



# S-Series® DOT - Public Use Lift



**Operator Manual**



-PRINT-  
-HOME-

**This VMI product must be installed and serviced by a VMI dealer or qualified service technicians.**

**The operator must refer to this manual for operating instructions, then retain it for future reference by a VMI dealer or qualified service technicians who perform service and repair.**

**“DOT – Public Use Lift” verifies that this platform lift meets the public use lift requirements of FMVSS no. 403. This lift may be installed on all vehicles appropriate for the size and weight of the lift, but must be installed on buses, school buses, and multi-purpose passenger vehicles other than motor homes with a gross vehicle weight rating (GVWR) that exceeds 10,000 lbs (4,536 kgs).**

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U.S. Patent Nos: 5,228,538; 5,308,215; 5,373,915; 5,445,488; 5,605,431; 5,944,473

Australian Patent Nos: 661127; 687066

Canadian Patent No: 2,129,821

German Patent No: EP 0625896 B1

U.K. Patent No: EP 0625896 B1

Other U.S. and foreign patents pending.

Printed in the United States of America

<b>Customer Information</b>	
<b>Customer name</b>	
<b>Installing dealer</b>	
<b>Date installed</b>	
<b>Serial number</b>	

## REVISION RECORD

REV	PAGES	DESCRIPTION OF CHANGE	ECO
32DSST05.B 10/21/11	Cover	Update to registered trademark.	6560
	i	Update to customer information.	
	1-1	Update to registered trademark.	
	1-2	Update to warranty literature.	
	2-1	Update to registered trademark.	
	2-1	Update to Safety Precaution instructions.	
	2-1	Update to Figure 2-2 caption.	
	2-3	Update to Figure 2-4.	
	2-5	Update to VMI contact.	
	2-6	Update to VMI contact	
	2-8	Update to Normal Lift Operation Warning.	
	2-9	Update to Section 1.d. and 2.b.	
	3-1	Update to registered trademark.	
	3-1	Update to Maintenance info Warning.	
<b>END OF LIST</b>			

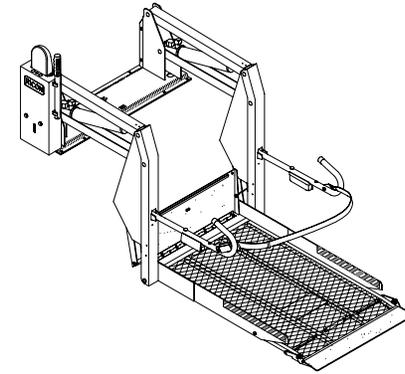
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## I. S-SERIES® PUBLIC USE INTRODUCTION

The Vantage Mobility International (VMI) S-Series® Public Use wheelchair lift provides wheelchair access to vans and buses and is DOT compliant. The lift is operated by a trained attendant.



The lift is intended to provide wheelchair access to public vehicles including buses, school buses, and large multi-purpose passenger vehicles. The mechanical linkages provide smooth movement to the platform, which has a rated load capacity of 800 pounds (364 kilograms).

The lift contains a powerful electro-hydraulic pump with a built-in manual backup pump. If the lift loses electrical power, it can be raised or lowered manually.

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

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

### A. PRODUCT SUPPORT

If there are questions about this manual, or additional copies are needed, please contact the VMI product support at one of the following locations:

#### **VMI**

**5202 S. 28<sup>th</sup> Place**

**Phoenix, AZ 85040.....(602) 243-2700**

**Outside 602 Area Code.....(800) 348-8267**

**World Wide Website.....www.vantagemobility.com**

## B. PRODUCT WARRANTY

### VANTAGE MOBILITY INTERNATIONAL S-SERIES® PUBLIC USE WHEELCHAIR LIFT FIVE-YEAR LIMITED WARRANTY

**Vantage Mobility International (VMI)** warrants to the original purchaser of this product that VMI 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 VMI 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 VMI product support.

**If you need to return a product:** Return this product to VMI. 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, over-loading, failure to follow operating instructions, or acts of nature (i.e., weather, lightning, flood).

**Note:** VMI recommends that this product be inspected by a VMI 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 VMI dealer or qualified service technician.
- The product has been modified or altered in any respect from its original design without written authorization by VMI.

*VMI disclaims liability for any personal injury or property damage that results from operation of a VMI product that has been modified from the original VMI design. No person or company is authorized to change the design of this VMI product without written authorization by VMI.*

*VMI's obligation under this warranty is exclusively limited to the repair or exchange of parts that fail within the applicable warranty period.*

*VMI 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 VMI within 20 days after installation of this VMI product for the warranty to be valid. The warranty is not transferable.*

*The warranty gives specific legal rights, and there may be other rights that vary from state to state.*

### **C. SHIPMENT INFORMATION**

- When the product is received, unpack the product and check for freight damage. Claims for any damage should be made to the carrier immediately.
- Be sure the installation kit contains all items listed on the kit packing list. Please report any missing items immediately to VMI product support. The warranty and owner registration cards must be completed and returned to VMI within 20 days for the warranty to be valid.

The sales or service personnel must review the Warranty and Operator Manual with the user to be certain that they understand how to safely operate the product. Instruct the user to follow the operating instructions without exception.

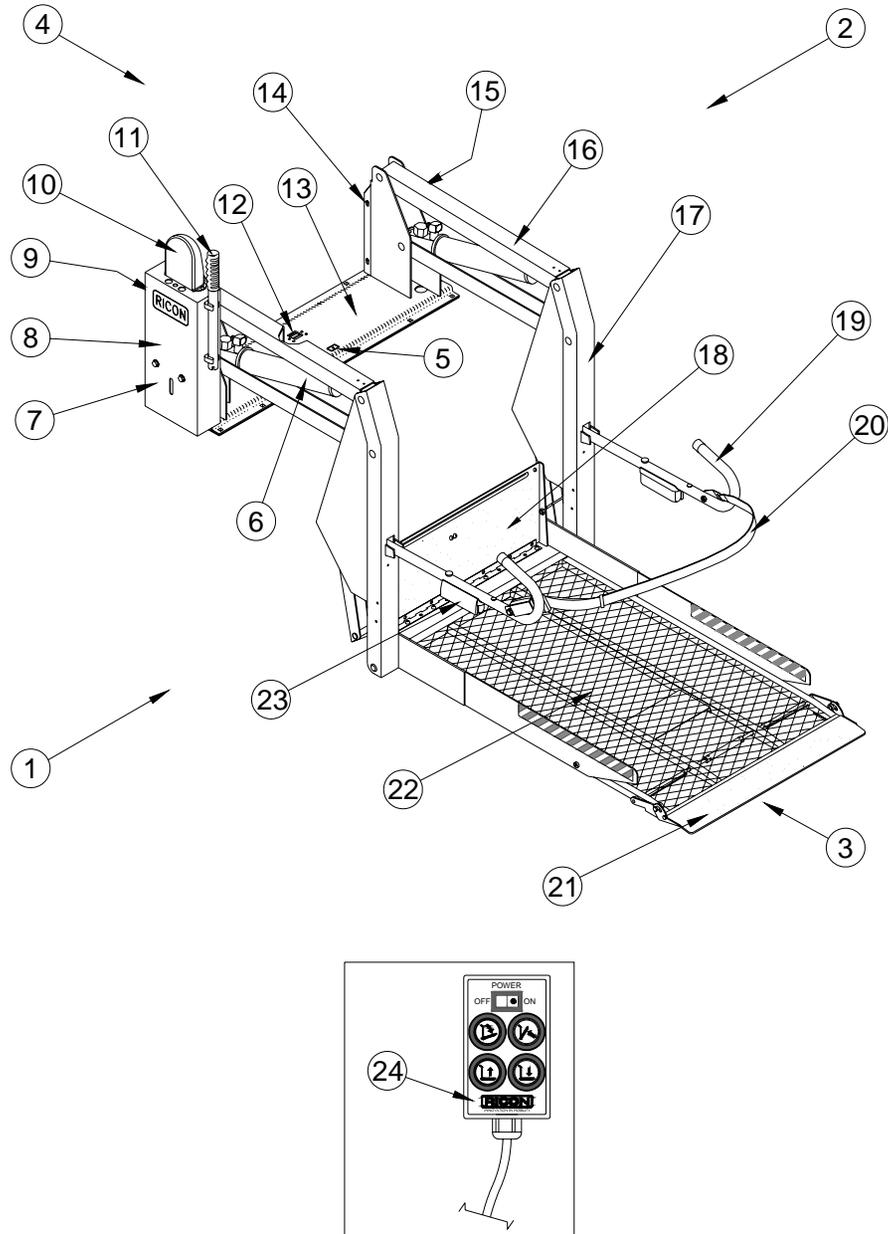
### **D. GENERAL SAFETY PRECAUTIONS**

The following general safety precautions must be followed during operation:

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

## E. MAJOR LIFT COMPONENTS

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



**FIGURE 1-1: S-SERIES PUBLIC USE WHEELCHAIR LIFT**

TABLE 1-1: S-SERIES PUBLIC USE LIFT COMPONENT TERMS		
REF	NAME	DESCRIPTION
1, 2, 3, 4	Left, right, front, rear	Position references when lift is viewed from outside of vehicle.
5	Bridgeplate load sensor	Senses if weight is present on the lowered bridgeplate.
6	Hydraulic cylinder	(left and right) Telescoping single-acting cylinders convert hydraulic pressure into platform lifting and folding force.
7	Hydraulic power unit	Contains hydraulic pump driven by electric motor that produces pressure to raise and fold platform, and a pressure release valve to unfold and lower it.
8	Audible alarm	(inside housing for hydraulic unit) Announces when something has passed over threshold. Activated by threshold beam.
9	Cycle counter	Visible at rear of housing, it records number of times platform has moved from floor to ground and back to floor.
10	Visual alarm	Flashing light makes it known when something has passed over threshold. Activated by threshold beams.
11	Manual backup pump handle	Used to operate manual back up-pump (located on hydraulic power unit cover).
12	Stow-Lock catch	Engages latch located on bottom of bridgeplate when platform is fully stowed.
13	Baseplate assembly	Bolts to vehicle floor; provides secure foundation for lift.
14	Threshold beams	Light-beams detect presence of objects in threshold area.
15	Serial number	Location of serial number decal.
16	Top and bottom arms	(left and right) Upper and lower links connecting vertical arm to base assembly.
17	Vertical arm	(left and right) Connects platform to top and bottom arms.
18	Bridgeplate (inboard rollstop)	Plate bridges gap between platform and baseplate when platform is at floor level. Acts as barrier to prevent wheelchair from rolling off of the platform during "Up" and "Down" platform motions.
19	Handrail	(left and right) Provides a handhold for standing passenger.
20	Occupant restraint belt	Electrically interlocked safety belt that is intended to prevent acceleration of wheelchair from platform. Lift will not operate unless belt is properly connected.
21	Front rollstop	Front barrier prevents the wheelchair from inadvertently rolling off of the platform during lift operation.
22	Platform	Component of lift where the wheelchair and occupant are situated during "Up" and "Down" lift motions.
23	Platform light	(left and right) Directs light onto platform surface.
24	Control pendant	Hand-held device controls platform motions.

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## II. S-SERIES® PUBLIC USE OPERATING INSTRUCTIONS

This chapter contains safety precautions, daily safety check instructions, control and indicator descriptions and operating instructions for the VMI S-Series® Public Use wheelchair lift. This chapter must be thoroughly understood before using the lift.

### A. SAFETY PRECAUTIONS

The following safety precautions must be complied with when operating lift:

- Refer to **Figure 2-1**. Deploying the lift when vehicle is on sloped ground is hazardous. Operate lift with vehicle parked on level ground.



**FIGURE 2-1: SLOPED PARKING HAZARD**

- Vehicle must be safely parked with parking brake set before using lift.
- Inspect lift before use. Do not use lift if an unsafe condition exists, or unusual noises or movements are noticed, and contact a VMI service technician for repair.
- Read and comply with all warning labels and symbols affixed to wheelchair lift.
- Refer to **Figure 2-2**. Due to variations in the size and configuration of mobility aids, for maximum safety, VMI recommends that passengers always face outward when riding the lift platform.



**FIGURE 2-2: VMI RECOMMENDS PASSENGERS FACE OUTBOARD WHEN RIDING LIFT PLATFORM**

- It is never safe for a wheelchair occupant to exit a vehicle facing inboard. It is not safe to rely on a threshold warning device (audible or other) to confirm that it is safe to exit vehicle while facing inboard. Exiting the vehicle while facing outboard allows for visual confirmation that the lift platform has been raised in the event that the threshold warning device is inoperative or unheard and prevents the occupant from exiting the vehicle backwards when the platform is still on the ground.
- When exiting vehicle, verify that platform is at same height as floor and front rollstop is up and locked.

- Do not place large equipment inside vehicle that can prevent pivoting of a wheelchair. Being able to pivot assures that a passenger can safely exit facing outward.
- The raised front rollstop prevents slow and unintentional rolling off of the platform. It is not intended to stop a fast-moving wheelchair, which might tip forward if the small front wheels collide with the rollstop.
- Be certain wheelchair fits safely on platform; it must not extend beyond edges or interfere with rising and locking of front rollstop.
- Do not operate with a load in excess of 800 lbs (364 kgs).
- Keep arms, legs, and clothing away from moving lift parts.
- The lift is intended for one wheelchair and its occupant or one standee. Do not overload lift.
- Refer to **Figure 2-3**. Do not stand in front of lift while deploying platform.



**FIGURE 2-3: STAND CLEAR OF PLATFORM**

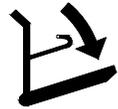
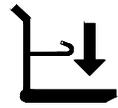
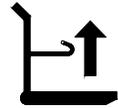
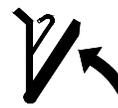
- Keep others clear while operating lift.
  - Do not allow an untrained person to operate lift.
  - Careful supervision is necessary if used near children.
  - Do not allow anyone to stand on bridgeplate. A bent bridgeplate can interfere with the platform as it rises and lowers.
  - Lock wheelchair brakes when on platform (power chair users must turn off power and set brake).
  - Use great care in wet conditions, because the wheelchair brakes are less effective if wheels or platform are wet.
  - Never leave platform outside of vehicle. Return platform to stowed position after use.
  - Do not load an oversize wheelchair into vehicle if it is too large to pivot freely inside vehicle.
- Read and understand these safety precautions. Review them periodically and ask other operators to read them as well. Contact a VMI dealer or qualified service technician or call VMI Product Support if there are questions.

## **B. DAILY SAFETY CHECK**

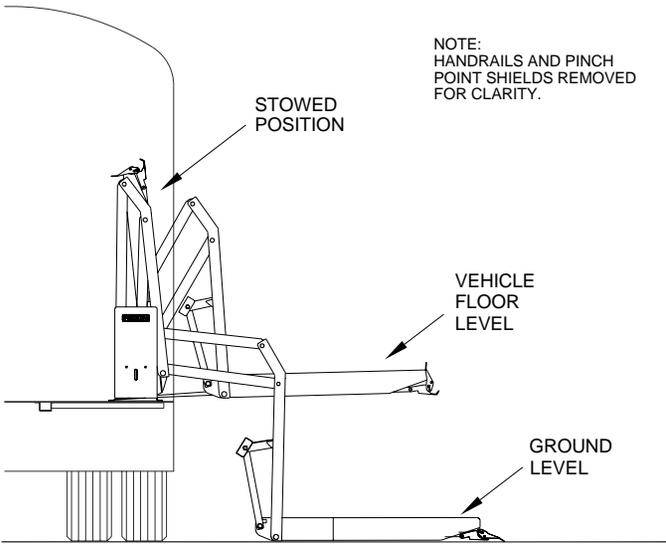
Inspect the lift before each use and check that the following conditions are met before operating:

- All functions operate properly. **DO NOT** use if unusual noises or movements exist, and contact a VMI dealer or qualified Service Technician for repair.
- Vehicle interlock is operating properly.
- No objects that may interfere with operation are present.
- General appearance and lubrication are satisfactory and fasteners are tight.

**C. PLATFORM MOTIONS**

TABLE 2-1: PLATFORM MOTIONS		
MOTION		DESCRIPTION
	DEPLOY	Platform unfolds, or deploys, out of vehicle from stowed position. If equipped with a power door operator, the doors automatically open before lift deploys.
	DOWN	Platform lowers from vehicle floor level towards ground level. The rollstop automatically lowers when platform reaches ground level.
	UP	Platform rises from ground level towards vehicle floor level. The rollstop automatically rises (closes) when platform leaves ground level.
	STOW	Platform folds, or stows, from vehicle floor level to stowed position. If equipped with a power door operator, the doors automatically close after lift stows.
<b>END OF TABLE</b>		

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



**FIGURE 2-4: PLATFORM POSITIONS**

## D. CONTROLS AND INDICATORS

 <b>WARNING</b>
THE LIFT IS ALLOWED TO OPERATE ONLY WHEN THE VEHICLE MANUFACTURER INTERLOCK CIRCUITRY IS ACTIVATED. IF NECESSARY, REFER TO VEHICLE OPERATOR MANUAL FOR INTERLOCK INSTRUCTIONS. DO NOT ATTEMPT TO OPERATE LIFT WITH INTERLOCK BYPASSED.

### ■ CONTROL PENDANT

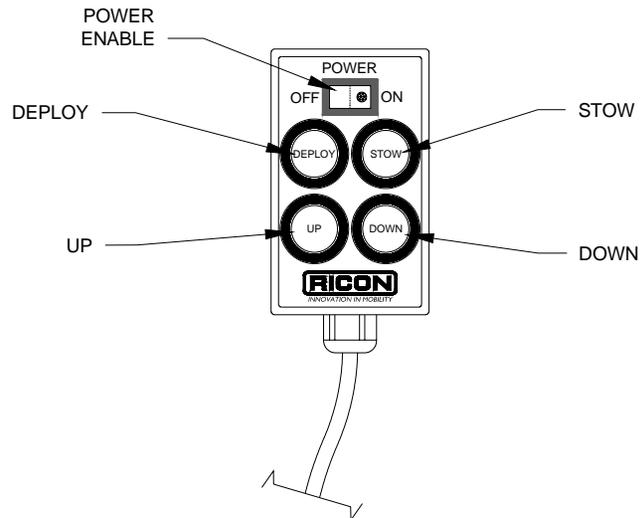
Refer to **Figure 2-5**. The lift is operated with four buttons and a switch located on a hand-held, hard-wired remote-control pendant. Turn on the POWER switch and then press an appropriate button to control each lift motion.

The POWER switch enables the pendant by providing power to it and must be turned on before the lift can be operated. When turned on, the power switch and each button illuminate.

Pressing the DEPLOY button unfolds the platform from the vehicle, and pressing the STOW button folds the platform back into the vehicle. Pressing the DOWN button lowers the platform towards the ground, and pressing the UP button raises the platform towards the floor.

A button must be held depressed until the motion is completed. Movement of the platform can be halted at any time by releasing the button.

The pendant is typically stowed on a wall-mounted clip inside the vehicle, near the lift.

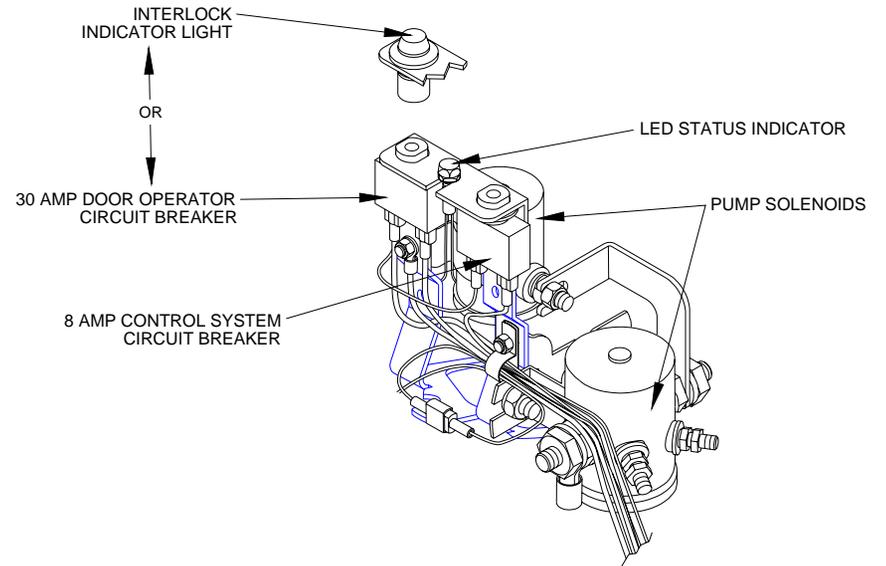


**FIGURE 2-5: CONTROL PENDANT**

■ CIRCUIT BREAKERS AND INDICATOR LIGHTS

- Interlock Indicator Light

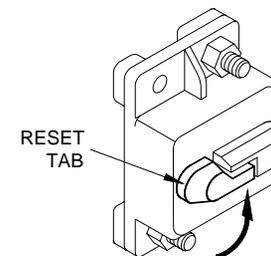
Refer to **Figure 2-6**. The purpose of a vehicle interlock system is to prevent operation of lift if an unsafe condition is present. When vehicle interlock systems are interfaced with lift circuitry, the interlock indicator shows whether or not interlock is operating properly. The light is interfaced 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.



**FIGURE 2-6: INDICATOR LIGHT AND CIRCUIT BREAKERS**

- Main Circuit Breaker

Refer to **Figure 2-7**. The main circuit breaker is located in vehicle engine compartment and is used to interrupt electrical power to lift electrical system when a major short circuit occurs. In the event of such a short circuit, the circuit breaker reset tab will “flip-down”. If pressing reset tab UP and releasing does not restore power, do not press and hold tab. Contact a VMI dealer or qualified service technician for repair.



**FIGURE 2-7: MAIN CIRCUIT BREAKER**

- Door Operator Circuit Breaker (Optional)

Refer to **Figure 2-6**. The circuit breaker for the power door operator is located on the hydraulic pump assembly. In the event of a door operator short circuit, the circuit breaker button will “pop-out”. If pressing and releasing button does not reset power, **DO NOT** press and hold. Contact a VMI dealer or qualified service technician for repair. Refer to appropriate Power Door Operator Service Manual for further details.

- Control System Circuit Breaker

Refer to **Figure 2-6**. The Control System Circuit Breaker is on hydraulic pump assembly. In case of a control system short circuit, the circuit breaker button will “pop-out”. If pressing and releasing button does not reset power, **DO NOT** press and hold. Contact a VMI dealer or qualified service technician for repair.

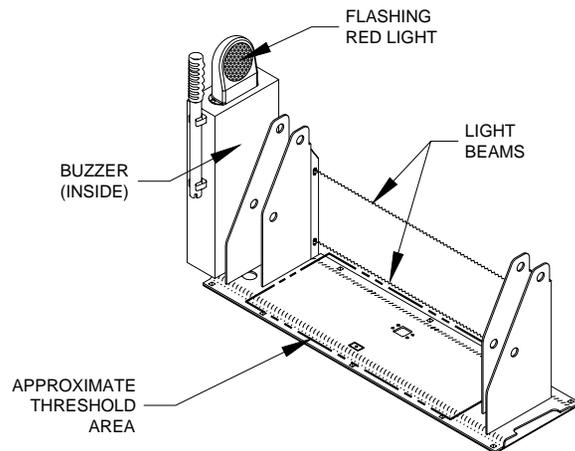
- BRIDGEPLATE LOAD SENSOR

Refer to Figure 1-1 and Table 1-1 (in Chapter 1) for the location of the switch that detects the presence of a load on the bridgeplate. When the sensor switch detects that an object is present on the bridgeplate it inhibits lowering of the platform. This protects the passenger from possible injury when the bridgeplate rises. It also protects the bridgeplate from damage, which could later interfere with proper operation of the lift.

- THRESHOLD SAFETY WARNING SYSTEM

Refer to **Figure 2-8** for the location of the sensor portion of the threshold warning system. The lift incorporates two light beams that detect when a passenger (or object, such as a wheelchair) is in the vicinity of the baseplate or bridgeplate (threshold area). The beams are enabled when the platform is one inch, or more, below the vehicle floor. If someone passes through either of the beams when the platform is one inch below the floor an audible buzzer and flashing red light are actuated.

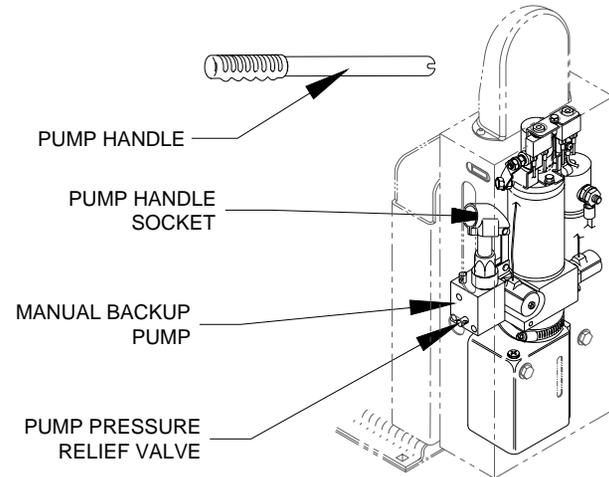
This system provides a margin of safety for lift users by warning them if the platform is below floor level. The platform must be at floor level when a passenger is boarding the platform prior to exiting the vehicle.



**FIGURE 2-8: THRESHOLD WARNING SYSTEM**

- MANUAL BACKUP PUMP

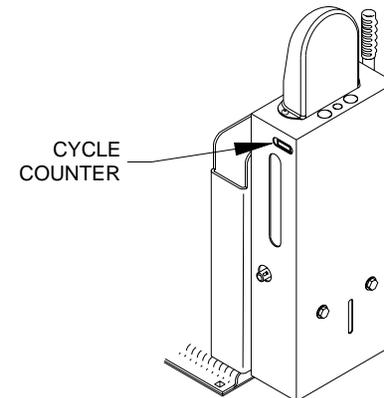
Refer to **Figure 2-9**. The manual backup pump is used to operate lift if electrical power is not functional. The controls for the pump consist of a pump handle for raising the platform and a pump release valve for lowering it. Instructions for operating manual pump are provided in the MANUAL OPERATION paragraph, which is part of the LIFT OPERATION section in this chapter.



**FIGURE 2-9: MANUAL BACK-UP PUMP & HANDLE**

- LIFT CYCLE COUNTER

Refer to **Figure 2-10**. The cycle counter is located inside the hydraulic pump housing and visible through a slot on the rear side. The counter advances each time the platform moves through a complete cycle, which consists of the platform moving from the vehicle floor to the ground and back to the floor. The number of cycles displayed is used to schedule maintenance operations.



**FIGURE 2-10: CYCLE COUNTER**

## E. NORMAL LIFT OPERATION



### WARNING

IMPROPER USE OF LIFT CAN RESULT IN PERSONAL INJURY. USERS MUST READ AND FOLLOW OPERATING INSTRUCTIONS. ADDITIONAL COPIES OF OPERATOR MANUAL ARE AVAILABLE FROM:

VMI  
5202 S. 28<sup>th</sup> PLACE  
PHOENIX, AZ 85040  
(602) 243-2700 OR (800) 348-8267

- DO NOT EXCEED RATED LOAD CAPACITY OF 800 POUNDS (364 KGS).
- PRIOR TO USE, INSPECT WHEELCHAIR LIFT FOR PROPER FUNCTION, REQUIRED MAINTENANCE, OR DAMAGE. IF A PROBLEM EXISTS, DO NOT USE LIFT AND CONTACT A VMI DEALER OR QUALIFIED SERVICE TECHNICIAN FOR REPAIR.
- THIS LIFT IS FOR USE BY WHEELCHAIR OCCUPANTS AND STANDEES.

VMI CORPORATION DISCLAIMS LIABILITY FOR DAMAGE OR PERSONAL INJURY RESULTING FROM MODIFICATION TO LIFT, LACK OF MAINTENANCE OR REPAIR, NEGLIGENCE, ABUSE, OR FAILURE TO FOLLOW LIFT OPERATING INSTRUCTIONS.

- Before operating lift, be certain vehicle is safely parked on a level area away from traffic. Provide space for lift operation and passenger boarding.
- The lift operator must take special care to ensure that area is clear before deploying lift. Be certain there are no obstacles beneath platform.
- Open doors completely if lift is not equipped with a power door operator. If so equipped, the vehicle doors will automatically open before platform deploys or close after platform is stowed.
- If equipped with a safety interlock mechanism (e.g. transmission, parking brake, etc) be certain that it is properly engaged before attempting to operate lift. The lift will not operate until this feature has been engaged properly.
- A person that uses the wheelchair lift while standing (does not require mobility aid equipment) is referred to in this manual as a Standee.



### WARNING

ATTENDANT MUST REMAIN NEAR PASSENGER TO RENDER IMMEDIATE ASSISTANCE WHEN NECESSARY.

## 1. ENTERING VEHICLE

**NOTE:** The occupant restraint belt must be fastened to enable the DEPLOY, DOWN, and UP motions; the platform will not operate unless this safety mechanism is connected. Turn pendant power switch on.

- DEPLOY PLATFORM** - Push and hold DEPLOY button until platform completely unfolds from vehicle and stops at floor level.
- LOWER PLATFORM** - Push and hold DOWN button until lift contacts ground and rollstop opens completely.
- Unfasten occupant restraint belt, carefully place wheelchair in center of platform, facing outward (away from vehicle), and lock wheelchair brakes.



### CAUTION

Be certain wheelchair is safely within platform perimeter and does not interfere with operation of platform rollstop.

- ✘ A Standee must stand near the center of the platform, facing in the direction of travel (into vehicle), and firmly grasp handrails.
- d. Fasten occupant restraint belt. Insert belt tongue into buckle and listen for “click” then “tug” on belt tongue to confirm belt is securely fastened.
- e. **RAISE PLATFORM** - Push and hold UP button until platform rises and stops automatically at vehicle floor level.
- f. Release wheelchair brakes, carefully board passenger into vehicle, and secure wheelchair.
- g. Refer to “STOWING PLATFORM” section on next page and stow platform.

## 2. EXITING VEHICLE

**NOTE:** The occupant restraint belt must be fastened to enable the DEPLOY and DOWN motions. The platform will not operate unless this safety mechanism is connected.

- a. **DEPLOY PLATFORM** - Push and hold DEPLOY button until platform completely unfolds from vehicle and stops at vehicle floor level.



### WARNING

VERIFY THAT PLATFORM IS AT VEHICLE FLOOR LEVEL AND FRONT ROLLSTOP IS UP AND LOCKED IN POSITION.

- b. Fasten occupant restraint belt. Insert belt tongue into buckle and listen for “click” then “tug” on belt tongue to confirm belt is securely fastened.
- c. Carefully place wheelchair in center of platform, facing outward (away from vehicle), and lock wheelchair brakes.



### CAUTION

Do not stand on bridgeplate as platform lowers.

- ✘ A Standee must stand near the center of the platform, facing in the direction of travel (away from vehicle), and firmly grasp handrails.
- d. **LOWER PLATFORM** - Push and hold DOWN button until platform settles at ground level and front rollstop is fully lowered.
- e. Unfasten occupant restraint belt, release wheelchair brakes, and carefully assist passenger off platform.
- f. Refer to “STOWING PLATFORM” section and stow platform.

## 3. STOWING PLATFORM

**NOTE:** The occupant restraint belt must be fastened to enable the UP and STOW motions. The platform will not operate unless this safety mechanism is connected.

- a. If platform is at ground level, push and hold UP button until platform rises and stops automatically at floor level.
- b. Push and hold STOW button until platform folds completely into vehicle.

**CAUTION**

Be certain lift has folded completely before closing doors. To prevent damage to doors, do not release switch until lift has folded completely and lift pump motor has stopped automatically.

- c. Close vehicle doors if lift is not equipped with a power door operator. If so equipped, the vehicle doors will automatically close after platform is stowed.

**F. MANUAL LIFT OPERATION**

The lift can be operated manually if lift electrical power is not functioning. VMI recommends that manual operation be used only for exiting from vehicle.

Preparation:

- Be certain vehicle is on a level area and away from traffic. Allow space for platform movement plus space to exit from platform.
- The vehicle operator must summon assistance to move vehicle to a safe area if a break down situation exists where vehicle cannot be moved under its own power.
- Open doors manually if vehicle is not equipped with a power door operator. If equipped with a power door operator, refer to its operator manual for manual operation directions.

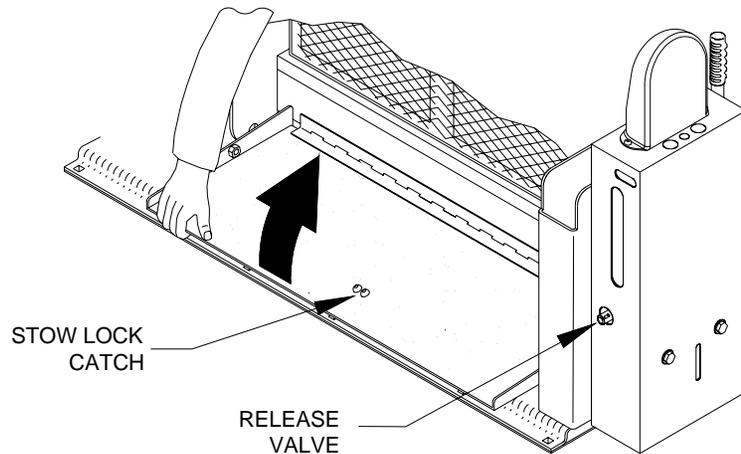
**WARNING**

FOLLOW PRECAUTIONS AT BEGINNING OF "LIFT OPERATION" SECTION WHEN USING MANUAL BACKUP SYSTEM TO EXIT VEHICLE.

**NOTE:** The threshold warning system is not active during manual operation and cannot be used to indicate platform height.

**1. DEPLOY PLATFORM**

- a. Refer to **Figure 2-11**. Override the stow lock feature by lifting bridgeplate by hand. This will separate the stow lock catch (fastened to underside of bridgeplate) from stow lock latch (fastened to base assembly). If stow lock is difficult to separate, use manual backup pump to raise platform slightly and remove tension from catch; refer to "Stow Platform" paragraph in this section.



**FIGURE 2-11: RAISE BRIDGEPLATE BY HAND**

32DSST05.B

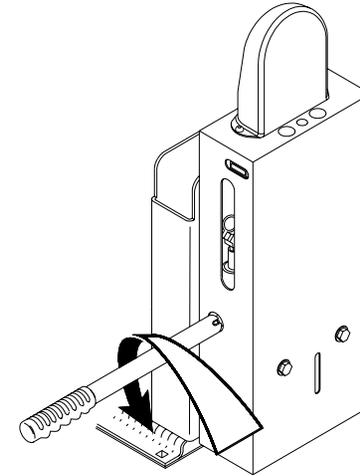
- b. Refer to **Figure 2-12**. Insert notched end of pump handle into circular hole on hydraulic pump cover and engage pump release valve.



**CAUTION**

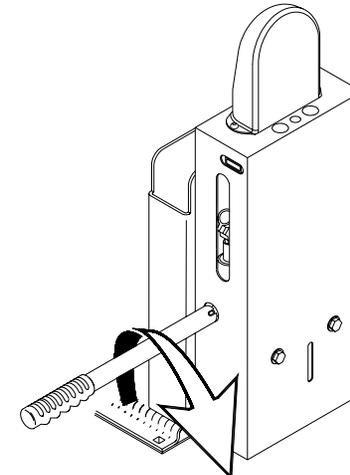
Do not open pump release valve more than  $\frac{1}{4}$  turn. Opening valve further may cause it to disengage from pump body, which will disable manual pump.

- c. Refer to **Figure 2-12**. Open valve by turning it  $\frac{1}{4}$  turn counter-clockwise and platform will begin to lower.



**FIGURE 2-12: OPEN RELEASE VALVE**

- d. Refer to **Figure 2-13**. When platform reaches level of interior floor turn valve clockwise to close; do not over-tighten valve. Do not lower platform below vehicle floor level. The rear edge of bridgeplate must rest flat on vehicle floor.



**FIGURE 2-13: CLOSE RELEASE VALVE**

32DSST05.B

- e. Load passenger  
Carefully place wheelchair in center of platform, facing outward (away from vehicle), and lock wheelchair brakes.

## 2. LOWER PLATFORM



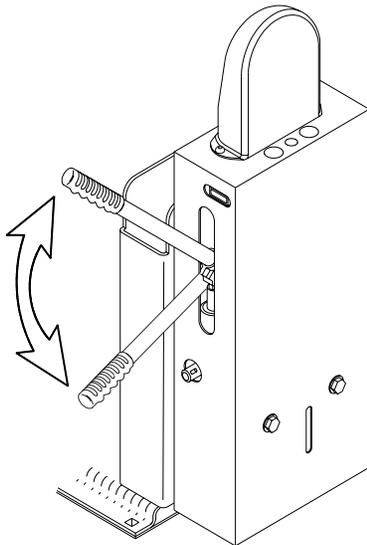
### CAUTION

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

- a. Refer to **Figure 2-12**. Turn valve 1/4 turn counter-clockwise to begin lowering platform.
- b. Hold valve open until platform settles at ground level. Refer to **Figure 2-13**. Turn handle clockwise to close valve; do not over-tighten valve.
- c. Release wheelchair brakes and carefully exit platform.

## 3. STOW PLATFORM

- a. Refer to **Figure 2-13**. Verify that pump release valve is closed; do not over-tighten valve.
- b. Refer to **Figure 2-14**. Insert pump handle into pump handle socket. Operate pump to begin raising and folding platform.



**FIGURE 2-14: RAISE PLATFORM**

- c. Operate pump until platform is completely folded inside vehicle and stow lock has engaged.
- d. Stow pump handle. Close vehicle doors.

## G. MAINTENANCE AND REPAIR NOTE

Follow the lubrication, cleaning, and maintenance instructions in the following chapter, MAINTENANCE. These instructions are meant to optimize the operating condition of wheelchair lift.

### III. S-SERIES® PUBLIC USE MAINTENANCE

Regular maintenance of the VMI S-Series® Public Use wheelchair lift will provide optimum performance and reduce the need for repairs. This chapter contains cleaning instructions, a maintenance schedule, and decal information.

#### A. ADDITIONAL MAINTENANCE INFORMATION

Additional maintenance information is available in the S-Series Public Use service manual, part number 32DSST06. This manual is available from VMI in printed hard copy, or at the Ricon website in PDF format. The website is located at [www.riconcorp.com](http://www.riconcorp.com). At the website, click on “Technical Documents”, “I agree”, and then “Service Manuals”.



#### WARNING

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

#### B. CLEANING

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

#### C. MAINTENANCE SCHEDULE

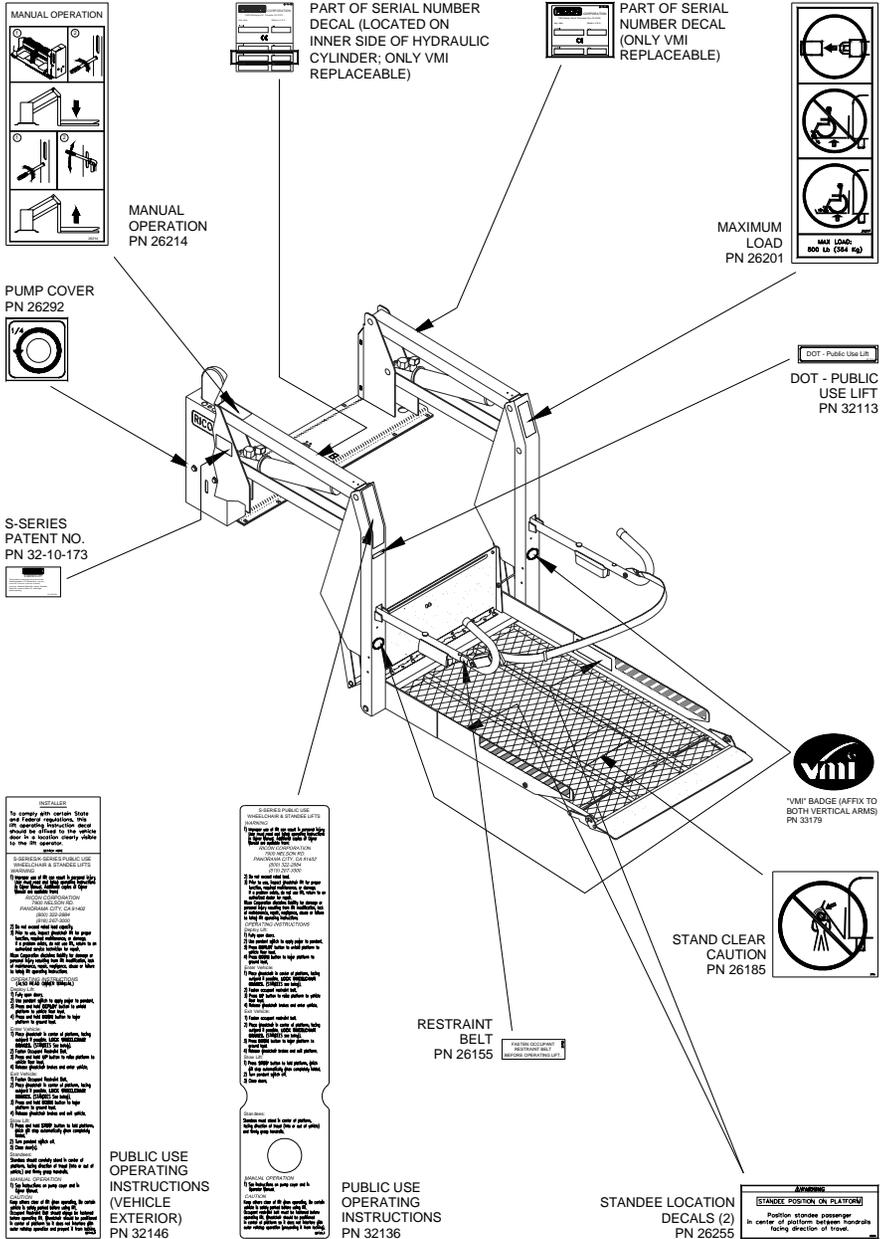
Refer to cycle counter located on rear side of hydraulic power unit. Under normal operating conditions, maintenance inspections are required at the frequencies listed in **Table 3-1**. 10 cycles is considered an average number of cycles for one day.

TABLE 3-1: MAINTENANCE SCHEDULE	
SERVICE POINT	ACTION TO PERFORM
<b>10 CYCLES</b>	
Overall condition	Listen for abnormal noises as lift operates (i.e. grinding or binding noises.)
Control pendant	<ul style="list-style-type: none"><li>▪ Verify that control pendant is undamaged and cable connector is tight.</li><li>▪ Verify that switch and buttons are illuminated.</li></ul>
Threshold warning system	Verify that system properly detects objects in baseplate area and actuates the visual and audible alarms.
Bridgeplate load sensor	Verify that sensor inhibits downward movement of platform when a weight is present on lowered bridgeplate.
Platform lights	Verify that both lights are on when lift is powered.
<b>150 CYCLES</b>	
Overall condition	Inspect underside of vehicle for anything that is out of place.
Electrical wiring	Inspect electrical wiring for frayed wires, loose connectors, etc.
Vehicle interlock	Place vehicle in non-interlock mode and verify that lift does not operate.
Decals	Verify that lift decals are properly affixed, clearly visible, and legible. Replace, if necessary.

<b>TABLE 3-1: MAINTENANCE SCHEDULE</b>	
<b>SERVICE POINT</b>	<b>ACTION TO PERFORM</b>
Handrails	Verify that handrail fasteners are properly tightened.
Lift mounting points	<ul style="list-style-type: none"> <li>▪ Verify that vehicle mounting and support points are undamaged.</li> <li>▪ Verify that mounting bolts are sufficiently tight and free of corrosion.</li> </ul>
Main lifting pivots	Verify that link pins on arms are properly installed, free from damage, and locked in position.
Platform pivot points	Verify that platform moves freely, without binding, and does not wobble.
Bridgeplate	<ul style="list-style-type: none"> <li>▪ Verify that bridgeplate operates without binding during lift functions.</li> <li>▪ Verify that bridgeplate deploys fully when platform stops at floor level.</li> <li>▪ Verify bridgeplate rests flat against baseplate.</li> </ul>
Front rollstop	<ul style="list-style-type: none"> <li>▪ Verify that rollstop is opened completely when platform is at ground level.</li> <li>▪ Verify that rollstop closes and locks when platform leaves ground.</li> </ul>
Hydraulic power unit	 <b>CAUTION</b>
	Check and add fluid when platform is at <u>ground</u> level. Fluid that is added when platform is raised will overflow when platform is lowered.
	<ul style="list-style-type: none"> <li>▪ Verify that pump hydraulic fluid level is at FULL mark when platform is at ground level. Add Texaco 01554 Aircraft Hydraulic Oil or equivalent U.S. mil spec H5606G fluid.</li> <li>▪ Verify there are no hydraulic fluid leaks.</li> <li>▪ Verify that manual backup pump operates properly.</li> </ul>
<b>1800 CYCLES</b>	
Cleaning and lubrication	<ol style="list-style-type: none"> <li>1. Clean lift with mild soap and water and wipe dry. Prevent rust by coating all surfaces with a light oil. Remove excess oil.</li> <li>2. Spray penetrating oil (Curtisol® Red Grease 88167 or WD-40®) where specified in the service manual 32DSSP04 following directions on container. Remove excess grease from surrounding areas.</li> </ol>
 <b>CAUTION</b>	
A VMI dealer or qualified service technician must perform the annual safety check.	
<b>3600 cycles</b>	
Hydraulic cylinder, hoses and fittings	<ul style="list-style-type: none"> <li>▪ Check hydraulic cylinder for evidence of leaks.</li> <li>▪ Inspect hydraulic hoses for damage.</li> <li>▪ Verify that all fittings are tight.</li> </ul>
<b>END OF TABLE</b>	

**D. DECAL PART NUMBERS AND LOCATIONS**

Refer to **Figure 3-1**. Inspect decals at interval in **Table 3-1**. Inspect for chipping, peeling, fading, and illegibility. Order replacement decals with part number given in **Figure 3-1**, and apply where shown.



**FIGURE 3-1: S-SERIES PUBLIC USE DECAL LOCATIONS AND PART NUMBERS**

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