

Service Manual for:

NUVL855RM24

Under-Vehicle Lift®



Public Use Wheelchair Lifts

Series A1

DOT — Public Use Lift

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

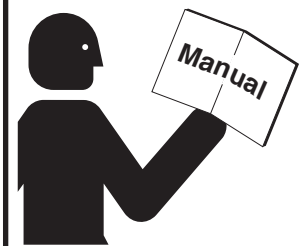


"Providing Access to the World"®

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



! WARNING



**Read manual
before installing
or servicing lift.
Failure to do so
may result in
serious bodily
injury and/or
property damage.**

Braun UVL Series™

Congratulations

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

This manual provides service-related material. Refer to the FMVSS No. 403 Quick Reference Installation Sheet for installation instructions, operating instructions and maintenance procedures.

Braun UVL Series™ lifts are built for dependability and will provide years of pleasure and independence as long as the lift is installed and serviced as specified by a Braun certified technician, and the lift is operated by an instructed person.

Sincerely,
THE BRAUN CORPORATION



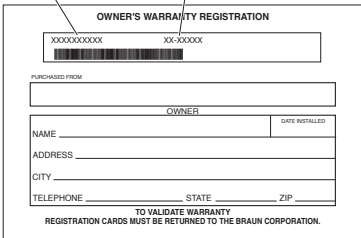
Ralph W. Braun
Chief Executive Officer

Warranty and Registration Instructions

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

Two warranty/registration cards (shown right) are protected in a clear envelope and attached to the lift protective shipping wrap. The sales representative must process one of the cards. The consumer must fill out the other card and mail it to The Braun Corporation. A detailed warranty section is provided in this manual. The warranty cards must be processed to activate the warranty.

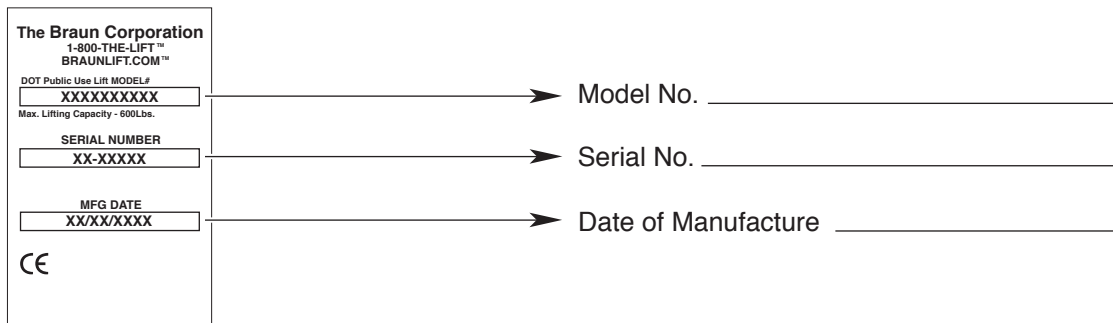
Model No. Serial No.



The form is titled "OWNER'S WARRANTY REGISTRATION". It contains fields for "PURCHASED FROM", "OWNER", "NAME", "ADDRESS", "CITY", "TELEPHONE", "STATE", and "ZIP". There are also fields for "DATE INSTALLED" and "TO VALIDATE WARRANTY". A note at the bottom states "REGISTRATION CARDS MUST BE RETURNED TO THE BRAUN CORPORATION".

Sample Warranty/Registration Card

Two Braun Serial No./Series No. identification tags (shown below) are posted on the lift. One I.D. tag is posted on the left platform side plate (outboard end). A second I.D. tag is located inside of the pump module. Both I.D. tags provide the product identification information provided on the warranty/registration card. Record the information in the space provided (or document on a copy). This information must be provided when filing a warranty claim or ordering parts.



The tag is a rectangular label with the following text: "The Braun Corporation", "1-800-THE-LIFT™", "BRAUNLIFT.COM™", "DOT Public Use Lift MODEL# XXXXXXXXX", "Max. Lifting Capacity - 600Lbs.", "SERIAL NUMBER XX-XXXXX", "MFG DATE XX/XX/XXXX", and a CE mark. Arrows point from the "MODEL# XXXXXXXXX", "SERIAL NUMBER XX-XXXXX", and "MFG DATE XX/XX/XXXX" fields to corresponding lines on the right: "Model No. _____", "Serial No. _____", and "Date of Manufacture _____".

Sample Serial No./Series No. Identification Tag

Contents

Troubleshooting and Maintenance

| | |
|---|----------|
| Lift Terminology | 2 |
| Switch and Sensor Locations | 3 |
| Certification Checklist Diagnostic Procedures | 4 |
| Adjustments and Calibration | 5 |
| LCD Diagnostic Codes | 6 |
| Floor Level and Inner Roll Stop Adjustments | 7-11 |
| Lubrication Diagram | 12 |
| Maintenance and Lubrication Schedule | 13-15 |
| Troubleshooting Diagnosis Chart | 16-19 |
| Lift Wiring Schematic | 19A, 20A |
| Contact Removal | 19B |

Hydraulics

| | |
|----------------------------|-----|
| Hydraulic Parts List | 20B |
| Hydraulic Diagram | 21 |

Repair Parts

Pump Module

| | |
|------------------------------|----|
| Pump Module Parts List | 22 |
| Pump Module Diagram | 23 |

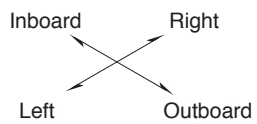
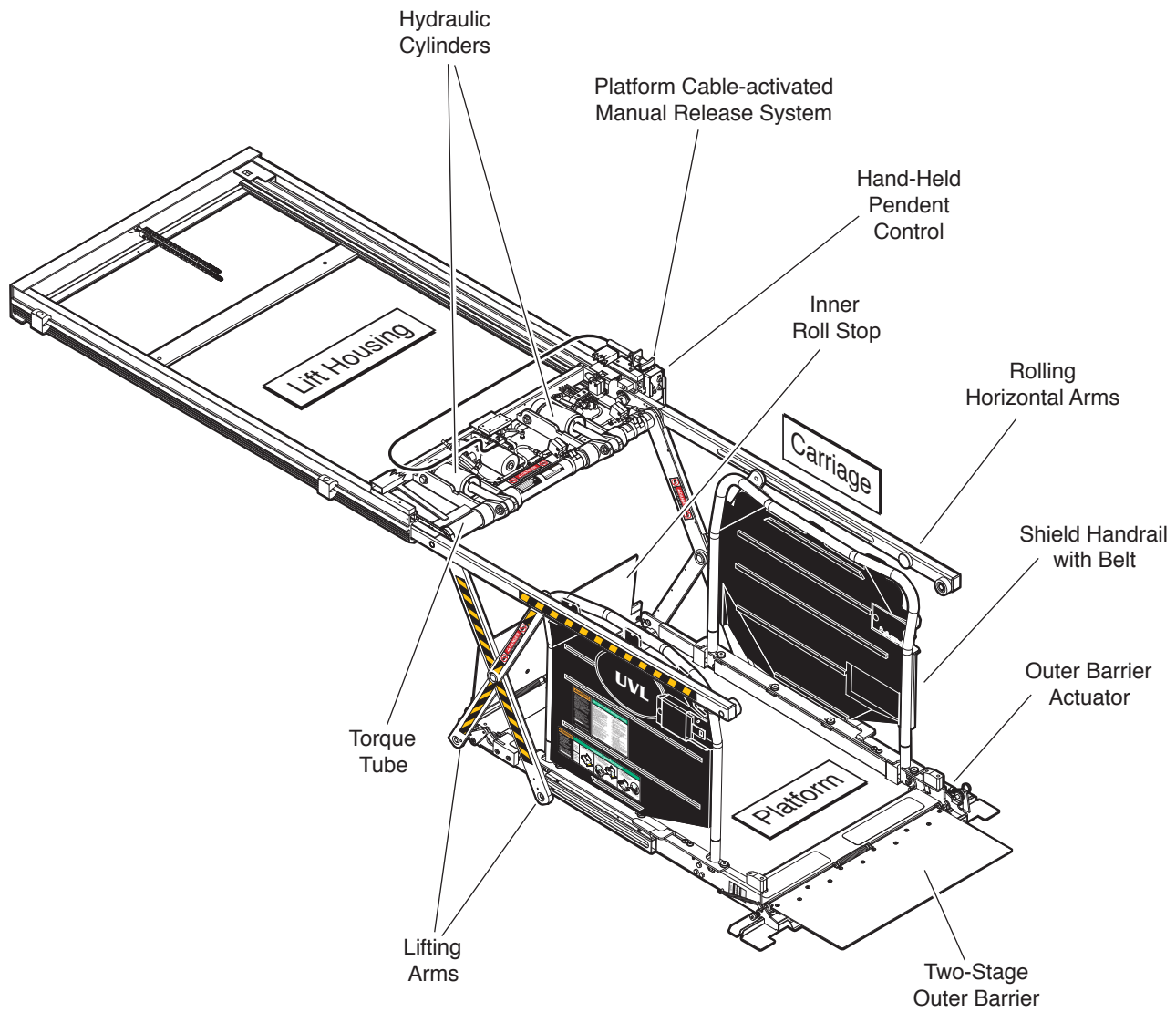
Lift Exploded Views and Parts Lists

| | |
|-------------------------|--------|
| Housing Assembly | 24, 25 |
| Carriage Assembly | 26, 27 |
| Platform Assembly | 28-32 |

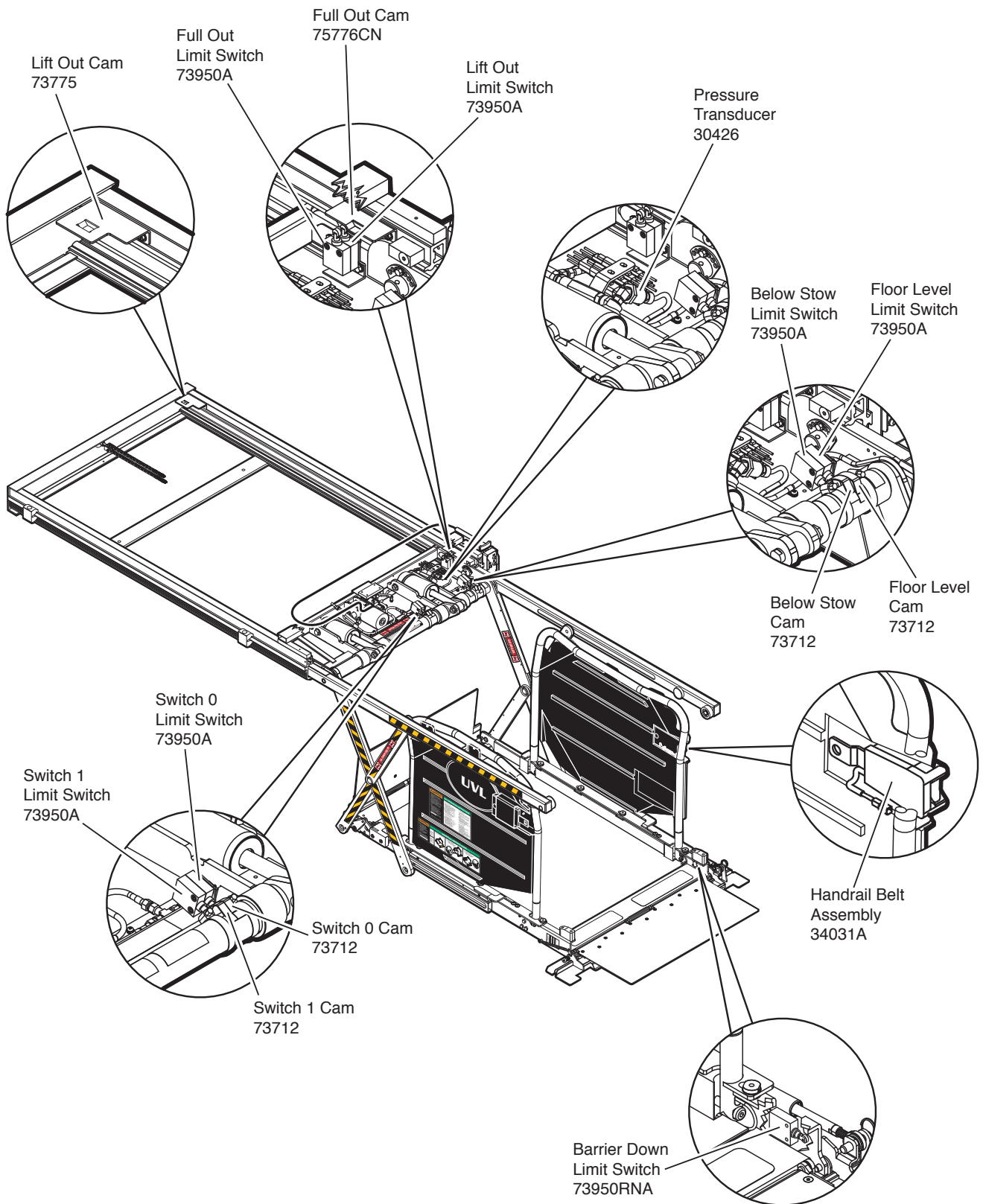
Warranty

| | |
|-------------------------------|-------|
| Braun® Limited Warranty | 33-35 |
|-------------------------------|-------|

Lift Terminology



Switch and Sensor Locations



Certification Checklist Diagnostic Procedures

The following operations and conditions must be functionally verified in order for the lift to be FMVSS 403/404 compliant. If an operation does not function as described or a condition is not met, follow the referenced procedures to correct the problem or contact a Braun Corporation Product Support representative.

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

- Vehicle movement is prevented unless the lift door is closed, ensuring the lift is stowed.
 1. Verify lift stowed signal (pin 7) in the 9 conductor plug on the side of the pump module has a +24 volt signal.
 2. Refer to the interlock installation instructions.
- Lift operation shall be prevented unless the vehicle is stopped and vehicle movement is prevented.
 1. Verify vehicle secure signal (pin 6) in the 9 conductor plug on the side of the pump module has a +24 volt signal.
 2. Refer to the interlock installation instructions.
- The platform will not fold/stow when occupied.
 - Refer to Platform Sense Calibration.
- The inner roll stop will not raise if occupied.
 - Refer to Inner Roll Stop Occupied Sensor Adjustment
- The outer barrier will not raise if occupied.
 - Refer to Outer Barrier Occupied Calibration procedure
- Verify platform lighting when lift is deployed and pendant illumination when lift is powered.
 1. Replace bulb(s) in the light housing.
 2. Check inline fuse on wires going out to lights.
- A visual and audible warning will activate if the threshold area is occupied when the platform is at least 1" below floor level.
 1. Make sure connectors to threshold mat are properly connected.
 2. Call Product Support.
- Platform movement is prohibited beyond the position where the inner roll stop is fully deployed (up).
 - Call Product Support.
- Platform movement shall be interrupted unless the outer barrier is deployed (up).
 - Check Barrier Down limit switch, wires and connector.
 - Diagnostic LCD should display a value of "1" for OBAR SW when outer barrier is deployed (up).

Adjustments and Calibration

Adjustment Procedures

Lift Out Switch: The Lift Out Switch stops inward travel of the carriage/platform during Stow function (activated by the housing-mounted Lift Out Cam). Move cam in to increase inward travel. Move cam out to decrease inward travel.

Full Out Switch: The Full Out Switch stops outward travel of the carriage/platform during Deploy (Up/Down) functions (activated by the housing-mounted Full Out Cam). Move cam in to decrease outward travel. Move cam out to increase outward travel. Carriage rollers must be inside housing a minimum 1/2". The platform will not raise or lower until this switch is activated.

Floor Level Switch: See page 7 for procedures.

Inner Roll Stop Occupied Sensor: See page 11 for procedures.

Below Stow Switch: The Below Stow Switch controls the height of the carriage/platform before it moves inward during the Stow function (activated by the torque tube-mounted Below Stow Cam). Rotate the cam in to decrease platform height. Rotate the cam out to increase platform height. Adjust cam so lifting arms are aligned. View the platform position in the housing.

Barrier Down Switch: This platform-mounted switch prohibits the platform from raising unless the outer barrier is in the full up position. The Up function is prohibited if the outer barrier detent pin is not fully engaged also.

Switch 0: The switch (activated by the torque tube-mounted Switch 0 cam) interrupts downward travel of the platform during the Down function. This allows the vehicle door to be closed during the remaining unloading procedures. After the door is closed, downward travel can be restarted. Rotate the cam in to lower the height of the stopping position. Rotate the cam out to raise the height of the stopping position.

Switch 1: This switch (activated by the torque tube-mounted Switch 1 cam) interrupts upward travel of the platform during the UP function. This allows the vehicle door to remain closed until the lift approaches floor level. After the door is opened, upward travel can be restarted. Rotate the cam in to lower the height of the stopping position. Rotate the cam out to raise the height of the stopping position.

Drive Chain Adjustment

In event the drive chain sags 1/2" or more, adjust tension as detailed. Tighten to eliminate visible sag but do not overtighten.

1. Unlock and pull the manual release cable and lock in the released position.
2. Manually extend platform carriage 2/3 full out.
3. Remove adjustment bolt (tensioner) access cover.
4. Use deep well socket (long key sleeve) to loosen outside jam nut. Tighten inside jam nut to eliminate visible chain sag but do not overtighten.

5. Lock jam nuts together. Unlock and push the manual cable in fully. Lock release cable. Move the platform in and out until platform chain release assembly engages chain.

Carriage Ride Height Adjustment

The carriage horizontal arms move (roll) in and out of the housing tracks on roller bearings. Following installation or extensive lift operation, clearance between horizontal arms and tracks may diminish. The eccentric shaft mounting plate allows height adjustment.

Remove eccentric plate mounting screw. Using screwdriver or small rod, rotate the shaft clockwise to increase carriage height. Rotate the shaft counterclockwise to decrease carriage height. Reinstall mounting screw in nearest retainer hole. Adjust left and right side eccentric shafts (screw positions may vary from side to side). Adjust height such that horizontal arms do not contact top or bottom of tracks (align center).

Calibration Procedures

Platform Sense Calibration

1. Place 20 lbs. in the center of the platform.
2. Press UP button on the hand-held pendant to raise the platform a minimum of 3" above stow level.
3. Press and hold 50# CAL button on control board. While pressing the 50# CAL button, press and hold the STOW button on the hand-held pendant. The platform will lower to stow level, raise slightly, lower to stow level, and begin inward travel. Release the 50# CAL button when the platform begins moving inward. The platform sensing is now calibrated.
4. After calibration, the LCD screen should read "PF OCCUPIED" when 50 lbs., or more, are present on the platform. If 50 lbs. does not activate the "platform occupied" signal readout, recalibrate with less weight to lower the "occupied" setting or more weight to increase the "occupied" setting.

Ground Sense Calibration

1. Press hand-held pendant DOWN switch to lower platform fully to ground level.
2. While continuing to press the pendant DOWN switch, press and then release the control board O_BAR/ GROUND LVL button.
3. Release the pendant DOWN switch. Ground level sensing is now calibrated.
4. After calibration, the outer barrier should not unfold (down) until the platform is fully on the ground.

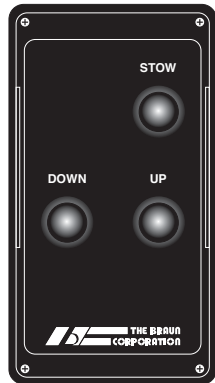
Outer Barrier Occupied Calibration

1. Press hand-held pendant DOWN switch to lower platform fully to ground level.
2. Once outer barrier is fully unfolded (ramp position), release the pendant DOWN switch.
3. Press and hold the control board O_BAR/ GROUND LVL button. While holding O_BAR/ GROUND LVL button, press hand-held pendant UP switch to raise the outer barrier. Be sure to release O_BAR/ GROUND LVL button when outer barrier reaches approximately half full up (vertical) position.
4. After calibration, the LCD screen should read "OUT-BAR OCCUPIED" whenever there is weight present on the outer barrier.

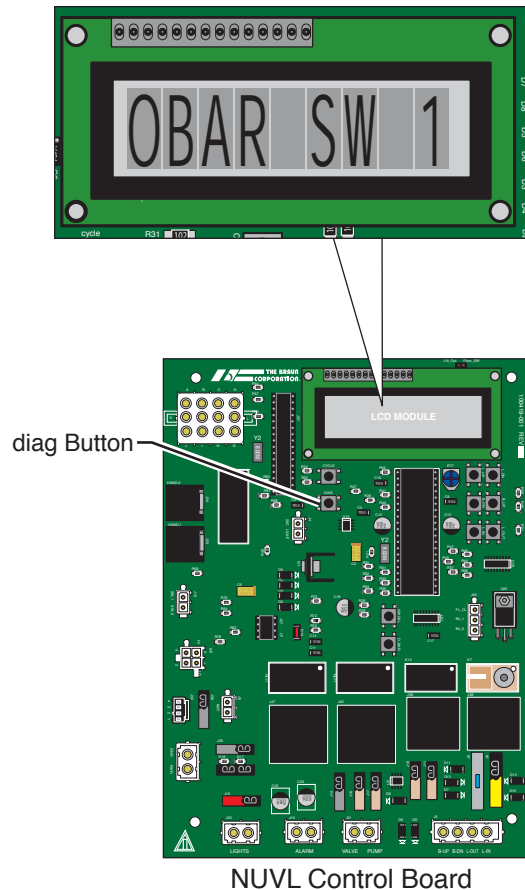
LCD Diagnostic Codes

To change the LCD display from cycle count to diagnostic mode, press the “diag” button on the control board (see illustration at right). When finished, press button again to return to cycle count mode. When all of the harnesses are correctly connected to the control board, the values shown in the chart below will display when the corresponding action is taken. “1” will appear to the right of the switch or sensor name on the LCD module when activated as shown. If any other value appears on the LCD screen during the specific diagnostic procedure, verify that the correct harness is properly connected to both the control board and the associated lift harness. Repeat the harness diagnostic procedure. If an incorrect value is still present after checking the harness and connections, contact The Braun Corporation Product Support Department.

All basic functions (UP, DOWN and STOW) should show a value of 1 when activated via a controlled input (Hand-held Pendant, Magnetic, Remote Entry or 3rd Station Controls).



Hand-held Pendant



| LCD Display | Stowed | Moving Out Of Cassette | Moving Up From Stow | At Floor Level | Moving Down From Stow | Ground Level | Ground Level OB Out |
|-------------|---|------------------------|---------------------|----------------|-----------------------|--------------|---------------------|
| ✓STLV SW | | | 1 | 1 | | | |
| LOUT SW | 1 | | | | | | |
| FOUT SW | | | 1 | 1 | 1 | 1 | 1 |
| FLV SW | | | | 1 | | | |
| OBAR SW | 1 | 1 | 1 | 1 | 1 | 1 | |
| *GND LVL | | | | | 1 | 1 | |
| MAT SW | = 1 when mat is activated. | | | | | | |
| IBAR SW | = 1 when inner roll stop is activated. | | | | | | |
| DO SW | = 1 when door is full open or pin 3 and pin 4 are jumpered. | | | | | | |
| *SBELT SW | = 1 when seat (handrail) belt is latched. | | | | | | |

* (NUVL855RM24 only)

✓ (BEL ST SW for NUVL855RM24)

✗ (HRBELT SW for NUVL855RM24)

Floor Level and Inner Roll Stop Adjustments

Achieving proper floor level positioning of the platform and inner roll stop requires a combination of Floor Level switch adjustment and inner roll stop cam adjustment. Both are factory set, but floor level positioning must be inspected during installation procedures (will vary per vehicle application).

Floor Level Requirements:
When the lift is positioned at floor level (raised fully), the bottom of the platform must be above floor level (threshold mat)

and the inner roll stop must rest solidly on vehicle floor with 7° maximum angle (relative to the platform).

Ensure the lift is positioned and secured as specified on the Quick Reference Installation Sheet supplied with the lift.

Adjust the Floor Level switch first (detailed below). If the 7° requirement above is not met, adjust the inner roll stop cam as detailed in Cam Adjustment (adjust cam only if necessary).

⚠CAUTION

Do not adjust inner roll stop linkage rod. Linkage rod adjustment may result in lift damage.

Do not adjust the inner roll stop linkage rod (see Photo G on page 10). The linkage rod should be adjusted to increase usable platform length only (following all other procedures).

Floor Level Switch Adjustment

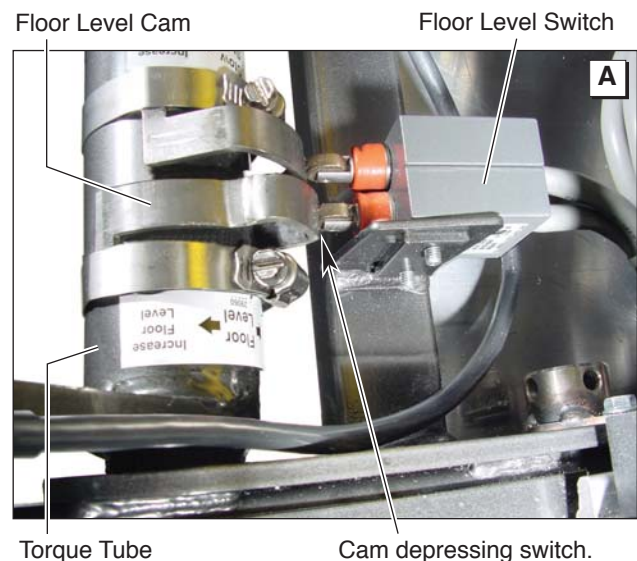
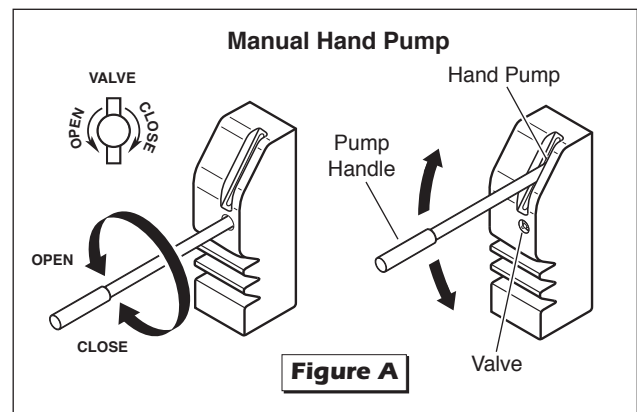
The Floor Level switch stops upward travel of the platform during the Up function (activated by the torque tube-mounted Floor Level cam).

1. Position the bottom of the lift platform 1-1/2" above floor level (threshold mat) using the manual hand pump. See Figure A.
2. Loosen the clamp securing the torque tube-mounted Floor Level cam. See Photo A. Rotate the cam until the Floor Level switch is activated (cam depresses switch). Tighten the clamp securing the cam.

Hydraulic pressure may affect platform height slightly. Fine tuning adjustment (tweaking) of the Floor Level switch (cam) may be required.

3. Using the control pendant, check floor level position by lowering the platform to stow level and then pressing the UP button until the platform raises fully (stops).

If the inner roll stop rests solidly on vehicle floor with 7° maximum angle (relative to the platform), move to page 10 and check the usable platform length as outlined.



Floor Level and Inner Roll Stop Adjustments

Floor Level Switch Adjustment

4. If the inner roll stop does not rest solidly on vehicle floor or the angle is more than 7°, open the hand pump valve (turn counterclockwise) to lower platform slightly (1/4" to 1/2"). Close valve. See Figure A.
5. Reset the floor level switch cam to this new position. See Photo A. Loosen the clamp securing the torque tube-mounted Floor Level cam. Rotate the torque tube-mounted Floor Level cam until the Floor Level switch is activated (cam depresses switch). Tighten the clamp securing the cam.
6. Using the control pendant, check floor level position by lowering the platform to stow level and then pressing the UP button until the platform raises fully (stops).

Floor Level Requirements: When the lift is positioned at floor level (raised fully), the bottom of the platform must be above floor level (threshold mat) and the inboard locator must rest solidly on vehicle floor with 7° maximum angle (relative to the platform).

If the inner roll stop rests solidly on vehicle floor with 7° maximum angle (relative to the platform), move to page 10 and check the usable platform length as outlined.

If the inner roll stop does not rest on the vehicle floor (hovers above floor) - adjust the cam as detailed in the following section.

Inner Roll Stop Cam Adjustment

Adjust the Floor Level switch first (detailed in previous section). If the above Floor Level Requirements are not met - adjust the inner roll stop cam as detailed in the following procedures.

Note: Adjustment of the inner roll stop cam affects the speed of inner roll stop deployment and torque tube/vehicle clearance.

1. Position the lift platform approximately 12" above stow level. See Photo B. Raising the platform will allow access to the cam securement screw and nut. See Photo C.
2. Use an Allen wrench to prevent the cam locking screw from turning and loosen the 3/8" serrated flange nut securing the inner roll stop cam. See Photos C and D. Do not remove the screw or nut.
3. Using the control pendant, press the UP button until the platform raises fully (stops).
4. Turn the cam adjustment screw counterclockwise until the inner roll stop rests on the vehicle floor. See Photo D.



Floor Level and Inner Roll Stop Adjustments

Inner Roll Stop Cam Adjustment

5. Measure the angle of inner roll stop and verify the slope is a maximum of 7° (relative to the platform). If correct, tighten the 3/8" serrated flange nut and screw securing the cam. See Photos C and D. Move to page 10 and check the usable platform length as outlined.
6. If the angle is more than 7° , open the hand pump valve (turn counterclockwise) to lower platform slightly (1/4" maximum). Close valve. See Figure A.
7. Reset the floor level switch cam to this new position. Loosen the clamp securing the torque tube-mounted Floor Level cam. See Photo A. Rotate the torque tube-mounted Floor Level cam until the Floor Level switch is activated (cam depresses switch). Tighten the clamp securing the cam.
8. Using the control pendant, check floor level position by lowering the platform to stow level and then pressing the UP button until the platform raises fully (stops).
9. If the inner roll stop rests solidly on the vehicle floor with 7° maximum angle (relative to platform), tighten the 3/8" serrated flange nut and screw securing the cam. See Photos C and D. Move to page 10 and check the usable platform length as outlined.

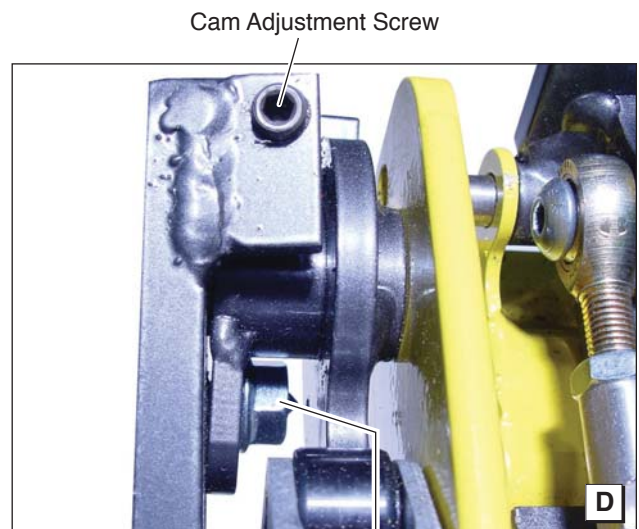
If the inner roll stop does not rest on the vehicle floor (hovers above floor), adjust the cam as detailed in Step 4.

Note: It may be necessary to repeat Steps 6-9 to meet Floor Level Requirements (see page 8).

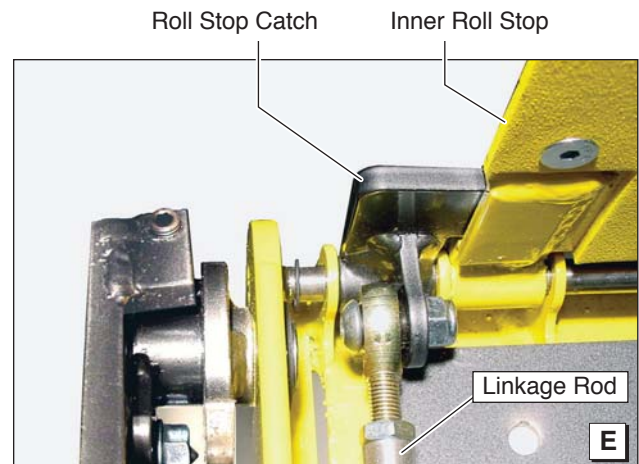
10. Verify there is no gap between the inner roll stop and the roll stop catch. See Photo E. Turn the adjustment screw clockwise to bring the roll stop catch back in contact with the inner roll stop. Do not remove the gap by adjusting the linkage rod.
11. While holding the cam locking screw, tighten the 3/8" serrated flange nut securely.



Cam Locking Screw



3/8" Serrated Flange Nut



Floor Level and Inboard Locator Adjustments

Usable Platform Length

⚠ CAUTION

Improper inner roll stop linkage rod adjustment may result in lift damage.

Do not adjust the inner roll stop linkage rod unless extra usable platform length is needed. See Photo F.

If the angle of the inner roll stop (when in the vertical position) restricts the usable platform length for the wheelchair passenger, adjustment of the linkage rod will change the angle.

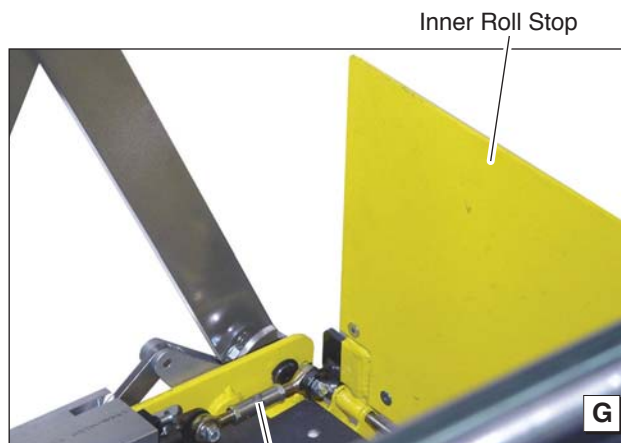
Adjust the inner roll stop as detailed in the previous procedures. Then, adjust the linkage rod as detailed (only if necessary). If the linkage rod is over adjusted (too long or too short), it will exceed the travel of the slider block resulting in damage to the cam follower bearing, the cam and/or other components.

Linkage rod adjustment affects angle of inner roll stop (vertical position).



Linkage Rod Adjustment

1. Position the lift platform below stow level using the manual hand pump (turn valve counterclockwise). Do not operate the lift with the electric pump during adjustment procedures.
2. Loosen the jam nuts at each end of the linkage rod. Adjust rod length as needed. Minimize adjustment. Provide a minimum of 1-1/2" clearance between inner roll stop and torque tube (inner roll stop must clear cylinder mount). See Photo H.
3. Carefully check the inner roll stop angle and operation using the hand pump. Ensure the linkage rod has not been over adjusted resulting in pressure on components (damage will result).
4. Tighten the linkage rod jam nuts.



Floor Level and Inboard Locator Adjustments

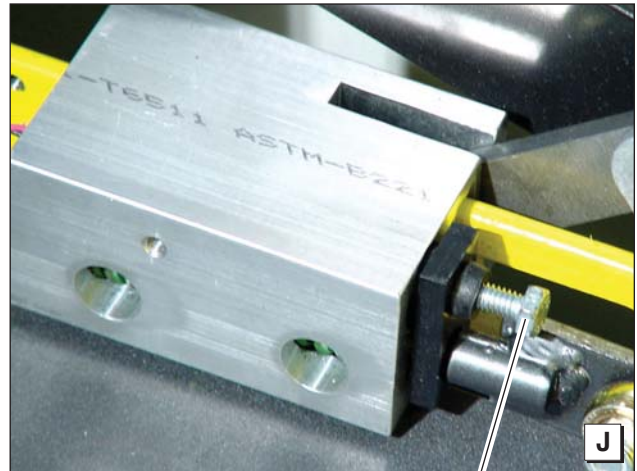
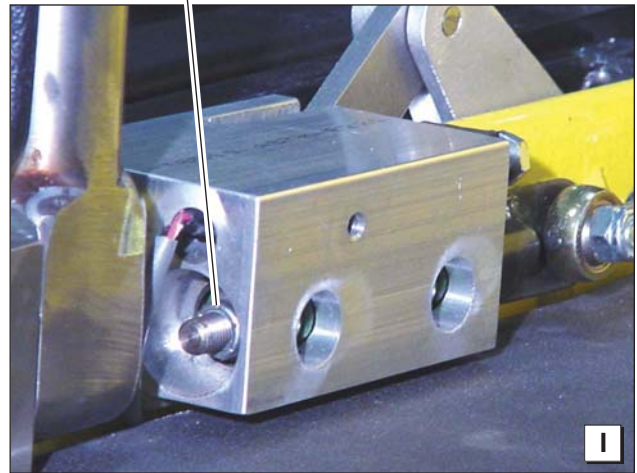
Inner Roll Stop Occupied Sensor Adjustment

The optimum setting for the inner roll stop occupied sensor adjustment nut is to have just enough pressure to fold and unfold the inner roll stop without triggering the inner roll stop occupied sensor. This provides the most weight sensitive setting while allowing the unoccupied inner roll stop to function correctly.

The inner roll stop sensor activates an audible/visual alarm and stops lift motion if the inner roll stop is occupied (weight or pressure on roll stop). Do not adjust the inner roll stop occupied sensor unless lift does not function properly.

1. If the weight of the empty inner roll stop is triggering the sensor while it is folding, tighten the sensor nut 1/8 turn and cycle the lift several times to verify correct operation. See Photo I.
2. If the lift is not reacting to weight (pressure) on the inner roll stop soon enough, loosen the pressure adjusting nut 1/8 turn and cycle the lift several times to verify correct operation.
3. If the inner roll stop occupied alarm continues to go off even when the inner roll stop is in the vertical position, turn the sensor activation bolt clockwise until alarm is not activated. See Photo J.

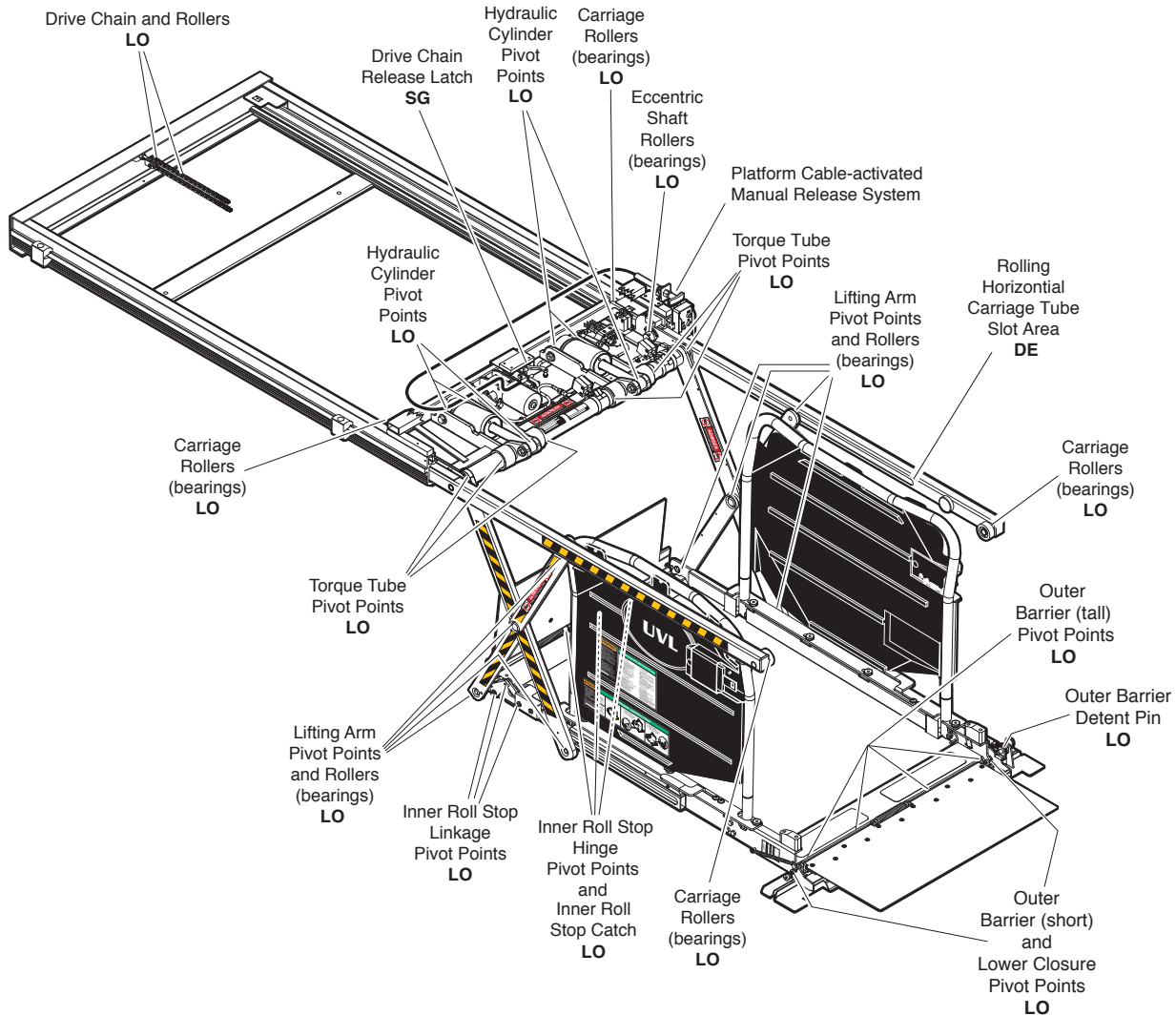
Adjustment Nut



Sensor Activation Bolt

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 | 16 oz. Aerosol Can | 15807 |
| DE - Door-Ease | Stainless Stick Style (tube) | Door-Ease Stick (tube) | 1.68 oz. | 15806 |
| LG - Light Grease | Synthetic Grease (Multipurpose) | Mobiltemp SHC32 | 12.5 oz. Can | 28598 |

Maintenance and Lubrication Schedule

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

The maintenance and lubrication procedures specified in the following schedule must be performed by a Braun authorized service representative at the scheduled intervals according to the number of cycles. NUVL Series lifts are equipped with a cycle counter (digital display built into the electronic control board).

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

When servicing the lift at the recommended intervals, inspection and lubrication procedures specified in the previous sections should be repeated. Clean 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 replacing these components, be sure to apply grease during installation procedures. Specified lubricants are available from The Braun Corporation (part numbers provided on previous page).

All listed inspection, lubrication and maintenance procedures should be repeated at 750 cycle intervals following the scheduled 4500 cycles maintenance pro-

cedures. 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 the hand-held pendant storage bracket, will change color to yellow after every 750 cycles. The yellow LED will not affect the functions of the lift, but is a reminder to complete necessary maintenance and lubrication procedures.

Once the lift has been serviced, press the CYCLE button (located below LCD display on the control board) until the Lift Ready LED changes back to green. The CYCLE button also clears the lift cycle count (since last service) but not the lifetime cycle count.

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. 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 and lower closure pivot points (2) | Apply Light Oil - See Lubrication Diagram |
| | Outer barrier detent pin pivot points (2) | Apply Light Oil - See Lubrication Diagram |
| | Inner roll stop hinge pivot points | Apply Light Oil - See Lubrication Diagram |
| | Inner roll stop linkage pivot points | Apply Light Oil - See Lubrication Diagram |
| | Lifting arm pivot points and rollers (bearings) | Apply Light Oil - See Lubrication Diagram |
| | Inspect outer barrier and lower closure for proper operation | Correct or replace damaged parts. |
| | Inspect outer barrier seal and lower closure gasket | Resecure, replace or correct as needed |
| | Inspect outer barrier detent pin hairpin cotter | Ensure hairpin cotter is present and can be removed and inserted easily. Resecure, replace or correct as needed. |
| | Inspect lift for wear, damage or any abnormal condition | Correct as needed. |

Maintenance and Lubrication Schedule

| | | |
|------------------------|--|---|
| 750 Cycles | Inspect lift for rattles | Correct as needed. |
| | Check drive chain tension. | Pull out and lock manual release cable. Adjust chain tension as needed. See Drive Chain Adjustment. |
| | Inspect inner roll stop and linkage for: <ul style="list-style-type: none"> • Proper operation. • Positive securement • Wear or damage • Proper adjustment | Resecure, replace or correct as needed. See Floor Level and Inner Roll Stop Adjustment Instructions. |
| | Check carriage ride height in housing | Adjust as needed. See Carriage Ride Height Adjustment. |
| | Check stow height/lifting arm alignment | Lifting arms should be horizontal, aligned with each other and aligned with carriage. Adjust as needed. See Switch Adjustment (Stow Switch). |
| | Inspect wiring harnesses for securement, wear or other damage | Resecure, replace or correct as needed |
| | Check lower pan securement | Resecure, replace damaged parts or correct as needed. |
| 1500 Cycles | Torque tube pivot bearings (4 places) | Apply Light Oil - See Lubrication Diagram |
| | Verify FVMSS 403/404 Certification Checklist | See Certification Checklist Diagnostic Procedures |
| | Carriage rollers (bearings) | Apply Light Oil - See Lubrication Diagram |
| | Eccentric shaft rollers (bearings) | Apply Light Oil - See Lubrication Diagram |
| | Lifting arm slots in rolling horizontal carriage arm tubes | Apply Door-Ease - See Lubrication Diagram. Apply to the surface area around both slots and wipe off excess. |
| | Hydraulic cylinder pivot points (4 per cylinder) | Apply Light Oil - See Lubrication Diagram |
| | Drive chain and chain rollers | Apply Light Oil - See Lubrication Diagram |
| | Drive chain release latch mechanism | Apply Synthetic Grease - See Lubrication Diagram |
| | Deploy lift, remove inboard and outboard lower pans and blow out housing. Blow off platform also. | Use compressor and nozzle to remove all debris from housing. Clean outboard lower pan slot and apply Antiseize to slot before reinstalling pan. |
| | Deploy lift, remove inboard and outboard lower pans and clean housing tracks | Use clean cloth and solvent to clean tracks. Clean outboard lower pan slot and apply Anti-seize to slot before reinstalling pan. |
| | Check drive chain tensioner, jam nuts and connecting link for securement and/or misalignment. | Correct or replace damaged parts and/or relubricate. See Drive Chain Adjustment. |
| | Inspect drive chain release latch mechanism for proper operation, positive securement, wear or other damage | Correct or replace damaged parts and/or relubricate. |

Maintenance and Lubrication Schedule

| | | |
|--|--|--|
| 1500 Cycles | <p>Inspect platform cable-activated manual release system (T-handle/cable assembly and carriage movement)</p> <p>Inspect limit switches and cams for securement and proper adjustment</p> <p>Inspect carriage, lifting arm and eccentric shaft rollers (bearings) for wear or damage, positive securement and proper operation</p> <p>Inspect external snap rings (e-clips):</p> <ul style="list-style-type: none"> • Carriage roller bearings (4) • Lower lifting arm pins (5) • Upper lifting arm pins (2) • Outer race bearings (2) • Inner roll stop shaft (2) <p>Inspect lower lifting arm pins for wear or damage, positive securement and proper adjustment</p> <p>Inspect eccentric shaft pins, bearing mounting screw, washers and securement hardware for wear or damage, positive securement and proper operation</p> <p>Inspect torque tube cams for securement, wear or damage</p> <p>Inspect housing cam brackets for securement, wear or damage</p> <p>Inspect cylinder(s), hoses, fittings and hydraulic connections for wear, damage or leaks</p> <p>Inspect power cable</p> | <p>Ensure T-handle release and cable assembly operate properly. Ensure carriage can be manually extended and retracted freely.</p> <p>Resecure, replace or adjust as needed. See Adjustments and Calibration section.</p> <p>Correct, replace damaged parts and/or relubricate.</p> <p>Resecure, replace or correct as needed.</p> <p>Resecure, replace damaged parts, lubricate or correct as needed.</p> <p>Resecure, replace damaged parts, lubricate or correct as needed. See Carriage Ride Height Adjustment.</p> <p>Resecure, replace or correct as needed.</p> <p>Resecure, replace or correct as needed.</p> <p>Tighten, repair or replace if needed.</p> <p>Resecure, repair or replace if needed.</p> |
| 4500 Cycles | <p>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.</p> <p>Inspect lifting arm bushings and pivot pins for visible wear or damage</p> <p>Inspect outer barrier pivot pin mounting bolts (2)</p> <p>Mounting</p> <p>Decals and Antiskid</p> | <p>Use Braun 87010R (5606 aviation fluid). Do not mix with Dextron III or other hydraulic fluids. Check fluid level with platform lowered fully. Fill to maximum fluid level indicated on reservoir (specified on decal). Do not overfill. If fluid level decal is not present - measure 7/8" from the bottom of fill tube to locate fluid level.</p> <p>Replace if needed.</p> <p>Tighten or replace if needed</p> <p>Check to see that the lift is securely anchored to the vehicle and there are no loose bolts, broken welds, or stress fractures.</p> <p>Replace decals if worn, missing or illegible. Replace antiskid if worn or missing.</p> |
| Consecutive 750 Cycle Intervals | Repeat all previously listed inspection, lubrication and maintenance procedures at 750 cycle intervals. | |

Troubleshooting Diagnosis Chart

⚠ WARNING

Troubleshooting and repair procedures must be performed as specified by authorized service personnel only. Failure to do so may result in serious bodily injury and/or property damage.

If a problem occurs with your lift, discontinue operation immediately! Do not attempt repairs yourself. Contact your dealer or call The Braun Corporation. One of our national Product Support representatives will direct you to an authorized service repairman who will inspect your lift.

The cause of the problem can be determined by locating the lift function and related symptom in the Troubleshooting Diagnosis Charts. The specific cause and remedy can then be determined

by process of elimination. A Wiring Schematic, Hydraulic Diagram and Hydraulic Schematic are provided to aid in troubleshooting.

A Repair Parts section with exploded views and corresponding parts lists is also provided. Correct the problem if possible. If the problem continues, contact The Braun Corporation.

| FUNCTION | POSSIBLE CAUSE | REMEDY |
|---|--------------------------------|--|
| 1.00 NO OPERATION | 1.11 Low battery | Check vehicle battery |
| | 1.12 Bad ground | Check for good ground between vehicle chassis and 3/8" bolt on back of power pack. |
| | 1.13 Poor plug connections | Check all plugs for proper contact. |
| | 1.14 Blown fuse | Check fuses on P.C. board. |
| | 1.15 Circuit Sentry | Reset circuit breaker. |
| | 1.16 Defective Interlock | Check for voltage on gray wire with red stripes in interlock plug connected to P.C. board. |
| 2.00 PUMP RUNS BUT WILL NOT LIFT PLATFORM | 2.11 Hydraulic Down valve open | Flush valve by operating Up and Down manual override switches at same time for 4 to 5 seconds several times. |
| | 2.12 Pump mounted horizontal | Power pack must be mounted vertically. |
| | 2.13 No oil (low) | Use Braun 87010R (5606 aviation fluid). Do not mix with Dextron III or other hydraulic fluids. Check fluid level with platform lowered fully. Fill to maximum fluid level indicated on reservoir (specified on decal). Do not overfill. If fluid level decal is not present - measure 7/8" from the bottom of fill tube to locate fluid level. |
| 3.00 PUMP DOES NOT RUN WITH OVERRIDE SWITCH OR HAND-HELD PENDANT | 3.11 Up Solenoid | Check for power on pump black wire going from solenoid to motor. |
| | 3.12 Bad power and ground | See 1.00 |

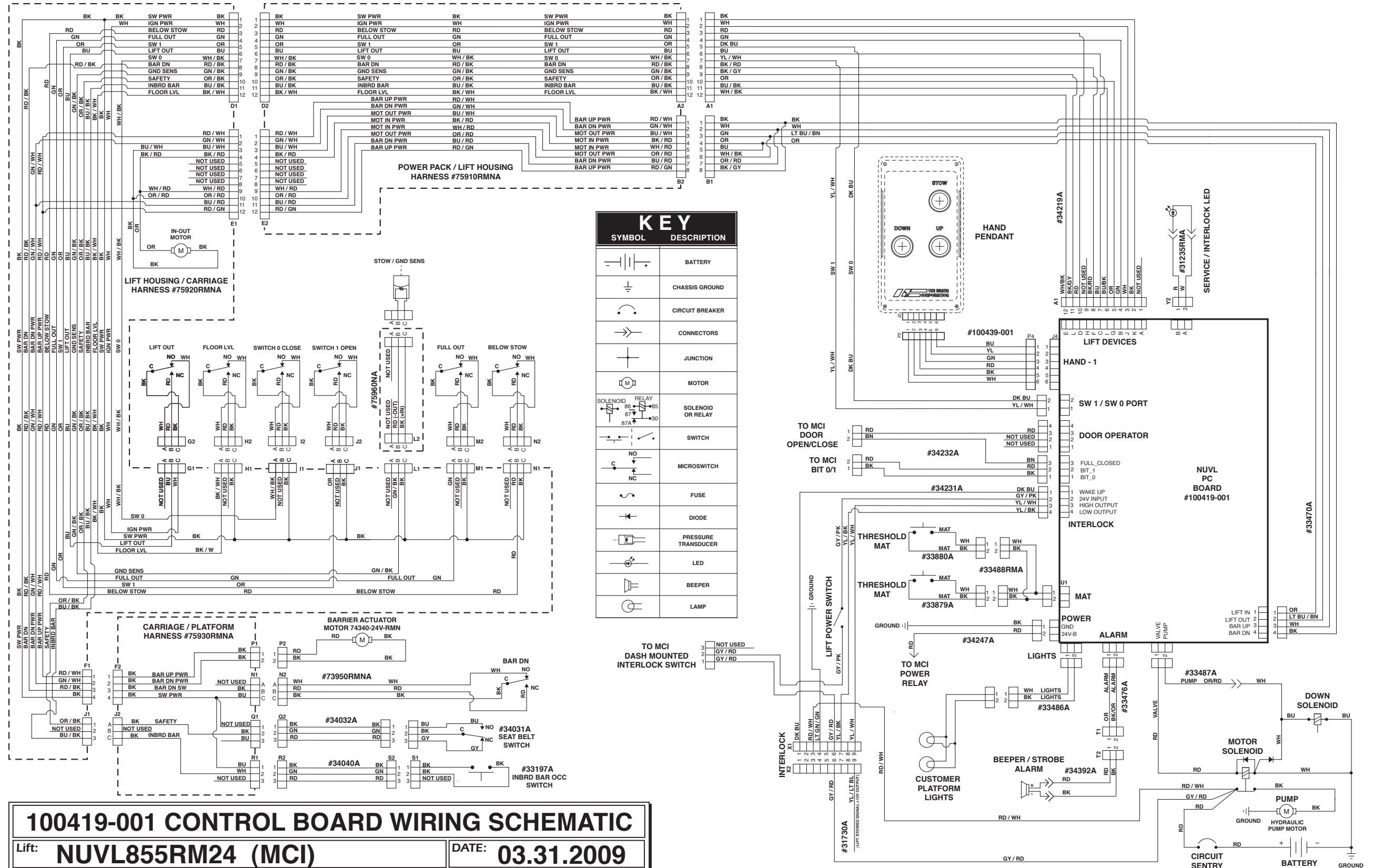
Troubleshooting Diagnosis Chart

| FUNCTION | POSSIBLE CAUSE | REMEDY |
|--|---|--|
| 4.00 LIFT WILL GO UP WITH OVERRIDE SWITCH BUT NOT WITH HAND-HELD PENDANT | 4.11 Outer Barrier switch is out of adjustment or defective. | Check diagnostic LCD for Outer Barrier switch status. Barrier is down or barrier release pin partially out. Adjust or replace switch as necessary. |
| | 4.12 Full Out switch is not activated or defective. | Check diagnostic LCD for Full Out switch status. Adjust or replace switch as necessary. |
| | 4.13 Hand-held pendant not working properly. | Check for hand-held pendant illumination and continuity of the switches. Verify SW1 and Door Open switches are functioning correctly. |
| 5.00 LIFT WILL NOT GO DOWN WITH OVERRIDE SWITCH OR WITH HAND-HELD PENDANT, GOES DOWN SLOWLY OR LIFT DRIFTS DOWN BY ITSELF | 5.11 Hydraulic Down valve bad | Check for power on red "valve" wire from P.C. board to Down solenoid when pushing override switch or hand-held pendant button. Replace if necessary. |
| | 5.12 Dirty Down valve (clogged) | Flush valve by operating Up and Down manual override switches at same time for 4 to 5 seconds several times. |
| 6.00 LIFT WILL GO DOWN WITH OVERRIDE SWITCH BUT NOT WITH HAND-HELD PENDANT | 6.11 Full Out switch out of adjustment or defective. | Check diagnostic LCD for Full Out switch status. Adjust or replace switch as necessary. |
| | 6.12 SW0 and/or Door Full Close switches out of adjustment or defective. | Check switches for proper operation/adjustment. Adjust or replace switch as necessary. |
| 7.00 LIFT WILL NOT EXTEND WITH OVERRIDE SWITCH OR HAND-HELD PENDANT | 7.11 Poor plug connections | Check harness connections A1, A2, B1 and B2 |
| | 7.12 Bad In/Out motor | Check power at motor. Replace motor if necessary. |
| | 7.13 Bad power and ground | See 1.00 |
| 8.00 LIFT WILL NOT STOW WITH HAND-HELD PENDANT | 8.11 Below Stow Level switch out of adjustment or defective. | Check diagnostic LCD for Below Stow Level switch status. Adjust or replace switch as necessary. |
| | 8.12 Platform is occupied or out of calibration | Remove weight from platform. See Platform Sense Calibration on page 5. |
| | 8.13 SW0 and/or Door Full Closed switches out of adjustment or defective. | Check switches for proper operation/adjustment. Adjust or replace switch as necessary. |
| | 8.14 Handrail Belt | Belt must be latched until platform is at stow level and must be unlatched before platform will stow. |

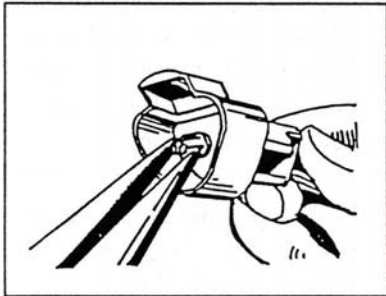
Troubleshooting Diagnosis Chart

| FUNCTION | POSSIBLE CAUSE | REMEDY |
|--|---|--|
| 9.00 BARRIER WILL NOT OPERATE UP OR DOWN WITH OVERRIDE SWITCHES OR HAND-HELD PENDANT | 9.12 Poor plug connections | Check harness connectors A1 and A2, E1, N1, N2, E1, F1 and F2. |
| | 9.13 Barrier actuator motor or actuator out of adjustment or faulty | Check power at motor. Slightly lengthen rod end if release pin is difficult to remove or replace actuator if necessary. |
| | 9.14 Bad power and ground | See 1.00 |
| 10.00 BARRIER OPERATES WITH OVERRIDE SWITCH BUT WILL NOT GO UP WITH HAND-HELD PENDANT | 10.11 Faulty Outer Barrier switch | Check diagnostic LCD for Outer Barrier switch status. Adjust or replace switch as necessary. |
| | 10.12 Barrier occupied | Remove weight from barrier. See Outer Barrier Occupied Calibration on page 5. |
| | 10.13 Handrail belt unlatched or faulty harness connections | Latch handrail belt. Check connectors F1, F2, N1 and N2. |
| 11.00 BARRIER OPERATES WITH OVERRIDE SWITCH BUT WILL NOT GO DOWN WITH HAND-HELD PENDANT | 11.11 Faulty Pressure Transducer | Check Pressure Transducer. Replace or adjust as necessary. See Ground Sense Calibration on page 5. |
| | 11.12 Below Stow Level switch out of adjustment or defective. | Check diagnostic LCD for Below Stow Level switch status. Adjust or replace switch as necessary. |
| | 11.13 Full Out switch out of adjustment or defective. | Check Full Out switch for proper operation. Replace or adjust as needed. |
| 12.00 SWITCHES DO NOT CHANGE STATE IN DIAGNOSTIC MODE | 12.11 No power going to switches | Check power on connector A1, pins 1 and 2. |
| | 12.12 Faulty wiring | Check continuity of wires from switches to connector A2. |
| | 12.13 Faulty connections | Check for proper connections on each switch and on each connector on the harnesses. Replace contact if necessary. See diagram on following page. |

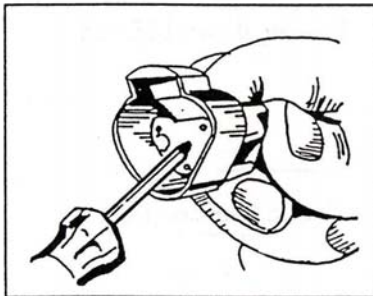
Wiring Schematic



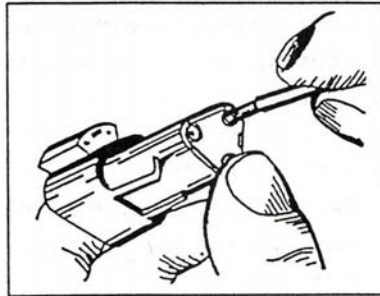
CONTACT REMOVAL



1. Remove orange wedge using needle nose pliers or a hook shaped wire to pull wedge straight out.



2. To remove the contacts, gently pull wire backwards, while at the same time releasing the locking finger by moving it away from the contact with a screwdriver.

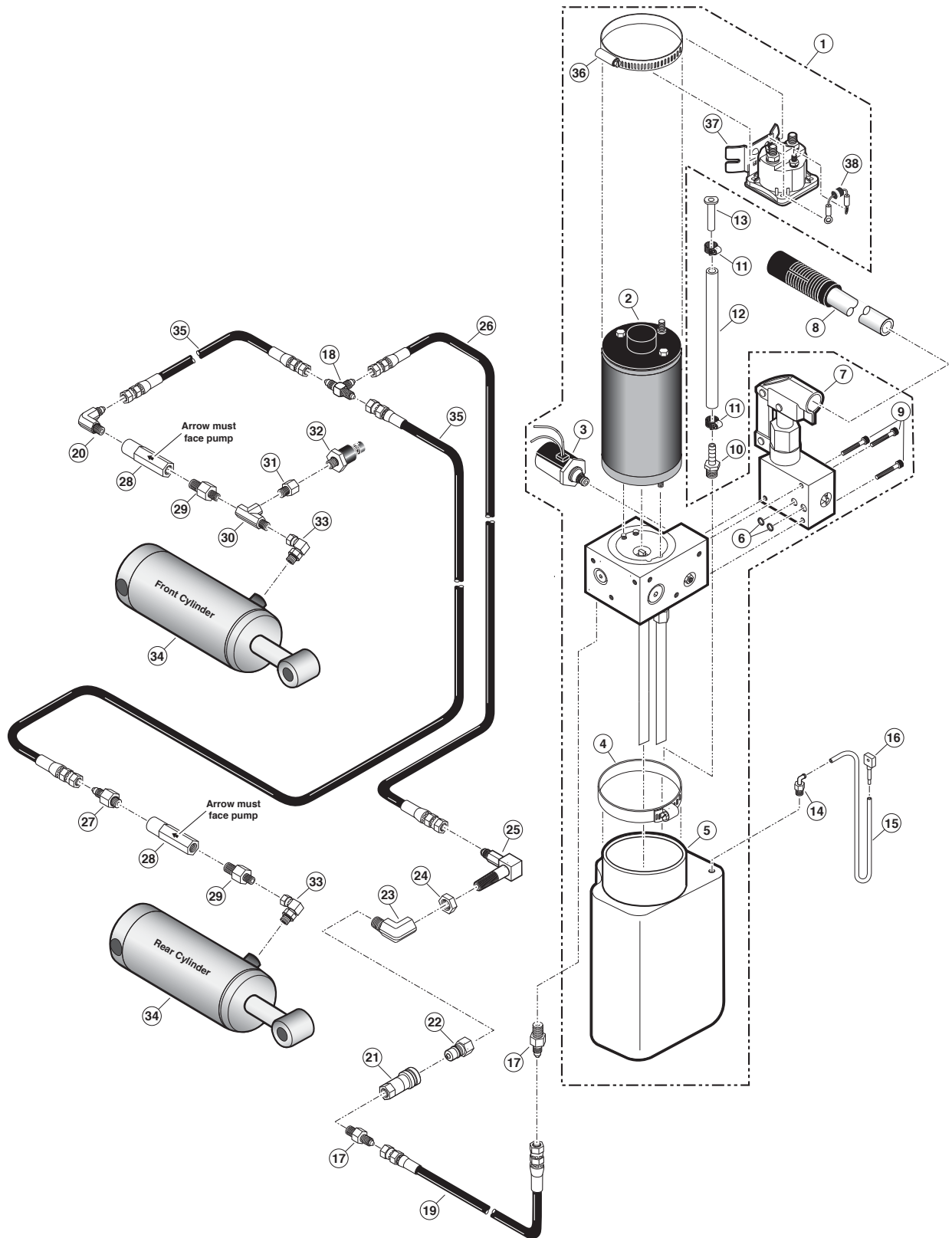


3. Hold the rear seal in place, as removing the contact will displace the seal

Hydraulic Parts List

| Item | Qty. | Description | Part No. |
|------|------|--|---------------|
| 1 | 1 | Pump Assembly (M259 with Reservoir/ with Back-up pump) | 87060-24V |
| 2 | 1 | Motor, Pump | 16504-IS |
| 3 | 1 | Valve, "Down" (with Solenoid) | 16505 |
| 4 | 1 | Clamp, Reservoir - H-48 | 17069 |
| 5 | 1 | Reservoir Replacement Kit (Includes Item #10) | 88188K |
| 6 | 2 | O-Ring (only), Hand Pump Mounting | 17351 |
| 7 | 1 | Hand Pump (Backup) with O-Rings (Includes Item #6) | 87065 |
| 8 | 1 | Handle with Grip | 17206W |
| 9 | 3 | Screw, 1/4-20 x 1 3/4", Allen Head | 17352 |
| 10 | 1 | Fitting, 3/8" Male NPT x 3/8" Barbed | 87618 |
| 11 | 2 | Clamp, Hose - 5/8" O.D. - Worm Drive | 84325 |
| 12 | 1 | Tubing, 3/8" x 5/8", Tygothane - Clear | 82066R012 |
| 13 | 1 | Plug, 3/8" Plastic Hose | 81580 |
| 14 | 1 | Fitting, 90°-1/8" Male Pipe x 1/8" Barbed | 87563 |
| 15 | 1 | Tube, 1/4" O.D. x 1/8" I.D. - Plastic | 81557R026 |
| 16 | 1 | Plug, 1/8" Plastic Tube | 81583 |
| 17 | 2 | Adapter, 1/4" Male NPT x 7/16-20 Male JIC 37° | 10130 |
| 18 | 1 | Fitting, Tee, 7/16-20 Male JIC 37° (3) | 30793 |
| 19 | 1 | Hose Assembly, 1/4" - Female Swivel 7/16-20 JIC 37° | 32785A-202 |
| 20 | 1 | Fitting, 90° - 9/16-18 Male O-Ring x 7/16-20 JIC 37° | 87622 |
| 21 | 1 | Coupling, Hydraulic Quick Connect x 1/4" Female NPT | 87614 |
| 22 | 1 | Nipple, Hydraulic Quick Connect x 1/4" Female NPT | 87615 |
| 23 | 1 | Elbow, 90° - 1/4" NPT Street | 10114 |
| 24 | 1 | Nut, 9/16-18, Hex Jam | 83077 |
| 25 | 1 | Fitting Assembly, Bulk Head | 73777A |
| 26 | 1 | Hose Assembly, 3/16" - Female Swivel 7/16-20 JIC 37° | 915-5603-62.5 |
| 27 | 1 | Fitting, 9/16" Male O-Ring x 7/16-20 Male JIC 37° | 26787 |
| 28 | 2 | Valve, Flow Control | 87053 |
| 29 | 2 | Adaptor, 9/16-18 Male O-Ring to 1/4" Male NPT | 31646 |
| 30 | 1 | Fitting, Tee - 1/4" Male NPT (1) x 1/4" Female NPT (2) | 11340 |
| 31 | 1 | Adapter, 7/16-20 Female O-Ring to 1/4-18 Male NPT | 29305 |
| 32 | 1 | Switch, Pressure Transducer | 30426 |
| 33 | 2 | Fitting, 90° - 1/4" Female Swivel NPT x 7/16-20 Male JIC 37° | 26789 |
| 34 | 2 | Cylinder, UVL Retracting | 87055N |
| 35 | 2 | Hose Assembly, 1/8" - Female Swivel 7/16-20 JIC 37° | 16004A-020 |
| 36 | 1 | Clamp, Hose - Solenoid Mounting | 29663 |
| 37 | 1 | Solenoid, Up - Prestolite - Short | 28308-24V |
| 38 | 1 | Diode Assembly, Up Solenoid | 73906A |

Hydraulic Diagram

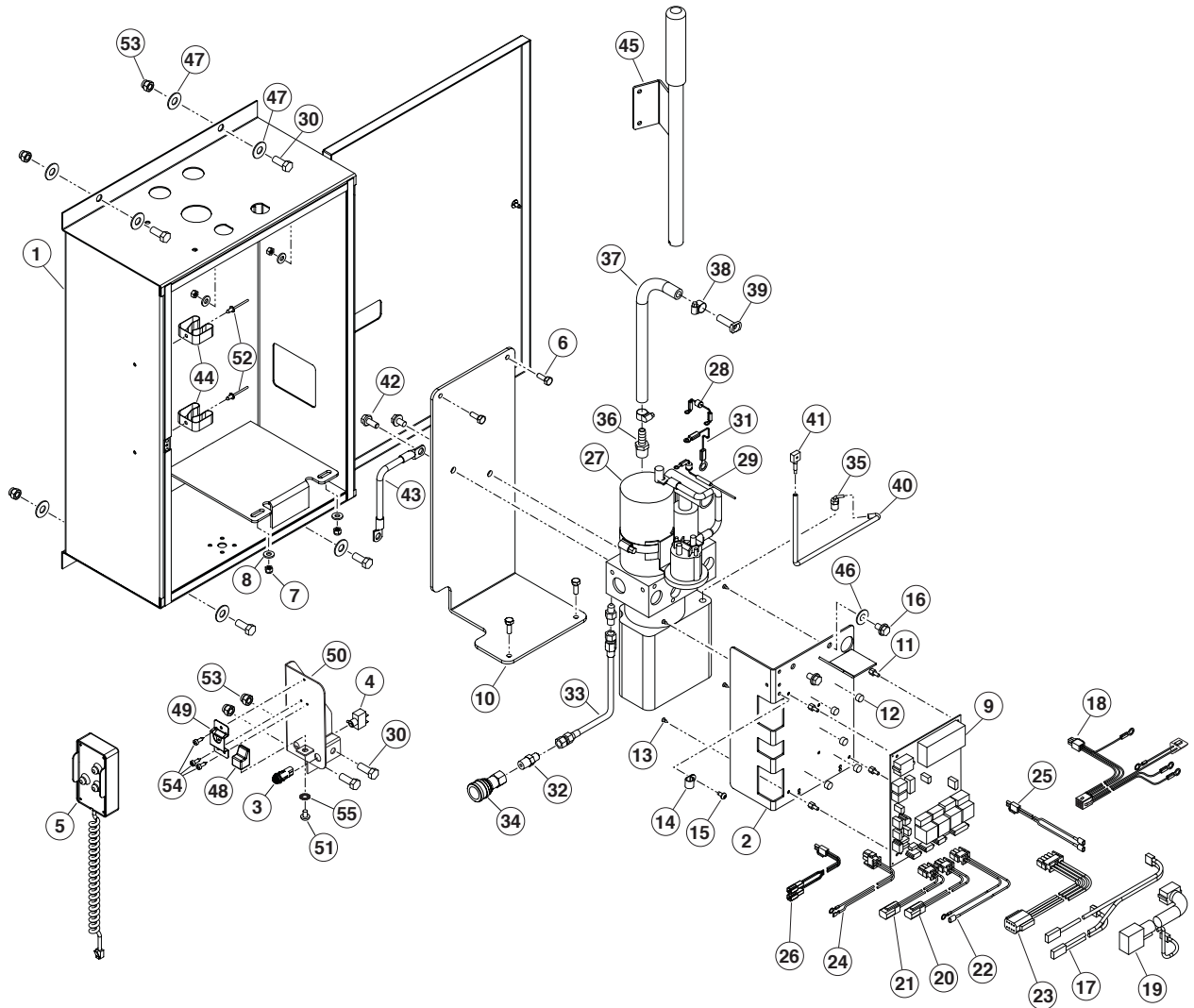


Pump Module Parts List

| ITEM | QTY | PART NO. | DESCRIPTION |
|----------------------------|-----|-------------|--|
| 1 | 1 | 22-01-1045A | ASSY-BOX-BRAUN HYDRAULIC & CONTROLS |
| 2 | 1 | 73824W | BRACKET-PC BOARD MOUNTING/WMT |
| 3 | 1 | 30728 | LAMP-BICOLORED LED PANEL |
| 4 | 1 | 12185 | SWITCH-KILL/TOGGLE/(2) 1/4" SCREW SPADES |
| 5 | 1 | 32426RMA | ASSY-HAND PENDANT-NHTSA NUVL |
| | 1 | 36824KS* | OPTIONAL 4 BUTTON PENDANT INSTALL KIT |
| 6 | 4 | 10970 | BOLT-1/4-20 X 3/4 GR5-HEX/AUTO-BK |
| 7 | 4 | 83070 | NUT-1/4-20 NYLOCK FULL SS |
| 8 | 4 | 10062 | WASHER-1/4" FLAT/AUTO-BK |
| 9 | 1 | 100419-001 | ASSY-NUVL 24V CONTROL BOARD |
| 10 | 1 | 73822RN | PLATE-POWER PACK MOUNTING |
| 11 | 4 | 86739 | STANDOFF-.25 LG PCB NYLON |
| 12 | 5 | 82064 | BUMPER-.5 DIA X .25 HT RUBBER |
| 13 | 4 | 82764 | SCREW-6 X 3/8 SELF TAP FLT PH |
| 14 | 1 | 15777 | CLIP-CABLE 7/16 PLASTIC |
| 15 | 1 | 82755 | SCREW-10-32 X 3/8 PHP ZP THD CUT |
| 16 | 3 | 82881 | SCREW-5/16-18 X .5 SER HH WSHRZP |
| 17 | 1 | 34232A | HARN-NUVL-2 DOOR SW/BIT 0/1 |
| 18 | 1 | 34231A | HARN-NUVL-2 INTERLOCK (MCI) |
| 19 | 1 | 34219A | HARN-NUVL-2 TO LIFT INPUTS (24V) |
| 20 | 1 | 33476A | HARN-NUVL-2 TO ALARM |
| 21 | 1 | 33486A | HARN-NUVL-2 TO LIGHT |
| 22 | 1 | 33487A | HARN-NUVL-2 TO PUMP/VALVE |
| 23 | 1 | 33470A | HARN-NUVL-2 TO LIFT IN/OUT + BAR UP/DN |
| 24 | 1 | 34247A | HARN-NUVL-2 POWER |
| 25 | 1 | 31235RMA | HARN-NUVL-2 SERVICE/ POWER INDICATOR |
| 26 | 1 | 33488RMA | HARN-NUVL-2 TO MAT |
| 27 | 1 | 87060-24V | PUMP ASSY-UVL POWER PACK/24 VOLT |
| 28 | 1 | 73906A | DIODE ASSY-UP SOLENOID |
| 29 | 1 | 73907A | DIODE ASSY-DOWN VALVE SOLENOID |
| 30 | 6 | 10025 | BOLT-3/8-16 X 1" HEX/AUTO-BK |
| 31 | 1 | 73943A | JUMPER ASSY-12GA X 4 |
| 32 | 2 | 10130 | ADAPTER-1/4M TO 7/16M JIC 37" |
| 33 | 1 | 32785A-202 | HOSE ASSY-202"-1/4" DIA. |
| 34 | 1 | 87614 | COUPLING-HYDRAULIC QUICK1/4NPT |
| 35 | 1 | 87563 | FITTING 90 DEG 1/8PX1/8H PLSTC |
| 36 | 1 | 87618 | FITTING-3/8 NPT MALE 3/8 BARB |
| 37 | 1 | 82066R012 | TUBING-3/8 X 5/8 TYGOTHANE CLE |
| 38 | 2 | 84325 | CLAMP-5/8OD HOSE WORM DRIVE |
| 39 | 1 | 81580 | PLUG-3/8 PLASTIC TUBING |
| 40 | 1 | 81557R026 | TUBE-1/4OD X 1/8ID PLASTIC |
| 41 | 1 | 81583 | PLUG-1/8 PLASTIC HOSE |
| 42 | 1 | 32464 | SCREW-5/16-18 X 3/4 SER HH WSHRZP |
| 43 | 1 | 68874 | BATTERY CABLE-BLACK W/ENDS-26" |
| 44 | 2 | 12350 | CLAMP-SPRING-PUMP HANDLE |
| 45 | 1 | 17206W | PUMP HANDLE/ANG BKT WMT-W/GRIP-SHIP OUT |
| 46 | 1 | 83583 | WASHER-.328 X .562 X .042 SS |
| 47 | 8 | 10064 | WASHER-3/8" FLAT/AUTO-BK |
| 48 | 1 | 26154 | BUMPER-STOW/VISTA |
| 49 | 1 | 84389-S | MCLIP-HAND CONTROL HANGER FOR SHIPMENT |
| 50 | 1 | 34269W | WMT-PENDANT SUPPORT BRACKET |
| 51 | 1 | 26281 | SCREW-5/16-18 X 1/2 BHSC-AUTO BK |
| 52 | 2 | 11512 | RIV-POP-SD62BS-3/16"-.06/.13/AUTO-BK |
| 53 | 6 | 17386 | NUT-3/8-16 UNC HEX NYLOCK |
| 54 | 3 | 13583 | SCREW-#8-18 X 1/2" PN/PH SD-AUTO BK |
| 55 | 1 | 16368 | WASHER-5/16 EXTERNAL TOOTH |
| ITEMS NOT SHOWN PARTS LIST | | | |
| ITEM | QTY | PART NO. | DESCRIPTION |
| 56 | 1 | 30787 | DECAL-WARN DAMAGE CONTROL BOARD-ESD |
| 57 | 1 | 31409 | DECAL-MANUAL OPER NUVL-PUBLIC |
| 58 | 1 | 29884 | DECAL-UVL PATENT & TRADEMARK CORR |
| 59 | 1 | 21494 | DECAL-LIFT POWER-ON/OFF |
| 60 | 1 | 34048A | SERIAL TAG DECAL ASSEMBLY |
| 61 | 1 | 18229 | DECAL-INSPECT/MADE IN AMERICA |
| 62 | 1 | 25807 | TAG-VENT TUBE PLUG REMOVAL UVL |
| 63 | 1 | 81796 | TAG-RED/CAUTION DO NOT CONNECT |
| 64 | 2 | 86003 | CABLE TIE-3 3/4 X .09 WH. SOLID/ECONOMY |
| 65 | .5 | 13910R | EDGE LINER |
| 66 | .34 | 13910R | EDGE LINER |
| 67 | 1 | 31730A | WIRE ASSY-LIFT/INTERLOCK CONNECTION UVL |

*AFTER INITIAL INSTALLATION, 36823A IS THE 4-BUTTON HAND PENDANT REPLACEMENT PART

Pump Module Diagram



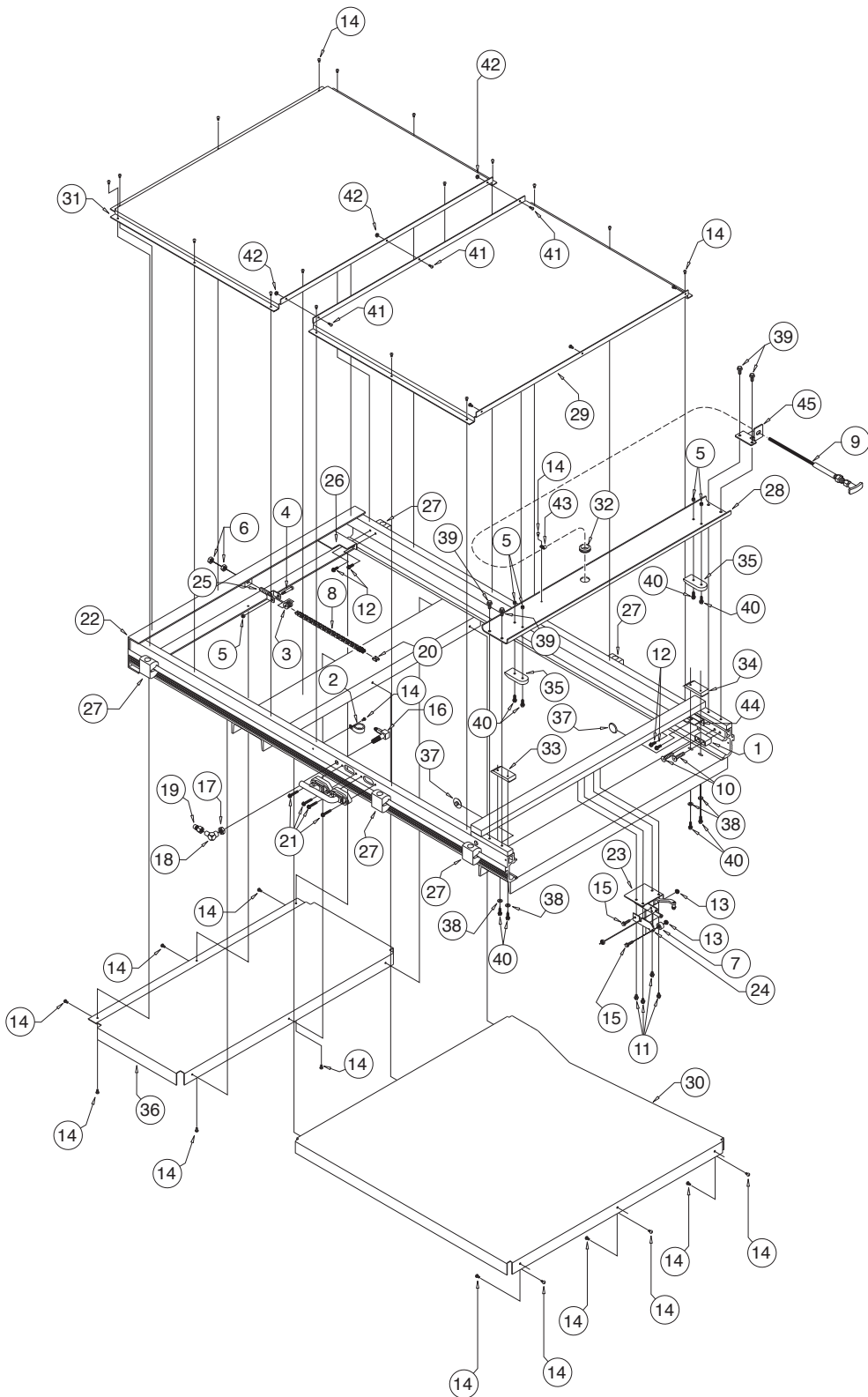
Exploded Views and Parts Lists

Housing Assembly Parts List

| | | | |
|------|------|-------------|--|
| 23 | 1 | 73760A | CHAIN RELEASE ASSY |
| 22 | 1 | 75101RMNW | HOUSING WMT-855RM |
| 21 | 4 | 24751 | SCREW-1/4-20 X 1 1/2 WSHR HD TYPE |
| 20 | 1 | 84317 | CONNECTOR LINK #35 CHAIN NP |
| 19 | 1 | 87615 | NIPPLE-HYDRAULIC QUICK 1/4 NPT |
| 18 | 1 | 10114 | ELBOW-1/4 NPT 90 STREET |
| 17 | 1 | 83077 | NUT-9/16-18 HEX JAM ZP |
| 16 | 1 | 73777A | FITTING ASSY-BULK HEAD-UVL 603A |
| 15 | 2 | 82760 | SCREW-1/4-20 X 1 SER HX ZP (10) |
| 14 | 32 | 82755 | SCREW 10-32 X 3/8 PHP ZP THD CUT |
| 13 | 2 | 83064 | NUT-1/4-20 SERRATED FLANGE Z/P |
| 12 | 4 | 24750 | SCREW-1/4-20 X 1 1/2 WSHR HD TYP F |
| 11 | 4 | 82761 | SCREW 1/4-20 X 3/8 SER HEX |
| 10 | 2 | 30385 | SCREW-3/8-16 X 1 3/4 SS 18-8 FHSC |
| 9 | 1 | 73770-600 | MANUAL RELEASE CABLE ASSY KIT |
| 8 | 1 | 84314R132.5 | CHAIN-NICKEL PLATED #35 ROLLER |
| 7 | 1 | 84052 | CAM-7/8 UVL FOLLOWER |
| 6 | 2 | 83022 | NUT 1/2-20 HEX JAM-AUT/BLK. |
| 5 | 5 | 83070 | NUT-1/4-20 NYLOCK FULL SS |
| 4 | 1 | 82751 | SCREW 5/16 X 1 1/4 SHLD SKT HD 1/4-20 ZP |
| 3 | 1 | 73706 | ROLLER-IDLER-NYLON-CHAIN |
| 2 | 1 | 20535 | CLAMP-INSULATE 1" |
| 1 | 1 | 75781N | BLOCK-CARRIAGE STOP |
| ITEM | QTY. | PART NO. | DESCRIPTION |

| | | | |
|------|------|-----------|-----------------------------------|
| 45 | 1 | 34733W | WMT-MANUAL RELEASE BRACKET |
| 44 | 1 | 75776CN | BRACKET-CAM-OUTSIDE |
| 43 | 1 | 26948 | CLAMP-CABLE NYLON 5/16 DIA/BLACK |
| 42 | 3 | 83080 | NUT-10-32 SERRATED FLANGE ZP |
| 41 | 3 | 82744 | SCREW-10-32 X 1/2 PH PN ZP |
| 40 | 8 | 82768 | SCREW-1/4-20 X 3/4 SERR HEX ZP |
| 39 | 4 | 32464 | SCREW-5/16-18 X 3/4 SER HH WSHRZP |
| 38 | 4 | 10062 | WASHER-1/4" FLAT/AUTO-BK |
| 37 | 2 | 29592 | BEARING-UHMW FLAT/1.5 EXEC. STEP |
| 36 | 1 | 34214 | COVER-LOWER INBOARD |
| 35 | 2 | 34201 | GUIDE-PLATFORM HORIZONTAL |
| 34 | 1 | 34208F | PLATE-CARRIAGE SUPPORT FRONT |
| 33 | 1 | 34208R | PLATE-CARRIAGE SUPPORT REAR |
| 32 | 1 | 84386 | GROMMET-1.25 DIA X .25 WIDE |
| 31 | 1 | 75730RM-2 | UPPER COVER-INBOARD |
| 30 | 1 | 75732RM | COVER-LOWER |
| 29 | 1 | 75730RM-1 | UPPER COVER-OUTBOARD |
| 28 | 1 | 75746RM | LIP-UPPER EDGE SEAL-RS |
| 27 | 6 | 73733 | CLAMP-LIFT MOUNTING |
| 26 | 1 | 73775 | BRACKET-IN/OUT CAM-OB |
| 25 | 1 | 76750W | CHAIN TENSIONER WMT-UVL |
| 24 | 1 | 73414 | CAM-REAR BARRIER FOLD |
| ITEM | QTY. | PART NO. | DESCRIPTION |

Exploded Views and Parts Lists
Housing Assembly



Exploded Views and Parts Lists

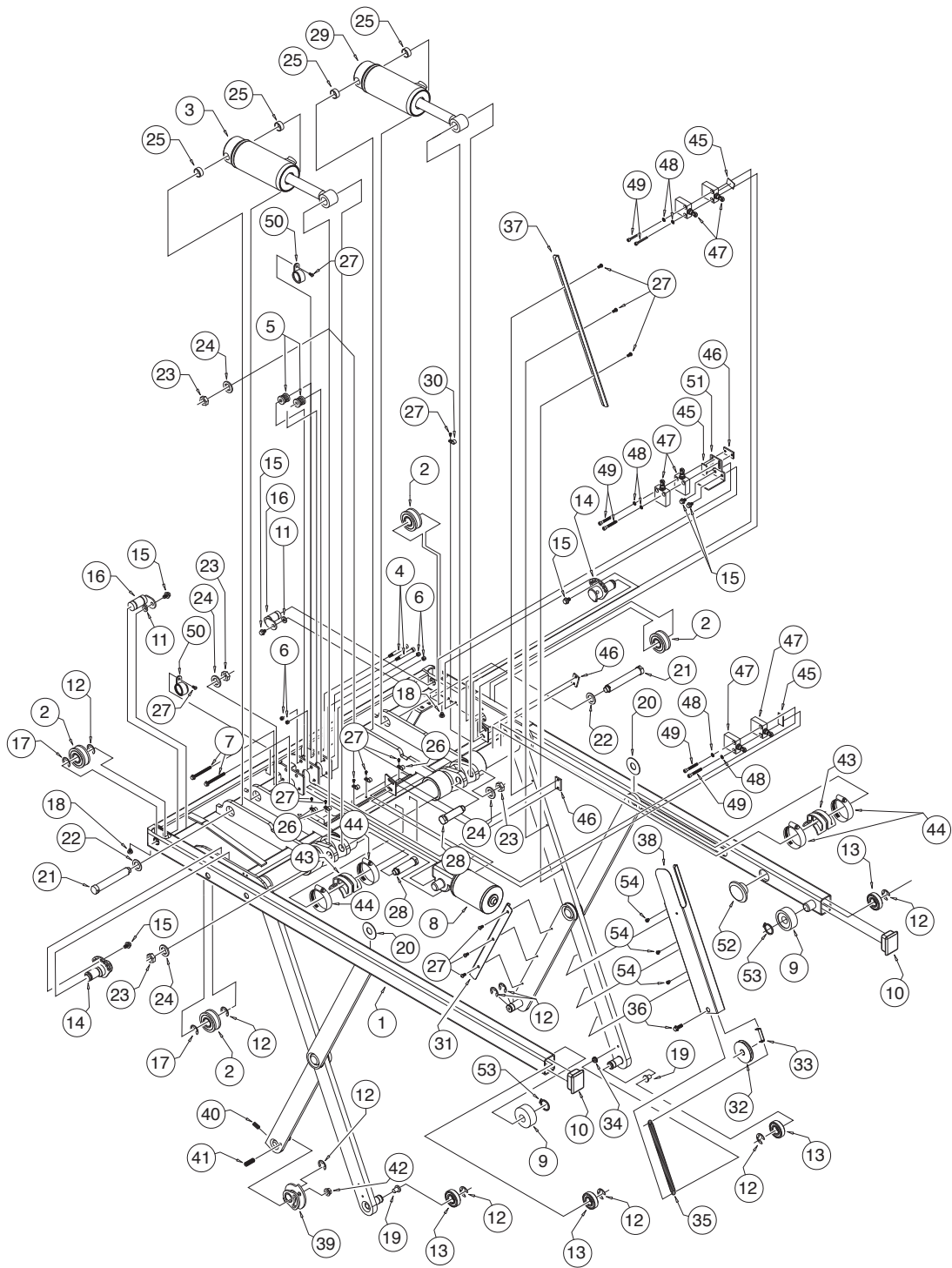
Carriage Assembly Parts List

| | | | |
|------|------|-----------|--|
| 27 | 14 | 82755 | SCREW-10-32 X 3/8 PHP ZP THD CUT |
| 26 | 5 | 26948 | CLAMP-CABLE NYLON 5/16 |
| 25 | 4 | 29515 | BEARING-.75 ID X .625 LG-12DU10 |
| 24 | 4 | 31137 | WASHER-UVL CYLINDER ROD PIN |
| 23 | 4 | 31176 | NUT-9/16-18 HEX JAM ZP |
| 22 | 2 | 25141 | WASHER-.758ID X 1.245 OD X .06 |
| 21 | 2 | 75700N | PIN-CYLINDER ROD MOUNTING/LONG/BLK OXIDE |
| 20 | 2 | 73748 | WASHER-FRONT SCISSOR ARM |
| 19 | 2 | 75248 | BEARING-SCISSOR ARM PIN |
| 18 | 2 | 82773 | SCREW-1/4-20 X 1/4 PAN HEAD NYLON |
| 17 | 2 | 84377 | E CLIP-3/4 BOWED .580 GROOVE |
| 16 | 2 | 73230W | SHAFT BEARING WMT-UVL600 |
| 15 | 6 | 82761 | SCREW-1/4-20 X 3/8 SER HEX |
| 14 | 2 | 73233W | SHAFT ECCENTRIC BEARING WMT |
| 13 | 4 | 84004 | BEARING-1 5/8 OD X 3/4 ID |
| 12 | 9 | 84376 | E CLIP-3/4 .580 GROOVE DIA |
| 11 | 2 | 83511 | WASHER-.281" ID X .625 OD X .055 TK/ZP |
| 10 | 2 | 81582 | PLUG 1 1/2" X 11" GAUGE TUBE |
| 9 | 2 | 75230RMA | BEARING OUTER RACE ASSEMBLY |
| 8 | 1 | 73780A24 | DRIVE MOTOR SPROCKET ASSY UVL |
| 7 | 2 | 82759 | SCREW 1/4-20 X 2 3/4 SER HEX |
| 6 | 4 | 83070 | NUT 1/4-20 NYLOCK FULL SS |
| 5 | 2 | 73706 | ROLLER IDLER NYLON CHAIN |
| 4 | 2 | 82758 | SCREW 5/16 X 2 SHLD SKT HD 1/4-20 SS |
| 3 | 1 | 75801RFNA | CYLINDER ASSEMBLY - REAR |
| 2 | 4 | 84305 | BEARING TRACK ROLLER 20X52 |
| 1 | 1 | 75201RMNW | CARRIAGE WELDMENT |
| ITEM | QTY. | PART NO. | DESCRIPTION |

| | | | |
|------|------|-----------|---------------------------------------|
| 54 | 3 | 26058 | SCREW-#10-32 X 5/8" FL HD-HX SKT/SS |
| 53 | 2 | 32495 | SNAP RING, 3/4" HEAVY DUTY |
| 52 | 1 | 34215 | BEARING-UHMW FLAT-BLK |
| 51 | 1 | 73719 | BRACKET-SWITCH IN/OUT MOUNTING |
| 50 | 2 | 20535 | CLAMP-INSULATE 1" |
| 49 | 6 | 82717 | SCREW-10-32 X 1 1/2 NF SKT CAP ZP |
| 48 | 6 | 11540 | WASHER-#10 INTERNAL TOOTH |
| 47 | 6 | 73950A | LIMIT SWITCH ASSEMBLY-UVL |
| 46 | 3 | 68280-1 | PLATE-SWITCH BRACKET TAP |
| 45 | 3 | 73747 | TAPE-LIMIT SWITCH MOUNTING PAD |
| 44 | 4 | 26400 | CLAMP-WORM DRIVE 1.31 X 2.25 X .5 |
| 43 | 1 | 73712 | CAM-TORQUE SHAFT ACTUATOR |
| 42 | 1 | 83065 | NUT-3/8-16 SERRATED FLANGE |
| 41 | 1 | 28008 | SCREW-3/8-16 X 1" SET |
| 40 | 1 | 26647 | SCREW-5/16-18 X 1 1/2" SET |
| 39 | 1 | 75408NW | WMT-CAM-REAR BARRIER |
| 38 | 1 | 75740RN | COVER-PULLEY SPRING TENSIONER |
| 37 | 1 | 75741 | COVER-LIFT ARM WIRING |
| 36 | 1 | 82768 | SCREW-1/4-20 X 3/4 SERR HEX ZP |
| 35 | 2 | 26367 | SPRING-.5 OD X 5 X .063 X 9.6 MAX EXT |
| 34 | 1 | 83064 | NUT-1/4-20 SERRATED FLANGE Z/P |
| 33 | 1 | 75748 | BRACKET-PULLEY SPRING TENSION |
| 32 | 1 | 75749N | PULLEY-SPRING TENSIONER |
| 31 | 1 | 75742 | COVER-IDLER ARM WIRING |
| 30 | 1 | 84396 | CLAMP-1/4 ID NYLON LOOP BLK |
| 29 | 1 | 75801CFNA | CYLINDER ASSEMBLY-FRONT-NUVL855CFST |
| 28 | 2 | 75701N | PIN-CYLINDER ROD MOUNTING/BLACK OXIDE |
| ITEM | QTY. | PART NO. | DESCRIPTION |

Exploded Views and Parts Lists

Carriage Assembly



Exploded Views and Parts Lists

Platform Assembly Parts List - Main

Note: See pages 30-32 for other platform assembly breakdowns.

| | | | |
|------|------|------------|-------------------------------------|
| 24 | 1 | 82348 | BOLT-5/16-24 X 1 SKT BTN PLTD |
| 23 | 1 | 74409 | BLOCK-NYLON SLIDER OUTSIDE |
| 22 | 1 | 74410 | BLOCK-NYLON SLIDER INSIDE |
| 21 | 1 | 87861 | O RING-7/16ID x 5/8OD VITON 75 |
| 20 | 1 | 75404A | ROCKER-ASSY/REAR BARRIER |
| 19 | 14 | 13186 | RIV-POP-AD66BSLF-3/16"- .25/38 |
| 18 | 7 | 33670 | BOLT-5/16-24 X 3/4" SS HHCS |
| 17 | 3 | 15777 | CLIP-CABLE 7/16 PLASTIC |
| 16 | 4 | 83070 | NUT-1/4-20 NYLOCK FULL SS |
| 15 | 1 | 74406CFRA | LINK-ASSY/REAR BARRIER |
| 14 | 3 | 40-5035-0 | SCREW-MS PAN PHIL 10-32 X 1-1/2 |
| 13 | 5 | 82744 | SCREW-10-32 X 1/2 PH PN ZP |
| 12 | 1 | 33481Y | COVER-HANDRAIL LATCH REAR |
| 11 | 1 | 33480Y | COVER-HANDRAIL LATCH FRONT |
| 10 | 1 | 75301RMNWY | PLATFORM WMT-NUVL855R |
| 9 | 6 | 82755 | SCREW-10-32 X 3/8 PHP ZP THD CUT |
| 8 | 5 | 82033R029 | TAPE 1/16 X 3/4 X 108 DBL FACE |
| 7 | 1 | 73747 | TAPE-LIMIT SWITCH MOUNTING PAD |
| 6 | 2 | 84282 | BEARING-.75ID X .25 LG SPLIT-12DU04 |
| 5 | 4 | 24028 | BEARING-PLASTIC-FLANGE-3/8 ID x 1/4 |
| 4 | 2 | 84386 | GROMMET-1.25 DIA X .25 WIDE |
| 3 | 1 | 75317RN | COVER-PLATFORM WIRING HARNESS |
| 2 | 1 | 75738RMNY | COVER-PLATFORM WIRING HARNESS |
| 1 | 1 | 75306RMGMG | PLATE-PLATFORM FLOOR |
| ITEM | QTY. | PART NO. | DESCRIPTION |

| | | | |
|------|------|---------------|---|
| 48 | 4 | 10091 | CABLE TIE-11" SOLID (NOT SHOWN) |
| 47 | 1 | 34040A | HARNESS-INBOARD BARRIER POSTION 53" (NOT SHOWN) |
| 46 | 2 | 34549 | SKID-REAR BARRIER |
| 45 | 1 | 74412 | PIN-.25 X .81 DOWEL |
| 44 | 4 | 28257 | SCREW-1/4-20 X 1 1/2" ALLAN HD/SS |
| 43 | 1 | 68280-2 | PLATE-SWITCH BRACKET TAP |
| 42 | 1 | 73950RMNA | LIMIT SWITCH ASSEMBLY-UVL |
| 41 | 1 | 82335 | BOLT-1/4-20 X 1/2 SOCKET LOW HD |
| 40 | 1 | 83592 | WASHER-.281 X .75 X .06 BRASS |
| 39 | 2 | 11540 | WASHER-#10 INTERNAL TOOTH |
| 38 | 2 | 82778 | SCREW-10-32 X 7/8 SKT CAP ZP |
| 37 | 1 | 74340-24V-RMN | BARRIER ACTUATOR ASSEMBLY-24V |
| 36 | 1 | 84189 | RING-RETAINING 5/8 |
| 35 | 1 | 26613 | SCREW-#10-32 X 1/2" SET |
| 34 | 1 | 30169 | SPRING-3/4X3/8X3X.135X.165 RATE 405 MAX |
| 33 | 1 | 75407CNA | ASSY-TIE ROD/REAR BARRIER |
| 32 | 2 | 31526 | NUT-REAR BARRIER SLIDE BLOCK |
| 31 | 1 | 74408CN | BLOCK-REAR BARRIER SLIDER |
| 30 | 2 | 34199 | GUIDE-PLATFORM VERTICAL |
| 29 | 2 | 74402RM | SKID-REAR BARRIER |
| 28 | 2 | 28006 | SCREW-5/16-24 X 1-1/2" FHSC SS |
| 27 | 1 | 84396 | CLAMP-1/4" ID-NYLON |
| 26 | 1 | 33197A | ASSY-SWITCH NUVL INBOARD BARRIER |
| 25 | 2 | 83079 | NUT-5/16-24 NYLOCK PLATED |
| ITEM | QTY. | PART NO. | DESCRIPTION |

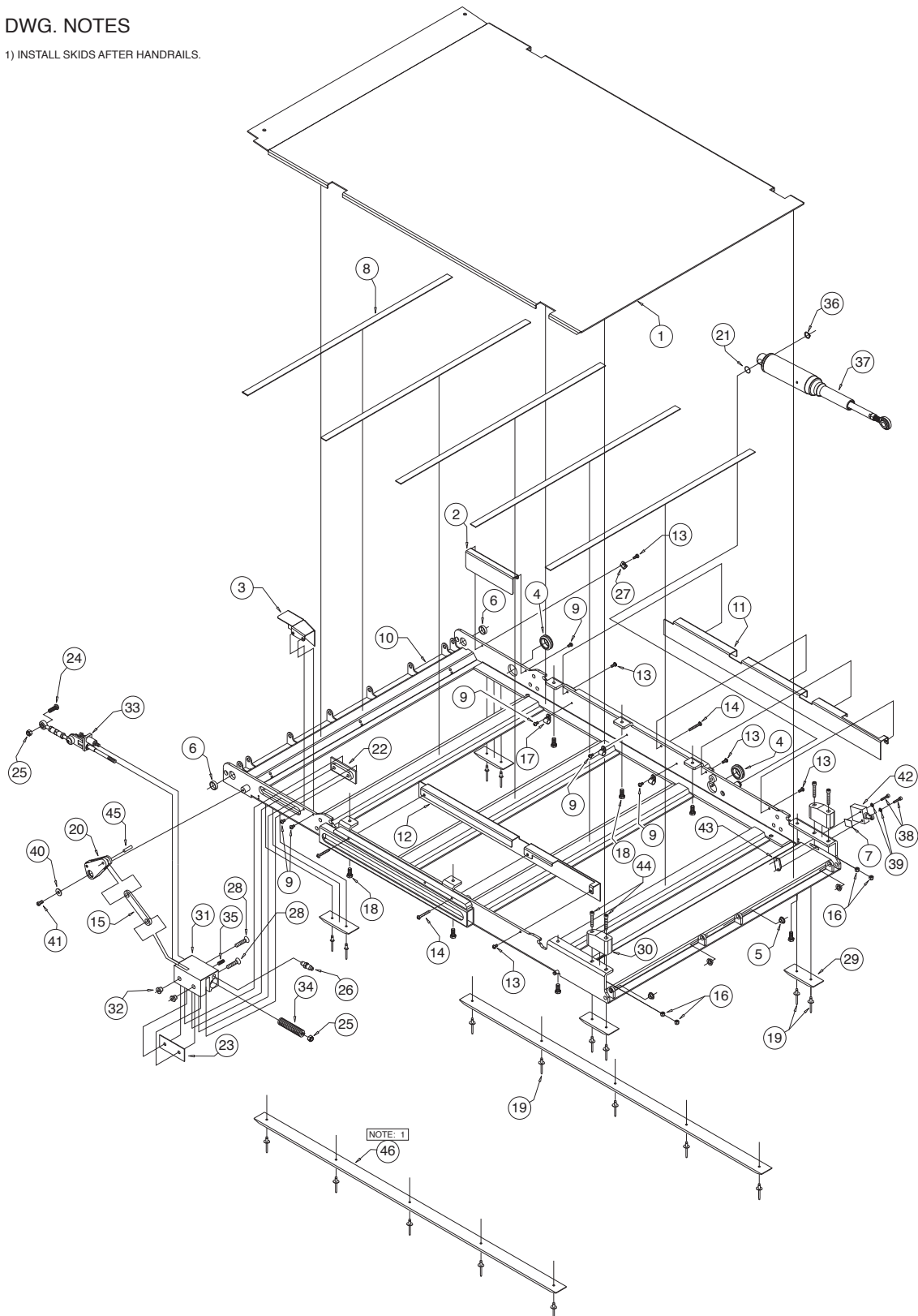
Exploded Views and Parts Lists

Platform Assembly - Main

Note: See pages 30-32 for other platform assembly breakdowns.

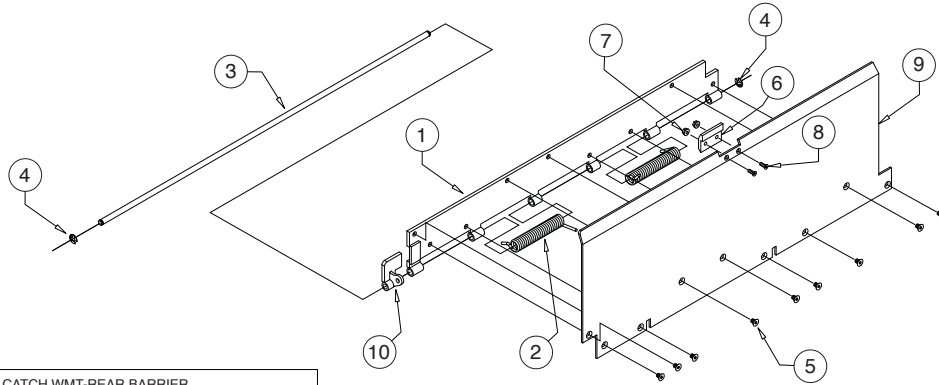
DWG. NOTES

1) INSTALL SKIDS AFTER HANDRAILS.



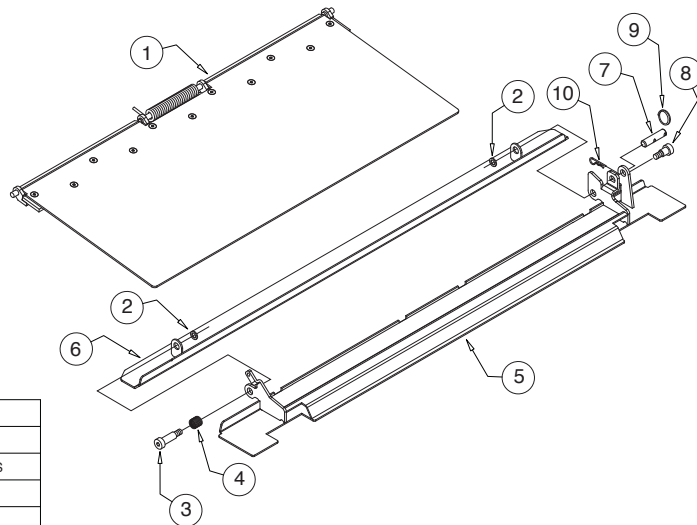
Exploded Views and Parts Lists

Platform Assembly - Inner Roll Stop



| | | | |
|------|------|------------|--|
| 10 | 1 | 75415CW | CATCH WMT-REAR BARRIER |
| 9 | 1 | 75411RMNYL | PLATE-REAR BARRIER |
| 8 | 2 | 17192P | SCREW-#10-32X1/2 FHDHXS-AUTO BLK-W/PATCH |
| 7 | 2 | 83080 | NUT-10-32 SERRATED FLANGE ZP |
| 6 | 1 | 75414C | SKID-REAR BARRIER |
| 5 | 9 | 23471 | SCREW-1/4-20 X 3/8 FL SOC CAP HD |
| 4 | 2 | 84383 | E CLIP-3/8 SHAFT |
| 3 | 1 | 75413 | SHAFT-BARRIER HINGE/RR |
| 2 | 2 | 85101 | SPRING-TORSION |
| 1 | 1 | 75420CNW | HINGE WMT-REAR BARRIER |
| ITEM | QTY. | PART NO. | DESCRIPTION |

Platform Assembly - Outer Barrier



| | | | |
|------|------|-----------|---|
| 10 | 1 | 84382 | CLIP-HAIRPIN 5/16 DIA SHAFT |
| 9 | 1 | 11390 | RING-CLEVIS PIN 15/16" |
| 8 | 1 | 32881 | SCREW-3/8 X 1/2 SHLD SKT HD X 3/8-16 SS |
| 7 | 1 | 73741-2 | PIN-BARRIER CLEVIS RELEASE |
| 6 | 1 | 75330W | CLOSURE-WMT |
| 5 | 1 | 75321RMNW | WMT-BARRIER |
| 4 | 1 | 73335 | SPRING-LOWER CLOSURE TORSION |
| 3 | 1 | 82771 | SCREW-1/2 X 1 1/4 SHLD SKT HD X 3/8-16 |
| 2 | 2 | 83585 | WASHER-.390 X .625 X .073 SS |
| 1 | 1 | 75321RNA | ASSY-DUAL OUTBOARD BARRIER |
| ITEM | QTY. | PART NO. | DESCRIPTION |

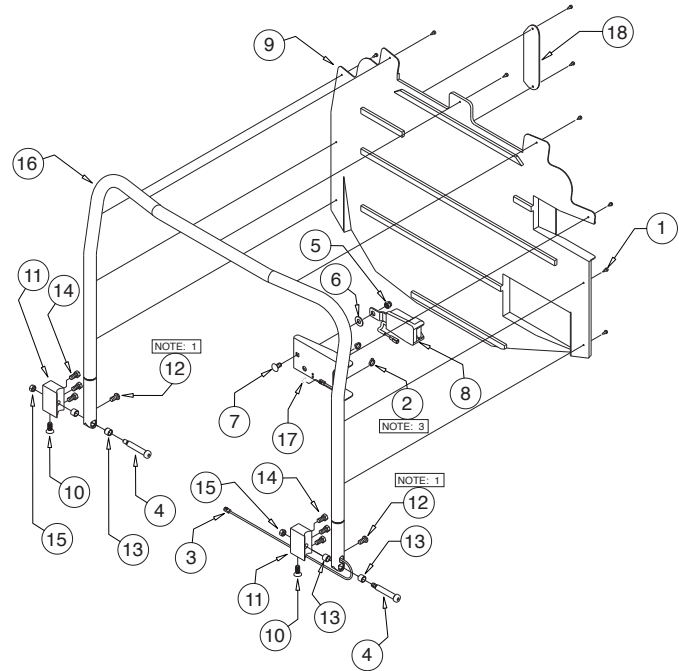
Exploded Views and Parts Lists

Platform Assembly - Front Handrail

DWG. NOTES

- 1) THREAD ITEM #16 INTO ITEM #12 UNTIL THERE IS 5/16" BETWEEN HANDRAIL AND HEAD OF BOLT.
- 2) USE LOCTITE RED #271 (B.C. #11522-1) ON ALL FASTENERS.
- 3) CABLE TIE SAFETY BELT WIRE TO SAME SIDE THAT BELT IS MOUNTED.

| | | | |
|------|------|-----------|--|
| 16 | 1 | 75384RNW | WMT-HANDRAIL/FRONT/NUVL855RM24 |
| 17 | 1 | 34428 | GROMMET-3/8"ID x 11/16"OD X 9/32" THK |
| 16 | 1 | 75384RNW | WMT-HANDRAIL/FRONT/NUVL855RM24 |
| 15 | 2 | 10059-SS | NUT-3/8-16 HEX/STAINLESS STEEL |
| 14 | 6 | 12463 | BOLT-3/8-16 X 3/4" GR5-HEX/AUTO-BK |
| 13 | 4 | 32026 | BEARING SLEEVE-1/2"ID-5/8"OD-1/2"L |
| 12 | 2 | 81060-000 | BOLT-3/8-16 X 3/4" BHCS SS |
| 11 | 2 | 34039 | BLOCK-HANDRAIL MOUNT-FRONT |
| 10 | 2 | 26648 | SCREW-3/8-16 X 1" FHSCS/BLK |
| 9 | 1 | 75386R | SHIELD-RH PASTIC COVER GUARD HANDRAIL |
| 8 | 1 | 34031A | ASSY-HANDRAIL BELT - LATCH IMMI |
| 7 | 1 | 15698 | BOLT-CARR 3/8-16 X 3/4" |
| 6 | 1 | 10064 | WASHER-3/8" FLAT/AUTO-BK |
| 5 | 1 | 17386 | NUT-3/8-16 UNC HEX NYLOCK |
| 4 | 2 | 33464 | SCREW-SHLD 1/2" SHLDR X 2 1/2" 3/8-16 SS |
| 3 | 1 | 34032A | HARNES-HANDRAIL BELT EXTENSION |
| 2 | 2 | 10091 | CABLE TIE-11" SOLID |
| 1 | 9 | 18533 | SCREW-#8-18 X 1/2" PH/PN SD-SS |
| ITEM | QTY. | PART NO. | DESCRIPTION |

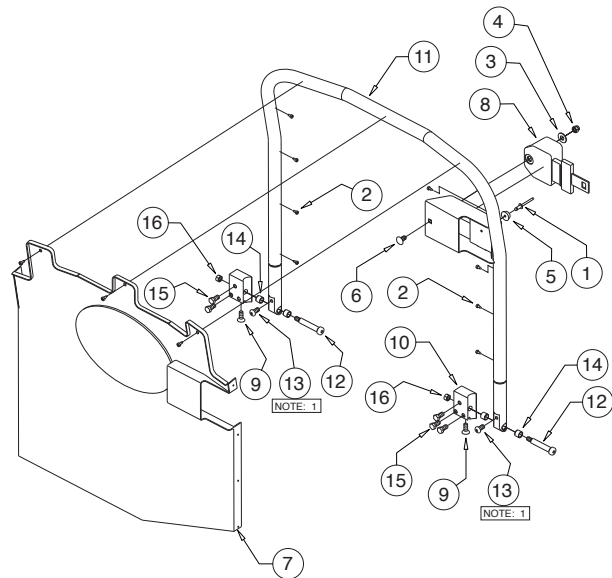


Platform Assembly - Rear Handrail

DWG. NOTES

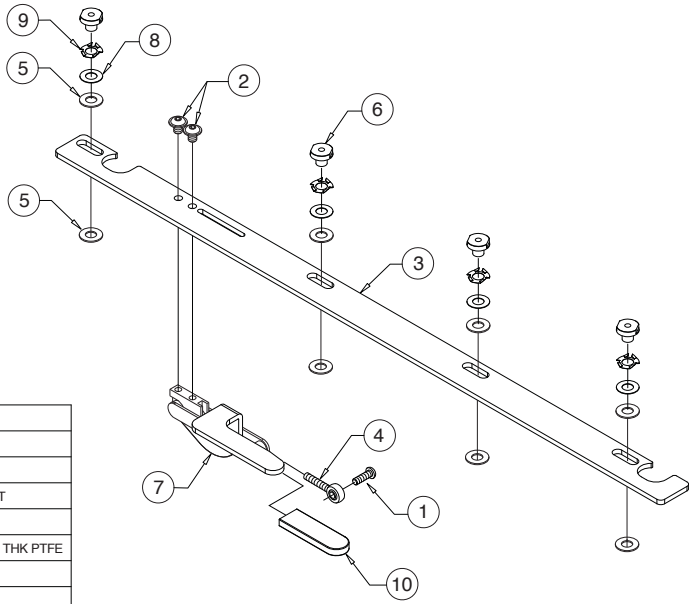
- 1) THREAD ITEM #11 INTO ITEM #13 UNTIL THERE IS 5/16" BETWEEN HANDRAIL AND HEAD OF BOLT.
- 2) USE LOCTITE RED #271 (B.C. #11522-1) ON ALL FASTENERS.

| | | | |
|------|------|-----------|---|
| 16 | 2 | 10059-SS | NUT-3/8-16 HEX/STAINLESS STEEL |
| 15 | 5 | 12463 | BOLT-3/8-16 X 3/4" GR5-HEX/AUTO-BK |
| 14 | 4 | 32026 | BEARING SLEEVE-1/2"ID-5/8"OD-1/2"L |
| 13 | 2 | 81060-000 | BOLT-3/8-16 X 3/4" BHCS SS |
| 12 | 2 | 33464 | SCREW-SHLD 1/2" SHLDR X 2 1/2" 3/8-16 SS |
| 11 | 1 | 75383RNW | WMT-HANDRAIL/REAR/NUVL855RM24 |
| 10 | 2 | 34038 | BLOCK-HANDRAIL MOUNT/REAR |
| 9 | 2 | 26648 | SCREW-3/8-16 X 1" FHSCS/BLK |
| 8 | 1 | 34031A | ASSY-HANDRAIL BELT - LATCH IMMI-RETRACTOR |
| 7 | 1 | 75385R | SHIELD-LH-PLASTIC COVER GUARD HANDRAIL |
| 6 | 1 | 15698 | BOLT-CARR 3/8-16 X 3/4" |
| 5 | 1 | 10950 | BUMPER-RUBBER RECES. 31/32" OD |
| 4 | 1 | 17386 | NUT-3/8-16 UNC HEX NYLOCK |
| 3 | 1 | 10064 | WASHER-3/8" FLAT/AUTO-BK |
| 2 | 11 | 18533 | SCREW-#8-18 x 1/2" PH/PN SD-SS |
| 1 | 1 | 14993 | RIV-POP-SD66BS-3/16"-.25/.38" /AUTO-BK |
| ITEM | QTY. | PART NO. | DESCRIPTION |



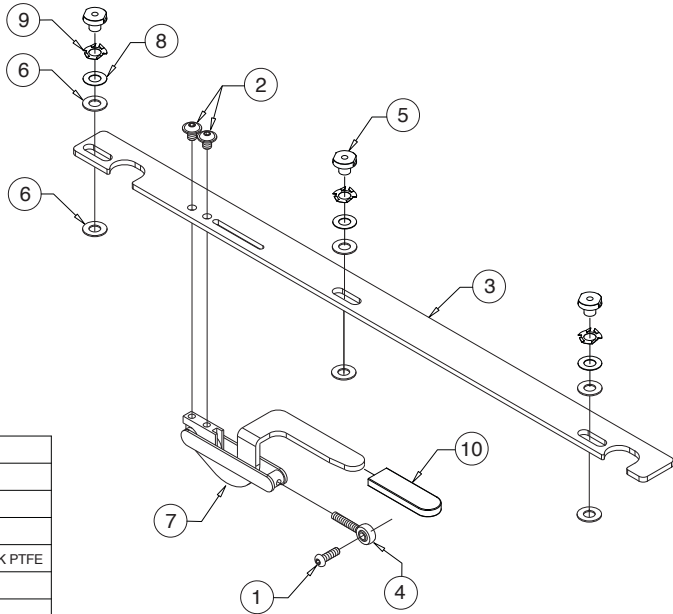
Exploded Views and Parts Lists

Platform Assembly - Front Handrail Lock



| | | | |
|------|------|----------|--|
| 10 | 1 | 34775 | COVER-YELLOW PLASTIC HANDLE |
| 9 | 4 | 27276 | WASHER-FINGER DISK SPRING |
| 8 | 4 | 15328 | WASHER-.507" ID / 1" OD X .025" |
| 7 | 1 | 34177W | WELDMENT-HANDRAIL LATCH FRONT |
| 6 | 4 | 34757 | NUT-HANDRAIL LOCK |
| 5 | 8 | 33668 | WASHER-5" ID X 1.003" OD X .057-.067" THK PTFE |
| 4 | 1 | 84384 | ROD END-5/16-24 MALE |
| 3 | 1 | 33426 | BAR-HANDRAIL LOCK FRONT |
| 2 | 2 | 29942 | BOLT-3/8-16 X 1/2" FLBHSCS 6G8/PATCH |
| 1 | 1 | 82348 | BOLT-5/16-24 X 1" SKT BTN PLTD |
| ITEM | QTY. | PART NO. | DESCRIPTION |

Platform Assembly - Rear Handrail Lock



| | | | |
|------|------|----------|--|
| 10 | 1 | 34775 | COVER-YELLOW PLASTIC HANDLE |
| 9 | 3 | 27276 | WASHER-FINGER DISK SPRING |
| 8 | 3 | 15328 | WASHER-.507" ID / 1" OD X .025" |
| 7 | 1 | 34178W | WELDMENT-HANDRAIL LATCH REAR |
| 6 | 6 | 33668 | WASHER-5" ID X 1.003" OD X .057-.067" THK PTFE |
| 5 | 3 | 34757 | NUT-HANDRAIL LOCK |
| 4 | 1 | 84384 | ROD END-5/16-24 MALE |
| 3 | 1 | 33478 | BAR-HANDRAIL LOCK REAR |
| 2 | 2 | 29942 | BOLT-3/8-16 X 1/2" FLBHSCS 6G8/PATCH |
| 1 | 1 | 82348 | BOLT-5/16-24 X 1" SKT BTN PLTD |
| ITEM | QTY. | PART NO. | DESCRIPTION |

Braun® Limited Warranty

WARRANTY COVERAGE AND WARRANTY COVERAGE TIME PERIODS

The Braun Corporation ("Braun") warranty covers certain parts of this wheelchair lift for three (3) years or 10,000 cycles and the cost of labor to repair or replace those parts for one (1) year or 3,000 cycles. This limited warranty covers substantial defects in materials and workmanship of the lift, provided that the lift is operated and maintained properly and in conformity with the owner's manual. The warranty period begins on the date that the product is delivered to the first retail purchaser by an independent, authorized dealer of Braun, or, if the dealer places the product into any type of service prior to retail sale, on the date the dealer first places the product in such service. This limited warranty applies only to the first purchaser. It may not be transferred.

WHAT BRAUN WILL DO TO CORRECT PROBLEMS

In the event that a substantial defect in material or workmanship, attributable to Braun, is found to exist during the first year of warranty coverage, it will be repaired or replaced, at Braun's option, without charge for parts or labor to the owner, in accordance with the terms, conditions and limitations of this limited warranty. If the substantial defect in material or workmanship, attributable to Braun, is found to exist during the second or third year of warranty coverage, it will be repaired or replaced, at Braun's option, without charge to the owner for parts, only, in accordance with the terms, conditions and limitations of this limited warranty. The cost of labor for any repair or replacement in the second and third year of warranty coverage is the sole responsibility of the owner. This warranty does not cover labor costs in the second or third year of coverage.

Braun's obligation to repair or replace defective materials or workmanship is the sole obligation of Braun under this limited warranty. Braun reserves the right to use new or remanufactured parts of similar quality to complete any work, and to make parts and design changes from time to time without notice to anyone. Braun reserves the right to make changes in the design or material of its products without incurring any obligation to incorporate such changes in any previously manufactured product. Braun makes no warranty as to the future performance of this product, and this limited warranty is not intended to extend to the future performance of the product. In addition, the owner's obligation to notify Braun, or one of its authorized, independent dealers, of a claimed defect does not modify any obligation placed on the owner to contact Braun directly when attempting to pursue remedies under state or federal law.

LIMITATIONS, EXCLUSIONS AND DISCLAIMER OF IMPLIED WARRANTIES

ANY IMPLIED WARRANTY THAT IS FOUND TO ARISE BY WAY OF STATE OR FEDERAL LAW, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR ANY IMPLIED WARRANTY OF FITNESS, IS LIMITED IN DURATION TO THE TERMS OF THIS LIMITED WARRANTY AND IS LIMITED IN SCOPE OF COVERAGE TO THE SCOPE OF COVERAGE OF THIS LIMITED WARRANTY.

Braun disclaims any express or implied warranty, including any implied warranty of fitness or merchantability, on items excluded from coverage as set forth in this limited warranty. Braun makes no warranty of any nature beyond that contained in this limited warranty. No one has authority to enlarge, amend or modify this limited warranty, and Braun does not authorize anyone to create any other obligation for it regarding this product. Braun is not responsible for any representation, promise or warranty made by any independent dealer or other person beyond what is expressly stated in this limited warranty. Any selling or servicing dealer is not Braun's agent, but an independent entity.

BRAUN SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES THAT MAY RESULT FROM BREACH OF THIS LIMITED WARRANTY OR ANY IMPLIED WARRANTY. THIS EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES SHALL BE INDEPENDENT OF ANY FAILURE OF THE ESSENTIAL PURPOSE OF ANY WARRANTY, AND THIS EXCLUSION SHALL SURVIVE ANY DETERMINATION THAT THIS LIMITED WARRANTY OR ANY IMPLIED WARRANTY HAS FAILED OF ITS ESSENTIAL PURPOSE.

Braun® Limited Warranty

This warranty does not cover, and in no event shall Braun be liable for towing charges, travel, lodging, or any other expense incurred due to the loss of use of the product or other reason.

Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

HOW TO GET SERVICE

To obtain warranty service the owner must do all of the following:

1. Notify an authorized service center, of the claimed defect attributable to Braun, within the warranty coverage period designated above.
2. Provide the notification mentioned in (1), above, within ten (10) days of when the owner discovered, or should have discovered, the claimed defect.
3. Promptly schedule an appointment with and take the product to an authorized service center for service.
4. Pay any transportation costs and all expenses associated with obtaining warranty service.

Since Braun does not control the scheduling of service work at the independent dealerships you may encounter some delay in scheduling or completion of work. If you need assistance you may contact Braun, at 631 West 11th Street, Winamac, Indiana 46996; 1-800-THE-LIFT, (843-5438).

If two (2) or more service attempts have been made to correct any covered defect that you believe impairs the value, use or safety of the product, or if it has taken longer than thirty (30) days for repairs to be completed, you must, to the extent permitted by law, notify Braun directly, in writing, at the above address, of the unsuccessful repair(s) of the alleged defect(s) so that Braun can become directly involved in providing service pursuant to the terms of this limited warranty.

WHAT IS NOT COVERED

This Limited Warranty does not cover any of the following: defects in materials, components or parts of the product not attributable to Braun, any material, component or part of the product that is warranted by another entity (Note: the written warranty provided by the manufacturer of the material, component or part is the direct responsibility of that manufacturer); items that are added or changed after the product leaves Braun's possession; additional items installed at any dealership, or other place of business, or by any other party, other than Braun; normal wear, tear, usage, maintenance, service, periodic adjustments, the effects of condensation or moisture from condensation; mold or any damage caused by mold; imperfections that do not affect the product for its intended purpose; items that are working as designed but that you are unhappy with; problems related to misuse, mishandling, neglect or abuse, including failure to maintain the product in accordance with the owner's manual, or other routine maintenance such as inspections, lubricating, adjustments, tightening of screws, sealing, wheel alignments or rotating tires; damage due to accident or collision, including any acts of weather or damage or corrosion due to the environment; theft, vandalism, fire, or other intervening acts not attributable to Braun; damage resulting from tire wear or tire failure; defacing, scratches, dents or chips on any interior or exterior surface of the product, including those caused by rocks or other road hazards, damage caused by off road use, overloading or alteration of the product, or any of its components or parts;

Defects and/or damage to interior and exterior surfaces and other appearance items may occur at the factory or when the product is in transit. These items are usually detected and corrected at the factory or by a dealer prior to delivery to the purchaser. You must inspect the product for this type of damage when you take delivery. If you find any such defect or damage you must notify the selling dealer, or Braun, at the time of delivery to have these items covered by this limited warranty and to have work performed on the items at no cost to you as provided by this limited warranty.

Braun® Limited Warranty

EVENTS DISCHARGING BRAUN FROM OBLIGATION UNDER WARRANTY

The following shall completely discharge Braun from any express or implied warranty obligation to repair or replace anything and void this warranty: misuse, neglect, collision, accidents, failure to provide routine maintenance (See Owner's Manual), unauthorized alteration, off road use, Acts of Nature, damage from weather or the environment, theft, vandalism, tampering, fire, explosions, overloading the product and odometer tampering.

LEGAL REMEDIES

Any action to enforce any portion of this limited warranty, or any implied warranty, must be commenced within six (6) months after expiration of the warranty coverage period designated above or the action will be barred because of the passage of time. Any performance of repairs shall not suspend this limitation period from expiring. Any performance of repairs after the warranty coverage period has expired, or performance of repairs regarding any thing excluded from coverage under this limited warranty shall be considered "good will" repairs, and they will not alter the terms of this limited warranty, or extend the warranty coverage period or the filing limitation period in this paragraph. In addition, since it is reasonable to expect that the product will need some service during the warranty period, this warranty does not extend to future performance. It only sets forth what Braun will do and does not guarantee anything about the product for any time period. Nothing in this warranty, or any action of Braun, or any agent of Braun, shall be interpreted as an extension of any warranty period or the filing limitation period in this paragraph. Some states do not allow a reduction in the statute of limitations, so this reduction may not apply to you.

WARRANTY REGISTRATION and MISCELLANEOUS

Your warranty registration records should be completed and delivered to the appropriate companies, including the Braun Delivery Checklist & Warranty form. That form must be returned to Braun within twenty (20) days of purchase. The Braun warranty will not be registered unless this warranty registration is completed and received by Braun. Failure to file this warranty registration with Braun will not affect your rights under this limited warranty as long as you can present proof of purchase, but it can cause delays in obtaining the benefits of this limited warranty, and it changes the start date of the warranty to the date of final assembly of the product by Braun.

Braun agrees to repair or replace any of its factory installed parts found to have substantial defects within the appropriate warranty period designated above, provided that the repair is authorized by Braun and carried out by an authorized service center (a Braun labor schedule determines the cost allowance for repairs). Braun will not honor any warranty claim for repairs or replacement of parts unless the claim is submitted with the appropriate paperwork, and the work is completed by an independent, factory authorized service center. The appropriate paperwork can be obtained by written or phone contact with Braun at the contact information in this warranty.

Braun reserves the right to designate where any warranty work can be performed. Braun also reserves the right to examine any defective workmanship or part prior to giving any authorization for warranty work. Braun's return authorization procedure must be adhered to in order to process any warranty claims.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE.

NOTES

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