

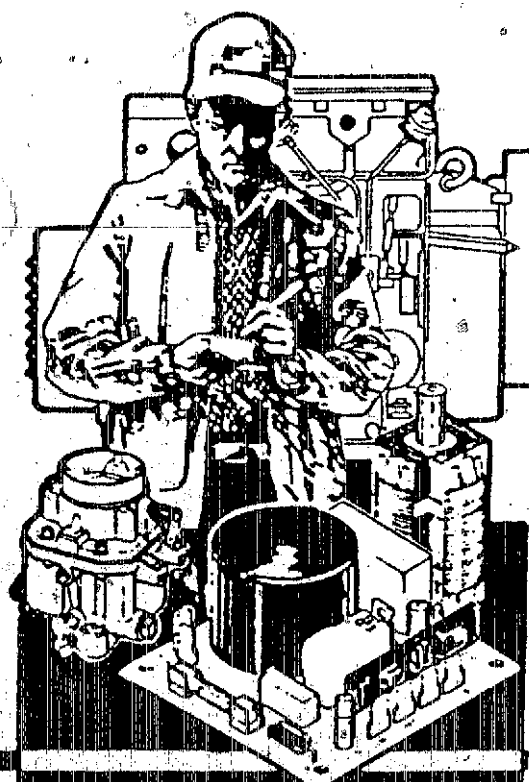
Onan

Parts Manual

DTDA / DXDA

DTDB / DXDB

GenSet



Onan Service Parts

903-0201

10-87 (Spec A)

Printed in U.S.A.

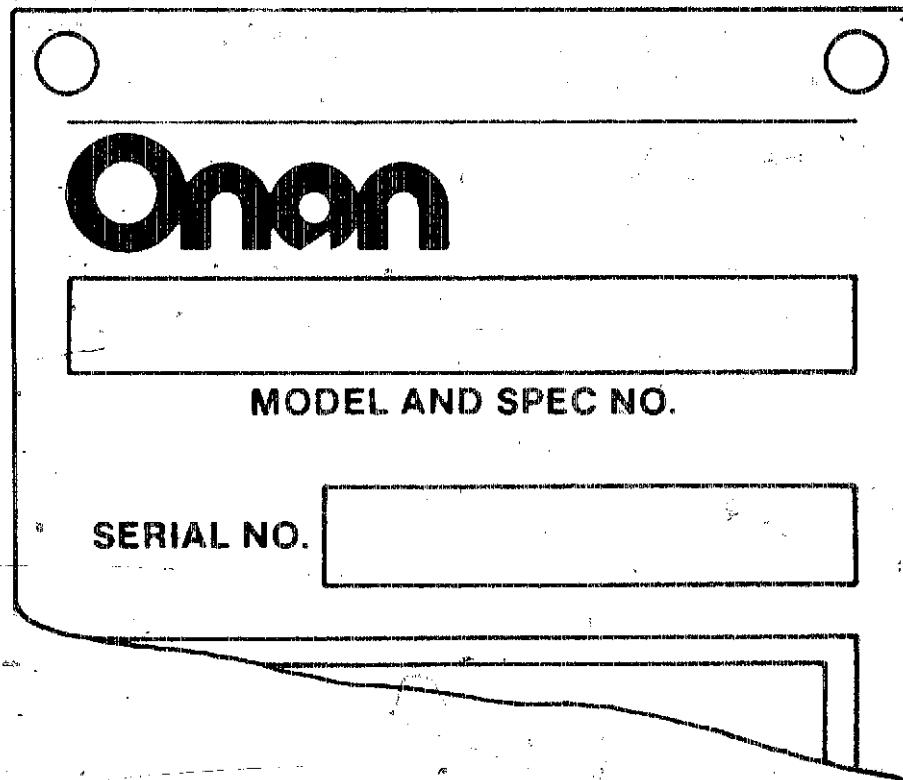
**Power
Generation**

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General Information

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

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



The image shows a rectangular nameplate template with rounded corners. At the top left and top right corners, there are small circles representing mounting holes. Below the top edge, the word "Onan" is printed in a large, bold, stylized font. Underneath the logo is a long, empty rectangular box. Below this box, the text "MODEL AND SPEC NO." is printed. Further down, the text "SERIAL NO." is printed to the left of another empty rectangular box. The bottom right corner of the nameplate is cut off at an angle. In the bottom right corner of the entire page, near the nameplate, is the text "M-1149".

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

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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 in the description column the parts are interchangeable between models.

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

Set Data Table

MODEL IDENTIFICATION	RATING	RPM RATING	BATTERY VOLTAGE
60.0 DTDA/DXDA - */#●	60,000 WATTS	1500 RPM	24 VDC
80.0 DTDA/DXDA - */#●	80,000 WATTS	1800 RPM	24 VDC
85.0 DTDB/DXDB - */#●	85,000 WATTS	1500 RPM	24 VDC
100.0 DTDB/DXDB - */#●	100,000 WATTS	1800 RPM	24 VDC

Electrical Data Table

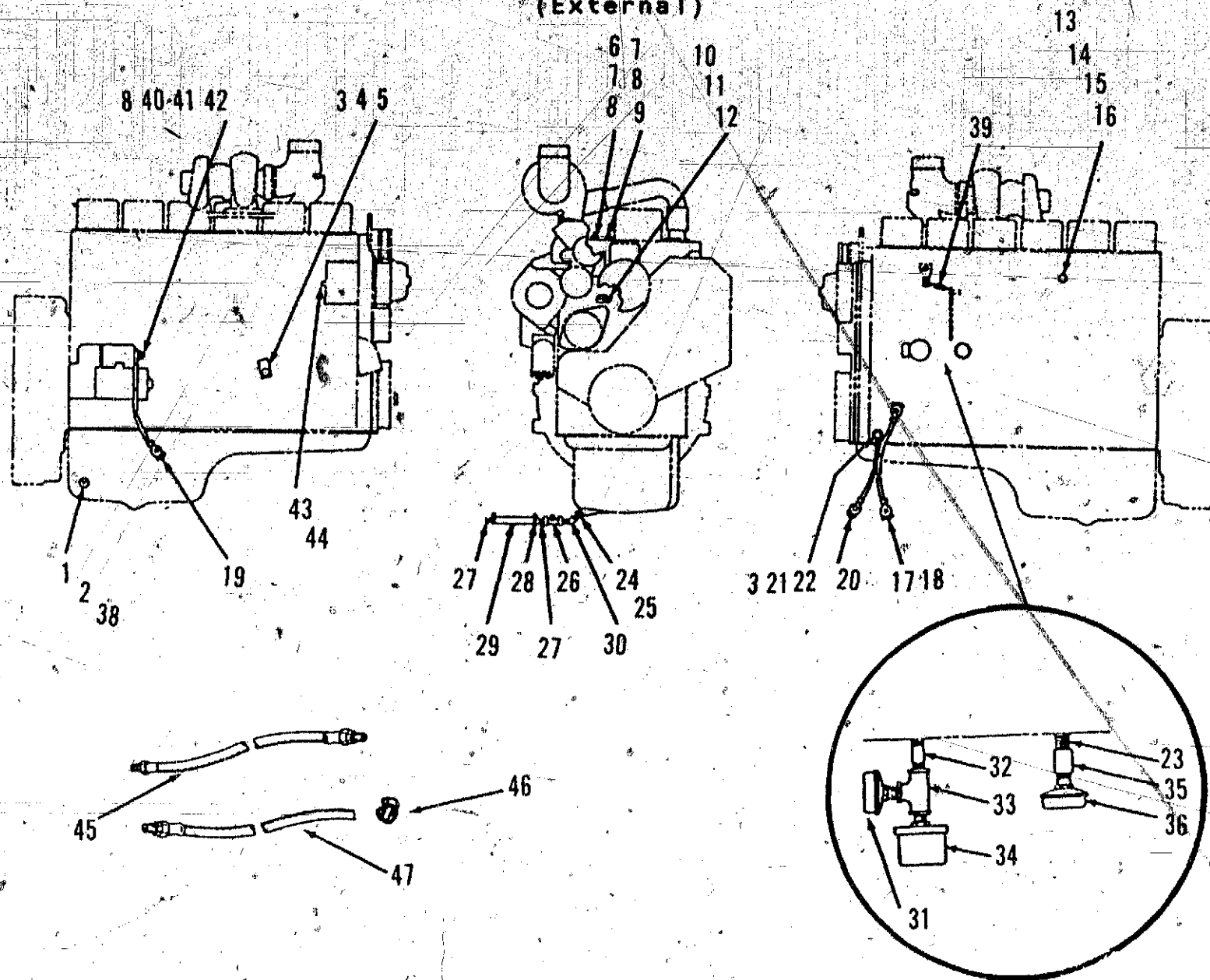
*VOLTAGE CODE	VOLTS	HERTZ	WIRE	PHASE	NOTES
H	347/600	60	4	3	
L	120/208	60	12	3	
	127/220	60	12	3	
	139/240	60	12	3	
	240/416	60	12	3	
	254/440	60	12	3	
	277/480	60	12	3	
Z	110/190	50	12	3	
	115/200	50	12	3	
	120/208	50	12	3	
	127/220	50	12	3	
	220/380	50	12	3	
	230/400	50	12	3	
	240/416	50	12	3	
	254/440	50	12	3	

- * - Voltage Codes follow Model Letter designations.
- # - Specification Number: Number 1 is Standard, all others indicate variations.
- - Specification Letter: Letter advances (A to B, B to C, etc) with major manufacturing changes.
- + - The Stators are Reconnectable.

Engine Replacement Parts

The Engine replacement parts can be ordered from the Cummins Engine Distributor except those parts modified or added during the Gen Set Assembly. When ordering engine parts, refer to the Engine Data plate and supply the Model, Serial, and CPL numbers. For assistance in ordering the Engine replacement parts, contact the nearest Cummins Engine Distributor or the Supplier from whom you purchased the Generator Set.

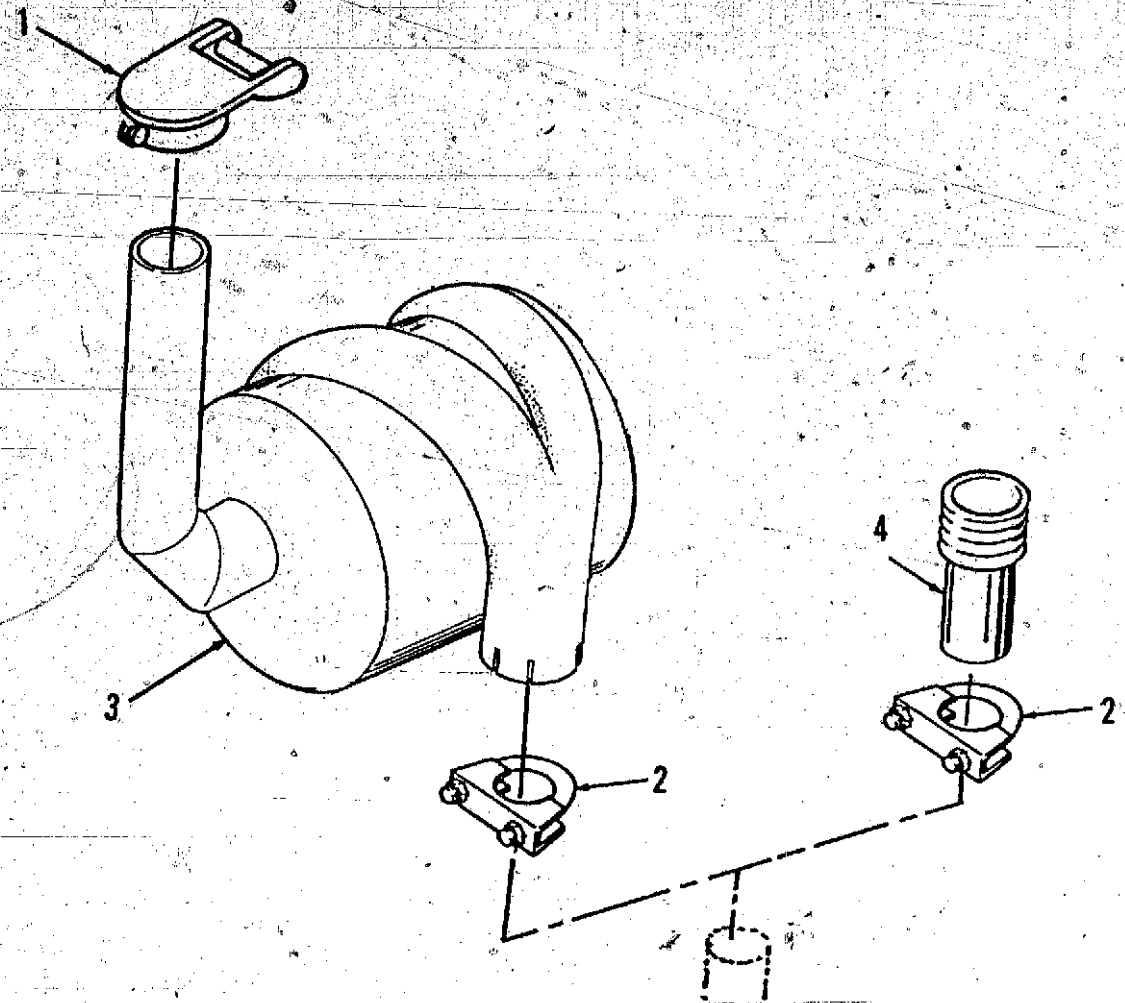
Engine Components (External)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	193-0353	1	Sender, Temperature - Oil
2	187-0146	1	Washer, Sealing
3	856-0013	3	Washer, Lock - EIT (1/2")
4	332-2739	1	Bracket Assembly, Terminal
5	800-2112	1	Screw, Cap - Hex Head (M12-1.75 x 30mm)
6	309-0554	1	Switch, Temperature
7	812-0075	1	Screw, Machine - Round Head (#8-32 x 1/4")
8	850-0025	2	Washer, Lock (#8)
9	309-0553	1	Switch, Temperature
10	800-2060	1	Screw, Cap - Hex Head (M8-1.25 x 35mm)
11	850-2008	1	Washer, Lock (M8)
12	309-0269	1	Switch, Temperature
13	193-0375	1	Sender, Temperature
14	526-0008	2	Washer, Flat (#10)
15	850-0030	1	Washer, Lock (#10)
16	871-0010	1	Nut, Cap - Hex Head (#10-32)
17	416-0446	1	Cable, Battery (9")
18	332-0941	2	Tie, Cable
19	416-0444	1	Cable, Battery (44")
20	416-0893	1	Cable, Battery (10")
21	800-2110	1	Screw, Cap - Hex Head (M12-1.75 x 20mm)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
22	850-2012	1	Washer, Lock (M12)
23	505-0098	1	Nipple, Close
24	102-1147	1	Gasket, Drain - Oil Pan
25	102-1237	1	Adapter, Drain - Oil
26	504-0011	1	Valve, Shutoff
27	505-0185	2	Nipple, Half
28	503-0197	2	Clamp, Hose
29	503-0098	1	Hose, Drain (6")
30	505-0248	1	Elbow, Pipe - Street
31	309-0169	1	Switch, Pressure - Oil
32	505-0104	1	Nipple, Pipe - Short
33	505-0059	1	Tee, Pipe - Black
34	193-0244	1	Sender, Pressure - Oil
35	505-0026	1	Coupling, Pipe
36	309-0272	1	Switch, Pressure - Oil
38	505-1373	1	Bushing, Reducer
39	145-0596	1	Spring, Extension - Throttle
40	871-0028	1	Nut, Hex (3/8-16)
41	850-0050	1	Washer, Lock - Spring (3/8")
42	860-0008	1	Nut, Hex (#8-32)
43	115-0025	1	Nut, Hex (1/4-28)
44	850-0040	1	Washer, Lock - Spring (1/4")
45	501-0441	1	Line, Fuel - Flex (Fuel In)
46	503-0685	1	Clamp, Hose
47	501-0502	1	Line, Fuel - Flex (Fuel Out)

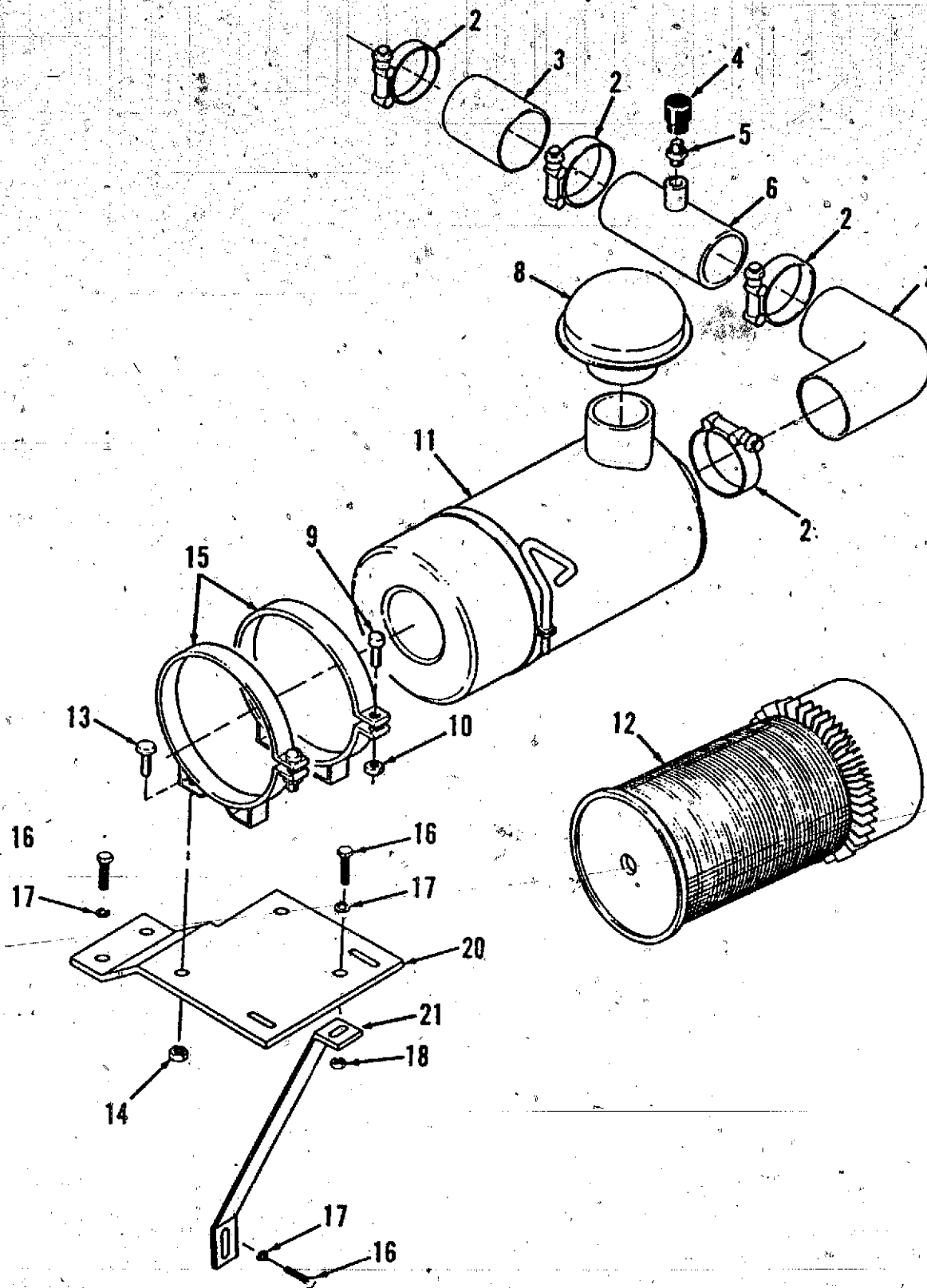
Exhaust System



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	155-2062-03	1	Cap, Rain
2	155-2175	1	Clamp, Muffler

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
3	155-2263	1	Silencer
4	154-2253	1	Adapter, Exhaust

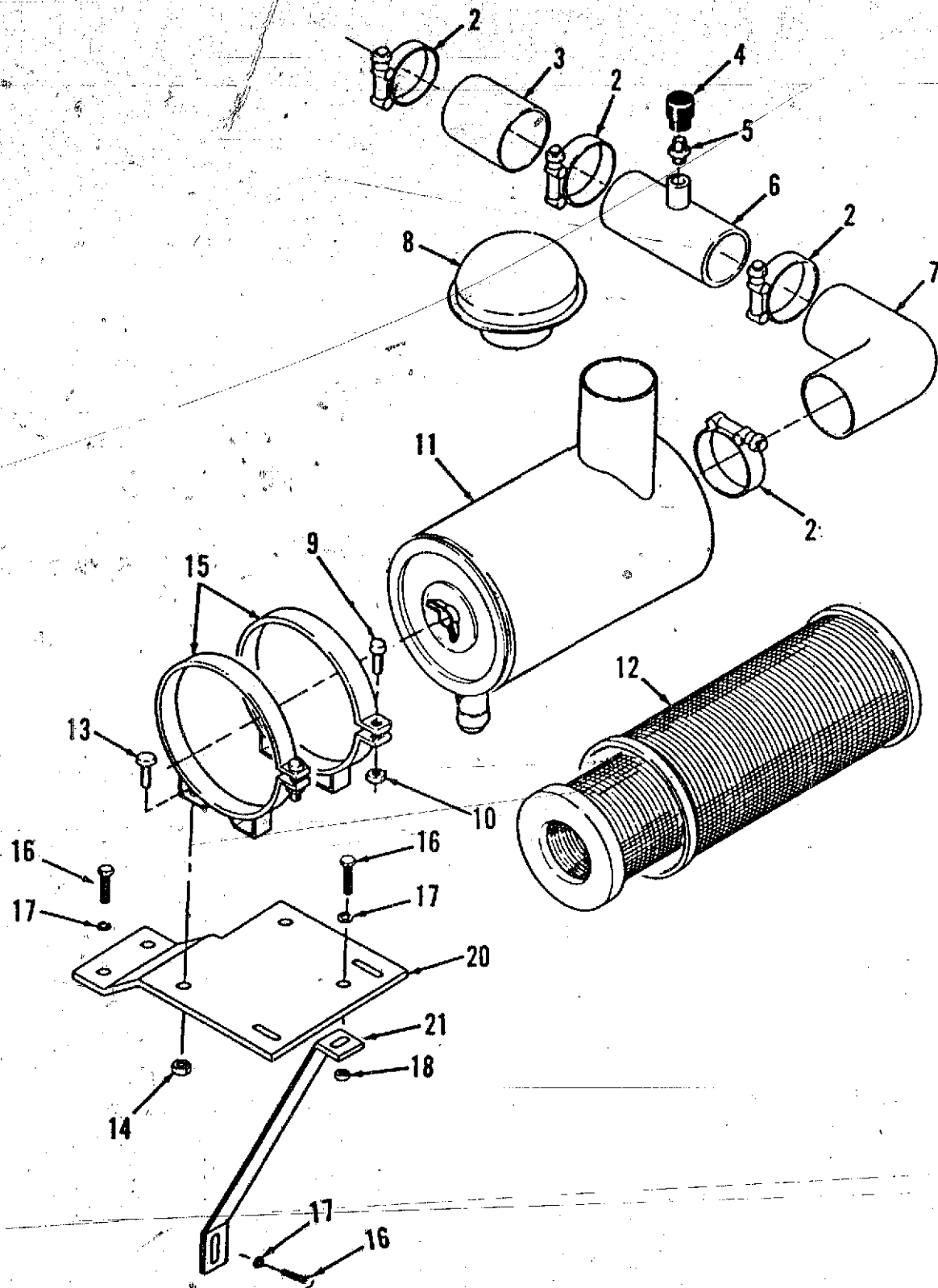
Air Cleaner - Standard



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0998	2	Clamp, Hose	12	140-2148	1	Element, Air Cleaner
2	503-0868	1	Clamp, Hose	13	821-0033	3	Screw, Self-locking - Hex Head (7/16-14 x 3/4")
3	503-1543	1	Hose, Reducing	14	870-0437	3	Nut, Lock (7/16-14)
4	140-1548	1	Indicator, Service	15	140-0078	2	Band, Mounting
5	140-1260	1	Adapter, Indicator	16	800-2110	4	Screw, Cap - Hex Head (M12 x .8 x 20mm)
6	140-2166	1	Tube, Inlet - Air	17	850-2012	4	Washer, Lock - Spring (M12)
7	503-1542	1	Elbow, Hose - Reducing	18	750-1010	1	Nut, Hex (M12)
8	140-2157	1	Cap, Air Cleaner	19	503-0999	1	Clamp, Hose
9	815-0115	2	Screw, Machine - Fillister Head (1/4-20 x 1")	20	140-2153	1	Bracket, Mounting
10	863-0002	2	Nut, Square (1/4-20)	21	140-2154	1	Brace, Mounting
11	140-2147	1	Cleaner, Air (Includes Element)				

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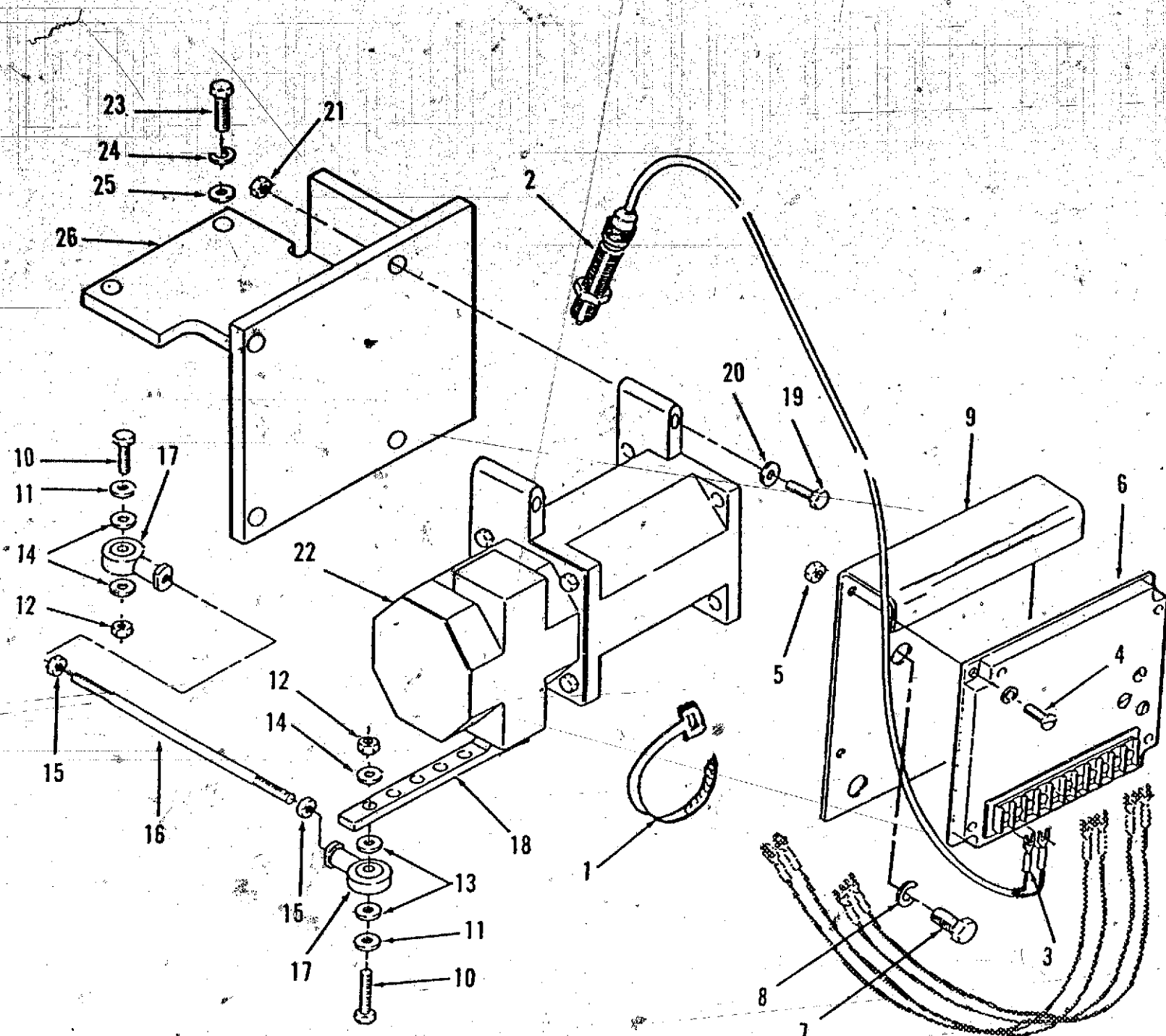
Air Cleaner - Heavy Duty



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
2	503-0868	4	Clamp, Hose
3	503-1460	1	Hose
4	140-1548	1	Indicator, Service
5	140-1260	1	Adapter, Indicator
6	140-2152	1	Tube, Inlet - Air
7	503-1467	1	Elbow
8	140-1435	1	Cap, Air Cleaner
9	815-0115	2	Screw, Machine - Fillister Head (1/4-20 x 1")
10	863-0002	2	Nut, Square, (1/4-20)
11	140-2149	1	Cleaner, Air (Includes Element)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
12	140-2148	1	Element, Air Cleaner Primary
	140-2150	1	Secondary
13	821-0033	4	Screw, Self-locking - Hex Head (7/16-14 x 3/4")
14	870-0437	4	Nut, Lock (7/16-14)
15	140-1599	2	Band, Mounting
16	800-2110	4	Screw, Cap - Hex Head (M12 x .8 x 20mm)
17	850-2012	4	Washer, Lock - Spring (M12)
18	750-1010	1	Nut, Hex (M12)
20	140-2153	1	Bracket, Mounting
21	140-2154	1	Brace, Mounting

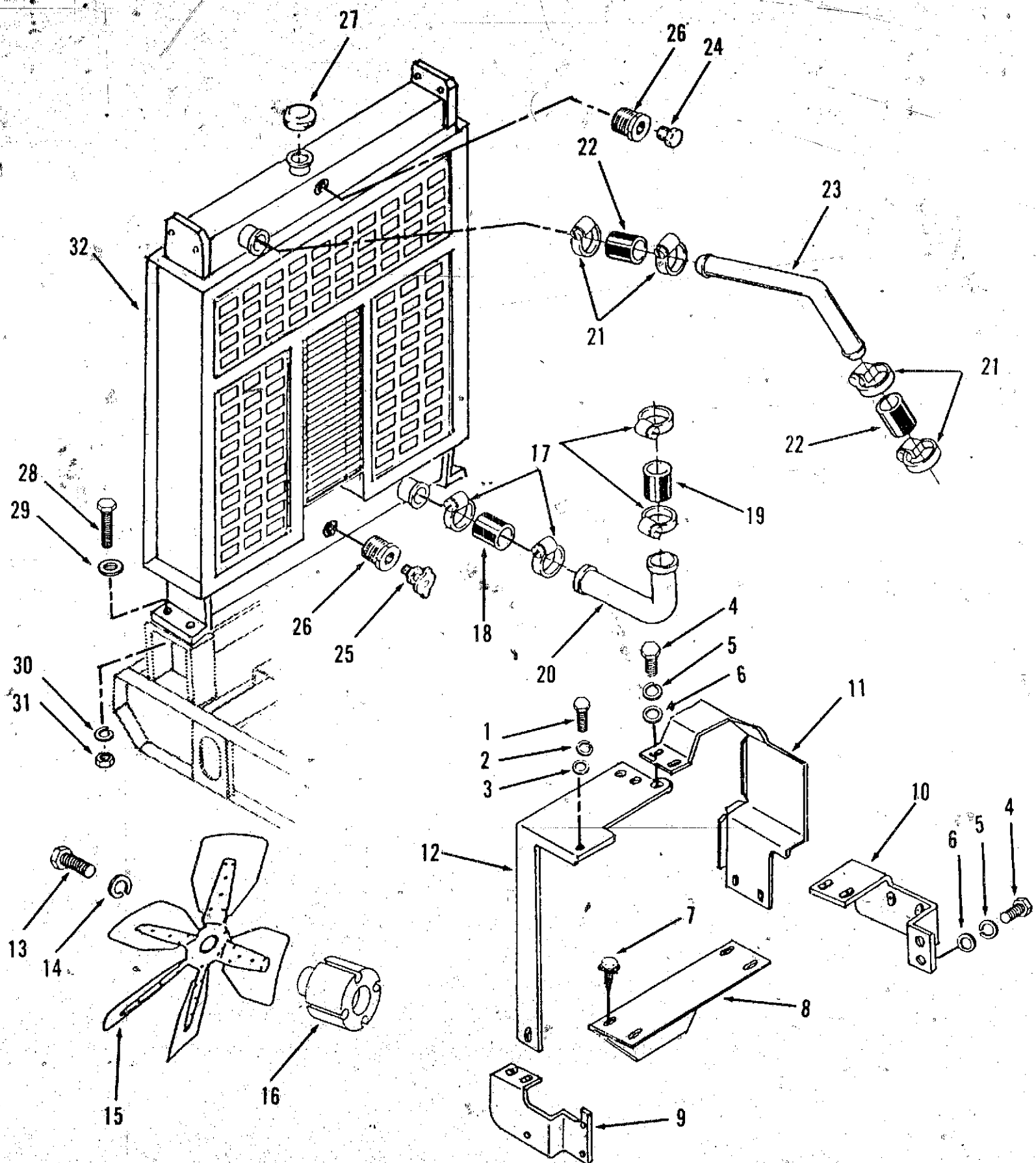
Electronic Governor



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	332-1445	5	Tie, Cable
2	150-2201	1	Sensor, Speed - Includes Leads, Less Terminals
3			Terminal, Electrical (For all Electrical Leads)
	332-1279	8	Spade, #6
	332-0325	1	Ring, #10
	332-1087	1	Ring, 1/2"
4	813-0103	4	Screw, Machine - Round Head (#10-32 x 3/4")
5	870-0131	4	Nut, Hex - W/ET (#10-32) (Not used all installations)
6	151-0611	1	Control, Governor
7	800-2110	2	Screw, Cap - Hex Head (M12 x 1.75 x 20mm)
8	850-2012	2	Washer, Flat (M12)
9	150-2007	1	Bracket, Mounting
10	815-0172	2	Screw, Machine - Hex Head (#10-32 x 1")

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
11	526-0327	2	Washer, Flat (13/64)
12	870-0131	2	Nut, Hex - W/ET (#10-32)
13	526-0008	2	Washer, Flat (#10)
14	526-0196	3	Washer, Flat - Aluminum
15	870-0053	2	Nut, Hex (#10-32)
16	150-2218-02	1	Rod - Governor
17	150-2200	2	Joint, Ball
18	150-2203	1	Lever, Actuator - Governor
19	800-0012	4	Screw, Cap - Hex Head (1/4-20 x 2 1/4")
20	526-0018	4	Washer, Flat (1/4)
21	870-0212	4	Nut, Self-locking - Hex (1/4-20)
22	151-0632	1	Actuator, Governor (24VDC)
23	800-2060	3	Screw, Cap - Hex Head (M8 x 1.25 x 35mm)
24	850-2008	3	Washer, Lock (M8)
25	526-0115	3	Washer, Flat (M8)
26	150-2187	1	Bracket, Governor

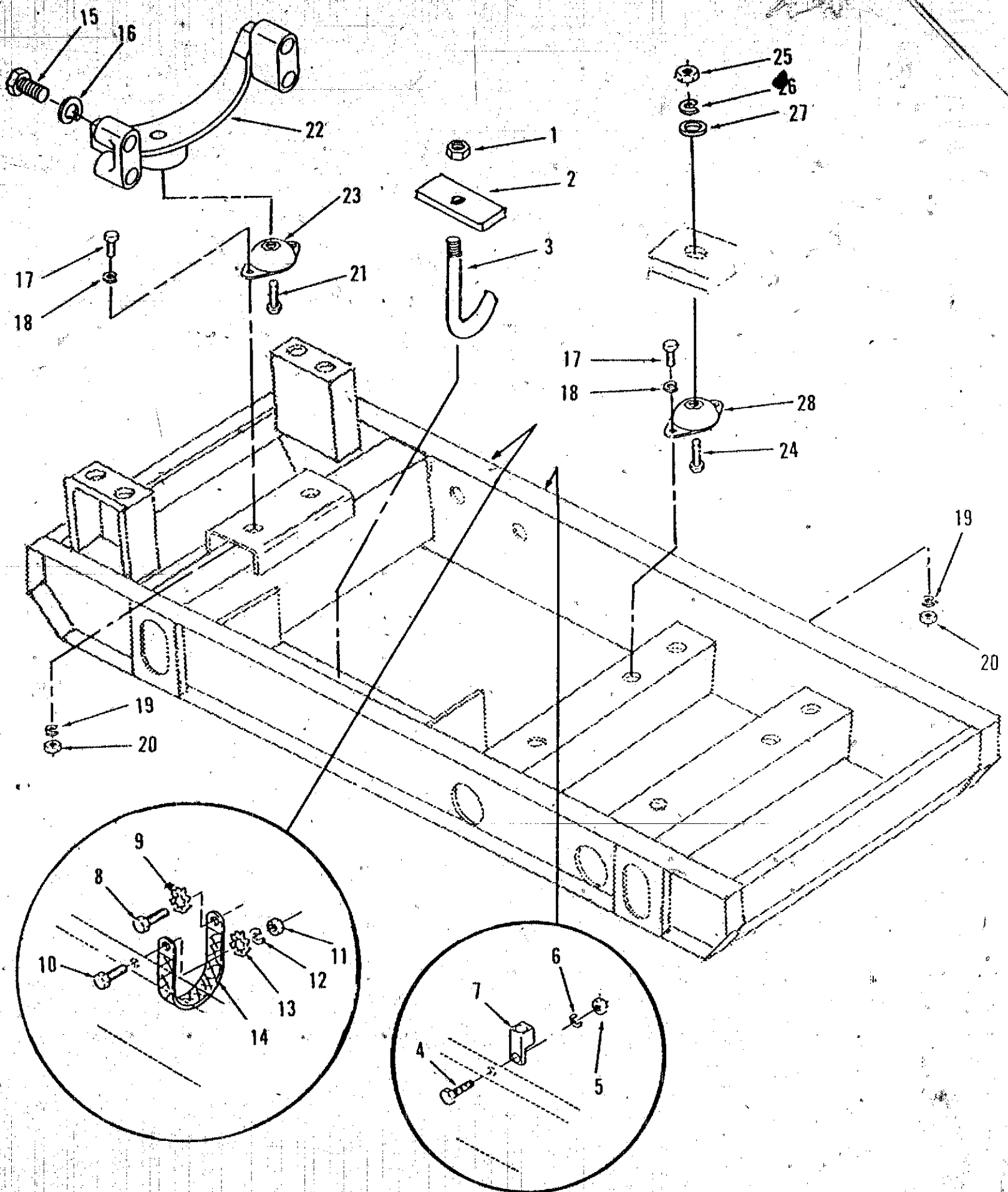
Cooling System (Radiator)



Cooling System (Radiator)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-2084	1	Screw, Cap - Hex Head (M10 x 1.5 x 16mm)	15	130-3117	1	Fan, Radiator
2	526-2120	1	Washer, Flat (M10)	16	130-3114	1	Spacer, Fan
3	850-2010	1	Washer, Lock - Spring (M10)	17	503-0354	4	Clamp, Hose
4	800-2110	5	Screw, Cap - Hex Head (M12 x 1.75 x 20mm)	18	503-1379-02	1	Hose, Radiator
5	526-2140	5	Washer, Flat (M12)	19	503-1379-03	1	Hose, Radiator
6	850-2012	5	Washer, Lock - Spring (M12)	20	130-3147	1	Tube, Outlet - Radiator
7	821-0009	9	Screw, Self-locking - Hex (1/4-20 x 3/8")	21	503-0365	4	Clamp, Hose
8	130-3121	1	Plate, Bottom	22	503-1391-01	2	Hose, Radiator
9	130-3124	1	Guard, Belt (Right Side)	23	130-3149	1	Tube, Inlet - Radiator
10	130-3125	1	Guard, Belt (Left Side)	24	502-0153	1	Plug, Hex Head (1/4 NPT)
11	130-3127	1	Guard, Belt - Alternator	25	504-0003	1	Cock, Drain
12	130-3126	1	Guard, Belt - Alternator	26	502-1033	2	Adapter, Metric To NPT
13	718-1044	4	Screw, Cap - Hex Head (M8 x 1.25 x 60mm)	27		1	Cap, Radiator
14	850-2008	4	Washer, Lock - Spring (M8)	28	800-0028	4	Screw, Cap - Hex Head (5/16-18 x 1")
				29	526-0022	4	Washer, Flat (5/16)
				30	850-0045	4	Washer, Lock - Spring (5/16)
				31	862-0015	4	Nut, Hex (5/16-18)
				32	130-3278	1	Radiator

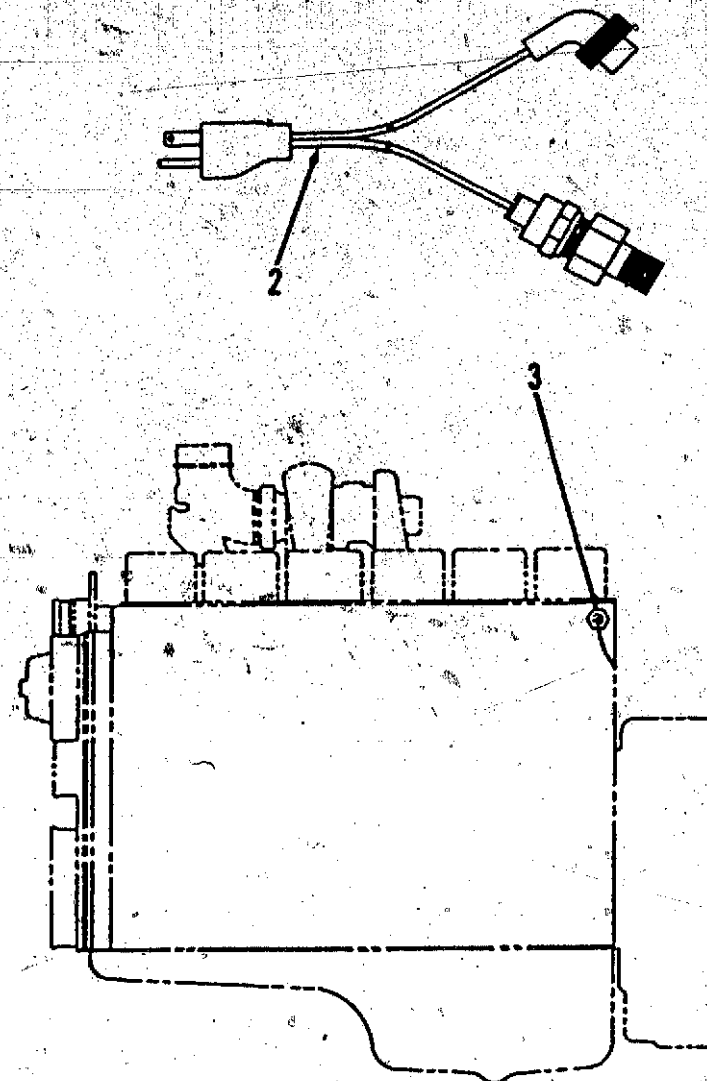
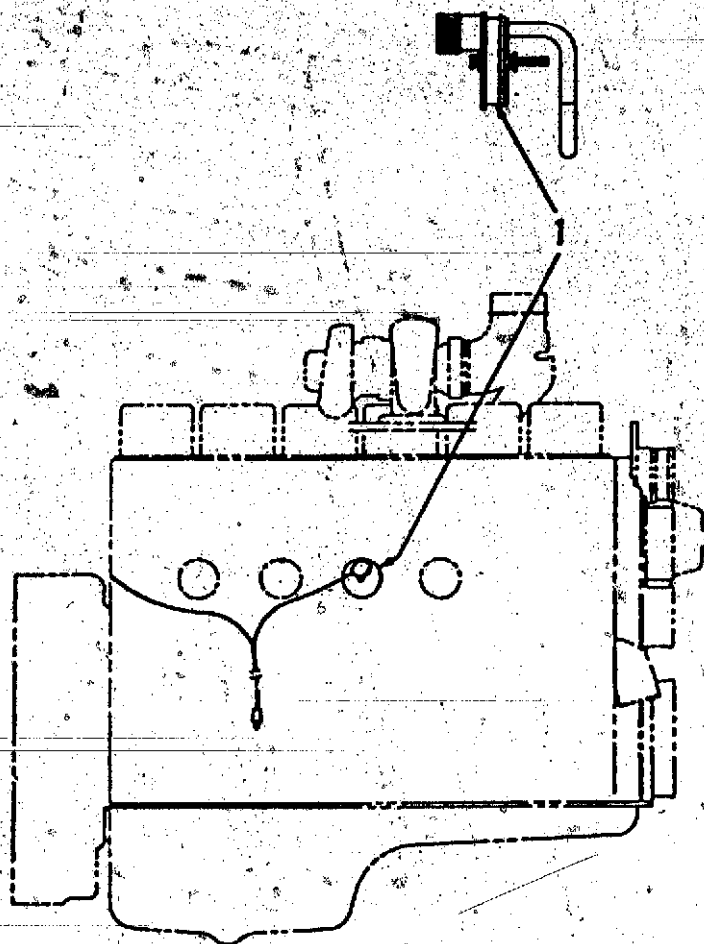
Chassis



Chassis

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	870-0212	1	Nut, Lock (1/4-20)	15	800-2120	4	Screw, Cap - Hex Head (M12 x 1.75 x 70mm)
2	416-0854	1	Bracket, Mounting - Battery	16	850-2012	5	Washer, Lock (M12)
3	416-0853	1	Holddown, Battery	17	800-0092	10	Screw, Cap - Hex Head (1/2-13 x 1-1/2")
4	800-0026	1	Screw, Cap - Hex Head (5/16-18 x 3/4")	18	850-0060	10	Washer, Lock - Spring (1/2")
5	856-0008	1	Washer, Lock - EIT (5/16)	19	526-0219	10	Washer, Flat (1/2")
6	870-0257	1	Nut, Lock (5/16-18)	20	862-0016	10	Nut, Hex (1/2-13)
7	332-1473	1	Lug, Solderless	21	800-0520	3	Screw, Cap - Hex Head (3/4-10 x 1")
8	800-2111	1	Screw, Cap - Hex Head (M12 x 1.75 x 25mm)	22	403-2567	1	Support, Engine
9	856-0013	1	Washer, Lock - EIT (1/2")	23	402-0568	1	Mount, Vibration
10	800-0092	1	Screw, Cap - Hex Head (1/2-13 x 1-1/2")	24	800-0156	4	Screw, Cap - Hex Head (3/4-10 x 2-1/4")
11	862-0016	1	Nut, Hex (1/2-13)	25	862-0008	4	Nut, Hex (3/4-10)
12	850-0060	1	Washer, Lock - Spring (1/2")	26	850-0079	2	Washer, Lock - Spring (3/4")
13	856-0013	1	Washer Lock - EIT (1/2")	27	526-0238	2	Washer, Flat (3/4)
14	337-0090	1	Strap, Electrical	28	402-0466	2	Mount, Vibration

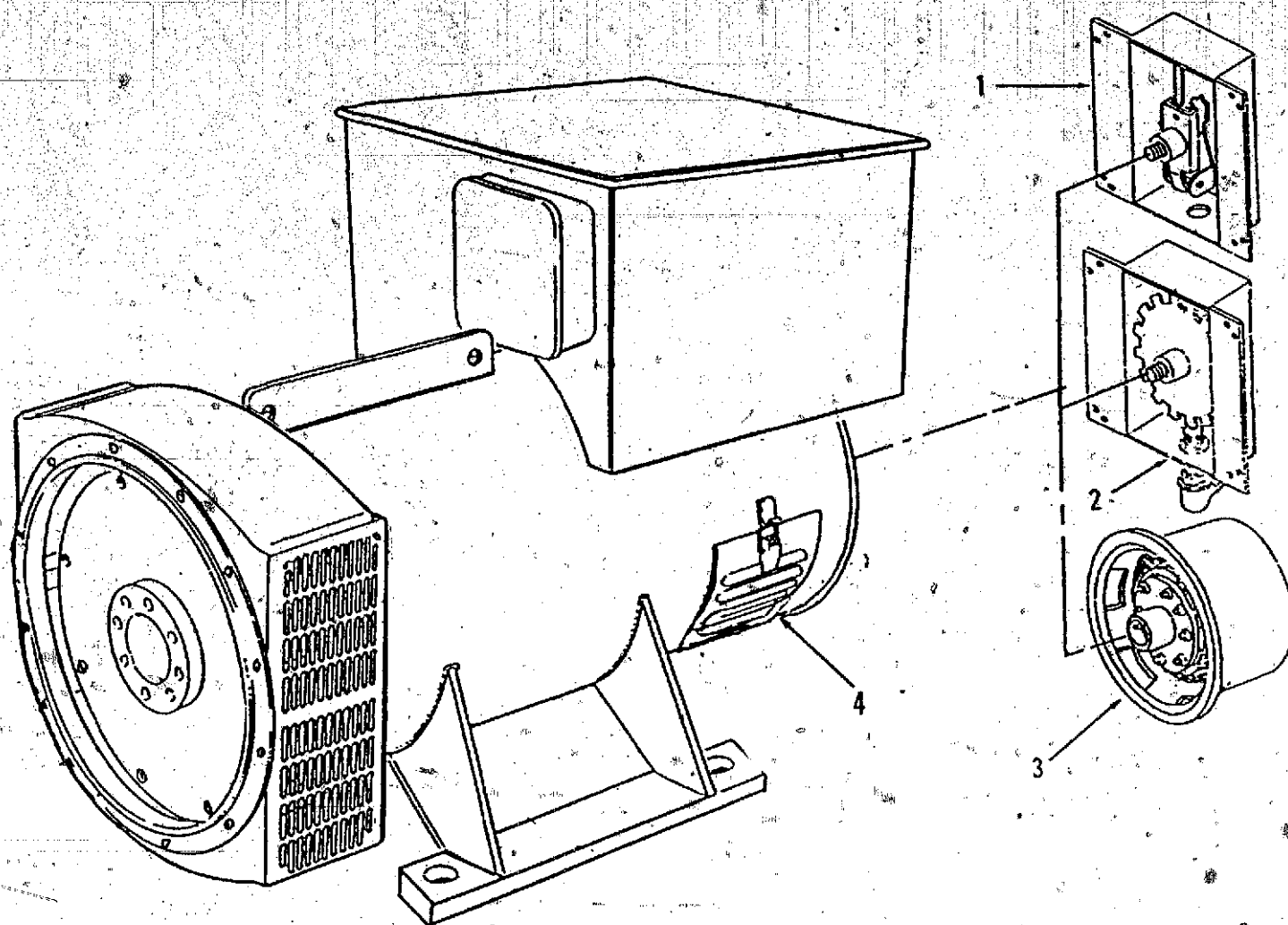
Engine Coolant Heater



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Heater, Engine Coolant
	333-0291-01	1	120 VAC
	333-0291-02	1	240 VAC

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
2			Cable, Electrical (Includes Thermostat Switch)
	333-0292-01	1	120 VAC
	333-0292-02	1	240 VAC
3	505-0851	1	Bushing, Reducer

Generator

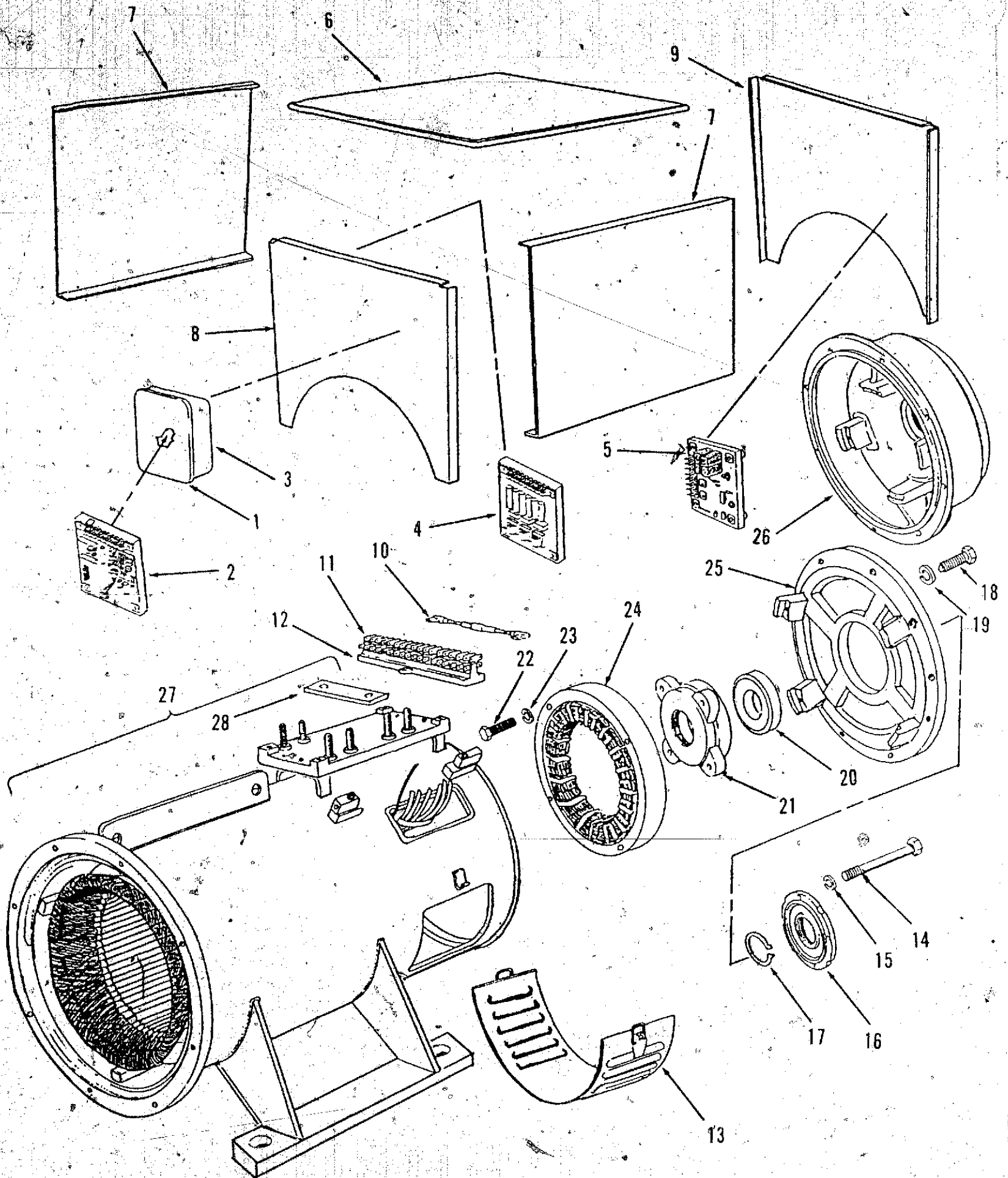


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1		1	Module, Overspeed Switch (See Separate Page for Components)
	821-2045	4	Attaching Parts Screw, Self-locking - Hex Hd (M8 x 1.25 x 16mm)
2		1	Module, Overspeed Sensor (See Separate Page for Components)
	821-2045	4	Attaching Parts Screw, Self-locking - Hex Hd (M8 x 1.25 x 16mm)
3		1	Module, Permanent Magnet Exciter (See Separate Page for Components)
	249-0298	4	Attaching Parts Screw, Cap - Hex Head (M8 x 16mm)
	249-0218	4	Washer, Lock (M8)
	249-0315	4	Clamp, Retaining

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
4	Note 1		Generator (See Separate Pages for Stator and Rotor Components)
	800-0156	4	Attaching Parts Generator to Chassis Screw, Cap - Hex Head (3/4-10 x 2-1/2")
	850-0079	4	Washer, Lock - Spring (3/4")
	526-0238	4	Washer, Flat (3/4")
	862-0016	2	Nut, Hex (1/2-13)
	800-2088	12	Adapter to Flywheel Housing Screw, Cap - Hex Head (M10 x 1.5 x 35mm)
	850-2010	12	Washer, Lock - Spring (M10)
	805-0015	8	Drive Disc to Flywheel Bolt - Hex Head (3/8-16 x 3/4", Grade 8)
	526-0124	8	Washer, Flat (1-1/2"OD x 13/32"ID)

Note 1: For replacement Generator please supply the complete Gen Set nameplate and Generator nameplate data. The Replacement Generator will be shipped from closest warehouse or the factory. The replacement will not include PMG Exciter Module, Generator to Flywheel Housing Adapter, Drive Discs and Terminal Box.

Generator Stator Section

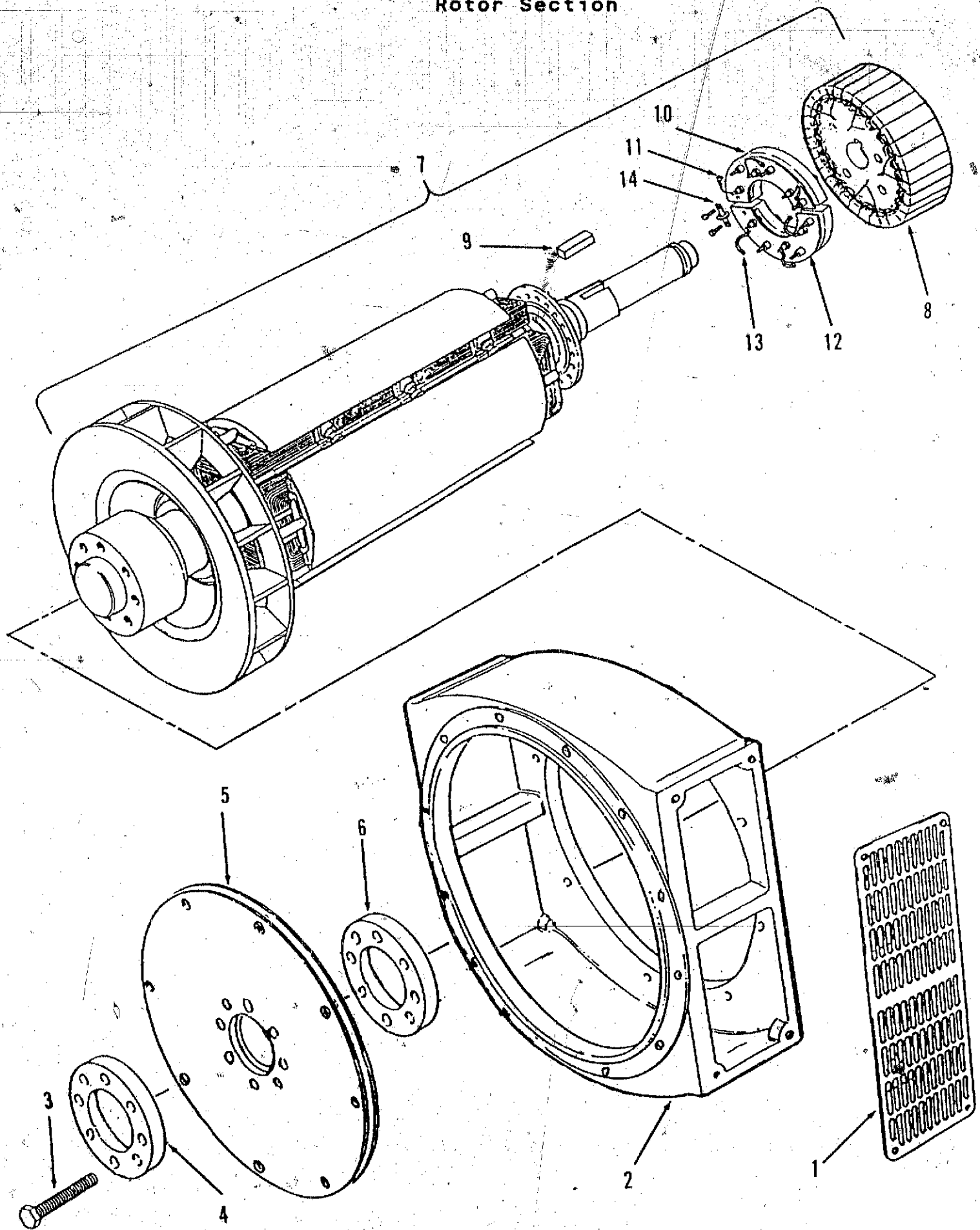


Generator Stator Section

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	249-0401	1	Lid	13	249-0368	2	Grille, Inlet - Air
			Attaching Parts	14	249-0302	4	Screw, Cap - Hex Head (M10 x 65mm)
	249-0304	4	Screw, Captive	15	249-0202	4	Washer, Lock - Spring (M10)
2			Regulator, Voltage	16	249-0362	1	Cap, Bearing - Outer
	305-0779	1	Standard	17	249-0444	1	Circlip
	305-0778	1	3 Phase (Used with PMG Exciter & 3 Phase Sensing Module)	18	249-0201	8	Screw, Cap - Hex Head (M10 x 35mm)
			Attaching Parts	19	249-0202	8	Washer, Lock - Spring (M10)
	249-0398	4	Pillar, Threaded	20	249-0312	1	Bearing, Ball
3	249-0564	1	Module, 3 Phase Sensing	21	249-0361	1	Cap, Bearing - Inner
			Attaching Parts	22			Screw, Cap - Hex Head (M6 x 55mm) Standard Gen
	249-0398	4	Pillar, Threaded		249-0297	4	(M6 x 70mm) Ext Stack Gen
4	249-0395	1	Box		249-0291	4	Washer, Lock - Spring (M6)
5	300-3209-02	1	Module, Frequency Detection	23	249-0212	4	Stator, Exciter
			Attaching Parts	24			Standard Generator
	249-0295	4	Screw, Cap - Hex Head (M5 x 35mm)		249-0334	1	Extended Stack Generator
	249-0288	4	Washer, Plastic (M5)	25	249-0354	1	Bracket, End-Standard Gen
	249-0287	4	Nut, Hex - Nylon (M5)	26	249-0355	1	Bracket, End-Extended Stack Gen
6	NFS	1	Lid	27	NFS	1	Stator, Generator (Includes Terminal Studs and Links)
7	NFS	2	Panel, Side				Attaching Parts Stator to Adapter
8	NFS	1	Panel, Front		249-0201	8	Screw, Cap - Hex Head (M10 x 35mm)
9	NFS	1	Panel, Rear		249-0202	8	Washer, Lock - Spring (M10)
10	249-0428	1	Resistor (Voltage Code H Only)	28	249-0404	4	Link, Terminal
11	249-0289	3	Block, Terminal - AUX				
12	249-0424	1	Base, Terminal - AUX				

NFS - Not For Sale

Generator Rotor Section

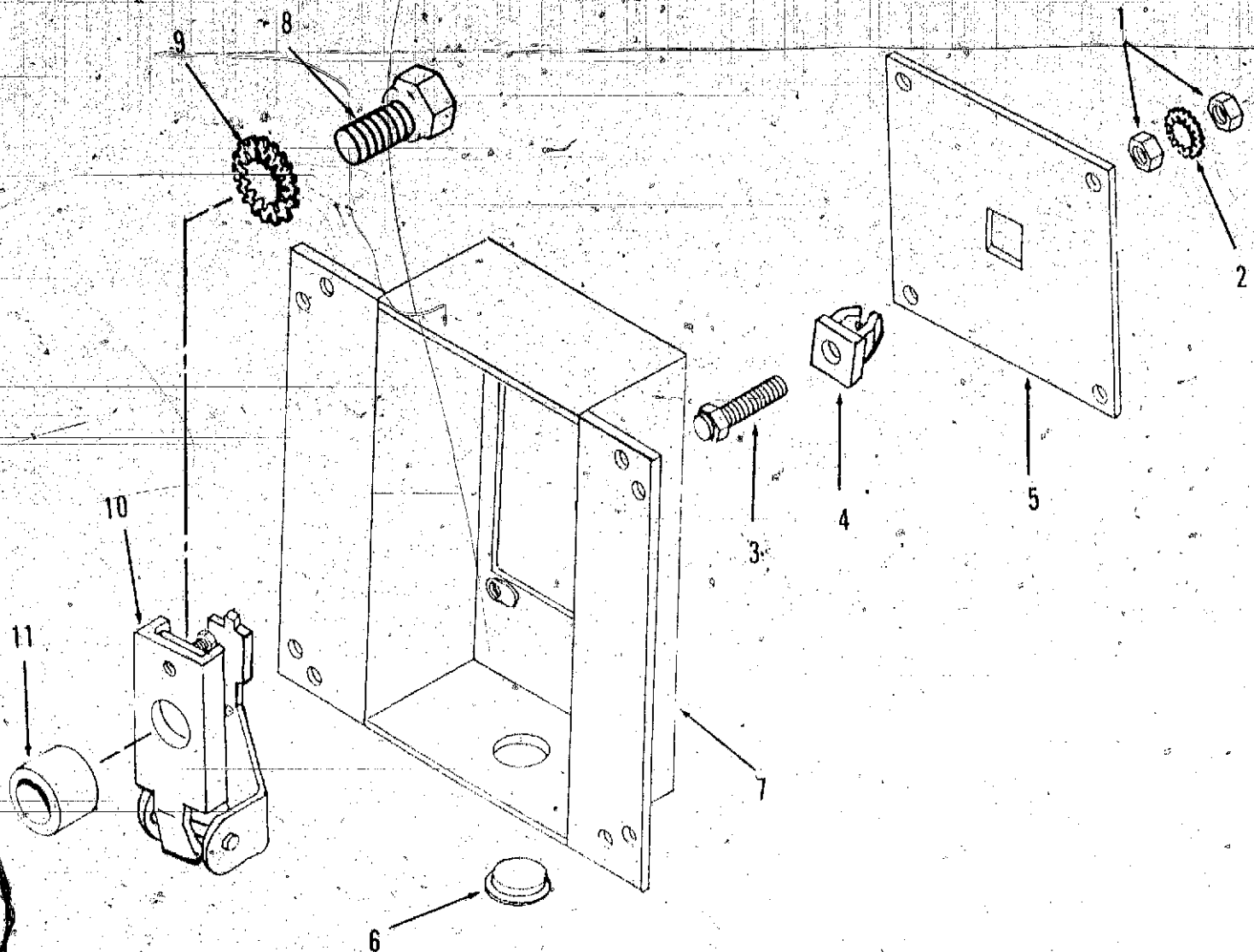


Generator Rotor Section

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	249-0341	2	Screen, Air - Adapter	8	249-0336	1	Rotor, Exciter (Does Not
			Attaching Parts				Include Rectifier Assy)
	249-0294	8	Screw, Cap - Hex Head				Standard Generator
			(M5 x 12mm)	8a	249-0367	1	Rotor, Exciter (Does Not
	249-0307	8	Washer, Lock - Spring (M5)				Include Rectifier Assy)
	249-0308	8	Washer, Flat (M5)				Extended Stack Generators
2	249-0370		Adapter, Generator	9	249-0271	1	Key
3	249-0290	8	Screw, Cap - Hex Head	10	249-0340	1	Rectifier Assy, Forward
			(M16 x 75mm)				(Includes Item 11 Diodes)
4	249-0402	1	Plate, Pressure	11	249-0281	1	Set, Forward Polarity Diode
5	249-0327	3	Disc, Drive	12	249-0341	1	Rectifier Assy, Reverse
6	249-0364	1	Spacer				(Includes Item 13 Diodes)
7	NFS	1	Rotor, Generator (Includes	13	249-0282	1	Set, Reverse Polarity Diode
			Exciter, Key, and Rectifier	14	249-0283	1	Varistor
			Assemblies)				Attaching Parts
					249-0294	2	Screw, Cap - Hex Head
							(M5 x 12mm)

NFS - Not For Sale

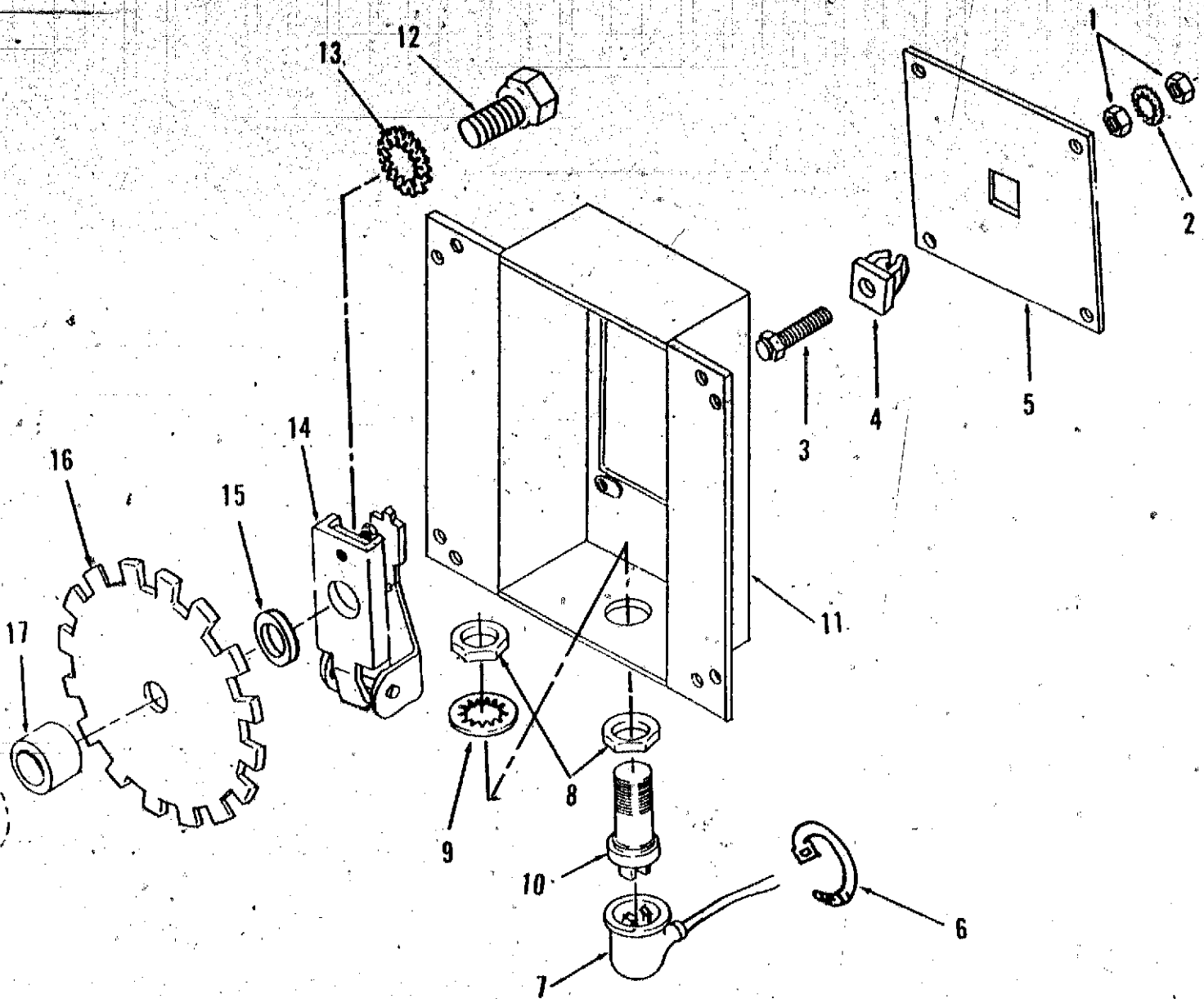
Generator Overspeed Switch



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	862-0001	2	Nut, Hex (1/4-20)
2	853-0013	1	Washer, Lock - EIT (1/4")
3	150-0723	1	Point, Overspeed
4	870-0250	1	Nut, Insulated
5	150-2206	1	Plate, Mounting
	821-0005	4	Screw, Self-locking -, Hex (#10-32 x 1/2")

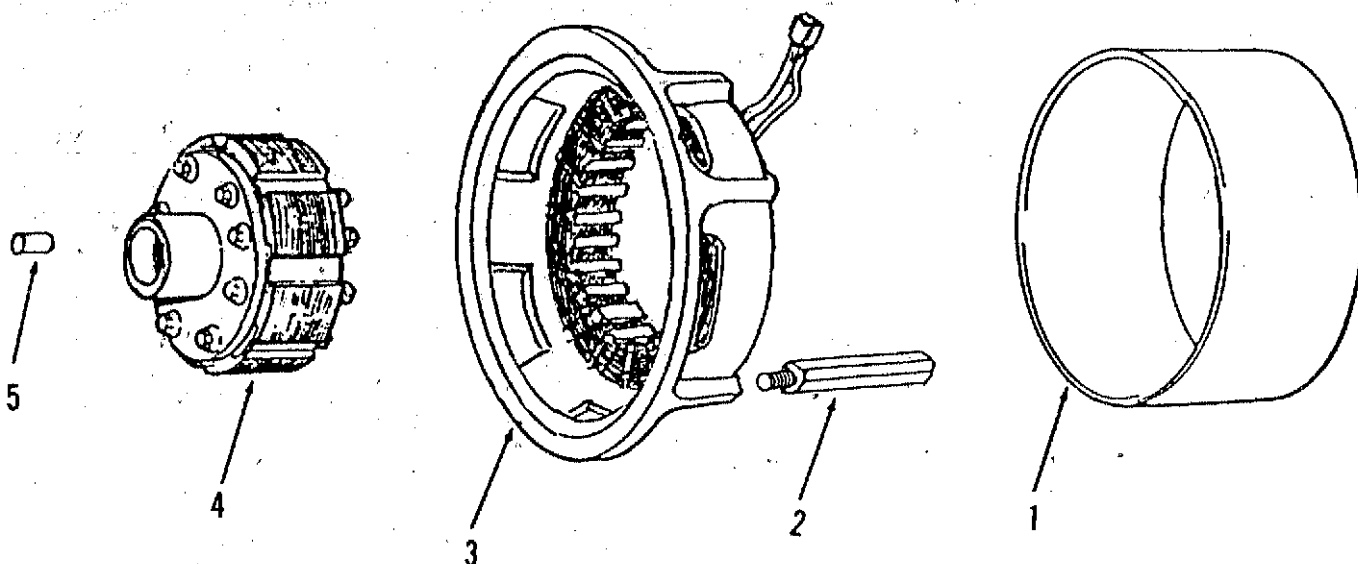
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
6	517-0136	1	Plug, Plastic
7	150-2207	1	Cover, Overspeed Switch
8	718-1058	1	Screw, Cap - Hex Head (M10 x 1.5 x 45mm)
9	856-0010	1	Washer, Lock - EIT (3/8")
10	150-0956	1	Switch, Overspeed
11	370-4032	1	Spacer, Sleeve

Generator Overspeed Sensor



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)	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	868-0011	2	Nut, Jam - Hex (3/4-16)	17	370-4032	1	Spacer, Sleeve

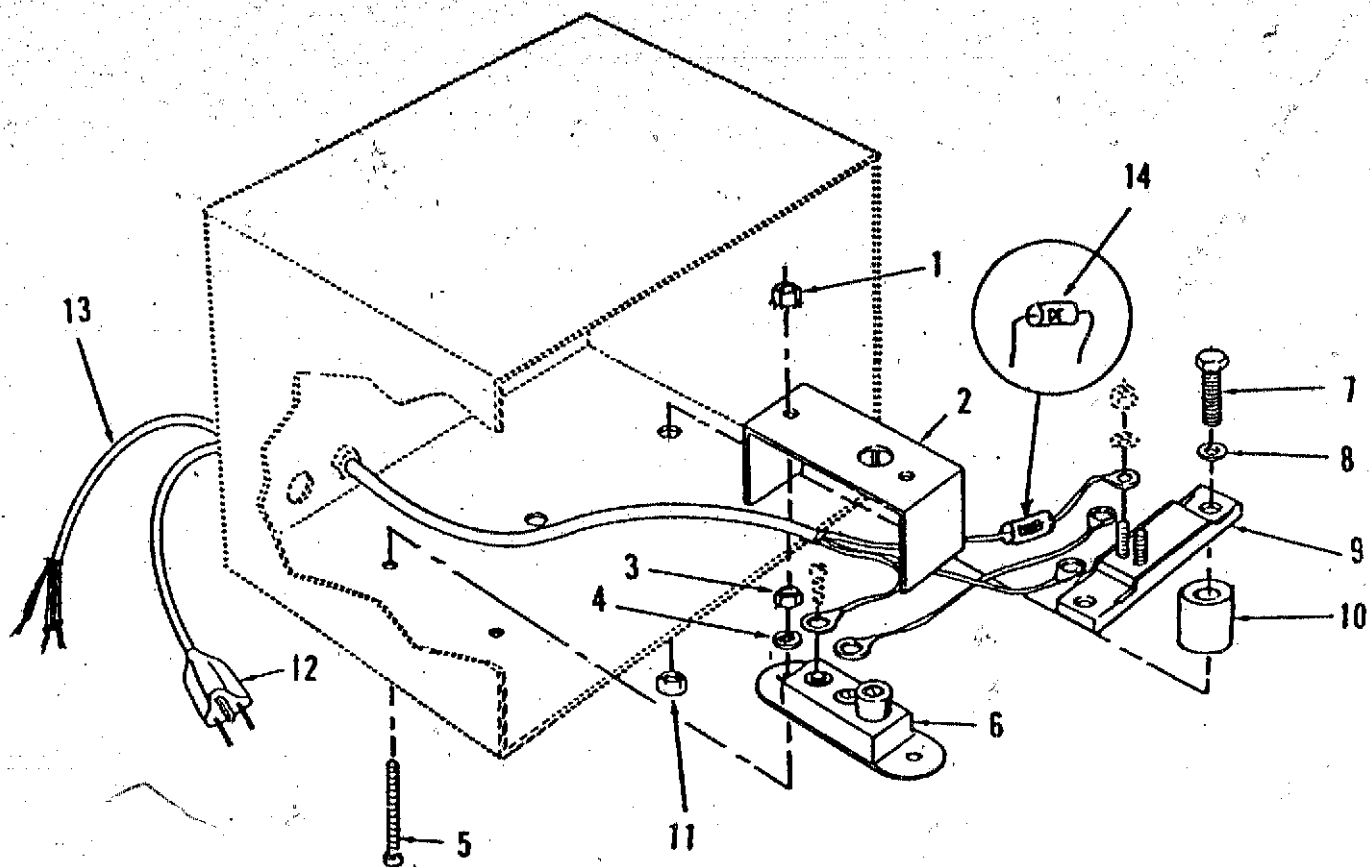
Generator Permanent Magnet Exciter



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	249-0422	1	Cover
	249-0294	3	Screw, Cap - Hex Head (M5 x 12mm)
	249-0307	3	Washer, Lock (M5)
2	249-0423	3	Pillar, Threaded

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
3	249-0426	1	Stator, Exciter with Frame
4	249-0427	1	Rotor, Exciter
	249-0399	1	Bolt
	249-0202	1	Washer, Lock (M10)
5	249-0313	1	Pin, Dowel

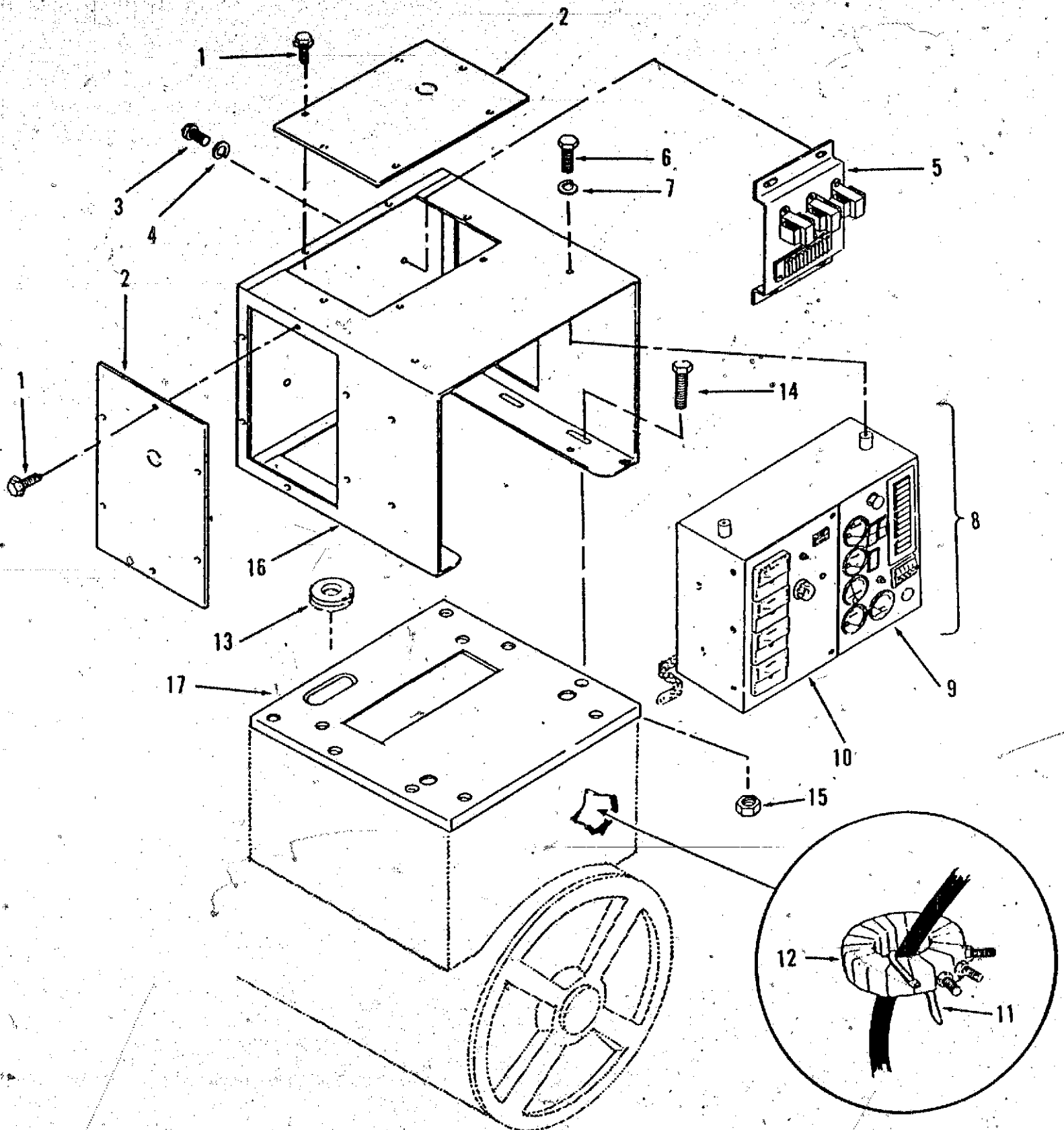
Control Heater



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	870-0183	2	Nut, Self-locking - Hex (#6-32)
2	301-1886	1	Cover
3	860-0006	1	Nut, Hex (#6-32)
4	854-0006	2	Washer, Lock - IT (#6)
5	812-0070	2	Screw, Machine - Round Head (#6-32 x 1-1/4")
6	309-0128	1	Thermostat, Adjustable
7	800-0034	2	Screw, Cap - Hex Head (5/16-18 x 2-1/4")
8	526-0113	2	Washer, Flat (5/16")

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
9			Heater, Electrical
	333-0151	1	120VAC
	333-0378	1	240VAC
10	130-1107	2	Spacer
11	870-0257	2	Nut, Self-locking - Hex (5/16-18)
12	335-0161	1	Cable, Electrical (120VAC Application)
13	338-2121	1	Harness Wiring with Diode, less plug (240VAC Application)
14	357-0013	1	Diode
15	98-3232	1	Decal, Warning - Shock Hazard (Not Illustrated)

Generator Set Control

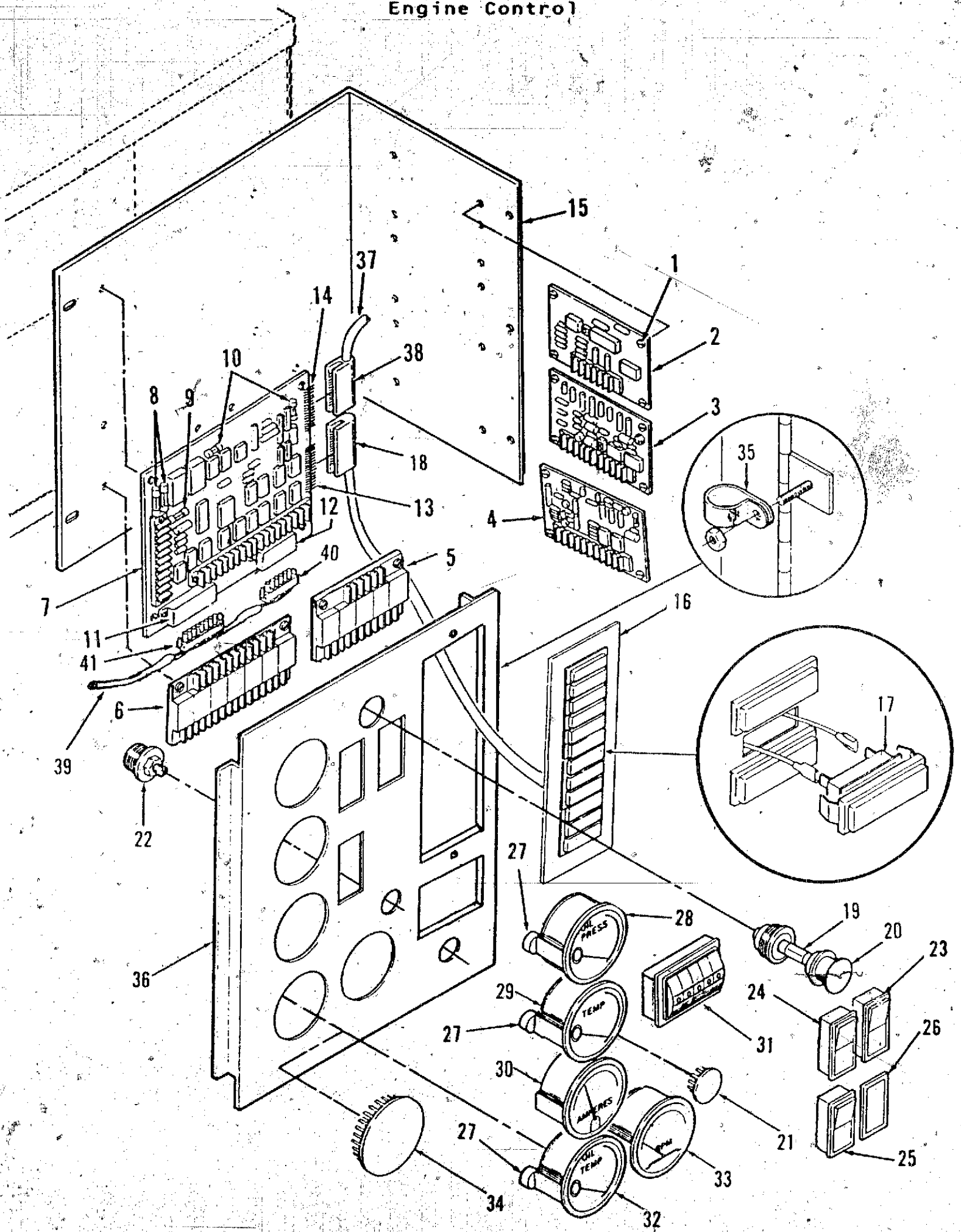


Generator Set Control

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")	10	NFS	1	Control, Generator (See Separate Page for Components)
2	NFS	3	Panel, Box - Control	11	332-0941	6	Tie, Cable
3	812-0156	4	Screw, Machine - Round Head (1/4-20 x 1/2")	12			Transformer, Current - Reconnectible
4	850-0040	4	Washer, Lock - Spring (1/4")		302-1794-02	3	80kW Voltage Code H
5	NFS	1	Transformer Assy, Potential (See Separate Page for Components)		302-1794-03	3	65 & 80kW Voltage Code L, 65 & 80kW Voltage Code Z, 100kW Voltage Code H.
6	800-0051	4	Screw, Cap - Hex Head (5/16-18 x 1/2")		302-1794-04	3	85 & 100kW Voltage Code L, 85 & 100kW Voltage Code Z.
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	821-0018	6	Screw, Self-locking - Hex Head (1/4-20 x 5/8")
9	NFS	1	Control, Engine (See Separate Page for Components)	15	870-0212	6	Nut, Self-locking - Hex (1/4-20)
				16	NFS	1	Housing, Control
				17	NFS	1	Adapter, Housing to Terminal Box

NFS - Not For Sale

Engine Control

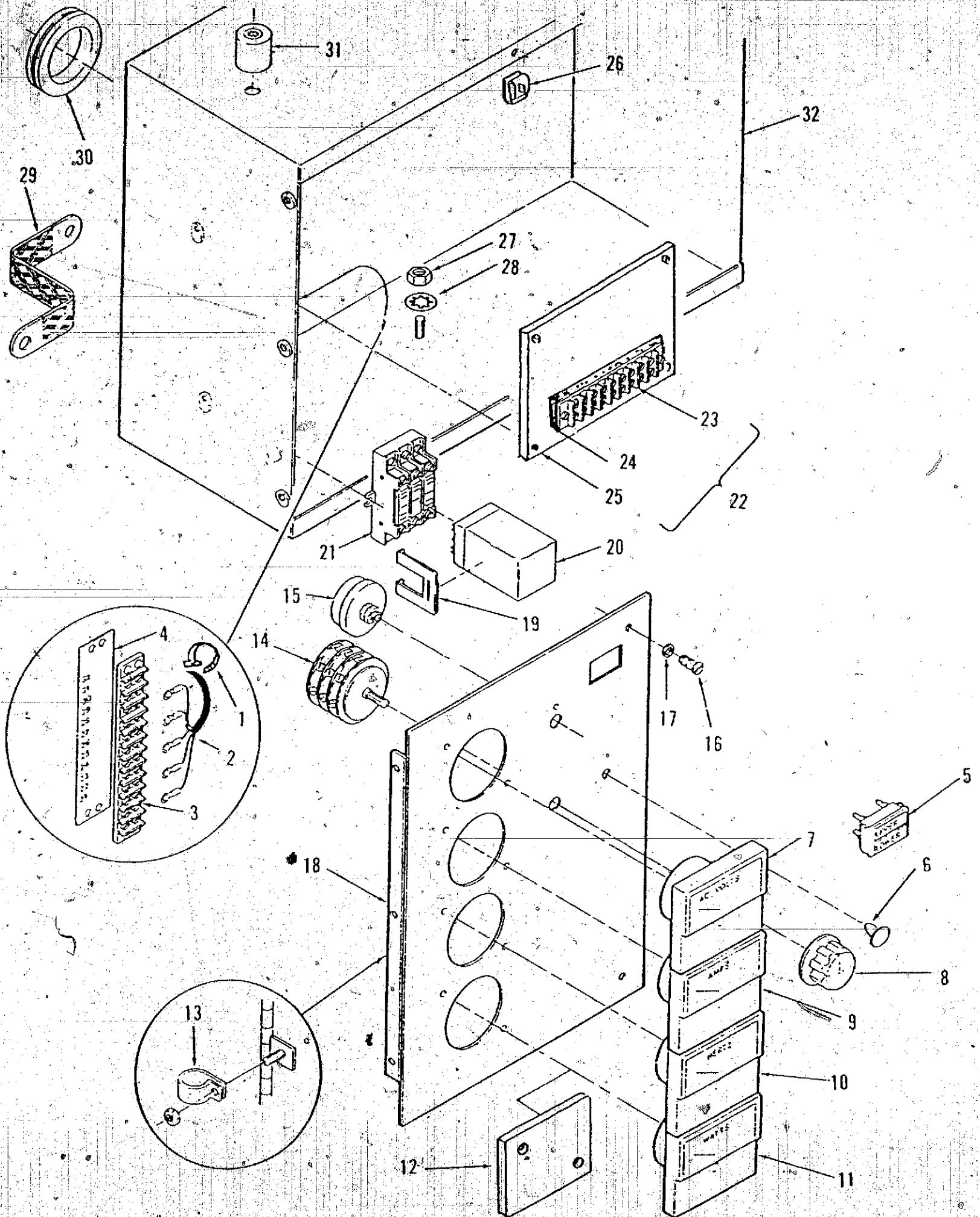


Engine Control

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	18	323-1310	1	Housing, 13 Pin (J3)
3			Start/Stop - 24 VDC (A15)	19	322-0017	1	Contact, Pin
			Board, Magnetic Sensor	20	322-0361	1	Lamp, Incandescent - 28 VDC (DS11)
			Start Disconnect/Over Speed Sensor (A16)	21	517-0131	1	Holder, Lamp
	300-2903	1	Standard	22	303-0280	1	Plug, Button
	300-2904	1	Precision	23	308-0785	1	Potentiometer (R11)
4	300-2906	1	Board, Over-Under Voltage Sensor - 24 VDC (A17)	24	308-0784	1	Switch, Push (S11)
5	300-2856	1	Board, Relay - 24 VDC (A13)	26	301-6257	1	Switch, Push (S12)
6	300-2863	1	Board, Relay - 24 VDC (A14)	27	193-0250	3	Cover
7			Board, Engine Monitor (A11) (Includes Fuses and Connectors)	28	193-0352	1	Resistor, Gauge (R12)
			24 VDC, 2 Light	29	193-0351	1	Gauge, Pressure - Oil (M11)
			24 VDC, 12 Light	30	302-1790	1	Gauge, Temperature - Water (M12)
8	321-0270	2	Fuse, Cartridge - 20 Amp (F1, F2)	31	302-0885	1	Ammeter (M13)
9	321-0231	1	Fuse, Cartridge - 15 Amp (F3)		815-0385	2	Meter, Totalizing - Time (M14)
10	321-0094	2	Fuse, Cartridge - 5 Amp (F4, F5)		870-0183	2	Screw, Machine - Round Head (#6-31 x 1/2")
11	323-1305	1	Connector, 8 Pin (P1)	32	193-0330	1	Nut, Hex with ET Lockwasher (#6-32)
12	323-1303	1	Connector, 6 Pin (P2)	33	302-1715	1	Gauge, Temperature - Oil (M15)
13	323-1309	1	Connector, 13 Pin (P3)	34	517-0221	1	Tachometer (M16)
14	323-1307	1	Connector, 12 Pin (P4)	35	322-0052	1	Plug, Button
15	NFS	1	Bracket, Mounting		870-0131	1	Clamp, Loop
	821-0004	4	Screw, Self-locking - Hex Hd (#10-32 x 5/16")	36	NFS		Nut, Hex with ET Lockwasher (#10-32 x 1/2")
16			Module, Indicator - Fault (Includes Replaceable Lamps, Harness with Connector Housing & Contact Pins)(A12)	37	338-1817	1	Door, Control
			24 VDC, 2 Light	38	323-1308	1	Harness, Wiring - DC Meter (Includes Connector & Pins)
			24 VDC, 12 Light		323-1302	12	Housing, 12 Pin (J4)
	322-0358-02	1	Screw, Machine - Round Head (#6-32 x 1/2")	39	338-2171	1	Contact, Pin
	322-0360-02	1	Nut, Self-locking - Hex (#6-32)	40	323-1304	1	Harness, Wiring - Control to Engine (Includes Connectors and Pins)
	815-0385	2			323-1200	6	Housing, 6 Pin
	870-0183	2		41	323-1306	1	Contact, Pin
					323-1200	8	Housing, 8 Pin
							Contact, Pin

NFS - Not For Sale

Generator Control

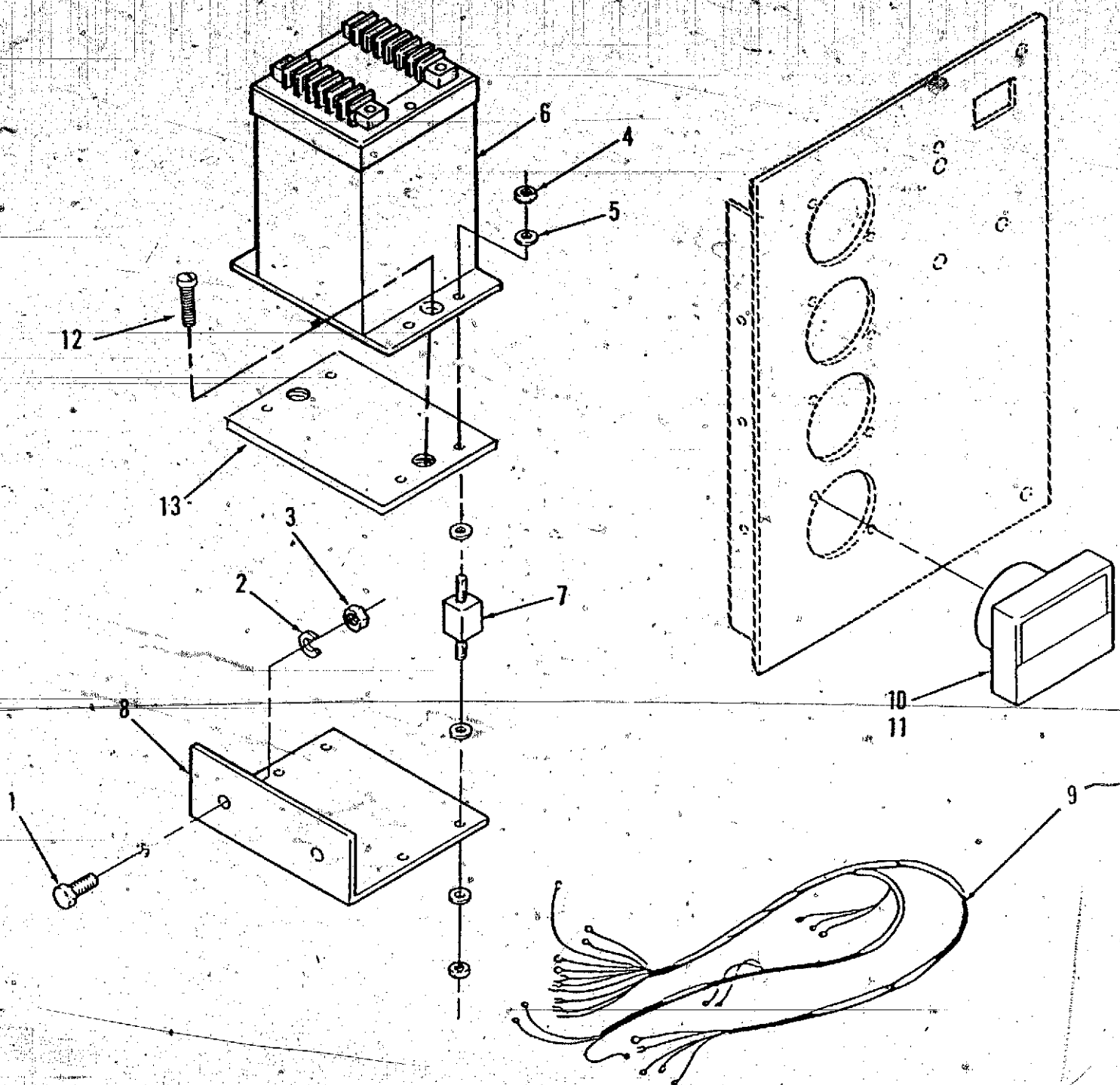


Generator Control

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	332-1445	2	Tie, Cable	14	308-0284	1	Switch, Rotary (S21)
2	338-1818	1	Harness, Wiring	15	303-0261	1	Rheostat (R21)
	338-1853	1	Control with Meters	16	406-0334	2	Clip, Fastener
	812-0065	2	(Includes Terminal Block)	17	406-0333	2	Stud, Fastener
			Control without Meters	18	NFS	1	Door, Control
			Screw, Machine - Round Head		821-0004	3	Screw, Self-locking - Hex
			(#6-32 x 5/8")				(#10-32 x 5/16")
3	332-0607	1	Block, Terminal (T81)	19	307-1987	2	Clip, Relay
4	332-2723	1	Strip, Marker	20	307-1056	1	Relay, 24 VDC (K21)
5	322-0363	1	Light, Indicator - Dual	21	323-0804	1	Socket, Relay
			(DS21, DS22)		815-0544	2	Screw, Machine - Round Head
6	517-0131	1	Plug, Button				with IT Lock Washer
7			Voltmeter (M21)				(#6-32 x 1/2")
	302-1148	1	Dual Scale 0-300/0-600V	22	NFS	1	Terminal Board Assembly
	302-1753	1	Single Scale 0-750V		812-0065	4	Screw, Machine - Round Head
8	303-0032	1	Knob				(#6-32 x 5/8")
9			Ammeter (M22)	23	332-0751	1	Block, Terminal
			Single Scale Voltage Code H		812-0066	2	Screw, Machine - Round Head
	302-1691	1	80kW, 0-100 Amp				(#6-32 x 3/4")
	302-1805-02	1	100kW, 0-150 Amp	24	332-0853	1	Strip, Marker
			Dual Scale Volt, Codes L & Z	25	NFS	1	Plate
	302-1684	1	65 & 80kW, 0-150/0-300 Amp	26	406-0332	2	Receptacle, Fastener
	302-1685	1	85 & 100kW, 0-200/0-400 Amp	27	871-0015	1	Nut, Hex (1/4-20)
10	302-1720	1	Meter, Frequency (M23)	28	853-0013	1	Washer, Lock - ET (1/4")
11		1	Wattmeter (M24) (See	29	337-0049	1	Strap, Electrical (Ground)
			Separate page for Components)		800-0024	1	Screw, Cap - Hex Head
12	NFS	1	Cover, Meter Hole				(5/16-18 x 1/2")
	815-0385	2	Screw, Machine - Round Head,		856-0008	1	Washer, Lock - EIT (5/16")
			Black (#6-32 x 1/2")	30	508-0051	1	Grommet
	870-0183	2	Nut, Hex with ET Lockwasher	31	402-0527	2	Mount, Vibration
			(#6-32)		800-0051	4	Screw, Cap - Hex Head
13	332-0052	1	Clamp, Loop				(5/16-18 x 1/2")
	870-0131	1	Nut, Self-locking - Hex with		850-0045	4	Washer, Lock - Spring
			ET Lock Washer (#10-32)				(5/16")
				32	NFS	1	Box, Control

NFS - Not For Sale

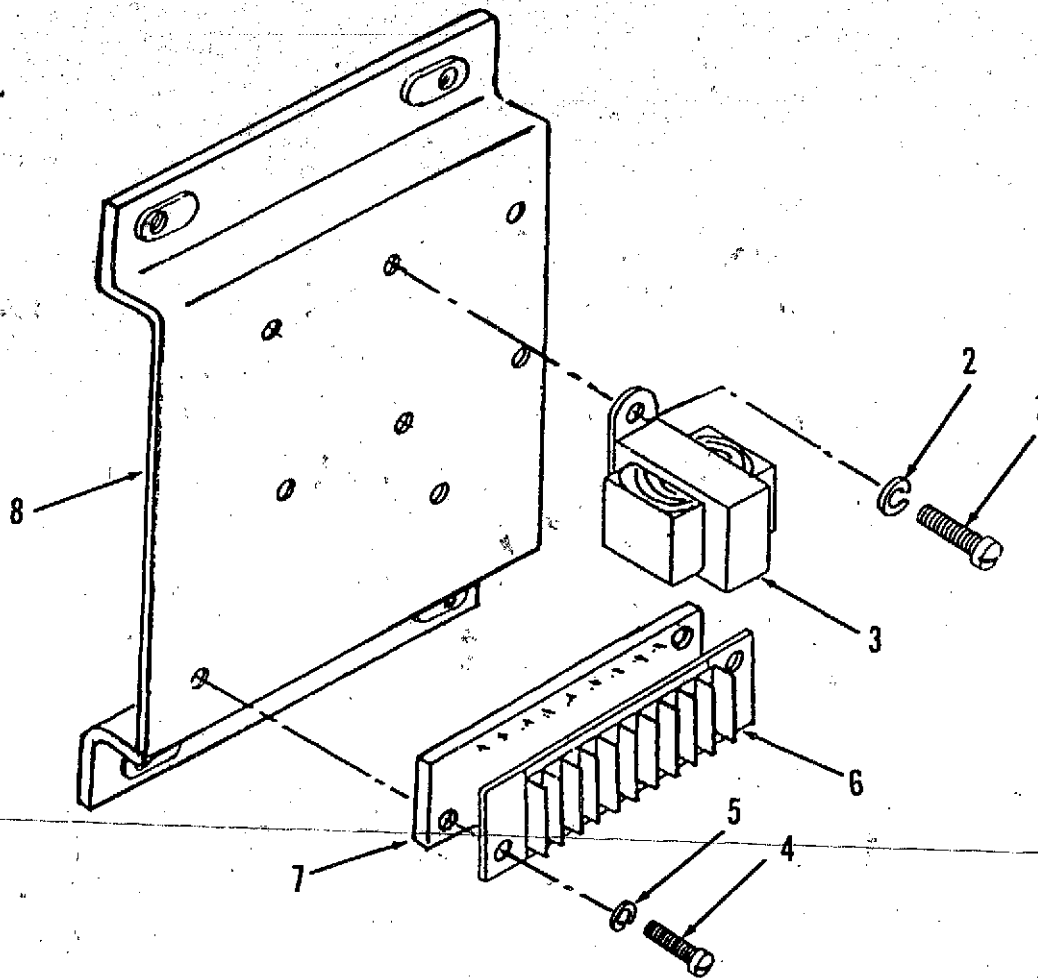
Wattmeter



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	821-0017	2	Screw, Cap - Hex Head (5/16-18 x 1/2")
2	850-0045	2	Washer, Lock (5/16)
3	862-0014	2	Nut, Hex (5/16-18)
4	860-0008	8	Nut, Hex (#8-32)
5	856-0002	16	Washer, Lock - ET (#8)
6	302-1833-01	1	Transducer, Watt
7	402-0354	4	Mount, Shock

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
8	301-6987	1	Bracket, Mounting
9	338-1936	1	Harness, Wiring
10	302-1722	1	Wattmeter (Less Dial)
11	302-1721-04	1	Dial, Wattmeter
	302-1721-05	1	DTDA, DXDA
	302-1721-05	1	DTDB, DXDB
12	813-0102	2	Screw, Machine - Round Head (#10-32 x 3/8")
13	319-0030	1	Plate, Support - Transducer

Potential Transformer



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	812-0079	6	Screw, Machine - Round Head (#8-32 x 1/2")
2	850-0025	6	Washer, Lock - Spring (#8)
3	315-0642	3	Transformer, Potential
4	812-0077	2	Screw, Machine - Round Head (#8-32 x 3/8")

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
5	850-0025	2	Washer, Lock - Spring (#8)
6	332-2562	1	Block, Terminal (10 Place)
7	332-2563	1	Strip, Marker
8	NFS	1	Bracket, Mounting

NFS - Not For Sale

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