



Innovation in Mobility

**Mirage
F9B Series
Export Use
Wheelchair and Standee Lift**

[PRINT](#)

Operator Manual

12/03/01

32DF9BE01.A

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U.S. Patent Nos. 5,228,538; 5,253,973; 5,373,915; 5,556,250;
Australian Patent Nos. 661127, 680501; Canadian Patent No. 2,129,821;
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.
Printed in the United States of America

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

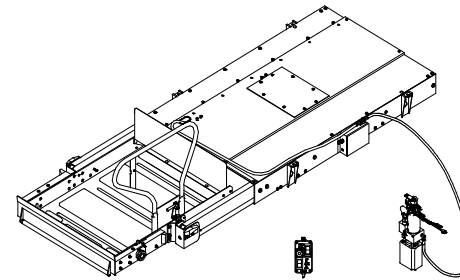
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32DF9BE01. A	All	New release in two-book format	3802/4820
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I. INTRODUCTION

The RICON Mirage F9B Series Export Use Wheelchair and Standee Lift is an under-floor, electro-hydraulic wheelchair lift for use by persons requiring assistance for entering and exiting a vehicle. The patented movement ensures smooth, safe entry and exit and easily lifts up to 660 pounds (300 kilograms). It is operated by a 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 the vehicle floor height. The user boards the large non-skid platform and the operator uses the control switches to gently lower the platform to the ground. After the user departs, the platform is raised and retracted (stowed).



The lift is an underfloor lift with a powerful electrical hydraulic pump. The lift also contains a built-in manual backup pump and rollstop manual 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

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

A. RICON 1 YEAR LIMITED WARRANTY (refer to following page)

**RICON CORPORATION
1-YEAR LIMITED WARRANTY**

Ricon Corporation (Ricon) warrants to original purchaser of this product that Ricon will repair or replace, at its option, any part that fails due to 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 replace 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 your installing dealer. Please give as much advance notice as possible and allow a reasonable amount of time for repairs.

If You are Traveling: All authorized Ricon dealers honor this warranty. Consult a telephone directory or call 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 vehicle, road hazards, overloading, failure to follow operating instructions, or acts of Nature (i.e., weather, lightning, flood).

NOTE: Ricon recommends that 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.



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.

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 service technicians, who perform the actual sale and installation.

- 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 enclosed 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 be certain that they understand the 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, and adjustments be attempted without the immediate presence of a person capable of rendering aid.
- An injury, no matter how slight, should always be attended. Always administer first aid or seek medical attention immediately.
- Protective eyeshields and appropriate clothing should be worn at all times.
- To avoid injury, always exercise caution when operating and be certain that hands, feet, legs, and clothing are not in the path of product movement.
- Batteries contain acid that can burn. If acid comes in contact with skin, flush affected area with water and wash with soap immediately.
- Always work in a properly ventilated area. Do not smoke or use an open flame near a battery.
- Do not lay anything on top of a battery.
- Check under vehicle before drilling so as not to drill into frame, subframe members, wiring, hydraulic lines, fuel lines, fuel tank, etc.
- Read and thoroughly understand the operating instructions before attempting to operate.
- Inspect the product before each use. If an unsafe condition, unusual noises or movements, exists, do not use it until the problem is corrected.
- Never load or stand on the platform until installation is complete. Upon completion of installation, always test load the lift to 125% of its rated load capacity.
- Stand clear of doors and platform and keep others clear during operation.
- The product requires regular 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.

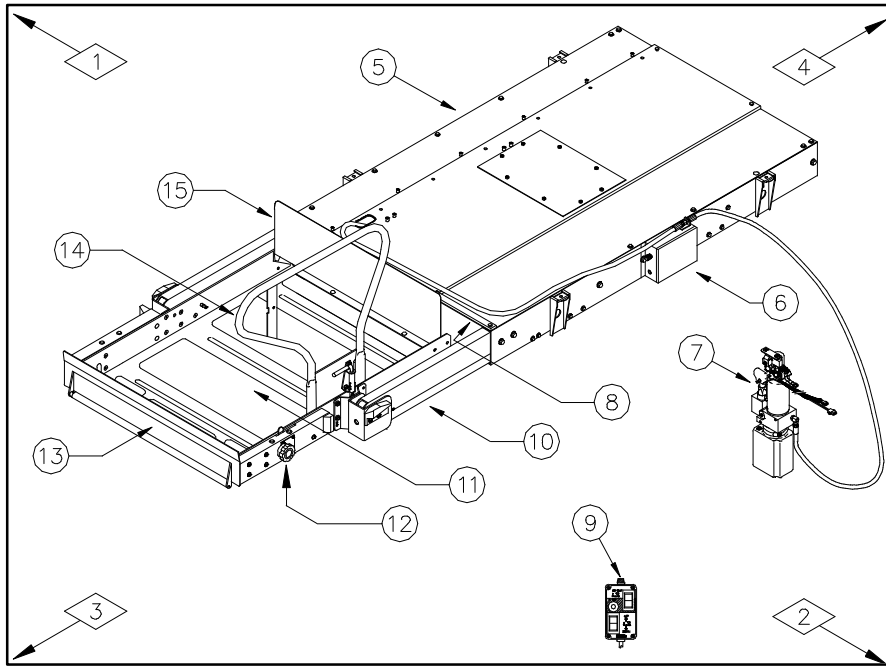


FIGURE 1-1: LIFT REFERENCE

TABLE 1-1: F9B SERIES EXPORT LIFT TERMINOLOGY		
REF	NAME	DESCRIPTION
1	Left	Reference points from outside the vehicle looking inward at the platform.
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 connections/terminals
7	Power Unit	Electro-hydraulic pump that performs the lift raise/UP and lower/DOWN functions.
8	Carriage	(Not shown) Part of traveling frame that contains the necessary components to extend/deploy the lift OUT and retract/stow the lift IN.
	Deployment System	(Not shown) The electrical gear-motor and associated mechanical hardware used to extend/deploy the lift OUT and retract/stow the lift IN.
	Lower Parallel Arms	(Not shown) Located within the lifting frame, these arms connect the platform to the carriage to maintain the platform horizontal position.
9	Control Pendant	Hand-held device used to control the lift operating functions.
10	Lifting Frame	Part of the frame that connects the platform to the hydraulic cylinder for raising/UP and lowering/DOWN.
11	Platform	Component where the occupant sits or stands during lift operations. Consists of fixed platform and sliding platform sections.
12	Rollstop Manual Control Knob and Motor Position Indicator	Provides manual control of the rollstop in the event of a loss of electrical power.
13	Platform Rollstop	Front barrier to prevent the wheelchair from slow, inadvertent rolling off the platform during lift operation.
14	Handrail and Slam-Lock Assembly	Provide a hand-hold for the platform occupant.
15	Bridgeplate	Plate bridging the gap between the platform and the vehicle threshold. Also serves as a rear rollstop when the platform is deployed.
END OF TABLE		

II. OPERATING INSTRUCTIONS

The following operating instructions are important for all models of RICON Mirage F9B Series Export Use Wheelchair and Standee Lift.



WARNING!

OPERATE LIFT ONLY IF YOU THOROUGHLY UNDERSTAND OPERATING INSTRUCTIONS.

A. SAFETY PRECAUTIONS

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

- Refer to **Figure 2-1**. A dangerous situation may exist when using the lift on a slope since the platform will slope parallel to the street.

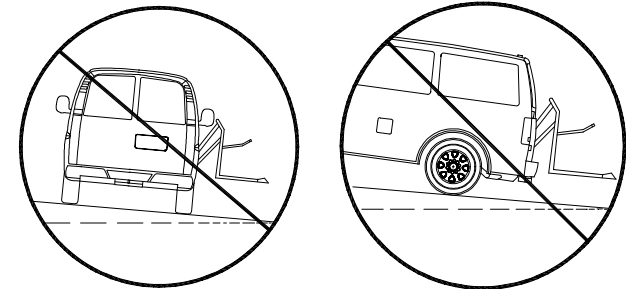


FIGURE 2-1: UNSAFE VEHICLE SLOPING

- Vehicle must be safely parked, with engine turned off before using wheelchair lift.
- When exiting vehicle always face outward and look to be certain platform is in a safe floor-level position and the outer rollstop is in an upward locked position.
- Unusual noises or movements should be inspected immediately by an authorized Ricon service technician.
- Inspect the lift prior to each use. Check for loose nuts and bolts. If any unsafe condition exists, **DO NOT** use the lift. Return the lift to an authorized Ricon dealer for repair.
- Wheelchair brakes are less effective if the platform and/or wheelchair wheels are wet. Use extreme 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 designed for one user at a time. Do not overload lift.
- Never leave platform outside of vehicle. Always return lift 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 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.
- Careful supervision is necessary if used by or near children.
- Do not place your arms or legs in or near any folding parts of the lift.
- Do not allow anyone to stand on the platform bridge plate. Bending this plate can cause dangerous interference with the platform as it raises or lowers.
- Do not operate lift with a load in excess of 660 pounds (300 Kg.).
- **Never** operate the OUT/IN switch when anyone is on the platform.

Be sure that these safety precautions have been read and understood. Review them periodically, and ask any attendants or other operators to read them as well. If there are any questions, contact an authorized Ricon Service technician or call the Ricon Service Department.

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 lift:

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

C. LIFT FUNCTIONS

FUNCTION		DESCRIPTION
Ⓜ	OUT	Platform extends/deploys OUT of the vehicle from the IN/stowed position.
-	DOWN	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.)
-	UP	Platform is raised from its present position, either ground level or OUT/ deployed position. (The rollstop automatically raises when the platform leaves ground level).
↶	IN	Platform retracts/stows from the OUT/deployed position to the IN/stowed position.
END OF TABLE		

D. CONTROLS AND INDICATORS

1. CONTROL PENDANT

Refer to **Figure 2-2**. The control for the lift is a hand held, hard-wired remote device called the Control Pendant. Control of all lift functions, e.g., raise, lower, in and out, are controlled by this device. The control pendant is mounted inside the vehicle on a wall clip next to the door opening.

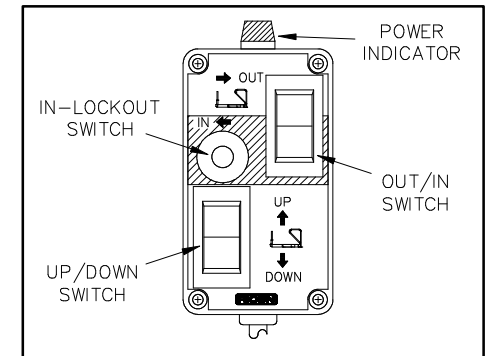


FIGURE 2-2: CONTROL PENDANT

NOTE: The lift is equipped with a feature that removes electrical power to the lift when it is not in use. The power indicator light on the control pendant shows when this power is supplied, and illuminates only when the lift is in operation. Contact an authorized Riccon service technician if the indicator does not illuminate during lift operation, or remains illuminated when the lift is not in operation. Refer to Chapter III of this manual for further description of the power indicator light.

NOTE: The -/up and -/down functions operate only while lift is in deployed position.

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 2-3** and the following paragraphs:

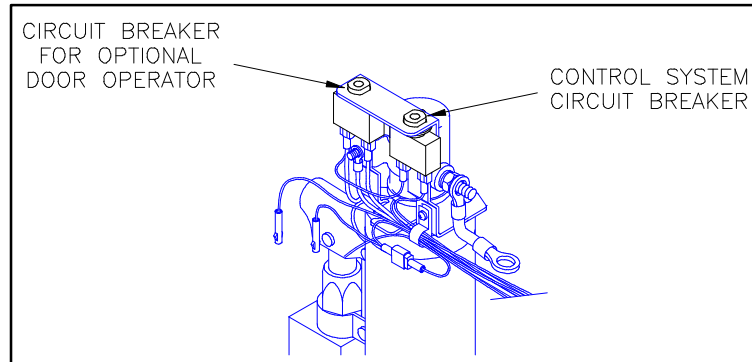


FIGURE 2-3: CIRCUIT BREAKER LOCATIONS

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". Do not continue to press button if pressing and releasing does not restore power. Contact an authorized Ricon service technician for repair.

b. Control System Circuit Breaker

The Control System Circuit Breaker, rated at 8 amps, is located on the hydraulic pump assembly. In the event of a control system short circuit, the circuit breaker button will "pop-out". Do not continue to press button if pressing and releasing does not restore power. Contact an authorized Ricon service technician for repair.

c. Main circuit breaker

Refer to **Figure 2-4**. The main circuit breaker, rated at 90 amps, is located in the vehicle engine compartment. It is designed to interrupt electrical power to the lift electrical system in the event of a short circuit. When a short circuit occurs, the circuit breaker reset tab will swing CW, as shown by arrow. Reset breaker by rotating tab CCW. Do not continue to rotate tab if rotating and releasing does not restore power. Contact an authorized Ricon service technician for repair.

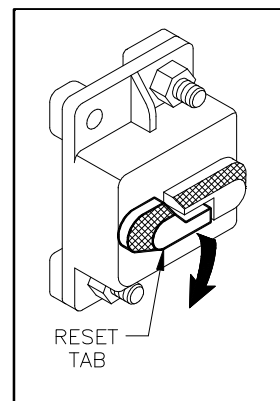


FIGURE 2-4: MAIN CIRCUIT BREAKER SHOWN RESET

3. MANUAL BACKUP PUMP

Refer to **Figure 2-5**. 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.

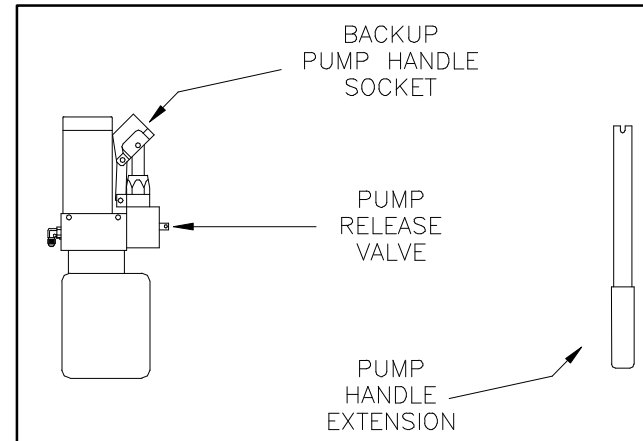


FIGURE 2-5: MANUAL BACKUP PUMP AND HANDLE EXTENSION

a. To raise platform manually

Refer to **Figure 2-6**. To raise the platform, insert the pump handle extension onto the pump release valve. Make sure the notches at the end of the handle are fully engaged by the release valve pin. Twist the handle **CLOCKWISE** until lightly-snug to make sure that the pump is in the "raise mode". Insert the handle extension into pump handle socket and move the handle extension in the appropriate directions (the pump may be installed either vertically or horizontally) to raise the platform.

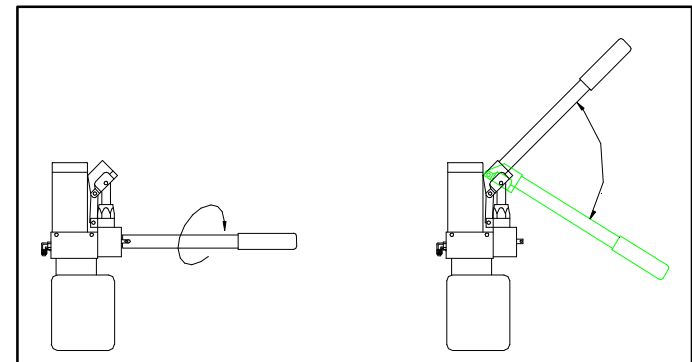


FIGURE 2-6: PLATFORM MANUAL RAISING

b. To Lower Platform Manually

Refer to **Figure 2-7**. To lower platform, engage pump release valve with handle extension and slowly twist handle 1/4-turn COUNTER-CLOCKWISE until platform begins to lower. Allow platform to lower to desired position.

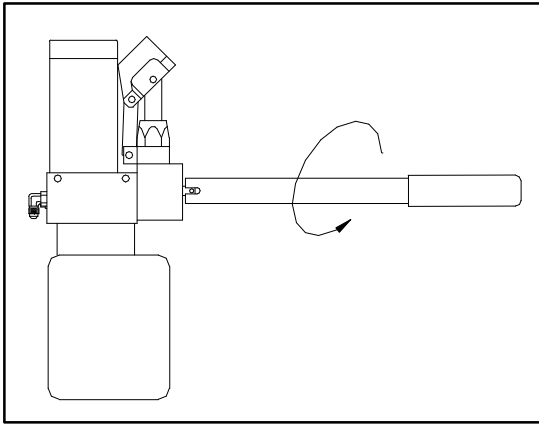


FIGURE 2-7: PLATFORM MANUAL LOWERING

4. ROLLSTOP MANUAL CONTROLS

Refer to **Figure 2-8**. 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.

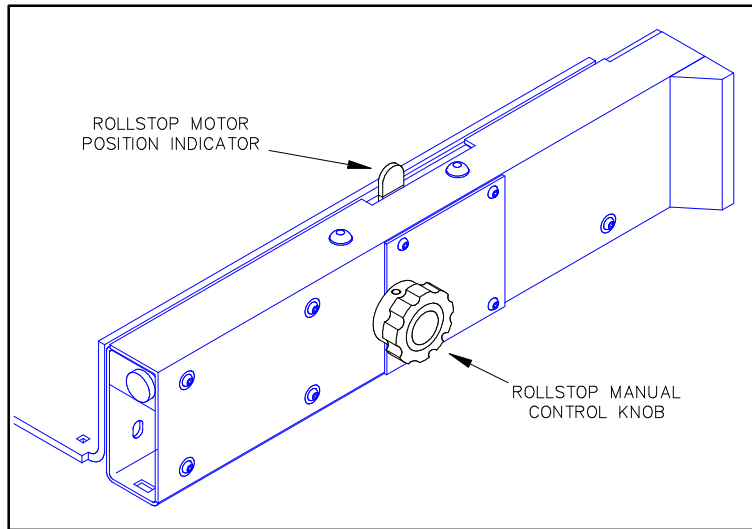


FIGURE 2-8: ROLLSTOP CONTROLS

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.



WARNING!

ROLLSTOP MUST BE IN UP/LOCKED POSITION BEFORE OPERATING LIFT.

E. LIFT OPERATION



WARNING!

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 DEALER FOR REPAIR.
- THIS LIFT IS DESIGNED 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 door(s) 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 until this feature has been engaged properly.



WARNING!

ATTENDANT SHOULD **ALWAYS** REMAIN NEAR PASSENGER TO RENDER IMMEDIATE ASSISTANCE, IF NECESSARY. KEEP OTHERS CLEAR OF LIFT WHEN OPERATING. MAINTAIN PRESSURE ON SWITCH UNTIL FUNCTION IS COMPLETE. BE CERTAIN WHEELCHAIR FITS PROPERLY ON PLATFORM; IT MUST NOT CONTACT ROLLSTOP OR PREVENT IT FROM LOCKING AS THE PLATFORM RISES.

1. TO ENTER VEHICLE

- a. DEPLOY PLATFORM: Press and hold the ®/OUT switch until the lift is fully deployed.
- b. RAISE HANDRAIL: Raise handrail until slam-lock fully engages.
- c. LOWER PLATFORM: Press and hold the ▾/DOWN switch until the platform reaches ground level and the rollstop opens completely.
- d. BOARD PLATFORM: Position wheelchair, facing outward, in center of platform and lock wheelchair brakes.
- STANDEES should face direction of travel (away from vehicle when exiting), carefully stand in center of platform, and firmly grasp handrail.
- e. RAISE PLATFORM: Press and hold the ↑/UP switch until platform stops at vehicle floor level.
- f. EXIT PLATFORM: Carefully exit platform.
- g. LOWER HANDRAIL: Grasp handrail with one hand and with the other hand, raise slam-lock handle UP. Lower handrail to platform.
- h. STOW PLATFORM: Press and hold → /IN switch and the red IN/LOCKOUT switch until the lift is fully stowed. The lift will raise or lower to the proper stowing level and retract into the vehicle.

2. TO EXIT VEHICLE

- a. DEPLOY LIFT: Press and hold →/OUT switch until lift is fully deployed.
- b. RAISE HANDRAILS: Raise handrail until slam-lock fully engages.
- c. RAISE PLATFORM: Press and hold ↑/UP until platform stops at vehicle floor level.
- d. BOARD PLATFORM: Position wheelchair, facing outward, in center of platform and lock wheelchair brakes.
- STANDEES should face direction of travel (away from vehicle when exiting), carefully stand in center of platform, and firmly grasp handrail.
- e. LOWER PLATFORM: Press and hold ↓/DOWN switch until the platform reaches ground level and the rollstop opens completely.
- f. EXIT PLATFORM: CAREFULLY exit platform.
- g. LOWER HANDRAIL: Grasp handrail with one hand and with the other hand, raise slam-lock handle UP. Lower handrail to platform.
- h. STOW PLATFORM: Press and hold → /IN switch and the red IN/LOCKOUT switch until the lift is fully stowed. The lift will raise or lower to the proper stowing level and retract into the vehicle.


3. MANUAL/EMERGENCY OPERATION

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

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


a. 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 there are no obstacles in the path of lift.

 WARNING!
USE CAUTION TO AVOID INJURY
DO NOT ATTEMPT TO MANUALLY DEPLOY OR STOW THE LIFT USING LESS THAN TWO PEOPLE. MANUALLY DEPLOYING AND/OR STOWING OF THIS LIFT REQUIRES FORCES 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. Manually Lower Platform

 **CAUTION!**

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

- 1) Refer to **Figure 2-9**. Engage pump release valve with handle extension. Make sure the notches at the end of handle are fully engaged by pin on release valve. Slowly twist the handle 1/4-turn COUNTER-CLOCKWISE until the lift platform begins to lower.

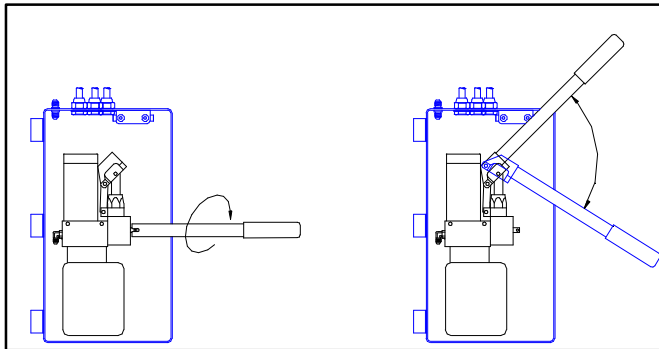



FIGURE 2-9: LIFT OPERATION – PLATFORM MANUAL RAISING

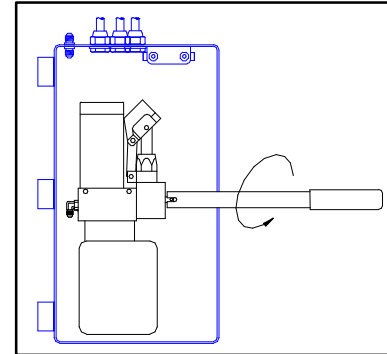
 **CAUTION!**

When raising lift, **do not** raise the platform more than 1-1/2" above vehicle floor level. Excessive travel will make it difficult to board platform and may damage the bridgeplate actuator. The rear edge of bridge plate must rest flat on vehicle floor.

- 2) Engage pump release valve with handle extension. Pump handle to raise platform to vehicle floor level.
- 3) The lift passenger and attendant must follow the instructions when entering or exiting vehicle (as described in Operating Instructions section of this manual).

c. **Manually Raise Platform**

- 1) 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.



**FIGURE 2-10: LIFT OPERATION – PLAT-
FORM MANUAL LOWERING**

- 2) Allow the platform to reach ground level.
- 3) Insert the pump handle extension onto manual backup pump release valve. Twist the handle **CLOCKWISE** until lightly-snug and remove.
- 4) Using the rollstop manual control knob and one hand on the rollstop, **OPEN** the rollstop.
- 5) 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. **Manually Stow Platform**

- 1) Using the manual back-up pump, raise or lower the platform to the deploy/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.
- 2) 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.

- 3) Use **ONE PERSON ON EACH SIDE** of the lift to prevent mechanical binding.
- 4) 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. **Manually Stow Platform if there is a Hydraulic Failure**

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


- 1) Raise or lower platform to the deploy/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.
- 2) Using the rollstop manual control knob and one hand on the rollstop, close the rollstop until it latches.

 WARNING!
MANUALLY DEPLOYING OR STOWING OF THIS PLATFORM 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 USING EXTREME CAUTION AND PROPER LIFTING TECHNIQUE:
ALWAYS LIFT WITH LEGS AND NOT BACK WHEN ATTEMPTING TO LIFT HEAVY OBJECTS.

- 3) Use one person on each side of lift to prevent mechanical binding.
- 4) With fingers up and palms forward, push platform forcefully to start it moving inward. As the platform begins to move inward, maintain a constant pushing motion until it comes to rest completely inside lift enclosure.

III. MAINTENANCE

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

 **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 will void warranty and may result in unsafe operating conditions.

A. MAINTENANCE INFORMATION

Additional maintenance information is available in the Mirage F9B Series Export Use Service manual, part number 32DF9B02. 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. 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.

B. MAINTENANCE SCHEDULE

Maintenance inspections must be performed by an authorized Ricon service technician 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**. Service should be increased under conditions of excessive use (more than 10 cycles per day).

TABLE 3-1: MAINTENANCE SCHEDULE	
SERVICE POINT	DESCRIPTION
DAILY SAFETY CHECK (or @ 10 - 20 cycles of operations)	
WITH LIFT IN STOWED POSITION	
Lift Mountings and Support Points	Verify that all lift mounting and support points are in proper order and free from damage. Verify that all mounting bolts are of appropriate grade and fastened properly. Verify carriage stops are fastened properly.
DEPLOY LIFT TO FULL EXTENSION (STOW LEVEL)	
Labeling and Signage	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.
General Operation Stow/Deploy	Listen for any abnormal noises as the lift deploys (i.e., grinding or binding noises). Torque Limit Clutch overloads properly at end of travel. Carriage stops are in place and stop lift squarely.

TABLE 3-1: MAINTENANCE SCHEDULE	
Main Lifting Pivots	<p>Verify carriage/lifting frame/platform pivot pins are installed properly, free from damage and locked in position with proper fasteners.</p> <p>Verify all cotterpins are engaged and secured properly.</p> <p>Verify hydraulic cylinder pivot pins are free from damage and locked in position with proper fasteners.</p>
Platform and Platform Attachment Points	<p>Verify platform operates properly during lift UP/DOWN functions without obstructions.</p> <p>Verify that all welds on carriage brackets, lifting frame and platform mounting brackets are in proper order.</p> <p>Verify that platform mounting brackets are properly fastened to both sides of the platform with the appropriate bolts.</p>
Handrail and Handrail attachment	<p>Verify handrail pivots properly and all fasteners are properly tightened on models so equipped.</p>
RAISE PLATFORM (VEHICLE FLOOR LEVEL)	
Bridge Plate and Bridge Plate Operation	<p>Verify bridge plate functions properly during deploy and stow operations without obstruction(s), and that the lift platform stops at vehicle floor level.</p> <p>Verify the pneumatic springs and snap rings are present and seated properly.</p>
LOWER PLATFORM (GROUND LEVEL)	
Rollstop and Rollstop Operation	<p>Verify rollstop operates properly on contact with the ground.</p> <p>Verify rollstop opens, closes and locks properly without obstructions</p> <p>Verify roll stop return springs are in proper order, if so equipped.</p>
STOWING LIFT	
Proper Stow Level	<p>Verify lift seeks proper stow level (Section IV, Repair).</p>
Torque Limit Clutch	<p>Torque Limit Clutch overloads properly at end of travel.</p>
BI-WEEKLY SAFETY CHECK (or @ 140 - 180 cycles of operation)	
Labeling, Decals, and Cleaning	<p>Verify that the Rated Load Capacity decal is affixed properly, clearly visible, and legible. Replace if necessary.</p> <p>Verify that all Operating Instruction decals are affixed properly, clearly visible, and legible. Replace if necessary.</p> <p>Verify that serial number is clearly marked and legible.</p> <p>After washing vehicle, verify that points requiring lubrication are lubricated (Section IV, Repair):</p> <ul style="list-style-type: none"> • Rollstop pivot points and springs. • Handrail slam locks and pivot points. • Bridgeplate pivot points, actuator pivot points, and cam followers (Section IV, Repair).
Stow/Deploy Drive Mechanism	<p>Verify there are no obstructions in the side channels.</p>

THREE MONTH SAFETY CHECK (or @ 900 - 1000 cycles of operation)	
Stow Limit	Verify the lift will seek the proper level when stow mode is selected. Check limit switch settings and adjust if necessary (Section IV, Repair) .
Drive Chains and Shafts	Spray lubricant, Curtisol Red Grease #88167, on final and primary drive chains and wipe clean any 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 clean any 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 fluid (or equivalent U.S. mil spec H5606G oil).
ANNUAL SAFETY CHECK (or @ 3600 - 4000 cycles of operation)	
Stow/Deploy Drive Mechanism	Verify that the torque limit clutch operates within recommended tolerances (Section IV, Repair) .
Cam Followers	Grease cam followers with an approved grease and wipe clean any 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 clean any excess grease from drive chains and surrounding areas.
Hydraulic Pump Unit	Extract, refill, extract again, and refill Hydraulic Pump Unit to the required "full" line at rear of pump using Texaco 01554 Aircraft Hydraulic Oil (or equivalent U.S. mil spec H5606G oil) (Section IV, Repair) .
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"> • Hydraulic Cylinder and Flow Control Valve. • Verify that hydraulic hoses are not damaged. • Verify that all seals are seated properly and all fittings are tightly secured.
SEVEN YEAR SAFETY CHECK (or @ 36,000 - 38,000 cycles of operation)	
UP/DOWN Switch	Replace UP/DOWN Switch.
STOW/DEPLOY Switch	Replace OUT/IN Switch.
Pump Motor Brush Assembly	Replace pump motor brushes (Section IV, Repair) .
TEN YEAR SAFETY CHECK	
*RICON CORP. strongly recommends that this lift be refit after five years of use.	
END OF TABLE	

C. LIFT DECALS

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

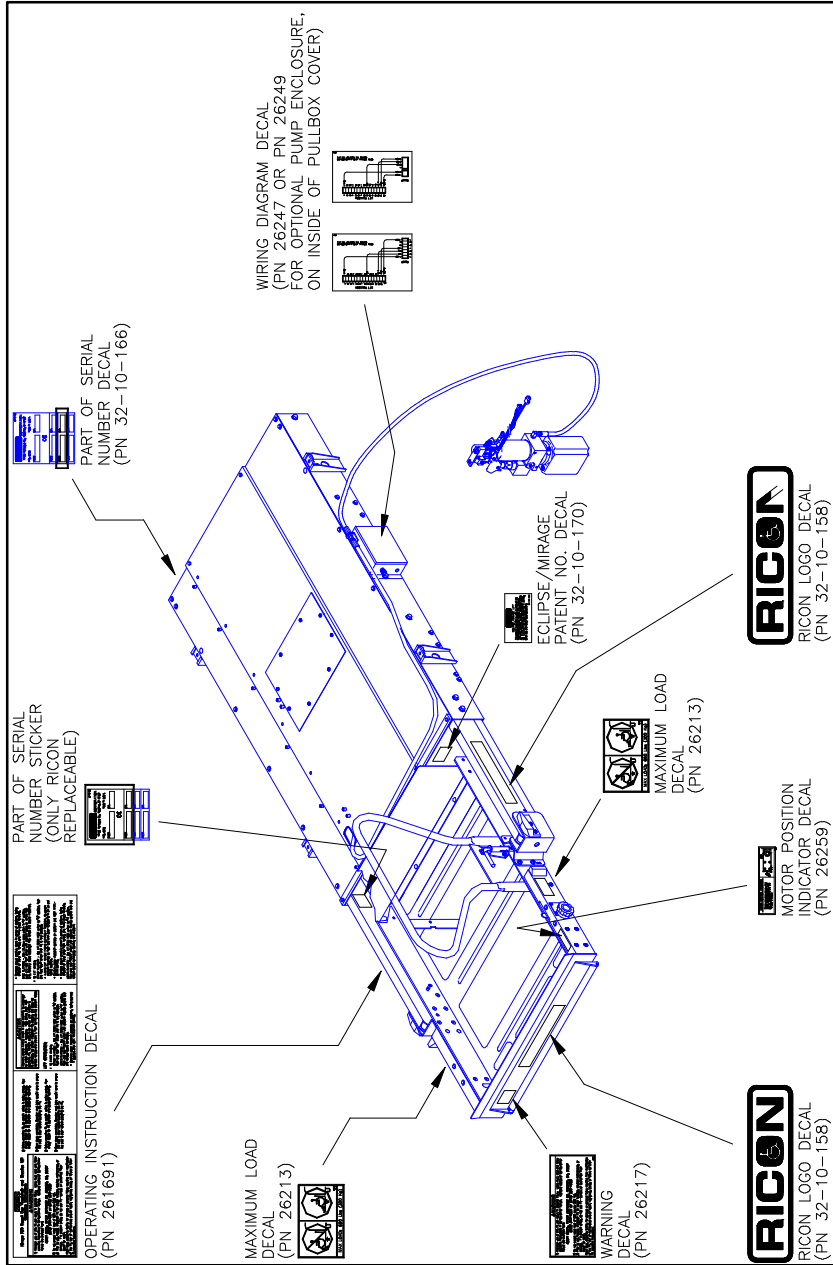


FIGURE 3-1: DECAL LOCATIONS AND PART NUMBERS