



KTT52 SPEC E

DFMB SPEC E

Generator Set

Parts Catalog

World Wide Parts & Service

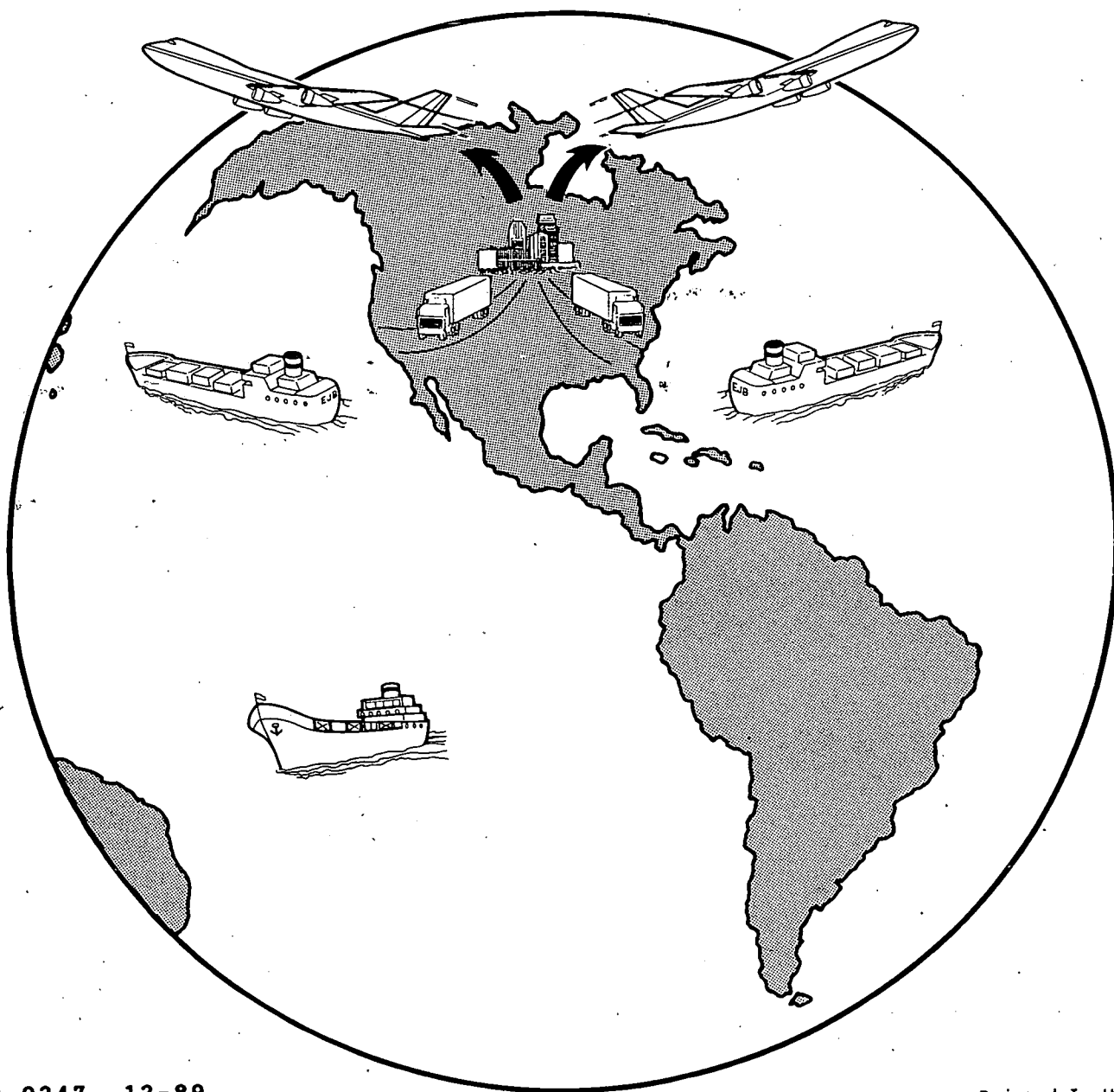


TABLE OF CONTENTS

MODEL IDENTIFICATION TABLE.....	ii
INTRODUCTION & GENERAL INFORMATION	I
ENGINE SECTION	
ENGINE SECTION TABLE OF CONTENTS	1-1
HOUSING SECTION	
HOUSING SECTION (NOT USED THIS ISSUE)	---
GENERATOR SECTION	
GENERATOR SECTION TABLE OF CONTENTS	3-1
CONTROL SECTION	
CONTROL SECTION TABLE OF CONTENTS	4-1
SOURCE CODE SECTION	
SOURCE CODES FOR MANUFACTURERS & SUPPLIERS	5-1

M O D E L I D E N T I F I C A T I O N T A B L E

ENGINE MODEL	GENERATOR SET IDENTIFICATION		NEWAGE GENERATOR	HERTZ	RPM	BATTERY VOLTAGE
	CUMMINS POWER SYSTEM	ONAN POWER SYSTEM				
KTTA50-G2	1250KTT52/xxxxxE	1250DFMB/xxxxxE	HC734C	50	1500	24 VDC
KTTA50-G2	1500KTT52/xxxxxE	1500DFMB/xxxxxE	HC734C	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

-cont-

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
6AT3.4GS/GC1
4BT3.9GS/GC1
6CT8.3GS/GC1

6CTA8.3GC/GS1
KTTA19GS/GC1
KTA38GS/GC1
KTA50GS/GC3

KTTA50GS/GC1
NT855GS/GC4
NTTA855GS/GC2
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

Model Ident Letters

Voltage Code(s) or Model
Ident Numbers

Specification Letter
Designates Major Changes

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

-cont-

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

SAFETY PRECAUTIONS

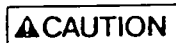
The following symbols are used in Parts Catalogs to alert users to the potentially dangerous conditions relating to maintenance of the equipment and replacement of parts. Please read and observe.



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:



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!



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!



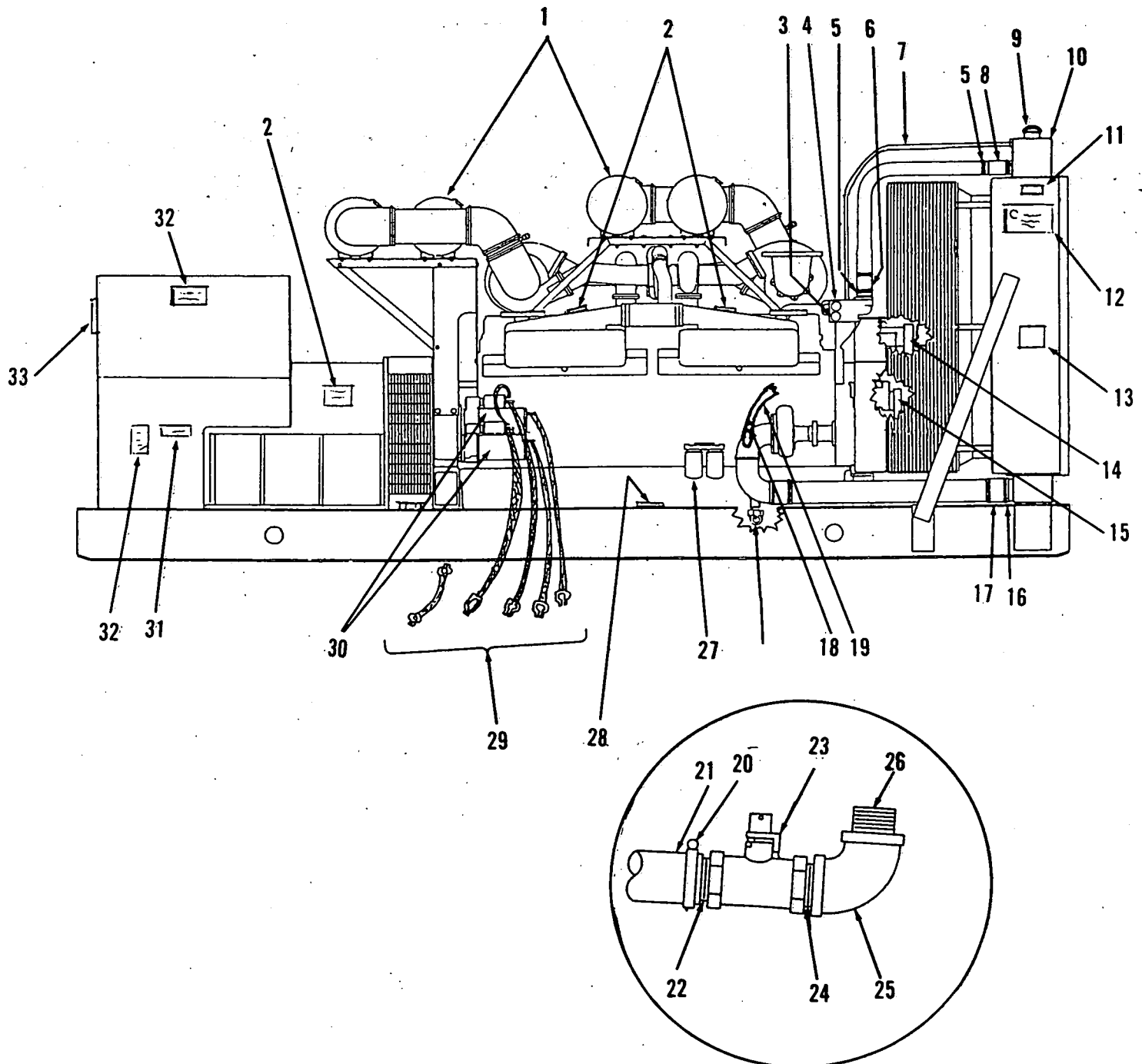
CONTACT WITH BENZENE and LEAD, FOUND IN GASOLINES, FUEL ADDITIVES AND SOLVENTS HAS BEEN IDENTIFIED BY A UNITED STATES FEDERAL AGENCY AND SOME USA STATE AGENCIES AS CAUSING CANCER or REPRODUCTIVE TOXICITY. WHEN CHECKING, DRAINING OR ADDING GASOLINE AND FUEL ADDITIVES, OR USING SOLVENTS TAKE ALL NECESSARY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

**TABLE OF CONTENTS
ENGINE SECTION**

EXTERNAL COMPONENTS - LEFT SIDE 1-3

EXTERNAL COMPONENTS - RIGHT SIDE 1-5

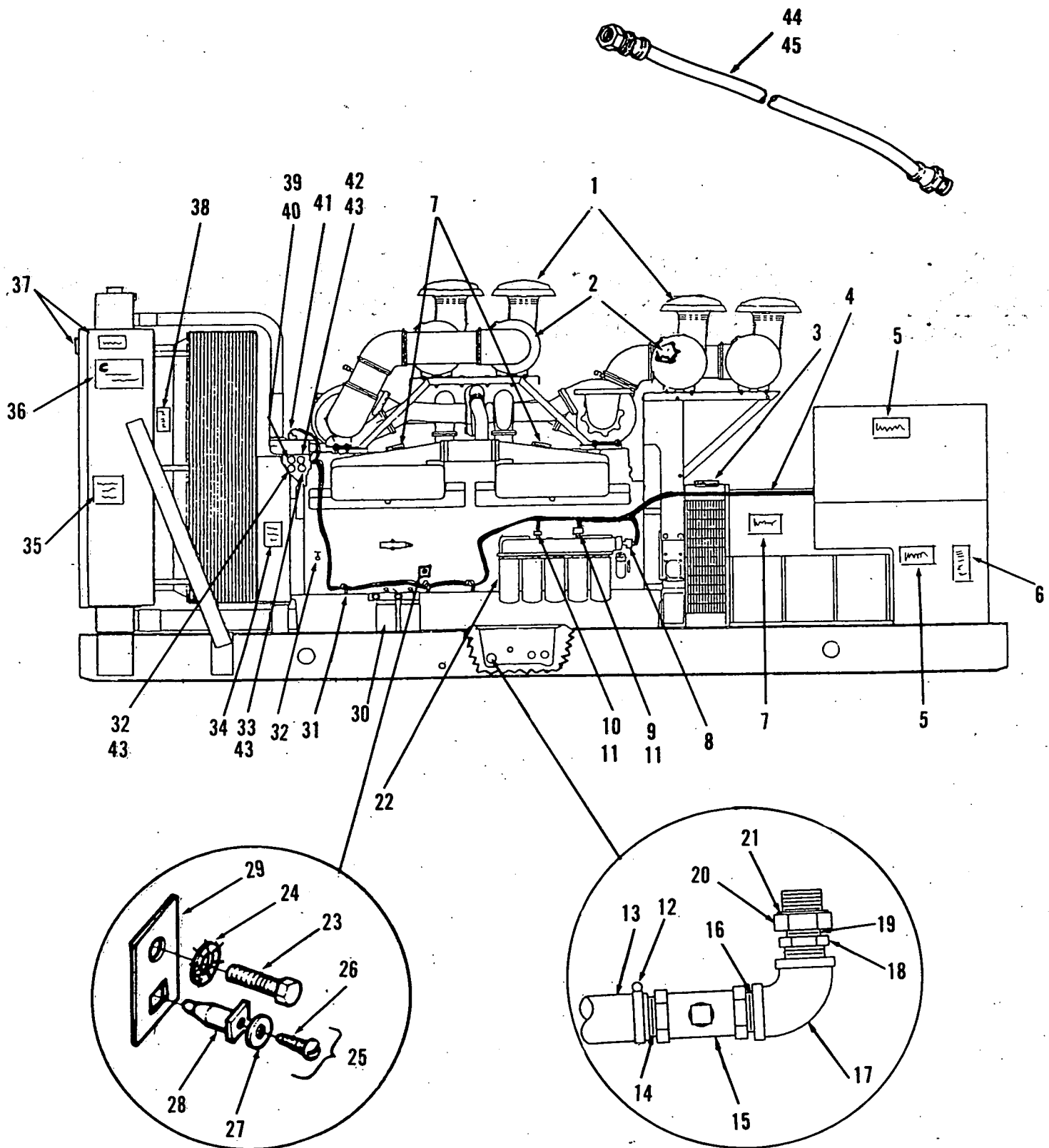
EXTERNAL COMPONENTS LEFT SIDE



EXTERNAL COMPONENTS LEFT SIDE

REF NO.	CPDC PART NO.	SOURCE PART NO.	C O D E	QTY USED	PART DESCRIPTION
1	140-2501	3050498	CE	4	Air Cleaner - Throwaway Type
2	98-5822			3	Decal - Warning "DO NOT USE LIFTING POINT, ETC."
3	309-0436			1	Switch, Thermostatic - High Water Temperature (PRE-ALARM)(216°F)
	505-0117			1	Attaching Part for Switch
				1	Bushing, Reducer - Flush (1/2 NPT x 3/8 NPT)
4	309-0437			1	Switch, Thermostatic - High Water Temperature (SHUTDOWN) (222°F)
	505-0117			1	Attaching Parts for Switch
	503-0868			1	Bushing, Reducer - Flush (1/2 NPT x 3/8 NPT)
6	503-1727			2	Clamp, Hose - T-Bolt Type (3.5" NON)
7	501-0558			1	Hose, Radiator
8	503-1728			1	Line, Flexible - Bypass
9	130-2981			2	Hose, Radiator
10	130-3758			1	Cap, Radiator - 7#PSI
11	98-6169			1	Radiator (includes Cap)
12				1	Decal - Caution "7 PSI HOT WATER SYSTEM"
	98-6108-03			2	Decal - Model Identification
	98-6111-03			2	ONAN GEN SET
	98-6139-03			2	CUMMINS GEN SET
13	98-4732			1	CUMMINS ONAN GEN SET
14				1	Decal - Caution
	511-0161-03			1	Fan Drive & Lube Components Group
	503-1743-01			1	Belt, Drive - Multi Groove
15				1	Hose, Flexible - Lube (Grease)
	191-1391			1	Alternator & Drive Components Group
	191-0688	70D44854B13	MO	1	Pulley, Alternator - Multi Groove (Use with 35 AMP Alternator)
	191-1635	8RF3080F	MO	1	Alternator - 24 VDC, 35 AMP (Less Pulley, Includes Voltage Regulator)
	511-0161-02			1	Regulator, Voltage - 24 VDC (Used on 35 AMP Alternator)
				1	Belt, Drive - Multi Groove (Used with 35 AMP Alternator)
	130-3254			1	-----*
	191-1926-02	70D44970S02	MO	1	Pulley, Alternator - Multi Groove (Use with 75 AMP Alternator)
		BRG3032	MO	1	Alternator - 24 VDC, 75 AMP (Less Pulley, Includes Voltage Regulator)
	511-0161-02			1	Regulator, Voltage - 24 VDC (used on 75 AMP Alternator)
				2	Belt, Drive - 75 AMP Alternator
					-----*
16	503-0960			4	Clamp, Hose
17	503-1726			2	Hose, Radiator
18	503-1140			2	Clamp, Hose
19	503-1730			1	Hose, Rubber
20	503-0183			1	Coolant Drain Components Group
21	503-1731			1	Clamp, Hose
22	505-0324			AR	Hose, Bulk (Sold by the Foot) Two Feet Required
23	504-0171			1	Nipple, Pipe - Half (3/4 NPT x 2"LG)
24	505-0102			1	Valve, Shutoff - Brass (3/4 NPT)
25	505-0132			1	Nipple, Pipe - Close (3/4 NPT x 1-3/8"LG)
26	505-0102			1	Elbow, Pipe - 90° (3/4 NPT)
				1	Nipple, Pipe - Close (3/4 NPT x 1-3/8"LG)
					-----*
27					Filter, Water - W/Corosion Inhibiting Chemical DCA4
	130-3538	3318201	CE	2	Service
	130-3576	3318319	CE	2	Pre-Charging Complete System
28	98-2235			1	Decal - Ground
29					Battery Cable Group
	416-0446			2	Cable, Battery - Jumper (12½"LG)
	416-0473			2	Cable, Battery - Jumper (27"LG)
	416-0964			2	Cable, Battery (35"LG)
	416-0639			2	Cable, Battery (60"LG)
	416-0680			3	Cable, Electrical - Jumper (10"LG)
					-----*
30		3010125		2	Starter - 24 VDC
31	98-5347			2	Decal - Danger "HIGH VOLTAGE"
32	98-5759			1	Decal - Warning "HAZARDOUS VOLTAGE"
33					Decal - Model 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



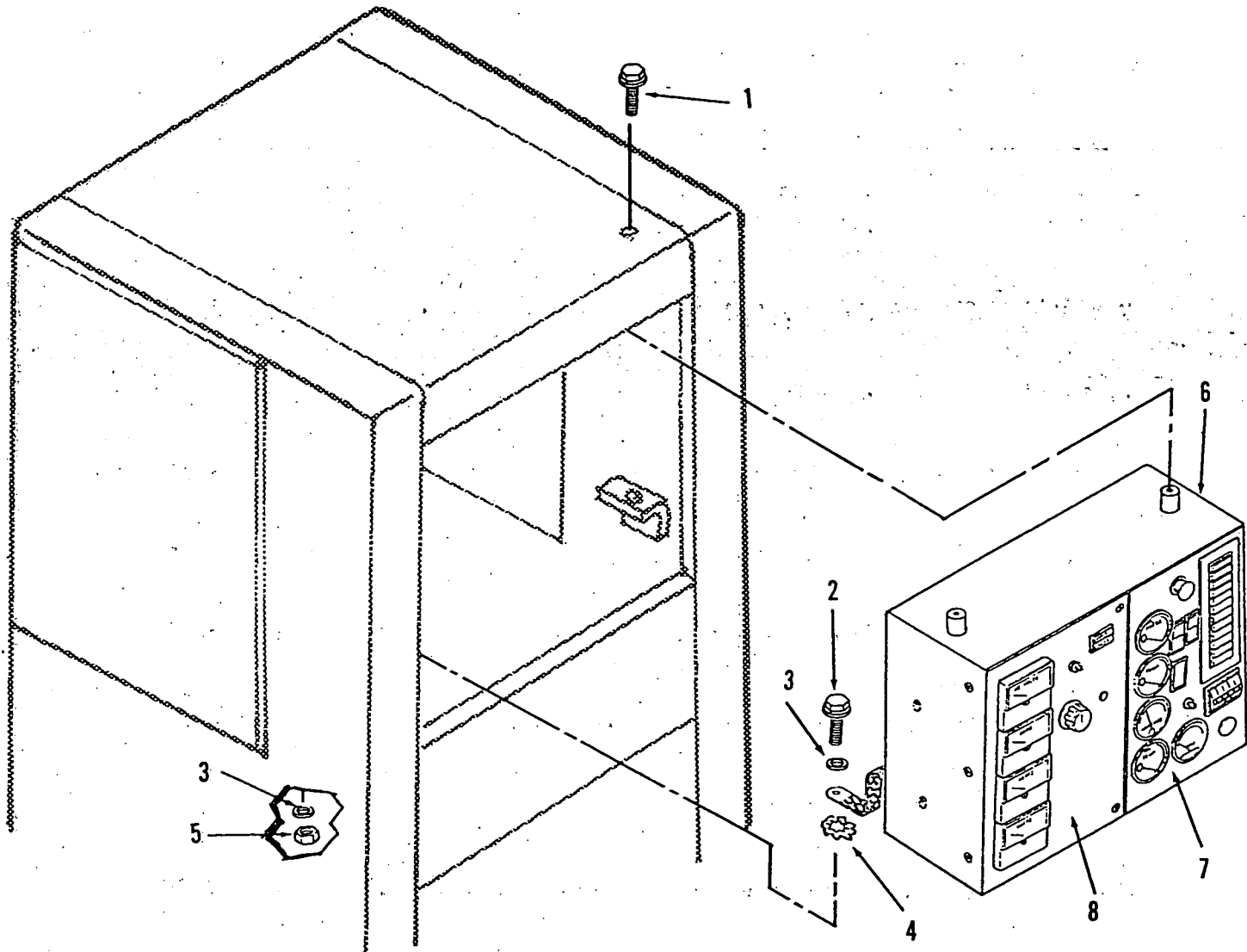
EXTERNAL COMPONENTS RIGHT SIDE

REF NO.	CPDC PART NO.	SOURCE PART NO.	C O D E	QTY USED	PART DESCRIPTION
1	140-1545	3013238	CE	4	Hood, Air Inlet (Used on Heavy Duty Air Cleaner)
2					Heavy Duty Air Cleaner Group
	140-2301	3056713	CE	4	Air Cleaner - Heavy Duty (Includes Elements)
	140-2465	3060220	CE	4	Element, Air Cleaner - Primary
	140-2366	3060221	CE	4	Element, Air Cleaner - Safety
					-----*
3	98-5842			1	Decal - Warning "APPLY NO FORCE TO GEN FAN WHEN LIFTING, ETC"
4	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
					-----*
5	98-5347			2	Decal - Danger "HIGH VOLTAGE"
6	98-5759			1	Decal - Warning "HAZARDOUS VOLTAGE"
7	98-5822			3	Decal - Warning "DO NOT USE LIFTING POINT, ETC."
8	309-0561			1	Switch, Pressure - Oil, 14# PSI (SHUTDOWN) With Dual Terminals
9	193-0244			1	Sender, Pressure - Oil
10	309-0272			1	Switch, Pressure - Oil, 20# PSI (PRE-ALARM) -
11	505-0007			2	Bushing, Reducer (1/4 NPT x 1/8 NPT)
					Oil Drain Group
12	503-0183			1	Clamp, Hose
13	503-1731		AR		Hose, Bulk (Sold by the Foot) Three Feet Required
14	505-0324			1	Nipple, Pipe - Half (3/4 NPT x 2"LG)
15	504-0171			1	Valve, Shutoff - Brass (3/4 NPT)
16	505-0102			1	Nipple, Pipe - Close (3/4 NPT x 1-3/8"LG)
17	505-0132			1	Elbow, Pipe - 90° (3/4 NPT)
18	505-0021			1	Bushing, Reducer (3/4 NPT x 1/2 NPT)
19	505-0100			1	Nipple, Pipe - Close (1/2 NPT x 1-1/8"LG)
20	102-1335			1	Plug, Drain (Modified)
21	508-0292			1	Washer, Sealing
					-----*
22	122-0757	3310169	CE	5	Filter, Oil
23	800-0270			1	Screw, Cap - Hex Head (3/8-24 x 5/8")
24	856-0010			2	Washer, Lock - EIT (3/8")
25	332-1292			1	Terminal Assembly (Includes Replaceable Items 26 thru 29)
26	809-0035			1	Screw, Tapping - Round Head (#8 x 3/4")
27	508-0015			1	Washer, Insulating
28	870-0196			1	Nut, Insulated
29	332-1281			1	Board, Terminal
30	149-2232	299202	CE	2	Filter, Fuel
31	332-2634			6	Clamp, J
33	309-0436			1	Switch, Thermostatic - High Water Temperature (PRE-ALARM) (216°F)
32	504-0028			2	Cock, Drain
34	98-4798			1	Decal - Warning "Caution - Moving Parts"
35	98-4732			1	Decal - Caution "AUTO CONTROL-GEN SET MAY START WITHOUT WARNING"
36					Decal - Model Identification
	98-6108-03			1	ONAN GEN SET
	98-6111-03			1	CUMMINS GEN SET
	98-6139-03			1	CUMMINS ONAN GEN SET
					-----*
37	98-6169			1	Decal - Caution "7# PSI HOT WATER SYSTEM"
38	98-5393			2	Decal - Warning "ROTATING FAN - STAY CLEAR"
39	193-0375			1	Sender, Water Temperature
40	505-0021			1	Bushing, Reducer - Hex (3/4 NPT x 1/2 NPT)
41	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")
					-----*
42	309-0437			1	Switch, Thermostatic - High Water Temperature (SHUTDOWN) (222°F)
43	505-0117			5	Bushing, Reducer - Flush (1/2 NPT x 3/8 NPT)
44	501-0520			1	Line, Fuel - Flexible "FUEL OUT" (37° 7/8-14 Female Swivel x 3/4-14 Male x 50"LG)
45	501-0524			1	Line, Fuel - Flexible "FUEL IN" (37° 1 5/16-12 Female Swivel x 1-11.5 Male x 50"LG)

TABLE OF CONTENTS CONTROL SECTION

GENERATOR SET CONTROL - Installation of	3-3
ENGINE CONTROL PANEL COMPONENTS	3-5
TACHOMETER - Installation Of	3-7
OIL TEMP GAUGE - Installation of	3-9
EMERGENCY STOP SWITCH - Installation of	3-11
ENGINE MONITOR BOARD - Installation Of	3-13
ALARM RELAY MODULES - Installation Of.....	3-15
RUN RELAYS - Installation of	3-17
TIME DELAY START/STOP - Installation Of	3-19
ELECTRONIC OVERSPEED MODULE - Installation of	3-21
GENERATOR CONTROL PANEL COMPONENTS	3-23
AMMETER & CURRENT TRANSFORMER - Installation Of	3-25
WATTMETER - Installation Of	3-27
VOLTAGE REGULATOR - Installation of	3-29
CONTROL SPACE HEATER - Installation Of	3-31
AUX TERMINAL BLOCK - Installation Of	3-32
CONTROL BOX & MOUNTING COMPONENTS	3-33

GENERATOR SET CONTROL
Installation Of

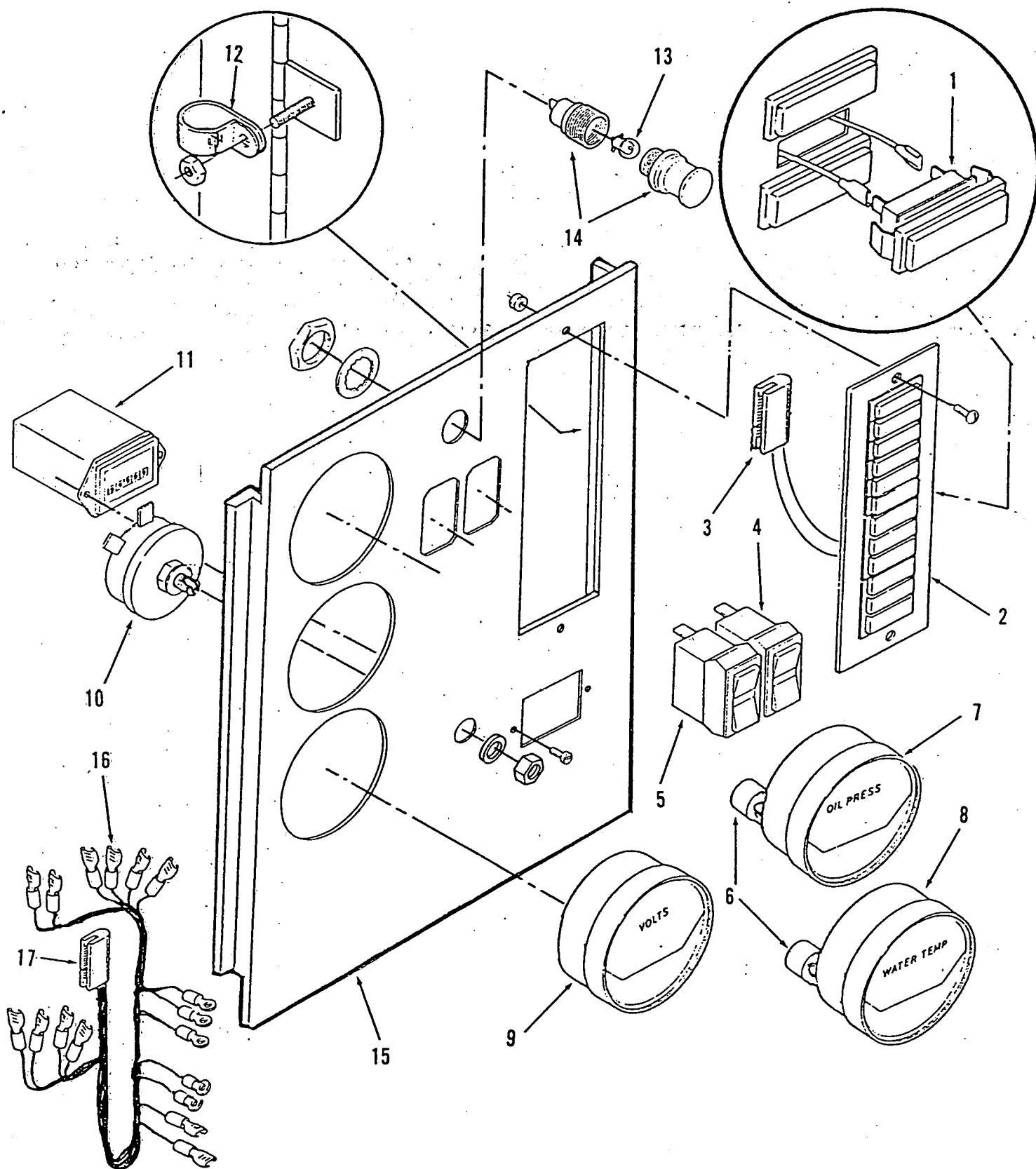


GENERATOR SET CONTROL Installation Of

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.

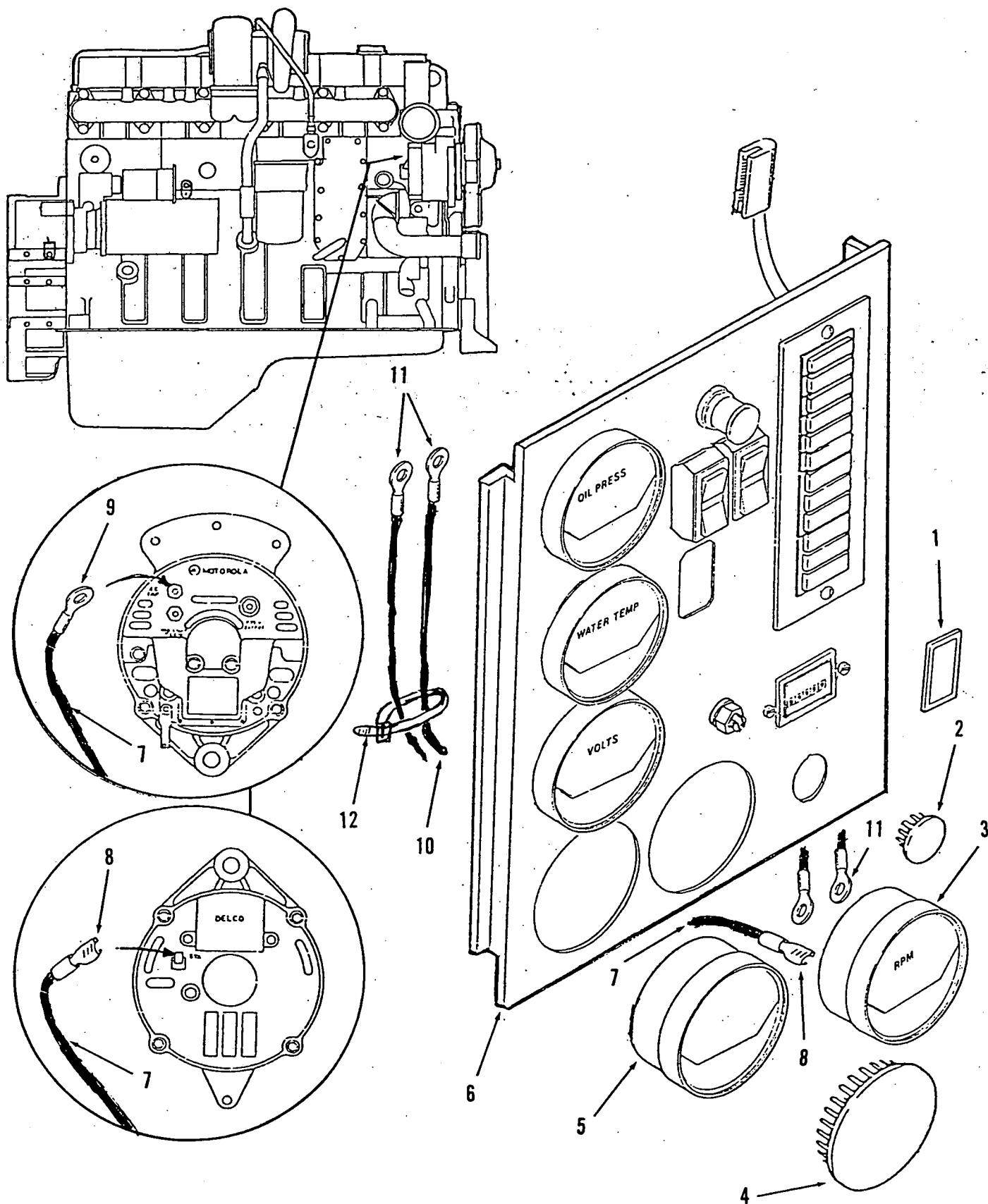
ENGINE CONTROL PANEL COMPONENTS



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	322-0359-02			1	Module, Indicator - Fault (A12) (Includes Connector Housing)
	322-0360-02			1	7 Light Module
				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



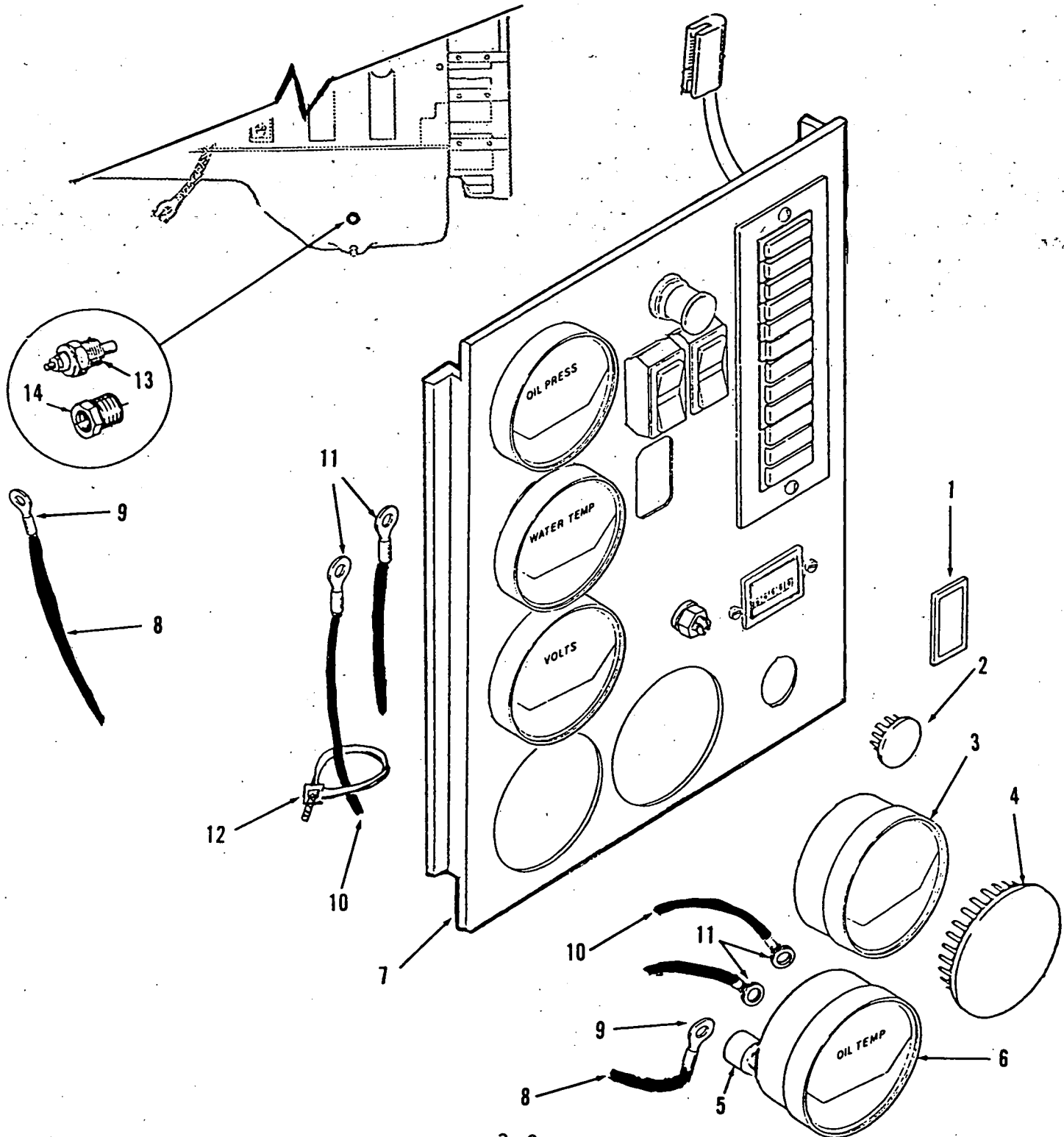
TACHOMETER Installation Of

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



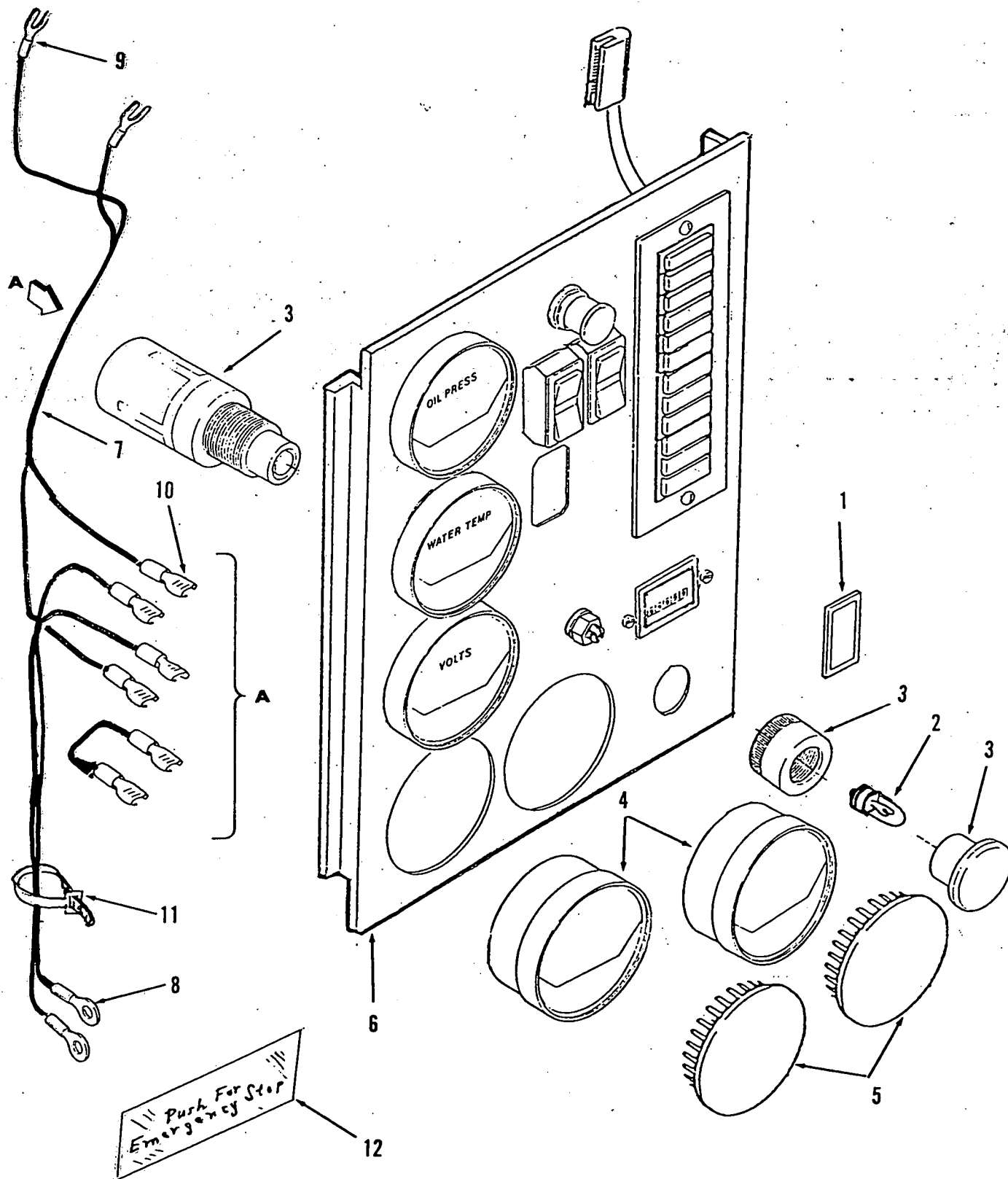
OIL TEMPERATURE GAUGE Installation Of

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



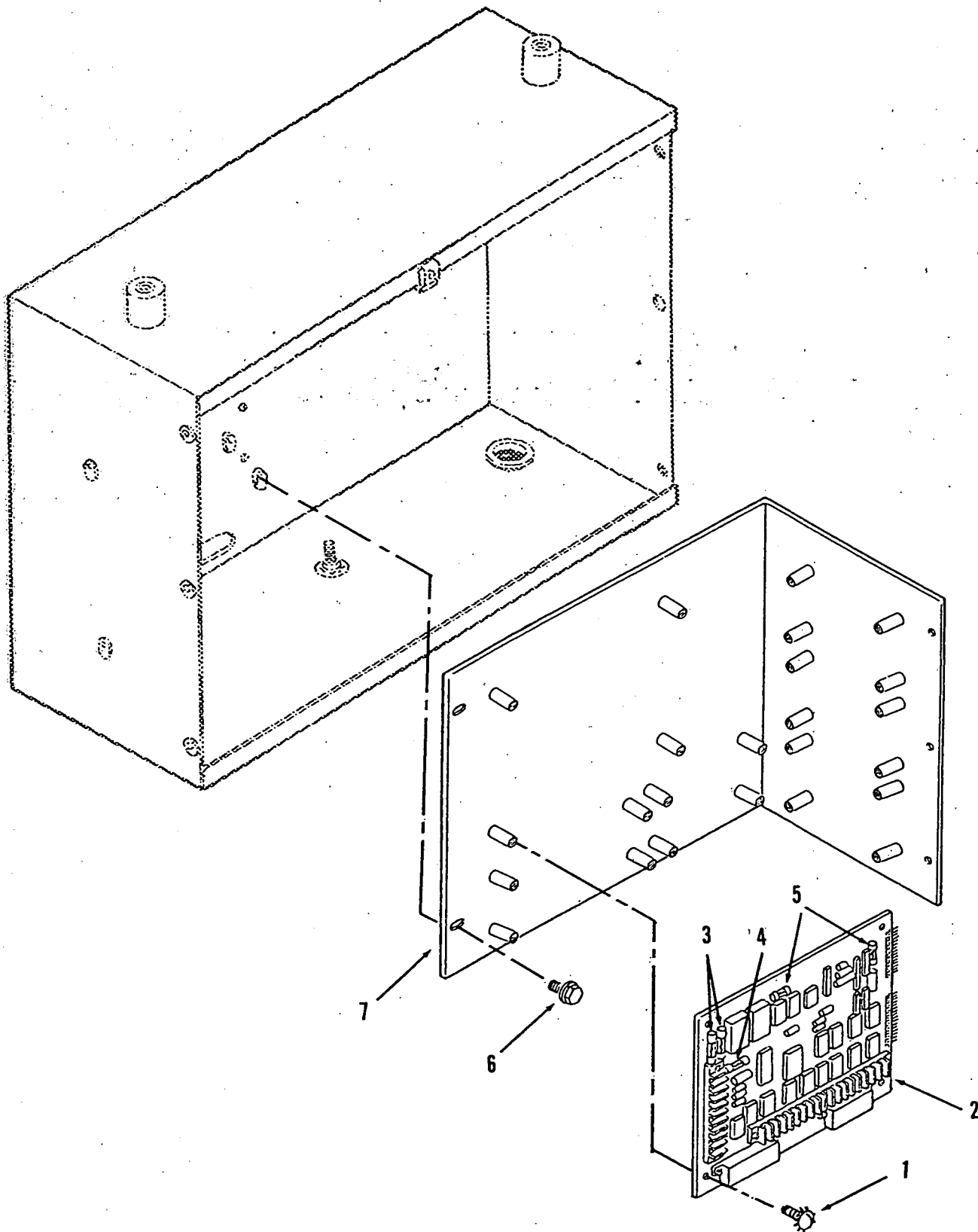
EMERGENCY STOP SWITCH Installation Of

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.

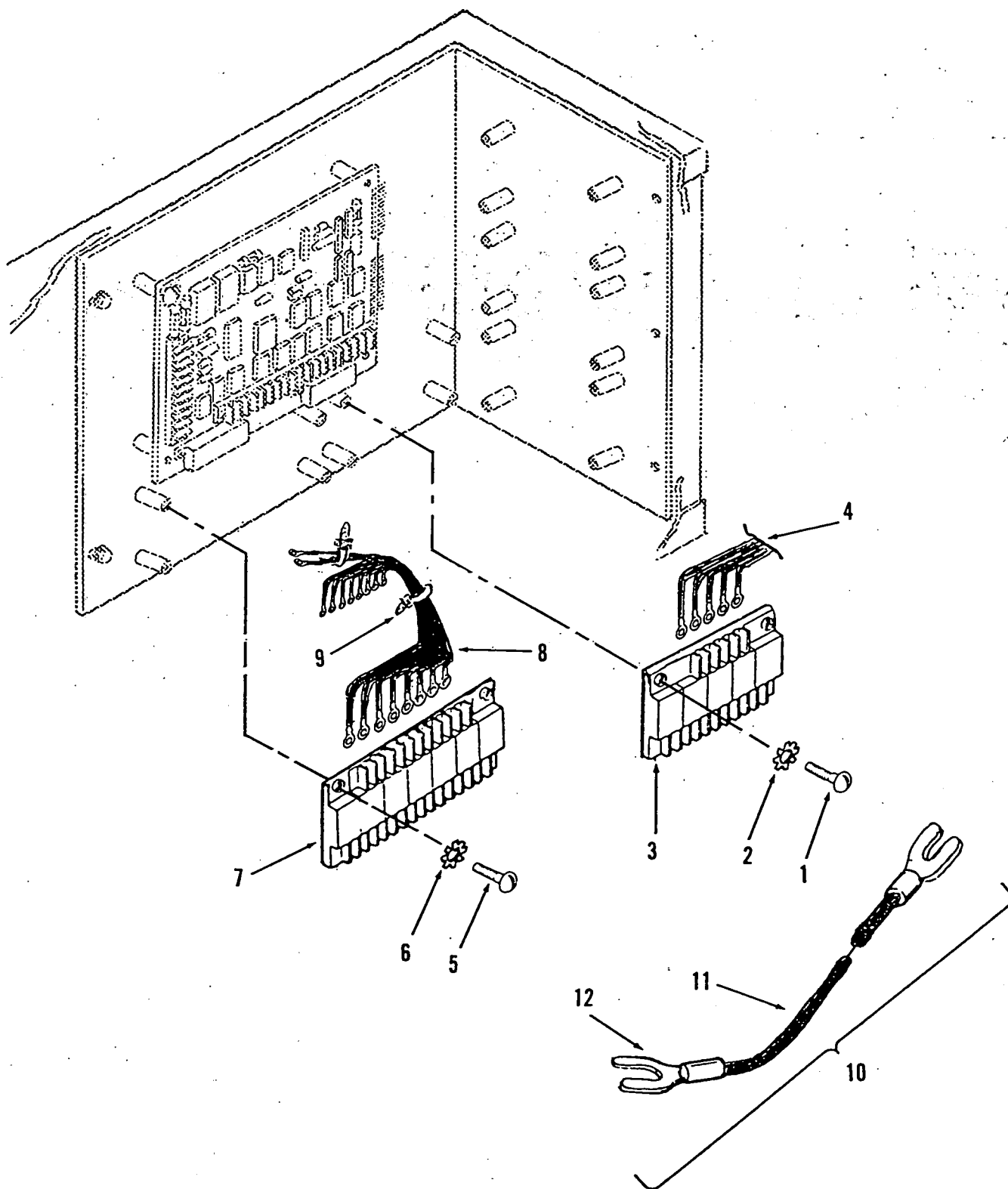
ENGINE MONITOR BOARD
Installation Of



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 (All) (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



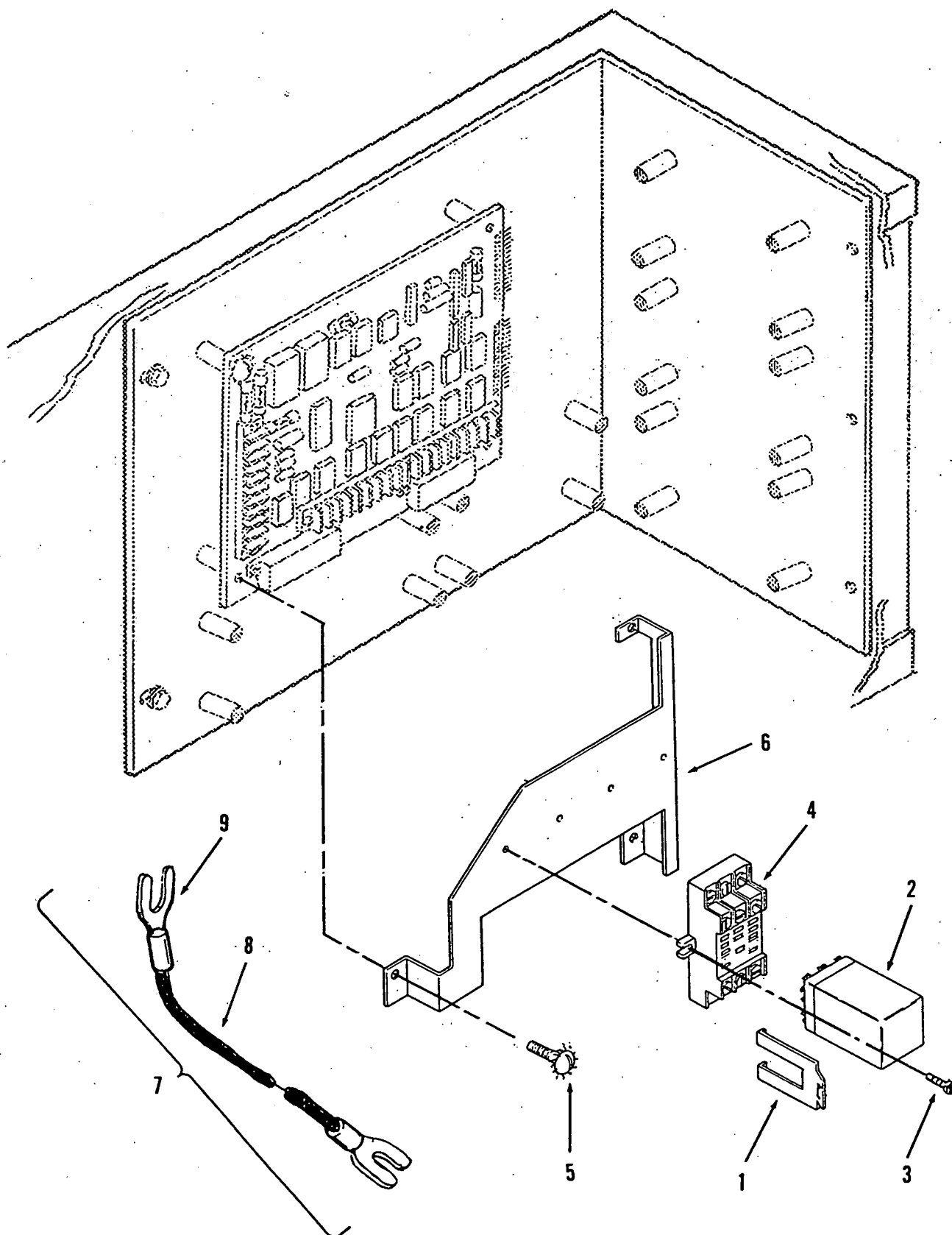
ALARM RELAY MODULES Installation Of

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



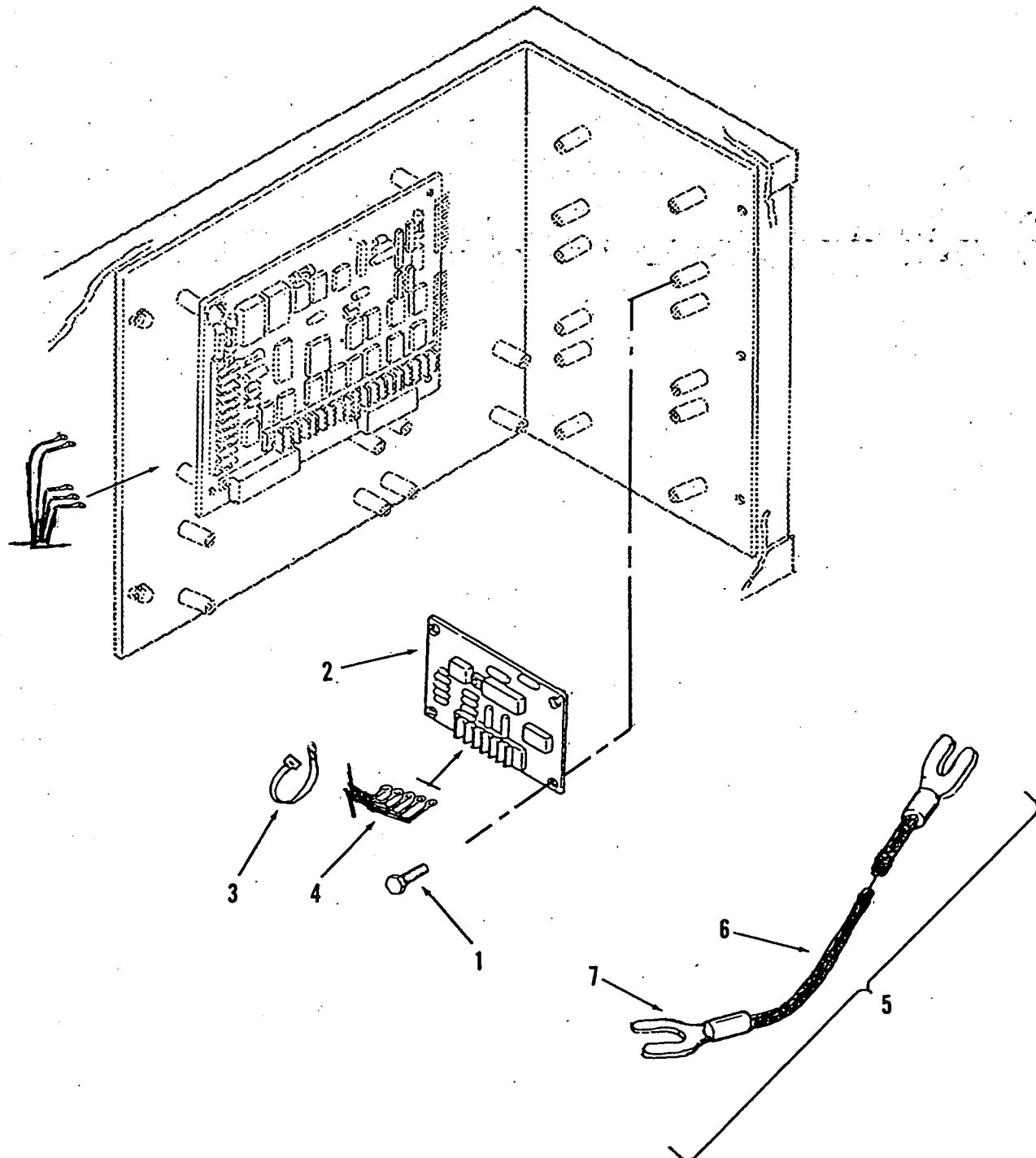
RUN RELAYS **Installation Of**

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



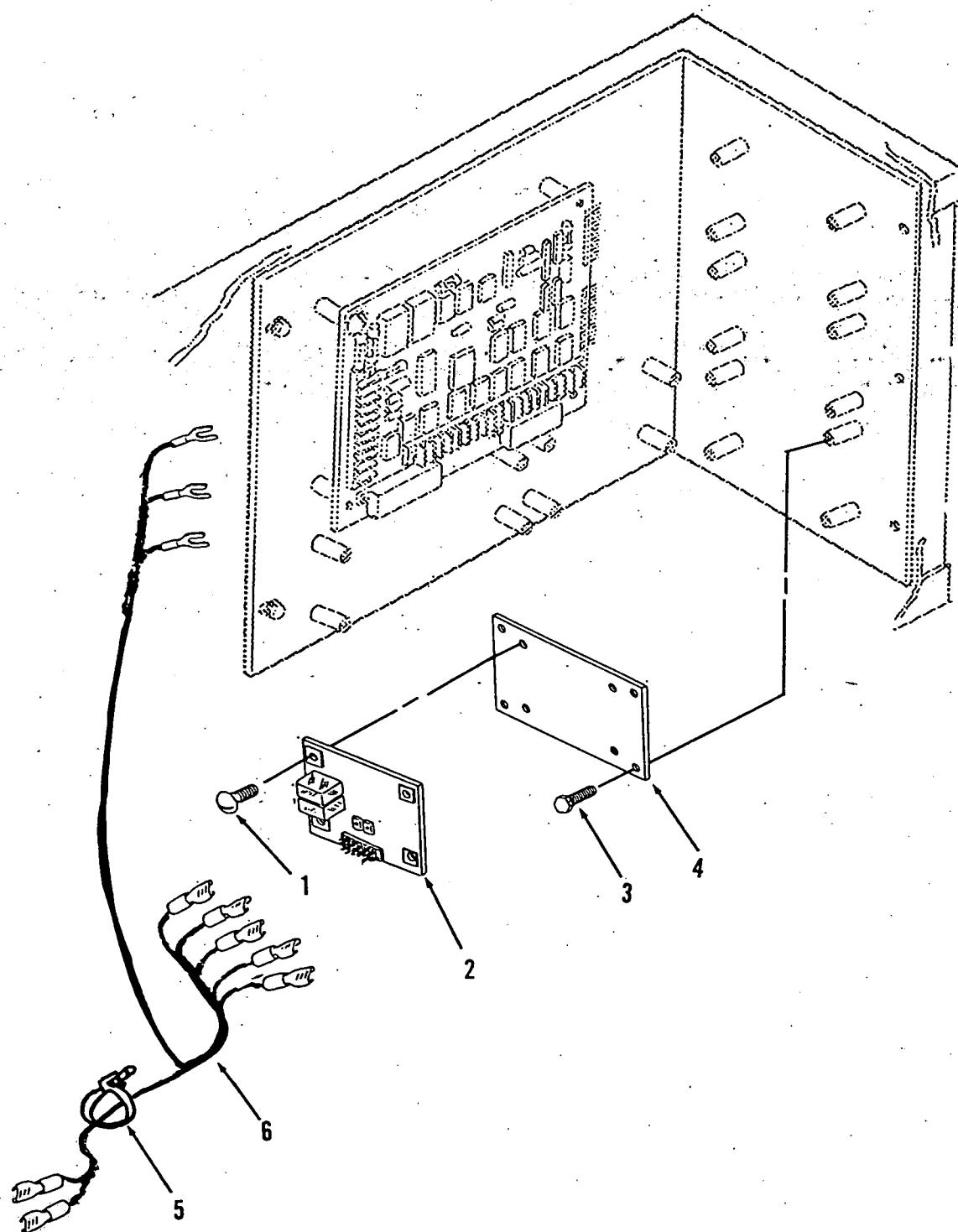
**TIME DELAY START/STOP MODULE
Installation Of**

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

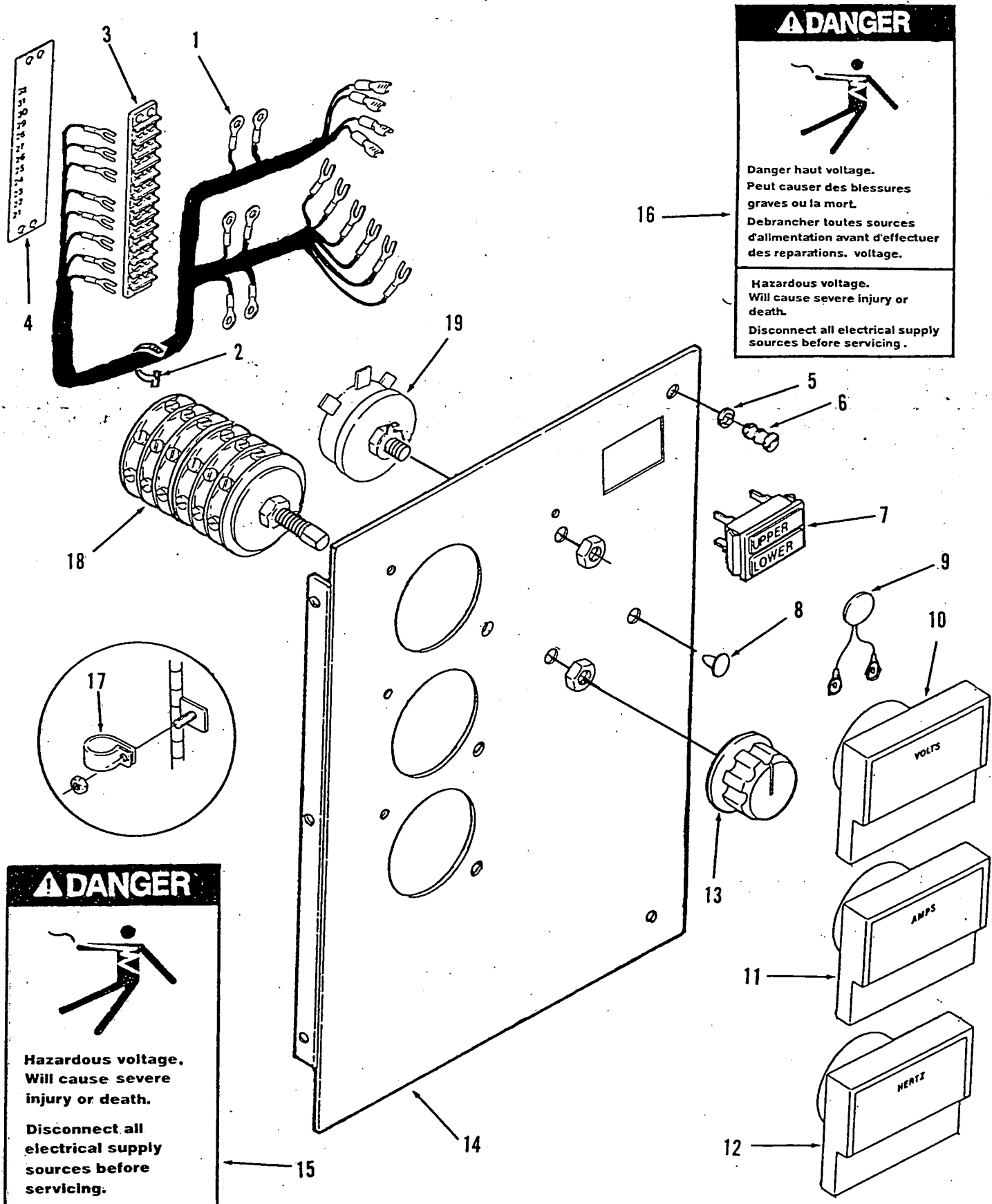
ELECTRONIC OVERSPEED MODULE
Installation Of



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	338-2529			1	Harness, Wiring (A16 to A11 and AUX-P2,P3)

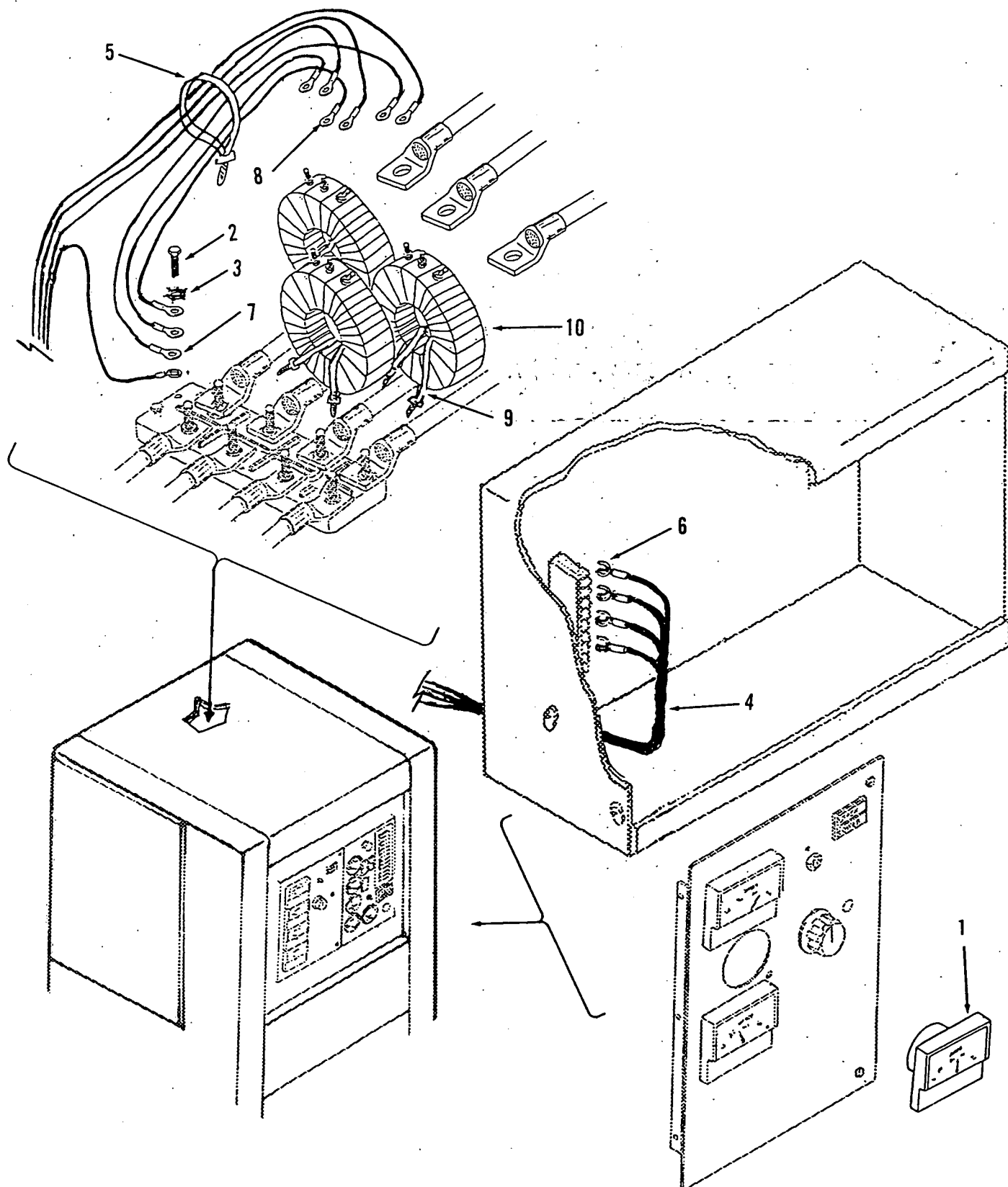
GENERATOR CONTROL PANEL COMPONENTS



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] Attaching Parts for AC Wiring Harness
	812-0065			2	Screw, Machine - Round Head (#6-32 x 5/8")
2	332-1445			44	Tie, Cable (Part of Wiring Harness)
3	332-0607			1	Block, Terminal (T81)
4	332-2723			1	Strip, Marker
5	406-0334			2	Clip, Retaining - Turnbutton Fastener
6	406-0333			2	Stud, Fastener - Turnbutton
7	322-0363			1	Light, Indicator - Dual (DS21, DS22)
8	517-0131			1	Plug, Dot Button
9	355-0093			1	Capacitor (Used accross Voltmeter Terminals on some Sets)
10					Voltmeter (M21)
	302-1148			1	Dual Scale 0-300/0-600V
	302-1753			1	Single Scale 0-750V
11			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			3	Attaching Parts Panel to Control Box Screw, Self-Locking-Hex Washer Head (#10-32 x 5/16")
15	98-5387			2	Decal - Warning (English) Located on Panel Front & Rear
16	98-5724			2	Decal - Warning (French/English)
17	332-0052			1	Clamp, Loop
	870-0131				Attaching Parts for Loop Clamp
				1	Nut, Self-Locking - with ET Lockwasher (#10-32)
18	308-0882			1	Switch, Rotary (S21)
19			REF		Potentiometer (R21) See Voltage Regulator Installation Figure for Parts)
20					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

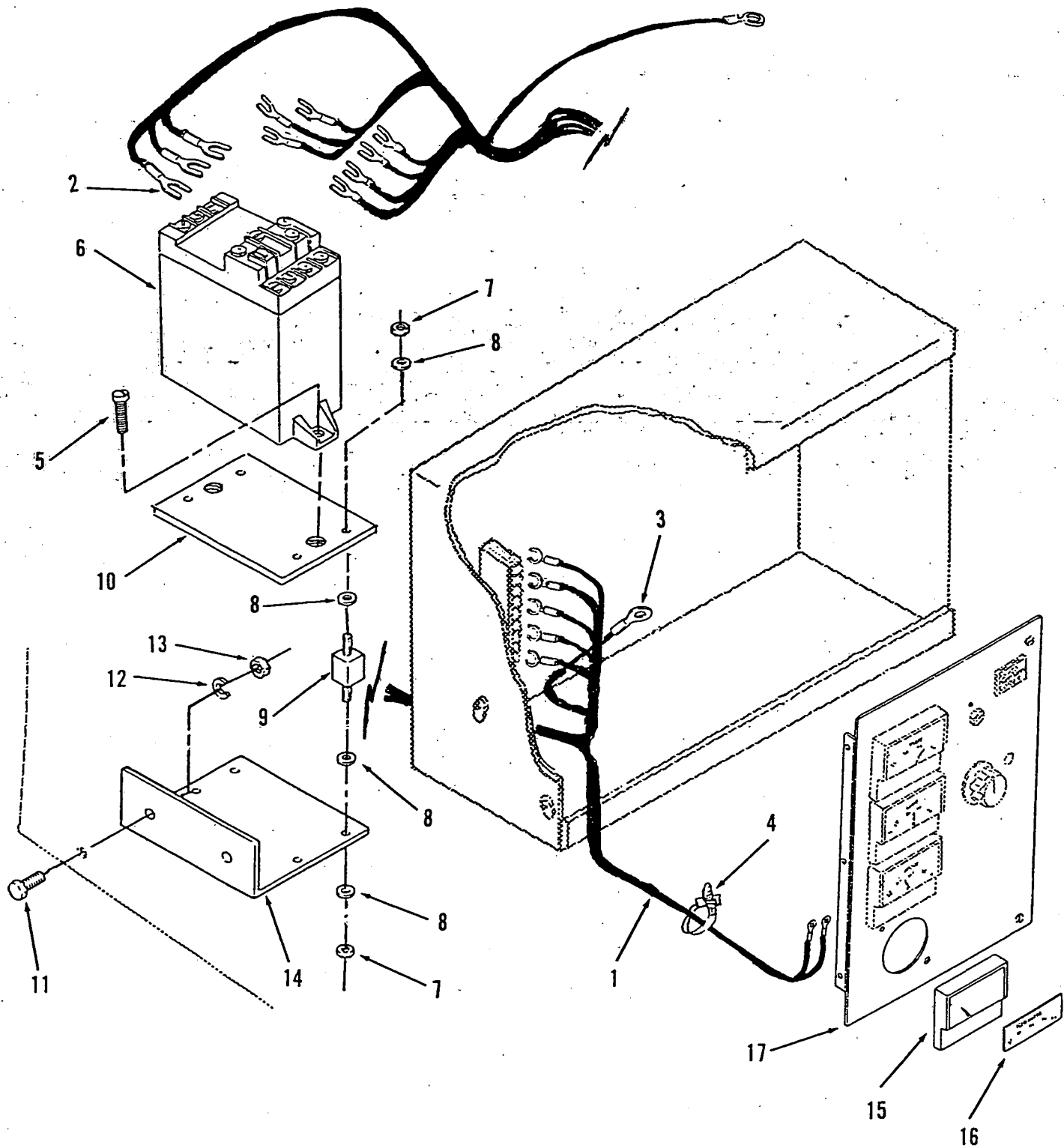


AMMETER & CURRENT TRANSFORMER INSTALLATION OF

REF NO.	CPDC PART NO.	SOURCE PART NO.	C O D E	QTY USED	PART DESCRIPTION
1	302-1908			1	Ammeter (M22) Scale in Amps as Indicated 0-3000/0-6000 (120-480 and 600 VAC Applications)
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	338-2532			1	Harness, Wiring (Includes Cable Ties and Terminals)
5	332-1445			17	Tie, Cable
6	332-1279			6	Terminal, Lug - Forked (No. 6 Screw)
7	332-2964			4	Terminal, Lug - Ring (3/8" Screw)
8	332-0806			4	Terminal, Lug - Ring (No. 8 Screw)
9	332-1389			6	Tie, Cable (Retainers for Current Transformers)
10	302-1794-15			3	Transformer, Current (Turn Ratio Listed) 3000/5,6000/5 (120-480 and 600 VAC Applications)

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

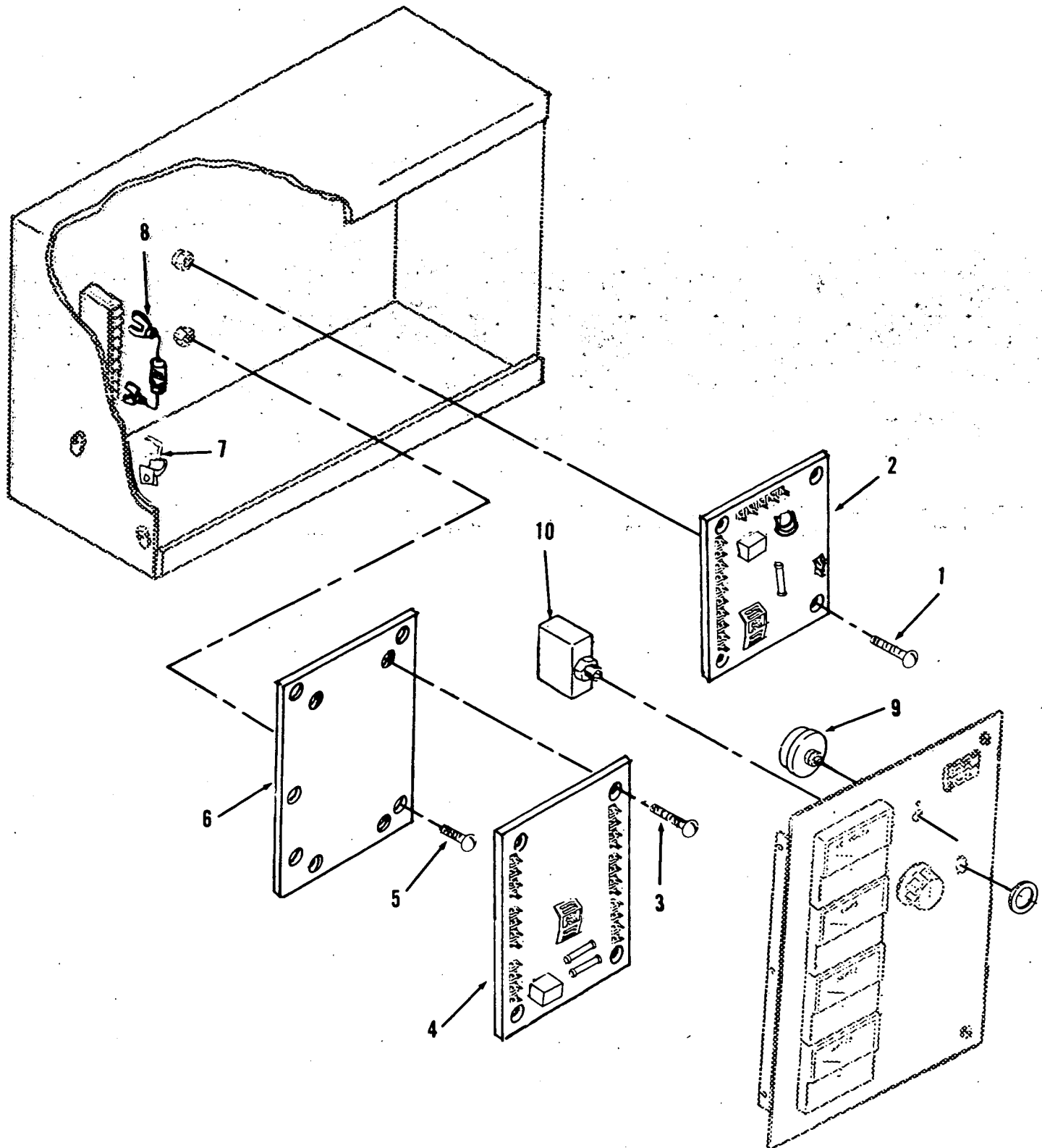


WATTMETER INSTALLATION OF

REF NO.	CPDC PART NO.	SOURCE PART NO.	C O D E	QTY USED	PART DESCRIPTION
1					Harness, Wiring
	338-1936		1		All Three Phase "WYE" Connected Generators
	338-2478		1		120/240 VAC "DELTA" Connected Generators
	338-2479		1		120/240 VAC "SINGLE PHASE" Connected Generators
2	332-1279		11		Terminal, Lug - Forked (For No. 6 Screw Mounting)
3	332-0897		4		Terminal, Lug - Ring (1/4" Screw Mounting)
4	332-0942		14		Tie, Cable
5	813-0102		2		Screw, Machine - Round Head (#10-32 x 5/8")
6					Transducer, Watt
	302-1833-01		1		All Three Phase "WYE" Connected Generators
	302-1833-04		1		120/240 VAC "SINGLE Phase" Connected Generators
	302-1833-05		1		124/240 VAC "DELTA" Connected Generators
7	860-0008		8		Nut, Hex (#8-32)
8	856-0002		16		Washer, Lock - EIT (#8)
9	402-0354		4		Mount, Shock
10	319-0030		1		Plate, Support - Transducer
11	821-0017		2		Screw, Self-locking - HWH (5/16-18 x 1/2")
12	850-0045		2		Washer, Lock - Spring (5/16")
13	862-0014		2		Nut, Hex (5/16-18)
14	301-6987		1		Bracket, Mounting
15	302-1722		1		Meter, Watt (Less Dial)
16					Dial, Wattmeter
	302-1721-19		1		Scale 0-2000 kW
17	301-9054-01		1		Panel, Control

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

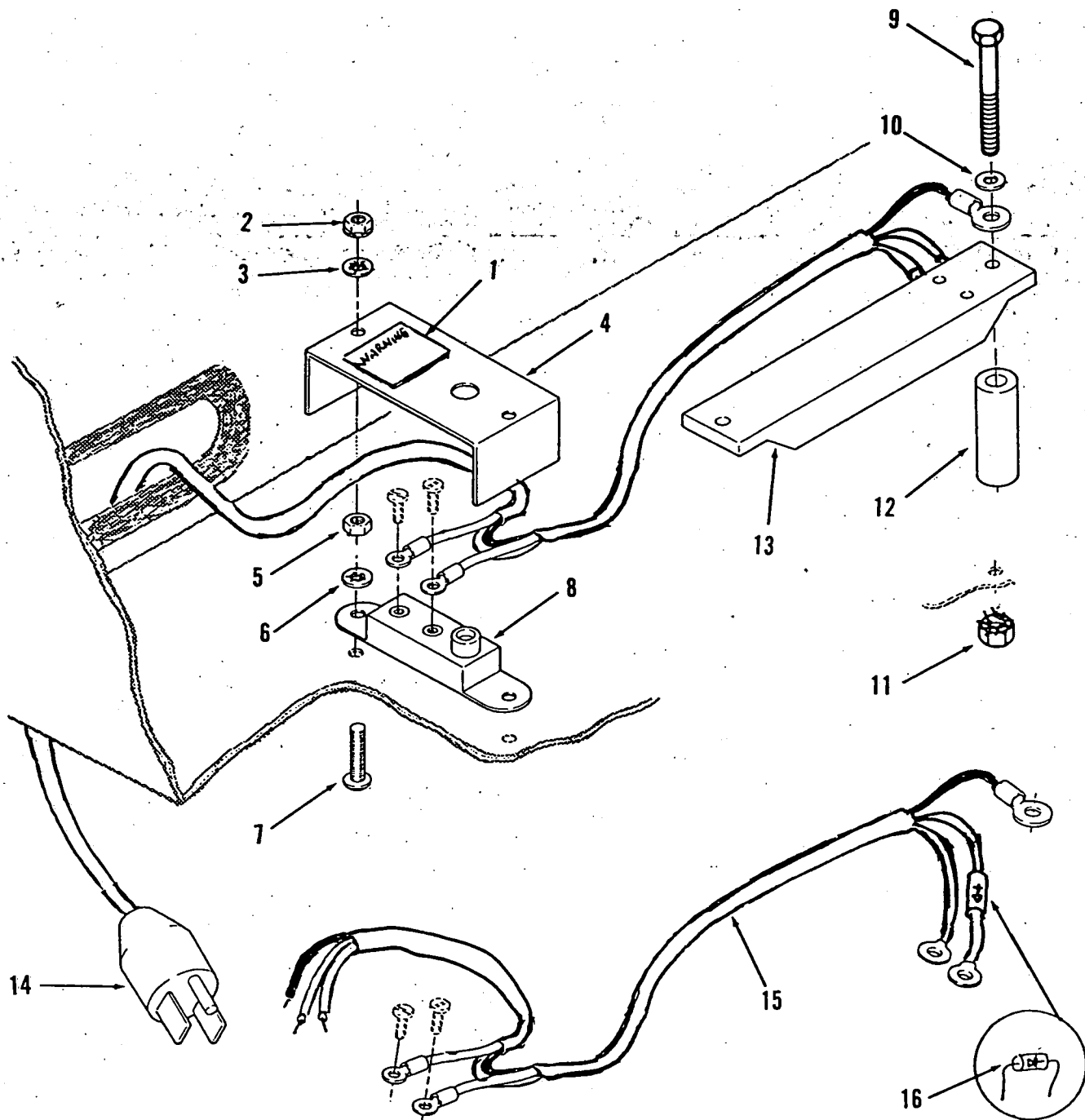
VOLTAGE REGULATOR
Installation of



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	303-0261			1	Potentiometer (Not used on all Sets)
	303-0285			1	1.5K Ohms +10% (Used with SX440 Voltage Regulator)
10				1	5K Ohms +10% (Used with MX321 Voltage Regulator)
	320-1688-01			1	Circuit Breaker - Field Current (Select as Applicable)
	320-1688-02			1	5 AMP, 240VAC/50VDC
				1	5 AMP, 240VAC/50VDC, with AUX Terminals

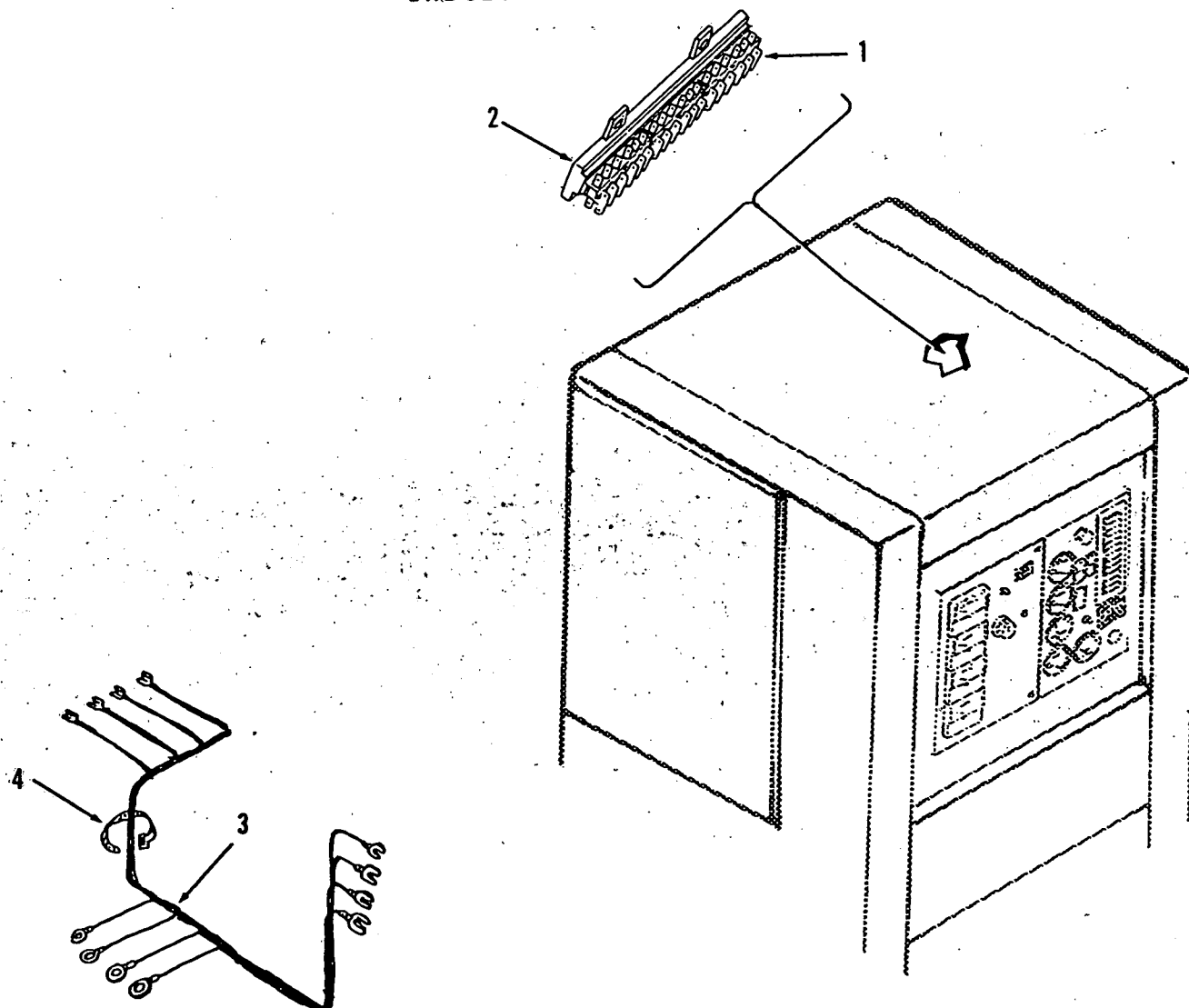
CONTROL SPACE HEATER
Installation Of



CONTROL SPACE HEATER Installation Of

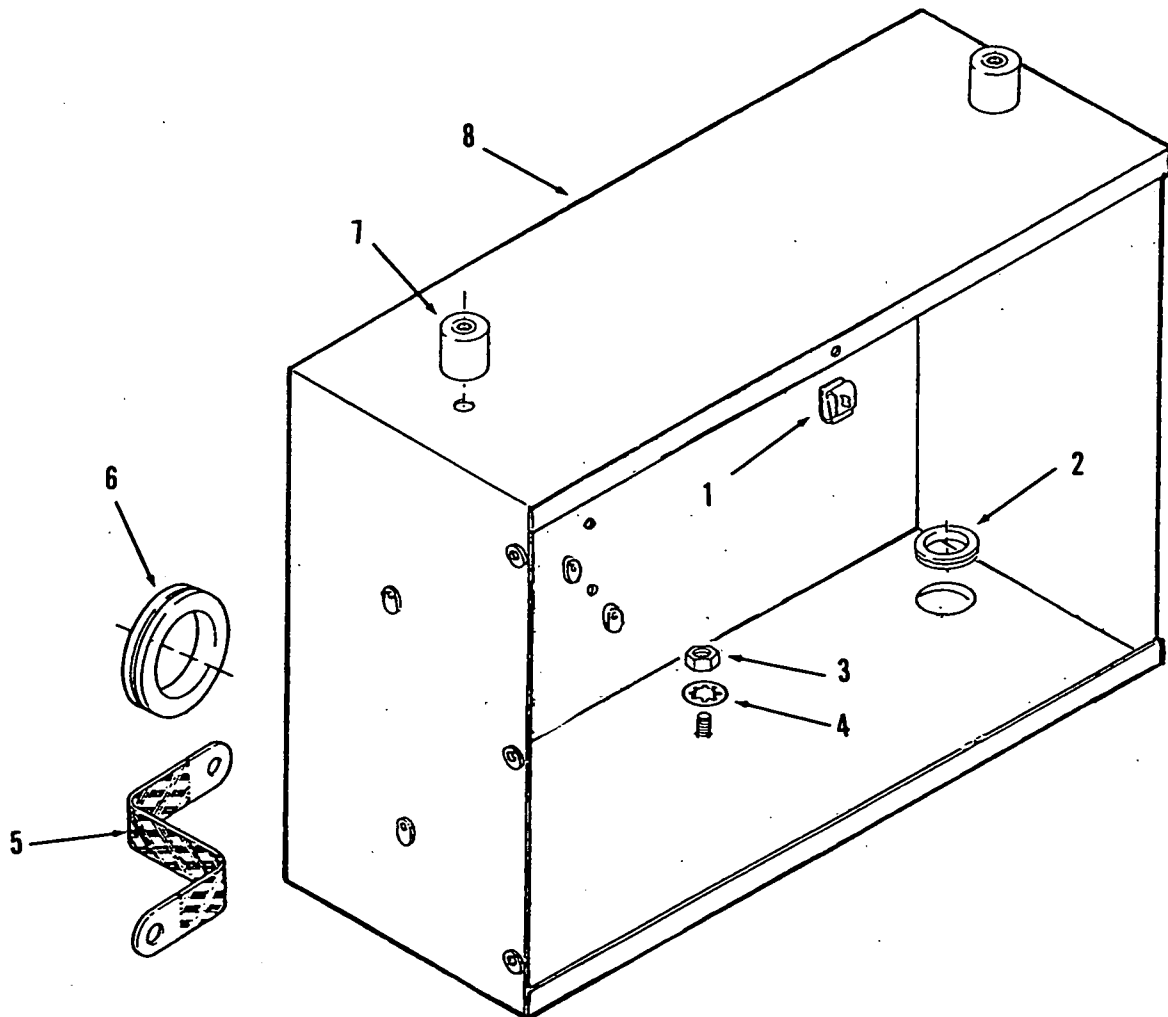
REF NO.	CPDC PART NO.	SOURCE PART NO.	C O D E	QTY USED	PART DESCRIPTION
1	98-3232			1	Decal - Warning (Shock Hazard)
2	870-0183			2	Nut, Self-locking - HEX (#6-32)
3	854-0006			2	Washer, Lock - IT (#6)
4	301-1886			1	Cover
5	860-0006			1	Nut, Hex (#6-32)
6	854-0006			2	Washer, Lock - IT (#6)
7	812-0070			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	150 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			3	Nut, Hex (#8-32))
				1	Harness, Wiring - AC AUX
4	332-1445			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
8	301-8065			4	Screw, Cap - Hex Head (5/16-18 x 3/8")
				4	Washer, Lock - Spring (5/16")
				1	Box, Control

NOTES

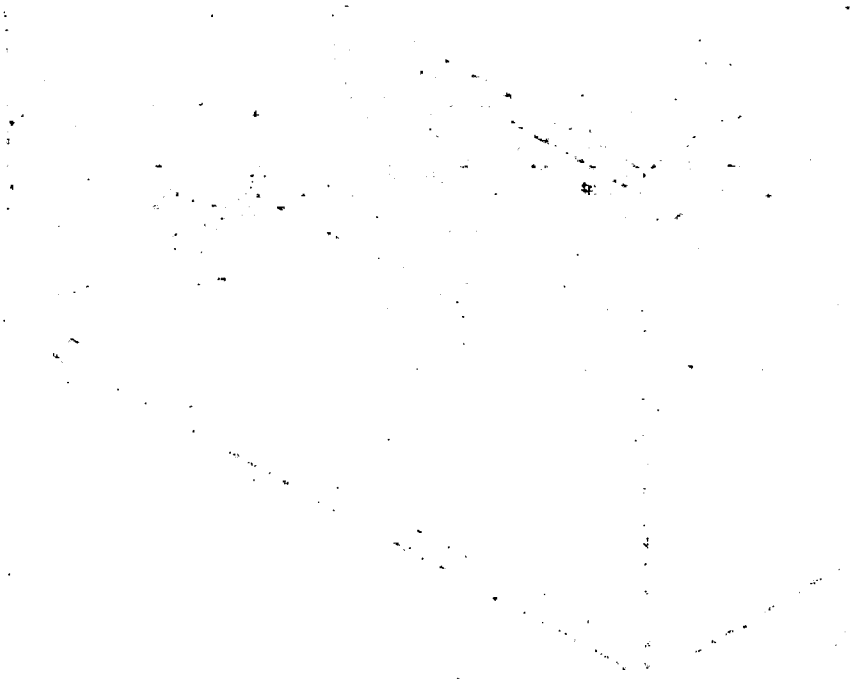


TABLE OF CONTENTS
GENERATOR SECTION

GENERATOR DATA TABLE	4-2
GENERATOR DATA TABLE -cont-	4-3
GENERATOR HC734 - Installation of	4-4
GENERATOR HC734 - Components	4-5
PERMANENT MAGNET EXCITER - Installation of	4-6

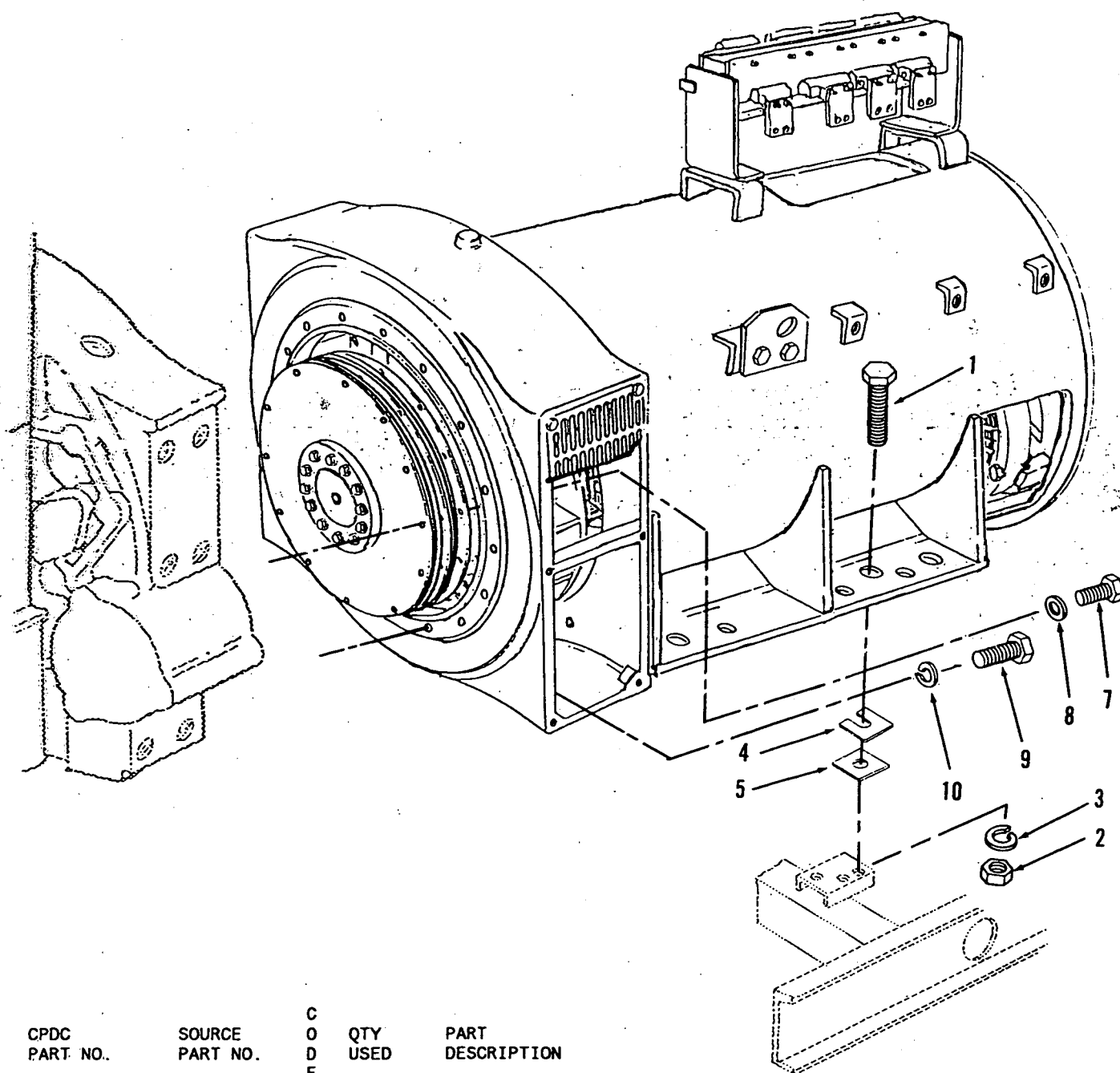
**GENERATOR TABLE
FOR
1500 kW 60 Hertz Sets**

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
249-0177-05	HC734C-312-D73-4143	0	18	380-480V 105°C	YES	NO	NO
249-0177-06	HC734C-312-D73-4143	0	18	380-480V 105°C	YES	YES	NO
249-0177-05	HC734C-312-D73-4142	0	18	380-480 V 125°C	YES	NO	NO
249-0177-06	HC734C-312-D73-4142	0	18	380-480 V 125°C	YES	YES	NO
249-0177-02	HC734B-312-D73-4142	0	18	480V Only 125°C	YES	NO	NO
249-0177-04	HC734B-312-D73-4142	0	18	480V Only 125°C	YES	YES	NO
249-0186-05	HC734C-007-D73-4173	0	18	600V Only 105°C	YES	NO	NO
249-0186-06	HC734C-007-D73-4173	0	18	600V Only 105°C	YES	YES	NO

**GENERATOR TABLE
FOR
1280 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
249-0177-05	HC734C-312-D73-4142	0	18	346-440V 105°C	YES	NO	NO
249-0177-06	HC734C-312-D73-4142	0	18	346-440V 105°C	YES	YES	NO
249-0177-05	HC734C-312-D73-4142	0	18	346-460 V 125°C	YES	NO	NO
249-0177-06	HC734C-312-D73-4142	0	18	346-460 V 125°C	YES	YES	NO
249-0177-05	HC734C-312-D73-4142	0	18	440V Only 125°C	YES	NO	NO
249-0177-06	HC734C-312-D73-4142	0	18	440V Only 125°C	YES	YES	NO

**GENERATOR
HC734 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	800-0303			2	Screw, Cap - Hex Head (1 1/4 - 7 x 3 1/2")
2	862-0017			2	Nut, Hex (1 1/4 - 7)
3	850-0092			2	Washer, Lock - Spring (1 1/4")
4					Shim (Select as Required)
	232-3552-01			4	1/32"THK
	232-3552-02			4	5/64"THK
5	403-2921			4	Shim (1/8"THK) (Select as Required)
7	805-0035			6	Bolt, Place - Hex Head (5/8-11 x 1-1/2")
8	526-0343			6	Washer, Flat (5/8")
9	800-0576			16	Screw, Cap - Hex Head (1/2-13 x 1-3/4" Grade 8)
10	850-0060			16	Washer, Lock - Spring (1/2")

GENERATOR HC734 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 & End Bell)
Attaching Parts End Bell to Stator					
800-2114	016-41021		NE	8	Screw, Cap - Hex Head (M12 x 40mm)
850-2012	028-31510		NE	8	Washer, Lock - Spring (M12)
-----*					
Note 1	Note 2		NE	1	End Bell, Generator
249-0470	366-12500		NE	1	Stator, Exciter
Attaching Parts for Stator					
249-0438	015-41617		NE	6	Screw, Cap - Hex Head (M6 x 85mm)
850-2006	028-31507		NE	6	Washer, Lock - Spring (M6)
-----*					
249-0510	462-12930		NE	1	Cap, Bearing - Outer
Attaching Parts for Outer Cap					
800-2528	016-40919		NE	4	Screw, Cap - Hex Head (M10 x 30mm)
850-2010	028-31509		NE	4	Washer, Lock - Spring (M10)
-----*					
249-0509	462-12920		NE	1	Cap, Bearing - Inner
Attaching Parts for Inner Cap					
800-2091	016-40923		NE	4	Screw, Cap - Hex Head (M10 x 50mm)
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)
249-0503	464-43500		NE	1	Rotor, Exciter - Wound
357-0093	362-12800		NE	1	Rectifier Assembly (Includes Diodes and Varister)
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	450-11740		NE	1	Varistor (Surge Suppressor)
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)
-----*					
249-0447	050-11011		NE	1	Ring, Retaining (Circlip)
249-0620	054-10076		NE	1	Key, Machine
249-0448	051-01025		NE	1	Bearing, Ball

PMG GROUP

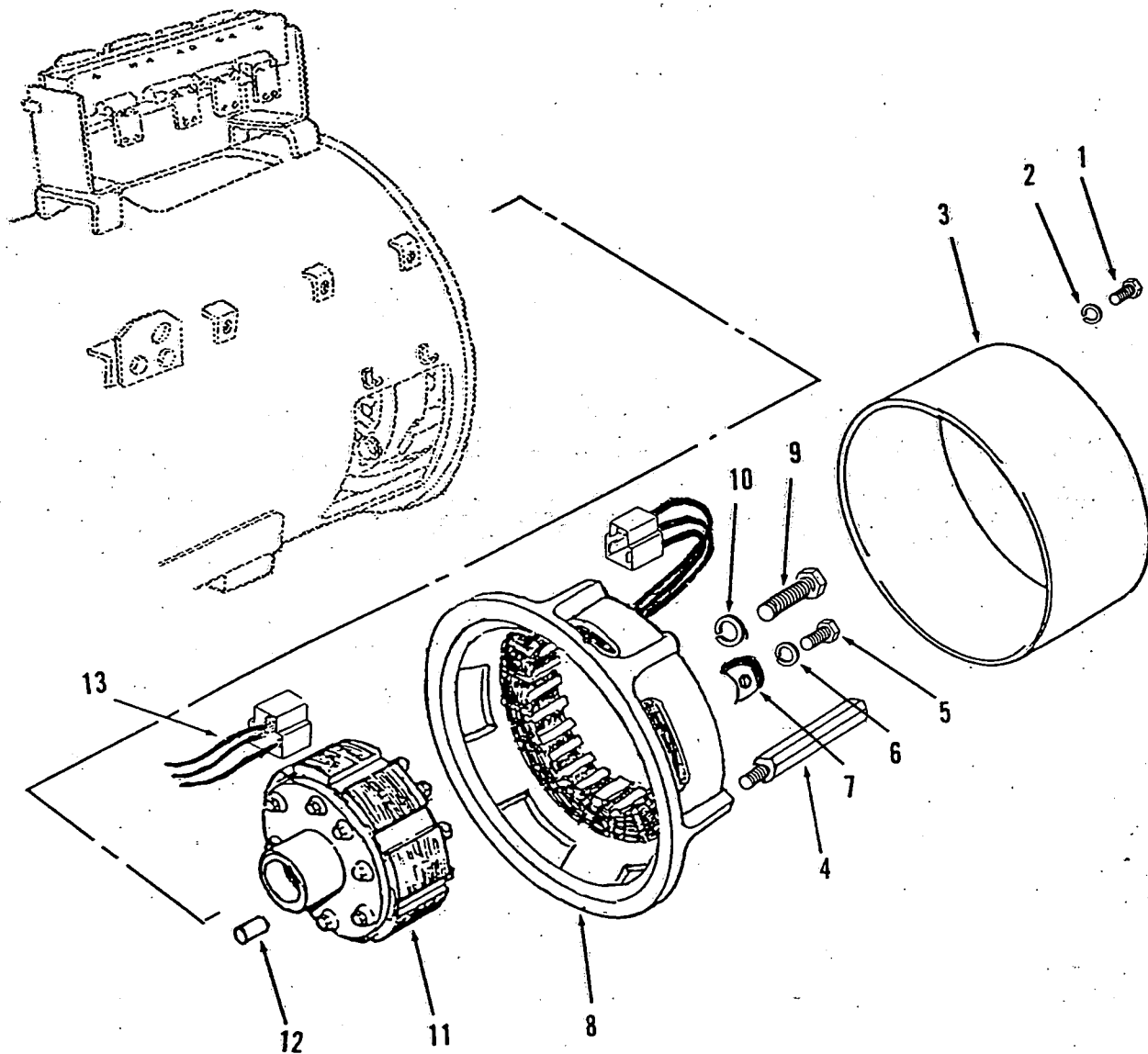
See Separate page for Servicable Components

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

TABLE OF CONTENTS
SOURCE CODE SECTION

MANUFACTURERS 5-2

SOURCES 5-3

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
Barnack Road
Stamford, Lincolnshire, England
PE9 2NB

TELEPHONE

Telephone: 612-574-5000
Telex: 275477
Fax: 612-574-5298

Telephone: 0780-62552
Telex: 32268
Cables: "Newage" Stamford

SOURCES

C
O
D
E

	<u>LOCATION</u>	<u>TELEPHONE</u>
CE	CUMMINS ENGINE COMPANY, INC. Columbus, Indiana, USA 47202-3005	
MO	(FORMERLY MOTOROLA ALTERNATORS) DISTRIBUTION DIVISION OF PRESTOLITE ELECTRIC INC. 2101 South Arlington Heights Road Suite 180 Arlington Heights, Illinois, USA 60005	Telephone: 312-952-0445
NE	NEWAGE ENGINEERS LIMITED P.O. Box 17 Barnack Road Stamford, Lincolnshire, England PE9 2NB	Telephone: 0780-62552 Telex: 32268 Cables: " Newage" Stamford
	NEWAGE ENGINEERS PTY. LIMITED 2A Parkes Street, Thornleigh New South Wales 2120 , Australia	Telephone: Sydney 8751933 Telex: 26686
	NEWAGE EQUIPMENT LIMITED P.O.Box 427, Islington, Ontario, Canada M9A 4X4	Telephone: 416-259-3741 Telex: 06-967676
	NEWAGE ENGINEERS G.m.b.H. Archenholzstr 69,2000 Hamburg 74, West Germany	Telephone: 040-712-20-44/45 Telex: 2174397
	P.T. NEWAGE ENGINEERS INDONESIA P.O. Box 70/JAT Ji. Pulogadung 21 Kawasan Industri Pilogadung Jakarta 13001 Indonesia	Telephone: 486654 Telex: 49204 NEWIND IA
	NEWAGE ITALIA S.r.l. Viale Fulvio Testi 56 20125 Milan, Italy	Telephone: 6420-868/64-36-602 Telex: 330541
	NEWAGE NORGE A/S Staalfjera 12 Oslo 9, Norway	Telephone: 25-1635 Telex: 18835

SOURCES

C
O
D
E

LOCATION

TELEPHONE

NEWAGE (FAR EAST) PTE LIMITED

Ghim Moh P.O. Box 1016
Singapore 1027

Telephone: 7776203
Telex: 33404

STAMFORD IBERICA S.A.

Paseo de la Castellano 62
Madrid 1, Spain

Telephone: 261-8558/8566
Telex: 43551

NEWAGE LIMITED

P.O. Box 103
3 Independence Court
Folcroft Industrial Park
Folcroft, Pennsylvania, USA
19032

Telephone: 215-534-9500
Telex: 845276



1400 73rd Avenue N.E.
Minneapolis, Mn 55432

Central Parts Distribution Center

6600 West Broadway
Brooklyn Park, MN 55428
Phone 612-574-8100
Fax 612-574-8180
Telex 282866

World Wide Parts & Service

