

Service Manual for:
NUVL855RM24
Under-Vehicle Lift®



Public Use Wheelchair Lifts

Series 01

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).

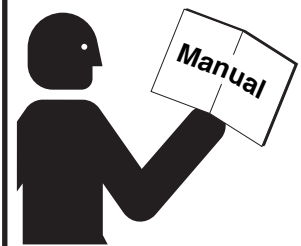


“Providing Access to the World”®

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™

34275
October
2007

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

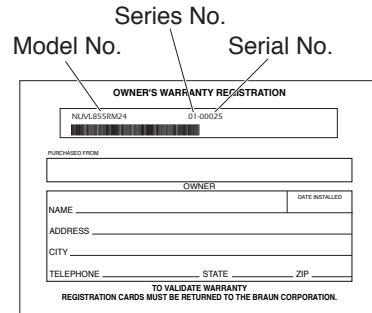


Ralph W. Braun
Chief Executive Officer

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. The warranty is provided on the back cover of this manual. **The warranty cards must be processed to activate the warranty.**



Series No.
Model No. Serial No.

OWNER'S WARRANTY REGISTRATION

NUVL855RM24 01-00025

PURCHASED FROM

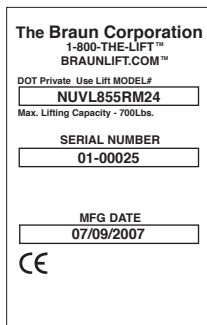
OWNER

NAME _____ DATE INSTALLED _____
ADDRESS _____
CITY _____
TELEPHONE _____ STATE _____ ZIP _____

TO VALIDATE WARRANTY
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 on the base 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 Braun Corporation
1-800-THE-LIFT™
BRAUNLIFT.COM™

DOT Private Use Lift MODEL#
NUVL855RM24
Max. Lifting Capacity - 700Lbs.

SERIAL NUMBER
01-00025

MFG DATE
07/09/2007

CE

Sample Serial No./Series No. Identification Tag

Model No. _____

Series No. _____

Serial No. _____

Pump Code _____

Cylinder Code _____

Date of Manufacture _____

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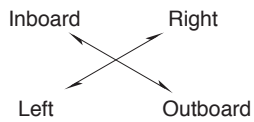
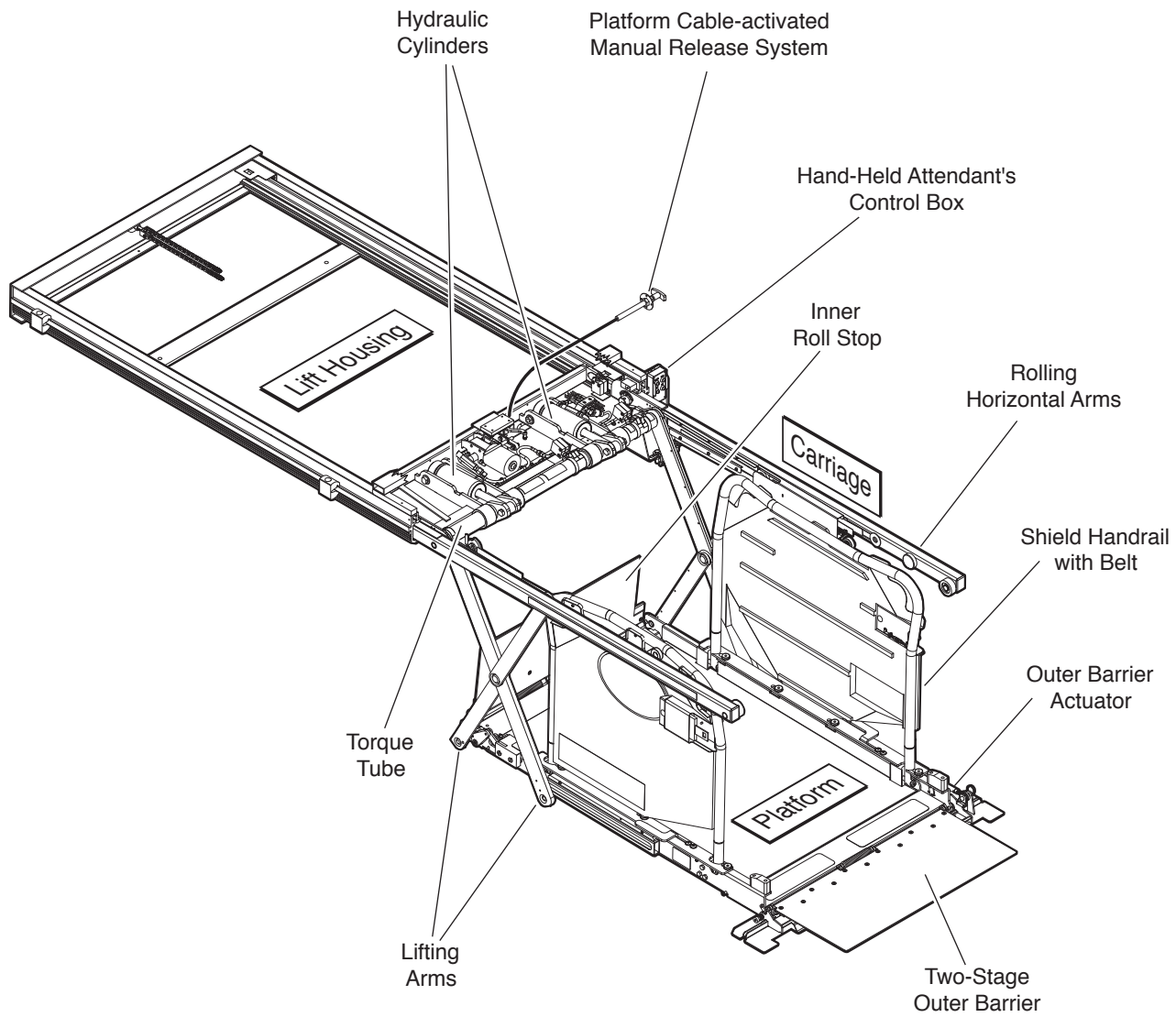
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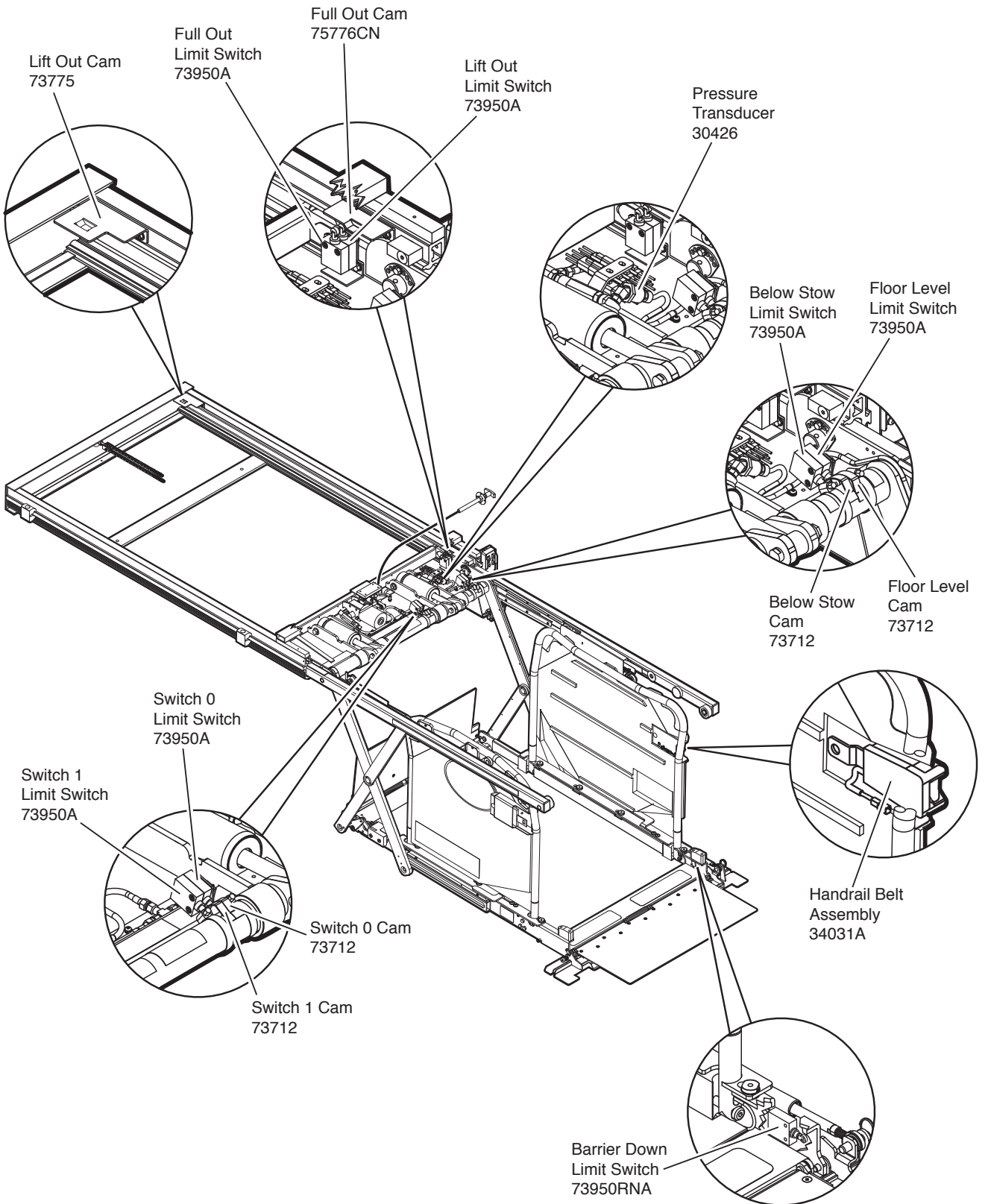
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Lift Terminology



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 at 1-800-THE LIFT®.

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.

- Lift 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 6 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. Remove bottom pan.
2. Pull the manual release cable and lock.
3. Remove adjustment bolt (tensioner) access cover.
4. Loosen inside jam nut. Secure tensioner and tighten outside jam nut. Tighten to eliminate visible chain sag but do not overtighten.
5. Lock jam nuts together making sure the tensioner

roller is horizontal. Release and push the manual cable in fully. Ensure platform is locked by moving the platform in and out until 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. There must be **no weight on platform**.
2. Press hand held pendant UP switch to raise platform a minimum 3" above stow level.
3. Press and hold control board mounted 50# CAL button. While pressing the 50# CAL button, press and hold the handheld pendant STOW switch (button). The platform will lower to stow level (begin stow function), and then start to raise. Release 50# CAL button immediately when platform starts to raise from stow level.
4. After calibration, the LCD screen should read "PF OCCUPIED" whenever there is 50 pounds or more present on the platform.

Ground Sense Calibration

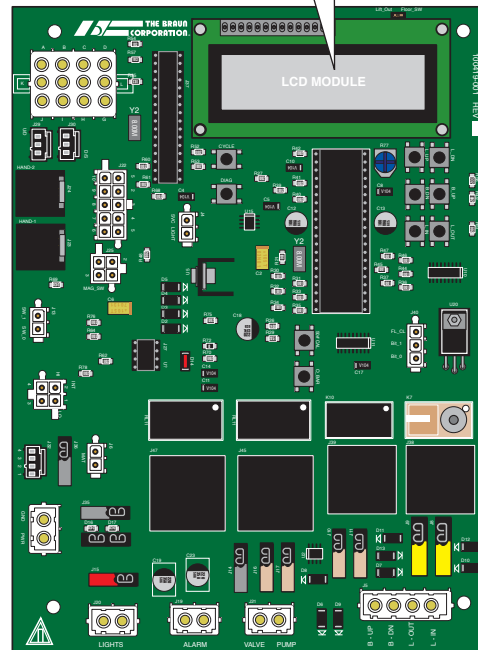
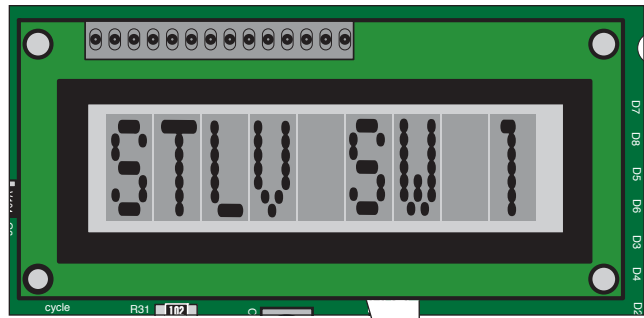
1. Press hand-held pendant DOWN switch to lower platform fully to ground level.
2. While continuing to press the pendant DOWN switch, press and then release control board mounted O_BAR button.
3. Release the pendant DOWN switch.
4. After calibration, the LCD screen should read "GND LVL 1" (in diagnostic mode) whenever the platform is at ground level.

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 mounted O_BAR button. While holding O_BAR button, press hand-held pendant UP switch to raise the outer barrier. Be sure to release O_BAR 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

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 on the LCD module as shown in the illustration at right. 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 at 1-800-THE-LIFT®.



Hand-held Pendant

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).



LCD Display	Stowed	Moving Out Of Cassette	Full Out	Moving Up	At Floor Level	Moving Down	Ground Level	Ground Level OB Out
BEL ST SW				1	1			
LOUT SW	1							
FOUT SW			1	1	1	1	1	1
FLV SW					1			
OBAR SW	1	1	1	1	1	1	1	
GND LVL							1	1
HRBELT SW	= 1 When Seat Belt is Plugged In.							
MAT SW	= 1 When Mat is Activated							
IBAR SW	= 1 When IN Barrier is activated							
DO SW	= 1 When Door is Full Open. Or pin 3 and pin 4 are jumpered.							
LO VOLT								

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 adjustment. Both are factory set but must be inspected during installation procedures (will vary per vehicle application).

Ensure the lift is positioned and secured as specified on Quick Reference Installation Sheet (supplied with lift) panels 1 and 2. **Adjust the Floor Level switch first** (detailed below). Then, adjust the inner roll stop as detailed in Inner Roll Stop Adjustment Instructions (adjust only if necessary). The inner roll stop must rest properly on the vehicle floor for wheelchair entry and exit.

Note: Lift model NUVL855RM24 depicted in adjustment photos. Adjustment procedures are applicable for lift model NUVL855RM24.

Floor Level Switch Adjustment

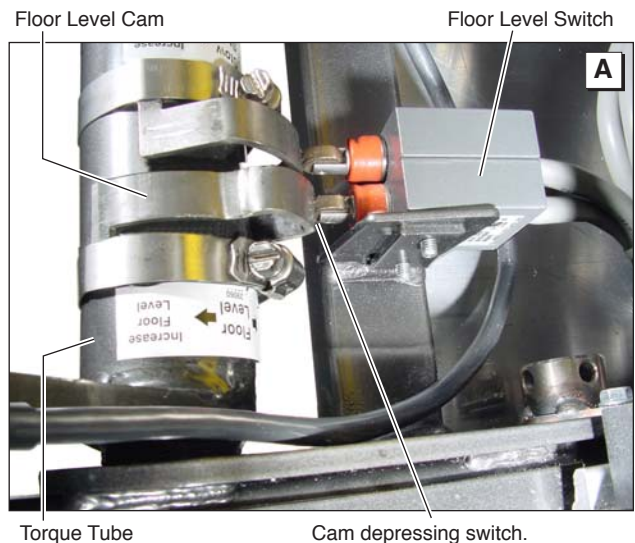
Adjust the Floor Level switch first!
(before adjusting the inner roll stop)!

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

Position the bottom of the lift platform 1 1/2" above floor level (threshold mat) **using the manual operation system**. **Do not** operate the lift with the electric pump during adjustment procedures.

Loosen the clamp securing the torque tube-mounted Floor Level cam. Rotate the cam until the Floor Level switch is activated (cam depresses switch).

Note: Check the floor level position of the platform and the inner roll stop after powering the pump. Hydraulic pressure may affect platform height slightly. Fine tuning adjustment (tweaking) of the Floor Level switch may be required.



Floor Level and Inner Roll Stop Adjustments

Inner Roll Stop Adjustment

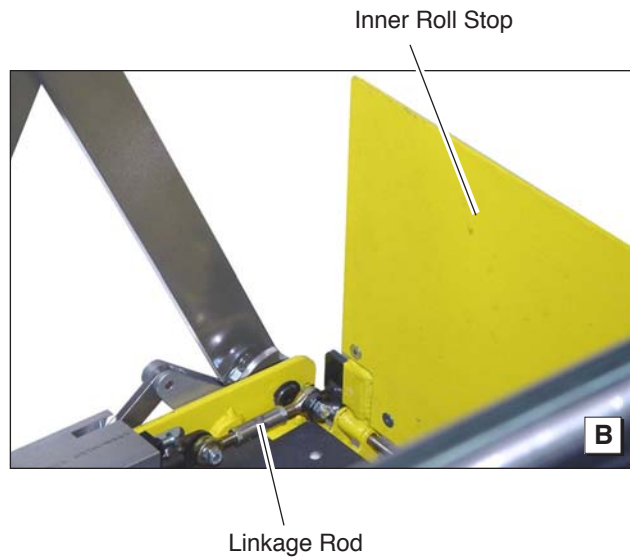
⚠ CAUTION

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

Do not adjust inner roll stop linkage rod at this time! Linkage rod adjustment is not required unless extra usable platform length is needed. 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.

With the platform at ground level and the inner roll stop in the vertical position, there should be a minimum of 1" clearance between the inner roll stop and torque tube. See Photo I.



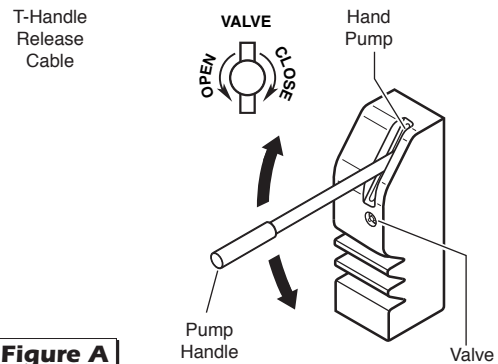
Adjust the inner roll stop as detailed in the following procedures. Then, adjust the linkage rod as detailed on page 10 (**only if necessary**).

1. Raise the lift platform fully (floor level) **using the manual operation system** (Manual Operating Instructions detailed on Quick Reference Installation Sheet). If the inner roll stop rests properly on the floor, **do not** adjust the inner roll stop. Lower the platform to ground level. If the angle of the inner roll stop (when in the vertical position), does not restrict the usable platform length for the wheelchair passenger, **disregard** inner roll stop adjustment procedures. See Photo G on page 10. Refer to the following procedures if adjustment is required.

2. Position the lift platform approximately 12" above stow level **using the manual operation system**. See Photo C.

Raising the platform will allow access to the cam securement screw and nut. See Photo E.

Manual Operation Systems



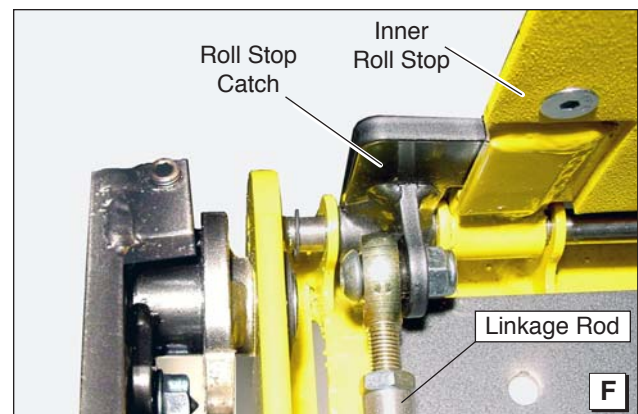
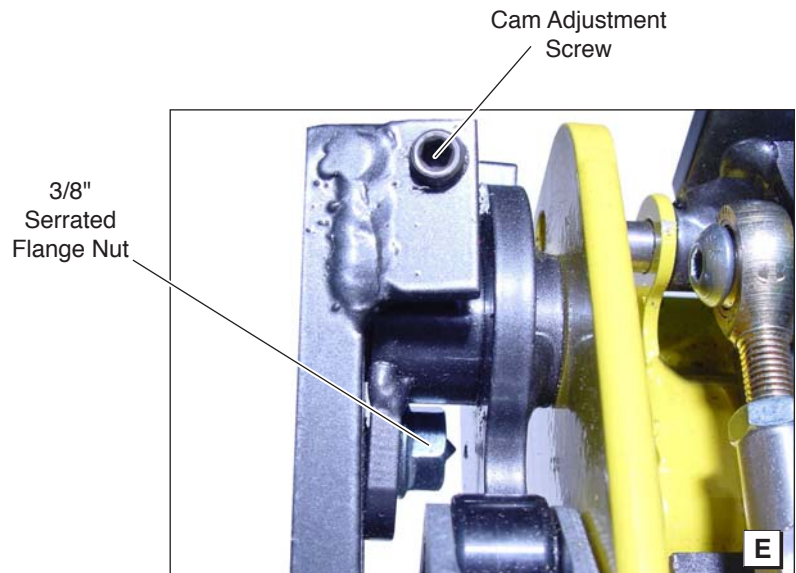
Floor Level and Inner Roll Stop Adjustments

Inner Roll Stop Adjustment

3. Use an Allen wrench to prevent the cam locking screw from turning and loosen the 3/8" serrated flange nut securing the lifting arm cam. See Photos D and E. Do not remove the screw or nut.
4. Raise the platform 1" above floor level **using the manual operation system**.
5. Turn the cam adjustment screw counterclockwise until the inner roll stop rests on the floor.

Do not continue to turn the adjustment screw once the inner roll stop is contacting the vehicle floor.

6. Verify there is no gap between the inner roll stop and the roll stop catch. See Photo F. 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.**
7. While holding the cam locking screw, tighten the 3/8" serrated flange nut **securely**.



Floor Level and Inner Roll Stop Adjustments

Inner Roll Stop Adjustment

⚠ CAUTION

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

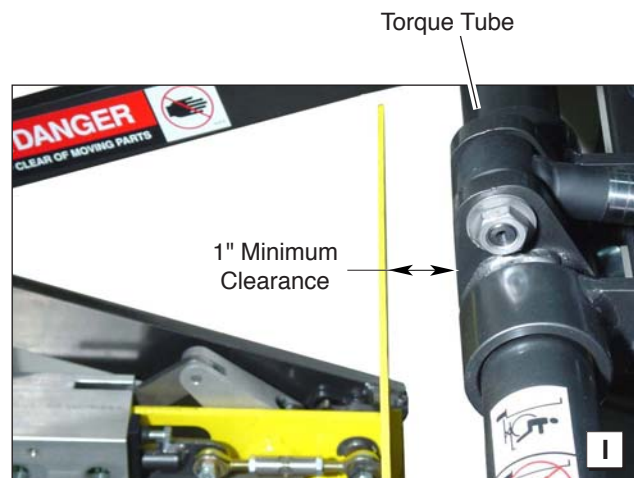
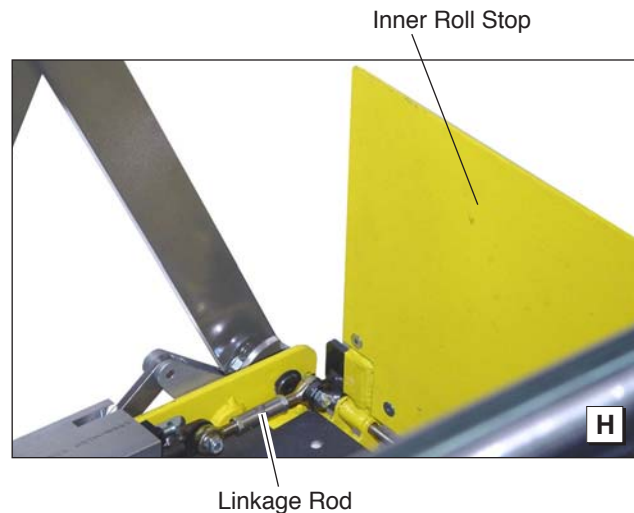
Do not adjust the inner roll stop linkage rod unless extra usable platform length is needed. See Photo

G. 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 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.

1. Position the lift platform below stow level **using the manual operation system**. **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. To prevent inner roll stop contact with the torque tube area, leave a minimum of 1" clearance. See Photo I. **Carefully** check the inner roll stop angle and operation **using the manual operation system**. Ensure the rod has not been over adjusted resulting in pressure on components (**damage will result**).
3. Tighten the linkage rod jam nuts.

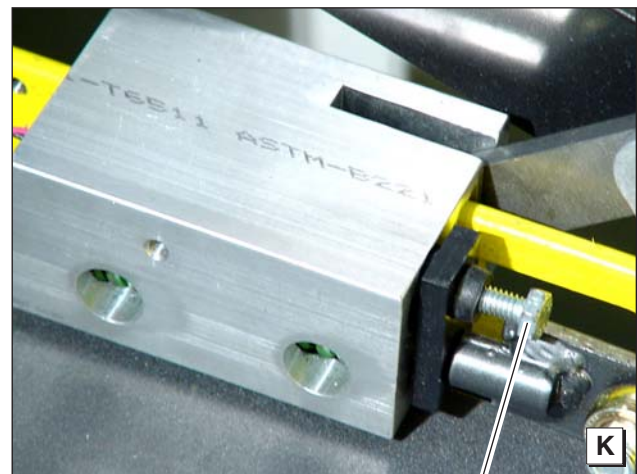
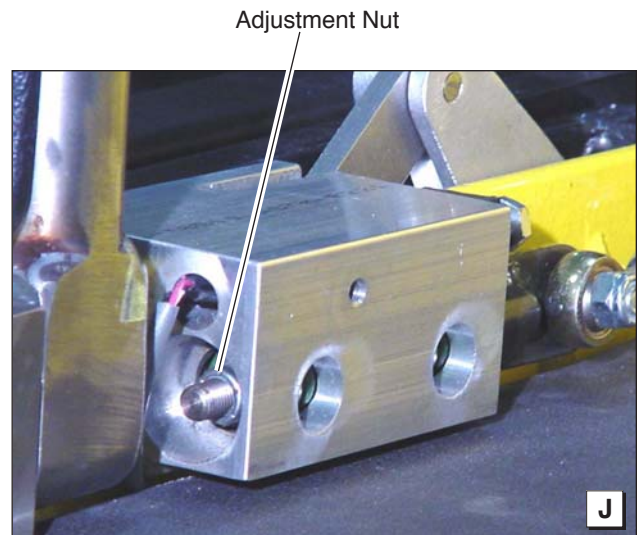
Linkage rod adjustment affects angle of inner roll stop (vertical position).



Floor Level and Inner Roll Stop Adjustments

Inner Roll Stop Occupied Sensor Adjustment

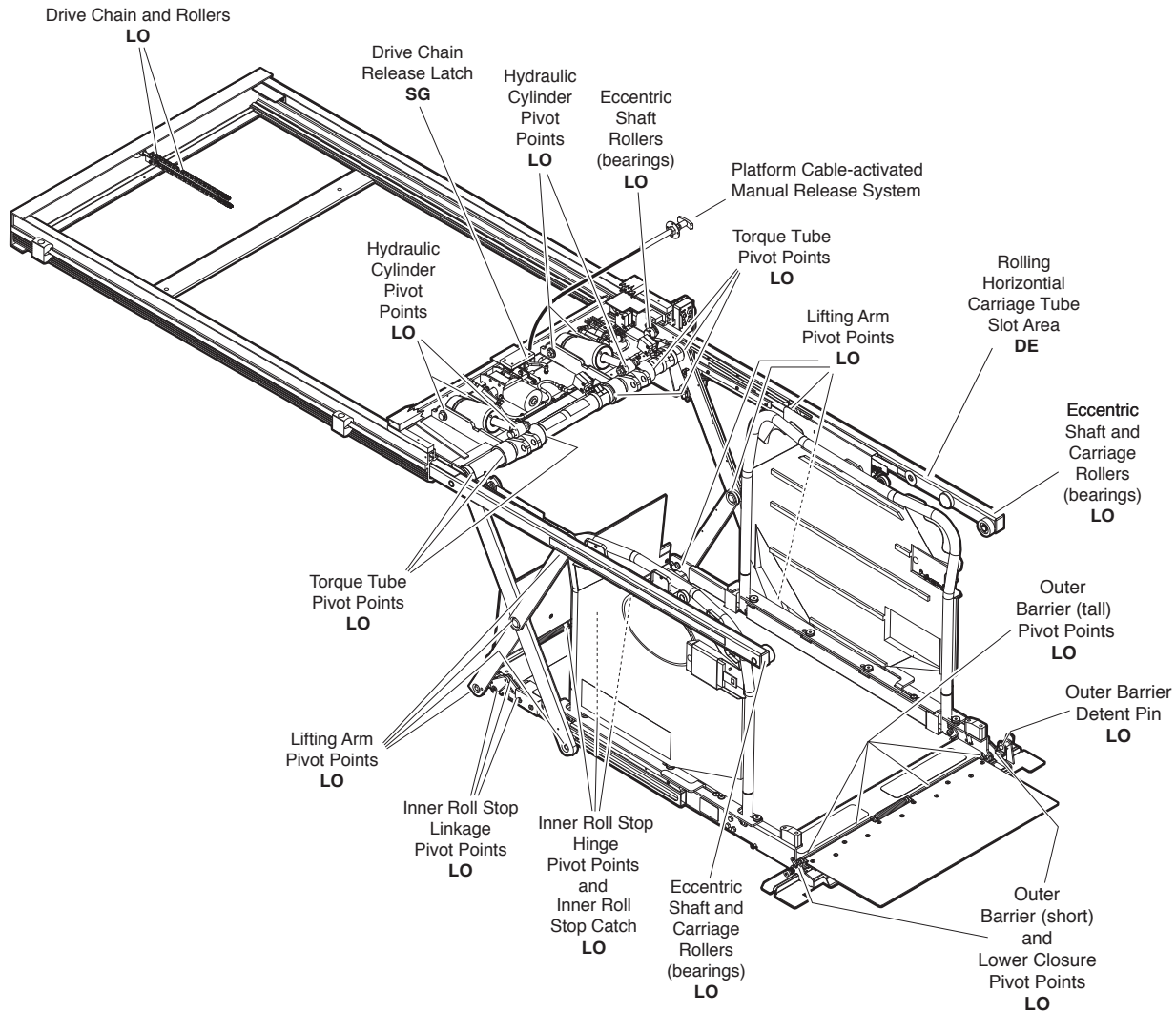
1. The optimum setting for the inner roll stop occupied sensor adjustment nut is to have just enough pressure to fold and unfold the inner roll stop without triggering the inner roll stop occupied sensor. This provides the most weight sensitive setting while allowing the unoccupied inner roll stop to function correctly.
2. 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 J.
3. If the lift is not reacting to weight 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.
4. 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 K.



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	11 oz. Aerosol Can	15807
DE - Door-Ease	Stainless Stick Style (tube)	Door-Ease Stick (tube)	1.68 oz.	15806
SG - Synthetic Grease	Synthetic Grease (Multipurpose)	Mobiltemp SHC32	12.5 oz. Tube	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 all transit agencies's 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. NHTSA 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** 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 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. These intervals are a general guideline for scheduling maintenance procedures and will vary according to lift use and conditions. Lifts exposed to severe conditions (weather, environment, contamination, heavy usage, etc.) may require inspection and maintenance procedures to be performed more often than specified.

⚠ WARNING

Maintenance and lubrication procedures must be performed as specified by an authorized service technician. Failure to do so may result in serious bodily injury and/or property damage.

Maintenance Indicator: The Lift Ready green LED mounted on 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 at 1-800-THE LIFT®. One of our national Product Support representatives will direct you to an authorized service technician who will inspect your lift.

750 Cycles	Outer barrier 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 center and platform pivot points (bearings at all points)	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. Roll stop should rest solidly on floor providing smooth transition. • Positive securement • Wear or damage 	Resecure, replace or correct as needed. See 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 (Below 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.
Torque tube pivot bearings (4 places)	Apply Light Oil - See Lubrication Diagram	

1500 Cycles	Carriage and 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 Antisieze 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 Antisieze 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.
Inspect platform cable-activated manual release system (T-handle/cable assembly and carriage movement)	Ensure T-handle release and cable assembly operate properly. Ensure carriage can be manually extended and retracted freely.	

Maintenance and Lubrication Schedule

1500 Cycles	Inspect limit switches for securement and proper adjustment	Resecure, replace or adjust as needed. See Switch Adjustment.
	Inspect carriage, lifting arm and eccentric shaft rollers (bearings) for wear or damage, positive securement and proper operation	Correct, replace damaged parts and/or relubricate.
	Inspect external snap rings (e-clips): <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) 	Resecure, replace or correct as needed.
	Inspect lower lifting arm pins for wear or damage, positive securement and proper adjustment	Resecure, replace damaged parts, lubricate or correct as needed.
	Inspect eccentric shaft pins, bearing mounting screw, washers and securement hardware for wear or damage, positive securement and proper operation	Resecure, replace damaged parts, lubricate or correct as needed. See Carriage Ride Height Adjustment.
	Inspect torque tube cams for securement, wear or damage	Resecure, replace or correct as needed.
	Inspect housing cam brackets for securement, wear or damage	Resecure, replace or correct as needed.
	Inspect cylinder(s), hoses, fittings and hydraulic connections for wear, damage or leaks	Tighten, repair or replace if needed.
Inspect power cable	Resecure, repair or replace if needed.	
4500 Cycles	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 5606 aviation fluid only (part 87010R). Check fluid level with platform lowered fully . Fill to within 1-1/2" of the bottom of the fill tube (neck).
	Inspect lifting arm bushings and pivot pins for visible wear or damage	Replace if needed.
	Inspect outer barrier pivot pin mounting bolts (2)	Tighten 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.	

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 at 1-800-THE LIFT®. 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 Electrical 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 1.12 Bad ground 1.13 Poor plug connections 1.14 Blown fuse 1.15 Circuit Sentry 1.16 Defective Interlock	Check vehicle battery Check for good ground between vehicle chassis and 3/8" bolt on back of power pack. Check all plugs for proper contact. Check fuses on P.C. board. Reset circuit breaker. Check for voltage on red wire with gray stripes in interlock plug connected to P.C. board.
2.00 PUMP RUNS BUT WILL NOT LIFT PLATFORM	2.11 Hydraulic Down valve open 2.12 Pump mounted horizontal 2.13 No oil (low)	Flush valve by operating Up and Down manual override switches at same time for 4 to 5 seconds several times. Power pack must be mounted vertically. Check fluid level. Use 5606 aviation fluid only (part 87010R). Check fluid level with platform lowered fully . Fill to within 1-1/2" of the bottom of the fill tube (neck).
3.00 PUMP DOES NOT RUN WITH OVERRIDE SWITCH OR HAND-HELD PENDANT	3.11 Up Solenoid 3.12 Bad power and ground	Check for power on pump black wire going from solenoid to motor. See 1.00

Troubleshooting Diagnosis Chart

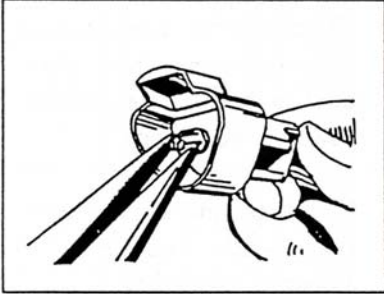
FUNCTION	POSSIBLE CAUSE	REMEDY
4.00 LIFT WILL GO UP WITH OVERRIDE SWITCH BUT NOT WITH HAND-HELD PENDANT	4.11 Outer Barrier switch is out of adjustment or defective. 4.12 Full Out switch is not activated or defective. 4.13 Hand-held pendant not working properly.	Check diagnostic LCD for Outer Barrier switch status. Barrier is down or barrier release pin partially out. Adjust or replace switch as necessary. Check diagnostic LCD for Full Out switch status. Adjust or replace switch as necessary. 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 5.12 Dirty Down valve (clogged)	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. 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. 6.12 SW0 and/or Door Full Close switches out of adjustment or defective.	Check diagnostic LCD for Full Out switch status. Adjust or replace switch as necessary. 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 7.12 Bad In/Out motor 7.13 Bad power and ground	Check harness connections A1, A2, B1 and B2 Check power at motor. Replace motor if necessary. See 1.00
8.00 LIFT WILL NOT STOW WITH HAND-HELD PENDANT	8.11 Stow Level switch out of adjustment or defective. 8.12 Platform is occupied or out of calibration 8.13 SW0 and/or Door Full Closed switches out of adjustment or defective. 8.14 Handrail Belt	Check diagnostic LCD for Stow Level switch status. Adjust or replace switch as necessary. Remove weight from platform. See Platform Sense Calibration on page 5. Check switches for proper operation/adjustment. Adjust or replace switch as necessary. Belt must be latched until platform is at stow level and must be unlatched before platform will stow.

Troubleshooting Diagnosis Chart

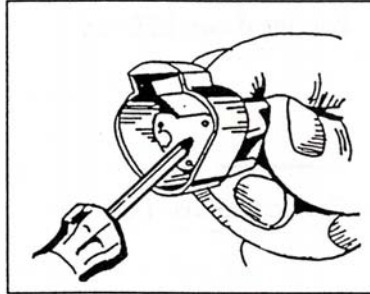
FUNCTION	POSSIBLE CAUSE	REMEDY
<p>9.00 BARRIER WILL NOT OPERATE UP OR DOWN WITH OVERRIDE SWITCHES OR HAND-HELD PENDANT</p>	<p>9.12 Poor plug connections</p> <p>9.13 Barrier actuator motor or actuator out of adjustment or faulty</p> <p>9.14 Bad power and ground</p>	<p>Check harness connectors A1 and A2,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

Troubleshooting Diagnosis Chart

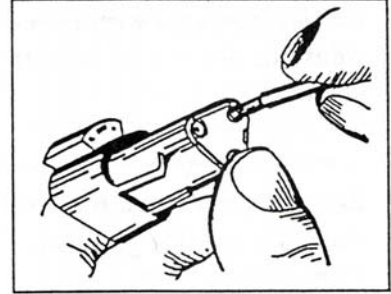
CONTACT REMOVAL



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.

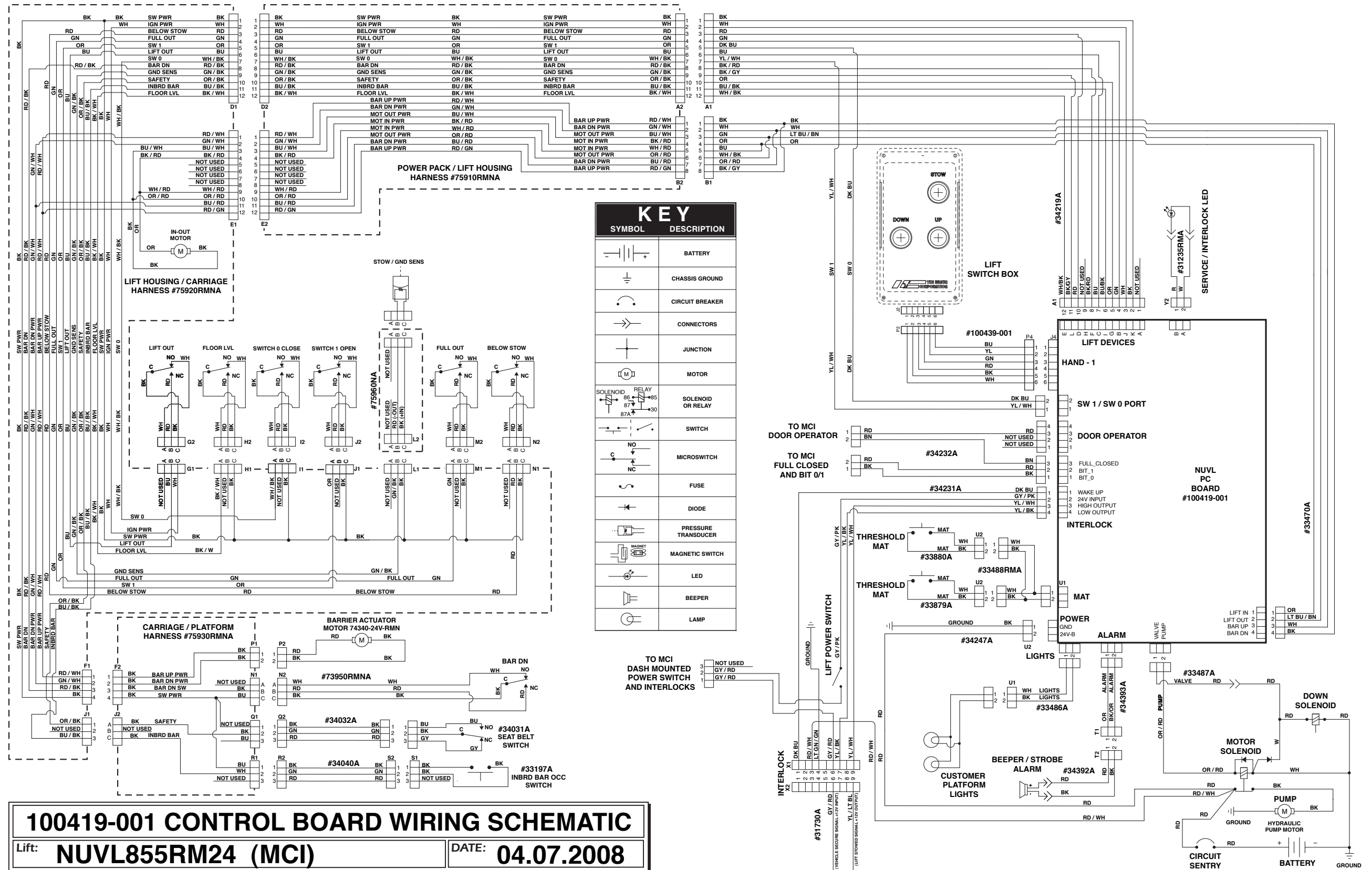


3. Hold the rear seal in place, as removing the contact will displace the seal

NOTES

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Wiring Schematic



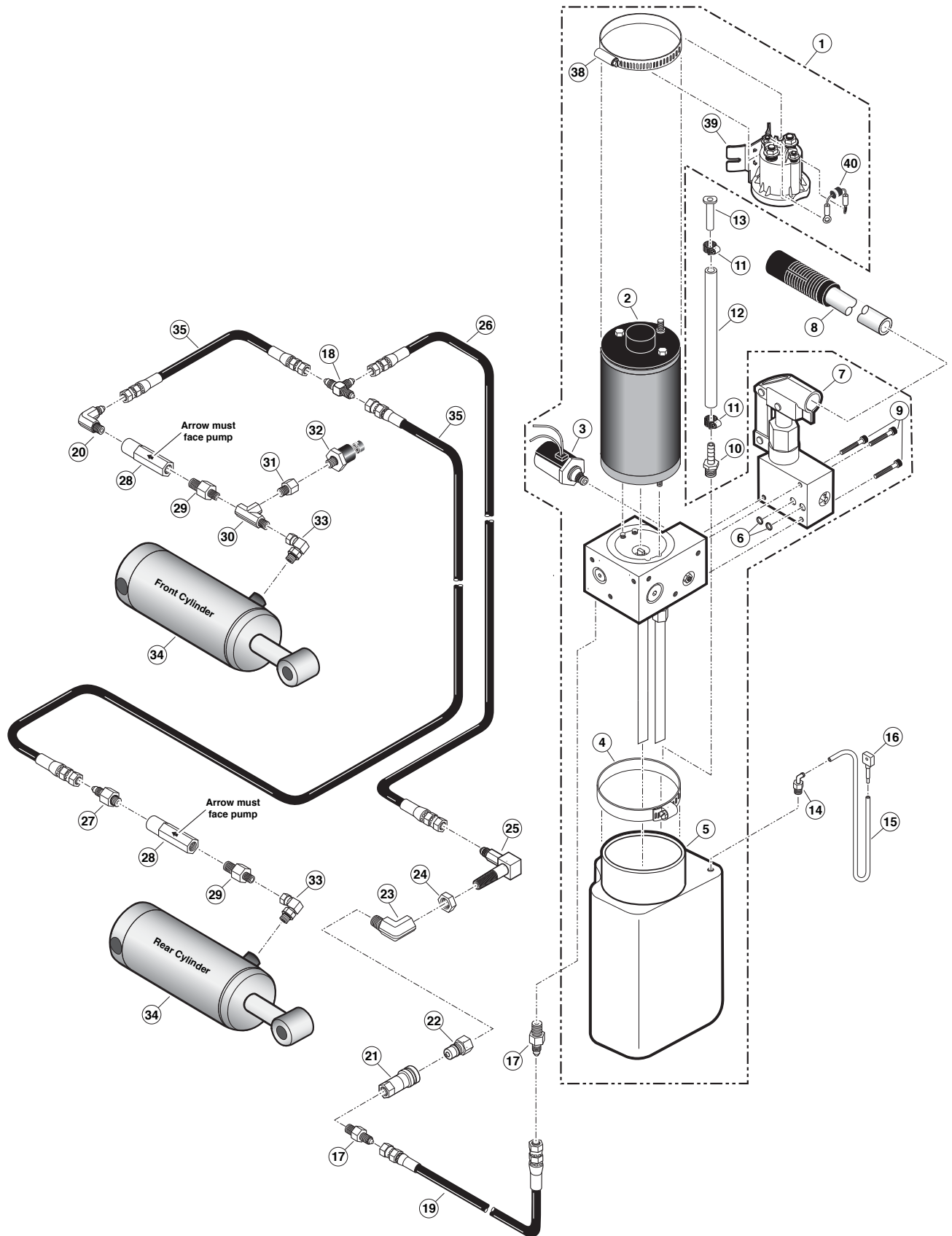
100419-001 CONTROL BOARD WIRING SCHEMATIC
 Lift: **NUVL855RM24 (MCI)** DATE: **04.07.2008**

Unfold for:
Lift Wiring
Schematic

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	81557R014
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°	915-5603-080.5
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

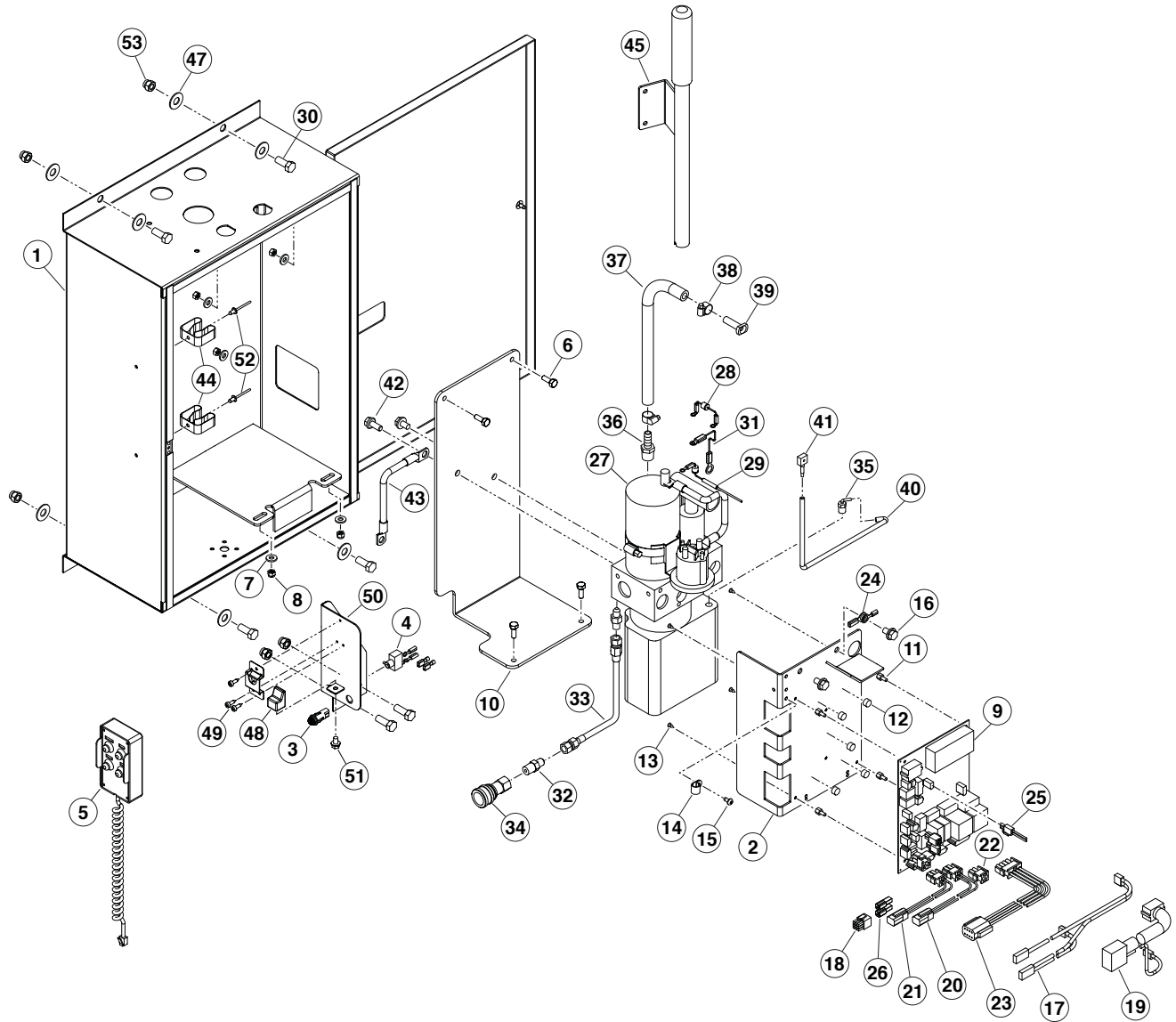
Hydraulic Diagram



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
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	HARNESS-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	81557R014	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	82761	SCREW-1/4-20 X 3/8 SER HEX
52	2	11512	RIV-POP-SD62BS-3/16".06/.13/AUTO-BK
53	6	17386	NUT-3/8-16 UNC HEX NYLOCK
ITEMS NOT SHOWN PARTS LIST			
ITEM	QTY	PART NO.	DESCRIPTION
54	1	30787	DECAL-WARN DAMAGE CONTROL BOARD-ESD
55	1	31409	DECAL-MANUAL OPER NUVL-PUBLIC
56	1	29884	DECAL-UVL PATENT & TRADEMARK CORR
57	1	21494	DECAL-LIFT POWER-ON/OFF
58	1	34048A	SERIAL TAG DECAL ASSEMBLY
59	1	18229	DECAL-INSPECT/MADE IN AMERICA
60	1	25807	TAG-VENT TUBE PLUG REMOVAL UVL
61	1	81796	TAG-RED/CAUTION DO NOT CONNECT
62	2	86003	CABLE TIE-3 3/4 X .09 WH. SOLID/ECONOMY
63	.5	13910R	EDGE LINER
64	.34	13910R	EDGE LINER
65	1	31730A	WIRE ASSY-LIFT/INTERLOCK CONNECTION UVL

Pump Module Diagram



Exploded Views and Parts Lists

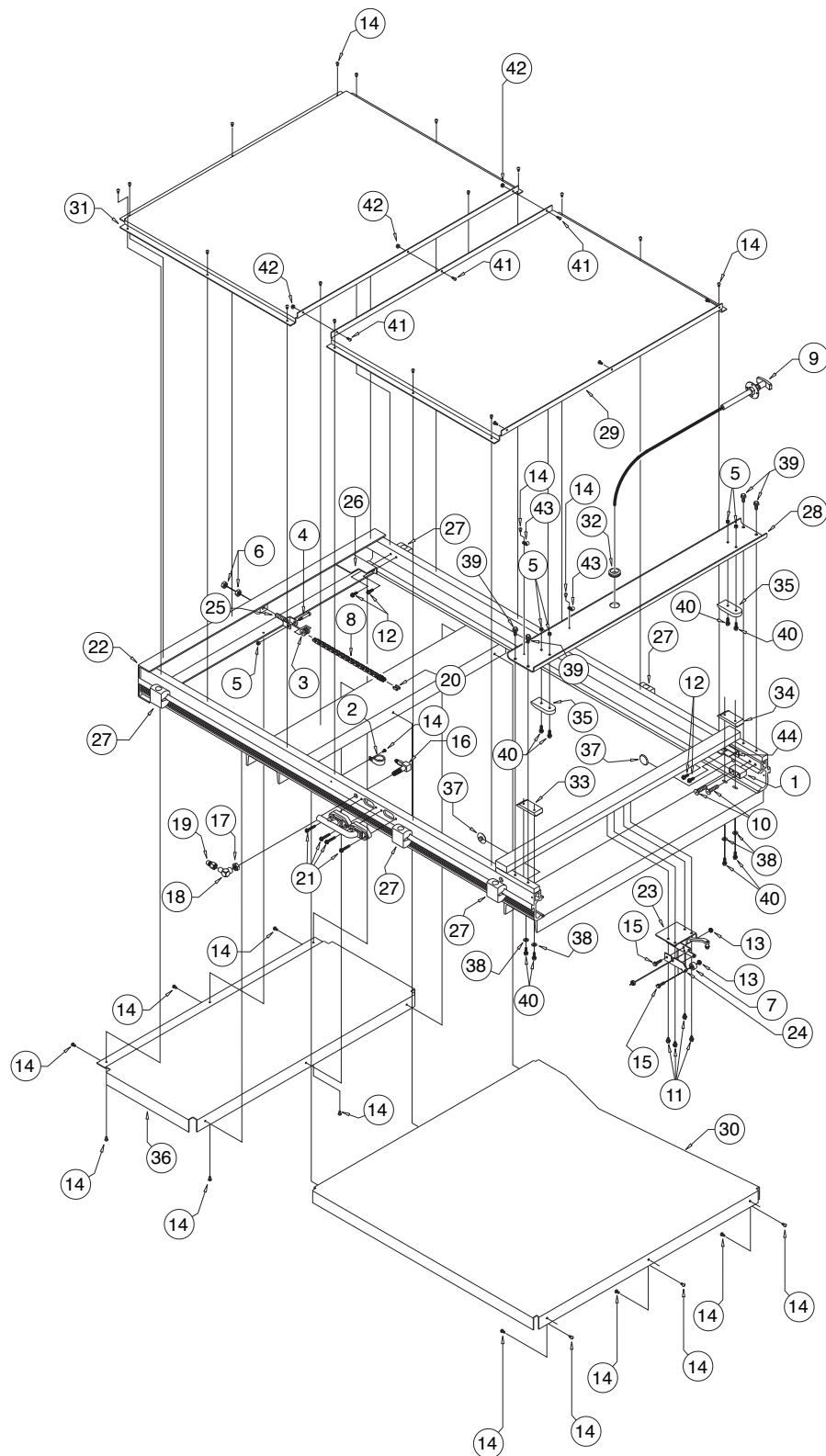
Housing Assembly Parts List

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	33	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

44	1	75776CN	BRACKET-CAM-OUTSIDE
43	2	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
23	1	73760A	CHAIN RELEASE ASSY
ITEM	QTY.	PART NO.	DESCRIPTION

Exploded Views and Parts Lists

Housing Assembly



Exploded Views and Parts Lists

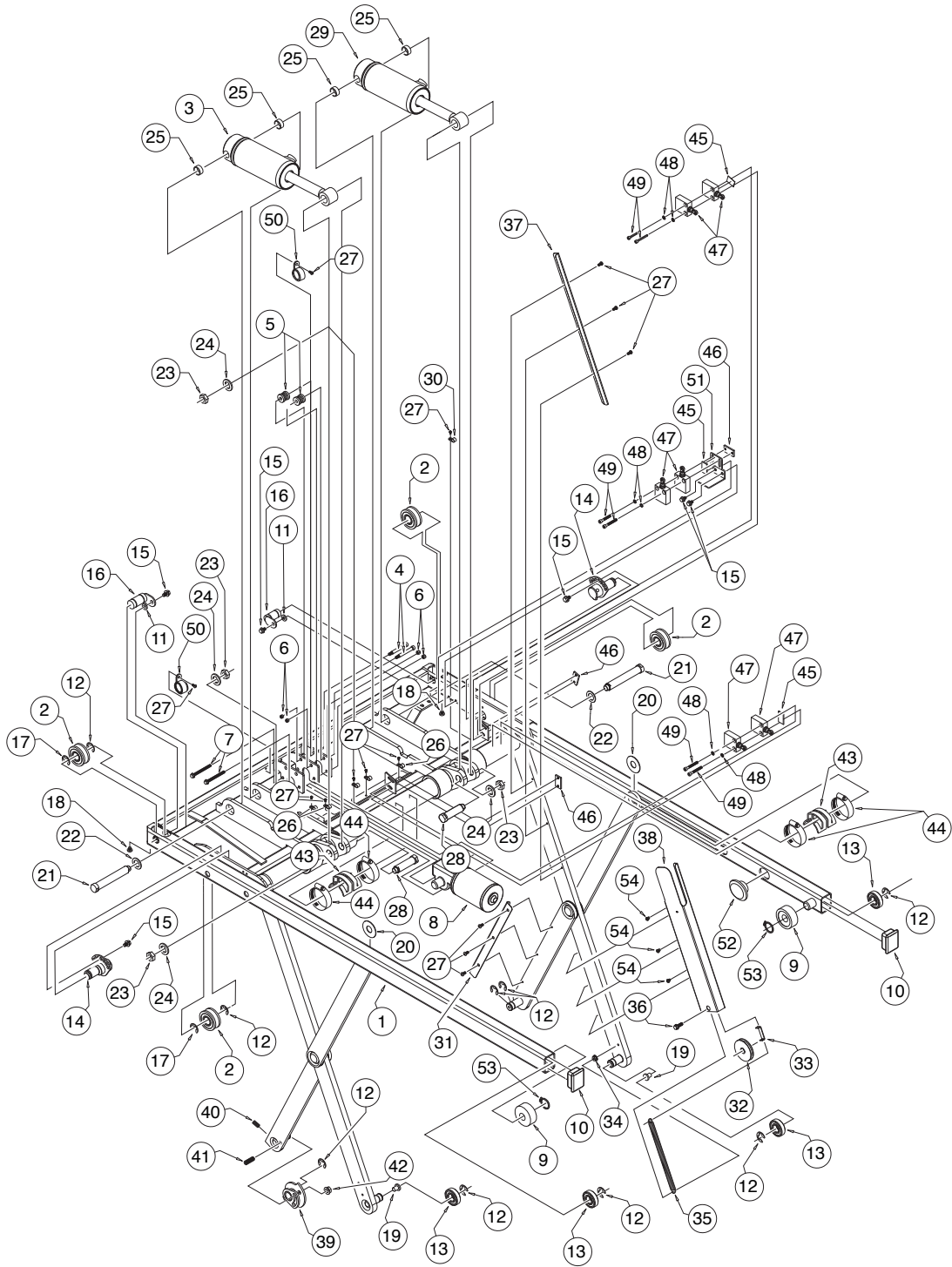
Carriage Assembly Parts List

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 32-34 for other platform assembly breakdowns.

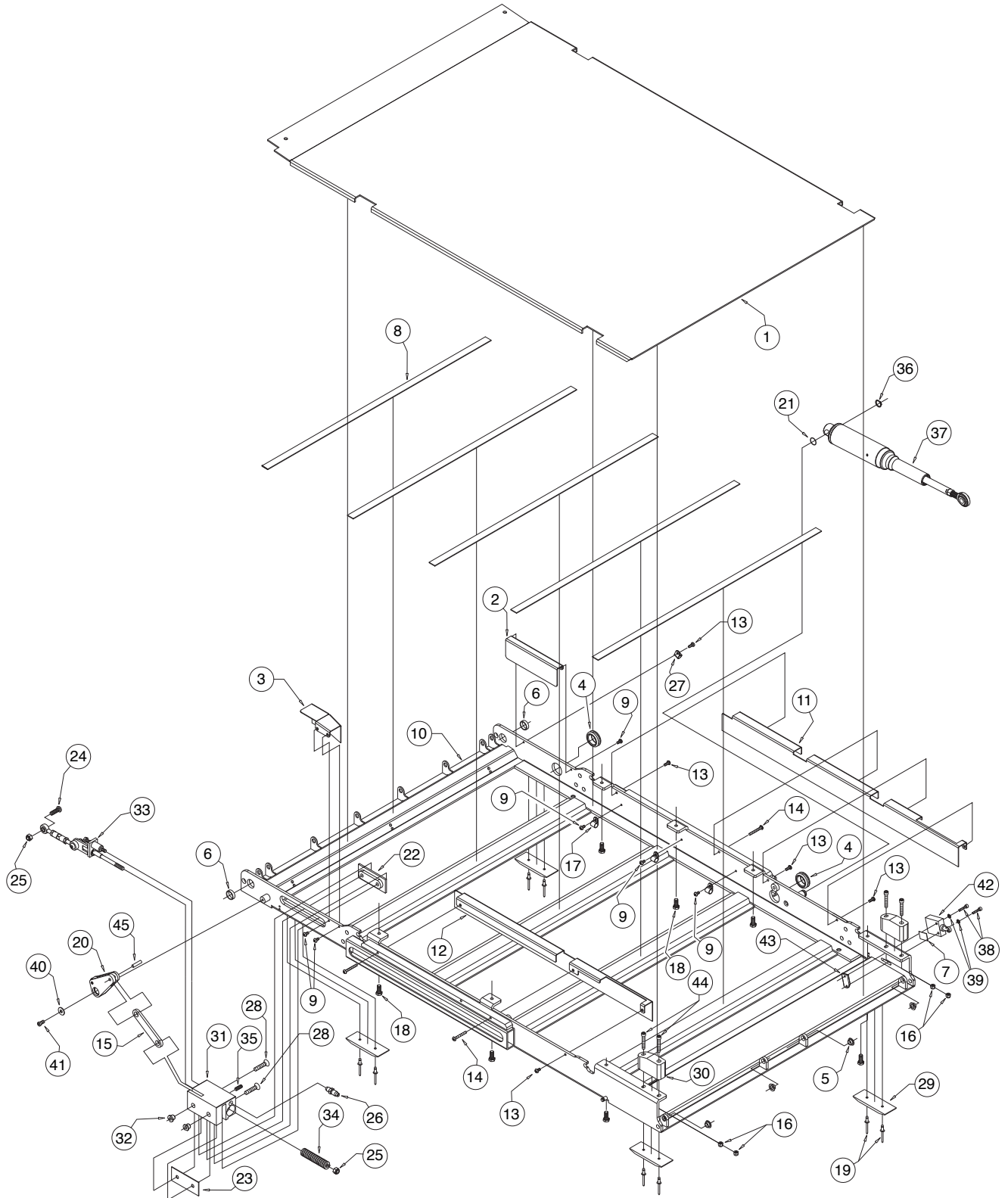
23	1	74409	BLOCK-NYLON SLIDER OUTSIDE
22	1	74410	BLOCK-NYLON SLIDER INSIDE
21	1	87861	O RING-7/16ID x 5/8OD VITON 75
20	1	75404A	ROCKER-ASSY/REAR BARRIER
19	8	13186	RIV-POP-AD66BSLF-3/16"-.25/.38
18	7	33670	BOLT-5/16-24 X 3/4" SS HHCS
17	3	15777	CLIP-CABLE 7/16 PLASTIC
16	4	83070	NUT-1/4-20 NYLOCK FULL SS
15	1	74406CFRA	LINK-ASSY/REAR BARRIER
14	2	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	75301RMNW	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

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	4	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
24	1	82348	BOLT-5/16-24 X 1 SKT BTN PLTD
ITEM	QTY.	PART NO.	DESCRIPTION

Exploded Views and Parts Lists

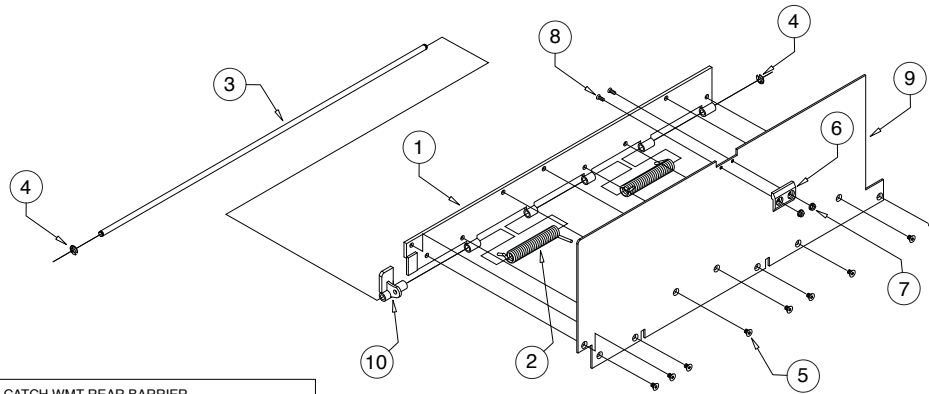
Platform Assembly - Main

Note: See pages 32-34 for other platform assembly breakdowns.



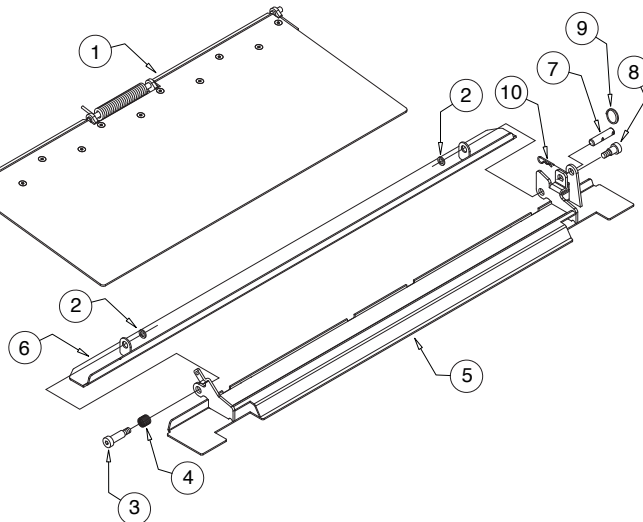
Exploded Views and Parts Lists

Platform Assembly - Inner Roll Stop



ITEM	QTY.	PART NO.	DESCRIPTION
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

Platform Assembly - Outer Barrier

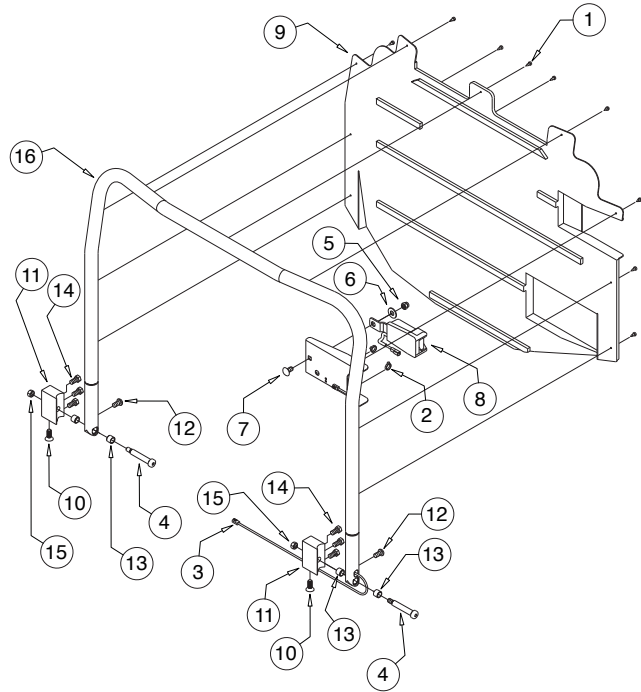


ITEM	QTY.	PART NO.	DESCRIPTION
10	1	84382	CLIP-HAIRPIN 5/16 DIA SHAFT
9	1	11390	RING-CLEVIS PIN 15/16"
8	1	32881	SCREW-3/8 X 1/2 SHLD SKT HD X 3/8-16 SS
7	1	73741-2	PIN-BARRIER CLEVIS RELEASE
6	1	75330W	CLOSURE-WMT
5	1	75321RMNW	WMT-BARRIER
4	1	73335	SPRING-LOWER CLOSURE TORSION
3	1	82771	SCREW-1/2 X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

Exploded Views and Parts Lists

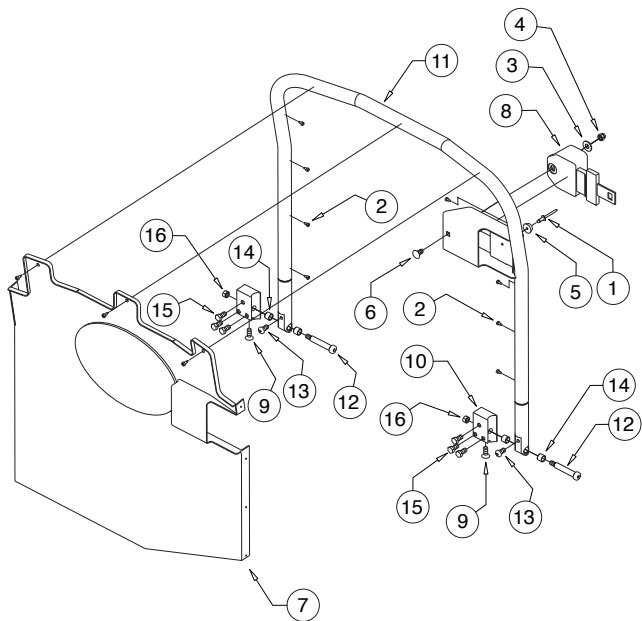
Platform Assembly - Front Handrail

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-5/8OD-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



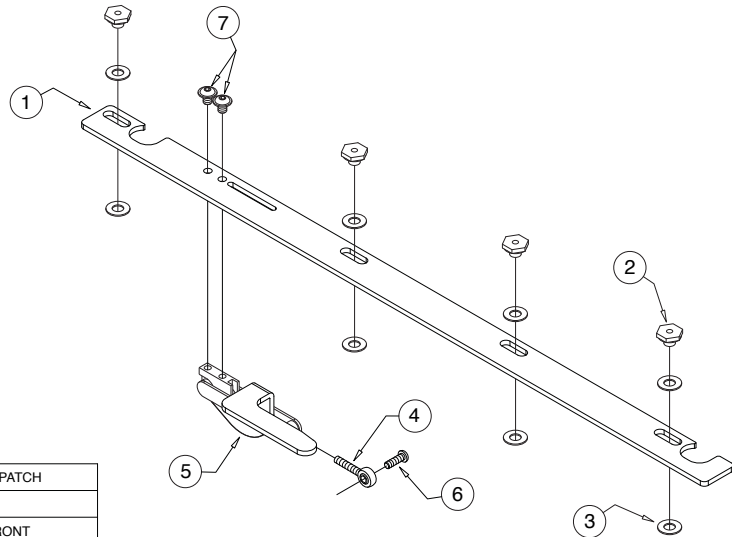
Platform Assembly - Rear Handrail

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-5/8OD-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"-.25/3/8/AUTO-BK
ITEM	QTY.	PART NO.	DESCRIPTION



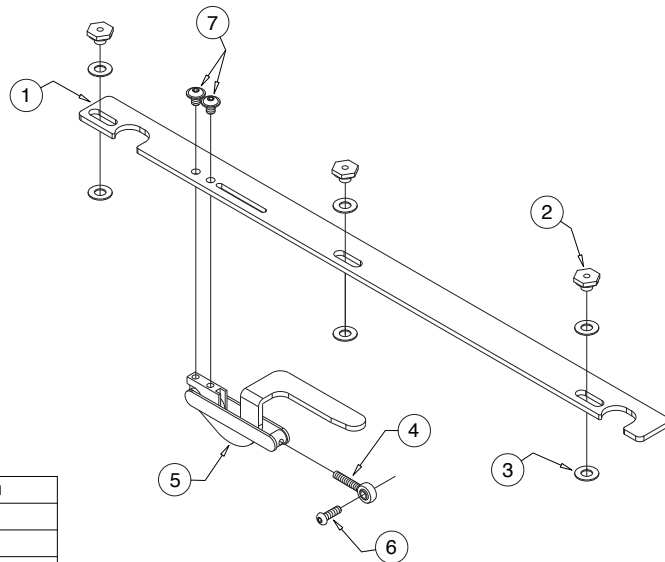
Exploded Views and Parts Lists

Platform Assembly - Front Handrail Lock



7	2	29942	BOLT-3/8-16 X 1/2" FLBHSCS 6G8/PATCH
6	1	82348	BOLT-5/16-24 X 1 SKT BTN PLTD
5	1	34177W	WELDMENT-HANDRAIL LATCH FRONT
4	1	84384	ROD END-5/16-24 MALE
3	8	33668	WASHER-.5ID X 1.003OD X .057-.067THK PTFE
2	4	33669	NUT-HANDRAIL LOCK
1	1	33426	BAR-HANDRAIL LOCK FRONT
ITEM	QTY.	PART NO.	DESCRIPTION

Platform Assembly - Rear Handrail Lock



7	2	29942	BOLT-3/8-16 X 1/2" FLBHSCS 6G8/PATCH
6	1	82348	BOLT-5/16-24 X 1 SKT BTN PLTD
5	1	34178W	WELDMENT-HANDRAIL LATCH REAR
4	1	84384	ROD END-5/16-24 MALE
3	6	33668	WASHER-.5ID X 1.003OD X .057-.067THK PTFE
2	3	33669	NUT-HANDRAIL LOCK
1	1	33478	BAR-HANDRAIL LOCK REAR
ITEM	QTY.	PART NO.	DESCRIPTION

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Braun™ Three-Year Limited Warranty

The Braun Corporation of Winamac, Indiana, warrants that it will repair (or replace at Braun's sole option) any defect in material or workmanship in its wheelchair lift for three years, providing the lift is operated and maintained properly and in conformity with this manual. This warranty is limited to the original purchaser and does not cover defects in the motor vehicle on which it is installed, or defects in the lift caused by a defect in any part of the motor vehicle.

This warranty commences on the date the lift is put in service, providing the warranty registration card is completed and received by The Braun Corporation within 20 days of purchase.

This warranty also covers the cost of labor for the repair (or replacement at Braun's sole option) of most parts for one year when performed by an authorized Braun Representative. (A Braun labor schedule determines cost allowance for repairs.)

This warranty does not cover normal maintenance, service, or periodic adjustments necessitated by use or wear. The Braun Corporation will not, under any circumstances, pay for loss of use of lift or vehicle in which it is installed or loss of time.

This warranty will become null and void if the lift has been damaged through accident, misuse, or neglect, or if the lift has been altered in any respect.

Return Authorization Procedure

When processing any warranty claims (parts, repairs, etc.), all requests must be processed through The Braun Corporation Product Support Department. Call 1-800-THE LIFT® (extension 3009) during normal working hours. Product Support will issue a Return Material Authorization (RMA) number and detail the procedures required for processing returns and/or authorizing credit.

The lift identification information is provided on the Braun Serial No./Series No. identification tag and the two warranty cards (shown on inside front cover). The lift identification information must be provided when filing a warranty claim or ordering parts.



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