



Ricon®

A **Wabtec** subsidiary

**R2000 SIX-WAY
POWER SEAT BASE™**



Operator Manual

riconcorp.com

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32DPSB01.A.1

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Other U.S. and foreign patents pending.
Printed in the United States of America

This RICON product must be installed and serviced by a Ricon dealer or qualified service technician.

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

Customer Information	
Customer name	
Installing dealer	
Date installed	
Serial number	

REVISION RECORD

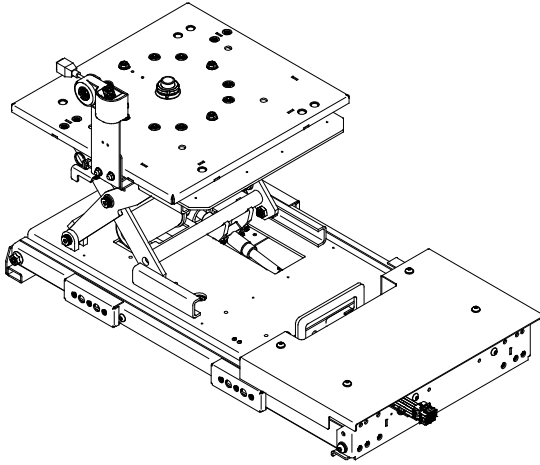
REV	PAGES	DESCRIPTION OF CHANGE	ECR/ECO
32DPSB01. A.1	Cvr	Update to company logo.	
	1-1	Update to company address	
	1-4	Update to Figure 1-1.	
	1-4	Update to figure items.	
	2-2	Update to company address.	
	2-4	Added Fore/Aft Emergency Release	
	2-4	Added Figure 2-4. Fore/Aft Emergency Release	
	2-4	Added Swivel/Rotate Emergency Release	
	2-5	Added Figure 2-5. Swivel/Rotate Emergency Release.	

<u>Chapter:</u>	<u>Page</u>
I. INTRODUCTION	1-1
A. PRODUCT WARRANTY	1-2
B. SHIPMENT INFORMATION	1-3
C. GENERAL SAFETY PRECAUTIONS	1-3
D. MAJOR POWER SEAT BASE COMPONENTS	1-4
II. OPERATING INSTRUCTIONS	2-1
A. SAFETY PRECAUTIONS	2-1
B. DAILY SAFETY CHECK	2-1
C. POWER SEAT BASE OPERATION	2-2
1. CONTROLS AND FUNCTIONS	2-2
2. OPERATING POWER SEAT BASE	2-3
A. TO TRANSFER FROM WHEELCHAIR TO SEAT	2-3
B. TO TRANSFER FROM SEAT TO WHEELCHAIR	2-4
C. FORE/AFT EMERGENCY RELEASE	2-4
D. SWIVEL/ROTATE EMERGENCY RELEASE	2-4
III. MAINTENANCE	3-1
A. MAINTENANCE SCHEDULE	3-1

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I. INTRODUCTION POWER SEAT BASE

The Ricon R2000 Six Way™ Power Seat Base assists the transfer of a person from a wheelchair to an interior vehicle seat, and vice versa. The seat base provides 20" (50.8 centimeters) of front-to-rear travel, 7.0" (17.8 centimeters) of up and down travel, plus 120° of right swivel and 120° degrees of left swivel. An additional 60° of right and 60° left swivel are available, through minor adjustments, which can provide up to 180° of right and left swivel. The OEM seat installs onto the top rotate plate of the seat base. It uses a scissors-arm lifting mechanism with a capacity of 500 pounds (227 kilograms).



The Ricon R2000 Six Way Power Seat Base is installed underneath the OEM seat to facilitate the transfer from a wheelchair to an interior vehicle seat, and vice versa. The Ricon R2000 Six Way™ Power Seat Base can be installed at either the driver or passenger seat position. This manual contains operation, minor service and maintenance instructions for the R2000 Six Way™ Power Seat Base. For installation instructions, please refer to the service manual. Once the seat base is installed, it is very important that it be properly maintained by following the Ricon recommended cleaning, lubrication and inspection instructions. If there are questions about this manual, or you need copies, please contact Ricon Product Support at the following location:

Ricon Corporation
1135 Aviation Rd.
San Fernando, CA 91340 (818) 267-3000
Outside (818) Area Code (800) 322-2884
Website www.riconcorp.com
Vapor Ricon Europe Ltd.
Meadow Lane
Loughborough, Leicestershire..... 0044 (0) 1509 635 920
LE 11 1HS United Kingdom
Website www.riconuk.com

A. PRODUCT WARRANTY

RICON CORPORATION
ONE-YEAR LIMITED WARRANTY

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

- Repair or replace parts for a period of one (1) year from date of purchase. A complete list of parts covered by this warranty can be obtained from a Ricon dealer.

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

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

This Warranty Does Not Cover:

- Labor or service charges (these may be covered separately by the installing dealer).
- 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 that this product be inspected by a Ricon dealer or qualified service technician at least once every six months, or sooner if necessary. Required maintenance should be performed at that time.

 **WARNING**

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

This Warranty is Void If:

- The product has been installed or maintained by someone other than a Ricon dealer or qualified 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 and the authorized labor to accomplish said repair.

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. There may be other rights that vary in each state.

B. SHIPMENT INFORMATION

Because of the specialized nature of the product, Ricon does not sell directly to the end user. Instead, the product is distributed through the worldwide network of Ricon dealers, who perform sales 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.
- 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 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.

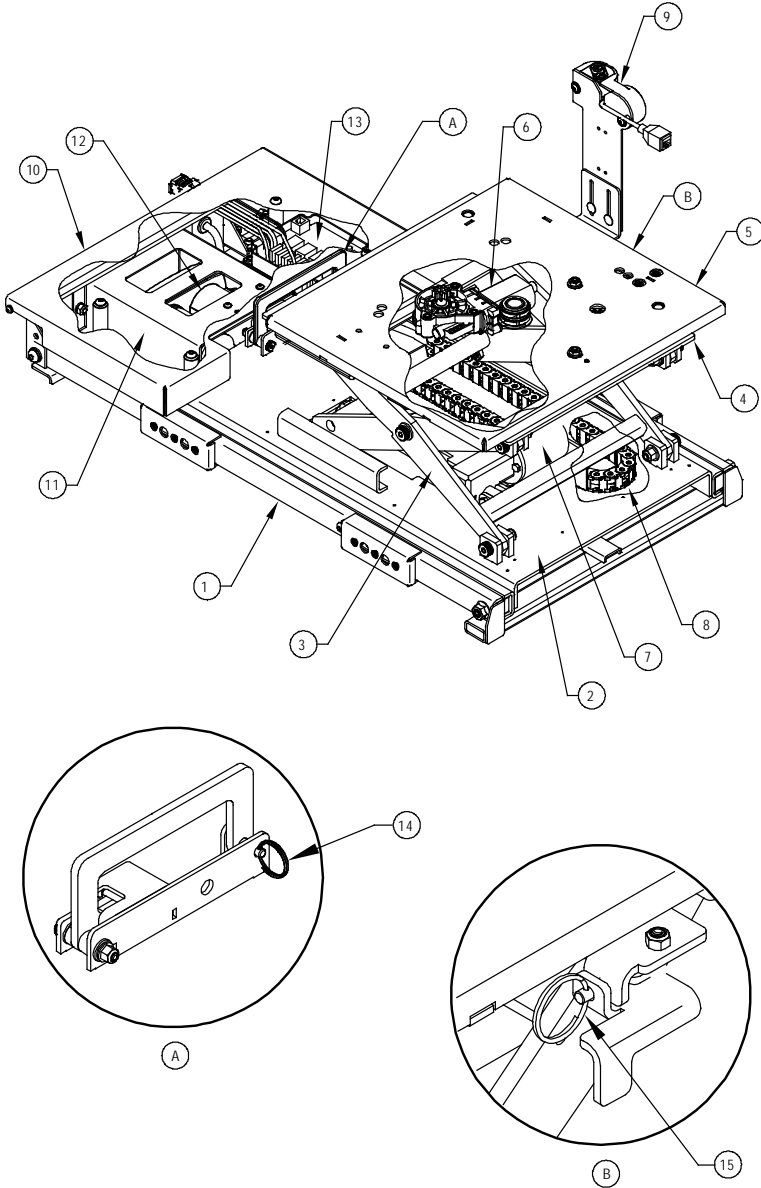
C. GENERAL SAFETY PRECAUTIONS

The following general safety precautions must be followed during seat base operation:

- To avoid injury, exercise caution when operating and be certain that hands, feet, legs, and clothing are clear of seat base.
- 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 exist, do not use seat base until the problem is corrected.
- The product requires periodic maintenance. The product should be maintained at the highest level of performance.

D. MAJOR POWER SEAT BASE COMPONENTS

Component references used through out this manual are illustrated in **Figure 1-1** and defined in **Table 1-1**. Refer to the **Service Manual, Chapter IV** for more details. The illustration below is configured for installation on drivers side of vehicle.



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FIGURE 1-1: R2000 SIX WAY POWER SEAT BASE MAJOR COMPONENTS

Table 1-1: Power Seat Base Major Component Terms	
TERM	DESCRIPTION
1	RAIL BASE ASSEMBLY
2	LOWER CROSSMEMEBER ASSEMBLY
3	SCISSOR ASSEMBLY
4	TOP PLATE ASSEMBLY
5	ROTATE PLATE ASSEMBLY
6	PSB ROTATE MOTOR
7	RAISE/LOWERACTUATOR
8	CABLE TRACK
9	USER INTERFACE
10	FOOTBOARD ASSEMBLY
11	FORE/AFT ACTUATOR COVER
12	FORE/AFT ACTUATOR
13	CONTROLLER ASSEMBLY
14	LOCK PIN – FORE/AFT EMERGENCY RELEASE
15	LOCK PIN ROTATE EMERGENCY RELEASE
END	


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II. OPERATING INSTRUCTIONS

This chapter contains operating instructions for the Ricon R2000 Six-Way™ Power Seat Base. These instructions must be thoroughly understood by the operator and/or attendant before operating the Power Seat Base.

A. SAFETY PRECAUTIONS

Comply with the following safety precautions when operating the Power Seat Base:

 WARNING
<p>THE AIRBAG CONTROL MODULE THAT DEPLOYS THE AIRBAGS IS LOCATED ON THE FLOOR BENEATH THE SEATS, ON SOME MODELS. DO NOT PLACE OBJECTS BENEATH THE SEAT, AS THEY COULD CONTACT THE AIRBAG CONTROL MODULE AS A RESULT OF THE POWER SEAT BASE MOVEMENT, CAUSING THE AIRBAGS TO DEPLOY.</p>

- The vehicle should be stationary when adjusting the Power Seat Base.
- Refer to **Figure 2-1**. The Power Seat Base should be adjusted with the vehicle parked on level ground, or near level.

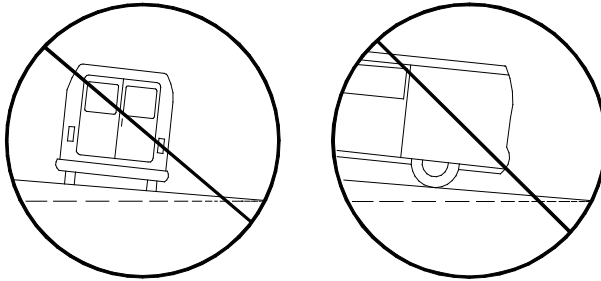


FIGURE 2-1: DO NOT ADJUST SEAT BASE IF VEHICLE IS ON STEEPLY SLOPED GROUND

- Do not operate with a load in excess of 500 lbs. (227 kg).
- Do not place arms, legs, or clothing in or near moving parts of the Power Seat Base.
- Keep others clear while operating Power Seat Base.
- Do not allow an untrained person to operate Power Seat Base.

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

B. DAILY SAFETY CHECK

Check that the following conditions are met before operating the Power Seat Base:

- If unusual noises or movements exist, DO NOT use seat base and contact a Ricon dealer or qualified technician for repair.
- No objects are present that may interfere with operation of the Power Seat Base.

C. POWER SEAT BASE OPERATION

**WARNING**

1. IMPROPER USE OF THE POWER SEAT BASE CAN RESULT IN PERSONAL INJURY. USERS MUST READ AND FOLLOW THE OPERATING INSTRUCTIONS. ADDITIONAL COPIES OF THE SERVICE/OWNER MANUAL ARE AVAILABLE FROM:

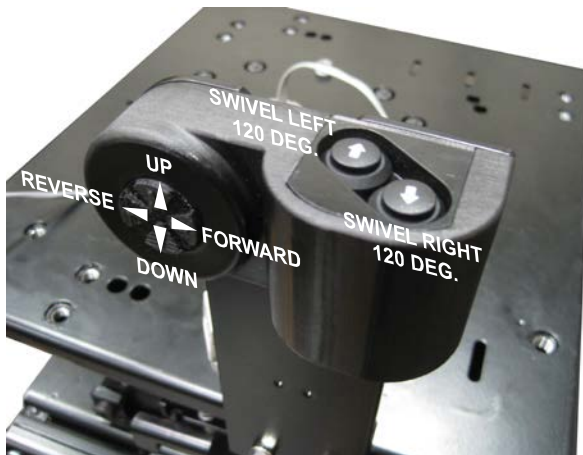
RICON CORPORATION
1135 Aviation Road
San Fernando, CA 91340
(818) 267-3000 OR (800) 322-2884

2. DO NOT EXCEED THE RATED LOAD CAPACITY OF 500 LBS. (227 KG).
3. PRIOR TO USE, INSPECT THE POWER SEAT BASE FOR PROPER FUNCTION, DAMAGE, AND CURRENT MAINTENANCE. IF A PROBLEM EXISTS, DO NOT USE THE POWER SEAT BASE AND CONTACT A RICON DEALER OR A QUALIFIED TECHNICIAN FOR REPAIR.

RICON CORPORATION DISCLAIMS LIABILITY FOR DAMAGE OR PERSONAL INJURY RESULTING FROM IMPROPER INSTALLATION, MODIFICATION TO THE POWER SEAT BASE, LACK OF MAINTENANCE OR REPAIR, NEGLIGENCE, ABUSE OR FAILURE TO FOLLOW OPERATING INSTRUCTIONS.

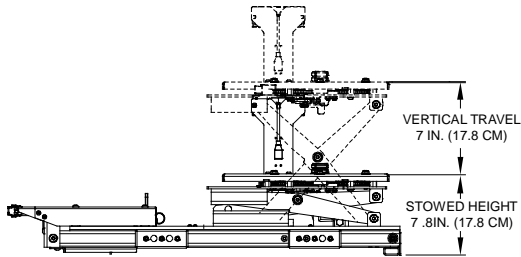
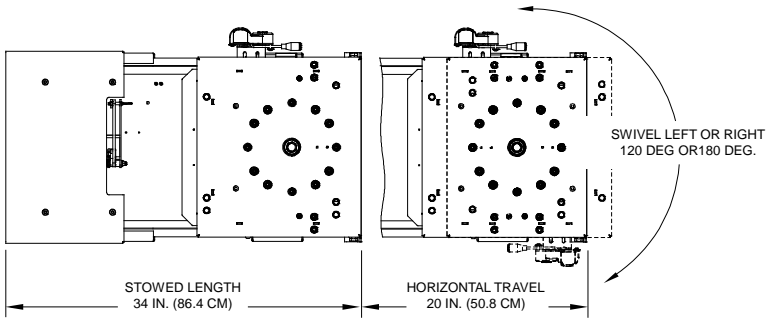
1. CONTROLS AND FUNCTIONS

Refer to **Figures 2-2 and 2-3** (following page). The R2000 Six Way™ Power Seat Base is operated by momentary-type switches on the User Interface. The switches provide the movements of up/down, forward/reverse, and swivel right/swivel left. The switches must be held ON until motion stops; releasing a switch will halt motion. Seat motion will cease automatically at the end of its travel. Make sure that the operator is familiar with each switch function before using the Power Seat Base.



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Figure 2-2: POWER SEAT BASE USER INTERFACE



RSM0055401

FIGURE 2-3: POWER SEAT BASE MOVEMENTS

2. OPERATING POWER SEAT BASE

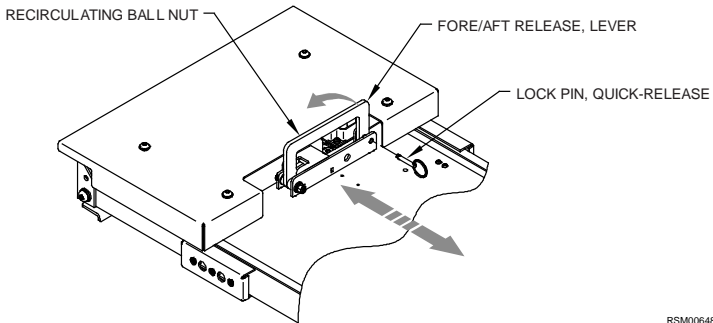
WARNING
DO NOT PLACE ARMS, LEGS, OR CLOTHING IN OR NEAR MOVING PARTS.

a. To transfer from wheelchair to seat:

WARNING
THE AIRBAG CONTROL MODULE THAT DEPLOYS THE AIRBAGS IS LOCATED ON THE FLOOR BENEATH THE SEATS ON SOME MODELS. DO NOT PLACE ANY OBJECTS BENEATH THE SEAT, AS THEY COULD CONTACT THE AIRBAG CONTROL MODULE AS A RESULT OF THE POWER SEAT BASE MOVEMENT, CAUSING THE AIRBAGS TO DEPLOY.

- ◆ Press and hold the "Reverse" switch towards the rear to move the seat completely back.
- ◆ Press the "Up or Down" switch until the seat reaches a position **SLIGHTLY LOWER** than the wheelchair seat.
- ◆ Press and hold the "Swivel Right or Left" switch until the seat rotates to a position that will allow easy transfer (usually parallel to wheelchair).
- ◆ **LOCK WHEELCHAIR BRAKES** and transfer into the seat.
- ◆ After the transfer is complete rotate the seat to face forward, and adjust to a comfortable height.

- b. To transfer from seat to wheelchair**
- ◆ Press and hold the "Reverse" switch towards the rear to move the seat completely back.
 - ◆ Press the "Swivel Right or Left" switch until the seat rotates to a position that will allow easy transfer (usually parallel to wheelchair).
 - ◆ Press and hold the "Up or Down" switch until the seat reaches a position **SLIGHTLY HIGHER** than the wheelchair seat.
 - ◆ Verify that the **WHEELCHAIR BRAKES ARE LOCKED** and then transfer into the wheelchair.
- c. Fore/Aft Emergency Release**
- The Ricon R2000 Six-Way™ Power Seat Base is fitted with an Emergency Release on the Fore/Aft Drive Actuator. The system is designed so that the lower Crossmember can be de-coupled from the drive enabling the seat to be retracted and the occupant extracted in case of Emergency.
- ◆ To decouple the system:
 - i. Refer to **Figure 2-4**. Pull Lock Pin, Quick-Release.
 - ii. Raise the Release handle.



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FIGURE 2-4: FORE/AFT EMERGENCY RELEASE

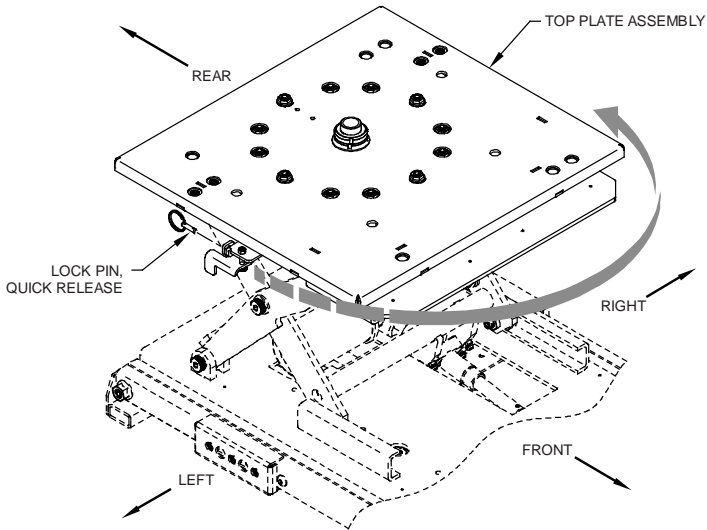
- ◆ To reconnect the system:
 - i. Slide Lower Crossmember forward so that housing on front of Lower Crossmember fits over recirculating ball nut block assembly.
 - ii. Align Emergency Release Lever so that locking tab fits into rebate on Recirculating Ball Nut block.

NOTE: Ensure that wedge surfaces are properly installed on both the ball nut block assembly and Emergency Release Lever.
 - iii. Close Emergency Release Lever and re-insert Lock Pin, Quick-Release.
- d. Swivel/Rotate Emergency Release**

The Ricon R2000 Six-Way™ Power Seat Base is fitted with an Emergency release on the rotate drive motor mounting bracket. The system is designed so that the drive pinion on the rotate motor can be de-

coupled from the ring gear enabling the seat to be rotated and the occupant extracted in case of emergency.

- ◆ To decouple the system:
 - i. Refer to **Figure 2-5**. Pull Lock Pin, Quick-Release.
 - ii. Pull the release handle.



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FIGURE 2-5: SWIVEL/ROTATE EMERGENCY RELEASE

- ◆ To reengage the rotate function:
 - i. Refer to **Figure 2-5**. Push release back to closed position.
NOTE: When doing so, ensure seat is free to rotate to ensure Rotate Motor Pinion meshes properly with the Ring Gear and does not bind (i.e. result in metal to metal gear contact)
 - ii. Re-insert the Locking Pin.

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This chapter contains cleaning instructions, a maintenance schedule, and decal information that applies to R2000 Six Way™ Power Seat Base. Regular maintenance of the R2000 Six Way™ Power Seat Base will provide optimum performance and reduce the need for repairs.

A. ADDITIONAL MAINTENANCE INFORMATION

Additional maintenance information is available in the R2000 Six Way™ Power Seat Base service manual, part number 32DPSB02. This manual is available from Ricon in printed hard copy, or at the Ricon website in PDF format. The website is located at www.RiconCorp.com. At the website, click on "Technical Documents", "I agree", and then "Service Manuals".

 WARNING
THIS RICON PRODUCT IS HIGHLY SPECIALIZED. MAINTENANCE AND REPAIRS MUST BE PERFORMED BY A RICON DEALER OR QUALIFIED SERVICE TECHNICIAN USING RICON REPLACEMENT PARTS. MODIFYING OR FAILING TO PROPERLY MAINTAIN THIS PRODUCT WILL VOID THE WARRANTY, AND MAY RESULT IN UNSAFE OPERATING CONDITIONS.

B. CLEANING

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

C. MAINTENANCE SCHEDULE

Refer to cycle counter located on rear side of hydraulic power unit. Under normal operating conditions, maintenance inspections are required at the frequencies listed in Table 3-1. Ten cycles is considered an average number of cycles for one day.

TABLE 3-1: SIX MONTH SAFETY CHECK	
SERVICE POINT	ACTION TO PERFORM
Pivot point and fastener tightness.	Inspect for looseness and tighten as necessary.
Rail Base, Lower Crossmember, and Top Plate assembly rail lubrication.	Apply white lithium grease as necessary.
Lift Actuator assembly ball screw lubrication.	Apply white lithium grease as necessary.
Fore/Aft actuator assembly ball screw lubrication	Apply white lithium grease as necessary
Rotate actuator ring gear lubrication	Apply white lithium grease as necessary
Electrical harness routing.	Inspect and adjust as necessary.
END OF TABLE	

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