

“DOT — Public Use Lift”

NHTSA Vehicle Physical Requirements

Cutaway Chassis Floor Requirements

Combined Crossmember Section Modulus: Minimum 3.4 in<sup>3</sup>

Steel: Minimum yield of 36 ksi.

Load must be evenly distributed over a minimum of 2 crossmembers.

Alternative floor structures are allowed providing the installed lift system passes all FMVSS 403 requirements.

OEM (Van) Chassis Floor Requirements

Installation kits per vehicle application are available to meet requirements. Detailed instructions supplied in kits.

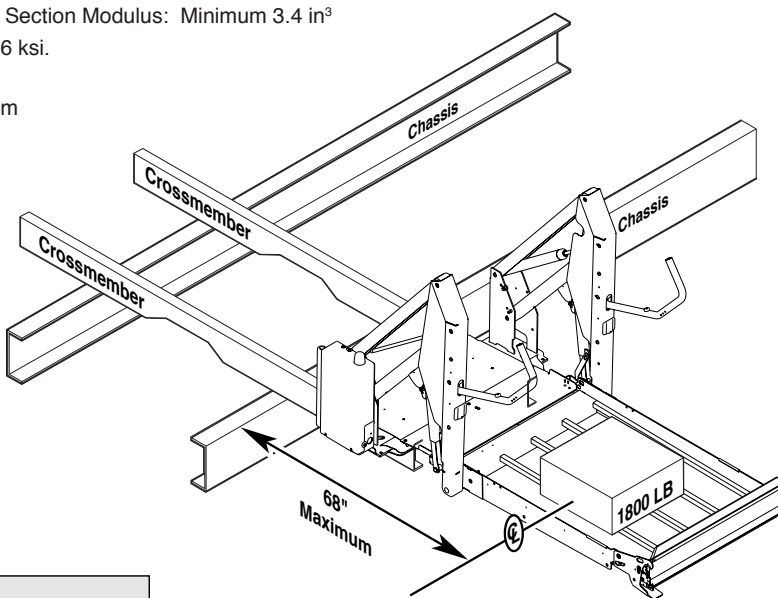


Figure A

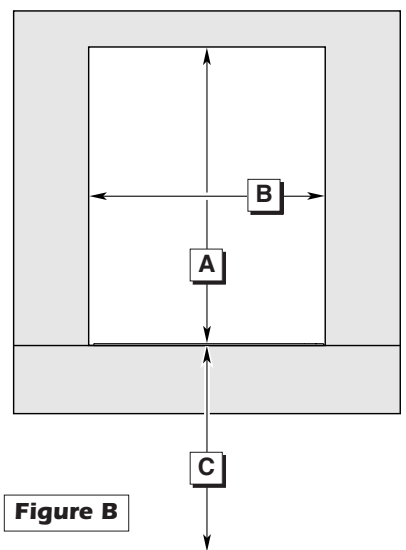


Figure B

Door Opening Dimensions

Vehicle lift access door opening must meet specified dimensions.

	917	918	919
A Minimum Clear Door Opening Height	57"	55-1/4"	57"
B Clear Door Opening Width	42"	42"	43"
C Maximum Floor-to-Ground	48"	42"	48"

1 Position Lift

	Installation Kits		Extended Length Chassis
	Standard Length Chassis		
Vehicle	Side Door	Rear Door	Rear Door
Ford	30956K	30957K	*30970K
GM/Chevy	30958K	**30959K	**30981K

Installation Kit 30955K supplied for Cutaway Chassis Floor applications. Detailed instructions supplied in kits.

42" Floor-to-Ground Lift Models only:

\* Installation Kit 30970K-42 required.

\*\* Rear Bumper Replacement Kit 19395A96 required.

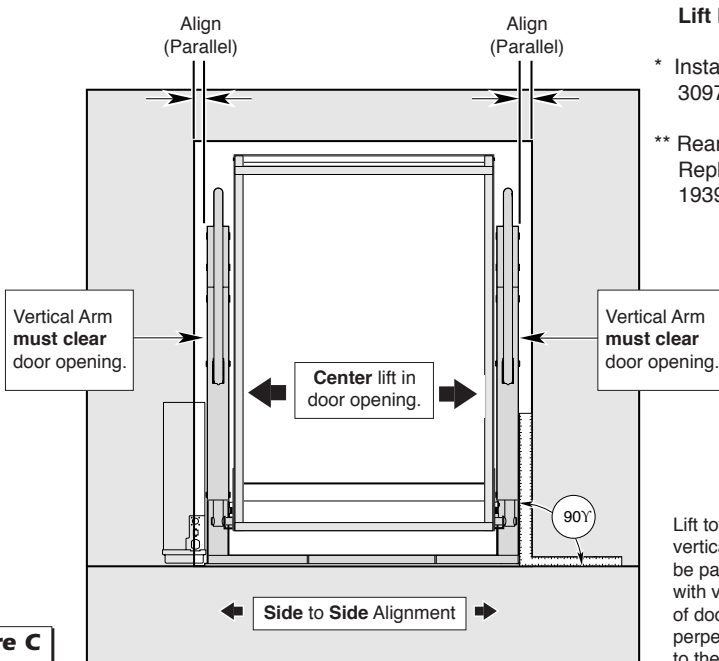


Figure C

Inboard Edge of Threshold Warning (Top) Plate

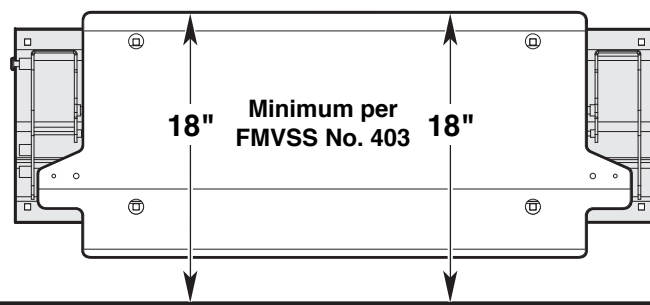


Figure D

Edge of Finished Floor or Stepwell Filler (not outboard edge of vehicle)

2 Secure Lift

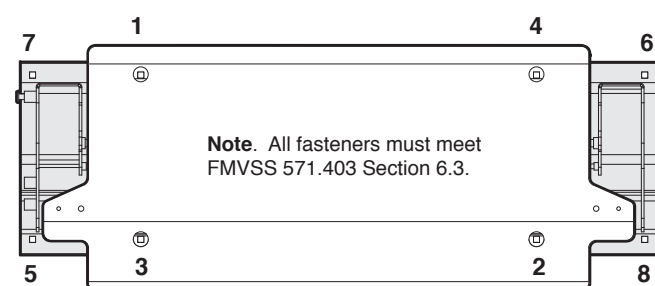


Figure E

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 lift using two mounting bolts (holes 6 and 7).

3. Manually deploy lift and check lift clearance. Drill remaining mounting holes.

4. Install below floor mounting hardware per instructions supplied in kit.

5. Tighten mounting bolts per sequence detailed above. Note deflection detail below.

Mounting Bolt Torque Target: 30 foot pounds.

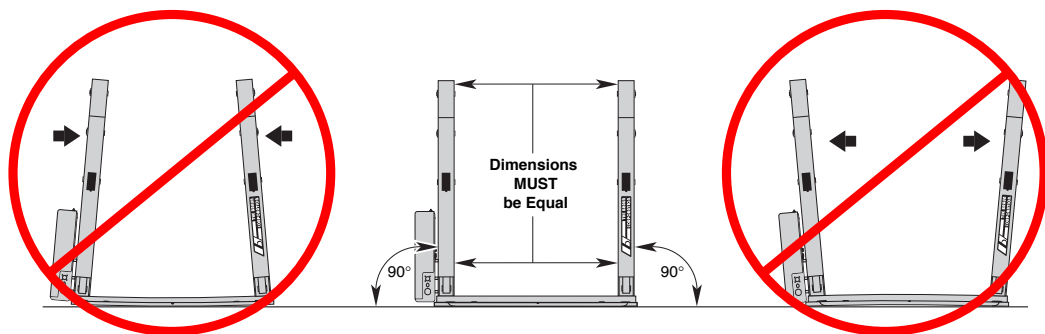
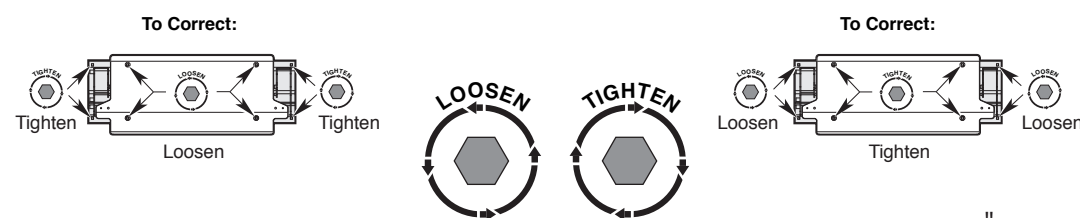


Figure F



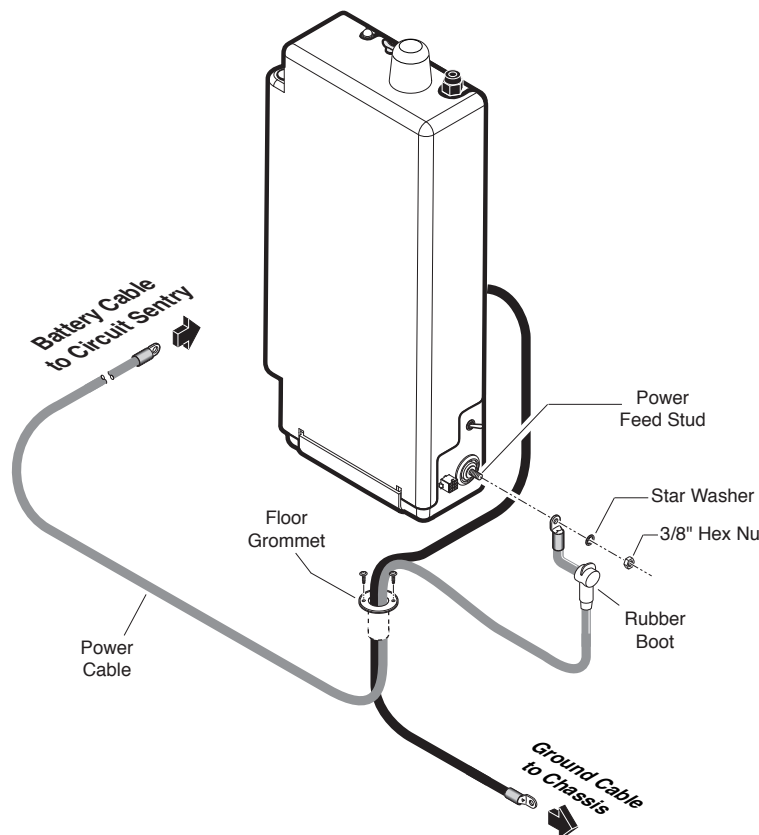
3 Attach Power and Ground Cables

1. Drill 1-1/8" diameter grommet access hole. Check under the vehicle for obstructions.

2. Insert grommet. Secure grommet with two self-tap screws.

3. Route ground and power cables through grommet. Route cables clear of exhaust, other hot areas and moving parts.

4. Connect ground and power cables.



Ground Cable Mounting

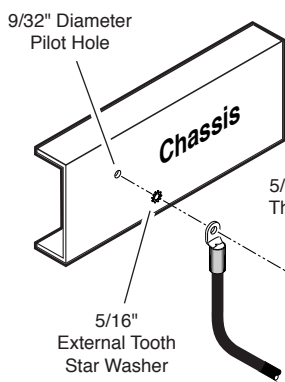


Figure H

CAUTION

Position and secure ground cable clear of lift operation.

Ground Cables

Pump-mounted ground cable must be mounted directly to a vehicle framing member. OEM or installer-supplied battery ground cable must be mounted directly to same vehicle framing member (minimum 4 gauge cable). Note: Cable available from The Braun Corporation. Failure to do so will void warranty of certain electrical components.

Ground Cable Corrosion: When mounting ground cables, remove undercoating, dirt, rust, etc. from framing member around mounting holes (minimum 5/8" diameter area). Apply protective coating to mounting holes to prevent corrosion. Failure to do so will void warranty of certain electrical components.

4 Connect Interlocks

Vehicle and Lift Interlocks

The pump module is equipped with a lift interface 9-circuit connector (female socket). A mating 9-circuit connector (male plug) is supplied.

To meet minimum NHTSA requirements, connect to vehicle interlock harness as outlined below (Steps 1-5).

Optional Interlock Kits

Optional interlock kits available. Contact The Braun Corporation for appropriate application.

WARNING

Install and verify proper operation of all NHTSA mandated interlocks as specified. Failure to do so will result in a non-compliant installation and may result in serious bodily injury and/or property damage.

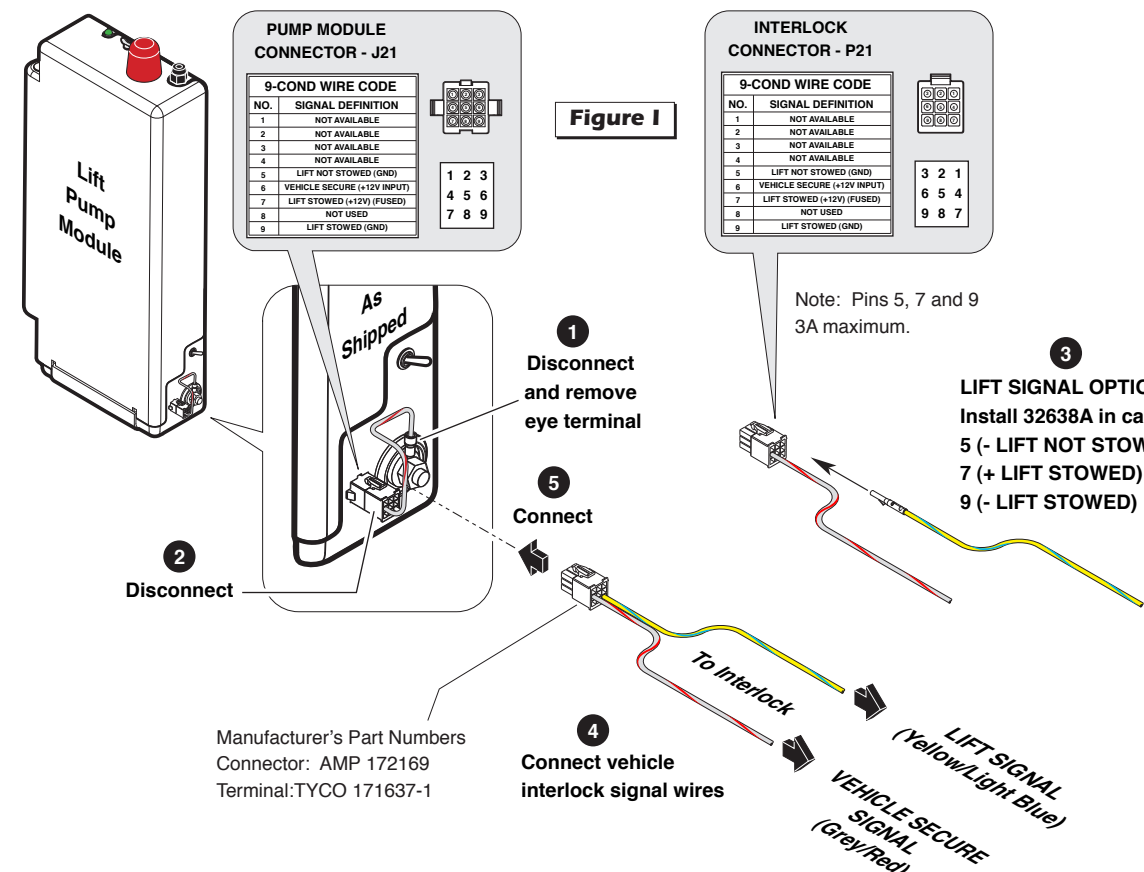


Figure I

INTERLOCK CONNECTOR - P21	
NO.	SIGNAL DEFINITION
1	NOT AVAILABLE
2	NOT AVAILABLE
3	NOT AVAILABLE
4	NOT AVAILABLE
5	LIFT NOT STOWED (GND)
6	VEHICLE SECURE (+12V INPUT)
7	LIFT STOWED (+12V INPUT)
8	NOT USED
9	LIFT STOWED (GND)

Note: Pins 5, 7 and 9 3A maximum.

LIFT SIGNAL OPTIONS  
Install 32638A in cavity:  
5 (- LIFT NOT STOWED)  
7 (+ LIFT STOWED)  
9 (- LIFT STOWED)

5 Adjust Platform Angle

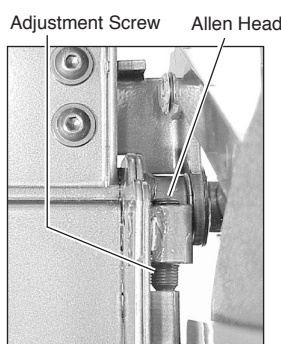
Millennium "NL" Series:

The platform angle should be adjusted so there is a balance between the angle at both positions (equal amount of angle). Angle A should equal angle B as shown in Figure J.

Century "NCL" and Vista "NVL" Series:

The platform angle must be adjusted so the outboard end of the platform (toe) is angled down slightly when positioned at floor level. See Figure K. The outboard end of the platform must contact the ground first to ensure the spring-loaded outer barrier unfolds fully.

Adjustment Procedures: Adjustment Allen screws are provided on each side of the lift platform for adjusting the platform angle. See photo below.



Platform Stop Blocks: When adjusting platform angle, ensure both stop blocks are making full contact with the vertical arms.

Floor Level Adjustment: Following platform angle adjustment, set floor level positioning as detailed in Tower Microswitch Adjustment.

6 Platform Floor Level Adjustment

Platform Floor Level Position Adjustment:

1. Position platform at desired floor level position (passenger loading/unloading height). Position platform such that:  
a. the inner roll stop is laying flat on the threshold plate  
b. platform has not begun to fold

Note: Use hand pump to position platform at proper position if unable to stop platform when powering lift.

2. Turn Lift Power switch Off.

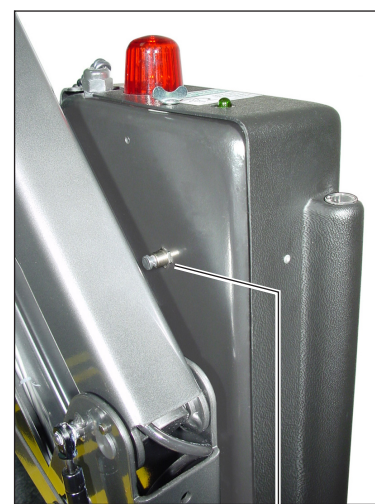
3. Press Floor Position Set button (located between pump housing and lift tower).

4. While pressing the Floor Position Set button, turn the Lift Power switch On.

5. Continue pressing the Floor Position Set button until the lift sounds three "beeps."

6. Release the Floor Position Set button.

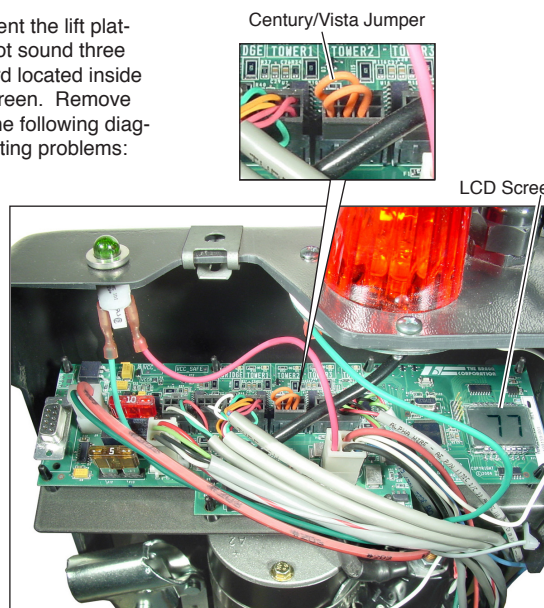
7. Cycle lift to verify that platform stops at the set floor level position. Note: If platform does not stop at the intended position - repeat adjustment procedures. If repeating procedures fails - refer to Diagnostics section below.



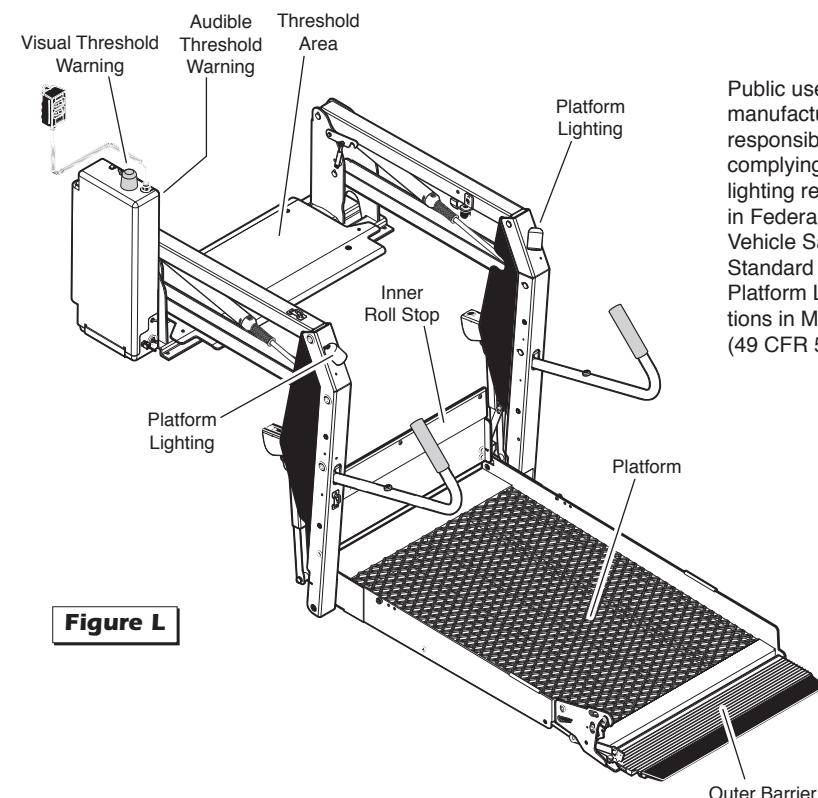
Floor Level Set Button

Diagnostic codes have been established in event the lift platform floor position does not set (the lift does not sound three "beeps" - see Step 5 above). The control board located inside the pump housing is equipped with an LCD screen. Remove the pump cover to access the LCD screen. The following diagnostic codes will help resolve floor position setting problems:

- 91 – The platform position is out of a predetermined acceptable range
- 92 – The Bridge Microswitch is not activated (adjust switch or lower the platform)
- 93 – The Inner Roll Stop Occupied switch is not activated (adjust switch)
- 94 – The Outer Barrier Up switch is not activated (adjust switch)
- 95 – The Outer Barrier Latched sensor is not activated (Century and Vista: Verify jumper is installed on the outboard barrier latch switch – see photo at right; Millennium: Check latch)



7 FMVSS 403/404 Certification Checklist



The following operations must be functionally 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.
- ☐ The outer barrier will not raise if occupied.
- ☐ Verify platform lighting when lift is deployed and pendant illumination when lift is powered.
- ☐ A visual and audible warning will activate if the threshold area is occupied when the platform is at least one inch below floor level.
- ☐ Platform movement is prohibited beyond the position where the inner roll stop is fully deployed (up).
- ☐ Lift platform movement shall be interrupted unless the outer barrier is deployed (up).

## Lift Operating Instructions

If you experience power or equipment failure, refer to the Manual Operating Instructions to operate the lift.



### 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.

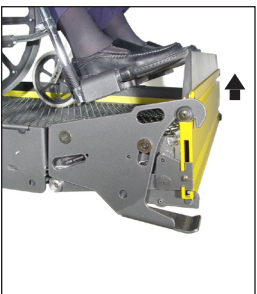
NL Series lift depicted in photos below. Operating procedures are applicable for other lift models.



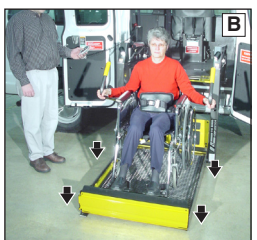
#### TO UNLOAD PASSENGER:

**1. Read Note below!** Load passenger onto platform and **lock** wheelchair brakes.

**Note:** Outer Barrier **must** be UP.



**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.

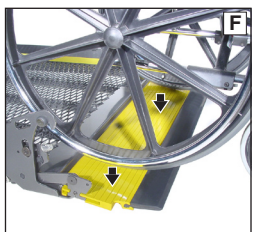
**Note:** Outer barrier **must** be **fully unfolded** (ramp position) until the entire wheelchair (or standee) has crossed the outer barrier. See Photos E and F.



#### TO LOAD PASSENGER:

**1. 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**.

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



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



#### TO FOLD PLATFORM:

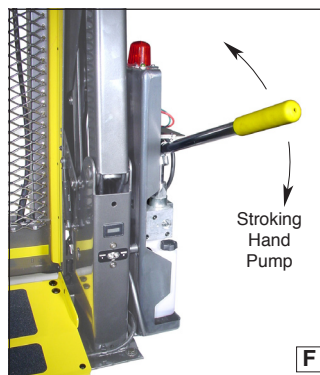
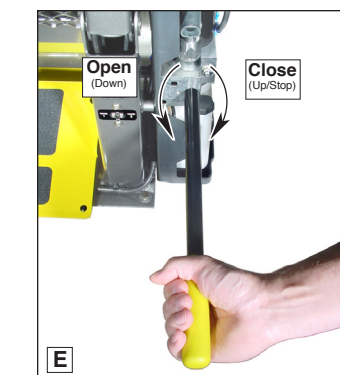
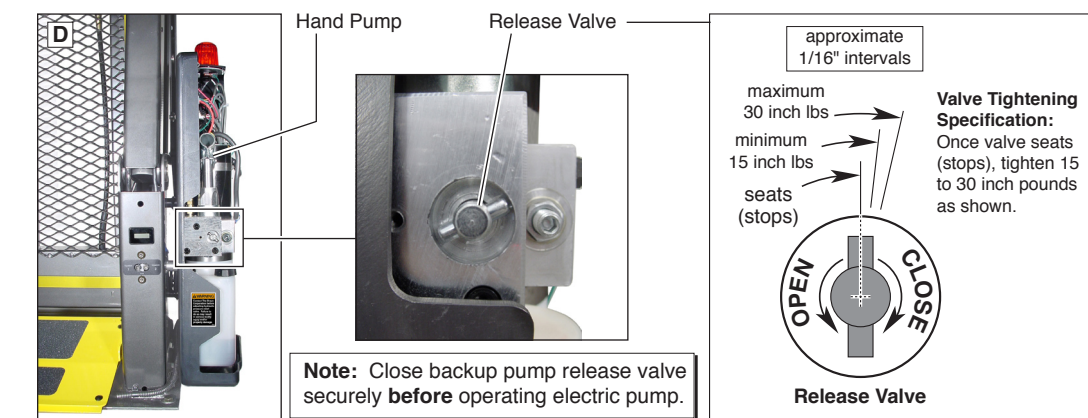
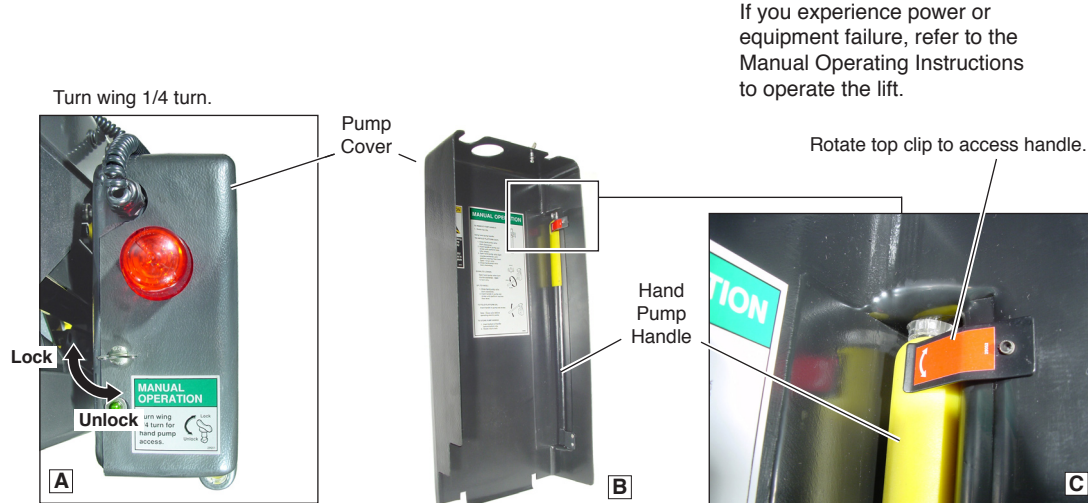
Press FOLD (In) switch until platform stops (**fully folded**). See Photos K and L. Release switch.



#### CLOSE DOOR(S)



## Manual Operating Instructions



#### TO REMOVE PUMP COVER:

Turn wing nut located on top 1/4 turn and lift pump cover off. See Photo A.

#### TO REMOVE PUMP HANDLE:

Rotate top clip to remove pump handle. See Photos B and C.

#### TO UNFOLD PLATFORM (OUT):

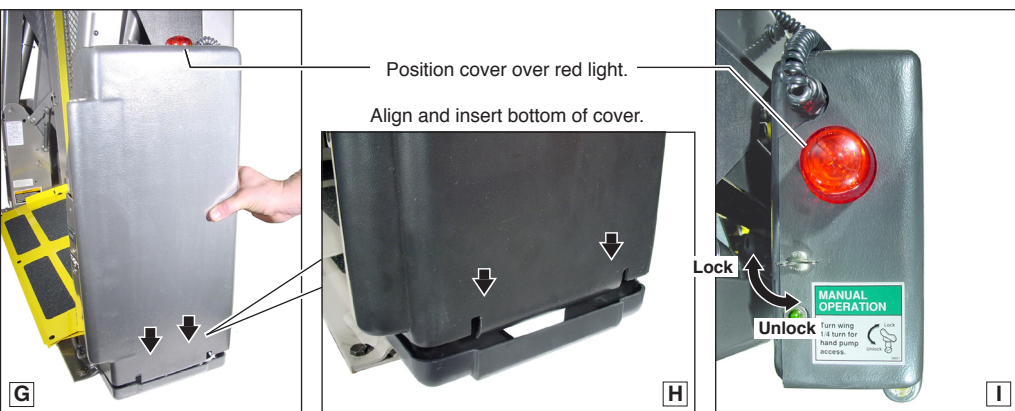
Using hand pump handle (Photo E):

1. 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). See Photo F.
3. 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 outer barrier unfolds.



#### UP (TO RAISE):

Using hand pump handle:

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

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

#### TO FOLD PLATFORM (IN):

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

#### TO STORE PUMP HANDLE:

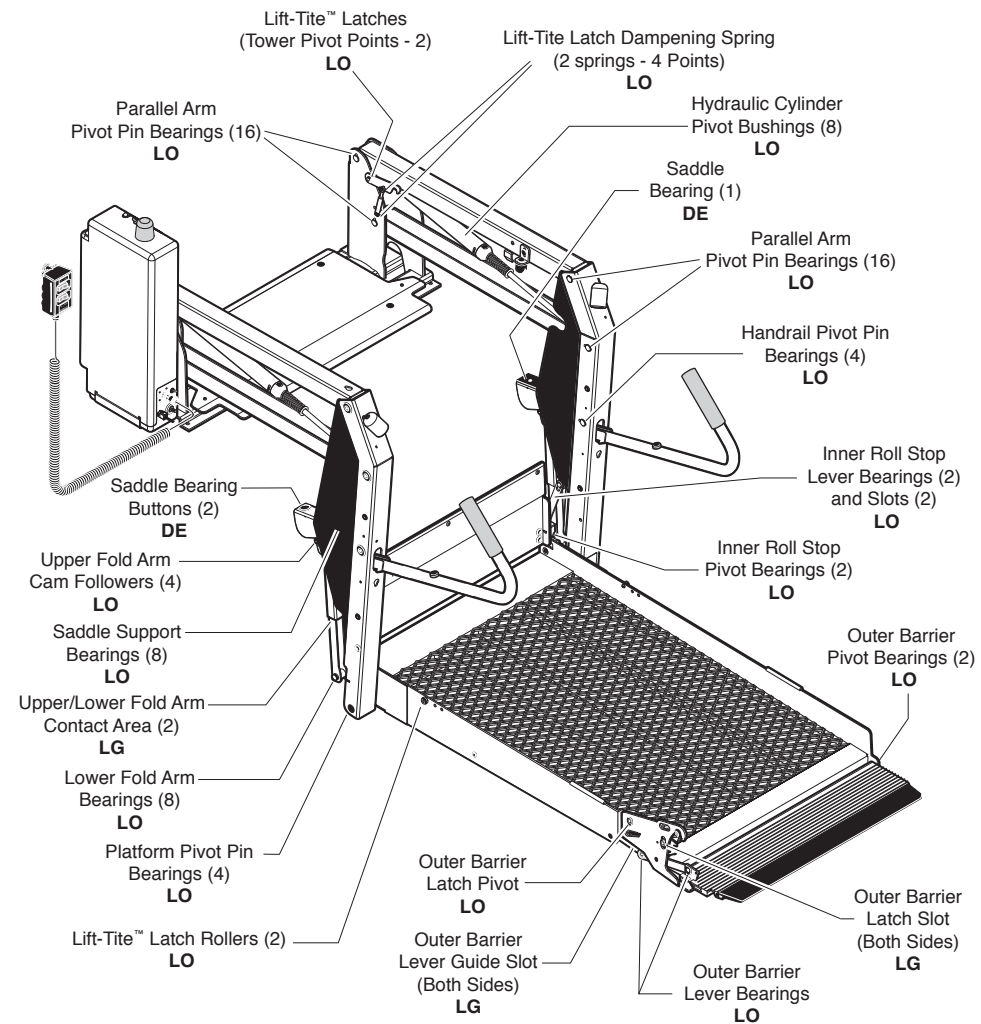
1. Insert bottom of handle behind bottom clip. See Photo B.
2. Rotate top clip to secure (lock) handle. See Photo C.

#### TO INSTALL PUMP COVER:

1. Position cover over module back cover. See Photo G.
2. Align outside cover lip with bottom cover offset and insert outside cover. See Photo H.
3. Insert wing stud and rotate 1/4 turn to lock cover. See Photo I.

## Maintenance and Lubrication

### Lubrication Diagram



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

Lubricant	Type	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

### Maintenance and Lubrication Schedule

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 this schedule **must** be performed by a Braun authorized service representative at the scheduled intervals according to the number of cycles.

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

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 above).

**WARNING**  
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.

**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.

Outer barrier pivot points (2)	Apply Light Oil - See Lubrication Diagram
Outer barrier latch pivot point	Apply Light Oil - See Lubrication Diagram
Outer barrier latch slot	Apply Light Grease to both sides of slot. See Lubrication diagram
Outer barrier lever bearings (2)	Apply Light Oil - 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 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. <b>Note:</b> Apply Light Grease to Lift-Tite™ latch tower pivot point if replacing latch.
Inspect outer barrier for proper operation	Correct or replace damaged parts.

### Maintenance and Lubrication Schedule

continued	Inspect outer barrier latch for proper operation, positive securement, and detached or missing spring	Correct or replace damaged parts and/or relubricate. See Lubrication Diagram
750 Cycles	Inspect lift for wear, damage or any abnormal condition	Correct as needed.
	Inspect lift for rattles	Correct as needed.

<b>Perform all procedures listed in previous section also</b>		
Upper/lower fold arms (2)	Apply grease (synthetic) to contact areas between upper/lower fold arms. See Lubrication Diagram	
Platform pivot pin bearings (4)	Apply Light Oil - See Lubrication Diagram	
Lower fold arm bearings (8)	Apply Light Oil - See Lubrication Diagram	
Inner roll stop pivot bearings (2)	Apply Light Oil - See Lubrication Diagram	
Inner roll stop lever bearings (2)	Apply Light Oil - See Lubrication Diagram	
Inner roll stop lever slot (2)	Apply Light Oil - See Lubrication Diagram	
Saddle support bearings (8)	Apply Light Oil - See Lubrication Diagram	
Upper fold arm cam followers (4)	Apply Light Oil - See Lubrication Diagram	
Parallel arm pivot pin bearings (16)	Apply Light Oil - See Lubrication Diagram	
Handrail pivot pin bearings (4)	Apply Light Oil - See Lubrication Diagram	
Hydraulic cylinder pivot bushings (8)	Apply Light Grease - See Lubrication Diagram	
Outer barrier lever guide slot	Apply Light Grease to both sides of slot. See Lubrication Diagram	
Inspect Lift-Tite™ latch rollers for wear or damage, positive securement and proper operation (2)	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 plate. • Positive securement (both ends)	Resecure, replace or correct as needed. See Platform Angle Instructions and Platform Floor Level Adjustment.	
Inspect handrail components for wear or damage, and for proper operation	Replace damaged parts.	
Inspect microswitches for securement and proper adjustment.	Resecure, replace or adjust as needed. See Microswitch Adjustment Instructions.	
Make sure lift operates smoothly	Realign towers and vertical arms. Lubricate or correct as needed.	
Inspect external snap rings: • Lower fold arm (6) • Lift-Tite™ latch roller (2) • Lift-Tite™ latch gas (dampening) spring (4) • Upper fold arm cam followers (4) • Outer barrier hydraulic cylinder mounting pin (2) • Inner roll stop lever bracket pins (2)	Resecure or replace if needed.	

continued

### Maintenance and Lubrication Schedule

continued	Inspect inner roll stop locks (2) and torsion springs (2) for wear or damage and for proper operation.	Replace damaged parts. Apply Light Oil to inner roll stop lock pivot point.
1500 Cycles	Inspect lower fold arm pins (2), axes (2) and bearings (8) for wear or damage and positive securement	Replace damaged parts and resecure as needed. Apply Light Oil.
	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.

<b>Perform all procedures listed in previous section also</b>		
Inspect cotter pins on platform pivot pin (2)	Resecure, replace or correct as needed	
Hydraulic Fluid (Pump) - Check level. <b>Note:</b> 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® Unisvis 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).	
Inspect cylinders, fittings and hydraulic connections for wear, damage or leaks	Tighten, repair or replace if needed.	
Inspect outer barrier cylinder hose assembly (hose, fasteners, connections, etc.) for wear, damage or leakage	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 bolts (8)	Tighten or replace if needed.	
Inspect platform pivot pins, bearings and vertical arms for wear, damage and positive securement	Replace damaged parts and resecure as needed. Apply Light Grease during reassembly procedures.	
Inspect upper/lower fold arms, saddle, saddle support and associated pivot pins 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 saddle bearing (1) and saddle bearing buttons (2)	Apply Door-Ease or replace if needed. See Lubrication Diagram.	
Inspect vertical arm plastic covers	Resecure or replace if needed.	
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.	

**Consecutive 750 Cycle Intervals**  
Repeat all previously listed inspection, lubrication and maintenance procedures at 750 cycle intervals.