
Onan

Parts Manual

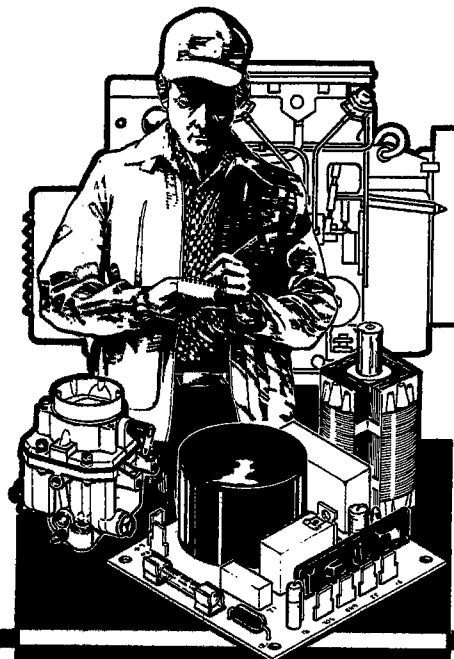
OTII

400 - 600 Amp

Transfer

Switch

Specification F



Onan Service Parts

962-0212
1-85 (SPEC F)
Replaces
6-84
Printed in U.S.A.

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 form with rounded corners and two circular punch holes at the top. The word "Onan" is printed in a large, bold, stylized font at the top left. Below it is a wide rectangular box labeled "MODEL AND SPEC NO.". Underneath that is a narrower rectangular box labeled "SERIAL NO.". The bottom right corner of the form is cut off, showing a jagged edge. The number "M-1149" is printed in the bottom right corner of the form.

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

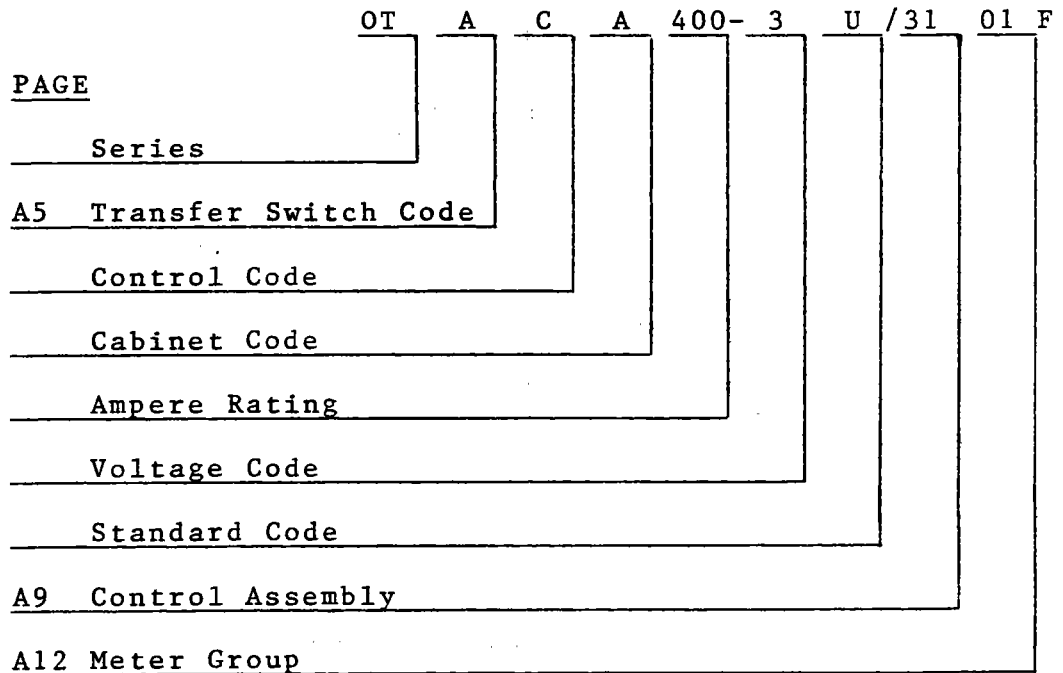
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INTRODUCTION

This catalog applies to the OTII 400 and 600 Amp Specification F Transfer Switches as indicated below. Each illustrated part is identified by a reference number corresponding to the same reference number in the parts list for that group. Parts illustrations are typical. Using the MODEL and SPEC NUMBER from the switch box nemeplate, select the parts that apply to your transfer switch. Unless otherwise mentioned in the description, parts are interchangeable between models.

EXPLANATION



DIRECTIONS

1. Locate the item you are looking for in the Index or the Table of Contents.
2. Turn to the page listed.
3. Mentally insert your model number in the blank spaces.
4. The part of the model number that is boxed, will help you to determine the part number that you need.
5. Match your model number to the appropriate box.
6. Follow the line down from the box.
7. If there is more than one box, follow in sequence according to (a), (b), (c).
8. Write down the respective part number.

TRANSFER SWITCH

OT

400

			4	54
			3	53
			5D	55D
		523	9X	59X
520	7	57	7X	57X
			4X	54X

600

			4	54
			3	53
			5D	55D
		523	9X	59X
520	7	57	7X	57X
			4X	54X

Transfer Switch

306-3053

306-3054

306-3055

306-3056

306-3057

306-3058

306-3040

306-3041

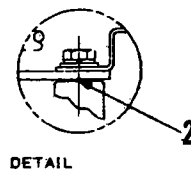
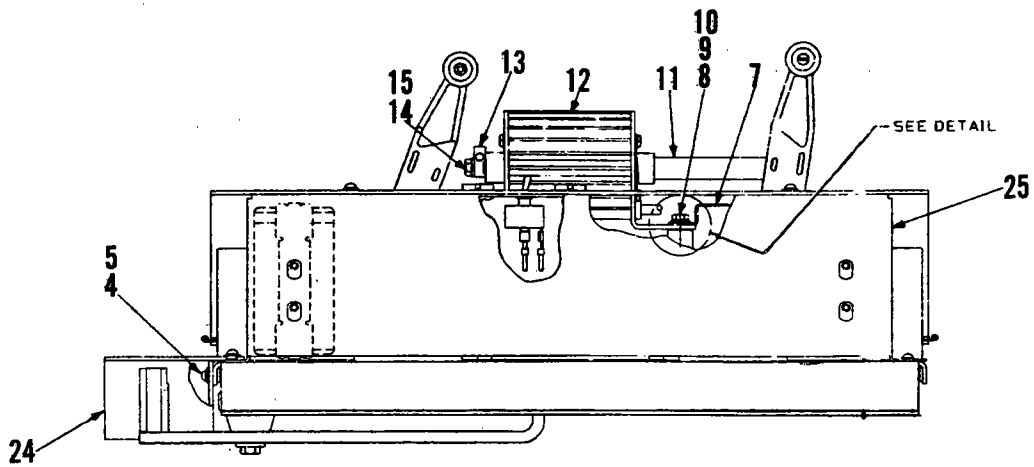
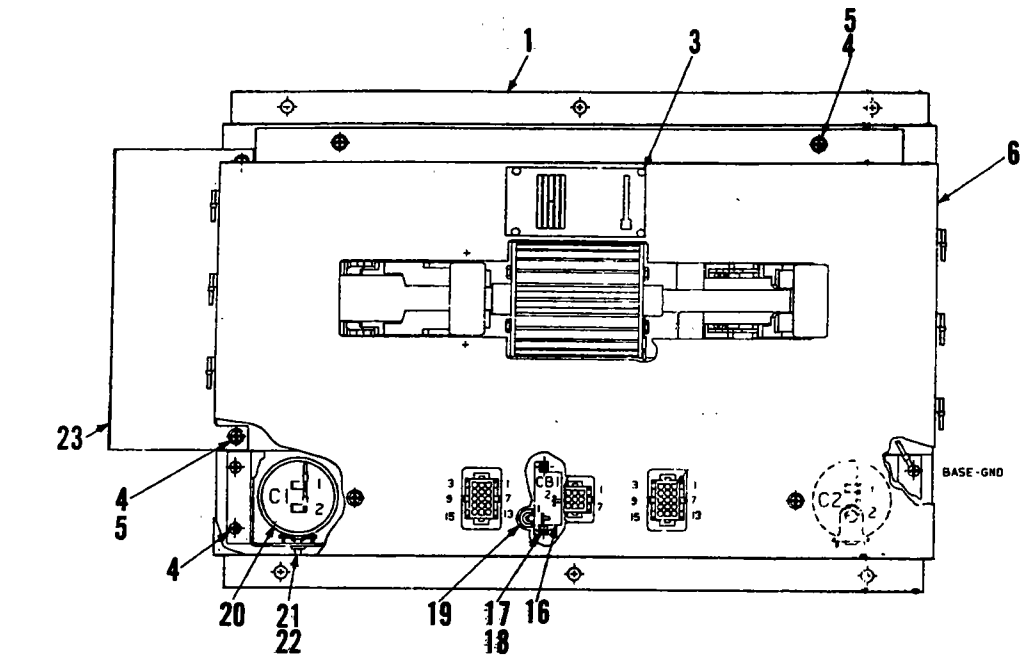
306-3042

306-3043

306-3044

306-3045

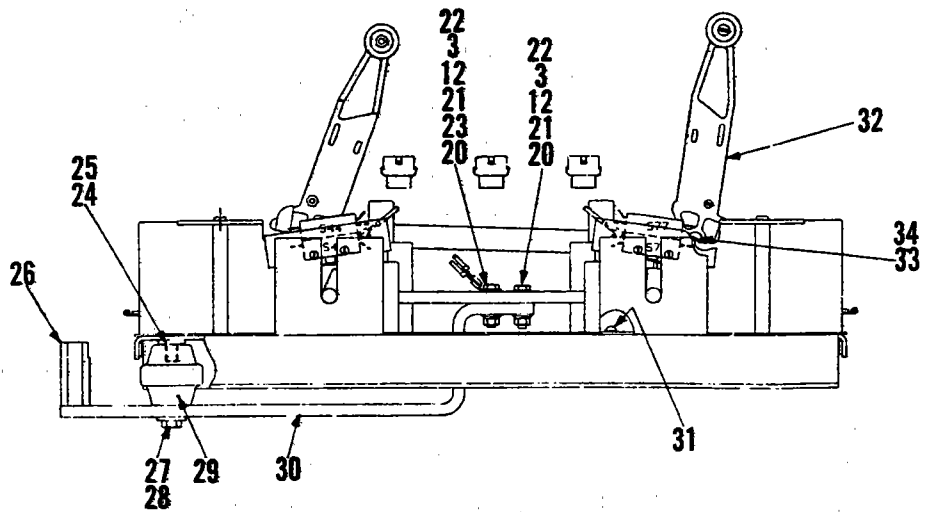
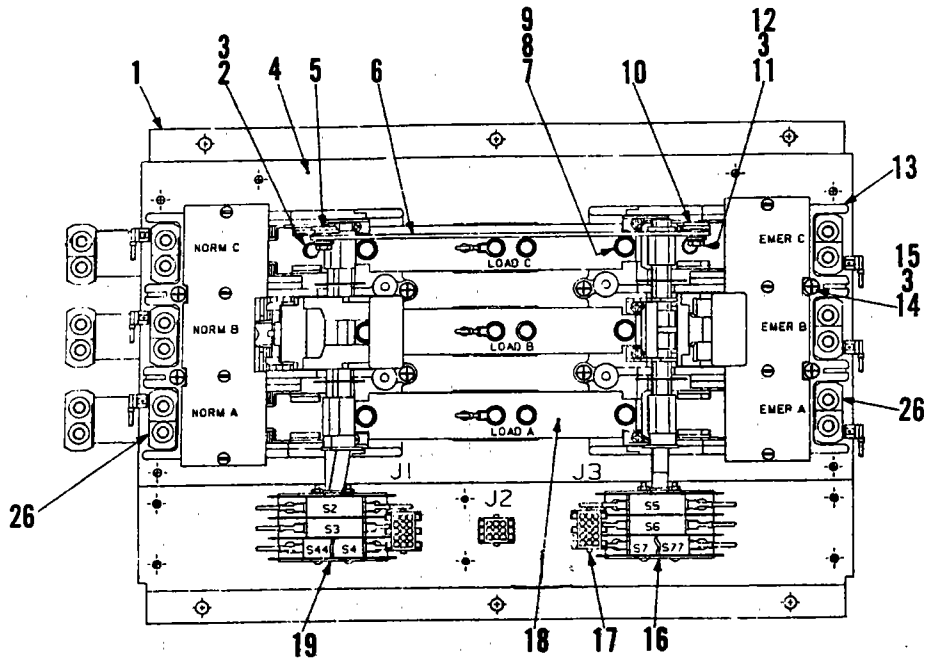
TRANSFER SWITCH



<u>TRANSFER SWITCH</u>	REF NO	PART NO	QTY	PART DESCRIPTION
	1	See Tab	1	Switching Assembly
	2	526-0016	4	Washer-Flat(1/4)
	3	818-0076	4	Rivet-Univ(1/8)
	4	815-0364	12	Screw-RH XREC W/ET(#10-32x1/2)
	5	526-0008	8	Washer-Flat(#10)
	6	See Tab	1	Cover and Silkscreen(Contact)
	7	306-2340	2	Barrier
	8	800-0007	4	Screw-HHC(1/4-20x1)
	9	850-0040	4	Washer-LK(1/4)
	10	526-0018	4	Washer-Flat(1/4)
	11	306-3108	1	Rod-Actuator
	12	See Tab	1	Actuator-Linear
	13	306-2266	2	Rod End Assy-Actuator
	14	800-0030	2	Screw-HHC(5/16-18x1 1/4)
	15	850-0045	2	Washer-LK(5/16)
	16	See Tab	1	Breaker-Circuit
	17	812-0063	2	Screw-RH(#6-32x1/8)
	18	853-0003	2	Washer-ET LK(#6)
	19	308-0406	1	Switch-Toggle(DPDT)
	20	See Tab	Tab	Capacitor
	21	815-0029	Tab	Screw-FH XREC(#10-32x1/2)
	22	855-0008	Tab	Washer-ET CST LK(#10)
	23	306-3127	1	Cover and Silkscreen(Load)
	24	306-3099	1	Barrier-Lug
	25	306-3100	1	Bracket-Lug

TRANSFER SWITCH ASSY.	TAB #1	TAB #6	TAB #12	TAB #16	TAB #20 QTY.	TAB #21	TAB #22
306-3053	306-3120	306-3126	306-3111	320-0611	312-0218 1	2	2
306-3054	306-3123	306-3125	306-3112	320-0611	312-0206 1	2	2
306-3055	306-3120	306-3126	306-3112	320-0611	312-0206 1	2	2
306-3056	306-3121	306-3126	306-3113	320-0608	312-0205 2	4	4
306-3057	306-3121	306-3126	306-3114	320-0609	312-0204 2	4	4
306-3058	306-3121	306-3126	306-3115	320-0608	312-0236 2	4	4
306-3040	306-3118	306-3126	306-3111	320-0611	312-0218 1	2	2
306-3041	306-3122	306-3125	306-3112	320-0611	312-0206 1	2	2
306-3042	306-3118	306-3126	306-3112	320-0611	312-0206 1	2	2
306-3043	306-3119	306-3126	306-3113	320-0608	312-0205 2	4	4
306-3044	306-3119	306-3126	306-3114	320-0609	312-0204 2	4	4
306-3045	306-3119	306-3126	306-3115	320-0608	312-0236 2	4	4

SWITCH
ASSEMBLY



SWITCH
ASSEMBLY

REF NO	PART NO	QTY	PART DESCRIPTION
1	306-3089	1	Base, Mounting
2	800-0002	2	Screw, HHC(1/4-20x3/8)
3	850-0040	18	Washer, LK(1/4)
4	306-3102	1	Barrier, Base Mounting
5	306-0509	1	Arm, Interlock
6	306-3107	1	Bar, Interlock
7	800-0028	6	Screw, HHC(5/16-18x1)
8	851-0028	6	Washer, LK(5/16)
10	306-0510	1	Arm, Interlock
11	800-0003	2	Screw, HHC(1/4-20x1/2)
12	526-0018	8	Washer, Flat(1/4)
13	See Tab	2	Block and Crossbar
14	815-0577	8	Screw, RHM XREC(1/4-20x2 3/4)
15	526-2081	8	Washer, Flat(M6 Metric)
* 16	306-2363	1	Switch, Aux(Emergency)
17	See Tab	1	Harness, Wiring
18	337-1941	3	Strap, Jumper
* 19	306-2364	1	Switch, Aux(Normal)
20	800-0008	6	Screw, HHC(1/4-20x1 1/4)
21	851-0027	6	Washer, Spring Conical(1/4)
22	862-0001	6	Nut, HEX(1/4-20)
23	332-2462	3	Terminal, Ring
24	853-0018	3	Washer, ET LK(3/8)
25	526-0030	3	Washer, Flat(3/8)
26	See Tab	9	Lug, Solderless
27	800-0050	3	Screw, HHC(3/8-16x1)
28	851-0022	3	Washer, Spring Conical(3/8)
29	332-2512	3	Standoff, Insulator(3/8-16THD)
30	337-1940	3	Strap, Load
31	815-0364	8	Screw, RHM XREC W/ET(#10-32x1/2)
32	306-1372	2	Handle, Actuator
33	815-0485	4	Screw, Shoulder(#10-32)
34	850-0030	4	Washer, LK(#10)

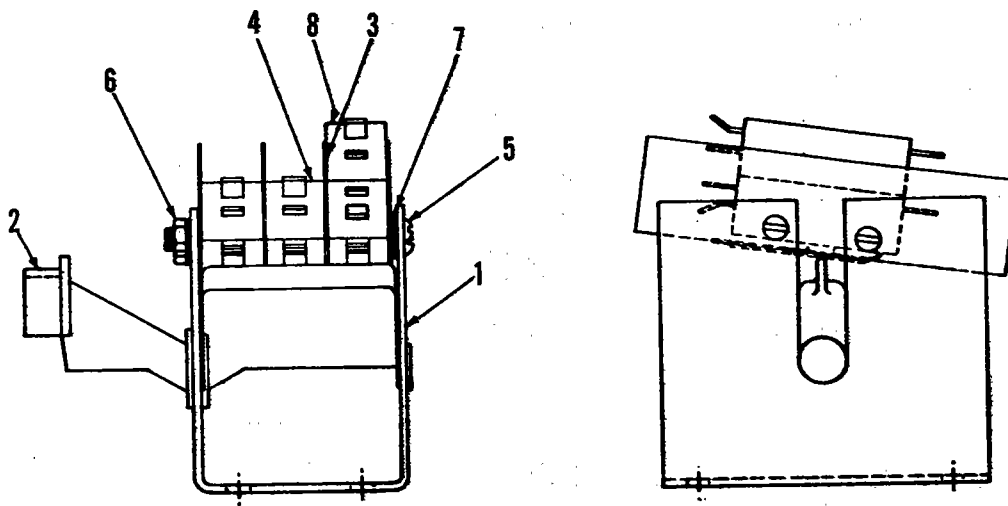
* See separate group for components

SWITCH ASSEMBLY	TAB #13	TAB #17	TAB #26
306-3118	306-3103-02	338-1732	332-2660
306-3119	306-3103-02	338-1740	332-2660
306-3120	306-3103-01	338-1732	332-2704
306-3121	306-3103-01	338-1740	332-2704
306-3122	306-3124-02	338-1733	332-2660
306-3123	306-3124-01	338-1733	332-2704

SWITCH
ASSEMBLY
AUXILIARY

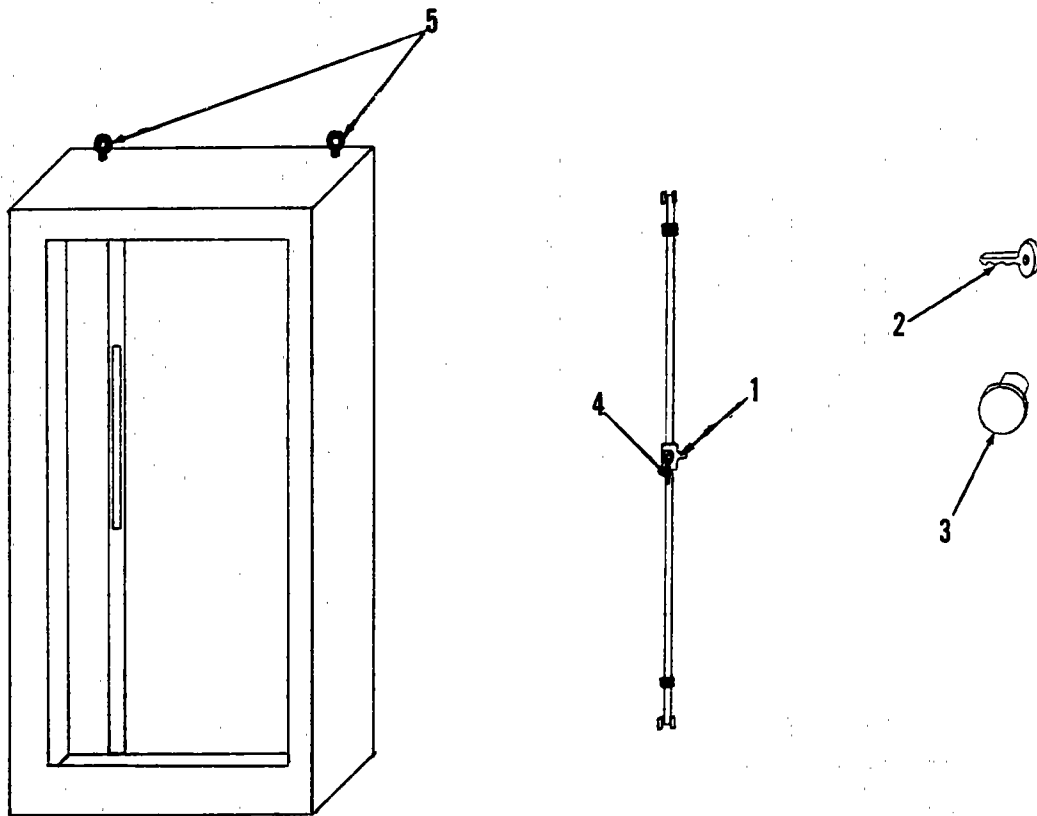
REF. NO.	PART NO.	QTY.	PART DESCRIPTION
1	306-2342	1	Bracket-Auxiliary Switch
2	See Tab	1	Lever-Auxiliary Switch
3	306-1987	4	Barrier-Switch
4	309-0393	2	Switch-Snap Action
5	812-0199	2	Screw-RHM(#6-32x2-1/2)
6	870-0183	2	Nut-HEX W/ET LW(6-32)
7	526-0002	4	Washer-Flat(#6)
8	309-0506	1	Switch-Snap Action

SIDE	TAB #2	SWITCH ASSY. COMPLETE
Emergency	306-2263	306-2363
Normal	306-2262	306-2364



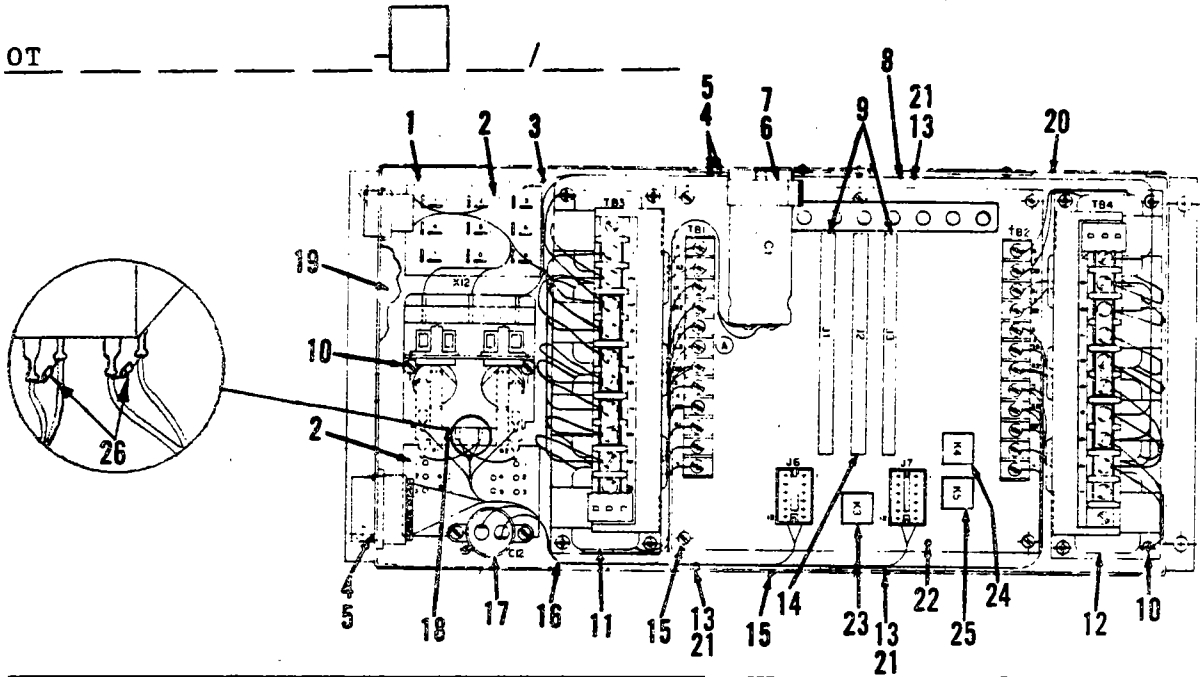
CABINET

REF NO	PART NO	QTY	PART DESCRIPTION
1	406-0508	1	Latch, Door
2	406-0565	1	Key, Handle
3	517-0150	1	Hole, Plug
4	406-0524	1	Handle, Locking
5	403-0931	1	Eyebolt



CONTROL ASSEMBLY

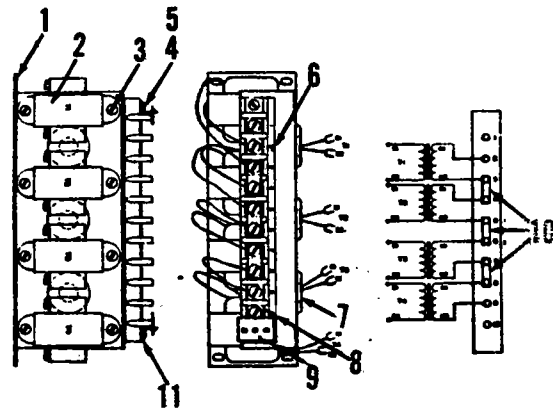
OT



VOLTAGE		CONTROL ASSEMBLY			TAB 11	TAB 12	TAB 3		
1	51	300-2772	315-0498	315-0498	338-1435				
3	53	300-2773	315-0538	315-0548	338-1435				
4	54	5D	55D	8	58	300-2774	315-0493	315-0493	338-1435
		523				300-2775	315-0494	315-0494	338-1435
7	57	7X				300-2776	315-0510	315-0510	338-1435
		4X	54X			300-2777	315-0495	315-0495	338-1435
		9X	59X			300-2859	315-0496	315-0496	338-1809

REF. NO.	PART NO.	QTY.	PART DESCRIPTION
1	301-6177	1	Base-Universal Control
2	98-4323	1	Silkscreen(Base)
3	See Tab 1	1	Wiring Harness(High Voltage)
4	812-0061	9	Screw-RD HD(#6-32x3/8)
5	870-1183	9	Nut-NW/ET(#6-32)
6	356-0108	1	Capacitor(C1)
7	356-0070	1	Clamp-Capacitor Mtg.
8	301-6217	1	Window-Display
9	REF	2	Module-Voltage Sensor
10	815-0550	10	Screw-Pan HW/ET(#6-32x3/8)
11	See Tab 1	1	Transformer Assy(Normal)
12	See Tab 2	2	Transformer Assy(Emergency)
13	332-0942	3	Tie Cable
14	300-2372	1	Module-Time Delay
15	815-0549	20	Screw-NW/ET(#6-32x1/4)
16	338-1434	1	Wiring Harness(Low Voltage)
17	356-0097	1	Filter Assy(C12)
18	307-1903	1	Contact-Reverse
19	301-6661	1	Cover and Silkscreen(Ctrl)
20	301-6662	1	Wrapper and Silkscreen
21	332-2420	3	Mount-Tie Cable
22	300-2109	1	Board Assy-Mother
23	307-2089	1	Relay(K3)
24	307-2319	1	Relay(K4)
25	307-2010	1	Relay(K5)(Optional)
26	357-0057	2	Diode

TAB 11,12	TAB 2	QTY
315-0492	315-0481	4
315-0493	315-0482	4
315-0494	315-0483	4
315-0495	315-0484	4
315-0496	315-0485	4
315-0498	315-0481	4
315-0499	315-0482	4
315-0500	315-0483	4
315-0510	315-0509	4
315-0538	315-0482	4
315-0548	315-0482	4
315-0597	315-0495	1



REF. NO.	PART NO.	QTY.	PART DESCRIPTION
1	301-6132	1	Bracket-Transformer Mtg.
2	See Tab	Tab	Transformer-Stepdown
3	815-0549	8	Screw-Pan H REC W/ET(6-32x1/4)
4	812-0066	2	Screw-RHM(6-32x3/4)
5		2	Clips(Part of item #9)
6	332-2588	1	Marker Strip
7	508-0008	3	Grommet
8	332-2587	1	Terminal Block
9	332-2589	1	Cover-Protective
10	332-1045	3	Jumper
11	526-0001	2	Washer-Flat

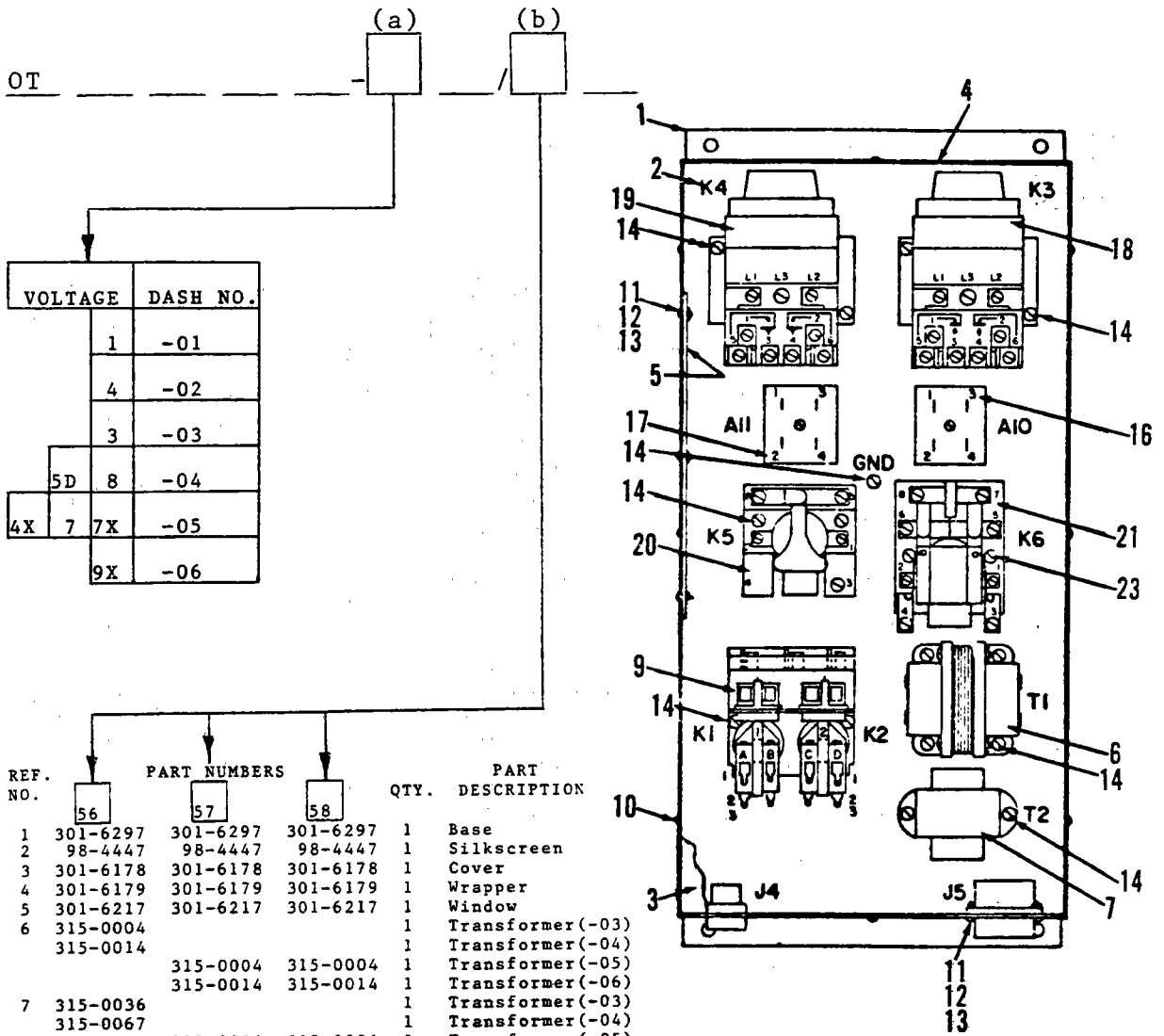
**VOLTAGE
SENSOR
MODULE**

OT _____ - _____ / _____

NORMAL SIDE SENSING		Ø	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	
Under Voltage	1		A	A	A		A												
	3		A	A	A		A												
Under/Over Voltage	1														B	B	B	B	
	3														B	B	B	B	
Under Voltage and Freq	1							C	C	C	C								
	3							C	C	C	C								
Under/Over Volt and Freq	1					E						D	D	D					
	3					D						D	D	D					
EMERGENCY SIDE SENSING		Ø	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	
Under Voltage	1		A									A			A				
	3		A									A			A				
Under/Over Voltage	1					B				B			B					B	
	3					B				B			B					B	
Under Voltage and Freq	1		C						C				C			C			
	3		C						C				C			C			
Under/Over Volt and Freq	1				E	E		D		D								D	
	3				D	D		D		D								D	

- CODE MODULE**
- A- 300-2375
 - B- 300-2788
 - C- 300-2548
 - D- 300-2373
 - E- 300-2758

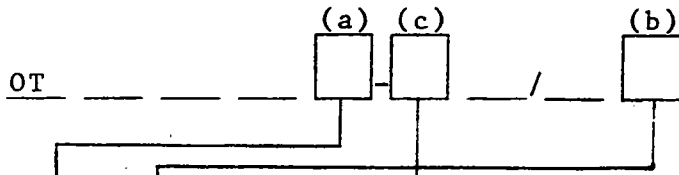
CONTROL ASSEMBLY



VOLTAGE	DASH NO.
1	-01
4	-02
3	-03
5D 8	-04
4X 7 7X	-05
9X	-06

REF. NO.	56	57	58	QTY.	PART DESCRIPTION
1	301-6297	301-6297	301-6297	1	Base
2	98-4447	98-4447	98-4447	1	Silkscreen
3	301-6178	301-6178	301-6178	1	Cover
4	301-6179	301-6179	301-6179	1	Wrapper
5	301-6217	301-6217	301-6217	1	Window
6	315-0004	315-0004	315-0004	1	Transformer (-03)
	315-0014	315-0014	315-0014	1	Transformer (-04)
		315-0004	315-0004	1	Transformer (-05)
		315-0014	315-0014	1	Transformer (-06)
7	315-0036	315-0036	315-0036	1	Transformer (-03)
	315-0067	315-0067	315-0067	1	Transformer (-04)
		315-0036	315-0036	1	Transformer (-05)
		315-0067	315-0067	1	Transformer (-06)
8	338-1434	338-1478	338-1478	1	Wiring Harness
		338-1477	338-1477	1	Wiring Harness (-01, -03)
				1	Wiring Harness (-02, -04, -05, -06)
9	307-1958	307-1958	307-1958	1	Contactors-Reversing (-01, -03)
	307-1870	307-1870	307-1870	1	Contactors-Reversing (-02)
		307-1870	307-1870	1	Contactors-Reversing (-01, -05, -06)
		307-1870	307-1870	1	Contactors-Reversing (-02, -03, -04)
10	812-0059	812-0059	812-0059	10	Screw-RHM (#6-32x1/4)
11	812-0061	812-0061	812-0061	7	Screw-RHM (#6-32x3/8)
12	853-0003	853-0003	853-0003	7	Washer-ET LK (#6)
13	860-0006	860-0006	860-0006	7	Nut-HMS (#6-32)
14	812-0077	812-0077	812-0077	8	Screw-RHM (#8-32x3/8)
		812-0077	812-0077	13	Screw-RHM (#8-32x3/8)
15	332-0556	332-0556	332-0556	1	Splice-Line Tab
		332-0556	332-0556	1	Splice-Line Tab (-05, -06)
16		300-2627	300-2627	1	Relay-T.D. Stop (-01, -05, -06)
		300-2628	300-2628	1	Relay-T.D. Stop (-02, -03, -04)
		300-2629	300-2629	1	Relay-T.D. Transfer (-01, -05, -06)
		300-2630	300-2630	1	Relay-T.D. Transfer (-02, -03, -04)
18		307-1108	307-1108	1	Relay-T.D. Start (-01, -05, -06)
		307-1109	307-1109	1	Relay-T.D. Start (-02, -03, -04)
19		307-1955	307-1955	1	Relay-T.D. Ret. (-01, -05, -06)
		307-1956	307-1956	1	Relay-T.D. Ret. (-02, -03, -04)
20		307-1114	307-1114	1	Relay-Line Voltage (-02)
		307-1081	307-1081	1	Relay-Line Voltage (-04)
		307-1119	307-1119	1	Relay-Line Voltage (-05)
		307-1425	307-1425	1	Relay-Line Voltage (-06)
21		307-1082	307-1082	1	Relay-Generator Voltage (-01)
		307-1113	307-1113	1	Relay-Generator Voltage (-02)
		307-1083	307-1083	1	Relay-Generator Voltage (-03, -04)
		307-1887	307-1887	1	Relay-Generator Voltage (-05)
		307-2114	307-2114	1	Relay-Generator Voltage (-06)
22		812-0083	812-0083	2	Screw-RHM (#8-32x7/8)
23		812-0079	812-0079	2	Screw-RHM (#8-32x1/2)
24	98-5387	98-5387	98-5387	1	Label-Danger (Not Illustrated)

METER
GROUP



		PART NO.
400/600	01 02 03 04 05 06	
Normal Lamp	1 3 4 4X 5D 7 7X 8 9X	322-0318
Emergency Lamp	1 3 4 4X 5D 7 7X 8 9X	322-0317
Light Bulb	1 3 4 4X 5D 7 7X 8 9X	322-0316
Resistor	1	350-1204
Resistor	3 4 5D 7 7X 8	350-1205
Resistor	4X	350-1206
Resistor	9X	350-1207

400	03 06 07 10	
Ammeter	1 3 4 4X 5D 7 7X 8 9X	302-0605

600	03 06 07 10	
Ammeter	1 3 4 4X 5D 7 7X 8 9X	302-0415

400/600	03 05 06 07 08 09 10	
Frequency Meter	4	302-0810
Frequency Meter	3 5D 8	302-0811
Frequency Meter	54	302-0894
Frequency Meter	53 55D 58	302-0895
Frequency Meter	1 4X 7 7X 9X	302-0809
Frequency Meter	51 54X 57 57X 59X	302-0893
Transformer, Stepdown	4X 7 7X 9X 54X 57 57X 59X	315-0377

400/600	02 03 06 07 09 10	
Voltmeter	1	302-0420
Voltmeter	3 4 5D 8	302-0421
Voltmeter	4X 7 7X 9X 520 523	302-0422

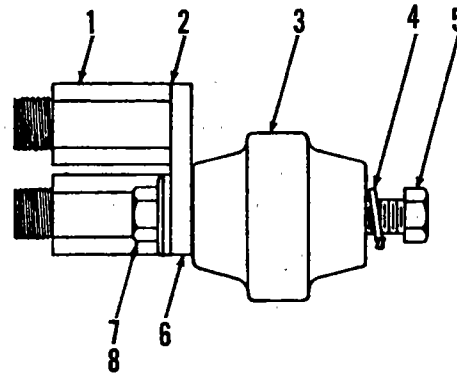
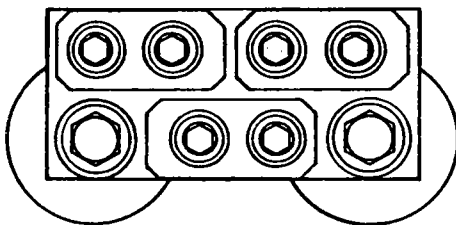
400/600	03 04 05 07 08	
Running Time Meter	3 4 5D 8	302-0466
Running Time Meter	53 54 55D 58	302-0469
Running Time Meter	1 4X 7 7X 9X	302-0465
Running Time Meter	51 54X 57 57X 59X	302-0468
Transformer-Stepdown	4X 7 7X 9X	315-0377

NEUTRAL
BAR

OT _____  _____ / _____

	ASSEMBLY	TAB #1
400	337-2204	332-2704
600	337-1944	332-2660

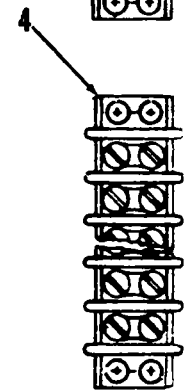
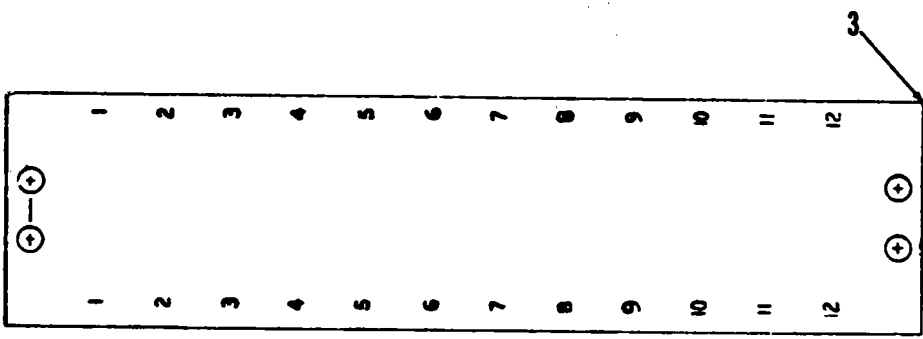
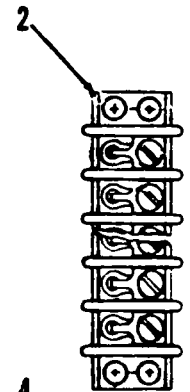
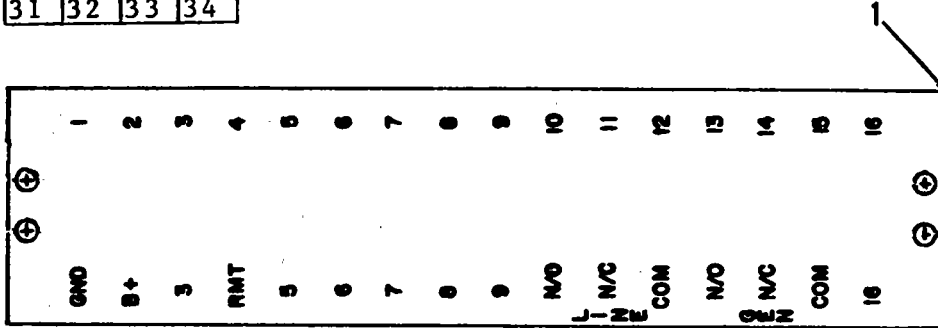
REF. NO.	PART NO.	QTY.	PART DESCRIPTION
1	See Tab	3	Lug-Solderless
2	518-0341	1	Compound-Joint(Electrical)
3	332-2512	2	Stand Off-Insulator
4	850-0050	2	Washer-LK(3/8)
5	800-0047	2	Screw-HHC(3/8-16x5/8)
6	337-1943	1	Bus Bar-Neutral
7	800-0050	2	Screw-HHC(3/8-16x1)
8	851-0022	2	Conical Disc Spring(3/8)



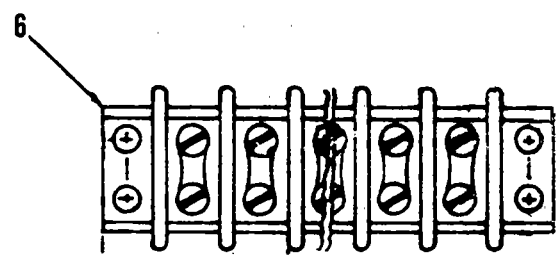
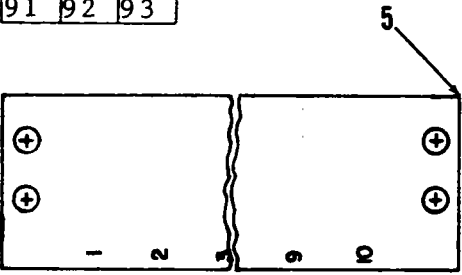
TERMINAL
BLOCK

OT _____

31	32	33	34
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91	92	93
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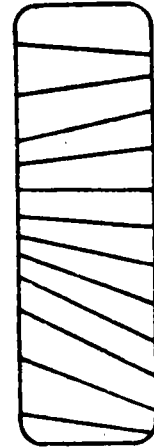
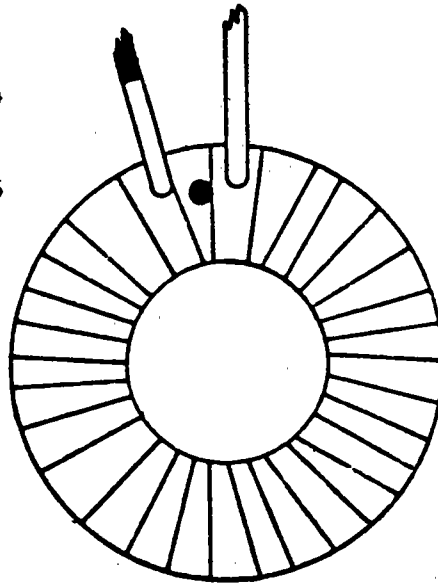


REF. NO.	PART NO.	QTY.	PART DESCRIPTION
1	332-2425	1	Strip-Marker
2	332-0795	1	Block-Terminal(16 Term.)
3	332-1469	1	Strip-Marker
4	332-1468	1	Block-Terminal(12 Term.)
5	332-2563	1	Strip-Marker
6	332-2562	1	Block-Terminal(10 Term.)

CURRENT TRANSFORMER

OT _____ (b) _____ / _____ (a) 03

400 302-1394
600 302-1395



CONTACT BLOCK

OT _____ - _____ /

31 32 33 34

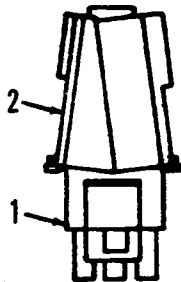
91 92 93

308-0579 (Normal Open) 308-0579 (Normal Open)

308-0580 (Normal Closed)



BYPASS PLUG



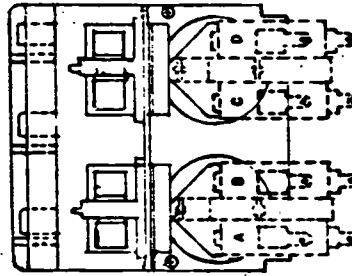
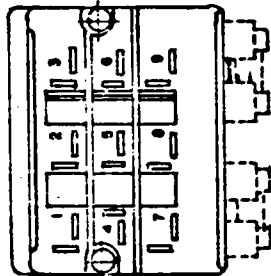
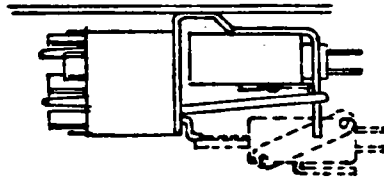
REF. NO.	PART NO.	QTY.	PART DESCRIPTION
1	323-1201	1	Connector-Plug Housing
2	323-1208	2	Strain Relief

REVERSING CONTACTOR

OT _____ - _____ 

91	92	93
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307-1870



SELECTOR SWITCH

OT _____ - _____ 

31	32	33	34
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308-0577

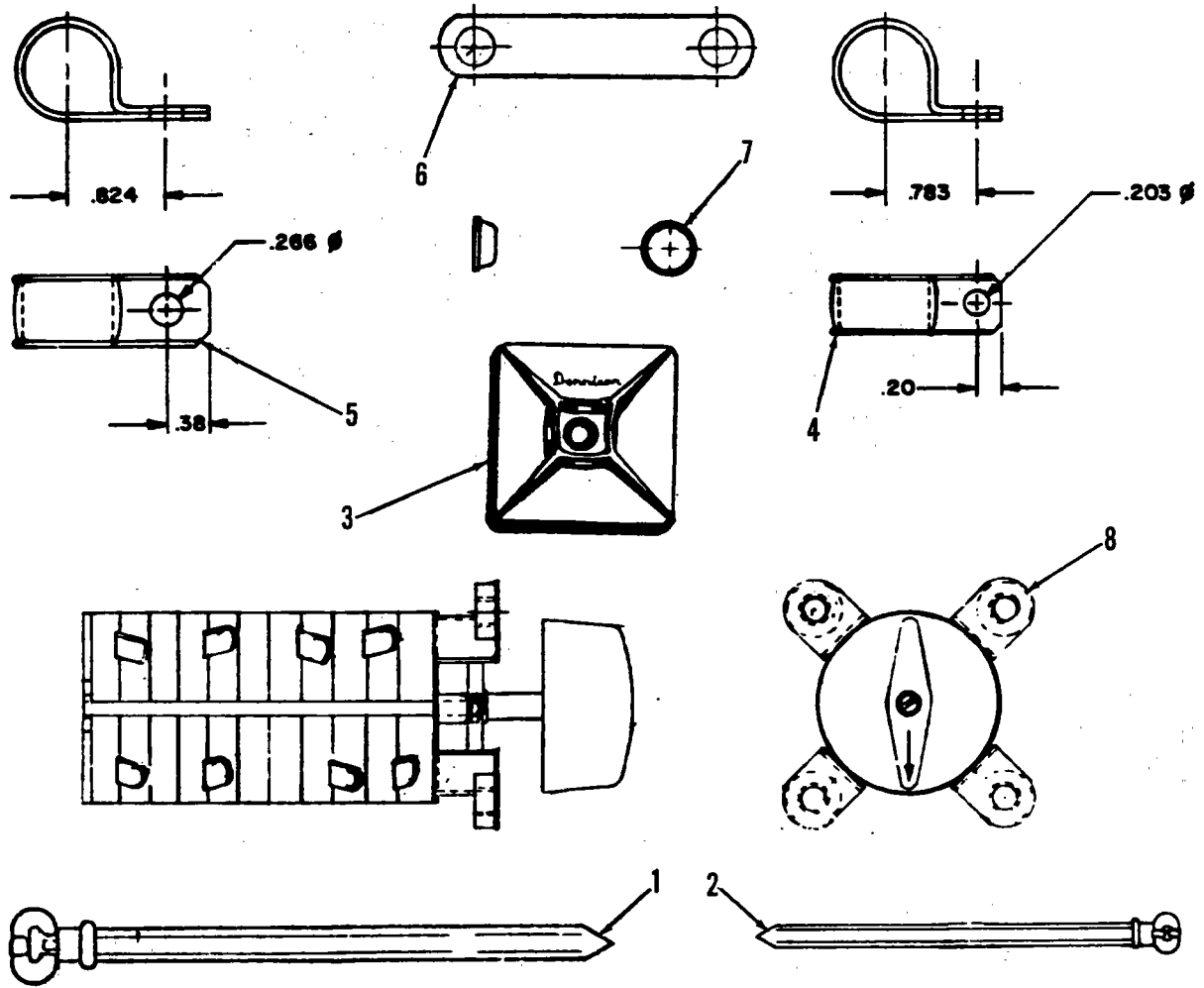
91	92	93
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308-0583

NOTE: Switch comes with key 308-0787.



MISCELLANEOUS



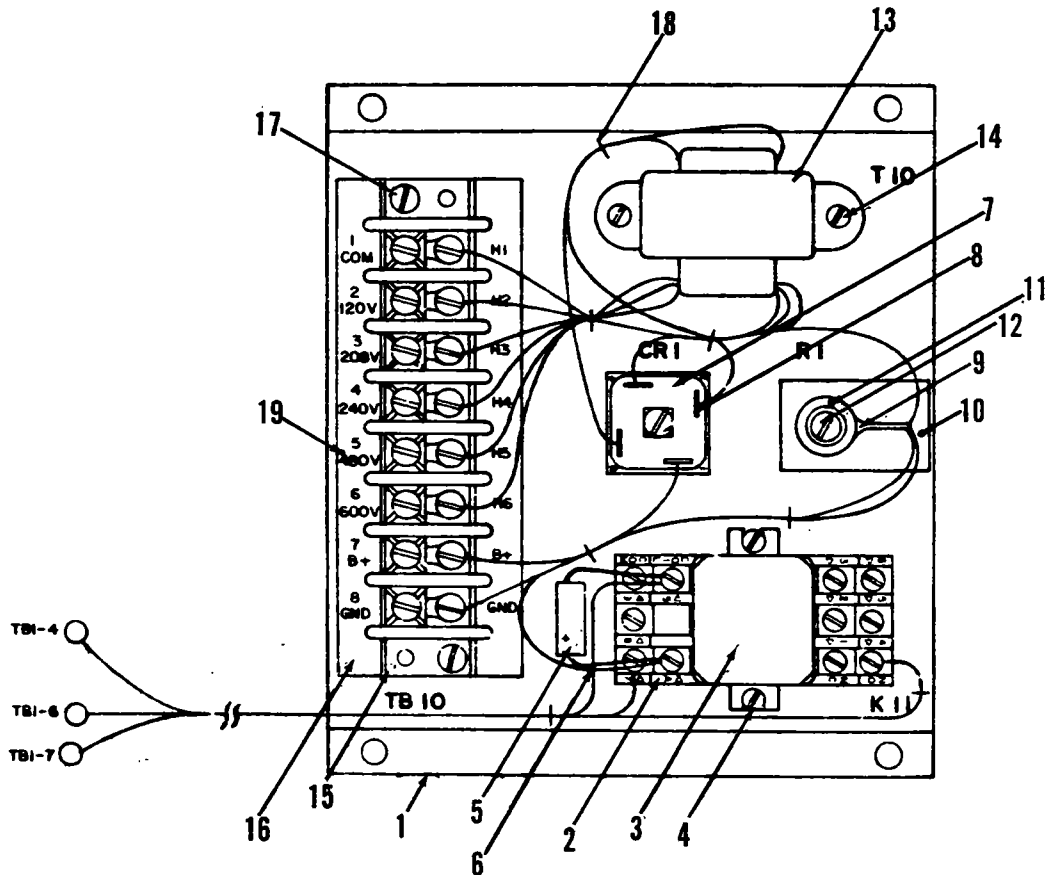
REF. NO.	PART NO.	QTY.	PART DESCRIPTION
1	332-0942	1	Tie-Cable(3.62" LG.)
2	332-2262	1	Tie-Cable(8.00" LG.)
3	332-2420	1	Mount-Cable Tie
4	332-2542	1	Clamp-Cable
5	332-2541	1	Clamp-Cable
6	332-0592	1	Ground-Jumper
7	508-0231	56	Bumper
8	308-0022	1	Switch-Rotary

POWER
SUPPLY

OT

B

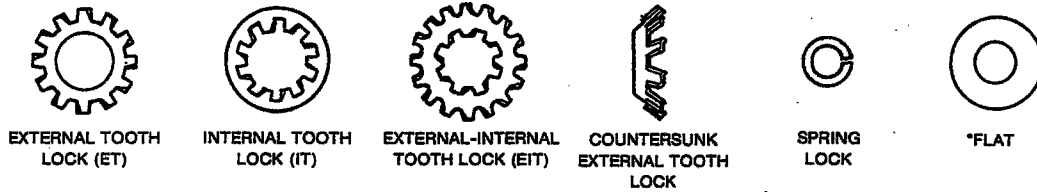
REF. NO.	PART NO.	QTY.	PART DESCRIPTION
1	301-6697	1	Plate-Mounting
2	323-0804	1	Socket-Relay
3	307-1056	1	Relay-3PDT(K11)
4	812-0062	2	Screw-RHM(#6-32x7/16)
5	356-0047	1	Capacitor
6	898-0004	1	Sleeving-Insulation
7	305-0517	1	Rectifier-Bridge(CR1)
8	813-0102	1	Screw-RHM(#10-32x5/8)
9	304-0011	1	Resistor-Fixed(R1)
10	304-0292	1	Insulator-Resistor
11	304-0014	1	Washer-Centering
12	813-0112	1	Screw-RHM(#10-32x2 1/2)
13	315-0375	1	Transformer-Stepdown(T10)
14	812-0059	2	Screw-RHM(#6-32x1/4)
15	332-2003	1	Block-Terminal(TB10)
16	332-2426	1	Strip-Marker
17	812-0065	2	Screw-RHM(#6-32x5/8)
18	332-0942	8	Tie-Cable
19	98-4791	1	Silkscreen-Term Block



HARDWARE IDENTIFICATION

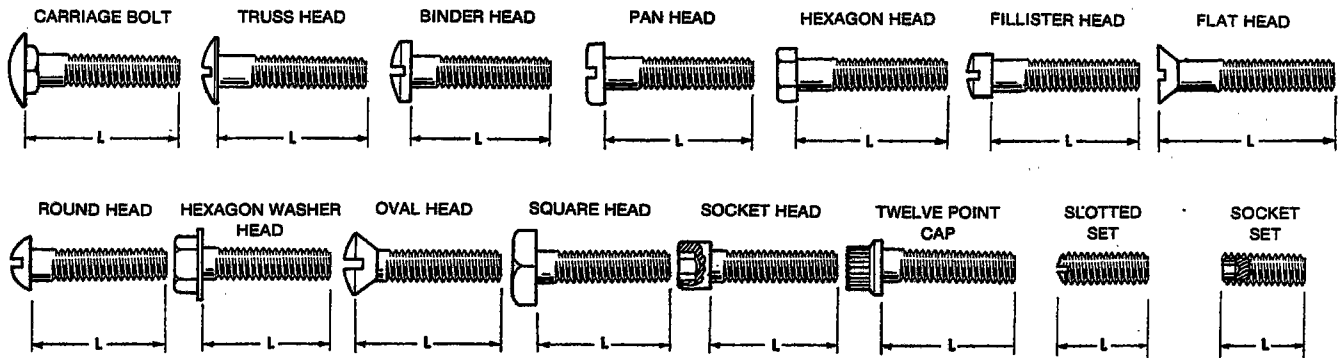
Illustrated hardware items are only for identification purposes. All hardware items listed throughout this parts catalog are steel SAE grade five (5) or lower (zinc plated with clear chromate dip) unless parts description indicates differently. All dimensions are in inches.

WASHER TYPES



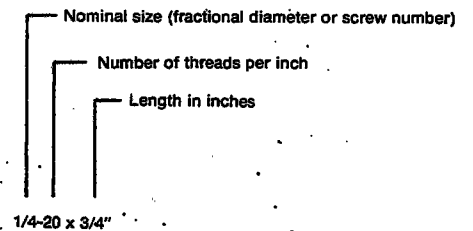
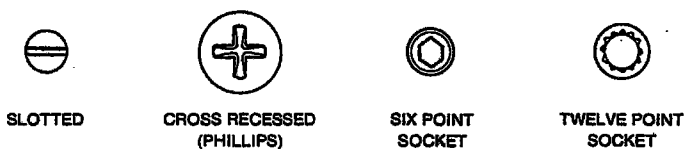
* - Flat washer dimensions given are: Inside Diameter (ID), Outside Diameter (OD) and Thickness (Thk).

BOLT AND SCREW TYPES



L - Measure length between these points.

INTERNAL DRIVE TYPES



NUT TYPES





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