

# Braun Corporation FMVSS No. 403 Quick Reference Installation Sheet 32494

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"DOT — Private Use Lift"

### NHTSA Vehicle Physical Requirements

#### OEM (Van) Chassis Floor Requirements

Nonmodified OEM full size floors meet all requirements.

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

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

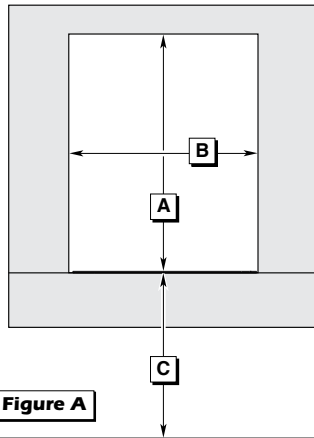


Figure A

#### Door Opening Dimensions

Vehicle lift access door opening must meet specified dimensions.

	NVL955IB3144
<b>A</b> Minimum Clear Door Opening Height	47"
<b>B</b> Clear Door Opening Width	40"
<b>C</b> Maximum Floor-to-Ground	42"

## 1 Position Lift

Vehicle	Installation Kits		Extended Length Chassis
	Side Door	Rear Door	Rear Door
Ford	30956K	30957K	30970K-42
GM/Chevy	30958K	*30959K	*30981K

Installation Kit 30955K supplied in lift parts box. Detailed instructions supplied in kits.

\* Rear Bumper Replacement Kit 19395A96 required.

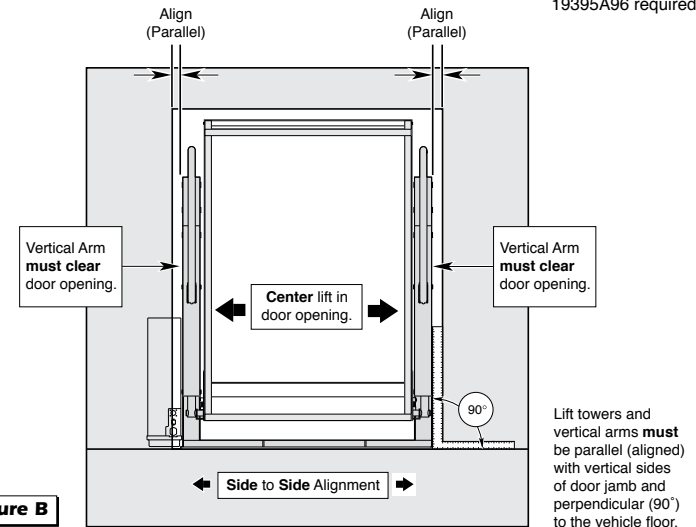


Figure B

#### Inboard Edge of Threshold Warning (Top) Plate (with plate folded down)

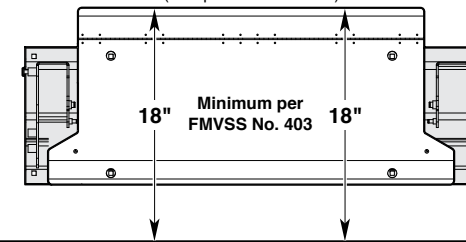
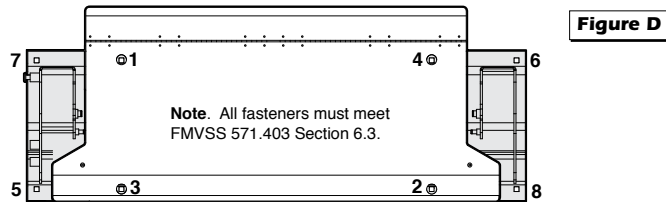


Figure C

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

## 2 Secure Lift



**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.

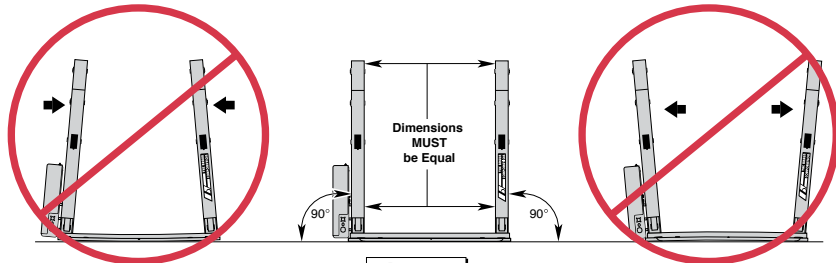
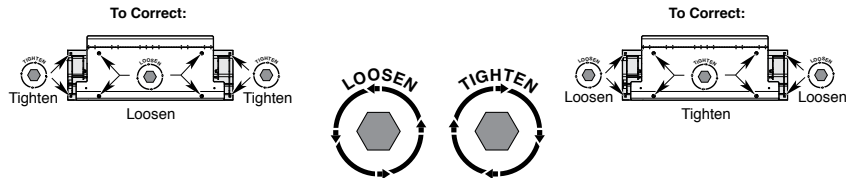


Figure E



## 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.

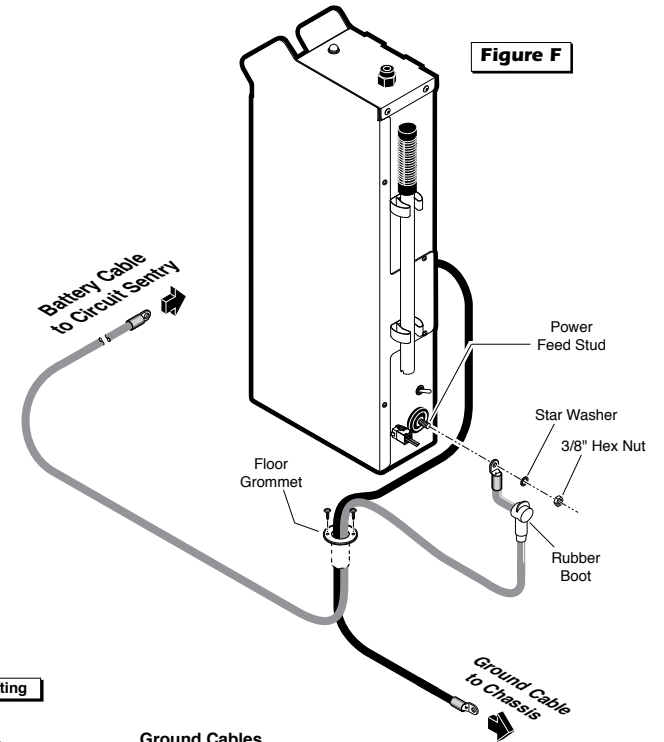


Figure F

### Ground Cable Mounting

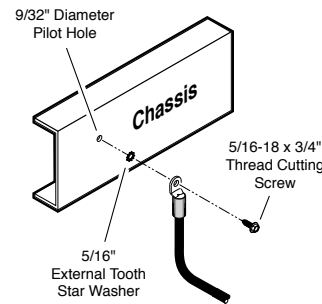


Figure G

### Ground Cables

Pump mounted ground cable **must** be routed and mounted directly to a vehicle framing member. 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.

**CAUTION**  
Position and secure ground cable clear of lift operation.

## 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

Universal Interlock Kit 30940K is available for easy interface with vehicle OEM electronic signals.

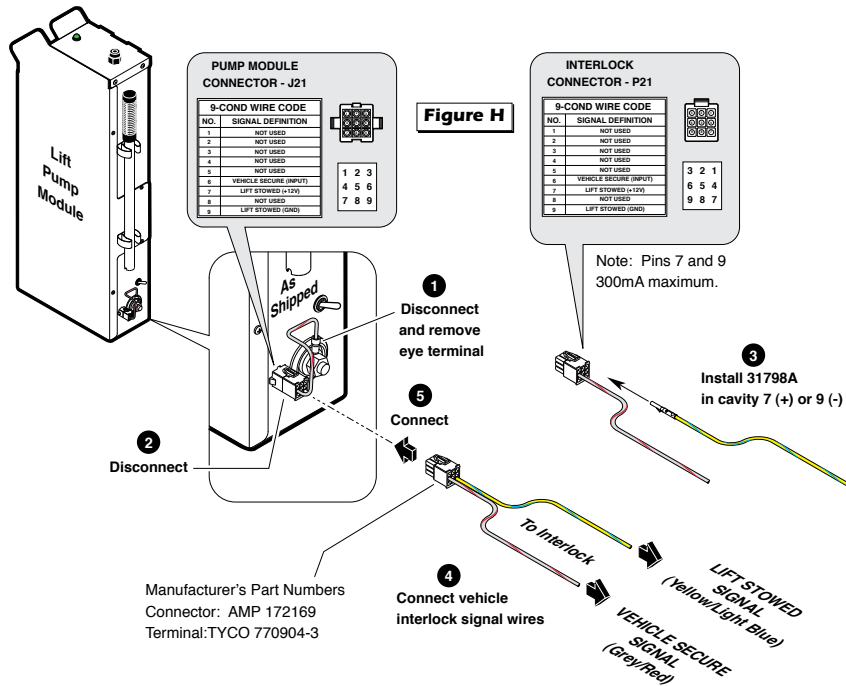
Instrument Panel Display Kit 30938K provides an LED Panel Display that interfaces with Braun Universal Interlock Kit 30940K.

Detailed installation instructions are supplied with interlock kits.

**Note:** All Braun Corporation interlocks require a positive (+12V) Lift Stowed signal (Pin 7).

**⚠ 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.



## 5 Adjust Platform Angle

Adjustments to platform angle may be required if base plate wedges are used. See Figures I and J.

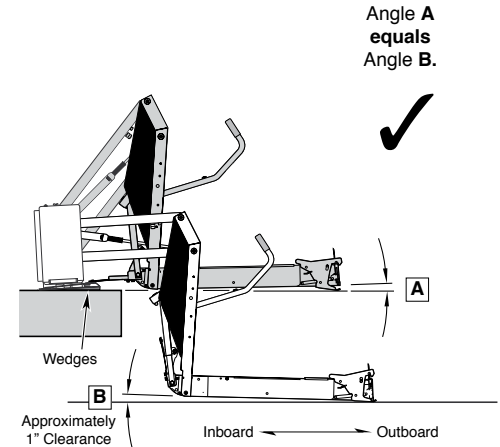


Figure I

### Floor Level Positioning:

Reset floor level positioning if wedges are used. See Floor Level Adjustment panel.

**⚠ WARNING**

Reset floor level position as specified in Floor Level Adjustment Instructions if wedges are used. Failure to do so may result in **serious** bodily injury and/or property damage.

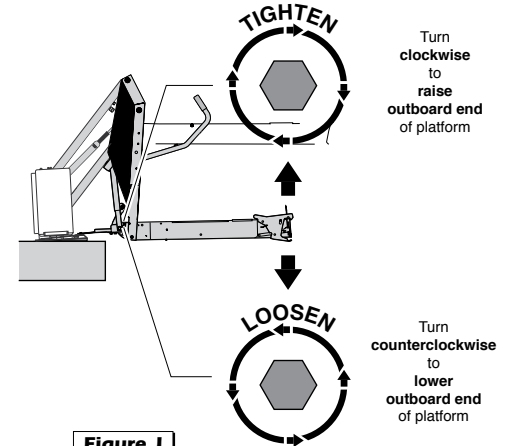


Figure J

## 6 Platform Floor Level Adjustment

### Platform Floor Level Position Adjustment:

1. Position platform at desired floor level position (passenger loading/unloading height).

Note: Position platform such that:

- a. the inner roll stop is laying flat on the threshold plate
- b. platform has **not** begun to fold

2. Turn Lift Power switch Off.
3. Press Floor Level Set button (located between pump housing and lift tower).
4. While pressing the Floor Level Set button, turn the Lift Power switch On.
5. Continue pressing the Floor Level Set button until the lift sounds three "beeps."
6. Release the Floor Level Set button.
7. Cycle lift to verify that platform stops at the set floor level position.



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 pre-determined acceptable range
- 92 – The Bridge Microswitch is not activated (adjust switch or lower the platform)
- 94 – The Outer Barrier Up switch is not activated (adjust switch)
- 95 – The Outer Barrier Latched sensor is not activated.



LCD Screen

## 7 FMVSS 403/404 Certification Checklist

DOT – Private Use Lift

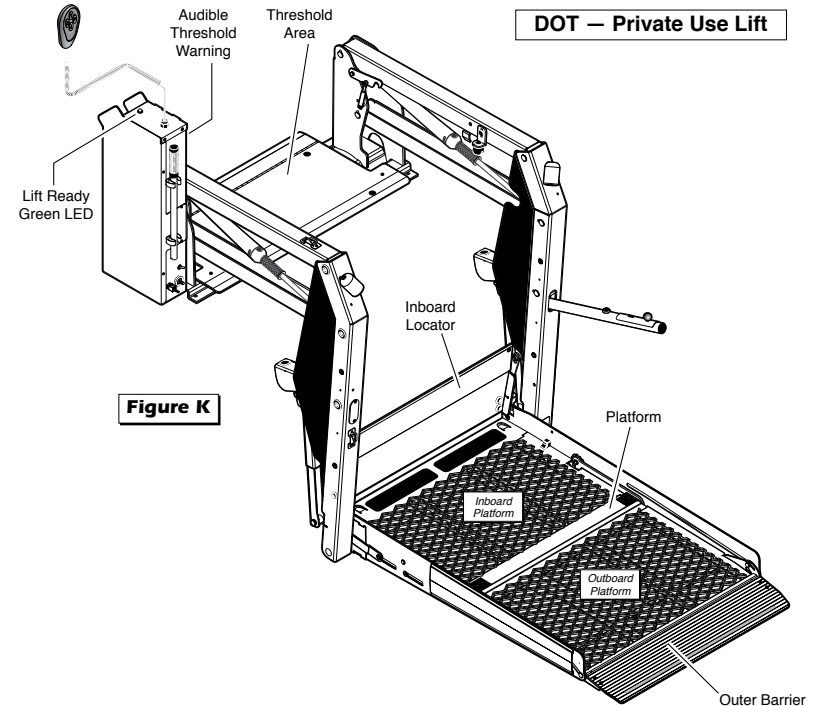
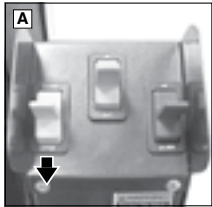


Figure K

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.
- A warning will activate if the threshold area is occupied when the platform is at least one inch below floor level.
- Lift platform movement shall be interrupted unless the outer barrier is raised and the outer barrier latch is positively engaged.

## Lift Operating Instructions



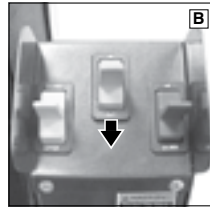
### To Open Door(s):

#### Automatic Door Operator(s):

Press yellow OPEN switch until door(s) are **fully open**. Release switch.

#### Manual Door(s):

Manually open door(s) **fully** and secure.



### To Unfold Platform (Out):

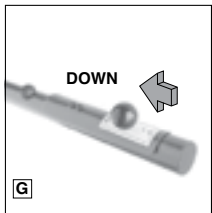
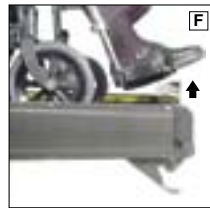
Press UNFOLD (orange OUT) switch (see Photo B) until platform **stops** (unfolds fully – reaches floor level). See Photos C and D. Release switch.



### To Unload Passenger:

1. **Read notes below!** Load passenger onto platform **facing outward** and **lock** wheelchair brakes.

Note: Outer barrier **must** be UP and outer barrier latch **must** be fully engaged **before** loading passenger onto platform. **Lower head** to clear vehicle door jamb header.



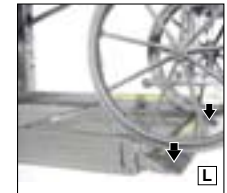
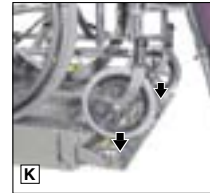
2. Press red DOWN switch until the **entire** platform reaches ground level (stops) and outer barrier unfolds **fully** (see Photos H and I). Release switch.

Switch Arm Switch: Slide knob in to DOWN position. See Photo G.



3. Unlock wheelchair brakes and unload passenger from platform.

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



### To Load Passenger:

1. Load passenger onto platform **facing outward** and **lock** wheelchair brakes.

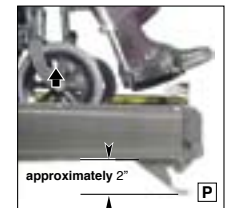
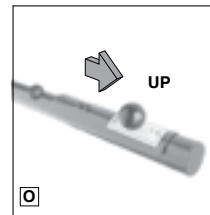
Note: Outer barrier **must** be **fully unfolded** (ramp position) until the entire wheelchair has crossed the outer barrier. See Photos K and L.



2. Press red UP switch until platform stops (reaches floor level). Release switch.

Switch Arm Switch: Slide knob out to UP position.

Note: Outer barrier **must** be UP and outer barrier latch **must** be fully engaged **before** raising platform. Platform will raise above ground level approximately two inches **before** latch engages **fully**.



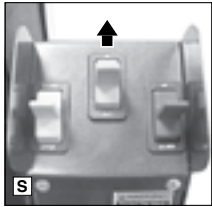
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## Lift Operating Instructions



### To Load Passenger (continued):

3. Unlock wheelchair brakes and load passenger from platform into vehicle. **Note:** Lower head to clear door jamb header.



### To Fold Platform (In):

- Press FOLD (orange IN) switch until platform **stops** (fully folded). Release switch.



### To Close Door(s):

#### Automatic Door Operator(s):

- Press yellow CLOSE switch until door(s) are **fully closed**. Release switch.

#### Manual Door(s):

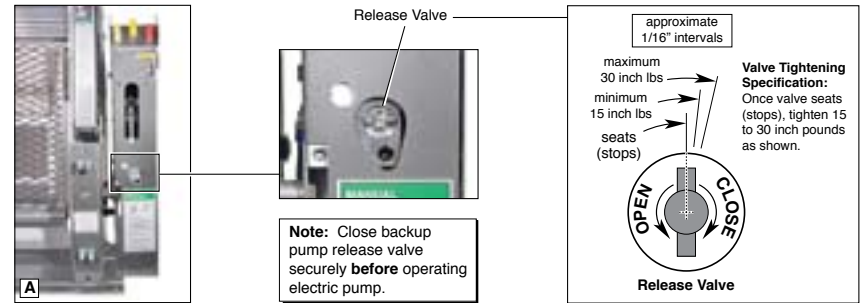
Manually close door(s) **fully**.

## Manual Operating Instructions

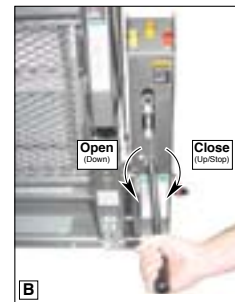
If you experience power or equipment failure, refer to the Manual Operating Instructions to operate the lift. Instructions and photos are provided for all steps that

differ from standard lift operation procedures. Manual Instructions Decal 31894 (posted on pump cover) provides manual operating instructions also. Refer to the

Lift Operating Instructions for all normal lift operation procedures (such as loading and unloading passengers). **Follow all Lift Operation Safety Precautions!**



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



### To Unfold Platform (Out):

Using hand pump handle:

- Place slotted end of pump handle onto back-up pump release valve and turn **counterclockwise** (open — **1/2 turn only**) until the platform reaches **floor level** (fully unfolded). See Photo B.
- Turn the release valve **clockwise** (close) to stop the platform. See Photo B.

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

### DOWN (To Lower Platform and Unfold Outer Barrier):

Place slotted end of pump handle onto back-up pump release valve and turn **counterclockwise** (open — **1/2 turn only**) until the platform reaches ground level and/or outer barrier unfolds. See Photo B.

### UP (To Fold Outer Barrier and Raise Platform):

Using hand pump handle:

- Place slotted end of pump handle onto back-up pump release valve and turn **clockwise** to close securely. See Photo B.
- Note:** Valve must be tight, but **do not** overtighten.
- Insert handle into back-up pump and stroke until platform reaches **floor level** (see Photo C).

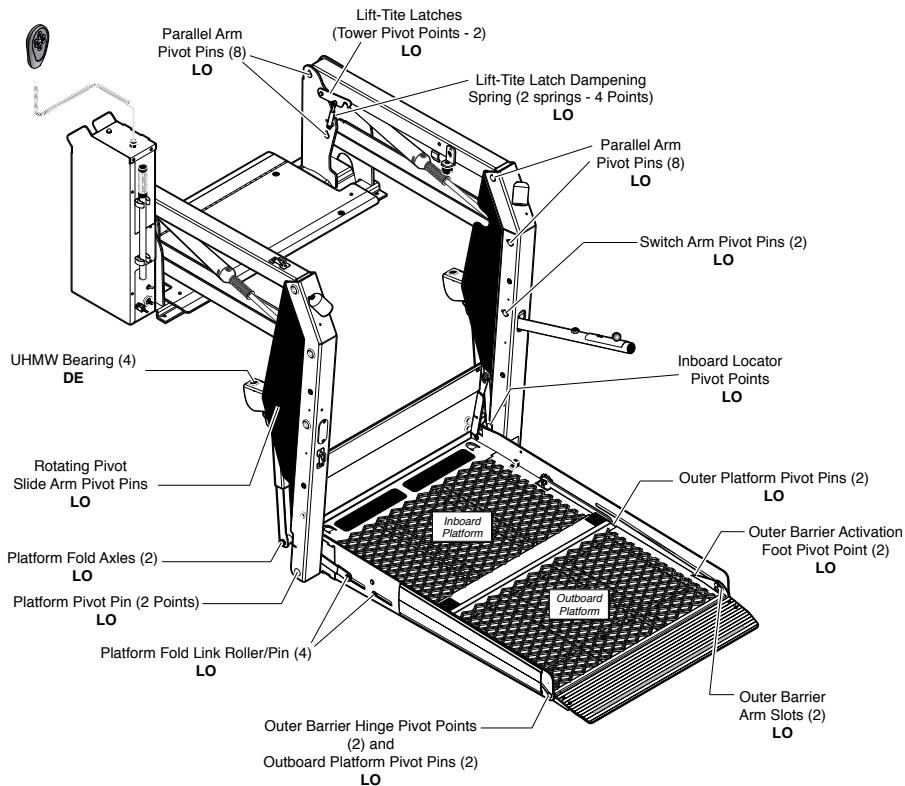
### To Fold Platform (In):

Insert handle into back-up pump and stroke until platform **stops** (folds **fully**). See Photo C.

**Note:** Close back-up pump release valve securely **before** operating electric pump.

## 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 a regular 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.

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.

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).

**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.

#### 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 stop 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.

#### 750 Cycles

Outer barrier hinge pivot points (2)	Apply Light Oil - See Lubrication Diagram
Outer barrier arm slots (2)	Apply Light Oil - See Lubrication Diagram
Outboard platform pivot pins (2)	Apply Light Oil - See Lubrication Diagram
Outer barrier activation foot pivot pins (2)	Apply Light Oil - See Lubrication Diagram
Platform fold link rollers and pins (4 sets)	Apply Light Oil - See Lubrication Diagram
Outer platform pivot pins (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 defective parts or otherwise correct as needed. <b>Note:</b> Apply Light Grease to Lift-Tite™ latch tower pivot point if replacing latch.

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## Maintenance and Lubrication Schedule

<b>750 Cycles</b>	Inspect outer barrier for proper operation	Correct or replace defective parts.
	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 section also**

<b>1500 Cycles</b>	Platform pivot pin bearings (2)	Apply Light Oil - See Lubrication Diagram
	Platform fold axles (2)	Apply Light Oil - See Lubrication Diagram
	Inboard locator lever bearings (2)	Apply Light Oil - See Lubrication Diagram
	Inboard locator lever slot (2)	Apply Light Oil - See Lubrication Diagram
	Rotating pivot slide arm pivot pins (2)	Apply Light Oil - See Lubrication Diagram
	Parallel arm pivot bearings (16)	Apply Light Oil - See Lubrication Diagram
	Switch arm pivot pin bearings (4)	Apply Light Oil - See Lubrication Diagram
	Hydraulic cylinder bushings (8)	Apply Light Oil - See Lubrication Diagram
	Inspect Lift-Tite™ latch rollers for wear or damage, positive securement and proper operation (2)	Correct, replace defective parts and/or relubricate.
	Inspect inboard locator for: • Wear or damage • Proper operation. Inboard locator should just rest on top surface of the base plate.	Resecure, replace or correct as needed. See Platform Angle Instructions and Platform Floor Level Adjustment Instructions.
	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 defective parts and secure as needed.
	Inspect switch arm components for wear or damage, and for proper operation	Replace defective parts.
	Inspect microswitches for securement and proper adjustment.	Resecure, replace or adjust as needed.
Make sure lift operates smoothly	Realign towers and vertical arms. Lubricate or correct as needed.	
Inspect external snap rings / e-clips: • Rotating pivot slide arm pivot pins (2 per pin) • Rotating pivot slide arm roller axles (2 per axle) • Platform fold axles (1 per axle) • Inboard locator lever bracket pins (1 per pin) • Lift-Tite™ latch gas (dampening) spring (2 per spring)	Resecure or replace if needed.	
Inspect platform fold axles and bearings for wear or damage and positive securement	Replace defective parts and resecure as needed. Apply Light Oil.	

## Maintenance and Lubrication Schedule

<b>1500 Cycles</b>	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.
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**Perform all procedures listed in previous section also**

<b>4500 Cycles</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 Dextron III transmission fluid. Check fluid level with <b>platform lowered fully and roll stop unfolded fully</b> . 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 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 platform pivot pin, bushings and vertical arms for wear, damage and positive securement	Replace defective parts and resecure as needed. Apply Light Grease during reassembly procedures.
	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 (buttons)	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.

<b>Consecutive 750 Cycle Intervals</b>	<b>Repeat all</b> previously listed inspection, lubrication and maintenance procedures at 750 cycle intervals.
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