

E-Series

Solid Platform

Thank you for choosing an

E - SERIES

from BraunAbility!

The manual that follows is an important, integral part of the product, providing you with information on how to perform accurate and safe installation. Please read through the manual carefully before starting your work.

If you have any questions about your customer's adaptation, please feel free to contact us. Your feedback is important to us. It helps us in our work of continuously improving our product and its installation. You can find more information about us and our range of vehicle adaptation solutions by visiting www.braunability.eu.

Once again, thank you for placing your confidence in our products!



This product is designed for a specific purpose and should only be used accordingly.

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The identification plate shown in the figure has been applied to the machine, covered by this documentation. This plate is positioned on the dredger carcass so as to be immediately identified

This product is manufactured by Olmedo Special Vehicles S.p.A. licensed by BraunAbility®. Consult your local BraunAbility® dealer for the warranty policy.

Produced Under BraunAbility License By:

Olmedo S.p.A

Reggio Emilia - ITALY

Not for Sale In U.S.

MODEL

SERIAL NUMBER

MFG DATE REV

→ Model No. _____

→ Serial No. _____

→ Rev. _____

→ Date of Manufacture _____

Sample Serial Number Identification Tag

WARNINGS FOR THE OPERATOR

This manual is the property of the manufacturer. Reproduction and transmission by any mechanical, electronic or other means is prohibited without the written authorisation of the manufacturer. The purchaser shall be authorised to photocopy and distribute the necessary copies to operators, with the obligation to prominently display the words "for internal use by the company (company name)".

It is supplied in a single original copy, unless otherwise agreed upon in the order.

The manual is delivered with the Lift, of which it is an integral part, and must accompany it even if it is transferred. It must be kept throughout the life of the machine (from placement on the market until demolition) and stored in a safe and protected place. In the event of loss, a duplicate must be requested from the manufacturer, who will provide it and charge for the cost.

This technical documentation comprehensively illustrates the main characteristics of the machine so that the purchaser can make the best and safest use of its performance throughout its working life. It is intended for all operators dealing with the machinery during handling, transport, installation, operation, adjustment and dismantling, as well as those responsible for maintenance and cleaning operations. It is therefore essential that these operators carefully read the instruction manual for use and maintenance before carrying out any operation.

The manufacturer accepts no liability for any damage caused to persons and/or the environment as a result of non-compliance with the instructions contained in this manual.

The manufacturer reserves the right to make any changes and improvements deemed necessary for commercial and/or technical reasons at any time and without prior notice. Therefore, the data and information given below may be subject to changes and/or updates.

WARRANTY

The manufacturer guarantees that the Lift was designed and built for many years of trouble-free use and has been successfully tested.

If faults should occur during the specified warranty period, the manufacturer undertakes to repair or replace, free of charge, any parts showing early breakage or wear due to faulty materials, faulty workmanship or faulty assembly.

No warranty is granted for parts whose breakage or premature wear and tear is due to:

- Failure to comply with the instructions contained in this operating and maintenance manual.
- Lack of or incorrect maintenance.
- Use of unsuitable tools for scheduled and unscheduled maintenance.
- Tampering or modifications carried out or commissioned without specific approval by the manufacturer.
- Installation of non-original spare parts.

Installed electrical equipment is also covered by warranty under the conditions set out in this chapter, whereas for commercial equipment purchased from external suppliers, the manufacturer grants the purchaser the same warranty as granted by the suppliers to the manufacturer.

The manufacturer reserves the right to make changes at any time in order to improve the functionality of its production and to modify the information and data in this instruction manual without prior notice, which does not constitute a commitment on the part of the manufacturer.

For full warranty policy contact your dealer.

This manual describes the characteristics of the lifting platform for disabled persons to be installed on means of transport.

The structure is composed of a fixed base to be fixed to the vehicle and an articulated mechanism consisting of a platform and movable beams that are moved via a pair of hydraulic cylinders.

The structure is then completed by safety and retaining devices.

GEOMETRY

The structure consists of the following components

- **Fixed Base**

The component is made of a solid structural steel plate. The lower sheet is fastened securely to the floor of the vehicle on which it is installed.

- **Lower Arm**

The component is made of structural sheet steel. At the ends are the housings for the fixing pins. The upper ear, on the other hand, contains the pin for securing the movement cylinder rod.

- **Upper Arm**

The component is made of structural sheet steel. At the ends are the housings for the fixing pins.

- **Vertical Mast**

The component is made of welded structural steel plate. In the upper part are the pins for fixing the arms described above, while in the lower part the lifting platform is fixed.

- **Footplate**

The lifting platform, made of welded sheet and tubular steel, is divided into two half-pedestals to allow it to be closed in less space. There is a tie rod for securing the front part.

Safety Symbols**SAFETY FIRST!** Know that

The information contained in this manual and supplements (if included) is provided for your use and safety. Familiarity with proper installation, operation, maintenance and service procedures is necessary to ensure safe, trouble-free lift operation. Safety precautions are provided to identify potentially hazardous situations and provide instructions on how to avoid them.

⚠ WARNING

This symbol indicates important safety information regarding a potentially hazardous situation that could result in serious bodily injury and/or property damage.

⚠ CAUTION

This symbol indicates important information regarding how to avoid a hazardous situation that could result in minor personal injury or property damage.

NOTICE

Additional information provided to help clarify or detail a specific subject.



This symbol indicates that there are dangerous energy levels present inside the casing of this product. To reduce the risk of fire or electric shock, do not attempt to open the casing or gain access to areas where you are not instructed to do so. Refer servicing to qualified service personnel only.



This symbol indicates that a condition where damage to the equipment resulting in injury to the operator could occur if operational procedures are not followed. To reduce the risk of damage or injury, refer to accompanying documents, follow all steps or procedures as instructed.



This symbol indicates a condition where injury or damage could occur if contact is made with the hot surface.



This symbol indicates an area to avoid bodily contact to prevent injury.



This symbol indicates the presence of high pressure hydraulic hoses. Use appropriate personal protective equipment when working on the hydraulic system.



This symbol indicates the presence of a fire hazard. Avoid open flames or sparks when working with flammable materials to prevent injury or damage.



This symbol indicates that a device weighs in excess of 139kg (306 lbs). Use of a fork lift or hoist is required.

These symbols will appear throughout this manual as well as on the labels posted on your lift.
Recognise the seriousness of this information.

Installation and Safety Symbols

⚠ WARNING

If installation, maintenance, or repair procedures cannot be completed exactly as provided in this manual or if the instructions are not fully understood, contact BraunAbility immediately. Failure to do so may result in serious bodily injury and/or property damage.

- ⚠ WARNING** Read this manual, supplement(s) and decals of operating instructions on the lift before performing installation, operation, or service procedures.
- ⚠ WARNING** Use appropriate personal protective equipment when installing and servicing the lift.
- ⚠ WARNING** Remove any obstructions within the lift mounting/operating area prior to beginning installation procedures.
- ⚠ WARNING** Install lift and power platform in the fully folded position before removing the shipping straps.
- ⚠ WARNING** Do not fold or unfold the platform prior to securing the base plate mounting hardware.
- ⚠ WARNING** Check for obstructions such as gas lines, wires, exhaust, etc. before drilling or cutting during installation procedures.

- ⚠ WARNING** Route all cables away from exhaust system, other hot areas, moving parts, wet areas, etc.
- ⚠ WARNING** Risk of electrical shock or fire! Use extra care when making electrical connections. Connect and secure as outlined in the installation instructions and wiring diagrams.
- ⚠ WARNING** Adjust the platform angle and floor level positioning of the bridge plate before operating the lift with a passenger.
- ⚠ WARNING** Maintenance and repairs must be performed only by authorised service personnel.
- ⚠ WARNING** Follow the lift lubrication and maintenance schedule as outlined in this manual.
- ⚠ WARNING** Disconnect the power cable from the battery prior to servicing.
- ⚠ WARNING** Never modify (alter) a BraunAbility lift.
- ⚠ WARNING** It is absolutely prohibited for operators to tamper with these devices and remove them during normal use of the machine.
- ⚠ WARNING** Periodically check their efficiency.
- ⚠ WARNING** Replacement parts must be BraunAbility authorised replacements.
- ⚠ WARNING** Never install screws or fasteners (other than those supplied by the factory).
- ⚠ WARNING** Whenever replacing a hydraulic cylinder or seals, lower the platform fully.
- ⚠ WARNING** Failure to follow these safety precautions may result in serious bodily injury and/or property damage.



The lift must be installed, operated, and maintained as detailed in applicable manuals. Any use of equipment other than as instructed in this manual is prohibited.

The specifications below reflect CE standards. The lifts meet or exceed these requirements.

Operating Temperature

This equipment will operate in its intended environment at a minimum between -30°C and 65°C.

Relative Humidity

This equipment will operate correctly within an environment at 50% RH at 40°C.

Altitude

This equipment will operate correctly up to 1000m above mean sea level.

Noise Level

The noise level at the operator's position is expected not to exceed 70 db(A).

Transportation and Storage

This equipment will withstand, or has been protected against, transportation and storage temperatures of -25°C to +55°C, and for short periods of up to +70°C.

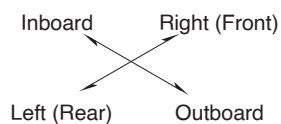
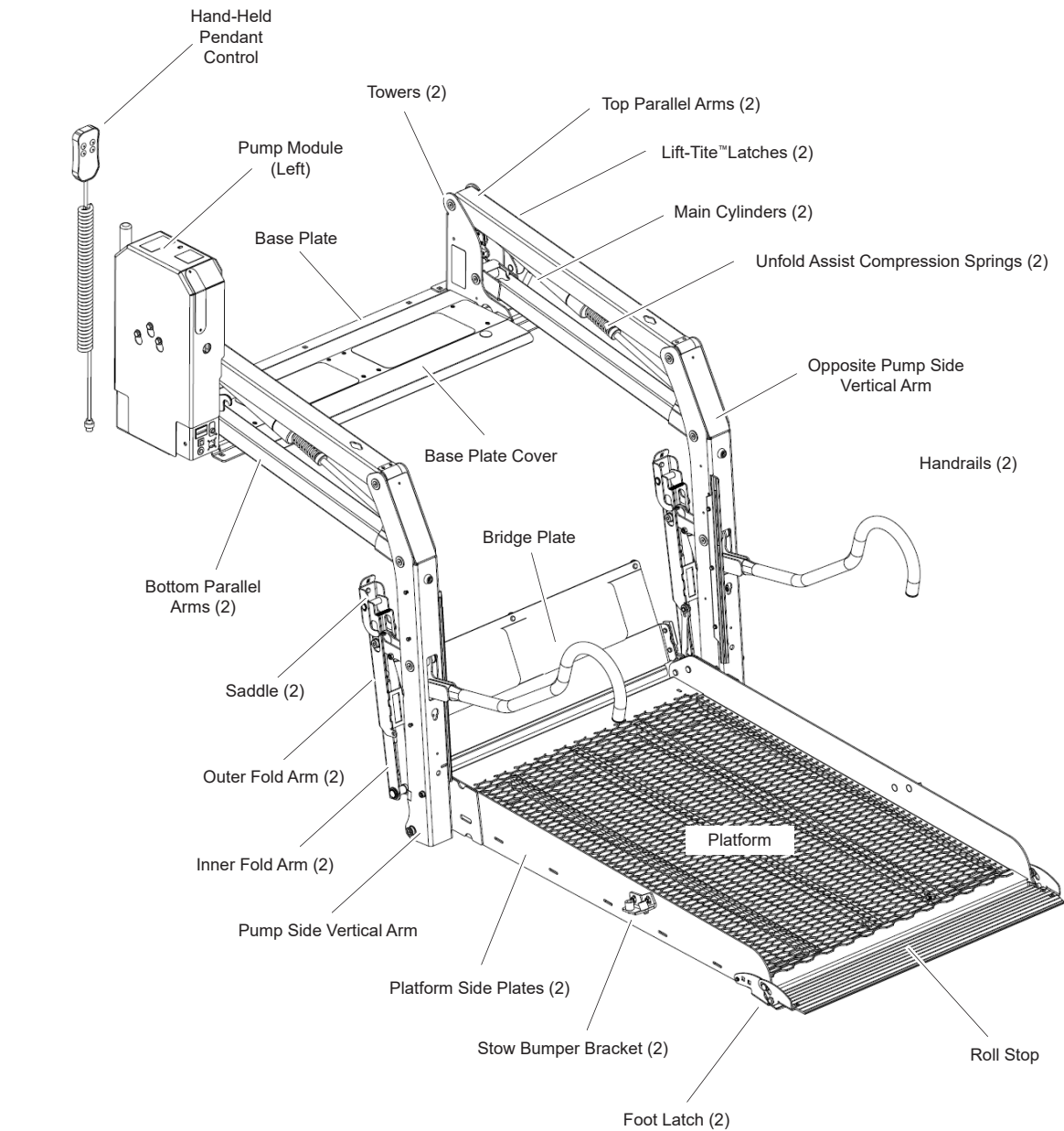
The lift has been packaged to prevent damage from the effects of normal humidity, vibration, and shock.

Dimensions	1500	1320	1050
Platform width	900 mm	860 mm	740 mm
Platform length	1500 mm	1320 mm	1050 mm
Overall height	1600 mm	1420 mm	1150 mm
Overall width	1260 mm	1195 mm	1085 mm
Overall depth	433 mm	350 mm	340 mm
Floor to ground	800 mm	800 mm	800 mm
Required door width	1140 mm	1085 mm	965 mm
Required door height	1620 mm	1440 mm	1170 mm

Weights			
Weight capacity	400 Kg	400 Kg	400 Kg
Unit weight	144 Kg	137 Kg	124 Kg
Shipping weight	175 Kg	168 Kg	155 Kg

Pump module			
Pump side	Left or right	Left or right	Left or right
Power Requirement	12 VDC	12 VDC	12 VDC

Lift Model			
Pump on left side, manual handle pump inboard	E1500S-LI	E1320S-LI	E1050S-LI
Pump on left side, manual handle pump outboard	E1500S-LO	E1320S-LO	E1050S-LO
Pump on right side, manual handle pump inboard	E1500S-RI	E1320S-RI	E1050S-RI
Pump on right side, manual handle pump outboard	E1500S-RO	E1320S-RO	E1050S-RO



BraunAbility wheelchair lifts provide a method of boarding and exiting applicable motor vehicles. BraunAbility wheelchair lifts accommodate wheelchair passengers, standees, and other users of mobility aids.

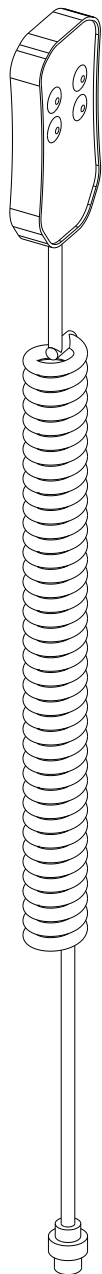


The lift must be installed, operated, and maintained as detailed in this manual. Any use of equipment other than as instructed in this manual is prohibited.

Lift Installation

Pallet contents on delivery

x1 Hand-held control

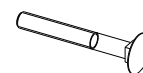


x1 Owner Manual

x2 Plugs



x5 Clips



x8 M10x80 Screws



x8 M10 Hex Nuts

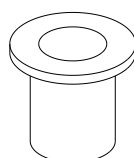


x8 M10 Safety Washers

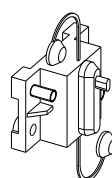


x8 Ø60 Sp.3 Body Washers

x1 Extra cable lug



x1 Plastic protector



x1 Fuse box

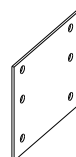


x5 Cable ties

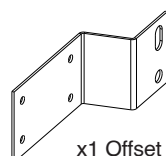
x1 Battery red cable



x1 Long red cable



x1 Flush Mount Bracket



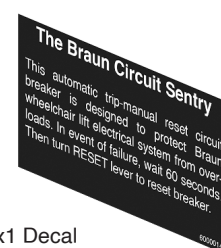
x1 Offset Mount Bracket



x4 M6x25 Self-drilling Screws

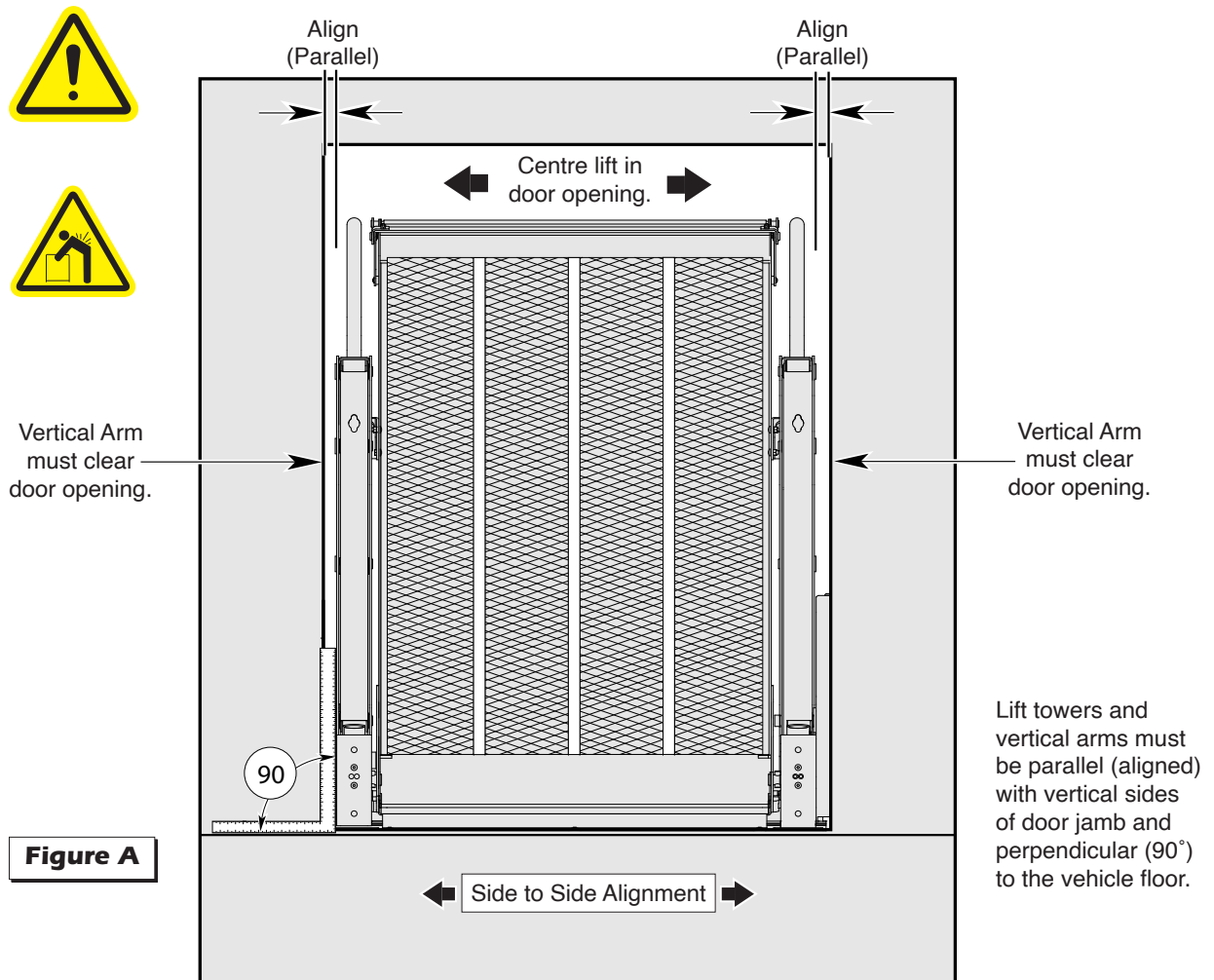


x4 M4x20 Self-drilling Screws



x1 Decal

Position Lift

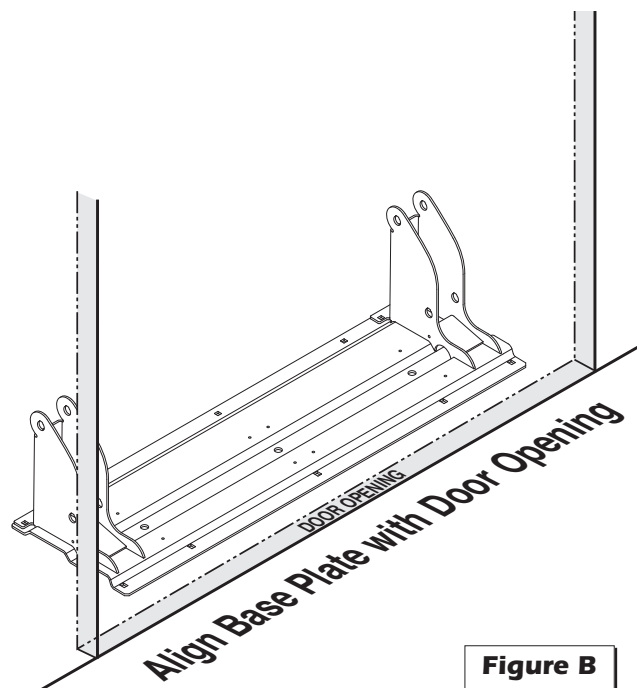


Clearance:

Centre the lift in the opening. See Figure A. Position the base plate parallel to (aligned with) the door opening as shown in Figure B. Close the vehicle door(s).

Position the lift as close to the door opening as possible while maintaining a minimum clearance of 12 mm between the lift and the door or wall. See Figure C.

Lift-Tite® Latches: When checking vehicle wall clearance - allow the lift to drift fully into the Lift-Tite® latches to ensure clearance (should drift occur). See Figure D. Using the hand pump handle, stroke the hand pump to stow the lift fully. Then open the valve slightly (1/2 turn only), and allow the Lift-Tite® latches to engage the vertical arm pins fully. Close the pump valve.



Position Lift

Alignment:

Side-to-Side Alignment: See Figure A on previous page. The lift vertical arms and platform should be perpendicular (90°) to the vehicle floor and parallel (aligned) with the vertical sides of the door jamb. The vertical arms and the parallel arms must clear the door opening when the lift folds and unfolds.

Inboard-to-Outboard Alignment: See Figure C. The vertical arms and parallel arms must be aligned and parallel to each other. The lift towers should be perpendicular (90°) to the vehicle floor.

Step well Installations: It is not permissible for the base plate to overhang the step well. The base plate support must be constructed in the step well for lift support. The structure must be level with the existing floor and of equivalent construction (structural strength).

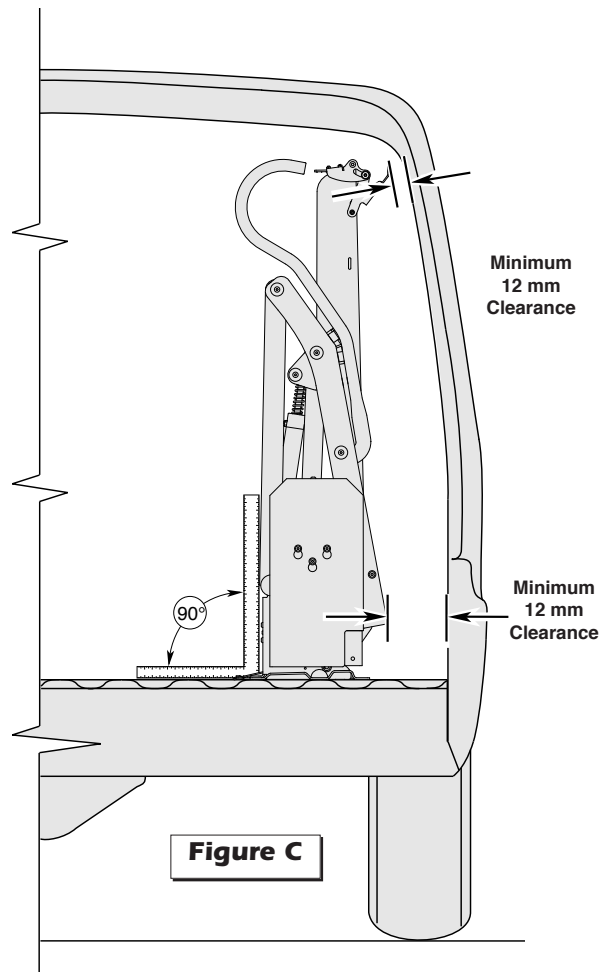


Figure C

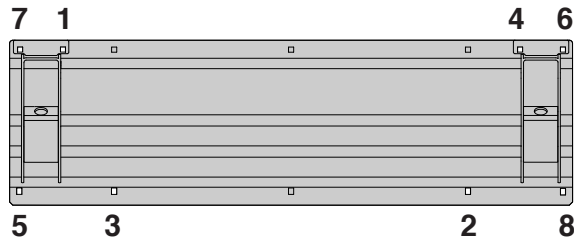
Lift-Tite® Latches: When checking vehicle wall clearance, allow the lift to drift fully into the Lift-Tite® latches to ensure proper clearance.



Figure D

Secure lift

Figure E



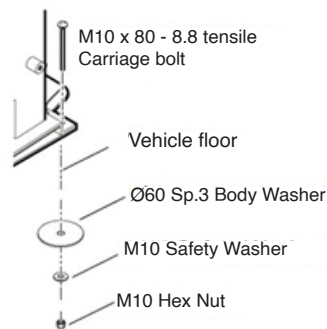
WARNING

Check for obstructions such as gas lines, wires, exhaust, etc. before drilling or cutting. Failure to do so may result in serious bodily injury and/or property damage.

1. Drill two mounting holes (holes **6** and **7**).
2. Temporarily secure the lift using two mounting bolts (holes **6** and **7**).
3. Manually deploy the lift and check lift clearance. Drill remaining mounting holes.
4. Install below floor mounting hardware as per the instructions supplied in the kit.
5. Install the remaining mounting bolts.
6. Tighten mounting bolts 1 through 8 in the order detailed above. Note deflection detail below.

Mounting Bolt Torque Target: 40 Nm.

Standard fasteners:



Avoid mounting into profiled member system of the vehicle.
If drilling passes through hollow segments, the structure must be reinforced.

Reinforce hollow segment with steel tubes.

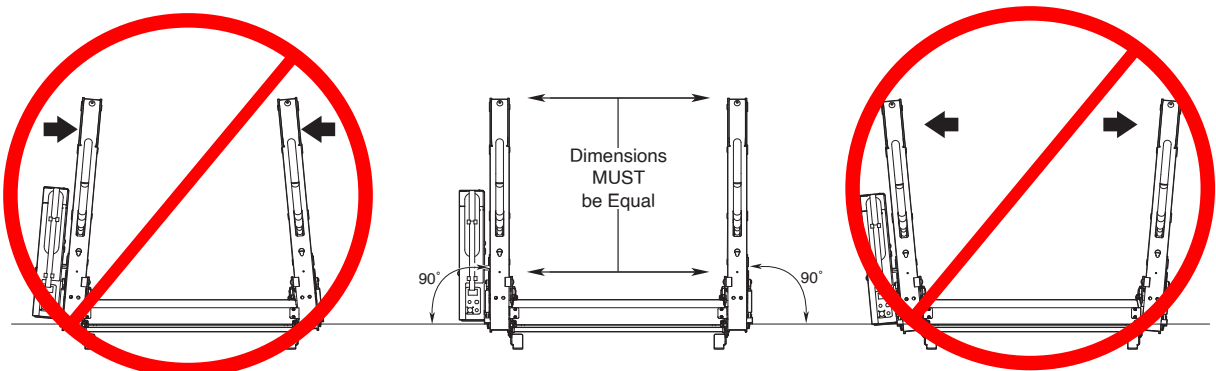
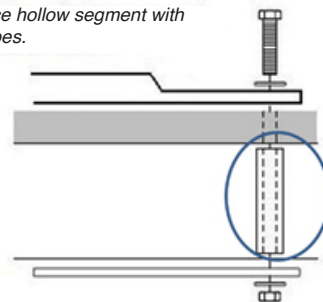
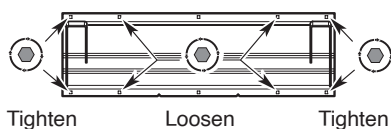
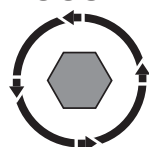


Figure F

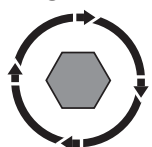
To Correct:



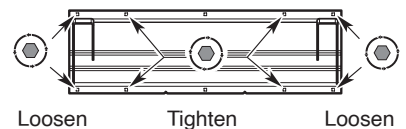
LOOSEN



TIGHTEN

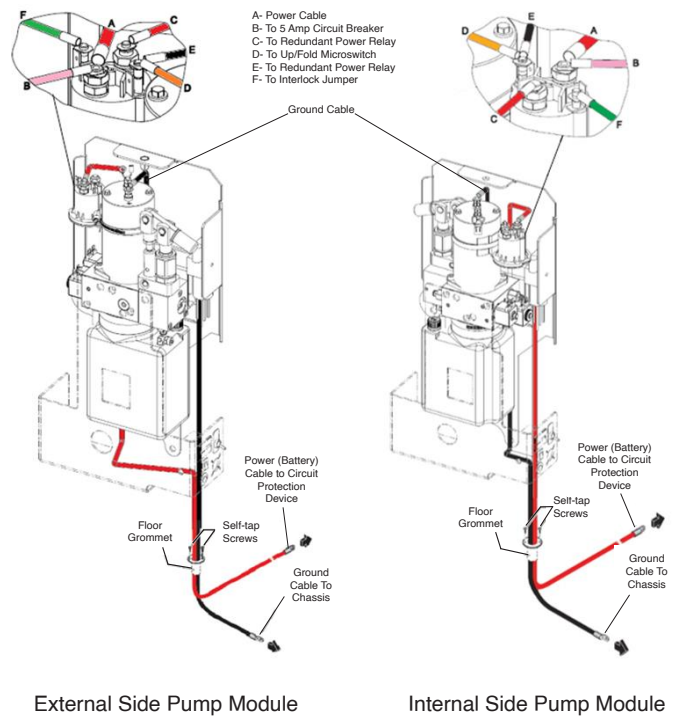


To Correct:



Power Cable and Ground Cable**Floor Grommet:**

1. Check under the vehicle for obstructions and drill a 28.5mm diameter grommet access hole.
2. Insert grommet. Secure grommet with two self-tap screws. See Figure G.
3. Attach power cable to up solenoid and route through the housing as shown in Figure G.
4. Route ground and power cables through the grommet.

**Vehicle Battery Positive Cable:**

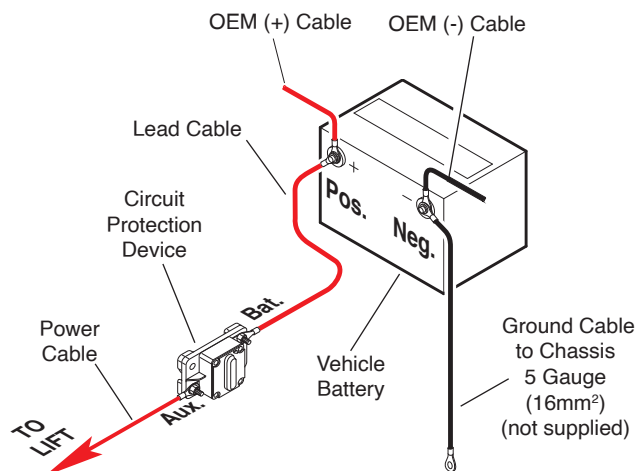
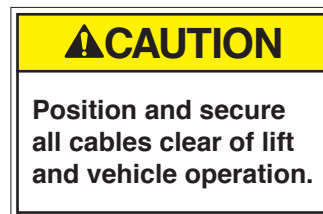
Install the in-line circuit protection device as shown in Figure H. Attach the power cable and lead cable as shown. Keep the cables clear of the exhaust and other hot areas and moving parts.

Pump Ground Cable:

Keep the ground cable clear of the exhaust and other hot areas and moving parts and connect to the vehicle frame part as shown. See Figure I. Note: The frame part must be the same as for the vehicle battery ground cable installed in the next step.

Vehicle Battery Ground Cable:

A 5 gauge (16 mm²) ground cable must be connected from the vehicle battery negative post to the same vehicle frame part as the pump ground cable. See Figures H and I.

**Figure H**

Power Cable and Ground Cable

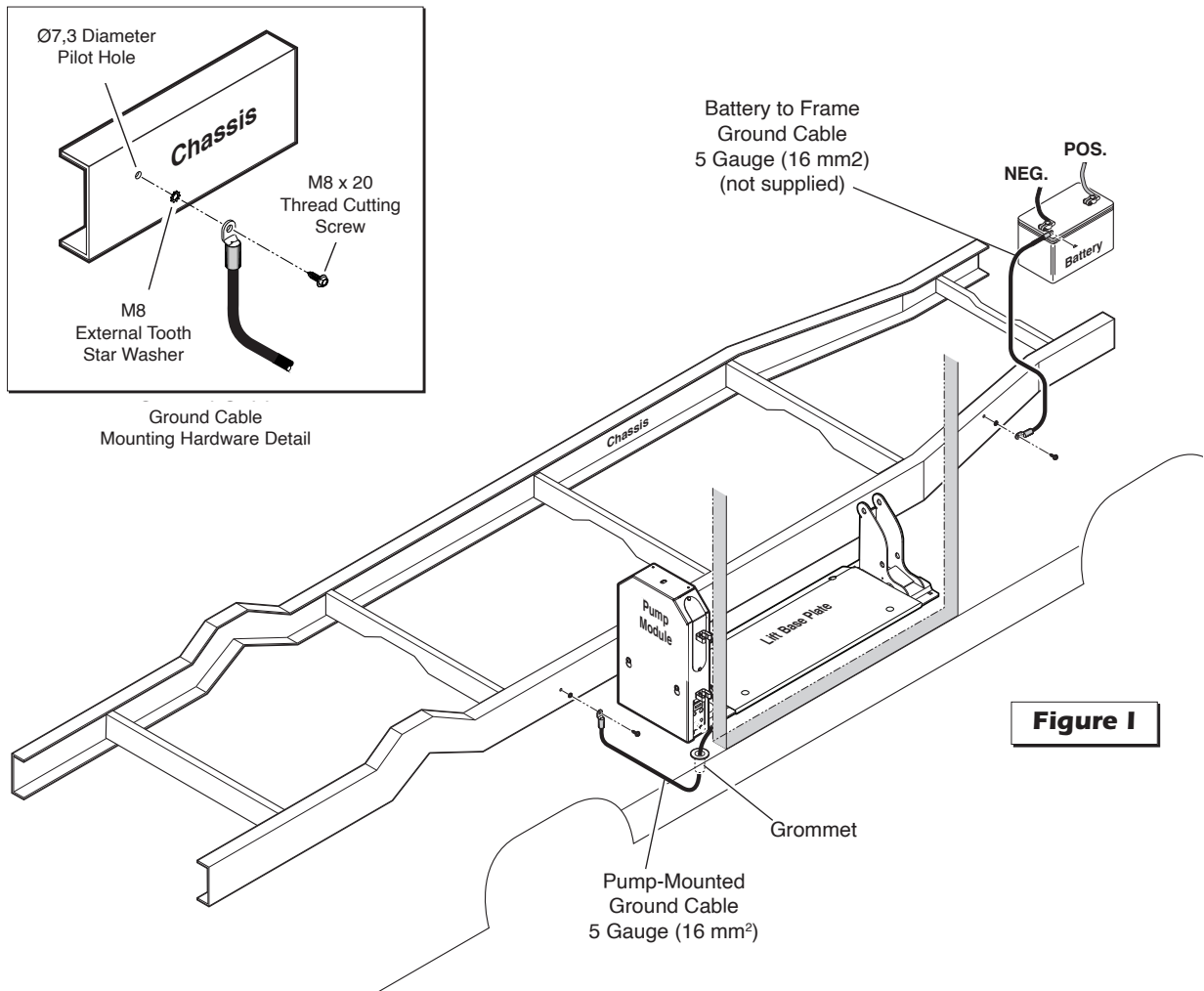


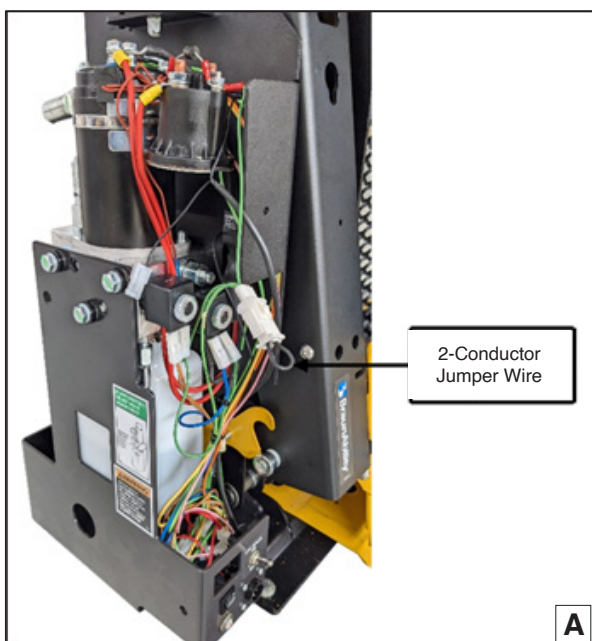
Figure I

Ground Cable Corrosion: When mounting ground cables, remove undercoating, dirt, rust, etc. from around the mounting holes on the frame part (minimum 16 mm diameter area). Apply protective coating to the mounting holes to prevent corrosion. Failure to do so will void the warranty of certain electrical components.

Interlock Instructions EU:

The lift must be installed in such way that the lift cannot be operational unless the vehicle is immobilised. Install a microswitch to the hand brake that provides a signal when the hand brake is engaged (installer provided). Verify that the lift is not operational unless the hand brake is engaged.

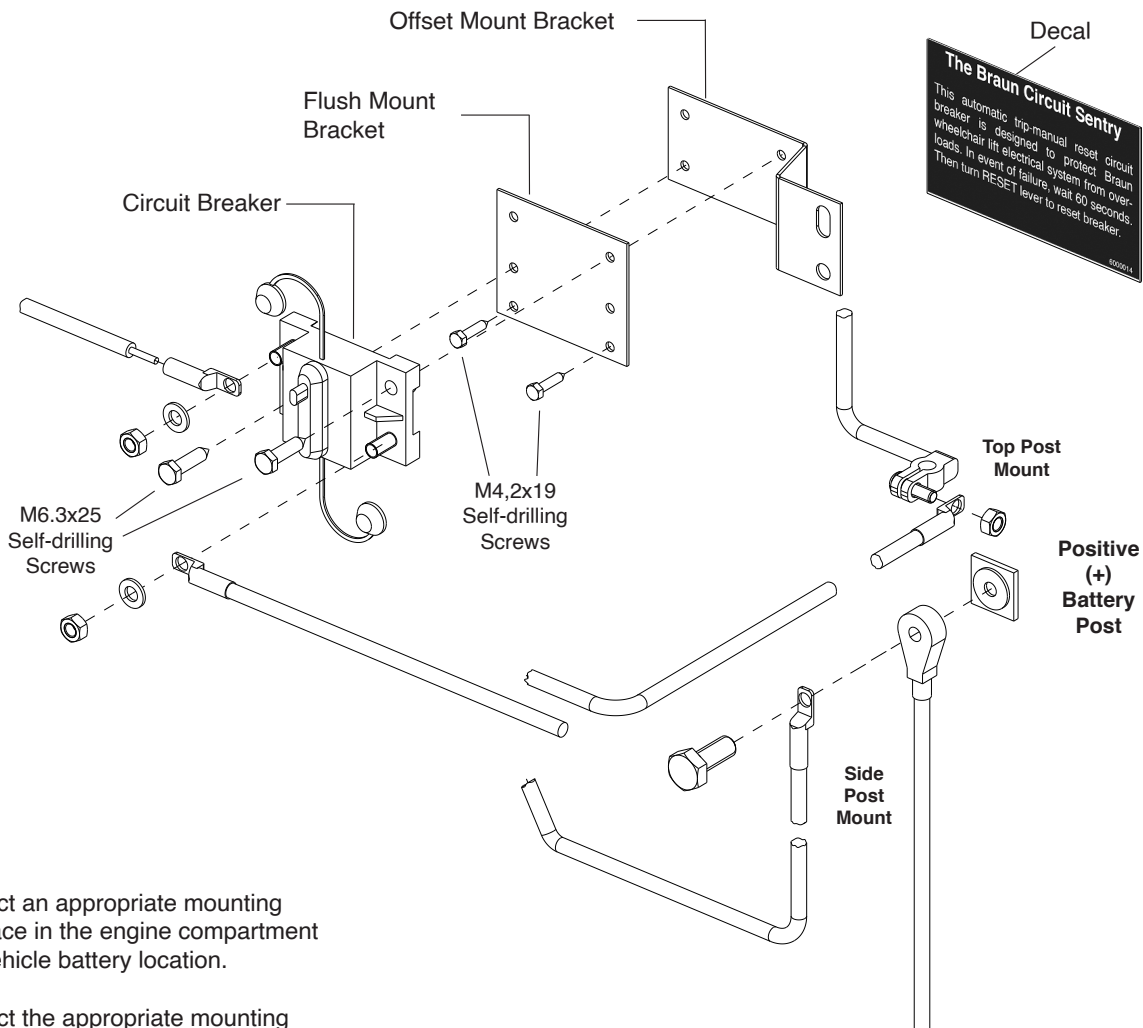
The E-Series pump module is equipped with a 2-conductor jumper wire that is available for interlock (see photo A). Also see service manual electrical schematic.



A

Lift Installation

Compact Circuit Sentry Kits



Select an appropriate mounting surface in the engine compartment or vehicle battery location.

Select the appropriate mounting bracket based on the available mounting surface and other variables (flush mount bracket or offset bracket).

Commercial Lift Applications: Locate the Circuit Sentry within 24V of positive (+) battery terminal.

Retail Lift Applications: Locate the Circuit Sentry within 12V of positive (+) battery terminal.

Mount circuit breaker to mounting bracket using two M6,3x25 self-drilling screws.

Mount the circuit breaker and mounting bracket assembly using M4,2x19 self-drilling screws.

Note: Optional (OEM) mounting hardware can be utilised in some applications.

Mount the bracket as needed.

Check for obstructions such as fuel lines, coolant lines, wires, exhaust, etc. **before drilling**

Remove the rubber caps attached to the circuit breaker terminals.

Attach the lift power cable to the **Auxiliary** terminal of the Circuit Sentry. Tighten securely.

Attach one end of the battery lead cable to the Circuit Sentry **Battery** terminal. Tighten securely.

Reposition the rubber caps on the breaker terminals to prevent electrical short circuits.

Compact Circuit Sentry Installation Instructions

Decal: Post decal adjacent to the Circuit Sentry assembly (contains circuit breaker reset instructions).

Note: Clean the surface with isopropyl alcohol **before** decal application. Use a clean cloth or paper towels.

The Braun Circuit Sentry

This automatic trip-manual reset circuit breaker is designed to protect the Braun wheelchair lift electrical system from overloads. In event of failure, wait 60 seconds. Then turn RESET lever to reset the breaker.

6000014

Platform Fold Pressure Adjustment



The purpose of this adjustment is to allow the platform to fold without loaded weight and not fold with the additional 18 kg weight. This permits the platform to fold reliably when empty and prevents folding when occupied.

To perform this adjustment, use a 18 Kg sample weight. The vehicle battery must be fully charged and in good working condition.

1. Verify the Tower 1 Unfold (Floor level adjustment) before adjusting the platform fold pressure.
2. Position the platform at the floor level loading position.
3. Loosen the 10 mm hex nut on the Platform Fold Relief Valve adjustment screw (do not remove hex nut). See Figure J for correct relief valve.
4. Press Up/Fold on the hand-held pendant. The platform should begin folding. Release the button before the platform half has folded 45°. If the platform does not fold, turn the Platform Fold Relief Valve adjustment screw clockwise 1/4 turn. Lower the platform to floor level and repeat until the platform can fold to 45°.

5. Return the platform to floor level position and add the 18 Kg weight, placing it in the middle of the platform. See Figure K.

6. Press Up/Fold on the hand-held pendant. The platform should not be able to fold. If the platform continues to fold, lower the platform back to floor level and turn the adjustment screw counter clockwise 1/4 turn. Repeat until the platform does not fold.

7. Tighten the 10 mm hex nut without moving the adjustment screw.

8. Remove the test weight and verify that the platform can still begin folding.

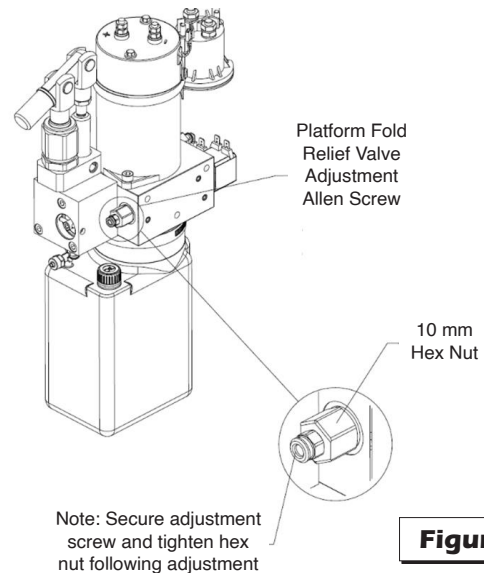


Figure J

DO NOT adjust this valve!
(Located Beside Fold & Down Valves)

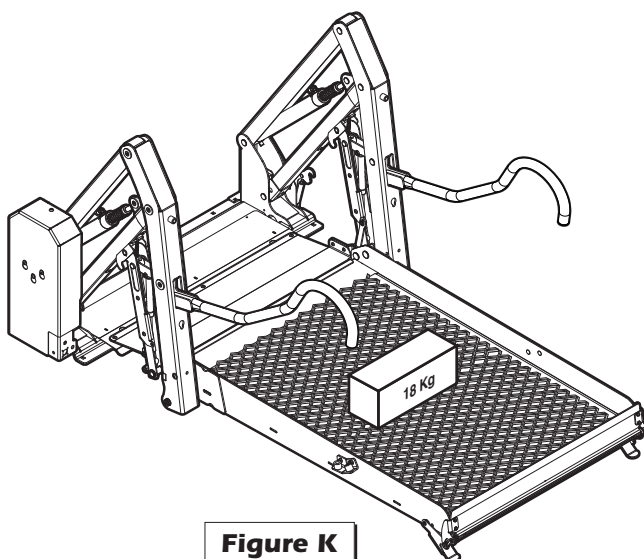
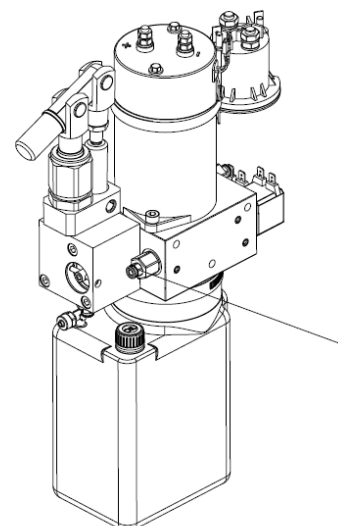


Figure K



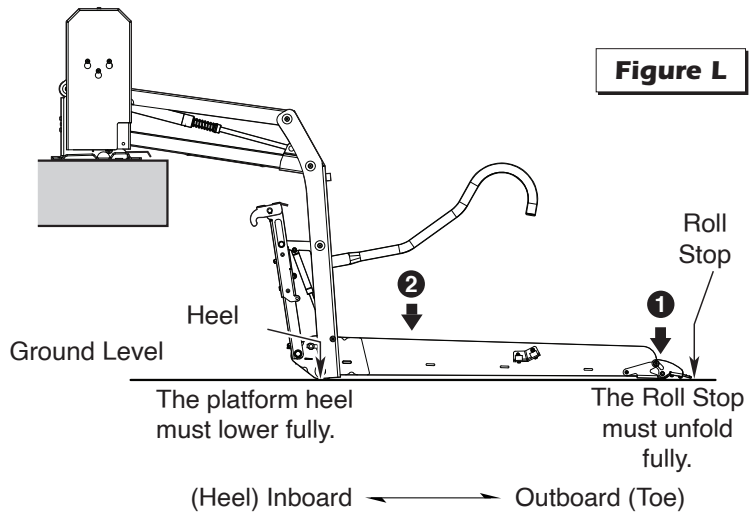
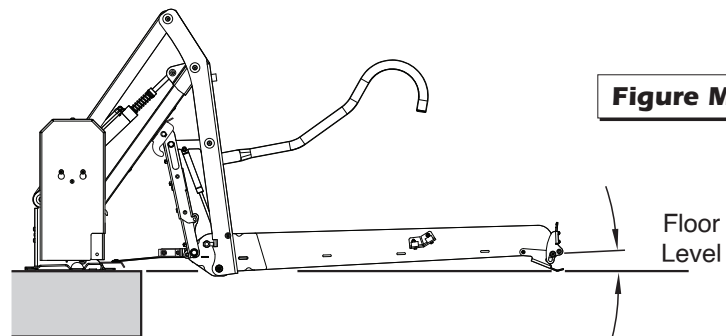
Platform Angle Adjustment**Lowering Sequence Requirements**

1. The outboard end (toe) of the platform must contact the ground first to ensure the spring-loaded roll stop unfolds fully. See Figure L.
2. The inboard end (heel) of the platform must continue to lower fully (the vertical arms must contact with the ground when fully lowered). See Figure L.

Adjusting the angle of the platform for proper contact with the ground directly affects the angle of the platform when positioned at floor level.

Raise the platform to floor level. Note the angle of the platform.

The platform at floor level should have a slight upward angle as shown in Figure M.

**Figure L****Figure M****Platform Angle Adjustment:**

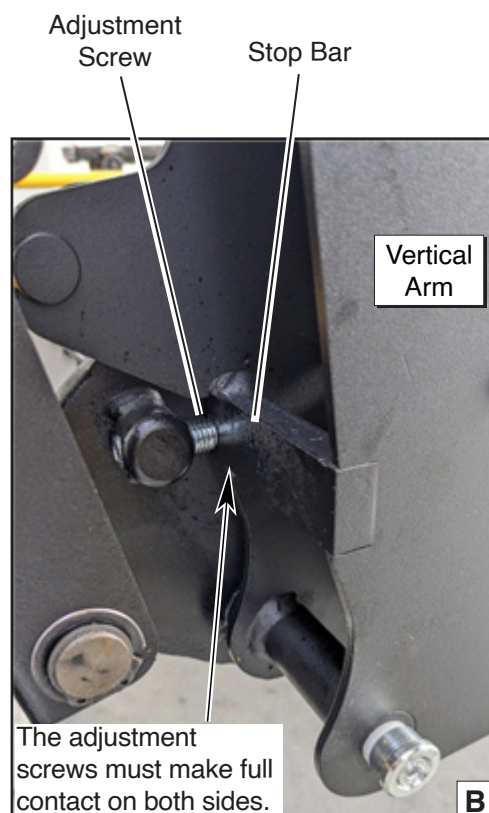
Allen screws are provided on each side of the platform (see Photo B).

Turn adjustment screws clockwise to raise the outboard end of the platform. Turn adjustment screws counterclockwise to lower the outboard end of the platform.

Both adjustment screws must make full contact with the stop blocks (bars) in the vertical arms (see Photo B).

Floor Level Adjustment:

Following platform angle adjustment, set platform floor level positioning as detailed in Tower Microswitch Adjustment. Check platform angle again after performing Tower Microswitch Adjustment procedures.

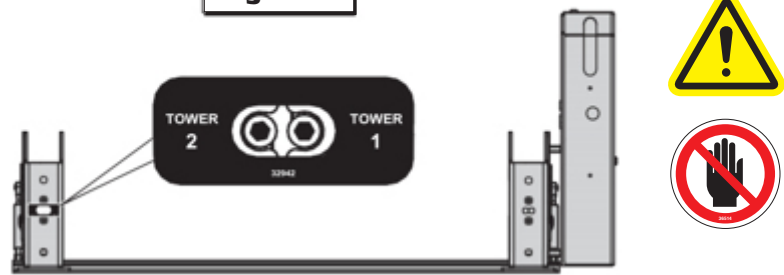


Tower Microswitch Adjustment



Review adjustment procedures below and adjust only as needed.

Figure N



Left pump lift depicted. Tower microswitch locations are on the opposite side for right pump lifts.

Tower 1 (Unfold) Switch Adjustment

Floor Position from Stow

1. Position the platform at the fully stowed position using the manual hand pump or pendant control.
2. Turn the switch adjustment screw clockwise 3 full turns.
3. Press the pendant UNFOLD switch (continue pressing the switch until the platform stops unfolding).
4. When the platform stops unfolding, turn the switch adjustment screw counter-clockwise while pressing the pendant UNFOLD switch. The platform position will change. Repeat adjustment until the criteria below are met.

Proper Adjustment Criteria:

- The handrail pin should be at the top of the slot in the outer fold arm. See Figure O.
- The bridge plate should rest on the base plate cover and should overlap a minimum 25 mm (1 in). See Photo D.
- Both platform angle adjustment Allen screws are making full contact with the vertical arm stop block bars. See Photo B.

Handrail pin at the top of the slot.

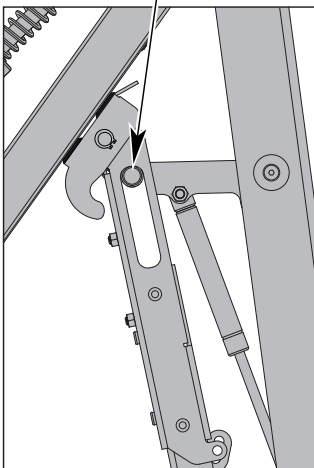


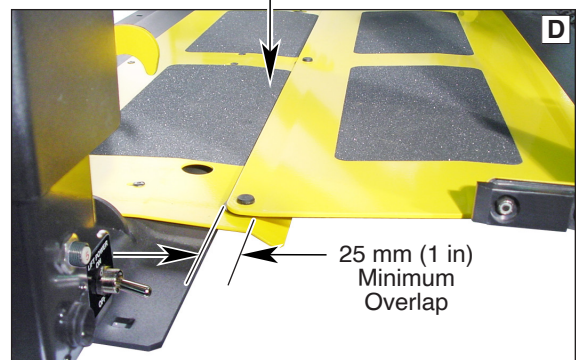
Figure O

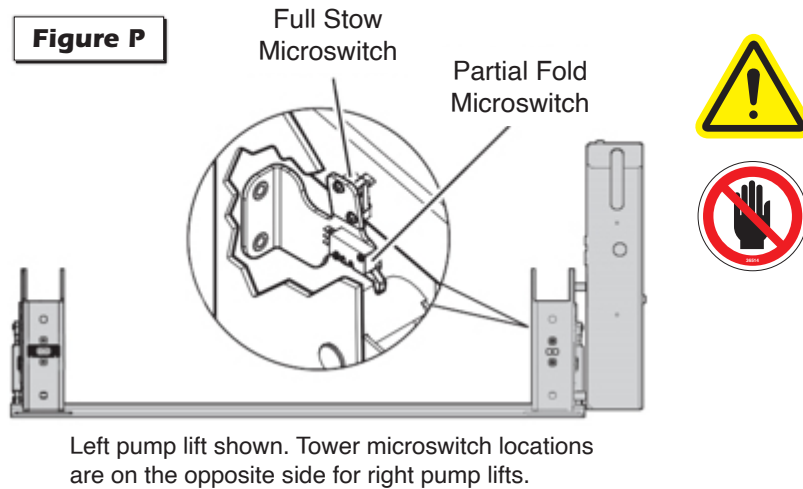
Tower 2 (Up) Switch Adjustment

Floor Position from Below Floor

1. Lower the platform a minimum of 15.25 cm below floor level position using the manual hand pump or pendant control.
2. Turn the switch adjustment screw counter-clockwise 3 full turns.
3. Press the pendant UP switch (continue pressing the switch until the platform stops).
4. When the platform stops, turn the switch adjustment screw clockwise while pressing the pendant UP switch. The platform position will change. Adjust the platform to meet the criteria listed for Tower 1 Switch "Proper Adjustment Criteria".

The bridge plate should rest on the base plate cover.



Tower Microswitch Adjustment**Partial Stow Switch**

Partial Stow to Full Stow Position

The partial stow microswitch (Figure P) is located in the lower position of the tower microswitch bracket inside the opposite pump side tower and is not adjustable.

The switch is deactivated (unpressed) once the platform has been stowed to approximately a 45° angle. Full fold pressure is activated at this position and will allow the platform to stow securely.

Full Stow Switch

Cycle Counter

The full stow microswitch is located in the upper position of the tower microswitch bracket located inside the opposite pump side tower. See Figure P. This switch is also not adjustable.

This switch is activated (pressed) when the platform is fully stowed. This will send a positive signal to increment the number of lift cycles on the electronic counter mounted on the pump module.

Compatibility between the lift and the vehicle

The installer must confirm the compatibility between the lift and the vehicle.

Static Test**Deformation**

The unladen platform is positioned mid-way between ground level and vehicle floor level and measurements are taken of the height of the platform and its angular attitude relative to the vehicle floor.

A load of 500 kg is applied to the platform and subsequently removed.

By repeating measurements of the height and attitude of the platform, check that no permanent deformation has occurred in any part of the lift or its attachment to the vehicle that could affect the lift's function.

Drift

A load of 500 kg is applied to the platform, positioned at floor level. Measurements are taken of the height of the platform and its angular attitude relative to the vehicle floor. These measurements are repeated after a 15 minute test period.

Check that the vertical drift of the platform between the two measurements has not exceeded 15mm.

Check that the angular drift of the platform between the two measurements has not exceeded 2°.

Test to Check that the Lift Cannot Raise an Excessive Load

A load of 500 kg is applied to the platform, positioned at ground level. Press the UP control and check that the platform does not raise (tilt is permissible).

1. Lower the platform to the ground.
2. Place 500 kg at centre of the platform.
3. Press the UP switch and check that the platform does not raise (tilt is permissible).
4. If the platform does not raise, proceed to Dynamic Test. If the platform does raise, proceed to step 5, PLATFORM UP relief valve adjustment is necessary.
5. Access the PLATFORM UP relief valve (see illustration on the following page). Loosen 10 mm hex nut on the relief valve adjustment screw (do not remove hex nut).
6. Turn the adjustment screw counter-clockwise 1/8 turn.
7. Press the UP switch and check that the platform does not raise (tilt is permissible).
8. If the platform does not raise, tighten the 10 mm hex nut (do not turn the relief valve adjustment screw while tightening the hex nut). If the platform does raise, repeat steps 6 through 8.

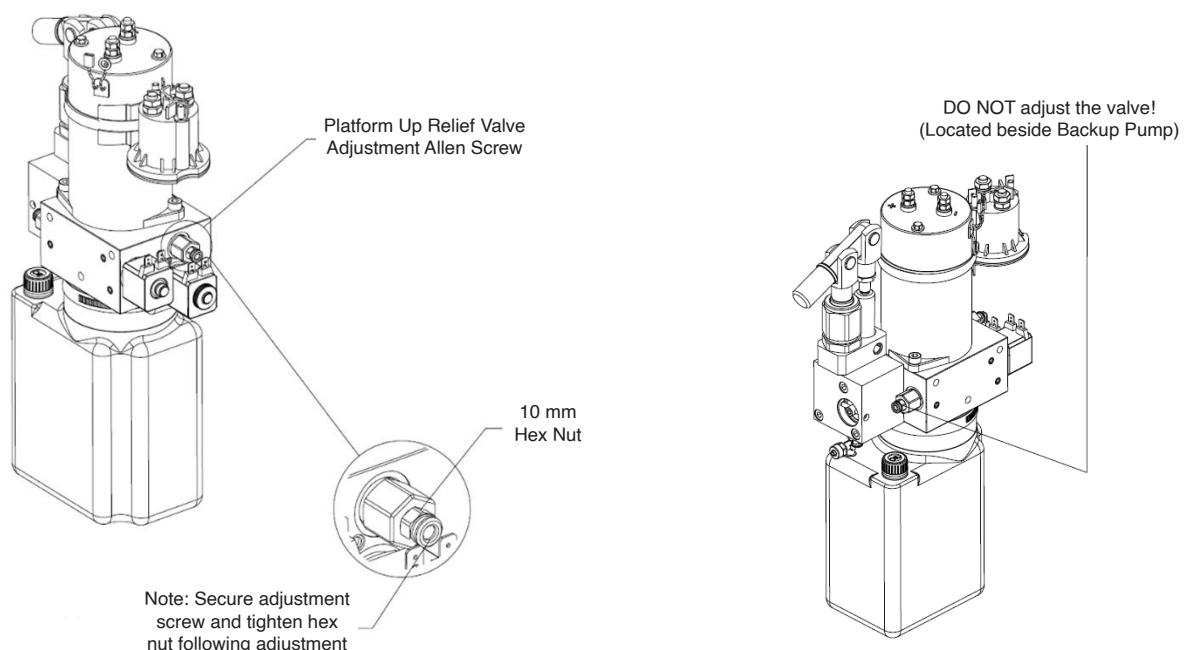
Dynamic Test

With 400 kg applied to the platform, check that the lift is able to operate throughout its full range of normal lifting and lowering.

1. Lower the platform to the ground.
2. Place 400 kg at centre of the platform.
3. Check that the lift is able to operate throughout its full range of normal lifting and lowering movements.
4. If the platform is able to operate throughout its full range of normal lifting and lowering movements, no adjustment is necessary. If the platform does not raise, proceed to step 5, PLATFORM UP relief valve adjustment is necessary.
5. Access the PLATFORM UP relief valve (see Figure Q). Loosen 10 mm hex nut on the relief valve adjustment screw (do not remove hex nut).
6. Turn the adjustment screw clockwise 1/8 turn.
7. Check that the lift is able to operate throughout its full range of normal lifting and lowering movements.
8. If the lift does not operate throughout its full range, repeat steps 6 through 8. If the lift does operate throughout its full range, tighten the 10 mm hex nut (do not turn the relief valve adjustment screw while the tightening hex nut).
9. Repeat the "Test to Check that the Lift Cannot Raise an Excessive Load" on previous page.

Test of Operations and Safety Functions

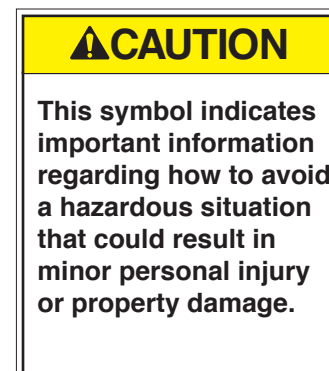
All functions of the lift and operations of all safety devices are checked after the static and dynamic tests have been completed. These tests do not apply to pipe break valves or non-resettable safety devices such as electrical fuses (these items are the subject of a manufacturer's type test).

**Figure Q**

Safety Symbols

SAFETY FIRST! Know that

The information contained in this manual and supplements (if included) is provided for your use and safety. Familiarity with proper installation, operation, maintenance and service procedures is necessary to ensure safe, trouble-free lift operation. Safety precautions are provided to identify potentially hazardous situations and provide instruction on how to avoid them.



NOTICE

Additional information provided to help clarify or detail a specific subject.



This symbol indicates that there are dangerous energy levels present inside the casing of this product. To reduce the risk of fire or electric shock, do not attempt to open the casing or gain access to areas where you are not instructed to do so. Refer servicing to qualified service personnel only.



This symbol indicates that a condition where damage to the equipment resulting in injury to the operator could occur if operational procedures are not followed. To reduce the risk of damage or injury, refer to accompanying documents, follow all steps or procedures as instructed.



This symbol indicates a condition where injury or damage could occur if contact is made with the hot surface.



This symbol indicates an area to avoid bodily contact to prevent injury.



This symbol indicates the presence of high pressure hydraulic hoses. Use appropriate personal protective equipment when working on the hydraulic system.



This symbol indicates the presence of a fire hazard. Avoid open flames or sparks when working with flammable materials to prevent injury or damage.



This symbol indicates that a device weighs in excess of 139kg (306 lbs). Use of a fork lift or hoist is required.

These symbols will appear throughout this manual as well as on the labels posted on your lift.
Recognise the seriousness of this information.

Lift Operation Safety Precautions**⚠ WARNING**

If the lift operating instructions, manual operating instructions and/or lift operation safety precautions are not fully understood, contact BraunAbility immediately. Failure to do so may result in serious bodily injury and/or property damage.

- ⚠ WARNING** Read the manual and the supplement(s) before operating the lift. Read and become familiar with all safety precautions, operation notes and details, operating instructions and manual operating instructions before operating the lift.
- ⚠ WARNING** Load and unload on level surface only.
- ⚠ WARNING** Engage the vehicle parking brake before operating the lift.
- ⚠ WARNING** Provide adequate clearance outside the vehicle to accommodate the lift before opening the lift door(s) or operating the lift.
- ⚠ WARNING** Inspect the lift before operation. Do not operate the lift if you suspect lift damage, wear or any abnormal condition.
- ⚠ WARNING** Do not use as a link bridge.

- ⚠ WARNING** Keep operator and bystanders clear of the lift operating area.
- ⚠ WARNING** Lift attendants must observe the passenger at all times during lift operation.
- ⚠ WARNING** Ensure adequate lighting exists in the lift's operating area.
- ⚠ WARNING** Whenever a wheelchair passenger (or standee) is on the platform, the:
 - Passenger must be positioned fully inside the yellow boundaries facing outward.
 - Wheelchair brakes must be locked.
 - Bridge plate and roll stop must be up (vertical).
 - Roll Stop latch must be fully engaged.
 - Passenger should grip both handrails (if able).
- ⚠ WARNING** Wheelchair lift attendants should be instructed on any special needs and/or procedures required for safe transport of wheelchair passengers.
- ⚠ WARNING** Load and unload clear of vehicular traffic.
- ⚠ WARNING** Do not attempt to load or unload a passenger in a wheelchair or other apparatus that does not fit on the platform area.
- ⚠ WARNING** The lift attendant must not ride on the platform with the passenger. The lift is intended for use by a single passenger.
- ⚠ WARNING** Do not overload or abuse. The load rating applies to both the raising and lowering functions.
- ⚠ WARNING** Use caution when operating this equipment outdoors during electrical storms or similar electrical phenomena.
- ⚠ WARNING** Use caution when operating this equipment in severe weather or environmental conditions (fog, rain, snow, ice, dust, etc.)
- ⚠ WARNING** Discontinue lift use immediately if any lift or vehicle interlock does not operate properly.
- ⚠ WARNING** Do not operate or board the lift if you or your lift operator are intoxicated.

Lift Operation Safety Precautions

- ⚠WARNING** Do not raise the front wheelchair wheels (pull wheelie) when loading, boarding, or riding on the platform.
- ⚠WARNING** Open the lift door(s) fully and secure before operating the lift.
- ⚠WARNING** Position and secure (buckle, engage, fasten, etc.) the wheelchair occupant seat belt (torso restraint) before loading onto the wheelchair lift platform.
- ⚠WARNING** Lift attendants must ensure that lift occupants keep hands, arms and all other body parts within the lift occupant area and clear of moving parts.
- ⚠WARNING** The platform must be positioned at floor level (bridging position) when loading or unloading in and out of the vehicle.
- ⚠WARNING** Do not use the platform bridge plate or roll stop as a brake. Stop and brake the wheelchair when loading onto the platform (manually stop and brake manual wheelchairs — stop powered wheelchairs with the wheelchair controls).
- ⚠WARNING** Turn powered (electric) wheelchairs off when on the lift platform.
- ⚠WARNING** Press the DOWN switch until the entire platform rests on ground level (lowered fully) and the roll stop is fully unfolded (ramp position) before loading or unloading a passenger at ground level.
- ⚠WARNING** Roll stop must be fully unfolded (ramp position) until front and rear wheelchair wheels cross the barrier when loading or unloading at ground level.
- ⚠WARNING** Accidental activation of control switch(es) may cause unintended operation(s).
- ⚠WARNING** Contact your authorised BraunAbility dealership or technician to schedule routine maintenance and inspection of your lift.
- ⚠WARNING** Replace missing, worn or illegible decals.
- ⚠WARNING** Never modify (alter) a BraunAbility lift.
- ⚠WARNING** Do not use accessory devices not authorised by BraunAbility.
- ⚠WARNING** Do not remove any guards or covers.
- ⚠WARNING** Keep clear of any hydraulic leak.
- ⚠WARNING** Failure to follow these safety precautions may result in serious bodily injury and/or property damage.
- ⚠WARNING** Any phase not performed properly can lead to damage to the component or dangerous situations for operators.
- ⚠WARNING** It is recommended to employ personnel specially appointed and suitable for use of the lift and ensure that they are aware of these instructions.



Before lift operation, park the vehicle on a level surface, away from traffic. Place the vehicle transmission in “Park” and engage the parking brake. Vehicle engine must be running.

Lift Operating Instructions address operation of the lift only.

Vehicle Doors and Vehicle Interlocks: Transit vehicle lift doors and interlocks vary. Procedures to operate them vary also. Lift operators (attendants) must become familiar with the vehicle lift access door system and vehicle interlock(s).

Manual Door(s): Open manual doors fully and secure in full open position before operating the lift.

Do not operate the lift if you suspect lift damage, wear, or any abnormal condition. Refer to the Manual Operating Instructions to manually operate lift.

Lift Power ON/OFF Switch: This switch must be in the ON position in order to activate the lift. The lift power switch is located at the lower outboard base of the pump module.

The hand-held pendant control plugs in just below the power switch.

Next to the lift power switch is a smaller circuit breaker marked “15 A.” This breaker is reset by pressing the rocker switch up.

The 5 amp circuit breaker marked “5” located beside hand control plug is reset by pressing the button.

The LED displays the number of lift cycles to help track when maintenance and lubrication is required.

Hand-held Pendant Control: The attendant’s hand-held pendant control is equipped with four buttons.

Hand-held
Pendant Control



Control Switch Functions:

UP: From ground level, the UP function will raise (rotate) the roll stop to the vertical position. The platform then raises to floor level position.

DOWN: From floor level, the DOWN function lowers the platform to ground level and then unfolds (lowers) the roll stop to the ramp (horizontal) position.

FOLD: From floor level, the FOLD function folds the platform inward to the stowed position.

UNFOLD: From stowed position, the UNFOLD function unfolds the platform outward to the floor position.

Note: If any functions do not work as described, discontinue lift use immediately.

Before lift operation, park on a level surface, away from vehicular traffic. Place the

vehicle transmission in "Park" and engage the parking brake. Vehicle engine must be running.


Refer to the Manual Operating Instructions to manually operate the lift.




OPEN DOOR(S) AND SECURE



TO UNFOLD PLATFORM:

Stand clear and press the  UNFOLD button until the platform stops (reaches floor level - unfolds fully). Release switch.

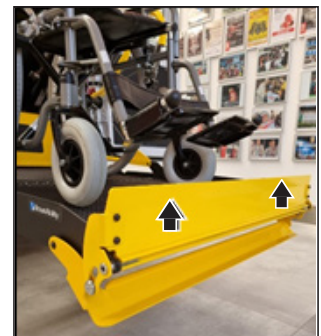
Notice: In event platform does not unfold, press the  FOLD button to release Lift-Tite™ latches.




TO UNLOAD PASSENGER:

1. Read Notice below! Load passenger onto the platform and lock the wheelchair brakes.

Notice: The passenger must be positioned fully inside the yellow boundaries, and the roll stop must be UP.



2. Press the  DOWN button until the entire platform reaches ground level (see Photo B) and the roll stop unfolds fully (ramp position). See Photo C. Release switch.



3. Unlock the wheelchair brakes and unload the passenger from the platform.





Notice: The roll stop must be fully unfolded (ramp position) until the entire wheelchair (or standee) has crossed the roll stop. See Photos E and F.



TO LOAD PASSENGER:



1. Read Notices below! Load the passenger onto platform and lock the wheelchair brakes. See Photo G.

Notice: The roll stop must be fully unfolded (ramp position) until the entire wheelchair (or standee) has crossed the roll stop. See Photos E and F.

Notice: The passenger must be positioned fully inside the yellow boundaries.



2. Press the ↑ UP button (Photo H) to fold the roll stop UP fully (vertical - see Photo I), and raise the platform to floor level. See Photo J. Release switch.

3. Unlock the wheelchair brakes and unload the passenger from the platform.



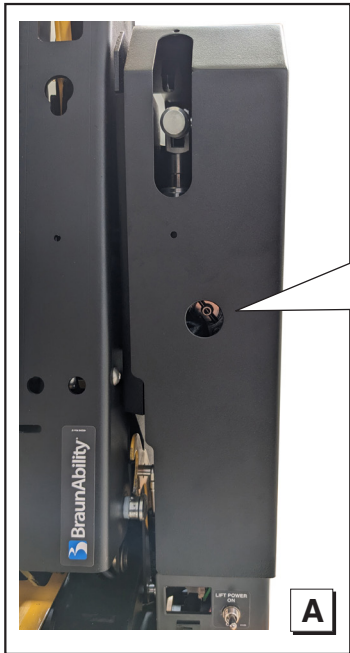
TO FOLD PLATFORM:



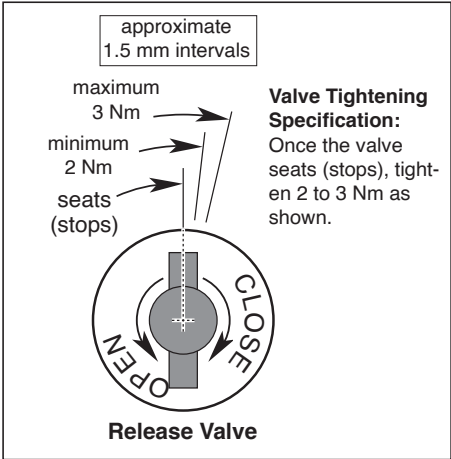
- Press the FOLD (In) button until the platform stops (fully folded). See Photos K and L. Release switch



CLOSE DOOR(S)



Release Valve

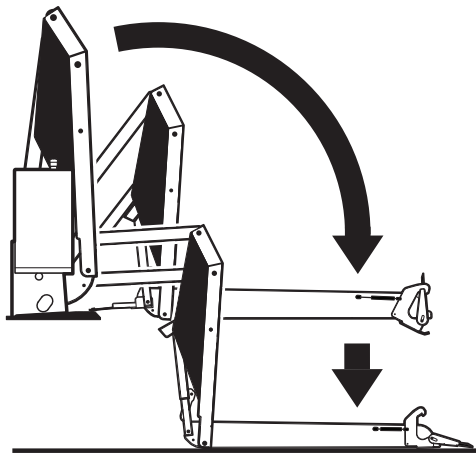


Notice: Close the back-
up pump release valve
securely before operating
the electric pump.

Hand Pump Handle



Notice: The bridge plate and roll stop, function
automatically during manual operations.

**To Unfold Platform (Out):**

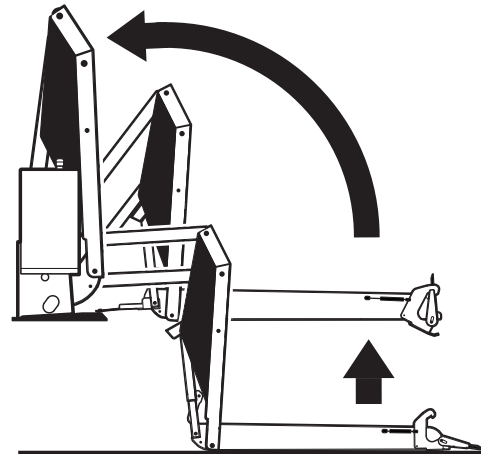
Using the hand pump handle (Photo B):

1. Close the hand pump valve (place the slotted end of the pump handle on the release valve and turn clockwise). See Photo C.
2. Insert the handle in the pump and stroke until the platform folds fully (stops). See Photo D.
3. Open the hand pump valve (turn counter-clockwise) until the platform reaches floor level. Open 1/4 turn only.
4. Close the hand pump valve (turn clockwise).

Notice: Valve must be tight, but do not overtighten.

Down (To Lower):

Place the slotted end of the pump handle onto the release valve and turn counter-clockwise (open 1/4 turn only) until the platform reaches ground level and the roll stop unfolds. See Photo C.

**Up (To Raise):**

Using the hand pump handle:

- a. Place the slotted end of the pump handle on the release valve and turn clockwise to close securely. See Photo C.

Notice: Valve must be tight, but do not overtighten.
- b. Insert the handle into the back-up pump and stroke until the platform reaches floor level (see Photo D).

To Fold Platform (In):

Insert the handle in the pump and stroke until the platform stops (folds fully). See Photo D.

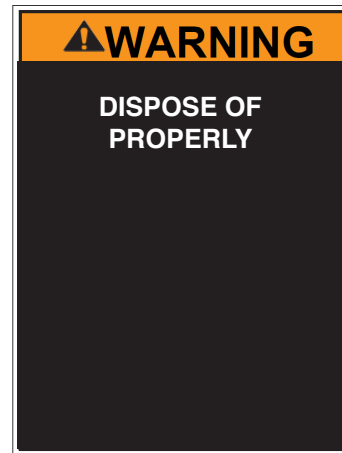
Notice: Close the release valve securely before operating the electric pump. Store the pump handle in the clamps shown in Photo B.

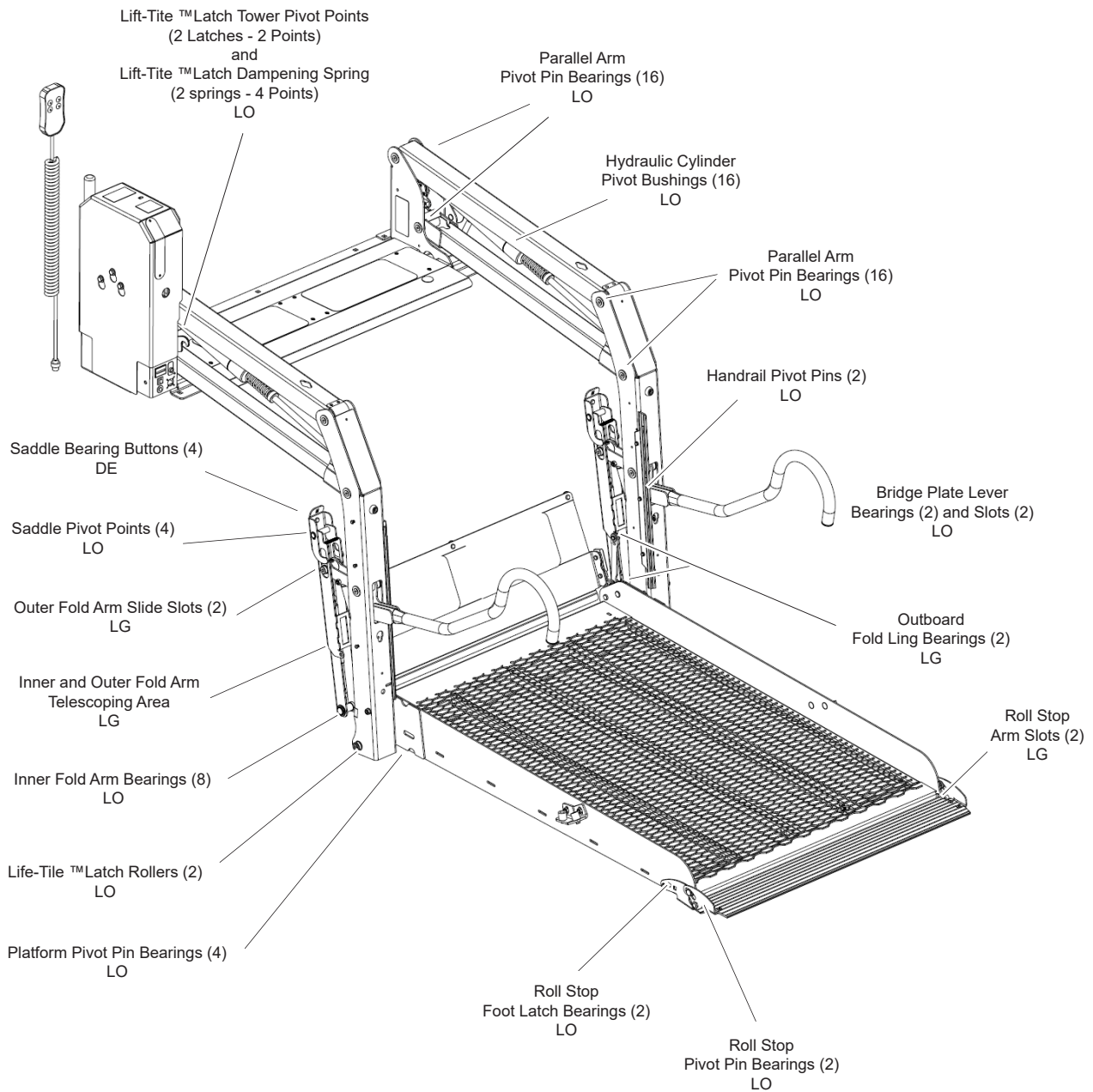
Decommissioning and dismantling:

1. All decommissioning and dismantling operations must be carried out making sure that the boat has been completely emptied first. Then proceed to separate the various components.

Demolition:

2. These machines can be disposed of, alternatively: a) by scrapping them and selling the scrap as recoverable waste; b) delivering the equipment to third parties authorised by the Region with the identification form for transport. Note that, for these machines which derive from industrial activities, the manufacturer must always fill in the MUD form, keep the loading and unloading register and the identification form for transport.



Lubrication Diagram**Figure R**

See the Maintenance/Lubrication Schedule for recommended applications per number of cycles.

Lubricant	Type	Specified (recommended) Lubricant
LO - Light Oil	Light Penetrating Oil	Multi-Use Product Lubricant Spray - WD40
DE - Door - Ease	Dry PTFE Lubricant	Specialist PTFE Lubricant - WD40
LG - Light Grease	Light Grease (Multi-purpose)	Multipurpose Lithium Grease - NLGI2



Proper maintenance is necessary to ensure safe, trouble-free lift operation. Inspecting the lift for any wear, damage or other abnormal conditions should be a part of the transport agency's daily service programme. Simple inspections can detect potential problems.

Park the vehicle on a level surface clear of traffic and bystanders. Place the vehicle transmission in "Park" and engage the parking brake. Deploy the lift to ground level. Provide adequate work space around the fully-deployed lift. Perform specified maintenance and lubrication procedures (position lift as required).

Pump Module: When cleaning the exterior of the pump module, first disconnect the unit from its power source. Do not use liquid cleaners, aerosols, abrasive pads, scouring powders or solvents, such as benzine or alcohol. Use a soft cloth lightly moistened with a mild detergent solution. Ensure the surface cleaned is fully dry before reconnecting power.

Other Components: Clean components and the surrounding area before applying lubricants. Clean only with mild detergent and water. Do not clean with solvents. Allow the lift to dry thoroughly and apply lubricants as specified after every cleaning.

LPS2 General Purpose Penetrating Oil is recommended where Light Oil is called for. Use of improper lubricants can attract dirt or other contaminants which could result in wear or damage to components. Platform components exposed to contaminants when lowered to the ground may require extra attention.

Perform maintenance and lubrication procedures at the scheduled intervals according to the number of cycles. When servicing the lift at the recommended intervals, inspection and lubrication procedures specified in the previous sections should be repeated.

These intervals are a general guideline for scheduling maintenance procedures and will vary according to lift use and conditions. Lifts exposed to severe conditions (weather, environment, contamination, heavy usage, etc.) may require inspection and maintenance procedures to be performed more often than specified. Records of maintenance and service procedures should be maintained.

Discontinue lift use if maintenance and lubrication procedures are not properly performed, or if there is any sign of wear, damage or any abnormal condition. Contact your authorised representative.

750 Cycles or Every 6 Months	Roll stop pivot pin bearings (2)	Apply Light Oil - See Lubrication Diagram
	Roll stop foot latch bearings (2)	Apply Light Oil - See Lubrication Diagram
	Roll stop arm slots (2)	Apply Light Grease - See Lubrication Diagram
	Lift-Tite™ latches (tower pivot points - 2)	Apply Light Oil - See Lubrication Diagram
	Lift-Tite™ latch gas (dampening) spring pivot points (2 springs - 4 points)	Apply Light Oil - See Lubrication Diagram
	Inspect the Lift-Tite™ latches and gas springs for wear or damage (bent, deformed or misaligned), positive securement (external snap rings) and proper operation	Re-secure, replace damaged parts or otherwise correct as needed. Note: Apply Light Grease to Lift-Tite™ latch tower pivot point if replacing latch
	Lift-Tite™ latch rollers (2)	Apply Light Oil - See Lubrication Diagram
	Inspect the roll stop for proper operation	Correct or replace damaged parts
	Inspect the platform hinges and fold link assemblies for proper operation and positive securement	Re-secure, replace or correct as needed
	Inspect the roll stop latch feet for proper operation, positive securement and detached or missing torsion springs	Correct, replace damaged parts and/or re-lubricate
	Inspect the lift for wear, damage or any abnormal condition	Correct as needed
	Inspect the lift for rattles	Correct as needed

1500 Cycles or Every 12 Months	In addition to all procedures listed in the previous section	
	Inner/outer fold arm telescoping areas (2)	Apply Grease to contact areas between inner/outer fold arms. See Lubrication Diagram
	Platform pivot pin bearings (4)	Apply Light Oil - See Lubrication Diagram
	Platform hinges (4)	Apply Light Oil - See Lubrication Diagram
	Outboard fold link pivots (4)	Apply Grease (Synthetic) - See Lubrication Diagram
	Inner fold arm bearings (8)	Apply Light Oil - See Lubrication Diagram
	Outer fold arm slide slots (2)	Apply Grease (Synthetic) - See Lubrication Diagram
	Bridge plate lever bearings (2)	Apply Light Oil - See Lubrication Diagram
	Bridge plate lever slots (2)	Apply Light Oil - See Lubrication Diagram
	Saddle pivot points (4)	Apply Light Oil - See Lubrication Diagram
	Parallel arm pivot pin bearings (16)	Apply Light Oil - See Lubrication Diagram
	Handrail pivot pins (2)	Apply Light Oil - See Lubrication Diagram
	Hydraulic cylinder pivot bushings (8)	Apply Light Oil - See Lubrication Diagram
	Inspect bridge plate for: • Wear or damage • Proper operation. The bridge plate should just rest on top surface of the base plate cover. • Positive securement (both ends)	Re-secure, replace or correct as needed. See Platform Angle Instructions and Platform Floor Level Microswitch Adjustment Instructions
	Inspect handrail components for wear or damage, and for proper operation	Replace damaged parts
	Inspect microswitches for securement and proper adjustment	Re-secure, replace or adjust as needed. See Tower Microswitch Adjustment Instructions
	Make sure the lift operates smoothly	Realign towers and vertical arms. Lubricate or correct as needed
	Inspect external snap rings: • Inner fold arm pivot pins (2) • Outer fold arm pivot pins (2) • Bridge plate levers (4) • Lift-Tite™ latch gas (dampening) springs (4) • Lift-Tite™ latch pivot pins (2)	Re-secure or replace if needed.

<div>4500 Cycles</div> <div>or</div> <div>Every 36 Months</div>	<div>In addition to all procedures listed in the previous section</div>	
	Remove the pump module cover and inspect: <ul style="list-style-type: none">• Hydraulic hoses, fittings and connections for wear or leaks• Harness cables, wires, terminals and connections for securement or damage• Circuit breaker, power switch and solenoids for securement or damage	Re-secure, replace or correct as needed.
	Hydraulic Fluid (Pump) - Check level. Note: Fluid should be changed if there is visible contamination. Inspect the hydraulic system (cylinder, hoses, fittings, seals, etc.) for leaks if fluid level is low.	Use (TEXACO Rando HDZ 15) hydraulic fluid (do not mix with other hydraulic fluids). Check the fluid level with platform fully lowered and roll stop completely unfolded . See the maximum level indicator on the tank.
	Inspect cylinders, fittings and hydraulic connections for wear, damage or leaks	Tighten, repair or replace if needed.
	Inspect parallel arms, bearings and pivot pins for visible wear or damage	Replace if needed.
	Inspect parallel arm pivot pin mounting screws (8)	Tighten or replace if needed.
	Inspect platform pivot pins, bearings and vertical arms for wear, damage and positive securement	Replace damaged parts and re-secure as needed. Apply Light Grease during reassembly procedures.
	Inspect vertical arms, handrails and pivot pins for visible wear or damage	Replace damaged parts and re-lubricate if needed.
	Inspect inner/outer fold arms, saddle, saddle support and associated pivot pins, bushings, and bearings for visible wear or damage	Replace if needed.
	Inspect gas springs (cylinders - 2) for wear or damage, proper operation and positive securement	Tighten, replace or correct as needed.
	Inspect saddle bearing buttons (4)	Apply Door-Ease or replace if needed. See Lubrication Diagram
	Inspect saddle springs (2)	Re-secure or replace if needed.
	Inspect the power cable	Re-secure, repair or replace if needed.
Mounting	Check to see that the lift is securely anchored to the vehicle and there are no loose bolts, broken welds, or stress fractures.	
Decals and Antiskid	Replace decals if worn, missing or illegible. Replace antiskid if worn or missing.	
Consecutive 750 Cycle Intervals	Repeat all previously listed inspection, lubrication and maintenance procedures at 750 cycle intervals	

<p>Lift Disposal Procedure</p>	<p>2000-53-EC Disassembly and Disposal Guidelines</p> <p>No lift components contain unacceptable amounts of lead, cadmium, mercury, or hexavalent chromium.</p> <ol style="list-style-type: none"> 1. Lower the platform to ground. 2. Open pump module manual relief valve. 3. Disconnect power from lift. 4. Capture and recycle hydraulic fluid. 5. Disassemble lift and recycle components. <p>Refer to exploded views in manual.</p>
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The product complies with European
safety requirements



Intertek

BraunAbility Europe AB is certified in
accordance with ISO 9001:2015 and
ISO 14001:2015

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