



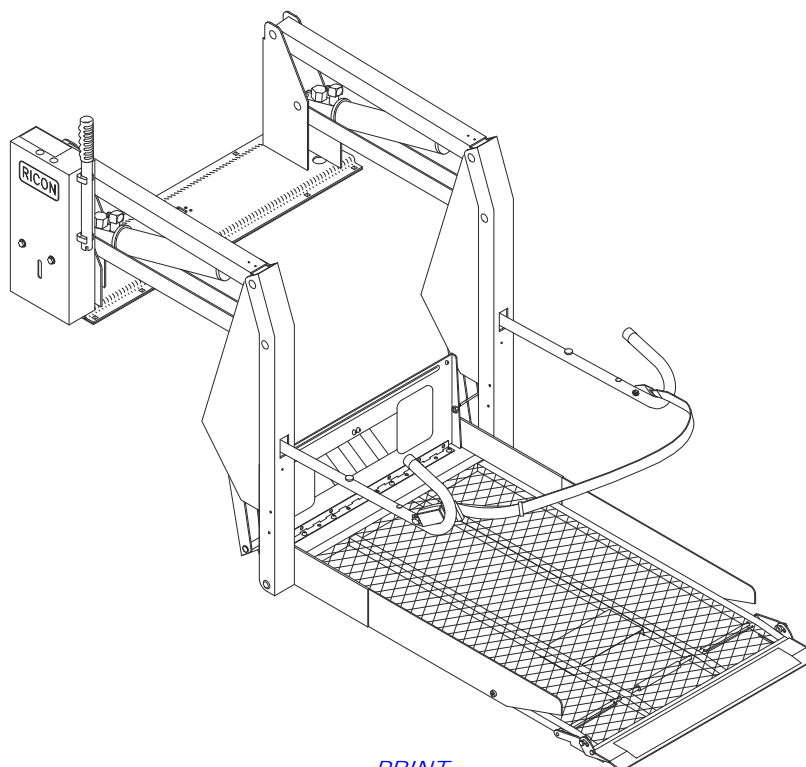
**Ricon®**

**A Wabtec company**

# **S-Series®**

## **ADA Transit Use**

## **Wheelchair and Standee Lift**



-PRINT-

# **Service Manual**

12/10/13

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Australia Patent Nos: 661127; 687066;  
Canadian Patent Nos: 1,245,603; 2,168,761  
Other U.S. and foreign patents pending

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United States of America

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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 service technician in your area, call Ricon Product Support at 1-800-322-2884.

Customer Name: \_\_\_\_\_  
Installing Dealer: \_\_\_\_\_  
Date Installed: \_\_\_\_\_  
Serial Number: \_\_\_\_\_

**REVISION RECORD**

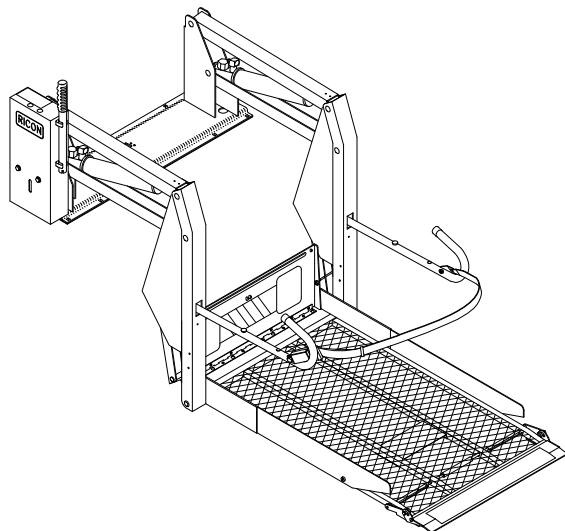
REV	PAGES	DESCRIPTION OF CHANGE	ECO
32DSSS02. D.1	Cvr	Update to Ricon Logo and S-Series registered trademark.	6663
	1-1	Add S-Series registered trademark.	
	2-6 thru 2-9	Update to Section B, Electrical Installation.	
	2-17 thru 2-19	Update to Section C.3, Platform Pressure Switch Adjustment.	
	4-9	Update to Parts List.	
	4-15 thru 4-17	Update to Parts List.	
	4-19 thru 4-23	Update to Parts List.	
	4-25	Update to Parts List.	

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## I. S-SERIES® TRANSIT INTRODUCTION

The RICON S-Series® Transit Use (ADA) Wheelchair and Standee Lift provides wheelchair access to transit vehicles. The patented movement provides smooth, safe entry and exit. The lift easily lifts up to 800 pounds (364 kilograms). It is designed to be operated by a trained attendant. The lift contains a powerful electro-hydraulic pump that includes a built-in manual backup pump. If the lift loses electrical power, it can still be raised and/or lowered manually.



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

This manual contains installation instructions; maintenance and repair instructions; troubleshooting guide; parts and diagram lists. It is important to user safety that lift operators 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 cleaning, lubrication, and inspection instructions.

If there are questions about this manual, or additional copies are needed, please contact the Ricon Product Support Department at one of 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](http://www.riconcorp.com)**

**Vapor Ricon Europe Ltd.**

**Meadow Lane**

**Loughborough, Leicestershire**

**United Kingdom, LE 1HS ..... 0044 (0) 1509 635 920**

## A. RICON FIVE-YEAR LIMITED WARRANTY

**RICON S-SERIES® TRANSIT  
FIVE-YEAR LIMITED WARRANTY**

**Ricon Corporation (Ricon)** warrants to the 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 the date of purchase.
- Labor costs for specified parts replaced under this warranty for a period of one year from the date of purchase. A Ricon rate schedule determines the parts covered and labor allowed.
- Repair or replace lift power train parts for a period of five years from the date of purchase. A list of parts covered can be obtained from Ricon Product Support.

**If you need to return a product:** Return this product to Ricon. Please give as much advance notice as possible, and allow a reasonable amount of time for repairs.

**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 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 DANGEROUS.

***This warranty is void if:***

- The product has been installed or maintained by someone other than a Ricon dealer or a 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.***

***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 from state to state.***

## B. SHIPMENT INFORMATION

- Because of the specialized nature of this product, Ricon does not sell directly to user. Instead, the product is distributed through a worldwide network of Ricon dealers, who perform the actual installation.
- When the product is received, unpack it and check for freight damage. Claims for any damage should be made to freight carrier immediately.
- Verify that the installation kit contains all items listed on enclosed 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 for warranty to be valid.

### NOTE

**The Sales/Service Personnel must review Warranty and Operator Manual with user to be certain that they understand safe operation of product. Instruct user to follow 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, or adjustments be attempted without immediate presence of a person capable of rendering aid.
- An injury, no matter how slight, must be attended to. Always administer first aid or seek medical attention immediately.
- Protective eye shields and appropriate clothing should be worn at all times.
- To avoid injury, exercise caution when operating and be certain that hands, feet, legs, and clothing are not in path of platform movement.
- Batteries contain acid that can burn. If acid comes in contact with skin, flush affected area with water and wash with soap immediately.
- Work in a properly ventilated area. Do not smoke or use an open flame near battery.
- Do not lay anything metallic on top of battery.
- Check under vehicle before to avoid drilling into frame members, wiring, hydraulic lines, fuel lines, fuel tank, etc.
- Read and thoroughly understand operating instructions before attempting to operate.
- Inspect lift before each use. If unsafe conditions, such as unusual noises or movements are present, do not use lift until problem is corrected.
- Never load or stand on platform until installation is complete. Upon completion of installation, test load lift to 100% 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 lift must be maintained at its highest level of performance.

## D. MAJOR LIFT COMPONENTS

The references used throughout this manual are illustrated in **Figure 1-1** and defined in the **Table 1-1**. Refer to **Chapter IV** "Parts Diagrams and Lists" for more details.

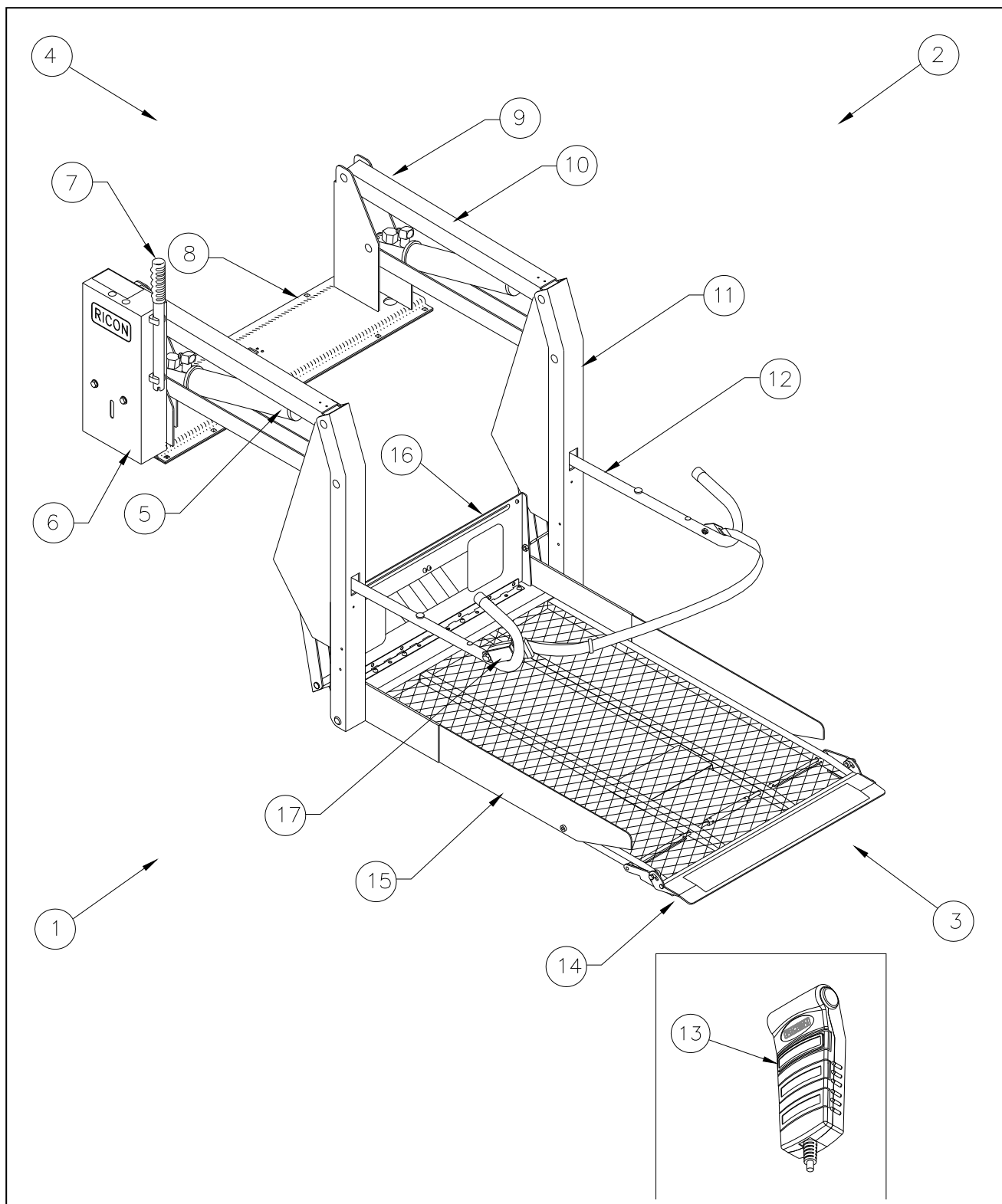


FIGURE 1-1: TRANSIT USE (ADA) WHEELCHAIR AND STANDEE LIFT

**TABLE 1-1: S-SERIES TRANSIT LIFT TERMINOLOGY**

REF	NAME	DESCRIPTION
1	Left	Lift reference when installation is viewed from outside of vehicle.
2	Right	
3	Front	
4	Rear	
5	Hydraulic cylinders (left and right)	Telescoping cylinders convert hydraulic pressure into platform lifting force.
6	Hydraulic power unit	Contains electric motor driven pump that produces hydraulic pressure to raise and fold lift, and a pressure release valve to unfold and lower it.
7	Manual backup pump handle	Used to operate manual back up-pump when electrical power is not functional.
8	Baseplate assembly	Assembly that bolts securely to vehicle floor.
9	Serial number	Location of lift serial number decal.
10	Top and bottom arms (left and right)	Upper and lower parallel links connect vertical arms to base assembly.
11	Vertical arms (left and right)	Connects platform to top and bottom arms.
12	Handrails (left and right)	Provide a hand-hold for platform occupant.
13	Control pendant	Hand-held device used to control lift functions.
14	Platform rollstop	Front barrier prevents wheelchair from slowly or inadvertently rolling off of platform during lift operation.
15	Platform	Area of lift where wheelchair and occupant are situated during "Up" and "Down" motions.
16	Bridgeplate (inboard rollstop)	Plate that bridges gap between platform and vehicle when platform is at floor height. Acts as barrier to confine wheelchair to platform during "Up" and "Down" motions.
17	Occupant restraint belt	Electrically interlocked belt that is intended to prevent wheelchair from moving off of platform. Lift will not operate unless belt is buckled.
<b>END OF TABLE</b>		

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## II. S-SERIES® TRANSIT INSTALLATION

This chapter contains instructions for installing the RICON S-Series® ADA Transit Use wheelchair lift into most vans, and buses although custom installations are also possible in other types of vehicles. Due to the wide range of applications for lift, specific information for every possible application is not available. The following general procedures will apply to most installations. Contact the Ricon Product Support department for instruction about installations not covered. To install lift, refer to following sections and perform procedures carefully and in the order that they are presented. Be certain that installation instructions are followed exactly and do not eliminate any steps or modify product.

### A. GENERAL MECHANICAL INSTALLATION

#### 1. LIFT LOCATION

The installation surface must be flat and level. It is recommended that lift be installed on a ½", minimum, high-grade plywood sub-floor. However, this additional installation height may not be acceptable in cases where over-head clearance is limited.

**NOTE:** Check for proper travel clearance through doorway.

- With doors fully open, place/position lift in vehicle doorway as close as possible to door, with lift's baseplate assembly parallel to side of vehicle.
- Allow a distance of 3/4", if possible, between door and the part of lift closest to it. Adjust lift left and right-side locations to accommodate subframe members.
- Verify proper clearance of door frame, passenger seats, and outer edge of vehicle floor and possible interference with wires, fluid lines, subframe members, etc.

#### 2. LIFT INSTALLATION GUIDELINES

The lift mounting is a very important step. Improper mounting or fastening of baseplate can adversely affect lift performance. Although fastening details may vary from one vehicle to the next, these general principles apply:

- Be certain that all mounting bolts are properly installed and tightened. Bolts used to fasten baseplate assembly to vehicle floor must have a minimum strength rating of SAE Grade 5 and be torqued to 28 ft lbs, dry. Recognize that the most important bolts are those along the rear of lift, since these bolts retain the majority of the load.
- Refer to **Figures 2-1** and **2-5**. Improper torquing sequence of baseplate bolts may result in a warped or bowed baseplate, which can cause platform to move erratically.

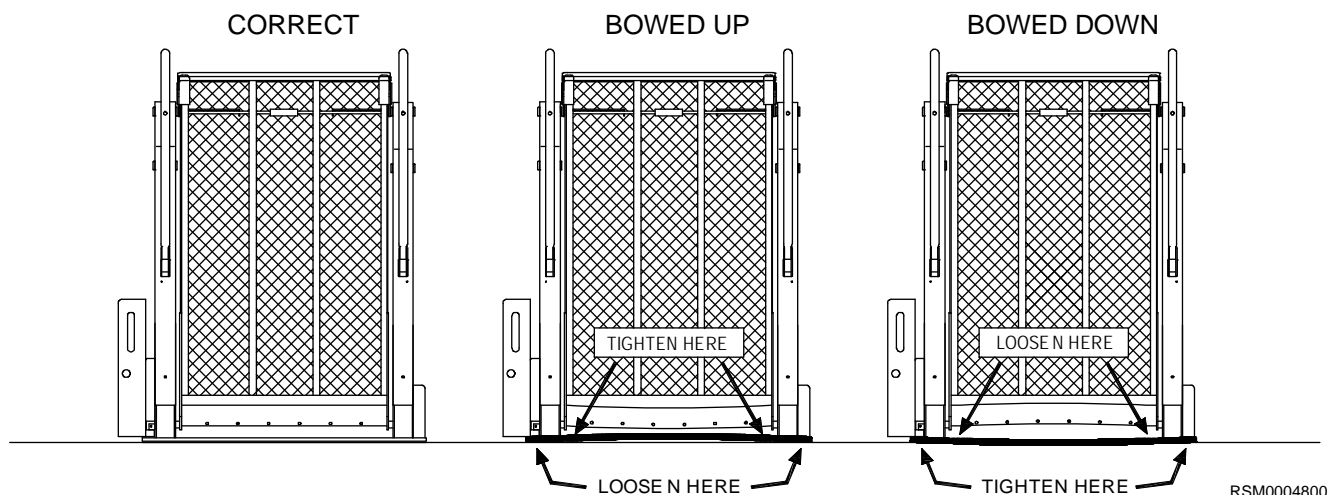
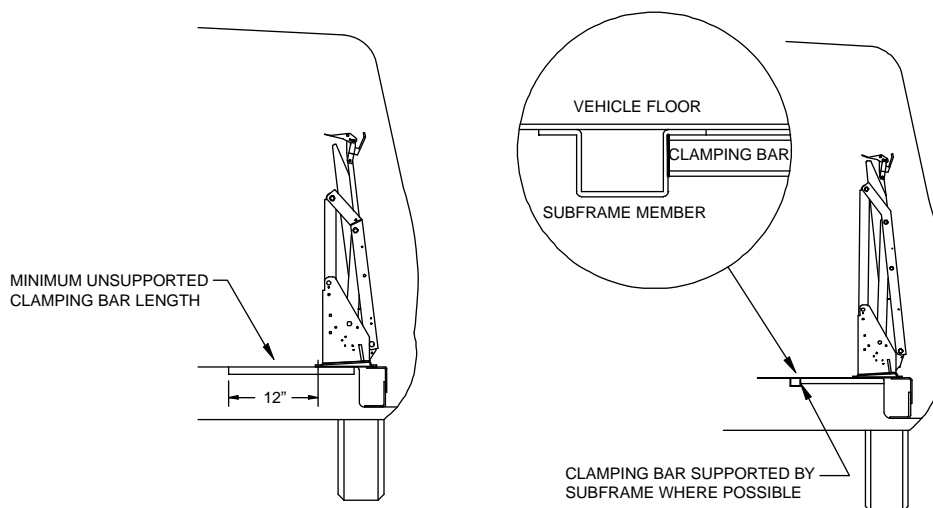


FIGURE 2-1: VAN CLAMPING BAR ARRANGEMENT

- ◆ Refer to **Figure 2-2**. On Ford van installations, clamping bars are used to help evenly distribute floor loading and should only be cut if needed to clear a subframe member. A subframe member must be used to support clamping bar.



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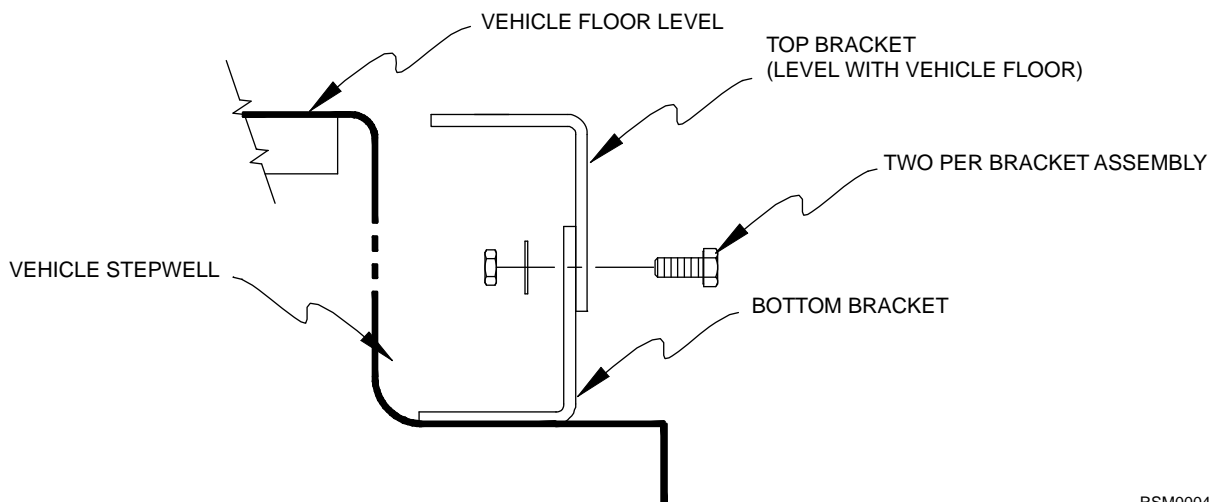
**FIGURE 2-2: VAN CLAMPING BAR ARRANGEMENT**

### 3. LIFT INSTALLATION INTO VANS

This is a general procedure for installing Ricon lifts into Ford, Dodge, and Chevrolet full size vans.

- Refer to **Figure 2-3**. Use four 1" x 3/8" bolts, 3/8" washers, 3/8" lock washers, and 3/8" hex nuts to assemble two bracket assembly kits.

**NOTE:** The top bracket must overlap bottom bracket, and both slots must face outward.



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**FIGURE 2-3: STEPWELL BRACKET**

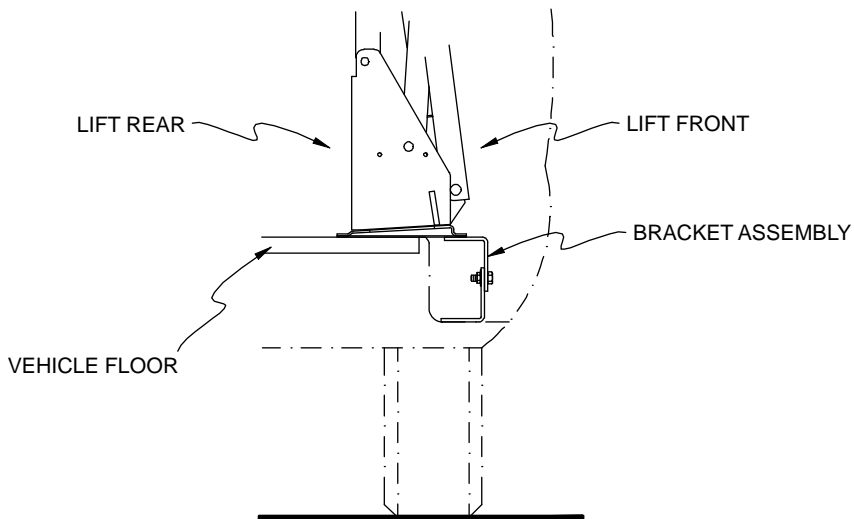
- Position brackets on stepwell and adjust height of both bracket assemblies so that top bracket is level with vehicle floor. Tighten bracket assembly bolts.
- Verify that lift is fully folded (stowed) with handrails folded tight against vertical arms. If necessary, use manual pump.



#### **WARNING**

LIFT WEIGHT IS APPROXIMATELY 350 - 375 LBS. USE EXTREME CARE WHEN POSITIONING BECAUSE STEPWELL BRACKETS MAY TIP. THIS PROCEDURE MUST NOT BE ATTEMPTED BY ONE PERSON.

- d. Refer to **Figure 2-4**. With doors fully open, position lift in vehicle doorway so that back of lift is supported by vehicle floor, and front of lift is supported by both bracket assemblies.



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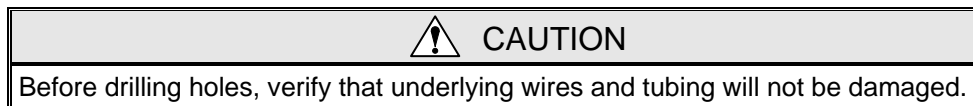
**FIGURE 2-4: BRACKET ASSEMBLY**

- e. Adjust Base Assembly:

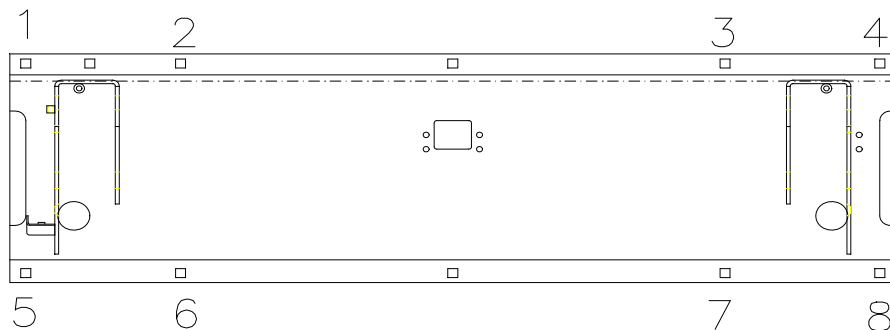
**NOTE:** If Ricon power door operators are used, install them first. They may influence location of lift.

- Be certain baseplate is flush against vehicle floor. The baseplate may be slightly offset in door opening to provide proper clearance for passenger seats.
- Before drilling, verify that lift position does not interfere with closing of vehicle doors or operation of passenger seats.

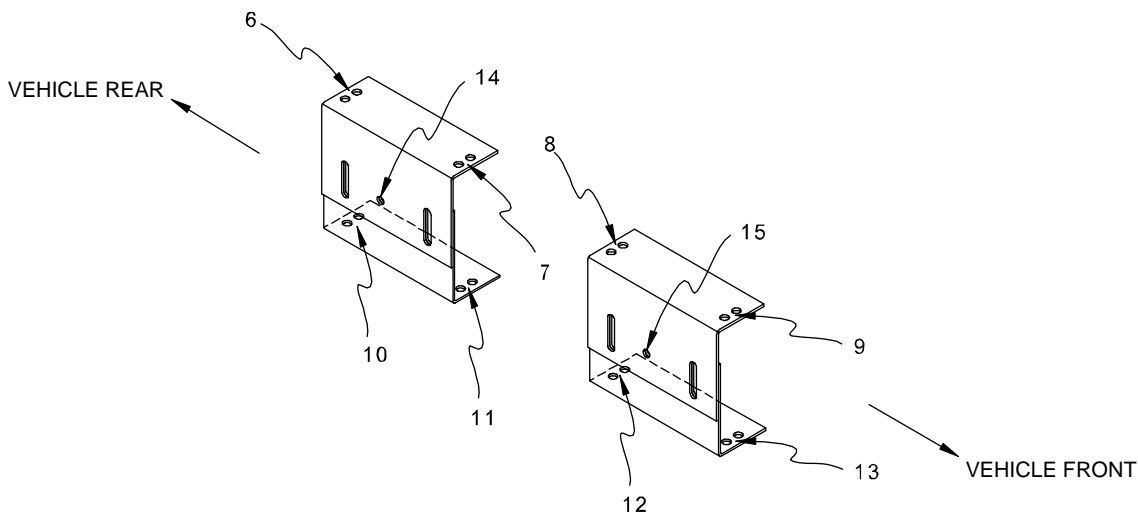
- f. Mark and Drill Holes:



- 1) Refer to **Figure 2-5**. Mark and drill five 25/64" baseplate mounting holes (1, 2, 3 and 4) through vehicle floor. (On Dodge and GM vans, you must drill through vehicle floor and subframe).
- 2) Place four 8" x 3/8" carriage bolts (use 4" x 3/8" bolts on Ford vans) into holes to secure position.

**FIGURE 2-5: VAN BASEPLATE HOLES**

- 3) Refer to **Figure 2-6** on the following page. Match and align top holes of stepwell brackets 5, 6, 7 and 8 with baseplate holes 5, 6, 7 and 8. Mark lower bracket assembly mounting holes 9, 10, 11 and 12 onto vehicle step.
- 4) Remove carriage bolts installed in step 2). Carefully push lift into vehicle interior.
- 5) Drill 1/4" dia holes through marked locations 9, 10, 11, and 12.



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**FIGURE 2-6: TOP BRACKET HOLE LOCATIONS**

**g. Fasten Bracket Assemblies and Lift:**

- 1) Use 1-1/2" x 5/16" sheet metal screws with 5/16" lock washers to secure lower brackets to vehicle step holes 9 through 12.

**NOTE:** If the screw in position 12 interferes with proper door operation, do not install.

- 2) Reposition lift and verify that surface beneath lift is free of obstacles.
- 3) Insert five 8" x 3/8" carriage bolts through mounting holes at rear of baseplate assembly, and insert four 1-1/2" x 3/8" carriage bolts through baseplate and bracket assemblies. Place 3/8" washers, lock washers, and nuts under bracket assemblies, and finger tighten nuts.

**NOTE:** On Dodge and GM vans, place five 4" x 4" plates, 3/8" washers, lock washers and hex nuts on 8" x 3/8" carriage bolts under van and finger tighten. On Ford models, reinforce vehicle floor with clamping bars. They are installed in positions 1, 2, 3 and 4 and run across width of baseplate towards center of van.

- 4) Before tightening carriage bolts, verify that lift is level with vehicle floor. Adjust bracket assembly bolts if necessary.
- 5) Tilting lift towards inside of van may hinder its initial unfolding. Install lift with its baseplate assembly as level as possible. Tightening carriage bolts requires special care to keep baseplate assembly from warping when secured to vehicle floor. If baseplate assembly warps, the vertical arms will not be parallel. Corrections can be made by shimming at appropriate locations. To help prevent warping, tighten the eight carriage bolts (six on Dodge van with sliding door) to 28 ft. lbs. in the following sequence:

DODGE WITH SWING DOORS, ALL FORD AND GM VANS ..... 2, 3, 6, 7, 1, 4, 5, 8

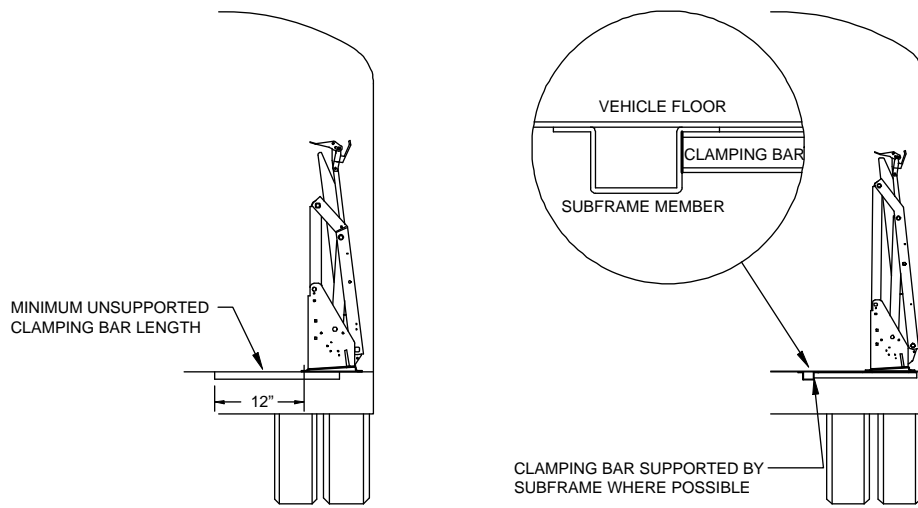
DODGE WITH SLIDING DOORS ..... 2, 3, 5, 8, 1, 4

**NOTE:** Vertical arms must be parallel for proper operation. Adjust bolts as required. Best results are obtained when lift is mounted on plywood. Shims, although best avoided, may be used if required.

- 6) Make certain that holes 13 and 14 on the front of each bracket assembly are drilled through, and 5/16" bolts are inserted to lock position of bracket assemblies.

#### 4. LIFT INSTALLATION INTO BUSES

Refer to **Figure 2-7**. Since clamping bars are used on most bus installations, they help distribute floor loading and should only be cut if needed to clear a subframe member. A subframe member should be used to support clamping bar.



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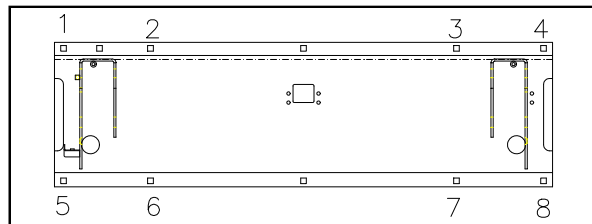
**FIGURE 2-7: BUS CLAMPING BAR ARRANGEMENT**



#### WARNING

LIFT WEIGHT IS APPROXIMATELY 350-375 LBS. TAKE EXTREME CARE WHEN POSITIONING BECAUSE STEPWELL BRACKETS MAY TIP. THIS PROCEDURE SHOULD NOT BE ATTEMPTED BY ONE PERSON.

- h. With doors fully open, position lift in vehicle doorway as close as possible to door with lift baseplate parallel to side of bus.
- i. Refer to **Figure 2-8**. Mark and drill eight 25/64" baseplate assembly mounting holes (1 thru 8) through vehicle floor.



**FIGURE 2-8: BUS BASEPLATE HOLES**

**NOTE:** Before drilling any holes, be sure that no underlying wires or tubes are in the way.

- j. Fasten Lift:
  - 7) Insert eight 4" x 3/8" carriage bolts through baseplate and vehicle floor.
  - 8) Install support tubes (4 ea.) to bolts underneath vehicle floor across baseplate, i.e., from 1 to 5, 2 to 6, etc., and secure lift to vehicle floor with 3/8" washers, lock washers and hex-nuts.
  - 9) Tightening carriage bolts requires special care to keep baseplate assembly from warping when secured to vehicle floor. If baseplate assembly warps, vertical arms will not be parallel. Corrections can be made by shimming at appropriate locations. To help prevent warping, tighten the eight carriage bolts to 28 ft. lbs. in following sequence:

**2, 3, 6, 7, 1, 4, 5, 8**

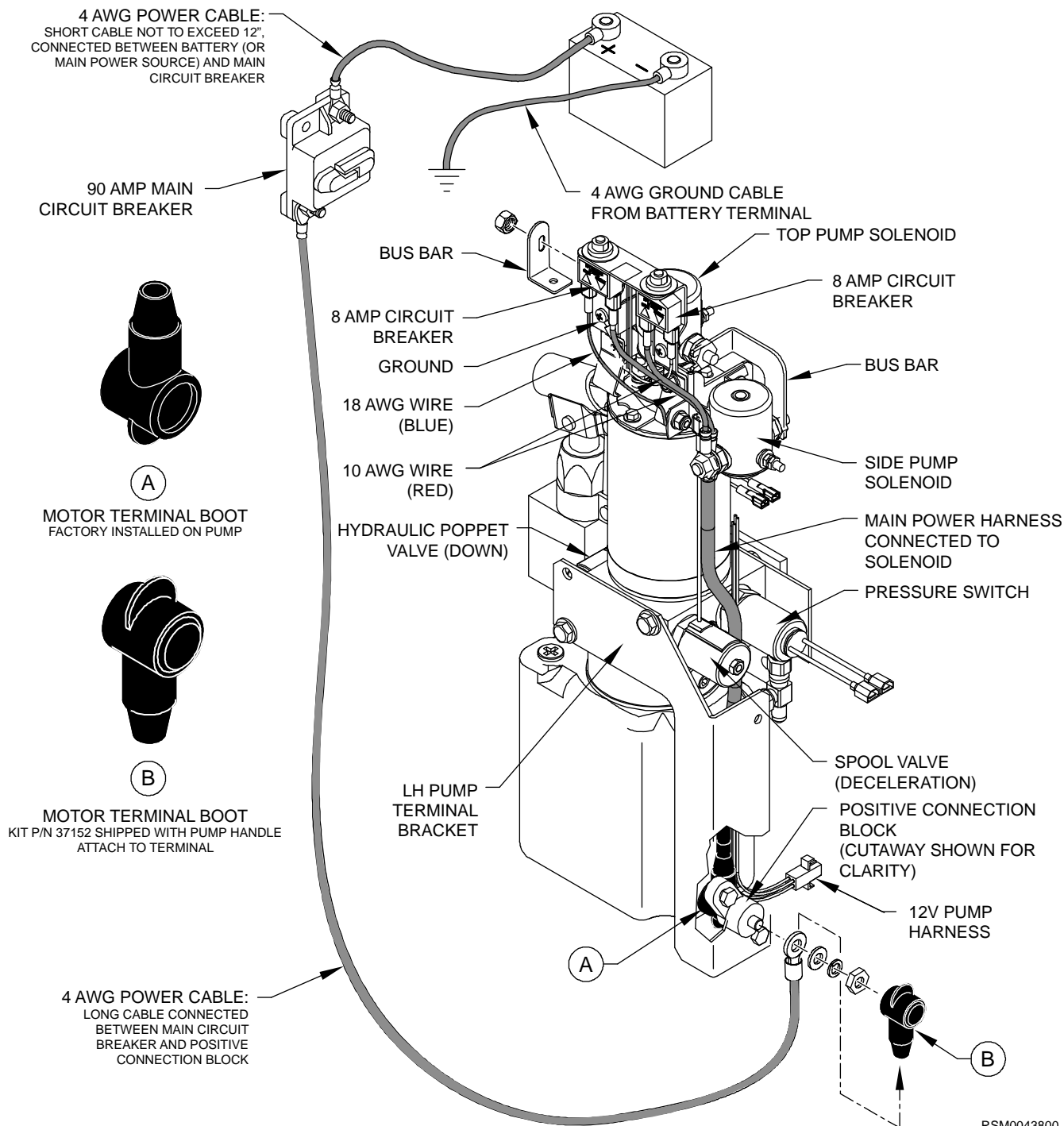
**NOTE:** Vertical arms must be parallel for proper operation. Adjust bolts as required. Best results are obtained when lift is mounted on plywood. Shims, although best avoided, may be used if required.

## B. ELECTRICAL INSTALLATION



### CAUTION

- Do not route any wire while it is connected to the battery.
- Route wires clear of moving parts, brake lines, and the exhaust system. Secure to the vehicle.
- When routing an electrical wire through vehicle floor or walls, use a grommet to protect wires from chafing.
- Check underside of vehicle before drilling to avoid damage to fuel lines, vent lines, brake lines, or wiring.



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FIGURE 2-9: ELECTRICAL INSTALLATION DIAGRAM



### CAUTION

## 1. INSTALL MAIN CIRCUIT BREAKER

- Disconnect battery.
- Mount main circuit breaker inside engine compartment within 12 inches of battery (to minimize length of unprotected cable). Avoid installing near a heat source.

## 2. ROUTE AND CONNECT MAIN POWER CABLE

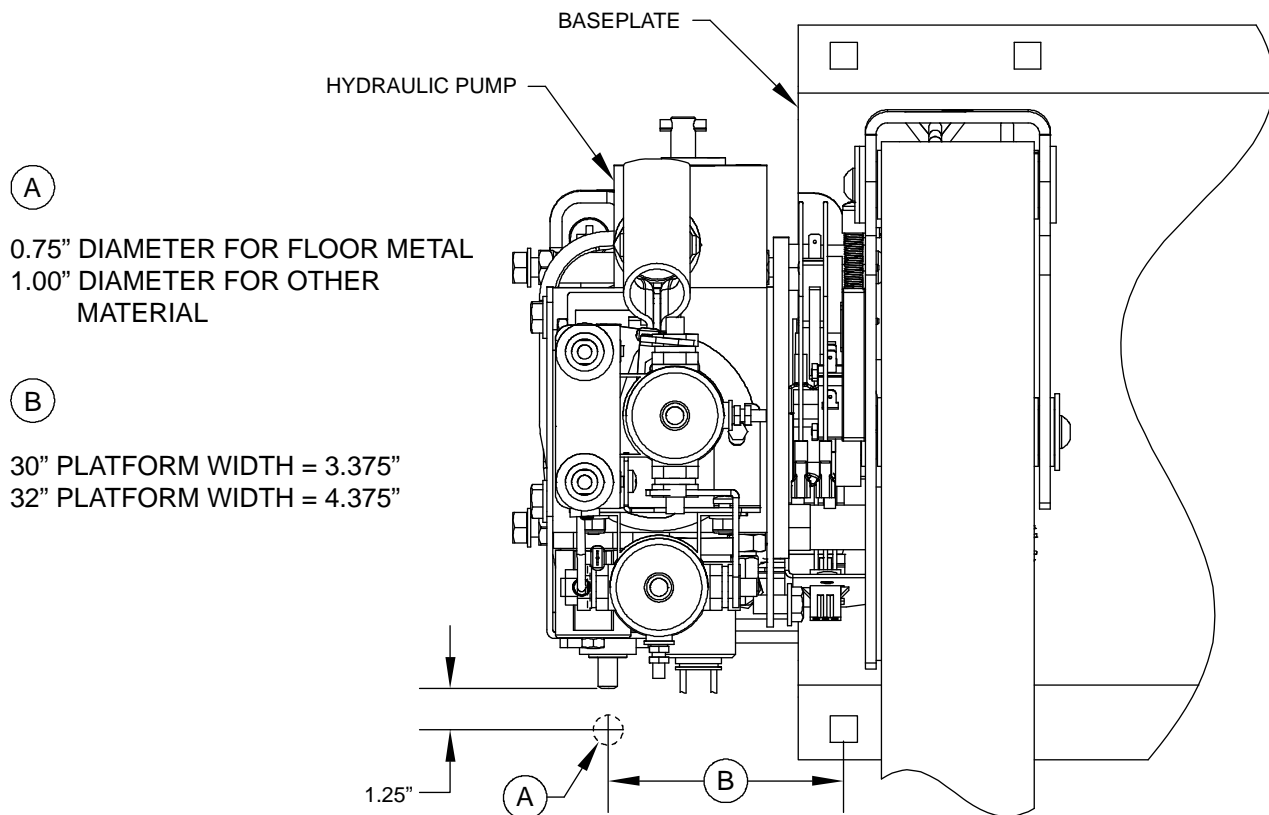


### CAUTION

Check under-side of vehicle before drilling to avoid damage to fuel lines, vent lines, brake lines, or wiring.

**NOTE:** For applications where power cable is to pass through sheet metal, drill a 3/4" hole and use wire clamp provided. For applications where cable is to pass through plywood, drill a 1" hole and use black plastic grommet provided.

- Refer to **Figures 2-9** and **2-10**. Drill a hole through vehicle floor near positive connection block so power cable can reach stud of positive connection block. Drill hole where the installed pump cover will cover it.



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**FIGURE 2-10: POWER CABLE ACCESS HOLE**

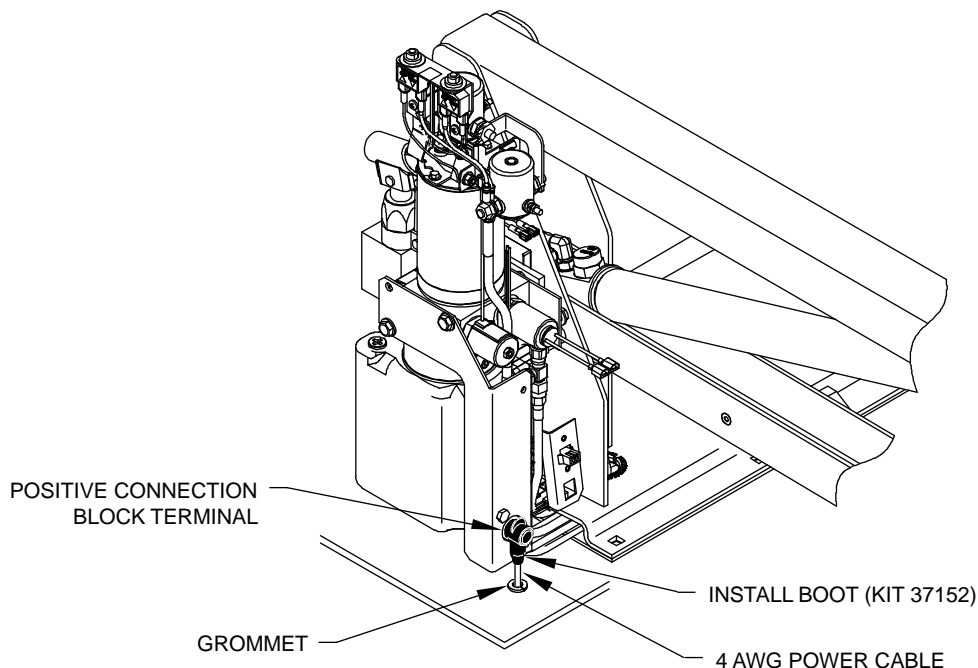
- Refer to **Figure 2-9**. Install supplied heavy ring terminals to each end of the short (12" long) 4 AWG power cable. Install one ring terminal, only, to one end of long power cable. Use an appropriate crimp tool (such as Ricon hammer tool, part of kit P/N 01243).
- Connect ring terminal end of long 4 AWG power cable to 90A main circuit breaker, then route power cable underneath vehicle floor and up through hole in floor.
- Refer to **Figure 2-9**. Detach Kit P/N 37152 (Shipped with pump handle) then install onto ring terminal connector before installing ring terminal onto positive connection block.
- Tie power cable to vehicle chassis, and to pump assembly harness using cable ties. Avoid pinch points, exhaust system, moving parts, and brake lines. Verify that power cable is secure.



### CAUTION

Be sure that there is no interference with any parts that could damage power cable or other wires in any way.

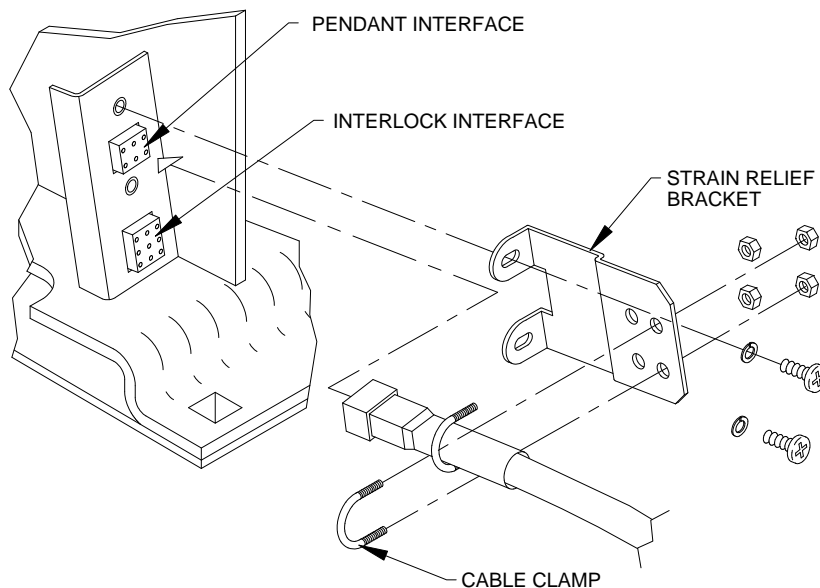
- f. Refer to **Figure 2-9**. Cut excess wire from long cable, install heavy ring terminal, and then connect to positive connection block. Verify that red wire from main circuit breaker (if applicable) is securely connected to positive connection block.



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**FIGURE 2-11: CABLE ROUTING**

- g. Refer to **Figure 2-11**. Connect appropriate RICON lift control interface to lift and secure control cable to lift with supplied cable clamp.



**FIGURE 2-11: STRAIN RELIEF KIT**

- h. For applications where a hand-held control pendant is used, it is essential that strain relief be installed. Connect a 12" cable from battery positive terminal to main breaker terminal closest to battery.
- i. Install wall portion of pendant dovetail clip in an appropriate safe location.

**CAUTION**

Be sure that harness does not interfere with any moving parts, or binds against any parts, or is pinched in any way.

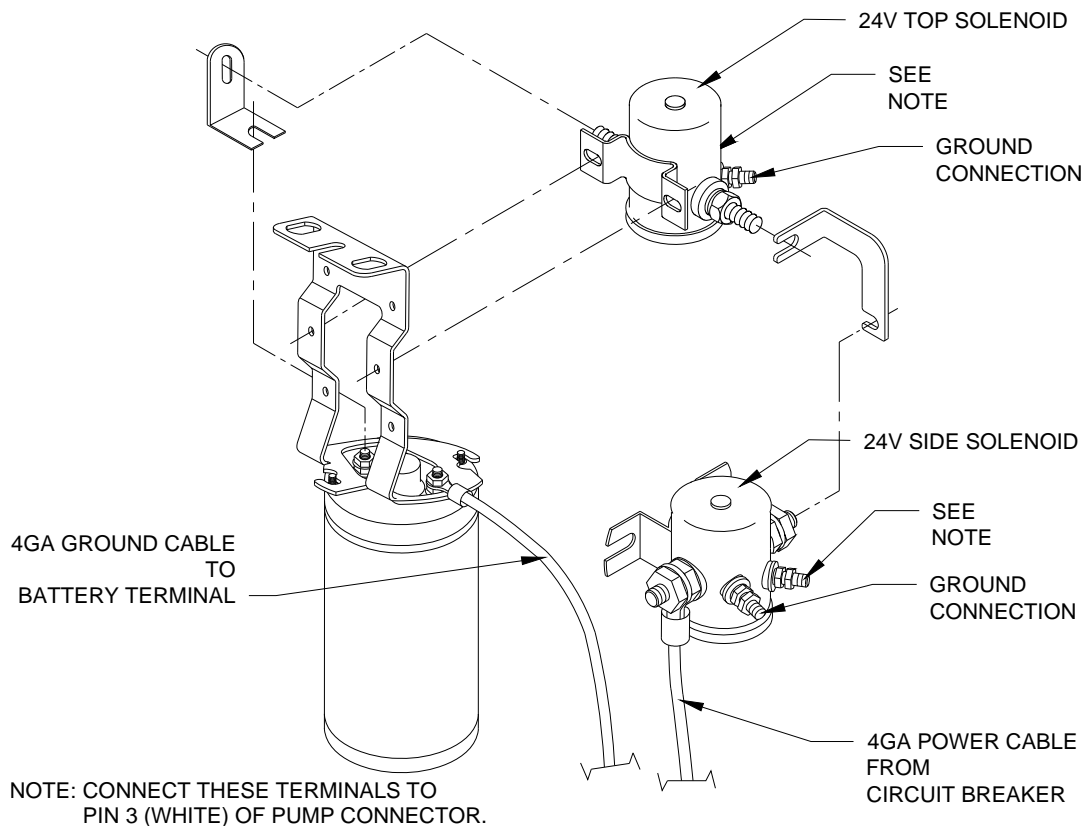
### 3. GROUND CONNECTIONS

#### a. 12VDC Systems

12VDC powered lifts are chassis grounded and do not require a separate ground cable connection to battery. However, if lift electrical system is connected to chassis with a cable, the cable must be attached in a manner that provides a reliable electrical connection. If ground cable is attached to an existing ground circuit, the circuit must be capable of conducting an additional 90 amps to the negative battery terminal.

#### b. 24VDC Systems

- 1) Ricon recommends that a dedicated ground cable be used in 24VDC installations. A 4GA cable, or heavier, must be used.
- 2) Refer to **Figure 2-13**. The ground cable is connected from the negative stud (-) on pump motor to the negative battery terminal.



**FIGURE 2-13: 24VDC DUAL SOLENOID WIRING**

#### 4. INSTALLATION OF INTERLOCK DEVICES NOT SUPPORTED BY RICON

An interlock device can be installed to prevent operation of the lift or vehicle when it is not safe to do so. **The interlock supplied by the installing Ricon dealer is not a Ricon product.**

Some interlock devices lock vehicle transmission in PARK (or neutral) when lift is deployed, or do not allow lift to be deployed unless vehicle transmission is in PARK (or neutral) and emergency brake is set. Other devices will stall vehicle engine if lift is deployed and emergency brake is released or transmission is shifted from PARK (or neutral). There may be other types of interlock devices that disable lift or vehicle to prevent unsafe lift operation.

Ricon is not aware of all available interlock products. For this reason it is very important that interlock products be properly installed so that they do not interfere with safe operation or create any other hazards.

The installer must verify that none of the original equipment circuit breakers, fuses, or solenoids are bypassed, removed, or altered. Be sure that no wires are left frayed or hanging loose after installation of an interlock device. If you have any questions about proper installation of interlock devices, please contact our Product Support Department.



#### WARNING

DO NOT OPERATE LIFT UNLESS YOU ARE CERTAIN THAT THE INTEGRITY OF LIFT ELECTRICAL CIRCUITS HAS BEEN MAINTAINED.



#### CAUTION

Wiring attached directly to the positive battery terminal is not protected against short circuits and must be kept to a length of 12" or less. The wiring must be routed in a manner that prevents pinching or abrasion by vehicle parts. The power source wire for the interlock circuit must be connected to a protected supply such as a dedicated accessory on an existing fuse panel.

Ricon recommends one of the following interlock methods:

##### a. INTERLOCK METHOD #1

Refer to **Figure 2-14**. This method interrupts power to the lift hand control pendant. It does not require additional circuit protection, but does require a modification to lift harness.

- 3) Disconnect battery.
- 4) Remove piggyback spade connector wire from OUTPUT side of 8 amp circuit breaker (refer to decal on circuit breaker).

**NOTE:** The OUTPUT side of breaker must be used to avoid possibility of an electrical short.

- 5) Connect female spade connector of interlock circuit provided by installer to OUTPUT side of 8 amp breaker using 16 AWG or larger wire.

**NOTE:** All connectors provided on interlock circuit must be a fully insulated type.

- 6) Cut piggyback connector from light assembly and female spade connector from signal power wire. Strip both wires about 1/2" being careful not to nick conductor. Crimp both wires in a single 1/4" fully insulated female spade connector designed for use on 14-16 AWG wire.
- 7) Connect male spade connector of interlock circuit to female spade connector added to harness in above step.
- 8) Dress wires in such a way as to not allow rubbing or chafing of insulation, and so there is no strain at any terminals or body of light.

##### b. INTERLOCK METHOD #2

Refer to **Figure 2-15**. This method interrupts power between lift 8 amp breaker and vehicle battery. It requires circuit protection to be provided by installer.

- 1) Disconnect battery.
- 2) The cable leading to applicable circuit protection from battery must be at least 16 AWG or larger, and must not exceed 12" in length.
- 3) Connect INPUT side of interlock circuit to OUTPUT side of circuit protector using 16 AWG or larger wire.



- 4) If an optional 30 amp circuit breaker has been installed next to 8 amp breaker, completely remove the 18 AWG wire connecting INPUT sides of 30 amp and 8 amp circuit breakers. To do this, the spade connector must be removed from 8 amp INPUT and 18 AWG wire must be cut as close as possible to 30 amp INPUT connector, since it is crimped to that connector along with a 10 AWG wire.
- 5) Connect OUTPUT side of interlock circuit to INPUT side of lift's 8 amp circuit breaker using 16 AWG or larger wire.
- 6) Re-connect battery.

c. **INTERLOCK METHOD #3**

Refer to **Figure 2-16**. This method interrupts power between pump solenoid and battery. This cuts all power to lift. It requires circuit protection to be supplied by installer.

- 1) Disconnect battery.
- 2) Disconnect 4 AWG power cable from main breaker at pump solenoid.
- 3) Connect cable to one of terminal posts of interlock solenoid.
- 4) Connect other terminal post of interlock solenoid to empty terminal post of pump solenoid using 4 AWG wire.
- 5) Connect circuit protector provided by installer (should be 8 amp, maximum) to main power cable coming from battery (which should be disconnected at this time) using wire at least 16 AWG or larger, not to exceed 12" in length. Be sure that wiring cannot pinch or chafe.
- 6) Connect OUTPUT side of circuit protector to INPUT side of interlock circuit provided by installer using 16 AWG or larger wire.
- 7) Connect OUTPUT side of interlock circuit to coil terminal of solenoid using 16 AWG or larger wire.
- 8) Be sure that interlock solenoid is properly grounded. If a separate grounding post is provided, connect a 16 AWG wire from ground post to a suitable chassis ground. If coil is grounded through body of solenoid, be sure that solenoid is mounted to a suitable chassis ground.
- 9) Reconnect battery.

INSTALLATION MUST CONFORM TO SAE SPECIFICATIONS:

J553: CIRCUIT BREAKERS

J1292/SEC. 2.9: WIRE ASSEMBLY

J1292/SEC. 2.10/PARAGRAPH 2.10.1: CIRCUIT PROTECTION

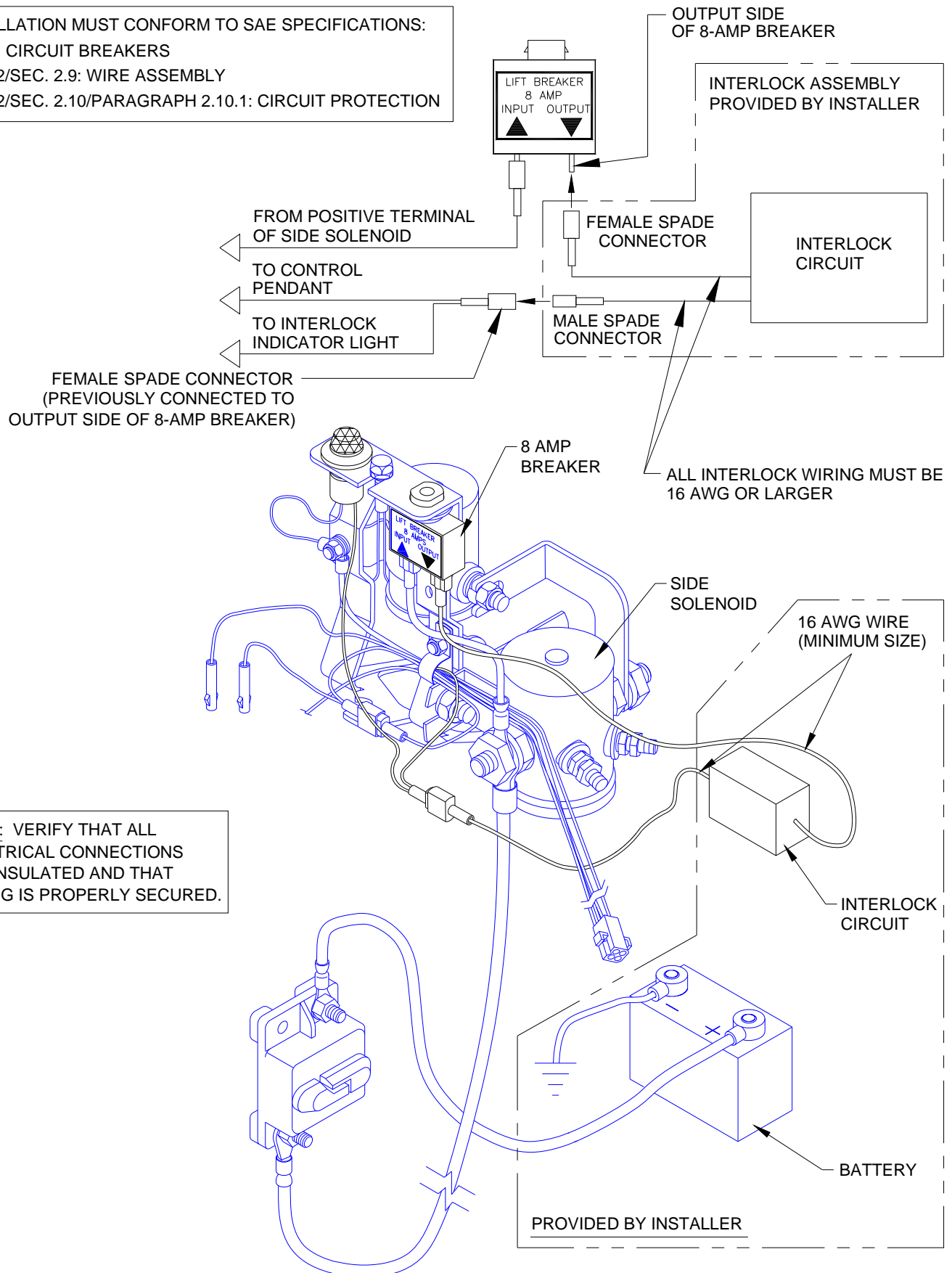


FIGURE 2-14: INTERLOCK METHOD #1 - INTERRUPT POWER TO CONTROL PENDANT

INSTALLATION MUST CONFORM TO SAE SPECIFICATIONS:

J553: CIRCUIT BREAKERS

J1292/SEC. 2.9: WIRE ASSEMBLY

J1292/SEC. 2.10/PARAGRAPH 2.10.1: CIRCUIT PROTECTION

4 AWG POWER WIRE  
TO SIDE SOLENOID

90 AMP  
MAIN BREAKER

BATTERY

PROVIDED BY INSTALLER

8 AMP CIRCUIT  
PROTECTION

INTERLOCK  
CIRCUIT

TO INPUT SIDE OF  
8 AMP CIRCUIT BREAKER

NOTE: VERIFY THAT ALL  
ELECTRICAL CONNECTIONS  
ARE INSULATED AND THAT  
WIRING IS PROPERLY SECURED.

\* NOTE: REMOVE EXISTING 18 AWG JUMPER CONNECTED  
BETWEEN 8 AMP AND 30 AMP CIRCUIT BREAKERS.

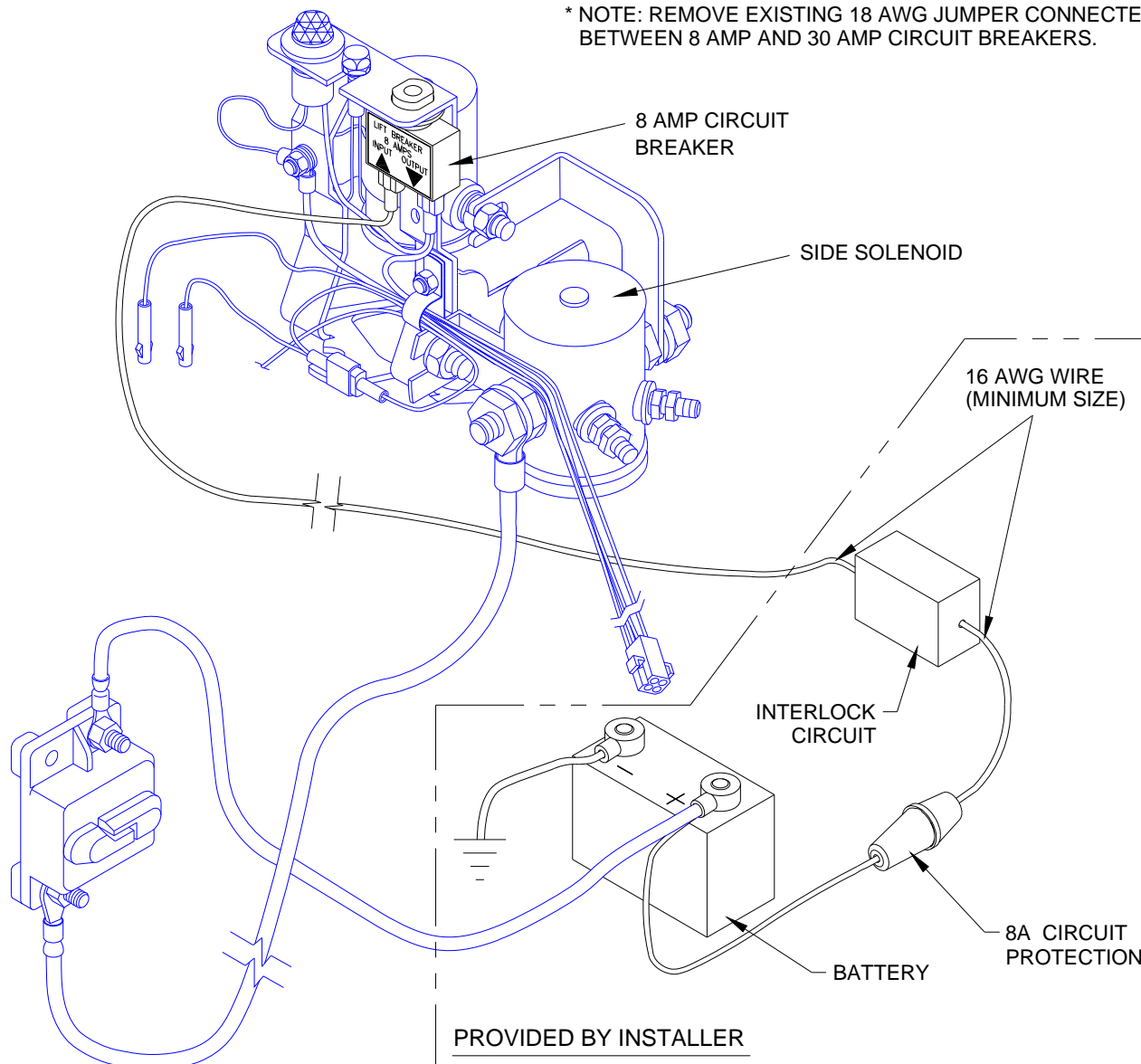


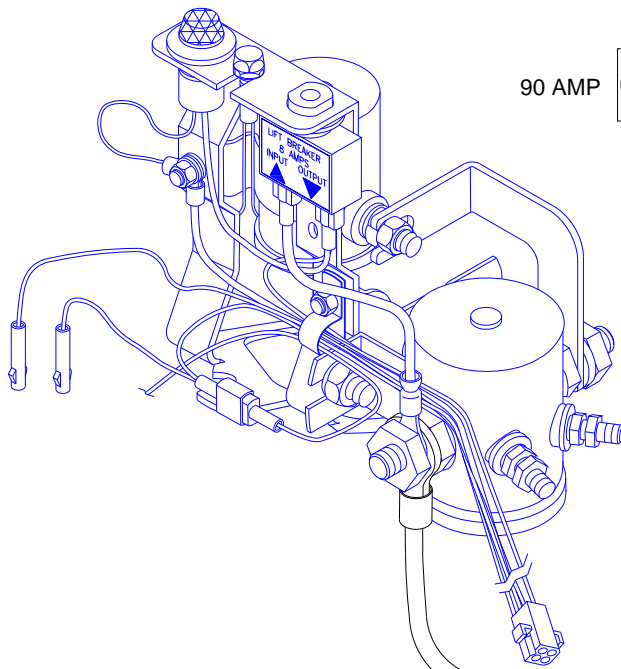
FIGURE 2-15: INTERLOCK METHOD #2 - INTERRUPT POWER TO 8 AMP CIRCUIT BREAKER

INSTALLATION MUST CONFORM TO SAE SPECIFICATIONS:

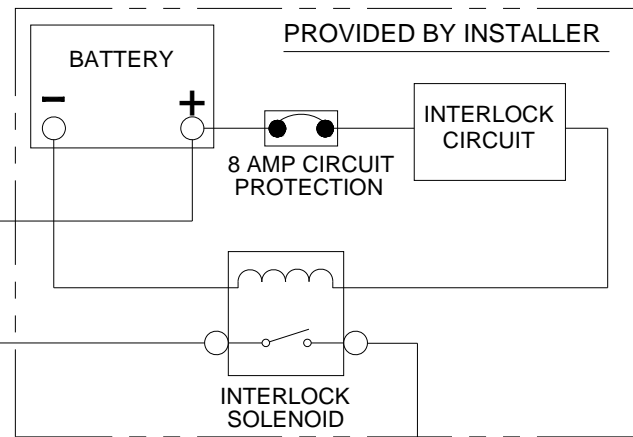
J553: CIRCUIT BREAKERS

J1292/SEC. 2.9: WIRE ASSEMBLY

J1292/SEC. 2.10/PARAGRAPH 2.10.1: CIRCUIT PROTECTION



90 AMP



PROVIDED BY INSTALLER

4 AWG POWER  
WIRE TO PUMP SOLENOID

NOTE: VERIFY THAT ALL  
ELECTRICAL CONNECTIONS  
ARE INSULATED AND THAT  
WIRING IS PROPERLY SECURED.

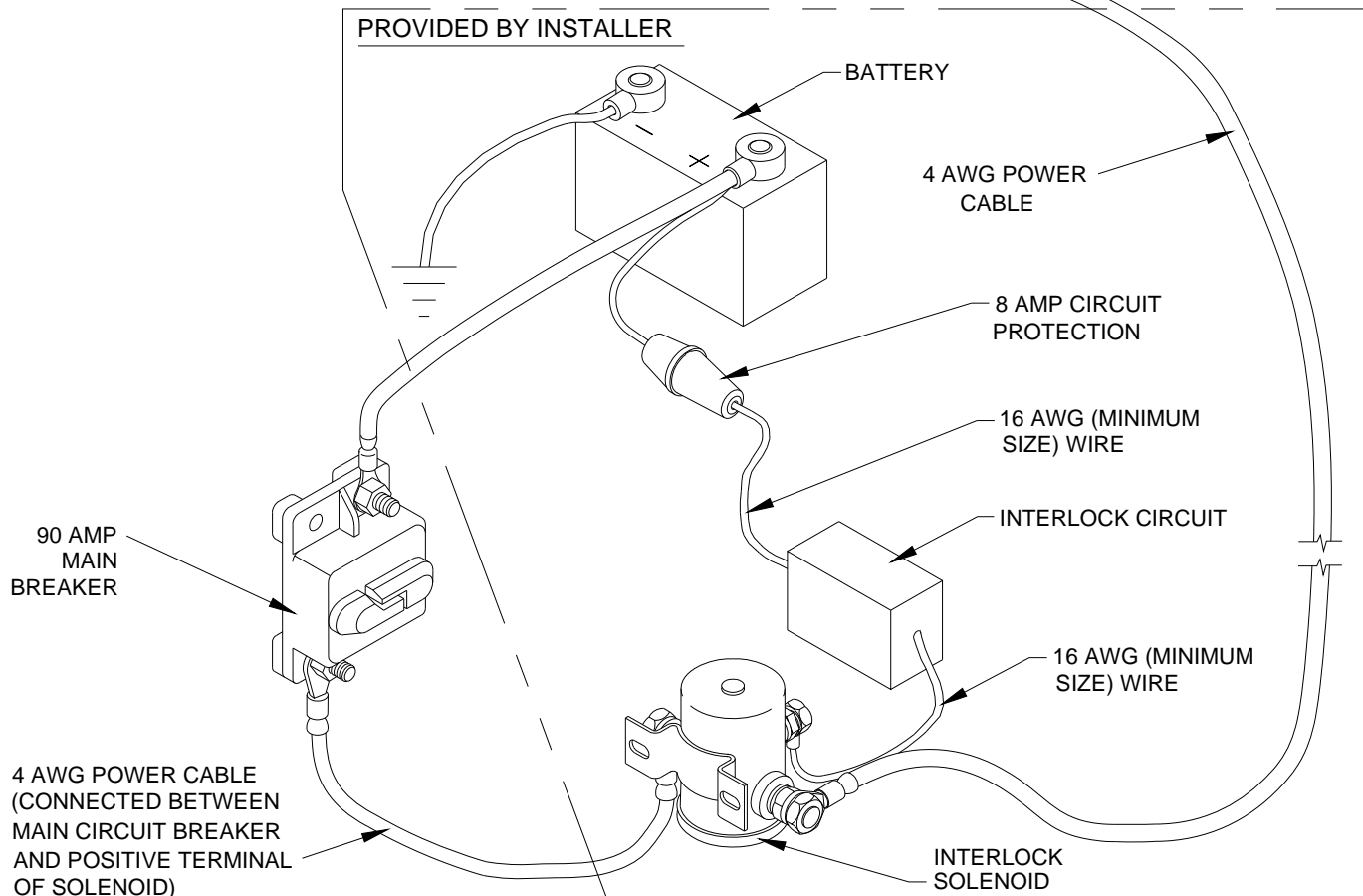


FIGURE 2-16: INTERLOCK METHOD #3 - POWER INTERRUPT

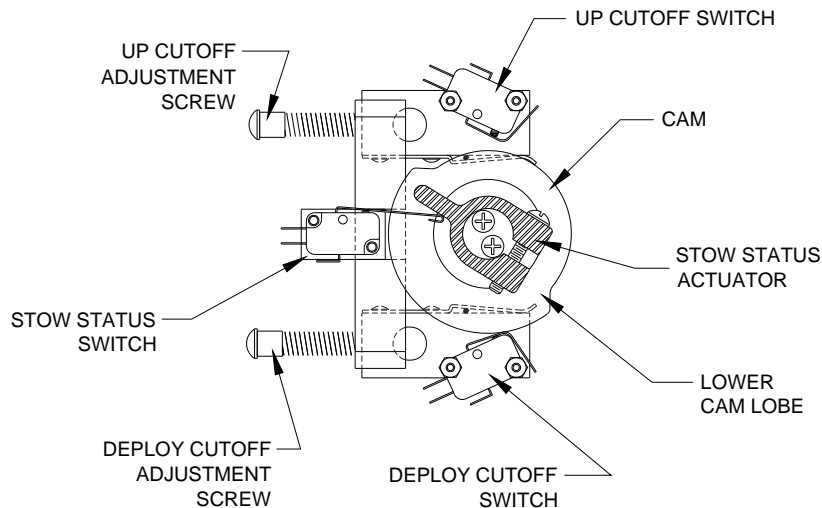
## C. FINAL ADJUSTMENTS

### 1. LIMIT SWITCH ADJUSTMENT

For lift limit switch adjustment, refer to **Figures 2-17, 2-18**, and the following procedure. Contact Ricon Product Support for assistance.

**NOTE:** To avoid operational “dead-spots”, always adjust OUT CUTOFF SWITCH **before** UP CUTOFF SWITCH.

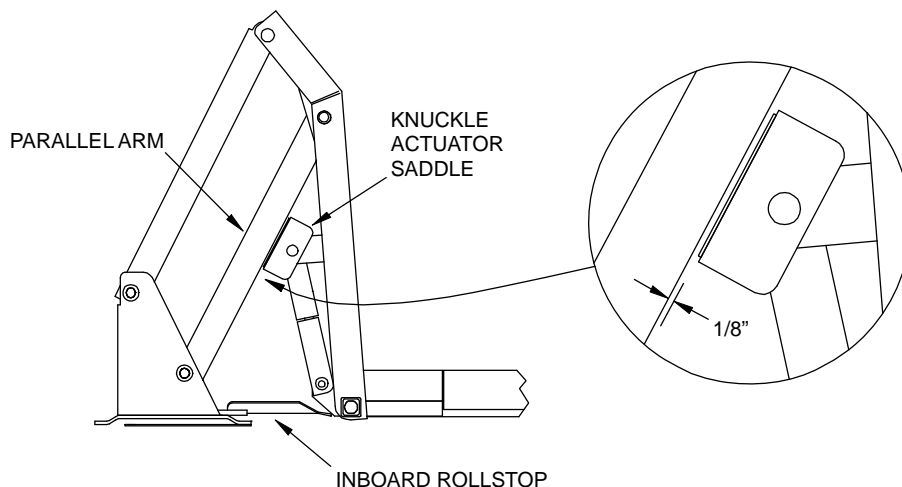
**NOTE:** When loosening adjustment screws, apply enough pressure to screw to move block instead of screw. (The block might stick if insufficient pressure is applied to screw.)



**FIGURE 2-17: LIMIT SWITCH ADJUST DIAGRAM**

- a. Fully DEPLOY platform.
- b. Adjust UP CUTOFF ADJUSTMENT SCREW and OUT CUTOFF ADJUSTMENT SCREW 6-8 turns **counter-clockwise** and then push screws FORWARD.
- c. Cycle platform to STOW then DEPLOY.
- d. When in DEPLOY position, platform should stop at an angle and NOT even with vehicle floor. If not, turn OUT CUTOFF ADJUSTMENT SCREW an additional 2-3 turns **counter-clockwise**, push screw forward, STOW then DEPLOY platform, then repeat this step.
- e. Cycle platform to UP position.
- f. When in UP position, platform should stop short of vehicle floor level. If not, turn UP CUTOFF ADJUSTMENT SCREW an additional 2-3 turns **counter-clockwise**, push screw forward, cycle platform DOWN then UP, then repeat this step.
- g. Cycle platform to STOW then DEPLOY.
- h. Push and hold control pendant DEPLOY switch. Slowly turn OUT CUTOFF ADJUSTMENT SCREW **clockwise** until platform “jogs” down to vehicle floor level. Make sure that clearance between knuckle actuator saddle and parallel arm is 1/8" minimum (distance may be 1/2" maximum and unequal from left or right arm), stop turning screw and release DEPLOY switch.
- i. Position platform DOWN to ground level then UP until it stops.
- j. Push and hold control pendant UP switch. Slowly turn UP CUTOFF ADJUSTMENT SCREW **clockwise** until platform “jogs” up to vehicle floor level. Make sure that clearance between knuckle actuator saddle and parallel arm is 1/8" minimum (distance may be 1/2" maximum and unequal from left or right arm), stop turning screw and release UP switch.

**NOTE:** If lift does not operate after 1-2 full turns of adjustment screw, cycle platform UP and DOWN (The UP CUTOFF SWITCH is less sensitive than OUT CUTOFF SWITCH).



RSM0004700

**FIGURE 2-18: LIMIT SWITCH ADJUSTMENT CLEARANCE**

- k. Cycle platform through all functions (DEPLOY, DOWN, UP, and STOW) to verify correct adjustment. Refer to **Table 2-1** if necessary.

TABLE 2-1: LIMIT SWITCH ADJUSTMENT CHART			
COMPONENT	SYMPTOM	CORRECTIVE ACTION	ADJUSTMENT PROCEDURE
Fold cutoff actuator	Lift does not fold tightly.	Rotate collar counter-clockwise.	With lift fully folded (handrails should be folded tight against vertical arms), rotate actuator so that fold cutoff leg barely trips fold cutoff switch.
	Pump runs continuously.	Rotate collar clockwise.	Test lift. Pump should cutoff when lift is folded tight.
Up cutoff adjustment screw	Lift stops low.	Adjust screw clockwise.	Adjust up cutoff switch so that lift stops just before first knuckle actuator saddle or roller touches underside of lower parallel arm. (Saddle or roller should be about 1/8" from lower parallel arm.)
	Lift stops high.	Adjust screw counter-clockwise.	
Out cutoff adjustment screw	Lift stops low.	Adjust screw counter-clockwise.	Adjust lower limit switch so that lift stops just below "Up" cutoff described in above step. This will give the necessary overlap to avoid "dead" spots.
	Lift stops high.	Adjust screw clockwise.	
END OF TABLE			

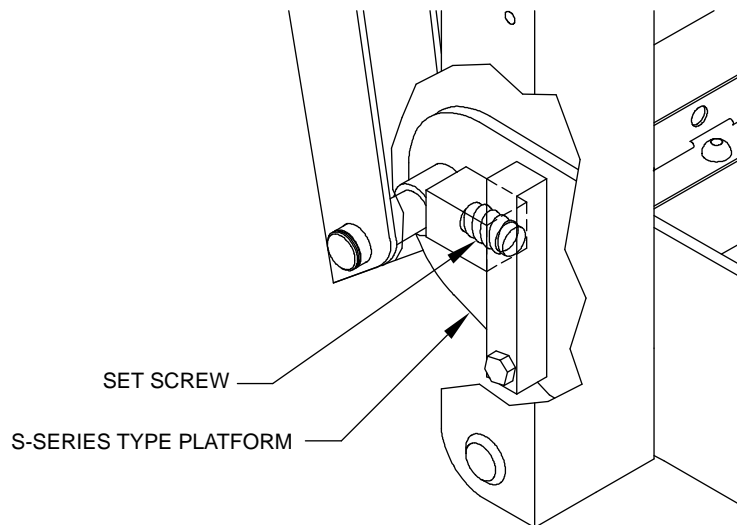
## 2. PLATFORM TILT ADJUSTMENT

Correct platform tilt adjustment is crucial for proper platform rollstop operation, but cannot be adjusted at factory. Factors such as vehicle floor height, lift tilt angle and stiffness of vehicle springs will vary installation geometry.

- Deploy and lower lift platform to a position halfway between vehicle floor level and ground level.
- Refer to **Figure 2-19**. Adjust left and right platform set screws until platform is level at zero (0) degrees. Turn set screws clockwise to angle front-end of platform upward, or counter-clockwise to angle downward.
- At ground level, the distance between heel of platform and ground should be 3/4" to 1". This distance should be measured at initial point of rollstop's full deployment.

**NOTE:** Adjust set screws on both sides of platform simultaneously and evenly to ensure proper leveling of platform.

- c. Repeat steps a and b as required to achieve proper rollstop operation.



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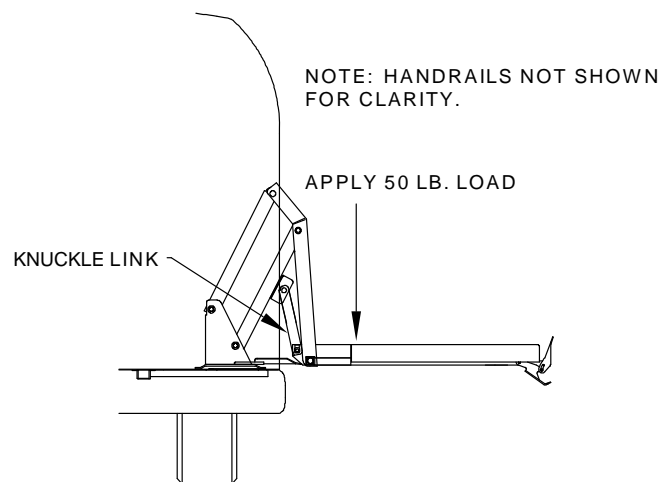
**FIGURE 2-19: PLATFORM SET SCREWS**

### 3. PLATFORM PRESSURE SWITCH CHECK AND ADJUSTMENT

(serial no.'s 104,000 to present)

Correct adjustment of this pressure switch is required to prevent platform from folding into vehicle when there is a load of 50 lbs, or more, on the platform.

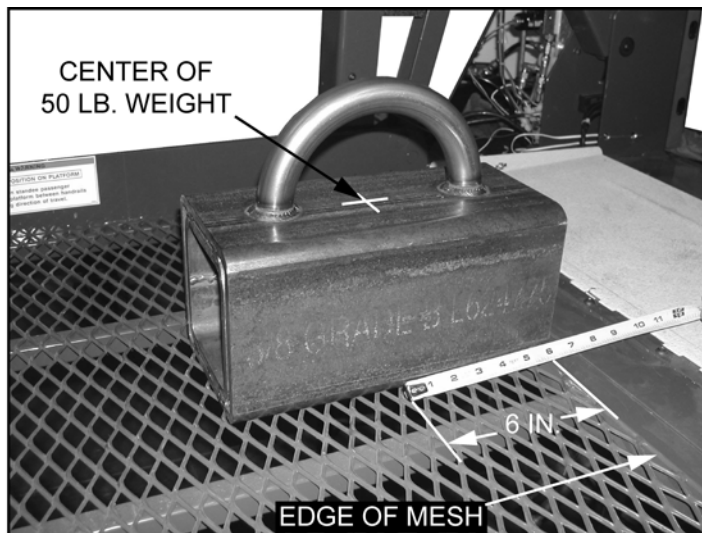
- a. Refer to **Figure 2-20**. Deploy and lower platform to ground.



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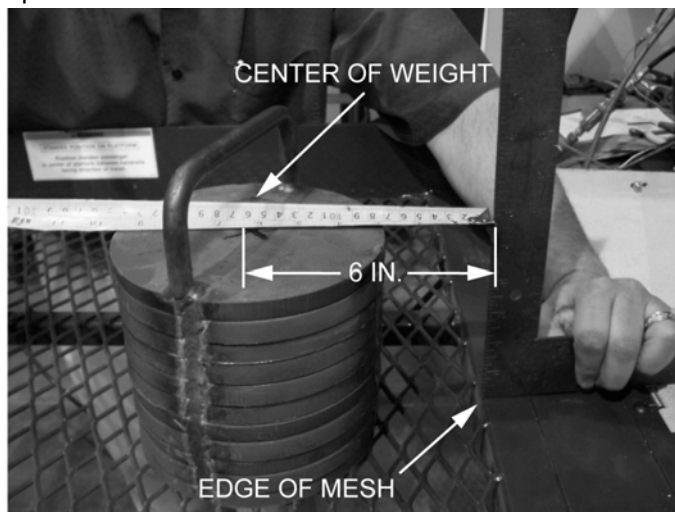
**FIGURE 2-20: PRESSURE SWITCH TEST AT FLOOR LEVEL**

**NOTE:** Weight must be 50 lbs. and placed 6 inches from rear edge of platform mesh as shown in **Figure 2-21**.



**FIGURE 2-21: 50 LB. WEIGHT PLACEMENT ON PLATFORM**

- b. Place a 6" x 6" x 12", 50 lb. load on the rear, center portion of platform then raise platform to floor level by pressing and holding the STOW switch.
- c. Refer to **Figure 2-22**. If an alternate weight is to be used, the center of the weight must be 6 inches from the rear edge of the platform mesh.

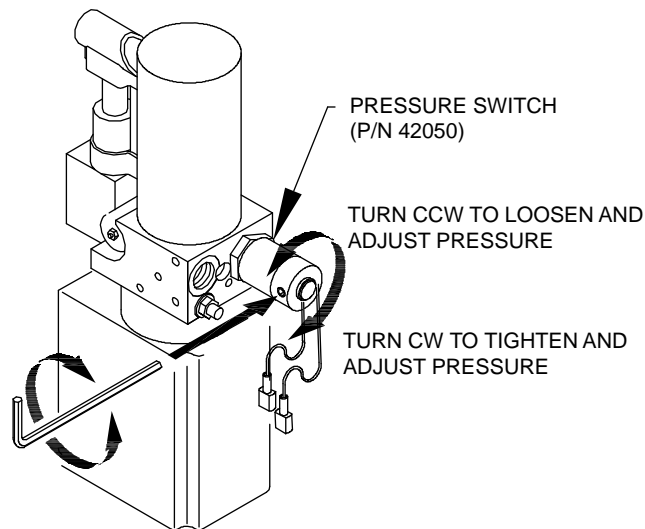


**FIGURE 2-22: ALTERNATE 50 LB. WEIGHT**

- d. The pressure switch is correctly set if pump motor shuts off when attempting to stow the lift, preventing inward movement of the platform.
- e. The pressure switch is not correctly set if pump motor does NOT shut off and there is inward movement of the platform. Adjustment of the pressure switch will be required.

**NOTE:** If adjustment is necessary then pressure switch must be adjusted as shown in **FIGURE 2-23**.

- f. Refer to **Figure 2-23**. Loosen the locking set screws from the hydraulic pressure switch, using a 5/64" hex wrench to allow adjustment of the hydraulic pressure switch.



RSM0005001

**FIGURE 2-23: PRESSURE SWITCH ADJUSTMENT (P/N 42050)**

- g. Turn the hydraulic pressure switch enclosure 1/8 of a turn **counterclockwise** (CCW), by hand to reduce the pressure.

**NOTE:** Turn the hydraulic pressure switch enclosure **clockwise** (CW) to increase pressure and **counterclockwise** (CCW) to decrease pressure, by hand.

- h. Stow platform and observe if the motor shuts off.
- i. If the motor does not shut off, turn the hydraulic pressure switch enclosure 1/8 of a turn **counterclockwise** (CCW), by hand to reduce the pressure.

**NOTE:** The lift should NOT stow or have inward movement with the weight on the platform.

- j. Repeat pressure switch adjustment as necessary to achieve correct setting.
- k. Tighten the locking set screw when the correct pressure setting is achieved.

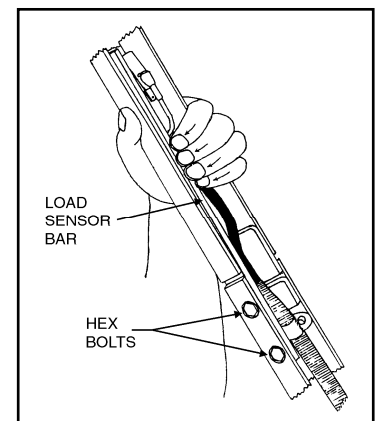
#### 4. PLATFORM LOAD SENSOR SWITCH ADJUSTMENT (serial no.'s 0 - 103,999)

This procedure provides for setting platform load sensor switch to prevent lift from folding past vehicle floor level when a load of 50 lbs is on center of platform.

- a. Refer to **Figure 2-24**. Place your left hand around knuckle vertical link assembly as shown; link is located on left side of lift.
- b. Loosen two hex-bolts shown.
- c. Exert a light downward pressure through your left-hand fingers onto load sensor bar, and retighten hex-bolts.
- d. Refer to **Figure 2-20**. To verify proper load sensor switch operation, deploy and lower platform to ground. Place a 50 lb. load in center of platform and then raise platform to floor level. Press and hold STOW switch.

**NOTE:** If pump motor does not stall or clicks off and on excessively, loosen two hex bolts, push down further on load sensor bar, and re-tighten bolts.

- e. Repeat above two steps as necessary until pump motor stalls (i.e., load sensor switch is activated, preventing lift platform from folding past vehicle floor level).

**FIGURE 2-24: LOAD SENSOR ADJUSTMENT**

## D. VERIFY INSTALLATION

- ! Be certain that no vehicle components interfere with operation of lift.
- ! The lift is designed to carry the weight of a wheelchair and its passenger. The vehicle structure must be capable of supporting all loads produced during lift operation, as well as those forces caused by motion of vehicle when it is driven.



### CAUTION

- Do not operate lift when test weight is on platform. This load test is designed to test the lift **mounting method**, not the lift capacity. Remove test weight immediately after test.
- Vehicle suspension will compress and vehicle will lean when test weight is placed on platform. If weighted platform contacts ground, remove weight, raise platform, and retest.

- ! The lift must be test loaded to 125% of its rated 800 pound load capacity to verify integrity installation. Position lift platform 2" - 6" above the ground, place 1000 pounds in center of platform, and inspect lift mounting points. REMOVE TEST WEIGHT.
- ! Run lift through several complete cycles while checking for proper operation.

## E. CUSTOMER ORIENTATION

### IMPORTANT

#### - Customer Orientation -

Ricon Sales or Service Personnel must review the warranty card and Operator manual with the customer to be certain they understand safe operation of the lift. The customer should be instructed to follow the operating instructions without exception.

- ! Refer to **Figure 2-25** on next page and verify that all decals are properly located and affixed as shown.

**NOTE:** The installing dealer affixes Operating Instructions decal to vehicle in a location clearly visible to lift operator.

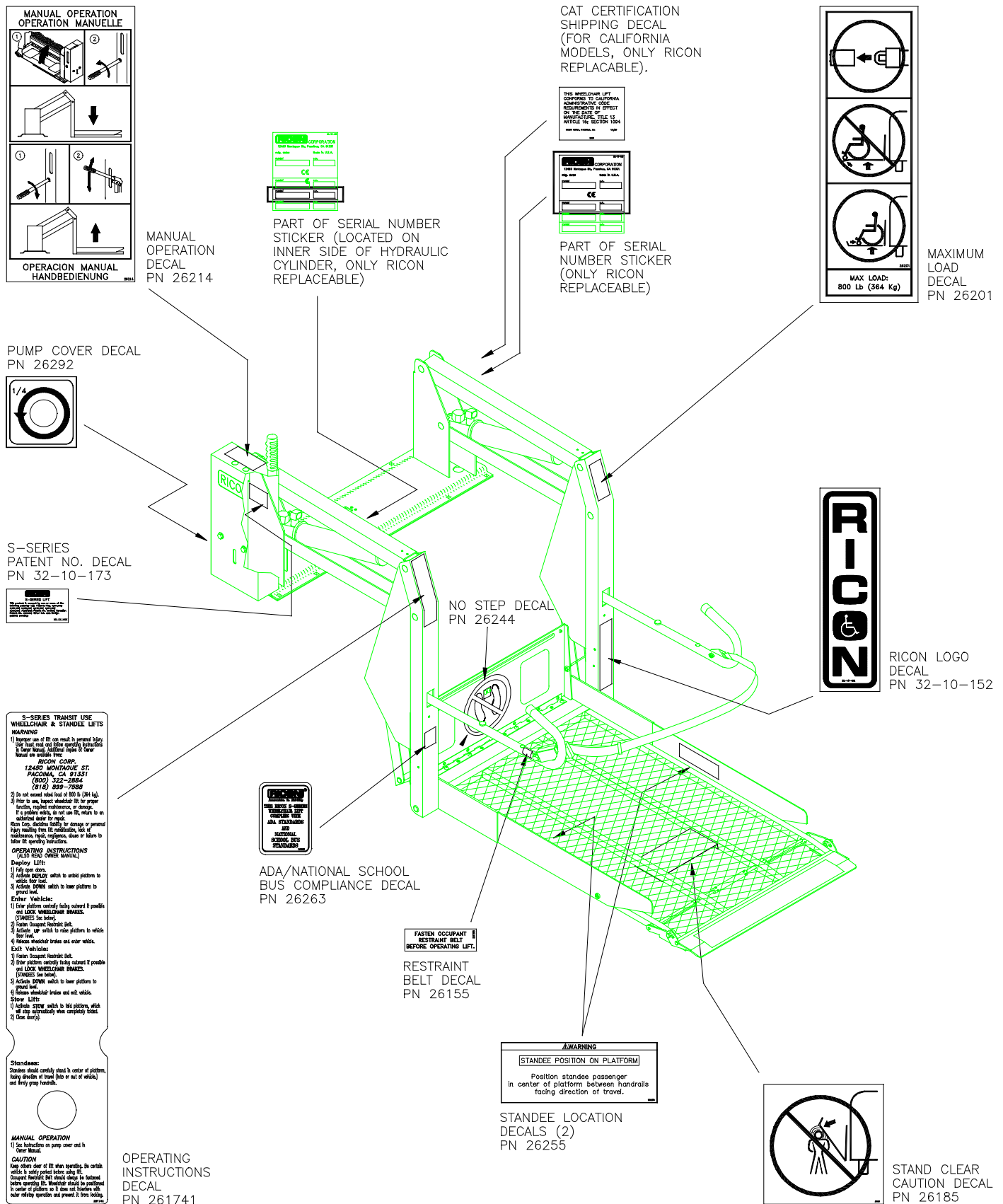


FIGURE 2-25: ADA TRANSIT LIFT DECAL LOCATIONS AND PART NUMBERS

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### III. MAINTENANCE AND REPAIR

**R**egular maintenance of the RICON S-Series (ADA) Transit Use Wheelchair and Standee Lift is required to optimize its performance and reduce the need for repairs. This chapter contains lubrication and cleaning instructions, a maintenance schedule, a troubleshooting section, and maintenance diagrams.

#### ⚠ CAUTION

THIS RICON PRODUCT IS HIGHLY SPECIALIZED. MAINTENANCE AND REPAIRS MUST BE PERFORMED BY A RICON AUTHORIZED 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. LUBRICATION

#### ⚠ CAUTION

DO NOT LUBRICATE MOTOR OR OTHER ELECTRICAL COMPONENTS. LUBRICATION OF ELECTRICAL COMPONENTS MAY CREATE UNINTENTIONAL SHORT CIRCUITS.

Lubrication should be performed at least every six months, or sooner depending on usage. Refer to **Figure 3-1** and following Maintenance Schedule. Lubricate lift at points specified.

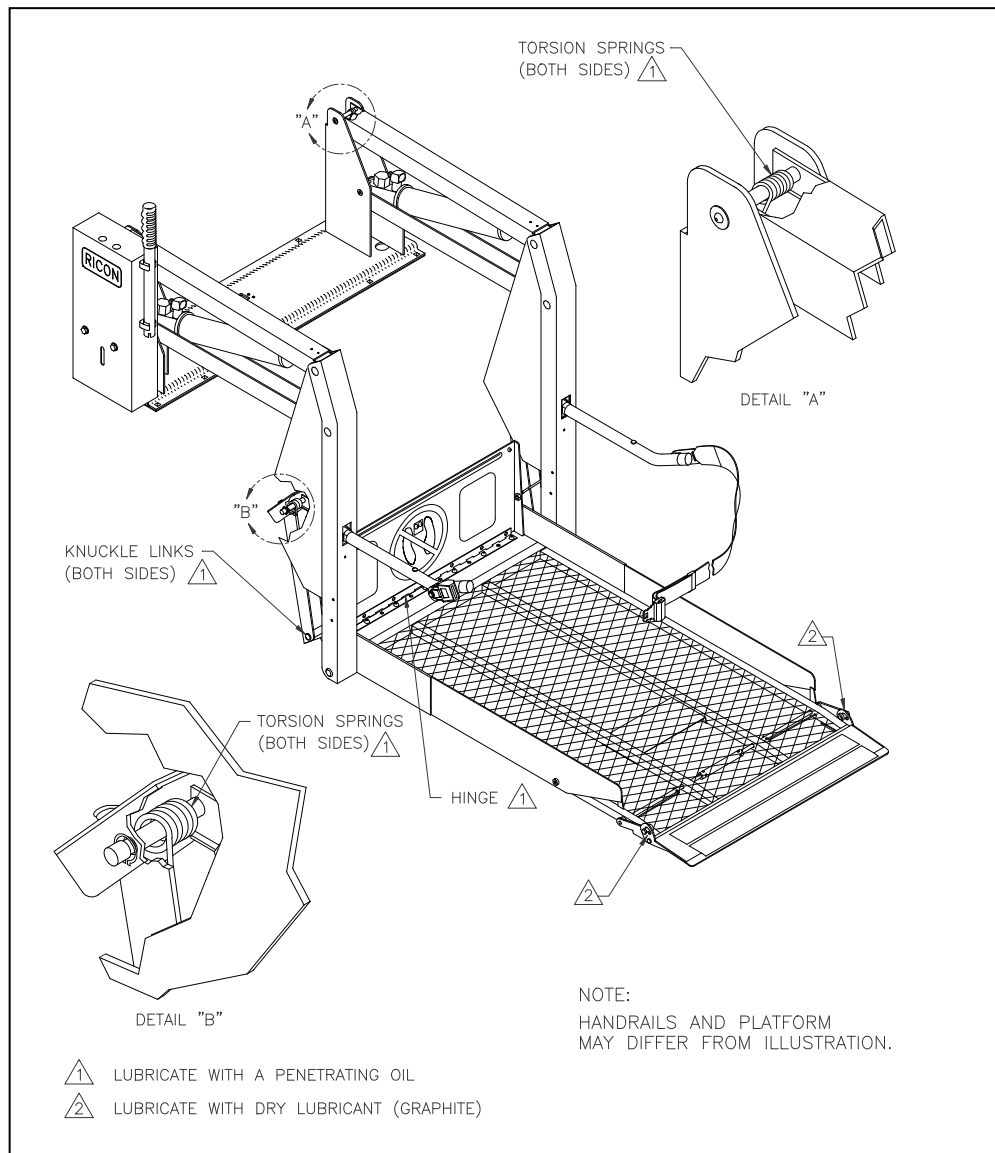



FIGURE 3-1: LIFT LUBRICATION POINTS


## B. CLEANING

Regular cleaning with mild soap (i.e. dish soap, car wash liquid) and thorough drying will protect lift painted 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

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

TABLE 3-1: MAINTENANCE SCHEDULE	
SERVICE POINT	ACTION TO PERFORM
<b>DAILY SAFETY CHECK</b>	
Overall Condition	Listen for any abnormal noises as lift operates (i.e., grinding or binding noises).
Control Pendant	Check that control pendant is not damaged and cable connectors are tight.
<b>TWO-WEEK SAFETY CHECK</b>	
Overall Condition	Listen for any abnormal noises as lift operates (i.e., grinding or binding noises). Inspect underside of vehicle to be certain nothing is out of the ordinary.
Control Pendant	Check that control pendant is not damaged and cable connectors are tight.
Electrical Wiring	Inspect electrical wiring for frayed wires, chaffed wires, loose connectors, etc.
Vehicle Interlock	Place vehicle in NON-INTERLOCK mode and attempt to operate lift.
Decals	Be certain that all lift decals are affixed properly, clearly visible and legible. Replace if necessary.
Handrails	Be certain that all handrail fasteners are properly tightened.
Lift Mountings and Support Points	Be certain that all lift mounting and support points are in proper order and free from damage. Be certain that all mounting bolts are sufficiently tight.
Main Lifting Pivots	Be certain traveling frame pins are installed properly, free from damage and locked in position.
Platform Attachment Points	Be certain platform operates properly during lift functions without obstruction.
Inner Rollstop	Be certain that inner rollstop operates properly during lift functions without obstruction. Be certain that inner rollstop deploys fully as platform stops at proper vehicle floor level.
Platform Rollstop	Be certain that rollstop operates properly without obstruction when it contacts ground.
Hydraulic Power Unit	<div style="text-align: center;">  <b>CAUTION</b> </div> <p>ADD FLUID WHEN PLATFORM IS AT GROUND LEVEL. ADDING FLUID WHEN PLATFORM IS RAISED CAUSES TANK TO OVERFLOW WHEN PLATFORM IS LOWERED.</p> <p>Check for visible hydraulic fluid leakage. Be certain backup pump manual release valve is lightly-snug.</p>
– continued –	

<b>SIX-MONTH SAFETY CHECK (or @ 1750 cycles of operation)</b>	
Handrails	Be certain that all handrail fasteners are properly tightened.
Cleaning and Lubrication	Clean lift with a mild soap and wipe dry. Rub down all surfaces with light oil, using a soft cloth to avoid rusting of material. Remove excess oil. Following labeled directions on container, spray lubricant (Curtisol® Red Grease No.88167 or WD-40®), lubricate lift as specified in Lift Lubrication Points diagram. Wipe any excess grease from surrounding areas.
Hydraulic Power Unit	While platform is at GROUND LEVEL, be certain that pump hydraulic fluid level is maintained at required FULL level. Add only Texaco 01554 Aircraft Hydraulic Oil or equivalent U.S. mil spec H5606G fluid.
<div style="text-align: center;">  <b>CAUTION</b> </div> <p><b>THIS SAFETY CHECK MUST BE PERFORMED BY A RICON AUTHORIZED SERVICE TECHNICIAN.</b></p>	
<b>ANNUAL SAFETY CHECK (or @ 3500 cycles of operation)</b>	
Hydraulic Cylinder, Hoses and Fittings	Check Hydraulic Cylinder for evidence of leaks. Inspect hydraulic hoses for damage. Be certain that all fittings are tightly secured.
<b>END OF TABLE</b>	

## D. TROUBLESHOOTING

The troubleshooting guides are designed to provide logical starting points to locate general problems that could occur with lift. However, not all possible problems or combinations of problems are listed. For troubleshooting lift, refer to **Tables 3-2** and **3-3**. The guides do not incorporate routine safety precautions or preliminary procedures and assume that vehicle battery is fully charged and battery terminals/connectors are clean and tight.



### WARNING

**THE TROUBLESHOOTING GUIDE DOES NOT INCORPORATE ROUTINE SAFETY PRECAUTIONS OR PRELIMINARY PROCEDURES. DURING THE RICON WARRANTY PERIOD A TRAINED, RICON AUTHORIZED SERVICE TECHNICIAN MUST PERFORM TROUBLESHOOTING. AFTER THE WARRANTY PERIOD, IT IS RECOMMENDED THAT TROUBLESHOOTING CONTINUE TO BE PERFORMED BY A RICON AUTHORIZED SERVICE TECHNICIAN.**

### 1. INTERLOCK INDICATOR DIAGNOSTICS

The purpose of a vehicle interlock system is to prevent operation of lift if an unsafe condition is present. When vehicle interlock systems are interfaced with lift circuitry, the interlock indicator shows whether or not interlock is operating properly. The light is interfaced with electrical system so that no matter which interlock system/method is used, the light will be ON when interlock allows electrical power to lift and OFF when interlock has disabled power to lift. When there is no interlock system installed, the light stays illuminated at all times.

A light-assembly is installed in the position where door operator circuit breaker would normally be mounted on all lift assemblies **without** optional door operator. The light indicates power is supplied to signal portion of electrical system, and will aid in diagnosing electrical problems.

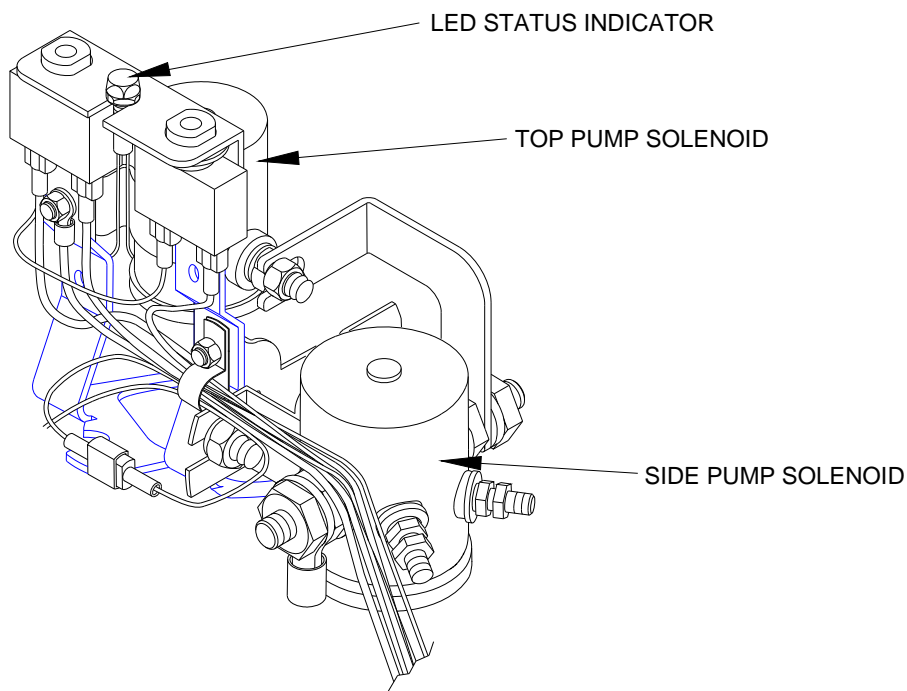
**TABLE 3-2: INTERLOCK INDICATOR TROUBLESHOOTING GUIDE**

SYMPTOM	POSSIBLE CAUSE
Light is not lit; lift does not operate.	Control system circuit breaker is tripped.
	Interlock system is not allowing power to lift due to an unsafe condition or a faulty interlock.
Light is not lit; lift operates.	Light needs to be replaced.
Light is lit; lift works in an unsafe condition.	Interlock is not functioning.
Light is lit; lift does not operate.	There is a problem with electrical system, either with power or signal side. Both will have to be checked, but start with power side since it is less complicated.
END OF TABLE	

## 2. PUMP SOLENOID LED STATUS INDICATOR

Refer to **Figure 3-2**. In April 2000 a second pump solenoid was installed next to the original pump solenoid. Two solenoids provide a margin of safety if one of the solenoids fails with its contacts closed. A status indicator LED is located between the 8A and 30A circuit breakers to monitor the condition of the two solenoids. The LED is normally off when the pump is not operating and becomes green when the pump operates. When the pump is not operating and the top solenoid has failed the LED will be red. The LED will be green when the side solenoid has failed.

A retrofit kit is available to add the second pump solenoid to lifts that have only a single solenoid. It is Ricon p/n 19068.

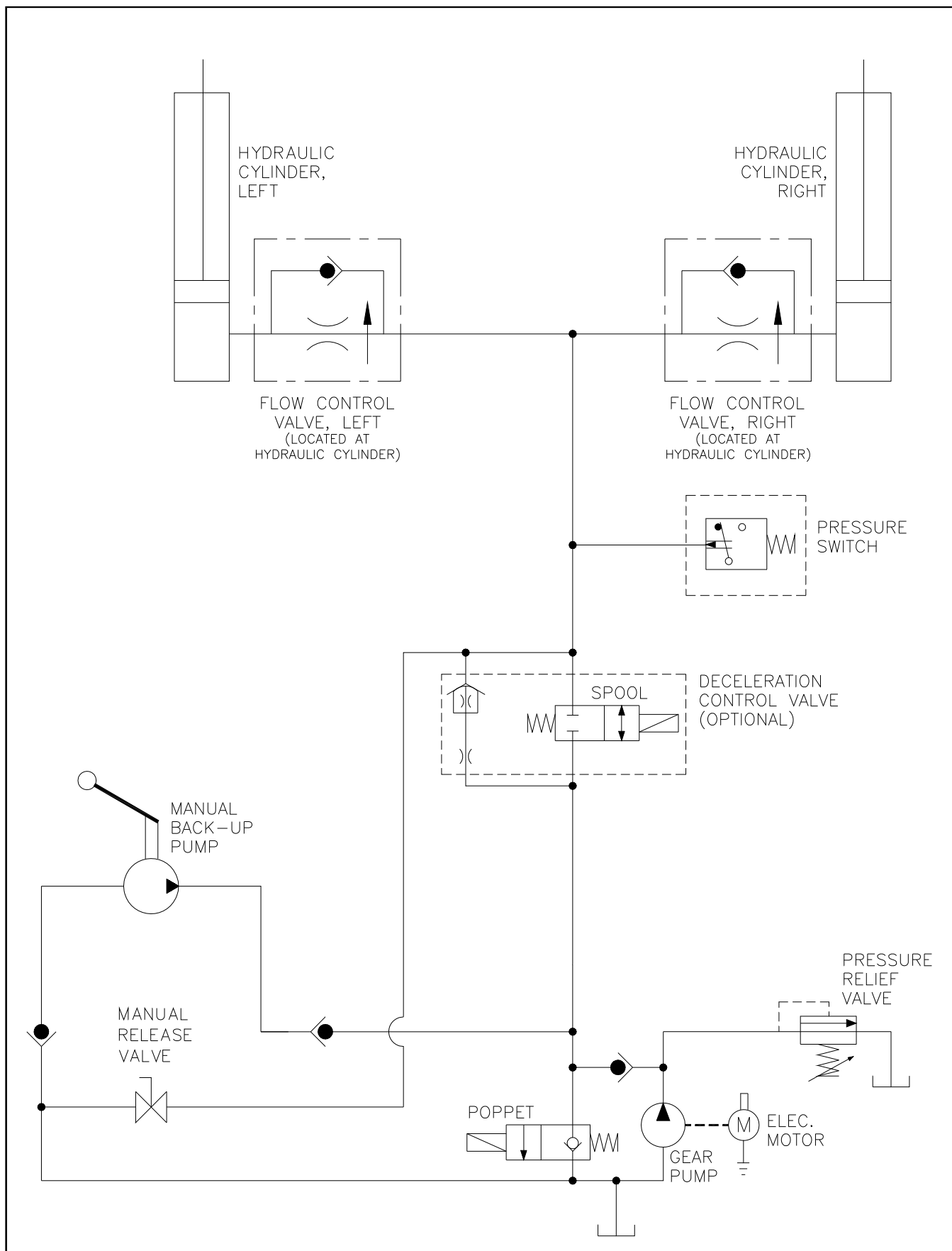


**FIGURE 3-2: STATUS INDICATORS FOR PUMP SOLENOIDS**

## 3. LIFT TROUBLESHOOTING

TABLE 3-3: LIFT OPERATION TROUBLESHOOTING			
SYMPTOM		POSSIBLE CAUSE	REMEDY
HYDRAULIC FLUID LEAKS		Loose hydraulic fitting.	Make sure fitting is PROPERLY tightened.
		Hydraulic component defective.	Discontinue use of lift until a Ricon authorized service technician makes repairs.
ROLLSTOP DOES NOT OPEN		Obstruction of rollstop release latch.	Raise lift and remove obstruction.
LIFT FUNCTIONS	Abnormal Operation	Obstruction in lifting frame.	Remove obstruction and check for any damage
		Backup pump manual release valve OPEN.	Turn manual release valve CLOCKWISE until slightly-snug.
		Hydraulic fluid may be low.	While platform is at GROUND LEVEL, be certain that pump hydraulic fluid level is maintained at required FULL level. Add only Texaco 01554 Aircraft Hydraulic Oil or equivalent U.S. mil spec H5606G fluid.
		Air may be trapped in hydraulic system.	Purge hydraulic system by operating lift through its maximum range of travel for at least four complete cycles. (For vehicles that do not use full travel of lift, the maximum range of travel is accomplished by raising vehicle on a service hoist or ramp.)
	No Operation	Control System Circuit Breaker tripped.	Reset circuit breaker.
		Backup pump manual release valve OPEN.	Turn manual release valve CLOCKWISE until slightly-snug.
		Hydraulic hose or fitting leak.	Contact an authorized Ricon service technician for repair.
		Hydraulic fluid may be low.	While platform is at GROUND LEVEL, be certain that pump hydraulic fluid level is maintained at required FULL level. Add only Texaco 01554 Aircraft Hydraulic Oil or equivalent U.S. mil spec H5606G fluid.
		Air may be trapped in hydraulic system.	Purge hydraulic system by operating lift through its maximum range of travel for at least four complete cycles. (For vehicles that do not use full travel of lift, the maximum range of travel is accomplished by raising vehicle on a service hoist or ramp.)

END OF TABLE

**E. HYDRAULIC CIRCUIT DIAGRAM****FIGURE 3-3: S-SERIES HYDRAULIC CIRCUIT**

## F. ELECTRICAL WIRING DIAGRAMS

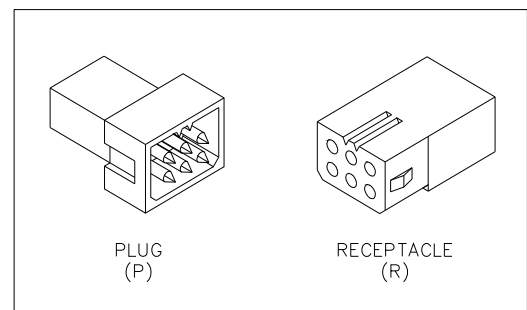
### 1. DIAGRAM LEGENDS

#### a. Wire Color Codes

TABLE 3-4: WIRE COLOR CODES			
LETTER	COLOR	LETTER	COLOR
BK	Black	R	Red
BL	Blue	VI	Violet
BR	Brown	GY	Gray
GN	Green	W	White
O	Orange	Y	Yellow
END OF TABLE			

#### b. Electrical Connector Description

Refer to **Figure 3-4**. The standard electrical connectors used by Ricon are Molex .062" Series. These connectors have terminal numbers on the back, use these numbers and colors to identify wires.



**FIGURE 3-4: MOLEX CONNECTORS**

#### c. Diagram Labels

12V	12 Volts – Circuit current rating is also given
DC	Door Close – Direct command
DO	Door Open – Direct command
DOE	Door open Enable – From Door Open cutoff switch
DWN	Pump Down – Used by OUT and DWN
DWNA	Down Attempt – Must be enabled
FAST	Signal to speedup valve for UP and DOWN
GND	GROUND
OUTA	Out Attempt – Out must be enabled
SDA	System Deploy Attempt – DO followed by OUT
SSA	System Store Attempt – IN followed by DC
UP	Pump Up – Used by UP and IN
UPA	Up Attempt – Up must be enabled

#### d. Electrical Symbols

Figure 3-5 shows symbols used in the electrical wiring diagrams.

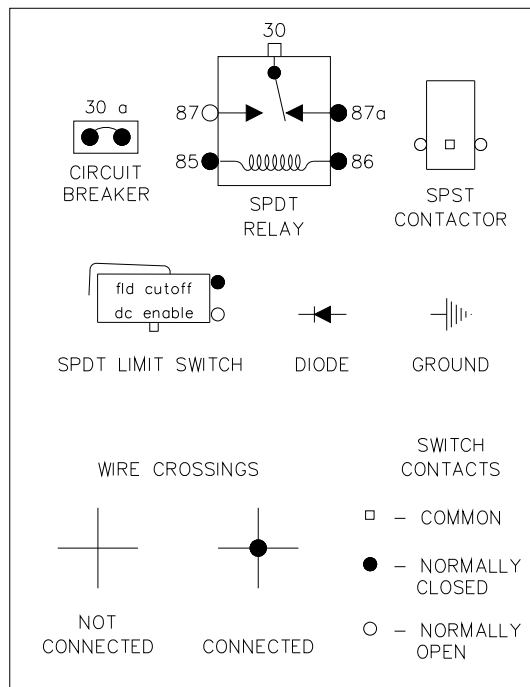


FIGURE 3-5: DIAGRAM SYMBOLS

## 2. S-SERIES LIMIT SWITCH STATES

Refer to **Figure 3-6**. The actuation diagram shows the state of all limit switches as the platform travels from stowed, to vehicle floor level, and then to ground level. The solid line segments represent current flow through the normally CLOSED switch contacts, and the open line segments represent current flow through the normally OPEN switch contacts. The heavy dashed lines show switch states when platform is beyond normal travel boundaries. This is useful in showing the operation of switches that change states at stowed or ground level positions. For proper operation of lift, the switch actuations must overlap as shown.

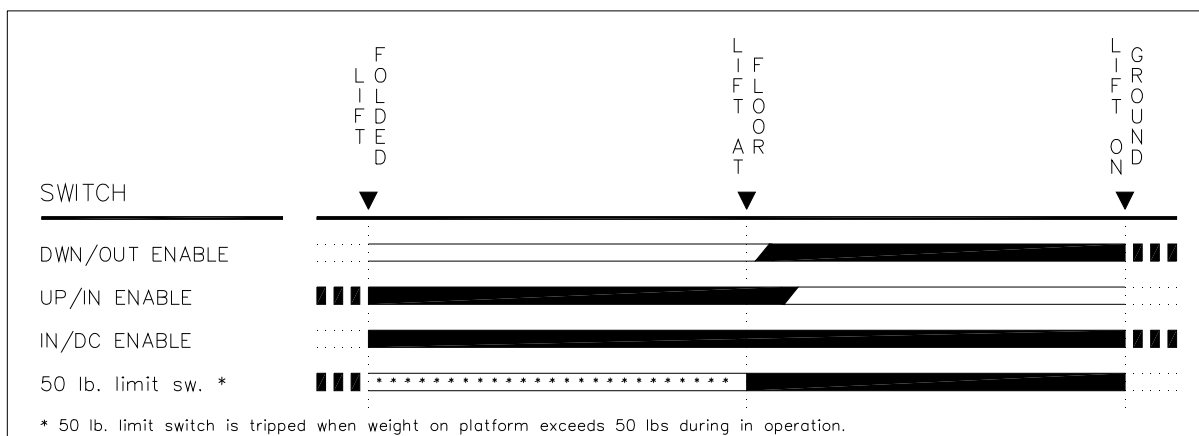
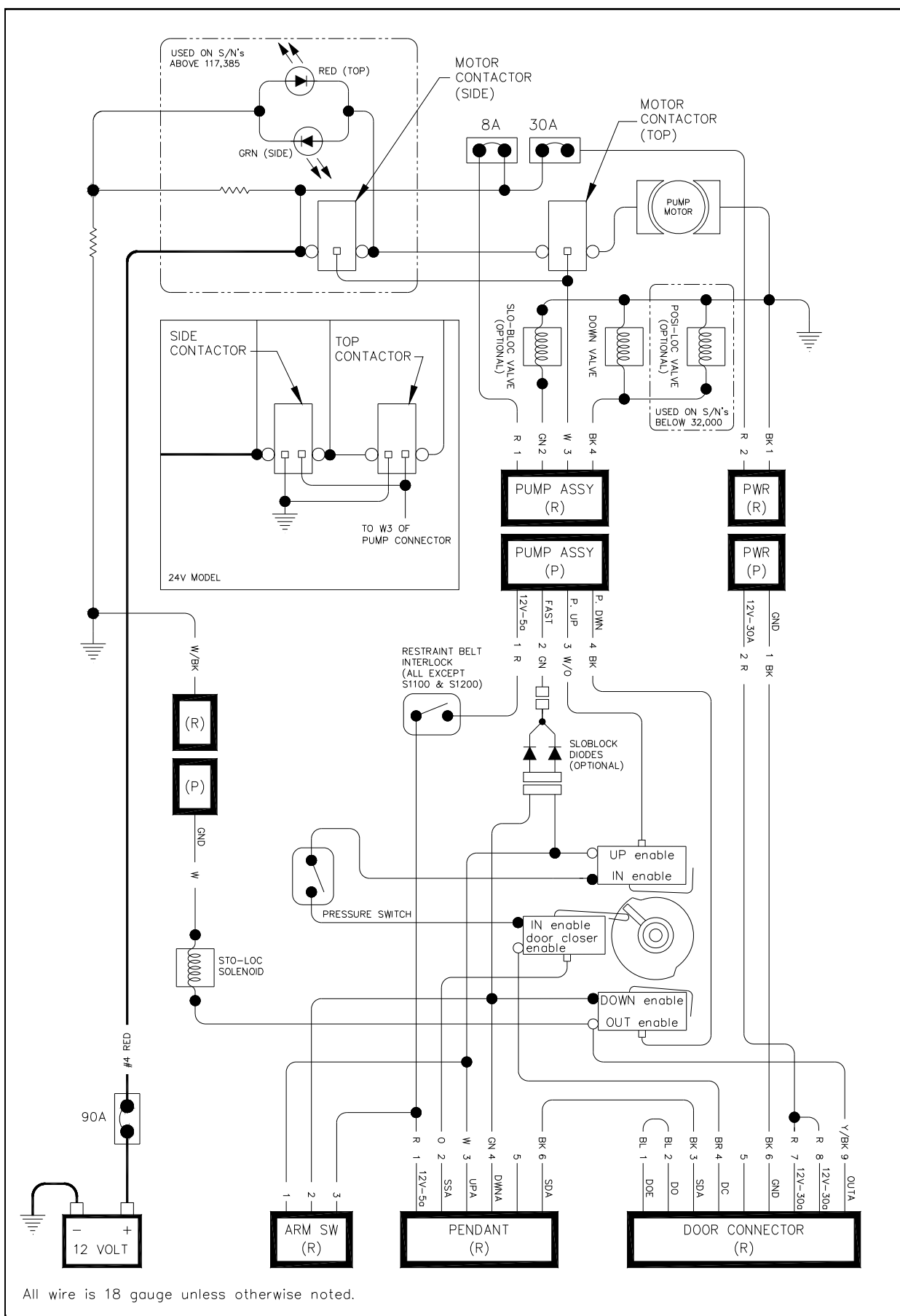
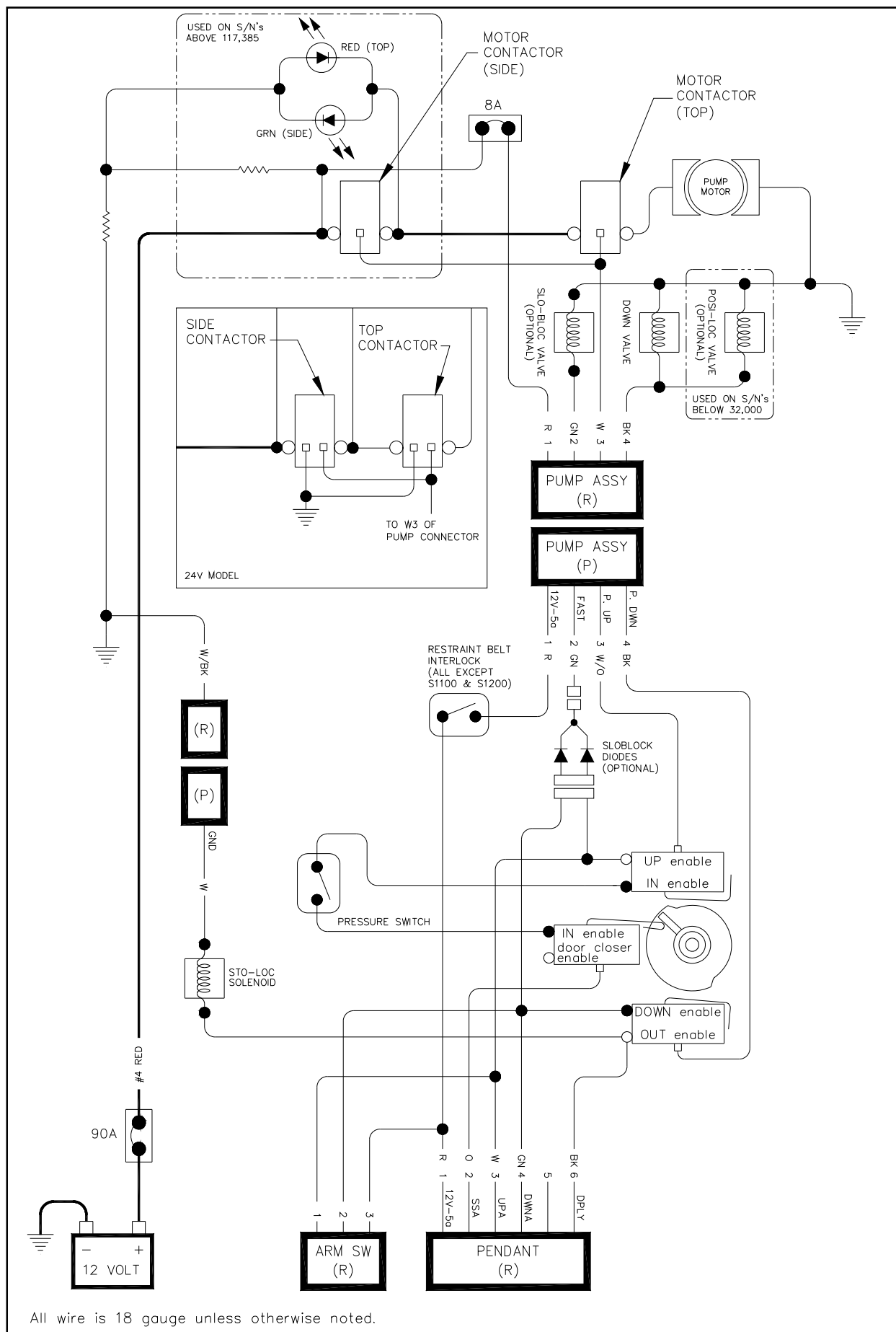


FIGURE 3-6: LIMIT SWITCH ACTUATION

### 3. WIRING DIAGRAMS



**FIGURE 3-7: WIRING DIAGRAM FOR LIFT WITH DOOR OPERATOR**



**FIGURE 3-8: WIRING DIAGRAM FOR LIFT WITHOUT DOOR OPERATOR**

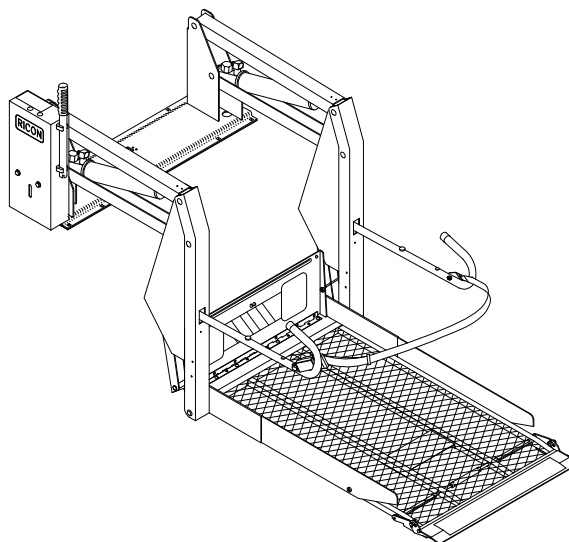
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## IV. S-SERIES® ADA TRANSIT USE SPARE PARTS

This chapter contains parts diagrams and parts lists for the RICON S-Series (ADA) Transit Use Wheelchair and Standee Lift. The exploded view of each major lift assembly shows individual components referenced by numbers. On each associated list are the reference numbers, part descriptions, the quantities used, and the Ricon part number. For part numbers of lift decals, refer to the “Decal Locations and Part Numbers” figure in **Chapter II** of this manual.

**NOTE:** To order a part: locate the part or assembly on an exploded view, note its reference number, find this number on the associated parts list (following page), and order the part number in the far right column. Most kits contain a single part (plus hardware). Therefore, you may need to order more than one kit if the part is used more than once on a major assembly.

**NOTE:** Some major lift components that are typically painted gray may also be produced in other colors, such as red, yellow, blue, black, and white. These components include the platform assembly, handrails, vertical arms, top and bottom arms, and baseplate assembly.



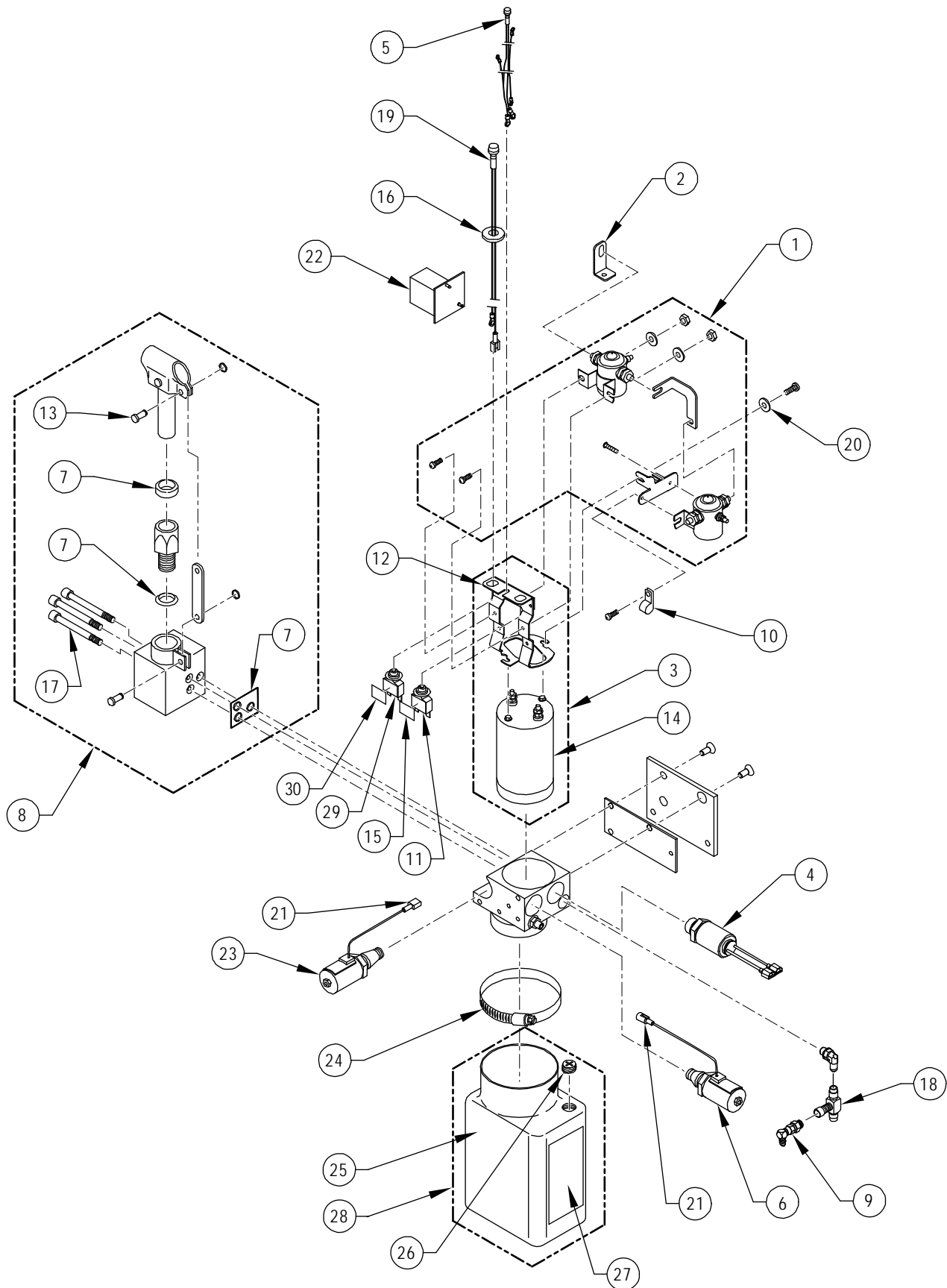
### LIFT MODEL AND KIT NUMBERS

PRODUCT NUMBER	S2000-S10000000 (First model in number sequence)
DOCUMENTATION KIT NUMBER	01073
PRODUCTION DECAL SET NUMBERS	XXXXLPXXXXXXXXXX
SPARE DECAL KIT NUMBER	26016

### PARTS DIAGRAM

### PAGE

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RSM0040900

FIGURE 4-1: ADA TRANSIT USE PUMP ASSY

FIGURE 4-1: ADA TRANSIT USE PUMP ASSY

FIG. ITEM	DESCRIPTION	QTY	CONFIG.	PART NO.
1	KIT, SOLENOID, 12V, SPST	2		29297
1A *	SOLENOID, SPST, 24V	1		26449
2	BUS BAR, ISKRA MOTOR	1		10807
3	KIT, MOTOR ASSY, W/BACKET, 12V	1		14345
3A *	KIT, MOTOR ASSY, W/BACKET, 24V, ISKRA	1		14346
4	KIT, PRESSURE SWITCH, WITH INSTRUCTIONS	1		42050
5 *	LIGHT ASSY, INDICATOR, 12V (SUPERSEDED) SEE 5A	1		19067
5A	PCB, PUMP LED ASSY, 12V	1		35739
6	KIT, SPOOL VALVE, WITH DECELERATION, 12V	1		01176
6A *	KIT, SPOOL VALVE, WITH DECELERATION, 24V	1		01177
7	KIT, SEAL, PUMP, MANUAL BACK-UP	1		V2-SH-220
8	BACK-UP PUMP, MANUAL	1		V2-SH-210
9	FITTING ASSY, SNL, 1/4J X 1/4J, STEEL	1		VS-SH-06
10	CABLE CLAMP, 3/16", NYLON (BAG OF 10)	1		19798
11	CIRCUIT BREAKER KIT, 8 AMP, W/HDWR & DECAL	1		V2-SH-005
12	BRACKET, SOLENOID, ISKRA MOTOR	1		10507
13	PIN & RETAINING RING	2		V2-SH-017
14	MOTOR ASSY, 12V, 3", ISKRA	1		14332
14A *	MOTOR ASSY, 24V, 3" ISKRA (SN 96000 - Present)	1		14333
15	DECAL, 8 AMP CIRCUIT BREAKER	1		18797
16	ADAPTER, .625 D-HOLE TO .484 ROUND	1		V2-ES-059
17	SCREW, SHC, 1/4-20 X 2.25L (BAG OF 10)	3		32407
18	FITTING, SRT, 1/4J, STEEL	1		V2-SH-012
19	LIGHT, LIFT ARMED INDICATOR, 12V, GREEN	1		UL-ES-034
19A *	LIGHT, LIFT ARMED INDICATOR, 24V, GREEN	1		V2-ES-016
20	WASHER, FLAT, .406X.812X.065 (BAG OF 10)	1		17510
21	TERM, SPL, M22-18 FULLINS, (BAG OF 10)	1		29388
22	COUNTER ASSY	1		33048
23	HYDRAULIC POPPET VALVE ASSY (DOWN VALVE), 12V	1		V2-SH-105
23A *	HYDRAULIC POPPET VALVE ASSY (DOWN VALVE), 24V	1		V2-SH-136
24	HOSE CLAMP	1		V2-SH-109
25	RESERVOIR, PUMP, PLASTIC	1		V2-SH-108
26	PLUG, RESERVOIR, BREATHER	1		V2-SH-106
27	DECAL,OIL LEVEL WARNING	1		32-10-154
28	RESERVOIR, PUMP, PLASTIC W/DECAL & PLUG	1		30938
29	CIRCUIT BREAKER, 30AMP, WHITE	1		26510
30	DECAL, 30 AMP BREAKER, HYDRAULIC, PUMP ASSY	1		44270
31 *	JUMPER, DPDT SOLENOID	1		ELJ00121
31A *	JUMPER, DPDT SOLENOID w/ISOLATED GROUND	1		ELJ00122

**NOTE:** (REF) in QTY column is for Referenced Parts Only and are not sold as spare parts.

**NOTE:** \* Item or configuration not shown.

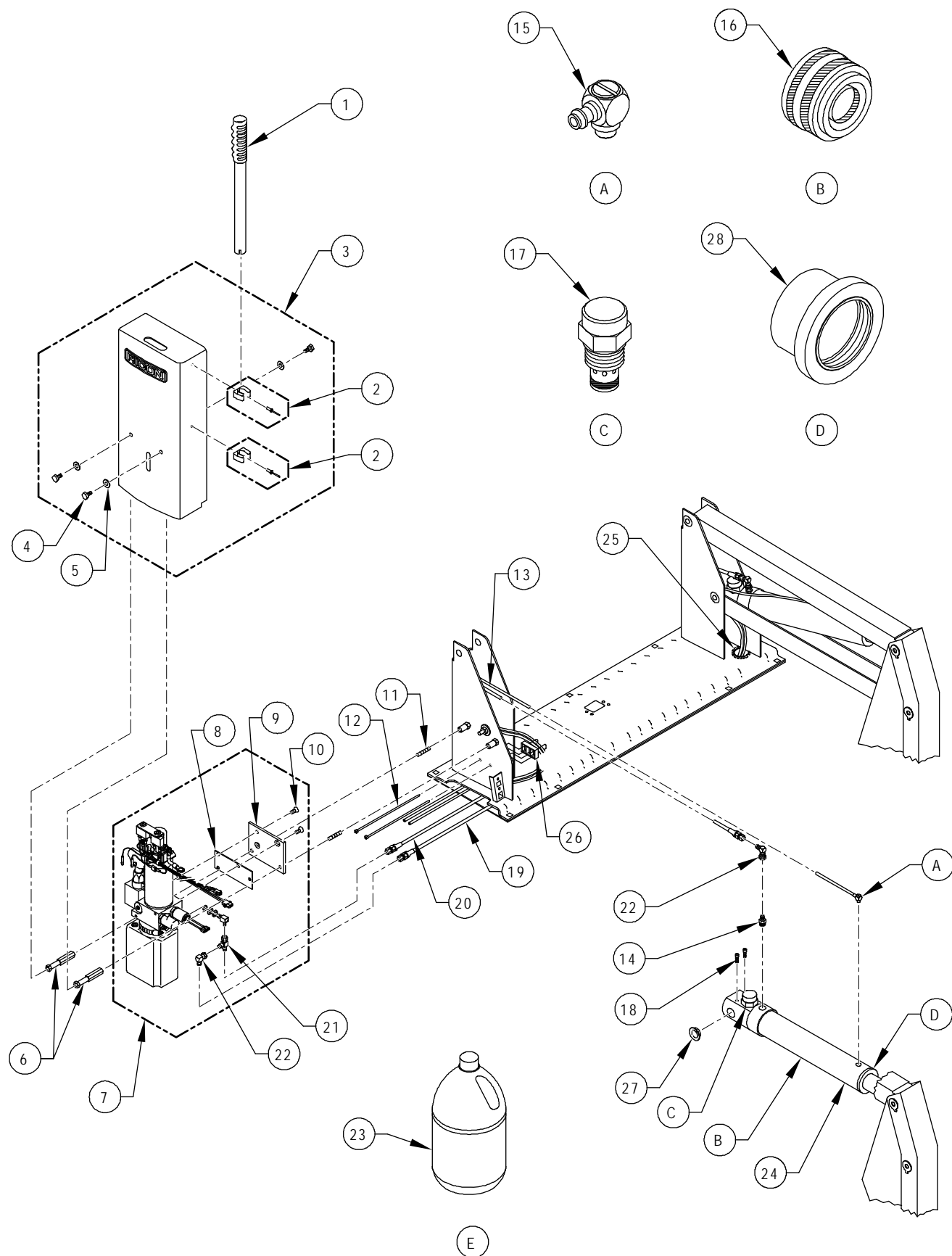
**FIGURE 4-1: ADA TRANSIT USE PUMP ASSY (CONT'D)**

FIG. ITEM	DESCRIPTION	QTY	CONFIG.	PART NO.
31B *	JUMPER, DPDT SOLENOID	1		ELJ02055
31C *	JUMPER, DPDT SOLENOID	1		ELJ03061
32 *	HARNESS, PUMP, W/DOOR INTERLOCK	1	S2003	V2-ES-100
*	HARNESS, PUMP, W/DOOR INTERLOCK	1	S2005	V2-ES-100
*	HARNESS, PUMP, W/DOOR INTERLOCK	1	S2007	V2-ES-100
*	HARNESS, PUMP, W/DOOR INTERLOCK	1	S2008	V2-ES-100
*	HARNESS, PUMP, W/DOOR INTERLOCK	1	S2014	V2-ES-100
*	HARNESS, PUMP, W/DOOR INTERLOCK	1	S5003	V2-ES-100
*	HARNESS, PUMP, W/DOOR INTERLOCK	1	S5007	V2-ES-100
*	HARNESS, PUMP, W/DOOR INTERLOCK	1	S5503	V2-ES-100
*	HARNESS, PUMP, W/DOOR INTERLOCK	1	S5510	V2-ES-100
32A *	HARNESS, PUMP, W/DOOR INTERLOCK, 24V	1		10069
32B *	HARNESS, PUMP, W/OUT DOOR INTERLOCK	1	S2003	V2-ES-150
*	HARNESS, PUMP, W/OUT DOOR INTERLOCK	1	S2005	V2-ES-150
*	HARNESS, PUMP, W/OUT DOOR INTERLOCK	1	S2007	V2-ES-150
*	HARNESS, PUMP, W/OUT DOOR INTERLOCK	1	S2008	V2-ES-150
*	HARNESS, PUMP, W/OUT DOOR INTERLOCK	1	S2010	V2-ES-150
*	HARNESS, PUMP, W/OUT DOOR INTERLOCK	1	S5003	V2-ES-150
*	HARNESS, PUMP, W/OUT DOOR INTERLOCK	1	S5005	V2-ES-150
*	HARNESS, PUMP, W/OUT DOOR INTERLOCK	1	S5006	V2-ES-150
*	HARNESS, PUMP, W/OUT DOOR INTERLOCK	1	S5007	V2-ES-150
*	HARNESS, PUMP, W/OUT DOOR INTERLOCK	1	S5008	V2-ES-150
*	HARNESS, PUMP, W/OUT DOOR INTERLOCK	1	S5010	V2-ES-150
*	HARNESS, PUMP, W/OUT DOOR INTERLOCK	1	S5016	V2-ES-150
*	HARNESS, PUMP, W/OUT DOOR INTERLOCK	1	S5503	V2-ES-150
*	HARNESS, PUMP, W/OUT DOOR INTERLOCK	1	S5505	V2-ES-150
*	HARNESS, PUMP, W/OUT DOOR INTERLOCK	1	S5510	V2-ES-150
32C *	HARNESS, PUMP, W/OUT DOOR INTERLOCK, 24V	1	S2003	10335
*	HARNESS, PUMP, W/OUT DOOR INTERLOCK, 24V	1	S2005	10335
*	HARNESS, PUMP, W/OUT DOOR INTERLOCK, 24V	1	S2007	10335
*	HARNESS, PUMP, W/OUT DOOR INTERLOCK, 24V	1	S2008	10335
*	HARNESS, PUMP, W/OUT DOOR INTERLOCK, 24V	1	S2010	10335
*	HARNESS, PUMP, W/OUT DOOR INTERLOCK, 24V	1	S5003	10335
*	HARNESS, PUMP, W/OUT DOOR INTERLOCK, 24V	1	S5005	10335
*	HARNESS, PUMP, W/OUT DOOR INTERLOCK, 24V	1	S5006	10335
*	HARNESS, PUMP, W/OUT DOOR INTERLOCK, 24V	1	S5007	10335
*	HARNESS, PUMP, W/OUT DOOR INTERLOCK, 24V	1	S5008	10335
*	HARNESS, PUMP, W/OUT DOOR INTERLOCK, 24V	1	S5505	10335
*	HARNESS, PUMP, W/OUT DOOR INTERLOCK, 24V	1	S5510	10335

**NOTE:** (REF) in QTY column is for Referenced Parts Only and are not sold as spare parts.

**NOTE:** \* Item or configuration not shown.

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**FIGURE 4-2: ADA TRANSIT USE HYDRAULIC SYSTEM**

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FIGURE 4-2: ADA TRANSIT USE HYDRAULIC SYSTEM

FIG. ITEM	DESCRIPTION	QTY	CONFIG.	PART NO.
1	HANDLE, MANUAL BACKUP PUMP	1		V2-SH-111
2	KIT, TOOL CLIP, W/HARDWARE	2		19557
3	COVER, ASSY, PUMP, LH	1		V2-CV-220
3A *	COVER, ASSY, PUMP, RH	1		V2-CV-221
4	SCREW, HEX, 5/16-18 X 5/8" GR 5 (BAG OF 10)	3		14495
5	WASHER, FLT, .344 X .688 X .065 (BAG OF 10)	3		13350
6	HEX ROD, PUMP STANDOFF	2		V2-CV-015
7 **	PUMP ASSY, NOTOP, UV RES, 2KPSI	1		PM212002007
7A **	PUMP ASSY W/INTLK, 12V, DR PROVISION	1		PM212090100
7B **	PUMP ASSY, W/O INTLK, RH STD, DCL, 12V	1		PM212090308
7C **	PUMP ASSY, W/O INTLK, W/DCL, 24V	1		PM224100108
8	PLATE, PUMP COVER MOUNT	1		V2-AC-71
9	PLATE, PUMP MOUNT	1		V2-AC-70
10	SCREW, FLAT HEAD, 5/16-18 X 3/4" (BAG OF 10)	2		14499
11	STUD, THREADED, 5/16-18 X 1.75" (BAG OF 10)	2		14500
12	CABLE TIE, 5.5", BLACK (BAG OF 10)	2		25697
13	TUBE, POLYURETHANE, 6MM x 4MM, BLACK	9'		22-02-230
14	ADAPTOR, # 6 SAE MALE X # 4 JIC MALE	2		26591
15	FITTING, "L", MALE 10-32 X 1/4", BARB	2		V2-SH-16
16	KIT, CYL REPAIR (W/SEALS) (SUPERSEDED BY 21829)	2		V2-SH-56
16A*	KIT, CYL REPAIR (PISTON/GLAND ASSY)	2		21829
17	KIT, FLOW CONTROL, FIXED RATE .50 GPM (KIT OF 2)	1		30968
18	SCREW, HEX RECESS HEAD, 1/4-20 X 1 (BAG OF 10)	4		14491
19	HOSE ASSY, HYDRAULIC, 61" X 1/4 JIC X 1/4 JIC	1		V2-SH-009
19A *	HOSE ASSY., 64" X 1/4 JIC X 1/4 JIC	1		16601
20	HOSE ASSY, HYDRAULIC, 26" X 1/4 JIC X 1/4 JIC	1		V2-SH-008
21	FITTING, RUN TEE, 1/4 JIC M-M-F	1		V2-SH-012
22	FITTING, "L", 1/4 JIC M-F SWIVEL	3		VS-SH-06
23	OIL, HYDRAULIC, TEXACO #15, MEETS MIL-H-5606G	1	GAL	20-16-051
24	CYLINDER ASSY, OPEN 37", CLOSED 21.25" (BLACK)	2	S20XX	VT-SH-105K
24A *	CYLINDER ASSY, OPEN 39.88", CLOSED 24.13" (BLACK)	2	S50XX	V5-SH-105K
25	GROMMET, CATERPILLAR, 3/16" X 12"	1		26647
26	SPACER, CABLE OR HOSE	2		25557
27	BUSHING, 3/4"ID X 3/8W	4		25386
28 *	GLAND NUT, 1.50", WITH SEAL (SUPERSEDED BY 21829)	2		13009
28A	GLAND ASSY (FOR S/N ABOVE 236622) (SEE KIT 21829)	2		42305

**NOTE:** (REF) in QTY column is for Referenced Parts Only and are not sold as spare parts.

**NOTE:** \* Item or configuration not shown.

**NOTE:** \*\* Refer to Pump Assembly figure for parts breakdown.

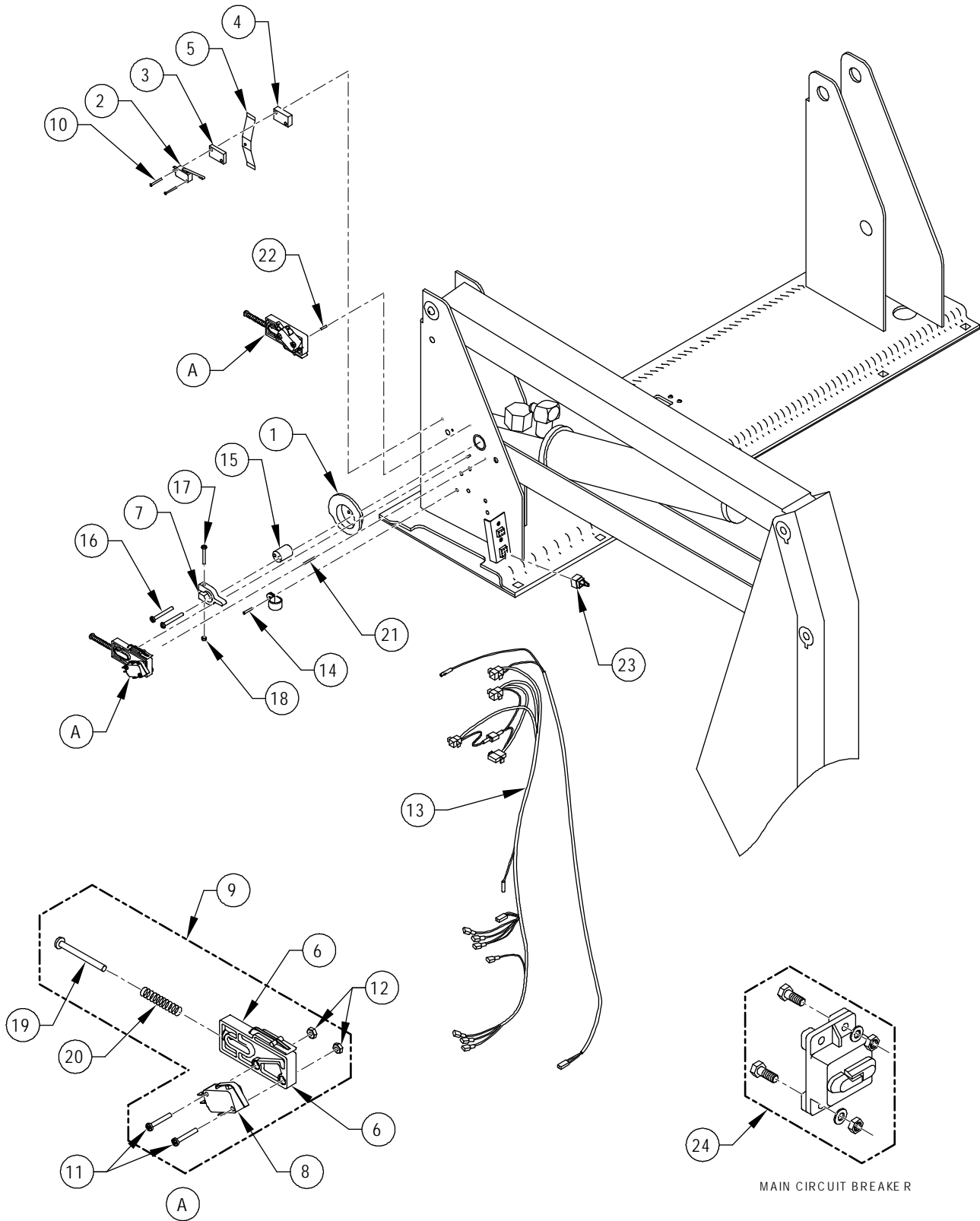


FIGURE 4-3: ADA TRANSIT USE ELECTRICAL SYSTEM

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FIGURE 4-3: ADA TRANSIT USE ELECTRICAL SYSTEM

FIG. ITEM	DESCRIPTION	QTY	CONFIG.	PART NO.
1	CAM, LIFT CONTROL	1		V2-AC-107
2	SWITCH, LIMIT, FOLD CUTOFF	1		V2-ES-111
3	BLOCK, FOLD CUTOFF SWITCH OFFSET, 1/4" THICK	1		V2-ES-78
4	BLOCK, FOLD CUTOFF SWITCH OFFSET, 3/8" THICK	1		V2-ES-79
5	SPRING, RETAINING, UPPER/LOWER SWITCH BLOCK	1		V2-ES-95
6 *	SWITCH BLOCK ASSEMBLY (SUPERSEDED BY 34314)	2		V2-ES-82
6A	SWITCH BLOCK	2		34314
7	ACTUATOR, FOLD CUTOFF	1		V2-AC-089
8	SWITCH, LIMIT, FLOOR LEVEL POWER CUTOFF, UP & DOWN	2		V2-ES-110
9	KIT, LIMIT SWITCH BLOCK REPLACEMENT	2		V2-ES-61
10	SCREW, 4-40 X 1.25 PAN HEAD (BAG OF 10)	1		15908
11	SCREW, 4-40 X .75 PAN HEAD (BAG OF 10)	1		15909
12	NUT, HEX, 4-40 (BAG OF 10)	1		15903
13	HARNESS, MAIN ELECTRIC, W/INTERLOCK	1	S2003	V2-ES-051
	HARNESS, MAIN ELECTRIC, W/INTERLOCK	1	S2005	V2-ES-051
	HARNESS, MAIN ELECTRIC, W/INTERLOCK	1	S2007	V2-ES-051
	HARNESS, MAIN ELECTRIC, W/INTERLOCK	1	S2008	V2-ES-051
	HARNESS, MAIN ELECTRIC, W/INTERLOCK	1	S5003	V2-ES-051
	HARNESS, MAIN ELECTRIC, W/INTERLOCK	1	S5008	V2-ES-051
13A *	HARNESS, MAIN ELECTRIC, W/INTERLOCK	1	S2003	V2-ES-050
*	HARNESS, MAIN ELECTRIC, W/INTERLOCK	1	S2005	V2-ES-050
*	HARNESS, MAIN ELECTRIC, W/INTERLOCK	1	S2007	V2-ES-050
*	HARNESS, MAIN ELECTRIC, W/INTERLOCK	1	S2008	V2-ES-050
*	HARNESS, MAIN ELECTRIC, W/INTERLOCK	1	S5003	V2-ES-050
*	HARNESS, MAIN ELECTRIC, W/INTERLOCK	1	S5005	V2-ES-050
*	HARNESS, MAIN ELECTRIC, W/INTERLOCK	1	S5007	V2-ES-050
*	HARNESS, MAIN ELECTRIC, W/INTERLOCK	1	S5008	V2-ES-050
*	HARNESS, MAIN ELECTRIC, W/INTERLOCK	1	S5503	V2-ES-050
*	HARNESS, MAIN ELECTRIC, W/INTERLOCK	1	S5505	V2-ES-050
13B *	HARNESS, MAIN ELECTRIC, 34", W/O INTERLOCK	1	S2010	16628
*	HARNESS, MAIN ELECTRIC, 34", W/O INTERLOCK	1	S5010	16628
*	HARNESS, MAIN ELECTRIC, 34", W/O INTERLOCK	1	S5510	16628
13C *	HARNESS, MAIN ELECTRIC, 34", W/O INTERLOCK	1	S5006	V2-ES-057
*	HARNESS, MAIN ELECTRIC, 34", W/O INTERLOCK	1	S5016	V2-ES-057
13D *	HARNESS, MAIN ELECTRIC, W/INTERLOCK	1	S2014	V2-ES-058
14	MS, 10-24 X 1/2 PHIL PAN (BAG OF 10)	1		13304
15	PIN, EXTENSION FOLD CUTOFF (BAG OF 10)	1		15914
16	MS 10-24 X 1 3/4 PHIL PAN (BAG OF 10)	1		29318
17	MS 8-32 X 1 1/4 PHIL PAN (BAG OF 10)	1		15906

**NOTE:** (REF) in QTY column is for Referenced Parts Only and are not sold as spare parts.

**NOTE:** \* Item or configuration not shown.

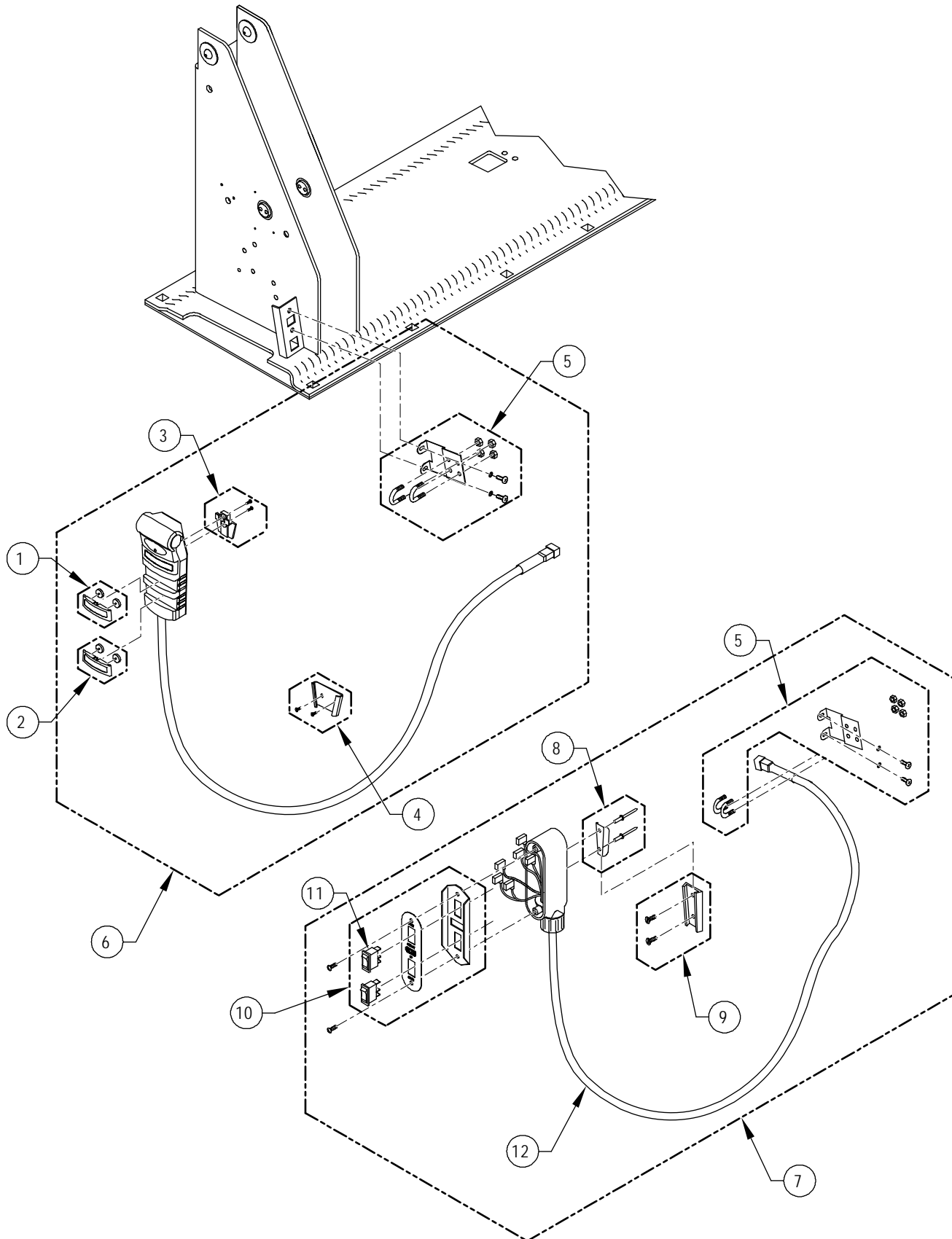
**FIGURE 4-3: ADA TRANSIT USE ELECTRICAL SYSTEM (CONT'D)**

FIG. ITEM	DESCRIPTION	QTY	CONFIG.	PART NO.
18	NUT, HEX, 8-32 NYLON INSERT (BAG OF 10)	1		15907
19	SCREW, RD HEAD, 10-24 X 2" (BAG OF 10)	1		14497
20	SPRING, COMPRESSION, .30 X 2.06L	2		V2-ES-93
21	ROLLPIN, .94 X 1.0 (BAG OF 10)	1		14498
22	ROLLPIN, .94 X .50 (BAG OF 10)	1		14496
23	SHORTING PLUG	1		UL-ES-007
24	KIT, CIRCUIT BREAKER, MAIN (90A) – 12 VOLTS	1		01010K
24A *	KIT, CIRCUIT BREAKER, 50 AMP – 24 VOLTS	1		01291

**NOTE:** (REF) in QTY column is for Referenced Parts Only and are not sold as spare parts.

**NOTE:** \* Item or configuration not shown.

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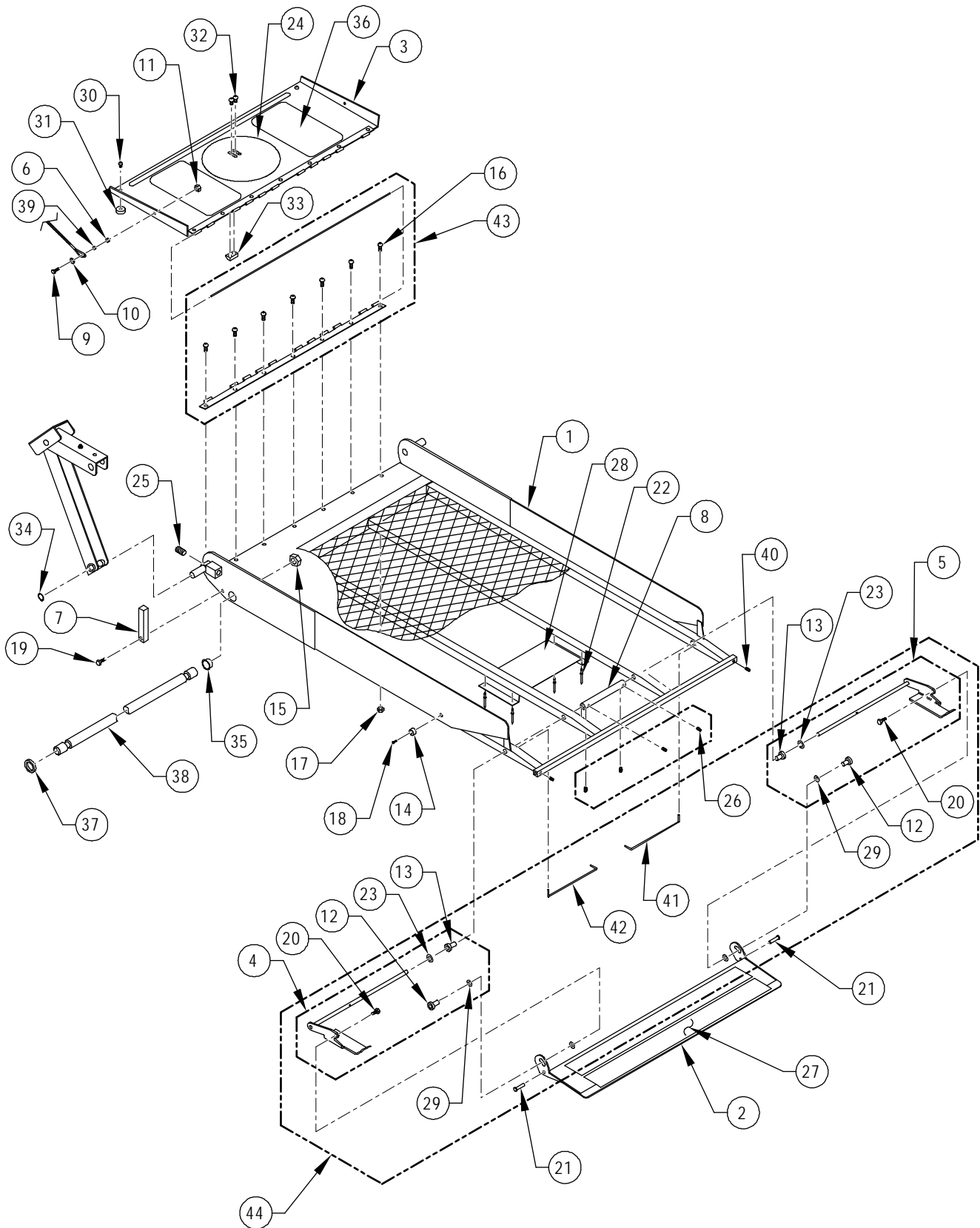
FIGURE 4-4: ADA TRANSIT USE PENDANT

FIGURE 4-4: ADA TRANSIT USE PENDANT

FIG. ITEM	DESCRIPTION	QTY	CONFIG.	PART NO.
1	KIT, STOW/DEPLOY BUTTON, S-SERIES	1		14731
2	KIT, UP/DOWN BUTTON, W/PLUNGER	1		14732
3	KIT, MALE CLIP, V-METAL, PENDANT	1		14733
4	KIT, INSTL, UNIVERSAL PENDANT MTG CLIP, S-SERIES	1		14709
5	KIT, CONTROL HARNESS STRAIN RELIEF, S-SERIES	1		01007
6A	KIT, PENDANT, S-SERIES, 7 FT	1		14727
6B *	KIT, PENDANT, S-SERIES, COILED CORD	1		14728
6C *	KIT, PENDANT, S-SERIES, 10 FT	1		14729
6D *	KIT, PENDANT, S-SERIES, STEEL JACKETED CORD	1		14730
7	KIT, PENDANT, OLD-STYLE (W/ROCKER SWITCH)	1		01008
8	KIT, CLIP, PENDANT, MALE W/RIVETS	1		28781
9	KIT, INSTL, PENDANT MATING CLIP	1		01118
10	FACEPLATE ASSY, PENDANT, SWITCH GD	1		V2-ES-035
11	SWITCH, SP ROCKER, ON-OFF-ON BLK	2		26455
12	HARNESS REPLACEMENT, 7FT CORD (FOR 01008 ONLY-OLD STYLE PENDANT)	1		V2-ES-024

**NOTE:** (REF) in QTY column is for Referenced Parts Only and are not sold as spare parts.

**NOTE:** \* Item or configuration not shown.



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FIGURE 4-5: S-SERIES SOLID PLATFORM

FIGURE 4-5: ADA TRANSIT USE SOLID PLATFORM

FIG. ITEM	DESCRIPTION	QTY	CONFIG.	PART NO.
1	PLATFORM ASSY, SOLID, 30" X 44"	1	S2000	V2-PF-384
1A *	PLATFORM ASSY, SOLID, 30" X 48"	1	S2007	V2-PF-385
	PLATFORM ASSY, SOLID, 30" X 48"	1	S5007	V2-PF-385
1B *	PLATFORM ASSY, SOLID, 30" X 51"	1	S2003	V2-PF-386
	PLATFORM ASSY, SOLID, 30" X 51"	1	S5003	V2-PF-386
1C *	PLATFORM ASSY, SOLID, 30" X 51"	REF	S5503	34849
1D *	PLATFORM ASSY, SOLID, 32" x 48"	1	S2008	V2-PF-388
	PLATFORM ASSY, SOLID, 32" x 48"	1	S5008	V2-PF-388
1E *	PLATFORM ASSY, SOLID, 32" X 51"	1	S2005	V2-PF-389
	PLATFORM ASSY, SOLID, 32" X 51"	1	S5005	V2-PF-389
1F *	PLATFORM ASSY, SOLID, 32" X 51"	REF	S5505	34846
1G *	PLATFORM ASSY, SOLID, 34" X 54"	1	S2010	16622
	PLATFORM ASSY, SOLID, 34" X 54"	1	S5010	16622
1H *	PLATFORM ASSY, SOLID, 34" X 54"	1	S5510	34248
1J *	PLATFORM ASSY, SOLID, 39.50" X 48"	1	S2006	17972
	PLATFORM ASSY, SOLID, 39.50" X 48"	1	S5006	17972
1K *	PLATFORM ASSY, SOLID, 39.50" X 48"	REF	S5016	47923
1L *	PLATFORM ASSY, SOLID, 39.50" X 60"	1	S2014	42385
2	ROLLSTOP ASSY, 6" X 30"	1	S2000	V2-PF-291
	ROLLSTOP ASSY, 6" X 30"	1	S2003	V2-PF-291
	ROLLSTOP ASSY, 6" X 30"	1	S2007	V2-PF-291
	ROLLSTOP ASSY, 6" X 30"	1	S5003	V2-PF-291
	ROLLSTOP ASSY, 6" X 30"	1	S5007	V2-PF-291
	ROLLSTOP ASSY, 6" X 30"	1	S5503	V2-PF-291
2A *	ROLLSTOP ASSY, 6" X 32" (GREY)	1	S2005	V2-PF-292
	ROLLSTOP ASSY, 6" X 32" (GREY	1	S2008	V2-PF-292
	ROLLSTOP ASSY, 6" X 32" (GREY	1	S5005	V2-PF-292
	ROLLSTOP ASSY, 6" X 32" (GREY	1	S5008	V2-PF-292
	ROLLSTOP ASSY, 6" X 32" (GREY	1	S5505	V2-PF-292
2B *	ROLLSTOP ASSY, 6" X 34" W, OUTBOARD (SEE 2C)	1	S2010	16626
	ROLLSTOP ASSY, 6" X 34" W, OUTBOARD (SEE 2C)	1	S5010	16626
2C *	ROLLSTOP ASSY, 6" X 34" W, OUTBOARD	1	S2010	39953
	ROLLSTOP ASSY, 6" X 34" W, OUTBOARD	1	S5010	39953
	ROLLSTOP ASSY, 6" X 34" W, OUTBOARD	1	S5510	39953
2C *	ROLLSTOP ASSY, 6" X 34" W, OUTBOARD	1	S2006	V2-PF-143
	ROLLSTOP ASSY, 6" X 34" W, OUTBOARD	1	S5006	V2-PF-143
2D *	ROLLSTOP ASSY, 6" X 39.5"	1	S2014	39954
	ROLLSTOP ASSY, 6" X 39.5"	1	S5016	39954
3	ROLLSTOP ASSY, 6" X 34" W, OUTBOARD	1	S2000	V2-PF-141
	ROLLSTOP ASSY, 6" X 34" W, OUTBOARD	1	S2003	V2-PF-141

**NOTE:** (REF) in QTY column is for Referenced Parts Only and are not sold as spare parts.

**NOTE:** \* Fully assembled platform with all items shown except item 33 and 34.

**FIGURE 4-5: ADA TRANSIT USE SOLID PLATFORM (CONT'D)**

FIG. ITEM	DESCRIPTION	QTY	CONFIG.	PART NO.
3	ROLLSTOP ASSY, 6" X 34" W, OUTBOARD	1	S2007	V2-PF-141
	ROLLSTOP ASSY, 6" X 34" W, OUTBOARD	1	S5003	V2-PF-141
	ROLLSTOP ASSY, 6" X 34" W, OUTBOARD	1	S5007	V2-PF-141
3A *	ROLLSTOP ASSY, INNER, 32" (BRIDGEPLATE)	1	S2005	V2-PF-142
	ROLLSTOP ASSY, INNER, 32" (BRIDGEPLATE)	1	S2008	V2-PF-142
	ROLLSTOP ASSY, INNER, 32" (BRIDGEPLATE)	1	S5005	V2-PF-142
	ROLLSTOP ASSY, INNER, 32" (BRIDGEPLATE)	1	S5008	V2-PF-142
3B *	ROLLSTOP ASSY, INNER, 34" (BRIDGEPLATE)	1	S2010	16625
	ROLLSTOP ASSY, INNER, 34" (BRIDGEPLATE)	1	S5010	16625
3C *	ROLLSTOP ASSY, INNER, 34" (BRIDGEPLATE)	1	S5510	30869
3D *	ROLLSTOP ASSY, INNER, 39.5" W, W/O GUIDES	1	S5016	46008
3E *	ROLLSTOP ASSY, INNER, 39.5"W	REF	S2014	42386
4	KIT, ROLLSTOP ACTUATOR REPLACEMENT, LH	1		22903
4A *	ACTUATOR WLDT, ROLLSTOP, LH	1	S2014	17964
5	KIT, ROLLSTOP ACTUATOR REPLACEMENT, RH	1		22902
5A *	ACTUATOR WLDT, ROLLSTOP, RH	1	S2014	17965
6	SPACER, BRIDGEPLATE SPRING	2		UV-PF-839
7	BLOCK, PLATFORM LEVEL ADJUSTMENT	1		VT-AH-142
8	KIT, COLLAR, ROLLSTOP ACTUATOR, 6.25"	1		28775
8A *	KIT, COLLAR, ROLLSTOP ACTUATOR, 8.25"	1		28773
9	SCREW, HEX HEAD, 1/4-20 X 7/8" (BAG OF 10)	2		15920
10	WASHER, 1/4" ID, FLAT SAE (BAG OF 10)	2		17504
11	NUT, HEX, 1/4-20, NYLON INSERT (BAG OF 10)	2		15919
12	"T" NUT, STAINLESS (BAG OF 10)	2		14485
13	BUSHING, BRONZE, .392ID	2		V2-BU-195
14	BUMPER, UHMW PLASTIC, 75ID X .38 T	2		V2-AC-027
15	NUT, HEX, 5/16-18 (BAG OF 10)	2		13349
16	SCREW, BUTTON HEAD, 5/16-18 X 3/4", SST (BAG OF 10)	7		15983
17	NUT, HEX, 5/16-18, NYLON INSERT, SST, (BAG OF 10)	7		14415
18	SCREW, TEK PAN HEAD, 8 X 3/4" (BAG OF 10)	2		15911
19	SCREW, HEX HEAD, 5/16-18 X 1, GR5 (BAG OF 10)	2		15953
20	SCREW, HEX HEAD, 1/4-20 X 1/2", GR5 (BAG OF 10)	2		34518
21	PIN, ROLLSTOP (BAG OF 10)	2		19513
22	RIVET, POP, 1/8 x 3/8 AL (BAG OF 10)	4		14490
23	WASHER, FLAT, .81OD X .41ID (BAG OF 10)	2		17510
24	DECAL, NO STEP, LEXAN, SERIES	1		26244
25	SETSCREW, HEX RECESS, 1/2-20 X 1-1/4" (BAG OF 10)	2		19704
26	SETSCREW, HEX RECESS, 1/4-20 X 1/4" CUP POINT (BAG OF 10)	4		13312
27	SAFETREAD ,28.75 X 2, YELLOW	2		25660

**NOTE:** (REF) in QTY column is for Referenced Parts Only and are not sold as spare parts.

**NOTE:** \* Fully assembled platform with all items shown except item 33 and 34.

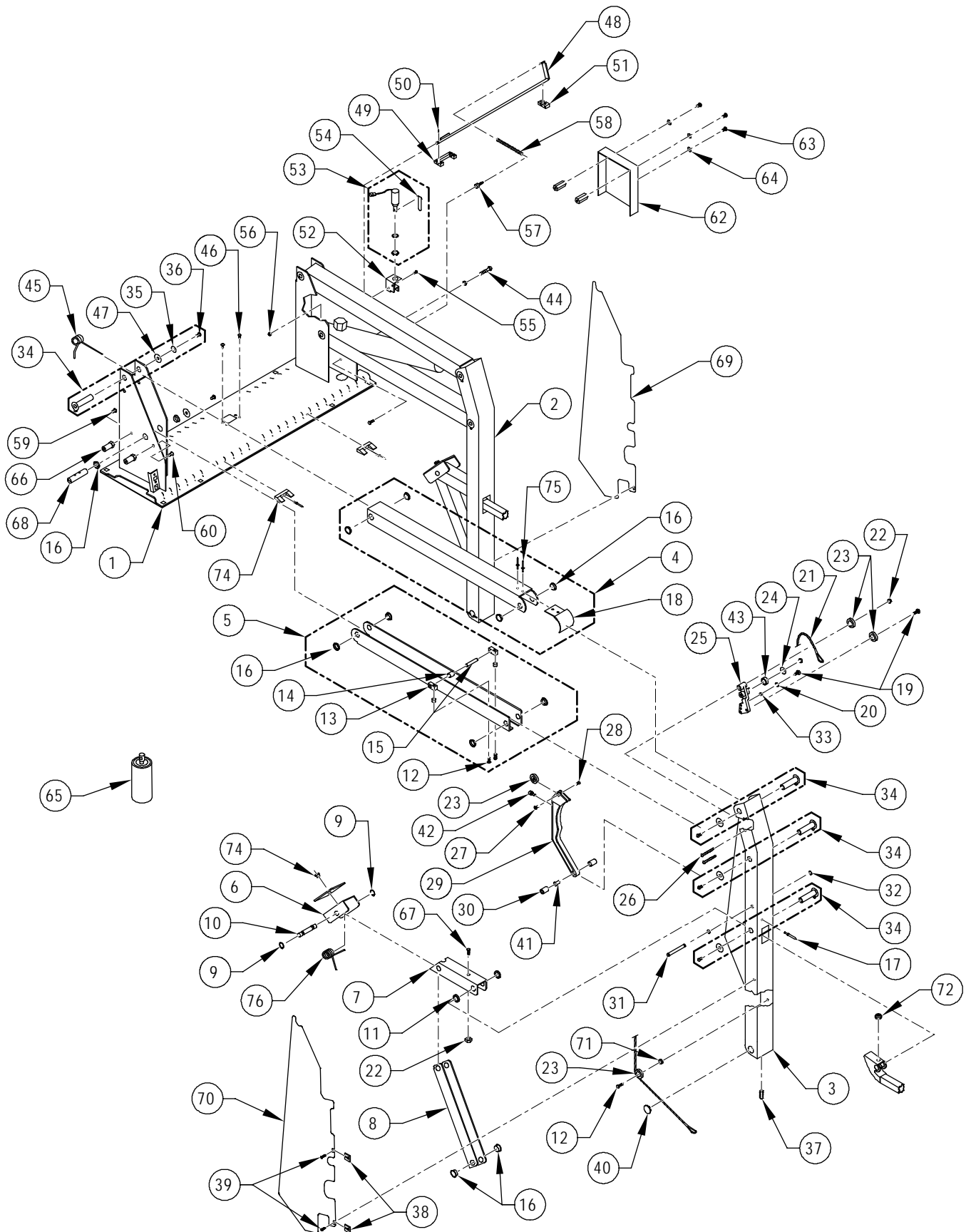
**FIGURE 4-5: ADA TRANSIT USE SOLID PLATFORM (CONT'D)**

FIG. ITEM	DESCRIPTION	QTY	CONFIG.	PART NO.
28	PLATE, 5.00" X 9.75" (DISCONTINUED)	1		VT-PF-54
29	WASHER, FLAT, NYLON, .32ID X .75OD X .031 (BAG OF 10)	4		14467
30	SCREW, BUTTON HEAD, 1/4-20 X 3/8, SST (BAG OF 10)	2		13309
31	GUIDE, 1"D X 1/4-20 X .25	2		UL-AC-034
32	SCREW, BUTTON HEAD, 5/16-18 X 1/2", SST (BAG OF 10)	2		14484
33 **	CATCH, BASE LATCH	1		V2-AC-103
33A **	KIT, REPLACEMENT LATCH MECHANISM (SN 32000-44083)	1		01099
34	RETAINING RING, .75" EXT (BAG OF 10)	2		11796
35	BUSHING, 1"ID X 1/2" (BAG OF 10)	2		19579
36	SAFETREAD, 9.5 X 5.5 ,YELLOW, SAFETY	2		25657
37	SHIM, PVC	2		V2-BU-091
38	KIT, SHAFT, MAIN, PLATFORM, 1" X 36.50", 30" (REF P/N VT-PI-43)	1		34890
38A *	KIT, SHAFT, MAIN, PLATFORM, 1" X 39.13", 32" (REF P/N VT-PI-49)	1		34893
38B *	KIT, SHAFT, MAIN, PLATFORM, 1" X 40.50", 26" (REF P/N 16607)	1		34887
38C *	KIT, SHAFT, MAIN, 1.00 x 46.00L (REF P/N VT-PI-46)	1	S2014	34892
39	BUSHING, STEEL, .25ID X .32OD X .19L	2		V2-BU-003
40	SETSCREW, HEX RECESS 1/4-20 X 1/4", CONE POINT (BAG OF 10)	2		14492
41	SPRING, TORSION, RH	1		V2-SP-022
42	SPRING, TORSION, LH	1		V2-SP-021
43	KIT, HINGE, W/PIN, CHARCOAL GREY	1		32107
43A *	HINGE, PLATFORM, CH GREY	1		11688
44	KIT, REPLACEMENT ASSY, 6" ROLLSTOP, 30" PLATFORM	1		010011
44A *	KIT, REPLACEMENT ASSY, 6" ROLLSTOP, 32" PLATFORM	1		010012

**NOTE:** (REF) in QTY column is for Referenced Parts Only and are not sold as spare parts.

**NOTE:** \* Fully assembled platform with all items shown except item 33 and 34.

**NOTE:** \*\* Must be used with V2-AC-102.



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FIGURE 4-6: S-SERIES TRAVELING FRAME

**FIGURE 4-6: ADA TRANSIT USE TRAVELING FRAME**

FIG. ITEM	DESCRIPTION	QTY	CONFIG.	PART NO.
1	BASEPLATE ASSY, 30", W/O INTERLOCK	1	S2000	14452
	BASEPLATE ASSY, 30", W/O INTERLOCK	1	S2003	14452
	BASEPLATE ASSY, 30", W/O INTERLOCK	1	S2007	14452
	BASEPLATE ASSY, 30", W/O INTERLOCK	1	S5003	14452
	BASEPLATE ASSY, 30", W/O INTERLOCK	1	S5007	14452
	BASEPLATE ASSY, 30", W/O INTERLOCK	1	S5503	14452
1A *	BASEPLATE ASSY, 30", W/O INTERLOCK	1	S2000	14452R
	BASEPLATE ASSY, 30", W/O INTERLOCK	1	S2003	14452R
	BASEPLATE ASSY, 30", W/O INTERLOCK	1	S2007	14452R
	BASEPLATE ASSY, 30", W/O INTERLOCK	1	S5003	14452R
	BASEPLATE ASSY, 30", W/O INTERLOCK	1	S5007	14452R
	BASEPLATE ASSY, 30", W/O INTERLOCK	1	S5503	14452R
1B *	BASEPLATE ASSY, 30", W/INTERLOCK	1	S2000	14453
	BASEPLATE ASSY, 30", W/INTERLOCK	1	S2003	14453
	BASEPLATE ASSY, 30", W/INTERLOCK	1	S2007	14453
	BASEPLATE ASSY, 30", W/INTERLOCK	1	S5003	14453
	BASEPLATE ASSY, 30", W/INTERLOCK	1	S5007	14453
	BASEPLATE ASSY, 30", W/INTERLOCK	1	S5003	14453
1C *	BASEPLATE ASSY, 32", W/O INTERLOCK	1	S2005	14454
	BASEPLATE ASSY, 32", W/O INTERLOCK	1	S2008	14454
	BASEPLATE ASSY, 32", W/O INTERLOCK	1	S5005	14454
	BASEPLATE ASSY, 32", W/O INTERLOCK	1	S5008	14454
	BASEPLATE ASSY, 32", W/O INTERLOCK	1	S5505	14454
1C *	BASEPLATE ASSY, 32", W/O INTERLOCK	1	S2005	14454R
	BASEPLATE ASSY, 32", W/O INTERLOCK	1	S2008	14454R
	BASEPLATE ASSY, 32", W/O INTERLOCK	1	S5005	14454R
	BASEPLATE ASSY, 32", W/O INTERLOCK	1	S5008	14454R
	BASEPLATE ASSY, 32", W/O INTERLOCK	1	S5505	14454R
1D *	BASEPLATE ASSY, 32", W/INTERLOCK	1	S2005	14455
	BASEPLATE ASSY, 32", W/INTERLOCK	1	S2008	14455
	BASEPLATE ASSY, 32", W/INTERLOCK	1	S5008	14455
1E *	BASEPLATE ASSY, 39.5" , W/O INTERLOCK	1	S2006	14456
	BASEPLATE ASSY, 39.5" , W/O INTERLOCK	1	S5006	14456
	BASEPLATE ASSY, 39.5" , W/O INTERLOCK	1	S5016	14456
1E *	BASEPLATE ASSY, 39.5" , W/INTERLOCK	1	S2006	14457
	BASEPLATE ASSY, 39.5" , W/INTERLOCK	1	S2014	14457
2	ARM ASSY, VERTICAL, RH (S2000)	1	S2000	VT-AC-241
	ARM ASSY, VERTICAL, RH (S2000)	1	S2003	VT-AC-241
	ARM ASSY, VERTICAL, RH (S2000)	1	S2005	VT-AC-241

**NOTE:** (REF) in QTY column is for Referenced Parts Only and are not sold as spare parts.

**NOTE:** \* Item or configuration not shown.

**FIGURE 4-6: ADA TRANSIT USE TRAVELING FRAME (CONT'D)**

FIG. ITEM	DESCRIPTION	QTY	CONFIG.	PART NO.
2	ARM ASSY, VERTICAL, RH (S2000)	1	S2006	VT-AC-241
	ARM ASSY, VERTICAL, RH (S2000)	1	S2007	VT-AC-241
	ARM ASSY, VERTICAL, RH (S2000)	1	S2008	VT-AC-241
	ARM ASSY, VERTICAL, RH (S2000)	1	S2010	VT-AC-241
2A *	ARM ASSY, VERTICAL, RH (S5000)	1	S5003	V5-AC-241
	ARM ASSY, VERTICAL, RH (S5000)	1	S5005	V5-AC-241
	ARM ASSY, VERTICAL, RH (S5000)	1	S5006	V5-AC-241
	ARM ASSY, VERTICAL, RH (S5000)	1	S5007	V5-AC-241
	ARM ASSY, VERTICAL, RH (S5000)	1	S5008	V5-AC-241
	ARM ASSY, VERTICAL, RH (S5000)	1	S5010	V5-AC-241
	ARM ASSY, VERTICAL, RH (S5000)	1	S5016	V5-AC-241
2B *	ARM ASSY, VERTICAL, RH	1	S2014	42916
3	ARM ASSY, VERTICAL, LH (S2000)	1	S2000	VT-AC-242
	ARM ASSY, VERTICAL, LH (S2000)	1	S2003	VT-AC-242
	ARM ASSY, VERTICAL, LH (S2000)	1	S2005	VT-AC-242
	ARM ASSY, VERTICAL, LH (S2000)	1	S2006	VT-AC-242
	ARM ASSY, VERTICAL, LH (S2000)	1	S2007	VT-AC-242
	ARM ASSY, VERTICAL, LH (S2000)	1	S2008	VT-AC-242
	ARM ASSY, VERTICAL, LH (S2000)	1	S2010	VT-AC-242
3A *	ARM ASSY, VERTICAL, LH (S5000)	1	S5003	V5-AC-242
	ARM ASSY, VERTICAL, LH (S5000)	1	S5005	V5-AC-242
	ARM ASSY, VERTICAL, LH (S5000)	1	S5006	V5-AC-242
	ARM ASSY, VERTICAL, LH (S5000)	1	S5007	V5-AC-242
	ARM ASSY, VERTICAL, LH (S5000)	1	S5008	V5-AC-242
	ARM ASSY, VERTICAL, LH (S5000)	1	S5010	V5-AC-242
	ARM ASSY, VERTICAL, LH (S5000)	1	S5016	V5-AC-242
3B *	ARM ASSY, VERTICAL, LH	1	S2014	42917
4	ARM ASSY ,PARALLEL, UPPER (GREY)	2	S2000	VS-AC-250
	ARM ASSY ,PARALLEL, UPPER (GREY)	2	S2003	VS-AC-250
	ARM ASSY ,PARALLEL, UPPER (GREY)	2	S2005	VS-AC-250
	ARM ASSY ,PARALLEL, UPPER (GREY)	2	S2006	VS-AC-250
	ARM ASSY ,PARALLEL, UPPER (GREY)	2	S2007	VS-AC-250
	ARM ASSY ,PARALLEL, UPPER (GREY)	2	S2008	VS-AC-250
	ARM ASSY ,PARALLEL, UPPER (GREY)	2	S2010	VS-AC-250
4A *	ARM ASSY ,PARALLEL, UPPER (GREY)	2	S5003	V5-AC-250
	ARM ASSY ,PARALLEL, UPPER (GREY)	2	S5005	V5-AC-250
	ARM ASSY ,PARALLEL, UPPER (GREY)	2	S5006	V5-AC-250
	ARM ASSY ,PARALLEL, UPPER (GREY)	2	S5007	V5-AC-250
	ARM ASSY ,PARALLEL, UPPER (GREY)	2	S5008	V5-AC-250

**NOTE:** (REF) in QTY column is for Referenced Parts Only and are not sold as spare parts.

**NOTE:** \* Item or configuration not shown.

FIGURE 4-6: ADA TRANSIT USE TRAVELING FRAME (CONT'D)

FIG. ITEM	DESCRIPTION	QTY	CONFIG.	PART NO.
4A *	ARM ASSY ,PARALLEL, UPPER (GREY)	2	S5010	V5-AC-250
*	ARM ASSY ,PARALLEL, UPPER (GREY)	2	S5016	V5-AC-250
4B *	ARM ASSY, PARALLEL, UPPER (GREY)	2	S2014	VT-AC-250
5	ARM ASSY, PARALLEL, UPPER (GREY)	2	S2000	VT-AC-252
	ARM ASSY, PARALLEL, UPPER (GREY)	2	S2003	VT-AC-252
	ARM ASSY, PARALLEL, UPPER (GREY)	2	S2005	VT-AC-252
	ARM ASSY, PARALLEL, UPPER (GREY)	2	S2006	VT-AC-252
	ARM ASSY, PARALLEL, UPPER (GREY)	2	S2007	VT-AC-252
	ARM ASSY, PARALLEL, UPPER (GREY)	2	S2008	VT-AC-252
	ARM ASSY, PARALLEL, UPPER (GREY)	2	S2010	VT-AC-252
5A *	ARM ASSY, PARALLEL, UPPER (GREY)	2	S5003	V5-AC-252
*	ARM ASSY, PARALLEL, UPPER (GREY)	2	S5005	V5-AC-252
*	ARM ASSY, PARALLEL, UPPER (GREY)	2	S5006	V5-AC-252
*	ARM ASSY, PARALLEL, UPPER (GREY)	2	S5007	V5-AC-252
*	ARM ASSY, PARALLEL, UPPER (GREY)	2	S5008	V5-AC-252
*	ARM ASSY, PARALLEL, UPPER (GREY)	2	S5010	V5-AC-252
*	ARM ASSY, PARALLEL, UPPER (GREY)	2	S5016	V5-AC-252
5B *	ARM ASSY, PARALLEL, UPPER (GREY)	2	S2014	VT-AC-250
6	SADDLE ASSEMBLY, W/T-NUT	2		VT-AC-046
7	UPPER LINK, KNUCKLE	2		VT-AC-070
8	LINK, KNUCKLE, LONG, GREY (18.25")	2	S2000	VT-AC-069
	LINK, KNUCKLE, LONG, GREY (18.25")	2	S2003	VT-AC-069
	LINK, KNUCKLE, LONG, GREY (18.25")	2	S2005	VT-AC-069
	LINK, KNUCKLE, LONG, GREY (18.25")	2	S2006	VT-AC-069
	LINK, KNUCKLE, LONG, GREY (18.25")	2	S2007	VT-AC-069
	LINK, KNUCKLE, LONG, GREY (18.25")	2	S2008	VT-AC-069
	LINK, KNUCKLE, LONG, GREY (18.25")	2	S2010	VT-AC-069
	LINK, KNUCKLE, LONG, GREY (18.25")	2	S2014	VT-AC-069
8A *	LINK, KNUCKLE, LONG, GREY (19.01")	2	S5003	V5-AC-069
*	LINK, KNUCKLE, LONG, GREY (19.01")	2	S5005	V5-AC-069
*	LINK, KNUCKLE, LONG, GREY (19.01")	2	S5006	V5-AC-069
*	LINK, KNUCKLE, LONG, GREY (19.01")	2	S5007	V5-AC-069
*	LINK, KNUCKLE, LONG, GREY (19.01")	2	S5008	V5-AC-069
*	LINK, KNUCKLE, LONG, GREY (19.01")	2	S5010	V5-AC-069
*	LINK, KNUCKLE, LONG, GREY (19.01")	2	S5016	V5-AC-069
9	RETAINING RING, .75" EXT (BAG OF 10)	1		11796
10	PIN, SNAP RING, .75 OD X 2.15L	2		VT-PI-41
11	KIT, SPACER, IRS CAM	4		VT-BU-42
12	SCREW, BUTTON HEAD, 1/4-20 X 1", SST (BAG OF 10)	1		19715

**NOTE:** (REF) in QTY column is for Referenced Parts Only and are not sold as spare parts.

**NOTE:** \* Item or configuration not shown.

**FIGURE 4-6: ADA TRANSIT USE TRAVELING FRAME (CONT'D)**

FIG. ITEM	DESCRIPTION	QTY	CONFIG.	PART NO.
13	RETAINER, CAM ROLLER	4		V2-AC-025
14	ROLLER, BRIDGEPLATE CAM	2		V2-AC-124
15	PIN, CAM ROLLER	2		V2-PI-094
16	FLANGE BEARING, .75ID (BAG OF 10)	3		19576
17	RIVET, BLIND, 3/16 X 3/8", ALUM (BAG OF 10)	1		15918
18	CAP, END, UPPER PARALLEL ARM	2		V2-AC-89
19	SCREW, HEX HEAD, 1/4-20 x 3/4, GR5 (BAG OF 10)	4		13308
19A	SCREW, FLAT HEAD, 1/4-20 x 1/2 (BAG OF 10)	1		15928
20	WASHER, FLAT HEAD, .63OD x .28ID x .065 (BAG OF 10)	2		17504
21	KIT, REPLACEMENT, CABLE ASSY, IRS, 52.75"	2	S20XX	16094
21A *	KIT, REPLACEMENT, CABLE ASSY, IRS, 55.50"	2	S50XX	16095
22	NUT, HEX, 1/4-20, NYLON INSERT (BAG OF 10)	2		15919
23	BEARING, GROOVED	8		VS-AH-06
24	WASHER, FENDER, 1.00OD x .28ID x .065 (BAG OF 10)	2		25623
25	BLOCK, PULLEY MOUNT, BRIDGEPLATE	2		V2-AC-112
26	SCREW, BUTTON HEAD, 1/4-20 x 2 1/4, SST (BAG OF 10)	1		19720
27	T-NUT, FLAT HEAD, 10-24 X .25 OD X .44L	2		V2-AC-015
28	SCREW, FLAT HEAD, 10-24 x 1/2 (BAG OF 10)	1		13303
29	CAM ASSY, BRIDGEPLATE ACTUATOR	2		V2-AC-190
30	KIT, SPACER, RUBBER, BRIDGEPLATE CAM	4		01224
31	PIN, SNAP RING, .38 OD X 3.09 L	2		VS-PI-09
32	RETAINING RING, .38 ID (BAG OF 10)	1		11795
33	BUSHING, STEEL, .25 ID X .32 OD X .19 L	2		V2-BU-003
34	KIT, RETROFIT, PIN, LINK-ARM, w/ HDWR	3		16679
35	WASHER, FENDER, 5/16, SST (BAG OF 10)	1		15921
36	SCREW, BUTTON HEAD, 5/16-18 X 1/2 SST, w/ NYLCK (BAG OF 10)	1		14494
37	SETSCREW, 3/8-16 x 3/8, CUP PT (BAG OF 10)	1		11797
38	SPRING NUT, 10-24, U-TYPE (BAG OF 10)	1		11799
39	SCREW, PAN HEAD, 10-24 x 1/2" (BAG OF 10)	1		13304
40	PLUG, 1" LOW PROFILE, BLACK NYLON	2		25563
41	BEARING, NYLINER, 3/8 ID 11/16 L	2		25562
42	BUMPER, BUTTON, BRIDGEPLATE CAM (BAG OF 10)	1		19783
43	BUMPER, BRIDGEPLATE CAM, ANTI-RATTLE	2		V2-BU-090
44	SCREW, HEX HEAD, 1/4-20 X 1-3/4, GR5 (BAG OF 10)	1		25696
45	SPRING, UPPER PARALLEL ARM	2		V2-SP-97
46	SETSCREW, 5/16-18 x 1, CUP PT (BAG OF 10)	1		15830
47	WASHER, KEYED	2		20258
48	KIT, LATCH RELEASE, 30", w/BLOCKS & HDWR	1		28768
48A	KIT, LATCH RELEASE, 26", w/BLOCKS & HDWR	1		28767

**NOTE:** (REF) in QTY column is for Referenced Parts Only and are not sold as spare parts.

**NOTE:** \* Item or configuration not shown.

FIGURE 4-6: ADA TRANSIT USE TRAVELING FRAME (CONT'D)

FIG. ITEM	DESCRIPTION	QTY	CONFIG.	PART NO.
48B *	KIT, LATCH RELEASE, 39.5", w/BLOCKS & HDWR	1	S2014	28770
49	BLOCK, CENTER MOUNTING, BASE LATCH	1		V2-AC-102
50	DOWEL PIN, .094 DIA X .38 L (BAG OF 10)	1		25615
51	BLOCK, MOUNT, BASE LATCH	1		V2-AC-001
52	BRACKET, STOW LOCK SOLENOID	1		V2-AC-108
53	KIT, SOLENOID ASSY, 12V	1		V2-ES-127
54	CLIP, SPRING, BASE LATCH, SST	1		V2-AC-009
55	SCREW, PAN HEAD, 10-24 x ½ (BAG OF 10)	1		13304
55A *	SCREW, FLAT HEAD, 10-24 x ½, SST (BAG OF 10)	1		14426
56	NUT, HEX, NYLON INSERT, 10-24 (BAG OF 10)	1		13382
57	PIN, SPRING MOUNTING	1		V2-PI-095
58	SPRING, STO-LOCK RELEASE, .38OD X 3.5"	1		V2-SP-093
59	SCREW, HEX HEAD, 5/16-18 X 3/4" (BAG OF 10)	1		15901
60	SCREW, FLAT HEAD, 5/16-18 X 3/4" (BAG OF 10)	1		14499
61	SCREW, BUTTON HEAD, 1/4-20 X 1/2", SST (BAG OF 10)	1		15902
62	COVER, BASE LATCH	1		V2-CV-123
63	SCREW, HEX HEAD, 5/16-18 X .625, GR 5 (BAG OF 10)	1		14495
64	WASHER, FLAT, .69OD x .34ID x .065 (BAG OF 10)	1		13350
65	SPRAY PAINT, TOUCH-UP, CHARCOAL	1		25340
66	BUSHING, E-COVER MOUNT	2		V2-BU-081
67	SCREW, HEX HEAD, 1/4-20 X 1, GR5 (BAG OF 10)	1		14493
68	PIN, CONTROL CAM	1		V2-PI-091
69	KIT, PINCH POINT SHIELD w/ HDWR, RH	1	S20XX	29162
69A *	KIT, PINCH POINT SHIELD w/ HDWR, RH	1	S50XX	29179
70	KIT, PINCH POINT SHIELD w/ HDWR, LH	1	S20XX	29178
70A *	KIT, PINCH POINT SHIELD w/ HDWR, LH	1	S50XX	29163
71	BUSHING, 5/8" OD X 3/16" ID	2		VS-AH-13
72	GROMMET, .30 ID x .88 OD x .44 (BAG OF 10)	1		23391
73	KIT, REPLACEMENT SOLENOID, 12V	1		01238
74	GUIDE BLOCK, BRIDGEPLATE	2		34343
75	RIVET, BLIND, STEEL 3/16 X 5/8 (BAG OF 10)	4		34519
76	SPRING, KNUCKLE ACTUATOR	2		VT-SP-42

**NOTE:** (REF) in QTY column is for Referenced Parts Only and are not sold as spare parts.

**NOTE:** \* Item or configuration not shown.

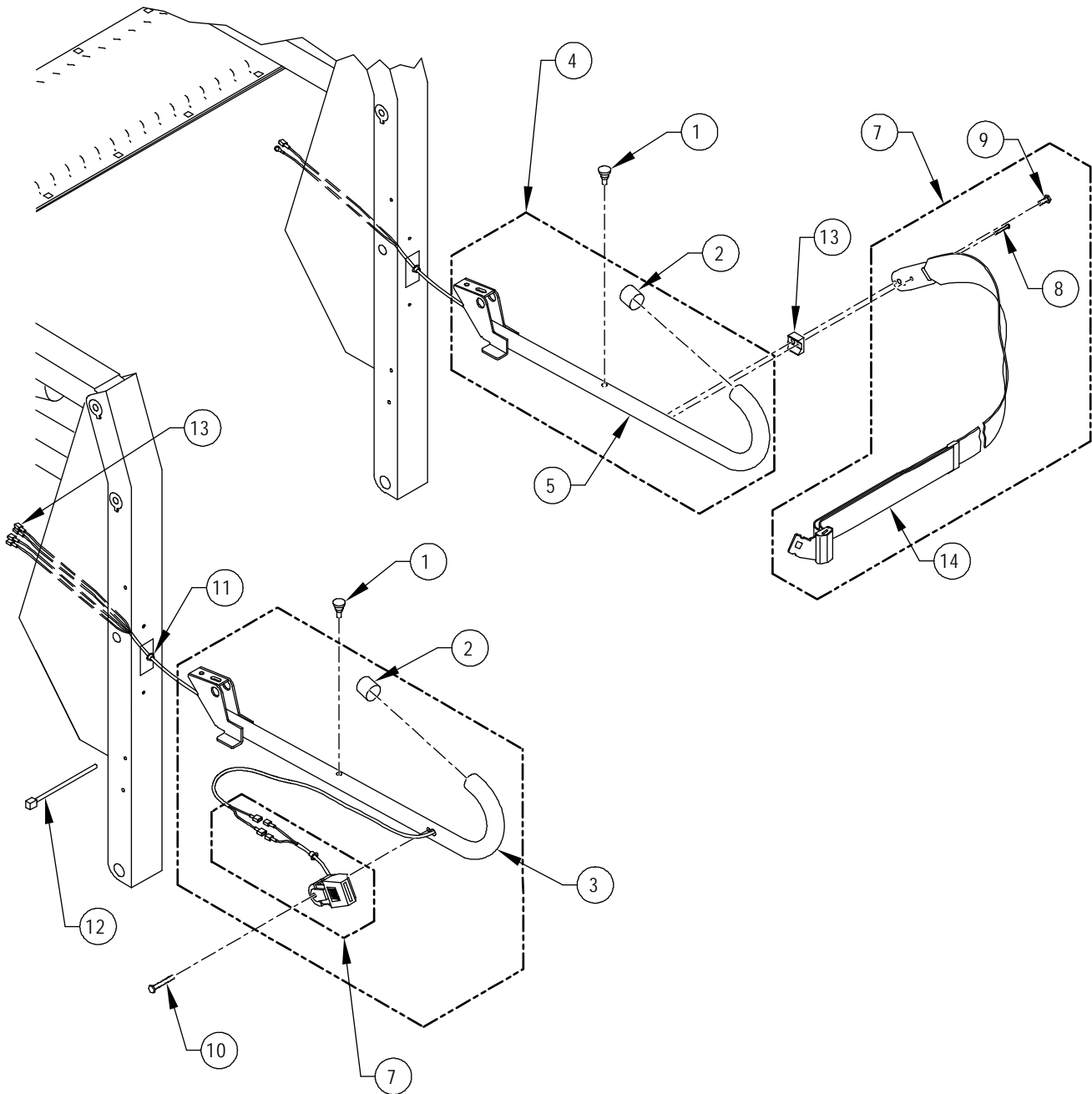


FIGURE 4-7: ADA TRANSIT USE STANDEE HANDRAILS

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FIGURE 4-7: ADA TRANSIT USE STANDEE HANDRAILS

FIG. ITEM	DESCRIPTION	QTY	CONFIG.	PART NO.
1	BUMPER, RUBBER (BAG OF 10)	1		20653
2	CAP, ROUND, BLACK	2		25550
3	HANDRAIL, LH	1	S20XX	32989
	HANDRAIL, LH	1	S50XX	32989
	HANDRAIL, LH	1	S55XX	32989
4 *	HANDRAIL ASSY, ADA, LH, W/BUCKLE ASSY/SWTCH	1	S2000	11714
	HANDRAIL ASSY, ADA, LH, W/BUCKLE ASSY/SWTCH	1	S2014	11714
4A *	HANDRAIL ASSY, FMVSS, LH	1	S2003	32476
	HANDRAIL ASSY, FMVSS, LH	1	S2005	32476
	HANDRAIL ASSY, FMVSS, LH	1	S2006	32476
	HANDRAIL ASSY, FMVSS, LH	1	S2007	32476
	HANDRAIL ASSY, FMVSS, LH	1	S2008	32476
	HANDRAIL ASSY, FMVSS, LH	1	S2010	32476
	HANDRAIL ASSY, FMVSS, LH	1	S5003	32476
	HANDRAIL ASSY, FMVSS, LH	1	S5005	32476
	HANDRAIL ASSY, FMVSS, LH	1	S5006	32476
	HANDRAIL ASSY, FMVSS, LH	1	S5007	32476
	HANDRAIL ASSY, FMVSS, LH	1	S5008	32476
	HANDRAIL ASSY, FMVSS, LH	1	S5016	32476
	HANDRAIL ASSY, FMVSS, LH	1	S5503	32476
	HANDRAIL ASSY, FMVSS, LH	1	S5505	32476
	HANDRAIL ASSY, FMVSS, LH	1	S5510	32476
4B *	HANDRAIL ASSY, LH, ADA (SUPERSEDED BY 32476)	1		VT-AC-84
4C *	HANDRAIL ASSY, LH, ADA (SUPERSEDED BY 32476)	1		V5-AC-84
5	HANDRAIL, RH	1	S20XX	32988
	HANDRAIL, RH	1	S50XX	32988
	HANDRAIL, RH	1	S55XX	32988
6	HANDRAIL ASSY, FMVSS, RH	1	S2000	32477
	HANDRAIL ASSY, FMVSS, RH	1	S2003	32477
	HANDRAIL ASSY, FMVSS, RH	1	S2005	32477
	HANDRAIL ASSY, FMVSS, RH	1	S2007	32477
	HANDRAIL ASSY, FMVSS, RH	1	S2008	32477
	HANDRAIL ASSY, FMVSS, RH	1	S2010	32477
	HANDRAIL ASSY, FMVSS, RH	1	S5003	32477
	HANDRAIL ASSY, FMVSS, RH	1	S5005	32477
	HANDRAIL ASSY, FMVSS, RH	1	S5007	32477
	HANDRAIL ASSY, FMVSS, RH	1	S5010	32477
	HANDRAIL ASSY, FMVSS, RH	1	S5503	32477
	HANDRAIL ASSY, FMVSS, RH	1	S5505	32477
	HANDRAIL ASSY, FMVSS, RH	1	S5510	32477
6A *	HANDRAIL ASSY, RH, ADA (SUPERSEDED BY 32477)	1		VT-AC-85
6B *	HANDRAIL ASSY, RH, ADA (SUPERSEDED BY 32477)	1		V5-AC-85
7	KIT, BUCKLE ASSY, w/ SWITCH	1		22017

**NOTE:** (REF) in QTY column is for Referenced Parts Only and are not sold as spare parts.

**NOTE:** \* Item or configuration not shown.

**FIGURE 4-7: ADA TRANSIT USE STANDEE HANDRAILS**

FIG. ITEM	DESCRIPTION	QTY	CONFIG.	PART NO.
8	SCREW, PAN HEAD, 10-24 X 3/4 (BAG OF 10)	1		15957
9	SCREW, HEX, 5/16-18 X 3/4 SST (BAG OF 10)	1		17508
10	SCREW, HEX HEAD, 5/16-18 X 1.0, SST (BAG OF 10)	1		19706
11	BUSHING, SNAP-IN	1		28-26-077
12	CABLE TIE, STD X 1.5 DIA, BLACK (BAG OF 10)	1		25697
13	TERMINAL, SLIP, F, 14-16, FULLINSUL (BAG OF 10)	1		13318
14	KIT, RESTRAINT BELT, ASSY, 34"	1		16092

**NOTE:** (REF) in QTY column is for Referenced Parts Only and are not sold as spare parts.

**NOTE:** \* Item or configuration not shown.

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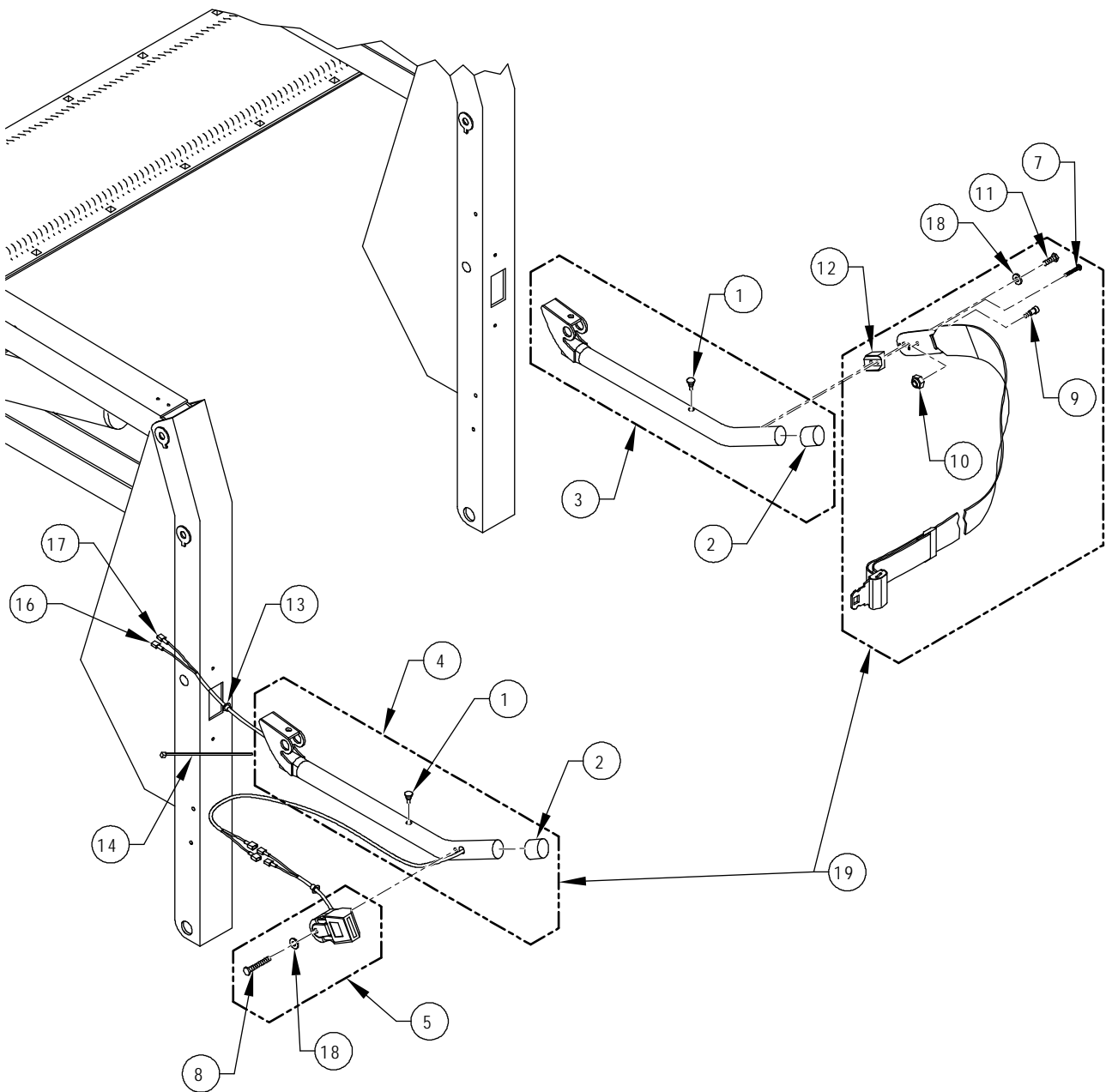


FIGURE 4-8: ADA TRANSIT USE HANDRAILS

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FIGURE 4-8: ADA TRANSIT USE HANDRAILS

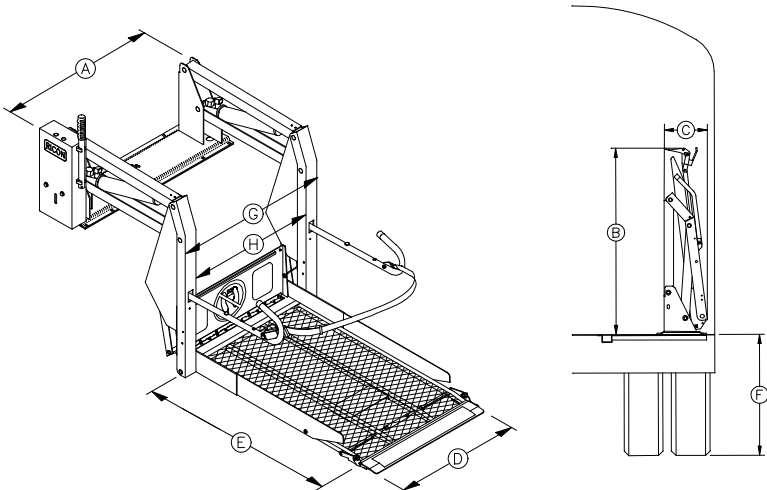
FIG. ITEM	DESCRIPTION	QTY	CONFIG.	PART NO.
1	BUMPER, RUBBER (BAG OF 10)	1		20653
2	CAP, ROUND, BLACK	2		25550
3	HANDRAIL, LH	1	S20XX	VT-AC-281
3A *	HANDRAIL ASSY, S5000, RH	1	S50XX	V5-AC-281
4	HANDRAIL ASSY, W/O SWITCH, S2000, LH	1	S20XX	VT-AC-282
4A *	HANDRAIL ASSY, S5000, LH	1	S50XX	V5-AC-282
5	KIT, BUCKLE ASSY, W/SW & HDWR	1		22017
6	DELETED			
7	SCREW, PAN HEAD, 10-24 X ¾ (BAG OF 10)	1		15957
8	SCREW, HEX HEAD, 5/16-18 X 1 ¾, SST (BAG OF 10)	2		14440
9	SCREW, SHOULDER, ¼-20 X .31OD X .38L	1		28373
10	NUT, NYLON INSERT, 1/4-20, THIN, SST (BAG OF 10)	1		13339
11	SCREW, HEX HEAD, 5/16-18 X ¾, SST (BAG OF 10)	1		17508
12	SPACER, HANDRAIL	1		V2-AC-063
13	BUSHING, SNAP-IN	1		28-26-077
14	CABLE TIE, STD X 1.5 DIA, BLACK (BAG OF 10)	1		25697
15	DELETED			
16	TERMINAL SLIP, M, 14-16, FULLINSUL (BAG OF 10)	1		13317
17	TERMINAL SLIP, F, 14-16, FULLINSUL (BAG OF 10)	1		13318
18	WASHER, FLAT, .344 X .668 X .065 (BAG OF 10)	2		13350
19	KIT, RESTRAINT BELT, TRANSIT	1		13055
20	KIT, RESTRAINT BELT, RETROFIT, INBOARD	1		29604

**NOTE:** (REF) in QTY column is for Referenced Parts Only and are not sold as spare parts.

**NOTE:** \* Item or configuration not shown.

## APPENDIX 1

## LIFT SPECIFICATIONS

S-SERIES (ADA) TRANSIT USE WHEELCHAIR LIFT								
Power ..... electro-hydraulic Motor rating @ 12 volts DC .....65 amp avg/cycle, 1250 psi Motor rating @ 24 volts DC .....32.5 amp avg/cycle, 1250 psi Hydraulic cylinders ..... 2ea, 1.5", power-up/gravity-down					Rated load capacity ..... 800 lbs Manual backup (up) .....hand pump Manual backup (down) ..... pressure release valve Lift Weight .....approx 340 - 370 lbs			
<div></div>								
DIMENSIONS (inches)								
	A	B	C	D	E	F	G	H
MODEL	Stationary frame width	Height (folded)	Installation depth (folded)	Usable platform width	Usable platform length	Floor-to-ground travel	Traveling frame width	Clear entry width
S2003-ADA	45	55.00	14	30	51	42	37.5	31
S2005-ADA	47	55.00	14	32	51	42	39.5	33
S2007-ADA	45	55.00	14	30	48	42	37.5	31
S2008-ADA	47	55.00	14	32	48	42	39.5	33
S2010-ADA	49	57.25	14	34	54	42	41.5	35
S5003-ADA	45	57.75	14	30	51	48	37.5	31
S5005-ADA	47	57.75	14	32	51	48	39.5	33
S5007-ADA	45	57.75	14	30	48	48	37.5	31
S5008-ADA	47	57.75	14	32	48	48	39.5	33
S5010-ADA	49	57.75	14	34	54	48	41.5	35
S5016-ADA	54	57.75	14	39.5	54	48	47	40.5