

# 211M Hydraulic Controller

## Spare Parts Leaflet

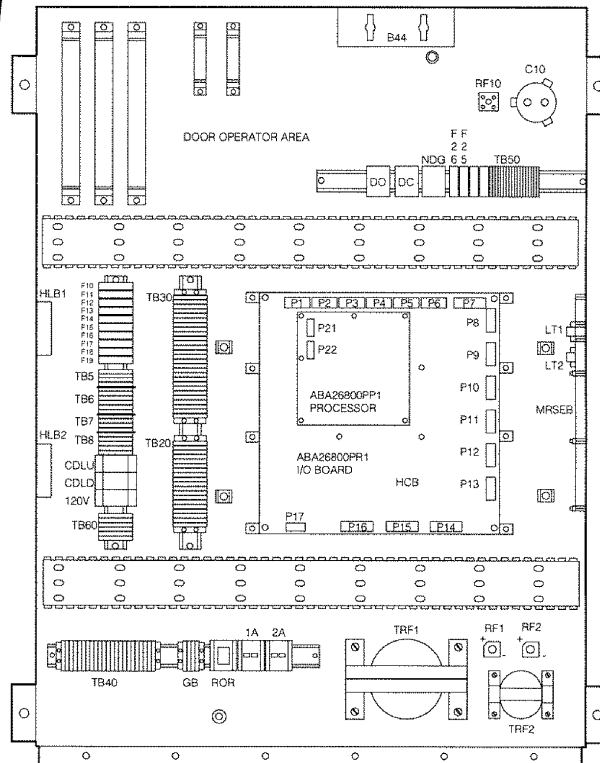
### 10-AAA21241A

April 27, 2004 / Page 1 of 15

Supersedes SPL 10-AAA21241A Dated September 30, 2003

**VINTAGE**

<b>CONTROLLER</b>	
SERIAL No.	
SERVICE ORDER No.	
CONTRACT No.	
MODEL No.	
VOLTS	AMPS
H.P.	PHASES
WIRES	HERTZ
COMPONENT VINTAGE No.	
<b>C-AAC21241A</b>	
COMPONENT CODE 10	
LETTER DESIGNATION	
WIRING DIAGRAM	
DATE	



**Leaflet Description**

This leaflet breaks out service parts for the 211M hydraulic controller.

**Leaflet Revisions**

<b>Date Revised</b>	<b>Subject Matter Expert</b>	<b>Reason for Revision</b>
June 1995	---	New leaflet
September 1995	---	Update parts
June 1998	Mike Boles	Correct p/n, p. 13; add history page
August 1, 2000	Mike Boles	Correct transformer voltages on p. 11, ref. 6
Sept. 30, 2003	Mike Boles	Added new parts for contactors (DO, DC) for some Mod door operators.
April 27, 2004	Val Minnes	Update p/n in ref. 6 on p. 4

**Related Drawings**

<b>Drawing No.</b>	<b>Title</b>	<b>Drawing No.</b>	<b>Title</b>
AAC21241A	Assembly, 211M	---	---
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**Related Documents**

<b>Document ID</b>	<b>Title</b>
SPL 10-AAA21241E	211M Starter Panel
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**Subject Matter Expert**

<b>Name</b>	<b>Department</b>
Val Minnes	OSC Service Engineering

**About Spare Parts Leaflets...**

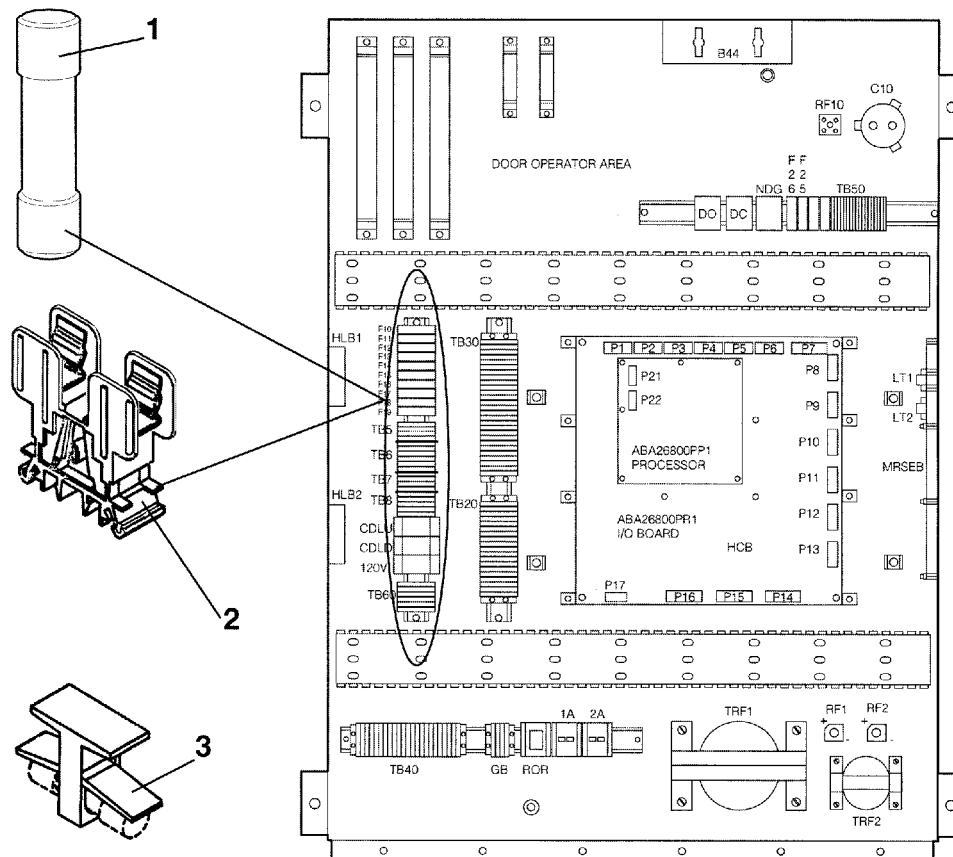
This document lists the lowest replaceable units (LRUs) for the standard version of the product. The LRUs are chosen by a team of Otis associates representing engineering and manufacturing.

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.

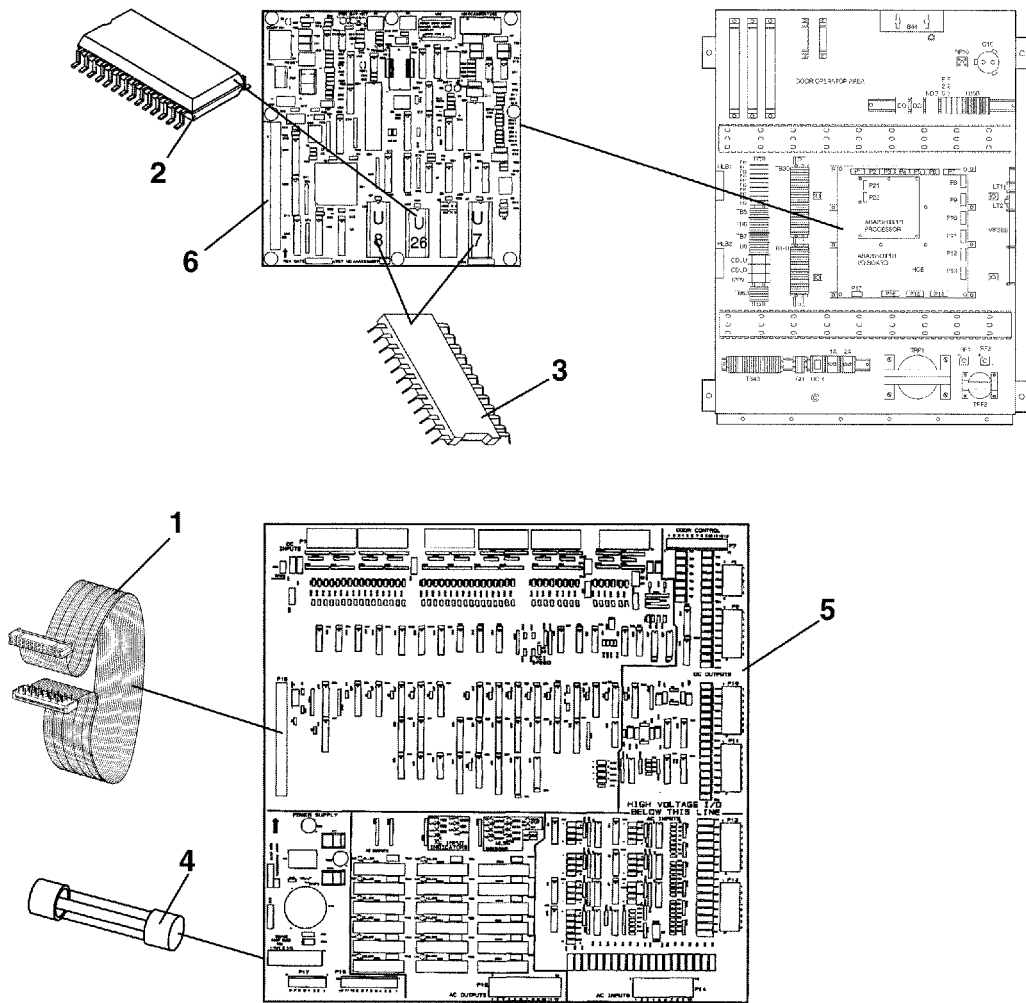
If you have any suggestions about this document, please contact the subject matter expert listed on this page.

# 211M Controller Fuses

**10-AAA21241A**



<b>AAB21241A AAC21241A</b>			
<b>REF. No.</b>	<b>PART No.</b>	<b>DESCRIPTION</b>	<b>SYMBOL</b>
1	AAA375BG15	Fuse, Fast-Acting, 5.0 A, 600 V	F10
	AAA375BG10	Fuse, Fast-Acting, 2.0 A, 600 V	F11, F12, F14, F16, F18
	AAA375BG8	Fuse, Fast-Acting, 1.0 A, 600 V	F13
	AAA375BG12	Fuse, Fast-Acting, 3.0 A, 600 V	F15, F17
	AAA375BJ18	Fuse, Slo-Blow, 2.0 A, 500 V	F19
2	AAA653K1	Holder, Fuse	
3	AAA653K100	Puller, Fuse	



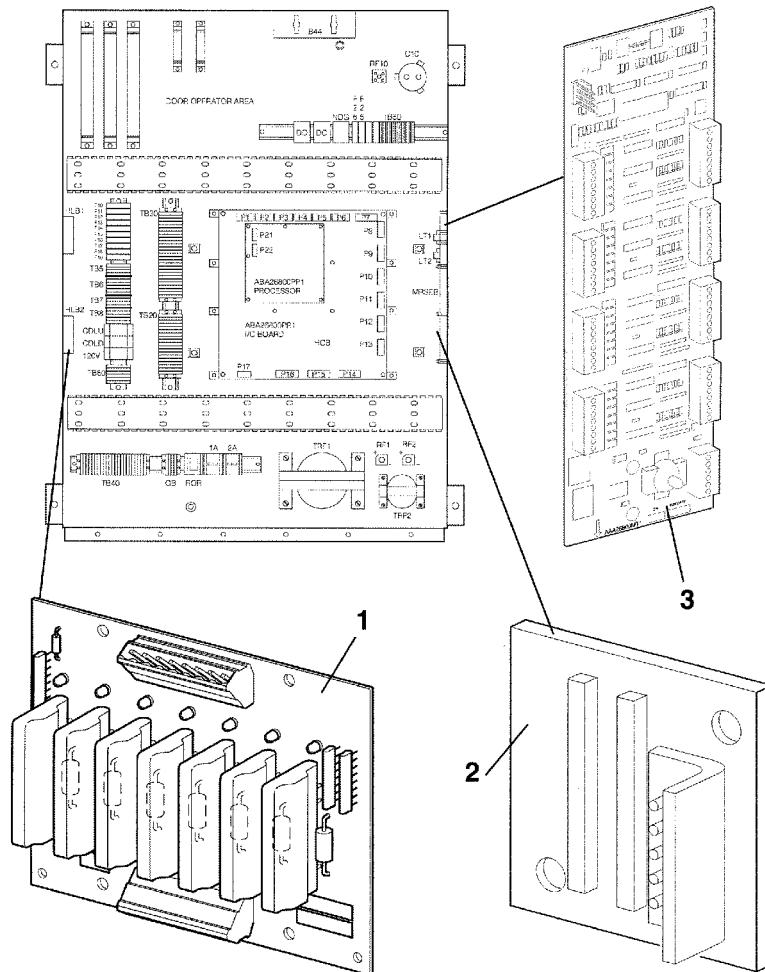
**AAB21241A  
AAC21241A**

REF. No.	PART No.	DESCRIPTION	SYMBOL
1	AAA174TP4	Assembly, Cable, Ribbon, 60 Position	---
2	AAA616KM3	EEPROM, Blank, 32 K x 8, 100 nSec.	U26
3	AAA616NK1	EPROM, Blank, 256 K x 8, 120 nSec., See <b>NOTE</b>	U7, U8
4	AAA375BT12	Fuse, Ceramic (for I/O PCB), 10 A, 250 V	HCB
5	ABA26800PR4 ACA26800PR1	PCB, I/O Hydraulic Controller	---
6	ABA26800PP4 AAA26800TD1	PCB, Microprocessor Hydraulic Controller	---

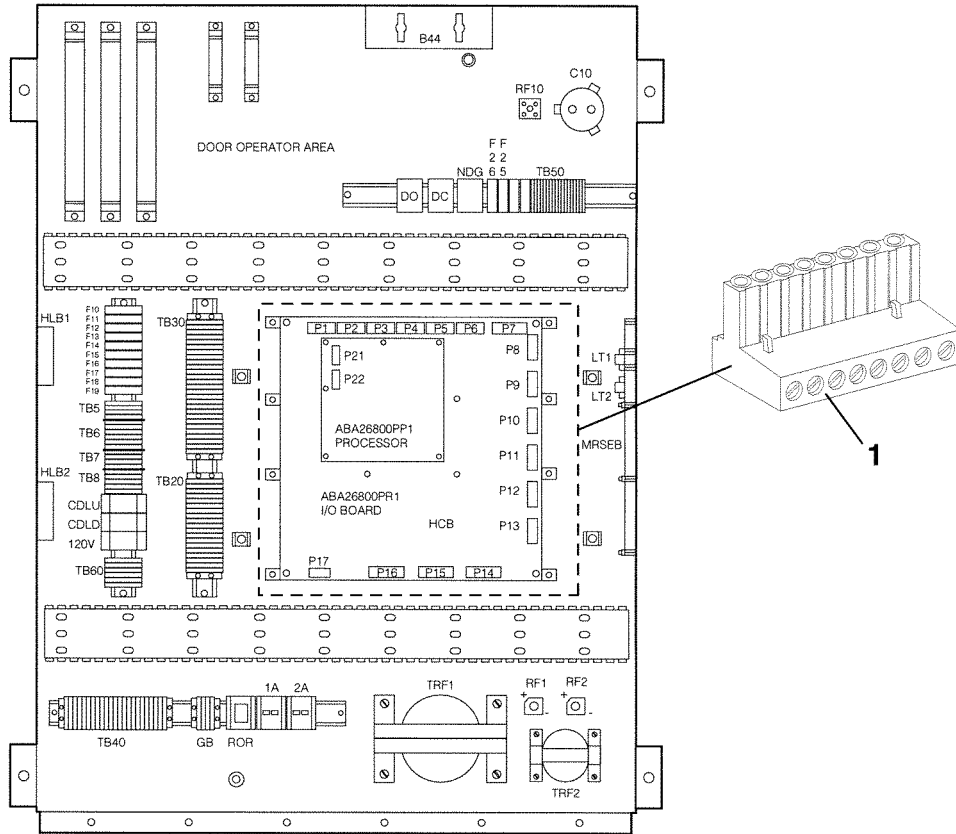
**NOTE:** AAA30200\*\*\* is the software configuration number associated with this blank EPROM.

# 211M Controller PC Boards

**10-AAA21241A**



<b>AAB21241A AAC21241A</b>			
<b>REF. No.</b>	<b>PART No.</b>	<b>DESCRIPTION</b>	<b>SYMBOL</b>
1	AAA26800PV1	PCB, Hall Lantern, 120 VAC Hall Lanterns	---
2	9693J1	PCB, Line Terminator	LT1, LT2
3	AAA26800MT1	PCB, Remote Station Extender	MRSEB

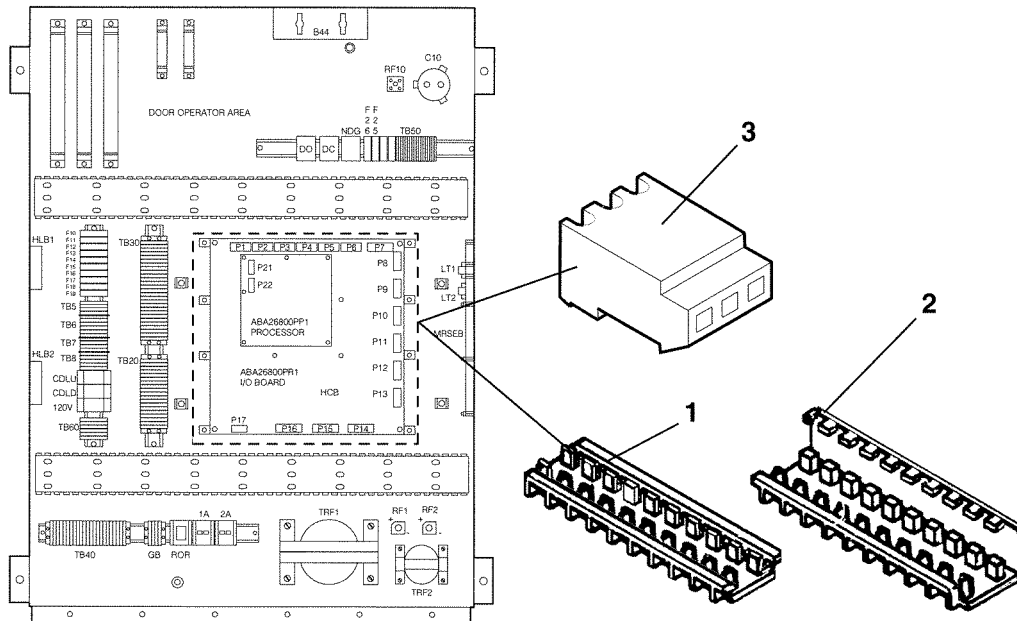


**AAB21241A  
AAC21241A**

REF. No.	PART No.	DESCRIPTION	SYMBOL
1	AAA447X3	Connector, 4-Position, 0.591 in. L	MRSEB, P11, P21-Processor
	AAA447X6	Connector, 7-Position, 1.181 in. L	P8-HCB
	AAA447X5	Connector, 6-Position, 0.984 in. L	MRSEB, P10
	AAA447X7	Connector, 8-Position, 1.378 in. L	P1, P2-6, P9-13, MRSEB-P2-9
	AAA447X9	Connector, 10-Position, 1.772 in. L	P1, P14
	AAA447X11	Connector, 12-Position, 2.165 in. L	P15

# 211M Controller Strain Relief Covers

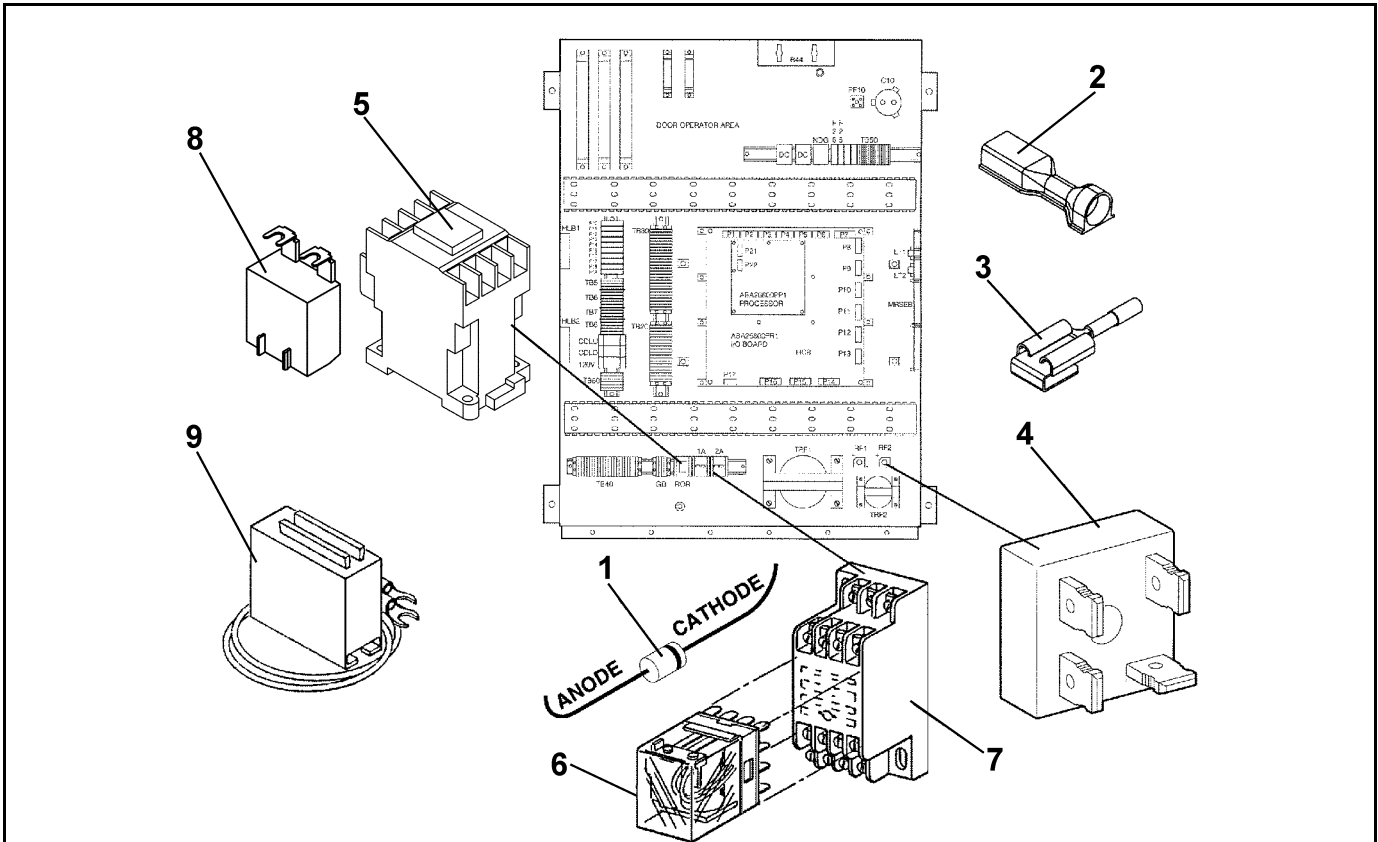
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**AAB21241A  
AAC21241A**

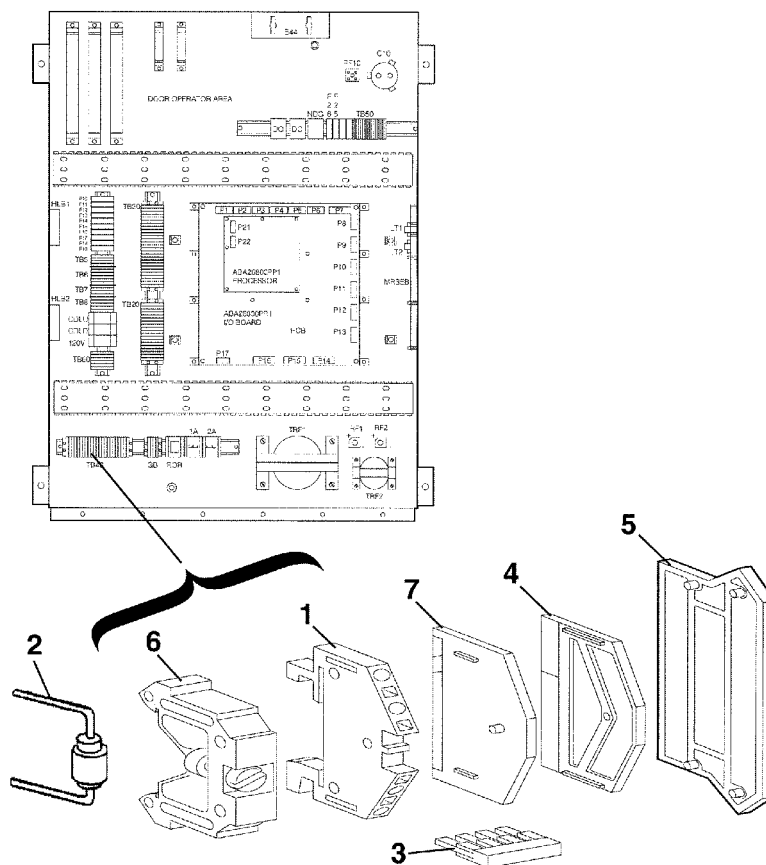
REF. No.	PART No.	DESCRIPTION	SYMBOL
1	AAA447AC11	Cover, Strain Relief, Feed-Thru, 4 Pin	IT1, IT2, P22-Processor, MRSEB-P1
	AAA447AC14	Cover, Strain Relief, Feed-Thru, 8 Pin	P17, HCB
2	AAA447AC17	Cover, Strain Relief, Feed-Thru, 12 Pin	P16, HCB
	AAA447AC47	Cover, Strain Relief, Closed End, 12 Pin	P16, HCB
	AAA447AC60	Cover, Strain Relief, Closed End, 13 Pin	P7-HCB
	AAA447AC41	Cover, Strain Relief, Closed End, 8 Pin	P17-HCB
3	AAA447AC3	Receptacle, Feed-Thru, 4 Pin	LT1, LT2, P22-Processor, MRSEB-P1
	AAA447AC59	Receptacle, Closed End, w/Lock, 13 Pin	P7, HCB
	AAA447AC61	Receptacle, Closed End, w/Lock, 12 Pin	P16, HCB
	AAA447AC62	Receptacle, Closed End, w/Lock, 8 Pin	P17, HCB

**211M Controller Lugs,  
Relays, and Suppressors**



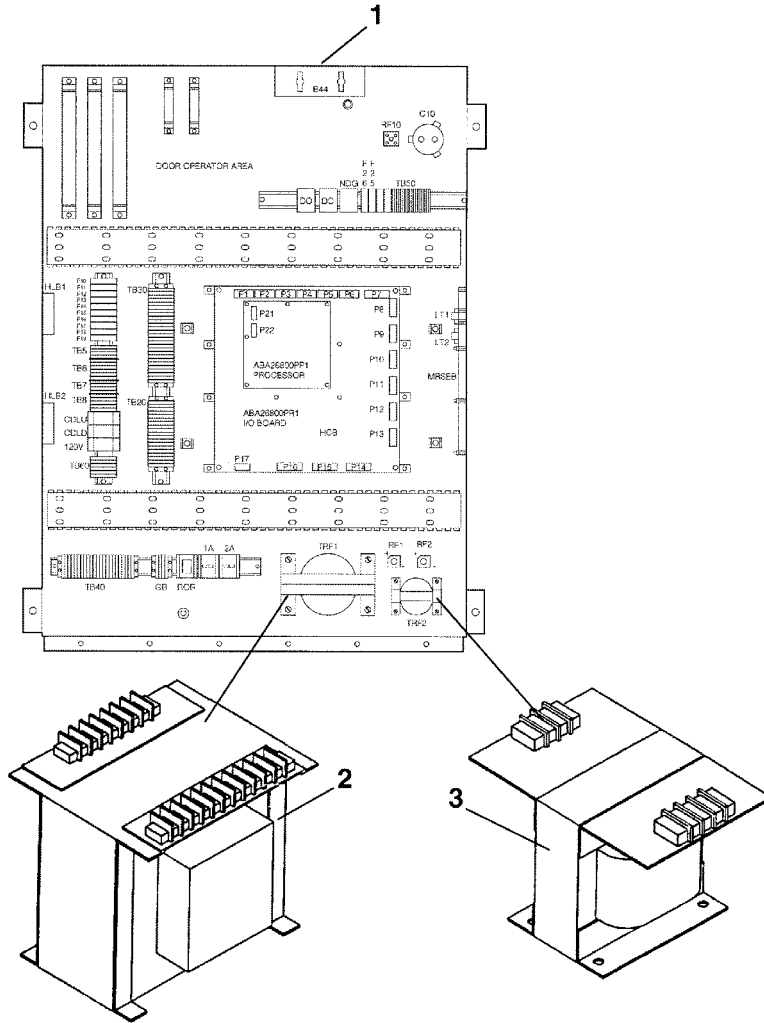
REF. No.	PART No.	DESCRIPTION	SYMBOL
	<b>AAB21241A AAC21241A</b>		
1	AAA612T7	Diode, Suppressor	ROR, RCDLD, RCDLU
2	AAA190CC14	Lug, Quick Connect, 3 A Maximum, 18-22AWG	RF1, RF2
3	AAA190CC23	Lug, Quick Connect, 7 A Maximum, 16-22AWG	RF1
4	230BS3	Rectifier, 420 V RMS, 25 A	RF1, RF2
5	AAA613DL16	Relay, 110 VAC, 3NO-1NC Contacts	1A, 2A
6	AAA613CZ8	Relay, 24 VDC, 4NC Contacts,  Telescopic Plunger/120 VAC Rear in-Car Lantern	ROR, RCDLU, RCDLD
	AAA613CZ9	Relay, 115 VAC, 4 Pole,  24 VDC Front in-Car Lantern	CDLU, CDLD 120V
7	AAA618AF6	Relay Socket, w/Telescopic Plunger/120 VAC Rear in-Car Lantern, and 24 VDC Front in-Car Lantern	ROR, RCDLU, RCDLD, CDLU, CDLD, 120V
8	AAA613DL61	Suppressor, 48–127 VAC (RC Network)	1A, 2A
9	AAA00605AAA001	Suppressor, 110–220 VAC, 0.15 μFD, 220 Ω	CDLU, CDLD





**AAB21241A  
AAC21241A**

REF. No.	PART No.	DESCRIPTION	SYMBOL
1	AAA303EP19	Block, Terminal, Blue, 26-14 AWG, 4 Entries	---
	AAA303EP1	Block, Terminal, Gray, 26-14 AWG, 4 Entries	---
2	AAA00230AAB001	Diode, 6 A, 50 V PIV	D1, D2, D3
3	AAA303EP48	Jumper, Vertical, 2 Pole	---
	AAA303EP50	Jumper, Vertical, 10 Pole (cut to 4 Position)	---
4	AAA303EP3	Plate, End, 0.09 in. Thick	TB5-8
5	AAA303EP52	Plate, End, 0.098 in. Thick	20, 30, 40, 60
6	AAA303EP5	Stop, End, 0.39 in. Thick	---
7	AAA303EP4	Separator, Terminal, Orange	TB5-8



<b>AAC21241A</b>			
<b>REF. No.</b>	<b>PART No.</b>	<b>DESCRIPTION</b>	<b>SYMBOL</b>
1	AAA21180B1	Assembly, B44 Bypass Switch	---
2	AAA225HM1	Transformer, 208–240 VAC	TRF1
	AAA225HM2	Transformer, 440–600 VAC	TRF1
3	AAA225HR1	Transformer, 108–132 VAC, E.R.U.	TRF2

# Type A\*\*21241C

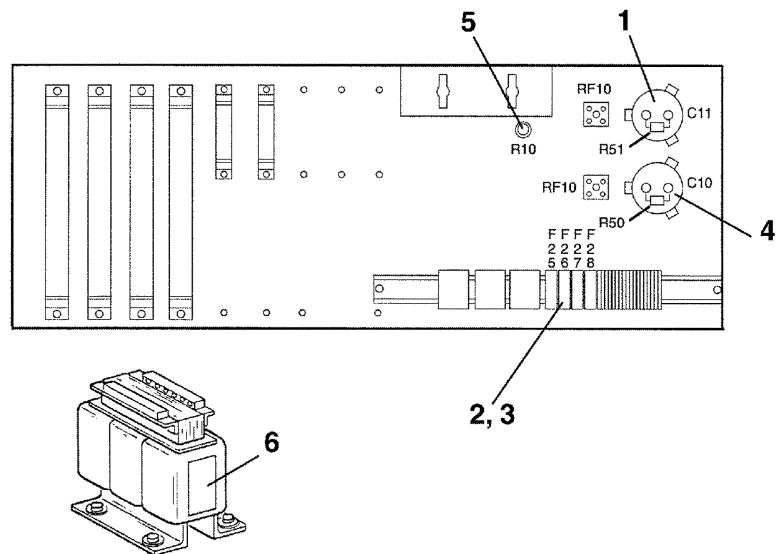
## Door Operator Interface

**10-AAA21241A**

ARR. NO	OPERATOR TYPE
1	OVL
2	OVL W/REAR
3	GAL MOD
4	GAL MOD W/REAR
5	GAL MOM/MOH
6	GAL MOM/MOH W/REAR
7	QL
8	QL W/REAR
9	7300AC
10	7300 W/REAR
11	O-AC
12	O-AC W/REAR
13	6970TR
14	6970TR W/REAR
15	7770A
16	7770A W/REAR
17	MANUAL
18	MANUAL W/REAR

**NOTE:**

A typical door operator is shown.  
The parts used and their arrangement will vary according to the operator type.

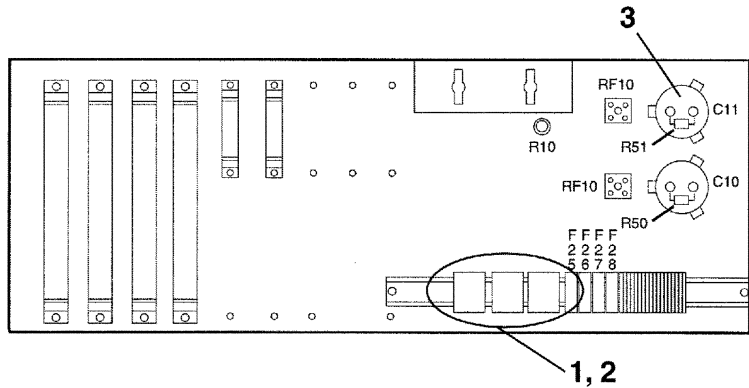


**AAB21241A**  
**AAC21241A**

REF. No.	PART No.	DESCRIPTION	SYMBOL	OPERATOR ARRANGEMENT
1	226DR1	Capacitor, 1400 $\mu$ F, 450 VDC	C10, C11	---
2	AAA375BJ23	Fuse, 3 A	F25-28	3, 4, 5, 6
	AAA375BJ26	Fuse, 4 A	F25-28	1, 2, 7, 8, 13, 14, 17, 18
	AAA375BJ28	Fuse, 5 A	F25-28 F50-F52	9, 10, 11, 12
3	AAA653K1	Holder, Fuse	F25-28	---
4	232T46	Resistor, Bleeder, 2 W, 2 K $\Omega$	R50, R51	---
5	AAA617H8	Resistor, 50 W, 25 $\Omega$	R10	---
6	235H1	Transformer, 380-460 V	BPS	9, 10, 11, 12
	235H3	Transformer, 440-480 V		
	235H2	Transformer, 550-600 V		

**Type A\*\*21241C**  
**Door Operator Interface**

ARR. NO	OPERATOR TYPE
1	OVL
2	OVL W/REAR
3	GAL MOD
4	GAL MOD W/REAR
5	GAL MOM/MOH
6	GAL MOM/MOH W/REAR
7	QL
8	QL W/REAR
9	7300AC
10	7300 W/REAR
11	O-AC
12	O-AC W/REAR
13	6970TR
14	6970TR W/REAR
15	7770A
16	7770A W/REAR
17	MANUAL
18	MANUAL W/REAR



**NOTE:**  
 A typical door operator is shown.  
 The parts used and their arrangement will vary according to the operator type.

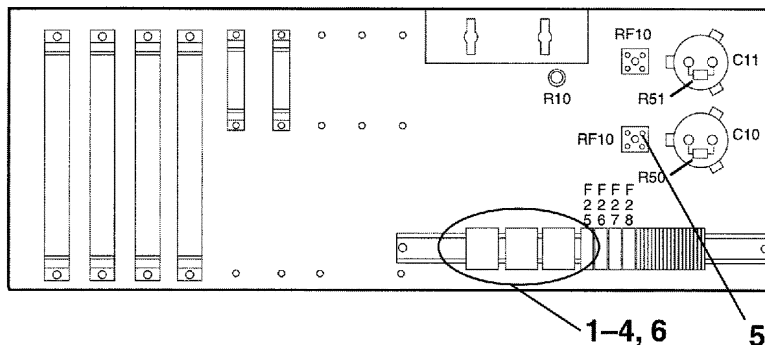
REF. No.	PART No.	DESCRIPTION	SYMBOL	OPERATOR ARRANGEMENT
1	<del>AAA638S201</del> AAA613CV102	Contact, Auxiliary, 3NO-1NC	(R)DO, DW, DC, DCOP, DST, DT	1-16
	<del>AAA638S202</del> AAA613CV106	Contact, Auxiliary, 2NO-2NC	NDG	1, 2
2	<del>AAA638B2</del> AAA638B102	Relay, 110 VAC, 3NO-1NC Contacts	DW, RDW ADS, RADS	9, 10, 13, 14, 17, 18
	<del>AAA638B5</del> AAA638B105	Relay, 24 VDC, 3NO-1NC Contacts	(R)DO, DC, NDG, REV, DCOP, DCT, DCR, DST, DT, DDC, DDO, DL, DOX, DCRX, ADR, NDG, CMR, RCMR	1-18
3	232T46	Resistor, Bleeder, 2 W, 2 KΩ	R50, R51	---

# Type A\*\*21241C

## Door Operator Interface

**10-AAA21241A**

ARR. NO.	OPERATOR TYPE
1	OVL
2	OVL W/REAR
3	GAL MOD
4	GAL MOD W/REAR
5	GAL MOM/MOH
6	GAL MOM/MOH W/REAR
7	QL
8	QL W/REAR
9	7300AC
10	7300 W/REAR
11	O-AC
12	O-AC W/REAR
13	6970TR
14	6970TR W/REAR
15	7770A
16	7770A W/REAR
17	MANUAL
18	MANUAL W/REAR



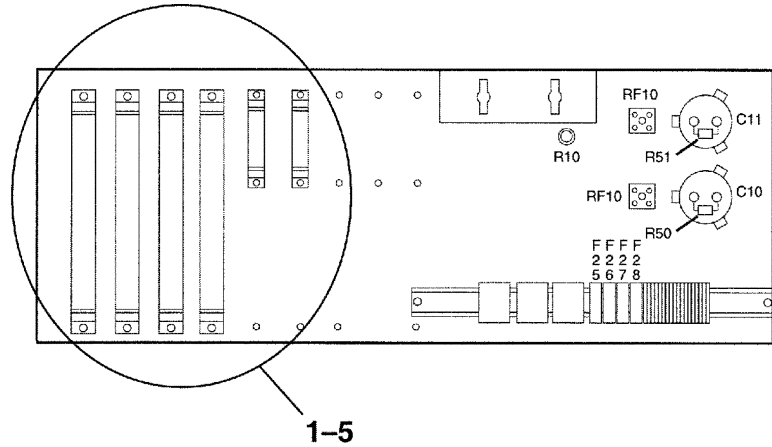
**NOTE:**  
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<b>AAB21241A AAC21241A</b>				
REF. No.	PART No.	DESCRIPTION	SYMBOL	OPERATOR ARRANGEMENT
1	AAA613CZ8	Relay, 24 V	(R)DCL	15, 16
2	AAA613CZ9	Relay, 115 VAC, 4 Pole	GS, RGS	1-14
3	AAA618AF6	Relay Socket	GS, RGS	1-14
4	<del>AAA613CX302</del> AAA613CX702	Suppressor, 48-127 VAC	(R)DW, ADS, RADS	1-14
	<del>AAA613CX304</del> AAA613CX704	Suppressor, Diode, 12-250 VDC	(R)DO, DC, NDG, DCOP, DCT, DCR, DST, DT, REV, DOX, DCRX, ADR, NDG, CMR, RCMR	1-18
5	230BS3	Rectifier, 420 V RMS, 25 A	RF10, RF11	1-8, 11-14
6	AAA623AA1	Timer	T1, RT1, DST, RT	13, 14, 15, 16

# 10-AAA21241A

# Type A\*\*21241C Door Operator Interface

ARR. NO	OPERATOR TYPE
1	OVL
2	OVL W/REAR
3	GAL MOD
4	GAL MOD W/REAR
5	GAL MOM/MOH
6	GAL MOM/MOH W/REAR
7	QL
8	QL W/REAR
9	7300AC
10	7300 W/REAR
11	O-AC
12	O-AC W/REAR
13	6970TR
14	6970TR W/REAR
15	7770A
16	7770A W/REAR



**NOTE:**  
A typical door operator is shown.  
The parts used and their arrangement will vary according to the operator type.

## AAB21241A AAC21241A

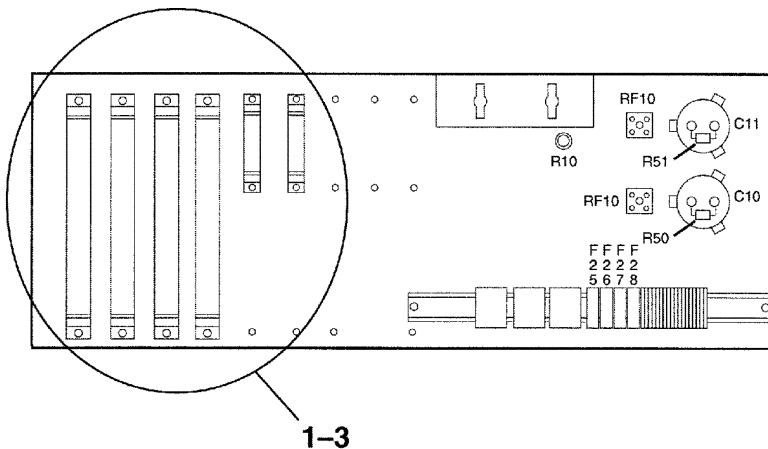
REF. No.	PART No.	DESCRIPTION	SYMBOL	OPERATOR ARRANGEMENT
1	AAA617H103	Bracket, Resistor	R10-R13, (R)DMR8	---
2	232B47	Resistor, 30 W, 75 Ω	(R)DMFR1, 2	1, 2, 7, 8
	232AA48	Resistor, 400 W, 14.1 Ω	DMR5, RDMR5	13, 14
3	232B72	Resistor, 30 W, 300 Ω, w/Conductor	(R)DMR3	1, 2
4	AAA617H8	Resistor, 50 W, 25 Ω	R10-R13, (R)DMR8	
5	AAA617K8	Resistor, Variable, 225 W, 50 Ω	(R)DMR7, 8	13, 14
			(R)DMR1, 2, 3	7, 8
			(R)DMR4, 5	15, 16
	AAA617K10	Resistor, Variable, 225 W, 250 Ω	(R)DMR1, 2, 3	1, 2, 3, 4
			(R)DMR6	15, 16
	AAA617K12	Resistor, Power, 225 W, 1000 Ω	(R)DMFR1	3, 4
	AAA617K15	Resistor, 225 W, 30 Ω	(R)DMR1, 2, 7	15, 16
AAA617K9	Resistor, 225 W, 100 Ω	(R)DMR3	15, 16	

# Type A\*\*21241C

## Door Operator Interface

**10-AAA21241A**

ARR. NO	OPERATOR TYPE
1	OVL
2	OVL W/REAR
3	GAL MOD
4	GAL MOD W/REAR
5	GAL MOM/MOH
6	GAL MOM/MOH W/REAR
7	QL
8	QL W/REAR
9	7300AC
10	7300 W/REAR
11	O-AC
12	O-AC W/REAR
13	6970TR
14	6970TR W/REAR
15	7770A
16	7770A W/REAR



**NOTE:**  
A typical door operator is shown.  
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<b>AAB21241A AAC21241A</b>				
REF. No.	PART No.	DESCRIPTION	SYMBOL	OPERATOR ARRANGEMENT
1	AAA617K102	Clamp, Resistor	---	All
2	AAA617K101	Clip, Mounting, Resistor	(R)DMR1, DMFR1	9-14
3	AAA617L9	Resistor, 100 W, 50 Ω	(R)DMR1-4, 4A, 5	11, 12, 13, 14
	AAA617L11	Resistor, 100 W, 150 Ω	(R)DMR1, 2	9, 10
	AAA617L12	Resistor, 100 W, 200 Ω	(R)DMR1, 2	11, 12
	AAA617L12	Resistor, 100 W, 200 Ω	(R)DMR6, 7, 8	9, 10
	AAA617L12	Resistor, 100 W, 200 Ω	(R)DMR7A	13, 14
	AAA617L16	Resistor, 100 W, 500 Ω	(R)DMR4, 5	9, 10
	AAA617L18	Resistor, 100 W, 1000 Ω	(R)DMFR1	13, 14