

LYCOMING WILLIAMSPORT DIVISION

TECHNICAL PUBLICATION REVISION

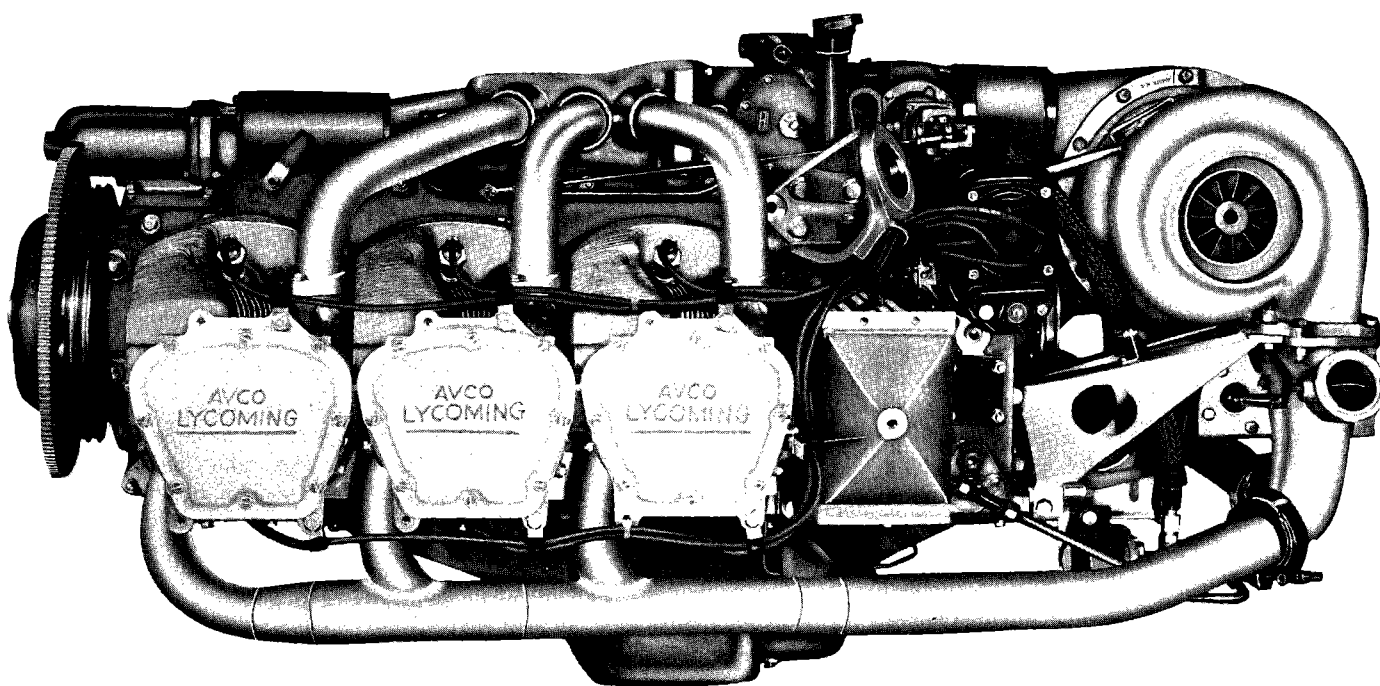
REVISION No.	PUBLICATION	PUBLICATION No.	PUBLICATION DATE
PC-120-1	TIO-541 Series Parts Catalog	PC-120	Sept., 1974

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

PARTS CATALOG



TIO-541 SERIES

AIRCRAFT ENGINES

TEXTRON Lycoming

PC-120

652 Oliver Street
Williamsport, PA 17701 U.S.A.
717/323-6181

SEPT. 1974

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.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY															
			ON ALL	A1A	E1A2	E1B2	E1C2											
1	76219	CRANKCASE ASSEMBLY				1												
	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	4				
	STD-1173	INSERT, 1/4-20 x 1/2 in.long notch										1	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	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.

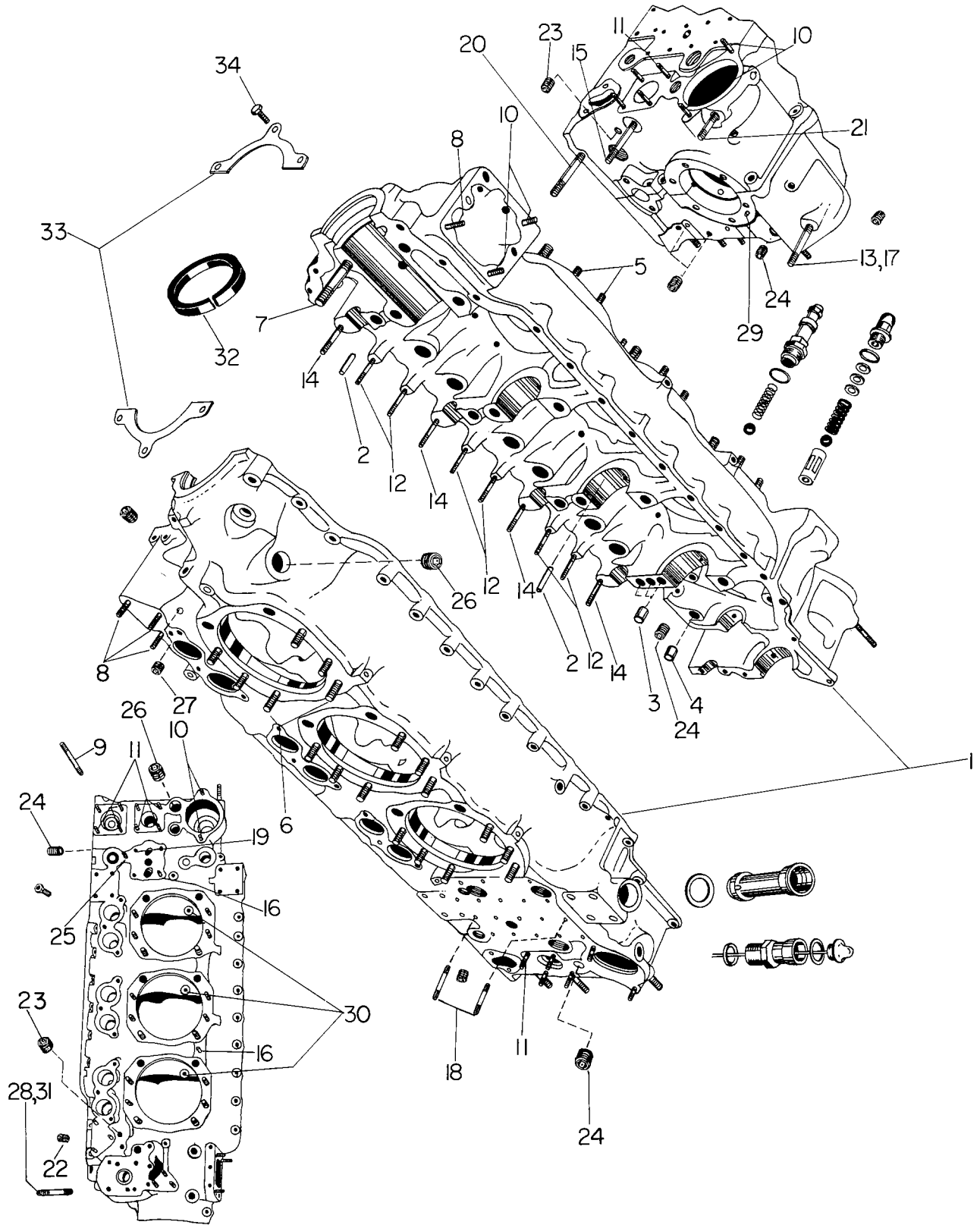


Figure 1 CRANKCASE ASSEMBLY

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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.																					

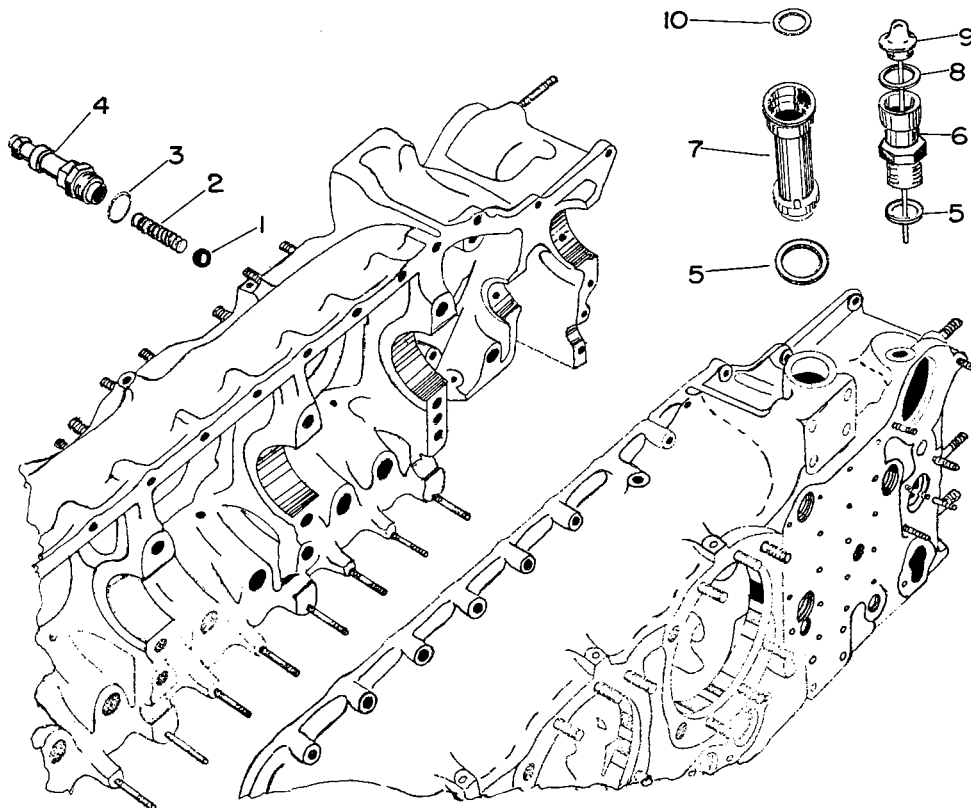


Figure 2
1-3

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T10-541 PARTS CATALOG

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP PROPELLER GOVERNOR DRIVE

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																				
			ON ALL	A1A	E1A	E2A	E3A																
3																							
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																				

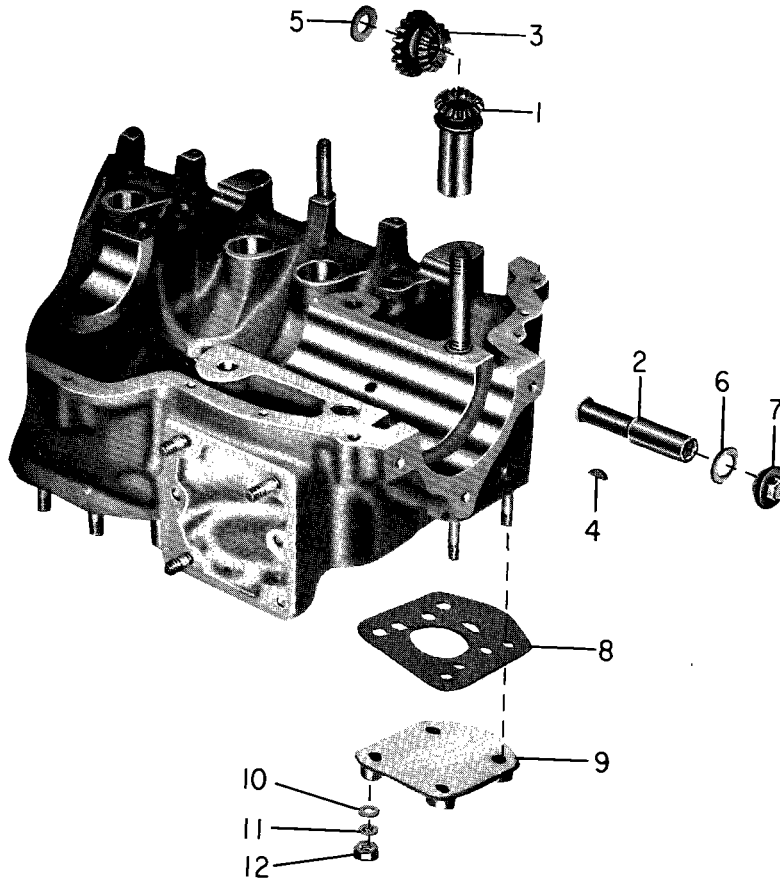


Figure 3
1-4

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TIO-541 PARTS CATALOG

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

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY											
			OW 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.

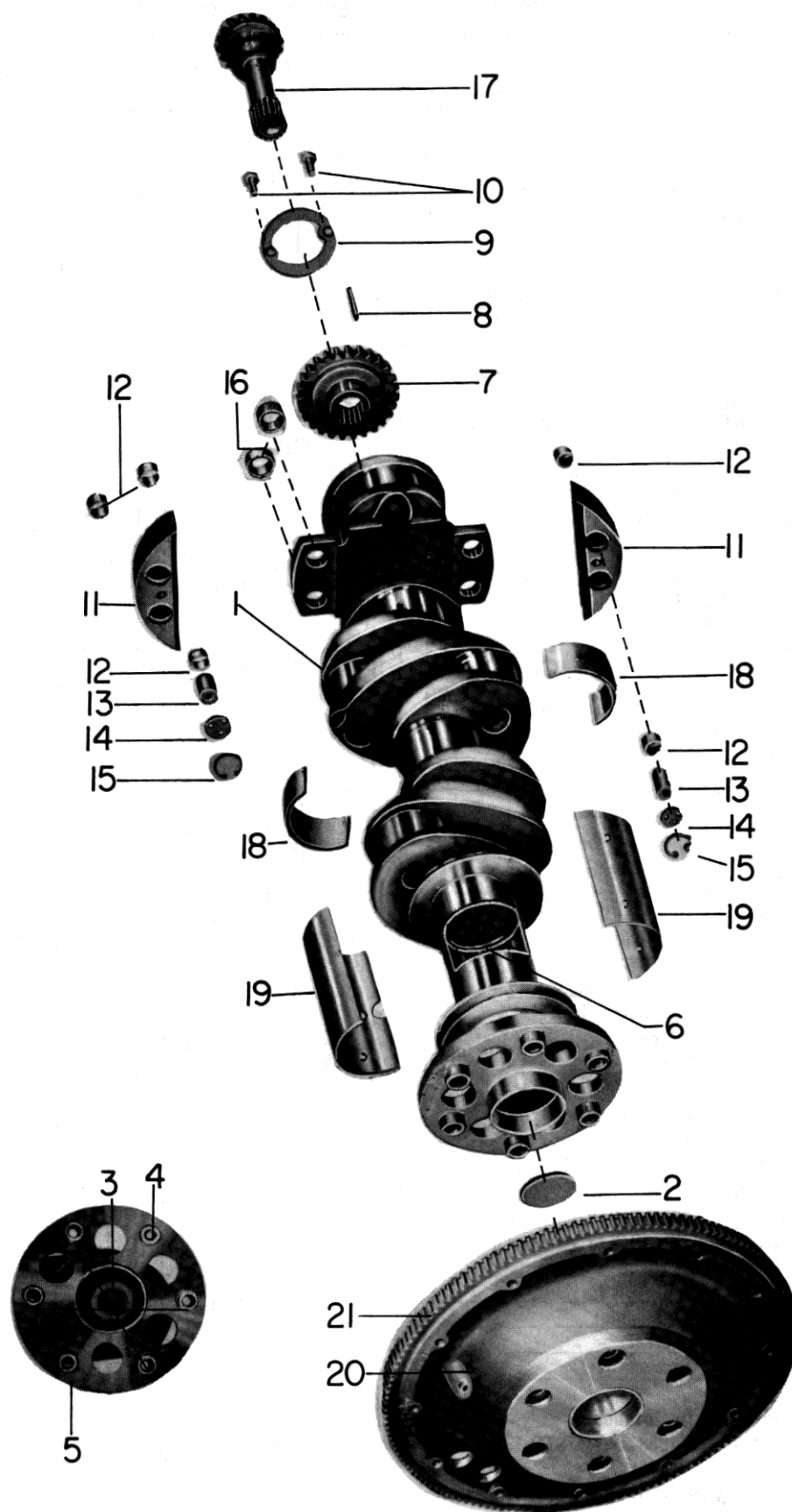


Figure 4 CRANKSHAFT, COUNTERWEIGHT AND STARTER RING GEAR ASSEMBLY

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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.

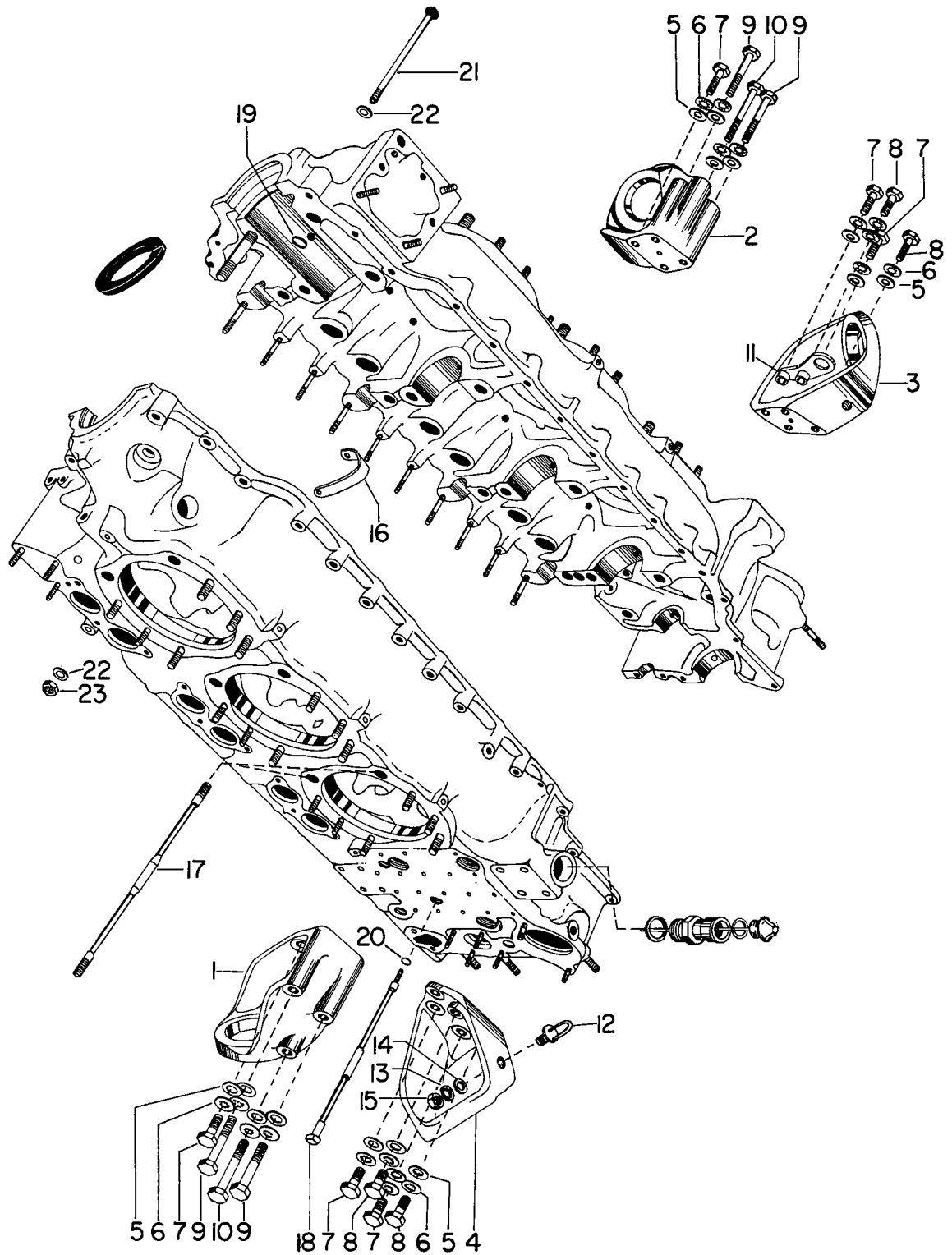


Figure 5 MOUNTING BRACKETS, LIFTING EYES AND ATTACHING PARTS

LYCOMING TIO-541 PARTS CATALOG

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP

CAMSHAFT ASSEMBLY

FIG. REF.	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												

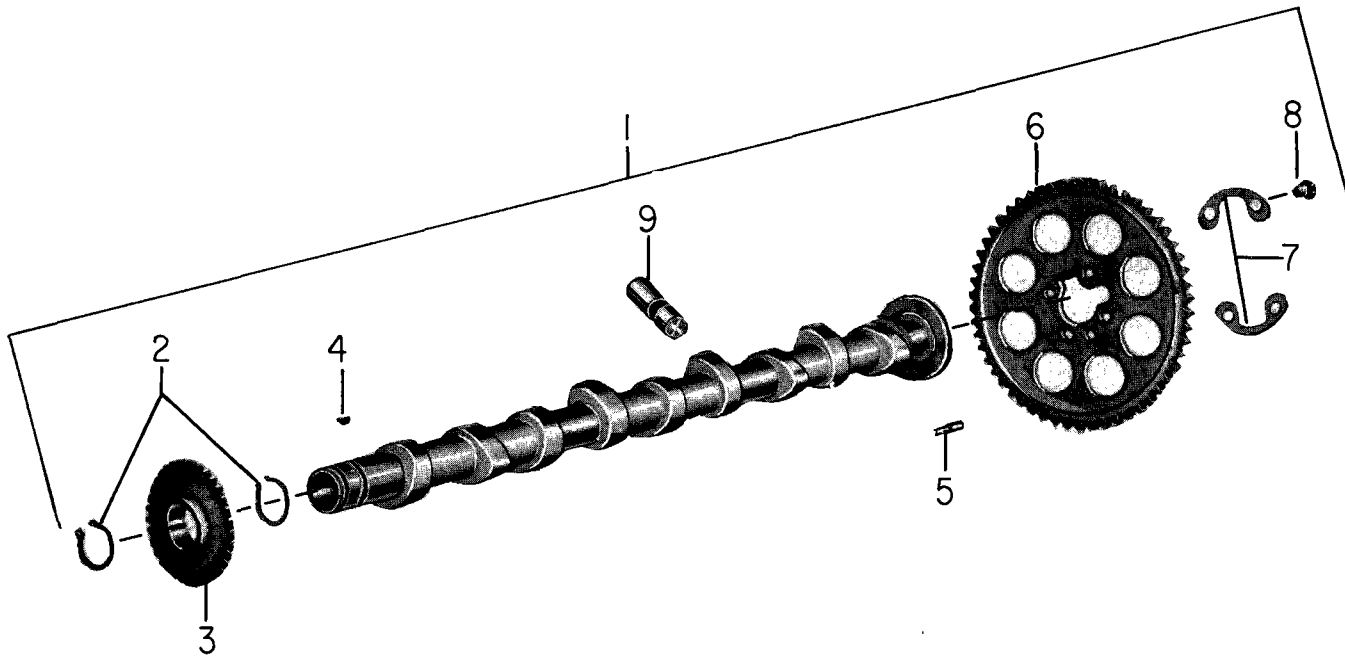


Figure 6

1-9

LYCOMING

TIO-541 PARTS CATALOG

CRANKCASE, CRANKSHAFT AND CAMSHAFT GROUP CRANKCASE ATTACHING PARTS

FIG. REF.	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																			
11	STD-1945	BOLT, 5/16-18 x 3-1/16 long,hex.hd.																			
		dr. end																			
12	STD-1956	BOLT, 5/16-18 x 4-15/16 long,hex.hd.																			
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												

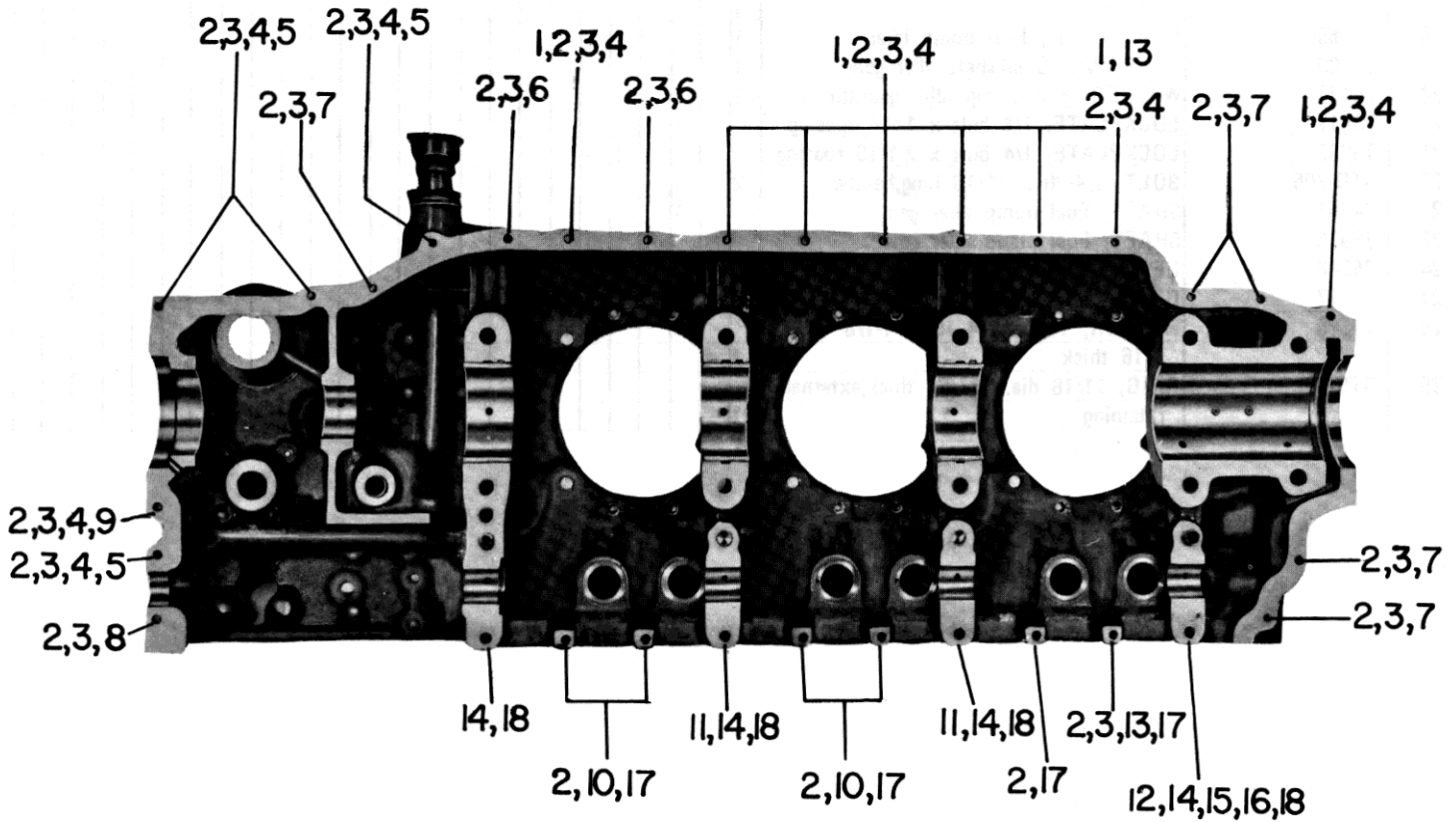


Figure 7

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															

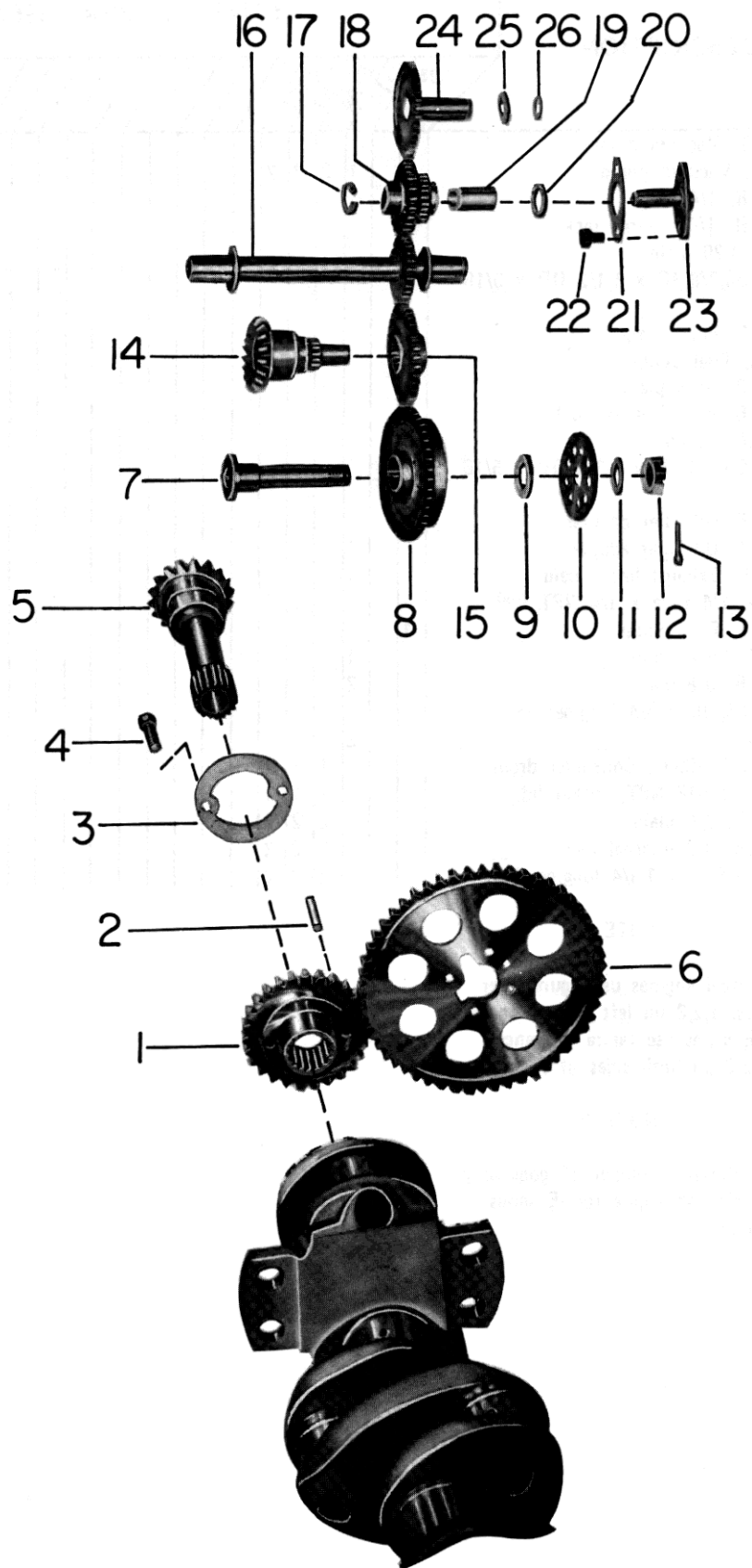


Figure 8 ACCESSORY DRIVE GEAR TRAIN
2-2

ACCESSORY GROUP
DRIVE COVERS

FIG. REF. 9	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY															
			ON ALL	A1A	E1A	E1B	E1C											
1	8313	GASKET, Vacuum pump	2															
2	60430	COVER, Vacuum pump			1	2	2	2										
3	STD-8	WASHER, 1/4 plain	8															
3	STD-160	WASHER, 1/4 internal lock	8															
3	STD-1411	NUT, 1/4-20 plain	8															
4	STD-208	SEAL, Oil,7/8 ID x 1-1/2 OD x 5/16 wide	2															
5	1691-C	GASKET, Fuel pump	1															
6	60431	COVER, Fuel pump	1															
7	STD-35	WASHER, 5/16 plain	4															
7	STD-475	WASHER, 5/16 internal lock	4															
7	STD-1410	NUT, 5/16 plain	4															
8	STD-213	SEAL, Oil,3/4 ID x 1-3/8 OD x 5/16 wide	1															
9	LW-12517	GASKET, Oil filter adapter	1															
9	76888	GASKET, Oil filter adapter			1													
10	78014	BAFFLE, Exhaust heat shield			1													
11	AN822-4-4	ELBOW, 1/4 tube x 1/4 NPT 90°			2	1	1	1										
12	60096	GASKET, Fuel pump	1															
13	65098	COVER, Fuel pump			1													
14	STD-33	WASHER, 3/8 plain			2													
14	STD-1592	BOLT, 3/8-16 x 3/4 long,hex.hd. drilled hd.			2													
15	77537	ADAPTER ASSY., Controller drain				1	1	1										
16	STD-784	PLUG, 3/8-18 NPT, socket hd.				1	1	1										
17	STD-33	WASHER, 3/8 plain				2	2	2										
17	STD-678	WASHER, 3/8 internal lock				2	2	2										
17	STD-1957	BOLT, 3/8-16 x 1-1/4 long,hex.hd.				2	2	2										

NOTE 1

A1A model engines use figure reference nos. 1,2,3 on left side of engine only. -E series use figure reference nos. 1,2,3 on both sides of engine.

NOTE 2

Figure reference number 11 goes only on left side of engine for -E series installations.

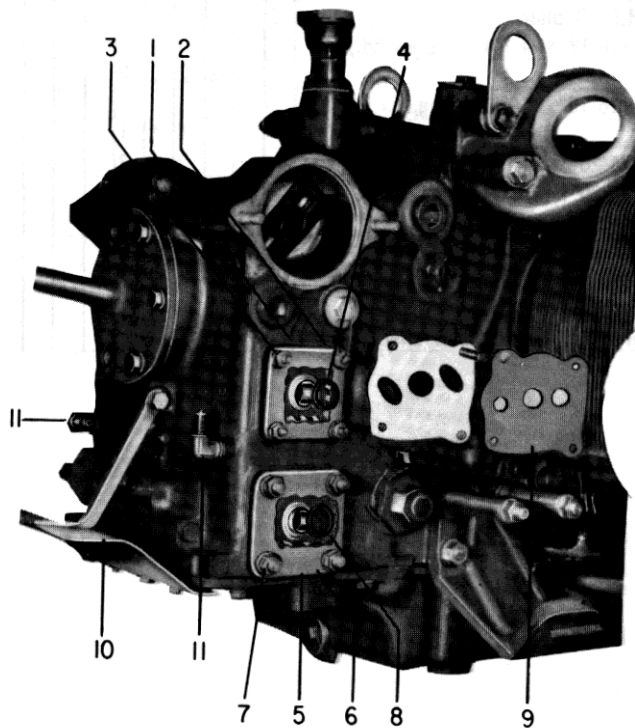
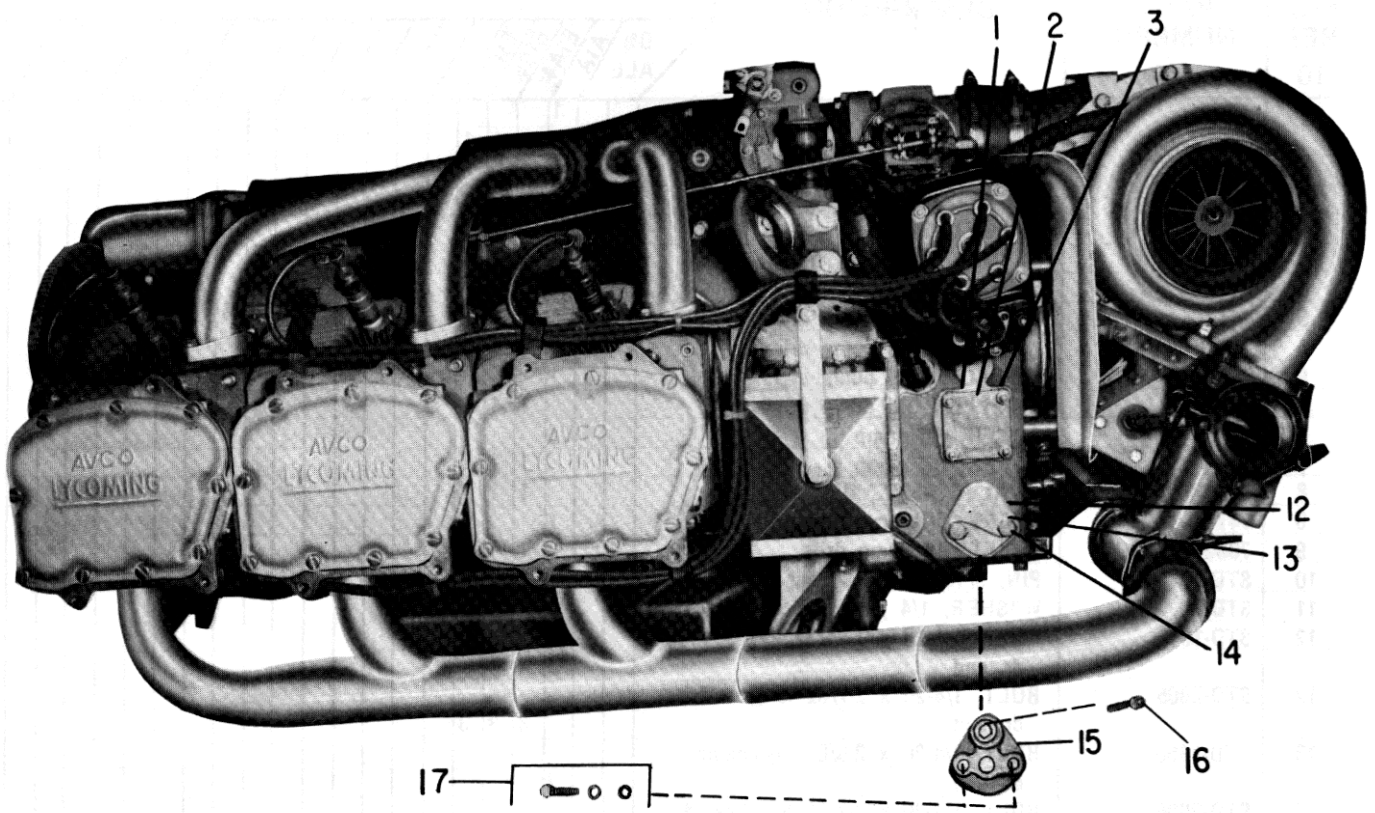


Figure 9 DRIVE COVERS

LYCOMING

TIO-541 PARTS CATALOG

ACCESSORY GROUP
OIL PUMP ASSEMBLY

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																						
			ON ALL	A1A	E1A	E2A	E3A																		
	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																							
14	STD-1409	NUT, 1/4-20,slotted shear	5											2	2	2									
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											

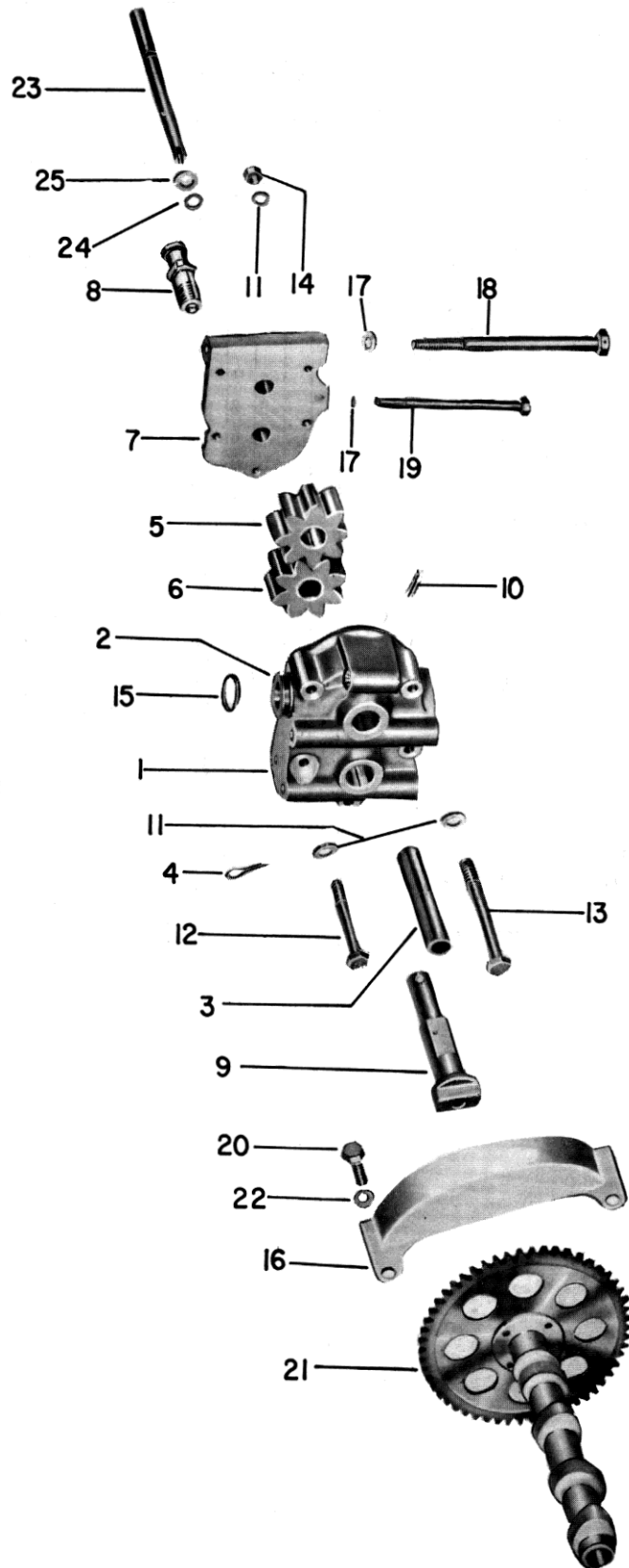


Figure 10 OIL PUMP ASSEMBLY

2-6

LYCOMING

TIO-541 PARTS CATALOG

ACCESSORY GROUP

COMPRESSOR DRIVE, MOUNTS, AND ATTACHING PARTS

FIG. REF.	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									

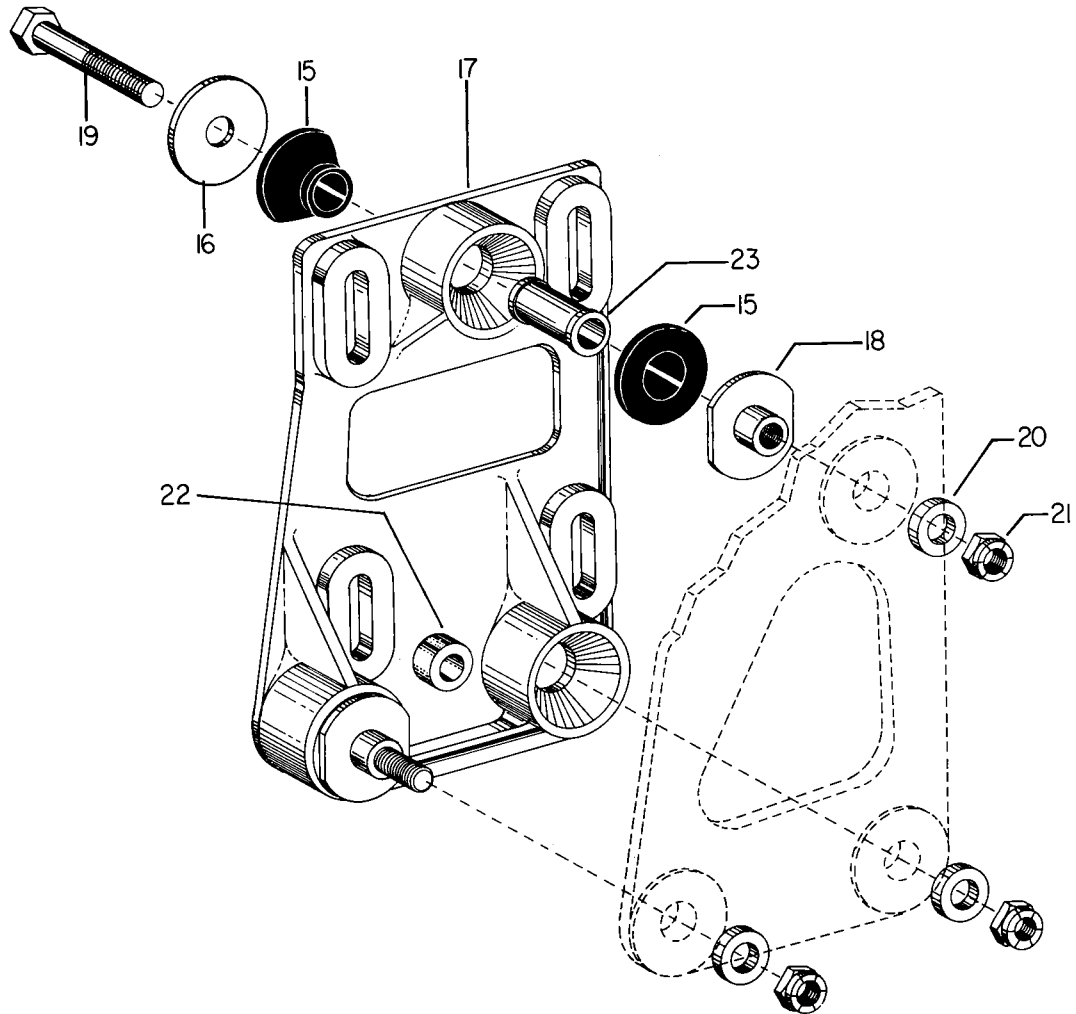
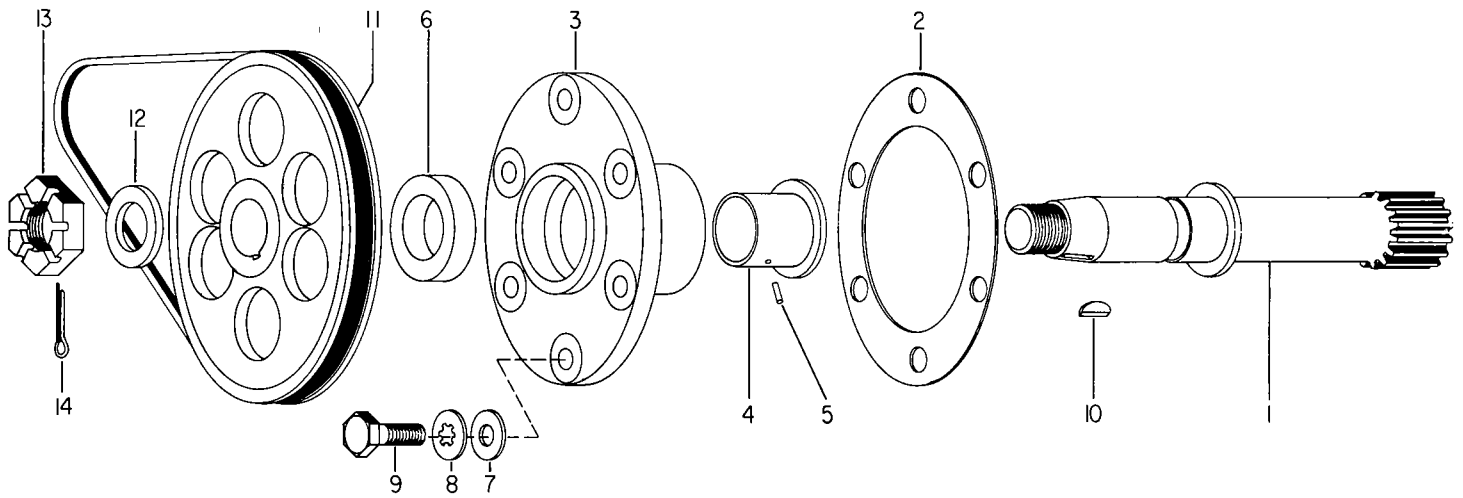


Figure 11 COMPRESSOR DRIVE MOUNTS AND ATTACHING PARTS

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.

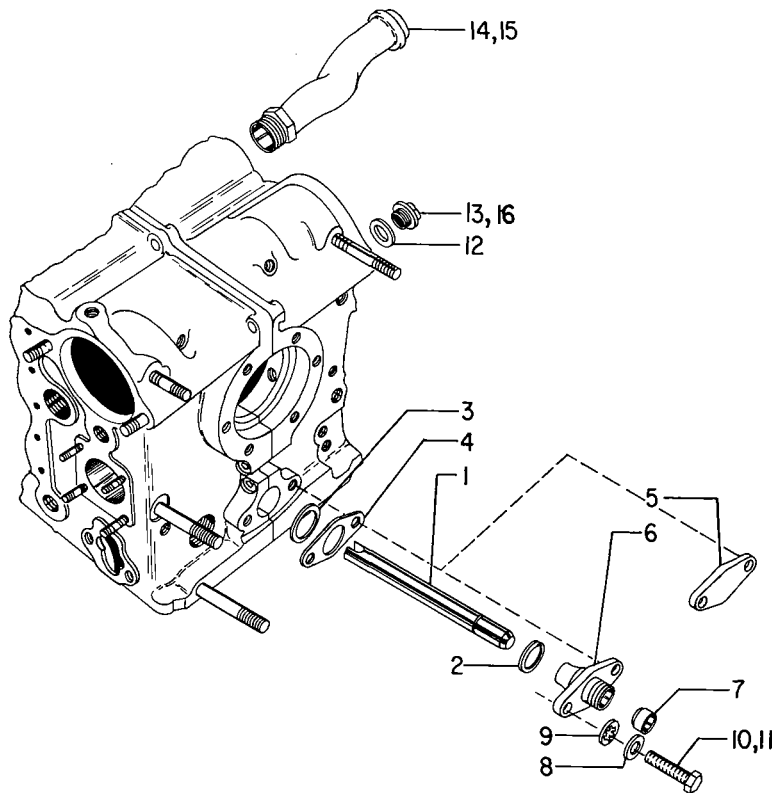


Figure 12

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY											
			OW ALL	A1A	E1A	E1B	E1C							
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							

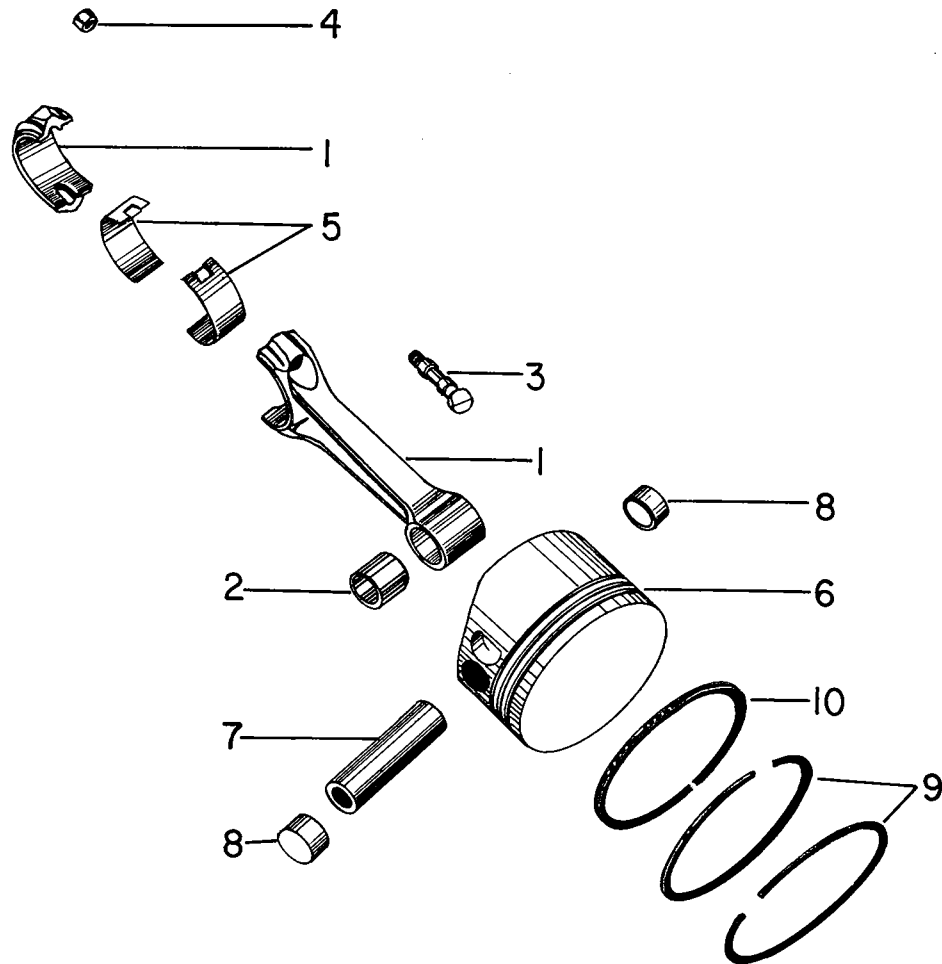


Figure 13
3-1

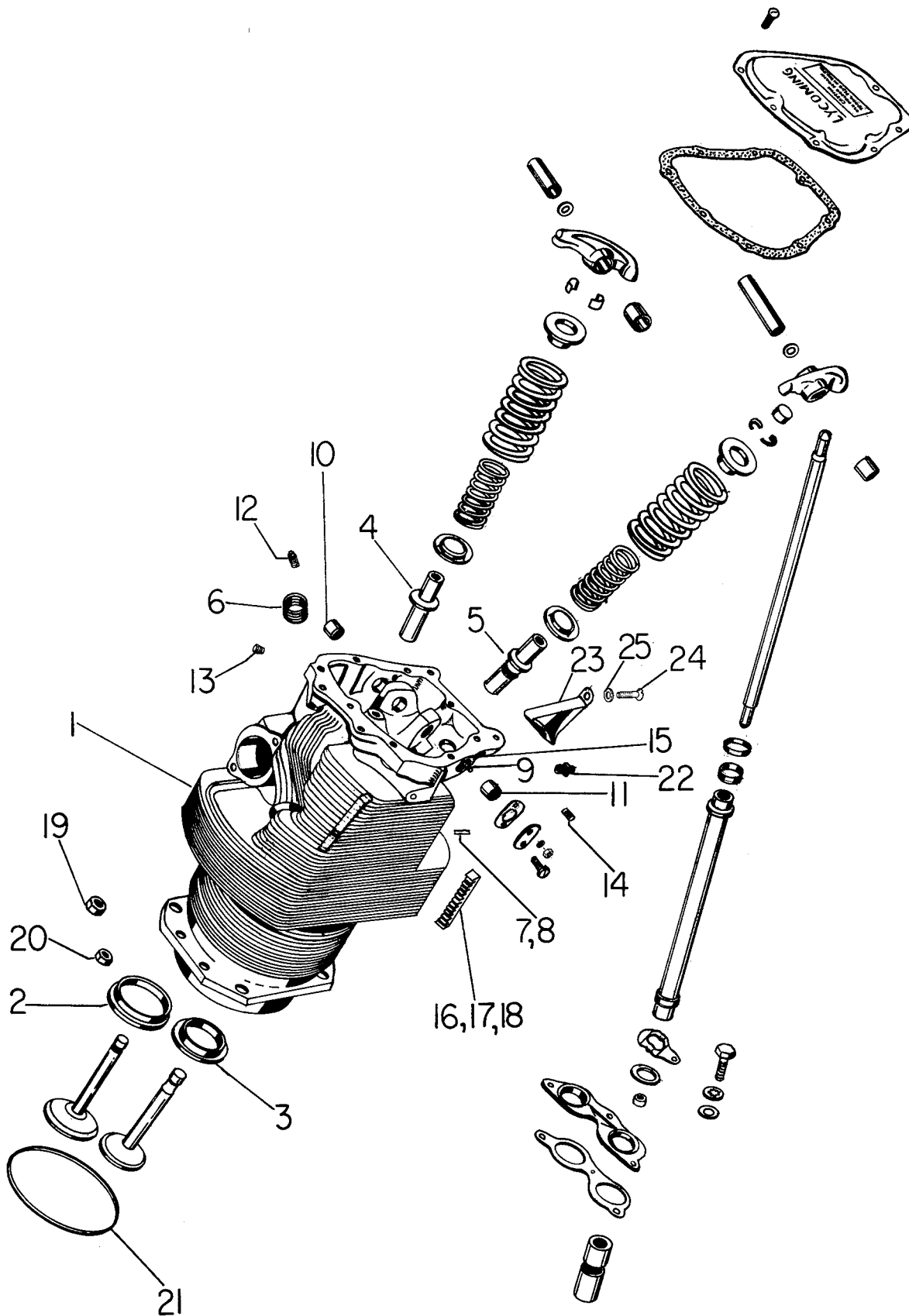


Figure 14 CYLINDER ASSEMBLY
3-3

LYCOMING

TIO-541 PARTS CATALOG

CYLINDER, PISTON AND VALVE TRAIN
VALVE ASSEMBLIES

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																				
			ON ALL	A1A	E1A2	E1B2	E1C2																
			/ / / / / / / / / / / / / / / /																				
1	73117	VALVE, Intake				6																	
	LW-13087	VALVE, Intake				6	6	6															
2	LW-11167	VALVE, Exhaust,rotator type				6																	
	76076	VALVE, Exhaust,rotator type					6	6	6														
3	LW-11796	SPRING, Valve,outer									12												
	LW-11798	SPRING, Valve,outer									12	12	12										
4	LW-11797	SPRING, Valve,auxiliary									12												
	LW-11799	SPRING, Valve,auxiliary									12	12	12										
5	68325	SEAT, Valve spring lower intake									6												
	LW-13321	SEAT, Valve spring lower intake										6	6	6									
6	73112	SEAT, Valve spring lower exhaust										6											
	76093	SEAT, Valve spring lower exhaust										6	6	6									
7	LW-10077	SEAT, Valve spring									6												
8	60009	KEY, Valve					12																
9	LW-10076	SEAT, Valve spring,rotator type					6																
10	MS13997-3	KEY, Valve rotator type					12																
11	MS13998-3	CAP, Valve stem					6																
12	74782	LIFTER, Hydraulic										12											
	77672	LIFTER, Hydraulic										12	12	12									

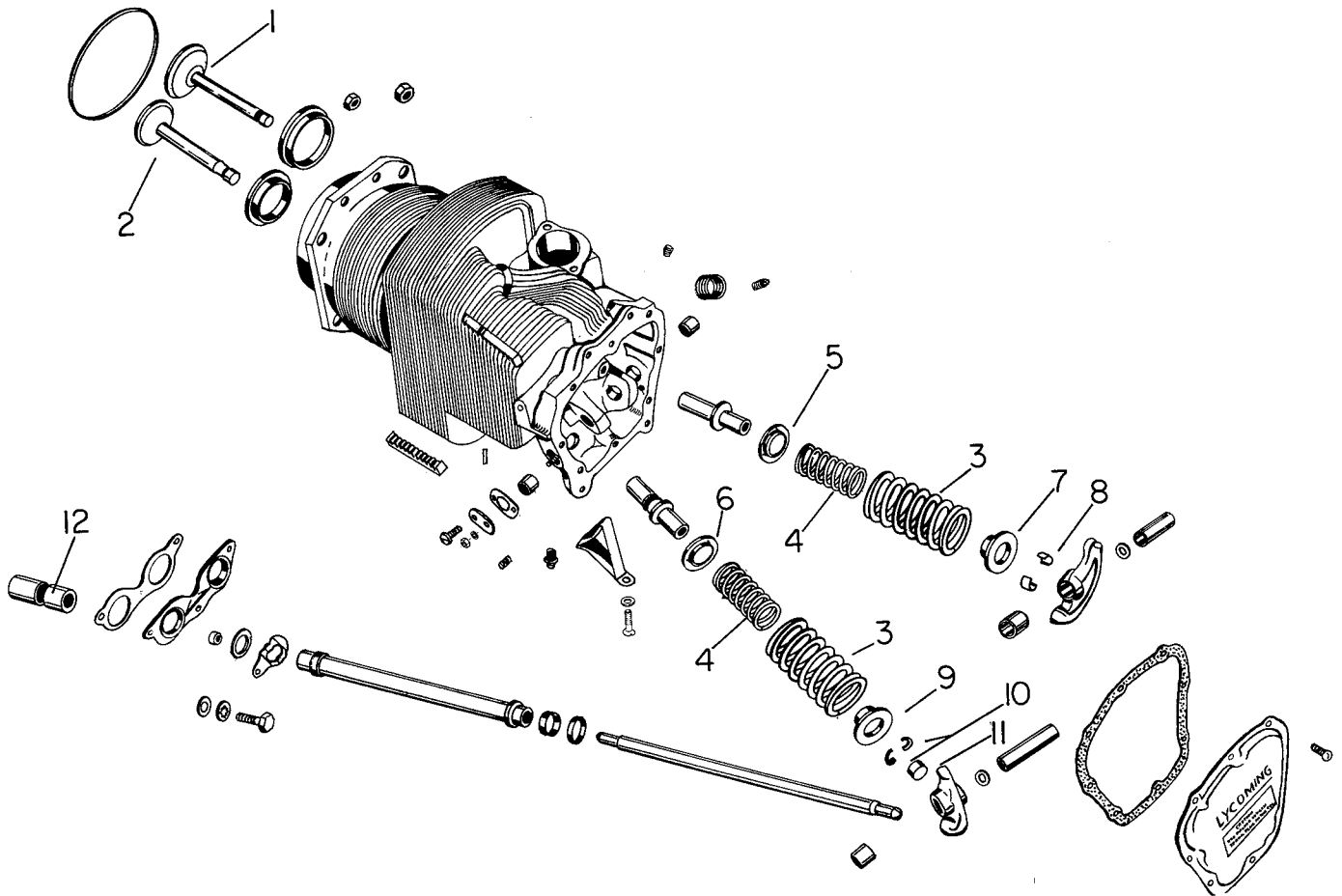


Figure 15

3-4

LYCOMING

TIO-541 PARTS CATALOG

CYLINDER, PISTON AND VALVE TRAIN SHROUD TUBES AND PUSH ROD ASSEMBLIES

FIG. REF. 16	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY															
			ON ALL	ALA	ETA	EBA	ECA											
1	74906	GASKET, Shroud tube	6															
2	74912	ADAPTER, Shroud tube		6														
	LW-13566	ADAPTER, Shroud tube				6	6	6										
3	STD-8	WASHER, 1/4 plain		18														
4	STD-160	WASHER, 1/4 internal lock		18														
5	STD-1875	BOLT, 1/4-20 x 13/16 long,hex.hd.		18														
6	74907	SHROUD TUBE ASSY., Push rod (intake)				6												
	LW-13339	SHROUD TUBE ASSY.				12	12	12										
	74905	SHROUD TUBE ASSY., Push rod (exhaust)				6												
7	LW-13077	SPRING, Shroud tube		12														
	LW-13565	SPRING, Shroud tube				12	12	12										
8	66728	WASHER, 25/32 ID x 1-1/4 OD x 1/32		24														
	LW-13340	WASHER, 25/32 ID x 31/32 OD x 1/32				12	12	12										
9	61503	SLEEVE, Shroud tube		12														
10	62922	SEAL, Shroud tube		24														
	70310	SEAL, Shroud tube				24	24	24										
11	73580*	ROD ASSY., Push intake				un												
	73581*	ROD ASSY., Push intake				un												
	73582*	ROD ASSY., Push intake				un												
	73568*	ROD ASSY., Push exhaust				un												
	73569*	ROD ASSY., Push exhaust				un												
	73570*	ROD ASSY., Push exhaust				un												
	76180**	ROD ASSY., Push				un	un	un										
	76181**	ROD ASSY., Push				un	un	un										
	76182**	ROD ASSY., Push				un	un	un										
	76183**	ROD ASSY., Push				un	un	un										

* - A total of 6 intake and 6 exhaust required.

** - A total of 12 required.

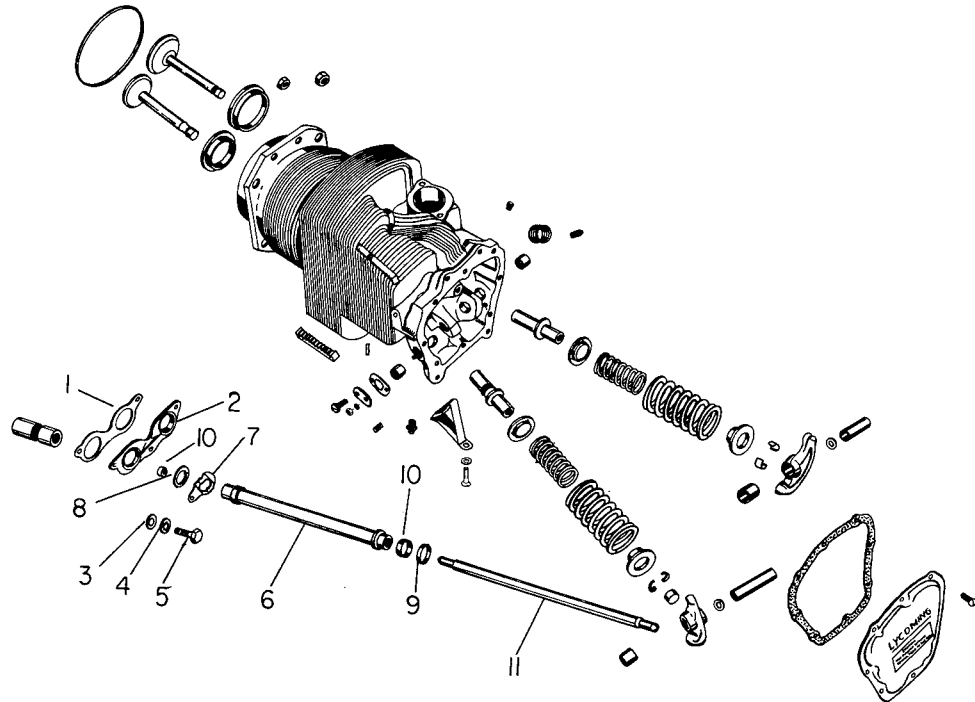


Figure 16

LYCOMING

TIO-541 PARTS CATALOG

CYLINDER, PISTON AND VALVE TRAIN VALVE ROCKER ASSEMBLIES

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY													
			ON ALL	A1A	E1A	E1B	E1C									
1	75916	ROCKER ASSY., Intake valve				6										
	76266	ROCKER ASSY., Valve					6	6	6							
2	75913	BUSHING, Intake valve rocker				6										
	76242	BUSHING, Valve rocker					6	6	6							
3	75915	ROCKER ASSY., Exhaust valve				6										
	76266	ROCKER ASSY., Valve					6	6	6							
4	75914	BUSHING, Exhaust valve rocker				6										
	76242	BUSHING, Valve rocker					6	6	6							
5	71549	WASHER, Valve rocker	12													
6	72626	SHAFT, Valve rocker	12													
7	71450	GASKET, Rocker box cover				6										
	76036	GASKET, Rocker box cover					6	6	6							
8	75734	COVER ASSY., Rocker box				6										
	76038	COVER ASSY., Rocker box					6	6	6							
9	STD-1925	SCREW, 1/4-20 x 5/8 pan hd., self-locking														
10	74494	PLATE, Spark plug reach caution	6													
11	STD-160	WASHER, 1/4 plain					12	12	12							
12	STD-1411	NUT, 1/4-20 plain						12	12	12						
13	72709	SCREW, 1/4-20 x 5/8, self-locking					24	12	12	12						
14	72710	COVER, Valve rocker shaft	12													
15	66732	GASKET, Valve rocker shaft cover	12													

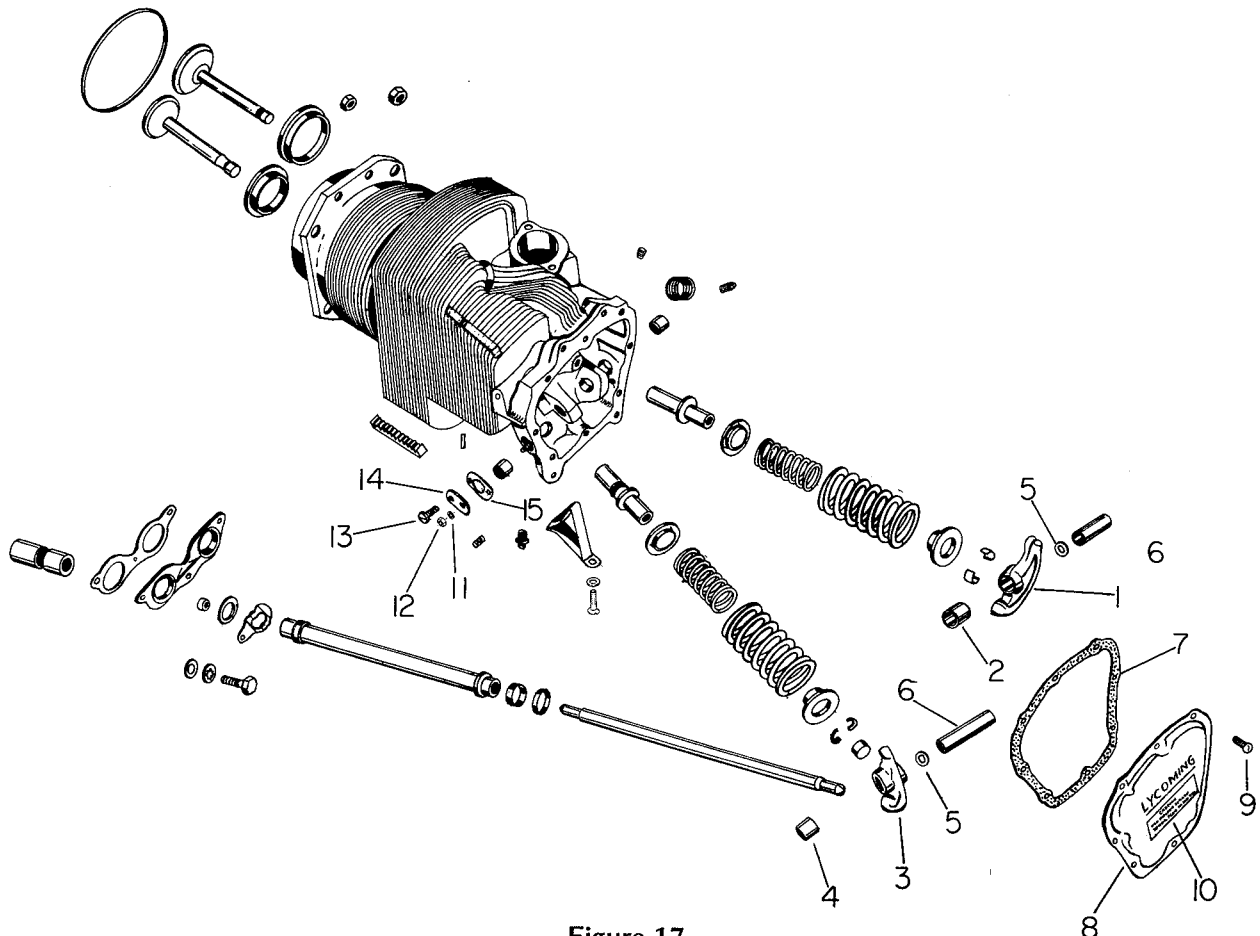


Figure 17

3-6

LYCOMING

TIO-541 PARTS CATALOG

CYLINDER, PISTON AND VALVE TRAIN INTERCYLINDER BAFFLE ASSEMBLY

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																		
			OM ALL	A1A	E1A	E1A	E1A														
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													

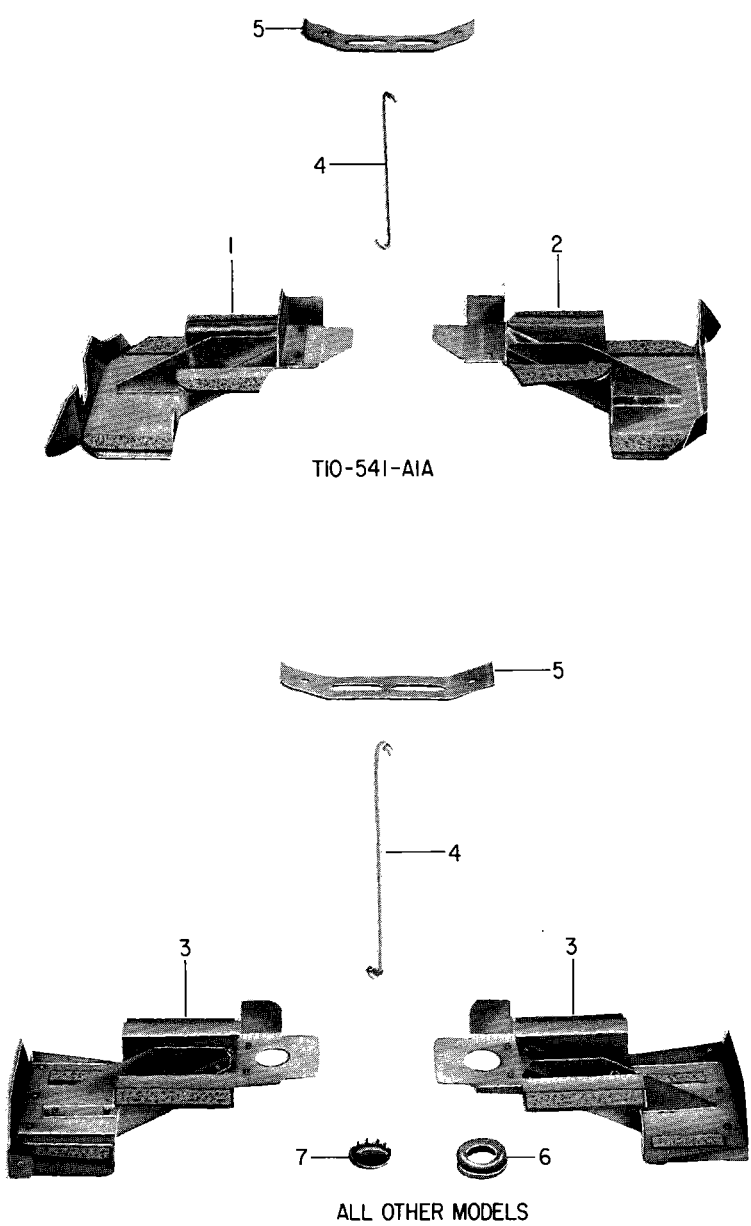


Figure 18
3-7

LYCOMING

TIO-541 PARTS CATALOG

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

FIG. REF.	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														

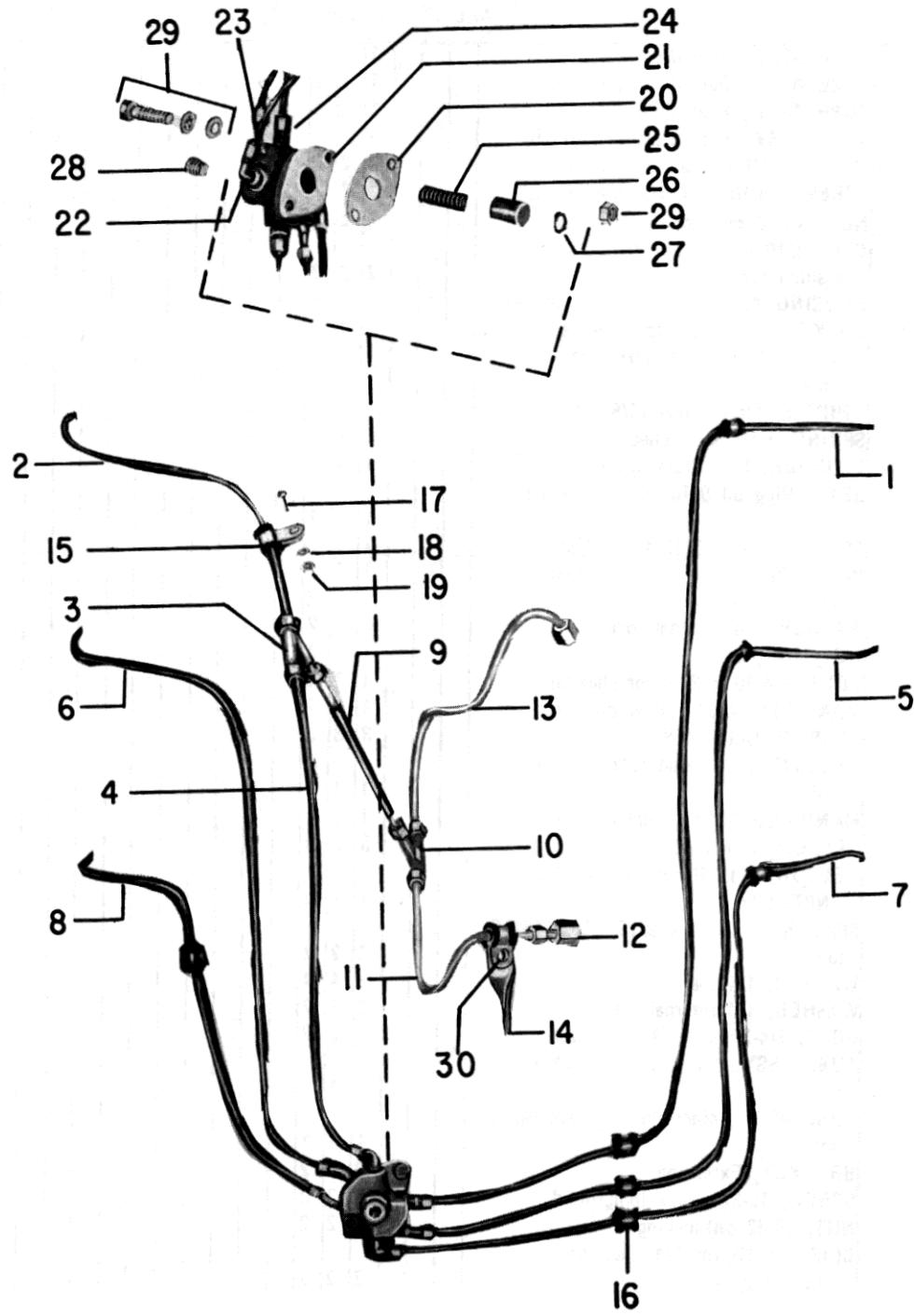


Figure 19 FUEL DRAIN SYSTEM (-A1A)

LYCOMING

TIO-541 PARTS CATALOG

CYLINDER, PISTON AND VALVE TRAIN
FUEL DRAIN SYSTEM (-E1A4, -E1B4, -E1C4)

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY											
			ON ALL	A1A	E1A4	E1B4	E1C4							
1	61581-40	TUBE ASSY., Fuel drain cyl.no.1				1	1	1						
2	61581-41	TUBE ASSY., Fuel drain cyl.no.2				1	1	1						
3	61581-42	TUBE ASSY., Fuel drain cyl.no.3				1	1	1						
4	61581-3	TUBE ASSY., Fuel drain cyls.no.4,5,6				3	3	3						
5	MS21919-G12	CLIP, 3/4 ID for 3/16 dia.screw				2	2	2						
6	STD-969	SCREW, No.10-32 x 1/2 long,fill.hd.				2	2	2						
7	STD-670	NUT, No.10 self-locking				2	2	2						
8	MS21919F2	CLIP, 3/16 ID for 1/4 dia.screw (cushion type)				2	2	2						
9	LW-13346	HOUSING ASSY., Fuel drain check valve				1	1	1						
	75085	GASKET, Fuel drain check valve				1	1	1						
10	AN822-3	ELBOW, 90° flared tube pipe thread												
11	AN816-3	NIPPLE, Flared tube (3/8 tubing)				1	1	1						
	75087	SPRING, Fuel drain check valve				1	1	1						
	LW-13344	PLUNGER, Fuel drain check valve				1	1	1						
	MS29513-015	SEAL, Ring oil 9/16 ID x 1/16 dia. sect.				1	1	1						
	STD-1006	SEAL, "O" ring 7/16 ID x 7/64 dia.				1	1	1						
	1102	PLUG, Pipe 1/8 x 3/8 long (allen)				1	1	1						
	STD-8	WASHER, 1/4 plain				2	2	2						
	STD-160	WASHER, 1/4 internal lock				2	2	2						
	STD-1411	NUT, 1/4 plain				1	1	1						
	STD-1646	BOLT, 1/4-20 x 2.00 long,hex.hd.				1	1	1						
12	76987	MANIFOLD ASSY., Fuel drain rt.				1	1	1						
13	AN791-2	ELBOW, Union 45°				3	3	3						
14	AN822-3	ELBOW, 3/16 flared tube to 1/8 NPT, 90°				1	1	1						
15	78381	MANIFOLD ASSY., Fuel drain, left				1	1	1						
16	AN791-2	ELBOW, Union 45°				3	3	3						
17	AN822-3	ELBOW, 3/16 flared tube to 1/8 NPT, 90°				1	1	1						
18	76413	SPACER, 9/32 ID x 9/16 OD x 15/16 long				2	2	2						
19	STD-8	WASHER, 1/4 plain				4	4	4						
19	STD-160	WASHER, 1/4 internal lock				2	2	2						
19	STD-1931	BOLT, 1/4-20 x 1-7/8 long,hex.hd.				2	2	2						
20	76191	TUBE ASSY., Manifold to check valve, right				1	1	1						
21	78376	TUBE ASSY., Manifold to check valve, left				1	1	1						
22	73136	BRACKET, Extension				2	2	2						
23	STD-969	SCREW, 10-32 x 1/2 long,fill.hd.				2	2	2						
24	STD-670	NUT, 10-32 self-locking				2	2	2						
25	73650	CLIP, 1/4 ID for 1/4 dia.screw (cushion type)				2	2	2						

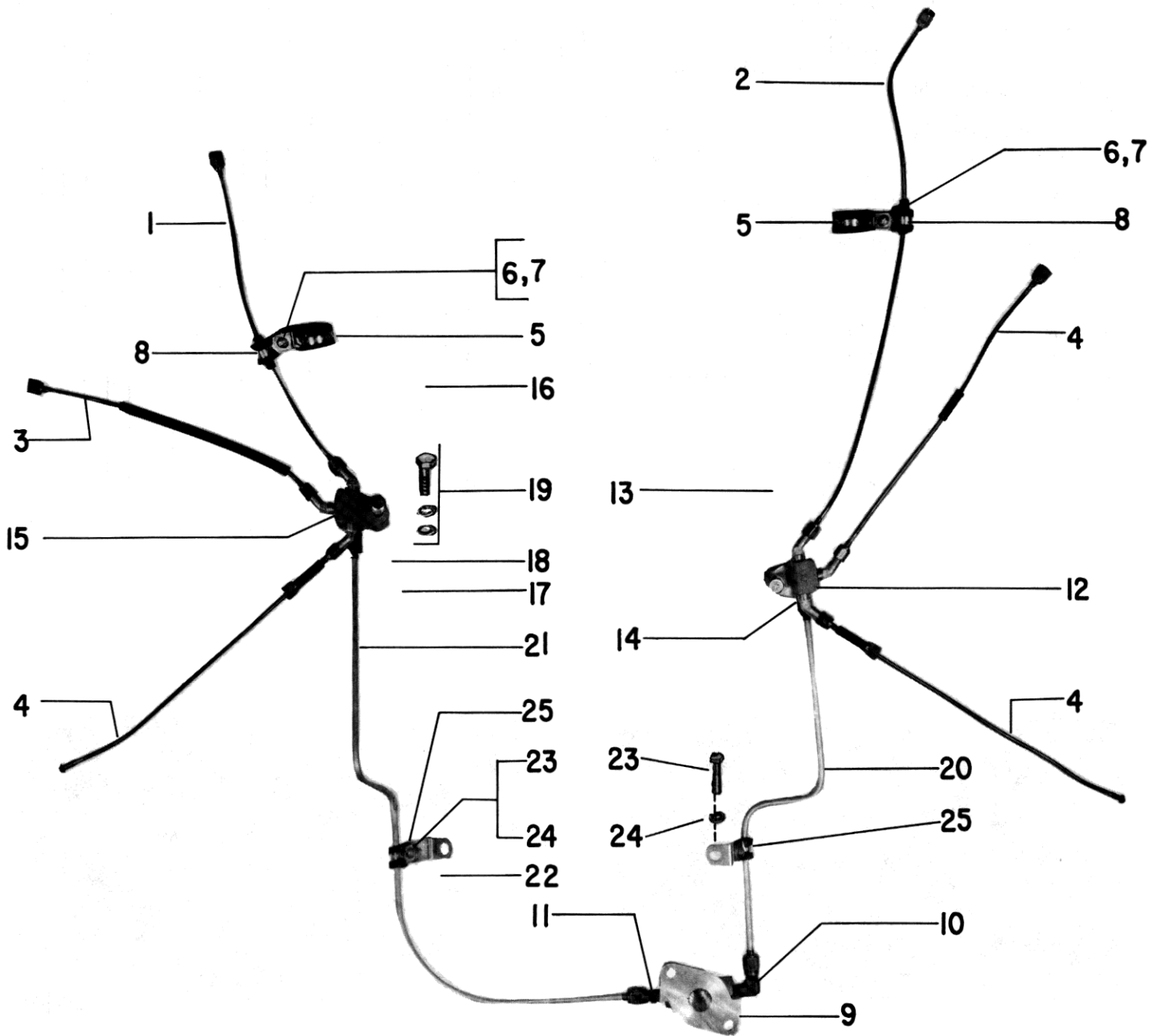


Figure 20 FUEL DRAIN SYSTEM (-E1A4, -E1B4, -E1C4)

LYCOMING

T10-541 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 ⁰ , 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 ⁰ 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 ⁰			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.							

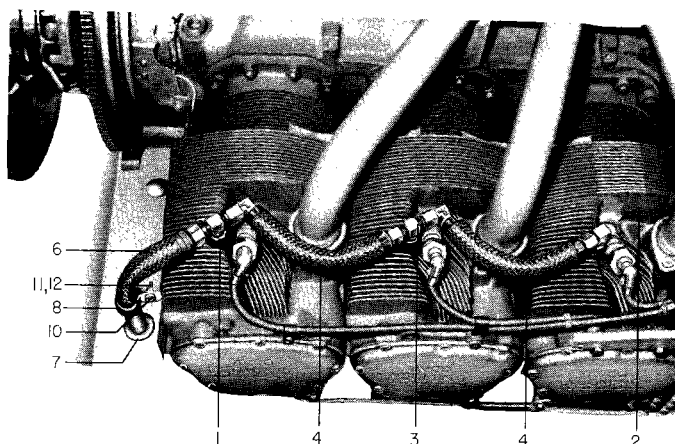
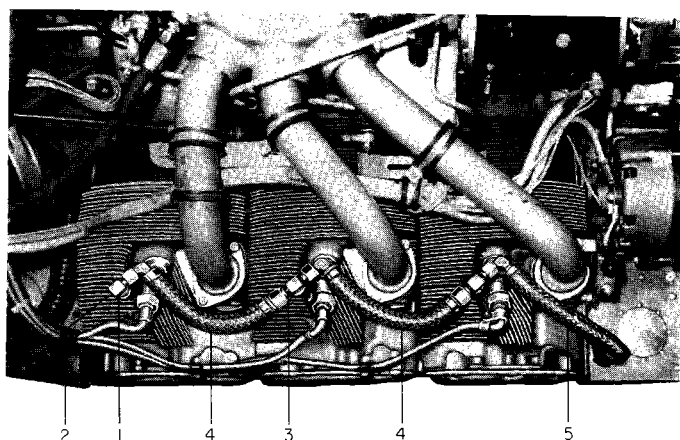


Figure 21
3-12

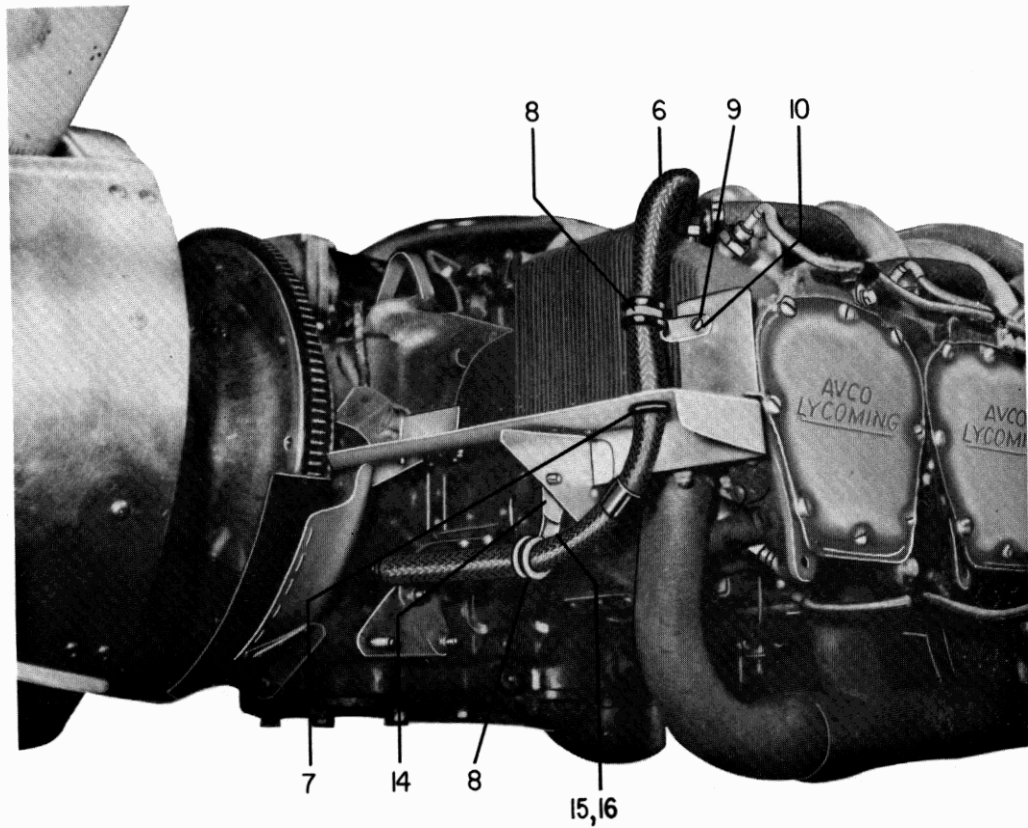
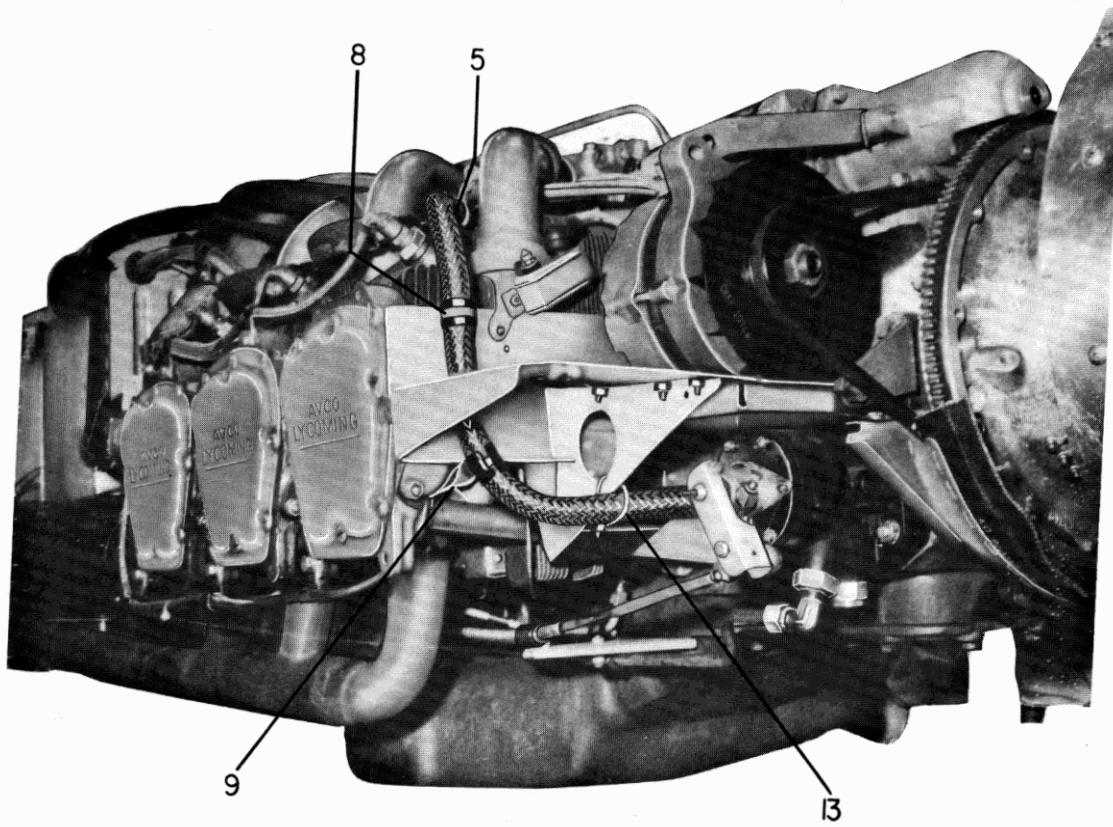


Figure 21 EXTERNAL PARTS FOR OIL COOLED EXHAUST VALVE GUIDES

IGNITION SYSTEM MAGNETOS AND DRIVES

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY											
			ON ALL	A1A	E1A	E1B	E1C							
1	LW-349310-4	MAGNETO, S6RN-1209	1											
2	LW-349290-2	MAGNETO, Retard breaker (S6LN-1208)	1											
3	75965	CLAMP, Magneto	4											
4	STD-475	WASHER, 5/16 internal lock	4											
5	STD-1410	NUT, 5/16-18 plain	4											
6	LW-12681	GASKET, Magneto	2											
7	69208	COUPLING, Magneto drive	2											
8	LW-12136	CUSHION, Magneto drive	4											
9	75468	SHAFTGEAR ASSY., Magneto drive			1									
9	75473	SHAFTGEAR ASSY., Magneto drive				1	1	1						
10	69565	SLEEVE, Magneto drive shaft	1											
11	75467	COUPLING ASSY., Magneto, intermediate	1											
12	69565	SLEEVE, Magneto drive shaft	1											

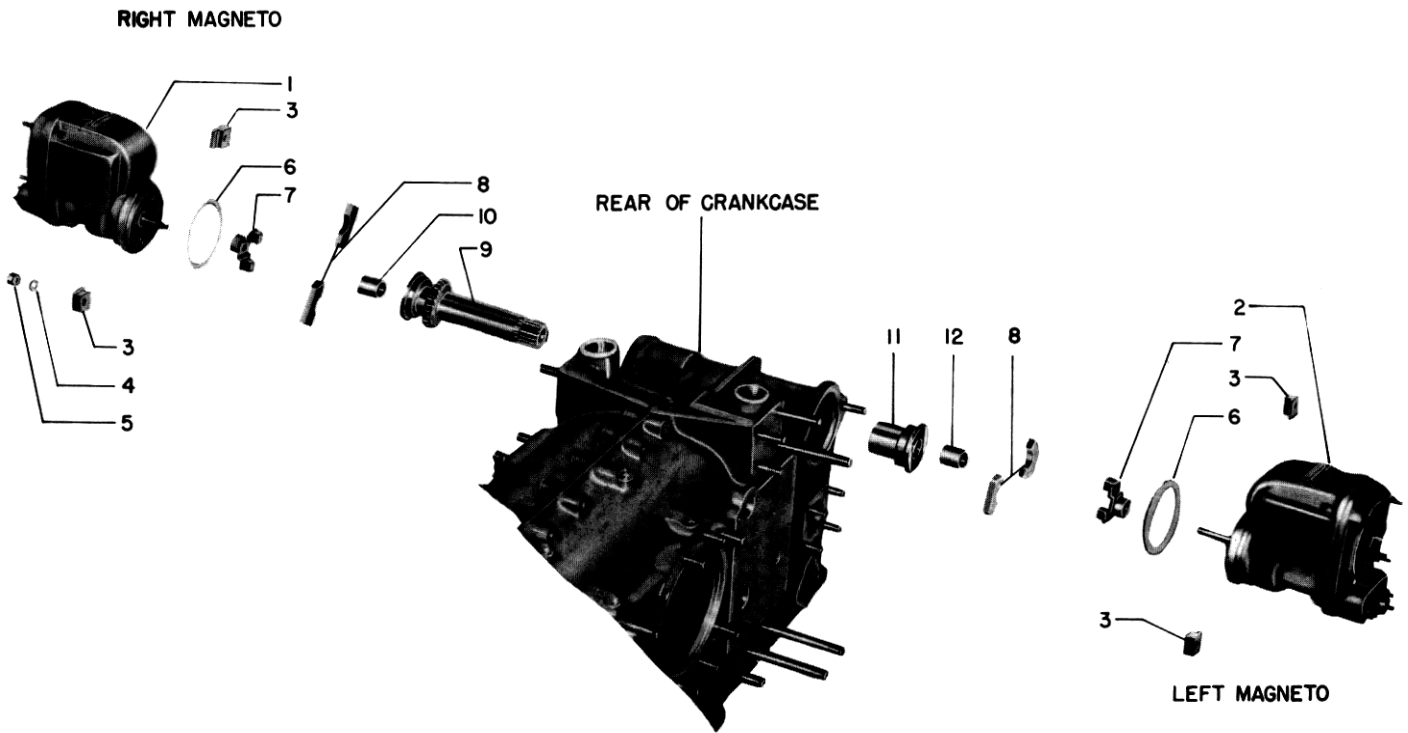


Figure 22
4-1

VENDOR ACCESSORY MAGNETOS

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																				
			ON ALL	A1A	E1A	F1A	F1CA																
23																							
43	10-353056	BEARING, Magneto drive end	1																				
44	10-349247	PLATE, Retaining	1																				
45	10-349351-3	MAGNET, Rotating	1																				
46	10-349242	GEAR, Distributor,small	1																				
47	10-157134	VENTILATOR	1																				
48	10-157135	PLUG, Timing	1																				
49	10-90500-8	SCREW, Identification plate securing	2																				
50	10-70616	PLATE, Identification	1																				
51	10-353060	BEARING, Roller	1																				
52	10-349394-3	HOUSING, Magneto	1																				

* - S6LN only.

Except where noted, quantities listed are for each magneto.

On T10-541-E engines time right magneto to engine with centerline of magneto 20°-30° toward rear of engine.

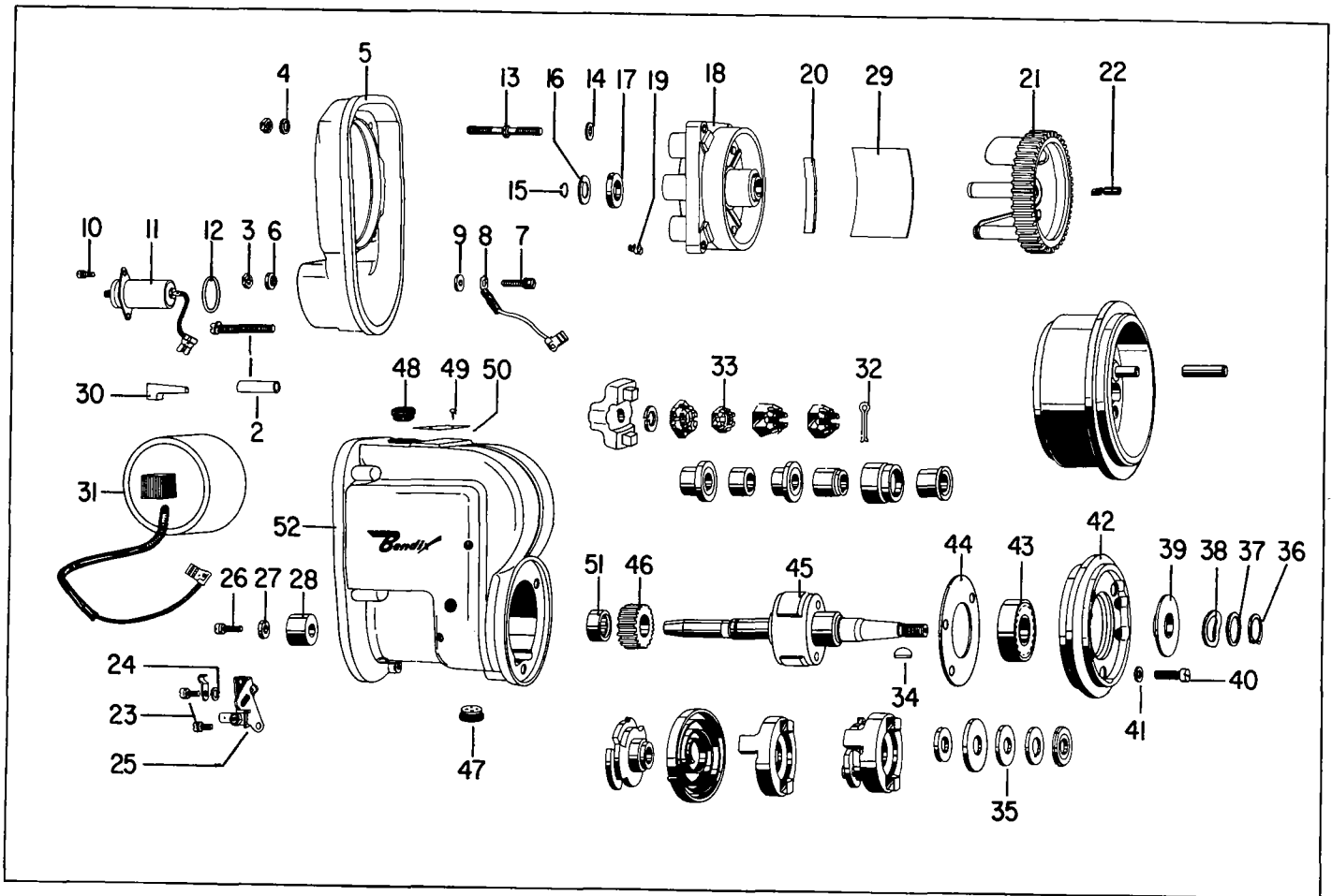


Figure 23
4-3

IGNITION SYSTEM
HARNESS ASSEMBLY ATTACHING PARTS AND SPARK PLUG

Table with columns: FIG. REF. 24, PART NUMBER, DESCRIPTION, QUANTITY PER ASSEMBLY (ON ALL, A/A, E/A, E/R, E/C).

NOTE

The above spark plugs are those 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.

* - Conduit type harness.

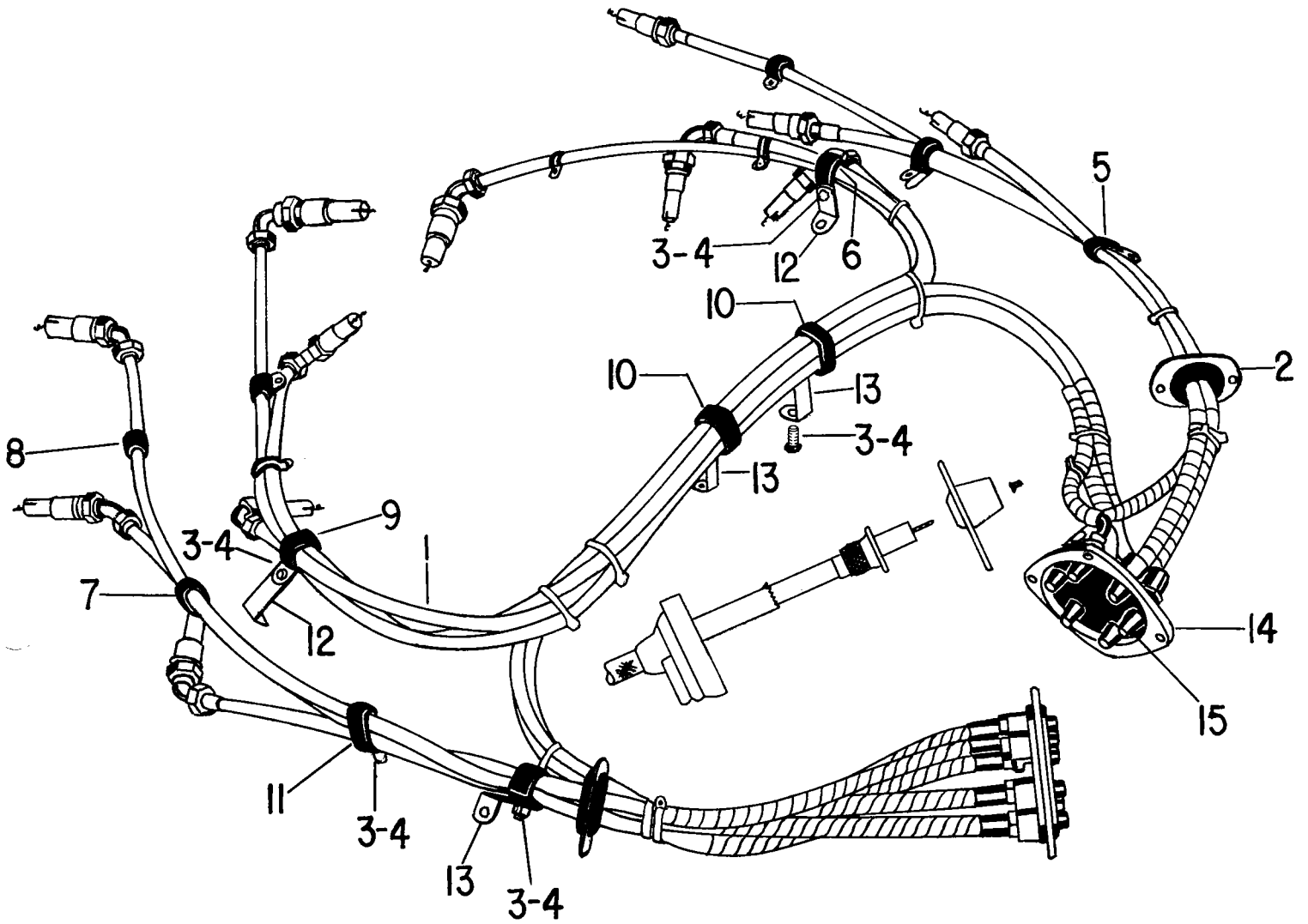


Figure 24 HARNESS ASSEMBLY
4-5

IGNITION SYSTEM
 HARNESS ASSEMBLY AND ATTACHING PARTS

FIG. REF. 25	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY													
			ON ALL	AJA	EIAA	EIBA	EICA									
	LW-620435-1	CABLE ASSY., Ignition shielded			1											
	LW-620435-4	CABLE ASSY., Ignition shielded				1	1									
1	10-620633-48*	LEAD, 48.00 in.long			un	un	un									
1	10-620633-78*	LEAD, 78.00 in.long			un	un	un									
2	10-320573-1	ELBOW, 70°			un	un	un									
2	10-320573-2	ELBOW, 90°			un	un	un									
2	10-320573-3	ELBOW, 110°			un	un	un									
3	10-94225-2	SPRING ASSY.			un	un	un									
4	10-320582	SLEEVE, Terminal end			un	un	un									
5	10-32326	SPRING, Terminal			un	un	un									
6	10-349226	GROMMET				2	2	2								
7	10-13799	NUT				1	2	2								
8	10-91431-8	SCREW				1	2	2								
	10-320232	CLAMP				4										
9	10-320298-3	CLAMP				7	1	1								
	10-320297-3	CLAMP				4										
10	10-320297-2	CLAMP					2	2								
11	10-320299-1	CLAMP					1	1								
12	10-320298-2	CLAMP					2	2								
13	10-320476-1	CLAMP					2	2								
14	10-320432-3	CLAMP					2	2								
15	10-89027-4	BRACKET				1	2	2								
16	10-163011	FERRULE			un	un	un									
17	10-163012	EYELET			un	un	un									
18	10-320471	SPIRAL TUBING (28.00 in.)				un	un									
19	10-349661-2	PLATE				2	2	2								
	10-19933	GROMMET				1										
	STD-160	WASHER, 1/4 internal lock				11	11	11								
	STD-705	BOLT, 1/4-20 x 11/16 long				11	11	11								
	74903	BRACKET, Ignition lead support				1										
	73152	BRACKET, Support clamp					1	1								
	STD-678	WASHER, 3/8 internal lock				1										
	STD-1947	BOLT, 3/8-16 x 19/32 long,hex.hd.				1										
	STD-1968	BOLT, 1/4-20 x 5/8 long,hex.hd.					1	1								
	STD-1685	NUT, 1/4-20 self-locking					1	1								
	STD-692	BOLT, No.10-32 x 1/2 long,rd.hd.					2	2								
	STD-28	WASHER, No.10 plain					2	2								
	STD-670	NUT, No.10-32 self-locking					2	2								
	STD-696	WASHER, 1/4 plain (thin)				un	un	un								
	1182-Y3	SPARK PLUG (Champion RHB36P)	12													

* - Replacement leads include 10-320601 and 10-320602 inner and outer ferrules.

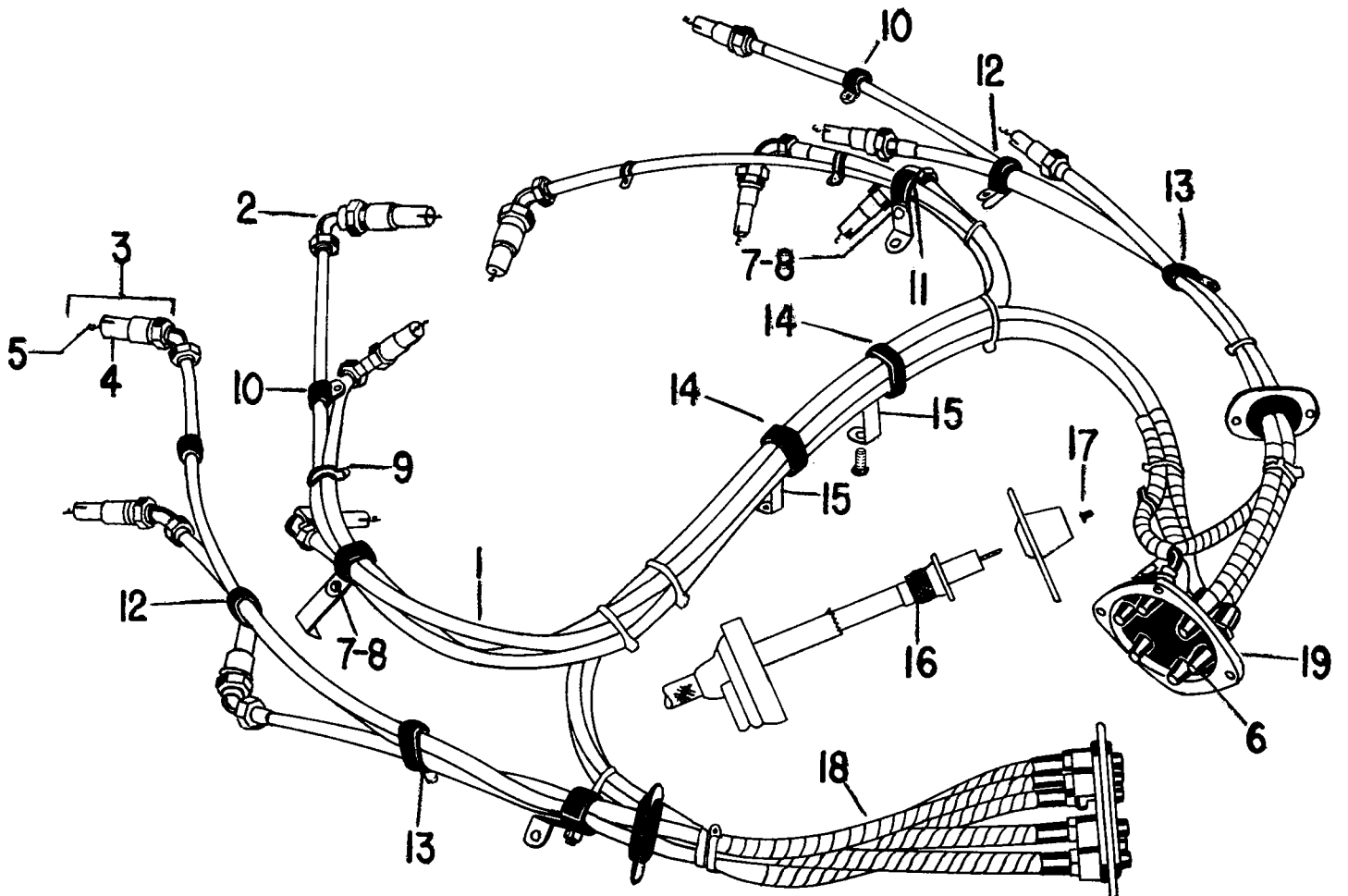


Figure 25 HARNESS ASSEMBLY
4-7

LYCOMING TIO-541 PARTS CATALOG

ELECTRICAL SYSTEM
ALTERNATOR, STARTER, SWITCH, REGULATOR AND ATTACHING PARTS

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																	
			ON ALL	A/A	E/A	E/B	E/C													
	75723*	ALTERNATOR ASSEMBLY				1														
1	74884	ALTERNATOR, 12V.-70Amp.(1100749)				1														
2	75673	BLAST TUBE ASSY.				1														
3	1959991	COLLAR, Outside				1														
4	74883	SHEAVE, Alternator (3.25:1 ratio)				1														
5	1941978	LOCKWASHER, Shaftnut				1														
6	1915172	NUT, Shaft				1														
7	AN6-30	BOLT, 3/8-24 x 3.07 long,hex.hd., dr. end				1														
8	STD-872	NUT, 3/8-24,slotted				1														
9	STD-713	PIN, Cotter,3/32 dia.x 3/4 long				1														
10	74866*	BRACKET, Alternator				1														
11	75749	LOCKPLATE, 5/16 dia.(3 bolts)				1														
12	STD-1838	BOLT, 5/16-18 x 15/16 long,hex.hd.				3														
13	74865	LINK, Alternator adjusting				1														
14	STD-35	WASHER, 5/16 plain				1														
15	STD-1858	BOLT, 5/16-18 x 29/32 long,hex.hd.				1														
16	STD-1727	WASHER, Plain,3/4 OD x 11/32 ID x 1/8 thick				1														
17	STD-1858	BOLT, 5/16-18 x 29/32 long,hex.hd.				1														
18	74864	BELT, Alternator drive				1														
19	75699	STARTER, 12 volt (3.38:1 int.red.) 12/14 pitch (MZ-2407)				1														
19	75700	STARTER, 24 volt (3.38:1 int.red.) 12/14 pitch (MHB-4002)								1	1	1								
20	STD-35	WASHER, 5/16 plain	4																	
21	STD-475	WASHER, 5/16 internal lock	4																	
22	STD-2156	BOLT, 5/16-18 x 1-5/32 long,hex.hd.				1														
22	LW-31-1.09	BOLT, 5/16-18 x 1-3/32 long,hex.hd.								1	1	1								
23	STD-1410	NUT, 5/16-18 plain	3																	
	LW-12083	SWITCH, Magnetic (SAZ-4201E-1)				1														
	LW-12085	SWITCH, Magnetic (SAZ-4401C-1)								1	1									
	74291	REGULATOR, 12 volt,full transistor voltage (9000590)				1														

* - Generator, mounting brackets and attaching parts for -E series furnished as a separate kit by airframe manufacturer.

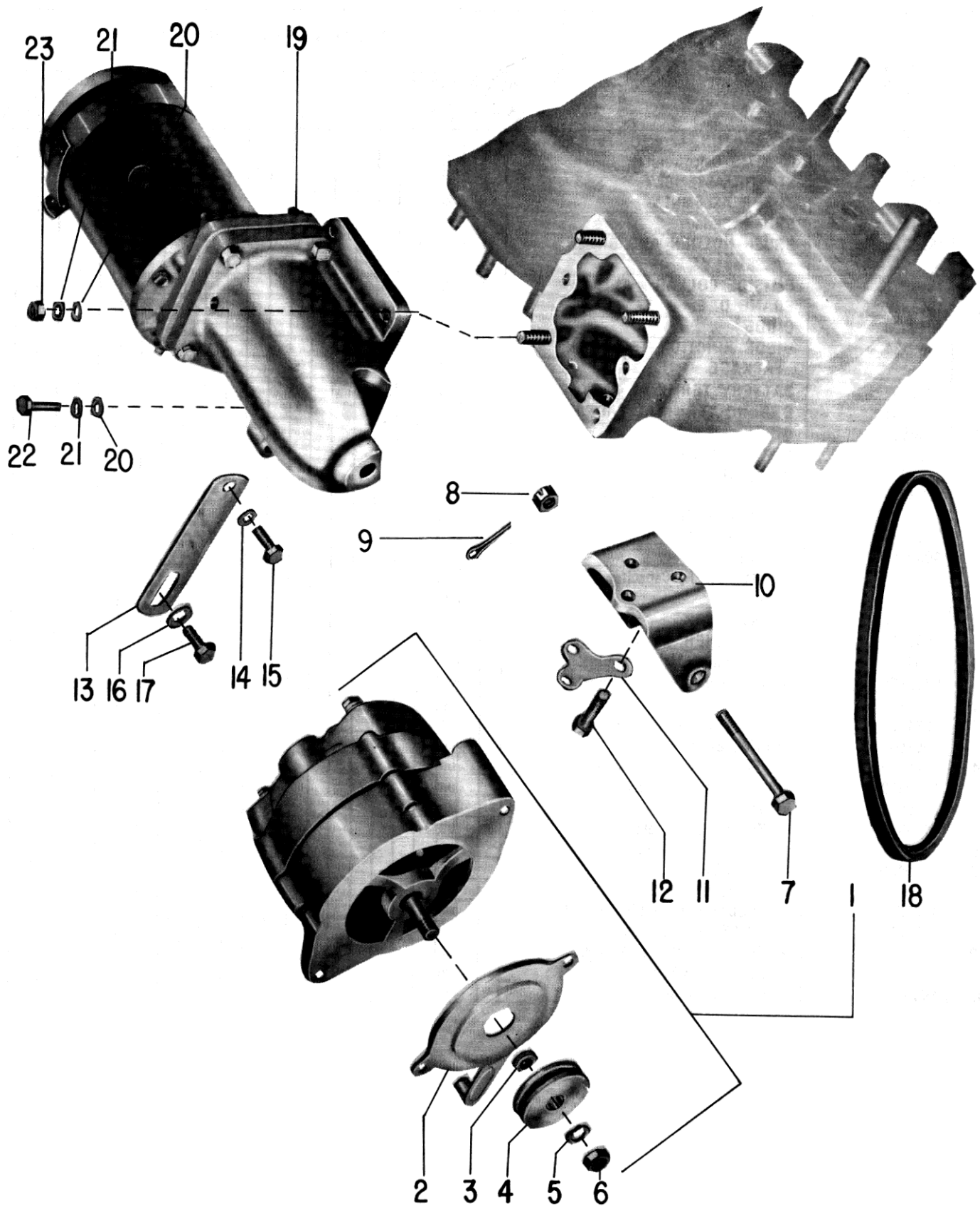


Figure 26 ALTERNATOR, STARTER, SWITCH AND REGULATOR
5-2

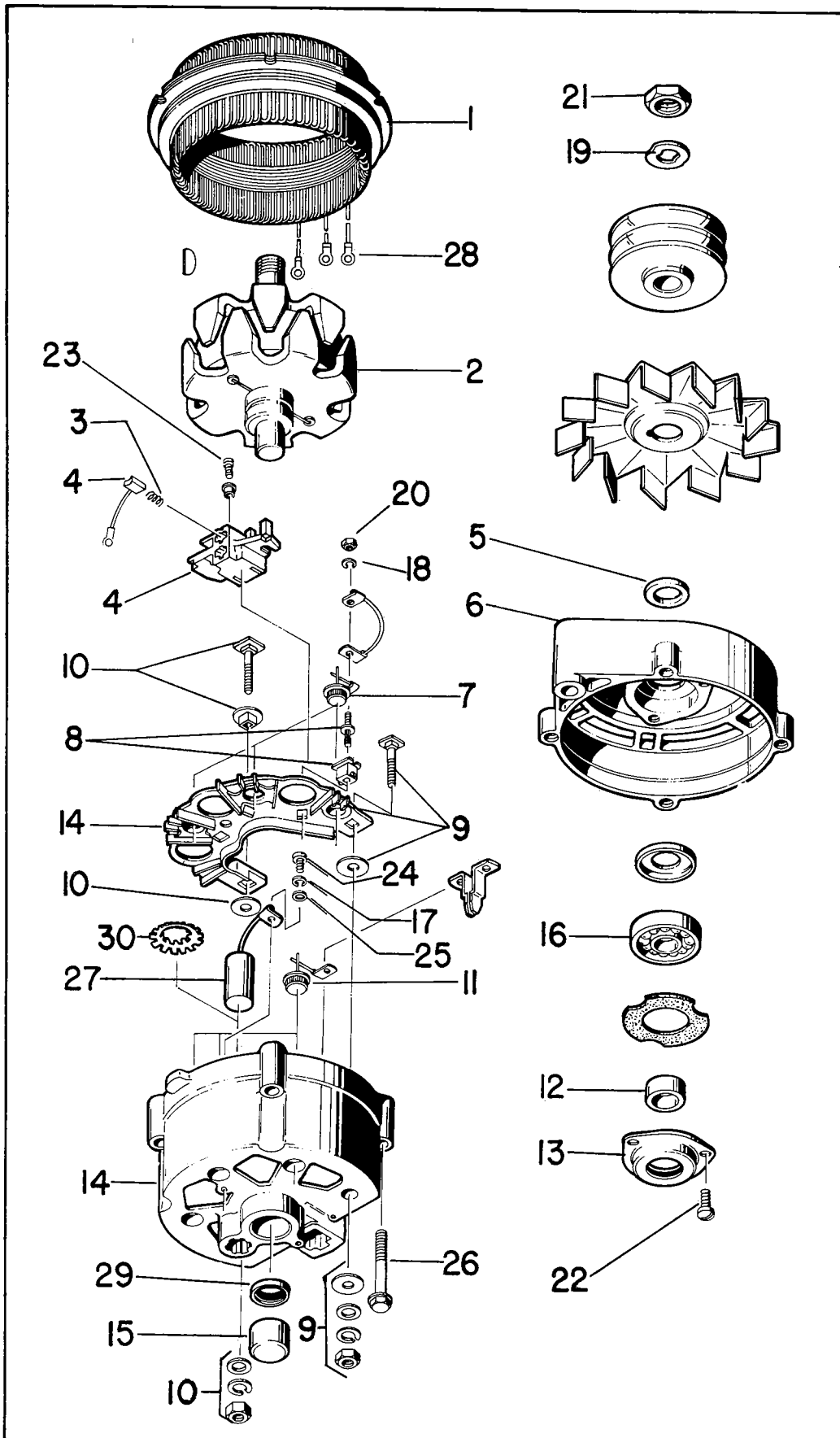
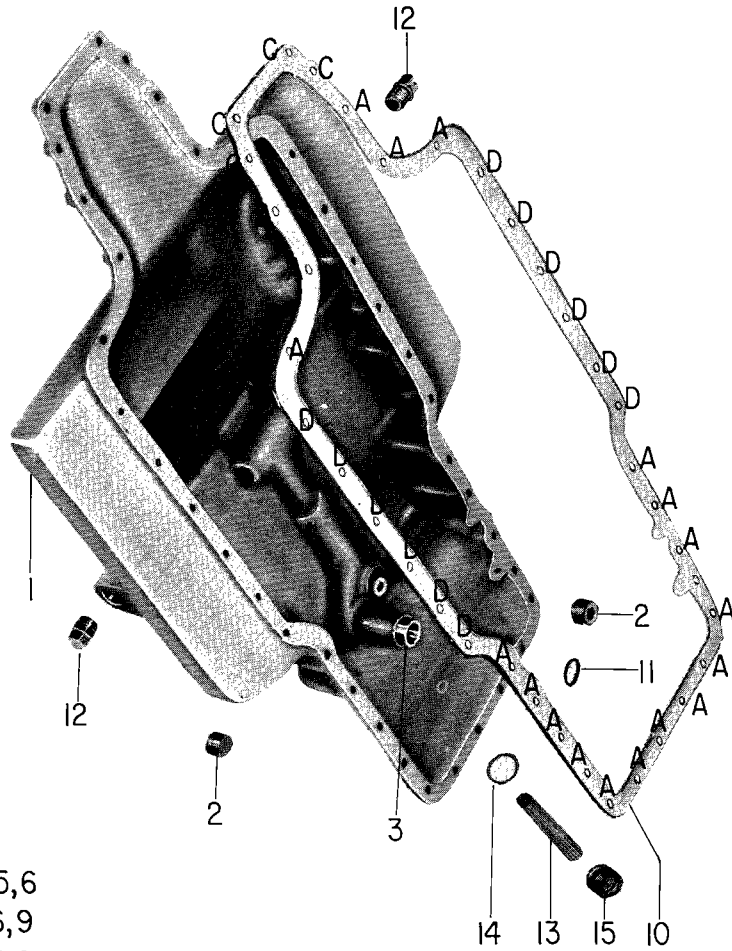


Figure 27 ALTERNATOR

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

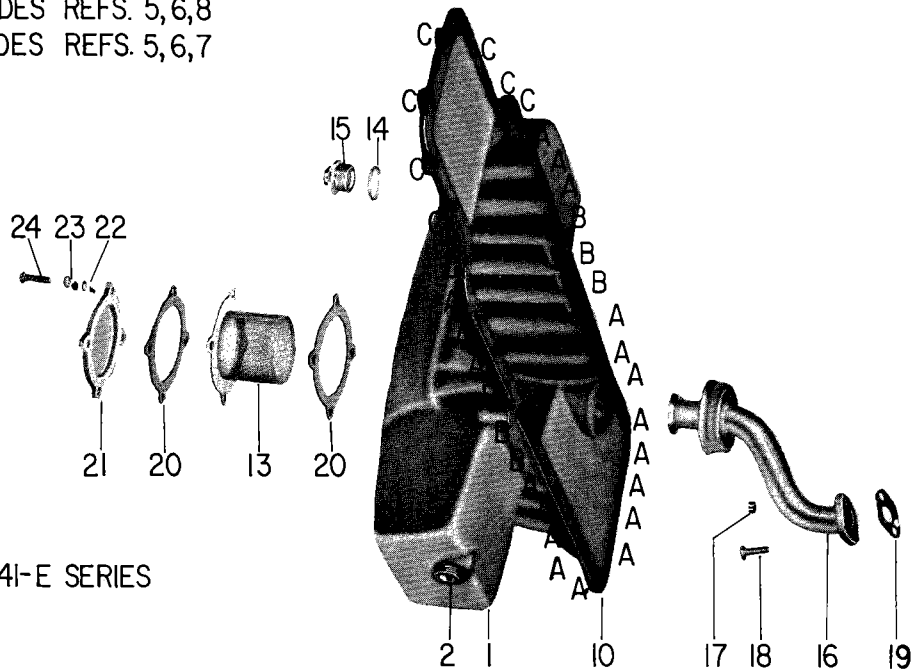


Figure 29 OIL SUMP ASSEMBLY

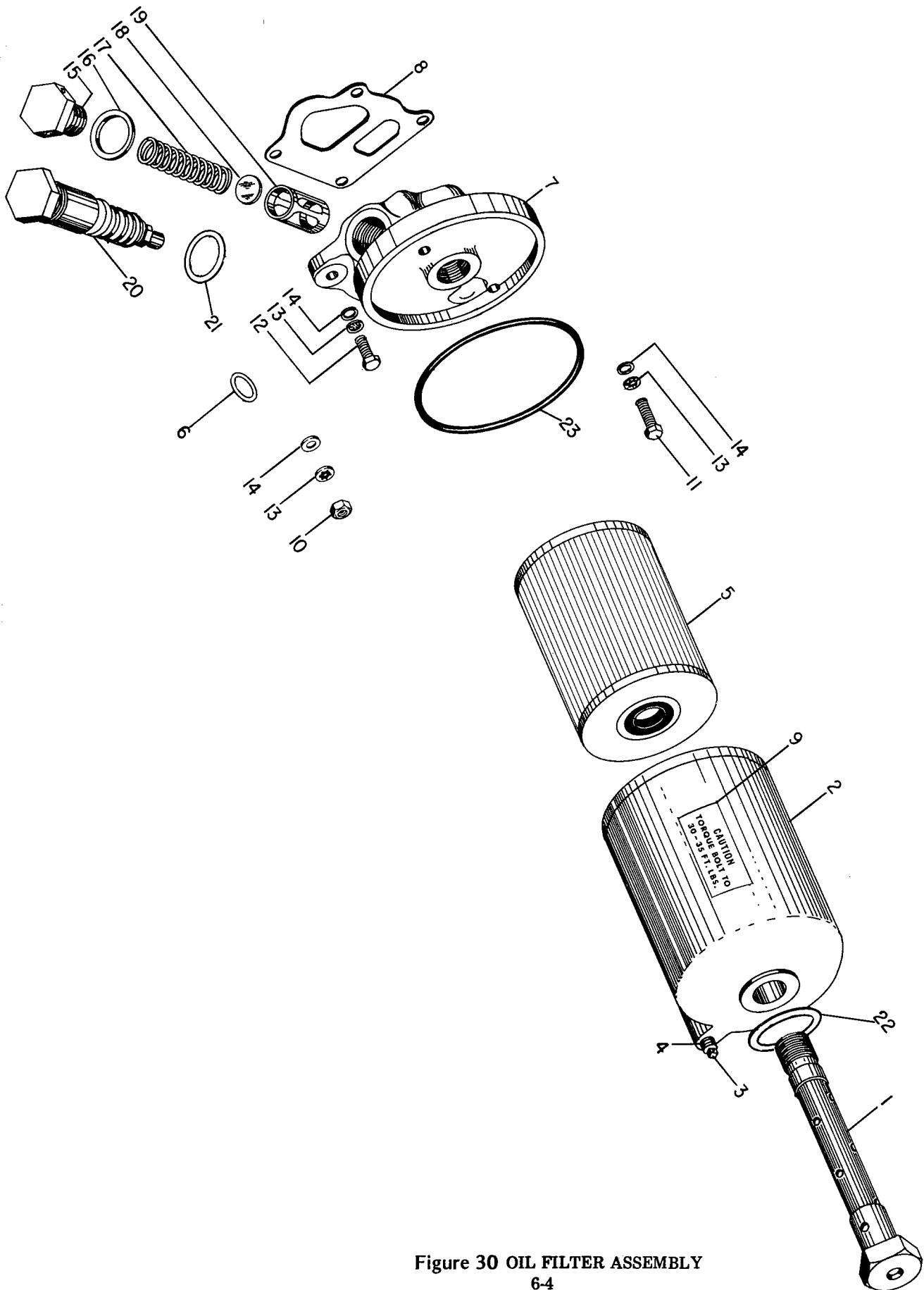


Figure 30 OIL FILTER ASSEMBLY

6-4

LYCOMING

TIO-541 PARTS CATALOG

OIL SUMP AND INDUCTION SYSTEM OIL COOLER ASSEMBLY

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY											
			ON ALL	A1A	E1A	E1B	E1C							
1	LW-11983	SPACER ASSY., Oil cooler				1	1	1						
2	75685	OIL COOLER ASSY. (8534533)			1									
2	LW-10025	OIL COOLER (De-congeal) (8535849)				1	1	1						
3	STD-8	WASHER, 1/4 plain			11	13	13	13						
4	STD-160	WASHER, 1/4 internal lock			12	13	13	13						
5	STD-1419	BOLT, 1/4-20 x 1-1/8 long,hex.hd.			12									
5	STD-1988	BOLT, 1/4-20 NC-3 x 2-3/4 long			11	11	11							
	STD-1411	NUT, 1/4 plain			2	2	2							
6	76508	GASKET, Spacer to crankcase			1	1	1							
7	74858	GASKET, Oil cooler			1									
7	77695	GASKET, Oil cooler			1	1	1							
8	75944	VALVE ASSY., Temp.control,oil cooler bypass			1	1	1							
9	76510	GASKET, Bypass valve			1	1	1							
10	STD-294	GASKET, 7/8 OD x 5/8 ID x 3/32 annular			1	1	1							
11	1540	PLUG, Thermometer well			1	1	1							
12	75740	BAFFLE, Oil cooler			1	1	1							
13	STD-8	WASHER, 1/4 plain			2	2	2							
14	STD-160	WASHER, 1/4 internal lock			2	2	2							
15	STD-705	SCREW, 1/4-20 x 11/16 long,hex.hd.			1	1	1							
16	77583	BRACKET, Oil cooler baffle			1	1	1							
17	STD-1988	BOLT, 1/4-20 x 2-3/4 long,hex.hd.			1	1	1							
18	STD-953	GROMMET, 9/16 ID			1	1	1							
19	78382	HEAT SHIELD, Oil cooler			1	1	1							
20	STD-969	SCREW, No.10-32 x 1/2 long,fill.hd.			6	6	6							
21	STD-28	WASHER, No.10 plain			12	12	12							
22	STD-670	NUT, No.10-32 self-locking			6	6	6							
23	77711	DAMPER ASSY., Oil cooler top			1	1	1							
24	77705	SCREW, Shoulder,1/4 body x 3/8 long			6	6	6							
25	AN-365-1024	NUT, No.10-24 NC-3 self-locking			6	6	6							
26	77712	DAMPER ASSY., Oil cooler,bottom			1	1	1							
27	77705	SCREW, Shoulder,1/4 body x 3/8 long			6	6	6							
28	AN-365-1024	NUT, No.10-24 NC-3 self-locking			6	6	6							
29	STD-8	WASHER, 1/4 plain			4	4	4							
30	STD-1968	BOLT, 1/4-20 NC-3 x 5/8 long,hex.hd.			4	4	4							
31	STD-1685	NUT, 1/4-20 self-locking			4	4	4							
32	74903	IGNITION LEAD SUPPORT			1									
33	STD-678	WASHER, 3/8 internal lock			1									
34	STD-1947	BOLT, 3/16-16 x 19/32 long			1									
35	STD-2008	BOLT, 1/4-20 NC-3 x 1.00 long,hex.hd., dr.hd.			4	4	4							
36	STD-1411	NUT, 1/4-20 plain			2	2	2							

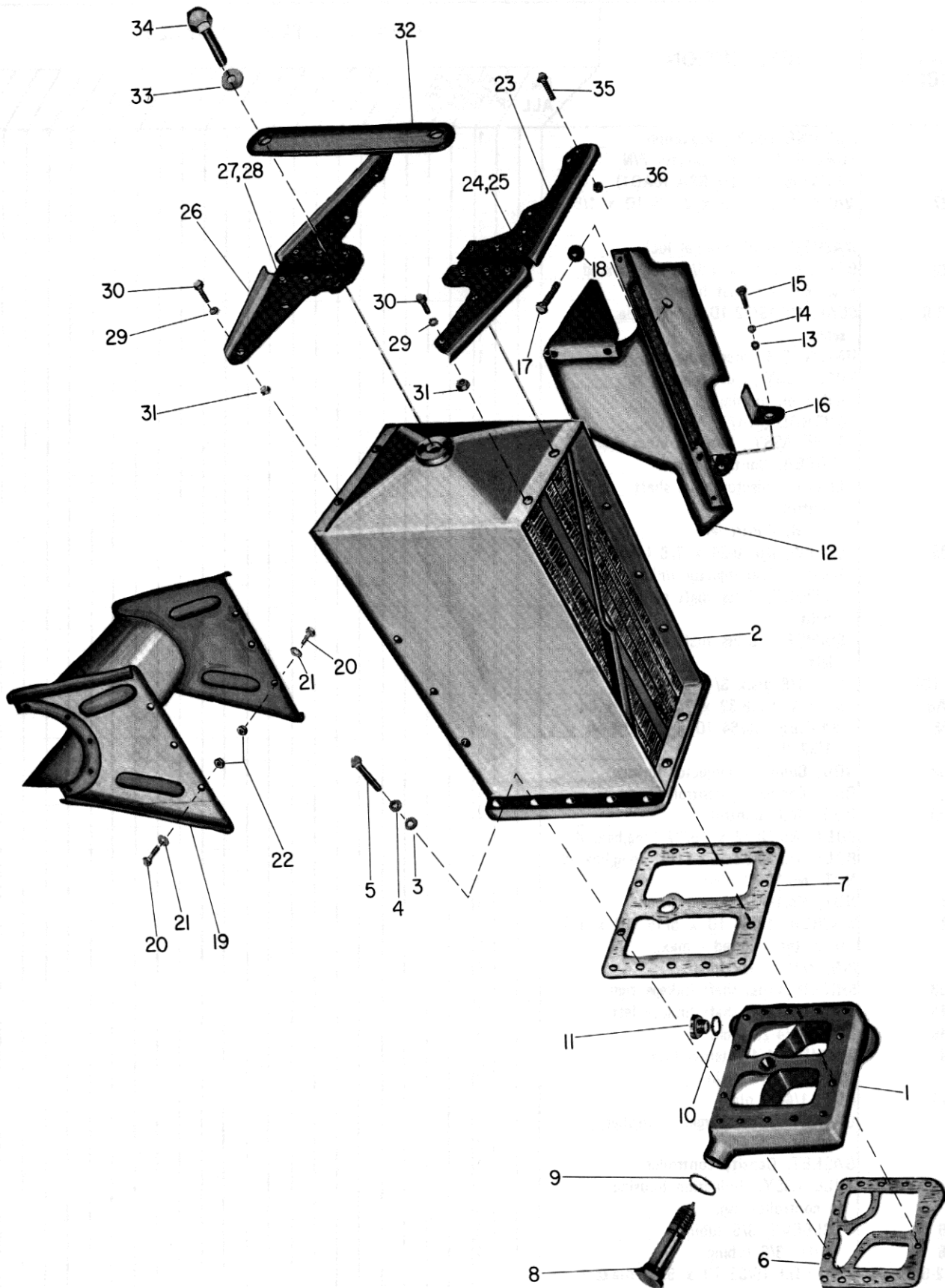


Figure 31 OIL COOLER ASSEMBLY

6-6

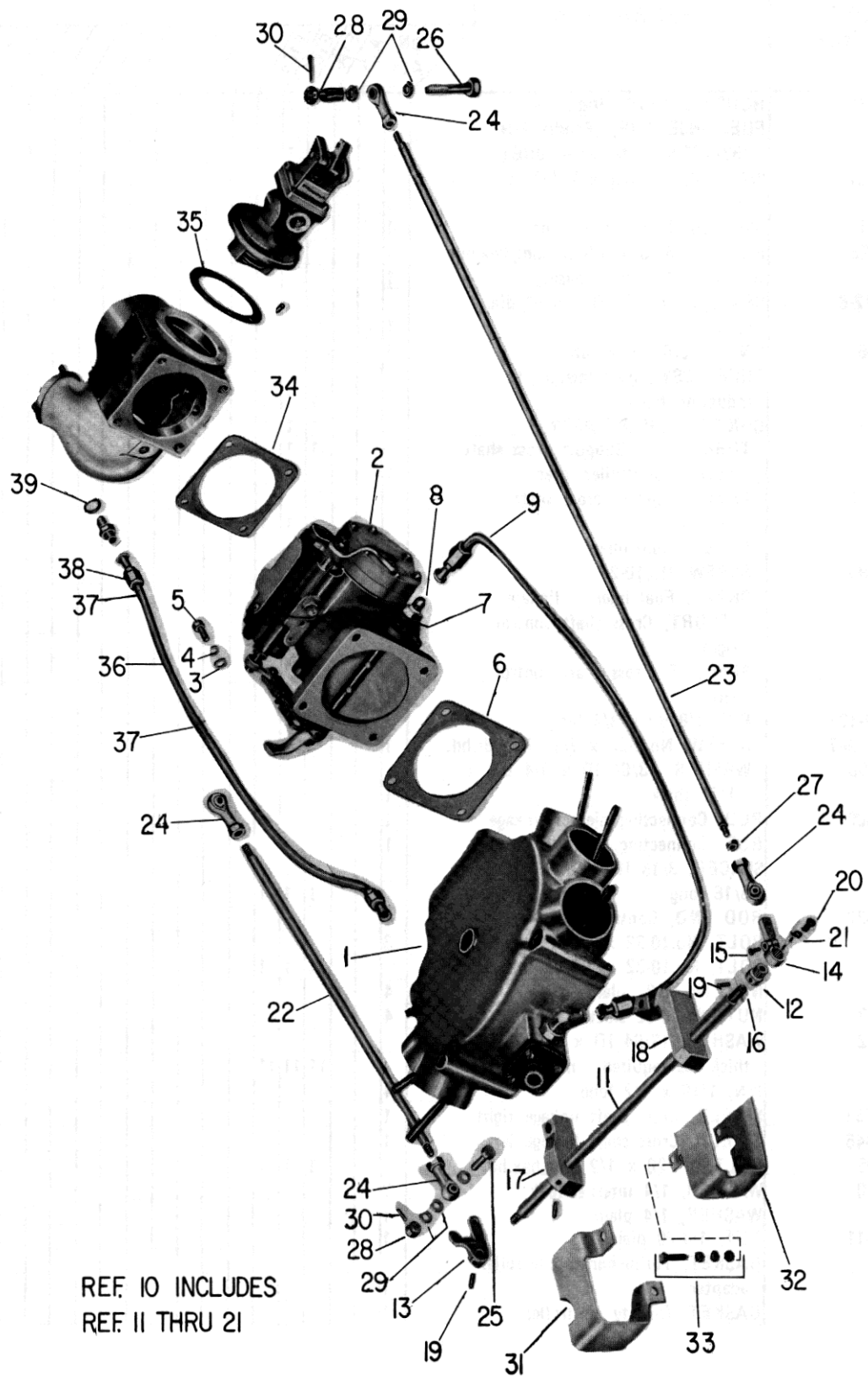


Figure 32 FUEL INJECTOR LINKAGE (-A1A)
6-8

LYCOMING

TIO-541 PARTS CATALOG

OIL SUMP AND INDUCTION SYSTEM INDUCTION HOUSING AND FUEL INJECTOR LINKAGE (-E1A4, -E1B4, -E1C4)

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																				
			ON ALL	A1A	E1A4	E1B4	E1C4																
1	LW-11379	HOUSING ASSY., Induction				1	1	1															
2	76476	FUEL INJECTOR, (Bendix P/N 2524275-8 model RSA-10DB1)				1	1	1															
3	STD-1727	WASHER, 3/4 OD x 21/64 ID x 1/8 plain	4																				
4	STD-475	WASHER, 5/16 internal lock	4																				
5	STD-1828	BOLT, 5/16-18 x 1-5/16 long,hex.hd.	4																				
6	73032	GASKET, Air inlet housing	1																				
7	MS29512-6	SEAL, Oil 15/32 ID x 5/64 dia. sect.	1																				
8	AN815-6	UNION, 3/8 flared tube	1																				
9	75940	TUBE ASSY., Fuel injector to induction housing							1	1	1												
10	LW-10797	CONTROL SHAFT ASSY.							1	1	1												
11	76195	TUBE ASSY., Support cross shaft							1	1	1												
12	75771	SPACER, Controller lever	1																				
13	LW-10796	LEVER, Injector cross shaft control							1	1	1												
14	75795	LEVER, Controller	1																				
15	STD-1896	SCREW, No.10-24	1																				
16	76194	SHAFT, Fuel injector linkage							1	1	1												
17	77741	SUPPORT, Cross shaft control right	1																				
18	75768	SUPPORT, Cross shaft control left	1																				
19	MS9047-104	PIN, 1/8 dia.x 3/4 long	3																				
20	AN500-A8-7	SCREW, No.8-32 x 7/16 long,dr.hd.	1																				
21	STD-1756	WASHER, 13/64 ID x 3/4 OD x 1/32 thick	1																				
22	LW-12309	ROD, Connecting,injector linkage	1																				
23	75791	ROD, Connecting,controller	1																				
24	76059	SPACER, 3/16 ID x 7/16 OD x 5/16 long									1	1	1										
25	LW-13429	ROD END, Control	4																				
26	AN3-7	BOLT, No.10-32 x 29/32 long,hex.hd.	3																				
27	AN3-11	BOLT, No.10-32 x 1-5/32 long,hex.hd.									1	1	1										
28	STD-63	NUT, No.10-32 plain	4																				
29	STD-303	NUT, No.10-32 slotted shear	4																				
30	STD-122	WASHER, 13/64 ID x 5/16 OD x 1/32 thick (as required - max.)									1	1	1	1									
31	STD-68	PIN, 1/16 x 1/2 long	4																				
32	LW-10753	SHIELD, Cross shaft linkage right	1																				
33	LW-11446	SHIELD, Cross shaft linkage left	1																				
34	STD-705	BOLT, 1/4-20 x 1/2 long,hex.hd.									1	1	1										
	STD-160	WASHER, 1/4 internal lock	2																				
	STD-8	WASHER, 1/4 plain	1																				
	STD-1411	NUT, 1/4-20 plain	1																				
35	74944	GASKET, Turbocharger controller adapter	1																				
36	73314	GASKET, Density controller	1																				

OIL SUMP AND INDUCTION SYSTEM
INDUCTION HOUSING AND FUEL INJECTOR LINKAGE (-E1A4, -E1B4, -E1C4)

FIG. REF. 33	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY									
			ON ALL	A1A	E1A4	E1B4	E1C4					
37	LW-13037*	TUBE ASSY., Induction housing to controller hsg.				1	1	1				
	LW-13328**	TUBE ASSY., Induction housing to controller hsg.				1	1	1				
	LW-13146+	TUBE ASSY., Induction housing to controller hsg.							1			
38	AN815-6	UNION, 3/8 flared tube				1	1	1				
	LW-12745	CHECK VALVE, Vent line				1	1	1				
39	AN819-6D	SLEEVE, 3/8 tubing				2	2	2				
40	AN818-6	NUT, 3/8 tubing	2									
41	MS29512-6	SEAL, Oil 15/32 ID x 5/64 dia. sect.	1									

* - Tube Assy. LW-13037 is used on installations with LW-12745 check valve.

** - Tube Assy. LW-13328 is used on installations with LW-13145 abs. relief valve and no check valve.

+ - Tube Assy. LW-13146 is used on installations with both LW-13145 abs. relief valve and LW-12745 check valve.

See Service Bulletin No. 362.

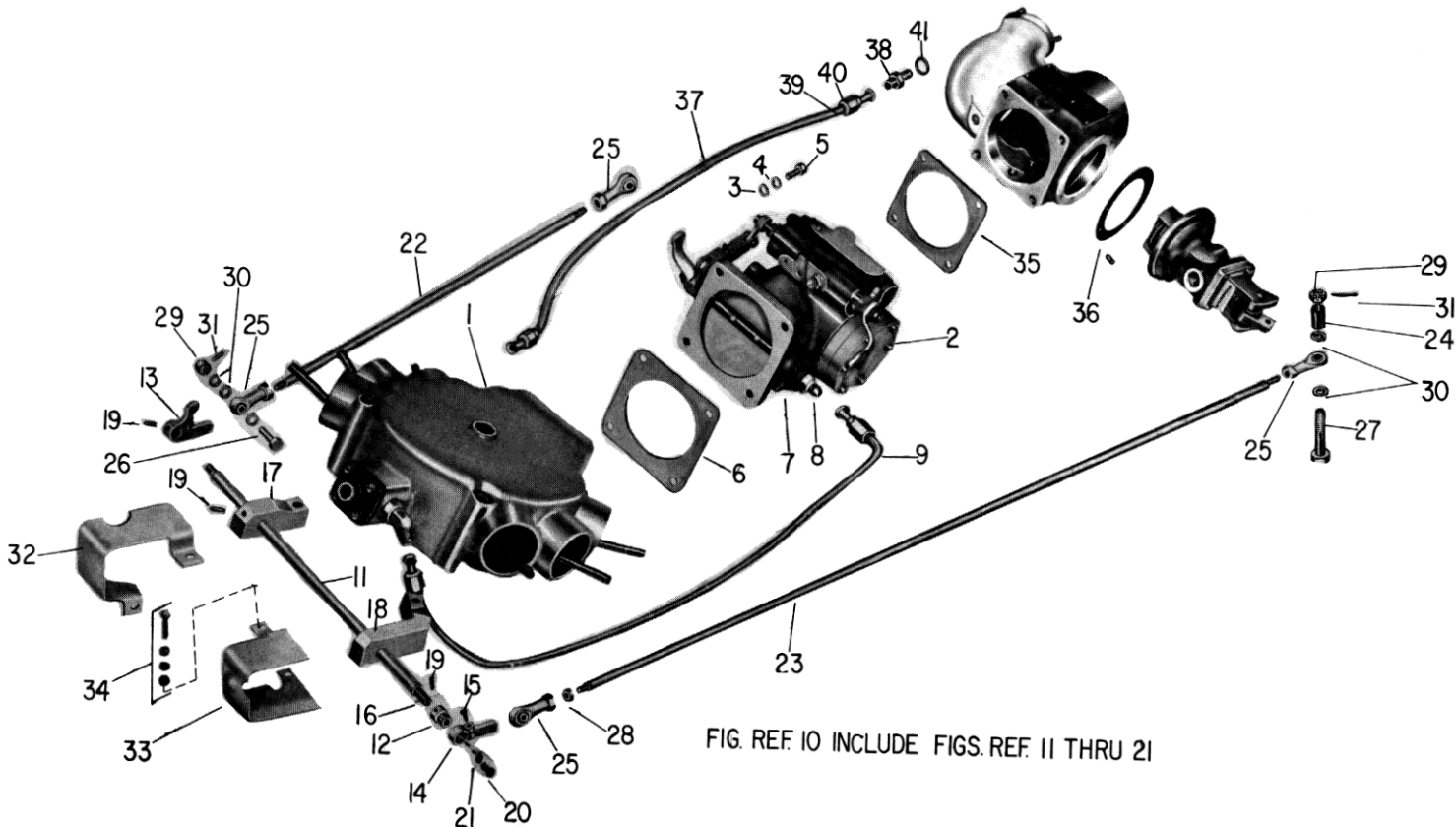


Figure 33
6-10

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		

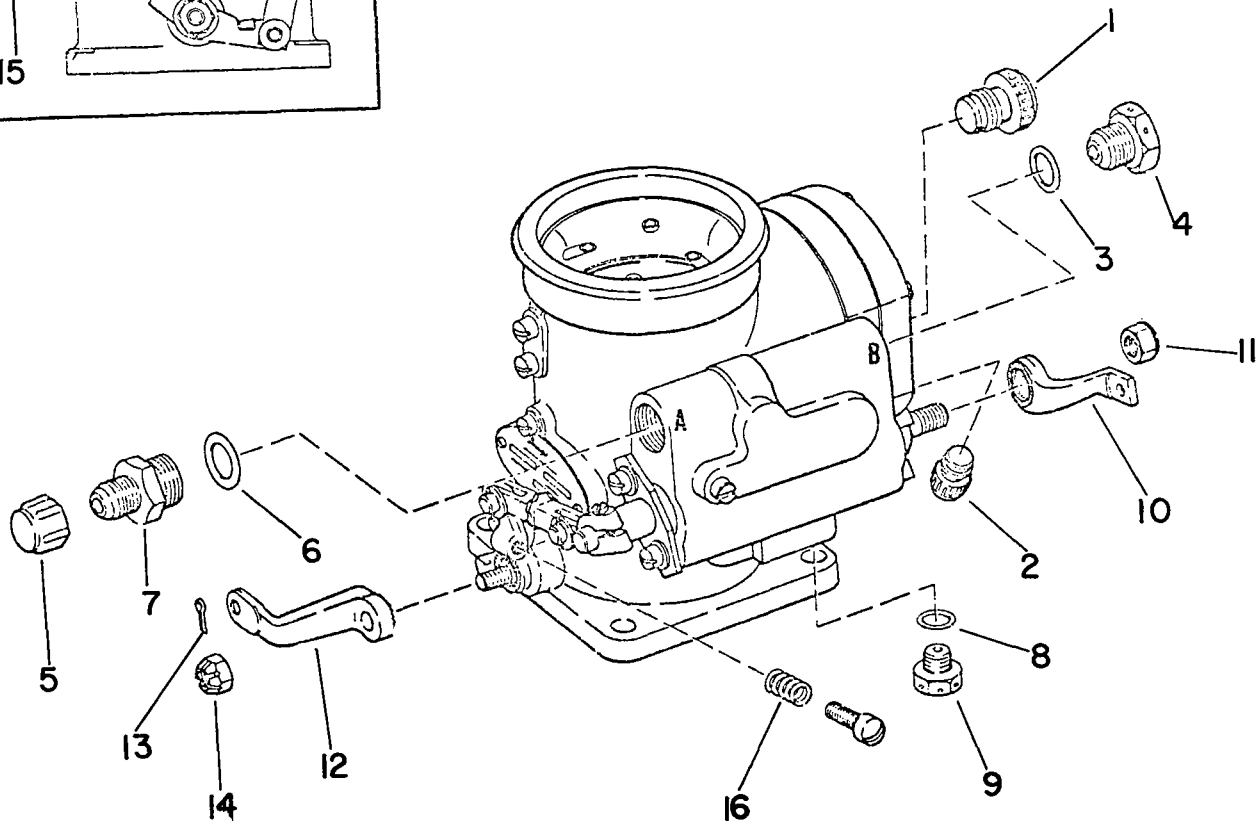
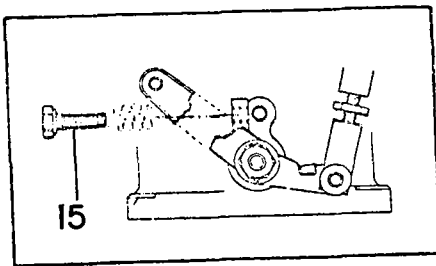


Figure 34
6-11

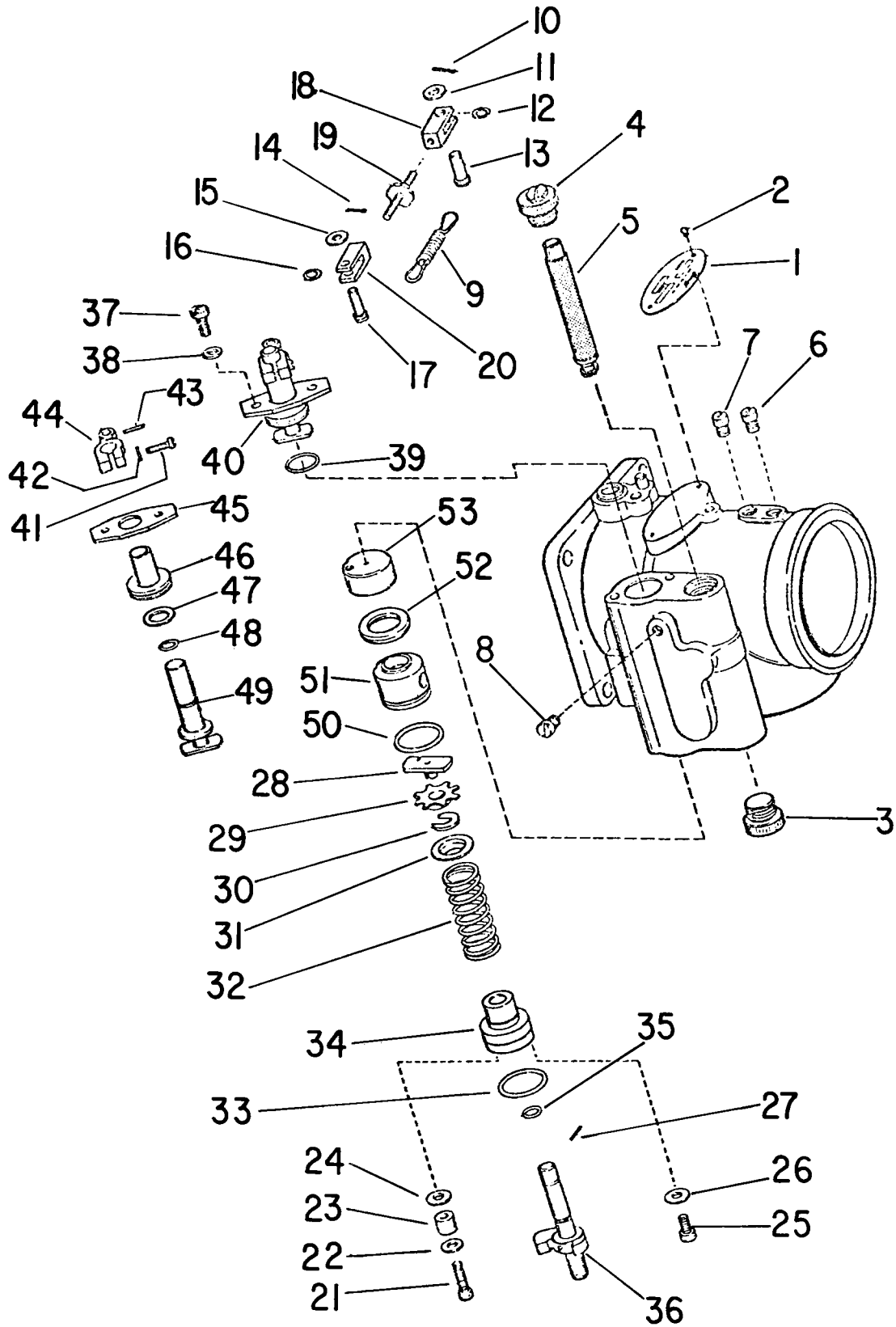


Figure 35 FUEL INJECTOR - RSA-10AD1
6-13

LYCOMING

TIO-541 PARTS CATALOG

VENDOR ACCESSORY FUEL INJECTOR ASSEMBLY, BENDIX RSA-10AD1

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																			
			ON ALL	A1A	F1A	F1B	F1C															
36																						
1	328617	SEAL					1															
2	2537499	NUT, Plain, hex. no. 10-32					1															
3	2537500	SCREW, Stop					1															
4	365533	GASKET					1															
5	2537498	PLUG					1															
6	362842	SCREW, Machine					6															
7	911242	WASHER, Flat					6															
8	2523502	COVER, Regulator					1															
9	178491	NUT, No. 2-56					1															
10	2529180	WASHER, Flat					1															
11	2529181	HOLDER, Spring					1															
12	2523387	SPRING, Helical compression					1															
13	2529182	BUSHING					1															
14	2529183	BUSHING					1															
15	2529470	DIAPHRAGM ASSY., Regulator					1															
16	2523247	SPRING, Helical compression					1															
	2526136	BODY ASSY., Regulator					1															
17	2529188	BUSHING ASSY., Regulator					1															
18	367727	SHIM, Laminated					1															
19	2523507*	BODY, Regulator					1															
20	2529471	DIAPHRAGM ASSY., Fuel					1															
21	2529184	SEAT ASSY., Regulator valve					1															
22	2529294	SHIM, Laminated					un															
23	2523357	VALVE, Throttle					1															
24	393849	SCREW, Machine, no. 8-32 x 29/64					2															
25	901045	WASHER, Lock					2															
26	2523800	STOP, Throttle					1															
27	909329K35	PIN, Spring					1															
28	367416	SHAFT ASSY., Throttle					1															
29	P13618	SCREW, Machine					1															
30	911242	WASHER, Flat					1															
31	2526429	PACKING, Preformed					1															
32	367967	VENTURI ASSY.					1															
33	367539	TUBE					4															
34	2523601	VENTURI					1															
35	2521763	BODY ASSY., Main					1															
36	909311K35	PIN, Spring					1															
37	2526413	STOP ASSY.					1															
38	2521918	BEARING, Sleeve					1															
39	2521918	BEARING, Sleeve					1															

* - Listed for illustrative purposes. Part not procurable.

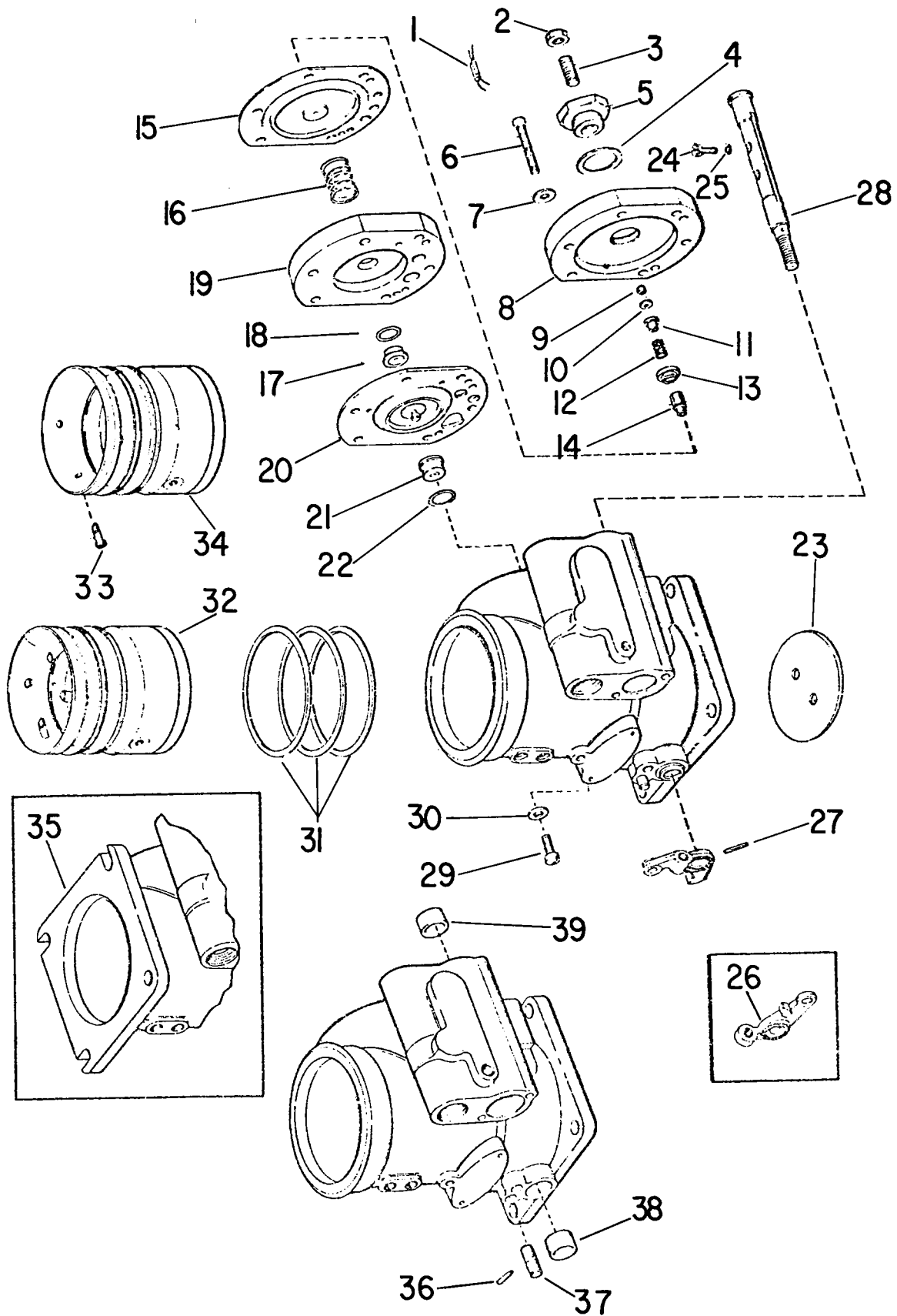


Figure 36 FUEL INJECTOR - RSA-10AD1

6-15

VENDOR ACCESSORY
FUEL INJECTOR ASSEMBLY, BENDIX RSA-10DB1

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																
			ON ALL	A1A	E1A	E1AA	E1BA	E1CA											
	76476	FUEL INJECTOR, Bendix P/N 2524275-8 model RSA-10DB1					1	1	1										
1	81584	PLUG, Shipping					1	1	1										
2	82887	CAP, Shipping					1	1	1										
3	951790	PACKING, Preformed					1	1	1										
4	2523903	ADAPTER, Fuel inlet					1	1	1										
5	951787	PACKING, Preformed					1	1	1										
6	132906	PLUG					1	1	1										
7	951790	PACKING, Preformed					1	1	1										
8	2523987	PLUG					1	1	1										
9	367988	LEVER, Mixture control					1	1	1										
10	187313	NUT, Self-locking 5/16-24					1	1	1										
11	365954	LEVER, Throttle					1	1	1										
12	901209K1	PIN, Cotter					1	1	1										
13	900848K1	NUT, Castle					1	1	1										
14	900452K1	SCREW, Idle adjusting					1	1	1										
15	P60219	SPRING, Helical compression					1	1	1										
16	2524505A	FUEL INJECTOR ASSY.					1	1	1										

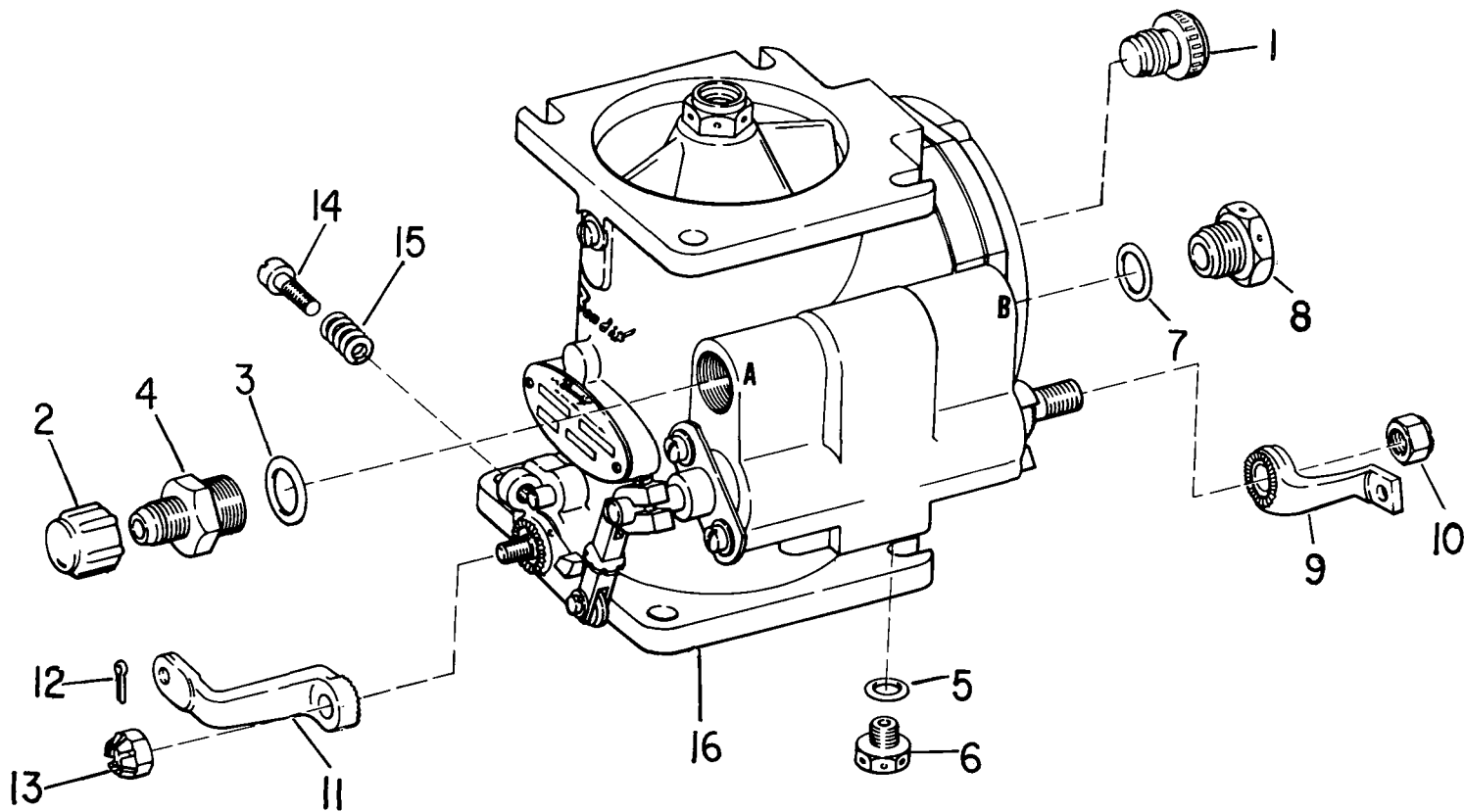


Figure 37
6-16

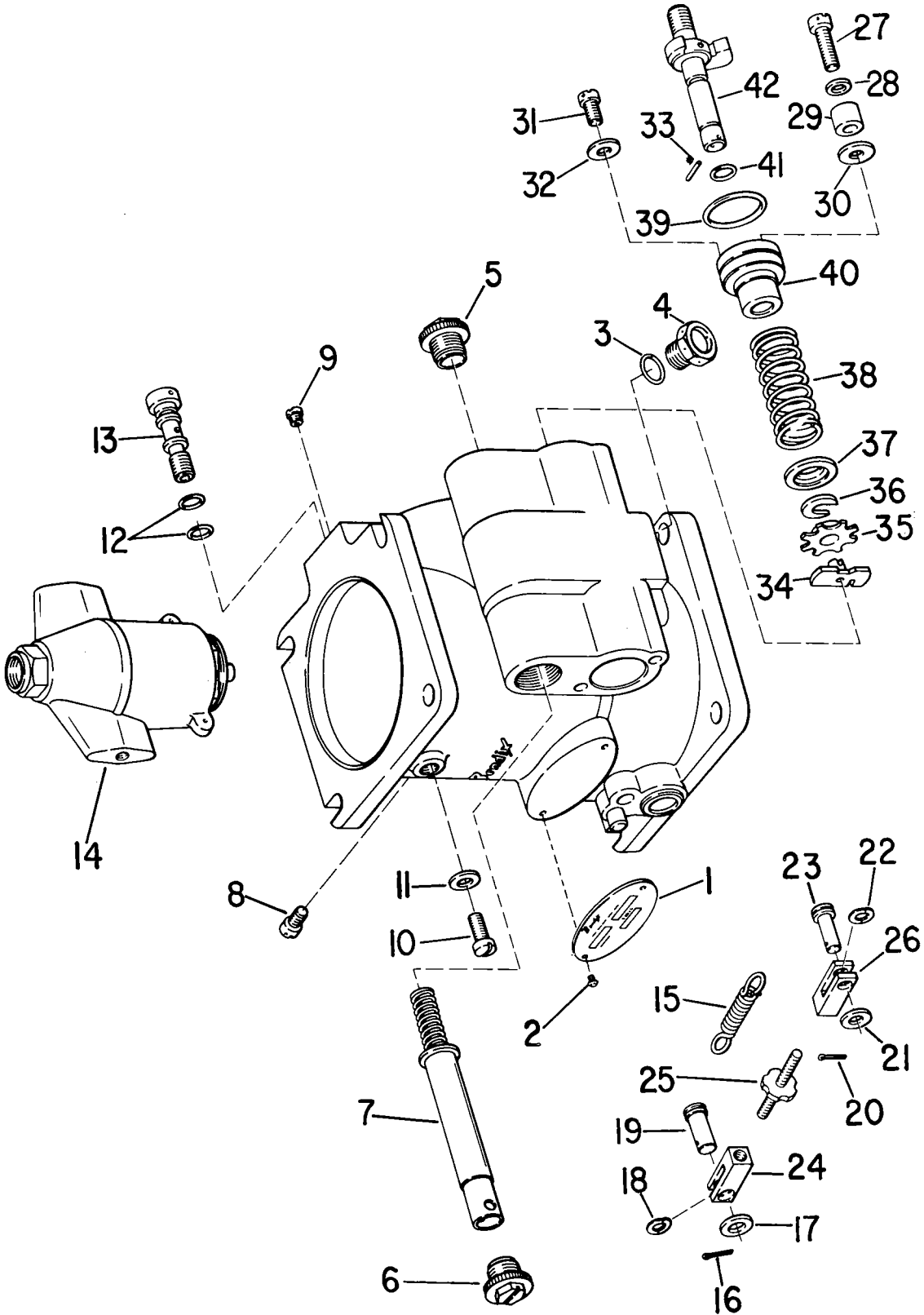


Figure 38 FUEL INJECTOR - RSA-10DB1

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LYCOMING

TIO-541 PARTS CATALOG

VENDOR ACCESSORY

FUEL INJECTOR ASSEMBLY, BENDIX RSA-10DB1

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY												
			ON ALL	E1A	E1B	E1C									
39															
43	328617	SEAL, Aluminum				1	1	1							
44	79216	SCREW, Machine				2	2	2							
45	911242	WASHER, Flat				2	2	2							
46	951400	PACKING, Preformed				1	1	1							
47	2529290	LEVER ASSY., Idle valve				1	1	1							
48	P21818	SCREW, Machine				1	1	1							
49	P22198	WASHER, Flat				1	1	1							
50	909329K35	PIN, Spring				1	1	1							
51	2523299*	LEVER				1	1	1							
52	2522326*	PLATE				1	1	1							
53	2526408	BUSHING				1	1	1							
54	367757	WASHER, Flat				1	1	1							
55	953516-10	PACKING, Preformed				1	1	1							
56	2529289*	STEM				1	1	1							
57	951400	PACKING, Preformed				1	1	1							
58	2525197	VALVE, Mixture control				1	1	1							
59	2525494	PACKING, Preformed				1	1	1							
60	2525215	VALVE, Lower idle				1	1	1							
61	2537499	NUT				1	1	1							
62	2537500	SCREW				1	1	1							
63	365533	GASKET				1	1	1							
64	2537498	PLUG				1	1	1							
65	393647	PLUG, Taper seat				2	2	2							
66	362842	SCREW, Cap,socket head				8	8	8							
67	911242	WASHER, Flat				8	8	8							
68	2525035	COVER				1	1	1							
69	178491	NUT, Self-locking no.2-56				1	1	1							
70	2529180	WASHER, Flat				1	1	1							
71	2529181	HOLDER, Spring				1	1	1							
72	2523155	SPRING, Helical,compression				1	1	1							
73	2529182	BUSHING				1	1	1							
74	2529183	BUSHING				1	1	1							
75	2529298	DIAPHRAGM ASSY., Air				1	1	1							
76	2523688	SPRING, Helical,compression				1	1	1							
	2526137	BODY ASSY., Regulator				1	1	1							
77	2529296	BUSHING ASSY., Regulator				1	1	1							
78	2525033*	BODY, Regulator				1	1	1							
79	2529293	DIAPHRAGM ASSY., Fuel				1	1	1							
80	2529184	SEAT ASSY., Regulator valve				1	1	1							
81	2529294	SHIM				un	un	un							
82	2523910	VALVE, Throttle				1	1	1							
83	393849	SCREW, Machine				2	2	2							
84	901045	WASHER, Lock				2	2	2							
85	2523800	STOP, Throttle				1	1	1							
86	909329K35	PIN, Spring				1	1	1							
87	367416	SHAFT ASSY., Throttle				1	1	1							
88	2523966	BODY ASSY., Main				1	1	1							
89	909311K35	PIN, Spring				1	1	1							
90	2526413	STOP ASSY., Throttle				1	1	1							
91	2521918	BEARING, Sleeve				1	1	1							
92	2521918	BEARING, Sleeve				1	1	1							

* - Listed for illustrative purposes only. Part not procurable.

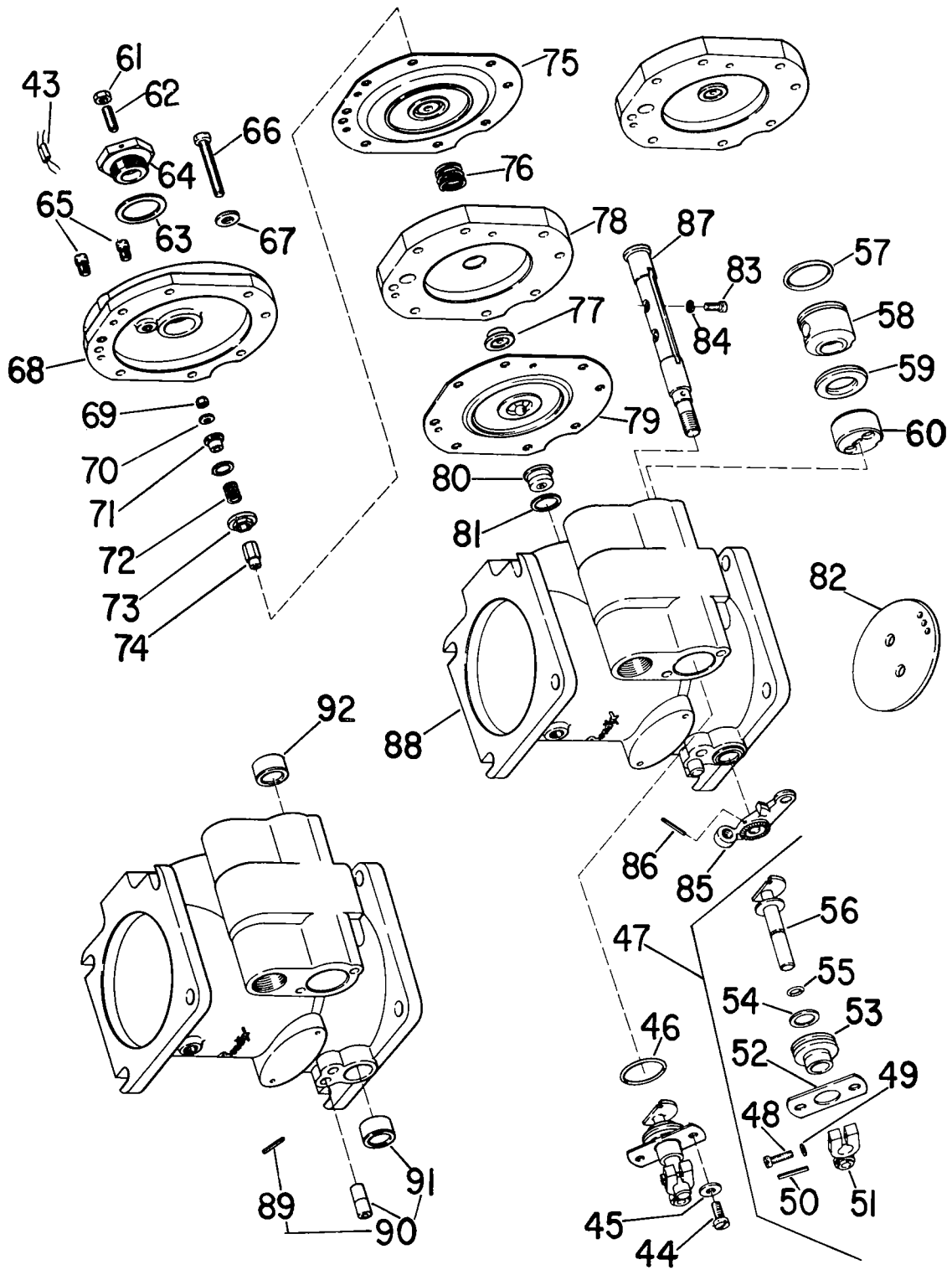


Figure 39 FUEL INJECTOR - RSA-10DB1
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LYCOMING

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	E1A4										
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									

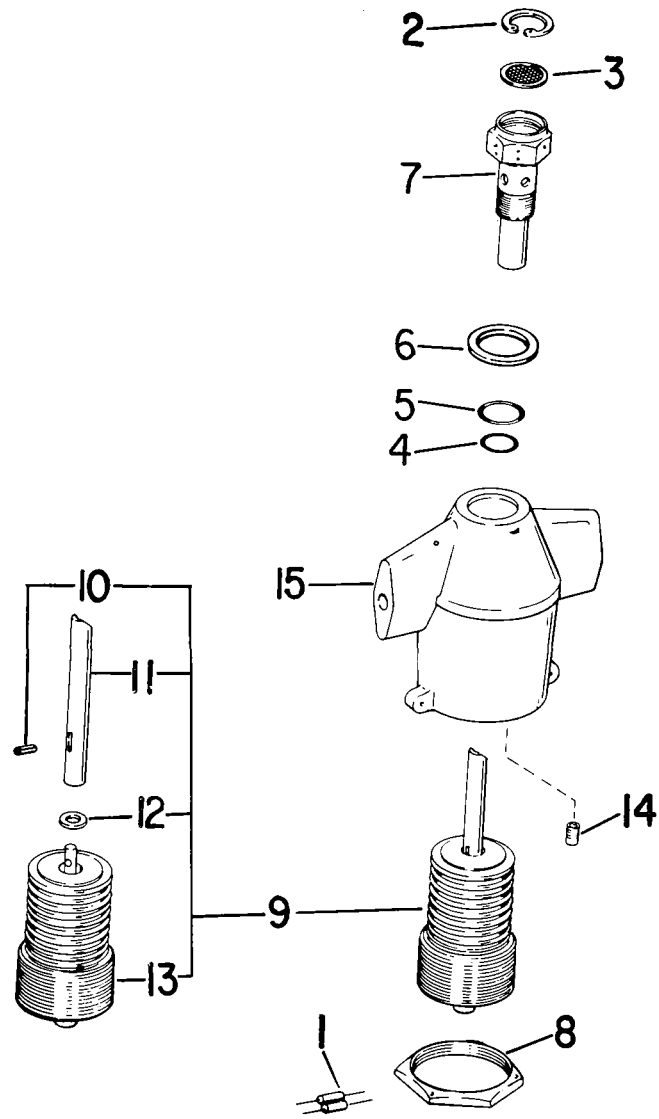


Figure 40

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LYCOMING

TIO-541 PARTS CATALOG

OIL SUMP AND INDUCTION SYSTEM INDUCTION HOUSING ASSEMBLY

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY															
			ON ALL	AJA	E1AA	E1BA	E1CA											
41	77406	HOUSING ASSY., Induction				1												
	LW-11379	HOUSING ASSY., Induction					1	1	1									
1	72377	ELBOW, 3/8 tubing adjustable,90°	1															
2	74070	ELBOW, 3/8 tubing adjustable,45°	1															
3	77627	ELBOW, 1/4 tube to 1/8 NPT (restricted)					1	1	1									
4	LW-10044	TEE, 1/4 tubing,adjustable with st.thd.on side	1															
5	AN929-4	CAP ASSY., 1/4 fl.tube fitting				1	3	3	3									
6	STD-1164	INSERT, 5/16-18 heli-coil x 5/8 long	4															
	STD-2134	INSERT, 7/16-20 x 3/8 long,heli-coil	6															
7	MS122200	INSERT, No.10-24 x 31/64 long, heli-coil				4	5	5	5									
8	STD-2035	DOWEL, 5/16 dia.x 1/2 long	2															
9	76291	COVER, Pressurizing valve	1															
10	STD-28	WASHER, No.10 plain	4															
11	STD-1896	SCREW, No.10-24 x 7/8 long,fill.hd. dr.hd.	4															
12	AN791-2	ELBOW, Union,5/16-32 x 1/8-27 NPT, 45°				1												
13	76399	VALVE ASSY., Pressurizing	1															
14	76286	SEAT, Pressurizing valve	1															
15	76292	VALVE AND DIAPHRAGM ASSY., Pressurizing	1															
16	76288	SPRING, Pressurizing valve	1															
17	1102	PLUG, 1/8 pipe x 3/8 long,allen	6															
18	75955	PLUG, Induction housing seal	1															
19	75957	RING, Oil seal,11/16 ID x 5/64 dia. section	1															
20	MS16625-1081	RING, Internal retaining,13/16 dia. hsg. x 3/64 thick	1															
21	75660	SPACER, Induction housing	1															
22	STD-8	WASHER, 1/4 plain	3															
23	STD-160	WASHER, 1/4 internal lock	3															
24	STD-1954	BOLT, 1/4-20 x 5-9/32 long,hex.hd.				1												
24	STD-2028	BOLT, 1/4-20 x 5-21/32 long,hex.hd.					1	1	1									
25	STD-1953	BOLT, 1/4-20 x 4-1/32 hex.hd.				2												
25	STD-2027	BOLT, 1/4-20 x 4-13/32 long,hex.hd.					2	2	2									
26	77623	LUG, Induction housing	2															
27	77622	SUPPORT, Induction housing lug	1															
28	STD-820	WASHER	2															
29	STD-160	WASHER, 1/4 internal lock	2															
30	STD-705	SCREW, 1/4-20 x 11/16 long,hex.hd.	2															
31	STD-160	WASHER, 1/4 internal lock	1															
32	STD-1204	BOLT, 1/4-20 x 15/16 long,hex.hd.	1															
33	STD-8	WASHER, 1/4 plain	1															
34	STD-160	WASHER, 1/4 internal lock	1															
35	STD-1951	BOLT, 1/4-20 x 3-5/8 long,hex.hd.				1												
35	STD-1887	BOLT, 1/4-20 x 4.00 long,hex.hd.					1	1	1									
36	STD-1411	NUT, 1/4-20,plain	1															
37	78344	NOZZLE ASSY., Fuel inj.(low flow)				6												
37	LW-11980	NOZZLE ASSY., Fuel inj.(high flow)					6	6	6									
38	LW-11602	LOCKPLATE, Fuel inj.nozzle	6															

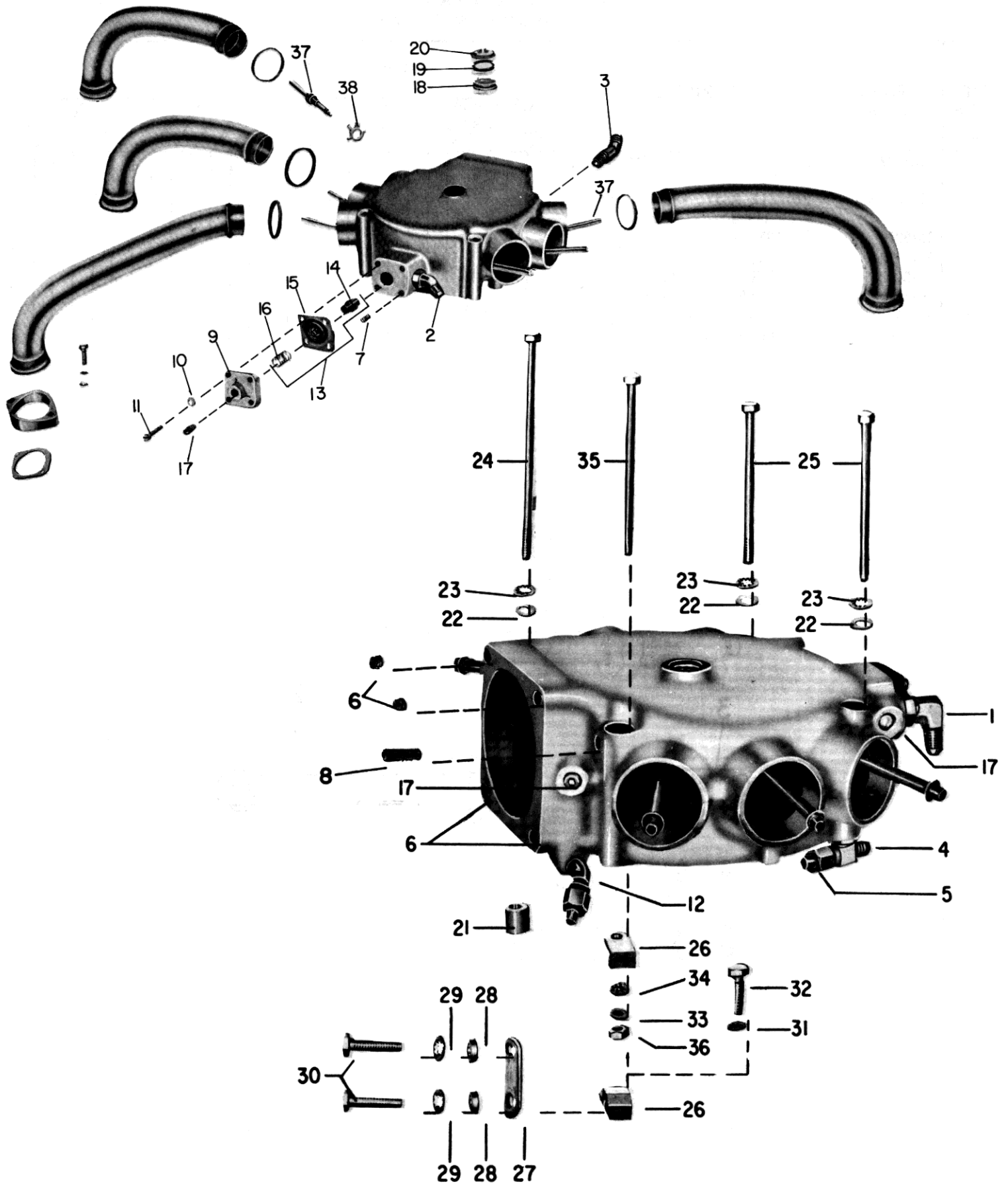


Figure 41 INDUCTION HOUSING ASSEMBLY

6-23

VENDOR ACCESSORIES
FUEL NOZZLE ASSEMBLY

FIG. REF. 42	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																				
			ON ALL	A1A	E1A	E1B	E1C																
1	2524322-3	NOZZLE ASSY., Lycoming P/N 78344			6																		
	2524321-3	NOZZLE ASSY., Lycoming P/N LW-11980				6	6	6															
2	2525279	BODY, Air bleed			1																		
	2525276	BODY, Air bleed				1	1	1															
3	2525280	NOZZLE ASSY., Air bleed			1																		
	2525277	NOZZLE ASSY., Air bleed				1	1	1															
4	326392	RING, Retaining	1																				
5	953516-8	PACKING, Preformed	1																				

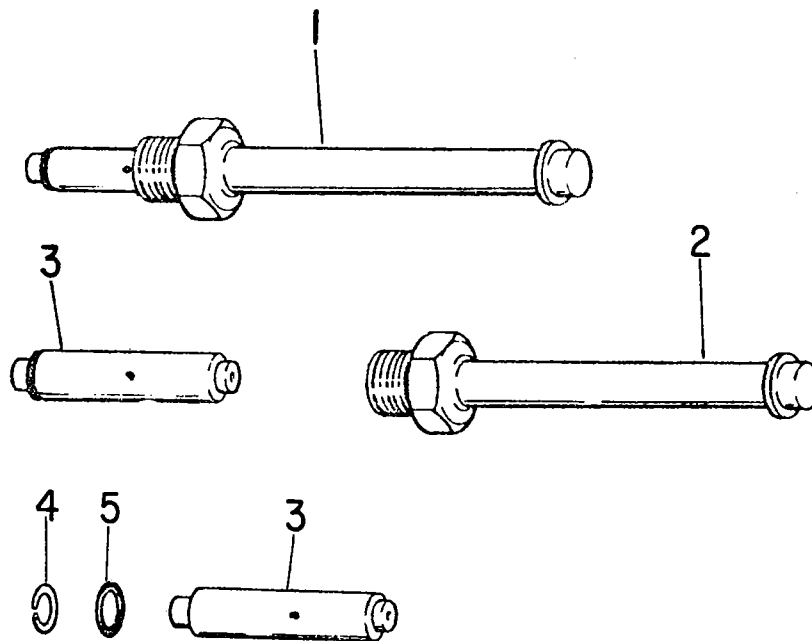


Figure 42

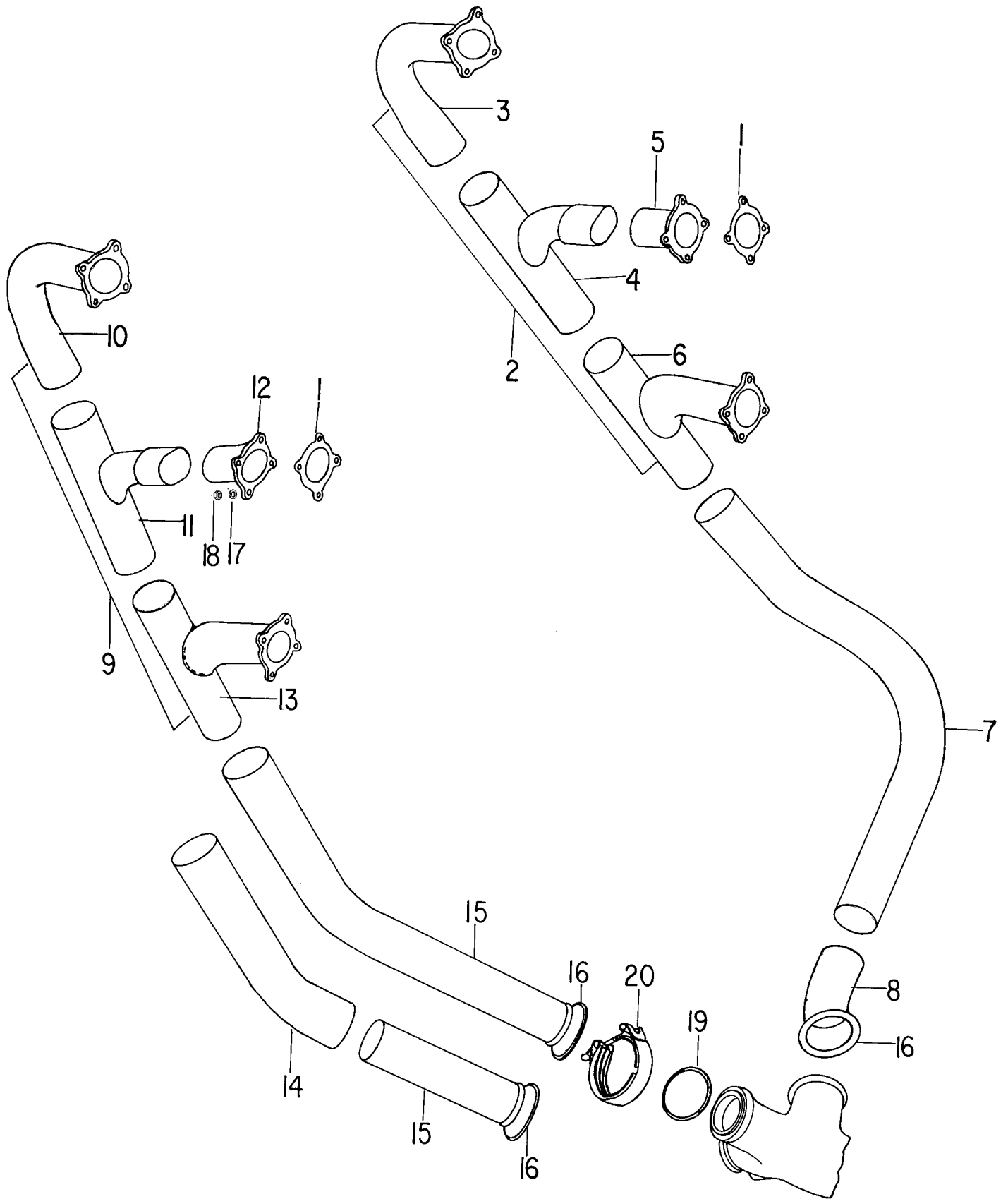


Figure 44 EXHAUST MANIFOLD
7-2

LYCOMING TIO-541 PARTS CATALOG

TURBOCHARGER AND EXHAUST SYSTEMS TURBOCHARGER ASSEMBLY AND RELATED PARTS

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY											
			ON ALL	E1A	E1A2	E1B2	E1C2							
1	LW-11968	TURBOCHARGER OUTLINE (406110-5)				1								
1	LW-11969	TURBOCHARGER OUTLINE (406110-6)					1	1						
1	LW-13310	TURBOCHARGER OUTLINE (407540-3)									1			
2	AN960C616	WASHER, 3/8 plain				4								
3	AN6C-13A	BOLT, 3/8-24 x 1-15/32 long,hex.hd.				2								
4	MS20500-624	NUT, 3/8-24 self-locking				2								
5	LW-12154	HOSE, 3-1/2 ID x 2-7/16 long, 3/16-1/4 wall				1								
5	75689	HOSE, 3-1/2 ID x 3-11/16 long, 3/16-1/4 wall							1	1	1			
6	78146	CLAMP, Hose,4.00 dia.	2											
7	75371	GASKET, Turbo oil inlet	1											
8	76889	ADAPTER, Turbo oil inlet	1											
9	76023	ELBOW, 1/4 tube,1/4 NPT,90°					1	1	1					
9	AN822-6	ELBOW, 3/8 tube,1/4 NPT,90°										1		
10	73782	GASKET, Turbo oil drain adapter					1	1	1					
10	LW-10122	GASKET, Turbo oil drain										1		
	77624	ADAPTER, Turbo oil drain					1							
11	77080	TUBE ASSY., Turbo oil drain							1	1				
11	LW-11954	TUBE ASSY., Turbo oil drain										1		
12	STD-33	WASHER, 3/8 plain	4											
13	STD-678	WASHER, 3/8 internal lock	4											
14	STD-1946	BOLT, 3/8-16 x 7/8 long,hex.hd.	4											
15	AN840-17	NIPPLE, 1.00 ID 11.3 NPT x 1.00 ID hose									1	1	1	
16	LW-11373	HOSE, 1.00 ID x 1-7/8 OD x 2-1/2 long				1								
17	AN737TW46	CLAMP, 1-3/8 OD hose	2											
18	76488	BLANKET, Turbo insulating							1	1	1			
18	LW-13060	BLANKET, Turbo insulating											1	

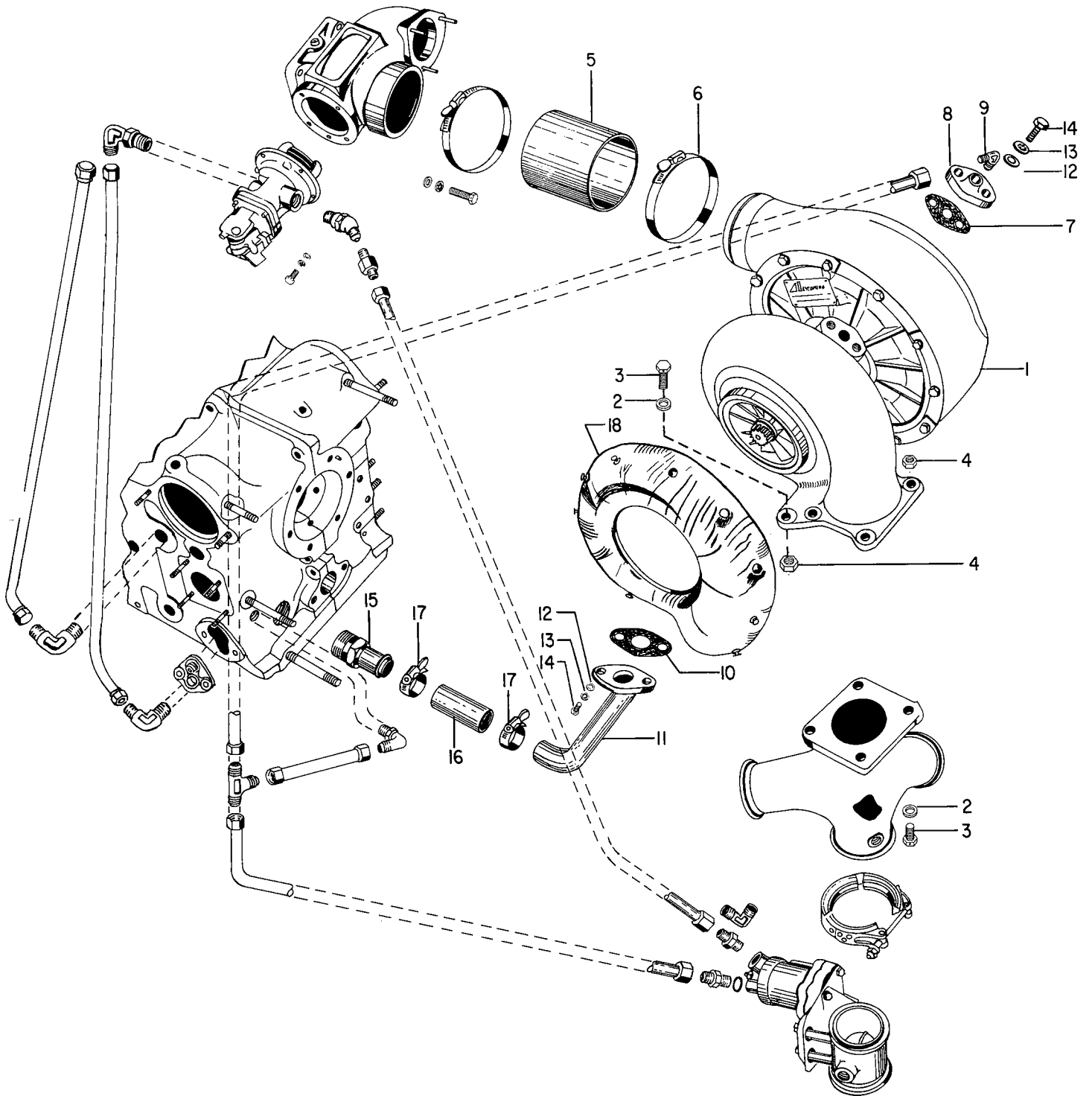


Figure 45 TURBOCHARGER ASSEMBLY AND RELATED PARTS
7-4

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

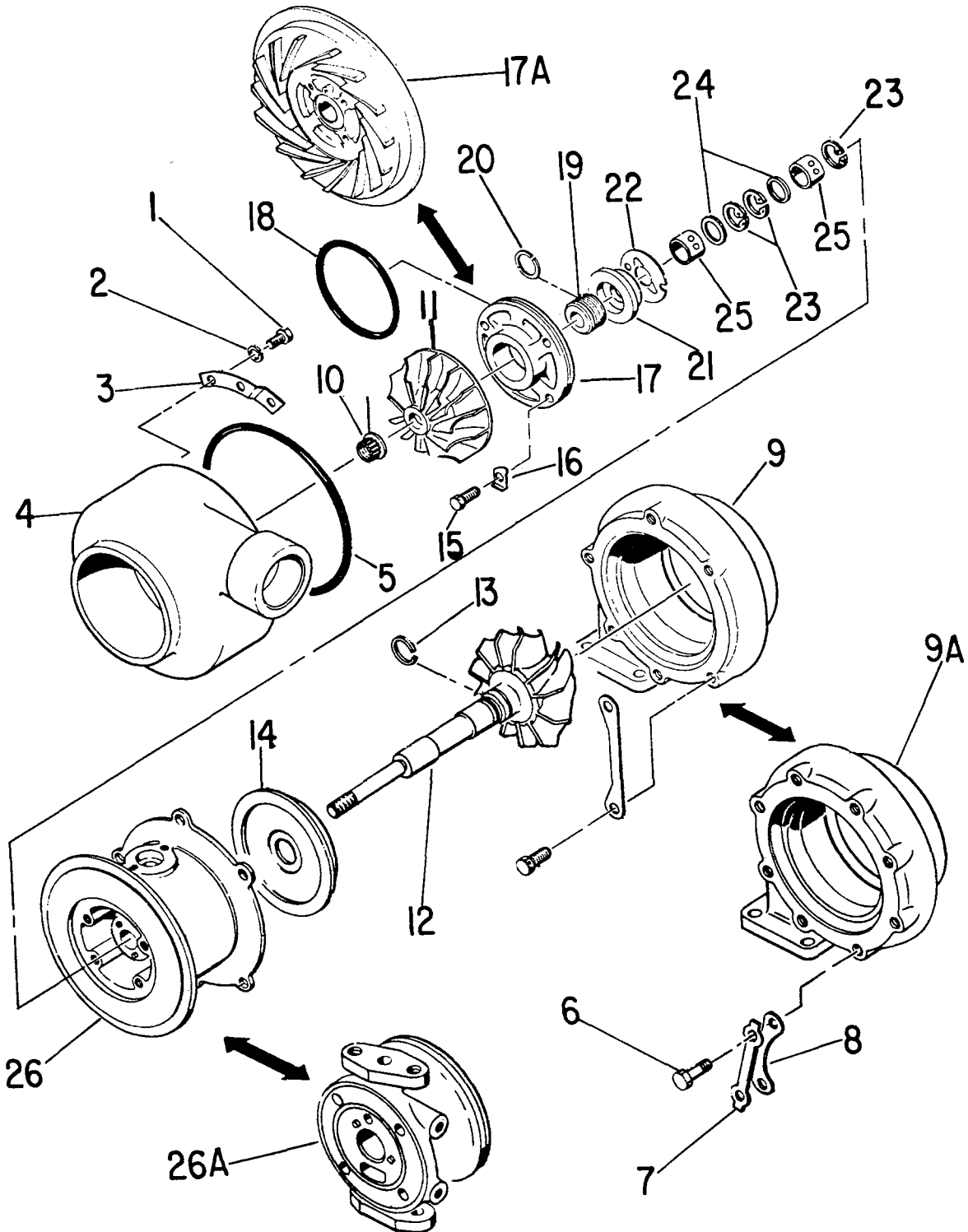


Figure 46
7-6

LYCOMING

TIO-541 PARTS CATALOG

TURBOCHARGER AND EXHAUST SYSTEM VARIABLE PRESSURE CONTROLLER AND RELATED PARTS GROUP

FIG. REF. 47	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY												
			ON ALL	ATA	E1AA	E1BA	E1CA								
1	77409	ADAPTER ASSY., Turbo controller			1										
1	77295	ADAPTER ASSY., Turbo controller				1	1	1							
1	LW-13480*	ADAPTER ASSY., Turbo controller				1	1	1							
2	69943	STUD, 1/4-20 x 1-3/8 long	3												
	STD-783	PLUG, 1/4-18 NPT,socket	1												
3	1102	PLUG, 1/8-27 NPT x 3/8 long, allen				2	3	3	3						
	72377	ELBOW, 3/8 tubing				1									
	AN822-3	ELBOW, 3/16 flare tube x 1/8 NPT, 90°				1									
4	STD-1202	BOLT, 5/16-18 x 1-3/32 long,hex.hd.				4									
4	LW-31-1.09	BOLT, 5/16-18 x 1-3/32 long,hex.hd.					4	4	4						
5	STD-475	WASHER, 5/16 internal lock	4												
6	STD-1727	WASHER, 3/4 OD x 21/64 ID x 1/8 plain	4												
7	LW-11377	CONTROLLER, Abs.variable pressure				1									
7	77740	CONTROLLER, Abs.variable pressure					1	1	1						
8	STD-28	WASHER, No.10 plain	4												
9	STD-251	WASHER, Internal lock	4												
10	STD-375	SCREW, No.10-24 x 5/8 long,fill.hd., drilled hd.	4												
11	72377	ELBOW, 3/8 tubing,adjustable 90°	1												
12	72377	ELBOW, 3/8 tubing,adjustable 90°				1									
12	AN815-6	NIPPLE, 3/8 tubing					1	1							
12	74070	ELBOW, 3/8 tubing to 9/16-18,45°							1						
13	LW-12799-6-070	HOSE ASSY.				1									
14	AN822-6-6D	ELBOW, 3/8 tube to 3/8 NPT				1									
	AN912-8S	BUSHING, Reducer 3/4 NPT to 3/8 NPT				1									
15	75950	TUBE ASSY., Controller drain					1	1	1						
16	AN818-6	NUT, 3/8 flared tube coupling					2	2	2						
	AN819-6	SLEEVE, 3/8 flared tube coupling					2	2	2						
	76298	CONNECTOR, 3/8 NPT external to 1/4 NPT internal					1	1	1						
17	AN822-6	ELBOW, 3/8 tube and 1/4 NPT,90°					1	1	1						

* - Adapter assy. applicable to those engines utilizing Abs. Pressure Relief Valve.

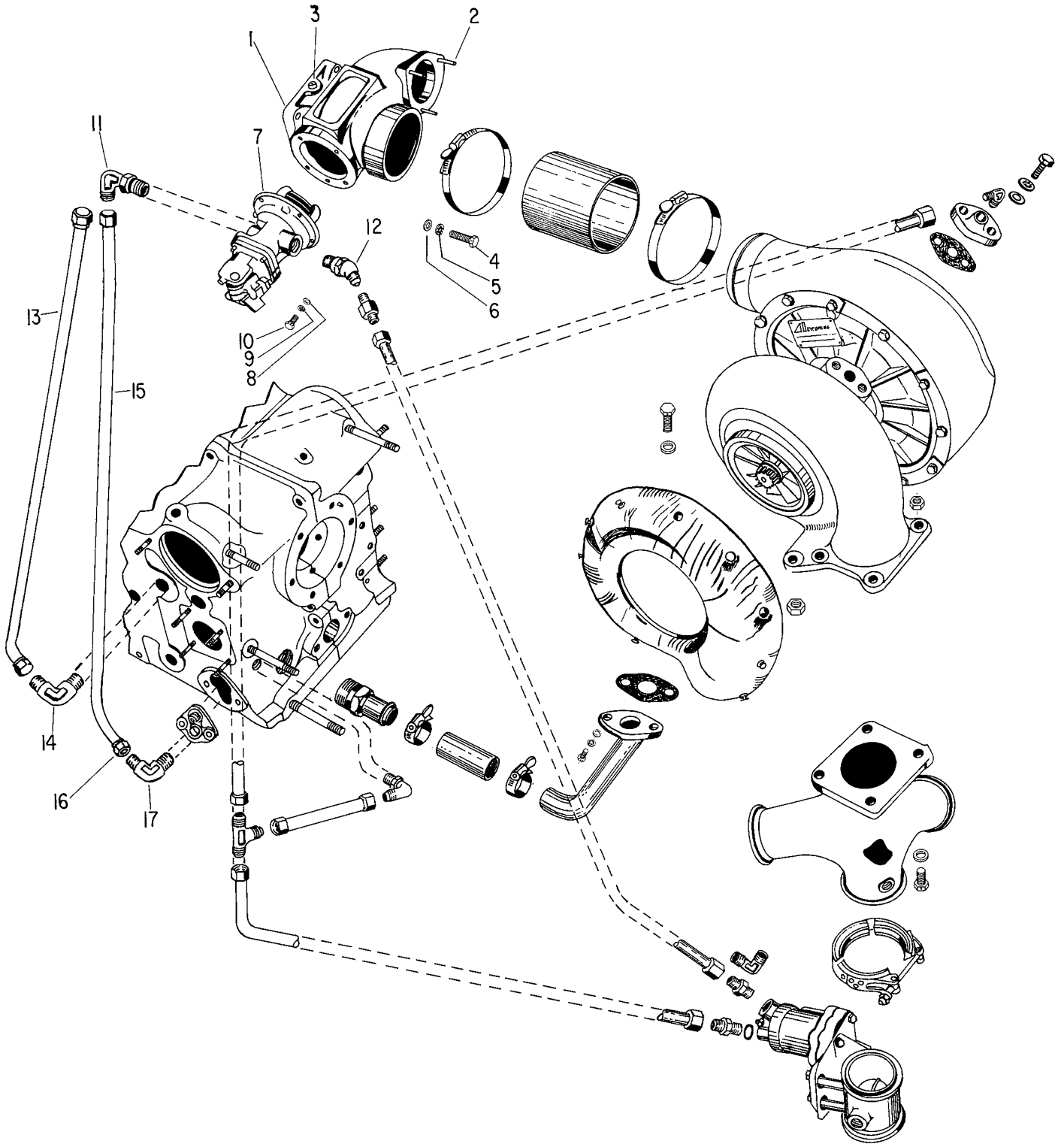


Figure 47 VARIABLE PRESSURE CONTROLLER AND RELATED PARTS
7-8

LYCOMING

TIO-541 PARTS CATALOG

VENDOR ACCESSORY ABSOLUTE VARIABLE PRESSURE CONTROLLER

FIG. REF. 48	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																				
			ON ALL	A1A	E1A	E1B	E1C																
	470748-1	CONTROLLER ASSY., Abs.variable pressure (LW-11377)			1																		
	470836-5	CONTROLLER ASSY., Abs.variable pressure (77740)				1	1	1															
1	476681	SHAFT, Cam			1																		
1	477008-3	SHAFT, Cam				1	1	1															
2	476682	ARM, Cam			1																		
2	477047	ARM, Cam					1	1	1														
	476918	SPACER			1																		
	475204-10	SHIM					un	un	un														
3	476909-1	BEARING				2																	
3	476909-2	BEARING					2	2	2														
	400365	PIN, Groove		1																			
4	476684	CAM				1																	
4	477002	CAM					1	1	1														
	S941523-6	PIN, Spring				1																	
	S941231-9	PIN, Spring					1	1	1														
5	477651	CARRIER ASSY., Bearing					1	1	1														
6	477003	BEARING, Needle					1	1	1														
	400478	SETSCREW			1																		
	400520-3	SETSCREW					1	1	1														
	400521	NUT					1	1	1														
	S9415777	SCREW					1	1	1														
	477049	LINK, Clevis, cam					1	1	1														
7	476900	BRACKET, Cam				1																	
	477001	BRACKET, Cam					1	1	1														
8	S132046	SCREW		4																			
9	400140-100	LOCKWASHER		4																			
10	400386-304	NUT		1																			
11	S116120	LOCKWASHER		1																			
12	400377-5	SCREW		3																			
13	476677	RETAINER, Spring		1																			
14	476650-1	SPRING				1																	
14	477363-1	SPRING					1	1	1														
15	476652	BELLOWS ASSY.				1																	
15	477123	BELLOWS ASSY.					1	1	1														
16	476646	BOOT ASSY.				1																	
16	477133	BOOT ASSY.					1	1	1														
17	403069-29	O-RING		1																			
18	476648	POPPET, Controller				1																	
18	476648-1	POPPET, Controller						1	1	1													
	400177-50	RING, Retainer						1	1	1													
	477590	SNUBBER						1	1	1													
19	476676	FOLLOWER, Cam				1																	
19	477000	FOLLOWER, Cam						1	1	1													
20	476649	SPRING		1																			
21	400207-6	O-RING		1																			
22	476651	SPRING				1																	
22	477377	SPRING						1	1	1													
23	476686	RETAINER, Spring				1																	
23	476999	RETAINER, Spring						1	1	1													
24	476645	SEAT, Poppet				1																	
24	477593	SEAT, Poppet						1	1	1													
	400208-14	O-RING						3															
	403069-40	O-RING							1	1	1												
25	476644	HOUSING, Controller		1																			

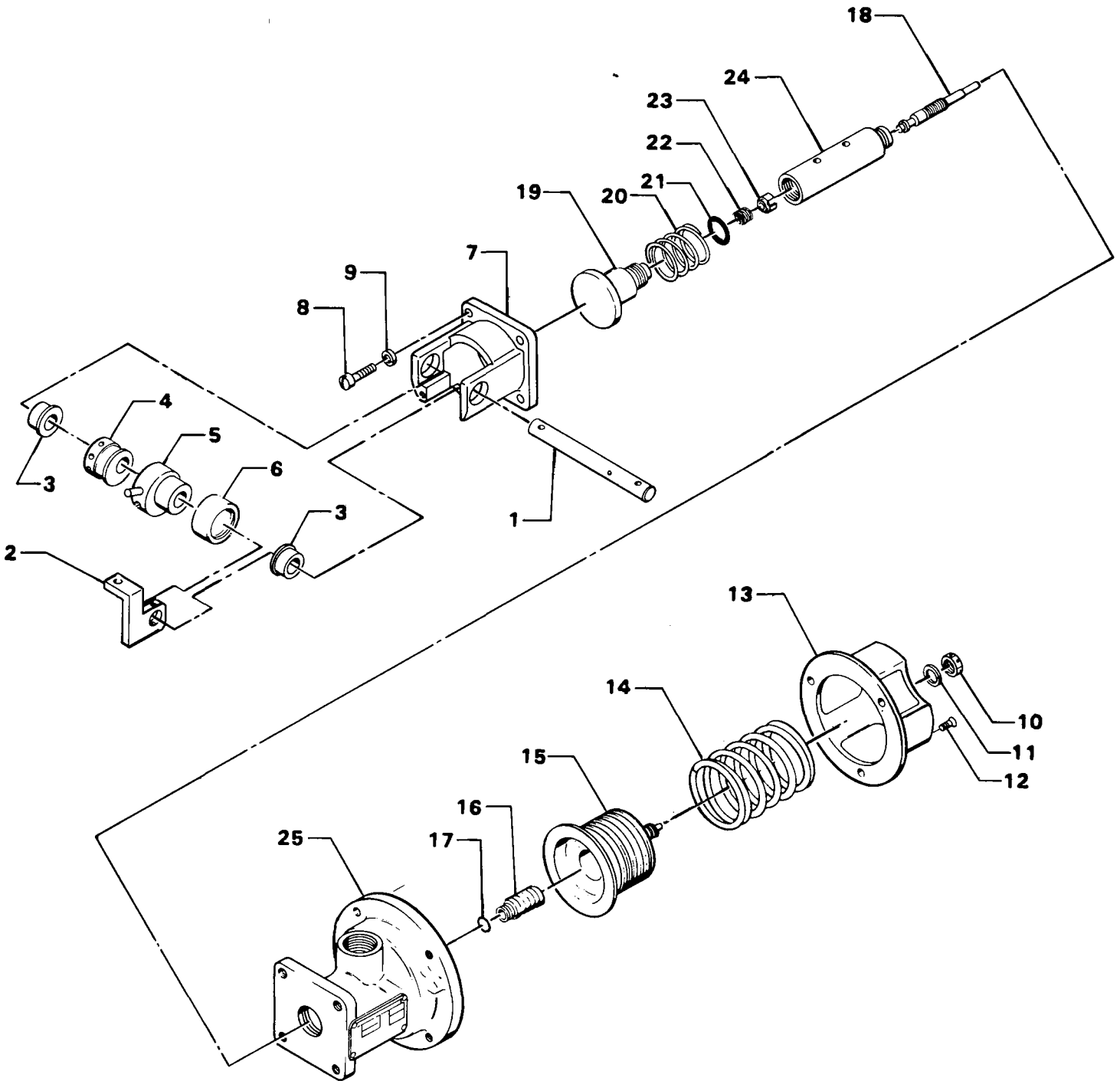


Figure 48 - Variable Pressure Controller

Revised January, 1982

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LYCOMING

TIO-541 PARTS CATALOG

TURBOCHARGER AND EXHAUST SYSTEM

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

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																		
			ON ALL	EJA	EJA3	EJBA	EJCA														
1	77676	VALVE ASSY., Exhaust bypass				1															
	77551	VALVE ASSY., Exhaust bypass							1	1											
	LW-10759	VALVE ASSY., Exhaust bypass									1										
2	LW-11005	TRANSITION, Exhaust									1										
3	AN960C616	WASHER, Plain, 3/8 in.	8																		
4	AN6C-13A	BOLT, 3/8-24 x 1-15/32 long,hex.hd.				4															
	STD-1998	BOLT, 3/8-24 x 7/16 long						4	4	4											
5	MS20500-624	NUT, 3/8-24 self-locking	4																		
6	78083	GASKET, V-band coupling, 2.00 tube				1	1	1													
	75845	GASKET, V-band coupling, 2.25 tube										2									
7	LW-12093-5	COUPLING, V-band, 2.00 tube				1	1	1													
	LW-12093-6	COUPLING, V-band, 2.25 tube									1										
	LW-12125-3	COUPLING, V-band, 2.25 tube									1										
8	78077	FLANGE, V-band coupling, 2.00 tube				1	1	1													
	75608	FLANGE, V-band coupling, 2.25 tube									1										
9	72377	ELBOW, 3/8 tubing, adjustable 90°				1	1	1													
	75948	TEE, 1/4 tube adjustable				1	1	1													
10	76704	ELBOW, 1/4 tube x 1/4 NPT, 45°				1	1	1													
	AN822-4-4	ELBOW, 1/4 tube x 1/4 NPT, 90°				1															
11	LW-13311	TEE, 1/4 tube and 3/8 tube with swivel branch									1										
12	LW-12798-4S-074	HOSE ASSY. (C'case to activator inlet)									1										
	LW-12798-4S-082	HOSE ASSY. (C'case to activator inlet)							1	1											
	LW-12876-4-046	HOSE ASSY. (C'case to activator inlet)				1															
13	LW-12799-6S-150	HOSE ASSY. (C'case to turbo)									1										
	LW-12798-4S-150	HOSE ASSY. (Activator to turbo)						1	1												
	LW-12798-4-190	HOSE ASSY. (C'case to turbo)				1															
14	LW-12799-6S-180	HOSE ASSY. (Activator to controller)							1	1	1										
	LW-12799-6-144	HOSE ASSY. (Activator to controller)				1															
15	MS29512-4	SEAL, "O" ring									1										
16	AN815-4	NIPPLE, 1/4 tube to 7/16-20									1										
17	75739	NIPPLE, 3/8 tube to 9/16-18									1										
	STD-71	PLUG, 3/8 pipe allen hd.				1															
	STD-783	PLUG, 1/4 pipe allen hd.				1															
	STD-1932	BUSHING, 1/4 to 1/8 NPT				1															
	1102	PLUG, 1/8 NPT allen hd.				1															
	76711	CLAMP, Tube 3/4 ID for 5/16 bolt				1	1	1													
	77235	CLIP, 3/4 ID for 5/16 bolt						1	1												
18	LW-13145*	VALVE ASSY., Abs.pressure relief						1	1	1											
	STD-425	WASHER, No.10 plain						4	4	4											
	STD-251	WASHER, No.10 internal lock						4	4	4											
	STD-375	SCREW, No.10-24 x 5/8 long,fill.hd.						4	4	4											
	38-26	STUD, 3/8-16 x 3-1/4 long						1	1	1											
	MS29513-138	SEAL, "O" ring 2-7/64 ID x 3/32 section							1	1	1										

* - See Service Instruction No. 1293.

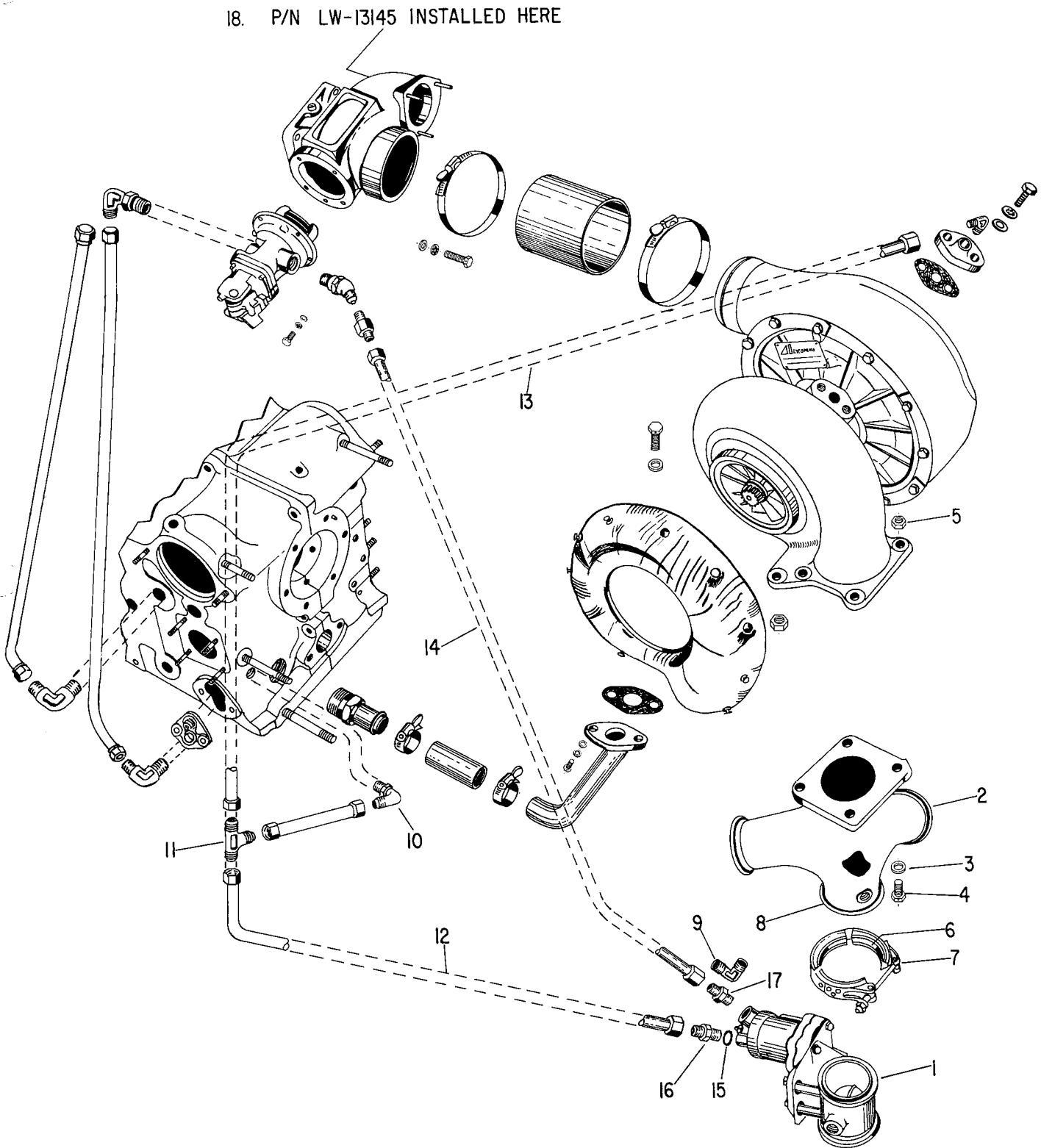


Figure 49 EXHAUST BYPASS VALVE, ABS. PRESSURE RELIEF VALVE AND RELATED PARTS

LYCOMING

TIO-541 PARTS CATALOG

VENDOR ACCESSORY EXHAUST BYPASS VALVE ASSEMBLY

FIG. REF. 50	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																			
			ON ALL	AJA	E1A4	E1B4	E1C4															
	470872-1	VALVE ASSY., Exhaust bypass Lyc. P/N 77676			1																	
	470864-1	VALVE ASSY., Exhaust bypass Lyc. P/N 77551				1	1															
1	400164-204	NUT, Lock	1																			
2	400140-200	LOCKWASHER	1																			
3	477096	SPRING, Tension	1																			
4	400143-96	PIN, Cotter	1																			
5	400138-111	WASHER	1																			
6	400460-817	PIN, Flat head	1																			
7	S180024	BOLT	3																			
8	400140-200	LOCKWASHER	3																			
9	477217-2	HOUSING ASSY., Valve			1																	
	477217-1	HOUSING ASSY., Valve				1	1															
10	S180024	BOLT	4																			
11	400140-200	LOCKWASHER	4																			
12	477311	HEAT SHIELD			1																	
	477023	HEAT SHIELD				1	1															
13	476773	GASKET	1																			
14	476770	RETAINER	1																			
15	477311	SPRING	1																			
16	476854	SPRING	1																			
17	477244	PLATE, Cylinder	1																			
18	400143-96	PIN, Cotter	2																			
19	400138-045	WASHER	2																			
20	400142-817	PIN, Flat head	2																			
21	476879	TURNBUCKLE	1																			
22	400515-311	LOCKNUT	1																			
23	476842-1	CLEVIS	1																			
24	477211	SHAFT	1																			
25	476769	PISTON	1																			
26	476844-2	PACKING	1																			
27	476762	EXPANDER	1																			
28	400545-5	O-RING	1																			
29	476135	SCREW, Adjusting	1																			
30	476771-3	CYLINDER ASSY.	1																			

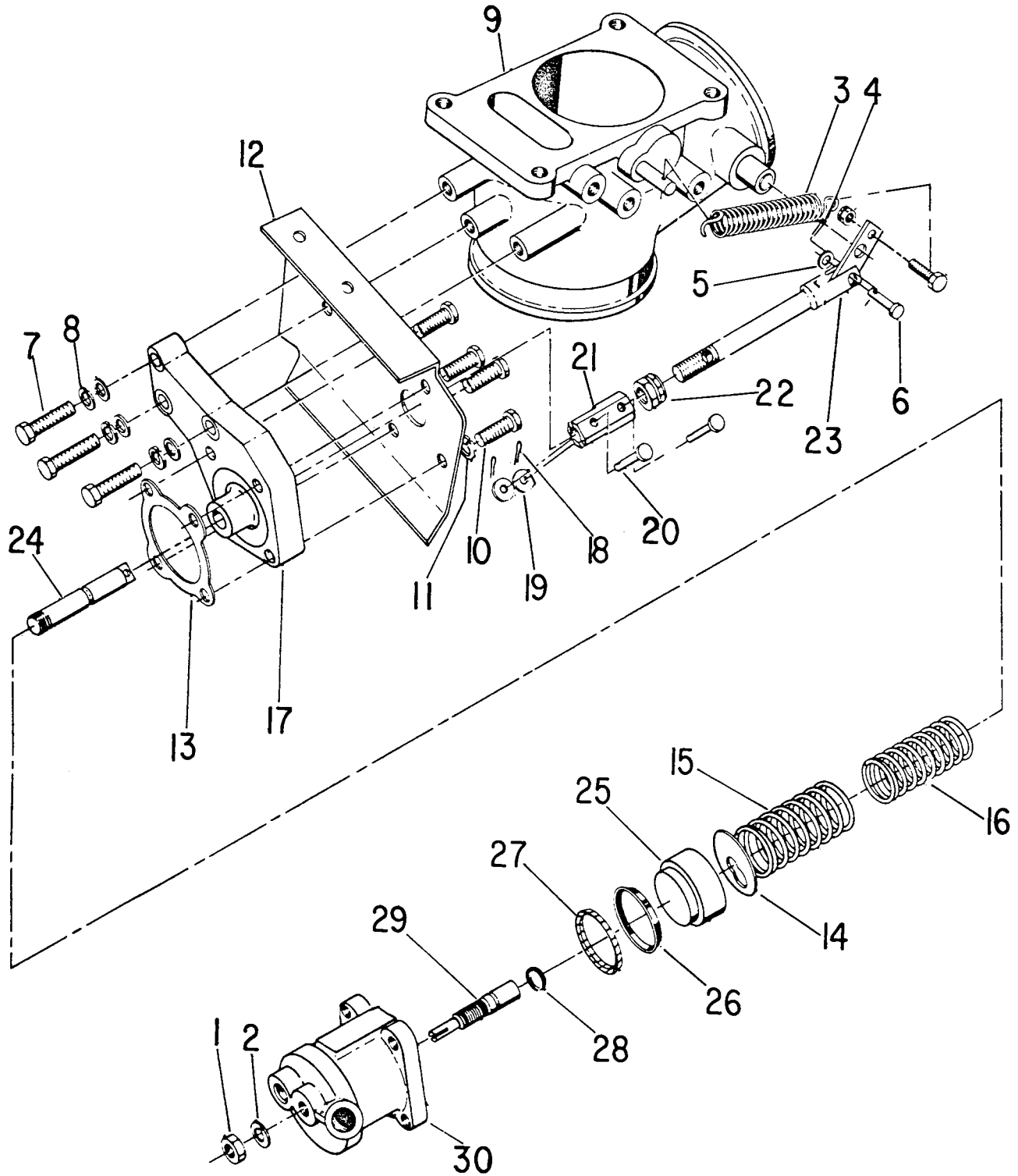
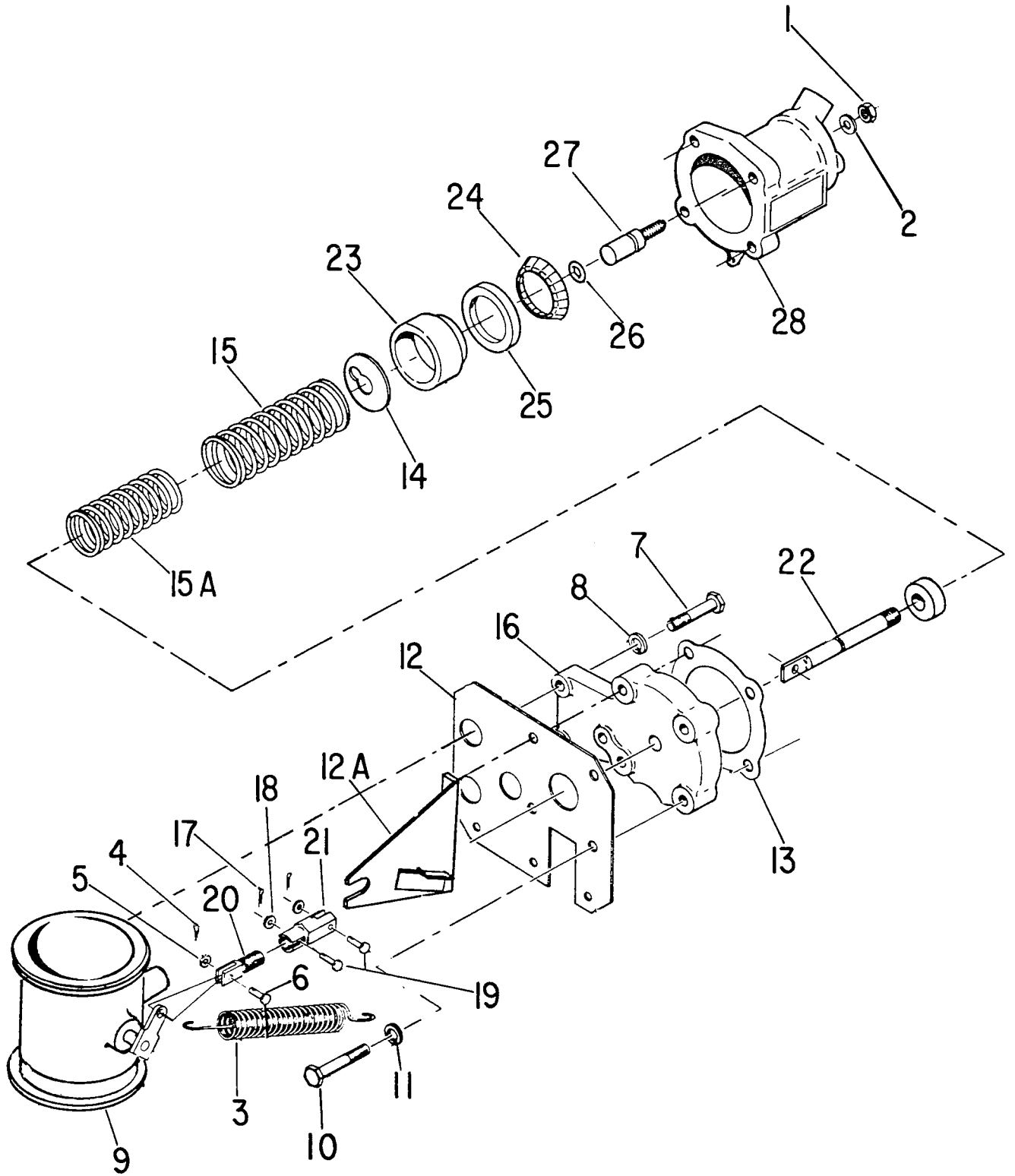


Figure 50 EXHAUST BYPASS VALVE (-A1A, -E1A4, -E1B4)
7-14



(SEE NOTE)

Figure 51 EXHAUST BYPASS VALVE (-E1C4)

7-16

LYCOMING

TIO-541 PARTS CATALOG

VENDOR ACCESSORY ABSOLUTE PRESSURE RELIEF VALVE

FIG. REF. 52	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																				
			ON ALL	A1A	E1A5	E1B5	E1C4																
1	470944-7	VALVE ASSY., Abs.pressure relief Lyc. P/N LW-13145				1	1	1															
2	400540	RIVET				4	4	4															
3	477301-1	FLANGE, Mounting				1	1	1															
4	477490	HEAD, Valve				1	1	1															
5	477586-7	BELLOWS ASSY.				1	1	1															
6	477535-3	SHIM, .125 thick				un	un	un															
	477535-2	SHIM, .032 thick				un	un	un															
	477535-1	SHIM, .016 thick				un	un	un															
7	477552	COVER, Valve				1	1	1															
8	400140-200	LOCKWASHER				1	1	1															
9	S181568	BOLT				1	1	1															

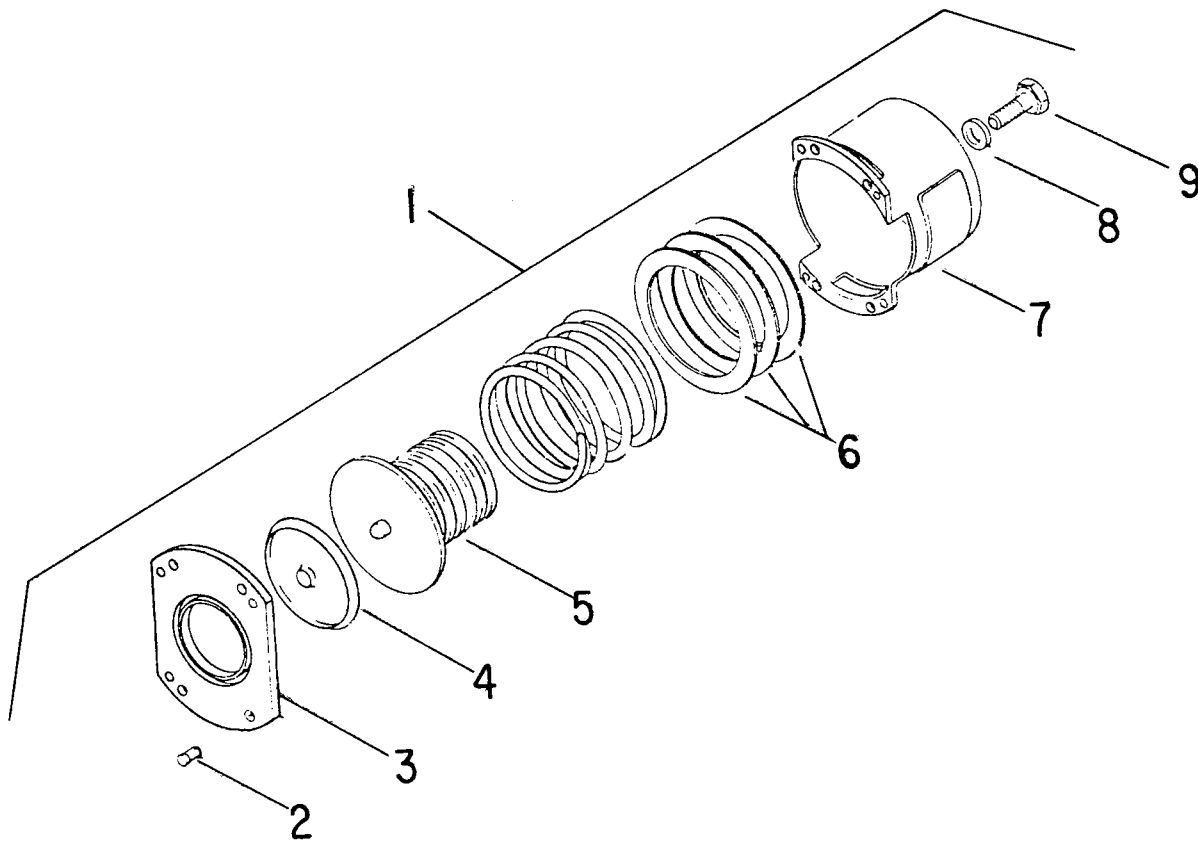


Figure 52
7-17

LYCOMING

TIO-541 PARTS CATALOG

TURBOCHARGER AND EXHAUST SYSTEMS SONIC NOZZLE ASSEMBLY

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY				
			ON ALL	A/A	E/A	E/B	E/C
1	75993*	GASKET, Sonic nozzle	1				
2	75994	NOZZLE, Sonic		1			
2	77796	NOZZLE, Sonic			1	1	
3	75995	FLANGE, Sonic nozzle		1	1	1	
4	MS29513-227	SEAL, "O" Ring, 2-7/64 ID x 9/64 dia.		1	1	1	
5	STD-1269	CLAMP, 1-7/8-2-1/4 ID x 9/16 wide		1	1	1	
6	STD-8*	WASHER, 1/4 plain	3				
7	STD-160*	WASHER, 1/4 internal lock	3				
8	STD-1411*	NUT, 1/4-20 plain	3				
9	76229	SUPPORT, Sonic nozzle		1			
9	77716	SUPPORT, Sonic nozzle			1	1	
10	STD-1957	BOLT, 3/8-16 x 1.00 long, hex. hd.		1	1	1	
11	STD-678	WASHER, 3/8 internal lock		1	1	1	
12	STD-35	WASHER, 5/16 plain			1	1	
13	STD-475	WASHER, 5/16 internal lock			1	1	
14	STD-1926	BOLT, 5/16-18 x 11/16 long, hex. hd.		1	1	1	
15	STD-1410	NUT, 5/16-18 plain			1	1	
16	76228	BRACKET, Sonic nozzle		1			
16	77242	BRACKET, Sonic nozzle			1	1	
17	STD-1499	BOLT, 1/4-20 x 1/2 long, hex. hd.		2	2	2	
18	STD-160	WASHER, 1/4 internal lock		2	2	2	
19	STD-8	WASHER, 1/4 plain		2	2	2	
20	STD-1411	NUT, 1/4-20 plain		1	2	2	
	AN900-7	GASKET, 7/16 ID annular		1			
	AN814-4DL	PLUG AND BLEEDER, Screw thd.		1			

* - These parts shipped loose on -E1B4 model engines.

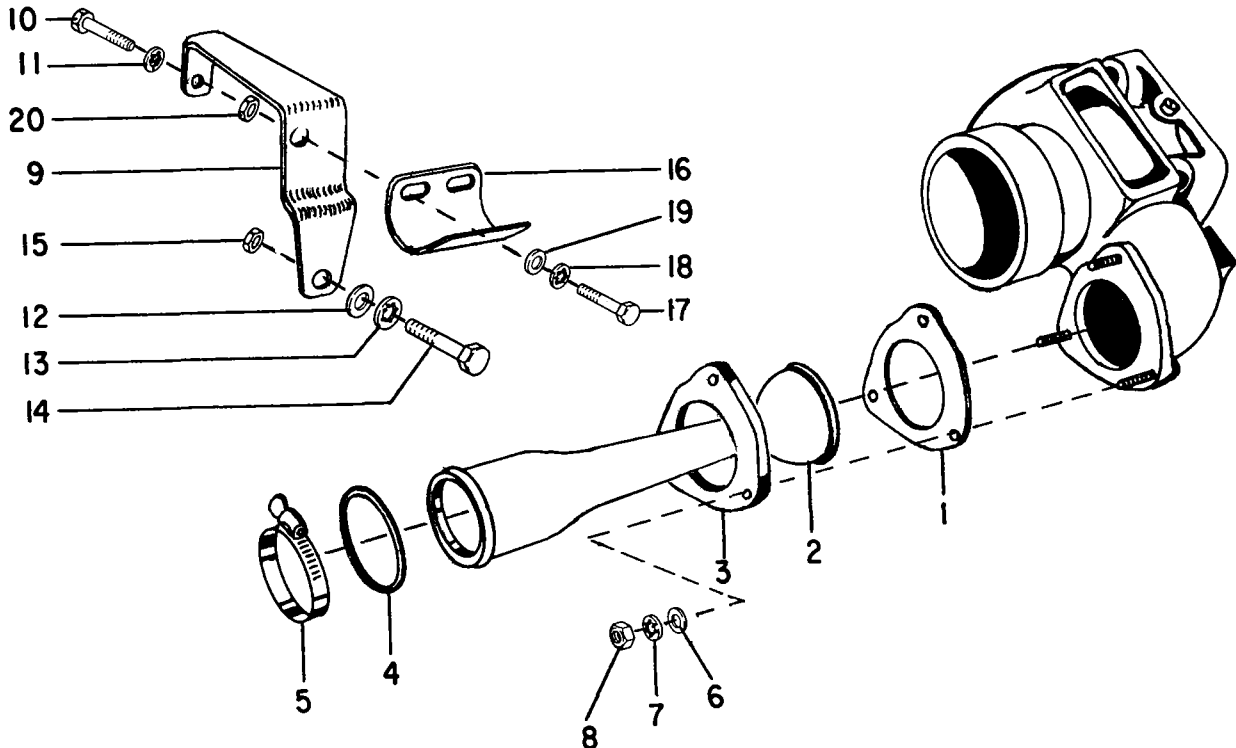


Figure 53
7-18

TURBOCHARGER AND EXHAUST SYSTEMS
 TURBOCHARGER MOUNTING PARTS (-A1A)

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY															
			ON ALL	A1A	E1A	E1B	E1C	[diagonal lines]										
	77038	BRACKET, Turbocharger			1													
	STD-475	WASHER, 5/16 internal lock			6													
	STD-2156	BOLT, 5/16-18 x 1-5/32 long,hex.hd.			6													
	74938	SPACER, 13/16 OD x 13/32 ID x 1-11/64 long			2													
	75962	BAFFLE, Magneto			1													
	STD-969	SCREW, No.10-32 x 1/2 long,fill.hd.			1													
	STD-670	NUT, No.10 self-locking			1													
	STD-33	WASHER, 3/8 plain			2													
	STD-678	WASHER, 3/8 internal lock			2													
	STD-1822	BOLT, 3/8-16 x 2-3/8 long,hex.hd.			2													
	77838	BRACKET, Controller and turbo support			1													
	77904	SUPPORT, Turbocharger			1													
	77839	BRACKET, Turbocharger support			1													
	STD-8	WASHER, 1/4 plain			2													
	STD-160	WASHER, 1/4 internal lock			2													
	STD-1499	BOLT, 1/4-20 x 1/2 long,hex.hd.			2													
	STD-1203	BOLT, 5/16-18 x 3/4 long,hex.hd.			2													
	STD-35	WASHER, 5/16 plain			2													
	STD-475	WASHER, 5/16 internal lock			2													
	STD-1410	NUT, 5/16-18 plain			2													

NOTE: These parts are not illustrated.

LYCOMING

TIO-541 PARTS CATALOG

TURBOCHARGER AND EXHAUST SYSTEMS

TURBOCHARGER MOUNTING PARTS (-E1A4, -E1B4)

FIG. REF. 54	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY															
			ON ALL	E1A	E1A4	E1B4												
1	LW-10168	BRACKET, Turbocharger			1	1												
	STD-1998*	BOLT, 3/8-24 x 1-7/16 long,hex.hd.			1	1												
	AN6C-17A*	BOLT, 3/8-24 x 1-61/64 long,hex.hd.			1	1												
	MS20500-624*	NUT, 3/8-24 self-locking			2	2												
2	STD-2045	NUT, 3/8-24 self-locking			8	8												
3	77067	DAMPER, Rubber			1	1												
4	77169	BRACKET, Turbo and compressor			1	1												
5	77162	SPACER, Turbo and compressor support			1	1												
6	78112	LOCKPLATE, 3/8 bolt			3	3												
7	STD-2133	BOLT, 3/8-16 x 1-3/4 long,hex.hd.			1	1												
8	76623	SUPPORT, Turbo and compressor			1	1												
9	78104	LOCKPLATE, 5/16 bolt x 1-5/16 spacing			1	1												
10	STD-1926	BOLT, 5/16-18 NC-3 x 11/16 long			2	2												
11	STD-1994	BOLT, 3/8-16 x 2-7/8 long,hex.hd.			1	1												
12	STD-1926	BOLT, 5/16-18 x 11/16 long			4	4												
13	STD-1815	NUT, 5/16-18 self-locking			8	8												
14	LW-10612	BRACKET, Compressor mounting			1	1												
15	STD-35	WASHER, 5/16 plain			11	11												
16	77068	DAMPER, Rubber			1	1												
17	77069	DAMPER, Rubber			1	1												
18	STD-1828	BOLT, 5/16-18 NF x 1-5/16 long, hex.hd.			5	5												
19	77415	WASHER, 15/16 OD x 3/8 ID x 3/8 thick			8	8												
20	77817	STRUT, Turbo mounting bracket			1	1												
21	AN6C-16A	BOLT, 3/8-24 x 1-1/2 long,hex.hd.			1	1												
22	78113	LOCKPLATE, 3/8 bolt			2	2												
23	STD-1115	BOLT, 3/8-24 x 1-7/8 long,hex.hd.			2	2												
24	77167	STRUT, Compressor mounting bracket			1	1												
25	STD-2016	BOLT, 3/8-24 x 1-7/8 long,hex.hd.			2	2												
26	78840	SUPPORT, Turbocharger strut			1	1												
27	78111	LOCKPLATE, 3/8 bolt x 1-1/4 spacing			1	1												
28	STD-1993	BOLT, 3/8-16 x 1-3/4 long,hex.hd.			1	1												
29	77164	STRUT, Turbocharger			1	1												
30	78149	LOCKPLATE, Turbocharger			1	1												
31	STD-1421	BOLT, 3/8-24 x 7/8 long,hex.hd.			1	1												
32	STD-1957	BOLT, 3/8-24 x 1.00 long,hex.hd.			1	1												
33	77511	BRACKET, Compressor mounting			1	1												
34	STD-1979	BOLT, 3/8-24 x 2-13/16 long,hex.hd.			1	1												
35	STD-1997	BOLT, 5/16-18 x 2-1/2 long,hex.hd.			1	1												
36	STD-35	WASHER, 5/16 plain			1	1												
37	LW-10167	STRUT, Compressor mounting bracket, lower			1	1												

* - To attach turbocharger to ref. 1.

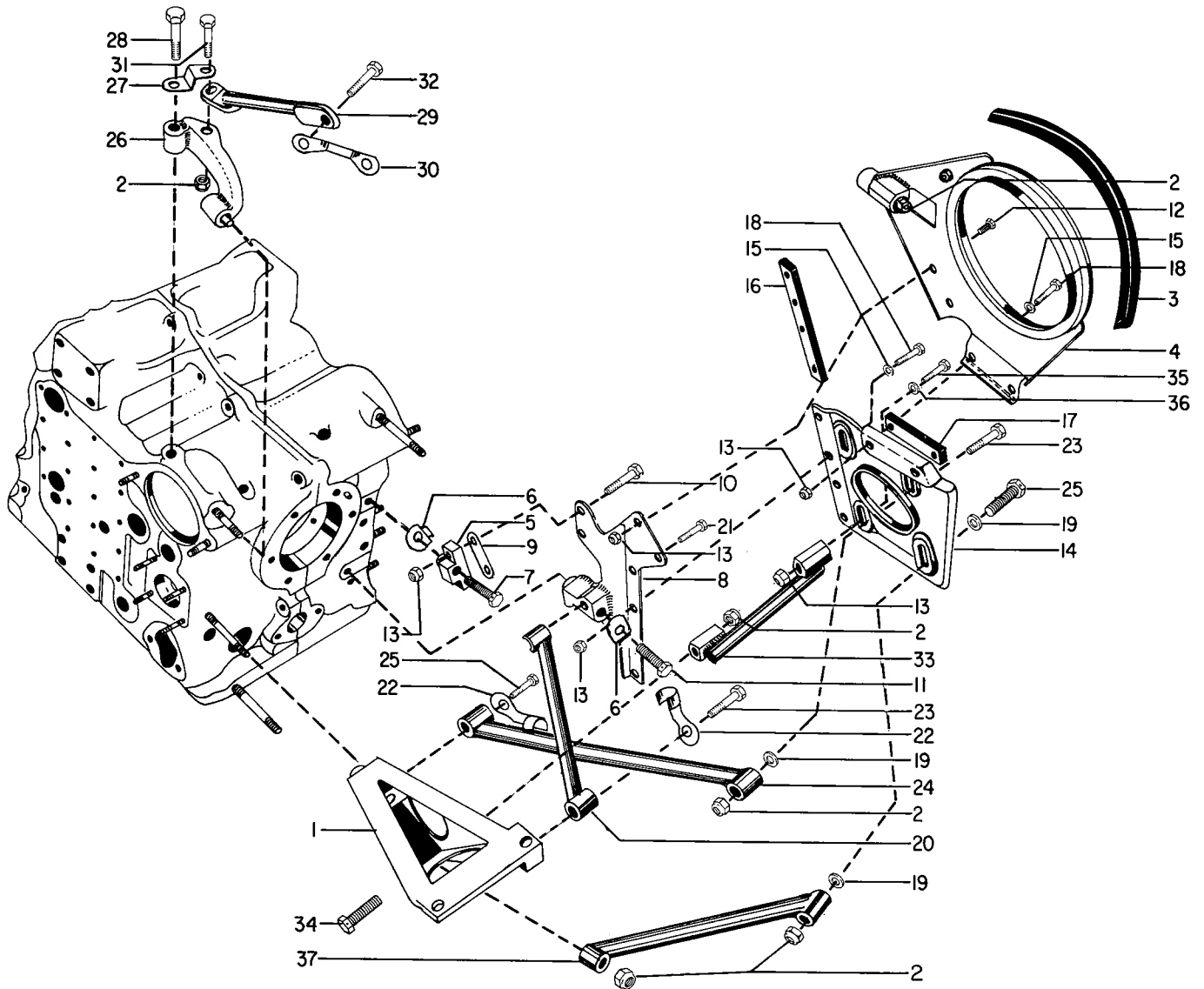


Figure 54 TURBOCHARGER MOUNTING PARTS (-E1A4, -E1B4)

LYCOMING TIO-541 PARTS CATALOG

TURBOCHARGER AND EXHAUST SYSTEMS TURBOCHARGER MOUNTING PARTS (-E1C4)

FIG. REF. 55	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY															
			ON ALL	A1A	E1A	E1B	E1C											
1	LW-10063	BRACKET, Turbo and compressor																1
2	STD-2045	NUT, 3/8-24 self-locking																2
3	LW-10066	SPACER, Turbo bracket																1
4	LW-10090	SHIM, Turbo mounting (3 max.)																un
5	LW-10089	SPACER, 13/16 OD x 13/32 ID x 59/64 long																1
6	LW-11105	LOCKPLATE, 3/8 bolt																2
7	STD-2128	BOLT, 3/8-16 x 4-11/16 long,hex.hd.																2
8	78840	SUPPORT, Turbo strut																1
9	78592	LOCKPLATE, 3/8 bolt x 1-1/4 spacing																1
10	STD-1959	BOLT, 3/8-16 x 1-5/8 long,hex.hd.																1
11	STD-2045	NUT, 3/8-24 self-locking																1
12	AN6C-25A	BOLT, 3/8-24 x 2-49/64 long,hex.hd.																2
13	MS20500-624	NUT, 3/8-24 self-locking																2
14	77067	DAMPER, Rubber																1
15	LW-11019	BRACKET, Turbocharger																1
16	STD-2045	NUT, 3/8-24 self-locking																1
17	LW-31-1.09	BOLT, Hex.hd.																2
18	STD-2043	NUT, Self-locking																2
19	78780	BRACKET, Turbo strut																1
20	STD-2157	BOLT, 5/16-18 x 1-5/32																2
21	LW-10836	STRUT, Turbocharger																1
22	STD-1115	BOLT, 3/8-24 x 1-1/2 long,hex.hd.																1
23	STD-2045	NUT, 3/8-24 self-locking																1
24	STD-2010	BOLT, 5/16-18 x 1-1/2 long																1
25	STD-2043	NUT, 5/16-18 self-locking																1

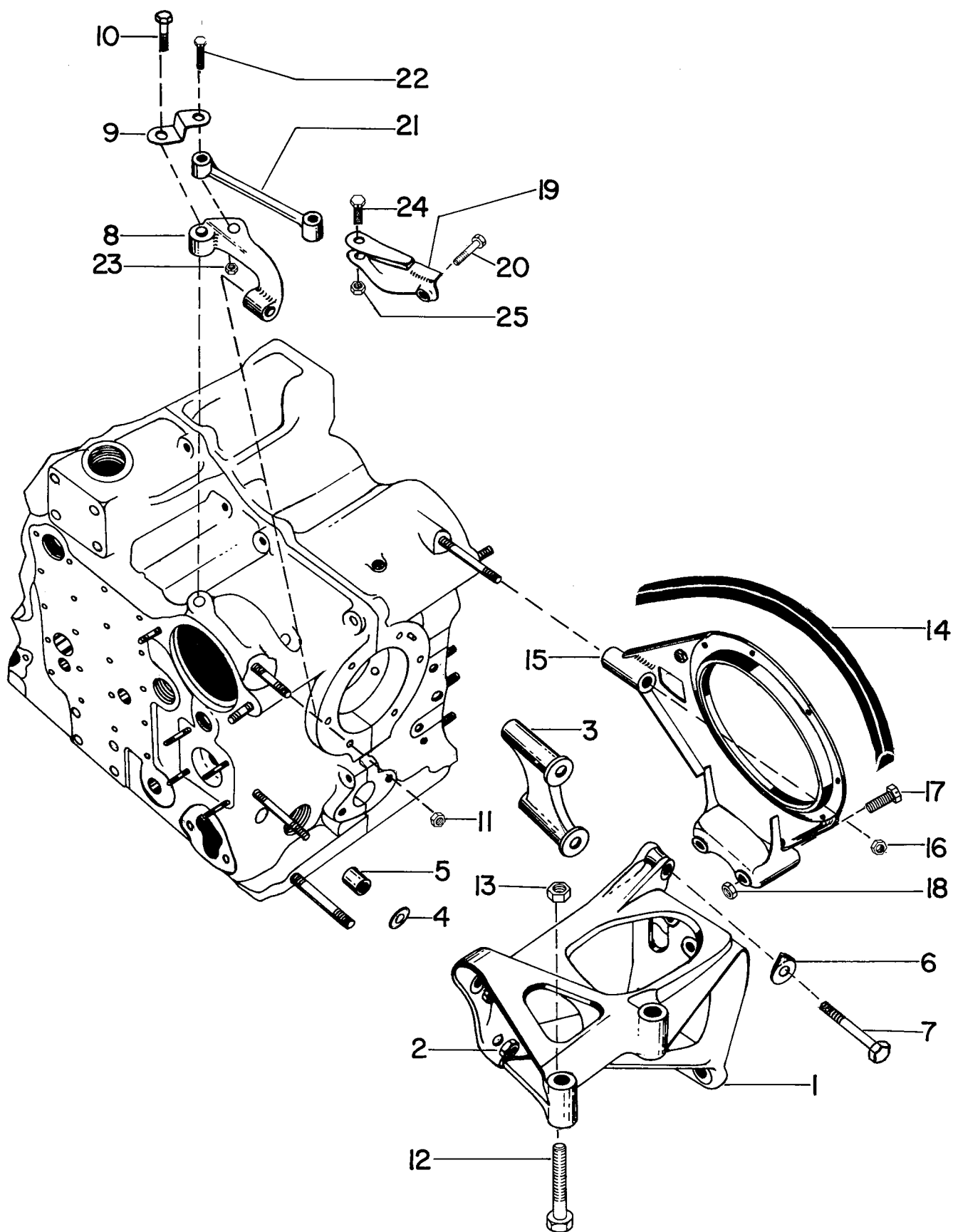


Figure 55 TURBOCHARGER MOUNTING PARTS (-E1C4)

7-23

SERVICE REPLACEMENT SETS

SEAL AND GASKET SET (-A1A)

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY														
			ON ALL	A1A	E1AA	E1BA	E1CA										
	76872-1	SEAL AND GASKET SET				1											
	AN900-7	GASKET				1											
	LW-11602	LOCKPLATE				6											
	LW-12681	GASKET, Magneto				2											
	MS28775-117	RING, Oil seal				1											
	MS28775-120	RING, Oil seal				1											
	MS29512-4	SEAL, "O" Ring				1											
	MS29512-6	SEAL, Oil				3											
	MS29513-227	SEAL, "O" Ring				1											
	STD-111	GASKET, Suction screen				1											
	STD-208	SEAL, Oil				2											
	STD-213	SEAL, Oil				1											
	STD-294	GASKET				1											
	STD-1006	SEAL, "O" Ring				1											
	STD-1045	GASKET, Oil pressure relief valve				2											
	1691-C	GASKET, Fuel pump				1											
	8313	GASKET, Vacuum pump				2											
	60096	GASKET, Fuel pump				1											
	61165	SEAL, Tachometer drive.oil				1											
	62922	SEAL, Shroud tube				24											
	66732	GASKET, Valve rocker shaft				12											
	70455	GASKET				2											
	70457	GASKET, Oil filler extension				1											
	71450	GASKET, Rocker box cover				6											
	71481	RING, Oil seal,cylinder base				6											
	71973	GASKET, Intake pipe flange				6											
	72053	GASKET, Governor				1											
	72075	SEAL, Oil				2											
	72078	LOCKPLATE, Camshaft gear				2											
	72220	GASKET, Oil level gage				1											
	72711	RING, Oil seal				6											
	73032	GASKET, Air inlet housing				1											
	73314	GASKET, Density controller				1											
	73782	GASKET, Turbo oil drain adapter				1											
	73817	LOCKPLATE				1											
	74305	SEAL, Crankshaft				1											
	74342	GASKET, Tachometer adapter				1											
	74756	GASKET, Exhaust flange				12											
	74770	LOCKPLATE, Crankshaft gear				1											
	74845	GASKET, Crankcase rear				1											
	74858	GASKET, Oil cooler				1											
	74906	GASKET, Shroud tube				6											
	74918	GASKET, Oil sump				1											
	74944	GASKET, Turbo controller adapter				1											
	75085	GASKET, Fuel drain check valve				1											
	75233	"O" RING				6											
	75371	GASKET				1											
	75749	LOCKPLATE				1											
	75957	RING, Oil seal				1											
	75993	GASKET, Sonic nozzle				1											
	76510	GASKET				1											
	76888	GASKET, Oil filter adapter				1											
	78083	GASKET, Marmon J11 coupling (24096-200)				3											
	78443	SEAL, Crankshaft				1											

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																
	77816-1	SEAL AND GASKET SET				1	1	1															
	LW-10122	GASKET				1	1	1															
	LW-11105	LOCKPLATE				2	2	2															
	LW-11602	LOCKPLATE				6	6	6															
	LW-12517	GASKET, Oil filter adapter				1	1	1															
	MS28775-120	RING, Oil seal				1	1	1															
	MS29512-6	SEAL, Oil				3	3	3															
	MS29513-277	SEAL, "O" Ring				1	1	1															
	STD-111	GASKET, Oil suction screen				1	1	1															
	STD-208	SEAL, Oil				2	2	2															
	STD-213	SEAL, Oil				1	1	1															
	STD-294	GASKET				1	1	1															
	STD-589	GASKET, Copper asbestos				1	1	1															
	STD-1006	SEAL, "O" Ring				1	1	1															
	STD-1045	GASKET, Oil pressure relief valve				2	2	2															
	STD-1934	SEAL, Oil				1	1	1															
	STD-1940	SEAL, Oil				2	2	2															
	1691-C	GASKET, Fuel pump				1	1	1															
	8313	GASKET, Vacuum pump				2	2	2															
	60096	GASKET, Fuel pump				1	1	1															
	62922	SEAL, Shroud tube				24	24	24															
	70310	SEAL, Shroud tube				24	24	24															
	66732	GASKET, Valve rocker shaft				12	12	12															
	70455	GASKET				2	2	2															
	70457	GASKET, Oil filler extension				2	2	2															
	71481	RING, Cylinder base				6	6	6															
	71973	GASKET				6	6	6															
	72053	GASKET, Governor				1	1	1															
	72075	SEAL, Oil				2	2	2															
	72078	LOCKPLATE, Camshaft gear				2	2	2															
	72312	RING, Seal				1	1	1															
	72711	SEAL, "O" Ring				6	6	6															
	73032	GASKET, Air inlet housing				1	1	1															
	73314	GASKET, Density controller				1	1	1															
	73782	GASKET, Turbo oil drive adapter				1	1	1															
	74068	RING, Seal				1	1	1															
	74305	SEAL, Crankshaft				1	1	1															
	74342	GASKET, Tachometer adapter				1	1	1															
	74770	LOCKPLATE, Crankshaft gear				1	1	1															
	74906	GASKET, Shroud tube				6	6	6															
	74944	GASKET, Turbo controller adapter				1	1	1															
	75085	GASKET, Fuel drain check valve				1	1	1															
	75233	"O" RING				24	24	24															
	75371	GASKET				1	1	1															
	75632	GASKET				1	1	1															
	75845	GASKET				2	2	2															
	75881	GASKET, Oil suction screen				2	2	2															
	75957	RING, Oil seal				1	1	1															
	75993	GASKET, Sonic nozzle				1	1	1															
	76036	GASKET, Rocker box				6	6	6															

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															

LYCOMING

TIO-541 PARTS CATALOG

SERVICE REPLACEMENT SETS

CYLINDER, PISTON, AND RING ASSY. KIT (-E1A4, -E1B4, -E1C4)

FIG. REF.	PART NUMBER	DESCRIPTION	QUANTITY PER ASSEMBLY																		
			ON ALL	A1A	E1A4	E1B4	E1C4														
	LW-14054	CYLINDER, Piston, and ring assy. kit			1	1	1														
	LW-10076	SEAT, Valve spring			1	1	1														
	LW-10077	SEAT, Valve spring			1	1	1														
	LW-10545-S	PISTON			1	1	1														
	LW-11798	SPRING, Valve, outer			2	2	2														
	LW-11799	SPRING, Valve, auxiliary			2	2	2														
	LW-13561	CYLINDER ASSY., Nitrided, angle hd.			1	1	1														
	MS13997-3	KEY, Valve			2	2	2														
	MS13998-3	CAP, Valve stem			1	1	1														
	STD-160	WASHER			3	3	3														
	STD-1215	BOLT			2	2	2														
	STD-1411	NUT			3	3	3														
	STD-1925	SCREW, 1/4-20 x 5/8 pan hd.			8	8	8														
	60009	KEY, Valve			2	2	2														
	70310	SEAL, Shroud tube			4	4	4														
	66732	GASKET, Valve rocker shaft cover			2	2	2														
	LW-13321	SEAT, Valve spring, lower			1	1	1														
	LW-13446	PIN, Piston			1	1	1														
	71195	BOX, Set up			1	1	1														
	71481	RING, Oil seal, cylinder base			1	1	1														
	71549	WASHER, Valve rocker			2	2	2														
	72198	PLUG, Piston pin			2	2	2														
	72626	SHAFT, Valve rocker			2	2	2														
	72709	SCREW, 1/4-20 x 5/8 self-sealing			1	1	1														
	72710	COVER, Valve rocker shaft			2	2	2														
	73857 (or)																				
	LW-12328	RING, Piston, oil regulating			1	1	1														
	74241	RING, Piston, compression			2	2	2														
	76036	GASKET, Rocker box cover			1	1	1														
	76038	COVER ASSY., Rocker box			1	1	1														
	76076	VALVE, Exhaust			1	1	1														
	76093	SEAT, Valve spring, lower			1	1	1														
	76266	ROCKER ASSY.			2	2	2														
	LW-13087	VALVE, Intake			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			
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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			
STD-1695	STD-2045	Nut	Product improvement.

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.

LYCOMING

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