



Generator Set

KTT11 SPEC E

DFFA SPEC E

Parts Catalog

World Wide Parts & Service

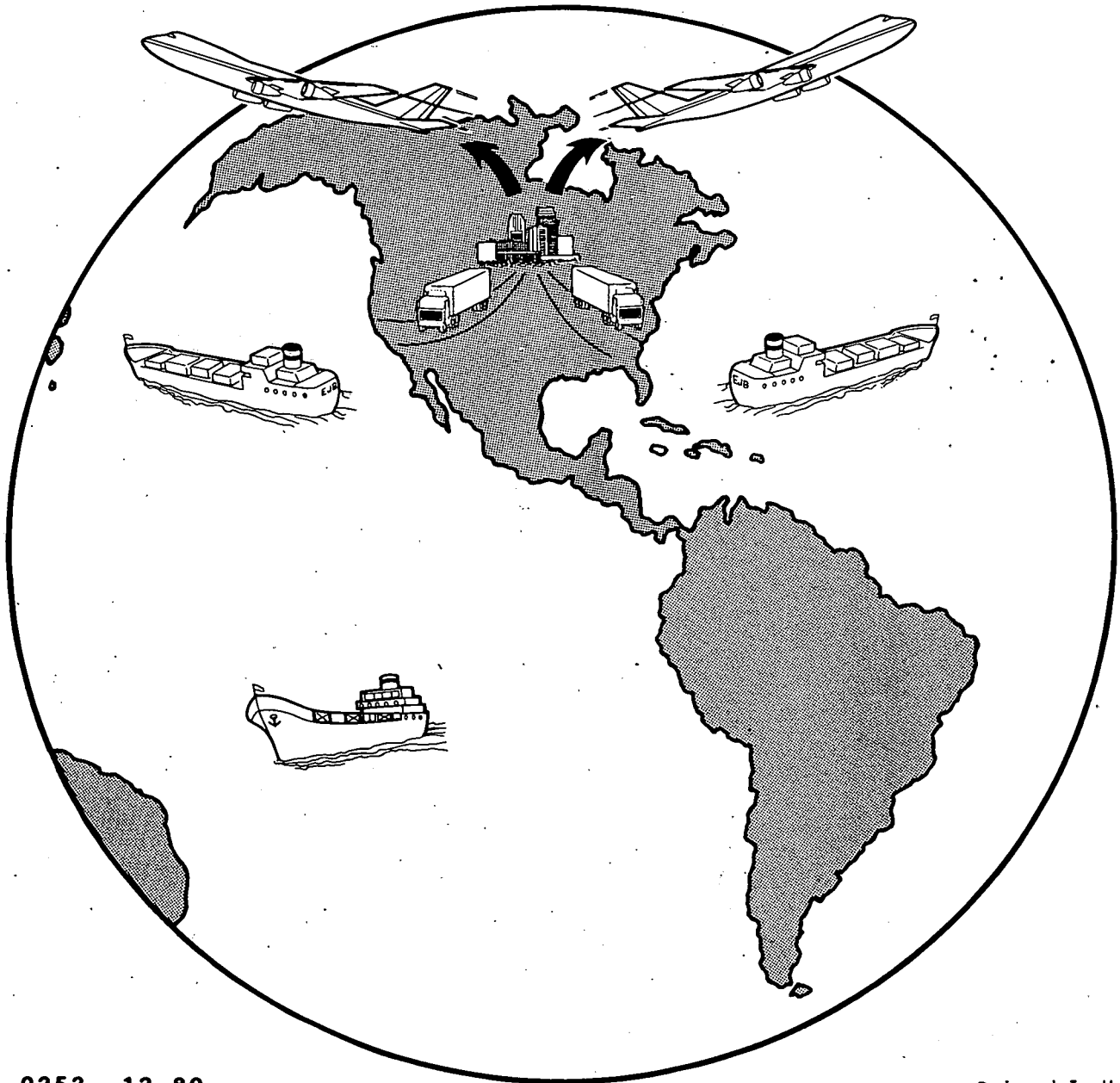


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MODEL IDENTIFICATION TABLE

ENGINE MODEL	GENERATOR SET IDENTIFICATION		NEWAGE GENERATOR	HERTZ	RPM	BATTERY VOLTAGE
	CUMMINS POWER SYSTEM	ONAN POWER SYSTEM				
KTTA19-G1	400KTT11/xxxxxE	400DFFA/xxxxxE	HC534D & HC534F	50	1500	24 VDC
KTTA19-G1	450KTT11/xxxxxE	450DFFA/xxxxxE	HC534C & HC534D & HC534E	60	1800	24 VDC

INTRODUCTION

FORWARD

This Service Parts Catalog provides identification of the Maintenance, Service or Repair parts for the Product(s) identified in the Model Identification Table. The Catalog is divided into sections applicable to the Major Sections of the Product, and Section Table of Contents are provided for your convenience.

ILLUSTRATIONS

The illustrations in the Parts Catalog are arranged in groups of related items, and each part or assembly is identified by a Reference Number shown in the illustration. 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 a Generator Set are determined by FACING the FRONT of the Set (Engine Radiator End).

PART NUMBERS

Dual Part Number columns are used. The first column contains the CENTRAL PARTS DISTRIBUTION CENTER Part Number; the second (SOURCE) column provides for identification of an alternate source for the part. The alternate source may be a Manufacturer, Supplier or Subsidiary of this Corporation. The Manufacturer/Supplier is assigned Identifying Letter(s) which are found in the third (CODE) column. A List of Manufacturers and Suppliers with their address, phone numbers, etc. are located in a separate section of this Parts Catalog.

REPLACEMENT ENGINE PARTS

The Models with engines supplied by a separate Engine Manufacturer will have only those external engine components added or modified during the Assembly of these Models. Most General Maintenance Parts and some engine optional features may be identified in this Parts Catalog. For internal engine parts and components not covered herein; refer to the applicable Manufacturer's engine Parts Catalog. The engine Manufacturer will be listed in the Manufacturer & Supplier (SOURCE CODE) Section.

INTRODUCTION

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MODEL IDENTIFICATION

The Model Table provides identification of the Product(s) which this Service Parts Catalog covers. Some Tables may include an Engine Identifier along with the Generator Set Identifier when the Manufacturer of the Engine is a Supplier of Engine Replacement Parts.

SAMPLE ENGINE IDENTIFIERS

4A2.3GS/GC1	6CTA8.3GC/GS1	KTTA50GS/GC1
6AT3.4GS/GC1	KTTA19GS/GC1	NT855GS/GC4
4BT3.9GS/GC1	KTA38GS/GC1	NTTA855GS/GC2
6CT8.3GS/GC1	KTA50GS/GC3	VTA28GS/GC3

SAMPLE MODEL IDENTIFIERS

When Engine Identifiers are used, the Model Identifier will also be located on the Nameplate. It is referred to as ID. NO. The sample Nameplate below has an arrow which points to the ID. NO. Location. Normally the MODEL Identifier follows the MODEL on the nameplate.

GEN SET IDENTIFIER SAMPLES

60	DGBA	Z	/13756	A
175	CTA	62	/32476	C
200	NT	4	/29876	E
250	DMBC	/	1	B
1250	KTA	53	/32069	D

Kilowatt Size:	Specification Letter Designates Major Changes
Model Ident Letters:	
Voltage Code(s) or Model Ident Numbers:	Specification Number: No. 1 is Standard; others designate Variations or Special Features

AC Generator Set Model	
kw	kva
class of insulation	amps
field amp max	field voltage max
generator model no.	
voltage regulator model no.	
ID no.	
generator set serial no.	
BS5000	NEMA

INTRODUCTION

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PRODUCT SERIAL NUMBER IDENTIFICATION

A Serial number is assigned to all Models or Products and is located on the nameplate for that product. The current Serial Number System of identification is as follows:

Month of Manufacture:	B	89	7	123456	
A = Jan, B = Feb, etc.					Assigned Six Digit Serial No.
Year of Manufacture: 1989					Assembly Plant Code Number

SAFETY PRECAUTIONS

The following symbols are used in Parts Catalogs to alert users to the potentially dangerous conditions relating to maintenance of the equipment and replacement of parts. Please read and observe.



This symbol warns of immediate hazards which will result in severe personal injury or death.



This symbol refers to a hazard or unsafe practice which can result in severe personal injury or death.



This symbol refers to a hazard or unsafe practice which can result in personal injury or product or property damage.

PRODUCT SAFETY PRECAUTIONS:

WARNING

CONTACT WITH USED ENGINE OILS HAS BEEN IDENTIFIED BY A UNITED STATES FEDERAL AGENCY AND SOME USA STATE AGENCIES AS CAUSING CANCER or REPRODUCTIVE TOXICITY. WHEN CHECKING OR CHANGING ENGINE OILS TAKE ALL NECESSARY PRECAUTIONS NOT TO INGEST, BREATHE THE FUMES OR CONTACT THE USED OIL!

WARNING

CONTACT WITH ASBESTOS HAS BEEN IDENTIFIED BY A UNITED STATES FEDERAL AGENCY AND SOME USA STATE AGENCIES AS CAUSING CANCER or REPRODUCTIVE TOXICITY. WHEN HANDLING ENGINE GASKETS TAKE ALL NECESSARY PRECAUTIONS NOT TO INGEST, BREATHE OR CONTACT THE DUST FROM THE GASKETS! USE ADEQUATE VENTILATION AND WEAR PROTECTIVE GLOVES, MASKS AND CLOTHING!

WARNING

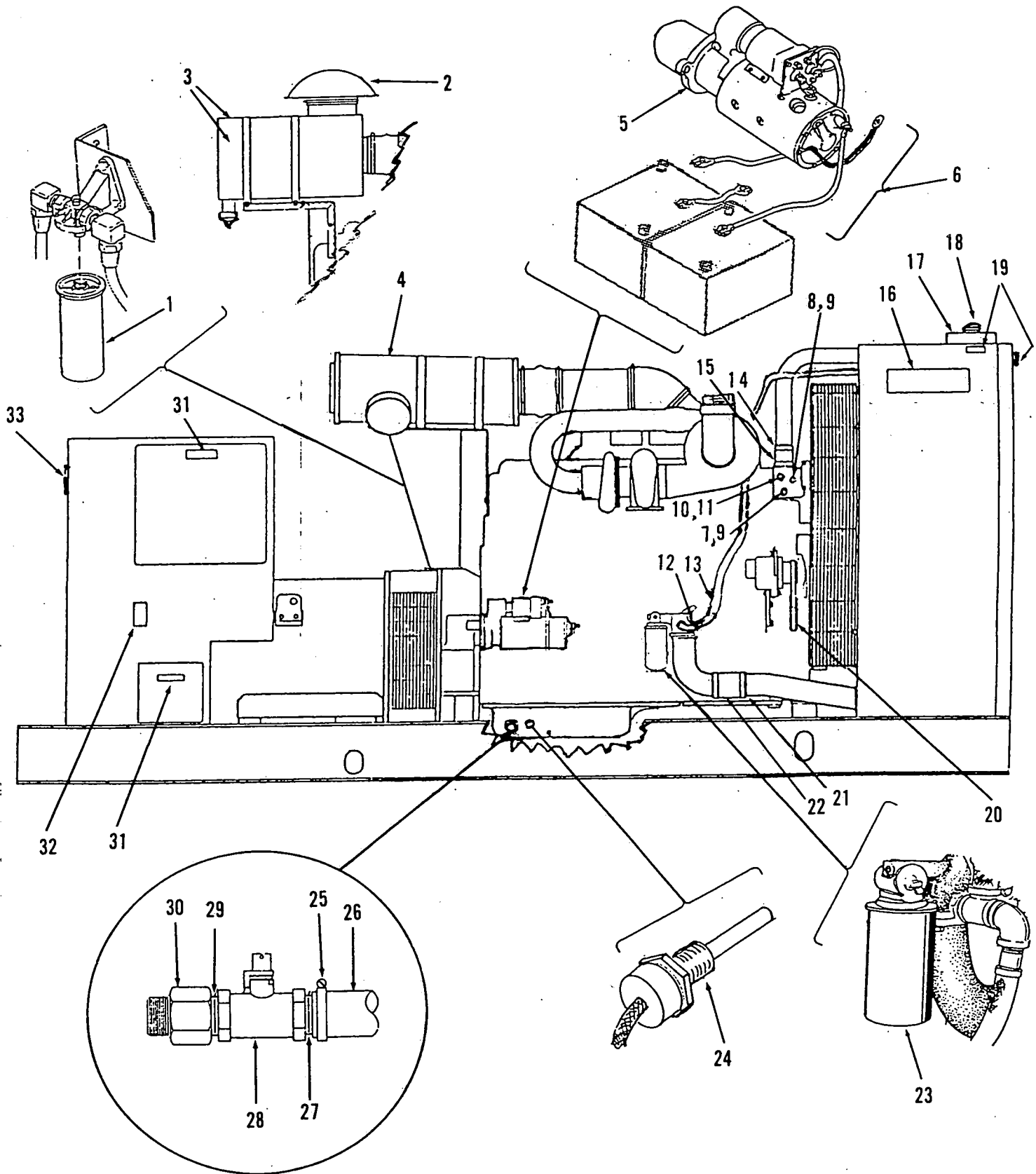
CONTACT WITH BENZENE and LEAD, FOUND IN GASOLINES, FUEL ADDITIVES AND SOLVENTS HAS BEEN IDENTIFIED BY A UNITED STATES FEDERAL AGENCY AND SOME USA STATE AGENCIES AS CAUSING CANCER or REPRODUCTIVE TOXICITY. WHEN CHECKING, DRAINING OR ADDING GASOLINE AND FUEL ADDITIVES, OR USING SOLVENTS TAKE ALL NECESSARY PRECAUTIONS NOT TO INGEST, BREATHE THE FUMES, OR CONTACT THE LIQUIDS. USE ADEQUATE VENTILATION AND WEAR PROTECTIVE GLOVES, MASKS AND CLOTHING!

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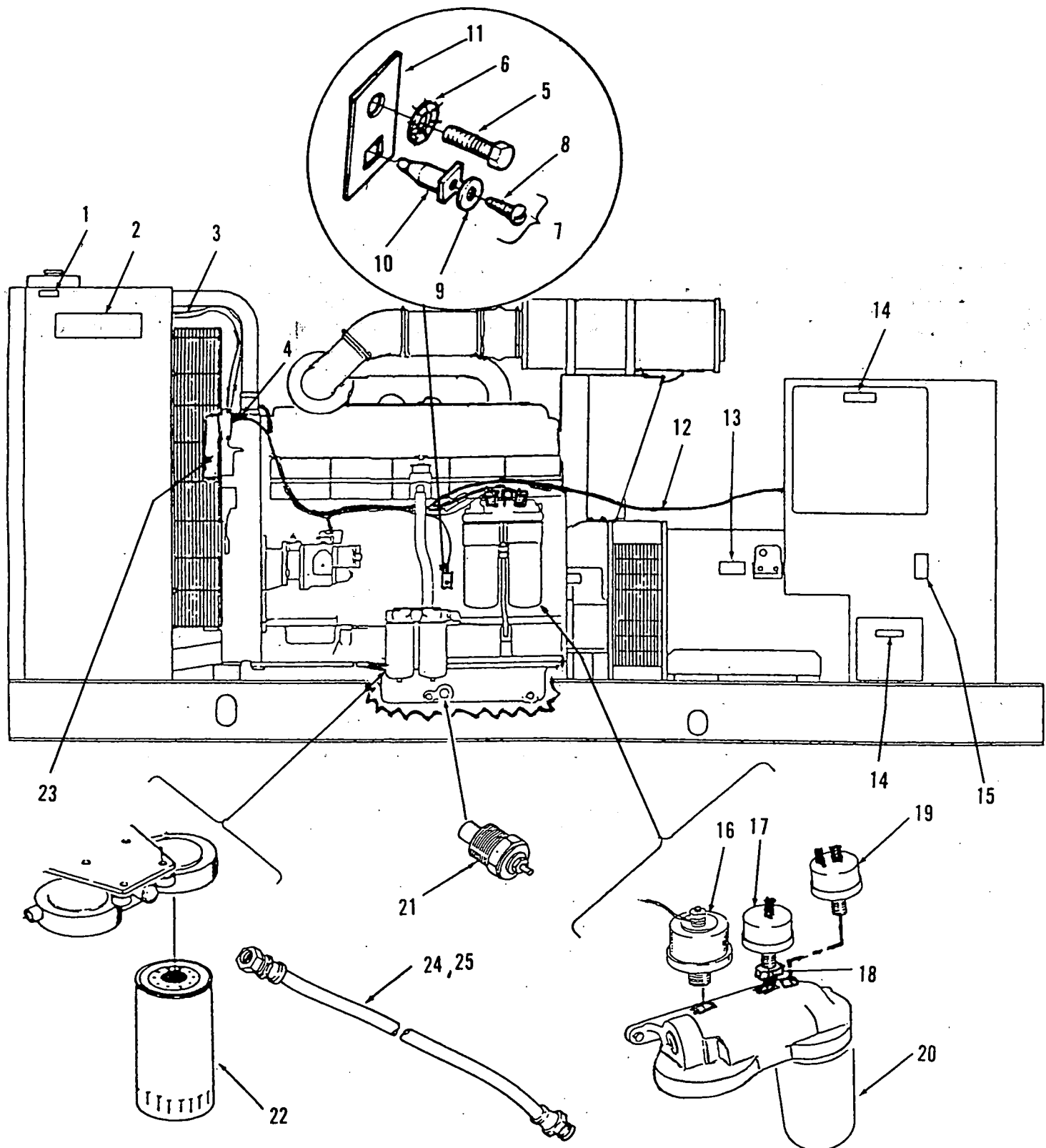
EXTERNAL COMPONENTS LEFT SIDE



EXTERNAL COMPONENTS LEFT SIDE

REF NO.	CPDC PART NO.	SOURCE PART NO.	C O D E	QTY USED	PART DESCRIPTION
1	122-0526	3313283		1	Filter, Oil - Bypass
2	140-2098			1	Hood, Air Inlet (Used on Heavy Duty Air Cleaner)
3					Heavy Duty Air Cleaner Group
	140-2097			1	Air Cleaner - Heavy Duty (Includes Elements)
	140-2096			1	Element, Air Cleaner - Primary
	140-2467			1	Element, Air Cleaner - Safety
4					Standard Air Cleaner Group
	140-2463			1	Air Cleaner (Includes Element)
	140-2464			1	Element, Air Cleaner
5		205431	CE	1	Starter, 24 VDC
	191-1588			1	Standard (Not Available from CPDC)
6					Battery Cable Group
	416-0446			1	Cable, Battery - Jumper (12½"LG)
	416-0444			1	Cable, Battery (44"LG)
	416-0960			1	Cable, Battery (29"LG)
	416-0632			1	Cable, Electrical (15"LG)
7	309-0436			1	Switch, Thermostatic - High Water Temperature (SHUTDOWN, 222°F)
8	309-0436			1	Switch, Thermostatic - High Water Temperature (PRE-ALARM, 216°F)
9	505-0117			2	Bushing, Reducer - Flush (1/2 NPT x 3/8 NPT)
10	193-0375			1	Sender, Water Temperature
11	505-0021			1	Bushing, Reducer - Hex (3/4 NPT x 1/2 NPT)
12	503-0398			2	Clamp, Hose
13	503-0249			1	Hose, Radiator - Bulk (1"ID)(Sold by the Foot) Five Feet Required
14	503-0867			4	Clamp, Hose - T-Bolt Type (3" NON)
15	503-1708			2	Hose, Radiator
16					Decal - Identification
	98-6108-03			2	ONAN GEN SET
	98-6111-03			2	CUMMINS GEN SET
	98-6139-03			2	CUMMINS ONAN GEN SET
17	130-3587			1	Radiator (Include Cap)
18	130-3588			1	Cap, Radiator (7 PSI)
19	98-4730			2	Label - Warning (HOT PRESSURIZED COOLANT SYSTEM)
20					Alternator & Drive Components Group
	191-1391			1	Pulley, Alternator - Multi Groove (Use with 35 AMP Alternator)
	191-0688	70D44854B13	MO	1	Alternator - 24 VDC, 35 AMP (Less Pulley, Includes Voltage Regulator)
	191-1635	8RF3080F	MO	1	Regulator, Voltage - 24 VDC (Used on 35 AMP Alternator)
	511-0119			1	Belt, Drive - Multi Groove (Used with 35 AMP Alternator)
					-----*
	130-3254			1	Pulley, Alternator - Multi Groove (Use with 75 AMP Alternator)
	191-1926-02	70D44970S02	MO	1	Alternator - 24 VDC, 75 AMP (Less Pulley, Includes Voltage Regulator)
		BRG3032	MO	1	Regulator, Voltage - 24 VDC (Used on 75 AMP Alternator)
	511-0161			1	Belt, Drive - Multi Groove (Used with 75 AMP Alternator)
21	503-0885			4	Clamp, Hose
22	503-0856			2	Hose, Radiator
23					Filter, Water - W/Corrosion Inhibiting Chemical DCA4
	130-3538	3318201	CE	1	Service
	130-3576	3318319	CE	1	Pre-Charging Complete System
24					Heater, Oil - 300 Watt
	333-0407-02	167619	CE	1	120 VAC
	333-0407-04	167621	CE	1	240 VAC
	333-0407-05	3000214	CE	1	480 VAC
25	503-0183			1	Clamp, Hose
26	501-1731			1	Hose - Bulk (Sold by the Foot) Two Feet Required
27	505-0324			1	Nipple, Pipe - Half (3/4 NPT x 2"LG)
28	504-0171			1	Valve, Shutoff - Brass (3/4 NPT)
29	505-0102			1	Nipple, Pipe - Close (3/4 NPT x 1-3/8"LG)
30	505-1433			1	Adapter, Hex (Metric to NPT)
31	98-5347			1	Label - Danger (HIGH VOLTAGE)
32	98-5759			1	Label - Warning (HAZARDOUS VOLTAGE BACKFEED TO UTILITY - CAN CAUSE DEATH OR DAMAGE)
33					Decal - Identification
	98-6108-02			1	ONAN GEN SET
	98-6111-02			1	CUMMINS GEN SET
	98-6139-02			1	CUMMINS ONAN GEN SET

EXTERNAL COMPONENTS RIGHT SIDE



**EXTERNAL COMPONENTS
RIGHT SIDE**

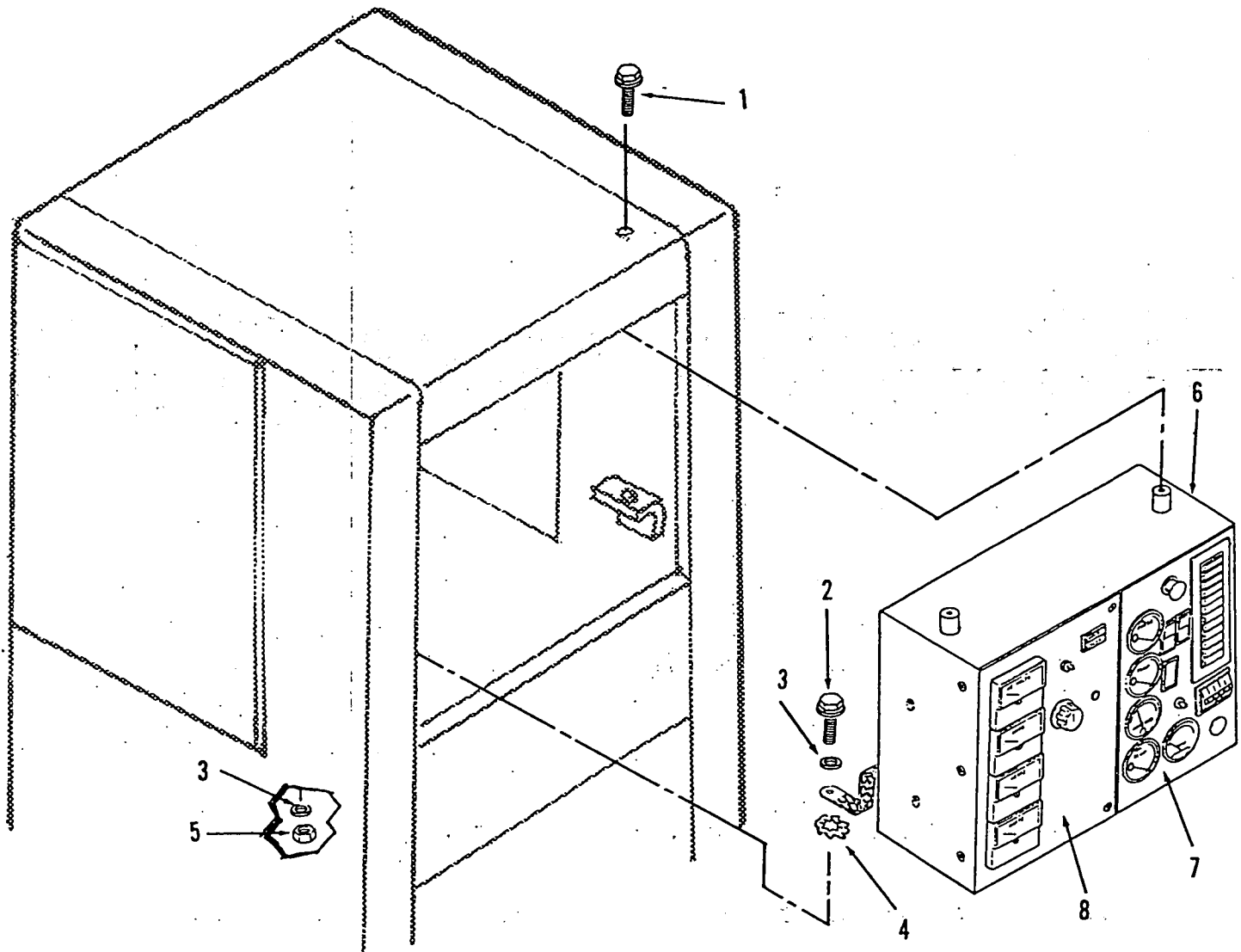
REF NO.	CPDC PART NO.	SOURCE PART NO.	C O D E	QTY USED	PART DESCRIPTION
1	98-4730			2	Label - Warning (HOT PRESSURIZED COOLANT SYSTEM)
2					Decal - Model Identification
	98-6108-03			2	ONAN GEN SET
	98-6111-03			2	CUMMINS GEN SET
	98-6139-03			2	CUMMINS ONAN GEN SET
3	501-0554			1	Line, Flexible
4	309-0269			1	Switch, Thermostatic - Low Engine Temperature
					Attaching Parts for Switch
	800-0062			1	Screw, Cap - Hex Head (3/8-16 x 4")
	850-0050			1	Washer, Lock - Spring (3/8")
5	800-0270			1	Screw, Cap - Hex Head (3/8-24 x 5/8")
6	856-0010			2	Washer, Lock - EIT (3/8")
7	332-1292			1	Terminal Assembly (Includes Replaceable Items 8 thru 10)
8	809-0035			1	Screw, Tapping - Round Head (#8 x 3/4")
9	508-0015			1	Washer, Insulating
10	870-0196			1	Nut, Insulated
11	332-1281			1	Board, Terminal
12	338-2525			1	Harness, Wiring - Engine to Control (Includes Replaceable Items)
	323-1306			1	Housing, Connector - 8 Pin (Less Pins)
	323-1200			8	Pin, Contact
	323-1304			1	Housing, Connector - 6 Pin (Less Pins)
	323-1200			6	Pin, Contact
					-----*
13	98-5822			3	Decal - Warning "DO NOT USE LIFTING POINT, ETC."
14	98-5347			2	Label - Danger (HIGH VOLTAGE)
15	98-5759			1	Label - Warning (HAZARDOUS VOLTAGE BACKFEED TO UTILITY - CAN CAUSE DEATH OR DAMAGE)
16	193-0244			1	Sender, Pressure - Oil
17	309-0272			1	Switch, Pressure - Oil, 20# PSI (PRE-ALARM)
18	502-0175			1	Adapter, Pipe
19	309-0561			1	Switch, Pressure - Oil, 14# PSI (SHUTDOWN) With Dual Terminals
20	122-0755	3313279	CE	2	Filter, Oil
21	193-0353			1	Sender - Temperature - Oil
22	149-2249	3315847	CE	2	Filter, Fuel
23	511-0162	3002203	CE	1	Belt, Drive - Fan
24	501-0084			1	Line, Fuel - Flexible "FUEL OUT" (45° 7/8-14 Female Swivel x 1/2-14 Male x 36"LG)
25	501-0216			1	Line, Fuel - Flexible "FUEL IN" (45° 3/4-16 Female Swivel x 3/8-18 Male x 42"LG)

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GENERATOR SET CONTROL
Installation Of

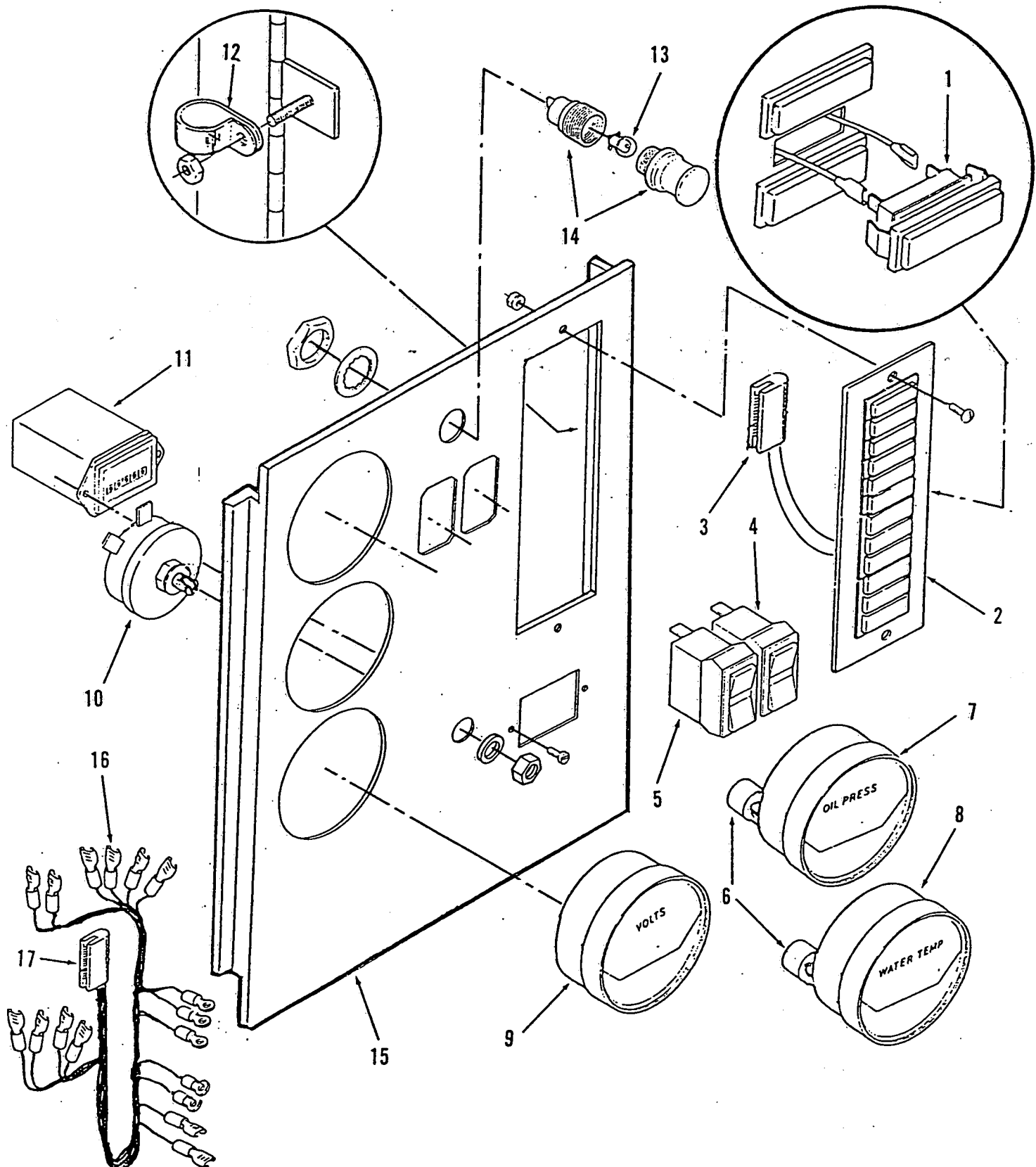


GENERATOR SET CONTROL Installation Of

REF NO.	CPDC PART NO.	SOURCE PART NO.	C O D E	QTY USED	PART DESCRIPTION
1	821-0014			1	Screw, Self-Locking - Hex Washer Head (5/16-18 x 1/2")
2	821-0018			1	Screw, Self-Locking - Hex Washer Head (1/4-20 x 5/8")
3	526-0018			2	Washer, Flat (1/4")
4	856-0006			1	Washer, Lock - EIT (1/4")
5	870-0212			1	Nut, Self-Locking - Hex (1/4-20)
6	NOTE 1			REF	Control, Generator Set (See Control Section Illustrations and Parts Lists For Replaceable Components)
7	NOTE 1			REF	Engine Control Panel (See Separate Illustration for Components)
8	NOTE 1			REF	Generator Control Panel (See Separate Illustration for Components)

NOTE 1. Not Stocked For Sale at the Central Parts Distribution Center.

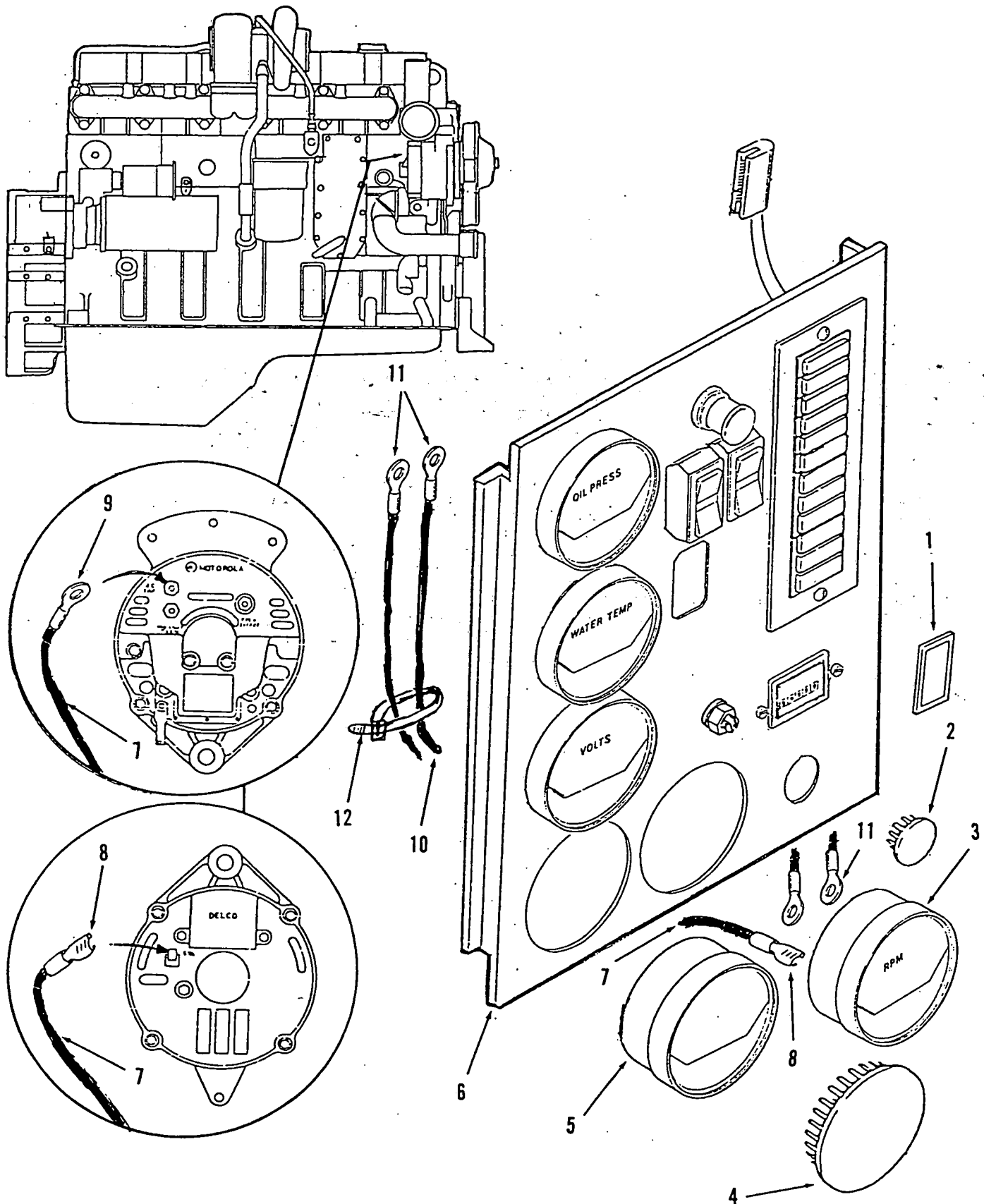
ENGINE CONTROL PANEL COMPONENTS



ENGINE CONTROL PANEL COMPONENTS

REF NO.	CPDC PART NO.	SOURCE PART NO.	C O D E	QTY USED	PART DESCRIPTION
1	322-0369-03			1	Lamp, Incandescent - 1/3 Watt, 28 Volts DC
2					Module, Indicator - Fault (A12) (Includes Connector Housing)
	322-0359-02			1	7 Light Module
	322-0360-02			1	12 Light Module
					Attaching Parts for Fault Module
	815-0385			2	Screw, Machine - Round Head (#6 - 32 x 1/2")
	870-0183			2	Nut, Self-Locking - ET Hex Washer Head (#6 - 32)
3	323-1310			1	Housing, Conn - 13 Pin (J3) (Less Contact Pins)
	323-1302			13	Contact, Pin
4	308-0785			1	Switch, Push - Reset/Panel Lamp (S11)
5	308-0784			1	Switch, Push - Run/Stop/Remote (S12)
6	193-0250			2	Resistor, Gauge (R12)
7	193-0352			1	Gauge, Pressure - Oil, 12 VDC (M11)
8	193-0351			1	Gauge, Temp - Water, 12 VDC (M12)
9	302-1642			1	Voltmeter, DC (M13)
10	151-0402			1	Potentiometer - Speed Control (R11)
11	302-0885			1	Meter, Running Time (M14)
					Attaching Parts for Meter
	815-0385			2	Screw, Machine - Round Head (#6 - 32 x 1/2")
	870-0183			2	Nut, Self-Locking - ET Hex Washer Head (#6 - 32)
12	332-0052			1	Clamp, Loop
					Attaching Parts for Clamp
	870-0131			2	Nut, Self-Locking - with ET Lockwasher (#10 - 32)
13	322-0017			1	Lamp, Incandescent - 28 VDC (DS11)
14	322-0361			1	Holder, Lamp
15	301-9055-02			1	Panel, Control - 3 Gauge Holes
16	338-2277			1	Harness Assembly, Wiring - DC (Includes Connector Housing)
17	323-1308			1	Housing, Conn - 12 Pin (J4) (Less Contact Pins)
	323-1302			12	Contact, Pin
18	98-5219			1	Decal - Panel Front (Not Illustrated)
19	98-5220			1	Decal - Panel Rear (Not Illustrated)

TACHOMETER Installation Of



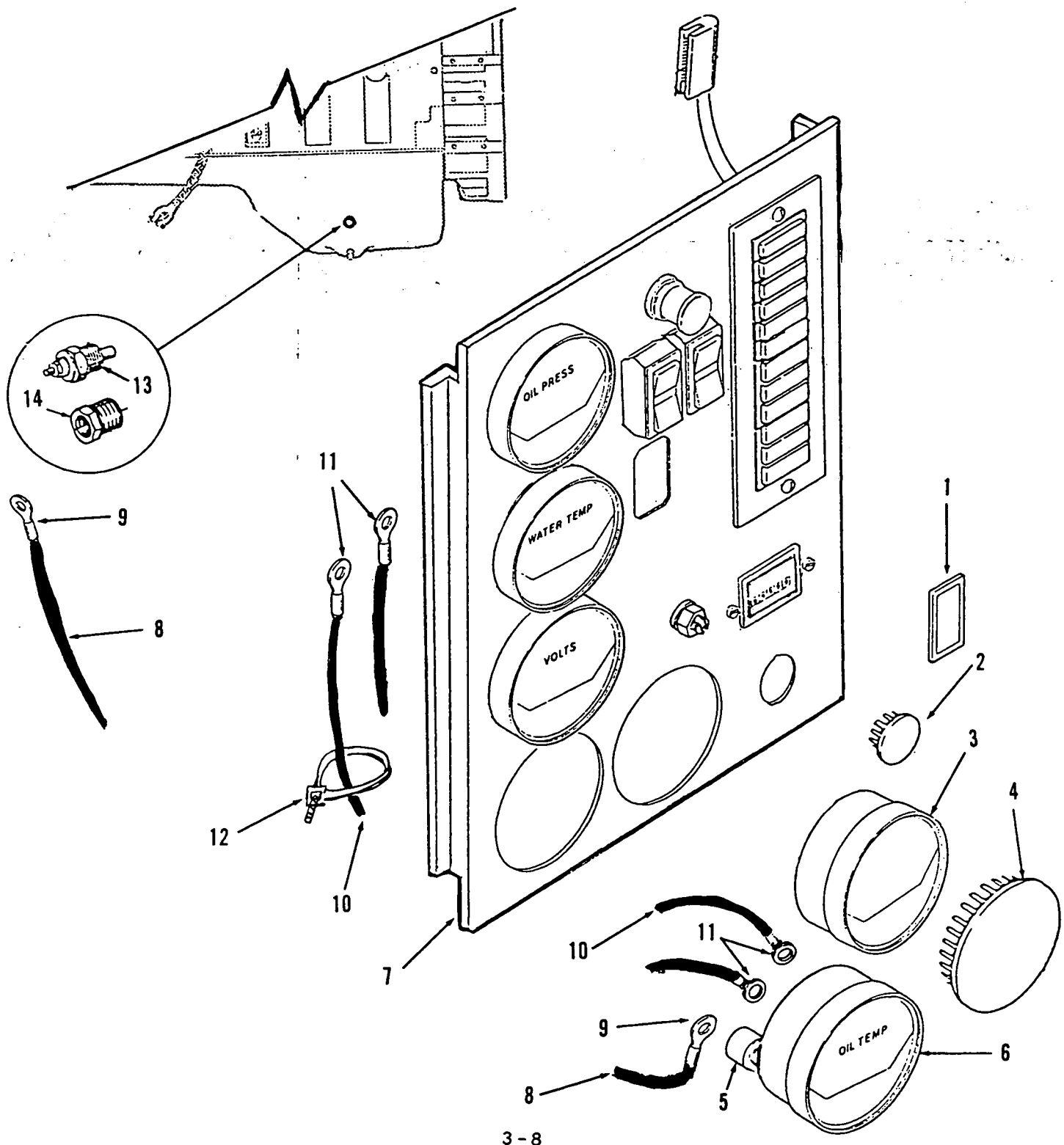
TACHOMETER Installation Of

REF NO.	CPDC PART NO.	SOURCE PART NO.	C O D E	QTY USED	PART DESCRIPTION
1	301-6257			1	Cover - Blank Switch
2	517-0137			1	Plug, Dot Button
3	302-1873-01			1	Tachometer (M16) [NOTE 1]
4	517-0131			1	Plug, Dot Button (Option in lieu of Blank Meter)
5	302-1723			1	Meter, Blank (Option in lieu of Dot Button Plug)
6	301-9055-01			1	Panel, Control
7	NOTE 2			AR	Wire, Electrical - 16 AWG, Insulated
8	332-1993			2	Terminal, Faston, .25 - 14-16 AWG Gauge Wire
9	332-0807			1	Terminal, Wire - Ring #10, 16-18 AWG Gauge Wire
10	NOTE 2			AR	Wire, Electrical - 20 AWG, Insulated
11	332-0147			4	Terminal, Wire - Ring #10, 18-20 AWG Gauge Wire
12	332-1445			3	Tie, Cable
18	98-5219			1	Decal - Panel Front (Not Illustrated)
19	98-5220			1	Decal - Panel Rear (Not Illustrated)

NOTES:

1. Tachometer comes with a 12 volt bulb and socket which must be discarded as meter illumination is provide by a front panel light. **Caution**, correct hookup per instruction sheet is necessary as the tachometer is used on both 12 VDC and 24 VDC electrical systems.
2. Electrical Wire Not Stocked for Sale in Central Distribution Parts Center; Obtain locally as needed.

OIL TEMPERATURE GAUGE
Installation Of



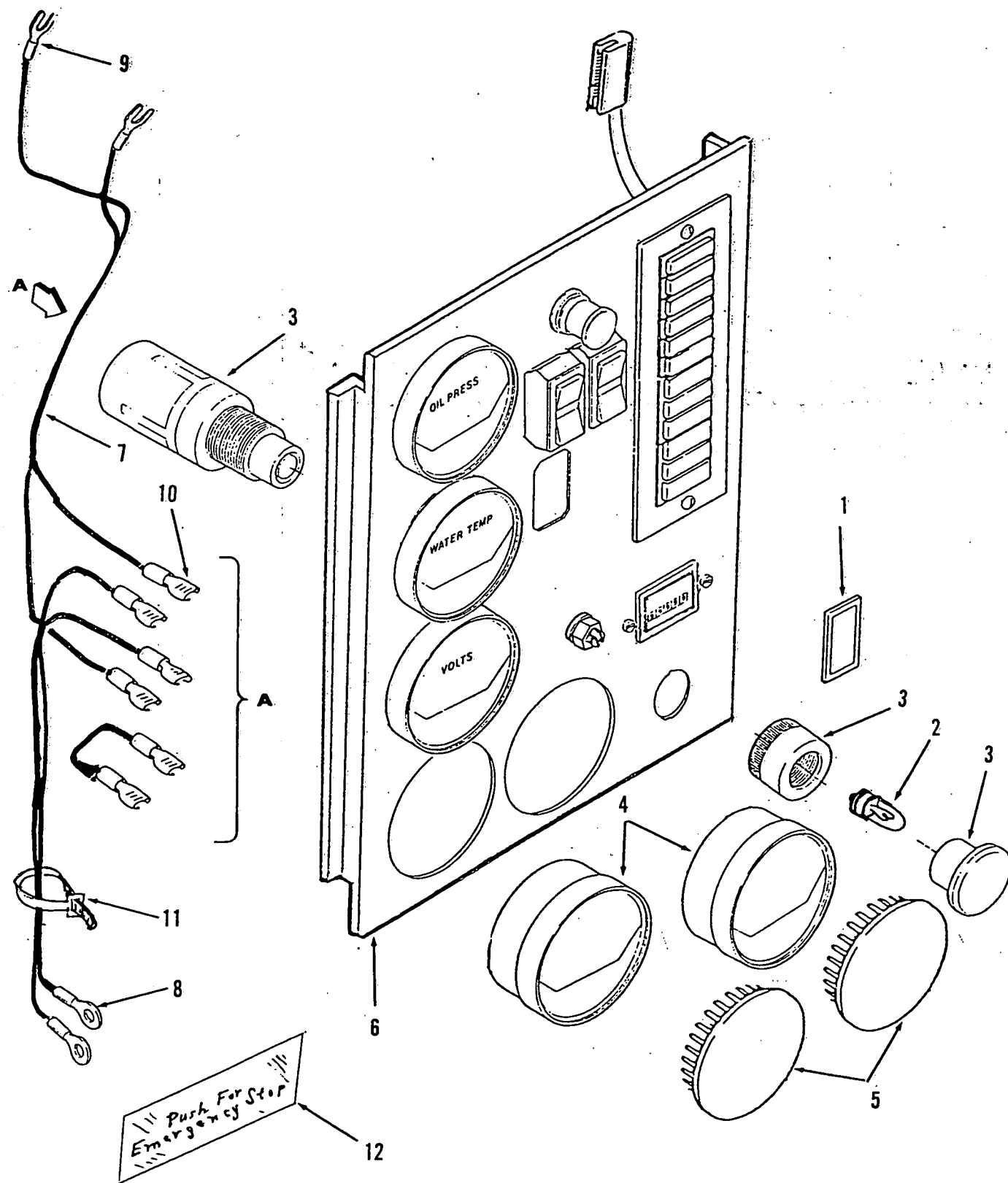
OIL TEMPERATURE GAUGE **Installation Of**

REF NO.	CPDC PART NO.	SOURCE PART NO.	C O D E	QTY USED	PART DESCRIPTION
1	301-6257			1	Cover - Blank Switch
2	517-0137			1	Plug, Dot Button
3	302-1723			1	Meter, Blank (Option in lieu of Dot Button Plug)
4	517-0131			1	Plug, Dot Button (Option in lieu of Blank Meter)
5	193-0250			1	Resistor, Gauge
6	193-0330			1	Gauge - Oil Temperature
7	301-9055-01			1	Panel, Control
8	NOTE 1			AR	Wire, Electrical - 16 AWG, Insulated
9	332-0807			2	Terminal, Wire - Ring #10, 16-18 AWG Gauge Wire
10	NOTE 1			AR	Wire, Electrical - 20 AWG, Insulated
11	332-0147			4	Terminal, Wire - Ring #10, 18-20 AWG Gauge Wire
12	332-1445			2	Tie, Cable
13	193-0353			1	Sender, Temperature - Oil (E4)
14	505-0151			1	Bushing, Reducer (1/2 NPTF x 1/8 NPTF)
18	98-5219			1	Decal - Panel Front (Not Illustrated)
19	98-5220			1	Decal - Panel Rear (Not Illustrated)

NOTES:

1. Electrical Wire Not Stocked for Sale in Central Distribution Parts Center; Obtain locally as needed.

EMERGENCY STOP SWITCH Installation Of



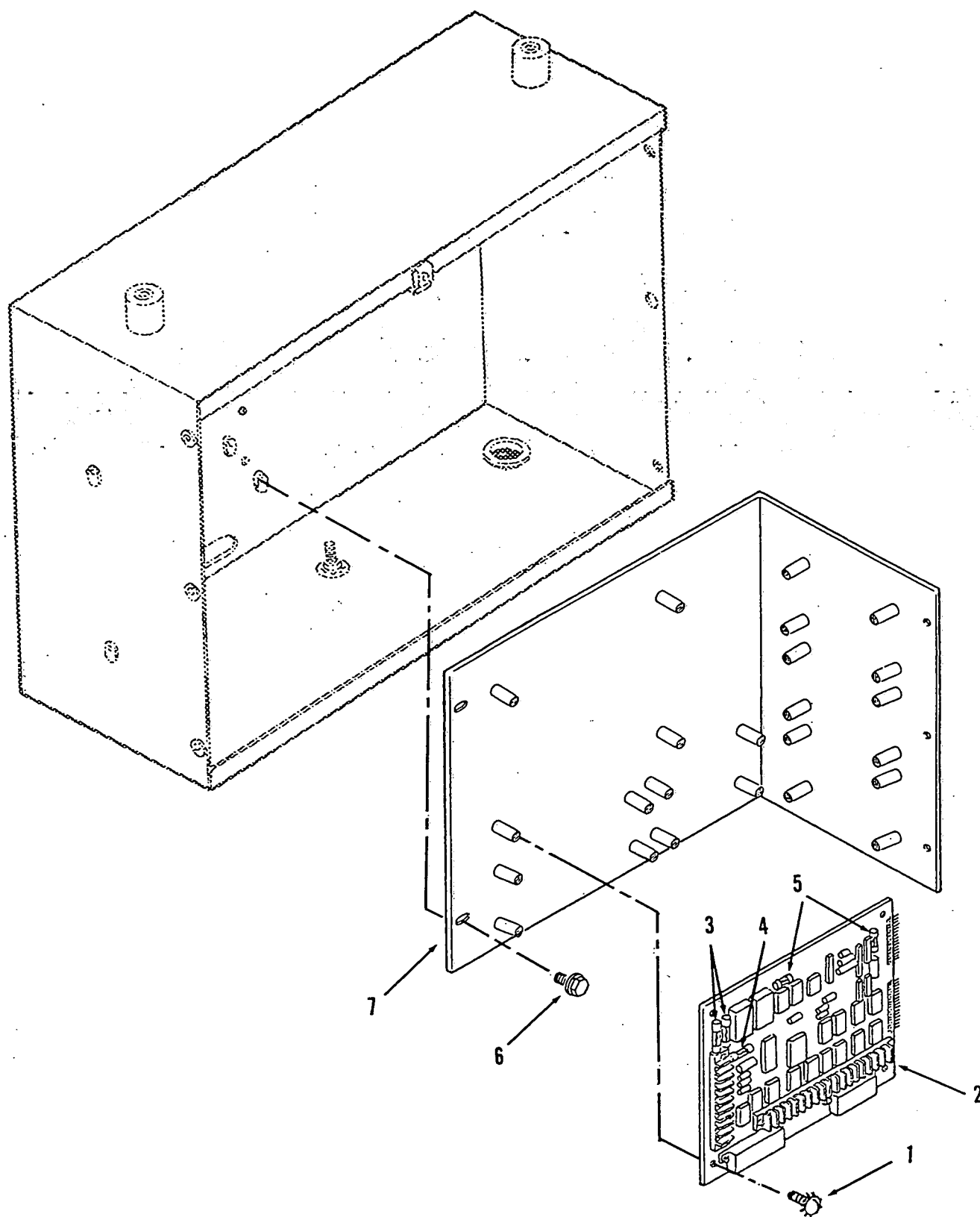
EMERGENCY STOP SWITCH **Installation Of**

REF NO.	CPDC PART NO.	SOURCE PART NO.	C O D E	QTY USED	PART DESCRIPTION
1	301-6257			1	Cover - Blank Switch
2	322-0223			1	Lamp, Incandescent - 28 VDC, MSCP .34
3	308-0853			1	Switch, Push (Includes replaceable bulb)
4	302-1723			2	Meter, Blank (Option in lieu of Dot Button Plug)
5	517-0131			2	Plug, Dot Button (Option in lieu of Blank Meter)
6	301-9055-01			1	Panel, Control
7	NOTE 1		AR		Wire, Electrical - 20 AWG, Insulated
8	332-0804			2	Terminal, Wire - Ring .25, 18-20 AWG Gauge Wire
9	332-1673			2	Terminal, Wire - Spade, #6, 18-20 AWG Gauge Wire
10	332-1477			6	Terminal, Wire - Faston, .25, 18-20 AWG Gauge Wire
11	332-1445			4	Tie, Cable
12	98-5662			1	Decal "Push For Emergency Stop"
18	98-5219			1	Decal - Panel Front (Not Illustrated)
19	98-5220			1	Decal - Panel Rear (Not Illustrated)

NOTES:

1. Electrical Wire Not Stocked for Sale in Central Distribution Parts Center; Obtain locally as needed.

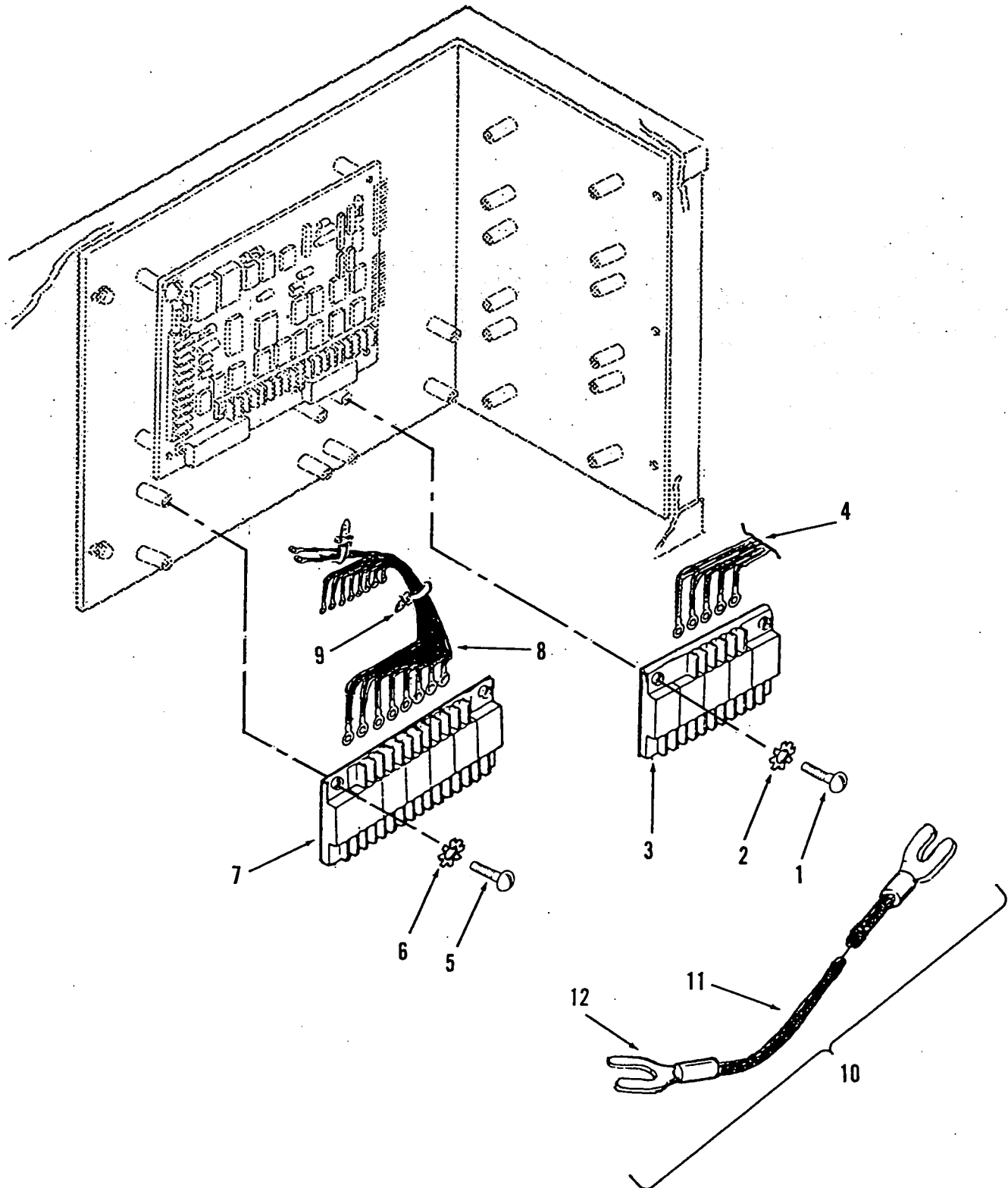
**ENGINE MONITOR BOARD
Installation Of**



ENGINE MONITOR BOARD Installation Of

REF NO.	CPDC PART NO.	SOURCE PART NO.	C O D E	QTY USED	PART DESCRIPTION
1	815-0544			4	Screw, Machine - Round Head With IT Lock Washer (#6-32 x 1/2")
2					Board - Engine Monitor (A11) (Includes Fuses)
	300-2810			1	24 VDC, 7 Light
	300-2812			1	24 VDC, 12 Light
3	321-0270			2	Fuse, Cartridge - 20 Amp (F1, F2)
4	321-0231			1	Fuse, Cartridge - 15 Amp (F3)
5	321-0094			2	Fuse, Cartridge - 5 Amp (F4, F5)
6	821-0004			4	Screw, Self-locking - Hex Washer Head (#10-32 x 5/16")
7	301-8851			1	Bracket, Mounting

ALARM RELAY MODULES
Installation Of



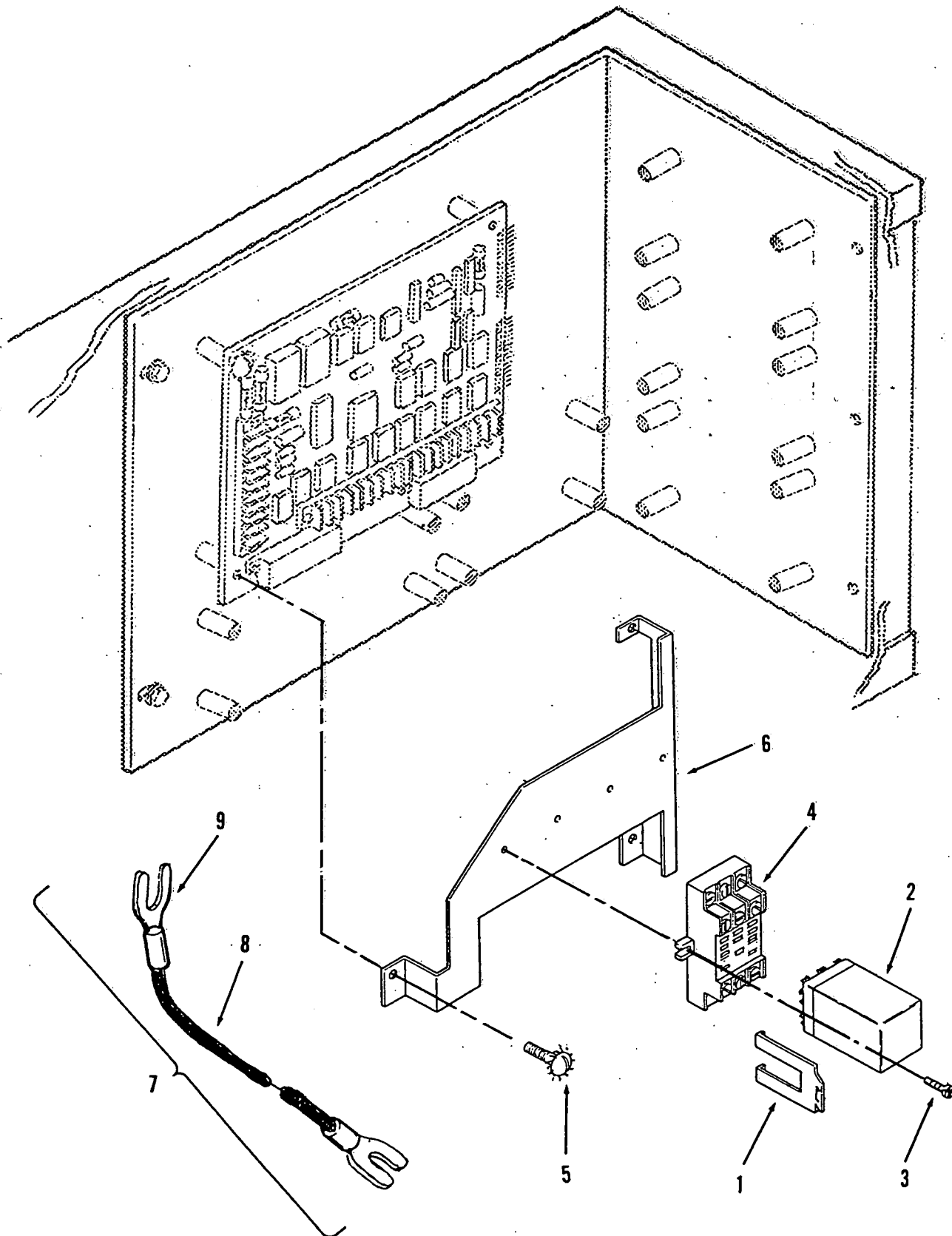
ALARM RELAY MODULES **Installation Of**

REF	CPDC	SOURCE	C	QTY	PART
NO.	PART NO.	PART NO.	O	USED	DESCRIPTION
			D		
			E		
1	812-0063			4	Screw, Machine - Round Head (#6-32 x 1/2)
2	853-0003			4	Washer, Lock - External Tooth (#6)
3	300-2856			1	Module, Alarm Relay - 24 VDC, A14 (5 Relays)
4	338-1836			1	Harness, Wiring (A14 to A11)
5	812-0063			4	Screw, Machine - Round Head (#6-32 x 1/2)
6	853-0003			4	Washer, Lock - External Tooth (#6)
7	300-2863			1	Module, Alarm Relay - 24 VDC, A13 (7 Relays)
8	338-1835			1	Harness, Wiring (A13 to A11)
9	332-1445			4	Tie, Cable
10	NOTE 1			1	Lead, Electrical (A13 to A14)
11	NOTE 2			AR	Wire, Electrical - 20 AWG, Insulated
12	332-1673			2	Terminal, Wire - Forked, 18-20 Gauge

NOTES:

1. Electrical Leads Not Stocked for Sale in Central Parts Distribution Center.
2. Electrical Wire Not Stocked for Sale in Central Distribution Parts Center; Obtain locally as needed.

RUN RELAYS
Installation Of



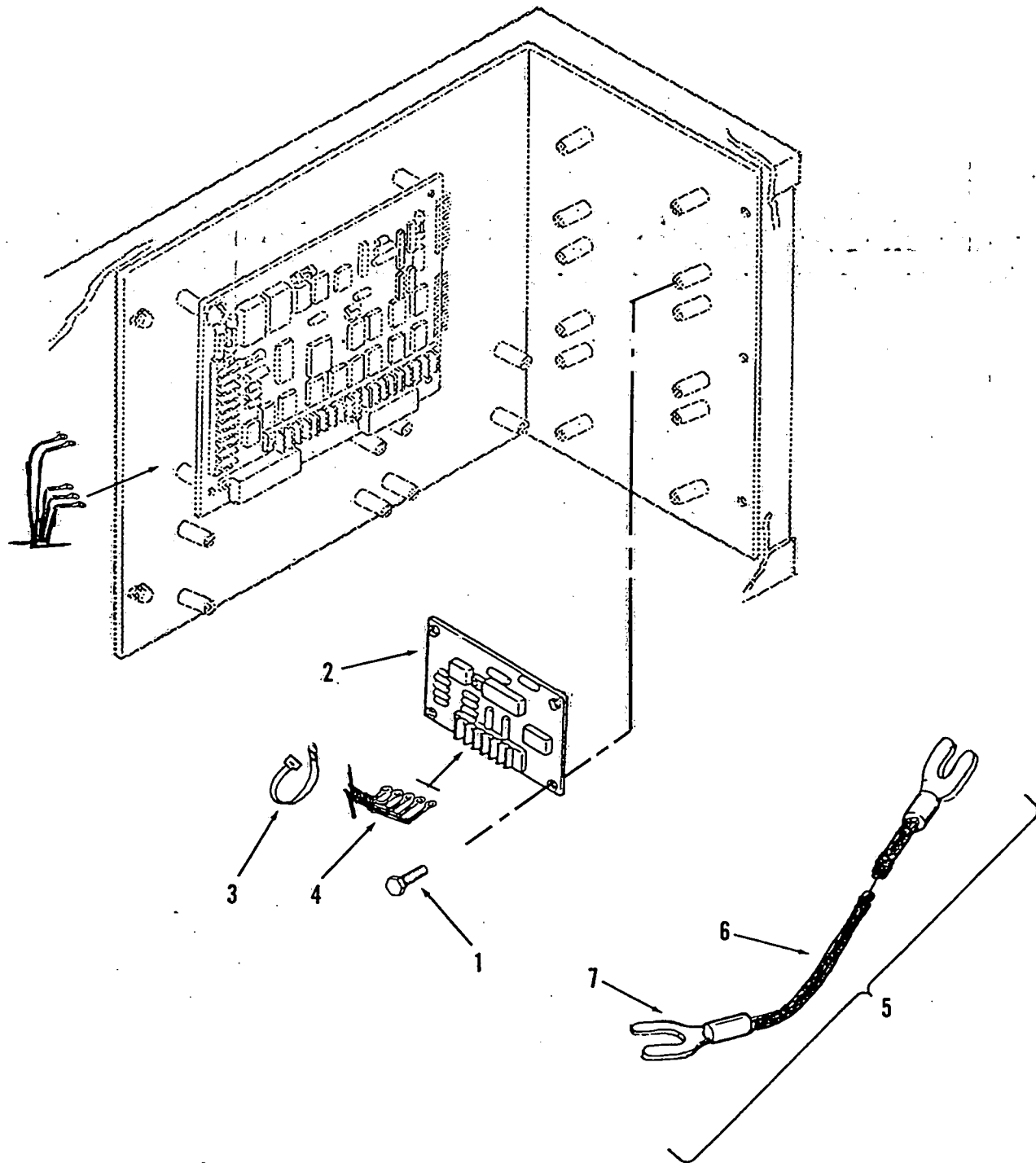
RUN RELAYS **Installation Of**

REF NO.	CPDC PART NO.	SOURCE PART NO.	C O D E	QTY USED	PART DESCRIPTION
1	307-1987			6	Clip, Relay
2	307-1056			3	Relay, 24 VDC
3	815-0388			6	Screw, Machine - Pan Head, Cross-Recessed Drive (#6-32 x 1/2")
4	323-0804			3	Socket, Relay
5	815-0544			3	Screw, Machine - Round Head with IT Lock Washer (#6-32 x 1/2")
6	319-0447			1	Bracket, Mounting - Relay
7	NOTE 1		REF		Lead(s), Electrical
8	NOTE 2		AR		Wire, Electrical - 20 AWG, Insulated
9	332-1673		AR		Terminal, Wire - Forked, 18-20 Gauge

NOTES:

1. Electrical Leads Not Stocked for Sale in Central Parts Distribution Center.
2. Electrical Wire Not Stocked for Sale in Central Distribution Parts Center; Obtain locally as needed.

TIME DELAY START/STOP MODULE
Installation Of



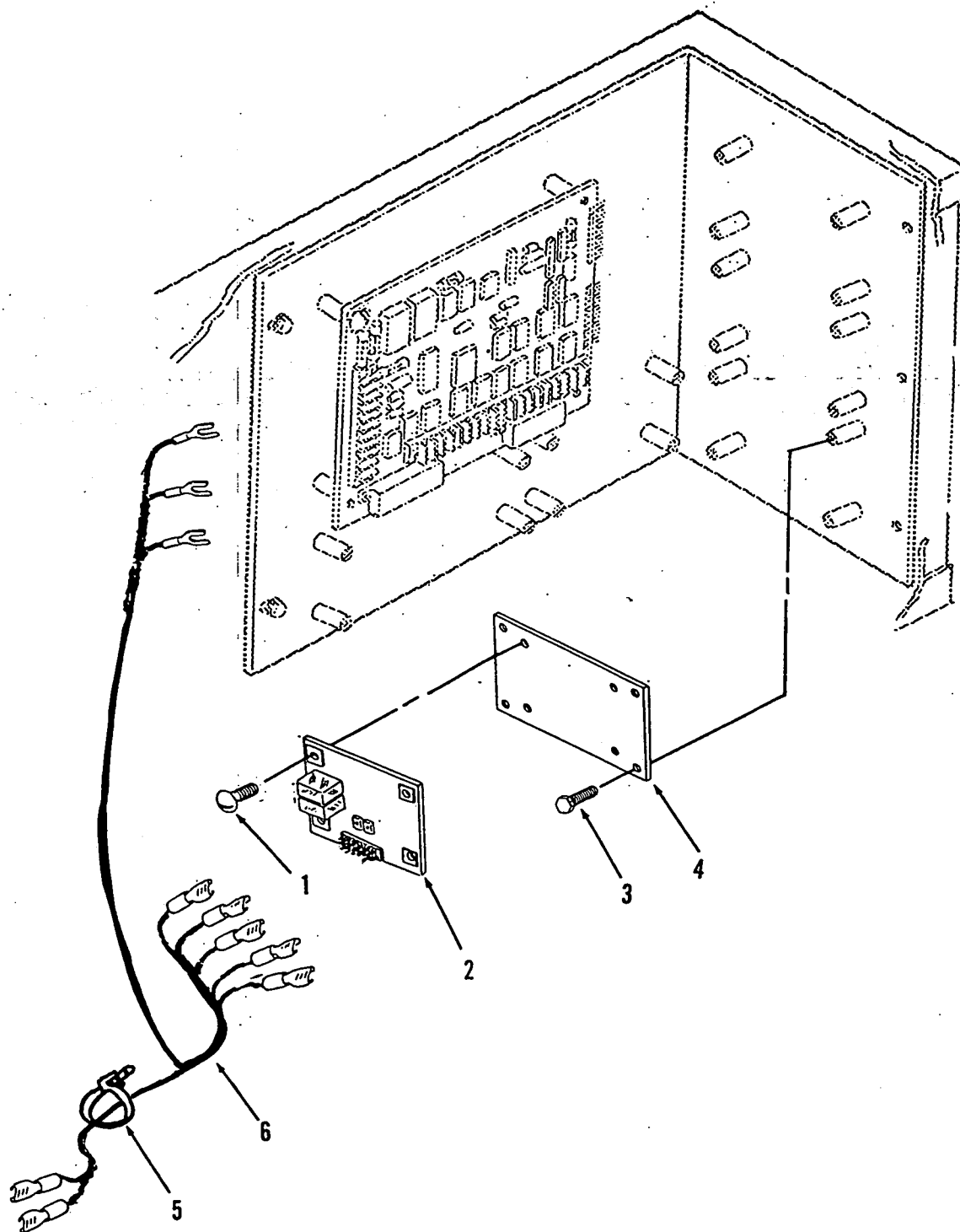
TIME DELAY START/STOP MODULE Installation Of

REF	CPDC	SOURCE	C	QTY	PART
NO.	PART NO.	PART NO.	O D E	USED	DESCRIPTION
1	815-0544			4	Screw, Cap - Hex Head with ET Lockwasher (#6-32 x 1/2)
2	300-2899			1	Module, Time Delay Start/Stop - 24 VDC, A15 (5 Relays)
3	332-1445			3	Tie, Cable
4	338-1904			1	Harness, Wiring (A15 to A11)
5	NOTE 1			1	Lead, Electrical (A15 to A11)
6	NOTE 2			AR	Wire, Electrical - 20 AWG, Insulated
7	332-1673			2	Terminal, Wire - Forked, 18-20 Gauge

NOTES:

1. Electrical Leads Not Stocked for Sale in Central Parts Distribution Center.
2. Electrical Wire Not Stocked for Sale in Central Distribution Parts Center; Obtain locally as needed.

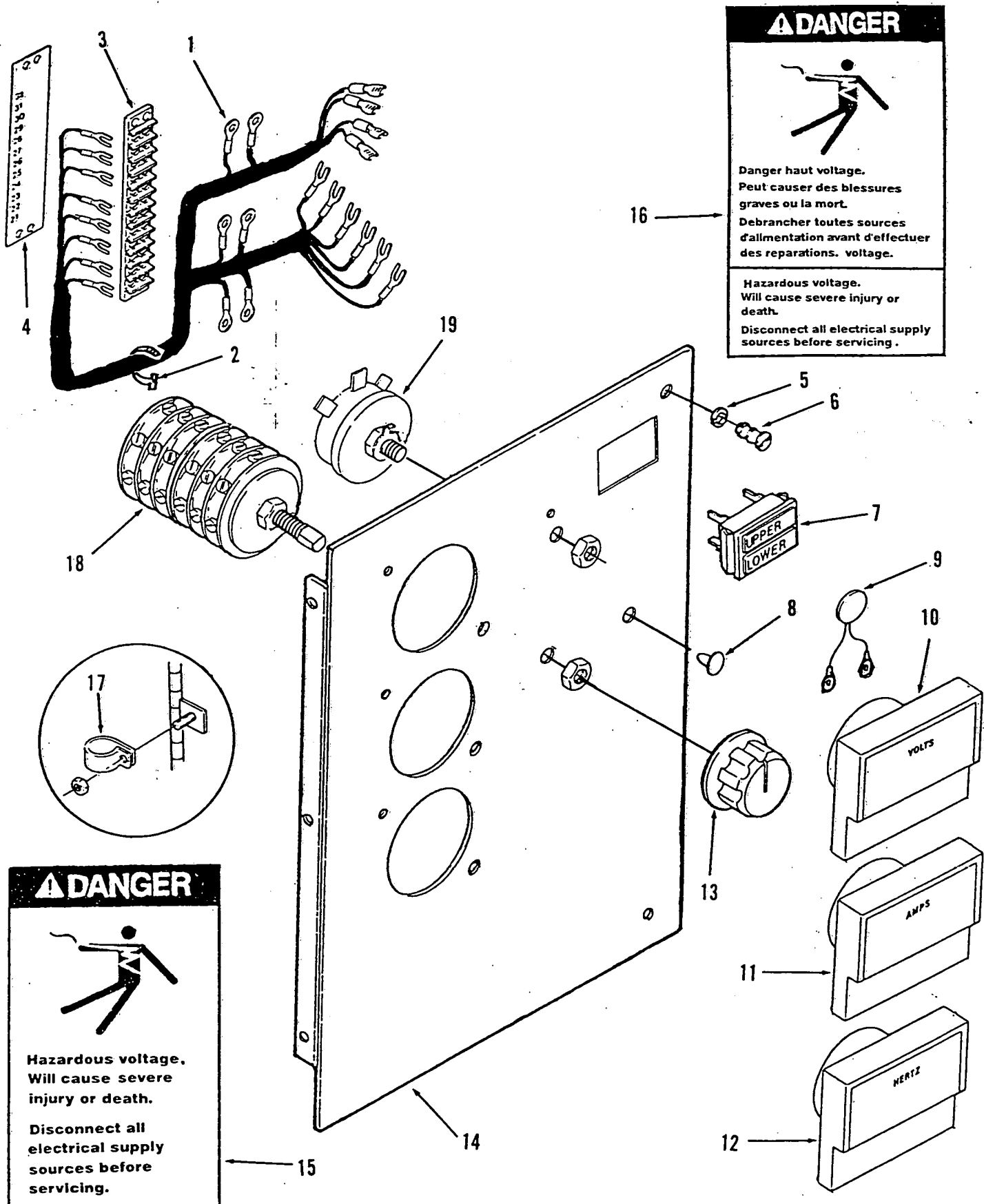
ELECTRONIC OVERSPEED MODULE
Installation Of



ELECTRONIC OVERSPEED MODULE **Installation Of**

REF NO.	CPDC PART NO.	SOURCE PART NO.	C O D E	QTY USED	PART DESCRIPTION
1	812-0084			4	Screw, Machine - Round Head (#8-32 x 1/2")
2	305-0818-02	E000-21002	NE		Module, Overspeed - 24 VDC (Frequency Detection Module)
3	815-0544			4	Screw, Cap - Hex Head with ET Lockwasher (#6-32 x 1/2)
4	319-0754			1	Plate, Mounting - Module
5	332-1445			10	Tie, Cable
6	338-2447			1	Harness, Wiring (A16 to A11 and AUX-P2,P3)

GENERATOR CONTROL PANEL COMPONENTS



⚠ DANGER



Danger haut voltage.
Peut causer des blessures graves ou la mort.
Debrancher toutes sources d'alimentation avant d'effectuer des reparations. voltage.

Hazardous voltage.
Will cause severe injury or death.
Disconnect all electrical supply sources before servicing.

⚠ DANGER

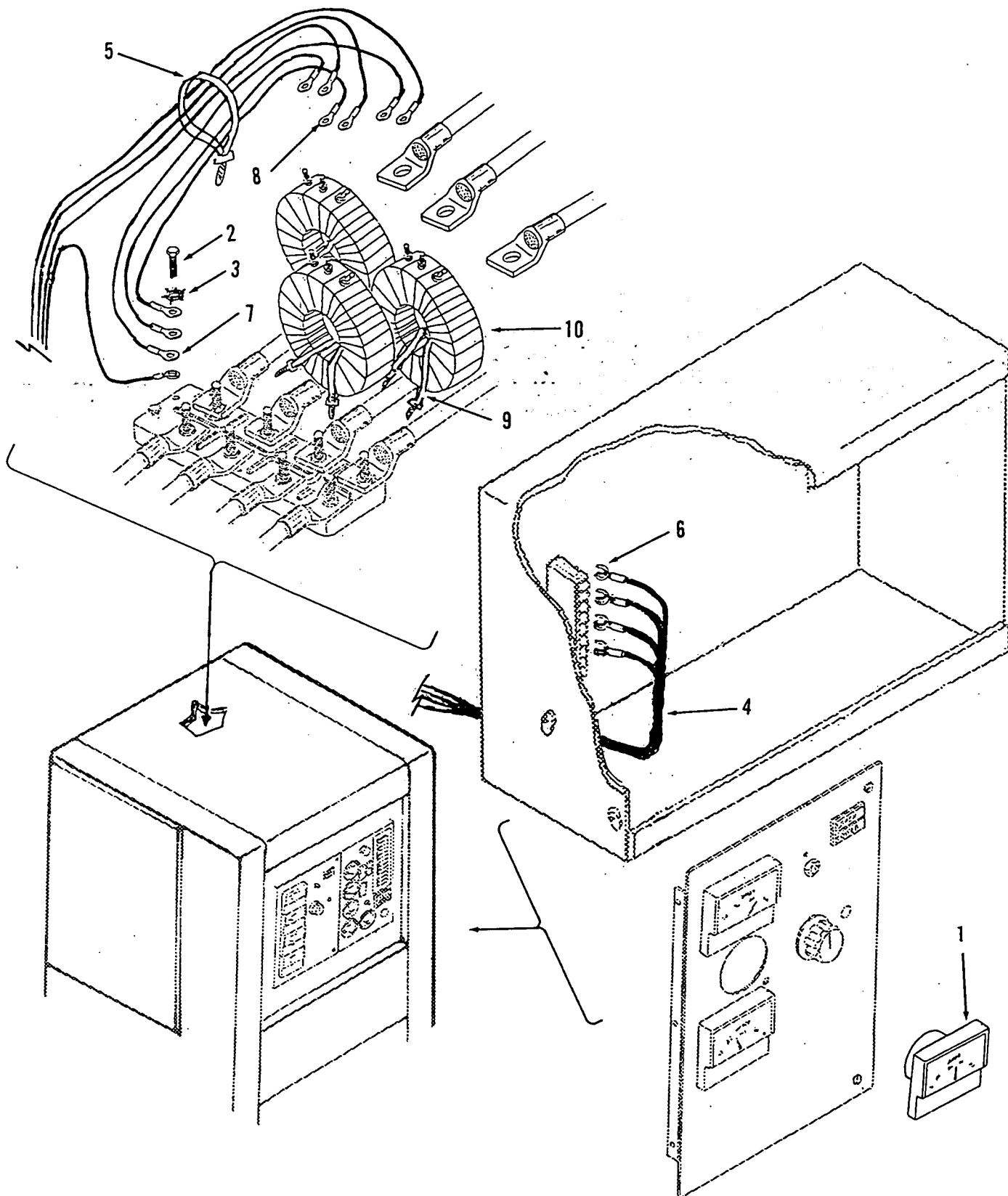


Hazardous voltage.
Will cause severe injury or death.
Disconnect all electrical supply sources before servicing.

GENERATOR CONTROL PANEL COMPONENTS

REF NO.	CPDC PART NO.	SOURCE PART NO.	C O D E	QTY USED	PART DESCRIPTION
1	338-2278			1	Harness, Wiring - AC (Includes Terminal Block & Cable Ties) [Used only with meters]
	812-0065				Attaching Parts for AC Wiring Harness
2	332-1445			2	Screw, Machine - Round Head (#6-32 x 5/8")
3	332-0607			44	Tie, Cable (Part of Wiring Harness)
4	332-2723			1	Block, Terminal (TB1)
5	406-0334			1	Strip, Marker
6	406-0333			2	Clip, Retaining - Turnbutton Fastener
7	322-0363			2	Stud, Fastener - Turnbutton
8	517-0131			1	Light, Indicator - Dual (DS21, DS22)
9	355-0093			1	Plug, Dot Button
10				1	Capacitor (Used accross Voltmeter Terminals on some Sets)
	302-1148			1	Voltmeter (M21)
	302-1753			1	Dual Scale 0-300/0-600V
11				1	Single Scale 0-750V
			REF		Ammeter (M22) See Current Transformer & Ammeter Installation Figure for Parts)
12	302-1720			1	Meter, Frequency (M23)
13	303-0032			1	Knob
14					Panel, Control (Blank - No Decals)
	301-9054-02			1	3 Meter Holes
	301-9054-03			1	No Meter Holes
	821-0004				Attaching Parts Panel to Control Box
15	98-5387			3	Screw, Self-Locking-Hex Washer Head (#10-32 x 5/16")
16	98-5724			2	Decal - Warning (English) Located on Panel Front & Rear
17	332-0052			2	Decal - Warning (French/English)
				1	Clamp, Loop
	870-0131				Attaching Parts for Loop Clamp
18	308-0882			1	Nut, Self-Locking - with ET Lockwasher (#10-32)
19				1	Switch, Rotary (S21)
20			REF		Potentiometer (R21) See Voltage Regulator Installation Figure for Parts)
					Decals (Not Illustrated)
	98-5316			1	Decal - Panel Front Markings (Control Without Meters)
	98-5298			1	Decal - Panel Front Markings (Control With Meters)
	98-5299			1	Decal - Panel Rear Markings (All Control Panels)

AMMETER & CURRENT TRANSFORMER INSTALLATION OF

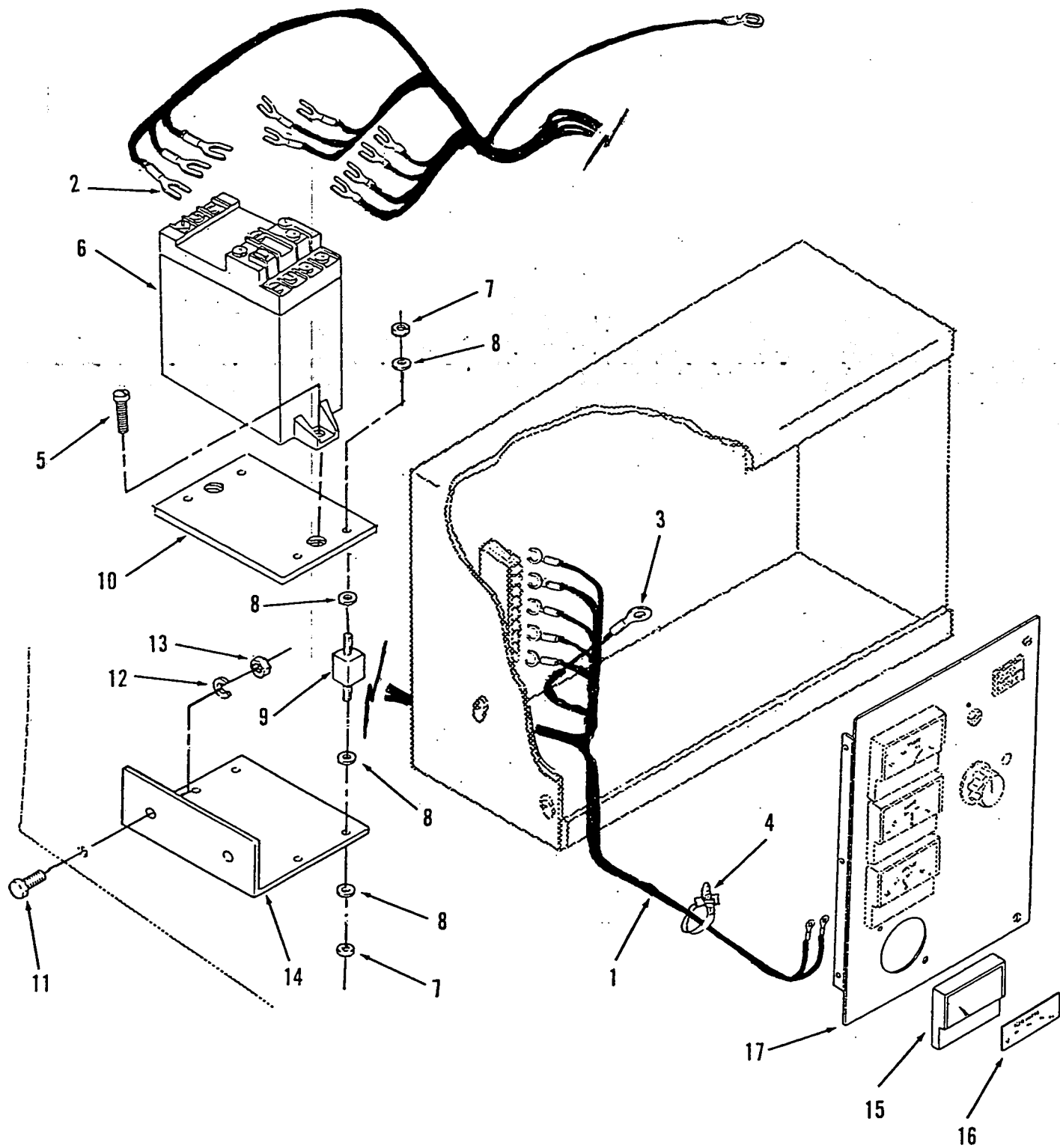


AMMETER & CURRENT TRANSFORMER INSTALLATION OF

REF NO.	CPDC PART NO.	SOURCE PART NO.	C O D E	QTY USED	PART DESCRIPTION
1	302-1729			1	Ammeter (M22) Scale in Amps as Indicated
	302-1798			1	0-750/0-1500 (600 VAC Application)
	302-1798			1	0-1000/0-2000 (120-480 Application)
2	800-2060	016-40820	NE	1	Screw, Cap - Hex Head (M8-1.25 x 35MM)
3	856-0008			2	Washer, Lock - EIT (5/16")
4	332-0942			6	Tie, Cable
5	338-1980			1	Harness, Wiring
6	332-1279			4	Terminal, Lug - Forked (No. 6 Screw)
7	332-0151			4	Terminal, Lug - Ring (5/16" Screw)
8	332-0806			6	Terminal, Lug - Ring (No. 8 Screw)
9	332-1389			6	Tie, Cable
10					Transformer, Current (Turn Ratio Listed)
	302-1794-11			3	750/5,1500/5 (600 VAC Application)
	302-1794-12			3	1000/5,2000/5 (120-480 VAC Application)

NOTE: Phantom Items on Control Panel are Identified in Applicable Generator Control Panel Component Illustration and Phantom Item Associated with Current Transformer are Identified in the Applicable Terminal Block Installation Illustration.

WATTMETER INSTALLATION OF

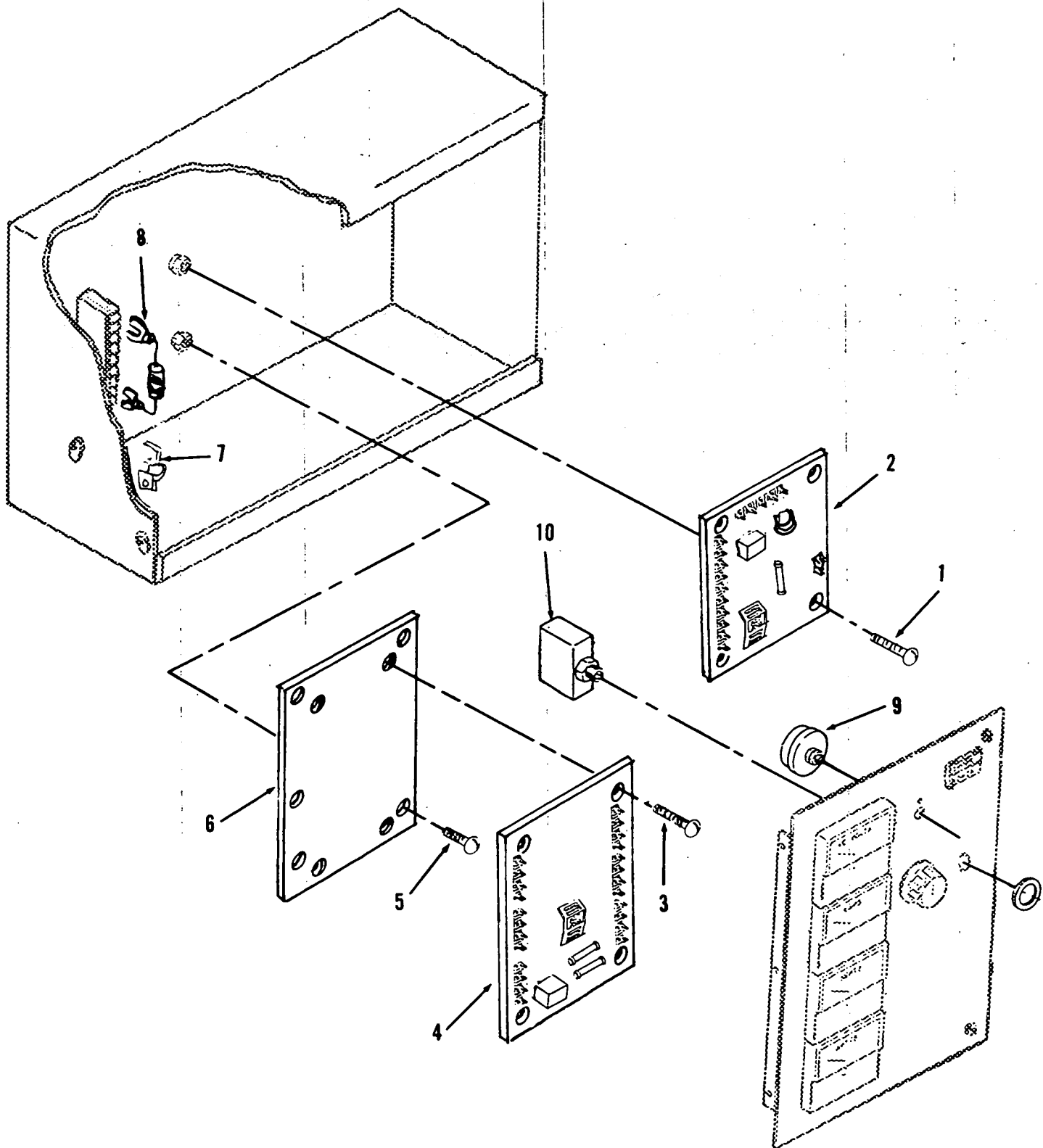


WATTMETER INSTALLATION OF

REF NO.	CPDC PART NO.	SOURCE PART NO.	C O D E	QTY USED	PART DESCRIPTION
1					Harness, Wiring
	338-1936		1	1	All Three Phase "WYE" Connected Generators
	338-2478		1	1	120/240 VAC "DELTA" Connected Generators
	338-2479		1	1	120/240 VAC "SINGLE PHASE" Connected Generators
2	332-1279		11	11	Terminal, Lug - Forked (For No. 6 Screw Mounting)
3	332-0897		4	4	Terminal, Lug - Ring (1/4" Screw Mounting)
4	332-0942		14	14	Tie, Cable
5	813-0102		2	2	Screw, Machine - Round Head (#10-32 x 5/8")
6					Transducer, Watt
	302-1833-01		1	1	All Three Phase "WYE" Connected Generators
	302-1833-04		1	1	120/240 VAC "SINGLE Phase" Connected Generators
	302-1833-05		1	1	124/240 VAC "DELTA" Connected Generators
7	860-0008		8	8	Nut, Hex (#8-32)
8	856-0002		16	16	Washer, Lock - EIT (#8)
9	402-0354		4	4	Mount, Shock
10	319-0030		1	1	Plate, Support - Transducer
11	821-0017		2	2	Screw, Self-locking - HWH (5/16-18 x 1/2")
12	850-0045		2	2	Washer, Lock - Spring (5/16")
13	862-0014		2	2	Nut, Hex (5/16-18)
14	301-6987		1	1	Bracket, Mounting
15	302-1722		1	1	Meter, Watt (Less Dial)
16					Dial, Wattmeter
	302-1721-13		1	1	Scale 0-500 kW
17	301-9054-01		1	1	Panel, Control

NOTE: Phantom Items on Control Panel are identified in applicable Generator Control Panel Component Illustration or applicable Meter Installation Illustration.

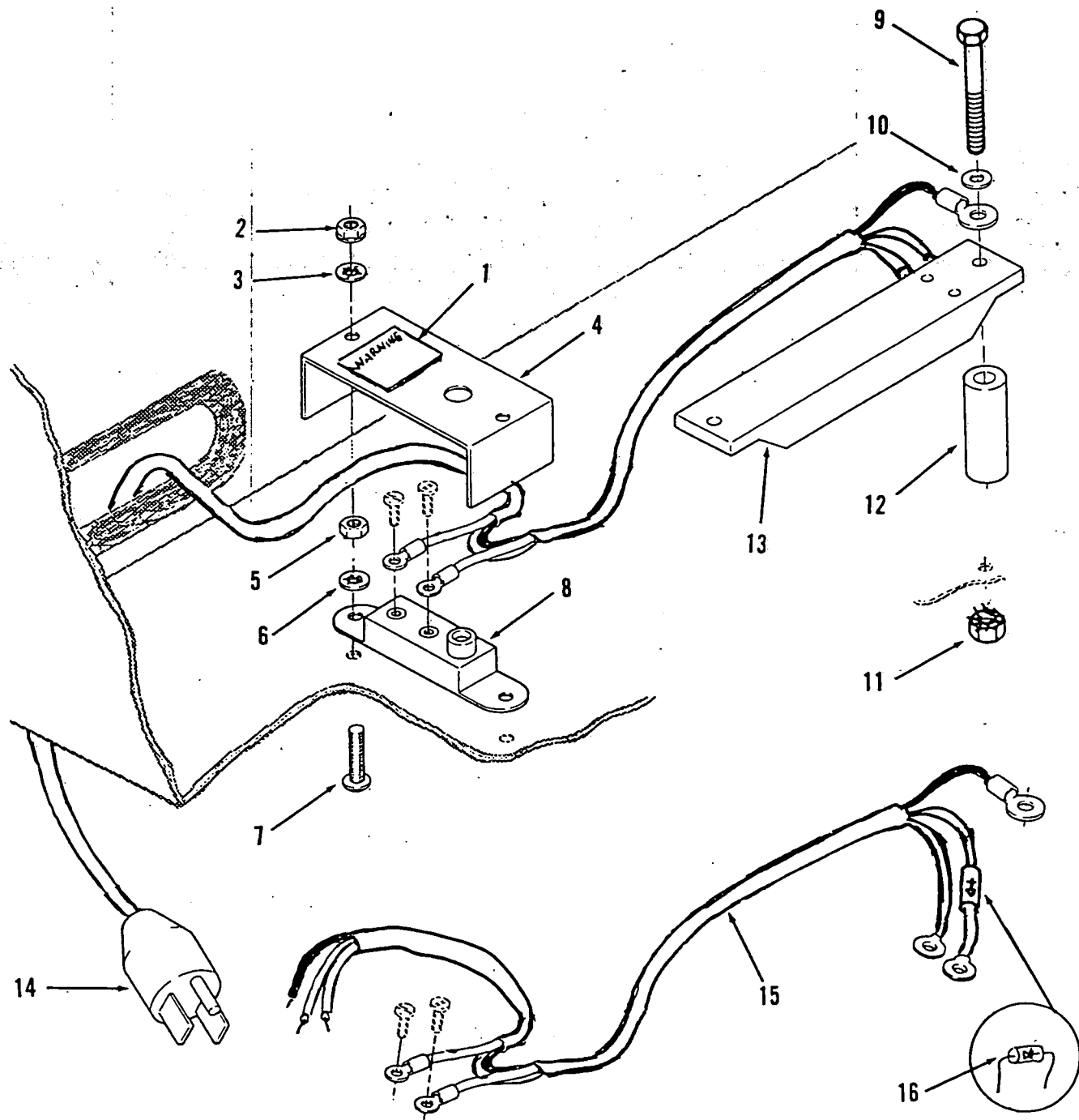
VOLTAGE REGULATOR Installation of



VOLTAGE REGULATOR Installation of

REF NO.	CPDC PART NO.	SOURCE PART NO.	C O D E	QTY USED	PART DESCRIPTION
1	812-0084			4	Screw, Machine - Round Head (#8-32 x 1")
2	305-0824	E000-24030	NE	1	Regulator, Voltage (Model SX440)[NOT USE WITH PMG GENERATORS]
3	815-0218			4	Screw, Machine - Round Head (#6-32 x 1")
4	305-0823	E000-23210	NE	1	Regulator, Voltage (Model MX321) [USED WITH PMG GENERATORS]
5	815-0544			6	Screw, Machine - Round Head (#6-3 x 1/2")
6	319-0652			1	Plate, Mounting - Voltage Regulator
7	331-1043			1	Jumper, Terminal
8	350-1222			1	Resistor and Terminal Assembly
	350-0991			1	Resistor, Fixed (1.5K Ohms +5%)
	332-1673			2	Terminal, Lug - Forked (No. 6 Spade)
9					Potentiometer (Not used on all Sets)
	303-0261			1	1.5K Ohms +10% (Used with SX440 Voltage Regulator)
	303-0285			1	5K Ohms +10% (Used with MX321 Voltage Regulator)
10					Circuit Breaker - Field Current (Select as Applicable)
	320-1688-01			1	5 AMP, 240VAC/50VDC
	320-1688-02			1	5 AMP, 240VAC/50VDC, with AUX Terminals

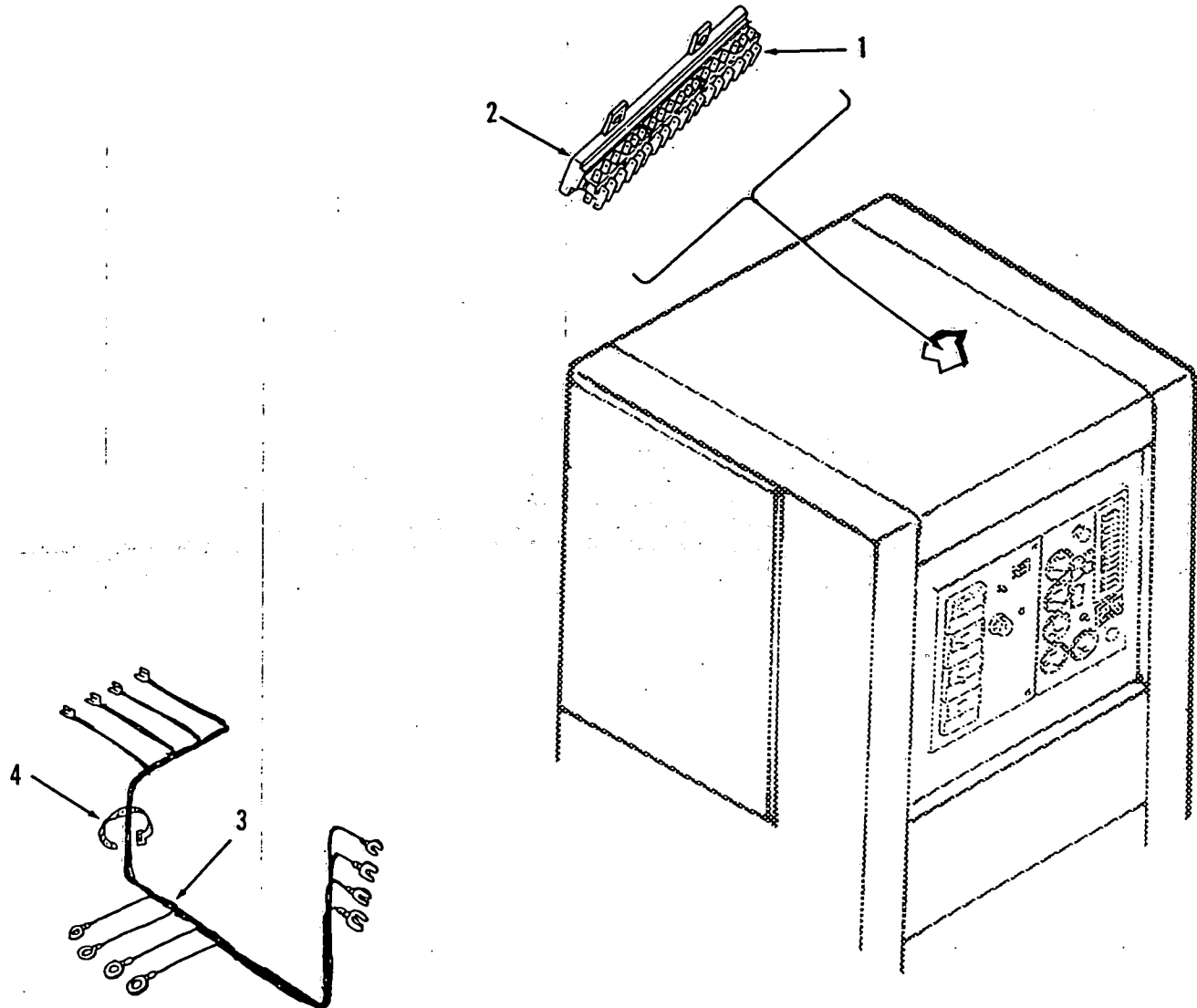
CONTROL SPACE HEATER Installation Of



CONTROL SPACE HEATER Installation Of

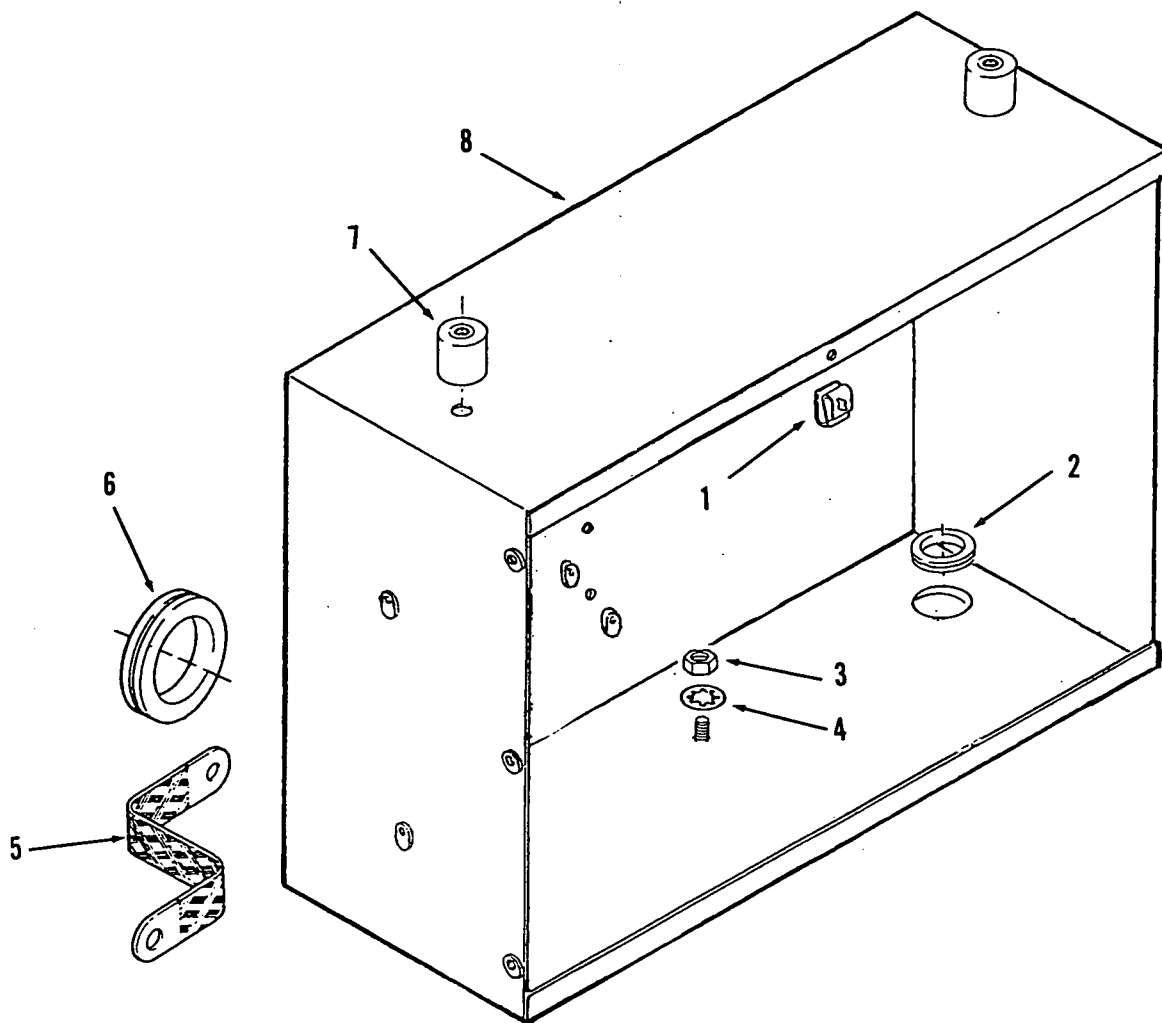
REF NO.	CPDC PART NO.	SOURCE PART NO.	C O D E	QTY USED	PART DESCRIPTION
1	98-3232			1	Decal - Warning (Shock Hazard)
2	870-0183			2	Nut, Self-locking - HEX (#6-32)
3	854-0006			2	Washer, Lock - IT (#6)
4	301-1886			1	Cover
5	860-0006			1	Nut, Hex (#6-32)
6	854-0006			2	Washer, Lock - IT (#6)
7	812-0070			2	Screw, Machine - Round Head (#6-32 x 1-1/4")
8	309-0128			1	Thermostat - Adjustable
9	800-0034			2	Screw, Cap - Hex Hd (5/16-18 x 2-1/4")
10	526-0113			2	Washer, Flat (5/16")
11	870-0257			2	Nut, Self-locking - Hex (5/16-18)
12	130-1107			2	Spacer
13					Heater, Electrical
	333-0151			1	75 Watt, 120 VAC
	333-0378			1	300 Watt, 240 VAC
14	335-0161			1	Cable, Electrical - 120 VAC Application
15	338-2121			1	Harness, Wiring with Diode, Less Plug (240 VAC Application)
16	357-0013			1	Diode

AUX TERMINAL BLOCK Installation of



REF NO.	CPDC PART NO.	SOURCE PART NO.	C O D E	QTY USED	PART DESCRIPTION
1		130-20102	NE	1	Base, Terminal
2		E00-10005	NE	3	Block, Terminal - AUX
	812-0085			3	Attaching Parts for AUX Base & Terminal Blocks
	850-0025			3	Screw, Machine - Round Head (#8-32 x 1-1/8")
	870-0221			3	Washer, Lock - Spring (1/8")
3	338-2530			1	Nut, Hex (#8-32))
4	332-1445			1	Harness, Wiring - AC AUX
				4	Tie, Cable

CONTROL BOX & MOUNTING COMPONENTS



REF NO.	CPDC PART NO.	SOURCE PART NO.	C O D E	QTY USED	PART DESCRIPTION
1	406-0332			2	Receptacle, Turnbutton Fastener
2	508-0001			1	Grommet 3/4" DIA
3	871-0015			2	Nut, Hex (1/4-20) Ground Stud
4	853-0013			2	Washer, Lock - ET (1/4") Ground Stud
5	337-0049			1	Strap, Electrical (Ground)
	800-0024			1	Attaching Parts for Ground Strap
	856-0008			1	Screw, Cap - Hex Head (5/16-18 x 1/2")
6	508-0051			1	Washer, Lock - EIT (5/16")
7	402-0527			1	Grommet 2" DIA
	800-0045			4	Mount, Vibration
	850-0045			4	Attaching Parts for Vibration Mounts
	301-8065			4	Screw, Cap - Hex Head (5/16-18 x 3/8")
				4	Washer, Lock - Spring (5/16")
8				1	Box, Control

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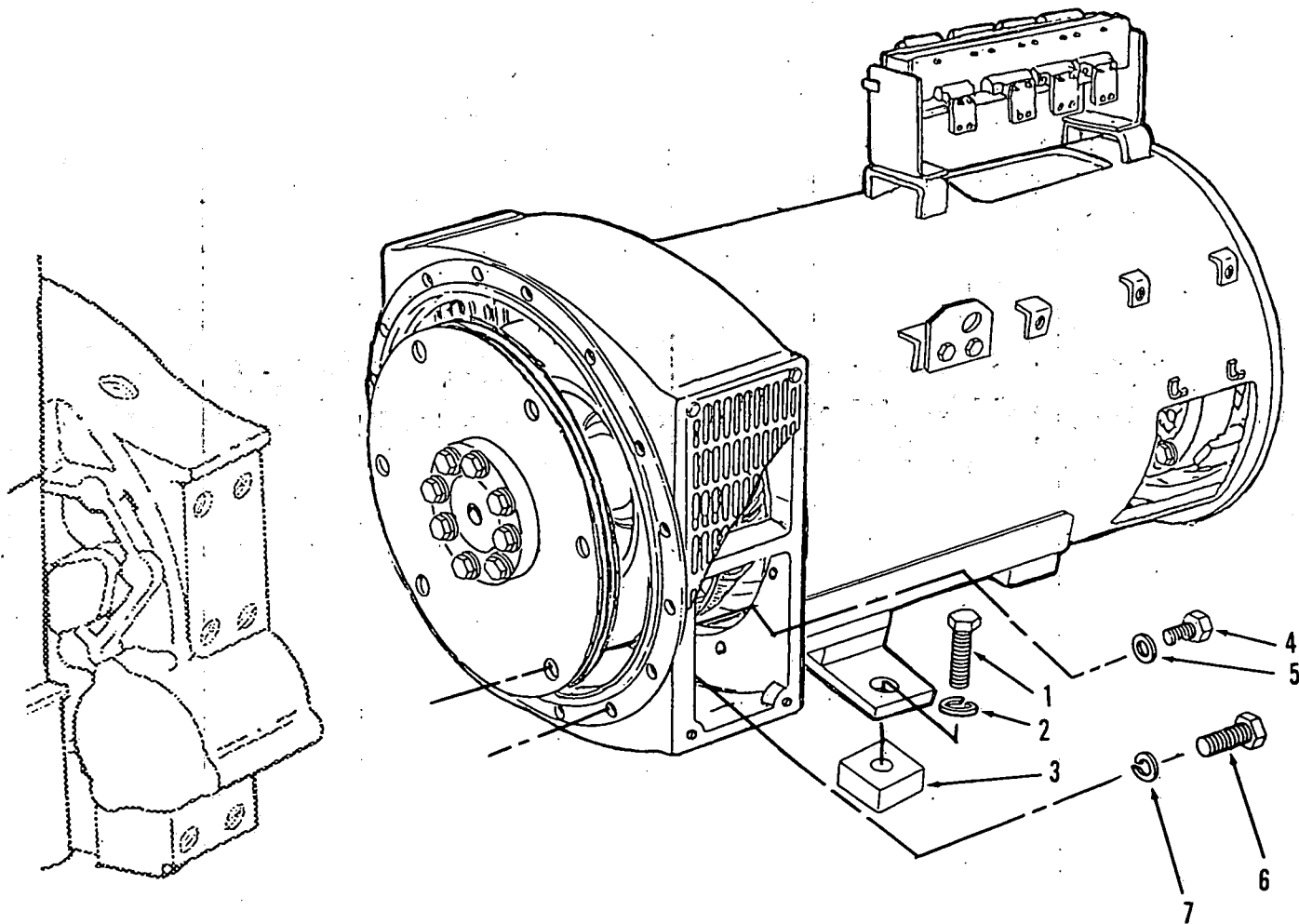
**GENERATOR TABLE
FOR
450 kW 60 Hertz Sets**

ONAN/CUMMINS IDENTIFICATION NUMBER	NEWAGE MODEL IDENTIFICATION NUMBER/LETTER	GEN ADPTR SAE	GEN DISK SAE	APPLICATION DATA VOLTAGES AT AMBIENT TEMPS	SPECIAL FEATURES		
					CSA CERT.	RTD EQUIPED	RAIN LOUVERS
249-0175-03	HC534E-311-D52-4069	0	18	190-480V 80°C	YES	NO	NO
249-0175-07	HC534E-311-D52-4069	0	18	190-480V 80°C	YES	YES	YES
249-0175-03	HC534E-311-D52-4069	0	18	190-480 V 105°C	YES	NO	NO
249-0175-07	HC534E-311-D52-4069	0	18	190-480 V 105°C	YES	YES	YES
249-0175-03	HC534E-311-D52-4069	0	18	190-480 V 125°C	YES	NO	NO
249-0175-07	HC534E-311-D52-4069	0	18	190-480 V 125°C	YES	YES	YES
249-0175-01	HC534C-311-D52-4069	0	18	480V Only 125°C	YES	NO	NO
249-0175-05	HC534C-311-D52-4069	0	18	480V Only 125°C	YES	YES	YES
249-0178-02	HC534D-007-D52-4069	0	18	600V Only 105°C	YES	NO	NO
249-0178-06	HC534D-007-D52-4069	0	18	600V Only 105°C	YES	YES	YES

**GENERATOR TABLE
FOR
400 kW 50 Hertz Sets**

ONAN/CUMMINS IDENTIFICATION NUMBER	NEWAGE MODEL IDENTIFICATION NUMBER/LETTER	GEN ADPTR SAE	GEN DISK SAE	APPLICATION DATA VOLTAGES AT AMBIENT TEMPS	SPECIAL FEATURES		
					CSA CERT.	RTD EQUIPED	RAIN LOUVERS
249-0175-04	HC534F-311-D52-4070	0	18	190-460V 80°C	YES	NO	NO
249-0175-08	HC534F-311-D52-4070	0	18	190-460V 80°C	YES	YES	YES
249-0175-02	HC534D-311-D52-4069	0	18	190-460 V 105°C	YES	NO	NO
249-0175-06	HC534D-311-D52-4069	0	18	190-460 V 105°C	YES	YES	YES
249-0175-02	HC534D-311-D52-4069	0	18	190-460 V 125°C	YES	NO	NO
249-0175-06	HC534D-311-D52-4069	0	18	190-460 V 125°C	YES	YES	YES

**GENERATOR
HC534 MODELS
Installation Of**



REF NO.	CPDC PART NO.	SOURCE PART NO.	C O D E	QTY USED	PART DESCRIPTION
------------	------------------	--------------------	------------------	-------------	---------------------

Generators with SAE 0 Adapter/ SAE 18 Drive Disc (See Separate Page for Servicable Components)					
1	800-0195			2	Screw, Cap - Hex Head (1 - 8 x 4")
2	850-0086			2	Washer, Lock - Spring (1")
3	403-2987			2	Spacer
4	805-0033			6	Bolt, Place - Hex Head (5/8-11 x 1-1/8")
5	526-0362			6	Washer, Flat (5/8")
	800-0238			2	Screw, Cap - Hex Head
					1/2-13 x 1-1/4"
6	800-0236			14	1/2-13 x 1-3/4"
7	850-0105			16	Washer, Lock - Spring (1/2")

GENERATOR HC534 MODELS SERVICABLE COMPONENTS

REF NO.	CPDC PART NO.	SOURCE PART NO.	C O D E	QTY USED	PART DESCRIPTION
GENERATOR STATOR GROUP					
Note 1	Note 3		NE	1	Stator, Generator (Main Stator; No Servicable Components)
GENERATOR END BELL GROUP					
Note 1	Note 3		NE	1	End Bell Assembly (Includes Exciter Stator, Bearing Caps and End Bell)
800-2088	016-40920		NE	8	Attaching Parts End Bell to Stator Screw, Cap - Hex Head (M10 x 35mm)
850-2010	028-31509		NE	8	Washer, Lock - Spring (M10) -----*-----
Note 1	Note 2		NE	1	End Bell, Generator
220-4248	462-12400		NE	1	Stator, Exciter
Attaching Parts for Stator					
800-2043	015-41613		NE	6	Screw, Cap - Hex Head (M6 x 65mm)
850-2006	028-31507		NE	6	Washer, Lock - Spring (M6) -----*-----
232-3519	458-12970		NE	1	Cap, Bearing - Outer
Attaching Parts for Outer Cap					
800-2091	016-40923		NE	4	Screw, Cap - Hex Head (M10 x 50mm)
850-2010	028-31509		NE	4	Washer, Lock - Spring (M10) -----*-----
232-3518	458-12960		NE	1	Cap, Bearing - Inner
Attaching Parts for Inner Cap					
800-2528	016-40919		NE	4	Screw, Cap - Hex Head (M10 x 30mm)
850-2010	028-31509		NE	4	Washer, Lock - Spring (M10) -----*-----
GENERATOR ROTOR GROUP					
Note 1	Note 3		NE	1	Rotor, Generator (Main Rotor, Exciter Rotor, Bearing, etc.)
Note 1	Note 3		NE	1	Rotor Assy, Exciter (Includes Rectifier Assembly and Wound Rotor)
249-0522	462-23400		NE	1	Rotor, Exciter - Wound
357-0093	362-12800		NE	1	Rectifier Assembly (Includes Diodes and Varistor)
Attaching Parts for Rectifier Assembly					
800-2043	016-41613		NE	4	Screw, Cap - Hex Head (M6 x 65mm)
850-2006	028-31507		NE	4	Washer, Lock - Spring (M6)
526-2080	029-62101		NE	4	Washer, Flat (M6) -----*-----
249-0240	450-11760		NE	1	Varistor
249-0238	364-10850		NE	3	Diode - Reverse
249-0239	364-10840		NE	3	Diode - Forward
Attaching Parts for Diodes					
860-2006	027-41206		NE	6	Nut, Hex (M5)
850-2005	028-31506		NE	6	Washer, Lock - Spring (M5) -----*-----
518-0018	050-11047		NE	1	Ring, Retaining (Circlip)
515-0300-01	054-10121		NE	1	Key, Machine - Frame 3,4,5
510-0168	051-01036		NE	1	Bearing, Ball

PMG GROUP

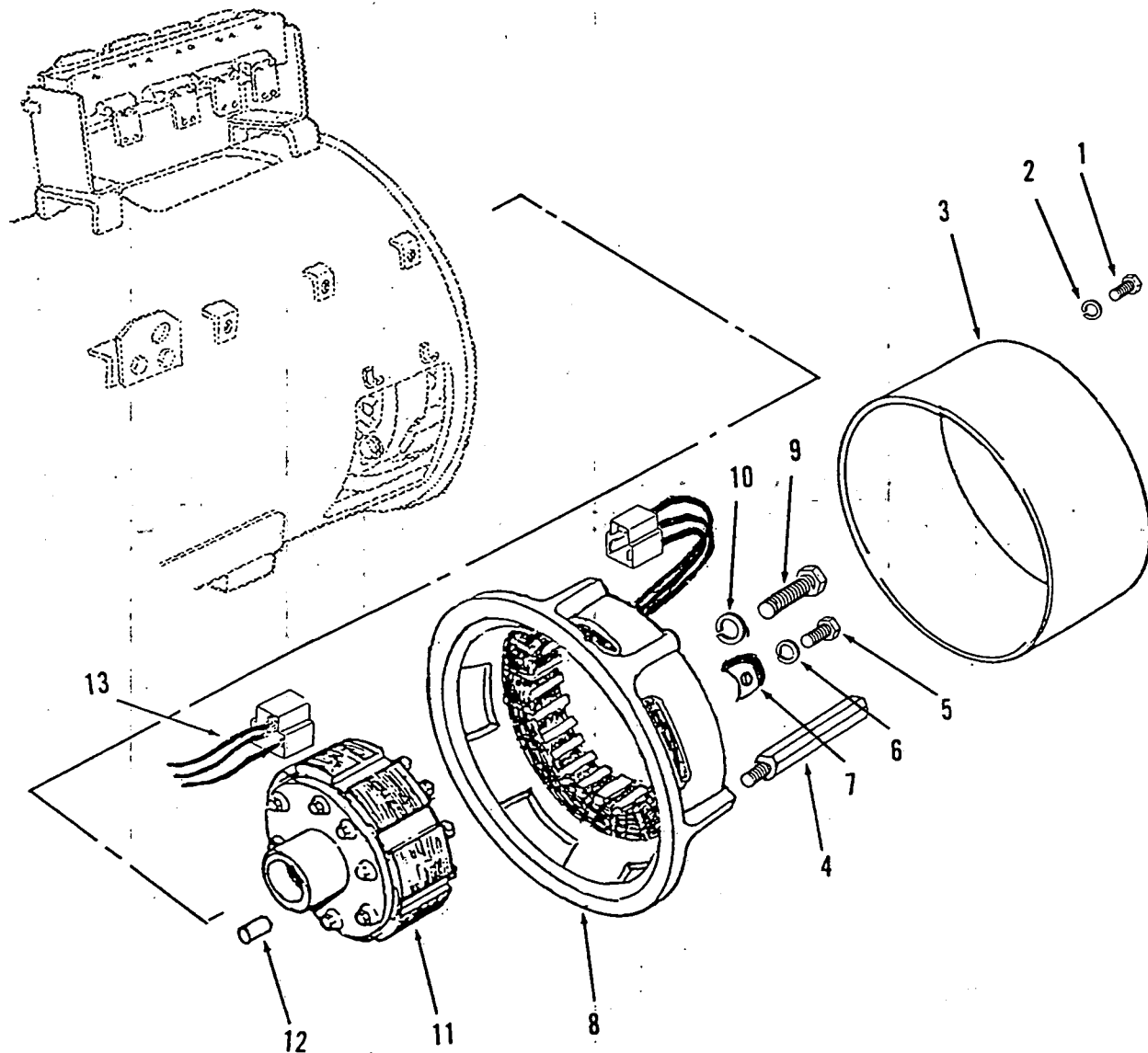
See Separate page for Servicable Components

NOTE 1. NOT STOCKED OR SOLD BY THE CENTRAL PARTS DISTRIBUTION CENTER!

NOTE 2. NOT STOCKED FOR SALE BY NEWAGE INTERNATIONAL. REPLACEMENT ORDER MAY HAVE A LONG LEAD TIME.

NOTE 3. NOT STOCKED OR SOLD BY NEWAGE INTERNATIONAL: FOR REPLACEMENT ORDER A COMPLETE GENERATOR BY CONTACTING NEAREST NEWAGE DISTRIBUTION CENTER AND SUPPLY THE COMPLETE GENERATOR MODEL AND SERIAL NUMBER FROM THE GENERATOR DATA PLATE OR THE CUMMINS/ONAN PART NUMBER FROM THE GENERATOR SET IDENTIFICATION PLATE.

**GENERATOR
PERMANENT MAGNET EXCITER
Installation Of**



REF NO.	CPDC PART NO.	SOURCE PART NO.	C O D E	QTY USED	PART DESCRIPTION
1	800-2004	016-40614	NE	3	Screw, Cap - Hex Head (M5 x 12mm)
2	850-2005	028-31506	NE	3	Washer, Lock - Spring (M5)
3	234-0890	450-11901	NE	1	Cover, PMG
4	232-3527	450-13340	NE	3	Pillar, Threaded
5	800-2056	016-40816	NE	4	Screw, Cap - Hex Head (M8 x 16mm)
6	850-2008	028-31508	NE	4	Washer, Lock - Spring (M8)
7	232-3526	150-10710	NE	4	Clamp, PMG Stator
8	249-0741	450-26400	NE	1	Stator and Frame, PMG
9	249-0495	450-13330	NE	1	Bolt, Hex Head
10	850-2010	028-31509	NE	1	Washer, Lock Spring (M10)
11	249-0644	450-23900	NE	1	Rotor, PMG
12	516-0228	054-20505	NE	1	Pin, Dowel (M5 x120mm)
13	249-0642	450-22000	NE	1	Harness, Wiring (Universal Replacement) PMG to AUX Terminal Strip

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MANUFACTURERS

LOCATION

CUMMINS/ONAN POWER SYSTEMS
1400 73rd Avenue N.E.
Minneapolis, Minnesota, USA
55432

CUMMINS ENGINE COMPANY, INC.
Columbus, Indiana, USA
47202-3005

NEWAGE ENGINEERS LIMITED
P.O. Box 17
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Stamford, Lincolnshire, England
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TELEPHONE

Telephone: 612-574-5000
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