Operator's Manual for:

NVL Series AWARNING

Public Use Wheelchair Lifts

DOT — Public Use Lift

"DOT - Public Use Lift" verifies that this platform lift meets the "public use lift" requirements of FMVSS No. 403. This lift may be installed on all vehicles appropriate for the size and weight of the lift, but must be installed on buses, school buses, and multipurpose passenger vehicles other than motor homes with a gross vehicle weight rating (GVWR) that exceeds 4,536 kg (10,000 lb).

THE BROUN **CORPORATION** "Providing Access to the World"

International Corporate Hdqrs: P.O. Box 310 Winamac, IN 46996 USA 1-800-THE LIFT (574) 946-6153 FAX: (574) 946-4670



Patent #5,261,779 Patent #6,065,924 Patent #6,238,169 Patent #6,599,079

Patent #6,692,217 Patent #6,739,824 Partent #6,454547 Partent #6,387,670 Download from Www.Somanuals.com. All Manuals Search And Download.



Read manual before operating lift. Failure to do so may result in serious bodily injury and/or property damage. Keep manual in lift storage pouch.

31714 Rev. B October 2006

SERIES

BRAUN

Patents Pending

Congratulations

We at The Braun Corporation wish to express our fullest appreciation on your new purchase. With you in mind, our skilled craftsmen have designed and assembled the finest lift available.

This manual includes safety precautions, lift operating instructions, manual operating instructions, and instructions for maintenance and lubrication procedures.

Your lift is built for dependability, and will bring you years of pleasure and independence, as long as maintenance is performed regularly and the lift is operated by an instructed person.

Sincerely,

THE BRAUN CORPORATION

Rall W. Brown

Ralph W. Braun

Chief Executive Officer

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Warranty and Registration Instructions

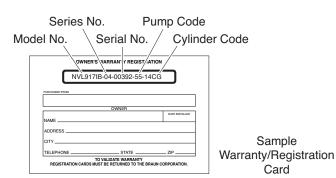
Immediately upon receiving your lift, examine the unit for any damage. Notify the carrier at once with any claims.

Two warranty/registration cards (shown below) are located in the lift-mounted owner's manual storage pouch. The sales representative must process one of the cards. The consumer must fill out

the other card and mail it to The Braun Corporation. The warranty is provided on the back cover of this manual. The warranty cards must be processed to activate the warranty.

Two Braun Serial No./Series No. identification tags are posted on the lift. One I.D. tag (shown below) is posted on the opposite

pump side vertical arm. A second I.D. tag is located on the opposite pump side tower. This I.D. tag contains the product identification information provided on the Warranty/Registration card. Record the information in the space provided on the next page. This information must be provided when filing a warranty claim or ordering parts.

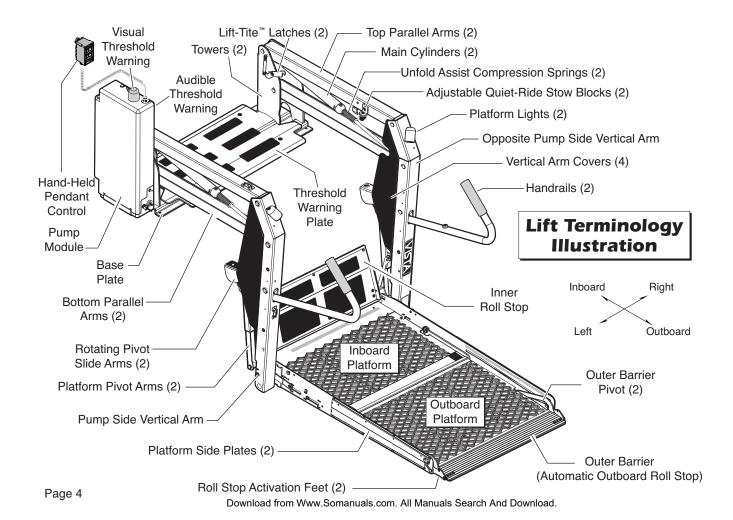


Sample Serial No./Series No. Identification Tag



Warranty and Registration Instructions

Model No	Pump Code	Note: This information must
Series No	Cylinder Code	be provided when filing a warranty claim or ordering
Serial No	Date of Manufacture	parts. Keep for future use.



Introduction:

Braun NVL Vista Series lifts are ADA compliant and comply fully with National Highway Traffic Safety Administration (NHTSA) specifications. The NVL is commercial oriented (intended for operation by an attendant).

Lift models vary per size (lift model numbers indicate lift dimensions). NVL Series lift models can be equipped with left or right side pump modules as needed. A left side pumpequipped lift model is depicted in the Lift Terminology Illustration (NVL917IB). Right side pump lift models are a mirrored image of rear pump models (pump module located on op-

posite end of base plate).

Refer to the Lift Terminology Illustration for identification of lift components.

Lift operation procedures are identical for all NVL Series lift models. The operating instructions contained in this manual and appearing on lift-posted operating instructions decals address the lift control switches and the corresponding lift functions. Instructions are provided for manual operation of the lift in event of power or equipment failure.

Terminology: Become familiar with the terminology that will be used throughout this manual. Become familiar with the identification of lift components and their functions. Contact your lift sales representative or call The Braun Corporation at 1-800-THE LIFT® if any of this information is not fully understood.

Direction: The terms "left," "right," "inboard," and "outboard" will be used throughout this manual to indicate direction (as viewed from outside the vehicle looking directly at the lift). Refer to the Lift Terminology Illustrations for clarification of direction terms.

Lift Components

Refer to the Lift Terminology Illustration on page 4.

Pump Module: The lift-mounted pump module consists of the hydraulic pump, the manual hand pump, the electronic control board and electrical components that power the lift electric/hydraulic systems.

Hand-held Pendant Control:

The hand-held attendant's pendant control is connected to the pump module. The hand-held pendant is equipped with two rocker switches, (UNFOLD, FOLD, DOWN, and UP). The momentary switches activate the automatic lift functions.

Lift Frame: The lift frame consists of the base plate, threshold warning plate, towers, parallel arms, vertical arms, platform pivot arms and handrails. Two main hydraulic cylinders are housed in the parallel arms. The electrical/hydraulic powered lift frame components mechanically unfold, lower, raise and fold the lift platform assembly.

Platform Assembly: The lift "stacking" platform assembly is made up of an inboard platform section and an outboard platform sections (each section consisting of a steel tubing frame with grating surface). The inner roll stop/bridge plate assembly (IB) is mounted on the inboard platform section. The outboard

platform section is equipped with the outer barrier.

Lift-Tite™ Latches: The springloaded latches prevent the platform from unfolding from the stowed position in the event of platform drift. Further details regarding Lift-Tite™ latches are provided on pages 16 and 17.

Outer Barrier: The spring-loaded automatic outer barrier (outboard roll stop) provides a ramp for wheelchair loading and unloading at ground level. Photos and

further details regarding the outer barrier are provided in the Operation Notes and Details section (pages 19-21).

Inner Roll Stop: NVL Series lift models are equipped with an automatic inboard roll stop that also serves as the bridge plate. The roll stop bridges the gap between the lift platform and the vehicle floor. The inner roll stop/bridge plate automatically rotates from the horizontal position to the vertical position as the lift lowers and raises. Further details regarding the automatic mechanical inboard roll stop are provided on pages 18 and 19.

Vehicle and Lift Interlocks

Braun Corporation NVL Series lifts comply fully with all NHTSA vehicle and lift interlock specifications. Vehicle movement is prohibited unless the lift is fully stowed and the lift will not function unless the vehicle is parked and secured.

The NVL features a visible and audible threshold warning system that will activate if the threshold area is occupied when the platform is one inch or more below floor level.

The inner roll stop and outer barrier sense weight to prohibit lift operation. The lift will not

function if the inner roll stop or outer barrier are occupied. The lift platform cannot be folded (stowed) if occupied.

The inner roll stop features a locking mechanism that prohibits the platform from lowering if the lock does not engage. The lift platform cannot be raised more than 3" above ground level unless the outer barrier is in the vertical position.

Lift Actions and Functions

DEPLOY (A-C)

A. UNFOLD (Out) - Platform Unfold: Unfold is the action of the platform rotating out and down from the fully-stowed (vertical) position to floor level (horizontal) position when the UNFOLD switch is pressed.

B. DOWN - Platform Lower:Down is the action of the platform lowering from floor level position to fully-lowered (ground level) position when the DOWN switch is pressed.

C. DOWN - Outer Barrier Unfold (Deploy) - When the platform reaches the fully-lowered (ground) position and the DOWN switch is continued to be pressed, the outer barrier rotates downward from vertical position to ramp position.

STOW (D-F)

D. UP - Platform Raise: Up is the action of the platform raising from ground level to floor level (fully-raised) position when the UP switch is pressed. When the lift is fully lowered, pressing the UP switch first raises the platform.

E. UP - Outer Barrier Fold (Raise): As the platform begins to raise off the ground, the spring-loaded outer barrier rotates from the ramp position to vertical position.

F. FOLD (In) - Platform Fold: Fold is the action of the platform rotating up and in from the floor level (horizontal) position to fullystowed (vertical) position when the FOLD switch is pressed.

Stowed Position: The lift is stowed when the lift platform has been fully raised and folded fully (vertical position).

Floor Level: Floor level is the position (height) the platform assembly reaches in order for the wheelchair passenger to enter and exit the vehicle (fully raised). The platform automatically stops at floor level when unfolding from the stowed position and when raising from ground level.

Safety Symbols

SAFETY FIRST! Know That

All information contained in this manual and supplements (if included), is provided for your safety. Familiarity with proper operation instructions as well as proper maintenance procedures are necessary to ensure safe, troublefree operation. Safety precautions are provided to identify potentially hazardous situations and provide instruction 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.



ACAUTION

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

D

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

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

Lift Operation Safety Precautions

AWARNING

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

AWARNING

Read manual and supplement(s) before operating lift. Read and become familiar with all safety precautions, pre-lift operation notes and details, operating instructions and manual operating instructions before operating the lift. **Note:** Wheelchair passengers and all transit agency personnel (drivers and wheelchair lift attendants) must read and become familiar with the contents of this manual and supplement(s) before operation.

▲WARNING

Load and unload on level surface only.

▲WARNING

Engage vehicle parking brake before operating lift.

▲WARNING

Provide adequate clearance outside the vehicle to accommodate the lift before opening lift door(s) or operating lift.

▲WARNING

Inspect lift before operation. Do not operate lift if you suspect lift damage, wear or any

abnormal condition.

▲WARNING

Keep operator and bystanders clear of area in which the lift operates.

AWARNING Whenever a wheelchair passenger (or standee) is on the platform, the:

• Passenger must be positioned fully inside yellow boundaries

· Wheelchair brakes must be locked

Inner roll stop and outer barrier must be up (vertical)

· Passenger should grip both handrails (if able).

AWARNING Load and unload clear of vehicular traffic.

AWARNING Do not overload or abuse. The load rating applies to both the raising and lowering func-

tions - continuous lifting capacity is 800 lbs.

AWARNING Discontinue lift use immediately if any lift or vehicle interlock does not operate properly.

AWARNING Do not operate or board the lift if you or your lift operator are intoxicated.

AWARNING Do not raise front wheelchair wheels (pull wheelie) when loading (boarding) the platform.

AWARNING Open lift door(s) fully and secure before operating lift.

AWARNING Position and secure (buckle, engage, fasten, etc.) the wheelchair-equipped occupant

seat belt (torso restraint) before loading onto the wheelchair lift platform.

Lift Operation Safety Precautions (continued)

▲WARNING

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

AWARNING

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

Platform must be positioned at floor level (bridge plate height) when loading or unloading in and out of vehicle.

▲WARNING

Do not use platform inner roll stop or outer barrier as a brake. Stop and brake wheelchair when loading onto the platform (manually stop and brake manual wheelchairs — stop powered wheelchairs with the wheelchair controls).

AWARNING

Turn powered (electric) wheelchairs off when on lift platform.

AWARNING

Press the DOWN switch until the entire platform rests on ground level (lowered fully) and the outer barrier is fully unfolded (ramp position) before loading or unloading a passenger at ground level.

▲WARNING

Outer barrier must be fully unfolded (ramp position) until front and rear wheelchair wheels cross the

AWARNING Accidental activation of control switch(es) may cause unintended operation(s).

AWARNING Maintenance and lubrication procedures must be performed as specified in this manual by

authorized (certified) service personnel.

AWARNING Replace missing, worn or illegible decals.

AWARNING Keep owner's (operator's) manual in lift-mounted manual storage pouch at all times.

AWARNING Never modify (alter) a Braun Corporation lift.

AWARNING Do not use accessory devices not authorized by The Braun Corporation.

AWARNING Do not remove any guards or covers.

AWARNING Keep clear of any hydraulic leak.

AWARNING Failure to follow these safety precautions may result in serious bodily injury and/or prop-

erty damage.

AWARNING

Read and become familiar with all lift operation safety precautions, operation notes and details. operating instructions and manual operating instructions prior to operating the lift. If this information is not fully understood. contact The Braun Corporation immediately. Failure to do so may result in serious bodily injury and/or property damage.

NVL Series "Public Use" lift models are specifically designed to be operated by an attendant. The Lift Operating Instructions contained in this manual and posted on the lift provide instructions for operation of the lift **only**. Read and become familiar with all lift operation safety precautions, operation notes and details, operating instructions and manual operating instructions before attempting lift operation procedures.

Lift Access Doors and Interlocks: Attendants must become familiar with the vehicle lift access door system and vehicle interlock system(s). Transit vehicles and lift access door configurations vary. Door securement devices (latches, hooks, cables, etc.) and procedures to operate them vary.

Instructions for operation of vehicle interlocks and door securement systems are not addressed in this manual or on lift-posted operating instructions decals due to the variety of procedures required for operating them. Braun Corporation NVL Series lifts comply fully with all NHTSA vehicle and lift interlock specifications (detailed on pages 7 and 32). Infringement of any lift interlock will prohibit lift operation.

It is the responsibility of the lift operator (attendant) to properly open, secure and close the vehicle lift door(s), to activate the vehicle interlock(s), to load and unload the wheelchair passenger (or standee) on and off the lift platform, and to properly activate all lift functions.

General Safety: The lift operator (attendant) and bystanders must keep clear of the area in which the lift operates and clear of all moving parts. Lift attendants

must ensure that lift occupants (passengers) keep hands, arms and all other body parts within the lift occupant area and clear of moving parts.

Control Switches



Lift Power ON/OFF Switch:

This switch must be in the ON position in order to activate the lift. The green Power Indicator Light mounted on top of the pump module illuminates to signal power to the lift.

Hand-held Pendant Control:

The hand-held attendant's pendant control is equipped with two rocker switches, (UNFOLD, FOLD, DOWN, and UP). The momentary switches activate the automatic lift functions. Simply



Hand-held Pendant

press the switch labeled for the intended function.

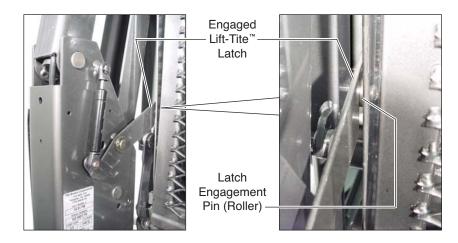
Lift Features

Become familiar with all lift features and the proper operation of the lift components **before** attempting lift operation. Refer to the Lift Terminology Illustrations for identification of specific lift components if not clearly depicted in this section. Contact The Braun Corporation at 1-800-THE LIFT® immediately if any of this information is not understood.

Lift-Tite™ Latches: NVL Series lifts are equipped with Lift-Tite™ Latches. Lift-Tite™ Latches prevent the platform from unfolding from the stowed position in



Discontinue lift use immediately if any lift component does not operate properly. Failure to do so may result in serious bodily injury and/or property damage.

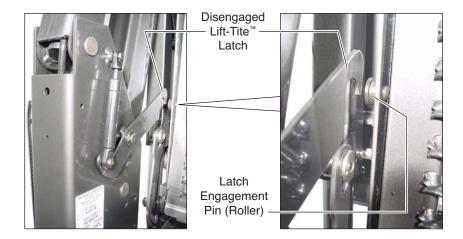


the event of platform drift. Due to the "all-hydraulic" operation of the dual-cylinder NVL, hydraulic fluid expansion, contraction or seepage may occur. Any of these conditions may result in platform drift (failure to hold the platform in the folded or raised position). Platform drift may occur during lift shipment and/or between extended periods of non-use.

In the event that the platform does not unfold when the UNFOLD switch is pressed, press the FOLD switch momentarily to disengage the Lift-Tite™ latches (platform drift has occurred). Then, press the UNFOLD switch to unfold the platform to floor level (standard operation).

When manually operating a lift equipped with Lift-Tite™ latches, insert the pump handle in the pump and stroke until the platform folds fully (stops). Then, open the hand pump valve (turn counterclockwise) to unfold the

platform. Folding the platform fully first will ensure that the Lift-Tite™ latches will disengage properly when the release valve is opened. Manual Operating Instructions are provided on pages 33-37.



Lift Features (continued)

Inner Roll Stop: NVL Series lift models are equipped with an automatic inner roll stop that also serves as a bridge plate (inner roll stop photos below).

When the UNFOLD switch is

pressed and the platform unfolds from stow position to floor level, this mechanical roll stop is automatically deployed to the bridging (horizontal) position to provide a bridge plate between the platform and the lift base plate (vehicle floor). The inboard edge of the roll stop rests on the threshold

warning plate (base plate).

The roll stop automatically folds (rotates) to the vertical (roll stop) position when the platform lowers to the ground (DOWN switch is pressed).



Fully Deployed (vertical) (horizontal)
Inner Inner Roll Stop
(bridging position)

Inner Roll Stop

The inner roll stop must overlap the base plate a minimum 1/2".



AWARNING

Discontinue lift use immediately if any lift component does not operate properly. Failure to do so may result in serious bodily injury and/or property damage.

As the UP switch is pressed and the platform raises from ground level, the inner roll stop automatically unfolds (rotates) to the horizontal (bridging) position when it reaches vehicle floor level. The roll stop must overlap the lift base plate a minimum 1/2".

When the FOLD switch is pressed and the platform folds from floor level to the stow (vertical) position, the roll stop/bridge plate automatically travels inboard to the stowed position.

Interlock Features: The inner roll stop features a locking mechanism that prohibits the platform from lowering if the lock is not engaged. The inner roll stop also senses weight to prohibit lift operation. The lift will not function if the inner roll stop is occupied.

Discontinue lift operation immediately if the inner roll stop does not operate properly.

Outer Barrier: This spring-loaded roll stop provides a ramp for wheelchair loading and unload-

ing at ground level (see photos on following page). When the platform lowers fully to ground level, the roll stop activation feet automatically unfold (rotate) the barrier to the ramp position (fully unfolded). The two activation feet (one at each end of the barrier) ensure barrier operation on an uneven surface.

Although the outer barrier is lift-powered, the activation of the barrier is controlled by the lift operator (attendant). Pressing the DOWN switch unfolds the barrier. The outer barrier is spring-loaded to automatically fold (rotate) to the vertical position when the UP switch is pressed. As the activation feet lift off the ground, the torsion springs rotate the barrier to the

Lift Features (continued)

springs rotate the barrier to the vertical position.

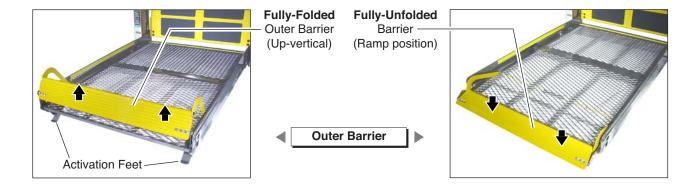
Interlock: The outer barrier senses weight to prohibit lift operation. The lift will not function if the outer barrier is occupied.

Discontinue lift operation immediately if the outer barrier does not operate properly.

Note: The platform must raise approximately three inches **before** the outer barrier reaches the fully vertical position (see photo on opposite page). **Interlock:**

Lift platform movement shall be interrupted unless the outer barrier is raised (vertical position).

Outer Barrier Operation: The lift attendant must press the DOWN switch to lower the platform fully to the ground. The



attendant **must view** the platform as it lowers to **be certain** the **entire platform** reaches and

Fully-Vertical
Outboard Barrier



Note: Platform must raise approximately three inches before barrier raises fully.

rests safely on the ground. Stop pressing the DOWN switch if any portion of the platform is obstructed while descending or the entire platform does not reach ground level **for any reason** (contact with an obstruction, mechanical failure, exceeding the lift "floor-to-ground" capacity, etc.).

Note: The barrier must be fully unfolded until the entire wheelchair (or standee) has crossed when loading or unloading at ground level. Discontinue lift operation immediately if the outer barrier does not operate properly.

Bridging: The NVL incorporates a bridging feature. This feature stops the down travel

of the platform if the outboard end of the platform contacts a raised surface (such as a curb), preventing the operator from lowering the inboard end of the platform.

Handrails: Dual handrails are provided for wheelchair passenger (or standee) use. The handrails unfold automatically to the deployed (horizontal) position when the lift unfolds and automatically fold to the stowed (vertical) position when the platform folds.

If able, passengers should grip both handrails when on the lift platform. Discontinue lift operation immediately if the handrails do not operate properly.

Lift Passengers

If you are an attendant operating the lift, it is your responsibility to perform safe loading and unloading procedures. Wheelchair lift attendants should be instructed on any special needs and/or procedures required for safe transport of wheelchair passengers.

The lift operator and bystanders must keep clear of the area in which the lift operates. Observe your passenger at all times during lift operation.

Do not attempt to load or unload a passenger in a wheelchair or other apparatus that does not fit on the platform area. Do not exceed the 800 pound load capacity of the lift. The lift attendant should not ride on the platform with the passenger.

Passenger Orientation (Boarding Direction): Braun NVL Series wheelchair lifts accommodate both inboard and outboard facing wheelchair passengers or standees. Inboard facing of wheelchair lift passengers is not prohibited, but outboard facing of passengers is recommended by The Braun Corporation.

Braun NVL Series lifts permit both inboard and outboard facing of wheelchair and mobility aid users **and** accommodate persons using walkers, crutches, canes or braces or who otherwise have difficulty using steps.

Standees: Lift Operating Instructions apply to wheelchair passengers and standees. Standees should stand in the center of the platform (fully inside the yellow boundaries) and grip both handrails (if able) when on platform.

Yellow Boundaries: The passenger must be positioned in the center of the platform to prevent side-to-side load imbalance. The lift attendant (operator) should not ride on the platform with the passenger.

Yellow platform loading boundaries are identified in the following manner. The yellow powder-coated inner roll stop and outer barrier identify the inboard and outboard ends of the platform. Yellow boundary strip decals are

affixed to the platform side plates. Yellow plastic caps are placed on the dual handrails.

The threshold warning plate is powder-coated yellow to identify the platform threshold area. **Interlock:** A visible and audible threshold warning system will activate if the threshold area is occupied when the platform is one inch or more below floor level.

The attendant must always be certain the wheelchair passenger or standee is properly positioned on the platform (fully inside yellow boundaries) and the wheelchair brakes are locked when a passenger is on the lift platform. The lift passenger must keep hands, arms and all other body parts within the lift occupant area

and clear of all moving parts.

Vehicle (Floor Level) Loading and Unloading: The platform must be fully raised (at floor level) and the bridge plate must be properly positioned when loading or unloading passengers in or out of the vehicle. It is the responsibility of the lift attendant to ensure the platform and the bridge plate are properly positioned at floor level when loading and unloading passengers.

The wheelchair brakes must be locked, the inner roll stop must be in the fully-up (vertical) position and the outer barrier must be in the fully up (vertical) position whenever a passenger is on the platform.

AWARNING

Whenever a passenger is on the platform, the:

- Passenger must be positioned fully inside yellow boundaries
- Wheelchair brakes must be locked
- Inner roll stop and outer barrier must be UP

Failure to follow these rules may result in serious bodily injury and/or property damage.

Lift Passengers (continued)

Do not use the outer barrier as a brake. Stop and brake the wheelchair when fully loaded on the platform. Manually stop and brake manual wheelchairs. Stop powered wheelchairs with the wheelchair controls. Turn powered (electric) wheelchairs off when on the platform.

If the outer barrier, bridge plate, handrails or any other lift component does not operate as outlined in this manual, **discontinue lift use immediately** and contact The Braun Corporation sales representative in your area or call The Braun Corporation at 1-800-THE LIFT®. One of our national Product Support repre-

sentatives will direct you to an authorized service technician who will inspect your lift.

AWARNING

Discontinue lift use immediately if any lift component does not operate properly. Failure to do so may result in serious bodily injury and/or property damage.

Wheelchair-Equipped Occupant Seat Belts

The Braun Corporation recommends wheelchair passengers position and buckle their wheel-

AWARNING

Position and secure (buckle, engage, fasten, etc.) the wheelchair-equipped occupant seat belt before loading onto the wheelchair lift platform. Failure to do so may result in serious bodily injury and/or property damage.

chair-equipped seat belt (torso restraint) **before** loading onto a wheelchair lift.

Different types of disabilities require different types of wheel-chairs and different types of wheelchair-equipped occupant restraint belt systems (torso restraints). It is the responsibility of the wheelchair passenger to have his or her wheelchair equipped with an occupant restraint (seat belt) under the direction of their health care professional.

Wheelchair lift attendants should be instructed on any special needs and/or procedures required for safe transport of wheelchair passengers.

Operation Procedure Review

The Braun Corporation recommends that transit agency supervisors and wheelchair lift attendants review the safety precautions and operation procedures appearing in this manual and on lift-posted decals with your wheelchair lift sales representative (dealer), **before** attempting lift operation.

Any questions or concerns can be answered by the sales representative at that time. Operate the lift through all functions with your sales representative on hand to ensure the proper use and operation of the wheelchair lift is understood.

Transit agency supervisors should train and educate their lift attendants on the proper use and operation of the wheelchair lift if it is not possible for the attendants to review the safety precautions and operation procedures with the wheelchair lift sales representative.

The lift operator's manual must be stored in the lift-mounted manual storage pouch at all times.

Preventive Maintenance:

Maintenance is necessary to ensure safe and troublefree lift operation. General preventive lift maintenance consisting of **careful** inspections of the lift system and cleaning the lift should be

a part of your transit agency's daily lift service program. Simple inspections can detect potential lift operational problems.

Regular preventive maintenance will reduce potential lift operation downtime and increase the service life of the lift, as well as possibly detecting potential hazards.

Exposure to harsh weather elements, environmental conditions, or heavy usage may require more frequent maintenance and lubrication procedures.

Preventive maintenance visual inspections **do not** take the place of the procedures specified in the Maintenance and Lubrication Schedule provided on pages

41-49 of this manual. Refer to the Maintenance and Lubrication section for further details.

AWARNING

Maintenance and lubrication procedures must be performed by authorized service personnel as specified in this manual. Failure to do so may result in serious bodily injury and/or property damage.

AWARNING

Read and become familiar with all lift operation safety precautions, operation notes and details. operating instructions and manual operating instructions prior to operating the lift. If this information is not fully understood. contact The Braun Corporation immediately. Failure to do so may result in serious bodily injury and/or property damage.

AWARNING

Whenever a passenger is on the platform, the:

- Passenger must be positioned fully inside yellow boundaries
- Wheelchair brakes must be locked
- Inner roll stop and outer barrier must be UP

Failure to follow these rules may result in serious bodily injury and/or property damage.

Before lift operation, park the vehicle on a level surface, away from vehicular traffic. Place the vehicle transmission in "Park" and engage the parking brake.

Lift Operating Instructions photos depict lift model NVL917IB. Instructions and procedures are applicable for all NVL Series lift models. Lift-posted Warnings and Lift Operating Instructions decal 30695 provides lift operating instructions. Replace any missing, worn or illegible decals.

If your lift does not function as intended or an audible warning signal is activated, review the NHTSA Operations Checklist on page 32. Follow the Manual Operating Instructions on pages 33-37 in the event of a power or equipment failure.





Open Door(s) and Secure

To Unfold Platform:

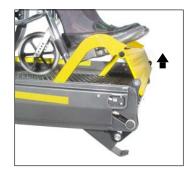
Stand clear and press the UN-FOLD switch until the platform stops (reaches floor level - unfolds fully). Release switch.

Note: In event platform does not unfold, press FOLD switch to release Lift-Tite[™] latches.

To Unload Passenger:

- Read Note below! Load passenger onto platform and lock wheelchair brakes.
- Note: Passenger must be positioned fully inside yellow boundaries and outer barrier must be UP.







To Unload Passenger (continued):

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

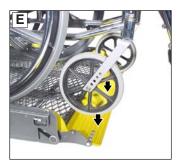




3. Unlock wheelchair brakes and unload passenger from platform.

Note: Outer barrier **must** be **fully unfolded** (ramp position) until the entire wheelchair (or standee) has crossed the outer barrier. See Photos **E** and **F** on page 30 also.

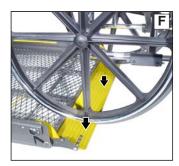




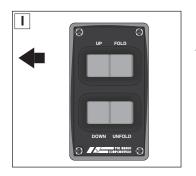


To Load Passenger:

- Read Notes below! Load passenger onto platform and lock wheelchair brakes. See Photo G.
- Note: Outer barrier must be fully unfolded (ramp position) until the entire wheelchair (or standee) has crossed the outer barrier. See Photos **E** and **F**.
- Note: Passenger must be positioned fully inside yellow boundaries.



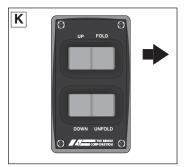




To Load Passenger (continued):

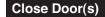
- 2. Press UP switch (Photo I) to fold outer barrier UP fully (vertical - see Photo H), and raise the platform to floor level. See Photo J. Release switch.
 - **3**. Unlock wheelchair brakes and unload passenger from platform.





To Fold Platform:

Press FOLD switch until platform stops (**fully** folded). See Photos K and L. Release switch.





NHTSA Operations Checklist

installation. This operational checklist can be used at any time to verify the lift is fully functional.
Verified:
☐ Vehicle movement is prevented unless the lift door is closed, ensuring the lift is stowed.
☐ Lift operation shall be prevented unless the vehicle is stopped and vehicle movement is prevented.
☐ The platform will not fold/stow if occupied.
☐ The inner roll stop will not raise if occupied.
$\hfill \Box$ The outer barrier will not raise if occupied.
☐ Verify platform lighting* when lift is deployed and pendant illumination when it is powered.
☐ An audio warning (and visual warning for public lifts) will activate if the threshold area is occupied when the platform is at least one inch below floor level.

The following exercises have been verified upon

Lowering the platform beyond the inner roll stop locking position is allowed only when the inner roll stop is locked in position.

Lift platform movement shall be interrupted unless the outer barrier is raised and the outer barrier latch is positevely engaged.

▲WARNING

Discontinue lift use immediately if any lift or vehicle interlock does not operate properly. Failure to do so may result in serious bodily injury and/or property damage.

*Public use vehicle manufacturers are responsible for complying with the lift lighting requirements in Federal Motor Vehicle Safety Standard No. 404, Platform Lift Installations in Motor Vehicles (49 CFR 571.404).

Manual Operating Instructions

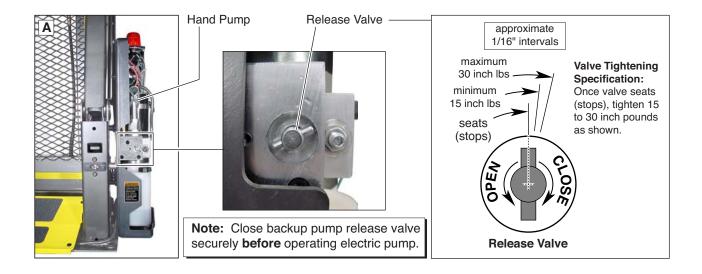
If you experience power or equipment failure, refer to the Manual Operating Instructions to operate the lift. Instructions and photos are provided for all steps that differ from standard lift operation procedures. The Manual Instructions decal (posted inside pump cover) provides manual operating instructions also. **Note:** A right side pump lift model is depicted in the photos. Left side pump applications are a mirrored image. Refer to the Lift Operating Instructions or all



Manual Operating Instructions

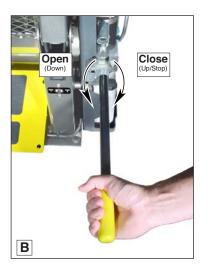
normal lift operation procedures (such as loading and unloading passengers). Follow all Lift Operation Safety Precautions! Remove the pump cover to gain access to the pump handle and the hand pump. See photos on page 33. To remove the pump cover, turn the wing nut located

on top 1/4 turn and lift the pump cover off. The pump handle is inside this cover secured by two clips. Rotate the top clip to remove the pump handle.



Manual Operating Instructions

Remove pump cover to access hand pump and pump handle as outlined on page 33. Refer to release valve photos and illustration on page 34.



To Unfold Platform (Out):

Using hand pump handle (Photo B):

- Close hand pump valve (place slotted end of pump handle onto backup pump release valve and turn clockwise).
- 2. Insert handle in pump and stroke until platform folds fully (stops).
- Open hand pump valve (turn counterclockwise) until platform reaches floor level. Open 1/2 turn only.
- 4. Close hand pump valve (turn **clockwise**).

Note: Valve must be tight, but **do not** overtighten.

Down (To Lower):

Place slotted end of pump handle onto backup pump release valve and turn **counterclockwise** (open **1/2 turn only**) until the platform reaches ground level and roll stop unfolds.



Manual Operating Instructions

Remove pump cover to access hand pump and pump handle as outlined on page 33. Refer to release valve photos and illustration on page 34.



Up (To Raise):

Using hand pump handle:

 Place slotted end of pump handle onto backup pump release valve and turn clockwise to close securely. See Photo D.

Note: Valve must be tight, but **do not** overtighten.

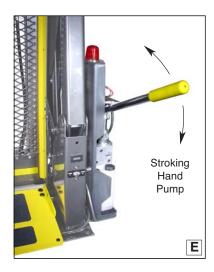
 Insert handle into backup pump and stroke until platform reaches floor level (see Photo E).

To Fold Platform (In):

Insert handle into backup pump and stroke until platform **stops** (folds **fully**). See Photo E.

Note: Close backup pump release valve securely **before** operating electric pump.

Store pump handle and install pump cover as outlined on page 37.



Manual Operating Instructions

To Store Pump Handle:

- 1. Insert bottom of handle behind bottom clip. See page 33.
- 2. Rotate top clip to secure (lock) handle.

To Install Pump Cover:

- 1. Position cover over module back cover and red warning light. See Photo F.
- 2. Align outside cover lip with bottom cover offset and insert outside cover. See Photo G.

3. Insert wing stud and rotate 1/4 turn to lock cover. See Photo Η.



Position cover over red light.

Align and insert bottom of cover.





Н

Decals and Antiskid

Decals

AWARNING

Replace missing, worn or illegible decals. Failure to do so may result in serious bodily injury and/or property damage.

Note: Clean surfaces as detailed on page 40 before posting decals.

25675







The lift is only as safe as

the operator. Replace

any missing, worn or

illegible decals! Part

numbers are provided for

missing, worn or illegible

decals. Call 1-800-THE

LIFT® for replacements.

decals. Inspect your lift for





Decals and Antiskid

Decals

32410 LCD Lift Codes I isted below are nodes that the lift controlle outputs during lift operation. The codes will be displayed on an LCD screen located on the lift 01 - Platform stowed 57 - Outer barrier is not up and latched and 02 - Platform unfolding ground detect switch did not deactivate (Century and Vista only) 58 – Outer barrier is not up and latched and the 03 – Platform unfolding paused 04 – Platform at floor level 05 – Platform beginning to lower platform is 3° above the ground 08 – Platform lowering (threshold cannot be occupied from this point down) 07 – Outer barrier moving to horizontal 59 - Outer barrier is not up after pausing platform travel 60 – The kickout gas springs are worn, replace before using 75 – Low voltage detected; must turn off power switch to reset LCD 77 – Vehicle secure interlock has not been 08 - Platform at around level 09 – Outer barrier moving to vertical position 10 – Platform raising 11 – Platform raising paused at floor 12 – Platform folding (limited pressure) 13 – Platform folding (full pressure) 90 - Position will be set if you keep holding the button until it beeps 14 – Timed fold (cinching lift tite) or (anti-rattle 91 – Position is out of a predetermined state) 15 – Platform folding stopped acceptable range of floor position 92 – Bridge switch is not made, needs adjusting 16 - Paused fold 93 - Inner rollstop occupied switch is not made 17 - Platform between ground and 3° above position needs to be moved or switch ground 18 – Platform above 3* should be adjusted 94 – Outer barrier is not made, fix and try again 19 - Outer barrier moving to horizontal 95 - Outer barrier latch is not made (check to jumper on Century and Vista lifts, check latch on Millennium lifts) 99 – Controller program is not valid; replace 20 – The doors are not fully opened (only applicable when door operators are installed) 21 – The doors are opening (only applicable when door operators are installed) 22 – The doors are closing (only applicable when door operators are installed) 28 – Illegal function not defined

Flashing Numbers

29 - Interioris fault not recognized (or has

31 - Platform location transition state;

been cleared but a motion button is still pressed)

30 – Platform location unknown

attempting to locate position 35 – Two or more motion buttons are being 36 – The retention belt cannot be buckled while trying to fold or unfold 37 – Motion button being pressed is not a

50 - Outer barrier is not up above inboard

inner rollstop locked position

up position

(Milennium only)

barrier locked position 51 – Threshold is occupied when platform is

56 - Outer barrier is not up and latched and bridge switch did not deactivate

Flashing 66 - Fold button is pressed Flashing 66 – Pold buildin is pressed Flashing 68 – Up button is pressed Flashing 68 – Up button is pressed Flashing 69 - Bridge switch is activated

Flashing 70 – Outer barrier latch switch is activated Flashing 71 – Ground detect switch is activated Flashing 72 – Outer barrier up switch is activated Flashing 73 – Inner rollstop up switch is activated Flashing 74 – Inner rollstop occupied switch is activated

Flashing 76 - Outboard barrier occupied switch is activated Flashing 78 – Threshold tape switch "A" is activated
Flashing 79 – Threshold tape switch "B" is activated
Flashing 80 – Position set button is pressed

1° or more below floor level 52 – Inner rollstop is not up and locked below 53 – Inner rollstop occupied sensor is not activated between floor and inner rollstop Flashing 81 – Single function UP / FOLD / CLOSE button is pressed Flashing 82 – Single function OPEN / UNFOLD / DOWN button is pressed 54 - Outer barrier is occupied before it is up 55 – Other barrier is not latched when above the inner rollstop locked position Flashing 87 – CLOSE button is pressed

Flashing 88 - OPEN button is pressed Flashing 89 - Door full open switch is activated



32201



30787



27154



Decals and Antiskid

Decals

22249



25652



29051



1" Wide Yellow Boundary Tape

30236R (order by the inch as needed)

Antiskid



Replace missing or worn antiskid.
Failure to do so may result in serious bodily injury and/or property damage.

Available Antiskid		
Size	Color	Part No.
2" x 12"	Black	#24172-BK
2" x 12"	Yellow	#24172-YL
3" x 8"	Black	#31188-BK
3" x 12"	Black	#24173-BK
3" x 12"	Yellow	#24173-YL
6" x 12"	Black	#24174-BK
6" x 12"	Yellow	#24174-YL

Inspect your lift for any missing or worn antiskid. Order as needed. **Note:** Clean surfaces with isopropyl alcohol before decal or antiskid application. Use a clean cloth or paper towels. **Do not** use oily shop rags. Wipe surface free of residue with dry portion of cleaning cloth.

Maintenance and Lubrication

Proper maintenance is necessary to ensure safe, troublefree operation. Inspecting the lift for any wear, damage or other abnormal conditions should be a part of all transit agencies's daily service program. Simple inspections can detect potential problems.

The maintenance and lubrication procedures specified in the following schedule **must** be performed by a Braun authorized service representative at the scheduled intervals according to the number of cycles.

NVL Series lifts are equipped with hardened pins and self-lubricating bushings to decrease wear, provide smooth operation and extend the service life of the lift.

When servicing the lift at the recommended intervals, inspection and lubrication procedures specified in the previous sections should be repeated. **Clean** the components and the surrounding area **before applying lubricants**.

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

AWARNING

Maintenance and lubrication procedures must be performed as specified by an authorized service technician.
Failure to do so may result in serious bodily injury and/or property damage.

Lift components requiring grease are lubricated during assembly procedures. When these components are replaced, grease must be applied during installation procedures. Specified lubricants are available from The Braun Corporation (part numbers provided on page 42).

Maintenance and Lubrication

All listed inspection, lubrication and maintenance procedures should be repeated at "750 cycle" intervals following the scheduled "4500 Cycles" maintenance. 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.

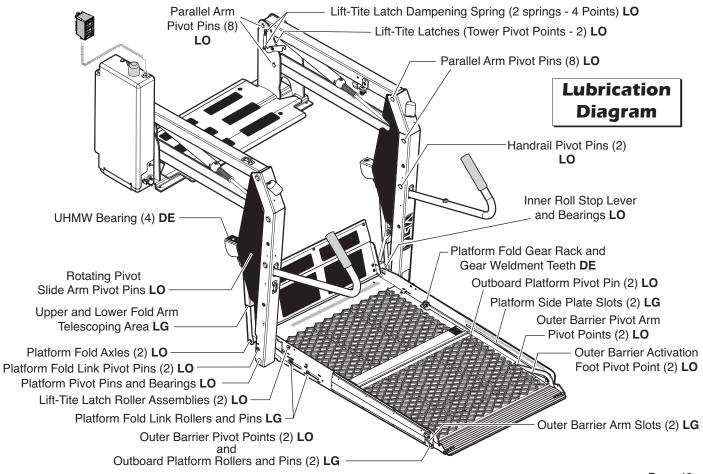
Maintenance Indicator: The Lift Ready green LED mounted on top of the pump cover will begin to blink after every 750 cycles. The blinking LED will not affect the functions of the lift, but is a

reminder to complete necessary maintenance and lubrication. Once the lift has been serviced, fully stow the lift. Once stowed, press the UP button on the hand pendant and the Floor Level Set button on the back side of the pump cover until the Lift Ready green LED stops blinking.

Discontinue lift use immediately if maintenance and lubrication procedures are not properly performed, or if there is any sign of wear, damage or improper operation. Contact your sales representative or call The Braun Corporation at 1-800-THE LIFT®. One of our national Product Support representatives will direct you to an authorized service technician who will inspect your lift.

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

Lubricant	Туре	Specified (recommended) Lubricant	Available Amount	Braun Part No.
LO - Light Oil	Light Penetrating Oil (30 weight or equivalent)	LPS2, General Purpose Penetrating Oil	11 oz. Aerosol Can	15807
DE - Door-Ease	Stainless Stick Style (tube)	Door-Ease Stick (tube)	1.68 oz.	15806
LG - Light Grease	Light Grease (Multipurpose)	Lubriplate	14 oz. Can	15805



	Outer barrier pivot points (2)	Apply Light Oil - See Lubrication Diagram
	Outer barrier arm slots (2)	Apply Light Grease - See Lubrication Diagram
	Outboard platform pivot pins (2)	Apply Light Oil - See Lubrication Diagram
	Outboard platform rollers and pins	Apply Light Oil - See Lubrication Diagram
	Platform fold link pivot pins	Apply Light Oil - See Lubrication Diagram
750	Platform fold link rollers and pins	Apply Light Grease - See Lubrication Diagram
Cycles	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 Lift-Tite™ latches and gas springs for wear or damage (bent, deformed or misaligned), positive securement (external snap rings) and proper operation	Resecure, replace damaged parts or otherwise correct as needed. Note: Apply Light Grease to Lift-Tite™ latch tower pivot point if replacing latch.
	Inspect outer barrier for proper operation	Correct or replace damaged parts.

750	Inspect platform fold gear rack and gear weldment teeth for foreign objects, wear or damage (bent, deformed or misaligned), positive securement and proper operation	Remove foreign objects, replace damaged parts and resecure as needed
Cycles	Inspect lift for wear, damage or any abnormal condition	Correct as needed.
	Inspect lift for rattles	Correct as needed.

	Perform all procedures listed in previous sections also	
	Outer barrier pivot arm pivot points (2)	Apply Light Oil - See Lubrication Diagram
1500	Upper and lower fold arm telescoping area	Apply Light Grease - See Lubrication Diagram
Cycles	Platform pivot pin bearings (2)	Apply Light Oil - See Lubrication Diagram
	Platform fold axles (2)	Apply Light Oil - See Lubrication Diagram
	Inner roll stop lever bearings (2)	Apply Light Oil - See Lubrication Diagram
continued	Inner roll stop lever slot (2)	Apply Light Oil - See Lubrication Diagram

continued	Perform all procedures listed in previous section also		
	Rotating pivot slide arm pivot pins (2)	Apply Light Oil - See Lubrication Diagram	
	Parallel arm pivot bearings (16)	Apply Light Oil - See Lubrication Diagram	
	Handrail pivot pin bearings (4)	Apply Light Oil - See Lubrication Diagram	
	Hydraulic cylinder bushings (8)	Apply Light Oil - See Lubrication Diagram	
1500	Inspect Lift-Tite [™] latch rollers for wear or damage, positive securement and proper operation (2)	Correct, replace damaged parts and/or relubricate.	
Cycles	Inspect outer barrier feet for proper operation, positive securement and detached or missing torsion spring	Correct, replace damaged parts and/or relubricate.	
	Inspect inner roll stop for: • Wear or damage • Proper operation. Roll stop should just rest on top surface of the threshold (base) plate. • Positive securement (both ends)	Resecure, replace or correct as needed. See Platform Angle Instructions and Floor Level Adjustment Instructions.	
	Inspect handrail components for wear or damage, and for proper operation	Replace damaged parts.	

	Make sure lift operates smoothly	Realign towers and vertical arms. Lubricate or correct as needed.
	Inspect external snap rings: Handrail pivot pins (2 per pin) Platform slide/rotate pivot pins (2 per pin) Platform fold axles (1 per axle) Inner roll stop lever bracket pins (1 per pin) Lift-Tite™ latch gas (dampening) spring (2 per) Outboard platform pivot pins (1 per pin) Gear weldment pivot pins (1 per pin)	Resecure or replace if needed.
1500 Cycles	Inspect platform fold axles and bearings for wear or damage and positive securement	Replace damaged parts and resecure as needed. Apply Light Oil.
	Inspect platform fold link rollers and bearings for wear or damage and positive securement	Resecure, replace or correct as needed. Note: Apply Loctite® to threads if needed.
continued	Remove pump module cover and inspect: Hydraulic hoses, fittings and connections for wear or leaks Harness cables, wires, terminals and connections for securement or damage Control board, circuit breaker, power switch and lights for securement or damage	Resecure, replace or correct as needed.

	Perform all procedures listed in previous section als	60
	Inspect cotter pins on platform pivot pin (2)	Resecure, 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 Braun 32840-QT (Exxon® Univis HVI 26) hydraulic fluid (do not mix with Dextron III or other hydraulic fluids). Check fluid level with platform lowered fully and roll stop unfolded fully . Fill to within 1/2" of the bottom of the 1-1/2" fill tube (neck).
4500 Cycles	Inspect cylinders, fittings and hydraulic connections for wear, damage or leaks	Tighten, repair or replace if needed.
-	Inspect parallel arms, bushings and pivot pins for visible wear or damage	Replace if needed.
	Inspect parallel arm pivot pin mounting bolts (8)	Tighten or replace if needed.
	Inspect vertical arms, handrails and pivot pins for visible wear or damage	Replace damaged parts and lubricate if needed
	Inspect upper/lower fold arms, rotating pivot slide arms, slide support arms and associated pivot pins, bushings, and bearings for visible wear or damage	Replace if needed.

	Inspect gas springs (cylinders) for wear or damage, proper operation and positive securement	Tighten, replace or correct as needed
	Inspect rotating pivot slide arm UHMW slide bearings	Apply Door-Ease or replace if needed. See Lubrication Diagram.
4500	Inspect vertical arm plastic covers	Resecure or replace if needed.
Cycles	Inspect power cable	Resecure, 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. See Decals and Antiskid section on pages 37-39.

Consecutive
750 Cycle
Intervals

Repeat all previously listed inspection, lubrication and maintenance procedures at 750 cycle intervals.

"Providing Access to the World"



Vista Series Lift Braun "Worry-Free" Five-Year Limited Warranty

The Braun Corporation of Winamac, Indiana, warrants its wheelchair lift against defects in material and workmanship for up to five years*, providing the lift is installed, operated and maintained properly and in conformity with this manual. This warranty is limited to the original purchaser and does not cover defects in the motor vehicle on which it is installed, or defects in the lift caused by a defect in any part of the motor vehicle.

This warranty commences on the date the lift is put into service, providing the warranty registration card is completed and received by The Braun Corporation within twenty days of purchase. If no warranty card is received, the warranty will expire three years from the date of manufacture as identified on the lift serial number tag.

This warranty also covers the cost of labor for the repair or replacement of parts for three years when performed by an approved Braun Dealer. (A labor schedule determines cost allowance for repairs, which can be provided upon request by an approved Braun Dealer).

This warranty does not cover normal maintenance, service, or periodic adjustments necessitated by use or wear. The Braun Corporation will not, under any circumstances, pay for loss of use, incidental or consequential damages related to the lift, or vehicle in which it is installed.

This warranty will become null and void if the lift has been damaged through accident, misuse, or neglect, or if the lift has been altered in any respect.

- * The five-year portion of this warranty covers the following lift's power train parts:
- Cable Cylinder Flow Control Gear Box Motor Pump Hydraulic Hose & Fittings
- Solid State Controller

All remaining lift components are covered by a three-year warranty.

Public Wheelchair

Manua

All illustrations, descriptions and specifications in this manual are based on the latest product information available at the time of publication. The Braun Corporation reserves the right to make changes at any time without notice.

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