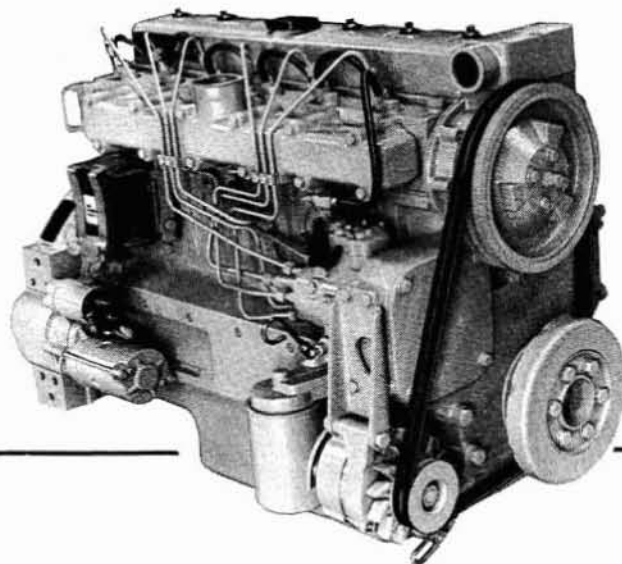


Onan

Parts Manual

L634D-I
L634D-P
**Engine
Diesel**



934-0251

7-87

(SPEC A-C — INDUSTRIAL ENGINE)

(SPEC A AND C — POWER UNIT)

Replaces

5-86 (Spec A-C — Industrial Engine)

(Spec A — Power Unit)

Printed in U.S.A.

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INTRODUCTION

To assist your Onan Dealer in giving you prompt and efficient replacement parts service, a Sales Option Code plate is part of your Onan nameplate and lists Sales Option Code numbers that identify factory installed parts unique to your engine. Corresponding Code Numbers are listed at the top of each parts group and are used to determine correct replacement parts. For early built Industrial Engines that do not have the rocker cover mounted nameplate and early built Power Units that do not have the radiator shroud mounted nameplate, refer to the table at the rear of this manual.

This parts manual is divided into two sections each of which is controlled by a separate nameplate. The Industrial Engine Section includes service replacement parts for Sales Option Code numbers listed on the rocker cover nameplate. The Power Unit Section includes service replacement parts for Sales Option Code numbers listed on the radiator shroud nameplate. Only the Power Units have the second shroud mounted nameplate. When ordering replacement parts for a Power Unit the model and specification number from both nameplates must be provided.

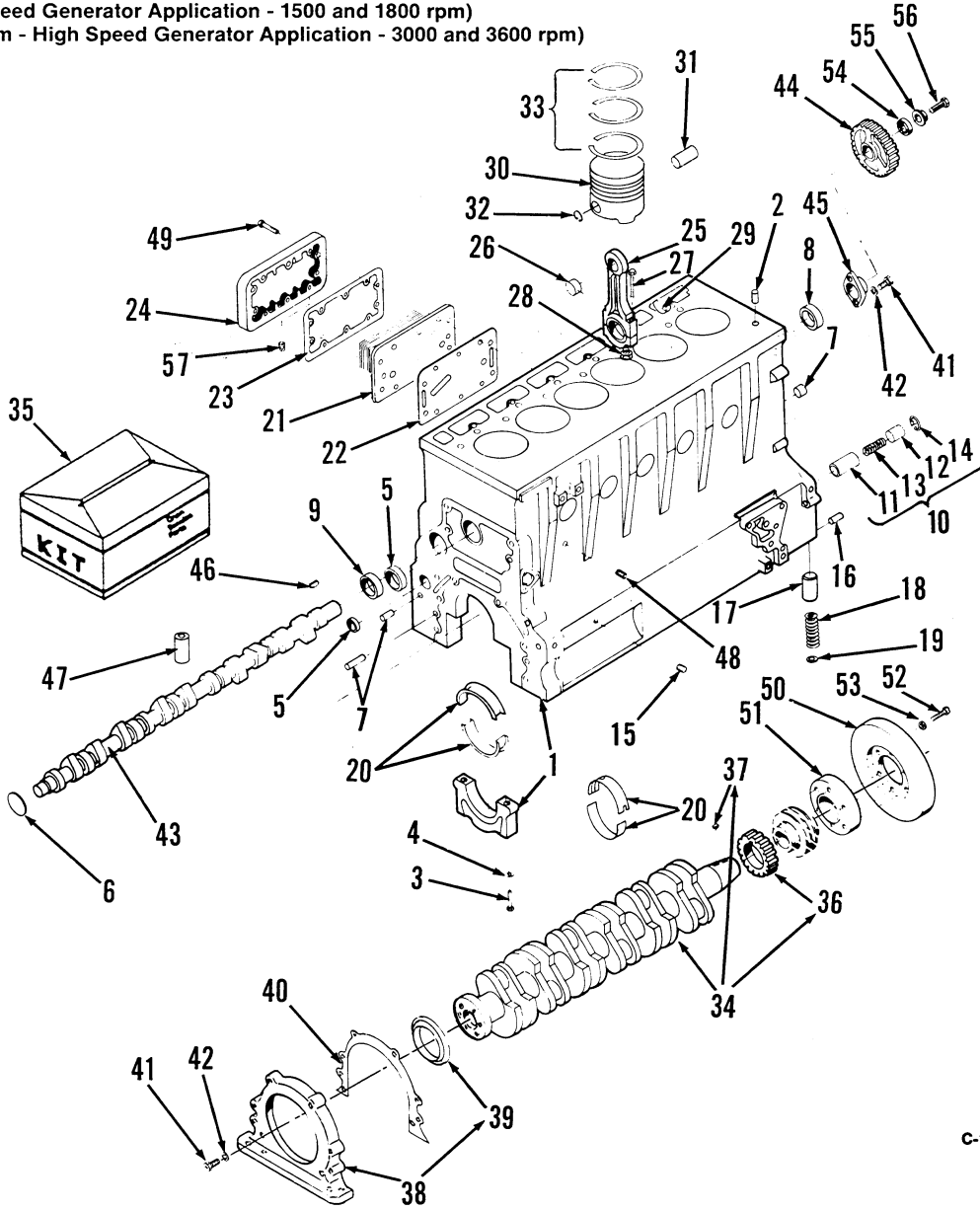
The diagonal line (/) in the model and specification number separates engine characteristics from the specification number and letter. The specification letter on each nameplate may advance (A to B, B to C, etc.) independently of each other with major manufacturing changes. This letter designation, when used in the Part Description, also applies when ordering replacement parts. Left (non-accessory) and right (accessory) sides are determined by facing the rear or drive end (Flywheel) of the engine.

Listed below are Sales Option Code Modifier numbers that may appear on your Onan Nameplate. These code numbers have no direct service replaceable parts and only modify another related Sales Option Code number by identifying a distinctive feature(s). Parts that differ as a result of the modifier are identified in the parts description for that part.

- 15AJ (Fuel System for #2 Diesel Fuel)
- 15AK (Fuel System for Jet A or JP-5 Fuel)
- 15AL (Fuel System for JP-4 Fuel)
- 15AU (Bosch Injection Pump in place of Stanadyne Injection Pump)
- 23CB (No Belts)
- 23CC (No Belts or Alternator Pulley)
- 23CD (Double Pulley and Belts to Replace Single)
- 23CE (Single Pulley and Belts to Replace Double)
- 31AG (12 Volt System)
- 31AH (24 Volt System)
- 31AJ (32 Volt System)
- 35AJ (Fuel Solenoid - Energized to Run)
- 35AK (Fuel Solenoid - Energized to Run, Manual Override)
- 35AL (Fuel Solenoid - Energized to Shut Off, Manual Override)
- 45AA (Auxiliary Gear Drive)
- 45AT (Two Groove Crankshaft Pulley to Replace Single)
- 47 (Literature and Shipping Hardware)
(Alpha letters after the number 47 are variable depending on model)
(Sales Code 47 is not a modifier, however, there are no service replaceable parts)

CYLINDER BLOCK

Code 11AA (Low Speed Variable to 2600 rpm)
 Code 11AB (Premium - High Speed Variable to 3600 rpm)
 Code 11AC (Low Speed Generator Application - 1500 and 1800 rpm)
 Code 11AE (Premium - High Speed Generator Application - 3000 and 3600 rpm)



C-1064-2

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	BLOCK ASSEMBLY, CYLINDER (Includes Parts Marked *)			2	110-2978	2	*Pin, Cylinder Head Alignment
			Code 11AA and 11AC	3	720-1801	14	*Screw, Cap - Hex Head - Special
			Spec A	4	740-1801	14	*Washer, Flat - Special
110-3433	1	1	Vert. Down Oil Filter	5	PLUG, CUP		
110-3435	1	1	Horizontal Oil Filter	517-0141	6	*50.8 MM Stainless Steel	
110-3437	1	1	Remote Oil Filter	517-0144	2	*12.7 MM Steel	
110-3292	1	1	Spec B	517-0146	1	*31.75 MM Stainless Steel	
			Code 11AB, 11AE	517-0250	1	54.37 MM Stainless Steel (Oversize)	
			Spec A	6	517-0140	1	*Plug, Welch (57.15 MM) - Steel
110-3434	1	1	Vert. Down Oil Filter	7	PIN, ALIGNMENT		
110-3436	1	1	Horizontal Oil Filter	775-0074	2	* 8 MM x 20 MM	
110-3438	1	1	Remote Oil Filter	775-0089	2	*10 MM x 20 MM	
110-3293	1	1	Spec B	775-0078	2	* 8 MM x 40 MM	

CYLINDER BLOCK

Code 11AA (Low Speed Variable to 2600 rpm)
 Code 11AB (Premium - High Speed Variable to 3600 rpm)
 Code 11AC (Low Speed Generator Application - 1500 and 1800 rpm)
 Code 11AE (Premium - High Speed Generator Application - 3000 and 3600 rpm)

5100-0711
 5100-0716
 5100-0720
 5100-0721

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
				30	PISTON AND PIN KIT (Includes Retaining Rings)		
					112-0201	6	Standard
					112-0202	6	0.25 MM Oversize
					112-0203	6	0.50 MM Oversize
					112-0204	6	0.75 MM Oversize
					112-0205	6	1.0 MM Oversize
				31	112-0165	6	Pin, Piston
				32	518-0409	12	Ring, Retaining - Piston Pin
				33	RING KIT, PISTON		
					113-0233	6	Standard
					113-0234	6	0.25 MM Oversize
					113-0235	6	0.50 MM Oversize
					113-0236	6	0.75 MM Oversize
					113-0237	6	1.0 MM Oversize
				34	104-1576	1	Crankshaft and Gear (Includes Key)
				35	168-0173	1	Gasket Kit, Lower End
				36	104-1138	1	Gear, Crankshaft
				37	515-0245	1	Key, Woodruff (Special)
				38	101-0713	1	Plate, Rear Seal (Includes Seal)
				39	509-0203	1	Seal, Oil - Rear (Includes Wear Sleeve)
				40	101-0600	1	Gasket, Rear Seal Plate
				41	718-1037	8	Screw, Cap - Hex Head (M8 x 25 MM)
				42	740-1006	8	Washer, Flat (M8)
				43	105-0512	1	Camshaft
				44	GEAR, CAMSHAFT		
					105-0515	1	Engines Without Front PTO
					105-0552	1	Engines With Front PTO
				45	105-0534	1	Retainer, Camshaft
				46	515-0245	1	Key, Camshaft Gear
				47	115-0275	12	Tappet
				48	FITTING (3/8")		
					504-0028	1	Valve, Coolant Drain - Code 11AA, 11AC
					502-0775	1	Plug, Pipe - Code 11AB, 11AE
				49	725-1057	10	Screw, Socket Head (M8 x 40 MM) - Code 11AB, 11AE
				50	DAMPER, CRANKSHAFT		
							Engines Not Used for Generator Application - Codes 11AA, 11AB
					104-1193	1	Engines Without Front PTO
					104-1485	1	Engines With Front PTO
							Engines Used for Generator Application - Code 11AB, 11AE
					104-1485	1	3000 rpm
					104-1547	1	3600 rpm
				51	104-1464	1	Adapter, Damper - Engines Not Used for Generator Application (Without Front PTO)
				52	720-1807	6	Screw, Cap - Hex Head (Special)
				53	740-1008	6	Washer, Flat (M10)
				54	510-0140	1	Bearing, Ball - Camshaft - Engines With Front PTO
				55	105-0569	1	Retainer, Camshaft Bearing - Engines With Front PTO
				56	720-1039	1	Screw, Cap - Hex Head (M8 x 35MM) - Engines With Front PTO
				57	504-0028	1	Valve, Coolant Drain Code 11AB, 11AE
8	101-0511	1	*Bearing, Camshaft - Front				
9	101-0471	6	*Bearing, Camshaft - Intermediate and Rear				
10	123-1613	1	*Valve Assembly, Pressure Relief (Includes Parts Marked +) - Code 11AB, 11AE				
11	123-1515	1	+Body, Relief Valve - Code 11AB, 11AE				
12	123-1514	1	+Piston, Relief Valve - Code 11AB, 11AE				
13	123-1508	1	+Spring, Relief Valve - Code 11AB, 11AE				
14	518-0410	1	+Ring, Retaining - Code 11AB, 11AE				
15	PLUG, PIPE						
	502-0153	1	*Brass (1/4") Early Models				
	505-0274	6	*Steel (1/8")				
16	516-2102	1	*Pin, Regulator Valve Spring				
17	123-1514	1	*Piston, Regulator Valve				
18	123-1511	1	*Spring, Regulator Valve				
19	740-1004	1	*Washer, Flat (M6)				
20	BEARING KIT, MAIN (Includes Upper and Lower Bearing Half)						
			Front				
	101-0689	1	Standard				
	101-0690	1	0.25 MM Undersize				
	101-0691	1	0.50 MM Undersize				
	101-0692	1	0.75 MM Undersize				
			Center				
	101-0681	1	Standard				
	101-0682	1	0.25 MM Undersize				
	101-0683	1	0.50 MM Undersize				
	101-0684	1	0.75 MM Undersize				
			Intermediate (Except Center)				
	101-0685	4	Standard				
	101-0686	4	0.25 MM Undersize				
	101-0687	4	0.50 MM Undersize				
	101-0688	4	0.75 MM Undersize				
			Rear				
	101-0677	1	Standard				
	101-0678	1	0.25 MM Undersize				
	101-0679	1	0.50 MM Undersize				
	101-0680	1	0.75 MM Undersize				
21	102-1022	1	Cooler, Oil - Code 11AB, 11AE				
22	102-0973	1	Gasket, Oil Cooler - Code 11AB, 11AE				
23	102-0975	1	Gasket, Oil Cooler Cover - Code 11AB, 11AE				
24	102-1005	1	Cover, Oil Cooler - Code 11AB, 11AE				
25	114-0313	6	Rod, Connecting (Includes Finished Bearing, Bolts and Nuts)				
26	114-0316	6	Bushing, Connecting Rod (Semi Finished)				
27	114-0315	12	Bolt, Connecting Rod				
28	114-0318	12	Nut, Connecting Rod				
29	BEARING, CONNECTING ROD (Half)						
	114-0319	12	Standard				
	114-0319-01	12	0.25 MM Undersize				
	114-0319-02	12	0.50 MM Undersize				
	114-0319-03	12	0.75 MM Undersize				

* - Parts Included in Cylinder Block Assembly.
 + - Parts Included in 123-1613 Pressure Relief Valve Assembly.

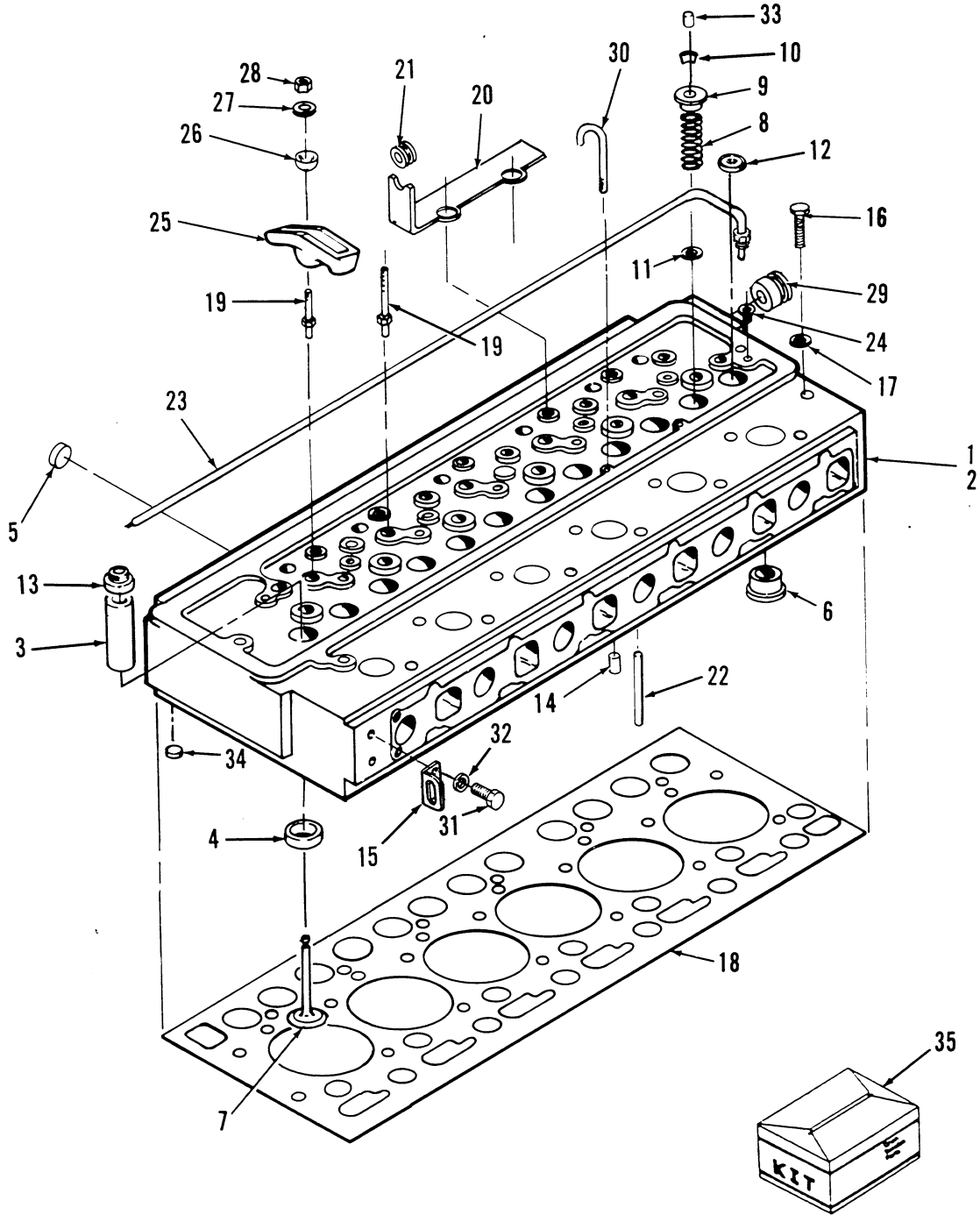
CYLINDER HEAD

Code 11AA (Low Speed Variable to 2600 rpm)

Code 11AB (Premium - High Speed Variable to 3600 rpm)

Code 11AC (Low Speed Generator Application - 1500 and 1800 rpm)

Code 11AE (Premium - High Speed Generator Application - 3000 and 3600 rpm)



CYLINDER HEAD

Code 11AA (Low Speed Variable to 2600 rpm)	5100-0009
Code 11AB (Premium - High Speed Variable to 3600 rpm)	5100-0043
Code 11AC (Low Speed Generator Application - 1500 and 1800 rpm)	5100-0095
Code 11AE (Premium - High Speed Generator Application - 3000 and 3600 rpm)	5100-0725
	5100-0790
	5100-0870
	5100-0894
	5100-0895
	5100-0919

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	110-3200	1	Head Assembly, Cylinder (Includes Guides, Seats, Cup Plugs, Breather Tubes, Valves, Springs, Water Pump Adapter, Retainers, Collets, Wear Plates, Sleeves, Seals and Spacers)	9	110-3015	12	Retainer, Valve Spring
				10	110-2752	24	Collet, Valve Lock
				11	PLATE, VALVE SPRING WEAR		
					110-2991	12	Spec A and B
					110-2991	6	Begin Spec C (Exhaust)
2	110-3284	1	Head, Cylinder (Includes Seats, Spacers, Sleeves, Cup Plugs, Water Pump Adapter and Guides)	12	110-3432	6	Spacer, Valve Spring (Intake) Begin Spec C
3	GUIDE, VALVE (Semi Finished)			13	110-3228	12	Seal Assembly, Valve Stem
	110-3495	6	Intake (Std.)	14	110-2979	6	Sleeve, Sealing
	110-3496	6	Exhaust (Std.)	15	403-1875	2	Bracket, Lifting - Engines Without Code 19AB, 23BM
4	SEAT, VALVE			16	720-1802	26	Screw, Cap - Hex Head (M12 x 130 MM)
			Intake	17	740-1801	20	Washer, Flat (M12)
	110-2839	6	Spec A and B (Std.) Not Original Equipment Begin Spec C - Code 11AB, 11AE (Not Original Equipment for Code 11AA, 11AC)	18	110-3026	1	Gasket, Cylinder Head
			Standard	19	STUD, ROCKER ARM		
	110-3226-01	6	.25 MM Oversize		115-0204	6	Short
	110-3226-02	6	.50 MM Oversize		115-0270	6	Long
	110-3226-03	6	Exhaust	20	115-0313	3	Guide, Push Rod
			Standard	21	508-0228	3	Grommet
	110-2781-01	6	.25 MM Oversize	22	115-0253	12	Pushrod
	110-2781-02	6	.50 MM Oversize	23	120-0920	1	Tube, Rocker Arm Oil
	110-2781-03	6		24	502-0003	1	Connector, Inverted Male
5	PLUG, CUP			25	115-0316	12	Arm, Rocker
	517-0142	11	38.1 MM	26	115-0202	12	Ball, Rocker Arm
	517-0146	4	31.75 MM	27	526-2119	12	Washer, Flat
	517-0162	6	19.05 MM	28	115-0315	12	Locknut, Rocker Arm
6	PLUG, HOT (Swirl)			29	ADAPTER, WATER PUMP		
			Spec A and B		110-3045	1	Standard
	110-3039	6	Code 11AA, 11AB, 11AE		110-3490	1	0.5 MM Oversize
	110-3137	6	Code 11AC	30	123-1536	2	Tube, Breather
			Begin Spec C	31	718-1053	4	Screw, Cap - Hex Head (M10 x 20 MM) Engines Without Code 23BM
	110-3137	6	Code 11AA, 11AC	32	740-1008	4	Washer, Flat (M10) Engines Without Code 23BM
	110-3039	6	Code 11AB, 11AE	33	110-3245	12	Cap, Valve Stem (Not Used on Some Early Models)
7	VALVE			34	517-0167	1	Plug, Cup (22.6 MM) Code 11AA, 11AC
	110-3066	6	Intake	35	168-0160	1	Gasket Kit, Valve Grind
	110-2840	6	Exhaust				
8	110-3300	12	Spring, Valve				

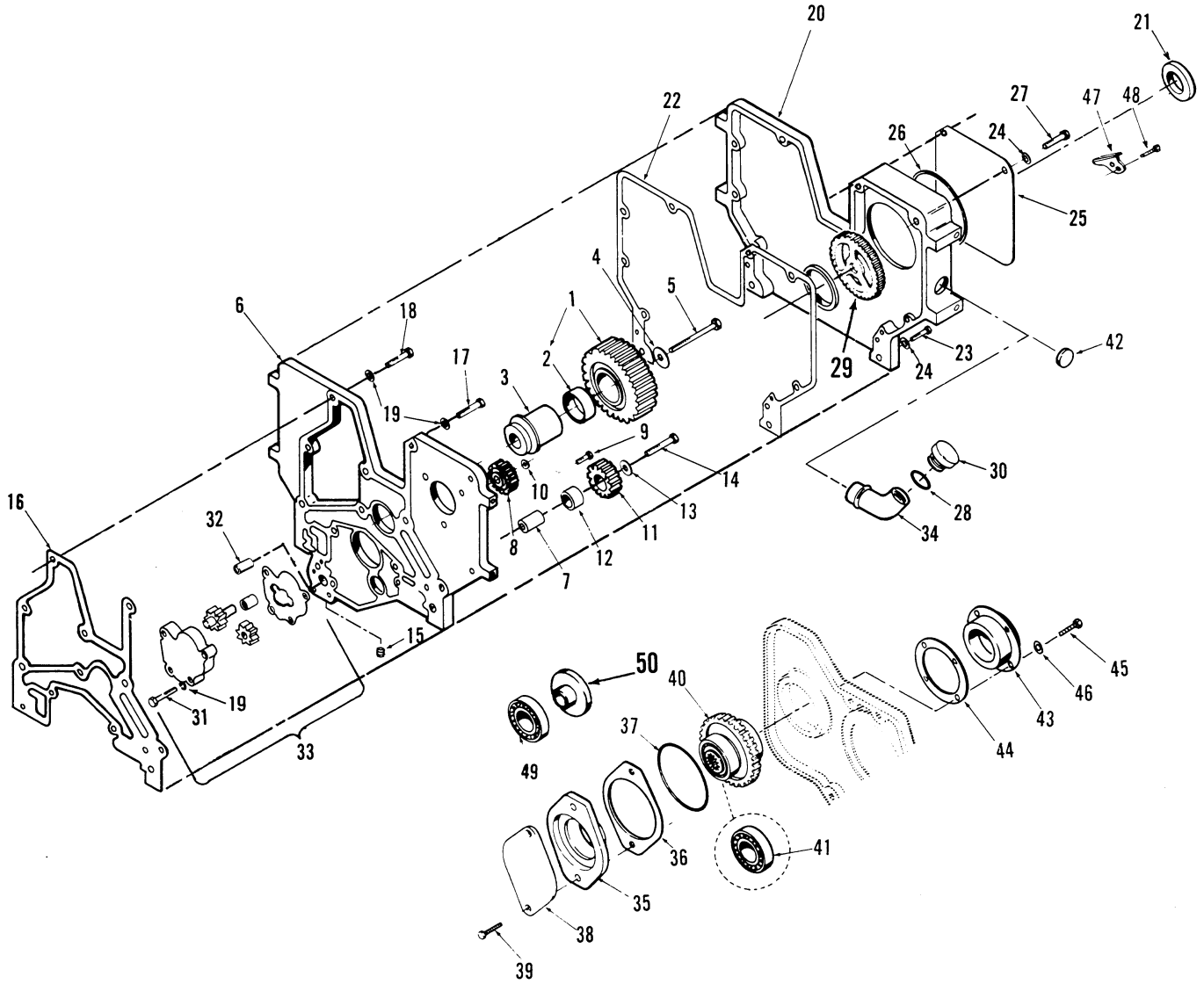
GEARCASE

Code 11AA (Low Speed Variable to 2600 rpm)

Code 11AB (Premium - High Speed Variable to 3600 rpm)

Code 11AC (Low Speed Generator Application - 1500 and 1800 rpm)

Code 11AE (Premium - High Speed Generator Application - 3000 and 3600 rpm)



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GEARCASE

Code 11AA (Low Speed Variable to 2600 rpm)

Code 11AB (Premium - High Speed Variable to 3600 rpm)

Code 11AC (Low Speed Generator Application - 1500 and 1800 rpm)

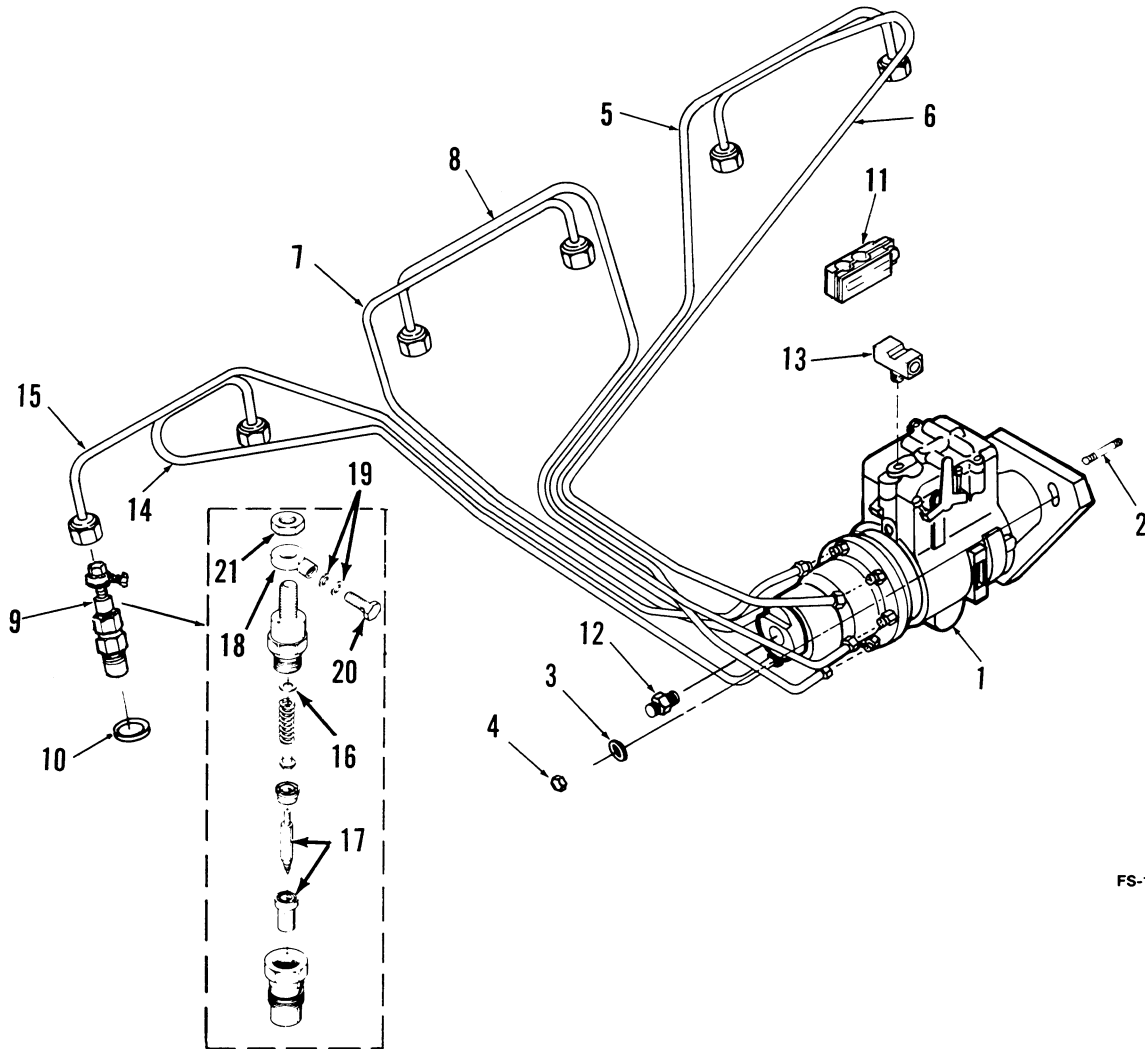
Code 11AE (Premium - High Speed Generator Application - 3000 and 3600 rpm)

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	GEAR, IDLER 105-0513	1	Engines Without Front PTO (Includes Finished Bearing)	23	SCREW, CAP - HEX HEAD 718-1046	2	M8 x 70 MM
	105-0555	1	Engines With Front PTO		718-1043	5	M8 x 55 MM
2	105-0519	1	Bearing, Idler Gear (Semi Finished) - Engines Without Front PTO		718-1085	4	M12 x 85 MM (Engines Without Code 41AA, 41AB and 41AH)
3	SHAFT, IDLER GEAR 105-0508	1	Engines Without Front PTO	24	WASHER, FLAT 740-1006	4	M8
	105-0572	1	Engines With Front PTO		740-1010	4	M12
4	526-2127	1	Washer, Flat (M10) - Engines Without Front PTO	25	103-0735	1	Cover, Injection Pump Gear
5	718-1064	1	Screw, Cap - Hex Head (M10 x 75 MM)	26	509-0263	1	Seal, O-Ring
6	BACKPLATE, GEARCASE 103-0600	1	Engines Without Front PTO Spec A	27	SCREW, CAP - HEX HEAD 718-1048	1	M8 x 80 MM
	103-0716	1	Begin Spec B		718-1044	2	M8 x 60 MM
	103-0725	1	Engines With Front PTO		718-1036	1	M8 x 20 MM
7	120-0983	1	Shaft, Oil Pump Idler Gear	28	509-0142	1	Seal, O-Ring - Oil Fill Cap - Engines With Code 17AM
8	120-0885	1	Gear, Oil Pump Drive	29	147-0427	1	Gear, Injection Pump
9	718-1035	1	Screw, Cap - Hex Head (M8 x 16 MM)	30	123-1647	1	Cap - Oil Fill - Engines With Code 17AM
10	526-2106	1	Washer, Flat	31	718-1043	2	Screw, Cap - Hex Head (M8 x 55 MM)
11	120-1063	1	Gear, Oil Pump Idler (Includes Finished Bearing)	32	120-0979	1	Bearing, Oil Pump Drive Shaft
12	120-1041	1	Bearing, Oil Pump Idler Gear (Semi Finished)	33	120-1014	1	Pump Kit, Oil (Includes Drive Shaft Bearing)
13	526-2107	1	Washer, Flat	34	123-1558	1	Tube, Oil Fill - Engines With Code 17AM
14	718-1035	1	Screw, Cap - Hex Head (M8 x 16 MM)	35	121-0038	1	Adapter, Hyd. Pump - Engines With Front PTO
15	725-1802	1	Screw, Hex Socket Set (M16 x 16 MM)	36	121-0039	1	Gasket, Adapter - Engines With Front PTO
16	GASKET, GEARCASE BACKPLATE 103-0612	1	Spec A	37	509-0175	1	Seal, O-Ring - Engines With Front PTO
	103-0733	1	Begin Spec B	38	121-0040	1	Cover, Adapter - Engines With Front PTO
17	SCREW, CAP - HEX HEAD 718-1037	1	M8 x 25 MM	39	718-1075	2	Screw, Cap - Hex Head (M12 x 35 MM) - Engines With Front PTO
	718-1039	1	M8 x 35 MM	40	105-0571	1	Gear Assembly (Includes Bearings) Engines With Front PTO
18	725-1801	2	Screw, Low Socket Head Cap (M8 x 16 MM)	41	510-0141	2	Bearing, Gear - Engines With Front PTO
19	740-1006	7	Washer, Flat (M8)	42	517-0188	1	Plug, Cap
20	GEARCASE (Includes Oil Seal) Engines Without Front PTO Without Side Oil Fill			43	101-0710	1	Support, Camshaft Bearing - Engines With Front PTO
	103-0739	1	Spec A	44	101-0711	1	Gasket, Support - Engines With Front PTO
	103-0744	1	Begin Spec B With Side Oil Fill (Includes Oil Fill Tube)	45	718-1037	4	Screw, Cap - Hex Head (M8 x 25 MM) Engines With Front PTO
	103-0740	1	Spec A	46	740-1006	4	Washer, Flat (M8) Engines With Front PTO
	103-0746	1	Begin Spec B	47	103-0750	1	Plate, Timing (Use Began During Spec B) Engines Without Code 23BK
21	509-0191	1	Engines With Front PTO	48	815-0578	2	Screw, Cap - Hex Head (M6 x 12.5 MM) Use Began During Spec B - Engines Without Code 23BK
22	GASKET, GEARCASE Engines Without Front PTO Spec A			49	510-0139	1	Bearing, Idler Gear - Engines With Front PTO
	103-0614	1	Spec A	50	105-0556	1	Retainer, Idler Gear - Engines With Front PTO
	103-0731	1	Begin Spec B				
	103-0723	1	Engines With Front PTO				

FUEL INJECTION

Code 13AA (2600 rpm Variable)
Code 13AB (3600 rpm Variable)
Code 13AC (1800 rpm Fixed)
Code 13AD (3000 rpm Fixed)
Code 13AE (1500 rpm Fixed)
Code 13AF (3600 rpm Variable)
Code 13AG (3600 rpm Variable)

Code 13AH (3000 rpm Variable)
Code 13AJ (2800 rpm Variable)
Code 13AK (2400 rpm Variable)
Code 13AL (2200 rpm Variable)
Code 13AM (2000 rpm Variable)
Code 13AN (3600 rpm Variable)
Code 13AP (3600 rpm Fixed)



FS-1566

FUEL INJECTION

Code 13AA (2600 rpm Variable)
 Code 13AB (3600 rpm Variable)
 Code 13AC (1800 rpm Fixed)
 Code 13AD (3000 rpm Fixed)
 Code 13AE (1500 rpm Fixed)
 Code 13AF (3600 rpm Variable)
 Code 13AG (3600 rpm Variable)

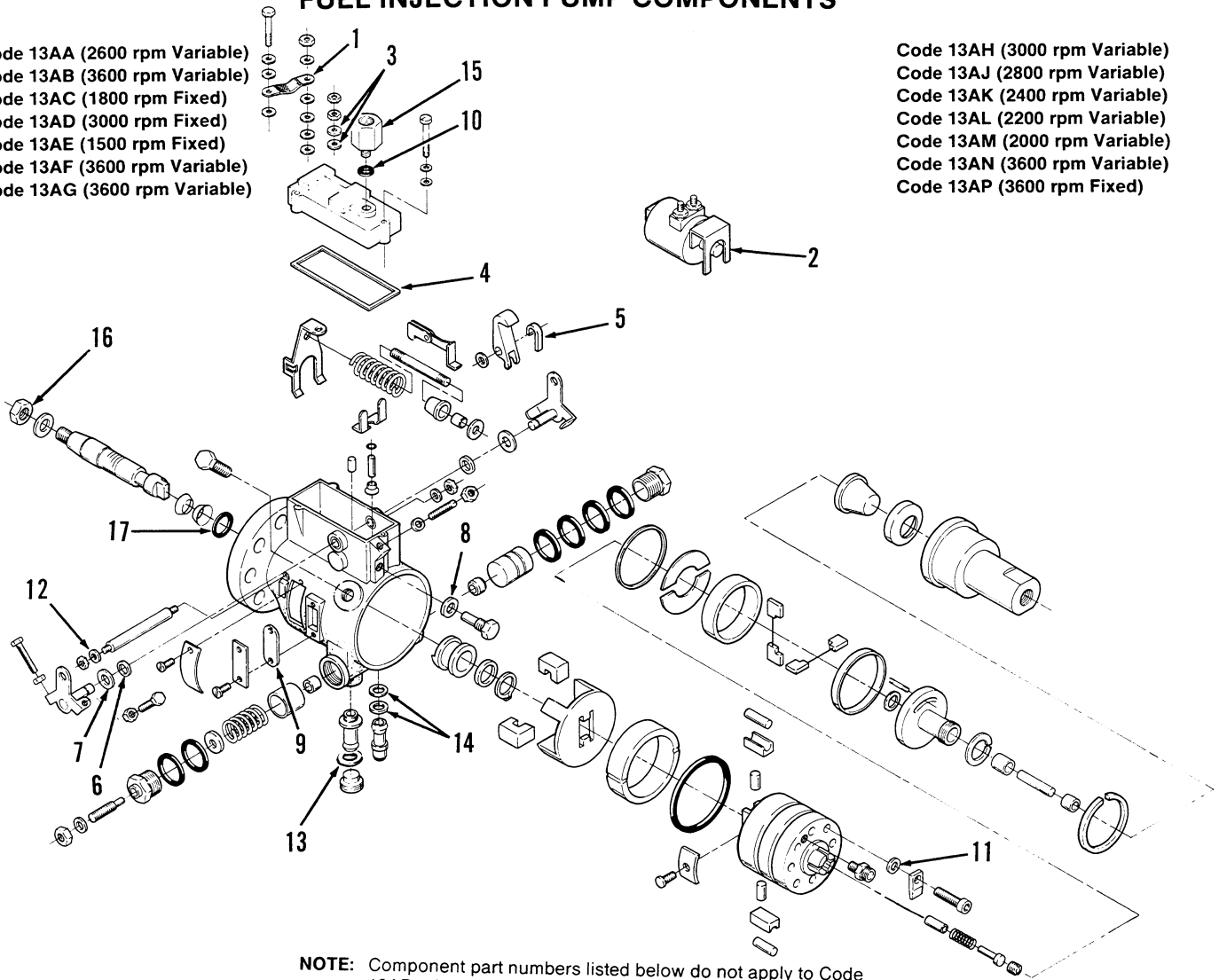
Code 13AH (3000 rpm Variable)
 Code 13AJ (2800 rpm Variable)
 Code 13AK (2400 rpm Variable)
 Code 13AL (2200 rpm Variable)
 Code 13AM (2000 rpm Variable)
 Code 13AN (3600 rpm Variable)
 Code 13AP (3600 rpm Fixed)

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	PUMP, FUEL INJECTION (See Separate Group for Components)			12	502-0733	1	Connector
			Code 13AA, 13AK	13	502-0057	1	Tee, Pipe - Special
			12 Volt Pump	14	LINE, FUEL INJECTION (No. 5)		
	147-0464-03	1	Jet A Fuel Not Required		149-1769	1	Spec A
	147-0464-10	1	Jet A Fuel Required		147-0670	1	Begin Spec B
	147-0464-19	1	24 Volt Pump (Jet A Fuel Required)	15	LINE, FUEL INJECTION (No. 6)		
			Code 13AB		149-1770	1	Spec A
	147-0464-09	1	12 Volt Pump		147-0671	1	Begin Spec B
	147-0464-12	1	24 Volt Pump	16	WASHER, INJECTION NOZZLE SHIM		
	147-0464-05	1	Code 13AC		147-0617	As Req.	0.80 MM
	147-0464-08	1	Code 13AD, 13AP		147-0618	As Req.	0.84 MM
	147-0464-06	1	Code 13AE		147-0619	As Req.	0.88 MM
	147-0464-12	1	Code 13AF, 13AG (24 Volt)		147-0620	As Req.	0.92 MM
			Code 13AH		147-0621	As Req.	0.96 MM
	147-0464-09	1	Spec A and B		147-0622	As Req.	1.00 MM
	147-0464-02	1	Begin Spec C		147-0623	As Req.	1.04 MM
	147-0464-02	1	Code 13AJ		147-0624	As Req.	1.08 MM
	147-0464-04	1	Code 13AL, 13AM		147-0625	As Req.	1.12 MM
	147-0464-07	1	Code 13AN		147-0626	As Req.	1.16 MM
2	520-2403	3	Stud, Injection Pump (M8)		147-0627	As Req.	1.20 MM
3	526-2106	3	Washer, Flat (M8)		147-0628	As Req.	1.24 MM
4	750-1006	3	Nut, Hex (M8)		147-0629	As Req.	1.28 MM
5	LINE, FUEL INJECTION (No. 1)				147-0630	As Req.	1.32 MM
	149-1765	1	Spec A		147-0631	As Req.	1.36 MM
	147-0666	1	Begin Spec B		147-0632	As Req.	1.40 MM
6	LINE, FUEL INJECTION (No. 2)				147-0633	As Req.	1.44 MM
	149-1766	1	Spec A		147-0634	As Req.	1.48 MM
	147-0667	1	Begin Spec B		147-0635	As Req.	1.52 MM
7	LINE, FUEL INJECTION (No. 3)				147-0636	As Req.	1.56 MM
	149-1767	1	Spec A		147-0637	As Req.	1.60 MM
	147-0668	1	Begin Spec B		147-0638	As Req.	1.64 MM
8	LINE, FUEL INJECTION (No. 4)				147-0639	As Req.	1.68 MM
	149-1768	1	Spec A		147-0640	As Req.	1.72 MM
	147-0669	1	Begin Spec B		147-0641	As Req.	1.76 MM
9	INJECTOR, FUEL (Includes Seal)				147-0642	As Req.	1.80 MM
	147-0562	6	Used With Flexible Leak Off Lines		147-0643	As Req.	1.84 MM
	147-0700	6	Used With Metal Leak Off Lines		147-0644	As Req.	1.88 MM
10	147-0436	6	Seal, Injector		147-0645	As Req.	1.92 MM
11	CLAMP, FUEL LINE (Begin Spec B)				147-0646	As Req.	1.96 MM
	147-0672	3	Clamps Two Lines	17	147-0647	6	Tip, Nozzle
	147-0673	2	Clamps Three Lines	18	147-0766	6	Banjo
	147-0674	1	Clamps Six Lines	19	147-0767	12	Washer
				20	147-0765	6	Screw, Hollow
				21	147-0780	6	Nut, Hex (M19) Used With 147-0700 Fuel Injector

FUEL INJECTION PUMP COMPONENTS

Code 13AA (2600 rpm Variable)
 Code 13AB (3600 rpm Variable)
 Code 13AC (1800 rpm Fixed)
 Code 13AD (3000 rpm Fixed)
 Code 13AE (1500 rpm Fixed)
 Code 13AF (3600 rpm Variable)
 Code 13AG (3600 rpm Variable)

Code 13AH (3000 rpm Variable)
 Code 13AJ (2800 rpm Variable)
 Code 13AK (2400 rpm Variable)
 Code 13AL (2200 rpm Variable)
 Code 13AM (2000 rpm Variable)
 Code 13AN (3600 rpm Variable)
 Code 13AP (3600 rpm Fixed)



NOTE: Component part numbers listed below do not apply to Code 13AB, 13AF, 13AG injection pump (147-0464-12) and Code 13AA, 13AK injection pump (147-0464-19) with 24 volt application. Component part numbers for this pump were not available at time of printing.

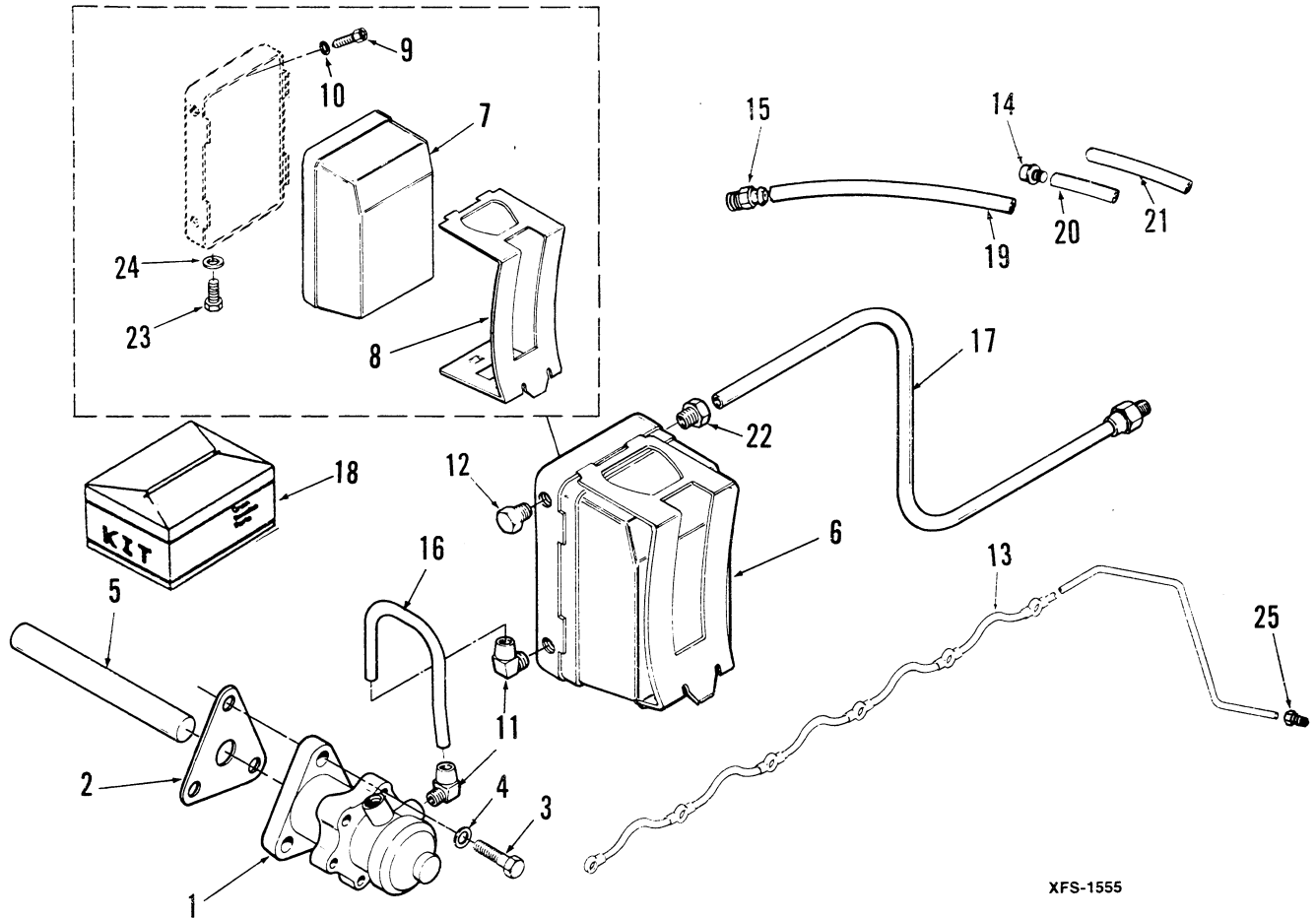
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
PUMP, FUEL INJECTION - COMPLETE (See Fuel Injection Group)			
1	147-0592	1	Strap, Terminal Grounding
2	SOLENOID AND FRAME KIT		
	147-0593	1	All Except Code 13AN
	147-0705	1	Code 13AN
3	147-0591	2	Washer, Terminal Insulating
4	147-0590	1	Gasket, Governor Cover
5	147-0589	1	Clip, Shaft Retaining
6	147-0588	2	Seal, Throttle Shaft
7	147-0587	2	Washer, Throttle Shaft Seal
8	147-0586	1	Washer, Guide Stud
9	147-0585	1	Gasket, Timing Line Cover
10	147-0584	1	Seal, Return Line Connector
11	147-0583	1	Seal, Locking Plate
12	147-0582	2	Seal, Pivot Shaft
13	147-0581	1	Seal, Advance Screw Hole Plug
14	147-0580	2	Seal, Head Locating Screws
15	147-0579	1	Connector, Return Line
16	147-0578	1	Nut, Drive Shaft
17	509-0265	1	Seal, Pilot Tube

NOTE: For component parts not listed contact manufacturer shown on nameplate.

FUEL SYSTEM

Code 15AA (Low Pressure, Glass Filter, Soft Lines, With Drain)
 Code 15AG (Low Pressure, Metal Filter and Lines, With Drain)
 Code 15AH (Low Pressure, Glass Filter, Metal Lines, With Drain)

5100-0018
 5100-0626
 5100-0922



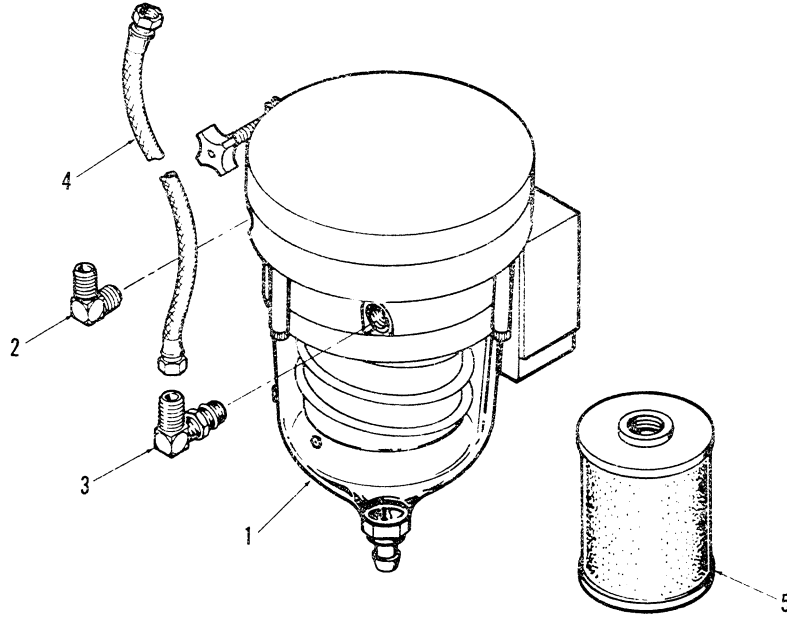
XFS-1555

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	149-2067	1	Pump Kit, Fuel Transfer (Includes Mounting Gasket)	11	502-0774	2	Elbow, Flareless Tube Fitting (Includes Sleeve and Nut)
2	149-1728	1	Gasket, Fuel Transfer Pump	12	502-0153	2	Plug, Pipe (1/4")
3	718-1021	3	Screw, Cap - Hex Head (M6 x 20 MM)	13	147-0693	1	Tube, Nozzle Leak Off - Code 15AG, 15AH
4	740-1004	3	Washer, Flat (M6)	14	502-0736	1	Plug
5	149-1732	1	Pushrod, Fuel Transfer Pump	15	502-0736	1	Connector, Male - Code 15AA
6	FILTER ASSEMBLY 149-1755	1	Code 15AA, 15AH (Includes Filter, Base, Clamp, Drain Plug, Drain Seal, and Plugs)	16	149-1797	1	Line, Fuel
	149-1803	1	Code 15AG (Includes Base, Filter and Clamp)	17	149-1796	1	Line, Fuel
7	FILTER, FUEL 149-1754	1	Code 15AA, 15AH	18	149-2069	1	Repair Package - Transfer Pump
	149-1802	1	Code 15AG	19	503-1055	1	Line, Fuel Return (Flexible) - 380 MM Long - Code 15AA
8	149-1801	1	Clamp, Fuel Filter	20	503-1054	1	Line, Fuel Return (Flexible) - 25 MM Long - Code 15AA
9	725-1074	2	Screw, Cap - Socket Head (M10 x 20 MM)	21	503-1053	5	Line, Fuel Return (Flexible) - 180 MM Long - Code 15AA
10	740-1008	2	Washer, Flat (M10)	22	502-0773	1	Connector, Flareless Tube Fitting (Includes Sleeve and Nut)
				23	149-1835	1	Plug, Filter Drain
				24	149-1836	1	Gasket, Filter Drain Plug
				25	502-0830	1	Connector, Male - Code 15AG, 15AH (Includes Sleeve and Nut)

WATER SEPARATOR

Code 15AD

5100-0339



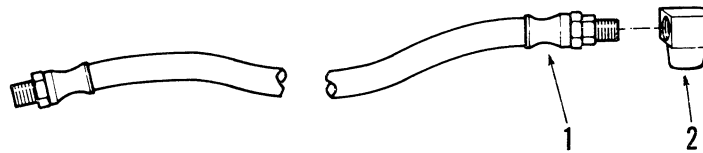
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	149-1866	1	Separator, Water
2	502-0041	1	Elbow, Inverted Male
3	502-0840	1	Elbow, O-Ring Boss
4	501-0450	1	Line, Flexible - Fuel
5	149-1865	1	Element, Water Separator

FS-1500

FLEXIBLE FUEL LINE

Code 15AF

5100-0515



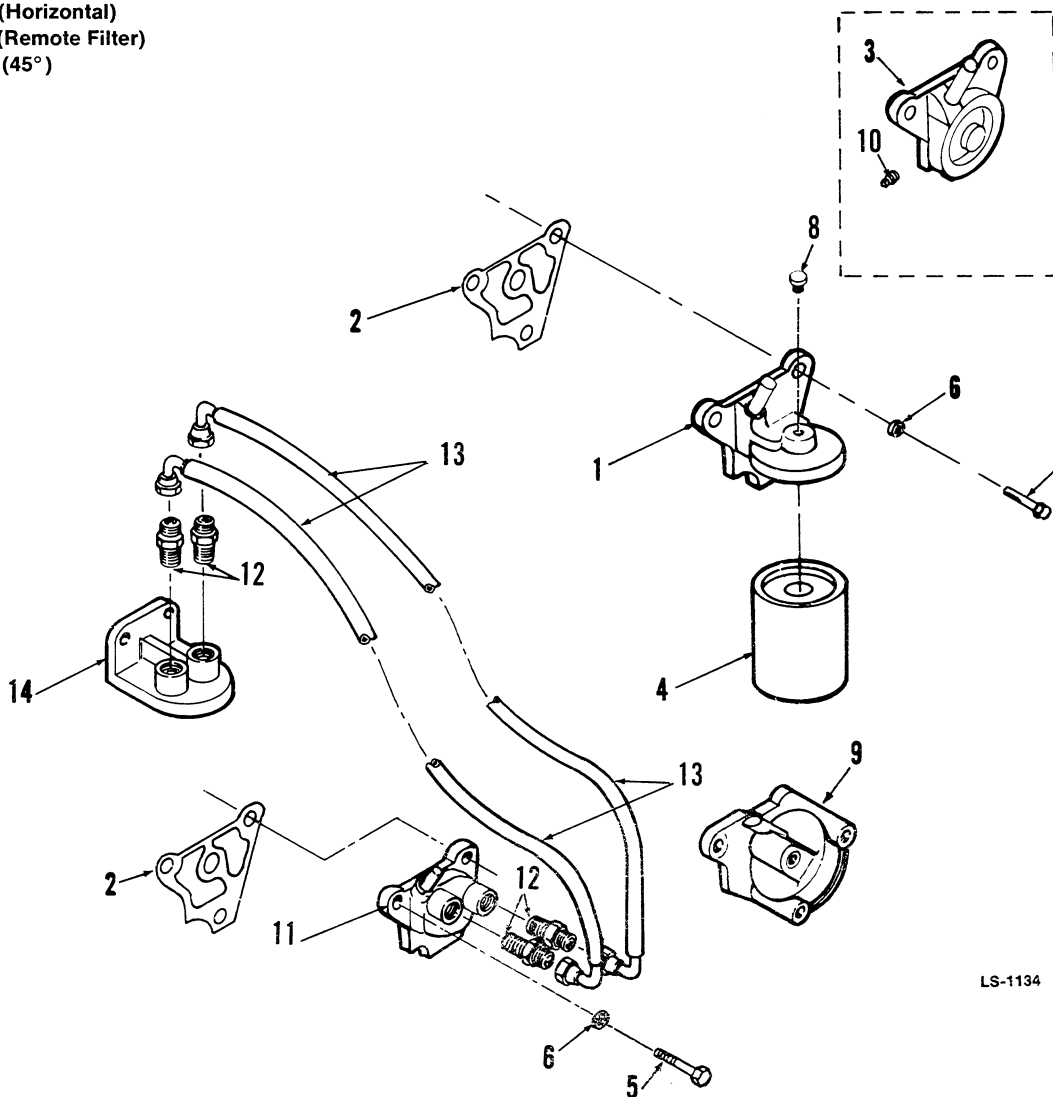
FS-1629

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	501-0002	1	Line, Flexible Fuel (7")
2	502-0041	1	Elbow, Male

OIL FILTER

Code 17AJ (Vertical Down)
 Code 17AK (Horizontal)
 Code 17AS (Remote Filter)
 Code 17AW (45°)

5100-0383
 5100-0454
 5100-0539
 5100-0802



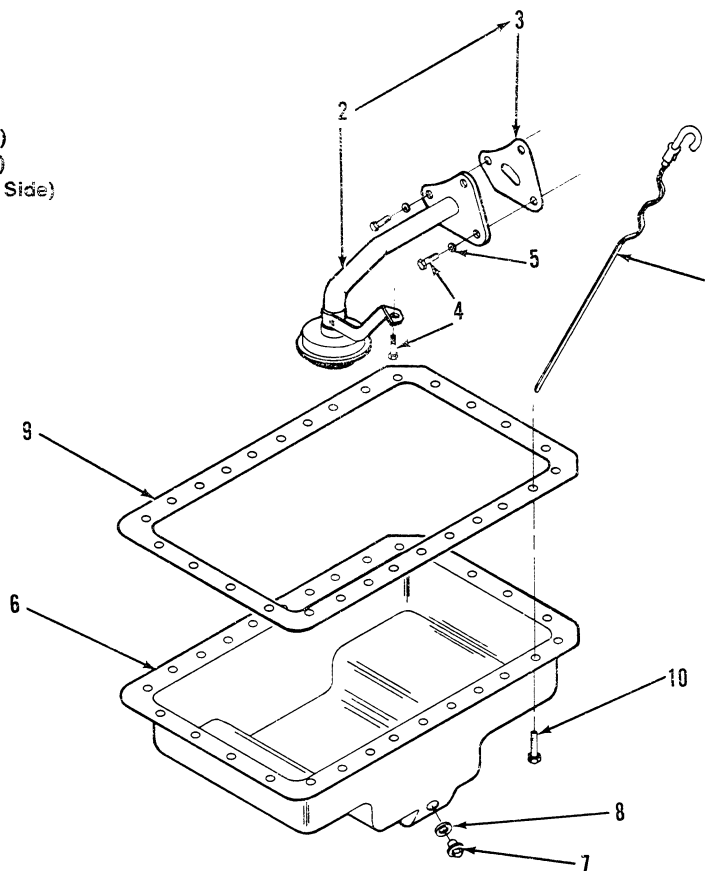
LS-1134

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	ADAPTER, OIL FILTER (Includes Gasket) - Code 17AJ			6	WASHER, FLAT (M8)		
	122-0568	1	Spec A		526-2108	3	Code 17AJ, 17AS, 17AW
	122-0613	1	Begin Spec B		526-2108	3	Code 17AK
2	122-0635	1	Gasket, Oil Filter Adapter		740-1802	1	Code 17AK
3	ADAPTER, OIL FILTER (Includes Gasket) - Code 17AK			8	505-0274	1	Plug, Pipe (1/8") Begin Spec B
	122-0567	1	Spec A	9	122-0606	1	Adapter, Oil Filter - Code 17AW
	122-0614	1	Begin Spec B	10	505-0266	1	Plug, Pipe (3/8") Code 17AK - Used During Spec B
4	122-0550	1	Filter, Oil	11	122-0612	1	Adapter, Oil Filter (Includes Gasket) Code 17AS
5	SCREW, CAP - HEX HEAD			12	502-0873	4	Adapter, Oil Lines - Code 17AS
	725-1051	3	M8 x 25 MM - Code 17AJ (Socket Head)	13	501-0479	2	Line, Oil - Code 17AS
	718-1040	2	M8 x 40 MM - Code 17AK	14	122-0581	1	Base, Oil Filter - Code 17AS
	725-1053	1	M8 x 35 MM - Code 17AK (Socket Head)				
	718-1040	3	M8 x 40 MM - Code 17AS				
	718-1037	1	M8 x 25 MM - Code 17AW				
	718-1804	2	M8 x 110 MM - Code 17AW				

OIL PAN

Code 17AA (20° Tilt - Drain to Accessory Side)
 Code 17AB (30° Tilt - Drain to Accessory Side)
 Code 17AC (20° Tilt - Drain to Front)
 Code 17AE (20° Tilt - Drain to Rear)
 Code 17AG (20° Tilt - Drain to Non-Accessory Side)
 Code 17AH (30° Tilt - Drain to Non-Accessory Side)
 Code 17AP (20° Tilt - Drain to Front and Accessory Side)
 Code 17AR (20° Tilt - Drain to Accessory Side)

5100-0104
 5100-0357
 5100-0366
 5100-0368
 5100-0371



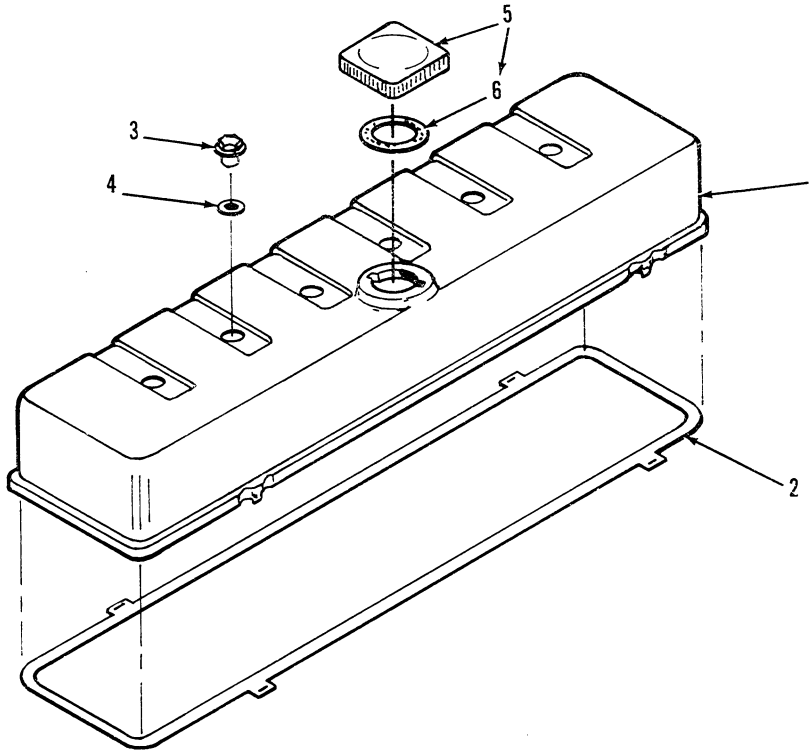
LS-1059

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	INDICATOR, OIL LEVEL 123-1524	1	Codes 17AA, 17AC, 17AE, 17AG, 17AP, 17AR
	123-1542	1	Codes 17AB, 17AH
2	PICKUP KIT, OIL (Includes Gasket) 120-1006	1	Code 17AA, 17AC, 17AE, 17AG, 17AP, 17AR
	120-1005	1	Code 17AB, 17AH
3	120-0917	1	Gasket, Oil Pickup
4	SCREW, CAP - HEX HEAD 718-1046	2	M8 × 70 MM
	718-1036	2	M8 × 20 MM
5	740-1006	4	Washer, Flat (M8)
6	PAN, OIL 102-1190	1	Codes 17AA, 17AC, 17AE, 17AG, 17AP, 17AR
	102-1191	1	Codes 17AB, 17AH
7	PLUG, OIL DRAIN (Not Used on Generator Application Engines or Engines With Remote Oil Drain) 102-1047	1	Early Models (Prior to January 1983) - 12 MM
	102-1146	1	Late Models (Begin January 1983) - 18 MM
8	GASKET, OIL DRAIN PLUG 102-1046	1	Early Models (Prior to January 1983) - 12 MM Plug
	102-1147	1	Late Models (Begin January 1983) - 18 MM Plug
9	102-1036	1	Gasket, Oil Pan
10	815-0547	36	Screw, Cap - Hex Head (Includes Washer) - M8 × 20 MM

ROCKER COVER

Code 17AL (Top Center)
Code 17AM (Top Center and Side Gearcase)

5100-0079



LS-1060

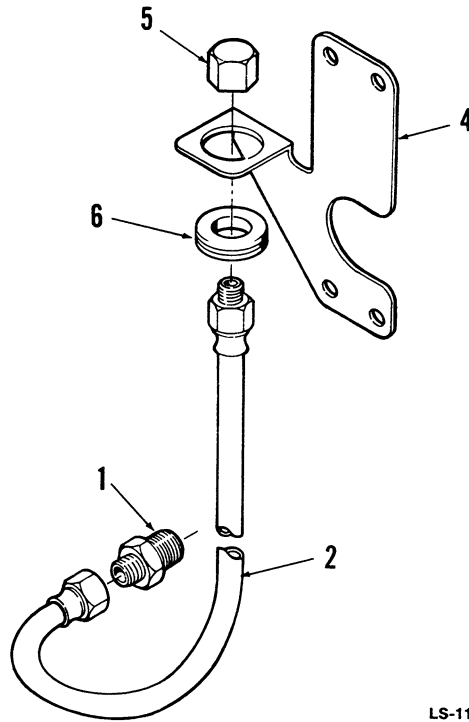
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	115-0346	1	Cover, Rocker
2	115-0244	1	Gasket, Rocker Cover
3	115-0320	6	Capnut, Rocker Cover
4	115-0232	6	Gasket, Capnut
5	123-1605	1	Cap, Oil Fill (Includes Gasket)
6	123-1518	1	Gasket, Oil Fill Cap

NOTE: Additional parts for Code 17AM will be found in the Gearcase Group.

REMOTE OIL DRAIN

Code 17BA

5100-0570



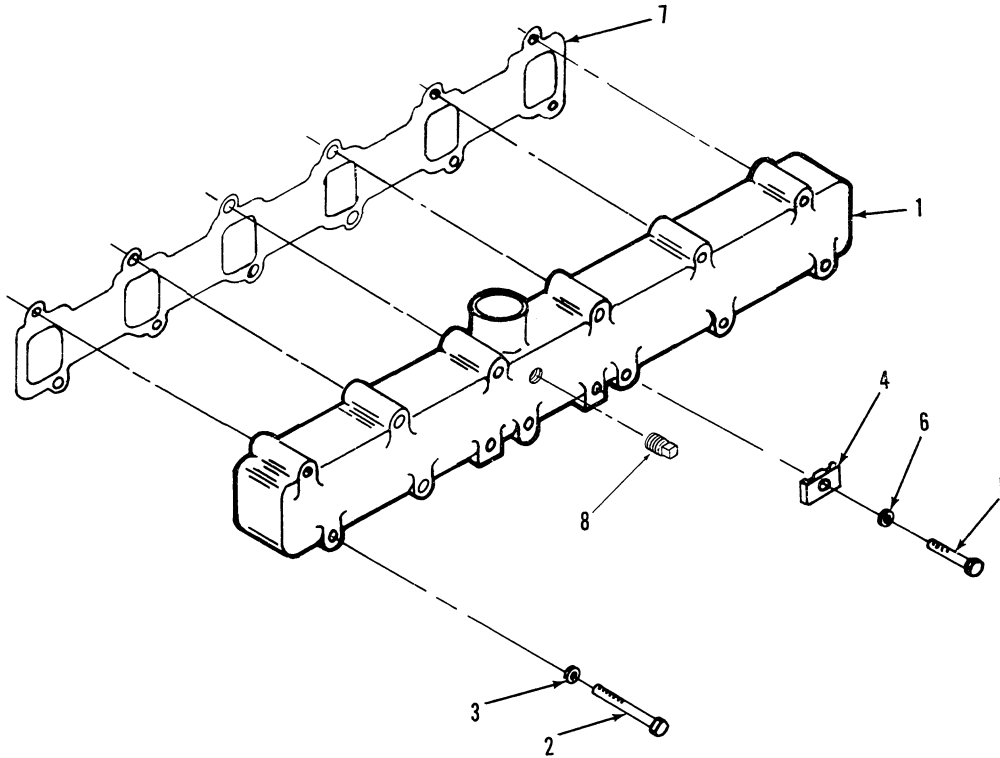
LS-1135

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	102-1237	1	Adapter, Oil Drain
2	LINE, OIL DRAIN		
	501-0482	1	Used With 20° Tilt Oil Pan (615 MM Long)
	501-0494	1	Used With 30° Tilt Oil Pan (787 MM Long)
4	102-1235	1	Bracket, Oil Drain
5	502-0876	1	Cap, Pipe
6	508-0250	1	Grommet

INTAKE MANIFOLD

Code 19AA (Center Up)

5100-0481



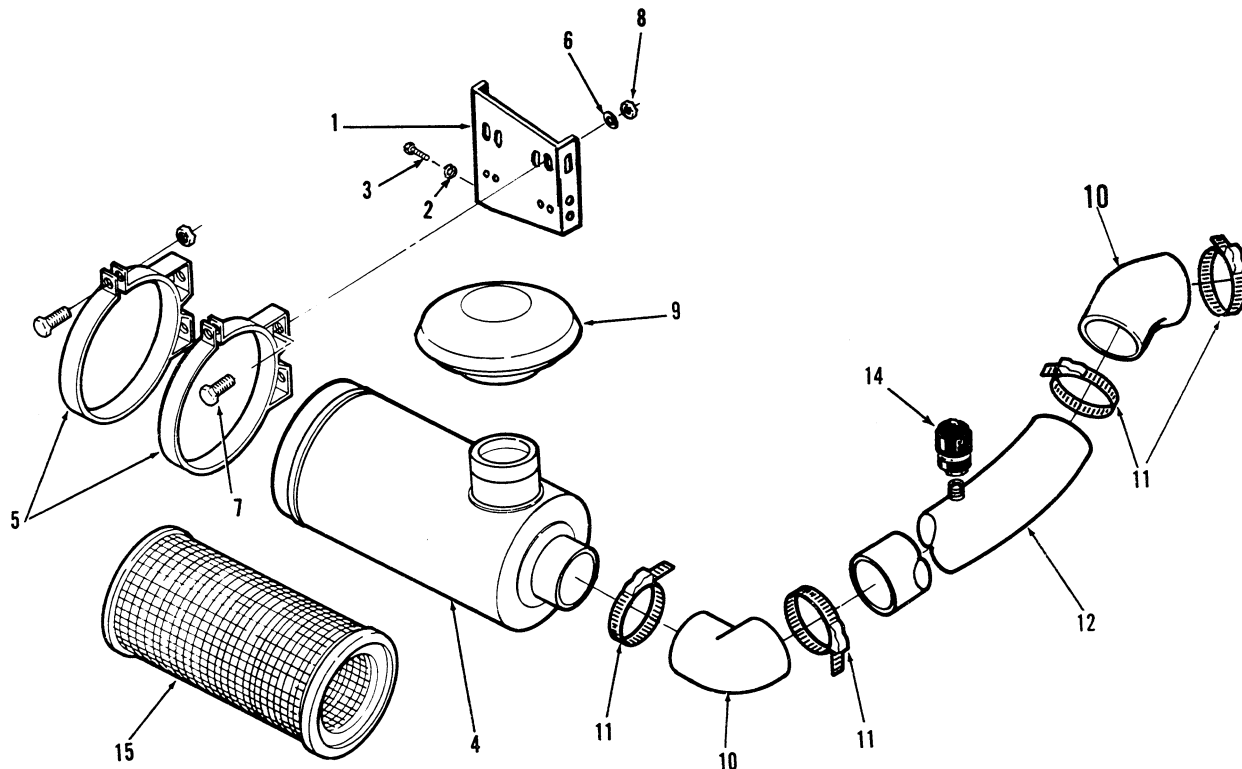
EXS-1050

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	154-2461	1	Manifold, Intake (Includes Plug)
2	718-1801	12	Screw, Cap - Hex Head (M8 x 85 MM) (Engines Without Code 31AL)
3	740-1006	12	Washer, Flat (M8)
4	147-0439	4	Clamp, Injection Lines, Spec A
5	718-1022	2	Screw, Cap - Hex Head (M6 x 25 MM) - Spec A
6	740-1004	2	Washer, Flat (M6) - Spec A
7	154-2300	1	Gasket, Intake Manifold
8	505-0274	1	Plug, Pipe (1/8")

AIR CLEANER

Code 19AB (Medium Duty - Single Stage - Engine Mounted)

5100-0186



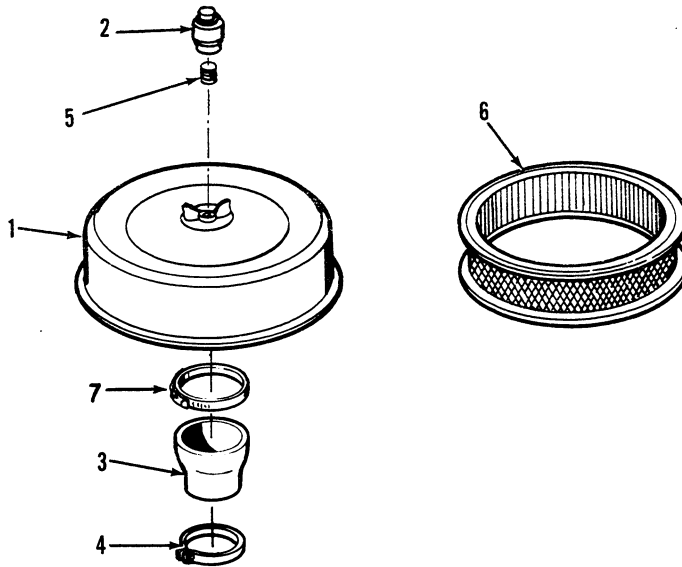
XFS-1383

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	140-1772	1	Bracket, Air Cleaner Mounting
2	740-1010	1	Washer, Flat - Hardened (M12)
3	718-1073	1	Screw, Cap - Hex Head (M12 x 25 MM)
4	140-1794	1	Cleaner, Air (Includes Element)
5	140-0317	2	Band, Air Cleaner
6	740-1006	4	Washer, Flat-Hardened (M8)
7	718-1036	4	Screw, Cap - Hex Head (M8 x 20 MM)
8	750-1006	4	Nut, Hex (M8)
9	140-1435	1	Hood, Air Inlet
10	140-1775	2	Elbow, 90°
11	503-0354	4	Clamp, Hose
12	140-1802	1	Tube, Air Inlet
14	140-1791	1	Indicator, Service
15	140-1455	1	Element, Air Cleaner

AIR CLEANER

Code 19AJ

5100-0106



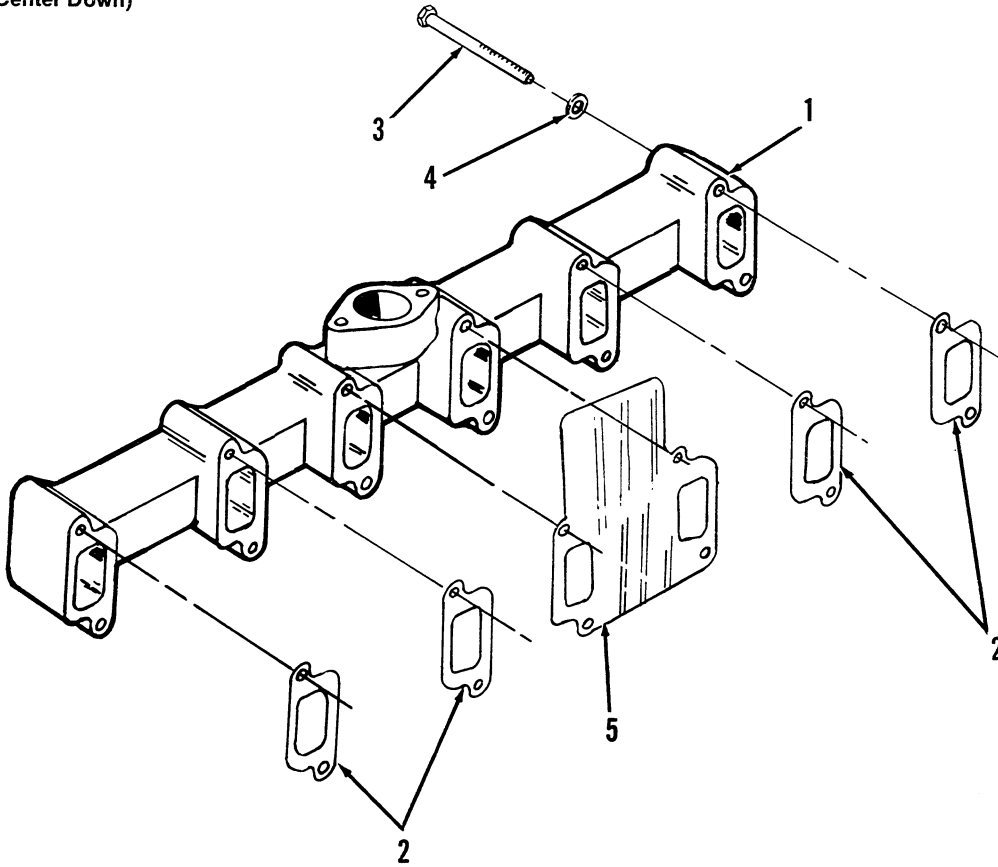
FS-1385

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	140-1091	1	Cleaner, Air (Includes Element)
2	140-0961	1	Indicator, Service
3	503-1181	1	Hose, Air Cleaner
4	503-0465	1	Clamp, Hose
5	505-0098	1	Nipple, Pipe
6	140-1089	1	Element, Air Cleaner
7	503-0648	1	Clamp, Hose

EXHAUST MANIFOLD

Code 21AA (Center Up)
Code 21AB (Center Down)

5100-0029
5100-0162



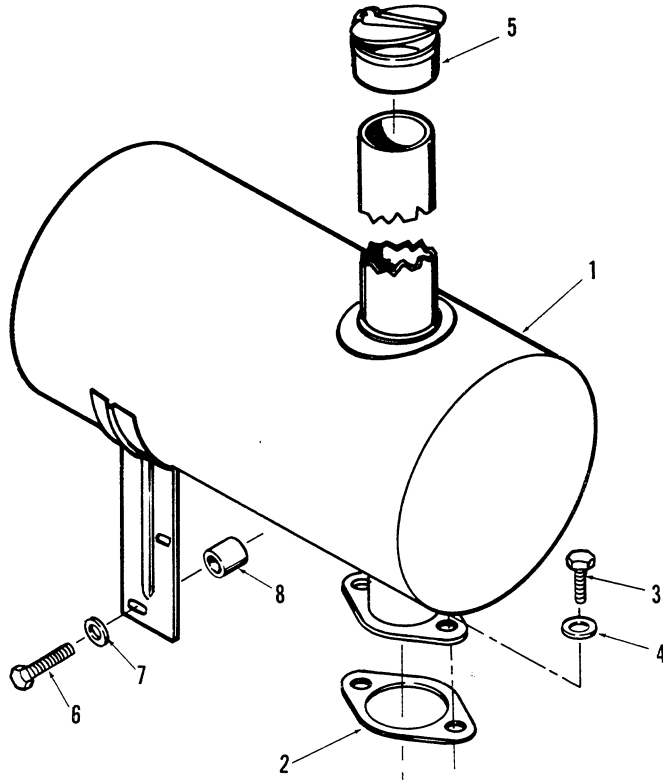
EXS-1051

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	154-2389	1	Manifold, Exhaust
2	GASKET, EXHAUST MANIFOLD		
	154-2162	4	Code 21AA
	154-2162	6	Code 21AB
3	SCREW, CAP - HEX HEAD		
	800-2524	12	Late Models (M8 × 90 MM)
	718-1048	12	Early Models (M8 × 80 MM)
4	740-1006	12	Washer, Flat (M8)
5	154-2325	1	Gasket, Exhaust Manifold - Code 21AA

MUFFLER

Code 21AC (Horizontal)

5100-0372



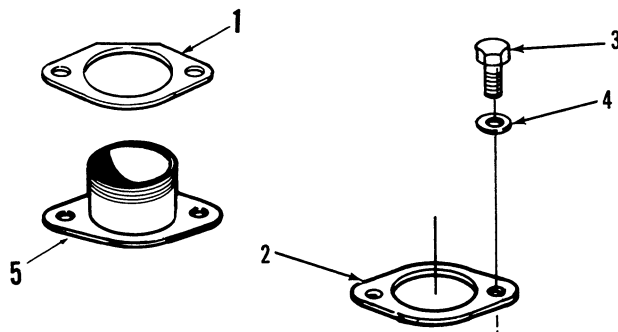
XS-1091

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	155-1967	1	Muffler, Exhaust
2	155-1920	1	Gasket, Muffler Mounting
3	718-1054	2	Screw, Cap - Hex Head (M10 × 25 MM)
4	740-1008	2	Washer, Flat (M10)
5	155-0986	1	Cap, Rain
6	718-1807	2	Screw, Cap - Hex Head - (M8 × 95 MM)
7	850-2008	2	Washer, Flat (M8)
8	155-1964	2	Spacer, Muffler Brace

EXHAUST FLANGE

Code 21AG (Exhaust Flange - Without Threaded Nipple)
 Code 21AG (Exhaust Flange - With Threaded Nipple)
 Code 21AJ (Gasket Only)

5100-0285
 5100-0338
 5100-1051



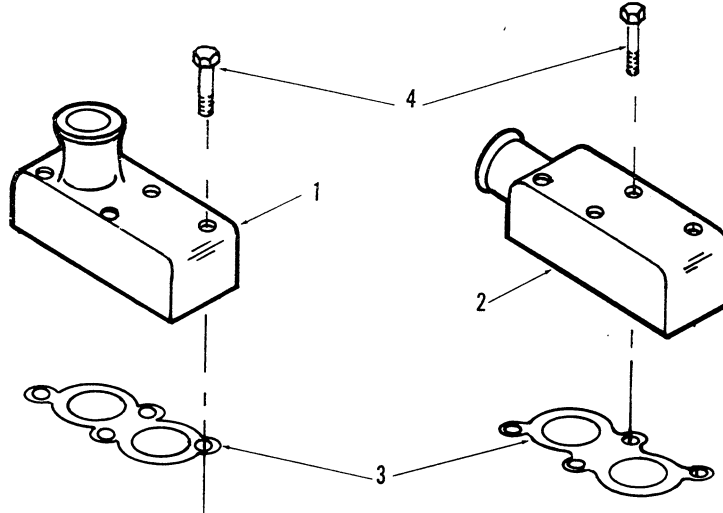
EXS-1065

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	155-1921	1	Flange, Exhaust - Code 21AG (Without Threaded Nipple)
2	155-1920	1	Gasket
3	718-1054	2	Screw, Cap - Hex Head (M10 × 25 MM) - Code 21AG
4	740-1008	2	Washer, Flat (M10) - Code 21AG
5	155-1916	1	Flange, Exhaust - Code 21AG (With Threaded Nipple)

COOLANT OUTLET CONNECTOR

Code 23AA (Vertical, Accessory Side)
 Code 23AB (Horizontal, Non-Accessory Side)
 Code 23AC (Horizontal, Accessory Side)
 Code 23CP (Vertical, Non-Accessory Side)

5100-0129



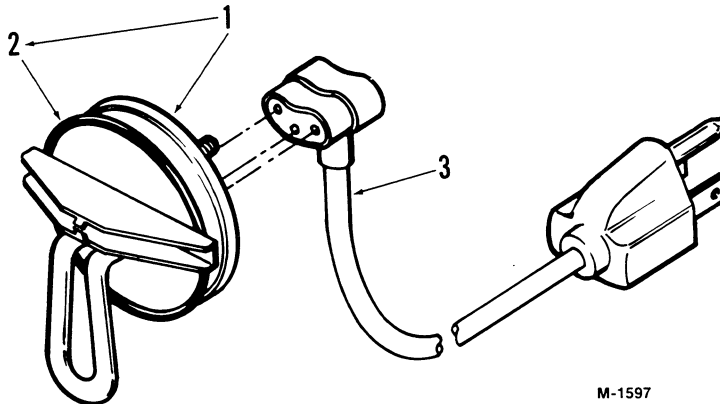
CS-1112

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	309-0473	1	Cover, Thermostat (Includes Gasket) - Code 23AA, 23CP
2	309-0475	1	Cover, Thermostat (Includes Gasket) - Code 23AB, 23AC
3	309-0424	1	Gasket, Thermostat Cover
4	SCREW CAP - SOCKET HEAD		
	725-1056	4	M8 × 50 MM - Code 23AA, 23CP
	725-1058	4	M8 × 60 MM - Code 23AB, 23AC

ENGINE BLOCK HEATER

Code 23AL (600 Watt)

5100-0540



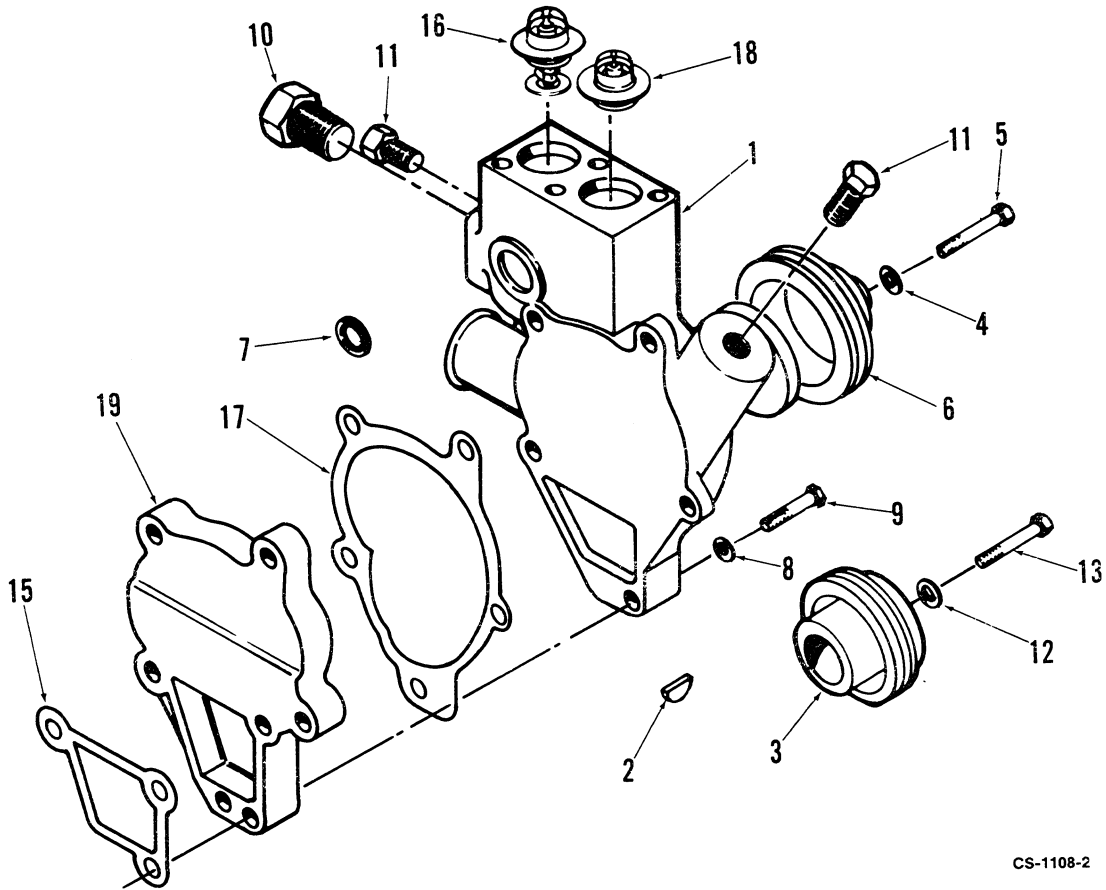
M-1597

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	333-0187	1	Heater (Includes O-Ring Seal)
2	509-0104	1	Seal, O-Ring
3	335-0158	1	Cord, Heater

COOLANT PUMP

Code 23AS (1.18 Drive Ratio - Automotive Type)

5100-0891



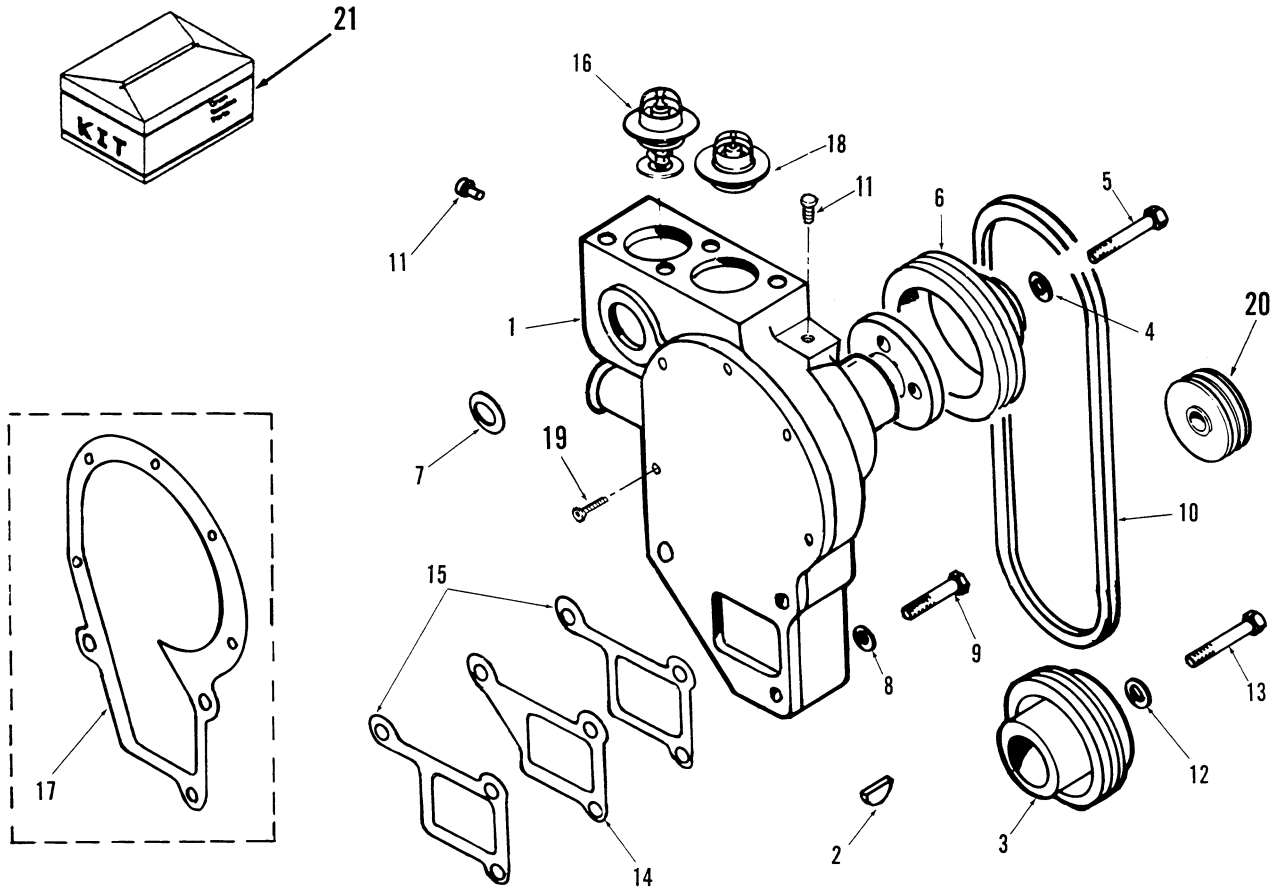
CS-1108-2

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	131-0421	1	Pump Kit, Coolant (Includes Mounting Gaskets)
2	515-0245	1	Key, Pulley
3	104-1515	1	Pulley, Crankshaft
4	740-1006	4	Washer, Flat (M8)
5	718-1036	4	Screw, Cap - Hex Head (M8 x 20 MM)
6	131-0412	1	Pulley, Coolant Pump
7	509-0264	1	Seal, O-Ring
8	740-1006	4	Washer, Flat (M8)
9	SCREW, CAP - HEX HEAD		
	718-1041	4	Pump to Base (M8 x 45 MM)
	718-1046	1	Pump to Block (M8 x 70 MM)
	725-1051	2	Base to Block (M8 x 25 MM)
10	502-0317	1	Plug, Pipe - Hex (3/4")
11	502-0775	3	Plug, Pipe - Brass Hex (3/8")
12	526-0283	1	Washer, Flat (M8)
13	720-1123	1	Screw, Cap - Hex Head (M16 x 60 MM)
15	131-0409	1	Gasket, Coolant Pump Mounting
16	309-0458	1	Thermostat Kit (192°) Includes Cover Gasket
17	131-0408	1	Gasket, Coolant Pump Base
18	309-0462	1	Thermostat Kit (180°) Includes Cover Gasket
19	131-0406	1	Base, Coolant Pump

COOLANT PUMP

Code 23AF (Low Flow, .97 Drive Ratio)
 Code 23AG (High Flow, .61 Drive Ratio)
 Code 23AN (Low Flow, 1.07 Drive Ratio)
 Code 23BA (High Flow, .81 Drive Ratio)
 Code 23BC (Low Flow, 1.29 Drive Ratio)
 Code 23BE (Low Flow, 1.29 Drive Ratio)

Code 23BG (Low Flow, .81 Drive Ratio)
 Code 23BH (High Flow, .97 Drive Ratio)
 Code 23BJ (High Flow, .73 Drive Ratio)
 Code 23BP (Low Flow, 1.29 Drive Ratio)
 Code 23CL (Low Flow, 1.53 Drive Ratio, No Belts)



CS-1108

COOLANT PUMP

5100-0155
5100-0158
5100-0763
5100-0764
5100-0767-01
5100-0768-02
5100-0769
5100-0770-01

5100-0771-01
5100-0772-02
5100-0772-03
5100-0773
5100-0774
5100-0775
5100-0776

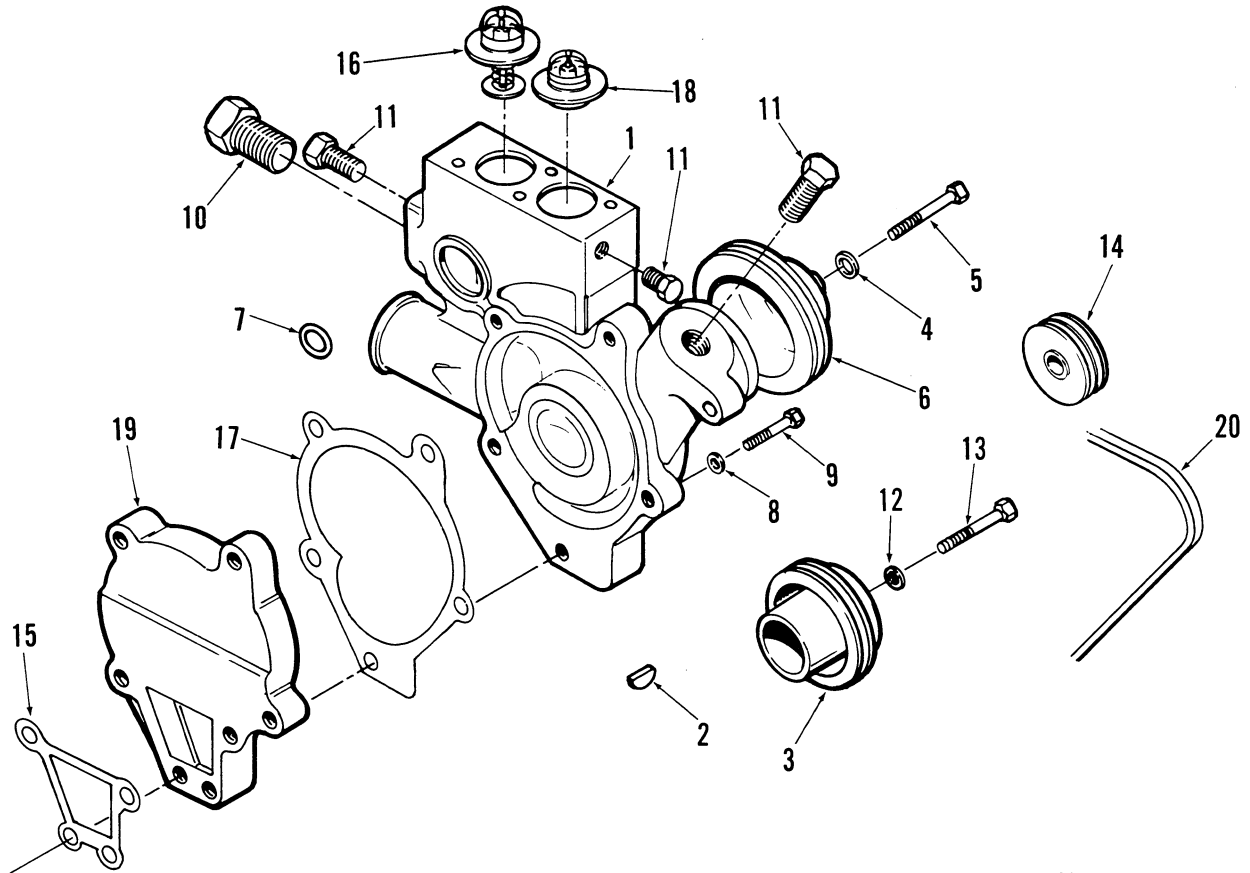
5100-0778-01
5100-0778-02
5100-0779
5100-0793
5100-0794
5100-0797
5100-0945
5100-0946
5100-1053

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	PUMP KIT, COOLANT (Includes Mounting Gaskets)						Code 23BA
	131-0351	1	Code 23AF, AN, BE, BG, BP, CL	511-0147-01		1	High Mounted Alternator
	131-0349	1	Code 23AG, BA, BH, BJ	511-0147-01		2	Low Mounted Alternator
2	515-0245	1	Key - Crankshaft Pulley				Code 23BC, BE (Some Engines Require 2)
3	PULLEY, CRANKSHAFT						High Mounted Alternator
	104-1472	1	Single Groove Code 23AF, BE, BH, BJ, BP, CL	511-0147-13		1	High Mounted Alternator
	104-1466	1	Code 23AG, AN, BA, BG	511-0147-08		1	Low Mounted Alternator
			Double Groove				Code 23BG
	104-1468	1	Code 23AF, BE, BH, BJ	511-0147-13		1	High Mounted Alternator
	104-1467	1	Code 23AG, AN, BA, BG	511-0147-01		2	Low Mounted Alternator
4	740-1006	4	Washer, Flat (M8)				Code 23BJ (Some Engines Require 2)
5	718-1035	4	Screw, Cap - Hex Head (M8 x 16MM)	511-0147-03		1	High Mounted Alternator
6	PULLEY, COOLANT PUMP			511-0147-06		1	Low Mounted Alternator
			Single Groove	511-0147-06		1	High Mounted Idler Pulley
	131-0344	1	Code 23AF, BA, BG, BH				Code 23BP
	131-0346	1	Code 23AG, BJ	511-0147-13		1	High Mounted Alternator
	131-0342	1	Code 23AN, BE, BP	511-0147-08		1	Low Mounted Alternator
	131-0341	1	Code 23CL	11	PLUG, BRASS		
			Double Groove	502-0775		3	3/8"
	131-0345	1	Code 23AF, BA, BG, BH	502-0317		1	3/4"
	131-0347	1	Code 23AG, BJ	12	526-0283	1	Washer, Flat (M8)
	131-0343	1	Code 23AN, BE	13	720-1123	1	Screw, Cap - Hex Head (M16 x 60 MM)
7	509-0264	1	Seal, O-Ring	14	131-0324	1	Spacer, Coolant Pump
8	740-1006	3	Washer, Flat (M8)	15	131-0294	2	Gasket, Coolant Pump Mounting
9	718-1044	3	Screw, Cap - Hex Head (M8 x 60 MM)	16	309-0458	1	Thermostat Kit (192°)
10	BELT						Includes Cover Gasket
			Code 23AF, BH (Some Engines Require 2)	17	131-0335	1	Gasket, Coolant Pump Backplate
	511-0147-15	1	High and Low Mounted Alternator	18	309-0462	1	Thermostat Kit (180°)
	511-0147-17	1	High Mounted Idler Pulley				Includes Cover Gasket
			Code 23AG (Some Engines Require 2)	19	815-0612	5	Screw, Torque Drive (Special)
	511-0147-15	1	High Mounted Alternator	20	PULLEY, ALTERNATOR		
	511-0147-05	1	Low Mounted Alternator				Single Groove
	511-0147-11	1	Code 23AN (Some Engines Require 2) High and Low Mounted Alternator)	191-1338		1	71.7 MM Diameter
				191-1339		1	78 MM Diameter
							Double Groove
				191-1342		1	71.7 MM Diameter
				191-1333		1	78 MM Diameter
				21	KIT, REPAIR - Coolant Pump (Includes Gaskets, Seal, Hub, Bearing, Impeller and Backplate Mounting Screws)		
				541-0214-04		1	Code 23AF, AN, BE, BG, BP, CL
				541-0214-03		1	Code 23AG, BA, BH, BJ

COOLANT PUMP

Code 23CF (Pulley Ratio and Belts, 1.29 Drive Ratio)
 Code 23CR (High Flow, Low Fan Center)
 Code 23CR (Pulley Ratio and Belts, .97 Drive Ratio)
 Code 23CS (Pulley Ratio and Belts, 1.07 Drive Ratio)

5100-0940
 5100-0952
 5100-1106
 5100-1107



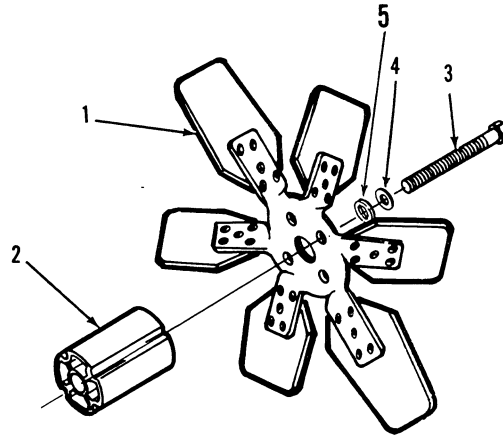
CS-1108-3

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	131-0434	1	Kit, Coolant Pump (Includes Mounting Gaskets, Plugs and O-Ring Seal)	10	502-0317	1	Plug, Pipe - Hex (3/4")
2	515-0245	1	Key, Pulley	11	502-0775	4	Plug, Pipe - Brass, Hex (3/8")
3	PULLEY, CRANKSHAFT			12	526-0283	1	Washer, Flat (M8)
	104-1618	1	Single Groove - Code 23CF	13	720-1123	1	Screw, Cap - Hex Head (M16 x 60 MM)
	104-1468	1	Double Groove	14	PULLEY, ALTERNATOR (Double Groove)		
	104-1467	1	Code 23CR		191-1333	1	Code 23CR
4	740-1006	4	Washer, Flat (M8)		191-1342	1	Code 23CS
5	718-1035	4	Screw, Cap - Hex Head (M8 x 16MM)	15	131-0409	1	Gasket, Coolant Pump Mounting
6	PULLEY, COOLANT PUMP			16	309-0458	1	Kit, Thermostat (192°) Includes Cover Gasket
	131-0344	1	Single Groove	17	131-0408	1	Gasket, Coolant Pump Base
	131-0342	1	Code 23CR	18	309-0462	1	Kit, Thermostat (180°) Includes Cover Gasket
	131-0424	1	Code 23CS	19	131-0406	1	Base, Coolant Pump
7	509-0264	1	Double Groove - Code 23CF	20	BELT		
8	740-1006	5	Seal O-Ring		511-0147-11	1	Code 23CR Single Groove Crankshaft Pulley
9	SCREW, CAP - HEX HEAD				511-0147-08	1	Double Groove Crankshaft Pulley
	718-1041	3	Pump to Base		511-0147-27	1	Code 23CS
	718-1042	1	M8 x 45MM				
	718-1046	1	M8 x 50MM				
	725-1051	2	Pump to Block (M8 x 70 MM)				
			Base to Block (M8 x 25 MM)				

COOLING SYSTEM - FAN

Code 23AH (Suction Fan and 89 MM Spacer)
 Code 23AU (Blower Fan and 53 MM Spacer)
 Code 23CW (32 MM Spacer)
 Code 23CZ (Suction Fan and 65 MM Spacer)
 Code 23DL (Suction Fan and 65MM Spacer)

5100-0179
 5100-0938
 5100-1124
 5100-1126
 5100-1192

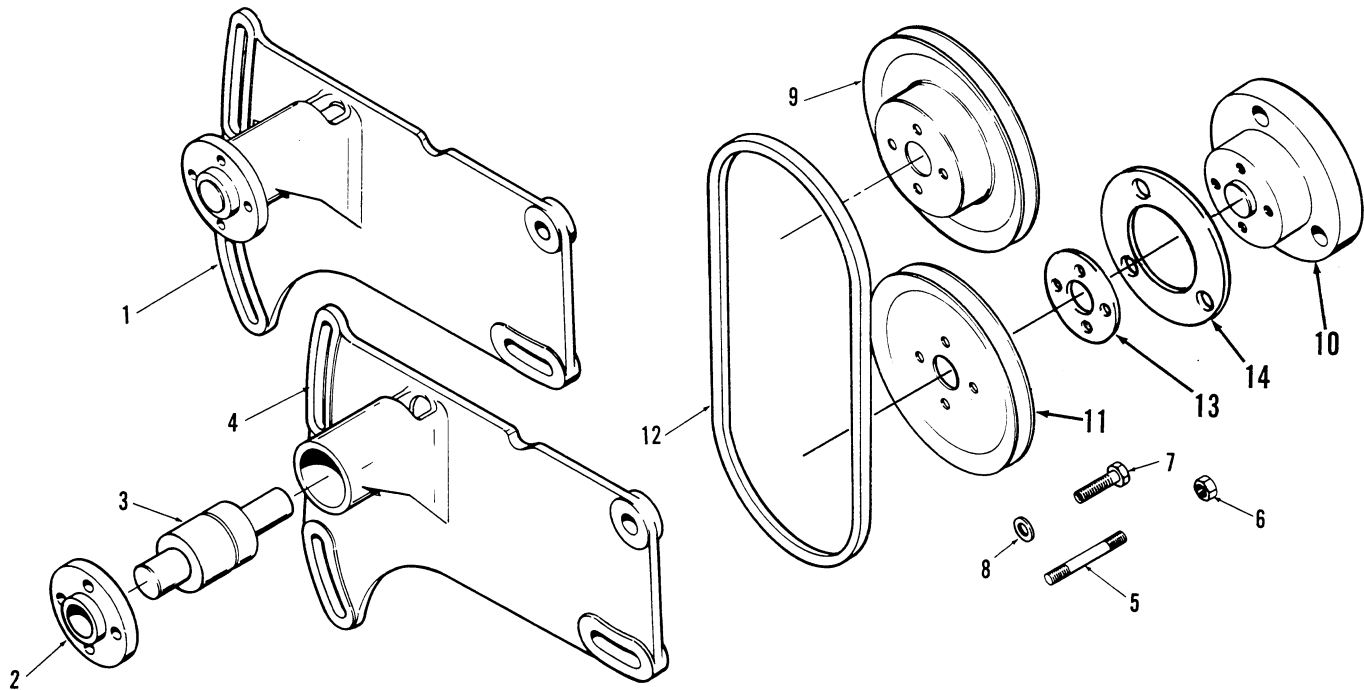


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	FAN, COOLING		
	130-1925	1	Code 23AH
	130-2305	1	Code 23AU
	130-2951	1	Code 23CZ
	130-3152	1	Code 23DL
2	SPACER, FAN		
	130-1874	1	Code 23AH
	130-1873	1	Code 23AU
	130-1880	1	Code 23CW
	130-1876	1	Code 23CZ, 23DL
3	SCREW, CAP - HEX HEAD		
			Code 23AH
	718-1804	4	Use With Sheet Steel Pulley (M8 x 110 MM)
	718-1803	4	Use With Cast Iron Pulley (M8 x 115 MM)
	718-1047	4	Code 23AU (M8 x 75 MM)
	718-1043	4	Code 23CW (M8 x 55 MM)
	800-2070	4	Code 23CZ, 23DL (M8 x 85MM)
4	740-1006	4	Washer, Flat (M8)
5	526-0122	4	Washer, Flat (5/16") Code 23AH, 23AU

LOW FAN DRIVE

Code 23BK (1.07 Ratio)

5100-0420



XCS-1234

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	130-2137	1	Adapter Assembly, Fan (Includes Parts Marked*)
2	131-0297	1	*Hub, Fan
3	131-0321	1	*Bearing and Shaft, Fan
4	130-2139	1	*Bracket, Fan Support
5	520-2403	1	Stud (M8)
6	750-1006	1	Nut, Hex (M8)
7	SCREW, CAP - HEX HEAD		
	718-1806	1	M8 × 90 MM
	718-1046	2	M8 × 70 MM
	718-1035	4	M8 × 16 MM
	720-1056	3	M10 × 35 MM
	718-1036	4	M8 × 20 MM

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
8	WASHER, FLAT		
	526-2106	4	M8
	740-1006	8	M8
	740-1008	3	M10
9	131-0342	1	Pulley, Fan Drive
10	104-1483	1	Adapter, Low Fan Pulley
11	104-1447	1	Pulley, Low Fan Drive
12	511-0147-20	1	Belt, Drive
13	104-1637	1	Spacer, Pulley Alignment - Front (Begin Spec B)
14	104-1638	1	Spacer, Pulley Alignment - Rear (Begin Spec B)

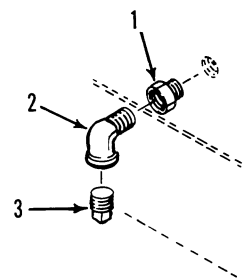
* - Parts Included in 130-2137 Adapter Assembly.

COOLANT HEATER CONNECTION

Code 23AW

5100-0671
5100-0672

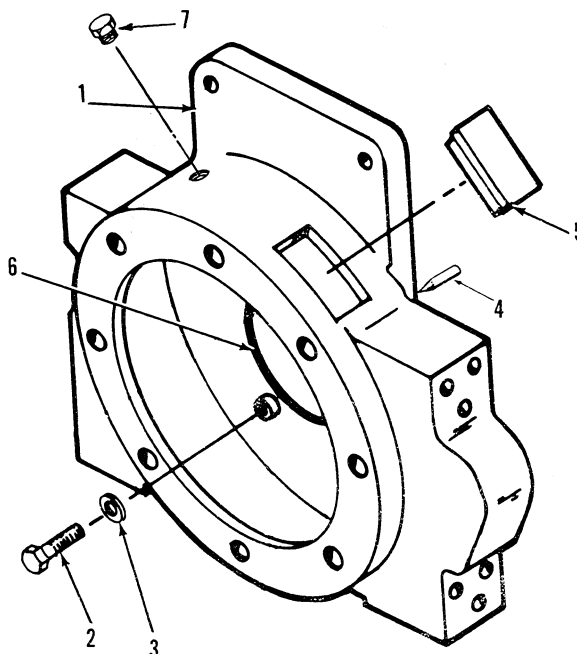
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	505-0017	1	Bushing
2	502-0156	1	Elbow, Street
3	502-0153	1	Plug, Brass



FLYWHEEL HOUSING

Code 27AA (SAE 5 Without Magnetic Pickup)
 Code 27AB (SAE 4 Without Magnetic Pickup)
 Code 27AC (SAE 3 Without Magnetic Pickup)
 Code 27AE (SAE 5 With One Magnetic Pickup - Metric Tapped)
 Code 27AF (SAE 4 With One Magnetic Pickup, 70° From Horizontal)
 Code 27AG (SAE 3 With One Magnetic Pickup)
 Code 27AH (SAE 4 With Two Magnetic Pickups)
 Code 27AN (SAE 4 With One Magnetic Pickup, 47° From Horizontal)
 Code 27AV (SAE 5 With One Magnetic Pickup - English Tapped)

5100-0214
 5100-0974



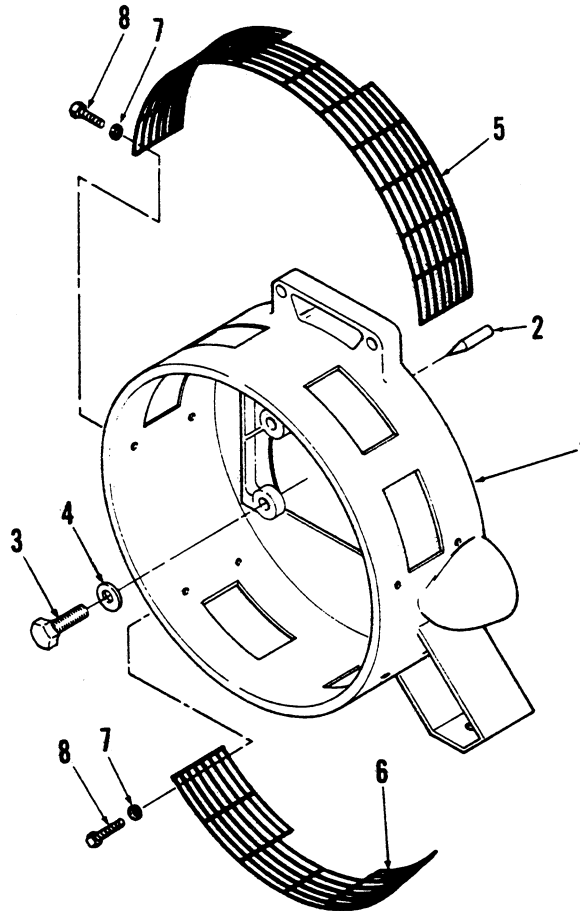
CS-1109

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	HOUSING, FLYWHEEL (Includes Seal and Indicator)		
	101-0719	1	Code 27AA
	101-0740-04	1	Code 27AB
	101-0714	1	Code 27AC
	101-0720	1	Code 27AE
	101-0740-01	1	Code 27AF
	101-0715	1	Code 27AG
	101-0740-03	1	Code 27AH
	101-0740-02	1	Code 27AN
	101-0698-03	1	Code 27AV
2	718-1078	6	Screw, Cap - Hex Head (M12 x 50 MM)
3	740-1801	6	Washer, Flat (M12)
4	160-1292	1	Indicator, Timing
5	101-0592	1	Plug, Timing Window
6	101-0630	1	Seal, Flywheel Housing
7	PLUG, CAP		
	517-0265	1	Code 27AE, 27AF, 27AG, 27AN (5/8-24)
	517-0265	2	Code 27AH (5/8-24)
	517-0259	1	Code 27AV (3/4-16)

GENERATOR ADAPTER

Code 27AJ

5100-1090

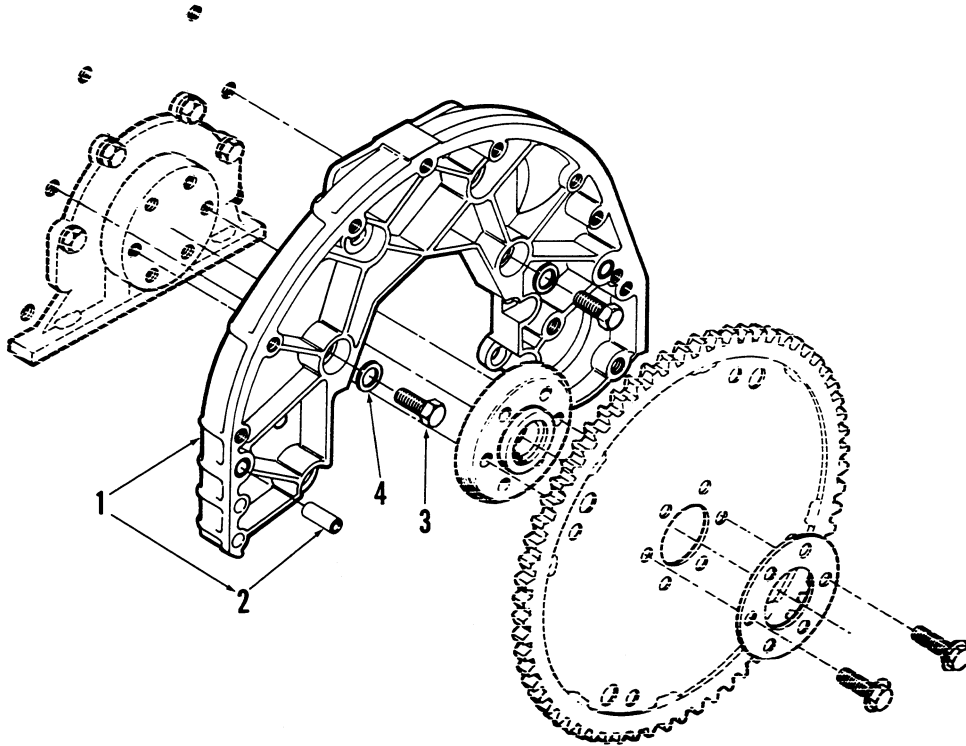


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	231-0267	1	Adapter Assembly, Generator (Includes Timing Indicator)
2	160-1292	1	Indicator, Timing
3	718-1078	6	Screw, Cap - Hex Head (M12 x 50 MM)
4	740-1801	6	Washer, Flat (M12)
5	234-0689	1	Guard, Generator Fan - Upper
6	234-0690	1	Guard, Generator Fan - Lower
7	526-0022	8	Washer, Flat (5/16")
8	800-0029	8	Screw, Cap - Hex Head (5/16-18 x 1-1/8")

TRANSMISSION ADAPTER

Code 27AL

5100-0603



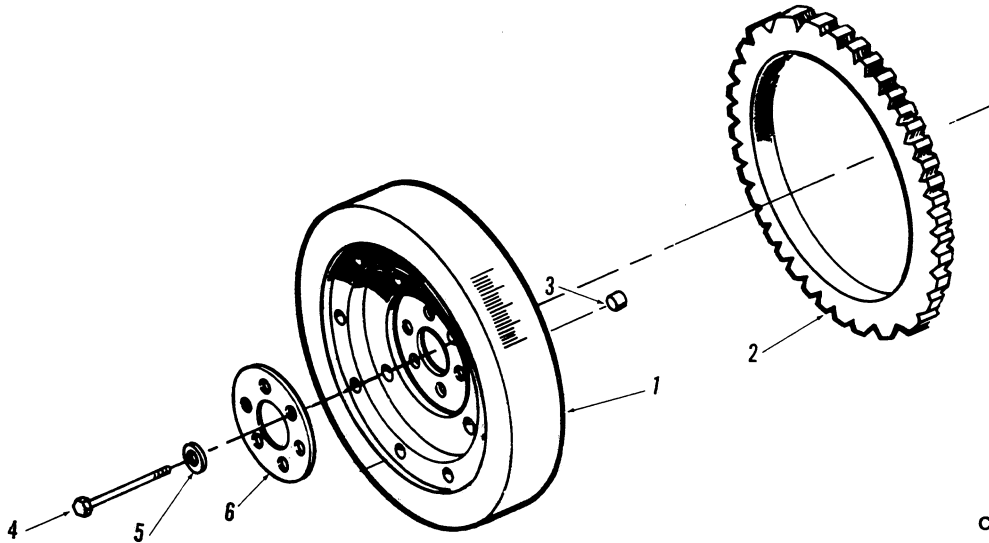
CT-1082

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	190-0622-02	1	Adapter Assembly, Transmission (Includes Dowel Pins)
2	516-0217	2	Pin, Dowel
3	718-1076	6	Screw, Cap - Hex Head (M12 x 40 MM)
4	740-1801	6	Washer, Flat (M12)

FLYWHEEL

- Code 29AA (7.5" Over Center - SAE #5)
- Code 29AD (10" Over Center - SAE #4)
- Code 29AE (10" Flat Face - For Rockford Cover UCLA 10.00 TT - SAE #4)
- Code 29AF (11" Flat Face - For Rockford Cover UCLA 11.00 RT - SAE #4)
- Code 29AG (11.5" Over Center - SAE #3)
- Code 29AH (12" Flat Face - For Rockford Cover UCLA 12.00 RT - SAE #3)
- Code 29AK (Generator Application - SAE #500)
- Code 29AL (9" Flat Face - For Rockford Cover UCLA 9.00 TT - SAE #5)
- Code 29AT (Generator Application - SAE #5)

- 5100-0010
- 5100-0051
- 5100-0052
- 5100-0090
- 5100-0463
- 5100-0565
- 5100-0566
- 5100-0567
- 5100-0931



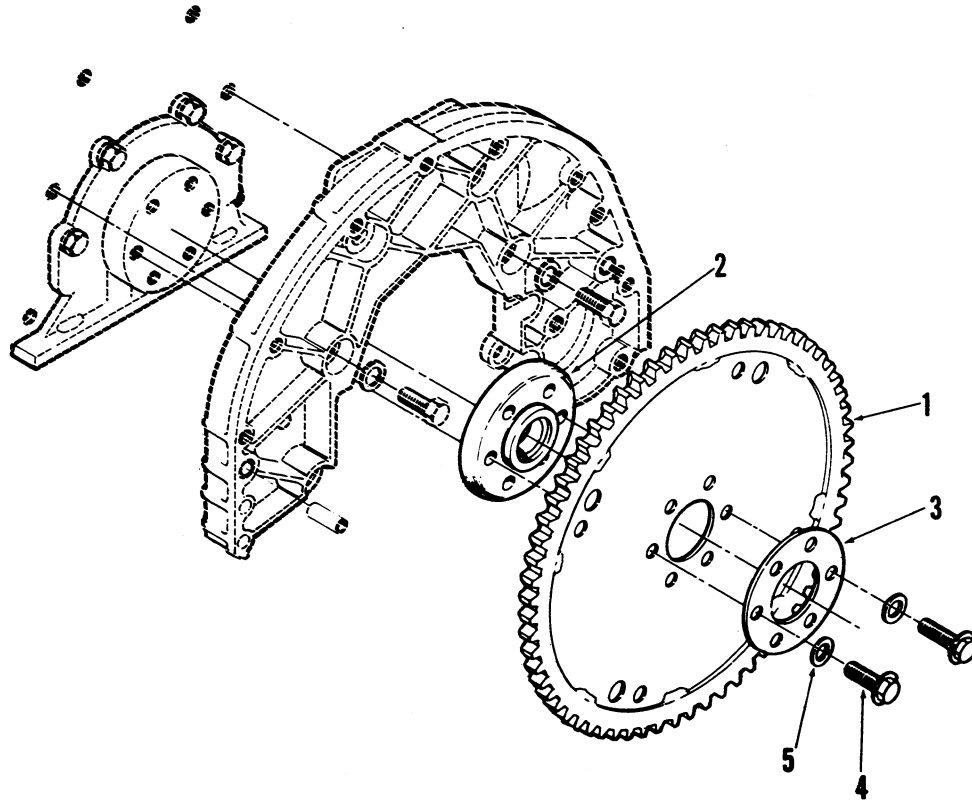
CS-1110

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	FLYWHEEL ASSEMBLY (Includes Ring Gear and Alignment Pin)		
	104-1504	1	Code 29AA
	104-1505	1	Code 29AD
	104-1388	1	Code 29AE
	104-1389	1	Code 29AF
	104-1506	1	Code 29AG
	104-1393	1	Code 29AH
	104-1503	1	Code 29AK
	104-1416	1	Code 29AL
	104-1462	1	Code 29AT
2	GEAR, RING		
	104-1169	1	Code 29AA, 29AL, 29AT
	104-1185	1	Code 29AD, 29AE, 29AF, 29AK
	104-1184	1	Code 29AG, 29AH
3	104-1171	1	Pin, Alignment
4	SCREW, CAP - FLANGE HEX HEAD		
	720-1804	6	M10 x 38 MM - Code 29AA, 29AK, 29AL, 29AT
	720-1805	6	M10 x 45 MM - Code 29AD, 29AE, 29AF, 29AG, 29AH
5	740-1008	6	Washer, Flat (M10) - Code 29AA, 29AK, 29AL, 29AT
6	104-1036	1	Plate, Washer - Code 29AD, 29AE, 29AF, 29AG, 29AH

FLEXPLATE

Code 29AP (Automatic Transmission)

5100-0602

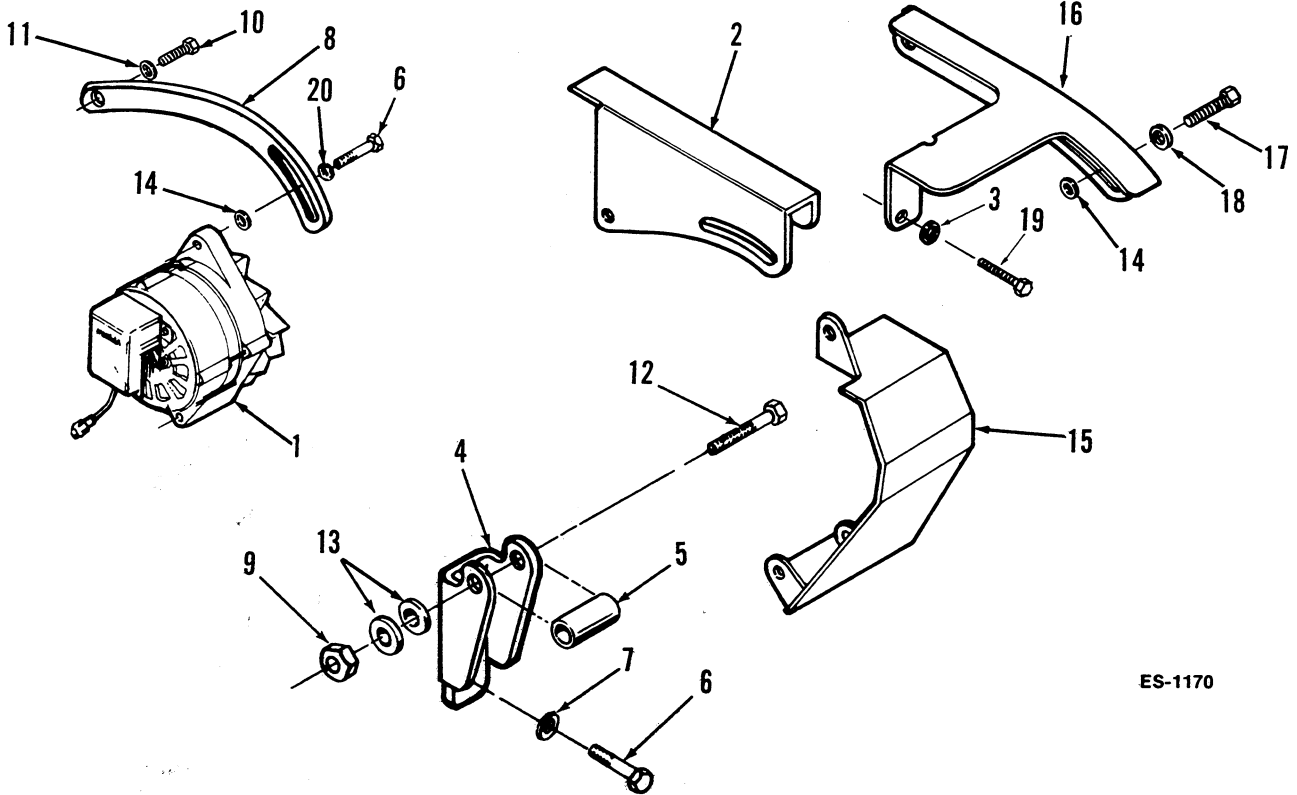


CT-1002-1

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	104-1574	1	Flexplate
2	104-1536	1	Hub, Flexplate
3	104-1497	1	Clamp, Flexplate
4	720-1804	6	Screw, Cap - Flange Hex Head (M10 x 38 MM)
5	740-1008	6	Washer, Flat (M10)

ALTERNATOR

- Code 31AA (High Mount Accessory Side - 37 Amp, 12 Volt)
- Code 31AB (Low Mount Accessory Side - 37 Amp, 12 Volt)
- Code 31AC (High Mount Accessory Side - 62 Amp, 12 Volt)
- Code 31AD (Low Mount Accessory Side - 62 Amp, 12 Volt)
- Code 31AE (High Mount Accessory Side - No Alternator)
- Code 31AF (Low Mount Accessory Side - No Alternator)
- Code 31AL (High Mount Accessory Side - 72 Amp, 12 Volt)
- Code 31AR (High Mount Accessory Side - 35 Amp, 24 Volt)
- Code 31AU (Belt and Alternator Guard, High Mount Accessory Side)



ES-1170

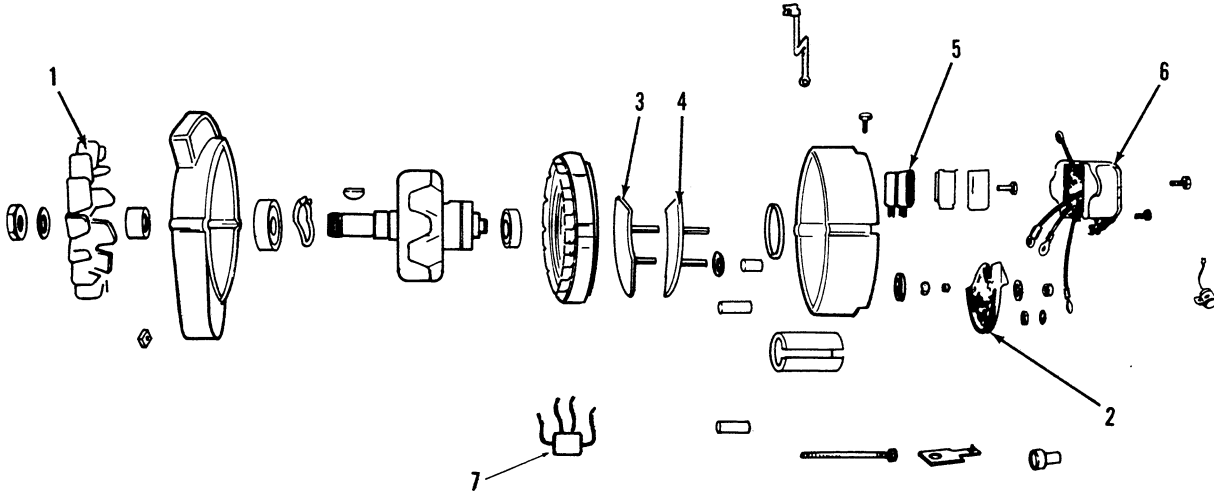
ALTERNATOR

Code 31AA (High Mount Accessory Side - 37 Amp, 12 Volt)	5100-0781
Code 31AB (Low Mount Accessory Side - 37 Amp, 12 Volt)	5100-0782
Code 31AC (High Mount Accessory Side - 62 Amp, 12 Volt)	5100-0784
Code 31AD (Low Mount Accessory Side - 62 Amp, 12 Volt)	5100-0785
Code 31AE (High Mount Accessory Side - No Alternator)	5100-0786
Code 31AF (Low Mount Accessory Side - No Alternator)	5100-0899
Code 31AL (High Mount Accessory Side - 72 Amp, 12 Volt)	5100-0948
Code 31AR (High Mount Accessory Side - 35 Amp, 24 Volt)	5100-1105
Code 31AU (Belt and Alternator Guard, High Mount Accessory Side)	

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	ALTERNATOR (See Separate Group for Components)			12	800-2100	1	Screw, Cap - Hex Head (M10 x 100MM)
	191-1525	1	Code 31AA, 31AB	13	526-2123	2	Washer, Flat (M10)
	191-1526	1	Code 31AC, 31AD	14	SPACER, ALTERNATOR STRAP		
	191-1600	1	Code 31AL		191-1322	1	Code 31AA, 31AB, 31AC, 31AD, 31AR
	191-1570	1	Code 31AR				Code 31AL
2	130-2784	1	Guard, Belt - Code 31AU		191-1322	1	Engines Without Low Fan Center Coolant Pump (Code 23CR)
3	740-1006	1	Washer, Flat (M8) Code 31AL		191-1759	1	Engines With Low Fan Center Coolant Pump (Code 23CR)
4	BRACKET, ALTERNATOR MOUNTING			15	191-1677	1	Guard, Alternator - Code 31AU
	191-1331	1	Code 31AA, 31AC, 31AE, 31AL, 31AR	16	STRAP, ALTERNATOR ADJUSTING - Code 31AL		
	191-1332	1	Code 31AB, 31AD, 31AF		191-1555	1	Engines Without Low Fan Center Coolant Pump (Code 23CR)
5	191-1321	1	Spacer, Alternator Bracket		191-1758	1	Engines With Low Fan Center Coolant Pump (Code 23CR)
6	SCREW, CAP - HEX HEAD			17	SCREW, CAP - HEX HEAD - Code 31AL		
			M8 x 25 MM		718-1037	1	M8 x 25 MM - Engines Without Low Fan Center Coolant Pump (Code 23CR)
	718-1037	5	Code 31AE, 31AF				
	718-1037	4	Code 31AA, 31AB, 31AC, 31AD, 31AL, 31AR		718-1038	1	M8 x 30 MM - Engines With Low Fan Center Coolant Pump (Code 23CR)
	800-2058	1	M8 x 25MM - Code 31AA, 31AB, 31AC, 31AD, 31AR	18	526-0122	1	Washer, Flat (5/16") Code 31AL
7	740-1006	4	Washer, Flat (M8)	19	718-1806	1	Screw, Cap - Hex Head (M8 x 90 MM) Code 31AL
8	STRAP, ALTERNATOR ADJUSTING			20	526-2106	1	Washer, Flat (M8) Code 31AA, 31AB, 31AC, 31AD, 31AE, 31AF, 31AL, 31AR
	191-1365	1	Code 31AA, 31AC, 31AE, 31AR				
	191-1312	1	Code 31AB, 31AD, 31AF				
9	860-2009	1	Nut, Hex (M10)				
10	SCREW, CAP - HEX HEAD						
			M8 x 20 MM				
	718-1036	1	Code 31AA, 31AC, 31AE				
	718-1036	2	Code 31AB, 31AD, 31AF				
	718-1037	1	M8 x 25 MM - Code 31AL, 31AR				
11	WASHER, FLAT (M8)						
	740-1006	1	Code 31AA, 31AB, 31AC, 31AD, 31AE, 31AF, 31AL, 31AR				

ALTERNATOR COMPONENTS

Code 31AA (High Mount Accessory Side - 37 Amp, 12 Volt)
 Code 31AB (Low Mount Accessory Side - 37 Amp, 12 Volt)
 Code 31AC (High Mount Accessory Side - 62 Amp, 12 Volt)
 Code 31AD (Low Mount Accessory Side - 62 Amp, 12 Volt)
 Code 31AL (High Mount Accessory Side - 72 Amp, 12 Volt)
 Code 31AR (High Mount Accessory Side - 35 Amp, 24 Volt)



NOTE: Component part numbers for 35 and 72 Amp Alternators not available at time of printing.

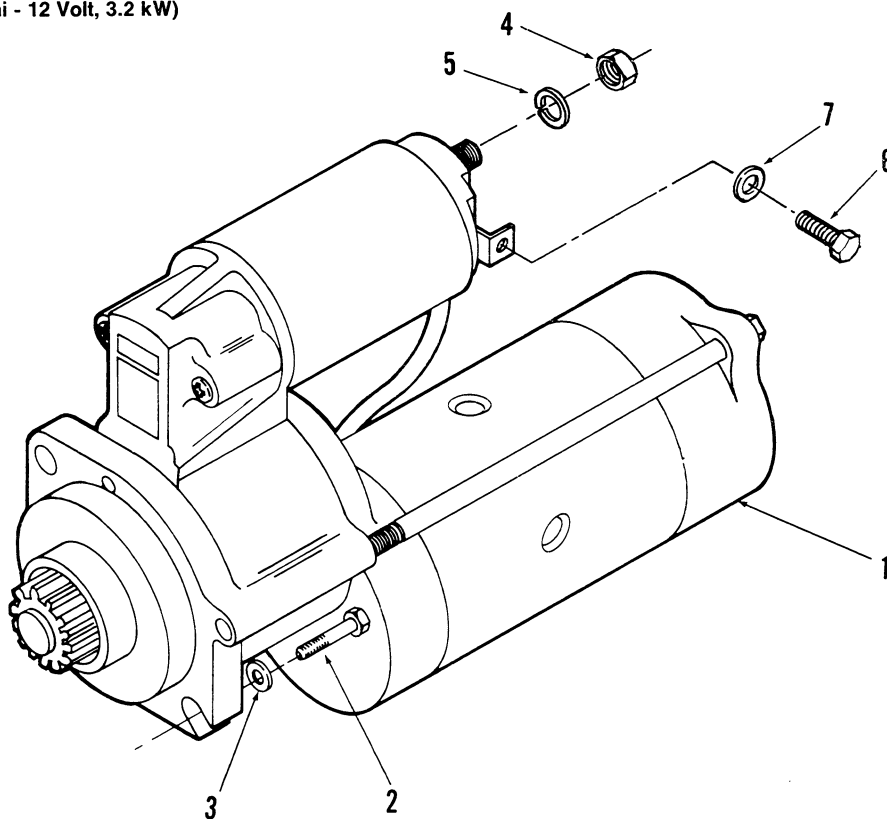
ES-1292

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	ALTERNATOR, COMPLETE			4	DIODE, RECTIFIER - POSITIVE		
	191-1525	1	Code 31AA, 31AB - Used on Late Models - Has No Isolation Diodes on Back Side of Alternator (Replaces Early Models With Isolation Diode Assembly on Back side of Alternator)	191-1452	1	Used on Early Models with Isolation Diode Assembly	
	191-1526	1	Code 31AC, 31AD	191-1559	1	Used on Late Models without Isolation Diode Assembly	
	191-1600	1	Code 31AL	5	BRUSH ASSEMBLY		
	191-1570	1	Code 31AR	191-0659	1	Used on Early Models with Isolation Diode Assembly	
1	191-0943	1	Fan, Alternator	191-1558	1	Used on Late Models without Isolation Diode Assembly	
2	191-1454	1	Diode Assembly, Isolation - Used on Early Models	6	REGULATOR, VOLTAGE		
3	DIODE, RECTIFIER - NEGATIVE			191-1457	1	Used on Early Models with Isolation Diode Assembly	
	191-1453	1	Used on Early Models with Isolation Diode Assembly	191-1557	1	Used on Late Models without Isolation Diode Assembly	
	191-1560	1	Used on Late Models without Isolation Diode Assembly	7	191-1556	1	Diode, Trio - Used on Late Models without Isolation Diode Assembly

STARTER

Code 33AA (Mitsubishi - 12 or 24 Volt, 2.6 kW)
 Code 33AM (Delco Remy)
 Code 33AU (Mitsubishi - 12 Volt, 3.2 kW)

5100-0082
 5100-0295
 5100-0411
 5100-1145

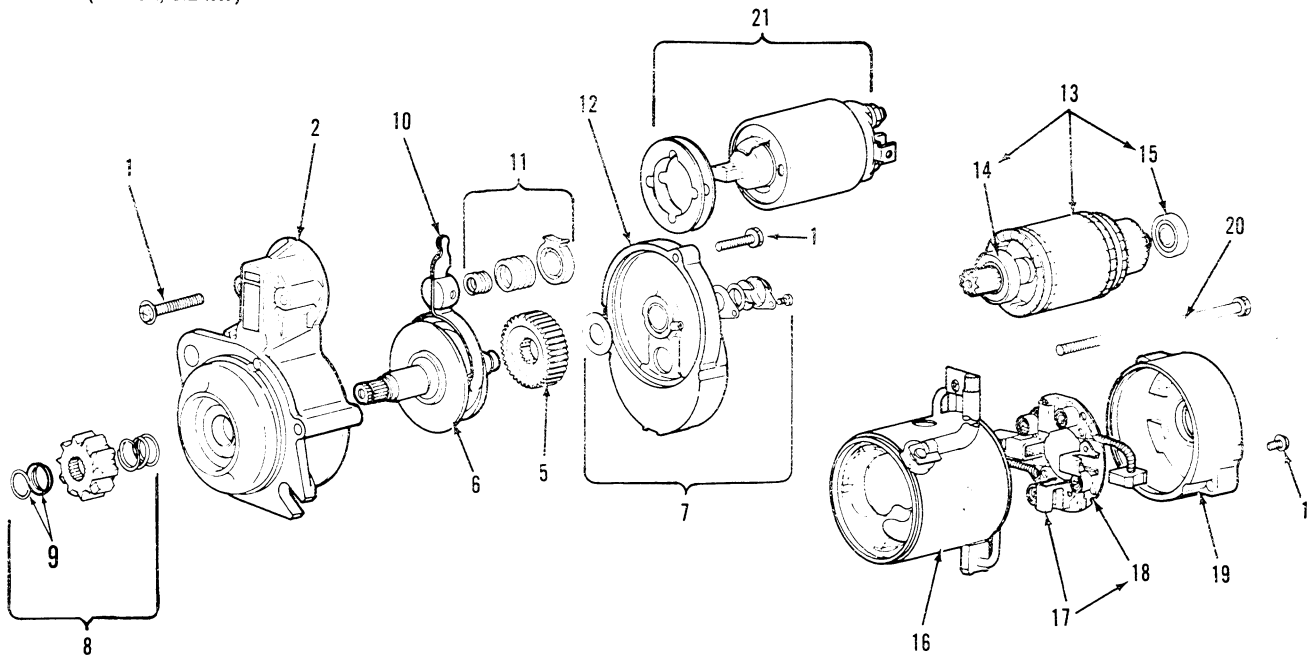


XES-1169

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	STARTER		Code 33AA, 33AU (Mitsubishi) Includes Switch Terminal Hardware (See Separate Group for Components) 12 Volt
	191-1394	1	Code 33AA
	191-1807	1	Code 33AU
	191-1550	1	24 Volt - Code 33AA
	191-1299	1	Code 33AM (Delco Remy) 12 Volt (Not Illustrated)
2	720-1806	2	Screw, Cap - Flanged Hex Head (M12 x 30 MM)
3	740-1010	2	Washer, Flat (M12)
4	860-2008	1	Nut, Hex (M8) B+ Terminal - Code 33AA, 33AU
5	850-2008	1	Washer, Lock - Spring (M8) B+ Terminal - Code 33AA, 33AU
6	718-1002	1	Screw, Cap - Hex Head (M5 x 8 MM) Solenoid Terminal - Code 33AA, 33AU
7	850-2005	1	Washer, Lock - Spring (M5) Solenoid Terminal - Code 33AA, 33AU

STARTER COMPONENTS (Mitsubishi)

Code 33AA (12 or 24 Volt, 2.6 kW)
Code 33AU (12 Volt, 3.2 kW)



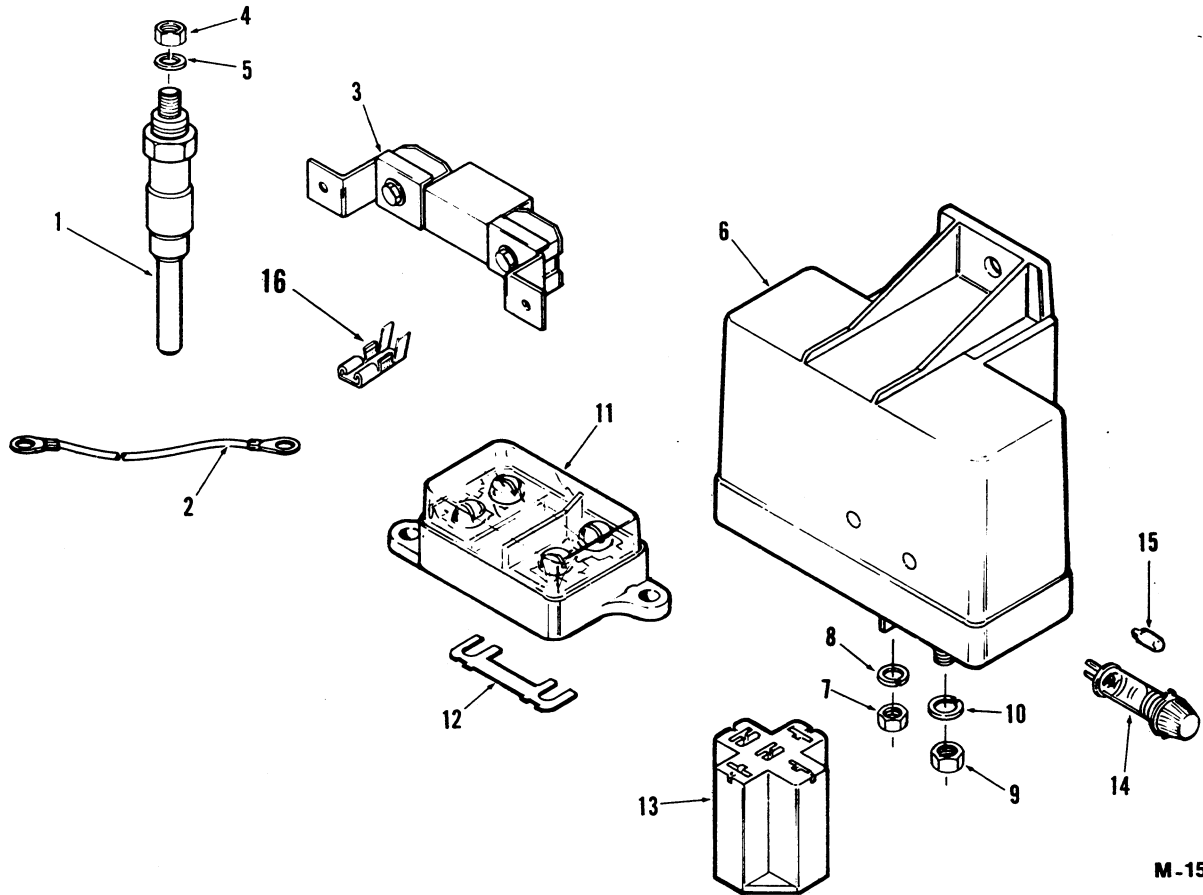
XES-1255

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	STARTER (Complete)						
	191-1394	1	12 Volt Code 33AA	14	191-1437	1	Bearing, Center
	191-1807	1	Code 33AU	15	191-1436	1	Bearing, Rear
	191-1550	1	24 Volt - Code 33AA	16	YOKE ASSEMBLY (Includes Pole Shoes, Field Coil and Positive Brushes)		
1	191-1450	1	Screw Set				12 Volt
2	BRACKET ASSEMBLY, FRONT (Includes Bearing)			191-1435	1	Code 33AA	
	191-1449	1	12 Volt	191-1853	1	Code 33AU	
	191-1605	1	24 Volt	191-1607	1	24 Volt - Code 33AA	
5	191-1446	1	Gear	17	HOLDER, BRUSH (Includes Negative Brushes)		
6	191-1445	1	Clutch				12 Volt
7	191-1444	1	Cover Set (Includes Cover, Plate, Washers, Snap Ring, and Screws)	191-1434	1	Code 33AA	
8	191-1443	1	Pinion Set (Includes Pinion, Spring, and Stopper Set)	191-1852	1	Code 33AU	
9	191-1442	1	Stopper Set (Includes Stopper and Ring)	191-1608	1	24 Volt - Code 33AA	
10	191-1441	1	Lever Assembly	18	SPRING, BRUSH		
11	191-1440	1	Spring Set	191-1433	4	Code 33AA	
12	191-1439	1	Bracket Assembly, Center	191-1851	4	Code 33AU	
13	ARMATURE ASSEMBLY (Includes Bearings)			191-1432	1	Bracket, Rear	
			12 Volt	20	BOLT SET		
	191-1438	1	Code 33AA	191-1431	1	Code 33AA	
	191-1854	1	Code 33AU	191-1850	1	Code 33AU	
	191-1606	1	24 Volt - Code 33AA	21	SWITCH ASSEMBLY		
				191-1430	1	12 Volt	
				191-1609	1	24 Volt	

GLOW PLUG

Code 33AD (12 Volt 20 Second Glow Plugs, Lead and Ballast Resistor)
 Code 33AE (12 Volt 7 Second Glow Plugs, Lead and Control)
 Code 33AG (24 Volt 60 Second Glow Plugs, Lead and Ballast Resistor)
 Code 33AN (12 Volt 20 Second Glow Plugs and Lead)
 Code 33AR (12 Volt 7 Second Glow Plugs and Lead)

5100-0177
 5100-0315
 5100-0343
 5100-0543
 5100-0629



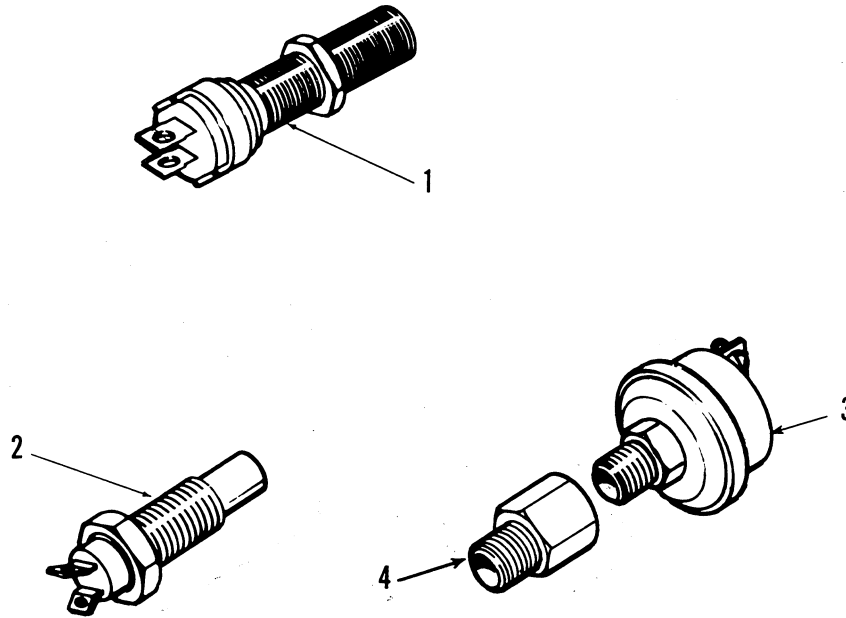
M-1565

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	PLUG, GLOW			7	750-1002	1	Nut, Hex (M5) - Code 33AE
	333-0195	6	Code 33AD, 33AN	8	850-2005	1	Washer, Lock-Spring (M5)
	333-0220	6	Code 33AE, 33AR				- Code 33AE
	333-0226	6	Code 33AG	9	750-1004	1	Nut, Hex (M6) - Code 33AE
2	336-4131	5	Lead, Glow Plug	10	850-2006	1	Washer, Lock-Spring (M6)
3	RESISTOR, BALLAST						- Code 33AE
	333-0198	1	Code 33AD	11	321-0263	1	Holder, Fuse - Code 33AE
	333-0234	1	Code 33AG	12	321-0262-01	1	Fuse, Strip (80 Ampere)
4	750-1002	6	Nut, Hex (M5)				- Code 33AE
5	850-2005	6	Washer, Lock - Spring (M5)	13	307-1690	1	Plug, Harness - Code 33AE
6	333-0245	1	Controller, Glow Plug	14	322-0354	1	Light, Indicator - Code 33AE
			- Code 33AE	15	322-0353	1	Lamp, Indicator - Code 33AE
				16	332-1497	4	Connector, Terminal
							- Code 33AE

SWITCHES

Code 35AC (Low Oil Pressure and High Water Temperature Switches)
 Code 35AE (Magnetic Speed Sensor)

5100-0261
 5100-0340
 5100-0920



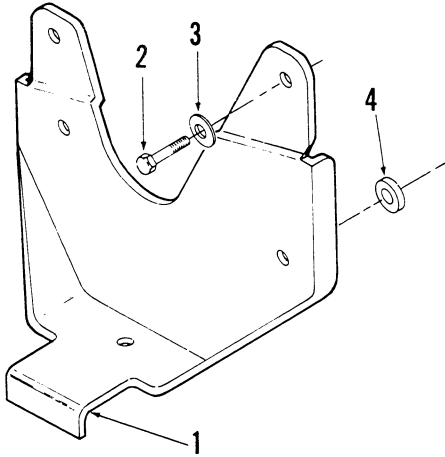
M-1489

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	150-1925	1	Sensor, Speed - Magnetic - Code 35AE
2	309-0482	1	Switch, High Water Temperature - Code 35AC
3	309-0177	1	Switch, Low Oil Pressure - Code 35AC
4	502-0944	1	Adapter - Code 35AC (Not Required on All Engines)

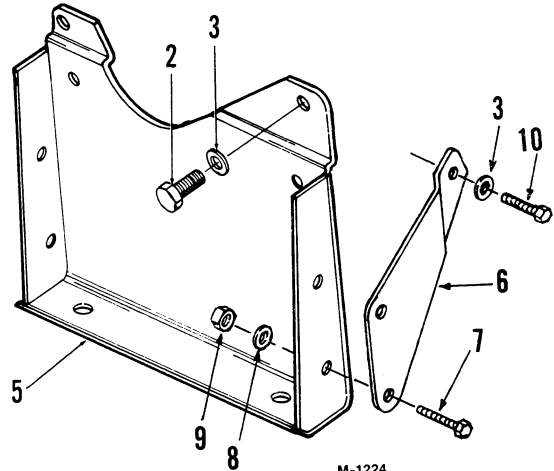
FRONT ENGINE MOUNT

Code 41AA (Single Point)
 Code 41AB (Rigid Four Point - With Radiator Support Arms)
 Code 41AH (Rigid Four Point - Without Radiator Support Arms)

5100-0065
 5100-0620
 5100-1034



M-1548



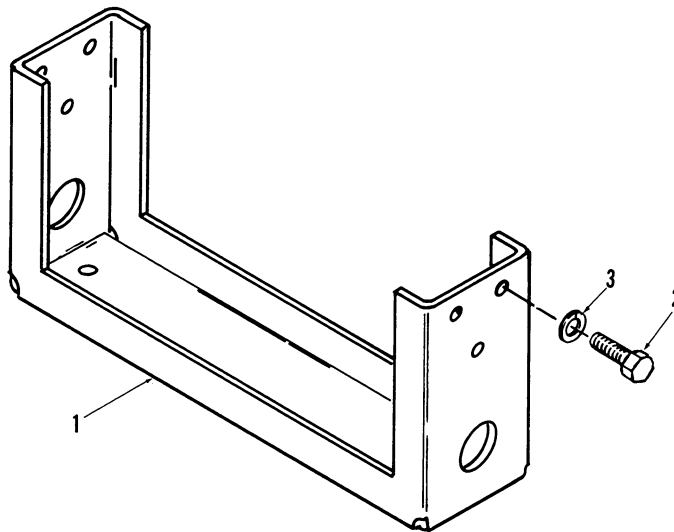
M-1224

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	403-1925	1	Bracket, Mount - Code 41AA
2	718-1086	2	SCREW, CAP - HEX HEAD M12 × 90 MM (Top)
	718-1802	2	M12 × 95 MM (Bottom)
3	740-1010	4	WASHER, FLAT (M12) Code 41AA
	740-1010	6	Code 41AH
4	403-1932	2	Spacer, Bracket Mounting - Code 41AA
5	403-2210	1	BRACKET, MOUNT Code 41AB
	403-2033	1	Code 41AH
6	130-2797	1	SUPPORT - Code 41AH Right Hand
	130-2798	1	Left Hand
7	718-1074	4	Screw, Cap - Hex Head (M12 × 30 MM) Code 41AH
8	850-2012	4	Washer, Lock (M12) Code 41AH
9	750-1010	4	Nut, Hex (M12) Code 41AH
10	718-1073	2	Screw, Cap - Hex Head (M12 × 25 MM) Code 41AH

REAR ENGINE MOUNT

Code 41AB
Code 41AH

5100-0198
5100-0207
5100-0311



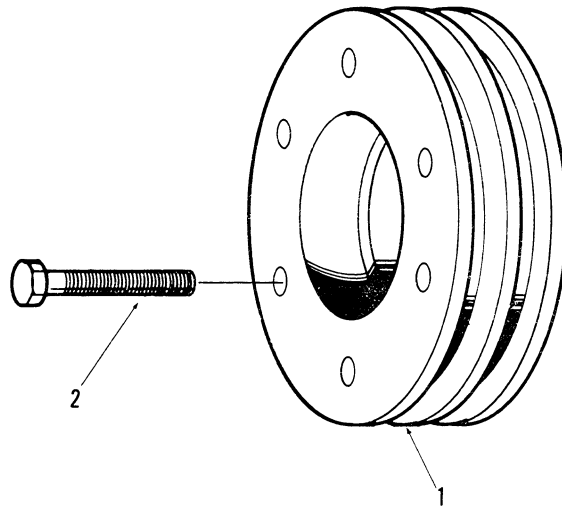
M-1224

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	BRACKET, REAR HOUSING		
			Code 41AB
	403-2036	1	For Engines With SAE #3 Flywheel Housing (Option Code 27AC, 27AG)
	403-1973	1	For Engines With SAE #4 Flywheel Housing (Option Code 27AB, 27AF, 27AN)
	403-1952	1	For Engines With SAE #5 Flywheel Housing (Option Code 27AA, 27AE)
			Code 41AH
	403-1973	1	For Engines With SAE #4 Flywheel Housing (Option Code 27AB, 27AF, 27AN)
2	718-1073	6	Screw, Cap - Hex Head (M12 × 25 MM)
3	850-2012	6	Washer, Lock - Spring (M12)

CRANKSHAFT PULLEY

Code 45AB (Double Groove)

5100-0167



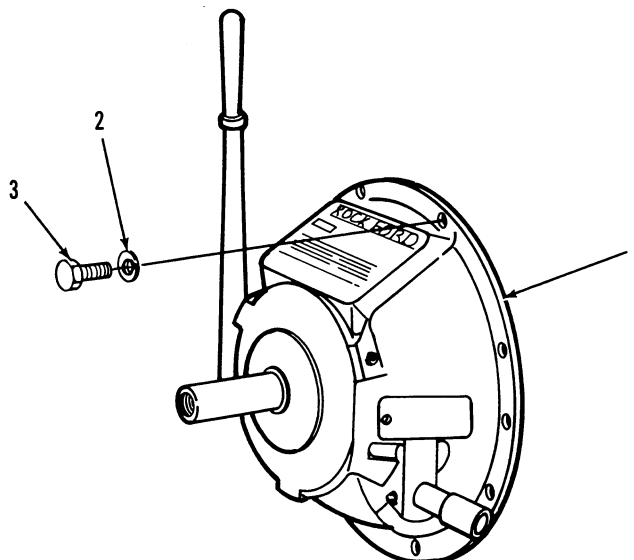
CT-1042

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	104-1374	1	Pulley, Crankshaft
2	720-1064	6	Screw, Cap - Hex Head (M10 x 75 MM)

CLUTCH

Code 45AC (7.5" Over Center)
 Code 45AD (10.0" Over Center)
 Code 45AE (11.5" Over Center)
 Code 45AH (10.0" Over Center, In-Line)

5100-0180
 5100-0181
 5100-0182
 5100-0354



M-1344

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	CLUTCH ASSEMBLY, POWER TAKE-OFF		
	190-0541	1	Code 45AC
	190-0594	1	Code 45AD
	190-0595	1	Code 45AE
	190-0598	1	Code 45AH
2	WASHER, FLAT (Hardened)		
	740-1006	8	M8 - Code 45AC
	740-1008	8	M10 - Code 45AC
	740-1008	20	M10 - Code 45AD, 45AE, 45AH
3	SCREW, CAP - HEX HEAD		
	718-1038	8	M8 × 30 MM - Code 45AC
	718-1054	8	M10 × 25 MM - Code 45AC
	718-1054	12	M10 × 25 MM - Code 45AD, 45AE, 45AH
	718-1056	8	M10 × 35 MM - Code 45AD, 45AE, 45AH

NOTE: For component parts contact manufacturer shown on nameplate.

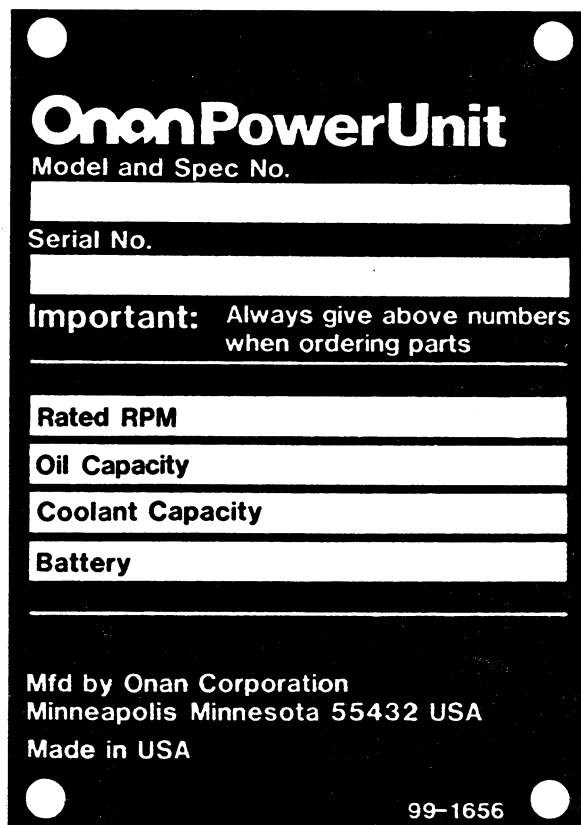
PAINT AND THREAD SEALANT

PART NO.	QTY. USED	PART DESCRIPTION
525-0454		Paint, Greige (13 oz. Pressurized Spray Can)
518-0452		Sealant, Thread (50 cc Bottle)

POWER UNIT SECTION

This section contains replacement parts for the Power Unit as listed by Sales Option Code number on the radiator shroud nameplate.

MODEL IDENTIFICATION LABEL



Onan Power Unit
Model and Spec No.
[]
Serial No.
[]
Important: Always give above numbers
when ordering parts

Rated RPM
[]
Oil Capacity
[]
Coolant Capacity
[]
Battery
[]

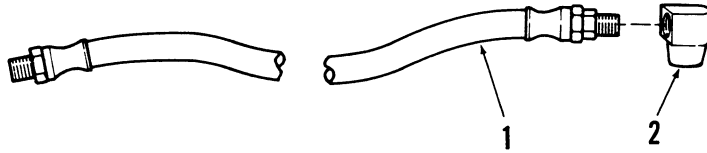
Mfd by Onan Corporation
Minneapolis Minnesota 55432 USA
Made in USA
99-1656

For handy reference, insert your radiator shroud nameplate and Sales Option Code information in the spaces above.

FLEXIBLE FUEL LINE

Code 15AF

5100-0515

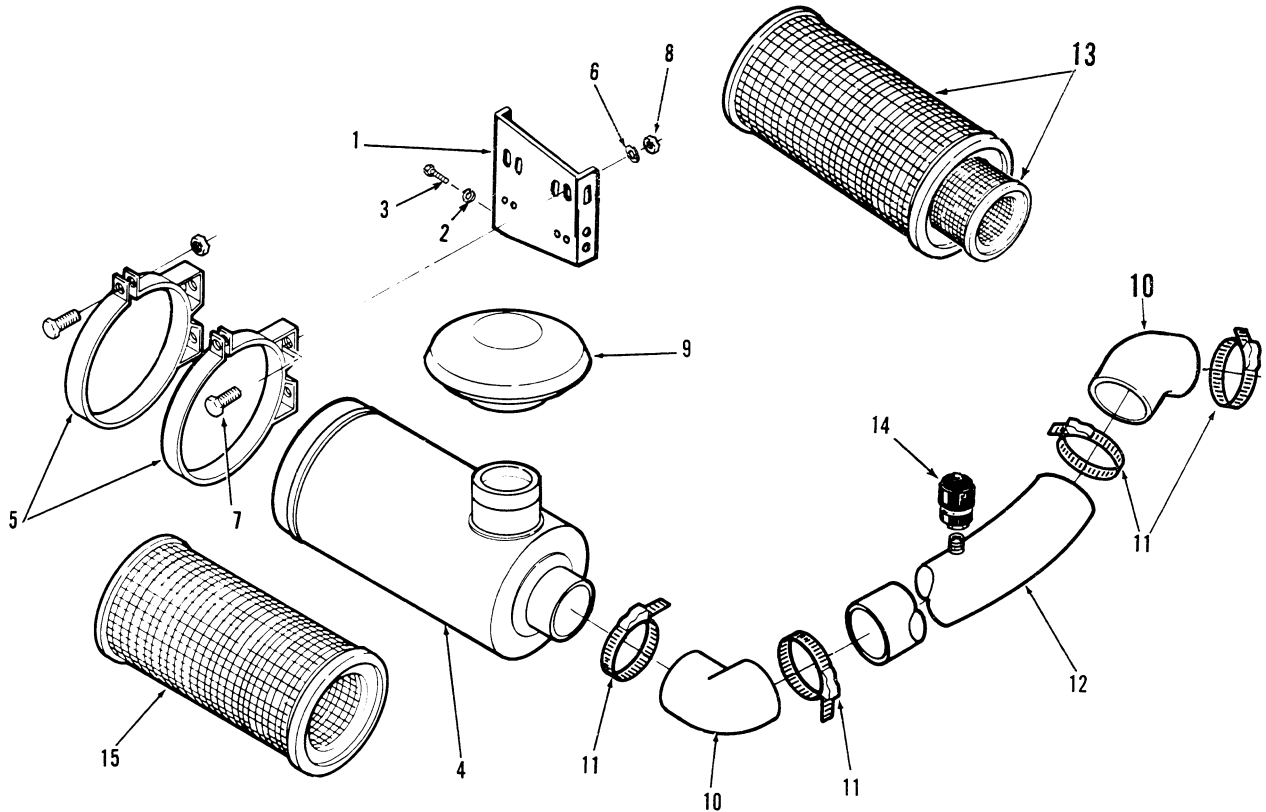


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	501-0002	1	Line, Flexible Fuel (7")
2	502-0041	1	Elbow, Male

AIR CLEANER (SPEC A)

Code 19AB (Medium Duty, Single Stage, Unhoused Mounted)
 (Medium Duty, Single Stage, Housed, Not Mounted)
 Code 19AC (Heavy Duty, Dual Stage, Not Mounted)

5100-0186
 5100-0188
 5100-0202



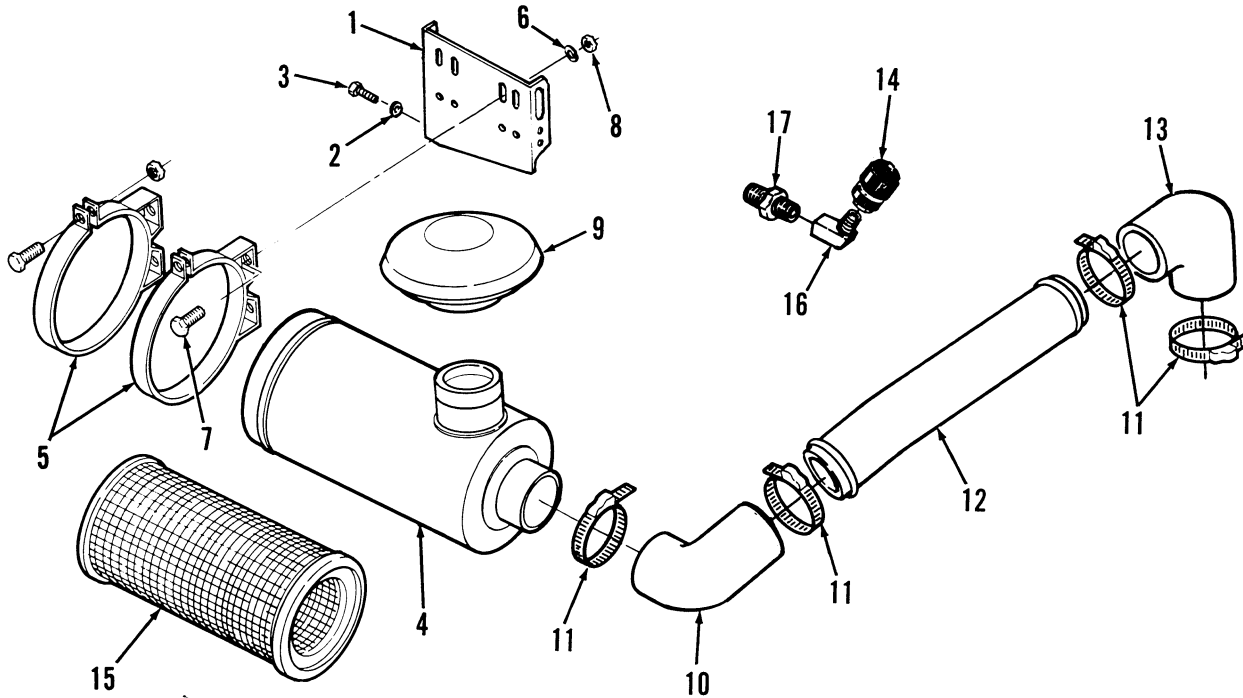
XFS-1383

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	140-1772	1	Bracket, Air Cleaner Mounting - Code 19AB	8	750-1006	4	Nut, Hex (M8) - Code 19AB - Mounted
2	740-1010	1	Washer, Flat - Hardened (M12) - Code 19AB	9	HOOD, AIR INLET		
3	718-1073	1	Screw, Cap - Hex Head (M12 x 25 MM) - Code 19AB	140-1435	1	Code 19AB	
4	CLEANER, AIR (Includes Element)			140-1575	1	Code 19AC	
	140-1794	1	Code 19AB	10	140-1775	2	Elbow, 90° - Code 19AB
	140-1555	1	Code 19AC	11	503-0354	4	Clamp, Hose - Code 19AB
5	140-0317	2	Band, Air Cleaner	12	TUBE, AIR INLET - Code 19AB		
6	WASHER (M8) Code 19AB			140-1802	1	Unhoused	
	740-1006	4	Flat - Hardened - Mounted	140-1793	1	Housed	
	850-2008	4	Lock - Not Mounted	13	ELEMENT, AIR CLEANER - Code 19AC		
7	SCREW, CAP - HEX HEAD - Code 19AB			140-1619	1	Primary	
	718-1036	4	M8 x 20 MM - Mounted	140-1620	1	Secondary	
	718-1034	4	M8 x 14 MM - Not Mounted	14	140-1791	1	Indicator, Service - Code 19AB - Unhoused
				15	140-1455	1	Element, Air Cleaner - Code 19AB

AIR CLEANER (SPEC C)

Code 19AB (Medium Duty, Single Stage, Engine Mounted, Unhoused)

5100-0531



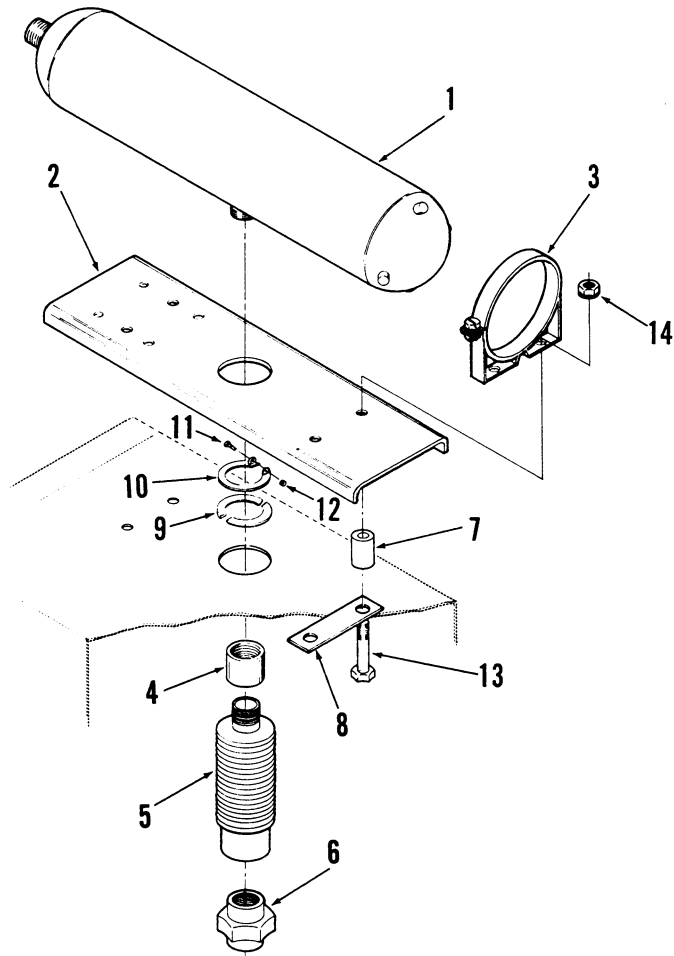
XFS-1383

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	140-1772	1	Bracket, Air Cleaner Mounting
2	526-2148	1	Washer, Flat - Hardened (M12)
3	800-2111	1	Screw, Cap - Hex Head (M12 x 25 MM)
4	140-1794	1	Cleaner, Air (Includes Element)
5	140-0317	2	Band, Air Cleaner
6	526-2103	4	Washer, Flat-Hardened (M8)
7	800-2057	4	Screw, Cap - Hex Head (M8 x 20 MM)
8	860-2008	4	Nut, Hex (M8)
9	140-1435	1	Hood, Air Inlet
10	503-1222	1	Elbow, 90°
11	503-0354	4	Clamp, Hose
12	140-1991-01	1	Tube, Air Inlet
13	503-1406	1	Elbow, 90°
14	140-1791	1	*Indicator, Service
15	140-1455	1	Element, Air Cleaner
16	502-0020	1	*Elbow, 90° (1/8")
17	502-0082	1	*Nipple, Hex-Pipe (1/8")

* - Intake Manifold Mounted

MUFFLER

Code 19AM (Housed)



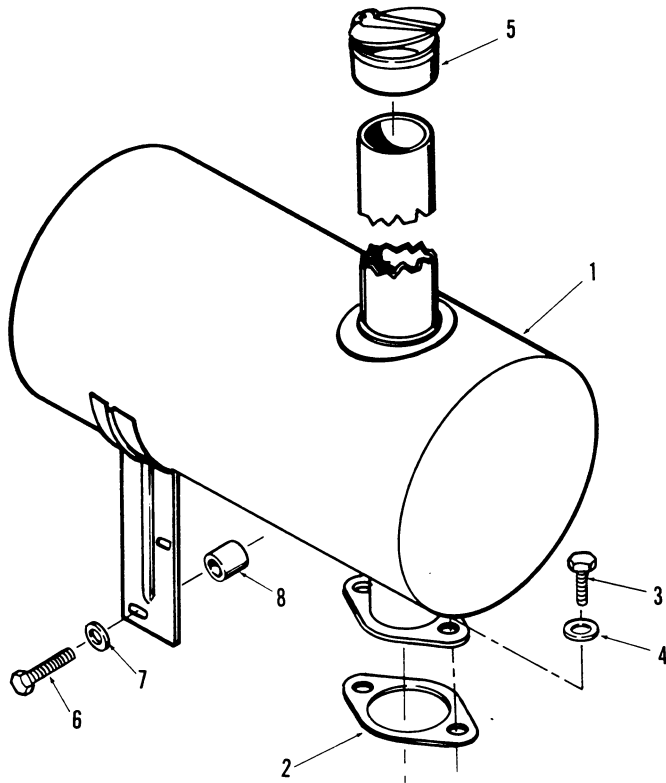
XES-1116-1

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	155-0988	1	Muffler
2	155-0978	1	Shield, Heat
3	140-0649	2	Band, Mounting
4	505-0203	1	Coupling (2")
5	155-2066	1	Tube, Exhaust
6	505-0454	1	Union (2")
7	155-1430	4	Spacer
8	370-0072	2	Strip, Reinforcing
9	895-0157	1	Strip, Asbestos
10	155-1420	1	Shield, Rain
11	813-0105	2	Screw, Machine - Round Head (10-32 x 1")
12	870-0188	2	Nut, Locking (10-32)
13	800-0037	4	Screw, Cap - Hex Head (5/16-18 x 3")
14	870-0048	4	Nut, Locking (5/16-18)

MUFFLER

Code 21AC (Horizontal)

5100-0372



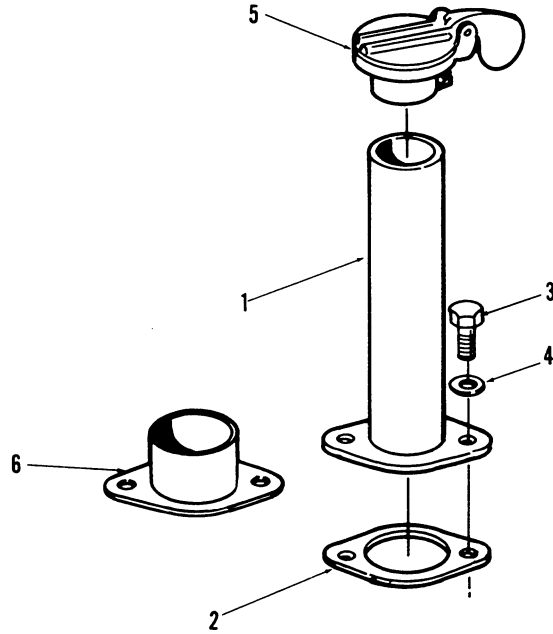
XS-1091

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	155-1967	1	Muffler, Exhaust
2	155-1920	1	Gasket, Muffler Mounting
3	718-1054	2	Screw, Cap - Hex Head (M10 × 25 MM)
4	740-1008	2	Washer, Flat (M10)
5	155-0986	1	Cap, Rain
6	718-1807	2	Screw, Cap - Hex Head - (M8 × 95 MM)
7	850-2008	2	Washer, Flat (M8)
8	155-1964	2	Spacer, Muffler Brace

EXHAUST PIPE

Code 21AD (With Rain Cap)
 Code 21AG (Exhaust Flange)
 Code 21AJ (Gasket Only)

5100-0190
 5100-0285
 5100-0338



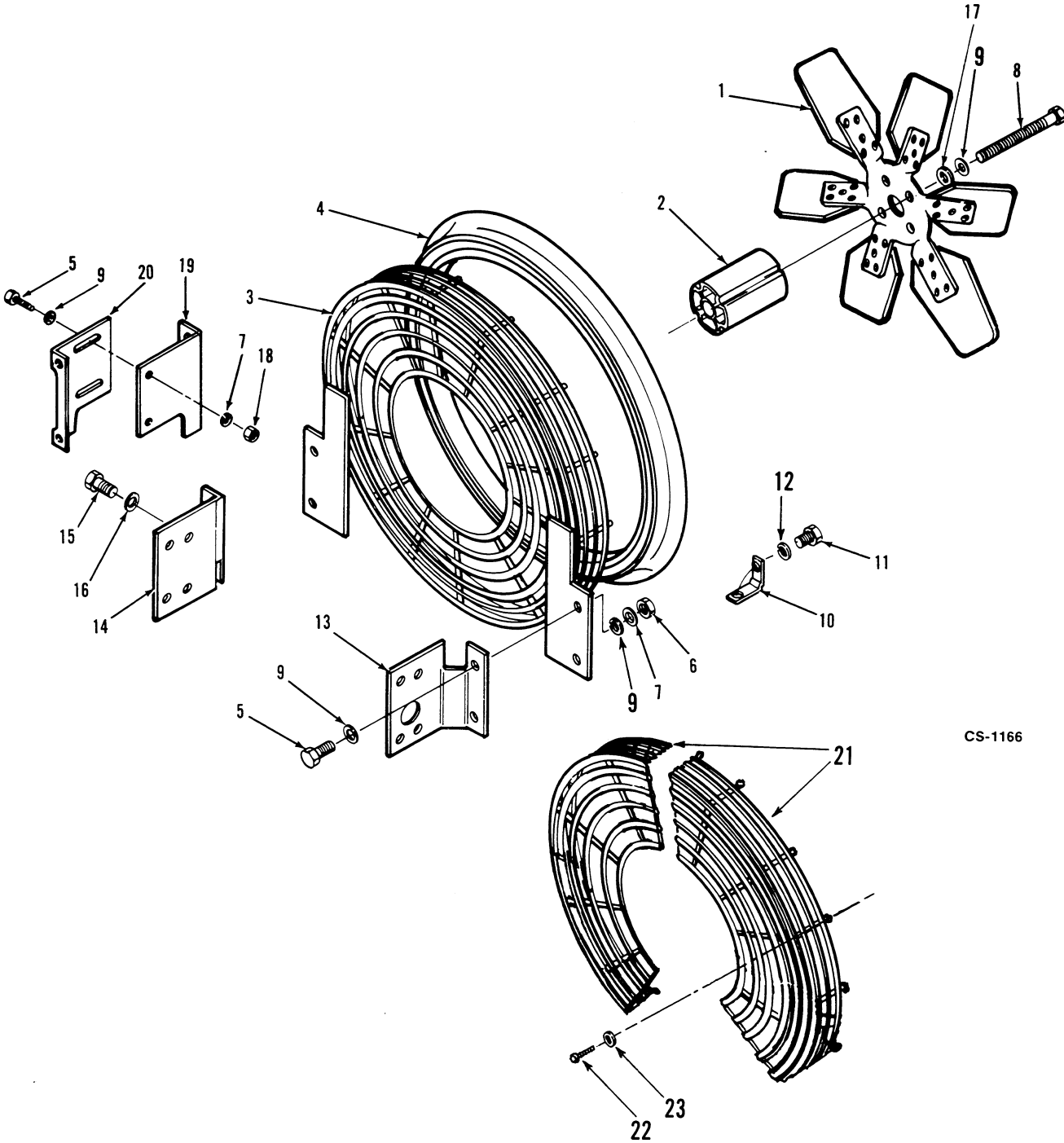
EXS-1065

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	155-1919	1	Pipe, Exhaust - Code 21AD
2	155-1920	1	Gasket
3	718-1054	2	Screw, Cap - Hex Head (M10 × 25 MM) Code 21AD, 21AG
4	740-1008	2	Washer, Flat (M10) Code 21AD, 21AG
5	155-0985	1	Cap, Rain - Code 21AD
6	155-1916	1	Flange, Exhaust - Code 21AG

COOLING SYSTEM - FAN

Code 23AH (Suction Fan and 89 MM Spacer)
 Code 23AJ (Suction Fan and 89 MM Spacer)
 Code 23BM (Blower Fan and 89 MM Spacer)
 Code 23BN (Blower Fan and 89 MM Spacer)
 Code 23CA (Suction Fan and 89 MM Spacer)

5100-0179
 5100-0203
 5100-0564
 5100-0666
 5100-0921
 5100-1108



CS-1166

COOLING SYSTEM - FAN

Code 23AH (Suction Fan and 89 MM Spacer)
 Code 23AJ (Suction Fan and 89 MM Spacer)
 Code 23BM (Blower Fan and 89 MM Spacer)
 Code 23BN (Blower Fan and 89 MM Spacer)
 Code 23CA (Suction Fan and 89 MM Spacer)

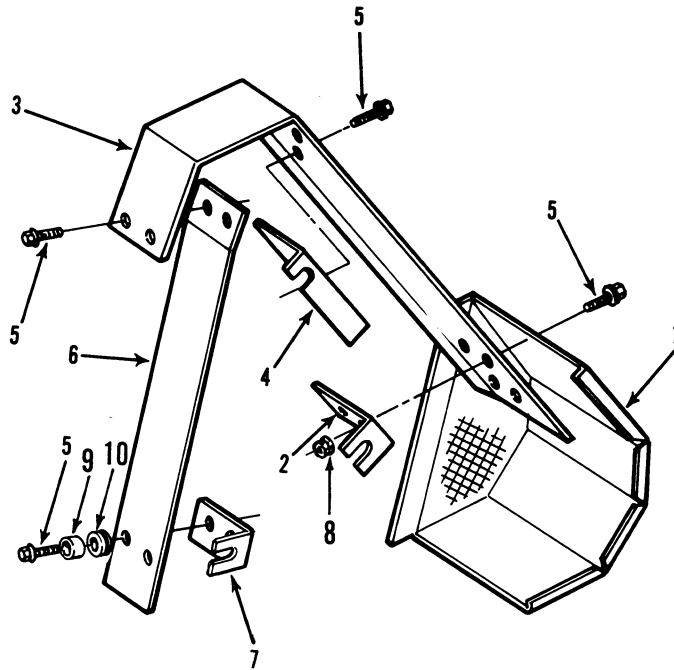
5100-0179
 5100-0203
 5100-0564
 5100-0666
 5100-0921
 5100-1108

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	FAN, COOLING			12	850-2005	1	Washer, Lock-Spring (M5) - Code 23AJ, 23BN
	130-1925	1	Code 23AH, 23AJ, 23CA	13	130-2004	1	Bracket, Fan Guard - RH - Code 23AJ, 23BN
	130-1922	1	Code 23BM, 23BN	14	130-2005	1	Bracket, Fan Guard - LH - Engines Without Front PTO
2	130-1874	1	Spacer, Fan				- Code 23AJ, 23BN
3	130-2030	1	Guard, Fan - Code 23AJ, 23BN	15	718-1036	4	Screw, Cap - Hex Head (M8 x 20 MM) - Code 23AJ, 23BN
4	130-1962	1	Shroud, Fan - Code 23AJ, 23BN	16	740-1006	4	Washer, Flat (M8) - Code 23AJ, 23BN
5	SCREW, CAP - HEX HEAD (M8 x 20 MM)			17	WASHER, FLAT - Code 23AJ	4	89 MM Spacer and Cast Iron Pulley
	Code 23AJ, 23BN				526-0122	4	89 MM Spacer and Sheet Steel Pulley
	718-1036	4	Engines Without Front PTO		740-1006	4	89 MM Spacer and Sheet Steel Pulley
	718-1036	6	Engines With Front PTO	18	860-2008	2	Nut, Hex (M8 x 1.25) Engines With Front PTO - Code 23AJ, 23BN
6	750-1006	4	Nut, Hex (M8) Code 23AJ, 23BN	19	130-2470	1	Support, Fan Guard - Engines With Front PTO - Code 23AJ, 23BN
7	WASHER, LOCK-SPRING (M8)			20	130-2471	1	Bracket, Fan Guard - Engines With Front PTO - Code 23AJ, 23BN
	850-2008	4	Engines Without Front PTO	21	GUARD, FAN - Code 23BM, 23CA	1	Left Hand
	850-2008	6	Engines With Front PTO		130-2460	1	Right Hand
8	SCREW, CAP - HEX HEAD			22	SCREW		
			Code 23AJ		718-1018	8	Cap - Hex Head (M6 x 12 MM) Code 23BM, 23CA
	718-1804	4	M8 x 110 MM (89 MM Spacer and Sheet Steel Pulley)		821-2033	8	Locking - Hex Washer Head (M6 x 16 MM) Code 23BN in Spec C
	718-1803	4	M8 x 115 MM (89 MM Spacer and Cast Iron Pulley)	23	850-2006	8	Washer, Lock - Spring (M6) Code 23BM, 23CA
	718-1804	4	Code 23AH, 23BM, 23BN, 23CA (M8 x 110 MM)				
9	WASHER						
			Code 23AJ, 23BN in Spec A				
	740-1006	8	Engines Without Front PTO (Flat - M8)				
	740-1006	10	Engines With Front PTO (Flat -M8)				
	850-2008	4	Code 23AH, 23BM, 23BN in Spec C, 23CA				
			(Lock - Spring - M8)				
10	130-2085	1	Clip, Pan - Shroud - Code 23AJ, 23BN				
11	718-1005	1	Screw, Cap - Hex Head (M5 x 14 MM) - Code 23AJ, 23BN				

BELT GUARD

Code 23BM (Belt Guard - Low Alternator)
Code 23CA (Belt Guard - Low Alternator)

5100-0663
5100-0851



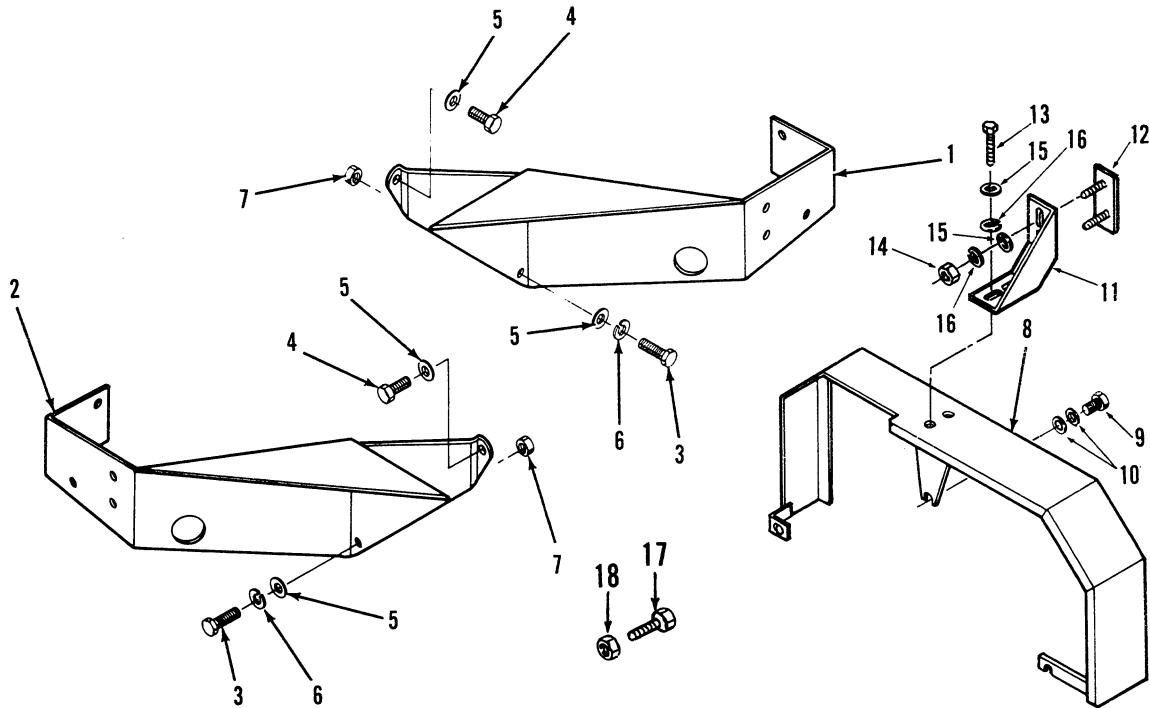
M-1595

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	191-1539	1	Guard, Alternator Belt
2	BRACKET, BELT GUARD		
	191-1543	1	Code 23BM
	191-1593	1	Code 23CA
3	GUARD, ALTERNATOR BELT		
	191-1540	1	Code 23BM
	191-1579	1	Code 23CA
4	BRACKET, BELT GUARD		
	191-1542	1	Code 23BM
	191-1580	1	Code 23CA
5	SCREW, LOCKING HEAD		
			1/4-20 x 1/2"
	821-0010	10	Code 23BM
	821-0010	2	Code 23CA
	821-2032	4	M6 x 12 MM - Code 23CA
	821-2033	3	M6 x 16 MM - Code 23CA
6	GUARD, ALTERNATOR BELT		
	191-1546	1	Code 23BM
	191-1577	1	Code 23CA
7	BRACKET, ALTERNATOR BELT		
	191-1547	1	Code 23BM
	191-1590	1	Code 23CA
8	870-2054	2	Nut, Locking Flange (M6) - Code 23CA
9	402-0546	3	Insert, Isolator - Code 23CA
10	508-0248	3	Grommet - Code 23CA

BELT GUARD AND RADIATOR SUPPORTS (SPEC A)

Code 23AJ
Code 23BN

5100-0196
5100-0206



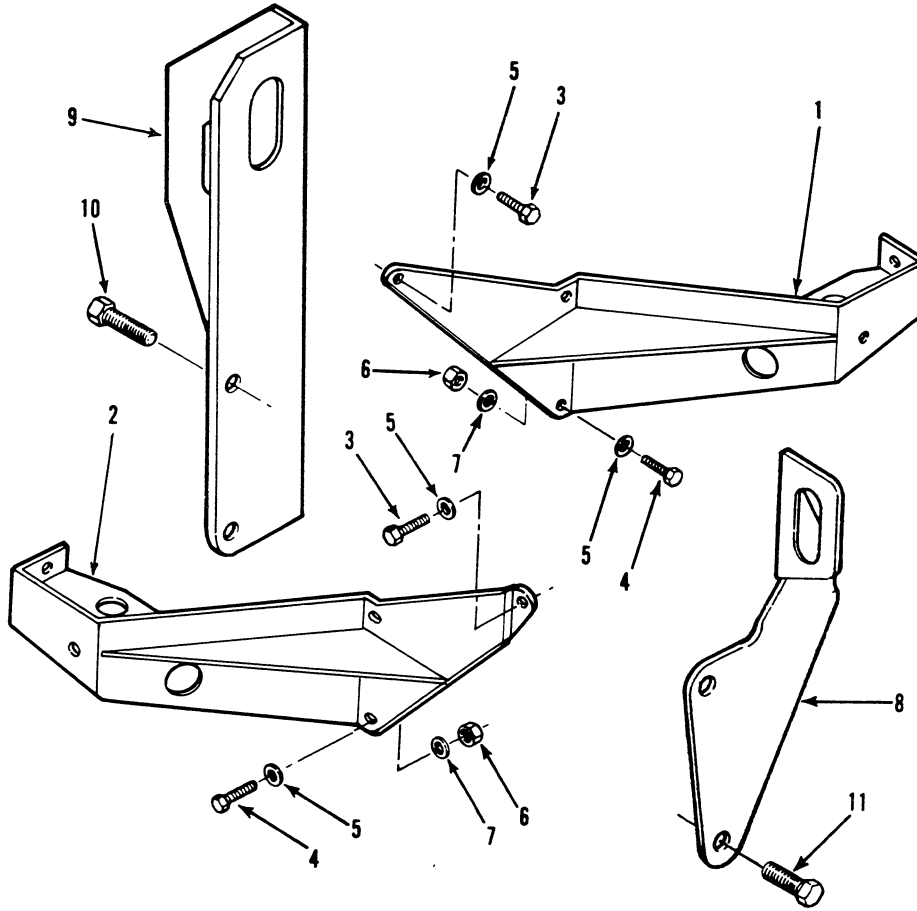
M-13

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	130-2019	1	Support, Radiator - RH
2	130-2022	1	Support, Radiator - LH
3	718-1074	4	Screw, Cap - Hex Head (M12 × 30 MM)
4	718-1072	2	Screw, Cap - Hex Head (M12 × 20 MM)
5	740-1010	6	Washer, Flat (M12)
6	850-2012	4	Washer, Lock - Spring (M12)
7	750-1010	4	Nut, Hex (M12)
8	130-1993	1	Guard, Belt
9	718-1047	1	Screw, Cap - Hex Head (M8 × 75 MM)
10	740-1006	2	Washer, Flat (M8)
11	130-2192	1	Support, Belt Guard
12	130-2210	1	Plate, Fan Guard Support
13	718-1020	2	Screw, Cap - Hex Head (M6 × 16 MM)
14	750-1004	2	Nut, Hex (M6)
15	526-0018	4	Washer, Flat (M6)
16	850-2006	4	Washer, Lock-Spring (M6)
17	718-1035	1	Screw, Cap - Hex Head (M8 × 16 MM)
18	740-1006	1	Washer, Flat (M8)

RADIATOR SUPPORTS (SPEC A)

Code 23BM
Code 23CA

5100-0668

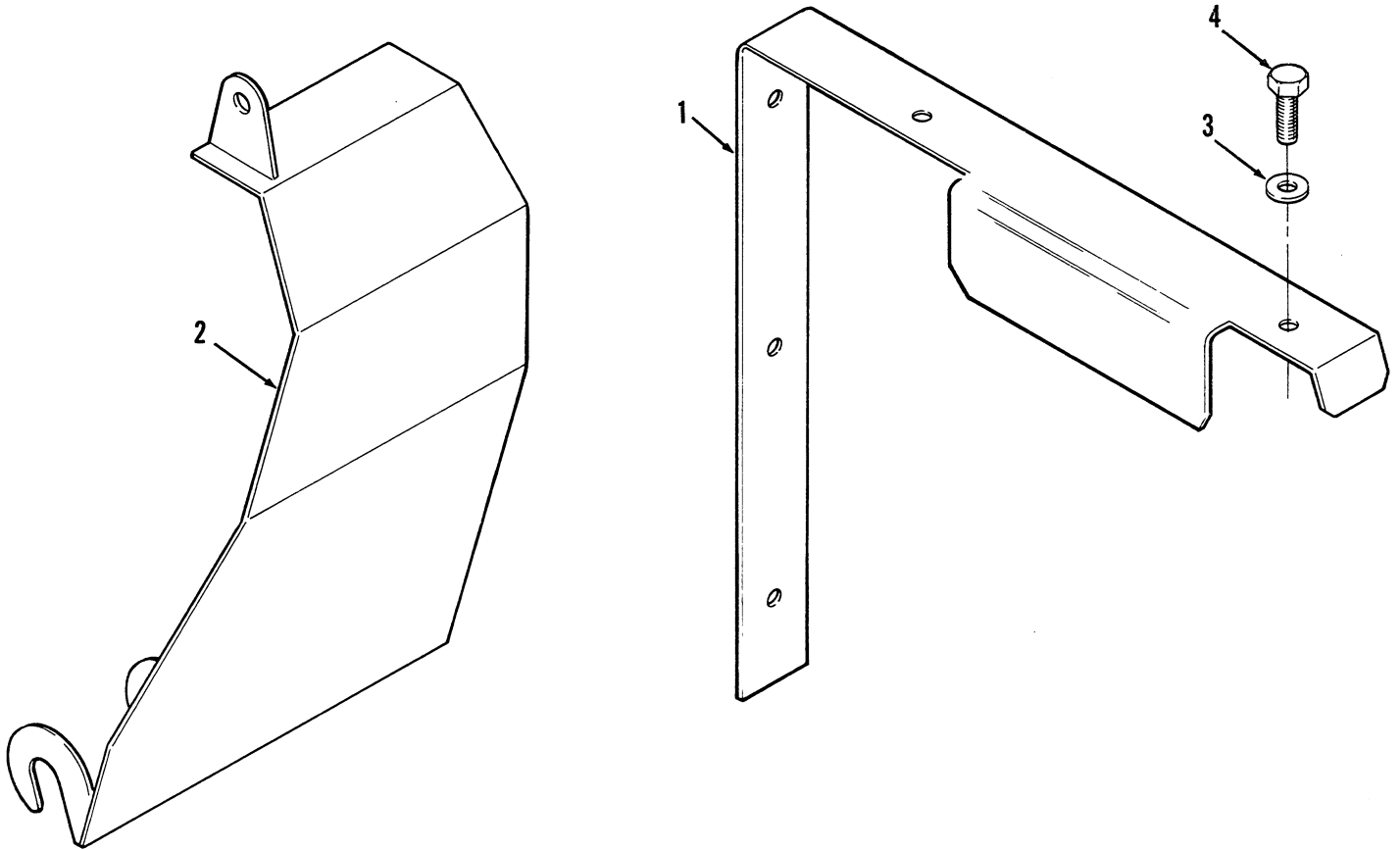


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	130-2463	1	Support, Lower Radiator (Right Hand)
2	130-2464	1	Support, Lower Radiator (Left Hand)
3	800-2110	2	Screw, Cap - Hex Head (M12 × 20 MM)
4	800-2112	4	Screw, Cap - Hex Head (M12 × 30 MM)
5	740-1010	6	Washer, Flat (M12)
6	860-2010	4	Nut, Hex (M12)
7	850-2012	4	Washer, Lock - Spring (M12)
8	130-2838	1	Support, Upper Radiator (Right Hand)
9	130-2338	1	Support, Upper Radiator (Left Hand)
10	800-2086	2	Screw, Cap - Hex Head (M10 × 25 MM)
11	800-2071	2	Screw, Cap - Hex Head (M8 × 90 MM)

BELT GUARD (SPEC C)

Code 23AJ
Code 23BN

5100-1152

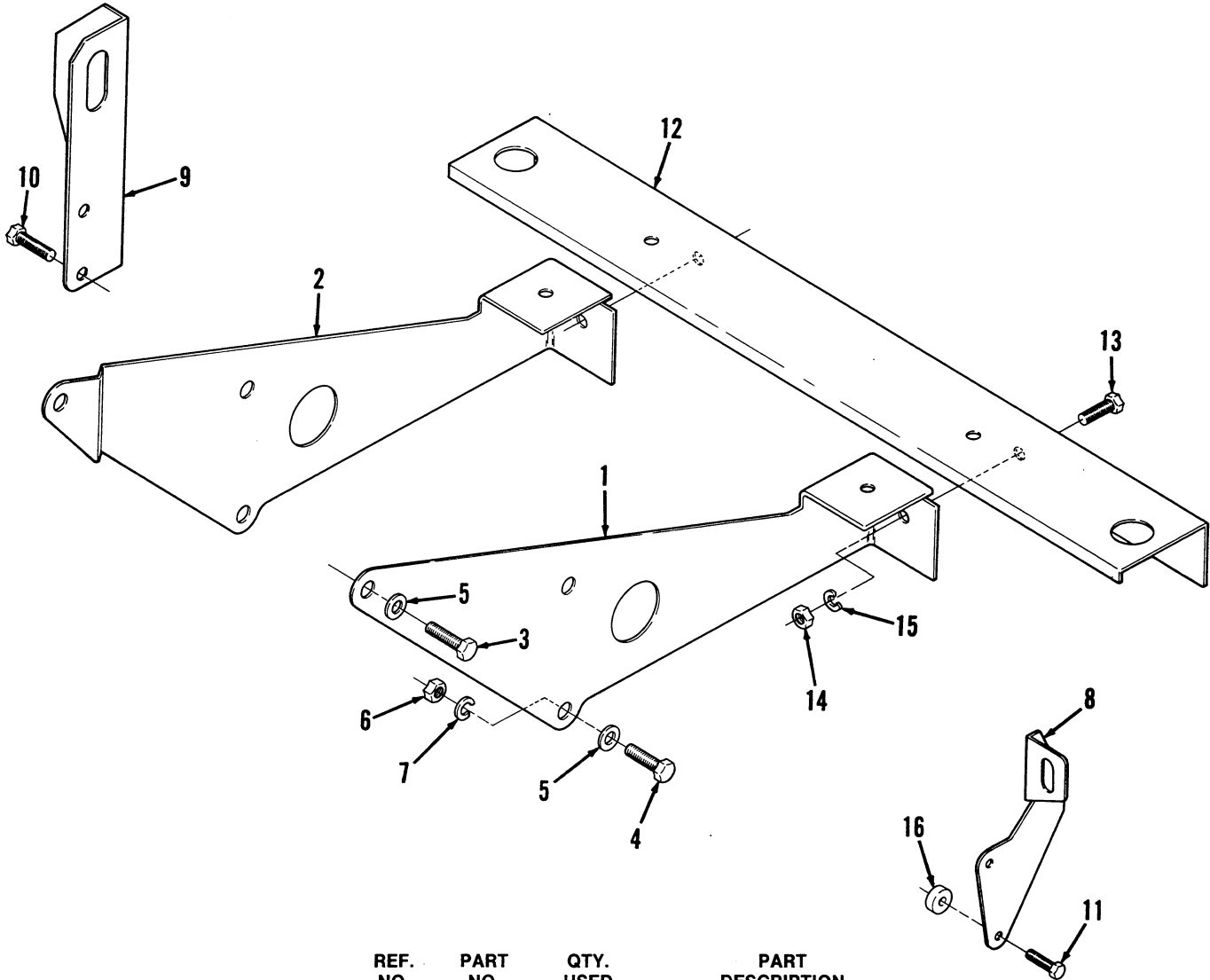


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	130-3065	1	Guard, Belt
2	191-1741	1	Guard, Alternator
3	526-2103	5	Washer, Flat (M8)
4	800-2052	5	Screw, Cap - Hex Head (M8 x 12 MM)

RADIATOR SUPPORTS (SPEC C)

Code 23AK
Code 23BN

5100-1144

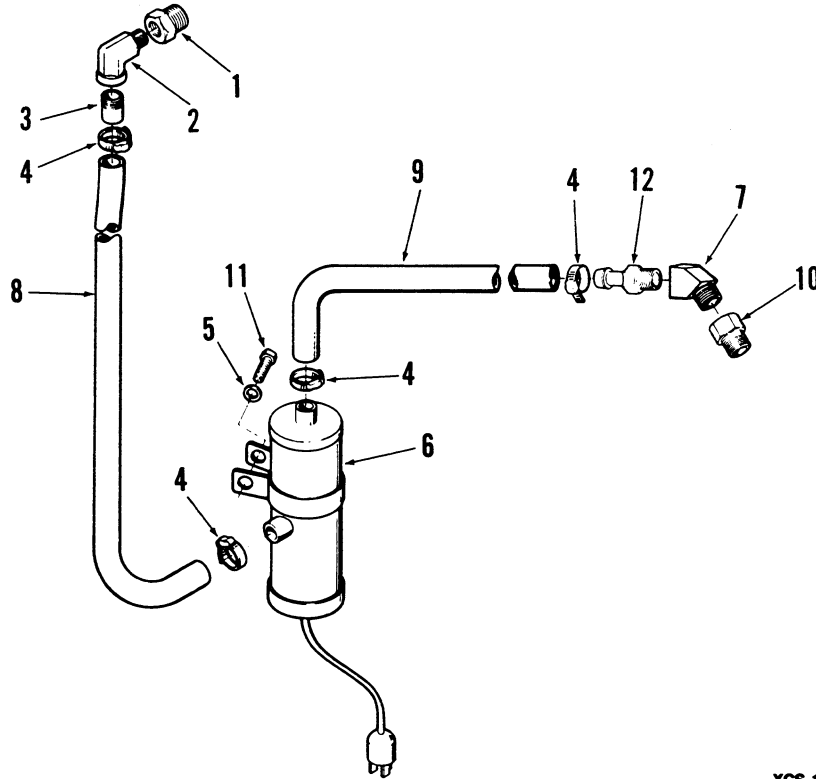


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	130-3048	1	Support, Lower Radiator (Right Hand)
2	130-3049	1	Support, Lower Radiator (Left Hand)
3	800-2110	2	Screw, Cap - Hex Head (M12 x 20 MM)
4	800-2112	4	Screw, Cap - Hex Head (M12 x 30 MM)
5	526-2148	6	Washer, Flat (M12)
6	860-2010	4	Nut, Hex (M12)
7	850-2012	4	Washer, Lock - Spring (M12)
8	130-2838	1	Support, Upper Radiator (Right Hand)
9	130-2338	1	Support, Upper Radiator (Left Hand)
10	800-2086	2	Screw, Cap - Hex Head (M10 x 25 MM)
11	718-1807	2	Screw, Cap - Hex Head (M8 x 95 MM)
12	130-3050	1	Channel, Radiator Mounting
13	800-2057	4	Screw, Cap - Hex Head (M8 x 20 MM)
14	860-2008	4	Nut, Hex (M8)
15	526-2103	4	Washer, Flat (M8)
16	191-1322	1	Spacer

ENGINE TANK HEATER

Code 23AY (850 Watt, 120 Volt - 4 Cylinder Engines)
 (1500 Watt, 120 Volt - 6 Cylinder Engines)
 Code 23BB (1000 Watt, 230 Volt - 4 Cylinder Engines)
 (1500 Watt, 230 Volt - 6 Cylinder Engines)

5100-0665

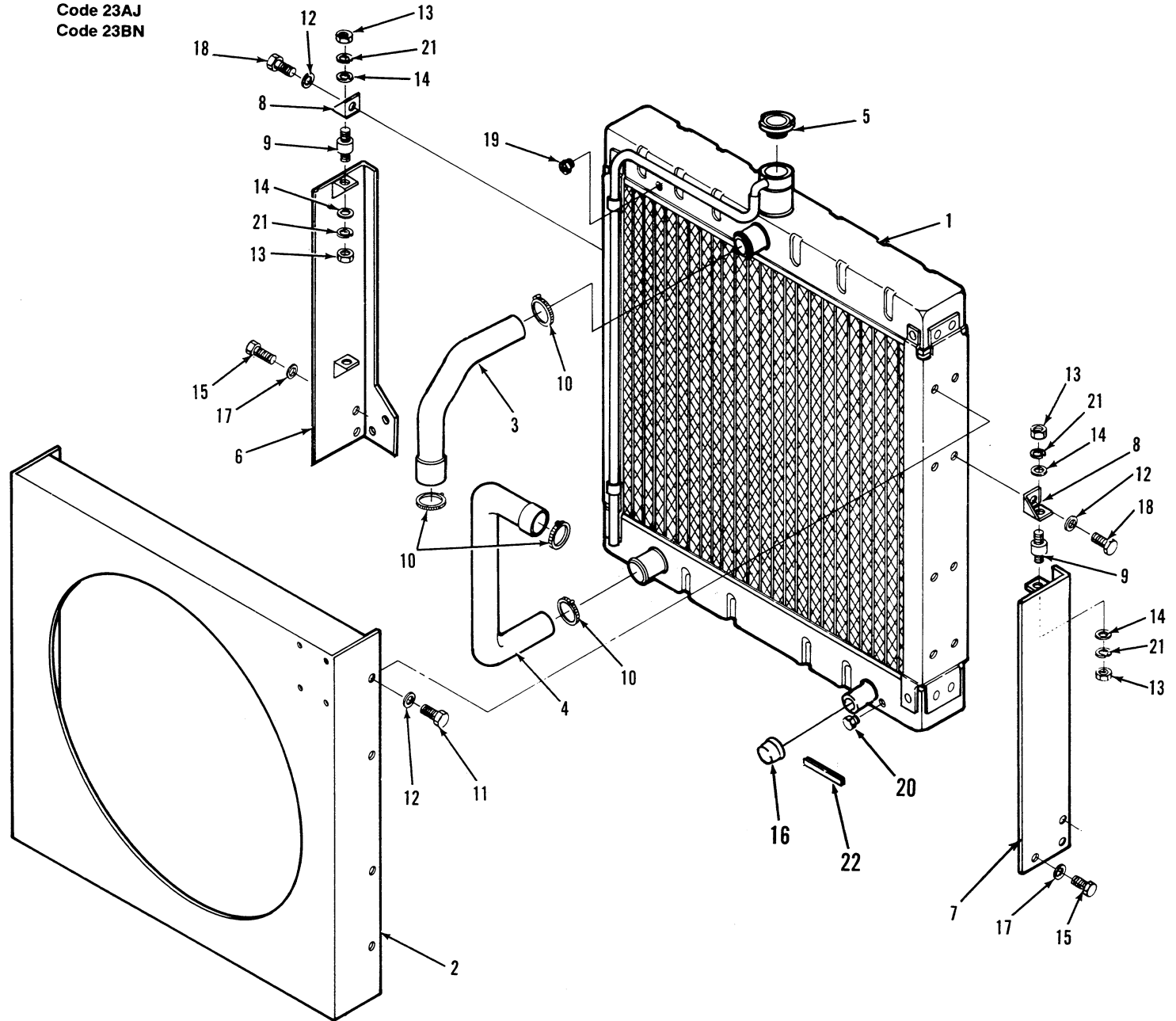


XCS-1244-1

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	505-0131	1	Bushing, Reducer (3/4" x 3/8")
2	505-0120	1	Elbow, Street (3/8")
3	505-0135	1	Nipple, Half (3/8" x 1-1/2")
4	503-0382	4	Clamp, Hose
5	850-2012	1	Washer, Lock (M12)
6	HEATER, TANK (Includes Hose Adapter, Cord and Mounting Bracket)		
			Code 23AY (120 Volt)
	333-0203	1	850 Watt - Four Cylinder Engines
	333-0204	1	1500 Watt - Six Cylinder Engines
			Code 23BB (230 Volt)
	333-0201	1	1000 Watt - Four Cylinder Engines
	333-0202	1	1500 Watt - Six Cylinder Engines
7	502-0156	1	Elbow, Street (1/4")
8	503-1168	1	Hose, Rubber (5/8" ID x 36")
9	HOSE, RUBBER		
	503-0387	1	Four Cylinder Engines (5/8" ID x 10-1/4")
	503-1429-02	1	Six Cylinder Engines (5/8" ID x 16")
10	505-0017	1	Bushing, Reducer (3/8" x 1/4")
11	718-1071	1	Screw, Cap - Hex Head (M12 x 16 MM)
12	502-0613	1	Adapter, Pipe to Hose (1/4" Pipe x 5/8" ID Hose)

COOLING SYSTEM - RADIATOR (SPEC A)

Code 23AJ
Code 23BN



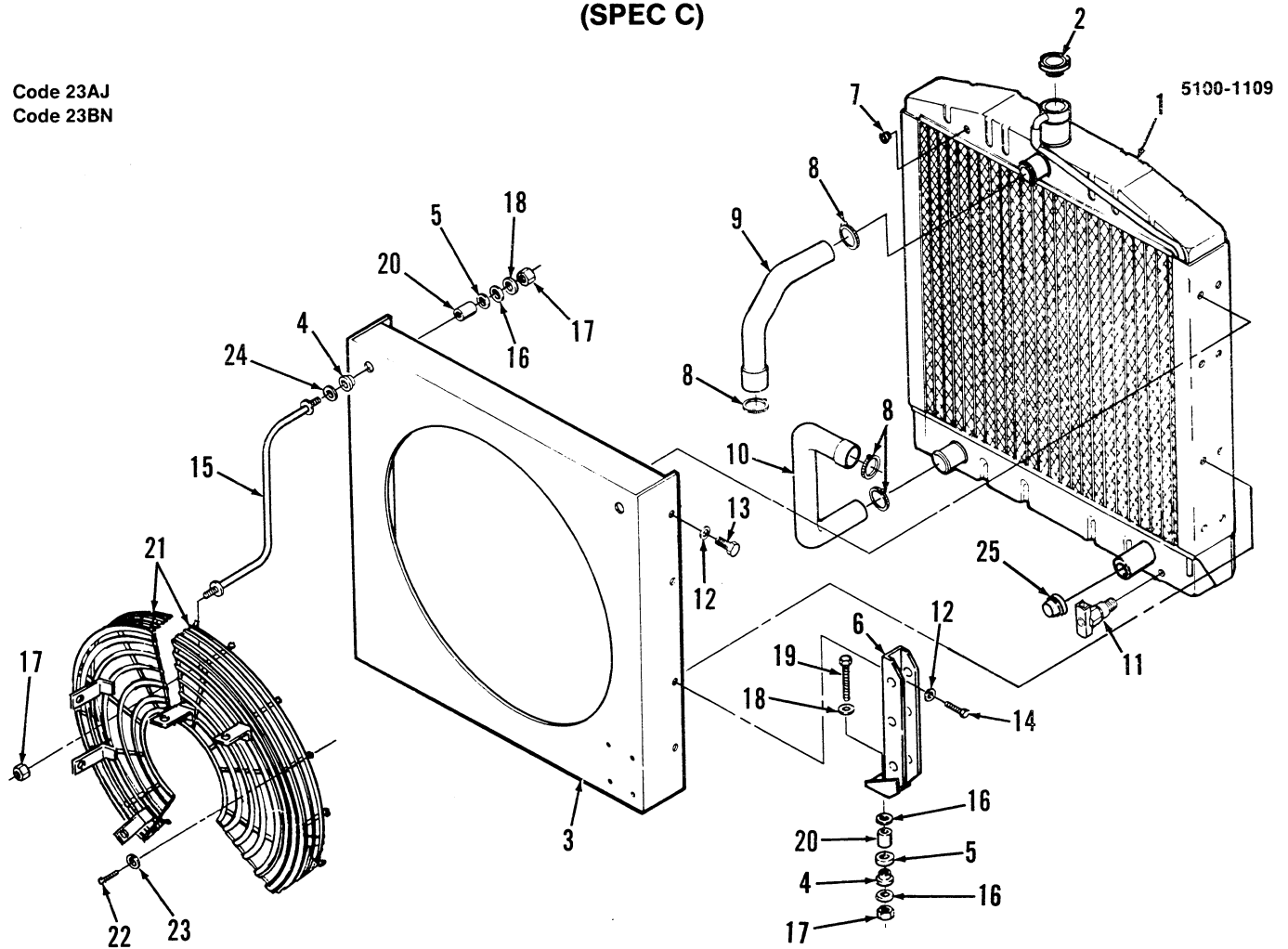
XCS-1164

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	130-1818	1	Radiator
2	130-2015	1	Shroud
3	503-1095	1	Hose, Upper
4	HOSE, LOWER		
	503-1193	1	Engines Without Front PTO
	503-1346	1	Engines With Front PTO
5	130-2003	1	Cap, Pressure
6	405-2920	1	Support, Radiator
7	405-2919	1	Support, Radiator
8	405-2876	4	Bracket, Radiator Isolator
9	402-0508	4	Isolator, Vibration
10	503-0365	4	Clamp, Hose
11	718-1032	8	Screw, Cap - Hex Head (M8 × 10 MM)
12	850-2008	16	Washer, Lock - Spring (M8)

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
13	862-0001	8	Nut, Hex (1/4 - 20)
14	850-0040	8	Washer, Lock - Spring (1/4")
15	718-1036	4	Screw, Cap - Hex Head (M8 × 20 MM)
16	CAP, RADIATOR (Lower Hose Fitting)		
	517-0263	1	1-1/2" ID
	517-0264	1	1-3/4" ID
17	740-1006	4	Washer, Flat - (M8)
18	718-1034	4	Screw, Cap - Hex Head (M8 × 14 MM)
19	502-0153	1	Plug, Pipe (1/4")
20	504-0003	1	Cock, Drain (1/4")
21	526-0018	8	Washer, Flat (1/4")
22	508-1008	2	Channel, Edging - Used on Some Early Models Built Prior to September 21, 1982

COOLING SYSTEM - RADIATOR (SPEC C)

Code 23AJ
Code 23BN

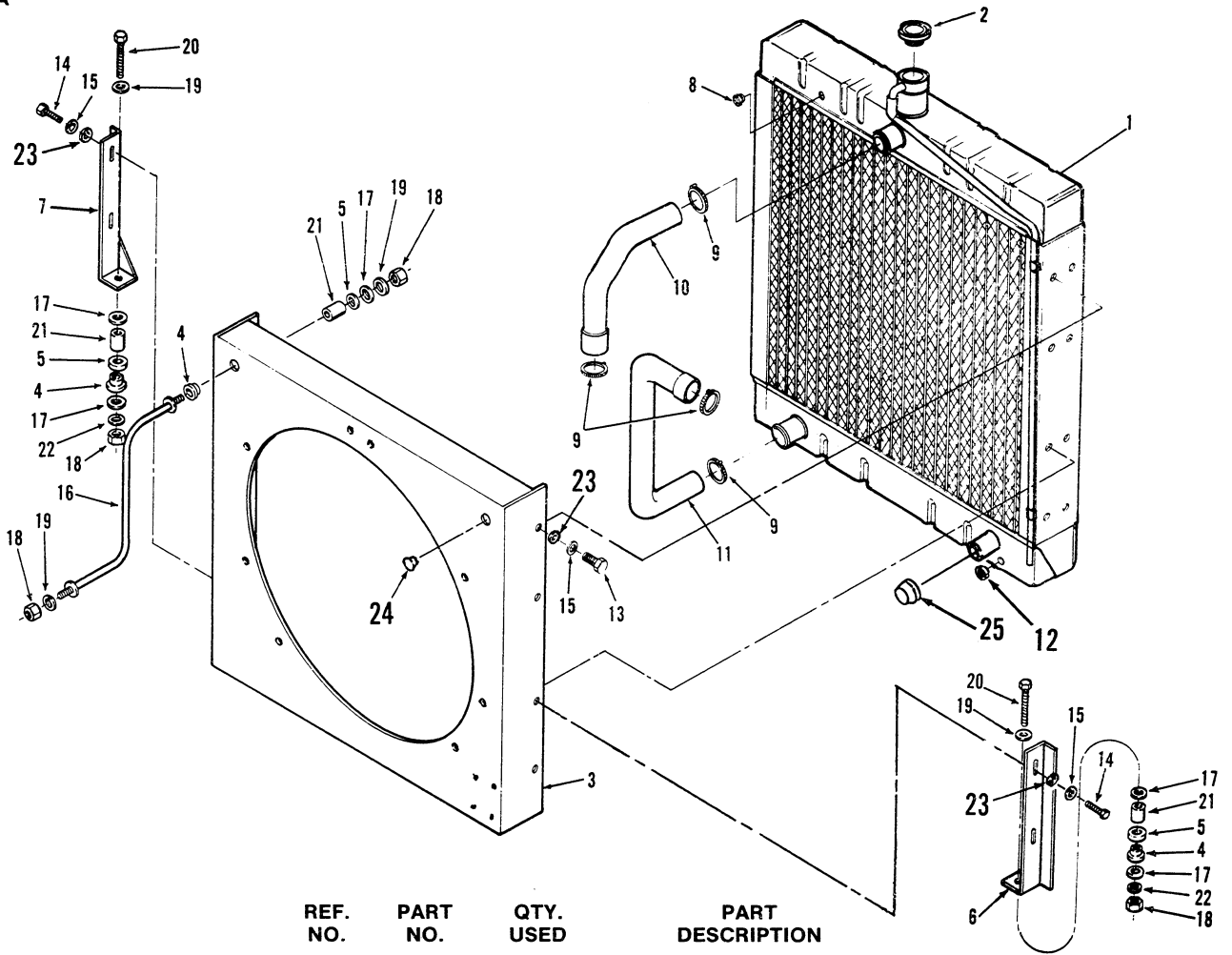


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	130-1818	1	Radiator	16	526-0322	6	Washer, Isolator (2" O.D.)
2	130-2003	1	Cap, Pressure	17	860-2010	6	Nut, Locking (M12)
3	130-2462	1	Shroud	18	740-1010	4	Washer, Flat (M12)
4	402-0547	4	Isolator, Bushing	19	718-1079	2	Screw, Cap - Hex Head (M12 x 55 MM)
5	402-0548	4	Isolator, Ring	20	130-2458	4	Spacer, Isolator
6	130-2768	2	Support, Radiator	21	GUARD, FAN		
7	502-0153	1	Plug, Pipe (1/4")		130-3068	1	Left Hand
8	503-0365	4	Clamp, Hose		130-3067	1	Right Hand
9	503-1095	1	Hose, Radiator - Upper	22	800-2033	8	Screw, Cap - Flange Hex Head (M6 x 16 MM)
10	503-1346	1	Hose, Radiator - Lower	23	740-1004	8	Washer, Flat (M6)
11	504-0003	1	Cock, Drain	24	526-0087	2	Washer, Flat (1-17/64" ID x 1-3/4" OD x 1/16" THK)
12	740-1006	8	Washer, Flat (M8)	25	CAP, RADIATOR (Lower Hose Fitting)		
13	800-2050	4	Screw, Cap - Hex Head (M8 x 10 MM)	517-0263		1	1-1/2" ID
14	800-2054	4	Screw, Cap - Hex Head (M8 x 14 MM)	517-0264		1	1-3/4" ID
15	130-2453	2	Rod, Stabilizer				

COOLING SYSTEM - RADIATOR

Code 23 BM
Code 23CA

5100-0667

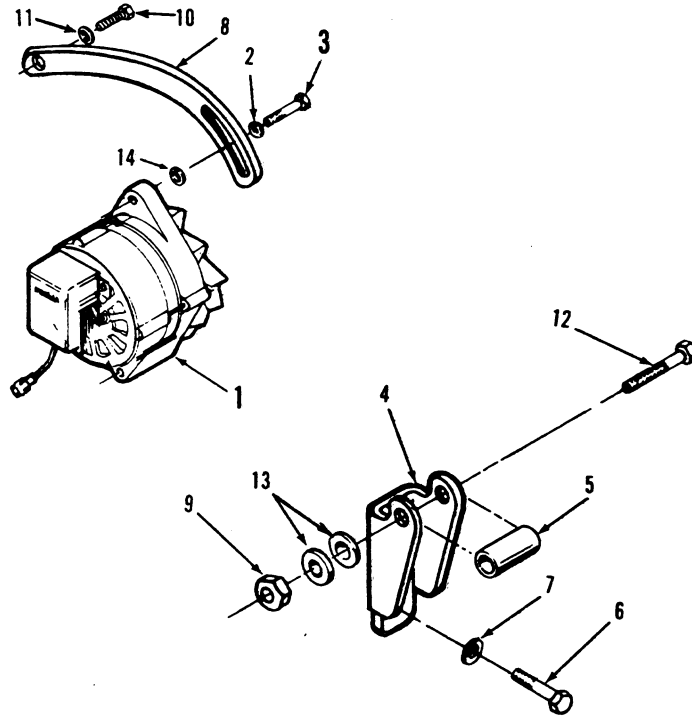


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	130-1818	1	Radiator
2	130-2003	1	Cap, Pressure
3	130-2462	1	Shroud
4	402-0547	4	Isolator, Bushing
5	402-0548	4	Isolator, Ring
6	130-2465-02	1	Support, Radiator - Right Hand
7	130-2465-01	1	Support, Radiator - Left Hand
8	502-0153	1	Plug, Pipe (1/4")
9	503-0365	4	Clamp, Hose
10	503-1095	1	Hose, Radiator - Upper
11	503-1193	1	Hose, Radiator - Lower
12	504-0003	1	Cock, Drain
13	718-1032	4	Screw, Cap - Hex Head (M8 x 10 MM)
14	718-1034	4	Screw, Cap - Hex Head (M8 x 14 MM)
15	850-2008	8	Washer, Lock-Spring (M8)
16	130-2453	2	Rod, Stabilizer
17	526-0322	6	Washer, Isolator (2" O.D.)
18	750-1010	6	Nut, Hex (M12)
19	740-1010	6	Washer, Flat (M12)
20	718-1079	2	Screw, Cap - Hex Head (M12 x 55 MM)
21	130-2458	4	Spacer, Isolator
22	850-2012	2	Washer, Lock-Spring (M12)
23	740-1006	8	Washer, Flat (M8)
24	517-0150	2	Plug, Hole (Cooling Systems Without Stabilizer Rods)
25	CAP, RADIATOR (Lower Hose Fitting)		
	517-0263	1	1-1/2" ID
	517-0264	1	1-3/4" ID

ALTERNATOR

Code 31AA (High Mount Accessory Side - 37 Amp, 12 Volt)
 Code 31AB (Low Mount Accessory Side - 37 Amp, 12 Volt)
 Code 31AC (High Mount Accessory Side - 62 Amp, 12 Volt)

5100-0060
 5100-0061
 5100-0169
 5100-0229
 5100-0781
 5100-0782
 5100-0785
 5100-0786



ES-1170-1

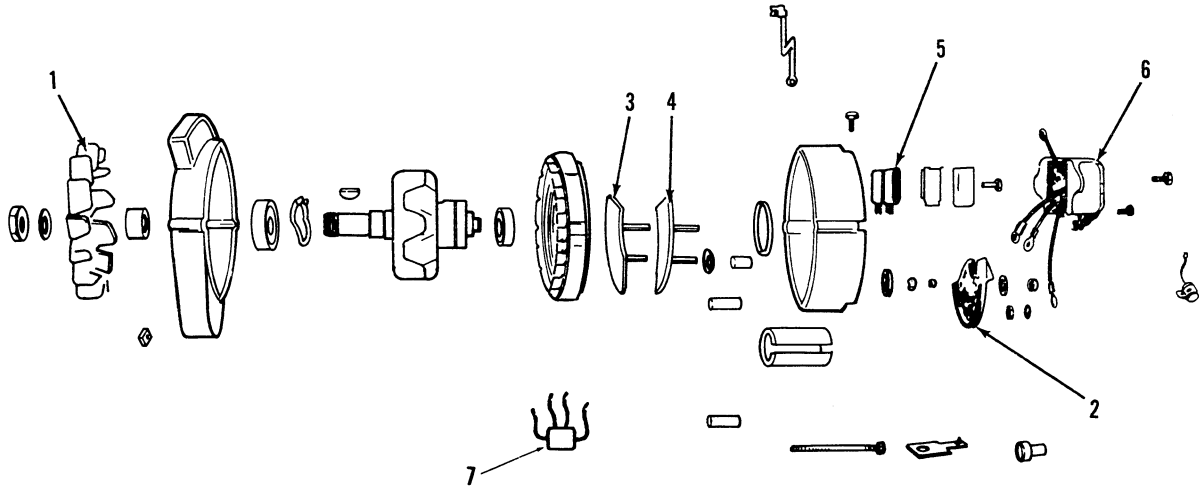
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	ALTERNATOR (Includes Fan - See Separate Group for Components)			8	STRAP, ALTERNATOR ADJUSTING		
	191-1525	1	Code 31AA, 31AB		191-1312	1	Code 31AB
	191-1526	1	Code 31AC		191-1365	1	Code 31AA, 31AC
2	526-2106	1	Washer, Flat (M8)	9	860-2009	1	Nut, Hex (M10)
3	800-2058	1	Screw, Cap - Hex Head (M8 x 25MM)	10	718-1036	1	Screw, Cap - Hex Head (M8 x 20 MM)
4	BRACKET, ALTERNATOR MOUNTING			11	740-1006	1	Washer, Flat (M8)
	191-1332	1	Code 31AB	12	800-2100	1	Screw, Cap - Hex Head (M10 x 100 MM)
	191-1331	1	Code 31AA, 31AC	13	526-2123	2	Washer, Flat (M10)
5	191-1321	1	Spacer, Alternator Bracket	14	191-1322	1	Spacer, Alternator Strap
6	718-1037	4	Screw, Cap - Hex Head (M8 x 25 MM)				
7	740-1006	4	Washer, Flat (M8)				

ALTERNATOR COMPONENTS

Code 31AA (High Mount Accessory Side - 37 Amp - 12 Volt)

Code 31AB (Low Mount Accessory Side - 37 Amp - 12 Volt)

Code 31AC (High Mount Accessory Side - 62 Amp - 12 Volt)



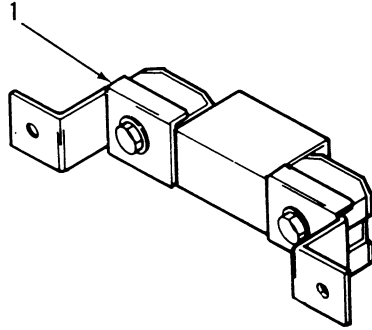
ES-1292

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	ALTERNATOR - Complete			4	DIODE, RECTIFIER - POSITIVE		
	191-1525	1	Code 31AA, 31AB - Used on Late Models - Has No Isolation Diodes on Back Side of Alternator (Replaces Early Models With Isolation Diode Assembly on Back Side of Alternator)		191-1452	1	Used on Early Models with Isolation Diode Assembly
	191-1526	1	Code 31AC		191-1559	1	Used on Late Models without Isolation Diode Assembly
1	191-0943	1	Fan, Alternator	5	BRUSH ASSEMBLY		
2	191-1454	1	Diode Assembly, Isolation - Used on Early Models		191-0659	1	Used on Early Models with Isolation Diode Assembly
3	DIODE, RECTIFIER - NEGATIVE				191-1558	1	Used on Late Models without Isolation Diode Assembly
	191-1453	1	Used on Early Models With Isolation Diode Assembly	6	REGULATOR, VOLTAGE		
	191-1560	1	Used on Late Models Without Isolation Diode Assembly		191-1457	1	Used on Early Models with Isolation Diode Assembly
					191-1557	1	Used on Late Models without Isolation Diode Assembly
				7	191-1556	1	Diode, Trio - Used on Late Models without Isolation Diode Assembly

BALLAST RESISTOR

Code 33AP

5100-0317



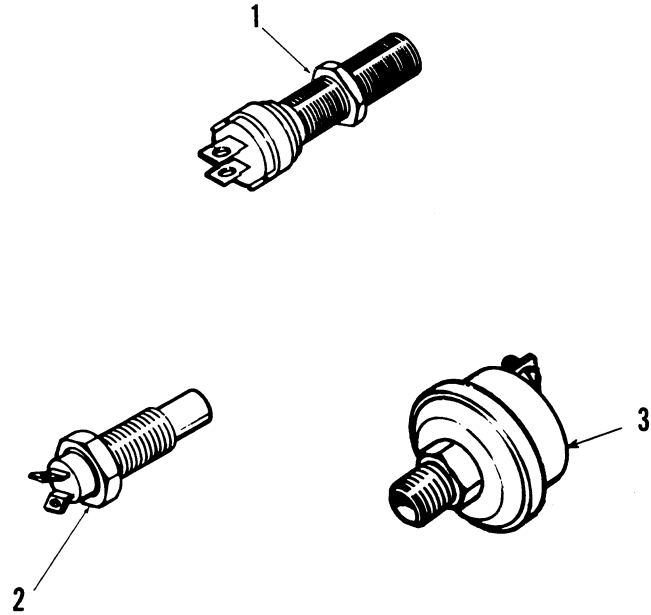
M-1345-1

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	RESISTOR, BALLAST		
	333-0198	1	12 Volt
	333-0234	1	24 Volt

SWITCHES

Code 35AC (Low Oil Pressure Switch and High Water Temperature Switch)
 Code 35AE (Speed Sensor - Magnetic)

5100-0261
 5100-0340



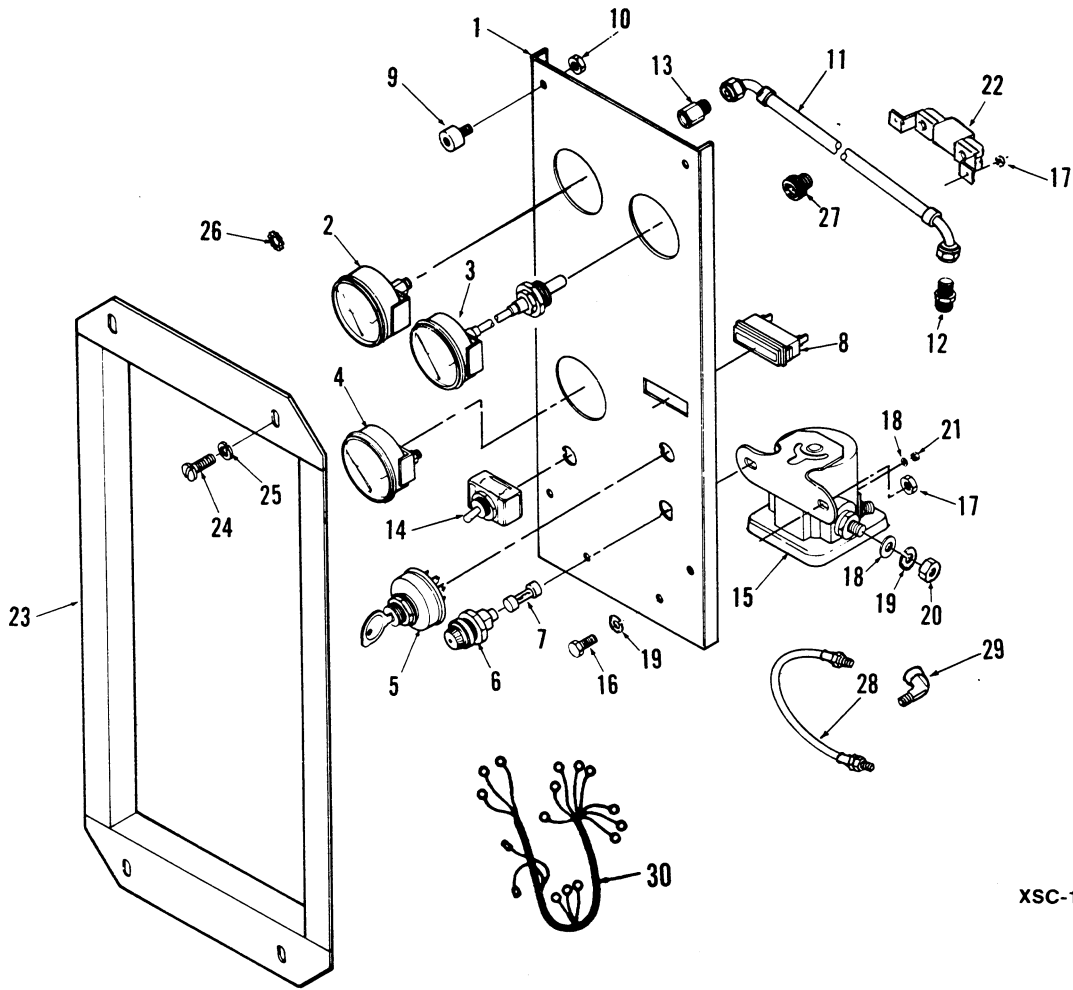
M-1489

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	150-1925	1	Sensor, Speed - Magnetic - Code 35AE
2	309-0482	1	Switch, High Water Temperature - Code 35AC
3	309-0177	1	Switch, Low Oil Pressure - Code 35AC

CONTROL - POWER UNIT

Code 35AD

5100-0201



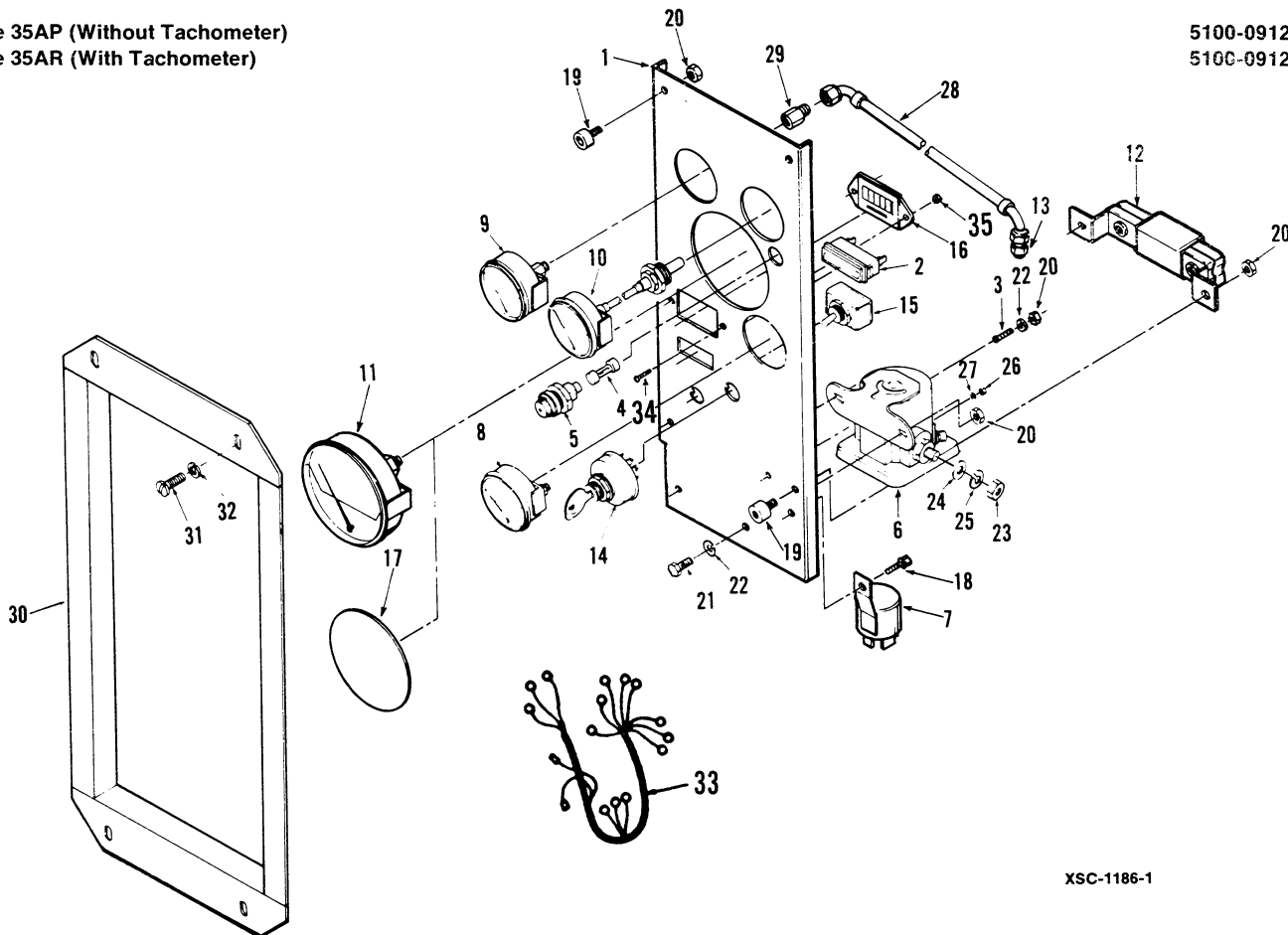
XSC-1186

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	301-6710	1	Panel, Control	19	WASHER, LOCK - SPRING		
2	193-0323	1	Gauge, Oil Pressure	850-0045	2	5/16"	
3	193-0324	1	Gauge, Water Temperature	850-2006	2	M6	
4	302-0063	1	Ammeter (Includes Mounting Hardware)	20	868-0002	2	Nut, Jam (5/16 - 24)
5	308-0385	1	Switch (Includes Key)	21	870-0131	1	Nut, Hex W/ET (#10-32)
6	321-0175	1	Holder, Fuse	22	RESISTOR, BALLAST		
7	321-0254	1	Fuse	333-0199	1	Four Cylinder Engines	
8	322-0302	1	Light, Indicator	333-0198	1	Six Cylinder Engines	
9	402-0507	4	Isolator, Vibration	23	301-6709	1	Frame, Control Panel
10	750-1004	4	Nut, Hex (M6)	24	718-1017	4	Screw, Cap - Hex Head (M6 x 10 MM)
11	501-0438	1	Line, Oil Pressure	25	850-2006	4	Washer, Lock - Spring (M6)
12	502-0807	1	Nipple, Hose Adapter	26	856-0008	2	Washer, Lock - EIT (5/16") - Ground to Rear Housing
13	502-0808	1	Nipple, Hose Adapter	27	505-0131	1	Bushing, Reducer (3/4 to 3/8")
14	308-0155	1	Switch, Toggle	28	501-0002	1	Line, Flexible Fuel - Transfer Pump
15	307-1031	1	Relay, Solenoid	29	ELBOW		
16	718-1018	2	Screw, Cap - Hex Head (M6 x 12 MM)	502-0041	1	Inverted Male - Transfer Pump	
17	750-1004	2	Nut, Hex (M6)	502-0053	1	Street Pipe - Injection Pump	
18	WASHER, FLAT			30	338-1554	1	Harness, Wiring
	526-0022	2	5/16"				
	526-0008	1	#10				

CONTROL - POWER UNIT

Code 35AP (Without Tachometer)
Code 35AR (With Tachometer)

5100-0912-02
5100-0912-04



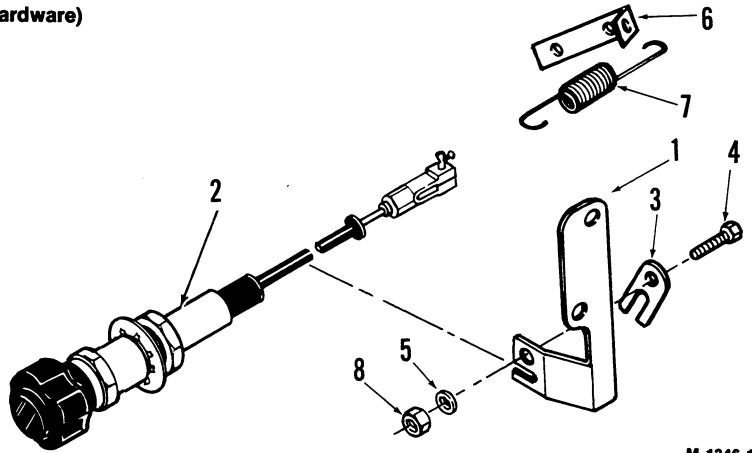
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	301-8990	1	*Panel, Control	18	718-1002	1	Screw, Locking Head (M5 x 8 MM)
2	322-0302	1	Light, Indicator	19	402-0507	4	Isolator, Vibration
3	718-1021	1	Screw, Cap - Hex Head (M6 x 20 MM) Grounding Stud	20	750-1004	7	Nut, Hex (M6)
4	321-0254	1	Fuse	21	718-1018	2	Screw, Cap - Hex Head (M6 x 12 MM)
5	321-0175	1	Holder, Fuse	22	850-2006	3	Washer, Lock-Spring (M6)
6	307-1031	1	Relay, Solenoid (Start) (Includes Terminal Hardware)	23	868-0002	2	Nut, Hex - Jam (5/16-24)
7	307-1886	1	Relay (Shutdown)	24	526-0022	2	Washer, Flat (5/16")
8	302-0063	1	Ammeter (Includes Mounting Hardware)	25	850-0045	2	Washer, Lock-Spring (5/16")
9	GAUGE, OIL PRESSURE			26	870-0131	1	Nut, Hex - ET (#10-32)
	193-0378	1	Spec A	27	526-0008	1	Washer, Flat (#10)
	193-0394	1	Spec C	28	501-0438	1	Line, Oil Pressure
10	GAUGE, WATER TEMPERATURE (Includes 3/8-18 Hex Reducer)			29	502-0808	1	Nipple, Hose Adapter (Female)
	193-0377	1	Spec A	30	301-6709	1	*Frame, Control Panel (Not required on all engines)
	193-0393	1	Spec C	31	800-2027	4	Screw, Cap - Hex Head (M6 x 10 MM)
11	302-1719	1	Tachometer (Includes Mounting Hardware) Code 35AR	32	850-2006	4	Washer, Lock-Spring (M6)
12	RESISTOR, BALLAST			33	HARNES, WIRING		
	333-0199	1	Four Cylinder Engines		338-1813-02	1	Engines Without Tachometer
	333-0198	1	Six Cylinder Engines		338-1813-01	1	Engines With Tachometer
13	502-0807	1	Nipple, Hose Adapter (Male)	34	812-0061	2	Screw, Machine - Round Head (#6-32 x 3/8")
14	308-0385	1	Switch (Includes Keys)	35	870-1183	2	Nut, Hex - With ET (#6-32)
15	308-0792	1	Switch, Toggle				
16	302-0885	1	Meter, Time Totalizing				
17	517-0190	1	Plug, Hole - Code 35AP				

NOTE: Control Panel width was increased 12.0 MM to 144.0 MM eliminating the need for the Control Panel Frame. This change occurred during Spec A.

THROTTLE CONTROL

Code 39AA (Without Mounting Hardware)
Code 39AA (With Mounting Hardware)

5100-1098
5300-0019



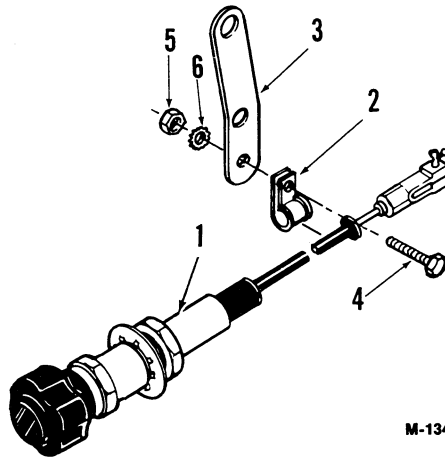
M-1346-1

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	152-0251	1	Bracket, Cable
2	CABLE, SPEED ADJUSTING		
	152-0242	1	Without Mounting Hardware (23-3/4")
	152-0254	1	With Mounting Hardware (25-3/4")
3	152-0253	1	Clamp, Cable
4	800-2033	1	Screw, Cap - Hex Head (M6 x 16 MM)
5	850-2006	1	Washer, Lock - Spring (M6)
6	150-2144	1	Bracket, Spring
7	150-2056	1	Spring, Accelerator Return
8	860-2007	1	Nut, Hex (M6)

THROTTLE CONTROL

Code 39AD (With Mounting Hardware)

5100-0853



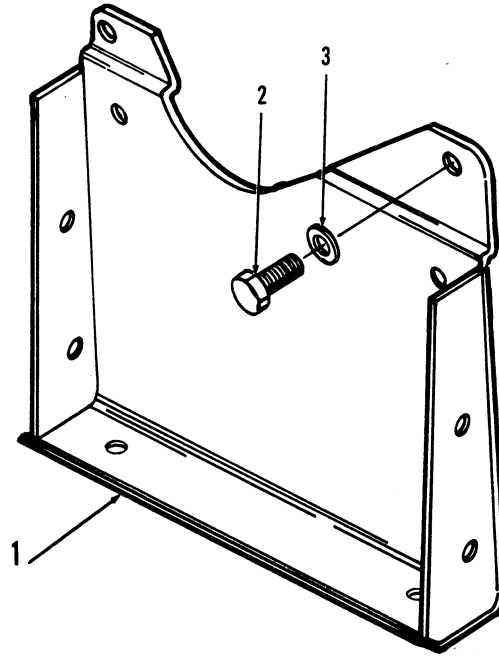
M-1346-2

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	152-0246	1	Control, Vernier (64")
2	518-0454	2	Clamp, Mounting
3	150-2061	2	Bracket, Mounting
4	718-1003	2	Screw, Cap - Hex Head (M5 x 10 MM)
5	750-1002	2	Nut, Hex (M5)
6	853-2005	2	Washer, Lock - ET (M5)

FRONT ENGINE MOUNT

Code 41AB (Rigid Four Point)

5100-0197



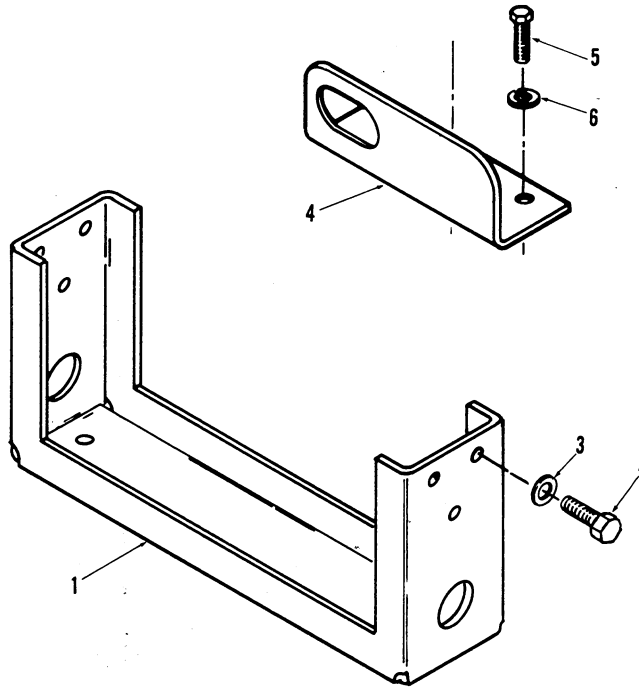
M-1224

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	403-2033	1	Bracket, Mount
2	SCREW, CAP - HEX HEAD		
	718-1086	2	M12 × 90 MM
	718-1802	2	M12 × 95 MM
3	740-1010	4	Washer, Flat (M12)

REAR ENGINE MOUNT AND LIFTING BRACKET

Code 41AB (Rigid Four Point)

5100-0198
5100-0199
5100-0207
5100-0311



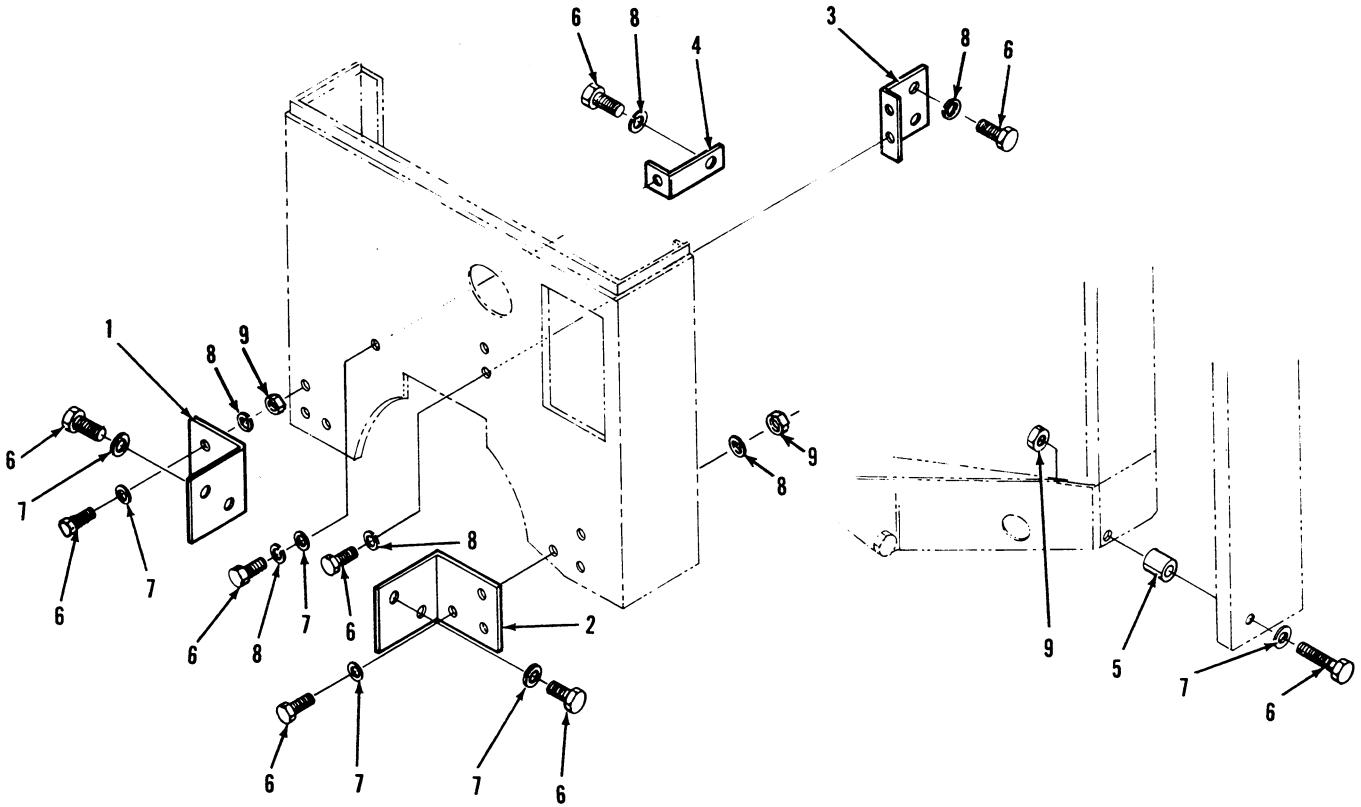
M-1224

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	BRACKET, REAR HOUSING 403-2036	1	For Engines With SAE #3 Flywheel Housing (Code 27AC, 27AG)
	403-1973	1	For Engines With SAE #4 Flywheel Housing (Code 27AB, 27AF, 27AH)
	403-1952	1	For Engines With SAE #5 Flywheel Housing (Code 27AA, 27AE)
2	718-1073	6	Screw, Cap - Hex Head (M12 x 25 MM)
3	850-2012	6	Washer, Lock-Spring (M12)
4	403-1937	1	Bracket, Lifting - Unhoused Engines
5	718-1053	2	Screw, Cap - Hex Head (M10 x 20 MM) - Unhoused Engines
6	850-2010	2	Washer, Lock-Spring (M10) - Unhoused Engines

HOUSING MOUNTING HARDWARE

Code 43AA
Code 43AB

5500-0013



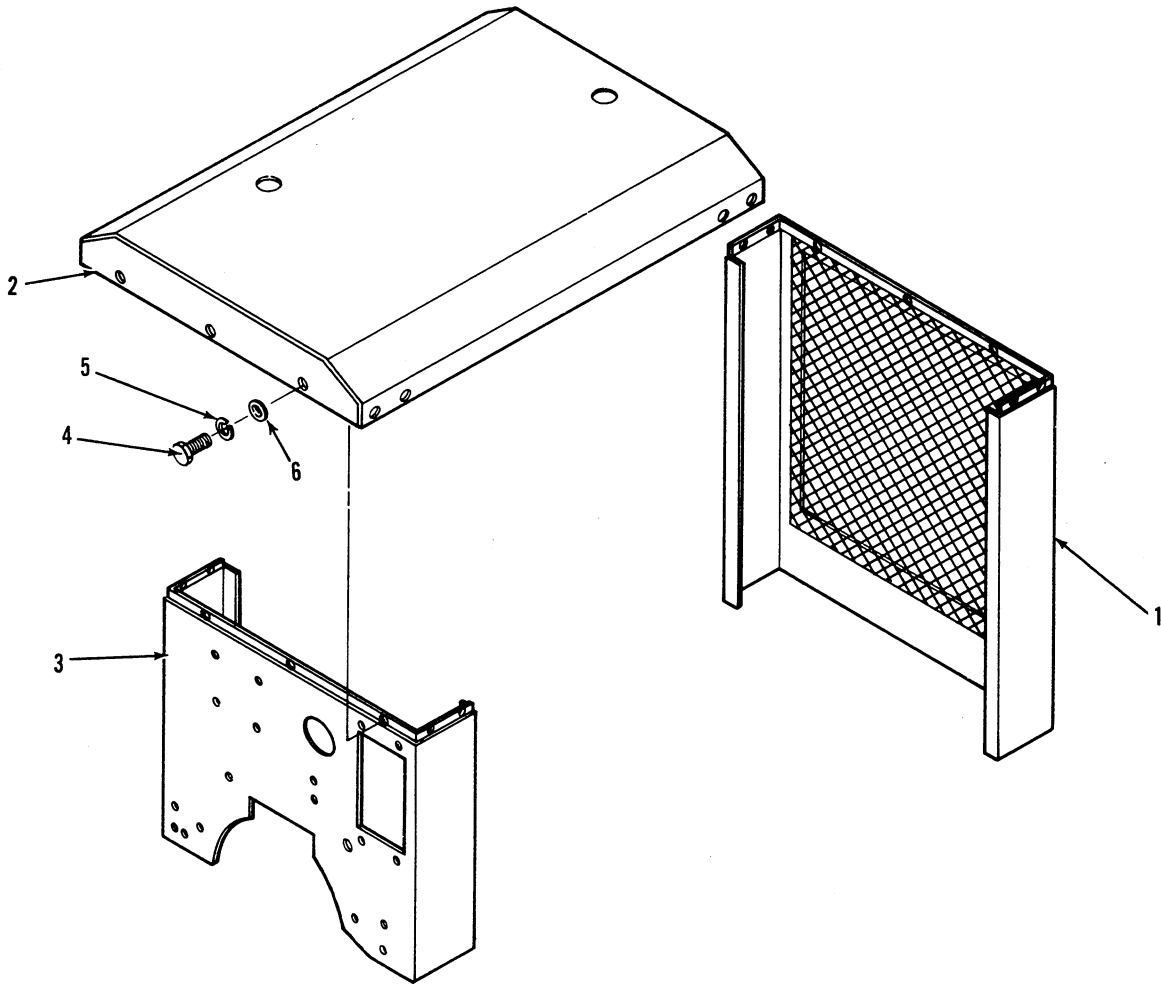
M-1340

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	405-2917	1	Bracket, Rear Housing (RH)
2	405-2918	1	Bracket, Rear, Housing (LH)
3	405-2877	1	Bracket, Rear Housing
4	405-2878	1	Bracket, Rear Housing
5	405-2886	2	Spacer
6	SCREW, CAP - HEX HEAD		
	718-1073	4	M12 × 25 MM
	718-1035	3	M8 × 16 MM
	718-1037	8	M8 × 25 MM
	718-1041	2	M8 × 45 MM
	718-1052	2	M10 × 16 MM
	718-1071	1	M12 × 16 MM
7	WASHER, FLAT		
	740-1010	4	M12
	740-1006	6	M8
8	WASHER, LOCK		
	850-2008	13	M8
	850-2010	2	M10
	850-2012	1	M12
9	750-1006	6	Nut, Hex (M8) (Not required on all engines)

HOUSING (SPEC A)

Code 43AA
Code 43AB

5500-0051



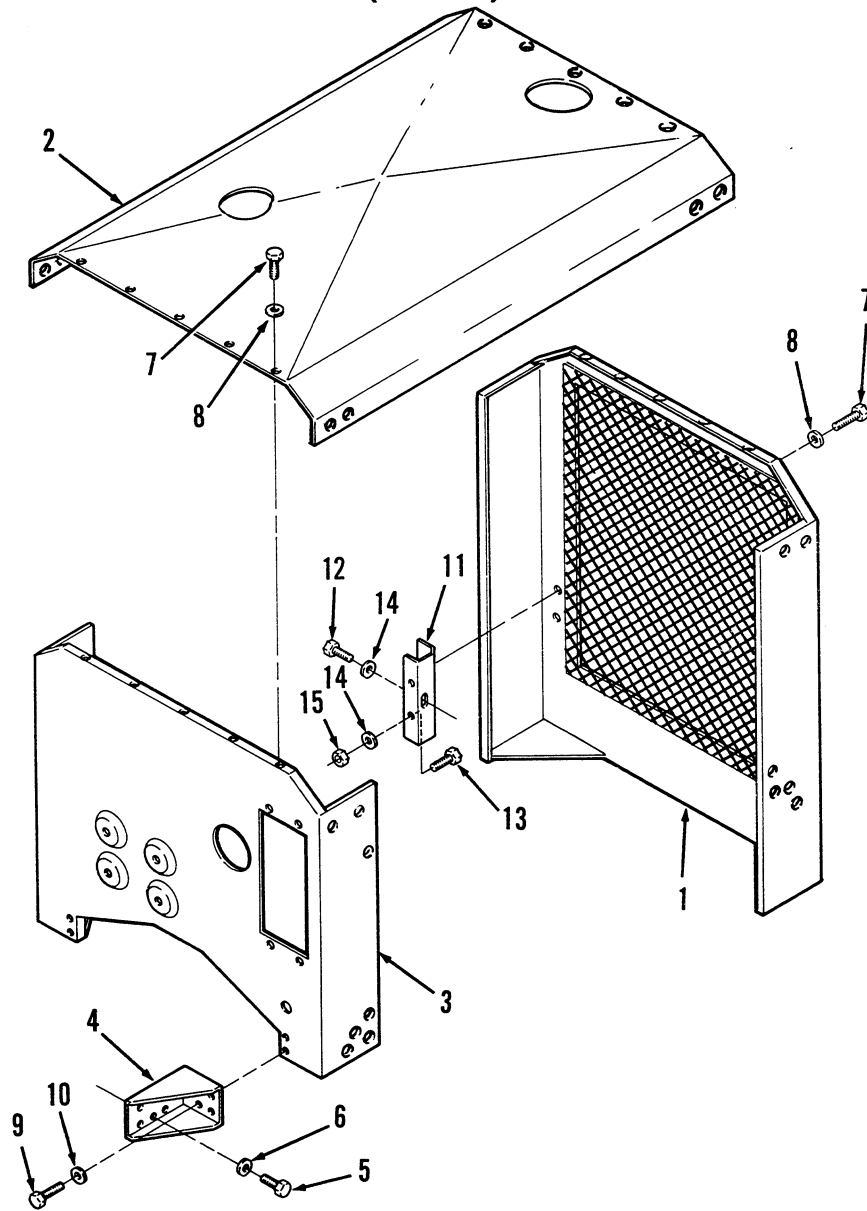
M-1342

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	405-2924	1	Housing, Radiator
2	405-2925	1	Roof, Housing
3	405-3195	1	Housing, Rear
4	718-1018	14	Screw, Cap - Hex Head (M6 × 12 MM)
5	850-2006	14	Washer, Lock - Spring (M6)
6	526-2081	14	Washer, Flat (M6)

HOUSING (SPEC C)

Code 43AA

5500-0055

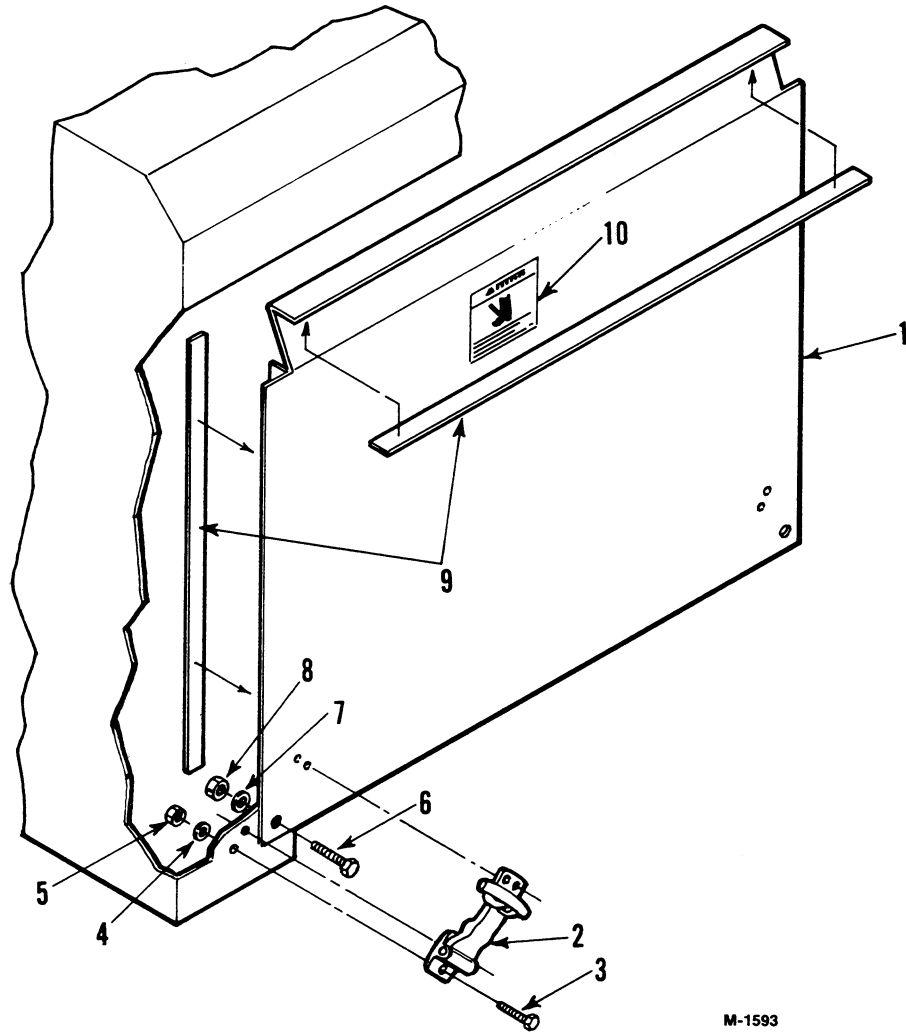


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	405-3788	1	Housing, Radiator
2	405-3381	1	Roof, Housing
3	405-3570	1	Housing, Rear
4	405-3599	2	Bracket, Rear Housing
5	800-2111	4	Screw, Cap - Hex Head (M12 x 25 MM)
6	526-2148	4	Washer, Flat (M12)
7	800-2052	22	Screw, Cap - Hex Head (M8 x 12 MM)
8	526-2108	22	Washer, Flat (M8)
9	800-2085	4	Screw, Cap - Hex Head (M10 x 20 MM)
10	526-2123	8	Washer, Flat (M10)
11	405-3786	2	Bracket, Housing Support
12	800-2052	2	Screw, Cap - Hex Head (M8 x 12 MM)
13	800-2057	4	Screw, Cap - Hex Head (M8 x 20 MM)
14	526-2103	6	Washer, Flat (M8)
15	860-2008	4	Nut, Hex (M8)

LOCKABLE DOORS - SPEC A

Code 43AB (Lockable Doors)
Code 43AE (Lockable Door, Accessory Side)

5100-0705
5100-1119



M-1593

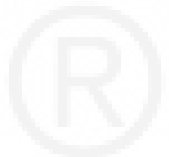
NOTE: These lockable doors **MUST** be used with a blower type cooling fan.

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	DOOR		
	405-3308	2	Code 43AB
	405-3308	1	Code 43AE
2	406-0562	2	Latch, Door (Includes Keeper)
3	718-1004	8	Screw, Cap - Hex Head (M5 × 12 MM)
4	740-1002	8	Washer, Flat (M5)
5	750-1002	8	Nut, Hex (M5)
6	718-1036	2	Screw, Cap - Hex Head (M8 × 20 MM) Code 43AB
7	740-1006	6	Washer, Flat (M8) Code 43AB
8	750-1006	2	Nut, Hex (M8) Code 43AB
9	GASKET, DOOR (1829 MM)		
	405-3339	2	Code 43AB
	405-3339	1	Code 43AE
10	LABEL, CAUTION		
	98-5333	2	Code 43AB
	98-5333	1	Code 43AE

MODEL SPECIFICATION NUMBER TO OPTION CODE TABLE

The front of this parts manual states that an option code identification plate is attached to each engine. This plate lists all option codes used to manufacture and service the engine. Early production engines have been manufactured and shipped less this plate leaving no proper identification of component parts, Sales Option Codes for Power Units are combined with Sales Option Codes that apply to the Industrial Engine portion. Using the specification number from your engine nameplate determine the option codes that apply to your engine.

Spec No.	10008	10011	10012	10016	10017	10021	10022	10023	10027	10028	10038	10039	10040	10041	10042	10043	10051	10052	10053	10054	
		PU	PU												PU						
OPTION	11AA	11AA	11AA	11AB	11AB	11AC	11AA	11AA	11AA	11AB	11AB	11AA	11AB	11AB	11AB	11AB	11AB	11AA	11AA	11AB	
	13AA	13AA	13AA	13AB	13AB	13AC	13AA	13AA	13AA	13AB	13AB	13AA	13AB	13AB	13AB	13AB	13AP	13AB	13AA	13AA	13AB
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	17AA	17AA	17AA	17AA	17AA	17AK	17AA	17AA	17AJ	17AA	17AE	17AA	17AA	17AA	17AA	17AA	17AA	17AA	17AA	17AA	17AA
	17AJ	17AJ	17AJ	17AJ	17AJ	17AL	17AJ	17AJ	17AM	17AJ	17AJ	17AJ	17AJ	17AJ	17AJ	17AJ	17AJ	17AJ	17AJ	17AJ	17AJ
	17AL	17AL	17AL	17AL	17AL	17AR	17AM	17AM	17AP	17AM	17AL	17AL	17AL	17AL	17AL	17AL	17AM	17AL	17AL	17AL	17AL
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	23AH	21AD	21AD	23AG	23AG	23AM	23BA	23BA	23AF	23AG	23AG	23BA	23BA	21AD	21AD	23BJ	23AG	23AF	23AF	23AG	23AG
	23BA	23AA	23AA	33AD	23AH	27AD	27AB	31AA	31AG	33AD	27AA	27AB	27AB	23AA	23AA	27AF	27AA	27AA	27AB	27AB	27AB
CODE	27AB	23AJ	23AJ	47AA	27AB	29AK	29AD	33AA	33AD		29AA	29AD	29AD	23AJ	23AJ	29AK	29AA	29AA	29AD	29AD	29AD
	29AD	23BA	23BA		29AD	33AA	31AA	33AD			31AA	33AA	33AA	23BA	23BA	31AG	31AB	31AB	31AA	31AA	31AA
	31AA	27AB	27AB		31AB	33AD	33AA				33AA	33AN	33AN	27AB	27AB	33AA	33AA	33AA	33AA	33AA	33AA
	33AA	29AD	29AD		33AA	41AA	33AD				33AD			29AD	29AD	33AR	33AD	33AD	33AD	33AD	33AD
	33AD	31AA	31AA		33AD						45AB			31AA	31AA	41AA					
		33AA	33AA												33AA	33AA					
NUMBERS		33AN	33AN												33AN	33AN					
		41AB	39AA												41AB	35AD					
			41AB													39AA					
			43AA													41AB					
																43AA					



SPEC NO.	10055	10056 PU	10063	10066	10067	10068	10070	10074	10077	10078 PU	10081	10089	10090	10092	10093	10096	10097	10098	10100
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	23AF	21AD	23AG	23AC	23BP	23BP	23BP	23AG	23BA	21AD	23AG	23BE	23AF	23BE	23AF	23AC	23BE	23BE	23BJ
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		27AB	31AA	31AA	33AR	33AR	33AN	33AD	33AD	27AC	31AA	33AA	33AA	33AA	33AD	31AA	33AA	33AD	33AA
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		33AA	33AD	45AB						33AA		41AA		41AA		35AC	41AA		
		33AN								33AD						45AB			
		39AA								35AD									
		41AB								39AA									
		43AA								41AB									
										43AA									

SPEC NO.	10101	10103 PU	10105	10106	10114	10118	10119	10120 PU	10125	10126 PU	10133	10134 PU	10139 PU	10140	10141	10142 PU	10144	10145	10171
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NUMBERS	27AB	23AA	27AF	27AF	27AA	23BJ	23BE	21AD	27AC	23AA	27AB	23AA	23AA	23BG	27AA	23AA	23AA	23AA	23BP
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		33AD						31AG		33AN		33AA	33AN	35AJ		33AN	33AR	33AR	41AA
		35AD						33AA		35AC		33AN	35AD			33AP	35AJ	35AJ	
		41AB						33AN		35AD		35AD	39AA			41AB	41AA	41AA	
		43AA						33AP		39AA		39AA	41AB						
								35AJ		41AB		41AB	43AA						
								41AB		43AA		43AA							

SPEC NO.	10172	10182	10183 PU	10197	10198	10203	10204 PU	10211	10214	10217	10218 PU	10224	10225 PU	10229	10240	10241 PU	10245	10246 PU	10249
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NUMBERS	23BP	23BP	21AG	23AA	23AA	27AB	23AA	23AB	23BJ	27AF	23AA	23BA	21AD	27AF	23BA	21AD	23BA	21AD	23AA
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	31AG	31AG	23BM	27AF	27AF	33AA	27AB	29AA	31AA	33AA	27AF	31AG	23BA	31AG	31AG	23BN	31AG	23BA	29AD
	33AA	33AA	23BP	29AK	29AK	33AN	29AD	31AG	31AG	33AN	29AD	33AA	27AF	33AA	33AA	27AB	33AA	27AF	31AG
	33AR	33AR	27AF	31AG	31AG		31AA	31AL	33AA		31AC	33AD	29AD	33AD	33AN	29AD	33AN	29AD	33AA
	35AJ	35AJ	29AD	33AA	33AA		31AG	33AA	33AN		31AG	35AJ	31AC	35AJ	35AJ	31AA	35AJ	31AC	33AN
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			33AR				39AA				35AD		35AJ			35AD		35AD	
			35AJ				41AB				39AA		41AB			35AJ		35AJ	
			41AB				43AA				41AB		45AA			39AA		39AA	
											43AB					41AB		41AB	
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																45AB			

SPEC NO.	10250 PU	10251	10252 PU	10254	10255 PU	10258	10259 PU	10261 PU	10266	10267 PU	10268	10271	10273	10276	10278	10281 PU	10282	10284	10285 PU
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	15AF	15AJ	15AJ	15AJ	15AJ	15AJ	15AJ	15AJ	15AJ	15AJ	15AJ	15AJ	15AJ	15AJ	15AK	15AJ	15AJ	15AJ	15AF
OPTION	15AJ	17AA	17AA	17AA	17AA	17AA	17AA	17AA	17AA	17AA	17AA	17AA	17AA	17AA	17AJ	17AA	17AA	17AA	15AJ
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	17AJ	17AL	17AL	17AM	17AM	17AM	17AM	17AL	17AL	17AL	17AM	17AM	17AM	17AM	17AZ	17AL	17AL	17AL	17AJ
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NUMBERS	21AA	23BA	23AA	23BA	21AG	23BA	21AC	21AG	23BA	21AD	23CL	23CB	23CL	23CB	23AS	21AD	23AU	23BA	21AB
	21AD	27AF	23BA	27AB	23AA	27AF	23AA	23AA	27AF	23AA	29AT	23CD	29AT	23CD	27AF	23AA	23BJ	27AB	23AA
	23AA	29AD	23BN	29AD	23BA	29AD	23BA	23AY	29AD	23AJ	31AG	27AE	31AG	27AE	29AD	23AJ	23CD	31AG	23BA
	23BA	31AG	27AF	31AG	23BM	31AG	23CA	23BN	31AG	23BA	33AA	29AA	33AA	29AA	31AE	23BA	27AF	33AA	23BN
	23BN	33AA	29AD	33AA	27AB	33AA	27AF	23BP	33AA	27AF	33AR	31AA	33AR	31AH	31AG	27AF	29AD	33AE	27AB
	27AB	33AN	31AA	33AN	29AD	33AN	29AD	27AF	33AN	29AD	35AJ	31AG	35AJ	31AR	33AA	29AD	31AA	35AJ	31AA
	29AD	35AJ	31AG	35AJ	31AB	35AJ	31AB	29AD	35AJ	31AA		33AA		33AA	33AR	31AC	31AG		31AG
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	31AG		33AN		33AA		33AA	31AG		33AA		35AL		35AL	41AA	33AA	33AD		33AE
	33AA		35AD		33AN		33AN	33AA		33AN						33AN	35AC		35AC
	33AN		35AJ		35AJ		35AE	33AR		33AP						35AD	35AJ		35AJ
	35AD		39AA		35AP		35AJ	35AJ		35AJ						35AJ			39AD
	35AJ		41AB		41AB		35AR	41AB		41AB						39AA			41AB
	39AA		43AA		43AA		39AA			45AA						41AB			
	41AB		45AB				41AB									43AB			
	43AA						43AA												
	45AA																		

SPEC NO.	10286	10300	10304	10306	10307	10308 PU	10316	10319	10320 PU	10321	10322 PU	10337 PU	10341	10342 PU	10345	10352	10353 PU	10362	10371
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	13AA	13AA	13AB	13AE	13AC	13AC	13AB	13AA	13AA	13AC	13AC	13AB	13AJ	13AJ	13AB	13AC	13AC	13AC	13AD
	15AA	15AA	15AA	15AG	15AA	15AA	15AA	15AA	15AA	15AA	15AA	15AA	15AA	15AA	15AA	15AA	15AA	15AA	15AG
	15AK	15AJ	15AJ	15AJ	15AJ	15AJ	15AJ	15AJ	15AJ	15AJ	15AF	15AJ	15AJ	15AJ	15AD	15AJ	15AJ	15AJ	15AJ
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	19AA	19AA	19AA	19AA	19AA	19AA	19AA	19AA	19AA	19AA	17AL	19AA	19AA	19AA	17AM	19AA	19AA	19AA	19AA
NUMBERS	21AB	21AA	21AA	23AB	21AA	19AB	21AA	21AA	19AB	21AA	19AA	19AB	21AA	19AC	19AA	21AA	19AB	19AB	23AB
	23AA	23AA	23AA	23AN	23AA	21AA	23AA	23AA	21AA	23AA	19AB	21AA	23AA	21AA	21AA	23AA	21AA	21AA	23BG
	23BH	23AF	23BJ	23CB	23BA	21AD	23AG	23BA	21AD	23BA	21AA	21AD	23BA	21AD	21AG	23BE	21AG	21AG	23CB
	27AL	27AF	27AF	29AT	27AB	23AA	27AF	27AF	23AA	27AG	21AD	23AA	27AF	23AA	23AC	23CE	23AA	23AA	23CD
	29AP	29AD	29AD	31AH	29AD	23AJ	29AD	29AD	23BA	29AG	23AA	23BA	29AD	23BA	23AG	27AF	23BE	23BE	27AF
	31AE	31AA	31AA	33AA	31AG	23BA	31AA	31AG	23CA	31AG	23BA	23CA	31AG	23BN	27AF	29AD	23BM	23CE	29AK
	31AG	31AG	31AG	33AG	33AA	27AB	31AG	33AA	27AF	33AA	23BN	27AF	33AA	27AF	29AD	31AB	23CE	27AF	31AA
	33AA	33AA	33AA	35AJ	33AN	29AD	33AA	33AD	29AD	33AN	27AG	29AD	33AN	29AD	31AA	31AG	27AF	29AD	31AG
	33AE	33AD	33AD	35AJ	31AA	33AD	35AJ	31AB	35AJ	29AG	31AB	35AJ	31AC	31AG	33AA	29AD	31AB	31AG	33AA
	35AJ	35AJ	35AJ		31AG	35AJ		31AG		31AA	31AG	45AA	31AG	33AA	33AR	31AB	31AG	31AG	33AE
	45AT					33AA		33AA		31AG	33AA		33AA	33AD	35AJ	31AG	33AA	35AJ	
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						35AJ		35AJ		35AD	35AJ		35AJ			35AJ	41AH		
						41AB		35AR		35AJ	35AR		39AA			41AB			
						43AA		39AA		41AB	39AA		41AB						
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									43AA		43AA		45AA						

SPEC NO.	10385	10386	10391	10392	10402	10403	10404	10405 PU	10406 PU	10407 PU	10408 PU	10418	10419 PU	10428	10429 PU	10431 PU	10443	10444	10453
OPTION	11AC	11AC	11AE	11AE	11AC	11AC	11AC	11AA	11AA	11AB	11AB	11AA	11AA	11AB	11AB	11AA	11AB	11AA	11AB
	13AE	13AC	13AP	13AD	13AC	13AE	13AE	13AA	13AA	13AB	13AB	13AA	13AA	13AB	13AB	13AA	13AH	13AA	13AB
	15AA	15AA	15AA	15AA	15AG	15AG	15AG	15AA	15AA	15AA	15AA	15AA	15AA	15AA	15AA	15AA	15AA	15AA	15AA
	15AJ	15AJ	15AJ	15AJ	15AJ	15AJ	15AJ	15AJ	15AF	15AJ	15AF	17AA	15AF	17AA	17AA	15AJ	15AJ	15AK	15AJ
CODE	17AA	17AA	17AA	17AA	17AA	17AA	17AA	17AJ	15AJ	17AJ	15AJ	17AJ	17AA	17AJ	17AJ	17AA	17AA	17AA	17AA
	17AJ	17AJ	17AJ	17AJ	17AJ	17AJ	17AJ	17AL	17AJ	17AL	17AJ	17AL	17AJ	17AL	17AL	17AJ	17AJ	17AJ	17AJ
	17AM	17AM	17AM	17AM	17AM	17AM	17AM	17AP	17AL	17AP	17AL	19AA	17AL	19AA	19AA	17AL	17AM	17AL	17AL
	17BA	17BA	17BA	17BA	19AA	19AA	19AA	19AA	17AP	19AA	17AP	21AA	19AA	21AA	19AB	19AA	19AA	19AA	19AA
NUMBERS	19AA	19AA	19AA	19AA	23AB	23AB	23AB	19AB	19AA	19AB	19AA	23AA	19AB	23AA	21AA	19AB	21AA	21AB	21AA
	21AA	21AA	21AA	21AA	23CB	23CB	23CB	21AA	19AB	21AA	19AB	23AL	21AA	23BA	21AD	21AA	23AA	21AJ	23AA
	23AA	23AA	23AA	23AA	23CL	23CL	23CL	23AA	21AA	23AA	23BJ	23AA	23BA	21AD	27AG	23AA	21AD	23BA	23AA
	23AW	23AW	23AW	23AW	31AG	31AG	31AH	23AF	23AA	23BJ	23AA	27AF	23AA	29AG	23AJ	23AA	27AB	23AL	27AB
	23BP	23BP	23BJ	23BJ	33AR	33AR	33AG	23BN	23AF	23BN	23BJ	29AD	23AJ	33AA	23BA	23AJ	29AD	23BH	29AD
	23CC	23CC	23CC	23CC	35AJ	35AJ	35AJ	27AF	23BN	27AF	23BN	33AA	23AL	33AN	27AG	23BA	31AC	23CZ	31AA
	27AN	27AN	27AN	27AN				29AD	27AF	29AD	27AF	33AN	23BA		29AG	27AF	31AG	27AL	31AG
	29AK	29AK	29AK	29AK				31AA	29AD	31AA	29AD		27AF		31AA	29AD	33AA	29AP	33AA
	31AF	31AF	31AF	31AF				31AG	31AA	31AG	31AA		29AD		33AA	31AC	33AD	31AA	33AN
	31AG	31AG	31AG	31AG				33AA	31AG	33AA	31AG		31AC		33AN	31AG	35AJ	31AG	35AJ
	33AA	33AA	33AA	33AA				33AD	33AA	33AD	33AA		33AA		33AP	33AA		33AA	45AA
	33AR	33AR	33AR	33AR				35AJ	33AD	35AJ	33AD		33AN		41AB	33AN		33AE	
	35AJ	35AJ	35AJ	35AJ				41AB	35AJ	41AB	35AJ		35AD			35AD		35AJ	
	41AA	41AA	41AA	41AA					35AP		35AP		39AA			35AJ		45AT	
									39AA		39AA		41AB			39AA			
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								43AA		43AA									

SPEC NO.	10454 PU	10468	10471	10485	10522	10545	10547	10553	10579	10580	10581	10582	10610	10612	10613 PU	10635	10637	10669	10672	10681
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	13AB	13AP	13AA	13AA	13AA	13AA	13AB	13AA	13AA	13AA	13AA	13AA	13AA	13AA	13AA	13AA	13AB	13AA	13AA	13AA
	15AA	15AG	15AA	15AA	15AA	15AA	15AA	15AA	15AA	15AA	15AA	15AA	15AA	15AA	15AA	15AA	15AA	15AA	15AA	15AA
	15AJ	15AJ	15AK	15AD	15AK	15AJ	15AJ	15AJ	15AK	15AD	15AK	15AK	15AK	15AK	15AK	15AK	15AJ	15AK	15AK	15AK
OPTION	17AA	17AA	17AA	15AK	17AA	17AJ	17AJ	17AJ	17AA	15AK	17AA	17AA	17AA	17AJ	17AJ	17AJ	17AB	17AA	17AJ	17AJ
	17AJ	17AJ	17AJ	17AA	17AJ	17AL	17AL	17AL	17AJ	17AA	17AJ	17AJ	17AJ	17AL	17AL	17AL	17AJ	17AJ	17AL	17AL
	17AL	17AM	17AL	17AJ	17AL	17AP	17AP	17AP	17AL	17AJ	17AL	17AL	17AL	17AP	17AP	17BJ	17AM	17AL	17BJ	17BJ
CODE	19AA	19AA	19AA	17AL	19AA	19AA	19AA	19AA	19AA	17AL	19AA	19AA	19AA	19AA	19AA	19AA	19AA	19AA	19AA	19AA
	19AB	23AB	21AB	19AA	21AB	21AA	21AA	21AA	21AB	19AA	21AB	21AB	21AB	21AB	19AB	21AB	21AA	21AB	21AB	21AB
	21AA	23BG	23AA	21AB	23AA	23AA	23AA	23AA	23AA	21AB	21AJ	23AA	23AC	23AA	21AB	23AB	23AA	23AA	23AB	23AB
NUMBERS	21AD	23CB	23BH	21AG	23AL	23AF	23BJ	23AF	23BH	21AJ	23AA	23BH	23AL	23AF	23AA	23CR	23AL	23BH	23CR	23AL
	23AA	23CD	27AP	23AA	23BH	27AF	27AF	27AF	27AU	23AA	23BH	27AU	23BH	23AL	23AF	27AP	23BJ	27AL	31AE	23CR
	23AJ	27AF	29AZ	23AL	27AL	29AD	29AD	29AD	29AP	23BH	23CZ	29AP	23CZ	27AF	23AL	29AZ	27AF	29AP	31AG	27AP
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	27AB	31AA	31AG	23CZ	31AA	31AG	31AG	31AG	31AG	27AU	29AP	31AG	29AP	31AE	27AF	31AG	31AA	31AG	33AU	31AE
	29AD	31AG	33AA	27AL	31AG	33AA	33AA	33AA	33AA	29AP	31AA	33AA	31AA	31AH	29AD	33AA	31AG	33AA	35AJ	31AG
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	31AG	33AE	35AJ	31AC	33AE	35AJ	35AJ	35AJ	35AJ	31AG	33AA	35AJ	33AE	33AG	31AH	35AJ	33AD	35AJ		33AU
	33AA	35AJ	45AT	31AG	35AJ	45AA	45AA		45AB	33AA	33AE	45AT	33AU	35AJ	33AA	41AA	35AJ	45AT		35AJ
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	35AD			33AE	45AT					35AJ	45AT		45AT		35AJ					
	35AJ			35AJ						45AT					41AB					
	39AA			45AT																
	41AB																			
	43AB																			
	45AA																			



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