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32DSSW01.A

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 by authorized RICON service technicians who perform service and repair.

| Customer Name:     |  |
|--------------------|--|
| Cusioniei name     |  |
| Installing Dealer: |  |
| Date Installed:    |  |
| Serial Number:     |  |
|                    |  |

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# **REVISION RECORD**

| REV         | PAGES | DESCRIPTION OF CHANGE | ECO |
|-------------|-------|-----------------------|-----|
| 32dssw01.   | All   | New release           |     |
| END OF LIST |       |                       |     |

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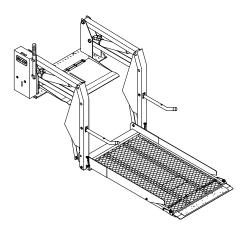
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### I. W-SERIES WHEELCHAIR LIFT INTRODUCTION

The RICON W-Series Wheelchair Lift provides wheelchair access to vans and buses. The patented movement provides smooth, safe entry and exit and lifts up to 800 pounds (364 kilograms). A trained attendant operates it. The lift contains an electro-hydraulic pump with a built-in manual backup pump. If the lift loses electrical power, it can be raised or lowered by hand.



The platform is unfolded from the vehicle (deployed) using the lift control switches. The passenger boards the non-skid platform and the operator uses the control switches to lower the platform to the ground. After the passenger departs, the platform is raised and folded into the vehicle (stowed).

This manual contains warranty information, safety precautions, operating instructions, and maintenance information. It is important to user safety that the lift operator be completely familiar with the operating instructions. Once the lift is installed, it is very important that the lift be properly maintained by following the Ricon recommended maintenance and inspection instructions provided in Chapter III.

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

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

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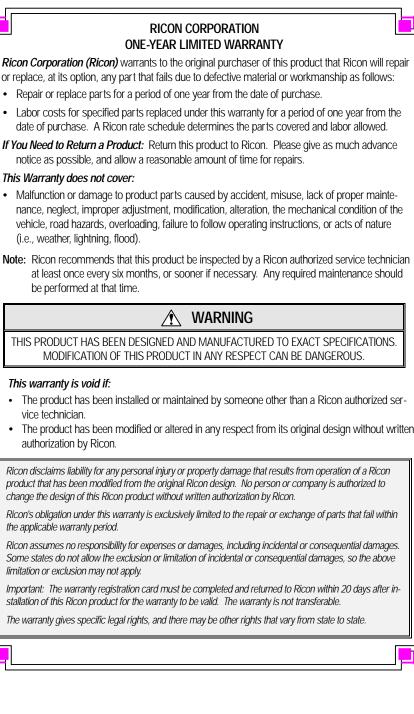
#### RICON ONE-YEAR LIMITED WARRANTY

or replace, at its option, any part that fails due to defective material or workmanship as follows:

notice as possible, and allow a reasonable amount of time for repairs.

at least once every six months, or sooner if necessary. Any required maintenance should be performed at that time.

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### B. 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.

**NOTE:** The Sales or Service personnel must review the Warranty and 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 operation:

- To avoid injury, exercise caution when operating lift and be certain that hands, feet, legs, and clothing are not in the path of platform movement.
- Read and thoroughly understand the operating instructions before attempting to operate.
- Inspect the product before each use. If an unsafe condition is present, such as unusual noises or movements, do not use lift 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 should be maintained at the highest level of performance.

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# D. MAJOR LIFT COMPONENTS

The references used throughout this manual are illustrated in Figure 1-1 and defined in Table 1-1.

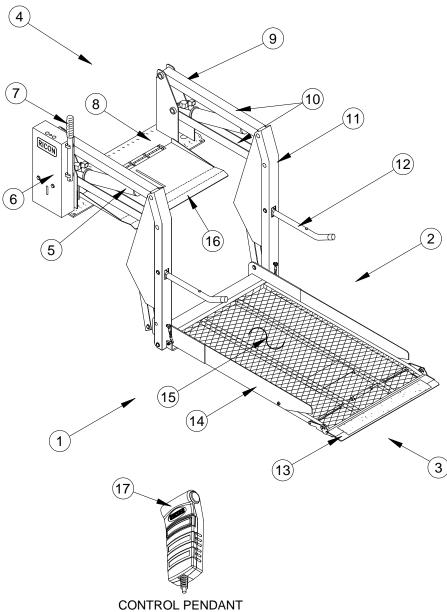


FIGURE 1-1: W-SERIES WHEELCHAIR LIFT

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| REF | NAME  | DESCRIPTION   |
|-----|---|---|
| 1   | Left  | Side references when lift is viewed from outside of vehicle.  |
| 2   | Right   |   |
| 3   | Front   |   |
| 4   | Rear  |   |
| 5   | Hydraulic cylinder<br>(left and right side)                               | Telescoping assemblies, which convert hydraulic pressure lifting force.   |
| 6   | Hydraulic power unit  | Contains pump that produces hydraulic pressure used to ra<br>and fold platform; also contains manual back up-pump and<br>pressure release valve to operate lift manually. |
| 7   | Manual backup pump<br>handle  | Used to operate manual back up-pump when electrical powis not functional.   |
| 8   | Baseplate assembly  | Assembly that is securely bolted to the vehicle floor.  |
| 9   | Serial number location  | Location of serial number decal.  |
| 10  | Top and bottom arms (left and right side)                                 | Upper and lower links that connect vertical arm to base assembly.   |
| 11  | Vertical arm Connects platform and top/bottom arms. (left and right side) |   |
| 12  | Handrails<br>(left and right side)  | Provide a handhold for platform occupant.   |
| 13  | Front rollstop  | Front barrier prevents the wheelchair from slowly or inadve tently rolling off of the platform during platform motion.  |
| 14  | Side barriers<br>(left and right side)                                    | Vertical curbs help confine passenger to platform area.   |
| 15  | Platform  | Lift component where the wheelchair and occupant sit duri<br>Up and Down motions.   |
| 16  | Bridgeplate   | Plate unfolds when platform is at floor level to bridge gap b tween platform and vehicle floor.   |
| 17  | Control pendant   | Hand-held device used to control platform motions.  |

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# II. W-SERIES WHEELCHAIR LIFT OPERATING INSTRUCTIONS

This chapter contains safety precautions, daily safety check instructions, control and indicator descriptions and operating instructions for the RICON W-Series Wheelchair Lift. This chapter must be thoroughly understood before attempting to use the lift.

### A. SAFETY PRECAUTIONS

Comply with the following safety precautions when operating the lift:

- Perform the Daily Inspection described in Table 2-1 (refer to Section B in this chapter).
- Refer to Figure 2-1. Deploying the lift when vehicle is on sloped ground is hazardous. Operate lift with vehicle parked on level ground.

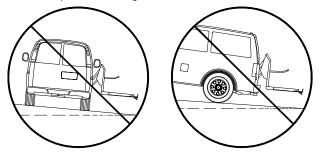


FIGURE 2-1: DO NOT DEPLOY LIFT WHEN VEHICLE IS ON SLOPED GROUND

- Vehicle must be safely parked with parking brake ON before using lift.
- The operator must inspect lift before use. If unusual noises, movements, or other unsafe conditions are noticed, do not use lift and contact an authorized Ricon service technician for repair.
- Read and comply with all warning labels and symbols affixed to wheelchair lift.
- Refer to **Figure 2-2**. Wheelchair occupant must FACE OUTWARD on platform while entering or exiting vehicle. This is necessary due to the possibility that the large rear wheels could roll over the front rollstop.

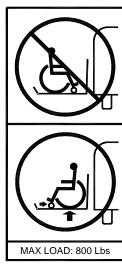


FIGURE 2-2: FACE OUTWARD 32DSSW01.A

- Verify that front rollstop is up before raising or lowering platform.
- Do not rely on an audible threshold warning device to confirm that it is safe to exit the vehicle while facing backwards. This device can be inoperative or unheard, and you might exit backwards when the platform is on the ground!
- When exiting vehicle, the attendant must verify that platform is at vehicle floor level and the front rollstop is up and locked.
- The raised front rollstop prevents slow and unintentional rolling off of the platform. It is NOT intended to stop a fast-moving wheelchair, which might tip forward if the small front wheels collide with the rollstop.
- Be certain wheelchair fits safely on the platform and does not extend over edges of platform or interfere with operation of rollstop.
- Do not operate with a platform load in excess of 800 lbs (364 kg).
- Do not allow arms, legs, or clothing near moving parts.
- The lift is designed to transport ONE wheelchair and its occupant, or a single standee. Do not overload lift.
- Do not stand in front of lift while deploying platform.
- Keep others clear while operating lift.
- Do not allow an untrained person to operate lift.
- Do not allow anyone to stand or walk on the bridgeplate when it is unsupported. A bent bridgeplate can cause interference with platform as its rises or lowers.
- LOCK WHEELCHAIR BRAKES before lift is operated. Powered wheelchairs should have their power turned off and brake set.
- Use extreme care in wet conditions. Wheelchair brakes are less effective if platform or wheels are wet.
- Never leave platform outside of vehicle. Always return platform to stowed position after use
- Do not place large equipment or furniture inside vehicle that may prevent pivoting of your wheelchair. Being able to pivot assures that you can safely exit facing outward.
- Do not load a wheelchair into vehicle if it is too large to pivot freely when inside vehicle.

Be sure these safety precautions have been read and understood. Review them periodically, and ask other attendants or operators to read them as well. If there are any questions, contact Ricon Product Support.

### B. DAILY SAFETY CHECK

Inspect the lift before each use and check that the following conditions are met before operating:

- All functions operate properly. DO NOT use if unusual noises or movements exist, and contact a Ricon authorized Service Technician for repair.
- No objects that can interfere with motion of platform are present.
- General appearance and lubrication are satisfactory and all fasteners are tight.

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# C. PLATFORM MOTIONS

| TABLE 2-1: PLATFORM MOTIONS |  |  |
|-----------------------------|--|--|
| MOTION                      | DESCRIPTION  |  |
| DEPLOY                      | Platform unfolds, or deploys, out of vehicle from stowed position.   |  |
| DOWN                        | Platform is lowered from vehicle floor level to ground level. The rollstop automatically opens (or lowers) when platform contacts ground.    |  |
| <b>I</b> UP                 | Platform is raised from ground level to vehicle floor level. The rollstop automatically closes (or rises) when platform leaves ground level. |  |
| STOW                        | Platform folds into stowed position from vehicle floor level.  |  |
| END OF TABLE                |  |  |

**NOTE:** The up and down functions do not operate if platform is in stowed position.

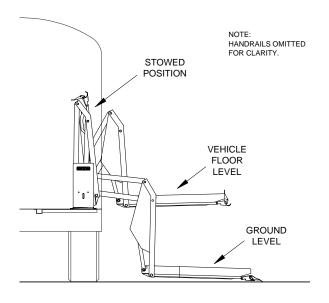


FIGURE 2-3: PLATFORM POSITIONS

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# D. LIFT CONTROLS



THE LIFT IS ALLOWED TO OPERATE ONLY WHEN VEHICLE MANUFACTURER INTERLOCK CIRCUITRY IS ACTIVATED. NEVER ATTEMPT TO OPERATE LIFT WITH INTERLOCK BYPASSED. REFER TO VEHICLE OWNER/OPERATOR MANUAL FOR INTERLOCK INSTRUCTIONS BEFORE OPERATING LIFT.

### CONTROL PENDANT

Refer to **Figure 2-4**. Platform motions are controlled with a hand held, hard-wired remote control pendant. It has two dual-position rocker switches. Pushing, and holding, one end of a rocker switch controls the platform motions. The ends of the rocker switches are referred to here as "buttons". Pushing the DEPLOY button unfolds the platform from vehicle and pushing the STOW button folds platform into vehicle. Pushing the DOWN button lowers the platform towards the ground and pushing the UP button raises the platform towards floor. The pendant is typically stowed on a wall-clip located inside the vehicle.

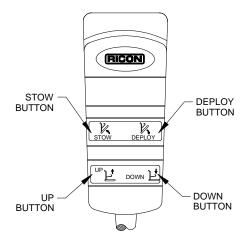


FIGURE 2-4: CONTROL PENDANT

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### ■ ELECTRICAL CONTROLS

# Control System Circuit Breaker

Refer to **Figure 2-5**. The Control System Circuit Breaker is on the hydraulic pump assembly. In the event of a control system short circuit, the circuit breaker button will "pop-up". If pressing and releasing the button does not reset power, **DO NOT** press it and hold. Contact a Ricon authorized service technician for repair.

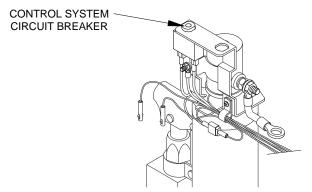


FIGURE 2-5: CIRCUIT BREAKER ON PUMP ASSEMBLY

### Main Circuit Breaker

Refer to **Figure 2-6**. The main circuit breaker is located in the vehicle engine compartment and interrupts electrical power to the lift electrical system when a short circuit occurs. In the event of a short circuit, the circuit breaker reset tab will "flip-down". Rotate as shown to reset. If rotating reset tab does not restore power, **DO NOT** rotate tab and hold it. Contact a Ricon authorized service technician for repair.

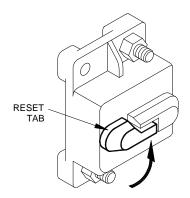


FIGURE 2-6: MAIN CIRCUIT BREAKER

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# MANUAL BACKUP PUMP

Refer to **Figure 2-7**. The manual backup pump is used to operate the lift if electrical power is not available. Controls for the pump are a pump handle used to raise the platform and a pressure release valve to lower it. Instructions for operating the manual pump are provided in the MANUAL OPERATION section.

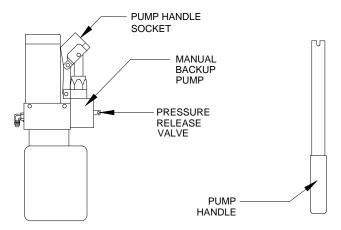


FIGURE 2-7: MANUAL BACK-UP PUMP & HANDLE

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### NORMAL LIFT OPERATION

# **↑** WARNING

 IMPROPER USE OF LIFT CAN RESULT IN PERSONAL INJURY. USERS MUST READ AND FOLLOW OPERATING INSTRUCTIONS. 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 800 POUNDS (364 KG).
- PRIOR TO USE, INSPECT WHEELCHAIR LIFT FOR PROPER FUNCTION, REQUIRED MAINTENANCE, OR DAMAGE. IF A PROBLEM EXISTS, DO NOT USE LIFT AND CONTACT A
  RICON AUTHORIZED SERVICE TECHNICIAN FOR REPAIR.
- THIS LIFT IS FOR USE BY A WHEELCHAIR AND OCCUPANT OR A STANDEE.

RICON CORPORATION DISCLAIMS LIABILITY FOR DAMAGE OR PERSONAL INJURY RESULT-ING 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.
   Provide space for lift operation and passenger boarding.
- The lift operator must verify that the area in the vicinity of the lift is clear before deploying platform. Be certain there are no obstacles where platform will contact ground.
- Completely open vehicle doors adjacent to lift and verify that they are held open.

# **⚠** WARNING

ATTENDANT SHOULD ALWAYS REMAIN NEAR PASSENGER TO RENDER IMMEDIATE ASSISTANCE IF NECESSARY. KEEP OTHERS CLEAR WHEN OPERATING LIFT. BE CERTAIN WHEELCHAIR FITS PROPERLY ON PLATFORM AND DOES NOT CONTACT ROLLSTOP, WHICH WOULD PREVENT IT FROM LOCKING WHEN PLATFORM RISES.

### 1. ENTERING VEHICLE

- a. DEPLOY PLATFORM Push and hold DEPLOY button until platform is completely unfolded at floor level.
- LOWER PLATFORM Push and hold DOWN button until platform contacts ground and rollstop opens completely.
- c. Place wheelchair in center of platform, facing outward, and lock wheelchair brakes.

<u>NOTE:</u> Be certain wheelchair is safely within platform perimeter and does not interfere with operation of front rollstop.

- d. **RAISE PLATFORM** Push and hold UP button while platform rises and then stops automatically at floor level.
- Verify that platform is at vehicle floor level and bridgeplate is resting squarely on rear edge of platform.
- f. Release wheelchair brakes and assist passenger into vehicle.

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g. Refer to "Stowing Platform" section below and stow platform.

### 2. EXITING VEHICLE

- DEPLOY PLATFORM Push and hold DEPLOY button until platform is completely unfolded at floor level.
- b. Verify that platform is at vehicle floor level, the bridgeplate is resting squarely on rear edge of platform, and platform rollstop is up and locked.
- c. Place wheelchair in center of platform, facing outward, and lock wheelchair brakes.



- d. **LOWER PLATFORM** Push and hold DOWN button until platform contacts ground and rollstop opens completely.
- e. Release wheelchair brakes and assist passenger off of platform.
- f. Refer to "Stowing Platform" section below to stow platform.

# 3. STOWING PLATFORM

a. Push and hold STOW button until platform folds completely into vehicle.



Do not release STOW button until platform has folded completely and hydraulic pump motor has stopped running. Be certain platform is completely folded before attempting to close doors.

b. Close vehicle doors.

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# F. MANUAL LIFT OPERATION

# **⚠** WARNING

FOLLOW SAFETY PRECAUTIONS AT BEGINNING OF CHAPTER WHEN USING MANUAL BACKUP SYSTEM TO EXIT VEHICLE.

If lift electrical power is not functional, the lift can be operated manually. Open and secure vehicle doors before operating lift. Ricon recommends that manual lift operation be used only for unloading passengers.

### 1. DEPLOY PLATFORM

a. Refer to **Figure 2-8**. Insert notched end of pump handle into hole in hydraulic pump cover marked "RELEASE VALVE" and engage pump release valve.

# **CAUTION**

Do not open pump release valve more than **1/4-turn**. Opening valve further may cause it to disengage from pump body, which will disable pump.

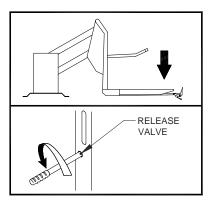


FIGURE 2-8: MANUAL OPERATION

b. Turn valve 1/4 turn counterclockwise to begin unfolding platform. When platform unfolds to vehicle floor level turn valve clockwise to close it; do not lower platform below floor level. The front edge of bridgeplate must rest flat against the rear edge of the platform.

**NOTE:** Do not over-tighten valve when closing it.

c. Place wheelchair in center of platform, facing outward, and lock wheelchair brakes

### 2. LOWER PLATFORM

- a. Refer to Figure 2-8. Turn valve 1/4 turn counterclockwise to begin lowering platform.
- b. Hold valve open until platform settles at ground level. Turn valve clockwise to close it.

**NOTE:** Do not over-tighten valve when closing it.

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# 3. STOW PLATFORM

a. Refer to **Figure 2-9**. Check pump release valve to be certain it is closed. Insert pump handle into pump handle socket. Operate pump to begin raising platform.

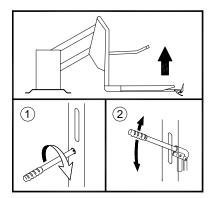


FIGURE 2-9: MANUAL BACK-UP PUMP - RAISE PLATFORM

- b. Operate pump until lift is COMPLETELY folded inside vehicle.
- c. Stow pump handle. Close vehicle doors.

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### III. W-SERIES WHEELCHAIR LIFT MAINTENANCE

R egular maintenance of the RICON W-Series Wheelchair Lift will help optimize its performance and reduce the need for repairs. This chapter contains cleaning instructions and a maintenance schedule.

### A. MAINTENANCE INFORMATION

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 "Technical Documents" and then click on "I agree".

# **CAUTION**

This Ricon product is highly specialized. A Ricon authorized service technician using Ricon replacement parts must perform maintenance and repairs. Modifying or failing to properly maintain this product will void warranty and may result in unsafe operating conditions.

### B. CLEANING

Regular cleaning with mild soap (hand soap or car wash liquid) and drying thoroughly will protect painted lift surfaces. Cleaning is especially important in areas where roads are salted in winter. Make sure that lift pivot points remain clear and clean prior to lubrication.

### C. MAINTENANCE SCHEDULE

Under normal operating conditions, maintenance inspections are required every six months (1750 cycles) and a thorough inspection should be performed at service intervals referenced in **Table 3-1**. Increase service under conditions of heavier use (more than 10 cycles per day).

| TABLE 3-1: MAINTENANCE SCHEDULE         |   |  |  |
|---|---|--|--|
| SERVICE POINT                           | ACTION TO PERFORM   |  |  |
|   | DAILY SAFETY CHECK  |  |  |
| Overall condition                       | Listen for any abnormal noises as lift operates (i.e., grinding or binding noises).   |  |  |
| Control pendant                         | Verify that control pendant is not damaged and cable connectors are tight.  |  |  |
|   | TWO-WEEK SAFETY CHECK   |  |  |
| Overall condition                       | Inspect lift mounting brackets and hardware beneath vehicle to verify that they are not loose or damaged.                               |  |  |
| Electrical wiring                       | Inspect electrical wiring for chafed wire insulation, loose connectors, etc.  |  |  |
| Decals                                  | Verify that all lift decals are affixed properly, clearly visible, and legible. Replace, if necessary.                                  |  |  |
| Handrails                               | Verify that all handrail fasteners are properly tightened.  |  |  |
| Main lifting pivots                     | Verify that all lifting frame pins are installed properly, free from damage and locked in position.                                     |  |  |
| Platform and platform attachment points | Verify that platform motions occur smoothly and without obstruction.  |  |  |
| Bridgeplate                             | Verify that bridgeplate deploys fully when platform stops at vehicle floor level and that it rests evenly across rear edge of platform. |  |  |

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| TABLE 3-1: MAINTENANCE SCHEDULE   |  |  |  |
|---|--|--|--|
| SERVICE POINT   | ACTION TO PERFORM  |  |  |
| Platform rollstop   | Be certain that rollstop opens or closes properly when it contacts ground or leaves the ground.  |  |  |
| Hydraulic power unit  | <u></u> CAUTION  |  |  |
|   | Add fluid only when platform is at ground level. Adding fluid while platform is raised will cause reservoir to overflow when platform is lowered.  |  |  |
|   | Check for visible hydraulic fluid leakage.   |  |  |
|   | Verify that backup pump manual release valve is lightly closed.  |  |  |
| SIX-MONTI   | SIX-MONTH SAFETY CHECK (OR @ 1750 CYCLES OF OPERATION)   |  |  |
| Handrails   | Be certain that all handrail fasteners are properly tightened.   |  |  |
| Cleaning and lubrication  | Clean lift with a mild soap and wipe dry. Use a soft cloth to cover all surfaces with light oil (avoids metal rusting). Remove excess oil.   |  |  |
|   | Following directions on container, spray lubricant (Curtisol Red Grease No.88167 or WD-40) where specified in Chapter III of service manual 32DSSW02. Remove excess grease from surrounding areas. |  |  |
| Hydraulic power unit  | While platform is at ground level, be certain that pump hydraulic fluid level is at FULL level. Add only Texaco 01554 Aircraft Hydraulic Oil or equivalent U.S. mil spec H5606G fluid.             |  |  |
| CAUTION  SAFETY CHECK MUST BE PERFORMED BY A RICON AUTHORIZED SERVICE TECHNICIAN. |  |  |  |
| ANNUAL SAFETY CHECK (OR @ 3500 CYCLES OF OPERATION)                               |  |  |  |
| Hydraulic cylinder, hoses,  | Check hydraulic cylinder for evidence of leaks.  |  |  |
| and fittings  | Inspect hydraulic hoses for damage.  |  |  |
|   | Verify that all fittings are tightly secured.  |  |  |
| END OF TABLE  |  |  |  |

**3-2** 32DSSW01.A