



CRE-2110, CRE-2110C and CRE-2110OS
residential and commercial
ELITE CURVE
CUSTOM CURVED RAIL STAIRLIFT

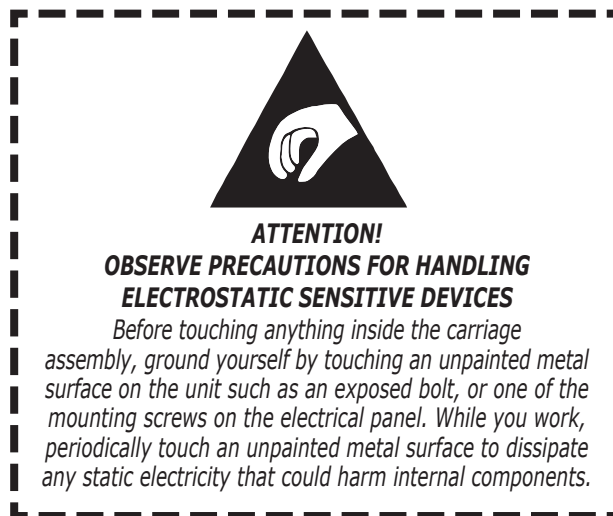
INSTALLATION MANUAL
02-08-2019
P/N 2110-I

The warranty for the CRE-2110
Elite Curve-Custom Curved Rail Stairlift is
rendered null and void
if the unit is installed or maintained by
anyone other than an authorized Bruno dealer.

This stairlift is
FOR INDOOR USE ONLY
in enclosed heated locations
above 35°F (2°C).

IMPORTANT SAFETY NOTES!

1. Always turn the carriage circuit breaker **OFF** and ground your body to bare metal before plugging in any wire harness to the PC board or when touching the PC board. Static charge can damage electronic components.
2. Always turn the carriage circuit breaker **OFF** when working around the drive gear to prevent accidental entanglement.



Electra-Ride™ is a trademark of Bruno Independent Living Aids, Inc.® The Electra-Ride® III, #5,967,265, is covered by one or more U.S. Patents and/or has U.S. Patents Pending

Velcro® is a registered trademark of Velcro Industries B.V.

Vise-Grip® is a registered trademark of Irwin® Industrial Tools.

Pledge® is a registered trademark of the S.C. Johnson & Son, Inc.

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REGULATORY INFORMATION

REGULATORY LISTINGS



This lift is intended to be installed in accordance with the current edition of:

- ASME A18.1:2017 Safety Standard for Platform Lifts and Stairway Chairlifts
- Units with overspeed assembly
- ASME A18.1:2014 Safety Standard for Platform Lifts and Stairway Chairlifts
- Units with out overspeed assembly
- CAN/CSA-B613-00 (R2005) - Private Residence Lifts for Persons With Physical Disabilities
- ASME A17.5/CSA B44.1 - 2014 Elevator and Escalator Electrical Equipment
- NFPA 70: National Electrical Code®
- CSA C22.1 Canadian Electrical Code

Verify applicable local codes with the appropriate regulatory authorities.

FCC REGULATIONS

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the of the following measures:

- Reorient or relocate receiving antenna.
- Increase separation between equipment and receiver.
- Consult your dealer.

THIS DEVICE COMPLIES WITH FCC RULES PART 15.

OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:

- (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE AND,
- (2) THIS DEVICE MUST ACCEPT INTERFERENCE THAT MAY BE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

INSTALLING DEALER RESPONSIBILITIES

The installing dealer has responsibility to report any malfunctions, safety concerns or events to the manufacturer in a timely manner. The installing dealer also has the responsibility to ensure that the users are properly trained in the use and operation of the unit.

Bruno stairway elevators shall be put into service and regularly serviced by a Bruno authorized dealer in accordance with the information provided in installation documents provided with the device.

MATERIAL SAFETY DATA SHEETS

Material safety data sheets (MSDS) on materials used on this unit may be requested through the Bruno Technical Service Department.

CARTON CONTENTS AND TOOLS

CARTON CONTENTS

The **CRE-2110** is shipped in three (3) main cartons plus separately-wrapped rail sections. Before beginning an installation, check the carton contents against the packing list to be sure you have all the components.

Also, check the carton contents for shipping damage upon receipt. Damage claims must be filed promptly by the Dealer, not the Manufacturer.

Bruno Independent Living Aids cannot be responsible for shipping damage.

CARRIAGE BOX

- complete carriage assembly with covers
- remote control box
- antenna kit

INSTALLATION BOX

- rail standfeet
- tube of grease, charge cable kit
- charge contact blocks (2)
- final limit assembly
- shims, screws, nuts/bolts/washers, rail joint hardware kit, nut bars

FOOTREST BOX

- footrest assembly
- cover kits
- footrest tool with pin

SEAT BOX

- seat assembly
- seat installation kit
- battery charger assembly

RAIL SECTIONS WRAPPED SEPARATELY

TOOLS

Be sure you have all necessary parts and tools before traveling to installation site.

- **FIX-00525 rail clamp (recommended - available from Bruno)**
- Angle locator/protractor
- Digital level
- 20-foot tape measure
- Flashlight
- Metric sockets(10 mm, 13 mm, 17 mm and 19)
- Metric and U.S. open ended box wrenches (7 mm, 10 mm, 13 mm, 17 mm, 19 mm, plus 9/16 in., 5/8 in.)
- Soft-faced or dead-blow hammer, or hard rubber or rawhide mallet
- Ratchet, 3/8 in. with 6 in. extension
- Magnetic Phillips screwdrivers
- Flat-head screwdriver
- Torque wrench (open end, and one that handles 50-80 ft.lb./68-108 Nm)
- Metric Allen wrenches (#2, #2.5, #5 and #6)
- Magnetic socket, 3/8" (Bruno recommends use with an 18" extension)
- Needle-nose pliers
- Utility knife
- Vise grips and C-clamp vise grips
- Drill driver with *MINIMUM* 18 in. extension
- Drill bits: appropriate for floor (eg. concrete, hardwood); 3/8", min. 6" long
- Extension cords
- Scratch awl
- Multimeter



Torque Specifications GRADE 10.9 (Metric) (Rough equivalent to US Grade 8)

M 6	7 lb.-ft.....	9.49 Nm
M 8	25 lb.-ft.....	33.8 Nm
M 10	47 lb.-ft.....	63.7 Nm

INSTALLATION

PREPARATION FOR INSTALLATION

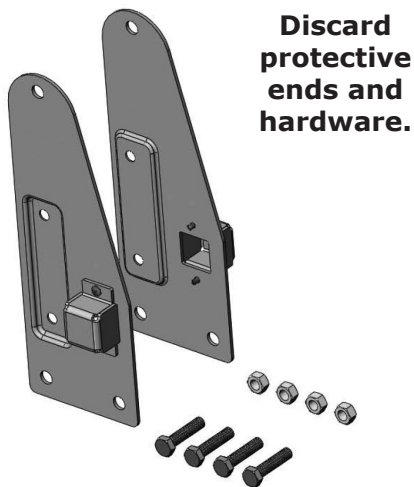
Refer to the rail/clamp chart for the correct rail-to-step nosing position.

Note: The information on the installation drawing is intended as a guide for the installer. Rail placement may vary according to conditions found at the installation site.

Rails are numbered on the bottom side near the end of the rail.

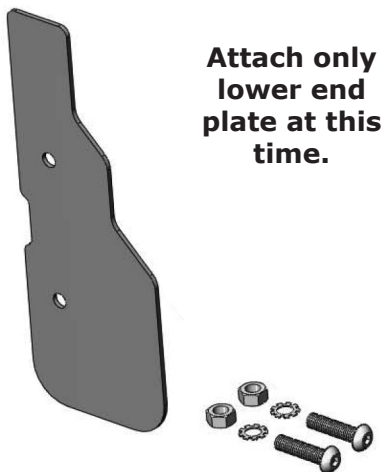
The number indicates rail placement on the staircase.

- Rail #1 is the first rail at the bottom of the stairs.
- Rail #2 is the next rail as you go up the stairs, and so on.



Remove the protective ends shipped on the upper and lower rails.

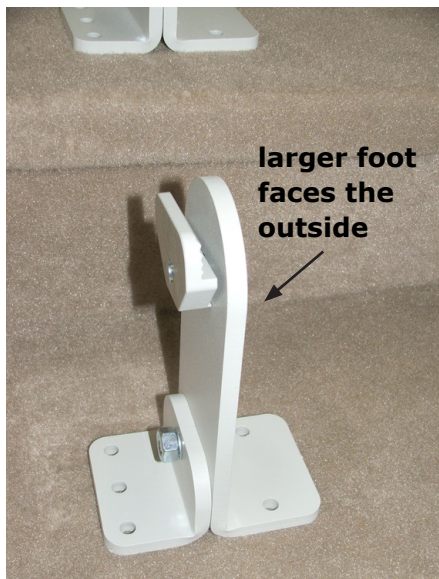
DISCARD THE PROTECTIVE ENDS AND HARDWARE.



Attach the **lower** rail end plate and charge bracket to the lower rail section *before* placing the rail on the stairs. See photo to the left.

Do NOT attach the **upper** end plate or charge contact at this time.

CLAMP PLACEMENT AND RAIL INSTALLATION



1. Set the clamps on the steps, as indicated on the Application Drawing.

NOTE: Larger clamp faces the outside (chair side of rail).

2. **Referring to the Application Guide**, position clamps to ensure correct step nose clearance.



3. Begin rail placement with rail section no. one.



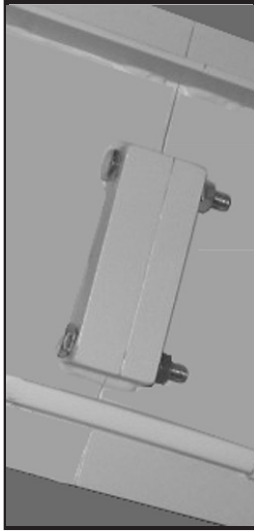
4. Position and attach the rail clamps to the lower rail assembly as shown on the application drawing.

*NOTE: Rail clamps vary in size.
Verify size and installation location on the
installation drawing.*

5. Verify:
 - the **step nose-to-rail dimension** (measured perpendicular to the rail bottom);
 - the **rail angle**.

INSTALLATION

CLAMP PLACEMENT AND RAIL INSTALLATION



6. Install rail section no. two to rail section no. one using (2) M10 x 1.5 x 70 mm hex head cap screws to join the rails.

NOTE: It may be necessary to install a screw into one of the rear holes on the clamp assembly to prevent the rail from sliding.

7. Install the remaining lower section(s), if applicable, and add clamps as shown on the installation drawing.

Check the angle of each section before installing the next section!

8. Install the upper rail section(s), adding clamp assemblies with each section.

NOTE: Do not install the end plate and charge bracket at this time.

9. Position the rail as close to the application drawing measurements as possible.

10. Secure the rail with one or two screws.

NOTE: You may need to shim the rail to ensure proper placement.

For example, if the rail is leaning forward, shim the front of the clamp until the unit is level.

******VERY IMPORTANT******

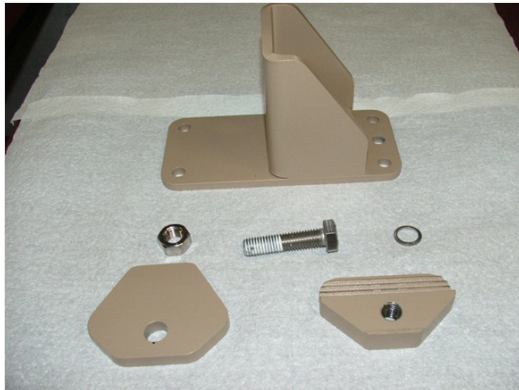
The degree of slope of the rail is critical. To locate the degree at which each rail piece should be installed, use the ELEVATION VIEW drawings ***specific to your job*** and inserted in this manual. Place the angle finder on the guide strip on the front of the rail to obtain the *correct angle*.

The *correct angle* should be observed within 1/2 degree, every (2) feet of linear rail travel.



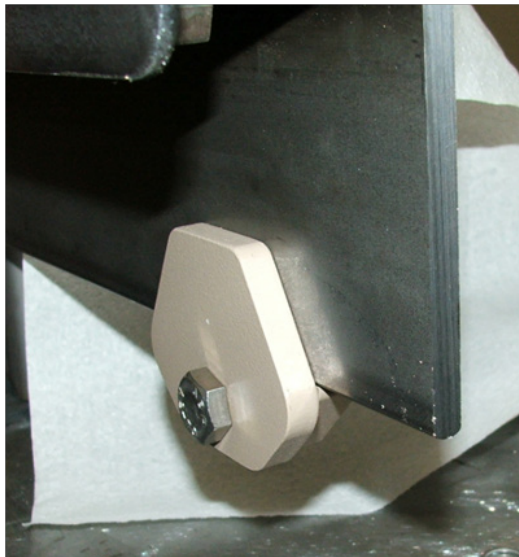
Check the rail angle every (2) feet of linear travel.

STRAIGHT FLAT LANDING ADJUSTABLE CLAMP INSTALLATION (if applicable)

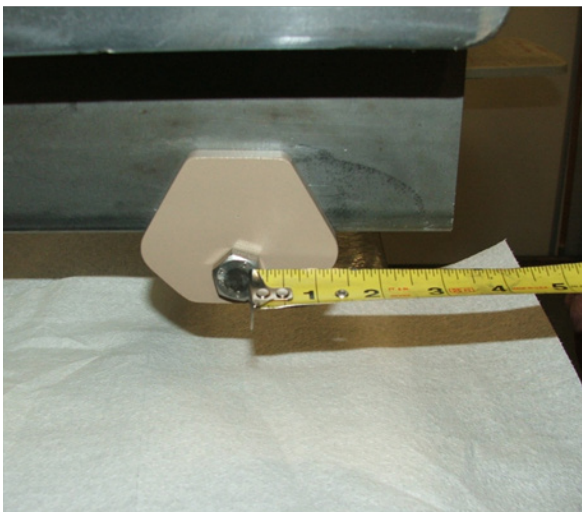


1. Check for all parts:

(1) clamp base, (1) front clamp, (1) back clamp and hardware (M12x 1.75 screw, safety washer and nut), wood lag screws or other anchors screws (not shown).



2. Using the M12 x 1.75 X 50mm long full thread screw, assemble the front and back clamps to the rail.



3. Position all clamps on the rail according to the dimensions from the application drawing.

Secure the clamps (see Notes below).

NOTES: Make sure the back clamp is snug to the bottom of the rail before tightening down.

The first three steps may be performed before placing the rail in position on the landing.

*In order to ensure the safety of the user when disembarking, **there must be clamps located 3 inches (76 mm) and 12 inches (305 mm) in from the end of the rail.***

The clamp after the 12-inch (305 mm) position should be located 30 inches (762 mm) from the 12-inch (305 mm) position.

INSTALLATION

STRAIGHT FLAT LANDING ADJUSTABLE CLAMP INSTALLATION (if applicable - continued)



- Once the rail is level and at the correct height, mount the clamp base bracket to the back clamp using the extra thread length from the M12 x 1.75 screw.

Be sure to use the safety washer between the bracket and the nut to keep the rail from slipping down on the slot.

	straight	curve
front		
back		

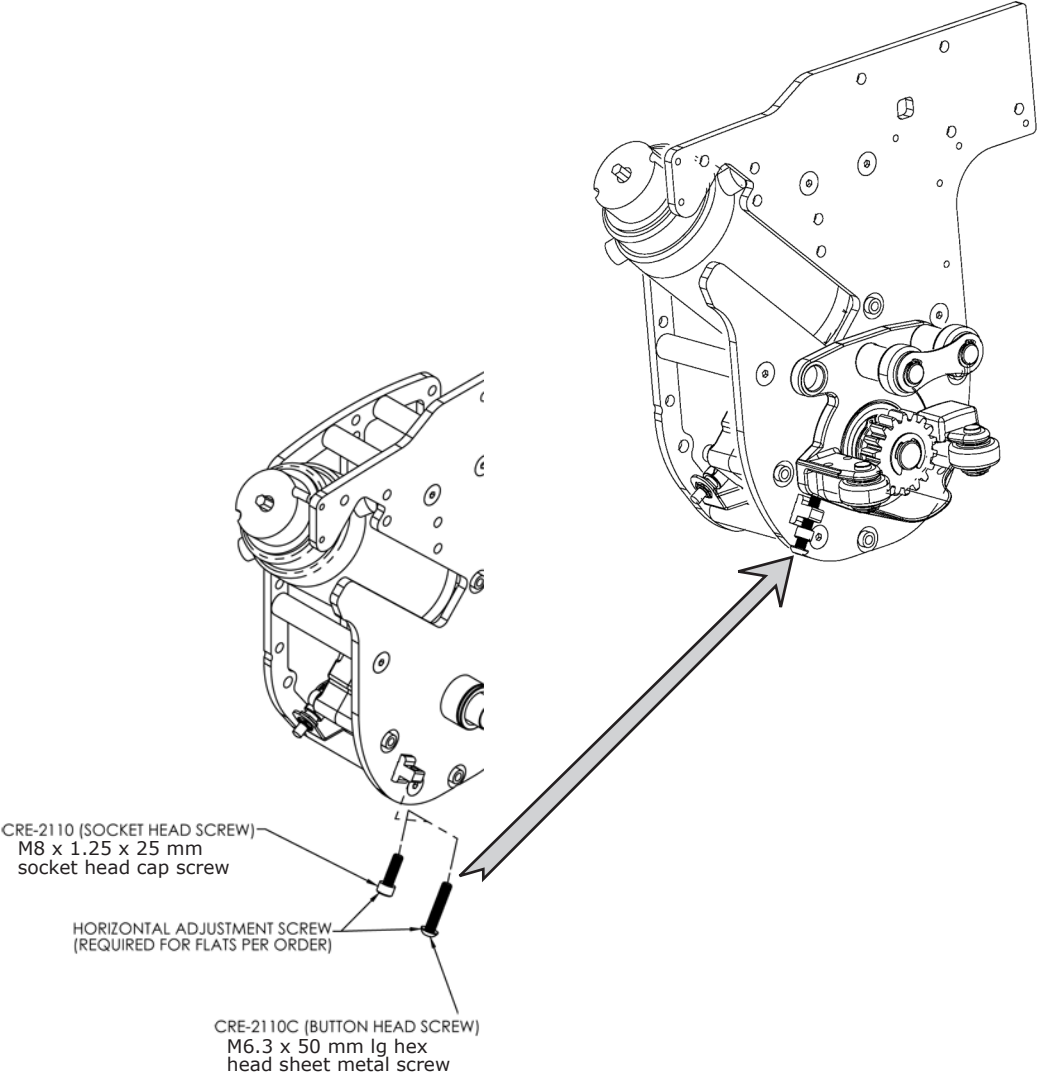
- Finish leveling the section and secure it to the upper landing using lag screws provided.

Note: The curve flat landing adjustable clamps set up in the same manner, except that the front and back clamps are smaller to accommodate the bow in the rail and the required carriage clearance.

ZERO-DEGREE SLOPE

The CRE-2110 is equipped with a horizontal adjustment screw to accommodate stairways which include a portion with zero-degree slope.

This screw is factory set. **Do not adjust** it without contacting a Bruno representative for instructions.



MOUNTING LEAD IN CABLE CHANNEL



The rail is shipped with the adhesive-backed cable channel mounted on the back of the rail.

- 1. Insert the power cable into the channel.

INSTALLATION

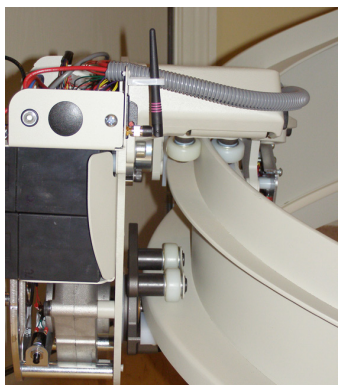
CARRIAGE and FOOTREST



NOTICE:

Before touching anything inside the carriage assembly, ground yourself by touching an unpainted metal surface on the unit such as an exposed bolt, or one of the mounting screws on the electrical panel.

While you work, periodically touch an unpainted metal surface to dissipate any static electricity that could harm internal components.



1. Turn on the circuit breaker.

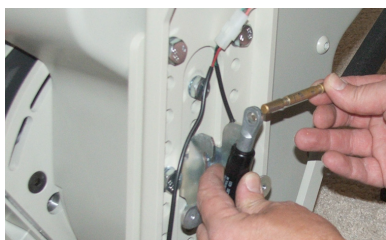
2. Using the remote, power the carriage onto the rail until all of the carriage wheels are on the rail.

3. Mount the footrest as follows:

- Remove the (2) **hex head** bolts from the front of the carriage.
- Secure the footrest (***middle hole of footrest***) to the carriage using (2) hex head bolts (see left). **Torque to 50 ft-lb (68 Nm).**



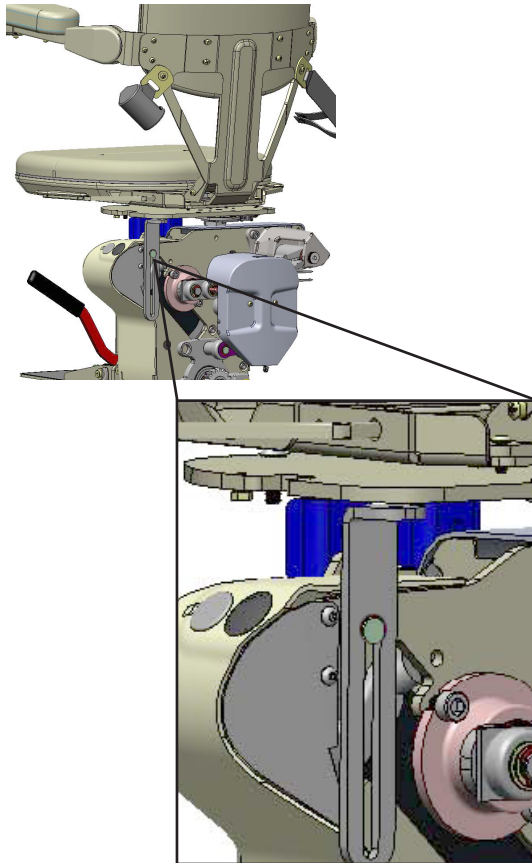
- Insert the pin in the gas spring (see left).
- Fold the footrest to approximately 45°.



- As you rotate the tool downward, gently push the pin into the notches on the gas shock bracket (see left).
- Remove the pin insertion tool and set aside.



SEAT



1. Mount the rear seat support bracket (see left) using M-10 bolt and safety lockwasher. **Do not tighten at this time.**



Tilt seat and set into notches.

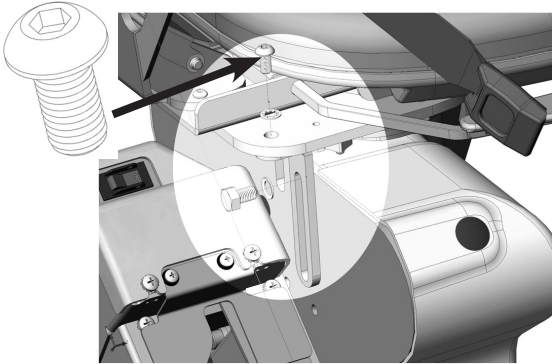
2. To mount the seat on the carriage, tilt the seat slightly forward, and set into the notches of the adjustable seat bracket.
3. Connect the (3) wiring harnesses:
 - 3-pin: footrest
 - 6-pin: seat swivel (rocker switch)
 - 12-pin: seat swivel (diagnostic board).
4. Insert (2) hex head bolts and washers through the front seat bracket holes to **loosely** secure the seat.



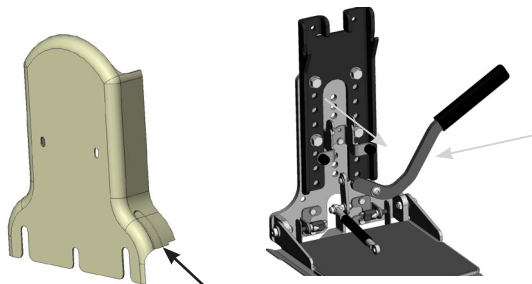
Loosely secure with 2 bolts.

INSTALLATION

SEAT (continued)

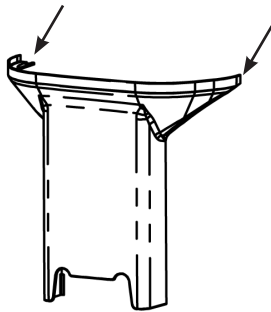


Insert buttonhead Allen screw from top.



footrest lever cutout
(one on each side)

bumpers and screws



Slide top footrest cover under screws.

5. Rotate the seat to gain access to the Allen head screw hole above the seat bracket (see left).
6. Insert and tighten the Allen head screw.
7. While pulling the seat back slightly forward, fully tighten the seat support bracket bolt (see Step 1).
8. To mount the footrest cover:
 - remove the cutout for the footrest lever;
 - remove the (2) footrest bumpers;
 - place the lower footrest cover against the bracket;
 - reinsert the bumpers and screws;
 - tighten the screws.
9. Loosen (**but do not remove**) the (2) top 10mm footrest top shroud screws (see bottom left).
10. Mount the top footrest cover by sliding it under the screws loosened in Step 10.
11. Tighten the (2) top screws.
12. Turn on the circuit breaker.
13. Lower the footrest.
14. Using the arm rocker switch, run the seat and carriage down the rail to check for proper clearances (*footrest-to-step nose and seat-to-wall/obstruction*). Adjust as needed.
15. If the clearances are correct, secure the remaining stand feet to the stairs.

Always secure the back screws of the stand feet first! Be sure the bottom edge of the rail is fully supported by the stand foot (no air gaps). Torque to 225 lb-in (25 Nm).

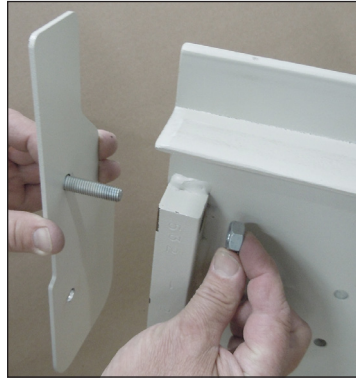
WARNING

RISK OF INJURY!

Do NOT ride the stairlift until all stand feet are properly secured.

Failure to observe this warning could result in injury or damage to equipment.

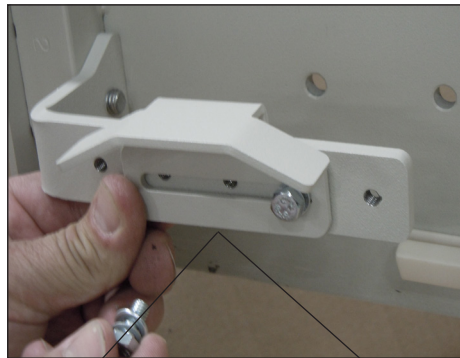
FINAL LIMIT, END CAP AND CHARGE CONTACT



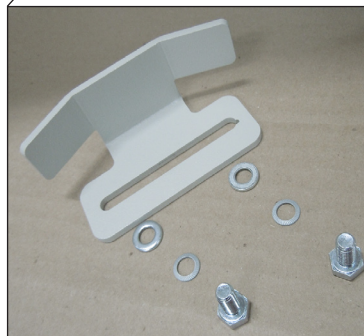
1. upper end cap
(back of rail)



2. upper final limit
(back of rail)



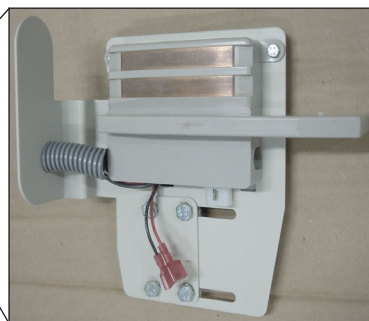
2b. upper final limit
limit (complete)
(back of rail)



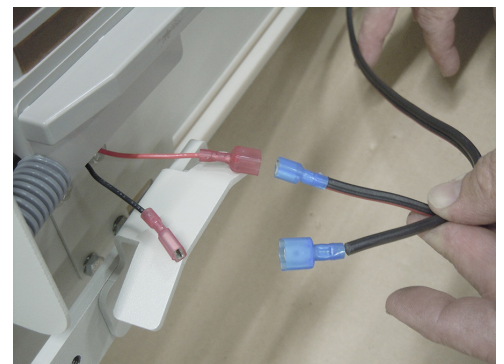
2a. upper final limit
(back of rail)



3. upper charge contact
(back of rail)



3a. upper charge contact
(back of rail)



4. upper charge contact wire connections black to black and red to red (back of rail)
(continued on next page)

INSTALLATION

FINAL LIMIT, END CAP AND CHARGE CONTACT



5. upper charge contact tuck wire connections (back of rail)

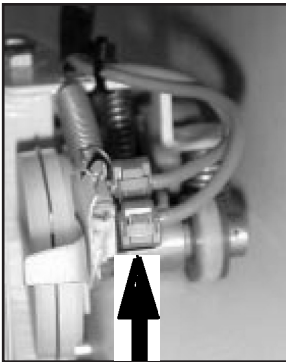


6. lower charge contact no final limit (back of rail)



7. lower charge contact and end cap no final limit

RESETTING THE OVERSPEED (CRE-2110C/OS units only)

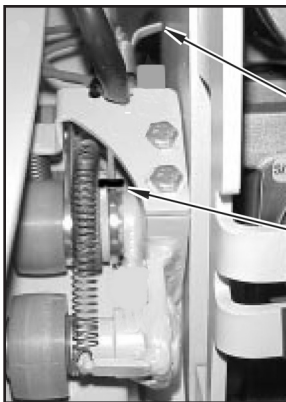


overspeed switch

1. If the overspeed switch trips, you must *reset (2) levers (overspeed lever and cam lever)*. See photos at left.
2. While rotating the overspeed switch lever, push in on the wires to engage the overspeed switch.

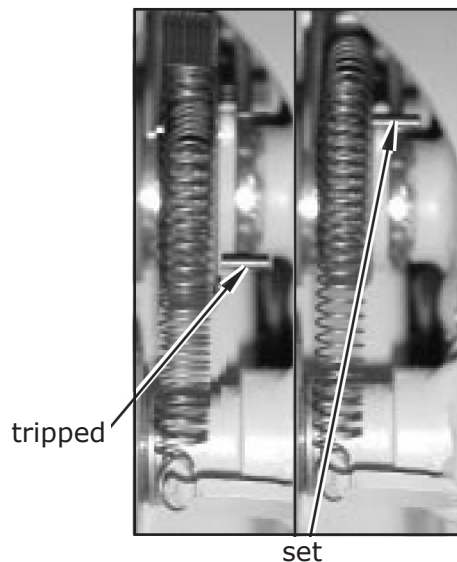
NOTE: If the lever is rotated too far, the unit will not be reset.

3. Rotate the cam lever until you just feel the switch engage.



overspeed lever

cam lever (in set position)

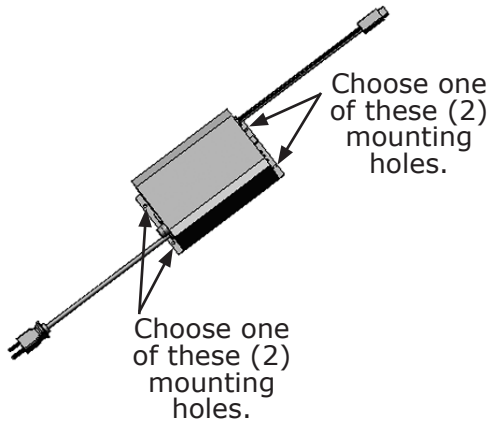


tripped

set

CAM LEVER

MOUNTING THE BATTERY CHARGER



1. Position the charger in a suitable permanent location **where it will not create a tripping hazard.**

2. Secure the charger by inserting (2) screws (provided) through the mounting holes in the charger base.

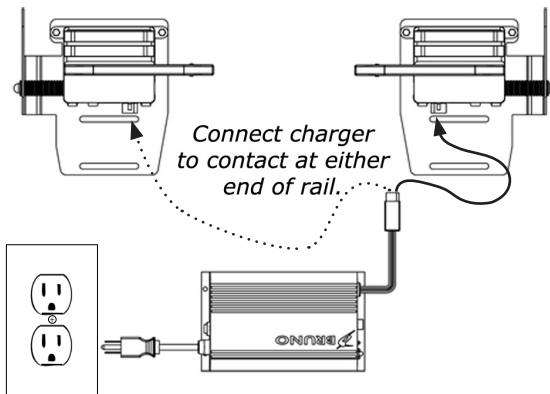
NOTE: There are (2) mounting holes on each side of the charger base. Choose one of the two on each side.

3. Connect the charger power cord to the nearest wall or floor outlet.

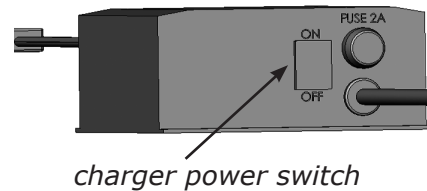
4. Connect the charger wiring harness to the elevator charge contacts.

5. Bundle together loose wires.

6. Turn ON the charger power switch.



**standard unit
(no mid-park)**

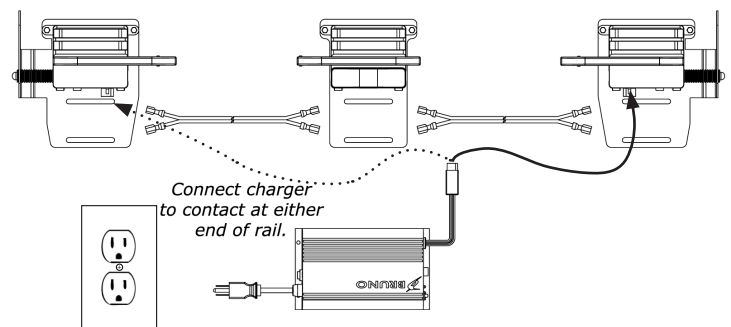


charger power switch

Leave charger plugged into a household outlet at all times!



charger connection to charge contact



unit with optional mid-park

INSTALLATION

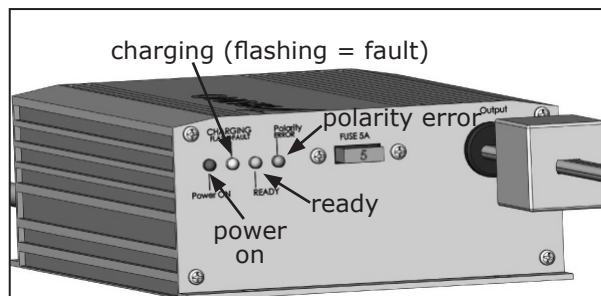
IMPORTANT CHARGING NOTES



Note: If the charger AC power plug and wire are located in a vulnerable location, use of a plug lock is recommended to prevent accidental unplugging. Plug locks are available at hardware and department stores.

- The elevator is designed so that the batteries will be charged when the carriage is at a designated charging point.
- It is imperative that the carriage be “parked” at the end of the rail (or at the mid-park position, if applicable) when it is not in use to maintain full battery charge.
- Frequently check that the LED charging indicator is ON (see left).
- If the stairway elevator cannot be parked at one end of the rail (for example, on stairways with a door at the top), use the remote call/send transmitter to send the carriage to the other end (or to the mid-park position, if applicable). In this way, the carriage will properly engage the charging contacts, ensuring that the batteries will remain fully charged.

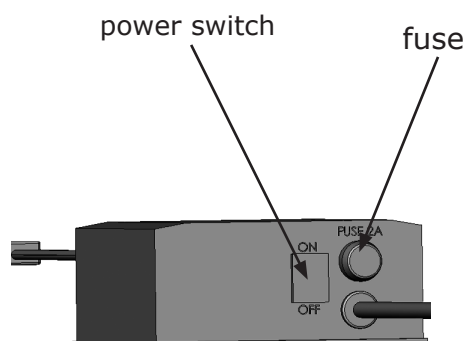
BATTERY CHARGER LED'S



6) LED indicators (status and color):

STATUS	RED	YELLOW	GREEN	blue	COMMENT
AC Power On without any battery connected	ON	ON (< 1 sec.) OFF	OFF	OFF	Charger has not been connected to any batteries.
AC Power On	ON (< 5 sec.)	ON (< 5 sec.)	ON (< 5 sec.)	OFF	This feature detects any battery disconnect situation and has a 5 sec. delay until yellow & green are completely off.
Event battery disconnect	ON	OFF	BLINK (5 sec.)	OFF	
	ON	OFF	OFF	OFF	
Bulk Charge (Constant current)	ON	ON	OFF	OFF	At this stage the charger is delivering max current (2.2 A)
Constant Voltage	ON	ON	OFF	OFF	At this stage the charger has reached maximum voltage and current continues to drop.
Float Charge	ON	OFF	ON	OFF	At this stage batteries are fully charged. The Yellow LED turns occasionally off.
Abnormal Conditions:				OFF	This feature indicates that the battery voltage is not climbing to acceptable level
Low Voltage Indication	ON	BLINKS ALTERNATELY	BLINKS ALTERNATELY		
Bad Battery/Sulfation	BLINKS ALTERNATELY	BLINKS ALTERNATELY	OFF		This feature indicates that the batteries are heavily sulfated or defective.
Bad contact / Partial battery sulfation	ON	OFF	FAST BLINK		This feature indicates a partially open circuit. Bad contact or battery sulfation
Battery connector reverse				ON	

BATTERY CHARGER FUSE REPLACEMENT



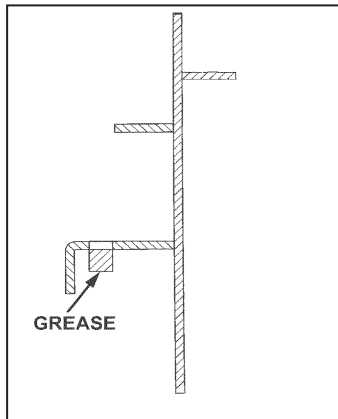
If the charger is subject to a power line surge, the AC input fuse may blow. Refer to the illustration to the left for fuse location.

To replace fuse:

1. Turn OFF the battery charger power switch.
2. Remove power cord from wall outlet.
3. Twist the fuseholder cap and pull out to remove the fuse.
4. Replace with the same size and type:
(Bussmann GMD-2A or equivalent) 2A, Slo-Blow, 5x20 mm.

INSTALLATION

RAIL LUBRICATION



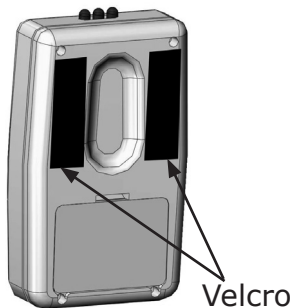
First-time lubrication:

1. Run the stairway elevator up and down several times.
2. Wipe the rail clean with Pledge® .
3. Apply a thin layer of *white lithium grease* to the gear rack teeth only.

RAIL CLEANING

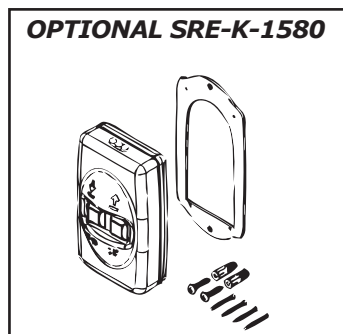
1. Regular cleaning of the rail is important to ensure proper operation of the rail and elevator components.
2. Develop the practice of frequent rail cleaning with Pledge®, especially if the stairway elevator is used in harsh environments.
3. Approximately once per year, regrease the gear rack teeth **ONLY** with white lithium grease.

MOUNTING THE CALL/SEND TRANSMITTER



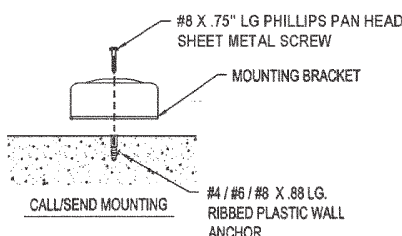
Mounting STANDARD transmitter:

1. Leaving the hook and loop halves of the (2) Velcro® strips (provided) together, remove the backing from the **hook** half of each strip.
2. Mount the (2) strips to the back of the transmitter as shown.
3. Remove the backing from the **loop** half of each strip.
4. Mount the transmitter to the desired surface (eg. wall, railing) by gently pressing against the transmitter.

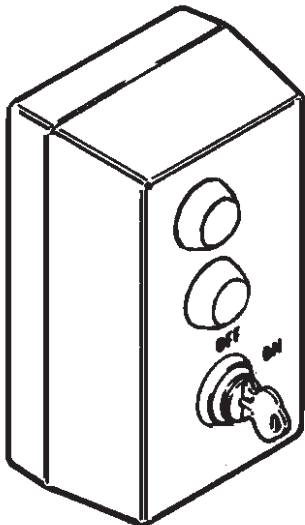


Mounting with OPTIONAL kit SRE-K-1580:

1. Mount the bracket to the back of the transmitter using the (4) screws provided.
2. Position the bracket/transmitter unit in the mounting location on the wall and mark the top and bottom bracket holes.
3. Drill a pilot hole slightly smaller than the anchors provided.
4. Gently pound the anchors into the wall with a rubber mallet.
5. Position the bracket/transmitter unit on the wall so that the top/bottom bracket holes align with the anchors.
6. Secure the bracket/transmitter to the wall using the screws provided.



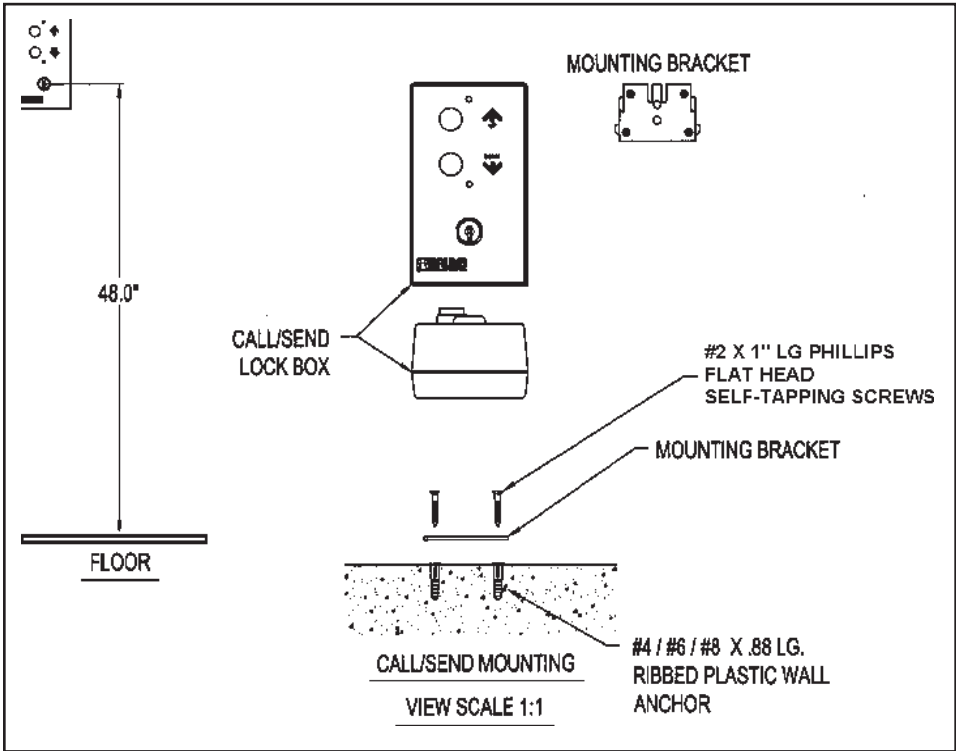
MOUNTING THE KEYED CALL/SEND TRANSMITTER



keyed call/send transmitter

- 1. Install the key-controlled call/send transmitters as shown below.
- 2. The distance between the key switch and the floor should measure approximately 48".
- 3. Install one transmitter at the top of the stairs, and one at the bottom.

NOTE: Codes may vary from one municipality to another. Check pertinent local codes in force before beginning installation of the call/send transmitter.



INSTALLATION

TESTING THE CALL/SEND TRANSMITTER

Soft Start Feature

The controller includes a *soft start* feature which causes a *short delay* between the time the rocker switch on the armrest is depressed and the initiation of carriage movement.

This is normal!

1. Using the rocker switch on the seat armrest, run the unit up and down the rail.

NOTE: The unit should travel noticeably faster going up than down.

2. Check for smooth operation and travel.
3. Now, using one of the remote call/send transmitters, run the unit up and down the rail.
4. Repeat Step 3 with the other transmitter.
5. Check for smooth operation and travel.

TESTING THE UNIT COMPONENTS

1. When the installation is complete, test the operation of the following components:
 - a. rocker switch
 - b. armrest key switch (if applicable)*
***In the OFF position, the key switch will disable both the unit and the remotes.**
 - c. footrest safety switches
 - d. carriage limit switches
 - e. seat safety switch.

NOTE: This unit includes equipment covered by FCC regulations. Any changes or modifications to the call/send transmitter or receiver, unless expressly approved by Bruno Independent Living Aids, Inc.® (the party responsible for ensuring its equipment complies with FCC regulations), could void the user's authority to operate the equipment.

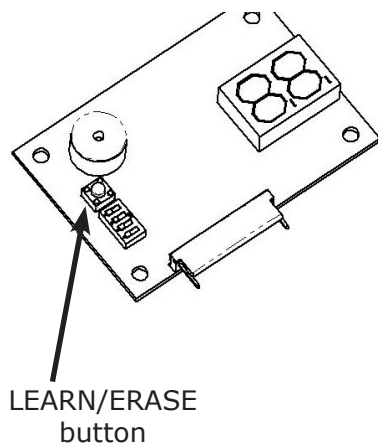
CUSTOMER EDUCATION

Before leaving the installation site, be sure that the customer fully understands the correct and safe operation of the stairway elevator.

Have the customer operate the unit while you are there to answer any questions or concerns.

Remind the customer to always use the seat positioning belt.

LEARNING THE REMOTE TRANSMITTER (not necessary when installing unit for the first time)



The operating channel of the two (2) RF transmitters included with the CRE-2110 is pre-set at the Bruno factory.

Reasons for relearning transmitters:

- you have to replace transmitters.

To relearn a transmitter:

1. Turn the circuit breaker OFF.
2. Remove the seat hinge plate cover to expose the interface PCB.
3. Remove the carriage control cover to allow you to see the learn/erase LED on the main control PCB. (See drawings at the back of this manual for cover removal.)
4. Turn the circuit breaker ON, wait for the 'power-up' beep.
5. Locate the LEARN/ERASE button on the interface PCB (see left).
6. **Clear the memory:**
 - Hold down the LEARN/ERASE button until the LED on the main Control PCB goes out (approximately 12 seconds).
7. Press and hold the LEARN/ERASE button (LED on the main control PCB is on). As you continue to press the LEARN/ERASE button, press either of the call/send transmitter buttons until the LED goes out (approximately 2-5 sec.).
8. Release both buttons (LEARN/ERASE and transmitter). The remote is now "learned".
9. **Test the transmitter operation** by pressing either of the transmitter buttons.

If the carriage moves, the new configuration has been accepted and the transmitter is learned.

If the carriage does not move, repeat Steps 6 through 9.
10. Turn the circuit breaker OFF.
11. Remount the control enclosure cover(s) and the seat hinge plate cover.
12. Turn the circuit breaker ON, and verify operation of all functions.

ELECTRICAL

CIRCUIT BOARD DIAGNOSTICS

The circuit board provided on the CRE-2110 is equipped with (4) diagnostic modes that continuously monitor the unit's operation. This choice of operational modes allows the CRE-2110 to respond to the requirements of a wide variety of installations.

NOTE : The CRE-2110 is shipped in the MULTI-USER/DIAGNOSTIC MODE.

MULTI-USER/DIAGNOSTIC MODE

Provides full range of Audio diagnostic notices:

- ***Circuit Board Power Up:** Chirp
- ***Safety Device Activated:** Chirp
- ***Elevator Stopped Off Charge Bumper:** 5 Beeps (4 short and 1 long)
Repeats every 3 minutes until the Elevator is returned to the bumper.
- ***Seat Safety Disengaged:** Chirp repeats every 3 seconds until seat safety switch is re-engaged.
- ***Battery Voltage Drop:** 5 Beeps (3 short and 2 long)
Repeats every 4 minutes until seat safety switch is disengaged, the battery voltage increases, or the switch is pressed.
- ***Battery Voltage Critical:** 5 Beeps (2 short and 3 long)
Repeats once a minute until the voltage exceeds 16V or the switch is pressed.
- ***Switch Active During Power Up:** 2 Beeps / Pause /5 Beeps (long beeps indicate which switches are active)
Repeats beeps every 5 seconds until all switches are off.
- ***More Than One Switch Active:** 2 Beeps / Pause /5 Beeps (long beeps indicate which switches are active)
Repeats every 30 seconds until all switches are off.
- ***Transmitter ID Memory Full:** 3 Beeps (1 short and 2 long)

SINGLE-USER MODE

Provides the same audio diagnostic notices as the Multi-User/Diagnostic Mode, except for the Seat Safety Disengaged notice.

QUIET MODE

In the QUIET mode, none of the Audible Warning Messages is active.

BATTERY WARNINGS ONLY MODE

Provides battery audio diagnostic only.

- ***Elevator Stopped Off Charge Bumper:** 5 Beeps (4 short and 1 long)
Repeats every 3 minutes until Elevator is returned to the bumper.
- ***Battery Voltage Drop :** 5 Beeps (3 short and 2 long)
Repeats once every 4 minutes until the seat safety switch is disengaged or the battery voltage increases.
- ***Battery Voltage Critical:** 5 Beeps (2 short and 3 long)
Repeats once a minute until voltage is above 16 V.

CIRCUIT BOARD DIAGNOSTICS



NOTICE:

Before touching anything inside the carriage assembly, ground yourself by touching an unpainted metal surface on the unit such as an exposed bolt, or one of the mounting screws on the electrical panel. While you work, periodically touch an unpainted metal surface to dissipate any static electricity that could harm internal components.

AUDIO REFERENCE	
Chirp	0.25 seconds
Short Beep	0.50 seconds
Long Beep	1.50 seconds
Pause	1.00 second

Changing the PCB Diagnostic Mode

1. Turn the circuit breaker OFF.
2. Fold up the seat. Remove the screws securing the seat hinge plate cover to provide access to the interface PCB.
3. The unit is shipped in the Multi-User Diagnostic Mode. Changes are made via the #1 and #2 positions on the 4-Ganged DIP Switch (see chart below).
4. Remount the seat hinge plate cover.
5. Turn the circuit breaker ON, wait for the 'power-up' beep.

4 GANGED DIP SWITCH

DIAGNOSTIC MODE	DIP SWITCH POSITION	
	#1	#2
Multi-User	OFF	OFF
Single-User	OFF	ON
Quiet	ON	OFF
Battery Warnings Only	ON	ON

ELECTRICAL

DIAGNOSTIC CODES (under seat)

The CRE-2110 includes a visual diagnostic display to aid troubleshooting. The table below shows the code displayed and a description of the code indication.

11/28/2018

Borg Visual-Audio Diagnostics For Service_2-16-2016_English

Readout/Diagnostic Group (Group Indicator)	S - Solid = 'Normal' Condition CF - Continuous Flash = Diagnostic Fault	VISUAL		AUDIBLE				VISUAL		AUDIBLE				AUDIBLE	
		Segment 1	Segment 2	Mode 1 S1 Off S2-Off	Mode 2 S1-Off S2-On	Mode 3 S1-On S2-Off	Mode 4 S1-On S2-On	Segment 1	Segment 2	Mode 1 S1 Off S2-Off	Mode 2 S1-Off S2-On	Mode 3 S1-On S2-Off	Mode 4 S1-On S2-On	Multi-User	Single User
Charge/Battery Condition Group (C)															
Charging (Charger detected)	S	C	1	None	None	None	None	C	1	None	None	None	None	None	None
Off-Charge (running w/rocker or remote)	S	C	2	None	None	None	None	C	2	None	None	None	None	None	None
Off-Charge and Not-Parked (fault condition)	CF	C	3	BBBLL	BBBLL	None	None	NA	NA	NA	NA	NA	NA	NA	NA
arked and Charger Not Detected	CF	C	4	BBBLL	BBBLL	None	None	C	4	BBBLL	BBBLL	BBBLL	BBBLL	BBBLL	BBBLL
attery Voltage Critical (~16V)	CF	C	5	BLLLL	BLLLL	None	None	C	5	BLLLL	BLLLL	BLLLL	BLLLL	BLLLL	BLLLL
attery Voltage Low (<18V)	CF	C	6	None	None	None	None	C	6	None	None	None	None	None	None
otorized Swivel Moving (Prior to SW Rev. 2.7 only-see A6)	S	C	7	None	None	None	None	NA	NA	NA	NA	NA	NA	NA	NA
otorized Footrest Moving (Prior to SW Rev. 2.7 only-see A7)	S	C	8	None	None	None	None	NA	NA	NA	NA	NA	NA	NA	NA
Limit/Switch Input Group (L)															
SS open	S	L	1	S,M,C,PPPP	S,M	None	None	L	1	S,M,C,PPPP	S,M	None	None	S,M,C,PPPP	S,M
ip Limit Switch Open	S	L	2	S,M	S,M	None	None	L	2	S,M	S,M	None	None	S,M	S,M
own Limit Switch Open	S	L	3	S,M	S,M	None	None	L	3	S,M	S,M	None	None	S,M	S,M
ayswitch Closed (not currently used)	S	L	4	M,PPCC	M	None	None	NA	NA	NA	NA	NA	NA	NA	NA
eat Fold Switch Open (not currently used)	S	L	5	M	M	None	None	NA	NA	NA	NA	NA	NA	NA	NA
lid-Rail Park Active	S	L	6	S	S	None	None	L	6	S	S	None	None	S	S
ake Input switch	S	L	7	M	M	None	None	NA	NA	NA	NA	NA	NA	NA	NA
off Stop Switch	S	L	8	None	None	None	None	L	8	None	None	None	None	None	None
Operation Switch Group (O)															
ocker Up	S	O	1	None	None	None	None	O	1	None	None	None	None	None	None
ocker Down	S	O	2	None	None	None	None	O	2	None	None	None	None	None	None
earn Switch	S	O	3	None	None	None	None	O	3	None	None	None	None	None	None
emote Up	S	O	4	None	None	None	None	O	4	None	None	None	None	None	None
emote Down	S	O	5	None	None	None	None	O	5	None	None	None	None	None	None
Diagnostics Group (d)															
peed Pd Fail (open)	CF	d	1	None	None	None	None	d	1	None	None	None	None	None	None
ransmitter ID Memory Full	CF	d	2	BLL	BLL	None	None	d	2	BLL	BLL	None	None	BLL	BLL
rogram Memory Bad CheckSum	CF	d	3	None	None	None	None	d	3	None	None	None	None	None	None
ver Current Fault	CF	d	4	CCCC	CCCC	None	None	d	4	CCCC	CCCC	None	None	CCCC	CCCC
ver Temperature Fault	CF	d	5	CCC	CCC	None	None	d	5	CCC	CCC	None	None	CCC	CCC
peed Over Ride on High Temperature.	CF	d	6	None	None	None	None	d	6	None	None	None	None	None	None
ow Voltage Stop	CF	d	7	CCCCC	CCCCC	None	None	d	7	CCCCC	CCCCC	None	None	CCCCC	CCCCC
ineamed Remote Unit	CF	d	8	None	None	None	None	d	8	None	None	None	None	None	None
Relay FET Fault Group (F)															
rive FET Shorted	CF	F	1	None	None	None	None	F	1	None	None	None	None	None	None
afety Relay Shorted	CF	F	2	None	None	None	None	F	2	None	None	None	None	None	None
i-Bridge Relay Fault	CF	F	3	None	None	None	None	F	3	None	None	None	None	None	None
afety Circuit Faulted	CF	F	4	None	None	None	None	F	4	None	None	None	None	None	None
est Input High (Internal Failure, should never happen)	CF	F	5	None	None	None	None	F	5	None	None	None	None	None	None
est Input Low (Internal Failure, should never happen)	CF	F	6	None	None	None	None	F	6	None	None	None	None	None	None
ux Current Measurement Failure (Prior to SW Rev. 2.7 only-see A9)	CF	F	7	None	None	None	None	F	7	None	None	None	None	None	None
Unknown Relay Fault (should never happen)	CF	F	8	None	None	None	None	F	8	None	None	None	None	None	None

DIAGNOSTIC CODES (under seat)

The CRE-2110 includes a visual diagnostic display to aid troubleshooting. The table below shows the code displayed and a description of the code indication.

11/28/2018

Borg Visual-Audio Diagnostics For Service_2-16-2016_English

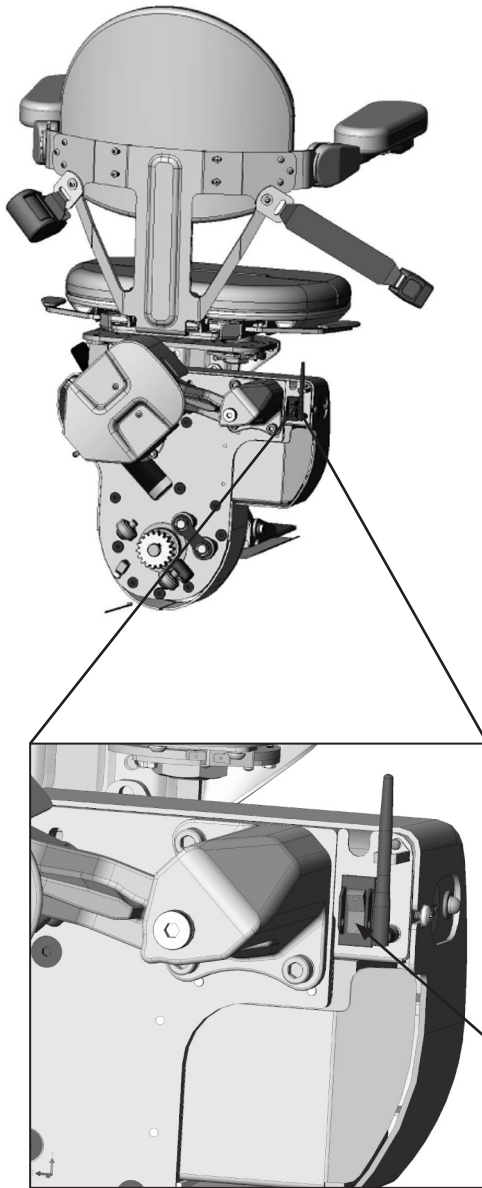
Readout/Diagnostic Group (Group Indicator)	S - Solid = 'Normal' Condition CF - Continuous Flash = Diagnostic Fault	VISUAL				AUDIBLE				VISUAL		AUDIBLE				AUDIBLE	
		Segment 1	Segment 2	Mode 1 S1 Off S2-On	Mode 2 S1-Off S2-On	Mode 3 S1-On S2-Off	Mode 4 S1-On S2-On	Segment 1	Segment 2	Mode 1 S1 Off S2-On	Mode 2 S1-Off S2-On	Mode 3 S1-On S2-Off	Mode 4 S1-On S2-On	Multi-User	Single User		
LUX Group																	
Wivel Enable	S	A	1	None	None	None	None	A	1	None	None	None	None	None	None	None	
Seat Fold Switch Closed	S	A	2	None	None	None	None	A	2	None	None	None	None	None	None	None	
Wivel Limit Open	S	A	3	None	None	None	None	A	3	None	None	None	None	None	None	None	
Footrest Up Limit Open	S	A	4	None	None	None	None	A	4	None	None	None	None	None	None	None	
Footrest Down Limit Open	S	A	5	None	None	None	None	A	5	None	None	None	None	None	None	None	
Wivel Actuator Blocked	S	A	6	None	None	None	None	A	6	None	None	None	None	None	None	None	
Footrest Actuator Blocked	S	A	7	None	None	None	None	A	7	None	None	None	None	None	None	None	
Lux Actuator Active	S	A	8	None	None	None	None	A	8	None	None	None	None	None	None	None	
Lux Actuator Fault	CF	A	9	None	None	None	None	A	9	None	None	None	None	None	None	None	
Lux Communication Fault	CF	A	0	None	None	None	None	A	0	None	None	None	None	None	None	None	
Power Rail Group																	
Tail Up Limit	S	P	1	None	None	None	None	P	1	None	None	None	None	None	None	None	
Tail Down Limit	S	P	2	None	None	None	None	P	2	None	None	None	None	None	None	None	
Tail Disable	S	P	3	None	None	None	None	P	3	None	None	None	None	None	None	None	
Reserved		P	4	None	None	None	None	P	4	None	None	None	None	None	None	None	
Reserved		P	5	None	None	None	None	P	5	None	None	None	None	None	None	None	
Reserved		P	6	None	None	None	None	P	6	None	None	None	None	None	None	None	
Tail Actuator Blocked	S	P	7	None	None	None	None	P	7	None	None	None	None	None	None	None	
Tail Actuator Active	S	P	8	None	None	None	None	P	8	None	None	None	None	None	None	None	
Tail Actuator Fault	CF	P	9	None	None	None	None	P	9	None	None	None	None	None	None	None	
Tail Communication Failure	CF	P	0	None	None	None	None	P	0	None	None	None	None	None	None	None	
Run Time in seconds (No display 4 bytes in EEPROM)	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	
				B = 0.5 second tone L = 1 second tone C = 0.25 second tone P = 1 second no tone S = 0.25 second tone when opened M = 0.25 second tone when movement requested													
Additional Audible Codes																	
Multiple Buttons Pressed at Power-up	Normal Button Codes	BBP?????	BBP?????	None	None	None	None	BBP?????	BBP?????	BBP?????	BBP?????	None	None	None	None	BBP?????	
Multiple Buttons Pressed	Normal Button Codes	BBP????	BBP????	None	None	None	None	BBP????	BBP????	BBP????	BBP????	None	None	None	None	BBP????	
				Question marks designate a LONG BEEP. The long beep indicates which switch is active at power-up or if multiple switches are pressed (in this order): Left rocker, Right Rocker, Learn Switch, Remote Up (RF Only), Remote Down (RF Only)													
				Question marks designate a LONG BEEP. The long beep indicates which switch is active at power-up or if multiple switches are pressed (in this order): Left rocker, Right Rocker, Learn Switch, Remote Up (RF Only), Remote Down (RF Only)													

CIRCUIT BREAKER

The on/off switch is built into the circuit breaker which is provided to protect the battery, controller and motor circuits in the Stairway Elevator carriage.

It is unlikely that this circuit breaker will ever trip in normal use. However, should the Elevator fail to operate, check the circuit breaker as a first troubleshooting step, and reset it if necessary.

It is also recommended that you determine the reason that the breaker tripped, and correct the situation. Two most frequent causes of a tripped circuit breaker: (1) foreign object jamming the rail or gear rack and (2) exceeding the rated load capacity leading to circuit overload of the Elevator.

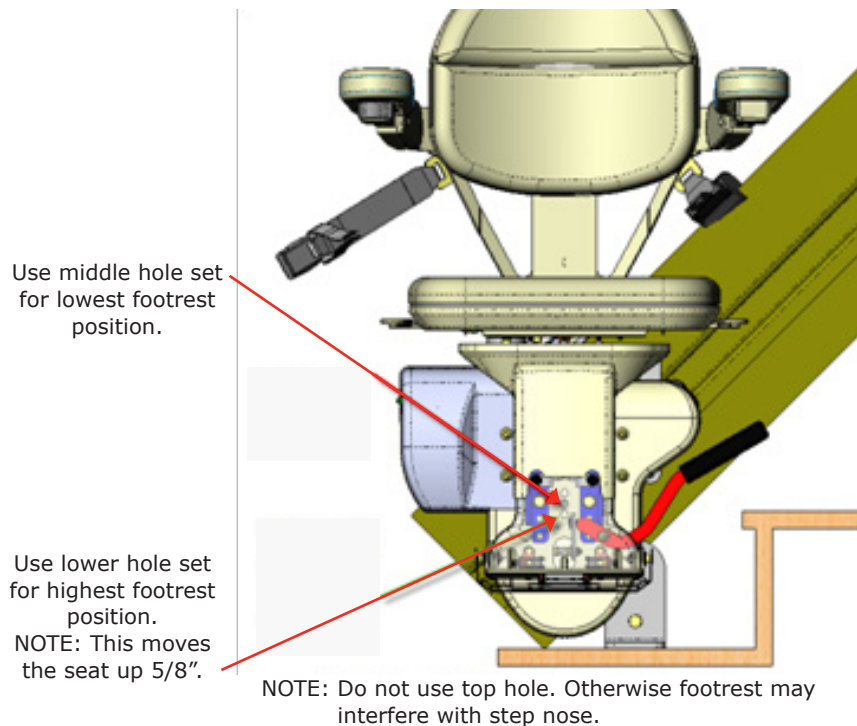


circuit breaker

FOOTREST HEIGHT ADJUSTMENT

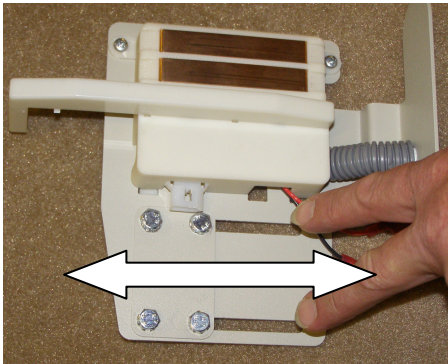
	<i>Seat Height Position with Standard Bracket (total seat height in inches)</i>			
Footrest Position	0	1	2	3
0	21.75	22.75	23.75	24.75
0.63	22.38	23.38	24.38	25.38

1. Remove all (4) M10 x 16mm bolts.
2. Loosen the seat support bracket bolt (M10) connecting the seat to the carriage.
3. Slide the seat up or down.
4. Line up the holes on the seat post with the holes on the footrest mounting plate at the desired height.
5. Reinsert the M10 x 16mm bolts and corresponding washers.
6. Tighten.
7. Retighten the seat support bracket bolt connecting the seat to the carriage.



ADJUSTMENT

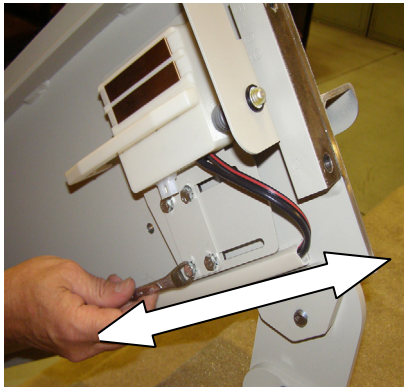
CHARGE CONTACT POSITION ADJUSTMENT



You may adjust the charge contact position vertically and horizontally, if necessary.

Horizontal adjustment

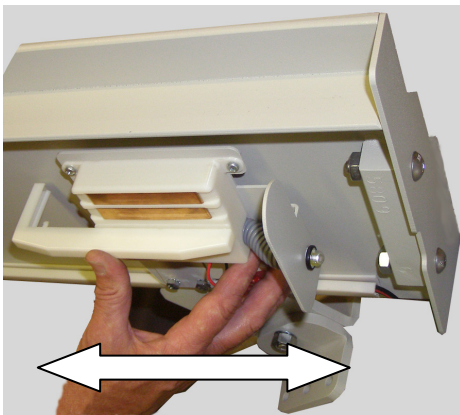
1. Loosen the (4) bolts (see left).
2. Slide the charge contact horizontally to the desired position.
3. Tighten the (4) bolts.



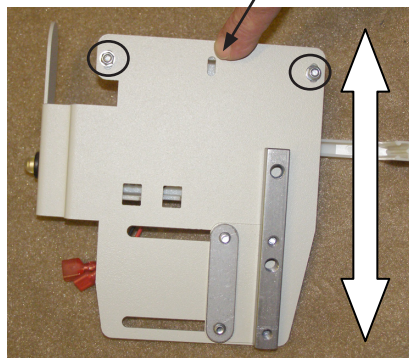
Vertical adjustment

1. Loosen the (2) Phillips head screws (see bottom left).
2. Slide the charge contact vertically to the desired position.
3. Tighten the (2) Phillips head screws.

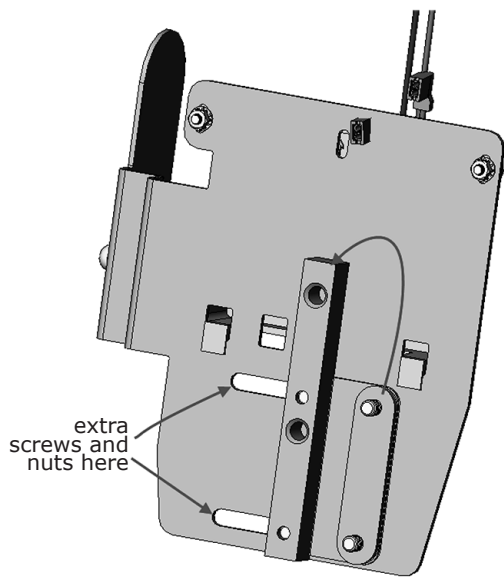
See next page for service tip.



Slot like this is behind Phillips head screws.



rear of charge contact



SERVICE TIP

Proximity Charge Assembly
(#2 hand shown)

For maximum travel extension and seat height position (maximum height on the upper landing and minimum height on the lower landing), be sure to switch the mounting bar with the oval nut plate.

For the lower landing, you may add two M6x1x16mm or 1/4-20x5/8 screws with jam nuts (not provided in the kit) for increased bracket stability.

Cautions:

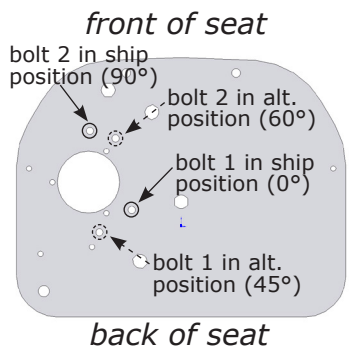
- Be sure the wheels do not contact the end cap when using the maximum setting.
- Be sure that the final limit switch is not in intermittent contact at the top landing when using the maximum setting.
- Adjust the contact position as required to prevent the occurrence of these conditions.

SEAT SWIVEL STOP ADJUSTMENT

NOTE: There are two bolts that prevent the seat from over rotating in the forward and back directions. Bolt 1 stops the seat from swiveling too far back. Bolt 2 stops it from swiveling too far forward.

CAUTION! Changing Bolt 1 to the 45-degree position may allow the seat to rotate into the wall!

**left-hand orientation shown
(top view)**



1. Remove the lower seat hinge plate cover.
2. Remove bolts 1 and 2, ship position.
3. Pivot the seat to expose the holes for bolts 1 and 2, alternate position.
4. Apply Loctite 242 (blue) to bolts 1 and 2, insert and tighten to the appropriate torque.
5. Remount the lower seat hinge plate and secure with its (2) screws.

ADJUSTMENT

ARM EXTENSION



1. Remove the arm swivel cover.



2. Cut the wire tie.



3. Remove the (3) arm bracket screws.



4. Slide the arm out to the position that best fits the user (3 possible settings).

5. Insert and tighten the (3) arm bracket screws.

6. Wind the wire into a service loop (no wire tie needed).

7. Remount the arm swivel cover and secure with its screw.

- ***Do not overtighten!***
- ***Make sure the wire sits in the cover slot as shown.***

8. Repeat the procedure for the opposite side (units without a keyswitch).



**RECYCLE
BATTERIES IN
ACCORDANCE WITH
REGULATIONS IN
FORCE IN YOUR AREA.**



The CRE-2110 is designed to give you many years of reliable service with minimal required maintenance.

To ensure the best service life:

1. Keep the stair rail channel clean and free of debris.
2. Park the carriage at one end of the stair rail so that the batteries charge when not in use.
3. Keep the battery charger plugged into a "live" outlet.
4. Have a qualified service technician clean, check, and grease the unit at least once a year (see maintenance list below).

Gear rack lubrication instructions appear earlier in this manual.

YEARLY MAINTENANCE OPERATIONS

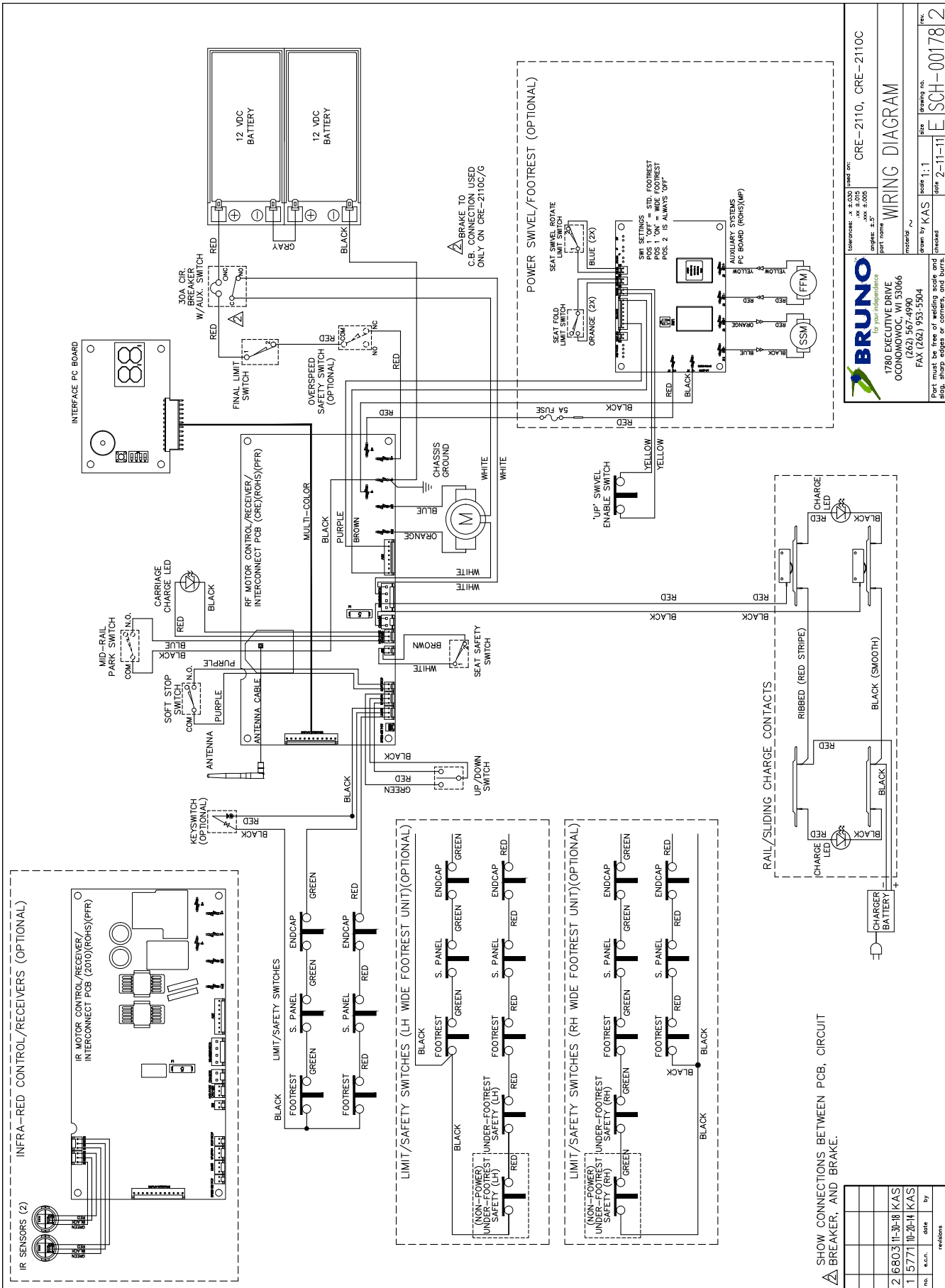
- Clean rails, racks and wheels. Regrease.
- Check rail wear.
- Clean charging contacts (both carriage and rail ends) with Scotch Brite®.
- Check battery voltage (load test).
- Check safety switches (footrest, carriage, seat).
- Check armrest switch.
- Check battery charger output:
 - Load test using remote controls: check voltage while carriage is traveling up.
 - Test with carriage against contacts.
 - Test with carriage away from contacts.
 - Check contacts and lights.
- Check speed.
- Check seat belt for wear and proper operation.
- Examine exposed wiring. Are there any cuts or abrasions?
- Verify operation of seat swivel mechanism. Does it move easily and lock in place correctly?
- Check that all hardware is properly tightened.

VACATION/LONG-TERM STORAGE

If the stairlift will remain unused for an extended period of time, turn off the circuit breaker (ON/OFF switch on the carriage), turn off the battery charger power switch (if equipped) and unplug the charger from the wall outlet.

The batteries may require recharging before normal use if the elevator remained in the OFF position for an extended period of time. To recharge, turn on the circuit breaker, reconnect the charger to the wall outlet, and turn on the battery charger power switch (if equipped). Then wait until the charger LED's indicate that the batteries are fully recharged.

WIRING DIAGRAM



BRUNO
for your independence

1780 EXECUTIVE DRIVE
OCONOMOWOC, WI 53066
(262) 567-4990
FAX (262) 193-5304

part name: **WIRING DIAGRAM**

designed by: KAS
checked by: KAS
date: 2-11-11
size: 1:1
drawing no.: E SCH-00178
rev.: 2

CRE-2110, CRE-2110C

SHOW CONNECTIONS BETWEEN PCB, CIRCUIT BREAKER, AND BRAKE.

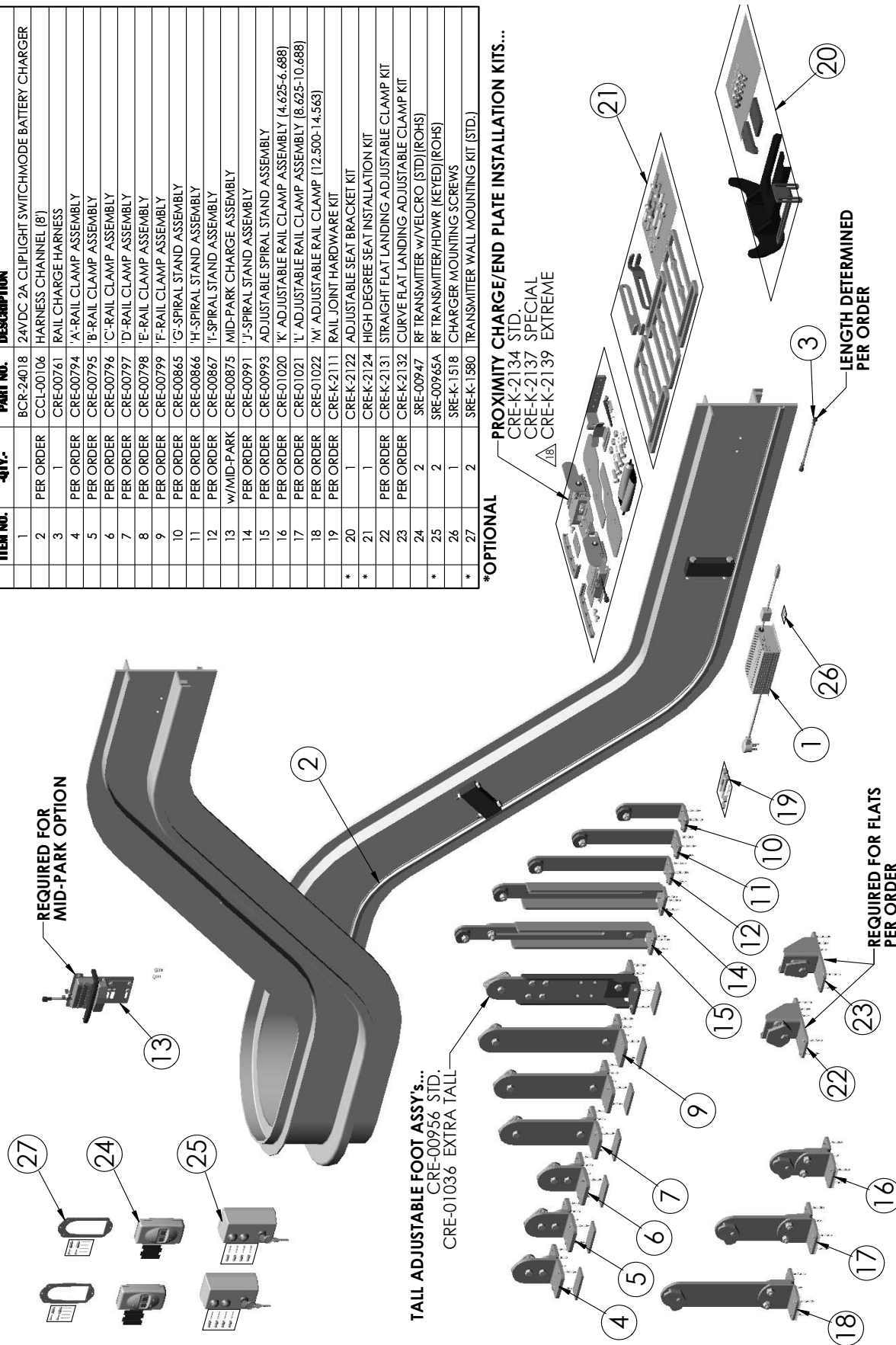
no.	date	by	revisions
1	15771 10-20-11	KAS	
2	6803 11-30-18	KAS	

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'ELITE' CURVE - CUSTOM RAIL STAIRLIFT

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	BCR-24018	24VDC 2A CLIPLIGHT SWITCHMODE BATTERY CHARGER
2	PER ORDER	CCL-00106	HARNES CHANNEL (8)
3	1	CRE-00761	RAIL CHARGE HARNESS
4	PER ORDER	CRE-00794	'A'-RAIL CLAMP ASSEMBLY
5	PER ORDER	CRE-00795	'B'-RAIL CLAMP ASSEMBLY
6	PER ORDER	CRE-00796	'C'-RAIL CLAMP ASSEMBLY
7	PER ORDER	CRE-00797	'D'-RAIL CLAMP ASSEMBLY
8	PER ORDER	CRE-00798	'E'-RAIL CLAMP ASSEMBLY
9	PER ORDER	CRE-00799	'F'-RAIL CLAMP ASSEMBLY
10	PER ORDER	CRE-00865	'G'-SPIRAL STAND ASSEMBLY
11	PER ORDER	CRE-00866	'H'-SPIRAL STAND ASSEMBLY
12	PER ORDER	CRE-00867	'I'-SPIRAL STAND ASSEMBLY
13	W/MID-PARK	CRE-00875	MID-PARK CHARGE ASSEMBLY
14	PER ORDER	CRE-00991	'J'-SPIRAL STAND ASSEMBLY
15	PER ORDER	CRE-00993	ADJUSTABLE SPIRAL STAND ASSEMBLY
16	PER ORDER	CRE-01020	'K' ADJUSTABLE RAIL CLAMP ASSEMBLY (4.625-6.688)
17	PER ORDER	CRE-01021	'L' ADJUSTABLE RAIL CLAMP ASSEMBLY (8.625-10.688)
18	PER ORDER	CRE-01022	'M' ADJUSTABLE RAIL CLAMP (12.500-14.563)
19	PER ORDER	CRE-K-2111	RAIL JOINT HARDWARE KIT
* 20	1	CRE-K-2122	ADJUSTABLE SEAT BRACKET KIT
* 21	1	CRE-K-2124	HIGH DEGREE SEAT INSTALLATION KIT
22	PER ORDER	CRE-K-2131	STRAIGHT FLAT LANDING ADJUSTABLE CLAMP KIT
23	PER ORDER	CRE-K-2132	CURVE FLAT LANDING ADJUSTABLE CLAMP KIT
24	2	SRE-00947	RF TRANSMITTER W/VELCRO (STD)(ROHS)
* 25	2	SRE-00965A	RF TRANSMITTER/HDW/WR (KEYED)(ROHS)
26	1	SRE-K-1518	CHARGER MOUNTING SCREWS
* 27	2	SRE-K-1580	TRANSMITTER WALL MOUNTING KIT (STD.)



***OPTIONAL**
 PROXIMITY CHARGE/END PLATE INSTALLATION KITS...
 CRE-K-2134 STD.
 CRE-K-2137 SPECIAL
 CRE-K-2139 EXTREME

CRE-2110 Rail, Charger, & Call-Sends
SHEET 1 OF 5
REV. 18 (6223)(10/20/2017)(DPG)



'ELITE' CURVE - NO POWER

SEAT FRAME ASSEMBLIES
w/TAN VINYL UPHOLSTERY (STD.)...
CRE-00849 STD.
CRE-00888 XL

SEAT CONTROL ASSEMBLIES...
CRE-00966 ROCKER
CRE-00968 KEYPED/ROCKER
CRE-00970 PADDLE
CRE-00972 KEYPED/PADDLE

2
INSERT TETHER THRU LOOP IN BUCKLE BELT AND
LOOP ENDS TOGETHER. ASSEMBLE TO UNDERSIDE
OF ARM EXTENSION WELDMENT USING REAR SCREW
TO MOUNT THE ARM REST ASSEMBLY.

CONTROL ASSEMBLIES...
(INCLUDES CAP & DECAL)
CRE-00962L LH STD.
CRE-00962R RH STD.
CRE-00963L LH KEYED
CRE-00963R RH KEYED

LOWER CARRIAGE ASSEMBLIES...
CRE-00836L LH
CRE-00836R RH

MAIN CARRIAGE ASSEMBLIES...
CRE-00980L LH
CRE-00980R RH

FOOTREST ASSEMBLIES...
CRE-00979 STD.
CRE-00959L LH WIDE
CRE-00959R RH WIDE



ITEM NO.	QTY.	PART NO.	DESCRIPTION
2	1	CRE-00850	LAP BELT TETHER ASSY
3	1	CRE-00893	FRONT SEAT POST COVER ASSEMBLY
4	1	CRE-00895	SEAT MOUNTING BRACKET ASSEMBLY
5	1	CRE-K-2106	SEAT INSTALLATION KIT
6	1	CRE-K-2112	FOOTREST CYLINDER INSTALLATION KIT
7	2	MHCSL-10018	M10 X 1.5 X 20MM LG HEX HEAD CAP SCREW w/SRVCSL THRD LK
8	2	SAE-38001	3/8" SAE WASHER
9	1	SRE-20602	FOOT REST COVER

ADDITIONAL SEAT COLORS/MATL	UPHOLSTERY SET STD. SEAT
LIGHT BROWN VINYL	SRE-20676BV
CHARCOAL VINYL	SRE-20676CV
MAROON VINYL	SRE-20676MV
OLIVE VINYL	SRE-20676OV
BROWN ULTRALEATHER	SRE-20676BR
BURGUNDY ULTRALEATHER	SRE-20676BL
DARK BROWN ULTRALEATHER	SRE-20676DBL
GREY ULTRALEATHER	SRE-20676GR

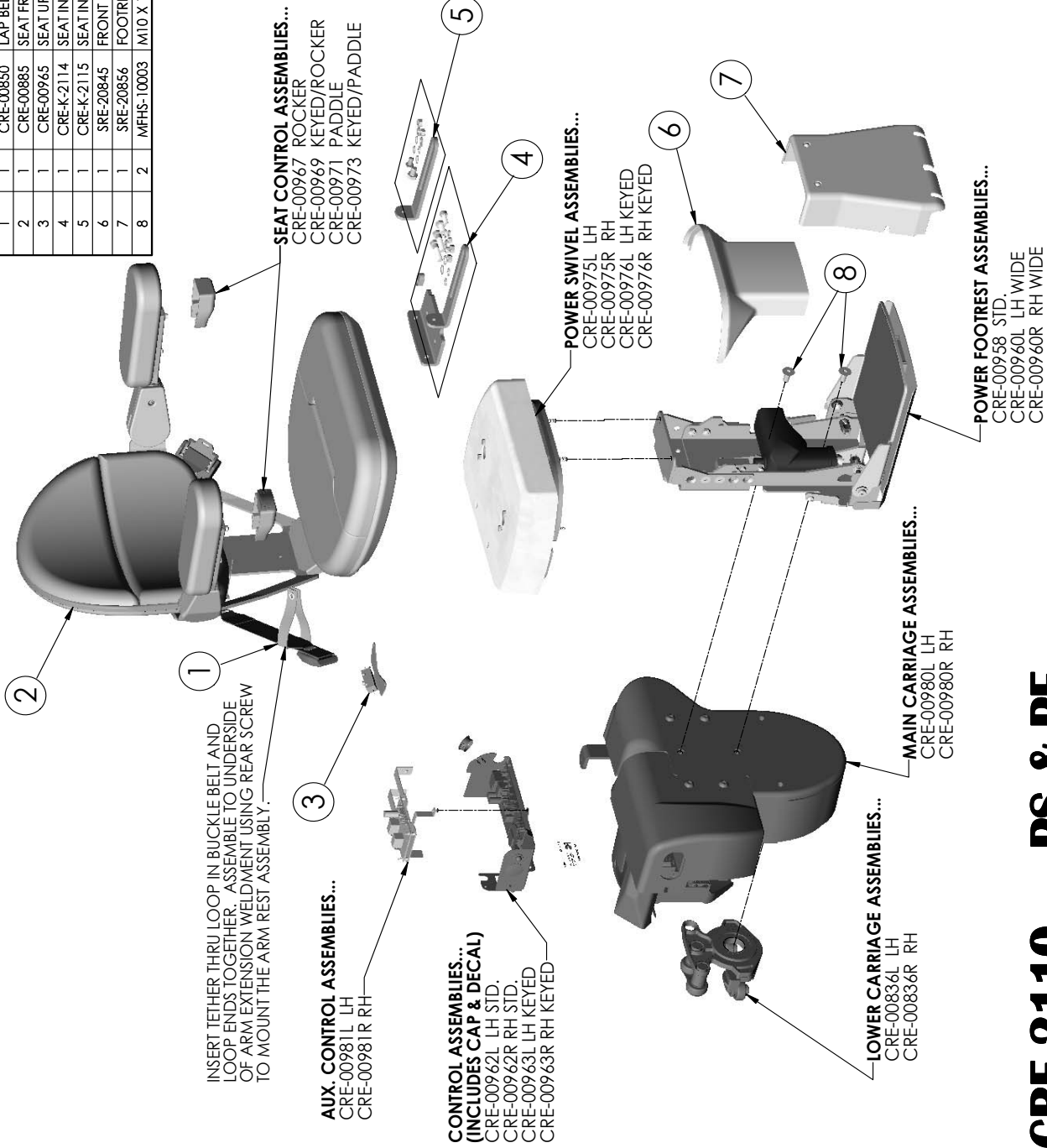
CRE-2110 No Power
SHEET 2 OF 5
REV. 18 (6223)(10/20/2017)(DPG)



'ELITE' CURVE - POWER SWIVEL & POWER FOOTREST

EXPLODED VIEW

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	CRE-00850	LAP BELT TETHER ASSY
2	1	CRE-00885	SEAT FRAME ASSEMBLY w/TAN VINYL UPH - PWR SWVL
3	1	CRE-00965	SEAT UP SWITCH ASSEMBLY-POWER SWIVEL & FOOTREST
4	1	CRE-K-2114	SEAT INSTALLATION KIT (POWER SWIVEL)
5	1	CRE-K-2115	SEAT INSTALLATION KIT (POWER FOOTREST)
6	1	SRE-20845	FRONT SEAT POST COVER (POWER FOOTREST)
7	1	SRE-20856	FOOTREST COVER ASSY (POWER FOOTREST)
8	2	MFHS-10003	M10 X 1.50 X 25MM LG FLAT HEAD CAP SCREW (GRADE 10.9)



CRE-2110 PS & PF
SHEET 3 OF 5
REV. 18 (6223)(10/20/2017)(DPG)



'ELITE' CURVE - POWER SWIVEL

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	CRE-00850	LAP BELT TETHER ASSY
2	1	CRE-00885	SEAT FRAME ASSEMBLY w/TAN VINYL UPH - PWR SWVL
3	1	CRE-00893	FRONT SEAT POST COVER ASSEMBLY
4	1	CRE-K-2112	FOOTREST CYLINDER INSTALLATION KIT
5	1	CRE-K-2114	SEAT INSTALLATION KIT (POWER SWIVEL)
6	2	MHC-SL-10018	M10 X 1.5 X 20MM LG HEX HEAD CAP SCREW w/SRV/CBL THRD LKR
7	2	SAE-38001	3/8" SAE WASHER
8	1	SRE-20402	FOOT REST COVER

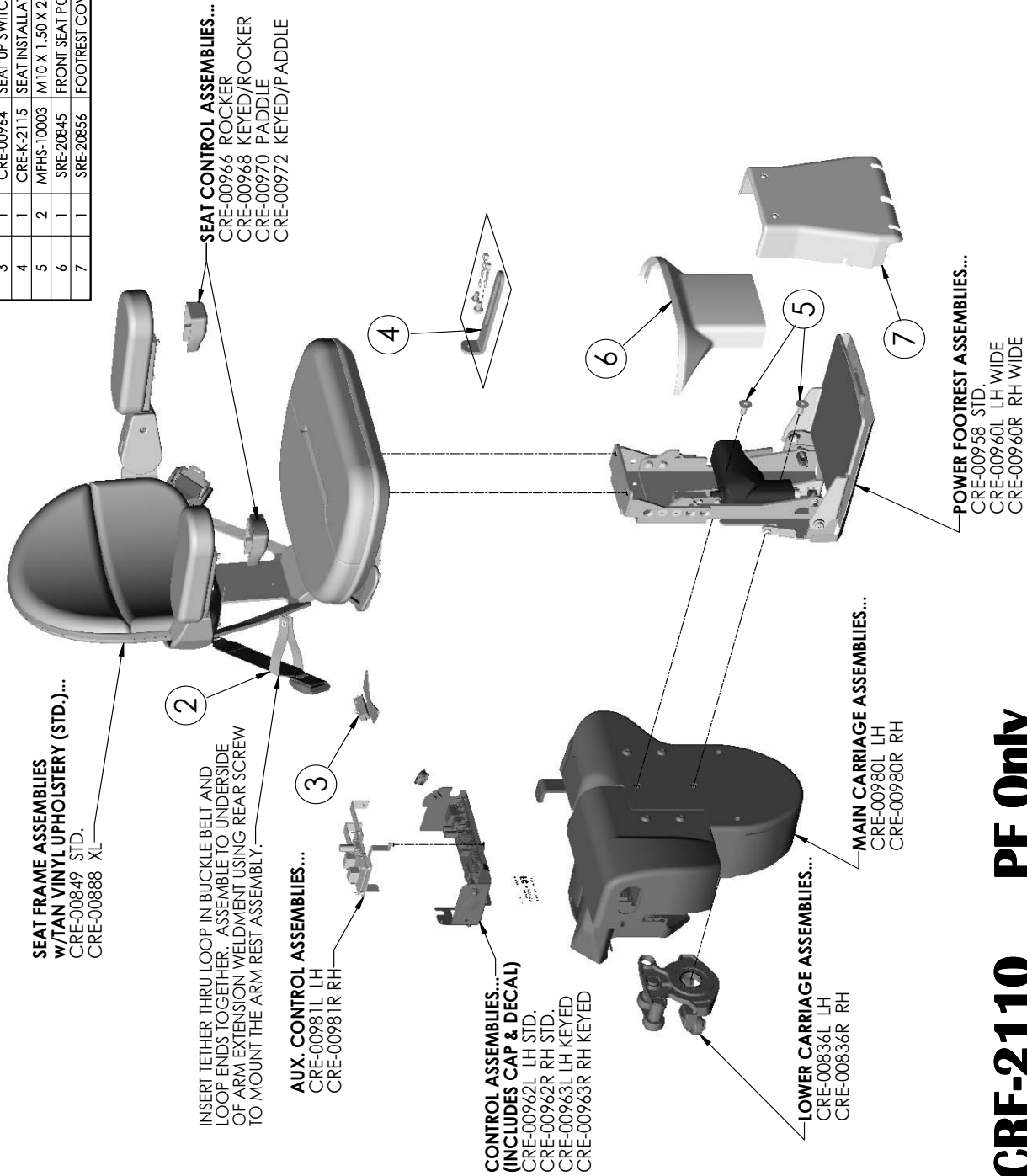


CRE-2110 PS Only
SHEET 4 OF 5
REV. 18 (6223)(10/20/2017)(DPG)



'ELITE' CURVE - POWER FOOTREST

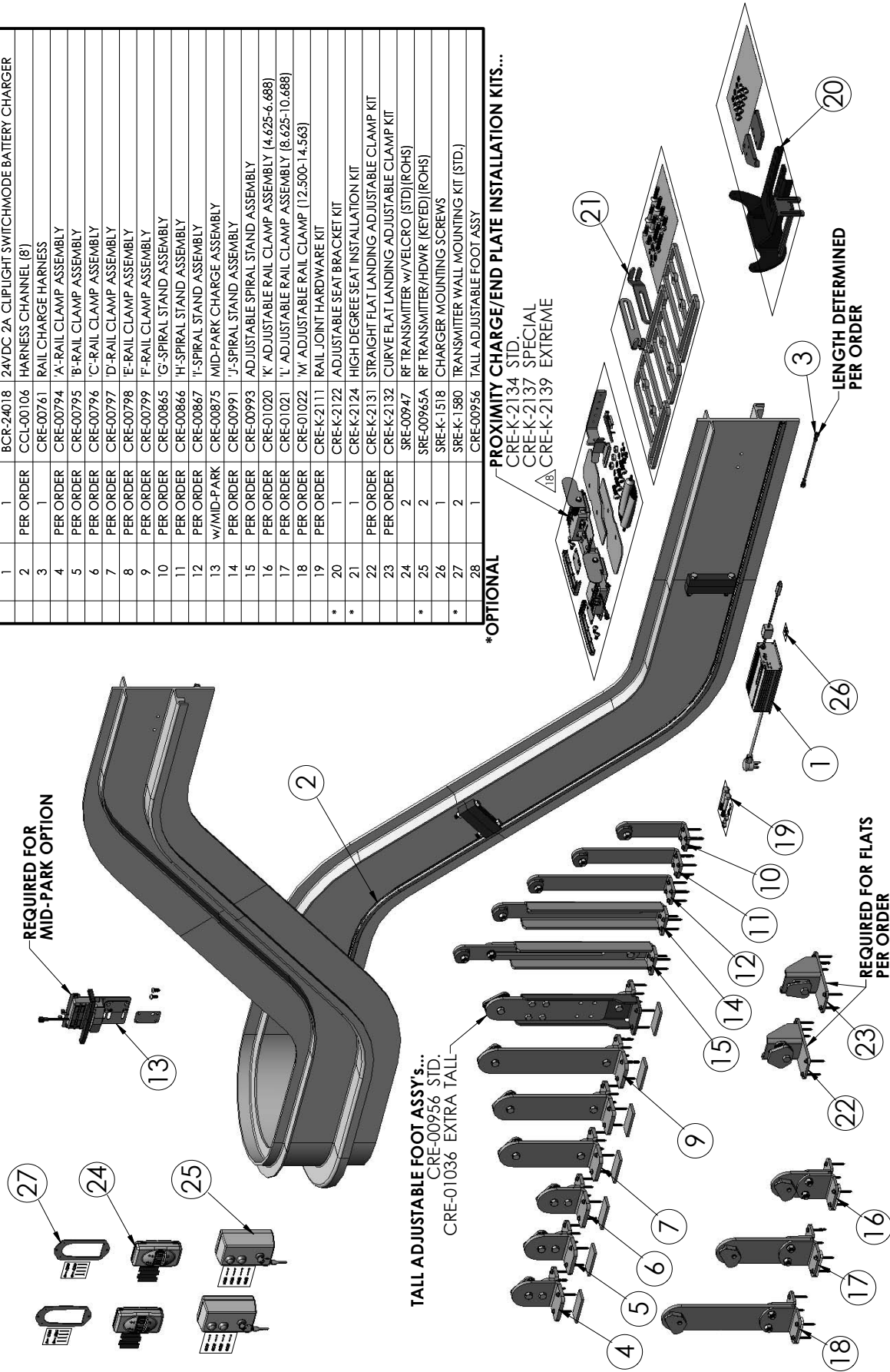
ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	CRE-00850	LAP BELT TETHER ASSY
2	1	CRE-00964	SEAT UP SWITCH ASSEMBLY-POWER FOOTREST
3	1	CRE-K-2115	SEAT INSTALLATION KIT (POWER FOOTREST)
4	2	MFHS-10003	M10 X 1.50 X 25MM LG FLAT HEAD CAP SCREW (GRADE 10.9)
5	1	SRE-20845	FRONT SEAT POST COVER (POWER FOOTREST)
6	1	SRE-20856	FOOTREST COVER ASSY (POWER FOOTREST)



COMMERCIAL 'ELITE' CURVE - CUSTOM RAIL STAIRLIFT

ITEM NO.	QTY	PART NO.	DESCRIPTION
1	1	BCR-24018	24VDC 2A CLIPLIGHT SWITCHMODE BATTERY CHARGER
2	PER ORDER	CCL-00106	HARNES CHANNEL (8)
3	1	CRE-00761	RAIL CHARGE HARNESS
4	PER ORDER	CRE-00794	A-RAIL CLAMP ASSEMBLY
5	PER ORDER	CRE-00795	B-RAIL CLAMP ASSEMBLY
6	PER ORDER	CRE-00796	C-RAIL CLAMP ASSEMBLY
7	PER ORDER	CRE-00797	D-RAIL CLAMP ASSEMBLY
8	PER ORDER	CRE-00798	E-RAIL CLAMP ASSEMBLY
9	PER ORDER	CRE-00799	F-RAIL CLAMP ASSEMBLY
10	PER ORDER	CRE-00865	G-SPIRAL STAND ASSEMBLY
11	PER ORDER	CRE-00866	H-SPIRAL STAND ASSEMBLY
12	PER ORDER	CRE-00867	I-SPIRAL STAND ASSEMBLY
13	W/MID-PARK	CRE-00875	MID-PARK CHARGE ASSEMBLY
14	PER ORDER	CRE-00991	J-SPIRAL STAND ASSEMBLY
15	PER ORDER	CRE-00993	ADJUSTABLE SPIRAL STAND ASSEMBLY
16	PER ORDER	CRE-01020	K' ADJUSTABLE RAIL CLAMP ASSEMBLY (4.625-6.688)
17	PER ORDER	CRE-01021	L' ADJUSTABLE RAIL CLAMP ASSEMBLY (8.625-10.688)
18	PER ORDER	CRE-01022	M' ADJUSTABLE RAIL CLAMP (12.500-14.563)
19	PER ORDER	CRE-K-2111	RAIL JOINT HARDWARE KIT
*	1	CRE-K-2122	ADJUSTABLE SEAT BRACKET KIT
*	1	CRE-K-2124	HIGH DEGREE SEAT INSTALLATION KIT
22	PER ORDER	CRE-K-2131	STRAIGHT FLAT LANDING ADJUSTABLE CLAMP KIT
23	PER ORDER	CRE-K-2132	CURVE FLAT LANDING ADJUSTABLE CLAMP KIT
24	2	SRE-00947	RF TRANSMITTER w/VELCRO (STD)(ROHS)
25	2	SRE-00965A	RF TRANSMITTER/HDWR (KEYED)(ROHS)
26	1	SRE-K-1518	CHARGER MOUNTING SCREWS
27	2	SRE-K-1380	TRANSMITTER WALL MOUNTING KIT (STD.)
28	1	CRE-00956	TALL ADJUSTABLE FOOT ASSY

*OPTIONAL
 PROXIMITY CHARGE/END PLATE INSTALLATION KITS...
 CRE-K-2134 STD.
 CRE-K-2137 SPECIAL
 CRE-K-2139 EXTREME



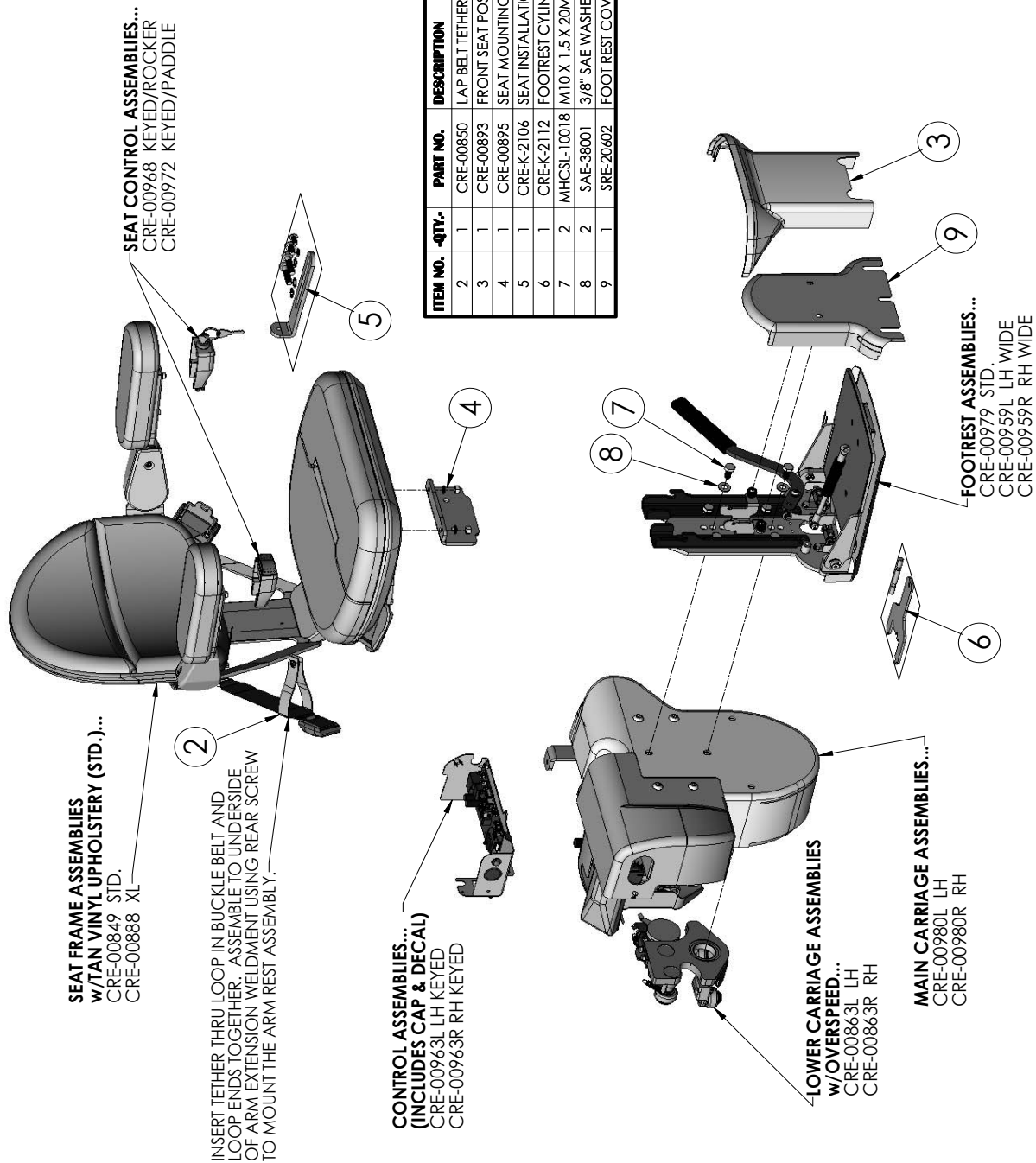
CRE-2110C Rail, Charger, & Call-Sends

SHEET 1 OF 5
 REV. 18 (6223)(10/20/2017)(DPG)



COMMERCIAL 'ELITE' CURVE - NO POWER

EXPLODED VIEW



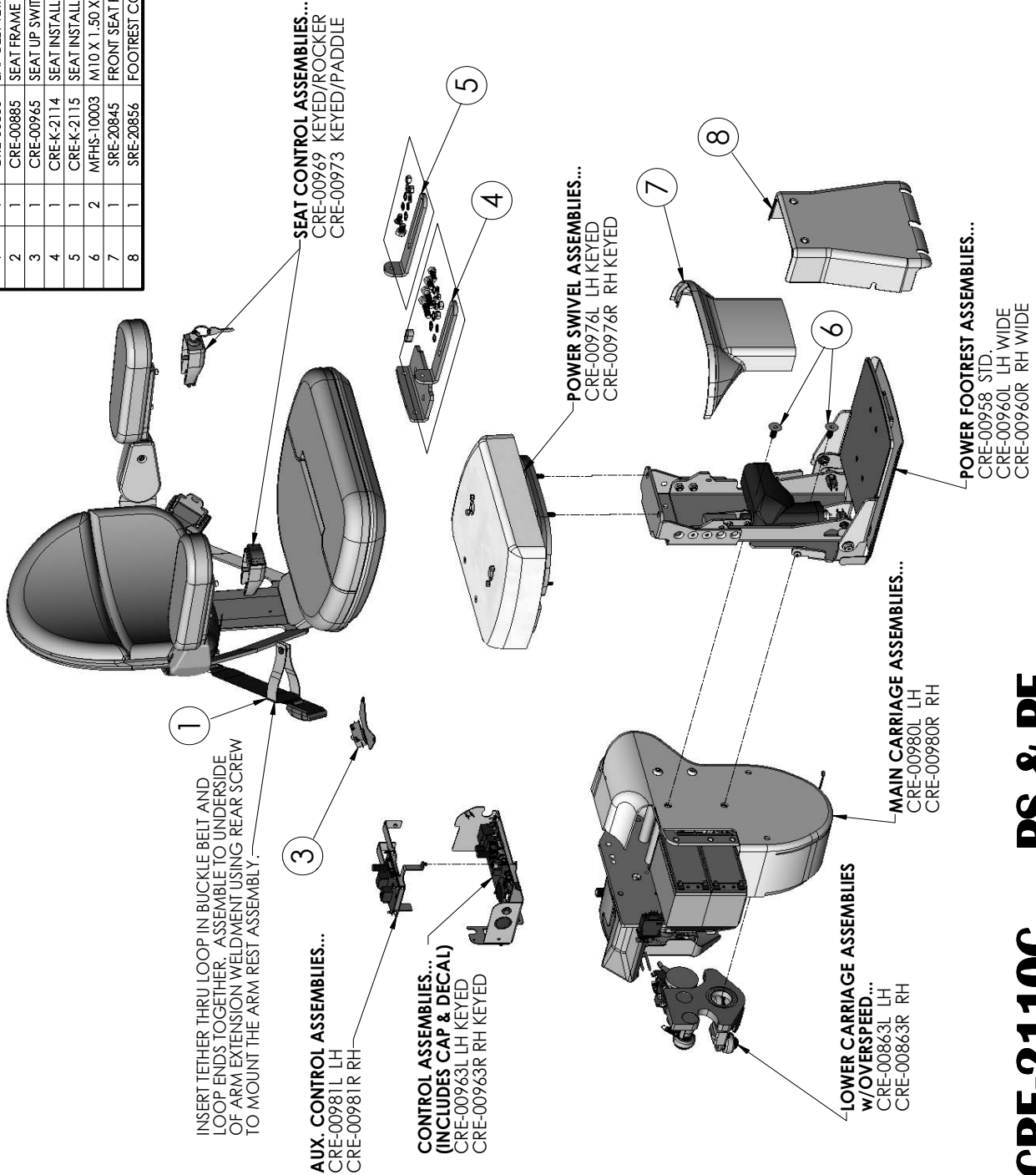
ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	CRE-00850	LAP BELT TETHER ASSY
2	1	CRE-00893	FRONT SEAT POST COVER ASSEMBLY
3	1	CRE-00895	SEAT MOUNTING BRACKET ASSEMBLY
4	1	CRE-K-2106	SEAT INSTALLATION KIT
5	1	CRE-K-2112	FOOTREST CYLINDER INSTALLATION KIT
6	2	MHC SL-10018	M10 X 1.5 X 20MM LG HEX HEAD CAP SCREW w/SRVCL THRD LKR
7	2	SAE-38001	3/8" SAE WASHER
8	1	SRE-20602	FOOT REST COVER

CRE-2110C No Power
SHEET 2 OF 5
REV. 18 (6223)(10/20/2017)(DPG)

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COMMERCIAL 'ELITE' CURVE - POWER SWIVEL & POWER FOOTREST

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	CRE-00850	LAP BELT TETHER ASSY
2	1	CRE-00885	SEAT FRAME ASSEMBLY w/TAN VINYL UPH - PWR SWVL
3	1	CRE-00965	SEAT UP SWITCH ASSEMBLY-POWER SWIVEL & FOOTREST
4	1	CRE-K-2114	SEAT INSTALLATION KIT (POWER SWIVEL)
5	1	CRE-K-2115	SEAT INSTALLATION KIT (POWER FOOTREST)
6	2	MFHS-10003	M10 X 1.50 X 25MM LG FLAT HEAD CAP SCREW (GRADE 10.9)
7	1	SRE-20845	FRONT SEAT POST COVER (POWER FOOTREST)
8	1	SRE-20856	FOOTREST COVER ASSY (POWER FOOTREST)



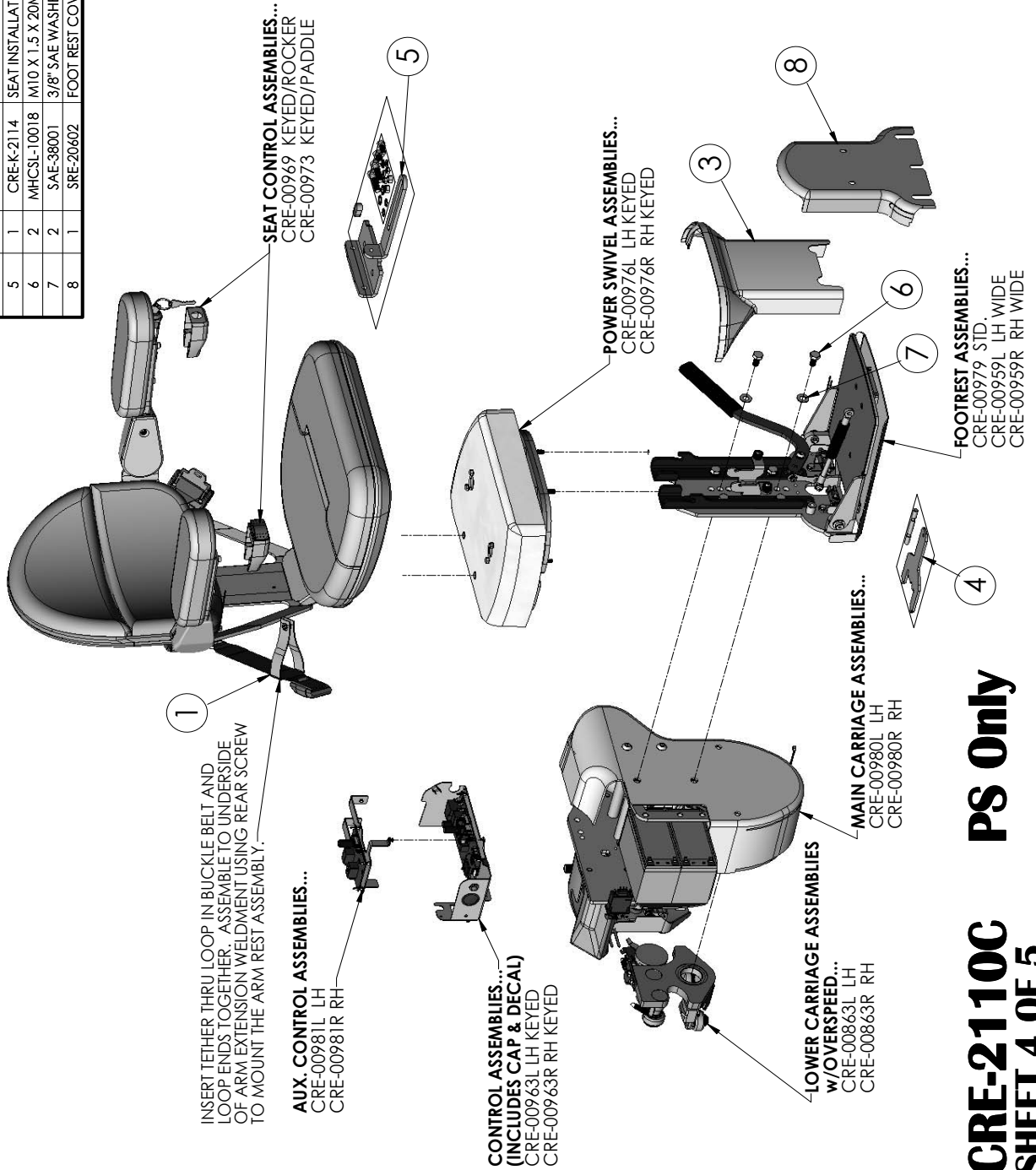
ADDITIONAL SEAT COLORS/MATERIAL	UPHOLSTERY SET STD. SEAT
LIGHT BROWN VINYL	SRE-20676BV
CHARCOAL VINYL	SRE-20676CV
MAROON VINYL	SRE-20676MV
OLIVE VINYL	SRE-20676OV
BROWN ULTRALEATHER	SRE-20676BRL
BURGUNDY ULTRALEATHER	SRE-20676BL
DARK BROWN ULTRALEATHER	SRE-20676DBL
GREY ULTRALEATHER	SRE-20676GRL

CRE-2110C PS & PF
SHEET 3 OF 5
REV. 18 (6223)(10/20/2017)(DPG)

COMMERCIAL 'ELITE' CURVE - POWER SWIVEL

EXPLODED VIEW

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	CRE-00850	LAP BELT TETHER ASSY
2	1	CRE-00885	SEAT FRAME ASSEMBLY w/TAN VINYL UPH - PWR SWVL
3	1	CRE-00893	FRONT SEAT POST COVER ASSEMBLY
4	1	CRE-K-2112	FOOTREST CYLINDER INSTALLATION KIT
5	1	CRE-K-2114	SEAT INSTALLATION KIT (POWER SWIVEL)
6	2	MHC3L-10018	M10 X 1.5 X 20MM LG HEX HEAD CAP SCREW w/SRV/CBL THRD/IKR
7	2	SAE-38001	3/8" SAE WASHER
8	1	SRE-20602	FOOT REST COVER



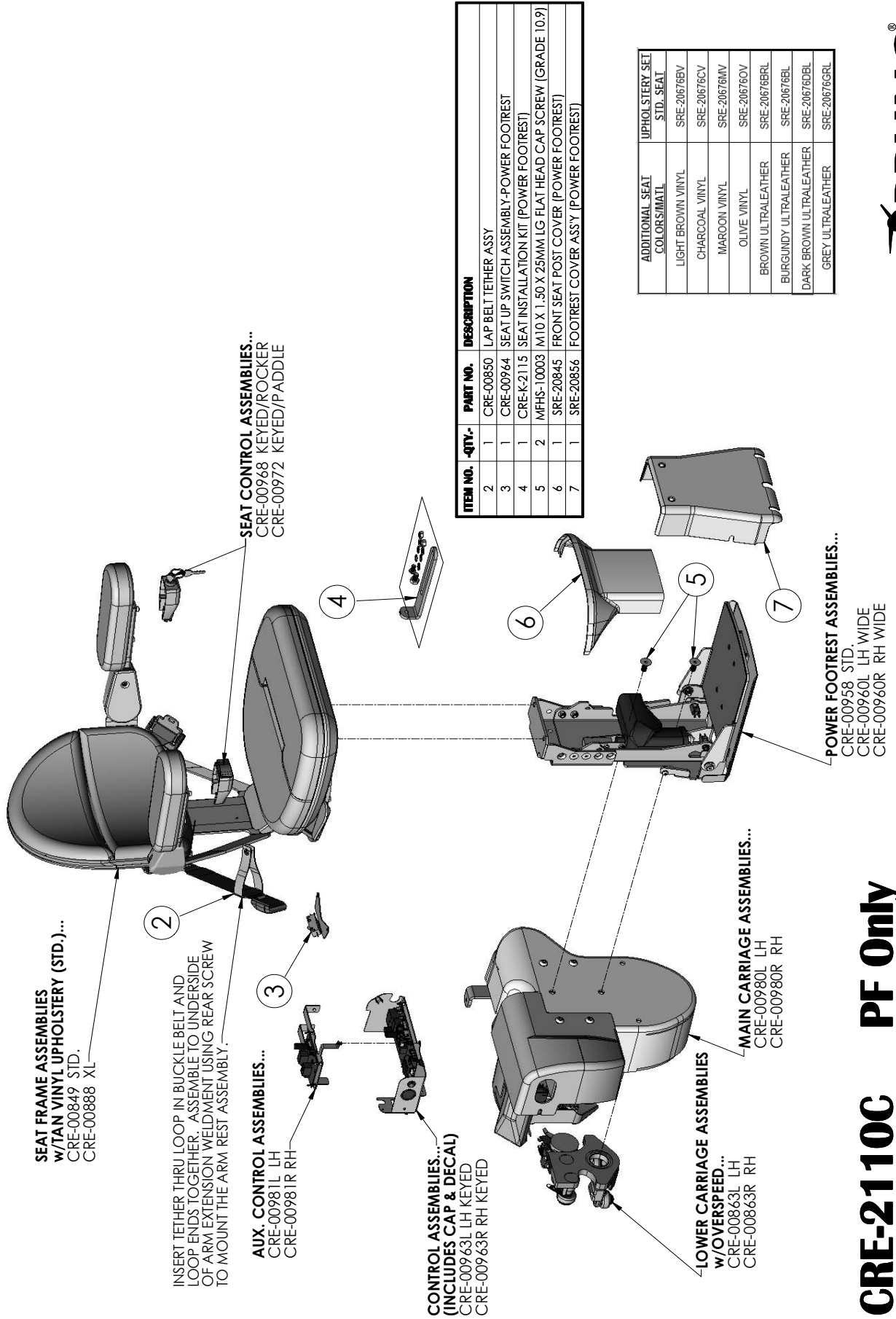
ADDITIONAL SEAT COLOR/MATL.	UPHOLSTERY SET STD. SEAT.
LIGHT BROWN VINYL	SRE-20676BV
CHARCOAL VINYL	SRE-20676CV
MAROON VINYL	SRE-20676MV
OLIVE VINYL	SRE-20676OV
BROWN ULTRALEATHER	SRE-20676BRL
BURGUNDY ULTRALEATHER	SRE-20676BL
DARK BROWN ULTRALEATHER	SRE-20676DBL
GREY ULTRALEATHER	SRE-20676GRL

CRE-2110C PS Only
SHEET 4 OF 5
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COMMERCIAL 'ELITE' CURVE - POWER FOOTREST

EXPLODED VIEW



CRE-2110C PF Only
SHEET 5 OF 5
REV. 18 (6223)(10/20/2017)(DPG)

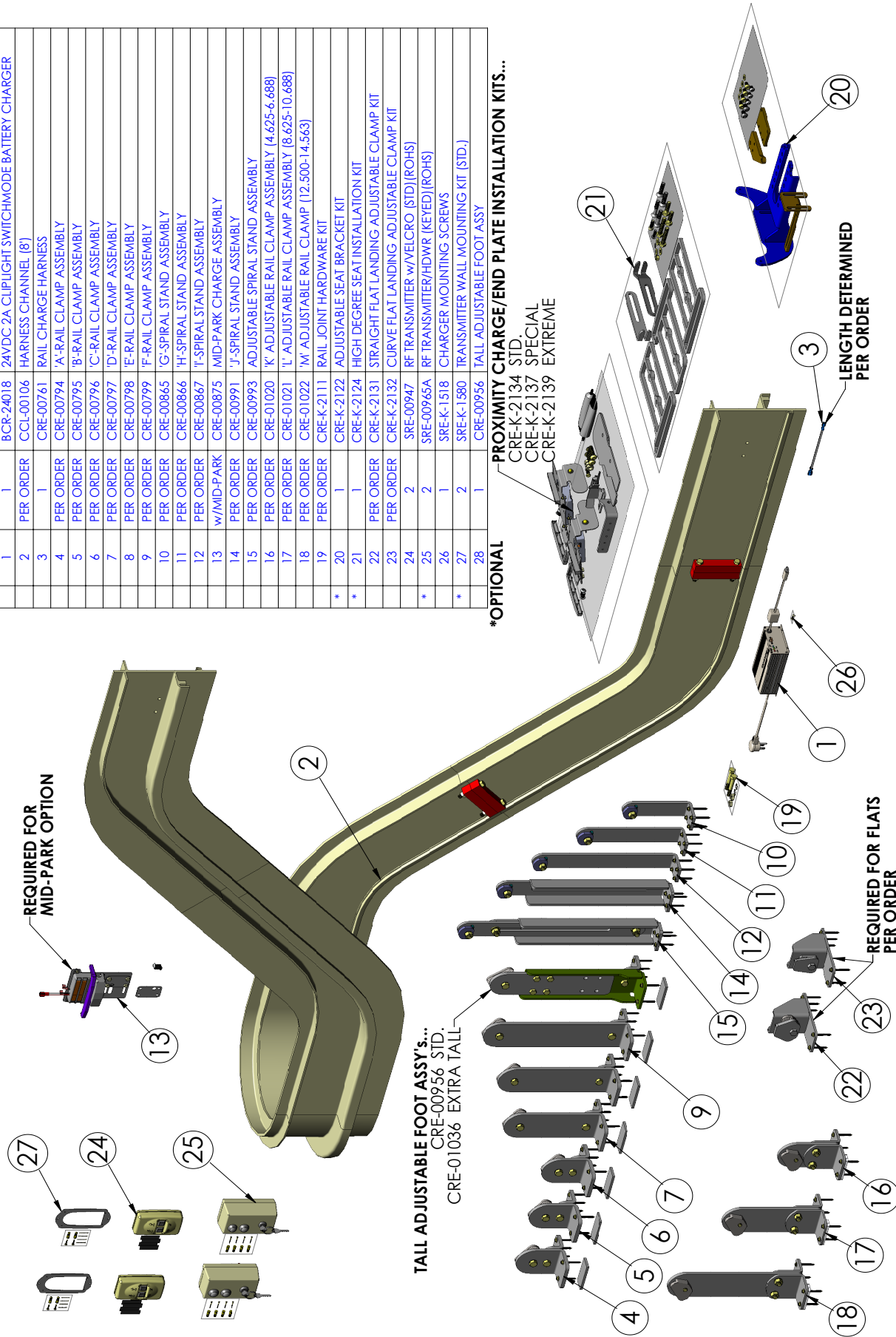
'ELITE' CURVE - CUSTOM RAIL STAIRLIFT (OS)

EXPLODED VIEW

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	BCR-24018	24VDC 2A CLIPLIGHT SWITCH/MODE BATTERY CHARGER
2	PER ORDER	CCL-00106	HARNESS CHANNEL (8')
3	1	CRE-00761	RAIL CHARGE HARNESS
4	PER ORDER	CRE-00794	'A'-RAIL CLAMP ASSEMBLY
5	PER ORDER	CRE-00795	'B'-RAIL CLAMP ASSEMBLY
6	PER ORDER	CRE-00796	'C'-RAIL CLAMP ASSEMBLY
7	PER ORDER	CRE-00797	'D'-RAIL CLAMP ASSEMBLY
8	PER ORDER	CRE-00798	'E'-RAIL CLAMP ASSEMBLY
9	PER ORDER	CRE-00799	'F'-RAIL CLAMP ASSEMBLY
10	PER ORDER	CRE-00865	'G'-SPIRAL STAND ASSEMBLY
11	PER ORDER	CRE-00866	'H'-SPIRAL STAND ASSEMBLY
12	PER ORDER	CRE-00867	'I'-SPIRAL STAND ASSEMBLY
13	w/MID-PARK	CRE-00875	MID-PARK CHARGE ASSEMBLY
14	PER ORDER	CRE-00991	'J'-SPIRAL STAND ASSEMBLY
15	PER ORDER	CRE-00993	ADJUSTABLE SPIRAL STAND ASSEMBLY
16	PER ORDER	CRE-01020	'K' ADJUSTABLE RAIL CLAMP ASSEMBLY (4.625-6.688)
17	PER ORDER	CRE-01021	'L' ADJUSTABLE RAIL CLAMP ASSEMBLY (8.625-10.688)
18	PER ORDER	CRE-01022	'M' ADJUSTABLE RAIL CLAMP (12.500-14.563)
19	PER ORDER	CRE-K-2111	RAIL JOINT HARDWARE KIT
20	1	CRE-K-2122	ADJUSTABLE SEAT BRACKET KIT
21	1	CRE-K-2124	HIGH DEGREE SEAT INSTALLATION KIT
22	PER ORDER	CRE-K-2131	STRAIGHT FLAT LANDING ADJUSTABLE CLAMP KIT
23	PER ORDER	CRE-K-2132	CURVE FLAT LANDING ADJUSTABLE CLAMP KIT
24	2	SRE-00947	RF TRANSMITTER w/VELCRO (STD)(ROHS)
25	2	SRE-00945A	RF TRANSMITTER/HDWR (KEYED)(ROHS)
26	1	SRE-K-1518	CHARGER MOUNTING SCREWS
27	2	SRE-K-1580	TRANSMITTER WALL MOUNTING KIT (STD.)
28	1	CRE-00956	TALL ADJUSTABLE FOOT ASSY

*OPTIONAL

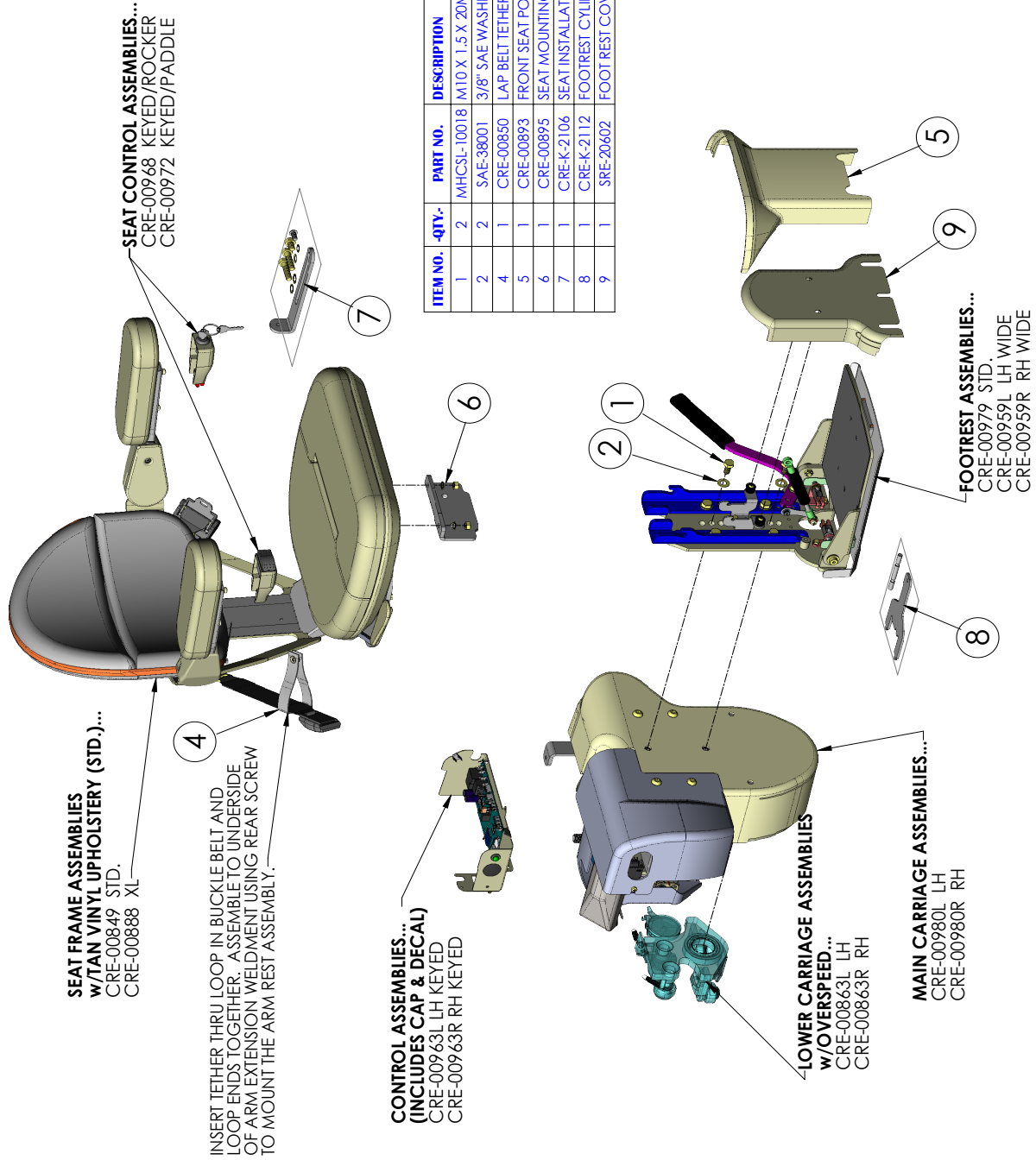
-PROXIMITY CHARGE/END PLATE INSTALLATION KITS...
 CRE-K-2134 STD.
 CRE-K-2137 SPECIAL
 CRE-K-2139 EXTREME



CRE-2110 OS Rail, Charger, & Call-Sends
SHEET 1 OF 5
REV. 0 (ISSUED)(1/11/2019)(KAS)

COMMERCIAL 'ELITE' CURVE - NO POWER

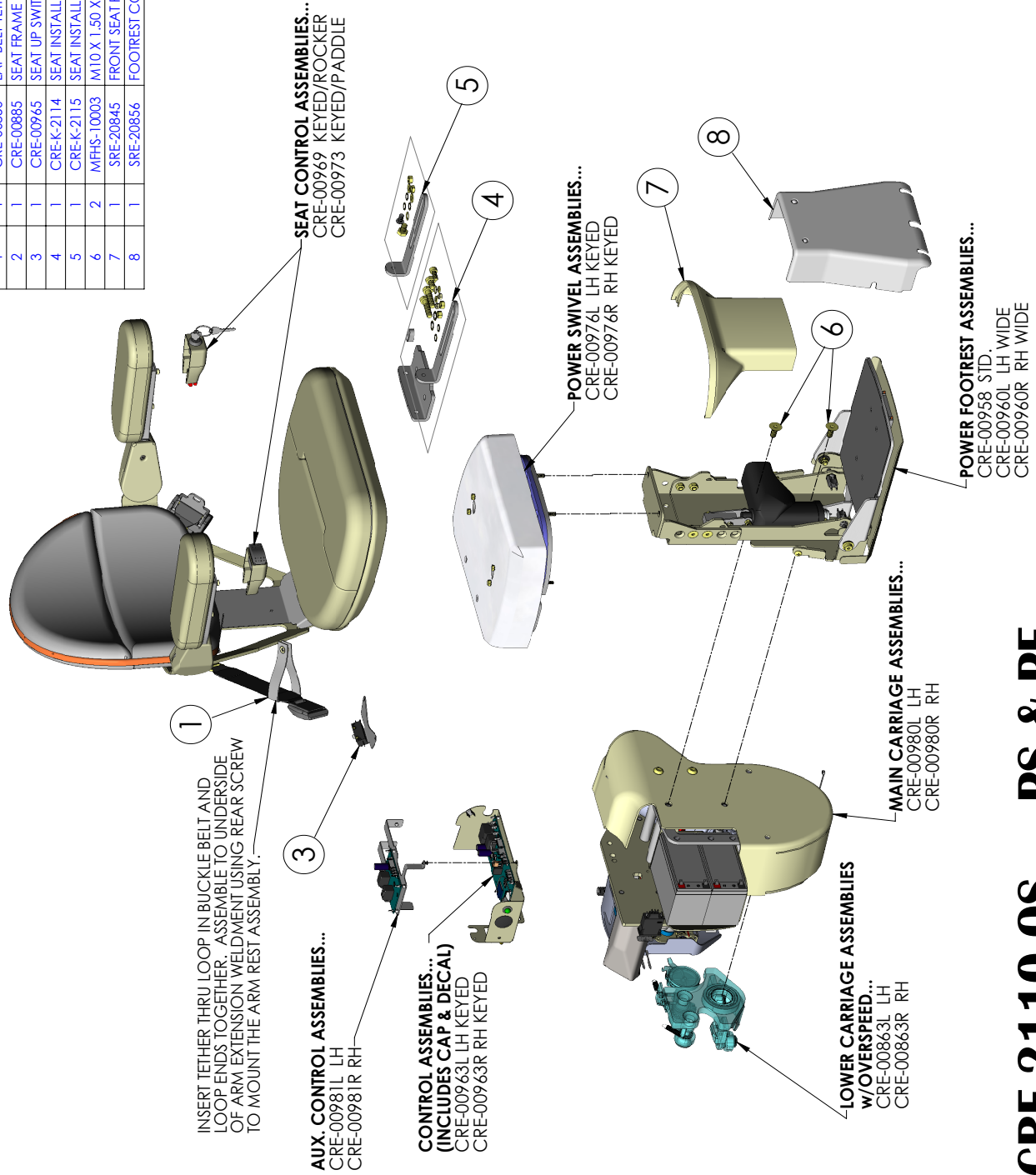
EXPLODED VIEW



CRE-2110 OS No Power
SHEET 2 OF 5
REV. 18 (ISSUED)(1/11/2019)(KAS)

'ELITE' CURVE - CUSTOM RAIL STAIRLIFT (OS) - POWER SWIVEL & POWER FOOTREST

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	CRE-00850	LAP BELT TETHER ASSY
2	1	CRE-00885	SEAT FRAME ASSEMBLY w/TAN VINYL UPH. - PWR SWVL
3	1	CRE-00965	SEAT UP SWITCH ASSEMBLY-POWER SWIVEL & FOOTREST
4	1	CRE-K-2114	SEAT INSTALLATION KIT (POWER SWIVEL)
5	1	CRE-K-2115	SEAT INSTALLATION KIT (POWER FOOTREST)
6	2	MFHS-10003	M10 X 1.50 X 25MM LG FLAT HEAD CAP SCREW (GRADE 10.9)
7	1	SRE-20845	FRONT SEAT POST COVER (POWER FOOTREST)
8	1	SRE-20856	FOOTREST COVER ASSY (POWER FOOTREST)



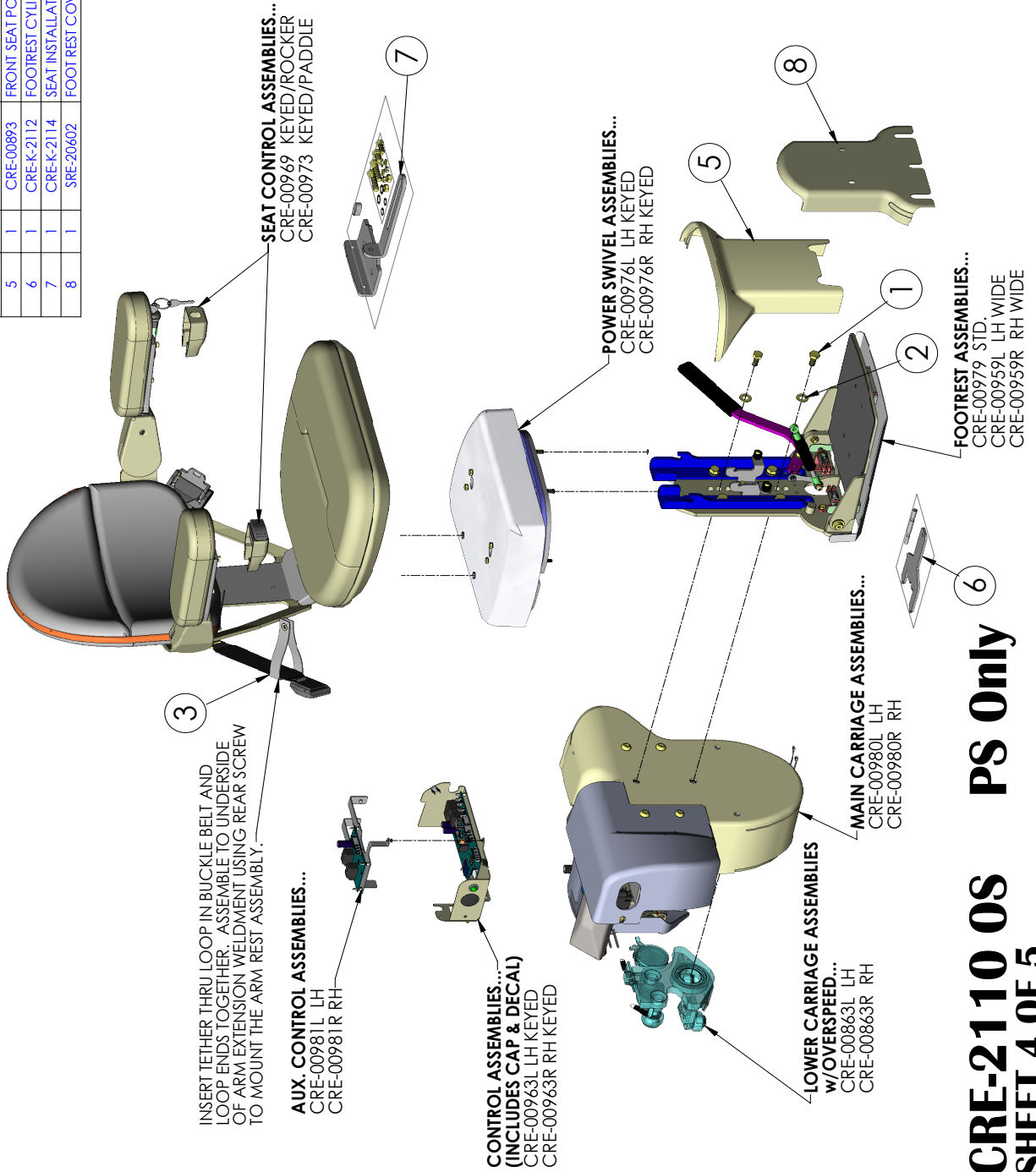
ADDITIONAL SEAT COLORS/MATL.	UPHOLSTERY SET STD. SEAT
LIGHT BROWN VINYL	SRE-20676BV
CHARCOAL VINYL	SRE-20676CV
IMAROOON VINYL	SRE-20676MV
OLIVE VINYL	SRE-20676OV
BROWN ULTRALEATHER	SRE-20676BRL
BURGUNDY ULTRALEATHER	SRE-20676BL
DARK BROWN ULTRALEATHER	SRE-20676DBL
GREY ULTRALEATHER	SRE-20676GRL

CRE-2110 OS PS & PF
SHEET 3 OF 5
REV. 0 (ISSUED)(1/11/2019)(KAS)



'ELITE' CURVE - CUSTOM RAIL STAIRLIFT (OS) - POWER SWIVEL

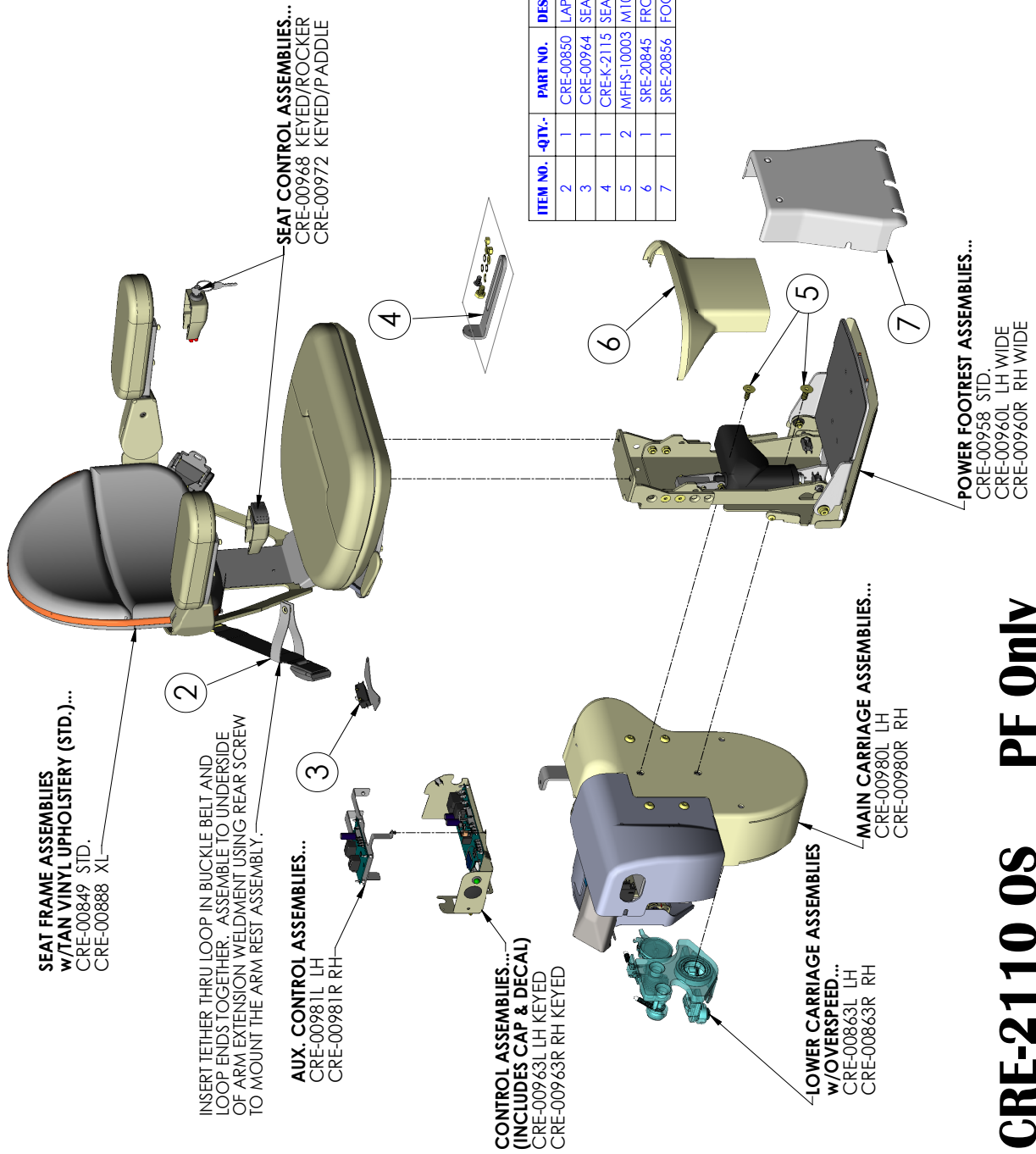
ITEM NO.	-QTY-	PART NO.	DESCRIPTION
1	2	MHCSSL-10018	M10 X 1.5 X 20MM LG HEX HEAD CAP SCREW w/SRV/CBL THRD/LKR
2	2	SAE-38001	3/8" SAE WASHER
3	1	CRE-00850	LAP BELT TETHER ASSY
4	1	CRE-00885	SEAT FRAME ASSEMBLY w/TAN VINYL UPH - PWR SWVL
5	1	CRE-00893	FRONT SEAT POST COVER ASSEMBLY
6	1	CRE-K-2112	FOOTREST CYLINDER INSTALLATION KIT
7	1	CRE-K-2114	SEAT INSTALLATION KIT (POWER SWIVEL)
8	1	SRE-20602	FOOT REST COVER



CRE-2110 OS PS Only
SHEET 4 OF 5
REV. 0 (ISSUED)(1/11/2019)(KAS)

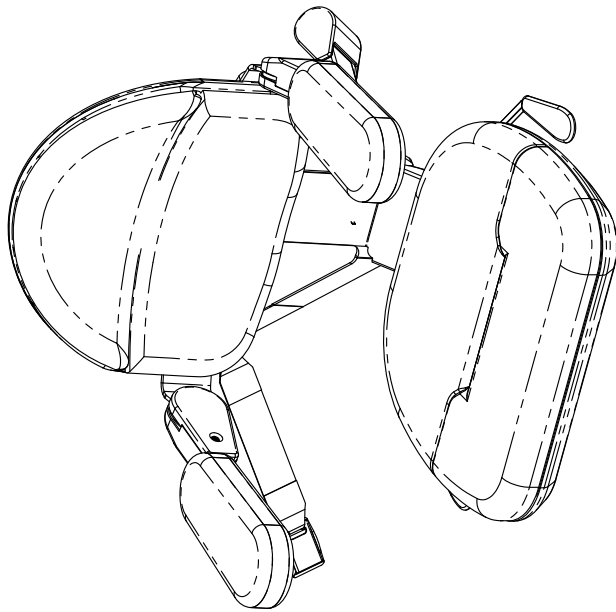
'ELITE' CURVE - CUSTOM RAIL STAIRLIFT (OS) - POWER FOOTREST

EXPLODED VIEW



CRE-2110 OS PF Only
SHEET 5 OF 5
REV. 0 (ISSUED)(1/11/2019)(KAS)

SEAT FRAME ASSEMBLY w/TAN VINYL UPH



TORQUE TO 80 FT. LBS.

TORQUE TO 150 IN. LBS. (3)

TORQUE TO 25 FT. LBS. (2)

TORQUE TO 85 IN. LBS. (3)

WIPE OFF GREASE, BOLT MUST BE CLEAN
APPLY BLUE LOCTITE (OR EQUIVALENT)

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	2	BRG-10003	1.0" TAPERED ROLLER BEARING CONE
2	2	BRG-10004	1.0" TAPERED ROLLER BEARING CUP
3	1	BRG-50012	FLANGE BEARING (1 1/2" ID X .518" OD X 1 1/2" LG)
4	1	CRE-00847	SEAT LOWER HINGE PLATE WELDMENT
5	2	MBHC-08009	M8 X 1.25 X 25MM SOCKET BUTTON HEAD CAP SCREW (ZINC)
6	2	MBHCL-06005	M6 X 1 X 14MM LG BUTTON HEAD SOCKET CAP SCREW w/SRVCBL THDLKR NYL PCH (ZNC PLT)
7	3	MFHSL-06006	M6 X 1 X 14MM LG FLAT HEAD CAP SCREW w/SRVCBL THDLKR
8	2	MFSW-04001	M4 FLAT WASHER (HARDENED)
9	2	MHCS-06002	M6 X 1 X 10MM LG HEX HEAD CAP SCREW
10	2	MHCSL-04001	M4 X .7 X 10MM LG HEX HEAD CAP SCREW (ULTRA SEAL) w/SRVCBL THDLKR
11	2	MPPM-03002	M3 X .5 X 16MM LG PHILLIPS PAN HEAD MACHINE SCREW
12	3	MSHSL-06009	M6 X 1 X 16MM LG SOCKET HEAD CAP SCREW (ULTRA SEAL) w/SRVCBL THDLKR
13	3	MSHSL-08003	M8 X 1.25 X 14MM LG SOCKET HEAD CAP SCREW (ULTRA SEAL) w/SRVCBL THDLKR
14	1	PBS-00136	SPST PUSHBUTTON SWITCH (POS. BREAK)
15	1	SRE-20596	SEAT PIVOT BOLT
16	1	SRE-20597	ACTUATOR MOUNTING RING
17	1	SRE-20598	SEAT SAFETY SWITCH CAM
18	1	SRE-20599	SEAT SAFETY SWITCH MTG PLATE
19	1	SRE-20600	SWIVEL BEARING HOUSING
20	1	SRE-20651	SEAT JAM NUT
21	1	SRE-20790	SWIVEL PLATE

DELETED TAN FABRIC SEAT OPTIONS.

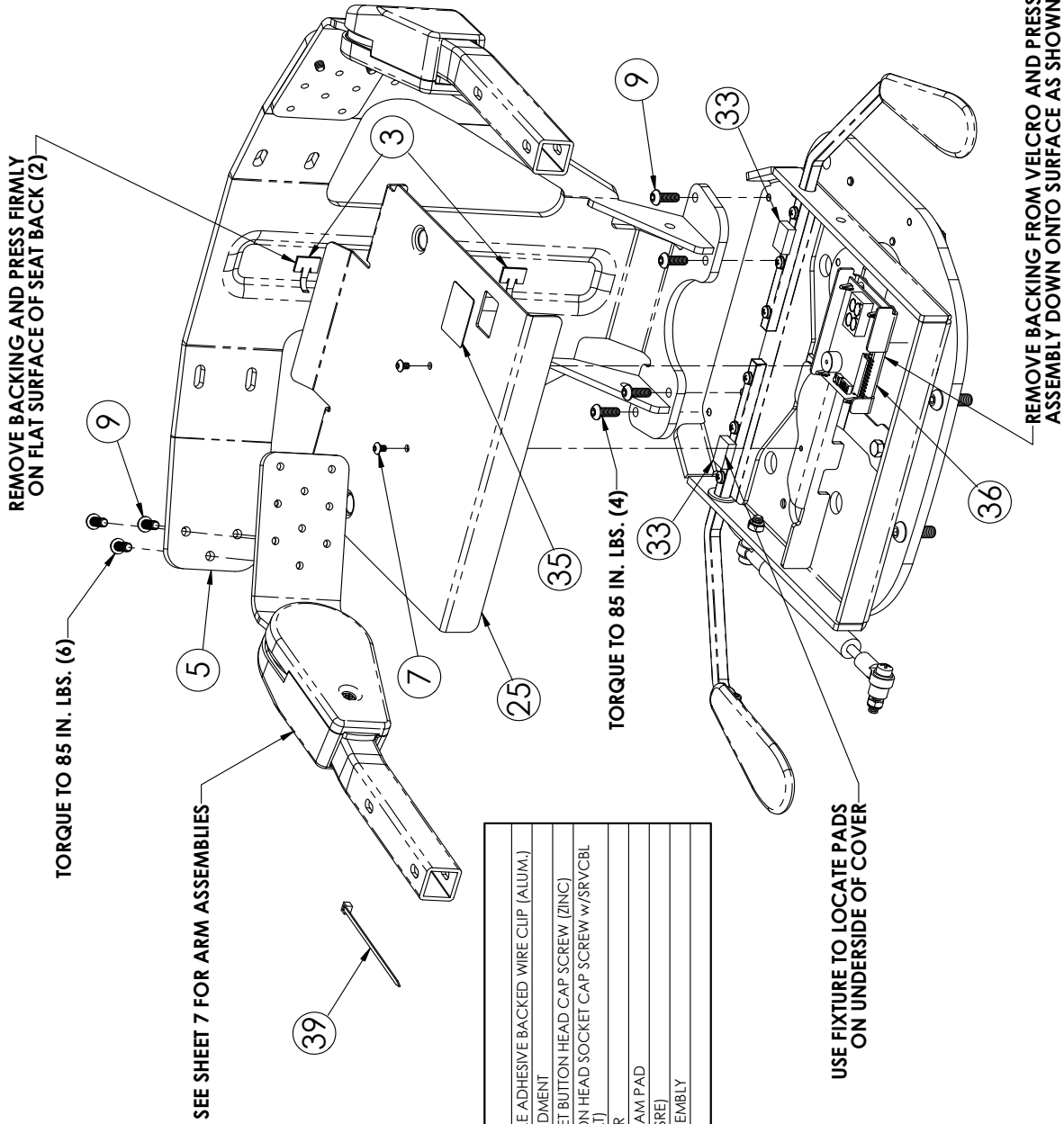
CRE-00849
SHEET 1 OF 7
REV. 12 (5685)(4/1/14)(KAS)

LEFT HAND ASSEMBLY SHOWN

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SEAT FRAME ASSEMBLY w/TAN VINYL UPH

EXPLODED VIEW



ITEM NO.	QTY.	PART NO.	DESCRIPTION
3	2	CCL-23001	23 ID X .67 W ADJUSTABLE ADHESIVE BACKED WIRE CLIP (ALUM.)
5	1	CRE-00848	SEAT BACK SUPPORT WELDMENT
7	2	MBHC-04001	M4 X .7 X 6MM LG SOCKET BUTTON HEAD CAP SCREW (ZINC)
9	10	MBHCL-04005	M6 X 1 X 14MM LG BUTTON HEAD SOCKET CAP SCREW w/SRV/CBL THDLKR NTL PCH (ZINC PLY)
25	1	SRE-20580CP	SEAT HINGE PLATE COVER
33	2	SRE-20751	HANDLE DAMPENING FOAM PAD
35	1	SRE-20991	DISPLAY WINDOW (CRE/SRE)
36	1	SRE-27391	USER INTERFACE PCB ASSEMBLY
39	1	WRT-10001	4" LG WIRE TIE (.1" WIDTH)

△ DELETED TAN FABRIC SEAT OPTIONS.

CRE-00849
SHEET 3 OF 7
REV. 12 (5685)(4/1/14)(KAS)

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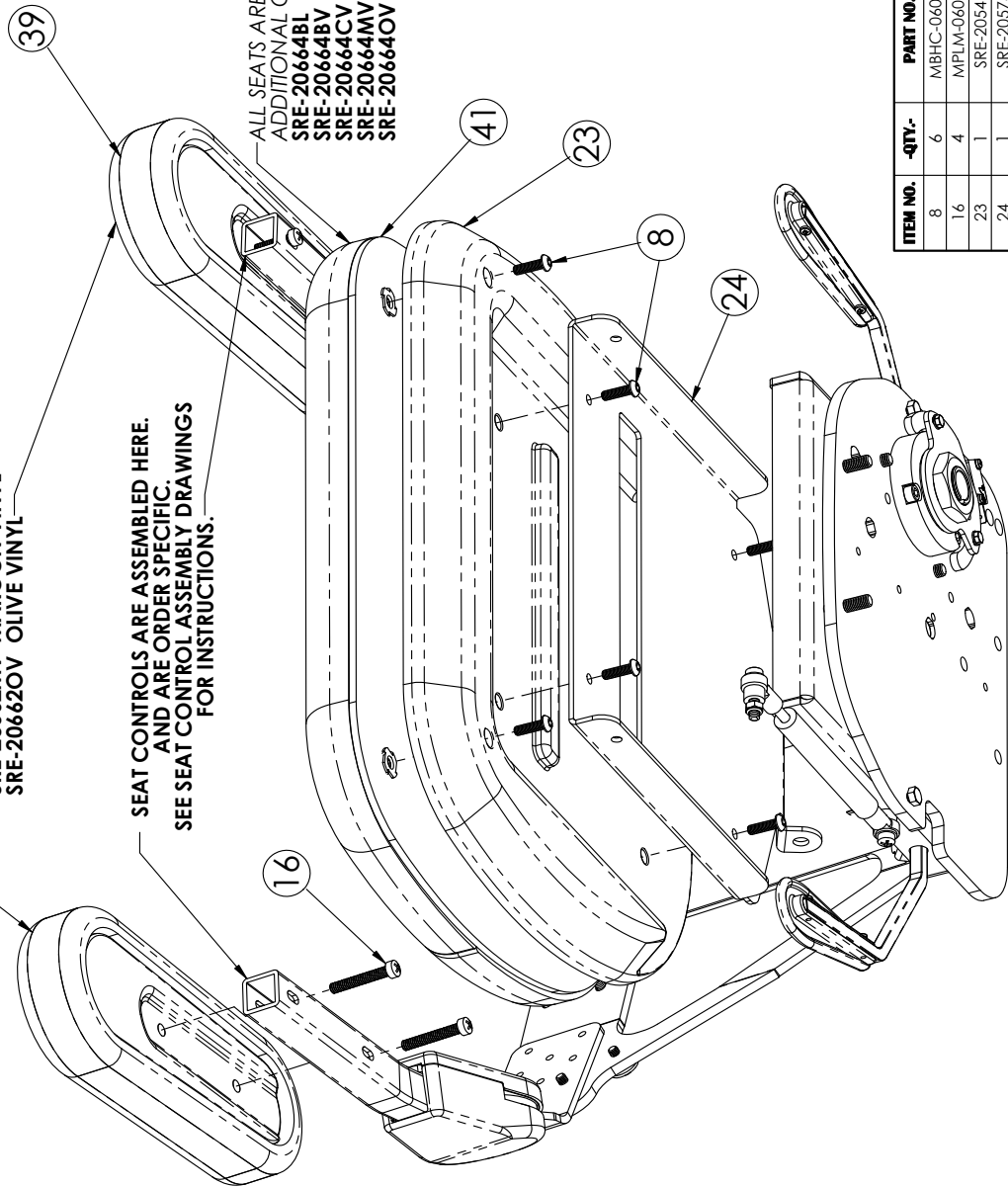
SEAT FRAME ASSEMBLY w/TAN VINYL UPH

ALL SEATS ARE BUILT WITH TAN VINYL ARMREST CUSHIONS (SRE-20662TV)

ADDITIONAL OPTIONS ARE...
 SRE-20662BL BURGUNDY LEATHER
 SRE-20662BV BROWN VINYL
 SRE-20662CV CHARCOAL VINYL
 SRE-20662MV MAROON VINYL
 SRE-20662OV OLIVE VINYL

SEAT CONTROLS ARE ASSEMBLED HERE.
 AND ARE ORDER SPECIFIC.
 SEE SEAT CONTROL ASSEMBLY DRAWINGS
 FOR INSTRUCTIONS.

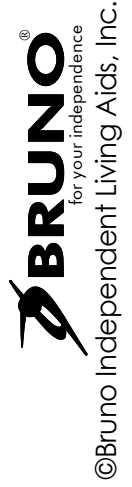
ALL SEATS ARE BUILT WITH TAN VINYL SEAT CUSHIONS (SRE-20664TV)
 ADDITIONAL OPTIONS ARE...
 SRE-20664BL BURGUNDY LEATHER
 SRE-20664BV BROWN VINYL
 SRE-20664CV CHARCOAL VINYL
 SRE-20664MV MAROON VINYL
 SRE-20664OV OLIVE VINYL



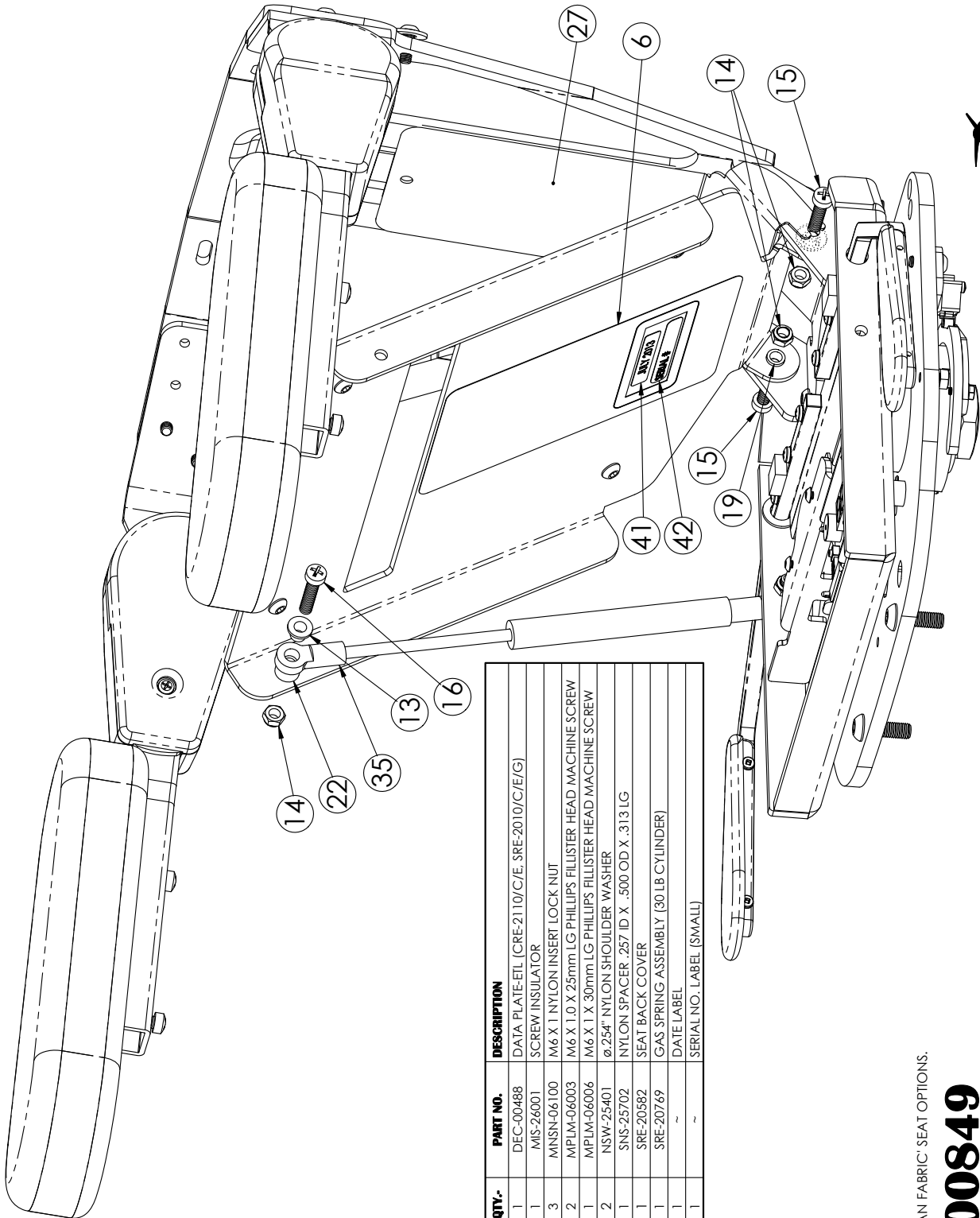
ITEM NO.	QTY.	PART NO.	DESCRIPTION
8	6	MBHC-06007	M6 X 1 X 20mm LG SOCKET BUTTON CAP SCREW (ZINC) (MAX TIP)
16	4	MPLM-06007	M6 X 1 X 40mm LG PHILLIPS FILLISTER HEAD MACHINE SCREW
23	1	SRE-20547	SEAT BOTTOM COVER
24	1	SRE-20573	SEAT UPPER HINGE PLATE
39	2	SRE-20662TV	ARM REST ASSEMBLY (TAN VINYL)
41	1	SRE-20664TV	SEAT BOTTOM ASSEMBLY (TAN VINYL)

DELETED TAN FABRIC SEAT OPTIONS.

CRE-00849
SHEET 4 OF 7
REV. 12 (5685)(4/1/14)(KAS)



SEAT FRAME ASSEMBLY w/TAN VINYL UPH



ITEM NO.	-QTY-	PART NO.	DESCRIPTION
6	1	DEC-00488	DATA PLATE-ETL (CRE-2110/C/E, SRE-2010/C/E/G)
13	1	MIS-26001	SCREW INSULATOR
14	3	MNSN-06100	M6 X 1 NYLON INSERT LOCK NUT
15	2	MPLM-06003	M6 X 1.0 X 25mm LG PHILLIPS FILLISTER HEAD MACHINE SCREW
16	1	MPLM-06006	M6 X 1 X 30mm LG PHILLIPS FILLISTER HEAD MACHINE SCREW
19	2	NSW-25401	Ø.254" NYLON SHOULDER WASHER
22	1	SNS-25702	NYLON SPACER .257 ID X .500 OD X .313 LG
27	1	SRE-20582	SEAT BACK COVER
35	1	SRE-20769	GAS SPRING ASSEMBLY (30 LB CYLINDER)
41	1	~	DATE LABEL
42	1	~	SERIAL NO. LABEL (SMALL)

△2 DELETED TAN FABRIC SEAT OPTIONS.

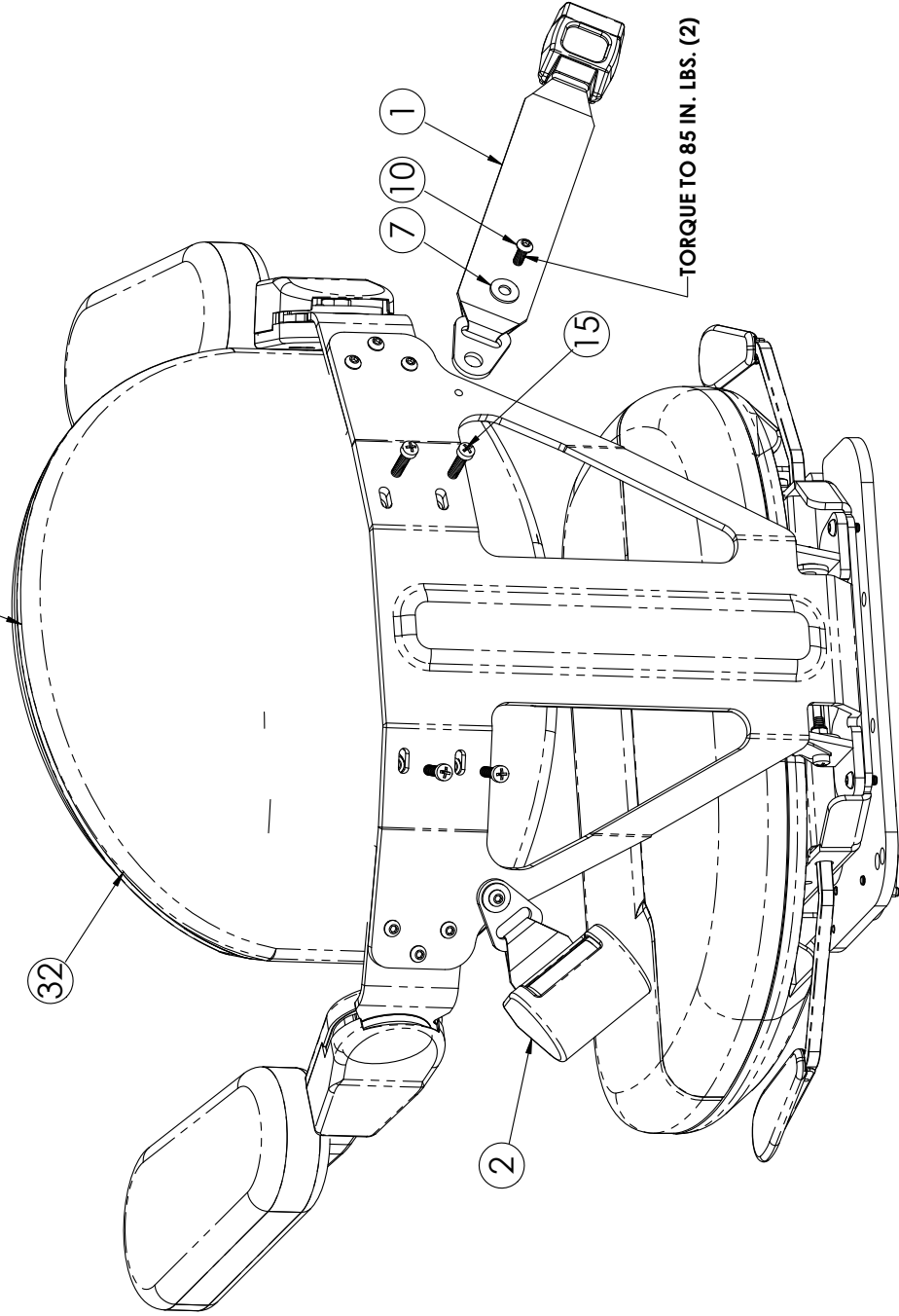
CRE-00849
SHEET 5 OF 7
REV. 12 (5685)(4/1/14)(KAS)

EXPLODED VIEW

SEAT FRAME ASSEMBLY w/TAN VINYL UPH

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	BLT-00005	RETRACTABLE LAP BELT (BUCKLE END)
2	1	BLT-00005	RETRACTABLE LAP BELT (RETRACTOR SIDE)
7	2	FSW-25001	1/4" FLAT WASHER
10	2	MBHCL-06005	M6 X 1 X 14MM LG BUTTON HEAD SOCKET CAP SCREW w/SRVCBL THDLKR NYL PCH (ZNC PLT)
15	4	MPLM-06003	M6 X 1.0 X 25mm LG PHILLIPS FILLISTER HEAD MACHINE SCREW
32	1	SRE-20663TV	SEAT BACK ASSEMBLY (TAN VINYL)

ALL SEATS ARE BUILT WITH TAN VINYL SEAT BACKS (SRE-20663TV)
ADDITIONAL OPTIONS ARE:
SRE-20663BL BURGUNDY LEATHER
SRE-20663BV BROWN VINYL
SRE-20663CV CHARCOAL VINYL
SRE-20663MV MAROON VINYL
SRE-20663OV OLIVE VINYL

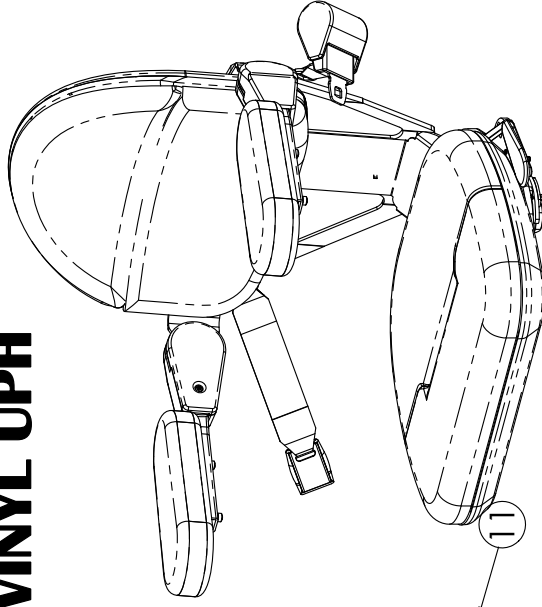


DELETED TAN FABRIC SEAT OPTIONS.

CRE-00849
SHEET 6 OF 7
REV. 12 (5685)(4/1/14)(KAS)

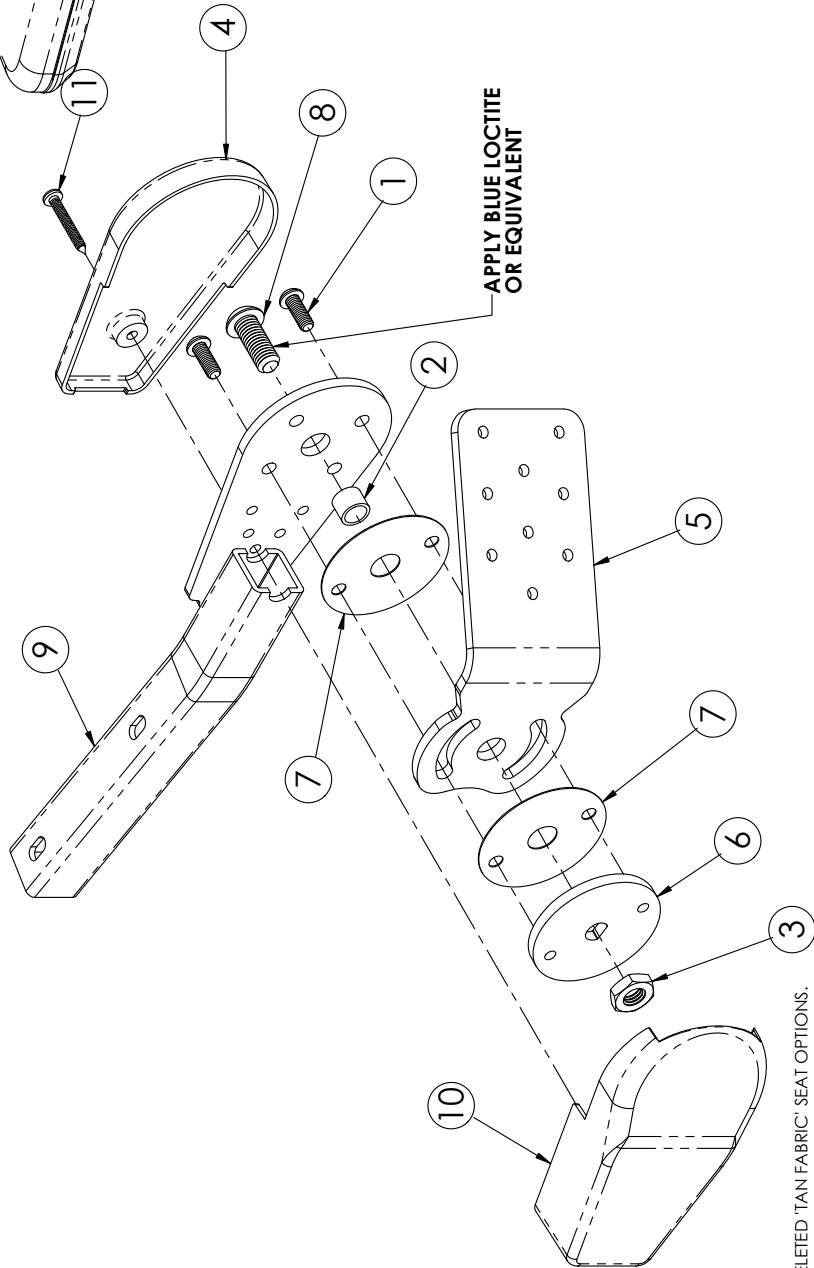


SEAT FRAME ASSEMBLY w/TAN VINYL UPH



ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	2	MBHCL-04006	M6 X 1 X 16MM LG BUTTON HEAD SOCKET CAP SCREW w/SRV/CBL THDLKR
2	1	MBUS-10001	BUSHING, TEFLON COMPOSITE (10MM ID X 12MM OD X 10MM LG)
3	1	MJNF-10151	M10 x 1.5 HEX JAM NUT PLATED
4	1	SRE-20550	ARM SWIVEL COVER - INNER
5	1	SRE-20583	SEAT ARM SWIVEL MITG BRKT
6	1	SRE-20587	ARM PIVOT BACKING PLATE
7	2	SRE-20588	ARM PIVOT SHEAR BEARING
8	1	SRE-20589	ARM PIVOT BOLT
9	1	SRE-21135	ARM EXTENSION WELDMENT
10	1	SRE-21148	ARM SWIVEL COVER
11	1	STFS-08001	#8-11 X 1.25 LG PHILLIPS PAN HEAD THREAD FORMING SCREW (ROUND-SHANK SHARP POINT)

NOTE: QTY.'s ARE DOUBLED FOR A COMPLETE SEAT



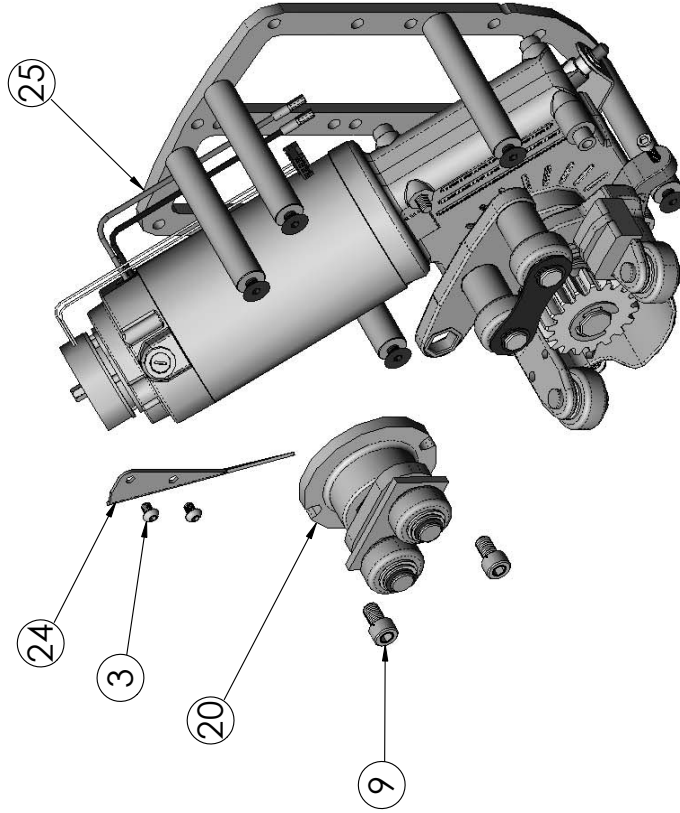
△ DELETED 'TAN FABRIC' SEAT OPTIONS.

CRE-00849
SHEET 7 OF 7
REV. 12 (5685)(4/1/14)(KAS)

EXPLODED VIEW

MAIN CARRIAGE ASSEMBLY-LH

ITEM NO.	EXPLOD/GTY.	PART NO.	DESCRIPTION
3	2	MBHC-06010	M6 X 1 X 8MM LG SOCKET BUTON HEAD CAP SCREW (ZINC)
9	5	MSHSL-10001	M10 X 1.5 X 16MM LG SOCKET HEAD CAP SCREW (BRIGHT ZINC) W/SERVICEABLE THREADLOCKER(S THDS AT END)
20	1	CRE-00838	LEVELING CAM ASSEMBLY
24	1	CRE-00843L	MOTOR COVER PLATE-LEFT
25	1	CRE-00977L	DRIVE ASSEMBLY-LH



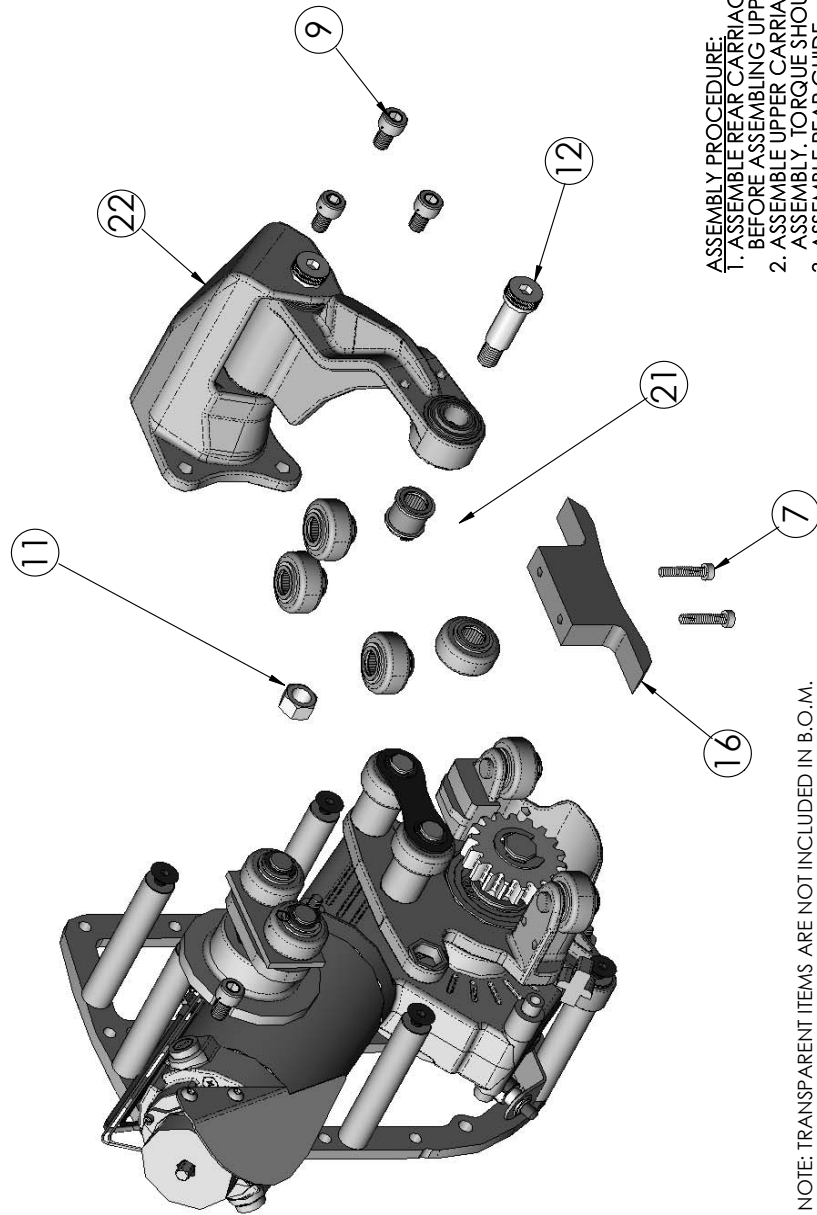
NOTE: TRANSPARENT ITEMS ARE NOT INCLUDED IN B.O.M.

CRE-00980L
SHEET 1 OF 6
REV. 3 (5456)(8/1/13)(RJH)

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MAIN CARRIAGE ASSEMBLY-LH

ITEM NO.	EXPLOD/ QTY.	PART NO.	DESCRIPTION
7	2	MPLM-06006	M6 X 1 X 30mm LG PHILLIPS FILLISTER HEAD MACHINE SCREW
9	5	MSHSL-10001	M10 X 1.5 X 16MM LG SOCKET HEAD CAP SCREW (BRIGHT ZINC) W/SERVICEABLE THREADLOCKER(S THDS AT END)
11	1	NPL-50131	1/2-13 HEX NUT (PLATED)
12	1	SLSL-63001	5/8" DIA. X 1.5" LG SOCKET HEAD SHOULDER SCREW (1/2"-13 THREAD) W/SERVICEABLE THREADLOCKER
16	1	CRE-00526	REAR GUIDE
21	1	CRE-00839L	UPPER CARRIAGE ASSEMBLY-LH
22	1	CRE-00840L	REAR CARRIAGE ARM ASSEMBLY-LH



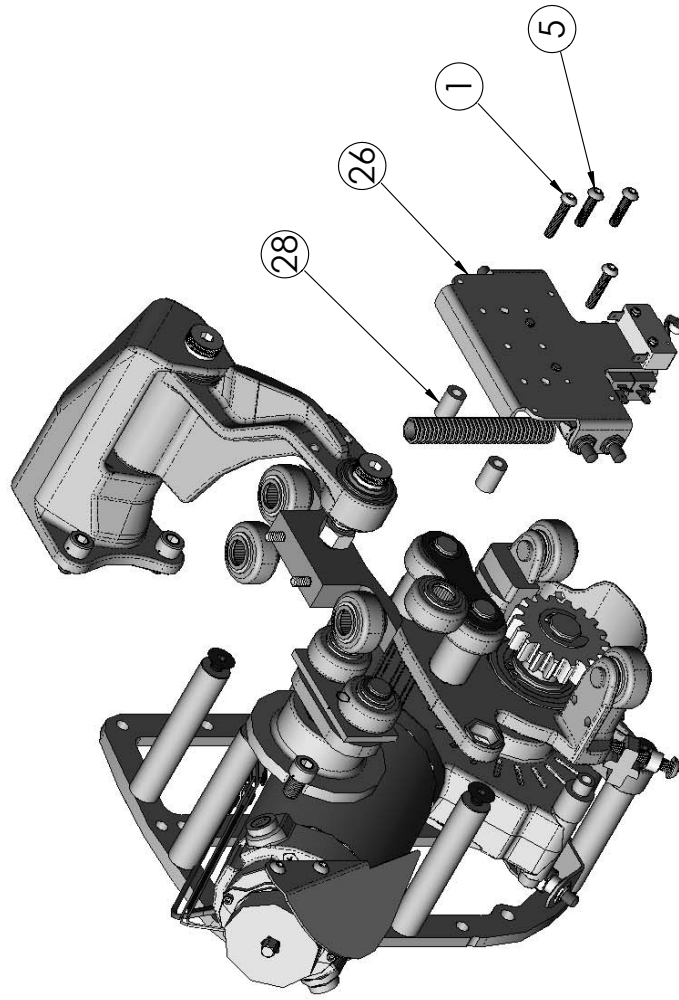
ASSEMBLY PROCEDURE:
 1. ASSEMBLE REAR CARRIAGE ARM ASSEMBLY TO DRIVE ASSEMBLY BEFORE ASSEMBLING UPPER CARRIAGE ASSEMBLY.
 2. ASSEMBLE UPPER CARRIAGE ASSEMBLY TO REAR CARRIAGE ARM ASSEMBLY. TORQUE SHOULDER SCREW AND NUT TO 7-10 FT. LBS.
 3. ASSEMBLE REAR GUIDE.

NOTE: TRANSPARENT ITEMS ARE NOT INCLUDED IN B.O.M.

CRE-00980L
SHEET 2 OF 6
REV. 3 (5456)(8/1/13)(RJH)

MAIN CARRIAGE ASSEMBLY-LH

ITEM NO.	EXPLODED QTY.	PART NO.	DESCRIPTION
1	2	MBHC-06002	M6 X 1 X 30MM LG BUTTON HEAD CAP SCREW
5	2	MBHCL-06011	M6 X 1 X 25MM LG SOCKET BUTTON HEAD CAP SCREW (ZINC) W/SERVICEABLE THREADLOCKER (1/2 THDS UNDER HEAD)
26	1	CRE-00978L	CHARGE CONTACT ASSEMBLY-LH (POS. BREAK)
28	2	SNS-25703	SPACER .25ID X .50D X .75 LG



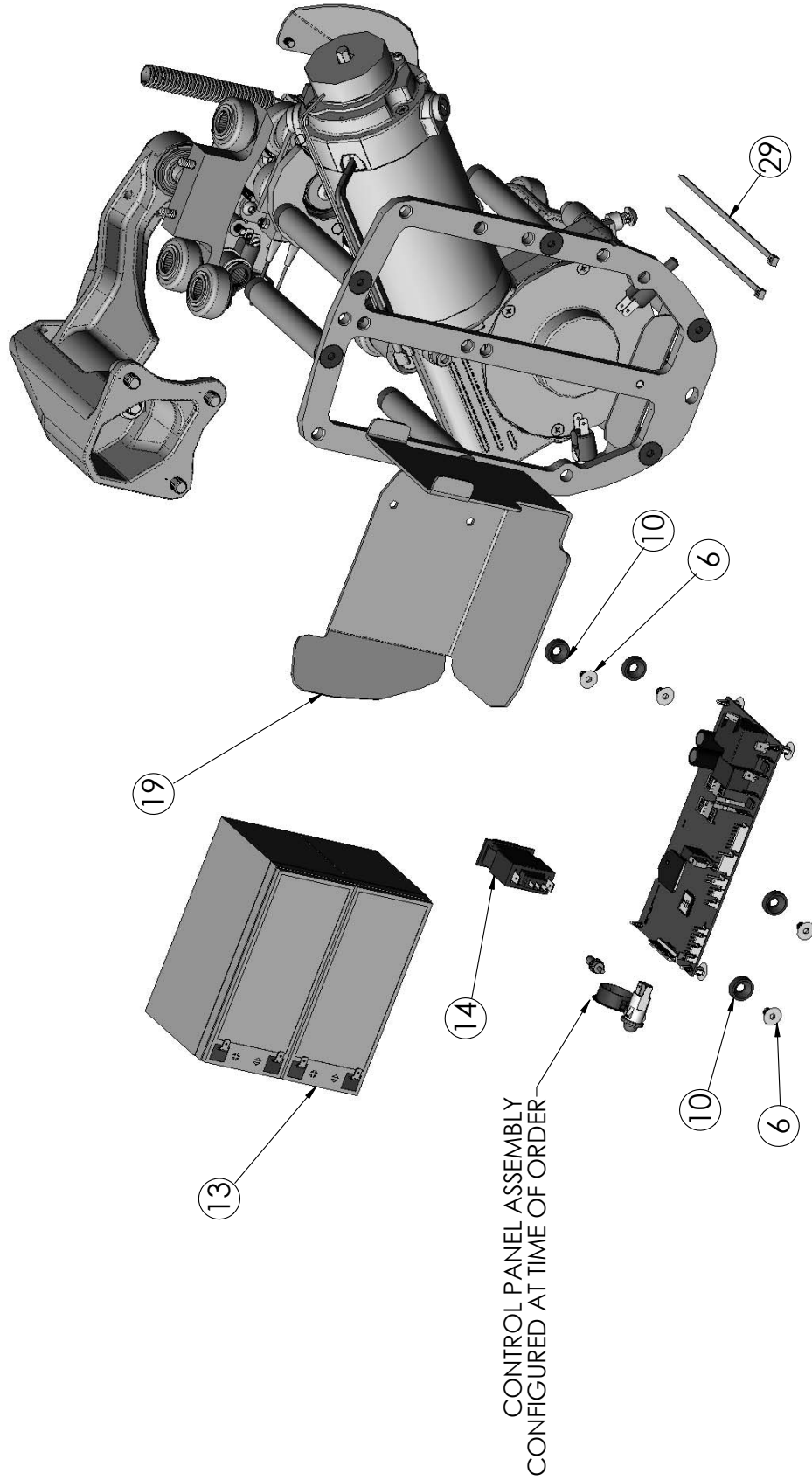
SEE SHEET 6 FOR "STICK-OUT"
BOLT SPECIFICATIONS

CRE-00980L
SHEET 3 OF 6
REV. 3 (5456)(8/1/13)(RJH)

NOTE: TRANSPARENT ITEMS ARE NOT INCLUDED IN B.O.M.

MAIN CARRIAGE ASSEMBLY-LH

ITEM NO.	Exp'd4/ Qty.	PART NO.	DESCRIPTION
6	4	MFHS-06002	M6 X 1.0 X 10mm LG FLAT SOCKET HEAD CAP SCREW
10	4	NFW-26001	.260" ID X .638" OD X .180" THK NYLON FINISHING WASHER (NATURAL)
13	2	BTR-12002	12V 6/6-5/7 AH BATTERY (MAINTENANCE FREE)
14	1	CBK-30004	30A CIRCUIT BREAKER W/AUX. SWITCH (ROCKER)
19	1	CRE-00811L	LH BATTERY MTG BRACKET
29	2	WRT-14401	6" LG WIRE TIE (.144" WIDTH)



CONTROL PANEL ASSEMBLY
CONFIGURED AT TIME OF ORDER

CRE-00980L
SHEET 4 OF 6
REV. 3 (5456)(8/1/13)(RJH)

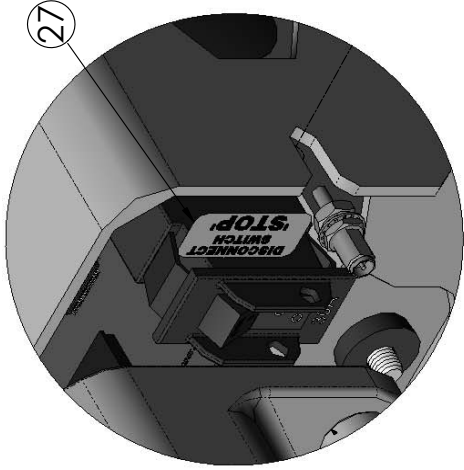
NOTE: TRANSPARENT ITEMS ARE NOT INCLUDED IN B.O.M.

EXPLODED VIEW

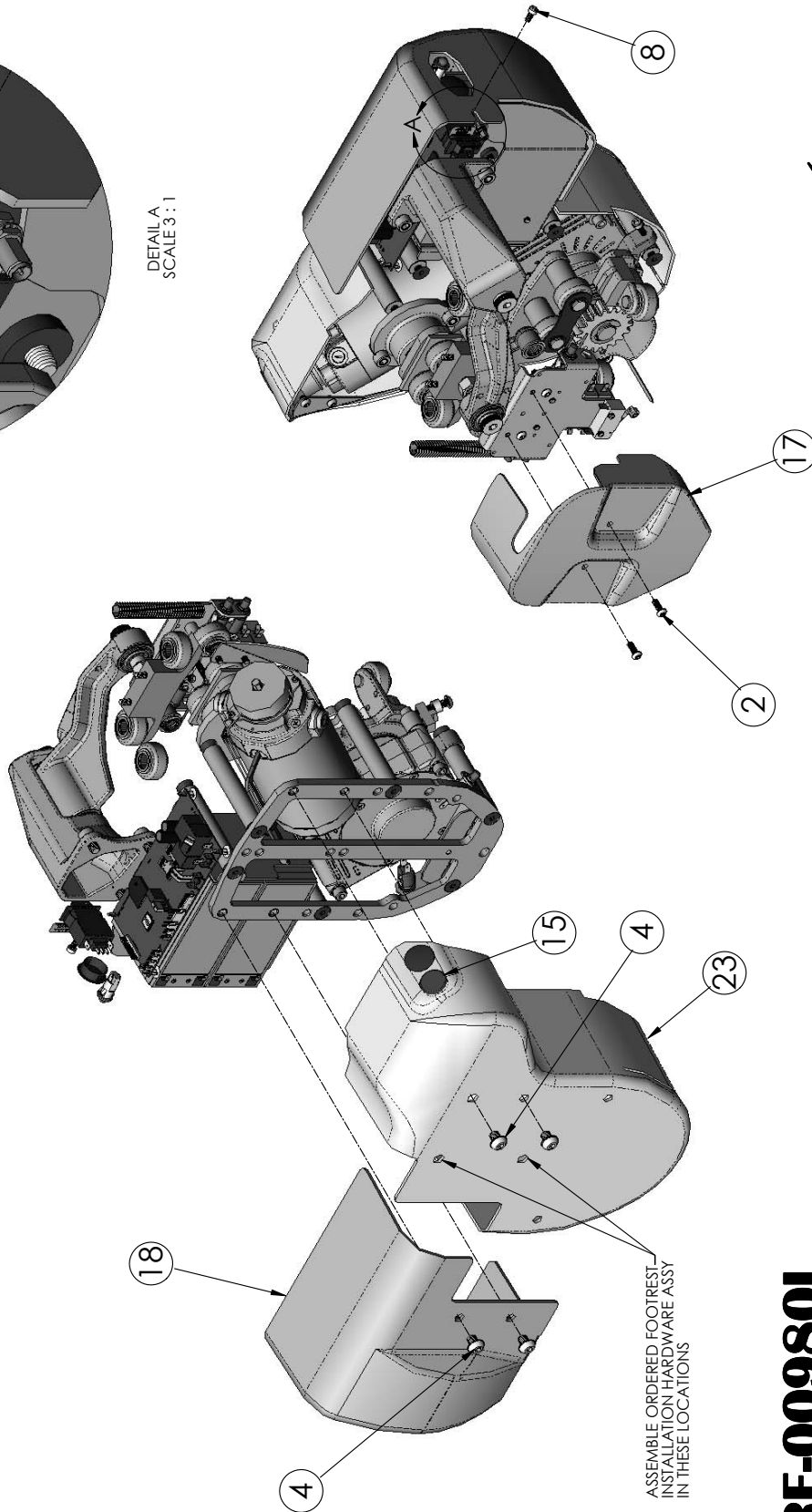
MAIN CARRIAGE ASSEMBLY-LH

EXPLODED VIEW

ITEM NO.	EXPLD/ QTY.	PART NO.	DESCRIPTION
2	2	MBHC-06006	M6 X 1 X 1.6mm LG SOCKET BUTTON CAP SCREW
4	4	MBHC-10003	M10 X 1.5 X 12mm METRIC BUTTON HEAD CAP SCREW
8	1	MPLM-06008	M6 X 1 X 12mm LG PHILLIPS FILLISTER HEAD MACHINE SCREW
15	1	CPP-88003	7/8" DIA. "PRY-OUT" CAP PLUG (BLACK)
17	1	CRE-00759L	SENSORS COVER-LH
18	1	CRE-00760L	CRE CONTROL COVER-LEFT
23	1	CRE-00841L	DRIVE COVER - LEFT (CRE-2110)
27	1	LBL-00140	DISCONNECT SWITCH/STOP LABEL



DETAIL A
SCALE 3:1



ASSEMBLE ORDERED FOOTREST
INSTALLATION HARDWARE ASSY
IN THESE LOCATIONS

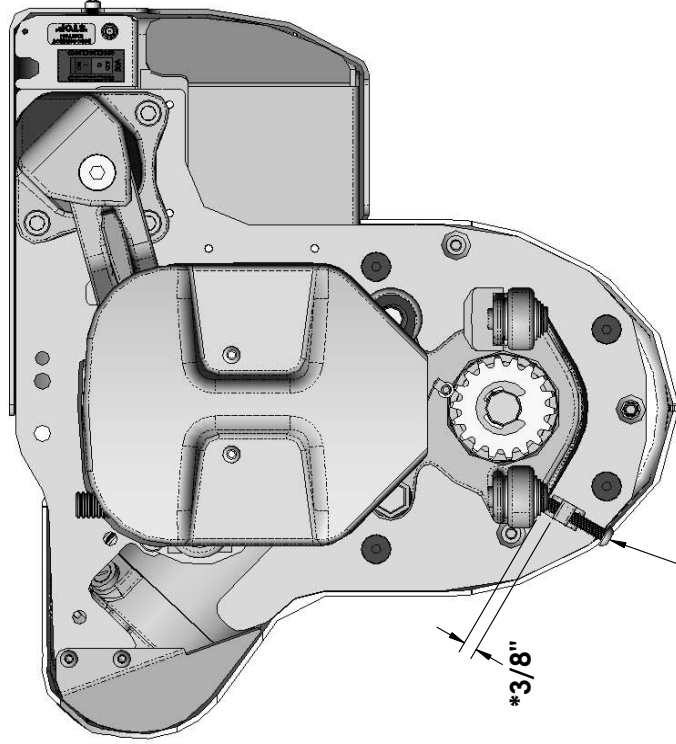
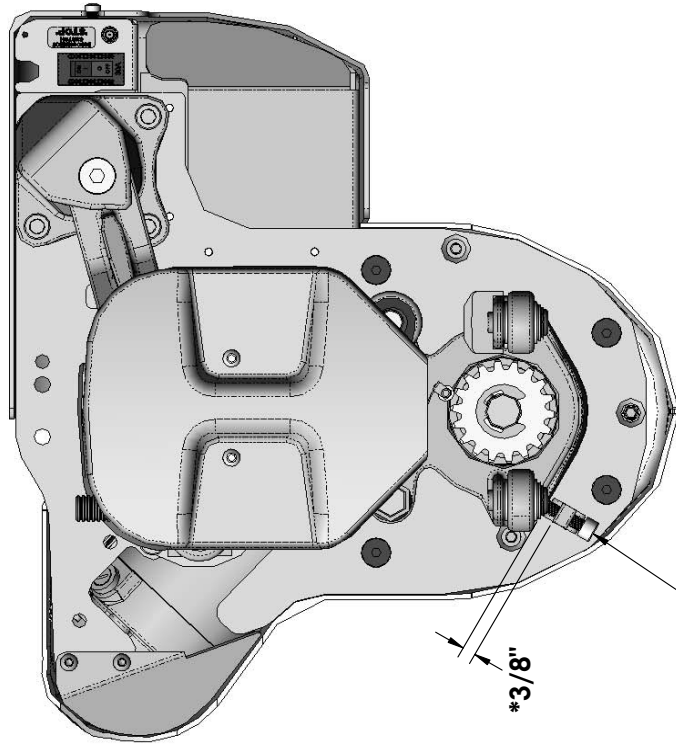
NOTE: TRANSPARENT ITEMS ARE NOT INCLUDED IN B.O.M.

CRE-00980L
SHEET 5 OF 6
REV. 3 (5456)(8/1/13)(RJH)

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MAIN CARRIAGE ASSEMBLY-LH

EXPLODED VIEW



***UNLESS SPECIFIED OTHERWISE BY CRE FABRICATION
(HARDWARE IS SPECIFIED ON cfg-CRE JOB TRAVELER BASED ON MODEL NO.)**

NOTE: TRANSPARENT ITEMS ARE NOT INCLUDED IN B.O.M.

CRE-00980L
SHEET 6 OF 6
REV. 3 (5456)(8/1/13)(RJH)

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BRUNO GOLD LIMITED WARRANTY FOR STAIRLIFT 5 Years Major Components — 2 Year Parts

Bruno Independent Living Aids, Inc.© (Bruno) is so confident in our USA designed and built units that we provide every original buyer with the following "Industry Leading" warranty for your peace of mind.

The quality of parts we use and the care our employees take allow Bruno to provide the original buyer of its Bruno Stairlift with a **2-year warranty** that all parts are free of defects in material and workmanship.

Because of the reliability found in Bruno's Stairlift product Bruno is able to provide the original buyer with an extended **5-year warranty** of the Major Components of the product, to include the motor/gearbox drive train and rail system. Bruno's warranty periods begin with **the date of the installation** of the Bruno Stairlift.

Bruno Authorized Dealers are trained to evaluate your unique situation and then install the best Bruno product to meet your needs. The trained installation and service technicians employed by Bruno Authorized Dealers have the appropriate equipment and resources needed to correctly install and maintain your new stairlift and are the first contact for any warranty or service needs.

SPECIFICS OF THE WARRANTY COVERAGE:

- ◇ All Parts are free of defects in material and workmanship for a period of two years after the date of installation.
- ◇ All MAJOR COMPONENTS are free of defects in material and workmanship for a period of five years after the date of installation.
- ◇ All labor to address any product defect by a Bruno Authorized Dealer is covered for the first 30 days after installation.

WHAT IS NOT WARRANTY COVERAGE:

- ◇ Damage to units caused by misuse, abuse, accidents, neglect or modifications NOT made by a Bruno Authorized Dealer.
- ◇ Consumable items such as remote batteries.
- ◇ All labor by a Bruno Authorized Dealer after the first 30 days since installation.
- ◇ Reasonable wear and tear.

ADDITIONAL NOTES:

All Service and Warranty issues are handled through the Bruno Authorized Dealer that installed the unit.

- ◇ In no event shall Bruno be responsible for indirect, incidental or consequential damages, whether such damages arise based on claims based on contract, warranty, tort (including negligence, strict liability or product liability).
- ◇ Bruno reserves the right to replace, repair or, if not commercially practical and/or feasible, to elect to refund the purchase price at its sole discretion.
- ◇ This warranty gives the original buyer specific legal rights, and you may also have other rights which vary from state to state. Bruno specifically does not authorize any person to extend the time or scope of this warranty.

For more detailed information regarding this limited warranty, please contact Bruno by writing:

Bruno Independent Living Aids, Inc.
Attn: Service Department
1780 Executive Drive
Oconomowoc, WI 53066 USA
or call: 1-800-882-8183 toll free

Innovative solutions

for your indoor and outdoor lifestyle



Indoor Stairlifts



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Scooter/Powerchair Lifts



Vertical Platform Lifts



Bruno Independent Living Aids, Inc.
1780 Executive Drive, Oconomowoc, WI 53066
800-882-8183 • www.bruno.com

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