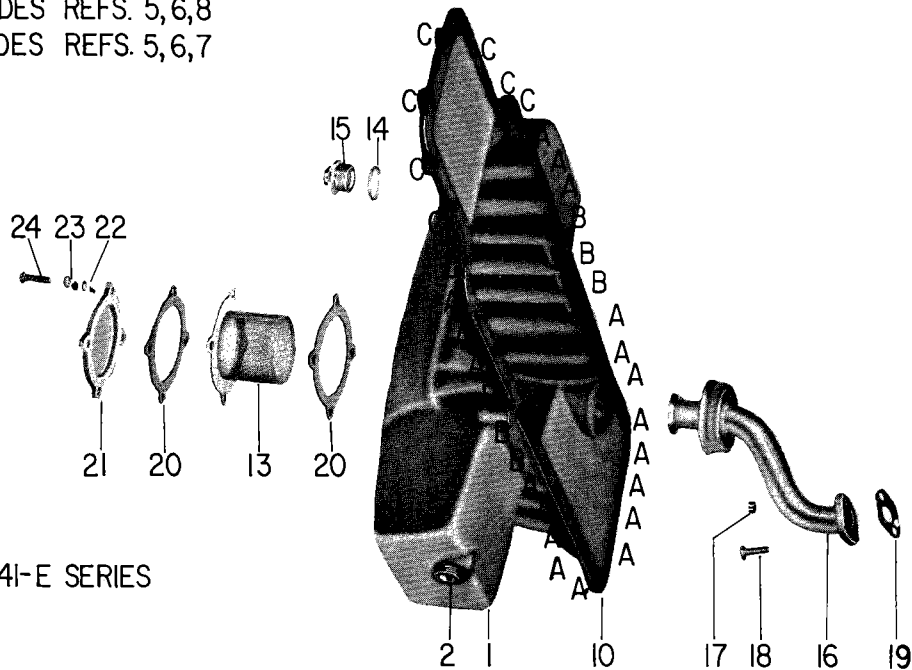


Figure 29 OIL SUMP ASSEMBLY

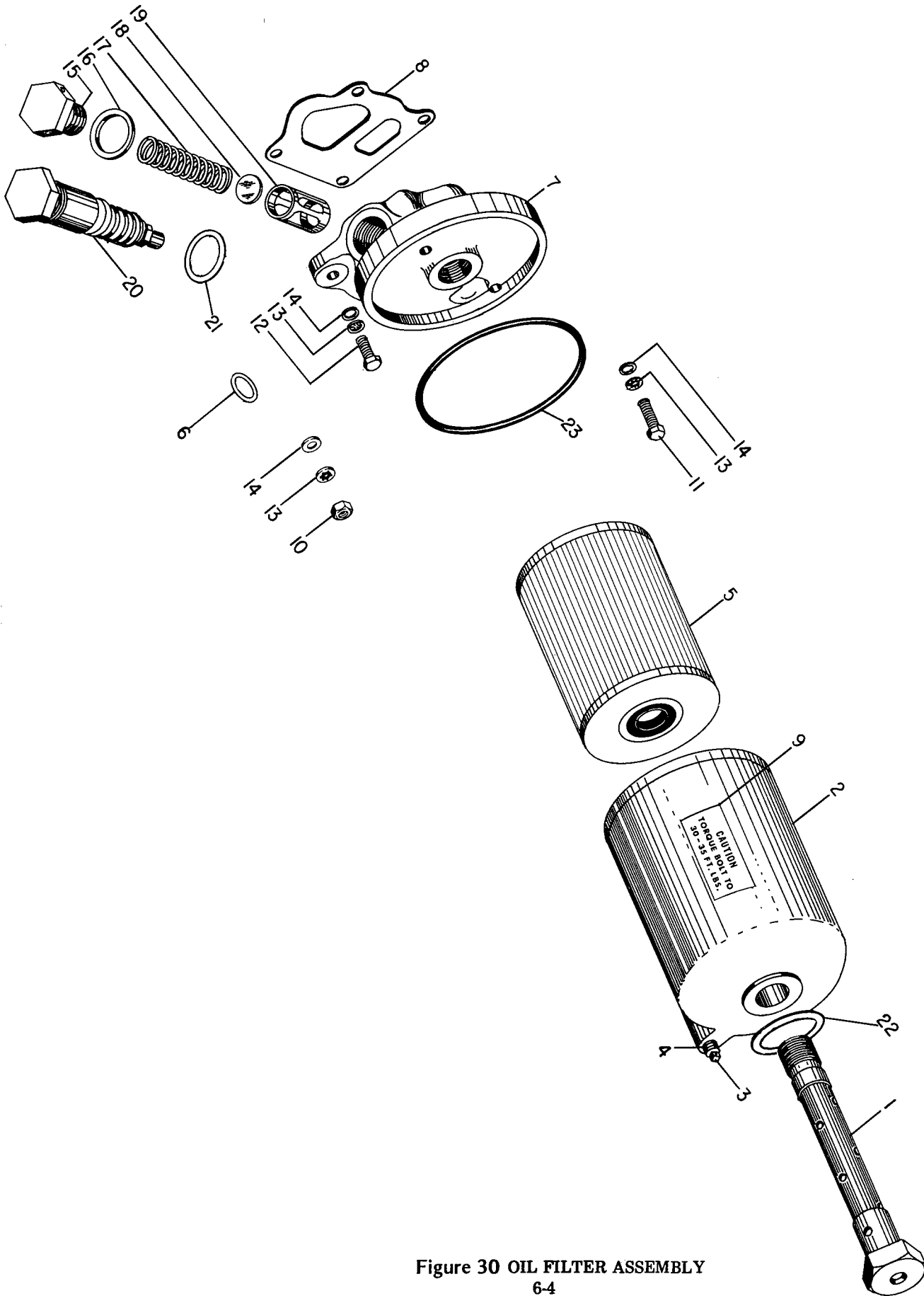


Figure 30 OIL FILTER ASSEMBLY

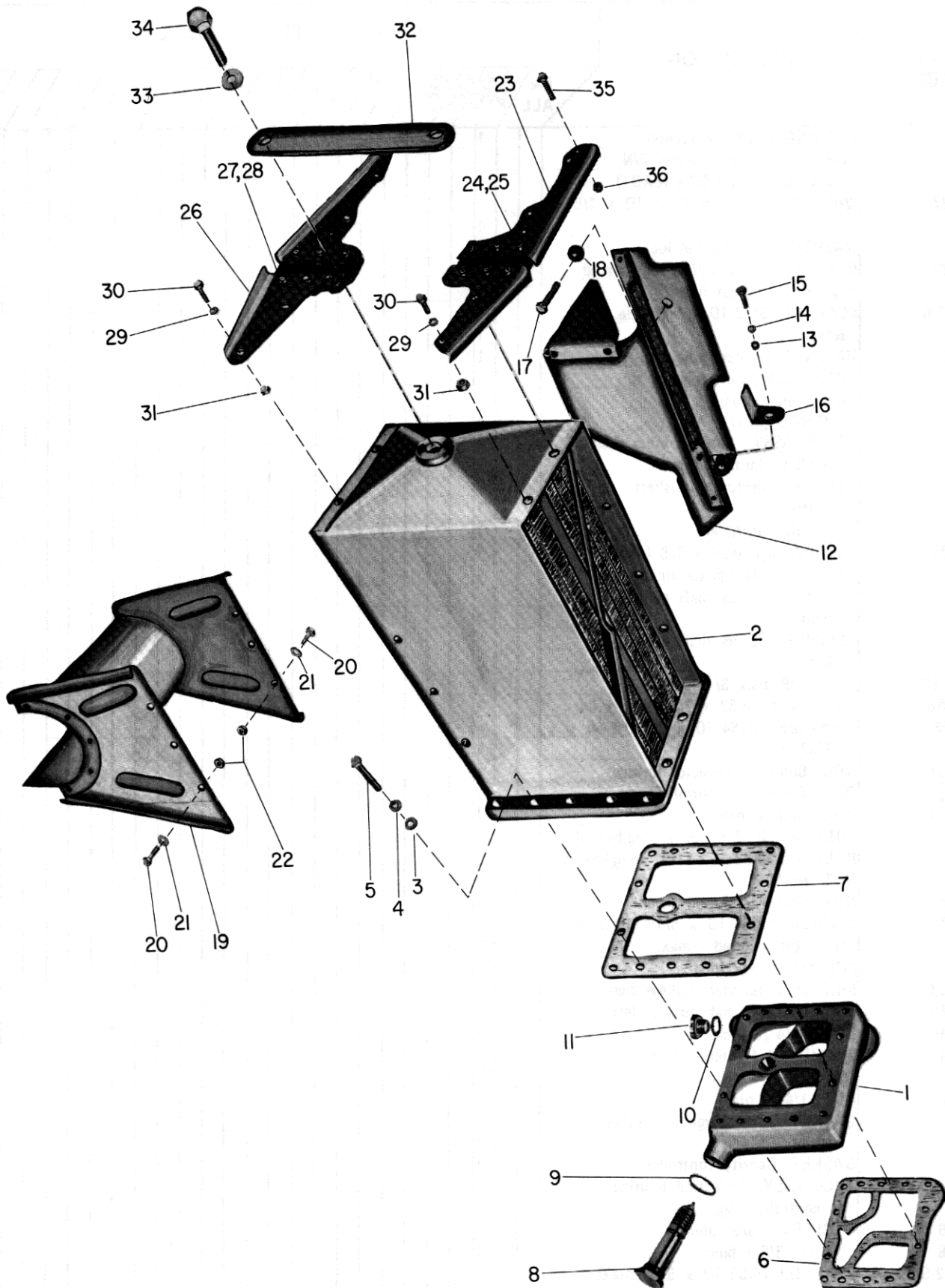


Figure 31 OIL COOLER ASSEMBLY

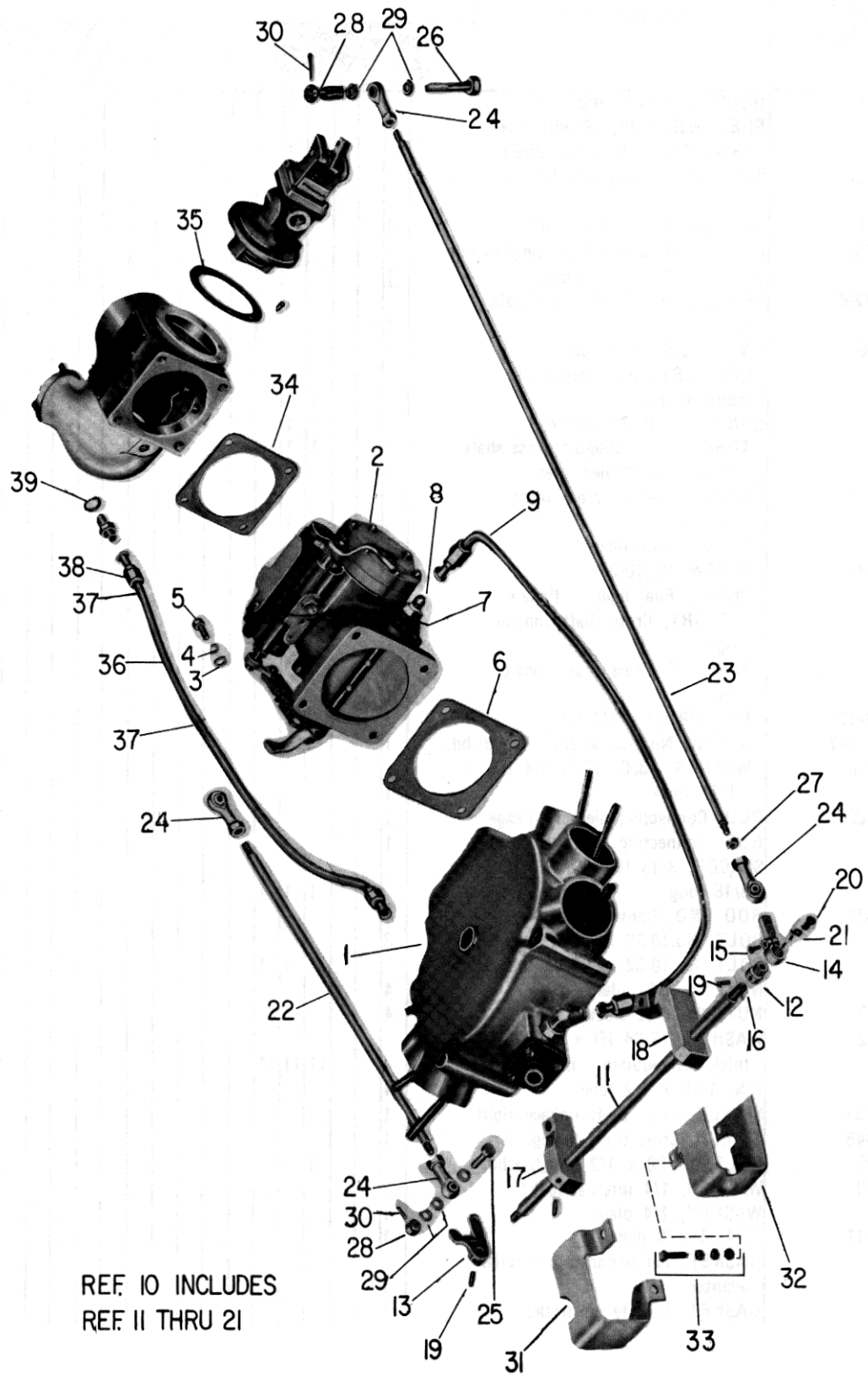


Figure 32 FUEL INJECTOR LINKAGE (-A1A)
6-8

LYCOMING

TIO-541 PARTS CATALOG

VENDOR ACCESSORY FUEL INJECTOR ASSEMBLY, BENDIX RSA-10AD1

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY				
			ON ALL	A1A	E1A2	E1B2	E1C2
	74945	FUEL INJECTOR, Bendix P/N 2524256-4 model RSA-10AD1			1		
1	81584	PLUG, Shipping			1		
2	396660	PLUG, Shipping			1		
3	951790	PACKING, Preformed			1		
4	2523987	PLUG, Machine			1		
5	82887	CAP, Shipping			1		
6	951790	PACKING, Preformed			1		
7	2523903	ADAPTER			1		
8	951787	PACKING, Preformed			1		
9	132906	PLUG, 7/16-20			1		
10	367988	LEVER, Mixture control			1		
11	187313	NUT, Self-locking, 5/16-24			1		
12	365954	LEVER			1		
13	901209K1	PIN, Cotter			1		
14	900848K1	NUT, Castle			1		
15	900452K1	BOLT, 1/4-28 x 3/4 long			1		
16	P60219	SPRING, Helical compression			1		

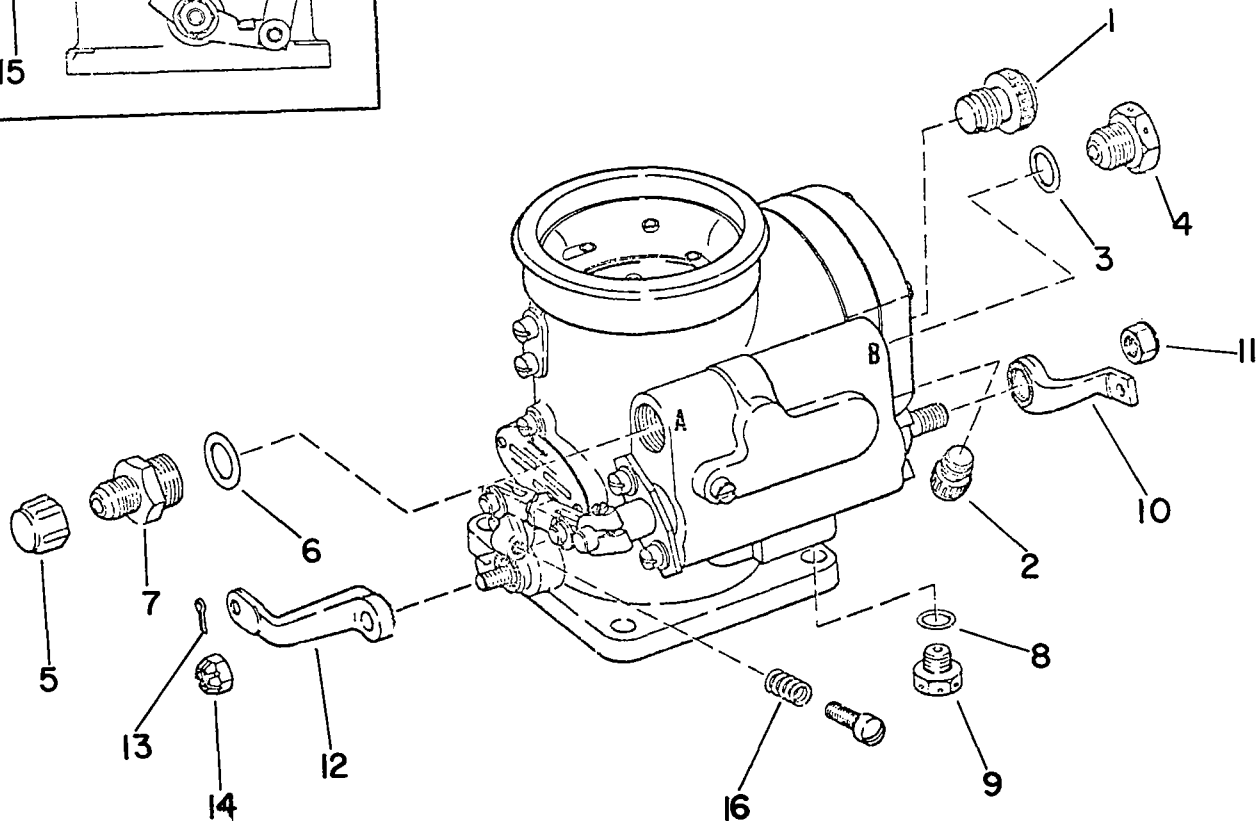
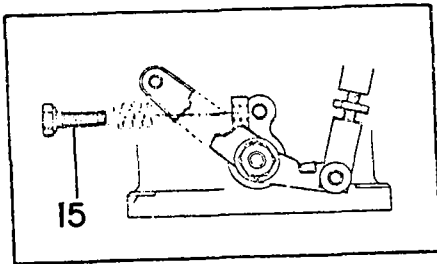


Figure 34
6-11

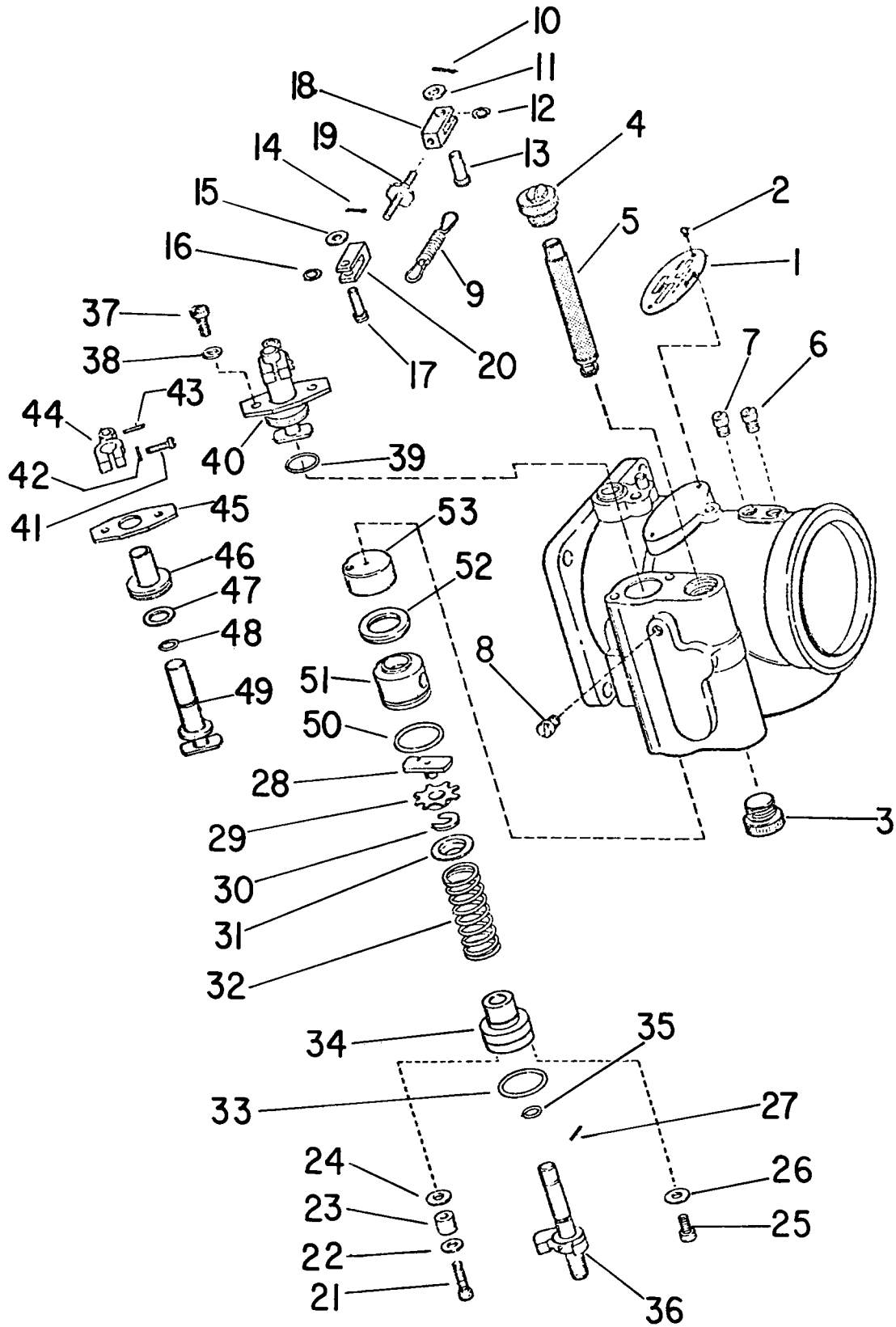


Figure 35 FUEL INJECTOR - RSA-10AD1
6-13

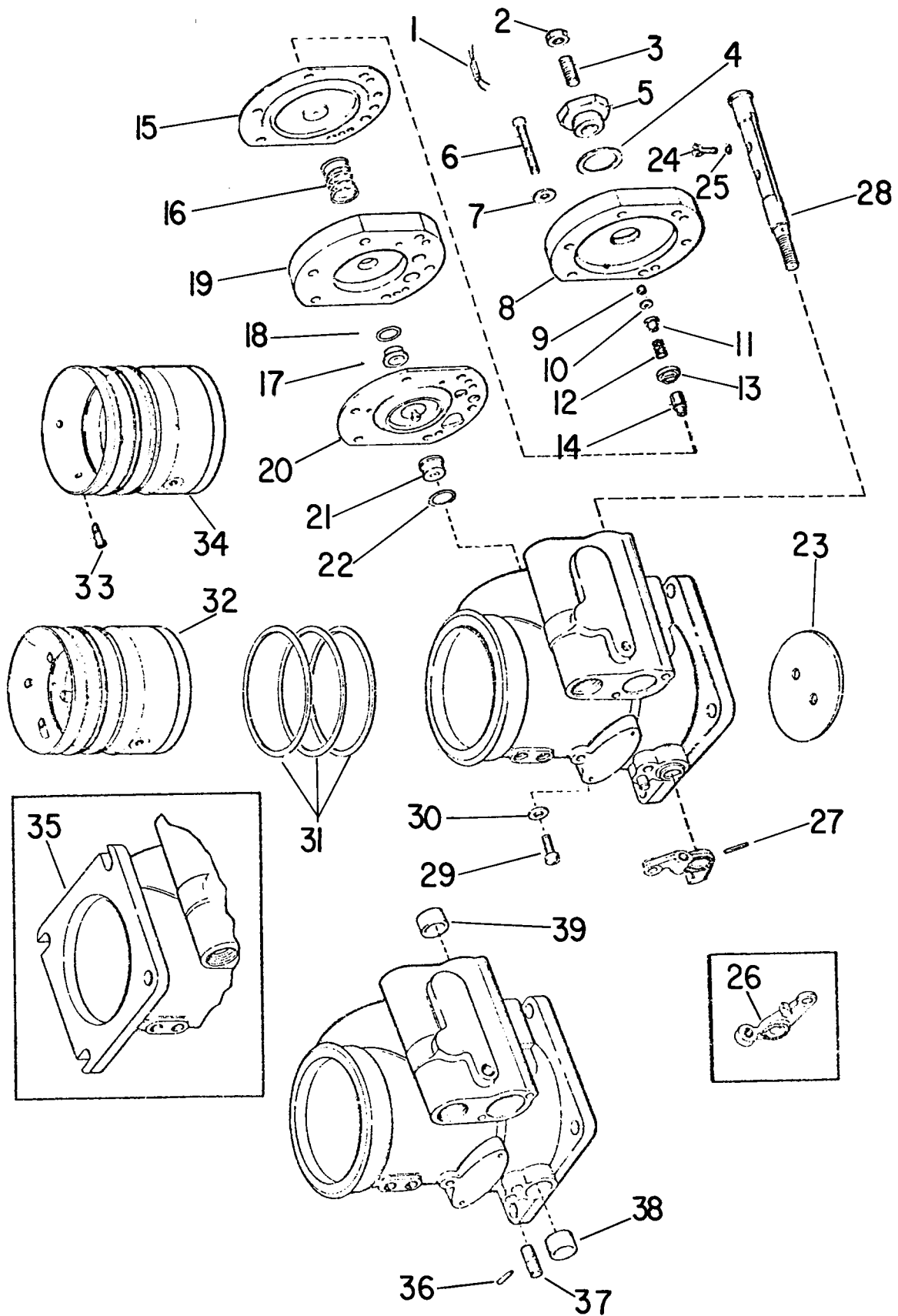


Figure 36 FUEL INJECTOR - RSA-10AD1

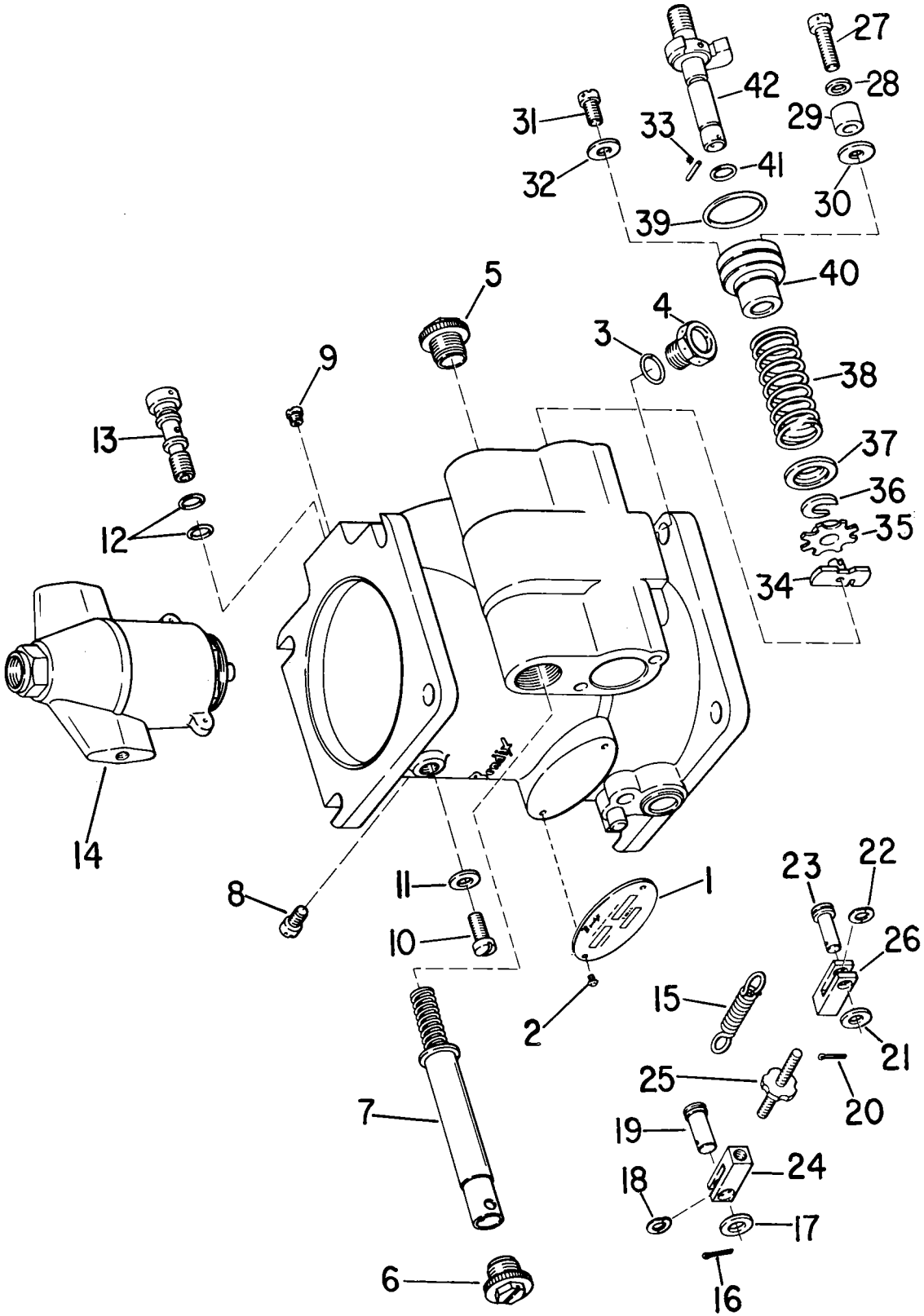


Figure 38 FUEL INJECTOR - RSA-10DB1

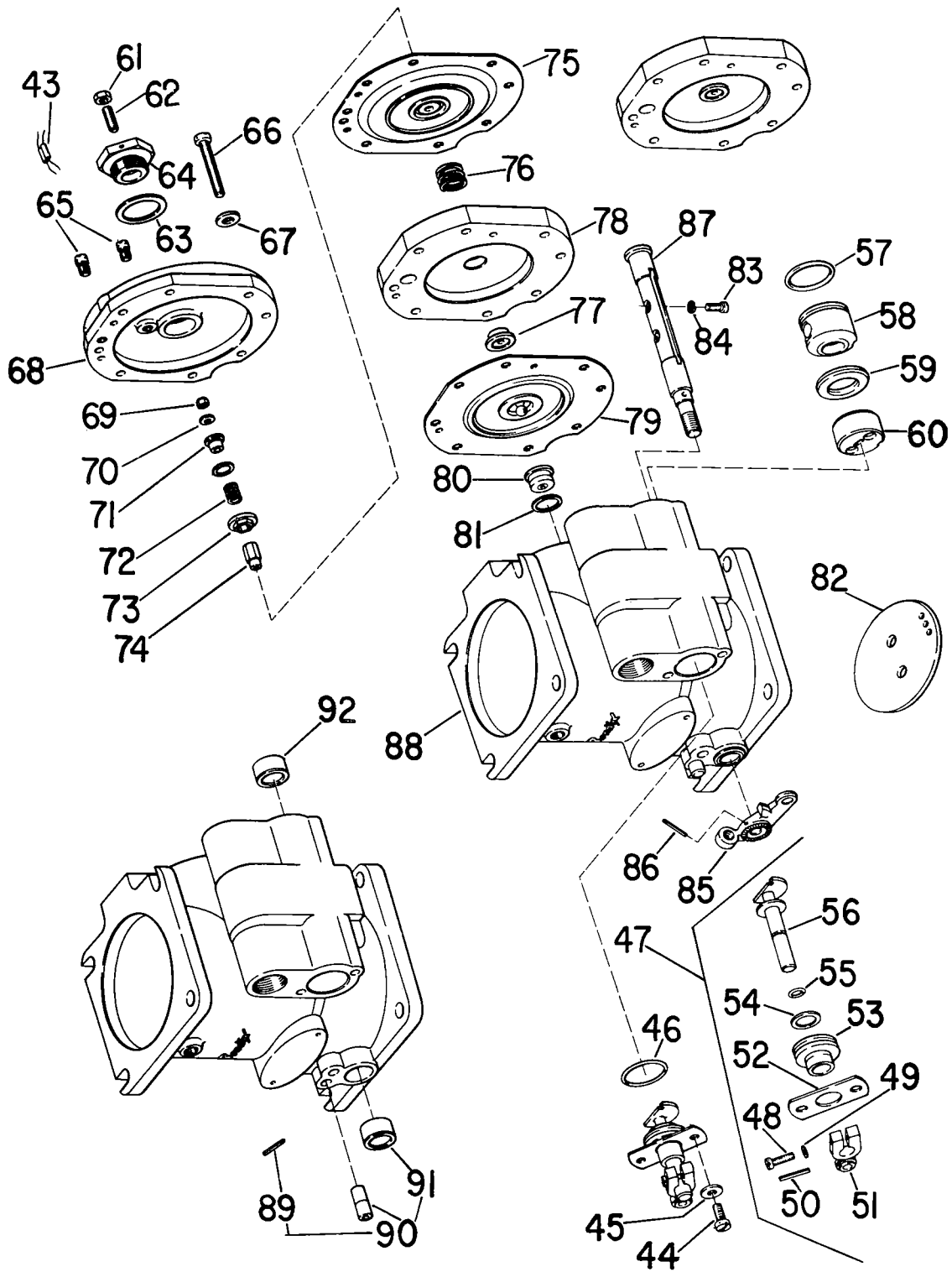


Figure 39 FUEL INJECTOR - RSA-10DB1
6-20

LYCOMING

TIO-541 PARTS CATALOG

VENDOR ACCESSORY

FUEL INJECTOR ASSEMBLY, BENDIX RSA-10DB1

FIG. REF. 40	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY															
			ON ALL	A1A	E1A4	E1A4	E1CA											
1	328617	SEAL, Aluminum					1	1	1									
2	339667	RING, Retaining					1	1	1									
3	2523979	SCREEN					1	1	1									
4	951392	PACKING, Preformed					1	1	1									
5	951394	PACKING, Preformed					1	1	1									
6	2537445	WASHER, Flat					un	un	un									
7	2523955	BUSHING ASSY.					1	1	1									
8	383878	NUT, Lock					1	1	1									
9	2523992	BELLOWS AND NEEDLE ASSY.					1	1	1									
10	909277K35	PIN, Spring					1	1	1									
11	2523993	NEEDLE					1	1	1									
12	2525360	PACKING, Preformed					1	1	1									
13	2523991	BELLOWS ASSY.					1	1	1									
14	360909-48	JET, Metering					1	1	1									
15	2523969	HOUSING, Venturi					1	1	1									

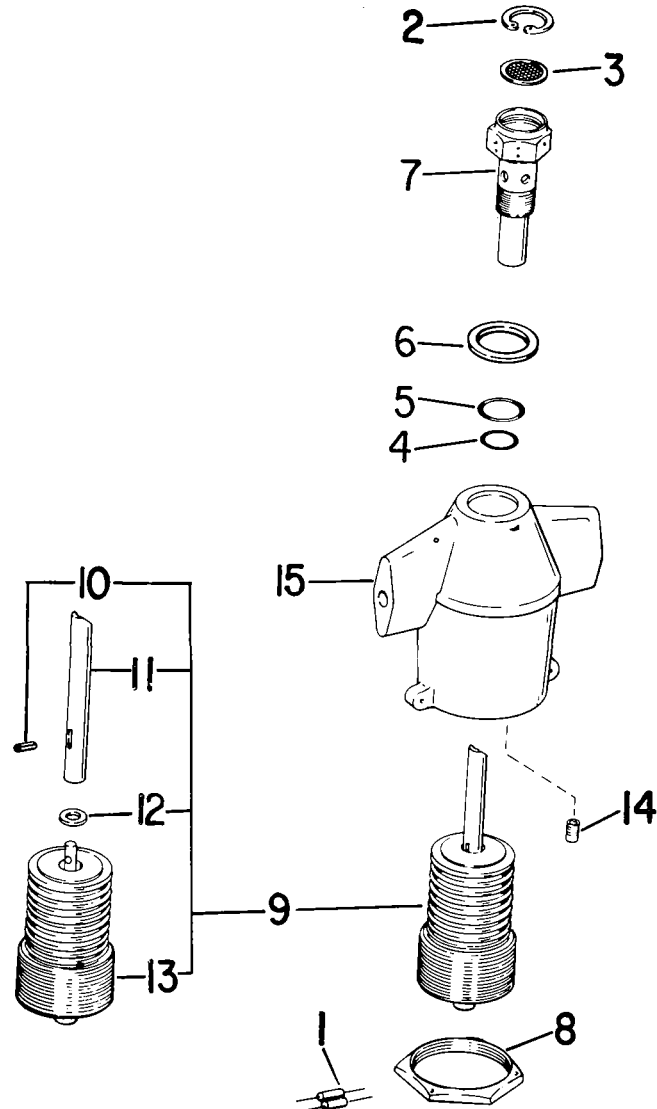


Figure 40

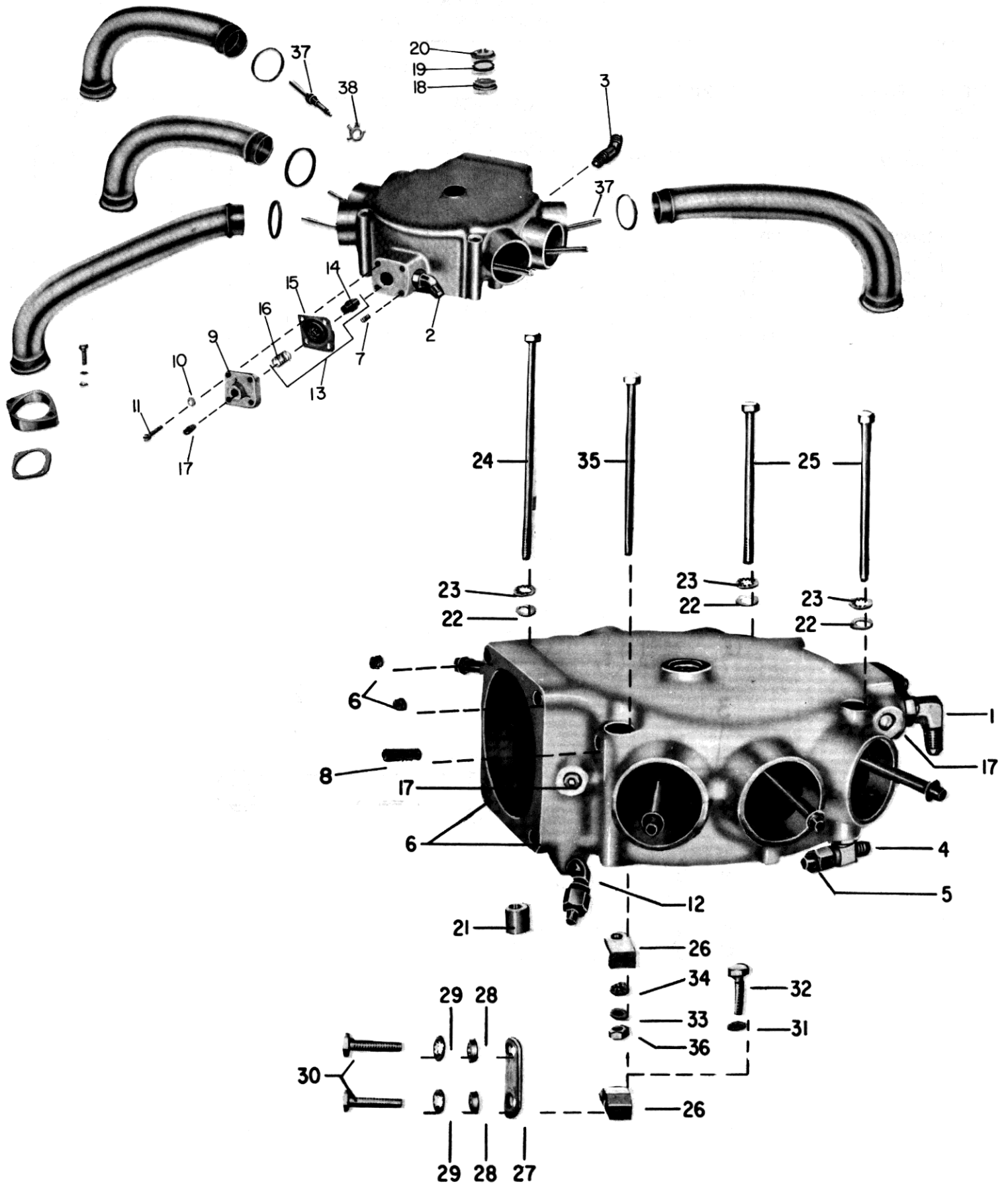


Figure 41 INDUCTION HOUSING ASSEMBLY

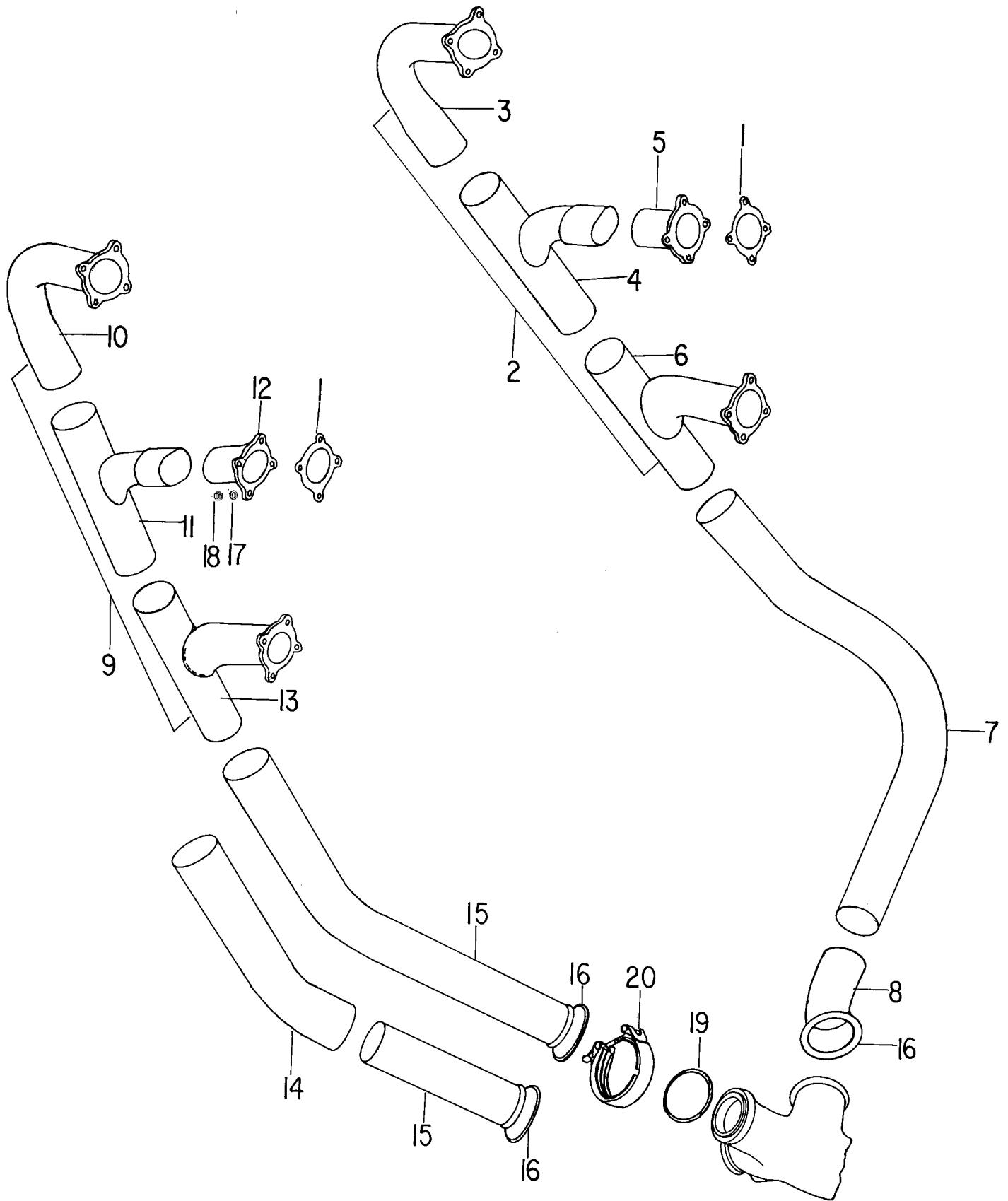


Figure 44 EXHAUST MANIFOLD
7-2

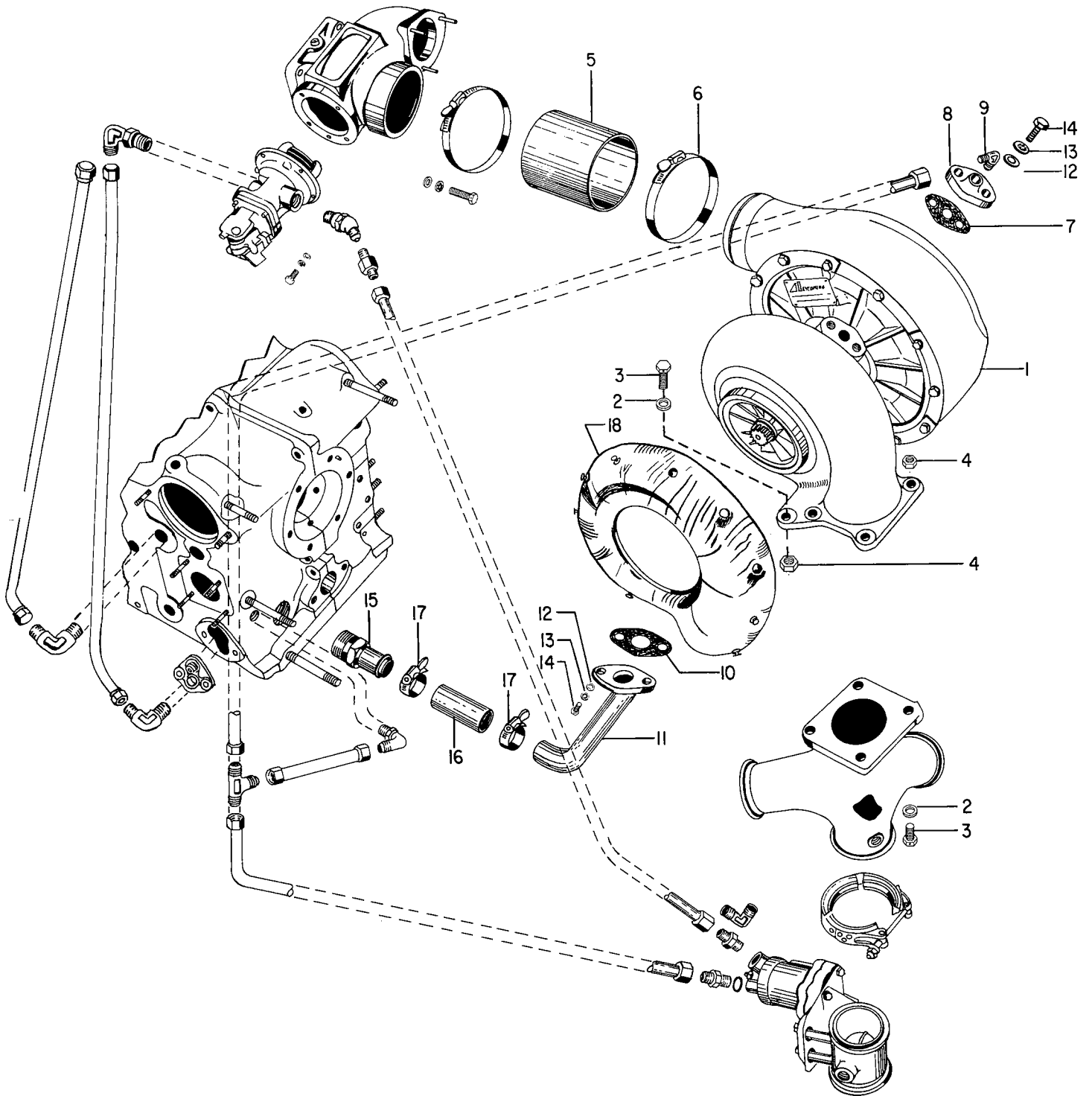


Figure 45 TURBOCHARGER ASSEMBLY AND RELATED PARTS

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																		
			ON ALL	ATA	ETA	ETB	ETC														
26	407118-2	HOUSING ASSY., Center			1	1	1														
26A	407812-2	HOUSING ASSY., Center																			1

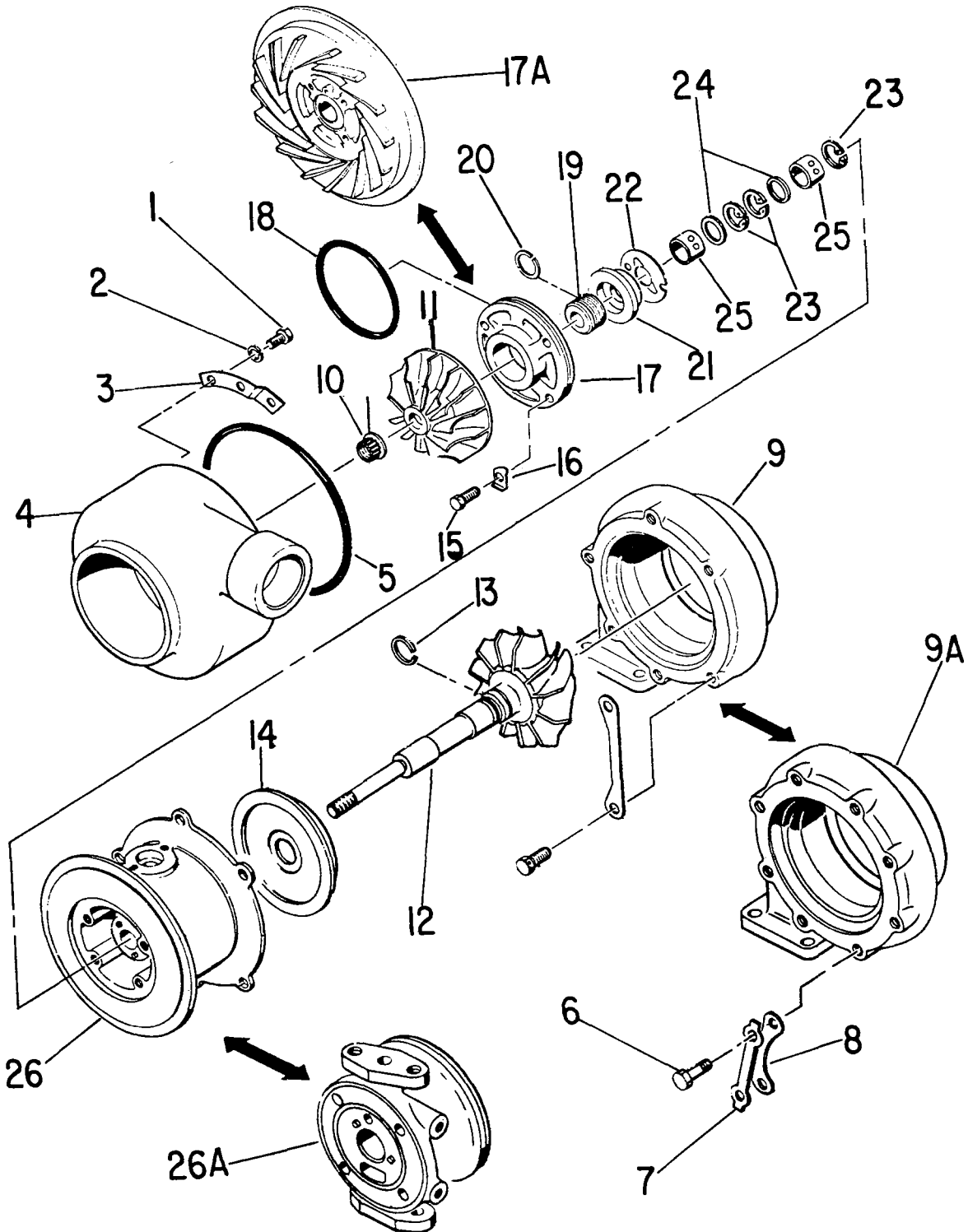


Figure 46
7-6

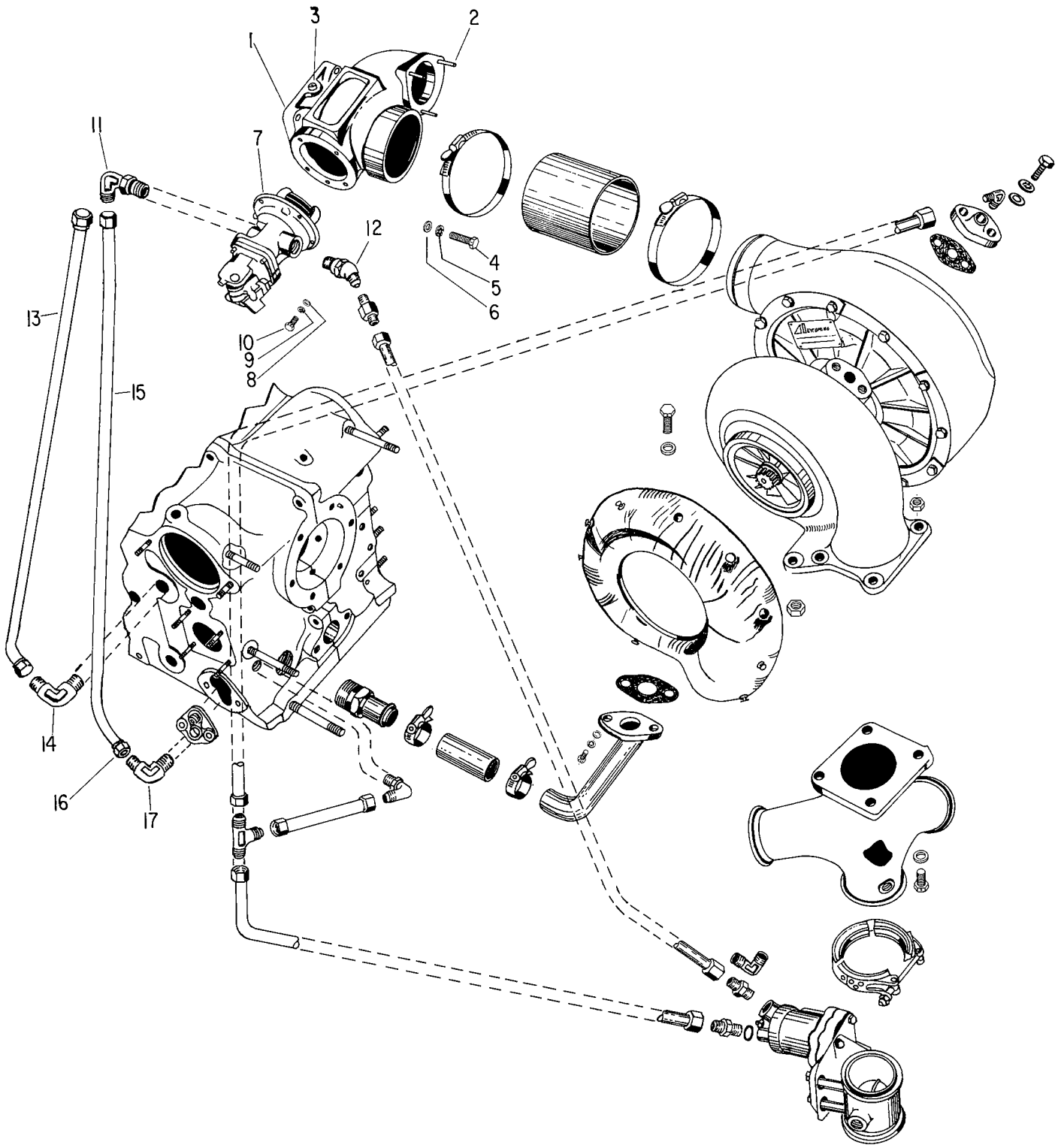


Figure 47 VARIABLE PRESSURE CONTROLLER AND RELATED PARTS
7-8

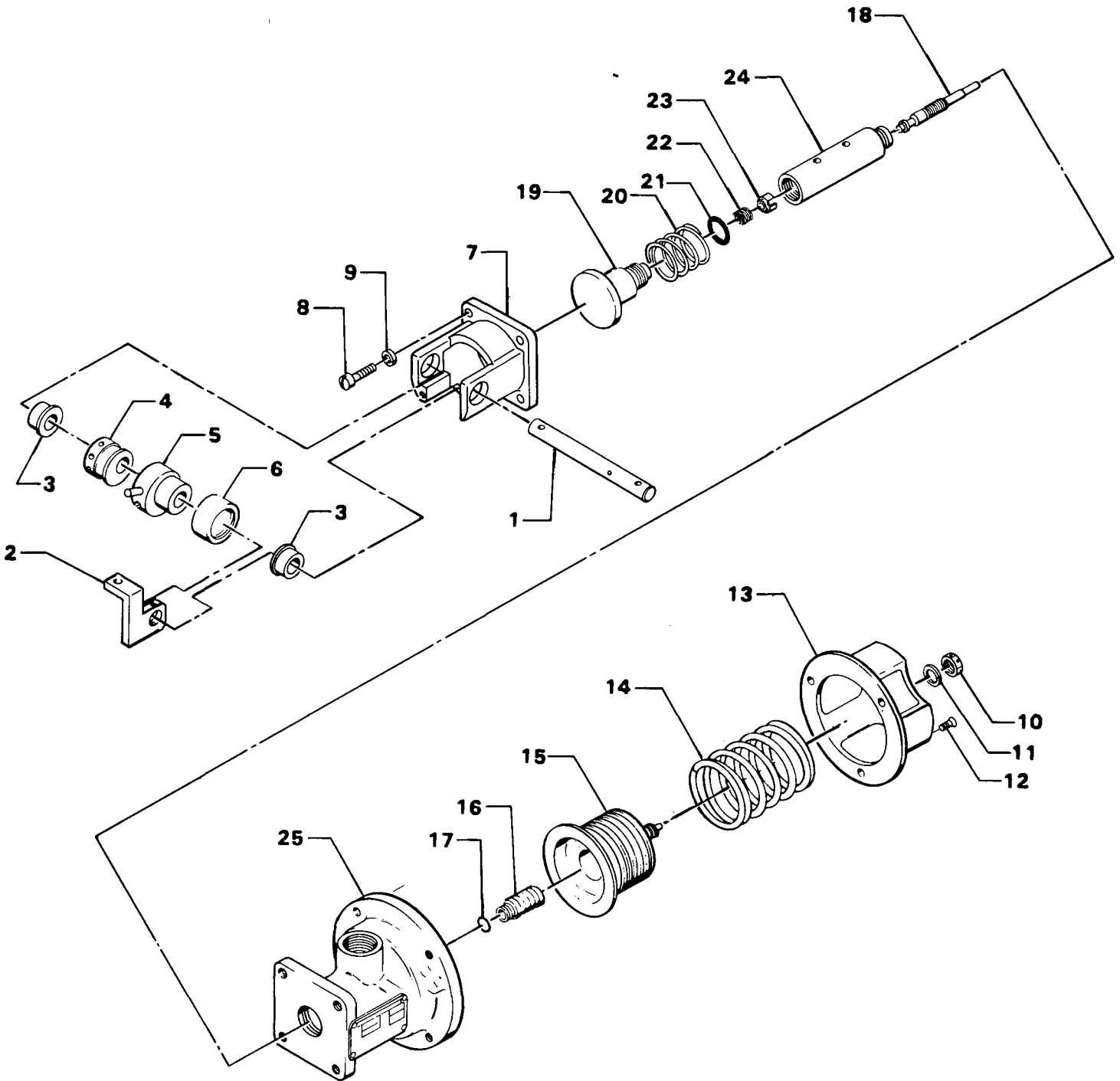


Figure 48 - Variable Pressure Controller

18. P/N LW-13145 INSTALLED HERE

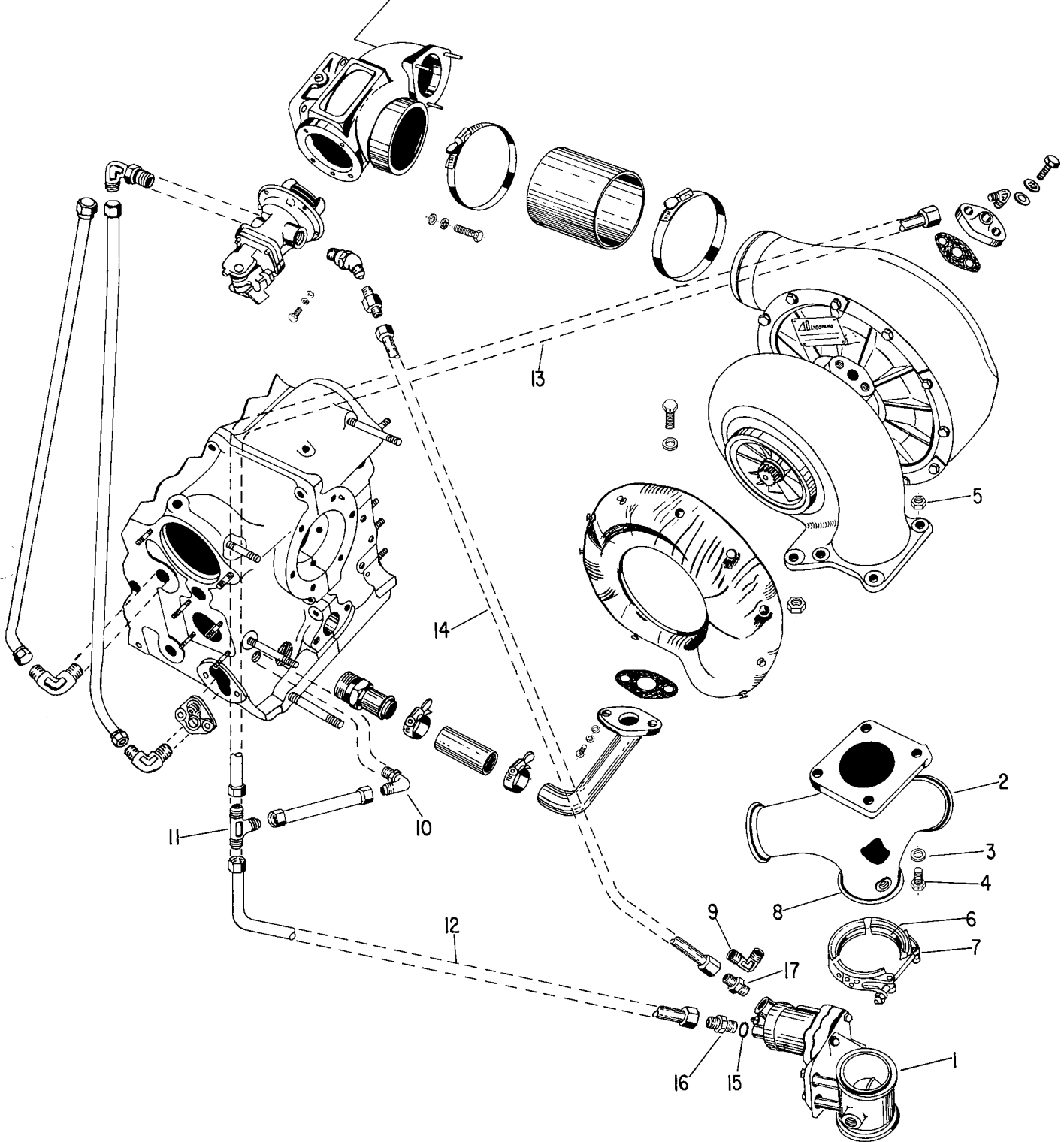


Figure 49 EXHAUST BYPASS VALVE, ABS. PRESSURE RELIEF VALVE AND RELATED PARTS

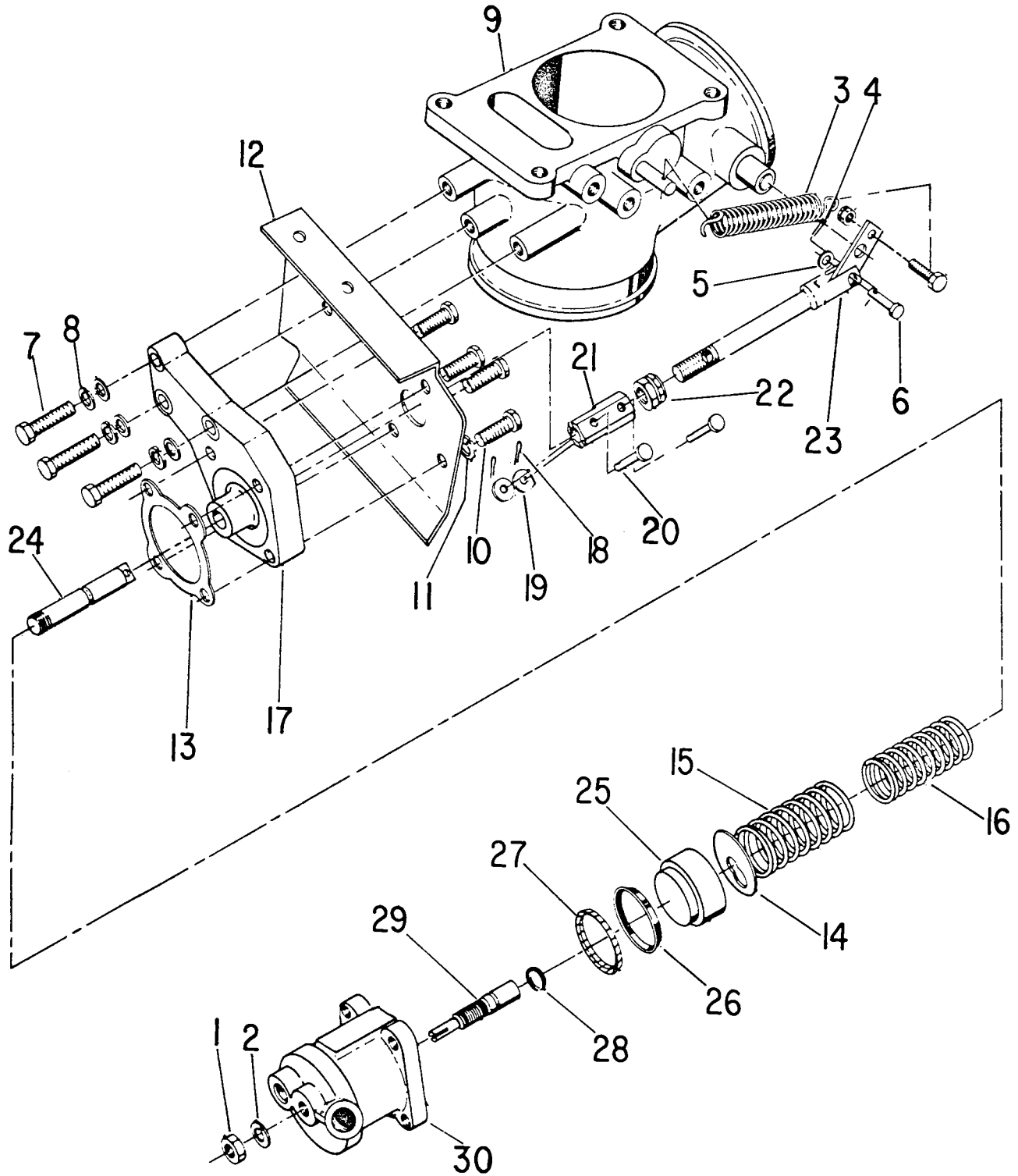
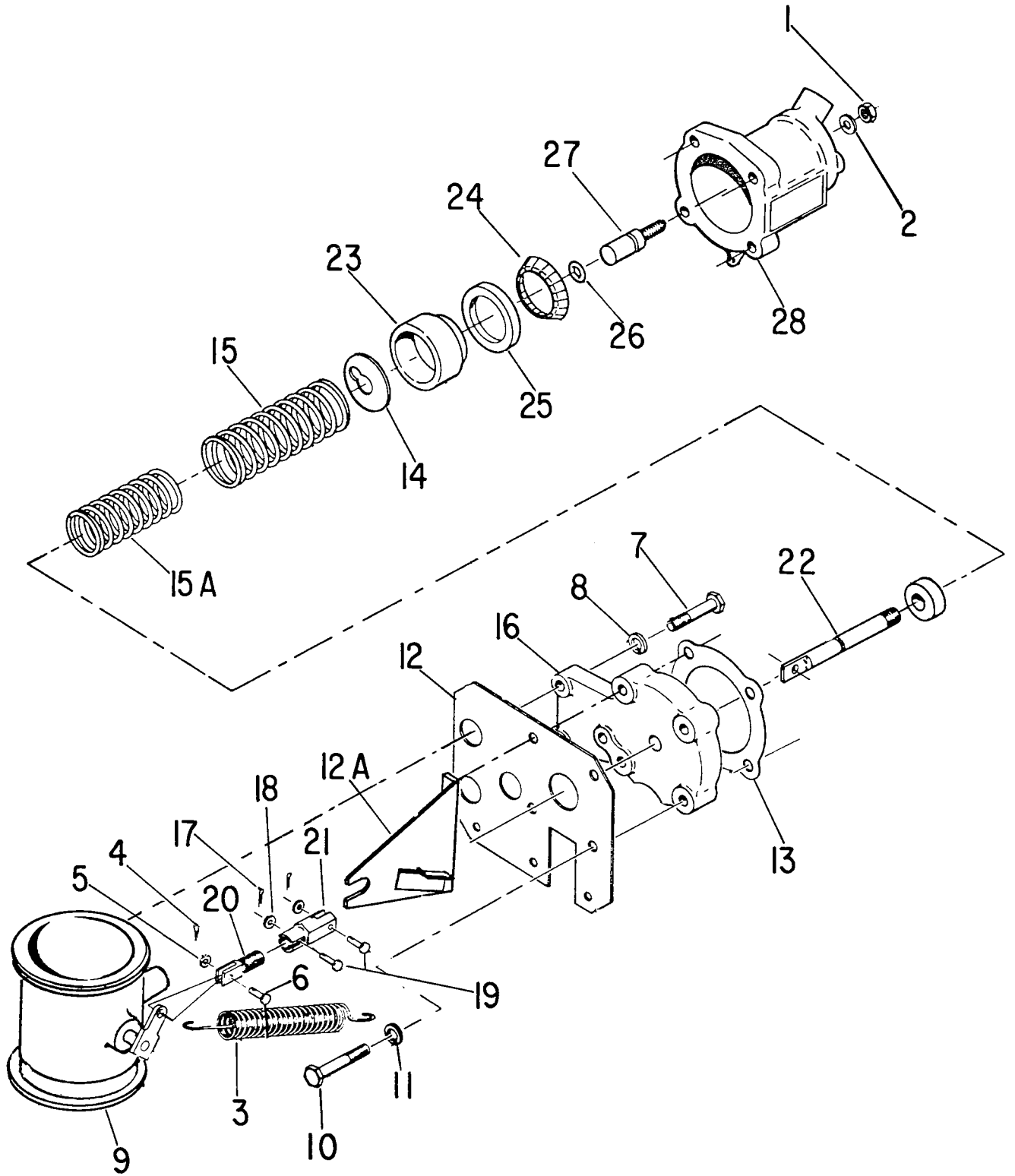


Figure 50 EXHAUST BYPASS VALVE (-A1A, -E1A4, -E1B4)



(SEE NOTE)

Figure 51 EXHAUST BYPASS VALVE (-E1C4)

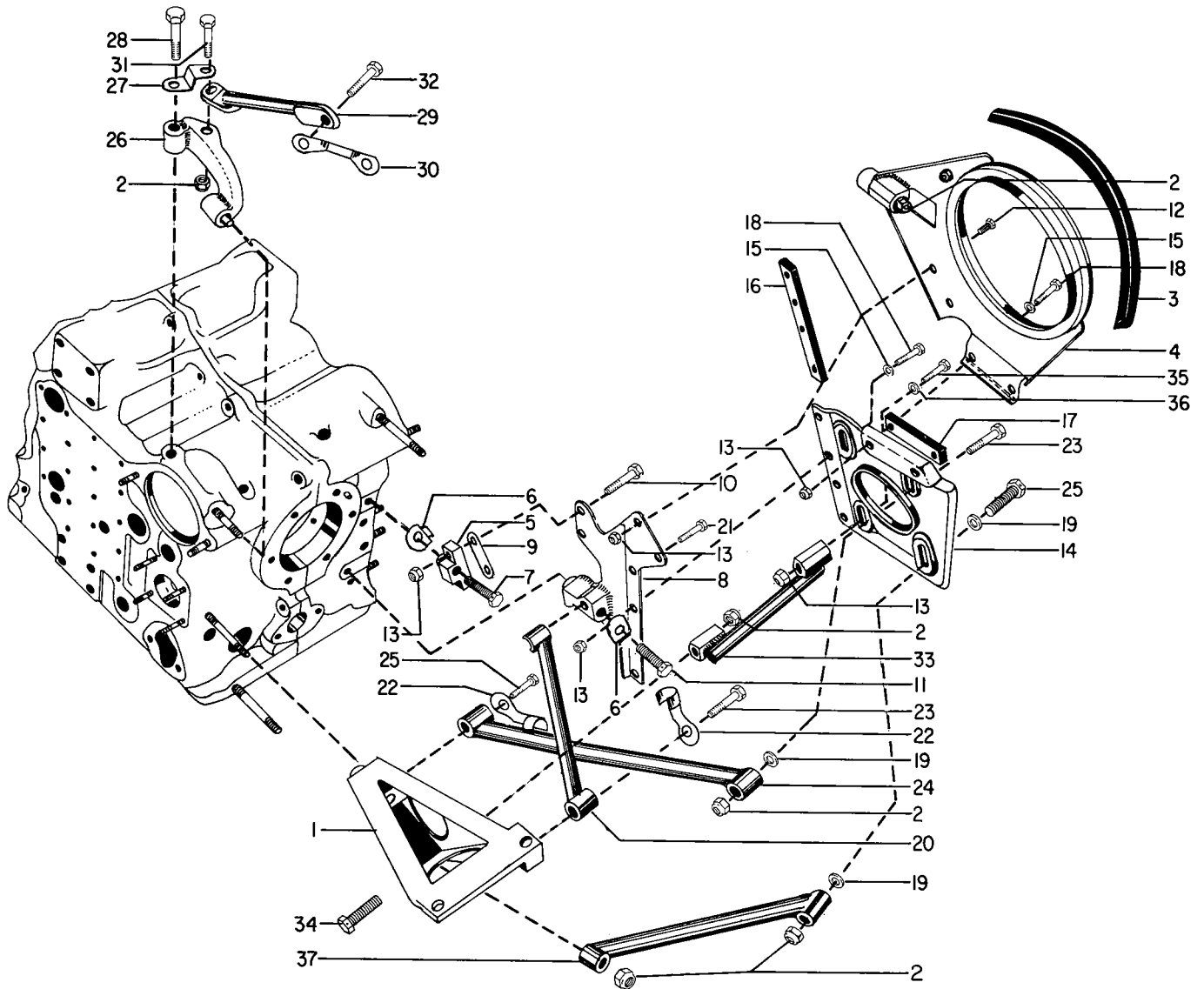


Figure 54 TURBOCHARGER MOUNTING PARTS (-E1A4, -E1B4)

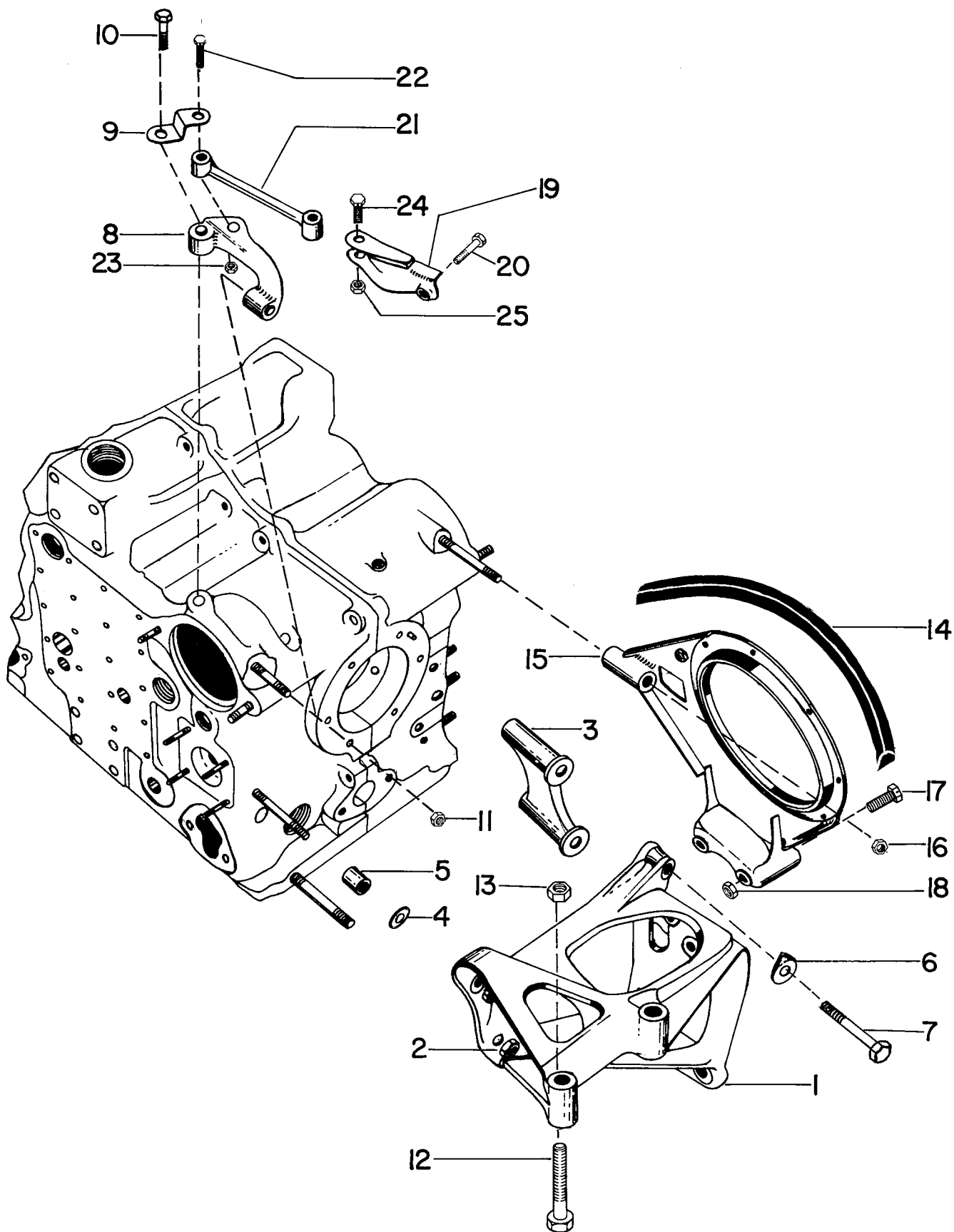


Figure 55 TURBOCHARGER MOUNTING PARTS (-E1C4)

LYCOMING

TIO-541 PARTS CATALOG

SERVICE REPLACEMENT SETS

SEAL AND GASKET SET (-E1A4, -E1B4, -E1C4)

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY															
			ON ALL	A1A	E1A4	E1B4	E1C4											
	76048	GASKET, Exhaust flange				12	12	12										
	76508	GASKET, Spacer to crankcase				1	1	1										
	76510	GASKET				1	1	1										
	76625	GASKET, Oil suction tube				1	1	1										
	76819	GASKET, Oil sump				1	1	1										
	76967	LOCKPLATE				1	1	1										
	77695	GASKET, Oil cooler				1	1	1										
	77707	GASKET, Crankcase rear				1	1	1										
	78083	GASKET, Marmon 11J coupling (24096-200)				3	3	3										
	78292	GASKET, Magneto				2	2	2										
	78443	SEAL, Crankshaft				1	1	1										
	78592	LOCKPLATE				1	1	1										

SECTION 9
PARTS SUPERSEDURES

SECTION 1

Part No.	Superseded by	Name	Remarks
Reference Page 1-1			
74985	76219	Crankcase	Removed dip stick boss.
76219	77266	Crankcase	Uses adjustable oil relief.
76886	LW-11992	Crankcase	Change in studding and main bearing dowels.
77748	LW-11992	Crankcase	Change in studding and main bearing dowels.
77266	76883	Crankcase	Common machining for "A" and "E" crankcases.
STD-514	STD-2035	Dowel	Aids oil pump installation.
76796	LW-10647	Dowel ("E" only)	Replaces stepped bearing dowels.
74305	78443	Oil Seal	Eliminates retaining plates.
Reference Page 1-3			
76163	77808	Oil Relief Valve Assy.	Change to hex head for adjustment.
73680	75675	Oil Filler Extension	Reinforced nylon filler tube.
71714	76529	Plug	For new adjustable oil relief valve.
Reference Page 1-4			
There are no supersedures on Page 1-4			
Reference Page 1-5			
77887	78989	Crankshaft and Counterweight Assembly	To eliminate interference at counterweight bridge.
74303	LW-11575	Crankshaft Bearing	To incorporate straight main bearing dowels.
Reference Page 1-7			
There are no supersedures on Page 1-7			
Reference Page 1-9			
LW-10069	LW-12441	Camshaft and Gear Assembly	Carburized oil pump dogs.
Reference Page 1-10			
There are no supersedures on Page 1-10			
SECTION 2			
Reference Page 2-1			
74776	78034	Breather Gear	Eliminates use of pinion pins.
61154	77309	Bushing	Shorter pressed onto gear.
Reference Page 2-3			
72517	78014	Baffle	Eliminates burning on tachometer drive and drain line covers.

SECTION 9
PARTS SUPERSEDURES

SECTION 2 (CONT.)

Part No.	Superseded by	Name	Remarks
76531	LW-12517	Gasket	Prevents oil hole restriction or blockage.
Reference Page 2-5			
74838	76964	Shaft, Oil Pump Idler	For new P/N 76883 crankcase.
76866	LW-13025	Oil Pump Assy.	Takes oil pressure relief valve.
STD-705	LW-25H.75	Bolt	Improved hardness.
STD-918	LW-25H.75	Bolt	Improved hardness.
Reference Page 2-7			
77517	78585	Shaft	Product improvement.
75938	76396	Cover	Reworked for interchangeability.
MS21261R505	STD-2057	Key	Eliminates interference with mating part.
STD-61	STD-1035	Nut	Product improvement.
77568	LW-10516	Pulley	Product improvement.
Reference Page 2-9			
74800	76860	Tach. Shaft Assy.	For new P/N 76883 crankcase.
74818	76918	Tach. Adapter	For new P/N 76883 crankcase.

SECTION 3

Reference Page 3-1			
75059-S	LW-10646	Connecting Rod Assembly	Tongue and groove machining.
75509	74309	Connecting Rod Bearing	For LW-10646 connecting rod assembly.
76966-S	LW-10545-S	Piston	Weight modification for strength.
Reference Page 3-2			
LW-12216	LW-13263	Cylinder Assembly	To incorporate small intake valves.
LW-10065	LW-13263	Cylinder Assembly	To incorporate small intake valves.
LW-11607	LW-13263	Cylinder Assembly	To incorporate small intake valves.
LW-13263	LW-13561	Cylinder Assembly	Uses coil spring retention shroud tube.
72212	LW-12688	Seat, Intake Valve	Small intake valve ("E" model only).
75838	LW-11958	Guide, Exhaust Valve	Flangeless for angle head cylinder.
STD-528	STD-2090	Nut	Increased hardness.
66713	LW-11956	Guide, Valve, Intake	Flangeless for angle head cylinder.
Reference Page 3-4			
68326	LW-11796	Spring, Valve, Outer	Retains pressure better.

SECTION 9
PARTS SUPERSEDURES

SECTION 3 (CONT.)

Part No.	Superseded by	Name	Remarks
68327	LW-10077	Seat, Valve Spring	New material.
68328	LW-11797	Spring, Valve, Auxiliary	Retains tension better.
68325	LW-13321	Seat, Valve Spring	Provides clearance with valve guide.
73115	LW-10076	Seat, Valve Spring	New material.
76347	LW-13087	Valve, Intake	Small diameter valve.
76351	LW-11798	Spring Valve, Outer	Retains tension better.
76352	LW-11799	Spring, Valve, Auxiliary	Retains tension better.
Reference Page 3-5			
76278	LW-13339	Shroud Tube Assy.	To prevent oil leakage.
LW-13077	LW-13565	Spring, Shroud Tube	For new shroud tube "E" series.
62922	70310	Seal, Shroud Tube	For new shroud tube "E" series.
66728	LW-13340	Washer	For new shroud tube "E" series.
66717	LW-13077	Spring, Shroud Tube	Two req. thinner, harder.
74939	LW-13077	Spring, Shroud Tube	Two req. thinner, harder.
79051	LW-13077	Spring, Shroud Tube	Two req. thinner, harder.
76052	77755	Adapter, Shroud Tube	Die cast not sand cast.
77755	LW-13566	Adapter, Shroud Tube	For new LW-13561 cylinder assembly.
Reference Page 3-6			
There are no supersedures on Page 3-6			
Reference Page 3-7			
76175	78692	Baffle Assy, Intercylinder	Product improvement.
Reference Page 3-8			
77392	61581-36	Tube Assy.	Parts standardization.
77391	61581-37	Tube Assy.	Parts standardization.
77388	61581-38	Tube Assy.	Parts standardization.
77390	61581-39	Tube Assy.	Parts standardization.
75832	LW-12098-1-092	Tube Assy.	Parts standardization.
75068	LW-13344	Plunger	To provide improved fuel drain check valve seal.
Reference Page 3-10			
77000	61581-40	Tube Assy.	Parts standardization.
76712	61581-41	Tube Assy.	Parts standardization.

SECTION 9
PARTS SUPERSEDURES

SECTION 3 (CONT.)

Part No.	Superseded by	Name	Remarks
78270	61581-42	Tube Assy.	Parts standardization.
73650	MS21919F2	Clip	Product improvement.
76126	LW-13346	Housing Assy.	To provide improved fuel drain check valve seal.
Reference Page 3-12			
79039	LW-10042	Connector	Product improvement.
72376	LW-10045	Elbow	Product improvement.
75948	LW-10044	Tee	Product improvement.
LW-10038	LW-12876-4-066	Hose Assy.	Change to teflon.
74543	LW-12876-4-224	Hose Assy.	Change to teflon.
76517	LW-12798-4-204	Hose Assy.	Change to teflon.

SECTION 4

Reference Page 4-1

68874	LW-12136	Cushion, Magneto Drive	For improved starting with impulse magnetos.
78292	LW-12681	Gasket	Product improvement.
73820	78292	Gasket	Product improvement.

Reference Page 4-2

There are no supersedures on Page 4-2

Reference Page 4-3

There are no supersedures on Page 4-3

Reference Page 4-4

There are no supersedures on Page 4-4

Reference Page 4-6

75690	LW-620435-1	Harness Assy.	New harness for -1200 series magnetos.
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SECTION 5

Reference Page 5-1

STD-35	STD-1727	Washer	Product improvement.
STD-1323	STD-2156	Bolt	Product improvement.
76773	LW-12083	Switch, Magnetic	Improved solenoid.
76775	LW-12085	Switch, Magnetic	Improved solenoid.

SECTION 9
PARTS SUPERSEDURES

SECTION 5 (CONT.)

Part No.	Superseded by	Name	Remarks
Reference Page 5-3			
There are no supersedures on Page 5-3			
Reference Page 5-5			
There are no supersedures on Page 5-5			

SECTION 6

Reference Page 6-1

74913	76857	Oil Sump Assy.	Use on "A" with 76883 crankcase.
74918	76819	Gasket Oil Sump	Use with 76857 sump.

Reference Page 6-3

LW-12263	LW-12262	Bolt Assy., Oil Filter Housing	Eliminate failure at roll pin.
74904	76888	Gasket	Product improvement.
76531	LW-12517	Gasket	Prevent oil hole restriction or blockage.
76538	77607	Oil Relief Valve Sleeve	Product improvement.
76550	LW-12258	Housing Assy., Oil Filter	Prevents oil hole restriction or blockage.
76650	LW-11198	Element, Oil Filter	Product improvement.
77296	LW-12262	Bolt, Oil Filter Housing	Eliminates failure at roll pin.

Reference Page 6-5

STD-918	STD-705	Bolt	Cost reduction.
76511	LW-11983	Spacer Assy.	Product improvement.
77598	78382	Heat Shield	Change by Beech request.
77714	LW-10025	Oil Cooler	Product improvement.

Reference Page 6-7

AN815-6	72377	Union	Product improvement.
STD-35	STD-1727	Washer	Product improvement.
75777	77901	Control Shaft Assy.	Product improvement.
75861	LW-10753	Shield Cross, Shaft	Parts standardization.
75935	LW-11446	Shield Cross, Shaft	Product improvement.
76363	77741	Support, Cross Shaft	Machined for interchangeability.
77199	LW-12309	Rod	Product improvement.

SECTION 9
PARTS SUPERSEDURES

SECTION 6 (CONT.)

Part No.	Superseded by	Name	Remarks
Reference Page 6-9			
77363	LW-10796	Lever	Parts standardization.
77365	LW-10797	Control Shaft Assy.	Parts standardization.
77618	LW-10753	Shield, Cross Shaft	Parts standardization.
77625	LW-11446	Shield, Cross Shaft	Product improvement.
77754	LW-10989	Control Rod End	To eliminate throttle linkage seizure.
78245	LW-10990	Control Rod End	To eliminate throttle linkage seizure.
LW-10989	LW-13429	Control Rod End	Product improvement.
LW-10990	LW-13429	Control Rod End	Product improvement.

Reference Page 6-10

75972	LW-13037	Tube Assy.	Changed by Beech request.
77419	LW-13037	Tube Assy.	Changed by Beech request.
77706	LW-13037	Tube Assy.	Changed by Beech request.

Reference Pages 6-11, 6-12, 6-14, 6-16, 6-17, 6-19, 6-21.

There are no supersedures on Pages 6-11, 6-12, 6-14, 6-16, 6-17, 6-19, 6-21.

Reference Page 6-22

MS124659	STD-2134	Insert	MS insert extended into air bleed line.
STD-514	STD-2035	Dowel	Parts standardization.
STD-1953	STD-1887	Bolt	Improved hardness.
77539	LW-11980	Nozzle Assy.	Product improvement.
75948	LW-10044	Tee	Product improvement.
75951	78344	Nozzle Assy.	Facilitates inspection and cleaning.
75954	LW-11602	Lockplate	Eliminates loose injector nozzles.
76018	77406	Induction Hsg. Assy.	Drain modification.
77338	LW-11379	Induction Hsg. Assy.	Product improvement.

Reference Page 6-24

There are no supersedures on Page 6-24

Reference Page 6-25

There are no supersedures on Page 6-25

SECTION 9
PARTS SUPERSEDURES

SECTION 7

Part No.	Superseded by	Name	Remarks
Reference Page 7-1			
STD-1411	STD-2044	Nut	Product improvement.
STD-2079	STD-2044	Nut	Product improvement.
72571	78014	Baffle	Eliminate burning on tachometer cable and drain line covers.
78081	LW-12093-5	Coupling	Product improvement.
78084	78083	Gasket	For new cast transition assy.
Reference Page 7-3			
LW-10356	LW-11968	Turbocharger	Stainless steel housing.
LW-10357	LW-11969	Turbocharger	Stainless steel housing.
74367	LW-11373	Hose	Hose more flexible.
74983	78146	Clamp	Positive lock.
74990	LW-12154	Hose	Product improvement.
77066	LW-11968	Turbocharger	Stainless steel housing.
77247	LW-11969	Turbocharger	Stainless steel housing.
77908	LW-11975	Turbocharger	Stainless steel housing.
78349	LW-13060	Blanket, Turbo.	For stainless steel housing.
Reference Page 7-5			
LW-10356	LW-11968	Turbocharger	Stainless steel housing.
LW-10357	LW-11969	Turbocharger	Stainless steel housing.
77908	LW-11975	Turbocharger	Stainless steel housing.
77247	LW-11969	Turbocharger	Stainless steel housing.
77066	LW-11968	Turbocharger	Stainless steel housing.
Reference Page 7-6			
There are no supersedures on Page 7-6			
Reference Page 7-7			
77295	LW-11207	Adapter Assy.	Provision to incorporate abs. pressure relief valve.
LW-11207	LW-13480	Adapter Assy.	Provides clearance with Beech mount.
75693	LW-11377	Controller	Product improvement.
76462	77740	Controller	Product improvement.
LW-11018	LW-12125-3	Coupling	Product improvement.
75606	LW-12093-6	Coupling	Product improvement.

SECTION 9
PARTS SUPERSEDURES

SECTION 7 (CONT.)

Part No.	Superseded by	Name	Remarks
76411	LW-12799-6-070	Hose Assy.	Change to teflon.
78081	LW-12093-5	Coupling	Product improvement
78084	78083	Gasket	For new cast transition assy.
75739	74070	Elbow	Relieves stress in hose.
Reference Page 7-9			
75693	LW-11377	Controller	Product improvement.
76462	77740	Controller	Product improvement.
Reference Page 7-11			
LW-11124	LW-12798-4S-074	Hose Assy.	Change to teflon.
LW-11125	LW-12799-6S-170	Hose Assy.	Change to teflon.
75665	LW-12798-4-190	Hose Assy.	Change to teflon.
75666	LW-12876-4-046	Hose Assy.	Change to teflon.
75949	LW-12798-4S-150	Hose Assy.	Change to teflon.
77113	LW-12798-4S-082	Hose Assy.	Change to teflon.
77452	LW-12799-6S-170	Hose Assy.	Change to teflon.
STD-1687	STD-251	Washer	Product improvement.
Reference Page 7-13			
There are no supersedures on Page 7-13			
Reference Page 7-15			
There are no supersedures on Page 7-15			
Reference Page 7-17			
There are no supersedures on Page 7-17			
Reference Page 7-18			
75994	77796	Sonic Nozzle	Modified by Beech request - "E" Series.
Reference Page 7-19			
74942	75962	Magneto Baffle	Product improvement.
77041	77838	Bracket	Product improvement.
77042	77839	Bracket	Product improvement.
77043	77904	Turbo Support	Product improvement.
Reference Page 7-20			
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SECTION 9
PARTS SUPERSEDURES

SECTION 7 (CONT.)

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STD-1993	STD-2133	Bolt	Self-sealing.
77165	78840	Support	Part standardization.
77168	LW-10612	Bracket	Prevents cracking at adjustment slot in bracket.
77170	LW-10168	Bracket	Product improvement.
Reference Page 7-22			
STD-2031	LW-31-1.09	Bolt	Parts standardization.
STD-2037	STD-2128	Bolt	Self-sealing.
STD-2060	STD-2157	Bolt	Shorter to avoid bottoming.
77165	78840	Support	Product improvement.

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