

The following catalog
has gaps in its page
numbers, or doesn't
have any numbers.
We have chosen to
leave the page
numbering in the
order that Acrobat
assigns it.



Parts Manual

Cummins **Onan**

Performance you rely on.™



Diesel Genset

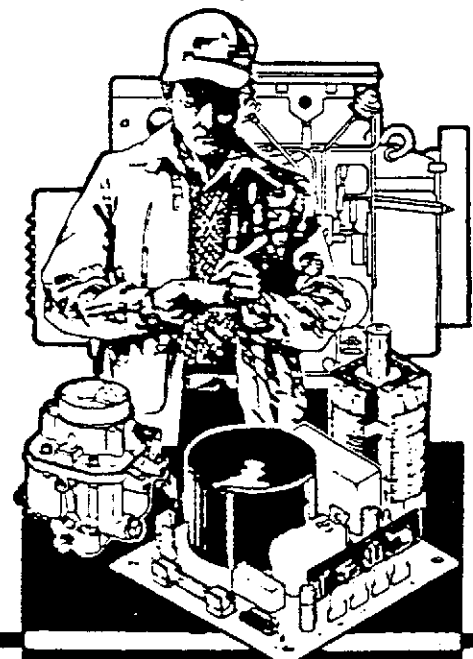
DFM / LDFM

Onan

Parts Manual

DFM

GenSet



Onan Service Parts

960-0220
10-86 (Spec H-N)
Replaces 11-81 (Spec H-M)
Printed in U.S.A.



**Power
Generation**

Redistribution or publication of this document
by any means, is strictly prohibited.

960-1007 (8-79)

SUPPLEMENTARY PARTS LIST

This Supplementary Parts List Applies to the Standard LDFM Models as listed below. Use these parts in place of/or in addition to those listed in Main Parts Catalog, 960-0220.

SET DATA TABLE

MODEL AND SPEC NO.	ELECTRICAL DATA				
	WATTS	VOLTAGE	PHASE	WIRE	HERTZ
200.0 LDFM-517R/*	200,000	#	3	12	50
236.0 LDFM-17R/*	236,000	#	3	12	60

* - The Specification Letter Advances (A to B, B to C. etc.) with Manufacturing Changes.

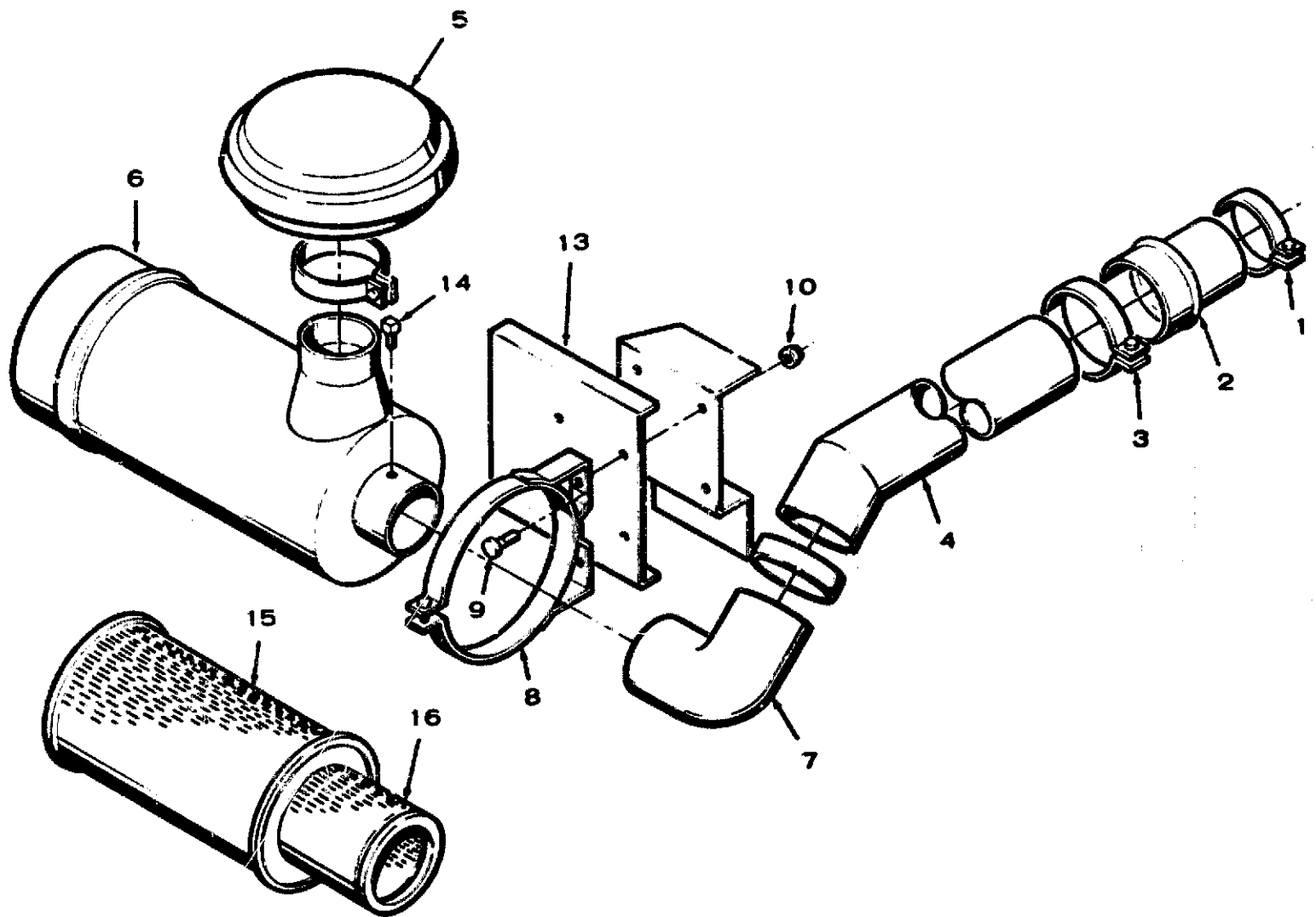
- These sets are Broad Range Reconnectable; Refer to Connection Diagram inside Control Box Cover.

100-1579 1 Engine, Replacement

AIR CLEANER PARTS

<u>REF. NO.</u>	<u>PART NO.</u>	<u>QTY. USED</u>	<u>PART DESCRIPTION</u>
1	503-0863	1	Clamp, Hose
2	503-0862	1	Reducer, Tube
3	503-0864	3	Clamp, Hose
4	140-1544	1	Tube, Air Cleaner
5	140-1545	1	Hood, Air Inlet
6	140-1537	1	Cleaner, Air (Includes Elements)
7	503-0861	1	Elbow
8	140-0757	2	Clamp, Air Cleaner
9	800-0050	6	Screw, Cap-Hex Head -(3/8-16 X 1" Long)
10	870-0281	6	Nut, Hex - Self Locking -(3/8-16)
11	801-0119	2	Screw, Cap - Hex Head -(5/8-18 X 1" LG)
12	850-0070	2	Washer, Lock-Spring -(5/8")
13	140-1546	1	Bracket, Air Cleaner
14	140-1548	1	Indicator, Service
15	140-1631	1	Element, Air Cleaner (Primary)
16	140-1630	1	Element, Air Cleaner (Safety)

AIR CLEANER PARTS



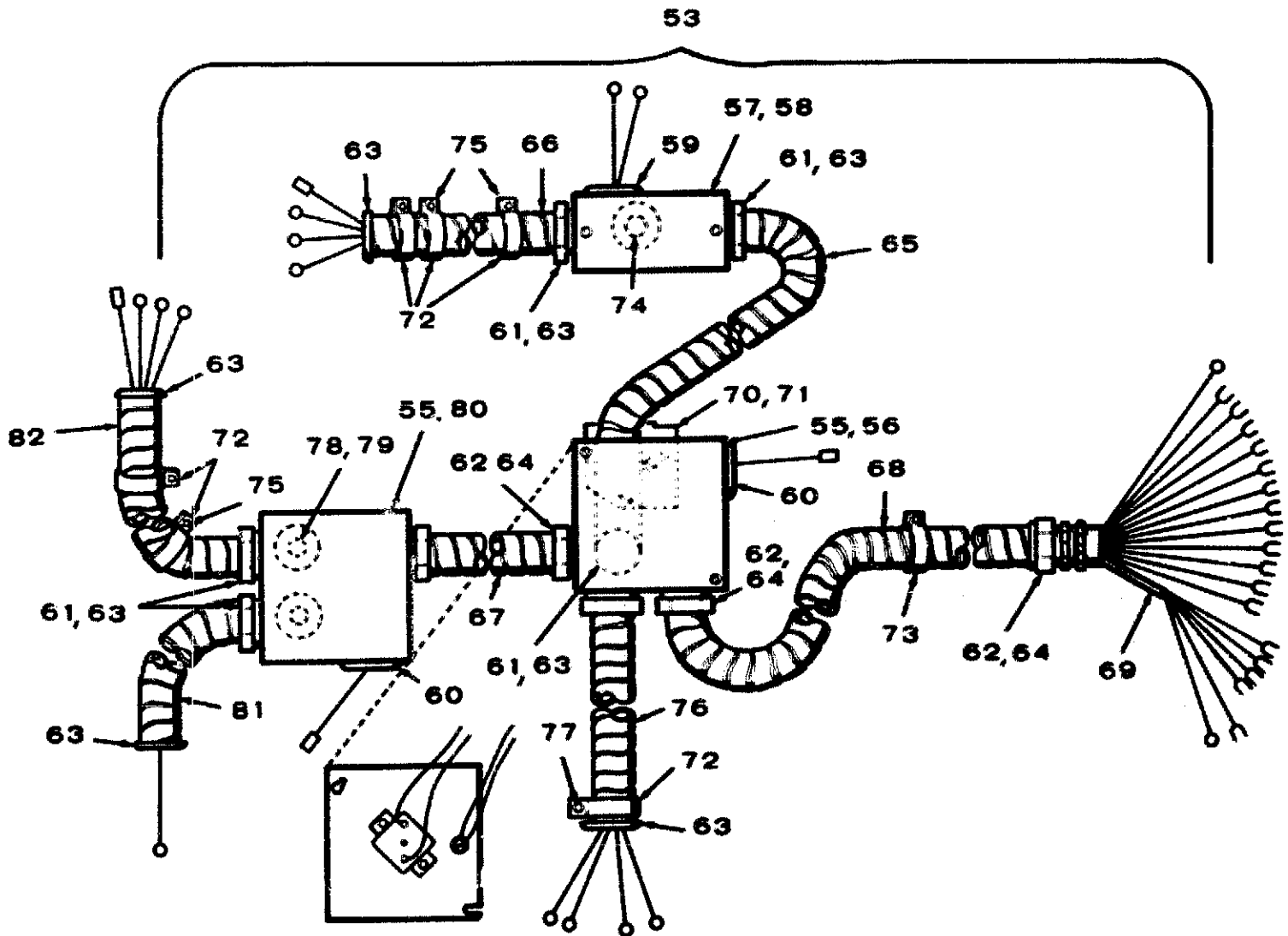
MISCELLANEOUS ENGINE PARTS

<u>REF. NO.</u>	<u>PART NO.</u>	<u>QTY. USED</u>	<u>PART DESCRIPTION</u>
53	338-1161	1	Harness, Engine Wiring (Includes Parts Marked +)
55	330-0093	1	+ Box, Outlet
56	330-0099	1	+ Cover Assembly, Outlet Box
57	330-0094	1	+ Box, Outlet
58	330-0004	1	+ Cover, Outlet Box
59	508-0001	1	+ Grommet
60	508-0009	1	+ Grommet
61	331-0149	3	+ Connector
62	331-0150	3	+ Connector
63	508-0201	4	+ Bushing
64	508-0202	4	+ Bushing
65	331-0190	1	+ Conduit, Flex
66	331-0146	1	+ Conduit, Flex
67	331-0184	1	+ Conduit, Flex
68	331-0148	1	+ Conduit, Flex
69	338-0989	1	+ Harness, Governor
70	330-0097	1	+ Bracket, Mounting
71	821-0010	2	+ Screw, Cap - Locking Head ($\frac{1}{4}$ -20 X $\frac{1}{2}$ " Long)
72	331-0180	6	+ Strap, Half
73	331-0181	1	+ Strap, Half
74	800-0088	1	+ Screw, Cap-Hex Head - ($\frac{1}{2}$ -13 X $\frac{3}{4}$ " Long)
75	800-0048	3	+ Screw, Cap-Hex Head - ($\frac{3}{8}$ -16 X $\frac{3}{4}$ " LG)
76	331-0155	1	+ Conduit, Flex
77	801-0048	1	+ Screw, Cap-Hex Head - ($\frac{3}{8}$ -24 X $\frac{3}{4}$ " LG)
78	801-0099	2	+ Screw, Cap-Hex Head - ($\frac{9}{16}$ -18 X $\frac{3}{4}$ " LG)
79	526-0198	3	+ Washer, Flat ($\frac{5}{8}$ ID X $1\frac{1}{2}$ " OD X $\frac{1}{16}$ " Thick)
80	330-0100	1	+ Cover, Outlet Box
81	331-0154	1	+ Conduit, Flex
82	331-0182	1	+ Conduit, Flex
	151-0423	1	* Actuator, Governor (B.C. # 11003-0-0-24)
	151-0399	1	* Control (Includes Mtg. Screw) - (B.C. # DYN1-1000-2-0-24)
	151-0441	1	* Lower, Actuator (B.C. # DYNC-208)
	151-0442	1	* Rod, Threaded (B.C. # GYRF-43-1)
	151-0443	2	* Bearing, Rod End (B.C. # DYN2-47-2)
	151-0411	1	* Pickup, Magnetic (B.C. # DYN2-10200)
		1	* Bracket, Actuator Mtg. (B.C. # DYN2-68)

* - Check for Barber-Colman numbers when ordering parts.

+ - Parts Included in 338-1161 Wiring Harness.

MISCELLANEOUS ENGINE PARTS



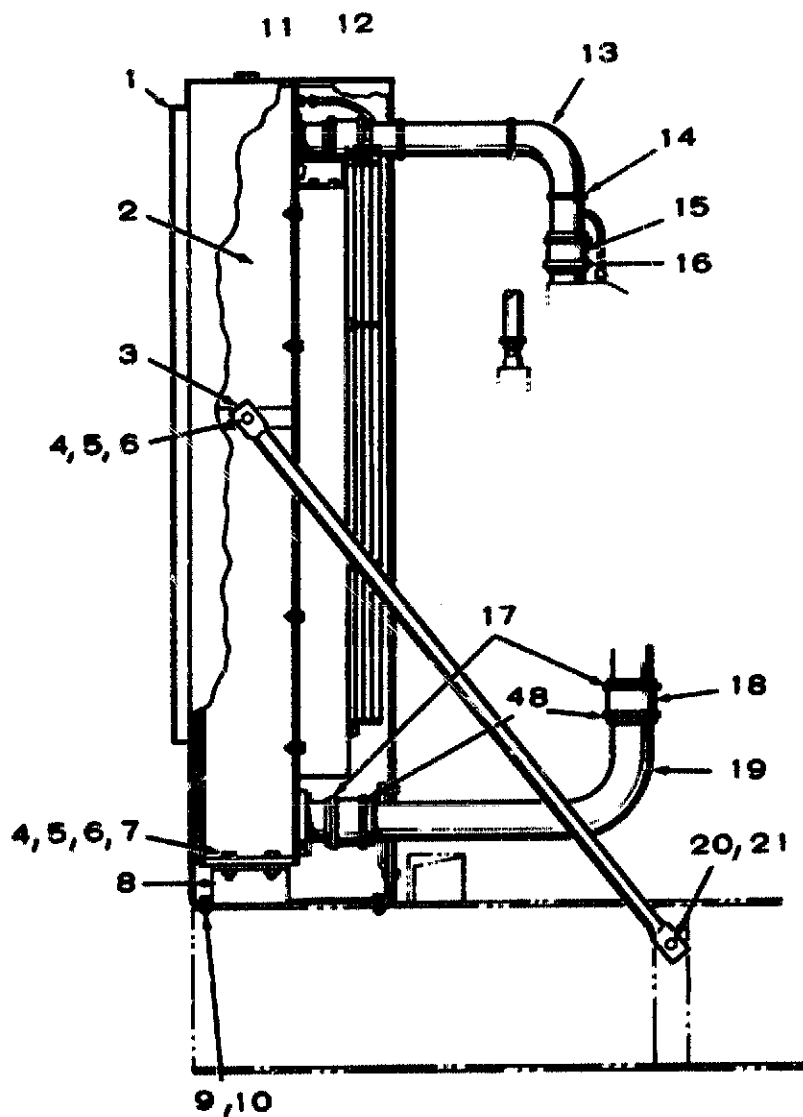
COOLING SYSTEM

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	405-2228	1	Panel, Front End
2	130-1239	1	Radiator (Includes Cap)
3	130-1293	2	Brace, Radiator Support
4	800-0133	8	Screw, Cap -Hex Head - (5/8-11 X 1" Long)
5	526-0004	12	Washer, Flat (11/16" ID X 1-3/4" OD X 9/64" Thick)
6	850-0070	8	Washer, Lock Spring - (5/8")
7	826-0007	6	Nut, Hex - (5/8-11)
8	130-1292	2	Bracket, Radiator Support
9	821-0023	4	Screw, Cap-Locking Head - (5/16-18 X 1 1/2" Long)
10	870-0257	4	Nut, Hex - Self Locking - (5/16-18)
11	502-0184	1	Connector
12	501-0087	1	Hose, Flex
13	130-1306	1	Tube, Radiator Outlet
14	332-0941	3	Tie, Cable
15	503-0904	2	Hose
16	503-0999	4	Clamp, Hose
17	503-0998	2	Clamp, Hose
18	503-0906	2	Hose
19	130-1300	1	Tube, Radiator Outlet
20	821-0029	10	Screw, Cap Locking Head (3/8-16 X 3/4" Long)
21	870-0281	10	Nut, Hex - Self Locking - (3/8-16)
22	130-1309	1	Shroud, Fan
23	130-1013	1	Guard, Fan
24	821-0011	12	Screw, Cap - Locking Head - (1/2-20 X 7/8" Long)
25	526-0005	12	Washer, Flat (9/32" ID X 1-3/4" OD X 3/16" Thick)
26	821-0016	4	Screw, Cap Locking Head - (5/16-18 X 3/4" Long)
27	870-0257	4	Nut, Hex - Self Locking - (5/16-18)
28	405-2236	1	Bracket, Panel Mtg. (R.H.)
29	405-2237	1	Bracket, Panel Mtg. (L.H.)
30	800-0071	12	Screw, Cap-Hex Head - (7/16-14 X 1" LG)
31	850-0055	12	Washer, Lock - Spring - (7/16")
32	130-1194	2	Gasket, Radiator (Inlet)
33	130-1307	1	Cap, Radiator Inlet
34	130-1308	1	Bridge, Fan Shroud
35	504-0003	1	Valve, Drain
36	130-1193	1	Gasket, Radiator Outlet
37	130-1296	1	Adapter, Radiator, Outlet
38	800-0092	4	Screw, Cap - Hex Head - (1/2-13 X 1 1/2" LG)
39	526-0028	4	Washer, Flat (9/16" ID X 15/16" OD X 1/16" Thick)
40	850-0060	4	Washer, Lock - Spring (1/2")
41	862-0016	4	Nut, Hex - (1/2-13)
42	130-1299	1	Adapter, Inlet Tube
43	503-0853	1	Hose
44	503-0429	2	Clamp, Hose
45	505-0759	1	Adapter, Pipe

COOLING SYSTEM

<u>REF NO.</u>	<u>PART NO.</u>	<u>QTY. USED</u>	<u>PART DESCRIPTION</u>
46	130-1007	2	Foam, Insulation
47	130-1006	2	Foam, Insulation
48	503-0867	2	Clamp, Hose
	130-0449	1	Cap, Radiator

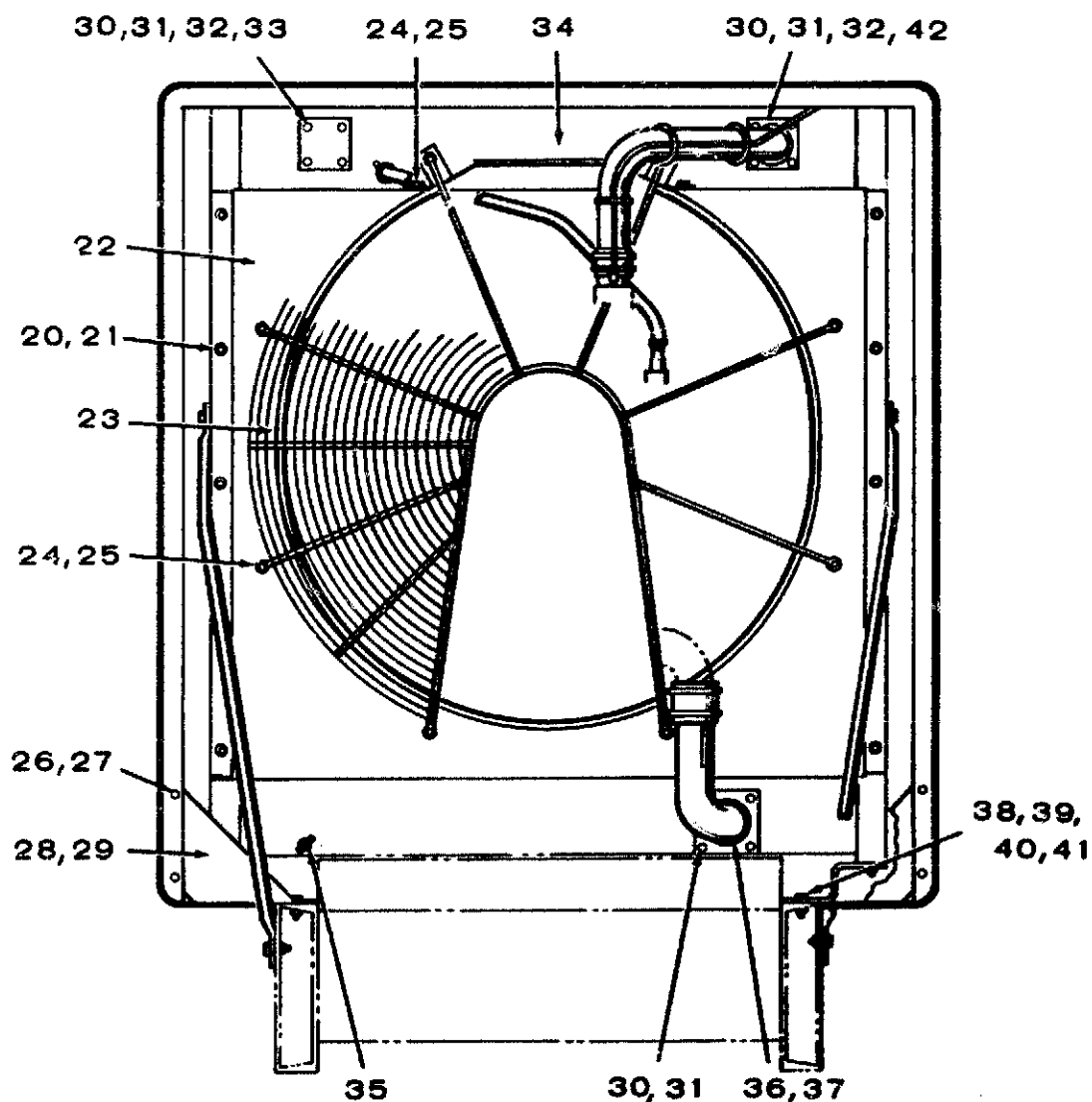
COOLING SYSTEM - SIDE VIEW



GENERATOR

<u>REF. NO.</u>	<u>PART NO.</u>	<u>QTY. USED</u>	<u>PART DESCRIPTION</u>
35	509-0151	1	Seal "O" Ring
36	234-0490	1	Grille, Air Inlet

COOLING SYSTEM - FRONT VIEW



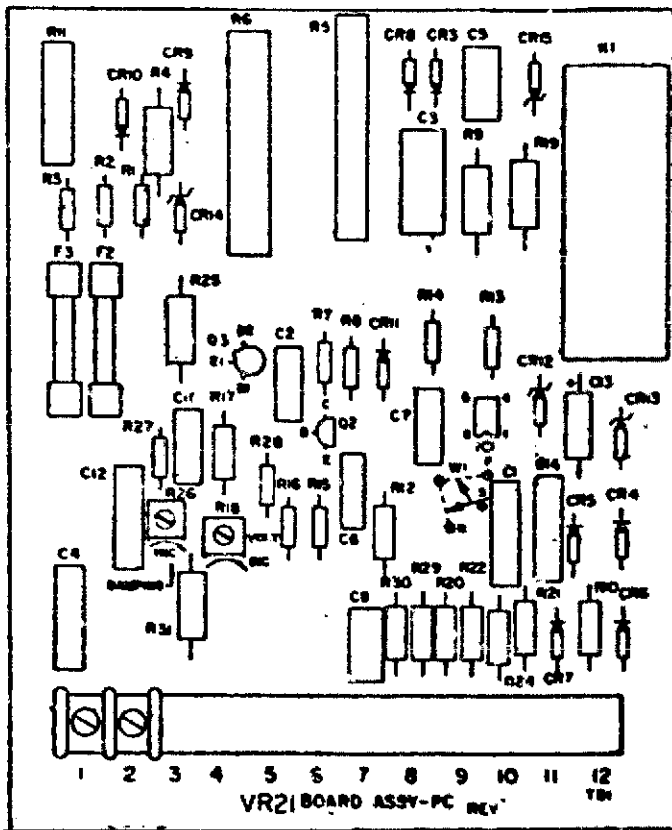
CHASSIS

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
14	403-1418	1	Skid, Base

CONTROL - (AC PORTION)

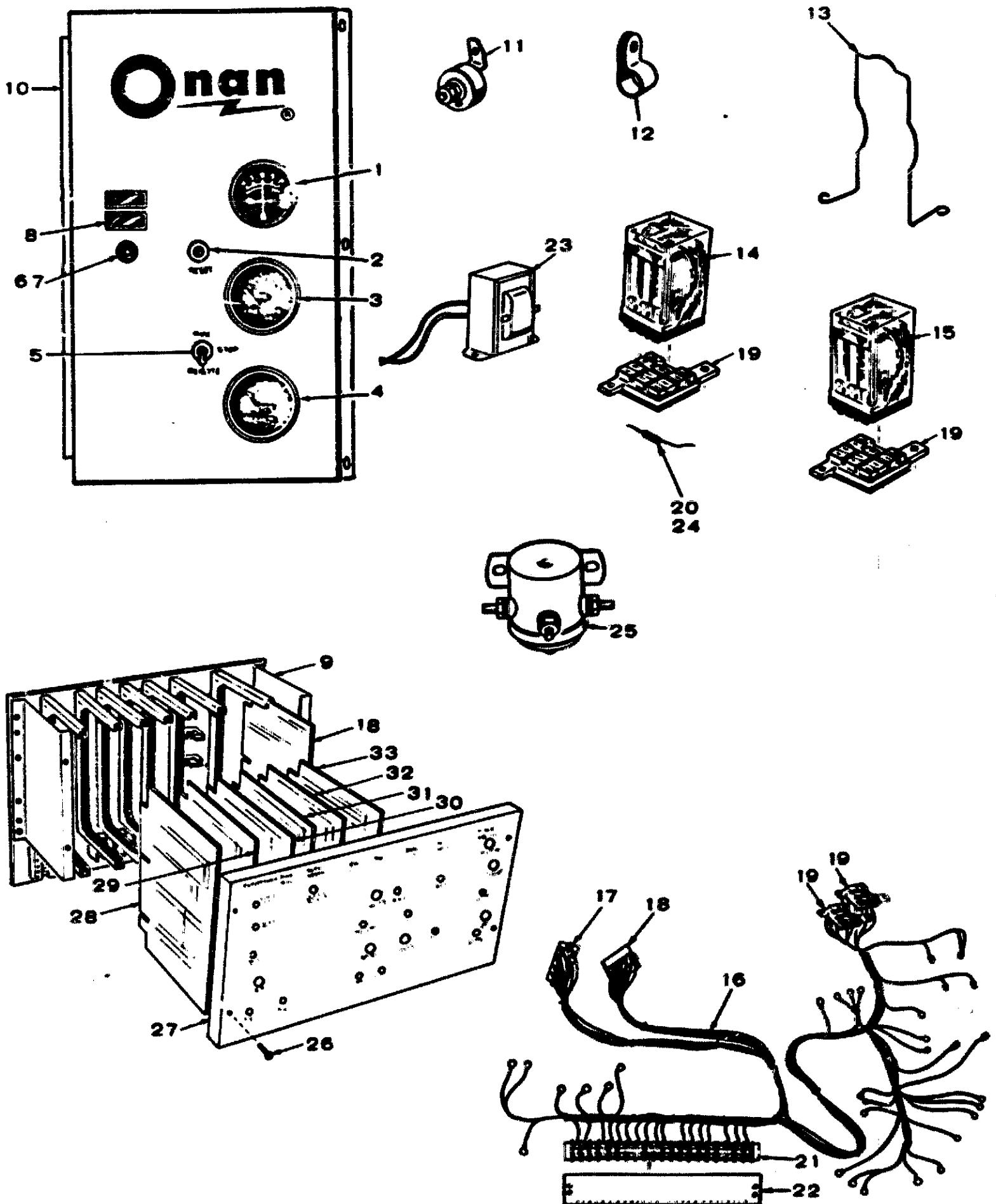
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	301-4668	1	Box, Control
22	332-2044	1	Regulator Board, Voltage (See separate group for Components)
	321-0223	5	Fuse, 15 Ampere
	321-0177	1	Block, Fuse
	321-0176	1	Block, Fuse
	338-1104	1	Harness, Wiring
	151-0402	1	Potentiometer, Governor Adj.

VOLTAGE REGULATOR BOARD ASSEMBLY



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	332-1954	1	Printed Circuit Board
C1,14	355-0042	2	Capacitor - 47 Mfd., 250 Volt
C2,7	355-0043	2	Capacitor - .22 Mfd, 250 Volt
C3	355-0047	1	Capacitor - .47 Mfd, 400 Volt
C4,12	355-0044	2	Capacitor - .47 Mfd, 250 Volt
C5,8	355-0046	2	Capacitor - 1 Mfd, 100 Volt
C6	355-0056	1	Capacitor - .33 Mfd, 250 Volt
C11	355-0048	1	Capacitor - .1 Mfd, 400 Volt
C13	356-0039	1	Capacitor - Electrolytic, 100 Mfd, 10 Volt
CR3 thru 11	357-0014	9	Rectifier - Silicon
CR12	359-0036	1	Diode, Zener - 5.6 Volt
CR13	359-0025	1	Diode, Zener - 20 Volt
CR14	359-0026	1	Diode, Zener - 18 Volt
F1,2,3	321-0204	3	Fuse - 1.4 Amp
IC1	357-0005	1	Integrated Circuit
Q2	362-0017	1	Transistor - Silicon (NPN)
Q3	361-0004	1	Transistor - Unijunction
R1	350-0355	1	Resistor - 1/2 Watt, 47-Ohm
R2,3	350-0351	2	Resistor - 1/2 Watt, 33-Ohm
R4	350-1075	1	Resistor - 2 Watt, 4,700,000-Ohm
R5	353-0040	1	Resistor, Fixed - 10 Watt, 270-Ohm
R6	353-0039	1	Resistor, Fixed - 15 Watt, 5,000-Ohm
R7	350-0398	1	Resistor - 1/2 Watt, 3,000-Ohm
R8,16	350-0447	2	Resistor - 1/2 Watt, 330,000-Ohm
R10	351-0885	1	Resistor - 1/2 Watt, 51,000-Ohm
R11	352-0151	1	Resistor, Fixed - 5 Watt, 15,000-Ohm
R12	351-0909	1	Resistor - 1/2 Watt, 90,900-Ohm
R13	350-0411	1	Resistor - 1/2 Watt, 10,000-Ohm
R14	350-0443	1	Resistor - 1/2 Watt, 220,000-Ohm
R15,27	350-0435	2	Resistor - 1/2 Watt, 100,000-Ohm
R17	351-0293	1	Resistor - Metal Film - 1/4 Watt, 11,000-Ohm
R18	303-0210	1	Potentiometer - 1/2 Watt, 5,000-Ohm
R20,22,29 & 30	351-0520	4	Resistor - 1/4 Watt, 28,000-Ohm
R21	351-0522	1	Resistor, Metal Film - 1/4 Watt, 5,110,000-Ohm
R24	351-0523	1	Resistor, Metal Film - 1/4 Watt, 8,870,000-Ohm
R25,31	350-1011	2	Resistor - 2 Watt, 10,000-Ohm
R26	303-0211	1	Potentiometer - 1/2 Watt, 100,000-Ohm
R28	350-0568	1	Resistor - 1/2 Watt
TB1	332-1252	1	Terminal Block
CR15	359-0015	1	Diode, Zener - 24 Volt
	321-0163	6	Clip - Fuse
K1	307-1063	1	Relay - Magnetic Reed
R9	350-1014	1	Resistor - 2 Watt, 13,000-Ohm
R19	350-1007	1	Resistor - 2 Watt, 6,800-Ohm

CONTROL (ENGINE SECTION)



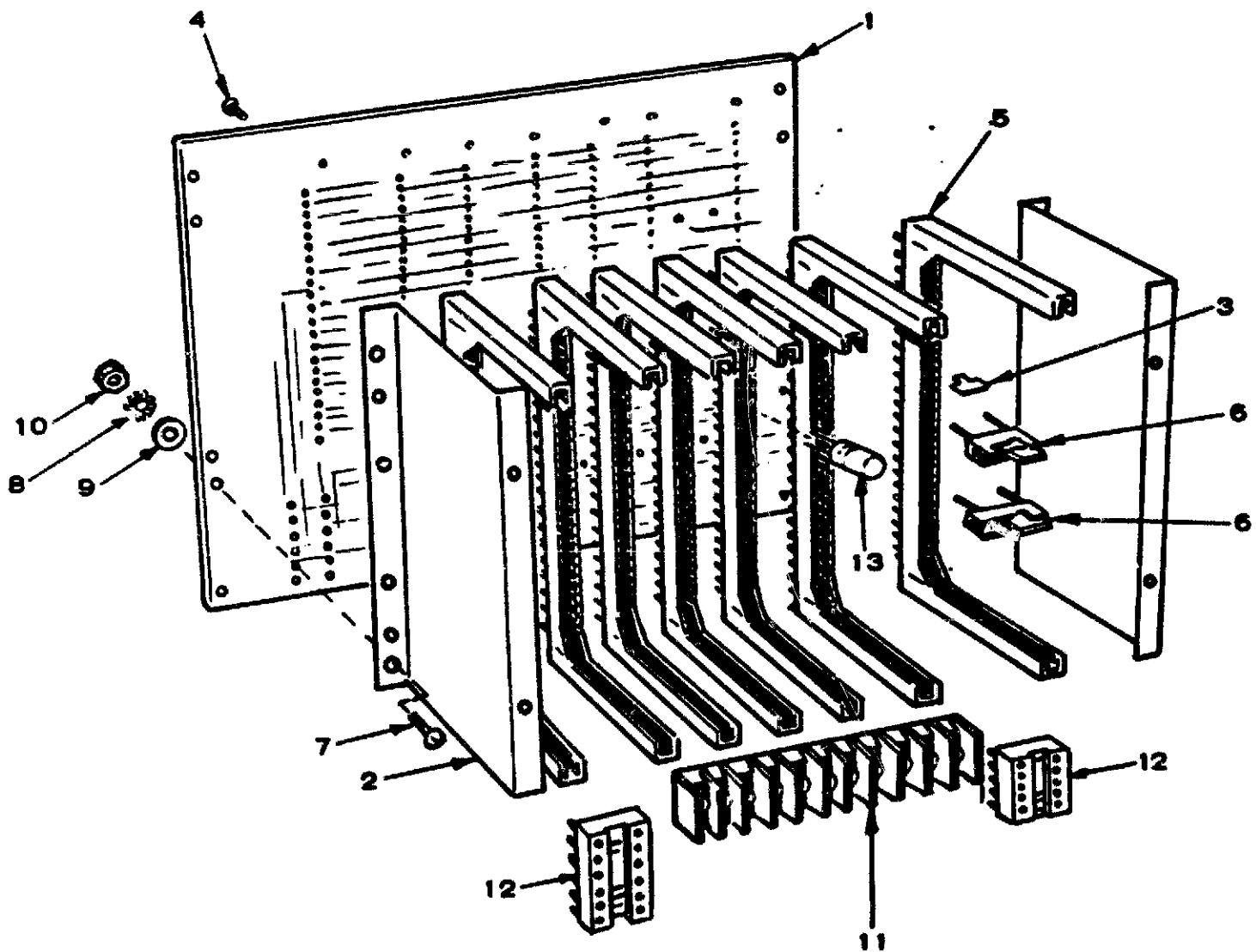
CONTROL (ENGINE SECTION)

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	302-0061	1	Ammeter (30-0-30)	16	338-1016	1	Harness, Wiring (Includes Parts Marked †)
2	308-0410	1	Switch, Push	17	332-0984	2	†Connector, Plug, Electrical (12 Pin)
3	193-0243	1	Gauge, Oil Pressure (0-80)	18	300-1579	1	*Module, Time Delay Start-Stop
4	193-0245	1	Gauge, Water Temperature	19	323-0765	2	*†Socket, Relay
5	SWITCH, TOGGLE			20	357-0004	1	†Diode
	308-0220	1	Standard Sets	21	332-1005	1	†Board, Terminal (20 Place)
	308-0347	1	Penn State Sets	22	332-1559	1	Strip, Marker
6	321-0147	1	Fuse - 5 Amp	23	315-0361	1	Transformer, Step-down
7	321-0217	1	Fuseholder	24	357-0004	2	Diode
8	LIGHT, INDICATOR			25	307-0061	1	Relay - Start Solenoid
	322-0119	1	Overcrank	26	815-0387	4	Screw, Machine - Pan Head, Cross-Recessed Drive (#6-32 x 1/4")
	322-0120	1	Low Oil Pressure	27	301-4015	1	Cover, Access - Control Modules
	322-0121	1	High Engine Temperature	28	300-1573	1	*Module, Cycle Cranker
	322-0122	1	Low Engine Temperature	29	300-1574	1	*Module, Start-Disconnect
	322-0123	1	Overspeed	30	300-1575	1	*Module, Overspeed Control
	322-0135	1	Over Voltage	31	300-1576	1	*Module, Monitor No. 1
9	300-1572	1	*Chassis, Control	32	300-1577	1	*Module, Monitor No. 2
10	301-4692	1	Panel, Control	33	300-1578	1	*Module, Engine Shutdown
11	193-0250	2	Resistor, Gauge				
12	332-0052	1	Clamp, Loop				
13	307-1157	2	Spring, Hold-down - Relay				
14	307-1061	1	Relay, Armature - Starter Protection				
15	307-1056	1	Relay, Armature - Start Disconnect				

* - See Separate Group for Components.

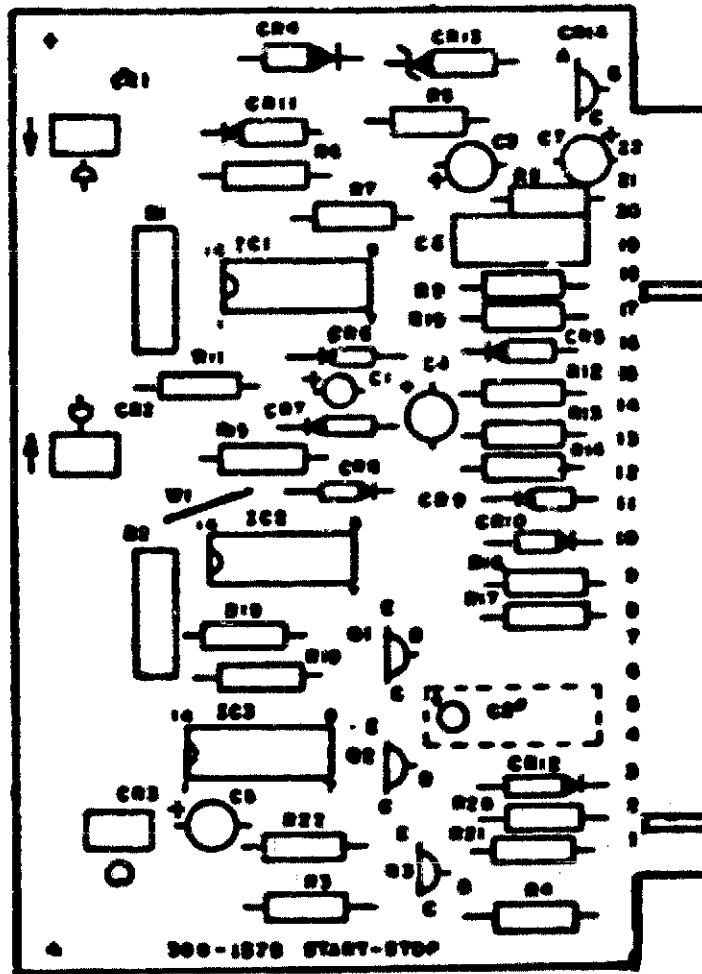
† - Included in Wiring Harness.

CONTROL CHASSIS



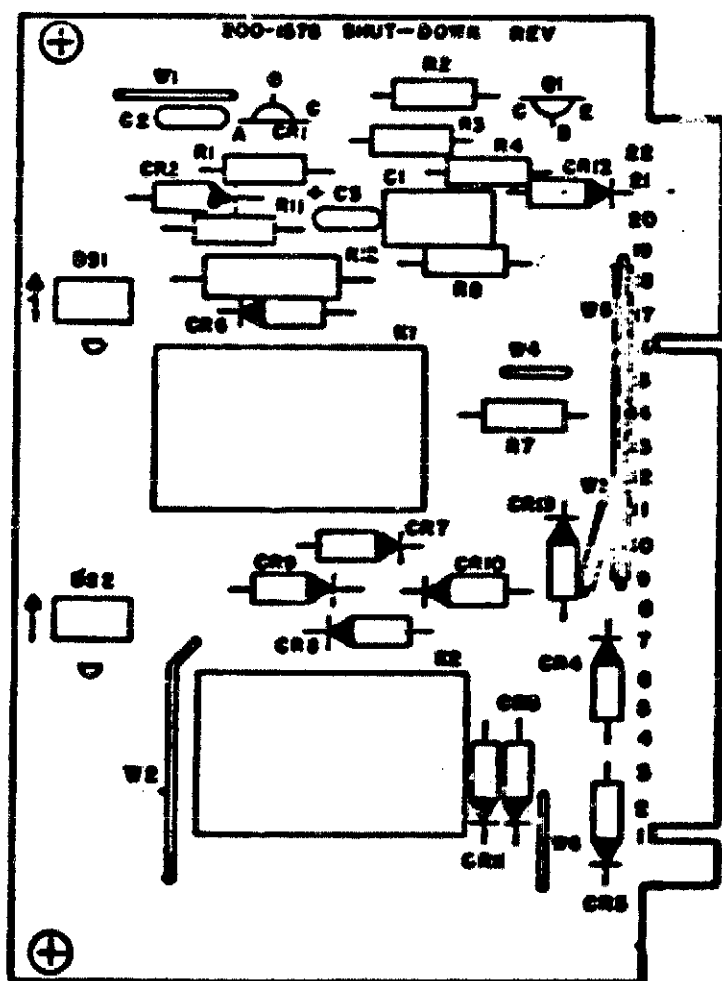
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	300-1572	1	Chassis, Control (Complete)
1	332-1884	1	Board, Printed Circuit
2	301-3680	2	Bracket, Module Cover Mtg.
3	332-1917	14	Plug, Keying
4	812-0029	14	Screw, Machine - Roundhead (#4-40 x 3/8" long)
5	332-1887	7	Socket Plug In Module
6	308-0324	2	Switch, Slide
7	812-0059	4	Screw, Machine - Roundhead (#6-32 x 1/4" long)
8	853-0003	4	Washer, Lock - External (#6)
9	526-0047	4	Washer, Flat (.147" ID x 5/16" OD x 1/32" Thk)
10	860-0006	4	Nut, Hex (#6-32)
11	332-1909	1	Block, Terminal (11 Place)
12	323-0983	2	Connector, Receptacle Electrical (12 Pin)
13	356-0068	1	Capacitor, Electrolytic (180 MFD - 40 Volt)

TIME DELAY START-STOP MODULE (300-1579)



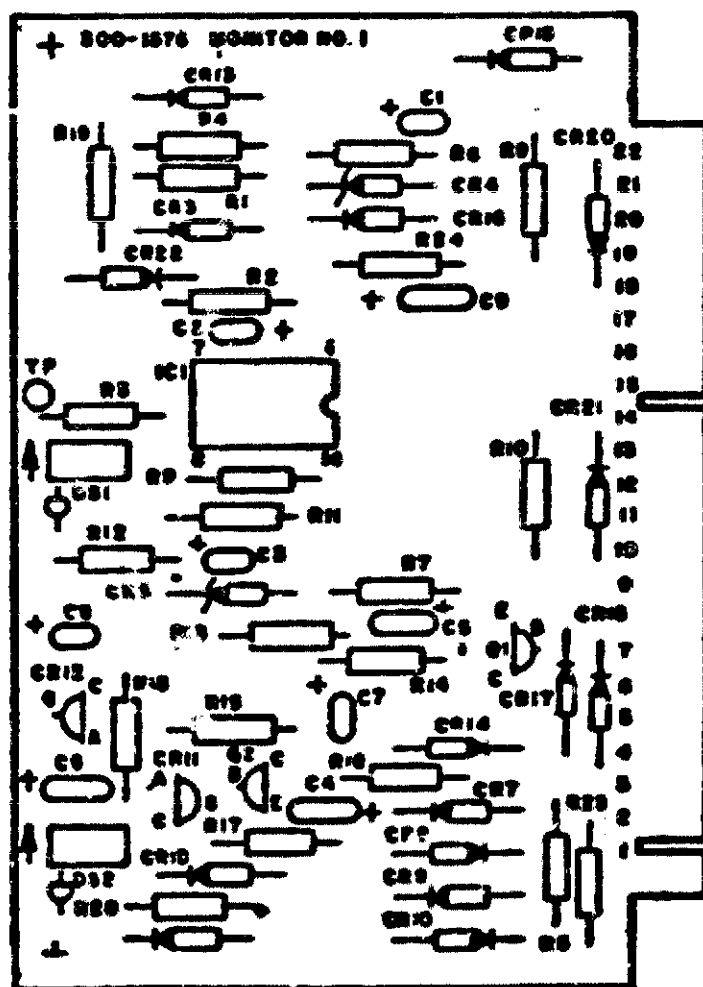
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	300-1579	1	Module, Time Delay Start-Stop (Complete)	1C3	357-0017	1	Integrated Circuit, Counter 7 Stage
C1,2	356-0059	2	Capacitor, Electrolytic (2.2 Mfd., 35 Volt)	Q1,2,3	362-0011	3	Transistor, Signal
C3,4,5	356-0051	3	Capacitor, Electrolytic (6.8 Mfd., 35 Volt)	R1,2	353-0169	2	Potentiometer (3.5 Megohm)
C6	355-0062	1	Capacitor, Composition (1 Mfd., 100 Volt)	R3,19	350-0418	2	Resistor (20,000-Ohm, 2 Watt)
C7	356-0053	1	Capacitor, Tantalum (1.0 Mfd., 35 Volt)	R7	350-0370	1	Resistor (200-Ohm, 1/2 Watt)
CR1	322-0172	1	Lamp, Indicator (Green)	R5,11,15,18	350-0548	4	Resistor (10,000-Ohm, 2 Watt)
CR2	322-0157	1	Lamp, Indicator (Red)	R6	350-0373	1	Resistor (470-Ohm, 1/2 Watt)
CR3	322-0171	1	Lamp, Indicator (Red-Green)	R8	350-0505	1	Resistor (2.7-Ohm, 1/2 Watt)
CR4-12	357-0004	9	Receptacle, Lamp	R10,14,18,22	350-0394	4	Resistor (2,000-Ohm, 1/2 Watt)
CR13	359-0002	1	Diode, Zener (13 Volt, 400 MW)	R12	350-0443	1	Resistor (220,000-Ohm, 1/2 Watt)
CR14	364-0011	1	Rectifier, Gate Control	R13,17,20,21	350-0537	4	Resistor (12,000-Ohm, 2 Watt)
1C1,2	367-0016	2	Integrated Circuit, Timing	R4	350-0376	1	Resistor (360-Ohm, 1/2 Watt)
				R9	350-0524	1	Resistor (100-Ohm, 1/2 Watt)

SHUTDOWN MODULE (300-1578)



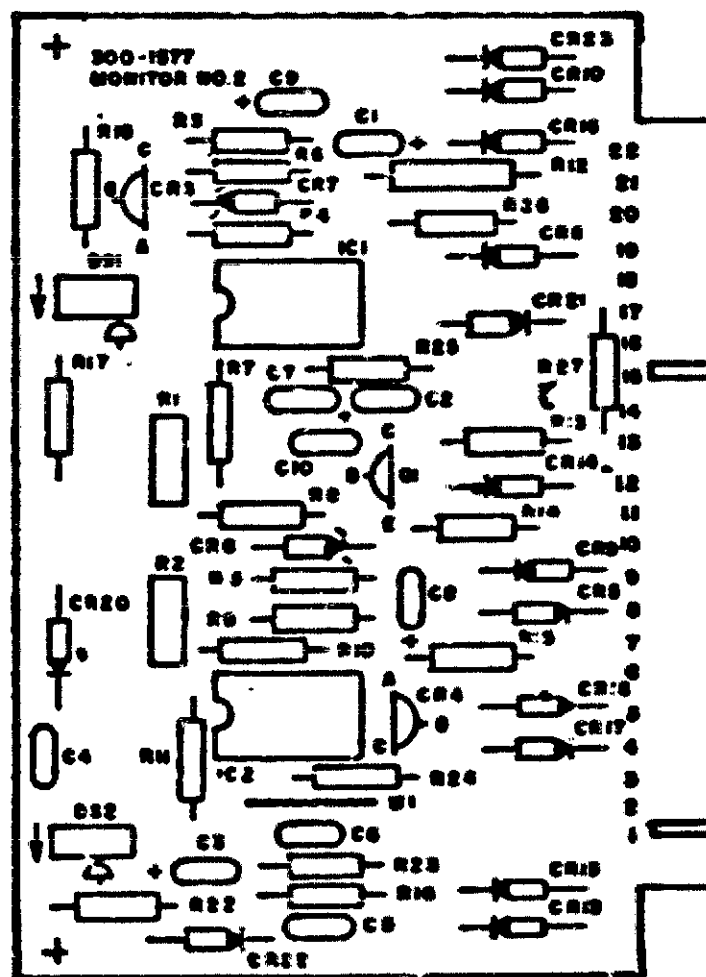
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	300-1578	1	Module, Shut Down (Complete)
C1	355-0045	1	Capacitor, Composition (1 Mfd., 200 Volt)
	322-0175	2	Receptacle, Lamp
DS1	322-0157	1	Lamp, Indicator (Red)
DS2	322-0172	1	Lamp, Indicator (Green)
C2	355-0041	1	Capacitor, Ceramic (.22 Mfd., 35 Volt)
C3	356-0051	1	Capacitor, Tantalum (5.5 Mfd., 35 Volt)
CR1	364-0011	1	Rectifier, Gate Control
CR2-13	357-0004	12	Rectifier, Diode (400 Volt, 400 MA)
K1,2	307-1076	2	Relay
Q1	362-0026	1	Transistor, Signal
R2	350-0398	1	Resistor (3,000-Ohm, 1/2 Watt)
R1	350-0505	1	Resistor (2.7-Ohm, 1/2 Watt)
R7	350-0533	1	Resistor (500-Ohm, 1/2 Watt)
R3	350-0529	1	Resistor (270-Ohm, 1/2 Watt)
R4	350-0540	1	Resistor (2,200-Ohm, 1/2 Watt)
R6	350-0379	1	Resistor (470-Ohm, 1/2 Watt)
R11,12	350-0393	2	Resistor (1,800-Ohm, 1/2 Watt)

MONITOR NUMBER ONE MODULE (300-1576)



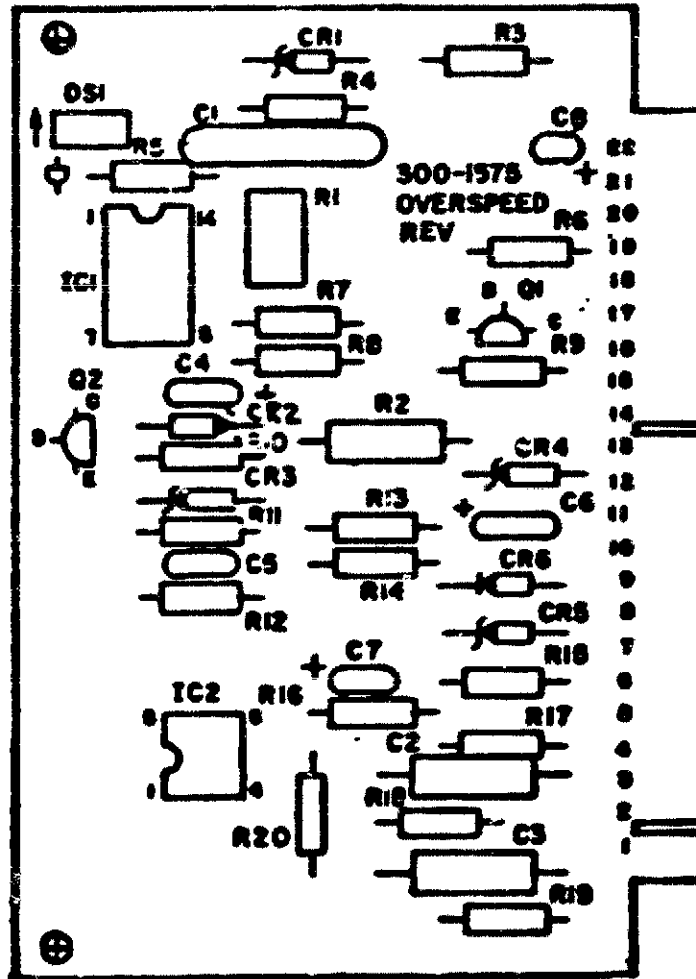
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	300-1576	1	Module, Monitor Number One (Complete)	R1	350-0397	1	Resistor (2,700-Ohm, 1/2 Watt)
C1,2,3	356-0051	5	Capacitor, Electrolytic (6.8 Mfd., 35 Volt)	R2	350-0446	1	Resistor (300,000-Ohm, 1/2 Watt)
C4	356-0053	1	Capacitor, Tantalum (1 Mfd., 35 Volt)	R3	350-0584	1	Resistor (10 Megohm, 1/2 Watt)
C5,6,9	355-0041	3	Capacitor, Ceramic (.22 Mfd., 35 Volt)	R4,6	350-0536	2	Resistor (1,000-Ohm, 1/2 Watt)
CR3,7-10, 13-23	357-0004	16	Rectifier, Diode (400 Volt, 400 MA)	R5,23	350-0404	2	Resistor (5,100-Ohm, 1/2 Watt)
CR4	359-0026	1	Diode, Zener (18 Volt, 400 MW)	R7,18	350-0505	2	Resistor (2.7-Ohm, 1/2 Watt)
CR5	359-0002	1	Diode, Zener (13 Volt, 400 MW)	R8	350-0544	1	Resistor (4,700-Ohm, 1/2 Watt)
CR11,12	364-0011	2	Rectifier, Gate Control	R9	350-0548	1	Resistor (10,000-Ohm, 1/2 Watt)
DS1,2	322-0157	2	Lamp, Indicator (Red)	R10,17	350-0529	2	Resistor (270-Ohm, 1/2 Watt)
IC1	367-0016	1	Integrated Circuit, Timing	R11,15	350-0398	2	Resistor (3,000-Ohm, 1/2 Watt)
Q1,2	362-0026	2	Transistor, Signal	R12	350-0380	1	Resistor (510-Ohm, 1/2 Watt)
				R13,14	350-0379	2	Resistor (470-Ohm, 1/2 Watt)
				R16	350-0540	1	Resistor (2,200-Ohm, 1/2 Watt)
				R19,20	350-0393	2	Resistor (18,000-Ohm, 1/2 Watt)
				R24	350-0451	1	Resistor (470,000-Ohm, 1/2 Watt)
					322-0175	2	Receptacle, Lamp

MONITOR NUMBER TWO MODULE (300-1577)



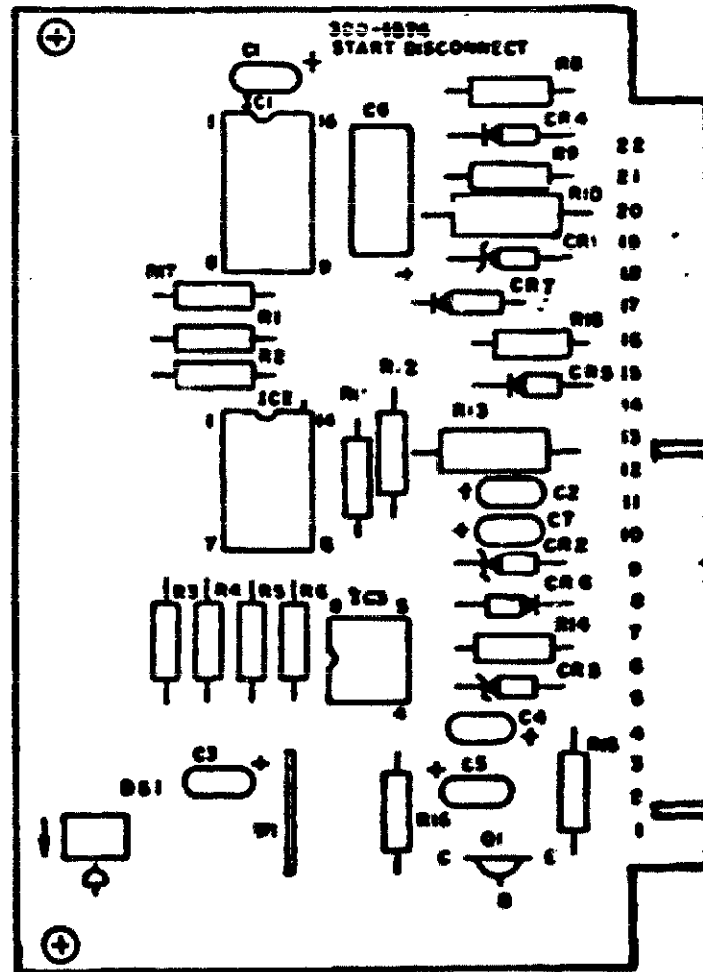
REF. NO.	PART NO.	QTY. used	PART DESCRIPTION
	300-1577	1	Module, Monitor Number Two
C1	356-0086	1	Capacitor, Electrolytic (47 Mfd.)
C2	356-0059	1	Capacitor, Electrolytic (2.2 Mfd., 35 Volt)
C3,8,9	356-0051	3	Capacitor, Electrolytic (6.8 Mfd., 35 Volt)
C4,5,6,7,10	355-0041	5	Capacitor, Ceramic (.22 Mfd.)
CR3,4	364-0011	2	Rectifier, Gate Control
CR5-9,13-18,20-23	357-0004	14	Rectifier, Diode (400 Volt, 400 MA)
CR6	359-0016	1	Diode, Zener (6.8 Volt, 400 mW)
CR7	359-0033	1	Diode, Zener (14 Volt, 5 W)
IC1,2	367-0016	2	Integrated Circuit, Timing
DS1,2	322-0157	2	Lamp, Indicator (Red)
	322-0175	2	Receptacle, Lamp
Q1	362-0011	1	Transistor, Signal
R1,2	303-0189	2	Potentiometer (3.5 Megohm)
R3	350-0420	1	Resistor (24,000-Ohm, 1/2 Watt)
R4,7,10,13,16	350-0548	5	Resistor (10,000-Ohm, 1/2 Watt)
R5,15	350-0379	2	Resistor (470-Ohm, 1/2 Watt)
R6,9	350-0398	2	Resistor (3,000-Ohm, 1/2 Watt)
R8	350-0418	1	Resistor (20,000-Ohm, 1/2 Watt)
R11	350-0486	1	Resistor (2 Megohm, 1/2 Watt)
R12	350-0672	1	Resistor (240-Ohm, 1/2 Watt)
R14	350-0389	1	Resistor (1,200-Ohm, 1/2 Watt)
R17,18	350-0393	2	Resistor (1,800-Ohm, 1/2 Watt)
R22,23	350-0505	2	Resistor (2,700-Ohm, 1/2 Watt)
R24,25,27	350-0451	3	Resistor (470,000-Ohm, 1/2 Watt)
R26	350-0421	1	Resistor (27,000-Ohm, 1/2 Watt)

OVERSPEED MODULE (300-1575)



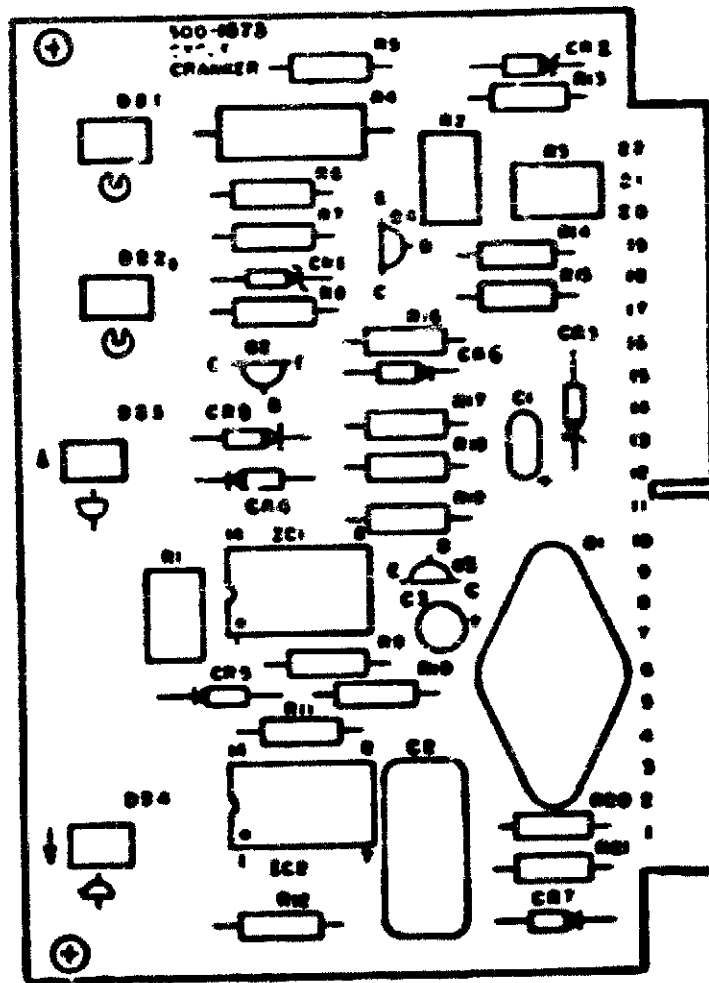
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
C1	300-1575 355-0043	1 1	Module, Overspeed (Complete) Capacitor, Composition (22 Mfd., 200 Volt)	CR6	357-0004	1	Rectifier, Diode (400 Volt, 400 MA)
C2,3	355-0010	2	Capacitor, Composition (.0022 Mfd., 100 Volt)	DS1	322-0172	1	Lamp, Indicator (Green)
C4,8	356-0051	2	Capacitor, Electrolytic (6.8 Mfd., 35 Volt)		322-0175	1	Receptacle, Lamp
C5	355-0049	1	Capacitor, Ceramic (22 Mfd., 1000 Volt)	1C1	367-0002	1	Integrated Circuit
C6,7	356-0066	2	Capacitor, Tantalum (47 Mfd., 20 Volt)	1C2	367-0001	1	Integrated Circuit
CR1,3	359-0016	2	Diode, Zener (6.8 Volt, 400,000 Watt)	Q1,2	362-0011	2	Transistor, Signal
CR2	359-0017	1	Diode, Zener (5.1 Volt, 400 MW)	R1	303-0191	1	Potentiometer (5,000-Ohm, 4 Watt)
CR4	359-0032	1	Diode, Zener (8.2 Volt, 400 MW)	R2	350-0683	1	Resistor (680-Ohm, 1 Watt)
CR5	359-0002	1	Diode, Zener (13 Volt, 400 MW)	R3	350-0379	1	Resistor (470-Ohm, 2 Watt)
				R4,6,7	350-0411	7	Resistor (10,000-Ohm, 1/2 Watt)
				8,10,17,19			
				R5	350-0414	1	Resistor (13,000-Ohm, 1/2 Watt)
				R9	350-0427	1	Resistor (47,000-Ohm, 1/2 Watt)
				R11,13	350-0384	2	Resistor (2,000-Ohm, 1/2 Watt)
				R14	350-0380	1	Resistor (510-Ohm, 1/2 Watt)
				R15,18	350-0536	2	Resistor (1,000-Ohm, 2 Watt)
				R12,16,20	350-0451	3	Resistor (470,000-Ohm, 1/2 Watt)

START DISCONNECT MODULE (300-1574)



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	300-1574	1	Module, Start Disconnect (Complete)
C1,2,3	356-0051	3	Capacitor, Electrolytic (6.8 Mfd., 35 Volt)
C4,7	356-0066	2	Capacitor, Tantalum (.47 Mfd.)
C5	356-0059	1	Capacitor, Electrolytic (2.2 Mfd)
C6	355-0045	1	Capacitor, Composition (.1 Mfd)
DS1	322-0172	1	Lamp, Indicator
CR1,2	359-0033	2	Diode, Zener (14 Volt, 5 Watt)
CR3	359-0032	1	Diode, Zener (8.2 Volt)
CR4,5,6,7	357-0004	4	Rectifier, Diode (400 Volt, 400 Milliampere)
IC1	367-0014	1	Integrated Circuit (Multivibrator)
IC2	367-0013	1	Integrated Circuit (Dual, 2 Input, and Gate)
IC3	367-0001	1	Integrated Circuit (Oral Amp)
Q1	362-0011	1	Transistor, Signal
R1,2,5,6	350-0418	1	Resistor (20,000-Ohm, 1/2 Watt)
R3,11,12,15,16	350-0548	5	Resistor (10,000-Ohm, 1/2 Watt)
R4,8	350-0422	2	Resistor (30,000-Ohm, 1/2 Watt)
R9	350-0435	1	Resistor (100,000-Ohm, 1/2 Watt)
R10,13	350-0672	2	Resistor (240-Ohm, 1 Watt)
R14	350-0404	1	Resistor (1,000-Ohm, 1/2 Watt)
R18	350-0536	1	Resistor (1,000-Ohm, 1/2 Watt)
R17	350-0459	1	Resistor (1 Megohm, 1/2 Watt)
	322-0175	1	Receptacle, Lamp

CYCLE CRANKER MODULE (300-1573)



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	300-1573	1	Module, Cycle Cranker (Complete)	R1	303-0171	1	Potentiometer (100,000-Ohm)
C1	356-0086	1	Capacitor, Tantalum (.47 Mfd., 20 Volt)	R2,3	303-0191	2	Potentiometer (5000-Ohm)
C2	355-0042	1	Capacitor (.47 Mfd., 250 Volt)	R4	350-1132	1	Resistor (470-Ohm, 2 Watt)
DS1,2	322-0171	2	Lamp, Indicator (Red-Green)	R5,18	350-0532	2	Resistor (470-Ohm, 1/2 Watt)
DS3	322-0157	1	Lamp, Indicator, (Red)	R6,8	350-0537	2	Resistor (1200-Ohm, 1/2 Watt)
DS4	322-0172	1	Lamp, Indicator (Green)	R7	350-0382	1	Resistor (620-Ohm, 1/2 Watt)
CR1	359-0032	1	Diode, Zener - 8.2 Volt	R9	350-0394	1	Resistor (2000-Ohm, 1/2 Watt)
CR2	359-0016	1	Diode, Zener - 6.8 Volt	R10	350-0418	1	Resistor (20,000-Ohm, 1/2 Watt)
CR3	359-0002	1	Diode, Zener - 13 Volt	R11,13,16	350-0548	5	Resistor (10,000-Ohm, 1/2 Watt)
CR4-8	357-0004	5	Rectifier, Diode - 400 Volt 400 MA	17,21			
IC1	367-0017	1	Integrated Circuit, Counter	R12	350-0437	1	Resistor (120,000-Ohm, 1/2 Watt)
IC2	367-0016	1	Integrated Circuit, Timing	R14,15	350-0538	2	Resistor (1,000-Ohm, 1/2 Watt)
Q1	362-0038	1	Transistor, Power	R19	350-0380	1	Resistor (510-Ohm, 1/2 Watt)
Q2,3,4	362-0011	3	Transistor, Signal	R20	350-0387	1	Resistor (1,000-Ohm, 1/2 Watt)
				C3	356-0051	1	Capacitor, Electrolytic (8.8 Mfd., 35 Volt)
					322-0175	4	Receptacle, Lamp

General Information

For parts or service, contact the dealer from whom you purchased this equipment or refer to your Nearest Authorized Onan Parts and Service Center.

To avoid errors or delay in filling your parts order, always give the MODEL, SPEC NO. and SERIAL NO. from the Onan nameplate.

The diagram shows a rectangular nameplate with two circular mounting holes at the top. The Onan logo is at the top left. Below it is a large rectangular field labeled "MODEL AND SPEC NO.". Below that is a smaller rectangular field labeled "SERIAL NO.". The bottom right corner of the nameplate is folded over.

IM-1149

For handy reference, insert "YOUR" nameplate information in the spaces above.

Std. #36D

Index

- Actuator, Governor 10
Alternator 11
Ammeter - AC 67, 69, 71, 73
Ammeter - DC 61, 63, 65
- Base, Sub 36
Bell, End 51, 53
Belt, Drive 11
Board, Bypass 65
Board, Cyle Cranker 65
Board, Engine Monitor 63, 65
Board, Engine Shutdown 65
Board, Magnetic Sensor 63, 65
Board, Over Speed Sensor 63, 65
Board, Over Under Voltage 63, 65
Board, Relay Assembly 63, 65
Board, Remote Indicator 65
Board, Standard Cranker 65
Board, Start Disconnect 63, 65
Board, Terminal 9
Board, Time Delay 63, 65
Breaker, Circuit 81, 83
Bus Bar Assembly 53
- Cable, Battery 7
Cap, Radiator 13, 15, 17
Chassis 39, 41
Cleaner, Air 3, 4
Contactor 25, 27, 29
Control, Engine 61, 63, 65
Control, Generator 67, 69, 71, 73
Controller, Governor 10
- Disk, Drive 49, 51
- Elbow, Exhaust 7, 43, 45
Element, Cleaner, Air 3, 4
Element, Fuel/Water Separator 31
Element, Lube Oil Filter 30
- Fan, Cooling 13, 15, 17
Filter, Oil 30
Filter, Voltage Regulator 78, 79
Frame, Battery 31, 37
- Gauge, Fuel - Level 36
Gauge, Pressure - Fuel 32
Gauge, Pressure - Oil 61, 63, 65
Gauge, Temperature 61, 63, 65
Generator 51, 53
Governor, Electronic 10
Guard, Belt 9, 19, 21
Guard, Fan 13, 15, 17
- Harness, Engine 7
Heater, Control 84
Heater, Generator 60
Heater, Water 25, 27, 29
Housing, Control 75
Housing, Set 47
- Indicator, Service, Air 3, 4
Introduction 2
- Light, Indicator 63, 67, 69, 71, 73
Line, Fuel - Incoming 9
Line, Fuel - Return 9
- Meter, Frequency 67, 69, 71, 73
Meter, Time Totalizing 63, 65, 67, 69, 71, 73
Module, Indicator, Fault 63
Mount, Vibration 39, 41
Muffler, Exhaust 43, 45
- Panel, Housing - Front 13, 15, 17
Parts, Replacement - Engine 2
Pick Up, Magnetic 10, 55, 56
Point Assembly, Overspeed 54, 56
- Rack, Battery 37
Radiator 13, 15, 17
Regulator, Alternator 10
Regulator, Voltage 67, 69, 71, 73
Rotor, Exciter 49, 51, 57
Rotor, Generator 49, 51
- Sender, Pressure - Oil 9
Sender, Tach 9
Sender, Temperature 9
Separator, Fuel/Water 31
Shield, Heat 43, 45
Solenoid, Start 2A, 65
Starter 7
Stator, Exciter 49, 51
Stator, Generator 49, 51
Suppressor, Voltage 58, 59
Switch, Level - Coolant 22
Switch, Over Speed 54
Switch, Pressure - Oil 9
Switch, Selector 63, 65
Switch, Temperature 9, 23
- Table, Data - Electrical 2
Table, Data - Set 2
Tachometer 63, 65
Tang, Drive - Tachometer 9
Tank, Expansion 19
Tank, Fuel - Day 33, 35, 36
Tank, Standpipe 21
Throttle, Vernier 5
Transducer, Watt 77
Transformer, Current 74
- Valve, Control - Temperature 21
Valve, Drain 7
Valve, Float 35
Valve, Globe 19, 21
Valve, Solenoid 19, 21, 35
Voltmeter 67, 69, 71, 73
- Wattmeter 77
Wheel, Sensor - Overspeed 55, 56

Introduction

This Parts Manual applies to the Standard Sets Listed below. The illustrations are arranged in groups of related items, and each part or assembly is identified by a Reference Number. All parts illustrated are typical, and unless otherwise mentioned in the description column the parts are interchangeable between models.

These typical illustrations are subject to change and reflect only the latest replacement parts arrangement. The Right and Left sides of the Set are determined by FACING the FRONT of the Set (Engine End)

Set Data Table

MODEL IDENTIFICATION	RATING	RPM RATING	BATTERY VOLTAGE
210.0 DFM - */ * @	210,000 WATTS	1500 RPM	24 VDC
230.0 DFM - */ * @	230,000 WATTS	1500 RPM	24 VDC
250.0 DFM - */ * @	250,000 WATTS	1800 RPM	24 VDC
275.0 DFM - */ * @	275,000 WATTS	1500 RPM	24 VDC
275.0 DFM - */ * @	275,000 WATTS	1800 RPM	24 VDC
300.0 DFM - */ * @	300,000 WATTS	1800 RPM	24 VDC

Electrical Data Table

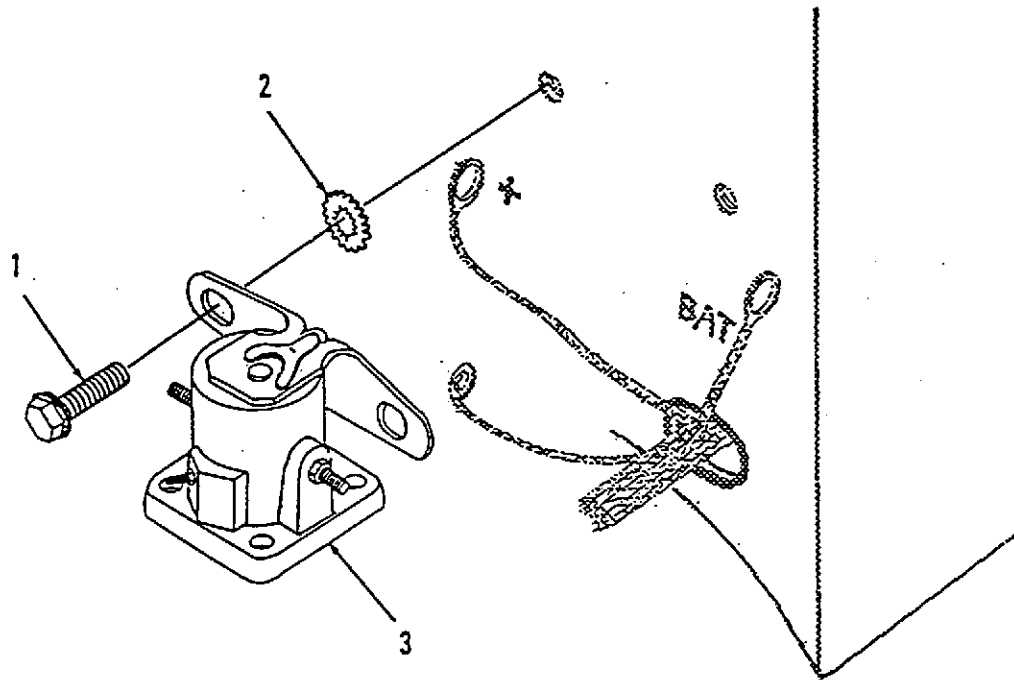
*VOLTAGE CODE	VOLTS	HERTZ	WIRE	PHASE	NOTES
5D	120/240	60	4	3	
6D	240/480	60	4	3	
7	220/380	60	4	3	
9X	347/600	60	4	3	
17	120/208	60	12	3	+
	127/220	60	12	3	
	139/240	60	12	3	
	240/416	60	12	3	
	254/440	60	12	3	
	277/480	60	12	3	
517	110/190	50	12	3	+
	115/200	50	12	3	
	120/208	50	12	3	
	127/220	50	12	3	
	220/380	50	12	3	
	230/400	50	12	3	
	240/416	50	12	3	
	254/440	50	12	3	
17R50	Same as 17	60	12	3	&

- * - Voltage Codes follow Model Letter designations.
- # - Specification Number: Number 1 is Standard, all others indicate variations.
- @ - Specification Letter: Letter advances (A to B, B to C, etc) with major manufacturing changes.
- +
- The Stators are Reconnectable.
- * - Penn State Sets Only. Special Parts identified in manual when used.

Engine Replacement Parts

All Engine replacement parts must be ordered from the Engine Manufacturer, except those modified or added by Onan. When ordering engine parts, refer to the Engine Manufacturer's Nameplate and supply the Model, Specification, Serial Numbers and other available information. Refer to the Engine Manufacturer's Manuals for your nearest authorized Parts Distributor; or contact the Onan Distributor from whom you purchased this set, for assistance in ordering the replacement parts.

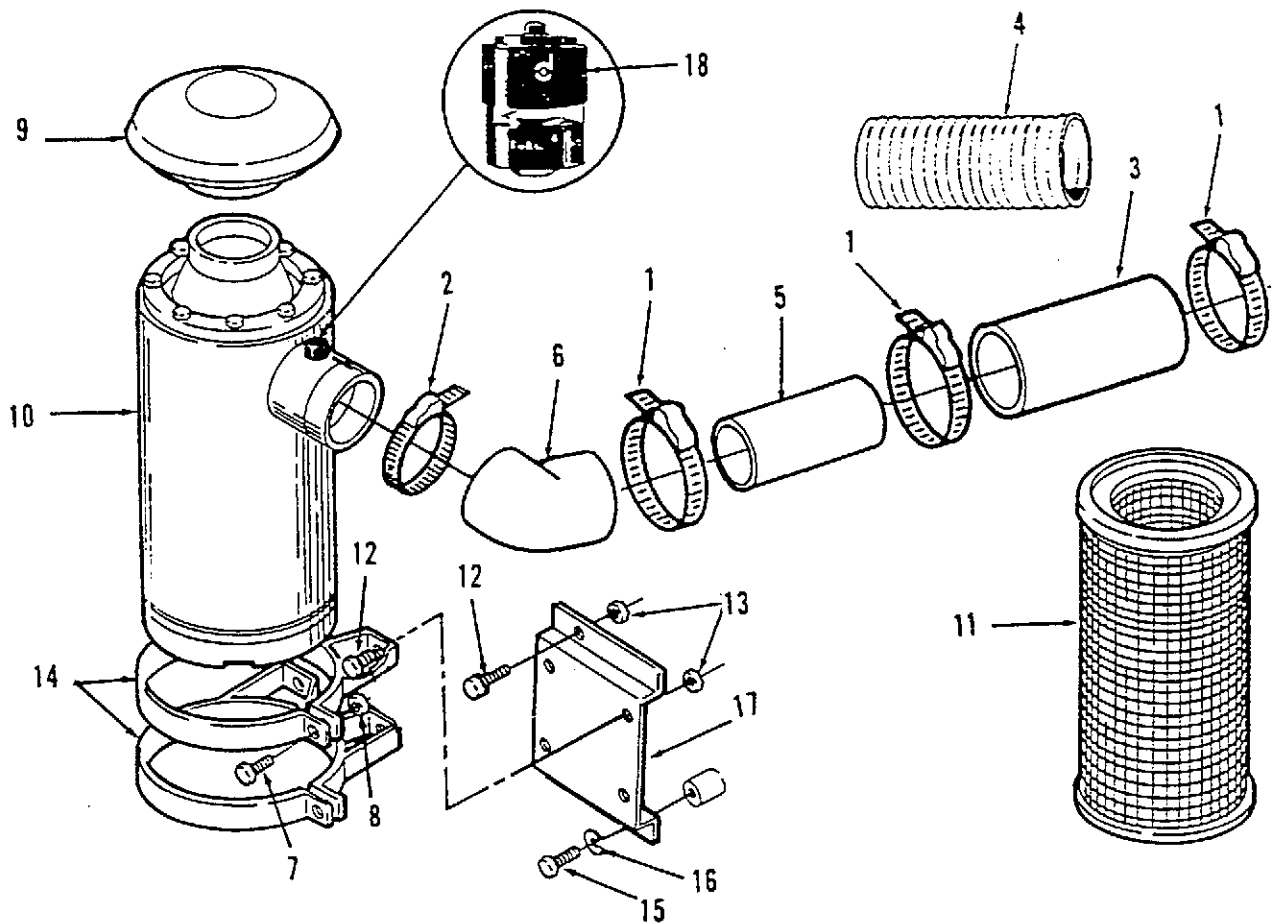
Start Solenoid
Begin Spec N



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	821-0010	2	Screw, Self-locking - Hex Head (1/4-20 x 1/2")	2	856-0006	2	Washer, Lock - EIT (1/4")
				3	307-2167	1	Solenoid, Start (K2)

Just a note to ourse.
But Eng W.D calls it
a KA. IT really is K2

Air Cleaner
 210 kW and 230 kW 50 Hz Sets
 250 kW and 275 kW 60 Hz Sets

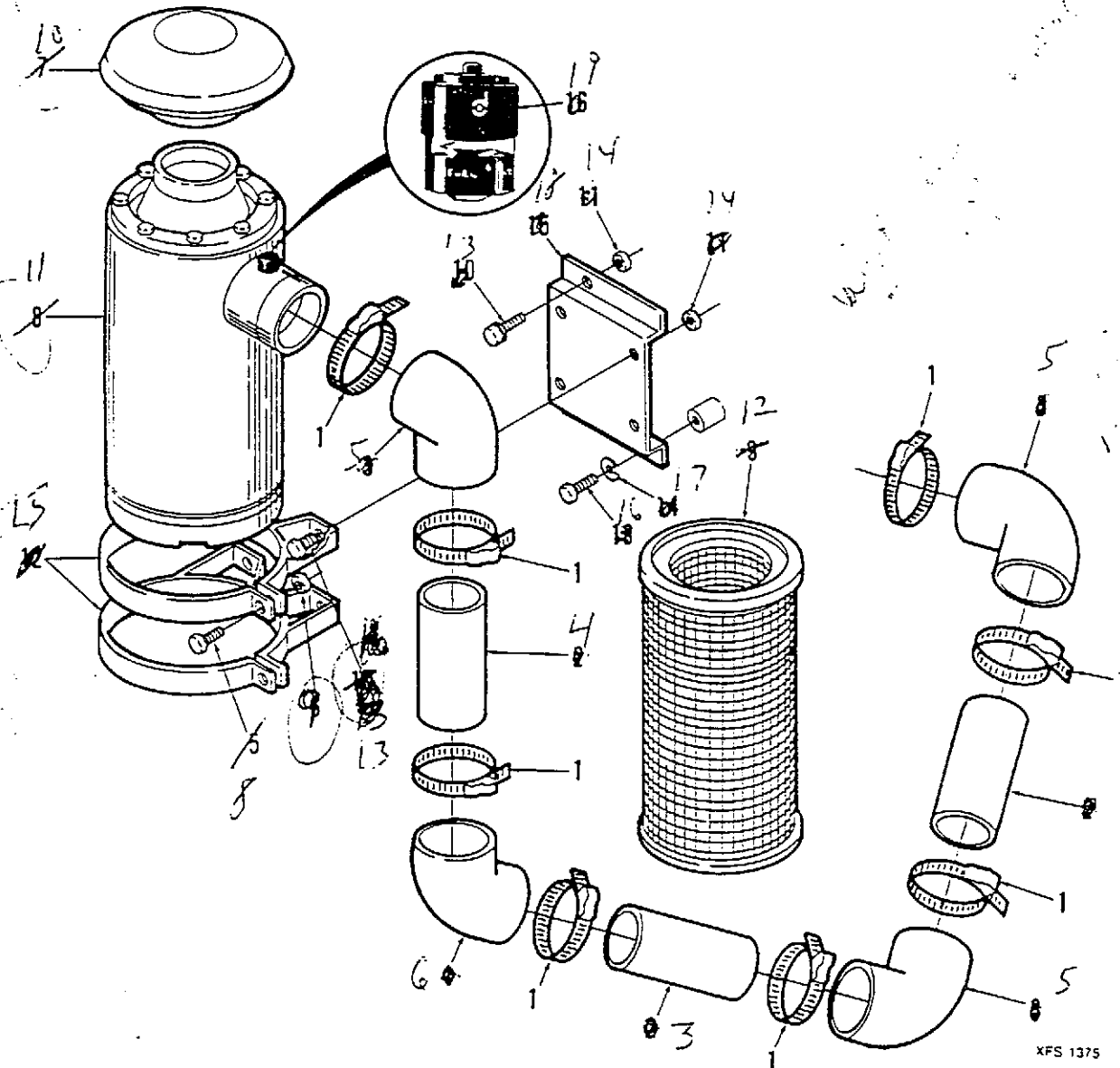


M1290

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0863	2	Clamp, Hose - Begin July 1981	10	140-1346	1	Air Cleaner (Includes Element)
2	503-0863	2	Clamp, Hose	11	140-1376	1	Element
3	503-0806	1	Hose - Begin July 1981	12	821-0029	5	Screw, Self-locking - Hex (3/8-16 x 3/4")
4	503-0855	1	Hose - 1970 Thru June 1981	13	870-0281	5	Nut, Self-locking - Hex
5	140-1795	1	Tube - Begin July 1981	14	140-1345	2	Band, Mounting
6	503-1092	1	Elbow, Hose - Begin July 1981	15	801-0119	2	Screw, Cap - Hex Head (5/16-18 x 1")
7	800-0032	2	Screw, Cap - Hex Head (5/16-18 x 1-3/4")	16	850-0070	2	Washer, Lock - Spring (5/8")
8	870-0257	2	Nut, Self-locking - Hex (5/16-18)	17	140-1349	1	Bracket, Mounting
9	140-1347	1	Cap, Air Cleaner	18	140-1548	1	Indicator, Service

Pencil up & glue - only 2
Air Cleaner
 275 kW 50 Hz and 300kW 60 Hz Sets

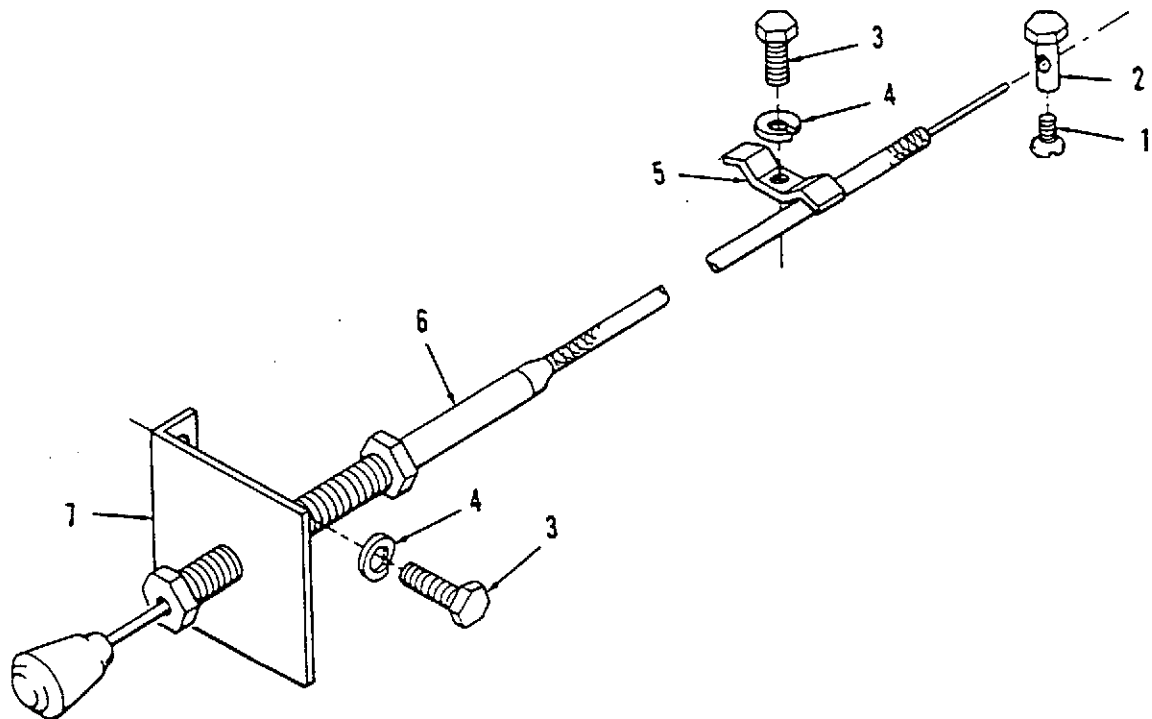
Good worker would check it out!



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0863	8	Clamp, Hose
2	140-1816	1	Tube, Air
3	140-1817	1	Tube, Air
4	140-1578	1	Tube, Air
5	140-1415	3	Elbow, Hose - 90 Degree
6	503-1092	1	Elbow, Hose - 45 Degree
8	800-0032	2	Screw, Cap - Hex Head (5/16-18 x 1-3/4")
9	870-0257	2	Nut, Self-locking - Hex (5/16-18)
10	140-1347	1	Cap, Air Cleaner

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
11	140-1346	1	Cleaner, Air (Includes Element)
12	140-1376	1	Element
13	821-0029	5	Screw, Self-locking - Hex (3/8-16 x 3/4")
14	870-0281	5	Nut, Self-locking - Hex
15	140-1345	2	Band, Mounting
16	801-0119	2	Screw, Cap - Hex Head (5/16-18 x 1")
17	850-0070	2	Washer, Lock - Spring (5/8")
18	140-1349	1	Bracket, Mounting
19	140-1548	1	Indicator, Service

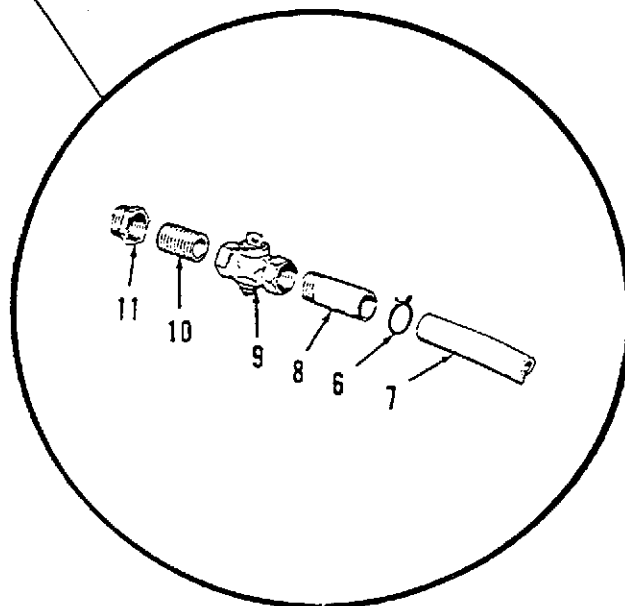
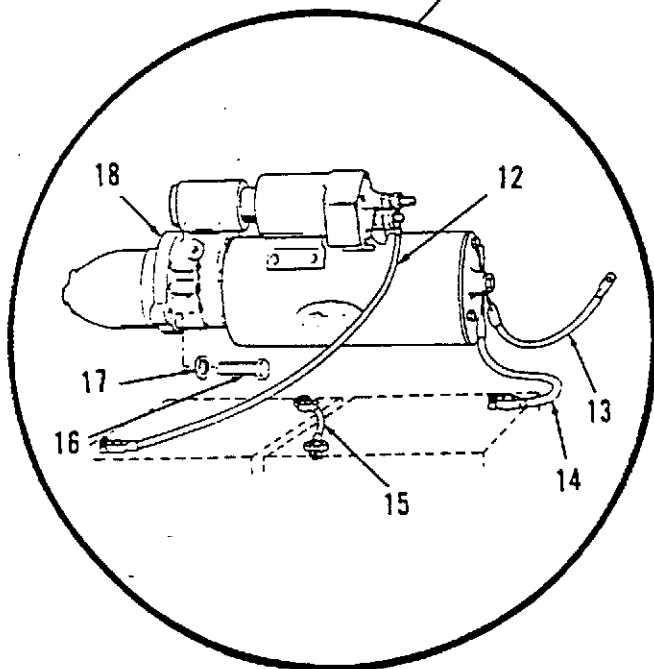
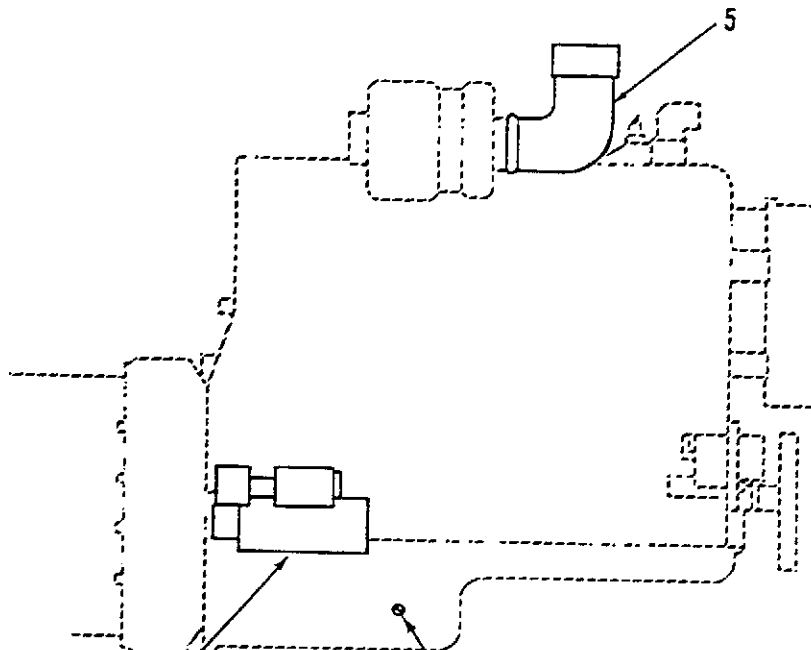
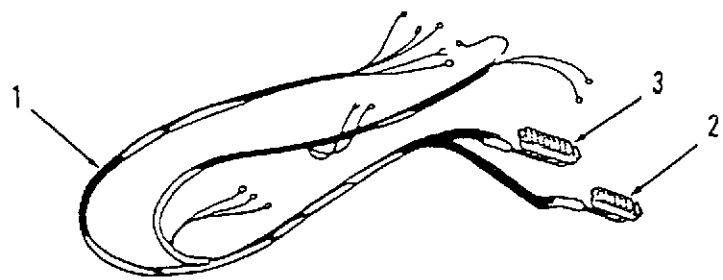
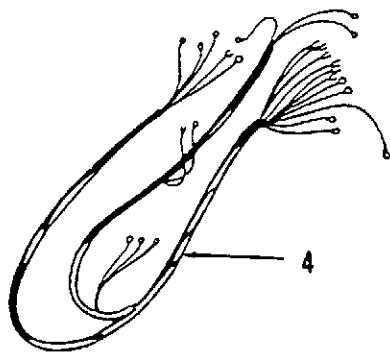
Vernier Throttle



M1179

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	812-0075	1	Screw, Machine - Round Head (#8-32 x 1/2")	4	850-0040	3	Washer, Lock - Spring (1/4")
2	152-0158	1	Swivel	5	152-0036	1	Clamp, Cable
3	800-0005	3	Screw, Cap - Hex Head (1/4-20 x 3/4")	6	152-0120	1	Throttle, Vernier
				7	151-0230	1	Bracket, Mounting

Miscellaneous Engine Parts Left Side



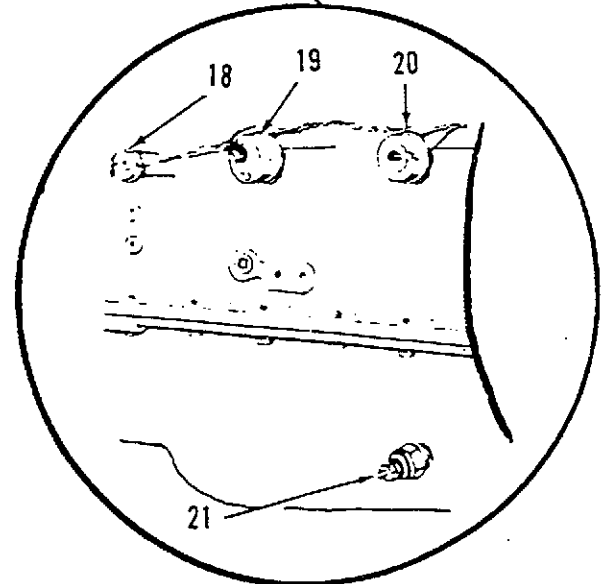
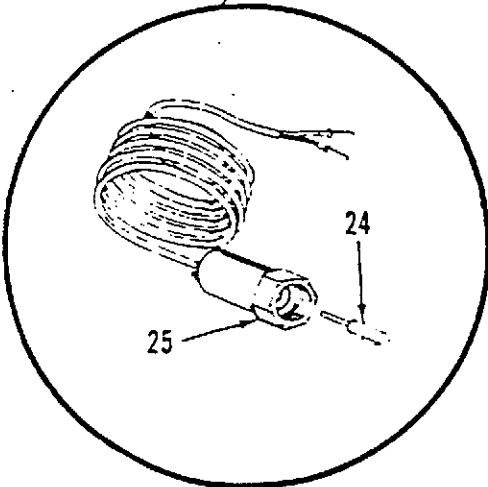
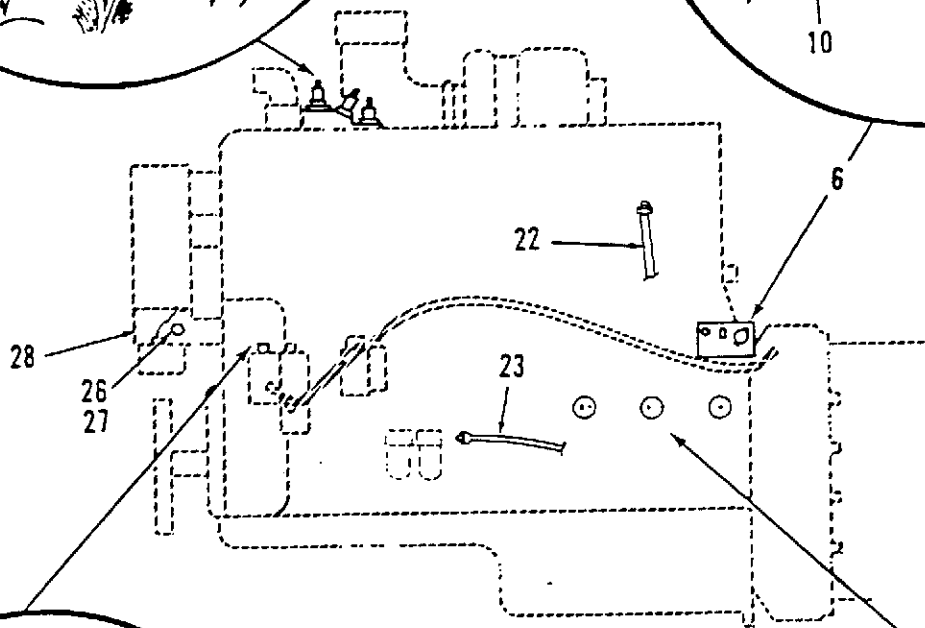
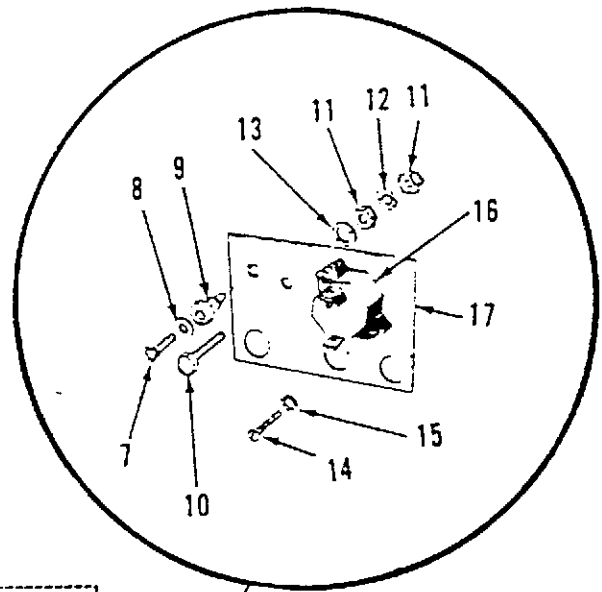
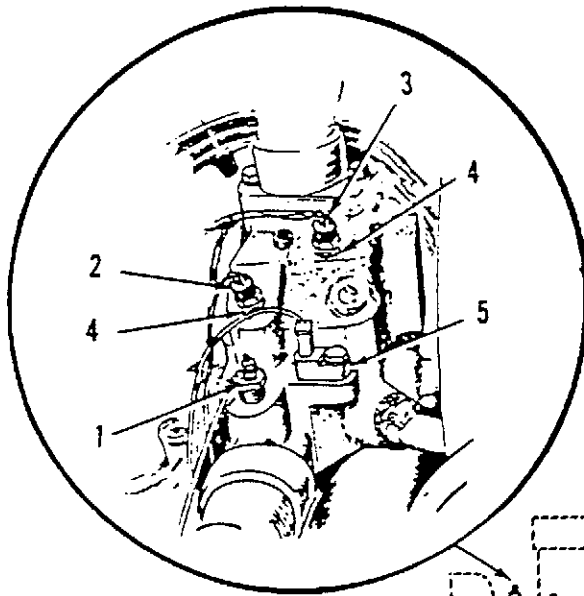
M1239

Miscellaneous Engine Parts Left Side

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	338-2067	1	Harness, Wiring - Begin Spec N (Includes Connectors)	9	504-0011	1	Valve
2	323-1304	1	Housing, Connector - 6 Place	10	505-0100	1	Nipple, Pipe - Close
	323-1200	6	Contact, Pin	11	505-0022	1	Bushing, Reducer - Hex
3	323-1306	1	Housing, Connector - 8 Place	12	416-0636	1	Cable, Battery - Positive
	323-1200	8	Contact, Pin	13	416-0632	1	Cable, Electrical - Ground
4	338-0957	1	Harness, Wiring - Spec H Thru M	14	416-0639	1	Cable, Battery - Negative
5	155-1035	1	Elbow, Exhaust	15	416-0473	1	Cable, Electrical - Jumper
6	503-0197	1	Clamp, Loop	16	800-0135	3	Screw, Cap - Hex Head (5/16-11 x 2-1/4")
7	503-0888	1	Hose	17	850-0070	3	Washer, Lock - Spring (5/8")
8	505-0185	1	Nipple, Pipe - Half	18	191-1348	1	Starter - 24 VDC (Universal Reg/sem)

1588

Miscellaneous Engine Parts Right Side



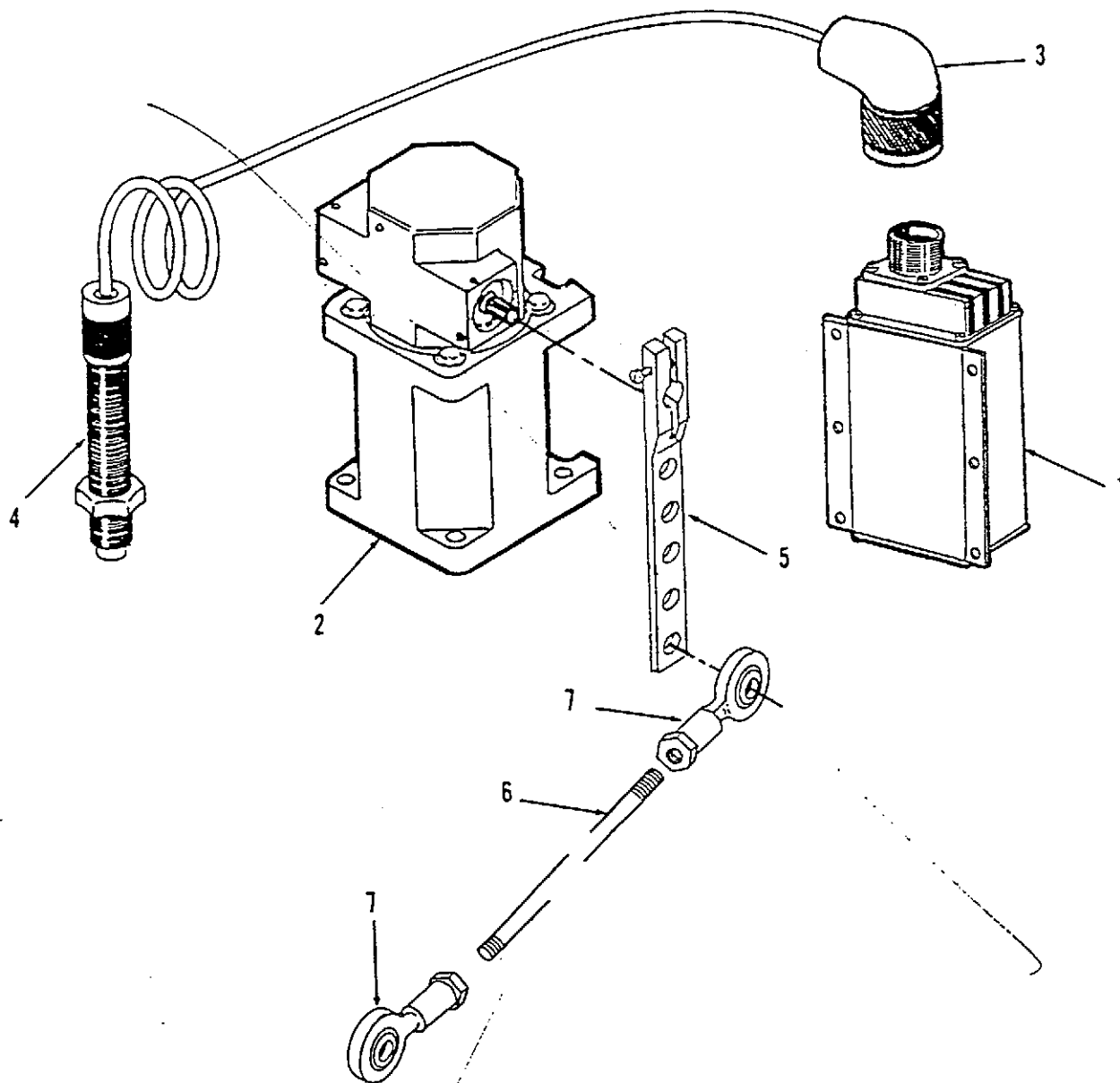
M1240

Miscellaneous Engine Parts Right Side

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Sender, Temperature - Engine Coolant (E2)	14	813-0103	2	*Screw, Machine - Round Head (#10-32 x 3/4")
	193-0247	1	Begin Spec K	15	850-0030	2	*Washer, Lock - Spring (#10)
	193-0109	1	Spec H - J	16	320-0240	1	*Breaker, Circuit
2	309-0178	1	Switch, Thermostatic - Coolant Temperature (S2)	17	332-1382	1	*Board, Terminal
3	309-0179	1	Switch, Thermostatic - Coolant Temperature - Shutdown (S6)	18	309-0272	1	Switch, Pressure - Oil - Alarm (S5)
4	505-0117	1	Bushing, Reducer - Flush	19			Sender, Pressure - Oil (E1)
5	309-0269	1	Switch, Temperature - Low Engine Temperature (S4)		193-0244	1	Begin Spec K
6	332-1383	1	Terminal Assembly (Includes Parts Marked*)		193-0108	1	Spec H - J
7	809-0035	1	*Screw, Tapping - Round Head (#8 x 3/4")	20	309-0169	1	Switch, Pressure - Oil - Shutdown (S1)
8	508-0015	1	*Washer, Insulating	21			Sender, Temperature - Oil (E5)
9	870-0196	1	*Nut, Insulated		193-0249	1	Begin Spec K
10	800-0005	1	*Screw, Cap - Hex Head (1/4-20 x 3/4")		193-0109	1	Spec H - J
11	862-0001	2	*Nut, Hex (1/4-20)	22	501-0216	1	Line, Fuel - Return
12	856-0006	1	*Washer, Lock - EIT (1/4")	23	501-0084	1	Line, Fuel - Incoming
13	850-0040	1	*Washer, Lock - Spring (1/4")	24	302-0753	1	Tang, Drive - Tachometer
				25	302-0750	1	Sender - Tachometer
				26	800-0130	1	Screw, Cap - Hex Head (5/8-11 x 1")
				27	850-0070	1	Washer, Lock - Spring (5/8")
				28	191-1144	1	Guard, Belt

*- Parts included in Circuit Breaker Assembly.

Electronic Governor

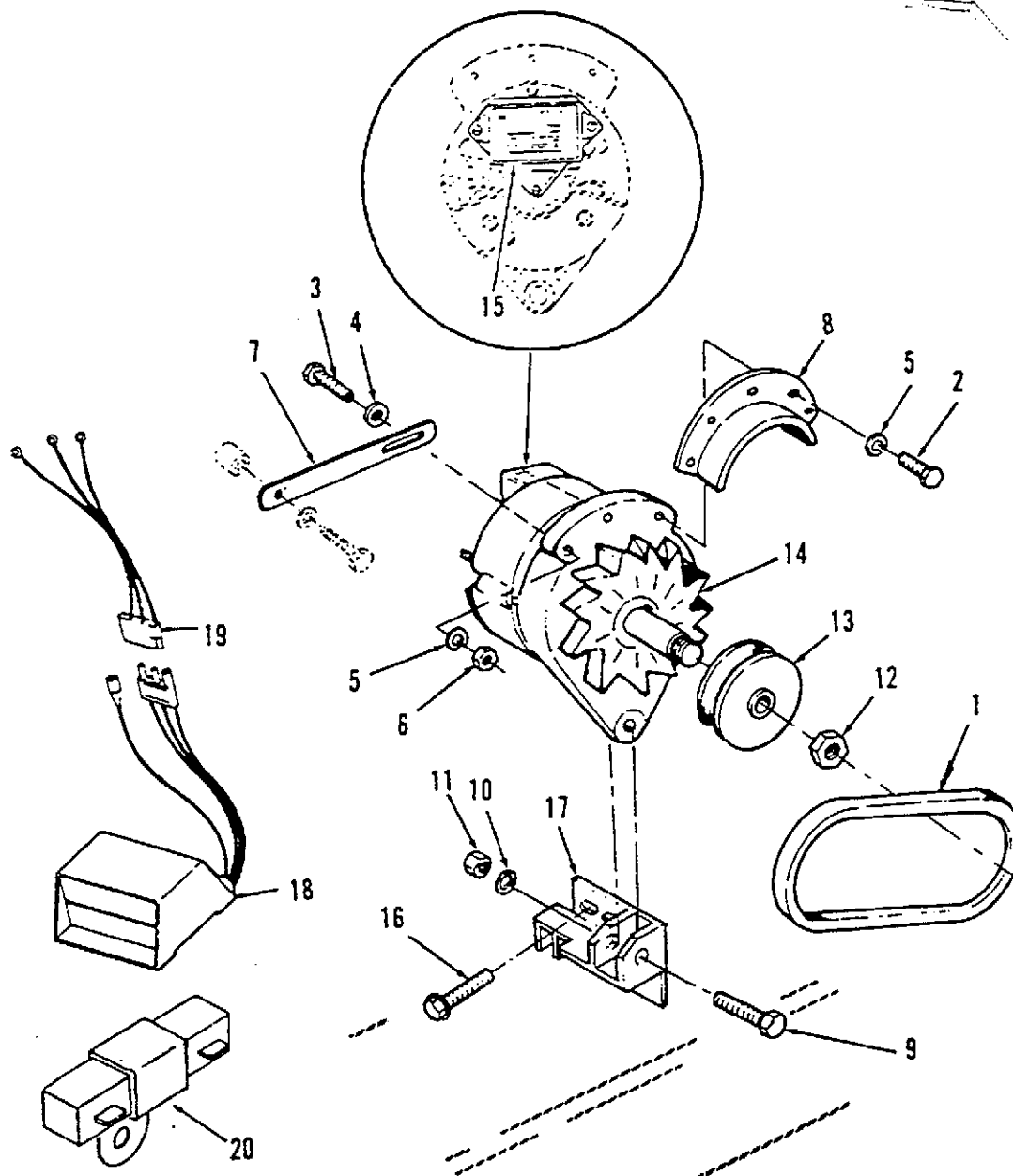


FS1272-1

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	151-0399	1	Controller
2	151-0419	1	Actuator
3	338-0989	1	Harness Wiring

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
4	151-0411	1	Pickup, Magnetic
5	151-0441	1	Lever
6	151-0442	1	Rod, Threaded
7	151-0443	2	Joint, Ball

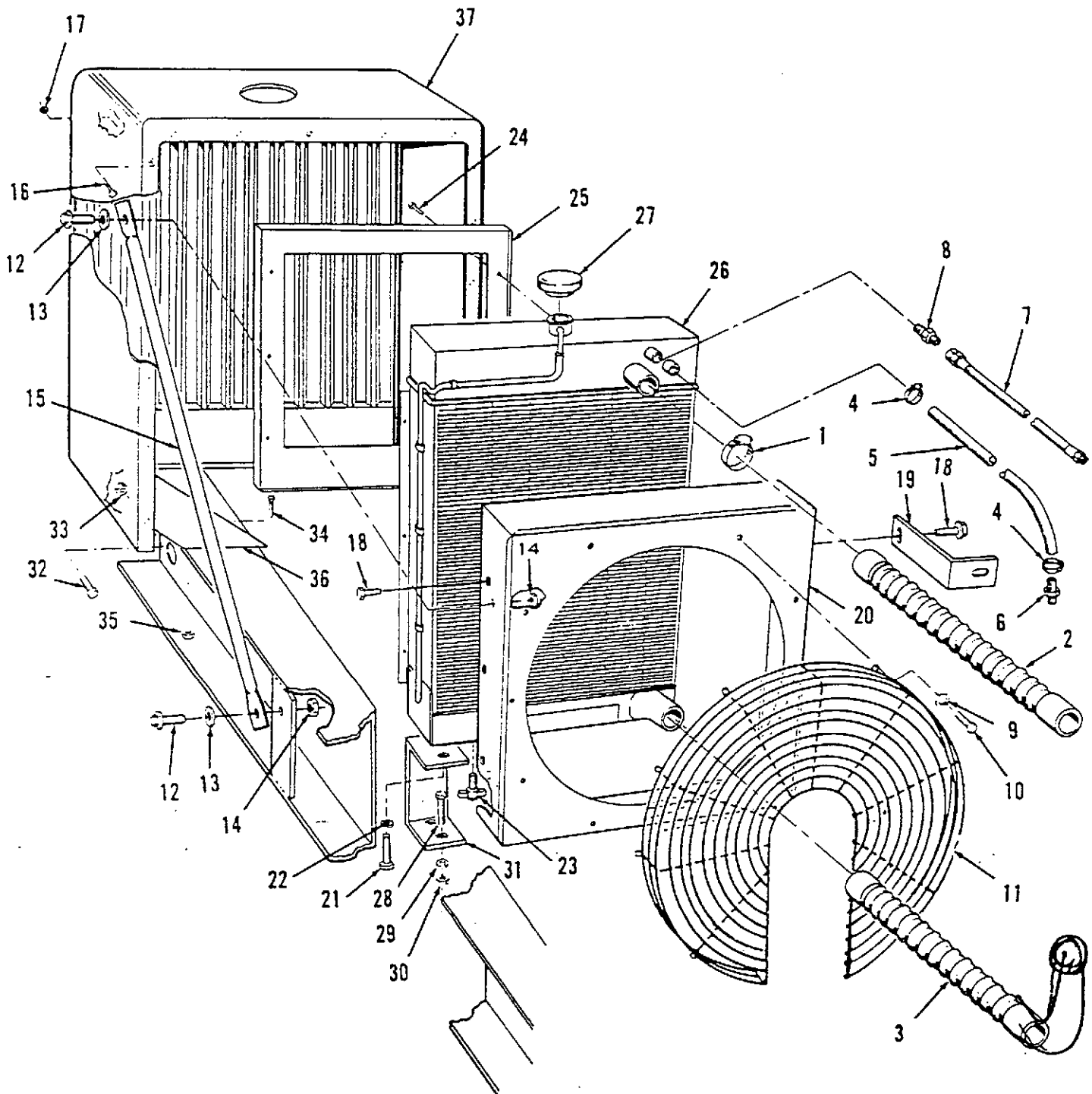
Alternator



ES1138

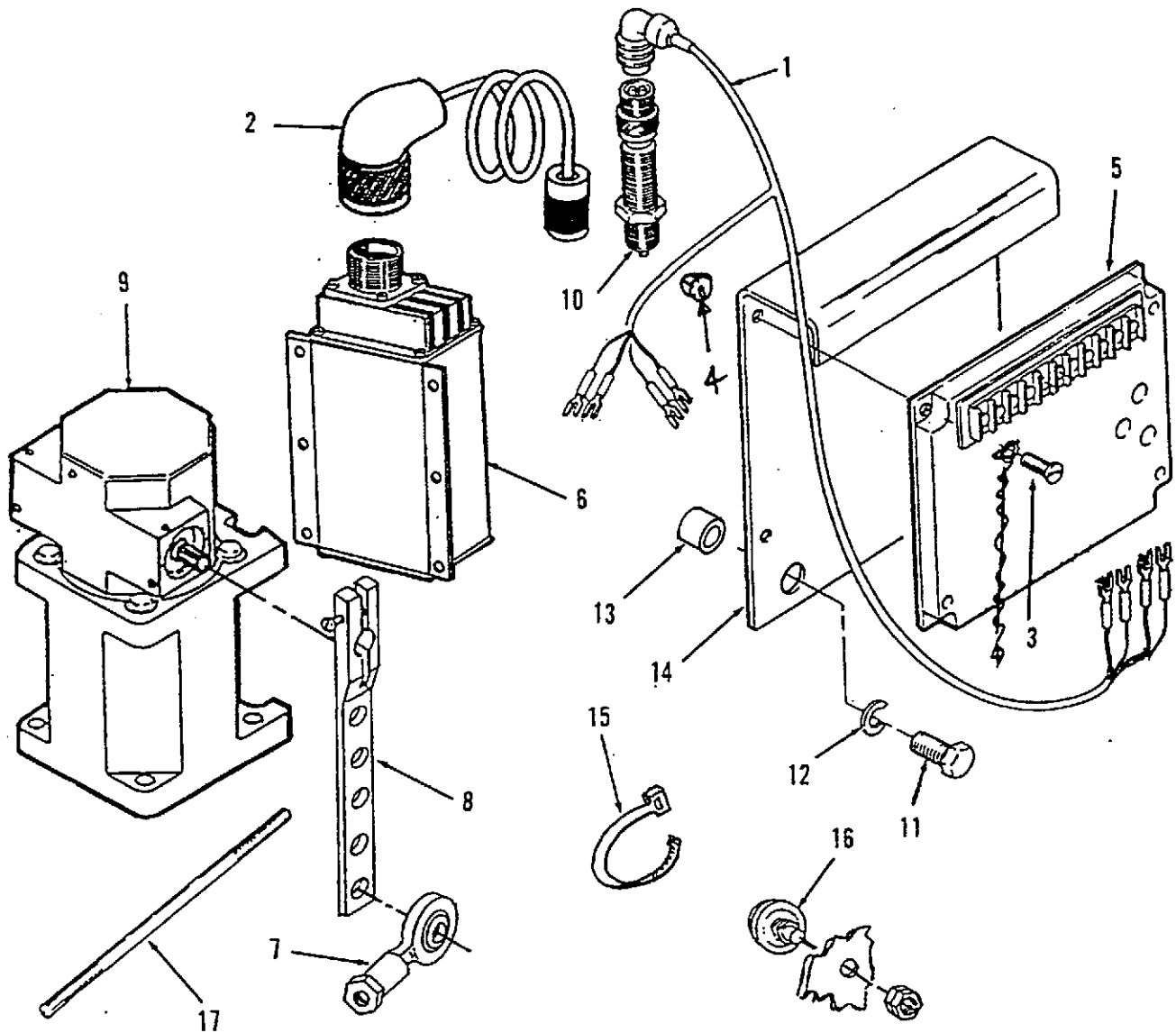
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	511-0084	1	Belt	13	191-0781	1	Pulley
2	821-0014	1	Screw, Self-locking - Hex (5/16-18 x 1/2")	14	191-0688	1	Alternator - Standard
3	800-0030	1	Screw, Cap - Hex Head (5/16-18 x 1-1/4")	15	191-1258	1	Marine
4	526-0030	1	Washer, Flat (5/16")	16	191-0733	1	Regulator, Voltage (Used with Standard Alternator)
5	850-0045	2	Washer, Lock - Spring (5/16")	17	821-0029	2	Screw, Self-locking - Hex (3/8-16 x 3/4")
6	862-0015	1	Nut, Hex (5/16-18)	18	191-1141	1	Bracket, Mounting
7	191-0869	1	Strap, Adjusting	19	191-0548	1	Regulator, Voltage (Used with Marine Alternator)
8	191-0725	1	Guard, Belt	20	191-0681	1	Cable, Electrical (Used with Marine Alternator)
9	800-0095	1	Screw, Cap - Hex Head (1/2-13 x 2-1/4")	21	191-0550	1	Resistor (Used with Marine Alternator)
10	850-0060	1	Washer, Lock - Spring (1/2")				
11	862-0016	1	Nut, Hex (1/2-13)				
12	868-0007	1	Nut, Hex (5/8-18)				

Cooling System - Radiator
210 kW 50 Hz and 250 kW 60 Hz Sets



XCS1132

Electric Governor

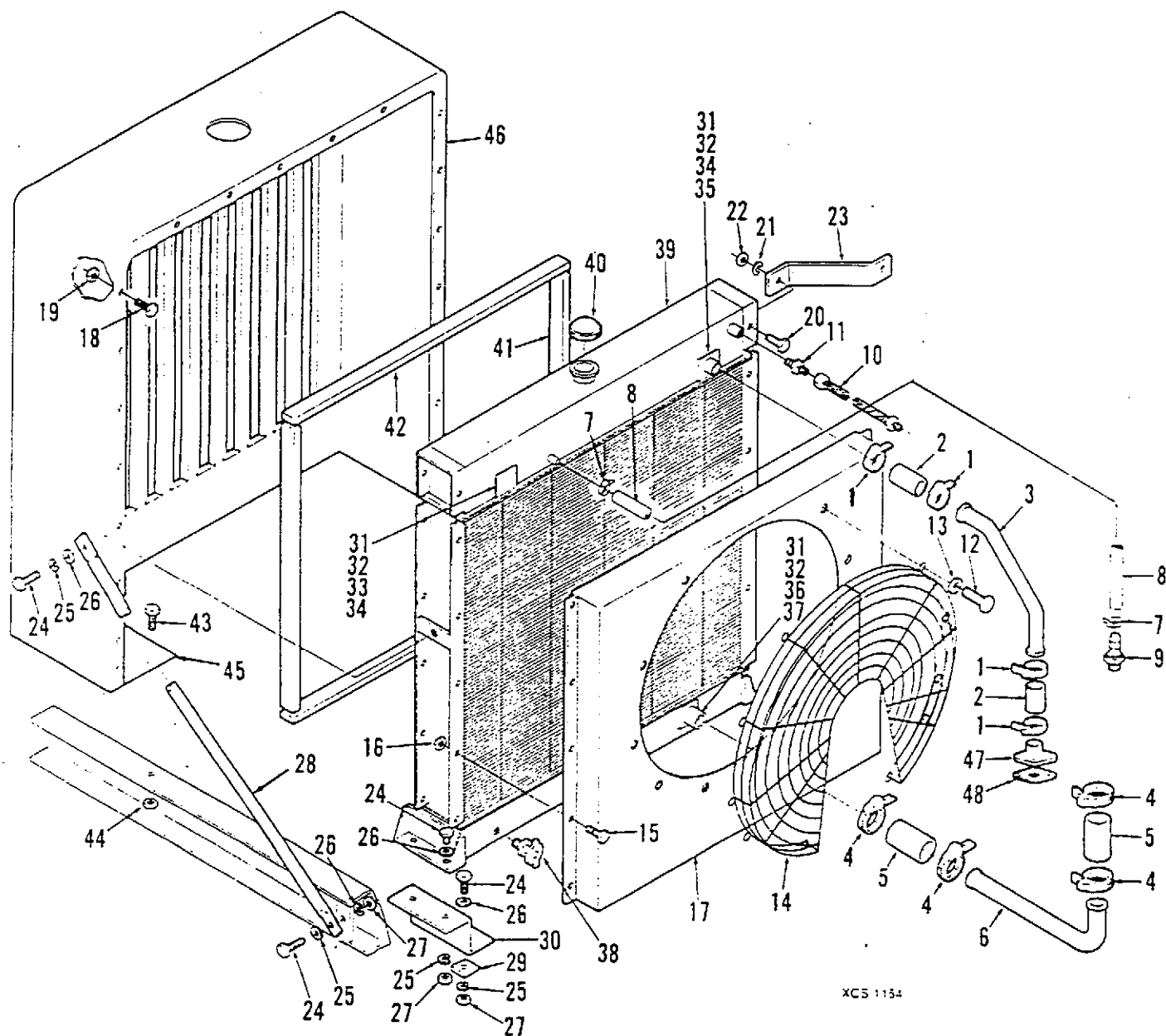


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	338-1777	1	Harness, Wiring - Begin Spec N	8	151-0441	1	Lever - Spec H Thru M
2	338-1086	1	Harness, Wiring - Spec H Thru M	9	151-0419	1	Actuator - Spec H Thru M
3	813-0103	4	Screw, Machine - Round Head (#10-32 x 3/4")	10	151-0411	1	Pickup, Magnetic
4	870-0131	4	Nut, Self-locking, Hex (#10-32)	11	800-0151	2	Screw, Cap - Hex Head (3/4-10 x 1")
5	151-0637	1	Controller, Governor - Begin Spec N	12	850-0079	2	Washer, Lock - Spring (3/4")
6	151-0399	1	Controller, Governor - Spec H Thru M	13	370-4040	2	Spacer, Sleeve
7	151-0443	2	Joint, Ball - Spec H Thru M	14	150-2007	1	Bracket, Mounting - Begin Spec N
				15	332-1445	9	Tie, Cable
				16	151-0402	1	Potentiometer - Speed Control - Spec H Thru M (Mounted in Set Control)
				17	151-0442	1	Rod, Threaded - Spec H Thru M

Cooling System - Radiator
210 kW 50 Hz and 250 kW 60 Hz Sets

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0354	4	Clamp, Hose	20		1	Shroud, Fan
2	503-0752	1	Hose, Upper		130-1017	1	Opening for 34" Fan
3	503-0858	1	Hose, Lower <i>Revised</i>		130-0846	1	Opening for 32" Fan
4	503-0429	2	Clamp, Hose	21	800-0130	4	Screw, Cap - Hex Head (5/8-11 x 1")
5	503-0877	1	Hose	22	850-0070	4	Washer, Lock - Spring (5/8")
6	505-0759	1	Adapter, Pipe to Hose	23	504-0028	1	Cock, Drain
7	501-0087	1	Line, Fuel	24	821-0014	16	Screw, Self-locking - HEX (5/16-18 x 1/2")
8	502-0184	1	Connector, Pipe	25	130-0842	1	Shroud, Radiator
9	821-0018	8	Screw, Self-locking - Hex (1/4-20 x 5/8")	26	130-0992	1	Radiator (Include Cap)
10	526-0018	8	Washer, Flat (1/4")	27	130-0449	1	Cap, Radiator
11	130-0924	1	Guard, Fan	28	800-0092	4	Screw, Cap - Hex Head (1/2-13 x 1-1/2")
12	821-0029	4	Screw, Self-locking - Hex (3/8-16 x 3/4")	29	850-0060	4	Washer, Lock - Spring (1/2")
13	526-0077	4	Washer, Flat (3/8")	30	862-0016	4	Nut, Hex (1/2-13)
14	870-0281	4	Nut, Self-locking - Hex (3/8-16)	31	130-1412	2	Bracket, Support
15	405-1888	2	Brace	32	821-0016	4	Screw, Self-locking - Hex (5/16-18 x 3/4")
16	821-0016	4	Screw, Self-locking - Hex (5/16-18 x 3/4")	33	870-0257	4	Nut, Self-locking - Hex (5/16-18)
17	870-0257	4	Nut, Self-locking - Hex (5/16-18)	34	800-0030	4	Screw, Cap - Hex Head (5/16-18 x 1-1/4")
18	821-0016	6	Screw, Self-locking - Hex (5/16-18 x 3/4")	35	870-0048	4	Nut, Self-locking - Hex (5/16-18)
19	130-0848	2	Brace	36	405-2016	2	Bracket, Mounting
				37	405-1884	1	Panel, Housing - Front

Cooling System - Radiator
 230 kW and 275 kW 50 Hz Sets
 275 kW and 300 kW 60 Hz Sets

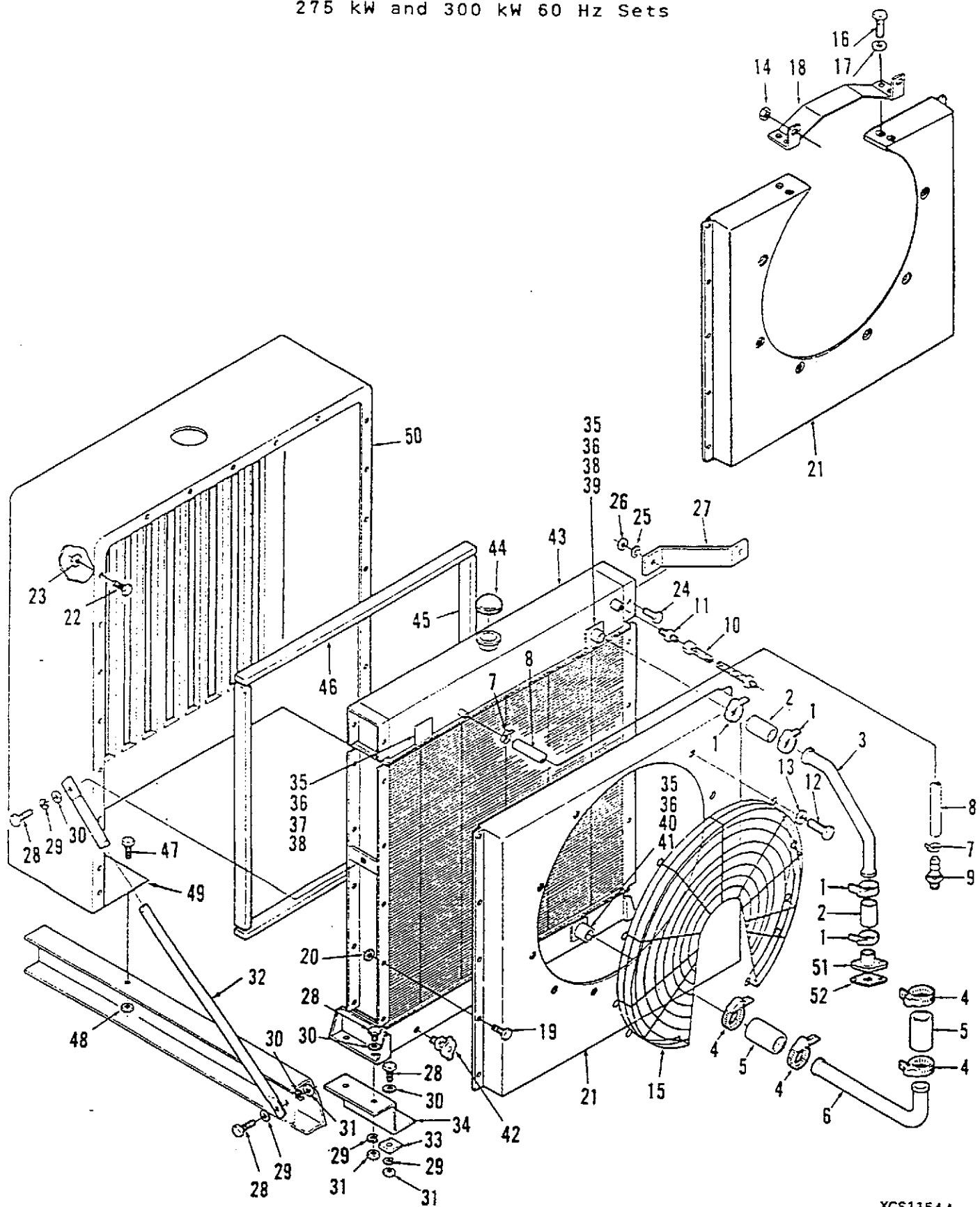


XCS 1154

Cooling System - Radiator
230 kW and 275 kW 50 Hz Sets
275 kW and 300 kW 60 Hz Sets

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0908	4	Clamp, Hose	20	800-0092	2	Screw, Cap - Hex Head (1/2-13 x 1-1/2")
2	503-0904	2	Hose, Upper	21	850-0060	2	Washer, Lock - Spring (1/2")
3			Tube, Upper	22	862-0016	2	Nut, Hex (1/2-13)
	130-1306	1	230 kW 50 Hz Set	23	130-0996	2	Bracket, Support
	130-1306	1	275 kW 60 Hz Set	24	800-0133	12	Screw, Cap - Hex Head (5/8-11 x 1-3/4")
	130-2111	1	275 kW 50 Hz Set	25	850-0070	12	Washer, Lock - Spring (5/8")
	130-2111	1	300 kW 60 Hz Set	26	526-0112	24	Washer, Flat (5/8")
4	503-0998	4	Clamp, Hose	27	862-0007	10	Nut, Hex (5/8-11)
5	503-0906	2	Hose, Lower	28	130-1293	2	Brace, Support
6			Tube, Lower	29	403-1396	4	Washer, Bevel
	130-1300	1	230 kW 50 Hz Set	30	130-1292	2	Bracket, Support
	130-1300	1	275 kW 60 Hz Set	31	800-0071	12	Screw, Cap - Hex Head (7/16-14 x 1")
	130-2110	1	275 kW 50 Hz Set	32	850-0055	12	Washer, Lock - Spring (7/16")
	130-2110	1	300 kW 60 Hz Set	33	130-1307	1	Plate, Cover - Inlet
7	503-0429	2	Clamp, Hose	34	130-1194	2	Gasket
8	503-0853	1	Hose	35	130-1299	1	Adapter, Inlet
9	505-0759	1	Adapter, Pipe to Hose	36	130-1296	1	Adapter, Outlet
10	501-0087	1	Line, Fuel	37	130-1193	1	Gasket
11	502-0184	1	Connector, Pipe	38	504-0003	1	Cock, Drain
12	821-0018	8	Screw, Self-locking - Hex (1/4-20 x 5/8")	39	130-1011	1	Radiator (Include Cap)
13	526-0018	8	Washer, Flat (1/4")	40	130-0449	1	Cap, Radiator
14	130-0924	1	Guard, Fan	41	130-1006	2	Strip, Foam
15	821-0029	10	Screw, Self-locking - Hex (3/8-16 x 3/4")	42	130-1007	2	Strip, Foam
16	870-0281	10	Nut, Self-locking - Hex (3/8-16)	43	821-0029	4	Screw, Self-locking - Hex (5/16-18 x 1-1/8")
17			Shroud, Fan	44	870-0257	4	Nut, Self-locking - Hex (5/16-18)
	130-1936	1	230 kW 50 Hz Set	45			Bracket, Mounting - Front Par
	130-1936	1	275 kW 60 Hz Set		405-2236	1	Right Side
	130-2109	1	275 kW 50 Hz Set		405-2237	1	Left Side
	130-2109	1	300 kW 60 Hz Set	46	405-2228	1	Panel, Housing - Front
18	821-0016	6	Screw, Self-locking - Hex (5/16-18 x 3/4")	47	130-2112	1	Outlet, Engine
19	870-0257	6	Nut, Self-locking - Hex (5/16-18)	48	130-2113	1	Gasket

Cooling System - High Ambient
 230 kW and 275 kW 50 Hz Sets
 275 kW and 300 kW 60 Hz Sets

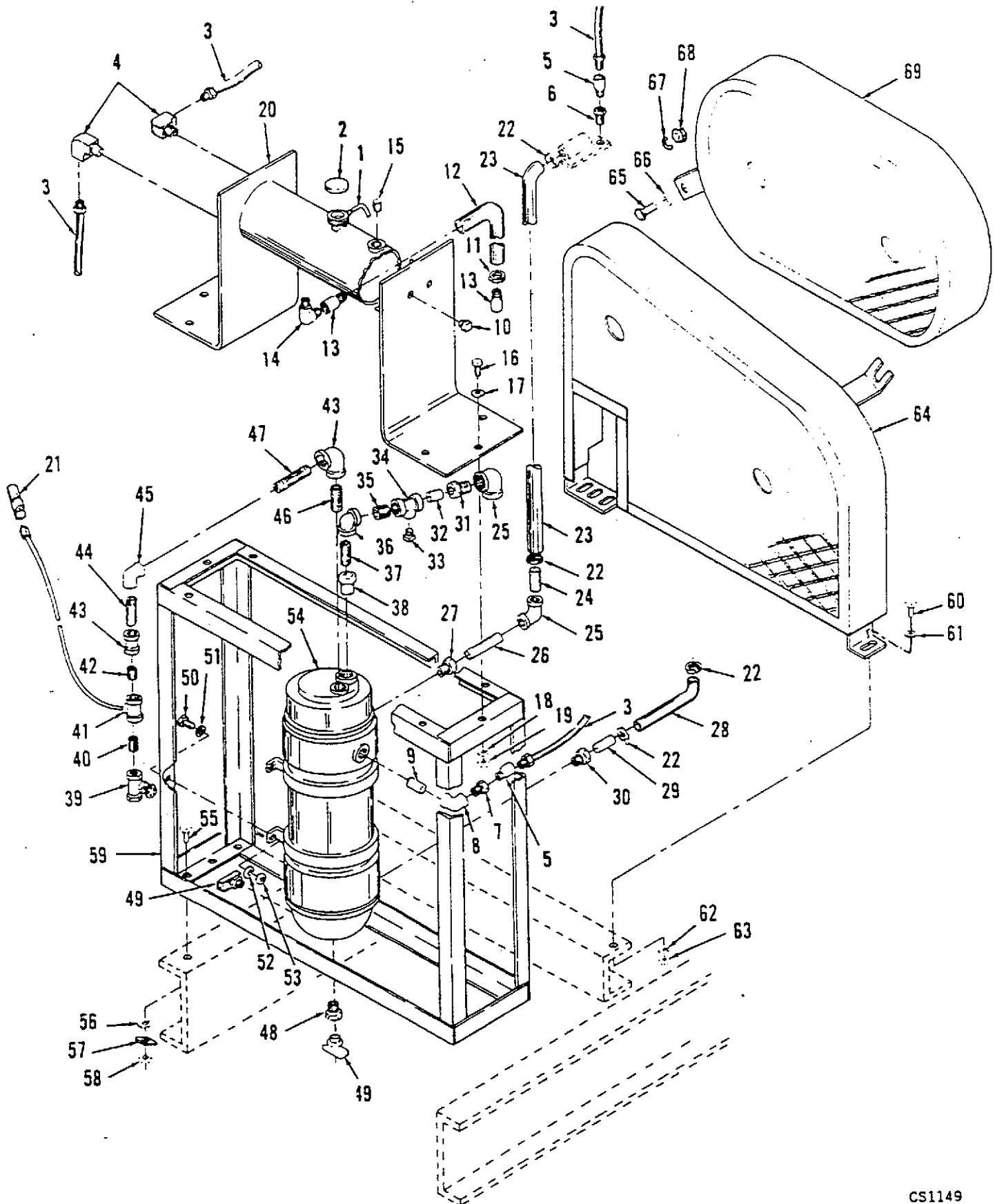


XCS1154 A

Cooling System - High Ambient
230 kW and 275 kW 50 Hz Sets
275 kW and 300 kW 60 Hz Sets

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0908	4	Clamp, Hose	23	870-0257	6	Nut, Self-locking - Hex (5/16-18)
2	503-0904	2	Hose, Upper	24	800-0092	2	Screw, Cap - Hex Head (1/2-13 x 1-1/2")
3			Tube, Upper	25	850-0060	2	Washer, Lock - Spring (1/2")
	130-1306	1	230 kW 50 Hz Set	26	862-0016	2	Nut, Hex (1/2-13)
	130-1306	1	275 kW 60 Hz Set	27	130-0996	2	Bracket, Support
	130-2111	1	275 kW 50 Hz Set	28			Screw, Cap - Hex Head (5/8-11 1-3/4") 230 kW 50 Hz Set and 275 kW 60 Hz Set
	130-2111	1	300 kW 60 Hz Set		800-0133	12	2-1/4") 275 kW 50 Hz Set and 300 kW 60 Hz Set
4	503-0998	4	Clamp, Hose	29	850-0070	12	Washer, Lock - Spring (5/8")
5	503-0906	2	Hose, Lower	30	526-0112	24	Washer, Flat (5/8")
6			Tube, Lower	31	862-0007	10	Nut, Hex (5/8-11)
	130-1300	1	230 kW 50 Hz Set	32	130-1293	2	Brace, Support
	130-1300	1	275 kW 60 Hz Set	33	403-1396	4	Washer, Bevel
	130-2110	1	275 kW 50 Hz Set	34	130-1292	2	Bracket, Support
	130-2110	1	300 kW 60 Hz Set	35	800-0071	12	Screw, Cap - Hex Head (7/16-14 x 1")
7	503-0429	2	Clamp, Hose	36	850-0055	12	Washer, Lock - Spring (7/16")
8	503-0853	1	Hose	37	130-1307	1	Plate, Cover - Inlet
9	505-0759	1	Adapter, Pipe to Hose	38	130-1194	2	Gasket
10	501-0087	1	Line, Fuel	39	130-1299	1	Adapter, Inlet
11	502-0184	1	Connector, Pipe	40	130-1296	1	Adapter, Outlet
12	821-0018	8	Screw, Self-locking - Hex (1/4-20 x 5/8")	41	130-1193	1	Gasket
13	526-0018	8	Washer, Flat (1/4")	42	504-0003	1	Cock, Drain
14	870-0212	2	Nut, Self-locking - Hex (1/4-20) 230 kW 50 Hz and 275 kW 60 Hz Sets	43			Radiator (Include Cap)
15			Guard, Fan		130-1011	1	230 kW 50 Hz Set
	130-1013	1	230 kW 50 Hz Set		130-1011	1	275 kW 60 Hz Set
	130-1013	1	275 kW 60 Hz Set		130-1011	1	275 kW 50 Hz Set
	130-0924	1	275 kW 50 Hz Set		130-2181	1	300 kW 60 Hz Set
	130-0924	1	300 kW 60 Hz Set		130-2181	1	Cap, Radiator
16	821-0018	4	Screw, Self-locking - Hex (1/4-20 x 5/8")	44	130-0449	1	Strip, Foam
17	526-0018	4	Washer, Flat (1/4")	45	130-1006	2	Strip, Foam
18	130-2206	1	Bridge, Shroud - 230 kW 50 Hz and 275 kW 60 Hz Sets	46	130-1007	2	Screw, Self-locking - Hex (5/16-18 x 1-1/8")
19	821-0029	10	Screw, Self-locking - Hex (3/8-16 x 3/4")	47	821-0029	4	Nut, Self-locking - Hex (5/16-18)
20	870-0281	10	Nut, Self-locking - Hex (3/8-16)	48	870-0257	4	Bracket, Mounting - Front Pan
21			Shroud, Fan	49			Right Side
	130-2207	1	230 kW 50 Hz Set		405-2236	1	Left Side
	130-2207	1	275 kW 60 Hz Set	50	405-2228	1	Panel, Housing - Front
	130-2109	1	275 kW 50 Hz Set	51	130-2112	1	Outlet, Engine
	130-2109	1	300 kW 60 Hz Set	52	130-2113	1	Gasket
22	821-0016	6	Screw, Self-locking - Hex (5/16-18 x 3/4")				

Cooling System Heat Exchanger

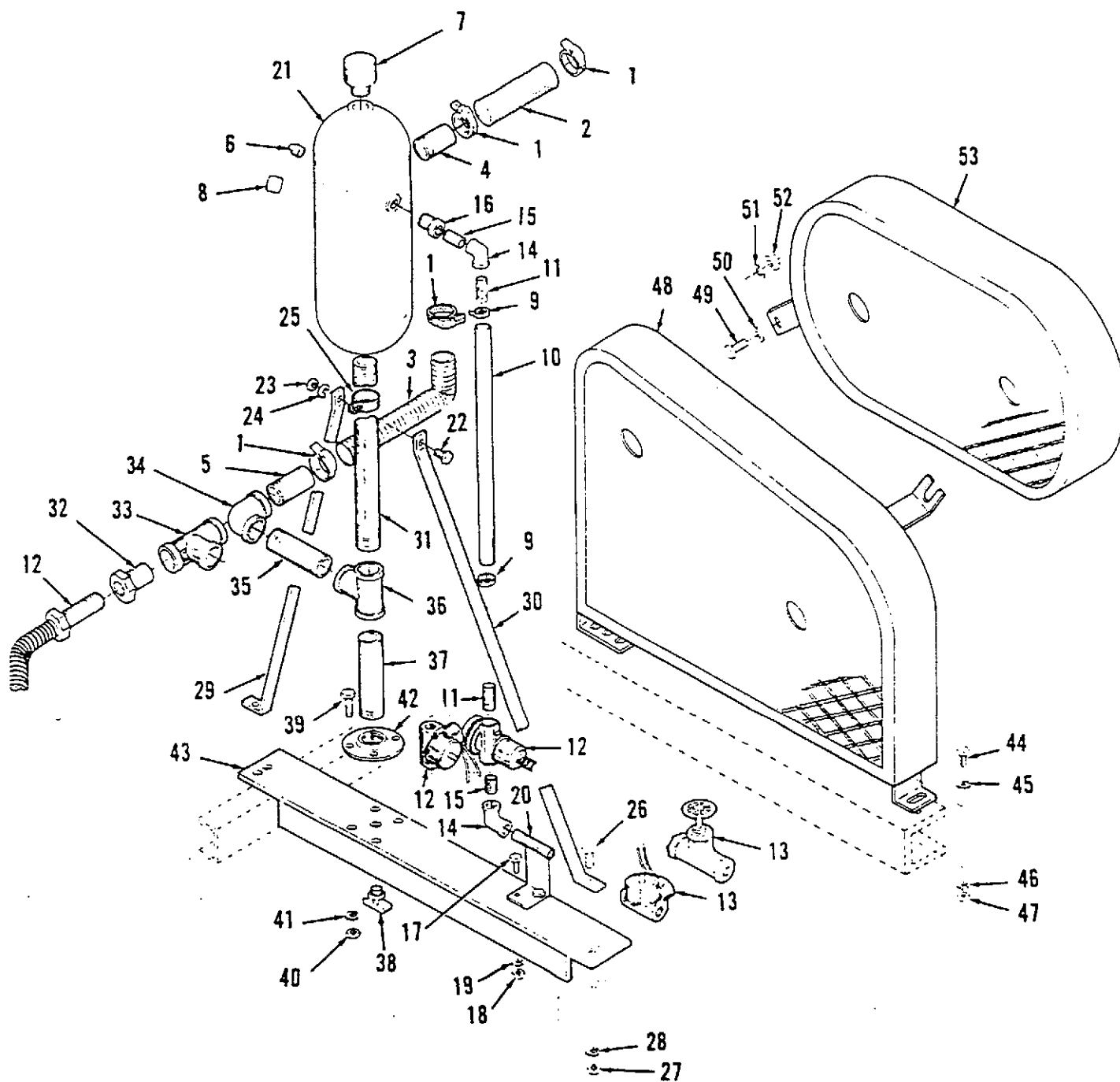


CS1149

Cooling System Heat Exchanger

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0539	1	Hose	37			Nipple, Pipe
2	130-0449	1	Cap, Radiator	505-0220	1	1-1/2"	
3	501-0087	2	Line, Fuel	505-0172	1	2"	
4	502-0020	2	Elbow, Pipe - Street, 90 Degree	38	505-0187	1	Bushing, Reducer
5	502-0184	2	Adapter, Pipe to Hose	39	504-0057	1	Valve, Globe
6	502-0143	1	Bushing, Reducer	40	505-0172	1	Nipple, Pipe
7	502-0049	1	Bushing, Reducer	41	307-0844	1	Valve, Solenoid
8	505-0039	1	Elbow, Pipe - 90 Degree	42	505-0172	1	Nipple, Pipe
9	505-0101	1	Nipple, Pipe - Close	43	505-0175	1	Elbow, Pipe - 90 Degree
10	505-0057	2	Plug, Pipe - Square Head	44	505-0405	1	Nipple, Pipe
11	503-0429	2	Clamp, Hose	45	505-0872	1	Elbow, Pipe - 45 Degree
12	503-0799	1	Hose	46	505-0172	1	Nipple, Pipe
13	505-0759	2	Adapter, Pipe to Hose	47	505-0173	1	Nipple, Pipe
14	505-0003	1	Elbow, Pipe - Street, 90 Degree	48	502-0019	1	Bushing, Reducer
15	505-0054	1	Plug, Pipe	49	504-0028	2	Cock, Drain
16	800-0051	6	Screw, Cap - Hex Head (3/8-16 x 1-1/4")	50	800-0051	4	Screw, Cap - Hex Head (3/8-16 x 1-1/4")
17	526-0013	6	Washer, Flat (3/8")	51	526-0013	4	Washer, Flat (3/8")
18	850-0050	6	Washer, Lock - Spring (3/8")	52	850-0050	4	Washer, Lock - Spring (3/8")
19	862-0003	6	Nut, Hex (3/8-16)	53	862-0003	4	Nut, Hex (3/8-16)
20	130-1887	1	Tank, Expansion	54	130-1431	1	Exchanger, Heat
21	332-1506	1	Splice	55	800-0094	5	Screw, Cap - Hex Head (1/2-13 x 2")
22	503-0354	8	Clamp, Hose	56	850-0060	5	Washer, Lock - Spring (1/2")
23	503-0752	1	Hose	57	526-0278	5	Washer, Bevel - Square
24	505-0375	1	Nipple, Pipe - Half	58	862-0005	5	Nut, Hex (1/2-13)
25	505-0175	2	Elbow, Pipe - 90 Degree	59	130-1833	1	Frame, Support
26	505-0172	1	Nipple, Pipe	60	800-0028	4	Screw, Cap - Hex Head (5/16-18 x 1")
27	505-0738	1	Bushing, Reducer	61	526-0041	4	Washer, Flat (5/16")
28	503-0858	1	Hose - Preformed	62	850-0045	4	Washer, Lock - Spring (5/16")
29	505-0380	1	Nipple, Pipe	63	862-0014	4	Nut, Hex (5/16-18)
30	505-0738	1	Bushing, Reducer	64	130-1891	1	Guard, Belt
31	505-0187	1	Bushing, Reducer	65	800-0088	1	Screw, Cap - Hex Head (1/2-13 x 3/4")
32	505-0220	1	Nipple, Pipe - Close	66	526-0061	1	Washer, Flat (1/2")
33	505-0402	1	Plug, Pipe	67	850-0060	1	Washer, Lock - Spring (1/2")
34	505-1072	1	Valve, Water Saver	68	862-0005	1	Nut, Hex (1/2-13)
35			Nipple, Pipe	69	130-1136	1	Guard, Belt
	505-0220	1	1-3/4"				
	505-0748	1	9"				
36			Elbow, Pipe - 90 Degree				
	505-0043	1	1-1/2"				
	505-0175	1	2"				

Cooling System Standpipe

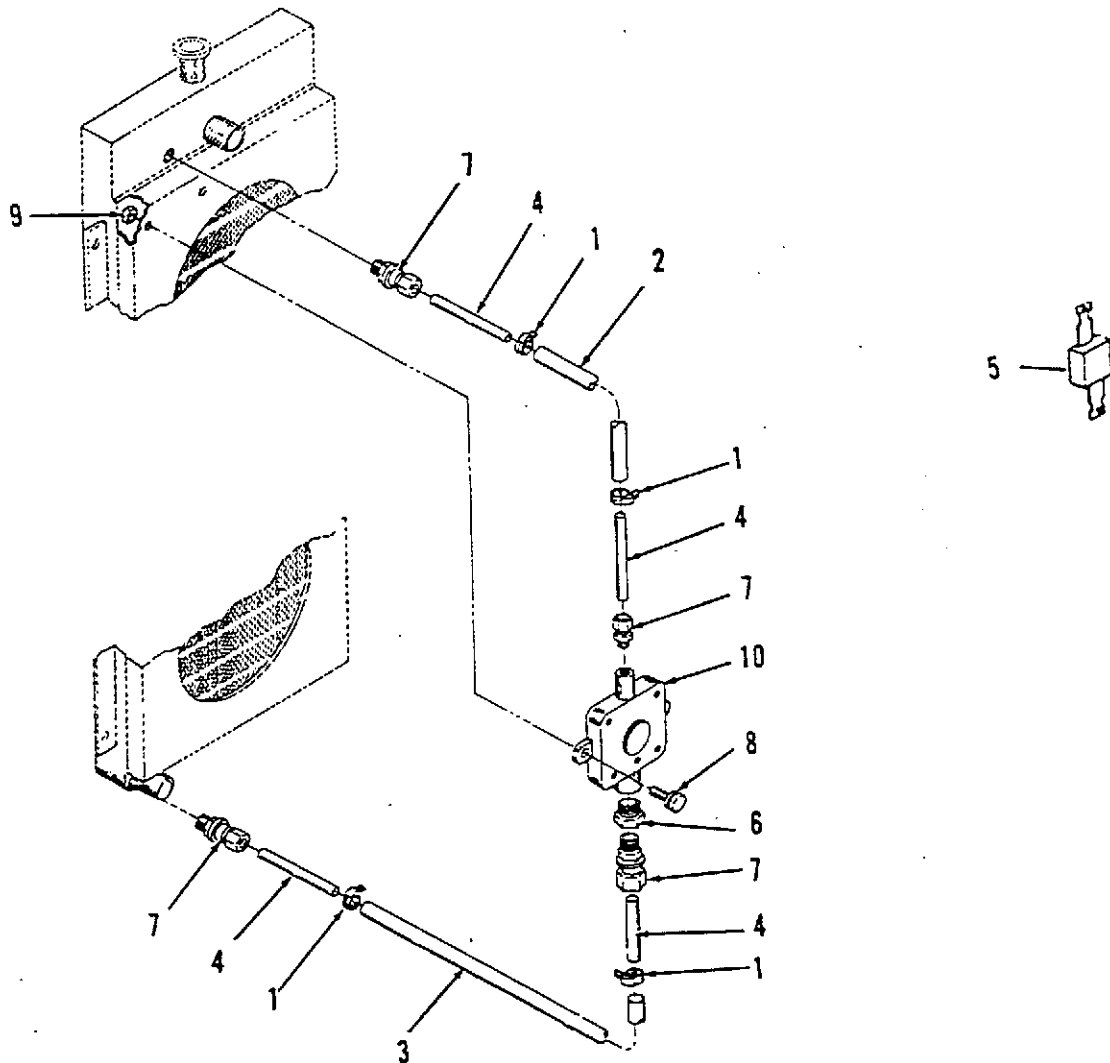


XCS1134

Cooling System Standpipe

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0354	4	Clamp, Hose	27	862-0005	2	Nut, Hex (1/2-13)
2	503-0617	1	Hose	28	850-0060	2	Washer, Lock - Spring (1/2")
3	503-0756	1	Hose, Preformed	29	130-1178	1	Brace
4	505-0204	1	Nipple, Pipe - Half	30	130-1179	1	Brace
5	505-0875	1	Adapter, Pipe to Hose	31	505-0746	1	Nipple, Pipe
6	505-0140	1	Plug, Pipe - Square Head	32	505-0351	1	Bushing, Reducer
7	504-0062	1	Valve, Vacuum Relief	33	505-0374	1	Tee, Pipe
8	505-0949	1	Plug, Pipe - Socket Head	34	505-0175	1	Elbow, Pipe - 90 Degree
9	503-0189	2	Clamp, Hose	35	505-0748	1	Nipple, Pipe
10	503-0361	1	Hose	36	505-0374	1	Tee, Pipe
11	505-0330	2	Nipple, Pipe - Half	37	505-0379	1	Nipple, Pipe
12			Valve, Control	38	504-0006	1	Cock, Drain
	309-0242	1	Temperature Regulating	39	800-0092	6	Screw, Cap - Hex Head (1/2-13 x 1-1/2")
	307-1135	1	Solenoid				Nut, Hex (1/2-13)
13			Valve, Control	40	862-0005	6	Washer, Lock - Spring (1/2")
	307-1135	1	Solenoid	41	850-0060	6	Base
	504-0090	1	Manual	42	130-0442	1	Support
14	505-0041	2	Elbow, Pipe - 90 Degree	43	130-1177	1	Screw, Cap - Hex Head (5/16-18 x 1")
15	505-0004	2	Nipple, Pipe - Close	44	800-0028	4	Washer, Flat (5/16")
16	505-0023	1	Bushing, Reducer	45	526-0041	4	Washer, Lock - Spring (5/16")
17	800-0007	2	Screw, cap - Hex Head (1/4-20 x 1")	46	850-0045	4	Nut, Hex (5/16-18)
18	862-0001	2	Nut, Hex (1/4-20)	47	862-0014	4	Guard, Belt
19	850-0040	2	Washer, Lock - Spring (1/4")	48	130-1132	1	Screw, Cap - Hex Head (1/2-13 x 3/4")
20	130-0797	1	Nipple, Support	49	800-0088	1	Washer, Flat (1/2")
21	130-0425	1	Tank, Standpipe	50	526-0060	1	Washer, Lock - Spring (1/2")
22	800-0051	1	Screw, Cap - Hex Head (3/8-16 x 1-1/4")	51	850-0060	1	Nut, Hex (1/2-13)
23	862-0003	1	Nut, Hex (3/8-16)	52	862-0005	1	Guard, Belt
24	850-0050	1	Washer, Lock - Spring (3/8")	53	130-1136	1	
25	130-0871	1	Clamp, Loop				
26	800-0092	2	Screw, Cap - Hex Head (1/2-13 x 1-1/2")				

Coolant Level Switch

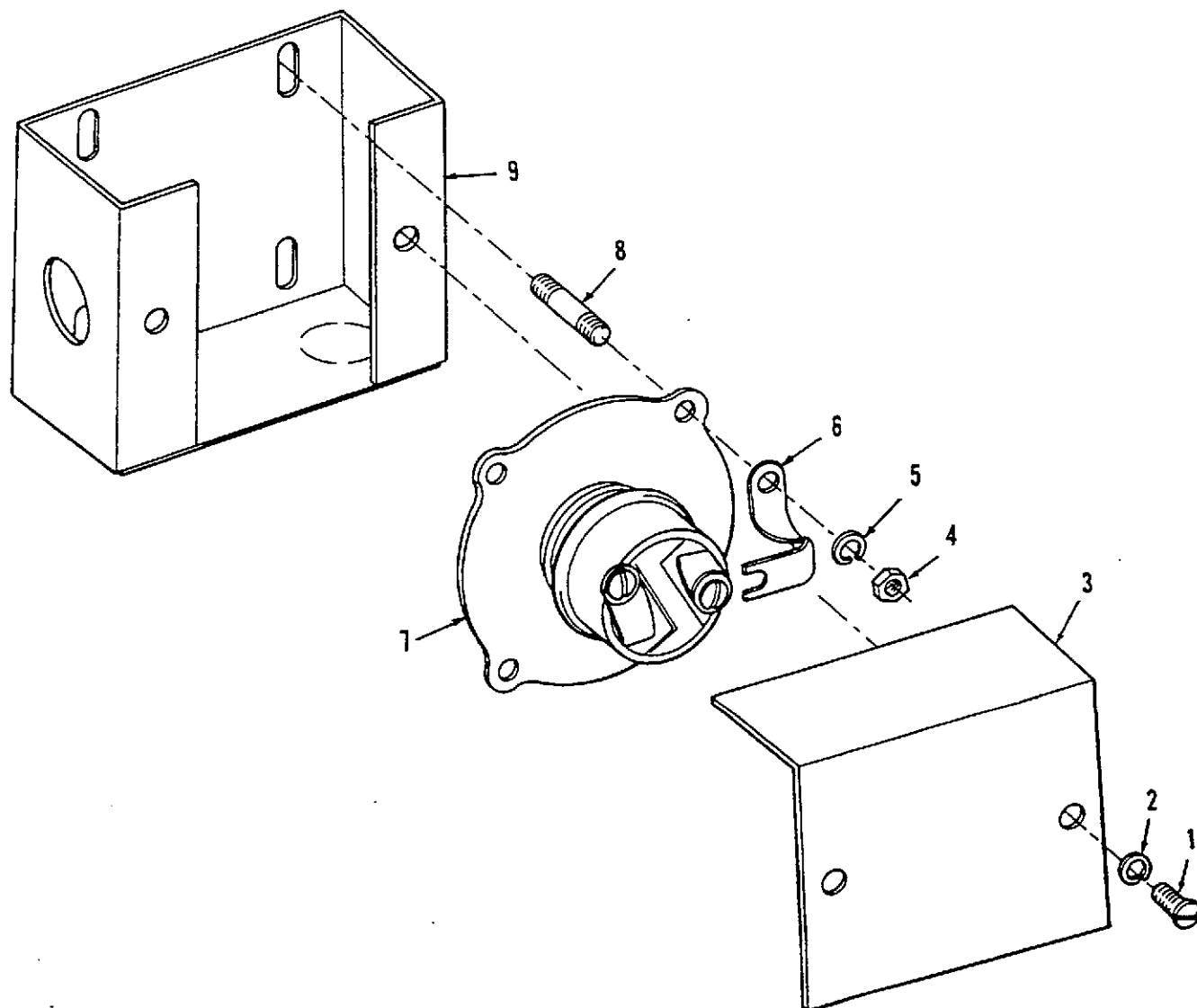


CS1148.

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0685	4	Clamp, Hose
2	503-1199	1	Hose
3	503-1119	1	Hose
4	130-2053	4	Tube
5	357-0030	2	Diode
6	502-0802	1	Bushing, Reducer - Hex

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
7	502-0801	4	Connector, Tube, Brass
8	821-0011	2	Screw, Self-locking - Hex (1/4-20 x 7/8")
9	870-0212	2	Nut, Self-locking - Hex (1/4-20)
10	193-0329	1	Switch, Level - Coolant

Engine Temperature Switch

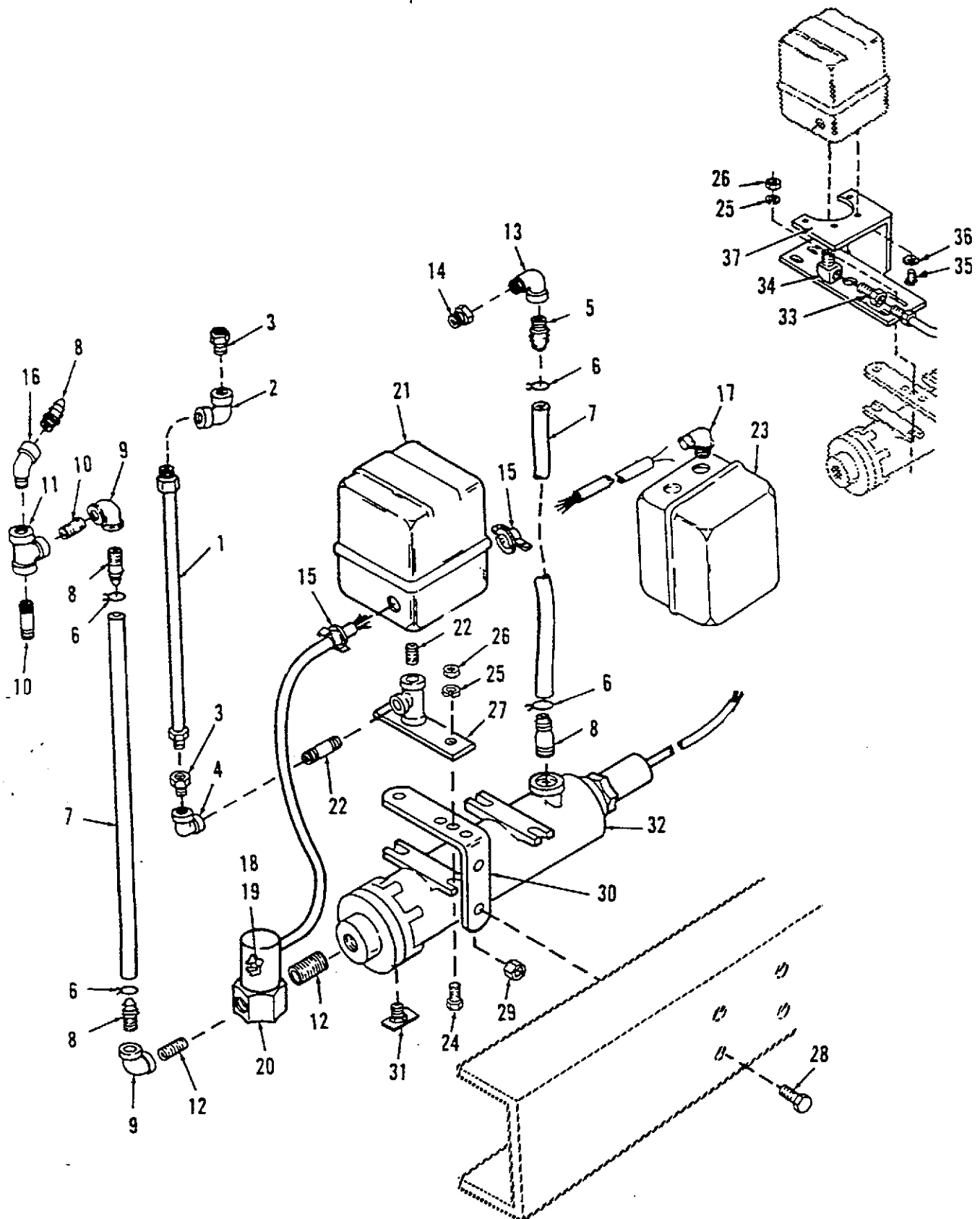


CS106

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	812-0075	2	Screw, Machine - Round Head (#8-32 x 1/4")
2	850-0025	2	Washer, Lock - Spring (#8)
3	333-0013	1	Cover
4	870-0053	2	Nut, Hex (#10-32)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
5	850-0030	2	Washer, Lock - Spring (#10)
6	160-0428	1	Strap, Ground
7	309-0029	1	Switch, Thermostatic
8	520-0446	2	Stud (#10-32 x 3/4")
9	333-0012	1	Box

Heater - Horizontal Tank
210 kW 50 Hz and 250 kW 60 Hz Sets
Spec H Thru M

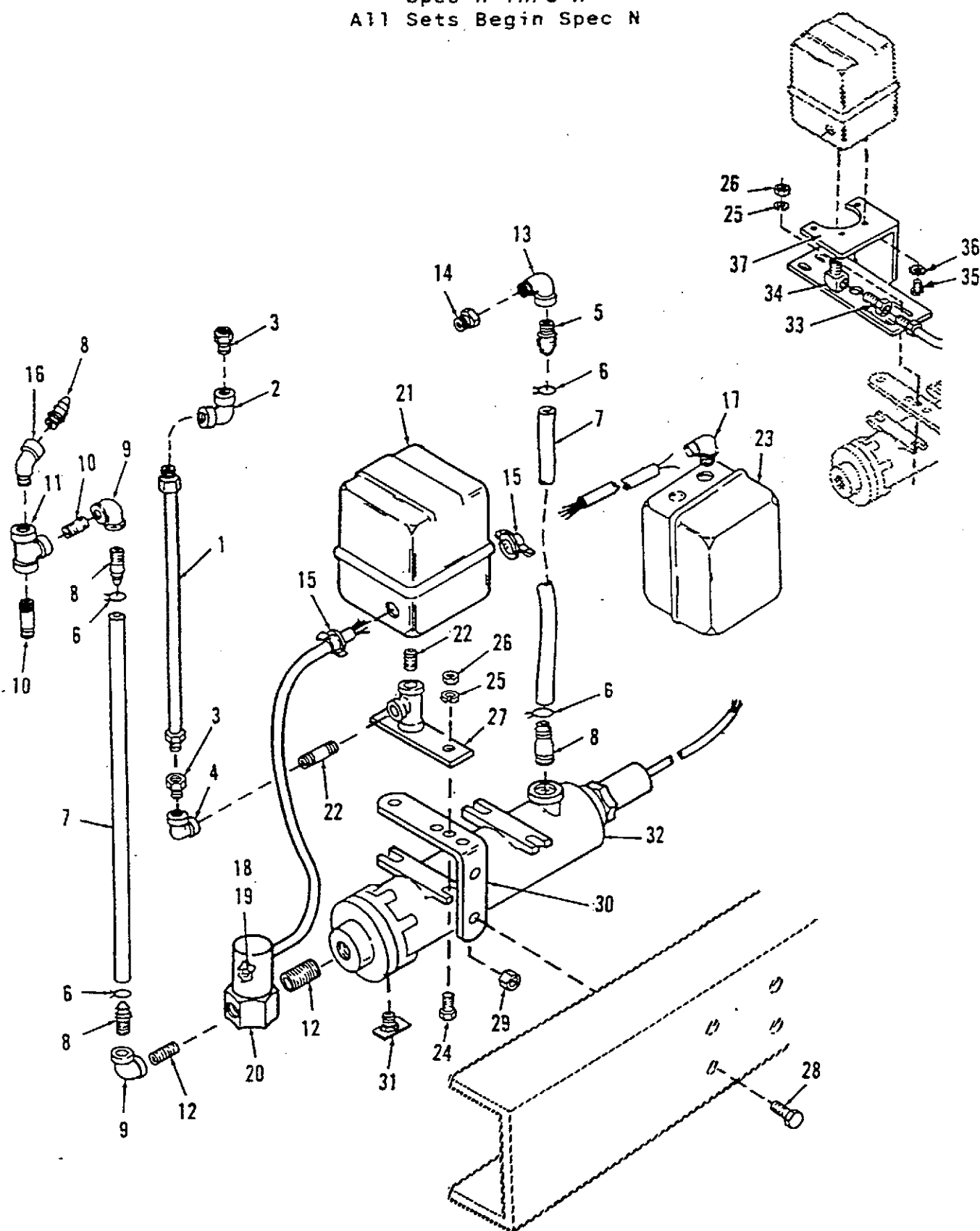


CS1136

Heater - Horizontal Tank
210 kW 50 Hz and 250 kW 60 Hz Sets
Spec H Thru M

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	501-0227	1	Line, Fuel	25	850-0040	4	Washer, Lock - Spring (1/4")
2	505-0037	1	Elbow, Pipe - 90 Degree	26	862-0001	4	Nut, Hex (1/4-20)
3	505-0007	2	Bushing, Reducer - Hex	27	333-0142	1	Support with Tee (1970 Thru 1982)
4	505-0038	1	Elbow, Pipe - 90 Degree	28	800-0052	2	Screw, Cap - Hex Head (3/8-16 x 1-1/2")
5	505-0324	1	Nipple, Pipe - Half	29	862-0003	2	Nut, Hex (3/8-16)
6	503-0429	4	Clamp, Hose	30	130-1191	2	Bracket, Mounting
7	503-0853	2	Hose	31	504-0003	1	Cock, Drain
8	505-0759	4	Adapter, Hose to Pipe	32			Heater, Electrical
9	505-0041	2	Elbow, Pipe - 90 Degree		333-0094	1	2500 Watt, 115 VAC - 1 Phase
10	505-0086	2	Nipple, Pipe		333-0169	1	2500 Watt, 208 VAC - 1 Phase
11	505-0304	1	Tee, Pipe		333-0165	1	2500 Watt, 208 VAC - 3 Phase
12	505-0004	2	Nipple, Pipe - Close		333-0131	1	2500 Watt, 240 VAC - 1 Phase
13	502-0390	1	Elbow, Pipe - Street, 90 Degree		333-0180	1	2500 Watt, 380 VAC - 1 Phase
14	505-0289	1	Bushing, Reducer - Hex		333-0211	1	2500 Watt, 380 VAC - 3 Phase
15	331-0027	2	Clamp, Cable		333-0166	1	2500 Watt, 480 VAC - 1 Phase
16	505-0333	1	Elbow, Pipe - Street, 45 Degree		333-0172	1	2500 Watt, 480 VAC - 3 Phase
17	331-0027	4	Clamp, Cable	33	505-0007	1	Bushing, Reducer - Hex (Begin 1983)
18	323-0957	2	Nut, Wire		502-0054	1	Elbow, Pipe - Street, 90 Degree (Begin 1983)
19	332-0149	8	Lug, Terminal	35	812-0079	4	Screw, Machine - Round Head (#8-32 x 1/2") (Begin 1983)
20	309-0490	1	Switch, Thermostatic	36	854-0007	4	Washer, Lock - ET (#8) (Begin 1983)
21	309-0307	1	Switch, Pressure - Oil	37	333-0224	1	Bracket, Support (Begin 1983)
22	505-0099	2	Nipple, Pipe - Close (1970 thru 1982)				
23			Contactor				
	307-1460	1	230 VAC, 3 Pole				
	307-1164	1	460 VAC, 3 Pole				
24	800-0007	4	Screw, Cap - Hex Head (1/4-20 x 1")				

Heater - Horizontal Tank
 230 kW 50 Hz and 275 kW 60 Hz Sets
 Spec H Thru M
 All Sets Begin Spec N

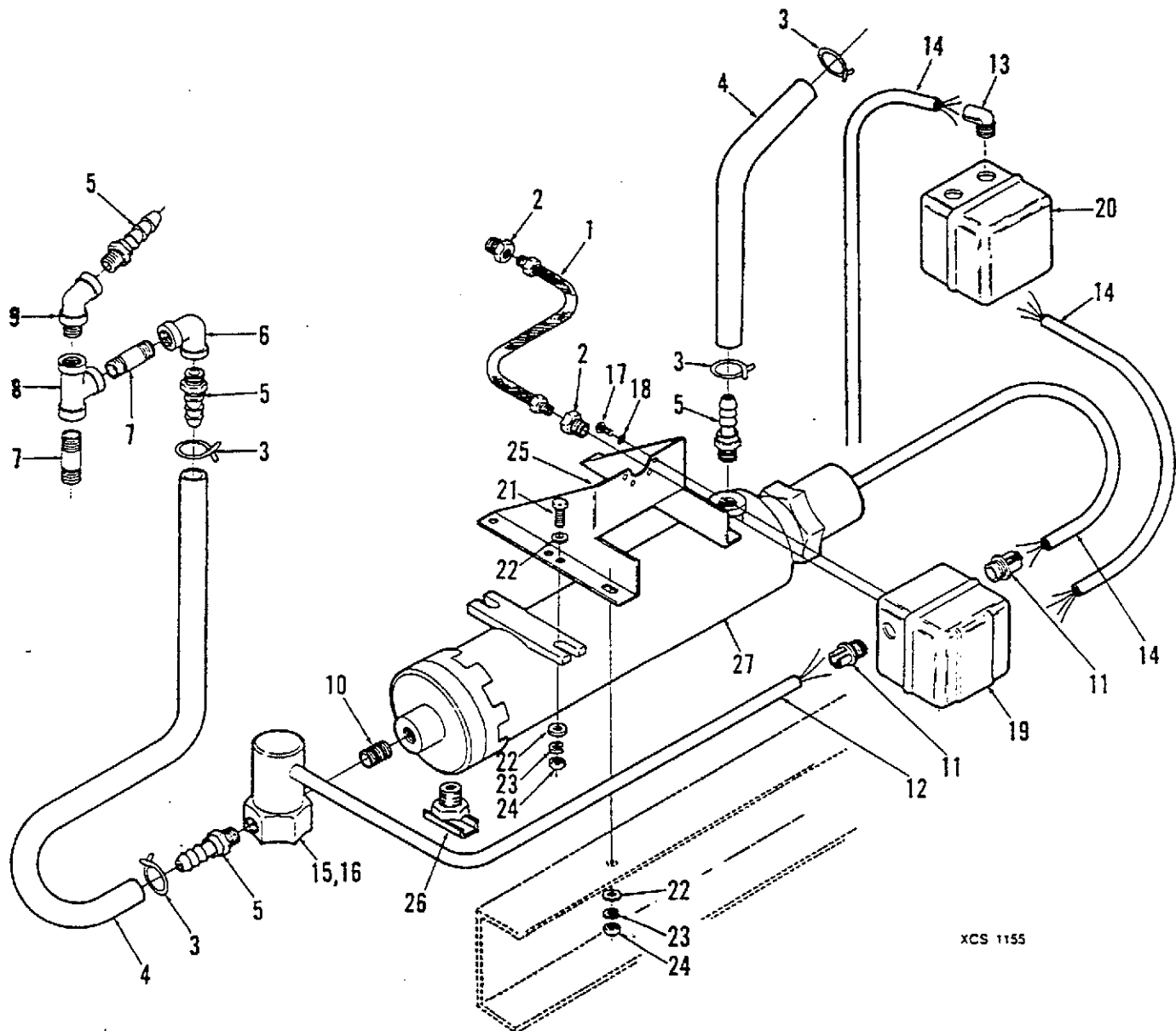


CS1136

Heater - Horizontal Tank
230 kW 50 Hz and 275 kW 60 Hz Sets
Spec H Thru M
All Sets Begin Spec N

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	501-0227	1	Line, Fuel	25	850-0040	4	Washer, Lock - Spring (1/4")
2	505-0037	1	Elbow, Pipe - 90 Degree	26	862-0001	4	Nut, Hex (1/4-20)
3	505-0007	2	Bushing, Reducer - Hex	27	333-0142	1	Support with Tee (1970 Thru 1982)
4	505-0038	1	Elbow, Pipe - 90 Degree	28	800-0052	2	Screw, Cap - Hex Head (3/8-16 x 1-1/2")
5	505-0324	1	Nipple, Pipe - Half	29	862-0003	2	Nut, Hex (3/8-16)
6	503-0429	4	Clamp, Hose	30	130-1191	2	Bracket, Mounting
7	503-0853	2	Hose	31	504-0003	1	Cock, Drain
8	505-0759	4	Adapter, Hose to Pipe	32			Heater, Electrical
9	505-0041	2	Elbow, Pipe - 90 Degree		333-0143	1	4000 Watt, 208 VAC - 1 Phase
10	505-0086	2	Nipple, Pipe		333-0164	1	4000 Watt, 208 VAC - 3 Phase
11	505-0304	1	Tee, Pipe		333-0138	1	4000 Watt, 240 VAC - 1 Phase
12	505-0004	2	Nipple, Pipe - Close		333-0190	1	4000 Watt, 240 VAC - 3 Phase
13	502-0390	1	Elbow, Pipe - Street, 90 Degree		333-0150	1	4000 Watt, 277 VAC - 1 Phase
14	505-0289	1	Bushing, Reducer - Hex		333-0183	1	4000 Watt, 380 VAC - 1 Phase
15	331-0027	2	Clamp, Cable		333-0174	1	4000 Watt, 380 VAC - 3 Phase
16	505-0333	1	Elbow, Pipe - Street, 45 Degree		333-0161	1	4000 Watt, 480 VAC - 1 Phase
17	331-0027	4	Clamp, Cable		333-0144	1	4000 Watt, 480 VAC - 3 Phase
18	323-0957	2	Nut, Wire	33	505-0007	1	Bushing, Reducer - Hex (Begin 1983)
19	332-0149	8	Lug, Terminal	34	502-0054	1	Elbow, Pipe - Street, 90 Degree (Begin 1983)
20	309-0490	1	Switch, Thermostatic	35	812-0079	4	Screw, Machine - Round Head (#8-32 x 1/2") (Begin 1983)
21	309-0307	1	Switch, Pressure - Oil	36	854-0007	4	Washer, Lock - ET (#8) (Begin 1983)
22	505-0099	2	Nipple, Pipe - Close (1970 Thru 1982)	37	333-0224	1	Bracket, Support (Begin 1983)
23			Contactor				
	307-1460	1	230 VAC, 3 Pole				
	307-1164	1	460 VAC, 3 Pole				
24	800-0007	4	Screw, Cap - Hex Head (1/4-20 x 1")				

Heater - Horizontal Tank
275 kW 50 Hz and 300 kW 60 Hz Sets
Spec M Only

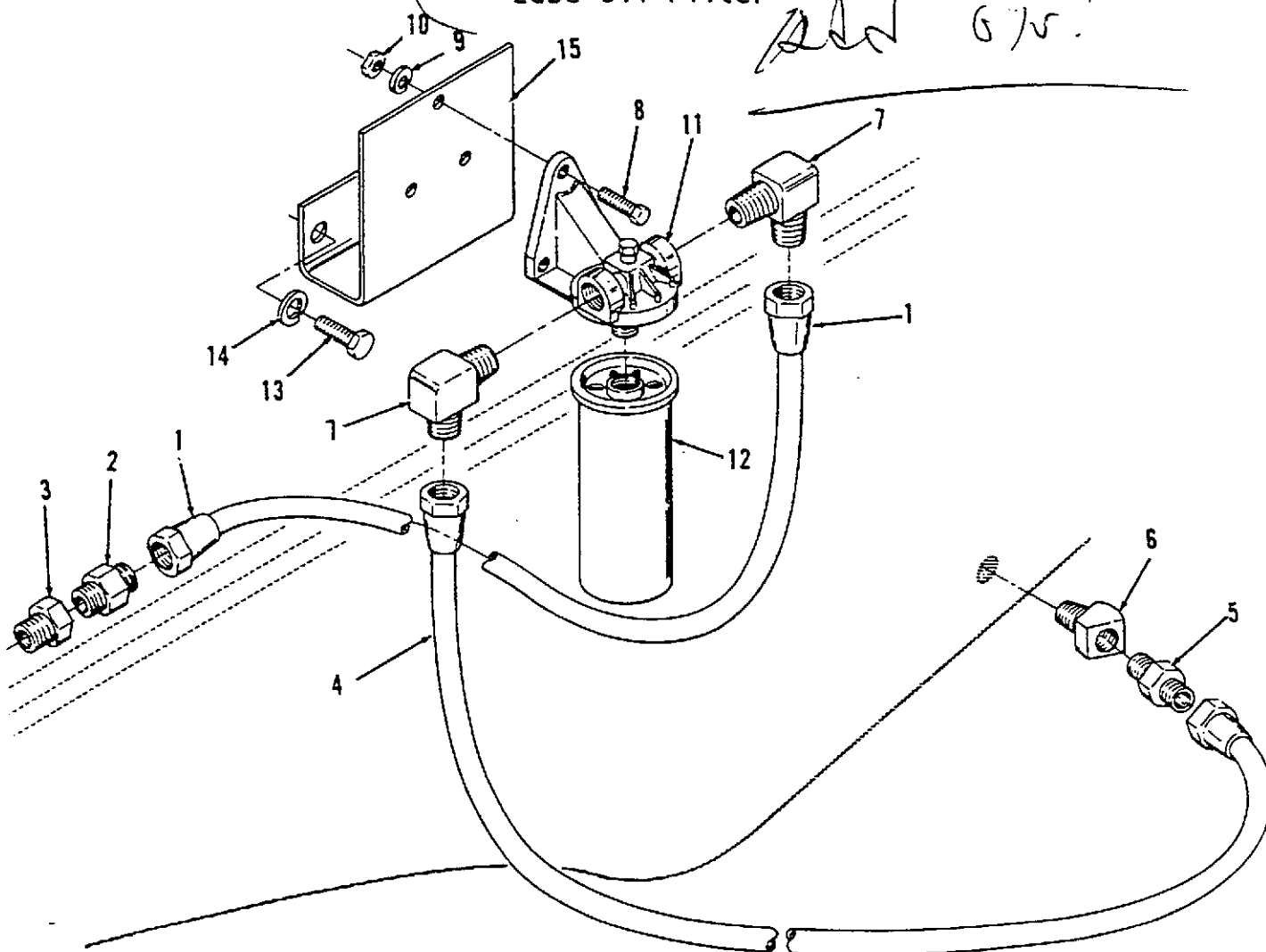


XCS 1155

Heater - Horizontal Tank
275 kW 50 Hz and 300 kW 60 Hz Sets
Spec M Only

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	501-0227	1	Line, Fuel	20			Contactor
2	505-0007	2	Bushing, Reducer - Hex		307-1460	1	230 VAC, 3 Pole
3	503-0429	4	Clamp, Hose		307-1164	1	460 VAC, 3 Pole
4	503-0853	2	Hose	21	800-0052	6	Screw, Cap - Hex Head (3/8-16 x 1-1/2")
5	505-0759	4	Adapter, Hose to Pipe	22	526-0026	12	Washer, Flat (3/8")
6	505-0041	2	Elbow, Pipe - 90 Degree	23	850-0050	6	Washer, Lock - Spring (3/8")
7	505-0086	2	Nipple, Pipe	24	862-0003	6	Nut, Hex (3/8-16)
8	505-0304	1	Tee, Pipe	25	333-0206	2	Bracket, Mounting
9	505-0333	1	Elbow, Pipe - Street, 45 Degree	26	504-0003	1	Cock, Drain
10	505-0004	1	Nipple, Pipe - Close	27			Heater, Electrical
11	331-0027	2	Clamp, Cable		333-0143	1	4000 Watt, 208 VAC - 1 Phase
13	331-0027	4	Clamp, Cable		333-0164	1	4000 Watt, 208 VAC - 3 Phase
14	323-0957	2	Nut, Wire		333-0138	1	4000 Watt, 240 VAC - 1 Phase
15	332-0149	8	Lug, Terminal		333-0190	1	4000 Watt, 240 VAC - 3 Phase
16	309-0490	1	Switch, Thermostatic		333-0150	1	4000 Watt, 277 VAC - 1 Phase
17	812-0079	4	Screw, Machine - Round (#8-32 x 1/2")		333-0183	1	4000 Watt, 380 VAC - 1 Phase
18	854-0007	4	Washer, Lock - IT (#8)		333-0174	1	4000 Watt, 380 VAC - 3 Phase
19	309-0307	1	Switch, Pressure - Oil		333-0161	1	4000 Watt, 480 VAC - 1 Phase
					333-0144	1	4000 Watt, 480 VAC - 3 Phase

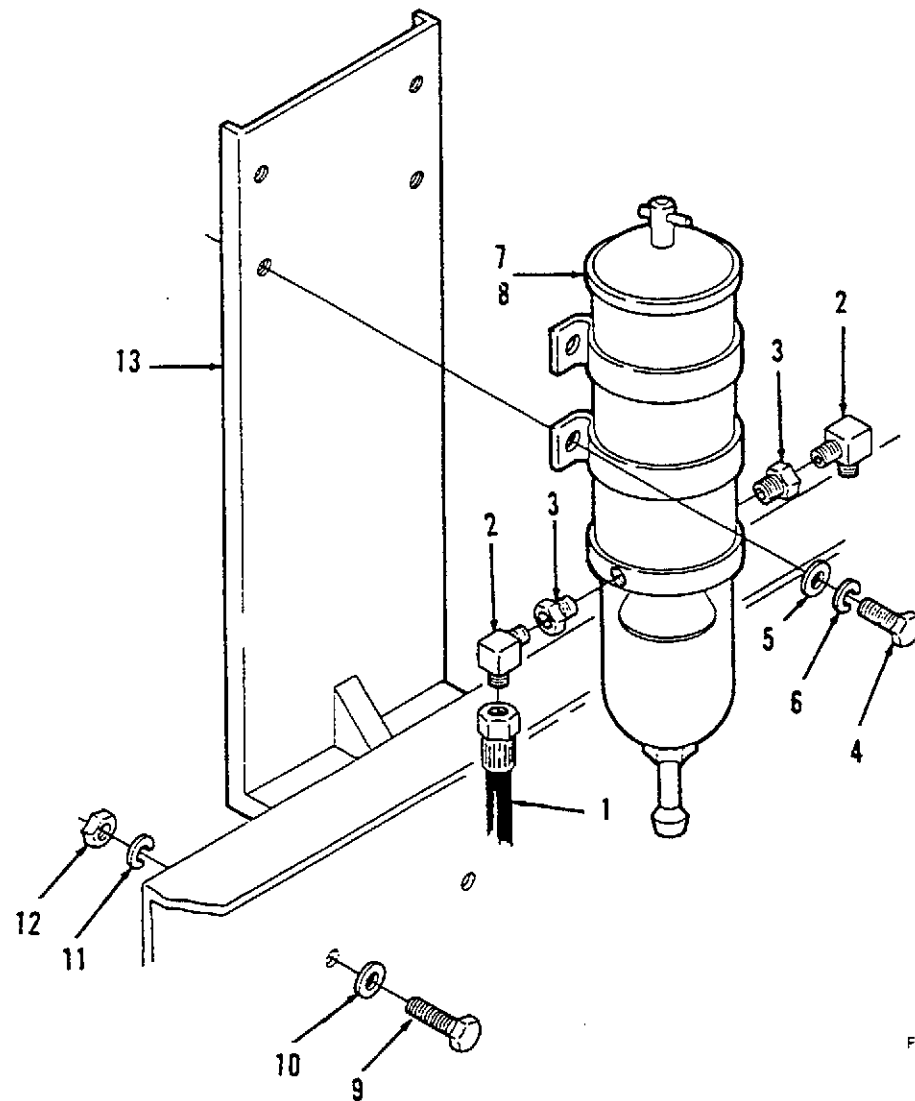
BYPASS Lube Oil Filter



LS1071

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	501-0382	1	Line, Fuel	9	850-0050	3	Washer, Lock - Spring (3/8")
2	502-0682	1	Nipple, Pipe - Hex	10	862-0003	3	Nut, Hex (3/8-16)
3	505-0021	1	Bushing, Reducer - Hex	11	122-0524	1	Head, Filter
4	501-0381	1	Line, Fuel	12	122-0526	1	Element, Filter
5	502-0594	1	Adapter, Line to Pipe	13	801-0099	2	Screw, Cap - Hex Head (9/16-18 x 3/4")
6	505-0248	1	Elbow, Pipe - 45 Degree	14	850-0065	2	Washer, Lock - Spring (9/16")
7	502-0277	2	Elbow, Pipe - 90 Degree	15	122-0543	1	Bracket, Mounting
8	800-0053	3	Screw, Cap - Hex Head (3/8-16 x 1-3/4")				

Fuel/Water Separator

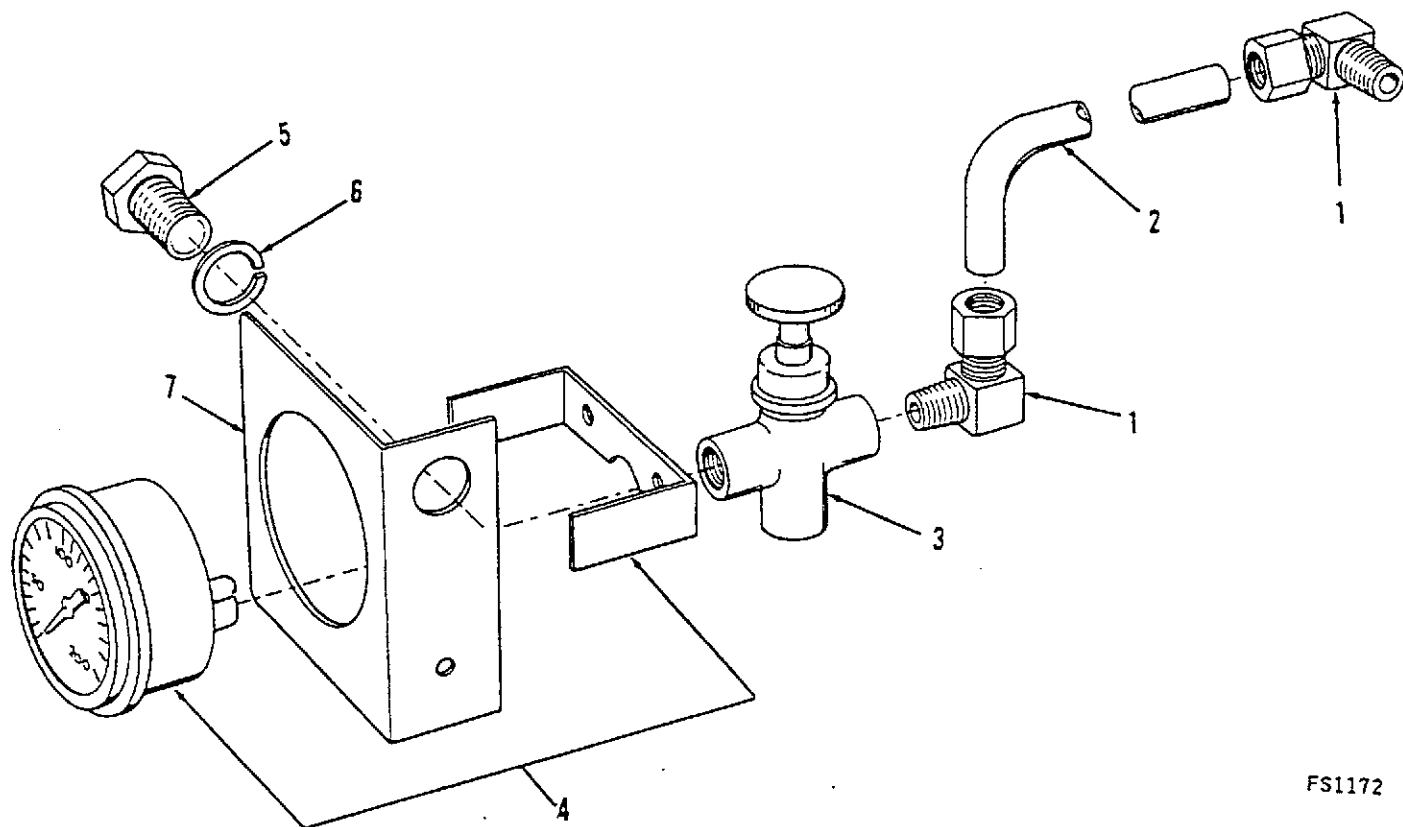


FS 1374

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	501-0331	1	Line, Fuel	7	149-1625	1	Separator (Includes Element)
2	502-0702	2	Elbow, Pipe - Street - Male - 90 Degree	8	149-1689	1	Element
3	502-0701	2	Adapter, Pipe	9	800-0051	4	Screw, Cap - Hex Head (3/8-16 x 1-1/4")
4	800-0028	4	Screw, Cap - Hex Head (5/16-18 x 1")	10	526-0026	4	Washer, Flat (3/8")
5	526-0022	4	Washer, Flat (5/16")	11	850-0050	4	Washer, Lock - Spring (3/8")
6	850-0045	4	Washer, Lock - Spring (5/16")	12	862-0003	4	Nut, Hex (3/8-16)
				13	149-1716	1	Bracket, Mounting

539-0929-00

Fuel Pressure Gauge

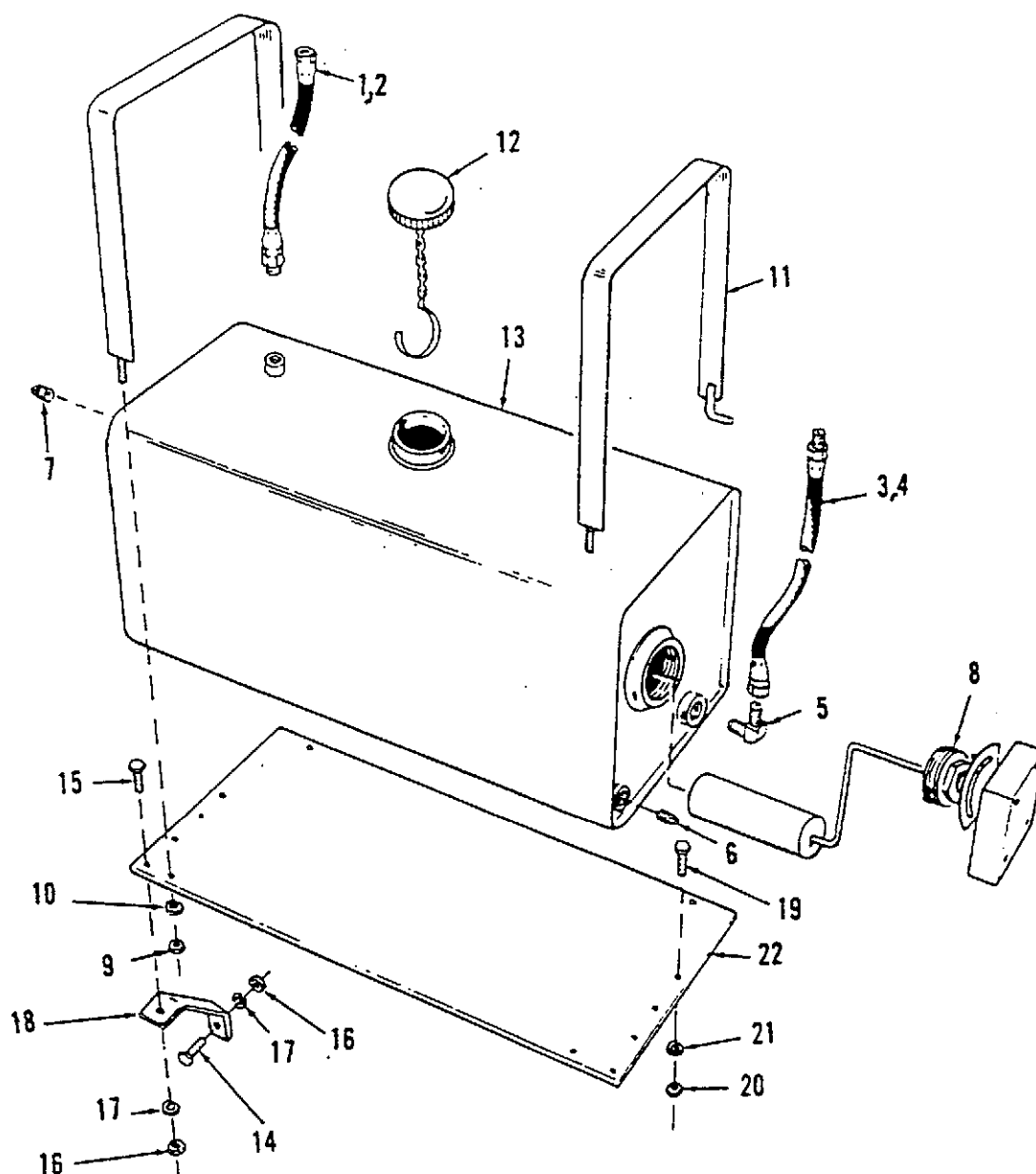


FS1172

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	502-0034	2	Elbow, Tube - 90 Degree (Includes Nut and Ring)
2	370-4003	1	Tube, Copper
3	504-0064	1	Valve, Gate

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
4	193-0128	1	Gauge, Pressure (Includes Bracket and Hardware)
5	800-0130	1	Screw, Cap - Hex Head (5/8-11 x 1")
6	850-0070	1	Washer, Lock - Spring (5/8")
7	193-0029	1	Bracket, Mounting

Fuel Tank



FS1171

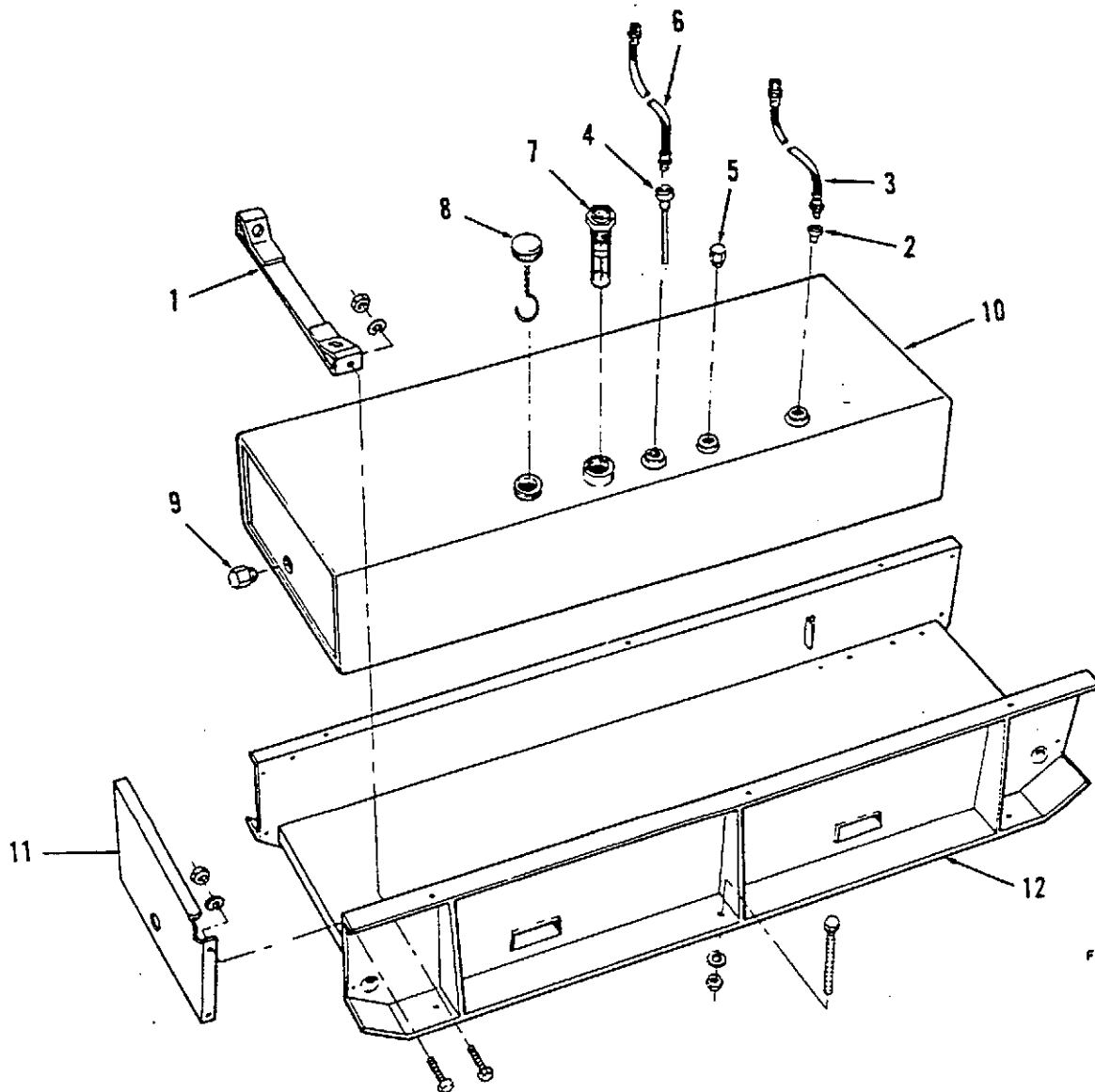
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	501-0215	1	Line, Fuel (Housed Set)	13	415-0322	1	Tank, Fuel - 8-1/2 Gallon
2	501-0216	1	Line, Fuel (Unhoused Set)	14	800-0007	2	Screw, Cap - Hex Head (1/4-20 x 1")
3	501-0214	1	Line, Fuel (Housed Set)	15	800-0005	2	Screw, Cap - Hex Head (1/4-20 x 3/4")
4	501-0194	1	Line, Fuel (Unhoused Set)	16	862-0001	4	Nut, Hex (1/4-20)
5	502-0133	1	Elbow, Pipe - Street - 90 Degree (Unhoused Set)	17	850-0040	4	Washer, Lock - Spring (1/4"
6	505-0110	1	Plug, Pipe - Square Head	18	415-0329	2	Brace (Unhoused Set)
7	505-0056	1	Plug, Pipe - Square Head	19	800-0007	2	Screw, Cap - Hex Head (1/4-20 x 1")
8	415-0170	1	Switch, Level	20	862-0001	2	Nut, Hex (1/4-20)
9	862-0001	2	Nut, Hex (1/4-20)	21	850-0040	2	Washer, Lock - Spring (1/4"
10	850-0040	2	Washer, Lock - Spring (1/4")	22	415-0330	1	Plate, Mounting
11	415-0331	2	Strap, Hold Down				
12	159-0020	1	Cap, Tank				



Fuel Tank Overhead/Underground Supply

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	501-0215	1	Line, Fuel (Housed Set)	25	415-0464	1	Cover, Access
2	501-0216	1	Line, Fuel (Unhoused Set)	26	307-1056	1	Relay
3	501-0194	1	Line, Fuel (Housed Set)	27	812-0079	2	Screw, Machine - Round Head (#8-32 x 1/2")
4	501-0214	1	Line, Fuel (Unhoused Set)	28	323-0804	1	Socket, Relay
5	502-0133	1	Elbow, Pipe - Street - 90 Degree	29	821-0008	2	Screw, Self-locking - Hex (1/4-20 x 5/16")
6	505-0056	2	Plug, Pipe - Square Head	30	415-0463	1	Box
7	505-0110	1	Plug, Pipe - Square Head	31	813-0097	1	Screw, Machine - Round Head (#10-32 x 5/16")
8	505-1050	1	Plug, Pipe - Modified	32	850-0030	1	Washer, Lock - Spring (#10)
9	415-0466	1	Switch, Float (Overhead Supply)	33	821-0014	8	Screw, Self-locking - Hex (5/16-18 x 1/2")
10	415-0476	1	Switch, Float (Underground Supply)	34	402-0078	4	Mount, Vibration
11	159-0020	1	Cap, Tank	35	415-0479	1	Plate, Mounting
12	307-1816	1	Valve, Solenoid (Overhead Supply)	36	800-0093	2	Screw, Cap - Hex Head (1/2-13 x 1-3/4")
13	505-0098	1	Nipple, Pipe	37	526-0219	2	Washer, Flat (1/2")
14	505-0057	1	Plug, Pipe - Square Head (1970 thru Aug 1982)	38	526-0278	2	Washer, Bevel
15	800-0002	8	Screw, Cap - Hex Head (1/4-20 x 3/8")	39	850-0060	2	Washer, Lock - Spring (1/2")
16	526-0053	8	Washer, Flat (1/4")	40	862-0016	2	Nut, Hex (1/2-13)
17	415-0486	1	Gasket	41	415-0478	1	Bracket, Mounting
18	309-0404	1	Valve, Float (Overhead Supply)	42	505-0016	1	Bushing, Reducer - Hex (Begin Sept 1982)
19	862-0001	2	Nut, Hex (1/4-20)	43	505-0110	1	Plug, Pipe - Square Head (Begin Sept 1982)
20	850-0040	2	Washer, Lock - Spring (1/4")				
21	415-0509	2	Strap				
22	415-0465	1	Tank, Fuel - 8-1/2 Gallon				
23	415-0515	1	Plate, Access				
24	821-0004	2	Screw, Self-locking - Hex (#10-32 x 5/16")				

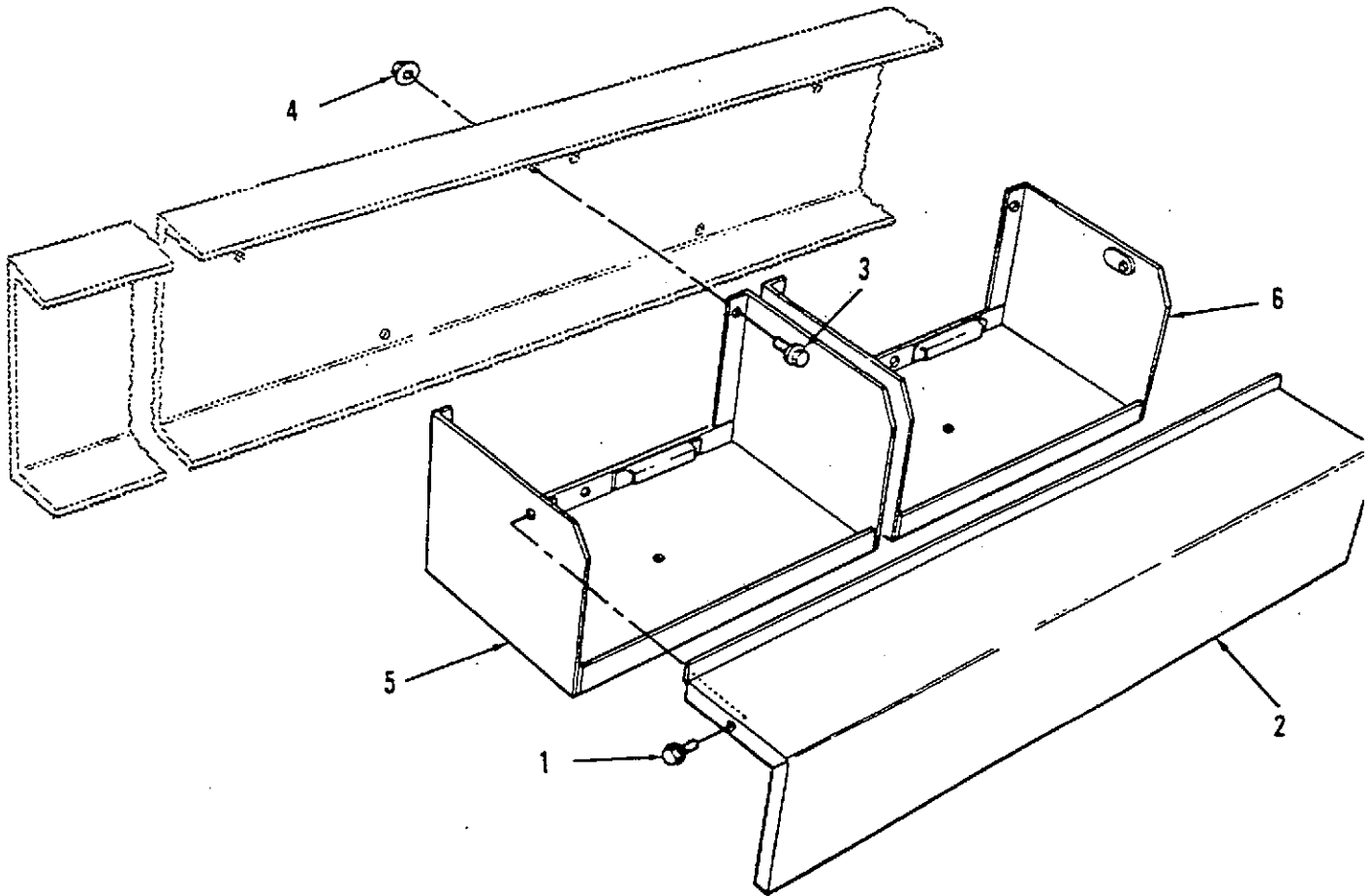
Fuel Tank and Sub Base
 210 kW 50 Hz and 250 kW 60 Hz Sets
 230 kW 50 Hz and 275 kW 60 Hz Sets



FS-1168

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	159-1100	2	Strap, Hold Down	9	505-0247	1	Plug, Pipe - Socket Head
	800-0051	4	Screw, Cap - Hex Head (3/8-16 x 1-1/4")	10	159-1101	1	Tank, Fuel
	526-0013	4	Washer, Flat (3/8")	11	403-1743	2	Plate, End
	850-0050	4	Washer, Lock - Spring (3/8")		800-0050	8	Screw, Cap - Hex Head (3/8-16 x 1")
	862-0003	4	Nut, Hex (3/8-16)		850-0050	8	Washer, Lock - Spring (3/8")
2	502-0297	1	Bushing, Reducer - Hex		862-0003	8	Nut, Hex (3/8-16)
3	501-0211	1	Line, Fuel	12	403-1896	1	Base, Sub
4	415-0317	1	Pipe, Suction		800-0156	6	Screw, Cap - Hex Head (3/4-10 x 2-1/4")
5	505-0334	1	Plug, Pipe - Square Head		850-0079	6	Washer, Lock - Spring (3/4")
6	501-0214	1	Line, Fuel		862-0020	6	Nut, Hex (3/4-10)
7	193-0216	1	Gauge				
8	159-0020	1	Cap, Tank				

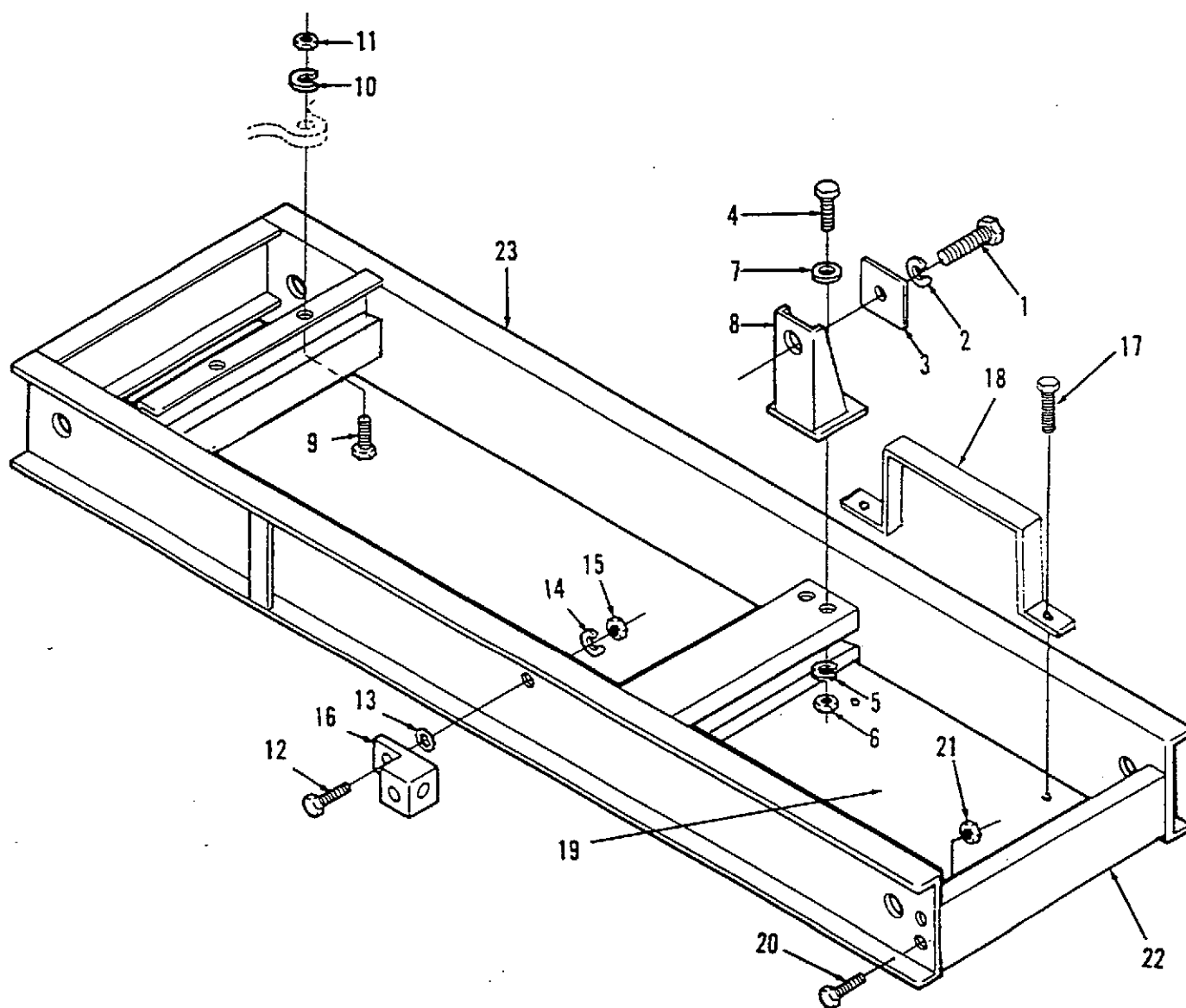
Battery Rack
275 kW 50 Hz and 300 kW 60 Hz Sets



M-1434

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	821-0030	2	Screw, Self-locking - Hex (3/8-16 x 1")	4	870-0281	6	Nut, Self-locking - Hex (3/8-16)
2	416-0805	1	Cover, Rack	5	416-0809	1	Rack, Battery
3	821-0030	6	Screw, Self-locking - Hex (3/8-16 x 1")	6	416-0808	1	Rack, Battery

Chassis
 210 kW 50 Hz and 250 kW 60 Hz Sets
 230 kW 50 Hz and 275 kW 60 Hz Sets

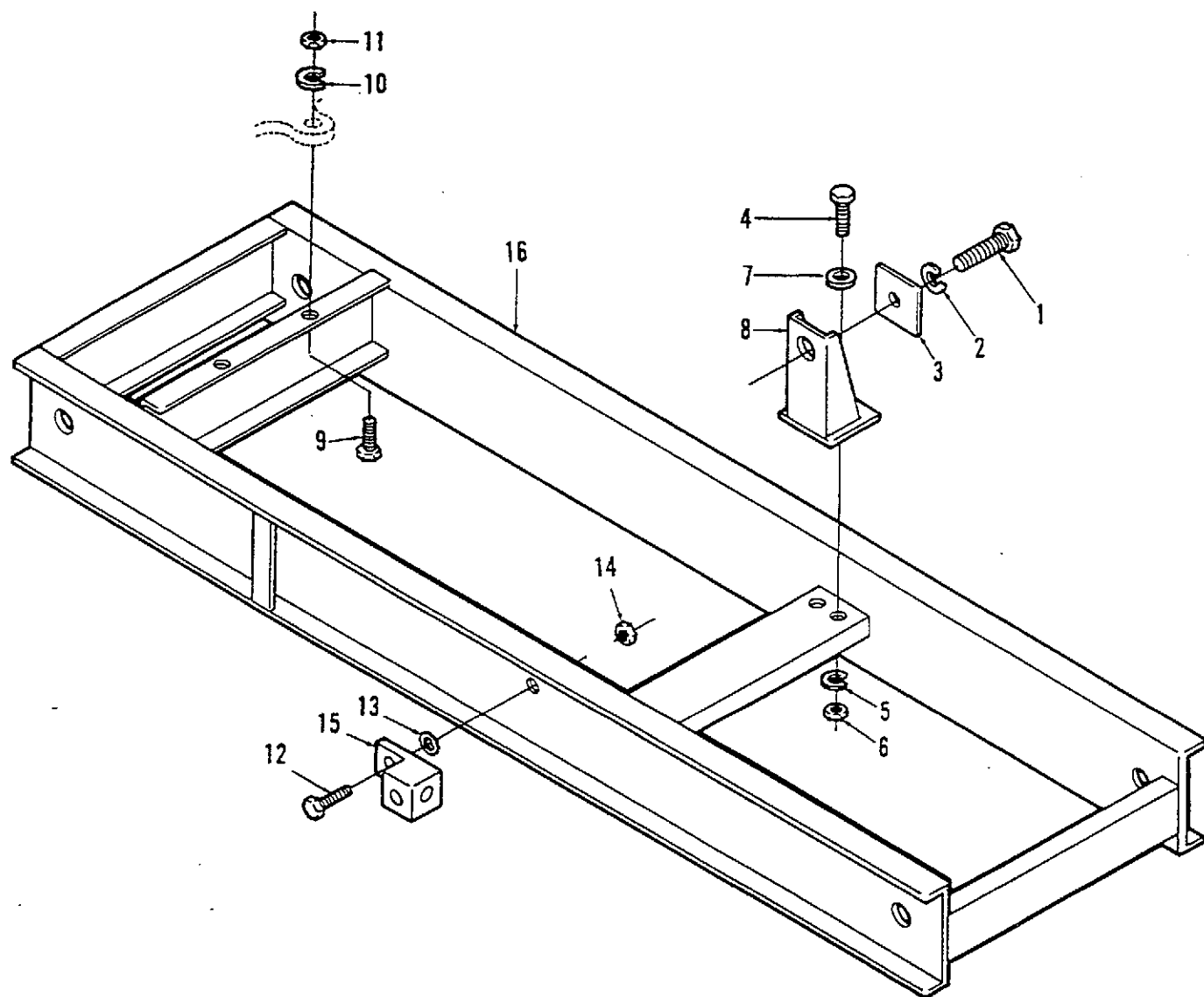


M1242-1

Chassis
210 kW 50 Hz and 250 kW 60 Hz Sets
230 kW 50 Hz and 275 kW 60 Hz Sets

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-0153	2	Screw, Cap - Hex Head (3/4-10 x 1-1/2")	13	856-0008	1	Washer, Lock - EIT (5/16")
2	850-0079	2	Washer, Lock - Spring (3/4")	14	850-0045	1	Washer, Lock - Spring (5/16")
3	232-2385	2	Plate, Mounting - Generator	15	870-0257	1	Nut, Self-locking - Hex (5/16-18)
4	800-0156	4	Screw, Cap - Hex Head (3/4-10 x 2-1/2")	16	332-1473	1	Lug, Terminal
5	850-0079	4	Washer, Lock - Spring (3/4")	17	800-0035	4	Screw, Cap - Hex Head (5/16-18 x 2-1/2")
6	862-0020	4	Nut, Hex (3/4-10)	18	416-0635	2	Strap, Holddown - Battery
7	526-0238	2	Washer, Flat (3/4")	19	416-0674	1	Tray, Battery
8	232-2389	2	Bracket, Mounting - Generator	20	821-0016	6	Screw, Self-locking - Hex (5/16-18 x 3/4")
9	800-0138	2	Screw, Cap - Hex Head (5/8-11 x 3")	21	870-0257	6	Nut, Self-locking - Hex (5/16-18)
10	850-0070	2	Washer, Lock - Spring (5/8")	22	403-1200	1	Panel, Rear - Chassis
11	862-0007	2	Nut, Hex (5/8-11)	23	403-1203	1	Base, Skid
12	800-0028	1	Screw, Cap - Hex Head (5/16-18 x 1")				

Chassis
275kW 50Hz and 300kW 60Hz Sets

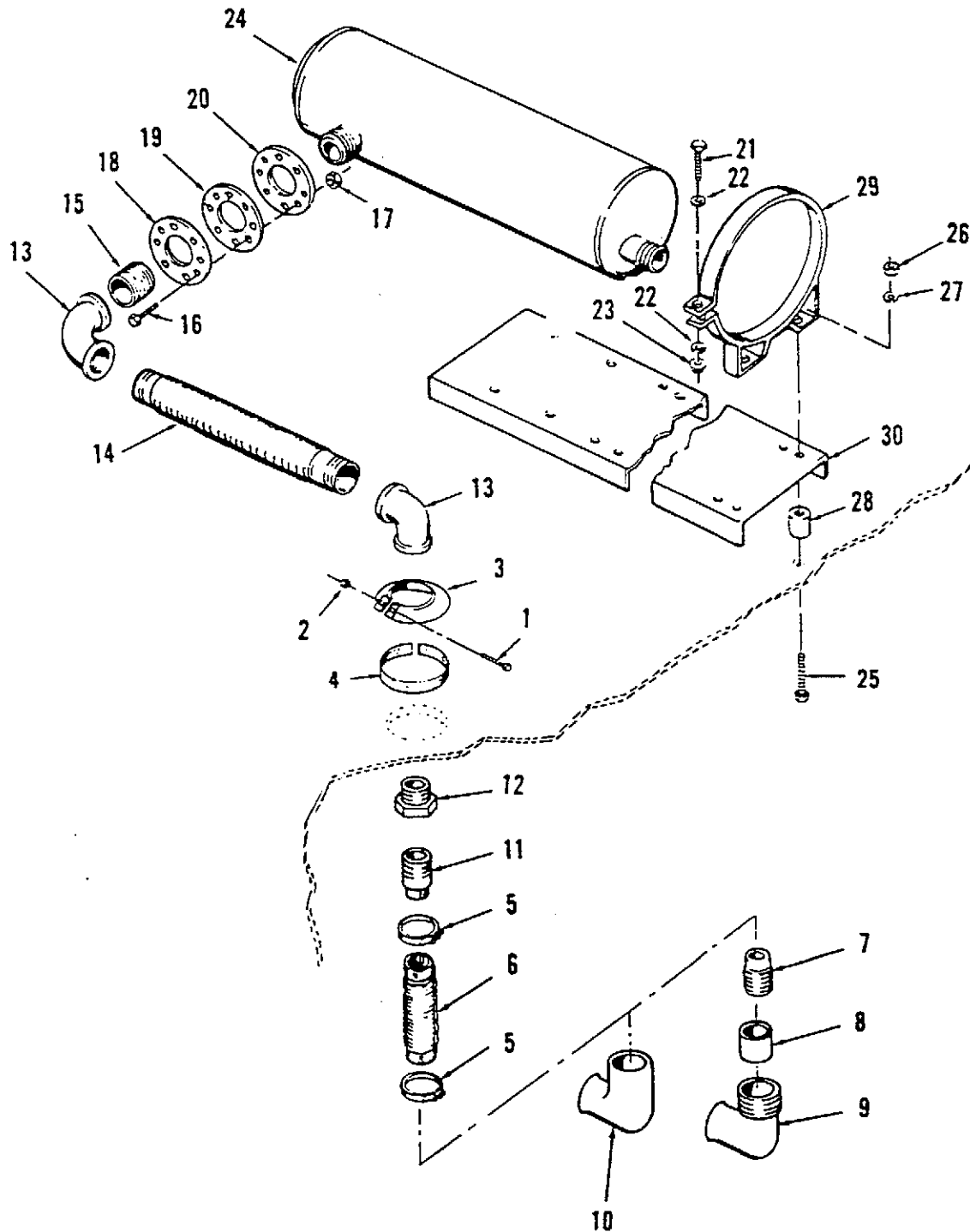


M1312

Chassis
275 kW 50 Hz and 300 kW 60 Hz Sets

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-0153	2	Screw, Cap - Hex Head (3/4-10 x 1-1/2")	10	850-0070	2	Washer, Lock - Spring (5/8")
2	850-0079	2	Washer, Lock - Spring (3/4")	11	862-0007	2	Nut, Hex (5/8-11)
3	232-2385	2	Plate, Mounting - Generator	12	800-0028	1	Screw, Cap - Hex Head (5/16-18 x 1")
4	800-0156	4	Screw, Cap - Hex Head (3/4-10 x 2-1/2")	13	856-0008	1	Washer, Lock - EIT (5/16")
5	850-0079	4	Washer, Lock - Spring (3/4")	14	870-0257	1	Nut, Self-locking - Hex (5/16-18)
6	862-0008	4	Nut, Hex (3/4-10)	15	332-1473	1	Lug, Terminal
7	526-0238	4	Washer, Flat (3/4")	16	403-2009	1	Base, Skid
8	232-2389	2	Bracket, Mounting - Generator				
9	800-0138	2	Screw, Cap - Hex Head (5/8-11 x 3")				

Exhaust Muffler Commerical

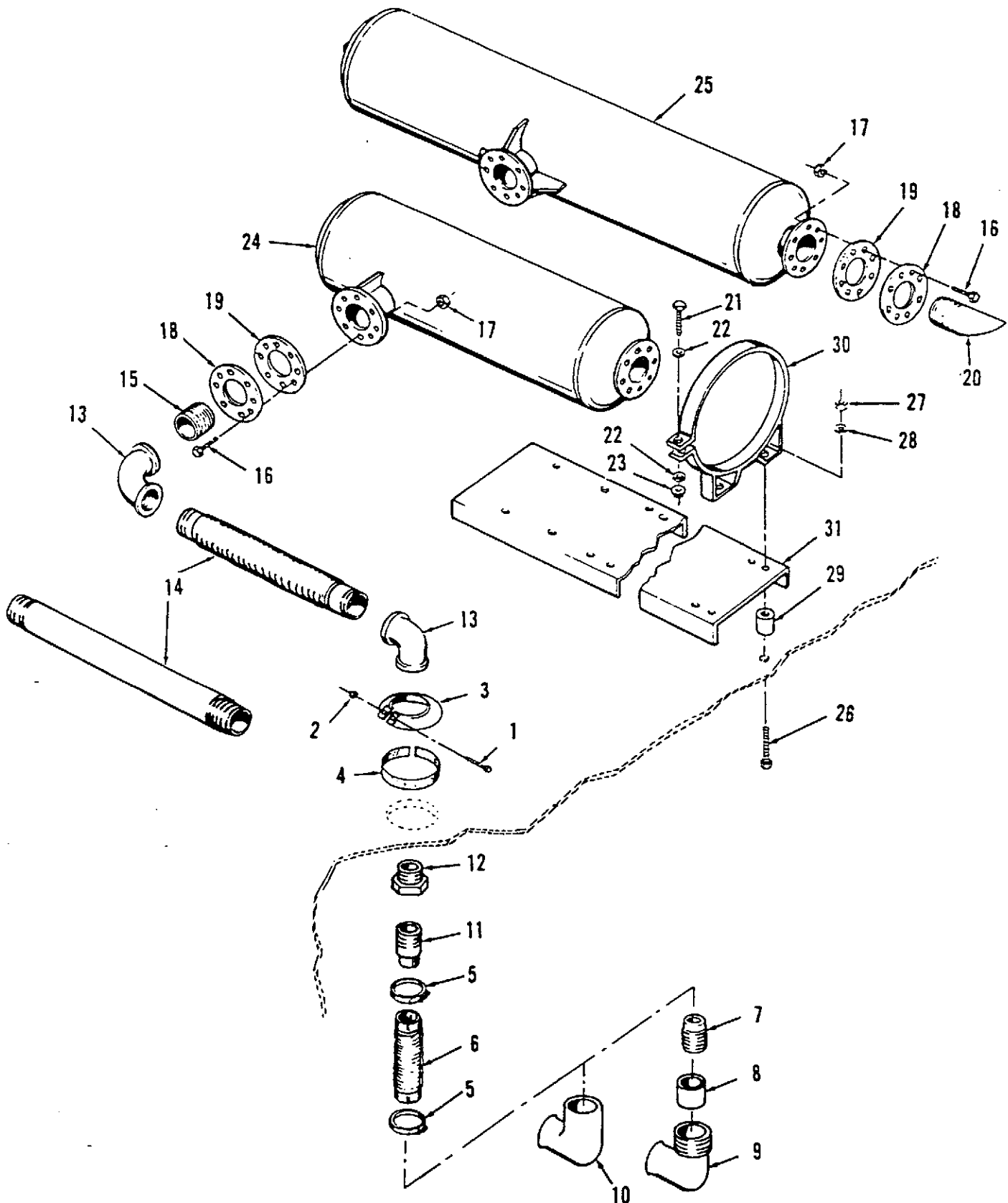


EXS1056

Exhaust Muffler Commerical

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	813-0105	2	Screw, Machine - Round Head (#10-32 x 1")	14		1	Tube, Exhaust Standard
2	870-0188	2	Nut, Self-locking - Hex (#10-32)		155-1160	1	Stainless Steel
3			Shield, Rain	15	505-0740	1	Nipple, Pipe - Short
	155-1425	1	Standard	16	800-0160	8	Screw, Cap - Hex Head (3/4-10 x 3-1/4")
	155-1639	1	Stainless Steel	17	862-0008	8	Nut, Hex (3/4-10)
4	895-0163	1	Strip, Asbestos	18	155-0652	1	Flange, Companion - Pipe
5	503-0605	2	Clamp	19	155-0676	1	Gasket
6			Tube, Exhaust - Stainless Steel	20	155-0652	1	Flange, Companion - Pipe
	155-1143	1	10"	21	800-0037	3	Screw, Cap - Hex Head (5/16-18 x 3")
	155-1603	1	13"			6	Washer, Flat (5/16")
	155-1456	1	16"	22	526-0113	3	Nut, Self-locking - Hex (5/16-18)
	155-1299	1	21"	23	870-0257	1	Muffler, Exhaust
	155-1293	1	33"			6	Screw, Cap - Hex Head (5/16-18 x 3")
7	155-1275	1	Connector, Tube	24	155-1158	6	Nut, Self-locking - Hex (5/16-18)
8	505-0784	1	Coupling, Pipe	25	800-0037	6	Washer, Lock - Spring (5/16")
9	155-1035	1	Elbow, Pipe			6	Spacer
10	155-1736	1	Elbow, Tube	26	870-0048	3	Band, Mounting
11			Connector, Tube	27	850-0045	1	Shield, Heat
	155-1275	1	6"	28	155-1430		
	155-1929	1	17"	29	140-0757		
12	505-0695	1	Bushing, Reducer - Hex	30	155-1404		
13	505-0741	2	Elbow, Pipe - 90 Degree				

Exhaust Muffler Residential and Critical

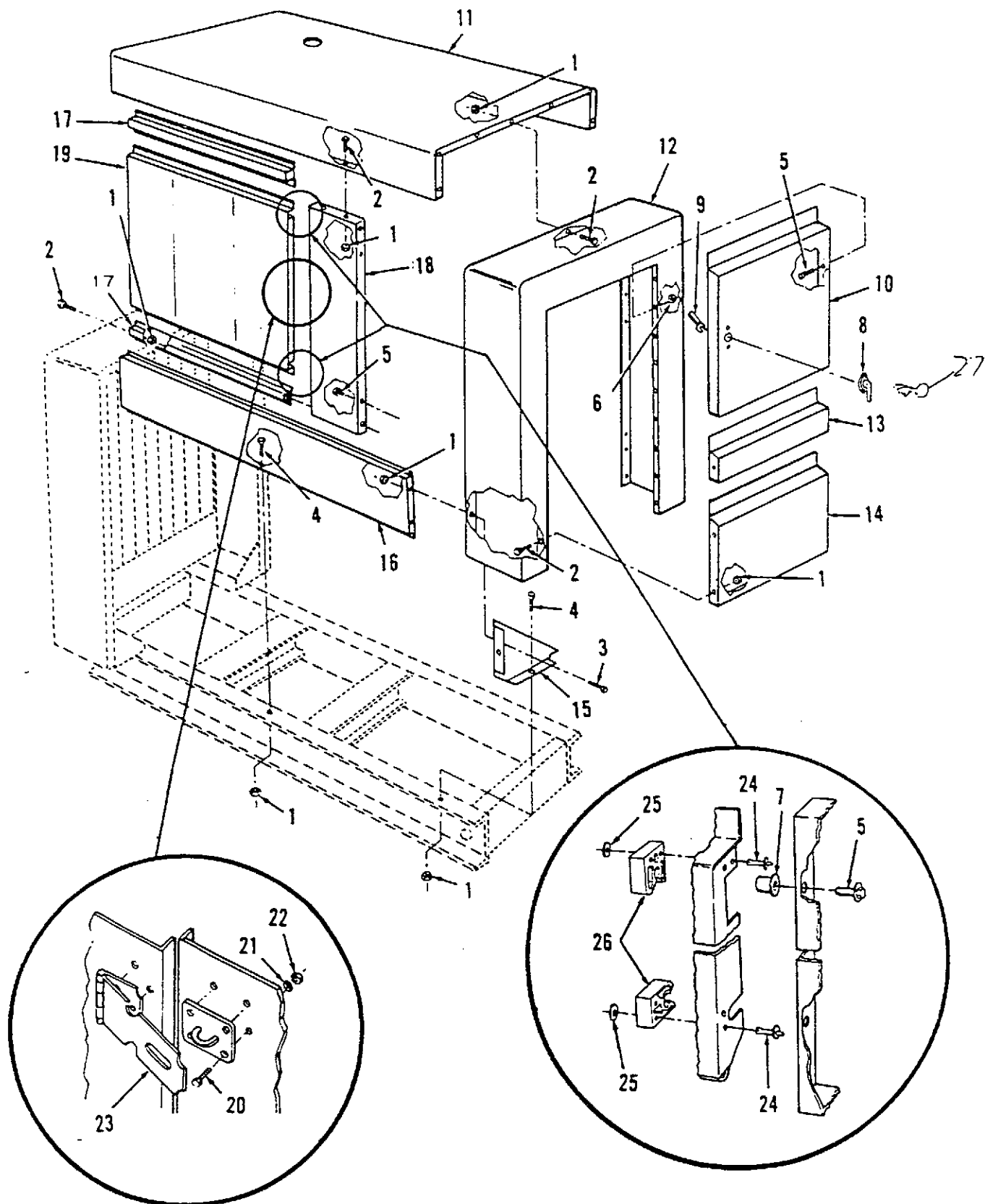


EXS1057

Exhaust Muffler Residential and Critical

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	813-0105	2	Screw, Machine - Round Head (#10-32 x 1")	16	800-0160	16	Screw, Cap - Hex Head (3/4-10 x 3-1/4")
2	870-0188	2	Nut, Self-locking - Hex (#10-32)	17	862-0008	16	Nut, Hex (3/4-10)
3			Shield, Rain	18	155-0652	2	Flange, Companion - Pipe
	155-1425	1	Standard	19	155-0676	2	Gasket
	155-1639	1	Stainless Steel	20	505-0785	1	Nipple, Pipe - Modified
4	895-0163	1	Strip, Asbestos	21	800-0037	3	Screw, Cap - Hex Head (5/16-18 x 3")
5	503-0605	2	Clamp	22	526-0113	6	Washer, Flat (5/16")
6			Tube, Exhaust - Stainless Steel	23	870-0257	3	Nut, Self-locking - Hex (5/16-18)
	155-1143	1	10"				Muffler, Exhaust - Residential
	155-1603	1	13"	24			Standard
	155-1456	1	16"		155-1605	1	Stainless Steel
	155-1299	1	21"		155-1727	1	Muffler, Exhaust - Critical
	155-1493	1	22-1/2"	25			Standard
	155-1293	1	33"		155-1568	1	Stainless Steel
7	155-1275	1	Connector, Tube		155-1728	1	Screw, Cap - Hex Head (5/16-18 x 3")
8	505-0784	1	Coupling, Pipe	26	800-0037	6	Nut, Self-locking - Hex (5/16-18)
9	155-1035	1	Elbow, Pipe	27	870-0048	6	Washer, Lock - Spring (5/16")
10	155-1736	1	Elbow, Tube	28	850-0045	6	Spacer
11			Connector, Tube	29	155-1430	6	Band, Mounting
	155-1275	1	6"	30			Standard
	155-1929	1	17"		140-0751	3	Stainless Steel
12	505-0695	1	Bushing, Reducer - Hex		140-1685	3	Shield, Heat
13	505-0741	2	Elbow, Pipe - 90 Degree	31			Standard, 67"
14			Tube, Exhaust		155-1400	1	Stainless Steel, 67"
	155-1604	1	Tube, 38"		155-1729	1	Standard, 94"
	155-1619	1	Tube, 55"		155-1602	1	Stainless Steel, 94"
	505-0939	1	Pipe, 43"		155-1730	1	
15	505-0740	1	Nipple, Pipe - Short				

Set Housing



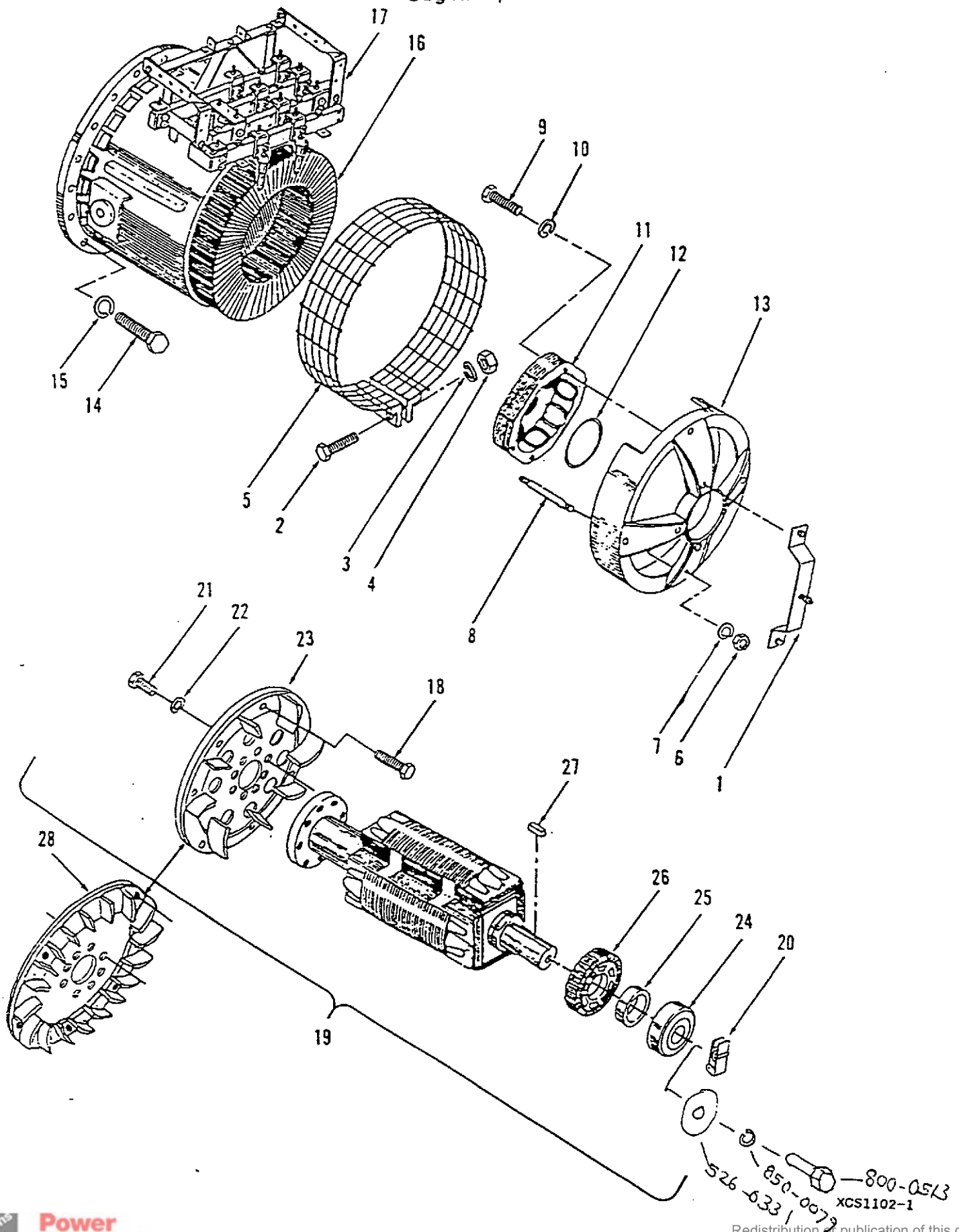
M1004

Set Housing

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	870-0257	62	Nut, Self-locking - Hex (5/16-18)	13	405-1858	2	Panel, Louver - Rear
2	821-0014	48	Screw, Self-locking - Hex (5/16-18 x 1/2")	14	405-1856	1	Panel, Lower - Rear
3	821-0016	8	Screw, Self-locking - Hex (5/16-18 x 3/4")	15	405-2016	4	Bracket, Mounting -
4	800-0030	6	Screw, Cap - Hex Head (5/16-18 x 1-1/4")		405-2016	4	210 kW 50 Hz Set
5	821-0010	20	Screw, Self-locking - Hex (1/4-20 x 1/2")		405-2236	4	250 kW 60 Hz Set
6	870-0212	4	Nut, Self-locking - Hex (1/4-20)		405-2236	2	Right Side, 230 kW 50 Hz Set
7	870-0258	16	Nut, Weld		405-2236	2	Right Side, 275 kW 60 Hz Set
8	406-0157	1	Handle, Lock		405-2236	2	Right Side, 275 kW 50 Hz Set
9	406-0089	1	Catch		405-2236	2	Right Side, 300 kW 60 Hz Set
10	405-1880	1	Door, Rear -		405-2237	2	Left Side, 230 kW 50 Hz Set
11			Panel, Top		405-2237	2	Left Side, 275 kW 60 Hz Set
	405-2222	1	210 kW 50 Hz Set		405-2237	2	Left Side, 275 kW 50 Hz Set
	405-2227	1	250 kW 60 Hz Set		405-2237	2	Left Side, 300 kW 60 Hz Set
	405-2488	1	230 kW 50 Hz Set	16	405-2221	2	Panel, Base
	405-2488	1	275 kW 60 Hz Set	17	405-2014	8	Panel, Louver
	405-3019	1	275 kW 50 Hz Set	18	405-2220	2	Panel, Center
	405-3019	1	300 kW 60 Hz Set	19	405-2011	4	Door
12			Panel, Rear -	20	814-0079	28	Screw, Machine - Flat Head (#8-32 x 1/2")
	405-1883	1	210 kW 50 Hz Set				
	405-1883	1	250 kW 60 Hz Set	21	850-0025	28	Washer, Lock - Spring (#8)
	405-2227	1	230 kW 50 Hz Set	22	860-0008	28	Nut, Hex (#8-32)
	405-2227	1	275 kW 60 Hz Set	23	406-0249	4	Set, Hasp
	405-2227	1	275 kW 50 Hz Set	24	818-0150	32	Rivet, Drive Pin
	405-2227	1	300 kW 60 Hz Set	25	526-0003	32	Washer, Flat (3/16")
				26	405-1872	16	Clip, Pivot - Door
</							

27406-1565 1 Key

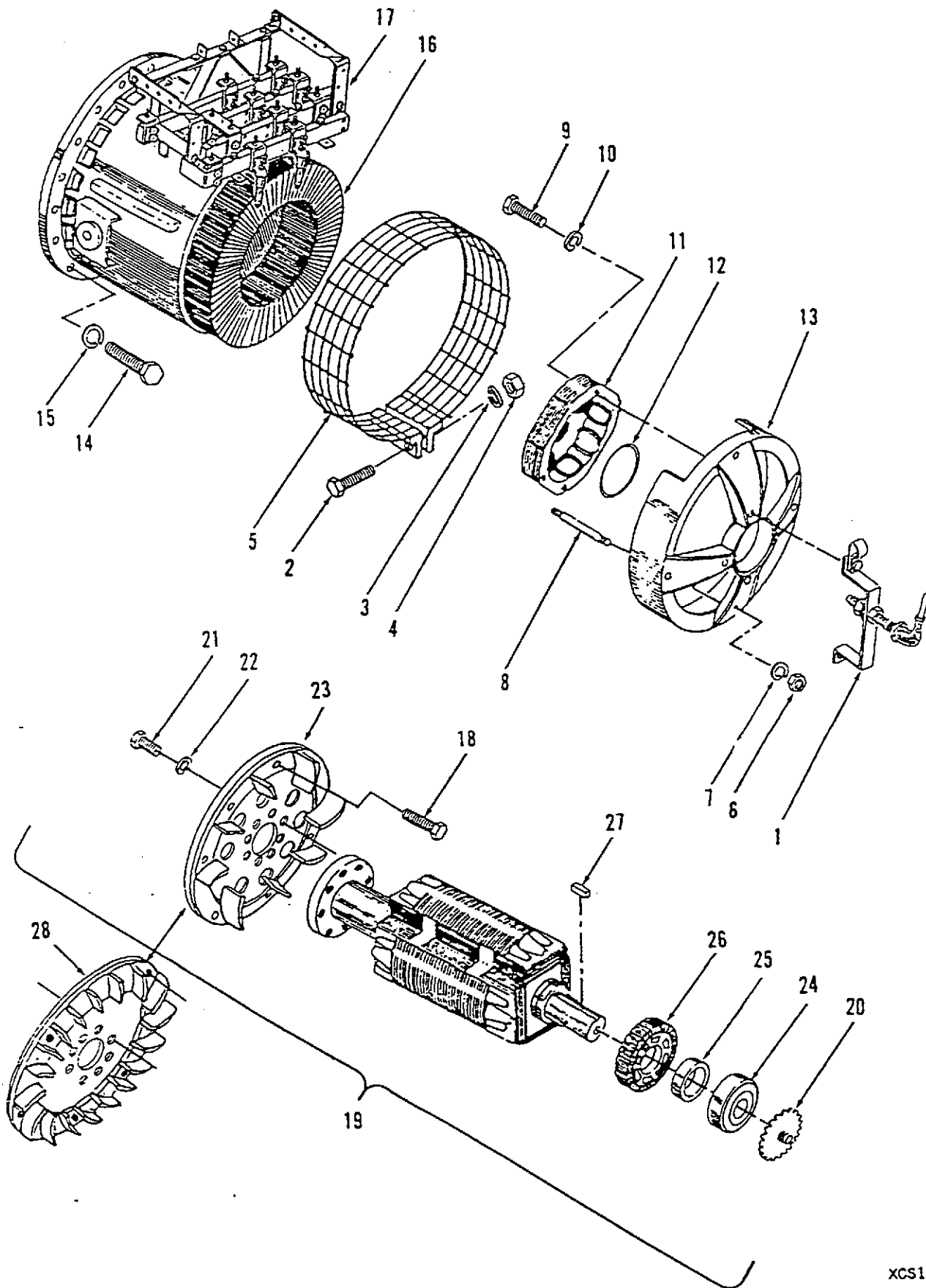
Generator
Begin Spec N



Generator Begin Spec N

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1		1	Switch Assembly, Overspeed (See Separate Page for Components)	17		1	Bus Bar Assembly (See Separate Page for Components)
2	114-0023	2	Screw, Cap - Hex Head (1/4-20 x 1-1/4"	18			Bolt, Hex Head - Grade 8
3	850-0040	2	Washer, Lock - Spring (1/4")		805-0032	8	1/2-13 x 1-1/4" (210 kW 50 Hz, 230 kW 50 Hz, 250 kW 60 Hz, 275 kW 60 Hz Sets)
4	862-0001	2	Nut, Hex (1/4-20)		805-0035	6	5/8-11 x 1-1/2" (275 kW 50 Hz, 300 kW 60 Hz Sets)
5	234-0455	1	Screen, Air				Rotor Assembly (Includes Disk and Fan Assembly Marked *, Bearing, Exciter Rotor and Overspeed Switch
6	862-0016	4	Nut, Hex (1/2-13)	19			210 kW, Code 517
7	850-0060	4	Washer, Lock - Spring (1/2")		201-3330	1	230 kW, Code 517
8	520-0780	4	Stud (1/2-13 x 6-1/2")		201-3330	1	250 kW, Code 5, 6, 7, 9, 17
9	800-0009	4	Screw, Cap - Hex Head (1/4-20 x 1-1/2")		201-3331	1	275 kW, Code 5, 6, 7, 9, 17
10	850-0040	4	Washer, Lock - Spring (1/4")				Rotor Assembly (Includes Disk and Fan Assembly Marked @, Bearing, Exciter Rotor and Overspeed Switch
11	220-1920	1	Stator, Exciter		201-3336	1	275 kW, Code 517
12	509-0151	1	Seal, Oil - "O" Ring		201-3335	1	300 kW, Code 5, 6, 7, 9, 17
13	211-0214	1	Bell, End				Switch Assembly, Overspeed (See Separate Page for Components)
14			Screw, Cap - Hex Head				Bolt, Hex Head - Grade 8 (5/8-11 x 1-1/2")
	800-0073	12	7/16-14 x 1-1/2" (210 kW 50 Hz, 230 kW 50 Hz, 250 kW 60 Hz, 275 kW 60 Hz Sets)				Washer, Flat - Hardened Steel (5/8")
	800-0092	16	1/2-13 x 1-1/2" (275 kW 50 Hz, 20 300 kW 60 Hz Sets)				*Disk and Fan Assembly (Matched Pair)
15			Washer, Lock - Spring				Bearing, Ball
	850-0055	12	7/16" (210 kW 50 Hz, 230 kW 50 Hz, 250 kW 60 Hz, 275 kW 60 Hz Sets)	21	805-0035	8	Spacer, Sleeve
	850-0060	16	1/2" (275 kW 50 Hz, 300 kW 60 Hz Sets)	22	526-0259	8	Rotor, Assembly - Exciter (See Separate Page for Components)
16			Stator (Includes Bus Bar Assembly)	23	232-2898	1	Key, Machine
	220-2137	1	210 kW, Code 517				@Disk and Fan Assembly (Matched Pair)
	220-2133	1	230 kW, Code 517	24	510-0106	1	
	220-2140	1	275 kW, Code 517	25	232-2317	1	
	220-2343	1	250 kW, Code 5	26	201-1902	1	
	220-2345	1	300 kW, Code 5				
	220-2349	1	250 kW, Code 6	27	515-0145	1	
	220-2351	1	300 kW, Code 6	28	232-2899	1	
	220-2445	1	250 kW, Code 7				
	220-2447	1	300 kW, Code 7				
	220-2319	1	250 kW, Code 9				
	220-2321	1	300 kW, Code 9				
	220-1914	1	250 kW, Code 17				
	220-1910	1	275 kW, Code 17				
	220-1916	1	300 kW, Code 17				

Generator
Spec H Thru M

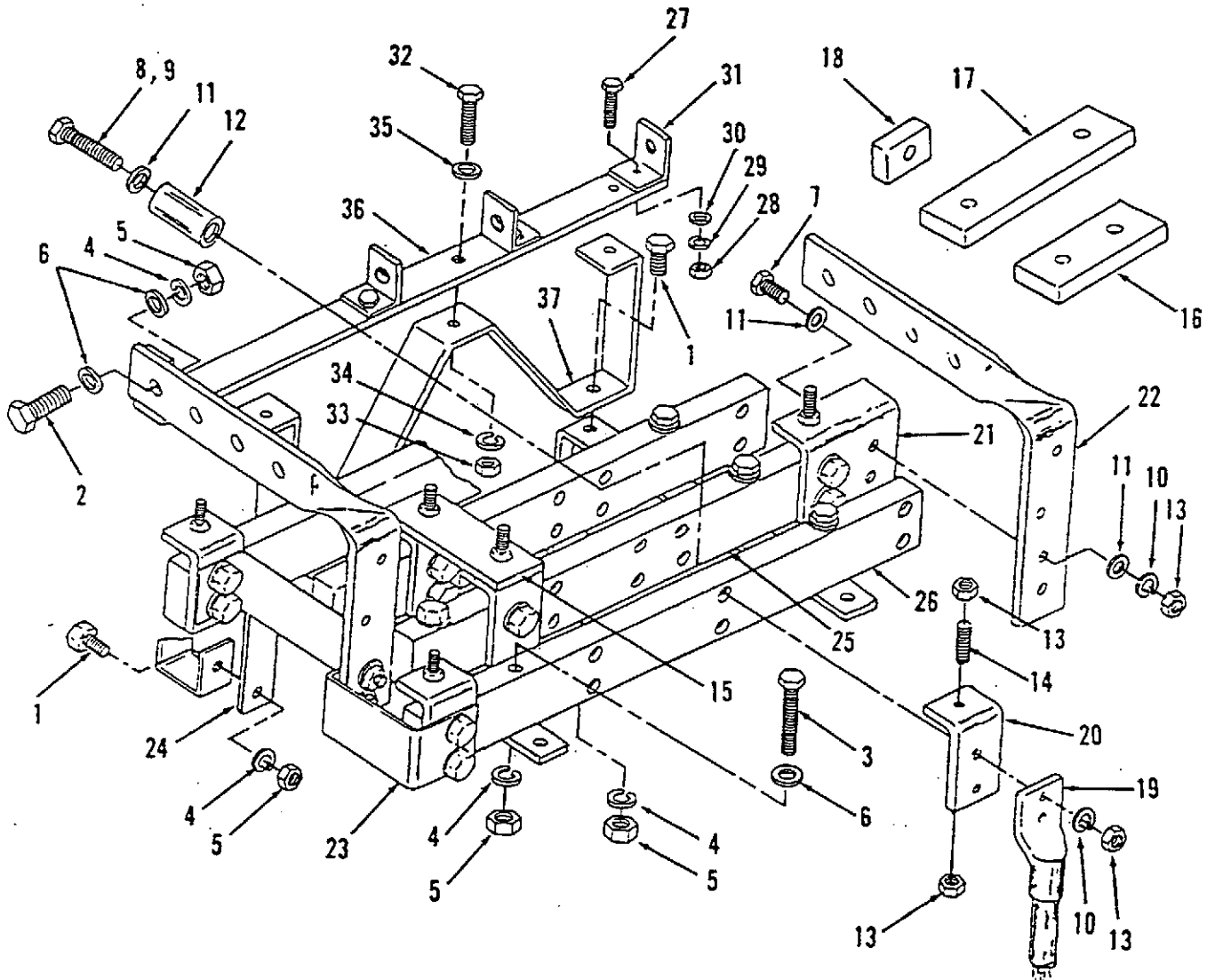


XCS1102-2

Generator Spec H Thru M

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1		1	Sensor Assembly, Overspeed (See Separate Page for Components)	17		1	Bus Bar Assembly (See Separate Page for Components)
2	114-0023	2	Screw, Cap - Hex Head (1/4-20 x 1-1/4")	18		8	Bolt, Hex Head - Grade 8 1/2-13 x 1-1/4" (210 kW 50 Hz, 230 kW 50 Hz, 250 kW 60 Hz, 275 kW 60 Hz Sets)
3	850-0040	2	Washer, Lock - Spring (1/4")		805-0032	6	5/8-11 x 1-1/2" (275 kW 50 Hz, 300 kW 60 Hz Sets)
4	862-0001	2	Nut, Hex (1/4-20)		805-0035	19	Rotor Assembly (Includes Disk and Fan Assembly Marked *, Bearing, Exciter Rotor and Overspeed Sensor)
5	234-0455	1	Screen, Air			1	210 kW, Code 517
6	862-0016	4	Nut, Hex (1/2-13)		201-1942	1	230 kW, Code 517
7	850-0060	4	Washer, Lock - Spring (1/2")		201-2962	1	250 kW, Code 5, 6, 7, 9, 17
8	520-0780	4	Stud (1/2-13 x 6-1/2")		201-1942	1	275 kW, Code 5, 6, 7, 9, 17
9	800-0009	4	Screw, Cap - Hex Head (1/4-20 x 1-1/2")		201-2962	1	Rotor Assembly (Includes Disk and Fan Assembly Marked @, Bearing, Exciter Rotor and Overspeed Sensor)
10	850-0040	4	Washer, Lock - Spring (1/4")			1	275 kW, Code 517
11	220-1920	1	Stator, Exciter		201-3031	1	300 kW, Code 5, 6, 7, 9, 17
12	509-0151	1	Seal, Oil - "O" Ring		201-3030	1	Switch Assembly, Overspeed (See Separate Page for Components)
13	211-0214	1	Bell, End			8	Bolt, Hex Head - Grade 8 (5/8-11 x 1-1/2")
14			Screw, Cap - Hex Head 7/16-14 x 1-1/2" (210 kW 50 Hz, 230 kW 50 Hz, 250 kW 60 Hz, 275 kW 60 Hz Sets)			8	Washer, Flat - Hardened Steel (5/8")
	800-0073	12				1	*Disk and Fan Assembly (Matched Pair)
			1/2-13 x 1-1/2" (275 kW 50 Hz, 300 kW 60 Hz Sets)			1	Bearing, Ball
	800-0092	16				1	Spacer, Sleeve
15			Washer, Lock - Spring 7/16" (210 kW 50 Hz, 230 kW 50 Hz, 250 kW 60 Hz, 275 kW 60 Hz Sets)	20		1	Rotor, Assembly - Exciter (See Separate Page for Components)
	850-0055	12				1	Key, Machine
			1/2" (275 kW 50 Hz, 300 kW 60 Hz Sets)	21	805-0035	1	@Disk and Fan Assembly (Matched Pair)
	850-0060	16		22	526-0259		
16			Stator (Includes Bus Bar Assembly)	23	232-2898		
	220-2137	1	210 kW, Code 517	24	510-0106		
	220-2133	1	230 kW, Code 517	25	232-2317		
	220-2140	1	275 kW, Code 517	26	201-1902		
	220-2343	1	250 kW, Code 5				
	220-2345	1	300 kW, Code 5				
	220-2349	1	250 kW, Code 6				
	220-2351	1	300 kW, Code 6	27	515-0145		
	220-2445	1	250 kW, Code 7	28	232-2899		
	220-2447	1	300 kW, Code 7				
	220-2319	1	250 kW, Code 9				
	220-2321	1	300 kW, Code 9				
	220-1914	1	250 kW, Code 17				
	220-1910	1	275 kW, Code 17				
	220-1916	1	300 kW, Code 17				

Bus Bar Assembly

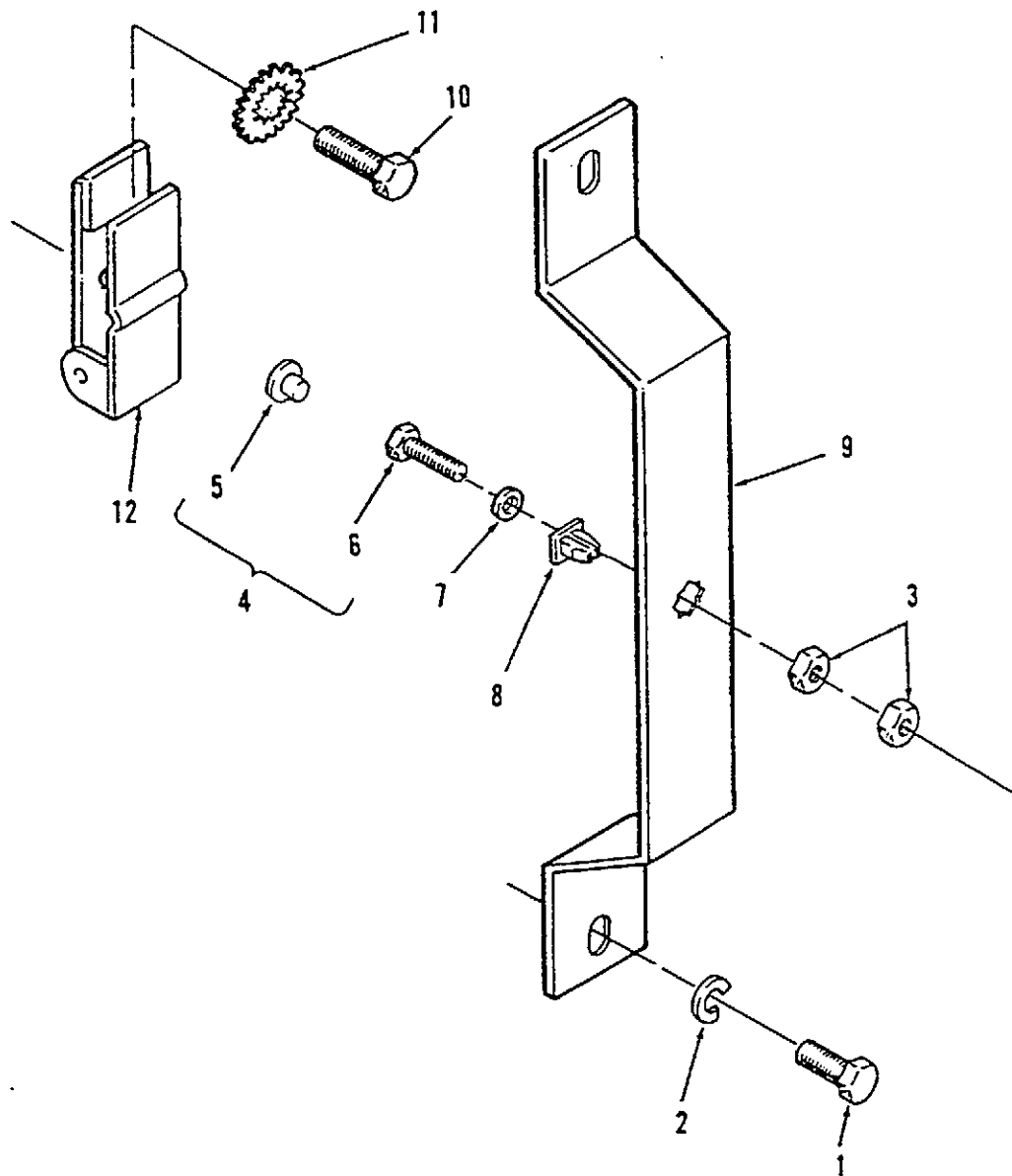


XES1154

Bus Bar Assembly

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-0050	4	Screw, Cap - Hex Head (3/8-16 x 1")	18	232-2583	1	Spacer, Bus Bar
2	800-0051	4	Screw, Cap - Hex Head (3/8-16 x 1-1/4")	19	332-1152	12	Terminal, Lug
3	800-0056	8	Screw, Cap - Hex Head (3/8-16 x 2-1/2")	20	232-2241	11	Bar, Bus
4	850-0050	16	Washer, Lock - Spring (3/8")	21	232-2343	3	Bar, Bus
5	862-0003	16	Nut, Hex (3/8-16)	22	232-2240 ✓	4	Bar, Bus
6	526-0029	16	Washer, Flat (3/8")	23	232-2238	1	Bar, Bus
7	800-0028	4	Screw, Cap - Hex Head (5/16-18 x 1")	24	232-2249	2	Bracket, Mounting - Bus Bar
8	114-0022	24	Screw, Cap - Hex Head (5/16-18 x 1-3/4")	25	232-2242	2	Board, Insulator - Center
9	800-0033	8	Screw, Cap - Hex Head (5/16-18 x 2")	26	232-2243	2	Board, Insulator - Front and Rear
10	850-0045	36	Washer, Lock - Spring (5/16")	27	800-0007	4	Screw, Cap - Hex Head (1/4-20 x 1")
11	526-0115	48	Washer, Flat (5/16")	28	862-0001	4	Nut, Hex (1/4-20)
12	232-2344	32	Spacer, Sleeve	29	850-0040	4	Washer, Lock - Spring (1/4")
13	862-0015	50	Nut, Hex (5/16-18)	30	526-0018	4	Washer, Flat (1/4")
14	520-0142	14	Stud (5/16-18 x 1-1/4"LG)	31	232-2387 ✓	4	Bracket, Angle
15	232-2246	2	Bar, Reconnection - Long	32	800-0051	3	Screw, Cap - Hex Head (3/8-16 x 1-1/4")
16	232-2248	2	Bar, Reconnection - Short	33	862-0003	3	Nut, Hex (3/8-16)
17	232-2582	1	Jumper, Bus Bar	34	850-0050	3	Washer, Lock - Spring (3/8")
				35	526-0029	3	Washer, Flat (3/8")
				36	232-2245 ✓	1	Board, Insulator
				37	232-2237 ✓	1	Bracket, Support

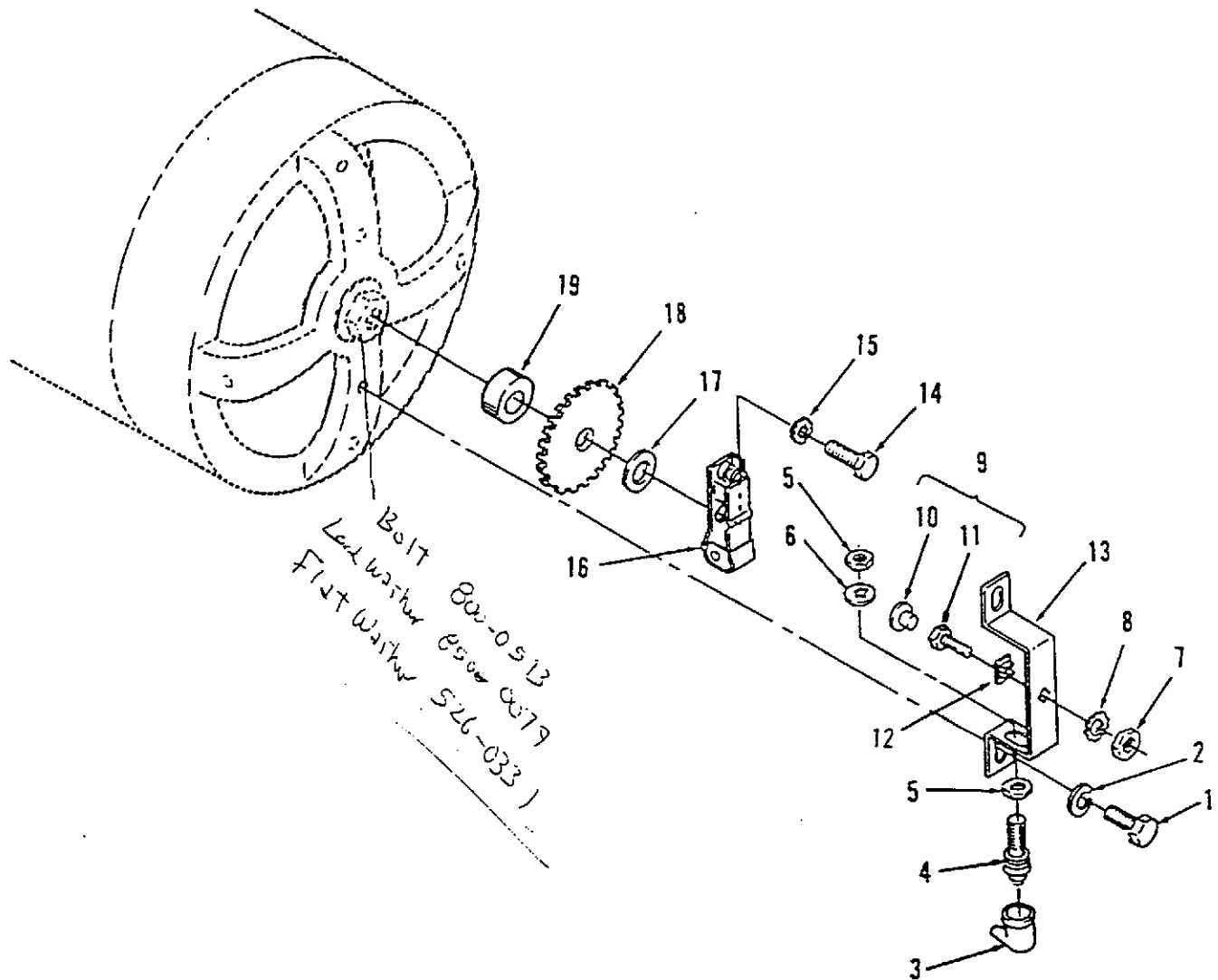
Overspeed Switch Assembly Begin Spec M



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-0003	2	Screw, Cap - Hex Head (1/4-20 x 1/2")
2	850-0040	2	Washer, Lock - Spring (1/4")
3	862-0001	2	Nut, Hex (1/4-20)
4	150-0723	1	Point Assembly, Overspeed (Includes Contact and Modified Screw)
5	306-0036	1	Contact, Electrical

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
6	150-0724	1	Screw, Cap - Modified
7	853-0013	1	Washer, Lock - ET (1/4")
8	870-0250	1	Nut, Insulating (1/4")
9	150-2104	1	Bracket, Mounting
10	800-0048	1	Screw, Cap - Hex Head (3/8-16 x 3/4")
11	856-0010	1	Washer, Lock - EIT (3/8")
12	150-0717	1	Switch, Overspeed

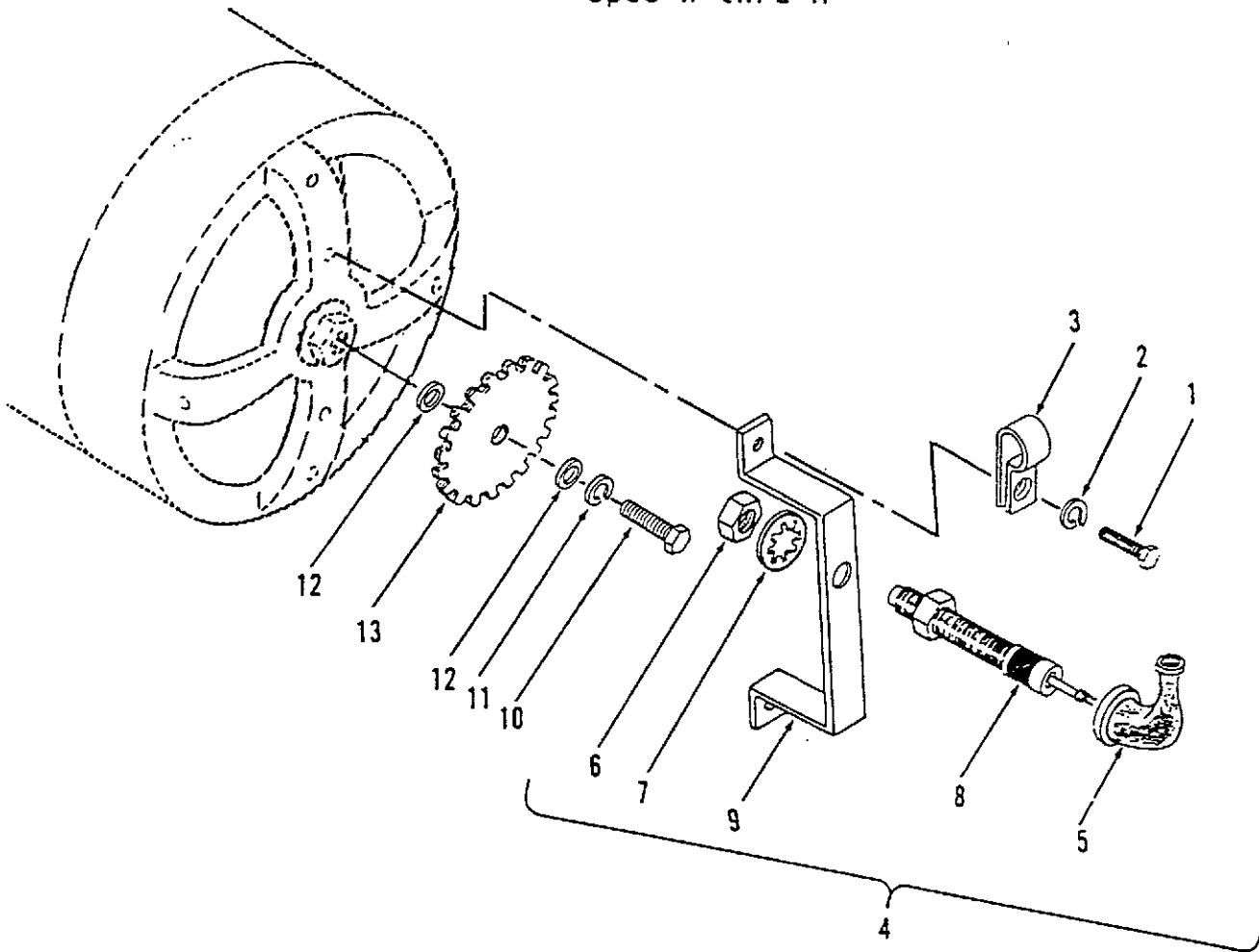
Magnetic Pickup
Begin Spec N



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-0003	2	Screw, Cap - Hex Head (1/4-20 x 1/2")
2	850-0040	2	Washer, Lock - Spring (1/4")
3	150-1410	1	Cap, Insulating
4	150-1406	1	Pickup, Magnetic (Sensor)
5	868-0011	2	Nut, Hex (3/4-16)
6	854-0031	1	Washer, Lock - IT (3/4")
7	862-0001	2	Nut, Hex (1/4-20)
8	853-0013	1	Washer, Lock - ET (1/4")
9	150-0723	1	Point Assembly, Overspeed (Includes Contact and Modified Screw)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
10	306-0036	1	Contact, Electrical
11	150-0724	1	Screw, Cap - Modified
12	870-0250	1	Nut, Insulating (1/4")
13	301-9697	1	Bracket, Mounting
14	800-0053	1	Screw, Cap - Hex Head (3/8-16 x 1-3/4")
15	856-0010	1	Washer, Lock - EIT (3/8")
16	150-0717	1	Switch, Overspeed
17	526-0077	1	Washer, Flat (13/32" ID x 1-1/4" OD x 1/4" Thick)
18	150-1557	1	Wheel, Sensor - Overspeed
19	370-4011	1	Spacer, Sleeve

Overspeed Sensor Assembly Spec H thru M

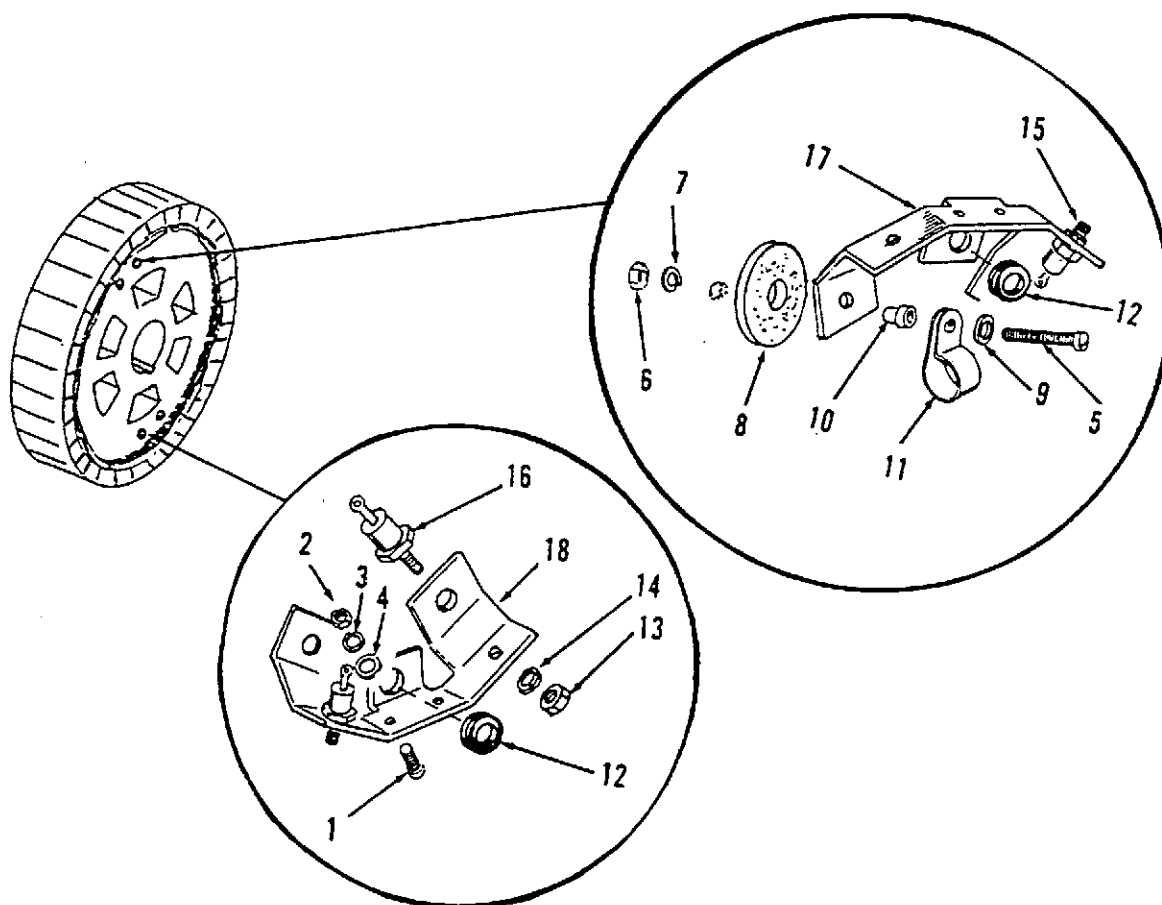


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-0005	2	Screw, Cap - Hex Head (1/4-20 x 1-1/2")
2	850-0040	2	Washer, Lock - Spring (1/4")
3	332-1554	1	Clamp, Loop
4	150-1411	1	Sensor Assembly, Overspeed (Includes Cap, Sensor and Mounting Bracket)
5	150-1410	1	Cap, Insulating
6	868-0011	2	Nut, Hex (3/4-16)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
7	854-0031	1	Washer, Lock - IT (3/4")
8	150-1406	1	Pickup, Magnetic (Sensor)
9	150-1407	1	Bracket, Mounting
10	800-0092	1	*Screw, Cap - Hex Head (1/2-13 x 1-1/2")
11	850-0060	1	*Washer, Lock - Spring (1/2")
12	526-0252	2	*Washer, Flat (1/2")
13	150-1405	1	*Wheel, Sensor - Overspeed

* - Parts included with Generator Rotor Assembly.

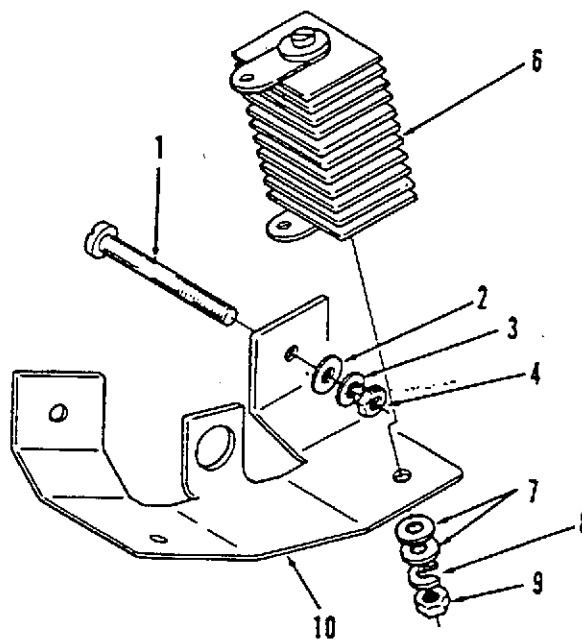
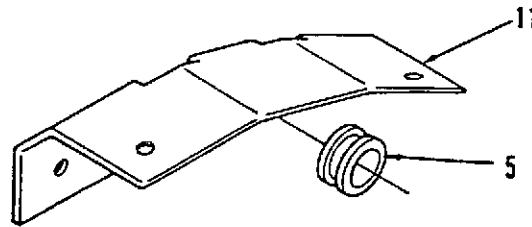
Exciter Rotor Components



G1092-1

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			Rotor, Exciter (Includes Heat Sinks and Diodes)	7	850-0030	4	Washer, Lock - Spring (#10)
	201-1902	1	Standard	8	508-0156	4	Washer, Insulating
	201-2453	1	Enviromental Protected	9	526-0009	4	Washer, Flat (#10)
1	813-0100	2	Screw, Machine - Round Head (#10-32 x 1/2")	10	508-0187	4	Spacer, Stepped
2	870-0053	2	Nut, Hex (#10-32)	11	332-0050	2	Clamp, Loop
3	850-0030	2	Washer, Lock - Spring (#10)	12	508-0093	2	Grommet
4	526-0008	2	Washer, Flat (#10)	13	868-0001	6	Nut, Hex (1/4-28)
5	813-0110	4	Screw, Machine - Round Head (#10-32 x 2")	14	850-0040	6	Washer, Lock - Spring (1/4")
6	870-0053	4	Nut, Hex (#10-32)	15	358-0011	3	Rectifier, Diode - Positive (CR1, CR2, CR3)
				16	358-0012	3	Rectifier, Diode - Negative (CR4, CR5, CR6)
				17	363-0049	1	Sink, Heat
				18	363-0050	1	Sink, Heat

Voltage Suppressor Components

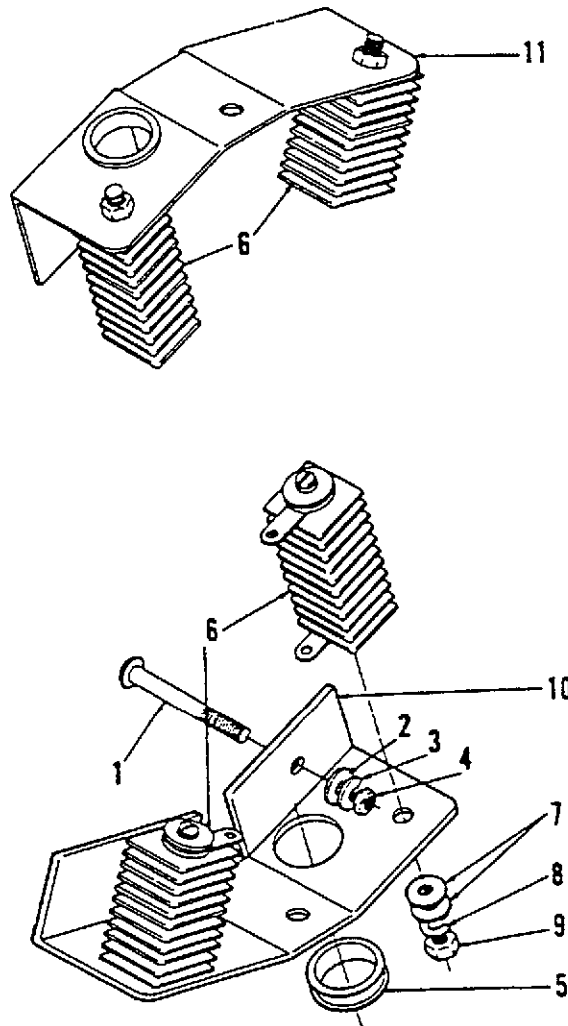


XES1229

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	232-2445	1	Suppressor, Voltage
1	813-0112	4	Screw, Machine - Round Head (#10-32 x 2-1/2")
2	526-0140	4	Washer, Flat (#10)
3	850-0030	4	Washer, Lock - Spring (#10)
4	870-0053	4	Nut, Hex (#10-32)
5	508-0093	2	Grommet

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
6	305-0526	1	Set, Voltage Suppressor
7	526-0140	4	Washer, Flat (#10)
8	850-0030	4	Washer, Lock - Spring (#10)
9	870-0053	4	Nut, Hex (#10-32)
10	363-0054	1	Sink, Heat
11	363-0055	1	Sink, Heat

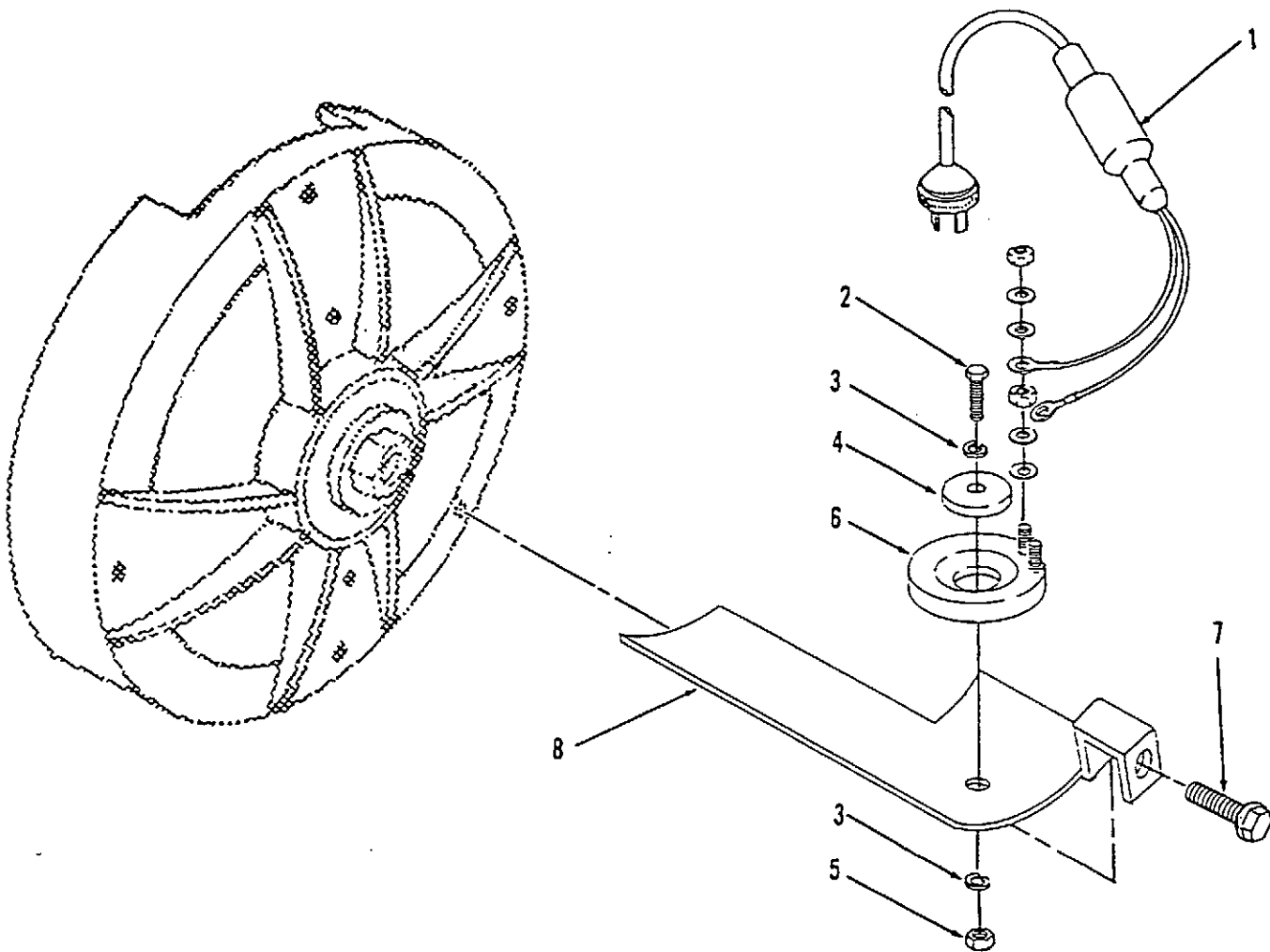
Dual Voltage Suppressor Components



XES1230

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	232-2639	1	Suppressor, Voltage - Dual	6	305-0526	2	Set, Voltage Suppressor
1	813-0112	8	Screw, Machine - Round Head (#10-32 x 2-1/2")	7	526-0140	8	Washer, Flat (#10)
2	526-0140	8	Washer, Flat (#10)	8	850-0030	8	Washer, Lock - Spring (#10)
3	850-0030	8	Washer, Lock - Spring (#10)	9	870-0053	8	Nut, Hex (#10-32)
4	870-0053	8	Nut, Hex (#10-32)	10	363-0025	1	Sink, Heat
5	508-0093	2	Grommet	11	363-0033	1	Sink, Heat

Generator Heater

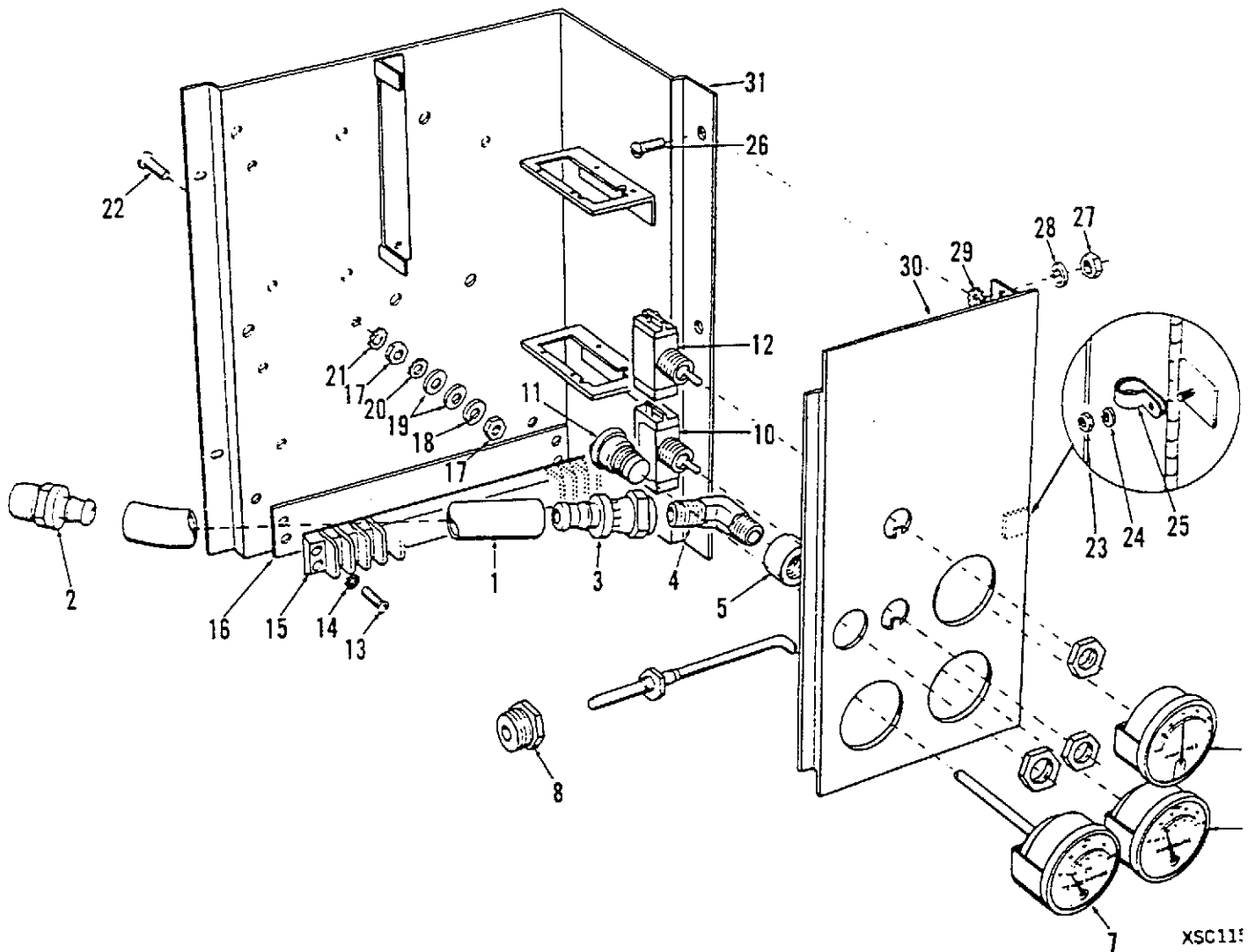


G1086-1

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Cable, Electrical (Includes Thermostat)
	335-0146	1	120 VAC
	335-0147	1	240 VAC
2	800-0004	1	Screw, Cap - Hex Head (1/4-20 x 5/8")
3	850-0038	1	Washer, Lock - Spring (1/4")
4	526-0158	1	Washer, Flat (17/64"ID x 1"OD x 1/8"Thick)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
5	862-0001	1	Nut, Hex (1/4-20)
6			Heater, Electrical
	333-0059	1	125 Watt, 120 VAC
	333-0192	1	200 Watt, 240 VAC
7	821-0014	1	Screw, Self-locking - Hex (5/16-18 x 1/2")
8			Bracket, Mounting
	232-2446	1	Used with 120 VAC Heater
	232-2832	1	Used with 240 VAC Heater

Engine Control Mechanical Gauges

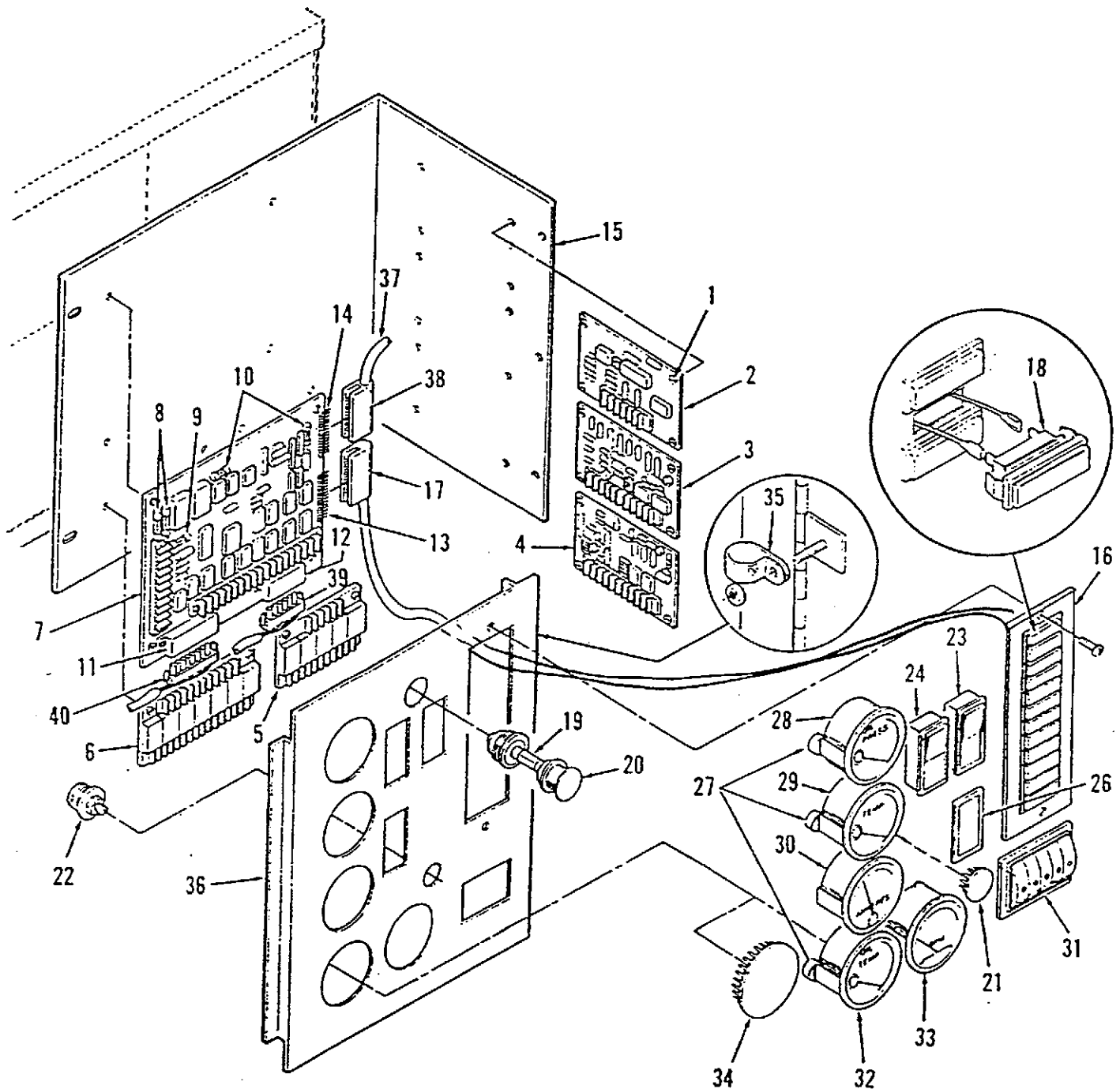


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-1077	1	Hose
2	502-0444	1	Adapter, Pipe to Hose - Male
3	502-0445	1	Adapter, Pipe to Hose - Female
4	502-0583	1	Elbow, Pipe - 45 Degree
5	502-0051	1	Coupling, Pipe
6			Gauge, Pressure - Oil
	193-0232	1	0 - 75 Pounds
	193-0233	1	0 - 150 Pounds
7			Gauge, Temperature - Water
			(Includes Reducer)
	193-0234	1	72" Capillary Tube
	193-0235	1	84" Capillary Tube
	193-0236	1	96" Capillary Tube
	193-0305	1	144" Capillary Tube
8	NFS	1	Reducer, Hex (Part of Gauge)
9	302-0061	1	Ammeter
10	308-0088	1	Switch, Toggle
11	308-0297	1	Switch, Push
12	308-0155	1	Switch, Toggle
13	812-0066	2	Screw, Machine - Round Head
			(#6-32 x 3/4")

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
14	853-0003	2	Washer, Lock - ET (#6)
15	332-0795	1	Block, Terminal - 20 Place
16	332-1241	1	Strip, Marker
17	871-0010	2	Nut, Hex - Brass (#10-32)
18	850-0030	2	Washer, Lock - Spring (#10)
19	526-0062	2	Washer, Flat - Brass (#10)
20	853-0008	1	Washer, Lock - ET (#10)
21	856-0003	1	Washer, Lock - EIT (#10)
22	815-0203	1	Screw, Machine - Round Head
			(#10-32 x 7/8")
23	870-0053	1	Nut, Hex (#10-32)
24	850-0030	1	Washer, Lock - Spring (#10)
25	332-0051	2	Clamp, Loop
26	815-0026	5	Screw, Machine - Truss Head
			(#10-32 x 3/8")
27	870-0053	1	Nut, Hex (#10-32)
28	850-0030	1	Washer, Lock - Spring (#10)
29	856-0003	1	Washer, Lock - EIT (#10)
30	301-4009	1	Panel, Control
31	301-3253	1	Bracket, Mounting

XSC111

Engine Control
Begin Spec N

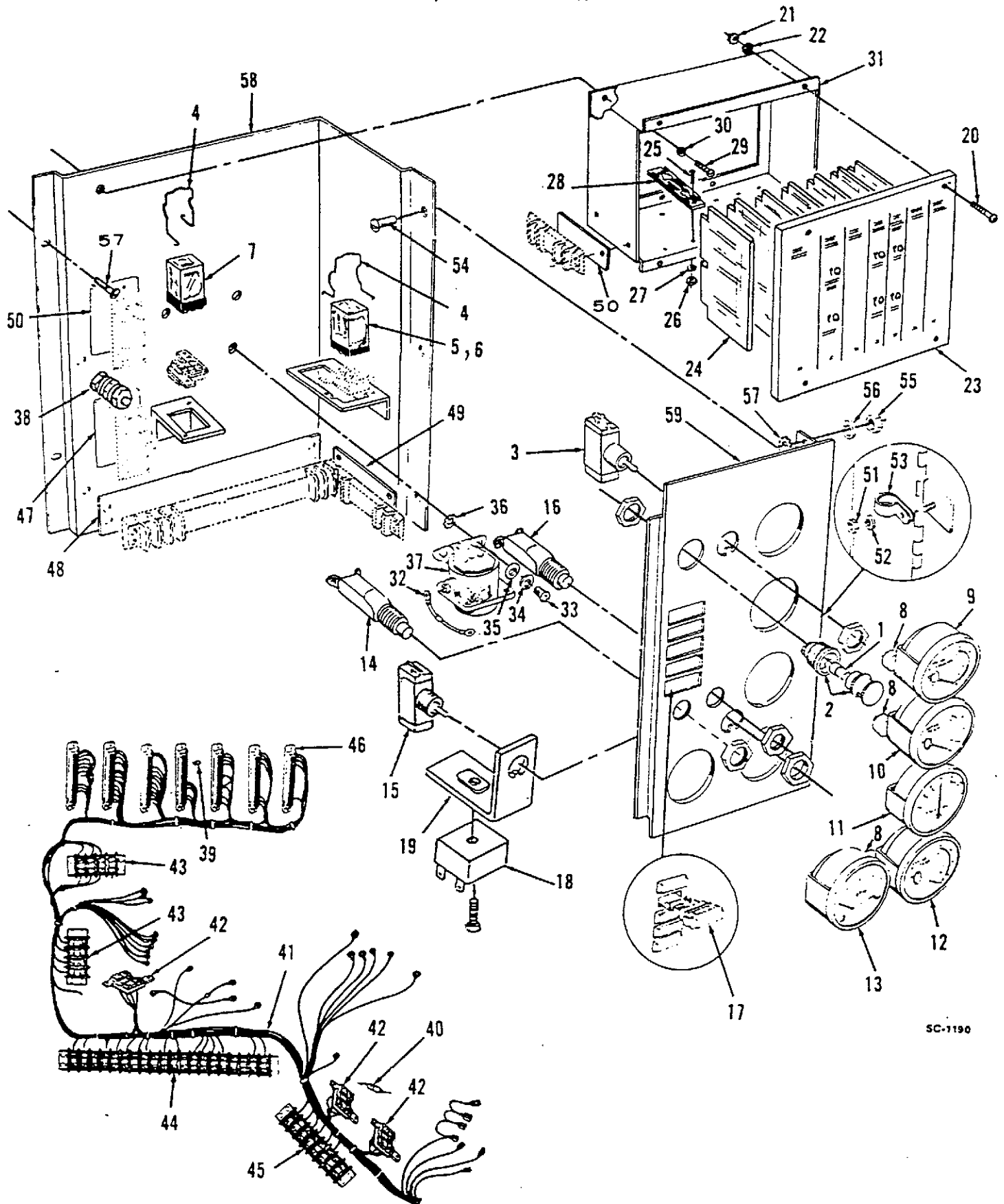


Engine Control Begin Spec N

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	815-0544	24	Screw, Machine - Round Head With IT Lock Washer (#6-32 x 1/2")	17	323-1310	1	Housing, 13 Pin (J3)
2	300-2900	1	Board, Time Delay, Start/Stop - 24 VDC (A15)	18	323-1302	13	Contact, Pin
3			Board, Magnetic Sensor, Start Disconnect/Over Speed Sensor (A16)	19	322-0369-02	1	Lamp, Incandescent - 1/3 Watt, 28 VDC
	300-2903	1	Standard	20	322-0017	1	Lamp, Incandescent - 28 VDC (OS11)
	300-2904	1	Precision	21	322-0361	1	Holder, Lamp
4	300-2906	1	Board, Over-Under Voltage Sensor - 24 VDC (A17)	22	517-0131	1	Plug, Button
5	300-2856	1	Board, Relay - 24 VDC (A13)	23	151-0402	1	Potentiometer (R11)
6	300-2863	1	Board, Relay - 24 VDC (A14)	24	308-0785	1	Switch, Push (S11)
7			Board, Engine Monitor (A11) (Includes Fuses and Connectors)	25	308-0784	1	Switch, Push (S12)
	300-2808	1	24 VDC, 2 Light	26	301-6257	1	Cover
	300-2812	1	24 VDC, 12 Light	27	193-0250	3	Resistor, Gauge (R12)
8	321-0270	2	Fuse, Cartridge - 20 Amp (F1, F2)	28	193-0352	1	Gauge, Pressure - Oil (M11)
9	321-0231	1	Fuse, Cartridge - 15 Amp (F3)	29	193-0351	1	Gauge, Temperature - Water (M12)
10	321-0094	2	Fuse, Cartridge - 5 Amp (F4, F5)	30	302-1790	1	Ammeter (M13)
11	323-1305	1	Connector, 8 Pin (P1)	31	302-0885	1	Meter, Totalizing - Time (M14)
12	323-1303	1	Connector, 6 Pin (P2)	32	193-0330	1	Gauge, Temperature - Oil (M15)
13	323-1309	1	Connector, 13 Pin (P3)	33	302-1715	1	Tachometer (M16)
14	323-1307	1	Connector, 12 Pin (P4)	34	517-0221	1	Plug, Button
15	301-8851	1	Bracket, Mounting	35	302-0052	1	Clamp, Loop
	821-0004	4	Screw, Self-locking - Hex (#10-32 x 5/16")	36	870-0131	1	Nut, Self-locking - Hex (#10-3
16			Module, Indicator - Fault (A12) (Includes Connector)				Door, Control
	322-0358-02	1	24 VDC, 2 Light		301-9055-01	1	5 Meter Holes
	322-0360-02	1	24 VDC, 12 Light		301-9055-02	1	3 Meter Holes
	815-0385	2	Screw, Machine - Round Head (#6-32 x 1/2")	37	338-1817	1	Harness, Wiring - DC (Includes Connector)
	870-0183	2	Nut, Self-locking - Hex (#6-32)	38	323-1308	1	Housing, 12 Pin (J4)
					323-1302	12	Contact, Pin
					323-1304	1	*Housing, 6 Pin
					323-1200	6	*Contact, Pin
					323-1306	1	*Housing, 8 Pin
					323-1200	8	*Contact, Pin

* - Parts Included in Engine Wiring Harness

Engine Control Spec H Thru M



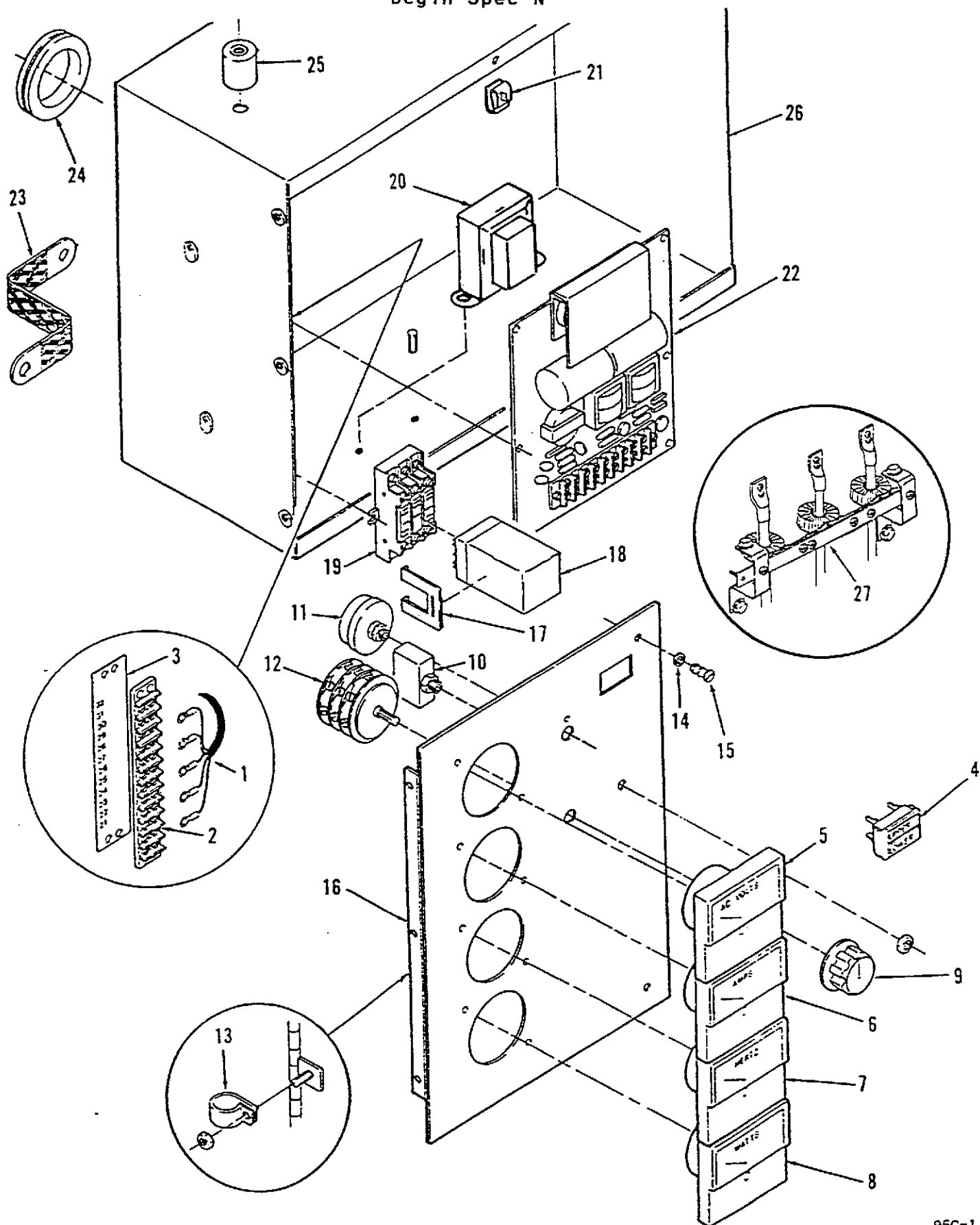
SC-1190

Engine Control Spec H Thru M

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	322-0017	1	Lamp, 24 VDC (DS11)	26	860-0006	28	Nut, Hex (#6-32)
2	322-0149	1	Light, Panel	27	853-0003	28	Washer, Lock - ET (#6)
3	308-0002	1	Switch, Toggle (S11)	28	323-0814	14	Guide
4	307-1157	3	Spring, Holddown - Relay	29	813-0100	4	Screw, Machine - Round Head (#10-32 x 1/2")
5	307-1056	1	Relay, Ignition (K12)	30	850-0030	4	Washer, Lock - Spring (#10)
6	307-1056	1	Relay, Start Disconnect (K11)	31	301-3588	1	Rack
7	307-1061	1	Relay, Start Protection (K14)	32	357-0018	1	Diode with Terminals
8	193-0250	3	Resistor, Gauge (R11,R12,R13)	33	813-0098	2	Screw, Machine - Round Head (#10-32 x 3/8")
9			Gauge, Pressure - Oil, 12 VDC (M11)	34	850-0030	2	Washer, Lock - Spring (#10)
	193-0243	1	Begin 1977	35	526-0009	2	Washer, Flat (#10)
	193-0107	1	Thru 1976	36	856-0003	2	Washer, Lock - EIT (#10)
10			Gauge, Temperature - Water - 12 VDC (M12)	37	307-0061	1	Relay, Starting - 24 VDC (K13)
	193-0245	1	Begin 1977	38			Terminal, Ground
	193-0106	1	Thru 1976				(Includes Parts Marked *)
11	302-1362	1	Ammeter (M13)		871-0010	2	*Nut, Hex (#10-32)
12			Gauge, Temperature - Oil - 12 VDC (M14)		850-0030	1	*Washer, Lock - Spring (#10)
	193-0248	1	Begin 1977		526-0062	2	*Washer, Flat (#10)
	193-0187	1	Thru 1976		853-0008	1	*Washer, Lock - ET (#10)
13	302-0749	1	Tachometer (M15)		856-0003	1	*Washer, Lock - EIT (#10)
14	308-0337	1	Switch, Push - Lamp Test (S13)		815-0203	1	*Screw, Machine - Round Head (#10-32 x 7/8")
15			Switch, Toggle - Selector (S12)	39	332-1276	7	Plug, Keying
	308-0220	1	Standard	40	357-0004	2	Diode (CR11, CR12)
	308-0347	1	Penn State	41			@Harness, Wiring
	308-0539	1	Alarm Control		338-0715	1	Set with Single Fault Light
16	308-0091	1	Switch, Push - Alarm Reset (S14)		338-0705	1	Set with Five Fault Lights
17			Light, Indicator - 28 VDC	42	323-0765	3	Socket, Relay (Less Terminals)
	322-0119	1	Overcrank (DS12)		332-1280	11	Terminal
	322-0120	1	Low Oil Pressure (DS14)	43	332-0537	2	Block, Terminal (TB12,14)
	322-0121	1	High Engine Temperature (DS15)	44	332-1005	1	Block, Terminal (TB11)
	322-0122	1	Low Engine Temperature (DS16)	45	332-0699	1	Block, Terminal (TB13)
	322-0123	1	Overspeed (DS13)	46	332-1271	7	Connector
	322-0129	1	Fault (DS12)	47	332-1561	1	Strip, Marker
	322-0315	1	Switch Off (DS17)	48	332-1239	1	Strip, Marker
	322-0137	1	Blank, No Legend	49	332-1559	1	Strip, Marker
18	333-0194-02	1	Flasher, 24 VDC	50	332-1560	1	Strip, Marker
	813-0105	1	Screw, Machine - Round Head (#10-32 x 1")	51	870-0053	1	Nut, Hex (#10-32)
19	301-6053	1	Bracket, Mounting - Flasher	52	850-0030	1	Washer, Lock - Spring (#10)
20	812-0063	4	Screw, Machine - Round Head (#6-32 x 1/2")	53	332-0051	1	Clamp, Loop
21	860-0006	4	Nut, Hex (#6-32)	54	815-0026	5	Screw, Machine - Truss Head (#10-32 x 3/8")
22	853-0003	4	Washer, Lock - ET (#6)	55	870-0053	1	Nut, Hex (#10-32)
23	301-3635	1	Cover	56	850-0030	1	Washer, Lock - Spring (#10)
24			Control	57	856-0003	1	Washer, Lock - ET (#10)
	300-0953	1	Board, Engine Monitor (A12)	58	301-3621	1	Bracket, Mounting
	300-0954	1	Board, Engine Shutdown (A11)	59			Panel, Control
	300-0955	1	Board, Remote Indicator (A13)		301-3661	1	Single Fault Light Control
	300-0956	1	Board, Cyle Cranker (A14)		301-3978	1	3 Meters, 1 Panel Light
	300-0957	1	Board, Overspeed Sensor (A16)		301-3979	1	4 Meters, 1 Panel Light
	300-0958	1	Board, Start Disconnet (A17)				5 Meters, 1 Panel Light
	300-0973	1	Board, StartStop (A15)		301-3629	1	Five Fault Light Control
	300-0977	1	Board, Standard Cranker (A14)		301-3976	1	3 Meters, 1 Panel Light
	300-0987	1	Board, Bypass (A15)		301-3977	1	4 Meters, 1 Panel Light
25	812-0063	28	Screw, Machine - Round Head (#6-32 x 1/2")		301-3977	1	5 Meters, 1 Panel Light
					301-7079	1	Six Fault Light Control
							3 Meters, 1 Panel Light

@ - Standard Harness Listed; Sets with 4 or 5 Meters and other special features may require additional electrical leads.
* - Parts Included in Ground Terminal.

Generator Control Begin Spec N



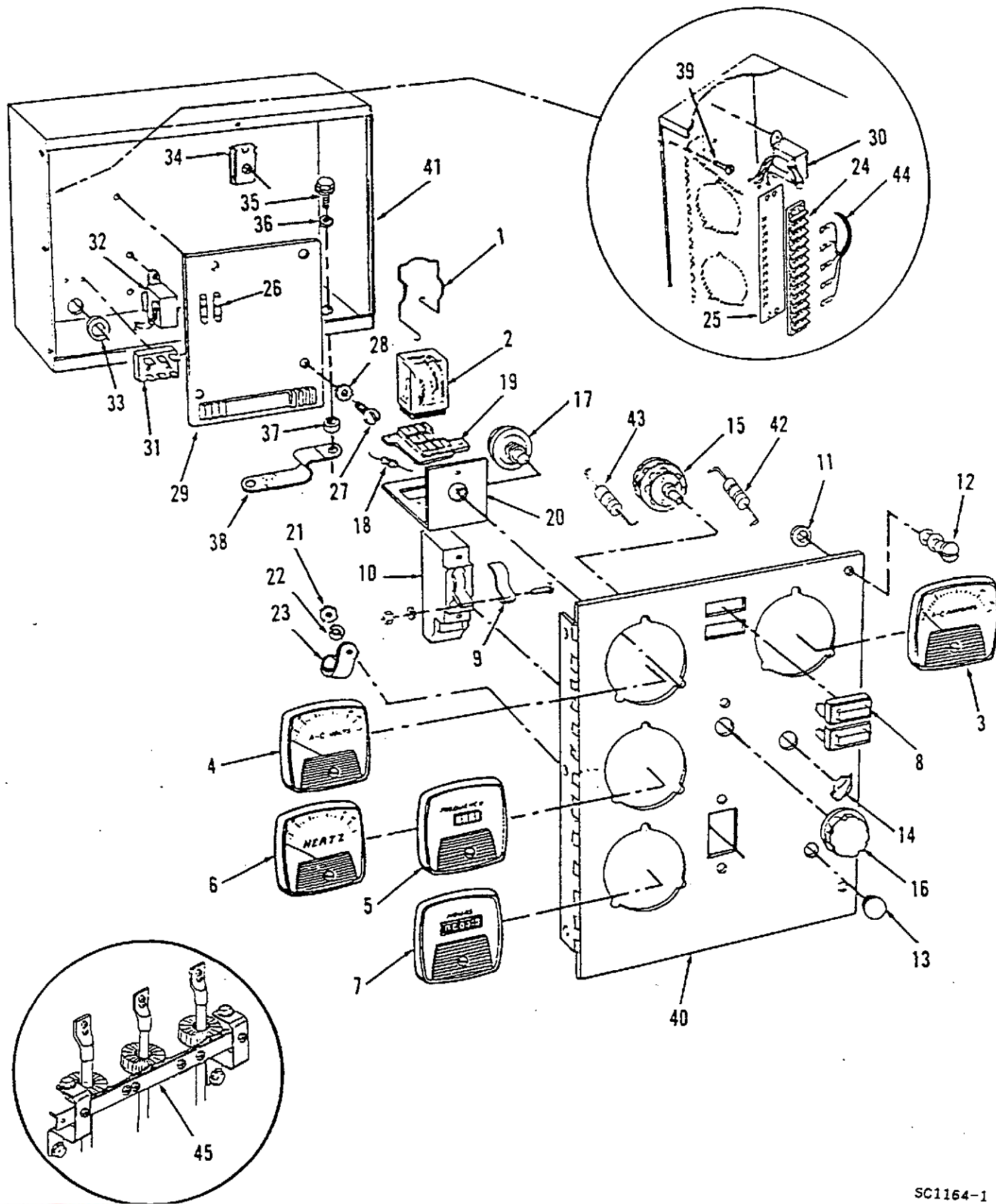
95C-1

Redistribution or publication of this document by any means, is strictly prohibited.

Generator Control Begin Spec N

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Harness, Wiring - (Includes Terminal Block)	16			Door, Control
	338-1818	1	Control with Meters		301-9054-01	1	4 Meter Holes
	338-1853	1	Control without Meters		301-9054-02	1	3 Meter Holes
	812-0065	2	Screw, Machine - Round Head (#6-32 x 5/8")		301-9054-03	1	No Meter Holes
2	332-0607	1	Block, Terminal (TB1)		821-0004	3	Screw, Self-locking - Hex (#10-32 x 5/16")
3	332-2723	1	Strip, Marker	17	307-1987	2	Clip, Relay
4	322-0363	1	Light, Indicator - Dual (DS21, DS22)	18	307-1056	1	Relay, 24 VDC (K21)
5			Voltmeter (M21)	19	323-0894	1	Socket, Relay
	302-1148	1	0-300/600 VAC, Code 17, 517		815-0544	2	Screw, Machine - Round Head with IT Lock Washer (#6-32 x 1/2")
	302-1753	1	0-750 VAC, Code 9	20	315-0642	1	Transformer, Step-down - Code 9 Only (T21)
6			Ammeter (M22)		812-0077	2	Screw, Machine - Round Head (#8-32 x 3/8")
	302-1687	1	0-400 Amp, Code 9		856-0002	2	Washer, Lock - EIT (#8)
	302-1727	1	0-500/1000 Amp, Code 17, 517 - 250 kW 60 Hz and 210 kW 50 Hz Sets	21	406-0332	2	Receptacle, Fastener
	302-1728	1	0-600/1200 Amp, Code 17, 517 - 275 kW 60 Hz and 230 kW 50 Hz Sets	22	300-2880	1	Regulator, Voltage (VR21)
	302-1728	1	0-600/1200 Amp, Code 17, 517 - 300 kW 60 Hz and 275 kW 50 Hz Sets		815-0544	6	Screw, Machine - Round Head with IT Lock Washer (#6-32 x 1/2")
7	302-1720	1	Meter, Frequency (M23)	23	337-0049	1	Strap, Electrical
8			Wattmeter (M24) (See Separate page for Components)		800-0024	1	Screw, Cap - Hex Head (5/16-18 x 1/2")
9	303-0032	1	Knob		856-0008	1	Washer, Lock - EIT (5/16")
10			Breaker, Circuit (CB21)	24	508-0051	1	Grommet
	320-1121	1	Standard	25	402-0527	2	Mount, Vibration
	320-1438	1	With Aux Contact		800-0045	4	Screw, Cap - Hex Head (5/16-18 x 3/8")
11	303-0261	1	Rheostat (R21)		850-0045	4	Washer, Lock - Spring (5/16")
12	308-0284	1	Switch, Rotary (S21)	26	301-8065	1	Box, Control
13	332-0052	1	Clamp, Loop	27		1	Current Transformer (See Separate Page for Components)
	870-0131	1	Nut, Self-locking - Hex with EIT Lock Washer (#10-32)				
14	406-0334	2	Clip, Fastener				
15	406-0333	2	Stud, Fastener				

Generator Control
Spec H thru M



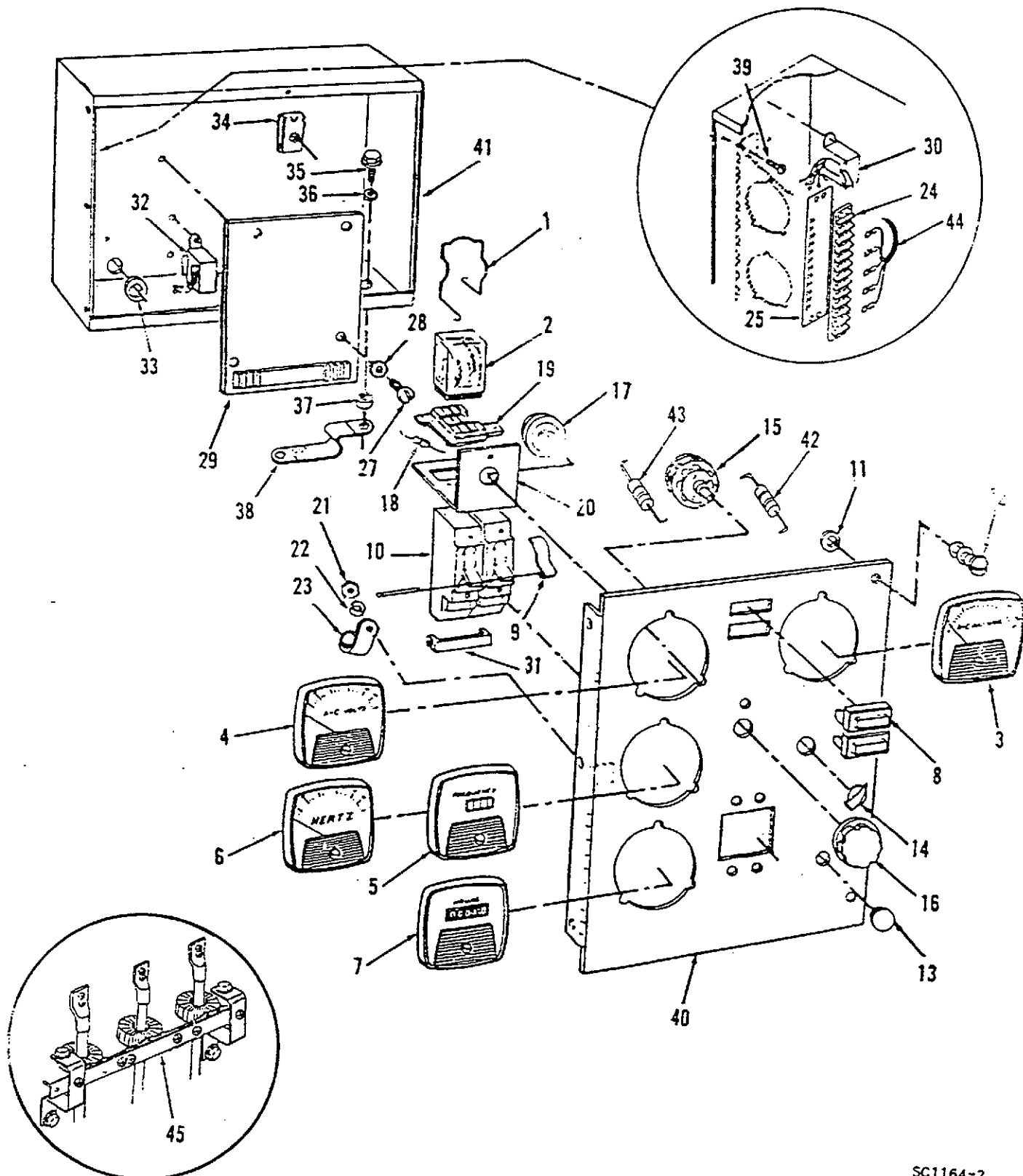
SC1164-1

Redistribution or publication of this document
by any means, is strictly prohibited.

Generator Control Spec H thru M

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	307-1157	1	Spring, Relay	20	301-3244	1	Bracket, Mounting
2	307-1061	1	Relay (K21)	21	870-0053	1	Nut, Hex (#10-32)
3			Ammeter (M21)	22	850-0030	1	Washer, Lock - Spring (#10)
	302-0605	1	0-400 Amp. Code 9	23	332-0051	1	Clamp, Loop
	302-0414	1	0-500 Amp. Code 6, 7	24			Block, Terminal (TB21)
	302-0416	1	0-1000 Amp. Code 5		332-0607	1	12 Place
	302-0878	1	0-500/1000 Amp. Code 17 -		332-0795	1	16 Place
			250 kW 60 Hz and Code 517 -		812-0066	2	Screw, Machine - Round Head
			210 kW 50 Hz Sets				(#6-32 x 3/4")
	302-0879	1	0-600/1200 Amp. Code 17 -		853-0003	2	Washer, Lock - ET (#6)
			275 kW and 300 kW 60 Hz Sets -		850-0020	2	Washer, Lock - Spring (#6)
			Code 517 - 230 kW and 275 kW	25			Strip, Marker
			50 Hz Sets		332-1242	1	16 Place
4			Voltmeter (M22)		332-1248	1	12 Place
	302-0421	1	0-300 VAC, Code 5	26	321-0204	2	Fuse, Cartridge - 1/4 Amp
	302-0612	1	0-500 VAC, Code 7	27	812-0065	4	Screw, Machine - Round Head
	302-0422	1	0-600 VAC, Code 6				(#6-32 x 5/8")
	302-0779	1	0-750 VAC, Code 9	28	853-0003	4	Washer, Lock - ET (#6)
	302-0718	1	0-300/600 VAC, Code 17, 517	29			Regulator, Voltage (VR21)
5			Meter, Frequency - Reed (M23)		332-1268	1	120 VAC Input Signal Req'd
	302-0221	1	230 VAC, 60 Hz - Code 5, 6,		332-1956	1	240 VAC Input Signal Req'd
			7, 9, 17	30			Transformer, Voltage (T21)
	302-0256	1	230 VAC, 50 Hz - Code 517		315-0342	1	120 VAC
6			Meter, Frequency - Pointer (M23)		315-0431	1	240 VAC
	302-0810	1	208 VAC, 60 Hz - Code 7, 17		812-0061	2	Screw, Machine - Round Head
	302-0811	1	240 VAC, 60 Hz - Code 5, 6, 9				(#6-32 x 3/8")
	302-0894	1	240 VAC, 50 Hz - Code 517		853-0003	2	Washer, Lock - ET (#6)
7			Meter, Totalizing - Time (M24)	31	305-0675	1	Rectifier, Bridge (CR21)
	302-0466	1	60 Hz		812-0070	2	Screw, Machine - Round Head
	302-0469	1	50 Hz				(#6-32 x 1-1/4")
8			Light, Indicator - Red - 125 VAC		850-0020	2	Washer, Lock - Spring (#6)
	322-0130	1	Upper Scale (DS21)	32	315-0384	1	Reactor (L21)
	322-0131	1	Lower Scale (DS22)		812-0061	2	Screw, Machine - Round Head
9	320-0307	1	Lock, Handle				(#6-32 x 3/8")
	815-0203	1	Screw, Machine - Round Head		853-0003	2	Washer, Lock - ET (#6)
			(#10-32 x 7/8")	33	508-0001	1	Grommet
	854-0010	1	Washer, Lock - ET (#10)	34	406-0332	2	Receptacle, Fastener
	871-0010	1	Nut, Hex (#10-32)	35	800-0045	4	Screw, Cap - Hex Head
10	320-0455	1	Breaker, Circuit (CB21)				(5/16-18 x 3/8")
	812-0061	2	Screw, Machine - Round Head	36	850-0045	4	Washer, Lock - Spring (5/16")
			(#6-32 x 3/8")	37	402-0078	4	Dampener, Vibration
	850-0020	2	Washer, Lock - Spring (#6)	38	337-0049	1	Strap, Electrical - Ground
11	406-0334	2	Clip, Fastener	39	815-0026	3	Screw, Machine - Truss Head
12	406-0333	2	Stud, Fastener				(#10-32 x 3/8")
13	517-0131	1	Plug, Plastic	40			Panel, Control
14	303-0076	1	Knob, Pointer		301-3342	1	4 Meters, Code 5, 6, 7, 9
15	308-0284	1	Switch, Selector (S21)		301-3170	1	4 Meters, Code 17, 517
16	303-0032	1	Knob		301-3449	1	5 Meters, Code 5, 6, 7, 9
17	303-0170	1	Rheostat (R21)		301-3312	1	5 Meters, Code 17, 517
18	350-0556	1	Resistor (R22)	41	301-3158	1	Box, Control
19	323-0765	1	Socket, Relay (Less Terminals)	42	350-0098	1	Resistor (3.k Ohms)
	812-0061	2	Screw, Machine - Round Head	43	350-0101	1	Resistor (3.9k Ohms)
			(#6-32 x 3/8")	44			Harness, Wiring
	853-0003	2	Washer, Lock - ET (#6)		338-0730	1	Code 17, 517
	860-0005	2	Nut, Hex (#6-32)		338-0759	1	Code 5, 6, 9
	332-1280	11	Terminal		338-0916	1	Code 7
				45			Current Transformer
							(See Separate Page for Components)

Generator Control
Switching Regulator
Spec H thru M

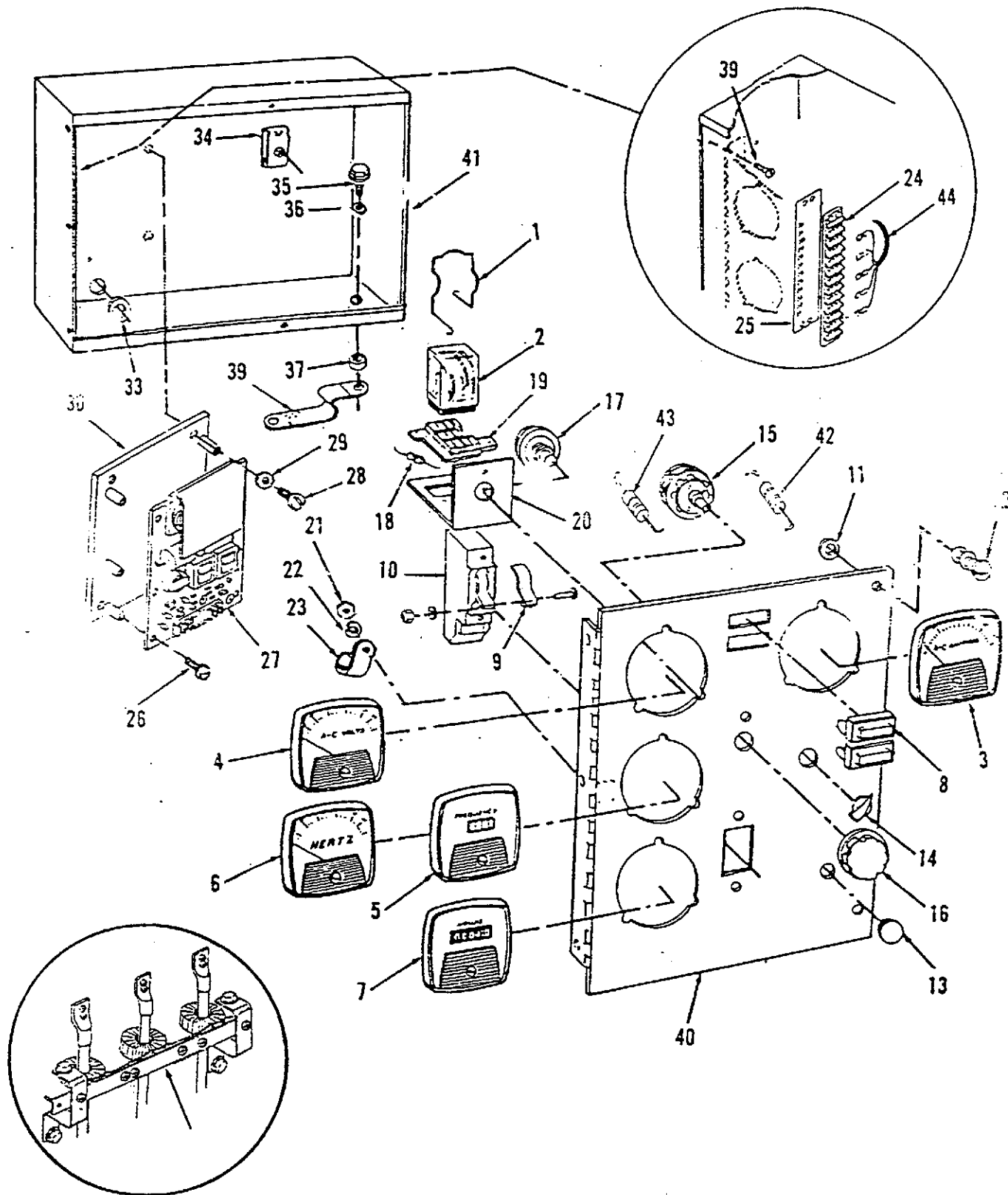


SC1164-2

Generator Control Switching Regulator Spec H thru M

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	307-1157	1	Spring, Relay	19	323-0765	1	Socket, Relay (Less Terminals
2	307-1061	1	Relay (K21)		812-0061	2	Screw, Machine - Round Head
3			Ammeter (M21)				(#6-32 x 3/8")
	302-0605	1	0-400 Amp, Code 9		853-0003	2	Washer, Lock - ET (#6)
	302-0414	1	0-500 Amp, Code 6, 7		860-0005	2	Nut, Hex (#6-32)
	302-0416	1	0-1000 Amp, Code 5		332-1280	11	Terminal
	302-0878	1	0-500/1000 Amp, Code 17 -	20	301-3244	1	Bracket, Mounting
			250 kW 60 Hz and Code 517 -	21	870-0053	1	Nut, Hex (#10-32)
			210 kW 50 Hz Sets	22	850-0030	1	Washer, Lock - Spring (#10)
	302-0879	1	0-600/1200 Amp, Code 17 -	23	332-0051	1	Clamp, Loop
			275 kW and 300 kW 60 Hz Sets -	24			Block, Terminal (T821)
			Code 517 - 230 kW and 275 kW		332-0607	1	12 Place
			50 Hz Sets		332-0795	1	16 Place
4			Voltmeter (M22)		812-0066	2	Screw, Machine - Round Head
	302-0421	1	0-300 VAC, Code 5				(#6-32 x 3/4")
	302-0612	1	0-500 VAC, Code 7		853-0003	2	Washer, Lock - ET (#6)
	302-0422	1	0-600 VAC, Code 6		850-0020	2	Washer, Lock - Spring (#6)
	302-0779	1	0-750 VAC, Code 9	25			Strip, Marker
	302-0718	1	0-300/600 VAC, Code 17, 517		332-1242	1	16 Place
5			Meter, Frequency - Reed (M23)		332-1248	1	12 Place
	302-0221	1	230 VAC, 60 Hz - Code 5, 6,	27	812-0065	4	Screw, Machine - Round Head
			7, 9, 17				(#6-32 x 5/8")
	302-0256	1	230 VAC, 50 Hz - Code 517	28	853-0003	4	Washer, Lock - ET (#6)
6			Meter, Frequency - Pointer (M23)	29			Regulator, Voltage (VR21)
	302-0810	1	208 VAC, 60 Hz - Code 7, 17		332-1956	1	Semi-Frequency Sensitive
	302-0811	1	240 VAC, 60 Hz - Code 5, 6, 9		332-2044	1	Voltage Sensitive
	302-0894	1	240 VAC, 50 Hz - Code 517		332-2045	1	Frequency Sensitive
7			Meter, Totalizing - Time (M24)	30	315-0431	1	Transformer, Voltage (T21)
	302-0466	1	60 Hz		812-0061	2	Screw, Machine - Round Head
	302-0469	1	50 Hz	31	320-0202	1	Bar, Locking
8			Light, Indicator - Red - 125 VAC	32	315-0384	1	Reactor (L21)
	322-0130	1	Upper Scale (DS21)		812-0061	2	Screw, Machine - Round Head
	322-0131	1	Lower Scale (DS22)				(#6-32 x 3/8")
9	320-0307	1	Lock, Handle		853-0003	2	Washer, Lock - ET (#6)
	815-0203	1	Screw, Machine - Round Head	33	508-0001	1	Grommet
			(#10-32 x 7/8")	34	406-0332	2	Receptacle, Fastener
	854-0010	1	Washer, Lock - ET (#10)	35	800-0045	4	Screw, Cap - Hex Head
	871-0010	1	Nut, Hex (#10-32)				(5/16-18 x 3/8")
10	320-0455	2	Breaker, Circuit (CB21)	36	850-0045	4	Washer, Lock - Spring (5/16")
	812-0061	4	Screw, Machine - Round Head	37	402-0078	4	Dampener, Vibration
			(#6-32 x 3/8")	38	337-0049	1	Strap, Electrical - Ground
	850-0020	4	Washer, Lock - Spring (#6)	39	815-0026	3	Screw, Machine - Truss Head
11	406-0334	2	Clip, Fastener				(#10-32 x 3/8")
12	406-0333	2	Stud, Fastener	40			Panel, Control
13	517-0131	1	Plug, Plastic		301-6298	1	4 Meters, Code 17, 517
14	303-0076	1	Knob, Pointer		301-6412	1	4 Meters, Code 5, 6, 7, 9
15	308-0284	1	Switch, Selector (S21)		301-8775	1	5 Meters, Code 17, 517
16	303-0032	1	Knob	41	301-3158	1	Box, Control
17	303-0170	1	Rheostat (R21)	42	350-0098	1	Resistor (3.4k Ohms)
18	350-0556	1	Resistor (R22)	43	350-0101	1	Resistor (3.9k Ohms)
				44			Harness, Wiring
					338-0730	1	Code 17, 517
					338-0759	1	Code 5, 6, 9
					338-0916	1	Code 7
				45			Current Transformer
							(See Separate Page for
							Components)

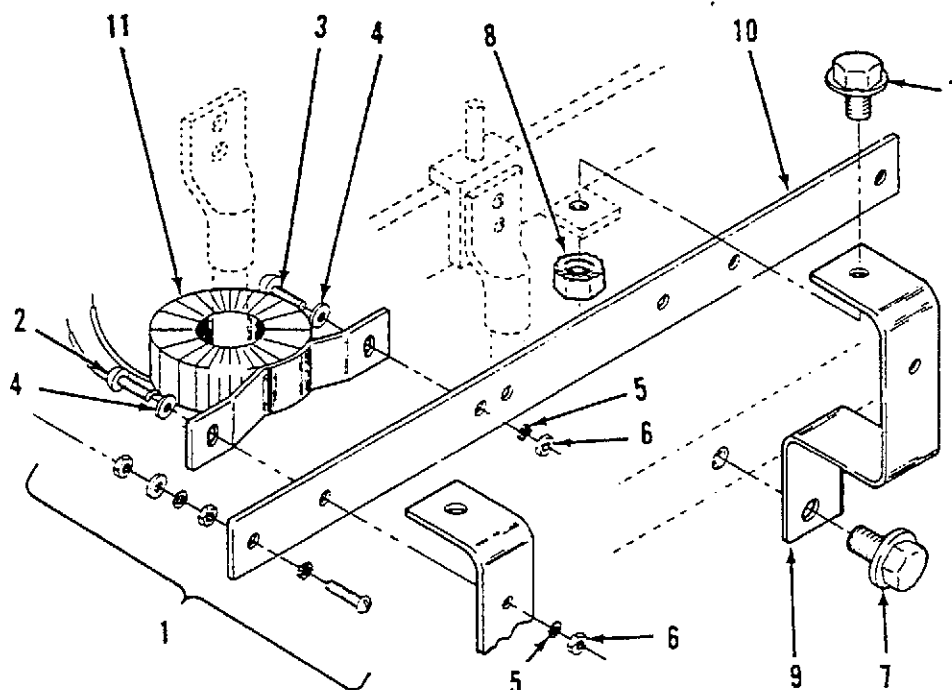
Generator Control
Torque Matched Regulator
Spec H thru M



**Generator Control
Torque Matched Regulator
Spec H thru M**

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	307-1157	1	Spring, Relay	19	323-0765	1	Socket, Relay (Less Terminals
2	307-1061	1	Relay (K21)		812-0061	2	Screw, Machine - Round Head
3			Ammeter (M21)				(#6-32 x 3/8")
	302-0605	1	0-400 Amp, Code 9		853-0003	2	Washer, Lock - ET (#6)
	302-0414	1	0-500 Amp, Code 6, 7		860-0005	2	Nut, Hex (#6-32)
	302-0416	1	0-1000 Amp, Code 5		332-1280	11	Terminal
	302-0878	1	0-500/1000 Amp, Code 17 -	20	301-3244	1	Bracket, Mounting
			250 kW 60 Hz and Code 517 -	21	870-0053	1	Nut, Hex (#10-32)
			210 kW 50 Hz Sets	22	850-0030	1	Washer, Lock - Spring (#10)
	302-0879	1	0-600/1200 Amp, Code 17 -	23	332-0051	1	Clamp, Loop
			275 kW and 300 kW 60 Hz Sets -	24			Block, Terminal (T821)
			Code 517 - 230 kW and 275 kW		332-0607	1	12 Place
			50 Hz Sets		332-0795	1	16 Place
4			Voitmeter (M22)		812-0066	2	Screw, Machine - Round Head
	302-0421	1	0-300 VAC, Code 5				(#6-32 x 3/4")
	302-0612	1	0-500 VAC, Code 7		853-0003	2	Washer, Lock - ET (#6)
	302-0422	1	0-600 VAC, Code 6		850-0020	2	Washer, Lock - Spring (#6)
	302-0779	1	0-750 VAC, Code 9	25			Strip, Marker
	302-0718	1	0-300/600 VAC, Code 17, 517		332-1242	1	16 Place
5			Meter, Frequency - Reed (M23)		332-1248	1	12 Place
	302-0221	1	230 VAC, 60 Hz - Code 5, 6,	26	815-0544	6	Screw, Machine - Round Head
			7, 9, 17				with IT Lock Washer
	302-0256	1	230 VAC, 50 Hz - Code 517				(#6-32 x 1/2")
6			Meter, Frequency - Pointer (M23)	27	300-2880	1	Regulator, Voltage (VR21)
	302-0810	1	208 VAC, 60 Hz - Code 7, 17	28	812-0065	4	Screw, Machine - Round Head
	302-0811	1	240 VAC, 60 Hz - Code 5, 6, 9				(#6-32 x 5/8")
	302-0894	1	240 VAC, 50 Hz - Code 517	29	853-0003	4	Washer, Lock - ET (#6)
7			Meter, Totalizing - Time (M24)	30	301-9315	1	Bracket, Mounting
	302-0466	1	60 Hz	33	508-0001	1	Grommet
	302-0469	1	50 Hz	34	406-0332	2	Receptacle, Fastener
8			Light, Indicator - Red - 125 VAC	35	800-0045	4	Screw, Cap - Hex Head
	322-0130	1	Upper Scale (DS21)				(5/16-18 x 3/8")
	322-0131	1	Lower Scale (DS22)	36	850-0045	4	Washer, Lock - Spring (5/16"
9	320-0307	1	Lock, Handle	37	402-0078	4	Dampener, Vibration
	815-0203	1	Screw, Machine - Round Head	38	337-0049	1	Strap, Electrical - Ground
			(#10-32 x 7/8")	39	815-0026	3	Screw, Machine - Truss Head
	854-0010	1	Washer, Lock - ET (#10)				(#10-32 x 3/8")
	871-0010	1	Nut, Hex (#10-32)	40			Panel, Control
10	320-0455	1	Breaker, Circuit (CB21)		301-3342	1	4 Meters, Code 5, 6, 7, 9
	812-0061	2	Screw, Machine - Round Head		301-3170	1	4 Meters, Code 17, 517
			(#6-32 x 3/8")		301-3449	1	5 Meters, Code 5, 6, 7, 9
	850-0020	2	Washer, Lock - Spring (#6)		301-3312	1	5 Meters, Code 17, 517
11	406-0334	2	Clip, Fastener	41	301-3158	1	Box, Control
12	406-0333	2	Stud, Fastener	42	350-0098	1	Resistor (3.k Ohms)
13	517-0131	1	Plug, Plastic	43	350-0101	1	Resistor (3.9k Ohms)
14	303-0076	1	Knob, Pointer	44			Harness, Wiring
15	308-0284	1	Switch, Selector (S21)		338-0730	1	Code 17, 517
16	303-0032	1	Knob		338-0759	1	Code 5, 6, 9
17	303-0170	1	Rheostat (R21)		338-0916	1	Code 7
18	350-0556	1	Resistor (R22)	45			Current Transformer
							(See Separate Page for
							Components)

Current Transformer

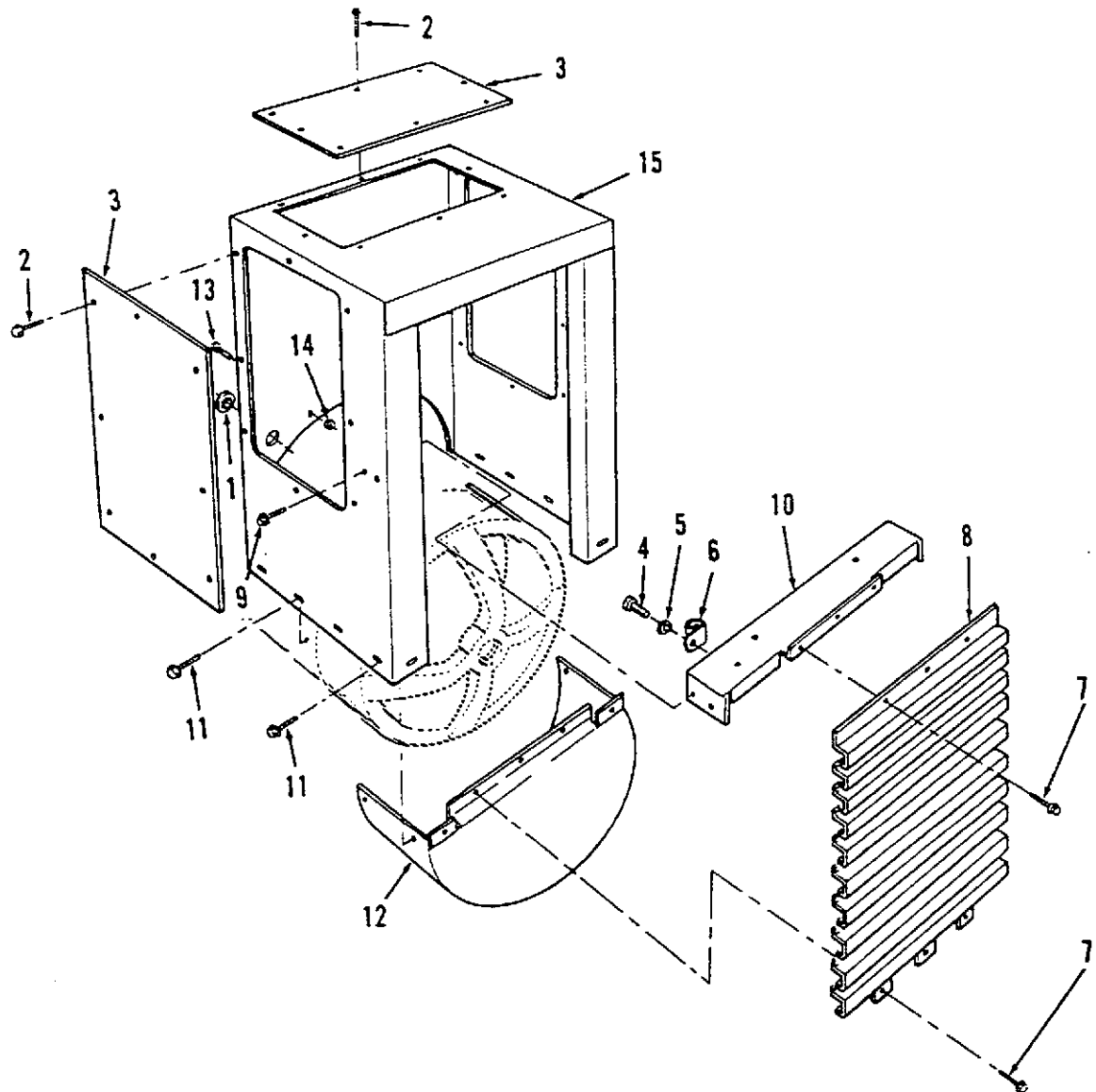


XES-1155

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	815-0203	1	Terminal, Ground Screw, Machine - Round Head (#10-32 x 7/8")
	871-0010	3	Nut, Hex (#10-32)
	856-0003	1	Washer, Lock - EIT (#10)
	854-0010	2	Washer, Lock - IT (#10)
	526-0049	2	Washer, Flat - Brass (#10)
2	813-0103	2	Screw, Machine - Round Head (#10-32 x 3/4")
3	813-0100	4	Screw, Machine - Round Head (#10-32 x 1/2")
4	526-0008	6	Washer, Flat (#10)
5	856-0003	6	Washer, Lock - EIT (#10)
6	870-0053	6	Nut, Hex (#10-32)
7	821-0029	4	Screw, Self-locking - Hex (3/8-16 x 3/4")

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
8	870-0281	4	Nut, Self-locking - Hex (3/8-16)
9	232-2342	2	Bracket, Mounting
10	315-0389	1	Plate, Mounting
11			Transformer, Current with Mounting Feet
	302-0608	3	400/5, 2VA - Code 9X
	302-0547	3	500/5, 2VA - Code 517 - 210 kW 50 Hz Set
	302-0438	3	500/5, 5VA - Code 6
	302-0876	3	600/5, 2VA - Code 517 - 230 kW and 275 kW 50 Hz Sets
	302-0876	3	600/5, 2VA - Code 7, 17
	302-0963	3	1000/5, 2VA - Code 5

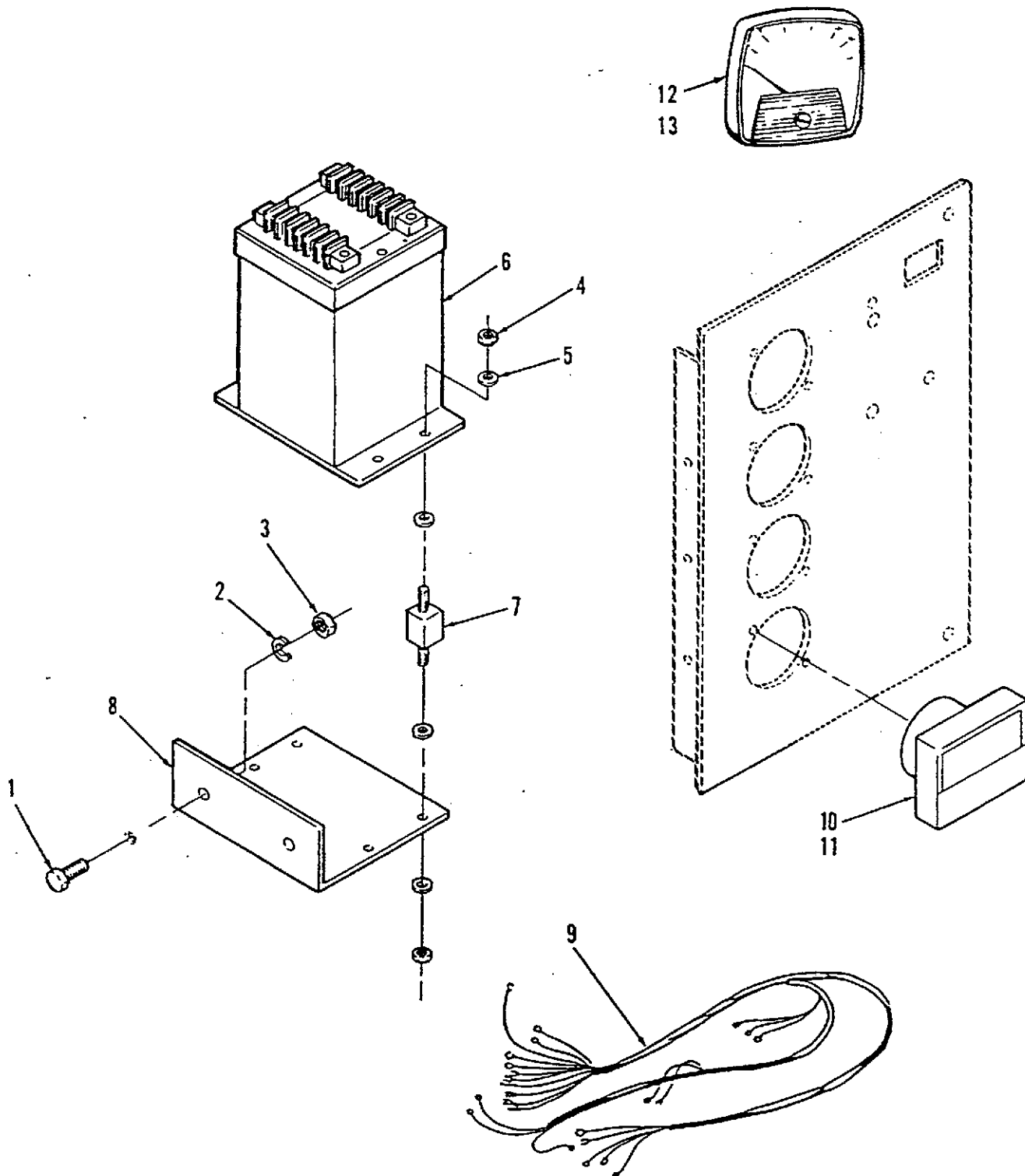
Control Housing



M-121

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	508-0203	1	Bushing, Grommet - Used Thru 1984	8	234-0490	1	Grille
	508-0051	1	Begin 1985	9	821-0010	4	Screw, Self-locking - Hex
2	821-0010	24	Screw, Self-locking - Hex (1/4-20 x 1 1/2")	10	301-3604	1	Shelf
3	301-3731	3	Panel, Access	11	821-0014	10	Screw, Self-locking - Hex (5/16-18 x 1 1/2")
4	813-0102	1	Screw, Machine - Round Head (#10-32 x 5/8")	12	234-0489	1	Cover, End Bell
5	850-0030	1	Washer, Lock - Spring (#10)	13	821-0016	2	Screw, Self-locking - Hex (5/16-18 x 3/4")
6	332-0052	3	Clamp, Loop	14	870-0257	2	Nut, Self-locking - Hex (5/16-18)
7	821-0010	6	Screw, Self-locking - Hex (1/4-20 x 1 1/2")	15	301-3605	1	Housing, Control

Wattmeter

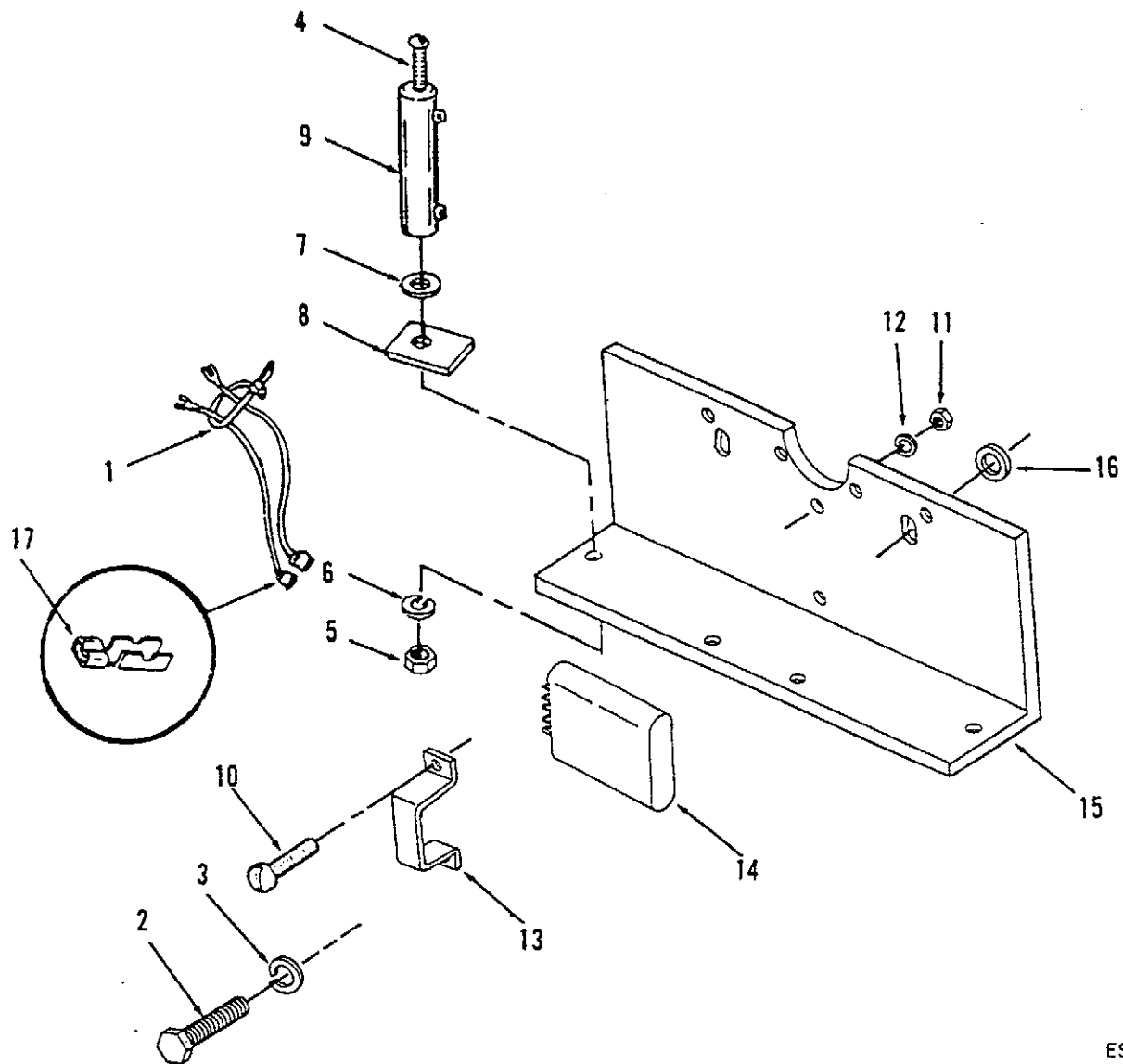


126A.

Wattmeter

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	821-0017	2	Screw, Self-locking - Hex (5/16-18 x 1/2")	8	301-6987	1	Bracket, Mounting
2	850-0045	2	Washer, Lock - Spring (5/16")	9	338-1936	1	Harness, Wiring
3	862-0014	2	Nut, Hex (5/16-18)	10	302-1722	1	Wattmeter (Less Dial) - Begin Spec N
4	860-0008	8	Nut, Hex (#8-32)	11			Dial
5	856-0002	16	Washer, Lock - EIT (#8)		302-1721-09	1	Scale 0-250 kW
6			Transducer, Watt		302-1721-10	1	Scale 0-300 kW
	302-1082	1	3 Phase, 60 Hz	12	302-1102	1	Wattmeter (Less Dial) - Spec H thru M
	302-1083	1	3 Phase, 50 Hz	13			Dial
7	402-0078	4	Mount, Vibration		302-1115	1	Scale 0-250 kW
					302-1116	1	Scale 0-300 kW

Voltage Regulator Filter

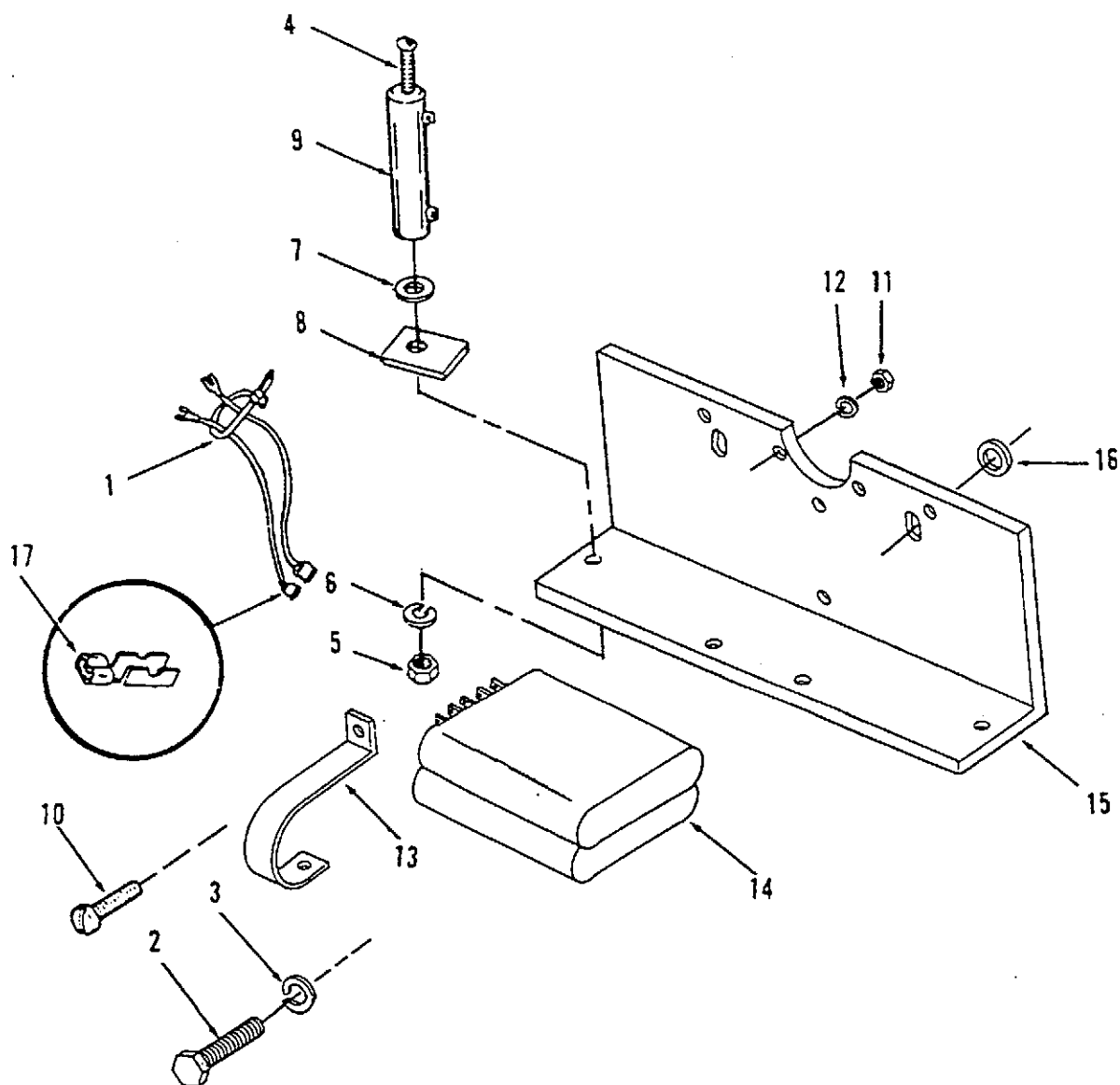


ES1115-1

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	332-0941	5	Tie, Cable
2	800-0003	2	Screw, Cap - Hex Head (1/4-20 x 1/2")
3	850-0040	2	Washer, Lock - Spring (1/4")
4	812-0165	2	Screw, Machine - Round Head (1/4-20 x 4-1/2")
5	862-0001	2	Nut, Hex (1/4-20)
6	850-0040	2	Washer, Lock - Spring (1/4")
7	304-0427	2	Washer, Centering
8	304-0292	2	Insulator
9	354-0025	1	Resistor

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
10	813-0098	2	Screw, Machine - Round Head (#10-32 x 3/8")
11	870-0053	2	Nut, Hex (#10-32)
12	850-0030	2	Washer, Lock - Spring (#10)
13	312-0189	1	Bracket, Mounting
14	312-0188	1	Capacitor
15	232-2218	1	Bracket
16	526-0018	15	Washer, Flat (1/4")
17			Terminals
	332-0529	4	Bare
	332-1279	8	Insulated

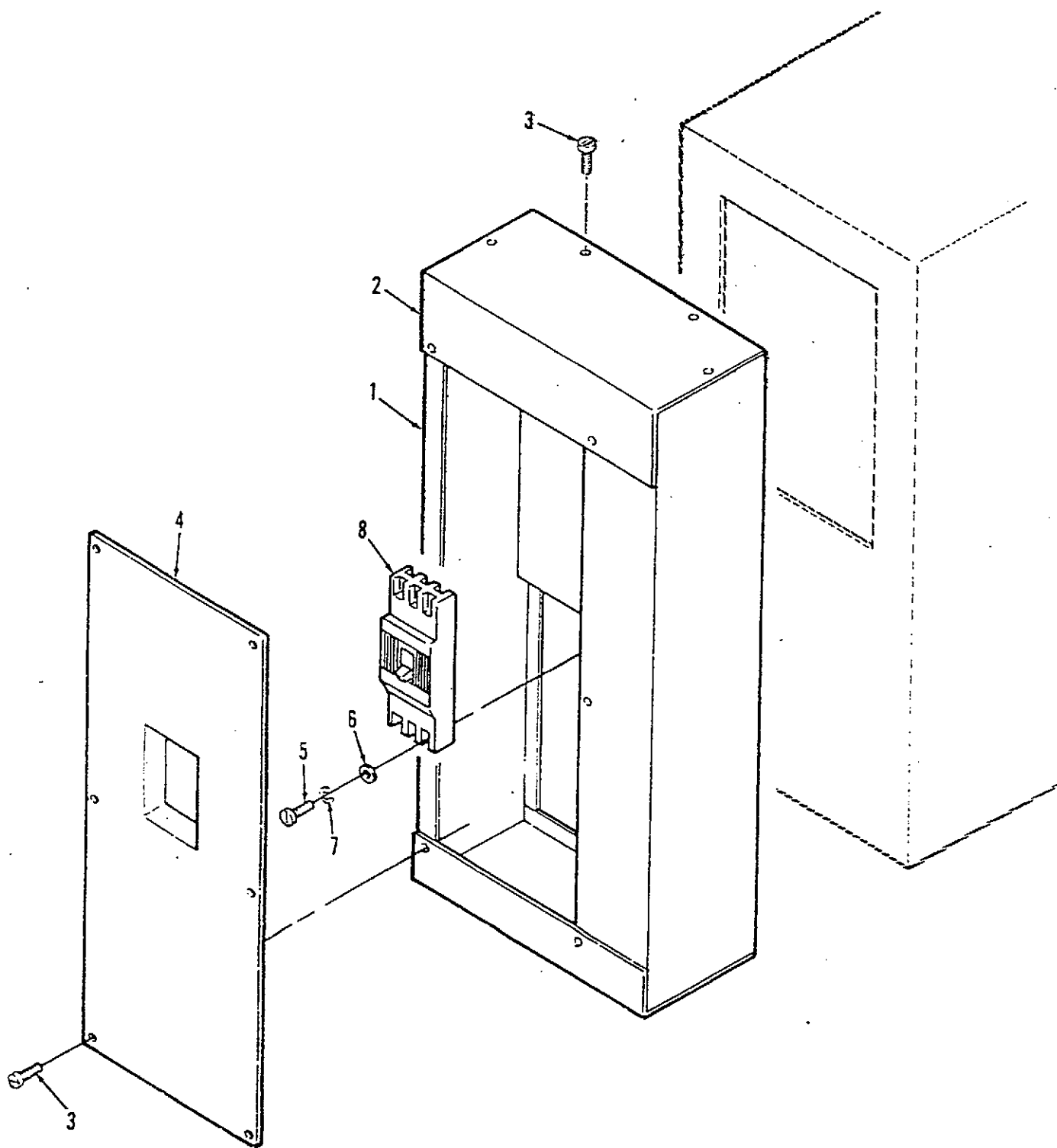
Voltage Regulator Filter Heavy Duty



ES1115-

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	332-0941	5	Tie, Cable	10	813-0098	4	Screw, Machine - Round Head (#10-32 x 3/8")
2	800-0003	2	Screw, Cap - Hex Head (1/4-20 x 1 1/2")	11	870-0053	4	Nut, Hex (#10-32)
3	850-0040	2	Washer, Lock - Spring (1/4")	12	850-0030	4	Washer, Lock - Spring (#10)
4	812-0165	2	Screw, Machine - Round Head (1/4-20 x 4-1/2")	13	370-0007	2	Strap, Mounting
5	862-0001	2	Nut, Hex (1/4-20)	14	312-0188	2	Capacitor
6	850-0040	2	Washer, Lock - Spring (1/4")	15	232-2218	1	Bracket
7	304-0427	2	Washer, Centering	16	526-0018	15	Washer, Flat (1/4")
8	304-0292	2	Insulator	17	332-0529	8	Terminals Bare
9	354-0025	1	Resistor		332-1279	16	Terminals Insulated

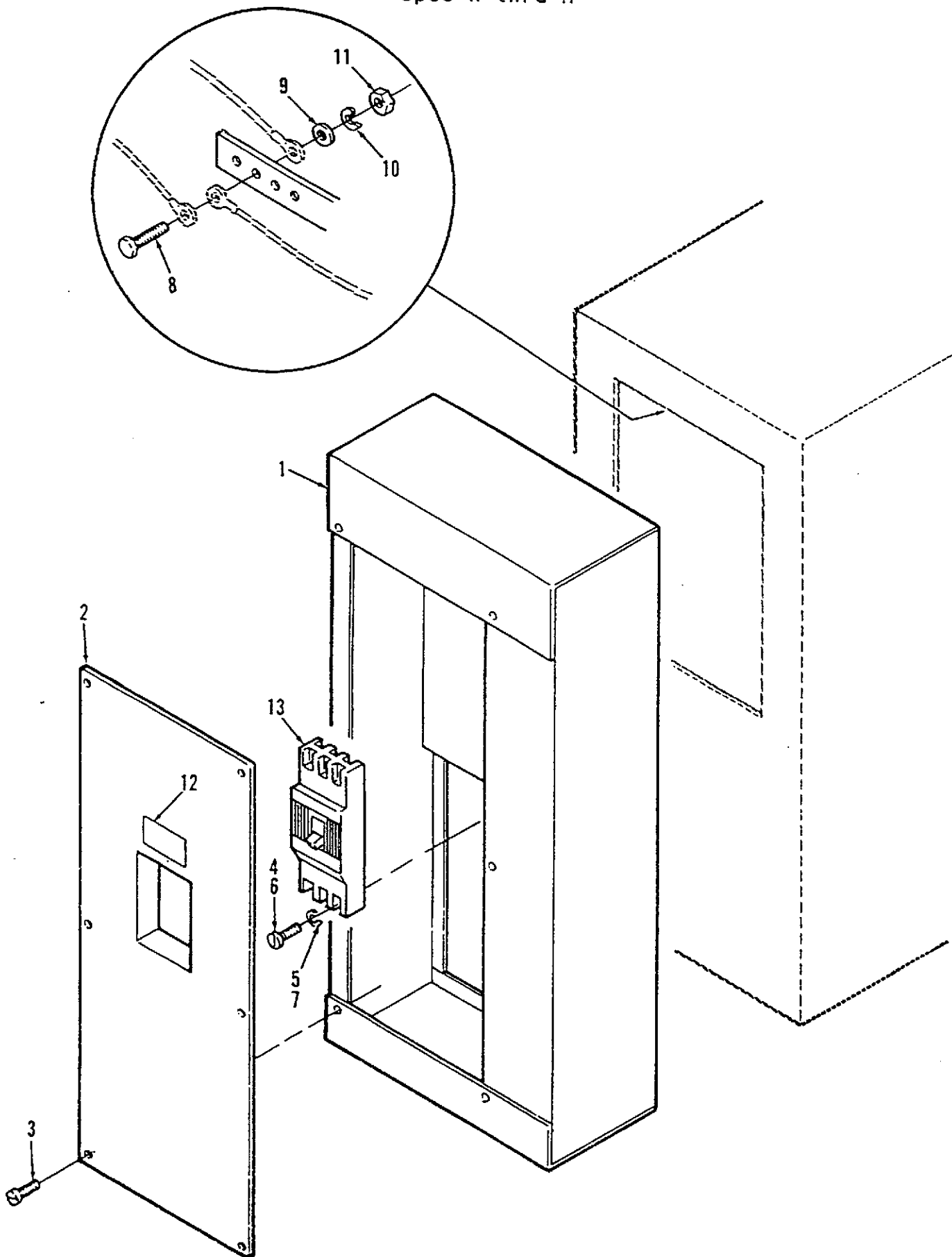
Circuit Breaker
Begin Spec N



Circuit Breaker Begin Spec N

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	301-9778	1	Box, Breaker	320-1477-08	1	800 Amp	
2	301-9779	2	Panel, Breaker	320-1477-09	1	1000 Amp	
3	821-0010	8	Screw, Self-locking - Hex (1/4-20 x 1/2")	320-1477-10	1	1200 Amp	
4			Cover, Box - Circuit Breaker	320-1484-07	1	300 Amp	With 480 VAC Shunt Trip
	301-9781	1	3" x 4" Breaker Hole	320-1484-09	1	400 Amp	
	301-9793	1	2-1/2" x 3-5/8" Breaker Hole	320-1484-11	1	500 Amp	
5			Screw, Mounting	320-1484-12	1	600 Amp	
	812-0094	4	225 Amp Breaker	320-1485-08	1	800 Amp	
	812-0157	4	250 - 600 Amp Breaker	320-1485-09	1	1000 Amp	
	800-0031	4	700 - 1200 Amp Breaker	320-1485-10	1	1200 Amp	
6			Washer, Flat				With 12 VDC Shunt Trip & Auxiliary Contacts
	526-0048	4	225 Amp Breaker	320-1488-07	1	300 Amp	
	526-0108	4	250 - 600 Amp Breaker	320-1488-09	1	400 Amp	
	526-0115	4	700 - 1200 Amp Breaker	320-1488-11	1	500 Amp	
7			Washer, Lock	320-1488-12	1	600 Amp	
	850-0025	4	225 Amp Breaker	320-1489-08	1	800 Amp	
	850-0040	4	250 - 600 Amp Breaker	320-1489-09	1	1000 Amp	
	850-0045	4	700 - 1200 Amp Breaker	320-1489-10	1	1200 Amp	
8			Breaker, Circuit - 3 Pole - Standard				With 24 VDC Shunt Trip & Auxiliary Contacts
	320-1460-07	1	300 Amp	320-1491-07	1	300 Amp	
	320-1460-09	1	400 Amp	320-1491-09	1	400 Amp	
	320-1460-11	1	500 Amp	320-1491-11	1	500 Amp	
	320-1460-12	1	600 Amp	320-1491-12	1	600 Amp	
	320-1461-08	1	800 Amp	320-1492-08	1	800 Amp	
	320-1461-09	1	1000 Amp	320-1492-09	1	1000 Amp	
	320-1461-10	1	1200 Amp	320-1492-10	1	1200 Amp	
			With Auxiliary Contacts				With 120 VAC Shunt Trip & Auxiliary Contacts
	320-1464-07	1	300 Amp	320-1495-07	1	300 Amp	
	320-1464-09	1	400 Amp	320-1495-09	1	400 Amp	
	320-1464-11	1	500 Amp	320-1495-11	1	500 Amp	
	320-1464-12	1	600 Amp	320-1495-12	1	600 Amp	
	320-1465-08	1	800 Amp	320-1496-08	1	800 Amp	
	320-1465-09	1	1000 Amp	320-1496-09	1	1000 Amp	
	320-1465-10	1	1200 Amp	320-1496-10	1	1200 Amp	
			With 12 VDC Shunt Trip				With 240 VAC Shunt Trip & Auxiliary Contacts
	320-1468-07	1	300 Amp	320-1500-07	1	300 Amp	
	320-1468-09	1	400 Amp	320-1500-09	1	400 Amp	
	320-1468-11	1	500 Amp	320-1500-11	1	500 Amp	
	320-1468-12	1	600 Amp	320-1500-12	1	600 Amp	
	320-1469-08	1	800 Amp	320-1501-08	1	800 Amp	
	320-1469-09	1	1000 Amp	320-1501-09	1	1000 Amp	
	320-1469-10	1	1200 Amp	320-1501-10	1	1200 Amp	
			With 24 VDC Shunt Trip				With 480 VAC Shunt Trip & Auxiliary Contacts
	320-1472-07	1	300 Amp	320-1504-07	1	300 Amp	
	320-1472-09	1	400 Amp	320-1504-09	1	400 Amp	
	320-1472-11	1	500 Amp	320-1504-11	1	500 Amp	
	320-1472-12	1	600 Amp	320-1504-12	1	600 Amp	
	320-1473-08	1	800 Amp	320-1505-08	1	800 Amp	
	320-1473-09	1	1000 Amp	320-1505-09	1	1000 Amp	
	320-1473-10	1	1200 Amp	320-1505-10	1	1200 Amp	
			With 120 VAC Shunt Trip				
	320-1476-07	1	300 Amp				
	320-1476-09	1	400 Amp				
	320-1476-11	1	500 Amp				
	320-1476-12	1	600 Amp				

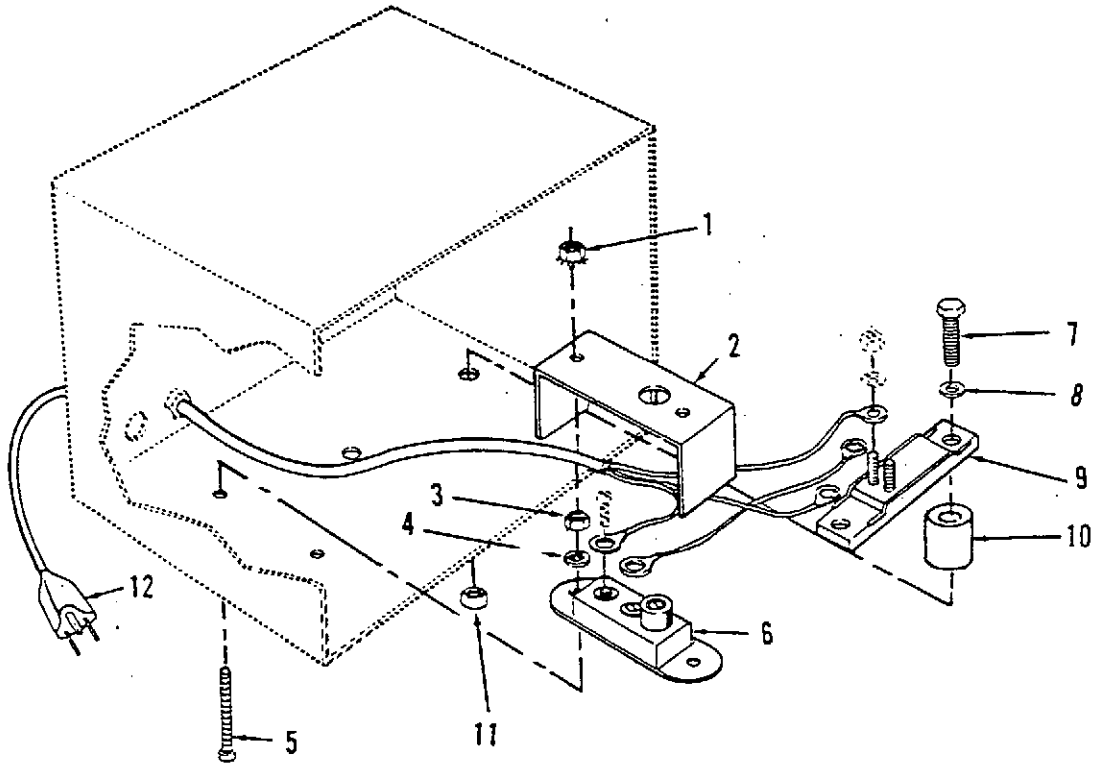
Circuit Breaker
Spec H thru M



Circuit Breaker Spec H thru M

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	301-3728	1	Box, Breaker				With Auxiliary Contacts
2	301-9139	1	Cover, Breaker	320-0741	1	300 Amp	
3	815-0026	6	Screw, Machine - Truss Head (#10-32 x 3/8")	320-0730	1	400 Amp	
4	812-0156	4	Screw, Machine - Round Head (1/4-20 x 1/2")	320-1305	1	600 Amp	
5	850-0040	4	Washer, Lock (1/4")	320-1562	1	800 Amp	
6	812-0182	4	Screw, Machine - Round Head (5/16-18 x 1-1/2")	320-0370	1	300 Amp	With 12 VDC Shunt Trip
7	850-0045	4	Washer, Lock (5/16)	320-0387	1	400 Amp	
8	800-0071	8	Screw, Cap - Hex Head (7/16-14 x 1")	320-0245	1	500 Amp	
9	526-0141	8	Washer, Flat (7/16")	320-0267	1	600 Amp	
10	850-0055	8	Washer, Lock (7/16")	320-0438	1	300 Amp	With 24 VDC Shunt Trip
11	862-0004	8	Nut, Hex (7/16-14)	320-0524	1	350 Amp	
12	98-2304	1	Silkscreen, Circuit Breaker (Warning)	320-0429	1	400 Amp	
13			Breaker, Circuit - 3 Pole - Standard	320-0403	1	500 Amp	
	320-0445	1	250 Amp	320-0432	1	600 Amp	
	320-0401	1	300 Amp	320-0436	1	700 Amp	
	320-0523	1	350 Amp	320-0466	1	800 Amp	
	320-0405	1	400 Amp	320-0576	1	1000 Amp	
	320-0598	1	500 Amp	320-0454	1	1200 Amp	
	320-0599	1	600 Amp				With 120 VAC Shunt Trip
	320-0528	1	700 Amp	320-0268	1	300 Amp	
	320-0519	1	800 Amp	320-0275	1	350 Amp	
	320-0521	1	1000 Amp	320-0236	1	500 Amp	
	320-0522	1	1200 Amp	320-0386	1	600 Amp	
				320-0364	1	1200 Amp	
							With 480 VAC Shunt Trip
				320-0331	1	300 Amp	
				320-0279	1	350 Amp	
				320-0398	1	500 Amp	
				320-0338	1	600 Amp	

Control Heater



SC1156

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	870-0183	2	Nut, Self-locking - Hex (#6-32)
2	301-1886	1	Cover
3	860-0006	1	Nut, Hex (#6-32)
4	854-0006	2	Washer, Lock - IT (#6)
5	812-0070	2	Screw, Machine - Round Head (#6-32 x 1-1/4")
6	309-0128	1	Thermostat, Adjustable

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
7	800-0034	2	Screw, Cap - Hex Head (5/16-18 x 2-1/4")
8	526-0113	2	Washer, Flat (5/16")
9	333-0151	1	Heater, Electrical
10	130-1107	2	Spacer
11	870-0257	2	Nut, Self-locking - Hex (5/16-18)
12	335-0161	1	Cable, Electrical

Numerical Index

Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page
98-2304	83	130-1296	17	149-1625	31	155-1425	43
114-0022	53	130-1299	15	149-1689	31	155-1425	45
114-0023	49	130-1299	17	149-1719	31	155-1430	43
114-0023	51	130-1300	15	150-0717	54	155-1430	45
122-0524	30	130-1300	17	150-0717	55	155-1456	43
122-0526	30	130-1306	15	150-0723	54	155-1456	45
122-0543	30	130-1306	17	150-0723	55	155-1493	45
130-0425	21	130-1307	15	150-0724	54	155-1568	45
130-0442	21	130-1307	17	150-0724	55	155-1602	45
130-0449	13	130-1412	13	150-1405	56	155-1603	43
130-0449	15	130-1431	19	150-1406	55	155-1603	45
130-0449	17	130-1833	19	150-1406	56	155-1604	45
130-0449	19	130-1887	19	150-1407	56	155-1605	45
130-0797	21	130-1891	19	150-1410	55	155-1619	45
130-0842	13	130-1936	15	150-1410	56	155-1639	43
130-0846	13	130-1936	15	150-1411	56	155-1639	45
130-0848	13	130-2053	22	150-1557	55	155-1727	45
130-0871	21	130-2109	15	150-2104	54	155-1728	45
130-0924	13	130-2109	17	151-0230	5	155-1729	45
130-0924	15	130-2110	15	151-0399	10	155-1730	45
130-0924	17	130-2110	17	151-0402	63	155-1736	43
130-0992	13	130-2111	15	151-0411	10	155-1736	45
130-0996	15	130-2111	17	151-0419	10	155-1929	43
130-0996	17	130-2112	15	151-0441	10	155-1929	45
130-1006	15	130-2112	17	151-0442	10	159-0020	33
130-1006	17	130-2113	15	151-0443	10	159-0020	35
130-1007	15	130-2113	17	152-0036	5	159-0020	36
130-1007	17	130-2181	17	152-0120	5	159-1100	36
130-1011	15	130-2206	17	152-0158	5	159-1101	36
130-1011	17	130-2207	17	155-0652	43	160-0428	23
130-1013	17	140-0751	45	155-0652	45	191-0548	11
130-1017	13	140-0757	43	155-0676	43	191-0550	11
130-1107	84	140-1345	3	155-0676	45	191-0681	11
130-1132	21	140-1345	4	155-1035	7	191-0688	11
130-1136	19	140-1346	3	155-1035	43	191-0725	11
130-1136	21	140-1346	4	155-1035	45	191-0733	11
130-1177	21	140-1347	3	155-1143	43	191-0781	11
130-1178	21	140-1347	4	155-1143	45	191-0869	11
130-1179	21	140-1349	3	155-1158	43	191-1141	11
130-1191	25	140-1349	4	155-1160	43	191-1144	9
130-1191	27	140-1376	3	155-1184	43	191-1258	11
130-1193	15	140-1376	4	155-1275	43	191-1348	7
130-1193	17	140-1415	4	155-1275	43	193-0029	32
130-1194	15	140-1548	3	155-1275	45	193-0106	65
130-1194	17	140-1548	4	155-1293	43	193-0107	65
130-1292	15	140-1578	4	155-1293	45	193-0108	9
130-1292	17	140-1685	45	155-1299	43	193-0109	9
130-1293	15	140-1795	3	155-1299	45	193-0128	32
130-1293	17	140-1816	4	155-1400	45	193-0187	65
130-1296	15	140-1817	4	155-1404	43	193-0216	36

N1

Numerical Index

Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page
193-0232	61	220-2343	49	300-0955	65	301-6412	71
193-0233	61	220-2343	51	300-0956	65	301-6987	77
193-0234	61	220-2345	49	300-0957	65	301-7079	65
193-0235	61	220-2345	51	300-0958	65	301-8065	67
193-0236	61	220-2349	49	300-0973	65	301-8775	71
193-0243	65	220-2349	51	300-0977	65	301-8851	63
193-0244	9	220-2351	49	300-0987	65	301-9054-01	67
193-0245	65	220-2351	51	300-2808	63	301-9054-02	67
193-0247	9	220-2445	49	300-2812	63	301-9054-03	67
193-0248	65	220-2445	51	300-2856	63	301-9055-01	63
193-0249	9	220-2447	49	300-2863	63	301-9055-02	63
193-0250	63	220-2447	51	300-2880	67	301-9139	83
193-0250	65	232-2218	78	300-2880	73	301-9315	73
193-0305	61	232-2218	79	300-2900	63	301-9697	55
193-0329	22	232-2237	53	300-2903	63	301-9778	81
193-0330	63	232-2238	53	300-2904	63	301-9779	81
193-0351	63	232-2240	53	300-2906	63	301-9781	81
193-0352	63	232-2241	53	301-1886	84	301-9793	81
201-1902	49	232-2242	53	301-3158	69	302-0061	61
201-1902	51	232-2243	53	301-3158	71	302-0221	69
201-1902	57	232-2245	53	301-3158	73	302-0221	71
201-1942	51	232-2246	53	301-3170	69	302-0221	73
201-2453	57	232-2248	53	301-3170	73	302-0256	69
201-2962	51	232-2249	53	301-3244	69	302-0256	71
201-3030	51	232-2317	49	301-3244	71	302-0256	73
201-3031	51	232-2317	51	301-3244	73	302-0414	69
201-3330	49	232-2342	74	301-3253	61	302-0414	71
201-3331	49	232-2343	53	301-3312	69	302-0414	73
201-3335	49	232-2344	53	301-3312	73	302-0416	69
201-3336	49	232-2385	39	301-3342	69	302-0416	71
211-0214	49	232-2385	41	301-3342	73	302-0416	73
211-0214	51	232-2387	53	301-3449	69	302-0421	69
220-1910	49	232-2389	39	301-3449	73	302-0421	71
220-1910	51	232-2389	41	301-3588	65	302-0421	73
220-1914	49	232-2445	58	301-3604	75	302-0422	69
220-1914	51	232-2446	60	301-3605	75	302-0422	71
220-1916	49	232-2582	53	301-3621	65	302-0422	73
220-1916	51	232-2583	53	301-3629	65	302-0438	74
220-1920	49	232-2639	59	301-3635	65	302-0466	69
220-1920	51	232-2832	60	301-3661	65	302-0466	71
220-2133	49	232-2898	49	301-3728	83	302-0466	73
220-2133	51	232-2898	51	301-3731	75	302-0469	69
220-2137	49	232-2899	49	301-3976	65	302-0469	71
220-2137	51	232-2899	51	301-3977	65	302-0469	73
220-2140	49	234-0455	49	301-3978	65	302-0547	74
220-2140	51	234-0455	51	301-3979	65	302-0605	69
220-2319	49	234-0489	75	301-4009	61	302-0605	71
220-2319	51	234-0490	75	301-6053	65	302-0605	73
220-2321	49	300-0953	65	301-6257	63	302-0608	74
220-2321	51	300-0954	65	301-6298	71	302-0612	69

N2

Numerical Index

Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page
302-0612	71	303-0032	73	308-0337	65	320-0405	83
302-0612	73	303-0076	69	308-0347	65	320-0429	83
302-0718	69	303-0076	71	308-0539	65	320-0432	83
302-0718	71	303-0076	73	308-0784	63	320-0436	83
302-0718	73	303-0170	69	308-0785	63	320-0438	83
302-0749	65	303-0170	71	309-0029	23	320-0445	83
302-0750	9	303-0170	73	309-0128	84	320-0454	83
302-0753	9	303-0261	67	309-0169	9	320-0455	69
302-0779	69	304-0292	78	309-0178	9	320-0455	71
302-0779	71	304-0292	79	309-0179	9	320-0455	73
302-0779	73	304-0427	78	309-0242	21	320-0466	83
302-0810	69	304-0427	79	309-0269	9	320-0519	83
302-0810	71	305-0526	58	309-0272	9	320-0521	83
302-0810	73	305-0526	59	309-0307	25	320-0522	83
302-0811	69	305-0675	69	309-0307	27	320-0523	83
302-0811	71	306-0036	54	309-0307	29	320-0524	83
302-0811	73	306-0036	55	309-0404	35	320-0528	83
302-0876	74	307-0061	65	309-0490	25	320-0576	83
302-0876	74	307-0844	19	309-0490	27	320-0598	83
302-0878	69	307-1056	35	309-0490	29	320-0599	83
302-0878	71	307-1056	65	312-0188	78	320-0730	83
302-0878	73	307-1056	67	312-0188	79	320-0741	83
302-0879	69	307-1061	65	312-0189	78	320-1121	67
302-0879	71	307-1061	69	315-0342	69	320-1305	83
302-0879	73	307-1061	71	315-0384	69	320-1438	67
302-0885	63	307-1061	73	315-0384	71	320-1460-07	81
302-0894	69	307-1135	21	315-0389	74	320-1460-09	81
302-0894	71	307-1157	65	315-0431	69	320-1460-11	81
302-0894	73	307-1157	69	315-0431	71	320-1460-12	81
302-0963	74	307-1157	71	315-0642	67	320-1461-08	81
302-1082	77	307-1157	73	320-0202	71	320-1461-09	81
302-1083	77	307-1164	25	320-0236	83	320-1461-10	81
302-1102	77	307-1164	27	320-0240	9	320-1464-07	81
302-1115	77	307-1164	29	320-0245	83	320-1464-09	81
302-1116	77	307-1460	25	320-0267	83	320-1464-11	81
302-1148	67	307-1460	27	320-0268	83	320-1464-12	81
302-1362	65	307-1460	29	320-0275	83	320-1465-08	81
302-1687	67	307-1816	35	320-0279	83	320-1465-09	81
302-1715	63	307-1987	67	320-0307	69	320-1465-10	81
302-1720	67	307-2167	2A	320-0307	71	320-1468-07	81
302-1721-09	77	308-0002	65	320-0307	73	320-1468-09	81
302-1721-10	77	308-0088	61	320-0331	83	320-1468-11	81
302-1722	77	308-0091	65	320-0338	83	320-1468-12	81
302-1727	67	308-0155	61	320-0364	83	320-1469-08	81
302-1728	67	308-0220	65	320-0370	83	320-1469-09	81
302-1753	67	308-0284	67	320-0386	83	320-1469-10	81
302-1790	63	308-0284	69	320-0387	83	320-1472-07	81
303-0032	67	308-0284	71	320-0398	83	320-1472-09	81
303-0032	69	308-0284	73	320-0401	83	320-1472-11	81
303-0032	71	308-0297	61	320-0403	83	320-1472-12	81

Numerical Index

Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page
320-1473-08	81	320-1505-09	81	323-1308	63	332-1382	9
320-1473-09	81	320-1505-10	81	323-1309	63	332-1383	9
320-1473-10	81	320-1562	83	323-1310	63	332-1473	39
320-1476-07	81	321-0094	63	331-0027	25	332-1473	41
320-1476-09	81	321-0204	69	331-0027	27	332-1506	19
320-1476-11	81	321-0231	63	331-0027	29	332-1554	56
320-1476-12	81	321-0270	63	332-0050	57	332-1559	65
320-1477-08	81	322-0017	63	332-0051	61	332-1560	65
320-1477-09	81	322-0017	65	332-0051	65	332-1561	65
320-1477-10	81	322-0052	63	332-0051	69	332-1956	69
320-1484-07	81	322-0119	65	332-0051	71	332-1956	71
320-1484-09	81	322-0120	65	332-0051	73	332-2044	71
320-1484-11	81	322-0121	65	332-0052	67	332-2045	71
320-1484-12	81	322-0122	65	332-0052	75	332-2723	67
320-1485-08	81	322-0123	65	332-0149	25	333-0012	23
320-1485-09	81	322-0129	65	332-0149	27	333-0013	23
320-1485-10	81	322-0130	69	332-0149	29	333-0059	60
320-1488-07	81	322-0130	71	332-0529	78	333-0094	25
320-1488-09	81	322-0130	73	332-0529	79	333-0131	25
320-1488-11	81	322-0131	69	332-0537	65	333-0138	27
320-1488-12	81	322-0131	71	332-0607	67	333-0138	29
320-1489-08	81	322-0131	73	332-0607	69	333-0142	25
320-1489-09	81	322-0137	65	332-0607	71	333-0142	27
320-1489-10	81	322-0149	65	332-0607	73	333-0143	27
320-1491-07	81	322-0315	65	332-0699	65	333-0143	29
320-1491-09	81	322-0358-02	63	332-0795	61	333-0144	27
320-1491-11	81	322-0360-02	63	332-0795	69	333-0144	29
320-1491-12	81	322-0361	63	332-0795	71	333-0150	27
320-1492-08	81	322-0363	67	332-0795	73	333-0150	29
320-1492-09	81	322-0369-02	63	332-0941	78	333-0151	84
320-1492-10	81	323-0765	65	332-0941	79	333-0161	27
320-1495-07	81	323-0765	69	332-1005	65	333-0161	29
320-1495-09	81	323-0765	71	332-1152	53	333-0164	27
320-1495-11	81	323-0765	73	332-1239	65	333-0164	29
320-1495-12	81	323-0804	35	332-1241	61	333-0165	25
320-1496-08	81	323-0804	67	332-1242	69	333-0166	25
320-1496-09	81	323-0814	65	332-1242	71	333-0169	25
320-1496-10	81	323-0957	25	332-1242	73	333-0172	25
320-1500-07	81	323-0957	27	332-1248	69	333-0174	27
320-1500-09	81	323-0957	29	332-1248	71	333-0174	29
320-1500-11	81	323-1200	7	332-1248	73	333-0180	25
320-1500-12	81	323-1200	63	332-1268	69	333-0183	27
320-1501-08	81	323-1302	63	332-1271	65	333-0183	29
320-1501-09	81	323-1303	63	332-1276	65	333-0190	27
320-1501-10	81	323-1304	7	332-1279	78	333-0190	29
320-1504-07	81	323-1304	63	332-1279	79	333-0192	60
320-1504-09	81	323-1305	63	332-1280	65	333-0194-02	65
320-1504-11	81	323-1306	7	332-1280	69	333-0206	29
320-1504-12	81	323-1306	63	332-1280	71	333-0211	25
320-1505-08	81	323-1307	63	332-1280	73	333-0224	25

Numerical Index

Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page
333-0224	27	370-4011	55	406-0332	71	501-0216	35
335-0146	60	402-0078	35	406-0332	73	501-0227	25
335-0147	60	402-0078	69	406-0333	67	501-0227	27
335-0161	84	402-0078	71	406-0333	69	501-0227	29
337-0049	67	402-0078	73	406-0333	71	501-0331	31
337-0049	69	402-0078	77	406-0333	73	501-0381	30
337-0049	71	402-0527	67	406-0334	67	501-0382	30
337-0049	73	403-1200	39	406-0334	69	502-0019	19
338-0705	65	403-1203	39	406-0334	71	502-0020	19
338-0715	65	403-1396	15	406-0334	73	502-0034	32
338-0730	69	403-1396	17	415-0170	33	502-0049	19
338-0730	71	403-1743	36	415-0317	36	502-0051	61
338-0730	73	403-1896	36	415-0322	33	502-0054	25
338-0759	69	403-2009	41	415-0329	33	502-0054	27
338-0759	71	405-1856	47	415-0330	33	502-0133	33
338-0759	73	405-1858	47	415-0331	33	502-0133	35
338-0916	69	405-1872	47	415-0463	35	502-0143	19
338-0916	71	405-1880	47	415-0464	35	502-0184	13
338-0916	73	405-1883	47	415-0465	35	502-0184	15
338-0957	7	405-1883	47	415-0466	35	502-0184	17
338-0989	10	405-1884	13	415-0476	35	502-0184	19
338-1817	63	405-1888	13	415-0478	35	502-0277	30
338-1818	67	405-2011	47	415-0479	35	502-0297	36
338-1853	67	405-2014	47	415-0486	35	502-0390	25
338-1936	77	405-2016	13	415-0509	35	502-0390	27
338-2067	7	405-2016	47	415-0515	35	502-0444	61
350-0098	69	405-2016	47	416-0473	7	502-0445	61
350-0098	71	405-2220	47	416-0632	7	502-0583	61
350-0098	73	405-2221	47	416-0635	39	502-0594	30
350-0101	69	405-2222	47	416-0636	7	502-0682	30
350-0101	71	405-2222	47	416-0639	7	502-0701	31
350-0101	73	405-2227	47	416-0674	39	502-0702	31
350-0556	69	405-2227	47	416-0805	37	502-0801	22
350-0556	71	405-2227	47	416-0808	37	502-0802	22
350-0556	73	405-2227	47	416-0809	37	503-0189	21
354-0025	78	405-2228	15	501-0084	9	503-0197	7
354-0025	79	405-2228	17	501-0087	13	503-0354	13
357-0004	65	405-2236	15	501-0087	15	503-0354	19
357-0018	65	405-2236	17	501-0087	17	503-0354	21
357-0030	22	405-2236	47	501-0087	19	503-0361	21
358-0011	57	405-2237	15	501-0194	33	503-0429	13
358-0012	57	405-2237	17	501-0194	35	503-0429	15
363-0025	59	405-2237	47	501-0211	36	503-0429	17
363-0033	59	405-2488	47	501-0214	33	503-0429	19
363-0049	57	405-3019	47	501-0214	35	503-0429	25
363-0050	57	406-0089	47	501-0214	36	503-0429	27
363-0054	58	406-0157	47	501-0215	33	503-0429	29
363-0055	58	406-0249	47	501-0215	35	503-0539	19
370-0007	79	406-0332	67	501-0216	9	503-0605	43
370-4003	32	406-0332	69	501-0216	33	503-0605	45

Numerical Index

Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page
503-0617	21	505-0007	25	505-0324	25	508-0156	57
503-0685	22	505-0007	27	505-0324	27	508-0187	57
503-0752	13	505-0007	29	505-0330	21	508-0203	75
503-0752	19	505-0016	35	505-0333	25	509-0151	49
503-0756	21	505-0021	30	505-0333	27	509-0151	51
503-0799	19	505-0022	7	505-0333	29	510-0106	49
503-0806	3	505-0023	21	505-0334	36	510-0106	51
503-0853	15	505-0037	25	505-0351	21	511-0084	11
503-0853	17	505-0037	27	505-0374	21	515-0145	49
503-0853	25	505-0038	25	505-0375	19	515-0145	51
503-0853	27	505-0038	27	505-0379	21	517-0131	63
503-0853	29	505-0039	19	505-0380	19	517-0131	69
503-0855	3	505-0041	21	505-0402	19	517-0131	71
503-0858	13	505-0041	25	505-0405	19	517-0131	73
503-0858	19	505-0041	27	505-0695	43	517-0221	63
503-0863	3	505-0041	29	505-0695	45	520-0142	53
503-0863	4	505-0043	19	505-0738	19	520-0446	23
503-0877	13	505-0054	19	505-0738	19	520-0780	49
503-0888	7	505-0056	33	505-0740	43	520-0780	51
503-0904	15	505-0056	35	505-0740	45	526-0003	47
503-0904	17	505-0057	19	505-0741	43	526-0008	57
503-0906	15	505-0057	35	505-0741	45	526-0008	74
503-0906	17	505-0086	25	505-0746	21	526-0009	57
503-0908	15	505-0086	27	505-0748	19	526-0009	65
503-0908	17	505-0086	29	505-0748	21	526-0013	19
503-0998	15	505-0098	35	505-0759	13	526-0013	19
503-0998	17	505-0099	25	505-0759	15	526-0013	36
503-1077	61	505-0099	27	505-0759	17	526-0018	13
503-1092	3	505-0100	7	505-0759	19	526-0018	15
503-1092	4	505-0101	19	505-0759	25	526-0018	17
503-1119	22	505-0110	33	505-0759	27	526-0018	53
503-1199	22	505-0110	35	505-0759	29	526-0018	78
504-0003	15	505-0110	35	505-0784	43	526-0018	79
504-0003	17	505-0117	9	505-0784	45	526-0022	31
504-0003	25	505-0140	21	505-0785	45	526-0026	29
504-0003	27	505-0172	19	505-0872	19	526-0026	31
504-0003	29	505-0173	19	505-0875	21	526-0029	53
504-0006	21	505-0175	19	505-0939	45	526-0029	53
504-0011	7	505-0175	21	505-0949	21	526-0030	11
504-0028	13	505-0185	7	505-1050	35	526-0041	19
504-0028	19	505-0187	19	505-1072	19	526-0041	21
504-0057	19	505-0204	21	508-0001	69	526-0048	81
504-0062	21	505-0220	19	508-0001	71	526-0049	74
504-0064	32	505-0247	36	508-0001	73	526-0060	21
504-0090	21	505-0248	30	508-0015	9	526-0061	19
505-0003	19	505-0289	25	508-0051	67	526-0062	61
505-0004	21	505-0289	27	508-0051	75	526-0062	65
505-0004	25	505-0304	25	508-0093	57	526-0063	35
505-0004	27	505-0304	27	508-0093	58	526-0077	13
505-0004	29	505-0304	29	508-0093	59	526-0077	55

Numerical Index

Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page
526-0108	81	800-0033	53	800-0153	41	813-0103	9
526-0112	15	800-0034	84	800-0156	36	813-0103	74
526-0112	17	800-0035	39	800-0156	39	813-0105	43
526-0113	43	800-0037	43	800-0156	41	813-0105	45
526-0113	45	800-0037	45	800-0160	43	813-0105	65
526-0113	84	800-0045	67	800-0160	45	813-0110	57
526-0115	53	800-0045	69	801-0099	30	813-0112	58
526-0115	81	800-0045	71	801-0119	3	813-0112	59
526-0140	58	800-0045	73	801-0119	4	814-0079	47
526-0140	59	800-0048	54	805-0032	49	815-0026	61
526-0141	83	800-0050	36	805-0032	51	815-0026	65
526-0158	60	800-0050	53	805-0035	49	815-0026	69
526-0219	35	800-0051	19	805-0035	51	815-0026	71
526-0238	39	800-0051	21	805-0035	51	815-0026	73
526-0238	41	800-0051	31	809-0035	9	815-0026	83
526-0252	56	800-0051	36	812-0061	69	815-0203	61
526-0259	49	800-0051	53	812-0061	71	815-0203	65
526-0259	51	800-0051	53	812-0061	73	815-0203	69
526-0278	19	800-0052	25	812-0063	65	815-0203	71
526-0278	35	800-0052	27	812-0065	67	815-0203	73
800-0002	35	800-0052	29	812-0065	69	815-0203	74
800-0003	54	800-0053	30	812-0065	71	815-0385	63
800-0003	55	800-0053	55	812-0065	73	815-0544	63
800-0003	78	800-0056	53	812-0066	61	815-0544	67
800-0003	79	800-0071	15	812-0066	69	815-0544	73
800-0004	60	800-0071	17	812-0066	71	818-0150	47
800-0005	5	800-0071	83	812-0066	73	821-0004	35
800-0005	9	800-0073	49	812-0070	69	821-0004	63
800-0005	33	800-0073	51	812-0070	84	821-0004	67
800-0005	56	800-0088	19	812-0075	5	821-0008	35
800-0007	21	800-0088	21	812-0075	23	821-0010	2A
800-0007	25	800-0092	13	812-0077	67	821-0010	47
800-0007	27	800-0092	15	812-0079	25	821-0010	75
800-0007	33	800-0092	17	812-0079	27	821-0010	81
800-0007	53	800-0092	21	812-0079	29	821-0011	22
800-0009	49	800-0092	49	812-0079	35	821-0014	11
800-0009	51	800-0092	51	812-0094	81	821-0014	13
800-0024	67	800-0092	56	812-0156	83	821-0014	35
800-0028	19	800-0093	35	812-0157	81	821-0014	47
800-0028	21	800-0094	19	812-0165	78	821-0014	60
800-0028	31	800-0095	11	812-0165	79	821-0014	75
800-0028	39	800-0130	9	812-0182	83	821-0016	13
800-0028	41	800-0130	13	813-0097	35	821-0016	15
800-0028	53	800-0130	32	813-0098	65	821-0016	17
800-0030	11	800-0133	15	813-0098	78	821-0016	39
800-0030	13	800-0133	17	813-0098	79	821-0016	47
800-0030	47	800-0135	7	813-0100	57	821-0016	75
800-0031	81	800-0135	17	813-0100	65	821-0017	77
800-0032	3	800-0138	39	813-0100	74	821-0018	13
800-0032	4	800-0153	39	813-0102	75	821-0018	15

Numerical Index

Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page
821-0018	17	850-0045	21	853-0003	65	862-0001	60
821-0029	3	850-0045	31	853-0003	69	862-0001	78
821-0029	4	850-0045	39	853-0003	69	862-0001	79
821-0029	11	850-0045	41	853-0003	71	862-0003	19
821-0029	13	850-0045	43	853-0003	73	862-0003	21
821-0029	15	850-0045	45	853-0008	61	862-0003	25
821-0029	17	850-0045	53	853-0008	65	862-0003	27
821-0029	74	850-0045	67	853-0013	54	862-0003	29
821-0030	37	850-0045	69	853-0013	55	862-0003	30
850-0020	69	850-0045	71	854-0006	84	862-0003	31
850-0020	71	850-0045	73	854-0007	25	862-0003	36
850-0020	73	850-0045	77	854-0007	27	862-0003	53
850-0025	23	850-0045	81	854-0007	29	862-0004	83
850-0025	47	850-0045	83	854-0010	69	862-0005	19
850-0025	81	850-0050	19	854-0010	71	862-0005	21
850-0030	9	850-0050	21	854-0010	73	862-0007	15
850-0030	23	850-0050	29	854-0010	74	862-0007	17
850-0030	35	850-0050	30	854-0031	55	862-0007	39
850-0030	57	850-0050	31	854-0031	56	862-0008	43
850-0030	58	850-0050	36	856-0002	67	862-0008	45
850-0030	59	850-0050	53	856-0002	77	862-0014	19
850-0030	61	850-0055	15	856-0003	61	862-0014	21
850-0030	65	850-0055	17	856-0003	65	862-0014	77
850-0030	69	850-0055	49	856-0003	65	862-0015	11
850-0030	71	850-0055	51	856-0003	74	862-0015	53
850-0030	73	850-0055	83	856-0006	2A	862-0016	11
850-0030	75	850-0060	11	856-0006	9	862-0016	13
850-0030	78	850-0060	13	856-0008	39	862-0016	15
850-0030	79	850-0060	15	856-0008	41	862-0016	17
850-0038	60	850-0060	17	856-0008	67	862-0016	35
850-0040	5	850-0060	19	856-0010	54	862-0016	49
850-0040	9	850-0060	21	856-0010	55	862-0016	51
850-0040	21	850-0060	35	860-0005	69	862-0020	36
850-0040	25	850-0060	49	860-0005	71	862-0020	39
850-0040	27	850-0060	51	860-0005	73	862-0020	41
850-0040	33	850-0060	56	860-0006	65	868-0001	57
850-0040	35	850-0065	30	860-0006	84	868-0007	11
850-0040	49	850-0070	3	860-0008	47	868-0011	55
850-0040	51	850-0070	4	860-0008	77	868-0011	56
850-0040	53	850-0070	7	862-0001	9	870-0048	13
850-0040	54	850-0070	9	862-0001	21	870-0048	43
850-0040	55	850-0070	13	862-0001	25	870-0048	45
850-0040	56	850-0070	15	862-0001	27	870-0053	23
850-0040	57	850-0070	17	862-0001	33	870-0053	57
850-0040	78	850-0070	32	862-0001	35	870-0053	58
850-0040	79	850-0070	39	862-0001	49	870-0053	59
850-0040	81	850-0079	36	862-0001	51	870-0053	61
850-0040	83	850-0079	39	862-0001	53	870-0053	65
850-0045	11	850-0079	41	862-0001	54	870-0053	69
850-0045	19	853-0003	61	862-0001	55	870-0053	71

Numerical Index

Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page
870-0053	73						
870-0053	74						
870-0053	78						
870-0053	79						
870-0131	63						
870-0131	67						
870-0183	63						
870-0183	84						
870-0188	43						
870-0188	45						
870-0196	9						
870-0212	17						
870-0212	22						
870-0212	47						
870-0250	54						
870-0250	55						
870-0257	3						
870-0257	4						
870-0257	13						
870-0257	15						
870-0257	17						
870-0257	39						
870-0257	41						
870-0257	43						
870-0257	45						
870-0257	47						
870-0257	75						
870-0257	84						
870-0258	47						
870-0281	3						
870-0281	4						
870-0281	13						
870-0281	15						
870-0281	17						
870-0281	37						
870-0281	74						
871-0010	61						
871-0010	65						
871-0010	69						
871-0010	71						
871-0010	73						
871-0010	74						
895-0163	43						
895-0163	45						
960-0220	COVER						