



**Mark 1
Personal
Wheelchair Lift
DOT - Private Use Lift**



Owners Manual



AUTHORIZED VMI SERVICE TECHNICIANS MUST SERVICE THIS VMI PRODUCT.

PRODUCT USERS MUST REFER TO THIS MANUAL FOR OPERATING AND GENERAL MAINTENANCE INSTRUCTIONS.

RETAIN THIS MANUAL IN THE VEHICLE FOR FUTURE REFERENCE.

“DOT–Private Use Lift” verifies that this platform lift meets only the “private use lift” requirements of FMVSS No. 403. This lift may be installed on all vehicles appropriate for the size and weight of the lift, except for busses, school busses, and multi-purpose passenger vehicles other than motor homes with a gross vehicle weight rating (GVWR) that exceeds 4,536 kg (10,000 lb).

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Printed in the United States of America

Customer Name: _____

Installing Dealer: _____

Date Installed: _____

Serial Number: _____

REVISION RECORD

REVISION	PAGES	DESCRIPTION OF CHANGE	ECO
32DPH05. C 10/20/06	3-2	Added 36905 and card sign to Figure 3-1.	6017

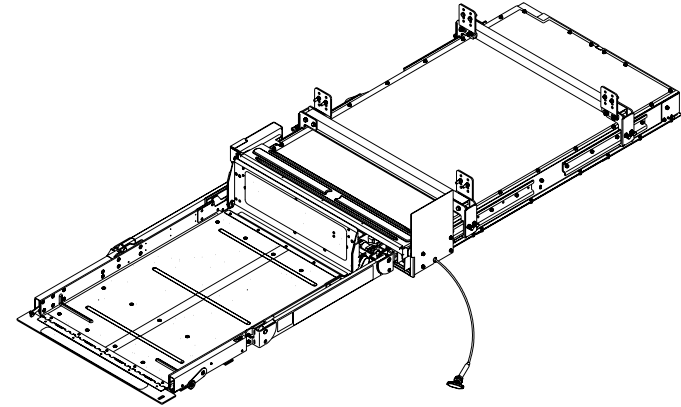
TABLE OF CONTENTS

<i>Chapter and Section</i>	<i>Page</i>
I. MARK 1 INTRODUCTION	1-1
A. VMI SERVICE SUPPORT	1-1
B. WARRANTY INFORMATION	1-2
C. GENERAL SAFETY PRECAUTIONS	1-3
D. PLATFORM OPERATING ENVELOPE.....	1-3
E. MAJOR LIFT COMPONENTS	1-4
II. MARK 1 OPERATING INSTRUCTIONS	2-1
A. SAFETY PRECAUTIONS	2-1
B. INSPECT THE LIFT.....	2-2
C. PLATFORM CHARACTERISTICS.....	2-2
1. PLATFORM POSITIONS	2-2
2. PLATFORM MOTIONS	2-3
D. LIFT CONTROLS.....	2-3
1. CONTROL PENDANT	2-3
2. VEHICLE INTERLOCK SYSTEM	2-4
3. CONTROL SYSTEM CIRCUIT BREAKERS	2-5
4. MAIN CIRCUIT BREAKER.....	2-5
5. CYCLE COUNTER	2-6
6. HYDRAULIC SYSTEM MANUAL BACKUP PUMP	2-6
E. OPERATING THE LIFT	2-7
1. NORMAL OPERATION	2-7
2. MANUAL OPERATION.....	2-9
III. MARK 1 MAINTENANCE PROCEDURES	3-1
A. CLEANING.....	3-1
B. MAINTENANCE SCHEDULE.....	3-1
C. DECALS	3-2

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I. MARK 1 INTRODUCTION

This manual provides operating instructions and basic maintenance procedures for the Vantage Mobility International (VMI) MARK 1 wheelchair lift. The MARK 1 provides safe and easy access to full size vans for an individual using a wheelchair or scooter.



The MARK 1 is typically installed in the side of the van, below the vehicle frame.

A hydraulic pump driven by an electric motor supplies lifting force to a pair of hydraulic cylinders. Maximum lifting capacity is 600 pounds (273 kilograms).

The operator uses the control pendant to withdraw the platform from the vehicle and lower it to the ground. The passenger moves onto the large non-skid platform and is then raised to floor height. After the passenger enters the vehicle, the operator lowers the platform and retracts it back into the vehicle.

When a passenger exits, the operator uses the control pendant to withdraw the platform from the vehicle and raise it to floor height. The passenger moves onto the platform, and is then lowered to the ground. After the passenger departs the platform, the platform is stowed.

One individual can manually operate the lift when normal power is not present. A manual release mechanism is provided to ease the task of pulling the platform out of the enclosure. The hydraulic pump assembly includes a manually operated back-up pump to raise the platform, and a pressure release valve to lower it.

It is important to passenger safety that the operator be familiar with the Operating Instructions chapter. It is also important to properly maintain the lift by following the required cleaning, lubrication, and inspection procedures in the MARK 1 personal service manual 32DPH06.

A. VMI SERVICE SUPPORT

If there are questions regarding this manual, or you need additional copies, please contact VMI Service Support at the following location:

VMI

5202 S. 28th Place

Phoenix, AZ 85040 (602) 243-2700

Outside 602 Area Code (800) 348-8267

World Wide Website www.vantagemobility.com

B. WARRANTY INFORMATION

Complete the warranty and owner registration cards and return them to VMI within 20 days to validate the warranty.

VANTAGE MOBILITY INTERNATIONAL ONE-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 parts that fail by reason of defective material or workmanship as follows:

- Repair or replace parts for a period of one year from the date of purchase. A complete list of parts covered by this warranty can be obtained from VMI Product Support.
- Labor costs for specified parts replace 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.

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, overloading, failure to follow operating instructions, or acts of nature (i.e., weather, lightning, flood).

Note: VMI requires this product be inspected by an authorized VMI service technician at least once every six months, or sooner if necessary. Any required maintenance should be performed at that time.



WARNING

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

This warranty is void if:

- Product has been installed or maintained by someone other than an authorized VMI 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 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. GENERAL SAFETY PRECAUTIONS

Adhere to the following safety precautions during operation:

- Exercise caution when operating lift to avoid personal injury and product damage, and be certain that hands, feet, legs, and clothing are not in the path of the platform as it moves.
- Read and thoroughly understand the operating instructions before operating the lift.
- Inspect the lift before each use. Do not use lift to assist passengers if any unsafe conditions are present, such as unusual noises or movements.
- Keep others clear during lift operation.
- Do not operate lift with a load on platform in excess of 600 lbs (273 kg).
- The lift requires regular maintenance. VMI requires that an authorized VMI service technician perform a thorough maintenance inspection every six months.

D. PLATFORM OPERATING ENVELOPE

Refer to **Figure 1-1**. The outline of the platform operating envelope and its dimensions are shown in the figure below. Do not operate lift with people or objects on platform that extend beyond any of the dimensions shown.

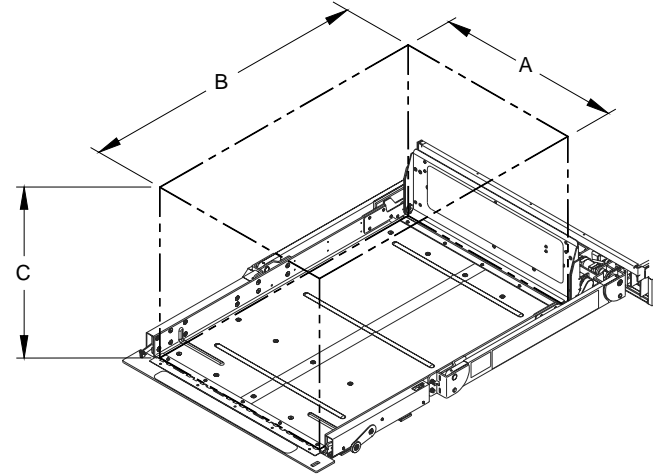


FIGURE 1-1: PLATFORM OPERATING ENVELOPE

A = 32 inches

B = 48 inches

C = 28 inches

E. MAJOR LIFT COMPONENTS

Major components of the MARK 1 personal lift are in **Figure 1-2**. A description of each component is in **Table 1-1**.

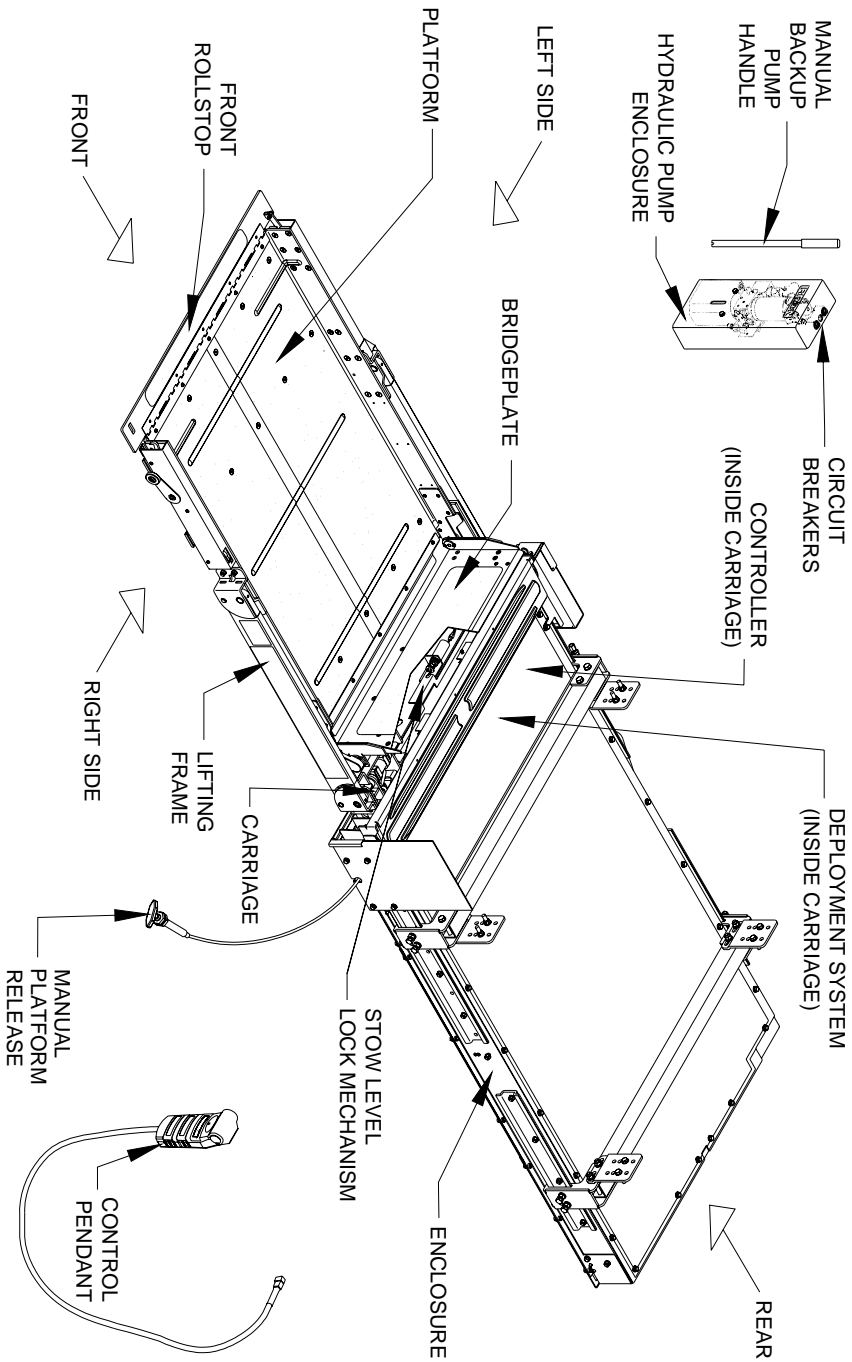


FIGURE 1-2: MAJOR MARK 1 PERSONAL LIFT COMPONENTS

32DPH05.C

TABLE 1-1: MAJOR MARK 1 PERSONAL LIFT COMPONENTS	
NAME	DESCRIPTION
Left, Right, Front, Rear	Lift references when viewing installed lift from outside of vehicle.
Carriage	Rear part of traveling frame. Mounted on rollers, which move on rails attached to inside of enclosure. Supports lifting frame.
Lifting frame	Hinged arms that lift or lower platform; arms are raised by a pair of hydraulic cylinders that are anchored to carriage.
Platform	Curbed area occupied by passenger during lift operation.
Traveling frame (not shown)	Assembly consisting of the platform, lifting frame, and carriage. Moves as a unit in and out of enclosure.
Front rollstop	Front barrier prevents wheelchair from inadvertently rolling off the platform during lift use. Rollstop is hydraulically opened and closed.
Bridgeplate (rear rollstop)	Plate unfolds when platform is at floor height to bridge the gap between platform and vehicle interior. Functions as a rear rollstop when platform is in motion.
Hydraulic power unit	Electro-hydraulic unit provides hydraulic pressure used to raise platform; also contains a backup pump and relief valve to raise and lower platform manually. Located in pump enclosure.
Control pendant	Hand-held device used to control platform motions.
Manual backup pump handle	Used to operate the manual hydraulic back-up pump and the hydraulic pressure release valve.
Enclosure	Housing for platform; rigidly attached to vehicle chassis.
Pump enclosure	Contains electrical and hydraulic power and control components; also referred to as the "pump box".
Deployment system	Employs an electric gear-motor and toothed belt to propel platform out of enclosure, or to pull it back into the enclosure. Located at top center of carriage.
Controller	Electronic module translates pendant commands to signals that control lift electrical and hydraulic components. Also monitors lift electrical activity and position of platform.
Stow level lock mechanism	A mechanical mechanism that establishes the correct platform height before the platform is retracted into enclosure.
Circuit breakers	Small circuit breakers that protect the pendant and lift control circuits.
Manual platform release handle	Disengages traveling frame from enclosure, thus allowing platform to be pulled from enclosure by hand.
END OF TABLE	

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II. MARK 1 OPERATING INSTRUCTIONS

The lift operator must thoroughly read and understand this chapter before using the VMI MARK 1 Wheelchair Lift, and must comply with the safety precautions and daily safety check instructions.

A. SAFETY PRECAUTIONS

- Refer to **Figure 2-1**. Operate the lift only when vehicle is parked on level ground. Using the platform while it is inclined is hazardous.

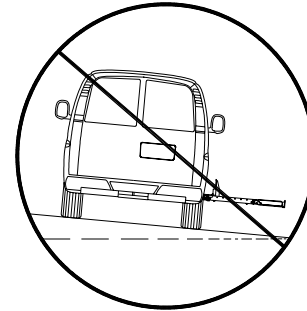


FIGURE 2-1: SLOPED PARKING HAZARD

- Verify that the vehicle boarding area is free of obstacles.
- Read and comply with all warning labels and symbols attached to the wheelchair lift.
- The operator must inspect lift before use. If unusual noises, movements, or other unsafe conditions are noticed, do not use lift and contact an authorized VMI service technician for repair.
- Do not operate with a load in excess of 600 lbs (273 kg).
- Do not allow people or objects on platform that exceed the operating envelope dimensions described in Chapter I.
- The platform is intended for ONE wheelchair and its occupant. Do not overload lift.
- Wheelchair occupants must face outward when entering or exiting platform.
- The outer rollstop is intended to prevent slow, or unintentional, rolling off the platform. The outer rollstop is not designed to stop a quick moving wheelchair; the wheelchair might tip when the small front wheels collide hard with the rollstop. In addition, the large rear wheels of a quick moving wheelchair can roll up and over the rollstop.
- Wheelchair brakes are less effective if the wheels or platform are wet. The operator must be extra careful in wet conditions.
- Verify that the wheelchair fits safely on the platform. The wheelchair cannot extend beyond the edges, or interfere with operation of the rollstop.
- When transferring a passenger from the vehicle to the platform, verify that the platform is at the same height as the vehicle floor, and that the front rollstop is up and locked.
- Keep arms, legs, and clothing away from moving lift parts.
- Keep others clear from lift while operating it.
- Return platform to stowed position when not in use; don't leave platform outside of vehicle.

Periodically read and review these safety precautions. Ask any attendants or other operators to read them as well. Contact VMI Product Support if you have questions.

B. INSPECT THE LIFT

Before using the lift, verify that the following conditions are met:

- All lift functions operate properly. Do not use lift if any unusual noises or movements are noticed. Contact an authorized VMI service technician for repair.
- The vehicle interlock circuit, if present, is working properly. The lift cannot be operated unless the parking brake is on, the transmission is in PARK, and the doors are open.
- Lubrication and general appearance are satisfactory.

C. PLATFORM CHARACTERISTICS

1. PLATFORM POSITIONS

Refer to **Figure 2-2**. The platform is stowed inside of its enclosure when not in use. When the platform is deployed, it will typically be at one of three heights, or levels, as shown. When the platform is directly in front of the enclosure it is referred to as being at stow level. When the platform is raised to its maximum height it is at the level of the vehicle floor. When the platform is in contact with the ground it is at ground level.

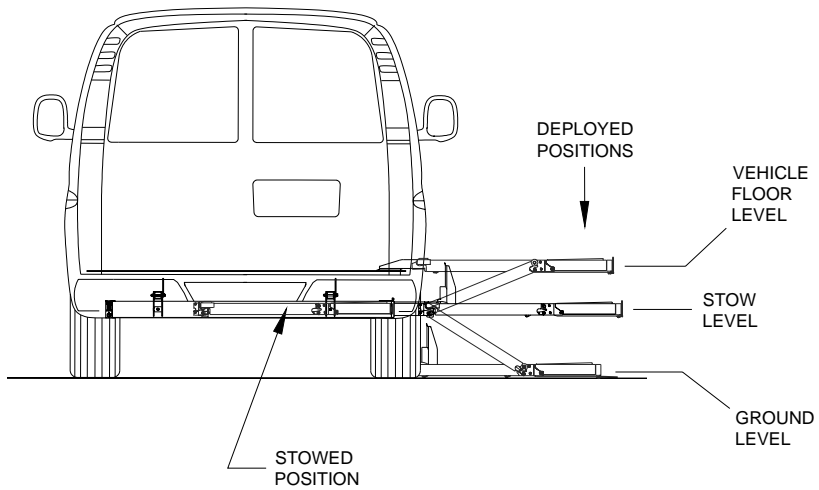






FIGURE 2-2: TYPICAL PLATFORM POSITIONS

2. PLATFORM MOTIONS

The platform is capable of moving vertically and horizontally. The table below describes each possible motion. The motions are managed with the control pendant, which is described below in the Lift Controls section.

TABLE 2-1: PLATFORM MOTIONS	
MOTION	DESCRIPTION
 DEPLOY	Platform extends out of vehicle, or deploys.
 DOWN	Platform lowers from present height (floor height or below); roll-stop lowers when platform contacts ground.
 UP	Platform rises from present height (ground level or above); roll-stop closes when platform leaves ground.
 STOW	Platform retracts into vehicle from any height, or stows.

D. LIFT CONTROLS

Controls for the MARK 1 personal wheelchair lift are the lift control pendant, vehicle interlock system, control system circuit breakers, main circuit breaker, cycle counter, and manual backup components (refer to Manual Operation section).

1. CONTROL PENDANT

Refer to **Figure 2-3**. The MARK 1 is operated with two rocker switches on a hard-wired, hand-held remote control pendant. Control platform movement by pushing and holding one end of a rocker switch. The ends of the switches are referred to in this manual as buttons.

Pushing the DEPLOY button causes the platform to extend from the vehicle. Pushing the UP button causes the platform to rise towards floor level. Pushing the DOWN button causes the platform to descend towards the ground. Pushing the STOW button causes the platform to rise or lower to stow level and then retract into the vehicle.

Platform motion can be halted at any time by releasing the button. The pendant is usually stored on a wall clip in an interior location that is near the lift.

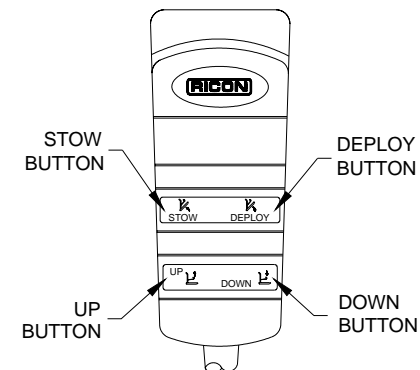


FIGURE 2-3: LIFT CONTROL PENDANT

2. VEHICLE INTERLOCK SYSTEM

Refer to **Figure 2-4**. The MARK 1 lift provides an electrical interlock signal to the vehicle that prevents movement of the vehicle unless the platform is fully stowed. The interlock control also supplies power to the lift only when the vehicle parking brake is set and the transmission is in PARK. Connection of the interlock circuit is mandatory.

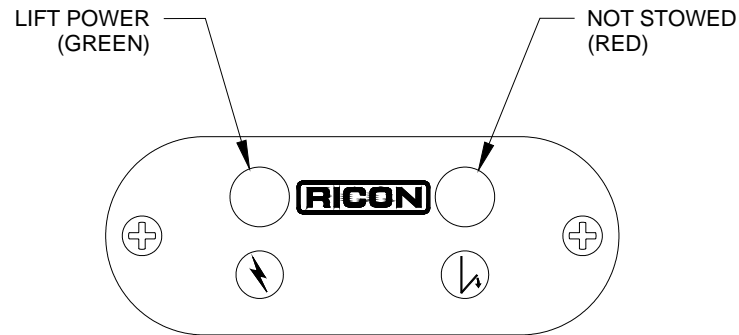



FIGURE 2-4: INTERLOCK DISPLAY PANEL

The figure shows an LED display panel that is attached to your vehicle dashboard. The Lift Power LED lights green when the vehicle transmission is in PARK and the parking brake is set. While the LED is green the lift is powered and the platform can be deployed. The Not Stowed LED lights red when the platform is not fully stowed into the vehicle. While the LED is red the transmission cannot be shifted out of PARK.

 WARNING
BEFORE USING THE FOLLOWING PROCEDURE YOU MUST VERIFY THAT THE PLATFORM IS IN FACT FULLY STOWED INTO THE VEHICLE. FAILURE TO DO SO CAN RESULT IN VEHICLE OR LIFT DAMAGE AND COULD SUBJECT THE OPERATOR, OR OTHERS, TO PERSONAL INJURY.

If a failure occurs in the interlock or lift circuitry that results in the red Not Stowed LED lighting (which also prevents vehicle movement) the following procedure will override the interlock system:

1. Turn vehicle ignition key to the ON position.
2. Shift vehicle transmission to neutral.
3. Start vehicle.
4. Shift to drive and proceed to a dealer for service.

3. CONTROL SYSTEM CIRCUIT BREAKERS

Refer to **Figure 2-5**. Each control system circuit breaker interrupts electric power to certain lift components when an electrical malfunction causes an abnormally high current flow. The 8A breaker protects the control pendant and the 30A breaker protects the carriage components, particularly the carriage drive motor. Both breakers are bracket mounted at the top of the hydraulic power unit. The breaker buttons “pop-up” when a short circuit occurs. Press the button to reset.

NOTE: Do not press and hold the button if pressing and releasing it does not restore power. Contact a VMI authorized service technician for repair.

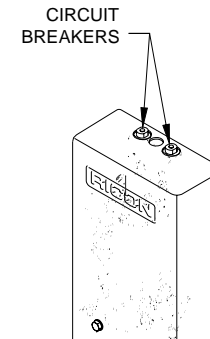


FIGURE 2-5: CONTROL SYSTEM CIRCUIT BREAKERS

4. MAIN CIRCUIT BREAKER

Refer to **Figure 2-6**. The main circuit breaker interrupts electrical power to the lift, but is primarily intended to protect the high-current motor that powers the hydraulic pump. If the current drawn by this motor is excessive, the reset tab rotates 90° CW. To reset the breaker, rotate the reset tab 90° CCW. The figure illustrates the reset tab in the normal, or reset, position. The breaker is typically located in the vehicle engine compartment near the battery.

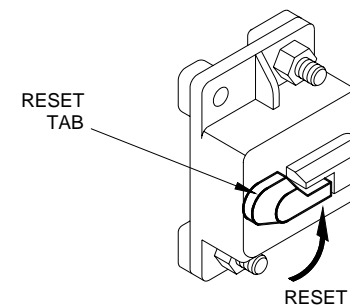


FIGURE 2-6: MAIN CIRCUIT BREAKER

5. CYCLE COUNTER

Refer to **Figure 2-7**. The cycle counter is located on the front face of the carriage to the left of the fuse block. It can be read when the platform is fully deployed. 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.

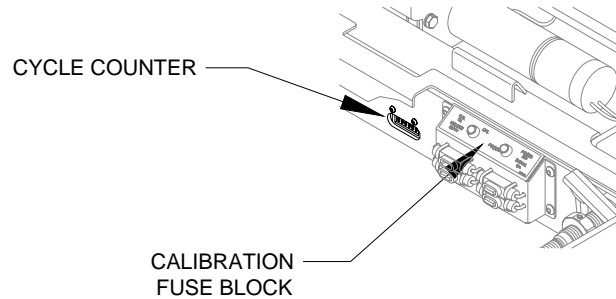


FIGURE 2-7: COUNTER LOCATION

6. HYDRAULIC SYSTEM MANUAL BACKUP PUMP

Refer to **Figure 2-8**. The hydraulic system manual backup pump is used to raise the platform when electrical power is not present, and the pressure release valve is used to lower the platform. See the Manual Lift Operation section for a pump operating procedure.

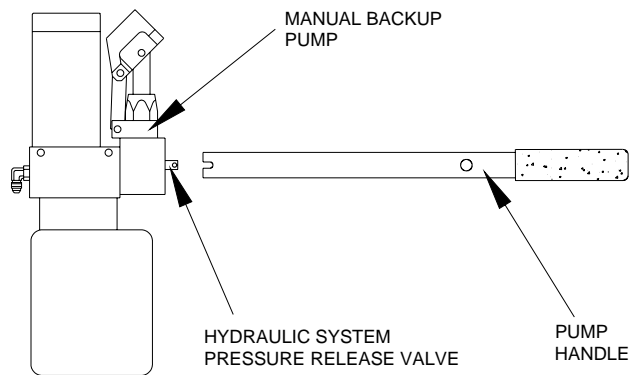



FIGURE 2-8: MANUAL BACKUP PUMP & HANDLE

E. OPERATING THE LIFT

The MARK 1 personal wheelchair lift can be operated with or without electrical power. Normal operation is with electrical power and manual operation is necessary when electrical power is not present. When operating the lift, follow the warning and safety precautions presented at the beginning of this chapter.

 WARNING
IMPROPER USE OF LIFT CAN RESULT IN PERSONAL INJURY. USERS MUST READ AND FOLLOW THE OPERATING INSTRUCTIONS IN THIS MANUAL. ADDITIONAL COPIES OF THE OPERATOR MANUAL ARE AVAILABLE FROM: VMI 5202 S. 28 th Place Phoenix, AZ 85040 (800) 348-8267 or (602) 243-2700
<ul style="list-style-type: none">▪ DO NOT EXCEED RATED LOAD CAPACITY OF 600 POUNDS (273 KG).▪ INSPECT WHEELCHAIR LIFT FOR PROPER FUNCTION, REQUIRED MAINTENANCE, AND DAMAGE BEFORE USE. DO NOT USE LIFT IF A PROBLEM EXISTS, AND CONTACT AN AUTHORIZED VMI SERVICE TECHNICIAN FOR REPAIR.
VMI 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.


- Park vehicle safely on a level area away from traffic, with adequate room for lift operation and passenger boarding, before operating lift.
- Put the vehicle in the interlock mode that supplies power to the lift.

NOTE: The lift cannot operate unless enabled by the vehicle interlock circuitry.

- Verify that the space where the platform will deploy is clear of obstacles, both in front of the platform and below it.
- Open the vehicle doors and secure them before attempting to operate the lift.

1. NORMAL OPERATION

Use the remote control pendant in the following procedures.

 CAUTION
When a button is pressed in the following sections it is necessary that the button be held depressed until all platform, rollstop, and bridgeplate activity has completed. It is particularly important when the Stow button is pressed. If you release it early you can press it again to continue the motion, but the platform may back up a few steps in its sequence of events, repeat the steps, and then complete the stow motion.

ENTERING VEHICLE:

- 1) **DEPLOY PLATFORM** – Press and hold the **DEPLOY** button until platform is fully extended from vehicle.
- 2) **LOWER PLATFORM** – Press and hold the **DOWN** button while bridgeplate rises to the vertical position, platform lowers to the ground, and the front rollstop opens (lowers) completely.

NOTE: It is normal for platform to first rise approximately six inches, hesitate, and then lower to ground.

- 3) **BOARD PLATFORM** – Position wheelchair in center of platform, facing outward, and verify that entire wheelchair is within the perimeter of the platform. Lock wheelchair brakes.



- 4) **RAISE PLATFORM** – Press and hold the **UP** button until platform stops at floor level and bridgeplate lowers to vehicle floor. Verify that rollstop is closed (raised).
- 5) **EXIT PLATFORM** – Unlock wheelchair brakes and assist passenger into vehicle.
- 6) **STOW PLATFORM** – Press and hold the **STOW** button until platform is completely retracted into vehicle.

NOTE: During the sequence of stow motions, it is normal for the platform to first lower to a height that is approximately six inches above stow level, hesitate, and then lower to stow level and retract into the vehicle.

EXITING VEHICLE:

- 1) **DEPLOY PLATFORM** – Press and hold the **DEPLOY** button until the platform is fully extended from vehicle.
- 2) **RAISE PLATFORM** – Press and hold the **UP** button while bridgeplate rises to the vertical position, platform rises to floor level, and bridgeplate lowers to vehicle floor.



- 3) **BOARD PLATFORM** – Position wheelchair in center of platform, facing outward, and verify that entire wheelchair is within the perimeter of the platform. Lock wheelchair brakes.



- 4) **LOWER PLATFORM** – Press and hold the **DOWN** button until the platform lowers to the ground and the front rollstop opens (lowers) completely.
- 5) **EXIT PLATFORM** – Unlock wheelchair brakes and assist passenger off of platform.
- 6) **STOW PLATFORM** – Press and hold the **STOW** button until platform is completely retracted into vehicle.

NOTE: During the sequence of stow motions, it is normal for the platform to first rise to a height that is approximately six inches above stow level, hesitate, and then lower back down to stow level and retract into the vehicle.

2. MANUAL OPERATION

The MARK 1 personal wheelchair lift relies on electrical power supplied by the vehicle for normal operation. If normal operation is not possible, the lift can be operated manually with the following procedure.



Preparation

- ✘ Safely park vehicle on a level area away from traffic, with adequate room for lift operation and passenger boarding.
- ✘ If the vehicle has broken-down and cannot be moved under its own power, then the operator must summon assistance to move the vehicle to a safe operating area.
- ✘ Verify that the space in which the platform will deploy is clear of obstacles.
- ✘ Inform people near the vehicle that the platform is about to be deployed.
- ✘ The platform must be pulled straight out of the enclosure; avoid moving it off to either side while pulling.

a. Lift Controls

Components used during manual operation are the platform release mechanism, the stow level lock mechanism, the backup pump for the hydraulic system, and the hydraulic system pressure release valve.

- ✘ Front Cover Release Mechanism: Open plastic door, pull locking pin (white knob), lift door to full open position, re-insert locking pin.
- ✘ Platform Release Mechanism

Refer to **Figure 2-9**. The platform release mechanism makes it possible to manually pull the platform out of the enclosure (or cassette).

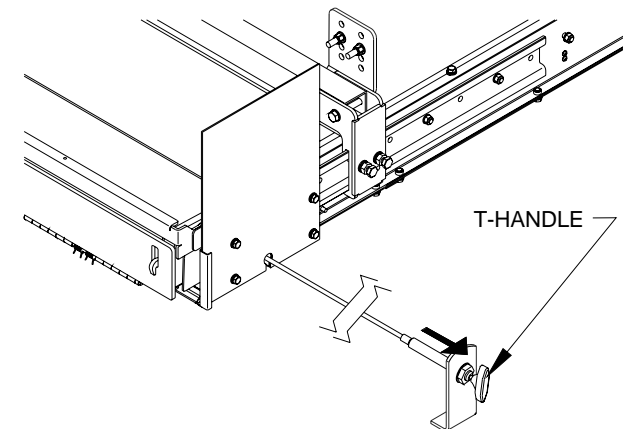


FIGURE 2-9: PLATFORM RELEASE

The platform is unlocked from the enclosure by pulling out and holding the T-handle to disengage the platform locking mechanism. The handle must be held out while the platform is pulled out of the enclosure, but can be released after pulling the platform out a few inches. The platform is then pulled fully out of the enclosure until it locks in place.

The release knob might not be mounted on the type of bracket shown, but in any case will be attached to something in the vehicle interior that is in the vicinity of the lift or near the side door.

✦ Stow Level Locking Mechanism

Refer to **Figure 2-10**. The platform is held at stow level by a pair of mechanical latches that drop down onto the hydraulic cylinder piston rods and prevent their inward movement. The locking mechanisms are located in the carriage, just in front of the hydraulic cylinders. These latches are normally engaged by a solenoid and disengaged by a compression spring. However, when the platform is stowed the latches are held in the engaged position by the weight of the platform bearing against them. In this instance, lifting the platform very slightly with the backup pump can disengage the latches.

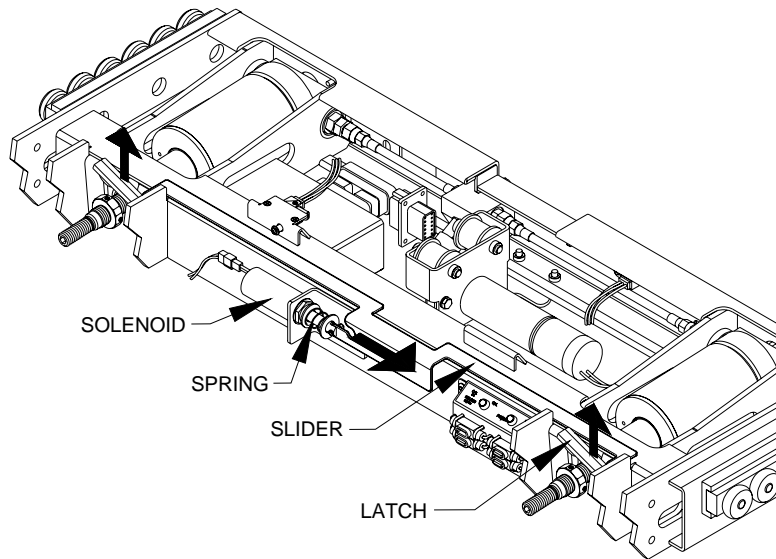


FIGURE 2-10: STOW LEVEL LOCKING MECHANISM BEING RELEASED BY SPRING

✦ Bridgeplate Release Mechanism

Refer to **Figure 2-11**. The bridgeplate is normally raised and lowered with an electric motor. A release lever is provided to disengage the drive system when manual operation is necessary. Move the lever to the left and hold it (a spring pushes the lever to the right) and then raise or lower the bridgeplate by hand. When the bridgeplate is moved to the vertical position it will lock in place when the lever is released.

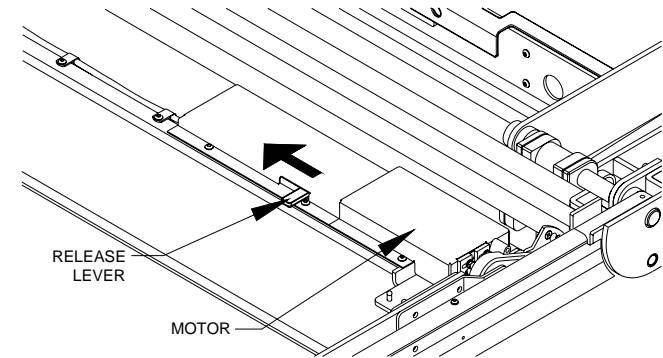


FIGURE 2-11: BRIDGEPLATE RELEASE MECHANISM

✦ Manual Hydraulic Backup Pump

Refer to **Figure 2-12**. The manual back-up pump is built into the hydraulic pump assembly (located in the pump box) and the backup pump handle is stowed near the hydraulic pump assembly. Pump the handle to raise the platform (the pressure release valve must be closed). This will release the stow latches and allow the platform to be lowered.

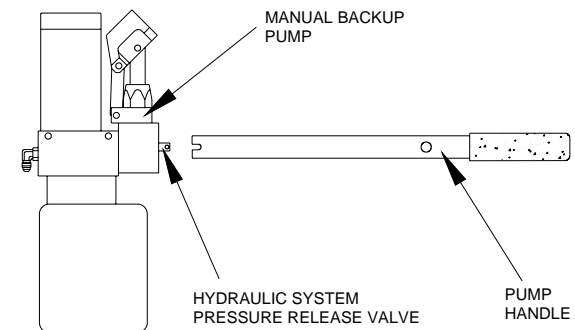


FIGURE 2-12: MANUAL HYDRAULIC BACKUP PUMP

✦ Hydraulic System Pressure Release Valve

Refer to **Figure 2-12**. The hydraulic system pressure release valve is also part of the hydraulic pump assembly. Opening this valve releases fluid from the hydraulic system, allowing the platform to lower. The valve must be kept closed for normal operation. Turn the release valve by engaging it with the notched end of the pump handle. Rotate the valve CCW to open, and CW to close. Do not over tighten when closing.

b. Procedure to Exit Vehicle

DEPLOY PLATFORM:

- 1) Turn off power to lift at vehicle instrument panel.

NOTE: The following steps may require two people, depending on how far the platform release T-handle is from the front of the platform.

- 2) Open plastic front door by pulling the locking pin (equipped with a white knob) located on the left side of the door's frame. Raise the door to the full open position and engage the locking pin.
- 3) Refer to **Figure 2-13**. Release the platform from the enclosure by pulling the T-handle outward about one to two inches and holding it out.

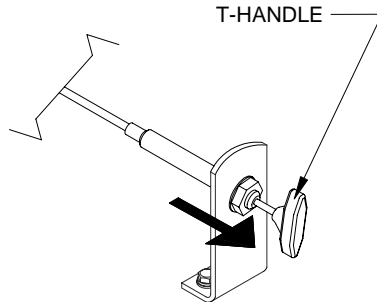


FIGURE 2-13: DISENGAGE PLATFORM FROM ENCLOSURE

NOTE: The T-handle is typically located in the interior near the lift or near the door the lift is installed in.

- 4) Grasp the top of the outboard roll-stop and pull the platform straight out until it stops. Avoid moving the platform to either side while pulling.

 WARNING
BEFORE PASSENGERS ARE ALLOWED TO USE THE PLATFORM IT MUST BE LOCKED TO PREVENT IT FROM INADVERTENTLY MOVING INWARD.

- 5) Release the T-handle and then verify that platform is locked in place by attempting to push it into the enclosure; it must not move.

RAISE PLATFORM:

- 1) Refer to **Figure 2-14**. Engage hydraulic system pressure release valve with notched end of pump handle, and rotate valve clockwise (turn lightly) to verify that it is closed (valve should have been closed previously).

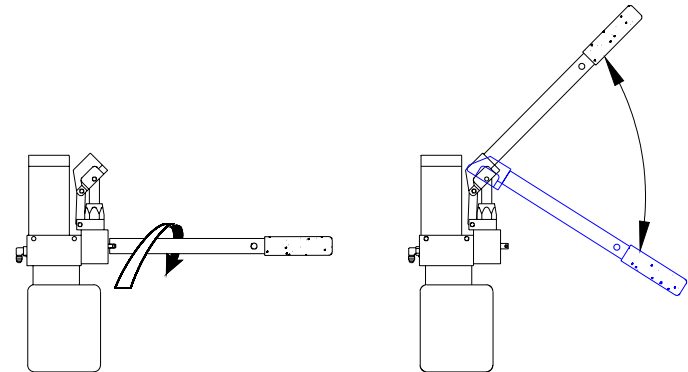


FIGURE 2-14: CLOCKWISE CLOSES RELEASE VALVE

- 2) Refer to **Figure 2-14**. Insert pump handle into socket on backup pump, and then pump handle until platform rises to vehicle floor height.
- 3) Manually move the bridgeplate release lever to the left, hold it there, and then unfold bridgeplate so that it rests on the edge of the vehicle floor.



CAUTION

Verify that the platform is at same height as the floor, the rear edge of the bridgeplate is resting flat against the edge of the floor, and the front rollstop is upright and latched.

- 4) Carefully place wheelchair to center of platform. Face the wheelchair outward, and lock the wheelchair brakes. Verify that the wheelchair cannot interfere with the front rollstop as it rises or lowers. Also verify that the entire wheelchair is within the perimeter of the platform.
- 5) Move the bridgeplate release lever to the left, hold it there, and then raise the bridgeplate to the vertical position. Release the lever to lock the bridgeplate in the vertical position.

LOWER PLATFORM:



CAUTION

Do not open the pressure release valve more than a 1/4-turn. The valve can separate from the pump body if unthreaded more than a 1/4 turn, which will disable both automatic and manual pump functions.

- 1) Refer to **Figure 2-15** on following page. Engage hydraulic system pressure release valve with notched end of pump handle and slowly rotate it counter-clockwise. Do not open the valve any further once the platform begins to lower.
- 2) Allow platform to settle on the ground and the front rollstop to open completely, then rotate the pressure release valve **CLOCKWISE** to close.

NOTE: Do not over-tighten release valve!

- 3) Unlock wheelchair brakes, and carefully assist passenger off platform. Follow the Safety Precautions at the beginning of this chapter when a passenger exits the platform.

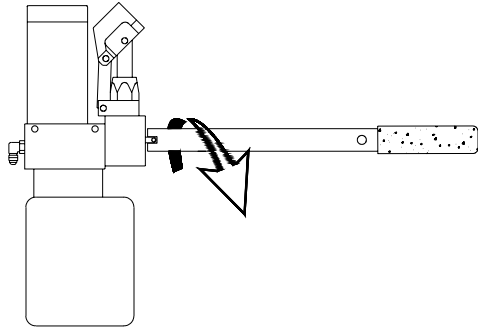


FIGURE 2-15: COUNTER-CLOCKWISE LOWERS PLATFORM

c. Stow Platform:

 WARNING
CAREFULLY OBSERVE THE LOCATION OF YOUR HANDS AND FINGERS WHEN THEY ARE NEAR MOVING LIFT PARTS.

- 1) Refer to **Figure 2-16**. Raise the platform with the manual backup pump until it is about 10" above stow height. Slightly open the pressure release valve. Go to the lift carriage and push one of the stow latches down until it contacts the hydraulic cylinder piston rod. Wait for the platform to settle on the stow latches then release the latch. The platform is now at stow height.

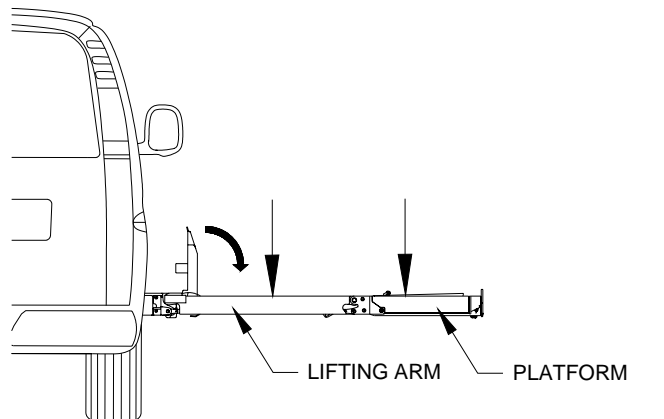


FIGURE 2-16: PLATFORM ALIGNED WITH ENCLOSURE

NOTE: The front rollstop closes automatically when the manual backup pump is operated.

- 2) Refer to **Figures 2-11** and **2-16**. Move the bridgeplate release lever to the left, hold it there, and then lower the bridgeplate down onto the platform.

- 3) Refer to **Figure 2-17**. Release the platform from the enclosure by pulling the T-handle outward about one inch and holding it out.

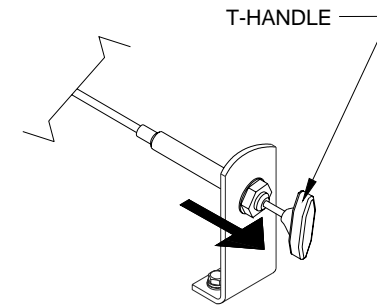


FIGURE 2-17: DISENGAGE PLATFORM FROM ENCLOSURE

- 4) Grasp the front rollstop and push the platform straight in until it stops. Do not move the platform to either side while pushing.
- 5) Release the T-handle and then verify that platform is locked in place by attempting to pull it out of the enclosure; it must not move.
- 6) Release the locking pin holding the plastic door in the up position. Allow the door to close completely and re-insert the locking pin.
- 7) The lift is now secure.

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III. MARK 1 MAINTENANCE INSTRUCTIONS

This chapter contains cleaning instructions and a basic maintenance schedule, as well as instructions for replacing decals. Regular maintenance of the VMI MARK 1 wheelchair lift will optimize its performance and minimize the need for repairs.

Additional maintenance information is available in the MARK 1 service manual 32DPH06. This manual is available from VMI in printed hard copy, or at the following website in PDF format. The website is located at www.riconcorp.com. To gain access to the website manuals, click on "TECHNICAL DOCUMENTS" and then click on "I AGREE" at the disclaimer page.

CAUTION

This VMI product is highly specialized. An authorized VMI service technician, using VMI replacement parts, must perform maintenance.

WARNING

MODIFYING OR FAILING TO PROPERLY MAINTAIN THIS PRODUCT WILL VOID THE WARRANTY AND MAY RESULT IN UNSAFE OPERATING CONDITIONS.

A. CLEANING

Regular cleaning with a commercially available cleaner suitable for use on painted surfaces (i.e. liquid hand soap or car wash liquid; do not use liquid dish cleaner soap or caustic soaps) and drying thoroughly will protect the painted surfaces. Cleaning is especially important in areas where roads are salted in winter. Be certain that lift pivot points are clean and dry prior to lubrication.

B. MAINTENANCE SCHEDULE

An authorized VMI service technician must perform the following tasks at the intervals listed in **Table 3-1**, or every six months, whichever occurs first. 10 cycles is considered an average number of cycles for one day. Refer to the cycle counter located on the front face of the carriage to the left of the fuse block. It can be read when the platform is fully deployed. After the warranty expires, VMI recommends continuation of the inspections by an authorized service technician.

TABLE 3-1: MAINTENANCE SCHEDULE	
SERVICE POINT	DESCRIPTION
@ 10 Cycles of Operation	
General operation	<ul style="list-style-type: none">• Listen for abnormal noise as platform deploys, i.e., grinding or binding noises.• Verify that platform moves without interference during any motion.• Verify that bridgeplate moves without interference when folding or unfolding.• Verify that rollstop closes and locks immediately after platform rises from ground.
@ 900 Cycles of Operation	
Hydraulic fluid level	Verify that hydraulic fluid level is maintained at the "Full" level. Add only Texaco 01554 Aircraft Hydraulic Oil (or equivalent U.S. mil spec H5606G oil).
Deployment system	Verify there are no obstructions in the side channels or the drive belt.

C. DECALS

Refer to **Figure 3-1** for the personal MARK I decal locations and part numbers. Check decals for chipping, peeling, fading, and illegibility. Replace as necessary. Locate and orient decals as shown. Part numbers for individual decals are given here, with the exception of the serial number decals, which must be replaced by VMI.

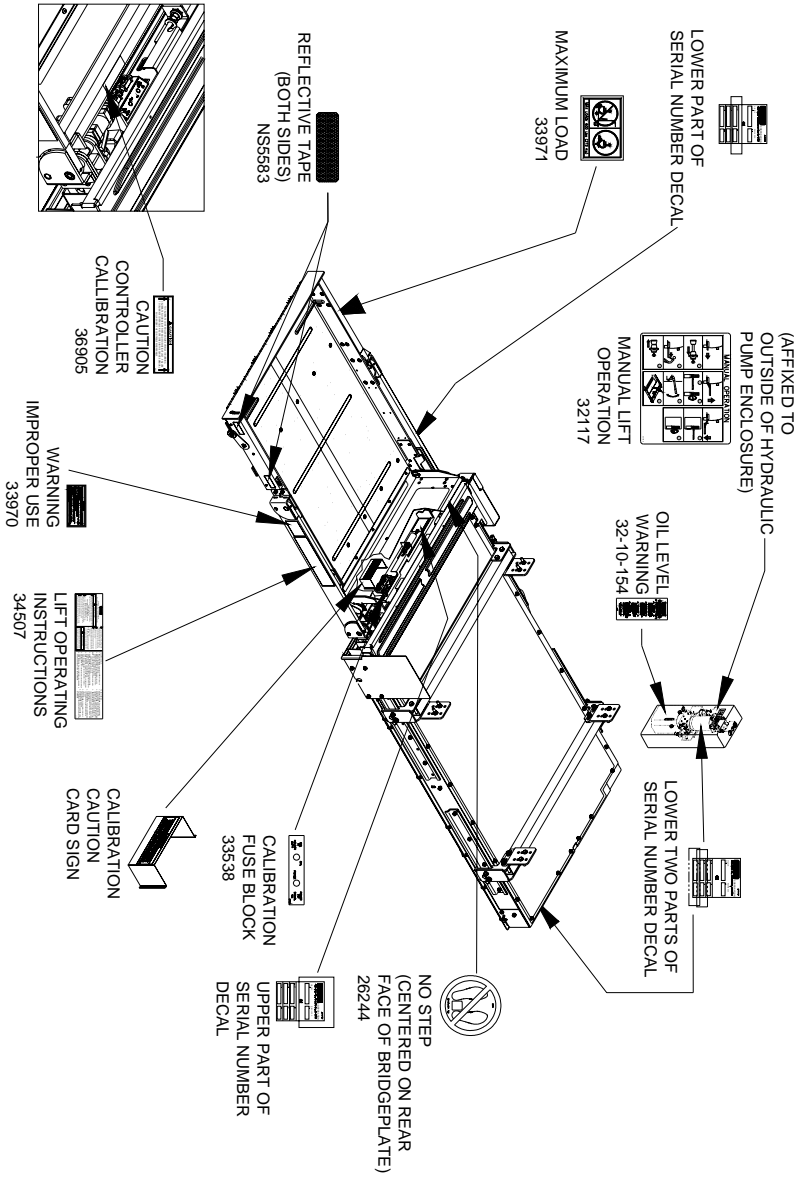


FIGURE 3-1: MARK I PERSONAL DECAL LOCATIONS AND PART NUMBERS