



Innovation in Mobility

S-Series™
Personal Use
Wheelchair Lift

Service/Owner Manual

(Owner Retains after Installation by an Authorized RICON Service technician)

09/07/00

32DSSP00.L

U.S. Patent Nos: 4,534,450; 5,308,215; 5,445,488; 5,605,431; 5,944,473;
Australian Patent Nos: 661127; 687066;
Canadian Patent Nos: 1,245,603; 2,168,761
Other U.S. and foreign patents pending.

©1992-00 RICON CORP.
All Rights Reserved

Printed in the
United States of America

This RICON product must be installed and serviced by authorized RICON service technicians.

The authorized RICON service technician must refer to this manual for installation instructions.

The owner must refer to this manual for operating instructions, then retain it for future reference by authorized RICON service technicians who perform service and repairs.

Customer Name: _____
Installing Dealer: _____
Date Installed: _____
Serial Number: _____

REVISION RECORD

REV.	PAGE(S)	DESCRIPTION OF CHANGE	ECR / ECO
32DSSP00. L 09/07/00	5-22,25	Deleted pins 14322 and VT-PI-44, plus ring 14-31-075; added note **** for pin kit 16679.	3201/ 4487
	4-3, 5	Changed hydraulic oil to Texaco 01554.	3215/ None
	5-3, 4	Added harness V2-SH-006, decal 32-10-154, and poppet valve V2-SH-177.	None/ None
	5-18	Changed part # 28325 to 15988 (Bag of ten).	None/ None
	4-9, 10	Wiring diagrams redrawn to show second motor solenoid.	3343/ 4567
	5-24, 5-25	Updated handrail drawing and parts list (ssp00009).	None/ None
END OF LIST			

I. INTRODUCTION **1-1**

 RICON 5-YEAR LIMITED WARRANTY 1-2

 SHIPMENT INFORMATION 1-3

 GENERAL SAFETY PRECAUTIONS 1-3

 MAJOR LIFT COMPONENTS 1-4

II. INSTALLATION **2-1**

A. MECHANICAL INSTALLATION **2-1**

 1. LIFT LOCATION 2-1

 2. LIFT INSTALLATION GUIDELINES 2-1

 3. LIFT INSTALLATION INTO VANS 2-2

 4. LIFT INSTALLATION INTO BUSES 2-4

B. ELECTRICAL INSTALLATION **2-6**

 1. INSTALL MAIN CIRCUIT BREAKER 2-6

 2. ROUTE AND CONNECT MAIN POWER CABLE 2-7

 3. GROUNDING INSTRUCTIONS 2-9

 4. RICON UNSUPPORTED INTERLOCK DEVICE INSTALLATION 2-9

C. FINAL ADJUSTMENTS **2-15**

 1. LIMIT SWITCH ADJUSTMENT 2-15

 2. ROLLSTOP (PLATFORM TILT) ADJUSTMENT 2-17

 3. SPLIT PLATFORM TIE ROD ASSEMBLY INSTALLATION AND ADJUSTMENT 2-17

 4. PLATFORM PRESSURE SWITCH CHECK AND ADJUSTMENT 2-18

 5. PLATFORM LOAD SENSOR SWITCH ADJUSTMENT 2-19

D. VERIFY INSTALLATION **2-20**

E. CUSTOMER ORIENTATION **2-20**

III. OPERATING INSTRUCTIONS **3-1**

A. SAFETY PRECAUTIONS **3-1**

B. DAILY SAFETY CHECK **3-2**

C. LIFT FUNCTIONS **3-3**

D. CONTROLS AND INDICATORS	3-4
1. CONTROL PENDANT	3-4
2. HANDRAIL SWITCH	3-4
3. ELECTRICAL CONTROLS AND INDICATORS	3-4
4. MANUAL BACKUP PUMP	3-5
E. LIFT OPERATION	3-6
1. ENTERING VEHICLE	3-7
2. EXITING VEHICLE	3-7
3. STOWING PLATFORM	3-8
4. MANUAL OPERATION	3-8
F. MAINTENANCE AND REPAIR	3-10
IV. MAINTENANCE AND REPAIR	4-1
A. LUBRICATION	4-1
B. CLEANING	4-2
C. MAINTENANCE SCHEDULE	4-2
D. TROUBLESHOOTING	4-4
1. INTERLOCK INDICATOR DIAGNOSTICS	4-4
2. LIFT TROUBLESHOOTING	4-5
E. HYDRAULIC CIRCUIT DIAGRAM	4-6
F. ELECTRICAL WIRING DIAGRAMS	4-7
1. DIAGRAM LEGEND	4-7
2. S-SERIES™ LIMIT SWITCH STATES	4-8
3. WIRING DIAGRAMS	4-9
V. PARTS DIAGRAMS AND LISTS	5-1
APPENDIX 1. LIFT SPECIFICATIONS	5-27, 5-28

LIST OF FIGURES**PAGE**

FIGURE [1-1]: PERSONAL USE WHEELCHAIR LIFT	1-4
FIGURE [2-1]: PLATFORM MOUNTING	2-1
FIGURE [2-2]: FORD VAN CLAMPING BAR ARRANGEMENT	2-2
FIGURE [2-3]: STEPWELL BRACKET	2-2
FIGURE [2-4]: BRACKET ASSEMBLY	2-3
FIGURE [2-5]: VAN BASEPLATE HOLES	2-3
FIGURE [2-6]: TOP BRACKET HOLE LOCATIONS	2-3
FIGURE [2-7]: BUS CLAMPING BAR ARRANGEMENT	2-5
FIGURE [2-8]: BUS BASEPLATE HOLES	2-5
FIGURE [2-9]: ELECTRICAL INSTALLATION DIAGRAM	2-6
FIGURE [2-10]: POWER CABLE ACCESS HOLE	2-7
FIGURE [2-11]: CABLE ROUTING	2-8
FIGURE [2-12]: STRAIN RELIEF KIT	2-8
FIGURE [2-13]: 24VDC WIRING	2-9
FIGURE [2-14]: INTERLOCK METHOD #1 DIAGRAM	2-12
FIGURE [2-15]: INTERLOCK METHOD #2 DIAGRAM	2-13
FIGURE [2-16]: INTERLOCK METHOD #3 DIAGRAM	2-14
FIGURE [2-17]: LIMIT SWITCH ADJUSTMENT DIAGRAM	2-15
FIGURE [2-18]: LIMIT SWITCH ADJUSTMENT CLEARANCE	2-15
FIGURE [2-19]: PLATFORM SET SCREWS	2-17
FIGURE [2-20]: ROD END INSTALLATION	2-17
FIGURE [2-21]: PRESSURE SWITCH TEST AT FLOOR LEVEL	2-18
FIGURE [2-22]: HYDRAULIC PUMP WITH PRESSURE SWITCH	2-19
FIGURE [2-23]: LOAD SENSOR ADJUSTMENT	2-19
FIGURE [2-24]: DECAL LOCATIONS AND PART NUMBERS	2-21
FIGURE [3-1]: DO NOT DEPLOY LIFT WHEN VEHICLE IS ON SLOPED GROUND	3-1
FIGURE [3-2]: FACE FORWARD	3-1

FIGURE [3-3]: STAND CLEAR OF LIFT 3-2

FIGURE [3-4]: PLATFORM POSITIONS 3-3

FIGURE [3-5]: CONTROL PENDANT 3-4

FIGURE [3-6]: HANDRAIL SWITCH 3-4

FIGURE [3-7]: INDICATOR LIGHT/CIRCUIT BREAKER 3-4

FIGURE [3-8]: MAIN CIRCUIT BREAKER 3-5

FIGURE [3-9]: MANUAL BACKUP PUMP & HANDLE 3-6

FIGURE [3-10]: MANUAL OPERATION 3-8

FIGURE [3-11]: MANUAL BACK-UP PUMP - DEPLOY AND LOWER PLATFORM 3-9

FIGURE [3-12]: MANUAL BACK-UP PUMP - RAISE PLATFORM 3-9

FIGURE [4-1]: LIFT LUBRICATION POINTS 4-1

FIGURE [4-2]: S-SERIES™ HYDRAULIC CIRCUIT DIAGRAM 4-6

FIGURE [4-3]: MOLEX® CONNECTORS 4-7

FIGURE [4-4]: DIAGRAM SYMBOLS 4-8

FIGURE [4-5]: LIMIT SWITCH ACTUATION DIAGRAM 4-8

FIGURE [4-6]: WIRING DIAGRAM FOR LIFT WITH DOOR OPERATOR 4-9

FIGURE [4-7]: WIRING DIAGRAM FOR LIFT WITHOUT DOOR OPERATOR 4-10

FIGURE [5-1]: MONARCH HYDRAULIC POWER UNIT #1 5-2

FIGURE [5-2]: MONARCH HYDRAULIC POWER UNIT #2 5-6

FIGURE [5-3]: S-SERIES™ HYDRAULIC SYSTEM 5-8

FIGURE [5-4]: S-SERIES™ ELECTRICAL SYSTEM 5-10

FIGURE [5-5]: S-SERIES™ PENDANT 5-12

FIGURE [5-6]: S-SERIES™ SOLID PLATFORM 5-14

FIGURE [5-7]: S-SERIES™ SPLIT PLATFORM 5-16

FIGURE [5-8]: S-SERIES™ TRAVELING FRAME 5-20

FIGURE [5-9]: S-1200 HANDRAIL 5-24

LIST OF TABLES**PAGE**

TABLE [1-1]: S-SERIES™ LIFT COMPONENT TERMINOLOGY	1-5
TABLE [2-1]: LIMIT SWITCH ADJUSTMENT CHART	2-16
TABLE [3-1]: LIFT FUNCTIONS	3-3
TABLE [4-1]: MAINTENANCE SCHEDULE	4-2
TABLE [4-2]: INTERLOCK INDICATOR TROUBLESHOOTING GUIDE	4-4
TABLE [4-3]: LIFT OPERATIONAL TROUBLESHOOTING GUIDE	4-5
TABLE [4-5]: WIRE COLOR CODE DEFINITIONS	4-7