



*Innovation in Mobility*

**Mirage<sup>®</sup>  
F9B Series  
Personal Use  
Wheelchair Lift**

**PRINT MANUAL**

**Operator Manual**

12/03/01

32DF9BP01.A

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French Patent No. 0-446-224; German Patent Nos. 68925368.0-08, EP 0625896 B1;  
U.K. Patent Nos. EP 0625896 B1, EP 0703766  
GB 2,224,992 B; Other U.S. and foreign patents pending.  
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**This RICON product must be installed and serviced by authorized RICON service technicians.**

**The operator must refer to this manual for operating instructions, then retain it for future reference.**

Customer Name: \_\_\_\_\_  
Installing Dealer: \_\_\_\_\_  
Date Installed: \_\_\_\_\_  
Serial Number: \_\_\_\_\_

## REVISION RECORD

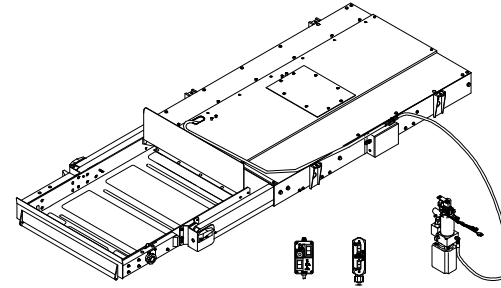
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## I. INTRODUCTION

The RICON Mirage F9B Series Personal Use Wheelchair Lift is an under-floor, electro-hydraulic wheelchair lift for use by persons requiring assistance for entering and exiting a vehicle. The patented movement provides smooth, safe entry and exit. It is operated by either the wheelchair occupant, an attendant, or the vehicle driver. By using the lift control switches, the lift extends (or deploys) from the vehicle and rises to vehicle floor height. The user boards the large non-skid platform and the operator uses the control switches to lower the platform to the ground. After the user departs, the platform is raised and retracted (stowed).



The lift is an underfloor type employing a hydraulic pump that easily lifts 660 pounds (300 kilograms), which represents the lift's maximum capacity. The lift also contains a manual backup pump and manual rollstop control knob. If the lift loses electrical power, two or more people can raise and/or lower the lift manually.

This manual contains operation and maintenance instructions and a troubleshooting guide for the lift. It is important to user safety that the lift operators be completely familiar with the Operating Instructions chapter of this manual. Once the lift is installed, it is very important that the lift be properly maintained by following the Ricon recommended cleaning, lubrication, and inspection instructions.

If there are questions about this manual, or additional copies are needed, please contact Ricon Product Support at one of the following locations:

**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](http://www.riconcorp.com)

**Ricon U.K. Ltd.**  
Littlemoss Business Park, Littlemoss Road  
Droylsden, Manchester  
United Kingdom, M43 7EF .....(+44) 161 301 6000

A. RICON ONE-YEAR LIMITED WARRANTY (Refer To Following Page)

## 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 date of purchase. A complete list of parts covered by this warranty can be obtained from an authorized Ricon dealer.
- Labor costs for specified parts replaced under this warranty for a period of one year from date of purchase. A Ricon rate schedule determines the parts covered and labor allowed.

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

**If You are Traveling:** All authorized Ricon dealers honor this warranty. Consult a telephone directory or our Product Support department for the name of the nearest authorized Ricon dealer.

### **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. Required maintenance should be performed at that time.



**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:**

- Product has been installed or maintained by someone other than an authorized Ricon service technician.
- 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.*

## **B. SHIPMENT INFORMATION**

Ricon does not sell directly to the user because of the specialized nature of the product. Instead, the product is distributed through the worldwide network of authorized Ricon dealers, who perform the sale and installation of the lift.

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

**NOTE:** The Sales/Service Personnel must review the Warranty and this Operator Manual with the user to verify they understand safe operation of the product. Instruct the user to follow the operating instructions without exception.

## **C. GENERAL SAFETY PRECAUTIONS**

The following general safety precautions must be followed during installation, operation, service and maintenance:

- Under no circumstances should installation, maintenance, repair, or adjustment be attempted without the immediate presence of a person capable of rendering aid.
- An injury, no matter how slight, should be attended. Administer first aid or seek medical attention immediately.
- Exercise caution when operating lift, and be certain that hands, feet, legs, and clothing are not in the path of platform movement.
- Do not lay anything metallic on top of battery.
- Read and thoroughly understand the operating instructions before attempting to operate.
- Inspect the product before each use. If unsafe conditions, unusual noise, or movement exist, do not use until the problem is corrected.
- Stand clear of doors and platform, and keep others clear during operation.
- The product requires periodic maintenance. A thorough inspection is recommended at least once every six months. The product must always be maintained at the highest level of performance.

## D. MAJOR LIFT COMPONENTS

The references used throughout this manual are illustrated in **Figure 1-1** and defined in **Table 1-1**. Refer to the Service Manual, Chapter IV for more details.

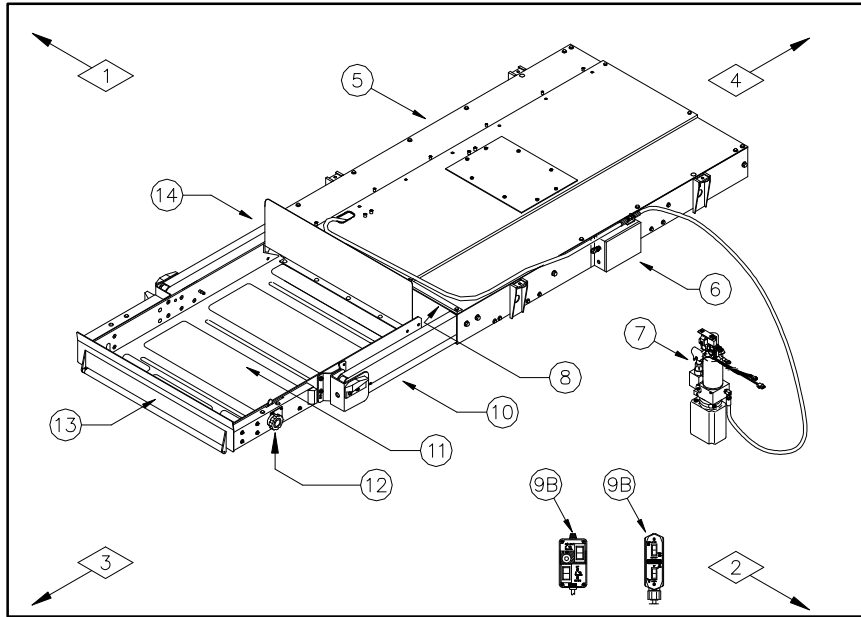


FIGURE 1-1: LIFT REFERENCES



TABLE 1-1: F9B SERIES PERSONAL USE LIFT TERMINOLOGY		
REF	NAME	DESCRIPTION
1	Left	Reference points from outside vehicle looking inward at lift.
2	Right	
3	Front	
4	Rear	
5	Lift enclosure	Cassette type structure, rigidly attached to the vehicle, which contains the lift.
6	Pull box	Contains electrical and hydraulic connections.
7	Power unit	Electro-hydraulic pump provides force to raise platform. Unit also contains valve used to release hydraulic pressure and lower platform.
8	Travelling frame	(not shown) Assembly stored inside lift enclosure, consisting of carriage, lifting frame, and platform.
	Carriage	(not shown) Part of traveling frame containing the components that extend (deploy) and retract (stow) the platform.
	Deployment system	(not shown) The electrical gearmotor and associated linkage used to extend (deploy) and retract (stow) the platform.
	Lower parallel arms	(not shown) Located within lifting frame, they maintain platform in a horizontal position.
9A	Control pendant	Hand-held device used by operator to control lift operations.
9B	Optional control pendant	
10	Lifting frame	Part of travelling frame connecting carriage and hydraulic cylinder to platform.
11	Platform	Area where occupant resides during lift operation.
12	Rollstop manual control knob and motor position indicator	Provides manual control of front rollstop in the event of a loss of electrical power. Also provides visual indication of motor position.
13	Platform rollstop	Front barrier prevents wheelchair from slowly and inadvertent rolling off the platform during operation.
14	Bridgeplate	Plate bridging gap between platform and vehicle threshold. Also serves as a rear rollstop when platform is deployed.
<b>END OF TABLE</b>		

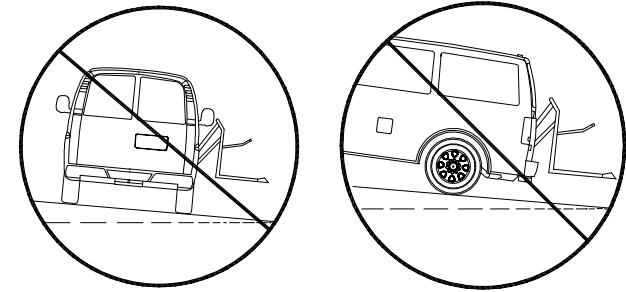
## II. OPERATING INSTRUCTIONS

The following instructions are for the RICON Mirage F9B Series Personal Use Wheelchair Lift. Operation must not be attempted until the user thoroughly understands the Operating Instructions.

### A. SAFETY PRECAUTIONS

The following safety precautions must be complied with at all times:

- Refer to **Figure 2-1**. It is unsafe to use the lift when the vehicle is parked on a sloped surface.



**FIGURE 2-1: UNSAFE VEHICLE SLOPING**

- Vehicle must be safely parked, with engine turned off before using wheelchair lift.
- Face outward when exiting vehicle.
- Visually verify that platform is at a floor level, and the outer rollstop is up and locked.
- Unusual noises or movements should be inspected immediately by an authorized Ricon service technician.
- Inspect lift prior to each use. Check for loose nuts and bolts. If any unsafe condition exists, DO NOT use lift. Return lift to an authorized Ricon dealer for repair.
- Wheelchair brakes are less effective if the platform or wheelchair wheels are wet. Use great care in wet conditions.
- Always lock wheelchair brakes (power chair users should turn off power and set brake) before platform is put in motion.
- Be certain wheelchair fits safely on platform and does not extend over the inside or outside edges of platform, or interfere with operation of the rollstop.
- Keep others clear while operating lift.
- The lift is for one user at a time. Do not overload lift.
- Never leave platform outside of vehicle; return platform to stowed position after use.
- Do not allow children or others to play with the lift as this may be dangerous.
- The platform rollstop is designed to prevent a wheelchair from slowly and inadvertently rolling off the platform. Because the large rear wheels of a wheelchair can roll over the rollstop, always face outward on the lift. Hitting the platform rollstop at high speed with the small front wheels can tip the wheelchair and injure the wheelchair occupant. The rollstop is not designed to stop a quick-moving wheelchair. Use extreme care, enter platform slowly, and lock your wheelchair brakes.
- Close supervision is necessary if the lift is used by or near children.
- Do not place your arms or legs in or near any folding parts of the lift.

- Do not stand on the bridgeplate (located at rear of platform). Bending this plate can cause interference with the platform as it rises or lowers.
- Do not operate lift with a load in excess of 660 pounds (300 Kg).
- Do not activate the DEPLOY or STOW switch when someone is on platform.

Be sure you have read, and understand each of these safety precautions. Review them periodically, and ask any attendants, or other wheelchair users operating your lift to read them as well. If you have any questions, contact your installing Ricon Service Technician, or call Ricon Product Support.

## B. DAILY SAFETY CHECK

Inspect the lift each day prior to use. It should be clean, free of debris, and well maintained. Check that the following conditions are met before operating the lift:

- All lift functions are operating properly.
- General appearance and lubrication are proper.
- All fasteners are tight.

## C. LIFT FUNCTIONS

Refer to **Tables 2-1** and **2-2** for descriptions of lift functions:

**NOTE:** The **up** and **down** functions will operate only if the platform is deployed.





TABLE 2-1: LIFT FUNCTIONS FOR STANDARD CONTROL PENDANT	
FUNCTION	DESCRIPTION
 <b>DEPLOY</b>	Lift extends/deploys OUT of the vehicle from the IN/stowed position.
 <b>DOWN</b>	Platform is lowered from its present position, either vehicle floor level or OUT/deployed position. (The rollstop automatically lowers when the platform reaches ground level.)
 <b>UP</b>	Platform is raised from its present position, either ground level or OUT/deployed position. (The rollstop automatically rises when the platform leaves ground level).
 <b>STOW</b>	Lift retracts/stows from the OUT/deployed position to the IN/stowed position.
<b>END OF TABLE</b>	

TABLE 2-2: LIFT FUNCTIONS FOR OPTIONAL CONTROL PENDANT	
FUNCTION	DESCRIPTION
Ⓜ / OUT	Platform extends/deploys OUT from the IN/stowed position. If held, the platform automatically rises to the vehicle floor level.
- / DOWN	Platform is lowered from its present position, either vehicle floor level or OUT/deployed position.
- / UP	Platform is raised from its present position, either ground level or OUT/deployed position.
↶ / IN	Platform retracts/stows from the OUT/deployed position to the IN/stowed position.
END OF TABLE	

#### D. CONTROLS AND INDICATORS

For descriptions of the lift controls and indicators, refer to the following sections

##### 1. CONTROL PENDANT

Refer to **Figures 2-2 and 2-3**. The control for the lift is a hand held, hard-wired remote device called the control pendant. The control of all lift functions, e.g., out/deploy/extend, down, up, in/stow/retract, are controlled by this device. The control pendant is mounted inside the vehicle on a wall clip next to the door opening.

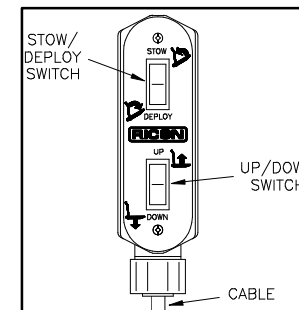


FIGURE 2-2: STANDARD CONTROL PENDANT

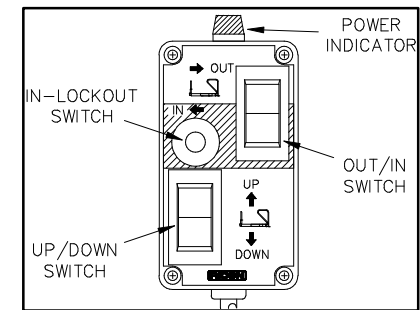


FIGURE 2-3: OPTIONAL CONTROL PENDANT

The optional lift (excluding the lift for Volkswagen Applications) is equipped with a feature that removes electrical power to the lift when it is not in use. The power indicator contained on the optional control pendant shows when this power is supplied and illuminates only when the lift is in operation. For a further description of the power indicator, refer to Chapter III.

**NOTE:** The power indicator should properly illuminate only when the lift is in operation. If the indicator **does not illuminate during operation** of the lift or **remains illuminated when the lift is not in operation**, contact an authorized Ricon service technician for repair.

## 2. ELECTRICAL CIRCUIT BREAKERS

The lift electrical circuit breakers are designed to interrupt electrical power to the lift in case of a short circuit. For descriptions of the circuit breakers, refer to **Figure 2-4** and the following paragraphs:

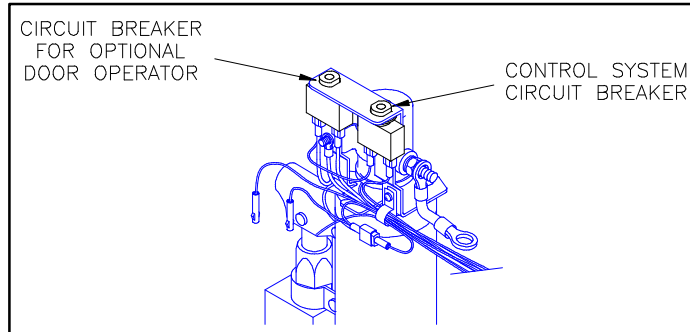


FIGURE 2-4: CIRCUIT BREAKER LOCATIONS



**WARNING!**

**REMINDER TO RICON SERVICE TECHNICIAN:**

DO NOT REPLACE A CIRCUIT BREAKER WITH ONE OF GREATER AMPERAGE. LOCATE AND REPAIR SHORT CIRCUIT TO CORRECT PROBLEM.

### a. IN/OUT Motor Circuit Breaker

The IN/OUT Motor Circuit Breaker is rated at 30 amps and is found on the hydraulic pump assembly. In case of an IN/OUT motor short circuit, the circuit breaker button will "pop-out". If pressing and releasing the button does not reset/restore power, **DO NOT** press and hold. Contact an authorized Ricon service technician for repair.

### b. Control System Circuit Breaker

The Control System Circuit Breaker is rated at 8 amps and is found on the hydraulic pump assembly. In case of a control system short circuit, the circuit breaker button will "pop-out". If pressing and releasing the button does not reset/restore power, **DO NOT** press and hold. Contact an authorized Ricon service technician for repair.

### c. Main Circuit Breaker

Refer to **Figure 2-5**. The main circuit breaker is rated at 90 amps, and is located in the vehicle engine compartment. It is provided to interrupt electrical power to the lift in the event of a short circuit. If a short circuit occurs, the circuit breaker reset tab will rotate CW slightly, and is rotated CCW to reset. Do not physically hold reset tab in reset position if it will not stay there on its own. Contact an authorized Ricon service technician for repair.

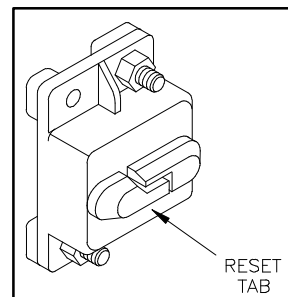
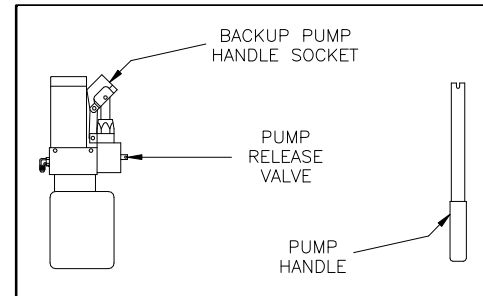


FIGURE 2-5: MAIN CIRCUIT BREAKER

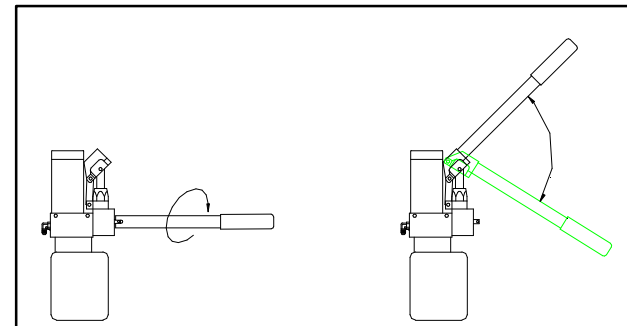
### 3. MANUAL BACKUP PUMP

Refer to **Figure 2-6**. The manual backup pump is used to operate the lift when there is no electrical power. The controls for the pump consist of the pump handle (stored within the control box cover) for raising the lift platform and a pump release valve for lowering.



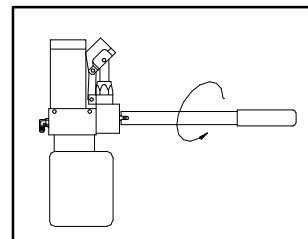
**FIGURE 2-6: MANUAL BACKUP PUMP AND HANDLE**

Refer to **Figure 2-7**. To raise the platform, insert the pump handle extension onto the pump release valve. Make sure the notches at the end of the handle fully engage the release valve pin. Rotate the handle **CLOCKWISE** until slightly snug to make sure that the pump is in the "raise mode". Insert the handle into the socket and pump to raise the platform.



**FIGURE 2-7: PLATFORM MANUAL RAISING**

Refer to **Figure 2-8**. To lower the platform, engage the release valve with the pump handle, and slowly rotate **COUNTERCLOCKWISE** (about 1/4-turn) until platform begins to lower. Allow platform to lower to desired position.



**FIGURE 3-8: MANUAL PLATFORM LOWERING**

#### 4. ROLLSTOP MANUAL CONTROLS

Refer to **Figure 2-9**. The rollstop manual control knob is used to operate the platform rollstop if the automatic rollstop is not functioning or if the lift is being operated manually. To open the rollstop, allow the lift to lower to ground position, pull and hold the control knob OUT and turn the knob COUNTER-CLOCKWISE until the rollstop opens completely. To close the rollstop, pull and hold the control knob OUT, turn the knob CLOCKWISE while raising the rollstop with the other hand until the rollstop closes and latches.

The Rollstop Motor Position Indicator shows the mechanical relationship of the rollstop and the automatic motor. When using the rollstop manual control knob, make sure that the rollstop is closed when the indicator is up or the rollstop is open when the indicator is down. Proper sequence occurs when the indicator is in the full UP position and the rollstop is CLOSED.

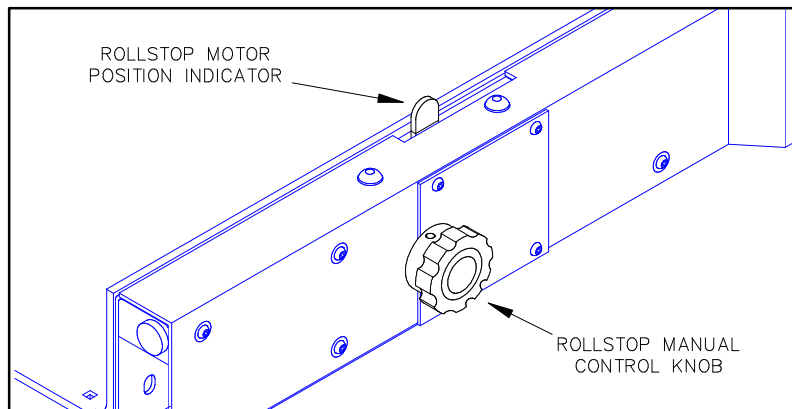


FIGURE 2-9: ROLLSTOP CONTROLS

## E. LIFT OPERATION



IMPROPER USE OF LIFT CAN RESULT IN PERSONAL INJURY. USERS MUST READ AND FOLLOW OPERATING INSTRUCTIONS IN OWNER MANUAL. ADDITIONAL COPIES OF OWNER 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).
- PRIOR TO USE, INSPECT WHEELCHAIR LIFT FOR PROPER FUNCTION, REQUIRED MAINTENANCE, OR DAMAGE. IF A PROBLEM EXISTS, DO NOT USE LIFT AND CONTACT AN AUTHORIZED RICON SERVICE TECHNICIAN FOR REPAIR.
- THIS LIFT IS FOR USE BY WHEELCHAIR AND STANDEE OCCUPANTS, ONLY.

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.

- Before operating lift, be certain vehicle is safely parked on a level area away from traffic. Allow enough space for lift operation and passenger boarding.
- The lift operator must take special care to ensure that the area is clear before deploying lift. Be certain there are no obstacles beneath the platform.
- Open doors completely. If equipped with a Power Door Operator, the vehicle doors will automatically open before the platform deploys and automatically close after the platform is stowed.
- If so equipped, be certain that the safety interlock mechanism (e.g., emergency/power brake) is properly engaged before attempting to operate the lift. The lift will not operate if this feature has been engaged properly.

### 1. NORMAL LIFT OPERATION

#### a. TO ENTER VEHICLE

**DEPLOY PLATFORM:** Press DEPLOY (or OUT) switch until platform is fully deployed and then release switch when platform begins to rise.

**LOWER PLATFORM:** Press and hold DOWN switch until platform reaches ground level and rollstop opens completely.

**BOARD PLATFORM:** Position wheelchair, facing outward, in center of platform and LOCK WHEELCHAIR BRAKES.

**RAISE PLATFORM:** Press and hold UP switch until platform stops at vehicle floor level.

**EXIT PLATFORM:** Carefully exit platform.

**STOW PLATFORM:** Press and hold STOW (or IN) switch **and** red IN/LOCKOUT switch until platform is fully stowed. The platform will rise or lower to the proper stow level and then retract into the vehicle.



**b. TO EXIT VEHICLE**

**DEPLOY AND RAISE PLATFORM:** Press and hold STOW (or OUT) switch until platform is fully deployed and automatically rises to vehicle floor level.

**BOARD PLATFORM:** Position wheelchair, facing outward, in center of platform and LOCK WHEELCHAIR BRAKES.

**LOWER PLATFORM:** Press and hold DOWN switch until platform reaches ground level and rollstop opens completely.

**EXIT PLATFORM:** Carefully exit platform.

**STOW PLATFORM:** Press and hold STOW (or IN) switch **and** red IN/LOCKOUT switch until platform is fully stowed. The lift will rise or lower to the proper stow level and then retract into the vehicle.


**2. MANUAL LIFT OPERATION**

The manual backup pump is used to operate the lift if there is no electrical power. The controls for the pump consist of the pump handle extension (stored within the control box cover) for raising the lift platform and the pump release valve for lowering.

In the event the lift becomes inoperable under its electrical power, it can be operated manually as follows:


**a. TO MANUALLY DEPLOY PLATFORM**

- ✦ Allow enough space for lift operation and passenger boarding. If a break down situation exists and the vehicle cannot be moved so that the lift system can be operated safely, the operator must summon emergency assistance to move the vehicle before operating the lift.
- ✦ Fully open vehicle doors. Verify that obstacles are not in the path of the platform.

 <b>WARNING!</b>
USE CAUTION TO AVOID INJURY:  DO NOT ATTEMPT TO MANUALLY DEPLOY OR STOW THE LIFT USING LESS THAN TWO PEOPLE. MANUALLY DEPLOYING OR STOWING OF THIS LIFT REQUIRES A FORCE GREATER THAN 100 LBS.  TO MANUALLY DEPLOY THE LIFT PLATFORM, A LARGE FORCE IS REQUIRED TO OVERCOME THE TORQUE CLUTCH INITIAL RESISTANCE. AFTER THE LIFT STARTS MOVING OUTWARD, SUSTAIN A CONSTANT FORCE UNTIL THE LIFT REACHES THE DEPLOYED POSITION.

- ✦ Using one person on each side of the lift (to prevent mechanical binding), grasp the platform rollstop and pull firmly until the lift is all the way out against the carriage stops.

b. TO MANUALLY LOWER PLATFORM

 CAUTION!

Do not turn pump release valve more than 1/4-turn counter-clockwise. The valve is totally removable which will disable all automatic and manual up/down functions.

- ✘ Refer to **Figure 2-10**. Insert the pump handle extension onto manual backup pump release valve. Make sure the notches at the end of the handle are fully engaged by the release valve pin. Slowly twist the handle 1/4-turn COUNTER-CLOCKWISE until the lift platform begins to lower.

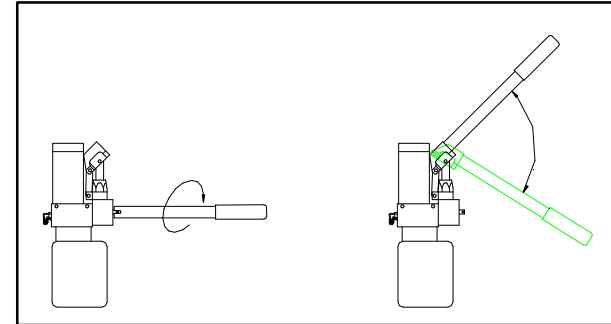



FIGURE 2-10: LIFT OPERATION – PLATFORM MANUAL RAISING

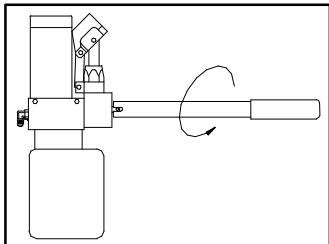
 CAUTION!

When manually raising the platform, do not raise more than 1-1/2" above the vehicle floor level. Any excessive travel will make it difficult to enter the platform or may damage the platform bridgeplate. The outer edge of the bridgeplate must rest squarely on the vehicle floor.

- ✘ Insert handle extension into manual backup pump handle socket. Move pump handle in the appropriate directions to raise the platform to the vehicle floor level.
- ✘ The lift passenger and attendant must follow the instructions to ENTER or EXIT the vehicle, as described in the Normal Lift Operation section of this chapter.

c. **TO MANUALLY RAISE THE PLATFORM**

- ✘ Refer to **Figure 2-11**. Insert the pump handle extension onto manual backup pump release valve. Make sure the notches at the end of the handle are fully engaged by the release valve pin.




**FIGURE 2-11: LIFT OPERATION – PLATFORM MANUAL LOWERING**

- ✘ Allow the platform to reach ground level.
- ✘ Insert the pump handle extension onto manual backup pump release valve. Twist the handle **CLOCKWISE** until slightly snug and remove.
- ✘ Using the rollstop manual control knob and one hand on the rollstop, **OPEN** the rollstop.
- ✘ The attendant and lift passenger should follow the instructions to **ENTER** or **EXIT** the vehicle, as described in the lift Operating Instructions section of this manual.

d. **TO MANUALLY STOW THE PLATFORM**

- ✘ Using the manual back-up pump, raise or lower the platform to the de-  
ploy/stow position. The platform frame must be parallel to the side of the lift enclosure. If the exact position cannot be obtained, slightly low is preferred to slightly high.
- ✘ Using the rollstop manual control knob and one hand on the rollstop, close the rollstop until it latches.

 <b>WARNING!</b>
MANUALLY DEPLOYING OR STOWING OF PLATFORM REQUIRES A FORCE GREATER THAN <b>100 LBS</b> . DO NOT ATTEMPT TO MANUALLY DEPLOY OR STOW THE LIFT USING LESS THAN TWO PEOPLE.

- ✘ Use **ONE PERSON ON EACH SIDE** of the lift to prevent mechanical binding.
- ✘ With fingers up and palms forward, push the platform forcefully to start the lift moving inward. As the lift begins to move inward, maintain a constant pushing motion until the lift comes to rest completely inside the lift enclosure.

e. **To Manually Stow the Platform if there is a hydraulic failure**

In the unlikely event there is a hydraulic system failure at ground level and the manual backup pump is inoperative, the lift may be stowed as follows by two or more able-bodied people:

- ✘ Raise or lower platform to stow height; the platform frame must be parallel to the side of the lift enclosure. If the exact position cannot be obtained, slightly low is preferred to slightly high.
- ✘ Using the rollstop manual control knob and one hand on the rollstop, close the rollstop until it latches.

 **WARNING!**

- MANUALLY DEPLOYING AND/OR STOWING OF THIS LIFT REQUIRES FORCES GREATER THAN 100 LBS. DO NOT ATTEMPT TO MANUALLY DEPLOY OR STOW THE LIFT USING LESS THAN TWO PEOPLE.
- THE PLATFORM IS HEAVY AND SHOULD BE LIFTED WITH CAUTION AND PROPER TECHNIQUE:  
LIFT WITH LEGS AND NOT THE BACK  
WHEN ATTEMPTING TO LIFT HEAVY OBJECTS.
- USE ONE PERSON ON EACH SIDE OF PLATFORM TO PREVENT MECHANICAL BINDING.

- ✘ With fingers up and palms forward, push the platform in until completely inside enclosure.

### III. MAINTENANCE

Regular maintenance of the RICON Mirage F9B Series Personal Use Wheelchair Lift will provide optimum performance and reduce the need for repairs. This chapter contains cleaning and lubrication instructions, a maintenance schedule, troubleshooting section, and maintenance diagrams.

#### A. ADDITIONAL MAINTENANCE INFORMATION

Additional maintenance information is available in the F9B Series Personal Use Service Manual, part number 32DF9BP02. 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). Click on RICON CORPORATION and then DEALER'S ROOM at the website. Entry to the dealer's room will require a Dealer Number and a Password.

#### CAUTION!

This Ricon product is highly specialized. Maintenance and repairs must be performed by an authorized Ricon service technician using Ricon replacement parts. Modifying or failing to properly maintain this product voids the warranty and may result in unsafe operating conditions.

#### B. MAINTENANCE SCHEDULE

Maintenance inspections must be performed by an authorized Ricon dealer at least once every six months or sooner, depending on usage. Maintenance inspections are required at least every six months, and 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
<b>DAILY SAFETY CHECK (or @ 10-20 cycles of operation)</b>	
<b>LIFT STOWED</b>	
Lifting Mount and Support Points	Verify all lift support points under vehicle are free from damage. Verify all mounting bolts are fastened properly. Verify carriage stops are fastened properly.
<b>FULLY DEPLOY LIFT (at stow level)</b>	
Decals	Verify Rated Load Capacity decal is affixed properly, clearly visible, and legible. Replace, if necessary. Verify all Operating Instruction decals and labels are affixed properly, are clearly visible, and legible. Replace if necessary.
General Operation Stow/Deploy	Listen for abnormal noise as lift deploys, i.e, grinding or binding noise. Torque Limit Clutch disengages properly at end of carriage travel. Carriage stops are in place and stop carriage squarely.
Main Lifting Pivots	Verify carriage, lifting frame, and platform pivot pins are installed properly, free from damage, and locked in position with proper fasteners. Verify all cotterpins are installed and properly secured. Verify hydraulic cylinder pivot pins are free from damage and locked in position with proper fasteners.

Platform	Verify platform operates properly during lift and stow modes without obstruction. Verify all welds on carriage brackets, lifting frame and platform mounting brackets are in proper order. Verify platform mounting brackets are properly fastened to both sides of the platform with the appropriate screws.
<b>RAISE PLATFORM (vehicle floor level)</b>	
Bridgeplate	Verify bridgeplate functions properly during deploy and stow operations without obstruction, and that lift platform stops at floor level. Verify pneumatic springs and snap rings are present and seated.
<b>LOWER PLATFORM (ground level)</b>	
Rollstop	Verify rollstop operates properly on contact with the ground. Verify rollstop opens, closes, and locks properly without obstruction. Verify roll stop return springs are in proper order, if so equipped.
<b>STOW LIFT</b>	
Proper Stow Level	Verify lift seeks proper stow level (see Chapter IV of Service Manual).
Torque Limit Clutch	Torque Limit Clutch disengages properly at end of travel.
<b>BI-WEEKLY SAFETY CHECK (or @ 140 - 180 cycles of operation)</b>	
Decals and Cleaning	Verify Rated Load Capacity decal is affixed properly, clearly visible, and legible. Replace, if necessary. Verify all Operating Instruction decals and labels are affixed properly, clearly visible, and legible. Replace, if necessary. Verify that serial number is clearly marked and legible. After washing vehicle, verify that points requiring lubrication are lubricated (see Chapter IV of Service Manual): <ul style="list-style-type: none"> <li>• Rollstop pivot points and springs.</li> <li>• Handrail slam locks and pivot points.</li> <li>• Bridgeplate pivot points, actuator pivot points, and cam followers (see Chapter IV of Service Manual).</li> </ul>
Deployment System	Verify there are no obstructions in the side channels.
<b>THREE MONTH SAFETY CHECK (or @ 900 - 1000 cycles of operation)</b>	
Stow Limit	Verify the lift will seek the proper level when stow mode is selected. Check limit switch settings and adjust, if necessary.
Drive Chains and Shafts	Spray lubricant (Curtisol Red Grease #88167) on final and primary drive chains, and wipe excess grease from drive chains and surrounding areas.
Main Lifting Arm and Bridgeplate Pivot Points.	Spray lubricant (Curtisol Red Grease #88167) on ball and socket joints at lifting arms, bridgeplate pivot points, and rod endpoints. Wipe excess grease from parts and surrounding areas.
Hydraulic Fluid Level	Verify that the 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).

<b>ANNUAL SAFETY CHECK (or @ 3600 - 4000 cycles of operation)</b>	
Deployment System	Verify that the torque limit clutch operates within recommended tolerances.
Cam Followers	Grease cam followers with an approved grease, and wipe excess grease from cam followers and surrounding areas.
Drive Chains and Shafts	Check drive chain tension and adjust, if necessary. Verify that spur gears and final drive sprocket are securely pinned to main drive shaft. Verify that torque limit clutch and final drive sprocket are securely pinned to idler shaft. Spray lubricant (Curtisol Red Grease #88167) on drive chains, and wipe excess grease from drive chains and surrounding area.
Hydraulic Pump Unit	Extract, refill, extract again, and refill Hydraulic Pump Unit reservoir to the "full" line (at rear of pump) using Texaco 01554 Aircraft Hydraulic Oil (or equivalent U.S. mil spec H5606G oil).
Hydraulic Cylinder / Flow Control Valve / Hoses, Lines and Seals	If hydraulic fluid is low, inspect the following for evidence of leaks: <ul style="list-style-type: none"> <li>• Hydraulic Cylinder and Flow Control Valve.</li> <li>• Verify hydraulic hoses are not damaged.</li> <li>• Verify seals are seated properly and fittings are tight.</li> </ul>
<b>SEVEN YEAR SAFETY CHECK (or @ 36,000 - 38,000 cycles of operation)</b>	
UP/DOWN Switch	Replace switch.
IN/STOW or OUT/DEPLOY Switch	Replace switch.
Pump Motor Brush Assembly	Replace pump motor brushes per instructions in the Service Manual.
<b>TEN YEAR SAFETY CHECK</b>	
RICON CORP. strongly recommends this lift be refit after ten years of service.	
<b>END OF TABLE</b>	

### C. LIFT DECALS

Refer to **Figure 3-1**. Inspect for chipping, peeling, fading, and illegibility. Order replacement decals by the part number given in **Figure 3-1**, and apply where shown.

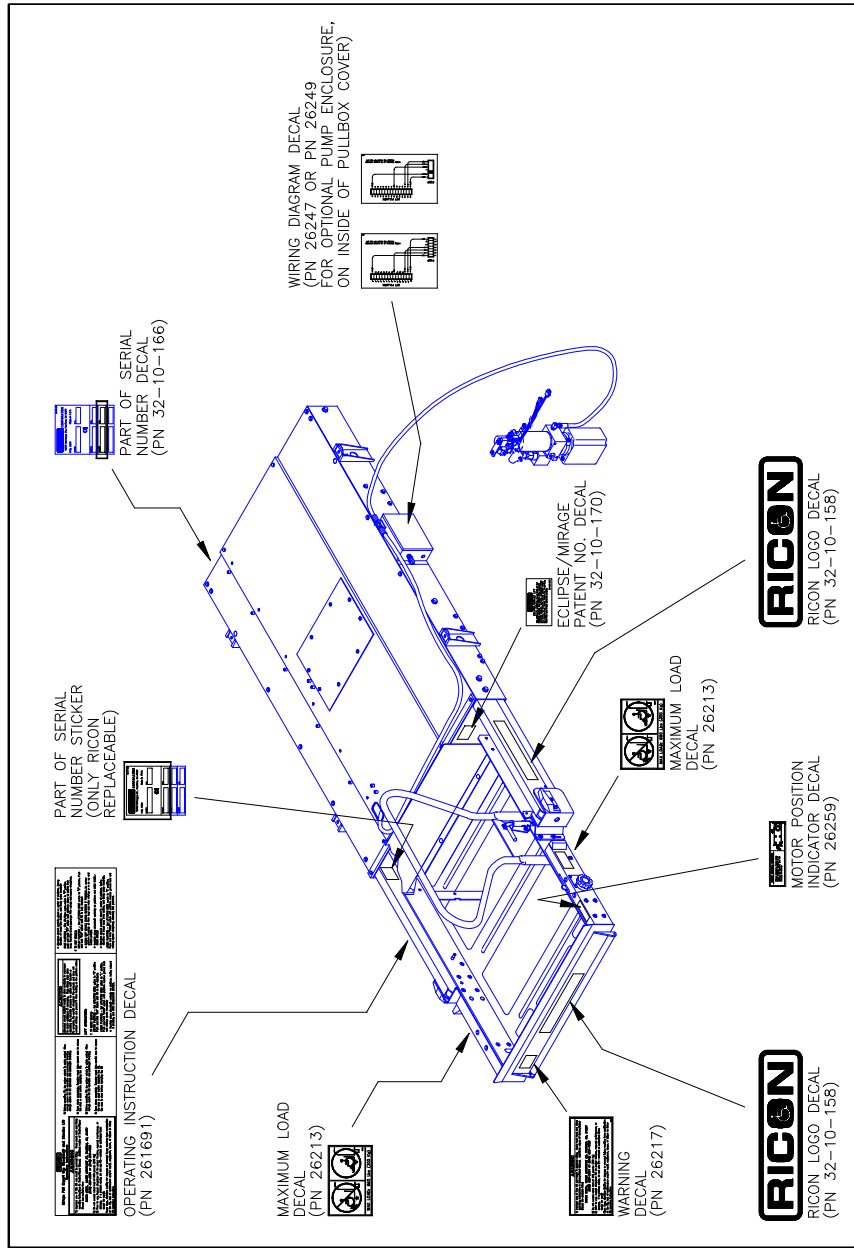


FIGURE 3-1: DECAL LOCATIONS AND PART NUMBERS

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