RICON®

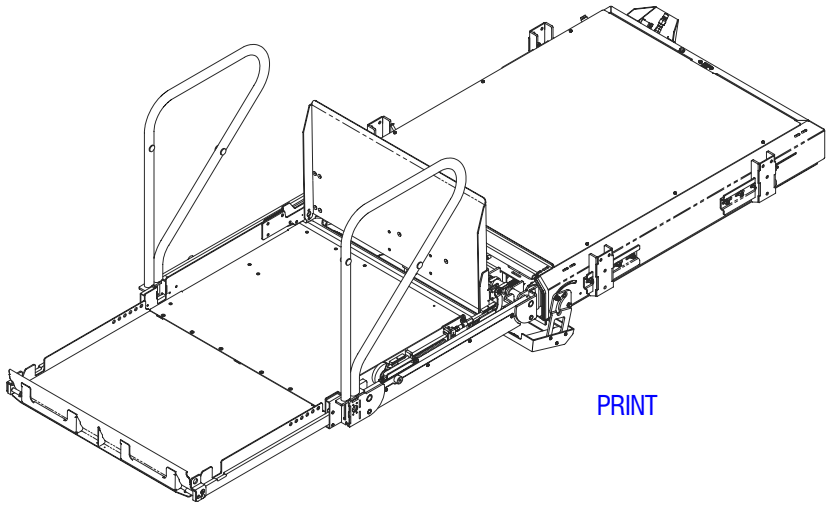
INNOVATION IN MOBILITY

Evolution

F8200 Series

Export Use

Wheelchair Lift



PRINT

OPERATOR MANUAL

01/20/05 32DF8201.A

RICON

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
32DF8201.A	All	New release.	

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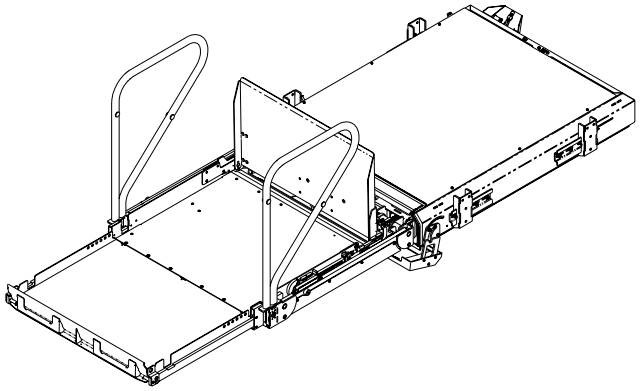
I. EVOLUTION INTRODUCTION

This manual provides operating instructions and basic maintenance procedures for the export version of the Ricon Evolution F8200 Series wheelchair lift. The Evolution provides safe and easy access to full size vans for an individual using a wheelchair or scooter. It also accommodates standing passengers (referred to in this manual as standees)



The Evolution is typically installed beneath the rear of the vehicle, providing access through the rear doors. Operation of the Evolution is semi-automatic.

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).

To assist a passenger into the vehicle the operator uses the control pendant to withdraw the telescoping platform from the vehicle. The platform is then manually extended to its full length, the bridgeplate is raised, and the handrails are raised. The pendant is used to lower the platform to the ground where the passenger can move onto the large non-skid platform. The pendant is used to raise the platform to floor height. After the passenger enters the vehicle, the operator lowers the handrails and bridgeplate, and pushes the front portion of the platform inward. Finally, the pendant is used to lower the platform to stow level and retract it back into the vehicle.

When a passenger exits, the operator uses the above procedure but moves the platform up to floor level to pick up the passenger and then lowers the platform to the ground.

One individual can manually operate the lift when normal power is not present. The hydraulic pump assembly includes a manually operated back-up pump to raise the platform, and a pressure release valve to lower it. Raising the handrails, etc, is done as it is during normal operation.

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 Evolution export service manual 32DF8202.

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. EVOLUTION WARRANTY INFORMATION

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, following the Ricon RMA procedure. Please give as much advance notice as possible, and allow a reasonable amount of time for repair.

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 DANGEROUS.

This warranty is void if:

- The product has been installed or maintained by someone other than a Ricon authorized 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. SHIPMENT INFORMATION

- When the product is received, unpack the product and check for freight damage. Claims for any damage should be made to the carrier immediately.
- Be sure the installation kit contains all items listed on the kit packing list. Please report any missing items immediately to Ricon Product Support. The warranty and owner registration cards must be completed and returned to Ricon within 20 days to validate the warranty.

D. GENERAL SAFETY PRECAUTIONS

⚠ CAUTION

The sales or service personnel must review the Warranty and Operator Manual with the user to be certain that they understand how to safely operate the product. Instruct the user to follow the operating instructions without exception.

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.

E. MAJOR LIFT COMPONENTS

Major components of the Evolution export use lift are in **Figure 1-1**. A description of each component is in **Table 1-1**. For clarity, the front of the enclosure in the figure below is shown partially cut away to reveal components in the carriage that are normally hidden from view.

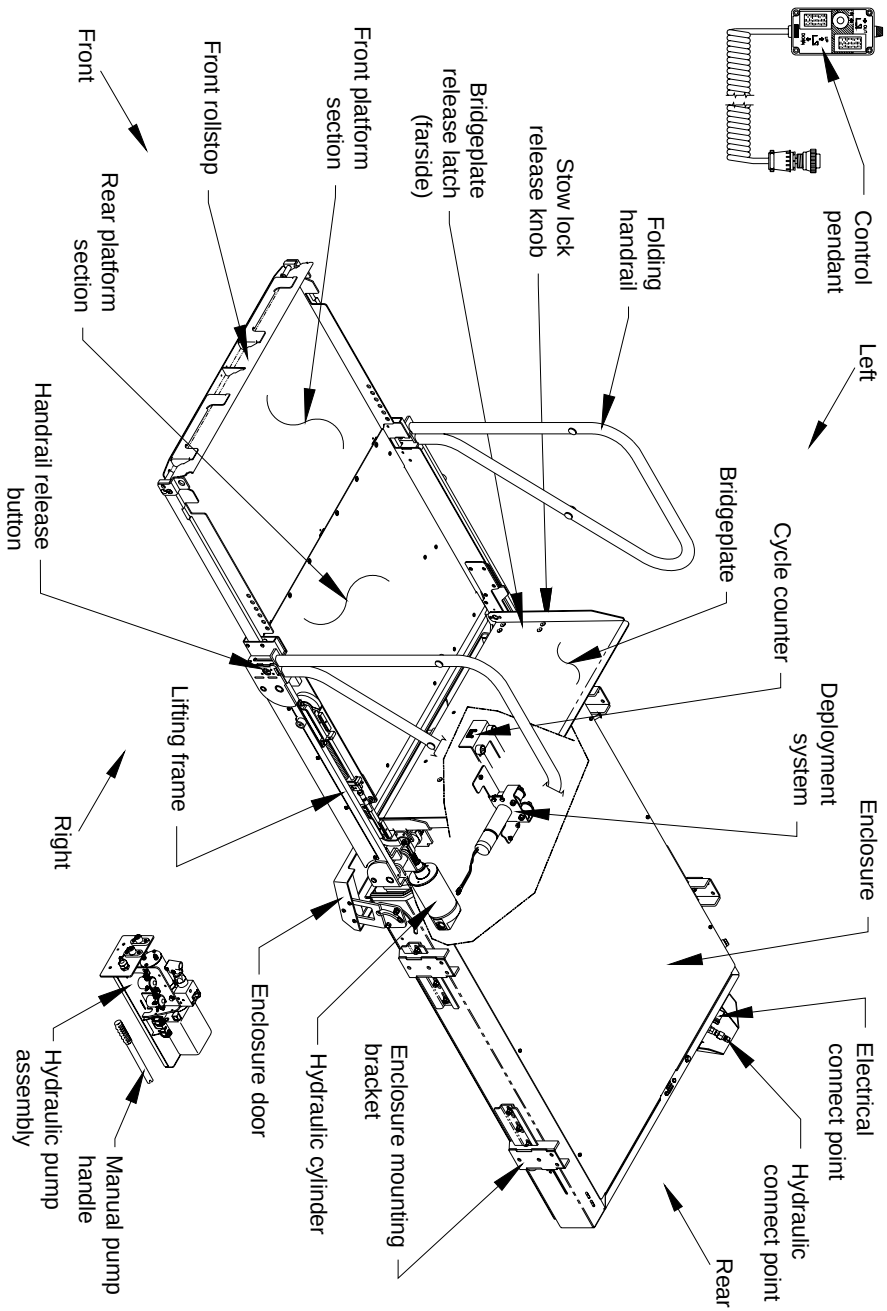


FIGURE 1-1: MAJOR EVOLUTION EXPORT LIFT COMPONENTS

32DF8201.A

TABLE 1-1: MAJOR EVOLUTION EXPORT LIFT COMPONENTS	
NAME	**DESCRIPTION**
Left, Right, Front, Rear	Lift references from outside of vehicle when looking inward at lift.
Bridgeplate (rear rollstop)	Plate bridges gap between platform and vehicle floor when platform is at floor level. Acts as barrier during up and down platform motions to prevent wheelchair from rolling off rear of platform.
Bridgeplate release pin	(not visible) Mounted on backside of bridgeplate. Latches bridgeplate in place when bridgeplate is folded down against platform prior to stowing.
Carriage (not shown)	Rear part of traveling frame. Mounted on rollers, which move on rails attached to inside of enclosure. Supports lifting frame and platform. Contains hydraulic cylinders, deployment system, cycle counter, etc.
Control pendant	Hand-held device used to control platform motions.
Cycle counter	Located at top front of carriage. Visible when travelling frame is fully deployed. It records number of times platform has moved from floor to ground and back to floor.
Deployment system	Employs an electric gear-motor and toothed belt to propel platform out of enclosure or to pull it back in. Located at top center of carriage.
Electrical connect point	Electrical connection point from lift enclosure to pump assembly and control pendant. Sealed 12-pin connector.
Enclosure	Housing for platform; rigidly attached to vehicle chassis.
Enclosure door	Hinged and sealed door that covers the open front of enclosure.
Enclosure mounting bracket	(left and right) Pairs of adjustable brackets provided to fasten lift enclosure to vehicle chassis.
Folding handrail	(left and right) Provides a handhold for standing passenger (standee).
Front rollstop	Front barrier prevents wheelchair from inadvertently rolling off platform during platform movement. Rollstop is hydraulically closed (raised and locked in position) and opened by gravity.
Hydraulic connect point	Hydraulic quick-disconnect point from lift enclosure to pump assembly.
Hydraulic cylinder	(left and right) Located within carriage and connected to lifting frame. Cylinders receive pressurized fluid from hydraulic pump to lift platform.
Hydraulic pump assembly	Electro-hydraulic unit provides hydraulic pressure to raise platform. Lowering platform is done with an electro-hydraulic valve that releases pressure from system. Assembly also contains a manual backup pump and manual relief valve to raise and lower platform manually.
Lifting frame	Assembly is hinged to front of carriage and to center of platform; arms are raised by a pair of hydraulic cylinders anchored to carriage frame.
Manual pump handle	Used to operate the manual hydraulic back-up pump and the hydraulic pressure release valve.

Platform sections	(front and rear) Curbed area occupied by passenger while being raised to vehicle or lowered to ground. The front section telescopes out of the rear section, and collapses back into it when the platform is stowed.
Relay box assembly	(not shown) Located inside cover for pump enclosure. Electronic module translates pendant commands to signals that control lift electrical and hydraulic components. Also monitors position of platform and whether platform is locked in place.
Stow lock release knob	(not visible) Use to lock traveling frame in either fully stowed or fully extended position. Refer to Controls section in Chapter two for more detail.
Travelling frame (not shown)	Assembly consisting of the platform, lifting frame, and carriage. Moves as a unit in and out of enclosure.
END OF TABLE	

II. EVOLUTION LIFT OPERATING INSTRUCTIONS

The lift operator must thoroughly read and understand this chapter before using the Ricon Evolution wheelchair lift. The operator must also comply with the safety precautions and daily safety check instructions.

A. SAFETY PRECAUTIONS

Follow these safety precautions:

- Refer to **Figure 2-1**. Operate lift with vehicle parked on level ground. Deploying platform when vehicle is on sloped ground is hazardous because passenger may roll off platform.

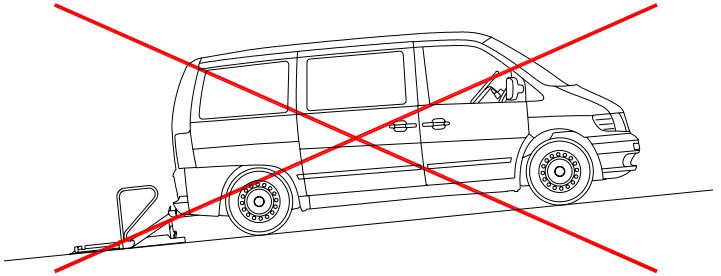


FIGURE 2-1: SLOPED PARKING HAZARD

- Vehicle must be safely parked with parking brake on before using lift.
- Inspect lift before use. Do not use lift if an unsafe condition exists, or if unusual noise or movement is noticed. Contact a Ricon authorized service technician for repair.
- Read and comply with all warning labels and symbols affixed to wheelchair lift.
- Do not operate with a load in excess of 660 lbs (300 kg).
- Keep arms, legs, and clothing away from moving lift parts.
- The lift is intended for one wheelchair and its occupant, or one standee. Do not overload lift.
- Keep others clear while operating lift.
- Do not allow an untrained person to operate lift.
- Refer to **Figure 2-2**. Stand clear of lift when deploying platform.

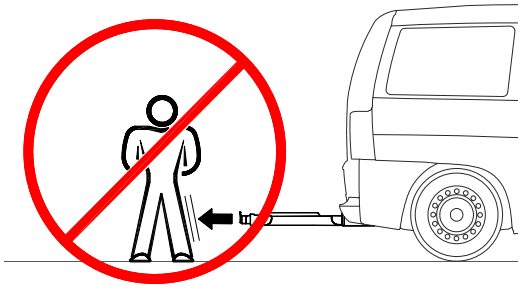


FIGURE 2-2: STAND CLEAR OF DEPLOYING PLATFORM

- Wheelchair occupant should face outward when entering or exiting vehicle.
- Do not back onto platform when exiting vehicle. Face outward, if possible, and verify that platform is at the same height as floor. Check that front rollstop is up and locked.
- The front rollstop is intended to prevent slow, unintentional, rolling off of platform.

- The front rollstop is not intended to stop a quick moving wheelchair. A quick moving wheelchair could tip if the small front wheels collide with the rollstop. Also, the large rear wheels of a quick moving wheelchair could roll over the rollstop. Possible injury to the occupant might occur in either case.
- Verify that wheelchair fits safely on platform; it must not extend beyond edges or interfere with operation of rollstop.
- Do not allow anyone to stand on bridgeplate. A bent bridgeplate can interfere with the platform as it raises and lowers.
- Lock wheelchair brakes before raising or lowering platform (power chair users should turn off power and set brake).
- Use great care in wet conditions; the wheelchair brakes are less effective if its tires or the platform are wet.
- Do not leave deployed platform unattended. Return to stowed position after use.

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

B. INSPECTING THE LIFT

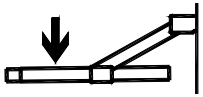
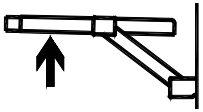
Inspect lift before use and verify that it meets the following conditions:

- All lift functions operate properly. Do not use lift if any unusual noises or movements exist. Contact an authorized Ricon dealer for repair.
- The vehicle interlock, if present, is working properly. The lift can't operate without the interlock requirements being met.
- Objects are not present that might interfere with lift operation.
- All fasteners are tight, and lubrication and general appearance are satisfactory.

C. PLATFORM MOTIONS

Refer to **Table 2-1.** The table describes the four platform motions controlled with the pendant.

TABLE 2-1: PLATFORM MOTIONS

MOTION		DESCRIPTION
	**OUT**	Platform extends out of vehicle, or deploys.
	**DOWN ***	Platform lowers from present height towards ground; front rollstop lowers (opens) when platform contacts ground.
	**UP ***	Platform rises from present height towards vehicle floor; rollstop rises (closes) before platform leaves ground.
	**IN**	Platform retracts into vehicle, or stows.

END OF TABLE

***** The UP and DOWN functions are available only when the platform is fully deployed.

D. PLATFORM POSITIONS

Refer to **Figure 2-3.** The platform is stowed inside of its enclosure when not in use. When deployed, the platform is typically at one of three heights. When the platform is directly in front of the enclosure it is referred to as being at stow level. It can also be raised up to the level of the vehicle floor, or lowered down to ground level.

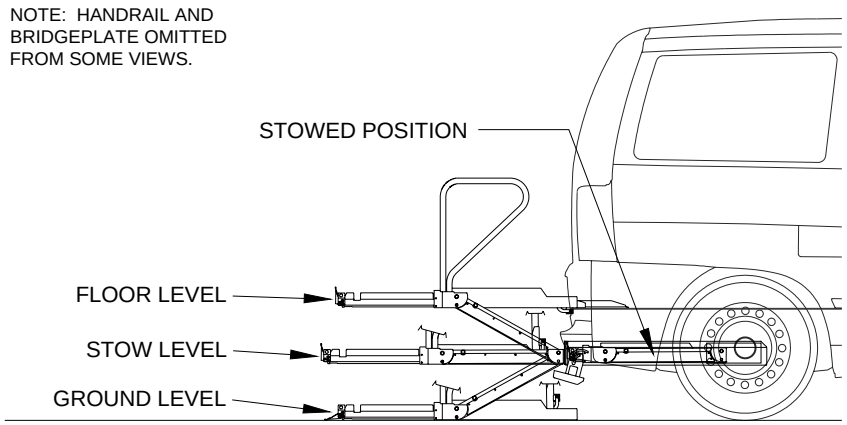


FIGURE 2-3: PLATFORM IN STOWED POSITION AND DEPLOYED POSITIONS.

E. LIFT CONTROLS

Controls for the Evolution Export wheelchair lift consist of the control pendant, vehicle interlock, electrical circuit breakers, and manual backup pump.

⚠ CAUTION
The lift cannot operate unless enabled by the vehicle interlock circuitry.

1. CONTROL PENDANT

Refer to **Figure 2-4**. The Evolution is operated with two rocker switches. The switches are on a hand-held, hard-wired remote-control pendant. You control lift functions by pushing one end of a rocker switch. The ends of the switches are referred to as buttons in this manual. Pushing the OUT button causes the platform to extend from the vehicle. Pushing the DOWN button lowers the platform towards the ground, and pushing the UP button raises the platform towards the vehicle floor. Pushing the IN button plus the STOW-GUARD LOCKOUT button causes the platform to retract into the vehicle. The pendant has an indicator light that turns on when power is supplied to the lift. The pendant is stored in an interior location selected by the lift installer, usually near the lift.

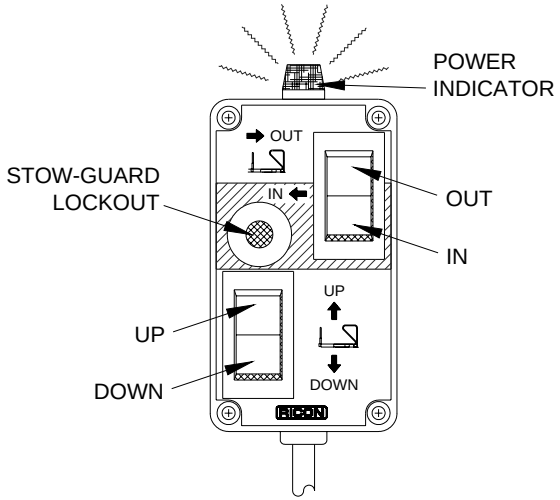


FIGURE 2-4: LIFT CONTROL PENDANT

2. VEHICLE INTERLOCK

If an interlock circuit is installed the lift will not operate unless its requirements are met. Typical requirements for an interlock circuit are that the vehicle parking brake is set, the doors are completely open, and the transmission is in neutral. The electrical circuitry in the Evolution wheelchair lift does not provide an interlock warning indicator.

3. STOW LOCK RELEASE LEVER

Refer to **Figure 2-5.** The stow lock release lever is located at the top, left front of the enclosure. In the position shown, it locks the travelling frame (assembly of carriage, lifting frame, and platform) to the enclosure, preventing unwanted movement of the platform in or out of the enclosure. Pushing the lever downwards releases the traveling frame and allows the platform to move freely. The traveling frame can be locked in two positions – either fully stowed or fully deployed. The spring holds the lever in the position selected (up or down).

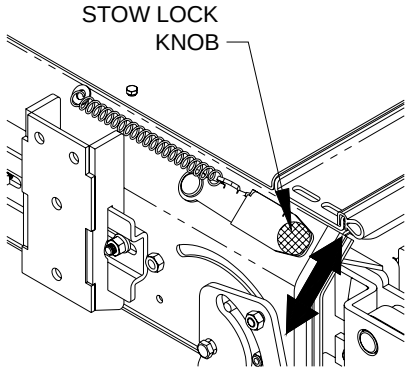


FIGURE 2-5: STOW LOCK RELEASE

4. BRIDGEPLATE LATCH

Refer to **Figure 2-6.** When the platform is stowed the spring-assisted bridgeplate is folded down against the platform and held in place with a pin latch. The latch is located on the lower face of the bridgeplate at the left side. The latch is released by sliding the pin in the direction shown. Hold onto the bridgeplate when releasing the latch, and continue holding it as the spring pushes the bridgeplate up to the vertical position.

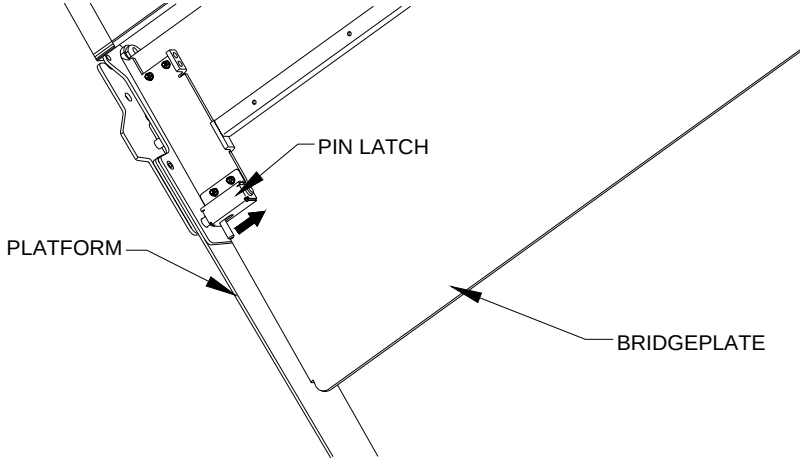


FIGURE 2-6: BRIDGEPLATE PIN LATCH

5. STOW HEIGHT TABS

Refer to **Figure 2-7.** Tabs on the platform and stops on the lifting frame hold the platform at stow height prior to stowing the platform into the enclosure. During normal operation the tabs are withdrawn into the rear section of the platform and protrude only when the front platform section is collapsed into the rear section. The tabs are hinged so that they are effective only when the platform is moving downward. The tabs and stops are visible between the rear edge of the deployed platform and front edge of the carriage when the bridgeplate is vertical or stowed.

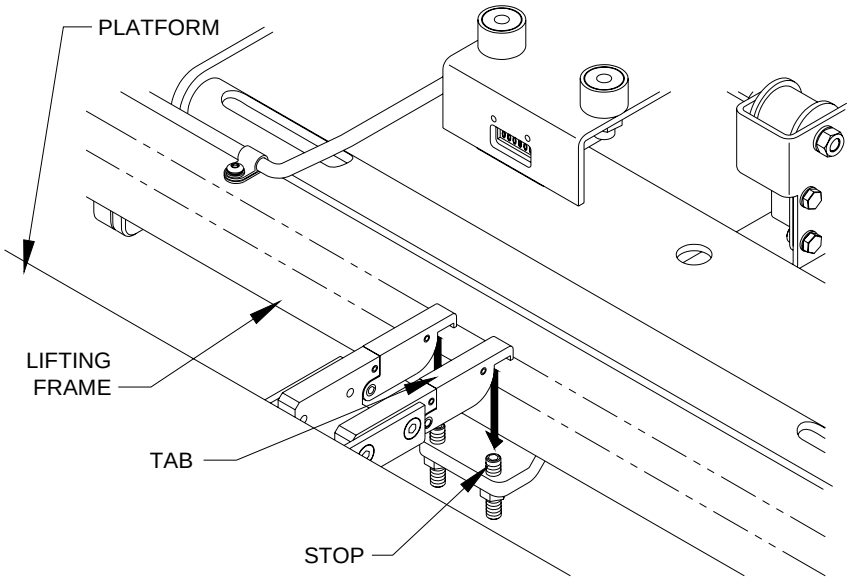


FIGURE 2-7: STOW HEIGHT TABS AND STOPS

6. HANDRAIL RELEASE BUTTONS

Refer to **Figure 2-8.** The raised handrails are locked in place with a button latch located at the base of each handrail. After raising a handrail push it down firmly to engage the button into the hole it latches into. The button will be visible as shown when the handrails are fully seated. To unlock a handrail, press the button inward while lifting up on the handrail.

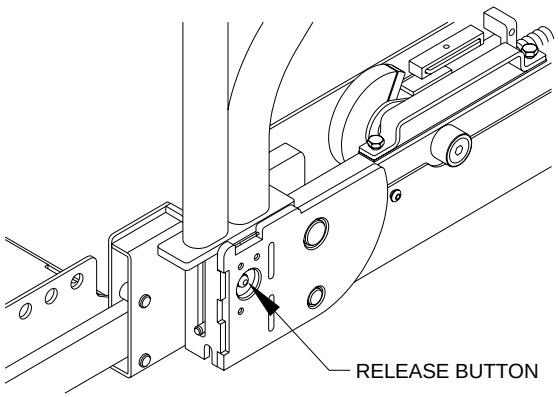


FIGURE 2-8: HANDRAIL RELEASE BUTTON

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7. ELECTRICAL CIRCUIT BREAKERS

- Control System Circuit Breakers

Refer to **Figure 2-9.** Two control system circuit breakers interrupt electric power to lift components if a malfunction causes an abnormally high current flow. The 8A circuit breaker provides protection for the control pendant and the 30A circuit breaker protects the carriage motor. Both breakers are mounted on a bracket fastened to the hydraulic power unit baseplate (shown with cover removed). 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.

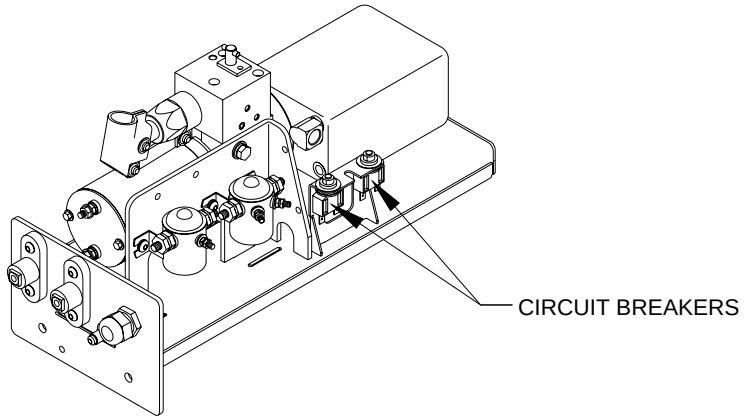

FIGURE 2-9: CONTROL SYSTEM CIRCUIT BREAKERS

- Main Circuit Breaker

Refer to **Figure 2-10**. The main circuit breaker interrupts electrical power to the high-current motor that powers the hydraulic pump. When this motor undergoes an over-current condition, the reset tab rotates 90^0 CW. Rotate the tab in the direction shown by the arrow to reset. The figure depicts the reset tab in the normal, or reset, position. The breaker is typically located in the vehicle engine compartment.

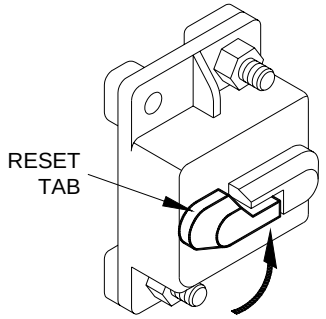

FIGURE 2-10: MAIN CIRCUIT BREAKER

F. OPERATING THE LIFT

The Evolution Export model wheelchair lift can be operated both with and 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.

⚠ WARNING

IMPROPER USE OF LIFT CAN RESULT IN PERSONAL INJURY. USERS MUST READ AND FOLLOW OPERATING INSTRUCTIONS IN THIS MANUAL. ADDITIONAL COPIES OF 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 DEALER 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 vehicle interlock, if present, into the mode that allows power to be supplied to 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 rear vehicle doors before attempting to operate lift.
- Turn on lift power switch located on or near vehicle dashboard, if so equipped.
- A person that uses the wheelchair lift while standing (does not require mobility aid equipment) is referred to in this manual as a standee.
- When the front platform section is slid back on top of the rear section the platform is referred to in this manual as collapsed.

⚠ WARNING

ATTENDANT MUST REMAIN NEAR PASSENGER TO RENDER IMMEDIATE ASSISTANCE WHEN NECESSARY.

1. NORMAL OPERATION:

a. ENTERING VEHICLE

1) RELEASE STOW LOCK – Move stow lock knob downward to release platform from enclosure.
2) DEPLOY PLATFORM – Press and hold the OUT button until the collapsed platform extends from enclosure and stops. The stow lock will automatically reset and lock platform in this position.

3) PARTIALLY RAISE PLATFORM – Press UP button to raise platform about two inches above stow level.
4) RAISE BRIDGEPLATE – Release bridgeplate latch and let bridgeplate rise to vertical position.
5) RAISE HANDRAILS – Lift handrails to vertical and push firmly down into their sockets. Verify that both handrails are locked in place by attempting to pull them upward.
6) EXTEND PLATFORM – Grasp the front rollstop and pull the front platform section outward to the end of its travel.
7) LOWER PLATFORM – Press and hold DOWN button until platform contacts ground and front rollstop opens completely.
8) Place wheelchair in center of platform. Face the wheelchair outward and lock wheelchair brakes. Verify that the wheelchair cannot interfere with the front rollstop when it rises, and that the entire wheelchair is within the perimeter of the platform.
9) RAISE PLATFORM – Press and hold the UP button until the platform has stopped at floor level. Rollstop must raise (close) when platform leaves ground. Bridgeplate must lower to floor when platform reaches floor level.

⚠ CAUTION

- Verify the platform is at the same height as the floor.
- Verify the front rollstop is upright and locked.
- Verify the rear edge of bridgeplate lies flat on floor along its entire edge and does not create a tripping hazard.

10) Unlock wheelchair brakes and carefully assist passenger into vehicle.
11) Refer to Stowing Platform section for instructions to move platform back into enclosure.

b. EXITING VEHICLE

1) RELEASE STOW LOCK – Move stow lock knob downward to release platform from enclosure.
2) DEPLOY PLATFORM – Press and hold the OUT button until the collapsed platform extends from enclosure and stops. The stow lock will automatically reset and lock platform in this position.
3) PARTIALLY RAISE PLATFORM – Press UP button to raise platform about two inches above stow level.
4) RAISE BRIDGEPLATE – Release bridgeplate latch and let bridgeplate rise to vertical position.
5) RAISE HANDRAILS – Lift handrails to vertical and push firmly down into their sockets. Verify that both handrails are locked in place by attempting to pull them upward.
6) EXTEND PLATFORM – Grasp the front rollstop and pull the front platform section outward to the end of its travel.
7) RAISE PLATFORM – Press and hold the UP button until the platform has stopped at floor level.

⚠ CAUTION

- Verify the platform is at the same height as the floor.
- Verify the front rollstop is upright and locked.
- Verify the rear edge of bridgeplate lies flat on floor along its entire edge and does not create a tripping hazard.

8) Carefully place wheelchair in center of platform. Face the wheelchair outward and lock wheelchair brakes. Verify that the entire wheelchair is within the perimeter of the platform.

⚠ WARNING

DO NOT STAND ON THE BRIDGEPLATE, OR PLACE ANY WEIGHT ON IT, BEFORE LOWERING THE PLATFORM.

9) LOWER PLATFORM – Press and hold the DOWN button until the platform has lowered to the ground and the front rollstop opens completely.
10) Unlock wheelchair brakes and carefully assist passenger off of platform.
11) Refer to Stowing Platform section for instructions to move platform back into enclosure.

c. STOWING PLATFORM

1) Press UP or DOWN button to raise or lower platform to a height of about six inches above stow level.
2) COLLAPSE PLATFORM – Grasp the front rollstop and push the front platform section fully inward.
3) LOWER HANDRAILS – Push the release buttons on the handrails and lift them upward out of their sockets. Lower to platform.
4) LOWER BRIDGEPLATE – Push downward (forward) on bridgeplate until it latches in place.
5) LOWER PLATFORM – Press DOWN button until platform is stopped at stow level by the stow tabs.
6) RELEASE STOW LOCK – Move stow lock knob downward to release platform.
7) STOW PLATFORM – Press and hold IN button plus STOW-GUARD LOCKOUT button until platform has completely retracted into enclosure. The stow lock will automatically reset and lock platform in the stowed position.

2. MANUAL OPERATION

If the lift loses electrical power, it can be operated manually. Refer to the following paragraphs for important pre-operation safety preparations, descriptions of lift controls, and operating instructions for deploying, lowering, and stowing the platform.

> **⚠ CAUTION**
>
> Ricon recommends that the instructions given for manual operation be used only for unloading passengers, and not for loading passengers.

a. Preparation

- Safely park vehicle on a level area away from traffic, with adequate room for lift operation and passenger boarding.
- If a breakdown situation exists and the vehicle cannot be moved under its own power the operator must summon assistance to move the vehicle to a safe operating area.
- Verify that dashboard switch supplying power to lift is turned off.
- Verify that the space in which the platform will deploy is clear of obstacles.
- Open rear vehicle doors before deploying lift.
- Inform people near the vehicle that the platform is about to be deployed.

b. Lift Controls

Additional components used during manual operation consist of a backup pump for the hydraulic system (with separate pump handle), and a hydraulic pressure release valve.

- Manual Hydraulic Backup Pump

Refer to **Figure 2-11**. The manual back-up pump is built into the hydraulic pump assembly (mounted in the pump box). The pump handle is stowed on the inside of the pump assembly cover and inserts into the pump socket when needed. Pumping the handle raises the platform when the release valve is closed. Unscrew the knob on the top of the cover and remove the cover to gain access to the pump.

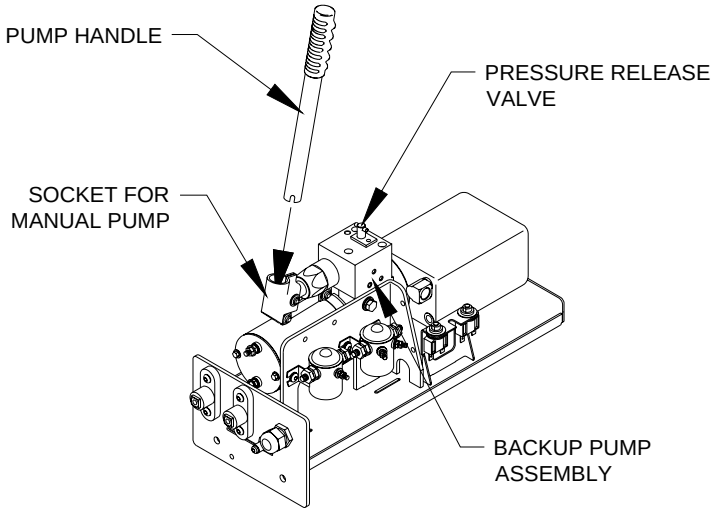

FIGURE 2-11: MANUAL HYDRAULIC BACKUP PUMP

- Hydraulic Pressure Release Valve

Refer to **Figure 2-11**. The hydraulic pressure release valve is also built into the hydraulic pump assembly, which is mounted in the pump box. Opening this valve releases pressure in the hydraulic system, allowing the platform to lower. The valve must be kept closed for normal operation. Engage the release valve with the notched end of the pump handle and rotate the valve CCW to open and CW to close.

⚠ CAUTION
Follow the Safety Precautions at the beginning of this chapter when operating the platform manually.

c. Exit Vehicle

1) Press stow lock knob downward to release platform from enclosure.
2) Grasp the top edge of the enclosure door and pull out and down to partially deploy platform.
3) Grasp the top of the front rollstop and pull the platform out of the enclosure until the stow lock resets and locks the platform in this position. Verify that stow lock is reset by attempting to push platform inward; it must not move. The bridgeplate should be completely clear of the enclosure.

NOTE: Do not move the platform to either side while pulling. Pull it straight out.

4) Remove the cover from the pump assembly by unscrewing the knob on the top of the cover. Remove the pump handle stored on the inside of the cover.
5) Refer to **Figure 2-12**. Engage pump pressure release valve with notched end of pump handle, and turn valve LIGHTLY CLOCKWISE to verify that it is closed (valve should have been closed previously). Remove handle.

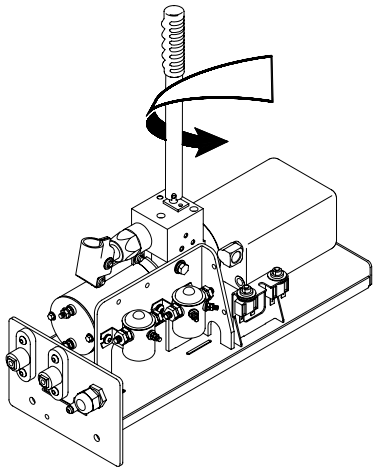

FIGURE 2-12: ROTATE VALVE CW TO CLOSE

6) Refer to **Figure 2-13** on following page. Insert pump handle into the socket on the backup pump and operate pump to raise platform one to two inches above stow level.

7) Release bridgeplate latch and let bridgeplate rise to vertical position.
8) Lift right handrail to vertical and push firmly down into its socket. Repeat for left handrail. Verify that both handrails are locked in place by attempting to pull them upward.
9) Grasp the front rollstop and pull the front platform section fully outward until it stops.
10) Refer to **Figure 2-13.** Operate pump to raise platform to floor level.

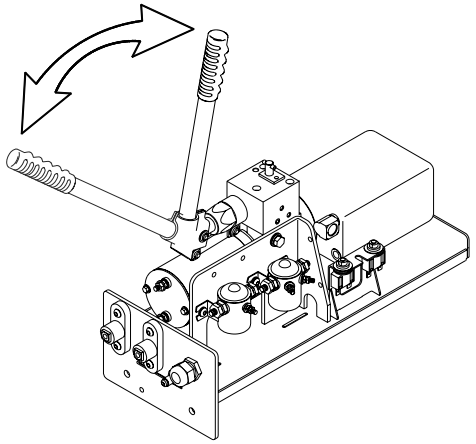

FIGURE 2-13: OPERATE PUMP TO RAISE PLATFORM

⚠ CAUTION
• Verify the platform is at the same height as the floor. • Verify the front rollstop is upright and locked. • Verify the rear edge of bridgeplate lies flat on floor along its entire edge and does not create a tripping hazard.

11) Carefully place wheelchair in center of platform. Face the wheelchair outward and lock wheelchair brakes. Verify that the entire wheelchair is within the perimeter of the platform.
12) Refer to **Figure 2-14** on following page. Engage pump release valve with handle. Slowly rotate valve counter-clockwise (1/4-turn max) until platform begins to lower; do not open further. Allow platform to settle on the ground, and then rotate valve clockwise to close.

NOTE: Do not over-tighten valve!

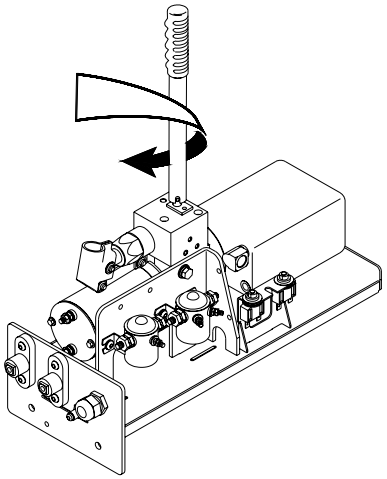

FIGURE 2-14: ROTATE VALVE CCW TO OPEN

13) Unlock wheelchair brakes and carefully assist passenger off of platform.
14) Refer to **Figure 2-13.** Operate pump to raise platform to a height about six inches above stow level.
15) Grasp the front rollstop and push the front platform section fully inward.
16) Lift the left handrail upward out of its socket and lower to platform. Repeat for the right handrail.
17) Push bridgeplate forward and down until it latches in place.
18) Refer to **Figure 2-14.** Engage pump release valve with handle. Slowly rotate valve counter-clockwise (1/4-turn max) until platform begins to lower; do not open further. Allow platform to lower until stopped at stow level by the stow tabs, and then rotate valve clockwise to close.
19) Move stow lock knob downward to release platform from enclosure.
20) Grasp the top of the front rollstop and push the platform into the enclosure. Continue pushing until the platform is fully retracted into enclosure. The stow lock will reset and lock platform in the stowed position. Verify that stow lock has reset by attempting to pull platform out of enclosure; it must not move.
21) Replace pump handle into clips on inside of pump cover and fasten cover onto pump assembly. Verify that hoses and cables are not pinched between cover and pump assembly. Finger tighten cover retaining knob.

III. EVOLUTION MAINTENANCE INSTRUCTIONS

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

Additional maintenance information is available in the Evolution service manual, part number 32DF8202. 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. At the website, click on “Technical Documents”, “I agree”, and then “Service Manuals”.

⚠ CAUTION

This Ricon product is highly specialized. Maintenance and repair work must be performed by an authorized Ricon service technician, using Ricon replacement parts.

⚠ WARNING

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 approved for use on painted surfaces (i.e. dish soap or car wash liquid; do not use caustic soaps) and drying thoroughly will protect painted surfaces. Cleaning is especially important in areas where roads are salted in winter. Make sure that lift pivot points are clean and dry prior to lubrication.

B. MAINTENANCE SCHEDULE

Bring the lift to an authorized Ricon dealer at the appropriate intervals for lubrication and inspection. Maintenance inspections must be performed by an authorized Ricon service technician at least once every six months, or sooner, depending on usage. A thorough inspection should be performed at the service intervals referenced in **Table 3-1**. Under conditions of excessive use (more than 10 cycles per day), service should be increased.

TABLE 3-1: MAINTENANCE SCHEDULE

SERVICE POINT	DESCRIPTION
DAILY SAFETY CHECK (or @ 10-20 cycles of operation)	
LIFT STOWED	
Lift mounting and support points	• Verify lift mounting points to vehicle are free from damage. • Verify mounting screws are fastened correctly. • Verify carriage stops are fastened correctly.
LIFT FULLY DEPLOYED (at stow level)	
Decals	• Verify maximum load capacity decal is correctly affixed and legible. Replace, if necessary. • Verify manual operating instruction decals are correctly affixed and legible. Replace if necessary.

General operation – stow and deploy	• Listen for abnormal noise as platform deploys, i.e., grinding or binding noise. • Carriage stops are in place and stop carriage squarely.
Main lifting pivots	• Verify carriage, lifting frame, and platform pivot pins are correctly installed, free from damage, and locked in position. • Verify all cotter pins are installed and correctly secured. • Verify hydraulic cylinder pivot pins are free from damage and locked in position.
Platform	• Verify platform operates without obstruction when deployed. • Verify welds on carriage, lifting frame, and platform are intact. • Verify platform mounting brackets are correctly fastened to both sides of the platform with correct fasteners.
RAISE PLATFORM (vehicle floor level)	
Bridgeplate	• Verify bridgeplate functions without obstruction when at floor level.
LOWER PLATFORM (ground level)	
Rollstop	• Verify rollstop opens when platform contacts ground. • Verify rollstop closes and locks immediately after platform rises from ground.
STOW LIFT	
Stow level	Verify platform is at the correct stow height when it rests on stow tabs.
BI-WEEKLY SAFETY CHECK (or @ 140 - 180 cycles of operation)	
Decals and cleaning	• Verify maximum load capacity decals are affixed correctly, clearly visible, and legible. Replace, if necessary. • Verify that serial number is clearly marked and legible. • After washing vehicle, verify that lift points requiring lubrication are lubricated (see Chapter IV of Service Manual): – Rollstop pivot points and springs. – Bridgeplate pivot points, actuator mechanism, and carriage rollers (see Chapter IV of Service Manual).
Deployment system	Verify there are no obstructions in the side channels or the drive belt.
THREE MONTH SAFETY CHECK (or @ 900 - 1000 cycles of operation)	
Main lifting arm and bridgeplate pivot points.	Spray lubricant (Curtisol Red Grease #88167) on ball and socket joints at lifting arms, and bridgeplate pivot points. Wipe excess grease from parts and surrounding areas.
Hydraulic fluid level	Verify that hydraulic fluid level is maintained at the required "full" level. Add only Texaco 01554 Aircraft Hydraulic Oil (or equivalent U.S. mil spec H5606G oil).

C. DECALS

Refer to **Figure 3-1** for Evolution Export wheelchair lift decal locations and part numbers. Check condition of decals daily 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 must be replaced by Ricon.

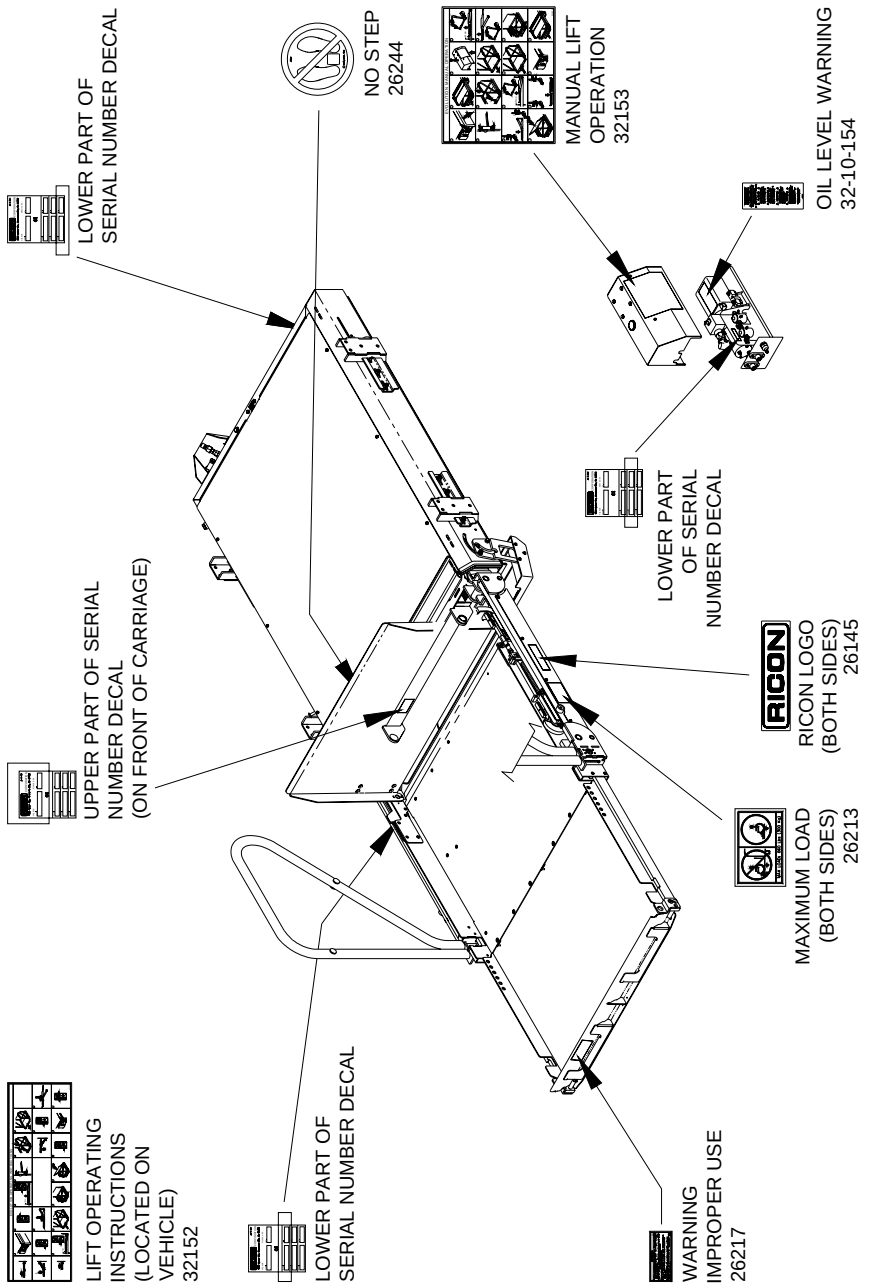

FIGURE 3-1: EVOLUTION EXPORT LIFT DECAL LOCATIONS AND PART NUMBERS

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