International Commercial Dual Parallel Arm Lift Installation / Operation / Maintenance Sheet 33263

1 Position Lift

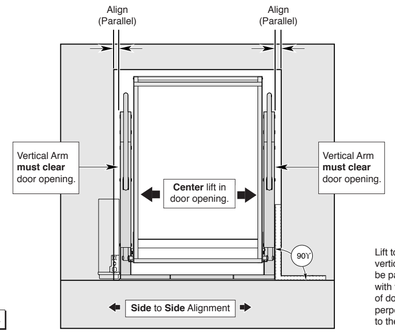


Figure A

Lift towers and vertical arms **must** be parallel (aligned) with vertical sides of door jamb and perpendicular (90°) to the vehicle floor.

Clearance:

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

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

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

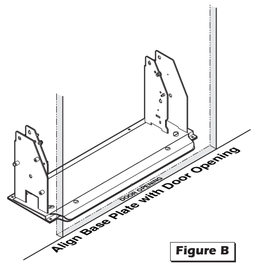


Figure B

Alignment:

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

Inboard-to-Outboard Alignment: See Figure D. The vertical arms and parallel arms **must** be aligned and parallel to each other. The lift towers should be perpendicular (90°) to the vehicle floor (**except** when base plate wedges are used).

Stepwell Installations: It is **not permissible** for the base plate to overhang the stepwell. Base plate support **must** be constructed in the stepwell. The structure **must** be level with the floor and of equal construction (structural strength).

Base Plate Wedges: The top of the lift **may** need to be tilted inboard slightly to provide the **minimum 12 mm clearance** and/or to increase platform and vertical arm kick-out (to provide adequate clearance between lift and vehicle). Position wedges as shown in Figure C.

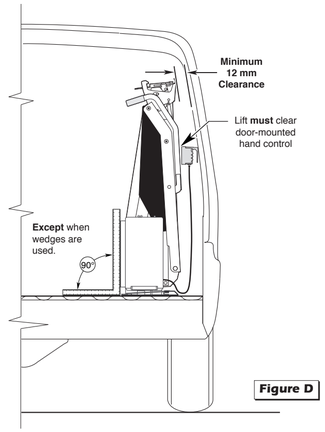
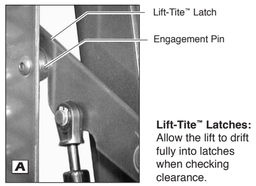


Figure D



Lift-Tite™ Latch

Engagement Pin

Lift-Tite™ Latches: Allow the lift to drift fully into latches when checking clearance.

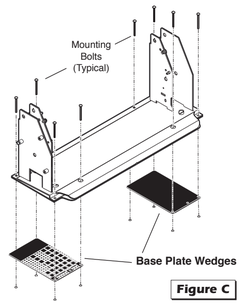


Figure C

2 Secure Lift

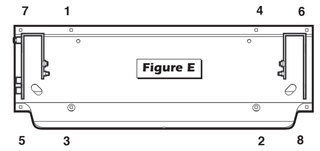


Figure E

Base Plate Mounting

There **must be a total of eight** 3/8˝-16 x 4˝ carriage bolts (or 8˝ bolts) **securing the base plate through the floor**. Two 8˝ bolts supplied for bolting through the vehicle floor framing members if applicable.

Underfloor Reinforcement Brackets

Two underfloor reinforcement brackets are supplied. Details at right (Figure G).

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 as shown in Figure G.
5. Tighten mounting bolts per sequence detailed above. Note deflection detail below.

Mounting Bolt Torque Target: 40 Nm

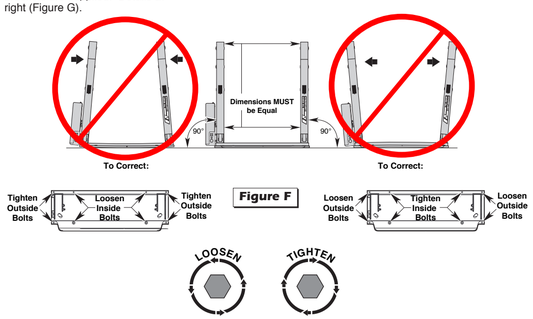


Figure F

3 Attach Power Cable

1. Drill 29 mm diameter grommet access hole. **Check under the vehicle for obstructions**.
2. Insert grommet. Secure grommet with two self-tap screws.
3. Route power cable through grommet. **Route cables clear of exhaust, other hot areas and moving parts**.
4. Connect the power cable.

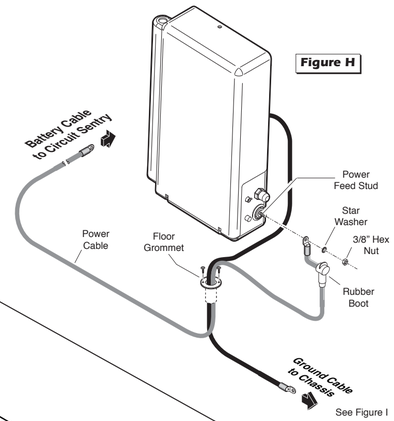


Figure H

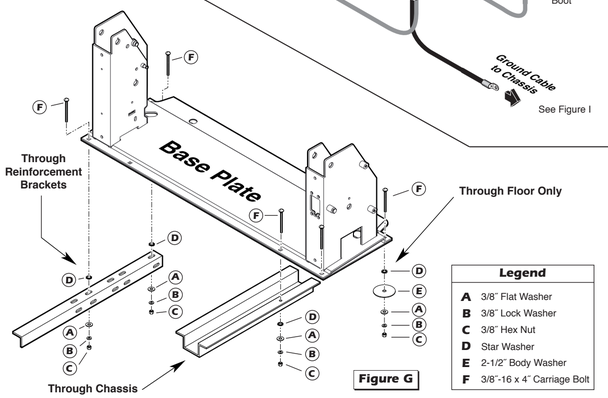


Figure G

4 Attach Ground Cable

Ground Cables: The pump ground cable and battery-to-frame ground cable **must** be mounted to a common vehicle framing member to provide **optimum ground**.

Mount ground cables as shown in detail below. **Route cables clear of exhaust, other hot area and moving parts.**

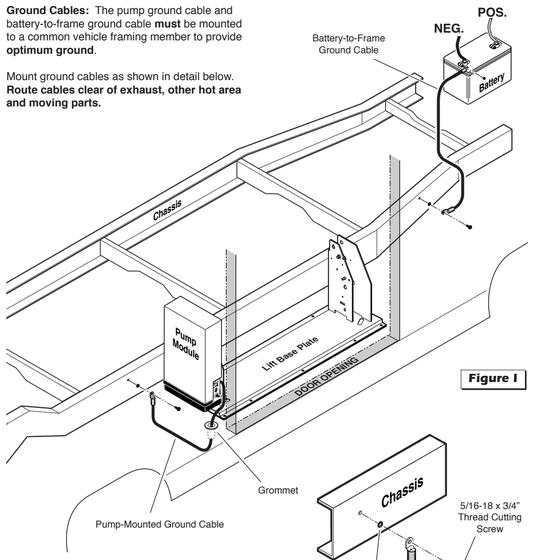


Figure I

Mounting Hardware Detail

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

5 Adjust Platform Angle

Millennium Series

The platform angle **should** be adjusted so there is balance between the angle at floor level and at ground level (**equal amount of angle**). **Angle A** should **equal angle B** as shown in Figure J.

Century Series/Vista Series

The platform angle may need to be adjusted so the outboard end of the platform (toe) is angled down slightly when positioned at floor level. 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.

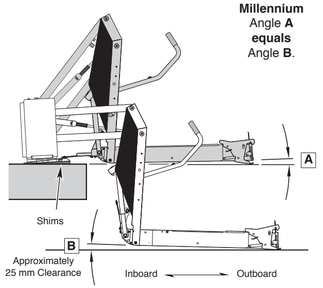


Figure J

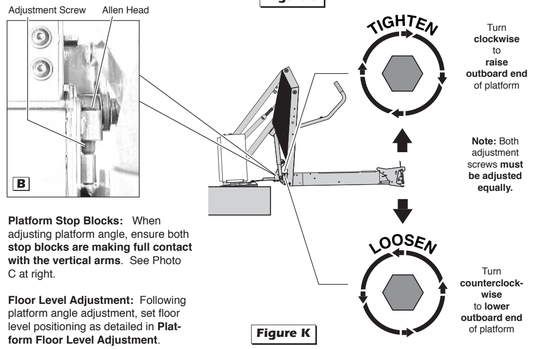


Figure K

Platform Stop Blocks: When adjusting platform angle, ensure both **stop blocks are making full contact with the vertical arms**. See Photo C at right.

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

6 Platform Floor Level Microswitch Adjustment

Automatic Floor Level Positioning: This feature eliminates the need for the lift operator to position and stop the platform at vehicle floor level.

Floor Level Adjustments: Tower 1 (Unfold) and Tower 2 (Up) microswitches control platform and bridge plate floor level positioning (see Figures L and M).

Review **Floor Level Guidelines** below and at right. Adjust microswitches as needed **only**.

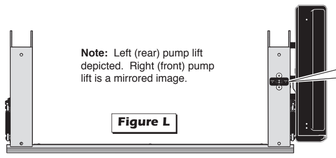
Floor Level Guidelines: When adjusting microswitches, bridge plate positioning and platform stop blocks must be viewed. See **Floor Level Guidelines** at right (Photos C-E).

Platform Angle: Adjust platform angle as outlined in Step 5 **before** adjusting microswitches.

Adjustment Verification: Following adjustment procedures, check floor level position. The platform must stop automatically at floor level when unfolding from stow position and when raising from below floor level position. From the stowed position, press the UNFOLD switch and hold until the platform stops at floor level. Once stopped, ensure the lift will fold when the pendant FOLD switch is pressed. Adjust microswitches as needed.

⚠WARNING

Improper microswitch adjustment may result in serious bodily injury and/or property damage.



Note: Left (rear) pump lift depicted. Right (front) pump lift is a mirrored image.

Figure L

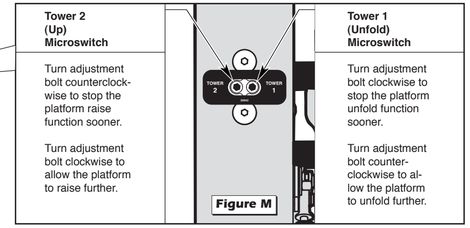


Figure M

Microswitch Adjustment Instructions:

Tower 1 (Unfold) Switch Adjustment: Floor Position from Stow

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

Proper Adjustment Criteria:

- The bridge plate should rest solidly on the base plate (minimum of 25 mm overlap). There should be a smooth (level) transition between the platform, bridge plate and the base plate. See Photo D.
- The stop blocks (one per side) must be making full contact with the edge of the vertical arms when the platform is at floor level. See Photo C.

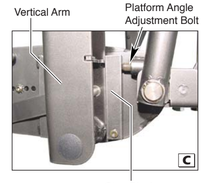
Tower 2 (Up) Switch Adjustment: Floor Position from Below Floor

1. Lower platform a minimum of 156 mm below floor level position using the manual hand pump or pendant control.
2. Turn switch adjustment screw counterclockwise 3 full turns.
3. Press pendant UP switch (continue pressing switch until platform stops).
4. When platform stops, turn switch adjustment screw clockwise while pressing the pendant UP switch. Platform position will change. Repeat adjustment to meet criteria listed in Tower 1 Switch Proper Adjustment Criteria at left.

Adjustment Verification

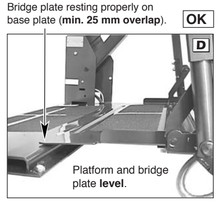
Following adjustment procedures, verify proper adjustment as detailed at left. Adjust the switches as needed.

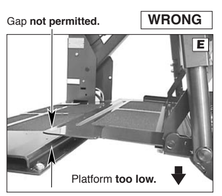
Floor Level Guidelines



Platform Stop Blocks: Both stop blocks **must make full contact** with the vertical arms when the platform is at floor level. **Improper stop block positioning can result in lift damage.**

Bridge Plate Positioning: The bridge plate should rest solidly on the base plate (**minimum of 25 mm overlap**). There should be a smooth (level) transition between the platform, bridge plate and the base plate. Refer to Photos D and E.





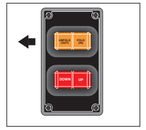
Lift Operating Instructions

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:



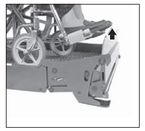


Stand clear and press the UN-FOLD switch until the platform stops (reaches **floor level** - unfolds **fully**). Release switch.

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

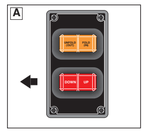
TO UNLOAD PASSENGER:





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

Note: Roll stop **must** be UP.





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

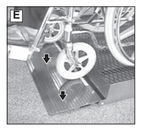


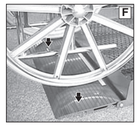


3. Unlock wheelchair brakes and unload passenger from platform.

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

TO LOAD PASSENGER:

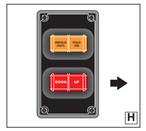




1. **Read Notes below!** Load passenger onto platform and **lock** wheelchair brakes. See Photo **G**.

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





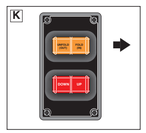
2. Press UP switch (Photo **H**) to fold roll stop UP **fully** (vertical - see Photo **I**), and raise the platform to **floor level**. See Photo **J**. Release switch.





3. Unlock wheelchair brakes and unload passenger from platform.

TO FOLD PLATFORM:



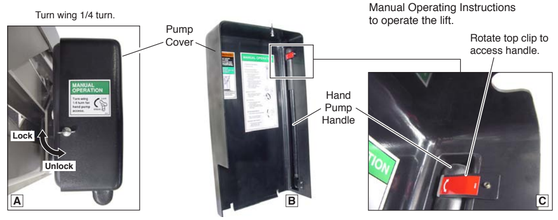


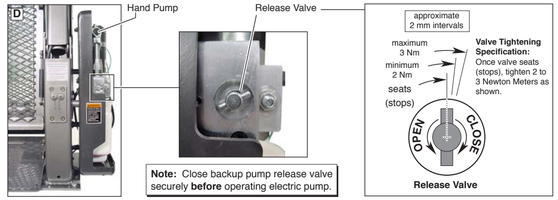
Press FOLD (In) switch until platform stops (**fully** folded). See Photos K and L. Release switch.

CLOSE DOOR(S)

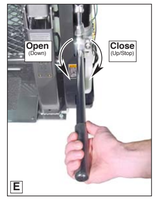
Manual Operating Instructions

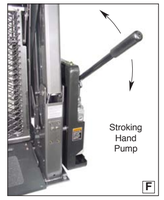
If you experience power or equipment failure, refer to the Manual Operating Instructions to operate the lift.





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





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.



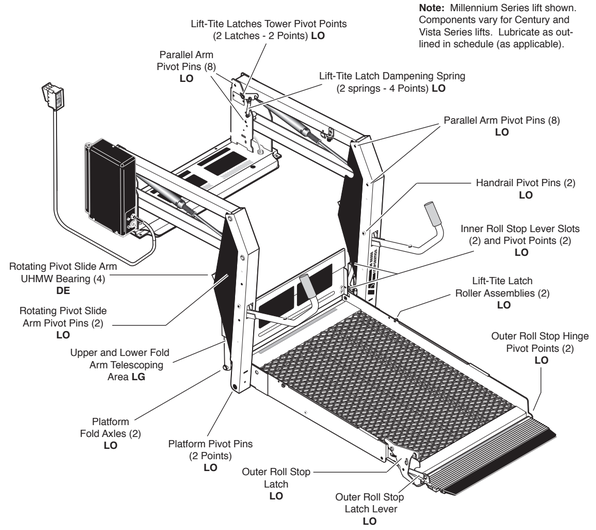




Maintenance and Lubrication

Lubrication Diagram

Note: Millennium Series lift shown. Components vary for Century and Vista Series lifts. Lubricate as outlined in schedule (as applicable).



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.

⚠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.

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.

Note: Disregard references to components not present.

750 Cycles	Outer Roll Stop hinge pivot points (2)	Apply Light Oil - See Lubrication Diagram
	Outer Roll Stop Foot Pivot (pivot/slide points - 2)	Apply Light Oil - See Lubrication Diagram
	Outer Roll Stop Arm Slots (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. **Note:** Apply Light Grease to Lift-Tite™ latch tower pivot point if replacing latch.
	Inspect outer roll stop for proper operation	Correct or replace damaged parts.
	Inspect outer roll stop foot pivot for proper operation, positive securement, and detached or missing spring	Correct or replace damaged parts and/or relubricate. See Lubrication Diagram
	Inspect lift for wear, damage or any abnormal condition	Correct as needed.
	Inspect lift for rattles	Correct as needed.

Maintenance and Lubrication Schedule

1500 Cycles	**Perform all procedures listed in previous section also**	
	Upper/Lower Fold Arm Telescoping Area	Apply Light Grease - See Lubrication Diagram
	Platform pivot pins (2)	Apply Light Oil - See Lubrication Diagram
	Platform fold axles (2)	Apply Light Oil - See Lubrication Diagram
	Inner roll stop lever pivot points (2)	Apply Light Oil - See Lubrication Diagram
	Inner roll stop lever slots (2)	Apply Light Oil - See Lubrication Diagram
	Rotating pivot slide arm pivot pins (2)	Apply Light Oil - See Lubrication Diagram
	Parallel arm pivot pins (8)	Apply Light Oil - See Lubrication Diagram
	Handrail pivot pins (2)	Apply Light Oil - See Lubrication Diagram
	Hydraulic cylinder pivot points (8)	Apply Light Oil - 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. (Apply Light Oil - See Lubrication Diagram)
	Inspect inner roll stop for: • Wear or damage • Proper operation. Inner roll stop 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 Platform Floor Level Microswitch Adjustment Instructions.
	Inspect handrail components for wear or damage, and for proper operation	Replace damaged parts.
	Inspect microswitches for securement and proper adjustment.	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: • Rotating pivot slide arm pivot pins (2 per pin) • Platform fold axles (1 per axle) • Handrail pivot pins (2 per pin) • Inner roll stop 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 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 • Circuit breaker and solenoids for securement or damage	Resecure, replace or correct as needed.

4500 Cycles	**Perform all procedures listed in previous section also**	
	Inspect cotter pins on platform pivot pins (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 12 mm of the bottom of the 38 mm fill tube (neck).
	Inspect cylinders, fittings and hydraulic connections for wear, damage or leaks	Tighten, repair or replace if needed.
	Inspect outer roll stop 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 screws (8)	Tighten or replace if needed.
	Inspect platform pivot pin, bushings and vertical arms for wear, damage and positive securement	Replace damaged parts and resecure as needed. Apply Light Grease during reassembly procedures.
	Inspect vertical arms, handrails and pivot pins for visible wear or damage	Replace damaged parts and relubricate 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 (buttons - 4)	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.