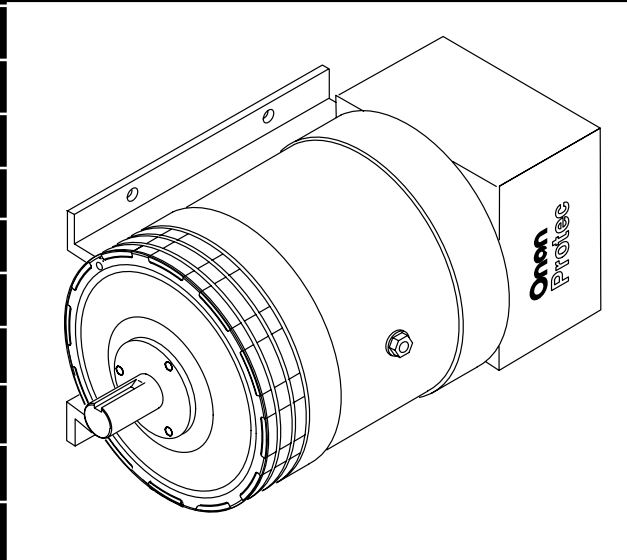


Onan

Commercial Generator Parts Catalog

PROTEC Series

YD



Printed in U.S.A.

929-0201B
7/05 (Spec A-C)

Replaces 929-0201, 3-95 (Spec A)
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MODEL IDENTIFICATION

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

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

MODEL AND SPEC NO.

SERIAL NO.

DIGITAL CONTROL SOFTWARE VERSION
AND DATE (IF APPLICABLE)

SAFETY PRECAUTIONS

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

▲ DANGER

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

▲ WARNING

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

▲ CAUTION

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

PRODUCT SAFETY PRECAUTIONS

▲ WARNING

Service and repair of Onan equipment must be performed by trained, experienced personnel only. Improper service or repair may result in property damage, severe personal injury or death. Do not use this catalog as a guide to servicing your equipment. Read and follow the IMPORTANT SAFETY INSTRUCTIONS in the Service Manual appropriate for the equipment you are working on.

▲ WARNING

Contact with USED ENGINE OILS has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When checking or changing engine oils take all necessary precautions not to ingest, breathe the fumes or contact the used oil.

▲ WARNING

Contact with ASBESTOS has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When handling engine gaskets take all necessary precautions not to ingest, breathe or contact the dust from the gaskets! Use adequate ventilation and wear protective gloves, masks and clothing!

▲ WARNING

Contact with BENZINE and LEAD, found in gasoline, 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 protective clothing!

PSP04

Introduction

This catalog applies to the AC PTO Generator as listed in the Generator Set Data Table. Parts are arranged in groups of related items and each illustrated part is identified by a reference number corresponding to the same reference number in the parts list. Parts illustrations are typical. Unless otherwise mentioned in the description or the page heading, parts are interchangeable between models. Using the model and specification number from your generator set nameplate, select parts that apply to your set.

Generator Set Data Table

<u>Model Number</u>	<u>Voltage</u>	<u>Hertz</u>	<u>Phase</u>
15YD-CJ/376A, B	120/240	60	1
15YD-CR/621C		60	1
15YD-CR/622C	Reconnect	60	3
20YD-CJ/376A, B	120/240	60	1
20YD-CR/621C		60	1
20YD-CR/622C	Reconnect	60	3
24YD-CJ/376A, B	120/240	60	1
25YD-CJ/376B	120/240	60	1
25YD-CR/621C		60	1
25YD-CR/622C	Reconnect	60	3
30YD-CJ/376A, B	120/240	60	1
30YD-CR/621C		60	1
32YD-CJ/376B	120/208	60	3
32YD-CR/622C	Reconnect	60	3
35YD-CJ/376A, B	120/240	60	1
35YD-CR/621C		60	1
37YD-CJ/376B	120/208	60	3
37YD-CR/622C	Reconnect	60	3
40YD-CR/622C	Reconnect	60	3
12YD-CJ/376A, B	115/230	50	1
12YD-CR/621C		50	1
12YD-CR/622C	Reconnect	50	3
16YD-CJ/376A, B	115/230	50	1
16YD-CR/621C		50	1
16YD-CR/622C	Reconnect	50	3
20YD-CJ/376A, B	115/230	50	1
20YD-CR/621C		50	1
30YD-CR/622C	Reconnect	50	3
24YD-CJ/376A, B	115/230	50	1
25YD-CR/621C		50	1
25YD-CR/622C	Reconnect	50	3
30YD-CJ/376A, B	115/230	50	1
30YD-CR/621C		50	1
30YD-CR/622C	Reconnect	50	3
31YD-CR/622C	Reconnect	50	3

* - The diagonal line (/) in the model and specification number separates generator set characteristics from the specification number and letter. The specification number denotes customer requested options or deviations from a standard (1A,1B, etc.) model. The specification letter advances (A to B, B to C, etc.) with major manufacturing changes.

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- Box, Switchboard (20kW, 24kW, 25kW), **17**
- Box, Switchboard (30kW, 35kW), **19**
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- Bracket, Panel Stop (30kW, 35kW), **19**
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- Breaker, Switchboard Circuit (12kW, 15kW, 16kW), **15**
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- Rotor, Exciter (Spec A, B), **5**
- Rotor, Generator (Begin Spec C), **9**
- Rotor, Generator (Spec A, B), **5**

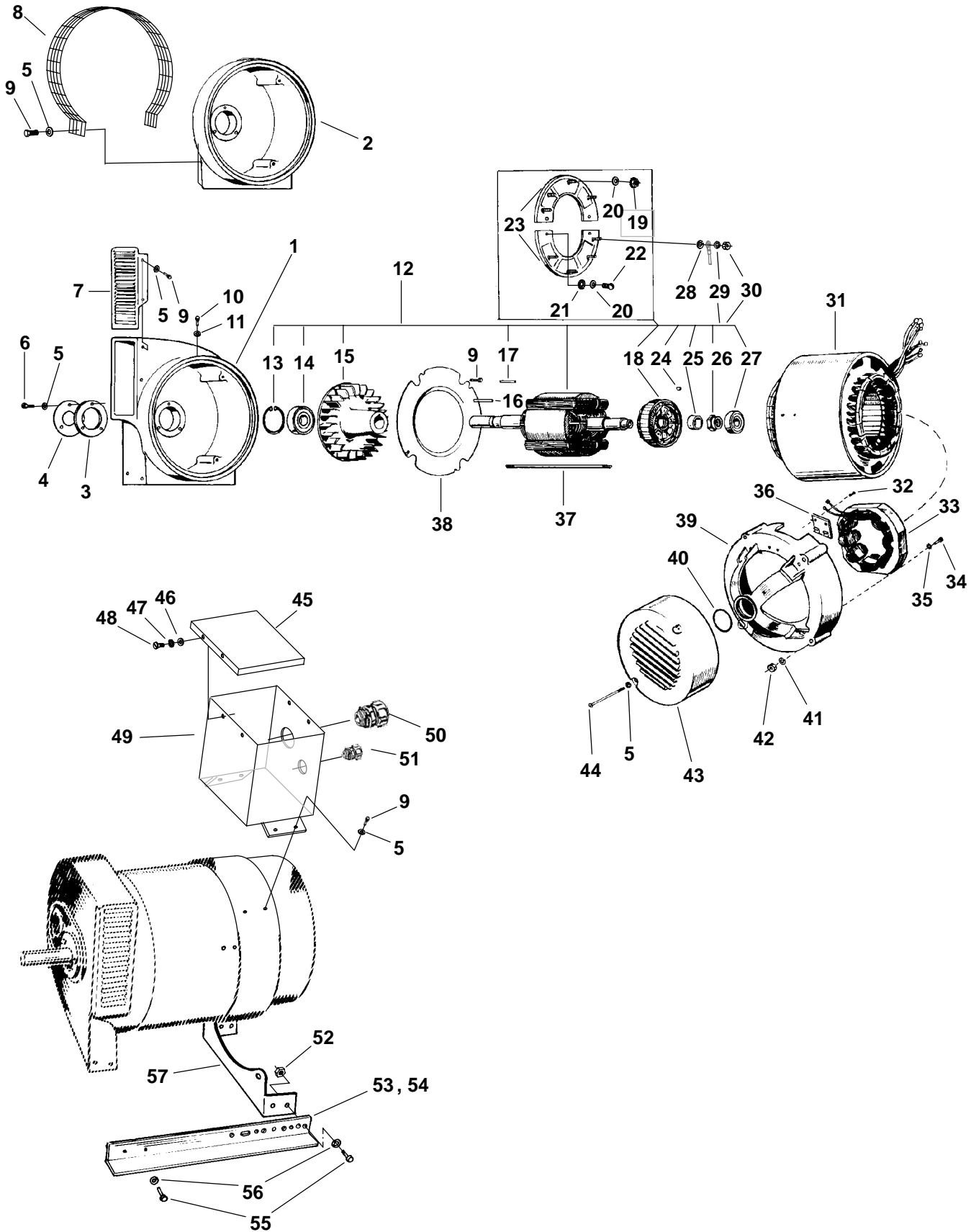
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- Seal, O'Ring (Spec A, B), **7**
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Generator (Spec A, B)

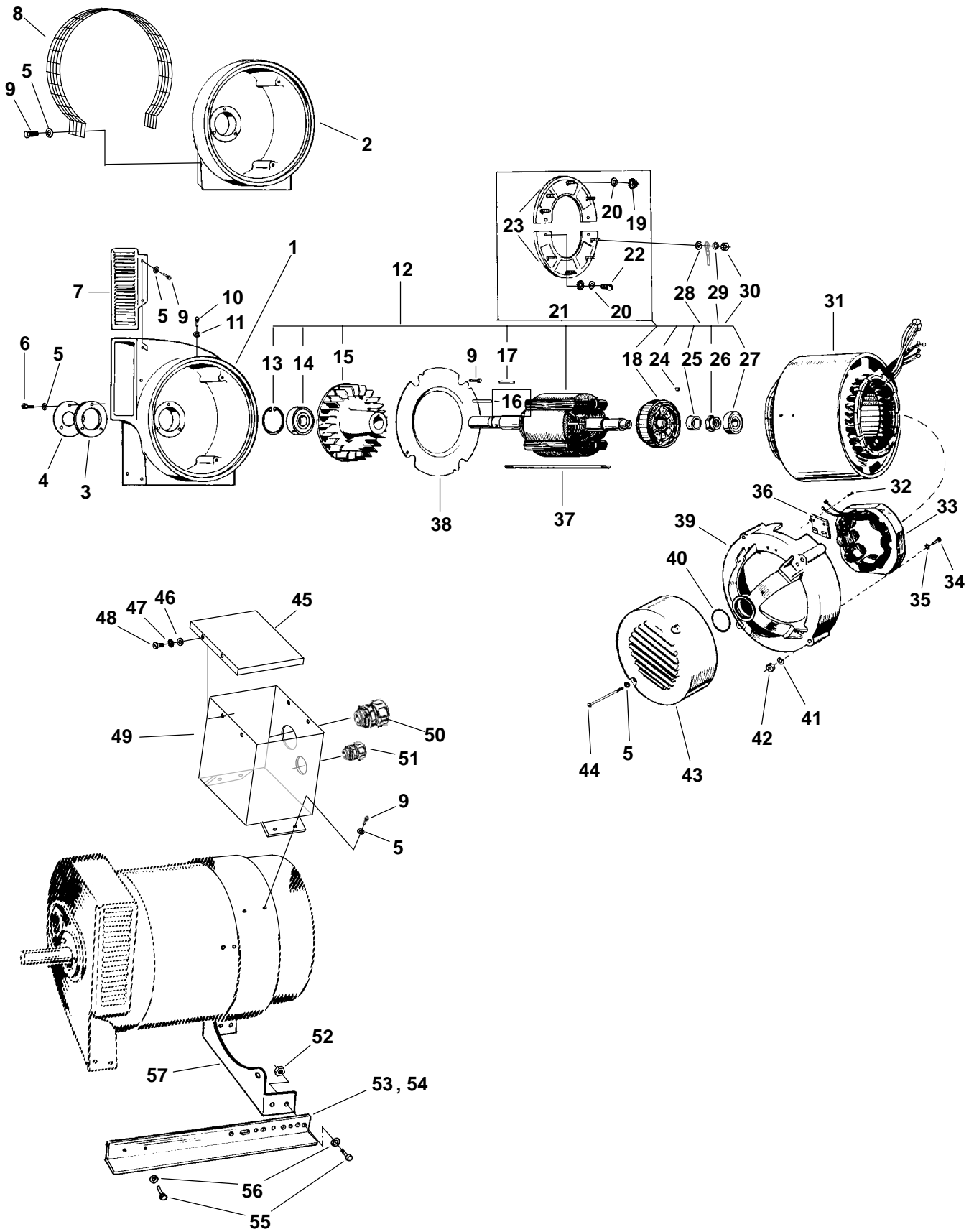


Generator (Spec A, B)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	231-0185	1	Adapter, Generator (Spec A)	19	870-0131	6	+Nut, ET Hex
2	231-0363	1	Adapter, Generator (Spec B)	20	526-0008	10	+Washer, Flat (#10)
3	232-2576	1	Retainer, Bearing	21	853-0008	4	+Washer, ET Lock (#10)
4	232-2453	1	Cover, Bearing	22	813-0100	4	+Screw, Round Head Machine (10-32 x 1/2 ⁹)
5	526-0399-13	16	Washer, Flat (1/4 ⁹)				+Rectifier Assy
6	800-0310-07	3	Screw, Hex Head Cap (1/4-20 x 1-1/4 ⁹)	23			Positive
7	234-0522	1	Grille, Fan (Spec A)		358-0069	1	Negative
8	232-3916	1	Fan Guard (Spec B)		358-0070	1	
9	800-0310-02	11	Screw, Hex Head Cap (1/4-20 x 1/2 ⁹)	24	515-0094	1	*Key, Woodruff (#6)
10	800-0310-62	1	Screw, Hex Head Cap (1/2-13 x 3/4 ⁹) (Spec A)	25	232-2398	1	*Spacer, Bearing
11	526-0399-25	1	Washer, Flat (1/2 ⁹) (Spec A)	26	870-0284	1	*Nut, Nylon Insert Lock (1-1/8-12UNF)
12			Rotor Assy (Includes Parts Marked *)	27	510-0112	1	*Bearing, Ball
			Spec A	28	850-0030	2	*Washer, Lock (#10) (Spec A) (60 Hz - 15/20/24kW Only; 50Hz - 12/16/20kW Only)
			60 Hz	29	526-0008	2	*Washer, Flat (#10)
	201-2338	1	15kW	30	870-0131	2	*Nut, ET Hex (#10-32)
	201-2340	1	20kW	31			Stator
	201-2341	1	24kW				60 Hz
	201-3529-01	1	30kW		220-4454-01	1	15kW
	201-3529-02	1	35kW		220-4454-02	1	20kW
			50 Hz		220-4454-03	1	24kW, 25kW
	201-2338	1	12kW		220-4454-04	1	30kW
	201-2340	1	16kW		220-4501-04	1	32kW (3 Phase)
	201-2341	1	20kW		220-4454-05	1	35kW
	201-3529-01	1	24kW		220-4501-05	1	37kW (3 Phase)
	201-3529-02	1	30kW				50 Hz
			Spec B		220-4454-01	1	12kW
			60 Hz		220-4454-02	1	16kW
	201-3543-01	1	15kW		220-4454-03	1	20kW
	201-3543-02	1	20kW		220-4454-04	1	24kW
	201-3543-03	1	24kW, 25kW	32	815-0194	2	30kW
	201-3543-04	1	30kW, 32kW				Screw, ET Hex Head Thread Cutting (#10-32 x 3/8 ⁹)
	201-3543-05	1	35kW, 37kW	33			Stator, Exciter
			50 Hz				60 Hz
	201-3543-01	1	12kW		220-2308	1	15kW, 20kW, 24kW, 25kW
	201-3543-02	1	16kW		220-2309	1	30kW, 32kW, 35kW, 37kW
	201-3543-03	1	20kW				50 Hz
	201-3543-04	1	24kW		220-2308	1	12kW, 16kW, 20kW
	201-3543-05	1	30kW		220-2309	1	24kW, 30kW
13	518-0333	1	*Ring, External Retainer	34			Screw, Slotted Head
14	510-0115	1	*Bearing, Ball (With Snap Ring)				Countersunk (1/4-20)
15			*Fan, Generator				60Hz
	205-0114	1	Spec A		802-0038	4	15kW, 20kW, 24kW, 25kW
	205-0247	1	Spec B		802-0040-01	4	30kW, 32kW, 35kW, 37kW
16	515-0212	1	Key, Machined				50 Hz
17	515-0051	1	*Key, Machined		802-0038	4	12kW, 16kW, 20kW
18			*Rotor, Exciter (Includes Parts Marked +)		802-0040-01	4	24kW, 30kW
			60 Hz	35	850-0114-05	4	Washer, Lock (1/4 ⁹)
	201-2151	1	15kW, 20kW, 24kW, 25kW	36	232-2418	1	Board, Connection
	201-2152	1	30kW, 35kW				
			50 Hz				
	201-2151	1	12kW, 16kW, 20kW				
	201-2152	1	24kW, 30kW				

* - Parts Included in Generator Rotor.
+ - Parts Included with Exciter Rotor.

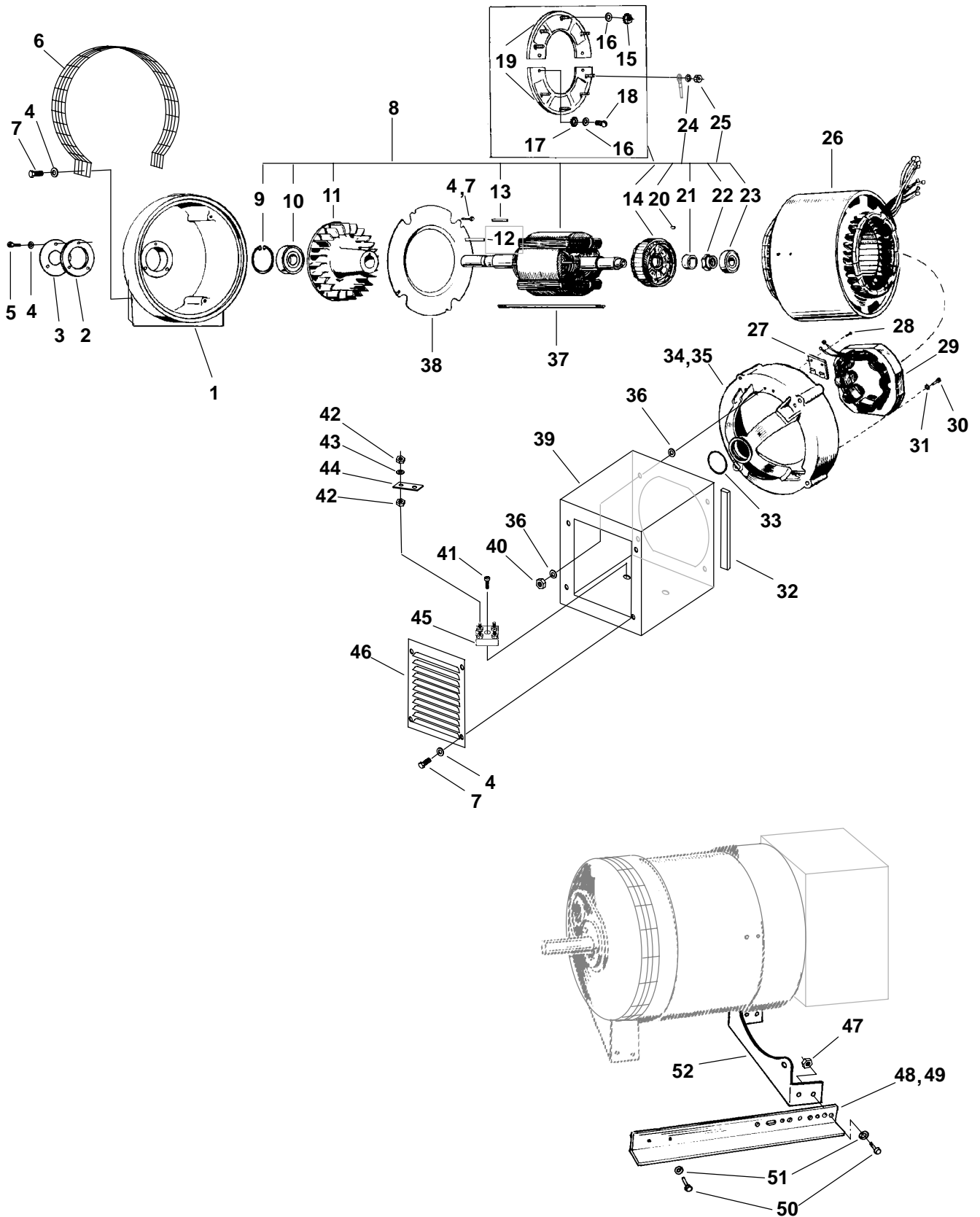
Generator (Spec A, B)



Generator (Spec A, B)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
37			Stud, Through	49	319-2502	1	Box, Output
			60 Hz	50	331-0551	1	Connector, Straight (1-1/4 ^o)
	520-0797	4	15kW	51	331-0115	1	Connector, Straight (1/2 ^o)
	520-0799	4	20kW	52	862-0026-08	4	Nut, Hex (7/16-14)
	520-0800	4	24kW, 25kW	53			Foot, Right Mounting
	520-0801	4	30kW, 32kW				60 Hz
	520-0802	4	35kW, 37kW		232-2577	1	15kW, 20kW, 24kW, 25kW
			50 Hz		232-3893	1	30kW, 32kW, 35kW, 37kW
	520-0797	4	12kW				50 Hz
	520-0799	4	16kW		232-2577	1	12kW, 16kW, 20kW
	520-0800	4	20kW		232-3893	1	24kW, 30kW
	520-0801	4	24kW	54			Foot, Left Mounting
	520-0802	4	30kW				60 Hz
38			Baffle, Air		232-2578	1	15kW, 20kW, 24kW, 25kW
	234-0519	1	Spec A		232-3892	1	30kW, 32kW, 35kW, 37kW
	234-0969	1	Spec B				50 Hz
39			Endbell		232-2578	1	12kW, 16kW, 20kW
	211-0470	1	Spec A		232-3892	1	24kW, 30kW
	211-0256-04	1	Spec B	55	800-0310-50	8	Screw, Hex Head Cap
40	509-0094	1	Seal, O'Ring				(7/16-14 x 1 ^o)
41	526-0399-42	4	Washer, Flat (3/8 ^o)	56	526-0399-43	12	Washer, Flat (7/16 ^o)
42	862-0026-07	4	Nut, Hex (3/8-16)	57			Bracket, Generator Support
43	234-0185	1	Cover, Endbell				60 Hz
44	812-0165	2	Screw, Round Head Machine		232-2452	1	15kW, 20kW, 24kW, 25kW
			(1/4-20 x 4-1/2 ^o)		232-3900	1	30kW, 32kW, 35kW, 37kW
45	319-2501	1	Cover, Output Box				50 Hz
46	526-0399-11	4	Washer, Flat (#10)		232-2452	1	12kW, 16kW, 20kW
47	853-0040-04	4	Washer, ET (#10)		232-3900	1	24kW, 30kW
48	822-2160-37	4	Screw, Pan Head Slot				
			(#10-32 x 1/2 ^o)				

Generator (Begin Spec C)

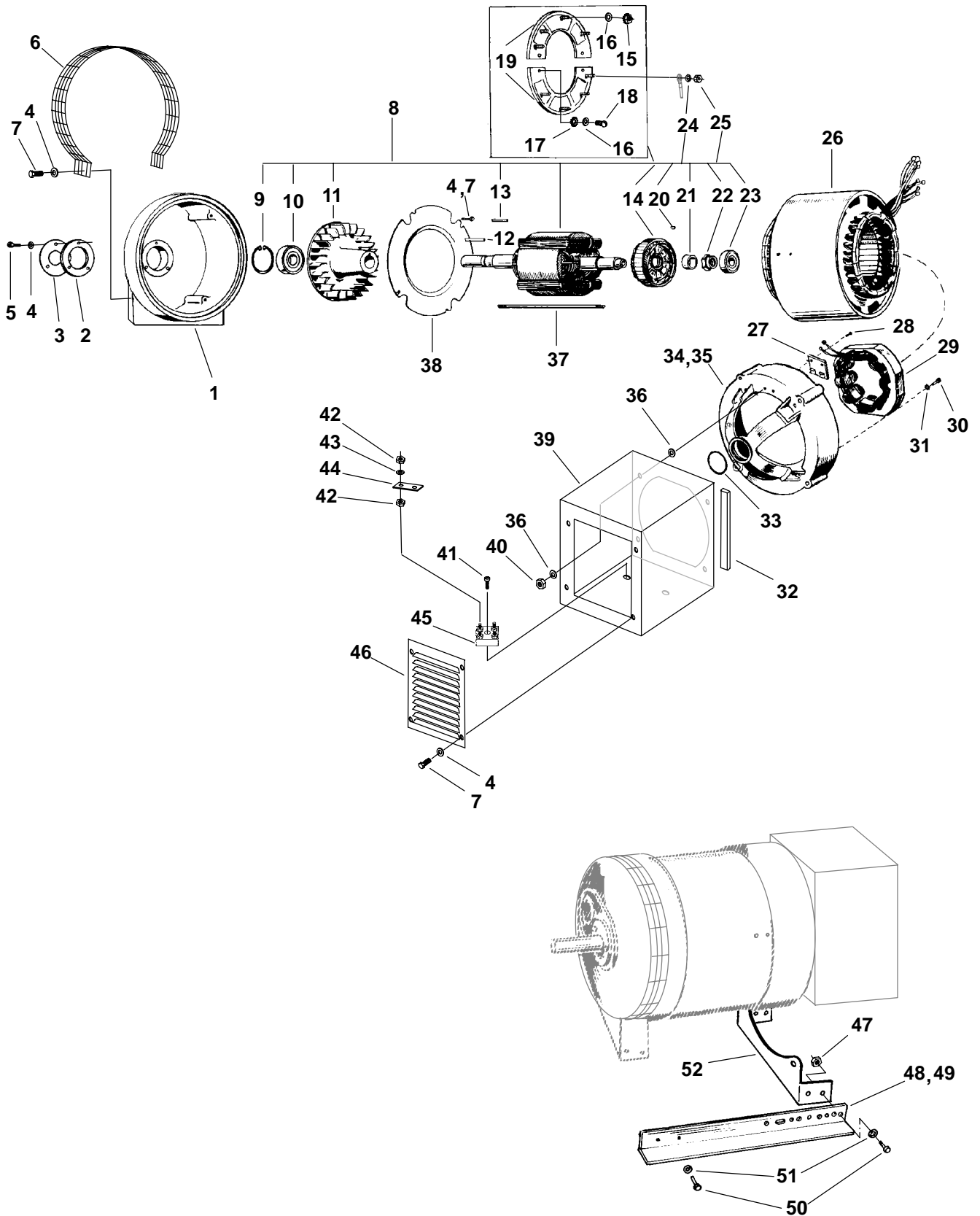


Generator (Begin Spec C)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	231-0363	1	Adapter, Generator	26			Stator
2	232-2576	1	Retainer, Bearing				Single Phase
3	232-2453	1	Cover, Bearing				60 Hz
4	526-0399-13	15	Washer, Flat (1/4 ^o)	220-4527-01	1	15kW	
5	800-0310-07	3	Screw, Hex Head Cap (1/4-20 x 1-1/4 ^o)	220-4527-02	1	20kW	
6	232-3916	1	Fan Guard	220-4527-03	1	25kW	
7	800-0310-02	12	Screw, Hex Head Cap (1/4-20 x 1/2 ^o)	220-4527-04	1	30kW	
8			Rotor Assy (Includes Parts Marked *)	220-4527-05	1	35kW	50 Hz
			60 Hz	220-4527-01	1	12kW	
			15kW	220-4527-02	1	16kW	
	201-3543-01	1	20kW	220-4527-03	1	20kW	
	201-3543-02	1	25kW	220-4527-04	1	25kW	
	201-3543-03	1	30kW, 32kW	220-4527-05	1	30kW	
	201-3543-04	1	35kW, 37kW, 40kW				Three Phase
	201-3543-05	1	50 Hz	220-4528-01	1	15kW	60 Hz
			12kW	220-4528-02	1	20kW	
	201-3543-01	1	16kW	220-4528-03	1	25kW	
	201-3543-02	1	20kW	220-4528-04	1	32kW	
	201-3543-03	1	25kW	220-4528-05	1	37kW, 40kW	
	201-3543-04	1	30kW, 31kW				50 Hz
	201-3543-05	1	*Ring, External Retainer	220-4528-01	1	12kW	
9	518-0333	1	*Bearing, Ball (With Snap Ring)	220-4528-02	1	16kW	
10	510-0115	1	*Fan, Generator	220-4528-03	1	20kW	
11	205-0247	1	Key, Machined	220-4528-04	1	25kW	
12	515-0212	1	*Key, Machined	220-4528-05	1	30kW, 31kW	
13	515-0051	1	*Rotor, Exciter (Includes Parts Marked +)	27	232-3961	1	Board, Connection
14			60 Hz	28	815-0194	2	Screw, ET Hex Head Thread Cutting (#10-32 x 3/8 ^o)
			15kW, 20kW, 24kW, 25kW	29			Stator, Exciter
	201-2151	1	30kW, 35kW				60 Hz
	201-2152	1	50 Hz	220-2308	1	15kW, 20kW, 25kW	
			12kW, 16kW, 20kW	220-2309	1	30kW, 32kW, 35kW, 37kW, 40kW	
	201-2151	1	24kW, 30kW				50 Hz
	201-2152	1	+Nut, ET Hex	220-2308	1	12kW, 16kW, 20kW	
15	870-0131	6	+Washer, Flat (#10)	220-2309	1	25kW, 30kW, 31kW	
16	526-0008	10	+Washer, ET Lock (#10)	30			Screw, Slotted Head
17	853-0008	4	+Screw, Round Head Machine (10-32 x 1/2 ^o)				Countersunk (1/4-20)
18	813-0100	4	+Rectifier Assy	802-0038	4	15kW, 20kW, 25kW	
19			Positive	802-0040-01	4	30kW, 32kW, 35kW, 37kW 40kW	
	358-0069	1	Negative				50 Hz
	358-0070	1	*Key, Woodruff (#6)	802-0038	4	12kW, 16kW, 20kW	
20	515-0094	1	*Spacer, Bearing	802-0040-01	4	25kW, 30kW, 31kW	
21	232-2398	1	*Nut, Nylon Insert Lock (1-1/8-12UNF)	31	850-0114-05	4	Washer, Lock (1/4 ^o)
22	870-0284	1	*Bearing, Ball				
23	510-0112	1	*Washer, Flat (#10)				
24	526-0008	2	*Nut, ET Hex (#10-32)				
25	870-0131	2					

* - Parts Included in Generator Rotor.
+ - Parts Included in Exciter Rotor.

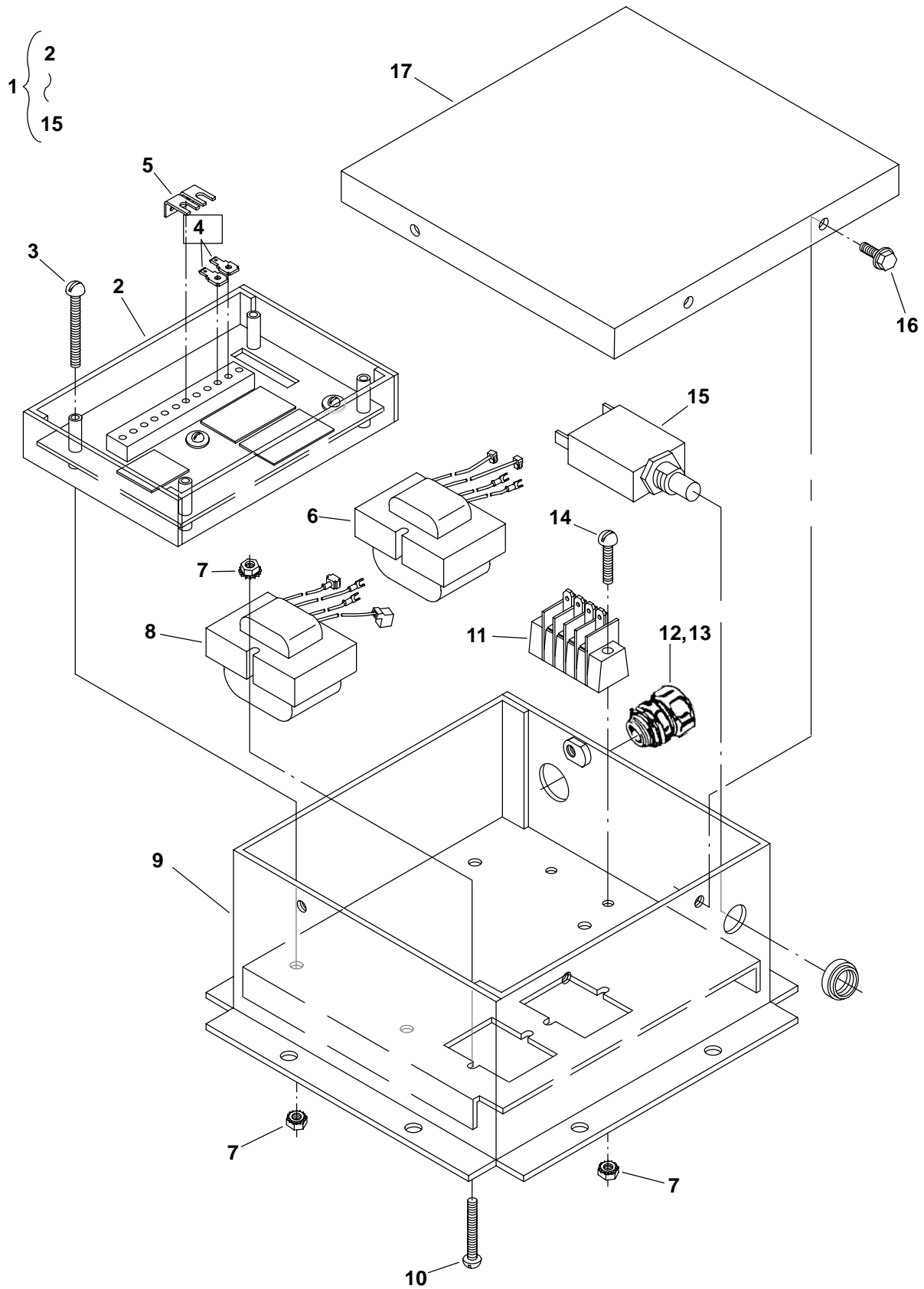
Generator (Begin Spec C)



Generator (Begin Spec C)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
32	895-0365	1	Gasket, Output Box (2.2')	47	862-0026-08	4	Nut, Hex (7/16-14)
33	509-0094	1	Seal, O'Ring	48			Foot, Right Mounting
34	211-0256-01		Endbell				60 Hz
35	508-0239	1	Edging (6°)		232-2577	1	15kW, 20kW, 25kW
36	526-0399-42	8	Washer, Flat (3/8°)		232-3893	1	30kW, 32kW, 35kW, 37kW,
37			Stud, Through				40kW
			60 Hz				50 Hz
	520-0797	4	15kW		232-2577	1	12kW, 16kW, 20kW
	520-0799	4	20kW		232-3893	1	25kW, 30kW, 31kW
	520-0800	4	25kW	49			Foot, Left Mounting
	520-0801	4	30kW, 32kW				60 Hz
	520-0802	4	35kW, 37kW, 40kW		232-2578	1	15kW, 20kW, 25kW
			50 Hz		232-3892	1	30kW, 32kW, 35kW, 37kW
	520-0797	4	12kW				40kW
	520-0799	4	16kW				50 Hz
	520-0800	4	20kW		232-2578	1	12kW, 16kW, 20kW
	520-0801	4	25kW		232-3892	1	25kW, 30kW, 31kW
	520-0802	4	30kW, 31kW	50	800-0310-50	8	Screw, Hex Head Cap
38	234-0969	1	Baffle, Air				(7/16-14 x 1°)
39	232-3956	1	Box, Reconnect	51	526-0399-43	12	Washer, Flat (7/16°)
40	862-0026-07	4	Nut, Hex (3/8-16)	52			Bracket, Generator Support
41	822-2160-37	2	Screw, Pan Head Slot				60 Hz
			(#10-32 x 1/2°)		232-2452	1	15kW, 20kW, 25kW
42	862-0026-54	16	Nut, Hex (M6 x 1)		232-3900	1	30kW, 32kW, 35kW, 37kW
43	526-0222	8	Washer, Flat Brass (1/4°)				40kW
44	232-3963	4	Link, Bus				50 Hz
45	332-3249	2	Block, Terminal		232-2452	1	12kW, 16kW, 20kW
46	232-3955	1	Cover, Inlet		232-3900	1	25kW, 30kW, 31kW

Regulator

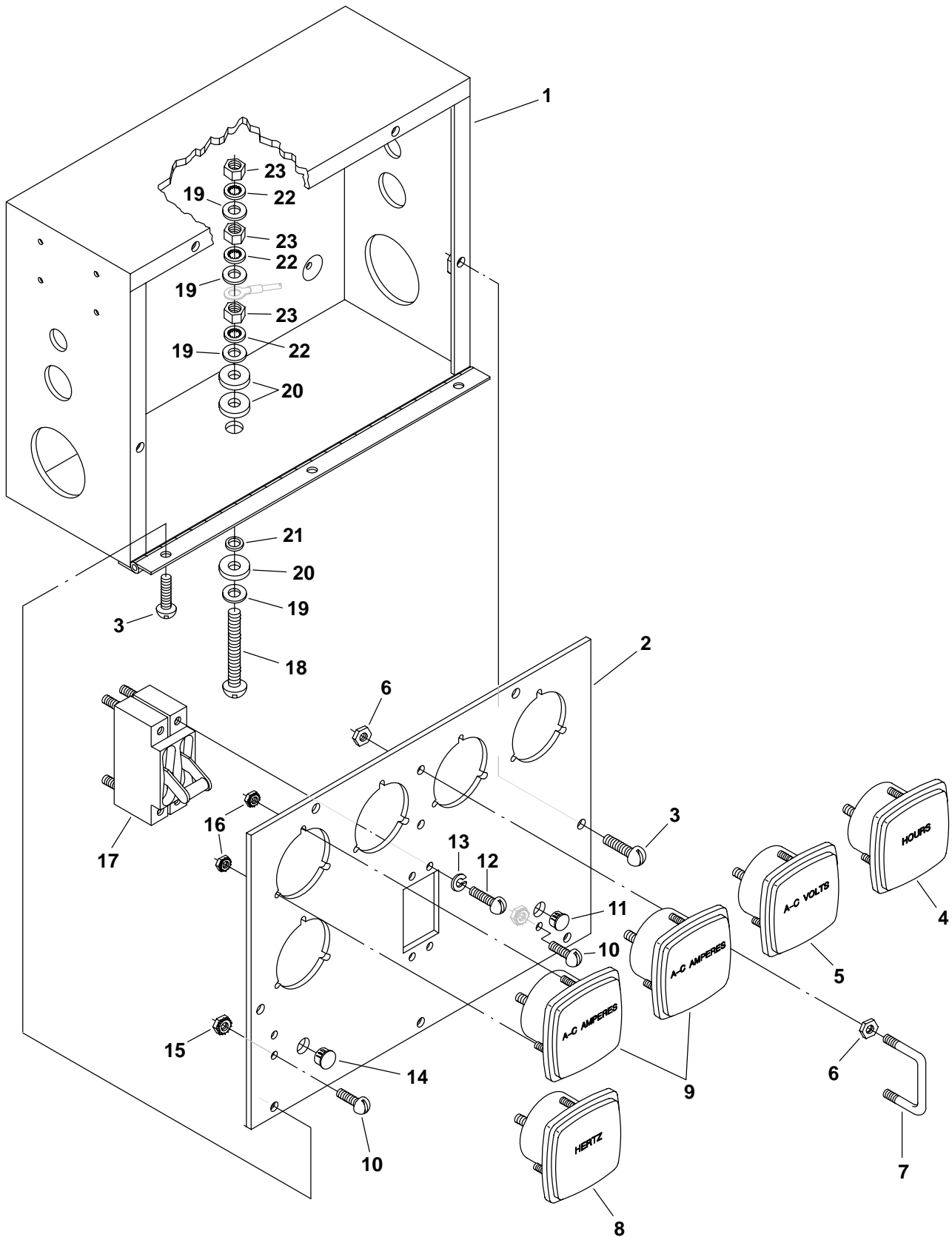


Regulator

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	305-0722-01	1	Regulator Assy (Includes Parts Marked +)	11	332-1658	1	+Strip, Terminal
2	305-0688	1	+Regulator, Voltage	12	331-0115	1	+Connector, Straight
3	812-0071	4	+Screw, Round Head Machine (#6-32 x 1-1/2 ^o)	13	331-0041	1	+Locknut, 1/2 Conduit
4	332-2617	2	+Terminal, Tab	14	812-0063	2	+Screw, Round Head Machine (#6-32 x 1/2 ^o)
5	332-2605	1	+Jumper, Terminal	15	320-1121-01	1	+Breaker, Circuit
6	315-0391	1	+Reactor	16	821-0004	4	Screw, Hex Flange Lock (#10-32 x 5/16 ^o)
7	870-0183	10	+Nut, ET Hex (#6-32)	17	301-3753	1	Cover, Regulator
8	315-0386	1	+Transformer, Voltage				
9	301-8852	1	+Panel, Voltage Regulator Mounting				
10	812-0070	4	+Screw, Round Head Machine (#6-32 x 1-1/4 ^o)				

+ - Parts Included in Regulator Assy.

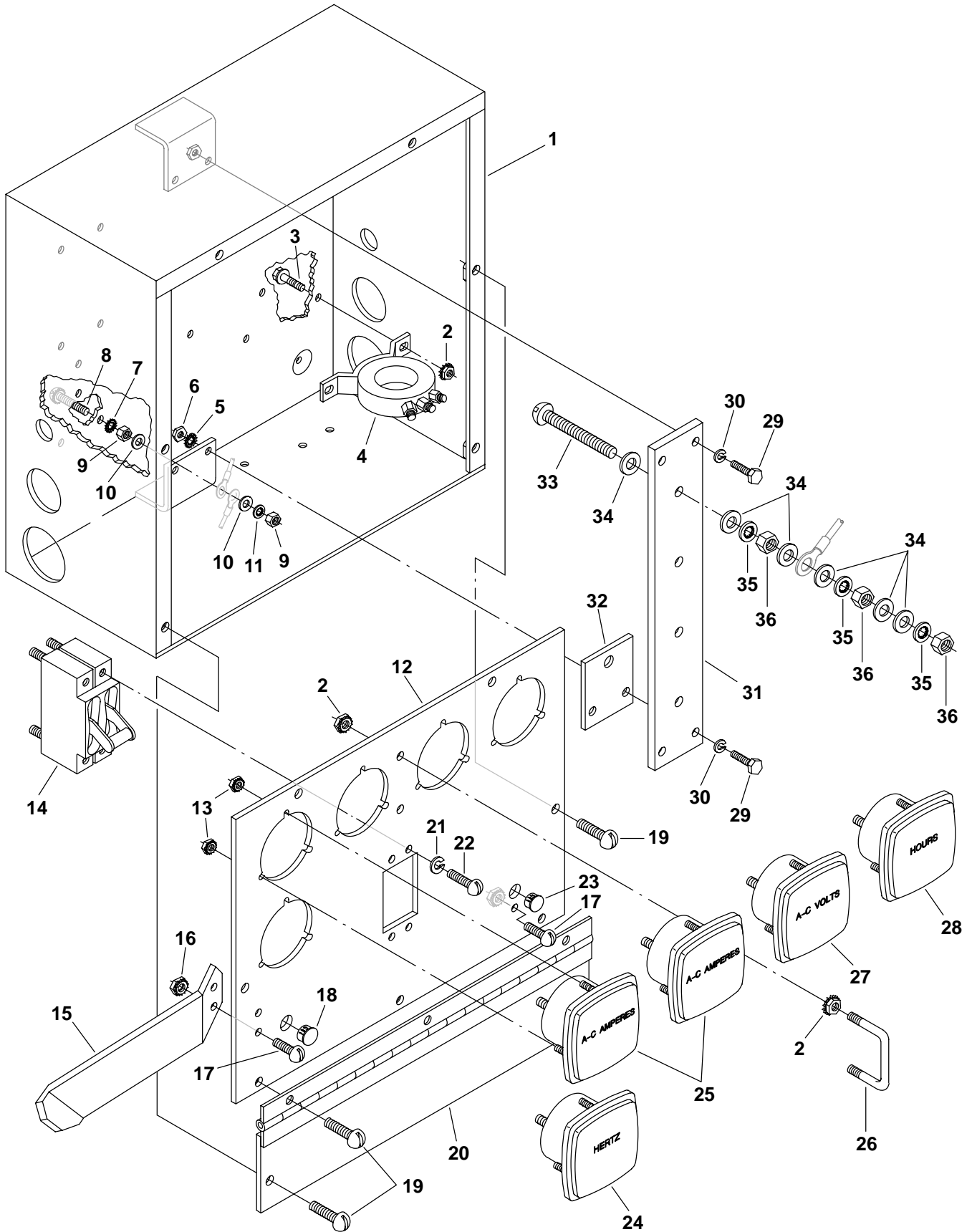
Switchboard Components (12KW, 15KW, 16KW)



Switchboard Components (12KW, 15KW, 16KW)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			Switchboard Assy	11	517-0131	1	Plug, Hole (3/8° Hole)
	300-4589	1	60 Hz (15kW)	12	812-0061	4	Screw, Round Head Machine (#6-32 x 3/8°)
	300-4700	1	50 Hz (12kW, 16kW)				
1	301-2087	1	Box, Switchboard	13	850-0020	4	Washer, Spring Lock (#6)
2	301-2288	1	Panel, Control	14	517-0132	1	Plug, Hole (3/8° Hole)
3	815-0026	7	Screw, Truss Head Machine (#10-32 x 3/8°)	15	870-0221	3	Nut, ET Hex (#8-32)
4			Meter, Time Totalizing	16	870-1220	15	Nut, ET Hex (#4-40)
	302-0465	1	60 Hz	17	320-1423	1	Breaker, Circuit (70A 240 VAC)
	302-0468	1	50 Hz	18	810-0155	1	Screw, Brass Round Head Machine (1/4-20 x 1-1/4°)
5	302-0421	1	Meter, Volt (0-300 VAC)	19	526-0052	4	Washer, Brass Flat (17/64°)
6	870-0131	4	Nut, ET Hex (#10-32)	20	508-0018	3	Washer, Fiber (1/4°)
7	301-2727	1	Handle, Control Panel	21	508-0006	1	Washer, Fiber (1/4°)
8	302-1338	1	Meter, Frequency (45-60Hz)	22	854-1014	3	Washer, IT Lock (17/64°)
9	302-0458	2	Meter, AC Amp (0-100A AC)	23	871-0016	3	Nut, Hex Brass (1/4-20)
10	812-0076	3	Screw, Round Head Machine (#8-32 x 5/16°)				

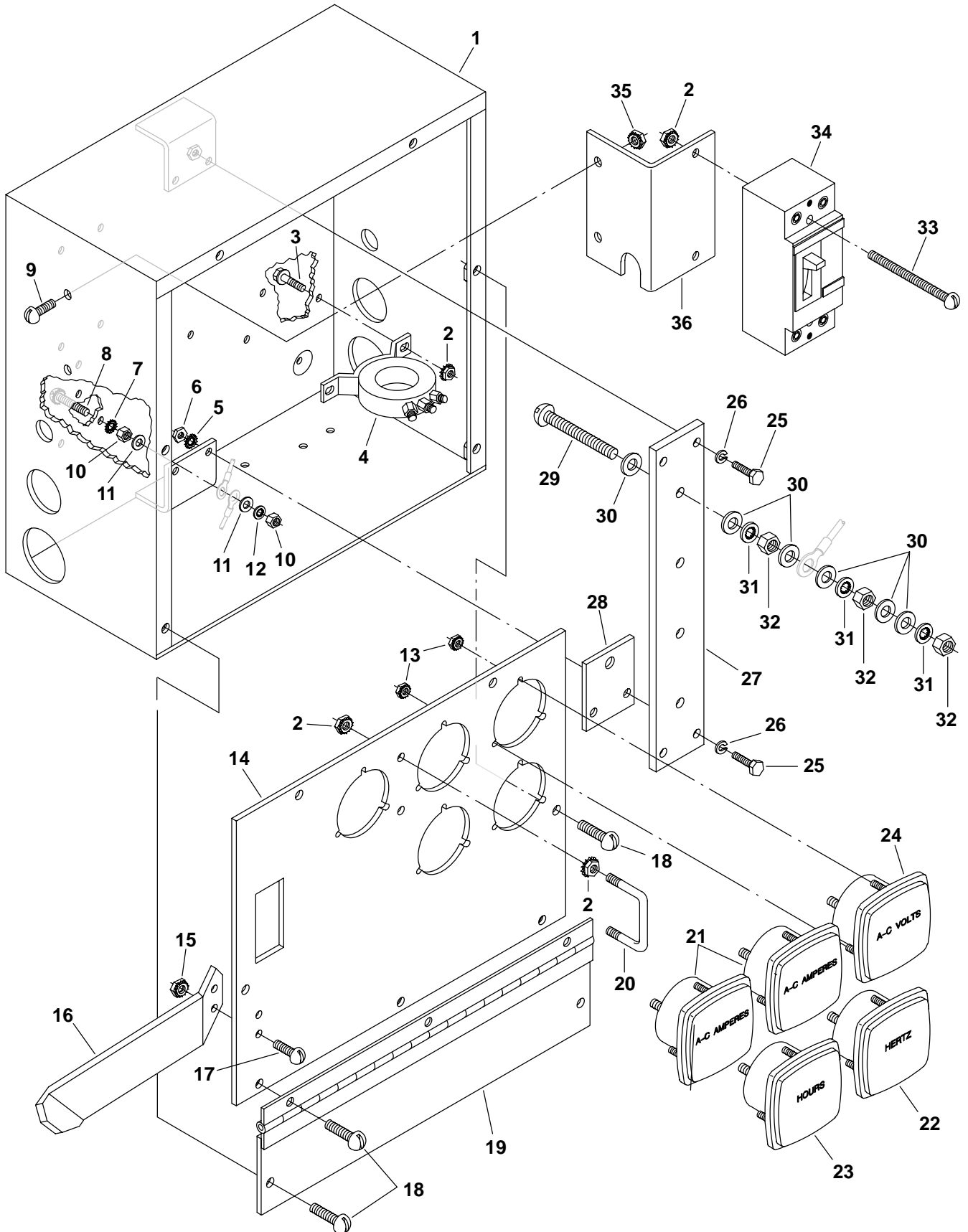
Switchboard Components (20KW, 24KW, 25kW)



Switchboard Components (20KW, 24KW, 25KW)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			Switchboard Assy	16	870-0221	3	Nut, ET Hex (#8-32)
		1	60 Hz	17	812-0076	3	Screw, Round Head Machine (#8-32 x 5/16 ^o)
	300-4590	1	20kW				
	300-4591	1	24kW, 25kW	18	517-0132	1	Plug, Hole (3/8 ^o Hole)
			50 Hz	19	815-0026	9	Screw, Truss Head Machine (#10-32 x 3/8 ^o)
	300-4701	1	20kW				
	300-4702	1	24kW, 25kW	20	301-1610	1	Panel, Lower Control
1	301-1535	1	Box, Switchboard	21	850-0020	4	Washer, Spring Lock (#6)
2	870-0131	8	Nut, ET Hex (#10-32)	22	812-0061	4	Screw, Round Head Machine (#6-32 x 3/8 ^o)
3	821-0005	4	Screw, Lock Hex Flange (#10-32 x 1/2 ^o)				
			Transformer, Current	23	517-0131	1	Plug, Hole (3/8 ^o Hole)
4			20kW	24	302-1338	1	Meter, Frequency (45-60Hz)
	302-1984-03	2	24kW, 25kW	25			Meter, AC Amp (0-100A AC)
	302-1984-04	2			302-0408	2	20kW, (0-100A)
5	856-0006	2	Washer, EIT Lock (1/4 ^o)		302-0410	2	24kW, 25kW (0-150A)
6	862-0001	4	Nut, Hex (1/4-20)	26	301-2727	1	Handle, Control Panel
7	856-0003	1	Washer, EIT Lock (#10)	27	302-0421	1	Meter, Volt (0-300 VAC)
8	815-0203	1	Screw, Round Head Brass ET Machine (#10-32 x 7/8 ^o)	28			Meter, Time Totalizing
			Nut, Brass Hex (#10-32)		302-0465	1	60 Hz
9	871-0010	2	Washer, Brass (#10)		302-0468	1	50 Hz
10	526-0049	2	Washer, IT Lock (#10)	29	800-0007	4	Screw (1/4-20 x 1 ^o)
11	854-0010	1	Panel, Upper Control	30	850-0040	4	Washer, Spring Lock (1/4 ^o)
12	301-2288	1	Nut, ET Hex (#4-40)	31	332-0513	1	Block, Terminal
13	870-1220	15	Breaker, Circuit (70A 240 VAC)	32	301-0648	1	Plate, Ground
14			20kW (85A)	33	812-0185	3	Screw (5/16-18 x 2-1/4 ^o)
	320-1210	1	24kW, 25kW (100A)	34	526-0054	18	Washer, Brass Flat (5/16 ^o)
	320-1207	1	Bracket, Panel Stop	35	854-0017	9	Washer, IT Lock
15	301-1914	1		36	871-0025	9	Nut, Hex Brass (5/16-18)

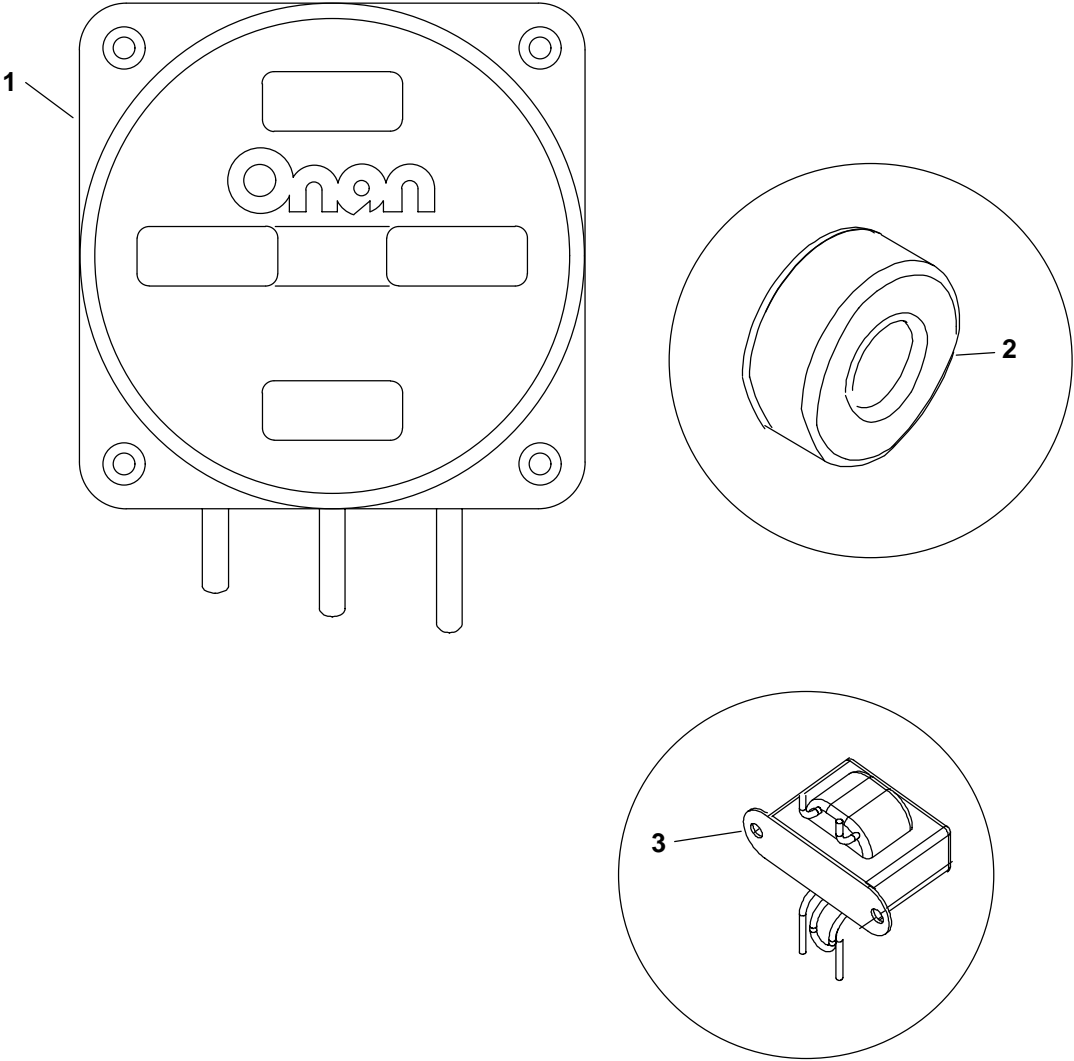
Switchboard Components (30KW, 35KW)



Switchboard Components (30KW, 35KW)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			Switchboard Assy	18	815-0026	9	Screw, Truss Head Machine (#10-32 x 3/8 ^o)
	300-4592	1	60 Hz				Panel, Lower Control
	300-4593	1	30kW	19	301-1610	1	Handle, Control Panel
	300-4703	1	35kW	20	301-2727	1	Meter, AC Amp (0-200A AC)
1	301-3105	1	50 Hz, 30kW	21	302-0411	2	Meter, Frequency (45-60Hz)
2	870-0131	10	Box, Switchboard	22	302-1338	1	Meter, Time Totalizing
3	821-0005	4	Nut, ET Hex (#10-32)	23			60 Hz (30kW, 35kW)
			Screw, Lock Hex Flange (#10-32 x 1/2 ^o)		302-0465	1	50 Hz (30kW)
4	302-1984-05	2	Transformer, Current	24	302-0468	1	Meter, Volt (0-300 VAC)
5	856-0006	2	Washer, EIT Lock (1/4 ^o)	25	302-0421	1	Screw (1/4-20 x 1 ^o)
6	862-0001	4	Nut, Hex (1/4-20)	26	800-0007	4	Washer, Spring Lock (1/4 ^o)
7	856-0003	1	Washer, EIT Lock (#10)	27	850-0040	4	Block, Terminal
8	815-0203	1	Screw, Round Head Brass ET Machine (#10-32 x 7/8 ^o)	28	332-0513	1	Plate, Ground
9	812-0148	2	Screw, Round Head Machine (1/4-20 x 1/2 ^o)	29	301-0648	1	Screw (5/16-18 x 2-1/4 ^o)
10	871-0010	2	Nut, Brass Hex (#10-32)	30	812-0185	3	Washer, Brass Flat (5/16 ^o)
11	526-0049	2	Washer, Brass (#10)	31	526-0054	18	Washer, IT Lock (5/16 ^o)
12	854-0010	1	Washer, IT Lock (#10)	32	854-0017	9	Nut, Hex Brass (5/16-18)
13	870-1220	15	Nut, ET Hex (#4-40)	33	871-0025	9	Screw, Round Head Machine (#10-32 x 2-3/4 ^o)
14	301-3739	1	Panel, Upper Control	34	813-0113	2	Breaker, Circuit (70A 240 VAC)
15	870-0221	2	Nut, ET Hex (#8-32)				30kW, 150A
16	301-1914	1	Bracket, Panel Stop		320-0343	1	35kW, 175A
17	812-0077	2	Screw, Round Head Machine (#8-32 x 3/8 ^o)	35	320-0344	1	Nut, ET Hex (1/4-20)
				36	870-0232	2	Bracket, Circuit Breaker
					301-3043	1	

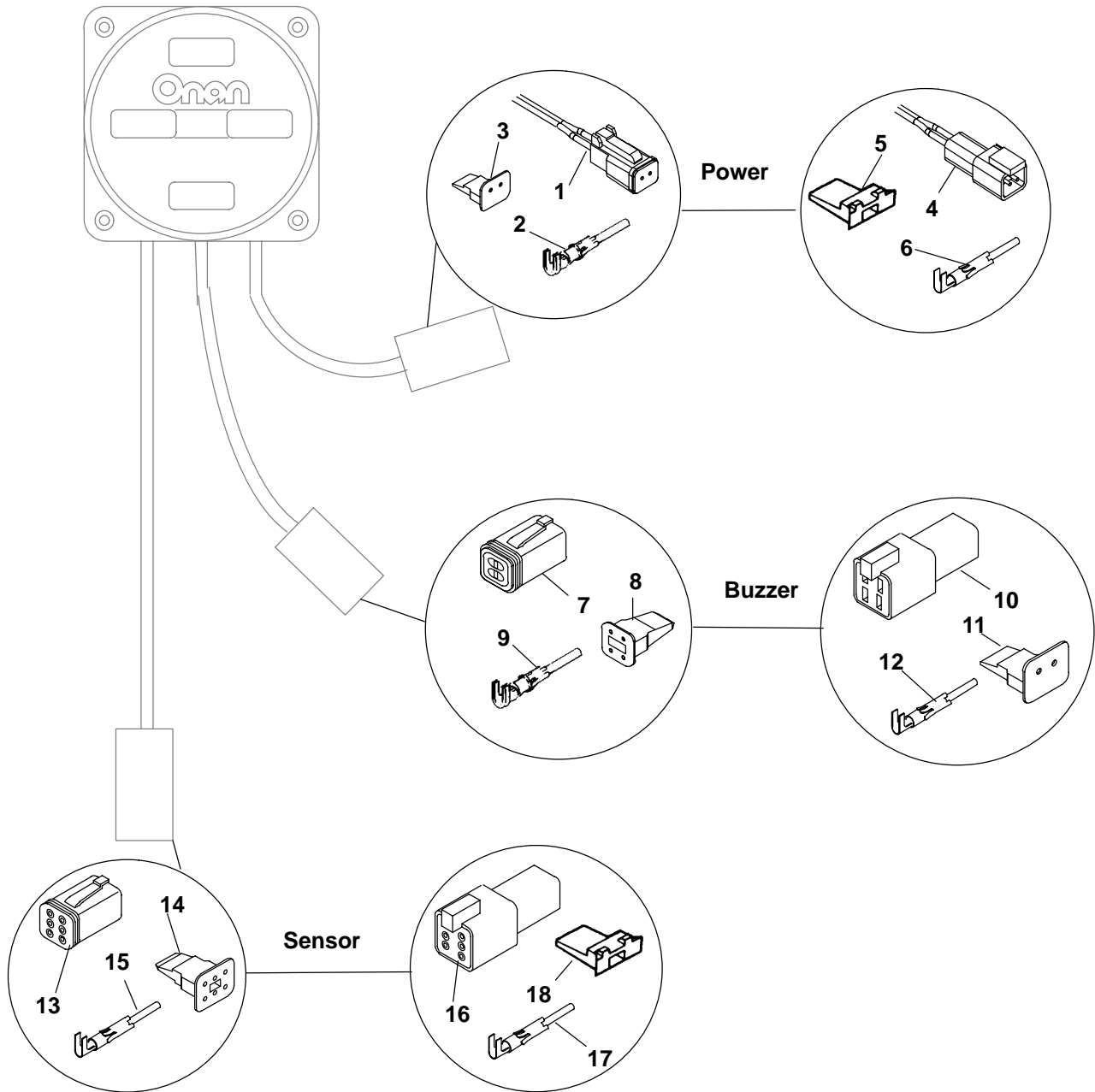
Multi-Meter



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	302-2079	1	Meter, Multi Single Phase
	302-2080	1	Three Phase (Star)
	302-2081	1	Three Phase (Wye)
2	315-0845	1	*Transformer, Current
3	315-0854	1	*Transformer, Voltage

* - Single Phase requires, 1 each Voltage and 2 each Current Transformers
 - Three Phase requires, 3 each Voltage and 3 each Current Transformers.

Harnesses



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
Power				10	323-1549	1	^Connector, Receptacle (4 Pin)
1	323-1504	1	+Connector, Plug (2 Pin)	11	323-1547	1	^Wedge, Receptacle
2	323-1492	1	+Terminal, Socket	12	323-1591	2	^Plug, Seal
3	323-1500	1	+Wedge, Plug	Sensor			
4	323-1505	1	+Connector, Receptacle (2 Pin)	13	323-1623	1	*Connector, Plug (6 Pin)
5	323-1501	1	+Wedge, Receptacle (2 Pin)	14	323-1624	1	*Wedge, Plug
6	323-1491	2	+Terminal, Pin	15	323-1492	6	*Terminal, Socket
Buzzer				16	323-1625	1	*Connector, Receptacle (6 Pin)
7	323-1546	1	^Connector, Plug (4 Pin)	17	323-1626	1	*Wedge, Receptacle
8	323-1548	1	^Wedge, Plug	18	323-1491	6	*Terminal, Pin
9	323-1492	3	^Terminal, Socket				

Labels

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
98-6958		1	Label, AC Schematic	98-7046		1	Label, ProTec
98-6195		1	Label, Caution	98-6982		1	Label, SW Board Assy
98-5347-01		1	Label, Danger (Hazardous Voltage) (Used on Outside of Output Cover)	98-7051		1	Label, TB21
				98-4798		1	Label, Warning (Rotating Parts)
98-5387-01		1	Label, Danger (Hazardous Voltage) (Used on Inside of Control Cover)	98-7075-01		2	Label, Warning (Hazardous Voltage)
							Label, WD Switchboard
				98-6979		1	15kW
98-7050		1	Label, Danger (Hazardous Voltage) (Used on Voltage Regulator Assy)	98-6975		1	20kW, 24kW
				98-6976		1	30kW, 35kW
98-5338		1	Label, No Step				

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