

# GCS Automatic Recovery Unit (ARU)

## Spare Parts Leaflet

### 10-AAA21305BX

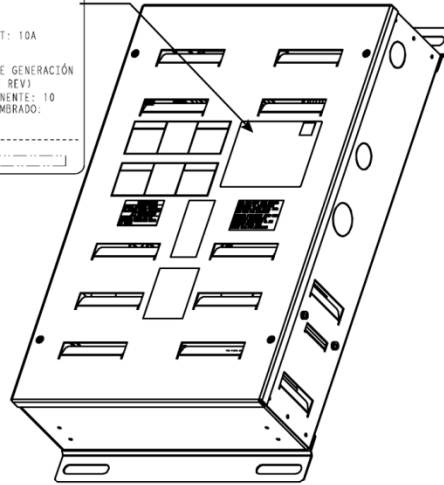
December 18, 2019 / Page 1 of 11

**OTIS**  
A United Technologies Company

SERIAL NUMBER/NO. DE SÉRIE/NO. DE SERIE: \_\_\_\_\_  
 SALES NUMBER/NO. DE VENTA/NO. DE VENTA: \_\_\_\_\_  
 MODEL NO./NO. DE MODELE/NO. DE MODELO: A 21305BX (LATEST REV)  
 NORMAL MODE/MODE NORMAL/MODO NORMAL  
 INPUT VOLTS/PHASES/AMPS: 480VAC/3-PH/23A  
 OUTPUT VOLTS/PHASES/AMPS: 480VAC/3-PH/23A  
 RECOVERY MODE/MODE DE SECOURS/MODO DE RECUPERACION  
 INPUT VOLTS/PHASES/AMPS: 480VAC/1-PH/6A  
 OUTPUT VOLTS/PHASES/AMPS: 48VDC/1PH/ACC: 30A, CONT: 10A  
 HERTZ/ HERTZ/ HERTZ: 50/60

COMP. VINTAGE NO. / NO. DE TYPE DU COMPOSANT/ NO. DE GENERACION  
 PASADA DE COMPONENTE: 10A-A 21305BX (LATEST REV)  
 COMPONENT CODE/ CODE DU COMPOSANT/ CÓDIGO DE COMPONENTE: 10  
 WIRING DIAGRAM/ SCHEMA DE CÂBLAGE/ DIAGRAMA DE ALAMBRADO:  
 A 21305CM (LATEST REV)  
 DATE/ DATE/ FECHA: \_\_\_\_\_

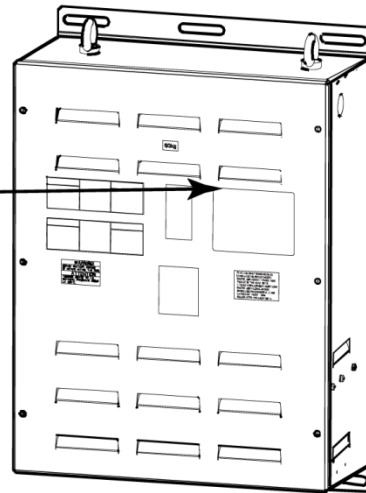
A\_21305BX (Latest Rev)



**OTIS**  
A United Technologies Company

SERIAL NUMBER/NO. DE SÉRIE/NO. DE SERIE: \_\_\_\_\_  
 SALES NUMBER/NO. DE VENTA/NO. DE VENTA: \_\_\_\_\_  
 MODEL NO./NO. DE MODELE/NO. DE MODELO: A 21305DB (LATEST REV)  
 NORMAL MODE/MODE NORMAL/MODO NORMAL  
 INPUT VOLTS/PHASES/AMPS: 480VAC/3-PH/31A  
 OUTPUT VOLTS/PHASES/AMPS: 480VAC/3-PH/31A  
 RECOVERY MODE/MODE DE SECOURS/MODO DE RECUPERACION  
 INPUT VOLTS/PHASES/AMPS: 480VAC/1-PH/6A  
 OUTPUT VOLTS/PHASES/AMPS: 96VDC/ACC: 30A, CONT: 10A  
 HERTZ/ HERTZ/ HERTZ: 50/60  
 H.P. / CHEVAL/ CABALLO DE FUERZA: \_\_\_\_\_ H.P. (KW)  
 WIRES/ LES CABLES/ ALAMBRES: \_\_\_\_\_  
 COMP. VINTAGE NO. / NO. DE TYPE DU COMPOSANT/ NO. DE GENERACION  
 PASADA DE COMPONENTE: 10A-A 21305DB (LATEST REV)  
 COMPONENT CODE/ CODE DU COMPOSANT/ CÓDIGO DE COMPONENTE: 10  
 WIRING DIAGRAM/ SCHEMA DE CÂBLAGE/ DIAGRAMA DE ALAMBRADO:  
 A 21305DC (LATEST REV)  
 DATE/ DATE/ FECHA: \_\_\_\_\_

A\_21305DB (Latest Rev)



# OTIS

This document contains technical data  
subject to EAR. ECCN: EAR99

**SERVICE ENGINEERING**

**Otis Elevator Company**

**Bloomfield, Connecticut USA**

Unpublished Work—© Otis Elevator Co.; 2019

**Leaflet Description**

This leaflet list spare part for Automatic Recovery Unit ABA21305BX1 (ARU1-480VAC), ABA21305BX2 (ARU1-208VAC) and AAA21305DB1 (ARU2-480VAC), AAA21305DB2 (ARU2-208VAC) used with the GCS control system AAA21310AD. Please note that the AAA21305BX was released but never deployed to the field.

**Leaflet Revisions**

<b>Date Revised</b>	<b>Subject Matter Expert</b>	<b>Reason for Revision</b>
November 3, 2010	Joseph Della Porta & Matt Fournier	New SPL
February 16, 2011	Joseph Della Porta and Matt Fournier	New pp 7–11 adding ARU2 (AAA21305DB)
July 20, 2011	Matt Fournier	pp 3 and 7 add battery label
May 16, 2012	Joseph Della Porta	Added new arrangements to include operation from 208 VAC 3-phase input voltage
August 23, 2017	Cuauhtemoc Castro Inzunza and Anh Pham	Updated pp. 4, 7, 8, and 11 with new part numbers
December 18, 2019	Peter Dinndorf	Updated pp. 5 and 9 to include new p/n AAA375BY16

**Related Drawings**

<b>Drawing No.</b>	<b>Title</b>	<b>Drawing No.</b>	<b>Title</b>
AAA21310AD	GCS GeN2/G2L System Assembly Drawing	AAA21303DQ	Terminal Block Assembly
ACA21310AE	GCS GeN2/G2L Wiring Diagram	ABA21305BX	ARU1 Assembly
AAA21305DB	ARU2 Assembly		

**Related Documents**

<b>Document ID</b>	<b>Title</b>
SPL 10-AAA21310AD	Gearless Variable Frequency Controller NSAA Global Control System
SPL 10-ABA21305BL	NSAA Global Control System Brake Module
SPL 10-ABA21305BN	Global Control System: Controller Box

**Subject Matter Expert**

<b>Name</b>	<b>Department</b>
Anh Pham	OSC Service Engineering

**About Spare Parts Leaflets...**

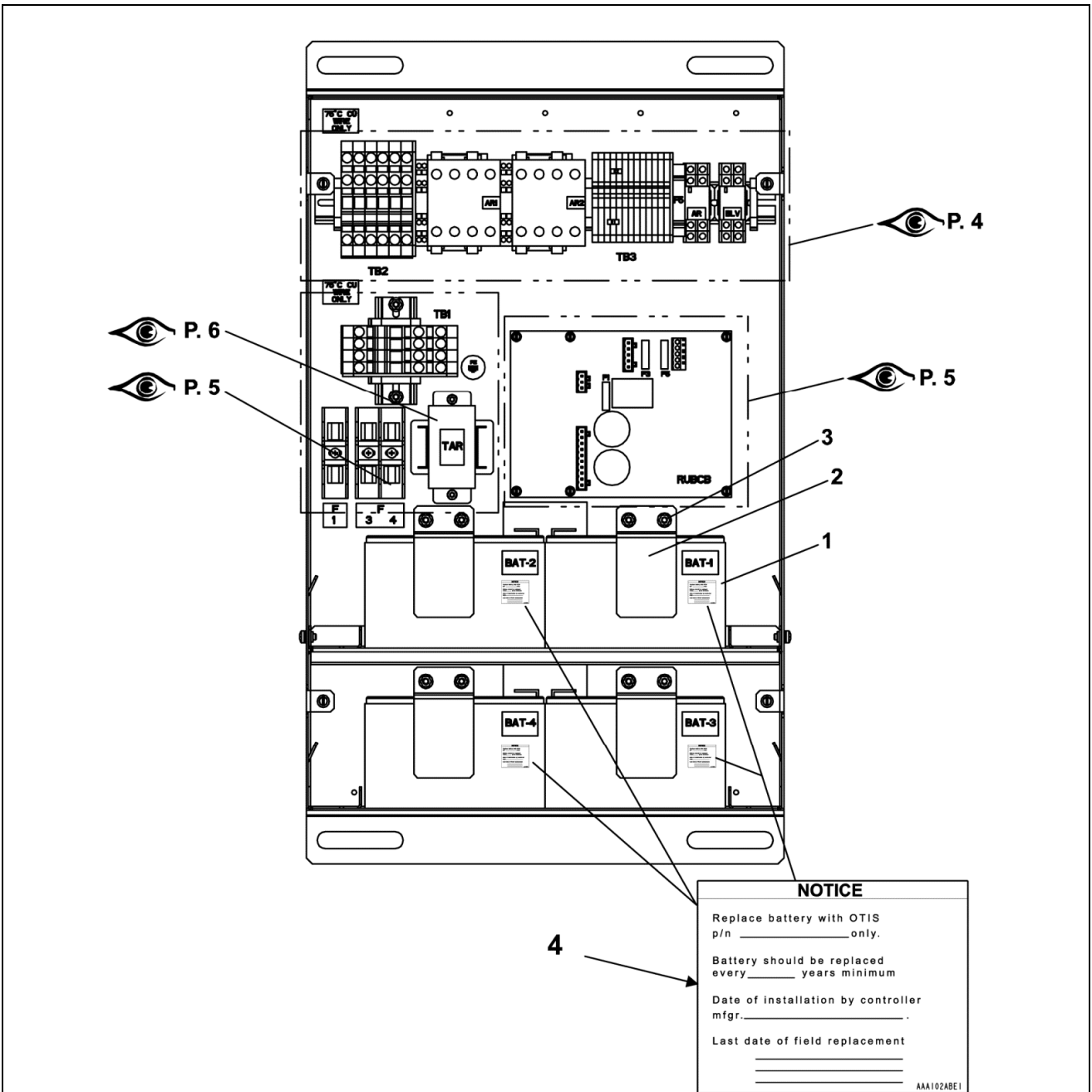
This document lists the lowest replaceable units (LRUs) for the standard version of the product. The LRUs are chosen by a team of Otis associates representing engineering and manufacturing.

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.

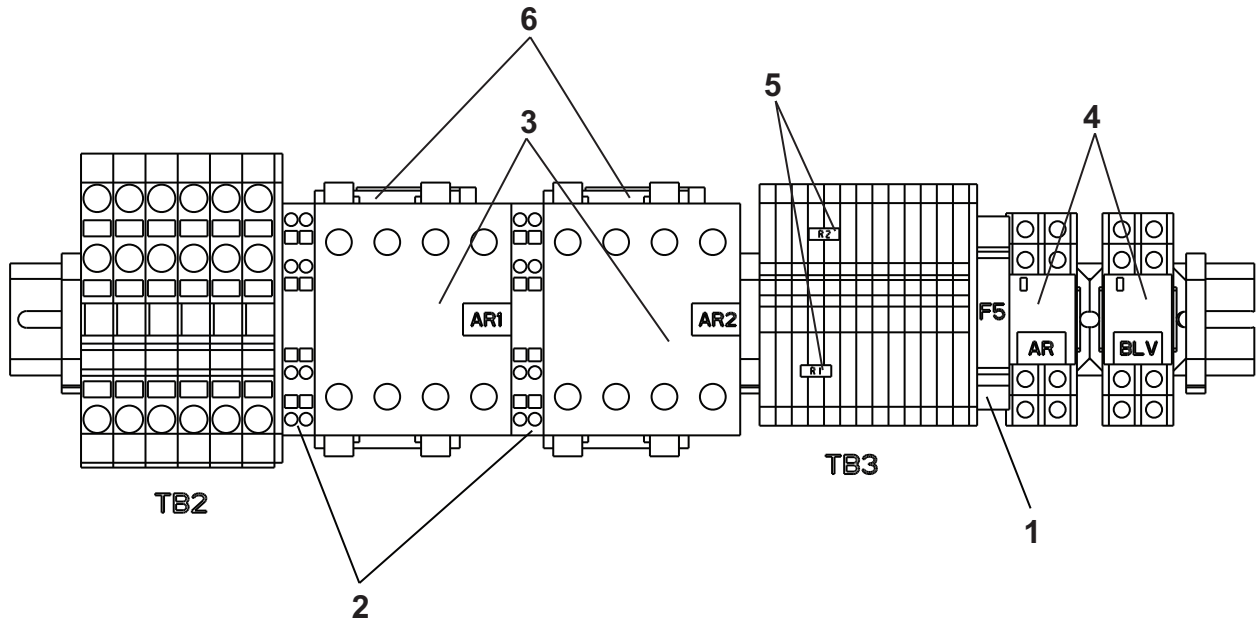
# Battery Assembly, ARU1

10-AAA21305BX



**NOTE:** Batteries should be replaced every three years.

ABA21305BX			
REF. No.	PART No.	DESCRIPTION	REMARKS
1	AAA718E15	Battery, 12 V, 12 Ah	BAT-1, BAT-2, BAT-3, and BAT-4
2	AAA316HNL1	Bracket, Battery	---
3	NON7201M5-8-Z	Hex Nut, M5, w/Serrated Flange	---
4	AAA102ABE1	Battery Data Plate	One per battery

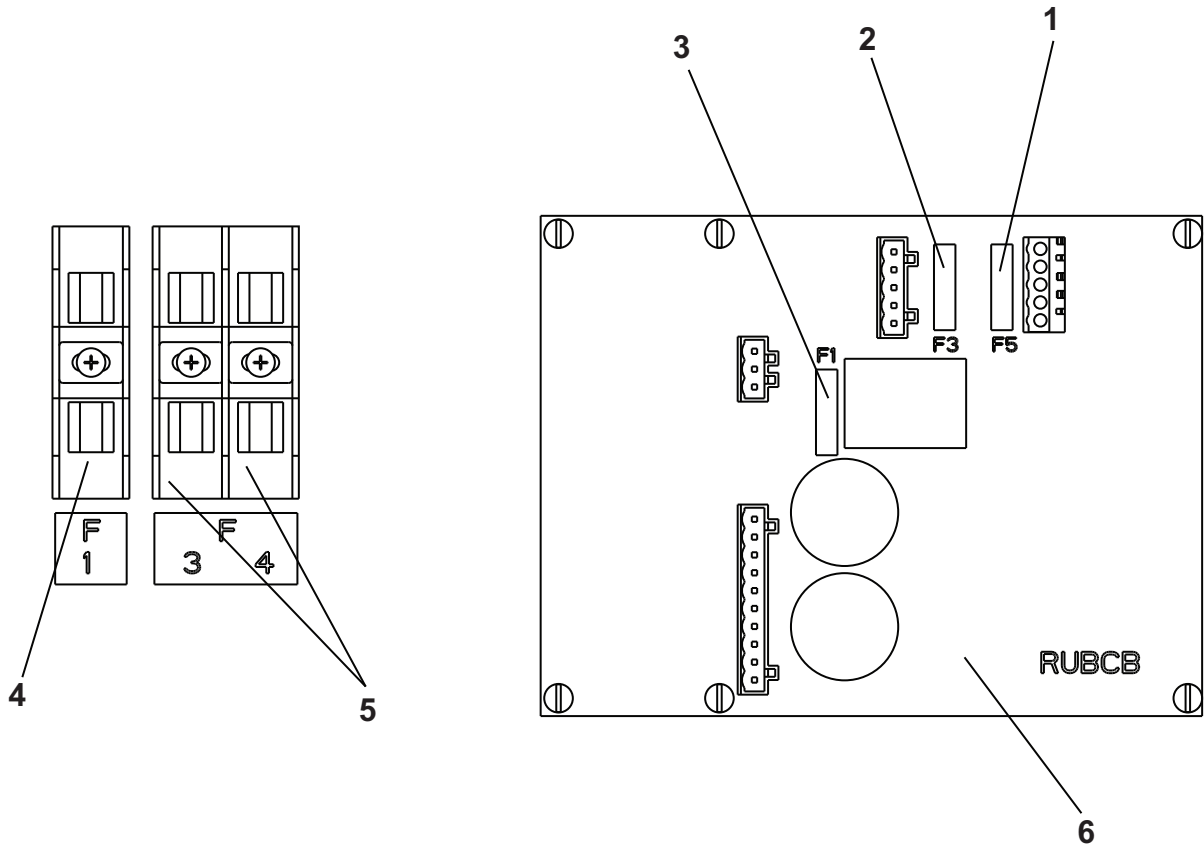


<b>ABA21305BX</b>			
<b>REF. No.</b>	<b>PART No.</b>	<b>DESCRIPTION</b>	<b>REMARKS</b>
1	AAA375BT6	Fuse, Single Element Fast Acting, 3 Amp, 250 V	F5
2	AAA638AM102	Relay, Contactor, Aux. Switch Block, 1 NO and 1 NC Contacts	AR1, AR2
3	AAA638AM9 AAA638AM37	Relay, Contactor, 48 VDC Coil, 2 NO and 2 NC Contacts	AR1, AR2, see <b>NOTE</b>
4	AAA613DA17	Relay, Socket Mount, 24 VDC Coil, 2 Form C Contacts	AR, BLV
5	AAA232FM90	Resistor, 5.1 kOhm, 1/2 Watt	R1, R2
6	AAA638AM101 AAA638AM122	Suppressor, Surge, 250 VDC	AR1, AR2, see <b>NOTE</b>

**NOTE:** The mating contactor or suppressor must be ordered at the same time.

# Fuses, PCB ARU1

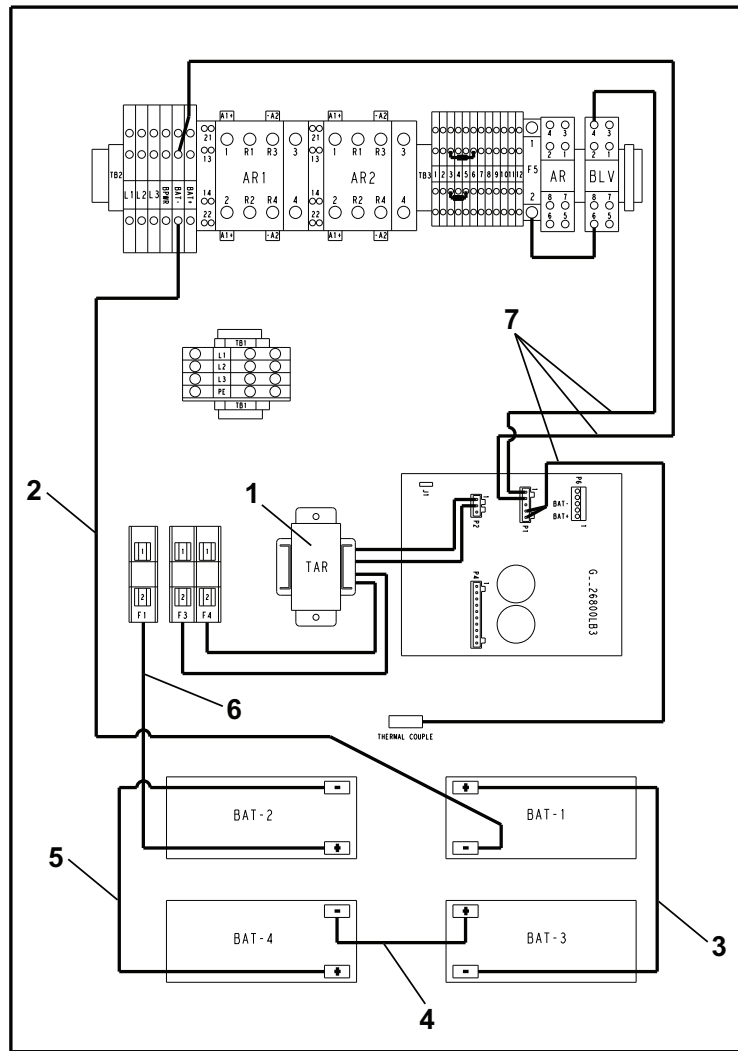
**10-AAA21305BX**



<b>ABA21305BX</b>			
<b>REF. No.</b>	<b>PART No.</b>	<b>DESCRIPTION</b>	<b>REMARKS</b>
1	GAA375CJ5	Fuse, Automotive Blade Type, 25 A 80V (located on PCB)	F5
2	GAA375CJ4	Fuse, Automotive Blade Type, 7.5 A 80V (located on PCB)	F3
3	AAA375CF2 AAA375BY16	Fuse, Single Element Time Delay (located on PCB, 20 mm), 1 A, 250 V	F1
4	AAA375BK45	Fuse, Time Delay, 30 A 600 V Rated, Class CC Type (located in ARU)	F1
5	AAA375BK7	Fuse, Time Delay, 300 mA, 600 V Rated, Class CC Type (located in ABA21305BX1, 480 V ARU1))	F3, F4
	AAA375BK10	Fuse, Time Delay, 600 mA, 600 V Rated, Class CC Type (located in ABA21305BX2, 208 V ARU1))	
6	GBA26800LB3	PCB, Battery Control Board	RUBCB

**10-AAA21305BX**

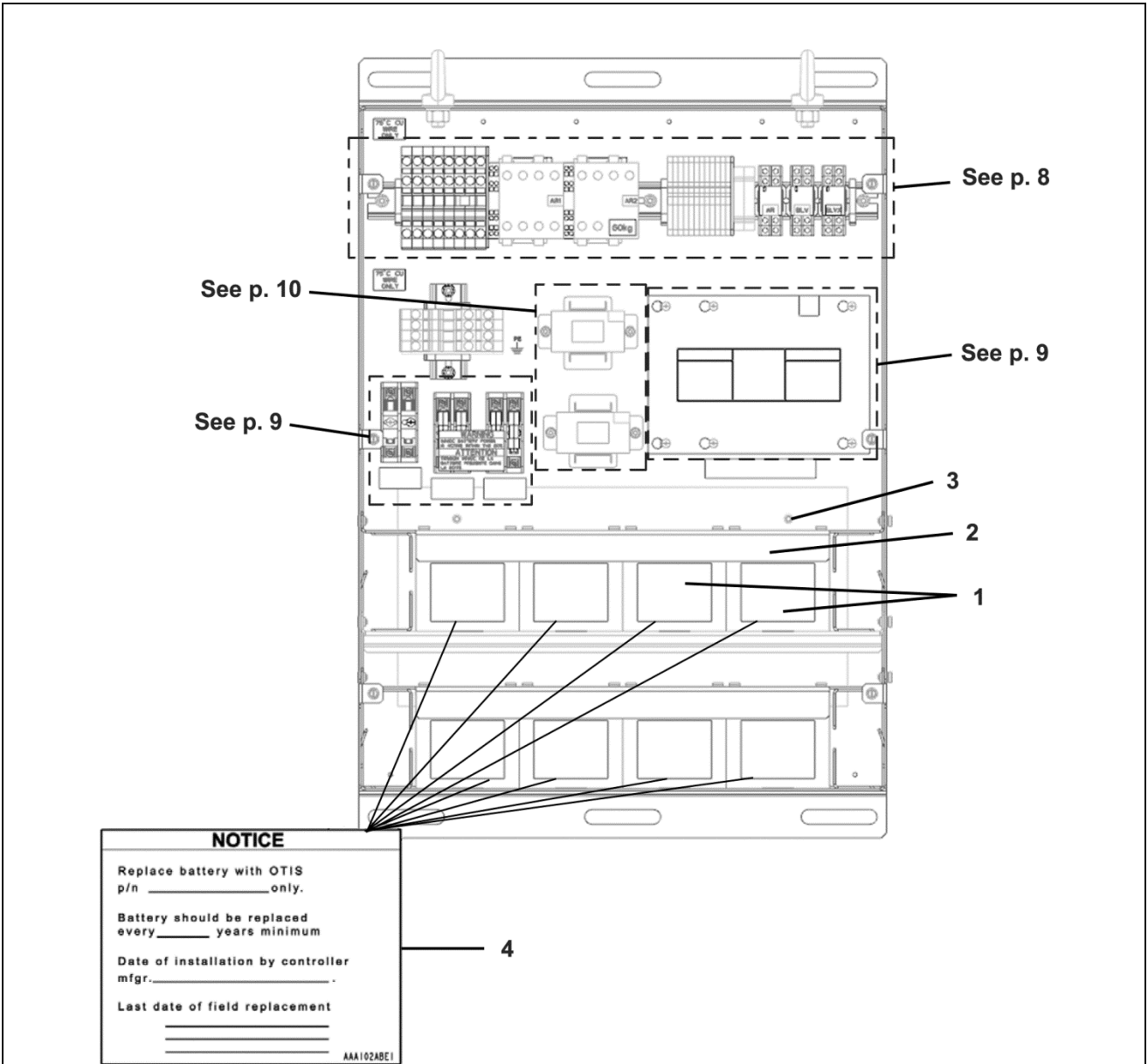
# Battery Interconnecting Cable, ARU1



ABA21305BX			
REF. No.	PART No.	DESCRIPTION	REMARKS
1	AAA21600CZ31	Cable, Electrical (contains transformer; located in ABA21305BX1, 480 V ARU1)	TAR TO PCB-P2, TO F3-2, TO F4-2
	AAA21600CZ51	Cable, Electrical (contains transformer; located in ABA21305BX2, 208 V ARU1)	
2	AAA21600CZ33	Cable, Electrical	TO BAT – 1(-), TO TB2 – BAT-
3	AAA21600CZ1		TO BAT – 3(-), TO BAT – 1(+)
4	AAA21600CZ2		TO BAT – 4(-), TO BAT – 3(+)
5	AAA21600CZ3		TO BAT – 2(-), TO BAT – 4(+)
6	AAA21600CZ30		TO BAT – 2(+), TO F1 - 2
7	AAA21600CZ45		TO BLV-4 TB2-BAT-, TO BCB-P1

# Battery Assembly, ARU2

**10-AAA21305BX**



**NOTICE**

Replace battery with OTIS p/n \_\_\_\_\_ only.

Battery should be replaced every \_\_\_\_\_ years minimum

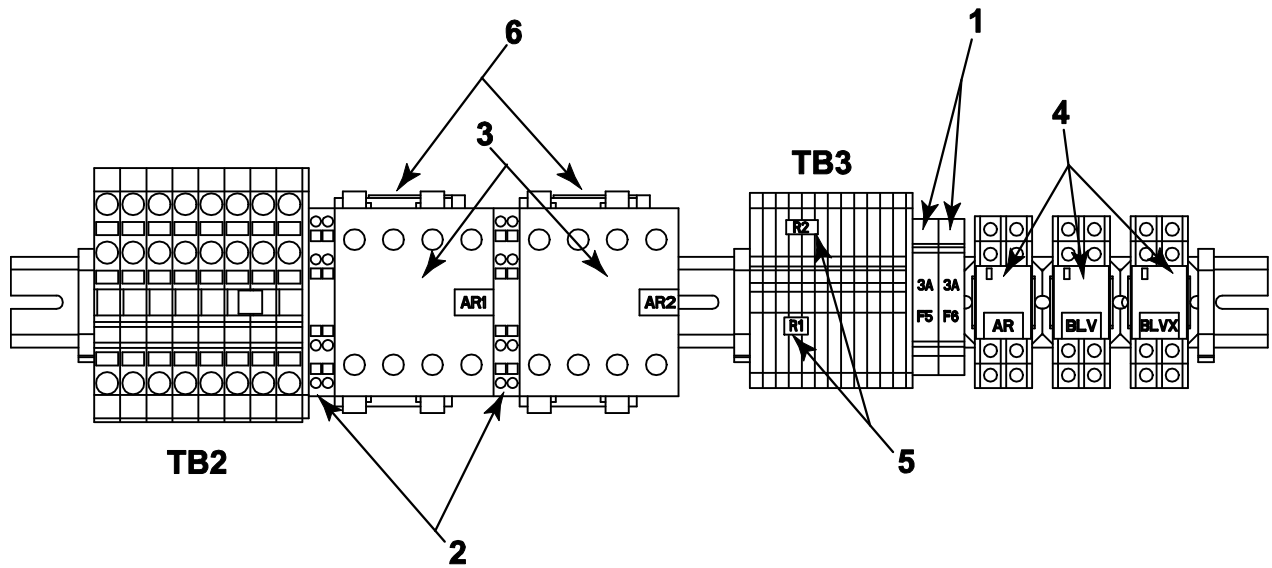
Date of installation by controller mgr. \_\_\_\_\_

Last date of field replacement \_\_\_\_\_

AAA102ABE1

**NOTE:** Batteries should be replaced every three years.

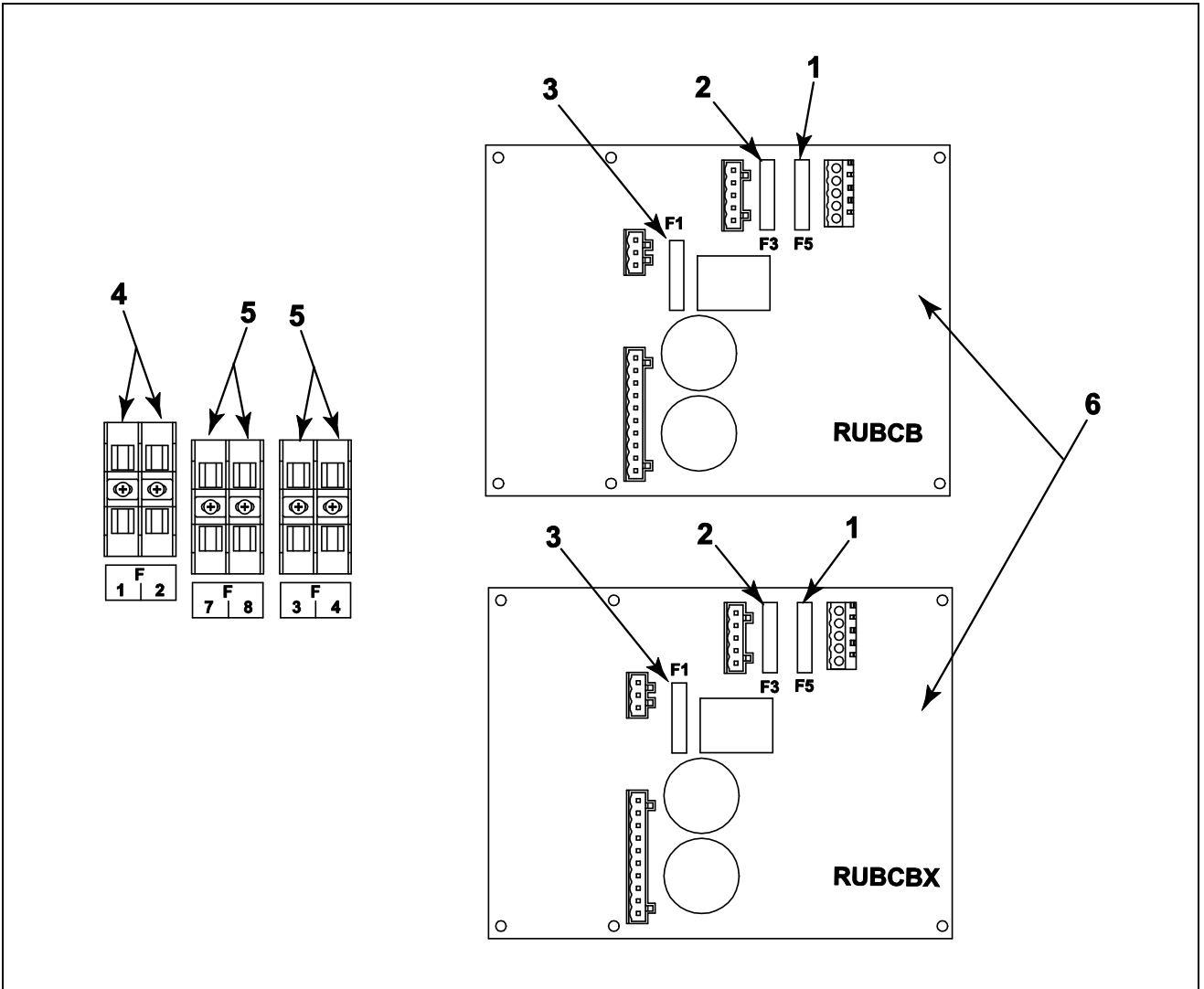
AAA21305DB			
REF. No.	PART No.	DESCRIPTION	REMARKS
1	AAA718E15	Battery, 12 V, 12 Ah	BAT1, BAT2, BAT3, BAT4, BAT5, BAT6, BAT7, and BAT8
2	AAA316HVC1 AAA316HLE1	Bracket, Battery	---
3	NON7201M5-8-Z AAA124FD38	M5 x 10 Cross Recessed Pan Head Screw	---
4	AAA102ABE1	Battery Data Plate	One per battery



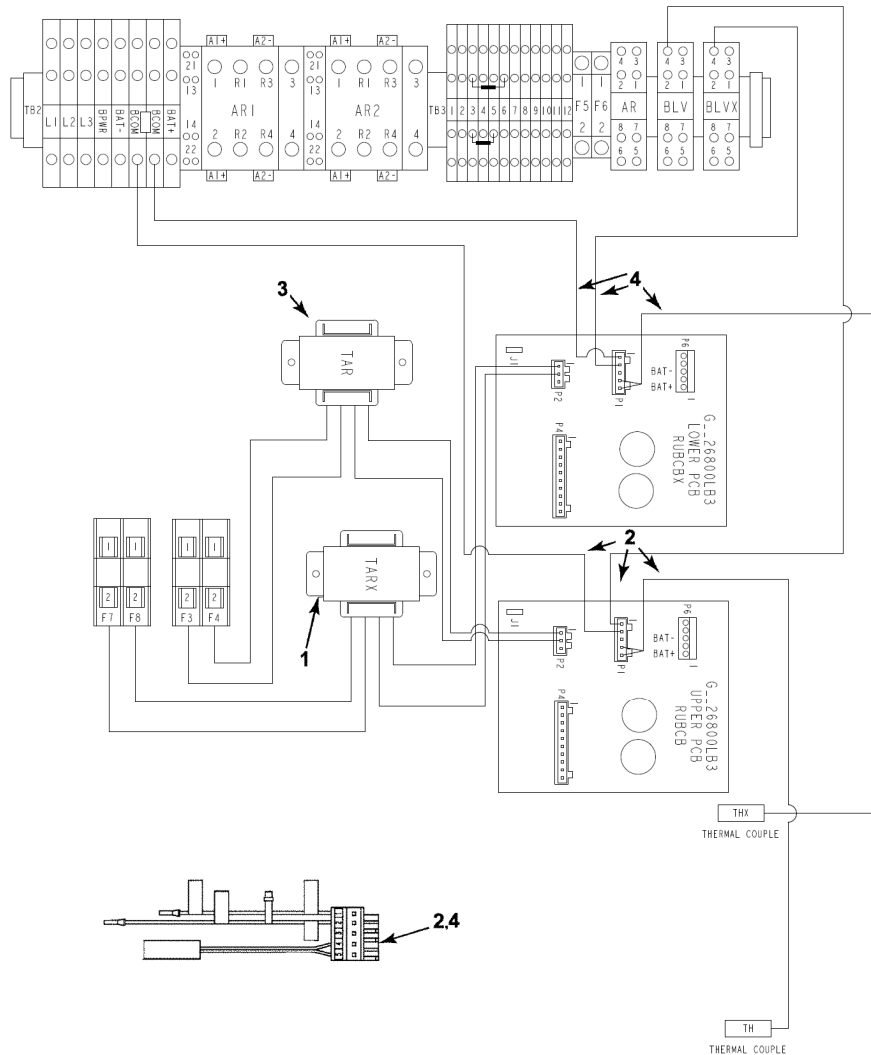
<b>AAA21305DB</b>			
<b>REF. No.</b>	<b>PART No.</b>	<b>DESCRIPTION</b>	<b>REMARKS</b>
1	AAA375BT6	Fuse, Single Element, Fast Acting, 3 Amp, 250 V	F5, F6
2	AAA638AM102	Relay, Contactor, Aux. Switch Block, 1 NO and 1 NC Contacts	AR1, AR2
3	AAA638AM9 AAA638AM37	Relay, Contactor, 48 VDC Coil, 2 NO and 2 NC Contacts	AR1, AR2, see <b>NOTE</b>
4	AAA613DA17	Relay, Socket Mount, 24 VDC Coil, 2 Form C Contacts	AR, BLV, BLVX
5	AAA232FM90	Resistor, 5.1 kOhm, 1/2 Watt	R1, R2
6	AAA638AM101 AAA638AM122	Suppressor, Surge, 250 VDC	AR1, AR2, see <b>NOTE</b>

**NOTE:** The mating contactor or suppressor must be ordered at the same time.

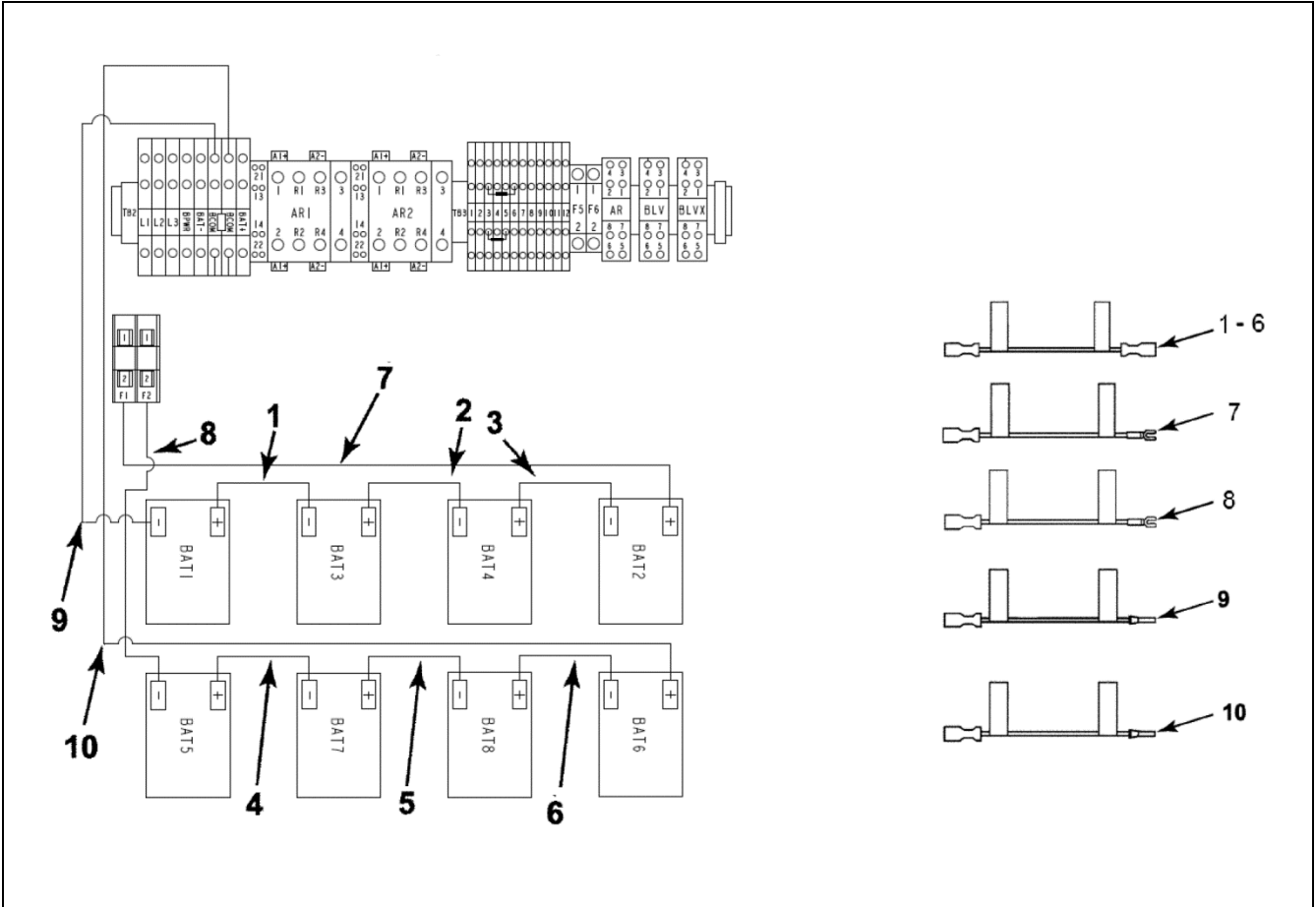




AAA21305DB			
REF. No.	PART No.	DESCRIPTION	REMARKS
1	GAA375CJ5	Fuse, Automotive Blade Type, 25 A, 80 V (located on PCB)	F5, F5
2	GAA375CJ4	Fuse, Automotive Blade Type, 7.5 A, 80 V (located on PCB)	F3, F3
3	AAA375CF2 AAA375BY16	Fuse, Single Element Time Delay (located on PCB, 20 mm), 1 A, 250 V	F1, F1
4	AAA375BK45	Fuse, Time Delay, 30 A, 600 V Rated, Class CC Type (located in ARU)	F1, F2
5	AAA375BK7	Fuse, Time Delay, 300 mA, 600 V Rated, Class CC Type (located in ABA21305DB1, 480 V ARU2)	F3, F4, F7, F8
	AAA375BK10	Fuse, Time Delay, 600 mA, 600 V Rated, Class CC Type (located in ABA21305DB2, 208 V ARU2)	
6	GBA26800LB3	PCB, Battery Control Board	RUBCB, RUBCBX



AAA21305DB			
REF. No.	PART No.	DESCRIPTION	REMARKS
1	AAA21600CZ48	Cable, Electrical (contains transformer; located in AAA21305DB1, 480 V ARU2)	TARX TO RUBCBX – P2, TO F7-2, TO F8-2
	AAA21600CZ50	Cable, Electrical (contains transformer; located in AAA21305DB2, 208 V ARU2)	
2	AAA21600DK4	Cable, Electrical (contains Thermocouple)	BLVX-4, TB2-BCOM, RUBCBX P1, P1-1, P1-2
3	AAA21600CZ47	Cable, Electrical (contains transformer; located in AAA21305DB1, 480 V ARU2)	TAR TO RUBCB – P2, TO F3-2, TO F4-2
	AAA21600CZ49	Cable, Electrical (contains transformer, located in AAA21305DB2, 208 V ARU2)	
4	AAA21600DK5	Cable, Electrical (contains Thermocouple)	BLV-4, TB2-BCOM, RUBCB P1, P1-1, P1-2



**AAA21305DB**

REF. No.	PART No.	DESCRIPTION	REMARKS
1	AAA21600DK34	Cable, Electrical, 122 mm L, Brown 10 AWG Wire, Labeled	BAT1(+), BAT3(-)
2	AAA21600DK35	Cable, Electrical, 122 mm L, Brown 10 AWG Wire, Labeled	BAT3(+), BAT4(-)
3	AAA21600DK36	Cable, Electrical, 122 mm L, Brown 10 AWG Wire, Labeled	BAT4(+), BAT2(-)
4	AAA21600DK37	Cable, Electrical, 282 mm L, Brown 10 AWG Wire, Labeled	BAT5(+), BAT7(-)
5	AAA21600DK43	Cable, Electrical, 282 mm L, Brown 10 AWG Wire, Labeled	BAT7(+), BAT8(-)
6	AAA21600DK45	Cable, Electrical, 282 mm L, Brown 10 AWG Wire, Labeled	BAT8(+), BAT6(-)
7	AAA21600DK30	Cable, Electrical, 572 mm L, Brown 10 AWG Wire, Labeled	BAT2(+), F1-2
8	AAA21600DK46	Cable, Electrical, 452 mm L, Brown-White, 10 AWG Wire, Labeled	BAT5(-), F2-2
9	AAA21600DK33	Cable, Electrical, 452 mm L, Brown-White, 10 AWG Wire, Labeled	BAT1(-), TB2-BCOM
10	AAA21600DK40	Cable, Electrical, Labeled, Brown, 10 AWG Wire	BAT6(+), TB2-BCOM)