



**Parts Catalog**  
**DP Series**  
**DR Series**  
**DZ Series**  
**330 - 450kW**  
**PMG GENERATOR SET**




## General Information

For parts or service, contact the distributor from whom you purchased this equipment or refer to the nearest Authorized Cummins Distributor.

To avoid errors or delays in filling your parts order, always give the full MODEL, SERIAL and ID No. from the nameplate.

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

	<b>AC Generator Set</b> Model _____		
kw	kva	pf	phase
voltage		amps	
duty		overload	
rpm		hz	
class of insulation		pmg voltage	
field amp max		field voltage max	
generator model no.			
voltage regulator model no.			
ID no.			
generator set serial no.			
BS5000		NEMA	

## TABLE OF CONTENTS

	GRID
INTRODUCTION .....	E4
INDEX .....	E5
EXTERNAL ENGINE COMPONENTS - RIGHT SIDE .....	E7
EXTERNAL ENGINE COMPONENTS - LEFT SIDE .....	E9
ENGINE COOLANT HEATER (KIM TYPE).....	E11
ENGINE COOLANT HEATER (WATLOW TYPE).....	E13
GOVERNOR .....	E14
TABLE OF CONTENTS FOR GENERATOR SECTION .....	F8
GENERATOR (SPEC A) .....	F9
GENERATOR (BEGIN SPEC B) .....	F10
STATOR SECTION OF GENERATOR .....	F12
ROTOR SECTION OF GENERATOR .....	F14
PERMANENT MAGNET EXCITER .....	F15
OVERSPEED SENSOR .....	F16
OVERSPEED SWITCH .....	F17
TABLE OF CONTENTS FOR GENERATOR SET CONTROLS .....	G3
GENERATOR SET CONTROL (WITH HOUSING ENCLOSURE) .....	G5
ENGINE CONTROL COMPONENTS (SETS WITH HOUSING ENCLOSURE) ....	G7
GENERATOR CONTROL COMPONENTS (SETS WITH HOUSING ENCLOSURE)..	G9
CONTROL HEATER (SETS WITH HOUSING ENCLOSURE) .....	G10
POTENTIAL TRANSFORMER (SETS WITH HOUSING ENCLOSURE .....	G11
BLANK PAGE .....	G12
WATTMETER (SETS WITH HOUSING ENCLOSURE) .....	G13
GENERATOR SET CONTROL (WITHOUT HOUSING ENCLOSURE).....	G15
ENGINE CONTROL COMPONENTS (SETS WITHOUT HOUSING ENCLOSURE)..	G17
GENERATOR CONTROL COMPONENTS(SETS WITHOUT HOUSING ENCLOSURE)	G19

## Introduction

This Parts Manual applies to the Standard Gen 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, 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 (Engine end) of the Set.

### Set Data Table

MODEL IDENTIFICATION	RATING	RPM RATING	BATTERY VOLTAGE
330.0D_EB - */ # @	330,000 WATTS	1500 RPM	24 VDC
400.0D_EB - */ # @	400,000 WATTS	1800 RPM	24 VDC
400.0D_FA - */ # @	400,000 WATTS	1500 RPM	24 VDC
450.0D_FA - */ # @	450,000 WATTS	1800 RPM	24 VDC

\* - 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.

### Electrical Data Table

*VOLTAGE CODE	VOLTS	HERTZ	WIRE	PHASE	NOTES
H	347/600	60	4	3	
L	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	
Z	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	

+ - The Stators are Reconnectible.

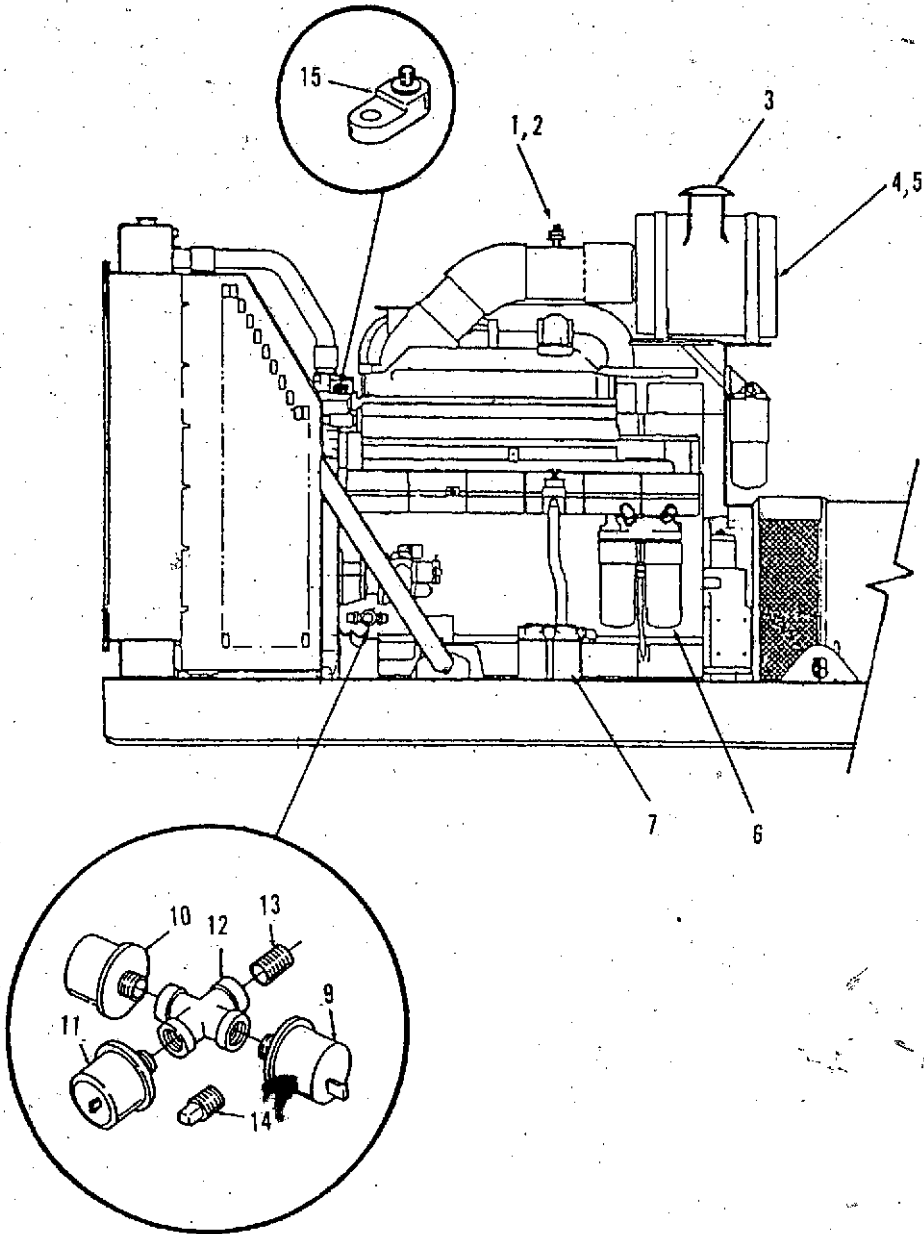
### Engine Replacement Parts

The External Engine Components added or modified during the Generator Set Assembly has been identified in this Parts Manual. For Internal Engine Parts and External Engine Accessories not covered herein; refer to the applicable Cummins Engine Parts Catalog

## Index

	GRID	GRID
Adapter, Generator	F14	
Ammeter - AC	G9, G19	G7, G17
Ammeter - DC	G7, G17	G9, G19
Bracket, End - Generator	F12	G7, G17
Cable, Battery	E9	G9, G19
Cap, Radiator	E9	G7, G17
Control, Engine	G7, G17	G9, G19
Control, Generator	G9, G19	G7, G17
Control, Generator Set	G5, G15	G9, G19
Cooling System	E9	
Disk, Drive - Generator	F14	
Gauge, Pressure - Oil	G7, G17	
Gauge, Temperature - Oil	G7, G17	
Gauge, Temperature - Water	G7, G17	
Generator	E9, E10	
Harness, Wiring - Control (AC)	G9, G19	
Harness, Wiring - Control (DC)	G7, G17	
Harness, Wiring - Control To Engine	G7, G15	
Harness, Wiring - Control to Generator	G15	
Harness, Wiring - Control to Governor	G17	
Harness, Wiring - Meter to Eng Monitor	Gd G17	
Harness, Wiring - Speed Control to Jack	G17	
Harness, Wiring - Fuse Block to Jack	G19	
Heater, Control	G10	
Hose, Radiator	E9	
Housing, Control	G5	
	E9	
	E9	
	F14	
	E7	
	E7	
	E7	
	F12	
	F25	
	E7	
	G7, G17	
	G7, G17	
	G9, G19	
	E9	
	E9	
	G5, G15	
	G11	
	G7, G9, G17, G19	
	G13	

External Engine Components  
Right Side



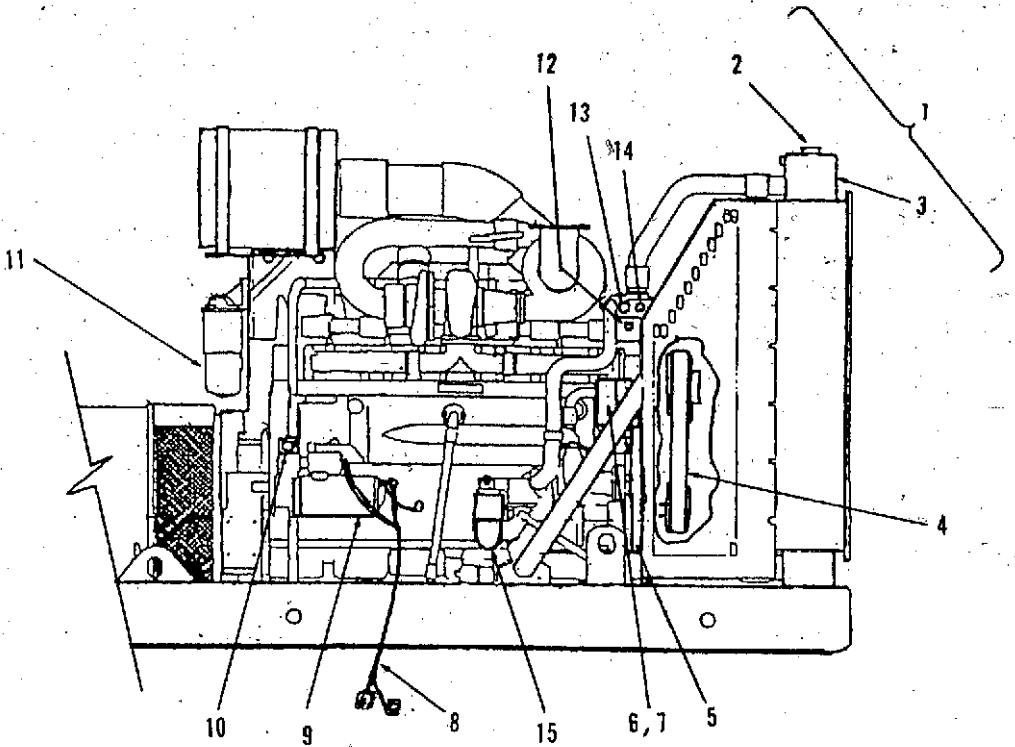
**External Engine Components  
Right Side**

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	140-2228	1	Indicator, Air Restriction (Includes Fitting)	6		2	Filter, Oil (CEC#3313279) [LF670]
2	140-1260	1	Fitting, Male - Hex	7		2	Filter, Fuel with Drain Plug (CEC# 3315847) [FF105D]
3			Cap, Air Cleaner	9	309-0272	1	Switch, Pressure - Oil - Alarm (S5)
	140-1545	1	Outdoor (CEC# 3017003) Heavy Duty (CEC# 3013238)	10	193-0244	1	Sender, Pressure - Oil (E1)
4			Cleaner, Air	11	309-0169	1	Switch, Pressure - Oil - Shutdown (S1)
	140-2264	1	Indoor (CEC# 3028847)	12	505-0763	1	Cross, Pipe
			Outdoor (CEC# 3017002)	13	505-0104	1	Nipple, Pipe - Close
	140-2301	1	Heavy Duty (CEC# 3056713)	14	505-0057	1	Plug, Pipe - Square Head
5			Element - Indoor/Outdoor (CEC# 3018042) [AF872M]	15	309-0269	1	Switch, Temperature - Low Engine Temperature (S4)
			Elements - Heavy Duty				
			Primary (CEC#3060220)				
			Secondary (CEC# 3060221)				

**NOTES:**

(CEC#) Numbers in Parans are Cummins Engine Company Identification.  
 [ ] Numbers in Brackets are Fleetwood Inc. Identification.

External Engine Components  
Left Side





## External Engine Components Left Side

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	Ref		● Cooling System - Radiator (Select replaceable items as required)	8			Cable, Electrical
			Spec A		416-0632	1	Ground
			D EB (BEARWARD # 53902-3PA)		416-0636	1	Battery (Positive)
			D FA (BEARWARD # 53903-3P)		416-0639	1	Battery (Negative)
			Spec B		416-0473	1	Battery (Jumper)
		1	D EB (BEARWARD # 53902-3PA)	9	191-1588	1	Starter (24 VDC)
		1	D FA (BEARWARD # 53903-3P)	10	307-2621-02	1	Switch, Magnetic
		1	Spec B	11	122-0526	1	Filter, Oil - Bypass
		1	D EB (BEARWARD # 53902-2P)	12			Switch & Bushing
		1	D FA (BEARWARD # 53903-3PA)		309-0436	1	Switch, Thermostatic (S6) (Prealarm)
	503-0998	4	Clamp, Hose		505-0117	1	Bushing, Reducer - Flush (1/2NPT x 3/8NPT)
	503-0625	2	Hose - Upper				Sender & Bushing
	130-3383	2	Tube, Water - Upper	13			Sender, Temperature (E2)
	503-0885	4	Clamp, Hose		192-0375	1	Bushing, Reducer (3/4NPT x 1/2NPT)
	503-0856	2	Hose - Lower		505-0021	1	Switch & Bushing
	130-3384	2	Tube, Water - Lower				Switch, Thermostatic (S2) (Shutdown)
2	130-3395	1	Cap, Radiator (10 PSI)	14			Bushing, Reducer - Flush (1/2NPT x 3/8NPT)
3			Radiator (Excludes Cap)		309-0437	1	*Filter, Water - W/Corrosion Inhibiting Chemical DCA4
			Spec A		505-0117	1	Service for 20-40 Gal Cooling System (CEC# 3318157) [WF2070]
	130-3282	1	D EB				Service for 40-60 Gal Cooling System (CEC# 3315116) [WF2071]
	130-3283	1	D FA	15			Pre-Charging for 20-90 Gal Cooling System (CEC# 3318319) [WF2076]
			Spec B				
	130-3398	1	D EB				
	130-3399	1	D FA				
4	511-0162	1	Belt, Drive - Fan				
5	511-0161	1	Belt, Drive - Alternator				
6	191-1846-01	1	Alternator (35 Amp, 24 VDC)				
7	130-3317-01	1	Pulley, Drive				

**NOTES:**

● Cooling Systems Manufactured by:

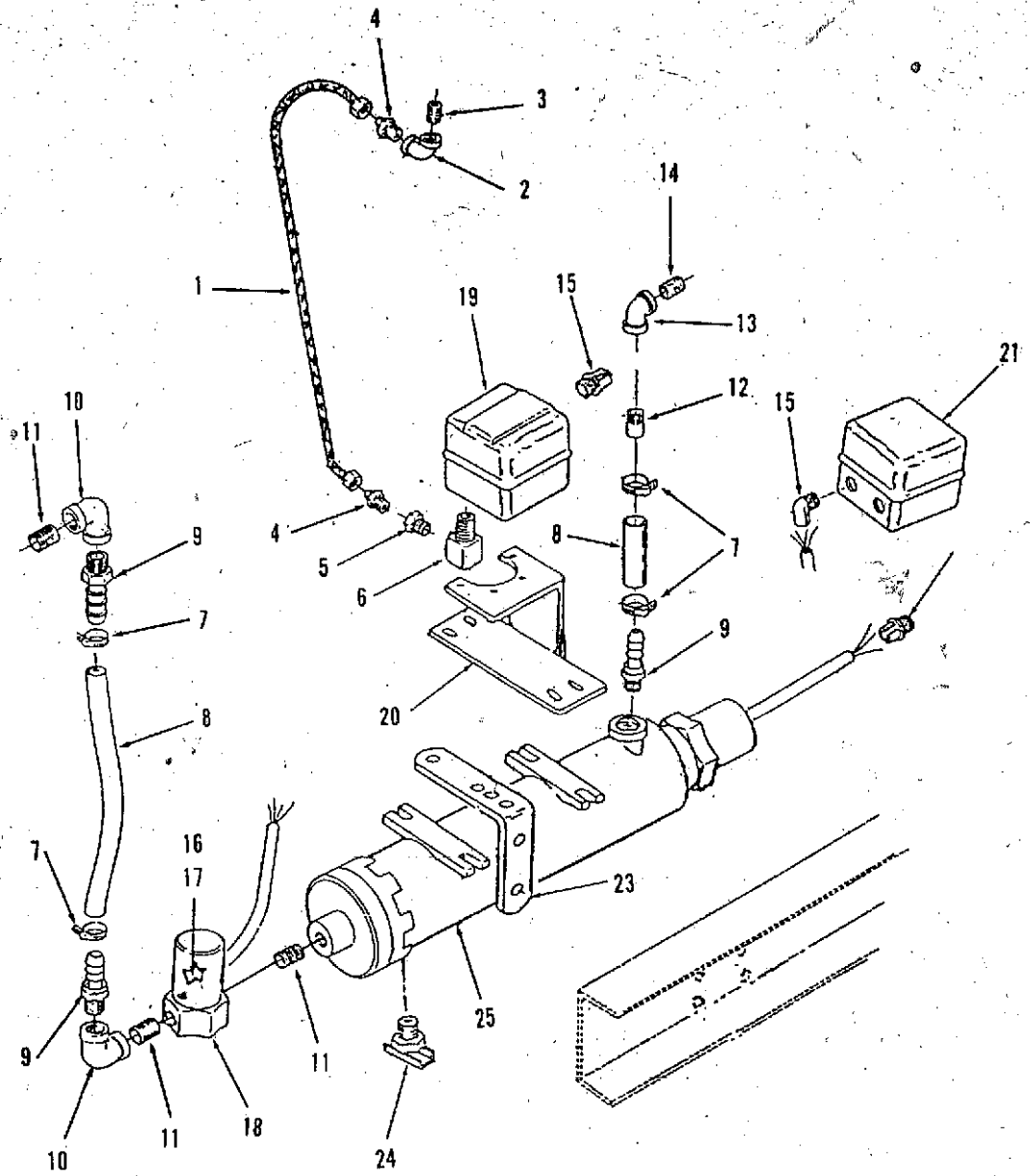
BEARWARD ENGINEERING LTD  
Main Road, Far Cotton  
Northampton, England NN4 9HU

USA Office:  
BEARWARD RADIATOR  
Route 222 Box 187  
Fleetwood, PA 19522  
215-944-6017

\* Replacement cartridges recommend and should be used in lieu of the Original Engine Factory Installed Item which contains a Pre-Charge amount of DCA or DCA4 Chemical. Replacement with Pre-charge Cartridge may overload the Cooling System and cause problems or failure of the Set.

(CEC#) Numbers in Parans are Cummins Engine Company Identification.  
[ ] Numbers in Brackets are Fleetwood Inc. Identification.

# Engine Coolant Heater (K1m Type)

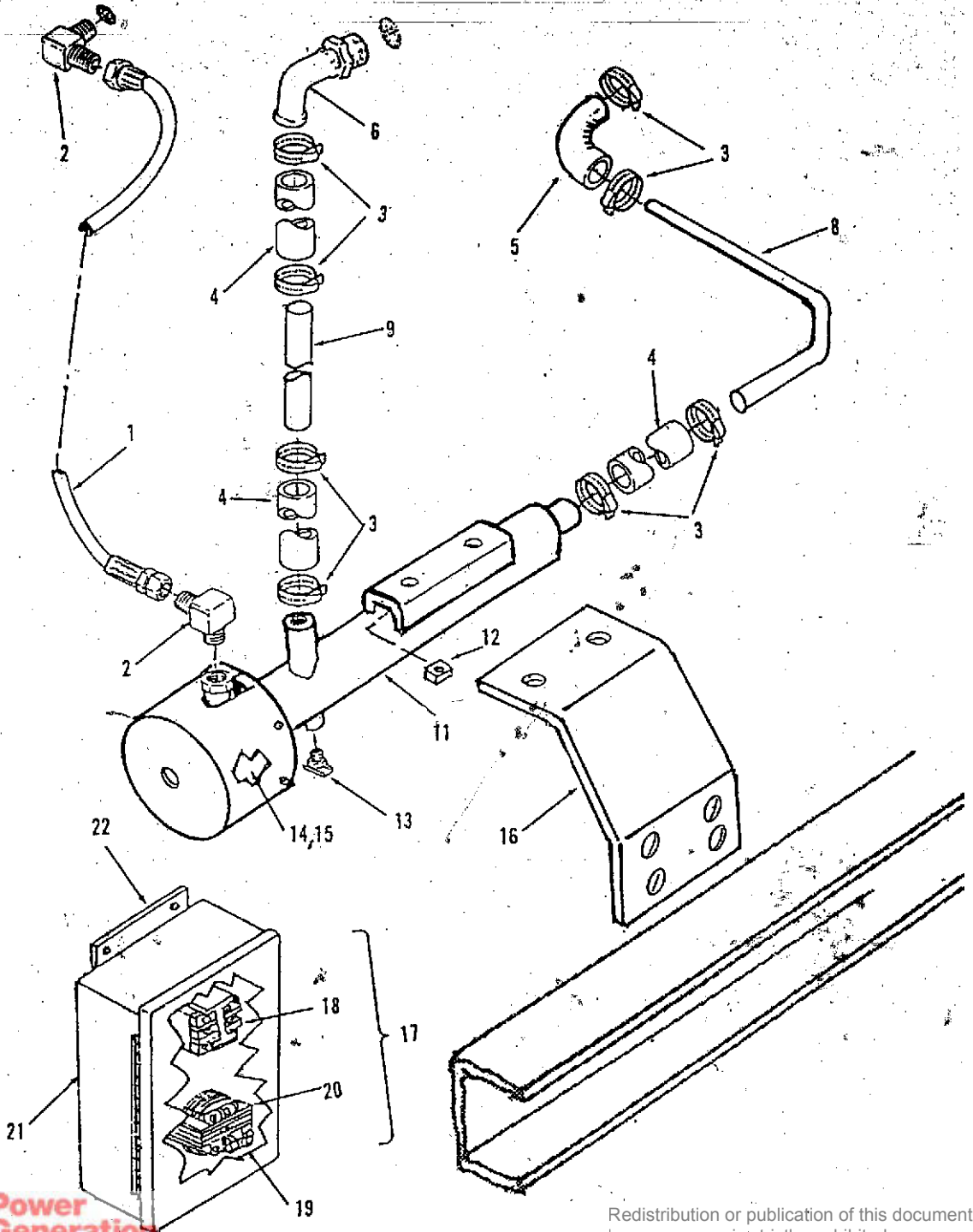


## Engine Coolant Heater (Kim Type)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	501-0199	1	Line, Fuel	20	333-0224	1	Bracket, Support
2	505-0037	1	Elbow, Pipe - 90°				Attaching Parts for Bracket
3	505-0098	1	Nipple, Pipe - Close		800-0007	4	Screw, Cap - Hex Head (1/4-20 x 1")
4	502-0193	2	Connector				Washer, Lock - Spring (1/4"
5	505-0007	1	Bushing, Reducer - Hex		850-0040	4	Nut, Hex (1/4-20)
6	502-0054	1	Elbow, Pipe - Street, 90°		862-0001	4	Contactor
7	503-0429	4	Clamp, Hose	21			230 VAC, 3 Pole
8	503-1411	AR	Hose, Bulk		307-1460	1	460 VAC, 3 Pole
9	505-0759	3	Adapter, Hose to Pipe		307-1164	1	Bracket, Mounting
10	505-0041	2	Elbow, Pipe - 90°	23	130-1375	2	Attaching Parts for Bracket
11	505-0004	3	Nipple, Pipe - Close				Screw, Cap - Hex Head (3/8-16 x 1-1/2")
12	505-0324	1	Nipple, Pipe - Half		800-0052	2	Nut, Hex (3/8-16)
13	505-0132	1	Elbow, Pipe - 90°				Cock, Drain
14	505-0102	1	Nipple, Pipe - Close		862-0003	2	Heater, Electrical
15	331-0027	6	Clamp, Cable	24	504-0003	1	4000 Watt, 208 VAC - 1 Phase
16	323-0957	2	Nut, Wire	25			4000 Watt, 208 VAC - 3 Phase
17	332-0149	8	Lug, Terminal		333-0143	1	4000 Watt, 240 VAC - 1 Phase
18			Switch, Thermostatic		333-0164	1	4000 Watt, 240 VAC - 3 Phase
	309-0304	1	80° - 100° Fahrenheit		333-0138	1	4000 Watt, 277 VAC - 1 Phase
	309-0490	1	100° - 120° Fahrenheit		333-0190	1	4000 Watt, 380 VAC - 1 Phase
	309-0253	1	120° - 140° Fahrenheit		333-0150	1	4000 Watt, 380 VAC - 3 Phase
19	309-0307	1	Switch, Pressure - Oil		333-0183	1	4000 Watt, 480 VAC - 1 Phase
			Attaching Parts for Switch		333-0174	1	4000 Watt, 480 VAC - 3 Phase
	812-0079	4	Screw, Machine - Round Head (#8-32 x 1/2")		333-0161	1	4000 Watt, 480 VAC - 1 Phase
	854-0007	4	Washer, Lock - ET (#8)		333-0144	1	4000 Watt, 480 VAC - 3 Phase

AR : As Required, Bulk Hose available in Multifoot lengths.

# Engine Coolant Heater (Matlow Type)



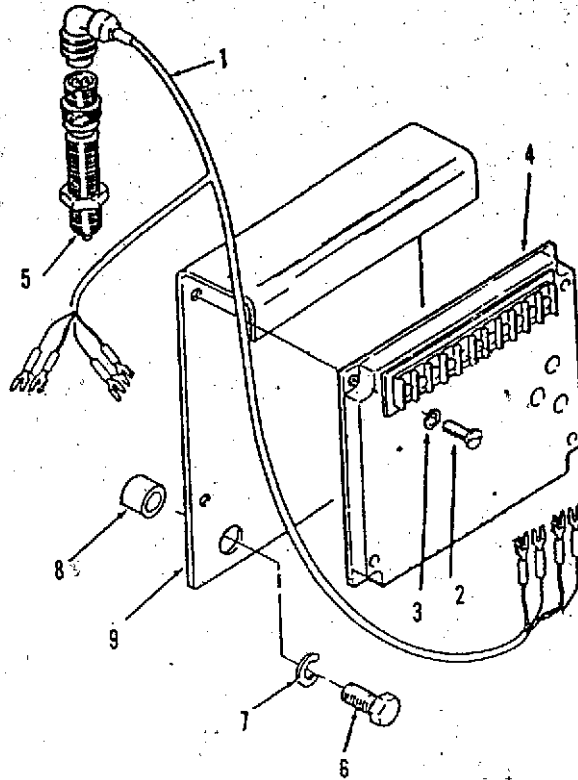
**Power  
Generation**

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## Engine Coolant Heater (Wattow Type)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	501-0537-07	1	Hose Assembly - Oil Pressure	18	130-3189	1	Bracket, Mounting - Heater
2	502-1043-08	2	Elbow, Pipe - Male, 90°				Attaching Parts for Brackets
3	503-1603	8	Clamp, Hose		800-0210	4	Screw, Cap - Hex Head (3/8-16 x 1-1/4")
4	503-1602	3	Hose, Rubber				Washer, lock - Spring (3/8")
5	503-1604	1	Elbow, Hose - Rubber		850-0103	4	Nut, Hex - Brass (3/8-16)
6	502-1049		Coupling, Hose - Elbow, 45°				Switch, Control - Heater
8	130-3269	1	Tube, Water		871-0028	4	(Includes Contactor, Step down Transformer w/ Fuse [480V Unit Only], Ground lug and Box)
9	130-3288	1	Tube, Water	17			120 VAC
11			Heater, Electrical (Includes Thermostat, Oil Press Switch, Drain Cock and Mounting Nuts)				480 VAC
	333-0413-08	1	4000 Watt, 208 VAC				Attaching Parts for Switch
	333-0389-02	1	4000 Watt, 240 VAC		309-0567-01	1	Screw, Cap - Hex Head (1/4-20 x 3/4")
	333-0389-04	1	4000 Watt, 480 VAC (Includes Heater Control Switch Unit)		309-0567-02	1	Washer, lock - Spring (1/4")
	333-0389-06	1	4000 Watt, 120 VAC (Includes Heater Control Switch Unit)		800-0222	4	Nut, Hex (1/4-20)
	800-0222	2	Attaching Parts for Heater Screw, Cap - Hex Head (1/4-20 x 3/4")	18		1	Contactor (37.5 AMP, 3 Pole SPST, 120 VAC Coil)
	850-0101	2	Washer, lock - Spring (1/4")	19		1	Fuse (1 AMP)
	402-0608	2	Isolator, Vibration	20		1	Transformer, Step-down (240/480VAC Pri, 120VAC Secondary, with Fuse clips on output Terminal Box, Electrical)
	402-0609	2	Isolator, Vibration				Bracket, Mounting - Switch
12		2	Nut, Special (Supplied with Heater)	21		1	Attaching Parts for Brackets
13	504-0003	1	Cock, Drain (1/4 NPT)	22	333-0390	1	Screw, Cap - Hex Head (3/8-16 x 1-1/4")
14		1	Thermostat				Washer, lock - Spring (3/8")
15		1	Switch, Pressure - Oil		800-0210	2	Nut, Hex - Brass (3/8-16)
					850-0103	2	
					871-0028	2	

# Electric Governor



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	338-1777	1	Harness, Wiring	5	151-0411	1	Pickup, Magnetic
2	813-0103	4	Screw, Machine - Round Head (#10-32 x 3/4")	6	800-0151	2	Screw, Cap - Hex Head (3/4-10 x 1")
3	870-0131	4	Nut, Self-locking, Hex (#10-32)	7	850-0079	2	Washer, Lock - Spring (3/4"
4	151-0637	1	Controller, Governor	8	370-4040	2	Spacer, Sleeve
				9	150-2007	1	Bracket, Mounting

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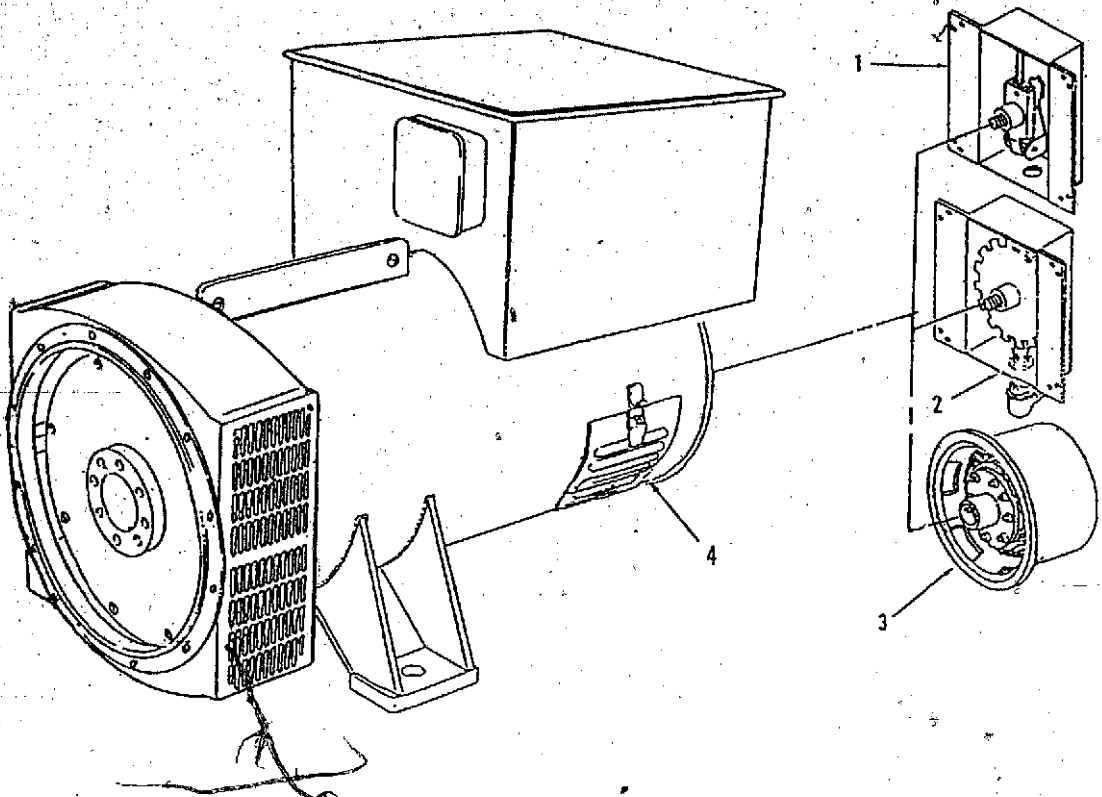
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**TABLE OF CONTENTS**  
**GENERATOR SECTION**

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GENERATOR - Spec A .....	32
GENERATOR - Spec B .....	33
STATOR SECTION - SAE 0 / SAE 18, Frame 5 .....	35
ROTOR SECTION - SAE 0 / SAE 18, Frame 5 .....	37
PERMANENT MAGNET EXCITER .....	38
OVERSPEED SENSOR .....	39
OVERSPEED SWITCH .....	40

## Generator Spec A

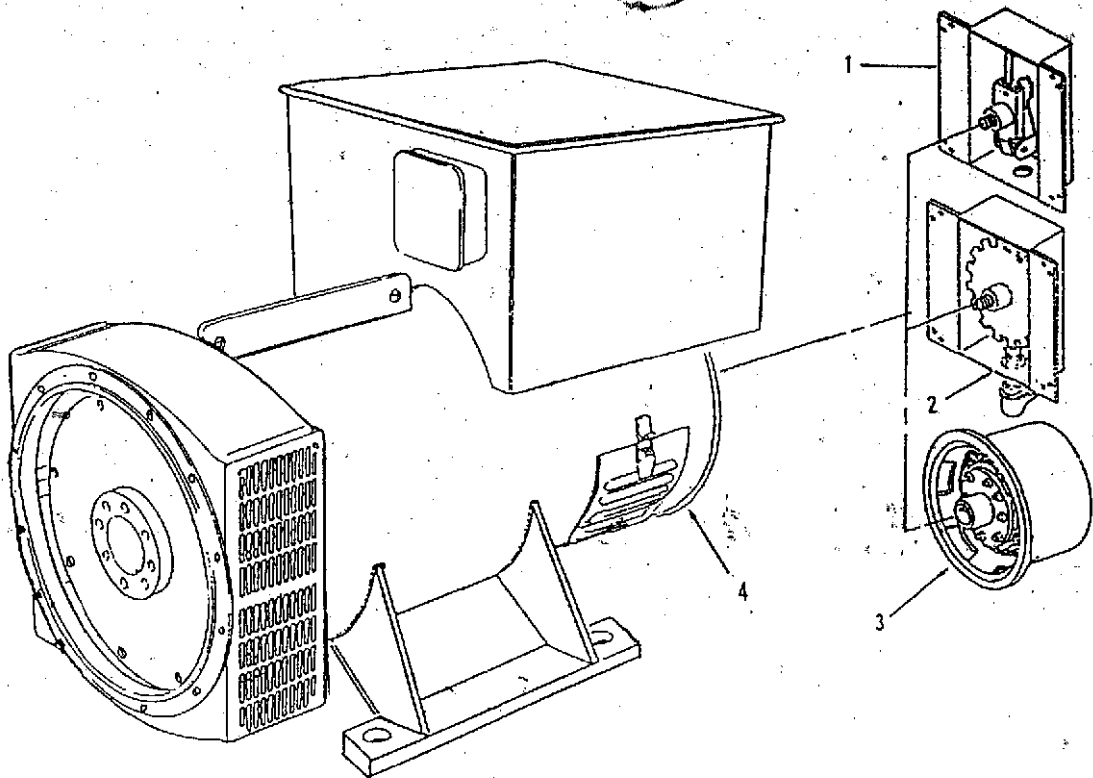


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1		1	Module, Overspeed Switch (See Separate Page for Parts)	4	Note 1		Generator (Spec A) (See Separate pages for Part Attaching Parts)
	821-2045	4	Screw, Self-locking - Hex Hd (M8 x 1.25 x 16mm)		800-0579	2	Screw, Cap - Hex Head (1-8 x 2-3/4")
2		1	Module, Overspeed Sensor (See Separate Page for Parts)		850-0087	2	Washer, Lock - Spring (1")
	821-2045	4	Screw, Self-locking - Hex Hd (M8 x 1.25 x 16mm)		526-0084	2	Washer, Flat (1")
3		1	Module, Perm. Magnet Exciter (See Separate Page for Parts)		862-0018	2	Nut, Hex (1-8)
	249-0298	4	Screw, Cap - Hex Head (M8 x 16mm)		800-0558	12	Adapter to Flywheel Housing Screw, Cap - Hex Head, Gr 8 (1/2-13 x 1-1/2")
	249-0218	4	Washer, Lock (M8)		850-0060	12	Washer, Lock - Spring (1/2")
	249-0315	4	Clamp, Retaining		800-0530	6	Drive Disc to Flywheel Screw, Cap - Hex Head, Gr 8 (5/8-11 x 1-1/4")

**Note 1:** For replacement Generator please supply the complete Gen Set nameplate and Generator nameplate data.



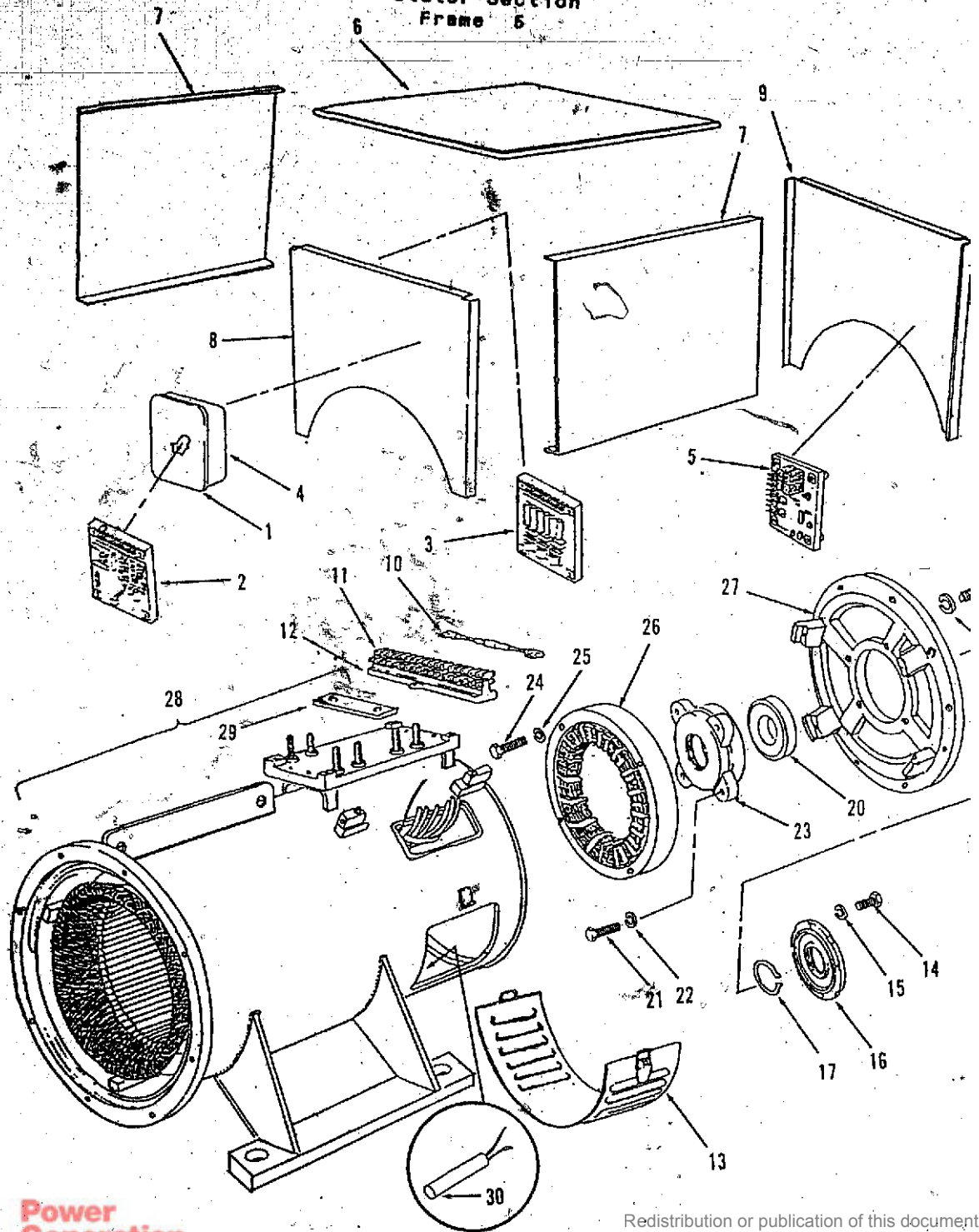
**Generator  
Begin Spec B**



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1		1	Module, Overspeed Switch (See Separate Page for Parts) Attaching Parts	4	Note 1		Generator (Begin Spec B) (See Separate pages for Part Attaching Parts
	821-2045	4	Screw, Self-locking - Hex Hd (M8 x 1.25 x 16mm)		800-0579	4	Generator to Chassis Screw, Cap - Hex Head (1-8 x 2-3/4")
2		1	Module, Overspeed Sensor (See Separate Page for Parts) Attaching Parts		850-0087	4	Washer, Lock - Spring (1")
	821-2045	4	Screw, Self-locking - Hex Hd (M8 x 1.25 x 16mm)		526-0084	4	Washer, Flat (1")
3		1	Module, Perm. Magnet Exciter (See Separate Page for Parts) Attaching Parts		862-0018	4	Nut, Hex (1-8)
	249-0298	4	Screw, Cap - Hex Head (M8 x 16mm)		800-0558	12	Adapter to Flywheel Housing Screw, Cap - Hex Head, Gr (1/2-13 x 1-1/2")
	249-0218	4	Washer, Lock (M8)		850-0060	12	Washer, Lock - Spring (1/2 Drive Disc to Flywheel)
	249-0315	4	Clamp, Retaining		800-0530	6	Screw, Cap - Hex Head, Gr (5/8-11 x 1-1/4")

Note 1: For replacement Generator please supply the complete Gen Set nameplate and Generator nameplate data  
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Generator  
Stator Section  
Frame 5



**Power  
Generation**

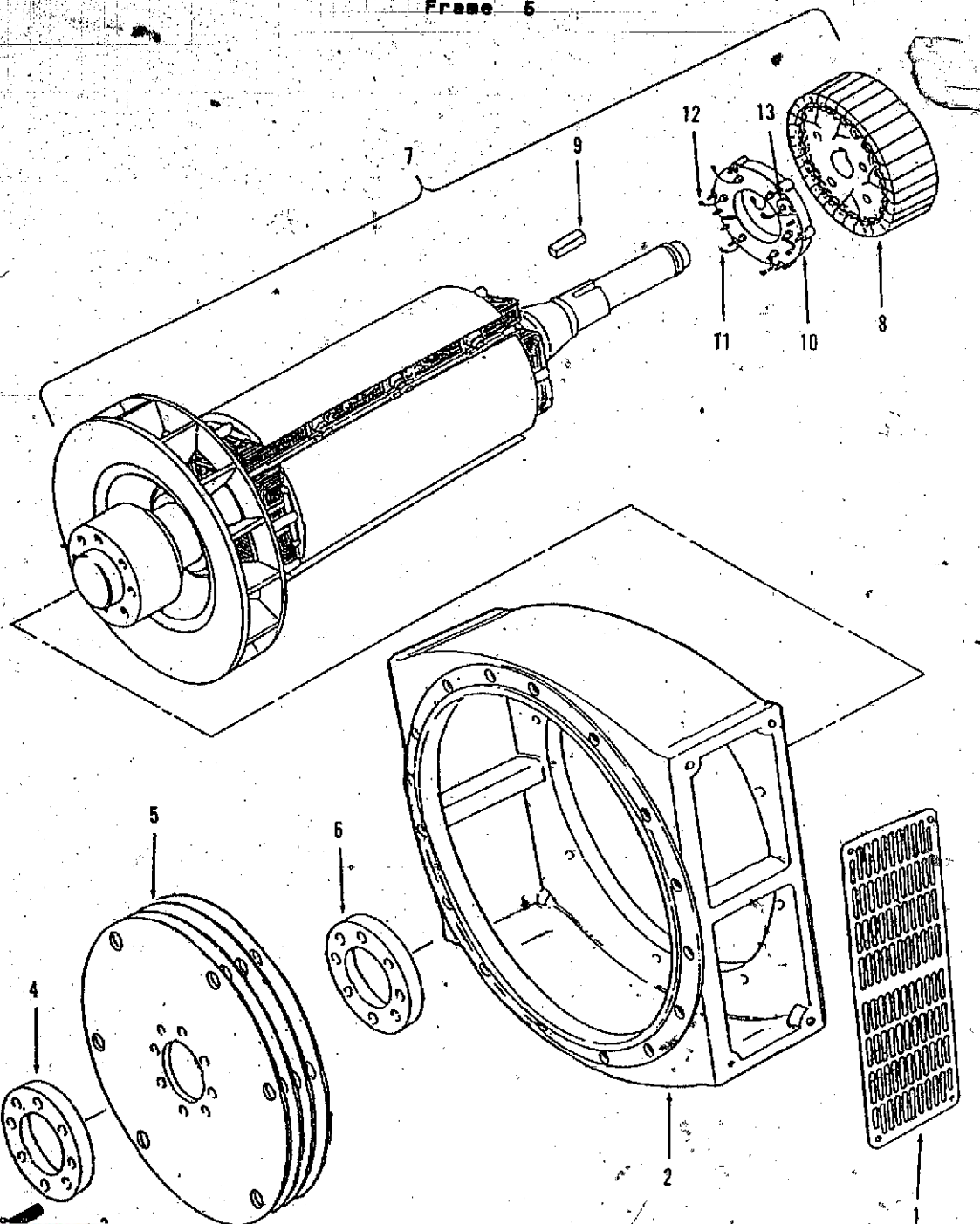
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**Generator  
Stator Section  
Frame 5**

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	249-0631	2	Lid	14	249-0201	8	Screw, Cap - Hex Head (M10 x 35mm)
	249-0304	4	Attaching Parts	15	249-0202	8	Washer, Lock - Spring (M10)
2	305-0770	1	Screw, Captive	16	249-0242	1	Cap, Bearing - Outer
	305-0778	1	Regulator, Voltage	17	249-0232	1	Circlip
			Standard 1 Phase u/w PMG	18	249-0243	4	Screw, Cap - Hex Head (M10 x 30mm)
			3 Phase (Used with PMG Exciter & 3 Phase Sensing Module)	19	249-0202	4	Washer, Lock - Spring (M10)
	305-0803	1	Manual	20	249-0241	1	Bearing, Ball
	249-0398	4	Attaching Parts	21	249-0245	4	Screw, Cap - Hex Head (M10 x 50mm)
3	249-0564	1	Pillar, Threaded	22	249-0202	4	Washer, Lock - Spring (M10)
			Module, 3 Phase Sensing	23	249-0244	1	Cap, Bearing - Inner
	249-0398	4	Attaching Parts	24	249-0256	6	Screw, Cap - Hex Head (M6 x 65mm)
4	249-0395	2	Pillar, Threaded	25	249-0212	6	Washer, Lock - Spring (M6)
5	300-3209-02	1	Box	26	249-0255	1	Stator, Exciter
			Module, Frequency Detection	27	249-0272	1	Bracket, End
	249-0295	4	Attaching Parts	28	NFS	1	Stator, Generator (Includes Terminal Studs and Links)
	249-0288	4	Screw, Cap - Hex Head (M5 x 35mm)				Attaching Parts Stator to Adapter
	249-0287	4	Washer, Plastic (M5)				Screw, Cap - Hex Head (M12 x 35mm)
6	NFS	1	Nut, Hex - Nylon (M5)				Washer, Lock - Spring (M12)
7	NFS	2	Lid		249-0205	8	Link, Terminal
8	NFS	1	Panel, Side		249-0200	4	Heater, Electrical - Replace
9	NFS	1	Panel, Front	29	249-0621	1	70 Watt, 120 VAC
10	249-0428	1	Panel, Rear	30	249-0622	1	70 Watt, 240 VAC
			Resistor (Voltage Code H Only)				
11	249-0289	3	Block, Terminal - AUX				
12	249-0424	1	Base, Terminal - AUX				
13	249-0408	2	Grille, Inlet - Air				

NFS - Not For Sale

Generator  
Rotor Section  
SAE 0 / SAE 18  
Frame 5

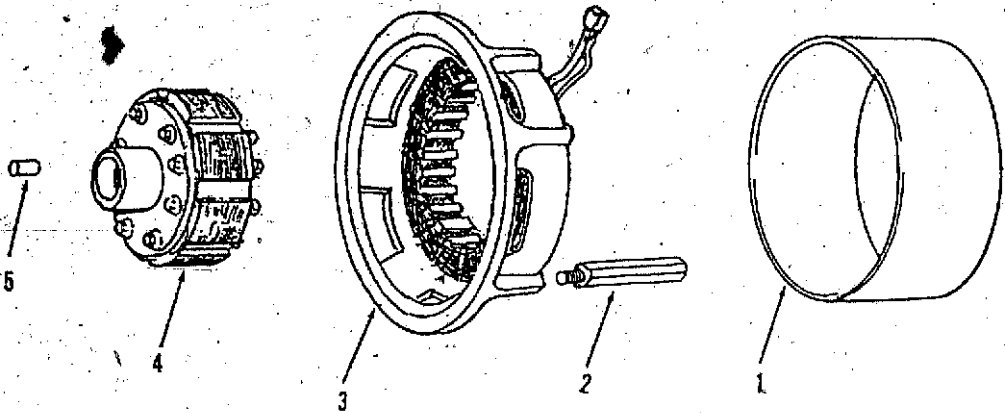


**Generator  
Rotor Section  
SAE 0 / SAE 18  
Frame 5**

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	249-0408	2	Screen, Air - Adapter	7	NFS	1	Rotor, Generator (Includes Exciter, Key, and Rectifier Assemblies)
	249-0294	12	Attaching Parts Screw, Cap - Hex Head (M5 x 12mm)	8	249-0522	1	Rotor, Exciter (Does Not Include Rectifier Assy)
	249-0307	12	Washer, Lock - Spring (M5)	9	249-0271	1	Key
	249-0365	12	Washer, Flat (M5)	10	249-0237	1	Rectifier Assy (Includes Diodes)
2	249-0322	1	Adapter, Generator, SAE Q	11	249-0239	3	Diode, Forward Polarity
3	249-0437	8	Screw, Cap - Hex Head (M20 x 75mm)	12	249-0238	3	Diode, Reverse Polarity
4	249-0230	1	Plate, Pressure	13	249-0240	1	Varistor
5	249-0276	4	Disc, Drive SAE 18				
6	249-0277	1	Spacer				

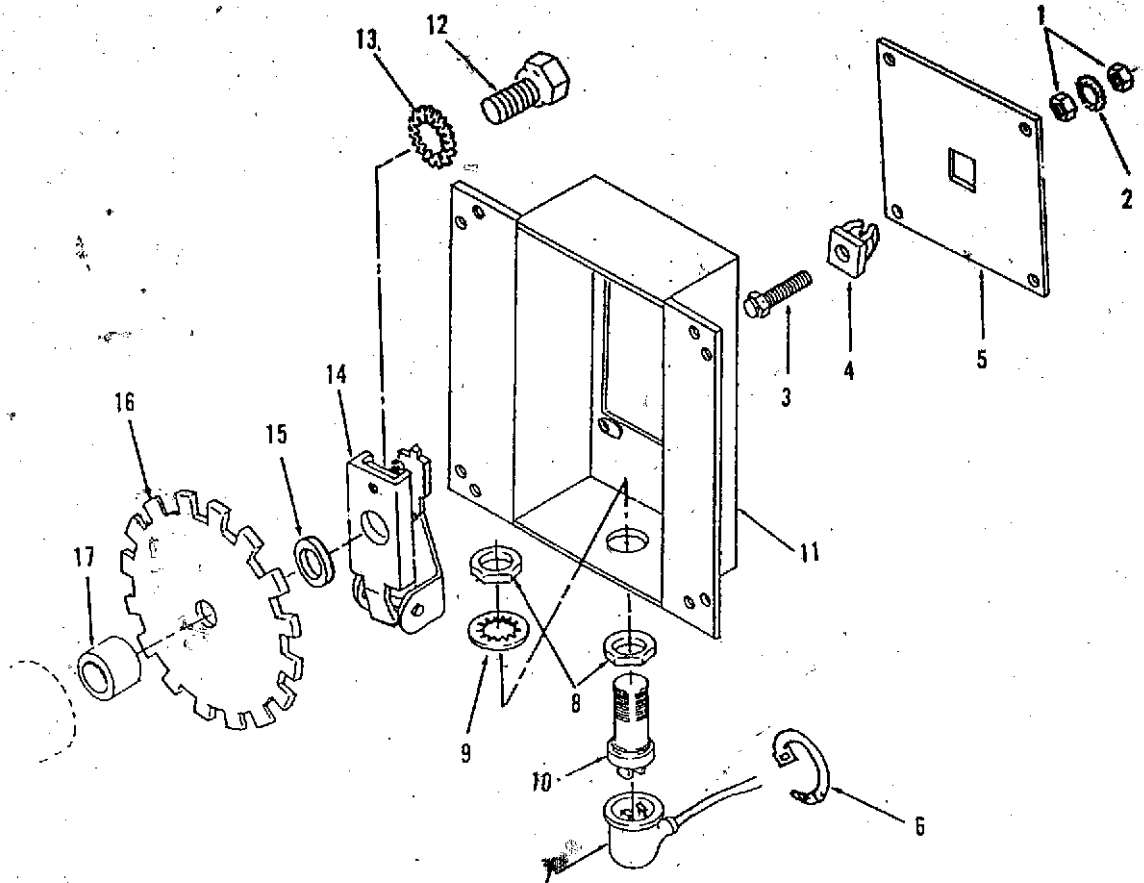
NFS - Not For Sale

## Generator Permanent Magnet Exciter



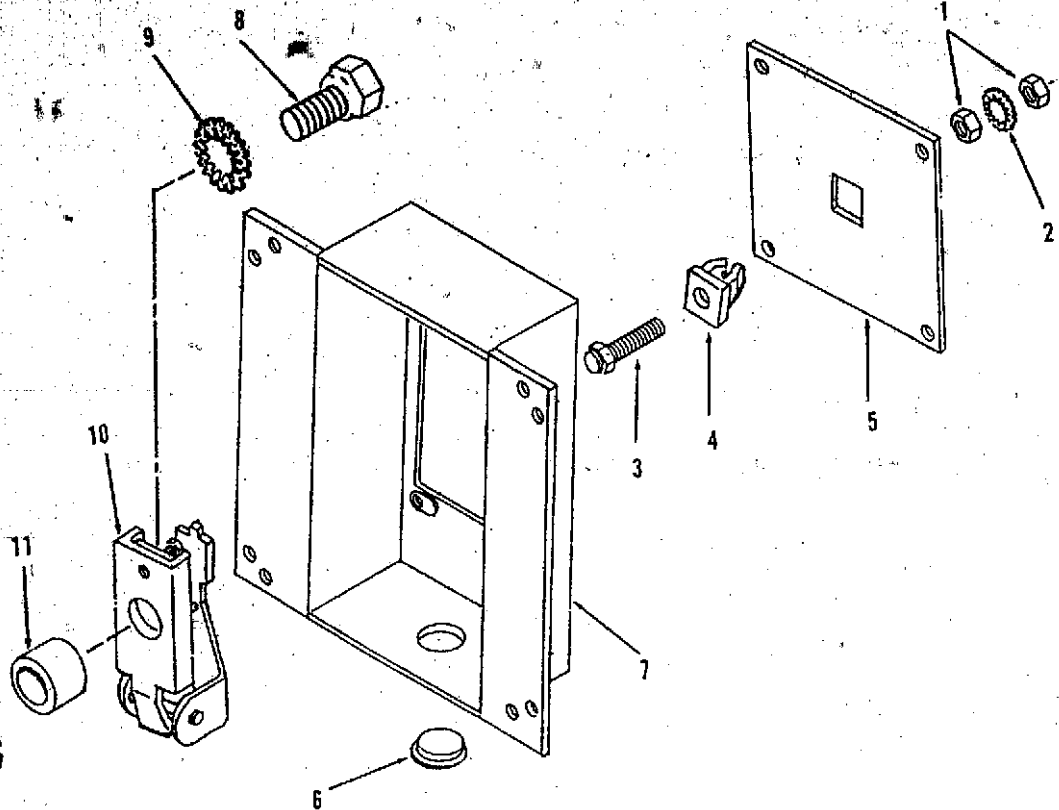
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	249-0497	1	Cover.	4	249-0427	1	Rotor, Exciter
	249-0294	3	Screw, Cap - Hex Head (M5 x 12mm)		249-0644	1	Frame 2, 3, 4 Generators
	249-0307	3	Washer, Lock (MS)			1	Frame 5, 6, 7 Generators
2	249-0498	3	Pillar, Threaded		249-0399	1	Attaching Parts for Rotor
3	249-0426	1	Stator, Exciter with Frame		249-0202	1	Bolt
				5	249-0313	1	Washer, Lock (M10)
							Pin, Dowel

## Generator Overspeed Sensor



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	852-0001	2	Nut, Hex (1/4-20)	9	854-0031	1	Washer, Lock - IT (3/4")
2	853-0013	1	Washer, Lock - EIT (1/4")	10	150-1406	1	Sensor, Speed
3	150-0723	1	Point, Overspeed	11	150-2207	1	Cover, Overspeed Switch
4	870-0250	1	Nut, Insulated	12	718-1058	1	Screw, Cap - Hex Head (M10 x 1.5 x 45mm)
5	150-2206	1	Plate, Mounting	13	856-0010	1	Washer, Lock - EIT (3/8")
	821-0005	4	Screw, Self-locking - Hex (#10-32 x 1/2")	14	150-0956	1	Switch, Overspeed
6	332-1445	5	Tie, Cable	15	370-4031	1	Spacer, Sleeve
7	338-2189-02	1	Harness, Wiring	16	150-2204	1	Wheel - Speed Sensor
8	808-0011	2	Nut, Jam - Hex (3/4-16)	17	370-4032	1	Spacer, Sleeve

## Generator Overspeed Switch



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	862-0001	2	Nut, Hex (1/4-20)	6	517-0136	1	Plug, Plastic
2	853-0013	1	Washer, Lock - EIT (1/4")	7	150-2207	1	Cover, Overspeed Switch
3	150-0723	1	Point, Overspeed	8	718-1058	1	Screw, Cap - Hex Head (M10 x 1.5 x 45mm)
4	870-0250	1	Nut, Insulated	9	856-0010	1	Washer, Lock - EIT (3/8")
5	150-2206	1	Plate, Mounting	10	150-0956	1	Switch, Overspeed
	821-0005	4	Screw, Self-locking - Hex (#10-32 x 1/2")	11	370-4032	1	Spacer, Sleeve



**TABLE OF CONTENTS**

**SET CONTROLS**

**GENERATOR SET CONTROL (WITH HOUSING ENCLOSURE) ..... 53**

**ENGINE CONTROL COMPONENTS (SETS WITH HOUSING ENCLOSURE) .... 55**

**GENERATOR CONTROL COMPONENTS (SETS WITH HOUSING ENCLOSURE).. 57**

**CONTROL HEATER (SETS WITH HOUSING ENCLOSURE) ..... 58**

**POTENTIAL TRANSFORMER (SETS WITH HOUSING ENCLOSURE ..... 59**

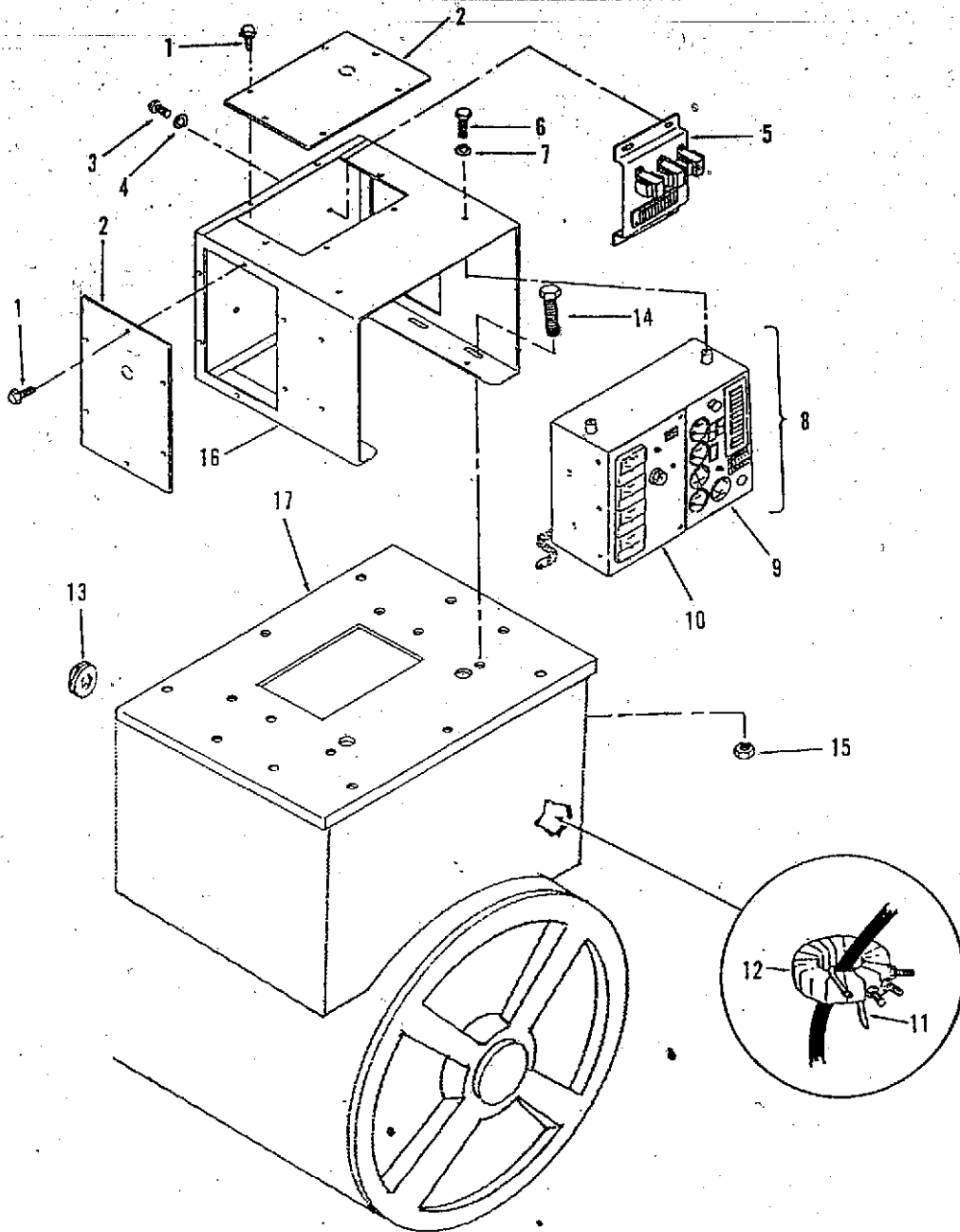
**WATTMETER (SETS WITH HOUSING ENCLOSURE) ..... 61**

**GENERATOR SET CONTROL (WITHOUT HOUSING ENCLOSURE)..... 63**

**ENGINE CONTROL COMPONENTS (SETS WITHOUT HOUSING ENCLOSURE).. 65**

**GENERATOR CONTROL COMPONENTS(SETS WITHOUT HOUSING ENCLOSURE) 67**

Generator Set Control  
(With Housing Enclosure)

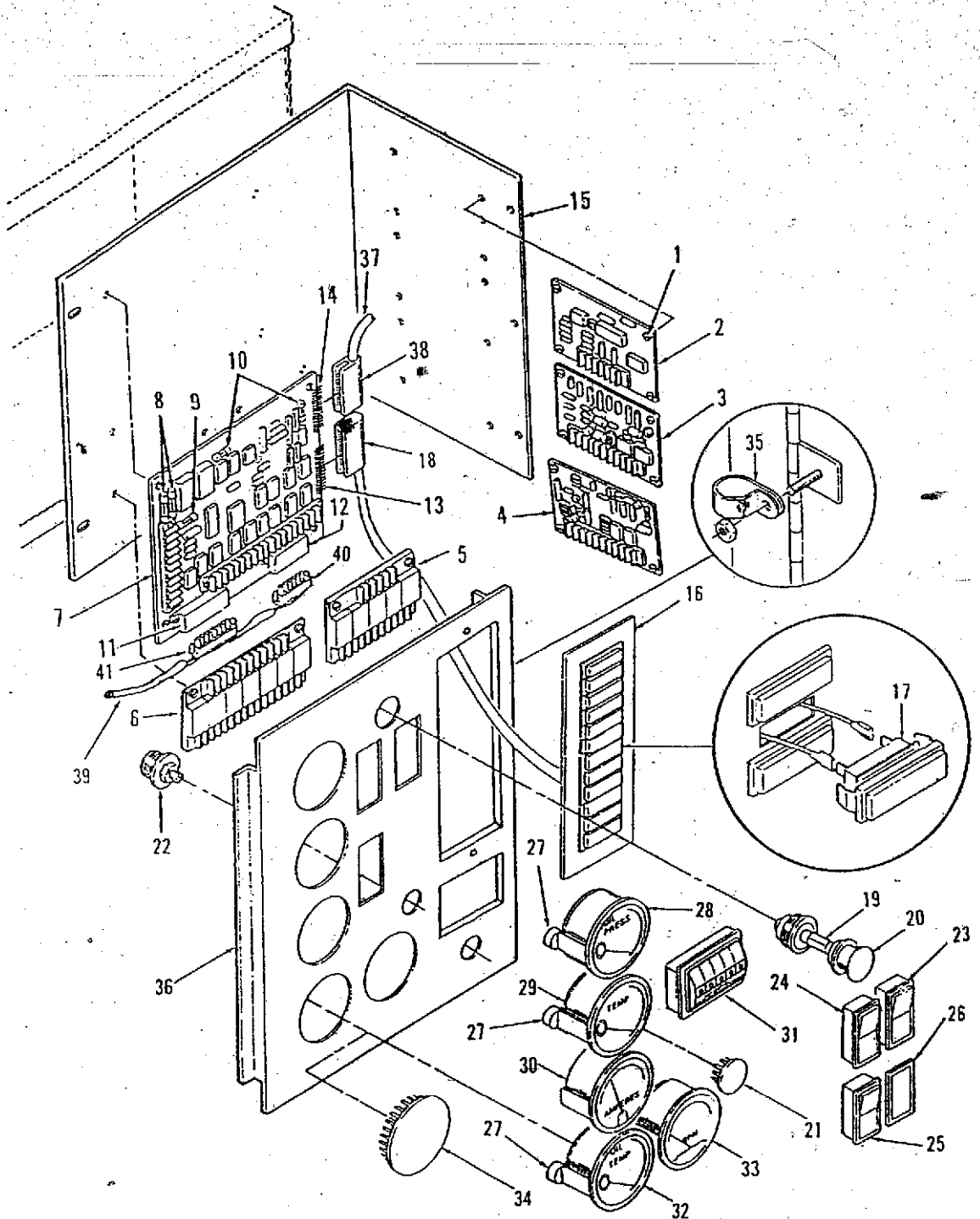


## Generator Set Control (With Housing Enclosure)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	821-0005	18	Screw, Self-locking - Hex (#10-32 x 1/2")	11	332-0941	6	Tie, Cable Transformer, Current - Recordible
2	NFS	3	Panel, Box - Control	12			
3	812-0156	4	Screw, Machine - Round Head (1/4-20 x 1/2")		303-1794-05	3	500:5 Ratio; 400kW Voltage Code H.
4	850-0040	4	Washer, lock - Spring (1/4")		302-1794-10	3	600/1200:5 Ratio; 330kW Voltage Code Z.
5	NFS	1	Transformer Assy, Potential (See Separate Page for Components)		302-1794-11	3	750/1500:5 Ratio; 400kW Voltage Codes L & Z, 450I
6	800-0051	4	Screw, Cap - Hex Head (5/16-18 x 1/2")		302-1794-12	3	1000/2000:5 Ratio; 450kW Voltage Code L.
7	850-0045	4	Washer, Lock - Spring (5/16")	13	508-0051	1	Grommet
8	NFS	1	Control, Set (See item 9 & 10 for Components)	14	870-0212	6	Nut, Self-locking - Hex
9	NFS	1	Control, Engine (See Separate Page for Components)	15	821-0018	6	Screw, Self-locking - Hex Head (1/4-20 x 5/8")
10	NFS	1	Control, Generator (See Separate Page for Components)	16	NFS	1	Housing, Control
				17	NFS		Adapter, Housing to Terminal Box

NFS - Not For Sale

# Engine Control Components (Sets with Housing Enclosure)

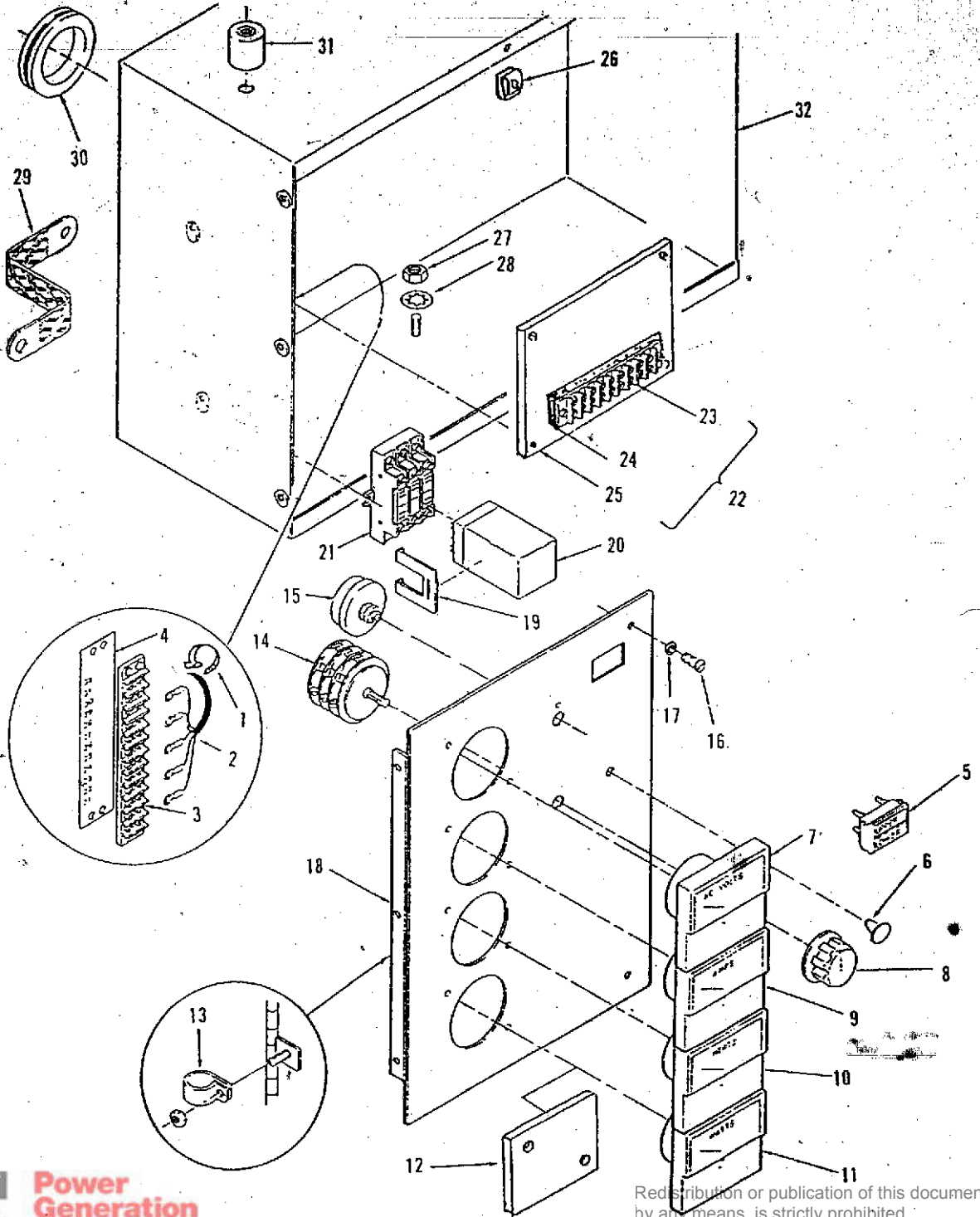


## Engine Control Components (Sets with Housing Enclosure)

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	322-0369-02	12	Lamp, Incandescent - 1/3 Watt 28 VDC
2	300-2899	1	Board, Time Delay, Start/Stop - 24 VDC (A15)	18	323-1310	1	Housing, 13 Pin (J3)
3			Board, Magnetic Sensor, Start Disconnect/Over Speed Sensor (A16)	19	323-1302	13	Contact, Pin
	300-2903	1	Standard	19	322-0017	1	Lamp, Incandescent - 28 VDC (DS11)
	300-2904	1	Precision	20	322-0361	1	Holder, Lamp
4	300-2906	1	Board, Over-Under Voltage Sensor - 24 VDC (A17)	21	517-0131	1	Plug, Button
5	300-2856	1	Board, Relay - 24 VDC (A13)	22	303-0280	1	Potentiometer (R11)
6	300-2863	1	Board, Relay - 24 VDC (A14)	23	308-0785	1	Switch, Push (S11)
7			Board, Engine Monitor (A11) (Includes Fuses and Connectors)	24	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)				Screw, Machine - Round Head (#6-31 x 1/2")
13	323-1309	1	Connector, 13 Pin (P3)				Nut, Hex with ET Lockwasher (#6-32)
14	323-1307	1	Connector, 12 Pin (P4)	32	193-0330	1	Gauge, Temperature - Oil (M15)
15	NFS	1	Bracket, Mounting [301-8851]	33	302-1873-01	1	Tachometer (M16)
	821-0004	4	Screw, Self-locking - Hex Hd (#10-32 x 5/16")	34	517-0221	1	Plug, Button
16			Module, Indicator - Fault (Includes replaceable lamps, Harness with connector housing & contact pins)(A12)	35	332-0052	1	Clamp, Loop
	322-0358-02	1	24 VDC, 2 Light		870-0131	1	Nut, Hex with ET Lockwasher (#10-32 x 1/2")
	322-0360-02	1	24 VDC, 12 Light	36	NFS		Door, Control [301-9055-01]
	815-0385	2	Screw, Machine - Round Head (#6-32 x 1/2")	37	338-1817	1	Harness, Wiring - DC Meter (Includes Connector & Pins)
	870-0183	2	Nut, Self-locking - Hex (#6-32)	38	323-1308	1	Housing, 12 Pin (J4)
					323-1302	12	Contact, Pin
				39	338-2169	1	Harness, Wiring - Control to Engine (Includes Connectors and Pins)
				40	323-1304	1	Housing, 6 Pin
					323-1200	6	Contact, Pin
				41	323-1306	1	Housing, 8 Pin
					323-1200	8	Contact, Pin

NFS - Not For Sale

# Generator Control Components (Sets with Housing Enclosure)

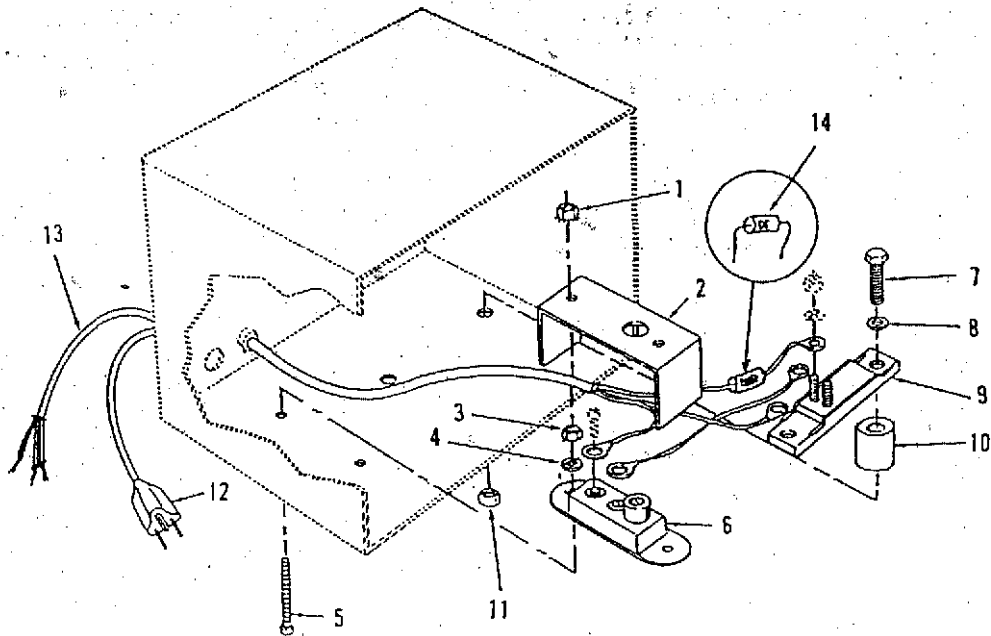


## Generator Control Components (Sets with Housing Enclosure)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	332-1445	2	Tie, Cable	13	332-0052	1	Clamp, Loop
2			Harness, Wiring	870-0131		1	Nut, Self-locking - Hex with ET Lock Washer (#10-32)
	338-1818	1	Control with Meters (Includes Terminal Block)	14	308-0284	1	Switch, Rotary (S21)
	338-1853	1	Control without Meters	15	303-0261	1	Rheostat (R21)
	812-0065	2	Screw, Machine - Round Head (#6-32 x 5/8")	16	406-0334	2	Clip, Fastener
				17	406-0333	2	Stud, Fastener
3	332-0607	1	Block, Terminal (TB1)	18	NFS	1	Door, Control
4	332-2723	1	Strip, Marker		821-0004	3	Screw, Self-locking - Hex (#10-32 x 5/16")
5	322-0363	1	Light, Indicator - Dual (DS21, DS22)	19	307-1987	2	Clip, Relay
6	517-0131	1	Plug, Button	20	307-1056	1	Relay, 24 VDC (K21)
7			Voltmeter (M21)	21	323-0804	1	Socket, Relay
	302-1148	1	Dual Scale 0-300/0-600V		815-0544	2	Screw, Machine - Round Head with IT Lock Washer (#6-32 x 1/2")
	302-1753	1	Single Scale 0-750V				
8	303-0032	1	Knob	22	NFS	1	Terminal Board Assembly
9			Ammeter (M22)		812-0065	4	Screw, Machine - Round Head (#6-32 x 5/8")
	302-1730	1	Single Scale Voltage Code H 400kW, 0-500 Amp	23	332-0751	1	Block, Terminal
	302-1731	1	450kW, 0-750 Amp		812-0066	1	Screw, Machine - Round Head (#6-32 x 3/4")
	302-1728	1	Dual Scale Voltage Code Z 330kW, 0-600/0-1200 Amp, 208 & 480 VAC Only.	24	332-0853	1	Strip, Marker
	302-1729	1	330kW, 0-750/0-1500 Amp, 380VAC Only; and 400 kW all voltages.	25	NFS	1	Plate
			Dual Scale Voltage Code L 400kW, 0-750/0-1500 Amp, all voltages.	26	406-0332	2	Receptacle, Fastener
	302-1729	1	400kW, 0-750/0-1500 Amp, all voltages.	27	871-0015	1	Nut, Hex (1/4-20)
	302-1798	1	450kW, 0-1000/0-2000 Amp, all voltages.	28	853-0013	1	Washer, Lock - ET (1/4")
10	302-1720	1	Meter, Frequency (M23)	29	337-0049	1	Strap, Electrical (Ground)
11		1	Wattmeter (M24) (See Separate page for Components)		800-0024	1	Screw, Cap - Hex Head (5/16-18 x 1/2")
12	NFS	1	Cover, Meter Hole		856-0008	1	Washer, Lock - ET (5/16")
	816-0385	2	Screw, Machine - Round Head, Black (#6-32 x 1/2")	30	508-0051	1	Grommet
	870-0183	2	Nut, Hex with ET Lockwasher (#6-32)	31	402-0527	2	Mount, Vibration
					800-0051	4	Screw, Cap - Hex Head (5/16-18 x 1/2")
					850-0045	4	Washer, Lock - Spring (5/16")
				32	NFS	1	Box, Control

NFS - Not for Sale

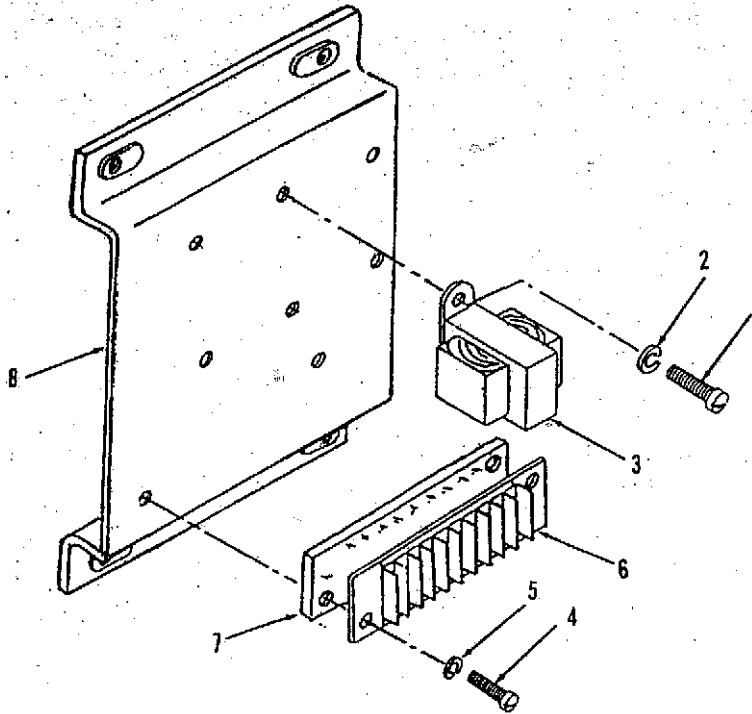
## Control Heater



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	870-0183	2	Nut, Self-locking - Hex (#6-32)	9		1	Heater, Electrical
2	301-1886	1	Cover	333-0151	1	120VAC	
3	860-0006	1	Nut, Hex (#6-32)	333-0378	1	240VAC	
4	854-0006	2	Washer, Lock - IT (#6)	10	130-1107	2	Spacer
5	812-0070	2	Screw, Machine - Round Head (#6-32 x 1-1/4")	11	870-0257	2	Nut, Self-locking - Hex (5/16-18)
6	309-0128	1	Thermostat, Adjustable	12	335-0161	1	Cable, Electrical (120VAC Application)
7	800-0034	2	Screw, Cap - Hex Head (5/16-18 x 2-1/4")	13	338-2121	1	Harness Wiring with Diode, less plug (240VAC Application)
8	526-0113	2	Washer, Flat (5/16")	14	357-0013	1	Diode
				15	98-3232	1	Decal, Warning - Shock Hazard (Not Illustrated)



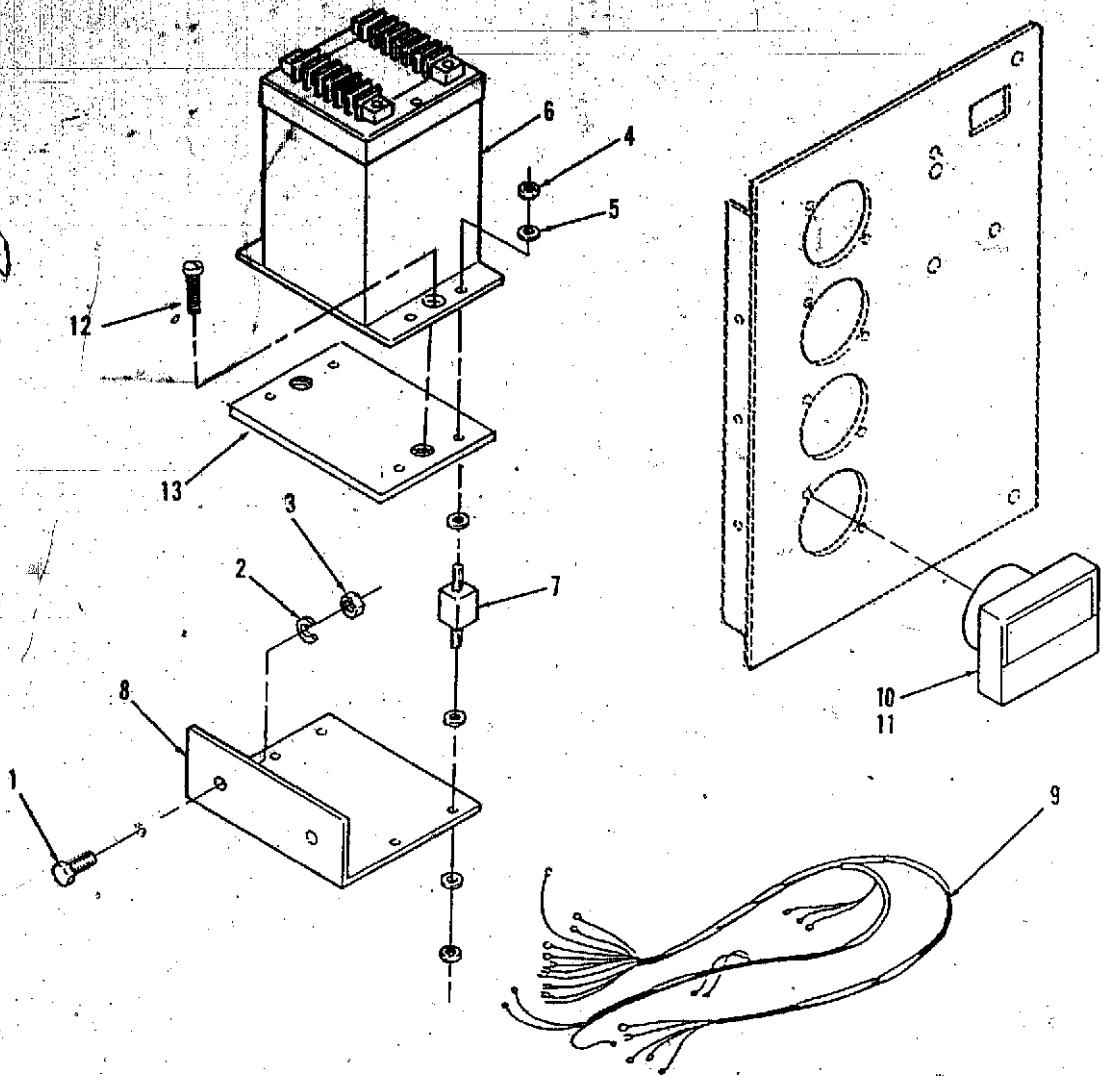
## Potential Transformer



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	812-0079	6	Screw, Machine - Round Head (#8-32 x 1/2")	5	850-0025	2	Washer, Lock - Spring (#8)
2	850-0025	6	Washer, Lock - Spring (#8)	6	332-2562	1	Block, Terminal (10 Place)
3	315-0642	3	Transformer, Potential	7	332-2563	1	Strip, Marker
4	812-0077	2	Screw, Machine - Round Head (#8-32 x 3/8")	8	NFS	1	Bracket, Mounting

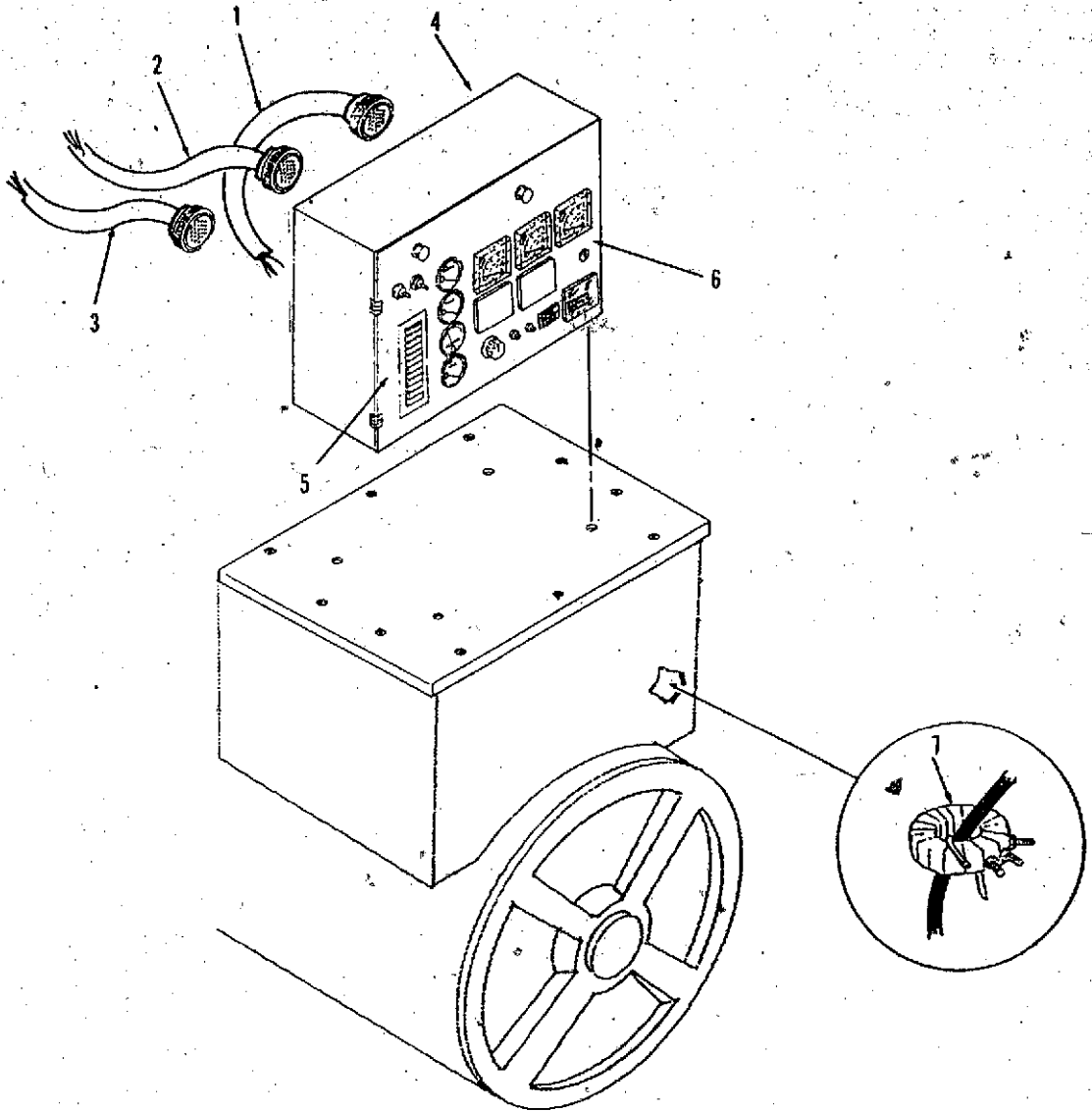
NFS - Not For Sale

## Wattmeter (Sets with Housing Enclosure)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	821-0017	2	Screw, Cap - Hex Head (5/16-18 x 1/2")	8	301-6987	1	Bracket, Mounting
2	850-0045	2	Washer, Lock (5/16)	9	338-1936	1	Harness, Wiring
3	882-0014	2	Nut, Hex (5/16-18)	10	302-1722	1	Wattmeter (Less Dial)
4	860-0008	8	Nut, Hex (#8-32)	11	302-1721-13	1	Dial, Wattmeter
5	856-0002	16	Washer, Lock - ET (#8)				Scale 0-500 kW
6	302-1833-01	1	Transducer, Watt	12	813-0102	2	Screw, Machine - Round Head (#10-32 x 3/8")
7	402-0354	4	Mount, Shock	13	319-0030	1	Plate, Support - Transducer

# Generator Set Control (Without Housing Enclosure)

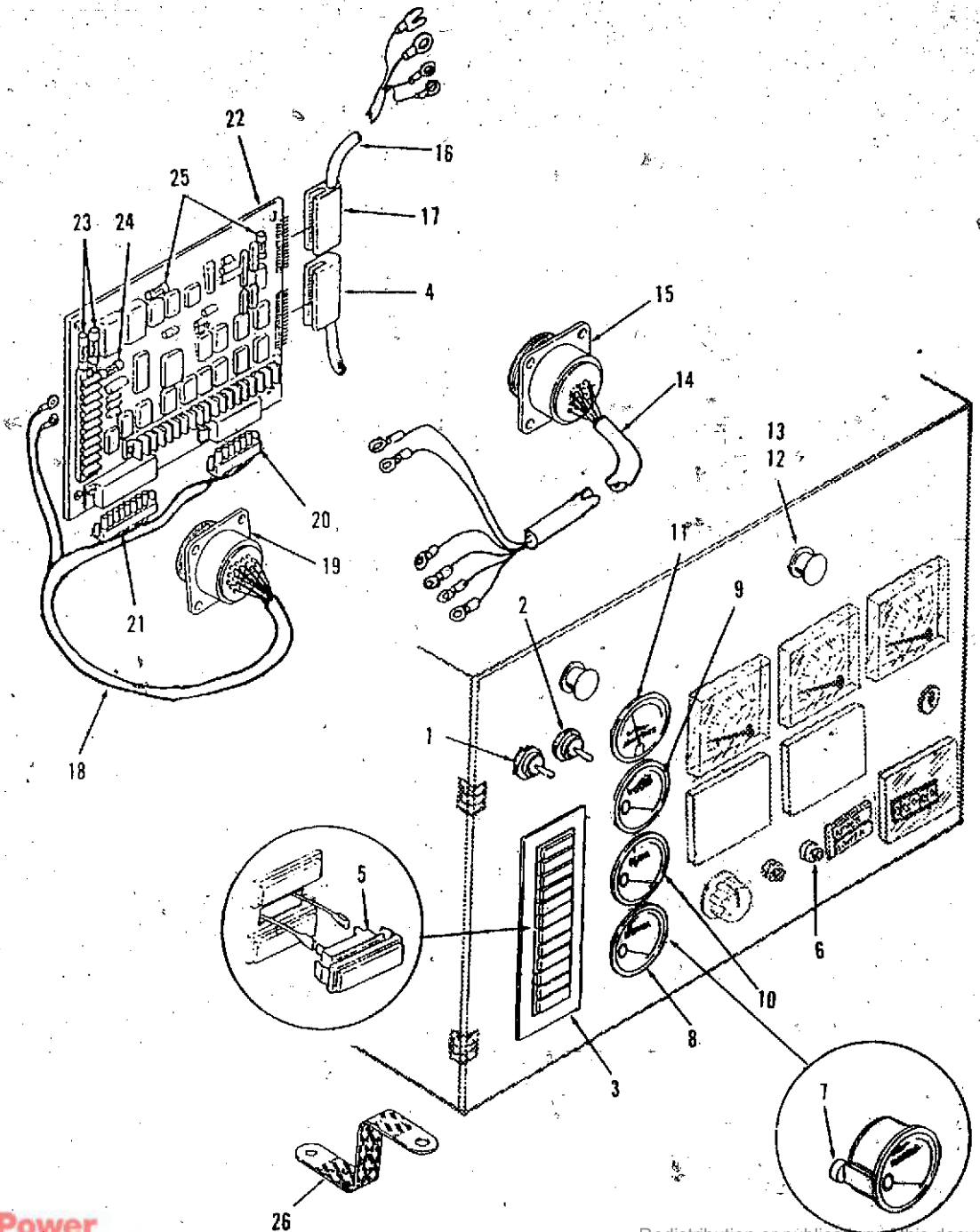


## Generator Set Control (Without Housing Enclosure)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	338-2201-01	1	Harness, Wiring - Control to Generator (Includes a connector housing)	7			Transformer, Current (Select As Applicable)
	323-1135	1	Housing, Connector (J21)	302-1785-01	3		1200:5 Ratio
	323-1193	4	Contact, Pin	302-1785-02	3		1500:5 Ratio
	323-1194	10	Contact, Pin	302-1785-03	3		1600:5 Ratio
2	338-2196-01	1	Harness, Wiring - Control to Governor (Includes a connector housing)	302-1785-04	3		2000:5 Ratio
	323-1135	1	Housing, Connector (J12)	302-1785-05	3		2500:5 Ratio
	323-1193	4	Contact, Pin	302-1785-06	3		2000:5 Ratio (380V Only)
	323-1194	10	Contact, Pin	302-1785-07	3		3000:5 Ratio
3	338-2191-01	1	Harness, Wiring - Control to Engine Components (Includes a connector housing)	302-1785-08	3		4000:5 Ratio
	323-1206	1	Housing, Connector (J11)	302-1785-09	3		5000:5 Ratio
	323-1194	20	Contact, Pin	302-1786-01	3		500/1000:5 Ratio
4	NFS	1	Control, Set (See Item 5 & 6 for Components)	302-1786-02	3		600/1200:5 Ratio
	402-0527	4	Mount, Vibration	302-1786-03	3		750/1500:5 Ratio
	800-0051	8	Screw, Cap * Hex Head (5/16-18 x 1/2")	302-1786-04	3		800/1600:5 Ratio
	850-0045	8	Washer, Lock - Spring (5/16")	302-1786-05	3		900/1800:5 Ratio
5	NFS	1	Control, Engine (See Separate	302-1786-06	3		1000/2000:5 Ratio
6	NFS	1	Control, Generator (See Separate Page for Components)	302-1786-07	3		1200/2400:5 Ratio
				302-1786-08	3		250/500:5 Ratio
				302-1786-09	3		300/600:5 Ratio
				302-1786-10	3		400/800:5 Ratio
				302-1786-11	3		375/750:5 Ratio
				302-1786-12	3		75/150:5 Ratio
				302-1786-13	3		100/200:5 Ratio
				302-1786-14	3		150/300:5 Ratio
				302-1786-15	3		200/400:5 Ratio
				302-1786-16	3		1500/3000:5 Ratio

NFS - Not For Sale

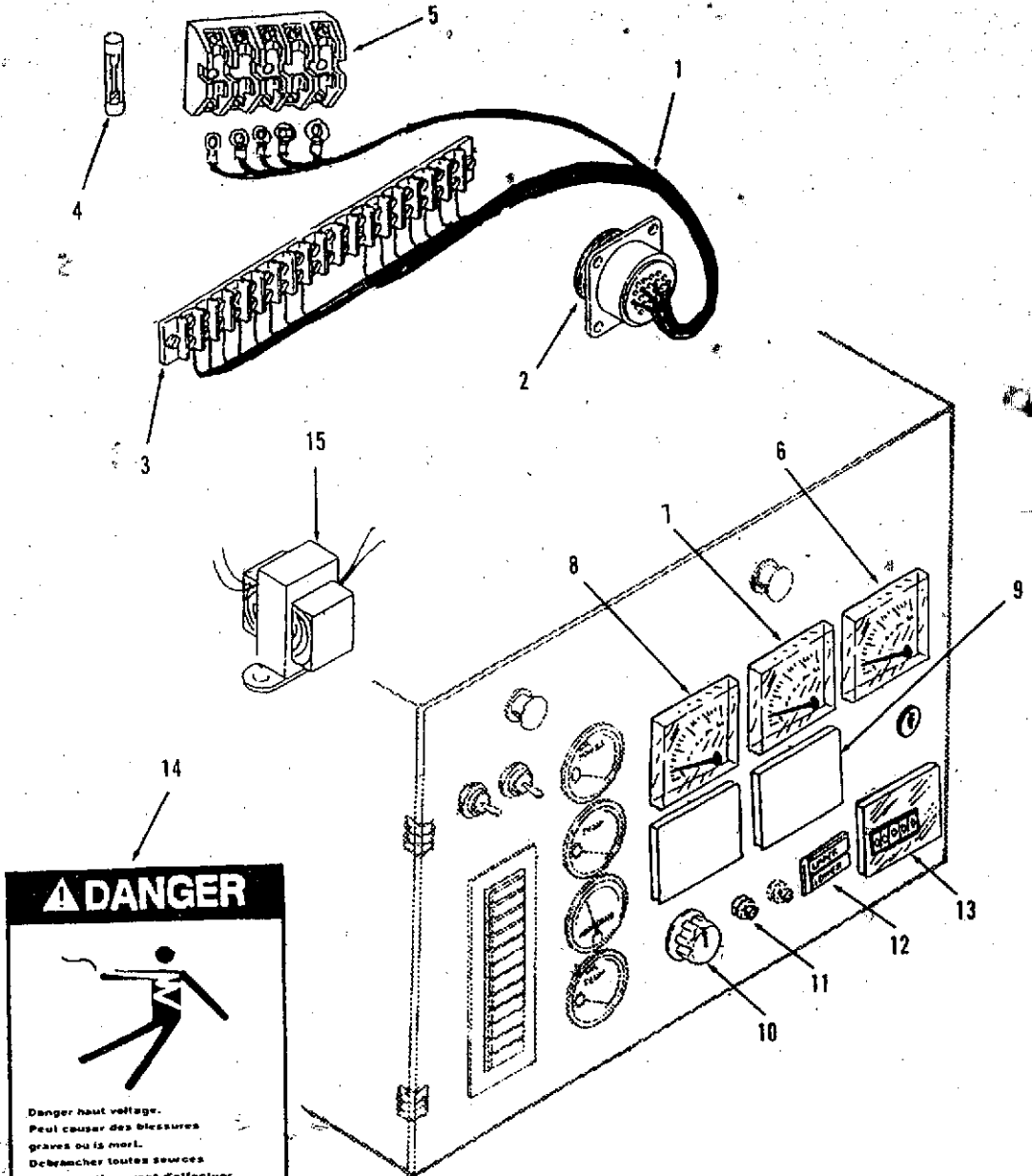
# Engine Control Components (Sets with Housing Enclosure)



## Engine Control Components (Sets with Housing Enclosure)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	308-0625	1	Switch, Push (S12) [Run/Stop/Remote]	15	323-1134	1	Housing, Connector (P12)
2	308-0900	1	Switch, Push (S11) [Reset/Panel Light]		323-1192	4	Contact, Socket
3			Module, Indicator - Fault (Includes Harness with a Connector Housing & Contact Pins, Replaceable Lamps) (A12)		323-1195	10	Contact, Socket
	322-0358-02	1	24 VDC, 2 Light		323-1190	2	Key
	322-0360-02	1	24 VDC, 12 Light	16	338-1817	1	Harness, Wiring - Engine Monitor Board to Meters (Includes Connector Housing)
	815-0385	2	Attaching Parts for Module Screw, Machine - Round Head (#6-32 x 1/2")	17	323-1308	1	Housing, Connector (J4)
	870-0183	2	Nut, Self-Locking - Hex (#6-32)		323-1302	15	Contact, Pin
4	323-1310	1	Housing, Connector (J3)	18			Harness, Wiring - Engine to Engine Monitor Board (Includes Connector Housings, Terminals and Contacts)
	323-1302	13	Contact, Pin		338-2244-01	1	Control with 2 Light Module
5	322-0369-02	1	Lamp, Incandescent - 1/3 Watt 28 VDC		338-2422-01	1	Control with 12 Light Module
6	303-0289	1	Rheostat - Speed Control (R23)	19	323-1207	1	Housing, Connector (P11)
7	193-0250	3	Resistor, Gauge (R11, R12, R15)		323-1195	22	Contact, Socket
8	193-0330	1	Gauge, Temperature - Oil, 12 VDC (M15) or		323-1190	1	Key
	302-1715	1	Tachometer (M16) or	20	323-1304	1	Housing, Connector (J2)
	302-1723	1	Gauge, Blank		323-1200	6	Contact, Pin
9	193-0351	1	Gauge, Temperature - Water, 12 VDC (M12)	21	323-1306	1	Housing, Connector (J1)
10	193-0352	1	Gauge, Pressure - Oil, 12 VDC (M11)		323-1200	8	Contact, Pin
11	302-1790	1	Ammeter (M13)	22			Board, Engine Monitor (A11) (Includes Fuses)
12	322-0017	1	Lamp, Incandescent - 28 VDC (DS10, DS11)		300-2808	1	24 VDC, 2 Light
13	322-0361	2	Holder, Lamp		300-2812	1	24 VDC, 12 Light
14			Harness, Wiring - Governor to Speed Control & Tachometer (Includes Connector Housing)	23	321-0270	2	Fuse, Cartridge - 20 Amp (F1, F2)
	338-2245-01	1	Control with 2 Light Module	24	321-0231	1	Fuse, Cartridge - 15 Amp (F3)
	338-2243-01	1	Control with 12 Light Module	25	321-0094	2	Fuse, Cartridge - 5 Amp (F4, F5)
				26	337-0049	1	Strap, Electrical - Ground

## Generator Control Components (Sets without Housing Enclosure)



**⚠ DANGER**

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

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



Power Generation

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**Generator Control Components  
(Sets without Housing Enclosure)**

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Harness, Wiring (Includes Connector and Terminal Strip)	302-1839-09		1	0-300/0-600 Amp
	338-2240-01	1	Sets with 12 Lead Generator	302-1839-10		1	0-400/0-800 Amp
	338-2241-01	1	Sets with 6 Lead Generator	302-1839-11		1	0-375/0-750 Amp
2	323-1134	1	Housing, Connector (P21)	302-1839-12		1	0-75/0-150 Amp
	323-1192	4	Contact, Socket	302-1839-13		1	0-100/0-200 Amp
	323-1195	10	Contact, Socket	302-1839-14		1	0-150/0-300 Amp
	323-1190	1	Key	302-1839-15		1	0-200/0-400 Amp
3			Terminal, Strip (18 Place)	302-1839-16		1	0-1500/0-3000 Amp
4	321-0293	5	Fuse F1 thru F5	302-1839-17		1	0-2000/0-4000 Amp
5	321-0294	1	Holder, Fuse	302-1840-01		1	0-1200 Amp
6	302-1842	1	Meter, Frequency (M23)	302-1840-02		1	0-1500 Amp
7	302-1841-03	1	Voltmeter (M21)	302-1840-03		1	0-1600 Amp
8			Ammeter (M22)	302-1840-04		1	0-2000 Amp
			Dual Scale	302-1840-05		1	0-2500 Amp
	302-1839-01	1	0-500/0-1000 Amp	302-1840-07		1	0-3000 Amp
	302-1839-02	1	0-600/0-1200 Amp	302-1840-08		1	0-4000 Amp
	302-1839-03	1	0-750/0-1500 Amp	302-1840-09		1	0-5000 Amp
	302-1839-04	1	0-800/0-1600 Amp	9	302-1849	2	Meter, Blank
	302-1839-05	1	0-900/0-1800 Amp	10	308-0883	1	Switch, Rotary (S21)
	302-1839-06	1	0-1000/0-2000 Amp	11	303-0287	1	Rheostat (R21)
	302-1839-07	1	0-1200/0-2400 Amp	12	322-0363	1	Light, Indicator - Dual (DS21, DS22)
	302-1839-08	1	0-250/0-500 Amp	13	302-1850	1	Meter, Time Totalizing (M14)
				14	98-5724	2	Decal (Warning)
				15	315-0664	3	Transformer, Potential (T21 - T23)

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