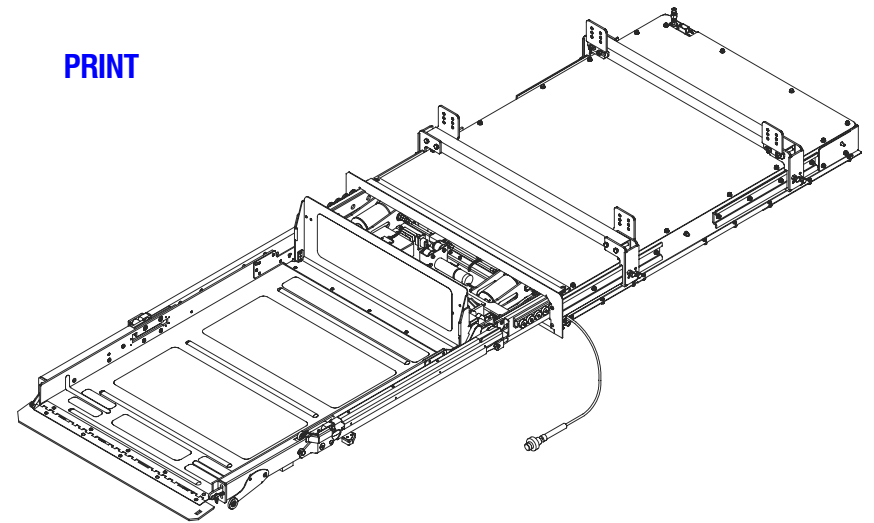




*INNOVATION IN MOBILITY*

# Phantom Thin-Profile Personal Wheelchair Lift

PRINT



**OPERATOR MANUAL**



07/29/04

32DPH01.B

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**THIS RICON PRODUCT MUST BE SERVICED BY AUTHORIZED  
RICON SERVICE TECHNICIANS.**

**PRODUCT USERS MUST REFER TO THIS MANUAL FOR  
OPERATING AND GENERAL MAINTENANCE INSTRUCTIONS.**

**RETAIN THIS MANUAL IN THE VEHICLE FOR FUTURE  
REFERENCE.**

Customer Name: \_\_\_\_\_

Installing Dealer: \_\_\_\_\_

Date Installed: \_\_\_\_\_

Serial Number: \_\_\_\_\_

## REVISION RECORD

| REVISION      | PAGES   | DESCRIPTION OF CHANGE                                                          | ECR/ECO   |
|---------------|---------|--------------------------------------------------------------------------------|-----------|
| 32DPH01.<br>B | 1-1     | Changed figure to TL2.                                                         | 4471/5246 |
|               | 1-4     | Changed figure 1-1 to reflect TL2.                                             |           |
|               | 2-6 & 7 | Minor rewrite of operating section to reflect differences between TPL and TL2. |           |
|               | 2-8     | Changed figure 2-7 to reflect TL2.                                             |           |
|               | 3-2     | Changed figure 3-1 to reflect TL2.                                             |           |
|               |         |                                                                                |           |

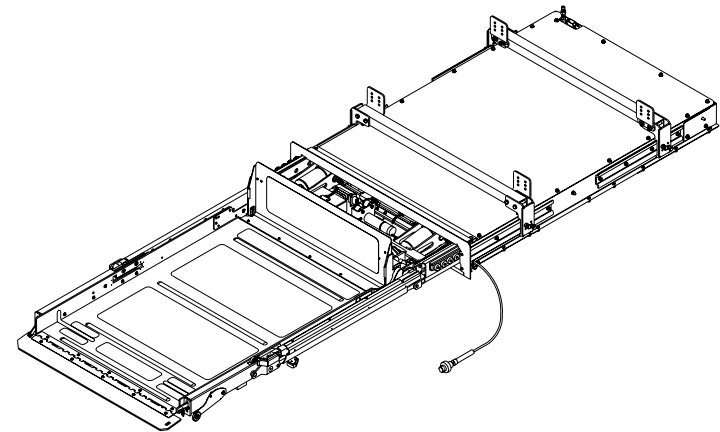
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FRONT COVER

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This manual provides operating instructions and basic maintenance procedures for the personal version of the Ricon Phantom wheelchair lift. The Phantom provides safe and easy access to full size vans for an individual using a wheelchair or scooter. The Phantom lift is also referred to as the Thin Platform Lift, or TL2.



The Phantom is typically installed in the side of the van, between the floor and frame.

A hydraulic pump driven by an electric-motor supplies lifting force to a pair of hydraulic cylinders. Maximum lifting capacity is 660 pounds (300 kilograms).

The operator uses the control pendant to withdraw the platform from the vehicle and lower it to the ground. The passenger moves onto the large non-skid platform and is then raised to floor height. After the passenger enters the vehicle, the operator lowers the platform and retracts it back into the vehicle.

When a passenger exits, the operator uses the control pendant to withdraw the platform from the vehicle and raise it to floor height. The passenger moves onto the platform, and is then lowered to the ground. After the passenger departs the platform, the platform is stowed.

One individual can manually operate the lift when normal power is not present. A manual release mechanism is provided to ease the task of pulling the platform out of the enclosure. The hydraulic pump assembly includes a manually operated back-up pump to raise the platform, and a pressure release valve to lower it.

It is important to passenger safety that the operator be familiar with the Operating Instructions chapter. It is also important to properly maintain the lift by following the recommended cleaning, lubrication, and inspection procedures in the Phantom personal service manual 32DPH02.

**A. RICON SERVICE SUPPORT**

If there are questions regarding this manual, or you need additional copies, please contact Ricon Product Support at the following location:

**Ricon Corporation**  
**7900 Nelson Road**  
**Panorama City, Ca 91402 ..... (818) 267-3000**  
**Outside 818 Area Code ..... (800) 322-2884**  
**World Wide Website ..... www.riconcorp.com**

## B. WARRANTY INFORMATION

Refer to the following page for detailed coverage of the one-year limited warranty. Complete the warranty and owner registration cards and return them to Ricon within 20 days to validate the warranty.

### RICON CORPORATION ONE-YEAR LIMITED WARRANTY

**Ricon Corporation (Ricon)** warrants to the original purchaser of this product that Ricon will repair or replace, at its option, any parts that fail by reason of defective material or workmanship as follows:

- Repair or replace parts for a period of one year from the date of purchase. A complete list of parts covered by this warranty can be obtained from Ricon Product Support.
- Labor costs for specified parts replace under this warranty for a period of one year from the date of purchase. A Ricon rate schedule determines the parts covered and labor allowed.

**If You Need to Return a Product:** Return this product to Ricon. Please give as much advance notice as possible and allow a reasonable amount of time for repairs.

**This Warranty does not Cover:** Malfunction or damage to product parts caused by accident, misuse, lack of proper maintenance, neglect, improper adjustment, modification, alteration, the mechanical condition of the vehicle, road hazards, overloading, failure to follow operating instructions, or acts of nature (i.e., weather, lightning, flood).

**Note:** Ricon recommends this product be inspected by an authorized Ricon service technician at least once every six months, or sooner if necessary. Any required maintenance should be performed at that time.



#### WARNING

THIS PRODUCT HAS BEEN DESIGNED AND MANUFACTURED TO EXACT SPECIFICATIONS. MODIFICATION OF THIS PRODUCT IN ANY RESPECT CAN BE HAZARDOUS.

***This Warranty is Void if:***

- The product has been installed or maintained by someone other than an authorized Ricon service technician.
- The product has been modified or altered in any respect from its original design without written authorization by Ricon.

***Ricon disclaims liability for any personal injury or property damage that results from operation of a Ricon product that has been modified from the original Ricon design. No person or company is authorized to change the design of this Ricon product without written authorization by Ricon.***

***Ricon's obligation under this warranty is exclusively limited to the repair or exchange of parts that fail within the applicable warranty period.***

***Ricon assumes no responsibility for expenses or damages, including incidental or consequential damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply.***

***Important: The warranty registration card must be completed and returned to Ricon within 20 days after installation of this Ricon product for the warranty to be valid. The warranty is not transferable.***

***The warranty gives specific legal rights, and there may be other rights that vary from state to state.***

### **C. GENERAL SAFETY PRECAUTIONS**

Adhere to the following safety precautions during operation:

- Exercise caution when operating lift to avoid personal injury and product damage, and be certain that hands, feet, legs, and clothing are not in the path of the platform as it moves.
- Read and thoroughly understand the operating instructions before operating the lift.
- Inspect the lift before each use. Do not use lift to assist passengers if any unsafe conditions are present, such as unusual noises or movements.
- Keep others clear during lift operation.
- The lift requires regular maintenance. Ricon recommends that an authorized Ricon service technician perform a thorough maintenance inspection every six months.



## D. MAJOR LIFT COMPONENTS

Major components of the Phantom personal lift are in **Figure 1-1**. A description of each component is in **Table 1-1**. For clarity, the carriage in the figure below is shown pulled further out of the enclosure than would occur during normal operation.

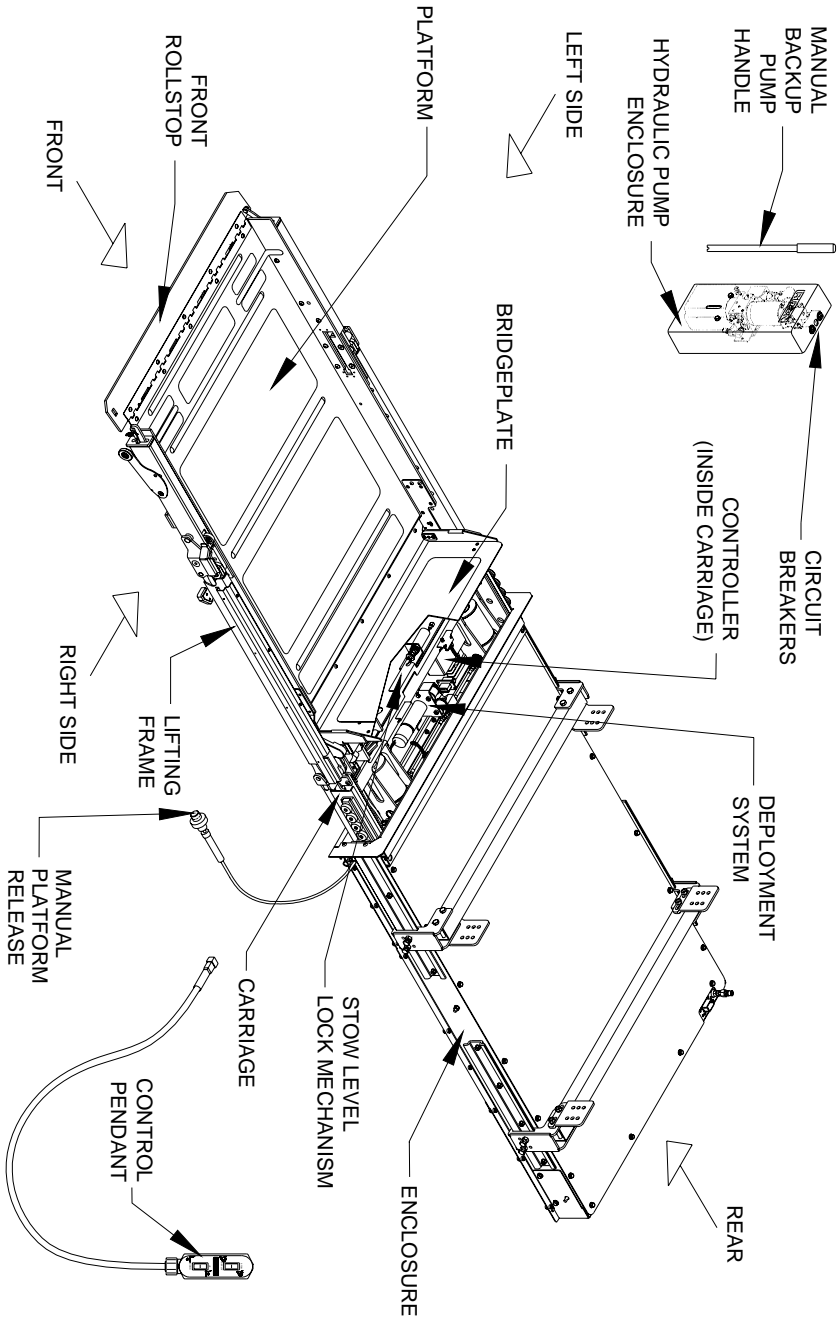


FIGURE 1-1: MAJOR PHANTOM PERSONAL LIFT COMPONENTS

32DPH01.B

| <b>TABLE 1-1: MAJOR PHANTOM COMMERCIAL LIFT COMPONENTS</b> |                                                                                                                                                                                          |
|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NAME</b>                                                | <b>DESCRIPTION</b>                                                                                                                                                                       |
| Left, Right, Front, Rear                                   | Lift references when viewing installed lift from outside of vehicle.                                                                                                                     |
| Carriage                                                   | Rear part of traveling frame. Mounted on rollers, which move on rails attached to inside of enclosure. Supports lifting frame.                                                           |
| Lifting frame                                              | Hinged arms that lift or lower platform; arms are raised by a pair of hydraulic cylinders that are anchored to carriage.                                                                 |
| Platform                                                   | Curbed area occupied by passenger during lift operation.                                                                                                                                 |
| Travelling frame (not shown)                               | Assembly consisting of the platform, lifting frame, and carriage. Moves as a unit in and out of enclosure.                                                                               |
| Front rollstop                                             | Front barrier prevents wheelchair from inadvertently rolling off the platform during lift use. Rollstop is hydraulically opened and closed.                                              |
| Bridgeplate (rear rollstop)                                | Plate unfolds when platform is at floor height to bridge the gap between platform and vehicle interior. Functions as a rear rollstop when platform is in motion.                         |
| Hydraulic power unit                                       | Electro-hydraulic unit provides hydraulic pressure used to raise platform; also contains a backup pump and relief valve to raise and lower platform manually. Located in pump enclosure. |
| Control pendant                                            | Hand-held device used to control platform motions.                                                                                                                                       |
| Manual backup pump handle                                  | Used to operate the manual hydraulic back-up pump and the hydraulic pressure release valve.                                                                                              |
| Enclosure                                                  | Housing for platform; rigidly attached to vehicle chassis.                                                                                                                               |
| Pump enclosure                                             | Contains electrical and hydraulic power and control components; also referred to as the "pump box".                                                                                      |
| Deployment system                                          | Employs an electric gear-motor and toothed belt to propel platform out of enclosure, or to pull it back into the enclosure. Located at top center of carriage.                           |
| Controller                                                 | Electronic module translates pendant commands to signals that control lift electrical and hydraulic components. Also monitors lift electrical activity and position of platform.         |
| Stow level lock mechanism                                  | A mechanical mechanism that establishes the correct platform height before the platform is retracted into enclosure.                                                                     |
| Circuit breakers                                           | Small circuit breakers that protect the pendant and lift control circuits.                                                                                                               |
| Manual platform release knob                               | Disengages travelling frame from enclosure, thus allowing platform to be pulled from enclosure by hand.                                                                                  |
| <b>END OF TABLE</b>                                        |                                                                                                                                                                                          |

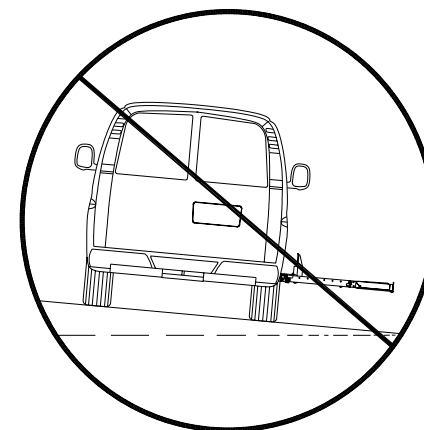
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## II. PHANTOM PERSONAL LIFT OPERATING INSTRUCTIONS

The lift operator must thoroughly read this chapter before using the Ricon Phantom Wheelchair Lift, and must comply with the safety precautions and daily safety check instructions.

### A. SAFETY PRECAUTIONS

- Refer to **Figure 2-1**. Operate the lift only when vehicle is parked on level ground. Using the platform while it is inclined is hazardous.



**FIGURE 2-1: SLOPED PARKING HAZARD**

- Verify that the vehicle boarding area is free of obstacles.
- Read and comply with all warning labels and symbols attached to the wheelchair lift.
- The operator must inspect lift before use. If unusual noises, movements, or other unsafe conditions are noticed, do not use lift and contact an authorized Ricon service technician for repair.
- Do not operate with a load in excess of 660 lbs (300 kg).
- The platform is intended for ONE wheelchair and its occupant. Do not overload lift.
- Wheelchair occupants must face outward when entering or exiting vehicle.
- The outer rollstop is intended to prevent slow, or unintentional, rolling off the platform. The outer rollstop is not designed to stop a quick moving wheelchair; the wheelchair might tip when the small front wheels collide hard with the rollstop. In addition, the large rear wheels of a quick moving wheelchair can roll up and over the rollstop.
- Wheelchair brakes are less effective if the wheels or platform are wet. The operator must be extra careful in wet conditions.
- Verify that the wheelchair fits safely on the platform. The wheelchair cannot extend beyond the edges, or interfere with operation of the rollstop.
- When transferring a passenger from the vehicle to the platform, verify that the platform is at the same height as the vehicle floor, and that the front rollstop is up and locked.
- Keep arms, legs, and clothing away from moving lift parts.
- Keep others clear from lift while operating it.
- Return platform to stowed position when not in use; don't leave platform outside of vehicle.

Periodically read and review these safety precautions. Ask any attendants or other operators to read them as well. Contact Ricon Product Support if you have questions.

## B. INSPECT THE LIFT

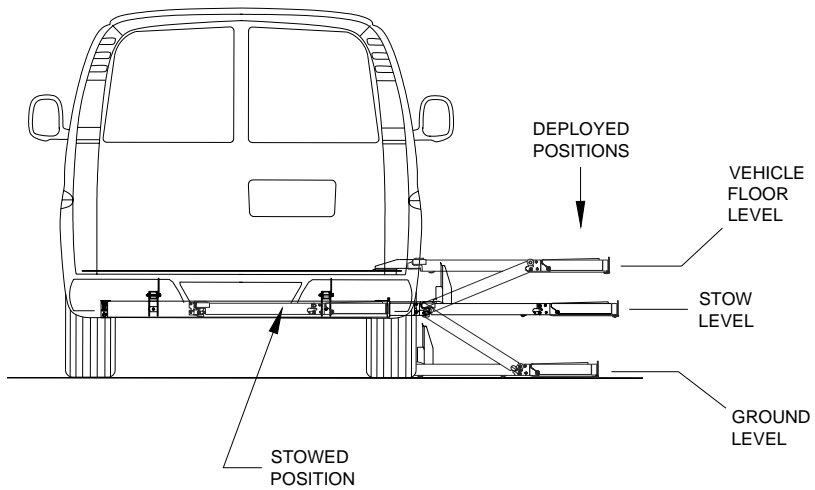
Before using the lift, verify that the following conditions are met:

- All lift functions operate properly. Do not use lift if any unusual noises or movements are noticed. Contact an authorized Ricon service technician for repair.
- The vehicle interlock circuit, if present, is working properly. The lift cannot be operated unless the parking brake is on, the transmission is in neutral, and the doors are open.
- Lubrication and general appearance are satisfactory.

## C. PLATFORM CHARACTERISTICS

### 1. PLATFORM POSITIONS

Refer to **Figure 2-2**. The platform is stowed inside of its enclosure when not in use. When the platform is deployed, it will typically be at one of three heights, or levels, as shown. When the platform is directly in front of the enclosure it is referred to as being at stow level. When the platform is raised to its maximum height it is at the level of the vehicle floor. When the platform is in contact with the ground it is at ground level.



**FIGURE 2-2: TYPICAL PLATFORM POSITIONS**

## 2. PLATFORM MOTIONS

The platform is capable of moving vertically and horizontally. The table below describes each possible motion. The motions are managed with the control pendant, which is described below in the Lift Controls section.

| TABLE 2-1: PLATFORM MOTIONS |        |                                                                                                              |
|-----------------------------|--------|--------------------------------------------------------------------------------------------------------------|
| MOTION                      |        | DESCRIPTION                                                                                                  |
| →                           | DEPLOY | Platform extends out of vehicle, or <b>deploys</b> .                                                         |
| ↓                           | DOWN   | Platform lowers from present height (floor height or below); roll-stop lowers when platform contacts ground. |
| ↑                           | UP     | Platform rises from present height (ground level or above); roll-stop closes when platform leaves ground.    |
| ←                           | STOW   | Platform retracts into vehicle from any height, or <b>stows</b> .                                            |

## D. LIFT CONTROLS

Controls for the Phantom personal wheelchair lift are the control pendant, vehicle interlock, control system circuit breakers, main circuit breaker, and manual backup pump.

### 1. LIFT CONTROL PENDANT

Refer to **Figure 2-3**. The Phantom is operated with two rocker switches on a hard-wired, hand-held remote-control pendant. Control platform movements by pushing and holding one end of a rocker switch. The ends of the switches are referred to in this manual as buttons. Pushing the DEPLOY button causes the platform to extend from the vehicle. Pushing the UP button causes the platform to rise towards floor level. Pushing the DOWN button causes the platform to descend towards the ground. Pushing the STOW button causes the platform to rise or lower to stow level and then retract into the vehicle.

Platform motion can be halted at any time by releasing the button.

The pendant is usually stored on a wall clip in an interior location that is near the lift.

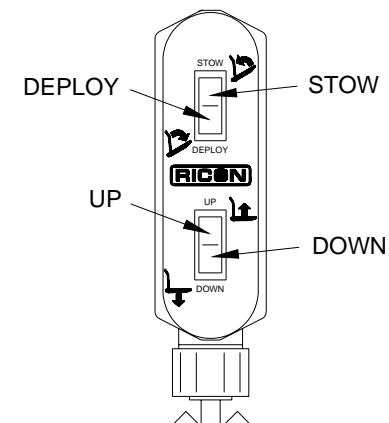


FIGURE 2-3: LIFT CONTROL PENDANT

## 2. VEHICLE INTERLOCK

The Phantom lift provides an electrical interlock signal to the vehicle that can be used by a vehicle interlock control circuit to prevent movement of the vehicle when the platform is deployed. The vehicle interlock control circuit can also be configured to provide power to the lift only when the vehicle parking brake is set, the doors are completely open, and the transmission is in neutral. Connection of interlock circuit is optional.

## 3. CONTROL SYSTEM CIRCUIT BREAKERS

Refer to **Figure 2-4**. Each control system circuit breaker interrupts electric power to certain lift components when an electrical malfunction causes an abnormally high current flow. The 8A circuit breaker protects the control pendant and the 30A circuit breaker protects components in the carriage, particularly the carriage drive motor. Both breakers are mounted on a bracket at the top of the hydraulic power unit. The circuit breaker buttons “pop-up” when a short circuit occurs. Press the button to reset.

**NOTE:** Do not press the button and hold it if pressing and releasing it does not restore power. Contact a Ricon authorized service technician for repair.

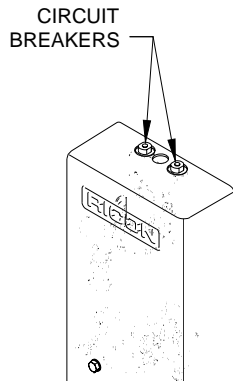


FIGURE 2-4: CONTROL SYSTEM CIRCUIT BREAKERS

## 4. MAIN CIRCUIT BREAKER

Refer to **Figure 2-5**. The main circuit breaker interrupts electrical power to the lift, but is primarily intended to protect the high-current motor that powers the hydraulic pump. If the current drawn by this motor is excessive, the reset tab rotates 90° CW. To reset the breaker, rotate the reset tab 90° CCW. The figure illustrates the reset tab in the normal, or reset, position. The breaker is typically located in the vehicle engine compartment near the battery.

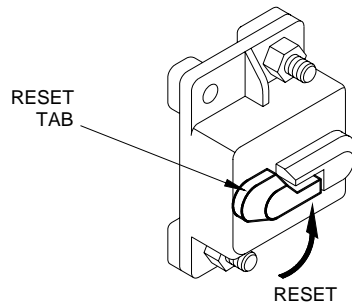
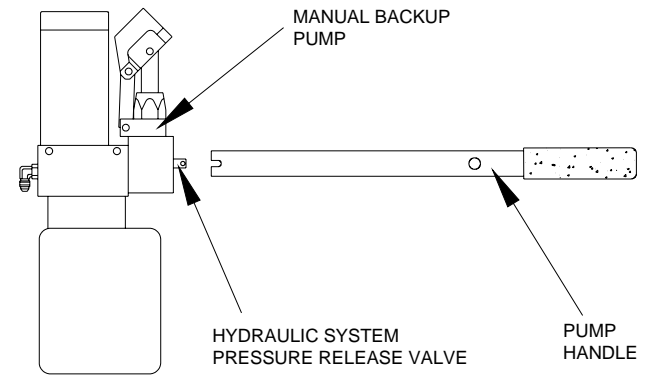


FIGURE 2-5: MAIN CIRCUIT BREAKER

## 5. HYDRAULIC SYSTEM MANUAL BACKUP PUMP

Refer to **Figure 2-6**. The hydraulic system manual backup pump is used to raise the platform when electrical power is not present, and the pressure release valve is used to lower the platform. See the Manual Lift Operation section for the manual pump operating procedure.



**FIGURE 2-6: MANUAL BACKUP PUMP & HANDLE**



## E. OPERATING THE LIFT

The Phantom personal wheelchair lift can be operated with or without electrical power. Normal operation is with electrical power and manual operation is necessary when electrical power is not present. When operating the lift, follow the warning and safety precautions presented at the beginning of this chapter.

### **WARNING**

IMPROPER USE OF LIFT CAN RESULT IN PERSONAL INJURY. USERS MUST READ AND FOLLOW THE OPERATING INSTRUCTIONS IN THIS MANUAL. ADDITIONAL COPIES OF THE OPERATOR MANUAL ARE AVAILABLE FROM:

RICON CORPORATION  
7900 NELSON ROAD  
PANORAMA CITY, CA 91402  
(800) 322-2884 or (818) 267-3000

- DO NOT EXCEED RATED LOAD CAPACITY OF 660 POUNDS (300 KG).
- INSPECT WHEELCHAIR LIFT FOR PROPER FUNCTION, REQUIRED MAINTENANCE, AND DAMAGE BEFORE USE. DO NOT USE LIFT IF A PROBLEM EXISTS, AND CONTACT AN AUTHORIZED RICON SERVICE TECHNICIAN FOR REPAIR.

RICON CORPORATION DISCLAIMS LIABILITY FOR DAMAGE OR PERSONAL INJURY RESULTING FROM MODIFICATION TO LIFT, LACK OF MAINTENANCE OR REPAIR, NEGLIGENCE, ABUSE, OR FAILURE TO FOLLOW LIFT OPERATING INSTRUCTIONS.

- Park vehicle safely on a level area away from traffic, with adequate room for lift operation and passenger boarding, before operating lift.
- Put the vehicle in the interlock mode that supplies power to the lift.
- Verify that the space where the platform will deploy is clear of obstacles, both in front of the platform and below it.
- Open the vehicle doors and secure them before attempting to operate the lift.

**NOTE:** The lift cannot operate unless enabled by the vehicle interlock circuitry (if present).

### 1. NORMAL OPERATION

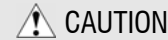
Use the remote control pendant in the following procedures.

### **CAUTION**

In the following sections where a button is pressed it is mandatory that the button be held depressed until all platform, rollstop, and bridgeplate activity is completed. If a button is released early you will have to move the platform back to the position it was in when the button was first pressed.

#### a. ENTERING VEHICLE

- 1) **DEPLOY PLATFORM** – Press and hold the **DEPLOY** button until platform is fully extended from vehicle.
- 2) **LOWER PLATFORM** – Press and hold the **DOWN** button while bridgeplate rises to the vertical position, platform lowers to the ground, and the front rollstop opens (lowers) completely.
- 3) **BOARD PLATFORM** – Position wheelchair in center of platform, facing outward, and verify that entire wheelchair is within the perimeter of the platform. Lock wheelchair brakes.



### CAUTION

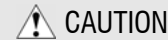
Verify that the position of the wheelchair cannot interfere with closing of front rollstop.

- 4) **RAISE PLATFORM** – Press and hold the **UP** button until platform stops at floor level and bridgeplate lowers to vehicle floor. Verify that rollstop closed (rose) when platform left the ground.
- 5) **EXIT PLATFORM** – Unlock wheelchair brakes and assist passenger into vehicle.
- 6) **STOW PLATFORM** – Press and hold the **STOW** button until platform is completely retracted into vehicle.

**NOTE:** During the sequence of stow motions, it is normal for the platform to first lower to a height that is approximately six inches above stow level, hesitate, and then lower to stow level and retract into the vehicle.

#### b. EXITING VEHICLE

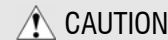
- 1) **DEPLOY PLATFORM** – Press and hold the **DEPLOY** button until the platform is fully extended from vehicle.
- 2) **RAISE PLATFORM** – Press and hold the **UP** button while bridgeplate rises to the vertical position, platform rises to floor level, and bridgeplate lowers to vehicle floor.



### CAUTION

Verify that platform is at same height as floor, bridgeplate is resting on floor, and front rollstop is closed and locked.

- 3) **BOARD PLATFORM** – Position wheelchair in center of platform, facing outward, and verify that entire wheelchair is within the perimeter of the platform. Lock wheelchair brakes.



### CAUTION

Do not allow anything to interfere with the bridgeplate as it rises to a vertical position because this could damage the mechanism that raises the bridgeplate.

- 4) **LOWER PLATFORM** – Press and hold the **DOWN** button until the platform lowers to the ground and the front rollstop opens (lowers) completely.
- 5) **EXIT PLATFORM** – Unlock wheelchair brakes and assist passenger off of platform.
- 6) **STOW PLATFORM** – Press and hold the **STOW** button until platform is completely retracted into vehicle.

**NOTE:** During the sequence of stow motions, it is normal for the platform to first rise to a height that is approximately six inches above stow level, hesitate, and then lower back down to stow level and retract into the vehicle.

## 2. MANUAL OPERATION

The Phantom personal wheelchair lift relies on electrical power supplied by the vehicle for normal operation. If normal operation is not possible, the lift can be operated manually with the following procedure.



### Preparation

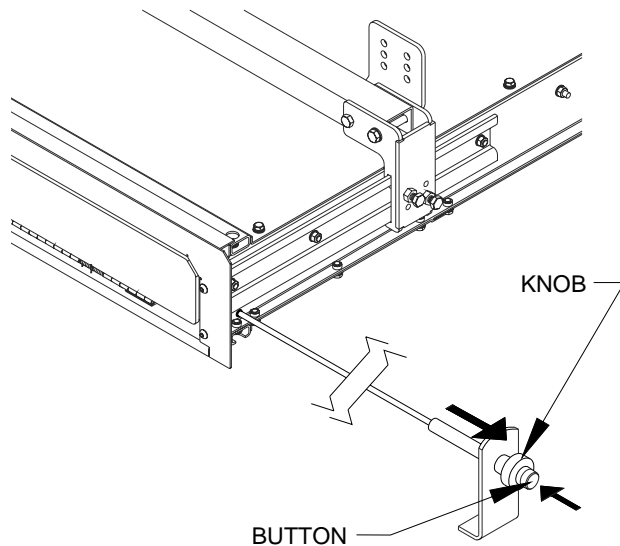
- ✦ Safely park vehicle on a level area away from traffic, with adequate room for lift operation and passenger boarding.
- ✦ If the vehicle has broken-down and cannot be moved under its own power, then the operator must summon assistance to move the vehicle to a safe operating area.
- ✦ Verify that the space in which the platform will deploy is clear of obstacles.
- ✦ Inform people near the vehicle that the platform is about to be deployed.
- ✦ The platform must be pulled straight out of the enclosure; avoid moving it off to either side while pulling.

#### a. Lift Controls

Components used during manual operation are the platform release mechanism, the stow level lock mechanism, the backup pump for the hydraulic system, and the hydraulic system pressure release valve.

- ✦ Platform Release Mechanism

Refer to **Figure 2-7**. The platform release mechanism makes it possible to manually pull the platform out of the enclosure. Normally, the travelling frame (the assembly that includes the platform) is locked to the enclosure when it is either fully stowed or deployed.



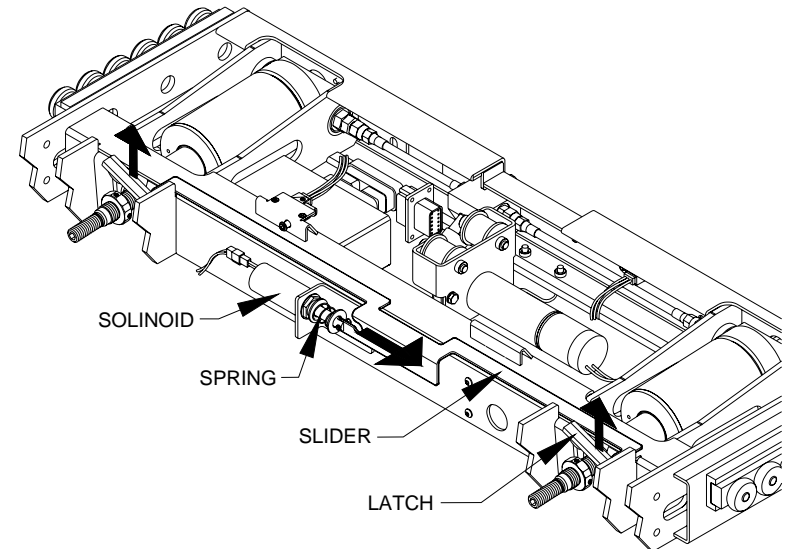
**FIGURE 2-7: PLATFORM RELEASE**

The platform can be unlocked from the enclosure by pulling the knob to disengage the locking mechanism. The knob incorporates a locking button that must be pressed at the same time the knob is pulled. Once the knob is pulled out, the button can be released and the platform will remain unlocked. Press the button again and push the knob back in to re-engage the mechanism.

The release knob might not be mounted on the type of bracket shown, but will be attached to something in the vehicle interior that is in the vicinity of the lift.

✦ Stow Level Locking Mechanism

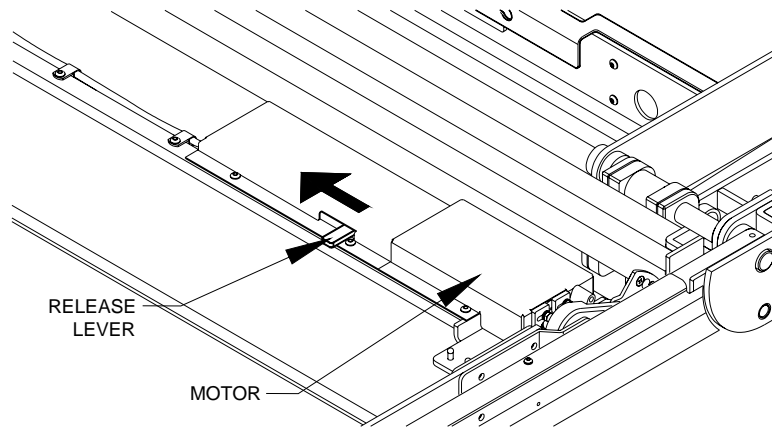
Refer to **Figure 2-8**. The platform is held at stow level by a pair of mechanical latches that drop down onto the hydraulic cylinder piston rods and prevent their inward movement. The locking mechanisms are located in the carriage, just in front of the hydraulic cylinders. These latches are normally engaged by a solenoid and disengaged by a compression spring. However, when the platform is stowed the latches are held in the engaged position by the weight of the platform bearing against them. In this instance, the latches can be disengaged by lifting the platform very slightly with the backup pump.



**FIGURE 2-8: STOW LEVEL LOCKING MECHANISM BEING RELEASED BY SPRING**

✦ Bridgeplate Release Mechanism

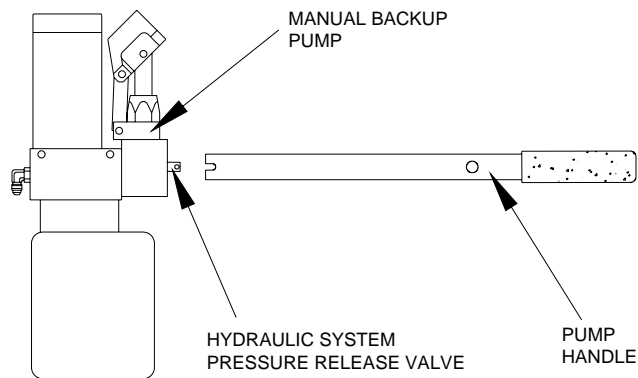
Refer to **Figure 2-9**. The bridgeplate is normally raised and lowered with an electric motor. A release lever is provided to disengage the drive system when manual operation is necessary. Move the lever to the left and hold it (a spring pushes the lever to the right) and then raise or lower the bridgeplate by hand. When the bridgeplate is moved to the vertical position it will lock in place when the lever is released.



**FIGURE 2-9: BRIDGEPLATE RELEASE MECHANISM**

✦ Manual Hydraulic Backup Pump

Refer to **Figure 2-10**. The manual back-up pump is built into the hydraulic pump assembly (located in the pump box) and the backup pump handle is stowed near the hydraulic pump assembly. Pumping the handle raises the platform (the pressure release valve must be closed).



**FIGURE 2-10: MANUAL HYDRAULIC BACKUP PUMP**

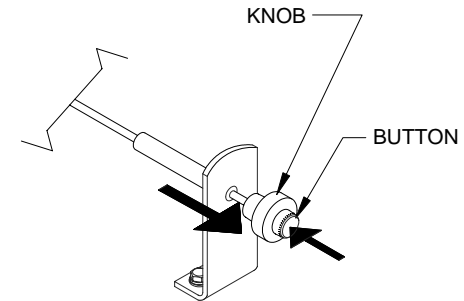
✦ Hydraulic System Pressure Release Valve

Refer to **Figure 2-10**. The hydraulic system pressure release valve is also part of the hydraulic pump assembly. Opening this valve releases fluid from the hydraulic system, allowing the platform to lower. The valve must be kept closed for normal operation. Turn the release valve by engaging it with the notched end of the pump handle. Rotate the valve CCW to open, and CW to close. Do not overtighten when closing.

**b. Exit Vehicle**

DEPLOY PLATFORM:

- 1) Turn off power to lift at vehicle instrument panel.
- 2) Refer to **Figure 2-11**. Release the platform from the enclosure by pressing the button on the release knob and then pulling the knob outward about two inches. Release the button while holding the knob out.



**FIGURE 2-11: DISENGAGE PLATFORM FROM ENCLOSURE**

**NOTE:** The release knob is located in the vehicle interior near the lift.

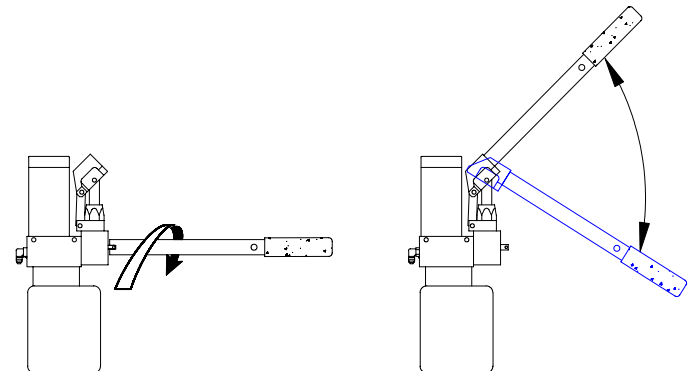
- 3) Grasp the handle recessed into the front rollstop and pull the platform straight out until it stops. Avoid moving the platform to either side while pulling.

|                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------|
|  <b>WARNING</b>                  |
| BEFORE PASSENGERS ARE ALLOWED TO USE THE PLATFORM IT MUST BE LOCKED TO PREVENT IT FROM INADVERTENTLY MOVING INWARD. |

- 4) Lock the platform in place by pressing the platform release button and pushing the knob inward. Verify that platform is locked in place by attempting to push it into the enclosure; it must not move.

RAISE PLATFORM:

- 1) Refer to **Figure 2-12**. Engage hydraulic system pressure release valve with notched end of pump handle, and rotate valve clockwise (turn lightly) to verify that it is closed (valve should have been closed previously).




**FIGURE 2-12: CLOCKWISE CLOSES RELEASE VALVE**

- 2) Refer back to **Figure 2-12**. Insert pump handle into socket on backup pump, and then pump handle until platform rises to vehicle floor height.
- 3) Move the bridgeplate release lever to the left, hold it there, and then unfold bridgeplate so that it rests on the edge of the vehicle floor.

|                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <b>CAUTION</b>                                                                      |
| Verify that the platform is at same height as the floor, the bridgeplate is resting squarely on the edge of the floor, and the front rollstop is upright and latched. |

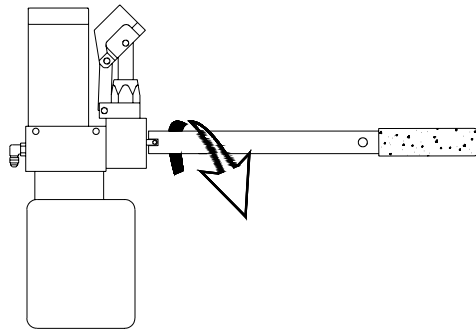
- 4) Carefully place wheelchair in center of platform. Face the wheelchair outward, and lock the wheelchair brakes. Verify that the wheelchair cannot interfere with the front rollstop as it rises or lowers. Also verify that the entire wheelchair is within the perimeter of the platform.
- 5) Move the bridgeplate release lever to the left, hold it there, and then raise the bridgeplate to the vertical position. Release the lever to lock the bridgeplate in the vertical position.

**LOWER PLATFORM:**

|                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <b>CAUTION</b>                                                                                                        |
| Do not open the pressure release valve more than a 1/4-turn. The valve can separate from the pump body if unthreaded more than a 1/4 turn, which will disable both automatic and manual pump functions. |

- 1) Refer to **Figure 2-13**. Engage hydraulic system pressure release valve with notched end of pump handle and slowly rotate it counter-clockwise. Do not open the valve any further once the platform begins to lower.
- 2) Allow platform to settle on the ground and the front rollstop to open completely, then rotate the pressure release valve **CLOCKWISE** to close.

**NOTE:** Do not over-tighten valve!



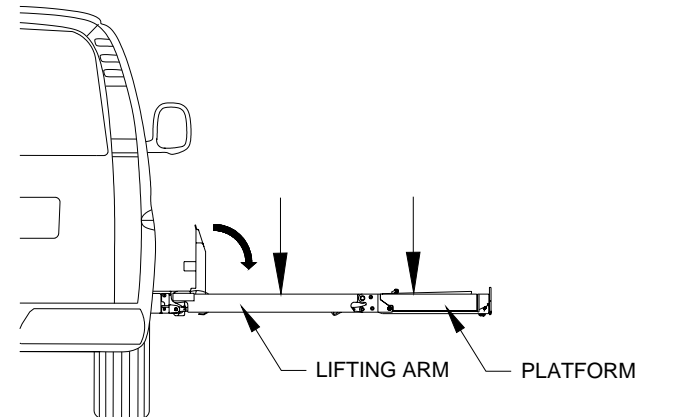
**FIGURE 2-13: COUNTER-CLOCKWISE LOWERS PLATFORM**

- 3) Unlock wheelchair brakes, and carefully assist passenger off platform. Follow the Safety Precautions at the beginning of this chapter when a passenger exits the platform.

**c. Stow Platform:**

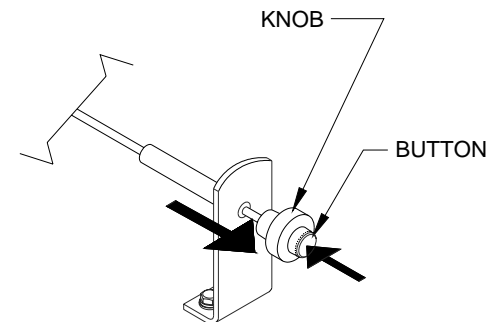
- 1) Refer to **Figure 2-14**. Raise the platform with the manual backup pump until it is directly in front of the enclosure opening. When the platform is at the correct height it will be aligned with the lifting arms (or at the same height as the lifting arms).

**NOTE:** The front rollstop closes automatically when the manual backup pump is operated.



**FIGURE 2-14: PLATFORM ALIGNED WITH ENCLOSURE**

- 2) Refer to **Figures 2-9** and **2-14**. Move the bridgeplate release lever to the left, hold it there, and then lower the bridgeplate down onto the platform.
- 3) Refer to **Figure 2-15**. Release the platform from the enclosure by pressing the button on the release knob and then pulling the knob outward about two inches. Release the button while holding the knob out.

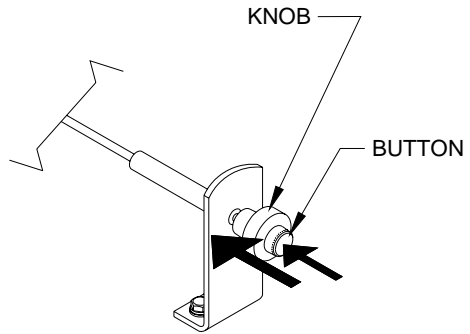


**FIGURE 2-15: DISENGAGE PLATFORM FROM ENCLOSURE**

- 4) Grasp the front rollstop and push the platform straight in until it stops. Do not move the platform to either side while pushing.



- 5) Refer to **Figure 2-16**. When the platform is fully stowed, lock it in place by pressing the platform release button and pushing the knob inward. Release the button while holding the knob in. Verify that platform is locked by attempting to pull it out of the enclosure; it must not move.



**FIGURE 2-16: RE-ENGAGE PLATFORM TO ENCLOSURE**

### III. PHANTOM PERSONAL LIFT MAINTENANCE INSTRUCTIONS

This chapter contains cleaning instructions and a basic maintenance schedule, as well as instructions for replacing decals. Regular maintenance of the RICON Phantom wheelchair lift will optimize its performance and minimize the need for repairs.

Additional maintenance information is available in the Phantom service manual, part number 32DPH02. This manual is available from Ricon in printed hard copy, or at the Ricon website in PDF format. The website is located at [www.riconcorp.com](http://www.riconcorp.com). To gain access to the website manuals, click on "TECHNICAL DOCUMENTS" and then click on "I AGREE" at the disclaimer page.

|                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------|
|  <b>CAUTION</b>                                                |
| This Ricon product is highly specialized. Maintenance must be performed by an authorized Ricon service technician, using Ricon replacement parts. |

|                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------|
|  <b>WARNING</b>                           |
| MODIFYING OR FAILING TO PROPERLY MAINTAIN THIS PRODUCT WILL VOID THE WARRANTY AND MAY RESULT IN UNSAFE OPERATING CONDITIONS. |

#### A. CLEANING

Regular cleaning with a commercially available cleaner suitable for use on painted surfaces (i.e. liquid hand soap or car wash liquid; do not use liquid dish cleaner soap or caustic soaps) and drying thoroughly will protect the painted surfaces. Cleaning is especially important in areas where roads are salted in winter. Be certain that lift pivot points are clean and dry prior to lubrication.

#### B. MAINTENANCE SCHEDULE

An authorized Ricon service technician must perform lubrication and inspection tasks at appropriate intervals. Maintenance inspections must be performed once every six months during the warranty period. After the warranty expires, Ricon recommends continuation of the inspections by an authorized service technician. Service should be done more frequently under conditions of heavy useage (more than 10 cycles per day).

| TABLE 3-1: MAINTENANCE SCHEDULE                                          |                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SERVICE POINT                                                            | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>DAILY SAFETY CHECK (or after every 10 cycles of operation)</b>        |                                                                                                                                                                                                                                                                                                                                                                                                   |
| General operation                                                        | <ul style="list-style-type: none"> <li>Listen for abnormal noise as platform deploys, i.e. grinding or binding noises.</li> <li>Verify that platform moves without interference during any motion.</li> <li>Verify that bridgeplate moves without interference when folding or unfolding.</li> <li>Verify that rollstop closes and locks immediately after platform rises from ground.</li> </ul> |
| <b>THREE MONTH SAFETY CHECK (or after every 900 cycles of operation)</b> |                                                                                                                                                                                                                                                                                                                                                                                                   |
| Hydraulic fluid level                                                    | Verify that hydraulic fluid level is maintained at the "Full" level. Add only Texaco 01554 Aircraft Hydraulic Oil (or equivalent U.S. mil spec H5606G oil).                                                                                                                                                                                                                                       |
| Deployment system                                                        | Verify there are no obstructions in the side channels or the drive belt.                                                                                                                                                                                                                                                                                                                          |

### C. DECALS

Refer to **Figure 3-1** for the personal Phantom decal locations and part numbers. Check decals for chipping, peeling, fading, and illegibility. Replace as necessary. Locate and orient decals as shown. Part numbers for individual decals are given here, with the exception of the serial number decals, which are replaced by Ricon.

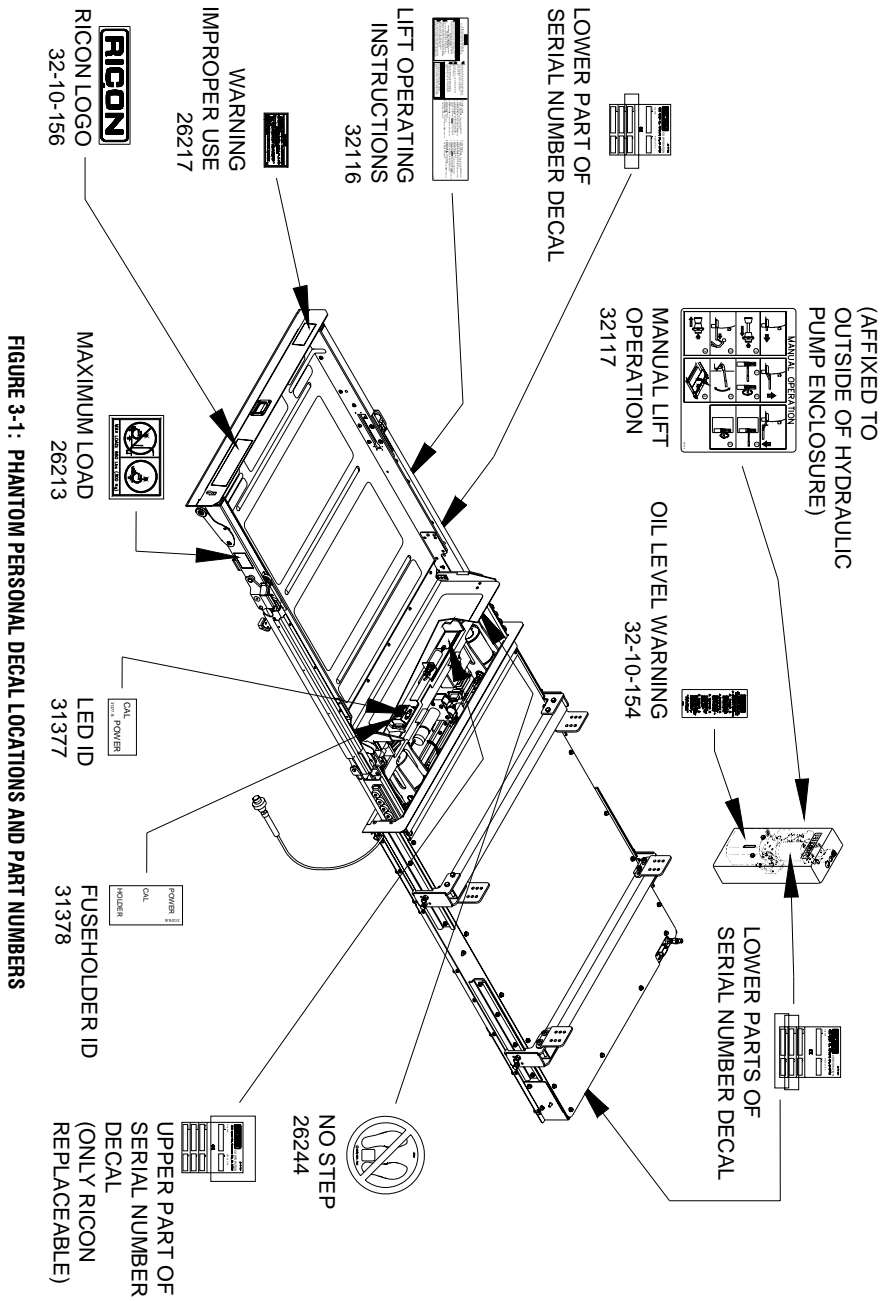


FIGURE 3-1: PHANTOM PERSONAL DECAL LOCATIONS AND PART NUMBERS