

**Braun Corporation FMVSS No. 403
Quick Reference Installation Sheet 32114 **Rev: A****

“DOT — Private Use Lift”

NHTSA Vehicle Physical Requirements

**OEM (Van) Chassis
Floor Requirements**

Nonmodified OEM full size van floors meet all requirements.

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

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

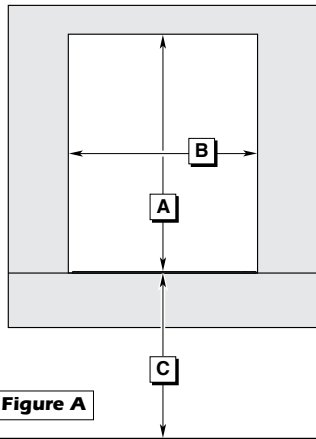


Figure A

Door Opening Dimensions

Vehicle lift access door opening must meet specified dimensions.

	NL918IB3343P
A Minimum Clear Door Opening Height	55-1/4"
B Clear Door Opening Width	42"
C Maximum Floor-to-Ground	42"

“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).

1 Position Lift

Vehicle	Installation Kits		Extended Length Chassis
	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.

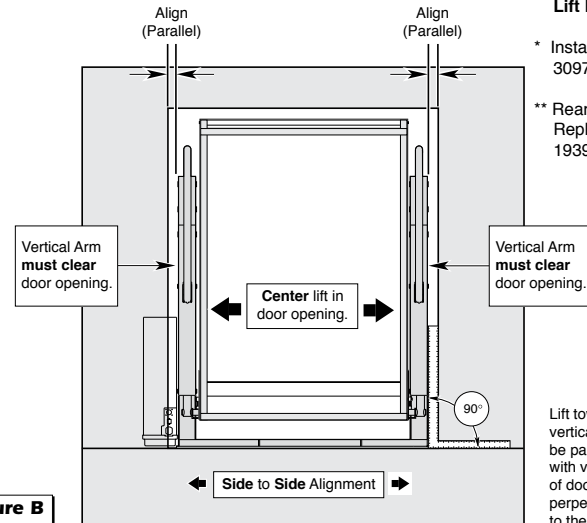


Figure B

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

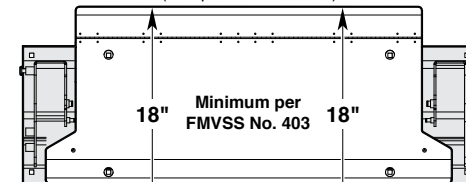
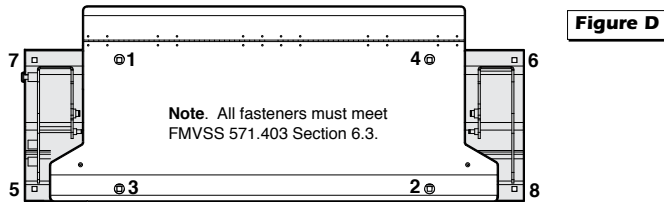


Figure C

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

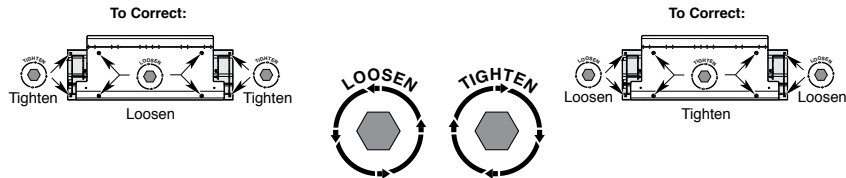
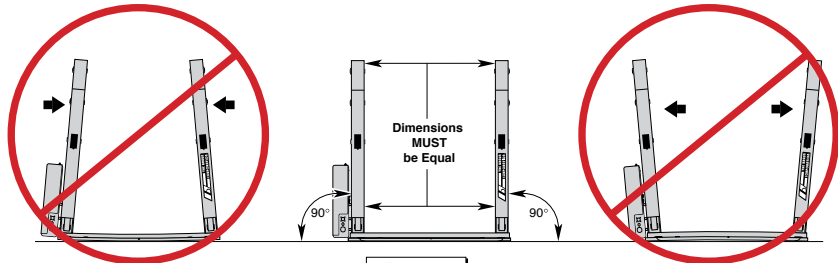
2 Secure Lift



WARNING

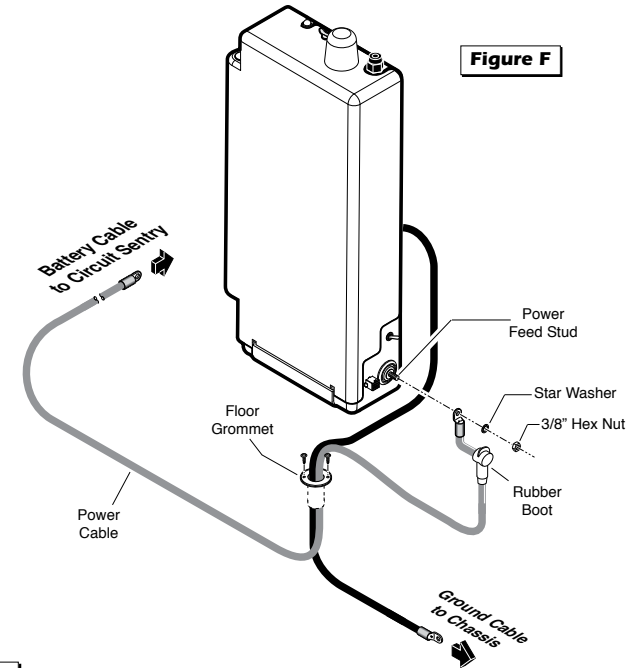
Check for obstructions such as gas lines, wires, exhaust, etc. before drilling or cutting. Failure to do so may result in serious bodily injury and/or property damage.

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.



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

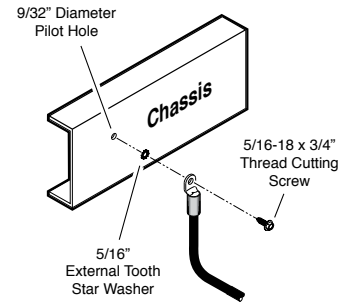


Figure G

Ground Cables

Pump mounted ground cable **must** be mounted 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

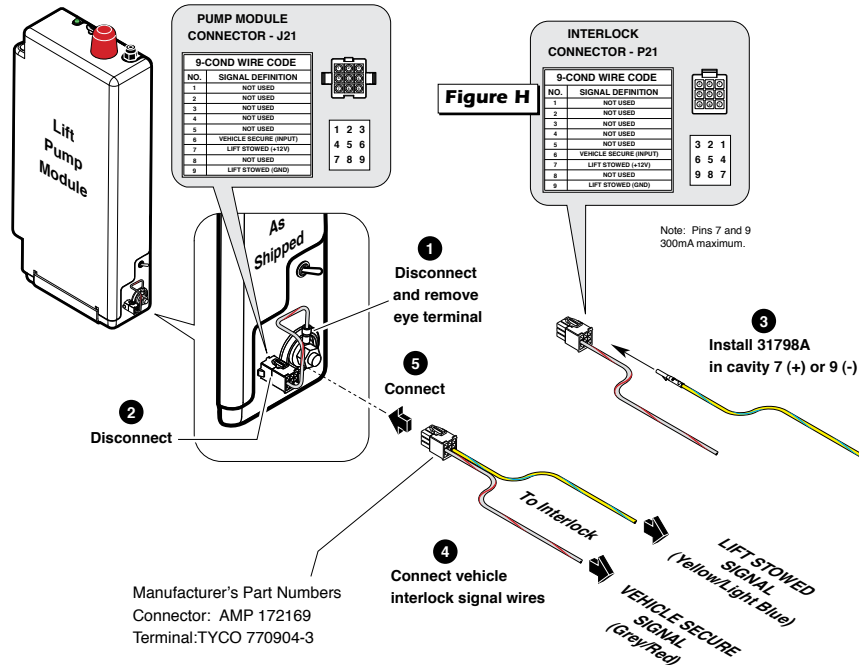
Universal Interlock Kit 30940K is available for easy interface with vehicle OEM electronic signals.

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.

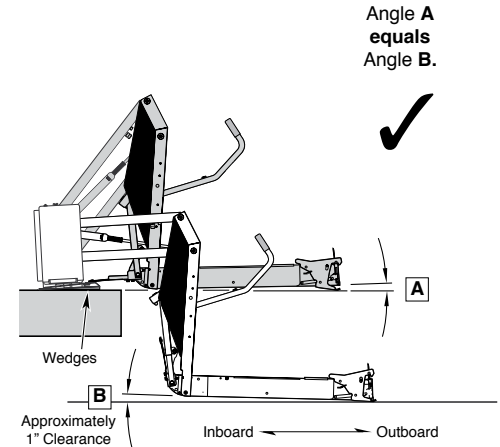
Note: All Braun Corporation interlocks require a positive (+12V) lift stowed signal (Pin 7).

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

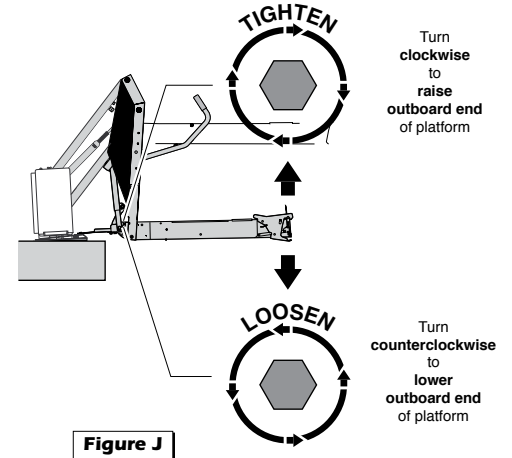
Adjustments to platform angle may be required if base plate wedges are used.



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.



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 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.



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:

Century/Vista Jumper



LCD Screen



- 91 – The platform position is out of a predetermined 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 (Vista: Verify jumper is installed on the outboard barrier latch switch – see photo at right; Millennium: Check latch)

7 FMVSS 403/404 Certification Checklist

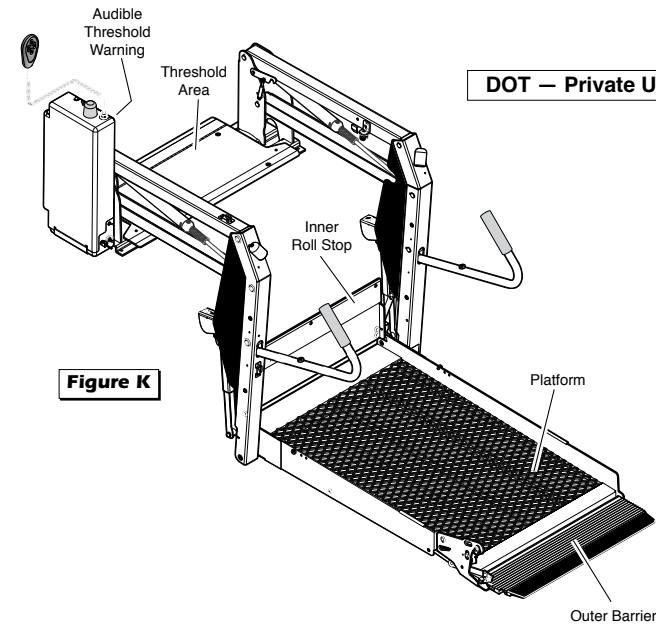


Figure K

The following operations must be functionally verified.

- | | |
|---|--|
| <input type="checkbox"/> Vehicle movement is prevented unless the lift door is closed, ensuring the lift is stowed. | <input type="checkbox"/> The outer barrier will not raise if occupied. |
| <input type="checkbox"/> Lift operation shall be prevented unless the vehicle is stopped and vehicle movement is prevented. | <input type="checkbox"/> A warning will activate if the threshold area is occupied when the platform is at least one inch below floor level. |
| <input type="checkbox"/> The platform will not fold/stow if occupied. | <input type="checkbox"/> Lift platform movement shall be interrupted unless the outer barrier is raised and the outer barrier latch is positively engaged. |
| <input type="checkbox"/> The inner roll stop will not raise if occupied. | |

Lift Operating Instructions

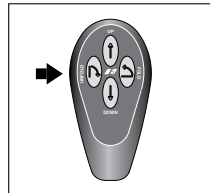
OPEN DOOR(S) AND SECURE



TO UNFOLD PLATFORM:

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

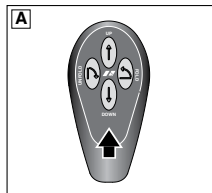
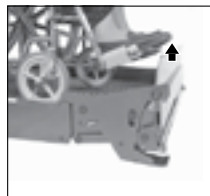
Note: In event platform does not unfold, press FOLD switch to release Lift-Tite™ latches.



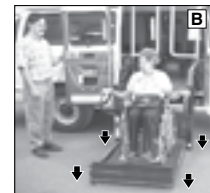
TO UNLOAD PASSENGER:

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

Note: Outer barrier **must** be UP and outer barrier latch **must** be engaged.

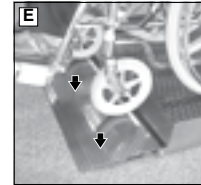


2. Press DOWN switch until the **entire** platform reaches ground level (see Photo B) and the outer barrier **unfolds fully** (ramp position). See Photo C. Release switch.



3. Unlock wheelchair brakes and unload passenger from platform.

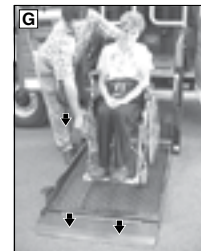
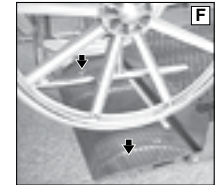
Note: Outer barrier **must** be **fully unfolded** (ramp position) until the entire wheelchair (or standee) has crossed the outer barrier. See Photos E and F.



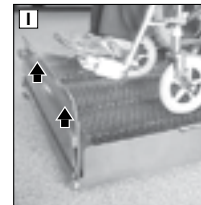
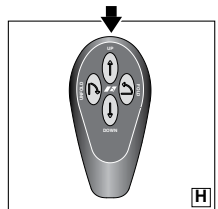
TO LOAD PASSENGER:

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

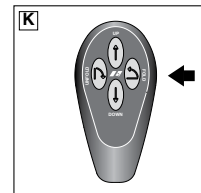
Note: Outer barrier **must** be **fully unfolded** (ramp position) until the entire wheelchair (or standee) has crossed the outer barrier. See Photos E and F.



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.



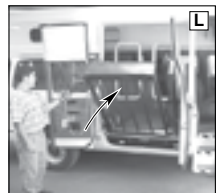
3. Unlock wheelchair brakes and unload passenger from platform.



TO FOLD PLATFORM:

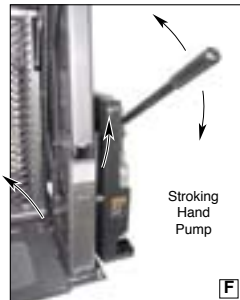
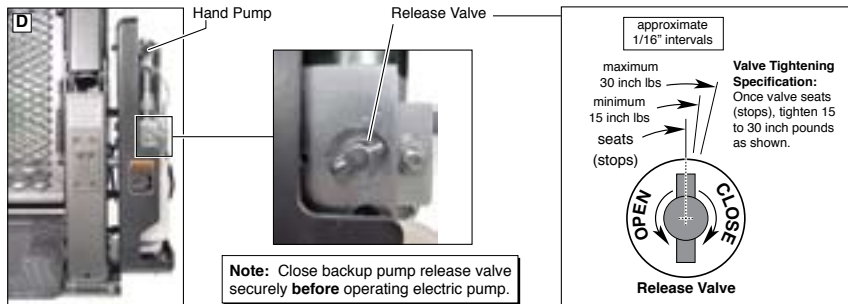
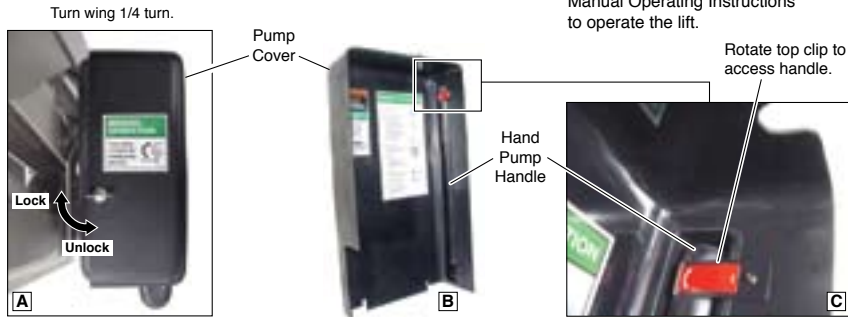
Press FOLD (In) switch until platform stops (**fully** folded). See Photos K and L. Release switch.

CLOSE DOOR(S)



Manual Operating Instructions

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



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.

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

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.

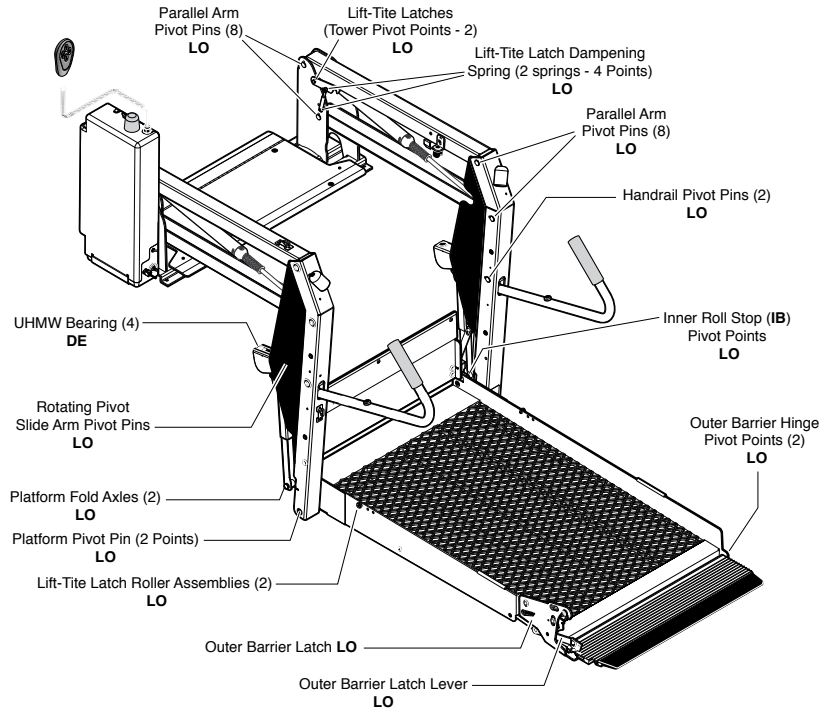
TO INSTALL PUMP COVER:

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.

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.

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.

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.

750 Cycles

Outer barrier hinge pivot points (2)	Apply Light Oil - See Lubrication Diagram
Outer barrier latch (pivot/slide points)	Apply Light Oil - See Lubrication Diagram
Outer barrier latch lever pivot points	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. Note: Apply Light Grease to Lift-Tite™ latch tower pivot point if replacing latch.
Inspect outer barrier for proper operation	Correct or replace defective parts.
Inspect outer barrier latch for proper operation, positive securement, and detached or missing spring	Correct or replace defective parts and/or relubricate. See Lubrication Diagram

Maintenance and Lubrication Schedule

750 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 section also

1500 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 (IB) lever bearings (2)	Apply Light Oil - See Lubrication Diagram
	Inner roll stop (IB) 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
	Handrail 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 inner roll stop (IB) for: • Wear or damage • Proper operation. Rollstop should just rest on top surface of the base plate. • Positive securement (both ends)	Resecure, replace or correct as needed. See Platform Angle Instructions and Microswitch Adjustment Instructions.
	Inspect handrail 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. See Microswitch Adjustment Instructions.
	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 (IB) 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

1500 Cycles	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

4500 Cycles	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 Dextron III transmission fluid. 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, 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 (IB)	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.

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