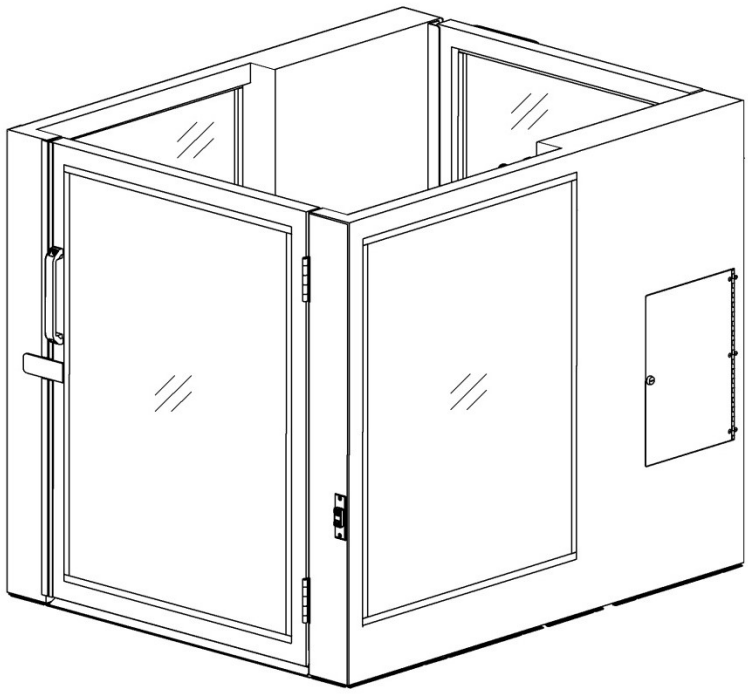
ASCENSION PROTEGE
PORTABLE WHEELCHAIR LIFT
MODEL 5442P

OPERATING MANUAL



Patented – see www.ascension-lift.com/patents

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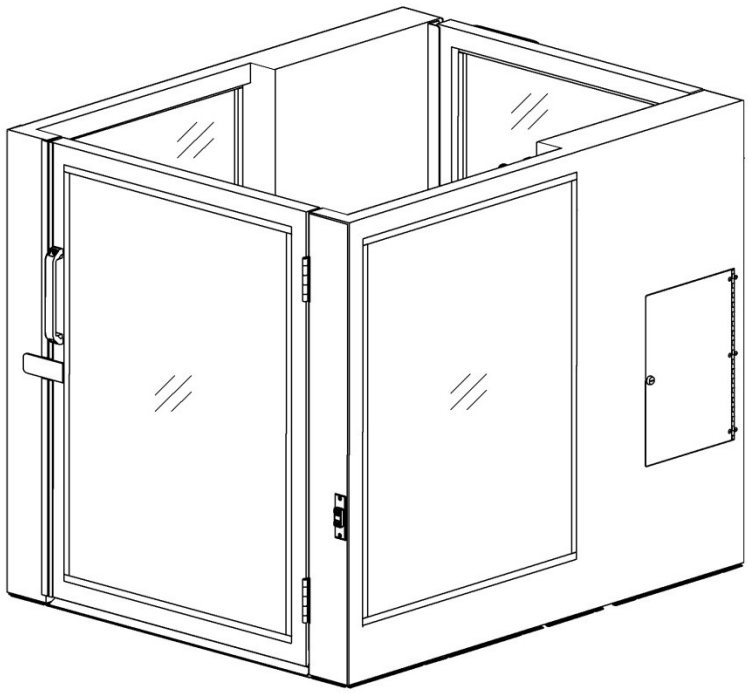

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INTRODUCTION

The Americans with Disabilities Act (ADA) of 1990 established the legal requirement for public facilities to provide access and reasonable accommodations for people with disabilities. In response to this requirement, the Ascension PROTEGE portable wheelchair lift provides the means for individuals who cannot negotiate stairs to gain access to a moderate vertical floor elevation change, such as a stage, riser, or platform.

This portable wheelchair lift has been designed with both the passenger and the facility in mind. It provides the passenger with safe access to a stage, and gives the facility maximum flexibility and ease of use. Because it is transportable, the lift can be quickly set up for use when needed or put into storage when not needed. The lift can be used at almost any stage or platform up to 42 inches [1060 mm] high.

About This Manual

This manual provides facility personnel with all the necessary information to safely and correctly set up, break down, and transport the lift. In the interest of safety, it is essential that all personnel performing these tasks read and understand this manual.

Section 1 presents operational and physical information, and describes the basic components and operation of the lift. Section 1 also covers important safety information.

Section 2 describes the correct set up of the lift for operation.

Section 3 provides the necessary information for safe operation of the lift.

Section 4 describes the break down procedures for the lift and gives recommendations for transportation.

Section 5 provides basic troubleshooting information in the event that the lift does not operate correctly.

Additional Information

The following sources of information supplement this manual:

Maintenance and Repair Manual A comprehensive *Maintenance and Repair Manual* is supplied with each lift. It contains component replacement instructions, as well as detailed procedures to disassemble, test, and reassemble major components.

Setup and Operation Video A short video on setup and operation can be found at the following web address: https://ascension-lift.com/lift-setup/.

Getting Help

If you have a question or problem with the lift, review the troubleshooting guide in Section 5 of this manual, as well as the comprehensive troubleshooting guide in the *Maintenance & Repair Manual*. If you are unable to resolve the problem, please contact Ascension as indicated on the following page, making sure that you have the serial number of your lift ready. The serial number can be found on the data plate located inside the platform on the upper right rail. Also, it is recommended that you contact Ascension while in the immediate vicinity of your lift, as this will reduce the time required to properly diagnose the problem.

Contacting Ascension

Ascension's business hours are 8 a.m. to 5 p.m. Mountain Standard Time, Monday through Friday.

Telephone: 800-459-0400
Fax: 520-881-4983
Email: sales@ascension-lift.com
Website: www.ascension-lift.com

Mailing Address: Ascension
Customer Service
PO Box 40020
Tucson, AZ 85717-0020

SECTION 1

Product Information

Operational

- VERTICAL TRAVEL DISTANCE: 4" to 42" [100mm to 1060 mm], infinitely adjustable
- OCCUPANCY: 1 person
- MAXIMUM PASSENGER LOAD: 900 pounds [408 kg].
- AVERAGE SPEED: 5 feet per minute [25 mm/s].

Physical

- DIMENSIONS: 48" wide x 49" high x 61" long [1220 x 1250 x 1550 mm]
- WEIGHT: 850 pounds [385 kg]
- MATERIALS: Platform, base frame, gates: Mild steel
  Platform sheet metal, safety pans: Aluminum alloy
  Windows: High impact strength clear thermoplastic
- FINISH: Platform: Powder coat
  Lift base: Galvanized steel
- ELECTRICAL: 120† VAC, 60 Hz, Single Phase, 13 Amps

† Electrical ratings may differ on lifts outside the USA. Check lift data plate for electrical ratings.

Terminology

To get the maximum benefit from this manual, you should be familiar with the following terms. Refer to Figure 1 as necessary.

Dock Plate The plate that bridges the gap between the platform floor and the upper landing surface when the platform is at the upper landing.

Lower Landing Gate The gate that serves the lower landing, or ground level.

Machinery Cabinet The enclosures in which the lifting and control mechanisms are located. There is one cabinet on each side of the lift. The contents of the machinery cabinets are accessible through the access panels.

Operating Stations The controls for raising and lowering the platform. All three operating stations are located on the right side of the platform. The operating station inside the platform has an emergency stop switch.

Platform The compartment in which the passenger rides.

Upper Landing The stage, platform, or riser that the lift serves.

Upper Landing Gate The gate that serves the upper landing, or stage.

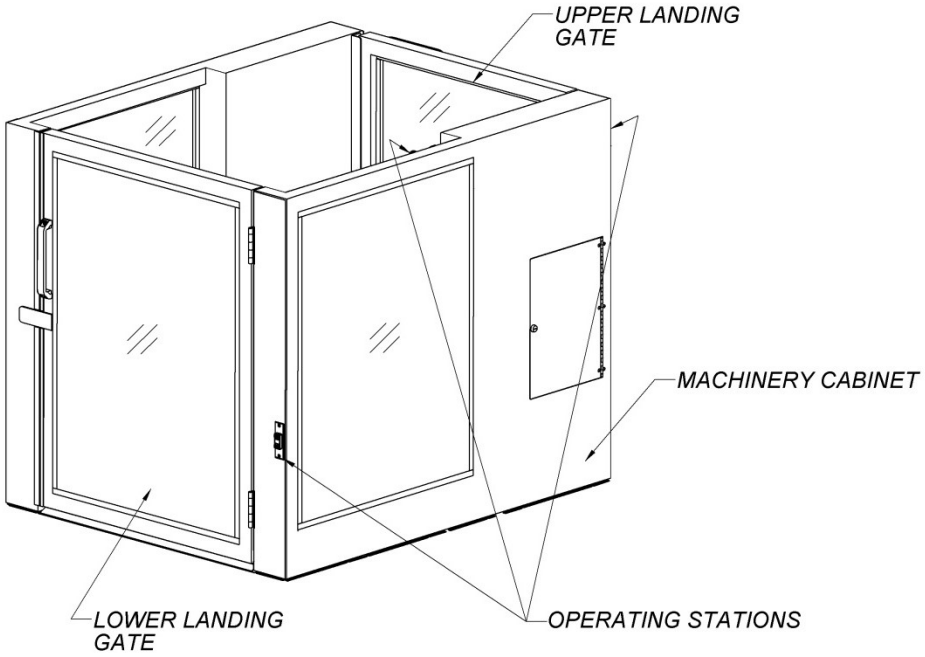

Figure 1

Important Safety Information

When using the lift, the following basic safety precautions and practices *must* be observed:

1. Read and understand all of the information contained in this manual.
2. Do not expose any part of the lift to a direct liquid stream or spray, such as a water hose. This could create an electrical shock or fire hazard.
3. Do not operate the lift in the presence of combustible or explosive gas or fumes. The electrical components of the lift could cause ignition of these chemicals.
4. Do not operate the lift if the electrical cord has become frayed or if its outer insulation has been removed, as this could create an electrical shock or fire hazard.
5. Do not allow any equipment, including the lift itself, to lie across or on the electrical cord, as this could cause the cord to become damaged, resulting in electrical shock or fire hazard.
6. Set up the lift for operation *only* in accordance with the instructions in Section 2 of this manual. If the lift cannot be set up as described, contact the manufacturer to determine the correct set up for a particular application.
7. The upper height limit sensor adjustment must be confirmed every time the lift is relocated. Failure to do so could result in serious injury to the user.
8. Operate the lift only as described in Section 3 of this manual.
9. Use extreme caution when moving the lift on an incline, as the lift weighs approximately 850 pounds [385 kg].
10. Transport the lift as described in Section 4 of this manual.
11. Use the lift for movement of people only.
12. Use an extension cord only as described in Section 4 of this manual.
13. Always close and lock all access panels and remove all keys before leaving the lift unattended.
14. Never leave the lift unattended while setting the lift up for operation or installing the casters for transport.

Description of Operation

Two hydraulic cylinders raise and lower the platform. When the "Up" circuit is energized, an electric motor operates a hydraulic pump which provides pressurized hydraulic fluid to the cylinders, causing the cylinder rods to extend and raise the platform. When the "Down" circuit is energized, a hydraulic valve is shifted so that the fluid flows in the opposite direction through the hydraulic circuit and the platform is lowered.

A gate at each end of the lift permits passengers to enter and leave the platform. The lower landing gate will open only when the platform is lowered all the way. The upper landing gate can be fully opened only when the platform is at the upper landing. Both gates are self-closing.

The height limit sensor is located in the left-hand machinery cabinet. This switch halts the movement of the platform when it reaches the upper landing, and its adjustment must be confirmed every time the lift is relocated.

The motion of the platform is controlled by any of the three operating switches located on the right side of the lift. These are constant-pressure type switches, so that when a switch is released the platform stops. It takes approximately 40 seconds for the platform to move through its full range of 42 inches. These switches are interlocked so that while one switch is activated, pressing another switch in the opposite direction will not cause the lift to stop; the original action will continue.

The lift is equipped with an under-platform safety pan that will halt all motion of the platform if it encounters an obstruction as it descends. If this occurs, use the hand pump or setup key to raise the platform and allow for the removal of the obstruction. The under-platform safety pan completely covers the bottom and side edges of the platform.

The dock plate is tethered to the bottom of the upper landing gate by a cable that lowers the dock plate as the gate opens. When the upper landing gate is closed, the dock plate is raised by its tether.

The unit is equipped with a hand pump that can be used to raise or lower the platform in an emergency, or when the casters are being put under the platform and power is not available. The hand pump is located in the right-hand machinery cabinet.

The casters are stored in the left-hand machinery cabinet. They can quickly and easily be installed underneath the lift so that the lift can be moved to another location. The hydraulic system is used to raise and lower the platform and base frame when installing or removing the casters.

The electrical control panel is located inside the right-hand machinery cabinet. This panel includes the power supply, control system relay, and main power relay. A Ground Fault Circuit Interrupter (GFCI) and lockable disconnect switch with integrated overload protection are located on the electrical cord near the wall plug.

SECTION 2

Setup Instructions

1. Prior to operation, position the upper landing end of the lift 1 to 3 inches [25 to 75 mm] from and approximately parallel to the edge of the upper landing (stage). This space should be flat, level, and free of any debris or obstructions (including the lift's power cord).
2. Plug the power cord into a grounded electrical outlet and turn the disconnect switch to the ON position. Raise the platform at least 12 inches [305 mm]. To do so, turn the barrel key in the setup switch on the front of the lift and hold an operating switch 'up', OR use the manual pump per Section 4, Operating the Lift Without Power. Certain option packages (incl. universal key switches) require manual operation.
3. Remove all four casters from the platform underside by pulling them straight down. Place them in the caster storage brackets in the left-hand machinery cabinet according to their color codes. See Figure 2. **The casters must be removed before the lift can be operated.**

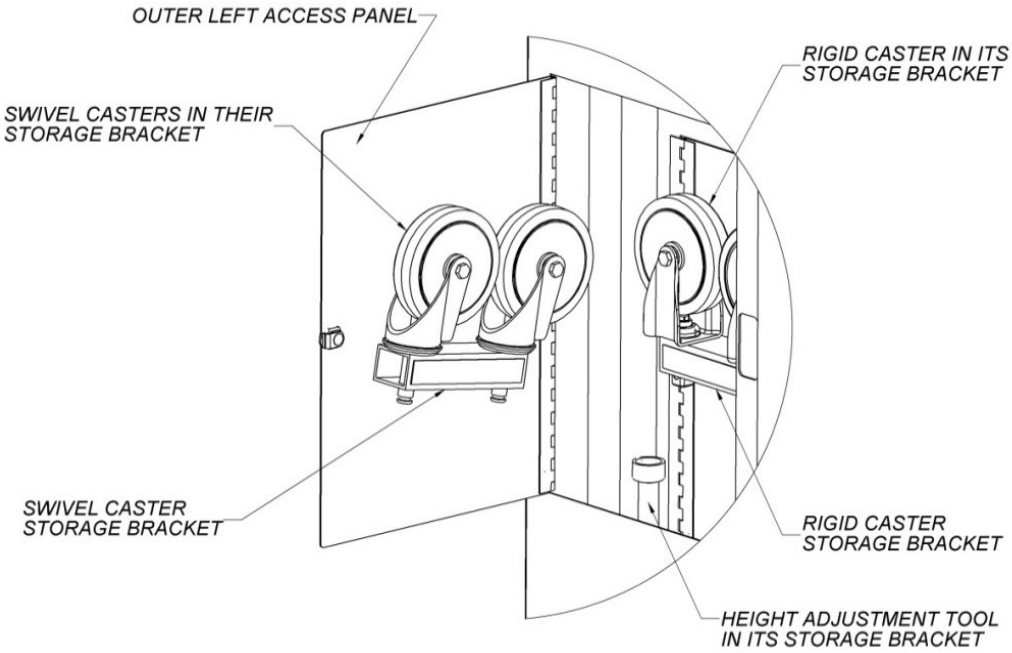

Figure 2

4. Use an operating switch to lower the platform to the floor.
5. Enter the platform and use the operating switch located inside the platform to move the platform upward until it stops.
6. Open the inner access panel on the left-hand machinery cabinet and remove the height adjustment tool from its storage bracket. Refer to Figure 2 for identification of the adjustment tool.
7. Use the adjustment tool to remove the magnetic optical reflector from the vertical guide rail. To do so, place the adjustment tool on the reflector, turn it clockwise a quarter turn to engage the reflector, and then pull the reflector off the guide rail. Reserve the reflector in the adjustment tool until Step 11. The reflector is located near the bottom of the cabinet and is marked by a yellow decal. See Figure 3.
8. Use an operating switch to move the platform so the platform floor is approximately level with the upper landing.

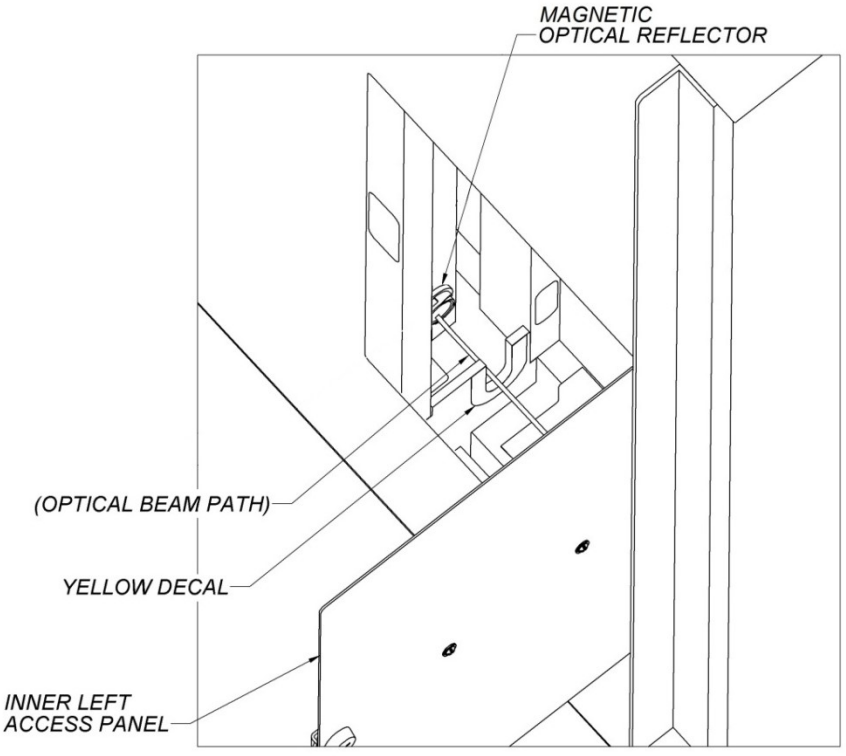

Figure 3

9. Open the upper landing gate completely. Verify that the dock plate rests securely on the upper landing, and provides a smooth, level, and safe transition to and from the platform. See Figure 4.

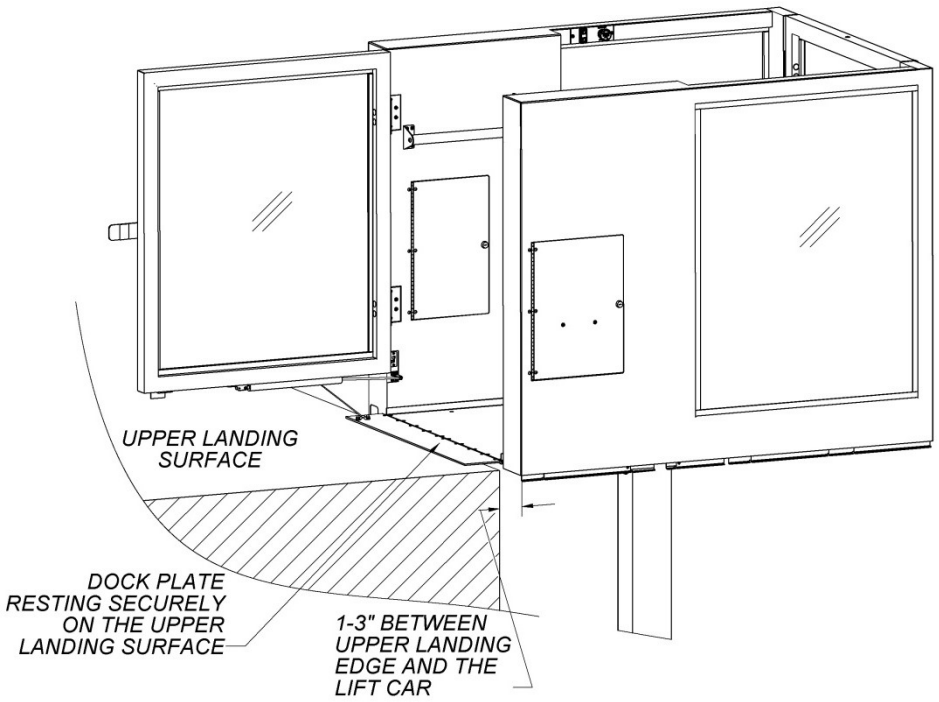

Figure 4

10. If the platform is not at the correct height, repeat Steps 8 & 9 until it is correct.
11. With the platform at the correct height, use the height adjustment tool to reattach the reflector to the vertical guide rail. Rest the adjustment tool in the u-shaped bracket marked by the yellow decal then slide it forward until the magnet on the reflector engages the vertical guide rail. See Figure 5. Twist the adjustment tool a quarter turn counterclockwise to disengage it from the reflector after it is placed. You should see a red dot at the bottom edge of the reflector.

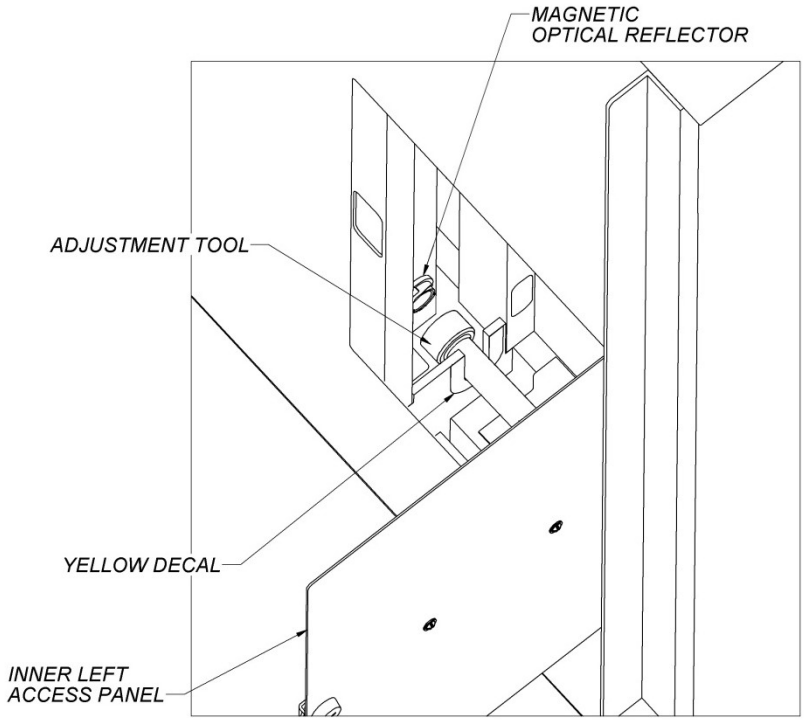

Figure 5

12. Lower the platform several inches and then raise it again until it stops automatically. Repeat Step 9 to verify that the height is correct. Re-position the optical reflector if necessary until the platform stops at the correct height.

> ⚠ ***WARNING!***
> ***The lift's stop height MUST be verified every time the lift is relocated, and reset if necessary. Failure to do so could result in serious injury to the user.***

13. Return the height adjustment tool to the tool holder in the left-hand machinery cabinet.

> ⚠***WARNING!***
> ***Always close and lock all access panels and remove all keys before leaving the lift unattended.***

14. The lift is ready for use.

SECTION 3

Operation

- The disconnect switch in the lift cord must be set to ‘ON’ for the lift to operate.
- The casters must be removed for the lift to operate. See Section 2.
- The On/Off switch in right machinery cabinet must be set to ‘ON’ for lift to operate. This switch may be set to ‘OFF’ to disable the lift.
- Both gates must be closed for the lift to operate.
- Move the platform by using any one of the three operating switches. The operating switches must be held with constant pressure until the platform stops at the upper or lower landing.
- Push the emergency stop button to activate it. Reset the button to allow operation.
- If the platform is at the lower landing and the lower landing gate interlock prevents the gate from being opened, hold an operating switch "Down" to disengage the interlock.
- The under-platform safety pan will halt the platform if it encounters an obstruction as it descends. If this occurs, remove the obstruction to resume motion. The lift may be raised using the hand pump or the setup key if necessary.

SECTION 4

Installing the Casters for Portability

⚠WARNING!
Always close and lock all access panels and remove all keys before leaving the lift unattended.

⚠WARNING!
Never leave the lift unattended while performing the following procedures.

1. Plug the power cord into a grounded electrical outlet and use an operating switch to move the platform upward at least 12 inches [305 mm].
2. Remove all four casters from the left-hand machinery cabinet and install them into the color-coded sockets located at the corners of the platform underside. See Figure 6 and Figure 7. The rigid casters (marked yellow) must be oriented so the lift will roll forward and backward. When correctly installed, the casters will not slide out without being pulled straight down.

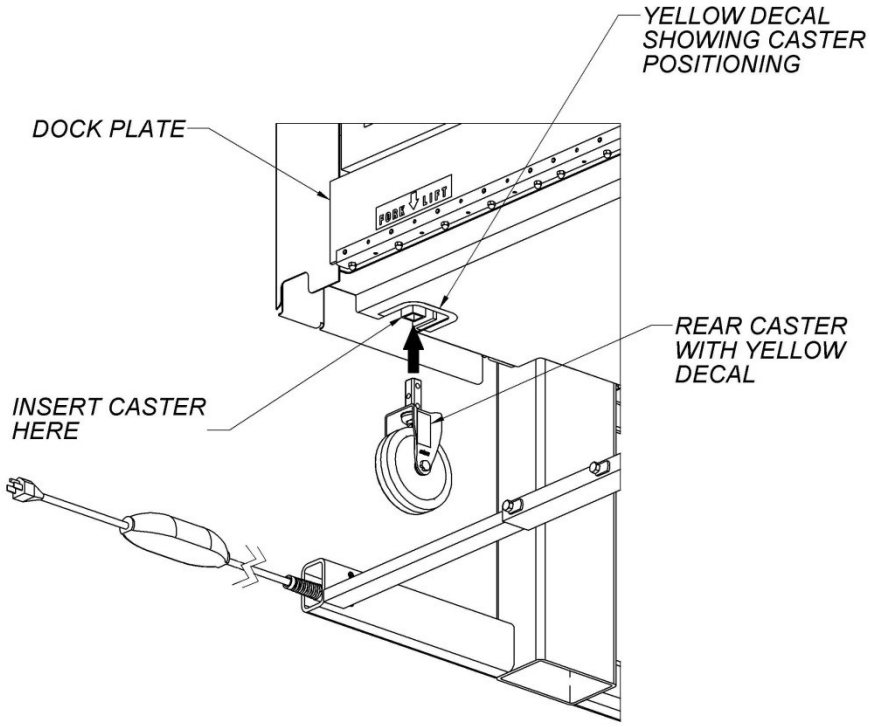

Figure 6

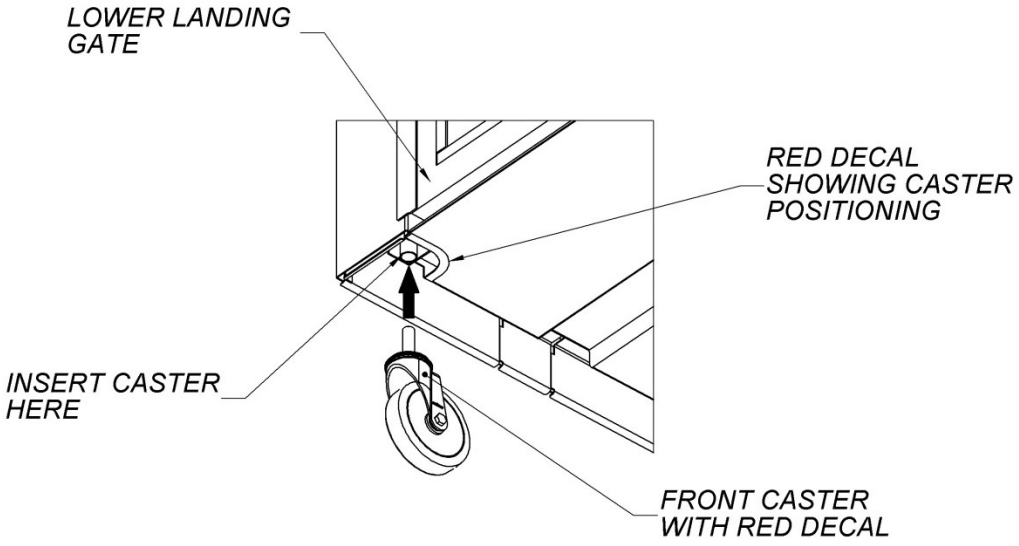

Figure 7

> **⚠ *CAUTION!***
> ***Stay clear of the edge of the platform floor while performing the following step.***

3. Lower the platform until the casters are on the ground and the base is raised about 5 inches [125 mm] off the ground. To do so, turn the barrel key in the setup key switch on the front of the platform, then hold an operating switch ‘down’, OR use the manual pump per Section 4, Operating the Lift Without Power.
   Certain option packages (incl. universal key switches) require manual operation.
4. Unplug the electrical cord and coil it inside the platform. The lift is ready to be moved.
5. Follow the setup instructions in Section 2 to prepare the lift for use in its new location. The casters must be removed to allow lift operation.

Operating the Lift Without Power

The hydraulic hand pump can be used to move the platform manually when facility power is unavailable. It may be operated from either the inner or the outer access panel of the right-hand machinery cabinet.

Instructions for use:

1. Locate the 12-inch [305 mm] hand pump handle stored just inside the outer access panel on the right-hand machinery cabinet and remove it from its bracket.
2. Swivel the pump linkage outward and then insert the hand pump handle into it.

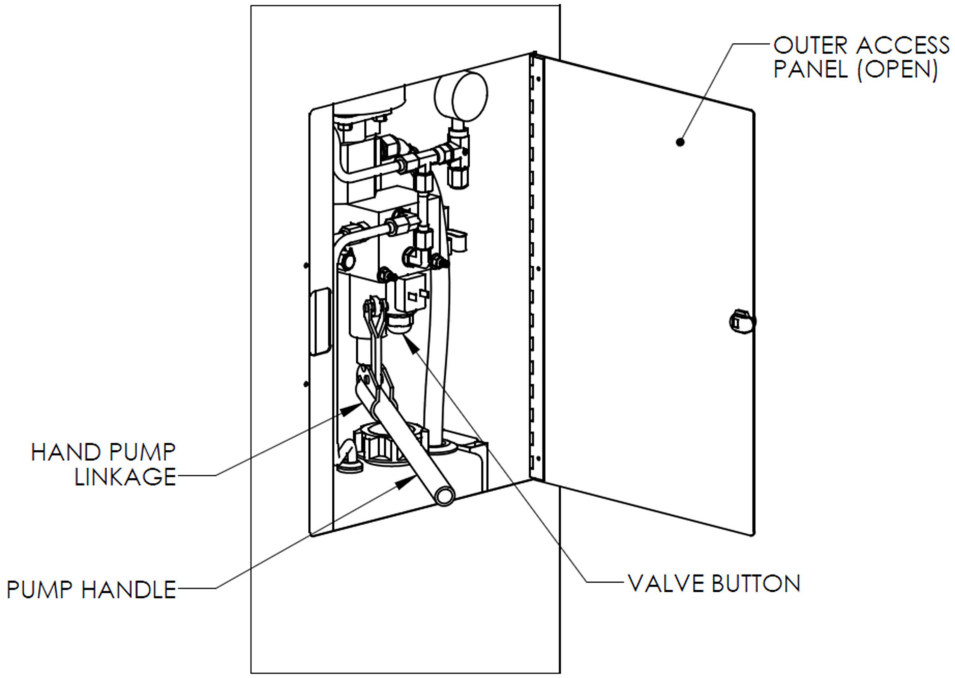

Figure 8

> **⚠ *WARNING!***
> ***Only use the handle provided with the pump. If this handle does not provide enough leverage to move the platform, immediately stop pumping and contact a repair technician.***

3. To move the platform upward, pump the handle. Please note that the hydraulic power unit is attached with flexible mounts to minimize noise and vibration, and that it is normal for the unit to move around significantly when pumped by hand.

4. To move the platform downward, pump the handle while depressing the black valve button located beside the hand pump.
5. Return the hand pump handle to its bracket in the right-hand machinery cabinet.
6. To manually override the lower gate lock, insert a 7/64" Allen Wrench into the triangular recess in the hole below the lower gate stop bracket on the front of the lift, then turn it about 1/8 turn counterclockwise. This will unlock the gate and prevent the lift from operating. Return the lock override to its original position to restore operation.

Manual Transportation

One person can push the lift on a hard, level, and smooth surface. Two people may be required to push it on a carpeted surface.

> ***⚠ WARNING!***
> ***Use extreme caution when rolling the lift up or down an incline, as it weighs approximately 850 pounds. Always use at least two (2) people to move the lift on an incline.***

Forklift Transportation

On surfaces other than those mentioned above, the lift should be moved by a forklift. Set the forklift tine spacing at 24 inches [610 mm] outside-to-outside. (The forklift tine spacing is marked on the lift, below the upper landing gate.) The forklift pickup points are on the underside of the base at the upper landing end. *Do not* attempt to pick up the lift from the lower landing end. The unit should be in its transport mode before lifting it with a forklift.

Storage

The lift should be stored indoors with the power cord unplugged and coiled inside the platform. The storage temperature should be between 20ºF and 100ºF [-7°C to 38ºC].

Outdoor Use

The lift is weatherized for use in outdoor conditions, including rain. However, the following limitations apply:

- The lift may not operate well at temperatures lower than 45°F (7°C). Lifts equipped with the special Outdoor Package may not operate well at less than 15°F (-10°C).
- If the lift is used on a soft or uneven surface, such as grass or rough asphalt, it is recommended that a 3/4" thick plywood sheet be placed under the lift base to ensure correct operation of the lift. Be sure to bevel the edge of the plywood where the lift user will roll or step onto the plywood. The plywood needs to be very flat for the lift to operate correctly.
- An extension cord may be used with the lift only in accordance with the instructions listed in the following section.

Extension Cord Use

Always obey the following instructions when using an extension cord with the lift.

⚠ WARNING!
Use extreme caution when using an extension cord. The lift's GFCI does not protect against electrical shock due to contact with extension cord conductors.

- All extension cords must be used under the direction of a licensed electrician and in compliance with all applicable electrical codes.
- Use a UL listed and CSA certified extension cord only. When using an extension cord outdoors, use a UL listed and CSA certified outdoor extension cord only.
- Never use an extension cord longer than 80'.
- Never use an extension cord in wet or damp conditions or locations.
- Never use an extension cord rated for less than the voltage and amperage on the lift’s data plate.

SECTION 5

Troubleshooting

If the lift will not operate after it has been set up as described in Section 2, check the following:

- The casters are removed and the lift is set up as described in Section 2.
- The outlet has power.
- The power cord is plugged in.
- The reset button on the GFCI is pressed.
- The disconnect switch on the lift cord is set to 'ON'.
- The on/off switch in the right machinery cabinet is set 'ON'.
- The lift is set up on a level surface (less than 5%).
- Both gates are closed. The lift will not operate if either one of the gates is open.
- The emergency stop button on the passenger's operating station is not activated. Reset the emergency stop button if necessary.
- The under-platform safety pan is hanging freely and evenly from the underside of the platform. The lift will not operate if the safety pan is actuated.

If these conditions are satisfied but the lift does not operate, refer to the comprehensive troubleshooting section in the *Maintenance & Repair Manual*. If the problem cannot be resolved with the help of the *Maintenance & Repair Manual*, call Ascension.

NOTES:

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