

VPL-3100

VERTICAL PLATFORM LIFT

Technical Service email: service@bruno.com www.bruno.com

DEALER:

INSTALLATION MANUAL MAN-3100-1 06-02-2008

- Check for shipping damage immediately upon receipt. Contact the shipper with any damage claims.
- Check the contents against the packing list before leaving the shop to begin on-site installation. Immediately report any discrepancies to Bruno Independent Living Aids, Inc.®.



Read and understand the installation manual prior to proceeding with the installation.

Throughout this manual, **safety precautions** are provided to identify potentially hazardous situations and to advise how to avoid them.



Warning-Indicates a potentially hazardous situation that, if not avoided, could cause serious bodily injury and / or property damage.



Caution—Indicates a potentially hazardous situation that, if not avoided, could cause damage to the unit and / or moderate injury.



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Electrical Hazard–Indicates a potentially hazardous electrical situation that, if not avoided, could cause damage to the unit and / or moderate injury.

Lubriplate® is a registered trademark of Lubriplate Division (Fiske Brothers). Vise-Grip® is a registered trademark of Petersen Manufacturing Co.

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SPECIFICATIONS

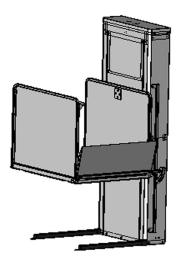
Load Capacity	750 lbs. (340 kg)				
Weight of Unit					
VPL-3153	752 lbs. (341 kg)				
VPL-3175	825 (374 kg)				
Rated Speed	9 FPM (2.75 m/mn)				
Power Supply	120 VAC, 15A, single phase, 60 Hz				
Motor	1 HP, 120 VAC				
Control Voltage	24 VAC, motor 120 VAC				
Maximum Travel	53" (1.3 m) unit and 75" (1.9 m) unit				
Platform Size	standard: 34" x 48" (86 x 122 cm); optional: 34" x 54" (86 x 137 cm)				
Emergency Operation	provision for manual hand wheel				
Standard Features	keyed, constant-pressure controls on platform with emergency stop switch; all-weather protected controls and switches; platform bottom safety panel, top and bottom limit switches, automatic folding ramp				
Optional Features	landing call/send station with key; top landing gate including call/send station with key and Bruno interlock; 34"x54" non-skid platform				

Recommended Bolt Torque US							
Size	Grad	le 5	mmended T Grade 8		18-8 S/S		
	Coarse	Fine	Coarse	Fine	Coarse	Fine	
1/4	8	10	12	14	6.3	7.8	
5/16	17	19	24	27	11	11.8	
3/8	31	35	44	49	20	22	
7/16	49	55	70	78	31	33	
1/2	75	85	105	120	43	45	
9/16	110	120	155	170	57	63	
5/8	150	170	284	323	93	104	
3/4	270	295	510	568	128	124	
Units are ftlbs.							

These torque values are provided for reference only. If specific torque is required for an installation operation, it will be indicated.

Tools Needed for Installation

- 1/2" dia. x 3" lg. masonry anchors
- Sawzall® or similar reciprocating saw
- Circular saw
- Straight and Phillips screwdrivers (or bits)
- Combination wrench sets (SAE)
- Allen wrench set (SAE)
- Socket wrench set (SAE)
- Level (4-foot) or inclinometer
- Torque wrench (20 lb.-ft to 133 lb.-ft) low-profile, open-end wrench style preferred
- Voltohmmeter and probes
- Wire stripper
- Crimping tool
- Tape measure
- Pry bar
- Hammer and mallets
- Extension cord for power tools (50' minimum)
- Vise-Grips®
- Appliance dolly
- Hammer drill
- Masonry bits, 1/2" and 3/8"
- Reversible drill, 3/8", and bits
- File
- Hammer drill, 1/2" for concrete fasteners



There are no USER serviceable parts in the electrical box.





WARNING

RISK OF ELECTROCUTION AND DFATH

Remove all metal jewelry (rings, bracelets etc.) which might accidentally come in contact with an electrical terminal.

- Never exceed the maximum rated lift capacity of 750 lbs. (340 kg).
- Never use the VPL-3100 to lift freight or other materials than intended by design.
- Read and understand the installation manual prior to installing the VPL-3100.
- Wear appropriate safety protection equipment for your head, eyes, hands and feet during all phases of the installation.
- Lift components are heavy. Use extreme caution when lifting them to the installation position to avoid personal injury and damage to the equipment.
- Keep panels and protective coverings in place to avoid potentially fatal injury.
- Disconnect power from the unit before performing any electrical or mechanical service operations.
- Never bypass sensor switches which prevent accidental start up when protective panels are removed.
- Do not work alone.
- Be aware of the location of others in the work zone.
- Do not wear jewelry or loose clothing.
- Lock the wheels of any mobility device riding on the platform.
- Use only recommended anchor fasteners.
- Check for applicable local codes and regulations.
- Failure to comply with the above could render the warranty nulL and void.

PRIOR TO INSTALLATION



A solid foundation is key to a successful installation.

Never install the VPL-3100 on an asphalt driveway, patio stones, concrete blocks or other unstable surfaces.



The fascia must be smooth, vertical and structurally sound.

Check all applicable local codes.

- Visit the installation site.
- Verify that a *dedicated* 15A electrical circuit is available for installation of the VPL-3100 and that it has been installed by a qualified electrical contractor in compliance with local codes and regulations.
- Check for correct voltage and supply wire size.
- Confirm the structural integrity of the fascia.
- Confirm the existence of a properly constructed concrete base that is level and flat.
- Verify that the walls and floors are level.
- Verify hoistway clearances, finished openings for gates and doors, ceiling break clearances and electrical layout.
- Locate and eliminate possible pinch points.
- Determine the path to be used to move the unit into place. Make sure it is free of obstacles.
- Double-check the order form to verify receipt of all parts needed for installation.
- Make sure that the ramp and the ramp actuator are on the correct side (right or left) for the installation.

To move the ramp/ramp actuator to the opposite side, see "MOVING THE RAMP AND RAMP ACTUATOR TO THE OPPOSITE SIDE" appearing later in this manual.

PRE-INSTALLATION CHECKS

PRIOR TO INSTALLATION (continued)

VSL-3175

The VSL-3175 is shipped disassembled. Prior to installation, mount the platform to the tower.

- 1. From the platform, remove the vertical panel with the pushbutton controls.
- 2. Move the platform into position next to the tower.



NOTE: A skate dolly works well for this purpose.

- 3. Attach the platform to the tower using the bolts, washers, lockwashers and nuts provided.
- 4. Remount the vertical panel with the pushbutton controls.

INSTALLATION OF MAIN COMPONENT

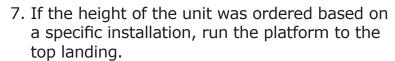


Per ASME Code
A18.1, there must be
a clearance of 3/8"
to 3/4" (10 mm to
19 mm) between
the platform and the
fascia.

The VPL-3100 must be installed on a level, smooth concrete base with a minimum thickness of 4" (10 cm), in place prior to installation and not provided by Bruno.

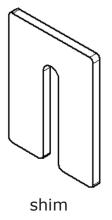
- 1. Decide on which side of the unit the call/ send and gate wire harnesses will be routed. This is easier to do before placing the unit in the installation position.
- 2. Place the VPL-3100 in its approximate final position on the concrete base.
- 3. Align the platform to the opening provided at the top landing for exiting the VPL.
- 4. Connect the VPL-3100 power cord to the dedicated power source (provided by others and in place prior to installation).
- 5. Test operation of the VPL-3100 using the platform control.
- 6. Verify that the unit is plumb, side-to-side and front-to-back. Shim base if necessary.

NOTE: Align the shims (provided-see left) with the mounting holes to keep the shims in place when fasteners are inserted.



Otherwise, skip to the next step.

- 8. Run the unit up until it stops at the factoryset maximum height.
- 9. Measure from the platform to the top of the landing. If the landing is above the platform, you will measure this number of inches ABOVE the mark placed on the channel at the factory, near the limit switch. If the landing is below the platform, you will measure BELOW the mark.







Top Cover Safety Switch

This is a push-pull switch. When the top cap is in place, the switch is closed, permitting the unit to operate normally.

When the top cover is removed, the switch is open, and the unit will not operate.

DURING INSTALLATION AND SERVICE WORK ONLY,

enable unit operation by pulling up on the switch until it snaps into position.
Remounting and securing the top cover pushes the switch down to its normal operating position.

NOTE: Steps 10—14 may have been done when the unit was removed from the shipping pallet. If so, proceed to the next section.

- 10. Loosen **but do not remove** the (3) screws at the bottom of the *front panel*.
- 11. Loosen the (2) screws on each side of the *top cover*.
- 12. Slide the *top cover* up and off.
- 13. Remove the (3) screw along the top of the *front access panel.*
- 14. Slide the *front access panel* up and off. Set to the side.

NOTE: Removal of the top cap opens the top housing sensor switch. This prevents accidental movement of the platform. See left and below.





with top cover in place, switch is pushed down and unit operates.



with top cover removed, switch is in middle position and unit will **not** operate



pull up for service

15. ALWAYS replace the top cover after completion of installation/service operations.

ADJUSTING TOP LANDING/FINAL LIMIT SWITCHES



Align bracket edge to be parallel to vertical column before tightening to ensure proper limit switch operation.

- 1. Loosen the top landing/final limit switch bracket hardware.
- 2. Slide the bracket up or down, depending on the measurement taken on the previous page.
- 3. The bottom of the bracket should line up with the new mark made on the vertical channel.
- 4. Tighten the limit switch bracket hardware.
- 5. Retest operation and recheck that the unit stops at the correct height. Readjust if necessary.

STANDARD GATE INSTALLATION

Wide gate (90° platform) instructions appear later in this manual.

NOTE: The instructions given below apply to the installation of a Bruno top landing gate on a Bruno lift.

If installing a top landing gate other than a Bruno gate, refer to the instructions provided by the gate manufacturer.

Prior to the installation of either a Bruno and or a non-Bruno top landing gate, check local codes and regulations in force.

1. Before positioning the gate on the landing:

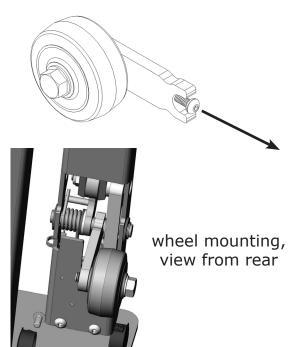
a. remove the access cover from the lower lock switch (see left);

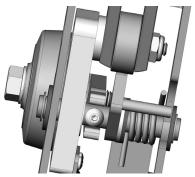


washer against yoke bracket

b. make sure the flat washer (assembled in the factory) is against the yoke bracket (see left);

STANDARD GATE INSTALLATION (continued)





wheel mounting, view from front



correct orientation

1. Before positioning the gate on the landing (continued):

- c. mount the gate wheel (see left):
- remove the #8 screw and lockwasher from the wheel assembly;
- assemble the wheel to the interlock, noting orientation (see left and below);
- secure the wheel with the #8 screw and lockwasher.

NOTE: Do not remount the access door at this time. You will require access to this area for wiring.



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STANDARD GATE INSTALLATION (continued)

2. Orient the landing gate so that the smooth, flush surface faces the platform.

NOTE: Refer to the Technical Specifications at the back of this manual for proper gate-to-platform alignment.

- 3. Decide on the routing of the wiring from the gate interlock post to the VPL. It can exit the interlock post at the side or the bottom of the post.
- 4. If necessary, mark and drill a 1/2" hole in the landing, or the landing post, to route wires back to the machine.
- 5. Secure the gate in place using (2) of its **sill** mounting screws.
- 6. Check that the gate is level (horizontally and vertically) and plumb. This is critical for proper door closing speed and latch alignment. Use provided shims if necessary.
- 7. Secure the gate post to the hand railing using the holes in the gate post or with an angle bracket.

NOTE: Bruno does not provide the mounting fasteners for the landing gate.

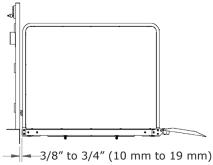
However, it DOES provide angle brackets.

- 8. Recheck that the gate is level (horizontally and vertically) and plumb. This is critical for proper door closing speed and latch alignment. Use provided shims if necessary.
- 9. Install the black caps (provided in parts kit) on both sides of the gate support (see left).
- 10. Finish securing the gate using the remaining hardware on the horizontal and vertical sills.



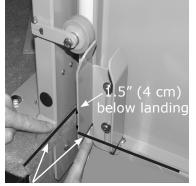
caps on both sides of support (left-hand shown)

CAM/ACTUATOR INSTALLATION AND ADJUSTMENT (standard gate)



platform-to-gate running clearance

1. Verify the required 3/8" to 3/4" (10 mm to 19 mm) running clearance.

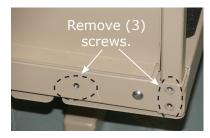


measure from top of landing to top of square tube (platform)

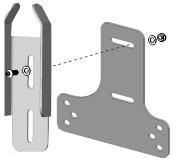
2. Perform final adjustment operations on the gate actuator.

NOTE: The actuator is part of the gate interlock. This is a mechanical interlock released by the motion of the platform. A series of electrical contacts prohibits platform operation when the interlock is engaged.

a. Start with the platform 1.5" (4 cm) below the landing (see left, and Technical Specifications at the rear of this manual).



b. Remove (3) screws from the platform.



left-hand shown

c. Loosely assemble the gate actuator bracket.

CAM/ACTUATOR INSTALLATION AND ADJUSTMENT standard gate (continued)



d. Mount the loosely-assembled bracket to the platform using the rectangular spacers and screws as shown.



- G A T E P O ACTUATOR S T 2" (5 cm)

- e. Slide the cam *horizontally* so that a 2" (5 cm) gap exists between the gate post and the flat edge of the actuator.
- f. Slide the actuator *vertically* (up) until its angled edge just touches the cam (*below, left*).
- g. Tighten all actuator/cam hardware.
- 2. Run the vertical platform lift up.

NOTE: When the unit reaches the landing level, the gate should be unlocked.

3. Re-verify clearances and check that the gate and platform align properly.

WIDE GATE (90° PLATFORM) **INSTALLATION**

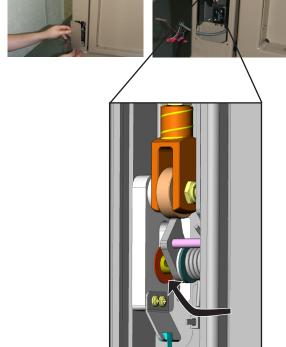
NOTE: The instructions given below apply to the installation of a Bruno top landing gate on a Bruno lift.

If installing a top landing gate other than a Bruno gate, refer to the instructions provided by the gate manufacturer.

Prior to the installation of either a Bruno and or a non-Bruno top landing gate, check local codes and regulations in force.

1. Before positioning the gate on the landing:

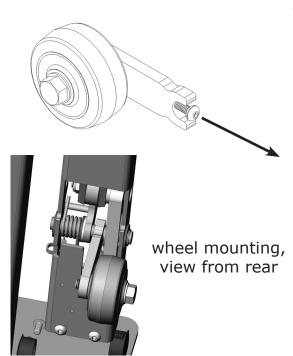
a. remove the access cover from the lower lock switch (see left);

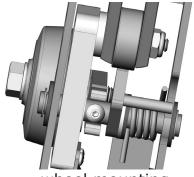


washer against yoke bracket

b. make sure the flat washer (assembled in the factory) is against the yoke bracket (see left);

WIDE GATE INSTALLATION (continued)





wheel mounting, view from front



correct orientation

1. Before positioning the gate on the landing (continued):

- c. mount the gate wheel (see left):
- remove the #8 screw and lockwasher from the wheel assembly;
- assemble the wheel to the interlock,
 noting orientation (see left and below);
- secure the wheel with the #8 screw and lockwasher.

NOTE: Do not remount the access door at this time. You will require access to this area for wiring.



WIDE GATE INSTALLATION (continued)

2. Orient the landing gate so that the smooth, flush surface faces the platform.

NOTE: Refer to the Technical Specifications at the back of this manual for proper gate-to-platform alignment.

- 3. Decide on the routing of the wiring from the gate interlock post to the VPL. It can exit the interlock post at the side or the bottom of the post.
- 4. If necessary, mark and drill a 1/2" hole in the landing, or the landing post, to route wires back to the machine.
- 5. Secure the gate in place using (2) of its **sill** mounting screws.
- 6. Check that the gate is level (horizontally and vertically) and plumb. This is critical for proper door closing speed and latch alignment. Use provided shims if necessary.
- Secure the gate post to the hand railing using the holes in the gate post or with an angle bracket.

NOTE: Bruno does not provide the mounting fasteners for the landing gate.

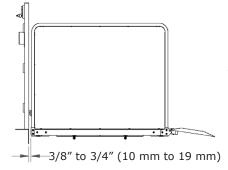
However, it DOES provide angle brackets.

- 8. Recheck that the gate is level (horizontally and vertically) and plumb. This is critical for proper door closing speed and latch alignment. Use provided shims if necessary.
- 9. Install the black caps (provided in parts kit) on both sides of the gate support (see left).
- 10. Finish securing the gate using the remaining hardware on the horizontal and vertical sills.



caps on both sides of support (left-hand shown)

CAM/ACTUATOR INSTALLATION AND ADJUSTMENT wide gate



platform-to-gate running clearance



- 1. Verify the required 3/8" to 3/4" (10 mm to 19 mm) running clearance.
- 2. Perform final adjustment operations on the gate actuator.

NOTE: The actuator is part of the gate interlock. This is a mechanical interlock released by the motion of the platform. A series of electrical contacts prohibits platform operation when the interlock is engaged.

a. Remove (3) screws from the platform.



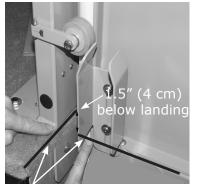
left-hand shown

b. Loosely assemble the gate actuator bracket.



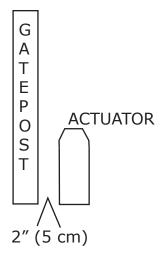
c. Mount the loosely-assembled bracket to the platform.

CAM/ACTUATOR INSTALLATION AND ADJUSTMENT wide gate (continued)



measure from top of landing to top of square tube (platform)

d. Start with the platform 1.5" (4 cm) below the landing (see left, and Technical Specifications at the rear of this manual).



e. Slide the actuator *horizontally* so that a 2" (5 cm) gap exists between the gate post and the flat edge of the actuator.

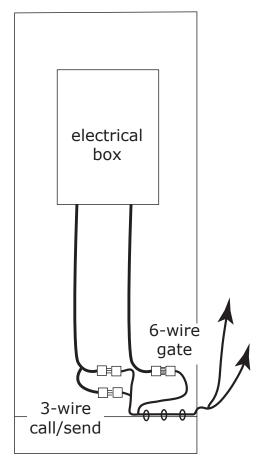


- f. Slide the actuator *vertically* (up) until its angled edge just touches the cam (see left).
- g. Tighten all actuator/cam hardware.
- 2. Run the vertical platform lift up.

NOTE: When the unit reaches the landing level, the gate should be unlocked.

3. Re-verify clearances and check that the gate and platform align properly.

WIRING THE CALL/SEND AND THE GATE



Bruno provides wiring harness kits for the call/ send and the gate. You will use the items in the kits to connect to the wiring harness near the bottom of the lift.

The 6-wire harness connects to the gate (includes call/send wiring).

The 3-wire harness connects to the remote call/send.

CALL/SEND

- 1. Remove the 3-wire harness from the kit.
- 2. Connect this harness to the corresponding harness from the VPL electrical box.
- 3. Route the harness through the plastic clips located at the base of the VPL tower.
- 4. Thread the harness through the punchout in the side of the tower.

NOTE: There is an access hole on each side of the tower. You may use either side.

- 5. Continue routing the harness to location where the call/send box will be mounted.
- 6. Skip to "Mounting the Call/Send Box" instructions on the next page.

WIRING THE CALL/SEND AND THE GATE (continued)

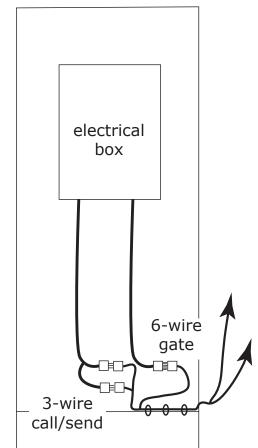




- 2. Remove the plug from the hole on the side of the tower through which you will route the harness.
- 3. Thread the harness through the punchout in the side of the tower.

NOTE: There is a punchout on each side of the tower. You may use either side.

- 4. Connect this harness to the corresponding harness from the VPL electrical box.
- 5. Route the harness through the plastic clips located at the base of the VPL tower.
- 6. Continue routing the harness to the gate.
- 7. At the gate, remove the electrical access panel in the gate tube (if necessary).
- 8. Gently pull the gate wires through the access hole in the gate tube.
- 9. Connect the gate wiring to the VPL harness, matching the wire colors.
- 10. Gently push the connected wiring into the gate tube.
- 11. Mount and secure the gate electrical access panel.



MOUNTING THE CALL/SEND BOX

- Mount the call/send box to the wall or other permanent mounting surface [at least 3' (1 m) away from the platform] using the screws provided.
- 2. Using the kit provided, prepare the wire ends of the 3-wire harness.
- 3. Attach the wires as appropriate to the switches on the box cover (white=up; black=down; red=switch).

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INSTALLATION

MOUNTING THE CALL/SEND BOX (continued)

- 4. Test switch operation.
- 5. After verifying correct switch operation, mount the cover to the box using the provided screws. Make sure the housing openings are resealed.
- 6. Retest switch operation.

SECURING THE UNIT AND TESTING

- 1. Run the VPL-3100 up and down several times to final check all clearances.
- 2. While holding the gate wheel in the unlocked position, run the platform down until it stops. The unit should NOT continue downward more than 2" (5 cm) with the gate unlocked.
- 3. Anchor the VPL-3100 to the concrete base using sleeve anchors such as 1/2"-diameter red head anchors (not provided).



4. Perform the following tests prior to releasing the VPL-3100 to the end-user:

Underside Panel Sensors

Push on the underpanel with an upward pressure. This action should stop the lift's downward movement (only), at all control stations.

Perform this test several times, each time pressing on a different area of the under panel.

• Top Housing Cover Sensor

Verify that all controls become inoperable when the top housing cover is removed.

• Final Limit Switch.

Press the *top* final limit switch and verify that the VPL-3100 becomes inoperable from all directions.

• Door/Gate Interlock

Verify that when the door is open, the VPL-3100 will not operate in any direction.

Make sure the door only opens when the platform is at the top landing.

Platform Key Switch

Verify that when the key is turned to the OFF position, the platform control becomes inoperable.

• Call/Send Controls (if applicable)

Verify that when the key switch is turned to the OFF position, station controls become inoperable.

COMPLETING THE INSTALLATION

- 1. Remount the VPL-3100 electrical box cover (if previously removed).
- 2. Remount all panels.
- 3. Clean the work area.
- 4. Train the end-user on the proper and safe operation of the VPL-3100. Have him/her operate the unit while you are present to answer any questions or address any concerns.

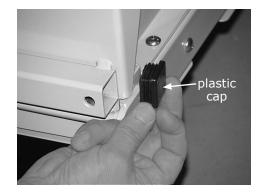
NOTE: When shipped from the factory, the ramp is installed on the platform.

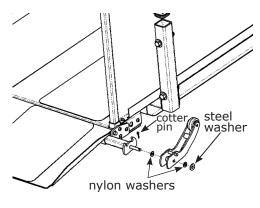
If the installation requires the ramp to be mounted on the opposite side of the platform, follow the instructions below.

Vertical Bar

- 1. Remove the (4) screws securing the vertical bar to the VPL tower.
- 2. Remove the bar.
- 3. Reinsert and tighten the (4) screws in the holes just vacated.
- 4. On the opposite side of the tower, remove the (4) screws from the bar mounting location.
- 5. Place the bar in the mounting location.
- 6. Secure the vertical bar with the (4) screws removed in Step 5.

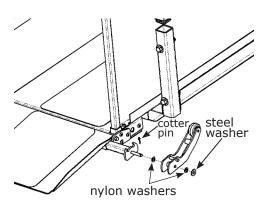




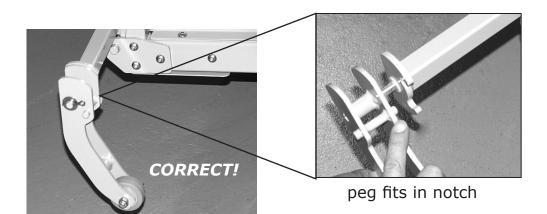


Ramp Actuator Wheel

- Raise the platform high enough to allow removal of the ramp and ramp actuator.
- 2. Remove 1-1/4" (32 mm) black square plastic cap from the end of the ramp tube.
- 3. On the actuator wheel end, remove the cotter pin.
- Remove the (2) washers (1 steel, 1 nylon) on the outside of the actuator wheel bracket.
- 5. Remove the entire actuator wheel/bracket.
- 6. Remove the second (inside) nylon washer.
- 7. Remove the (2) screws securing the ramp tube.
- 8. Remove the ramp tube.
- Insert the black square plastic cap in the opening just created by removal of the ramp tube (<u>i.e.</u>, on the other end of the tube from which you removed the cap in Step 2).
- 10. Insert the ramp tube in the opening on the opposite side of the ramp.
- 11. Insert and tighten the (2) screws to secure the ramp tube.
- 12. Insert (1) nylon washer on the ramp tube peg.



- 13. Mount the actuator wheel/bracket onto the ramp tube.
 - NOTE: Orientation is important! Make sure the wheel is mounted as shown lower left.
- 14. Insert (1) nylon washer then (1) steel washer onto the peg (steel washer on the outside).
- 15. Insert the cotter pin through the opening in the end of the ramp tube peg.
- 16. Bend the ends of the cotter pin to hold it securely in place.







Once the bracket screws are loosened, hold onto the ramp. It is now free and will slide off the platform.

Also, keep track of the (2) nylon washers on the ramp tube peg. They can easily slide off and be misplaced.



above: (3) screws to remove from bracket.

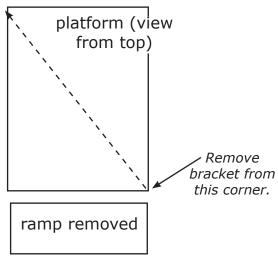
below: bracket removed, showing fixed shoulder washer and loose washer on peq (don't loose it!)



Ramp

- 1. On the side opposite the actuator wheel, remove the (3) screws securing the bracket (see lower left).
- 2. While holding the ramp, slide the bracket off the peg (see note to left).
- 3. Slide the ramp out of the bracket on the other side.
- 4. Set the ramp on the ground.
- 3. Take the screws and washer removed in Step 1 and insert back into their respective holes to secure the platform barrier.
- Mount the bracket just removed on the corner diagonally across from its original corner.

Remount bracket to platform in diagonal corner.



- 5. Remove the second bracket (same side as the ramp actuator wheel).
- 6. Lay this second bracket near the corner diagonally opposite the corner from which it was just removed.
- 7. Move the ramp to the opposite side of the platform.

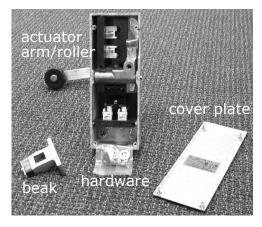
Ramp

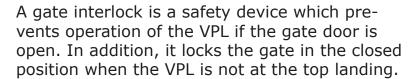
- 8. Slide the ramp into the bracket mounted in Step 4.
- 9. Make sure there is a nylon washer on the peg, and that the fixed shoulder washer on the bracket is flush against this loose nylon washer.
- 10. Holding the ramp in position, slide the second bracket onto the ramp peg, making sure that the shoulder washer on the bracket is flush against the loose nylon washer.
- 11. Secure the second bracket to the platform using the (3) screws.

OPTIONAL GATE INTERLOCK

Know Your Hand!

Gates with a left-hand swing require a right-hand interlock, and vice versa.





A gate interlock is required to comply with the residential elevator code.

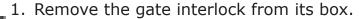
Bruno gates include a gate interlock.

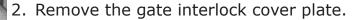
For customers installing a non-Bruno gate not equipped with the required gate interlock (or equivalent mechanical interlock), Bruno offers a gate interlock as an optional purchase.

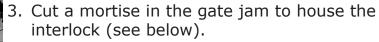
Installation of optional gate interlock

NOTE: This is a **mechanical interlock** that is released by the motion of the platform.

A series of electrical contacts prohibits platform operation when the interlock is engaged.







NOTES: a. When installed, the interlock actuator wheel must be approximately 6-7" (15-18 cm) above the landing.

b. The interlock must be flush with the jam (see photos below).

4. Loosely place the interlock in the mortise.

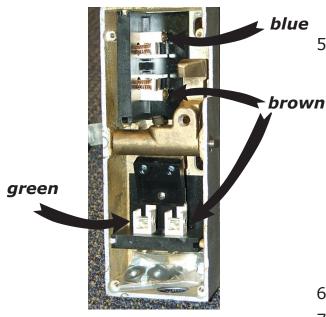


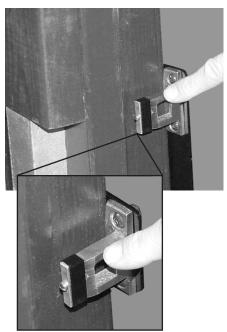
actuator w measures 6

5-18 cm



OPTIONAL GATE INTERLOCK







- 5. Route the wiring from the VPL to the gate, creating a chase in the gate jam.
 - brown wire = common to door closed switch and door locked switch
 - blue wire = door closed switch (<u>UPPER SWITCH</u>)
 - green wire = door locked switch (LOWER SWITCH)
 - (3) remaining wires (black/down, red/common and white/up) = call/ send (previously mounted)
- 6. Mount and secure the interlock cover plate.
- 7. Secure the interlock to the jam.
- 8. Mount the beak to the beak mounting plate using the (2) screws and (2) nuts provided.

 NOTE: The beak bevel must face the outside.
- 9. Mount the beak/beak mounting plate unit to the gate door as shown (hardware not provided).
- 10. Assemble and mount the rod and actuator arm/roller.
- 11. Tighten the actuator arm set screw and top screw so that the wheel sits at a height of approximately 6-7" (15-18 cm) above the landing.
- 12. Cut off the excess rod.
- 13. File any sharp edges from the rod end.
- 14. Once the gate interlock is mounted and wired, test operation.

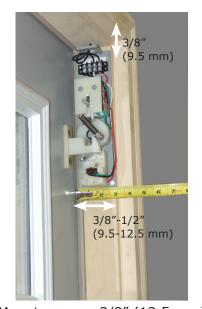
When operating properly, the interlock actuator contacts the wheel arm to open the gate lock. If necessary, adjust the actuator and wheel arm for proper contact.

OPTIONAL ELECTRIC DOOR INTERLOCK



NOTE: Interlocks are right-hand and left-hand specific. Make sure you have the correct one for your installation.





Mount approx. 3/8" (12.5 mm) from top of frame and 3/8" to 1/2" (9.5 to 12.5 mm) from face of door.

- 1. Remove the interlock cover. Note that the longer screw inserts in the bottom and the shorter screw in the top.
- 2. Place a black grommet (provided) in the wire pass-through hole at the top of the interlock.
- 3. Using (4) screws, mount the interlock flush with the door frame as shown to the left:
 - approximately 3/8" to 1/2" (9.5 to 12.5 mm) from the face of the door;
 - approximately 3/8" (9.5 mm) from the top of the frame.

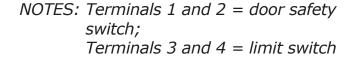


- 4. Hook the beak under the interlock pin as shown.
- 5. Close the door
- 6. Mark around the beak as shown.

OPTIONAL ELECTRIC DOOR INTERLOCK



- 7. Disengage the beak from the interlock and hold it in place in the marked area on the door.
- 8. Mark the beak holes.
- 9. Drill (2) 3/8" holes where marked.
- 10. From the back side of the door, insert the threaded sleeves (provided) in the holes just drilled.
- 11. Using the screws provided, mount the beak to the door. Tighten the screws in the threaded sleeves.
- 12. Referring to illustration ILS-00740 provided with the kit, connect the wiring from the VPL to the interlock. Drill holes in the door frame as necessary.



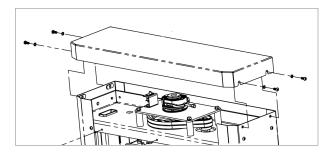
- 13. Close the door and test interlock operation.
- 14. Remount the interlock cover (longer screw in bottom hole).

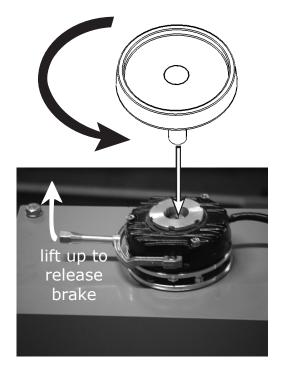


completed installation

EMERGENCY AND COLD WEATHER OPERATION

EMERGENCY OPERATION





OPERATING IN COLD WEATHER

Bruno offers an optional hand wheel for the VPL-3100 to serve in case of a power failure or non-operation.

If your lift is not equipped with a hand wheel and you would like to order one, please contact an authorized Bruno dealer. Contact a dealer as well if you require assistance in operating the hand wheel.

Using the hand wheel

- 1. Loosen the (2) screws on each side of the *top cover* (see *left*).
- 2. Slide the *top cover* up and off.
- 3. Locate the emergency hand wheel on top of the lift.
- 4. Insert the hand wheel into the brake shaft opening as shown.
- 5. Release the brake by lifting up on its release lever (see left).
- 6. Turn the wheel **counterclockwise** to lower the lift.
- 7. After safe exit of the passenger and mobility device, determine and remedy the cause of the incorrect operation.
- 8. Lower the brake release lever to re-engage the brake.
- 9. Remove and store the emergency hand wheel.
- 10. Reinstall the top tower cover and secure using the (4) screws shown on the previous page.

If the temperature falls below 0° F (-18° C):

- 1. Raise the platform to the mid-way position when the lift is not in use.
- 2. Run the lift down, then all the way up, then to the desired level to board the platform.
 - This will warm up the nut and screw mechanism to allow proper operation of the lift.

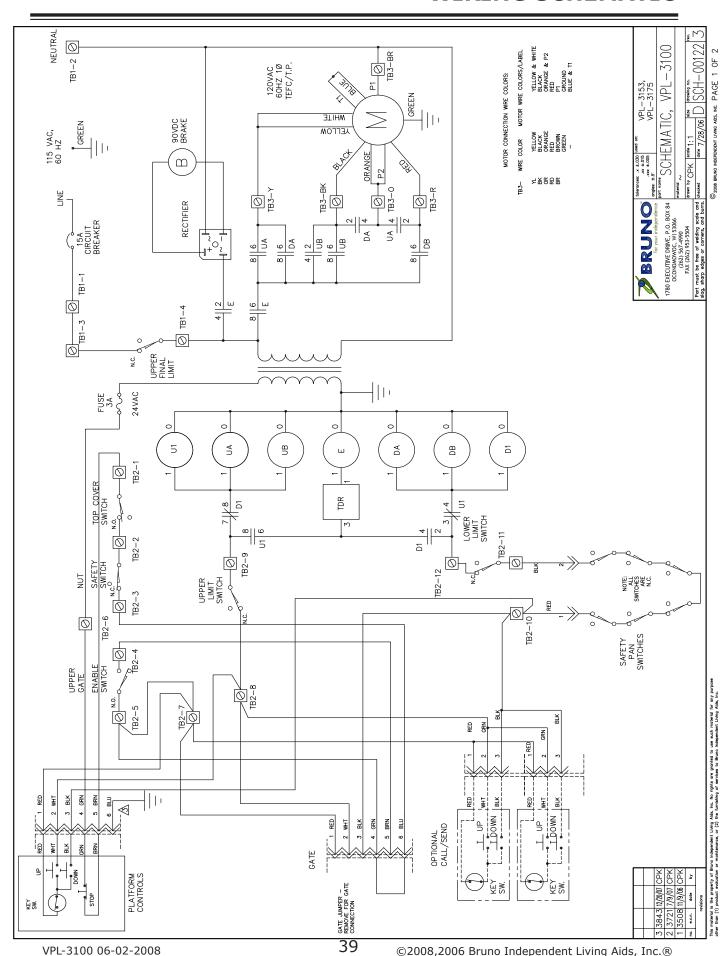
PROBLEM	PROBABLE CAUSE	REMEDY
Platform does not operate properly in UP direction	Incorrect outlet specifications	Outlet must be on a dedicated circuit rated for 15A service.
	Drive belts too loose	Increase belt tension or replace.
	Faulty motor	Replace the motor.
	Platform or lower landing gate/door switch not engaged	Adjust gate/door align- ment to maintain contact with gate/door switch.
	Broken gate/door switch	Replace the switch.
	Faulty upper limit switch	Replace the switch.
	Thermal overload tripped by motor	Reset the thermal overload switch.
	UP relay(s) [UB] faulty	Replace UB.
	Lower final limit switch engaged	Disengage the lower final limit switch.
Platform coasts after controls are disengaged	Brake torque setting drift	Adjust brake torque setting.
	Worn brake	Replace brake.
Platform does not operate properly in the DOWN direction	Top landing gate/door switch is not pressed	Adjust gate/door align- ment to maintain contact with the gate/door switch.
	Broken gate/door switch	Replace the switch.
	Underside panel switches compressed	Remove any foreign object contacting the underside panel or causing the panel to jam upward.
	Faulty underside panel switch	Replace the switch.
	Defective lower limit switch	Replace the switch.
	Incorrect wiring between the control box and the landing gate	Recheck all wiring connections.
	Top final limit switch engaged	Disengage the switch.

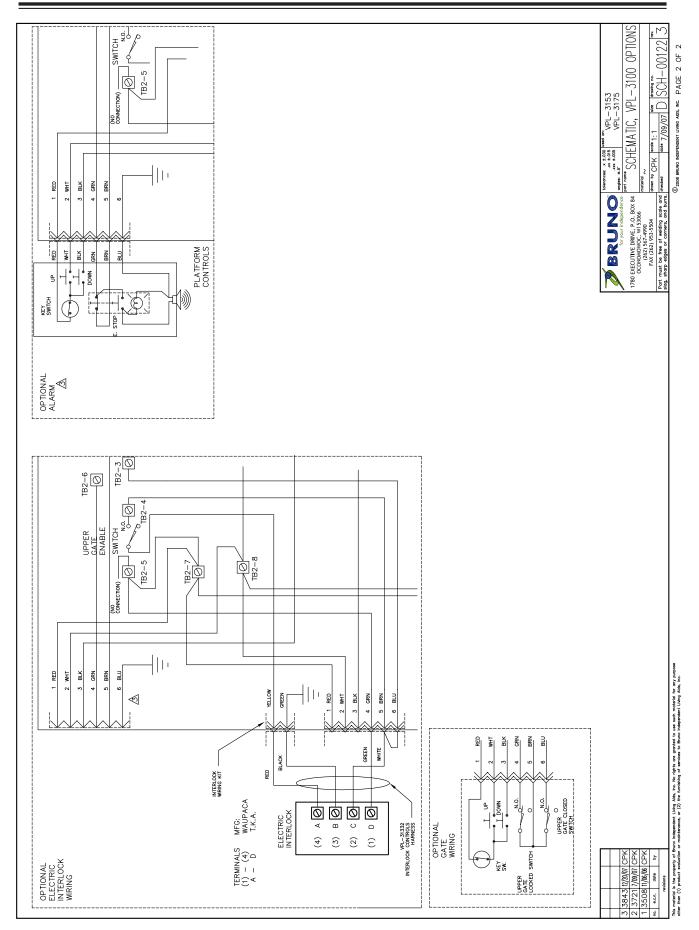
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TROUBLESHOOTING

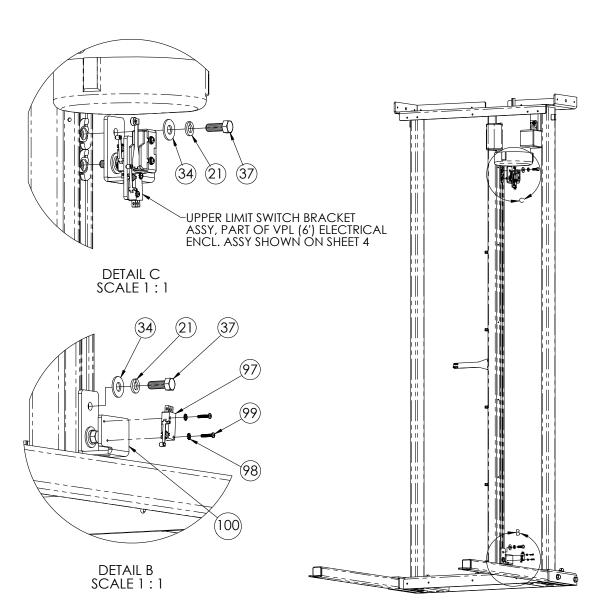
PROBLEM	PROBABLE CAUSE	REMEDY
Platform does not operate properly in the UP or the DOWN direction	Blown fuse	Check for 24V short. Replace the fuse.
	Internal circuit breaker tripped	Reset circuit breaker.
	Top housing cover sensor switch not engaged (closed by housing cover)	Mount the top housing cover.
	Broken top housing cover sensor switch	Replace the switch.
	Incorrect field wiring	Recheck all wiring con- nections.
	Top or bottom final limit switch engaged	Disengage the final limit switch.
	Faulty motor	Replace the motor
	Faulty gate/door switch	Replace the switch.
	Faulty brake solenoid	Replace the solenoid.
	Gate/door open	Close the gate/door.
	E-Stop button inadver- tently depressed	Pull out E-Stop button.
Landing controls (and platform controls) do not operate	Incorrect wiring in controls	Recheck all wiring con- nections.
	Broken or loose wire leads to landing controls	Use continuity tester to check for loose or broken wire leads.
	Faulty key switch	Replace the key switch.
Platform controls (and landing controls) do not operate	Key switch not turned to ON position	Turn key switch to ON position.
	Broken or loose wire leads to controls.	Use continuity test to check for loose or broken wire leads.
	Faulty control switches	Replace the switch.
	E-Stop button inadver- tently depressed	Pull out E-Stop button.
Unit emits squealing noise	Insufficient lubrication	Apply Lubriplate® every 6" (15 cm) along the length of the screw.

WIRING SCHEMATIC





ITEM NO.	QTY.	PART NO.	DESCRIPTION
21	4	SSLW-38001	3/8" SPLIT LOCK WASHER (SS)
34	4	SFSW-38001	3/8" FLAT WASHER (SS)
37	4	SHCS-38603	3/8-16 X 1" LG HEX HEAD CAP SCREW (SS)
97	1	PBS-00116	PUSH-BUTTON SWITCH (WATERTIGHT W/ROLLER)
98	2	SETW-05001	#5 EXTERNAL TOOTH WASHER (SS)
99	2	SPPM-05402	#5-40 X .63" LG PHILLIPS PAN HEAD MACHINE SCREW (SS)
100	1	VPL-31063	LOWER SWITCH BRACKET

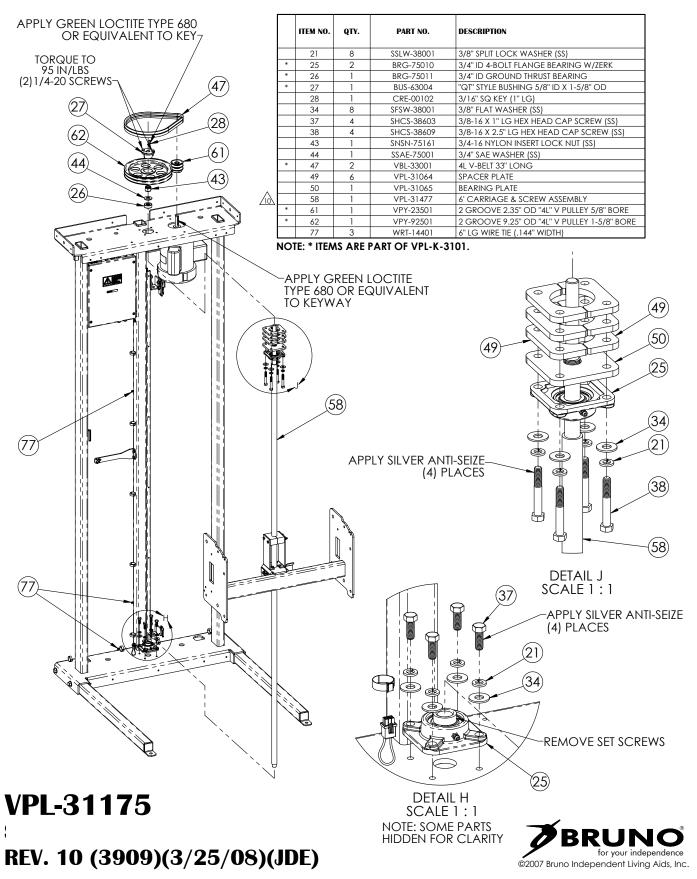


VPL-31175

REV. 10 (3909)(3/25/08)(JDE)

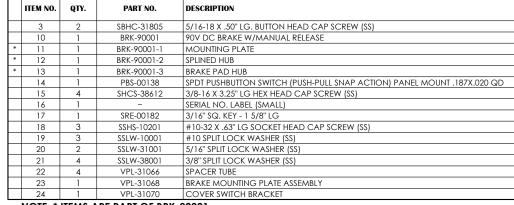
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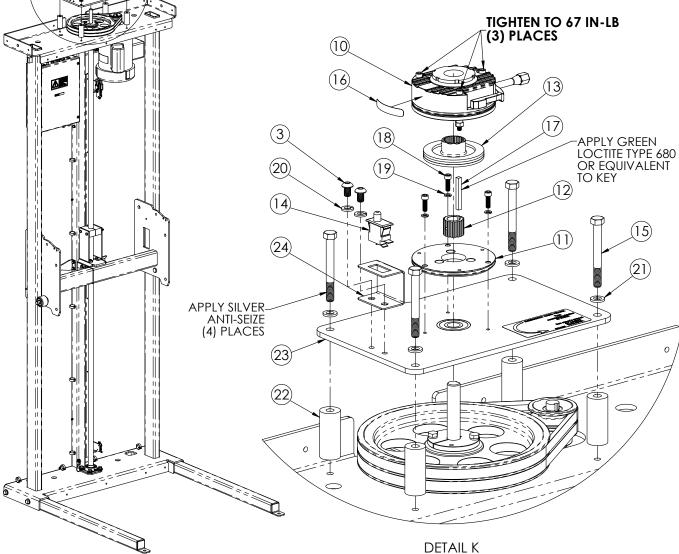


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VPL-3100 06-02-2008







VPL-31175

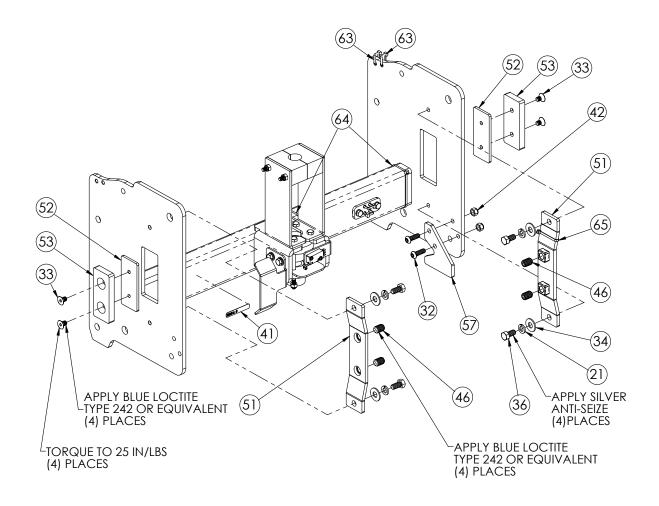
VPL-3100 06-02-2008

REV. 10 (3909)(3/25/08)(JDE)



SCALE 1:1

	ITEM NO.	QTY.	PART NO.	DESCRIPTION
	21	4	SSLW-38001	3/8" SPLIT LOCK WASHER (SS)
/10\	32	2	SBHC-31803	5/16-18 X 1" LG BUTTON HEAD CAP SCREW (SS)
	33	4	SFHS-31801	5/16-18 X .50" LG FLAT HEAD CAP SCREW (SS)
	34	4	SFSW-38001	3/8" FLAT WASHER (SS)
	36	4	SHCS-38602	3/8-16 X .75" LG HEX HEAD CAP SCREW (SS)
	41	1	~	SERIAL NO. LABEL (SMALL)
/10	42	2	SNSN-31181	5/16-18 NYLON INSERT LOCK NUT (SS)
	46	4	SSSS-50302	1/2-13 X .75" LG SET SCREW (SS)
	51	2	VPL-31081	GUIDE PAD ALIGNMENT WELDMENT
	52	2	VPL-31083	GUIDE PAD PLATE
	53	2	VPL-31084	INSIDE GUIDE PAD
10	57	1	VPL-31398	TRAVELING CABLE DEFLECTOR
	63	2	WRT-14401	6" LG. WIRE TIE (.144" WIDTH)
	64	2	WRT-14402	11" LG. WIRE TIE (.144" WIDTH)
	65	1	WRT-14402	11" LG. WIRE TIE (.144" WIDTH)

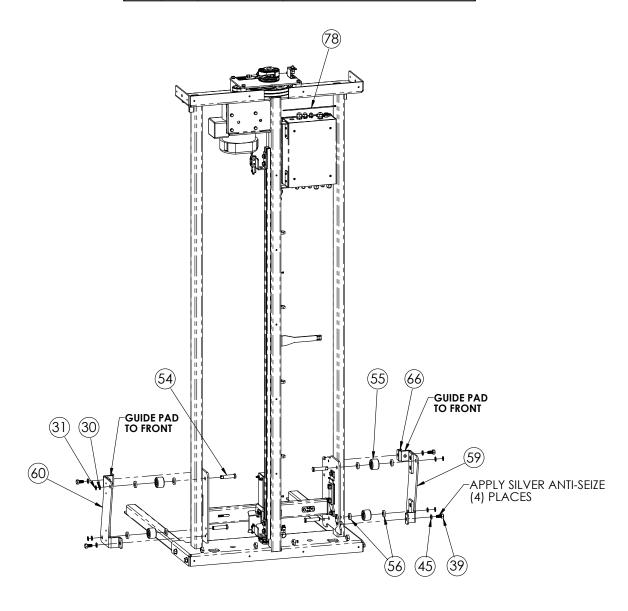


VPL-31175

REV. 10 (3909)(3/25/08)(JDE)



ITEM NO.	QTY.	PART NO.	DESCRIPTION
30	4	PSW-63001	5/8" PRECISION SUPPORT WASHER
31	4	RTR-63002	5/8" RETAINING RING (EXTERNAL/HEAVY DUTY)
39	4	SHCS-50301	1/2-13 X 1" LG HEX HEAD CAP SCREW (SS)
45	4	SSLW-50001	1/2" SPLIT LOCK WASHER (SS)
54	4	VPL-31087	WHEEL AXLE
55	4	VPL-31090	VPL WHEEL ASSEMBLY
56	8	VPL-31181	WHEEL SPACER
59	1	VPL-31480L	LEFT WHEEL CLEVIS ASSEMBLY
60	1	VPL-31480R	RIGHT WHEEL CLEVIS ASSEMBLY
66	1	WRT-14402	11" LG. WIRE TIE (.144" WIDTH)
78	1	WRT-14402	11" LG. WIRE TIE (.144" WIDTH)

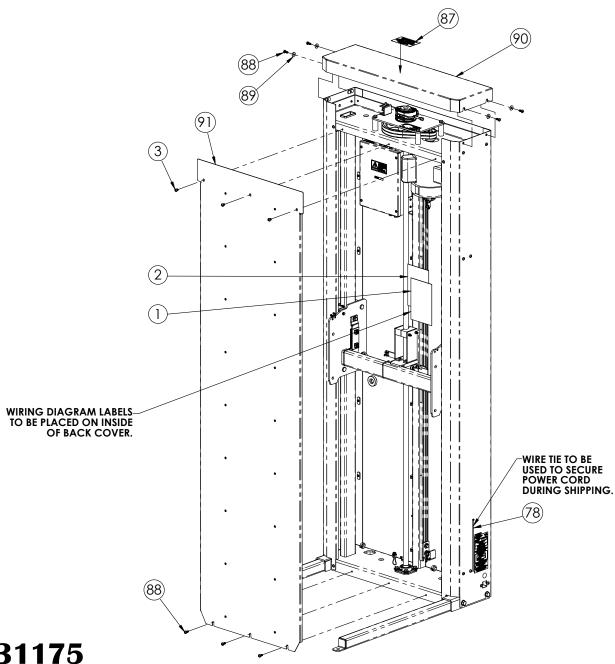


VPL-31175

REV. 10 (3909)(3/25/08)(JDE)



ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	LBL-00167	8 1/2" X 11" VPL WIRING DIAGRAM LABEL
2	1	LBL-00177	8 1/2" X 11" VPL ELECTRICAL PANEL ASSY LABEL
3	3	SBHC-31805	5/16-18 X .50" LG. BUTTON HEAD CAP SCREW (SS)
78	1	WRT-14402	11" LG. WIRE TIE (.144" WIDTH)
87	1	DEC-00328	MODIFICATION BY DEALER ONLY DECAL
88	7	SBHC-31802	5/16-18 X .75" LG BUTTON HEAD CAP SCREW (SS)
89	4	SFSW-31001	5/16" FLAT WASHER (SS)
90	1	VPL-31154	TOP COVER WELDMENT
91	1	VPL-31479	6' FRONT COVER ASSEMBLY



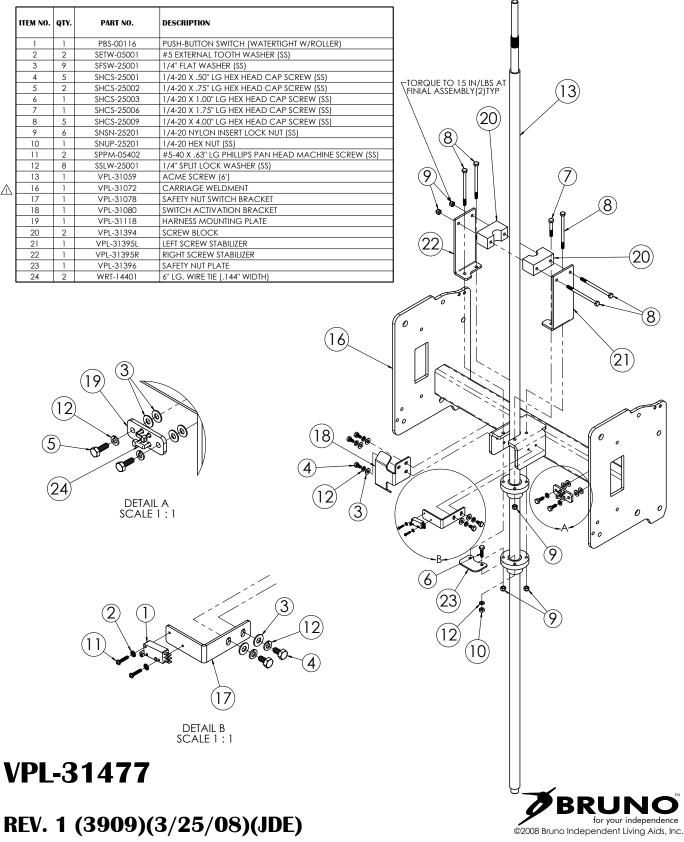
VPL-31175

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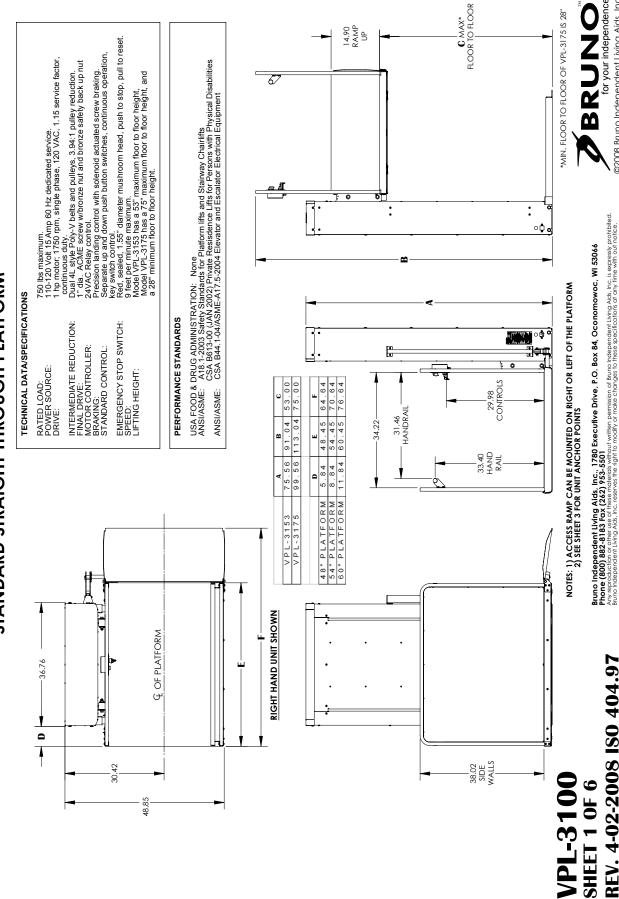
VPL-3100 06-02-2008

6' CARRIAGE & SCREW ASSEMBLY



47

BRUNO VERTICAL PLATFORM LIFT VPL-3100 SERIES STANDARD STRAIGHT THROUGH PLATFORM



REV. 4-02-2008 ISO 404.97

for your independence

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' MIN. FLOOR TO FLOOR OF VPL-3175 IS 28"

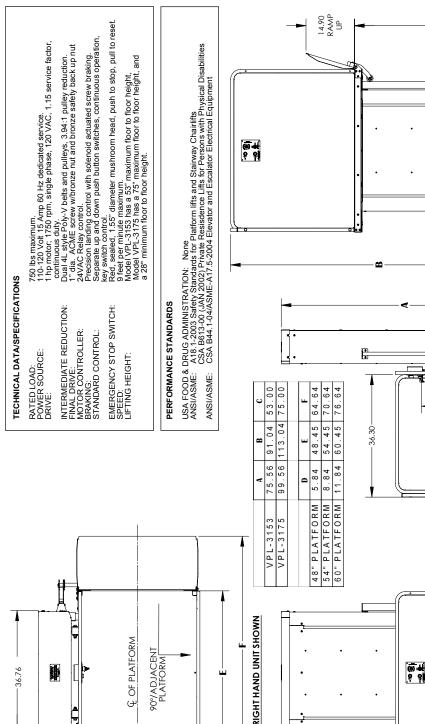
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29.98 Controls

FLOOR TO FLOOR

C MAX *

BRUNO VERTICAL PLATFORM LIFT VPL-3100 SERIES 90° / ADJACENT EXIT PLATFORM



NOTES: 1) ACCESS RAMP CAN BE MOUNTED ON RIGHT OR LEFT OF THE PLATFORM 2) SEE SHEET 3 FOR UNIT ANCHOR POINTS

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VPL-3100 SHEET 2 OF 6

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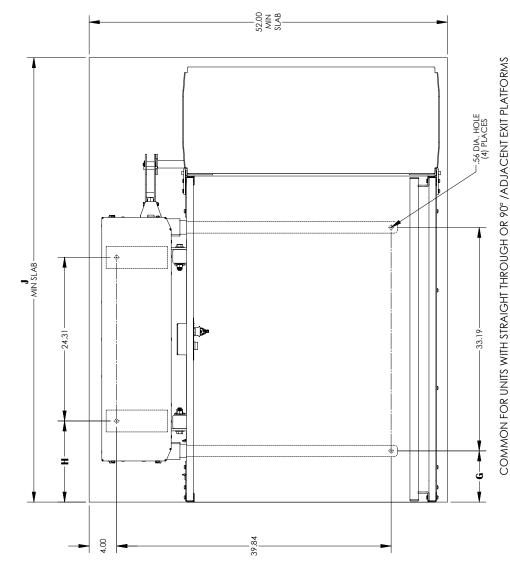
38.02 SIDE WALLS

30.42

49.60

BRUNO VERTICAL PLATFORM LIFT VPL-3100 SERIES ANCHOR POINT LOCATIONS

	9	Н	ſ
48" PLATFORM	7.60	12.04	00'99
54" PLATFORM	10.60	15.04	72.00
60" PLATFORM	13.60	18.04	78.00



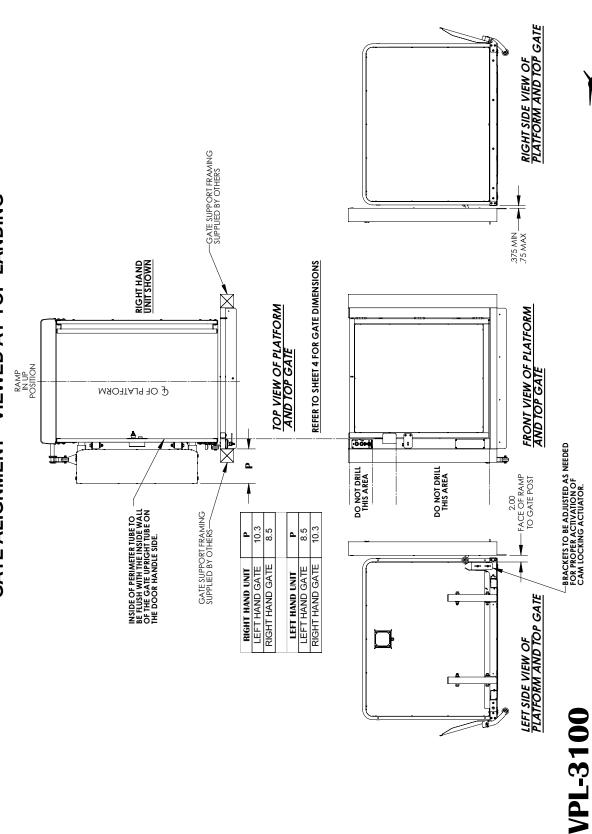
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for your independence ©2008 Bruno Independent Living Aids, Inc. BRUNO NOTE: (2) 1.5" X 1.5" X 5" 12GA. CHANNEL SUPPLIED FOR MOUNTING TO SUPPORT STRUCTURE. RIGHT SIDE VIEW TOP GATE BRUNO VERTICAL PLATFORM LIFT VPL-3100 SERIES LEFT HAND GATE DETAIL - VIEWED AT TOP LANDING 1/4" HEX BOLTS (BOTH SIDES) Bruno Independent Living Aids, Inc., 1780 Executive Drive, P.O. Box 84, Oconomowoc, WI 53066 Phone (800) 882-8183 Fax (262) 953-5501 Any reproduction or other was of these materials without written permission of Bruno Independent Living Ads, Inc. is expressly prothibited. Bruno Independent Living Ads, Inc. is expressly prothibited. Bruno Independent Living Ads, Inc. reserves the right to modify or make changes to these specifications at any time with our notice. 5.07 1/4" COUNTER SUNK BOLTS TOP VIEW OF TOP GATE FRONT VIEW OF TOP GATE K Clear Opening - ÖÖ+ 1.5" SQ. X 12GA. STEEL FRAME-1/4" COUNTER SUNK BOLT CALL/SEND CONTROL 16 GA. STEEL SHEET METAL **A** 42.0 3" X 1.5" X 12GA Gate uprights-**M** 40.5 REV. 4-02-2008 ISO 404.97 38.5 34.0 40.0 **SHEET 4 0F 6 VPL-3100** LEFT SIDE VIEW OF TOP GATE 3/16" THICK MOUNTING FLANGE CAM LOCKING ACTUATOR 34" GATE 40" GATE 51 VPL-3100 06-02-2008 ©2008,2006 Bruno Independent Living Aids, Inc.®

BRUNO VERTICAL PLATFORM LIFT VPL-3100 SERIES GATE ALIGNMENT - VIEWED AT TOP LANDING

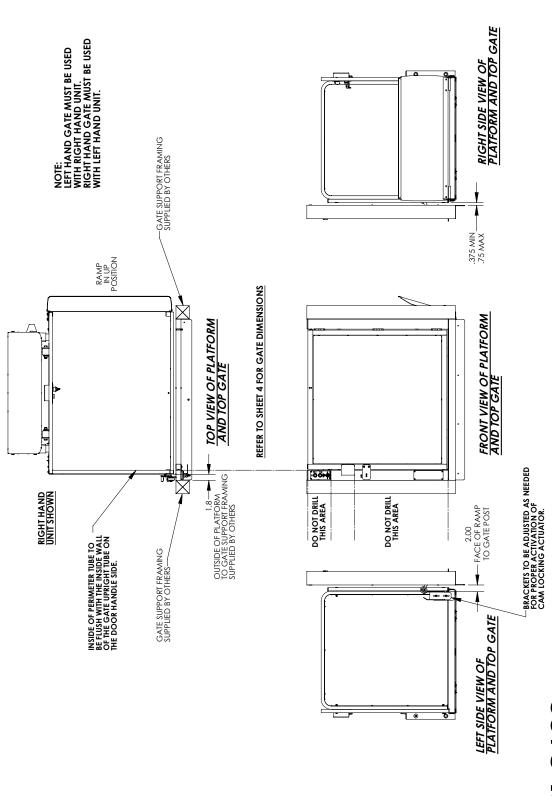




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REV. 4-02-2008 ISO 404.97 **SHEET 5 OF 6** VPL-3100 06-02-2008

BRUNO VERTICAL PLATFORM LIFT VPL-3100 SERIES GATE ALIGNMENT - VIEWED AT TOP LANDING



BRUNO

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VPL-3100SHEET 6 OF 6
REV. 4-02-2008 ISO 404.97

2 & 1 BRUNO GOLD LIMITED WARRANTY 2 Years Major Components — 1 Year Parts for Bruno Vertical Platform Lift

Bruno Independent Living Aids, Inc. ("Bruno"), warrants to the original purchaser of a Bruno Vertical Platform Lift that the Bruno Vertical Platform Lift is free from defects in material and workmanship for a period of one year from date of purchase. In addition, Bruno warrants that the motor, Acme screw and drive nut, brake, pulleys, belt and screw bearings (the "Major Components") will be free from defects in materials and workmanship for a period of two years from the date of purchase.

The exclusive remedy for a defect in a Bruno Vertical Platform Lift shall be the repair or replacement, at the option of Bruno, of the defective part or component. After the first 30 days of this warranty, only parts and components are covered. This warranty does not cover labor and other services after the initial 30 days. If repair or replacement of a Bruno Vertical Platform Lift is not commercially practical or cannot be timely made, Bruno may elect to refund the purchase price of the Bruno Vertical Platform Lift instead of repairing or replacing the Bruno Vertical Platform Lift.

IN NO EVENT SHALL BRUNO BE RESPONSIBLE FOR INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, WHETHER SUCH DAMAGES ARISE FROM CLAIMS BASED ON CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR PRODUCT LIABILITY. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

ALL IMPLIED WARRANTIES, INCLUDING ANY WARRANTY OF MERCHANT-ABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN THEIR DURATION TO THE LENGTH OF THE WARRANTY STATED ABOVE FOR THE AFFECTED COMPONENT. Some states do not allow limitations on how long an implied warranty lasts so the above limitation may not apply to you.

To obtain warranty service, you must follow these procedures:

- 1. Obtain return authorization by calling your local Bruno dealer;
- 2. Return the Bruno Vertical Platform Lift, freight prepaid, to the address provided by your Bruno dealer or Bruno with proof of purchase indicating the date purchased.

Bruno will pay for shipping back to the purchaser within the continental United States and Canada if a defect in material or workmanship is discovered. Return freight and repair charges will be the responsibility of the purchaser if the problem is not covered by warranty.

This warranty does not cover damage or failure caused by misuse, abuse, accidents, physical damage, modifications not made by Bruno, damage in shipment, or repairs undertaken by anyone other than Bruno factory employees or authorized distributors. The "original purchaser" of a Bruno Vertical Platform Lift that is leased or rented shall be the person or entity acting as the lessee or rental provider.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Bruno specifically does not authorize any person to extend the time or scope of this warranty.

For further information regarding this limited warranty, please contact Bruno by calling 1-800-882-8183 or writing to Bruno at the following address:

Bruno Independent Living Aids, Inc. Attention: Service Department 1780 Executive Drive, P.O. Box 84 Oconomowoc, WI 53066 USA



First in Performance. Built to Last!



Straight & Custom Curved Rail Stairlifts



Over 25
Different
Vehicle Lift
Solutions



Vertical Platform Lift



Turning Automotive Seating



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