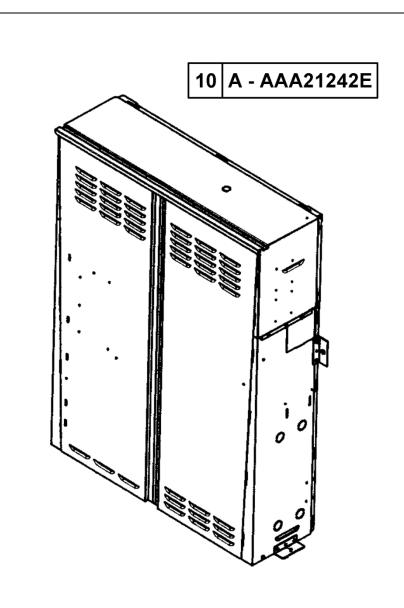
# HydroFit<sup>®</sup> GCS Hydraulic Controller (HYD)

# Spare Parts Leaflet 10-AAA21242E

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**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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## **History**

## **Leaflet Description**

This leaflet contains all the spare parts for the HydroFit® hydraulic controller.

#### **Leaflet Revisions**

| Date Revised Subject Matter Expert |                             | Reason for Revision                            |  |  |
|------------------------------------|-----------------------------|--|--|--|
| December 18, 2013                  | John Kleine and Bryan Leach | New SPL  |  |  |
| October 5, 2016                    | Taye Gebrewold              | Updated Information                            |  |  |
| December 7, 2016                   | Taye Gebrewold              | Updated description for p/n AAA225JT35 on p. 9 |  |  |
| November 4, 2020                   | Ali Bozorgzadeh             | Added NOTE to p. 8                             |  |  |

#### **Related Drawings**

| Drawing No.       | Title   | Drawing No.   | Title   |
|-------------------|---|---------------|---|
| AAA21242E         | Assembly and Arrangement for GCS Hydraulic Controller | AAA21240AD    | Control Assembly, Hydraulic<br>Motor Soft Starter |
| AAA21700AV        | Gateway Assembly                                      | AAA21700AT    | HydroFit® ERU Assembly                            |
| ABA21242F         | HydroFit® Wiring Diagram                              | AAA29502L_TDS | HydroFit® Technical Data Sheet                    |
| AAA21242E_F<br>MI | GCS Hydraulic Controller Field Micro Instruction      | AAA285ZV      | Passenger Duty Valve Cover<br>Box                 |
| AAA27076FB        | HydroFit® Master Wire List                            | AAA285ABB     | Hospital Duty Valve Cover Box                     |
| AAA285ABB         | MRL Hospital Duty Valve Cover                         | AAA285ZV      | MRL Passenger Duty Valve<br>Cover                 |
| ABA7900BH         | Machine Room ERU Assembly                             |               |   |

#### **Related Documents**

| Document ID      | Title  |
|------------------|--|
| TIP 1.1.14.0-12  | Hydraulic Elevator Pump Motor Solid State Controller |
| TIP 1.1.22.1-1   | Updating GECB Software with the Otis OMU             |
| SPL 10-AAA21242G | Hydraulic Controller Extension Assembly              |
| SPL 10-AAA7900BH | Emergency Rescue Unit (ERU)                          |

#### **Subject Matter Expert**

| Name            | Department              |
|-----------------|-------------------------|
| Ali Bozorgzadeh | OSC Service Engineering |

#### **About Spare Parts Leaflets...**

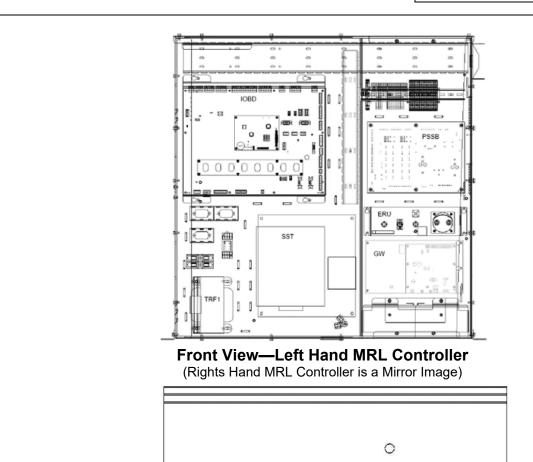
This document lists the lowest replaceable units (LRUs) for the standard version of the product. The LRUs are chosen by a team of Otis associates representing engineering and manufacturing. While goal of this document is to make parts identification as easy as possible, the document cannot be all-inclusive. 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.

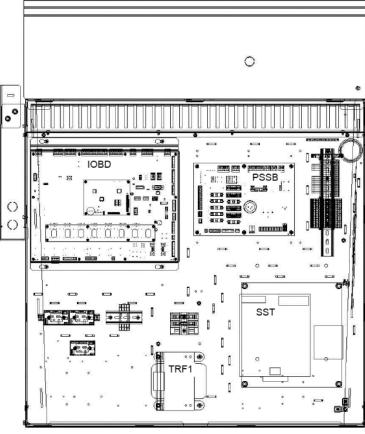
If you have any suggestions about this document, please contact the subject matter expert listed on this page.

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|--------|------------------|

# **HydroFit® Hydro Controller**

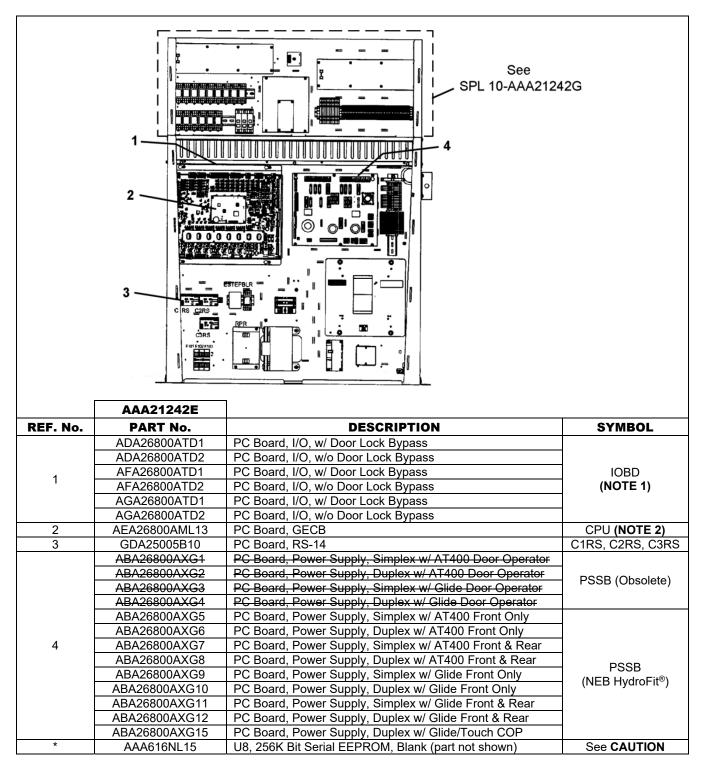
## 10-AAA21242E





Front View—Machine Room Controller

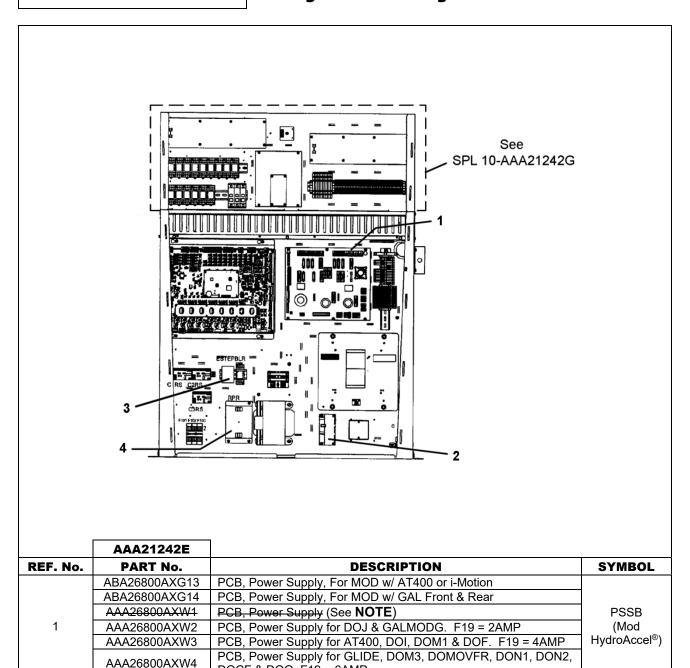
## HydroFit® Hydro Controller



#### (Continued on next page)

- **NOTE 1:** When replacing AFA26800ATD board with an AGA version, see TIP 1.1.23.1-8. If upgrading from ADA26800ATD board, see TIP 1.1.23.0-1.
- **NOTE 2:** GECB must be programmed: baseline AP231438AAB is needed for the ADA26800ATD; baseline AP131438BAA is needed for the AFA26800ATD; baseline AAA31438CAA is needed for the AGA26800ATD.
- **CAUTION:** When swapping GECB board, remember to remove U8 (EEPROM) from the existing PCB or your E2 parameters will be lost.

## **HydroFit® Hydro Controller**



4 AAA630AC3 Relay, Reverse-Phase, Site Supply = 575–600 VAC (60 Hz)

NOTE: When replacing AXW1 board, one of the new arrangements should be ordered depending on the door operator used, otherwise the fuse, F19 on an existing AWX1 board should be replaced in accordance with PUI-16-16-500.

Relay, Reverse-Phase, Site Supply = 208-240 VAC (60 Hz)

Relay, Reverse-Phase, Site Supply = 440-480 VAC (60 Hz)

Relay, Reverse-Phase, Site Supply = 380 VAC (50 Hz)

DOCF & DOO. F19 = 6AMP Relay, Overload, 15–30 A

Relay, Overload, 22-44 A

Relay, Overload, 33-66 A

Relay, Overload, 50-100 A

Relay, Overload, 75-150 A

AAA660B207

AAA660B208

AAA660B209

AAA660B210

AAA660B211

AAA630AC1

AAA630AC2

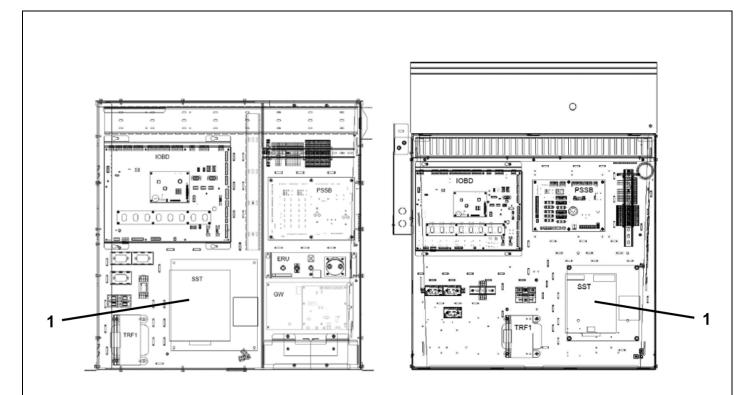
AAA630AC7

2

3

OLS

**RPR** 



Left Hand MRL and Machine Room Controller – Solid State Starter Location

(Right Hand Controller Is a Mirror Image)

| REF<br>NO. | HP<br>AT<br>200-<br>208 V | HP<br>AT<br>220-<br>240 V | HP AT<br>440-<br>480 V | HP<br>AT<br>575-<br>600 V | MAX. OPERATING CURRENT (AMPS) | OVERL<br>OAD<br>RANGE<br>(AMPS) | STARTER P/N   | REPLACEMENT<br>FAULT<br>CONTACTOR | REPLACEMENT<br>FAULT<br>CONTACT<br>COVER |
|------------|---------------------------|---------------------------|------------------------|---------------------------|-------------------------------|---------------------------------|---------------|-----------------------------------|--|
|            | 5                         | 7.5                       | 15                     |                           | 22                            | 5–22                            |               |                                   |  |
|            | 7.5                       | 10                        | 25                     |                           | 35                            | 9-35                            | - AAA21240AD5 | AAA21240AD39                      | AAA21240AD44                             |
|            | 10                        | 15                        | 30                     |                           | 42                            | 10–42                           |               |                                   |  |
|            | 15                        | 20                        | 40                     |                           | 55                            | 14–55                           |               |                                   |  |
|            | 20                        | 25                        | 50                     |                           | 68                            | 17–68                           |               |                                   |  |
| 1          | 25                        | 30                        | 60                     |                           | 80                            | 20–80                           |               |                                   |  |
|            | 30                        | 40                        | 75                     |                           | 105                           | 26–105                          | AAA21240AD7   | AAA21240AD40 A                    |  |
|            | 40                        | 50                        | 100                    |                           | 130                           | 32–130                          | AAA21240AD8   |                                   | AAA21240AD45                             |
|            |                           |                           | 40                     | 50                        | 55                            | 14–55                           | AAA21240AD14  |                                   |  |
|            |                           |                           | 50                     | 60                        | 68                            | 17–68                           | AAA21240AD15  | AAA21240AD41                      | A A A 21240 A D 45                       |
|            |                           |                           | 60                     | 75                        | 80                            | 20–80                           | AAA21240AD16  | AAA21240AD41                      | AAA21240AD45                             |

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

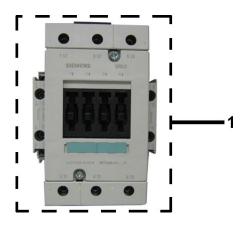
NOTE 2: Current limit % of overload current is 150-450 % (set at 230 V).

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## **Pump Motor Contactors**

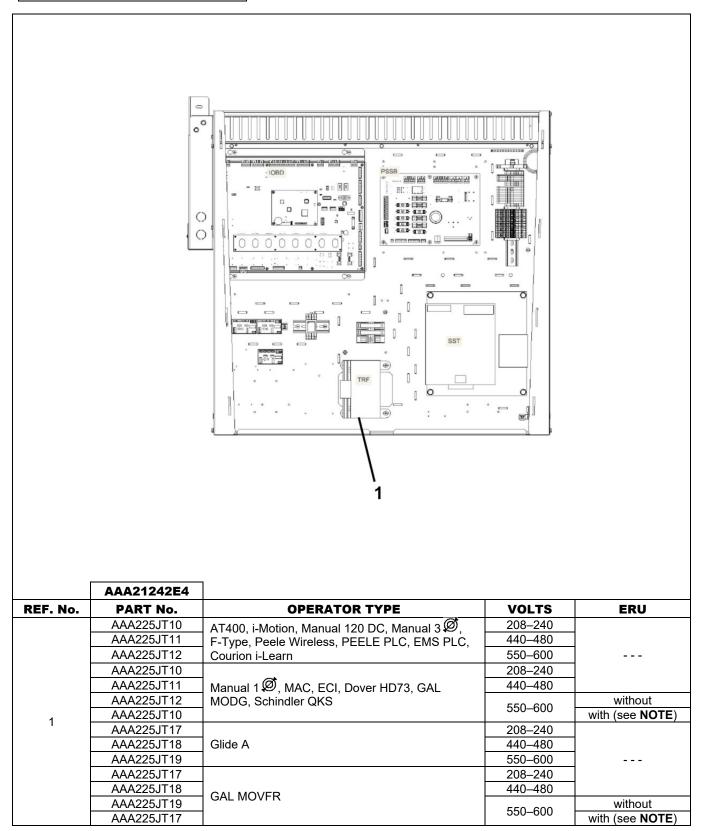
10-AAA21242E

NOTE: SPL 10-7151A, AC & DC Contactors Reversing / Y-∆ 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 |  |  |  |
| AAA638R7                         |                         | Contraton NEMA O AC  | ≥ 10 & ≤ 30           | 440–600 VAC  |        |  |  |  |
| 1                                | AAA638R107              | Contactor, NEMA 2 AC | ≥ 10 & ≤ 30           | 208–240 VAC  | PM     |  |  |  |
|                                  | AAA638A10<br>AAA638A110 | Contactor, NEMA 3 AC | <b>&gt;</b> 30 & ≤ 50 | 440–600 VAC  |        |  |  |  |

## **Transformer and System Fuses**

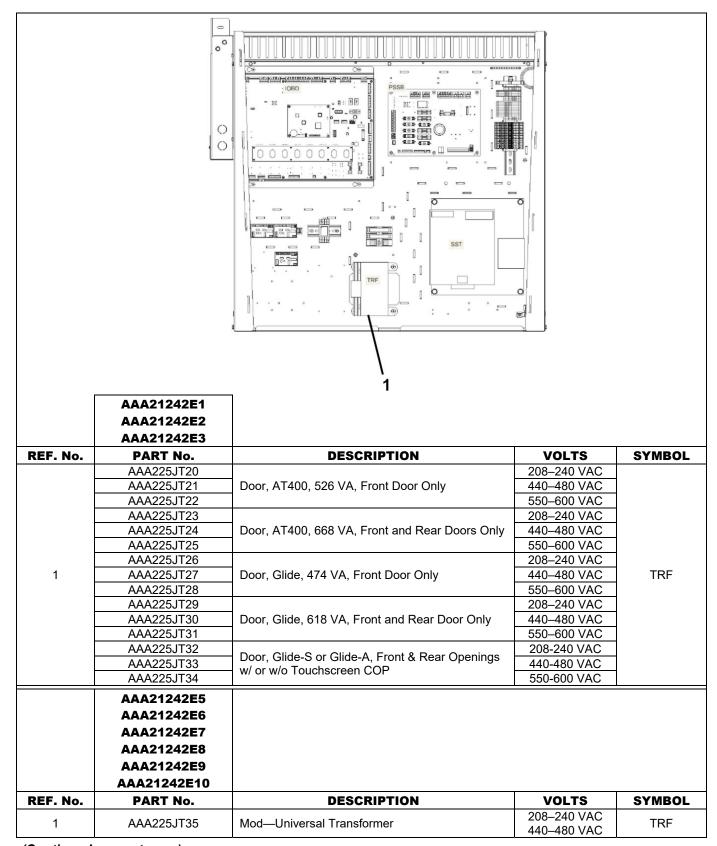


NOTE: With Reynolds & Reynolds ERU.

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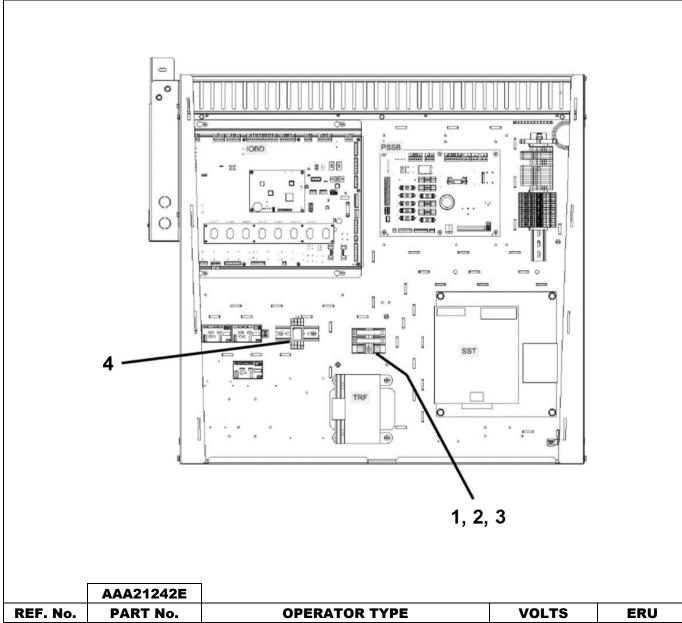
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## **Transformer and System Fuses**



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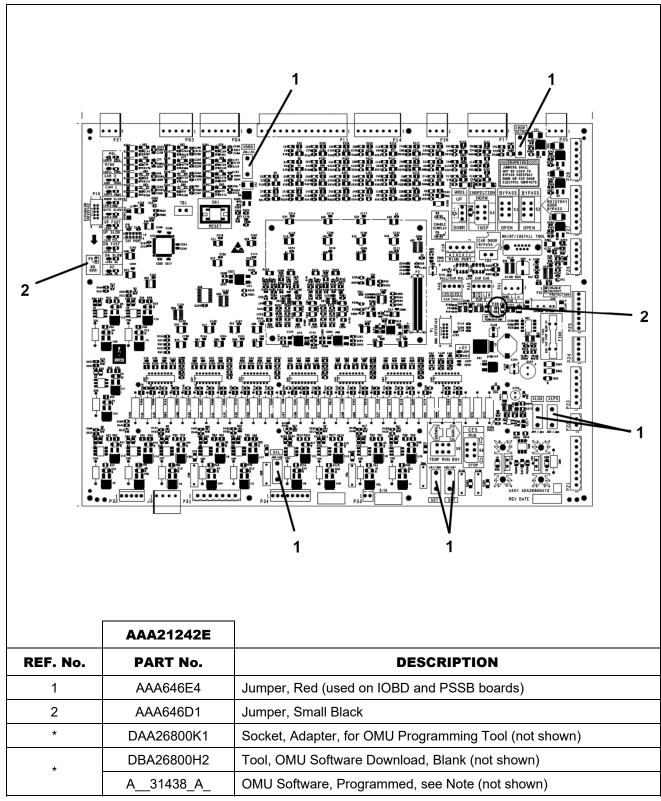
# **Transformer and System Fuses**



|                          | AAA21242E  |                                  |             |          |
|--------------------------|------------|----------------------------------|-------------|----------|
| REF. No.                 | PART No.   | OPERATOR TYPE                    | VOLTS       | ERU      |
|                          | AAA375BK24 | Fuse, Time Delay Rejection, 2.5A | 440-480 VAC |          |
| 4                        | AAA375BK21 | Fuse, Time Delay Rejection, 2.0A | 550-600 VAC |          |
| AAA375BK32<br>AAA375BK31 |            | Fuse, Time Delay Rejection, 5.6A | 208 VAC     |          |
|                          |            | Fuse, Time Delay Rejection, 5A   | 220-240 VAC |          |
| 2                        | AAA180FK2  | Fuse, Cover Puller               |             |          |
|                          | AAA653D1   | Holder, Fuse, F1 and F2          | 600 VAC     |          |
| 3                        | AAA180FK1  | Holder, Fuse F1, F2, and F3      |             |          |
| 4                        | AAA613CZ26 | Relay, 24V DC, 2 Form C          |             | ESTENBLR |

## I/O Board

## 10-AAA21242E



<sup>\*</sup> Part not shown.

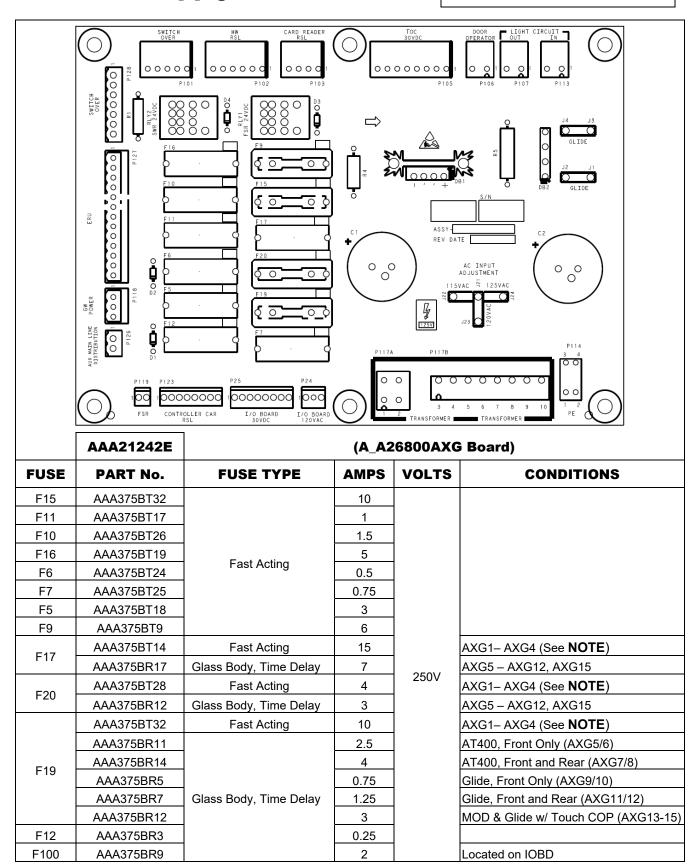
NOTE: Contact OSC for latest contract version.

## **I/O Board Connectors**

| AAA21242E   |                                    | (AAA26800ATD Board)       |                          |  |
|-------------|------------------------------------|---------------------------|--------------------------|--|
| PART No.    | SYMBOL                             | CONDITION                 | DESCRIPTION              |  |
| AAA447BE155 | P03                                | Door Link                 |                          |  |
| AAA447BE156 | P04                                | Hall Fixtures             | ]                        |  |
| AAA447BE157 | P11                                | Position System (ADA I/O) | ]                        |  |
| AAA447BE183 | P11                                | Position System (AFA I/O) | ]                        |  |
| AAA447BE158 | P14                                | Inspection                | 1                        |  |
| AAA447BE159 | P17                                | Gate Switches             |                          |  |
| AAA447BE160 | P21                                | Tank Valves               |                          |  |
| AAA447BE161 | P22                                | Pump Motor                | ]                        |  |
| AAA447BE175 | P23                                | System Tank Sensors       | Connectors for I/O Board |  |
| AAA447BE162 | P26                                | Inspection                | (IOBD)                   |  |
| AAA447BE163 | P27<br>(two or more cars in group) | Inter-Car Connection      |                          |  |
| AAA447BE164 | P28                                | Smoke Sensors             |                          |  |
| AAA447BE165 | P31                                | Run Bug (Temp. Operation) |                          |  |
| AAA447BE150 | P35                                | Safe To Open              |                          |  |
| AAA447BE151 | P36                                | Spare I/O                 |                          |  |
| AAA447BE166 | P37                                | PES                       |                          |  |
| AAA447BE132 | J3                                 | REM Tank Sensors          |                          |  |

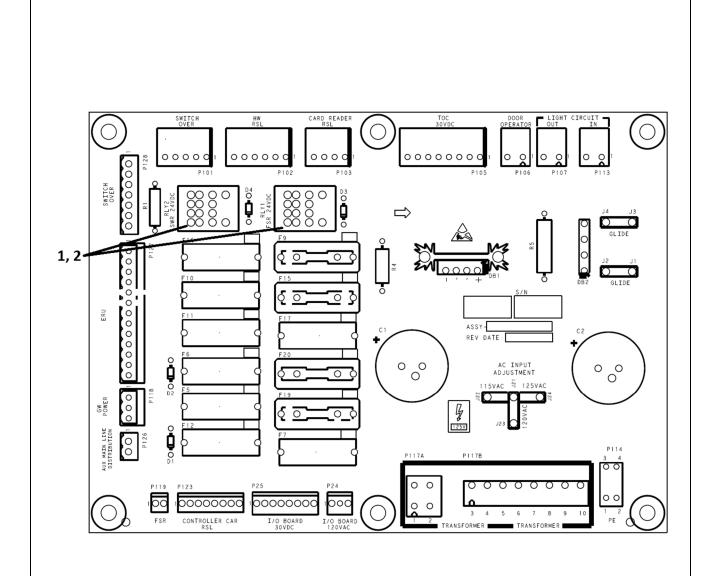
## **Power Supply Board Fuses**

#### 10-AAA21242E



**NOTE:** A compulsory PUI 16-16-005 dated 5/16/2016 requires this part to be changed.

## **Power Supply Hardware**

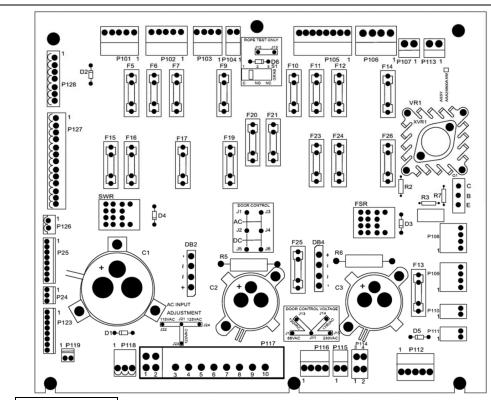


|          | AAA21242E   | (A_A26800AXG BOARD)   |           |  |
|----------|-------------|---|-----------|--|
| REF. No. | PART No.    | DESCRIPTION   | SYMBOL    |  |
| 1        | AAA618AF100 | Clips, Relay  | FSR & SWR |  |
| 2        | AAA613CZ8   | Relay, 24 VDC, Mounted on PSSB,<br>Fire Service Relay and Switch-Over Relay | FSR & SWR |  |

# Power Supply Hardware: Connectors

## 10-AAA21242E

| AAA21242E   |        | (A_A26800AXG Board)      |
|-------------|--------|--------------------------|
| PART No.    | SYMBOL | OPTIONS                  |
| AAA447BE167 | P101   | Hall                     |
| AAA447BE168 | P102   | Hall/Group               |
| AAA447BE24  | P103   | Card Reader              |
| AAA447BE25  | P104   | Rope Governor            |
| AAA447BE169 | P105   | TOC                      |
| AAA447BE170 | P106   | Door Operator            |
| AAA447BE171 | P107   | Fan & Light              |
| AAA447BE67  | P112   | 24 VDC                   |
| AAA447BE172 | P113   | Fan and Light            |
| AAA447BE38  | P115   | Tank Heater              |
| AAA447BE37  | P116   | LOS, LPS Sensors         |
| AAA447BE36  | P117   | Transformer              |
| AAA447BE173 | P118   | REM Sensors / GWII Power |
| AAA447BE42  | P126   | Main Line Disconnect     |
| AAA447BE40  | P128   | Inter-Car Connection     |
| AAA447BE22  | P130   | Inter-Car Connection     |
| AAA174YG22  | P127   | ERU, w/o ERU Connector   |



AAA21242E (A\_A26800AXW Board)

| FUSE No. | PART No.   | FUSE TYPE                | AMPS  | VOLTS | CONDITIONS                      |
|----------|------------|--------------------------|-------|-------|---------------------------------|
| F5, F16  | AAA375BT19 |                          | 5A    |       |                                 |
| F6       | AAA375BT24 |                          | 0.5A  |       |                                 |
| F7       | AAA375BT25 |                          | 0.75A |       |                                 |
| F10      | AAA375BT18 | Glass Body Fast Acting   | 3A    |       |                                 |
| F11      | AAA375BT26 |                          | 1.5A  |       |                                 |
| F15      | AAA375BT32 |                          | 10A   |       |                                 |
| F26      | AAA375BT28 |                          | 4A    |       |                                 |
| F9       | AAA375BT9  |                          | 6A    |       |                                 |
| F13      | AAA375BT6  | Ceramic Body Fast Acting | 3A    |       |                                 |
| F14      | AAA375BT14 |                          | 15A   | 0501/ |                                 |
|          | AAA375BT32 | Glass Body Fast Acting   | 10A   | 250 V | AAA26800AXW1 (See <b>NOTE</b> ) |
| F40      | AAA375BT9  | Ceramic Body Fast Acting | 6A    |       | AAA26800AXW4                    |
| F19      | AAA375BR14 |                          | 4A    |       | AAA26800AXW3                    |
|          | AAA375BR9  |                          | 2A    |       | AAA26800AXW2                    |
| F12      | AAA375BR3  |                          | 0.25A |       |                                 |
| F23      | AAA375BR6  |                          | 1A    |       |                                 |
| F20, F25 | AAA375BR12 | Glass Body Time Delay    | 3A    |       |                                 |
| F21      | AAA375BR11 |                          | 2.5   |       |                                 |
| F24      | AAA375BR4  |                          | 0.5A  |       |                                 |
| F100     | AAA375BR9  |                          | 2A    |       | Located on IOBD                 |
| F17      | AAA375BR20 |                          | 15A   | 32 V  |                                 |

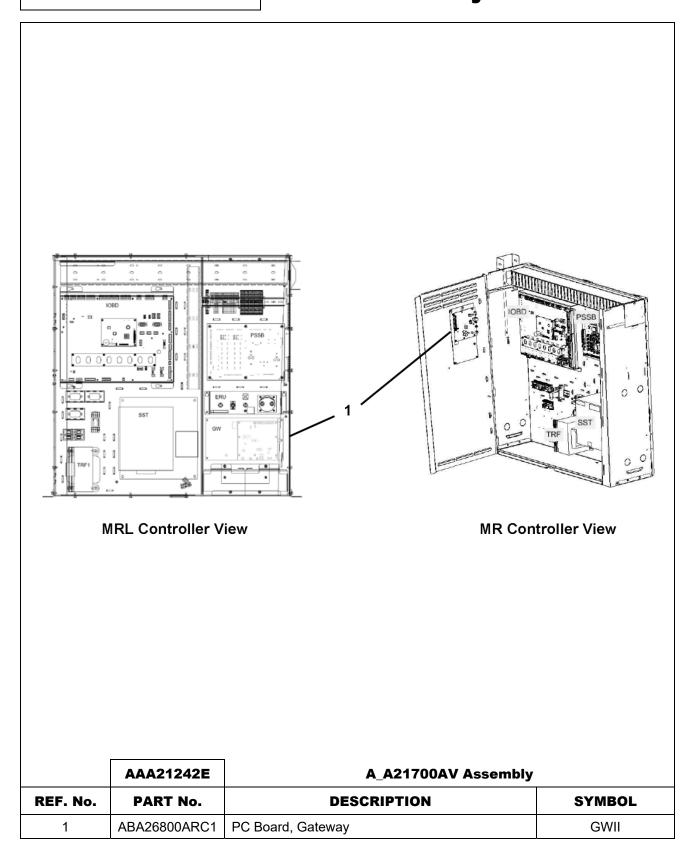
NOTE: A compulsory PUI 16-16-005 dated 5/16/2016 requires this part to be changed.

# Power Supply Hardware: Connectors

#### 10-AAA21242E

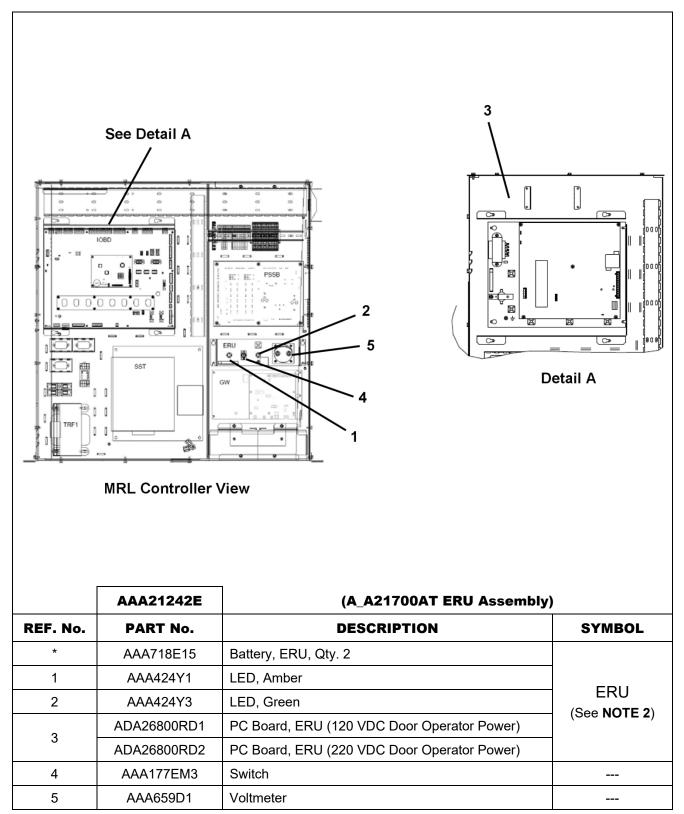
| AAA21242E   | (A_A26800AXW Board) |                          |
|-------------|---------------------|--------------------------|
| PART No.    | SYMBOL              | OPTIONS                  |
| AAA447BE167 | P101                | Hall                     |
| AAA447BE168 | P102                | Hall/Group               |
| AAA447BE24  | P103                | Card Reader              |
| AAA447BE25  | P104                | Rope Governor            |
| AAA447BE169 | P105                | тос                      |
| AAA447BE170 | P106                | Door Operator            |
| AAA447BE171 | P107                | Fan and Light            |
| AAA447AP256 | P108                | Extension RSL            |
| AAA447AP256 | P109                | Extension Door Power     |
| AAA447AP254 | P110                | 120 VAC Hall Lantern     |
| AAA447AP254 | P111                | 120 VDC Hall Lantern     |
| AAA447AP257 | P112                | 30 VDC and 24 VDC        |
| AAA447BE172 | P113                | Fan and Light            |
| AAA447BE38  | P115                | Tank Heater              |
| AAA447AP240 | P116                | Transformer 230 VAC      |
| AAA447BE36  | P117                | Transformer              |
| AAA447BE173 | P118                | REM Sensors / GWII Power |
| AAA447BE42  | P126                | Main Line Disconnect     |
| AAA447BE40  | P128                | Inter-Car Connection     |
| AAA447BE22  | P130                | Inter-Car Connection     |
| AAA174YG22  | P127                | ERU, w/o ERU Connector   |

## **Gateway Board**



## **ERU** Assembly

#### 10-AAA21242E



<sup>\*</sup> Part not shown.

NOTE 1: For machine room ERU, see SPL 10-AAA7900BH.

**NOTE 2:** This assembly is the AAA21242E1 & 2 version controller only (HydroFit® MRL only).