

5.1000 FRESH WATER PUMP

PART
FIG . . . NUMBER NAME AND DESCRIPTION

TYPES

FIG	NUMBER	NAME AND DESCRIPTION	1 6 2	1 6 3	1 6 9	1 8 0	1 9 2	1 9 3												
		5.1200 - PULLEY, FRESH WATER PUMP IDLER (CONT'D)																		
18	4414268	BOLT 3/8"-16X1 1/2 (12.9005)				1														
	5139238	PULLEY ASSY., 6V53																		
	5144798	+ CAP, PULLEY END 2-53																		
	5164294	SPACER, 13/32"X7/8"X1/8" 2,3,4-53 (7.1581)	1	1		1														
	5109886	SPACER, 2-53 (ASSY. TO SUPPORT)				2														
	5131123	SPACER, BEARING RETAINING 2-53				1														
	179850	BOLT, 3/8"-16X2 3/4" (12.9001)					2													
	181371	BOLT, 3/8"-24X1 3/4" (12.9001)	1	1		X														
	181377	BOLT, 3/8"-24X1 3/4" (12.9001)	1	1		1														
	186689	BOLT, 1/2"-13X2" (12.9001)				2														
	9409060	BOLT, 1/2"-20X1 1/2" (12.9001)				1														
	103341	WASHER, 3/8" FLAT (12.9190)	AR	AR		AR	AR													
	103321	LOCKWASHER, 3/8" (12.9200)	2	2		2														
	103323	LOCKWASHER, 1/2" (12.9200)				2														
	117049	NUT, 3/8"-24 HEX. (12.9120)	2	2		1X														
		OBsolete																		
	102635	NUT, 3/8"-16 (12.9120)				1														
		5.1201 - ARM, IDLER PULLEY ADJUSTING																		
	5136805	# ARM, ADJUSTING 2-53 # INCLUDES INTEGRAL CAST PULLEY SHAFT.				1														
		5.1202 - BEARING, FRESH WATER PUMP IDLER PULLEY																		
	907394	BEARING, 2,3,4,6,8V53	1	1			1													
	7450630	BEARING, 2-53 (INNER) (5.4110)				1														
	7451080	BEARING, 2-53 (OUTER) (5.4110)				1														
	908140	BEARING, 3,4-53					X													
	5131122	SPACER, BEARING 2-53 (5.4170)				1														
	5131095	BAFFLE, GREASE 2-53 (5.4110)				1														
	5131124	SHIM, .015" (5.4110)				AR														
	5131205	SHIM, .020" (5.4110)				AR														
	5131206	SHIM, .025" (5.4110)				AR														
		5.1205 - BRACKET, FRESH WATER PUMP IDLER PULLEY																		
	5139080	BRACKET, 2,3,4-53 (UPPER)		1																
	5136498	BRACKET, 2,3,4-53 (UPPER)				1														
	5136500	BRACKET, 2,3,4-53 (LOWER)				1														
	5130945	BRACKET, 2,3,4-53 (LOWER)	1	1																
	5130918	BRACKET, 2,3,4-53 (UPPER)	1																	
	5136770	SUPPORT, 3-53				1														

5.1000 FRESH WATER PUMP

PART		NAME AND DESCRIPTION		TYPES									
FIG	NUMBER			1 6 2	1 6 3	1 6 9	1 8 0	1 9 2	1 9 3				
	5.1205	BRACKET, FRESH WATER PUMP IDLER PULLEY (CONT'D)											
179838													
	180124	BOLT, 3/8"-16X7/8" (12.9001)		3	3		3						
	186612	BOLT, 3/8"-16X1 3/8" (12.9001)				3							
	103321	LOCKWASHER, 3/8" (12.9200)		3	3	3	3						
	5.1207	SEAL, IDLER PULLEY SHAFT											
	5108219	SEAL (5.4150)				1							
	5.1215	BELT, FRESH WATER PUMP DRIVE											
		NOTE: REFER TO 7.1000A OR 12.6000D FOR DRIVE BELT UNLESS LISTED BELOW.											
1B	5133178	BELT SET, 2,3,4-53 (2 BELTS) (36.00"LX.380"W.)		1	1								
1B	5135031	BELT SET, 3,4-53 (2 BELTS) (36.00"LX.380"W.)					1						
1B	5137110	BELT SET, 3-53 (2 BELTS) (38.00"LX.380"W.)				1							
1B	5139228	BELT SET, 6,8V53 (2 BELTS) (36.76"LX.380"W.)						1					

PART

.COLUMN

2A 5119282 GASKET, 2,3,4,6V53

[illegible]

5.1000 FRESH WATER PUMP

			C O L U M N													
FIG	PART NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J	K	L	M	N
		5.1032 - GASKET, FRESH WATER PUMP BODY COVER														
2A	5119282	GASKET, 2,3,4,6,8V53	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		5.1050 - SHAFT, FRESH WATER PUMP														
2A	904827	SHAFT ASSY., 2,3,4,6,8V53 (INCLUDES BEARING)	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		5.1110 - IMPELLER, FRESH WATER PUMP														
2A	5146563	IMPELLER, 2,3,4,6V53 (L.H. ROTATION) (WITH CERAMIC INSERT)	1				1	1	1		1					
	5113800	IMPELLER, 6,8V53 (L.H. ROTATION) (WITH CERAMIC INSERT)		1	1											
2A	5146562	IMPELLER, 4,6,8V53 (R.H. ROTATION) (WITH CERAMIC INSERT)				1				1						
2A	5146354	IMPELLER, 3-53 (R.H. ROTATION) (WITH CERAMIC INSERT)											1			
		5.1130 - SEAL, FRESH WATER PUMP														
2A	5130959	SEAL, 2,3,4,6,8V53	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		5.1214 - PULLEY, FRESH WATER PUMP														
2A	5119465	PULLEY, 2,3,4,6,8V53 (SD-166)	1	1	1	1			1	1	1					
2A	5109687	PULLEY, 6V53					1	1								
2A	5144502	PULLEY, 3-53											1			

PART

5.1001 - PUMP ASSY., FRESH WATER

~~IF NOT SERVICED: REFER TO CONVERSION CHART AT BEGINNING OF SECTION FOR REPLACEMENT PUMP AND ITEMS THAT MAY BE REQUIRED TO CONVERT TO NEW PUMP.~~

~~NOT SERVICED: REFER TO CONVERSION CHART AT BEGINNING OF SECTION FOR REPLACEMENT PUMP AND ITEMS THAT MAY BE REQUIRED TO CONVERT TO NEW PUMP.~~

5148436 BOLT, 5/16"-18X3/4" (W/LW) (12.9001)

2A 5119282 GASKET, 2.3.4.6.8V53

908140 SHAFT ASSY. 3,4-53 (INCLUDES BEARING)

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5.2000A WATER OUTLET MANIFOLD AND/OR ELBOW

PART		NAME AND DESCRIPTION	TYPES										
NUMBER			6 7	6 9	7 0	7 2	8 0	8 5	8 6	8 7	9 1	9 3	9 5	9 6
5.2035 - ELBOW, WATER OUTLET													
	5100033	ELBOW, 3,4-53 (DOUBLE OUTLETS)								1			
3A	5128492	ELBOW, 6,8V53 (30 DEG. OFFSET TO LEFT) (L. BANK)						1					
1B,3A	5128493	ELBOW, 6,8V53 (30 DEG. OFFSET TO RIGHT) (R. BANK)						1					
	5116081	ELBOW, 90 DEG. 2,3,4,6,8V53			1				1				
1A	5125649	ELBOW, 90 DEG. 2,3,4-53 (OFFSET)					1						
1A	5125451	ELBOW, 90 DEG. 2,3,4-53					1		1				
1A	5131321	ELBOW, 90 DEG. 2-53											1
1A,3B	5121228	FLANGE, 2-53 (1 3/4" L.)		1									
1A,3B	5119120	FLANGE, 2,3,4-53 (1 3/4" L.)				1							
1A,3B	5130033	FLANGE, 4-53 (1 3/4" L.)										1	1
	5116409	FLANGE, 2,3,4,6,8V53 (2 1/2" L.)	1										
	5115214	PLUG, 1/4" PIPE (12.9550)								1			
	179839	BOLT, 3/8"-16X1" (12.9001)				2	2					2	
	186619	BOLT, 3/8"-16X1 1/8" (12.9001)	2	2	2		2		4	4		2	2
	186679	BOLT, 3/8"-16X1 1/4" (12.9001)											
	179851	BOLT, 3/8"-16X3" (12.9001)								2			
	103321	LOCKWASHER, 3/8" (12.9200)	2	2	2	2	2	2	4	4	2	2	2
5.2037 - GASKET, WATER OUTLET ELBOW													
3A	5122437	GASKET, 4,6,8V53							2	2			
3B	5121257	GASKET, 2-53		1									
	5116092	GASKET, 2,3,4,6,8V53	1		1	1	1	1				1	1
3B	5108214	GASKET, 3,4-53								1			

5.1000 FRESH WATER PUMP

FIG . . . PART
NUMBER . . . NAME AND DESCRIPTION . . .

5.1050 - SHAFT, FRESH WATER PUMP
(CONT'D)

5140933 SHAFT, 8V53

5.1070 - BEARING, FRESH WATER PUMP

954501 BEARING, INNER 8V53

954212 BEARING, OUTER 8V53

5182145 SPACER, BEARING 8V53 (5.1060)

274746 RING, BEARING RETAINING

5178768 WASHER, BEARING RETAINING (5.6140)

5.1110 - IMPELLER, FRESH WATER PUMP

2A 5146562 IMPELLER, 6V53 (WITH CERAMIC
INSERT)2A 5146563 IMPELLER, 8V53 (WITH CERAMIC
INSERT)2A 5146354 IMPELLER, 2,3,4-53 (WITH CERAMIC
INSERT)2A 5113800 IMPELLER, 3,6V53 (WITH CERAMIC
INSERT)5140935 IMPELLER, 8V53 (WITH CERAMIC
INSERT)

5.1130 - SEAL, FRESH WATER PUMP

2A 5130959 SEAL, 2,3,4,6,8V53

5.1214 - PULLEY, FRESH WATER PUMP

2A 5144502 PULLEY, 3-53

2A 5136884 PULLEY, 6V53

2A 5144503 PULLEY, 2,3,4,6V53

5134448 PULLEY, 8V53

5152707 KEY, 1/8"X5/8"

5109886 SPACER, PULLEY (12.6682)

181396 BOLT, 7/16"-20X1 1/8" (12.9001)

COLUMN													
A	B	C	D	E	F	G	H	I	J	K	L	M	N
			1										
			1										
			1										
			1										
			1										
			1										
1													
			1										
		1				1							
	1			1									
			1										
1	1	1	1	1	1								
				1									
1													
	1	1				1							
			1										
			1										
			1										

5.2000B THERMOSTAT

PART
NUMBER NAME AND DESCRIPTION

5.2050 - THERMOSTAT ASSY.

3A,6B 5118264 THERMOSTAT ASSY., 6,8V53
 3041379 (165 DEG. OPENING TEMP.)
 6A,B 3146695 THERMOSTAT ASSY., 2,3,4,6V53
 (170 DEG. OPENING TEMP.)
 6A,B 5143210 THERMOSTAT ASSY., 3,4,6,8V53
 (170 DEG. OPENING TEMP.)
 3A,6A 3156272 THERMOSTAT ASSY., 3-53
 (170 DEG. OPENING TEMP.)
 6A,B 5124872 THERMOSTAT ASSY., 6,8V53 (170 DEG.
 OPENING TEMP. W/BLEED HOLE)

5.2060 - SEAL, THERMOSTAT

6A,B 5134269 SEAL, 3,4,6,8V53
 5132155 SEAL, 6,8V53

5.2090 - HOUSING, THERMOSTAT

1A,B 5123247 HOUSING, 2,3,4,6V53
 1A,6A 5121631 HOUSING, 2-53
 1B,6B 5128340 HOUSING, 6,8V53 (RIGHT BANK)
 1B,6B 5135913 HOUSING, 6V53 (LEFT BANK)
 6A,B 5108952 HOUSING, 3,4,6,8V53
 1A,6A 5128570 HOUSING, 4-53 (SD-221)
 1B,6B 5109630 HOUSING, 6,8V53 (L. BANK)
 1A,6A 5133552 HOUSING, 3-53 (ALUM.)
 5124775 BASE, 6,8V53
 5127997 ADAPTOR, 3,4,6,8V53
 103647 DRAINCOCK, 1/4" (12.9510)
 5145009 PLUG, 1/8" PIPE (12.9550)
 5125237 PLUG, 1/4" PIPE (12.9550)
 5145014 PLUG, 3/8" PIPE (12.9550)
 5136241 PLUG (.580" DIA.) (PLASTIC) (2.2001)
 5145014 PLUG, 3/8" PIPE (12.9550)
 5115214 PLUG, 1/2" PIPE (12.9550)
 5138827 PLUG
 179839 BOLT, 3/8"-16X1" (12.9001)
 186619 BOLT, 3/8"-16X1 1/8" (12.9001)
 186612 BOLT, 3/8"-16X1 3/8" (12.9001)
 179846 BOLT, 3/8"-16X1 7/8" (12.9001)
 108608 BOLT, 3/8"-16X2 1/8" (12.9001)
 191249 BOLT, 3/8"-16X3 3/4" (12.9001)
 9409914 BOLT, 3/8"-16X4 1/2" (AA LOCK)
 103341 WASHER, 3/8" FLAT (12.9190)
 103321 LOCKWASHER, 3/8" (12.9200)

103321 LOCKWASHER 3/8" (12.9200)

TYPES

7 2	7 3	8 6	8 8	9 1	1 0 5	1 2 3	1 2 4	1 2 6	1 3 3	1 3 6	1 5 3
							1	1			1
1	1			1					1		
			2		1	1					
										1	
		2									
		2	2		1			1			1
1									1		
	1										
		1									
			2		1	1					
				1				1			1
										1	
		2									
			2		1	1					
			2		1	1					
2		2					2	2	2	2	
			3								1
2		5	6		3	3	2	2	2	2	1
											2
			6		3	3					
	2	4			5	5					
			10				2	2			2
2				2					2		
		4									
										2	
AR	2	AR	AR	AR	AR	AR	2	2	AR	AR	2
2											

TYPES

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5.2000B THERMOSTAT

PART			TYPES											
FIG	NUMBER	NAME AND DESCRIPTION	7 2	7 3	8 6	8 8	9 1	1 0 5	1 2 3	1 2 4	1 2 6	1 3 3	1 3 6	1 5 3
		5.2092 - ELBOW, THERMOSTAT HOUSING OUTLET												
	5109549	ELBOW, 6,8V53								1	1			
	179846	BOLT, 3/8"-16X1 7/8" (12.9001)								2	2			
	103341	WASHER, 3/8" FLAT (12.9190)								2	2			
	103321	LOCKWASHER, 3/8" (12.9200)								2	2			
	5145012	PLUG, 1/2" PIPE (12.9550)								1	1			
		5.2093 - SEAL, THERMOSTAT HOUSING OUTLET ELBOW												
	5117786	GASKET, 6V53												1
	5116242	GASKET, 4,6,8V53								1	1			
		5.2110 - GASKET, THERMOSTAT HOUSING												
3A,B	5116242	GASKET, 2,3,4,6,8V53 (TO CYLINDER HEAD) (1.2044)	1	1	2		1			1	1	1	1	1
3A	5124997	GASKET, 6,8V53 (TO BASE)			2									
3A,B	5128002	GASKET, 3,4,6,8V53 (HOUSING TO ADAPTOR)				2		1	1					
3A,B	5119208	GASKET, 3,4,6,8V53 (ADAPTOR TO EXHAUST FLANGE) (6.1150)				2		1	1					
		5.2120 - COVER, THERMOSTAT HOUSING												
3A,5A	5125868	COVER, 6,8V53 (1/8" PIPE TAP)			1									
3A,5A	5135466	COVER, 6V53								1				
3A,5A	5135713	COVER, 6V53									1			1
	5119426	FLANGE, 2,3,4,6V53	1									1		
	5134343	FLANGE, 3-53												
	114981	DRAINCOCK, 1/8" (12.9510)			1					1	1			1
	5145014	PLUG, 3/8" PIPE (12.9550)									1			1
	186618	BOLT, 5/16"-18X5/8" (12.9001)	2		2									
	179822	BOLT, 5/16"-18X1 1/2" (12.9001)										2		
	191249	BOLT, 3/8"-16X3/4" (12.9001)								4	4			4
	103341	WASHER, 3/8" FLAT (12.9190)								AR	AR			AR
	103320	LOCKWASHER, 5/16" (12.9200)	AR		AR							AR		AR
	103321	LOCKWASHER, 3/8" (12.9200)								AR	AR			AR
	103320	LOCKWASHER, 5/16" (12.9200)	2											
	5.2122	ELBOW, THERMOSTAT HOUSING COVER OUTLET												
	5109680	TUBE, 6V53 (CROSSOVER)								1	1			1
		5.2124 - HOSE, THERMOSTAT HOUSING COVER OUTLET ELBOW												
	5163824 #	HOSE, 2"X2"L 6,8V53 (5199778)								2	2			
	5124877 #	HOSE, 1 1/8"X1.88"L 6,8V53 (5112425)								1	1			

5.2000B THERMOSTAT

PART
 .FIG . . . NUMBER NAME AND DESCRIPTION

PART		TYPES												
..FIG ..	NUMBER	NAME AND DESCRIPTION	7 2	7 3	8 6	8 8	9 1	1 0 5	1 2 3	1 2 4	1 2 6	1 3 3	1 3 6	1 5 3
	5.2124	- HOSE, THERMOSTAT HOUSING COVER OUTLET ELBOW (CONT'D)												
	5186841	CLAMP, HOSE 2"								4	4			
	5186840	CLAMP, HOSE 1" # NOT SERVICED: USE PART NUMBER IN PARENTHESES AND CUT TO SUIT.								2	2			
	5.2130	- GASKET, THERMOSTAT HOUSING COVER												
3A,B	5128139	GASKET, 2,3,4,6V53	1											
3A	5125024	GASKET, 6,8V53			1									
3A	5133450	GASKET, 6,8V53								1	1			
3B	5128139	GASKET, 3-53										1		
	5.2135	- TUBE, THERMOSTAT HOUSING VENT												
	5120970	# HOSE, #4X8"L. 3,4-53 (5.1003)						1						
		(5129867)												
	118748	CONNECTOR, 1/4" FL. TUBE 1/8" P.T.						1						
		(12.9380)												
	444052	ELBOW, 1/8"-45 DEG. STREET (BRASS)						1						
		(12.9590)												
	5111277	FITTING (1/4"I.D. HOSE X 7/16"-20						1						
		FL. TUBE) (8.1017)												
	5113629	FITTING (1/4"I.D. HOSE X 1/8" P.T.						1						
		(3.1002)												
		# NOT SERVICED: USE PART NUMBER IN PARENTHESES AND CUT TO SUIT.												

5.2000C WATER BY-PASS TUBE

PART			TYPES											
FIG	NUMBER	NAME AND DESCRIPTION	300	318	319	320	321	325	338	342	343	344	345	346
5.2160 - TUBE, WATER BY-PASS														
3A	5133554	TUBE, 3-53	1											
1A	5108944	TUBE, 3-53		1										
6A	5122563	TUBE, 3-53			1									
6A	5109049	TUBE, 4-53				1								
1A	5125168	TUBE, 2-53					1							
1A	5136596	TUBE, 2-53						1						
	5123163	TUBE, 3,4-53							1					
1A	5128699 +	TUBE, 4-53								1				
6A	5138584	TUBE, 4-53									1			
6A	5138760	TUBE, 4-53										1		
1A	5128698 +	TUBE, 4-53											1	
	5136414	TUBE, 4-53												1
1A	5119425	FLANGE, 2,3,4-53 (4.1510)		1	1			1	1					1
3A	5124946	FLANGE, 3-53			1									1
1A	5108953 +	FLANGE, 4-53				1								
5A	5181801	ELBOW, 3/4" PIPE X 1" HOSE (5.2161)			1					1			1	
5A	5122564	ELBOW, 1" HOSE (5.2095)			1				1					
5A	5128262	ELBOW, 1" PIPE X 1 1/4" HOSE				2								
	5144512	CONNECTOR (5.2030)	1											
	5144702	CONNECTOR (4.2165)		1			1	1	1	1			1	
1A	5184301	SEAL RING (4.4060)		1	1			1	1					1
	128003	BUSHING, 1"X3/4" RED. (12.9570)								1			1	
	5142549	PLUG, 3/4" PIPE (12.9550)	1	1	2	2	1	1	1	1	2	2	1	2
3A	186625	BOLT, 5/16"-18X7/8" (12.9001)		2	4			2	2					
5A	106327	BOLT, 5/16"-18X1 3/8" (12.9001)				2								
1A	179822	BOLT, 5/16"-18X1 1/2" (12.9001)					2							
3A	103320	LOCKWASHER, 5/16" (12.9200)		AR	AR	AR	AR	AR	AR					AR
		OBSELETE												2
	103320	LOCKWASHER 5/16" (12.9200)												
5.2165 - HOSE, WATER BY-PASS TUBE														
1A	5119251 #	HOSE, 7/8" I.D.X1.74"L. 2,3,4-53 (5169721)		1			1	1	1					1
1A	5166247 #	HOSE, 1" I.D.X2"L. 4-53 (4.8175) (5118149)								1			1	
6A	5156170 #	HOSE, 1" I.D.X2.50"L. 3,4-53 (5118149) (5.5470)			2			2	1				1	
	5124877 #	HOSE, 1 1/8" I.D.X1.88"L. 3,6V53 (5112425)	2											
6A	5151906 #	HOSE, 1 1/4" I.D.X2.26"L. 4-53 (5120022) (5.3330)				2					2	2		
	5111832	NIPPLE (1" PIPE X 1 1/4" HOSE)									2	2		
1A	5186840	CLAMP, 1" DIA. HOSE (12.9660)	4	2	4		2	2	4	4			4	2
6A	2337379	CLAMP, 1 1/4" DIA. HOSE (12.9660)				4					4	4		
	5144702	CONNECTOR, 3/4" PIPE -88 HOSE												1
	5142549	PLUG, 3/4"-14 PIPE (12.9550)												1
# NOT SERVICED; USE PART NUMBER IN PARENTHESES AND CUT TO SUIT.														

5.3000B WATER CONNECTIONS

PART		NAME AND DESCRIPTION	TYPES										
FIG	NUMBER		2 6 0	2 6 1	2 6 3	2 6 5	2 6 6	2 7 0	2 7 5	2 7 8	2 7 9	2 8 8	3 0 8	3 1 4
5.3270 - CONNECTION, RADIATOR INLET													
	5139873	TUBE, 6V53								1			
	5139909	TUBE, 6V53								1			
5.3290 - HOSE, RADIATOR INLET													
	5116083	# HOSE (1 3/4" I.D.X4 7/8") 2-53 (5199776)					1						
	5170738	# HOSE (1 3/4" I.D.X3.21") 6V53 (5199776)								4			
		# NOT SERVICED, USE PART NUMBER IN PARENTHESES AND CUT TO SUIT.											
5.3295 - HOSE, HEAT EXCHANGER FRESH WATER INLET													
6B	5136327	TUBE, 6,8V53 (1 3/4" O.D.X7.66"L)			1	1		1				1	
6B	5137327	TUBE, 6,8V53 (1 3/4" O.D.X8.40"L)			1	1		1				1	
6B	3222709	# HOSE (1 3/4" I.D.X2 3/4"L) 6,8V53 (5199776)			4	4		4				4	
		# NOT SERVICED, USE PART NUMBER IN PARENTHESES AND CUT TO SUIT.											
5.3300 - CLAMP, RADIATOR INLET HOSE													
6B	5186841	CLAMP, 1 9/16"-2 1/2" DIA. HOSE (12.9660)			8	8		8		8		8	
	111622	CLAMP, 2 1/8" HOSE					2						
5.3310 - CONNECTION, RADIATOR OUTLET													
	5125238	+ ELBOW, 2-53						1					
	103647	DRAINCOCK, 1/4" (12.9510) + OBSOLETE.						1					
5.3312 - CONNECTION, HEAT EXCHANGER FRESH WATER OUTLET													
6B	5138742	CONNECTOR, 4-53	1	1									
6B	5135396	ELBOW, 6V53			1	1							
6B	5136727	ELBOW, 6V53						1					
	179828	BOLT, 5/16"-18X2 1/2" (12.9001)											
	179839	BOLT, 3/8"-16X1" (12.9001)											
	186277	BOLT, 3/8"-16X2 3/8" (12.9001)	2	2								2	2
	427588	BOLT, 3/8"-16X2 1/2" (12.9001)			2	2		2					

5.3000B WATER CONNECTIONS

PART			TYPES											
FIG	NUMBER	NAME AND DESCRIPTION	2 6 0	2 6 1	2 6 3	2 6 5	2 6 6	2 7 0	2 7 5	2 7 8	2 7 9	2 8 8	3 0 8	3 1 4
		5.3312 - CONNECTION, HEAT EXCHANGER FRESH WATER OUTLET (CONT'D)												
	103320	LOCKWASHER, 5/16" (12.9200)											AR	AR
	103321	LOCKWASHER, 3/8" (12.9200)	2	2	2	2			2					
		5.3314 - CONNECTION, HEAT EXCHANGER FRESH WATER INLET												
5A	5135138	CONNECTOR, 6V53			2	2			2				2	
	5136864	CONNECTOR, 6V53												
	5138741	ELBOW, 4-53	1											
	5138567	ELBOW, 4-53		1										
	186619	BOLT, 3/8"-16X1 1/8" (12.9001)	4	4	4	4			4					
	103321	LOCKWASHER, 3/8" (12.9200)	4	4	4	4			4					
		5.3323 - GASKET, HEAT EXCHANGER FRESH WATER INLET CONNECTION												
	5123660	GASKET, 4,6V53 (4.1300)	2	2		2			2				2	2
	5146137	GASKET, 4,6,8V53 (4.1300)			1									
		5.3325 - GASKET, HEAT EXCHANGER FRESH WATER OUTLET CONNECTION												
6B	5134679	GASKET, 4,6,8V53	1	1	1	1			1				1	1
		5.3330 - HOSE, RADIATOR OUTLET												
	5140551	HOSE (1 3/4" I.D.X2"L) 4,8V53 (5.2165)	1	1										
	5110373	HOSE (2" I.D.X3"L) 6V53									2			
	5139881	TUBE, 6V53									1			
		5.3333 - COVER, HEAT EXCHANGER TANK OUTLET												
	5145290	COVER, 6,8V53												2
	186624	BOLT, 5/16"-18X1 1/4" (12.9001)												4
	103320	LOCKWASHER, 5/16" (12.9200)												AR
		5.3334 - HOSE, HEAT EXCHANGER TO FRESH WATER PUMP												
6A	5141193	HOSE (2" I.D.X2 1/2"L) 4-53 (5.2165)	2	2										
6A,B	5127299	HOSE (2 1/4" I.D.X2.24"L) 6V53			1				1				1	1
	5163824	HOSE (2 1/2" I.D.X2"L) 3,6V53				1		2			1			

5.3000B WATER CONNECTIONS

PART		TYPES												
FIG.	NUMBER	NAME AND DESCRIPTION	2 6 0	2 6 1	2 6 3	2 6 5	2 6 6	2 7 0	2 7 5	2 7 8	2 7 9	2 8 8	3 0 8	3 1 4
	5.3334	HOSE, HEAT EXCHANGER TO FRESH WATER PUMP (CONT'D)												
		(5.3330)												
5138775		TUBE, 4-53 (DEV. L. 44.50")		1										
5138860		TUBE, 4-53 (DEV. L. 44.50")	1											
5185418		BRACKET, 4-53 (7.7380)	1	1										
5110881		CLIP (5.2190)	1	1										
103647		DRAINCOCK, 1/4" (12.9510)	1	1										
179816		BOLT, 5/16"-18X3/4" (12.9001)	1	1										
103340		WASHER, 5/16" FLAT (12.9190)	1	1										
103320		LOCKWASHER, 5/16" (12.9200)	1	1										
123197		NUT, 5/16"-18 HEX. (12.9120)	1	1										
	5.3335	ELBOW, WATER PUMP INLET												
5142283		ELBOW, 8V53										1		
5142281		ELBOW, 8V53										1		
5123708		HOSE, 2 3/4"X2.26" 8V53										1		
5188036		CLAMP, 2 9/16"-3 1/2" HOSE (12.9660)										2		
186679		BOLT, 3/8"-16X1 1/4" (12.9001)										4		
103340		WASHER, 5/16" FLAT (12.9190)										6		
103341		WASHER, 3/8" FLAT (12.9190)										4		
103320		LOCKWASHER, 5/16" (12.9200)										6		
103321		LOCKWASHER, 3/8" (12.9200)										4		
114493		NUT, 5/16"-24 HEX. (12.9120)										6		
	5.3337	GASKET, WATER PUMP INLET AND OUTLET ELBOW												
5176286		GASKET, 8V53										1		
5176676		GASKET, 8V53 (BETWEEN INLET ELBOWS)										1		
	5.3340	CLAMP, RADIATOR OUTLET HOSE												
5186841		CLAMP, 1 9/16"-2 1/2" DIA. HOSE (12.9660) * FIG. 4A OF 4.0000.	4	4										
	5.3341	CLAMP, HEAT EXCHANGER TO WATER PUMP HOSE												
5186841		CLAMP, 1 9/16"-2 1/2" DIA. HOSE (12.9660)	2	2		2					6			
111625		CLAMP, 2 3/8" DIA. HOSE (12.9660)						4						
9139809		CLAMP, 2 1/2" DIA. HOSE (12.9660)			2			2					2	2

5.3000B WATER CONNECTIONS

PART		TYPES												
FIG	NUMBER	NAME AND DESCRIPTION	2 6 0	2 6 1	2 6 3	2 6 5	2 6 6	2 7 0	2 7 5	2 7 8	2 7 9	2 8 8	3 0 8	3 1 4
		5.3365 - HOSE, OIL COOLER WATER INLET CONNECTION												
	5131375	HOSE, #6X28" L. 8V53 (2.5210)											1	
	5139289	HOSE, #6X30" L. 8V53 (2.5001)											1	
	5171509	CLIP, 5/8" HOSE (9.1591)											1	
	9409943	TEE, 1/8" PIPE											1	
	444134	TEE, 1/4" PIPE (12.9490)											1	
	442322	CONNECTOR, 5/16" TUBE (12.9460)											1	
	9432266	CONNECTOR, 3/8" TUBE (12.9460)											1	
	442323	CONNECTOR, 3/8" INV. FL. TUBE (12.9460)											1	
	112877	BUSHING, 1/4"X1/8" RED. (12.9570)											2	
	189060	BUSHING, 1/4"X1/8" RED. (12.9570)											1	
	144050	BUSHING, 1/2"X1/8" RED. (12.9570)											1	
	225815	ELBOW, 90 DEG. (12.9480)											1	
	114981	DRAINCOCK, 1/8" (12.9510)											1	
	103647	DRAINCOCK, 1/4" PIPE (12.9510)											1	
		* NOT SERVICED; USE 5199575 HOSE PLUS (2) EACH OF 5199583 FITTINGS AND 2488022 CLIPS.												
		5.3420 - ELBOW, OIL COOLER WATER OUTLET												
1A	5126637	+ ELBOW, 4-53	1	1										
5B	5135679	ELBOW, 6V53			1	1								
5B	5135565	# ELBOW, 6V53					1				1		1	1
1A	5138275	ELBOW, 2,3,4-53						1		1				
5B	5143194	ELBOW, 8V53										1		
	5176933	STUD, 5/16"-18-24X1.44" (12.9117)										2		
	5145014	PLUG, 3/8" PIPE (12.9550)	1	1										
	179819	BOLT, 5/16"-18X1 1/8" (12.9001)	2	2	2	2	2	2	2	2	2		2	2
	103320	LOCKWASHER, 5/16" (12.9200)	2	2	2	2	2	2	2	2	2	2	2	2
	114493	NUT, 5/16"-24 HEX. (12.9120)										2		
		+ OBSOLETE.												
		# NOT SERVICED; USE 5135679 PLUS (1) 103870 PLUG.												
		5.3421 - GASKET, OIL COOLER WATER OUTLET ELBOW												
	5116357	GASKET, 2,3,4,6V53 (1.1070)	1	1	1	1	1	1	1	1	1		1	1
	5132474	GASKET, 8V53										1		
		5.3422 - HOSE, OIL COOLER WATER OUTLET ELBOW												
5B	5173020	HOSE (1 7/8" I.D.X2"L.) 6V53 (5.5680)				1								
	5116093	# HOSE (1 7/8" I.D.X4 3/4"L.) 2,3,4-53 (5199777)	1	1				1		1				

5.3000B WATER CONNECTIONS

PART		TYPES												
.FIG	NUMBER	NAME AND DESCRIPTION	2 6 0	2 6 1	2 6 3	2 6 5	2 6 6	2 7 0	2 7 5	2 7 8	2 7 9	2 8 8	3 0 8	3 1 4
		5.3422 - HOSE, OIL COOLER WATER OUTLET ELBOW (CONT'D)												
		(5199777)												
5B	5163824 #	HOSE (2" I.D.X2"L) 6V53 (5.3330)			1	1	1						1	1
		(5199778)												
	5177273 #	HOSE (2 1/2" I.D.X2 1/4"L) 8V53										2		
		(5199781)												
	5142413	TUBE, 8V53 2 1/2" O.D.X7.88"L										1		
	111625	CLAMP, 2 3/8" DIA. HOSE (12.9660)						2						
5B	5186841	CLAMP, 2 1/2" DIA. HOSE (12.9660)	2	2	2	2	2			2			2	2
5B	5188036	CLAMP, 2 9/16"-3 1/2" DIA. HOSE										4		
		(12.9660)												
		# NOT SERVICED; USE PART NUMBER IN PARENTHESES AND CUT TO SUIT.												
		5.3430 - CONNECTOR, EXHAUST MANIFOLD FRESH WATER INLET												
	5130450	ELBOW, 4,6,8V53 (LEFT BANK)		1	1	1	1		1				1	1
5B	5130451	ELBOW, 4,6,8V53 (RIGHT BANK)	1		1	1	1		1				1	1
	5121182	PLUG, 1/4" PIPE (12.9550)	2	2		2			2				2	2
	5145014	PLUG, 3/8" PIPE (12.9550)	1	1	2	2	2		2					
	186679	BOLT, 3/8"-16X1 1/4" (12.9001)	2	2										
	186628	BOLT, 3/8"-16X1 1/2" (12.9001)			4	4	4		4				4	4
	103321	LOCKWASHER, 3/8" (12.9200)	AR	AR	AR	AR	AR		AR				AR	AR
		5.3431 - GASKET, EXHAUST MANIFOLD FRESH WATER INLET CONNECTION												
	5116242	GASKET, 4,6,8V53 (1.2044)	1	1	2	2	2		2				2	2
		5.3432 - HOSE, EXHAUST MANIFOLD FRESH WATER INLET												
5A,B	5140551	HOSE (1 3/4" I.D.X2"L) 4,6,8V53	1	1		2	2		2				2	2
		(5.2165)												
	3222709 #	HOSE (1 3/4" I.D.X2 3/4"L) 6,8V53			4									
		(5.3330) (5199776)												
		# NOT SERVICED; USE PART NUMBER IN PARENTHESES AND CUT TO SUIT.												
		5.3434 - CLAMP, EXHAUST MANIFOLD FRESH WATER INLET HOSE												
7A	5186841	CLAMP, 1 9/16"-2 1/2" DIA. HOSE	2	2	4	4	4		4				4	4
		(12.9660)												

5.3000B WATER CONNECTIONS

PART		NAME AND DESCRIPTION	TYPES											
.FIG	NUMBER		2 6 0	2 6 1	2 6 3	2 6 5	2 6 8	2 7 0	2 7 5	2 7 8	2 7 9	2 8 8	3 0 8	3 1 4
5.3465 - VENT. EXHAUST MANIFOLD WATER OUTLET FLANGE														
5B	5136635	@ TUBE ASSY., 6V53 (DEV. L. 15.26")			1	1	1		1					
5B	5134169	# TUBE ASSY., 6V53 (DEV. L. 15.40")			1	1	1		1					
	5129867	HOSE (1/4" I.D. X 8" L.) 4-53 (5.1003)	1	1										
5B	5131604	HOSE ASSY., 6,8V53 (DEV. L. 15.65")										2	2	
	5113629	FITTING (1/4" HOSE X 1/8" PIPE) (3.1002)	1	1										
	5111277	FITTING (1/4" HOSE X 1/4" TUBE SWIVEL) (8.1017)	1	1										
	116453	ELBOW, 1/4" FL. TUBE X 1/4" P.T. 90 DEG. (12.9390)	1	1										
	118753	ELBOW, 1/4" FL. TUBE X 1/8" P.T. 90 DEG. (12.9390)										2	2	
	116524	BUSHING, 1/2" X 1/4" RED. PIPE (12.9570)	1	1										
		@ NOT SERVICED; USE 5131604 HOSE ASSY. AND (2) 118753 ELBOWS.												
		# NOT SERVICED; USE 5131604 HOSE ASSY. AND (2) 118748 CONNECTOR.												
5.3480 - TUBE, CYLINDER HEAD VENT														
	5136658	& TUBE ASSY., 6V53 (DEV. L. 6.22") (5.3465)			1	1	1		1					
	5136659	& TUBE ASSY., 6V53 (DEV. L. 7.34") (5.3465)			1	1	1		1					
	5137938	HOSE ASSY. (DEV. L. 8") 6,8V53										2	2	
	9409946	TEE, 1/8" INV. FL. TUBE										2	2	
	178685	TEE, 1/4" INV. FL. TUBE (12.9490)			2	2	2		2					
	118748	CONNECTOR, 1/8" INV. FL. TUBE (12.9460)										2	2	
	442321	CONNECTOR, 1/4" INV. FL. TUBE (12.9460)			2	2	2		2					
		& NOT SERVICED; USE 5137938 PLUS (1) 9409946 TEE AND (1) 118748 CONNECTOR.												

5.4025 - SUPPORT, FAN MOUNTING (CONT'D)

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5109640 SUPPORT .....
5136366 * SUPPORT .....
5164294 SPACER, 13/32 X7/8 X1/8 (7.1581) .....
186619 BOLT, 3/8"-16X1 1/8" (12.9001) .....
179850 BOLT, 3/8"-16X2 3/4" (12.9001) .....
186282 BOLT, 3/8"-16X3 1/4" (12.9001) .....
9409914 BOLT, 3/8"-16X4 1/4" (12.9001) .....
450517 BOLT, 3/8"-16X4 3/4" (12.9001) .....
427567 BOLT, 7/16"-14X1 3/4" (12.9001) .....
179871 BOLT, 7/16"-14X3 1/4" (12.9001) .....
103321 LOCKWASHER, 3/8" (12.9200) .....
103322 LOCKWASHER, 7/16" (12.9200) .....
* NOT SERVICED; USE 5141945 PLUS (2)
179850 AND (2)-179864 BOLTS.
@OBSOLETE

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5.4090 - BRACKET, FAN SHAFT

5164294	SPACER, 13/32 X7/8 X1/8 (7.1581)	3A
9409079	BOLT, 3/8"-16X7/8" LOCK (12.9001)	
186612	BOLT, 3/8"-16X1 3/8" (12.9001)	3
103321	LOCKWASHER, 3/8" (12.9200)	AS
103321	LOCKWASHER 3/8" (12.9200)	3

5.4100 - SHAFT, FAN

FOR SHAFT SEE PULLEY AND HUB ASSY.
BREAKDOWN.

427564 BOLT, 7/16"-14X1 3/8" (12.9001)
5108436 WASHER, 15/32 FLAT (7.1598)
103322 LOCKWASHER, 7/16" (12.9200)

5.4180 - CAP & SPACER, FAN HUB

5109034 # CAP & SPACER ASSY. (INCLUDES CAP)
5131536 CAP & SPACER ASSY. (INCLUDES CAP)
5111071 * CAP & SPACER ASSY. (INCLUDES CAP)
5172852 CAP (SPACER)
5125021 CAP (SPACER)
 # NOT SERVICED, USE (2) 5103676
 SPACER AND 5103460 CAP.
 * NOT SERVICED, USE (3) 5103676
 SPACER AND 5103460 CAP.

. TYPES

TYPES											
6 3 7	6 4 1	6 4 2	6 4 4	6 4 5	6 4 6	6 4 8	6 5 2	6 5 6	6 5 9	6 6 0	6 6 6
1		1	1			1		1	1	1	
	1			1			1			1	
4			4	6	1		6	4		4	
	6	6			6				6		
4	6	6	4	6	6	4 4	6	4	6	4	
1	1	1	1	1	1	1	1	1	1	1	
1	1	1	2			1		1		1	

NPN BLADE (CUSTOMER FURNISHED)

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4A      5126868  SUPPORT .....
4C      5133272 @ SUPPORT .....
1A      5126218  SUPPORT .....

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[illegible]

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[illegible]

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PART

FIG . . . NUMBER NAME AND DESCRIPTION

5131207	* PULLEY ASSY.
5131208	* PULLEY ASSY.
5131209	* PULLEY ASSY.
5131210	* PULLEY ASSY.
5131211	* PULLEY ASSY.
5132421	PULLEY ASSY.
5162786	* PULLEY ASSY.
5138886	PULLEY ASSY.
5139641	* PULLEY ASSY.

4C	7451080	BEARING (FRONT)
4C	7450630	BEARING (REAR)
4C	7451373	* BEARING (REAR)
4C	7451077	* BEARING (FRONT)
	5131095	SHIM (.015")
	5133467	* SHIM (.005")
	5133488	* SHIM (.010")

[illegible]

[illegible]

4C	5130029	@ PULLEY (4.90" DIA.) (2 GROOVES)	
4C	5127042	* PULLEY (5.38" DIA.) (2 GROOVES)	
4C	5136620	PULLEY (5.38" DIA.) (2 GROOVES)	
4C	5109639	@ PULLEY (5.68" DIA.) (2 GROOVES)	
4C	5100208	= PULLEY (6.25" DIA.) (2 GROOVES)	
4C	5100209	# PULLEY (7.50" DIA.) (2 GROOVES)	
4C	5108233	PULLEY (HUB) (7.50" DIA.) (3 GROOVES)	
4C	5139738	@ PULLEY (6.25" DIA.) (POLY.V GROOVES)	

[illegible]

6.1000A EXHAUST MANIFOLD

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6.1000A EXHAUST MANIFOLD

PART		TYPES										
FIG	NUMBER	NAME AND DESCRIPTION	1	1	1	1	1	1	1	1	2	
			4	1	4	6	6	7	8	8	9	
			1	2	2	2	6	6	8	9	0	
6.1001 - MANIFOLD, EXHAUST												
	5125411	* MANIFOLD, 3-53 (5198866)		1				1				
	5129641	* MANIFOLD, 3-53 (5146215)										
	5109455	@ MANIFOLD, 3,6V53 (L. BANK) (5198866)								1	1	
1B	5124378	# MANIFOLD, 4-53 (5130240)	1									
	5125431	# MANIFOLD, 4-53 (5100146)			1							
	5126626	# MANIFOLD, 4-53 (5130304)				1						
1B	5100146	MANIFOLD, 4-53						1				
1B	5109094	MANIFOLD, 4-53 (SD-202)							1			
	5125411	@ MANIFOLD, 3,6V53 (R. BANK) (5198866)									1	1
1C	5128014	MANIFOLD, 3,6V53				2						1
1B	113175	PLUG, 1/8" PIPE SQ. HD. BR. (12.9550)	1	1	1		1	1	1	1	1	1
	106973	BOLT, 5/16"-18X1/2" (12.9001)						1				
1A,C	5188273	WASHER (DISHED, 1 1/4" O.D.) (6.1001)	5	4	5	8	5	4	5	5	4	8 8
1A,C	114544	NUT, 7/16"-20 HEX. BR. (12.9120)	5	4	5	8	5	4	5	5	4	8 8
* NOT SERVICED; USE PART NUMBER SHOWN IN PARENTHESES PLUS EXHAUST FLANGE TYPE 234.												
@ NOT SERVICED; USE PART NUMBER SHOWN IN PARENTHESES AND INCLUDE (1) 5121098 COVER, (1) 5113412 GASKET, (2) 186618 BOLTS, (2) 103320 LOCKWASHERS, (1) 113175 PLUG.												
# NOT SERVICED; USE PART NUMBER SHOWN IN PARENTHESES PLUS EXHAUST FLANGE TYPE 243.												
6.1010 - GASKET, EXHAUST MANIFOLD												
1A,C	5119006	GASKET, 4,8V53	1		1		1		1	1		
1A,C	5116205	GASKET, 3,6V53		1		2		1			1	2 2
6.1020 - STUD, EXHAUST MANIFOLD TO HEAD												
1A,C	5112899	STUD, 3/16"X2 3/32" L.	5	4	5	8	5	4	5	5	4	8 8

6.2000A EXHAUST MUFFLER AND/OR CONNECTIONS

PART		TYPES												
.FIG	NUMBER	NAME AND DESCRIPTION	1 8 7	1 8 8	1 9 0	1 9 4	2 0 2	2 0 7	2 1 3	2 1 4	2 1 9	2 2 1	2 2 2	2 2 5
	6.2090	PIPE, EXHAUST (CONT'D)												
		* LENGTH DETERMINED BY INSTALLATION.												
	6.2091	SUPPORT, EXHAUST PIPE												
	5108559	SUPPORT (BRACKET).....											2	1
	5108455	BRACKET (SMALL).....											1	1
	5108456	BRACKET (LARGE).....											2	2
	5179976	SPRING (7.1612).....											4	5
	103340	WASHER, 5/16" FLAT (12.9190).....												
	6.2095	CONNECTION, FLEXIBLE EXHAUST												
3A	5128451	CONNECTION (MANIFOLD TO MUFFLER) ..						1						
		(ITEM 23)												
3A	5128452	CONNECTION (ASPIRATOR TO MUFFLER) ..						1						
		(ITEM 23)												
	5128273	NIPPLE (2 1/2" DIA. X 7" L).....						1						
	5128450	CLAMP (ASPIRATOR HOSE).....						2						
	5124113	CLAMP (2 1/4") (3.1003).....						2						
	6.2105	GASKET, EXHAUST OUTLET												
3A	3221863	GASKET (3 1/4" DIA. OPENING)				1								
		(ITEM 27)												
1D	5119208	GASKET (6.1150).....	2				1							
3A	5100147	GASKET											1	
	6.2115	STUD, EXHAUST OUTLET												
	103197	STUD, 3/8"-16-24X1 13/16" (12.9117) ..											4	

6.2000A EXHAUST MUFFLER AND/OR CONNECTIONS

PART			TYPES											
FIG	NUMBER	NAME AND DESCRIPTION	2 2 6	2 2 7	2 3 0	2 3 2	2 3 4	2 3 5	2 4 1	2 4 3	2 4 4	2 5 3	2 5 4	2 5 5
6.2085 - FLANGE, EXHAUST														
	NPN	FLANGE (CUSTOMER FURNISHED)						1			1			
3A	5108351	FLANGE (3 1/2" P.T.)				1								
3A	5108632	FLANGE (3" P.T.) (ITEM 10)					1							
3A	5109033	FLANGE (3 1/2" PLAIN HOLE)						1						
3A	5108467	FLANGE (3" P.T.)								1				
3A	5100145	ELBOW		1	1									
3A	5125592	ELBOW									1		1	
1B	2387401	CLAMP ASSY. (MARMAN FLANGE, 4.50" DIA.)	2	1	1									
	179859	BOLT, 7/16"-14X1 1/8" (12.9001)									4			
	179859	BOLT, 7/16"-14X1 1/8" (12.9001)											AR	
	103321	LOCKWASHER, 3/8" (12.9200)		AR	AR	AR	AR	AR	AR	AR			AR	
	103322	LOCKWASHER, 7/16" (12.9200)									AR		AR	
	114547	NUT, 3/8"-24 HEX. BR. (12.9120)		4	4	8	4	4	4	4				
		FOR A THREE USE A QUANTITY OF 4 AND A QUANTITY OF 8 FOR A SIX.												
	103321	LOCKWASHER, 3/8" (12.9200)								4				
6.2090 - PIPE, EXHAUST														
	5108831	PIPE (1 1/2" L X 4.22" FLANGE DIA.)	2											
6.2105 - GASKET, EXHAUST OUTLET														
3A	5100147	GASKET		1	1									
3A	5145238	GASKET				2		1	1	1				1
3A	5108377	GASKET					1					1		
3A	3221863	GASKET (ITEM 27)									1			
3A	3221863	GASKET (ITEM 27)											AR	
		USE A QUANTITY OF 1 FOR A THREE AND 2 FOR A SIX.												
6.2115 - STUD, EXHAUST OUTLET														
	103197	STUD 3/8"-16-24X1 13/16" (12.9117)		4										
	103196	STUD 3/8"-16-24X1 9/16" (12.9117)			4									
	5109167	STUD 3/8"-16-24X1.76"							4					
	5109158	STUD 3/8"-16-24X1 1/2"				8	4	4		4				

GROUP NOMENCLATURE

1.0000

ENGINE (less major assemblies)

- 1.1000 Cylinder Block
- 1.1000A Air Box Drains
- 1.2000 Cylinder Head
- 1.2000A Engine Lifter Bracket
- 1.3000 Crankshaft, Oil Seals and stabilizers
- 1.3000A Crankshaft Front Cover
- 1.3000B Vibration Damper
- 1.3000C Crankshaft Pulley
- 1.3000D Crankshaft Pulley Belt
- 1.4000A Flywheel
- 1.5000A Flywheel Housing
- 1.5000B Flywheel Housing Adaptor
- 1.6000 Connecting Rod and Piston
- 1.7000 Camshaft and Gear Train
- 1.7000A Balance Weight Cover
- 1.7000B Accessory Drive
- 1.8000 Valve and Injector Operating Mechanism
- 1.8000A Rocker Cover

2.0000

FUEL SYSTEM

- 2.1000A Fuel Injector
- 2.2000 Fuel Pump
- 2.2000A Fuel Pump Drain
- 2.3000A Fuel Filter
- 2.4000 Fuel Manifold and/or Connections
- 2.4000A Dual Fuel System
- 2.5000A Fuel Lines and Fuel Cooler
- 2.6000A Fuel Tank
- 2.7000A Mechanical Governor
- 2.8000A Hydraulic Governor
- 2.9000 Injector Controls
- 2.9000A Throttle Controls

3.0000

AIR SYSTEM

- 3.1000A Air Cleaner and/or Adaptor
- 3.2000A Air Silencer
- 3.3000A Air Inlet Housing
- 3.4000 Blower
- 3.4000A Blower Drive Shaft
- 3.4000B Blower End Plate Cover
- 3.5000A Turbocharger and Intercooler

4.0000

LUBRICATING SYSTEM

- 4.1000A Oil Pump
- 4.1000B Oil Distribution System
- 4.1000C Oil Pressure Regulator
- 4.2000A Oil Filter
- 4.3000A Oil Filter Lines
- 4.4000A Oil Cooler and Marine Gear Lines
- 4.5000A Oil Filler
- 4.6000A Dipstick
- 4.7000A Oil Pan
- 4.8000A Ventilating System

5.0000

COOLING SYSTEM

- 5.1000 Fresh Water Pump
- 5.1000A Fresh Water Pump Cover
- 5.2000A Water Outlet Manifold and/or Elbow
- 5.2000B Thermostat
- 5.2000C Water By-pass Tube
- 5.3000A Radiator
- 5.3000B Water Connections
- 5.4000A Fan
- 5.4000B Fan Shroud
- 5.5000A Heat Exchanger or Keel Cooling
- 5.6000A Raw Water Pump
- 5.7000A Water Filter

6.0000

EXHAUST SYSTEM

- 6.1000A Exhaust Manifold
- 6.2000A Exhaust Muffler and/or Connections

7.0000

ELECTRICAL—INSTRUMENTS

- 7.1000A Battery Charging Generator
- 7.2000A Battery Cables
- 7.2000B Automatic Starting
- 7.3000A Starting Motor
- 7.4000A Instruments
- 7.4000B Tachometer Drive
- 7.4000C Shut-off, Alarm and O.S. Governor
- 7.5000A Power Generator
- 7.6000A Control Cabinet
- 7.7000A Wiring Harness
- 7.8000A Air Heater
- 7.10000A Hydraulic Governor Solenoid

8.0000

POWER TAKE-OFF

- 8.1000A Power Take-off and/or Clutch
- 8.3000A Torque Converter
- 8.3000B Transmission Lines

9.0000

TRANSMISSION AND PROPULSION

- 9.1000A Hydraulic Marine Gear
- 9.2000A Reverse and Reduction Gear (mechanical)
- 9.3000A Power Transfer Gear
- 9.4000 Transmission—Highway
- 9.7000 Transmission—Off-highway
- 9.9000 Transmission—Rail Car

10.0000

SHEET METAL

- 10.1000A Engine Hood

11.0000

ENGINE MOUNTING

- 11.1000A Engine Mounting and Base

12.0000

MISCELLANEOUS

- 12.2000A Bilge Pump
- 12.3000A Vacuum Pump
- 12.4000A Air Compressor
- 12.5000A Hydraulic Pump
- 12.6000A Gasoline Starter
- 12.6000B Air Starter
- 12.6000C Cold Weather Starting Aid
- 12.6000D Hydraulic Starter
- 12.6000E Hydraulic Starter Accessories
- 12.8000A Supplies
- 12.8000B Fabrication Material
- 12.8000C Service Kits

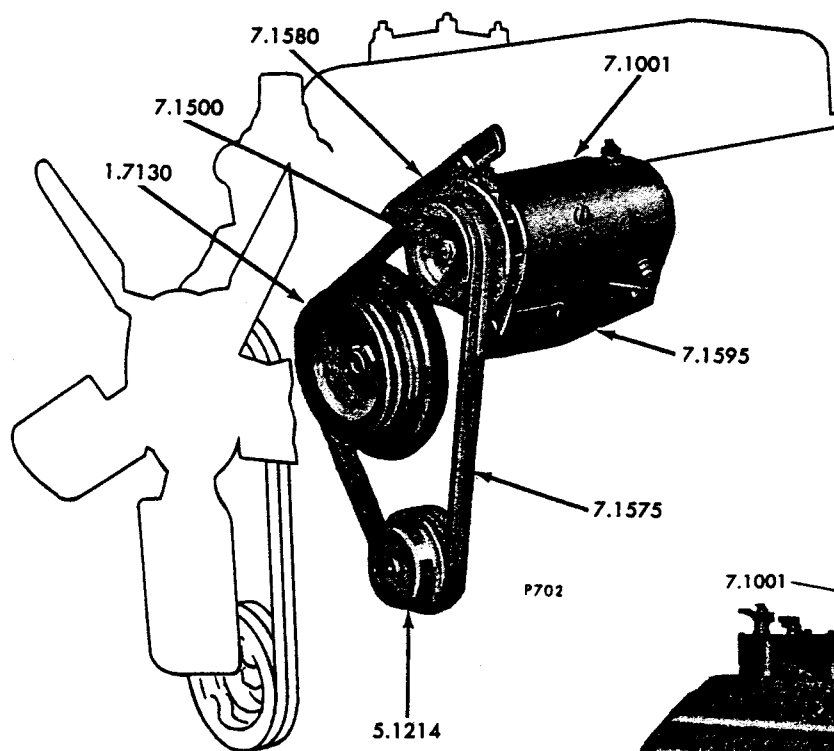


FIG. 1A

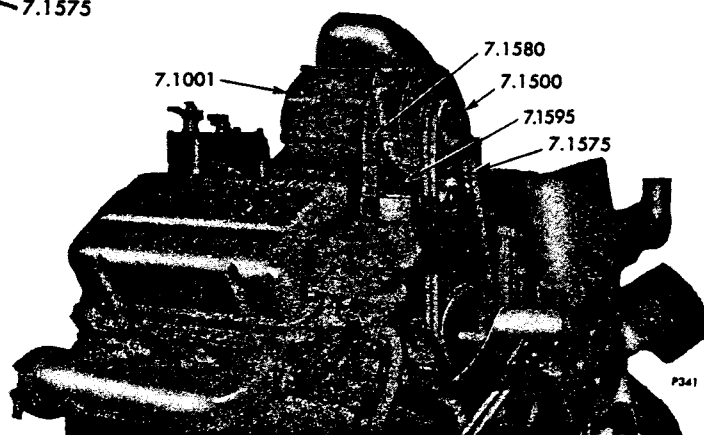


FIG. 1B

BATTERY CHARGING GENERATOR

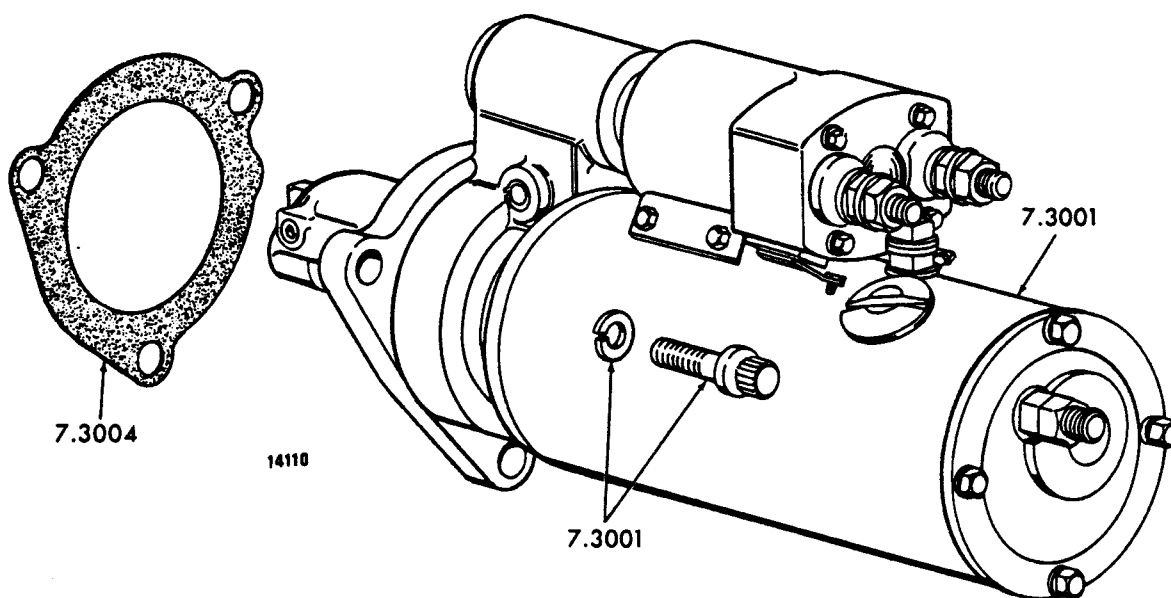


FIG. 3A STARTING MOTOR

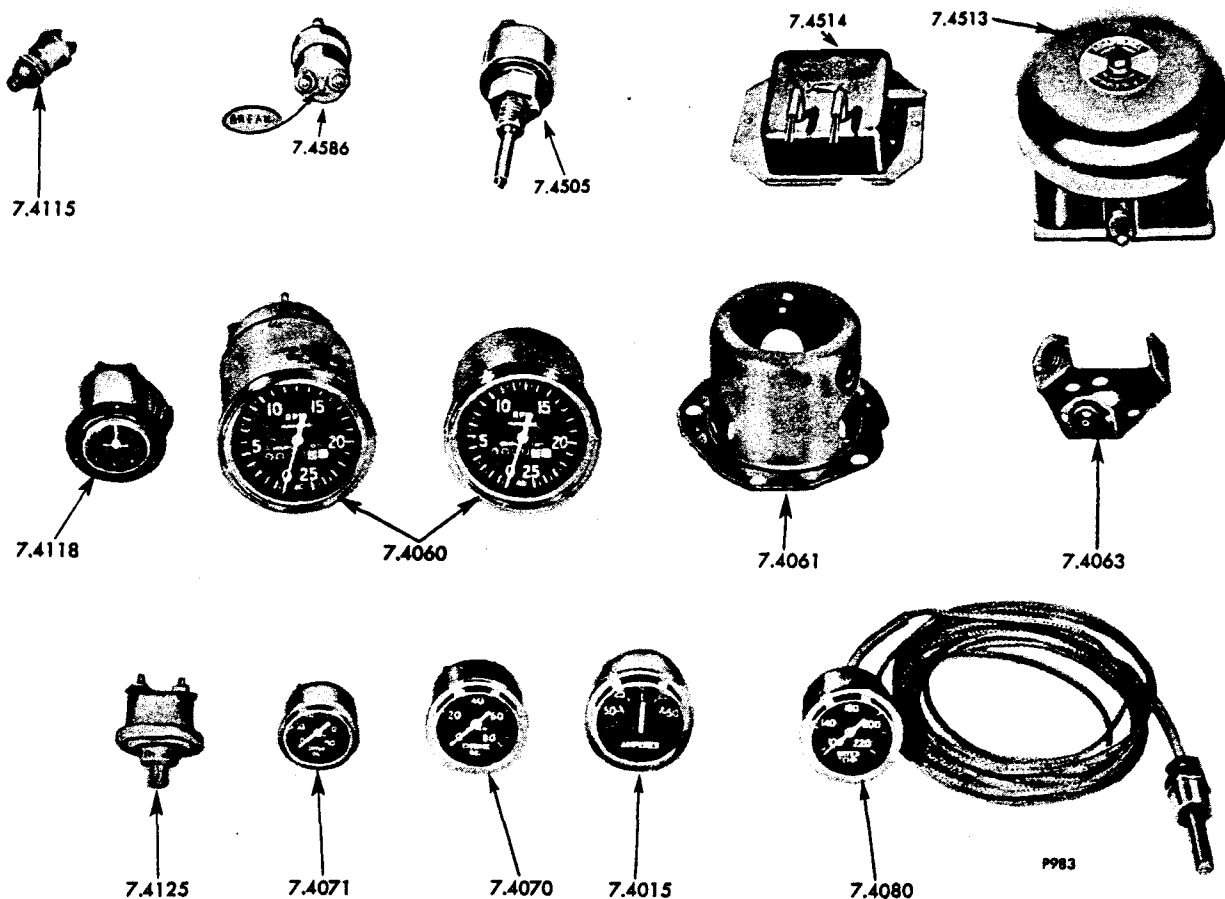


FIG. 4A INSTRUMENTS

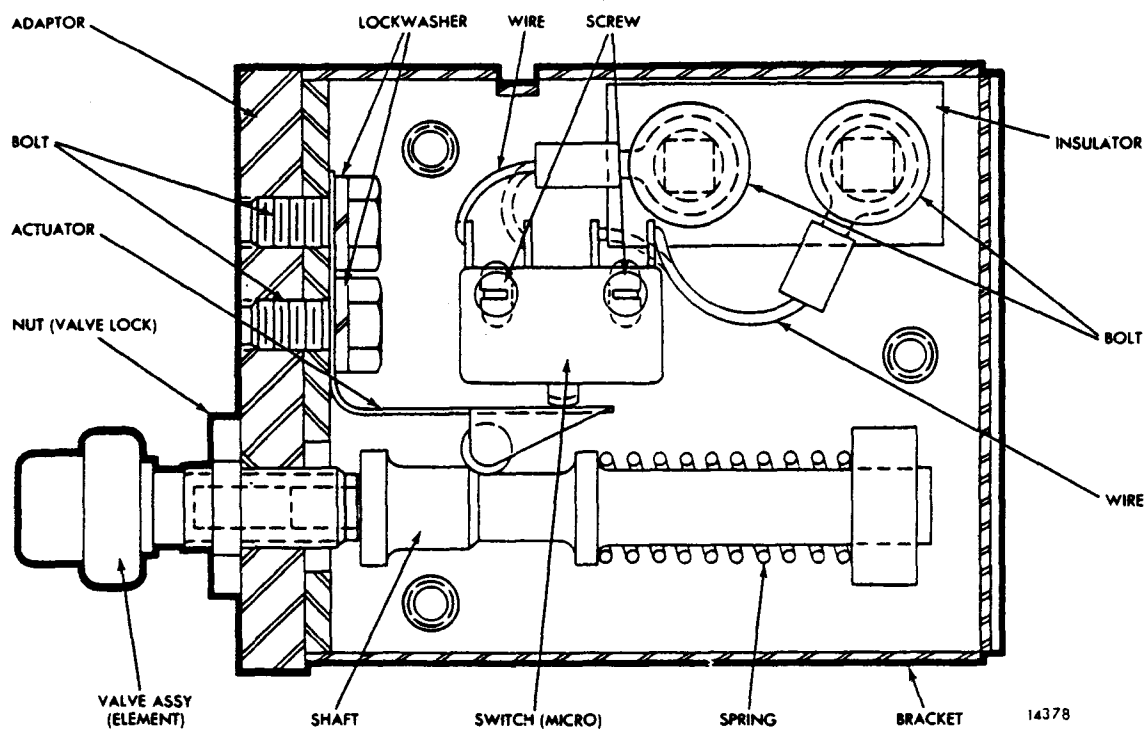


FIG. 4B SWITCH ASSY., WATER TEMPERATURE SHUTDOWN (7.4505)

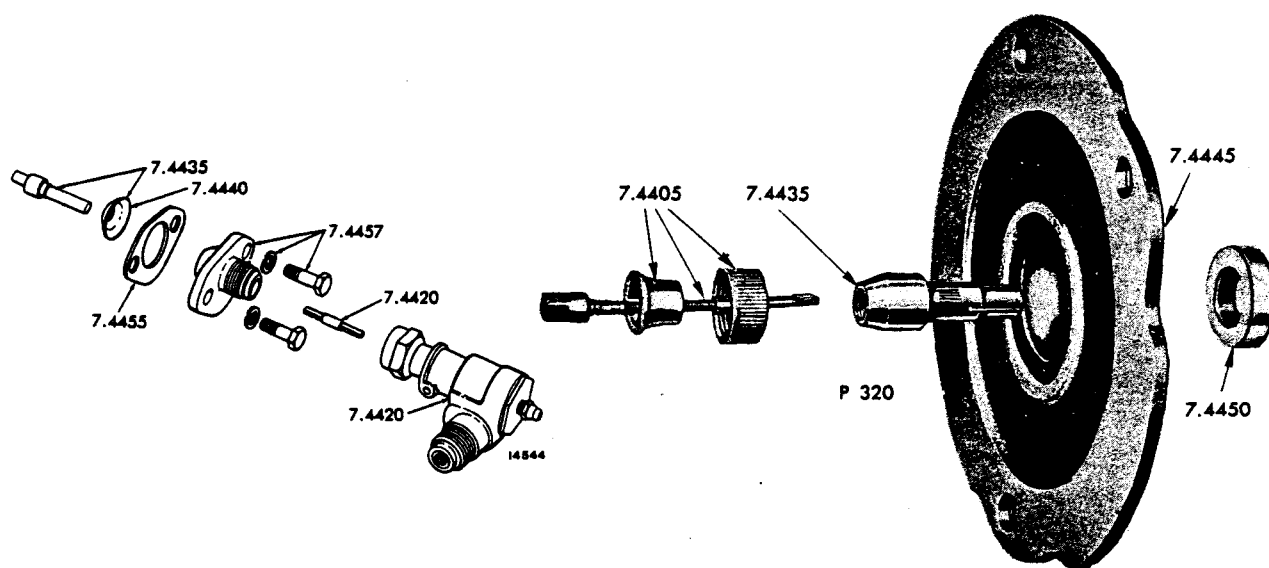


FIG. 5A TACHOMETER DRIVE

FIG. 5B TACHOMETER DRIVE

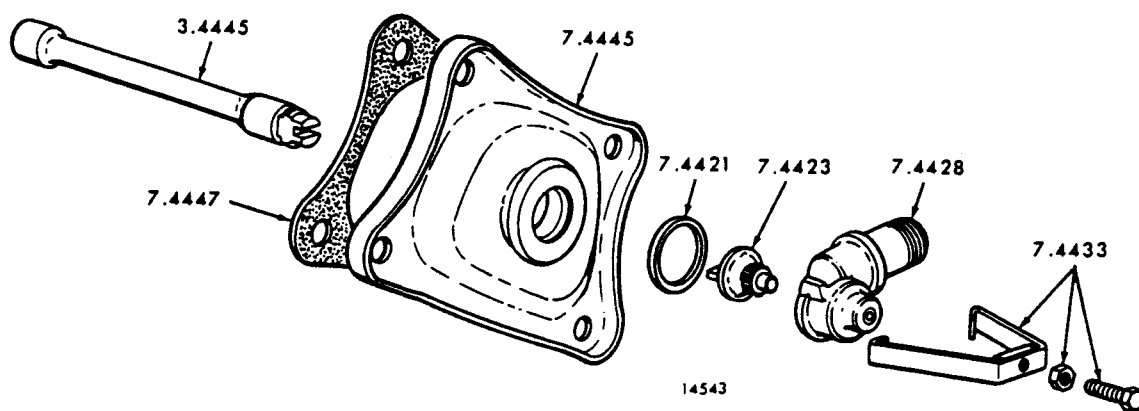


FIG. 5C TACHOMETER DRIVE

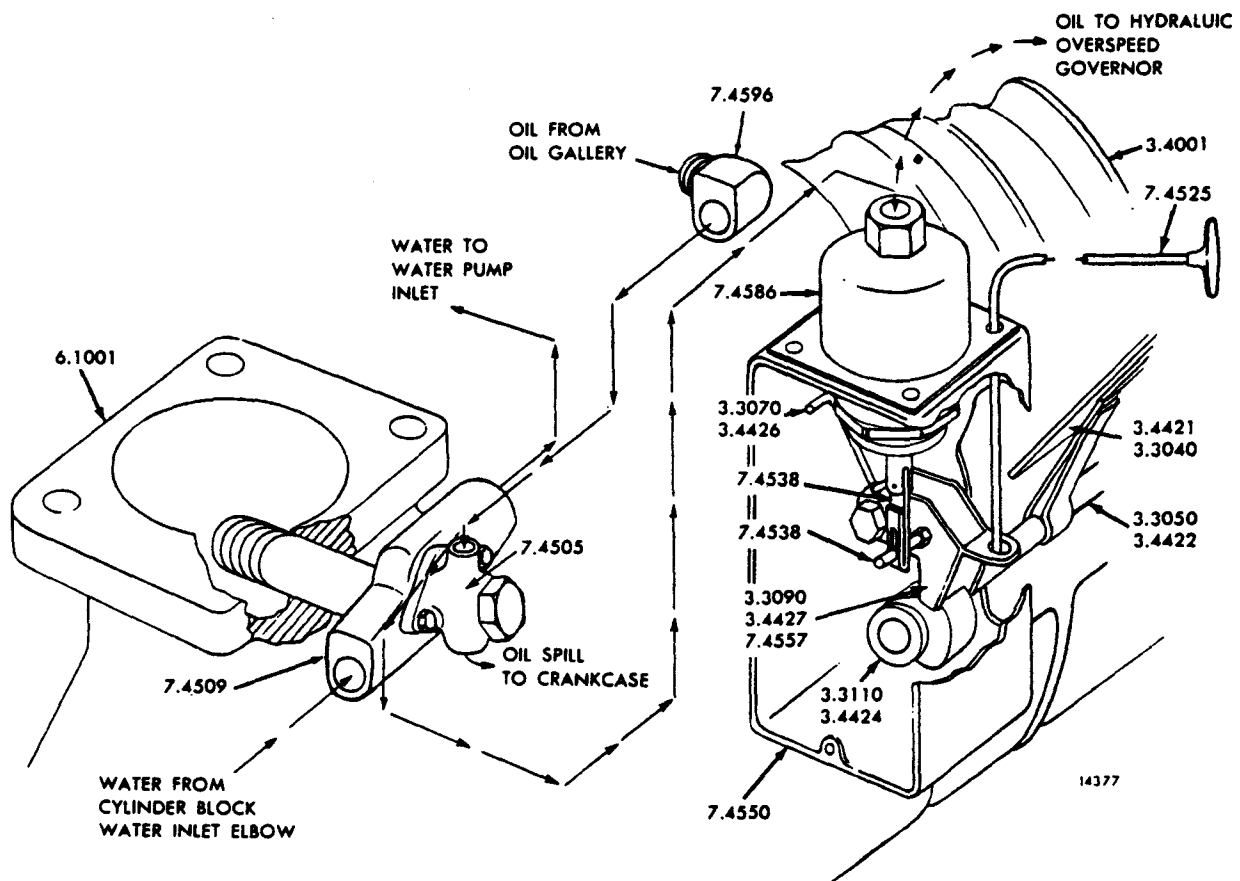
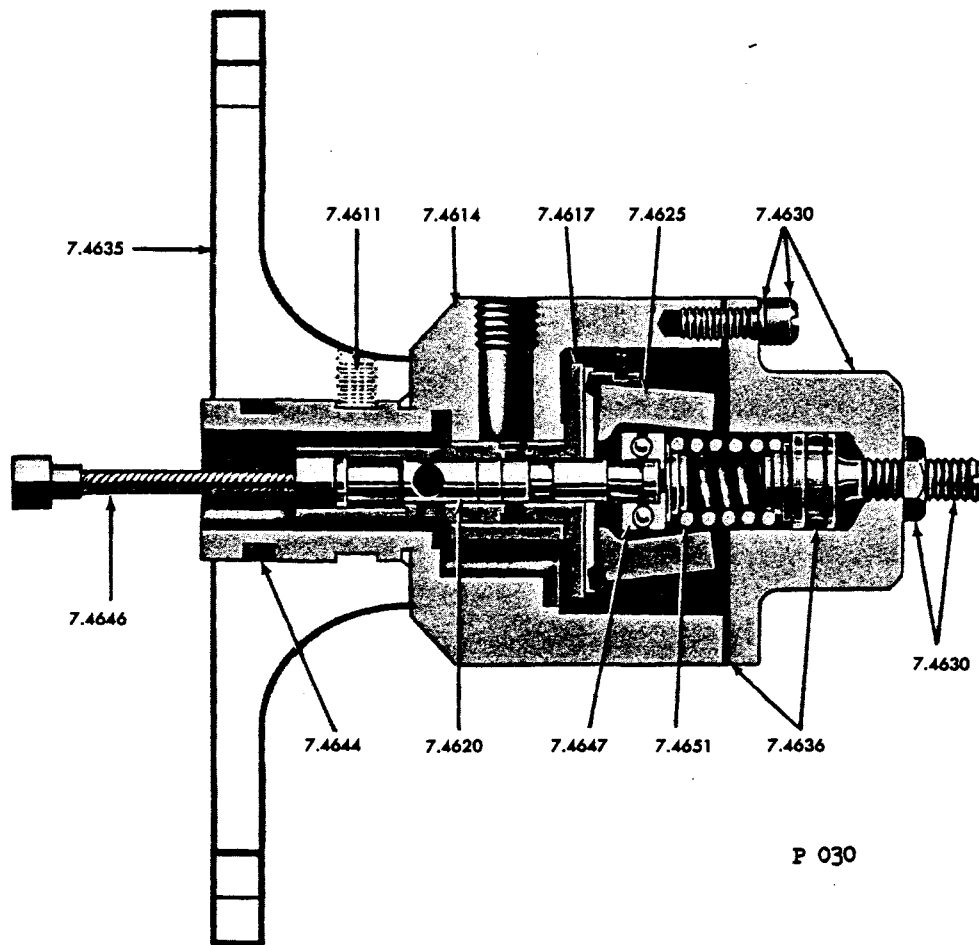


FIG. 6A AUTOMATIC SHUTDOWN



P 030

FIG. 6B OVERSPEED GOVERNOR
(Hydraulic Dump Type)

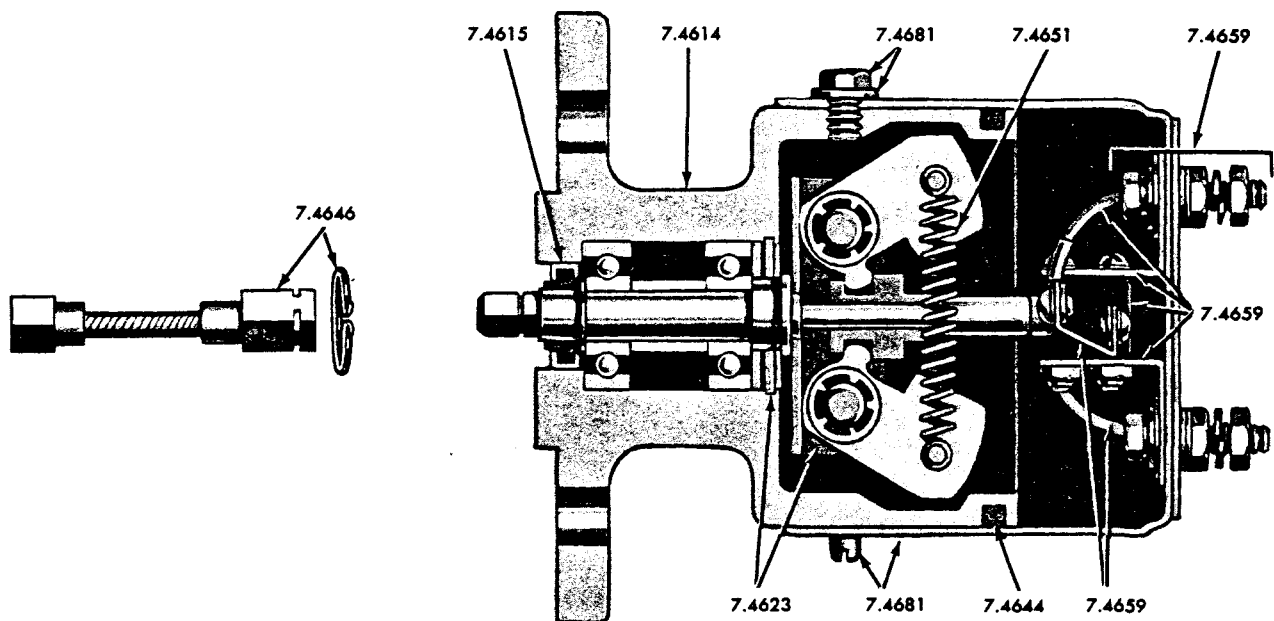


FIG. 6C OVERSPEED GOVERNOR
(Single Switch Electric)

P 029

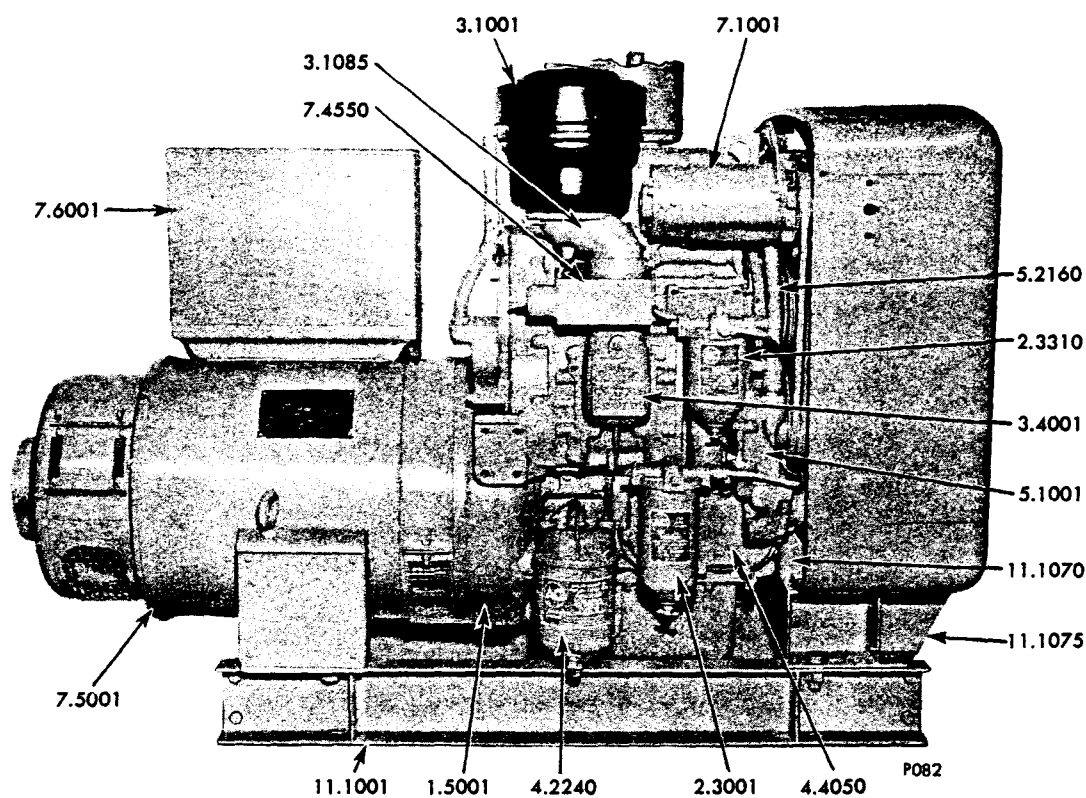
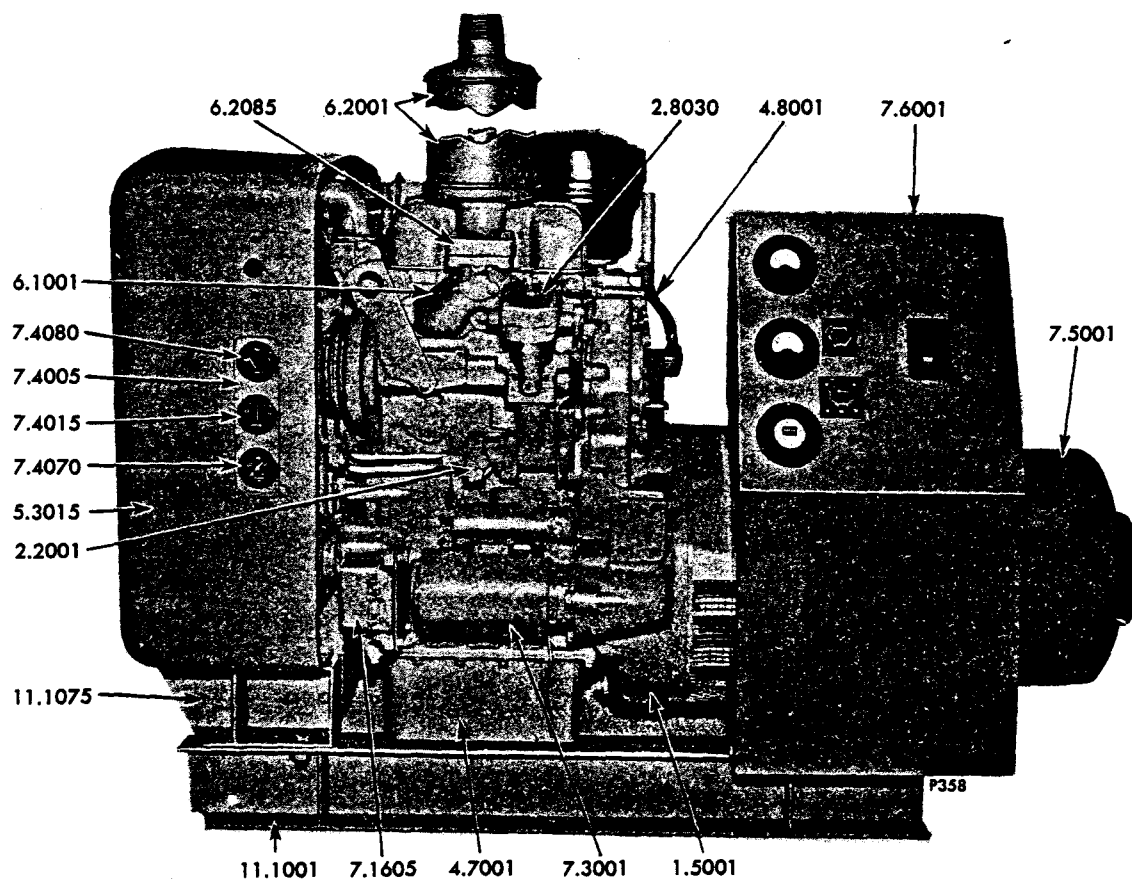


FIG. 10A POWER GENERATOR UNIT

7.1000A BATTERY CHARGING GENERATOR

..FIG ..	PART NUMBER	NAME AND DESCRIPTION	TYPES											
			1 5 6 2	1 5 6 3	1 5 6 7	1 5 7 0	1 5 7 2	1 5 7 7	1 5 7 9	1 5 8 1	1 5 8 5	1 5 9 2	1 6 0 0	1 6 0 1
	7.1630	WIRE ASSY., GENERATOR TO REGULATOR (CONT'D)												
	2977607	SLEEVE, INSULATOR (7.7001)	1								1			
	5187908	STRAP, GROUND		1										
	5155484	BRACKET		1										
	5165244	CLIP, 7/8"		1										
	2965399	CONNECTOR, #14 OR #16 CABLE (7.7001)	5								5			
	444148	TEE, 1/4"-18 INV. FL. (12.9490)							1					
	5127510	TEE, 1/4"x5/8"-14 INV. FL. (12.9490)									1			
	112877	BUSHING, 1/4"x1/8" RED. PIPE (12.9570)	1								1			
	181595	BOLT, 5/16"-24X3/4" (12.9001)		1										
	179835	BOLT, 3/8"-16X5/8" (12.9001)		1										
	178532	LOCKWASHER, 5/16" (12.9215)		1										
	178551	LOCKWASHER, 3/8" INV. EXT. TOOTH (12.9200)		1										
	114493	NUT, 5/16"-24 (12.9120)		1										
	123321	NUT, 3/8"-16 HEX. (12.9120)		1										

7.1000A BATTERY CHARGING GENERATOR

PART		TYPES												
FIG	NUMBER	NAME AND DESCRIPTION	1	1	1	1	1	1	1	1	1	1	1	1
			6	6	6	6	6	7	7	7	7	7	7	7
			2	2	3	4	9	1	2	2	2	2	2	3
			6	8	5	2	3	2	1	2	5	6	1	4
7.1001 - GENERATOR ASSY. (CONT'D)														
NOT SERVICED; USE 5138207 GENERATOR PLUS 1-5109949 WASHER. 5138207 GENERATOR IS SERVICED AS AN ASSY., FOR COMPONENTS CONTACT PRESTOLITE COMPANY AND FURNISH THEIR ASSY. NUMBER GHA-4804-UTS. # SERVICED AS ASSY.; FOR COMPONENTS CONTACT LEECE NEVILLE CORP. FURNISH THEIR ASSY. NUMBER A001-3002AD.														
7.1005 - SHIELD, GENERATOR														
	5129294	SHIELD, HEAT	1											
	5143583	SHIELD, HEAT				1								
	5143582	BRACKET				1								
	180120	BOLT, 3/8"-16X3/4" (12.9001)				1								
	178551	LOCKWASHER, 3/8" (12.9200)				1								
	123221	NUT, 3/8"-16 HEX. (12.9120)				1								
7.1440 - FAN, GENERATOR														
1A	1914628	FAN					1							
	1970765	FAN (INCLUDES BAFFLE)						1				1		
	800612	FAN							1					
1A	1952955	BAFFLE ASSY.	1											
1A	1914629	BAFFLE ASSY.					1						1	
7.1500 - PULLEY, GENERATOR														
1A,B	5133563	PULLEY	1		1						1			
1A	5132527	PULLEY		1				1	1	1		1		
1A	5138442	PULLEY				1								
1A	5121246	PULLEY					1						1	
1A	5136692	PULLEY												1
7.1575 - BELT, GENERATOR DRIVE														
	5148276	BELT SET (2 BELTS, 29"LX.380"W.)												1
1A	5135472	BELT SET (2 BELTS, 32"LX.380"W.)					1							
1A	5133180	BELT SET (2 BELTS, 34"LX.380"W.) (1.3320)						1						
1B	5133177	BELT SET (2 BELTS, 37"LX.380"W.)									1			
1B	5133174	BELT SET (2 BELTS, 40"LX.380"W.)	1								1			
1A	5133601	BELT SET (2 BELTS, 41"LX.380"W.)		1										

7.1000A BATTERY CHARGING GENERATOR

PART			TYPES											
FIG	NUMBER	NAME AND DESCRIPTION	1	1	1	1	1	1	1	1	1	1	1	1
			6	6	6	6	6	7	7	7	7	7	7	7
			2	2	3	4	9	1	2	2	2	2	3	3
			6	8	5	2	3	2	1	2	5	6	1	4
7.1575 - BELT, GENERATOR DRIVE (CONT'D)														
1A	5133173	BELT SET (2 BELTS, 42"LX.380"W.)						1				1		
	5100366	BELT SET (2 BELTS, 43"LX.380"W.)											1	
1A	5137635	BELT SET (2 BELTS, 44"LX.380"W.) (1.3320)			1									
1A	5136878	BELT SET (2 BELTS, 44"LX.380"W.)				1								
7.1580 - STRAP, GENERATOR ADJUSTING														
1B	5129112	STRAP	1											
1A	5121070	STRAP		1			1							
1A	5137634	STRAP			1									
1A	5133980	STRAP				1								
1A	5116435	STRAP						1						
1A	5137948	STRAP						1				1		
1A	5116686	STRAP							1					
1B	5131768	STRAP								1				
1A	5141739	STRAP											1	
1A	5147006	STRAP												1
	5164294	SPACER, 1/8" THICK (7.1581)						1	1			1		
	5157412	SPACER, 1/4" THICK (7.4013)			1									
	5182628	SPACER, 13/32"x3/4"x5/32" (12.4065)										1		
	179819	BOLT, 5/16"-18X1 1/8" (12.9001)						1	1			1		
	180120	BOLT, 3/8"-16X3/4" (12.9001)	1				1						1	
14838 →	454813	BOLT, 3/8"-16X7/8" (12.9001)		1						1				
	186678	BOLT, 3/8"-16X7/8" (12.9001)												1
	186678	BOLT, 3/8"-16X1" (CAD.) (12.9001)				2	1	2	1		1	1		
	179839	BOLT, 3/8"-16X1" (12.9001)											1	
	186619	BOLT, 3/8"-16X1 1/8" (12.9001)	1	1	2					1	2			
	186679	BOLT, 3/8"-16X1 1/4" (12.9001)												1
	186612	BOLT, 3/8"-16X1 3/8" (12.9001)			1									
	186627	BOLT, 3/8"-24X1" (12.9001)			1									
	5150230	WASHER, 3/8"x1 3/16" SPECIAL (3.4120)	1	1	1	1				1				
	5152148	WASHER, 3/8" FLAT (COPPER) (2.4050)	1											
	5159080	WASHER, 3/4"x.078" (2.7260)				1								
	103341	WASHER, 3/8" FLAT (12.9190)					AR						AR	
	5132147	WASHER, 13/32"x7/64"x5/32" (3.4030)									1			1
	103320	LOCKWASHER, 5/16" (12.9200)						AR	AR	AR		AR	AR	
	103321	LOCKWASHER, 3/8" (12.9200)	AR	AR	AR			AR	AR	AR	AR	AR	AR	
	178551	LOCKWASHER, 3/8" INT.-EXT. TOOTH (12.9215)				2	2							1
	120382	LOCKWASHER, 3/8" (12.9200)												1
	117049	NUT, 3/8"-24 HEX. (12.9120)			1									
7.1585 - GUARD, GENERATOR DRIVE BELT AND PULLEY														
	5135420	GUARD	1											
	5108991	GUARD											1	

7.1000A BATTERY CHARGING GENERATOR

PART		TYPES													
FIG	NUMBER	NAME AND DESCRIPTION	1	1	1	1	1	1	1	1	1	1	1	1	1
			6	6	6	6	6	7	7	7	7	7	7	7	7
			2	2	3	4	9	1	2	2	2	2	2	2	3
			6	8	5	2	3	2	1	2	5	6	1	1	4
7.1587 - BRACKET, GENERATOR DRIVE BELT AND PULLEY GUARD															
	5139361	BRACKET	2												
	5129362	BRACKET	1												
	5147104	BRACKET											1		
	5177000	SPACER, 3/4" DIA. X.800L (7.1598)	1												
	3844999	RETAINER, 1/4"-20 SCREW (7.1585)	3											1	
	113955	SCREW, 1/4"-20X1/2" RD. HD. SL (12.9025)	3											1	
	179839	BOLT, 3/8"-16X1"												1	
	427588	BOLT, 3/8"-16X2 1/2" (12.9001)	1												
	186627	BOLT, 3/8"-24X1" (12.9001)	2												
	120392	WASHER, 9/32" (12.9190)	3											1	
	103341	WASHER, 3/8" (12.9190)	1											2	
	103321	LOCKWASHER, 3/8" (12.9200)	2											1	
	117049	NUT, 3/8"-24 HEX. (12.9120)	2												
	123221	NUT, 3/8"-16 HEX. (12.9120)												1	
7.1595 - BRACKET, GENERATOR MOUNTING															
1B	5142647	BRACKET (FRONT)	1												
1B	5137450	BRACKET (REAR)	1												
1A	5126936	BRACKET		1			1								
	5137708	BRACKET			1										
	5136712	BRACKET				1									
1A	5137975	BRACKET						1							
1A	5142137	BRACKET							1				1		
1A	5126936	BRACKET								1					
1B	5147458	BRACKET									1				
	5136712	BRACKET										1			
	5147007	BRACKET											1		1
	5143584	PLATE (7.1596)				1									
	5175705	SPACER, 13/32"x7/8"x1" (8.3826)			3				3				3		
	5108436	SPACER, 15/32"x15/16"x5/32" (7.1598)	2												
	5125323	SHIM, .012" THICK (4.4115)	AR												
	106327	BOLT, 5/16"-18X1 3/8" (12.9001)	2												
	179839	BOLT, 3/8"-16X1" (12.9001)	2										3		
	186678	BOLT, 3/8"-16X1" CAD. (12.9001)												3	
	186619	BOLT, 3/8"-16X1 1/8" (12.9001)						3							
	186679	BOLT, 3/8"-16X1 1/4" (12.9001)		4						4					
	454906	BOLT, 3/8"-16X1 1/2" (12.9001)	1											3	
	179846	BOLT, 3/8"-16X1 7/8" (12.9001)		1											
	179847	BOLT, 3/8"-16X2" (12.9001)				3									
	179848	BOLT, 3/8"-16X2 1/4" (12.9001)			3				3				3		
	179850	BOLT, 3/8"-16X2 1/4" (12.9001)						3							
	181675	BOLT, 7/16"-20X2 1/4" (12.9001)			2										
	5152148	WASHER, 3/8" COPPER (2.4050)									3				
	106263	WASHER, 7/16" FLAT (12.9190)		1											
	103342	WASHER, 7/16" FLAT (12.9190)			2										

7.1000A BATTERY CHARGING GENERATOR

[illegible]

TYPES

**7.1595 - BRACKET, GENERATOR MOUNTING
(CONT'D)**

103320	LOCKWASHER, 5/16" (12.9200)
103321	LOCKWASHER, 3/8" (12.9200)
178551	LOCKWASHER, 3/8" (12.9215)
103322	LOCKWASHER, 7/16" (12.9200)
127855	NUT, 7/16"-20 HEX. (12.9120)

178551 LOCK WASHER, 3/8" (12.9215)

7.1605 - REGULATOR, VOLTAGE

9000590	REGULATOR (12V.)	.....
1118656	REGULATOR (24V.)	.....
5102888	REGULATOR (24V.)	.....
1119513	REGULATOR (12V.)	.....
9000591	REGULATOR (24V.)	.....
100004	BOLT, 1/4"-28X1/2" (12.9001)	.....
179835	BOLT, 3/8"-16X5/8" (12.9001)	.....
120380	LOCKWASHER, 1/4" (12.9200)	.....
103321	LOCKWASHER, 5/8" (12.9200)	.....
121902	NUT, 1/4" HEX. (12.9120)	.....

**7.1607 - CUTOUT ASSY., GENERATOR VOLTAGE
REGULATOR**

1115841	RELAY ASSY. (12V.)	.....
1115842	RELAY ASSY. (24V.)	.....
123450	BOLT, 1/4"-28X1/2" (12.9001)	.....
120380	LOCKWASHER, 1/4" (12.9200)	.....
121902	NUT, 1/4"-28 HEX. (12.9120)	.....

7.1610 - PLATE, VOLTAGE REGULATOR MOUNTING

5138342	PLATE
5145587	BRACKET (7.1606)
5139507	BRACKET
5160629	SPACER, 13/32"x7/32"
181309	BOLT, 1/4"-28X1/2" (12.9001)
179835	BOLT, 3/8"-16X5/8" (12.9001)
180120	BOLT, 3/8"-16X3/4" (12.9001)
186678	BOLT, 3/8"-16X1" (12.9001)
103319	LOCKWASHER, 1/4" (12.9200)
103321	LOCKWASHER, 3/8" (12.9200)
178551	LOCKWASHER, 3/8" (12.9200)
121902	NUT, 1/4"-28 HEX. (12.9120)

7.1612 - MOUNTING ASSY., VOLTAGE REGULATOR

1910966 MOUNTING ASSY. (SHOCK)
5179976 MOUNTING ASSY. (SPRING)
178532 LOCKWASHER, 5/16" (12.9200)

7.3000A STARTING MOTOR

PART		TYPES													
.FIG	NUMBER	NAME AND DESCRIPTION													
		2 4 9	2 5 0	2 5 3	2 5 5	2 6 0	2 7 0	2 7 2	2 7 3	2 9 3	2 9 7	2 9 8	3 0 0	3 0 2	3 0 3
7.3001 - MOTOR ASSY., STARTING															
NOTE: SERVICE ON ELECTRICAL EQUIPMENT IN THIS SECTION IS HANDLED THRU UNITED DELCO.															
3A	1107524	MOTOR ASSY., 12V. CCW. GRD.SPRAG.	1												
3A	1113236	MOTOR ASSY., 12V., CW, GRD. SPRAG.		1		1									
3A	1113873	MOTOR ASSY., 24V. CW. INSL. SPRAG.			1										
3A	1113940	MOTOR ASSY., 24V. CW. INSL. SPRAG.				1									
3A	1113847	MOTOR ASSY., 24V. CW. INSL. SPRAG.					1								
3A	1113189	MOTOR ASSY., 24V., CW, GRD. SPRAG.						1							
3A	1114052	MOTOR ASSY., 1IV. C.W. INSL. SPRAG.							1						
3A	1113221	MOTOR ASSY., 24V. CCW. GRD SPRAG.								1					
3A	1113904	MOTOR ASSY. 12V. C.W. SUBMERSIBLE.									1				
3A	1114717	MOTOR ASSY. 24V. CW. SUBMERSIBLE.										1			
	1113985	MOTOR ASSY. 24V. CW. SUBMERSIBLE.											1		
3A	1113245	MOTOR ASSY., 12V., CW. GRD. SPRAG.												1	
3A	1113249	MOTOR ASSY., 24V., CW. SUBMERSIBLE.													1
3A	5131967	BOLT, 5/8"-11X1 3/4", 12 PT. (12.9005)		3	3							3	2		3
3A	9418228	BOLT, 5/8"-11X1 3/4", 12 PT. (12.9005)				3	3	3	3	1	3		3	1	
3A	223435	BOLT, 5/8"-11X1 3/4" (12.9001)							2						2
3A	103325	LOCKWASHER, 5/8" (12.9200)		3	3	3	3	3	3	3	3	2	3	3	3
7.3004 - GASKET, STARTING MOTOR															
3A	5130995	GASKET (W/WET FLYWHEEL HOUSING)	1	1	1	1	1	1	1	1	1	1	1	1	1
7.3242 - STRAP, STARTING MOTOR GROUND															
	5185559	STRAP, GRD. (4 1/2 L.) (7.7110)					1								
	5156268	STRAP, GRD. (9 L.) (7.2040)									1	1			
	121804	BOLT, 1/4"-20X7/16" CAD. (12.9005)					1								
	186678	BOLT, 3/8"-16X1" (12.9001)									1	1			
	174916	LOCKWASHER, 1/4" (12.9215)					1								
	178551	LOCKWASHER, 3/8" (12.9215)									1	1			

7.4000A INSTRUMENTS

PART		TYPES												
FIG	NUMBER	NAME AND DESCRIPTION	1 3	2 4	3 3	4 2	9 7	2 1 5	2 2 0	2 2 9	2 8 1	3 2 2	3 3 3	3 7 1
	7.4005	PANEL, INSTRUMENT												
		A CLUSTER ASSY. INCLUDES PANEL IN 7.4005 PLUS ITEMS IN 7.4015, 7.4020, 7.4060, 7.4070, 7.4072, 7.4080, 7.4082. PANEL ASSYS. 1583452 AND 1583449 INCLUDES PANELS IN 7.4005 AND ITEMS IN 7.4015 THRU 7.4100.												
4A	1582507	PANEL (CLUSTER) (INCLUDES MOUNTING IN 7.4010)					1							1
	1583552	PANEL (DUAL)						1			1			
	1583551	PANEL							1	1			1	
	6405710	PANEL ASSY. (DUAL)						1						
	1583452	PANEL ASSY. (DUAL)						1			1			
	1583449	PANEL ASSY.											1	
	1586206	CLUSTER ASSY. (NO TEMPERATURE GAGE) * NOT SERVICED; COMPONENTS ARE AVAILABLE.					1							1
	7.4010	MOUNTING, INSTRUMENT PANEL												
	5193755	MOUNTING ASSY. (ANTI-VIBRATION)					AR							AR
	7.4015	AMMETER, BATTERY CHARGING												
		INCLUDES CLAMP IN 7.4020.												
4A	6474062	AMMETER (60 AMP.)		1 AR		1 AR	1 AR	2 AR	1 AR	1 AR	2 AR	1 AR	1 AR	1 AR
	120217	LOCKWASHER, #10 (12.9200)		AR		AR	AR	AR	AR	AR	AR	AR	AR	AR
	120614	NUT, #10-32 HEX. (12.9120)		AR		AR	AR	AR	AR	AR	AR	AR	AR	AR
	7.4020	CLAMP, AMMETER												
	6460429	CLAMP		AR		AR	AR	AR	AR	AR	AR	AR	AR	AR
	5101141	CLAMP * OBSOLETE		AR		AR	AR	AR	AR	AR	AR	AR	AR	AR
	7.4060	TACHOMETER												
		INCLUDES CLAMP IN 7.4065. ADAPTOR KIT INCLUDES RED. ADAPTOR AND KEY. NOT SOLD SEPARATELY, TO CONVERT FROM 7/8" TO 5/8" TACH. DRIVE.												
4A	1536865	# TACHOMETER (C.W., 2500 RPM) (5658115)			1									
4A	1549866	# TACHOMETER (C.W., 3500 RPM)						2	1	1		1		

GROUP NOMENCLATURE

1.0000 1.1000 1.1000A 1.2000 1.2000A 1.3000 1.3000A 1.3000B 1.3000C 1.3000D 1.4000A 1.5000A 1.5000B 1.6000 1.7000 1.7000A 1.7000B 1.8000 1.8000A	ENGINE (less major assemblies) Cylinder Block Air Box Drains Cylinder Head Engine Lifter Bracket Crankshaft, Oil Seals and stabilizers Crankshaft Front Cover Vibration Damper Crankshaft Pulley Crankshaft Pulley Belt Flywheel Flywheel Housing Flywheel Housing Adaptor Connecting Rod and Piston Camshaft and Gear Train Balance Weight Cover Accessory Drive Valve and Injector Operating Mechanism Rocker Cover	5.0000 5.1000 5.1000A 5.2000A 5.2000B 5.2000C 5.3000A 5.3000B 5.4000A 5.4000B 5.5000A 5.6000A 5.7000A	COOLING SYSTEM Fresh Water Pump Fresh Water Pump Cover Water Outlet Manifold and/or Elbow Thermostat Water By-pass Tube Radiator Water Connections Fan Fan Shroud Heat Exchanger or Keel Cooling Raw Water Pump Water Filter
2.0000 2.1000A 2.2000 2.2000A 2.3000A 2.4000 2.4000A 2.5000A 2.6000A 2.7000A 2.8000A 2.9000 2.9000A	FUEL SYSTEM Fuel Injector Fuel Pump Fuel Pump Drain Fuel Filter Fuel Manifold and/or Connections Dual Fuel System Fuel Lines and Fuel Cooler Fuel Tank Mechanical Governor Hydraulic Governor Injector Controls Throttle Controls	6.0000 6.1000A 6.2000A 7.0000 7.1000A 7.2000A 7.2000B 7.3000A 7.4000A 7.4000B 7.4000C 7.5000A 7.6000A 7.7000A 7.8000A 7.10000A	EXHAUST SYSTEM Exhaust Manifold Exhaust Muffler and/or Connections ELECTRICAL—INSTRUMENTS Battery Charging Generator Battery Cables Automatic Starting Starting Motor Instruments Tachometer Drive Shut-off, Alarm and O.S. Governor Power Generator Control Cabinet Wiring Harness Air Heater Hydraulic Governor Solenoid
3.0000 3.1000A 3.2000A 3.3000A 3.4000 3.4000A 3.4000B 3.5000A	AIR SYSTEM Air Cleaner and/or Adaptor Air Silencer Air Inlet Housing Blower Blower Drive Shaft Blower End Plate Cover Turbocharger and Intercooler	8.0000 8.1000A 8.3000A 8.3000B 9.0000 9.1000A 9.2000A 9.3000A 9.4000 9.7000 9.9000	POWER TAKE-OFF Power Take-off and/or Clutch Torque Converter Transmission Lines TRANSMISSION AND PROPULSION Hydraulic Marine Gear Reverse and Reduction Gear (mechanical) Power Transfer Gear Transmission—Highway Transmission—Off-highway Transmission—Rail Car
4.0000 4.1000A 4.1000B 4.1000C 4.2000A 4.3000A 4.4000A 4.5000A 4.6000A 4.7000A 4.8000A	LUBRICATING SYSTEM Oil Pump Oil Distribution System Oil Pressure Regulator Oil Filter Oil Filter Lines Oil Cooler and Marine Gear Lines Oil Filler Dipstick Oil Pan Ventilating System	10.0000 10.1000A 11.0000 11.1000A 12.0000 12.2000A 12.3000A 12.4000A 12.5000A 12.6000A 12.6000B 12.6000C 12.6000D 12.6000E 12.8000A 12.8000B 12.8000C	SHEET METAL Engine Hood ENGINE MOUNTING Engine Mounting and Base MISCELLANEOUS Bilge Pump Vacuum Pump Air Compressor Hydraulic Pump Gasoline Starter Air Starter Cold Weather Starting Aid Hydraulic Starter Hydraulic Starter Accessories Supplies Fabrication Material Service Kits

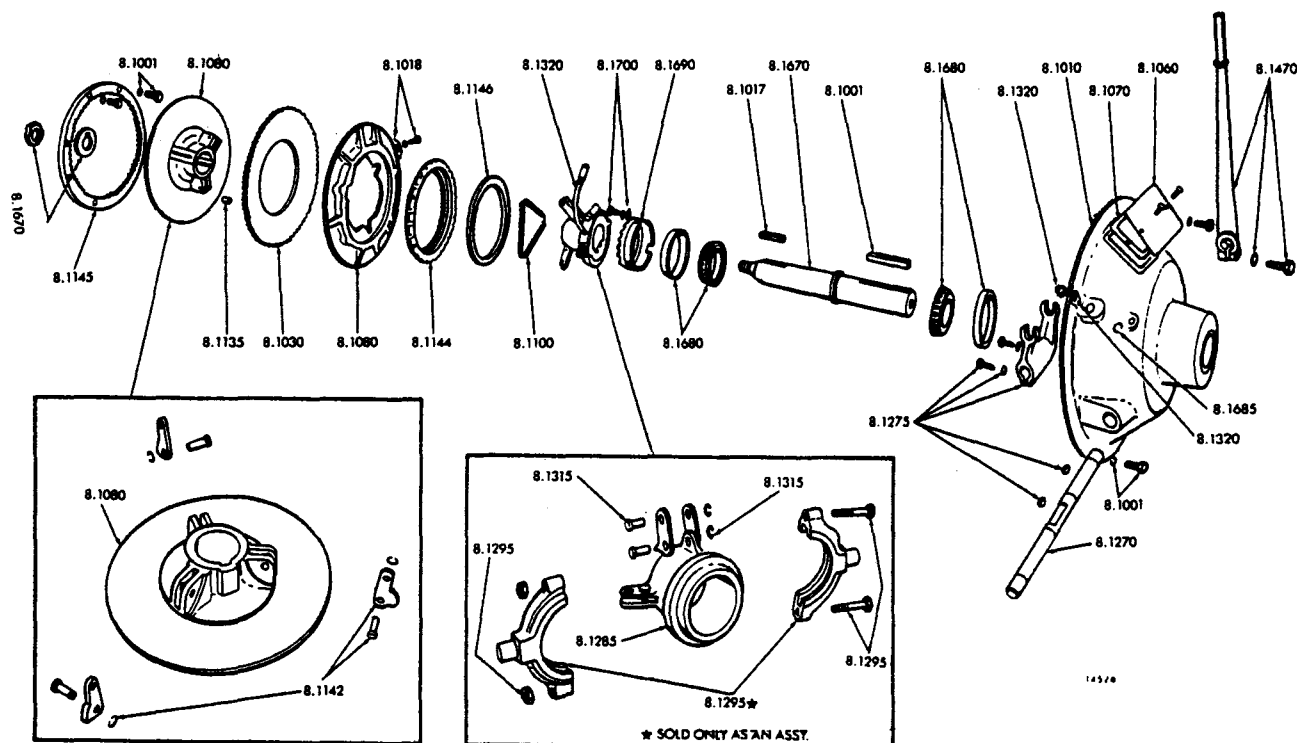


FIG. 1A POWER TAKE-OFF

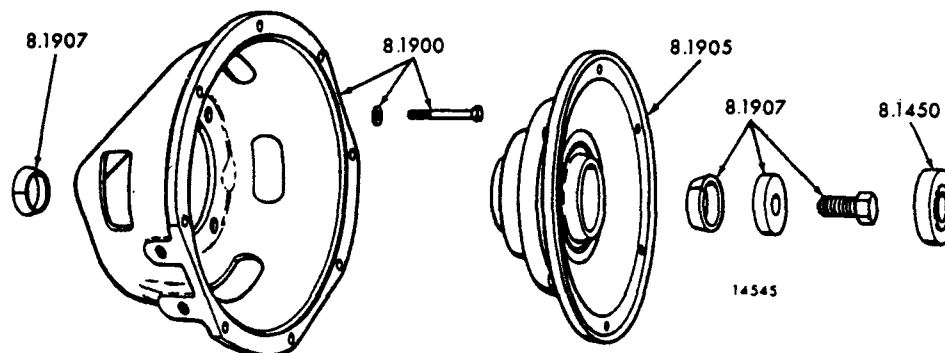
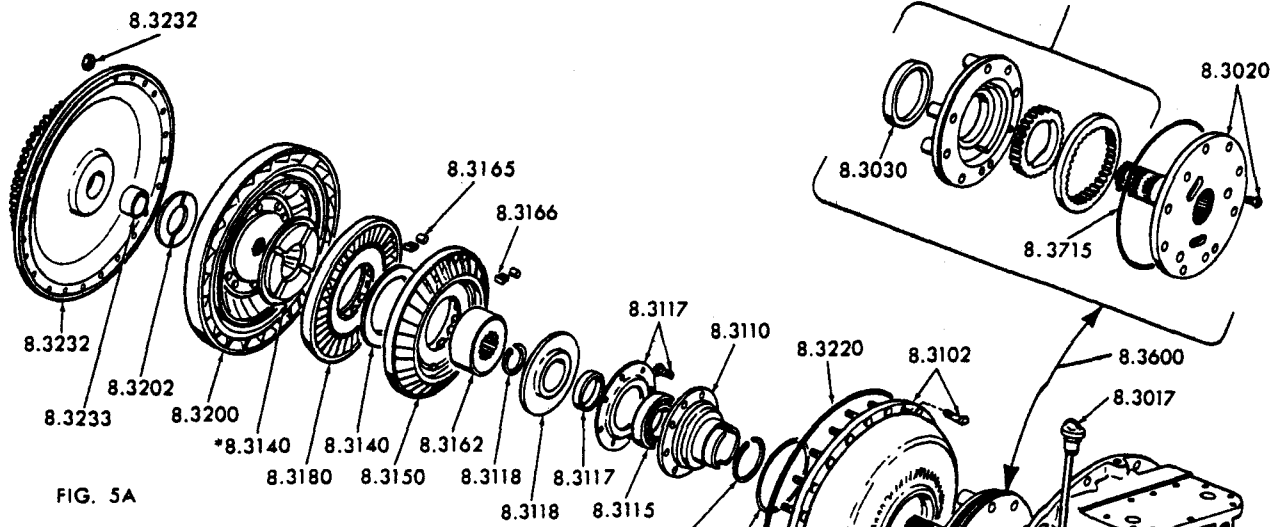


FIG. 1B FRONT POWER TAKE-OFF ADAPTOR



*NOT SERVICED SEPARATELY

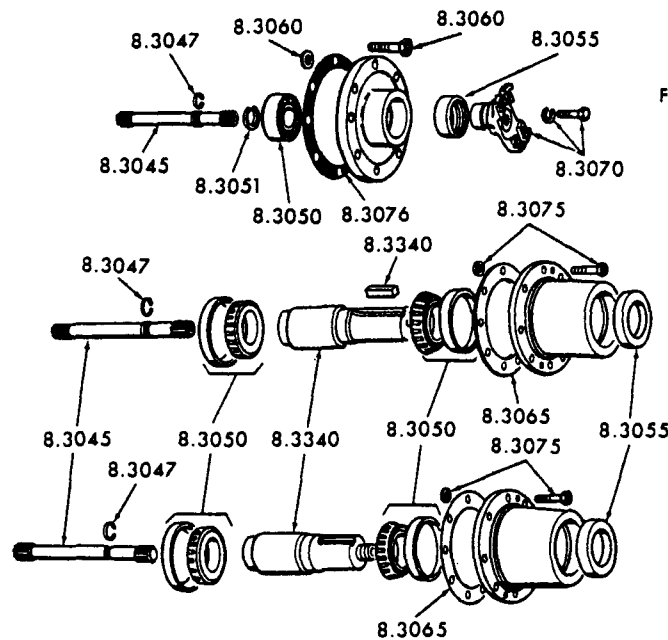
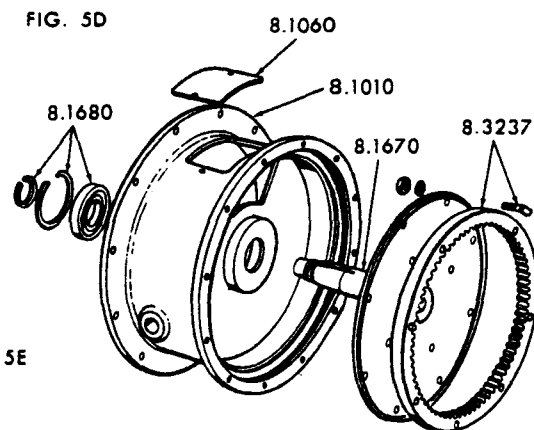
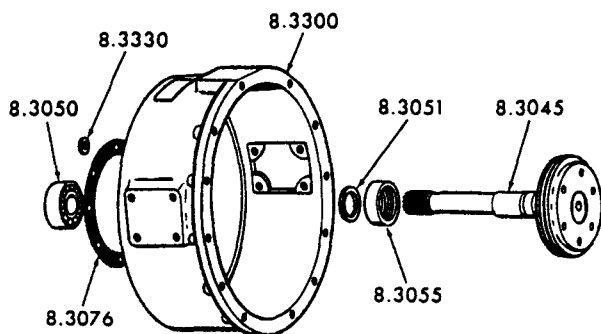


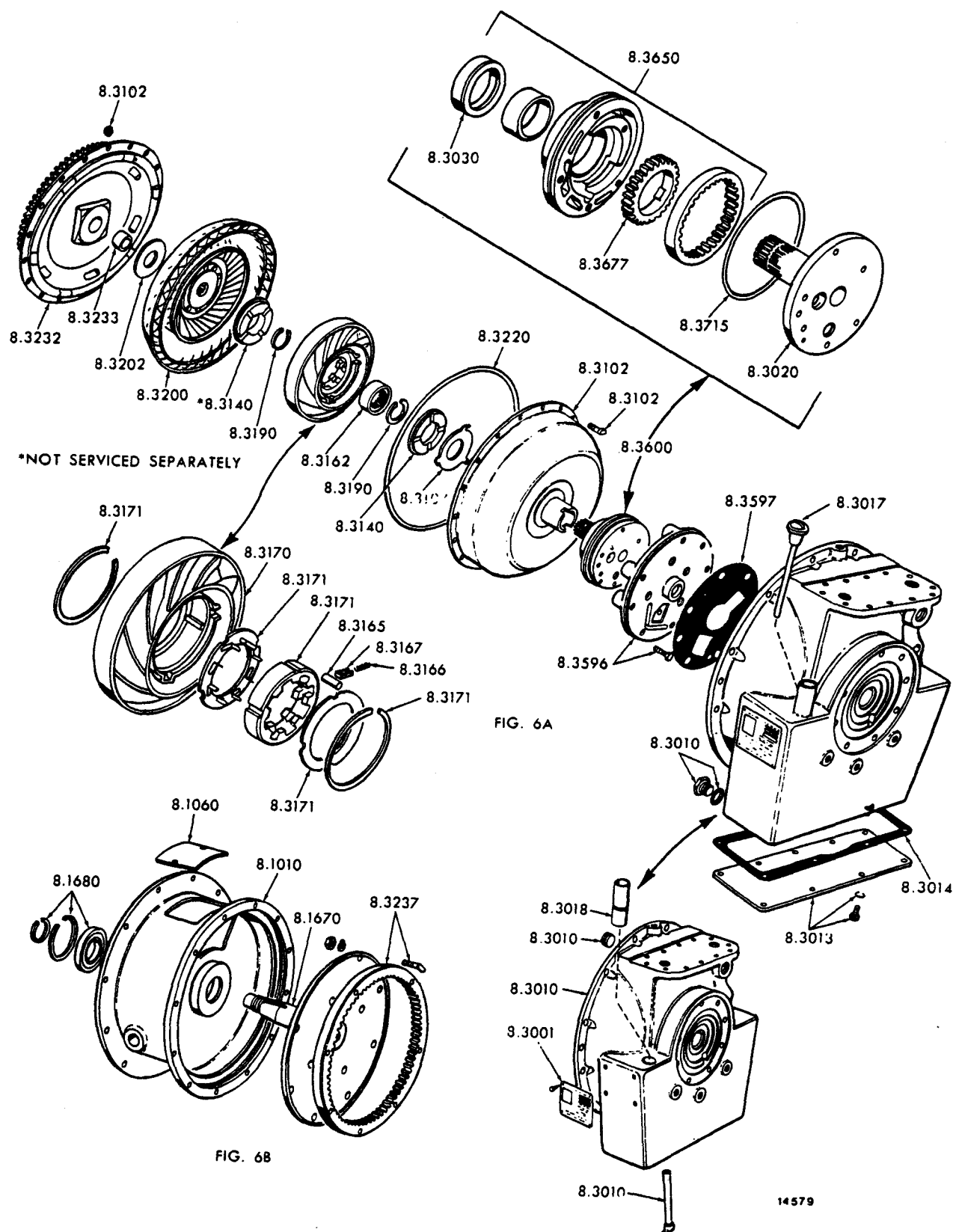
FIG. 5C

FIG. 5D

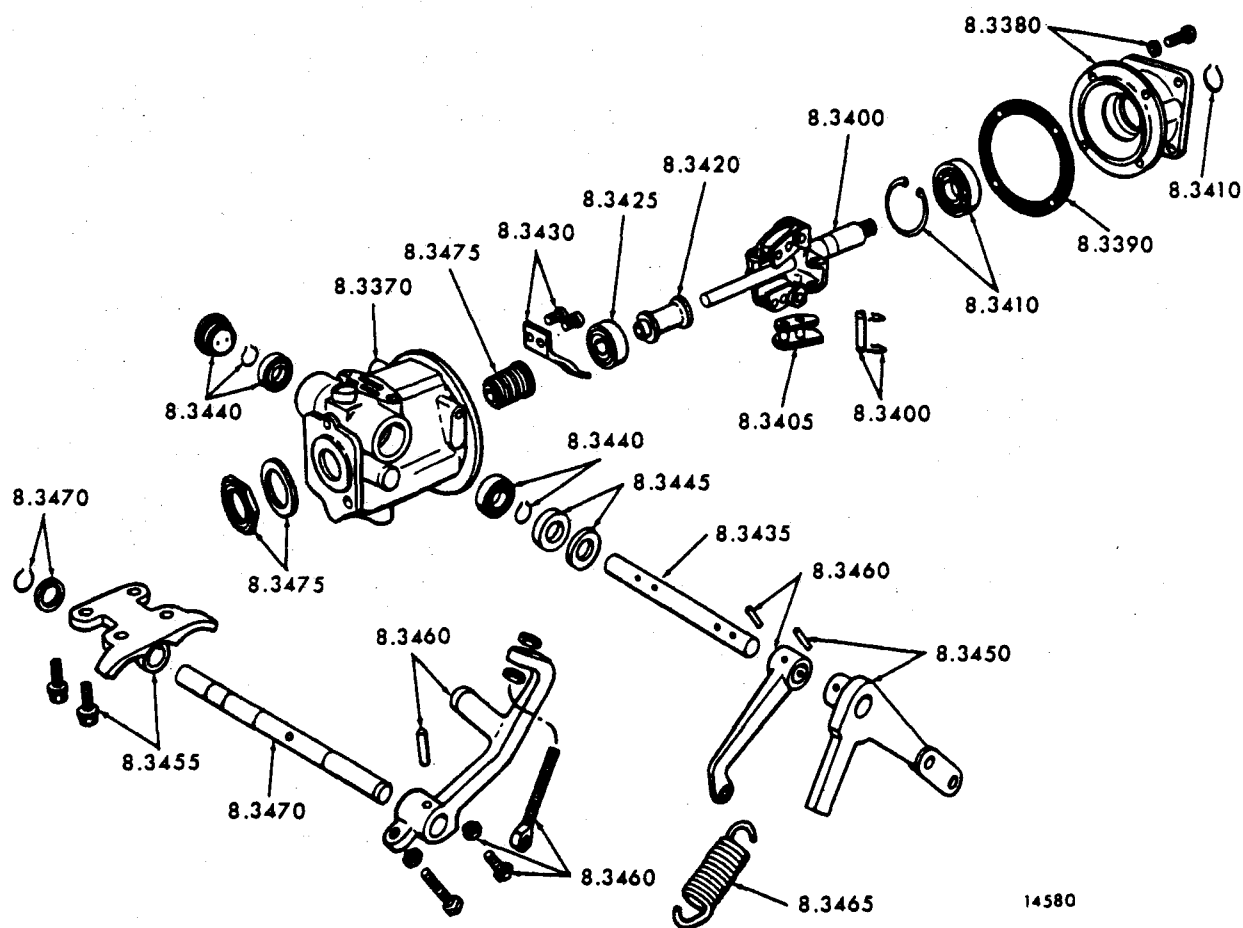


14578

SERIES 300 TORQUE CONVERTER AND SHAFTS



SERIES 200 TORQUE CONVERTER



14580

FIG. 7A TORQUE CONVERTER OUTPUT SHAFT GOVERNOR

8.1000A POWER TAKE-OFF AND/OR CLUTCH

PART			TYPES											
..FIG ..	NUMBER	NAME AND DESCRIPTION	1 8 0	1 8 1	1 8 7	2 0 4	2 0 8	2 1 4	2 2 0	2 2 1	2 2 8	2 3 0	2 5 5	2 7 1
		8.1690 - RETAINER, CLUTCH DRIVE SHAFT BEARING (CONT'D)												
1A	5197004	RETAINER..... & NOT SERVICED; REPLACE WITH 5199860.								1				
		8.1695 - SPACER, CLUTCH DRIVE SHAFT BEARING RETAINER												
	5191321 &	SPACER..... & NOT SERVICED; REPLACE WITH 5199860.					1							
		8.1700 - LOCK, CLUTCH DRIVE SHAFT BEARING RETAINER												
1A	3223379	LOCK.....	1	1						1		1		
1A	5191323	LOCK.....					1							
1A	179812	BOLT, 5/16"-18X1/2" (12.9001).....	1	1			1			1		1		
	103320	LOCKWASHER, 5/16" (12.9200).....	1	1			1			1		1		
		8.1900 - HOUSING, POWER TAKE-OFF ADAPTOR												
1B	5162833	HOUSING ASSY. (INCLUDES PIN).....		1								1		
1B	186283	BOLT, 3/8"-16X3 1/2" (12.9001).....		4										
1B	179860	BOLT, 7/16"-14X1 1/4" (12.9001).....		2								6		
1B	103321	LOCKWASHER, 3/8" (12.9200).....		4								4		
1B	103322	LOCKWASHER, 7/16" (12.9200).....		2								6		
	5146900	PIN, 3/8"X1 1/8" DQWEL (12.9290).....		2								2		
		8.1904 - SHAFT, POWER TAKE-OFF ADAPTOR STUB												
	5136411 *	SHAFT (TRANSMISSION DRIVE)..... * PART OF COUPLING ASSY. IN 8.1910.												1
		8.1905 - ADAPTOR, POWER TAKE-OFF TO CLUTCH AN ADAPTOR INCLUDES HUB IN 8.1906.												
1B	5119190	ADAPTOR.....		1								1		
	5172771	INSULATOR ASSY. (1.3280).....										1		
		8.1906 - HUB, FRONT POWER TAKE-OFF ADAPTOR												
	5119170	HUB.....		1								1		

8.1000A POWER TAKE-OFF AND/OR CLUTCH

PART		TYPES											
..FIG ..	NUMBER	NAME AND DESCRIPTION	1	1	2	2	2	2	2	2	2	2	2
			8	8	0	0	2	2	2	3	5	7	
			0	1	4	8	1	0	8	0	5	1	
8.1907 - CONE. POWER TAKE-OFF ADAPTOR													
1B	5119189	CONE (1.3295)		2						2			
1B	271632	BOLT, 3/4"-16X1 3/4" (1.3290)		1						1			
1B	5180291	WASHER (2.18" DIA. O.D.) (1.3290)		1						1			
8.1910 - COUPLING ASSY., POWER TAKE-OFF													
	5136521	* COUPLING ASSY. (TRANSMISSION)										1	
	5136406	# ADAPTOR, COUPLING										1	
	7450944	# BEARING, COUPLING										2	
	9152466	# SEAL, BEARING										2	
	5127300	# SPACER, BEARING										1	
	9152465	# RETAINER, BEARING										2	
	191758	# FITTING, 1/8" LUBE (12.9540)										1	
	5127184	GASKET (TO BELL) (1.5020)										1	
	5136529	BOLT, 3/8"-16X1 5/8" (NYLOCK)										12	
	103321	LOCKWASHER, 3/8" (12.9200)										12	
		# PART OF COUPLING ASSY. IN TYPE											
		271. AN ASSY. ALSO INCLUDES SHAFT											
		IN 8.1904.											
		<i>* NOT SERVICED, USE COMPONENTS.</i>											

GROUP NOMENCLATURE

1.0000

ENGINE (less major assemblies)

1.1000	Cylinder Block
1.1000A	Air Box Drains
1.2000	Cylinder Head
1.2000A	Engine Lifter Bracket
1.3000	Crankshaft, Oil Seals and stabilizers
1.3000A	Crankshaft Front Cover
1.3000B	Vibration Damper
1.3000C	Crankshaft Pulley
1.3000D	Crankshaft Pulley Belt
1.4000A	Flywheel
1.5000A	Flywheel Housing
1.5000B	Flywheel Housing Adaptor
1.6000	Connecting Rod and Piston
1.7000	Camshaft and Gear Train
1.7000A	Balance Weight Cover
1.7000B	Accessory Drive
1.8000	Valve and Injector Operating Mechanism
1.8000A	Rocker Cover

2.0000

FUEL SYSTEM

2.1000A	Fuel Injector
2.2000	Fuel Pump
2.2000A	Fuel Pump Drain
2.3000A	Fuel Filter
2.4000	Fuel Manifold and/or Connections
2.4000A	Dual Fuel System
2.5000A	Fuel Lines and Fuel Cooler
2.6000A	Fuel Tank
2.7000A	Mechanical Governor
2.8000A	Hydraulic Governor
2.9000	Injector Controls
2.9000A	Throttle Controls

3.0000

AIR SYSTEM

3.1000A	Air Cleaner and/or Adaptor
3.2000A	Air Silencer
3.3000A	Air Inlet Housing
3.4000	Blower
3.4000A	Blower Drive Shaft
3.4000B	Blower End Plate Cover
3.5000A	Turbocharger and Intercooler

4.0000

LUBRICATING SYSTEM

4.1000A	Oil Pump
4.1000B	Oil Distribution System
4.1000C	Oil Pressure Regulator
4.2000A	Oil Filter
4.3000A	Oil Filter Lines
4.4000A	Oil Cooler and Marine Gear Lines
4.5000A	Oil Filler
4.6000A	Dipstick
4.7000A	Oil Pan
4.8000A	Ventilating System

5.0000

COOLING SYSTEM

5.1000	Fresh Water Pump
5.1000A	Fresh Water Pump Cover
5.2000A	Water Outlet Manifold and/or Elbow
5.2000B	Thermostat
5.2000C	Water By-pass Tube
5.3000A	Radiator
5.3000B	Water Connections
5.4000A	Fan
5.4000B	Fan Shroud
5.5000A	Heat Exchanger or Keel Cooling
5.6000A	Raw Water Pump
5.7000A	Water Filter

6.0000

EXHAUST SYSTEM

6.1000A	Exhaust Manifold
6.2000A	Exhaust Muffler and/or Connections

7.0000

ELECTRICAL—INSTRUMENTS

7.1000A	Battery Charging Generator
7.2000A	Battery Cables
7.2000B	Automatic Starting
7.3000A	Starting Motor
7.4000A	Instruments
7.4000B	Tachometer Drive
7.4000C	Shut-off, Alarm and O.S. Governor
7.5000A	Power Generator
7.6000A	Control Cabinet
7.7000A	Wiring Harness
7.8000A	Air Heater
7.10000A	Hydraulic Governor Solenoid

8.0000

POWER TAKE-OFF

8.1000A	Power Take-off end, or Clutch
8.3000A	Torque Converter
8.3000B	Transmission Lines

9.0000

TRANSMISSION AND PROPULSION

9.1000A	Hydraulic Marine Gear
9.2000A	Reverse and Reduction Gear (mechanical)
9.3000A	Power Transfer Gear
9.4000	Transmission—Highway
9.7000	Transmission—Off-highway
9.9000	Transmission—Rail Car

10.0000

SHEET METAL

10.1000A	Engine Hood
----------	-------------

11.0000

ENGINE MOUNTING

11.1000A	Engine Mounting and Base
----------	--------------------------

12.0000

MISCELLANEOUS

12.2000A	Bilge Pump
12.3000A	Vacuum Pump
12.4000A	Air Compressor
12.5000A	Hydraulic Pump
12.6000A	Gasoline Starter
12.6000B	Air Starter
12.6000C	Cold Weather Starting Aid
12.6000D	Hydraulic Starter
12.6000E	Hydraulic Starter Accessories
12.8000A	Supplies
12.8000B	Fabrication Material
12.8000C	Service Kits

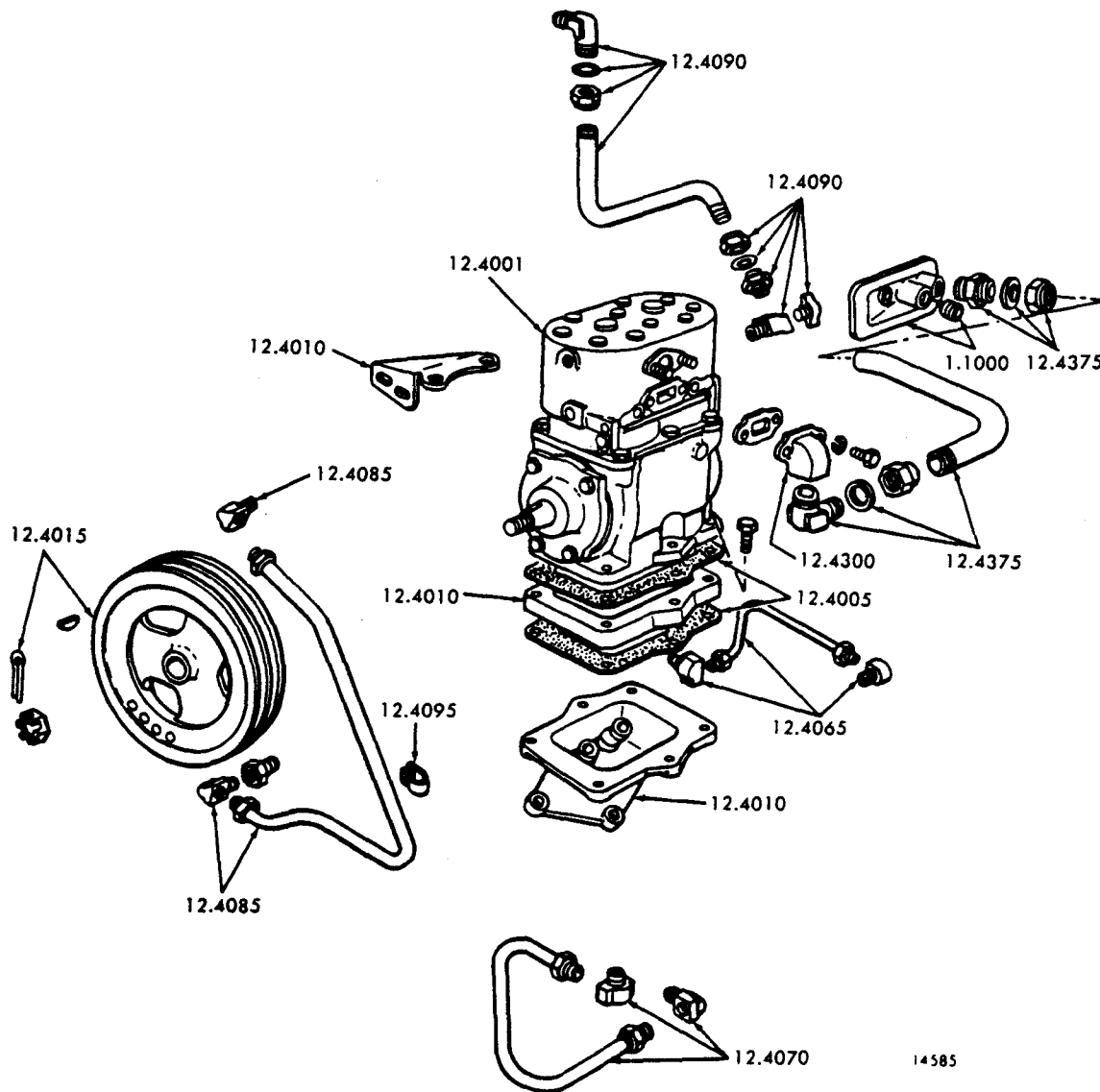


FIG. 3B AIR COMPRESSOR (BELT DRIVEN)

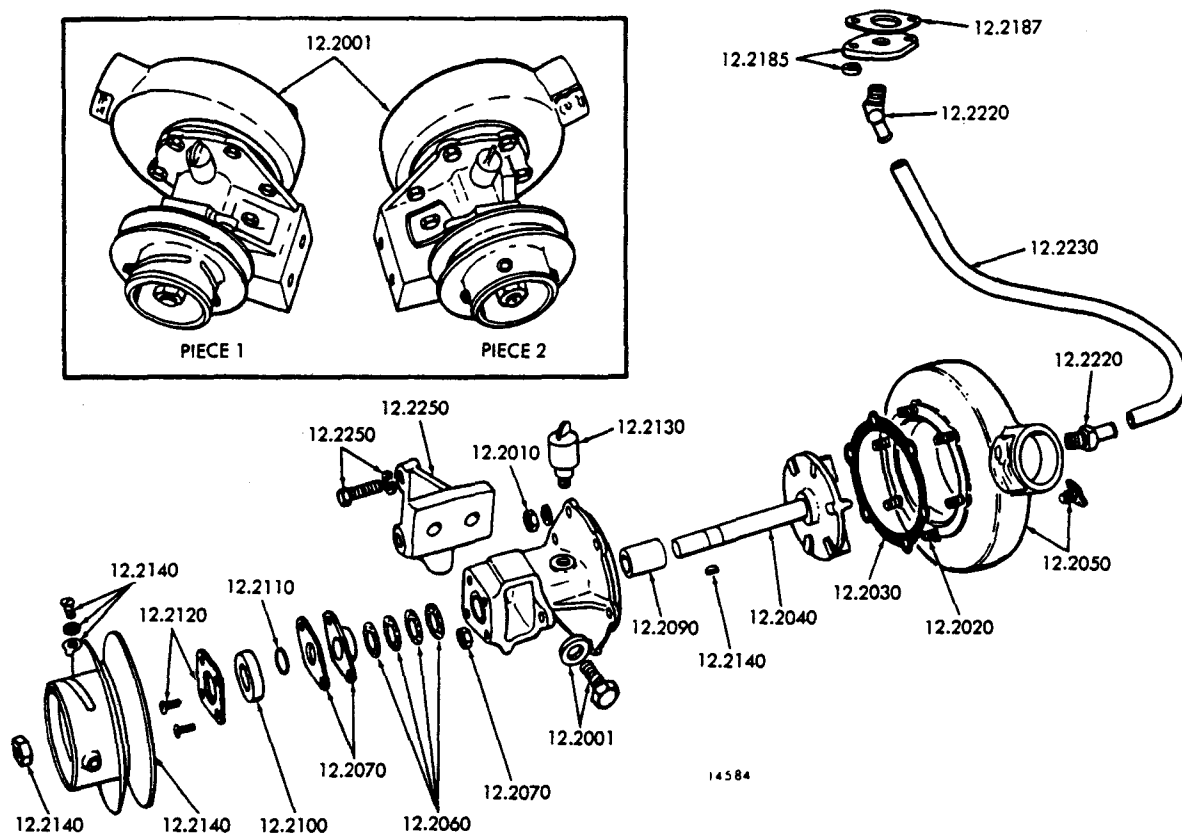


FIG. 1A BILGE PUMP ASSEMBLY

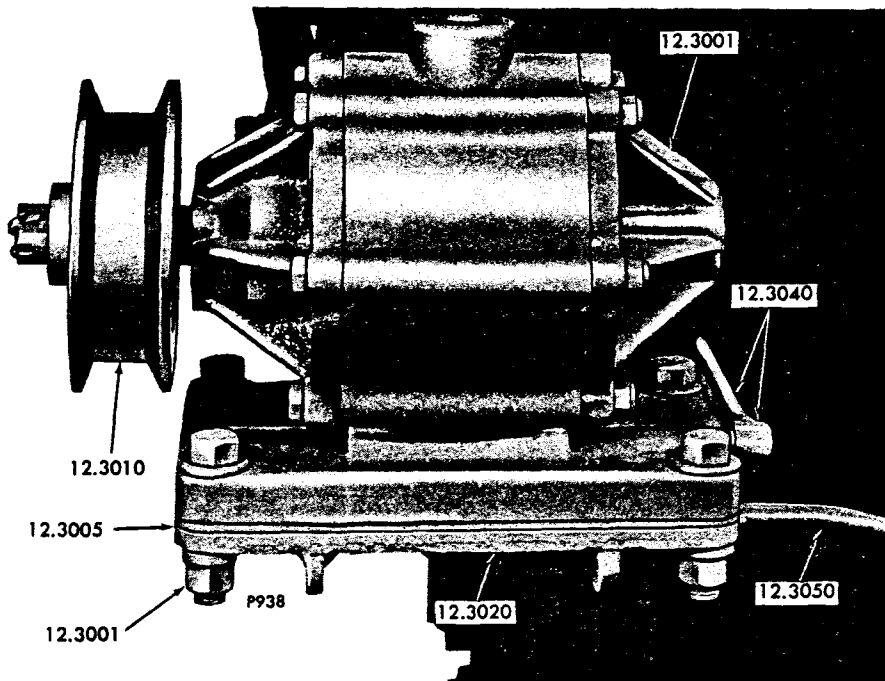


FIG. 3A VACUUM PUMP

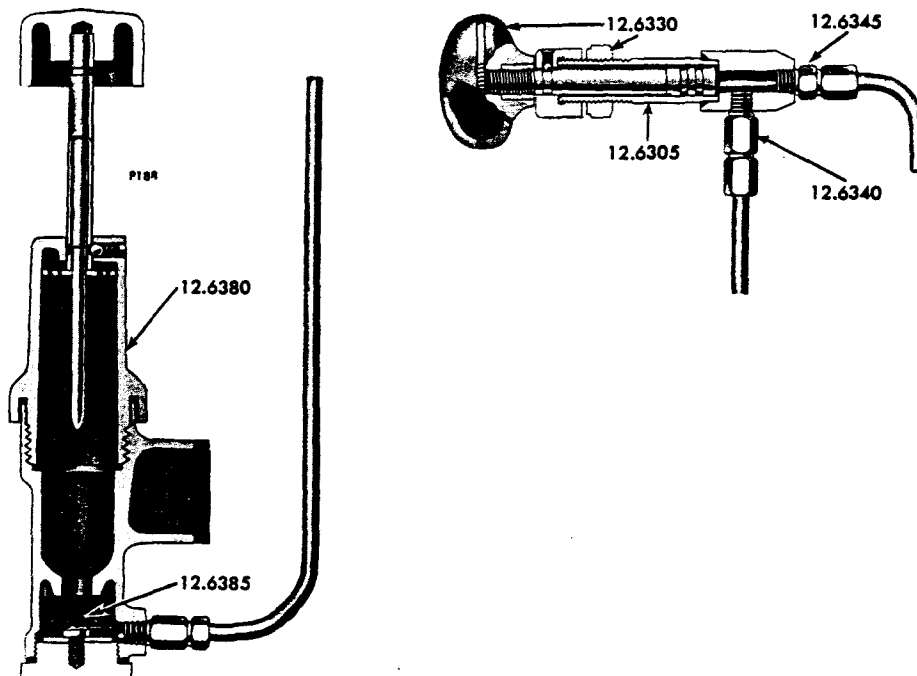


FIG. 5A COLD WEATHER STARTING AID

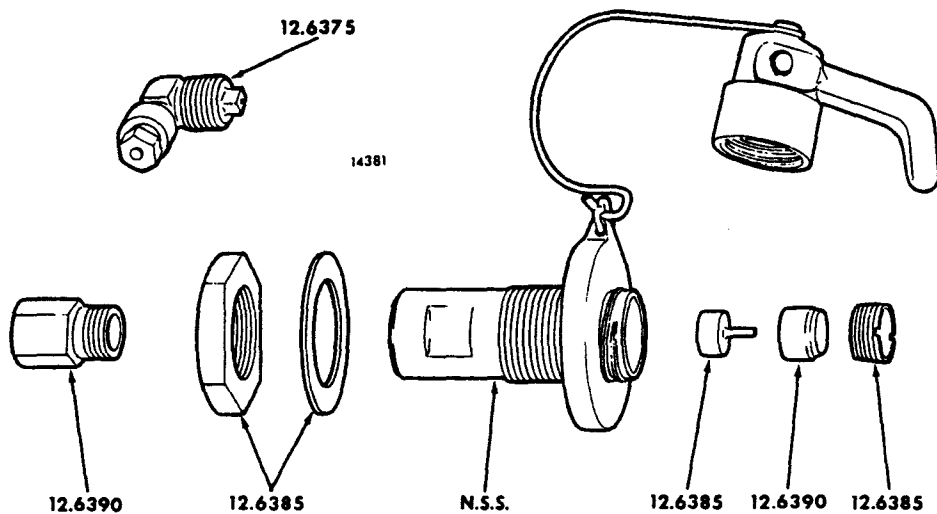


FIG. 5B COLD WEATHER STARTING AID

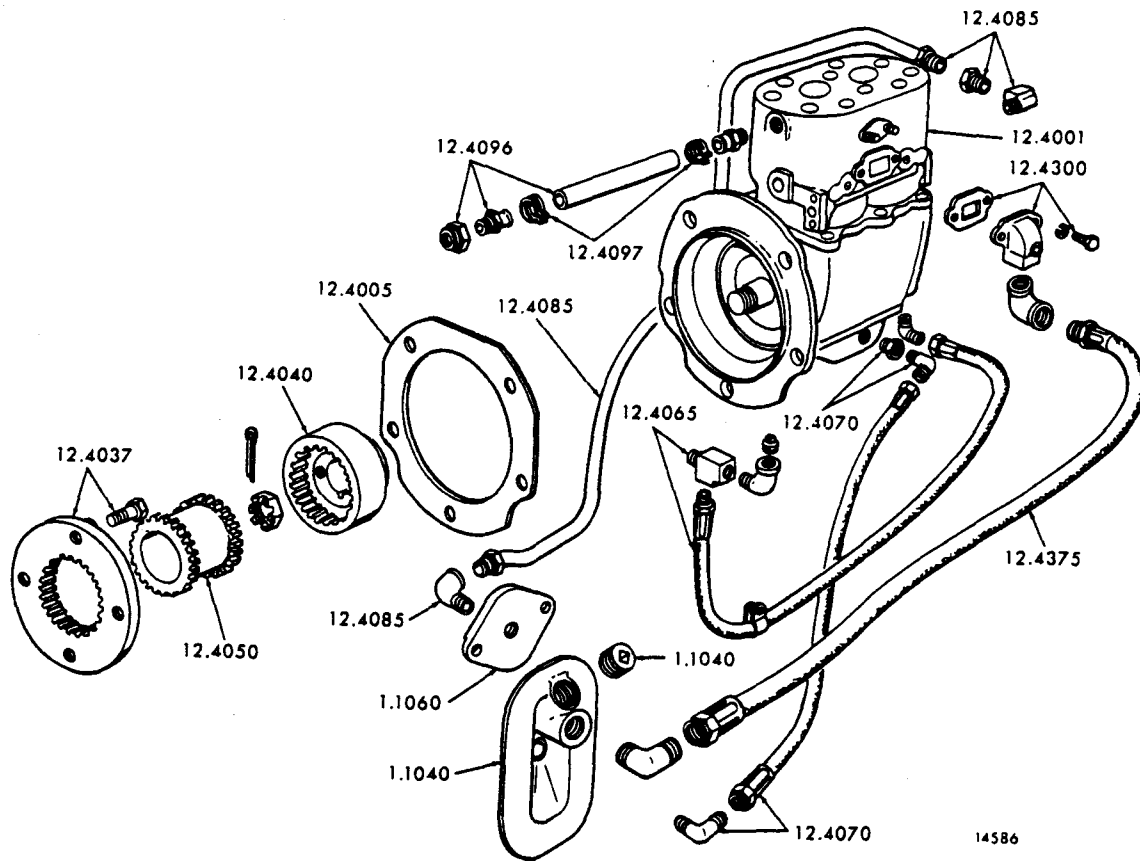


FIG. 3C AIR COMPRESSOR (direct drive)

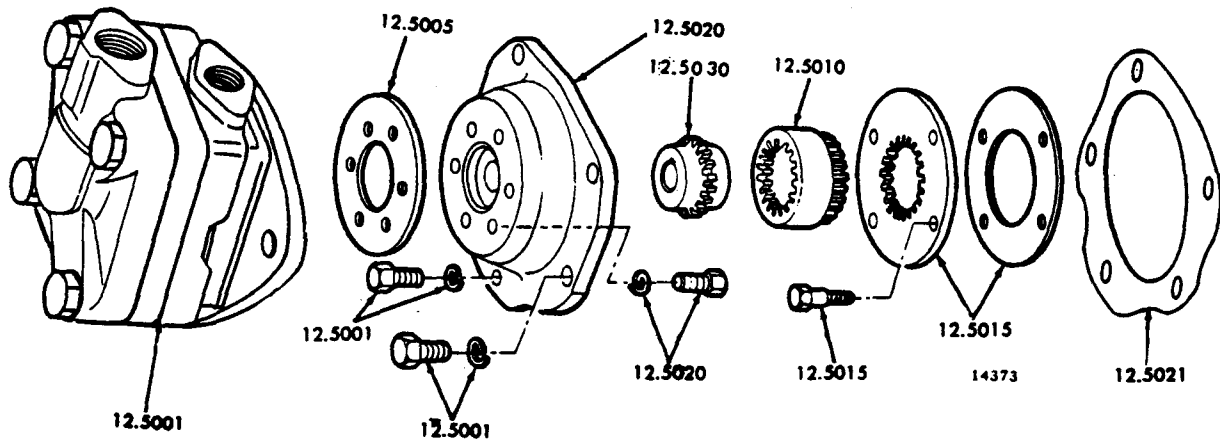


FIG. 4A HYDRAULIC PUMP

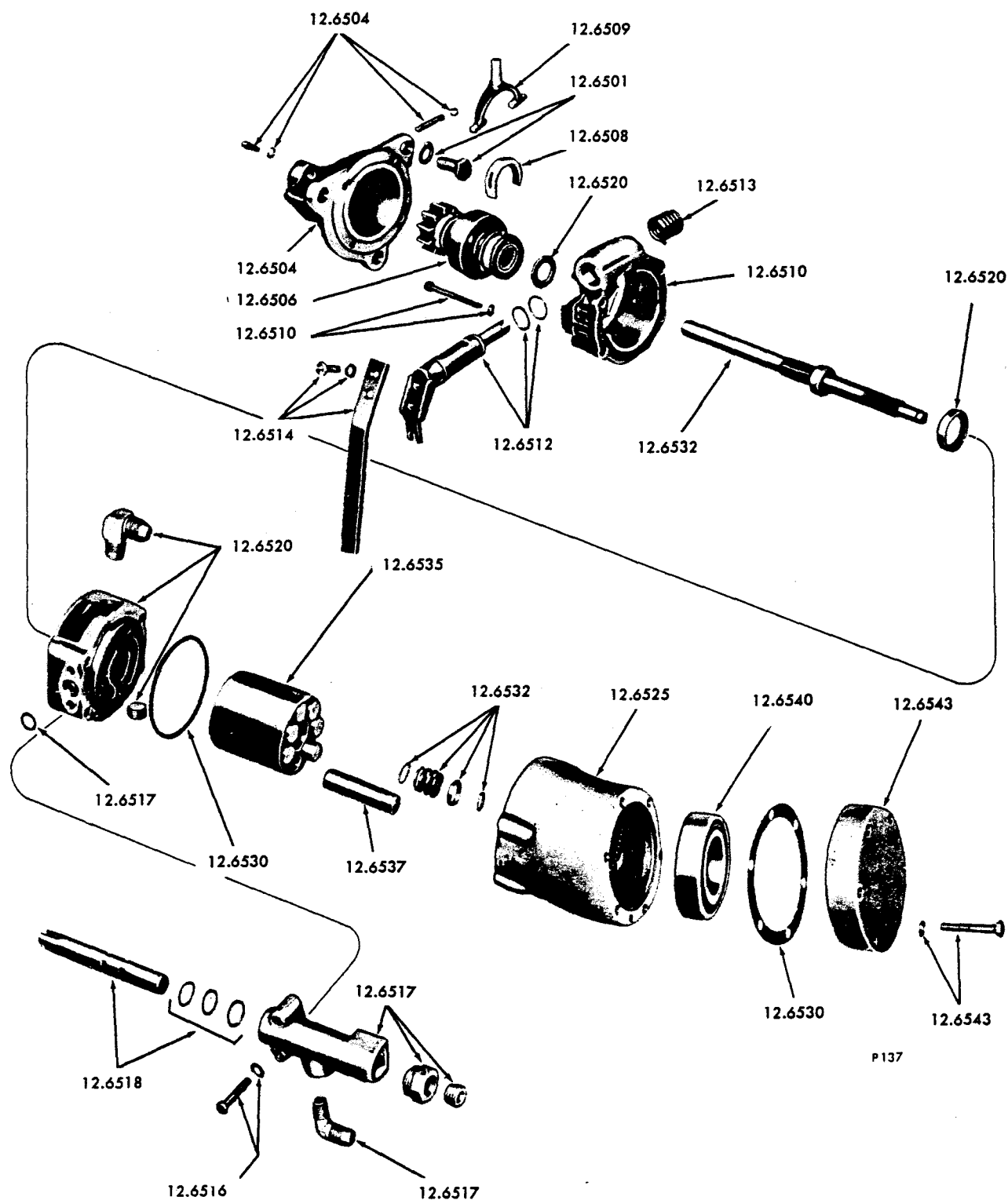


FIG. 6A HYDRAULIC STARTER ASSEMBLY

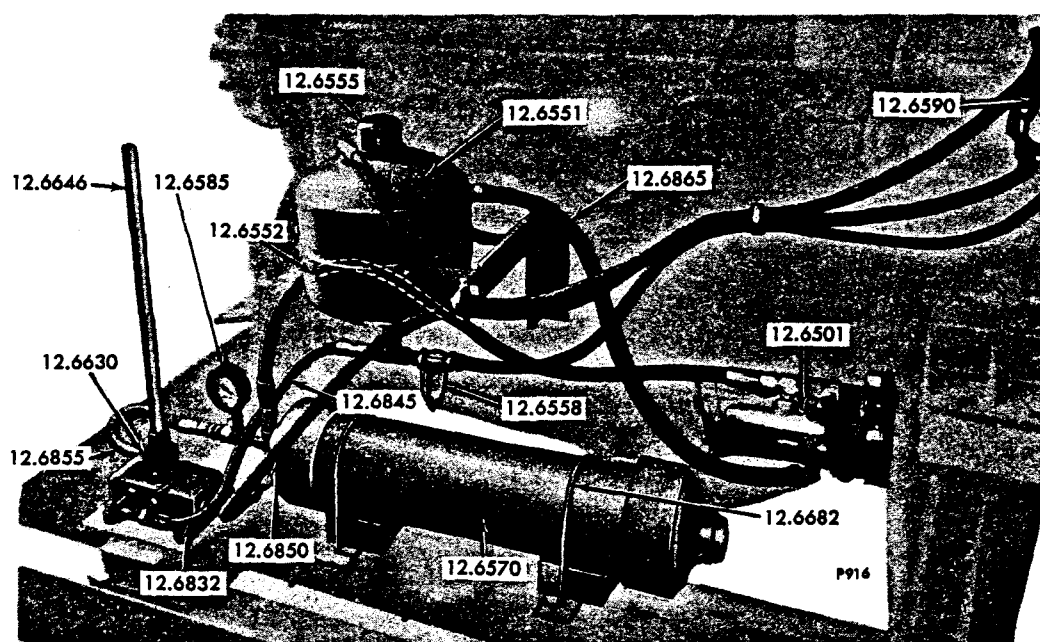


FIG. 5C HYDRAULIC STARTER SYSTEM

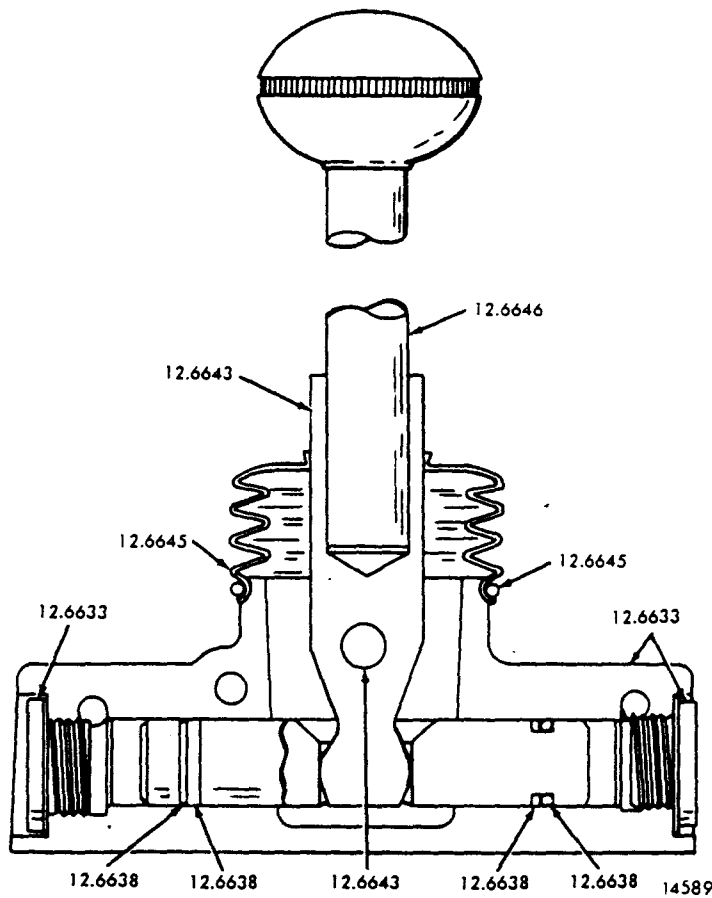


FIG. 6C

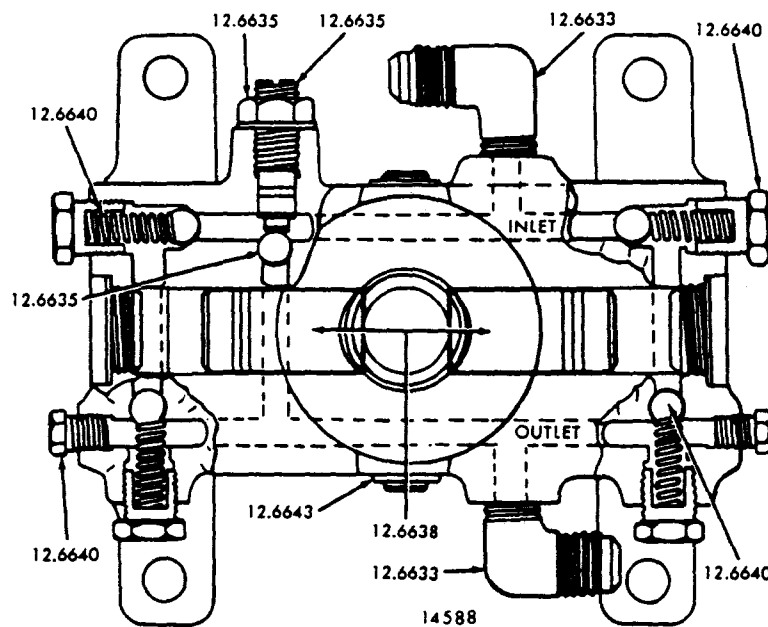


FIG. 6D

HYDRAULIC STARTER HAND PUMP

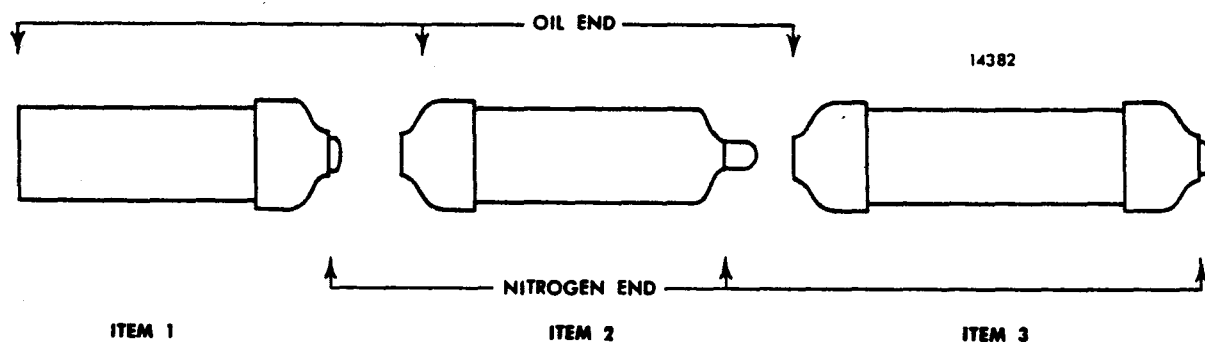


FIG. 6B HYDRAULIC STARTER ACCUMULATOR ASSY. (12.6570)

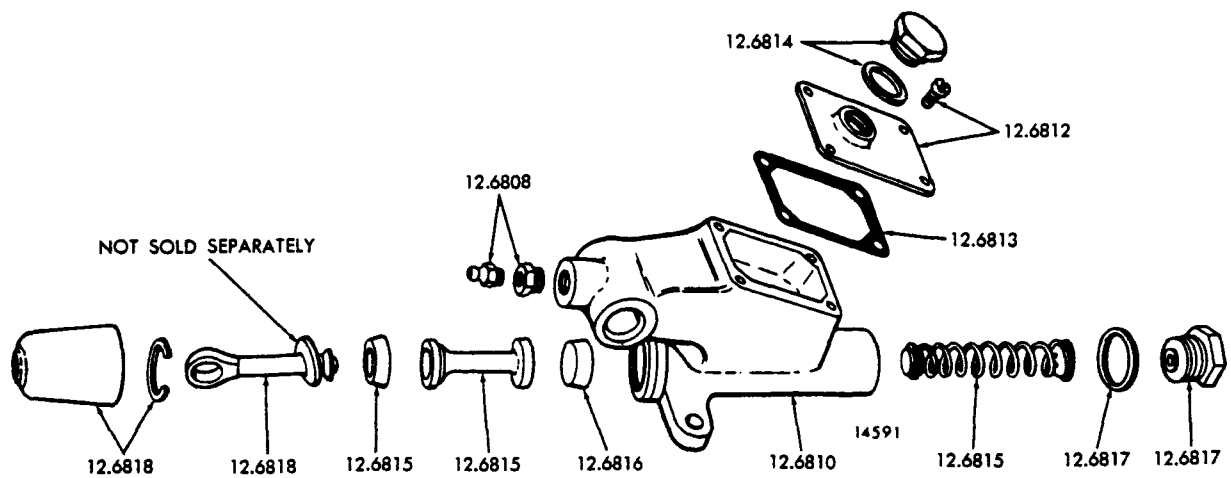


FIG. 7A REMOTE CONTROL MASTER CYLINDER

ENGINES

PART	
FIG	NUMBER NAME AND DESCRIPTION

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1994

12.4000A AIR COMPRESSOR

PART
..FIG ... NUMBER NAME AND DESCRIPTION

		TYPES											
		1	1	1	1	1	1	1	1	1	1	1	1
		0	0	0	0	0	0	0	0	0	0	0	0
		8	8	8	9	9	9	9	9	9	9	9	9
		5	8	9	0	2	4	5	6	7	8	9	0
12.4010 - BRACKET, AIR COMPRESSOR MOUNTING (CONT'D)													
179827	BOLT, 5/16"-18X2 1/4" (12.9001)												2
100015	BOLT, 5/16"-24X1 1/4" (12.9001)												2
179838	BOLT, 3/8"-16X7/8" (12.9001)										2		
186622	BOLT, 3/8"-16X1 1/4" (12.9001)	4								1	1	4	4
5157244	BOLT, 3/8"-16X1 3/4" (4.4190)	1										1	1
9409239	BOLT, 3/8"-16X1 3/4" (12.9001)									2	2		
179849	BOLT, 3/8"-16X2 1/2" (12.9001)									3	3		
179859	BOLT, 7/16"-14X1 1/8" (12.9001)										4		
5128076	BOLT, 7/16"-14X4" (SPECIAL)										1		
5108435	WASHER, 3/8" HARDENED									7	4		
103341	WASHER, 3/8" (12.9190)										3		
103342	WASHER, 7/16" (12.9190)										6		
103320	LOCKWASHER, 5/16" (12.9200)									3	3	4	
103321	LOCKWASHER, 3/8" (12.9200)	5								1	3	5	5
103322	LOCKWASHER, 7/16" (12.9200)										4		6
102635	NUT, 3/8"-16 (12.9120)										2		
441292	NUT, 7/16"-14 (12.9120)										1		
12.4015 - PULLEY, AIR COMPRESSOR													
5130964	PULLEY (6.25" DIA., 2 GROOVES)	1										1	1
5162966	PULLEY (6.25" DIA., 2 GROOVES)									1			
5139653	PULLEY (7.50" DIA., 4 PLOY-VEE GROOVE)										1		
103385	PIN, 1/8"X1" COTTER (12.9250)	1								1	1	1	1
12.4037 - PLATE, AIR COMPRESSOR DRIVE													
5170450	PLATE (1.7630)		1	1	1	1	1	1	1				
5145417	PLATE										1		
5130236	PLATE (ADAPTOR)											1	
5140814	SPACER (7.1610)						1	1					
5108836	STUD, 3/8"-24X1 3/4" (12.9117)		1	1	1	1							
5145092	BOLT, 3/8"-24X1.20" (12.5015)								4				
5145091	BOLT, 3/8"-24X1.38" (12.5015)	3	3	3	3	4	4						
179859	BOLT, 7/16"-14X1 1/8" (12.9001)										4		
179862	BOLT, 7/16"-14X1 1/2" (12.9001)											2	
103322	LOCKWASHER, 7/16" (12.9200)											2	
5145431	NUT, 3/8"-24 JAM CAD. (12.9120)	1	1	1	1								
9413533	NUT, 3/8"-24 JAM (12.9120)	1	1	1	1								
12.4040 - HUB, AIR COMPRESSOR													
5144866	HUB	1	1	1	1	1	1	1					

3C

12.4000A AIR COMPRESSOR

PART		TYPES													
.FIG	NUMBER	NAME AND DESCRIPTION													
		1 0 8 5	1 0 8 8	1 0 8 9	1 0 9 0	1 0 9 2	1 0 9 4	1 0 9 5	1 0 9 6	1 0 9 7	1 0 9 8	1 0 9 9	1 1 0 0	1 1 0 1	
	12.4045 - BELT, AIR COMPRESSOR DRIVE														
	5140187 BELT(45.00"L) (POLY-VEE, 4 GROOVE)										1				
	12.4050 - COUPLING, AIR COMPRESSOR DRIVE														
	5141773 COUPLING		1	1	1	1	1	1	1						
	12.4065 - TUBE, AIR COMPRESSOR LUBE OIL SUPPLY														
	5131140 HOSE, FLEX. (36"L)		1												
	5126893 HOSE, FLEX. (29"L)			1		1	1								
	5130799 HOSE, FLEX. (42"L)				1										
	5199575 HOSE, BULK #6 (CUTL 15")(12.8550)	1											1	1	
	5139343 @ HOSE, FLEX. 28 1/2"L (3.5500)						1								
	5126893 HOSE, FLEX. 29"L						1								
	5142098 HOSE, FLEX. 40"L							1							
	5131146 HOSE, FLEX. 25"L								1						
	5131828 HOSE, FLEX. 20"L									1	1				
	5199575 HOSE, BULK #6 (CUT L 10 1/2") (12.8550)											1			
	442322 CONNECTOR, 5/16" INV. FL TUBE (12.9460)						1								
	118748 CONNECTOR, 1/4" TUBE, 1/8" P.T. (12.9380)			1		1	1		1						
	120401 ELBOW, 1/8" STREET 90 DEG. (12.9590)		1		1										
	9409931 ELBOW, 1/8" STREET 90 DEG. (12.9590)					1	1								
	444052 ELBOW, 1/8" STREET 45 DEG. (12.9550)								1						
	118753 ELBOW, 1/4" TUBE-1/8" P.T. (90 DEG.) (12.9480)			1		1	1		1						
	137422 ELBOW, 5/16" TUBE, 90 DEG.							2							
	9432248 ELBOW, 3/8" TUBE 90 DEG. (12.9590)	2										2	2	2	
	9402801 ELBOW, 5/8" PIPE 45 DEG. (12.9660)									1	2				
	5199579 FITTING, 5/8"-18 INV. FL TUBE (12.8552)	2										2			
	105408 NIPPLE, 1/8"x1 1/2" PIPE (12.9560)								1						
	5145009 PLUG, 1/8" PIPE (12.9550)								2						
	5100136 ADAPTOR, 1/8" PIPE (12.9570) INV. FL.	1					1	1				1	1	1	
	442347 TEE, 5/16" TUBE (12.9490)						1			1					
	115226 BUSHING, 1"x3/8" RED. (12.9570)									1					
	105418 CROSS, 1/8" PIPE								1						
	+ USED WITH VACUUM PUMP.														
	# STD. LENGTH HOSE, CUT TO LENGTH SHOWN.														
	12.4070 - TUBE, AIR COMPRESSOR LUBE OIL DRAIN														
	5135293 * HOSE, FLEX. (11.50"L) (5.7090)	1								1	1	1	1	1	
	5135293 * HOSE, FLEX. (16"L) (12.4085)											1	1	1	
	5113215 FITTING, MALE 5/8" HOSE 1/2"-14	1								1		1	1	1	

12.4000A AIR COMPRESSOR

PART
..FIG... NUMBER NAME AND DESCRIPTION

TYPES

12.4070 - TUBE, AIR COMPRESSOR LUBE OIL DRAIN (CONT'D)

5113192 FITTING, 5/8" HOSE X 5/8" FL TUBE SWIVEL (12.6689)

5114551 TAG, CABEL (7.4545)

9402801 ELBOW, 5/8" PIPE 45 DEG. (12.9600)

144034 BUSHING, 3/4"X1/2" RED. (12.9570)

114505 NUT, 1/2"-13 (12.9120)

* STD. LENGTH HOSE, CUT TO LENGTH SHOWN.

12.4080 - CLIP, AIR COMPRESSOR LUBE OIL TUBE

2488022 CLIP, #6 HOSE (12.8554)

5153473 CLIP, 1/2" TUBE (4.6040)

140582 CLIP, 1/2" TUBE, 3/8" BOLT(12.9630)

12.4085 - TUBE, AIR COMPRESSOR WATER INLET

5129157 + HOSE, FLEX. (12 1/2")

5129157 + HOSE, FLEX. (36 1/2")

5129157 + HOSE, FLEX. (30 1/2")

5129157 + HOSE, FLEX. (27"L)

5129157 + HOSE, FLEX. (38"L)

5129157 + HOSE, FLEX. (10"L)

5115097 COVER

444058 ELBOW, 3/8"-45 DEG. STREET(12.9550)

5130294 ELBOW, 1/2" TUBE 45 DEG. (12.4090)

118757 ELBOW, 1/2" FL TUBE 90 DEG. X3/8" P.T. (12.9390)

137425 ELBOW, 90 DEG., 1/2" INV. FL TUBE (12.9480)

5173854 FITTING, 1/2"X3/4" P.T. (12.3050)

5120020 FITTING, 1/2" HOSE X 1/2" FL TUBE SWIVEL)

5121825 FITTING, 1/2" HOSE X 3/8" EXT. PIPE (12.4090)

186625 BOLT, 5/16"-18X7/8"(12.9001)

121207 NIPPLE, 3/8"X1" PIPE (12.9560)

444122 TEE, 3/8"-18 PIPE (12.9616)

444136 TEE, 3/8"-18 PIPE (12.9616)

118536 DRAINCOCK, 3/8" (12.9510)

134519 DRAINCOCK, 1/8" (12.9510)

5146648 PLUG, 1/2" PIPE (1.3162)

119932 BUSHING, 3/8"X1/8" RED. (12.9570)

142269 BUSHING, 1/2"X3/8" RED. (12.9570)

+ STD. LENGTH HOSE, CUT TO LENGTH SHOWN.

103320 LOCKWASHER, 5/16" (12.9200)

118752 CONNECTOR 1/2" FL. TUBE (12.9380)

DETROIT DIESEL

5 3 M P C

ENGINES

12.4000A AIR COMPRESSOR

FIG	PART NUMBER	NAME AND DESCRIPTION
1	100	100
2	200	200
3	300	300
4	400	400
5	500	500
6	600	600
7	700	700
8	800	800
9	900	900
10	1000	1000
11	1100	1100
12	1200	1200
13	1300	1300
14	1400	1400
15	1500	1500
16	1600	1600
17	1700	1700
18	1800	1800
19	1900	1900
20	2000	2000
21	2100	2100
22	2200	2200
23	2300	2300
24	2400	2400
25	2500	2500
26	2600	2600
27	2700	2700
28	2800	2800
29	2900	2900
30	3000	3000
31	3100	3100
32	3200	3200
33	3300	3300
34	3400	3400
35	3500	3500
36	3600	3600
37	3700	3700
38	3800	3800
39	3900	3900
40	4000	4000
41	4100	4100
42	4200	4200
43	4300	4300
44	4400	4400
45	4500	4500
46	4600	4600
47	4700	4700
48	4800	4800
49	4900	4900
50	5000	5000
51	5100	5100
52	5200	5200
53	5300	5300
54	5400	5400
55	5500	5500
56	5600	5600
57	5700	5700
58	5800	5800
59	5900	5900
60	6000	6000
61	6100	6100
62	6200	6200
63	6300	6300
64	6400	6400
65	6500	6500
66	6600	6600
67	6700	6700
68	6800	6800
69	6900	6900
70	7000	7000
71	7100	7100
72	7200	7200
73	7300	7300
74	7400	7400
75	7500	7500
76	7600	7600
77	7700	7700
78	7800	7800
79	7900	7900
80	8000	8000
81	8100	8100
82	8200	8200
83	8300	8300
84	8400	8400
85	8500	8500
86	8600	8600
87	8700	8700
88	8800	8800
89	8900	8900
90	9000	9000
91	9100	9100
92	9200	9200
93	9300	9300
94	9400	9400
95	9500	9500
96	9600	9600
97	9700	9700
98	9800	9800
99	9900	9900
100	10000	10000

12.4090 - TUBE, AIR COMPRESSOR WATER OUTLET

[illegible]

12.4095 - CLIP, AIR COMPRESSOR WATER TUBE

5173022	BRACKET	1	1	1	1	1
5101020	STRAP					
5160629	SPACER, 13/32" X 7/32" (4.2270)	1		1		
5182628	SPACER, 13/32" X .75" X .15" (12.4065)					1
5157412	SPACER, 7/8" X 13/32" X 1/4" (7.4013)					1
5151189	CLIP, 3/4" (4.8040)	2	1	2	1	2
186625	BOLT, 5/16"-18X7/8" (12.9001)	1	1	1		
179839	BOLT, 3/8"-16X1" (12.9001)					1
186612	BOLT, 3/8"-16X1 3/8" (12.9001)				1	1
192883	BOLT, 3/8"-16X5 1/4" (12.9001)					1
181361	BOLT, 3/8"-24X7/8" (12.9001)					1
181370	BOLT, 3/8"-24X1 1/4" (12.9001)				1	1
103341	WASHER, 3/8" FLAT (12.9190)				1	1
103320	LOCKWASHER, 5/16" (12.9200)	1	1	1		
103321	LOCKWASHER, 3/8" (12.9200)				1	1
120376	NUT, 5/16"-18 (12.9120)	1	1	1		
117049	NUT, 3/8"-24 HEX. (12.9120)				1	1

12.4300 - STRAINER, AIR COMPRESSOR

5110411	STRAINER	1	1	1	1			1	1	1	1	1
5110410	GASKET	1	1	1	X			1	1			
179827	BOLT, 5/16"-18X2 1/4" (12.9001)	2	2	2	2			2	2			
103320	LOCKWASHER, 5/16" (12.9200)	2	2	2	2			2	2			

**12.4375 - TUBE & ELBOW ASSY., AIR
COMPRESSOR B OOSTER INLET**

5132103	FLANGE	1
186629	BOLT, 5/16"-18X1" (12.9001)	2
103320	LOCKWASHER, 5/16" (12.9200)	2

12.6000C COLD WEATHER STARTING AID

PART NUMBER		NAME AND DESCRIPTION	5 6	6 0	TYPES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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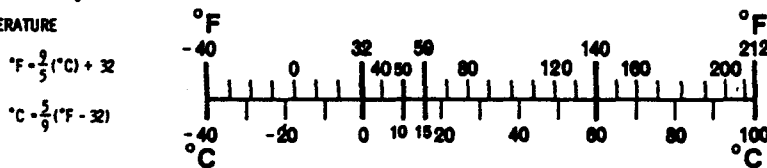
Detroit Diesel Allison
Division of General Motors Corporation

ENGLISH TO METRIC CONVERSIONS

Multiply	by	to get equivalent number of:	Multiply	by	to get equivalent number of:
LENGTH					
Inch	25.4	millimetres (mm)	Foot/sec ²	0.304 8	metre/sec ² (m/s ²)
Foot	0.304 8	metres (m)	Inch/sec ²	0.025 4	metre/sec ²
Yard	0.914 4	metres	TORQUE		
Mile	1.609	kilometres (km)	Pound-inch	0.112 98	newton-metres (N·m)
AREA			Pound-foot	1.355 8	newton-metres
Inch ²	645.2	millimetres ² (mm ²)	POWER		
Foot ²	6.45	centimetres ² (cm ²)	Horsepower	0.746	kilowatts (kW)
Yard ²	0.092 9	metres ² (m ²)	PRESSURE OR STRESS		
VOLUME			Inches of mercury	3.377	kilopascals (kPa)
Inch ³	16 387.	mm ³	Inches of water	0.249 1	kilopascals
	16.387	cm ³	Pounds/sq. in.	6.895	kilopascals
Quart	0.016 4	litres (l)	ENERGY OR WORK		
Gallon	0.946 4	litres	BTU	1 055.	joules (J)
Yard ³	3.785 4	litres	Foot-pound	1.355 8	joules
	0.764 6	metres ³ (m ³)	Kilowatt-hour	3.6 x 10 ⁶ or 3 600 000	joules (J - one W·s)
MASS			LIGHT		
Pound	0.453 6	kilograms (kg)	Footcandle	10.76 4	lumens/metre ² (lm/m ²)
Ton	907.18	kilograms	FUEL PERFORMANCE		
Ton	0.907	tonne (t)	Miles/gal	0.425 1	kilometres/litre (k.m/l)
FORCE			Gal/mile	2.352 7	litres/kilometre (l/k.m)
Kilogram	9.807	newtons (N)	VELOCITY		
Ounce	0.278 0	newtons	Miles/hour	1.609 3	kilometres/hr (k.m/h)
Pound	4.448	newtons			

Degree (angle) 0.017 5 radians (rad)
Ounce (mass)-inch 720.077 8 milligram-metre (mg·m)
(balancing)

TEMPERATURE



USE CONVERSION TABLES LIKE THIS:

13 hp = ? kW Read across the 10 line to the 3 column. Read 9.7 kW

POWER - HORSEPOWER TO KILOWATTS

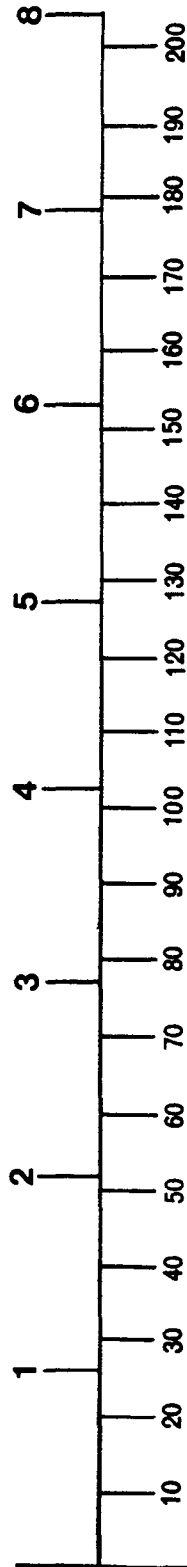
(1 hp = 0.7456999 kW)

hp	0	1	2	3	4	5	6	7	8	9
	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
0		0.75	1.49	2.24	2.98	3.73	4.47	5.22	5.97	
10	7.5	8.2	8.9	9.7	10.4	11.2	11.9	12.7		
20	14.9	15.7	16.4	17.2	17.9	18.6	19.4	20		
30	22.4	23.1	23.9	24.6	25.4	26.1				
40										

11883A

INCHES

MILLIMETRES



12.8000C SERVICE KITS

PART		COLUMN													
FIG	NUMBER	NAME AND DESCRIPTION													
	12.8715	LUBE OIL KIT													
	5149351	KIT, LUBE OIL													
		INCLUDES (1) FILTER ADAPTOR AND													
		(12) SPIN ON ELEMENTS.													
		AR													