

9.1000A HYDRAULIC MARINE GEAR

PART			COLUMN												
FIG	NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J	K	L	M
9.1032 - SHAFT, CLUTCH FORWARD & REVERSE															
4A	5198776	% RING, PISTON CLUTCH SHAFT (END)	6	6	6	6	6	6	6	6	6	6			
4A	5198779	% RING, PISTON CLUTCH SHAFT (CENTER)	2	2	2	2	2	2	2	2	2	2			
4A	5198830	% PLUG, 1/16" (SOCKET)	2	2	2	2	2	2	2	2	2	2			
4A	5198532	% PLUG, 1/16" (ORIFICE)	2	2	2	2	2	2	2	2	2	2			
% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.															

9.1000A HYDRAULIC MARINE GEAR

			COLUMN													
PART FIG . . . NUMBER NAME AND DESCRIPTION			A	B	C	D	E	F	G	H	I	J	K	L	M	N
9.1033 - BEARING, CLUTCH SHAFT																
A	5198544	% BEARING, ROLLER TAPER	4	4	4	4	4	4	4	4	4	4				
A	5198524	WASHER, THRUST	2	2	2	2	2	2	2	2	2	2				
% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.																
9.1036 - GEAR ASSY., CLUTCH HUB																
A	5198774	% GEAR (2.42:1 RATIO)	2					2			2					
A	5198810	% GEAR (1.93:1 RATIO)		2		2				2		2				
A	5198879	% GEAR (2.91:1 RATIO)			2				2							
A	5198806	GEAR (1.47:1 RATIO)					2									
% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.																
9.1041 - BEARING, THRUST CLUTCH HOUSING GEAR																
A	5198523	% BEARING, NEEDLE	4	4	4	4	4	4	4	4	4	4	4			
A	5198823	% RACE, THRUST	4	4	4	4	4	4	4	4	4	4	4			
A	5198522	% RACE (NEEDLE BEARING)	2	2	2	2	2	2	2	2	2	2	2			
% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.																
9.1055 - SPRING, REVERSE CLUTCH RELEASE																
A	5197354	SPRING - CLUTCH PISTON	2	2	2	2	2	2	2	2	2	2	2			
9.1060 - PLATE, REVERSE CLUTCH REACTION																
A	5198782	% PLATE - BACK CLUTCH	2		2	2		2	2	2	2	2	2			
A	5198895	% PLATE - BACK CLUTCH		2			2									
% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.																
9.1062 - PLATE, CLUTCH																
A	5198896	% PLATE, DRIVING		18			18									
A	5198783	% PLATE, DRIVING	18		18	18										
A	5198784	% PLATE, DRIVEN	16	16	16	16	16	16	16	16						
A	5149089	% PLATE, DRIVING						18	18	18	18	18	18			
% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.																
9.1065 - RING, CLUTCH REACTION PLATE SNAP																
	5199046	% SNAP RING	1	1	1	1	1	1	1	1	1	1	1			
% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.																

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			COLUMN													
FIG	PART NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J	K	L	M	N
9.1135 - VALVE ASSY., SELECTOR																
A VALVE ASSY. INCLUDES ITEMS IN 9.1136 THRU 9.1197.																
4B	5199048	% VALVE ASSY.	1	1	1	1	1	1	1	1	1	1				
4B	179848	BOLT, 3/8"-16X2 1/4" (12.9001)	2	2	2	2	2	2	2							

9.1000A HYDRAULIC MARINE GEAR

			COLUMN													
FIG	PART NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J	K	L	M	N
9.1135 - VALVE ASSY., SELECTOR (CONT'D)																
B	179839	BOLT, 3/8"-16X1" (12.9001) % NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.	1	1	1	1	1	1	1							
9.1136 - HOUSING, SELECTOR VALVE																
B	5199049	% HOUSING						1	1							
B	5198757	% HOUSING	1	1	1	1	1			1	1	1				
B	5198533	% PLUG, 1"-12	1	1	1	1	1	1	1	1	1	1				
B	5198521	% WASHER, SEAL	1	1	1	1	1	1	1	1	1	1				
	5149087	% PLUG, 1 5/16"-12						1	1	2	1	1				
	5198666	% SEAL RING						1	1	1	1	1				
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
9.1137 - VALVE, SELECTOR																
B	5198766	% VALVE	1	1	1	1	1	1	1	1	1	1				
	5198812	% SHIM	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR				
	457008	PIN, SPRING 5/16"X1 1/2"	1	1	1	1	1	1	1	1	1	1				
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
9.1138 - STEM, SELECTOR VALVE																
B	5198767	% STEM (DIRECTION)	1	1	1	1	1	1	1	1	1	1				
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
9.1139 - SEAL, SELECTOR VALVE STEM																
B	5198516	% SEAL RING	1	1	1	1	1	1	1	1	1	1				
B	5198825	% BEARING, NEEDLE THRUST	1	1	1	1	1	1	1	1	1	1				
B	5198824	% RACE, THRUST	2	2	2	2	2	1	1	1	1	1				
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
9.1147 - SPRING, SELECTOR VALVE REGULATOR																
B	5198763	% SPRING (INNER)	1	1	1	1	1	1	1	1	1	1				
B	5198764	% SPRING (OUTER)	1	1	1	1	1	1	1	1	1	1				
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
9.1148 - SPACER, SELECTOR VALVE SPRING																
B	5198762	% SPACER	1	1	1	1	1	1	1	1	1	1				
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														

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PART
 .FIG . . . NUMBER NAME AND DESCRIPTION

COLUMN

9.1175 - LEVER, SELECTOR VALVE OPERATING

4B 5198759 % LEVER
 4B 5198761 % PLATE, DETENT
 4B 104920 BALL, 3/8" DETENT (12.9670)

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	1	1	1				

9.1000A HYDRAULIC MARINE GEAR

PART			COLUMN													
FIG	NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J	K	L	M	N
9.1175 - LEVER, SELECTOR VALVE OPERATING (CONT'D)																
B	5198765	% SPRING, DETENT	1	1	1	1	1	1	1	1	1	1				
B	5149083	% SPRING, COMPRESSION		1			1									
B	5149084	% BOLT, 1/4"-20X.88" HEX. SOC. HD.	1	1	1	1	1	1	1	1	1	1				
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
9.1178 - COVER, HYDRAULIC CONTROL VALVE																
B	5198760	% COVER	1	1	1	1	1	1	1	1	1	1				
B	114861	BALL, 9/32" (12.9670)	1	1	1	1	1	1	1	1	1	1				
B	189132	BOLT, #10-24X5/8" (12.9027)	4		4	4		4	4	4	4	4				
B	5149085	% BOLT, 3/16"-24X.88" HEX. SOC. HD.		4			4									
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
9.1179 - GASKET, HYDRAULIC CONTROL VALVE COVER																
B	5198758	% GASKET	1	1	1	1	1	1	1	1	1	1				
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
9.1191 - GASKET, CONTROL VALVE PRESSURE REGULATOR																
B	5198515	% RING, SEAL	1	1	1	1	1	1	1	1	1	1				
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
9.1194 - VALVE, PRESSURE REGULATOR RELIEF																
B	5198742	% PISTON (VALVE)	1	1	1	1	1	1	1	1	1	1				
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
9.1195 - SPRING, PRESSURE REGULATOR RELIEF VALVE																
B	5198751	% SPRING	1	1	1	1	1	1	1	1	1	1				
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
9.1197 - PLUG, CONTROL VALVE PRESSURE REGULATOR																
B	5198517	% PLUG	1	1	1	1	1	1	1	1	1	1				
B	455277	PIN, 1/8"X1 1/8" SPRING (12.9275)	1	1	1	1	1	1	1	1	1	1				
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														

9.1000A HYDRAULIC MARINE GEAR

		COLUMN													
FIG	PART NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J	K	L	M
		9.1287 - GEAR, REDUCTION GEAR INPUT													
4A	5198770	% GEAR % NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.	1	1	1	1	1	1	1	1	1	1			

9.1000A HYDRAULIC MARINE GEAR

PART			COLUMN												
FIG	NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J	K	L	M
9.1310 - GEAR, REDUCTION															
4B	5198773	% GEAR, OUTPUT (2.42:1)	1												
4B	5198809	% GEAR, OUTPUT (1.93:1)		1		1				1		1			
4B	5198881	GEAR, OUTPUT (2.91:1)			1				1		1	1			
4B	5198805	GEAR, OUTPUT (1.47:1)					1	1							
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.													
9.1340 - SHAFT, REDUCTION GEAR DRIVE															
4B	5198747	% SHAFT, OUTPUT (2.42:1, 2.91:1)	1		1			1	1		1	1			
4B	5198790	% SHAFT, OUTPUT (1.47:1, 1.93:1)		1		1	1			1					
4B	5198949	% KEY, 1/2"X3/8"X1 1/4"		1		1	1			1					
4B	5198832	KEY, 1/2"X3/8"X2"	1		1		1	1	1		1	1			
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.													
9.1345 - BEARING, REDUCTION GEAR DRIVE SHAFT PILOT															
1B	5198546	% BEARING, ROLLER TAPER	1		1			1	1	1	1	1			
4B	5199011	% BEARING, ROLLER TAPER		1		1	1								
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.													
9.1350 - BEARING, REDUCTION GEAR DRIVE SHAFT THRUST															
1B	457441	BEARING, ROLLER TAPER	1		1			1	1	1	1	1			
1B	5199012	% BEARING, ROLLER TAPER		1		1	1								
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.													
9.1365 - COVER, REDUCTION GEAR BEARING															
1B	5198745	RETAINER	1		1			1	1	1	1	1			
1B	5198897	% RETAINER		1		1	1			1	1	1			
1B	180175	BOLT, 1/2"-13X1 1/4" (12.9001)	3	3	3	3	3	3	3	3	3	3			
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.													
9.1370 - GASKET, REDUCTION GEAR BEARING COVER															
1B	5198814	SHIM (.005")	AR		AR			AR	AR	AR	AR	AR			
1B	5198815	SHIM (.007")	AR		AR			AR	AR	AR	AR	AR			
1B	5198802	% SHIM (.005")		AR		AR	AR								
1B	5198803	% SHIM (.007")		AR		AR	AR								
1B	5198816	SHIM (.020")	AR		AR			AR	AR	AR	AR	AR			
1B	5198804	% SHIM (.020")		AR		AR	AR								
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.													

9.1000A HYDRAULIC MARINE GEAR

			COLUMN													
FIG	PART NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J	K	L	M	N
		9.1375 - SEAL, REDUCTION GEAR BEARING COVER OIL														
4B	5198750	% SEAL	1		1			1	1	1	1	1				
4B	5198792	SEAL (9.1018)		1		1	1									
		% NOT SERVICED, PROCURE THRU TWIN DISC INC. 1328 RACINE ST. RACINE, WISC. 53403 OR NEAREST OUTLET.														

9.1000A HYDRAULIC MARINE GEAR

			COLUMN													
PART FIG . . . NUMBER NAME AND DESCRIPTION			A	B	C	D	E	F	G	H	I	J	K	L	M	N
9.1395 - DIPSTICK, REDUCTION GEAR																
4B	5198777	% DIPSTICK	1	1	1	1	1									
4B	5199043	% DIPSTICK						1	1	1	1	1				
% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.																
9.1400 - GUIDE, REDUCTION GEAR DIPSTICK																
5149088	% PLUG, 3/4"-16							1	1	1	1	1				
% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.																
9.1405 - GASKET, REDUCTION GEAR DIPSTICK																
5198665	% GASKET							2	2	2	2	2				
% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.																
9.1410 - TUBE, REDUCTION GEAR OIL FILLER																
1B	5191238	TUBE ASSY. (INCLUDES BAFFLE, NOT SOLD SEPARATELY)	1	1	1	1	1									
1B	5199051	TUBE ASSY. (INCLUDES BAFFLE, NOT SOLD SEPARATELY)						1	1	1	1	1				
9.1415 - CAP, REDUCTION GEAR OIL FILLER																
1B	1528732	CAP	1	1	1	1	1			1	1	1				
9.1430 - FLANGE, PROPELLER DRIVE																
1B	5198740	% FLANGE, OUTPUT	1		1			1	1		1	1				
1B	5198811	% FLANGE, OUTPUT		1		1	1			1						
% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.																
9.1435 - NUT, PROPELLER DRIVE FLANGE																
1B	5198813	% RING, SEAL	1		1			1	1		1	1				
1B	5198775	% RING, SEAL		1		1	1			1						
1B	5198664	% LOCK PLATE	1		1			1	1		1	1				
1B	181427	BOLT, 1/2"-20X1" (12.9001)	3		3			3	3		3	3				
1B	223809	BOLT, 1/2"-20X1" (12.9001)		1		1	1			1						
1B	5198520	% WASHER, RETAINER	1		1			1	1		1	1				
1B	5199548	+ WASHER, RETAINER		1		1	1			1						
+ OBSOLETE. % NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.																

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PART		COLUMN													
FIG	NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J	K	L	M
		9.1440 - COUPLING, PROPELLER DRIVE SHAFT													
5198789		% FLANGE ASSY. (1 1/4" BORE)	1	1	1		1	1	1	1	1	1			
5198808		FLANGE ASSY. (1 3/8" BORE)				1									
424269		KEY, 1/2"X1/2"X3 3/4"						1	1						

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			COLUMN													
FIG	PART NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J	K	L	M	N
9.1440 - COUPLING, PROPELLER DRIVE SHAFT (CONT'D)																
	271587	BOLT, 5/8"-18X2" (12.9001)						6	6							
	271592	BOLT, 5/8"-18X3 1/4" (12.9001)						2	2							
	NPN	LOCKWASHER, 5/8"						2	2							
	114498	NUT, 5/8"-18 JAM (12.9120)						2	2							
	NPN	NUT, 5/8"						6	6							
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
9.1475 - PUMP ASSY., HYDRAULIC MARINE GEAR OIL																
4B	5198744	% PUMP ASSY.	1	1	1	1	1	1	1	1	1	1				
4B	179816	BOLT, 5/16"-18X3/4" (12.9001)	4	4	4	4	4	4	4	4	4	4				
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
9.1477 - ADAPTOR, MARINE GEAR OIL PUMP																
4B	5198739	% ADAPTOR	1	1	1	1	1	1	1	1	1	1				
4B	179839	BOLT, 3/8"-16X1" (12.9001)	3	3	3	3	3	3	3	3	3	3				
4B	179848	BOLT, 3/8"-16X2 1/4" (12.9001)	1	1	1	1	1	1	1	1	1	1				
	106261	WASHER, 5/16" (12.9190)	4	4	4	4	4									
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
9.1478 - GASKET, MARINE GEAR OIL PUMP ADAPTOR																
4B	5198793	% SHIM (.005")	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR			
4B	5198794	% SHIM (.007")	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR			
4B	5198795	% SHIM (.020")	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR			
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
9.1480 - GASKET, HYDRAULIC MARINE GEAR OIL PUMP																
4B	5198741	% GASKET, PUMP	1	1	1	1	1	1	1	1	1	1				
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
9.1593 - TUBE, HYDRAULIC PUMP TO CONTROL VALVE																
4B	5199556	% TUBE	1	1	1	1	1	1	1	1	1	1				
4B	5199074	% CONNECTOR	2	2	2	2	2	2	2	2	2	2				
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														

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			COLUMN													
PART FIG . . . NUMBER NAME AND DESCRIPTION			A	B	C	D	E	F	G	H	I	J	K	L	M	N
9.1598 - TUBE, CONTROL VALVE TO HYDRAULIC PUMP HOUSING																
IB	5198754	% TUBE	1	1	1	1	1	1	1	1	1	1				
IB	5199072	% ELBOW, 90 DEG.	1	1	1	1	1	1	1	1	1	1				
IB	5199553	% ELBOW	1	1	1	1	1	1	1	1	1	1				

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			COLUMN													
FIG	PART NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J	K	L	M	N
		9.1598 - TUBE, CONTROL VALVE TO HYDRAULIC PUMP HOUSING (CONT'D)														
IB	5199073	CONNECTOR	1	1	1	1	1	1	1	1	1	1				
IB	5199554	% NIPPLE	1	1	1	1	1	1	1	1	1	1				
		* NOT SERVICED; USE 5199555 TUBE PLUS (1) 5199553 ELBOW AND (1) 5199554 NIPPLE.														
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
		9.1650 - STRAINER, MARINE GEAR OIL														
IB	5198752	% STRAINER	1	1	1	1	1	1	1	1	1	1				
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
		9.1720 - TUBE, MARINE GEAR OIL STRAINER TO PUMP														
IA	5198787	% HOSE	1	1	1	1	1									
	5199042	HOSE						1	1	1	1	1				
IA	119094	ELBOW, 1/2", 45 DEG. PIPE (12.9600)						1	1	1	1	1				
IA	119098	ELBOW, 1/2", 90 DEG. PIPE (12.9600)														
	5198789	% NIPPLE, 1/2" X 1 1/2" PIPE	2	2	2	2	2									
	9409539	UNION, 1/2" PIPE	1	1	1	1	1									
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
		9.1840 - BREATHER, MARINE GEAR														
	5199044	% BREATHER						1	1	1	1	1				
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														

9.1000A HYDRAULIC MARINE GEAR

PART FIG ... NUMBER ... NAME AND DESCRIPTION			COLUMN												
			A	B	C	D	E	F	G	H	I	J	K	L	M
															N
9.1001 - GEAR ASSEMBLY, HYDRAULIC MARINE															
A	5144970	# GEAR ASSY. (1.47:1)	1												
A	5134384	GEAR ASSY. (1.47:1)		1											
A	5134385	GEAR ASSY. (1.93:1)			1										
A	5106313	GEAR ASSY. (2.9:1)				1									
A	5106312	GEAR ASSY. (2.3:1 RED) (RH)					1								
A	5106316	GEAR ASSY. (1.5:1 RED) (R.H.)						1							
A	5106317	GEAR ASSY. (1.5:1 RED) (L.H.)							1						
A	5106318	GEAR ASSY. (2:1 RED) (R.H.)								1					
A	5106319	GEAR ASSY. (2:1 RED) (L.H.)									1				
A	5106320	GEAR ASSY. (2.1:1 RED) (R.H.)										1			
A	5106321	GEAR ASSY. (2.1:1 RED) (R.H.)											1		
A	5106322	GEAR ASSY. (2.6:1 RED) (R.H.)												1	
A	5106323	GEAR ASSY. (2.6:1)													1
A	5106324	GEAR ASSY. (2.9:1)													1
	179839	BOLT, 3/8"-16X1" (12.9001)	12	12	12										
		# NOT SERVICED; SHOWN FOR REFERENCE ONLY.													
9.1006 - COUPLING, MARINE GEAR DRIVE															
A	5198785	% RING, DRIVE	1												
	5198889	* RING, DRIVE (FIBER)		1	1										
	5149086	WASHER, 3/8" PLAIN		8	8										
		* NOT SERVICED; REPLACE WITH KIT 5198700 IN 9.1016.													
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.													
9.1007 - ADAPTOR, MARINE GEAR HOUSING															
A	5198322	ADAPTOR ASSY. (INCLUDES BEARING)				1	1	1	1	1	1	1	1	1	1
A	455724	BEARING (NEEDLE)				1	1	1	1	1	1	1	1	1	1
A	5197537	BOLT, 3/8"-16X1 1/4"				4	4	4	4	4	4	4	4	4	4
9.1008 - GASKET, MARINE GEAR HOUSING															
A	5198898	% GASKET	1	1	1										
A	5196181	GASKET				1	1	1	1	1	1	1	1	1	1
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.													
9.1009 - SPIDER, MARINE GEAR DRIVE															
A	5198786	% SPIDER	1												
	5198891	* SPIDER		1	1										
A	5198768	BLOCK (RUBBER)	20												
		* NOT SERVICED; REPLACE WITH KIT 5198700 IN 9.1016.													
9.1010 - HOUSING ASSY., REVERSE GEAR															
		A HOUSING ASSY. INCLUDES A HOUSING AND COVER WHICH ARE NOT SERVICED SEPARATELY, GASKET IN 9.1008 & ITEMS INDICATED (=) IN 9.1010.													
B	5149072	% HOUSING ASSY. (1.47:1, 1.93:1)	1												

9.1000A HYDRAULIC MARINE GEAR

PART
 .FIG . . . NUMBER NAME AND DESCRIPTION

9.1010 - HOUSING ASSY., REVERSE GEAR
 (CONT'D)

4B 5149090 HOUSING ASSY. (1.47:1, 1.93:1)
 2A 5149807 HOUSING ASSY.
 2A 5149754 HOUSING ASSY.

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

9.1000A HYDRAULIC MARINE GEAR

			COLUMN													
FIG	PART NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J	K	L	M	N
		9.1010 - HOUSING ASSY., REVERSE GEAR (CONT'D)														
	5198781	= PLATE, NAME	1	1	1											
	5149696	PLATE, NAME				1										
	5149695	PLATE, NAME					1									
	5149756	PLATE, NAME						1								
	5149829	PLATE, NAME							1							
	5149828	PLATE, NAME								1						
	5149837	PLATE, NAME									1					
	5149838	PLATE, NAME										1				
	5149839	PLATE, NAME											1			
	5149840	PLATE, NAME												1		
	5149841	PLATE, NAME													1	
	5149842	PLATE, NAME														1
	5198894	% = PLATE, ROTATION INDICATOR	1	1	1											
	103870	PLUG, 1" PIPE (DRAIN) (12.9550)		1	1											
1A	5149071	% PLUG, DRAIN	1													
	5196511	BUSHING				2										
	141264	= PIN, DOWEL (1"x7/16" DIA.)	2	2	2											
	192413	= SCREW, #4X1/4" DRIVE (12.9067)	6	6	6											
	190073	SCREW, #2X3/16" DRIVE (12.9061)				2	2	2	2	2	2	2	2	2	2	2
	180175	BOLT, 5/8"-18X1 1/4"	9	9	9											
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
		9.1014 - RETAINER, SPIDER DRIVE														
1A	5149082	% WASHER, RETAINER	1													
1A	5198519	% WASHER, RETAINER		1	1											
1A	5198518	% LOCKPLATE		1	1											
1A	5198831	% PIN	1													
1A	5149081	% PIN		1	1											
1A	271581	BOLT, 5/8"-18X1 1/4" (12.9001)	1													
1A	223809	BOLT, 5/8"-18X1 1/2" (12.9001)		1	1											
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
		9.1016 - CONVERSION KIT, MARINE GEAR														
		NOTE: INCLUDES 5198785 DRIVE RING IN 9.1006, 5198786 SPIDER AND 5198768 BLOCKS IN 9.1009, NAME PLATE AND DR IVE SCREWS IN 9.1010 PLUS 5198518 LOCKPLATE IN 9.1014.														
	5198700	+ CONVERSION KIT		1	1											
		+ NOT SERVICED, PROCURE THRU TWIN DISC. INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
		9.1018 - SEAL, MARINE GEAR INPUT SHAFT														
1A	5198749	@ SEAL	1	1	1											
		@ NOT SERVICED, PROCURE THRU TWIN DISC. INC., 1328 RACINE ST., RACINE, WISC 53403 OR NEAREST OUTLET.														

9.1000A HYDRAULIC MARINE GEAR

			COLUMN												
FIG	PART NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J	K	L	M
9.1024 - SUPPORT, INPUT SHAFT BEARING															
4A	5198753	% SUPPORT	1	1	1										
4A	5198796	% SHIM (.005" THICK)	AR	AR	AR										
4A	5198797	% SHIM (.007" THICK)	AR	AR	AR										
4A	5198798	% SHIM (.020" THICK)	AR	AR	AR										
4A	179839	BOLT, 3/8"-16X1" (12.9001)	6	6	6										
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.													
9.1026 - SHAFT, MARINE GEAR INPUT															
4A	5198746	% SHAFT (1.47:1, 1.93:1)	1	1	1										
2A	5198244	SHAFT ASSY. (INCLUDES FLANGED KEY IN 9.1475)				1	1	1	1	1	1	1	1	1	1
4A	5198531	% KEY, WOODRUFF (3/8"X1/4"X1 1/8")	1	1	1										
4A	5198831	% KEY, WOODRUFF (3/8"X1/4"X1 3/8")	1	1	1										
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.													
9.1027 - BEARING, MARINE GEAR INPUT SHAFT															
4A	5198545	+ BEARING, ROLLER	2	2	2										
2A	5149670	BEARING				1	1								
2A	9416195	BEARING						1	1	1	1	1	1	1	1
2A	3709351	RING, SNAP (1 1/4" DIA.)				1	1	1	1	1	1			1	1
2A	5196193	RING, SNAP (2 1/4" DIA.)				1	1								
2A	5196267	RING, SNAP													
2A	5196545	RING, SNAP (2 29/64" DIA.)						1	1	1	1	1	1	1	1
2A	5196543	RING, SNAP (1 29/64" DIA.)						1	1	1	1	1	1	1	1
		+ NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC 53403 OR NEAREST OUTLET.													
9.1028 - GEAR, FORWARD CLUTCH															
4A	5199280	% # GEAR & SHAFT ASSY.	1	1	1										
		# INCLUDES A BUSHING; NOT SERVICED SEPARATELY.													
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.													
9.1029 - GEAR, REVERSE CLUTCH															
4A	5199281	# GEAR & SHAFT ASSY.	1	1	1										
		# INCLUDES A BUSHING; NOT SERVICED SEPARATELY.													
9.1030 - PISTON, REVERSE CLUTCH															
4A	5198743	% PISTON	2	2	2										
2A	5196183	PISTON				1	1	1	1	1	1	1	1	1	1
4A	5198780	RING, CLUTCH PISTON	2	2	2										
4A	5199047	% RING, SNAP	2	2	2										

9.1000A HYDRAULIC MARINE GEAR

PART FIG . . . NUMBER NAME AND DESCRIPTION			COLUMN													
			A	B	C	D	E	F	G	H	I	J	K	L	M	N
9.1030 - PISTON, REVERSE CLUTCH (CONT'D)																
% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.																
9.1032 - SHAFT, CLUTCH FORWARD AND REVERSE																
A	5198776	% RING, PISTON CLUTCH SHAFT (END)	6	6	6											
A	5198779	% RING, PISTON CLUTCH SHAFT (CENTER)	2	2	2											
	5149834	RING, RETAINING								1	1					
A	5198532	PLUG, 1/16" (ORIFICE)	2	2	2											
A	5198830	% PLUG, 1/16" (SOCKET)	2	2	2											
	5149835	PLUG, ORIFICE								6	6					
% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.																
9.1033 - BEARING, CLUTCH SHAFT																
A	5198544	% BEARING, ROLLER TAPER	4	4	4											
A	5198524	% WASHER, THRUST	2	2	2											
% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.																
9.1035 - SEAL, REVERSE CLUTCH PISTON																
A	5196180	SEAL, RING (7 1/2" DIA.)				1	1	1	1	1	1	1	1	1	1	1
A	5196188	SEAL, RING (3 1/2" DIA.)				1	1	1	1	1	1	1	1	1	1	1
9.1036 - GEAR ASSY., CLUTCH HUB																
A	5198806	# GEAR ASSY. (1.47:1 RATIO)	2	2												
A	5198810	% GEAR ASSY. (1.93:1 RATIO)			2											
# INCLUDES A BUSHING; NOT SERVICED SEPARATELY.																
% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.																
9.1041 - BEARING, THRUST CLUTCH HOUSING GEAR																
A	5198523	% BEARING, NEEDLE	4	4	4											
A	5198823	% RACE, THRUST	4	4	4											
A	5198522	% RACE (NEEDLE BEARING)	2	2	2											
% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.																
9.1045 - PLATE, REVERSE CLUTCH DISC.																
A	5149757	PLATE (SPLINED)				2	2	3	3	3	3	3	3	3	3	3
A	5196303	PLATE				1	1	2	2	2	2	2	2	2	2	2

9.1000A HYDRAULIC MARINE GEAR

PART			COLUMN													
..FIG ..	NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J	K	L	M	N
9.1055 - SPRING, REVERSE CLUTCH RELEASE																
4A	5197354	% SPRING, CLUTCH PISTON	2	2	2											
2A	5196186	SPRING				12	12	12	12	12	12	12	12	12	12	12
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
9.1060 - PLATE, REVERSE CLUTCH																
4A	5198895	% PLATE, BACK	2	2	2											
2A	5196184	PLATE				1	1	1	1	1	1	1	1	1	1	1
2A	3712718	PIN (6.23** L)				3	3									
2A	5196733	PIN, 5/16"X27/32"						3	3	3	3	3	3	3	3	3
2A	5121182	PLUG, 1/4" PIPE (2.4015)				1	1	1	1	1	1	1	1	1	1	1
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														

9.1000A HYDRAULIC MARINE GEAR

PART FIG . . . NUMBER NAME AND DESCRIPTION			COLUMN												
			A	B	C	D	E	F	G	H	I	J	K	L	M
9.1062 - PLATE, CLUTCH															
4A	5149089	PLATE, DRIVING	18												
4A	5198896	% PLATE, DRIVING		18	18										
4A	5198784	% PLATE, DRIVEN	16	16	16										
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.													
9.1065 - RING, CLUTCH REACTION PLATE SNAP															
	5199046	% SNAP RING	2	2	2										
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.													
9.1080 - GEAR ASSY., MARINE GEAR PLANETARY															
		INCLUDES BUSHING IN 9.1087.													
2A	5197209	GEAR ASSY.								1	1				
	5196246	GEAR ASSY. (2.5:1 & 3:1 RED)				1									
2A	5196272	SCREEN								1	1				
2A	5197230	BOLT, 5/16"-18								6	6				
2A	103320	LOCKWASHER, 5/16" (12.9200)								6	6				
9.1081 - CAGE, PLANETARY GEAR															
2A	5149702	CAGE PINION & SHAFT DRIVEN ASSY.				1									
2A	5149811	CAGE PINION & SHAFT ASSY.					1	1							
2A	5149760	CAGE PINION & SHAFT ASSY.							1						
2A	5149815	CAGE PINION & SHAFT ASSY.								1	1			1	1
2A	5149814	CAGE PINION & SHAFT ASSY.										1	1		
9.1085 - WASHER, MARINE GEAR PLANETARY GEAR THRUST															
2A	5196211	WASHER (1 3/4" O.D.)				1	1	1	1	1	1	1	1	1	1
2A	5149762	WASHER						1	1						
9.1087 - BEARING, MARINE GEAR PLANETARY GEAR															
B,D	5197342	BEARING (2.5:1 & 3:1 RED) (9.1350)				1				1	1			1	1
B,D	5199063	BEARING						1	1						
B,D	5196259	RING, SNAP (1 27/64" DIA.)				1				1	1			1	1
B,D	5196254	RING, SNAP						1	1						
	5199829	BUSHING				2	2	2	2	2	2	3	3	2	2
9.1091 - GEAR, MARINE GEAR PLANETARY RING															
A	5196208	GEAR				1	1								
A	5196549	GEAR						1	1	1	1	1	1	1	1
A	5196199	RING, SNAP (5 7/8" O.D.)				1	1	1	1	1	1	1	1	1	1

9.1000A HYDRAULIC MARINE GEAR

PART			COLUMN												
FIG	NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J	K	L	M
9.1093 - SHAFT, MARINE GEAR OUTPUT															
INCLUDES BUSHING IN 9.1087.															
5149820	SHAFT AND BUSHING ASSY.					1	1								
5149761	SHAFT OUTPUT AND BUSHING ASSY.							1	1						
5149818	SHAFT OUTPUT AND BUSHING ASSY.									1	1			1	1
5149822	SHAFT OUTPUT AND BUSHING ASSY.											1	1		
9.1097 - BEARING, OUTPUT SHAFT															
2B,C,D	5149677	CUP, BEARING				1	1	1	1	1	1	1	1	1	1
2B,C,D	5149679	CUP, BEARING				1	1	1	1	1	1	1	1	1	1
2B,C,D	5149680	CONE, BEARING				1	1	1	1	1	1	1	1	1	1
2B,C,D	5149678	CONE, BEARING				1	1	1	1	1	1	1	1	1	1

9.1000A HYDRAULIC MARINE GEAR

PART			COLUMN													
FIG	NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J	K	L	M	N
9.1135 - VALVE ASSY., SELECTOR																
A VALVE ASSY. INCLUDES ITEMS IN 9.1136 THRU 9.1197.																
4B	5199048	% VALVE ASSY.	1													
4B	5198756	% VALVE ASSY.		1	1											
2A	5149763	VALVE ASSY.				1	1	1	1	1	1	1	1	1	1	1
	5198799	% SHIM (.005")		AR	AR											
	5198800	% SHIM (.007")		AR	AR											
	5198801	% SHIM (.020")		AR	AR											
	179839	BOLT, 3/8"-16X1" (12.9001)		1	1											
	179848	BOLT, 3/8"-16X2 1/4" (12.9001)		2	2											
% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.																
9.1136 - HOUSING, SELECTOR VALVE																
4B	5198757	% HOUSING	1	1	1											
4B	5198533	% PLUG, HOUSING	1	1	1											
	5149087	% PLUG, 1 5/16"-12	2													
4B	5198521	% WASHER (SEAL)	1	1	1											
% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.																
9.1137 - VALVE, SELECTOR																
4B	5198766	% VALVE	1	1	1											
	5198812	% SHIM	AR	AR	AR											
2A	5196218	VALVE				1	1	1	1	1	1	1	1	1	1	1
2A	5149673	VALVE				1	1	1	1	1	1	1	1	1	1	1
	457008	PIN, 5/16"X1 1/2" SPRING	1	1	1											
% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.																
9.1138 - STEM, SELECTOR VALVE																
4B	5198767	% STEM (DIRECTION)	1	1	1											
% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.																
9.1139 - SEAL, SELECTOR VALVE STEM																
4B	5198516	% SEAL RING	1	1	1											
4B	5198825	% BEARING, NEEDLE (THRUST)	1	1	1											
4B	5198824	% RACE, THRUST BEARING	2	2	2											
% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.																

9.1000A HYDRAULIC MARINE GEAR

			COLUMN												
FIG	PART NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J	K	L	M
9.1147 - SPRING, SELECTOR VALVE REGULATOR															
4B	5198763	% SPRING (INNER)	1	1	1										
4B	5198764	% SPRING (OUTER)	1	1	1										
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.													
9.1148 - SPACER, SELECTOR VALVE SPRING															
4B	5198762	% SPACER	1	1	1										
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC., 53403 OR NEAREST OUTLET.													
9.1155 - SPRING, SELECTOR VALVE															
2A	5149764	SPRING				1	1	1	1	1	1	1	1	1	1
2A	5196220	RETAINER, SPRING				1	1	1	1	1	1	1	1	1	1
2A	5196212	RING, SNAP				1	1	1	1	1	1	1	1	1	1
9.1160 - SEAL, SELECTOR VALVE OIL															
2A	5196222	SEAL, RING				1	1	1	1	1	1	1	1	1	1
9.1157 - CAM, NEUTRAL															
2A	5149936	CAM				1	1	1	1	1	1	1	1	1	1
2A	179796	BOLT, 1/4"-20X7/8" (12.9001)				3	3	3	3	3	3	3	3	3	3
2A	103319	LOCKWASHER, 1/4" (12.9200)				3	3	3	3	3	3	3	3	3	3
9.1175 - LEVER, SELECTOR VALVE OPERATING															
1B	5198759	% LEVER	1	1	1										
2A	5197136	LEVER				1	1	1	1	1	1	1	1	1	1
1B	5198761	% PLATE, DETENT	1	1	1										
2A	5149768	SWITCH AND COVER ASSY.					1		1	1	1	1	1	1	1
1B	5198765	% SPRING, DETENT	1												
2A	5196221	SPRING, DETENT				1	1	1	1	1	1	1	1	1	1
1B	5149083	% SPRING, COMPRESSION			1	1									
2A	104919	BALL, 5/16" DIA (12.9670)				1	1	1	1	1	1	1	1	1	1
2A	103340	WASHER, 5/16" (12.9190)				1	1	1	1	1	1	1	1	1	1
1B	104920	BALL, 3/8" DIA. (DETENT) (12.9670)	1	1	1										
1B	5149084	% BOLT, 1/4"-20X.88"	1	1	1										
2A	108579	LOCKWASHER, 5/16" (12.9200)				1	1	1	1	1	1	1	1	1	1
2A	114493	NUT, 5/16"-24 (12.9120)				1	1	1	1	1	1	1	1	1	1
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.													
9.1178 - COVER, HYDRAULIC CONTROL VALVE															
1B	5198760	% COVER	1	1	1										
2A	5149765	COVER				1			1	1	1	1	1	1	1
1B	114861	BALL, 9/32" DIA. (12.9670)	1	1	1										
1B	189132	BOLT, #10-24X5/8" (12.9027)	4												
1B	5149085	% BOLT, 3/16"-24X.88" SOC. HD.		4	4										
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.													

9.1000A HYDRAULIC MARINE GEAR

			COLUMN													
FIG	PART NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J	K	L	M	N
		9.1179 - GASKET, HYDRAULIC CONTROL VALVE COVER														
1B	5198758	% GASKET	1	1	1											
2A	5196225	GASKET % NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.				1	1	1	1	1	1	1	1	1	1	1
		9.1191 - GASKET, CONTROL VALVE PRESSURE REGULATOR														
4B	5198515	% SEAL RING % NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.	1	1	1											
		9.1194 - VALVE, PRESSURE REGULATOR RELIEF														
4B	5198742	% PISTON (VALVE) % NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.	1	1	1											
		9.1195 - SPRING, PRESSURE REGULATOR RELIEF VALVE														
4B	5198751	% SPRING % NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.	1	1	1											
		9.1197 - PLUG, CONTROL VALVE PRESSURE REGULATOR														
4B	5198517	% PLUG	1	1	1											
	455277	PIN, 1/8"X1 1/8" SPRING (12.9275) % NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.		1	1											
		9.1223 - CYLINDER, FORWARD CLUTCH PISTON														
2A	5196194	CYLINDER				1	1									
2A	5196546	CYLINDER						1	1	1	1	1	1	1	1	1
2A	5196198	SEAL, RING				2	2	2	2	2	2	2	2	2	2	2
2A	5149755	SEAL, RING					4	4	4	4	4	4	4	4	4	4
		9.1224 - WASHER, FORWARD CLUTCH CYLINDER THRUST														
2A	5196881	WASHER (.063" THICK)				1	1	1	1	1	1	1	1	1	1	1
2A	5196279	WASHER									2	2	2	2	2	2
		9.1225 - PISTON FORWARD CLUTCH														
2A	5196196	PISTON				1	1	1	1	1	1	1	1	1	1	1

9.1000A HYDRAULIC MARINE GEAR

PART FIG ... NUMBER ... NAME AND DESCRIPTION			COLUMN												
			A	B	C	D	E	F	G	H	I	J	K	L	M
															N
9.1230 - SEAL, FORWARD CLUTCH PISTON															
A	5196195	SEAL, RING (2.016" I.D.)				1	1	1	1	1	1	1	1	1	1
A	5196197	SEAL, RING (4.120" I.D.)				1	1	1	1	1	1	1	1	1	1
9.1235 - PLATE, FORWARD CLUTCH															
A	5196202	PLATE (INNER)				1	1	1	1	1	1	1	1	1	1
A	5196205	PLATE (OUTER)				1	1	1	1	1	1	1	1	1	1
A	5196203	PLATE (STEEL)				4	4	6	6	6	6	6	6	6	6
A	5149809	PLATE (INNER)				5	5	7	7	7	7	7	7	7	7
A	5149758	PLATE ASSY.						1	1	1	1	1	1	1	1
	5196770	SHIM (SNAP RING) (.050")						1	1	1	1	1	1	1	1
	5196771	SHIM (SNAP RING) (.075")						1	1	1	1	1	1	1	1
	5196772	SHIM (SNAP RING) (.100")						1	1	1	1	1	1	1	1
	5149759	SNAP RING (12.9645)						1	1	1	1	1	1	1	1
9.1240 - SPRING, FORWARD CLUTCH RELEASE															
A	5196201	SPRING				1	1	1	1	1	1	1	1	1	1
A	5196200	RING, SNAP (3/8" DIA.)				1	1	1	1	1	1	1	1	1	1
A	5196209	RING, SNAP (5 1/2" DIA.)				1	1	1	1	1	1	1	1	1	1
9.1242 - HUB, FORWARD CLUTCH															
A	5196206	HUB				1	1								
A	5196547	HUB						1	1	1	1	1	1	1	1
A	5196207	RING, SNAP (1 21/32" DIA.)				1	1	1	1	1	1	1	1	1	1
A	218211	KEY, 1/4"X3/4" WOODRUFF (12.9350)				1	1								
9.1282 - PLATE, REDUCTION GEAR ADAPTOR															
B,D	5197338	ADAPTOR				1	1							1	1
B,D	5198554	ADAPTOR								1	1				
C	5197335	ADAPTOR										1	1		
	5199039	PLATE (1.5:1 RED)						1	1						
B,C,D	5199061	BOLT, 7/16"-14X1 1/4"				6	6							6	6
B,C,D	5199060	BOLT, 7/16"-14X1"						6	6	6	6	6	6	6	6
B,C,D	114607	LOCKWASHER, 7/16" (12.9200)				6	6	6	6	6	6	6	6	6	6
9.1283 - GASKET, REDUCTION GEAR ADAPTOR															
B,C,D	5196260	GASKET				1		1	1	1	1	1	1	1	1
9.1285 - HOUSING, REDUCTION GEAR															
B,C,D	5149684	HOUSING				1	1	1	1					1	1
B,D	5149836	HOUSING								1	1				
C	5149685	HOUSING										1	1		
B,C,D	180123	BOLT, 3/8"-16X1 1/8" (12.9001)				6	6	6	6	6	6	6	6	6	6
B,C,D	427567	BOLT, 7/16"-14X1 3/4" (12.9001)				2	2	2	2	2	2	2	2	2	2
B,C,D	103321	LOCKWASHER, 3/8" (12.9200)				6	6	6	6	6	6	6	6	6	6
B,C,D	103322	LOCKWASHER, 7/16" (12.9200)				2	2	2	2	2	2	2	2	2	2
9.1286 - GASKET, REDUCTION GEAR HOUSING															
B,C,D	5196285	GASKET, RED. U ADAPTOR (REAR)				1	1	1	1	1	1	1	1	1	1

9.1000A HYDRAULIC MARINE GEAR

			COLUMN													
PART			A	B	C	D	E	F	G	H	I	J	K	L	M	N
.FIG . . . NUMBER NAME AND DESCRIPTION																
9.1287 - GEAR, REDUCTION GEAR INPUT																
A	5198770	% GEAR	1													
B	5198883	GEAR		1	1											
B	5196251	GEAR						1	1							
% NOT SERVICED. PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.																
9.1288 - PLATE REDUCTION GEAR PLANETARY RING GEAR																
ID	5196255	PLATE				1	1									1
ID	5196256	PLATE												1	1	
9.1290 - GEAR, REDUCTION GEAR																
ID	5196266	GEAR				1	1			1	1					1
ID	5149686	GEAR						1	1							
ID	5149687	GEAR										1	1			
ID	5196265	GEAR												1	1	
9.1292 - GEAR ASSY. REDUCTION GEAR PLANETARY																
ID	5196290	* GEAR AND PLATE ASSY.				1	1									1
ID	5196268	GEAR ASSY.						1	1							
ID	5149701	GEAR ASSY.									1					
ID	5149703	GEAR ASSY.										1				
ID	5149825	GEAR ASSY.											1	1		
ID	5149702	GEAR ASSY.														1
* NOT SERVICED. FOR SERVICE USE COMPONENTS																
9.1298 - GEAR, REDUCTION GEAR PLANETARY RING																
B,C,D	5196252	GEAR, RING				1	1	1	1	1	1	1	1			1
ID	5196257	GEAR, RING												1	1	
B,C,D	5196253	RING, SNAP				1	1	1	1	1	1	1	1			1
ID	5196258	RING, SNAP												1	1	
B	5149681	RING, SNAP (12.9645)						1	1							
B	179857	BOLT, 7/16"-14X7/8" (12.9001)						4	4							
B	114607	LOCKWASHER, 7/16" (12.9210)						4	4							
9.1299 - HUB, REDUCTION GEAR																
B	5149690	HUB						1	1							
9.1310 - GEAR, REDUCTION																
B	5198805	GEAR, OUTPUT (1.47:1)	1	1												
B	5198809	% GEAR, OUTPUT (1.93:1)			1											
% NOT SERVICED. PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.																

9.1000A HYDRAULIC MARINE GEAR

PART			COLUMN													
FIG	NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J	K	L	M	N
9.1340 - SHAFT, REDUCTION GEAR DRIVE																
4B	5198790	% SHAFT, OUTPUT (1.47:1, 1.93:1)	1	1	1											
2B	5149688	SHAFT						1	1							
2B	5149689	SHAFT								1	1	1	1			
2B	5149704	SHAFT ASSY.										1				
4B	5198949	% KEY, 1/2"X3/8"X1 1/4" WOODRUFF	1	1	1											
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
9.1345 - BEARING, REDUCTION GEAR DRIVE SHAFT PILOT																
4B	5199011	% BEARING, ROLLER TAPER	1	1	1											
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
9.1350 - BEARING, REDUCTION GEAR DRIVE SHAFT THRUST																
4B	5199012	% BEARING, ROLLER TAPER	1	1	1											
2B,C,D	5197342	BEARING					1	1		1	1					
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
9.1351 - SPACER, REDUCTION GEAR DRIVE SHAFT BEARING																
	5149768	SPACER					1	1	1	1	1	1	1	1	1	1
9.1365 - COVER, REDUCTION GEAR BEARING																
1B	5198897	% RETAINER	1	1	1											
1B	180175	BOLT, 1/2"-13X1 1/4" (12.9001)	3	3	3											
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														

9.1000A HYDRAULIC MARINE GEAR

			COLUMN													
FIG	PART NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J	K	L	M	N
		9.1370 - GASKET, REDUCTION GEAR BEARING COVER														
IB	5198802	% SHIM (.005")	AR	AR	AR											
IB	5198803	% SHIM (.007")	AR	AR	AR											
IB	5198804	% SHIM (.020")	AR	AR	AR											
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
		9.1375 - SEAL, REDUCTION GEAR BEARING COVER OIL														
IB	5198792	SEAL (9.1018)	1	1	1											
IB,C,D	5149676	SEAL				1	1	1	1	1	1	1	1	1	1	1
		9.1380 - BAFFLE, MARINE GEAR HOUSING OIL														
ID	5196175	BAFFLE				1	1	1	1	1	1	1	1	1	1	1
		9.1386 - BAFFLE, REDUCTION HOUSING OIL														
	5149674	BAFFLE				1	1	1	1	1	1	1	1	1	1	1
	5149682	BAFFLE				1	1							1	1	1
	179857	BOLT, 7/16"-14X7/8" (12.9001)				2	2							2	2	2
		9.1395 - DIPSTICK, REDUCTION GEAR														
IB	5198777	% DIPSTICK	1	1	1											
IA	5149100	DIPSTICK				1	1	1	1	1	1	1	1	1	1	1
	5145009	PLUG, 1/8" PIPE (12.9550)				1	1	1	1	1	1	1	1	1	1	1
	5145014	PLUG, 3/8" PIPE (12.9550)				1	1	1	1	1	1	1	1	1	1	1
	5142549	PLUG, 3/4" PIPE (12.9550)										1	1			
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
		9.1400 - GUIDE, REDUCTION GEAR DIPSTICK														
B	5191267	GUIDE		1	1											
	5149088	% PLUG, 3/4"-16		1	1											
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
		9.1410 - TUBE, REDUCTION GEAR OIL FILLER														
B	5191238	TUBE ASSY. (INCLUDES BAFFLE NOT SOLD SEPARATELY)	1	1	1											
	5149061	ADAPTOR (FOR SQUEEZE TYPE DIPSTICK)				1	1	1	1	1	1	1	1	1	1	1
		9.1415 - CAP, REDUCTION GEAR OIL FILLER														
B	1528732	CAP	1	1	1											

9.1000A HYDRAULIC MARINE GEAR

PART			COLUMN													
FIG	NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J	K	L	M	N
9.1430 - FLANGE, PROPELLER DRIVE																
4B	5198811	% FLANGE, OUTPUT % NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.	1	1	1											

9.1000A HYDRAULIC MARINE GEAR

PART			COLUMN													
FIG	NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J	K	L	M	N
9.1435 - NUT, PROPELLER DRIVE FLANGE																
4B	5198775	% RING, SEAL	1	1	1											
4B	5199548	WASHER, RETAINER	1													
2B,C,D	5149767	NUT, FLANGED				1	1	1	1	1	1	1	1	1	1	1
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
9.1475 - PUMP ASSY., HYDRAULIC MARINE GEAR OIL																
4B	5198744	% PUMP ASSY.	1	1	1											
2A	5198459	PUMP ASSY.				1										
2A	5196889	PUMP ASSY.				1	1	1	1	1	1	1	1	1	1	1
4B	179816	BOLT, 5/16"-18X3/4"	4	4	4											
2A	5198270	KEY, 3/16" FLANGED				1	1	1	1	1	1	1	1	1	1	1
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
9.1477 - ADAPTOR, MARINE GEAR OIL PUMP																
4B	5198739	% ADAPTOR	1	1	1											
4B	179839	BOLT, 3/8"-16X1"	3	3	3											
4B	179848	BOLT, 3/8"-16X2 1/4"	1	1	1											
	106261	WASHER, 5/16"	4													
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
9.1478 - GASKET, MARINE GEAR PUMP ADAPTOR																
4B	5198793	% SHIM, .005" THK.	AR	AR	AR											
4B	5198794	% SHIM, .007" THK.	AR	AR	AR											
4B	5198795	% SHIM, .020" THK.	AR	AR	AR											
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
9.1480 - GASKET, HYDRAULIC MARINE GEAR OIL PUMP																
2A	5196216	GASKET				1	1	1	1	1	1	1	1	1	1	1
4B	5198741	% GASKET	1	1	1											
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														
9.1505 - SEAL, HYDRAULIC MARINE GEAR OIL PUMP																
2A	5199315	SEAL, OIL (DOUBLE LIP)				1	1	1	1	1	1	1	1	1	1	1
2A	5149675	+ SEAL, OIL						1	1	1	1	1	1	1	1	1
		+ OPTIONAL														

9.1000A HYDRAULIC MARINE GEAR

			COLUMN													
FIG	PART NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J	K	L	M	N
		9.1593 - TUBE, HYDRAULIC PUMP TO CONTROL VALVE														
4B	5199556	% TUBE	1	1	1											
4B	5199074	% CONNECTOR	2	2	2											
		% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.														

9.1000A HYDRAULIC MARINE GEAR

PART			COLUMN													
FIG . . .	NUMBER	NAME AND DESCRIPTION	A	B	C	D	E	F	G	H	I	J	K	L	M	N
9.1598 - TUBE, CONTROL VALVE TO HYDRAULIC PUMP HOUSING																
1B	5198754	% * TUBE	1	1	1											
1B	5199072	% ELBOW	1	1	1											
1B	5199553	% ELBOW	1													
1B	5199073	% CONNECTOR	1	1	1											
1E	5199554	% NIPPLE	1													
* NOT SERVICED; USE 5199555 TUBE PLUS (1) 5199553 ELBOW, AND (1) 5199554 NIPPLE.																
% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.																
9.1650 - STRAINER, MARINE GEAR OIL																
1B	5198752	% STRAINER	1	1	1											
2A	5198456	STRAINER				1	1	1	1	1	1			1	1	1
2A	5199386	DEFLECTOR										1	1			
2A	5198457	BUSHING, 3/4"X3/8"				1	1	1	1	1	1			1	1	1
2A	5199388	SPRING										1	1			
2A	5199387	WASHER										1	1			
2A	5198458	TUBE (OIL RETURN)				1	1	1	1	1	1			1	1	1
% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.																
9.1720 - TUBE, MARINE GEAR OIL STRAINER TO PUMP																
3A	5198787	% HOSE	1	1	1											
3A	119098	ELBOW, 1/2"X90 DEG. PIPE	2	2	2											
	5198769	% NIPPLE, 1/2"X1 1/2" PIPE	2	2	2											
	9409539	UNION, 1/2" PIPE	1	1	1											
% NOT SERVICED, PROCURE THRU TWIN DISC INC., 1328 RACINE ST., RACINE, WISC. 53403 OR NEAREST OUTLET.																
9.1840 - BREATHER, MARINE GEAR																
2A	5199044	BREATHER	1													
2A	5198454	BREATHER				1	1	1	1	1	1	1	1	1	1	1
2A	180082	BOLT, 5/16"-18X1 3/8" CAD. (12.9001)				4	4	4	4	4	4	4	4	4	4	4

9.7000 TRANSMISSION—OFF-HIGHWAY

PART		TYPES									
FIG	NUMBER	NAME AND DESCRIPTION	4								
			3								
9.7001 - TRANSMISSION ASSY.											
6882897		TRANSMISSION ASSY., 77 MY-MT640	1								
186628		BOLT, 3/8"-16X1 1/2" (12.9001)	12								
103341		WASHER, 3/8" (12.9190)	12								
103321		LOCKWASHER, 3/8" (12.9200)	12								

GROUP NOMENCLATURE

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

10.1000A ENGINE HOOD

PART		TYPES											
FIG	NUMBER	NAME AND DESCRIPTION											
		9 8	1 0 0	1 0 1	1 0 4	1 0 5	1 0 8	1 1 0	1 1 1	1 1 5	1 1 6	1 2 3	1 2 4
10.1001 - HOOD ASSY., ENGINE													
		FOR ENGINE HOOD TYPES 96, 97, 102, 107, AND 109 NOT SHOWN. REFER TO RADIATOR 5.3000A TYPES AS FOLLOWS FOR RADIATOR SHELL AND SUPPORTS. FOR TYPES 96 AND 107 REFER TO 5.3000A (58). FOR TYPES 97 AND 109 REFER TO 5.3000A (57). FOR TYPE 102 REFER TO 5.3000A TYPE (58) OR (64).											
5123801	HOOD	1											
5123602	+ HOOD		1										
5125340	HOOD			1							1		
5125457	HOOD				1								
5125342	HOOD					1				1			
5125458	HOOD						1						
5125341	HOOD							1					
5125343	HOOD								1				
5135969	HOOD											1	1
181309	BOLT, 1/4"-28X1/2" (12.9001)			14	9	14	9	14	14	14	14	14	14
103319	LOCKWASHER, 1/4" (12.9200)			14	9	14	9	14	14	14	14	14	14
114492	NUT, 1/4"-28 (12.9120)			14	9	14	9	14	14	14	14	14	14
	+ OBSOLETE.												
10.1025 - SUPPORT, ENGINE REAR HOOD													
5123598	SUPPORT	1	1										
5125333	SUPPORT			1		1		1	1	1	1		
5125456	SUPPORT				1		1						
5146353	SUPPORT											1	1
180016	BOLT, 1/4"-20X1/2" (12.9001)	4	4										
5135321	BOLT, 3/8"-24X3 11/16" (12.9001)				2		2						
454990	BOLT, 1/2"-13X1 1/8" (12.9001)			4		4		4	4	4	4	4	4
103343	WASHER, 1/2" (12.9190)			4		4			4	4	4	4	4
103319	LOCKWASHER, 1/4" (12.9200)	4	4										
103323	LOCKWASHER, 1/2" (12.9200)			4		4		4	4	4	4	4	4
123390	NUT, 1/4"-20 (12.9120)	4	4										
10.1057 - CATCH, ENGINE HOOD SIDE PANEL													
5171531	CATCH ASSY., HOOD												4
5135805	BRACKET												4
181309	BOLT, 1/4"-28X1/2" (12.9001)												8
103319	LOCKWASHER, 1/4" (12.9200)												8
114492	NUT, 1/4"-20 (12.9120)												8
10.1100 - PANEL, ENGINE HOOD SIDE													
5123599	PANEL	2											
5123600	PANEL		2										
5125334	PANEL			2				2					

FIG	PART NUMBER	NAME AND DESCRIPTION
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
25	25	25
26	26	26
27	27	27
28	28	28
29	29	29
30	30	30
31	31	31
32	32	32
33	33	33
34	34	34
35	35	35
36	36	36
37	37	37
38	38	38
39	39	39
40	40	40
41	41	41
42	42	42
43	43	43
44	44	44
45	45	45
46	46	46
47	47	47
48	48	48
49	49	49
50	50	50
51	51	51
52	52	52
53	53	53
54	54	54
55	55	55
56	56	56
57	57	57
58	58	58
59	59	59
60	60	60
61	61	61
62	62	62
63	63	63
64	64	64
65	65	65
66	66	66
67	67	67
68	68	68
69	69	69
70	70	70
71	71	71
72	72	72
73	73	73
74	74	74
75	75	75
76	76	76
77	77	77
78	78	78
79	79	79
80	80	80
81	81	81
82	82	82
83	83	83
84	84	84
85	85	85
86	86	86
87	87	87
88	88	88
89	89	89
90	90	90
91	91	91
92	92	92
93	93	93
94	94	94
95	95	95
96	96	96
97	97	97
98	98	98
99	99	99
100	100	100

10.1100 - PANEL, ENGINE HOOD SIDE
(CONT'D)

5125335 PANEL
5135965 PANEL

[illegible]

10.1000A ENGINE HOOD

		TYPES																			
PART		1	1	1	1	1	1														
.FIG . . . NUMBER NAME AND DESCRIPTION		2	2	2	3	3	3														
		5	6	7	2	4	5	8													
10.1001 - HOOD ASSY., ENGINE																					
5135967	HOOD	1	1																		
5135968	HOOD			1																	
5142791	HOOD				1		1	1													
5140226	HOOD					1															
181309	BOLT, 1/4"-28X1/2" (12.9001)	14	14	14	14			14	14												
100015	BOLT, 5/16"-24X1 1/4" (12.9001)					2															
103340	WASHER, 5/16" (12.9190)					2															
103319	LOCKWASHER, 1/4" (12.9200)	14	14	14	14			14	14												
103320	LOCKWASHER, 5/16" (12.9200)					2															
114492	NUT, 1/4"-28 (12.9120)	14	14	14	14			14	14												
114493	NUT, 5/16"-24 (12.9120)					2															
10.1025 - SUPPORT, ENGINE REAR HOOD																					
5146353	SUPPORT	1	1	1	1			1	1												
5140268	SUPPORT					1															
5143368	SHIM, 5" L X 1.12" W, X 1/4"					2															
181377	BOLT, 3/8"-24X1 3/4" (12.9001)					4															
454990	BOLT, 1/2"-13X1 1/8" (12.9001)	4	4	4	2			4	4												
442733	BOLT, 1/2"-13X1 1/4" (12.9001)				2																
5170971	WASHER, 3/8" BEVEL (5.3015)					4															
103341	WASHER, 3/8" (12.9190)					4															
103343	WASHER, 1/2" (12.9190)	4	4	4	6			4	4												
103321	LOCKWASHER, 3/8" (12.9200)					4															
103323	LOCKWASHER, 1/2" (12.9200)	4	4	4	4			4	4												
117049	NUT, 3/8"-24 (12.9120)					4															
10.1035 - PANEL, REAR HOOD SUPPORT																					
5139844	PANEL					1															
106261	WASHER, 1/4" (12.9190)					5															
103319	LOCKWASHER, 1/4" (12.9200)					5															
120375	NUT, 1/4"-20 (12.9120)					5															
10.1050 - CATCH, ENGINE HOOD HOLD-DOWN CLAMP																					
3222748	CATCH (90 DEG.)					4															
120697	SCREW, 1/4"-20X3/4" FL HD. SL (12.9030)					8															
103319	LOCKWASHER, 1/4" (12.9200)					8															
120375	NUT, 1/4"-20 (12.9120)					8															
10.1057 - CATCH, ENGINE HOOD SIDE PANEL																					
5171531	CATCH ASSY., HOOD	4		4				4	4												
5135805	BRACKET	4		4				4	4												
181309	BOLT, 1/4"-28X1/2" (12.9001)	8		8				8	8												

10.1000A ENGINE HOOD

FIG	PART NUMBER	NAME AND DESCRIPTION	TYPES						
			1 2 5	1 2 6	1 2 7	1 3 2	1 3 4	1 3 5	1 3 8
		10.1057 - CATCH, ENGINE HOOD SIDE PANEL (CONT'D)							
	103319	LOCKWASHER, 1/4" (12.9200)	8		8			8	8
	114492	NUT, 1/4"-20 (12.9120)	8		8			8	8
		10.1070 - ANTI-SQUEAK, ENGINE HOOD							
	5110780	+ ANTI-SQUEAK (1"X41"L) - NOT SERVICED: USE 5167873 AND CUT TO LENGTH SHOWN.					2		
		10.1080 - ROD, ENGINE HOOD TIE							
	3222531	ROD, 33 1/8"L					2		
	5190180	BRACKET (TIE ROD)					2		
	120697	SCREW, 1/4"-20X3/4" (12.9030)					4		
	103319	LOCKWASHER, 1/4" (12.9200)					4		
	103323	LOCKWASHER, 1/2" (12.9200)					4		
	120375	NUT, 1/4"-20 (12.9120)					4		
	102637	NUT, 1/2"-13 (12.9120)					8		
		10.1100 - PANEL, ENGINE HOOD SIDE							
	5135964	PANEL	2		2			2	2
	5139844	PANEL				1			

GROUP NOMENCLATURE

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

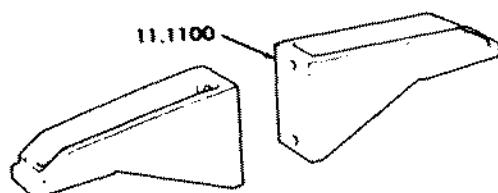


FIG. 1A ENGINE SUPPORT (Rear)

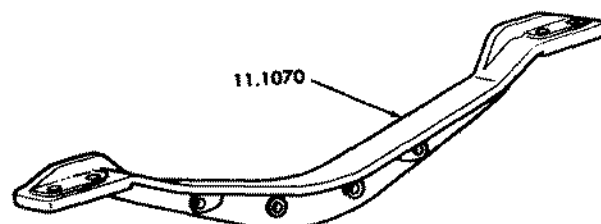


FIG. 1B ENGINE SUPPORT (Front)

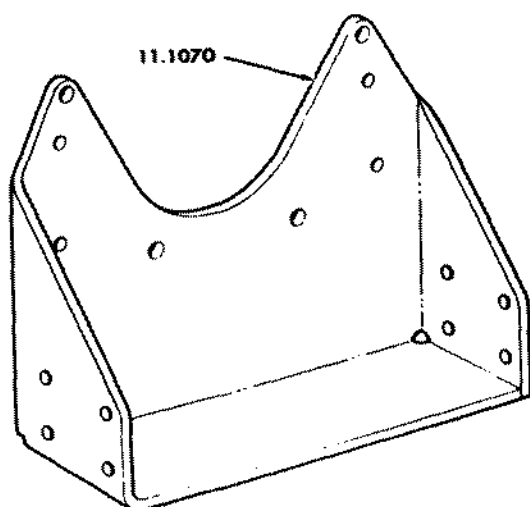


FIG. 1C FRONT ENGINE SUPPORT
(Stationary)

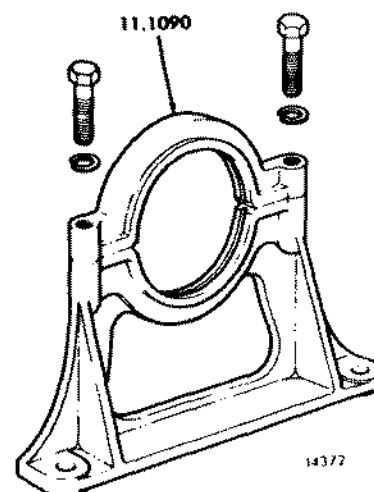


FIG. 1D FRONT ENGINE SUPPORT
(Trunnion)

ENGINE MOUNTS

Figs. 1A, 1B, 1C & 1D of 11.0000

OCT., 1978

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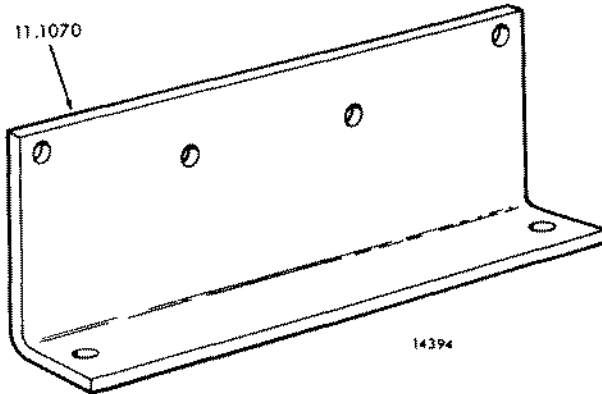


FIG. 1E

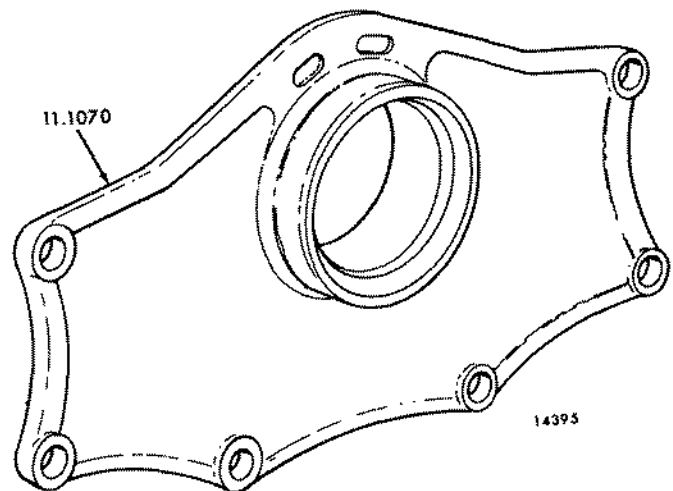


FIG. 1F

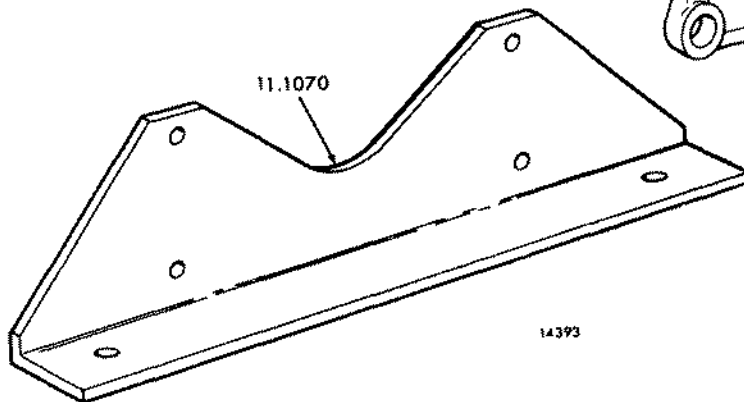


FIG. 1G

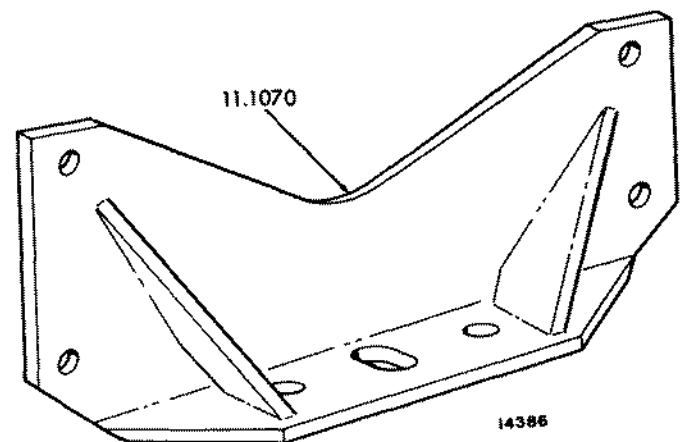


FIG. 1H

ENGINE FRONT SUPPORTS

11.1000A ENGINE MOUNTING AND BASE

			TYPES											
FIG	PART NUMBER	NAME AND DESCRIPTION	306	311	315	316	317	318	319	337	352	353	354	355
11.1001 - BASE, ENGINE														
	5116121	+ BASE		1										
	5119380	+ BASE				1								
	5119381	+ BASE					1							
	5167615	WASHER, 1/2" BEVEL (11.1073)		10										
		+ NOT SERVICED; CUSTOMER MUST FABRICATE.												
11.1035 - BUSHING, STARTING MOTOR CABLE INSULATION														
	5182781	BUSHING (1 1/2")				1	1							
	5166937	LOCKNUT (1 1/2") (11.1001)				1	1							
11.1070 - SUPPORT, ENGINE FRONT														
1G	5109374	SUPPORT	1											
1G	5126044	* SUPPORT		1										
1G	5109375	SUPPORT			1									
1B	5129068	SUPPORT						1						
1F	5124762	SUPPORT (11.1090)							1					
1C	5125510	SUPPORT								1				
1C	5125511	SUPPORT									1			
1C	5125509	SUPPORT										1		
1F	5128660	SUPPORT											1	
1C	5119060	BRACKET					2							
#	186283	BOLT, 3/8"-16 X 3 1/2" (12.9001)	4	6	2					4	4	4	4	4
	191249	BOLT, 3/8"-16X3 3/4" (12.9001)							2					
#	454933	SPACER, 5/8" I.D. X 2.12" L	2		2						4	4	4	
	180147	BOLT, 7/16"-14X1 1/4" (12.9001)		2						2				2
	179862	BOLT, 7/16"-14X1 1/2" (12.9001)							2					
	186725	BOLT, 1/2"-13X1 1/2" (12.9001)					4							
	181431	BOLT, 1/2"-20X1 1/2" (12.9001)			2									
	271585	BOLT, 5/8"-18X1 3/4" (12.9001)			2									
	103345	WASHER, 5/8" (12.9190)			2									
	103321	LOCKWASHER, 3/8" (12.9200)	AR	AR					AR	AR	AR	AR	AR	AR
	103322	LOCKWASHER, 7/16" (12.9200)	AR	AR	AR				AR	AR	AR	AR	AR	AR
	103323	LOCKWASHER, 1/2" (12.9200)						AR						
	103325	LOCKWASHER, 5/8" (12.9200)			2									
	103028	NUT, 1/2"-20 (12.9120)			2									
	117503	NUT, 5/8"-18 (12.9120)			2									
		# FIG. 2A OF 5.0000.												
		* OBSOLETE.												
11.1072 - MOUNTING, ENGINE FRONT SUPPORT ELASTIC														
	5118545	MOUNTING ASSY. (CUSHION)		2										
	181433	BOLT, 1/2"-20X1 3/4" (12.9001)		4										
	223747	BOLT, 5/8"-18X4 1/4" (12.9001)		2										

11.1000A ENGINE MOUNTING AND BASE

			TYPES											
FIG	PART NUMBER	NAME AND DESCRIPTION	3 0 6	3 1 1	3 1 5	3 1 6	3 1 7	3 1 8	3 1 9	3 3 7	3 5 2	3 5 3	3 5 4	3 5 5
		11.1072 - MOUNTING, ENGINE FRONT SUPPORT ELASTIC (CONT'D)												
	5167615	WASHER, 1/2" BEVEL (11.1073)		4										
	103345	WASHER, 5/8" (12.9190)		8										
	108267	WASHER, 11/16" (12.9190)		12										
	103323	LOCKWASHER, 1/2" (12.9200)		4										
	122761	NUT, 1/2"-20 SL (12.9130)		4										
	9434177	NUT, 5/8"-18 SL (12.9130)		12										
		11.1090 - SUPPORT, ENGINE FRONT TRUNNION MOUNTING												
		A SUPPORT ASSY. INCLUDES BOLTS AND LOCKWASHERS.												
1D	5122523	SUPPORT ASSY.												1
	454906	BOLT, 3/8"-16X1 1/2" (12.9001)												2
	103321	LOCKWASHER, 3/8" (12.9200)												2
		11.1094 - RING, ENGINE FRONT TRUNNION MOUNTING SUPPORT CUSHION												
	5168864	RING (CUSHION)								1				
	5122409	RING (CUSHION)											1	
		11.1100 - SUPPORT, ENGINE REAR												
1A	5119099	BRACKET						2	2					
	427564	BOLT, 7/16"-14X1 3/8" (12.9001)						4	4					
	103322	LOCKWASHER, 7/16" (12.9200)						4	4					
		11.1190 - SUPPORT, GENERATOR MTG.												
	5118545	MOUNTING ASSY. (CUSHION) (11.1072)		2										
	5167615	WASHER, 1/2" BEVEL (11.1073)		4										
	103345	WASHER, 5/8" FLAT (12.9190)		4										
	103323	LOCKWASHER, 1/2" (12.9200)		4										
	181433	BOLT, 1/2"-20X1 3/4" (12.9001)		4										
	223747	BOLT, 5/8"-18X4 1/4" (12.9001)		2										
	122761	NUT, 1/2"-20 HEX. SL (12.9130)		4										
	9434177	NUT, 5/8"-18 SL (12.9130)		4										

11.1000A ENGINE MOUNTING AND BASE

			TYPES											
FIG	PART NUMBER	NAME AND DESCRIPTION	3 5 7	3 5 8	3 5 9	3 7 0	3 8 0	3 8 6	3 8 9	4 0 2	4 0 4	4 0 5	4 0 6	4 0 7
	11.1001 - BASE, ENGINE MOUNTING													
	5127990	+ BASE												1
	5167615	WASHER, 1/2" BEVEL (11.1073) + OBSOLETE.												10
	11.1050 - RAIL, ENGINE MOUNTING													
	5126294	+ RAIL (RIGHT SIDE)								1				
	5126295	+ RAIL (LEFT SIDE)								1				
	5126305	+ RAIL (FRONT & CENTER)								2				
	5126304	+ RAIL (REAR)								1				
	181428	BOLT, 1/2"-20X1 1/8" (12.9001)								12				
	181431	BOLT, 1/2"-20X1 1/2" (12.9001)								4				
	271632	BOLT, 3/4"-16X1 3/4" (12.9001)								2				
	223752	BOLT, 3/4"-16X2" (12.9001)								2				
	103323	LOCKWASHER, 1/2" (12.9200)								16				
	103326	LOCKWASHER, 3/4" (12.9200)								4				
	103028	NUT, 1/2"-20 (12.9120)								16				
	218197	NUT, 3/4"-16 (12.9120) + OBSOLETE.								4				
	11.1070 - SUPPORT, ENGINE FRONT													
1G	5126044	* SUPPORT												1
1F	5124762	SUPPORT (11.1090)					1		1					
1C	5123945	SUPPORT	1	1	1									
1H	5125827	SUPPORT				1								
1C	5124404	SUPPORT						1						
1E	5127943	SUPPORT							1		1			
1B	5125209	* SUPPORT										1		
	186283	BOLT, 3/8"-16X3 1/2" (12.9001)	4	4	4	4	4	4	4	4				6
	186288	BOLT, 3/8"-16X4 1/2" (12.9001)									2	2		
#	454933	BOLT, 7/16"-14 X 1 1/8" (12.9001)	4	4	4			4			2			
	180147	BOLT, 7/16"-14X1 1/4" (12.9001)					8		2				6	2
	427567	BOLT, 7/16"-14X1 3/4" (12.9001)										2		
	103321	LOCKWASHER, 3/8" (12.9200)				AR					AR			
	103322	LOCKWASHER, 7/16" (12.9200)	AR	AR	AR		AR	AR	AR		AR	AR	AR	AR
	5125822	NUT, 1/2"-13 ANCHOR # FIG. 2A OF 5.0000. * OBSOLETE				1								
	11.1072 - MOUNTING, ENGINE FRONT SUPPORT ELASTIC													
	5118545	* MOUNTING ASSY. (CUSHION)												2
	181433	BOLT, 1/2"-20X1 3/4" (12.9001)												4
	223747	BOLT, 5/8"-18X4 1/4" (12.9001)												2

11.1000A ENGINE MOUNTING AND BASE

PART		TYPES												
..FIG	NUMBER	NAME AND DESCRIPTION	3 5 7	3 5 8	3 5 9	3 7 0	3 8 0	3 8 6	3 8 9	4 0 2	4 0 4	4 0 5	4 0 6	4 0 7
		11.1072 - MOUNTING, ENGINE FRONT SUPPORT ELASTIC (CONT'D)												
	5167615	WASHER, 1/2" BEVEL (11.1073)												4
	103345	WASHER, 5/8" (12.9190)												8
	106267	WASHER, 11/16" (12.9190)												12
	103323	LOCKWASHER, 1/2" (12.9200)												4
	122761	NUT, 1/2"-20 SL (12.9130)												4
	9434177	NUT, 5/8"-18 SL (12.9130)												12
		* OBSOLETE.												
		11.1075 - BRACKET, ENGINE SUPPORT												
	5125529	BRACKET (R.H.)	1											
	5125530	BRACKET (L.H.)	1											
	5123841	BRACKET (R.H.) (11.1070)		1				1						
	5123842	BRACKET (L.H.) (11.1070)		1				1						
	5123839	BRACKET (R.H.)			1									
	5123840	BRACKET (L.H.)			1									
	181361	BOLT, 3/8"-24X7/8" (12.9001)	8	8	8			8						
	103321	LOCKWASHER, 3/8" (12.9200)	8	8	8			8						
	117049	NUT, 3/8"-24 (12.9120)	8	8	8			8						
		11.1090 - SUPPORT, ENGINE FRONT TRUNNION MOUNTING												
		A SUPPORT ASSY. INCLUDES BOLTS AND LOCKWASHERS.												
1D	5122523	SUPPORT ASSY.											1	
1D	5186647	SUPPORT ASSY.					1		1					
	454906	BOLT, 3/8"-16X1 1/2" (12.9001)											2	
	179867	BOLT, 7/16"-14X2 1/4" (12.9001)					2		2					
	103321	LOCKWASHER, 3/8" (12.9200)											2	
	103322	LOCKWASHER, 7/16" (12.9200)					2		2					
		11.1094 - RING, ENGINE FRONT TRUNNION MOUNTING SUPPORT CUSHION												
	5166864	RING (CUSHION)					1		1					
	5122409	RING (CUSHION)											1	
		11.1100 - SUPPORT, ENGINE REAR												
	5125211	* SUPPORT											2	
	427564	BOLT, 7/16"-14X1 3/8" (12.9001)											4	
	103322	LOCKWASHER, 7/16" (12.9200)											4	
		* OBSOLETE.												

11.1000A ENGINE MOUNTING AND BASE

PART		TYPES											
FIG	NUMBER	NAME AND DESCRIPTION											
		4 0 8	4 0 9	4 1 0	4 1 2	4 1 4	4 1 7	4 2 1	4 2 2	4 2 3	4 2 4	4 2 5	4 2 6
	11.1050 - RAIL, ENGINE MOUNTING												
	5126919 + RAIL (SIDE)	2											
	5126921 + RAIL (CROSS)	2											
	5126296 + RAIL (RIGHT SIDE)				1								
	5126297 + RAIL (LEFT SIDE)				1								
	5126305 + RAIL (FRONT AND INTERMEDIATE)				2							2	2
	5126304 + RAIL (REAR)				1							1	1
	5126629 + RAIL (FRONT AND REAR)						2						
	5126290 + RAIL (RIGHT SIDE)											1	
	5126291 + RAIL (LEFT SIDE)											1	
	5126292 + RAIL (LEFT SIDE)												1
	5126293 + RAIL (RIGHT SIDE)												1
	181428 BOLT, 1/2"-20X1 1/8" (12.9001)				12							12	12
	181431 BOLT, 1/2"-20X1 1/2" (12.9001)				4							4	4
	271632 BOLT, 3/8"-16X1 3/4" (12.9001)	2			2							2	2
	223752 BOLT, 3/4"-16X2" (12.9001)				4							2	4
	103323 LOCKWASHER, 1/2" (12.9200)	AR			AR							AR	AR
	103326 LOCKWASHER, 3/4" (12.9200)	AR			AR							AR	AR
	103028 NUT, 1/2"-20 (12.9120)	8			16							16	16
	218197 NUT, 3/4"-16 (12.9120)	2			6							4	6
	+ NOT SERVICED; CUSTOMER MUST FABRICATE.												
	11.1052 - ROD, ENGINE MOUNTING RAIL TIE												
	5126633 ROD (31.40"L)						1						
	120378 NUT, 1/2"-13 (12.9120)						4						
	11.1070 - SUPPORT, ENGINE FRONT												
1B	5128688 SUPPORT			1									
1B	5128687 * SUPPORT		1										
1B	5129068 SUPPORT					1				1	1		
1C	5119060 SUPPORT							2					
1H	5125827 SUPPORT								1				
	186283 BOLT, 3/8"-16X3 1/2" (12.9001)								4				
	191249 BOLT, 3/8"-16X3 3/4" (12.9001)					2							
	186288 BOLT, 3/8"-16X4 1/2" (12.9001)									2	2		
	427564 BOLT, 7/16"-14X1 3/8" (12.9001)	4	4										
	179862 BOLT, 7/16"-14X1 1/2" (12.9001)					2							
	427567 BOLT, 7/16"-14X1 3/4" (12.9001)									2	2		
	186725 BOLT, 1/2"-13X1 1/2" (12.9001)							4					
	103321 LOCKWASHER, 3/8" (12.9200)				AR	AR			AR	AR	AR		
	103322 LOCKWASHER, 7/16" (12.9200)	AR	AR										
	103323 LOCKWASHER, 1/2" (12.9200)							4					
	5125822 NUT, 1/2"-13 ANCHOR								1				
	* OBSOLETE												

11.1000A ENGINE MOUNTING AND BASE

PART			TYPES											
FIG	NUMBER	NAME AND DESCRIPTION	408	409	410	412	414	417	421	422	423	424	425	426
	11.1072	MOUNTING, ENGINE FRONT SUPPORT ELASTIC												
	3766293	MOUNTING ASSY. (UPPER)								1				
	3767180	PLATE (LOWER) (2.88"L)								1				
	3766296	SPACER, 7.18" O.D. X 2.368" L								1				
	179895	BOLT, 1/2"-13X3 1/2" (12.9001)								1				
	103343	WASHER, 1/2" (12.9190)								1				
	103323	LOCKWASHER, 1/2" (12.9200)								1				
	11.1075	BRACKET, ENGINE SUPPORT												
	5125829	BRACKET								1				
	11.1100	SUPPORT, ENGINE REAR												
1A	5128897	* SUPPORT (R.H.)		1	1									
1A	5128898	* SUPPORT		1	1									
1A	5127279	SUPPORT					2	2	2		2			
1A	5119099	SUPPORT										2		
	186622	BOLT, 3/8"-16X1 1/4" (12.9001)		4	4									
	427564	BOLT, 7/16"-14X1 3/8" (12.9001)					4		4		4	4		
	103321	LOCKWASHER, 3/8" (12.9200)		AR	AR									
	103322	LOCKWASHER, 7/16" (12.9200)					4		4		4	4		
		* OBSOLETE												
	11.1120	MOUNTING, ENGINE REAR SUPPORT ELASTIC												
	3743771	MOUNTING ASSY. (UPPER, RUBBER)								2				
	3723646	MOUNTING ASSY. (3.38"L, LOWER, RUBBER)								2				
	3789949	MOUNTING ASSY. (2.562"L, LOWER, RUBBER)								1				
	3723648	SPACER, 5/8" I.D. X 2.12" L								2				
	3763766	BOLT, LOCK								2				
	271568	BOLT, 5/8"-11X3 1/2" (12.9001)								2				

11.1000A ENGINE MOUNTING AND BASE

PART			TYPES											
FIG	NUMBER	NAME AND DESCRIPTION	4 2 7	4 2 8	4 2 9	4 3 0	4 3 3	4 3 6	4 3 7	4 4 2	4 4 6	4 5 1	4 5 2	4 5 3
11.1001 - BASE, ENGINE														
	5116121	+ BASE						1						
	5167615	WASHER, 1/2" BEVEL (11.1073)						10						
11.1050 - RAIL, ENGINE MOUNTING														
	5126629	+ RAIL (FRONT AND REAR)	2	2										
	5126917	+ RAIL (SIDE)			2									
	5126920	+ RAIL (FRONT AND REAR)			2									
	5126629	+ RAIL (FRONT AND REAR)					2		2					
	181428	BOLT, 1/2"-20X1 1/8" (12.9001)			8									
	271630	BOLT, 3/4"-16X1 1/2" (12.9001)					2		2					
	271632	BOLT, 3/8"-16X1 3/4" (12.9001)			2									
	223752	BOLT, 3/8"-16X2" (12.9001)					2		2					
	103323	LOCKWASHER, 1/2" (12.9200)			AR									
	103326	LOCKWASHER, 3/4" (12.9200)			AR		AR		AR					
	103028	NUT, 1/2"-20 (12.9120)			8									
	218197	NUT, 3/4"-16 (12.9120)			2		4		4					
		+ NOT SERVICED; CUSTOMER MUST FABRICATE.												
11.1052 - ROD, ENGINE MOUNTING RAIL TIE														
	5126633	ROD (31.40"L)							1					
	5126632	ROD (26.00"L)	1				1							
	5126634	ROD (36.80"L)		1										
	103323	LOCKWASHER, 1/2" (12.9200)	2	2			2		2					
	120378	NUT, 1/2"-13 (12.9120)	4	4			4		4					
11.1070 - SUPPORT, ENGINE FRONT														
1B	5128688	* SUPPORT											1	
1B	5128687	* SUPPORT										1		
10, 1F	5128660	SUPPORT				1					1			1
1C	5116086	SUPPORT						1						
1C	5100151	SUPPORT								1				
	186283	BOLT, 3/8"-16X3 1/2" (12.9001)				4		6		4	4			4
	193221	BOLT, 7/16"-14X1 1/4" (12.9001)				2		4			2			2
	427564	BOLT, 7/16"-14X1 3/8" (12.9001)									4	4	4	
	103321	LOCKWASHER, 3/8" (12.9200)				AR			AR		AR			AR
	103322	LOCKWASHER, 7/16" (12.9200)				AR		AR		AR	AR	AR	AR	AR
		* OBSOLETE												
11.1072 - MOUNTING, ENGINE FRONT SUPPORT ELASTIC														
	5118545	MOUNTING ASSY. (CUSHION)						2						
	181433	BOLT, 1/2"-20X1 3/4" (12.9001)						4						
	223747	BOLT, 5/8"-18X4 1/4" (12.9001)						2						

11.1000A ENGINE MOUNTING AND BASE

PART		TYPES												
FIG	NUMBER	NAME AND DESCRIPTION	4 2 7	4 2 8	4 2 9	4 3 0	4 3 3	4 3 6	4 3 7	4 4 2	4 4 6	4 5 1	4 5 2	4 5 3
		11.1072 - MOUNTING, ENGINE FRONT SUPPORT ELASTIC (CONT'D)												
	5176715	WASHER, 1/2" BEVEL (11.1073)						4						
	103345	WASHER, 5/8" (12.9190)						4						
	106267	WASHER, 11/16" I.D. X 1 3/4" O.D. X .147" (12.9190)						6						
	103323	LOCKWASHER, 1/2" (12.9200)						4						
	122761	NUT, 1/2"-20 (12.9120)						4						
	9434177	NUT, 5/8"-18 LOCK (12.9140)						4						
		11.1090 - SUPPORT, ENGINE FRONT TRUNNION MOUNTING												
		A SUPPORT ASSY. INCLUDES BOLTS AND LOCKWASHERS.												
1D	5122523	SUPPORT ASSY.				1					1			
1D	5108972	SUPPORT ASSY.												1
	186628	BOLT, 3/8"-16 X 1 1/2" (12.9001)				2					2			2
	103321	LOCKWASHER, 3/8" (12.9200)				2					2			2
		11.1094 - RING, ENGINE FRONT TRUNNION MOUNTING SUPPORT CUSHION												
	5122409	RING (CUSHION)				1					1			1
		11.1100 - SUPPORT, ENGINE REAR												
1A	5128897	+ SUPPORT (R.H.)										1	1	
1A	5128898	+ SUPPORT										1	1	
	5109208	+ PLATE (11.1070)										1	1	
	5109209	+ SPACER (11.1070)										2	2	
	186622	BOLT, 3/8"-16 X 1 1/4" (12.9001)										4	4	
	187234	BOLT, 3/8"-24 X 2 7/8" (12.9001)										4	4	
	103321	LOCKWASHER, 3/8" (12.9200)										4	4	
	117049	NUT, 3/8"-24 (12.9120)										4	4	
		+ OBSOLETE.												
		11.1120 - MOUNTING, ENGINE REAR SUPPORT ELASTIC												
	5118545	MOUNTING ASSY. (CUSHION)						2						
	181433	BOLT, 1/2"-20 X 1 3/4" (12.9001)						4						
	223747	BOLT, 5/8"-18 X 4 1/4" (12.9001)						2						
	5167615	WASHER, 1/2" BEVEL (11.1073)						4						
	103345	WASHER, 5/8" (12.9190)						4						

11.1000A ENGINE MOUNTING AND BASE

PART		TYPES												
FIG	NUMBER	NAME AND DESCRIPTION	4 2 7	4 2 8	4 2 9	4 3 0	4 3 3	4 3 6	4 3 7	4 4 2	4 4 6	4 5 1	4 5 2	4 5 3
	11.1120	MOUNTING, ENGINE REAR SUPPORT ELASTIC (CONT'D)												
	106267	WASHER, 11/16" (12.9190)						6						
	103323	LOCKWASHER, 1/2" (12.9200)						4						
	122761	NUT, 1/2"-20 (12.9120)						4						
	9434177	NUT, 5/8"-18 LOCK (12.9140)						4						

11.1000A ENGINE MOUNTING AND BASE

			TYPES											
FIG	PART NUMBER	NAME AND DESCRIPTION	4 6 8	4 7 3	4 7 4	4 7 6	4 7 7	4 7 8	4 8 0	4 8 3	4 8 7	4 8 9	4 9 0	4 9 1
	11.1010 - CUSHION, ENGINE MOUNTING BASE ISOLATION PAD													
	5130657	ISOLATOR, VIBRATION					2							
	122408	BOLT, 1/2"-13X1" (12.9001)					4							
	103323	LOCKWASHER, 1/2" (12.9200)					4							
	11.1070 - SUPPORT, ENGINE FRONT													
B	5162813	SUPPORT	1								1			
B	5162814	SUPPORT		1	1	1		1		1				1
C	5130811	SUPPORT							1					
A	5131270	* SUPPORT										1	1	
A	5138756	* SUPPORT										1	1	
	186283	BOLT, 3/8"-16X3 1/2" (12.9001)							4					
	214265	* BOLT, 3/8"-16X3 3/4" (12.9001)		4				4		4				
	186288	BOLT, 3/8"-16X4 1/2" (12.9001)	2		2	2					2			2
	454933	BOLT, 7/16"-14X1 1/8" (12.9001)						4						
	427564	BOLT, 7/16"-14X1 3/8" (12.9001)										4	4	
	179862	BOLT, 7/16"-14X1 1/2" (12.9001)		2				2		2				
	427567	BOLT, 7/16"-14X1 3/4" (12.9001)	4		4	4				4		4		
	103321	LOCKWASHER, 3/8" (12.9200)	AR	AR	AR	AR		AR	AR	AR	AR	AR	AR	AR
	103322	LOCKWASHER, 7/16" (12.9200)	AR	AR	AR	AR		AR	AR	AR	AR	AR	AR	AR
		* OBSOLETE												
	11.1072 - MOUNTING, ENGINE FRONT SUPPORT ELASTIC													
	5179361	MOUNTING ASSY. (OUTBOARD)										2	2	
	5179364	MOUNTING ASSY. (INBOARD)										2	2	
	179895	BOLT, 1/2"-13X3 1/2" (12.9001)										8	8	
	103323	LOCKWASHER, 1/2" (12.9200)										AR	AR	
	102637	NUT, 1/2"-13 (12.9120)										8	8	
	11.1075 - BRACKET, ENGINE SUPPORT													
	5123841	BRACKET (R.H.) (11.1070)							1					
	5123842	BRACKET (L.H.) (11.1070)							1					
	181361	BOLT, 3/8"-24X7/8" (12.9001)							8					
	103321	LOCKWASHER, 3/8" (12.9200)							8					
	117049	NUT, 3/8"-24 (12.9120)							8					
	11.1100 - SUPPORT, ENGINE REAR													
A	5125211	* SUPPORT	2											
A	5127279	SUPPORT		2		2								
A	5119099	SUPPORT			2					2				

11.1000A ENGINE MOUNTING AND BASE

PART		TYPES												
FIG	NUMBER	NAME AND DESCRIPTION	4 8 8	4 7 3	4 7 4	4 7 6	4 7 7	4 7 8	4 8 0	4 8 3	4 8 7	4 8 9	4 9 0	4 9 1
11.1100 - SUPPORT, ENGINE REAR (CONT'D)														
1A	5130239	SUPPORT						2						2
	5131330	SUPPORT									2			
	5131383	SUPPORT										1		
	5131302	SUPPORT											1	
	5159347	SPACER, 3/4" O.D. X 1/2" (7.1581)											6	
	5173935	PLUG, 1/2" PIPE SL. HD. (1.5001)									8			
	186679	BOLT, 3/8"-16X1 1/4" (12.9001)									8	4		
	5157244	BOLT, 3/8"-16 X 1 3/4" (4.4190)											6	
	427564	BOLT, 7/16"-14X1 3/8" (12.9001)	4	4	4	4				4				
	442733	BOLT, 1/2"-13X1 1/4" (12.9001)						4						4
	186631	BOLT, 1/2"-13X2 1/4" (12.9001)						4						4
	103341	WASHER, 3/8" (12.9190)									8			
	103321	LOCKWASHER, 3/8" (12.9200)									8	AR	AR	
	103322	LOCKWASHER, 7/16" (12.9200)	4	4	4	4				4				
	103323	LOCKWASHER, 1/2" (12.9200)						8						8
		* OBSOLETE												

11.1000A ENGINE MOUNTING AND BASE

			TYPES											
FIG	PART NUMBER	NAME AND DESCRIPTION	4 9 8	4 9 8	4 9 9	5 0 1	5 0 2	5 0 6	5 0 9	5 1 0	5 1 1	5 1 5	5 1 6	5 2 3
11.1070 - SUPPORT, ENGINE FRONT														
1B	5173851	SUPPORT	1		1			1						
1C	5131318	SUPPORT		1										
1F	5124762	SUPPORT (11.1090)				1	1							
1C	5132145	SUPPORT							1					
1C	5123945	SUPPORT								1				
1C	5134442	SUPPORT										1		
1B	5134225	SUPPORT											1	1
	186282	BOLT, 3/8"-16X3 1/4" (12.9001)										4		
	186283	BOLT, 3/8"-16X3 1/2" (12.9001)		6		4				4				
	214265	+ BOLT, 3/8"-16X3 3/4" (12.9001)			4			4						
	9409914	BOLT, 3/8"-16X4 1/4" (12.9001)											2	2
	186288	BOLT, 3/8"-16X4 1/2" (12.9001)	2										2	2
	454933	BOLT, 7/16"-14X1 1/8" (12.9001)								4		2		
	193221	BOLT, 7/16"-14X1 1/4" (12.9001)		4		2	6							
	179862	BOLT, 7/16"-14X1 1/2" (12.9001)			2			2						
	427567	BOLT, 7/16"-14X1 3/4" (12.9001)	4											
	179867	BOLT, 7/16"-14X2 1/4" (12.9001)											2	2
	106263	WASHER, 7/16" (12.9190)											2	2
	103321	LOCKWASHER, 3/8" (12.9200)	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
	103322	LOCKWASHER, 7/16" (12.9200)	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
		+ OBSOLETE.												
11.1072 - MOUNTING, ENGINE FRONT SUPPORT ELASTIC														
	5179364	MOUNTING ASSY. (INBOARD)			2									
	5132451	MOUNTING ASSY.	2											
	5130234	MOUNTING ASSY.						2						
	179895	BOLT, 1/2"-13X3 1/2" (12.9001)	4		4			4						
	103323	LOCKWASHER, 1/2" (12.9200)	4		AR			AR						
	102637	NUT, 1/2"-13 (12.9120)	4		4			4						
11.1088 - TRUNNION, ENGINE FRONT														
	5133502	+ TRUNNION										1		
	272628	NUT, 7/16"-20 LOCK (12.9140)										6		
		+ OBSOLETE.												
11.1090 - SUPPORT, ENGINE FRONT TRUNNION MOUNTING														
		A SUPPORT ASSY. INCLUDES BOLTS AND LOCKWASHERS.												
1D	5100262	* SUPPORT ASSY.				1						1		
	179867	BOLT, 7/16"-14X2 1/4" (12.9001)				2						2		
	103322	LOCKWASHER, 7/16" (12.9200)				2						2		
		* OBSOLETE												

11.1000A ENGINE MOUNTING AND BASE

PART			TYPES											
FIG	NUMBER	NAME AND DESCRIPTION	4 9 6	4 9 8	4 9 9	5 0 1	5 0 2	5 0 6	5 0 9	5 1 0	5 1 1	5 1 5	5 1 6	5 2 3
	11.1094	- RING, ENGINE FRONT TRUNNION MOUNTING SUPPORT CUSHION												
	5166864	RING (CUSHION)				1	1				1			
	11.1100	- SUPPORT, ENGINE REAR												
1A	5127279	SUPPORT												2
1A	5131268	SUPPORT	2		2		2							
	427564	BOLT, 7/16"-14X1 3/8" (12.9001)	4		4			4						4
	103322	LOCKWASHER, 7/16" (12.9200)	4		4			4						4
	11.1120	- MOUNTING, ENGINE REAR SUPPORT ELASTIC												
	5179361	MOUNTING ASSY. (11.1072)	2											
	5179364	MOUNTING ASSY. (11.1072)			2									
	5130234	MOUNTING ASSY. (11.1072)						2						
	179895	BOLT, 1/2"-13X3 1/2" (12.9001)	4		4			4						
	103323	LOCKWASHER, 1/2" (12.9200)	4		4			4						
	102637	NUT, 1/2"-13 (12.9120)	4		4			4						

11.1000A ENGINE MOUNTING AND BASE

			TYPES											
PART ..FIG .. NUMBER .. NAME AND DESCRIPTION ..			5 2 5	5 3 2	5 3 4	5 3 7	5 3 8	5 4 5	5 5 0	5 5 3	5 5 4	5 5 6	5 5 7	5 6 3
11.1001 - BASE, ENGINE														
5139811 + BASE + NOT SERVICED; CUSTOMER MUST FABRICATE.														1
11.1035 - BUSHING, STARTING MOTOR CABLE INSULATION														
5182735 BUSHING (4")														2
5182738 LOCKNUT														2
11.1070 - SUPPORT, ENGINE FRONT														
1A	5133956	SUPPORT			1									
1A	5131270	* SUPPORT (TO MARINE GEAR R.H.)				1	1							
1A	5138756	* SUPPORT (TO MARINE GEAR L.H.)				1	1							
1B	5162814	SUPPORT						1						
	5139898	SUPPORT							1					
1B	5128688	* SUPPORT								1				
1B	5128687	* SUPPORT									1			
1B	5141015	SUPPORT										1		
1B	5173851	MOUNT											1	
	186679	BOLT, 3/8"-16X1 1/4" (12.9001)									4	4		
	186283	BOLT, 3/8"-16X3 1/2" (12.9001)		4	5				2					
	455537	BOLT, 3/8"-16X4" (12.9001)										2	2	
	186288	BOLT, 3/8"-16X4 1/2" (12.9001)						2	2			2	2	
	193221	BOLT, 7/16"-14X1 1/4" (12.9001)			3									
	427564	BOLT, 7/16"-14X1 3/8" (12.9001)				4	4							
	179862	BOLT, 7/16"-14X1 1/2" (12.9001)							2					
	427567	BOLT, 7/16"-14X1 3/4" (12.9001)						4					4	
	179867	BOLT, 7/16"-14X2 1/4" (12.9001)										2		
	106263	WASHER, 7/16" (12.9190)										2		
	103321	LOCKWASHER, 3/8" (12.9200)								4	4			
	103322	LOCKWASHER, 7/16" (12.9200)			AR	AR	AR	AR				AR		
		* OBSOLETE.												
11.1072 - MOUNTING, ENGINE FRONT SUPPORT ELASTIC														
	5179361	MOUNTING ASSY. (OUTBOARD)				2	2							
	5179364	MOUNTING ASSY. (INBOARD)				2	2							
	5140004	MOUNTING							1					
	5140563	MOUNTING (CUSHION)							6					
	5132451	MOUNTING ASSY. (FRONT)											2	
	5179361	MOUNTING ASSY. (REAR)											2	
	5140425	SPACER							3					

11.1000A ENGINE MOUNTING AND BASE

PART		TYPES													
FIG	NUMBER	NAME AND DESCRIPTION	525	532	534	537	538	545	550	553	554	556	557	563	
11.1072 - MOUNTING, ENGINE FRONT SUPPORT ELASTIC (CONT'D)															
	5140003	PLATE							1						
	179862	BOLT, 7/16"-14X1 1/2" (12.9001)							4						
	179895	BOLT, 1/2"-13X3 1/2" (12.9001)				8	8			3					
	271568	BOLT, 5/8"-11X3 1/2" (12.9001)								4					
	103322	LOCKWASHER, 7/16" (12.9200)													
	103323	LOCKWASHER, 1/2" (12.9200)				8	8								
	103325	LOCKWASHER, 5/8" (12.9200)							3						
	102637	NUT, 1/2"-13 (12.9120)				8	8								
	102639	NUT, 5/8"-11 (12.9120)							3						
11.1088 - TRUNNION, ENGINE FRONT															
	5128660	TRUNNION		1											
	5137901	TRUNNION											1		
	193221	BOLT, 7/16"-14X1 1/4" (12.9001)		2									6		
	103322	LOCKWASHER, 7/16" (12.9200)		2									6		
11.1090 - SUPPORT, ENGINE FRONT TRUNNION MOUNTING															
A SUPPORT ASSY. INCLUDES BOLTS AND LOCKWASHERS.															
1D	5186647	SUPPORT ASSY.	1										1		
1D	5136387	SUPPORT ASSY.		1											
1D	454908	BOLT, 3/8"-16X1 1/2" (12.9001)		2											
	179867	BOLT, 7/16"-14X2 1/4" (12.9001)	2										2		
1D	103321	LOCKWASHER, 3/8" (12.9200)		2											
	103322	LOCKWASHER, 7/16" (12.9200)	2										2		
11.1094 - RING, ENGINE FRONT TRUNNION MOUNTING SUPPORT CUSHION															
	5137902	RING (CUSHION)	1										1		
	5122409	RING (CUSHION)		1											
11.1100 - SUPPORT, ENGINE REAR															
	5137161	SUPPORT (R.H.)		1											
	5137162	SUPPORT (L.H.)		1											
	5131383	SUPPORT				1									
	5131302	SUPPORT					1								
	5140427	SUPPORT							2						
	5138860	* SUPPORT								1	1				

11.1000A ENGINE MOUNTING AND BASE

PART		TYPES												
FIG	NUMBER	NAME AND DESCRIPTION	5 2 5	5 3 2	5 3 4	5 3 7	5 3 8	5 4 5	5 5 0	5 5 3	5 5 4	5 5 6	5 5 7	5 6 3
11.1100 - SUPPORT, ENGINE REAR (CONT'D)														
1A	5128898	* SUPPORT (L.H.)								1	1			
	5148671	SUPPORT (NOTCHED)											2	
	5159347	SPACER, 3/4" O.D. X 1/2" (7.1581)				6	6							
	186619	BOLT, 3/8"-16X1 1/8" (12.9001)		6										
	186612	BOLT, 3/8"-16X1 3/8" (12.9001)		4										
	5157244	BOLT, 3/8"-16X1 3/4" (4.4190)				6	6							
	427564	BOLT, 7/16"-14X1 3/8" (12.9001)								4	4			
	186725	BOLT, 1/2"-13X1 1/2" (12.9001)							8					
	103321	LOCKWASHER, 3/8" (12.9200)			3	6	6							
	103322	LOCKWASHER, 7/16" (12.9200)								4	4			
	103323	LOCKWASHER, 1/2" (12.9200)							8					
		* OBSOLETE												
11.1120 - MOUNTING, ENGINE REAR SUPPORT ELASTIC														
	5140426	MOUNTING								4				
	5140562	MOUNTING (CUSHION)								8				
	5140425	SPACER								4				
	271568	BOLT, 5/8"-11X3 1/2" (12.9001)								4				
	103325	LOCKWASHER, 5/8" (12.9200)								4				
	102639	NUT, 5/8"-11 (12.9120)								4				

11.1000A ENGINE MOUNTING AND BASE

			TYPES										
FIG	PART NUMBER	NAME AND DESCRIPTION	5 6 8	5 7 7	5 7 8	5 8 2	5 8 7	5 9 4	5 9 6	6 0 1	6 1 0	6 1 1	6 1 6
11.1070 - SUPPORT, ENGINE FRONT													
1B	5162814	SUPPORT						1	1				1
1C	5140080	SUPPORT	1										
	5119060	SUPPORT		1									
1B	5129068	SUPPORT			1								
	5134225	SUPPORT				1					1		
1F	5128660	SUPPORT					1						
1B	5147843	MOUNT										1	
	186283	BOLT, 3/8"-16X3 1/2" (12.9001)					4						
	214265	+ BOLT, 3/8"-16X3 3/4" (12.9001)										4	
	455537	BOLT, 3/8"-16X4" (12.9001)				2					2		
	186288	BOLT, 3/8"-16X4 1/2" (12.9001)	2		2				2		2		2
	454933	BOLT, 7/16"-14X1 1/8" (12.9001)	2										
	193221	BOLT, 7/16"-14X1 1/4" (12.9001)					2						
	179861	BOLT, 7/16"-14X1 3/8" (12.9001)							4				
	179862	BOLT, 7/16"-14X1 1/2" (12.9001)						2				2	2
	427567	BOLT, 7/16"-14X1 3/4" (12.9001)			2				4				2
	179867	BOLT, 7/16"-14X2 1/4" (12.9001)				2					2		
	186725	BOLT, 1/2"-13X1 1/2" (12.9001)		4									
	186631	BOLT, 1/2"-13X2 1/4" (12.9001)	2										
	5167615	WASHER, 1/2" BEVEL	2										
	106263	WASHER, 7/16" (12.9190)				2					2		
	103322	LOCKWASHER, 7/16" (12.9200)	AR		AR	AR	AR	AR	AR		AR	AR	AR
	103323	LOCKWASHER, 1/2" (12.9200)	AR	AR									
	103263	NUT, 1/2"-13 (12.9120)	2										
		+ OBSOLETE.											
11.1072 - MOUNTING, ENGINE FRONT SUPPORT ELASTIC													
	179895	BOLT, 1/2"-13X3 1/2" (12.9001)											8
	103323	LOCKWASHER, 1/2" (12.9200)											8
	102637	NUT, 1/2"-13 (12.9120)											8
11.1088 - TRUNNION, ENGINE FRONT													
	5138894	TRUNNION											
	9411707	BOLT, 7/16"-14X1 1/4" (12.9001)								1			
	5125608	WASHER, 15/32"X3/4"X1/8" (1.3112)								8			
11.1090 - SUPPORT, ENGINE FRONT TRUNNION MOUNTING													
		A SUPPORT ASSY. INCLUDES BOLTS AND LOCKWASHERS.											
1D	5136387	SUPPORT ASSY.					1						
1D	454906	BOLT, 3/8"-16X1 1/2" (12.9001)					2						
1D	191249	BOLT, 3/8"-16X3 3/4" (12.9001)						4					

11.1000A ENGINE MOUNTING AND BASE

			TYPES										
FIG	PART NUMBER	NAME AND DESCRIPTION	5 8 8	5 7 7	5 7 8	5 8 2	5 8 7	5 9 4	5 9 6	6 0 1	6 1 0	6 1 1	6 1 6
	11.1090	SUPPORT, ENGINE FRONT TRUNNION MOUNTING (CONT'D)											
	103321	LOCKWASHER, 3/8" (12.9200)					2						
	11.1094	RING, ENGINE FRONT TRUNNION MOUNTING SUPPORT CUSHION											
	5122409	RING (CUSHION)					1						
	5166864	RING (CUSHION)							1				
	11.1100	SUPPORT, ENGINE REAR											
1A	5140092	SUPPORT (L.H.)	1										
1A	5140093	SUPPORT (R.H.)	1										
	5144558	SUPPORT		1	1								
1A	5147844	MOUNT										2	
1A	5148669	MOUNT (NOTCHED)											2
	5198788	BRACKET (9.1011)				2			2				
	5186664	SHIM (.010")	AR										
	5186663	SHIM (.005")	AR										
	5177445	SHIM (.031")	AR										
	5177446	SHIM (.062")	AR										
	5143369	SHIM (.187") (8.1895)	AR										
	5140392	SHIM (.005") (2 HOLE)	AR										
	5175223	SHIM (.062")	AR										
	5175224	SHIM (.031")	AR										
	427564	BOLT, 7/16"-14X1 3/8" (12.9001)		4	4							4	4
	180175	BOLT, 1/2"-13X1 1/4" (12.9001)				8			8				
	179886	BOLT, 1/2"-13X1 5/8" (12.9001)	4										
	186631	BOLT, 1/2"-13X2 1/4" (12.9001)	4										
	186659	BOLT, 1/2"-13X3 3/4" (12.9001)	4										
	5167815	WASHER, 1/2" BEVEL	2										
	103322	LOCKWASHER, 7/16" (12.9200)		4	4							4	4
	103323	LOCKWASHER, 1/2" (12.9200)	12			8			8				
	123263	NUT, 1/2"-13 (12.9120)	4										

11.1000A ENGINE MOUNTING AND BASE

			TYPES						
FIG	PART NUMBER	NAME AND DESCRIPTION	6 1 7	6 2 5	6 3 1	6 3 3	6 3 5	6 4 1	6 4 6
11.1070 - SUPPORT, ENGINE FRONT									
1F	5173851	SUPPORT	1						
	5124762	SUPPORT (11.1090)		1					
	5125827	SUPPORT			1				
	5162814	SUPPORT				1			
	5105106	SUPPORT					1		
	5106356	SUPPORT						1	
	5107098	SUPPORT							1
	186283	BOLT, 3/8"-16 X 3 1/2" (12.9001)			4			4	
	191249	BOLT, 3/8"-16 X 3 3/4" (12.9001)				4			
	186628	BOLT, 3/8"-16X4 1/2" (12.9001)	2						
	192883	BOLT, 3/8"-16 X 5 1/4" (12.9001)							2
	193221	BOLT, 7/16"-14 X 1 1/4" (12.9001)		6			6	2	
	179862	BOLT, 7/16"-14 X 1 1/2" (12.9001)				2			4
	427567	BOLT, 7/16"-14X1 3/4" (12.9001)	4						
	179867	BOLT, 7/16"-14X2 1/4" (12.9001)		2					
	103322	LOCKWASHER, 7/16" (12.9200)	4	8		2	6	2	4
	5125822	NUT, 1/2"-13 ANCHOR			1				
11.1072 - MOUNTING, ENGINE FRONT SUPPORT ELASTIC									
	5140004	MOUNTING							1
	5140562	MOUNTING (CUSHION)							6
	5140425	SPACER							3
	5140003	PLATE							1
	271568	BOLT, 5/8"-11 X 3 1/2" (12.9001)							3
	179862	BOLT, 7/16"-14 X 1 1/2" (12.9001)							4
	103322	LOCKWASHER, 7/16" (12.9200)							4
	103325	LOCKWASHER, 5/8" (12.9200)							3
	102639	NUT, 5/8"-11 (12.9120)							3
11.1094 - RING, ENGINE FRONT TRUNNION MOUNTING SUPPORT CUSHION									
	5166864	RING (CUSHION)		1					
11.1100 - SUPPORT, ENGINE REAR									
1A	5148671	SUPPORT	2						
	5140427	SUPPORT						2	
	427564	BOLT, 7/16"-14X1 3/8" (12.9001)	4						
	186725	BOLT, 1/2"-13 X 1 1/2" (12.9001)						8	
	103322	LOCKWASHER, 7/16" (12.9200)	4						
	103323	LOCKWASHER, 7/16" (12.9200)						8	
11.1120 - MOUNTING, ENGINE REAR SUPPORT ELASTIC									
	5179361	MOUNTING ASSY.	2						
	5105093	MOUNTING ASSY.			1				
	5140426	MOUNTING						4	
	5140562	MOUNTING (CUSHION)						8	
	5146900	PIN, 3/8" X 1 1/8" DOWEL (12.9290)			2				
	5140425	SPACER						4	
	5152148	WASHER, 3/8"			3				
	271568	BOLT, 5/8"-11 X 3 1/2"						4	
	186619	BOLT, 3/8"-16 X 1 1/8"				3			
	455537	BOLT, 3/8"-16 X 4" (12.9001)				6			
	179895	BOLT, 1/2"-13X3 1/2" (12.9001)	8						
	103321	LOCKWASHER, 3/8" (12.9200)			6				

11.1000A ENGINE MOUNTING AND BASE

PART		TYPES									
FIG	NUMBER	NAME AND DESCRIPTION	6 1 7	6 2 5	6 3 1	6 3 3	6 3 5	6 4 1	6 4 6		
	11.1120	MOUNTING, ENGINE REAR SUPPORT ELASTIC (CONT'D)									
103323		LOCKWASHER, 1/2" (12.9200)	8						4		
103325		LOCKWASHER, 5/8" (12.9200)									
102637		NUT, 1/2"-13 (12.9120)	8						4		
102639		NUT, 5/8"-11 (12.9120)									

GROUP NOMENCLATURE

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

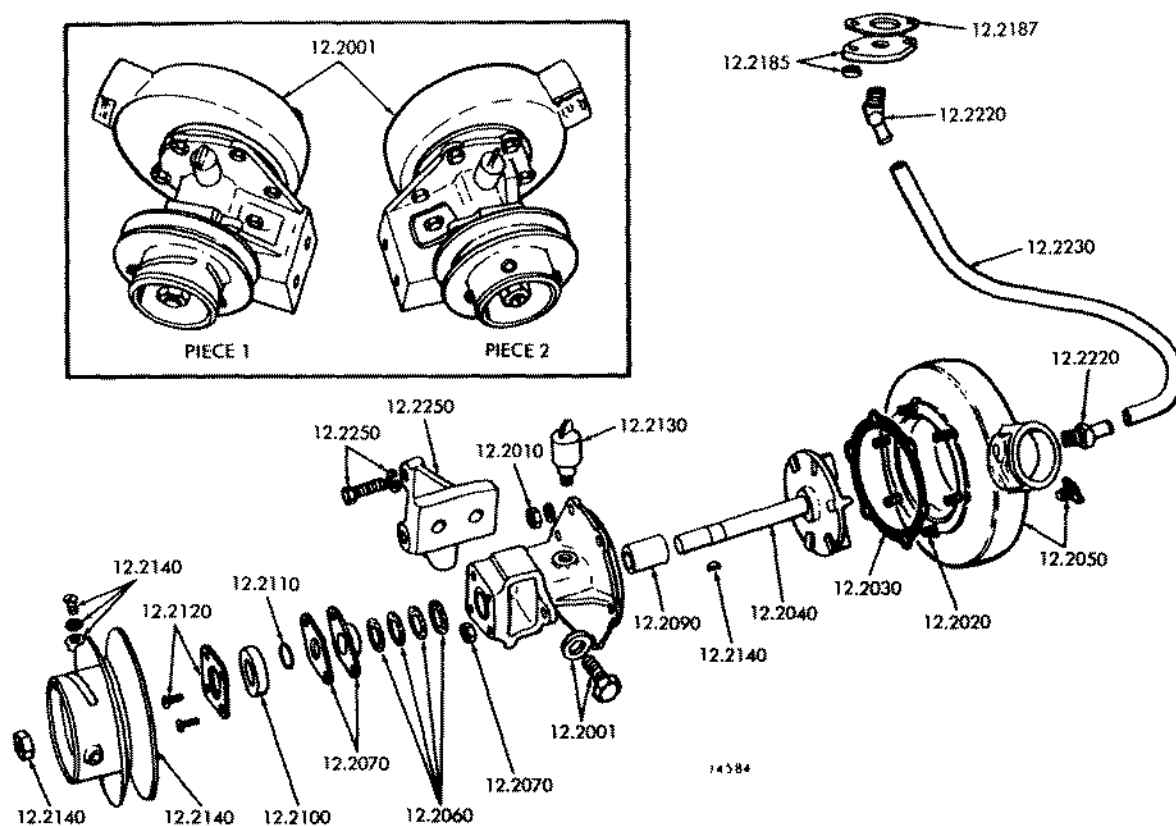


FIG. 1A BILGE PUMP ASSEMBLY

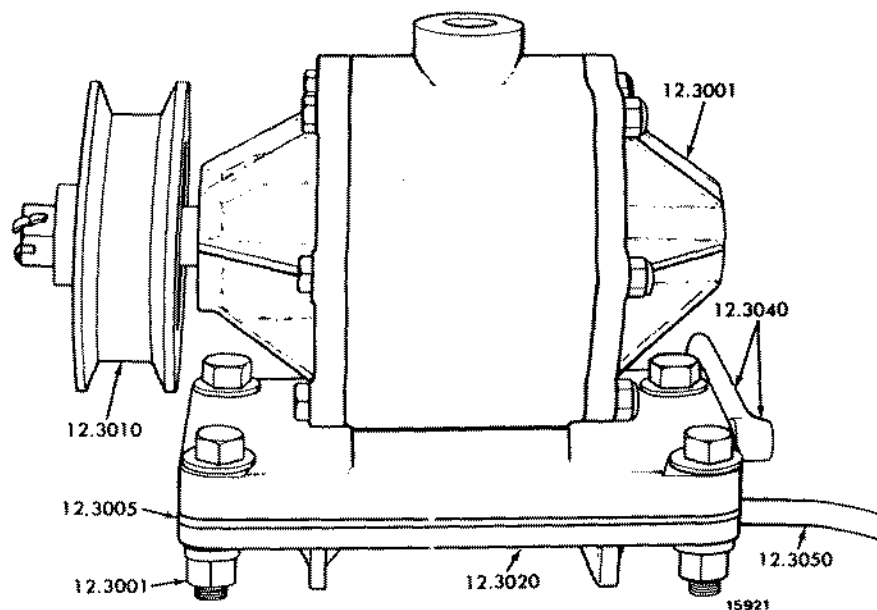


FIG. 3A VACUUM PUMP

Figs. 1A & 3A of 12.0000

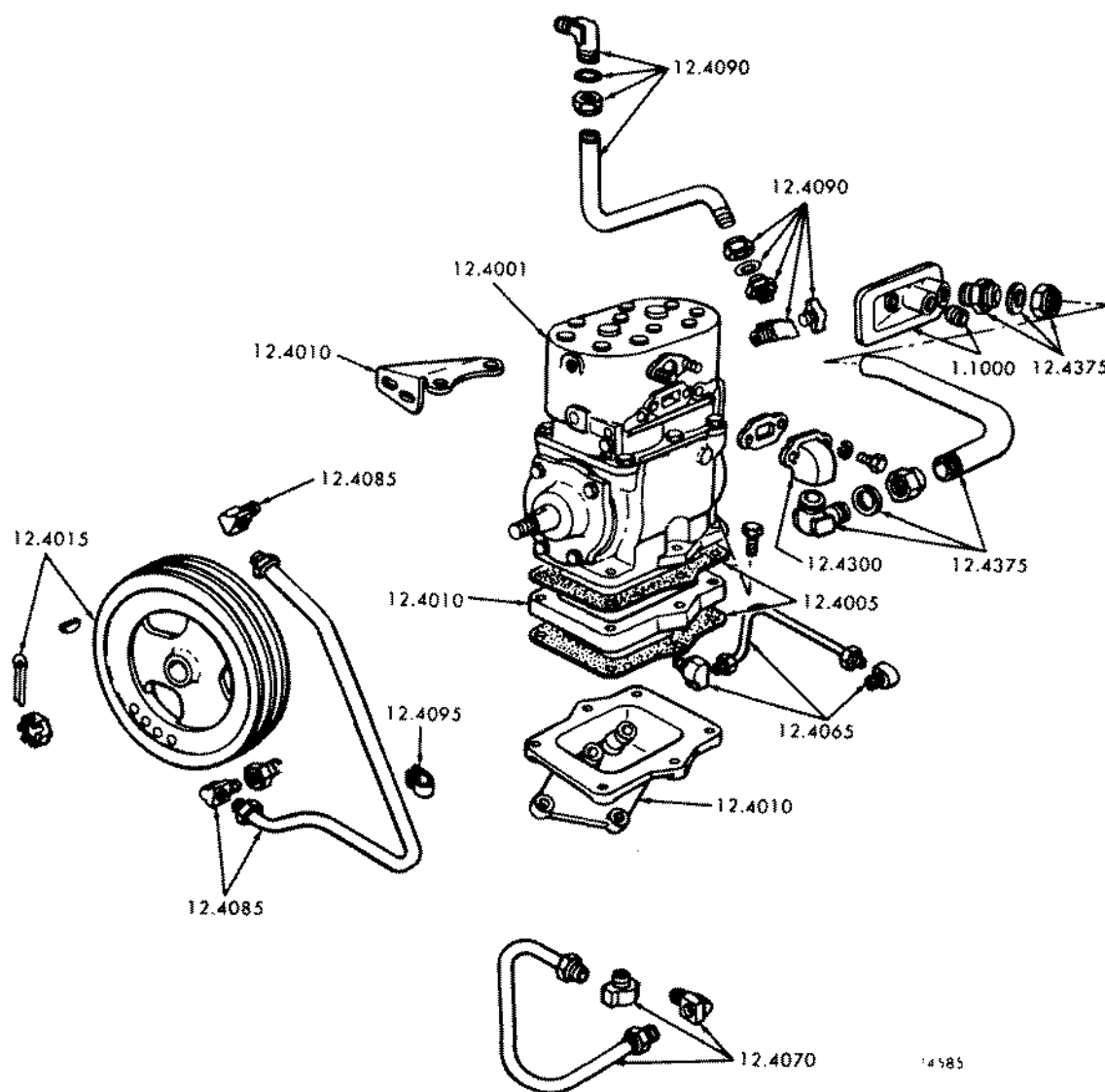


FIG. 3B AIR COMPRESSOR (BELT DRIVEN)

Fig. 3B of 12.0000

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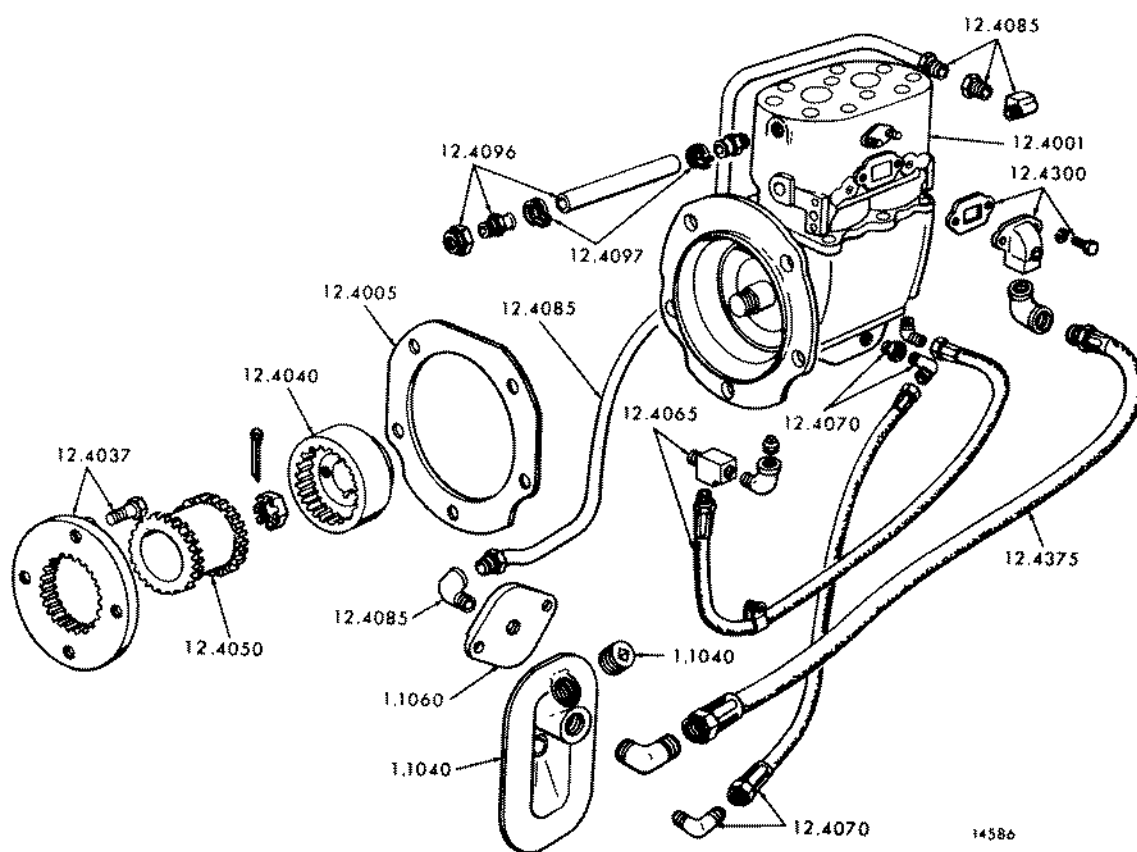


FIG. 3C AIR COMPRESSOR (direct drive)

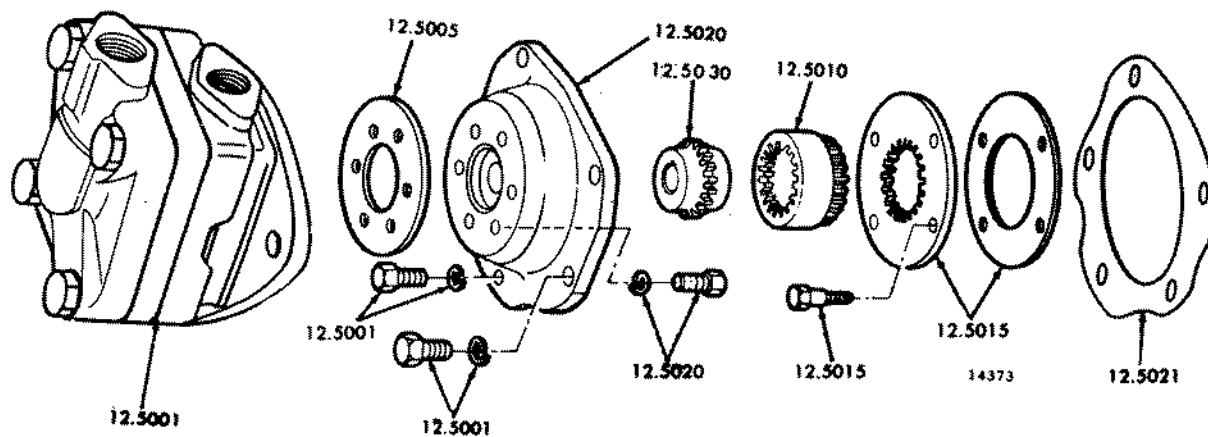


FIG. 4A HYDRAULIC PUMP

Figs. 3C & 4A of 12.0000

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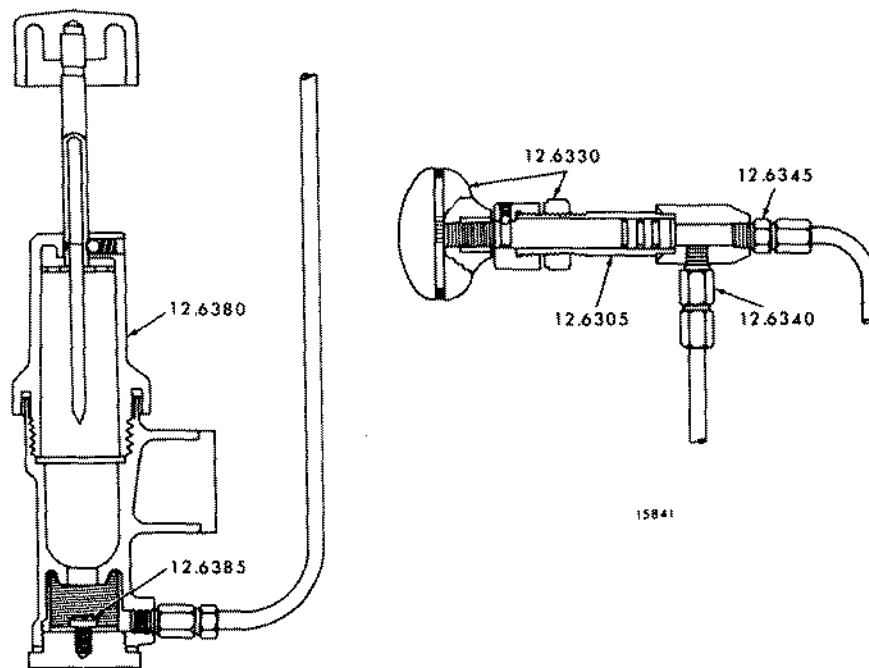


FIG. 5A COLD WEATHER STARTING AID

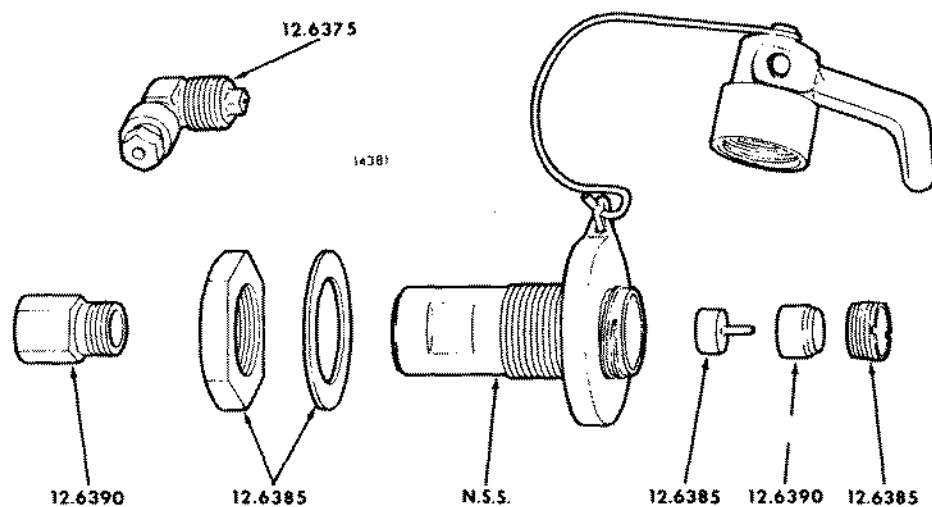


FIG. 5B COLD WEATHER STARTING AID

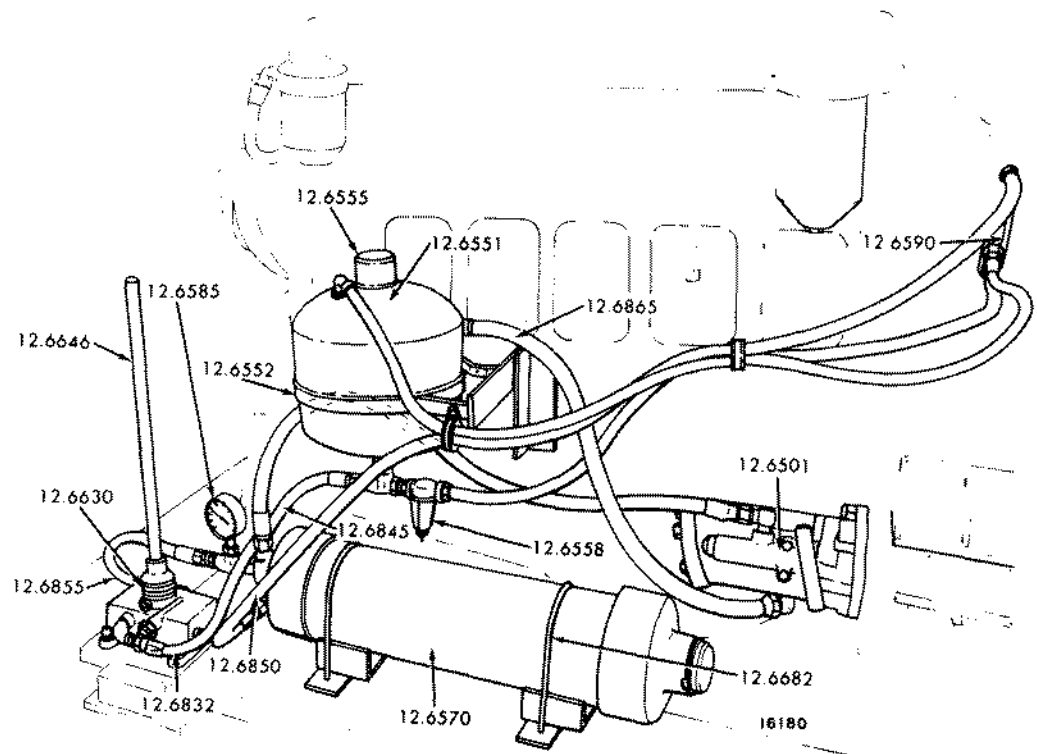


FIG. 5C HYDRAULIC STARTER SYSTEM

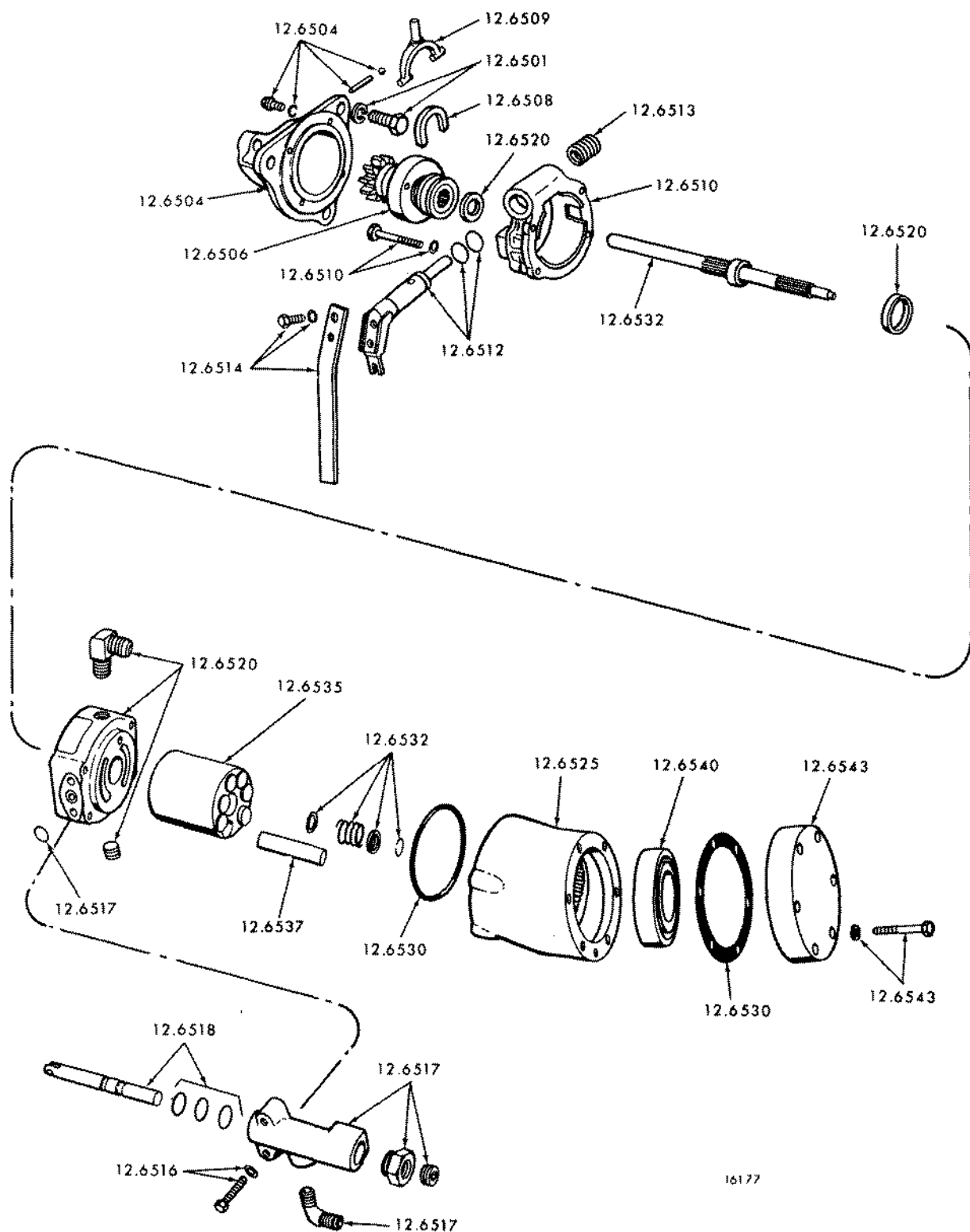


FIG. 6A HYDRAULIC STARTER ASSEMBLY

Fig. 6A of 12.0000

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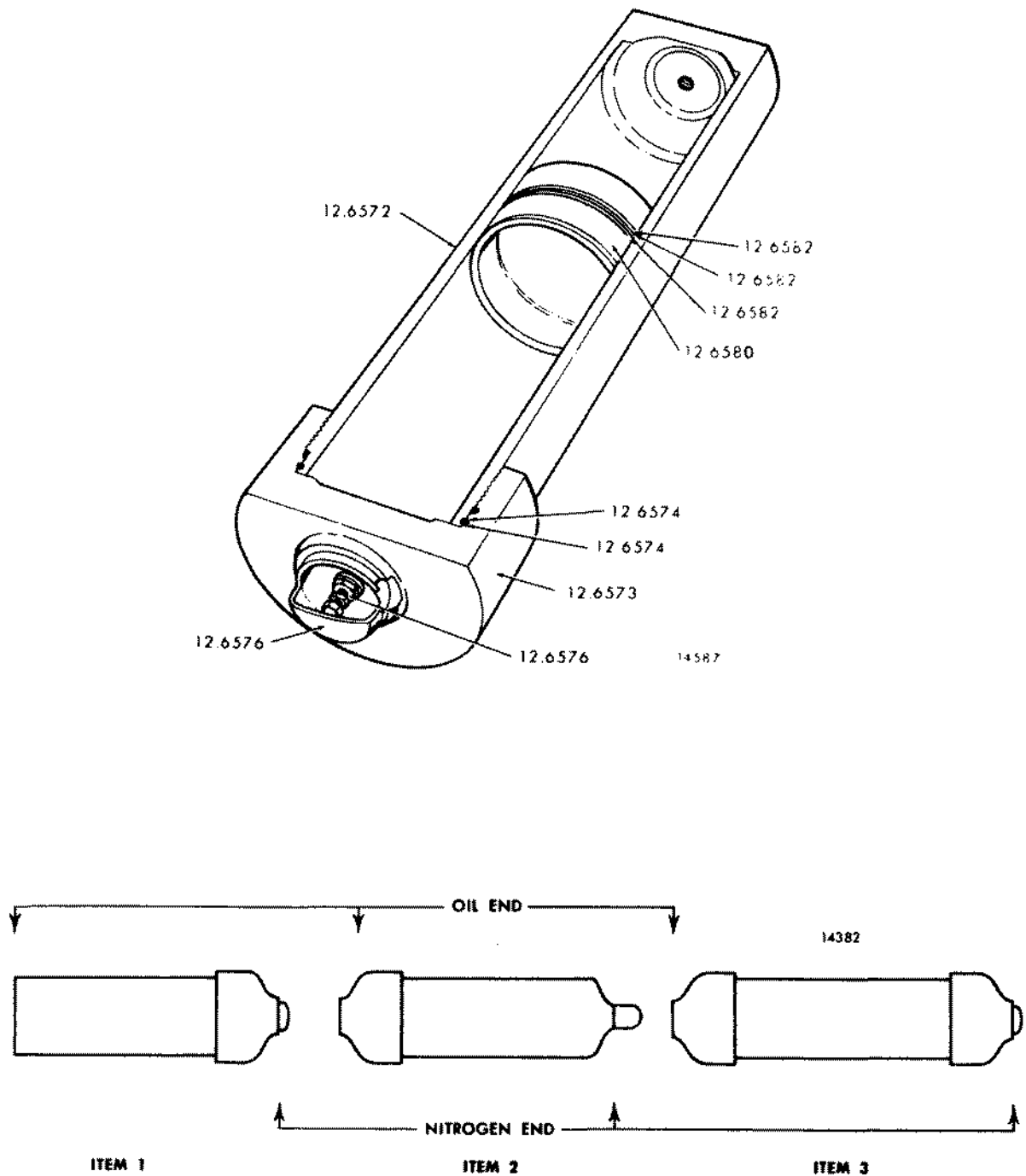


FIG. 6B HYDRAULIC STARTER ACCUMULATOR ASSY. (12.6570)

Fig. 6B of 12.0000

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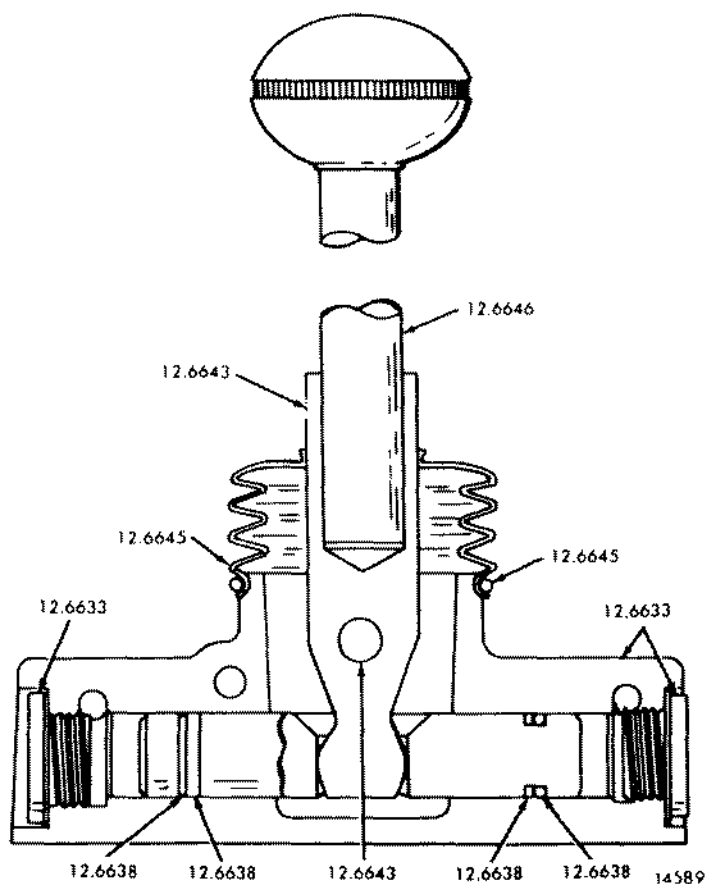


FIG. 6C

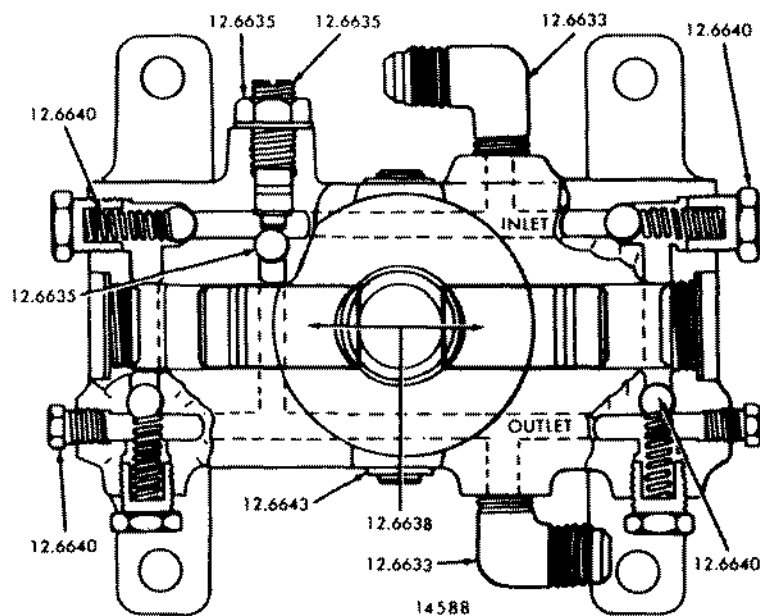


FIG. 6D

HYDRAULIC STARTER HAND PUMP



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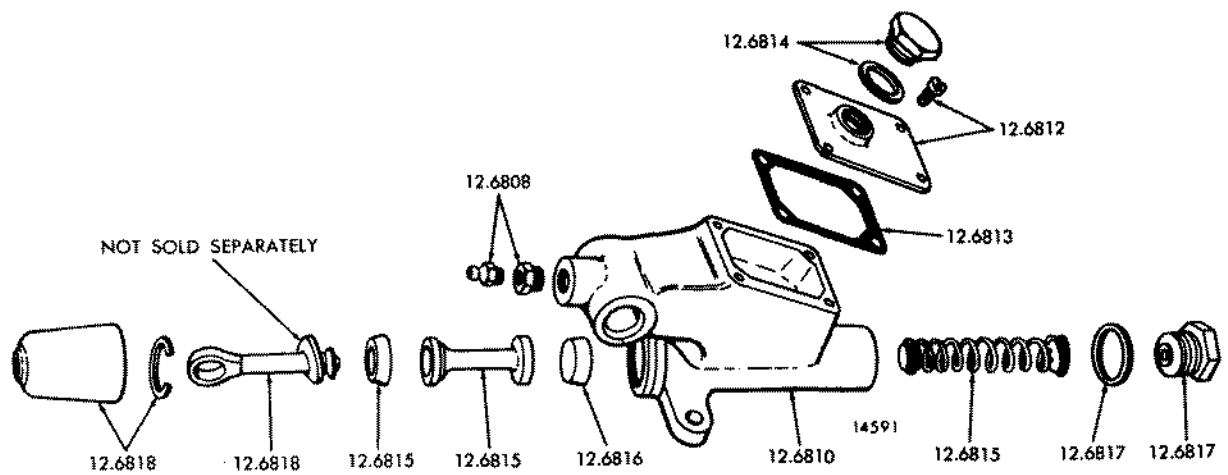


FIG. 7A REMOTE CONTROL MASTER CYLINDER

Fig. 7A of 12.0000

OCT., 1978



DETROIT DIESEL

53 MPC ENGINES

12.2000A BILGE PUMP

			TYPES											
FIG	PART NUMBER	NAME AND DESCRIPTION	2	2										
		12.2001 - PUMP ASSY., BILGE												
		A PUMP ASSY. INCLUDES ITEMS IN 12.2010 THRU 12.2140.												
1A	5169979	PUMP ASSY.	1											
		12.2010 - BODY, BILGE PUMP												
1A	5197519	BODY	1											
1A	5163834	WASHER, 5/16" BRASS (5.5600)	6											
1A	220075	NUT, 5/16"-18 BRASS (12.9120)	6											
		12.2020 - STUD, BILGE PUMP BODY												
1A	5190448	STUD, 5/16"-18X1 1/16"	6											
		12.2030 - GASKET SET, BILGE PUMP												
		A GASKET SET INCLUDES ONE EACH OF .005" AND .010" THICK GASKET.												
1A	5164528	+ GASKET SET	1											
		+ OBSOLETE												
		12.2040 - IMPELLER AND SHAFT ASSY., BILGE PUMP												
		INCLUDES PIN IN 12.2040.												
1A	5190464	IMPELLER AND SHAFT ASSY.	1											
	5190442	PIN, 3/16"X1 7/16"	1											
		12.2050 - HOUSING, BILGE PUMP IMPELLER												
1A	5190429	HOUSING	1											
1A	114981	DRAINCOCK, 1/8" (12.9510)	1											
		12.2060 - PACKING, BILGE PUMP SHAFT												
1A	5160375	PACKING (5.6170)	4											
	5190476	PACKING	1											
		12.2070 - GLAND, BILGE PUMP SHAFT PACKING												
1A	5190439	GLAND	1											
1A	5190452	LOCK	1											
1A	122002	NUT, 5/16"-24 BRASS (12.9120)	2											