



**Pride® Lifts**

## Commander 450

Owner's Manual

# SAFETY GUIDELINES



**WARNING!** A Harmar Dealer or a qualified technician must perform the initial setup of this product and must perform all of the procedures in this manual.

The symbols below are used throughout this owner's manual and on the product to identify warnings and important information. It is very important for you to read them and understand them completely.



**WARNING!** Indicates a potentially hazardous condition/situation. Failure to follow designated procedures can cause either personal injury, component damage, or malfunction. On the product, this icon is represented as a black symbol on a yellow triangle with a black border.



**MANDATORY!** These actions should be performed as specified. Failure to perform mandatory actions can cause personal injury and/or equipment damage. On the product, this icon is represented as a white symbol on a blue dot with a white border.



**PROHIBITED!** These actions are prohibited. These actions should not be performed at any time or in any circumstances. Performing a prohibited action can cause personal injury and/or equipment damage. On the product, this icon is represented as a black symbol with a red circle and red slash.



**CALIFORNIA PROPOSITION 65 WARNING!** This product may contain substances which are known to the state of California to cause cancer and birth defects or other reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## Intended Use

The intended use of the Pride Mobility Product device is to aid in the transport of products that provide mobility to persons limited to a seated position that have the capability of operating a mobility device.

## Quick Reference Information

Harmar Dealer:	_____
Address:	_____
Phone Number:	_____
Purchase Date:	_____

**NOTE:** This owner's manual is compiled from the latest specifications and product information available at the time of publication. We reserve the right to make changes as they become necessary. Any changes to our products may cause slight variations between the illustrations and explanations in this manual and the product you have purchased. The latest/current version of this manual is available on our website.

**NOTE:** This product is compliant with WEEE, RoHS, and REACH directives and requirements.

**NOTE:** This product meets IPX4 classification (IEC 60529).

**NOTE:** The Commander 450 Lift System and its components are not made with natural rubber latex. Consult with the manufacturer regarding any after-market accessories.



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# I. INTRODUCTION

## **SAFETY**

Welcome to Pride Mobility Products by Harmar. Congratulations on the purchase of your new lift system. The lift system design combines the most advanced state-of-the-art components with modern, attractive styling. We are certain that the design features and trouble-free operation will add convenience to your daily living and ensure complete satisfaction.

At Harmar, your safety is important to us. **Please read and follow all instructions in this manual before operating your lift system for the first time.** These instructions were produced for your benefit. Your understanding of these instructions is essential for the safe operation of your new lift system.

Harmar is not liable for damage to property or personal injury arising out of the unsafe use of a lift system. Harmar is also not liable for any property damage or personal injury arising out of the failure of any person and/or user to follow the instructions and recommendations set forth in this manual or any other instructions or recommendations contained in other lift system related literature issued by Harmar or contained on the lift system itself.

## **INTERNET AND PRIVATE PURCHASES**

If you purchased your product over the Internet or from a previous owner and you have any questions about the safe use and/or maintenance of the product, please visit our web site **[www.harmar.com](http://www.harmar.com)** or contact your authorized Harmar Dealer.

## **PURCHASER'S AGREEMENT**

By accepting delivery of this product, you promise that you will not change, alter, or modify this product or remove or render inoperable or unsafe any guards, shields, or other safety features of this product; fail, refuse, or neglect to install any retrofit kits from time to time provided by Harmar to enhance or preserve the safe use of this product.

## **SHIPPING AND DELIVERY**

Before using your lift system, make sure your delivery is complete as some components may be individually packaged. If you do not receive a complete delivery, please contact your authorized Harmar Dealer immediately. Where damage has occurred during transport, either to the packaging or content, please contact the delivery company responsible.

***NOTE: If you ever lose or misplace your copy of this manual, contact us and we will be glad to send you a new one immediately.***

## II. SAFETY

### PRODUCT SAFETY SYMBOLS

The symbols below are used on the lift system to identify warnings, mandatory actions, and prohibited actions. It is very important for you to read and understand them completely.



Read and follow the information in the owner's manual.

Maximum lifting capacity.

Do not sit on mobility product while operating the lift system or during transport.



Pinch/Crush points create during assembly and/or operation. Keep hands/fingers away from moving components during operation.



Battery posts, terminals, and related accessories contain lead and lead compounds. Wear goggles and gloves when handling batteries and wash hands after handling.



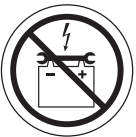
## II. SAFETY



Do not extend the lifting strap past the warning label located on it.



Disposal and recycling - Contact your authorized Harmar Dealer for information on proper disposal of your Pride product and its packaging.



Keep tools and other metal objects away from battery terminals. Contact with tools can cause electrical shock.



Do not allow unsupervised children to play near the lift system.

## II. SAFETY



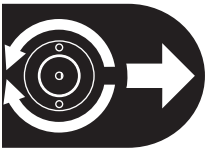
Corrosive chemicals contained in battery.



Explosive conditions exist.



Use only AGM or Gel-Cell batteries to reduce the risk of leakage or explosive conditions.



Manual Override

**CAUTION! Moving parts!**



## II. SAFETY

### LIFTING CAPABILITIES

Refer to the product specification sheet for maximum weight capacity. Under no circumstances should the lift system be made to exceed this weight limit. Subjecting the lift system to the strain of lifting more than it is designed to may cause it to fail, resulting in damage to the mobility product and/or injury to the lift operator. Refer to the mobility product specifications for information on the overall weight of the mobility product before lifting with the lift system.



**WARNING!** Exceeding the maximum lift capacity of the lift system may cause the lift system to fail, resulting in damage to the mobility product and/or injury to the lift operator. Refer to the product specifications for the maximum weight capacity



**MANDATORY!** Adding accessories, oversize batteries, or a different seat will increase the weight of your mobility device. Verify with your authorized Harmar Dealer that the total weight of your mobility device, including additions, **DOES NOT** exceed the maximum weight capacity as stated in the product specification.

### INSTALLATION

Your lift system is an exterior-rated lift designed for installation into vehicles. Read and fully understand the installation instructions provided in this manual and related literature for your brand of vehicle before installing the lift system. The distance between the top of the boom arm and mobility product should not exceed 50 in (127 cm) when the boom arm is fully extended.



**WARNING!** Before drilling or cutting into the vehicle, make absolutely certain through visual inspection that there are no obstructions, such as the fuel tank, exhaust pipes, or electrical wires, in the path of the drill bit.

### LIFTING NON-HARMAR PRODUCTS

The lift system is an extremely versatile device, which users may employ to lift items other than Harmar products. Harmar has no control over such use, nor can Harmar anticipate every possible use to which a lift system may be put. Operating the lift system outside of the safe limits as discussed in this manual or using the lift system to lift any item deemed by Harmar to be incompatible with the lift system is done at the operator's own risk, and Harmar accepts no liability for damage or injury resulting from such use.

### PRELIFT INSPECTION

Before operating the Commander 450 Lift System, conduct a careful survey of your surroundings to ensure that the lift system has a clear path of operation. Remove any possible obstructions before operating the lift and do not allow children to play near the lift. Ensure that all parts of the lift system are completely fastened before loading the mobility device onto the lift platform, and make sure the mobility device is properly secured before operating the lift system.

Inspect the lifting strap of the lift system before every use for twisting, fraying, and signs of wear. If signs of wear become evident, have the strap replaced by your authorized Harmar Dealer.



**WARNING!** A frayed or worn lifting strap can snap, resulting in damage to the mobility product being lifted and injury to the lift operator.

### OPERATOR POSITIONING

The operator of the lift should stand a safe distance from the unit being lifted/lowered to ensure that his/her feet are never positioned under the raised lift platform. The operator should also keep his/her hands clear of the lift system to avoid the potential for injury.

Keep hands clear of the lifting strap while the lift system is lifting/lowering a mobility product. The operator of the lift should stand a safe distance from the unit being lifted/lowered to ensure that his/her feet are never positioned under a raised mobility product.

### TRANSPORT VEHICLE POSITIONING

Be sure your vehicle is parked on flat, level ground before attempting to load, lift, or remove a mobility device with the lift system. Make sure the vehicle emergency park brake is engaged before loading or unloading a mobility device.



### III. INSTALLATION



**WARNING!** Attempting to lift a mobility product when a vehicle is not on level ground will cause the mobility product to swing forward or away from the vehicle, making it difficult to get the mobility product into the vehicle.

#### LIFT SYSTEM INSTALLATION

**NOTE:** The lift system is an exterior-rated lift system. Refer to the online compatibility database located at [www.harmar.com](http://www.harmar.com) for information concerning lift system/vehicle compatibility, or contact your authorized Harmar Dealer.



**WARNING!** The lift system should be installed only by an authorized Harmar Dealer or service technician.



**WARNING!** At least two people should lift the lift system into the rear of the vehicle. Use proper lifting techniques and avoid lifting beyond your physical capability.

**WARNING!** Avoid pinch points! Do not hold the lift frame by the pivot points when installing the lift system.

**NOTE:** Footprint the mounting area along with the lift and mobility device to make sure all clearances pass above and below vehicle without any interference before starting installation.

**NOTE:** Use only the supplied hardware to install the lift system.

**NOTE:** To preserve vehicle-system data, the vehicle's power system may need to be connected to an alternate power source prior to battery removal. Refer to the vehicle's owner's manual for information on proper battery-disconnection instructions.

**Follow these steps for installation:**

1. Install the lift system securement system to the vehicle.

**NOTE:** Securement systems vary depending on vehicle manufacturer. Harmar recommends use of only the securement system provided with the lift and that you follow any instructions provided by the manufacturer for installation.

2. Connect the lift system to a power source. See "Wiring Harness Installation."
3. Ensure that all mounting hardware is fully tightened and all required clearances have been achieved.

**NOTE:** The lift system may include an optional set of L-Base extensions. For information on L-base extension installation, refer to the supplemental instructions or contact your authorized Harmar Dealer.

**NOTE:** The lift system is equipped with a power base, which is an automated device designed to rotate the boom arm left and right.

# III. INSTALLATION

## BOOM-ARM ADJUSTMENT

The boom arm can be adjusted for your convenience. See figure 1.

### To raise or lower the upper post:

1. Remove the nut and bolt from the upper post. See figure 1.
2. Raise or lower the upper post to the desired position, matching the adjustment holes of the upper post with the adjustment holes of the lower post.
3. Reinstall the bolt through the adjustment hole and secure it with the nut.

### Lift System:

The Commander 450 is available in 2-axis or 3-axis models. The hand control has 6 buttons and is designed to control movement on all 3 axes. The orange button will not operate on 2-axis lift systems.

1. Rotate (Left and Right)
2. Boom Extension (In and Out) (3-axis system only)
3. Lifting Strap (Up and Down)

**NOTE:** The angle of the boom arm can be adjusted to accommodate certain height limitations. See figure 4.

**NOTE:** Do not force the threaded bolt into the adjustment hole.

### To secure the base:

Four nuts and four bolts are needed to secure the lift system firmly onto the base of your choice. There are four securement bolt holes located on the L-base. See figure 2.

Two bolts will be installed beneath the shroud of the power base. See figure 3.

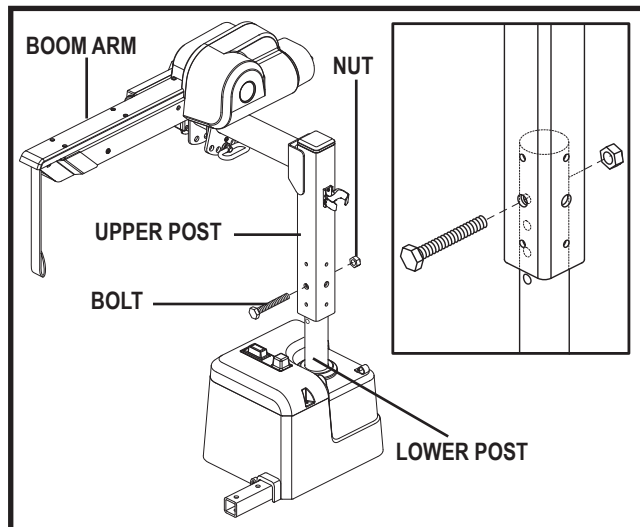


Figure 1. Upper Post Adjustment

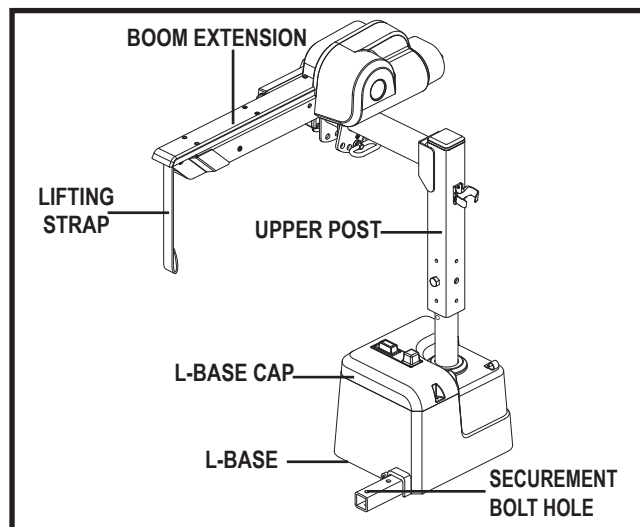


Figure 2. Fully Assembled Lift System

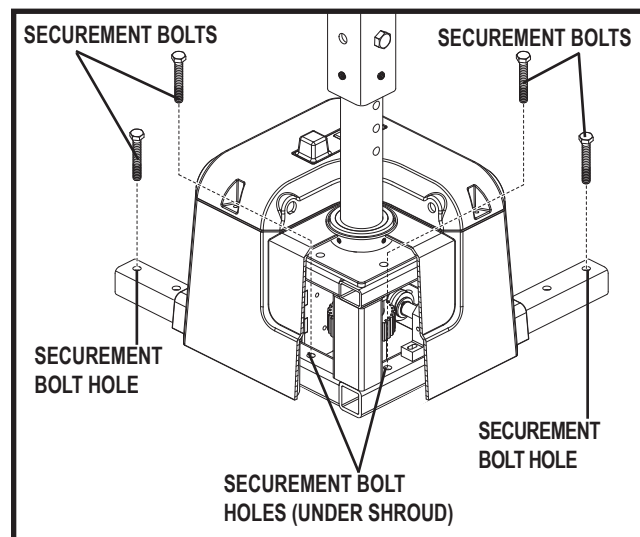


Figure 3. Power Base

### III. INSTALLATION

#### To raise or lower the boom arm:

1. Support the boom arm.
2. Remove the detent pin located between the boom arm and the upper post. Guide the boom arm upward or downward to the desired position. **See figure 4.**
3. Reinsert the detent pin into the top of the upper post to secure the boom arm in place. **See figure 4.**

#### ELECTRICAL WIRING INSTALLATION

1. Route the hard wire kit (starting at the lift) through the interior of the vehicle until you reach the automobile battery. **See figure 5.** Conceal the wire behind or under the interior panels. Be certain that the wire is protected with a rubber grommet when passing it through the metal panels and into the engine compartment. Inside the engine compartment, secure the wire to the firewall and the inner fender with the supplied plastic wire ties. Use care not to cause abrasions to the power wire. It is important to secure the power wire at various points along its run.
2. Insert the red positive (+) lead on the power wire into the spliced end of the red positive (+) battery lead, then crimp the splice to secure the wire.
3. Connect the red positive (+) battery lead to the positive (+) battery terminal and the black negative (-) ground wire to the negative (-) battery terminal.



**WARNING!** The red positive (+) wire must be connected directly to the positive (+) battery terminal.

**WARNING!** The black negative (-) wire must be connected directly to the negative (-) battery terminal.

4. Connect the harness extending from the motor housing to the harness coming from the battery.

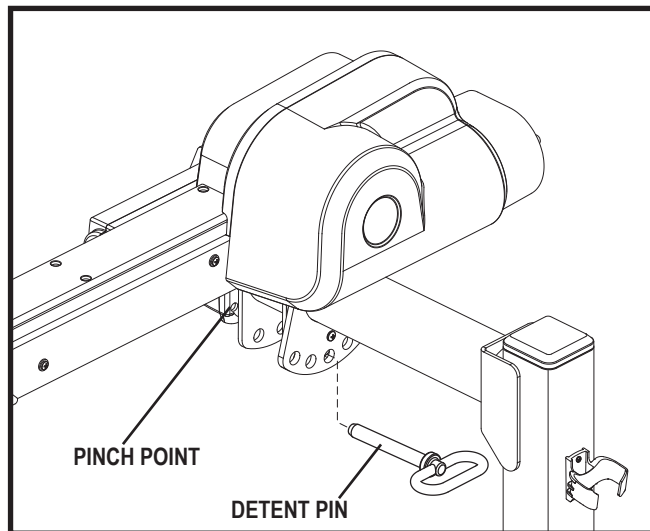


Figure 4. Securing the Boom Arm

### III. INSTALLATION

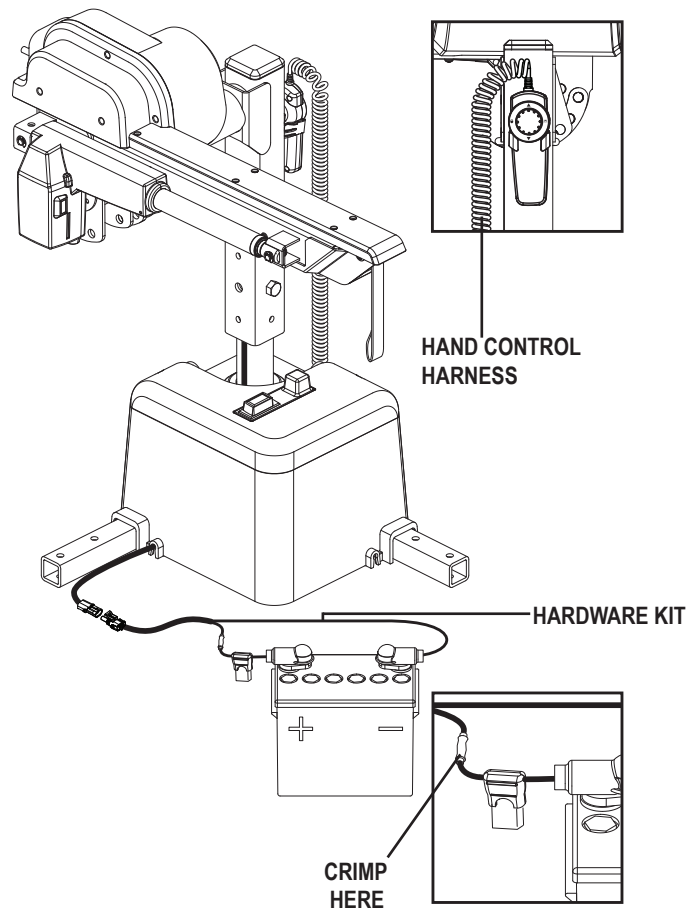


Figure 5. Electrical Wiring Connections

## IV. OPERATION

### POWER SWITCH OPERATION

The lift system is equipped with an ON/OFF switch that enables/disables operation. Toggle the ON/OFF switch to the “I” position to turn the power on; to the “O” position to turn the power off. **See figure 6.**

**NOTE:** The ON/OFF switch also functions as the circuit breaker reset button. **See figure 6.**

### HAND CONTROL OPERATION

The hand control for the lift system operates the arm in six directions: up/down, rotate left/right and in/out. Press and hold the appropriate button until the desired position is obtained. **See figure 7.**

**NOTE:** Store the hand control in the hand control bracket (located on the boom) after operation and during storage.

### LIFTING THE MOBILITY PRODUCT



**WARNING!** Before operating the lift system for the first time, be absolutely certain you have the proper docking device for your mobility product installed.

**WARNING!** Always operate the lift and mobility device being lifted on a flat, level surface.

1. Prepare your mobility product for transport. Ensure that the power is off and properly secure the batteries. You may also need to lower the tiller and/or remove the seat.
2. Position your mobility product on the ground behind the installed lift. Be sure that there is ample space between the mobility product and the vehicle bumper to insure that the mobility product will not hit the bumper while being raised. If the mobility product is too far from the vehicle's bumper, the mobility product will be dragged when attempting to lift it.
3. Position the boom arm over the mobility product.
4. Operate the lift in the downward direction. The lift strap should drop straight down to the T-bar or docking device.



**WARNING!** Inspect the lift strap before each use for twisting, fraying, signs of wear, loose parts, damage or debris. If you discover a problem, contact your authorized Harmar Dealer for maintenance and repair.

**NOTE:** Keep tension on the lifting strap with your free hand when lowering the boom arm.

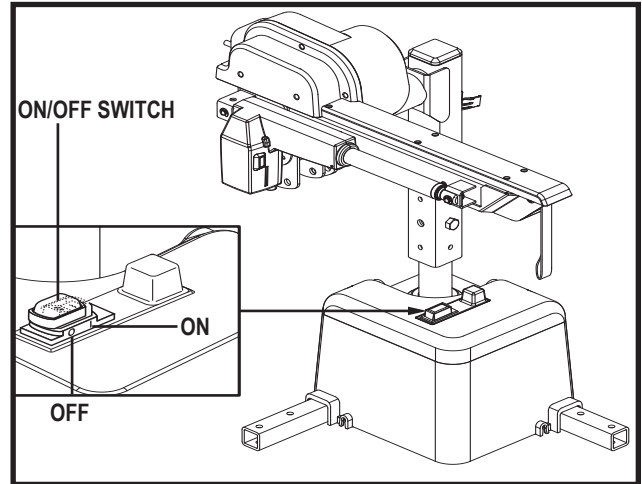


Figure 6. ON/OFF Switch

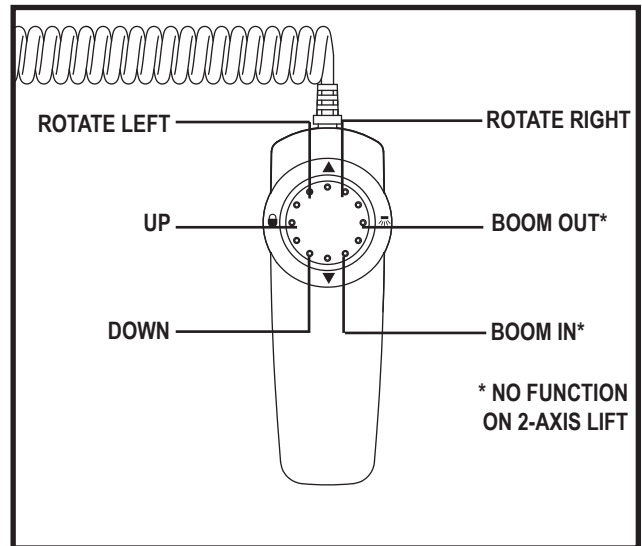


Figure 7. Hand Control

## IV. OPERATION



**WARNING!** Do not extend the lifting strap past the warning label located on it.

**WARNING!** Avoid unloading into vehicular traffic.

5. Ensure that the docking device is properly attached.
6. Operate the lift in the downward direction. The lift strap should drop straight down to the T-bar or docking device.
7. Ensure that the docking device is properly attached.
8. Operate the lift in the upward direction.



**WARNING! Pinch/Crush Hazard!** Always keep hands clear of the lifting strap while the lift system is lifting/lowering a mobility product. Ensure that all people and objects are a safe distance away from the mobility product being lifted/lowered and clear from path to travel.

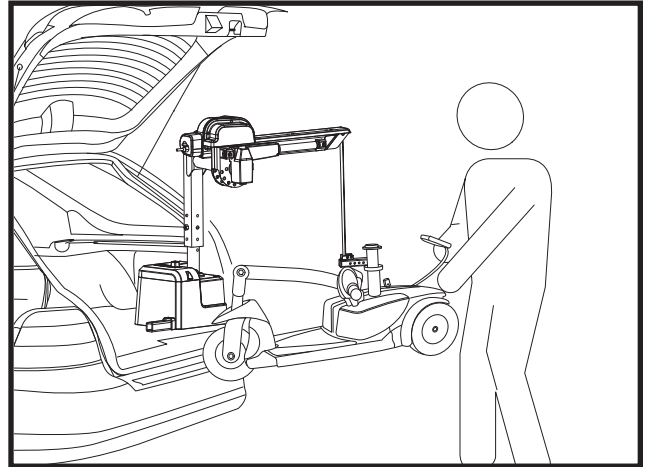


Figure 8. Lifting the Mobility Product

**NOTE:** Do not drag the mobility product into position using the lift. If dragging occurs, your mobility product is too far away from the vehicle.

### To prevent dragging:

- Release the lifting strap tension.
- Correct the position of the mobility product.
- Attempt the lift again



**MANDATORY!** The lift system is designed to not exceed the maximum weight capacity as stated in the product specification.

9. If the mobility product begins to tilt, lower it completely and adjust the docking device by moving the pick-up bar in the direction of the tilt.
10. Tighten the pick-up bar once the proper balance point has been found.
11. Once the mobility product is raised high enough to fit into the vehicle, stop the lift. **See figure 8.**
12. Rotate the boom arm toward the vehicle. When the mobility product is securely in the vehicle, lower the mobility product into the vehicle and secure it.

**NOTE:** Rotate the boom arm to the desired position to facilitate installation.

**NOTE:** Ensure the mobility device is secured against slipping once installed in the motor vehicle.

13. Shut off the lift system to prevent any accidental movement when transporting your mobility product.



**WARNING!** Your lift system was designed to be mounted primarily in a motor vehicle. Mounting your lift system on a platform, where the height of the lift may cause the lifting strap to extend beyond a safe point, can damage the lift system and injure the lift operator.

**WARNING!** Do not overtighten the strap. Doing so may put excessive strain on the motor, causing the circuit breaker to trip.

## V. TROUBLESHOOTING

### LIFT WILL NOT OPERATE

- Check the circuit breaker reset button. Reset if necessary. **See figure 6.**
- If the circuit breaker reset button is not tripped, check the hardware fuse to see if it is blown. Replace if necessary. **See figure 9.**
- Ensure all harness connections are secure.
- Ensure the power wire leading to the positive battery terminal is tight and not corroded.
- Check the fuse located on the red power wire near the battery. If blown, replace with a new 15-amp fuse. **See figure 9.**



**WARNING!** The replacement fuse must exactly match the rating of the old fuse. Failure to use properly rated fuses may cause damage to the electrical system.

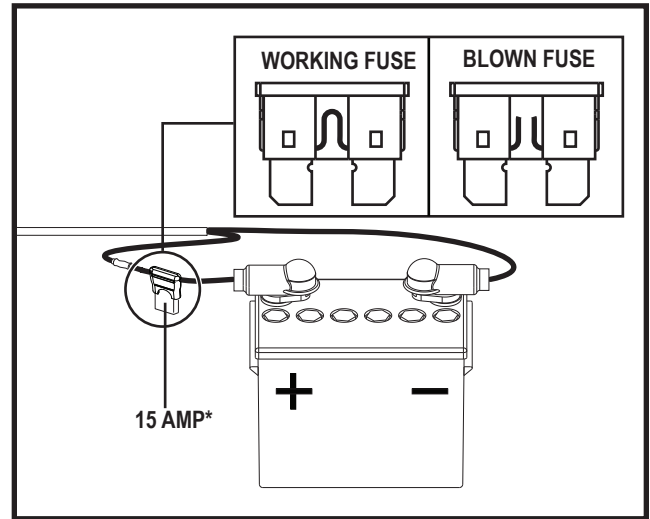


Figure 9. Hardware Fuse

### LIFT STOPS OPERATING

If your lift system is heavily strained because of excessive loads, the main circuit breaker (**see figure 6**) may trip to protect the monitor and electronics from damage. When the breaker trips, the entire electrical system shuts down.



**WARNING!** Never attempt to lift more than the maximum weight capacity as stated in the product specification.

#### To reset the main circuit breaker.

1. Allow a minute or so for the electronics to “cool.”
2. Push in the reset button to reset the breaker. **See figure 6.**

If the breaker trips frequently, contact your authorized Harmar Dealer.

### LIFTING STRAP TRAVELS IN OPPOSITE DIRECTION OF BUTTON BEING PUSHED ON HAND CONTROL

Before each use, check that the lifting strap is traveling in the proper direction. If the belt travels in the wrong direction when you press either the up or down button, you must restore proper lifting strap travel.

#### To restore proper lifting strap travel:

1. Pull slightly on the strap and operate the lift until the strap is extended completely past the “stop” warning label.
2. Allow the strap to rewind itself. Do not allow any twists in the belt.

Observe the travel of the belt, which should correspond with the button being pushed on the hand control. If you are still experiencing problems, contact your authorized Harmar Dealer.



## V. TROUBLESHOOTING

### MANUAL OVERRIDE OPERATION

The lift system is equipped with a manual crank that serves as backup in the event of a power failure. Using the supplied tools, rotate the manual crank clockwise or counterclockwise to move the platform up or down. **See figure 10.**

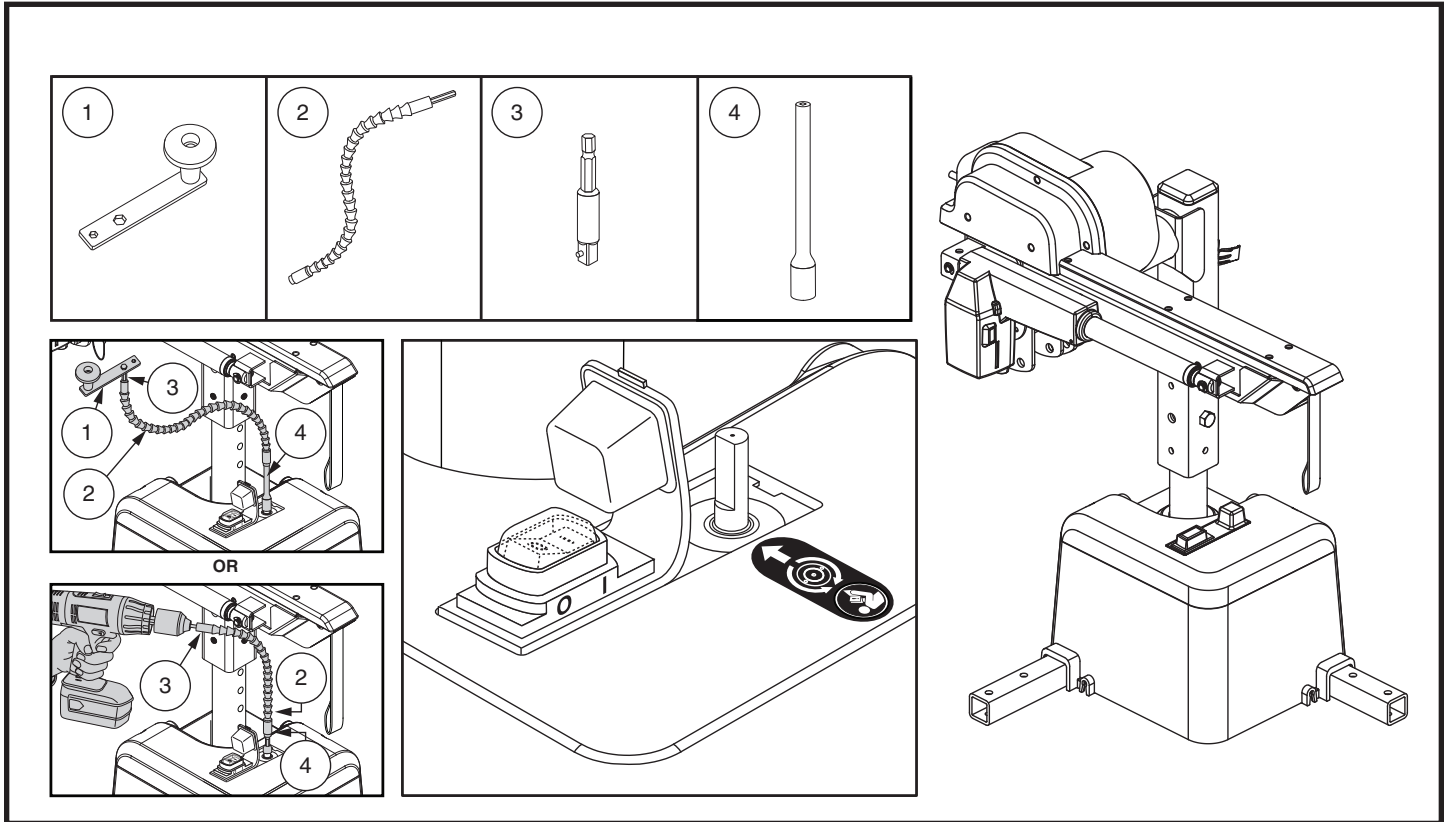


Figure 10. Manual Override Operation



## VI. CARE AND MAINTENANCE

The following routine maintenance should be performed at the indicated intervals. Failure to perform the required maintenance procedures at the required intervals may void Harmar's product warranty.

### **Perform prior to daily use:**

- Inspect lift strap wear and replace if necessary.
- Inspect all harnessing for damage and replace if necessary.

### **Perform every 6 months:**

Inspect all mounting hardware for defects and a secure fit. Any hardware found to be loose should be tightened or replaced if necessary.

### **Perform every 6 - 12 months:**

- Visually inspect chains for damage and replace if necessary.
- Lubricate chains with "General Purpose Petroleum-based Grease".
- Inspect plastic shrouds for cracks or damage and replace if necessary.
- Inspect the power base plastic shrouds for cracks or damage and replace if necessary.
- Lubricate the power base gears with "General Purpose Petroleum-based Grease".

### **Storage and Operation Temperatures.**

Transportation or storage: -40°F/-40°C to 149°F/65°C

Operation: -13°F/-25°C to 122°F/50°C

## VI. CARE AND MAINTENANCE

### Questions & Answers about Proposition 65

#### **What is Proposition 65?**

Proposition 65 requires businesses to provide warnings to Californians about significant exposures to chemicals that cause cancer, birth defects, or other reproductive harm. These chemicals can be in the products that Californians purchase, in their homes or workplaces, or that are released into the environment. By requiring that this information be provided, Proposition 65 enables Californians to make informed decisions about their exposures to these chemicals.

Proposition 65 also prohibits California businesses from knowingly discharging significant amounts of listed chemicals into sources of drinking water. Proposition 65 requires California to publish a list of chemicals known to cause cancer, birth defects, or other reproductive harm. This list, which must be updated at least once a year, has grown to include approximately 900 chemicals since it was first published in 1987.

#### **What types of chemicals are in the Proposition 65 list?**

The list contains a wide range of naturally occurring and synthetic chemicals that include additives or ingredients in pesticides, common household products, food, drugs, dyes, or solvents. Listed chemicals may also be used in manufacturing and construction, or they may be byproducts of chemical processes, such as motor vehicle exhaust.

#### **What does a warning mean?**

If a warning is placed on a product label or posted or distributed at a workplace, a business, or in rental housing, the business issuing the warning is aware or believes that it is exposing individuals to one or more listed chemicals. By law, a warning must be given for listed chemicals unless the exposure is low enough to pose no significant risk of cancer or is significantly below levels observed to cause birth defects or other reproductive harm.

#### **Where can I get more information on Proposition 65?**

If you have specific questions on the administration or implementation of Proposition 65, you can contact OEHHA's Proposition 65 program at [P65.Questions@oehha.ca.gov](mailto:P65.Questions@oehha.ca.gov), or by phone at (916) 445-6900.

## VII. WARRANTY

### THREE-YEAR TRANSFERABLE LIMITED WARRANTY

For three (3) years from the date of purchase, Pride Mobility Products by Harmar will repair or replace at our option, free of charge, any mechanical or electrical component found upon examination by an authorized representative of Harmar to be defective in material and/or workmanship.

The warranty does not extend to those items, which may require replacement due to normal wear and tear.

Labor, service calls, shipping, and other charges incurred for repair of the product, unless specifically authorized by Harmar IN ADVANCE, are excluded.

#### **Exclusions also include components with damage caused by:**

- Contamination
- Abuse, misuse, accident, or negligence
- Battery fluid spillage or leakage
- Commercial use or use other than normal
- Improper operation, maintenance, or storage
- Repairs and/or modifications made to any part without specific consent from Harmar
- Circumstances beyond the control of Harmar

### SERVICE CHECKS AND WARRANTY SERVICE

An authorized Harmar Dealer must perform warranty service. Do not return faulty parts to Harmar without prior written authorization. All transportation costs and shipping damage incurred while submitting parts for repair or replacement is the responsibility of the purchaser.

Failure to follow the instructions, warning, and notes in the owner's manual and those located on your Harmar lift product can result in personal injury or product damage and will void Harmar's product warranty.

There is no other express warranty.

### IMPLIED WARRANTIES

**Implied warranties, include those of merchantability and fitness for a particular purpose, are limited to one (1) year from the date of purchase and to the extent permitted by law. Any and all implied warranties are excluded.** This is the exclusive remedy. Liabilities for consequential damages under any and all warranties are excluded.

Some states do not allow limitation on how long an implied warranty lasts or do not allow the exclusion or limitation of incidental or consequential damages. The above limitation or exclusion may not apply to you.

This warranty gives you specific rights, and you may also have other rights, which vary from state to state.

# NOTES



800.833.0478 | [www.harmon.com](http://www.harmon.com)

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