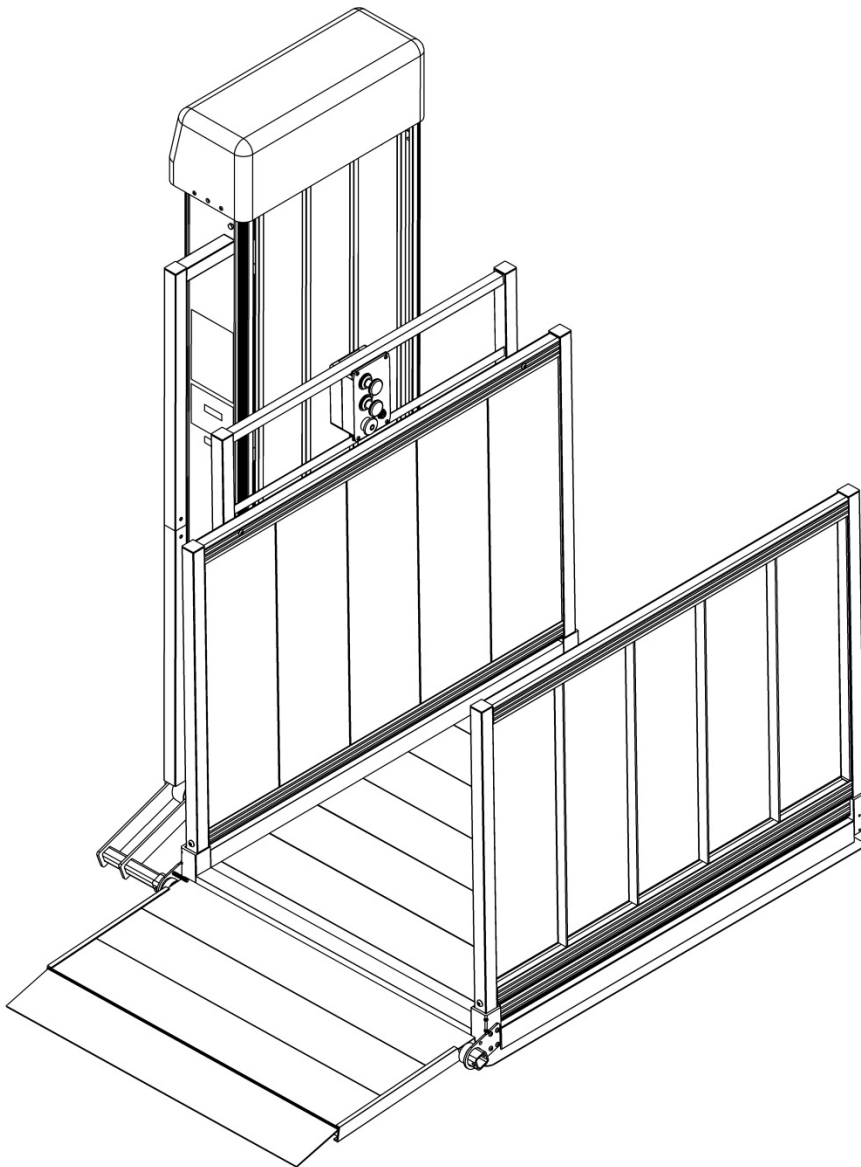

PASSPORT[®] Vertical Platform Lift (VPL)

User Manual



Manufactured in the USA

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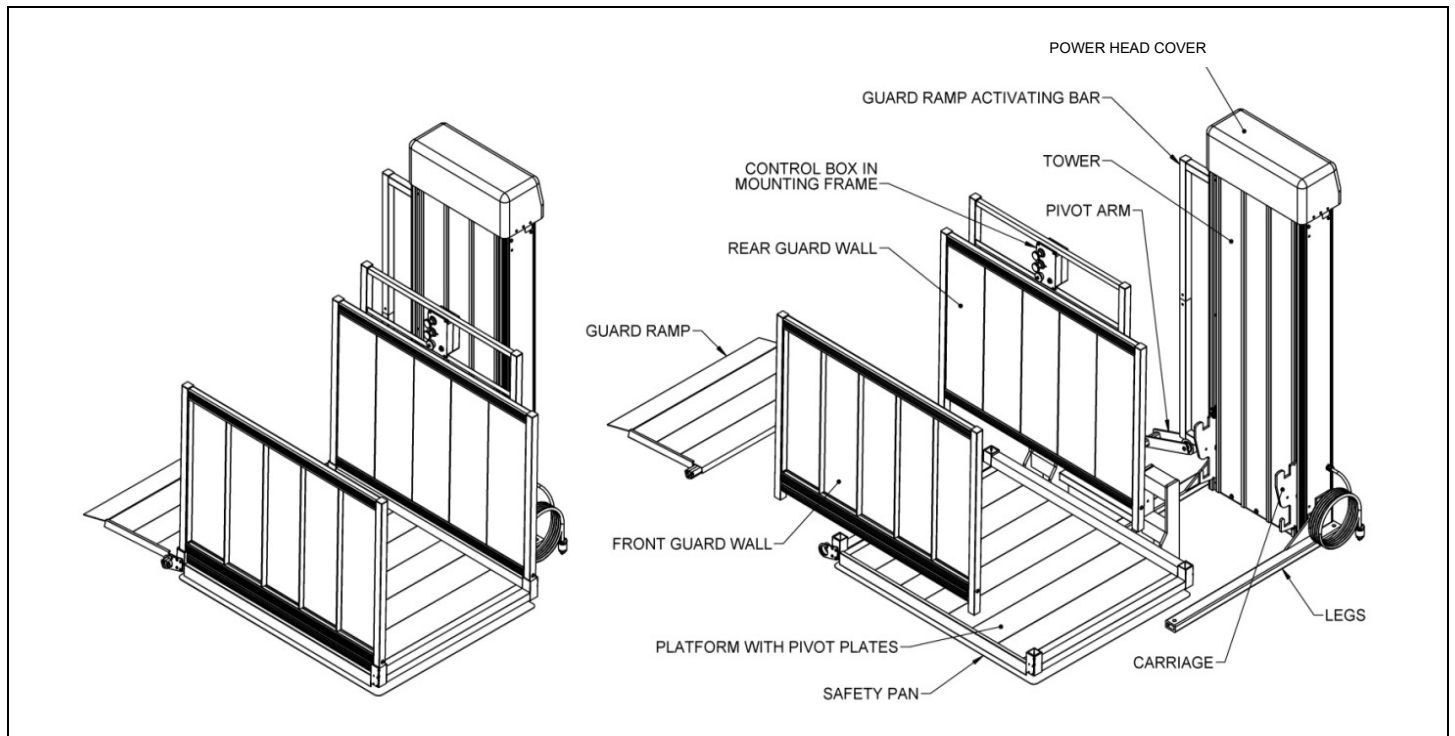
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INTRODUCTION

This document provides important use, maintenance, service, and safety information for the PASSPORT® Vertical Platform Lift. Throughout this document, the PASSPORT Vertical Platform Lift is also referred to as “VPL” or “Lift”.

MAIN COMPONENTS DRAWING



SYMBOLS

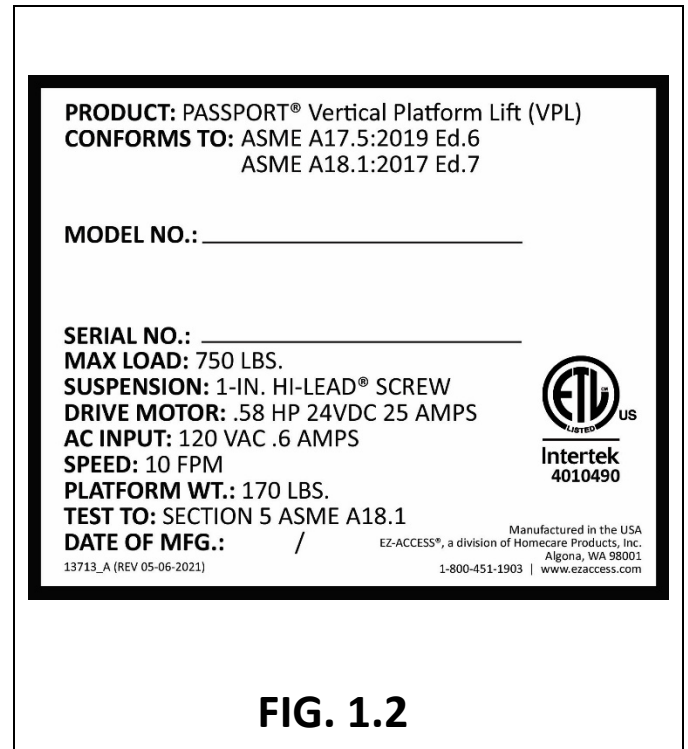
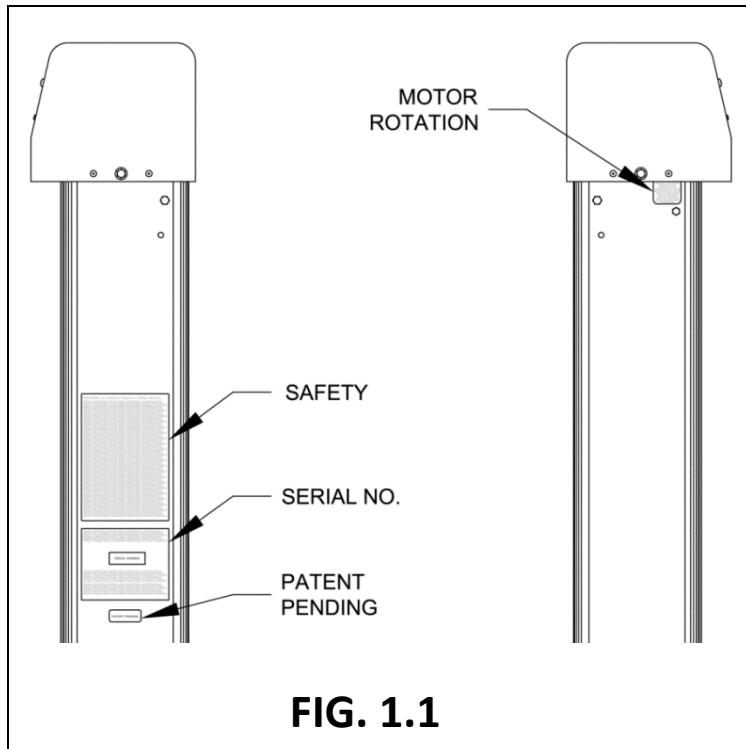
- ⚠ The **WARNING** symbol indicates a potentially hazardous condition/situation. The safety warnings throughout this manual, and on your equipment, if any, are for the protection of people and property. Failure to abide by safety warnings will result in a waiver of all liabilities, loss of your warranty, and could result in equipment damage and or failure, property damage, risk of serious bodily injury, and or death, to operators, riders, and those nearby the symbol may appear in various colors and in conjunction with other symbols.
- ✋ The **NOTE** symbol indicates important information. Failure to obey all notes could result in improper operation, less-than-optimum equipment performance, and at the sole discretion of the equipment manufacturer, may void your warranty. The symbol may appear in various colors and in conjunction with other symbols.

WARNINGS

- ⚠ Prior to use, read and understand this manual and all other applicable manuals, including supplements and addendums, if any, and warning labels, in their entirety. Learn and understand the location and function of all features, Rated Load, safety devices, and labels before use. If you do not understand which manuals apply, or their content, do not use the VPL and call 1-800-451-1903 for further information.
- ⚠ Do not remove safety labels. Maintaining all labels and manuals in legible condition is required by the VPL owner and is essential for safe VPL operation. If labels are missing, damaged, or become illegible, they must be replaced by VPL owner. A missing or illegible label will fail to alert individuals on or around the VPL of a procedure or hazardous operating conditions. For replacement copies, please call 1-800-451-1903.
- ⚠ VPL Rated Load is 750 lbs. (340 kg.). Do not exceed Rated Load.
- ⚠ Do not use VPL if Top Landing Gate is not secure and or functioning improperly.
- ⚠ Do not use VPL for anything other than its intended purpose of personal residential use for lifting of individuals and personal mobility devices.
- ⚠ Keep all body parts away from moving components and within the platform guards during VPL operation.
- ⚠ The Platform Safety Rail is required for anyone who will be standing on the VPL.
- ⚠ Never play on or near the VPL.
- ⚠ Turn mobility device's power 'OFF' and engage the brake prior to use on the VPL.
- ⚠ Remove ice, snow, leaves, and all potentially unsafe materials from VPL and landings before each use.
- ⚠ Inspect VPL for damaged, missing, or inoperable parts before each use. Never use a damaged or unstable VPL.
- ⚠ Annually (more often in harsher environments), check all fasteners and verify all nuts, bolts, screws, and other fasteners are undamaged and secure. Contact your dealer to schedule any needed inspections, repairs, or service.
- ⚠ Do not tamper with, attempt to repair, or modify any portion of the VPL. Only EZ-ACCESS approved technicians may service the VPL. Contact your dealer to schedule inspections, repairs, or service.
- ⚠ Observe and avoid all pinch points.
- ⚠ Whenever not actively raising or lowering the VPL, turn keyed power switch to 'OFF' position and remove key.
- ⚠ Always unplug VPL from electrical outlet before cleaning. Only plug VPL back in when area around VPL is dry.
- ⚠ Never operate VPL with damaged electrical wires, cords, or plugs.
- ⚠ The VPL's electrical cord must be routed and situated in a manner that poses no electrical or other hazards. Do not lay power cords on or across electrically conductive materials, such as metals, and always route power cords in such a manner so no one can trip over them and that they are not exposed to risk of accidental or incidental damage.
- ⚠ The AC electrical plug on this VPL is grounded and intended to be used only with a properly grounded GFCI outlet. If AC electrical wire ground pin is broken or missing, immediately contact your dealer to schedule repairs.
- ⚠ Stop using VPL and immediately contact your dealer for inspection, repairs, or service if any defect is suspected.
- ⚠ Use VPL only with a qualified helper.
- ⚠ Do not use VPL to support, attach, or hang planters, baskets, lights, adornments, decorations, clothing, fabrics or other ornamentals or furnishings.
- ⚠ Annual (more frequent in harsher environments) inspections by an EZ-ACCESS approved technician are required. Contact your dealer to schedule any needed inspections, repairs, or service.
- ⚠ Before and while operating VPL, ensure hair, clothing, shoelaces, jewelry, and other personal items do not catch onto anything that may create a hazard.
- ⚠ Correct installation, proper use, following instructions and obeying VPL safety warnings are necessary for safe operation.
- ⚠ Do not operate a VPL that has not been properly anchored to the reinforced concrete pad.
- ⚠ Do not operate VPL while occupied until VPL is properly anchored (and braced, when bracing is required). Operating the VPL, while occupied, before installation is complete is hazardous.
- ⚠ Unless servicing or inspecting the VPL, always keep all panels and protective coverings in place.
- ⚠ Only EZ-ACCESS approved technicians may service the VPL. Contact your dealer to schedule any needed inspections, repairs, or service.
- ⚠ Caustics and high alkaline detergents and solutions should not be used to clean aluminum.

1. LABELING

- 1.1. VPL labels are pre-installed and positioned as shown (FIG. 1.1). These labels may vary in color, border style, size, and written content.
- 1.2. Model and serial number information (FIG. 1.2) will be needed for service or maintenance.
- 1.3. Maintaining all labels in legible condition is required by the VPL owner and is essential for safe VPL operation. For replacement copies, please contact your dealer or call 1-800-451-1903.



2. DEALER CONTACT AND VPL OWNER INFORMATION

- 2.1. For questions about service, maintenance, or operation of your PASSPORT Vertical Platform Lift, please contact your dealer.

Dealer Name _____

Address _____

Phone _____

Email _____

- 2.2. To assist your dealer if service or maintenance is needed, please provide the model number, serial number, and date purchased.
 - 2.2.1. Refer to FIG. 1.1 and FIG. 1.2 for model and serial number information. Please check your receipt for the purchase date.
 - 2.2.2. If you need additional assistance, please call Customer Service on 1-800-451-1903.

Model No. _____

Serial No. _____

Date Purchased _____

3. OPTIONAL EQUIPMENT NOTICE

- 3.1. The following sections address options, which are sold separately and do not come standard with a VPL. To order optional equipment, contact your dealer or call 1-800-451-1903 for additional information.

4. OPTIONAL EQUIPMENT – WIRELESS REMOTE

- 4.1. The wireless remote option allows VPL operation from remote locations, i.e., inside your house or vehicle, with a small, two-button keyfob transmitter (FIG. 4.1). To allow the most versatility and coverage, the wireless remote option and the call/send control option can be used together.
- ▲ Do not allow unauthorized persons to use VPL or wireless remote.
 - ▲ Always confirm the area around the VPL is clear of people, animals, and debris before activating the Wireless Remote.
- 4.2. Multiple keyfob transmitters can be programmed to a single wireless remote.



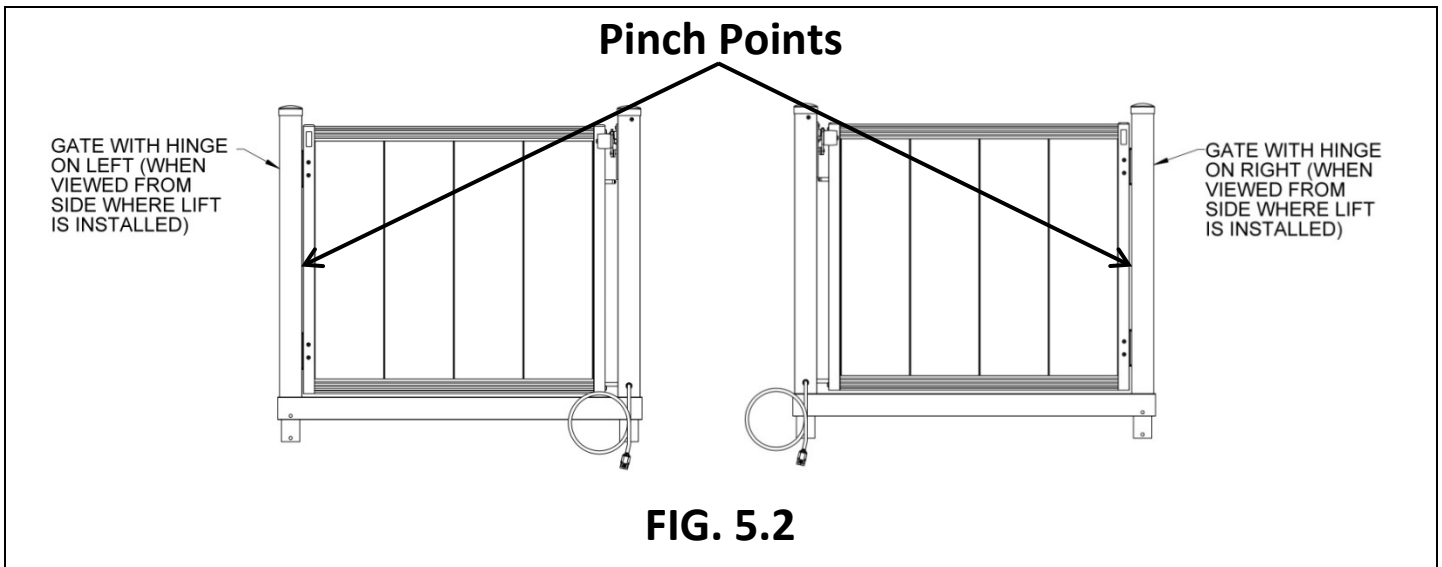
FIG. 4.1

4.3. PROGRAMING YOUR WIRELESS REMOTE TRANSMITTER(S) AND RECEIVER

- 4.3.1. The Wireless Remote comes pre-programmed for your VPL. However, replacement and additional Wireless Remotes may need programming or re-programming.
- 4.3.2. Each keyfob transmits a unique signal to the receiver. The receiver must be programmed/configured to respond to the keyfob transmitter. The following steps configure the receiver to operate with a keyfob transmitter. Please read the entire procedure before programming the receiver.
- 4.3.2.1. Up to twelve keyfob transmitters can be programmed to one receiver.
 - 4.3.2.2. Prior to programming the receiver, verify that it is connected to the input power and that the long-range antenna is installed into the receiver.
 - 👉 Once the receiver enters 'PROGRAM' mode, all previously programmed transmitter addresses will be erased.
 - 4.3.2.3. Locate the push button labeled 'PROGRAM' on the receiver. Press and hold this button until the red LED next to the program button illuminates (approximately 5 seconds). The receiver is now in the transmitter program mode, you can release the button. At this point, all previously programmed transmitter addresses are erased from the receiver's memory.
 - 4.3.2.4. Press either button on the keyfob transmitter and verify that the red LED on the receiver extinguishes and then illuminates (blinks once). Release the button.
 - 4.3.2.5. Repeat previous step for additional keyfob transmitters that will operate with this particular receiver. The red LED on the receiver will extinguish and illuminate one time for the first transmitter being programmed, twice for the second, three times for the third, four times for the fourth, etc. The receiver will not respond to transmitters that have already been programmed.
 - 4.3.2.6. If no button is pressed on the transmitter for 5 seconds, the transmitter will return to normal operation. The red LED on the receiver will blink rapidly, then extinguish. This completes the programming instructions and the receiver is now ready for use.
 - 👉 The receiver remembers its programming even if power is disconnected.

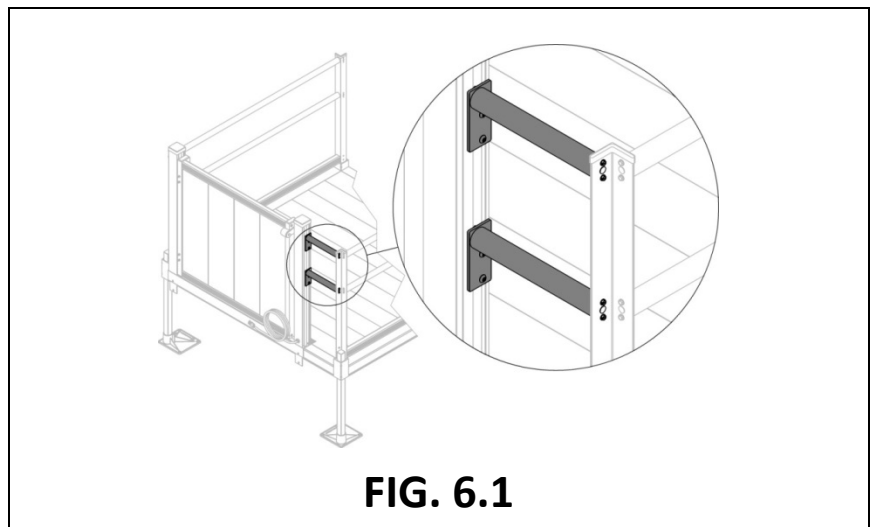
5. OPTIONAL EQUIPMENT – TOP LANDING GATE

- 5.1. The top landing gate comes with a latch cover and is factory assembled with hinges either on the right or the left, depending on the model ordered, and is used to control the access between the VPL and your upper landing, porch, or deck. The top landing gate may be required by your local applicable codes. Check with your dealer, or your local AHJ, regarding applicable code requirements.
- 5.2. An illustration of the 'PINCH POINT' warning label, affixed to your top landing gate, is shown (FIG. 5.1).
 - ▲ Observe and avoid all pinch points (FIG. 5.2).



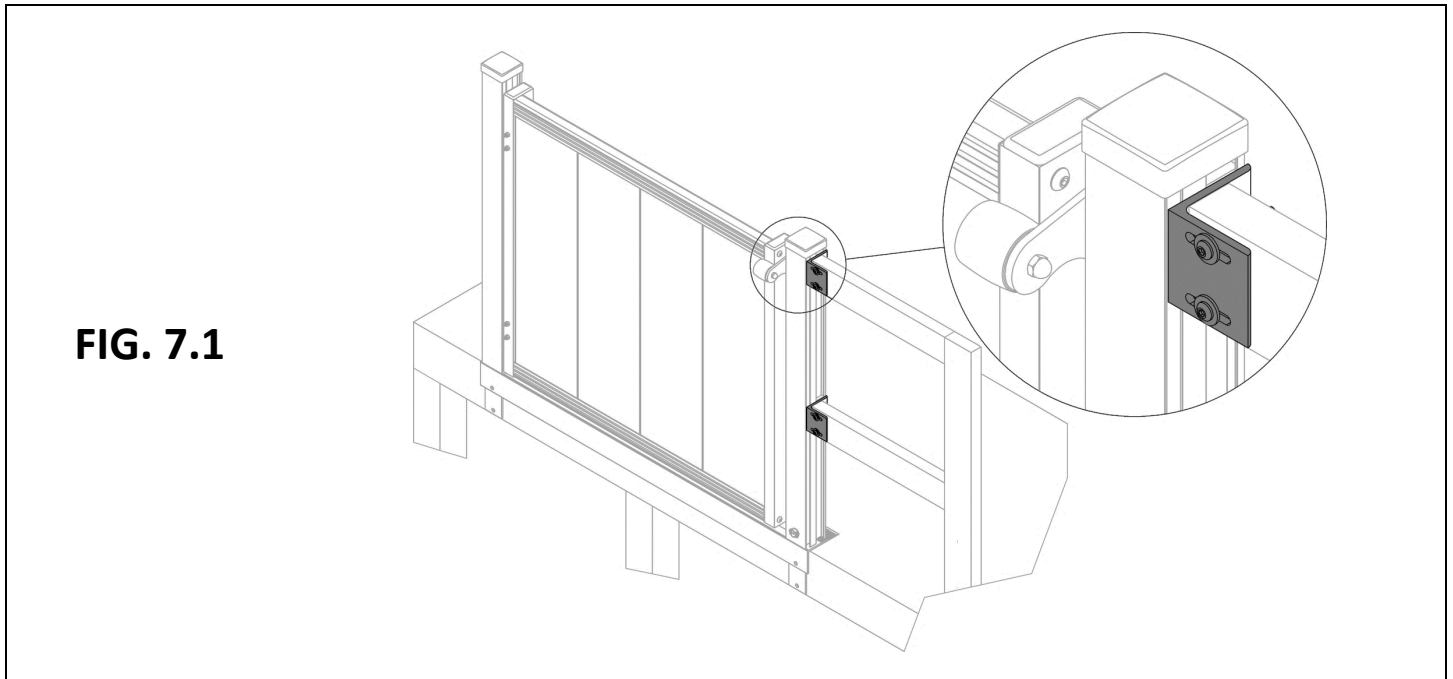
6. OPTIONAL EQUIPMENT – TOP LANDING GATE CONNECTOR KIT

- 6.1. This option is designed to connect the top landing gate to a PATHWAY® platform (FIG. 6.1).



7. OPTIONAL EQUIPMENT – TOP LANDING GATE CONNECTOR TO WOOD DECK

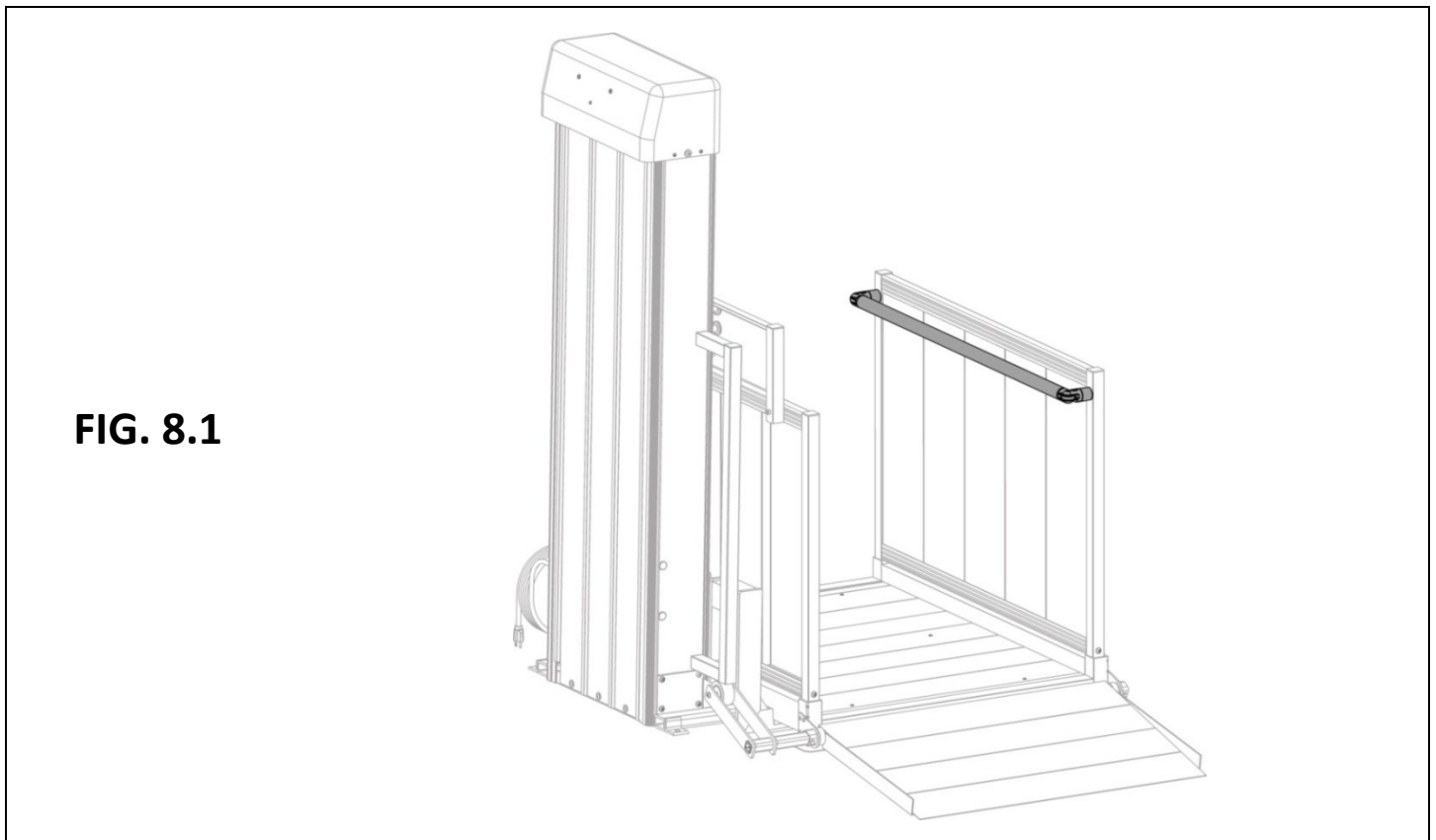
7.1. This option (FIG. 7.1) is used to connect the top landing gate post to handrails or posts on an existing wood porch or deck.



8. OPTIONAL EQUIPMENT – PLATFORM SAFETY RAIL

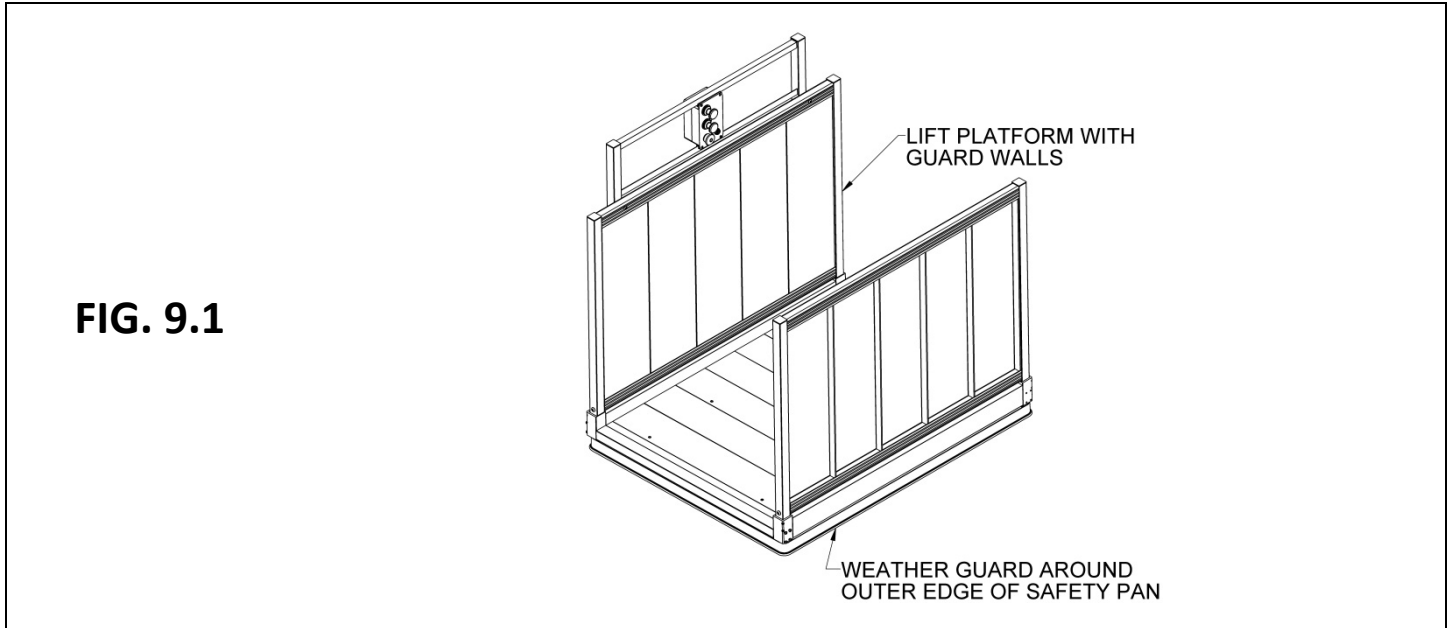
8.1. This option (FIG. 8.1) is designed exclusively to provide additional personal stability for those standing on the VPL.

⚠ The platform safety rail is required for anyone who will be standing on the VPL.



9. OPTIONAL EQUIPMENT – PLATFORM SAFETY PAN WEATHER GUARD

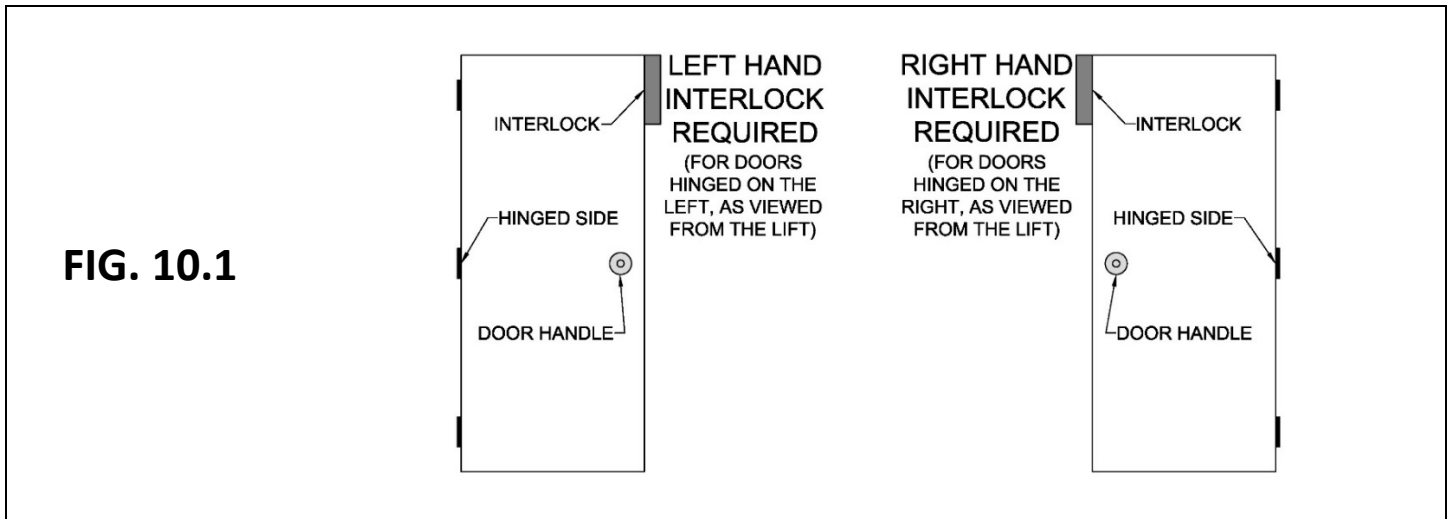
9.1. The platform safety pan weather guard (FIG. 9.1) helps to keep the area between the underside of the platform and the safety pan free of debris. Made of durable rubber, this option installs quickly by simply clipping onto the safety pan.



10. OPTIONAL EQUIPMENT – INTERLOCK

10.1. The interlock, a device intended to prevent an existing door from being opened when the lift is in the down position, is handed, either left or right, depending on the model ordered. When looking at the door from the VPL platform, refer to FIG. 10.1 to determine interlock handing.

- ⚠ With interlock use, the door must swing away from VPL, regardless of hinge location.
- ⚠ VPLs altered to operate with an interlock will not operate correctly if connected to a top landing gate. The wiring must be returned to its original wiring scheme (pre-interlock alteration) to work with the top landing gate.



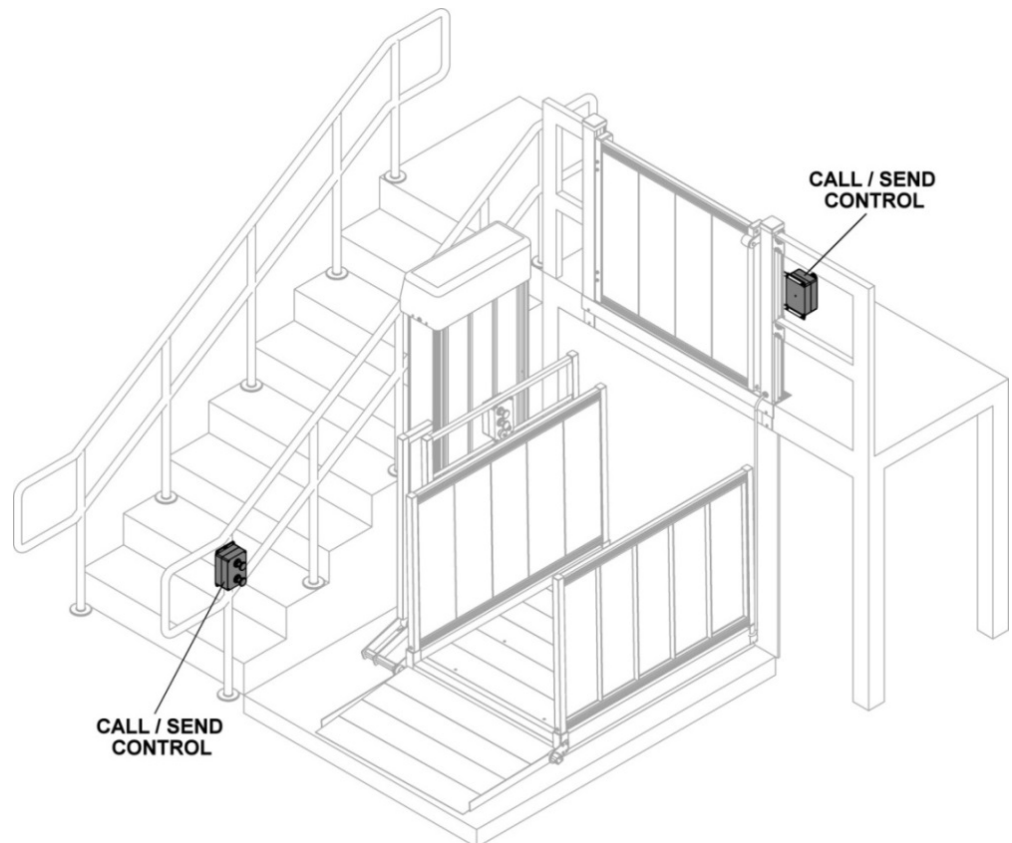
11. OPTIONAL EQUIPMENT – CALL/SEND CONTROL

- 11.1. The call/send control allows you to “call” the VPL up or down (FIG. 11.1). Multiple call/send controls can be used, allowing the lift to be called from various locations (FIG. 11.2). Press the ‘DOWN’ button and the platform descends; press the ‘UP’ button and the platform ascends.
- 11.2. The keyed power switch on the control panel must be in the ‘Power ON’ position for the call/send control to operate.
- 11.3. The VPL tower is pre-wired for one call/send control (splitter is included with additional call/sends).
 - ▲ Mount call/send control(s) in a safe location and in accordance with applicable codes.

FIG. 11.1



FIG. 11.2



12. OPTIONAL EQUIPMENT – CALL/SEND CONTROL MOUNTING KIT

- 12.1. The call/send control mounting kit (FIG. 12.1) is used to attach the call/send control to the top landing gate post. Multiple call/send controls can be used with the VPL.
- 12.2. Mounting must be done on the latch mounting post in the orientation shown (FIG. 12.1), extending away from the top landing gate, on the same side as the latch bar (the call/send control mounting kit can only be installed on the post opposite the hinge).

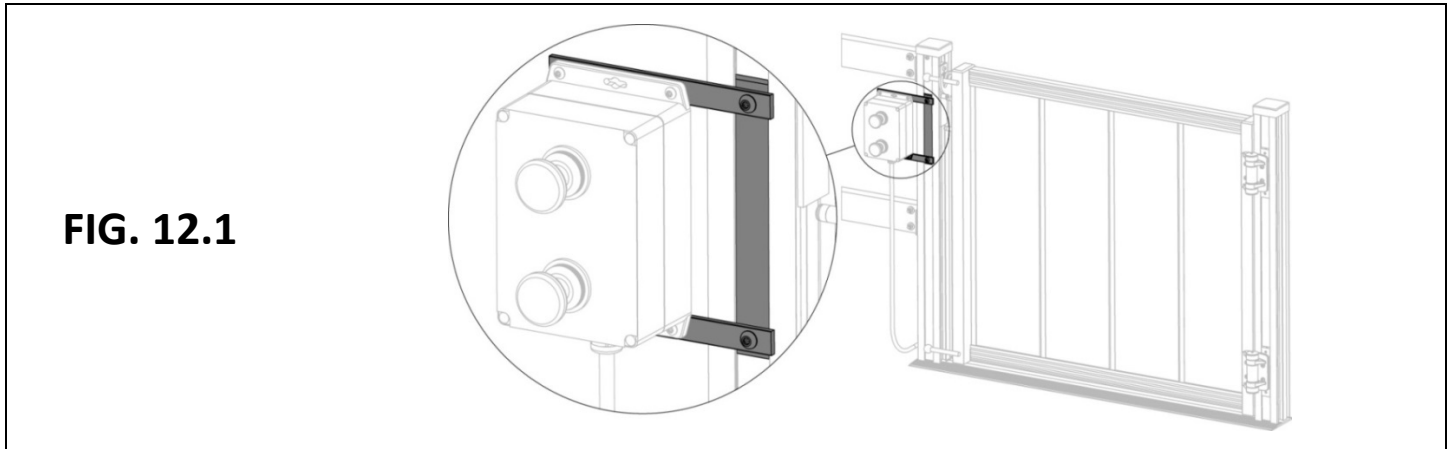


FIG. 12.1

13. OPTIONAL EQUIPMENT – PLATFORM GATE

- 13.1. The platform gate is an option.
 - ▲ The platform gate (FIG. 13.1) is not designed to bear weight. Never hang weight, of any kind, on the platform gate. Damage and possible injury could result.
- 13.2. The platform gate fits both standard turn and straight platforms.
- 13.3. The hinge can be installed on the left or right, depending on desired swing.
- 13.4. Hinge tension is factory set. However, tension on each hinge can be adjusted as desired using a flat screwdriver and adjusting from the top.
 - 13.4.1. Depress and turn counterclockwise to increase tension, clockwise to release tension.
 - 13.4.2. The platform gate should swing fully shut gently so as not to bounce off the rubber bumper more than once.

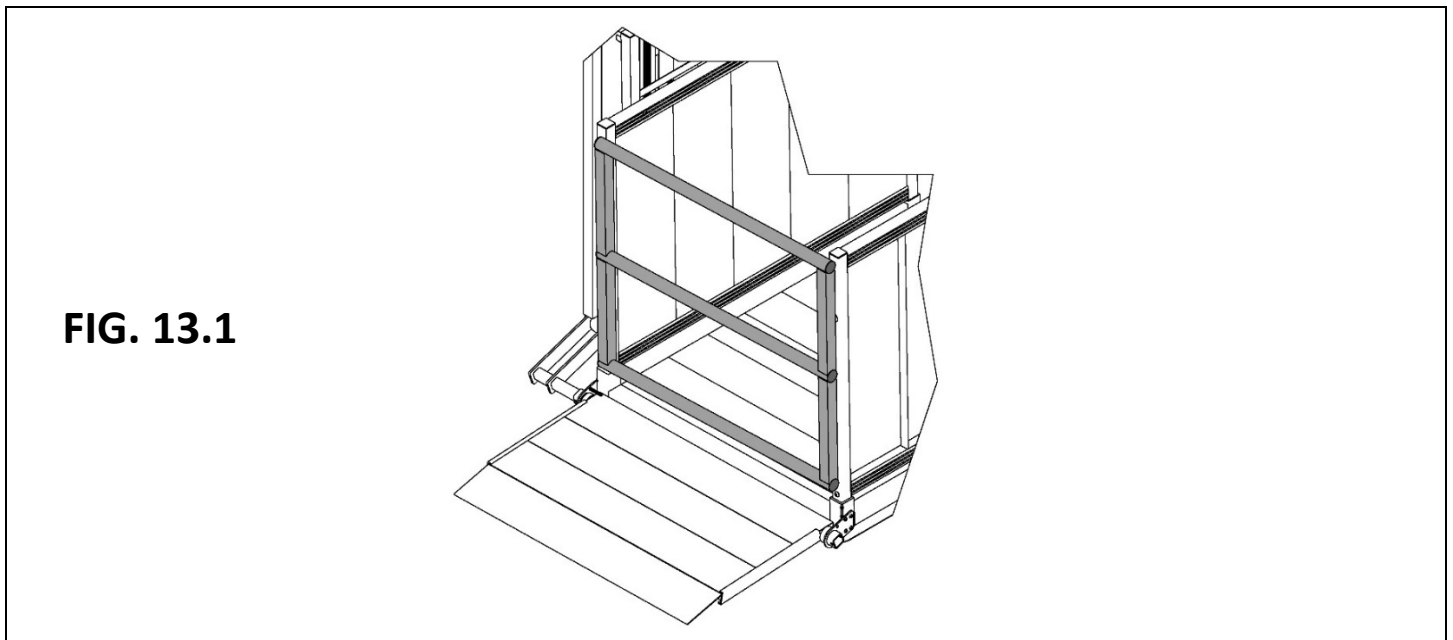


FIG. 13.1

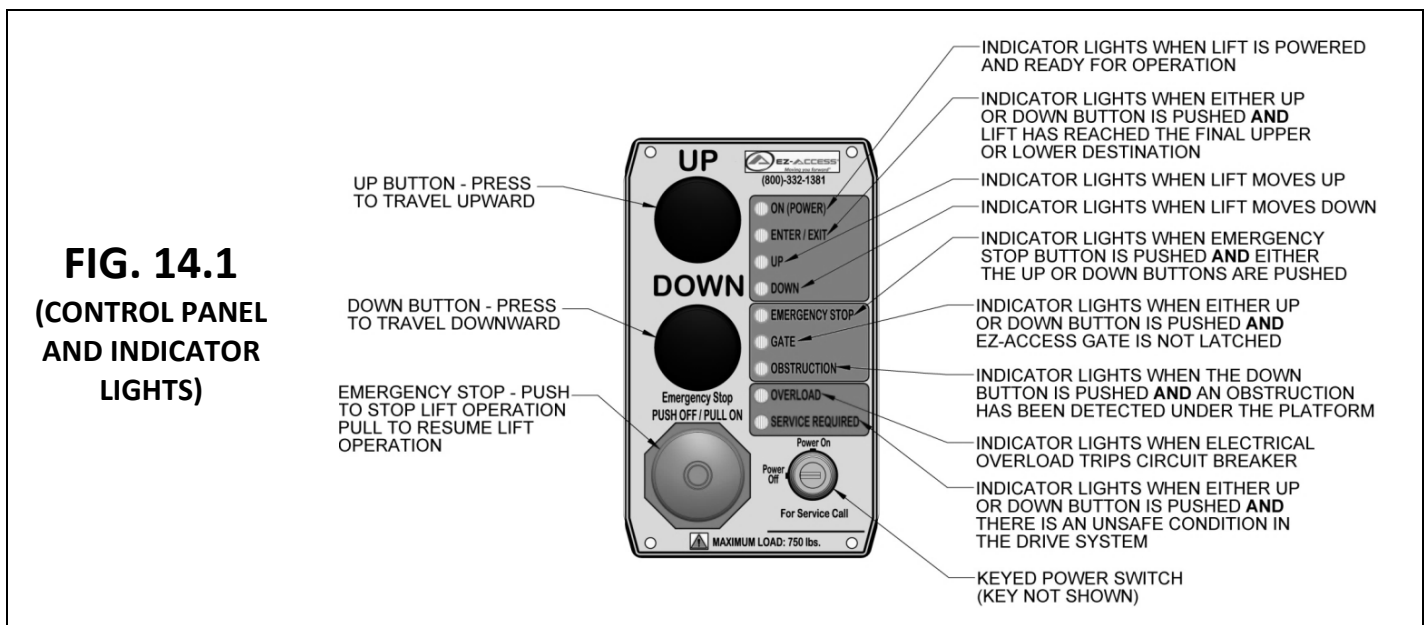
14. FEATURES

14.1. POWER

- 14.1.1. The VPL motor uses 24 volts DC supplied by two 12VDC, 12AH (amp hour) batteries connected in series. The VPL control voltage uses 12 volts DC supplied by one of those two batteries. The batteries are charged by a built-in smart charger. Household power (120VAC) is used to operate the charger and is supplied via an outdoor rated 12' (standard) power cord.
 - ⚠ The AC power cord must be connected to a properly grounded and polarized receptacle.
- 14.1.2. In the event of a power failure, the VPL is designed to operate approximately 20 cycles on battery power before recharging the batteries is required.
 - 👉 One "cycle" is the VPL moving up-and-down once or down-and-up once.
- 14.1.3. The batteries require approximately 6 hours to fully charge if totally discharged.
 - 👉 VPL cycles and recharge times are highly dependent on outside temperatures and loads. Low temperatures decrease battery performance and increase charging time.

14.2. CONTROL PANEL

- 14.2.1. The control panel (FIG. 14.1) incorporates operational controls as well as function indicator lights. Control functions and features are as follows:
 - 14.2.1.1. When turned to the 'Power On' position, the keyed power switch permits VPL operation. When turned to the 'Power Off' position, the VPL will not ascend or descend.
 - 14.2.1.2. The key is removable in both the 'Power On' and 'Power Off' positions. If AC power is disconnected from the VPL, leaving the key in the 'Power On' position will discharge fully charged, non-damaged, batteries over approximately 7 days. The batteries will charge with the key switch in either the 'Power On' or 'Power Off' position, provided the unit is plugged into AC power.
 - ⚠ Removing the key from the keyed power switch does not disconnect battery charger power. The only way to disconnect battery charger power is to unplug the VPL from the AC outlet.
 - 14.2.1.3. The force needed to operate the 'UP' or 'DOWN' push buttons is minimal. The VPL platform will travel upward by pressing and holding the 'UP' button. The VPL platform will travel downward by pressing and holding the 'DOWN' button. The VPL will stop moving if either button is not pressed continually.
 - 👉 Although some initial LED flicker may be observed, 'UP' or 'DOWN' indicator lights are not to illuminate unless either the 'UP' or 'DOWN' buttons are pressed.
 - 14.2.1.4. Pressing the 'Emergency Stop' button will remove power ONLY to the motor controls. This will stop VPL from moving up or down. The 'Emergency Stop' Button must be pulled back out to reset for continued operation.
 - ⚠ To disconnect power to the battery charger, the VPL must be unplugged from the AC outlet.



14.3. INDICATOR LIGHTS

- 14.3.1. The control panel also features a series of blue LED indicator lights. These lights are designed to indicate normal operation as well as alert the user to potential problems. The blue LED indicator lights are set into green, yellow, and red backgrounds on the control panel.
- 14.3.1.1. Lights in the green background indicate normal operation modes.
 - 14.3.1.2. Lights in the yellow background indicate conditions that may be corrected by user.
 - 14.3.1.3. Lights in the red background require repair by an EZ-ACCESS approved technician.
 - 🚫 VPL will not operate if any of the lights in the yellow or red fields are illuminated.
- 14.3.2. Blue LED indicator lights in the GREEN background:
- 14.3.2.1. 'ON' (power) indicates the keyed power switch is turned to the 'Power On' position. This verifies the unit is powered for operation.
 - 14.3.2.2. 'UP' and 'DOWN' illuminate when the associated button is pressed (these indicate that the 'UP' or 'DOWN' controls are activated).
 - 14.3.2.3. 'ENTER/EXIT' indicates the platform has reached either the lower or upper landing point.
 - ⚠️ If the unit does not stop at the correct height and the 'ENTER/EXIT' indicator light is on, the VPL's travel limit switches require inspection by an EZ-ACCESS approved technician.
- 14.3.3. Blue LED indicator lights in the YELLOW background:
- 14.3.3.1. 'EMERGENCY STOP' indicates when either the 'UP' or 'DOWN' button is pressed, and the emergency stop button has been pushed in. The VPL will not operate in this condition. Pulling the emergency stop button back out will clear the condition and allow VPL operation to continue.
 - 14.3.3.2. 'TOP LANDING GATE' indicates that the 'UP' or 'DOWN' buttons are pushed and top landing gate is open or not latched. The VPL will not operate in this condition. Closing and latching the top landing gate will clear the condition and allow VPL operation to continue.
 - 🚫 If a top landing gate is not included in the installation, this indicator light will not function.
 - 14.3.3.3. 'OBSTRUCTION' indicates the 'DOWN' button is pushed, and an object is detected under the platform. In this condition, the unit can only operate in the upward direction. Removing the object will clear the condition and allow downward travel.
- 14.3.4. Blue LED indicator lights in the RED background:
- 14.3.4.1. 'OVERLOAD' indicates the motor is drawing excessive current and causing the automatic circuit breaker to trip. The automatic breaker (auto reset) will reset itself after 1-10 minutes. This indicates an abnormal mechanical or electrical condition. If the problem persists, service by an EZ-ACCESS approved technician is required.
 - 14.3.4.2. 'SERVICE REQUIRED' illuminates if either the 'UP' or 'DOWN' button is pushed, and the unit has detected a potentially unsafe condition in the drive system. The VPL can only be operated downward in this condition.
 - ⚠️ Service by an EZ-ACCESS approved technician is required. Contact your dealer to schedule any needed inspections, repairs, or service.

14.4. GUARD RAMP

- 14.4.1. The VPL is supplied with a 24" guard ramp which can be assembled on either end of the platform, allowing access to the VPL from either side. Guard ramp operation is automatic; when the VPL rises, the ramp will fold upward providing a safety measure to help prevent accidental travel off the platform while the VPL is moving.

14.5. OBSTRUCTION DETECTION

- 14.5.1. The VPL is supplied with a safety pan which is designed to detect objects or obstructions under the platform. If such an object is detected, platform downward travel will stop. The VPL will still be operational in the upward direction, but the object or obstruction must be cleared to resume downward travel.

14.6. EMERGENCY HAND CRANK

- 14.6.1. In the event of a loss of AC power and the batteries have been fully discharged, the VPL may be operated up or down using an emergency hand crank. Refer to SECTION 16 for additional information on the emergency hand crank.

15. OPERATING INSTRUCTIONS

15.1. UPWARD TRAVEL

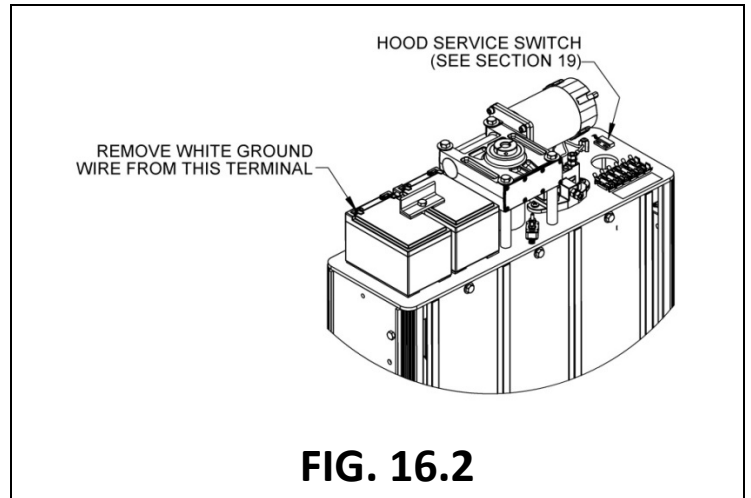
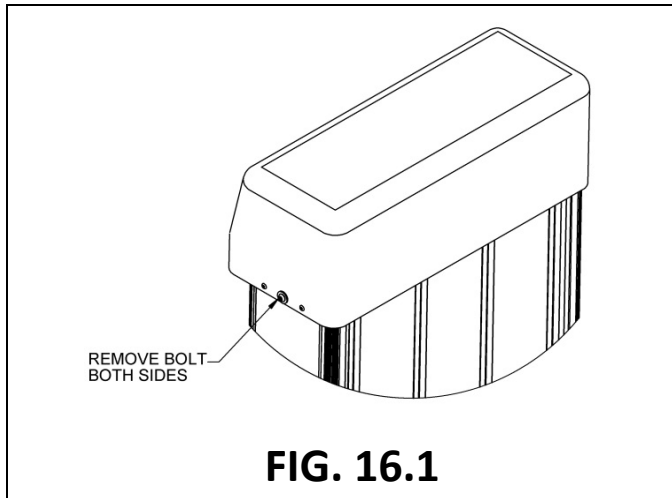
- 15.1.1. Be sure to have a straight, direct path onto the guard ramp and platform.
- 15.1.2. Move far enough onto the center of the platform to allow the guard ramp to fold upward without contacting the mobility device.
- 15.1.3. Ensure the mobility device and all body parts are on the platform and within the guard walls, and not touching the guard ramp.
- 15.1.4. Verify that no part of the mobility device, body parts, or other items extend beyond the platform.
- 15.1.5. Once properly situated on the platform, turn off mobility equipment's power and ensure the brake is properly set (contact the manufacturer of your mobility device for assistance).
- 15.1.6. Rotate the VPL's keyed power switch to 'Power On' position. The blue LED indicator light in the GREEN background should now be illuminated.
- 15.1.7. Press and hold the 'UP' button. The VPL will operate in the upward direction and the 'UP' indicator light will illuminate.
- 15.1.8. Continue pressing the 'UP' button until the VPL stops automatically at the upper landing. The 'ENTER/EXIT' indicator LED light should illuminate at this time. Release the 'UP' button.
- 15.1.9. Verify the platform and the top landing levels are within 1/2" of each other.
 - ▲ If the platform and the top landing levels are not within 1/2" of each other, do not attempt to exit the VPL. First raise or lower the VPL until the top landing levels are within 1/2" of each other before exiting the platform. If the problem persists, contact your dealer to schedule any needed inspections, repairs, or service.
- 15.1.10. Turn the power back on to your mobility device, release the mobility device brake, and travel off the platform onto the upper landing.
 - 👉 If your installation includes the optional top landing gate: Once the platform has reached the upper landing, the top landing gate will automatically unlatch, allowing the gate to open. The top landing gate is spring-loaded and will close by itself once you have passed through.

15.2. DOWNWARD TRAVEL

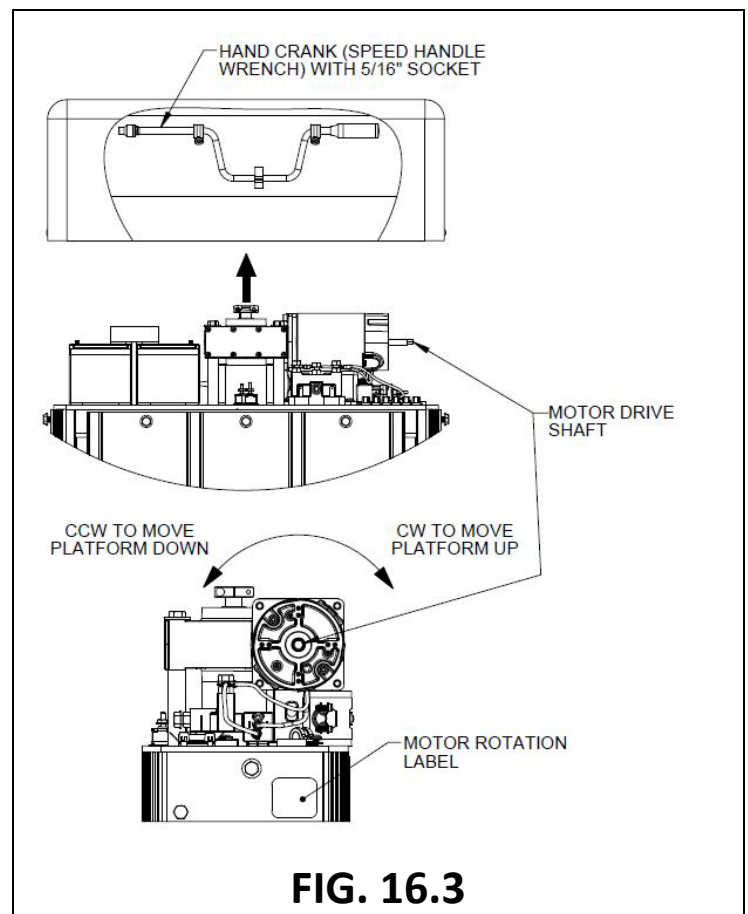
- 15.2.1. If the platform is in the upper landing position, the optional top landing gate swings open by pulling on it. If the top landing gate does not freely swing open, this could be an indication that the VPL platform may not be at the required height.
 - 👉 The platform must be properly positioned at the upper landing height before the VPL gate can be operated.
 - ▲ Do not attempt to release the top landing gate latching mechanism manually. For safety, proper setup and proper functioning is required.
- 15.2.2. Open the top landing gate and carefully travel onto the platform. Be sure to have a straight, direct path onto the guard ramp and platform.
- 15.2.3. Ensure the mobility device and all body parts are completely on the platform, within the guard walls, and not touching the guard ramp.
- 15.2.4. Ensure the top landing gate is closed and fully latched.
- 15.2.5. Once properly situated on the platform, turn off mobility equipment's power and ensure the brake is properly set (contact the manufacturer of your mobility device for assistance).
- 15.2.6. Rotate the VPL's keyed power switch to 'Power On' position. The blue LED indicator light in the GREEN background should now be illuminated.
- 15.2.7. Press and hold the 'DOWN' button. The VPL will begin moving in the downward direction and the 'DOWN' indicator light will illuminate.
- 15.2.8. Continue pressing the 'DOWN' button until the VPL stops automatically at the lower landing. The 'ENTER/EXIT' indicator LED light will now illuminate. Release the 'DOWN' button.
- 15.2.9. Verify the guard ramp has folded to the down position and is resting on the lower landing surface.
- 15.2.10. Turn the power back on to your mobility device, release the mobility device brake (contact the manufacturer of your mobility device for assistance) and travel off the platform onto the lower landing.

16. EMERGENCY OPERATION

- 16.1. In the event of a loss of AC power and the batteries have been fully discharged, the VPL may be operated using an emergency hand crank. A speed handle wrench (hand crank) and a 5/16" socket are included with the VPL to allow the platform to be manually moved up or down. The hand crank is stored inside the cover of the power head.
- 16.2. To use the hand crank, turn the keyed power switch to the 'Power Off' position, remove key, and depress the emergency stop button.
 - ▲ When hand raising and or lowering the VPL platform, failure to turn the keyed power switch to the 'Power Off' position, remove key, and depress the emergency stop button could result in unintended activation of the VPL motor which could result in severe injury or death.
- 16.3. Remove the power head cover by removing the bolts on both sides of the cover (FIG. 16.1).
- 16.4. Disconnect the white (ground) wire from the battery terminal (FIG. 16.2).



- 16.5. Remove the hand crank (speed handle wrench) from inside the power head cover (FIG. 16.3).
- 16.6. Place the 5/16" hex drive socket onto the motor drive shaft and rotate to move the VPL platform. Clockwise (CW) rotation will raise the platform and counterclockwise (CCW) rotation will lower the platform (FIG. 16.3).
 - ✎ The VPL platform moves 1" every 28 turns. For faster VPL platform movement, a battery-powered drill with the correct socket may be used, with due caution, instead of the hand crank to drive the motor shaft.
 - ▲ If the VPL is occupied at the time of power failure, allow the passenger to safely exit prior to troubleshooting the cause.
- 16.7. When finished, return hand crank to the inside of the power head cover.
- 16.8. Secure the cover with the two bolts removed previously.



17. SPECIFICATIONS OVERVIEW

17.1. For Technical Specifications, please visit www.ezaccess.com or contact your dealer.

- ✎ Although it is our intent to keep all technical data current, some documents are subject to change and may take time to update. If you are unsure whether you have the most current version, or if your product is different, please contact your dealer for further information.

18. DIAGNOSTIC PLUG (120 VAC)

18.1. The AC diagnostic plug detects certain AC supply line issues. In a properly wired GFCI plug (FIG. 18.1), the LED on a correctly functioning AC diagnostic plug will indicate one of the following situations:

18.1.1. Green LED indicates proper ground continuity and power status (FIG. 18.2).

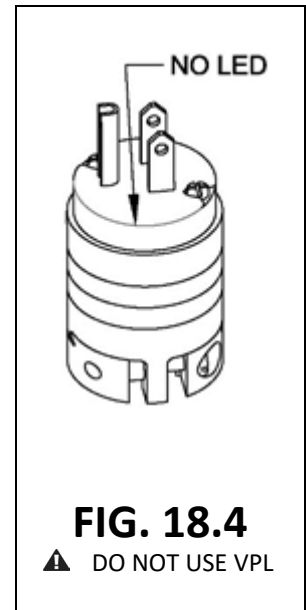
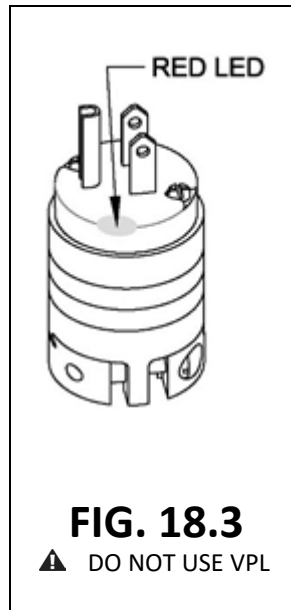
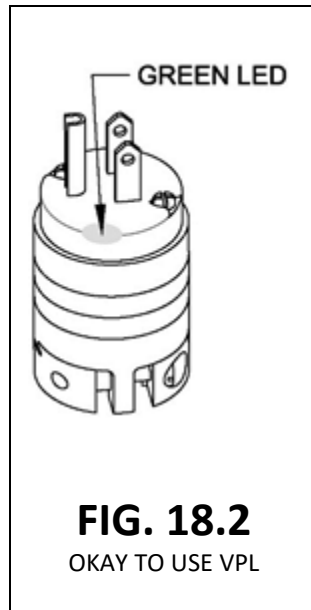
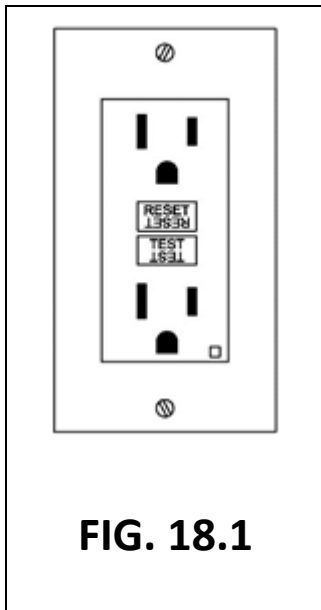
- ✎ Okay to use VPL.

18.1.2. Red LED indicates ground continuity loss or reversed polarity (FIG. 18.3).

- ⚠ Do not use VPL and contact your dealer immediately.

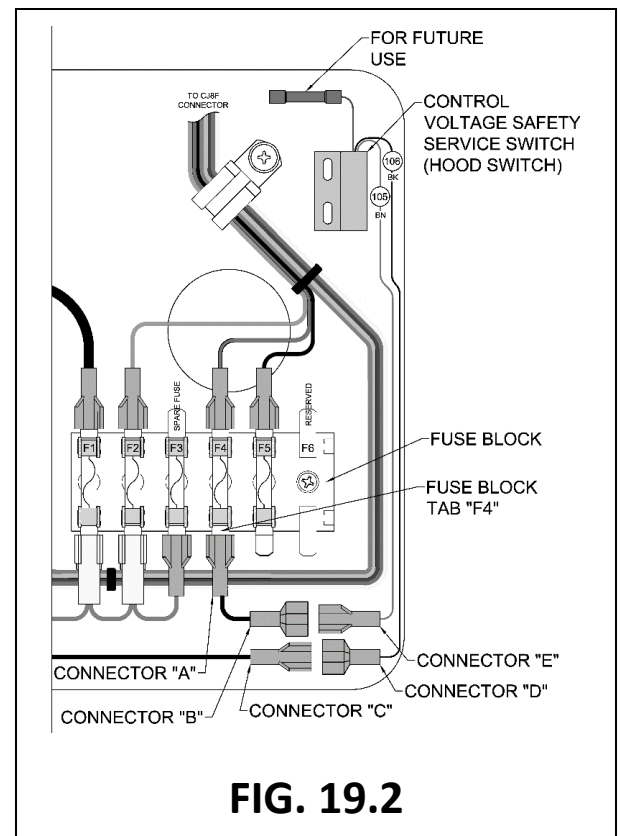
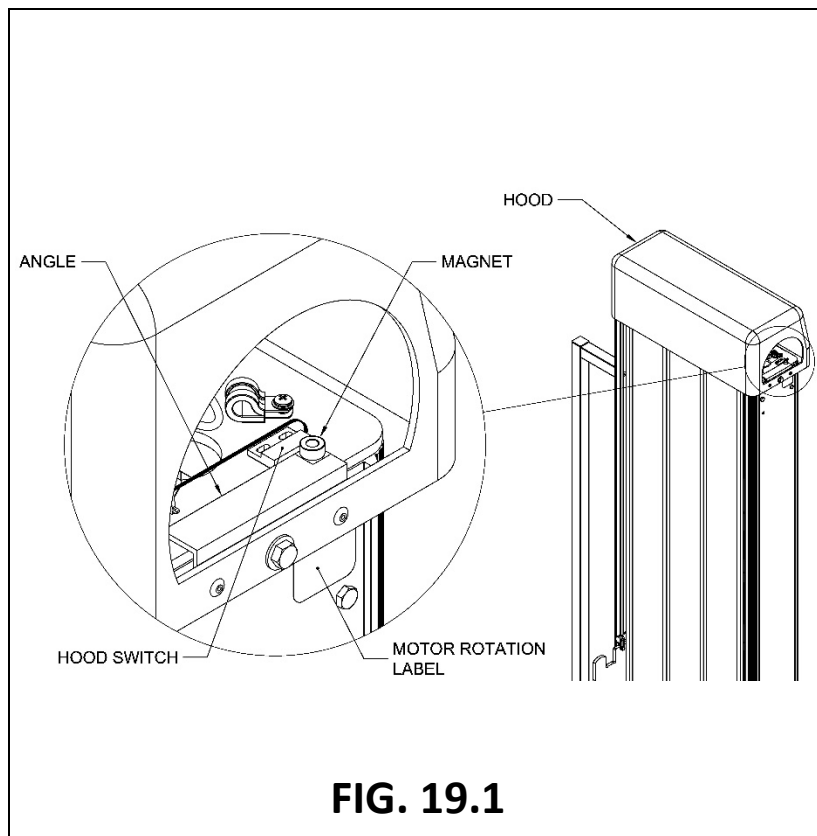
18.1.3. No LED indicates open hot, open neutral, or hot to ground cross (FIG. 18.4).

- ⚠ Do not use VPL and contact your dealer immediately.



19. CONTROL VOLTAGE SAFETY SERVICE SWITCH “HOOD SWITCH”

- 19.1. The VPL comes with a control voltage safety service switch (“hood switch”), a control voltage disconnect (“switch”) that is located under the power head cover (“hood”) as shown (FIG. 19.1).
- 19.2. This hood switch is a magnetic reed switch which works in conjunction with a magnet mounted to the inside of the hood on the angle (FIG. 19.1). When the hood is installed on the VPL, the magnet is in proximity to the hood switch, causing the hood switch contacts to close, enabling voltage to the control box.
- 19.3. When the hood is removed, the magnet is no longer in proximity to the switch, causing the switch to open, disabling control voltage to the control box.
- 19.4. When servicing the VPL, the EZ-ACCESS authorized technician may find it necessary to enable the control circuit power with the hood off. This can be done as follows (FIG. 19.2):
- 19.4.1. Unplug Connector “A” from Fuse Block Tab “F4”.
 - 19.4.2. Unplug Connector “C” from Connector “D”.
 - 19.4.3. Plug Connector “C” to Fuse Block Tab “F4”.
- ⚠ Disabling the hood switch keeps the VPL control circuit energized. The VPL is electrically active in this state and will operate if the control buttons are pressed or if the control circuit is inadvertently jumpered.
 - ⚠ Disable the hood switch at your own risk!
 - ⚠ Always enable the hood switch electrical system when service is complete.
 - ⚠ The hood switch does not remove battery power from the VPL motor circuit, only the control circuit.
- ⚠ Only EZ-ACCESS approved technicians may service the VPL. Contact your dealer with questions or to schedule any needed inspections, repairs, or service.



20. WARRANTY

- 20.1. The VPL features a 2-year Limited Warranty. Please contact your dealer for coverage and warranty-related questions.
- 20.2. The VPL warranty is not transferable.
- 20.3. Attempting to tamper with or modify any portion of the VPL will void the warranty.

21. MAINTENANCE AND SERVICE

- 21.1. Only EZ-ACCESS approved technicians may service the VPL. Contact your dealer with questions or to schedule any needed inspections, repairs, or service.
- 21.2. If the platform and guard ramp surface are covered with frost, ice and/or snow, remove frost, ice and/or snow before using the VPL.
 - ✎ Calcium chloride is often used to deice and prevent ice from forming on roads. Used properly, this may be useful to help rid or keep your VPL platform free of frost, ice, and snow. Calcium chloride may not always be effective in removing frost, ice and/or snow.
- 21.3. Weekly test and ensure that the safety pan, the built-in device designed to detect obstructions under the platform, is not damaged, moves freely up and down, and illuminates the OBSTRUCTION lamp on the control box when the safety pan is pushed up toward the platform.
- 21.4. Refer to 'WARNINGS' throughout this manual for important safety and maintenance information.

22. BATTERIES, COLD WEATHER, AND REPLACEMENT EQUIVALENTS

- ✎ Batteries and cold weather can combine to create an unexpected early-morning interruption – a dead battery. This is a common experience, especially in the northern latitudes. Before we explore the main causes, and how we might reduce the possibility of this happening, first let us cover a little housekeeping.
- ✎ EZ-ACCESS is not a battery or a battery blanket manufacturer, we purchase our batteries from known battery manufacturers – we cannot advise people to use battery blankets contrary to a battery blanket manufacturer's recommendation. Consult your battery blanket manufacturer for more information before deciding how to use a battery blanket with your VPL batteries.
- ✎ We are in contact with battery manufacturers around the world; we are researching available battery technologies; we are diligently working on resolves for battery-related issues. Research has shown us that at this point, there is no 100% effective solution. EZ-ACCESS has had customers use battery blankets with their VPLs in cold weather with excellent results. This document contains information collected from those customers, EZ-ACCESS own experiences, as well as from manufacturers of batteries of all types i.e., flooded lead acid, gel cell, absorbent glass mat, and lithium-ion batteries, deep cycle, etc.
- ✎ Basically, all batteries fall into one of two categories: lead-acid deep cycle batteries, and lithium-ion deep cycle batteries. The absolute most important thing to know about all types of batteries is this:

⚠ A BATTERY'S CHARGE RATE MUST ALWAYS BE MAINTAINED AS DISCHARGED BATTERIES WILL DEVELOP DAMAGE AND FAIL.

- ✎ Today, the best answer for our cold-weather-environment customers is to use a battery blanket. These are readily available, not expensive, and are proven technology.

⚠ BE AWARE THAT BATTERY BLANKETS REQUIRE ATTENTION SO AS NOT TO OVERHEAT THE BATTERIES IN LESS THAN AT-OR-NEAR FREEZING TEMPERATURES.

⚠ CONSULT YOUR BATTERY DEALER FOR MORE INFORMATION AND GUIDANCE.

- ✎ Note that lithium-ion and other deep-cycle batteries are not without cold weather issues. Here is a response from one of our battery manufacturers on cold weather and batteries:

Unfortunately, cold weather impacts all rechargeable/deep cycle batteries similarly. There is a reduction in capacity as temperatures drop. There are no products that will perform differently in those environments. What you can do to compensate for the cold temperatures is to keep the battery at a full state of charge or increase the capacity of the battery you are using to help compensate for the typical reduction. Keeping the battery warmer will certainly help the cause as well.

22.1 NOTES AND WARNINGS ON VPL BATTERY FUNCTION AND EXTREME TEMPERATURES

- ⚠ Batteries are negatively affected by extreme hot, or cold, temperatures and such temperatures can permanently damage batteries even if such extreme temperatures linger only momentarily.
- ⚠ A low state of charge is the main culprit in cold weather battery damage and reduced functionality. Remember, the lower the state of charge, the lower the electrolyte level, the more likely a battery is to be damaged by cold weather.
- ⚠ Warming once frozen batteries will not rejuvenate them; freezing damage is permanent.
- ⚠ Always keep your batteries 100% charged in cold temperatures.
- ⚠ Never let a battery discharge in cold temperatures – battery damage is likely to result.
- ⚠ Charging a “dead” battery in the cold, can cause internal off-gassing, causing expansion of the casing which could result in casing rupture and battery acid leakage. So, always keep your batteries 100% charged in cold temperatures.
- ⚠ “Water” in a “dead” battery can freeze at 32° Fahrenheit (0 °Celsius). Freezing water can expand and rupture the battery casing, causing leaks.
- ⚠ Battery blankets being left on a battery during warmer (not at or near freezing) periods can cause battery damage. Be sure to consult your battery dealer for more information and guidance.
- ⚠ Follow your battery blanket manufacturer’s directions. Consult your battery dealer for more information and guidance.

- ⚠ **THE COMMON THEME IS: A LESS THAN FULLY CHARGED BATTERY IS EXPECTED TO BECOME DAMAGED IN COLD ENVIRONMENTS. SO, NEVER LET YOUR BATTERIES DISCHARGE IN COLD WEATHER.**

- 👉 While not exact in every situation, Table 1 below is the conventional battery Cold-Weather Rule of Thumb. Note these values are based on an undamaged battery.

<u>STATE OF CHARGE (%)</u>	<u>FREEZING TEMPERATURE</u>
100%.....	-90°F
50%.....	5°F
20%.....	32°F

TABLE 1

22.2 VPL BATTERY SPECIFICATIONS

Model	MK ES12-12	Length.....	5.94” (151 mm)
Type	AGM	Width.....	3.86” (98 mm)
Voltage.....	12 V	Height.....	3.8” (98 mm)
Capacity	12 Ah	Weight.....	7.96 lbs. approx. (3.6 kg)

22.3 BATTERY CROSS REFERENCE (SUBSTITUTES/EQUIVALENTS) GUIDE

- ⚠ Battery manufacturers may update battery descriptions, dimensions, charging properties and capacities, as well as recommended functions and usage requirements. So, always consult your battery blank manufacturer for additional information before deciding regarding the use of a battery blanket for your application.
- Many, if not all, of the 12 battery equivalents listed below can be obtained from your local hardware stores as well as online.

22.4 BATTERY SUBSTITUTES/EQUIVALENTS

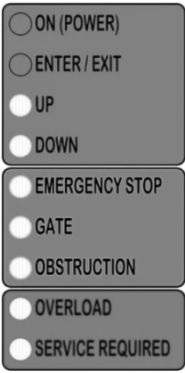
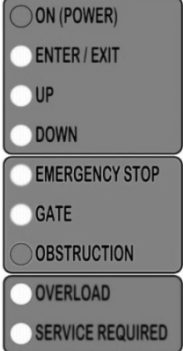
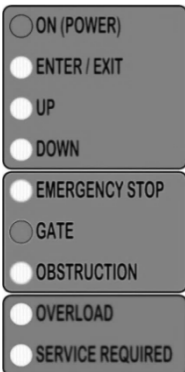
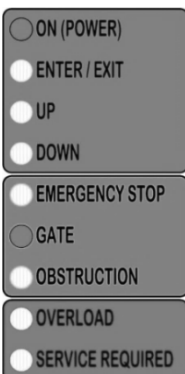
1.	KUNG LONG WP12-12	7.	LEOCH DJW12-12HD
2.	UNIVERSAL UB12120	8.	VISION CP12100
3.	MK EAST PENN ES12-12	9.	EAGLE PICHER CF-12V12
4.	CSB GP12120	10.	POWER PATROL SLA1105CSB
5.	B&B BP12-12	11.	CSB GP12110F2
6.	PANASONIC LC-RA1212P	12.	POWERSONIC PS-12120

23. TROUBLESHOOTING

23.1. Troubleshooting information is provided for reference only. Maintenance and service must be performed only by an EZ-ACCESS approved technician. Contact your dealer with questions or to schedule any needed inspections, repairs, or service.

23.2. CONTROL PANEL DISPLAY

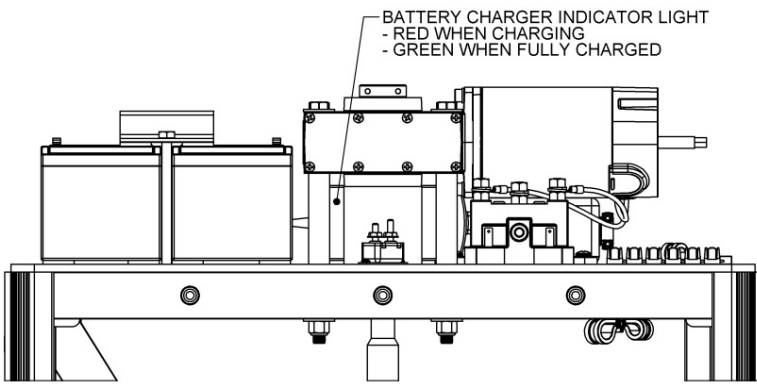
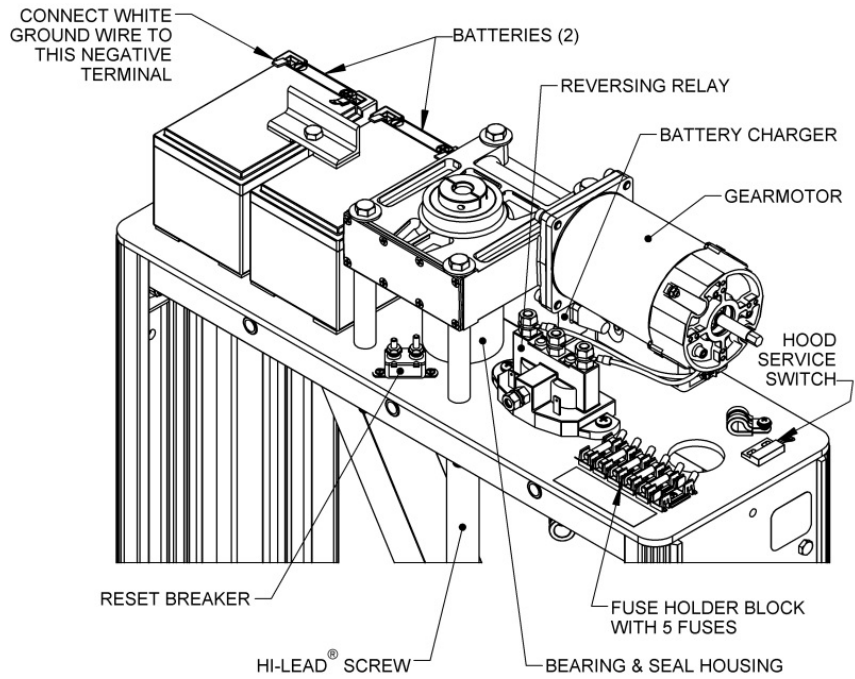
CONTROL PANEL DISPLAY	BUTTON PRESSED	SYMPTOM	POTENTIAL CAUSE	SOLUTION	COMMENTS
<input type="radio"/> ON (POWER) <input type="radio"/> ENTER / EXIT <input type="radio"/> UP <input type="radio"/> DOWN <input type="radio"/> EMERGENCY STOP <input type="radio"/> GATE <input type="radio"/> OBSTRUCTION <input type="radio"/> OVERLOAD <input type="radio"/> SERVICE REQUIRED	UP or DOWN	VPL will not operate and power indicator light on the control panel does not illuminate when the keyed power switch is turned to the Power On position.	Batteries have discharged.	See "Batteries Discharged".	
<input type="radio"/> ON (POWER) <input type="radio"/> ENTER / EXIT <input type="radio"/> UP <input type="radio"/> DOWN <input type="radio"/> EMERGENCY STOP <input type="radio"/> GATE <input type="radio"/> OBSTRUCTION <input type="radio"/> OVERLOAD <input type="radio"/> SERVICE REQUIRED	UP or DOWN	VPL will not operate and power indicator light on the control panel does not illuminate when the keyed power switch is turned to the Power On position.	Control panel power fuse blown.	Remove the power head cover and locate fuse #1 (FIG. 23.1). If the fuse has blown, replace with a similar 5-amp fuse.	Early models are equipped with LED indicator fuses which illuminate when the fuse is blown. Later models use tube style glass fuses.
<input type="radio"/> ON (POWER) <input type="radio"/> ENTER / EXIT <input type="radio"/> UP <input type="radio"/> DOWN <input type="radio"/> EMERGENCY STOP <input type="radio"/> GATE <input type="radio"/> OBSTRUCTION <input type="radio"/> OVERLOAD <input type="radio"/> SERVICE REQUIRED	UP or DOWN	VPL will not operate. Power indicator light on control panel illuminates when keyed power switch is in the Power ON position and the overload indicator is illuminated.	Auto reset breaker has tripped.	Allow unit to sit for 1-10 minutes. The auto reset breaker should reset and the unit should be operational. If the breaker does not reset or continues to trip after resetting 5-10 times, service by an EZ-ACCESS approved technician is required. Contact your dealer for service.	Under normal conditions, the auto resetting breaker, which supplies VPL motor power, should not trip. Operating the VPL in an overloaded weight condition, or mechanical or electrical issues can cause the breaker to trip. The breaker typically resets itself in 1-10 minutes.

CONTROL PANEL DISPLAY	BUTTON PRESSED	SYMPTOM	POTENTIAL CAUSE	SOLUTION	COMMENTS
	UP	VPL stops above or below upper landing level and Enter/Exit indicator light is illuminated.	Upper limit switch trigger ramp is out of adjustment.	Upper limit trigger ramp needs adjustment. Only EZ-ACCESS approved technicians may service the VPL. Contact your dealer for service.	Up/Down travel is controlled by limit switch triggers which trip a series of switches incorporated into the carriage. The downward limit is set at the lowest position and the upper limit set at maximum possible height at the factory. NOTE: Before connecting a Top Landing Gate adjust the upper limit switch trigger to the required upper landing height.
	DOWN	VPL stops during downward travel and the Obstruction light is illuminated when 'DOWN' button is pushed.	Object underneath platform contacting safety pan and stopping downward travel.	Run VPL upward, remove object below platform, and then resume operation.	This is a normal condition and indicates the proper operation of the safety pan. A buildup of leaves or snow can cause this condition and requires removal before VPL will operate correctly. Do not allow debris to accumulate on or under the safety pan.
	UP or DOWN	VPL will only travel a short distance down from upper landing and the top landing gate indicator light is illuminated when the 'UP' or 'DOWN' button is pushed.	Top landing gate latch is not rotating to the fully closed position	Make sure latch rotates freely. Check for damage which may prevent latch from operating, and check that catch rod on top landing gate aligns properly with latch. If latch or catch rod are damaged, they may need to be replaced. Contact your dealer for service. ▲ WARNING: Do not operate VPL while touching the latch.	The latch is spring-loaded and will normally rotate into the fully closed position as the VPL travels downward and the roller loses contact with the platform side wall. If the latch is not fully closed when the VPL has traveled down about 2", the latch monitor switch will stop VPL operation, and the top landing gate indicator light will illuminate.
	UP or DOWN	VPL will only travel 1-5 inches down from upper landing and top landing gate indicator light is illuminated when the Up or Down button is pushed.	Top landing gate is not fully closed.	Make sure top landing gate swings freely and that the hinge spring tension is sufficient to fully close the gate. Adjust hinge spring tension as needed. Check that the gate's latching mechanism is in the correct position so that latch fully closes around the catch rod. Refer to the top landing gate section in the PASSPORT® Vertical Platform Lift (VPL) Installation Manual for adjusting the height of latching mechanism and top landing gate.	The top landing gate is closed by spring-loaded hinges which are field adjustable to increase or decrease closing force. If the top landing gate is not fully closed the top landing gate monitor switch will stop the VPL operation and the top landing gate indicator light will illuminate.

CONTROL PANEL DISPLAY	BUTTON PRESSED	SYMPTOM	POTENTIAL CAUSE	SOLUTION	COMMENTS
<input type="radio"/> ON (POWER) <input checked="" type="radio"/> ENTER / EXIT <input type="radio"/> UP <input type="radio"/> DOWN <input checked="" type="radio"/> EMERGENCY STOP <input type="radio"/> GATE <input type="radio"/> OBSTRUCTION <input type="radio"/> OVERLOAD <input type="radio"/> SERVICE REQUIRED	UP	VPL stops above or below the upper landing <u>and</u> top landing gate indicator light is illuminated.	The upper limit is out of adjustment or was set after the top landing gate was plugged into the VPL.	Unplug the top landing gate from the VPL and plug the top landing gate bypass jumper back into the plug. Adjust the upper limit trigger ramp as described in the PASSPORT® Vertical Platform Lift (VPL) Installation Manual. ▲ WARNING: This adjustment must be made by an EZ-ACCESS approved technician. Contact your dealer.	Indicates upper limit is set above its correct position. To correct, unplug gate and install top landing gate bypass jumper into the top landing gate connector. When jumper is installed, VPL can travel up and down. If the jumper is not available, call your dealer.
<input type="radio"/> ON (POWER) <input checked="" type="radio"/> ENTER / EXIT <input type="radio"/> UP <input type="radio"/> DOWN <input checked="" type="radio"/> EMERGENCY STOP <input type="radio"/> GATE <input type="radio"/> OBSTRUCTION <input type="radio"/> OVERLOAD <input type="radio"/> SERVICE REQUIRED	UP or DOWN	VPL will not operate, <u>and</u> the EMERGENCY STOP indicator light is illuminated.	EMERGENCY STOP button is activated (pushed in).	Pull the EMERGENCY STOP button out to deactivate and energize unit. ▲ WARNING: Pressing the emergency stop button DOES NOT disconnect power to the AC (supply) side of the battery charger (the only way to disconnect power to the battery charger is to unplug VPL from AC outlet).	The EMERGENCY STOP button disconnects power to the motor and the VPL motor will not operate while button is pushed in. ▲ WARNING: Pressing the EMERGENCY Stop button DOES NOT disconnect power to the AC (supply) side of the battery charger (the only way to disconnect power to the battery charger is to unplug VPL from AC outlet).
<input type="radio"/> ON (POWER) <input checked="" type="radio"/> ENTER / EXIT <input type="radio"/> UP <input type="radio"/> DOWN <input checked="" type="radio"/> EMERGENCY STOP <input type="radio"/> GATE <input type="radio"/> OBSTRUCTION <input type="radio"/> OVERLOAD <input type="radio"/> SERVICE REQUIRED	UP	VPL will not travel upward, <u>and</u> service indicator light is illuminated.	Failure of the primary Hi-Lead® Screw nut.	Run VPL to the bottom of its travel and exit the VPL platform. Call your dealer for service immediately. Do not attempt to operate the VPL until repairs have been completed by an EZ-ACCESS approved technician. Contact your dealer for service.	The VPL is equipped with a backup safety nut. This feature allows the unit to travel safely in the downward direction only, allowing for safe exiting of the VPL so that repairs can be made.

23.3. GENERAL TROUBLESHOOTING

PROBLEM	POTENTIAL CAUSE	SOLUTION	COMMENTS
Slow, erratic operation, possible “buzzing” or “chattering” sounds heard	Batteries have discharged	See “Batteries Discharged”.	Main Power ON LED may be illuminated. The “buzzing” or “chattering” sound is the reversing motor relay quickly making and breaking contact.
Slow, erratic operation	Very cold temperatures	Limit number of uses per day.	VPL performance falls off quickly at lower temperatures. This is inherent to lead acid batteries. Their ability to supply power and accept a recharge is diminished as temperature falls.
Slow, erratic operation	Overuse	Limit number of uses per day.	This VPL is intended for occasional use. If the unit is cycled too often the charger cannot recharge the batteries between cycles. The motor can also overheat. Several repeated cycles are possible if the VPL is allowed to rest for 45 minutes to one hour between cycles. One full up/down cycle requires approximately 10 to 15 minutes for the charger to bring the batteries back to their pre-cycle charge level. Colder temperatures increase the recharge time considerably.
Slow, erratic operation	Lack of lubrication on the Hi-Lead® Screw.	Clean and lubricate the Hi-Lead® Screw.	Only EZ-ACCESS approved technicians may service the VPL. Consult your dealer for service-related information.
Batteries discharged	VPL has been disconnected from power source.	Plug VPL in, reset GFCI circuit. Verify AC connections and voltage in the junction box. ▲ WARNING: The junction box must be serviced by an EZ-ACCESS approved technician. Consult your dealer for service-related information.	Under normal temperatures and loads the VPL should operate approximately 25 cycles before the batteries become discharged when disconnected from the 120VAC power source required to operate the battery charger. The indicator light in the charger will be red when the batteries are charging and green once the batteries are fully charged. NOTE: Lights on the charger can only be viewed with the power head cover removed.
Batteries discharged	Battery charger is not working correctly	Green or red indicator on charger will be illuminated if charger is receiving 120VAC power. NOTE: The lights on the charger can only be viewed with the power head cover removed.	The charger incorporates reverse polarity and overload protection. The charger resets once condition is resolved. It may take 1-20 minutes before the charger indicator light will come back on. Conditions other than overload may require diagnosis and repair by an EZ-ACCESS approved technician. Consult your dealer for service-related information.
Batteries discharged	The battery charger fuse has blown.	Check that the GFCI circuit has not tripped.	GFCI protection devices sometimes control multiple receptacles. Ensure GFCI components have been reset and are functioning properly.
Batteries discharged	Battery charger is not working correctly	Remove power head cover and locate fuse #4 in the fuse block (FIG 23.1). If the fuse is blown, it must be replaced. See comment to right.)	The circuit between the battery charger and the batteries is fused. Under normal conditions this fuse should not blow. Look for problems in the wires connected to the batteries before replacing the fuse.
Batteries discharged	Batteries are defective or near the end of their service life	Load Test Batteries to gauge performance level. NOTE: Only EZ-ACCESS approved technicians may service the VPL.	The service life of batteries under normal conditions is approximately three years. One indication of a battery near the end of its service life is that the VPL will operate one or two times normally, and then labor during additional cycles. Cold weather will make this condition worse. A newer defective battery will display similar symptoms although other potential causes described previously should be explored before considering battery replacement.



FRONT VIEW
WIRING NOT SHOWN (BOTH VIEWS) FOR CLARITY

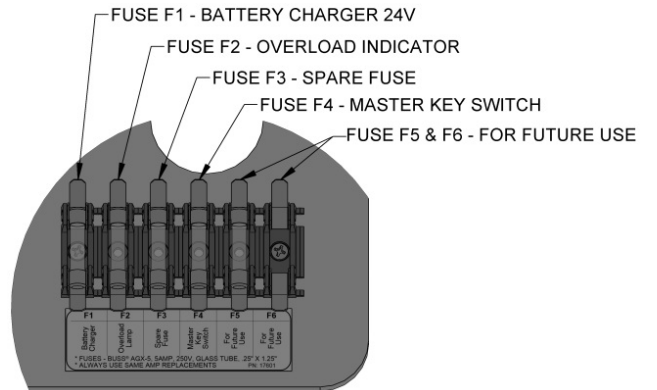


FIG. 23.1