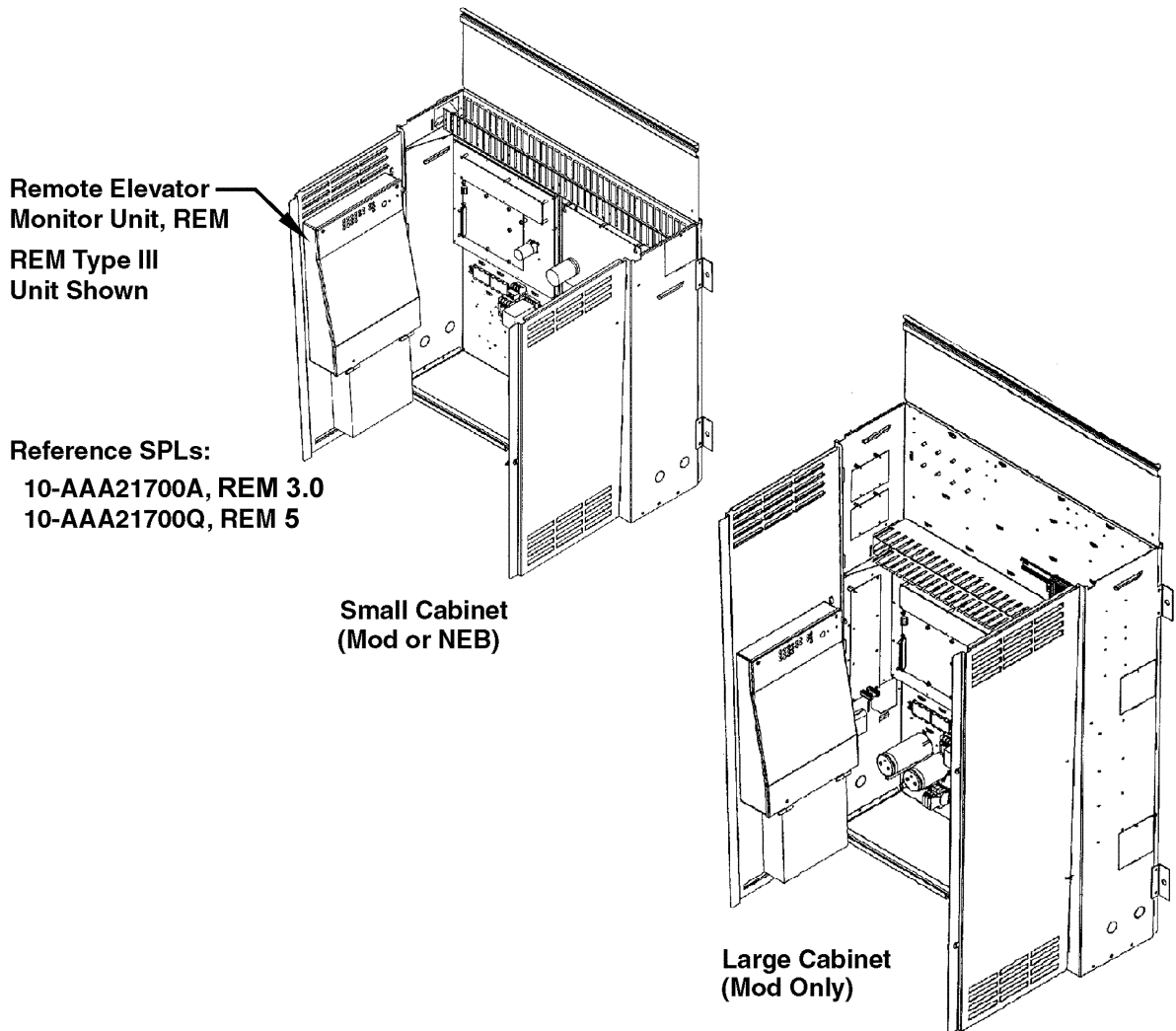


**Hydraulic Controller,
Microprocessor Phase II
(Unified Mod or NEB)**

**Spare Parts Leaflet
10-AAA21241U**

November 15, 2023 / Page 1 of 32



OTIS

This document does not contain any
technical data subject to EAR or ITAR

**SERVICE ENGINEERING
Otis Elevator Company
Bloomfield, Connecticut USA**

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Leaflet Description

This leaflet contains all the spare parts for the phase II (Mod or NEB) 211 hydraulic controller.

Leaflet Revisions

Date Revised	Subject Matter Expert	Reason for Revision
January 1, 1997	Mike Boles	Phase II leaflet created from old 211 controller leaflet.
July 1, 2001	Mike Boles	Part numbers changes to all solid-state starters and added cable information.
September 5, 2002	Mike Boles	Add new vendor part numbers on page 14.
December 15, 2003	Mike Boles	Added new part no. for contactors (DO, DC) used on some Mod door operators (30 VDC–24 VDC)
October 25, 2005	Mike Boles	Corrected typo on page 33.
January 5, 2008	Jeff Holmes	Updated parts and illustrations.
July 2, 2009	Jeff Holmes	Added AAA718F4; Corrected AAA21421F12 to AAA21421F2 and AAA447BE13 to AAA447BE113.
November 4, 2009	Jeff Holmes	Updated ABA26800ALR to ACA26800ALR; removed parts AAA375CJ5 and 6; updated AAA660B arrangement.
July 17, 2013	Taye Gebrewold	Added NYC Inspection Panel (AAA21255U5)
October 23, 2013	Anh Pham	Added p/n AAA27076FX1 on p. 11
July 16, 2014	Taye Gebrewold	Added p/n AAA646E5 on page 16.
October 12, 2016	Taye Gebrewold	Corrected Ref. 4 on p. 16
January 15, 2020	Ali Bozorgzadeh	Corrected description in Ref. 1 on p. 6
April 14, 2021	Ali Bozorgzadeh	Updated illustration on p. 15
September 21, 2022	Juan Murillo	Updated to include OBSOLESCENCE note on cover
December 7, 2022	Patrick Martin	Removed obsolete note on cover. Added Hydro Enhanced conversion board, I/O board, and CPU board. Added Soft Starter TIP note under pump motor contactors.
November 15, 2023	Patrick Martin	Board AAA21305GV1 added.

Related Drawings

Drawing No.	Title	Drawing No.	Title
AAA21241U	Assembly and Arrangement for 211 Controller	AAA21241W	Assembly and Arrangement: Door Operator Interface Hydraulic Products
AAA174YG	Cables	ABA26800YK	211 Power Supply Subsystem

(Continued on next page)

Related Documents

Document ID	Title
Document 55974	<i>Hydraulic Elevator Pump Motor Solid State Controller</i>
SPL 10-7151A	<i>AC & DC Contactors Reversing / Y-Δ Contactors Starters</i>
TIP 6.3.0-34	<i>Wiring Changes Required When Replacing the Existing 30 VDC Contactor with a 24 VDC Contactor (DO, DC, NDG) on the 211 Phase-II Hydro Controller</i>
TIP 1.1.14.0-14	<i>Hydro Enhanced Board</i>

Subject Matter Expert

Name	Department
Ali Bozorgzadeh	OSC Service Engineering

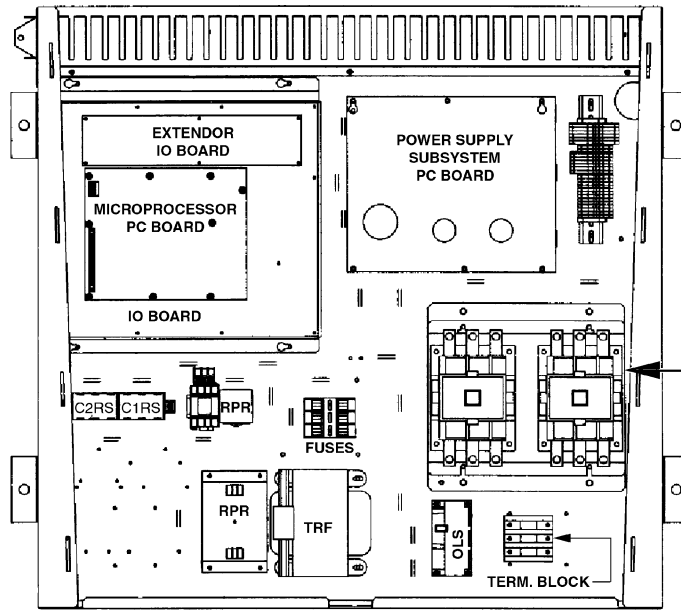
About Spare Parts Leaflets...

This document lists the lowest replaceable units (LRUs) for the standard version of the product. The LRUs are chosen by a team of Otis associates representing engineering and manufacturing.

While goal of this document is to make parts identification as easy as possible, the document cannot be all-inclusive. Elevator and escalator contracts classified as "special" or "custom" are not addressed here. For such contracts, please refer to specified information, the contract folder, TIPs, Field Education Articles, Construction Letters, etc. for further information.

If you have any suggestions about this document, please contact the subject matter expert listed on this page.

**Controller: Phase II
(Unified Mod or NEB)**



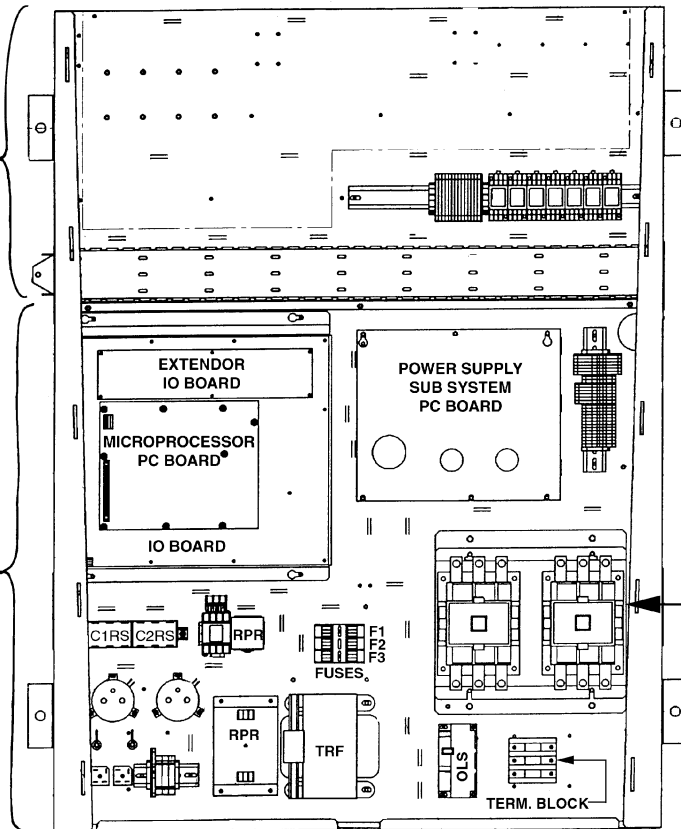
Small Cabinet - Front View

PUMP MOTOR CONTACTOR

- Across-the-line
- Wye-Delta
- Soft Start

MOD AREA
ALL DOOR
OPERATORS
& MOD
FEATURES

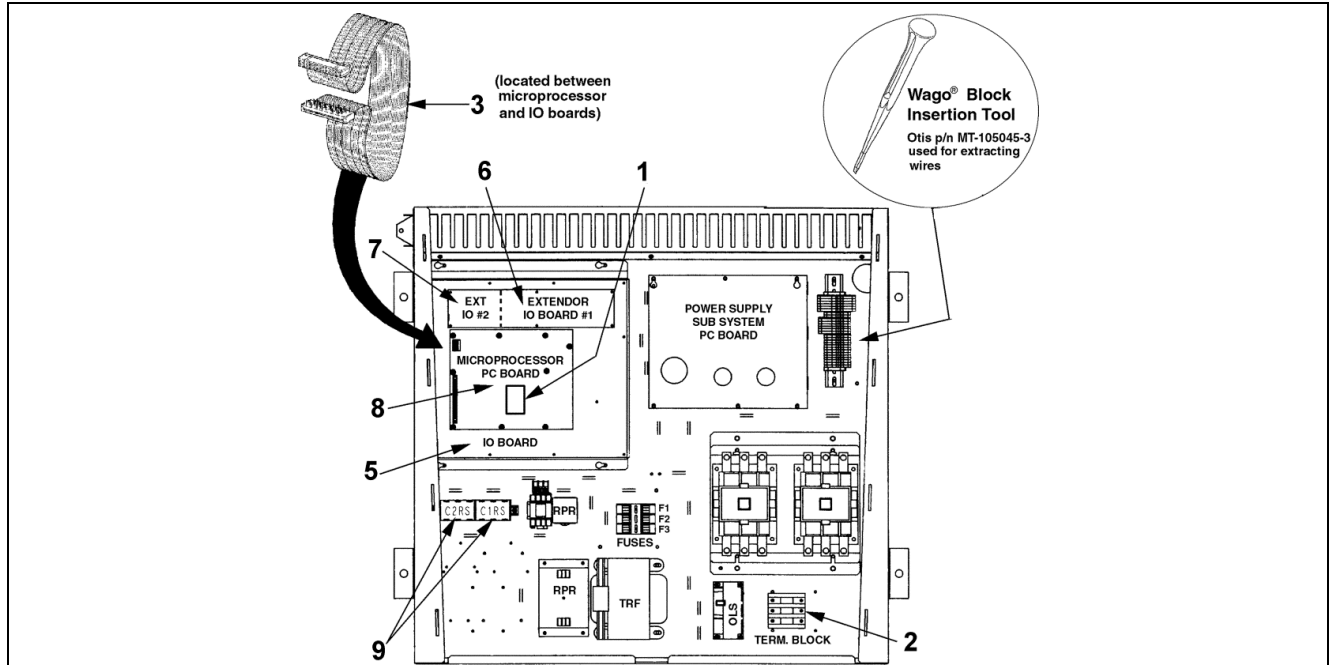
SAME
AS
NEB



Large Cabinet - Front View

211 Controller

10-AAA21241U

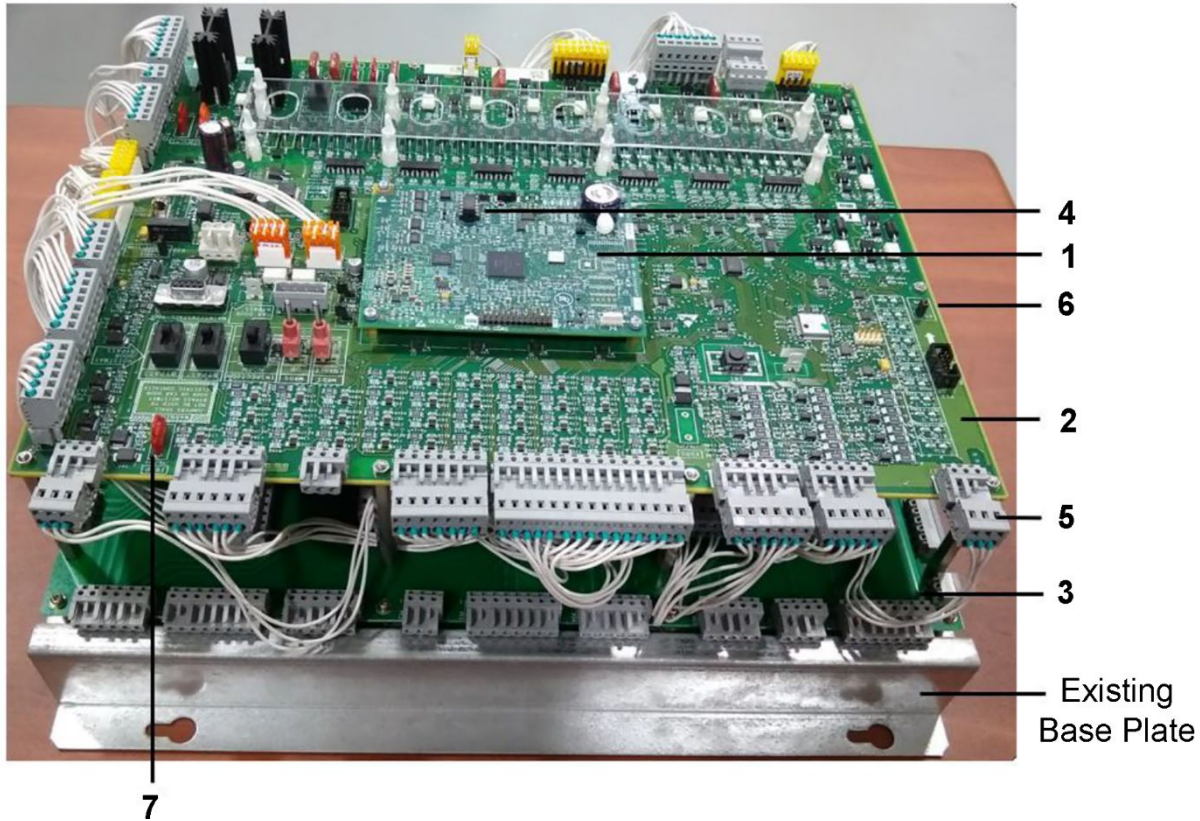


AAA21241U			
REF. No.	PART No.	DESCRIPTION	SYMBOL
1	AAA21241F2	Assembly, Battery (3.0 V) & Cable, for AAA26800TD1	---
	AAA718F4	Assembly, Battery (3.0 V) & Cable, for AAA26800AKP and ACA26800ALR	
2	303DH1	Block, Terminal, NEMA 4, 80–130 A, Power Input	---
	303DH16	Block, Terminal, NEMA 2 & 3, Up to 80 A, Power Input	
3	AAA174TP4	Cable, Ribbon, 60-Position	
4	ABA26800YA1 ACA26800YA1	PC Board, I/O, w/ Door Lock Bypass, See Notes 1 & 2	IOBD
	ABA26800YA2 ACA26800YA2	PC Board, I/O, w/o Door Lock Bypass, See Notes 1 & 2	IOBD
	AAA26800AKP	PC Board, Integrated Microprocessor and Limited I/O, w/o RSL Interface, See Note 3	IOBD
	ABA26800ALR1 ACA26800ALR1	PC Board, Integrated Microprocessor and I/O, w/ Door Lock Bypass, See Notes 1 & 2	IOBD
	ABA26800ALR2 ACA26800ALR2	PC Board, Integrated Microprocessor and I/O, w/o Door Lock Bypass, See Notes 1 & 2	IOBD
	ACA26800ALR3	PC Board, Integrated Microprocessor and I/O, w/o Door Lock Bypass, w/ Remote MRDS Panel. See Note 1	IOBD
5	AAA26800YB1	PC Board, I/O Extender (#1 mod & discrete fixtures)	XIO1
6	AAA26800ZU1	PC Board, I/O Extender (#2 rear door & serial fixtures)	XIO2
7	AAA26800TD1	PC Board, Microprocessor, See Note 2	CPU
8	GAA25005B1 GDA25005B10	PC Board, Remote Station 14	C1RS, C2RS
9	AAA21255U5	Remote Inspection Panel, NYC, w/ Up, Down, Enable Button; See p. 21	MRDS

- NOTES**
- When replacing ACA26800ALR PC board, provide the machine number to the Customer Service. If there is contract-specific software (e.g., freight doors), remember to provide software information when placing your order.
 - The A*26800ALR1, 2, 3 boards are only supported through the OSC Repair Return program for as long as supply of key components last. It is recommended and will be required when supply is exhausted, to upgrade this board, see p. 6.
 - PC board AAA26800AKP is obsolete and requires a new controller modernization.
 - The ACA26800YA1 and ACA26800ALR1 I/O PCB replacement is the Hydro enhanced board assembly shown on p. 6. See TIP 1.1.14.0-14, *Hydro Enhanced Board*.

Hydro Enhanced Board Assembly

10-AAA21241U



REF. No	PART No.	DESCRIPTION	SYMBOL
*	AAA27076KN1	Assembly Kit, Hydro Enhanced Board (not shown)	
1	ABA26800AVP1	Board, Processor, GECB	
2	AGA26800ATD1	Board, GPCB1 I/O, w/ Door Lock Bypass	
3	AAA26800BDW4 AAA21305GV1	Board, Conversion, Hydro Enhanced	
4	AAA616NL15	Chip, U8	
*	AAA375CF7	Fuse, F150 Hydro Enhanced Conversion Board (not shown)	
5	AAA174CFC1-36	Harnesses, Wire, w/ Connectors (Special Order; not stocked)	
*	AAA174AQJ45	Harness, Ground, TB1 (not shown)	
*	AAA174AQJ46	Harness, Ground, TB2 (not shown)	
6	AAA646D1	Jumper, Black	
7	AAA646E4	Jumper, Red	
*	AAA102RT158	Label, Fuse, F150 (not shown)	

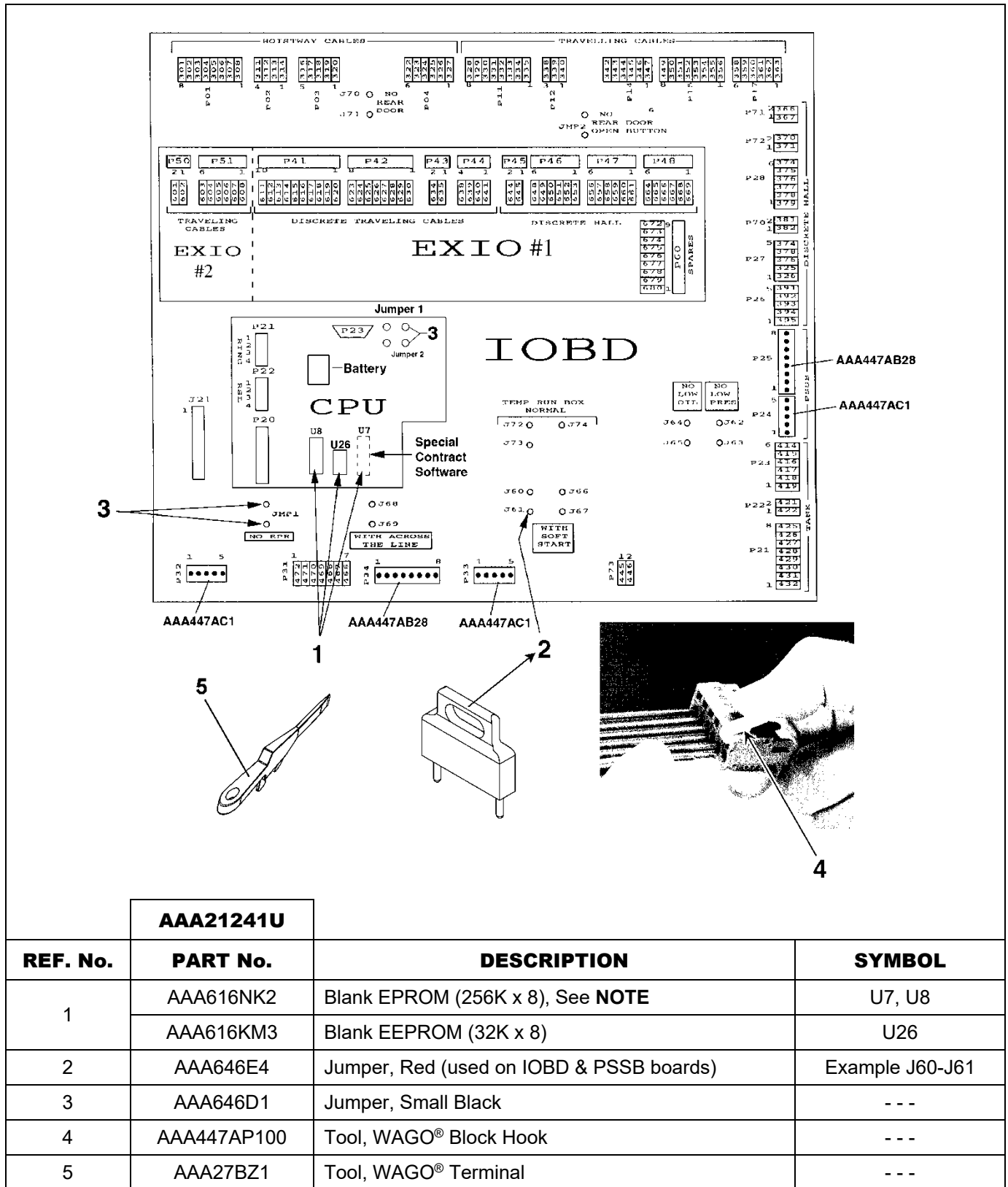
NOTE 1: The GECB must be programmed. The baseline software is the same baseline used on the Hydro Accel CPU board (p/n AP131438DAH).

NOTE 2: When replacing the GECB board, remember to remove the U8 chip from the existing GECB board and place it in the new GECB board. The existing U8 chip has all the existing contract parameters.

NOTE 3: See TIP 1.1.14.0-14.

211 Controller

10-AAA21241U




REF. No.	PART No.	DESCRIPTION	SYMBOL
1	AAA616NK2	Blank EPROM (256K x 8), See NOTE	U7, U8
	AAA616KM3	Blank EEPROM (32K x 8)	U26
2	AAA646E4	Jumper, Red (used on IOBD & PSSB boards)	Example J60-J61
3	AAA646D1	Jumper, Small Black	---
4	AAA447AP100	Tool, WAGO® Block Hook	---
5	AAA27BZ1	Tool, WAGO® Terminal	---


NOTE: Contact OSC for the latest software ---30270--- baseline.

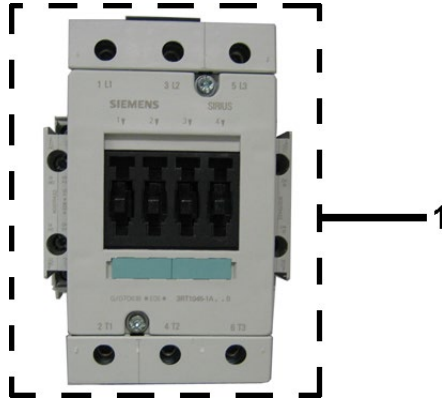
I/O Board Connectors

10-AAA21241U

AAA21241U			
PART No.	SYMBOL	CONDITION	DESCRIPTION
AAA447BE1	P01	Top Limits (Red)	Connectors for I/O Board (IOBD)
AAA447BE2	P02	Bottom Limits (Red)	
AAA447BE3	P03	Door Link (Red)	
AAA447BE4	P04	Hall Fixtures (Brown)	
AAA447BE5	P11	Position System (Brown)	
AAA447BE58	P12	Front Door Op. (Blue)	
AAA447BE59	P14	Inspection (Orange)	
AAA447BE60	P15	Front i-MOTION (Yellow)	
AAA447BE9	P17	Gate Switches (Red)	
AAA447BE18	P21	Tank Valves (Red)	
AAA447BE17	P22	Pump Motor (Red)	
AAA447BE16	P23	Tank Sensors (Red)	
AAA447BE15	P26	Inspection (Brown)	
AAA447BE14	P27 (two or more cars in group)	Intercar Connection (Brown)	
AAA447BE12	P28	Smoke Sensors (Brown)	
AAA447BE20	P31	Run Bug (Temp. Operation)	
AAA447BE13	P70	Spare - Mod	
AAA447BE10	P71	Spare - Mod (Red)	
AAA447BE11	P72	Spare - Mod (Brown)	
AAA447BE19	P73	Spare - Mod (Red)	
AAA447BE45	P41	Discrete COP	Connectors for Extender I/O Board (EXIO)
AAA447BE46	P42	Discrete COP	
AAA447BE47	P43	Discrete COP	
AAA447BE48	P44	Discrete CPI	
AAA447BE49	P45	Discrete Hall	
AAA447BE50	P46	Discrete Hall	
AAA447BE51	P47	Discrete Hall	
AAA447BE52	P48	Discrete Hall	
AAA447BE61	P50	Rear Doors	
AAA447BE62	P51	Rear i-MOTION	
AAA447BE53	P60	Spare - Mod	

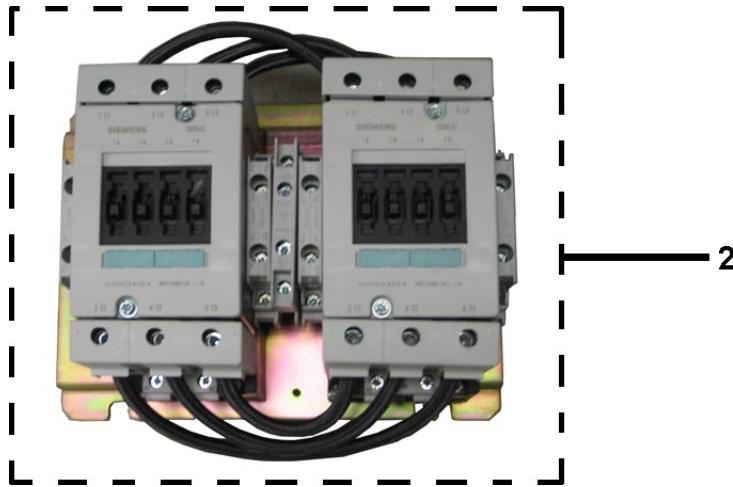
NOTE:  Illustration on page 5 for connector location.

NOTE:  SPL 10-7151A, AC & DC Contactors Reversing / Y-Δ Contactors Starters, for the lower level replacement parts for the contactor assemblies listed below. Use NEMA size number to identify the contactor.



ACROSS-THE-LINE CONTACTORS (SXL)

REF. No.	PART No.	DESCRIPTION	MOTOR HP	LINE VOLTAGE	SYMBOL
1	AAA638R7 AAA638R107	Contactor, NEMA 2 AC	≥ 10 & ≤ 30	440–600 VAC 208–240 VAC	PM
	AAA638A10 AAA638A110	Contactor, NEMA 3 AC	> 30 & ≤ 50	440–600 VAC	



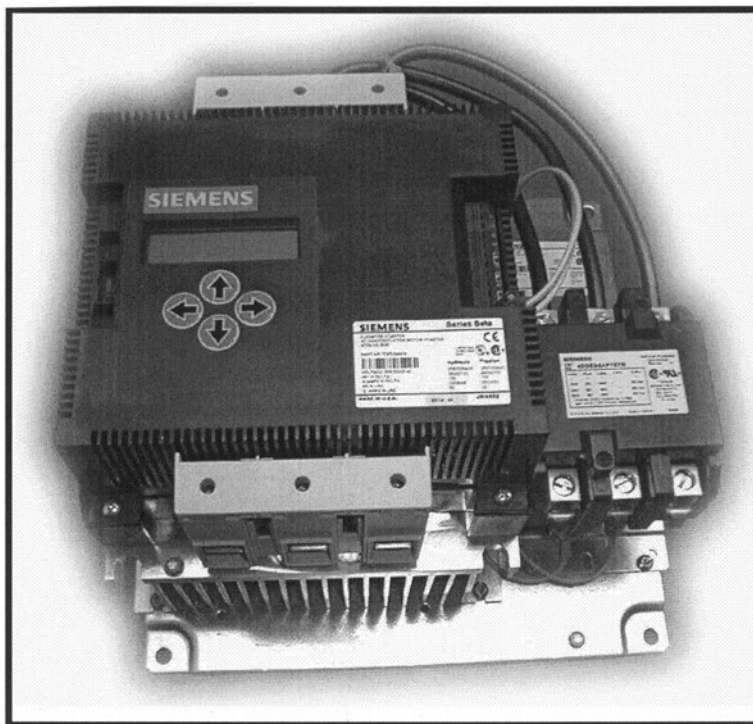
WYE-DELTA CONTACTORS (YDS)

REF. No.	PART No.	DESCRIPTION	MOTOR HP	LINE VOLTAGE	SYMBOL
2	AAA638W7 AAA638W107	NEMA 2 Contactor	≥ 10 & ≤ 30	440–600 VAC	L-M
	AAA638D7 AAA638D107	NEMA 3 Contactor		208–240 VAC	
	AAA638F12 AAA638F107	NEMA 4 Contactor	> 30 & ≤ 50	440–600 VAC 208–240 VAC	

NOTE: Recommend upgrading to a Soft Starter.

72G Series Elevator Starter with Key Pad & LCD

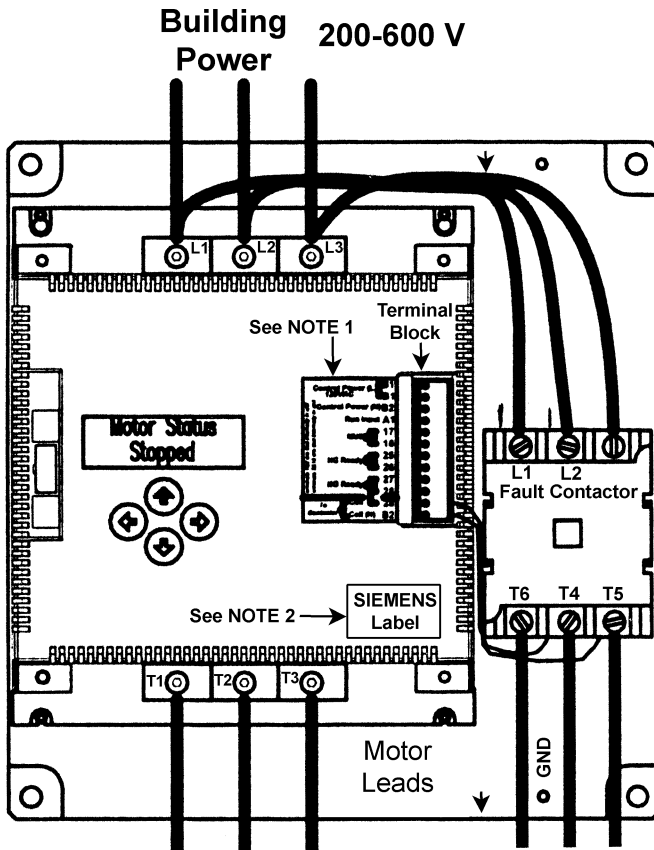
10-AAA21241U



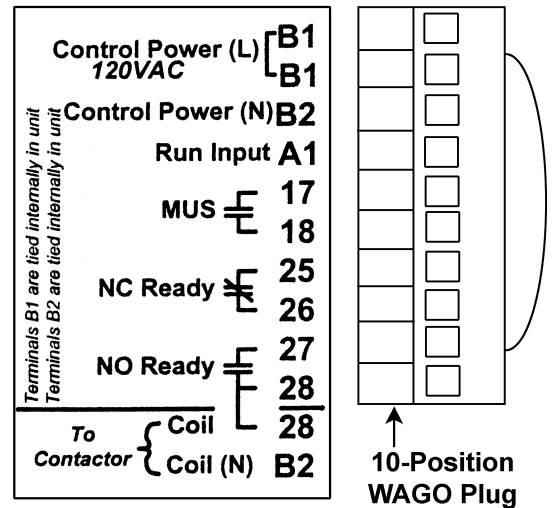
**Hydraulic Motor Soft Starter AAA21240AD Assembly Shown.
See details on pages 11–12.**

10-AAA21241U

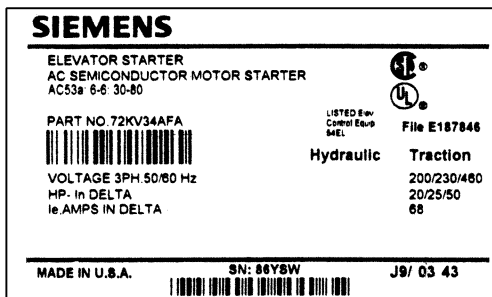
Instructions for Replacing Existing 211 Starters



NOTE 1: Enlarged View of Terminal Blocks



NOTE 2: Enlarged View of Siemens Label



- Use an Allen wrench to power terminals L1, L2, L3, T1, T2, and T3.
- Use WAGO tool AAA447AP100 to insert wires into 10-position plug.
- Use cables AAA174YG35 & 36 when replacing existing 211 starters (AAA638AL or AAA638AJ).
- Use Document 55974 (shipped with every new starter) to install new contactor.

Soft Starter Assemblies

AAA21240AD1 through AD10

10-AAA21241U

HP at 200- 208 V	HP at 220- 240 V	HP at 440- 480 V	Max. Operating Current (AMPS)	Overload Range (AMPS)	Existing Starter P/N	New Starter P/N	Replacement Fault Contactor	Replacement Fault Contact Cover
5	7.5	15	22	5–22	AAA638AJ1 AAA638AL1	AAA638AL4 AAA21240AD5	AAA21240AD39 AAA27076FX1	AAA21240AD44
7.5	10	25	35	9–35	AAA638AJ2 AAA638AL2	AAA638AL2 AAA21240AD5		
10	15	30	42	10–42	AAA638AJ3 AAA638AL3	AAA638AL3 AAA21240AD5		
15	20	40	55	14–55	AAA638AJ4 AAA638AL4	AAA638AL4 AAA21240AD5		
20	25	50	68	17–68	AAA638AJ5 AAA638AL5	AAA638AL5 AAA21240AD5		
25	30	60	80	20–80	AAA638AL6	AAA638AL6 AAA21240AD6		
30	40	75	105	26–105	AAA638AJ6 AAA638AJ7 AAA638AL7	AAA638AL7 AAA21240AD7	AAA21240AD40	AAA21240AD45
40	50	100	130	32–130	AAA638AJ8 AAA638AL8	AAA638AL8 AAA21240AD8	AAA21240AD40	
50	60	125	156	39–156	AAA638AJ9 AAA638AL9	AAA638AL9 AAA21240AD9	AAA21240AD41	
75	100	---	252	63–252	AAA638AJ10** AAA638AL10	AAA638AL10 AAA21240AD10	AAA21240AD43	AAA21240AD46

NOTE 1: Building power supply 200–240 V for use with 6 or 12 lead Wye-Delta wound motors only.

NOTE 2: Current limit % of overload current is 150%–450% (set at 230%).

NOTE 3: Consult OtisRole if you have a Wye-configured pump motor with 3 or 9 leads.

** Replacement fan AAA21240AD47.

10-AAA21241U

Soft Starter Assemblies AAA21240AD11 Through AD19

HP at 440-480 V	HP at 575-600 V	Max. Operating Current (AMPS)	Overload Range (AMPS)	Existing Starter P/N	Voltage	New Starter P/N	Replacement Fault Contactor	Replacement Fault Contact Cover
15	20	22	5-22	AAA638AJ11	440-480	AAA21240AD5	AAA21240AD39	AAA21240AD44
						AAA21240AD14	AAA21240AD40	AAA21240AD45
25	30	35	9-35	AAA638AJ12	440-480	AAA21240AD5	AAA21240AD39	AAA21240AD44
						AAA21240AD14	AAA21240AD40	AAA21240AD45
30	40	42	10-42	AAA638AJ13	440-480	AAA21240AD5	AAA21240AD39	AAA21240AD44
						AAA21240AD14	AAA21240AD40	AAA21240AD45
40	50	55	14-55	AAA638AJ14	440-480	AAA21240AD5	AAA21240AD39	AAA21240AD44
						AAA21240AD14	AAA21240AD40	AAA21240AD45
50	60	68	17-68	AAA638AJ15	440-480	AAA21240AD5	AAA21240AD39	AAA21240AD44
						AAA21240AD15	AAA21240AD9	AAA21240AD45
15	20	22	5-22	AAA638AL11	575-600	AAA21240AD5	AAA21240AD39	AAA21240AD44
						AAA21240AD5		
25	30	35	9-35	AAA638AL12	575-600	AAA21240AD13	AAA21240AD40	
						AAA21240AD14		
30	40	42	10-42	AAA638AL13	575-600	AAA21240AD15	AAA21240AD9	AAA21240AD45
						AAA21240AD16	AAA21240AD9	
40	50	55	14-55	AAA638AL14	575-600	AAA21240AD17	AAA21240AD42	AAA21240AD46
						AAA21240AD18	AAA21240AD42	
50	60	68	17-68	AAA638AL15	575-600	AAA21240AD19		
						AAA21240AD19		
60	75	80	20-80	AAA638AJ16 AAA638AL16	---	AAA21240AD17	AAA21240AD42	AAA21240AD46
						AAA21240AD18	AAA21240AD42	
75	100	105	26-105	AAA638AJ17 AAA638AL17	---	AAA21240AD19		
						AAA21240AD19		
100	125	130	32-130	AAA638AJ18 AAA638AL18	---	AAA21240AD19		
						AAA21240AD19		
125	150	156	39-195	AAA638AJ19 AAA638AL19	---	AAA21240AD19		
						AAA21240AD19		

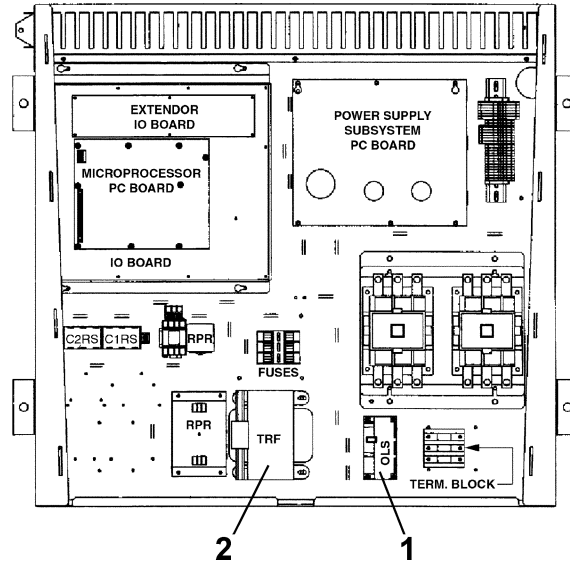
NOTE 1: Building power supply 440-600 V for use with 6 or 12 lead Wye-Delta wound motors only.

NOTE 2: Current limit % of overload current is 150%-450% (set at 230%).

NOTE 3: Consult Otis Role if you have a Wye-configured pump motor with 3 or 9 leads.

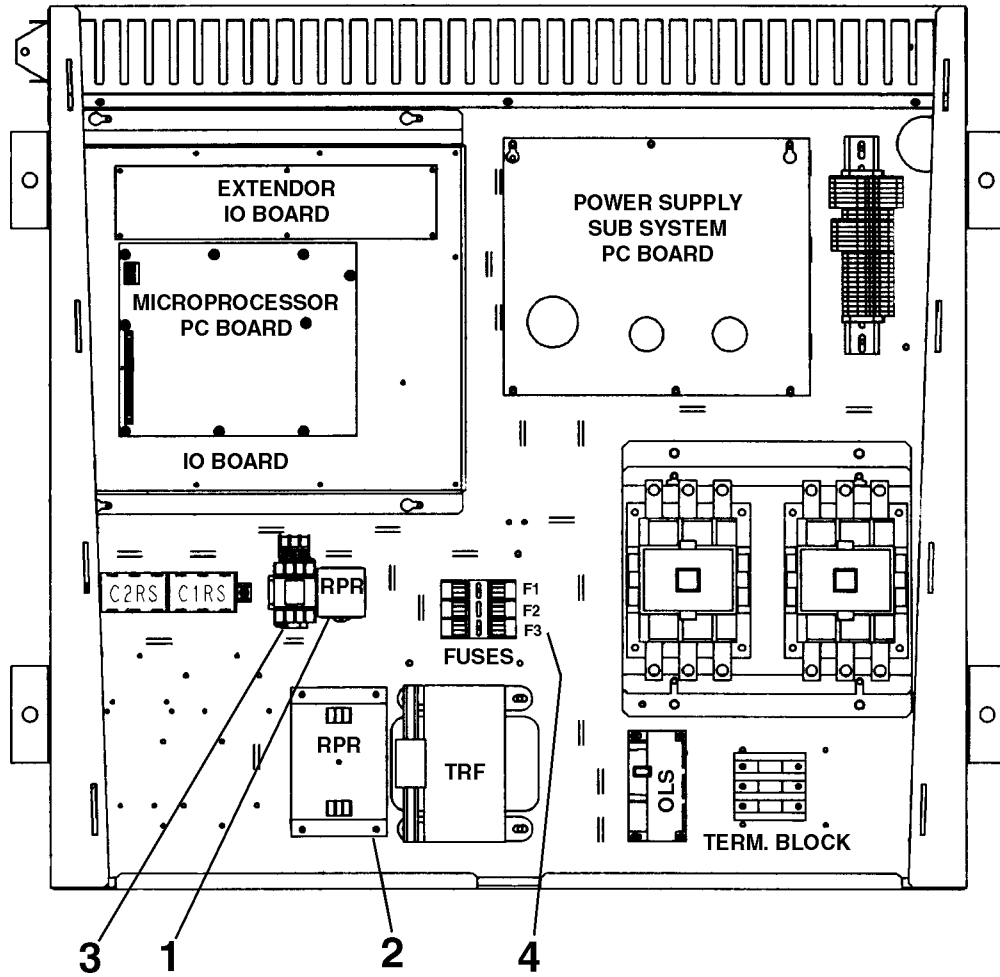
Overload and Transformer

10-AAA21241U



AAA21241U

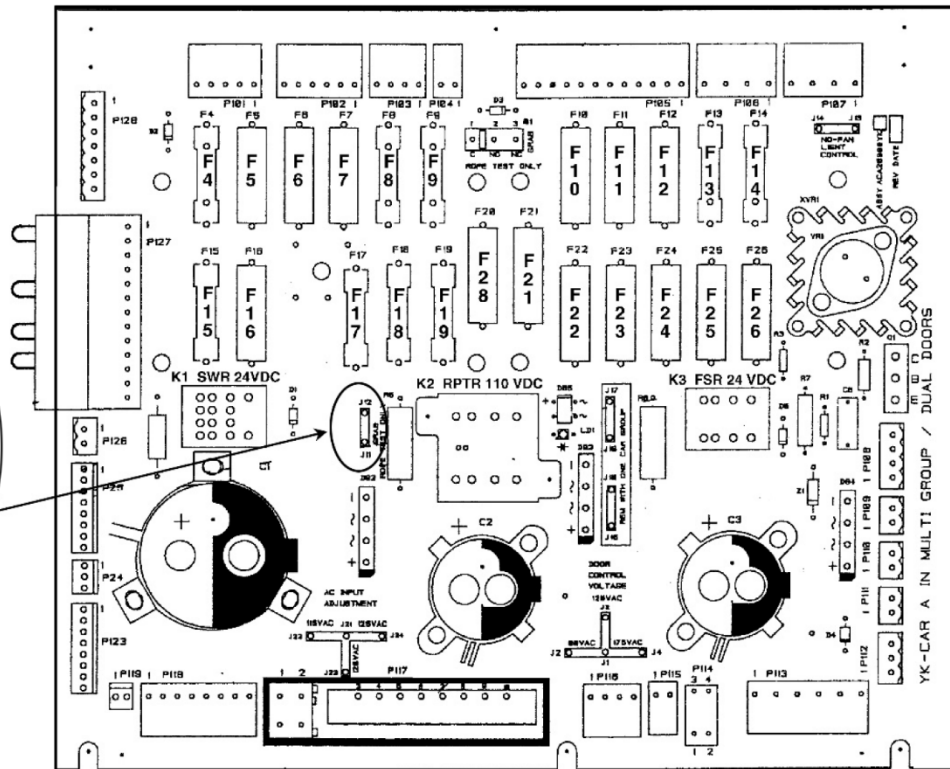
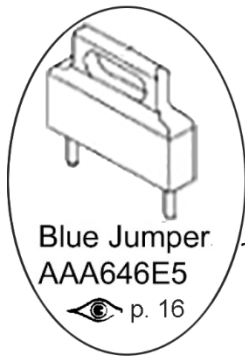
REF. No.	PART No.	DESCRIPTION		SYMBOL		
1	AAA660B107 AAA660B207	Relay, Overload, 10–40 A		OLS		
	AAA660B108 AAA660B208	Relay, Overload, 10–40 A				
	AAA660B109 AAA660B209	Relay, Overload, 25–100 A				
	AAA660B140 AAA660B210	Relay, Overload, 25–100 A				
	AAA660B144 AAA660B211	Relay, Overload, 50–200 A				
2	AAA225JT1	4 or Less Openings, Front 120 DC Door Only, w/Tank Heater, 790 VA	208–240 VAC	60 Hz	TRF	
	AAA225JT2		440–480 VAC			
	AAA225JT3		550–600 VAC			
	AAA225JT4	7 or Less Openings, w/o Tank Heater, Front 120 VDC Door Only, Simplex Controller, 570 VA	208–240 VAC			
	AAA225JT5		440–480 VAC			
	AAA225JT6		550–600 VAC			
	AAA225JT7	Front & Rear 120 VDC Door Motors, w/ or w/o Tank Heater, 1052 VA	208–240 VAC			
	AAA225JT8		440–480 VAC			
	AAA225JT9		550–600 VAC			
	AAA225JT10	All Mod 120 VAC or 220 VDC Front & Rear Door Operators, All Openings, 1302 VA	208–240 VAC			50 Hz
	AAA225JT11		440–480 VAC			
	AAA225JT12		550–600 VAC			
	AAA225JT13		208–240 VAC			
	AAA225JT14		360–380 VAC			
	AAA225JT15		400–430 VAC			



NOTE: See page 15 for spare fuses.

AAA21241U			
REF. No.	PART No.	DESCRIPTION	SYMBOL
1	AAA630AC1	Relay, Reverse-Phase, Site Supply = 208–240 VAC (60 Hz)	RPR
	AAA630AC2	Relay, Reverse-Phase, Site Supply = 440–480 VAC (60 Hz)	
	AAA630AC7	Relay, Reverse-Phase, Site Supply = 380 VAC (50 Hz)	
2	AAA630AC3	Relay, Reverse-Phase, Site Supply = 575–600 VAC (60 Hz)	
3	AAA613DL31	Relay, 120 VAC	Fan & Light Protection
	AAA613DL81	Driver, Coil, 24 VDC	
4	AAA180FK1	Holder, Fuse (F1, F2) F3 w/RPR	---
	AAA180FK2		

10-AAA21241U



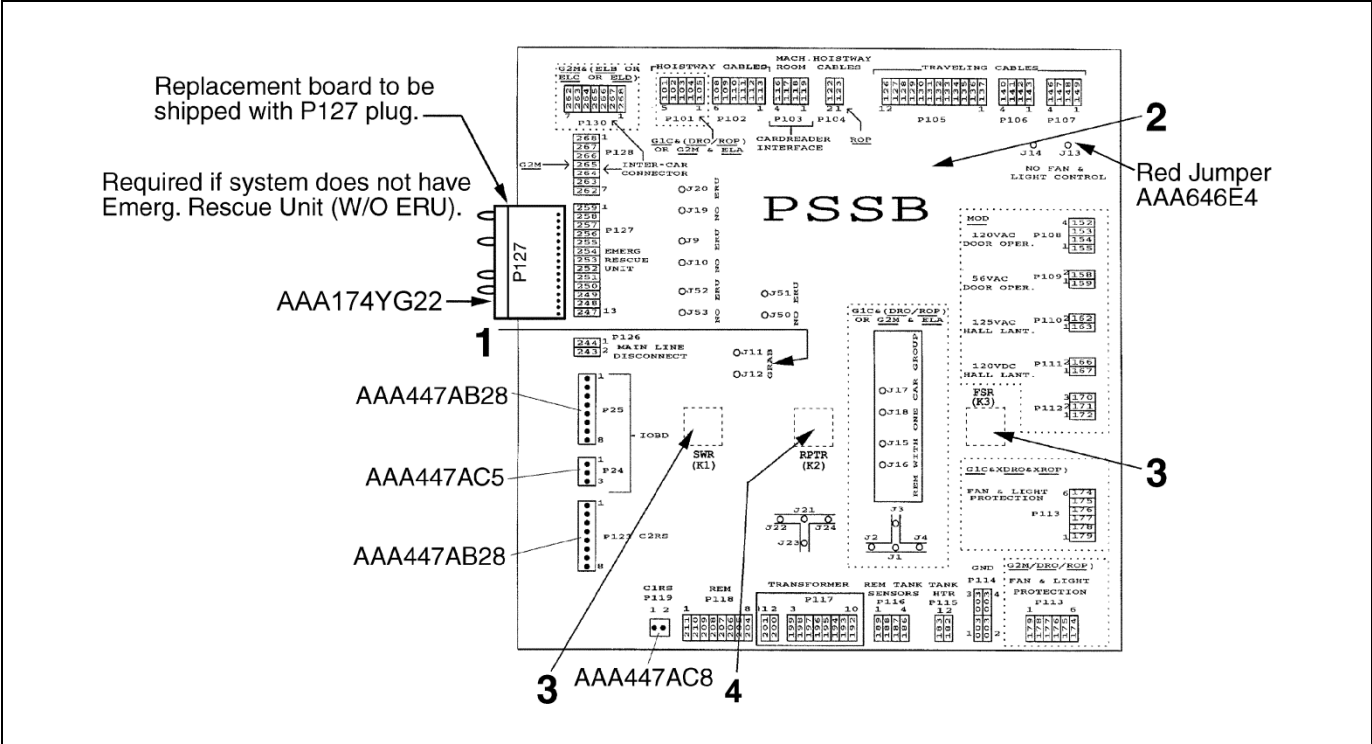
AAA21241U

FUSE No.	PART No.	FUSE TYPE	AMPS	VOLTS	SITE VOLTS (VAC)
F14	AAA375BT14	Fast-Acting	15	250	550–600
F17	AAA375BT34		25	32	
F12	AAA375BT22		0.125	250	
F4, F15, F18, F19	AAA375BT32		10		
F11	AAA375BT26		15		
F5, F16	AAA375BT19		5		
F6	AAA375BT24		0.5		
F7	AAA375BT25		0.75		
F8	AAA375BT5		2		
F24, F25	AAA375BT27		2		
F10	AAA375BT18		3		
F20, F21, F26	AAA375BT28		4		
F9, F13	AAA375BR12		Glass Body, Time Delay	3	
F23, F100*, F1**	AAA375BR6	1			
F22	AAA375BR14	4			
F1-F3	AAA375CE6	Time Delay Rejection (see page 14 for holder and location)	20	600	208–240
	AAA375BK38		9		440–460
	AAA375BK36		7.5		550–600

* Fuse located on ACA26800YA (IOBD) ** Fuse located on AAA26800AKP or ACA26800ALR (IOBD).

10-AAA21241U

Power Supply Hardware



REF. No.	PART No.	DESCRIPTION	SYMBOL	
1	AAA646E5	Blue Jumper	Used on ACA26800YK_ & YE_ boards	J11-J12
*	AAA618AF100	Clips, Relay	---	---
2	AAA26800YL1 ABA26800YL1	PCB, Power Supply Subsystem	NEB & w/o Rear Door Operator & Simplex & (Holed or Holeless) Systems	PSSB
	ABA26800YK1 ACA26800YK1	PCB, Power Supply Subsystem, Mod	Elevator A	
	ABA26800YK2 ACA26800YK2	PCB, Power Supply Subsystem, NEB		
	ABA26800YE1 ACA26800YE1	PCB, Power Supply Subsystem, Mod	Elevators B, or C, or D	
	ABA26800YE2 ACA26800YE2	PCB, Power Supply Subsystem, NEB		
3	AAA613CZ8	Relay, 24 VDC, Mounted on PSSB	Fire Service Relay.	FSR
			Switchover Relay Elevators A, B, C, or D	SWR
4	AAA613CZ9	Relay, 120 VAC, Mounted on PSSB, Used w/ ABA26800YK or ABA26800YE	REM Power Transfer Relay for Elevators B or C or D	RPTR
	AAA613CZ24	Relay, KUP, 110 VDC, Mounted on PSSB, Used w/ACA26800YK or ACA26800YE		

* Part not shown.

Power Supply Hardware:

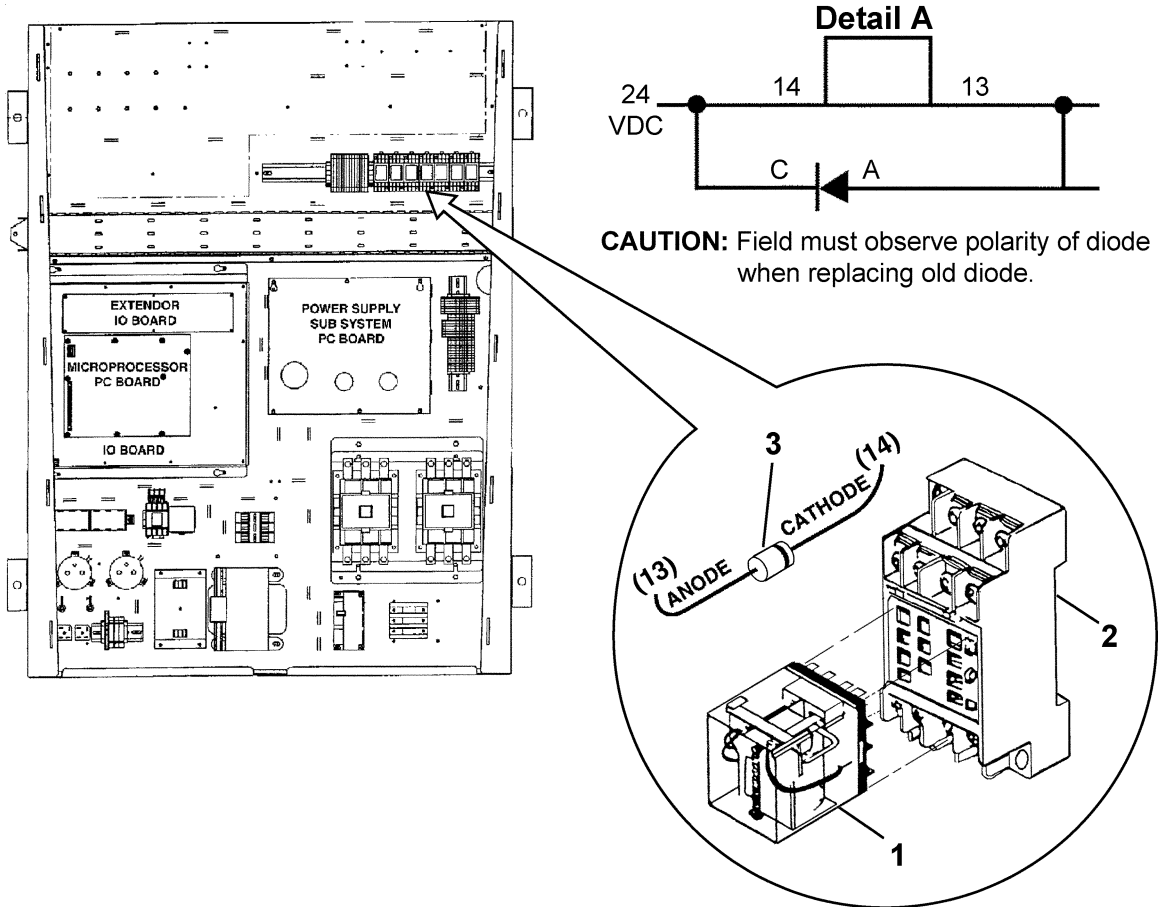
10-AAA21241U

Connectors



page 15 for location of WAGO® edge connectors.

AAA21241U			
PART No.	SYMBOL	OPTIONS	DESCRIPTION
AAA447BE21	P101	Hall	Connector, Power Supply Board
AAA447BE23	P102	Hall/Group	
AAA447BE24	P103	Card Reader	
AAA447BE25	P104	Rope Governor	
AAA447BE63	P105	TOC	
AAA447BE64	P106	Door Operator	
AAA447BE65	P106	Front Only (YL) PC Board	
AAA447BE66	P107	Fan & Light	
AAA447BE29	P108	120 VAC Door Operator	
AAA447BE30	P109	56 VAC	
AAA447BE31	P110	120 VAC HL	
AAA447BE32	P111	120 VDC HL	
AAA447BE67	P112	24 VDC	
AAA447BE39	P113	Fan & Light	
AAA447BE38	P115	Tank Heater	
AAA447BE37	P116	LOS, LPS Sensors	
AAA447BE36	P117	Transformer	
AAA447BE34	P118	REM - Car "A"	
AAA447BE35	P118	REM - Car "B," "C," & "D"	
AAA447BE42	P126	Main Line Disconnect	
AAA447BE41	P127	AAA26800YL1, ABA26800YK1, or YK2, ABA26800YE1 or YE2	
AAA447BE40	P128	Intercar Connection	
AAA447BE22	P130	Intercar Connection	
AAA174YG22	P127	w/o ERU: ABA26800YL1 or ACA26800YK1, YK2, or ACA26800YE1 or YE2	Cable (LVM controller) NOTE: This plug contains jumpers that are required with elevator w/o the Emergency Rescue Unit.



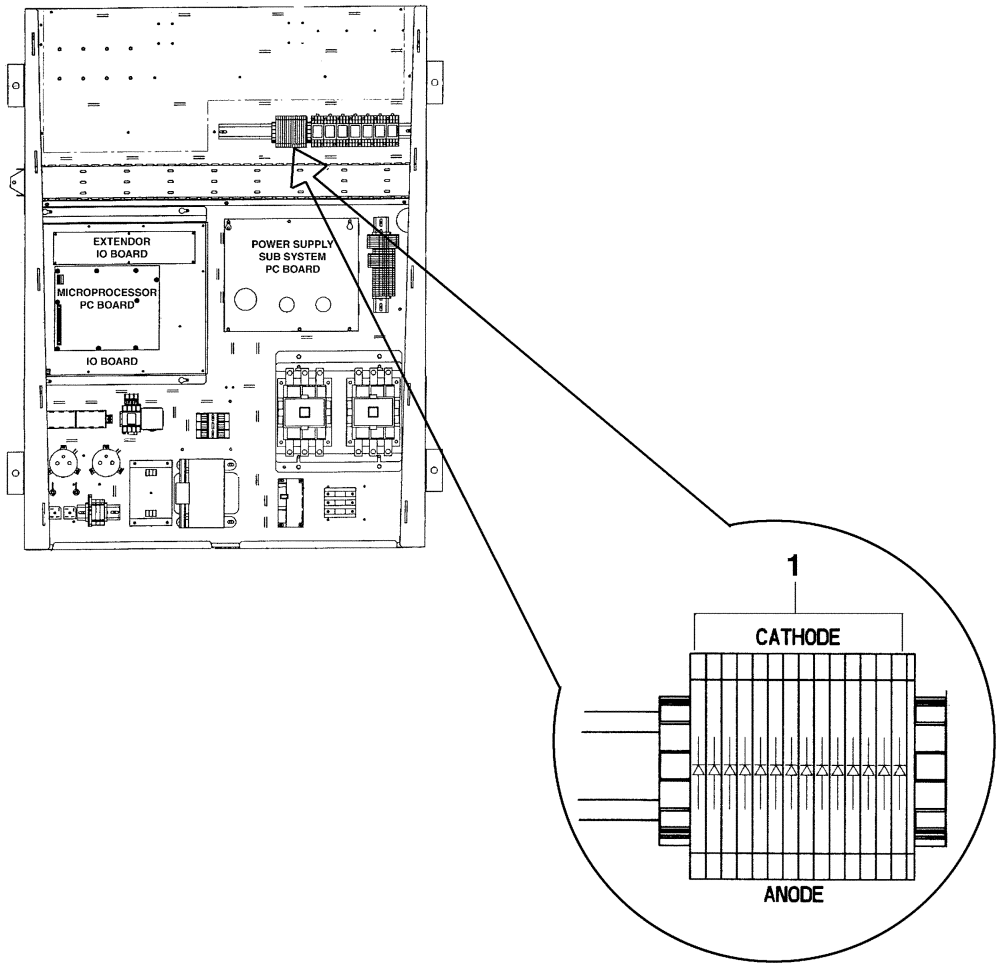
CAUTION: Field must observe polarity of diode when replacing old diode.

AAA21241U			
REF. No.	PART No.	DESCRIPTION	SYMBOL
1	AAA613CZ8	Relay, 24 VDC	ROR, RCDLU, RCDLD
	AAA613CZ9	Relay, 120 VAC	CDLU, CDLD, UMVR, DMVR
2	618AE2	Socket, Relay	---
3	AAA612T7	Suppressor, Diode (24 VDC) NOTE: See Detail A in the Illustration.	---
*	AAA605AA36	Suppressor, Transient (120 VAC)	---

* Part not shown.

Diode Terminal Block for Mod

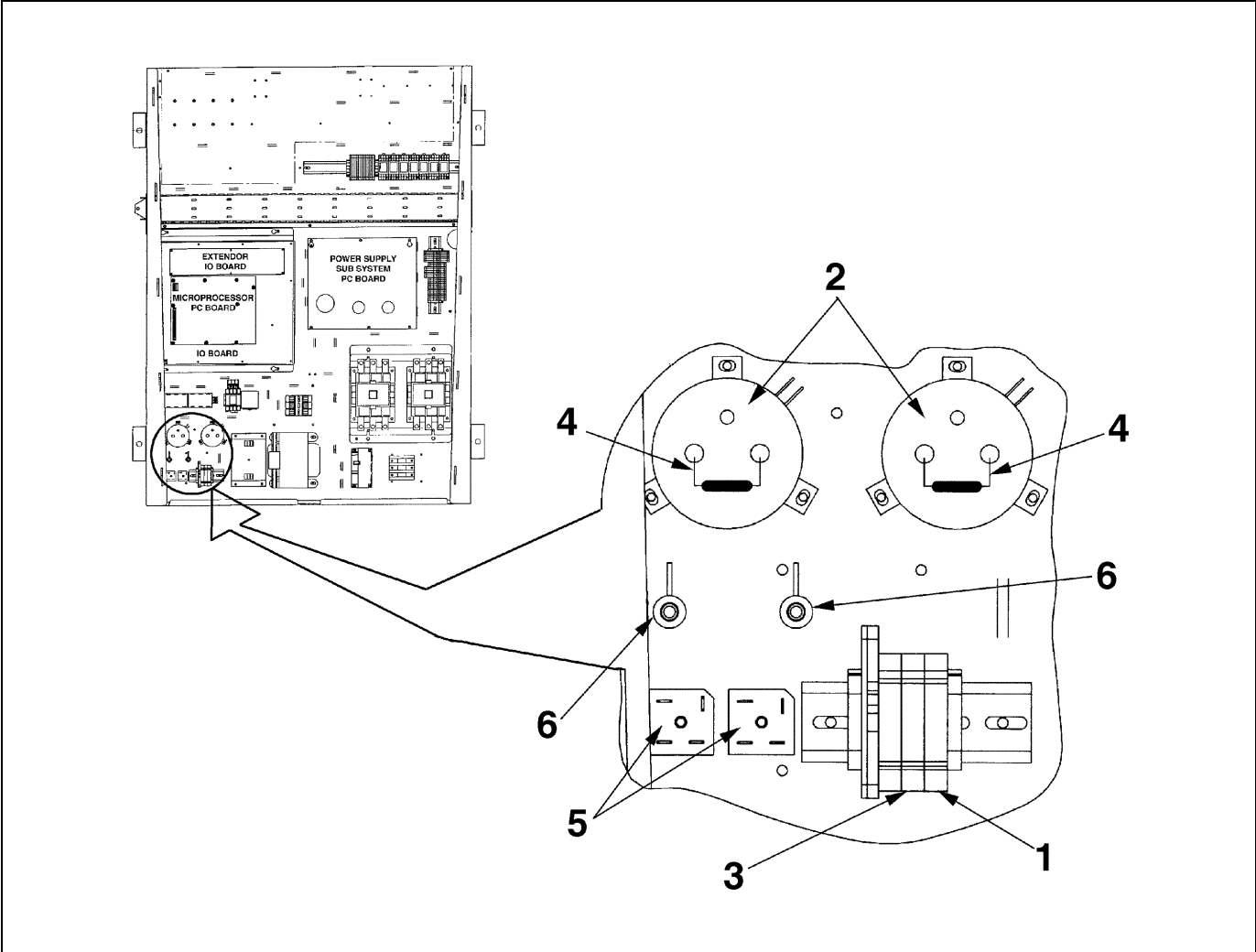
10-AAA21241U



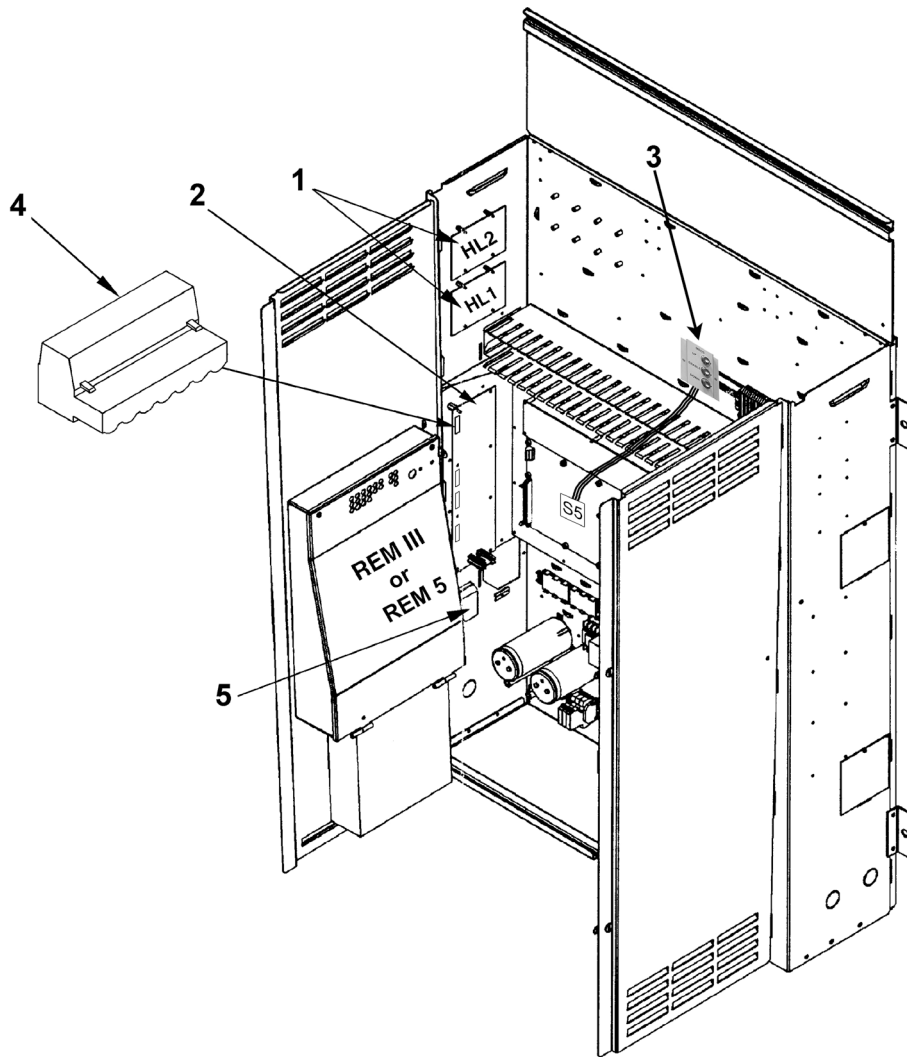
REF. No.	PART No.	DESCRIPTION
1	AAA303EP36	Block, Diode Terminal

10-AAA21241U

**Capacitors, Fuse, Rectifiers,
and Resistors for Mod**

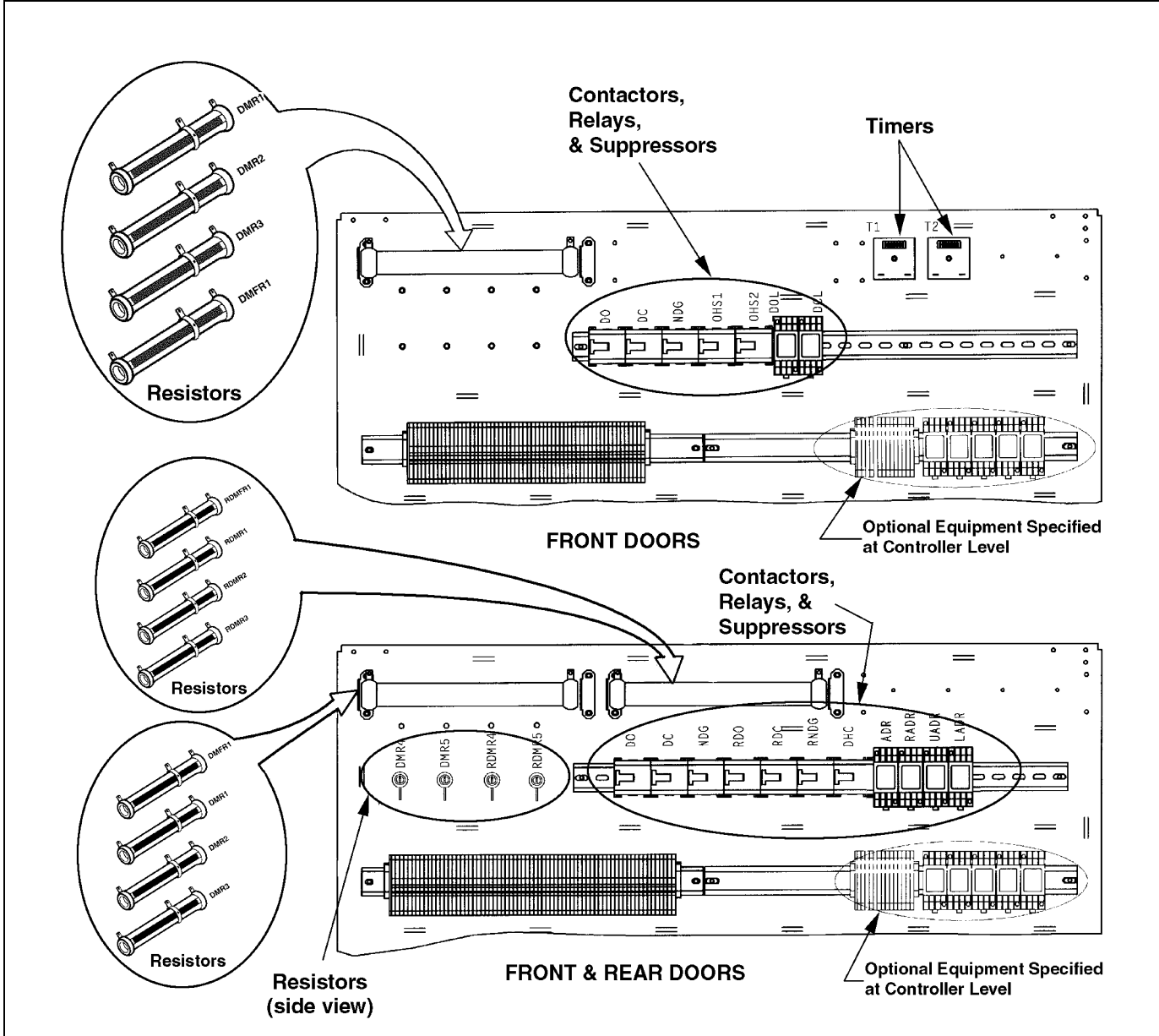


AAA21241U				
REF. No.	PART No.	DESCRIPTION	SYMBOL	CONDITION
1	AAA653E2	Block, Terminal Fuse	---	Hardware, Power Supply, for Mod Front & Rear Door Operators
2	226DR1	Capacitor	C61, C62	
	AAA226FN5		C63	
3	AAA375BR12	Fuse, 3 A, 250 V, Slo-Blow	F61-F64	
	AAA375BR14	Fuse, 4 A, 250 V, Slo-Blow		
4	AAA232FP89 AAA232HR65	Resistor, Bleeder, 47 KΩ	R61, R62	
	AAA232FP94	Resistor, Bleeder, 67 KΩ	R63	
5	230BS3	Rectifier, Bridge	DB61, DB62	
	AAA612AM4		DB63	
6	AAA617H8	Resistor, Surge, 25 Ω, 50 W	R63, R64, R66	



AAA21241U				
REF. No.	PART No.	DESCRIPTION	SYMBOL	
1	AAA26800PV1	Board, Hall Lantern (1 & 2)	HL1, HL2	
2	AAA26800MT1	Board, Mod Remote Station Extender (II)	MRSEB	
3	AAA21255U5	Position Indicator Assembly Inspection Panel, Remote, w/Up, Down & Enable Buttons. For NYC.	MRDS	
4	AAA447X3	Plugs, Mod Remote Station Extender Board	4-Pin	P11
	AAA447X5		6-Pin	P10
	AAA447X7		8-Pin	P2-P9
5	AAA26810C2	Terminator, Line	LT1	

**Spare Hardware—
Mod Door Operators**



Typical View - Mod Door Operator Spare Hardware

The following eight pages contain spare hardware—contactors, relays, resistors, suppressors, timers, and varistors—for mod door operators. Each page focuses on a different door operator type. The illustration above demonstrates the page layout and the parts shown.

All parts are called out by their symbol. Please note that resistors are shown in groups of four, either stacked on top of each other or from the side view. The resistors used in the field are easily identified because the part number and resistor settings are stamped on them.

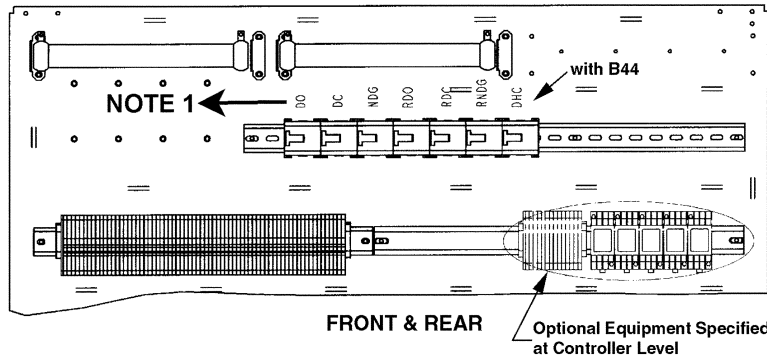
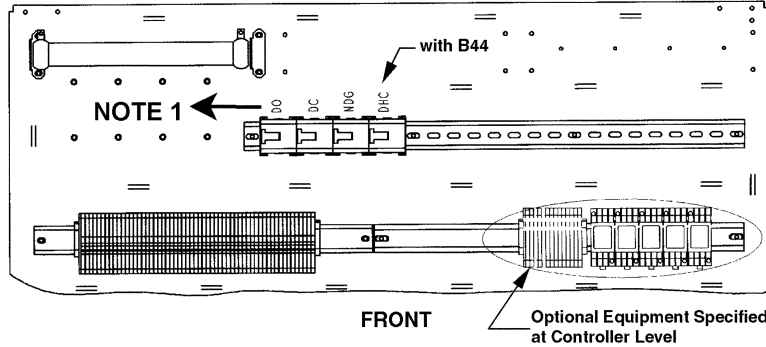
For more information, contact your OSC Customer Service Representative.

Hardware for Mod Door

10-AAA21241U

Operators: QL, GAL, or MOH Doors

NOTE 1: See TIP 6.3.0-34 when replacing any Siemens 30 VDC contactor.

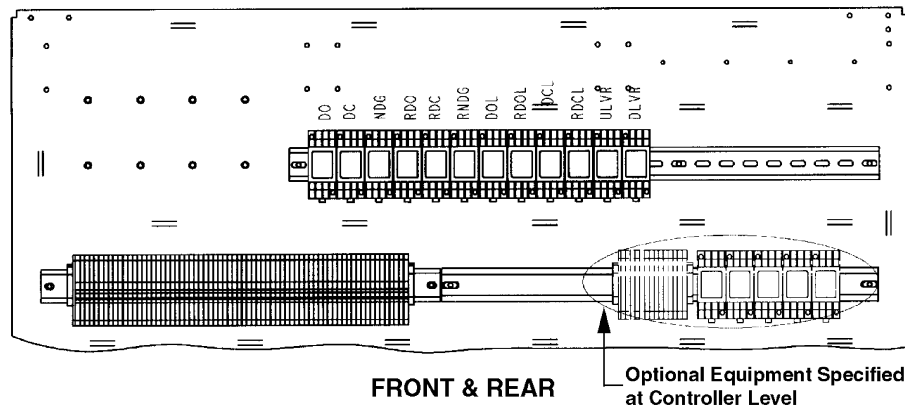
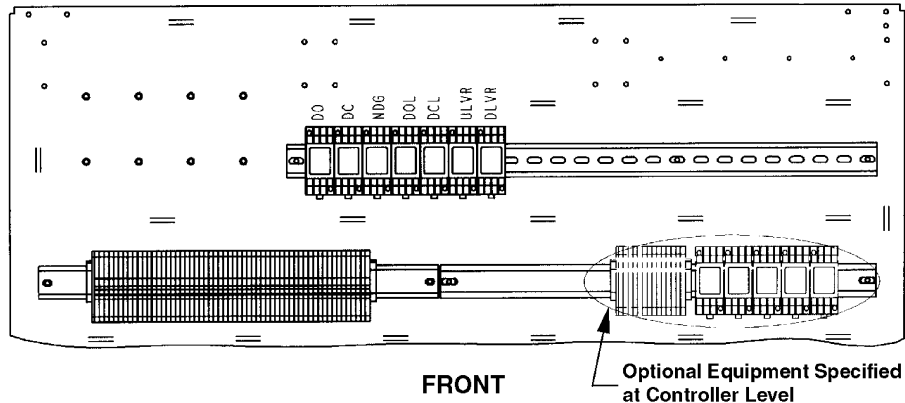


NOTE 2: No resistors are supplied with the GAL MOM or MOH door operators.

AAA21241U				
PART No.	DESCRIPTION		SYMBOL	DOOR TYPE
AAA613CV102	Block, Auxiliary Contact, 3NO-1NC		DO, DC	QL, GAL (MOM or MOH)
AAA638B17 AAA638B105	Contactor, Relay (30 VDC Coil), See NOTE 1 Contactor, Relay (24 VDC, 3NO-1NC)		DO, DC, NDG, DHC	QL, GAL (MOM or Mod)
AAA617K10	Resistor, Door	250 Ω @ 225 W	DMR1, DMR2, DMR3	QL, GAL, Mod
AAA617K19	Resistor, Door	75 Ω @ 225 W	DMR1, RDMR2	QL
AAA617K10	Resistor, Door	250 Ω @ 225 W	DMFR1,	QL
AAA617K12	MTR Field	1000 Ω @ 225 W	RDMR1	GAL, Mod
AAA605AA36	Suppressor, MDV		VRA, VRF	Field Mounted Hardware
AAA00605AAA006	Suppressor, RC		ASN	
AAA612AF2	Suppressor, Diode (MTR Field)		DF	
AAA638S204 AAA613CX704	Suppressor, Surge (Diode)		DO, DC, NDG, DHC	QL, GAL (MOM or MOH)

10-AAA21241U

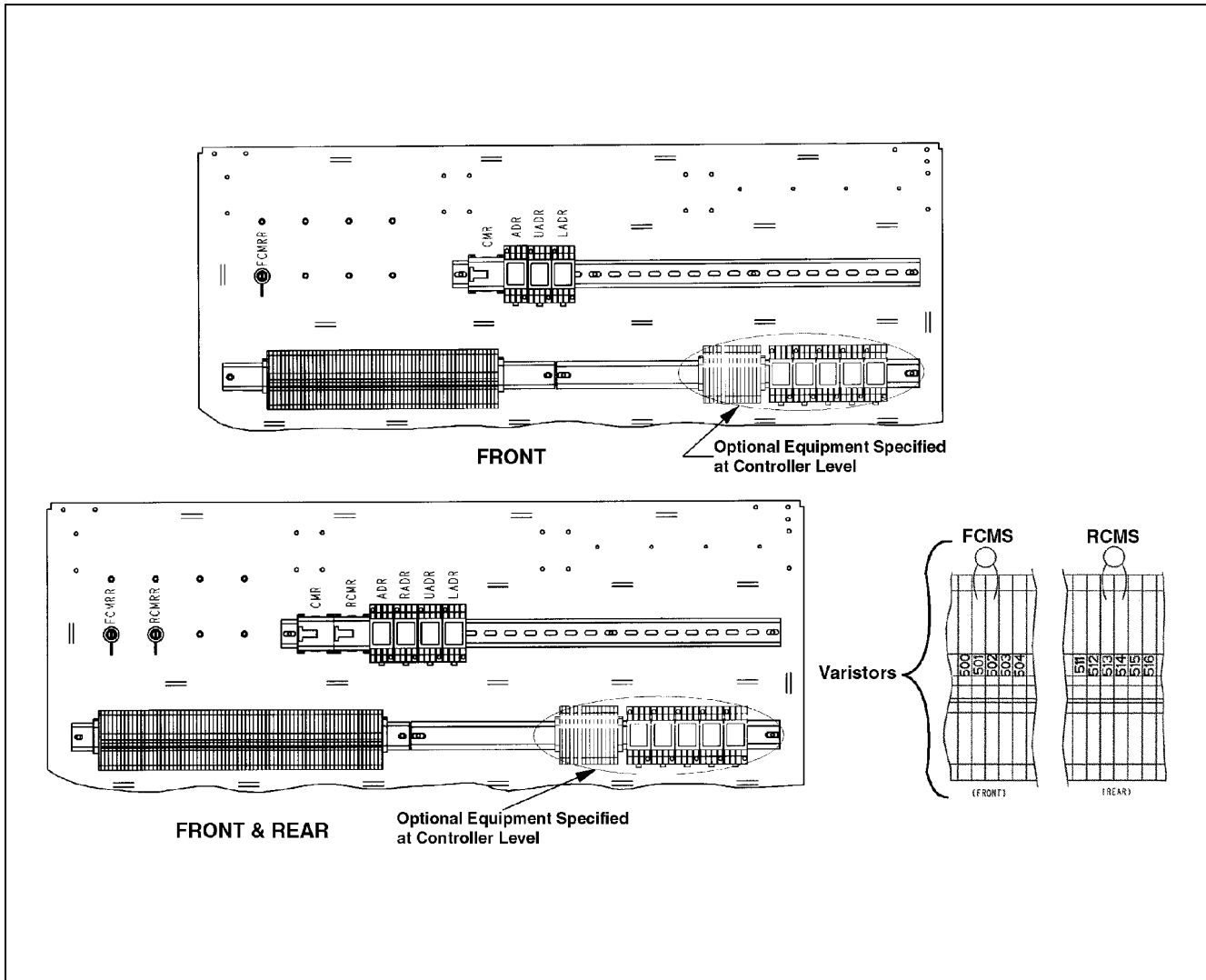
Hardware for Mod Door Operators: MAC PMSCC, or ECI 1000 Doors



AAA21241U		
PART No.	DESCRIPTION	SYMBOL
AAA613CZ9	Relay, Ice Cube, 120 VAC	DOL, DCL, ULVR, DLVR, RDO, RDCL
AAA613CZ8	Relay, Ice Cube, 24 VDC	DO, DC, NDG, RDO, RDC, RNDG
618AE2	Socket, Ice Cube Relay	All Ice Cube Relays
AAA00605AAA014	Suppressor (RC), 120 VAC REL	DOL, OCL, ULVR, DLVR, RDO, RDCL
AAA612T7	Suppressor, Diode, 24 VDC REL	DO, DC, NDG, RDO, RDC, RDNG

Hardware for Mod Door Operators: Manual Doors

10-AAA21241U

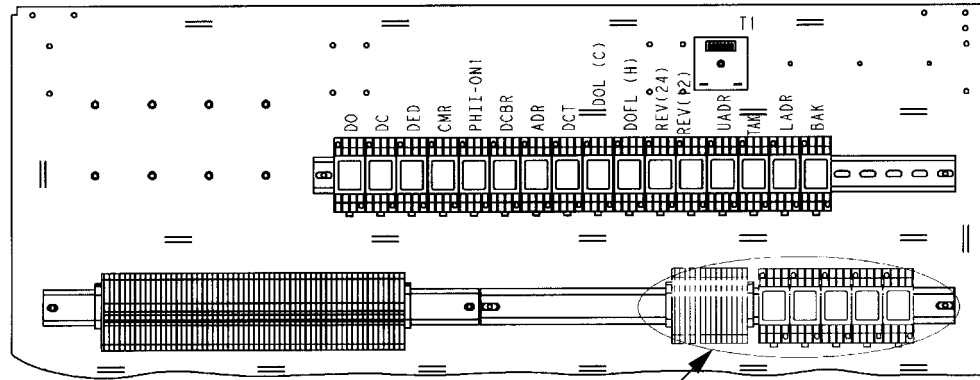


AAA21241U		
PART No.	DESCRIPTION	SYMBOL
AAA638B17 AAA638B105	Contactors, 30 VDC Coil, See NOTE 1 Contactors, 24 VDC Coil	CMR, RCMR
AAA613CZ9	Relay, Ice Cube, 120 V	ADR, UADR, LADR, RADR
AAA617L8	Resistor, 25 Ω, 100 W	FCMRR, RCMRR
618AE2	Socket, Relay	ADR, UADR, LADR, RADR
AAA00605AAA014	Suppressor, Ice Cube Relay (120 V)	ADR, UADR, LADR, RADR
AAA613CX304 AAA613CX704	Suppressor, Diode	CMR, RCMR
AAA605AA36	Varistor	FCMS, FCM, RCMS

NOTE 1: See TIP 6.3.0-34 when replacing any 30 VDC Siemens contactor.

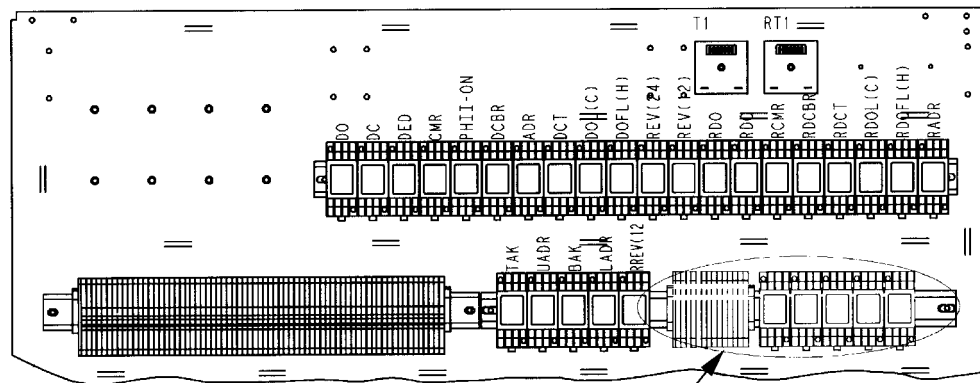
10-AAA21241U

Hardware for Mod Door Operators: Peelle® Freight Doors



FRONT

Optional Equipment Specified at Controller Level



FRONT & REAR

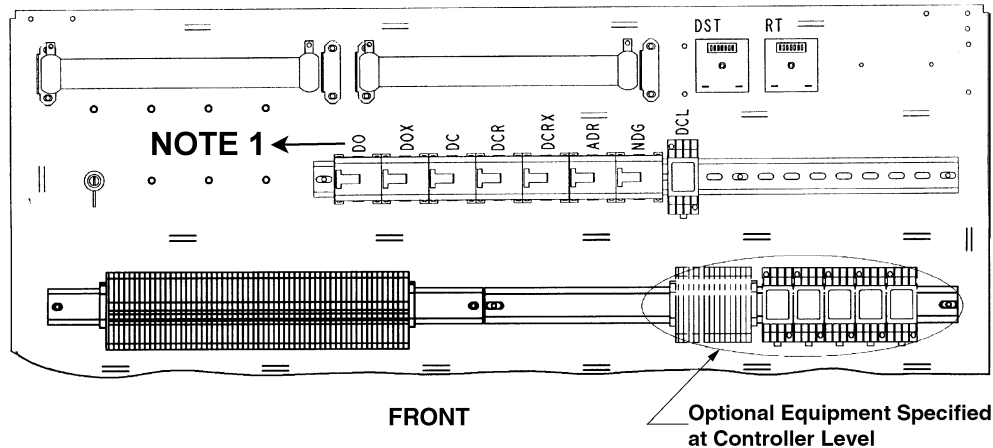
Optional Equipment Specified at Controller Level

AAA21241U		
PART No.	DESCRIPTION	SYMBOL
AAA613CZ13	Relay, Ice Cube, 12 VAC	REV (12)
AAA613CZ4	Relay, Ice Cube, 24 VDC	REV (24)
AAA613CZ8	Relay, Ice Cube, 24 VDC	DO, DC, DED, CMR, PHII, DCBR, DCT, DOL (C), TAK, BAK, DOFL (H), RDO, RDC, RCMR, RDCBR, RDCT, RDOL (C), RDOL (H)
AAA613CZ9	Relay, Ice Cube, 120 VAC	UADR, LADR, ADR, RADR
618AE2	Relay, Socket (24 VDC, 120 VAC)	All Ice Cube Relays
AAA618AF5	Relay, Socket (24 VAC Relay)	REV (24)
AAA00605AAA014	Suppressor (RC), 120 VAC Relay	REV (12), REV (24)
AAA612T7	Suppressor, Diode (24 VDC Relay)	All DC Ice Cube Relays
AAA623AA1	Timer	T1, RT1

Hardware for Mod Door Operators: 7770A Doors

10-AAA21241U

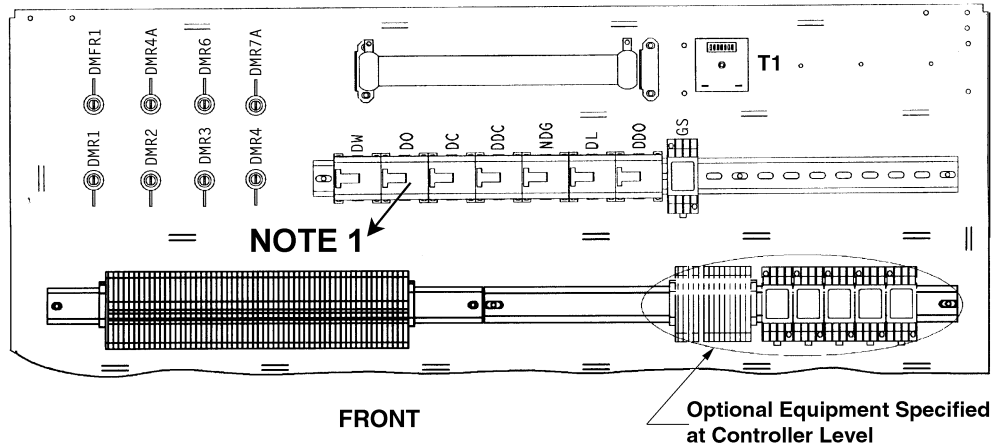
**NOTE 1: See TIP 6.3.0-34
when replacing any Siemens 30 VDC contactor.**



AAA21241U		
PART No.	DESCRIPTION	SYMBOL
AAA613CV102	Block, Auxiliary Contact, 3NO-1NC	DO, DOX, DC
AAA638B17 AAA638B105	Contactor, 30 VDC Coil, See NOTE 1 Contactor, 24 VDC Coil	ADR, DO, DOX, DC, DCR, DCRX, NDG
AAA613CZ8	Relay, 24 VDC	DCL
AAA617H8	Resistor, 25 Ω @ 50 W	DMR8
AAA617K8	Resistor, 50 Ω @ 225 W	DMR4, DMR5
AAA617K9	Resistor, 100 Ω @ 225 W	DMR3
AAA617K10	Resistor, 250 Ω @ 225 W	DMR6
AAA617K15	Resistor, 30 Ω @ 225 W	DMR1, DMR2, DMR7
618AE2	Socket, Ice Cube Relay	DCL (Relay Socket)
AAA612T7	Suppressor, Diode (DC Relay)	DCL
AAA613CX304 AAA613CX704	Suppressor, Relay	ADR, DO, DOX, DC, DCR, DCRX, NDG
AAA623AA1	Timer	DST, RT

Hardware for Mod Door Operators: 6970 Timer Resistance Doors

**NOTE 1: See TIP 6.3.0-34
when replacing any Siemens 30 VDC contactor.**

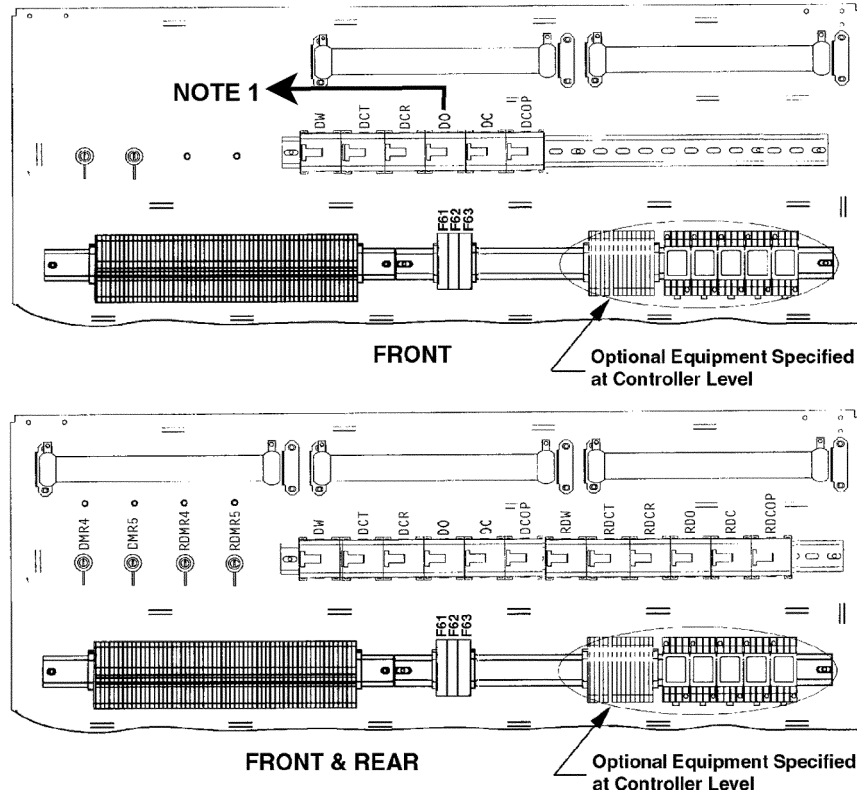


AAA21241U		
PART No.	DESCRIPTION	SYMBOL
AAA638B17 AAA638B105	Contactors, 30 VDC Coil, See NOTE 1 Contactors, 24 VDC Coil	DO, DC, DDC, NDG, DL, DDO
AAA638B2 AAA638B102	Contactors, 120 VAC Coil	DW
AAA638S204 AAA613CV102	Contacts, Auxiliary, 3NO-1NC	DW, DO, DC
AAA613CZ9	Relay, Ice Cube, 120 VAC	GS
AAA617K7	Resistor, 25 Ω @ 225 W	DMR5
AAA617L9	Resistor, 50 Ω @ 100 W	DMR1, DMR3, DMR4, DMR4A, DMR6
AAA617L12	Resistor, 200 Ω @ 100 W	DMR2, DMR7A
AAA617L18	Resistor, 1000 Ω @ 100 W	DMFR1
618AE2	Socket, Ice Cube Relay	GS
AAA612AF2	Suppressor, Diode	DF
AAA613CX304 AAA613CX704	Suppressor, Diode (30 VDC coil) Suppressor, Diode (24 VDC coil)	DO, DC, DDC, NDG, DL, DDO
AAA605AA36	Suppressor, MOV	VRA, VRF
AAA00605AAA006	Suppressor, RC	ASN
AAA613CX302 AAA613CX702	Suppressor, RC (120 VAC Relays)	DW
AAA623AA1	Timer	TI

Hardware for Mod Door Operators: 7300AC Doors

10-AAA21241U

NOTE 1: See TIP 6.3.0-34 when replacing any Siemens 30 VDC contactor.

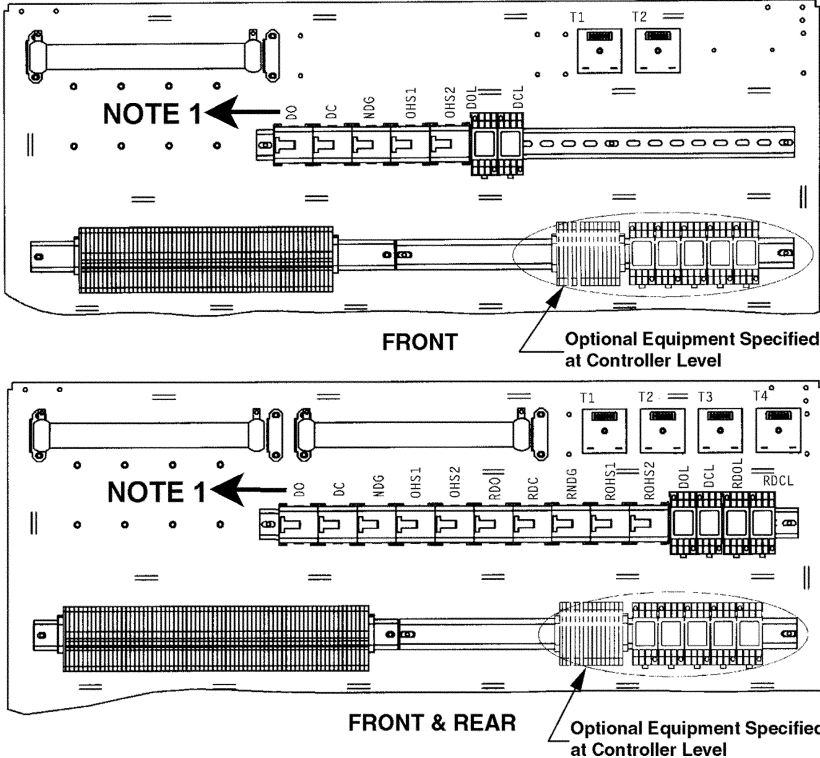


AAA21241U		
PART No.	DESCRIPTION	SYMBOL
AAA613CV102	Contact, Auxiliary, 3 NO-1 NC	DO, DC, DCOP, DW
AAA638B17 AAA638B105	Contactor, 30 VDC Coil, See NOTE 1 Contactor, 24 VDC Coil, 3 NO-1 NC	DO, RDO, DCT, RDCT, DCR, RDCR, DC, RDC, DCOP, RDCOP
AAA375BR12	Fuse	F61, F62, F63
AAA638B2 AAA613B102	Contactor, 120 VAC Coil	DW, RDW
AAA617K16	Resistor, 150 Ω @ 225 W	DMR1, DMR2, DMR3, RDMR1, RDMR2, RDMR3
AAA617K17	Resistor, 200 Ω @ 225 W	DMR6, DMR7, DMR8, RDMR6, RDMR7, RDMR8
AAA617L16	Resistor, 500 Ω @ 100 W	DMR4, DMR5, DMR6, RDMR4, RDMR5, RDMR6
AAA613CX302 AAA613CX702	Suppressor, 120 VAC Coil	DW, RDW
AAA613CX304 AAA613CX704	Suppressor, Diode (30 VDC coil) Suppressor, Diode (24 VDC coil)	DO, RDO, DCT, RDCT, DCR, RDCR, DC, RDC, DCOP, RDCOP

10-AAA21241U

Hardware for Mod Door Operators: Dover® HD73 Doors

NOTE 1: See TIP 6.3.0-34 when replacing any Siemens 30 VDC contactor.



AAA21241U		
PART No.	DESCRIPTION	SYMBOL
AAA638B17 AAA638B105	Contactors, 30 VDC Coil, See NOTE 1 Contactors, 24 VDC Coil, 3 NO-1 NC	DO, RDO, DC, RDC, NDG, RNDG
AAA638B2 AAA613B102	Contactors, 120 VAC Coil	OHS1, ROHS1, OHS2, ROHS2
AAA613CX206 AAA613CV102	Contacts, Auxiliary, 3 NO-1 NC	DO, RDO, DC, RDC
AAA613CZ9	Relay, Ice Cube (120 VAC)	DOL, RDOL, DCL, DRCL
AAA617K17	Resistor, 200 Ω @ 225 W	DMR2, RDMR2, DMR3, RDMR3
AAA617K10	Resistor, 250 Ω @ 225 W	DMR1, RDMR1
AAA613CX302 AAA613CX702	Suppressor, 120 VAC Coil	OHS1, ROHS1, OHS2, ROHS2
AAA613CX304 AAA613CX704	Suppressor, Diode (30 VDC Coils) Suppressor, Diode (24 VDC coil)	DO, RDO, DC, RDC, NDG, RNDG
AAA00605AAA001	Suppressor, Ice Cube (120 VAC)	DOL, RDOL, DCL, DRCL
AAA623AA1	Timer	T1, T2, T3, T4

Spare Hardware—Field Cables

10-AAA21241U

Between COP and TOC Devices

NOTE: Contact your customer service representative with the unit's contract number to assist in determining the cable/plug part number identification.

AAA21241U			
PART No.	DESCRIPTION	CONNECTION: MAIN COP TO TOP	REMARKS
AAA174ZC_*	Cable	Top-of-Car Inspection Box	Plug marked: KP6 (8-position)
AAA447BE113	Plug		
AAA174ZA1	Cable	Front Gate Switch on Top-of-Car	Plug marked: KP3 (3-position)
AAA447BE110	Plug		
AAA174ZA2	Cable	Rear Gate Switch on Top-of-Car	Plug marked: KP11 (3-position)
AAA447BE116	Plug		
AAA174YZ1	Cable	Safety Switch (SOS) on Top-of-Car	Plug marked: KP15 (3-position)
AAA447BE119	Plug		
AAA174YV1 thru 18*	Cable	Rear of Car Integration Box	Plug marked: KP12 (8-position)
AAA447BE117	Plug		
AAA174YU1 thru 11*	Cable	Tape Reader Box on Top-of-Car	Plug marked: KP5 (9-position)
AAA447BE112	Plug		
AAA174YR_*	Cable	Top-of-Car Inspection Box	Plug marked: KP6 (8-position)
AAA447BE_*	Plug		
AAA174YQ_*	Cable	Front of Top-of-Car Integration Box	Plug marked: KP4 (11-position)
AAA447BE111	Plug		
AAA174AP_*	Cable	Rear LAMBDA III Device on Top-of-Car	Plug marked: KP9 (7-position)
AAA447BE115	Plug		
AAA174YN_*	Cable	Front LAMBDA III Device on Top-of-Car	Plug marked: KP7 (7-position)
AAA447BE114	Plug		
AAA174YM1 thru 4	Cable	Car Lights on Top-of-Car	Plug marked: KP1 (3-position)
AAA447BE108	Plug		
AAA174YM9 thru 12	Cable	Emergency Exit Contact on Top-of-Car	Plug marked: KP14 (3-position)
AAA447BE118	Plug		
AAA174ZB1 thru 6	Cable	Front Door Control Box on Top-of-Car	Plug marked: KP8 (15-position)
AAA447BE56	Plug		
AAA174ZB4 thru 5	Cable	Rear Door Control Box on Top-of-Car	Plug marked: KP10 (15-position)
AAA447BE57	Plug		

* Contact OSC for actual length of cable.