

INSTRUCTION GUIDE

INSTALLATION OF LED LIGHTING PACKAGE WITH TURN SIGNALS



TABLE OF CONTENTS

- INTRODUCTION 3
 - 1. Replacement parts packages 3
 - 2. List of tools required..... 3
- ASSEMBLY & INSTALLATION 4
 - 1. Installing FRONT safety lights with turn signals 4
 - 1.1. Installing lights on chairs with a Center Mount Legrest..... 4
 - 1.2. Installing lights on chairs with separate legrests for adult, pediatric and HD models 4
 - 1.3. Installing lights on chairs with power legrests. 5
 - 1.4. Installing lights on chairs with knee blocks (Stander) 6
 - 2. Installing REAR safety lights with turn signals 6
 - 2.1. Installation onto the power module shroud of chair with tilt..... 6
 - 3.1. Installation onto the power module shroud with combo (tilt and elevate) 7
- CONNECTING AND WIRING CABLES 8
 - 3. Installing R-net cable onto the backrest 9
 - 3.1. On a fixed backrest 9
 - 3.2. On a power recline backrest 11
 - 4. Installing REAR safety lights with an R-NET cable 12
 - 4.1. For a power tilt..... 12
 - 4.2. For a power combo (tilt/elevate)..... 13
 - 5. Installing REAR safety lights with a VR2 controller..... 14
 - 5.1. Without tilt 14
 - 5.2. With tilt 15
 - 6. Installing cable underneath the seat pan (except for the Stander) 16
 - 7. Installing safety light cables for a STANDER..... 17
 - 7.1. From the backrest 17

LED Safety Light Package Installation (cont'd)





INTRODUCTION

The intention of this guide is to provide technicians step by step instructions for installing the Amylior lighting system onto all Alltrack power wheelchairs. This includes front and rear safety lights, the light module, connections, and proper wiring and securing cables.

1. Replacement parts packages

Order Form reference number	▶ EOLP2-RNET-T, EOLP2-RNET-TR, EOLP2-RNET-TR-DUAL, EOLP2-VR2
Part Number	Description
1004183	LEFT FRONT Safety Light Package including hardware.
1004184	RIGHT FRONT Safety Light Package including hardware.
1004185	REAR (LEFT 1004045, RIGHT 1004046) Safety Light Package including hardware
1004186	R-NET Safety Light Package including module, hardware, and harness
1004187	VR2 Safety Light Package including module, hardware, and harness
1004188	R-net STANDER Safety Light Package including module, hardware, and harness

2. List of tools required

Allen keys: $\frac{3}{16}$ " or 5 mm and $\frac{5}{16}$ " / 8 mm	
Wrenches: $\frac{5}{16}$ " / 8 mm and $\frac{7}{16}$ " / 11 mm	
Cutter pliers	
Phillips Screwdriver	

ASSEMBLY & INSTALLATION

1. Installing FRONT safety lights with turn signals

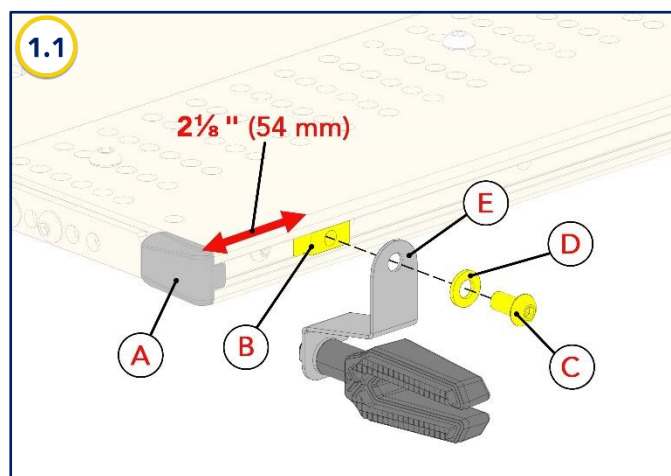
IMPORTANT:

Installation of front safety lights are done according to the power wheelchair's CONFIGURATION.

NOTE - For simplicity, this guide focuses on the installation of the lights on the left side of the chair, as viewed from the seated position. The terms "safety lights" and "lights" will be used interchangeably.

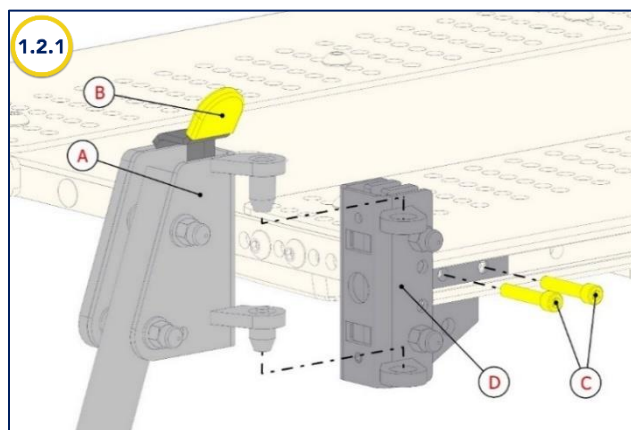
1.1. Installing lights on chairs with a Center Mount Legrest.

- 1.2.1. Remove the seat pan endcap **A**. Slide part **B** along the track and place it at $2\frac{1}{8}$ " from the front of the seat pan.
- 1.2.2. Using a $\frac{3}{16}$ " Allen key, firmly tighten screw **C** to part **B** passing through washer **D** and bracket **E**.
- 1.2.3. Reinstall endcap **A**.

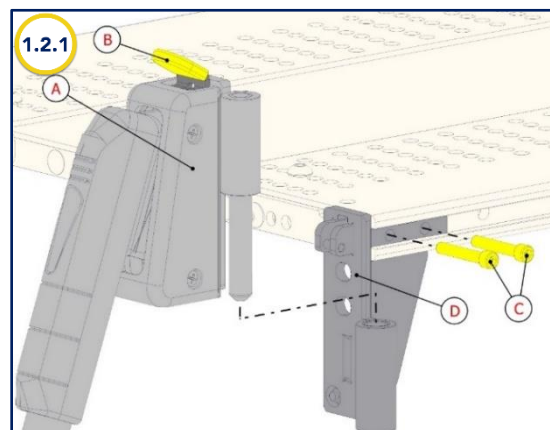


1.2. Installing lights on chairs with separate legrests for adult, pediatric and HD models

- 1.2.1. Remove legrest **A** by pressing quick-release lever **B** as shown in images 1.2.1 below. Using a $\frac{3}{16}$ " Allen key and a $\frac{7}{16}$ " wrench, unscrew both **C** screws to remove legrest support **D**.



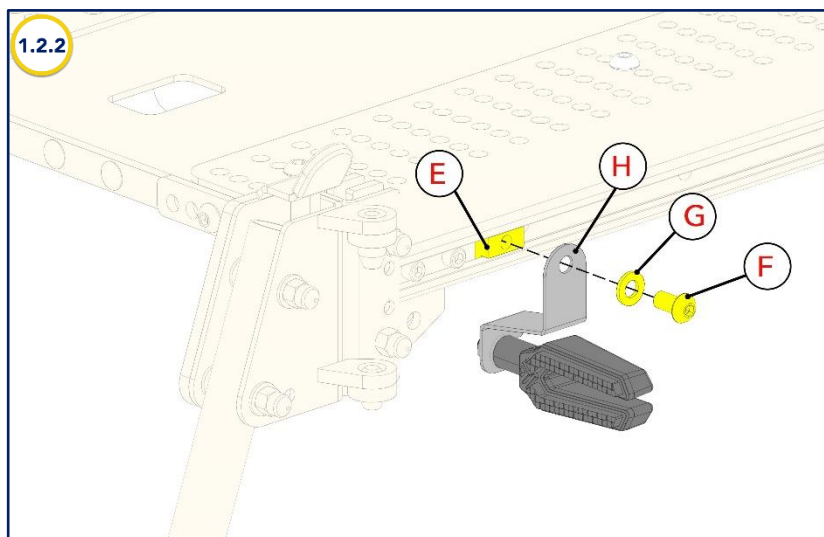
Adult and pediatric models



HD model

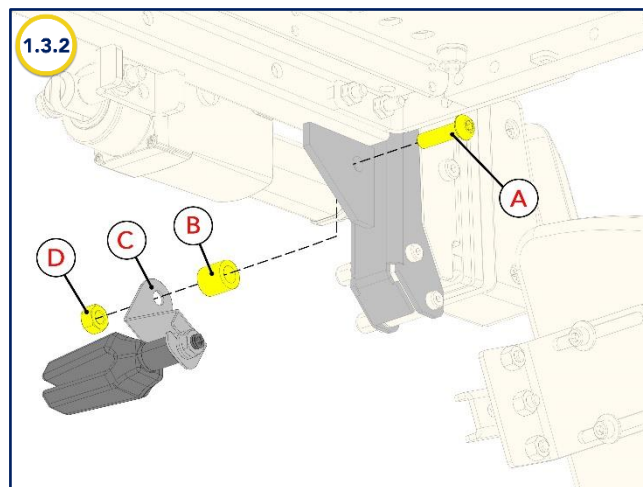
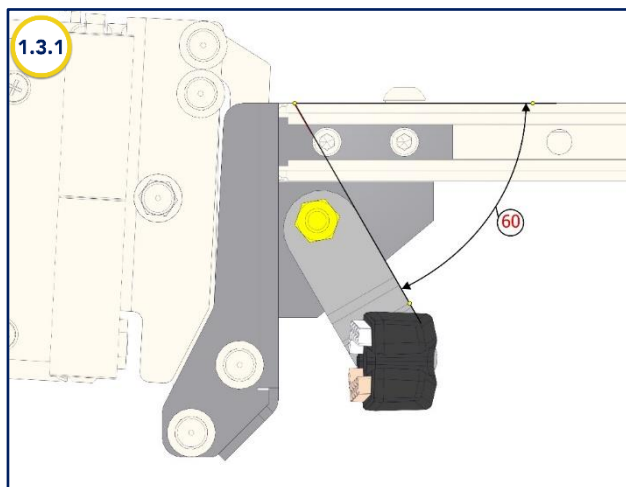
LED Safety Light Package Installation (cont'd)

- 1.2.2. Slide part **E** along the track and place it at $2\frac{1}{8}$ " from the front of the seat pan as shown in image 1.2.2 below.
- 1.2.3. Using a $\frac{3}{16}$ " Allen key, firmly tighten screw **F** to part **E** passing through washer **G** and bracket **H**.
- 1.2.4. Reinstall legrest support **D** and insert legrest **A** into support hole(s). Refer to previous images 1.2.1.



1.3. Installing lights on chairs with power legrests.

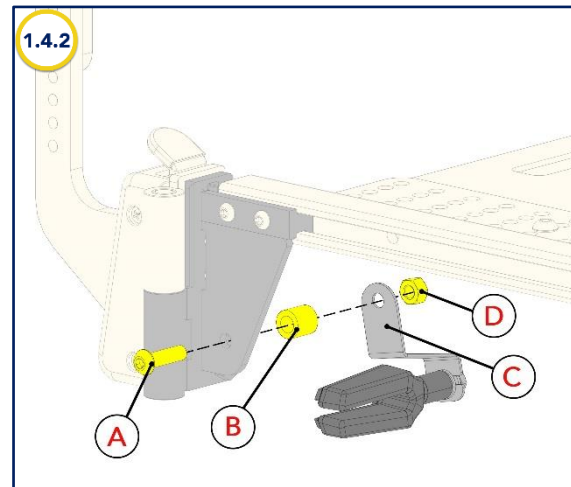
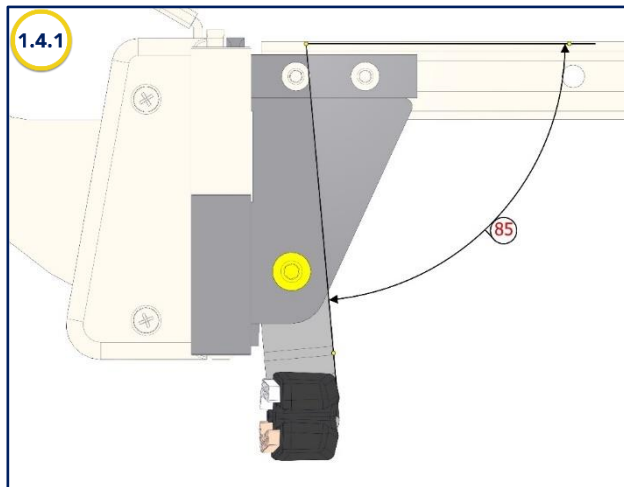
- 1.3.1 Install light bracket on the inner section of the legrest support as shown in image 1.3.1 below, keeping a 60° angle from top of seat pan.
- 1.3.1 As shown in image 1.3.2, insert screw **A** into the hole of the inner section and join spacer **B**, bracket **C**, and nut **D** using a $\frac{3}{16}$ " Allen key and a $\frac{7}{16}$ " wrench. Tighten firmly.



LED Safety Light Package Installation (cont'd)

1.4. Installing lights on chairs with knee blocks (Stander)

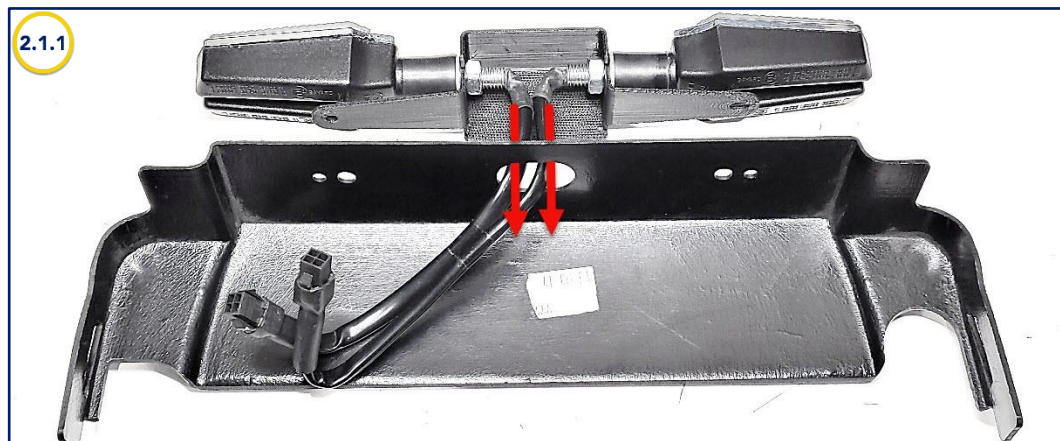
- 1.4.1. Install light bracket on the inner section of the legrest support as shown in image 1.4.1 below, keeping an 85° angle from top of seat pan.
- 1.4.2. As shown in image 1.4.2, insert screw **A** into the hole of the inner section and join spacer **B**, bracket **C**, and nut **D** using a $\frac{3}{16}$ " Allen key and a $\frac{7}{16}$ " wrench. Tighten firmly.



2. Installing REAR safety lights with turn signals

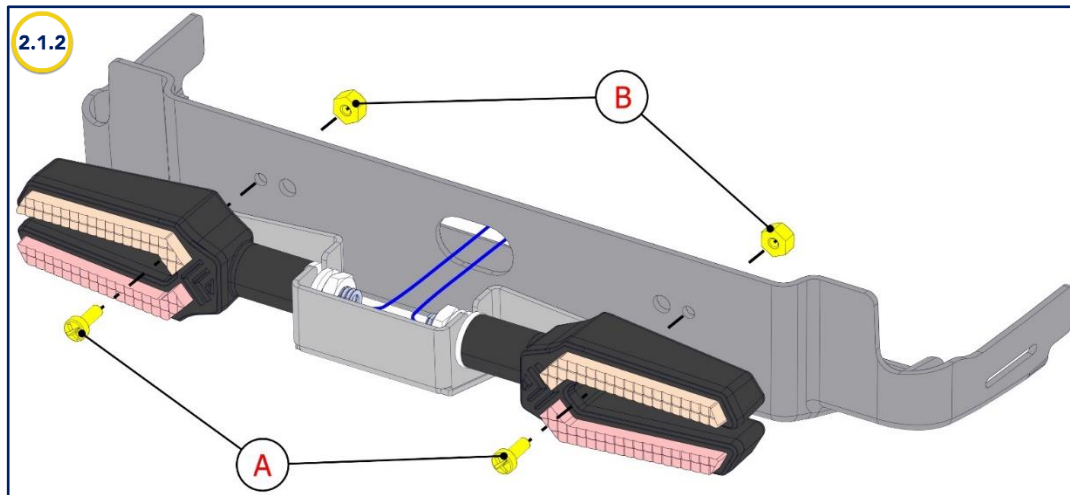
2.1. Installation onto the power module shroud of chair with tilt

- 2.1.1. Insert light cables into shroud's center opening.



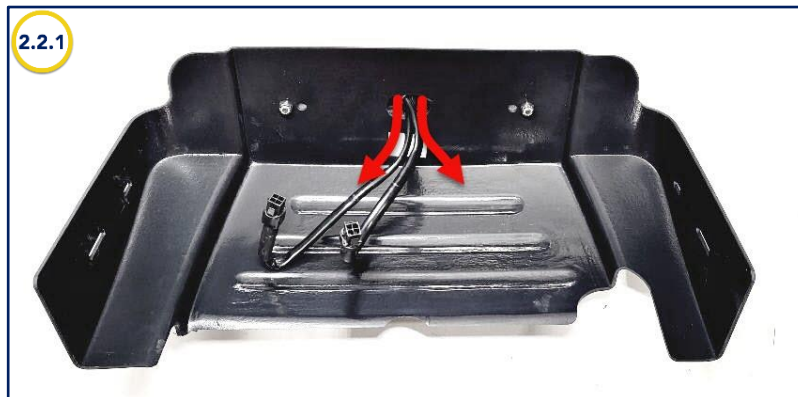
LED Safety Light Package Installation (cont'd)

- 2.1.2. Using a Phillips screwdriver and a $\frac{5}{16}$ " wrench, attach light support onto shroud with screws **A** and nuts **B**.

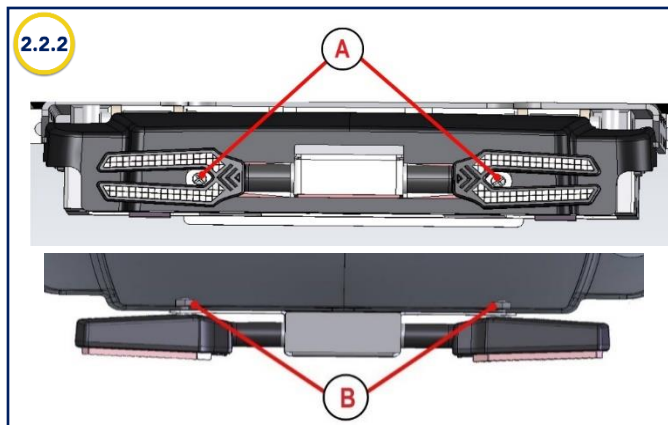


2.2. Installation onto the power module shroud with combo (tilt and elevate)

- 2.2.1. Insert light cables into the shroud's center opening.



- 2.2.2. Using a Phillips screwdriver and a $\frac{5}{16}$ " wrench, attach light support onto shroud with screws **A** and nuts **B**.



LED Safety Light Package Installation (cont'd)

CONNECTING AND WIRING CABLES

WARNING: Regardless of where a cable is attached, it is very important not to let any cable stick out from the wheelchair or form a loop that could catch on an external object when moving around with the chair. This could cause severe damage to the wheelchair's components or power supply.

NOTE: The yellow or white tie wraps shown in the images in the following pages are for illustrative purposes only, as these ties are normally black.

Before making any adjustments, it is important to take photos or to note where and how the cables are attached, so that they are placed in the same location and attached in the same way.

From this page on, pictures are for demonstration purposes only. They have been taken to help illustrate instructions on connecting and wiring cables.

Tie Wrap legend:

- Small tie wrap (S) = 5½"/140 mm
- Medium tie wrap (M) = 7½"/190 mm

RECOMMENDATION - When attaching tie wraps, it is recommended that they not be fully tightened to allow adjustments throughout the wiring.

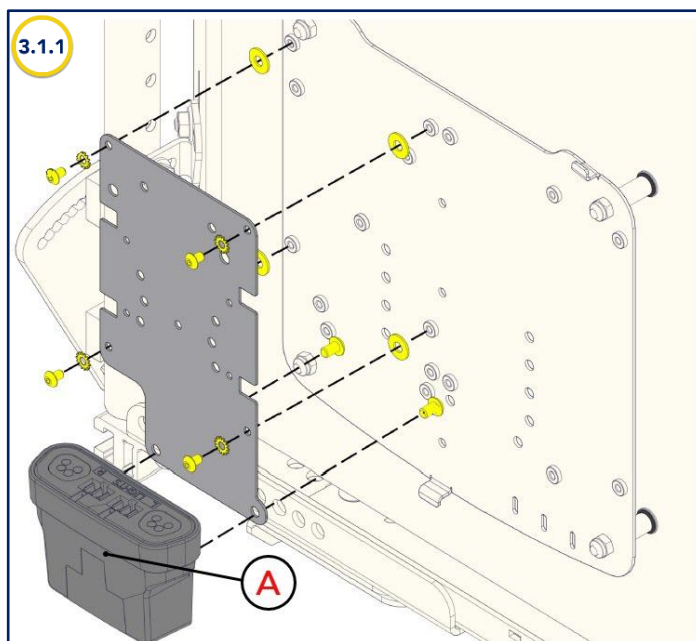
3. Installing R-net cable onto the backrest

IMPORTANT: All cables must be secured, no exception.

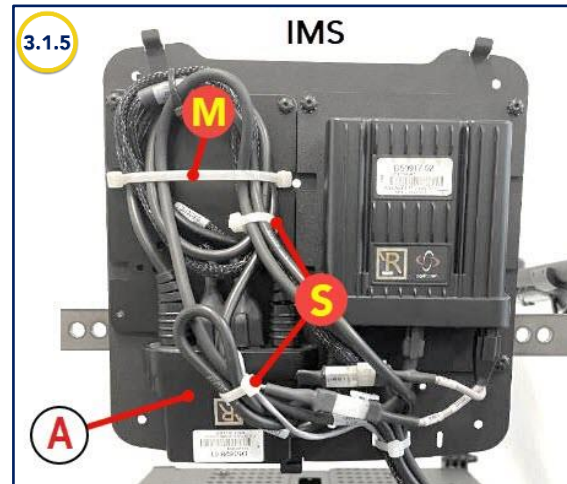
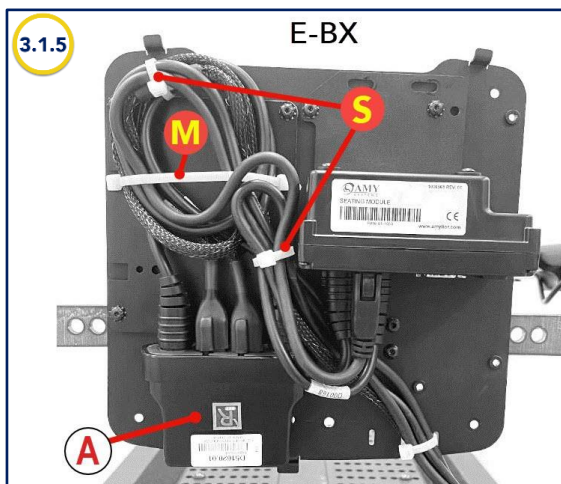
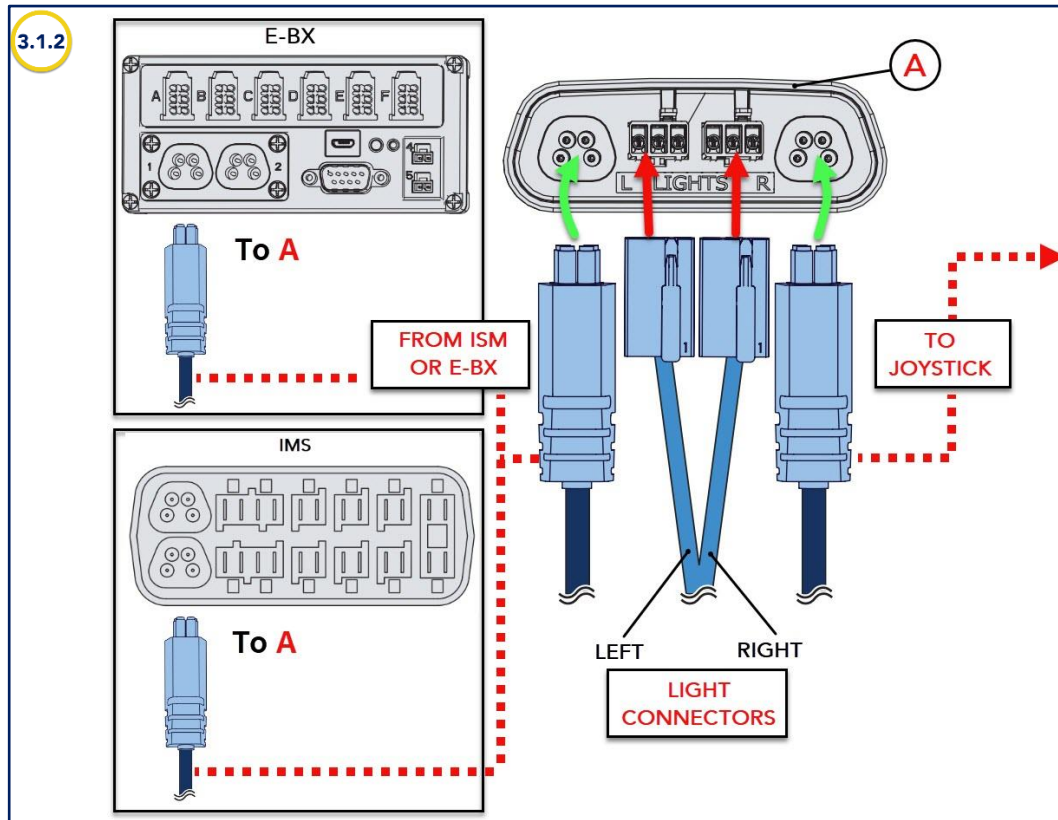
3.1. On a fixed backrest

NOTE: The following instructions apply to both **ISM** and **e-bx** controllers.

- 3.1.1. Install light module **A** on the backrest as shown in image 3.1.1 below. Hardware is included in the Light Package.
- 3.1.2. Plug both connectors in module **A** (Left to L and Right to R) as shown on diagrams in image 3.1.2.
- 3.1.3. Unplug the joystick cable from the controller (ISM or e-bx) and plug it into module **A**.
- 3.1.4. Connect module **A** to controller (ISM or e-bx) with the R-net cable (included in Light Package).
- 3.1.5. Coil excess cables together without making loops that are too tight. Using S or M tie-wraps, secure all cables onto the backrest as shown in images 3.1.5 below. Do not tighten completely until all cables have been connected properly.
- 3.1.6. Please go to Section 7 *Installing cable underneath the seat pan* for proper wiring to the front lights.



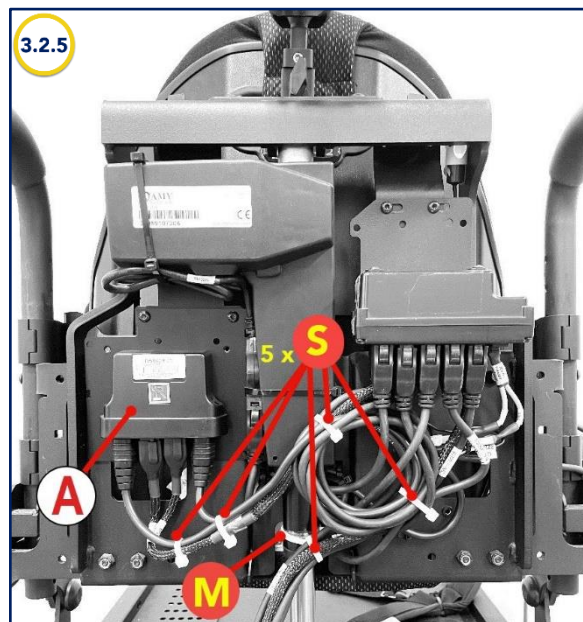
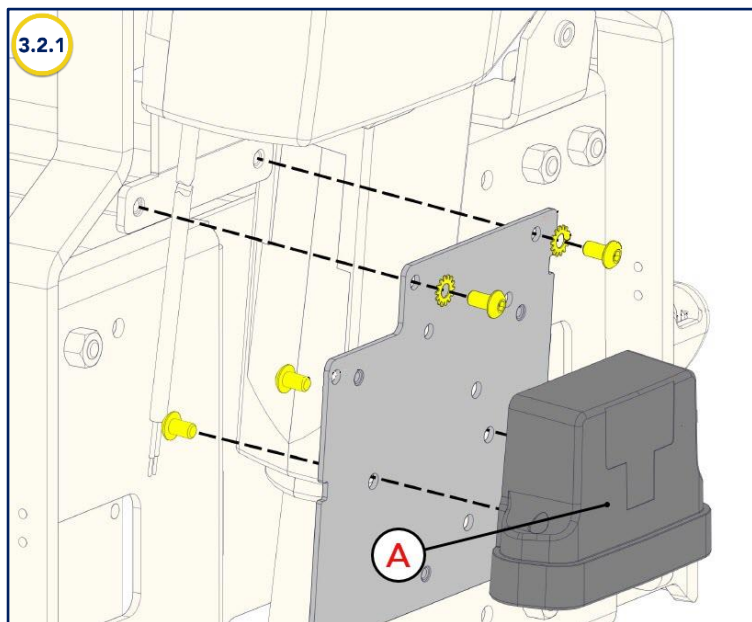
LED Safety Light Package Installation (cont'd)



LED Safety Light Package Installation (cont'd)

3.2. On a power recline backrest

- 3.2.1. Install light module **A** on the backrest as shown in image 3.2.1 below. Hardware is included in the Light Package.
- 3.2.2. Plug both connectors in module **A** (Left to L and Right to R) as shown in diagrams in image 3.1.2 (on the previous page).
- 3.2.3. Unplug the joystick cable from the controller (ISM or e-bx) and plug it into module **A**.
- 3.2.4. Connect module **A** to controller (ISM or e-bx) with the R-net cable (included in Light Package.)
- 3.2.5. Coil excess cables together without making loops that are too tight. Using S or M tie-wraps, secure all cables onto the backrest as shown in image 3.2.5 below. Do not tighten completely until all cables have been connected properly.
- 3.2.6. Please go to Section 7 *Installing cable underneath the seat pan* for proper wiring to the front lights.

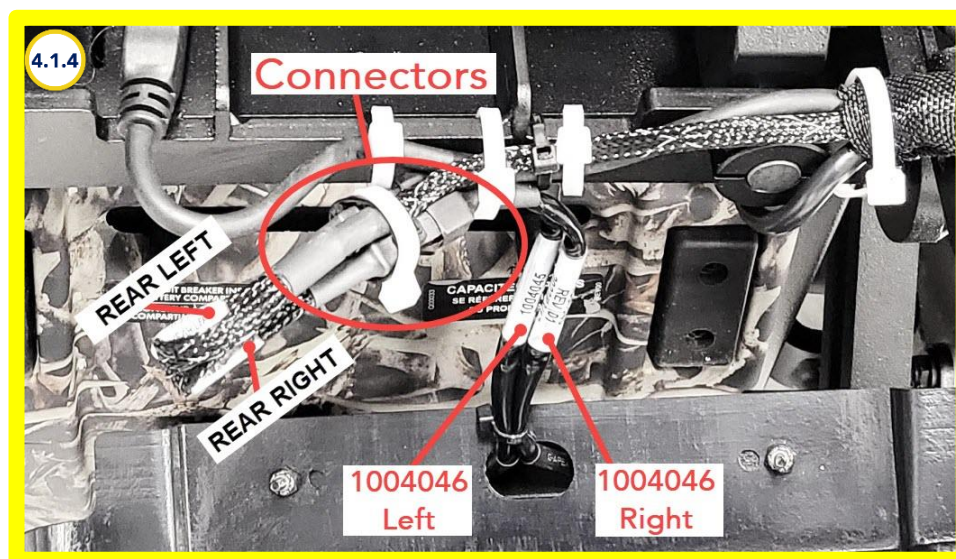
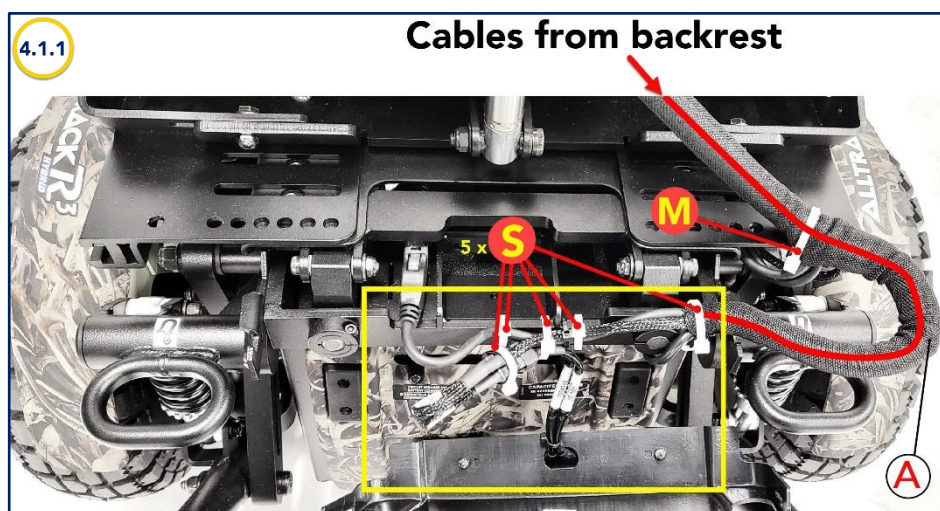


LED Safety Light Package Installation (cont'd)

4. Installing REAR safety lights with an R-NET cable

4.1. For a power tilt

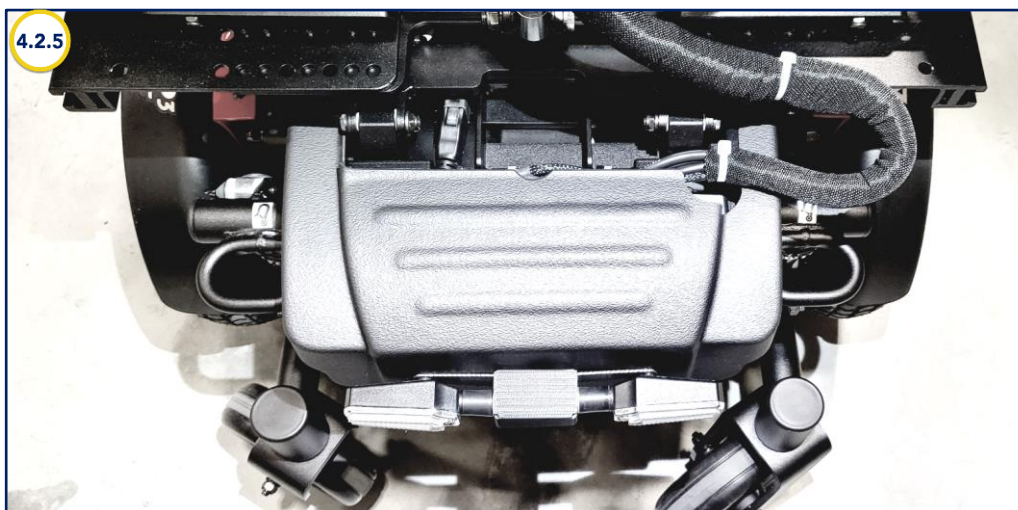
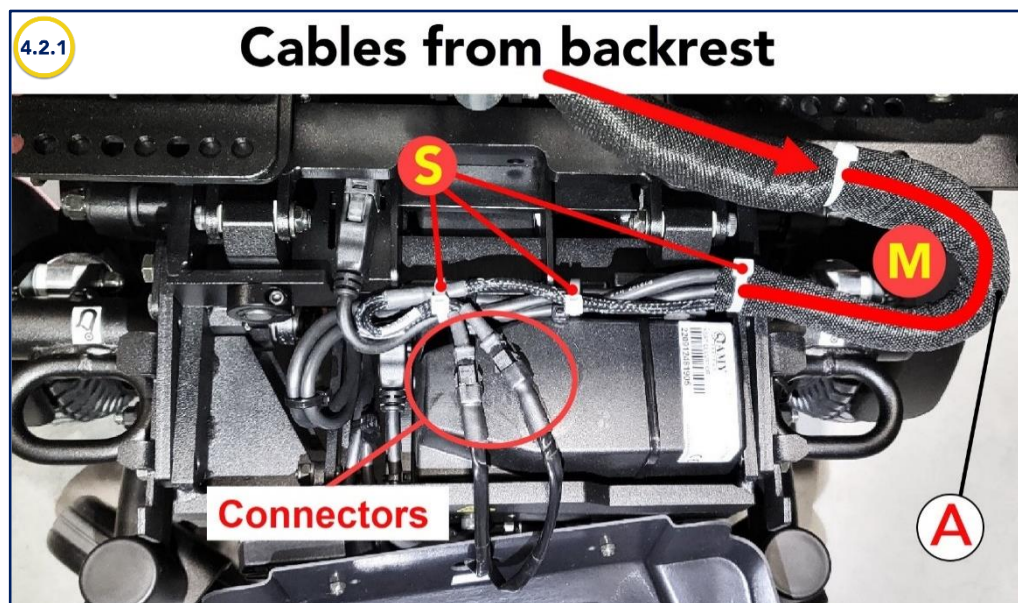
- 4.1.1. Fit a sheath over cables coming from the backrest as shown in image 4.1.1 below.
- 4.1.2. Attach this sheath to the seat pan using an M tie wrap. Make sure that there is a loop large enough (A) to allow the tilt movement.
- 4.1.3. Using S tie wraps, attach cables (from sheath) on the tilt module leaving enough play in the cables to perform the following connections:
- 4.1.4. Plug both light connectors. The "REAR RIGHT" connector to the light cable labeled 1004046 and the "REAR LEFT" connector to the light cable labeled 1004045.
- 4.1.5. Install power module shroud.



LED Safety Light Package Installation (cont'd)

4.2. For a power combo (tilt/elevate)

- 4.2.1. Fit a sheath over cables coming from the backrest as shown in image 4.2.1 below.
- 4.2.2. Attach this sheath to the seat pan using an M tie wrap. Make sure that there is a loop large enough (A) to allow the tilt movement.
- 4.2.3. Using S tie wraps, attach cables (from sheath) on the tilt module leaving enough play in the cables to perform the following connections:
- 4.2.4. Plug both light connectors to their respective light cable. Refer to previous image 4.1.4 for identification.
- 4.2.5. Install power module shroud.

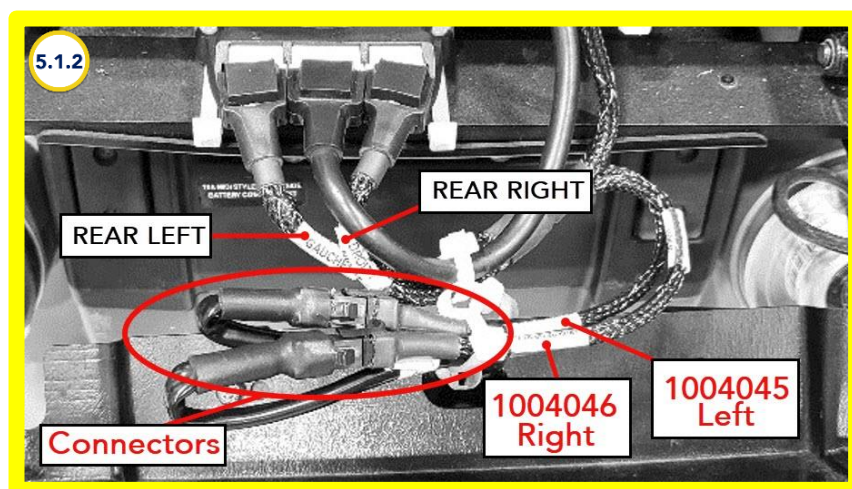
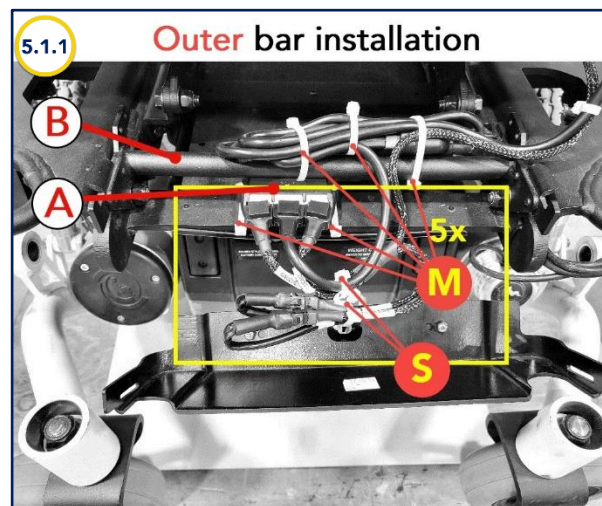
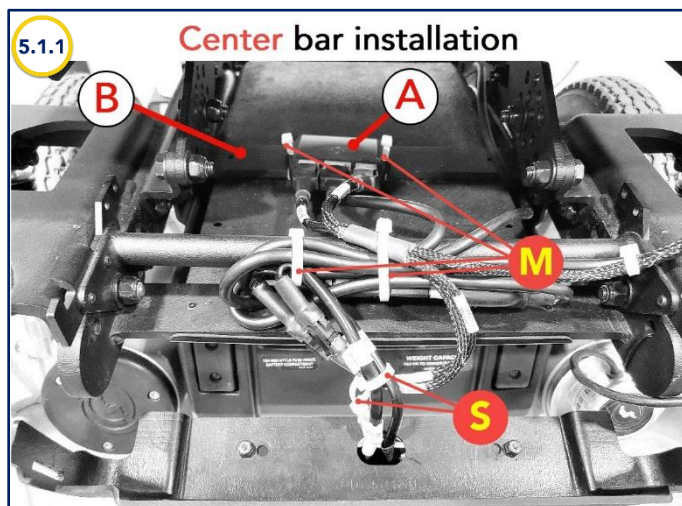


LED Safety Light Package Installation (cont'd)

5. Installing REAR safety lights with a VR2 controller

5.1. Without tilt

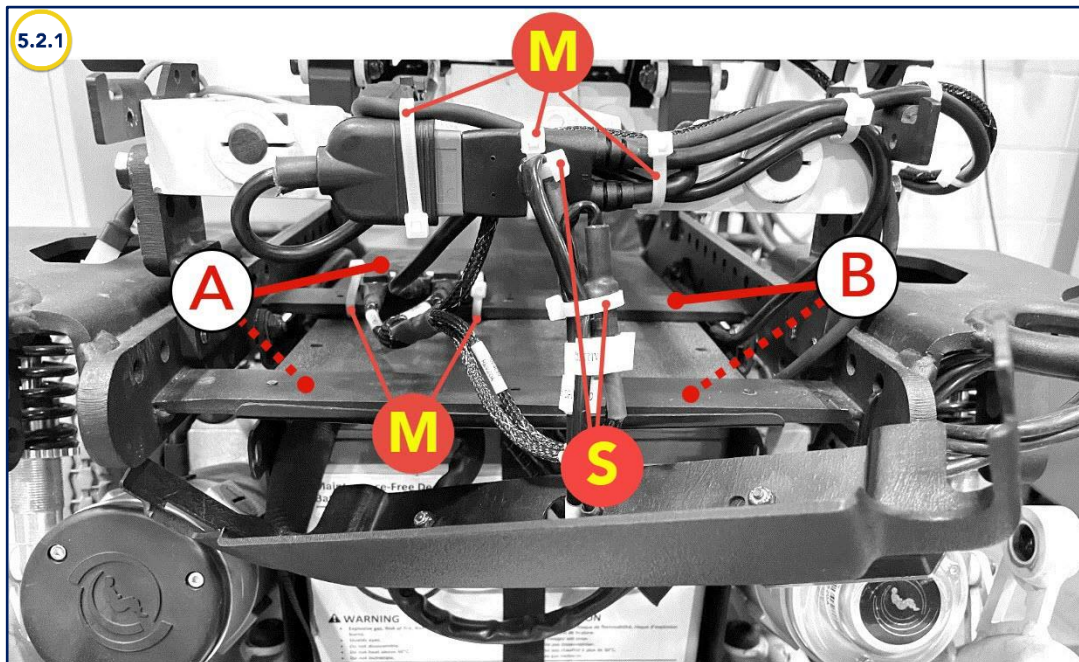
- 5.1.1. Install light module **A** on the frame's crossbar* **B**, using M tie wraps.
 - * Depending on the seat pan's height, the light module can be installed on the CENTER crossbar, or the OUTER (rear) crossbar as shown in images 5.1.1 below. If the seat pan is high enough, it is better to attach module **A** on the frame's center crossbar.
- 5.1.2. Plug both light connectors. The "REAR RIGHT" connector to the light cable labeled 1004046 and the "REAR LEFT" connector to the light cable labeled 1004045. This applies to both types of installations.
- 5.1.3. Using S tie wraps, attach all cables surrounding connectors going toward light module **A**. In image 5.1.1 on the right, the tilt module has been painted white to better identify it.
- 5.1.4. Install power module shroud.



LED Safety Light Package Installation (cont'd)

5.2. With tilt

- 5.2.1. Install light module **A** on the frame's crossbar* **B**, using M tie wraps.
 - * Depending on the seat pan's height, the light module can be installed on the CENTER crossbar, or the OUTER (rear) crossbar as shown in images 6.1.1 below. If the seat pan is high enough, it is better to attach module **A** on the frame's center crossbar.
- 5.2.2. Plug both light connectors. The "REAR RIGHT" connector to the light cable labeled 1004046 and the "REAR LEFT" connector to the light cable labeled 1004045. This applies to both types of installations.
- 5.2.3. Using M tie wraps, attach cables onto the back of the tilt module. In image 5.2.1, the tilt module has been painted white to better identify it. The connectors cables can be secured with S tie wraps.

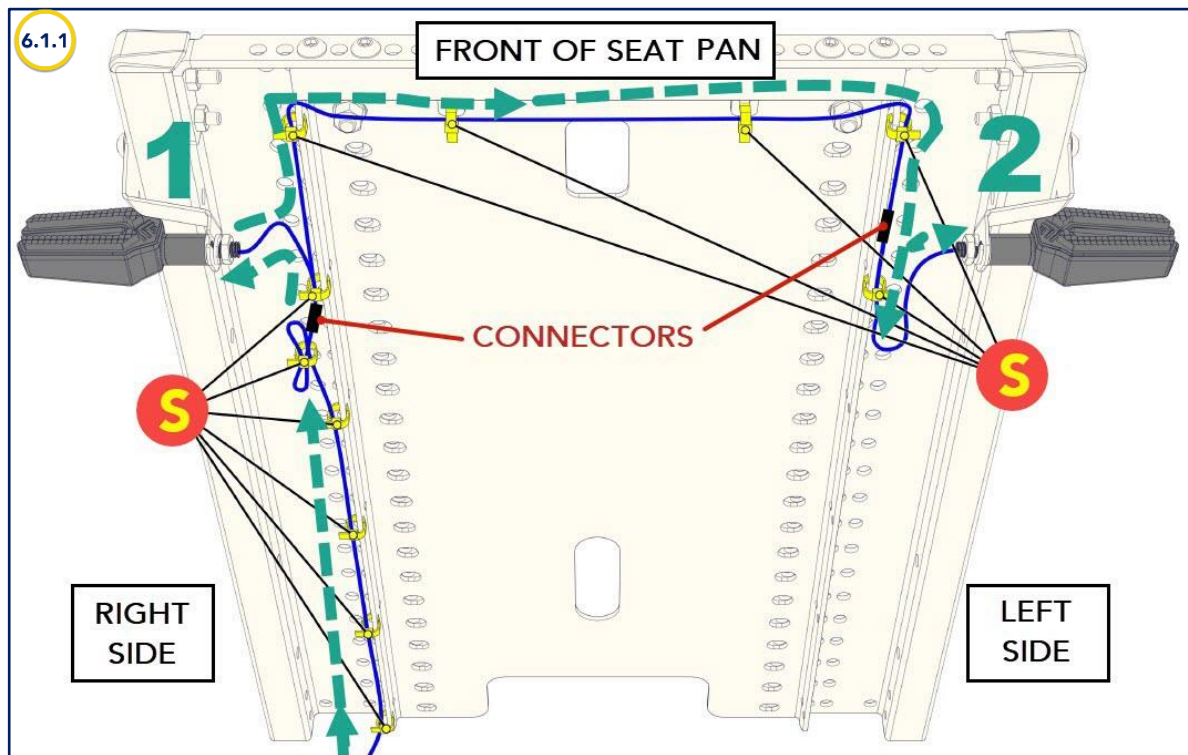


LED Safety Light Package Installation (cont'd)

6. Installing cable underneath the seat pan (except for the Stander)

NOTE - The cable running underneath seat pan is secured with S tie wraps as shown in image 6.1.1 below. Do not tighten tie wraps completely to allow some adjustment all along the wiring.

- 6.1.1. Start at the rear right of the seat pan, route cable along the rail and attach using tie wraps in holes.
- 6.1.2. Plug FRONT RIGHT connector (1) to light cable labeled 1004048 and route toward the front of the seat pan.
- 6.1.3. Route cable along the front of the seat pan and attach using mounting holes. Continue toward light cable labeled 1004047 and plug FRONT LEFT connector (2).
- 6.1.4. Once wiring is completed, make loops with excess cable, and tighten tie wraps. Avoid making the loops too tight.



LED Safety Light Package Installation (cont'd)

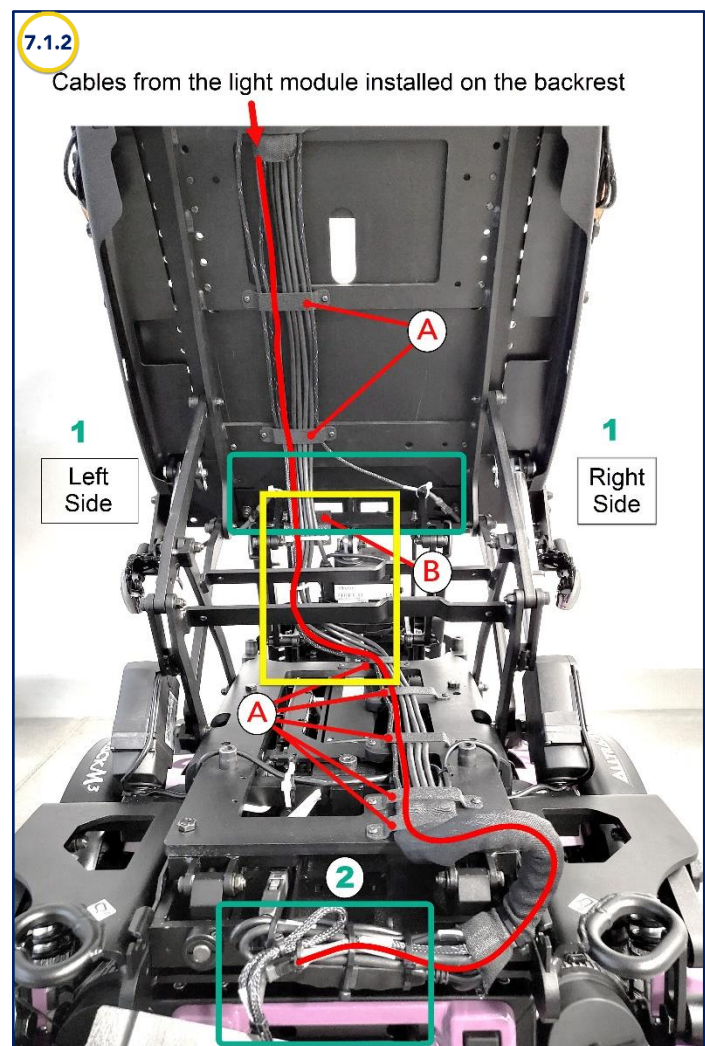
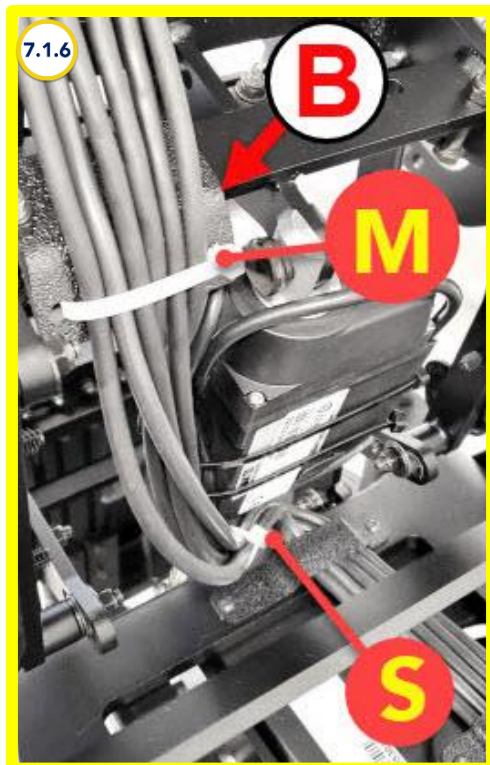
7. Installing safety light cables for a STANDER

7.1. From the backrest

- 7.1.1. Route cables from the light module (backrest) under the seat pan. Cables are first plugged into the FRONT light cables (1) underneath the seat pan (middle green rectangle in image) and second plugged into the REAR light cables (2) onto the back of the tilt module (bottom green rectangle in image).
- 7.1.2. Thread the series of cables through the wire guides A under the seat pan as shown in image 7.1.2 below.
- 7.1.3. It is important to place cables in order as follows:

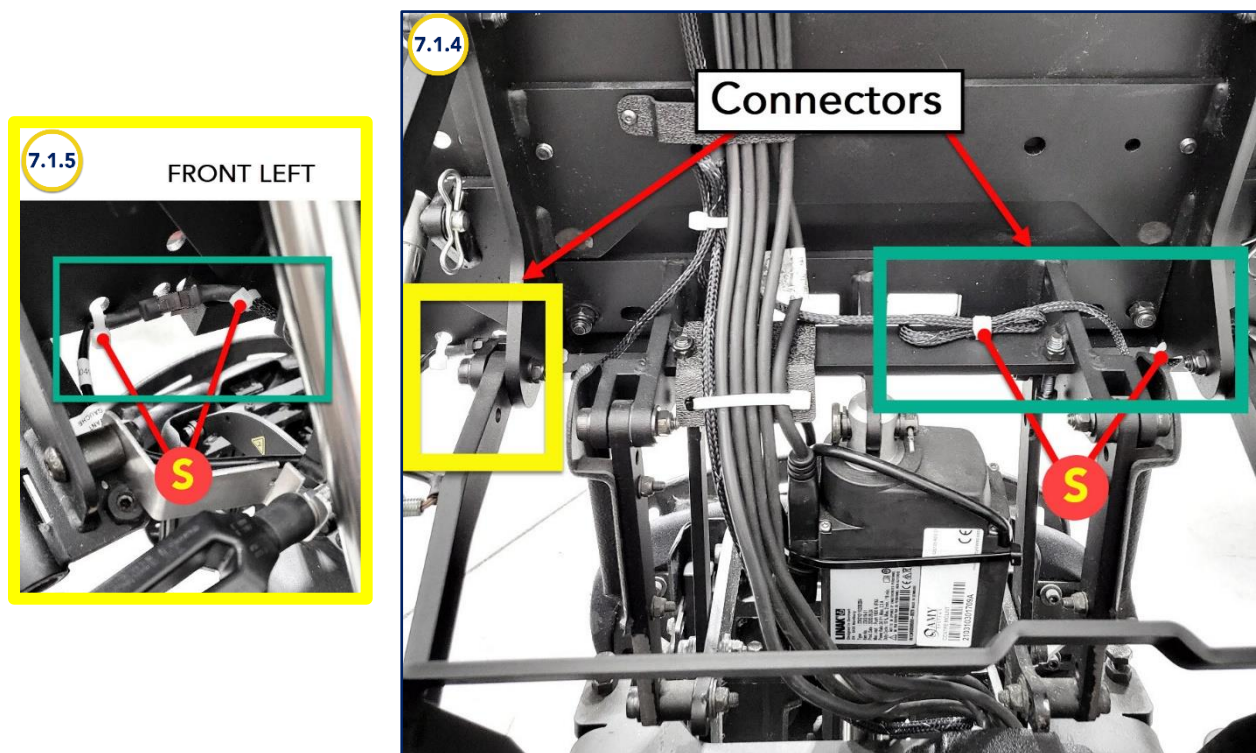
Cable Order (from right to left):

1. Stander Right
2. Stander Left
3. Stander Right Extension Cable
4. Stander Left Extension Cable
5. Tilt
6. R-net cable
7. Elevate
8. Connector cables for light cables
9. Others



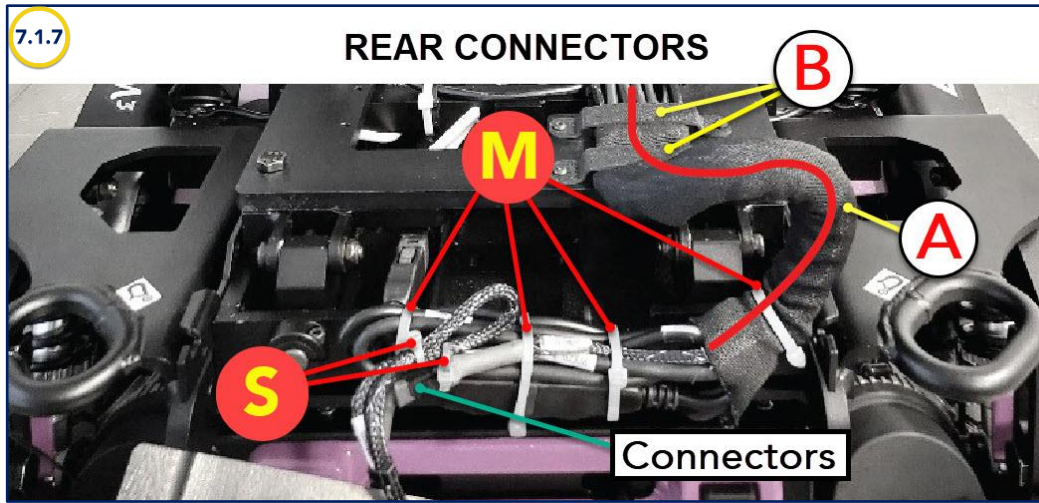
LED Safety Light Package Installation (cont'd)

- 7.1.4. FRONT light connectors (1): Plug both light connectors. The "FRONT LEFT" connector to the light cable labeled 1004045 and the "FRONT RIGHT" connector to the light cable labeled 1004046. Refer to image 7.1.4 below.
- 7.1.5. Attach FRONT LEFT light connector cable to the seat pan using S tie wraps as shown in image 7.1.5 below. Proceed the same way for the FRONT RIGHT light connector cable.
- 7.1.6. Secure all cables, in order, onto the cable bracket **B**, using an M tie wrap as shown in image 7.1.6 on the previous page. Attach an S tie wrap to prevent cables from separating and getting mixed up when the Stander closes. Do not tighten S tie wrap just yet.



LED Safety Light Package Installation (cont'd)

- 7.1.7. Before threading cables through the last 2 wire guides **B**, fit a sheath over all cables and route toward the back of the tilt module as shown in image 7.1.7 below. Attach this sheath at the back of the tilt module using **M** tie wraps. It is important to leave a loop in the sheath **A** to allow the cables to follow the movement of the tilt.
- 7.1.8. REAR light connectors (2): Plug both light connectors. The "REAR LEFT" connector to the light cable labeled 1004045 and the "REAR RIGHT" connector to the light cable labeled 1004046. Secure cables with **S** tie wraps. Refer to previous image 7.1.4 and image 7.1.7 below.



IMPORTANT - Once the wiring is complete, tie wraps that were not tightened, to allow adjustments along the way, must be tightened at this point. Be careful! Avoid over-tightening as it may damage cables or prevent movement in the mechanisms.

This completes the LED Light Package Instruction Guide. If further information is required, please contact Amylior Technical Support by email at techsupport@amylior.com or by phone at 1 888 453-0311