



*Innovation in Mobility*

***MIRAGE™  
F9B Series  
Export Use  
Wheelchair and Standee Lift***

[PRINT ENTIRE MANUAL](#)

[TABLE OF CONTENTS](#)

**Service Manual**

09/23/02

32DF9BE02.B

©99-2002 RICON CORPORATION  
All Rights Reserved

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 service manual is for use by qualified service technicians, and is not intended for use by non-professionals (do-it-yourselfers). The manual provides essential instructions and reference information, which supports qualified technicians in the correct installation and maintenance of Ricon products.**

**Qualified service technicians have the training and knowledge to perform maintenance work properly and safely. For the location of a Ricon authorized service technician in your area, call Ricon Product Support at 1-800-322-2884.**

Customer Name: \_\_\_\_\_

Installing Dealer: \_\_\_\_\_

Date Installed: \_\_\_\_\_

Serial Number: \_\_\_\_\_

## **REVISION RECORD**

<b>REV</b>	<b>PAGES</b>	<b>DESCRIPTION OF CHANGE</b>	<b>ECR / ECO</b>
32DF9BE02 .A	ALL	New release in two-book format.	3802/4820
32DF9BE02 .B	Inside Cover	Updated disclaimer on inside cover.	3990/4918
<b>END OF LIST</b>			

## TABLE OF CONTENTS

<i>Chapter:</i>		<i>Page</i>
I.	INTRODUCTION.....	1-1
A.	RICON ONE-YEAR LIMITED WARRANTY .....	1-1
B.	SHIPMENT INFORMATION .....	1-3
C.	GENERAL SAFETY PRECAUTIONS.....	1-3
D.	MAJOR LIFT COMPONENTS .....	1-4
II.	INSTALLATION.....	2-1
A.	MECHANICAL INSTALLATION .....	2-1
1.	LIFT LOCATION .....	2-1
2.	LIFT MOUNTING.....	2-1
3.	AUXILIARY EQUIPMENT MOUNTING.....	2-2
B.	ELECTRICAL .....	2-3
1.	INSTALL MAIN CIRCUIT BREAKER .....	2-2
2.	ROUTE MAIN POWER CABLE.....	2-2
3.	ROUTE GROUNDING STRAP.....	2-3
4.	CONNECT MAIN CIRCUIT BREAKER TO BATTERY .....	2-3
5.	SAFETY INTERLOCKS.....	2-3
C.	FINAL ADJUSTMENTS .....	2-3
1.	PLATFORM TRAVEL LIMIT ADJUSTMENT.....	2-3
2.	SET THE VERTICAL TRAVEL LIMIT SWITCH .....	2-4
3.	SET THE THRESHOLD GAP.....	2-4
4.	BRIDGEPLATE ADJUSTMENT .....	2-5
D.	VERIFY INSTALLATION.....	2-5
E.	CUSTOMER ORIENTATION .....	2-6
III.	MAINTENANCE.....	3-1
A.	MAINTENANCE SCHEDULE .....	3-1
B.	TROUBLESHOOTING .....	3-3
1.	INTERLOCK INDICATOR DIAGNOSTICS .....	3-3
2.	LIFT OPERATIONAL TROUBLESHOOTING .....	3-4
3.	LIFT MAINTENANCE TROUBLESHOOTING.....	3-5
C.	ELECTRICAL WIRING DIAGRAMS .....	3-8
1.	DIAGRAM LEGEND .....	3-8
2.	LIMIT SWITCH STATE DESCRIPTION .....	3-11
3.	WIRING DIAGRAM.....	3-12
IV.	MAJOR LIFT SYSTEM REPAIR.....	4-1
A.	LIFT SERVICE ACCESS .....	4-1
B.	TRAVELING FRAME .....	4-1
1.	REMOVAL OF TRAVELING FRAME .....	4-1
2.	TRAVELING FRAME INSTALLATION .....	4-2
C.	PLATFORM.....	4-2
1.	PLATFORM REMOVAL.....	4-2
2.	PLATFORM INSTALLATION .....	4-3
D.	BRIDGEPLATE MAINTENANCE AND ADJUSTMENT .....	4-3
1.	BRIDGEPLATE LUBRICATION .....	4-3
2.	BRIDGEPLATE ADJUSTMENT .....	4-3
E.	ROLLSTOP LUBRICATION.....	4-3

<b>F. LIFTING FRAME .....</b>	<b>4-4</b>
1. LIFTING FRAME REMOVAL .....	4-4
2. LIFTING FRAME INSTALLATION .....	4-5
<b>G. DEPLOYMENT SYSTEM REFERENCE DIAGRAMS .....</b>	<b>4-6</b>
<b>H. DEPLOYMENT SYSTEM STOW/DEPLOY MOTOR .....</b>	<b>4-7</b>
1. STOW/DEPLOY MOTOR REMOVAL.....	4-7
2. STOW/DEPLOY MOTOR INSTALLATION.....	4-8
<b>I. GEAR BOX .....</b>	<b>4-8</b>
<b>J. DRIVE CHAINS .....</b>	<b>4-8</b>
1. DRIVE CHAIN REMOVAL .....	4-8
2. DRIVE CHAIN INSTALLATION .....	4-9
3. DRIVE CHAIN ADJUSTMENT .....	4-9
<b>K. DEPLOYMENT SYSTEM TORQUE LIMIT CLUTCH.....</b>	<b>4-10</b>
1. TORQUE LIMIT CLUTCH REMOVAL .....	4-10
2. TORQUE LIMIT CLUTCH INSTALLATION .....	4-10
3. TORQUE LIMIT CLUTCH ADJUSTMENT .....	4-11
<b>L. DEPLOYMENT SYSTEM DRIVE SHAFTS.....</b>	<b>4-11</b>
1. DRIVE SHAFT REMOVAL.....	4-11
2. DRIVE SHAFT INSTALLATION.....	4-12
<b>M. DEPLOYMENT SYSTEM GEAR RACK AND PINION.....</b>	<b>4-12</b>
1. GEAR REMOVAL .....	4-12
2. GEAR INSTALLATION .....	4-12
<b>N. HYDRAULIC SYSTEM .....</b>	<b>4-13</b>
1. HYDRAULIC POWER UNIT (SYSTEM FLUSH AND FLUID RENEWAL) .....	4-13
2. HYDRAULIC PUMP MOTOR.....	4-13
3. HYDRAULIC CYLINDER .....	4-14
4. HYDRAULIC HOSES .....	4-16
5. BLEEDING OF HYDRAULIC SYSTEM .....	4-17
<b>O. ELECTRICAL CONTROL SYSTEM .....</b>	<b>4-17</b>
1. LIFT MODE ENABLE CIRCUIT (OUT SWITCH).....	4-17
2. AUTOMATIC STOW LEVEL CONTROL CIRCUIT DESCRIPTION.....	4-18
3. STOW LEVEL ALIGNMENT CHECK PROCEDURES .....	4-18
4. ADJUSTMENT OF THE AUTOMATIC STOW LEVEL ALIGNMENT SYSTEM .....	4-19
5. VERTICAL TRAVEL LIMIT CIRCUIT .....	4-20
6. LIMIT SWITCH REPLACEMENT .....	4-20
7. PUMP MOTOR CONTRACTOR .....	4-20
8. CIRCUIT PROTECTION DEVICES .....	4-20
<b>V. PARTS DIAGRAMS AND LISTS .....</b>	<b>5-1</b>
<b>APPENDIX 1: LIFT SPECIFICATIONS.....</b>	<b>5-26</b>