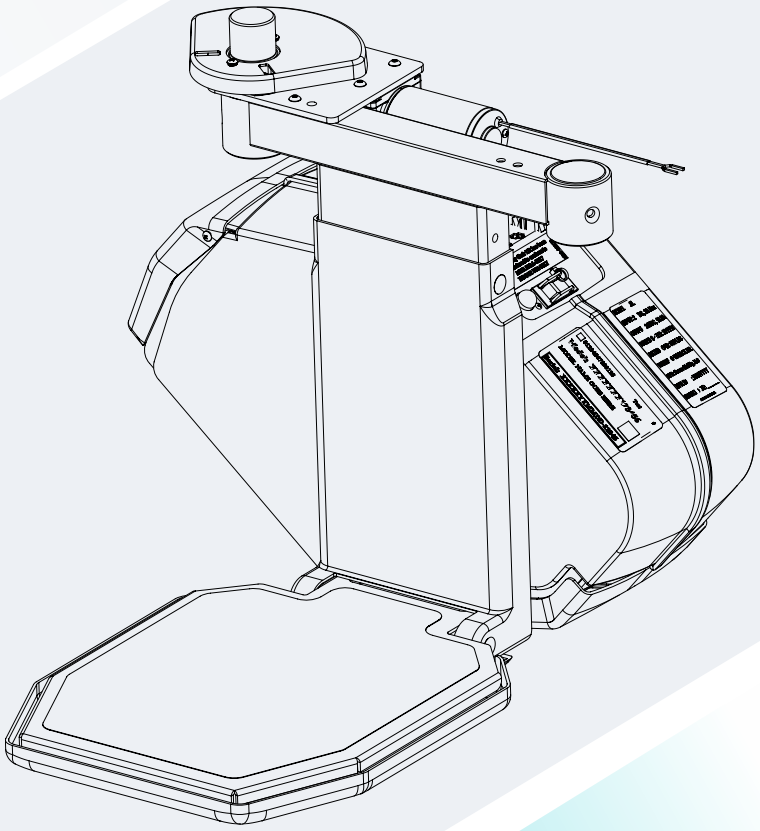
PINNACLE STAIRLIFT

POWER SWIVEL
POWER FOOTREST



INSTALLATION & SERVICE MANUAL SUPPLEMENT

HARMAR®
we lift lives

14OCT25 | 630-00166-01-C

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SECTION 1

SAFETY

SAFETY DEFINITIONS



This safety alert symbol appears with safety statements. It means attention, become alert, your safety and the safety of others are involved! Please read and abide by the message that follows the safety alert symbol.

⚠ WARNING

Indicates a hazardous situation that, if not avoided, could result in death or serious injury.

⚠ CAUTION

Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

NOTICE

Indicates a situation which can cause damage to the lift and/or the environment, or cause the lift to operate improperly.

NOTE: Indicates a condition that should be followed in order for the lift to function in the manner intended.

ENVIRONMENTAL CONDITIONS

The technician shall assess the surrounding conditions and verify that the location is acceptable before performing installation and/or servicing tasks. If you do not understand any portion of the installation or operation procedures, please consult Harmar's Liftsquad Support at 800-833-0478. Do not attempt to install or use this lift if you have any hesitation or question. Serious injury or damage can result if proper procedures are not followed.

SECTION 2

INTRODUCTION

This supplement is intended to complement the SL300 and SL600 Installation + Service Manuals by providing additional installation and service details specifically tailored to the power swivel and power footrest options. It aims to enhance the understanding and execution of the installation and servicing processes for these components.

DEVICE NAME:

SL300-PS
SL300-PF
SL300-PSPF
SL600-PS
SL600-PF
SL600-PSPF

READ AND UNDERSTAND

This manual provides instructions for the proper installation and maintenance of the Pinnacle indoor stairlift. This unit is not approved for outdoor installation. Please refer to the Owner's Manual for operating instructions. Any alterations to the equipment without written authorization from the manufacturer are prohibited and will void the warranty.

WARRANTY

Please ensure that you advise the owner of the Pinnacle stairlift to fill out the separate warranty form and return it within ten (10) days of purchase to register the lift.

TECHNICAL SPECIFICATIONS

Visit harmar.com for specifications on the lift model.

CODE STATEMENT

Code requirements for Pinnacle stairlift may vary depending on location. It is the installer's responsibility to contact their state, city or local code enforcement office and determine all the regulations the lift and installation are subject to. This must be done before installing the Pinnacle stairlift. Intertek (ETL) Certified to Safety standard ASME A18.1-2020 section 4 & 7, CSA B44.1/ASME A17.5-2019.

SECTION 3

PREPARATION

Installations may vary to some degree, but below are the basic tools to have on hand for a Pinnacle stairlift installation.

If you have any questions, concerns or comments, please contact our Liftsquad Support at 800-833-0478 or tech@harmar.com.

REQUIRED TOOLS

- Phillips screwdriver (#1, #2)
- Small flat head screwdriver
- Vice-grips or channel lock pliers
- 13⁄32" wrench
- 1⁄8" and 5⁄32" hex wrench

INCLUDED PARTS

Before beginning installation, inspect and check the box contents and report any damage or missing items to Harmar.

- Box #1: Pinnacle options chassis
- Box #2: Power Swivel
- Box #3: Seat with attachment for Power Swivel

SPECIFICATIONS

POWER SWIVEL

- Swivel time (one way) up to 5-seconds with full load
- Self resetting fuse in the event of motor overload
- Control using standard up/down control in armrest, continuous pressure
- Adds ½" to minimum seat height

POWER FOOTREST

- Deploy/retract time up to 3-seconds
- Self-resetting fuse in the event of motor overload
- Controlled via switch beneath armrest, continuous pressure

NOTICE

Positioning of the Lift's UP/DOWN control switch is discussed in the standard install manual. Consider positioning this switch on the uphill arm rest. This simplifies rotating an unoccupied seat, because the user does not have to reach across the seat.

SECTION 4

INSTALLATION

POWER SWIVEL INSTALLATION: LEFT HAND SWIVEL

Follow these steps to disassemble the seat support assembly:

1. Remove Plastic Shroud: Detach the plastic shroud from the seat support assembly and set it aside. ***See Figure 4-1***



Figure 4-1

2. Remove Set Screws: Utilize a 4mm Allen wrench to remove the two screws securing the seat post swivel. Safe one screw for attaching the power swivel. ***See Figure 4-2.***



Figure 4-2

3. Seat Post Swivel Removal: Once the screws are removed, take out the seat post swivel from the seat support assembly. ***See Figure 4-3.***



Figure 4-3

PRE-ASSEMBLY OF SWIVEL MECHANISM: LEFT HAND SWIVEL

ASSEMBLY STEPS

1. Motor Plate Setup:

   - Make sure side of motor plate marked with "LH" is facing up.
   - Position the motor plate over the motor, pass the gear through the hole in the plate. ***See Figure 4-4.***

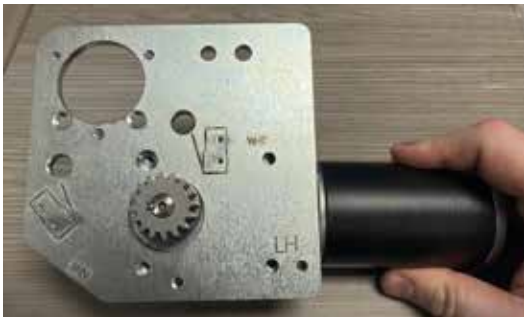


Figure 4-4

   - Fasten the motor to the motor plate.
   - Use 3x #10-32 x ½" button head cap screws in the location shown. Tighten using a ⅛"hex wrench.
   - Use 1x #10-32 x ½" flat head cap screw in the location shown below. **Apply Loctite** to this fastener. Tighten using a #2 Phillips screwdriver. ***See Figure 4-5.***

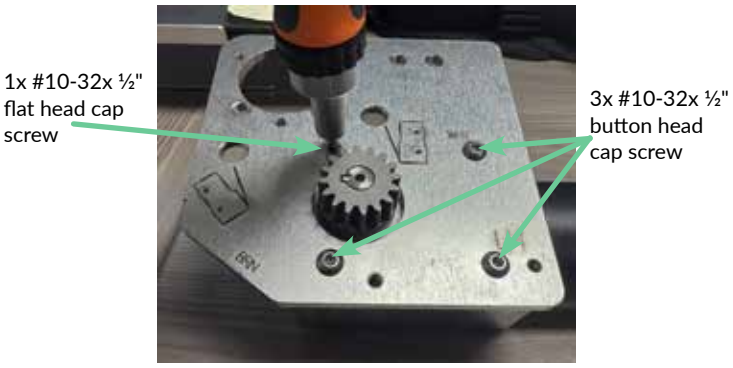


Figure 4-5

2. Shoulder Bolt Installation:

   - Insert the shoulder bolt into the threaded hole and tighten it securely with a flat blade screwdriver. ***See Figure 4-6.***

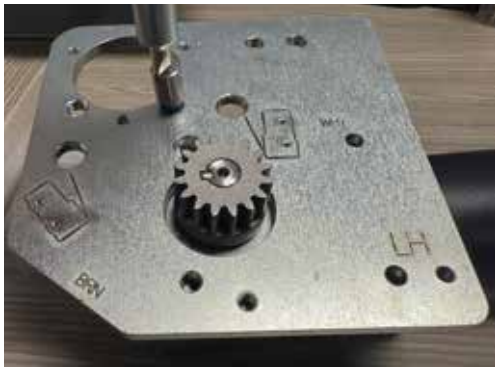


Figure 4-6

NOTICE

Confirm that the shoulder bolt is seated flat against the plate.

3. Power Seat Cup Installation:

- Insert the power seat cup into the motor plate. ***See Figure 4-7.***



Figure 4-7

- Fasten the power seat cup to the motor plate using 3x #10-24 flat head cap screws. Tighten them securely with a #2 Phillips screwdriver. ***See Figure 4-8.***



Figure 4-8

4. Magnet Switch Installation:

- Feed the sensor wire harness through the hole in the motor plate, then push the sensor down into the plate until it is flush with the surface of the plate. ***See Figure 4-9a.***



Figure 4-9a

- Use pliers to open the hose clamp, slide it over the sensor harness, and position it against the motor plate to secure the sensor in place. ***See Figure 4-9b.***



Figure 4-9b

NOTICE

Confirm that the top of the magnet switch is flush with the top of the motor plate. This is important because it prevents interference with one of the limit switches.

5. Limit Switch Harness Installation:

- Install the limit switch harness as shown, using 4x 2-56 x 7/16" pan head cap screws and secure with Loctite. Then tighten with a #1 Phillips screwdriver. ***See Figure 4-10.***
- Position the harness so the wire colors match. ***See Figure 4-10.***
- Orientate both limit switches so the arms point away from the motor's gear. ***See Figure 4-10.***

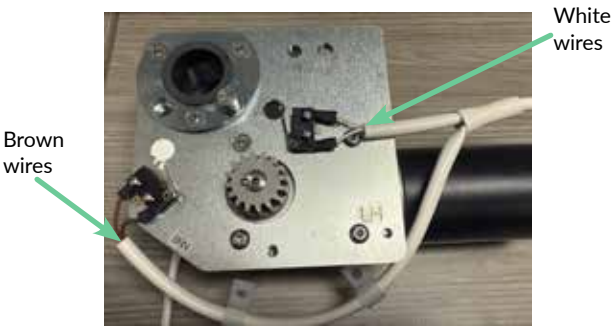


Figure 4-10

- Feed the harness through the two plastic clips.
- Position the clips as shown and fasten the clips to the motor plate using 2x #10-32 x 3/16" cap screws and Loctite. Tighten the screws using a 1/8" hex wrench. ***See Figure 4-11.***

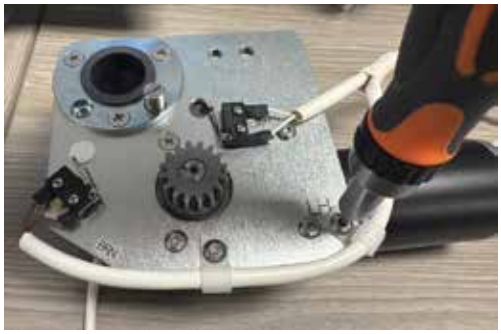


Figure 4-11

- Fasten the harness to the motor with the zip tie. ***See Figure 4-12.***



Figure 4-12

6. Power Seat Post and Gear Assembly:

- Install the magnet to the gear as shown. ***See Figure 4-13.***
- Use a set of vice-grips to hold the magnet in place and a 13/32" open-ended wrench to tighten the nut securely. ***See Figure 4-13.***

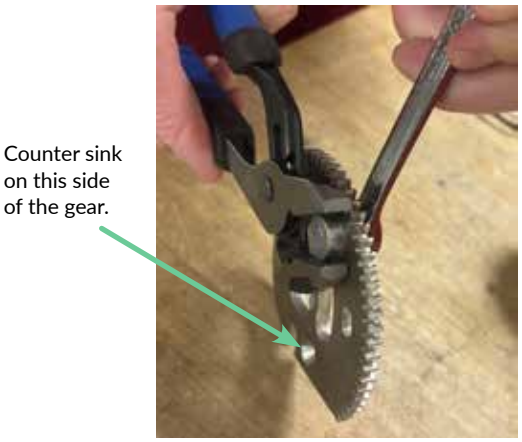


Figure 4-13

- Position the power seat shaft with the U-shaped notch. ***See Figure 4-14.***
- Place the power seat gear on top of the seat shaft with the countersunk holes facing up. ***See Figure 4-14.***

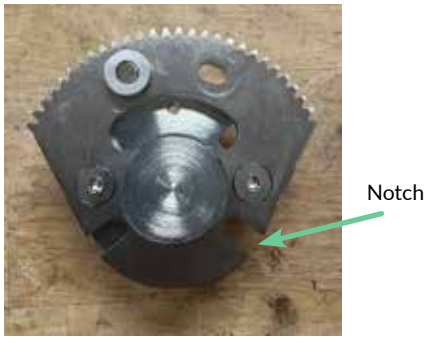


Figure 4-14

- Secure the gear to the shaft using 2x ¼-28 x ½" flat head cap screws. Tighten them with a 5⁄32" hex wrench. ***See Figure 4-15.***



Figure 4-15

- Apply a small amount of grease to the seat post, bushings and large gear. ***See Figure 4-16.***



Figure 4-16

- Insert the shaft and gear assembly into the seat cup, ensuring that the magnet switch is not engaging the limit switch. The magnet needs to sit between the two limit switches. ***See Figure 4-17.***



Figure 4-17

NOTICE

Position the magnet between switches.

7. <u>Complete Assembly:</u>
   - Ensure all components are securely fastened.
   - Set the assembled power swivel aside for further installation steps.

POWER SWIVEL INSTALLATION: RIGHT HAND SWIVEL

Follow these steps to disassemble the seat support assembly:

1. Remove Plastic Shroud: Detach the plastic shroud from the seat support assembly and set it aside. ***See Figure 4-18***



Figure 4-18

2. Remove Set Screws: Utilize a 4mm Allen wrench to remove the two screws securing the seat post swivel. Safe one screw for attaching the power swivel. ***See Figure 4-19.***



Figure 4-19

3. Seat Post Swivel Removal: Once the screws are removed, take out the seat post swivel from the seat support assembly. ***See Figure 4-20.***



Figure 4-20

PRE-ASSEMBLY OF SWIVEL MECHANISM: RIGHT HAND SWIVEL

ASSEMBLY STEPS

1. Motor Plate Setup:

   - Make sure side of the motor plate marked with "RH" is facing up.
   - Position the power seat motor as shown. ***See Figure 4-21.***

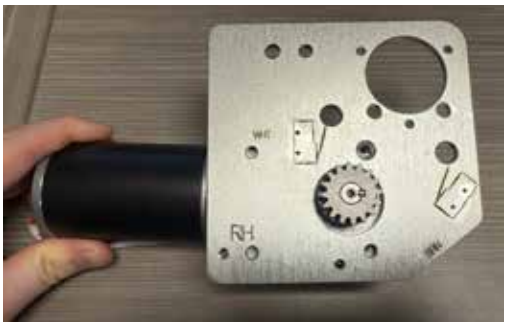


Figure 4-21

   - Fasten the motor to the motor plate.
   - Use 3x #10-32 x ½" button head cap screws in the location shown. Tighten using a ⅛"hex wrench. ***See Figure 4-22.***
   - Use 1x #10-32 x ½" flat head cap screw in the location shown below. **Apply Loctite** to this fastener. Tighten using a #2 Phillips screwdriver. ***See Figure 4-22.***

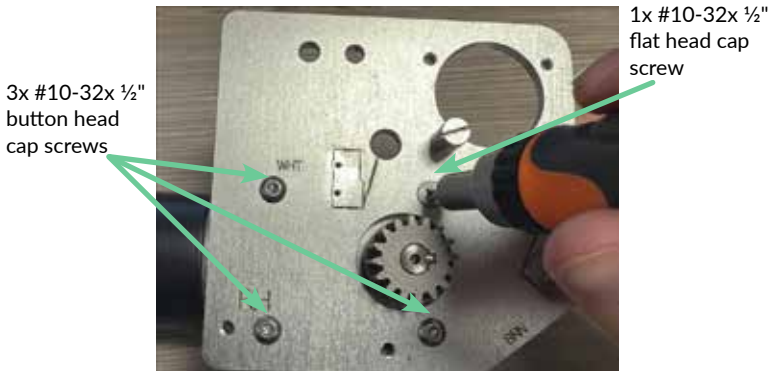


Figure 4-22

2. Shoulder Bolt Installation:

   - Insert the shoulder bolt into the threaded hole and tighten it securely with a flat blade screwdriver. ***See Figure 4-23.***



Figure 4-23

NOTICE

Confirm that the shoulder bolt is seated flat against the plate.

3. Power Seat Cup Installation:

- Insert the power seat cup into the motor plate. ***See Figure 4-24.***



Figure 4-24

- Fasten the power seat cup to the motor plate using 3x #10-24 flat head cap screws. Tighten them securely with a #2 Phillips screwdriver. ***See Figure 4-25.***



Figure 4-25

4. Magnet Switch Installation:

- Feed the sensor wire harness through the hole in the motor plate, then push the sensor down into the plate until it is flush with the surface of the plate. ***See Figure 4-26a.***

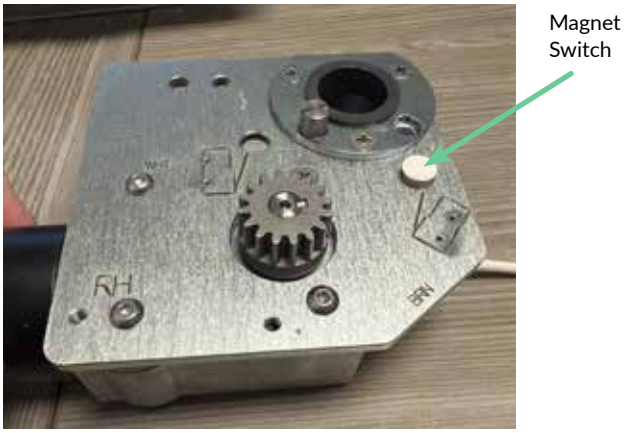


Figure 4-26a

- Use pliers to open the hose clamp, slide it over the sensor harness, and position it against the motor plate to secure the sensor in place. ***See Figure 4-26b.***



Figure 4-26b

NOTICE

Confirm that the top of the magnet switch is flush with the top of the motor plate. This is important because it prevents interference with one of the limit switches.

5. Limit Switch Harness Installation:

- Install the limit switch harness as shown, using 4x 2-56 x 7/16" pan head cap screws and secure with Loctite. Then tighten with a #1 Phillips screwdriver. ***See Figure 4-27.***
- Position the harness so the wire colors match. ***See Figure 4-27.***
- Orientate both limit switches so the arms point away from the motor's gear. ***See Figure 4-27.***

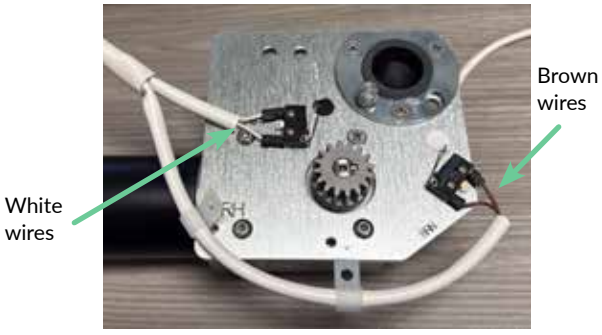


Figure 4-27

- Feed the harness through the two plastic clips.
- Position the clips as shown and fasten the clips to the motor plate using 2x #10-32 x 3/16" cap screws and Loctite. Tighten the screws using a 1/8" hex wrench. ***See Figure 4-28.***



Figure 4-28

- Fasten the harness to the motor with a zip tie. ***See Figure 4-29.***



Figure 4-29

6. Power Seat Post and Gear Assembly:

- Install the magnet to the gear as shown. ***See Figure 4-30.***
- Use a set of vice-grips to hold the magnet in place and a 13/32" open-ended wrench to tighten the nut securely. ***See Figure 4-30.***

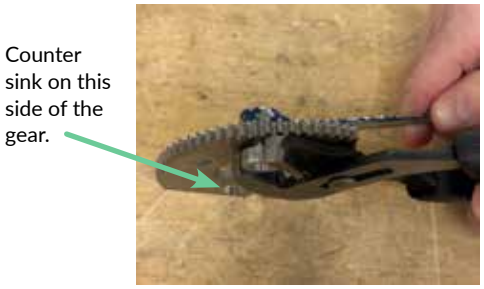


Figure 4-30

- Position the power seat shaft with the U-shaped notch. ***See Figure 4-31.***
- Place the power seat gear on top of the seat shaft with the countersunk holes facing up. ***See Figure 4-31.***

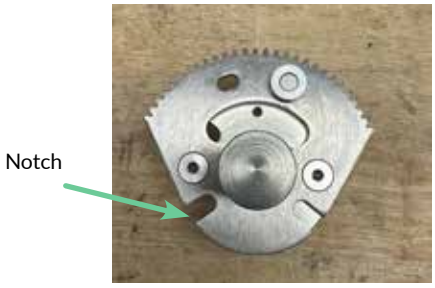


Figure 4-31

- Secure the gear to the shaft using 2x ¼-28 x ½" flat head cap screws. Tighten them with a 5/32" hex wrench. ***See Figure 4-32.***



Figure 4-32

- Apply a small amount of grease to the seat post, bushings and large gear. ***See Figure 4-33.***



Figure 4-33

- Insert the shaft and gear assembly into the seat cup, ensuring that the magnet switch is not engaging the limit switch. The magnet needs to sit between the two limit switches. ***See Figure 4-34.***



Figure 4-34

NOTICE

Position the magnet between switches.

7. Complete Assembly:

- Ensure all components are securely fastened.
- Set the assembled power swivel aside for further installation steps.

POWER SWIVEL ASSEMBLY ONTO CHASSIS (RIGHT HAND SHOWN)

1. Place the power swivel assembly onto the footrest seat support assembly. Secure them with the ¼"-20 x 2" button head cap screw and nylock nut. ***See Figure 4-35.***

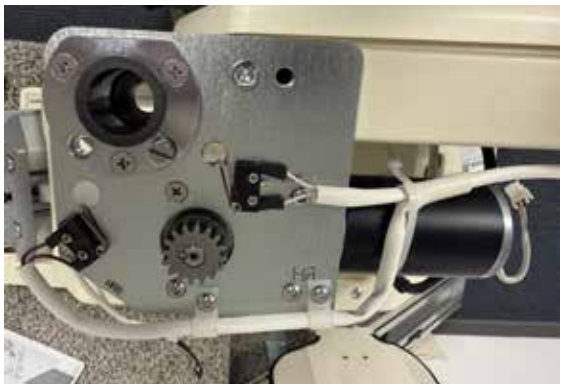


Figure 4-35

2. Using a 5⁄32" hex wrench install the existing seat post screw. ***See Figure 4-36.***



Figure 4-36

POWER SWIVEL INSTALLATION OF SEAT ASSEMBLY

1. Remove the manual seat swivel latch with an M2 Allen key. ***See Figure 4-37.***



Figure 4-37

2. Fasten the gear cover in place with the Phillips screws and split washers using Phillips screwdriver. ***See Figure 4-38.***



Figure 4-38

3. See below for orientation reference. Ensure that the screw holding the footplate to the power swivel orientation plate is installed before the power swivel cover. ***See Figure 4-39.***



Figure 4-39

4. Unplug and remove the seat magnet switch with a 7mm Deep Well Socket. ***See Figure 4-40.***



Figure 4-40

5. Install the seat onto the power seat post. Secure it in place with the 5⁄32" or M4 Allen set screw. ***See Figure 4-41.***



Figure 4-41

6. Select the motor extension harness according to the handedness of the swivel (Left vs. Right).
    - Left-handed units: Connect the red wire to position 2 at the chassis connection.
    - Right-handed units: Connect the red wire to position 1 at the chassis connection.
7. Connect the motor extension harness to the motor harness located on the motor plate. Then, plug the opposite end of the extension harness into the chassis.
8. Connect the extension harness to the swivel switch harness and the magnet sensor located on the motor plate. Plug the opposite ends into the chassis. ***See Figure 4-42.***



Figure 4-42

NOTICE

Before you insert the pins they are going to lock. Make sure they are correct. ***See Figure 4-43.***



Figure 4-43

Operate the lift following the instructions on ***pages 11 and 12*** of the Owner's Manual.

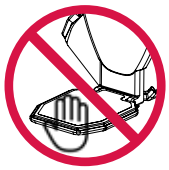
- Confirm the lift operates as described in the manual.
- Use the control on the armrest to rotate the seat in both directions. Rotate the seat against its limits of rotation for 20 seconds, then verify that the lift will

operate in the opposite direction. This ensures that the rotation limit switches are functioning as expected, allowing the seat to stop at the correct limits and reverse direction appropriately.

POWER FOOTREST INSTALLATION

- The power footrest structure for both the Pinnacle SL300 and the SL600 models will adopt the adjustable SL600 style footrest. The motor and mechanism are pre-assembled, facilitating straightforward installation.

NOTICE



DO NOT unfold the footrest manually. Manual operation will result in damage to the components. ***See Figure 4-44.***



Figure 4-44

1. Loosen the chassis bolts to prepare for mounting the footrest.
2. Remove the footrest from the packaging and place it onto the chassis.
3. Connect the 4-prong connector to the chassis. Turn the power switch ON, then plug in the EZ footrest jumper. The footrest will automatically open. ***See Figure 4-45.***



Figure 4-45

NOTE: The footrest jumper is stored inside the footrest box. Before proceeding with the installation, please locate the footrest jumper in the designated compartment within the footrest box.

4. Remove the footrest jumper.

   Use the installation switch to drive the chassis downward to a position about 6" clear off the floor. This will provide a safe area to install and adjust the footrest.

5. Position the footrest to line up with the two (2) vertical bolt holes on the chassis. ***See Figure 4-46.***



Figure 4-46

NOTICE

Harmar recommends using a torque wrench to tighten the footrest bolts to 46 ft-lb on both the front and back of the chassis.

6. Check that the height of the seat base is correctly set for the intended user. A seat height guide is provided behind the plastic footrest shroud.

   Consult with the client and use an existing chair or walker with armrest as a guide. If the height of the seat needs to be adjusted, loosen and remove the four (4) bolts on the sides of the seat base using an M10 socket. Adjust the seat base up or down relative to the footrest structure until the holes align, then replace and securely tighten the four (4) bolts. ***See Figure 4-47.***

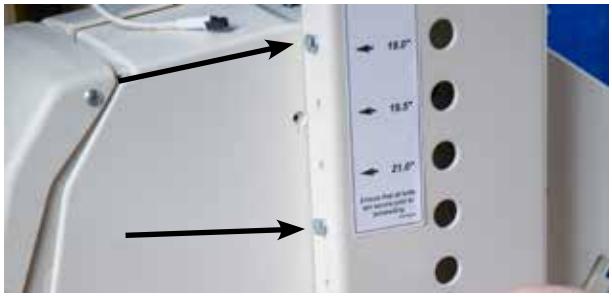


Figure 4-47

7. Connect the wires to the chassis. ***See Figure 4-48.***

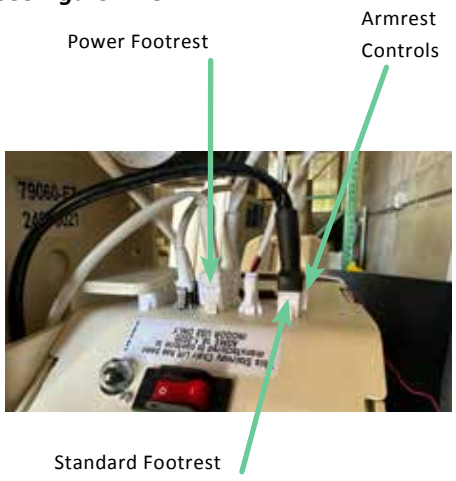


Figure 4-48

LEFT HAND/RIGHT HAND CONFIGURATION

The power footrest control is initially positioned beneath the right-hand armrest. Users may find it advantageous to switch armrests for convenience. On the Pinnacle SL600 model, the power footrest option is pre-wired to both armrests. However, on the Pinnacle SL300 model, the wiring will need to be rerouted from the right-hand to the left-hand armrest. To complete the setup, connect the switch to the corresponding wire.

1. Disassemble blank armrest. ***See Figure 4-49.***



Figure 4-49

2. Remove blank armrest switch from armrest. ***See Figure 4-50.***



Figure 4-50

3. Transfer power footrest control
   - Disassemble the armrest with the power footrest control.
   - Remove the footrest control switch from the armrest
   - Install the footrest control switch onto the opposite armrest. ***See Figure 4-51.***



Figure 4-51

4. Cut the hand control and LED wires *(SL600 only)* from opposite armrest. ***See Figure 4-52.***



Figure 4-52

5. Temporarily remove the hardware and armrest frame to facilitate the removal of the wire harness. Take out the wire harness and then reinstall the armrest. ***See Figure 4-53.***



Figure 4-53

6. Place the blank footrest plate onto the armrest from which the footrest switch was removed. ***See Figure 4-54.***



Figure 4-54

7. Reassemble the armrest covers onto the armrest frame. ***See Figure 4-55.***



Figure 4-55

8. Remove the wire harness from the opposite armrest. ***See Figure 4-56.***



Figure 4-56

9. Prepare for re-routing the wire harness by removing the seat belt hardware. ***See Figure 4-57.***

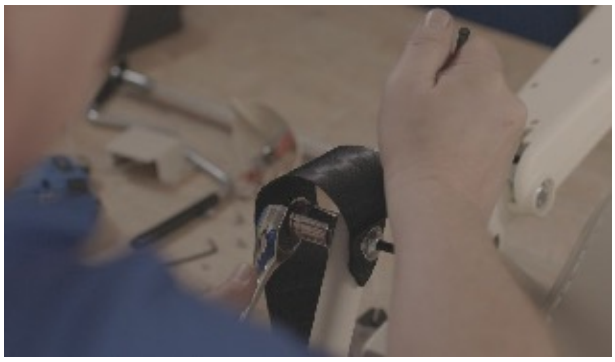


Figure 4-57

10. Utilize a pull wire to guide the wire harness up through the opposite armrest. ***See Figure 4-58.***

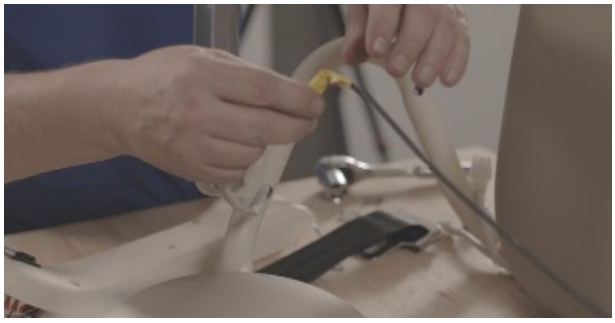


Figure 4-58

11. Remove the armrest frame and hardware, then reroute the wire harness past the hardware and to the end of the armrest frame. Reinstall the armrest frame and hardware. ***See Figure 4-59.***



Figure 4-59

12. Crimp three wire connectors back onto the wire harness. ***See Figure 4-60.***

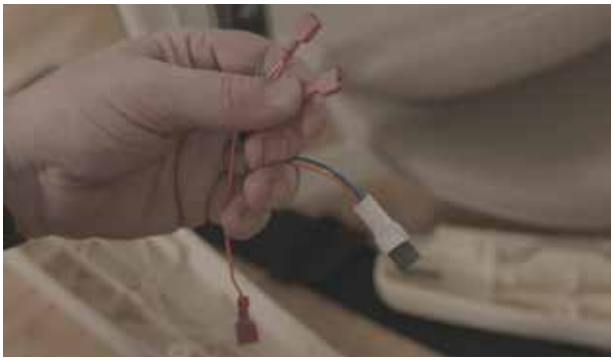


Figure 4-60

13. Reinstall the top and bottom armrest covers, ensuring the wires are visible through the oval opening. ***See Figure 4-61.***



Figure 4-61

14. Reconnect the wires to the hand control switch and reinstall the covers. ***See Figure 4-62.***



Figure 4-62

15. Reinstall the hand control switch. ***See Figure 4-63.***



Figure 4-63

16. Reinstall the seat belt and hardware to complete the process. ***See Figure 4-64.***



Figure 4-64

Run the lift through a full cycle confirm the lift behaves as expected.

SECTION 5

TROUBLESHOOTING

ISSUE: LIFT HALTS WITHOUT REACHING A LANDING.

⚠ WARNING

In the event of an unexpected halt of the lift, exercise caution and refrain from standing up immediately. It is crucial to assess your surroundings before taking any action.

The Power Swivel incorporates a recovery mechanism to address instances where the seat deviates from its designated home position. To activate this mode, release all controls, then press the downward button. Subsequently, the seat will realign itself to the home position, initiating downward movement of the lift.

ISSUE: SEAT MOTION INTERRUPTED DURING ROTATION.

A self-resetting fuse safeguards the electronics, activating if the seat remains in contact with an obstruction for more than 5 seconds. Once tripped, the fuse requires a 2-minute cool down period to ensure optimal functionality. Also verify connection of all chassis cables.

ISSUE: INTERMITTENT OPERATION

To address intermittent functionality, ensure all cables are securely connected to the chassis and properly seated. Verify the integrity of each connection by applying pressure to confirm full engagement.

ISSUE: FOOTREST INOPERABLE

To address the footrest's lack of movement, verify that all cables are securely connected to the chassis. Apply pressure to the Molex connectors to ensure they are fully and securely engaged.

SECTION 6

MAINTENANCE

During the standard maintenance procedure (recommended every year), it is imperative to inspect the power swivel shoulder bolt for secure tightening. This procedure should be conducted simultaneously with the maintenance outlined in the standard manual.

- Confirm the lift operates as described in the Owner's Manual.
- Use the control on the armrest to rotate the seat in both directions. Rotate the seat against its limits of rotation for 20 seconds, then verify that the lift will operate in the opposite direction. This ensures that the rotation limit switches are functioning as expected, allowing the seat to stop at the correct limits and reverse direction appropriately.

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