



Service Manual for:

NCL

Century

Series

Public Use Wheelchair Lifts

Series **A6**

DOT — Public Use Lift

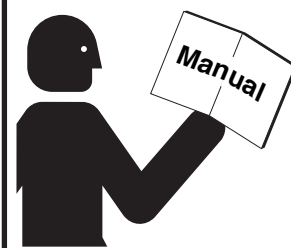
"DOT — Public Use Lift" verifies that this platform lift meets the "public use lift" requirements of FMVSS No. 403. This lift may be installed on all vehicles appropriate for the size and weight of the lift, but must be installed on buses, school buses, and multi-purpose passenger vehicles other than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

THE BRAUN CORPORATION®
"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 NCL Series

35025

August

2008

Patent #5,261,779

Patent #6,065,924

Patent #6,238,169

Patent #6,464,447

Patent #6,599,079

Patent #6,692,217

Patent #6,739,824

Patents Pending

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 Century 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 located in the lift-mounted manual storage pouch. 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.**

Two Braun Serial No./Series No. identification tags (shown below) are posted on the lift. One I.D. tag is posted on the opposite pump side vertical arm. A second I.D. tag is located on the opposite pump side tower. 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.**

Series No. Pump Code
Model No. Serial No. Cylinder Code

OWNER'S WARRANTY REGISTRATION	
NCL9171B A6-00025 66 14CG	
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

The Braun Corporation 1-800-THE LIFT™ BRAUNLIFT.COM™	
DOT Public Use Lift MODEL#	
NCL9171B	
Max. Lifting Capacity - 800 lbs.	
SERIAL NUMBER	
A6-00025	
PUMP CODE	CYLINDER
66	14CG
MFG DATE	
08/27/07	
CE e5*72/245*95/54*0110*00	
PATENT PENDING- 5,261,779-6,065,924-6,238,169-6,46 4,447-6,599,079-6,692,217-6,739,824	

Sample Serial No./Series No. Identification Tag

Model No. _____

Series No. _____

Serial No. _____

Pump Code _____

Cylinder Code _____

Date of Manufacture _____

Contents

Troubleshooting and Maintenance

Lift Terminology.....	2
Switch and Sensor Locations	3
Certification Checklist Diagnostic Procedures	4
Platform Fold Pressure Adjustment	5
Platform Angle Adjustment	6-7
Platform Stop Blocks	7
Platform Floor Level Adjustment	8
Notes	9
LCD Lift Codes	10-11
Lubrication Diagram.....	12
Maintenance and Lubrication Schedule.....	13-16
Lift Electrical Schematic	17
Lift Wiring Diagram	18

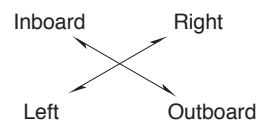
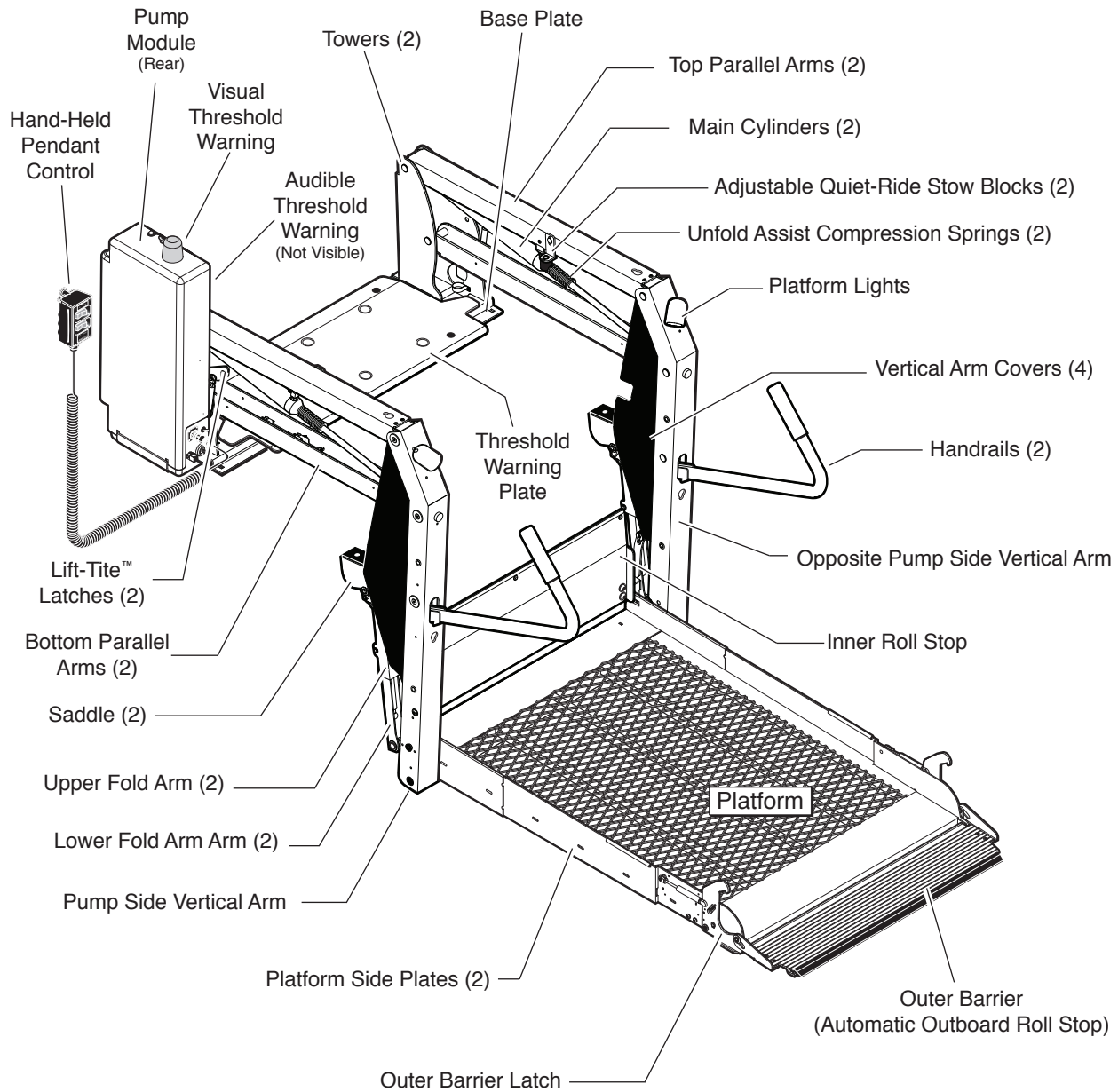
Hydraulics

Hydraulic Schematic	19
Hydraulics Parts List	20
Hydraulics Diagram	21

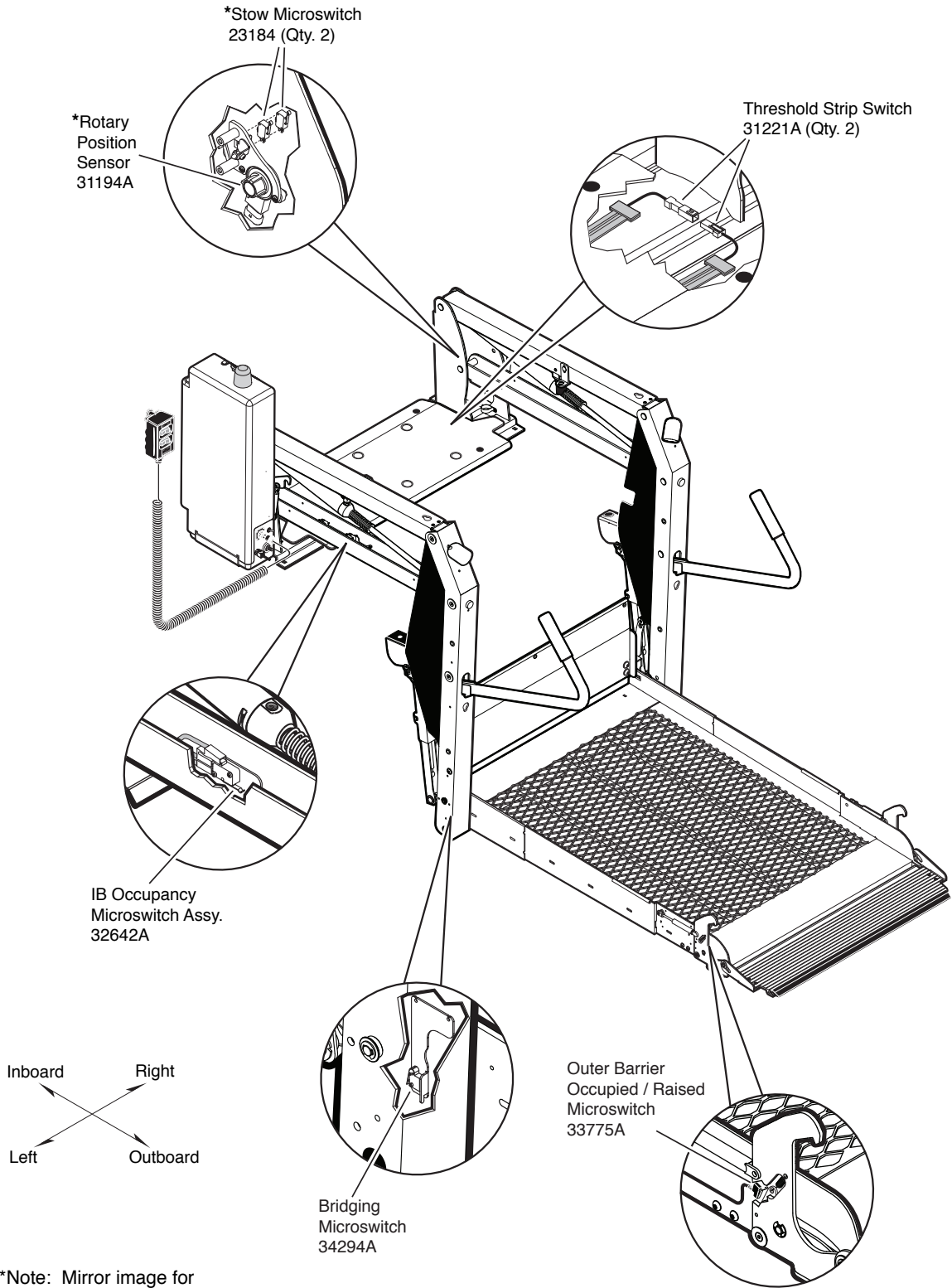
Repair Parts

Pump Module	
Pump Module Parts List	22
Pump Module Diagram	23
Lift Exploded View	
Repair Parts List	24
Exploded View	25
Notes	26

Lift Terminology



Switch and Sensor Locations



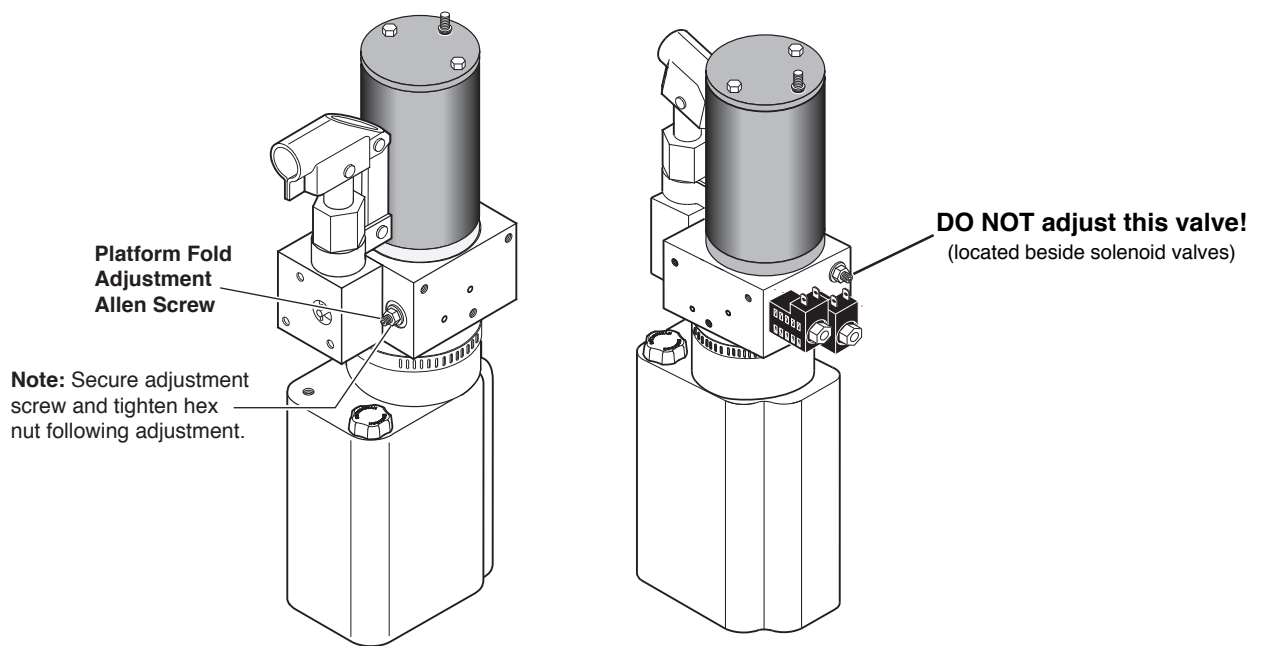
Certification Checklist Diagnostic Procedures

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®.

- Vehicle movement is prevented unless the lift door is closed, ensuring the lift is stowed.
 1. Verify on the pump module mounted interlock connector that the lift not stowed signal (pin 5) has an open signal - OR - lift stowed signal (pin 7) has a +12 volt signal - OR - (pin 9) has a ground signal (depends on interlock used).
 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) has a +12 volt signal.
 2. Refer to the interlock installation instructions.
- The platform will not fold/stow if occupied.
 - Refer to Platform Fold Pressure Adjustment procedures.
- The inner roll stop will not raise if occupied.
 - Call Product Support
- The outer barrier will not raise if occupied.
 - Call Product Support
- Verify platform lighting when lift is deployed and pendant illumination when lift is powered.
 1. Replace bulb(s) in the light housing.
 2. Check fuse (5 amp fuse on circuit board; F13)
- A visual and audible warning will activate if the threshold area is occupied when the platform is at least 1" below floor level.
 1. Remove the threshold warning plate
 2. Verify the threshold strip switch connectors are connected (see illustration on page 3).
 3. Replace the threshold strip switch
 4. Reinstall the threshold warning plate
- 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).
 - Call Product Support.

Platform Fold Pressure Adjustment

1. Position the platform at the floor level loading position.
2. Loosen the hex nut on the adjustment screw (do not remove hex nut).
3. Turn the adjustment screw counter clockwise until the platform does not fold when the Fold button is pressed.
4. Turn the adjustment screw clockwise in 1/4 turn increments and press the Fold button until the platform folds completely (Note: Return the platform to floor level position after each attempt to fold the platform).
5. Turn the adjustment screw an additional 1/8 turn after the platform folds successfully.
6. Tighten the hex nut without moving the adjustment screw.
7. Verify the platform will not stow while occupied.



Platform Angle Adjustment

Adjusting the platform angle based on the relationship of the platform at ground level directly affects the angle of the platform when positioned at floor level.

Unfold the lift and visually examine the angle of the platform when positioned at floor level. Lower the platform fully and note the angle of the platform when it reaches ground level also. The **outboard end of the platform (toe) must contact the ground first** when the platform is lowered (all lift models).

Millennium “NL” Series:

The platform angle **should** be adjusted so there is a balance between the angle at both positions (**equal amount of angle**). **Angle A** should **equal angle B** as shown in Figure C.

Century “NCL” Series:

Vista “NVL” Series:

The platform angle **must** be adjusted so the outboard end of the platform (toe) is angled down slightly when positioned at floor level. See Figure D. The outboard end of the platform **must** contact the ground first to **ensure** the spring-loaded outer **barrier unfolds fully**.

Adjustment Procedures: Adjustment Allen screws are provided on each side of the lift platform for adjusting the platform angle. Details and photos are provided on the opposite page.

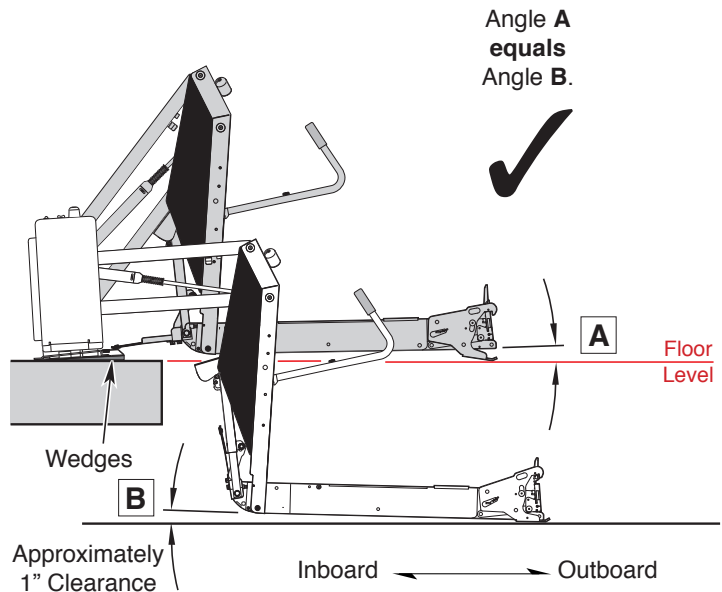
Base Plate Wedges: Installations where base plate wedges are used require more platform angle adjustment than normal.

Platform Stop Blocks: When adjusting platform angle, ensure both **stop blocks are making full contact with the vertical arms** (details on opposite page).

Floor Level Adjustment: Following platform angle adjustment, set floor level positioning as detailed in **Platform Floor Level Adjustment** (details on page 8).

Millennium “NL” Series

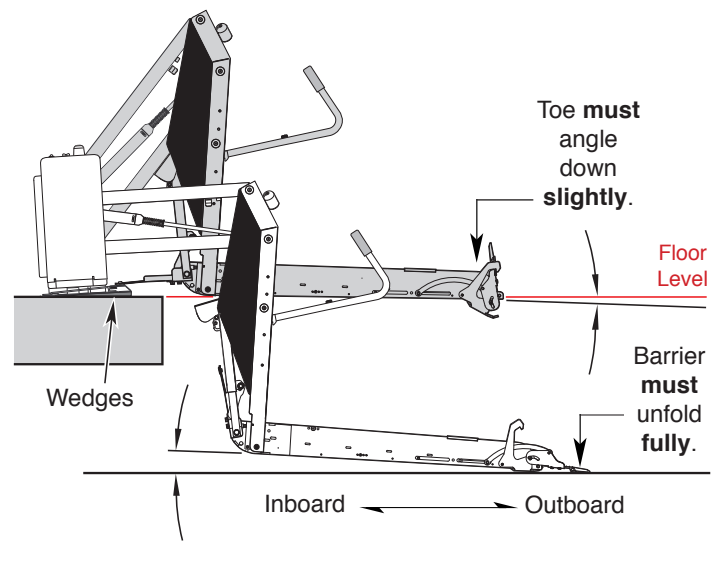
Figure C



Century “NCL” Series

Vista “NVL” Series

Figure D



Platform Angle Adjustment

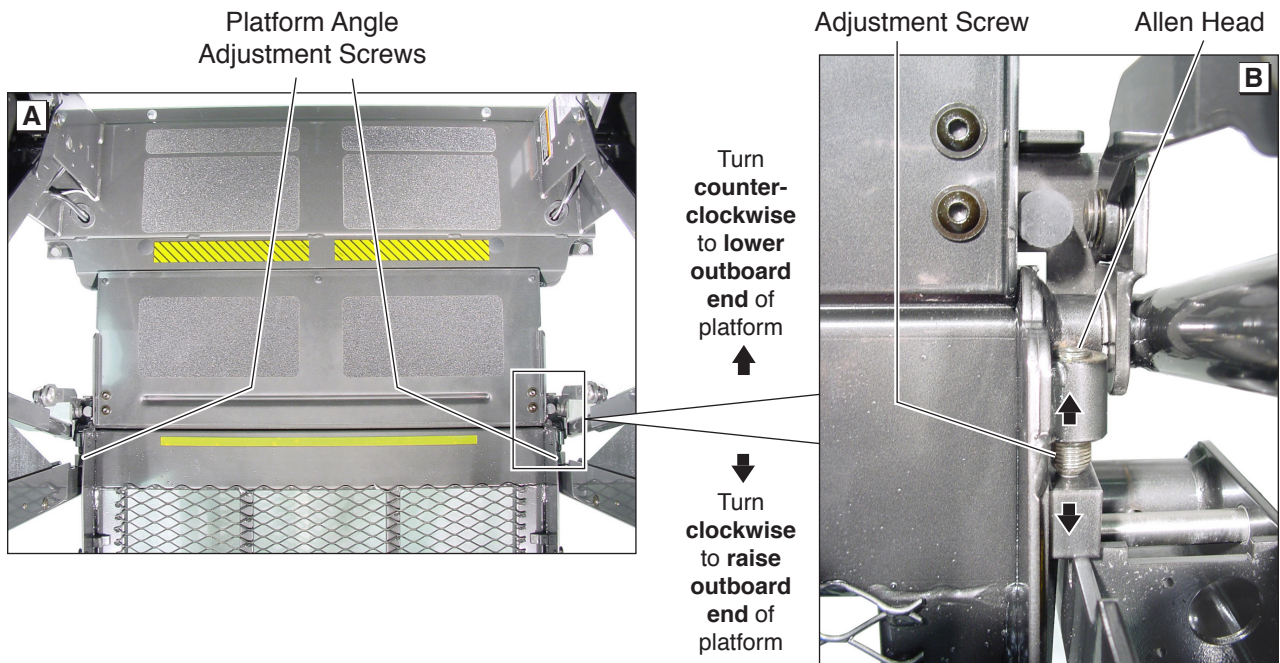
Adjustment Allen screws are provided on each side of the lift platform for adjusting the platform angle. Adjust platform angle as specified on previous page.

To **raise** the **outboard end** of platform - turn adjustment screw **clockwise**.

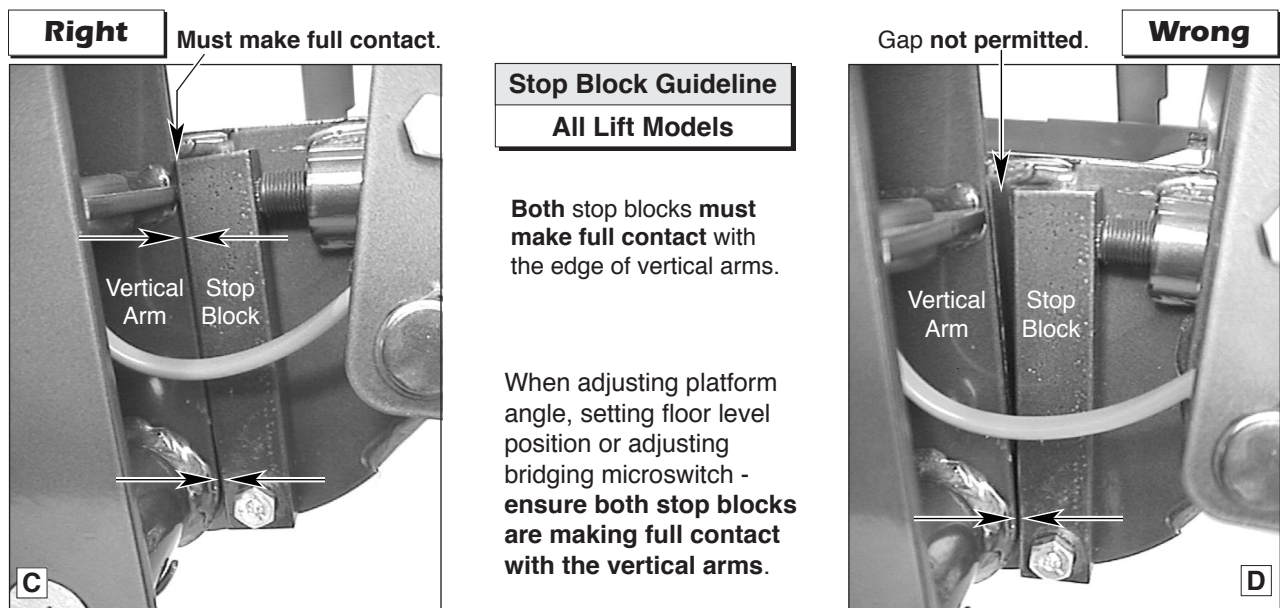
To **lower** the **outboard end** of platform - turn adjustment screw **counterclockwise**.

Note: Both adjustment screws **must be adjusted equally**.

Apply Loctite® to adjustment screws following adjustment.



Platform Stop Blocks



Platform Floor Level Adjustment

Before setting floor level position:

- Adjust platform angle as detailed on page 6.
- Ensure both **stop blocks are making full contact with vertical arms** (details on page 7).

Floor Level Adjustment:

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

Position platform such that:

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

Note: Use hand pump to position platform at proper posi-

tion if unable to stop platform when powering lift.

2. Turn Lift Power switch Off.
3. Press Floor Position Set button (located between pump housing and lift tower).
4. While pressing the Floor Position Set button, turn the Lift Power switch On.
5. Continue pressing the Floor Position Set button until the lift sounds three “beeps.”
6. Release the Floor Position Set button.
7. Cycle lift to verify that platform stops at the set floor level position. **Note:** If platform does not stop at



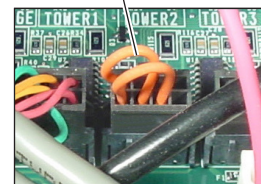
Floor Level Set Button

the intended position - repeat adjustment procedures. If repeating procedures fails - refer to Diagnostics section below.

Diagnostics: Diagnostic codes have been established in event the lift platform floor position does not set (the lift does not sound three “beeps” - see Step 5 above). The control board located inside the pump hous-

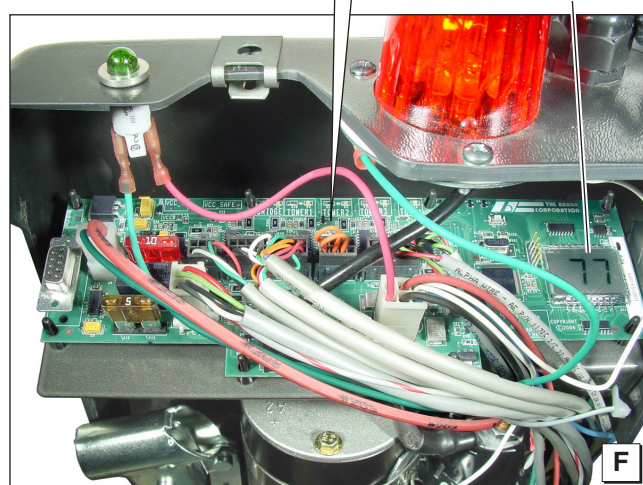
ing is equipped with an LCD screen. Remove the pump cover to access the LCD screen. The following diagnostic codes will help resolve floor position setting problems:

Century/Vista Jumper



- 91 – The platform position is out of a predetermined acceptable range
- 92 – The Bridging Microswitch is not activated (adjust switch or lower the platform)
- 93 – The Inner Roll Stop Occupied switch is not activated (adjust switch)
- 94 – The Outer Barrier Up switch is not activated (adjust switch)
- 95 – The Outer Barrier Latched sensor is not activated (Century and Vista: Verify jumper is installed on the outboard barrier latch switch – see photo at right; Millennium: Check latch)

LCD Screen



NOTES

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LCD Lift Codes

To better understand the Braun LCD Trouble shooting display you must first understand the numbers that appear on the screen. There are Flashing Codes, Solid Error Codes, and Solid Normal Operational Codes.

Flashing Codes #65-89: About 10 seconds after an operation has stopped there are a set of scrolling flashing numbers that indicate whenever a particular sensor or switch has been activated. These numbers will start at number 65 and scroll up to number 89, then start the sequence over. Remember they are not error codes. Keep in mind that the lift will display codes for different positions and certain flashing codes must be present for that position, you will not always get an error code.

Solid Error Codes #50-64: These are the numbers that will come on the screen when the audible and visual alarm goes off, and will direct you to where the problem exists. These numbers will only stay on the screen for about 10 seconds and then the flashing codes will scroll indicating what sensors are active. This sequence of codes will keep repeating. It is important to be looking at the screen when trying to get the lift to fail.

Solid Normal Operational Codes: There are also solid numbers that will appear while and after the lift is moving that indicate the lift operation and platform position.

Troubleshooting Procedures

1. While **looking** at the LCD screen, operate the lift until the failure occurs. Read the number that comes on the display the moment the alarm goes off and the light starts to flash. This code will only stay on the screen for 10 seconds.
2. Look up the number on the correct error code sheet and determine what part on the lift is causing the failure. Go to the part on the lift that is suspected of causing the failure and look for anything obvious like magnets missing, broken wires etc. If nothing is found, the next step is to determine if that sensor is sending a signal to the board.
3. Bring the platform to the level that the sensor should be activated using the backup pump if needed. At this point, look up the flashing code that corresponds to that sensor in the error code sheet, look at the LCD screen and wait for the flashing scrolling numbers to appear. If the number is not included in the scrolling numbers, you know that sensor is the problem. You should then check the harness or try another magnet with the south side of the magnet facing the sensor and see if the number will come up on the display.
4. If the problem is still not found or the harness is suspected, the voltages should to be checked to and from the sensor to find the exact location of the problem. First determine the 3 wire colors for this sensor at the board and understand the 3 voltage readings needed to operate the sensor, the 12V power, 8V power, and the 8V input signal to the PC board when activated by a magnet. First check for a 8V input signal coming from the sensor to the wire going into the PC board, if there is 11V on this wire, the sensor is not being activated by the magnet. Next check the 12V and 8V wires at the PC board plug leading to the sensor. Once verified at the plug on the PC board, the voltages should then be checked at the next plug down on the harness going to the sensor until the location of the problem is found.

Anytime you see the code for that specific switch you will have 8 volts on that colored wire on the 8 or 18 pin connector from that switch. IE: Outboard Barrier is closed "72" will appear on the screen and also 8V will be present on the signal wire from that switch, if no code is present the voltage will be 11V.

LCD Lift Codes

Listed below are codes that the lift controller outputs during lift operation. The codes will be displayed on an LCD screen located on the lift control board inside the pump module. See the Manual Operating Instructions in the operator's manual for pump cover removal instructions.

Non-Flashing Numbers

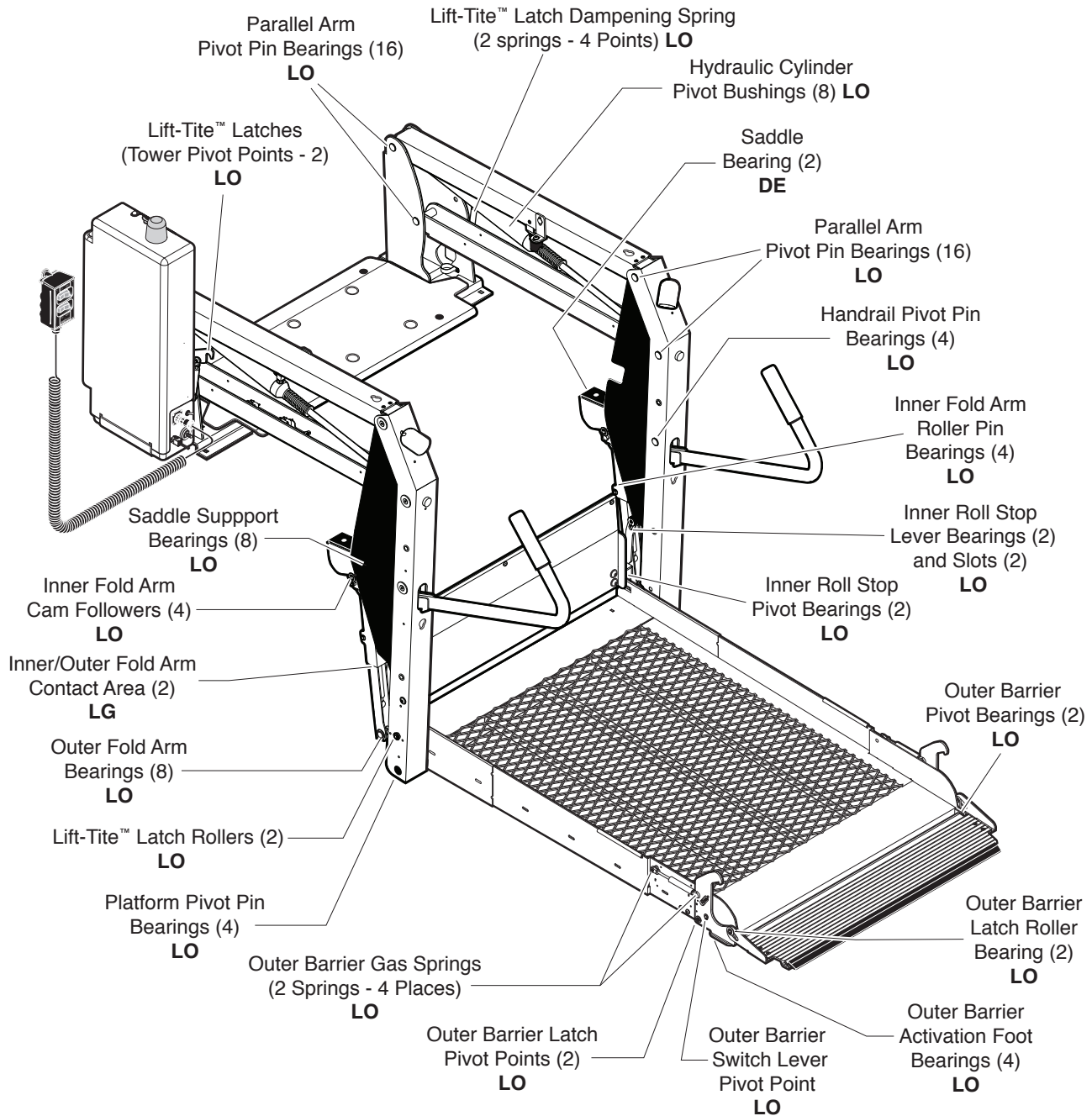
- 01 – Platform stowed
- 02 – Platform unfolding
- 03 – Platform unfolding paused
- 04 – Platform at floor level
- 05 – Platform beginning to lower
- 06 – Platform lowering (threshold cannot be occupied from this point down)
- 07 – Outer barrier moving to horizontal position
- 08 – Platform at ground level
- 09 – Outer barrier moving to vertical position
- 10 – Platform raising
- 11 – Platform raising paused at floor
- 12 – Platform folding (limited pressure)
- 13 – Platform folding (full pressure)
- 14 – Timed fold (cinching lift tite) or (anti-rattle state)
- 15 – Platform folding stopped
- 16 – Paused fold
- 17 – Platform between ground and 3" above ground
- 18 – Platform above 3"
- 19 – Outer barrier moving to horizontal position
- 23 – Outer barrier going back down after occupant detected
- 28 – Illegal function/not defined
- 29 – Interlock fault not recognized (or has been cleared but a motion button is still pressed)
- 30 – Platform location unknown
- 31 – Platform location transition state; attempting to locate position
- 35 – Two or more motion buttons are being pressed
- 36 – The retention belt cannot be buckled while trying to fold or unfold
- 37 – Motion button being pressed is not a valid motion
- 50 – Outer barrier is not up above inboard barrier locked position
- 51 – Threshold is occupied when platform is 1" or more below floor level
- 52 – Inner roll stop is not up and locked below inner roll stop locked position
- 53 – Inner roll stop occupied sensor is not activated between floor and inner roll stop up position
- 54 – Outer barrier is occupied before it is up
- 55 – Outer barrier is not latched when above the inner roll stop locked position (Millennium only)
- 56 – Outer barrier is not up and latched and bridge switch did not deactivate
- 57 – Outer barrier is not up and latched and ground detect switch did not deactivate (Century and Vista only)
- 58 – Outer barrier is not up and latched and the platform is 3" above the ground
- 59 – Outer barrier is not up after pausing platform travel
- 60 – Verify the IB occupied switch is functioning correctly when lift is below floor level. The kickout gas springs might be worn, replace before using.
- 75 – Low voltage detected; must turn off power switch to reset LCD
- 77 – Vehicle secure interlock has not been activated
- 90 – Position will be set if you keep holding the button until it beeps
- 91 – Position is out of a predetermined acceptable range of floor position
- 92 – Bridge switch is not made, needs adjusting
- 93 – Inner roll stop occupied switch is not made, position needs to be moved or switch should be adjusted
- 94 – Outer barrier is not made, fix and try again
- 95 – Outer barrier latch is not made (check for jumper on Century and Vista lifts, check latch on Millennium lifts)
- 99 – Controller program is not valid; replace controller

Flashing Numbers

- Flashing 65 – Unfold button is pressed
- Flashing 66 – Fold button is pressed
- Flashing 67 – Down button is pressed
- Flashing 68 – Up button is pressed
- Flashing 69 – Bridge switch is activated
- Flashing 70 – Outer barrier latch switch is activated
- Flashing 71 – Ground detect switch is activated
- Flashing 72 – Outer barrier up switch is activated
- Flashing 73 – Inner roll stop up switch is activated
- Flashing 74 – Inner roll stop occupied switch is activated
- Flashing 76 – Outboard barrier occupied switch is activated
- Flashing 78 – Threshold tape switch "A" is activated
- Flashing 79 – Threshold tape switch "B" is activated
- Flashing 80 – Position set button is pressed

Maintenance and Lubrication

Lubrication Diagram



See the Maintenance/Lubrication Schedule for recommended applications per number of cycles.

Lubricant	Type	Specified (recommended) Lubricant	Available Amount	Braun Part No.
LO - Light Oil	Light Penetrating Oil (30 weight or equivalent)	LPS2, General Purpose Penetrating Oil	11 oz. Aerosol Can	15807
DE - Door-Ease	Stainless Stick Style (tube)	Door-Ease Stick (tube)	1.68 oz.	15806
LG - Light Grease	Light Grease (Multipurpose)	Lubriplate	14 oz. Can	15805

Maintenance and Lubrication Schedule

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

The maintenance and lubrication procedures specified in this schedule **must** be performed by a Braun authorized service representative at the scheduled intervals according to the number of cycles.

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

When servicing the lift at the recommended intervals, inspection and lubrication procedures specified in the previous sections should be repeated. **Clean** the components and the surrounding area **before applying lubricants**. LPS2 General Purpose Penetrating Oil is recommended where Light Oil is called out. Use of improper lubricants can attract dirt or other contaminants which could result in wear or damage to the components. Platform components exposed to contaminants when lowered to the ground may require extra attention.

Lift components requiring grease are lubricated during assembly procedures. When these components are replaced, grease must be applied during installation procedures. Specified lubricants are available from The Braun Corporation (part numbers provided above).

All listed inspection, lubrication and maintenance procedures should be repeated at "750 cycle" intervals

following the scheduled "4500 Cycles" maintenance. These intervals are a general guideline for scheduling maintenance procedures and will vary according to lift use and conditions. Lifts exposed to severe conditions (weather, environment, contamination, heavy usage, etc.) may require inspection and maintenance procedures to be performed more often than specified.

Maintenance Indicator: The Lift Ready green LED mounted on top of the pump cover will begin to blink after every 750 cycles. The blinking LED will not affect the functions of the lift, but is a reminder to complete necessary maintenance and lubrication.

Once the lift has been serviced, fully stow the lift. Once stowed, press the UP button on the hand pendant and the Floor Level Set button on the back side of the pump cover until the Lift Ready green LED stops blinking.

Discontinue lift use immediately if maintenance and lubrication procedures are not properly performed, or if there is any sign of wear, damage or improper operation. Contact your sales representative or call The Braun Corporation at 1-800-THE LIFT®. One of our national Product Support representatives will direct you to an authorized service technician who will inspect your lift.

WARNING

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

750 Cycles	Outer barrier pivot bearings (2)	Apply Light Oil - See Lubrication Diagram
	Outer barrier latch pivot points (2)	Apply Light Oil - See Lubrication Diagram
	Outer barrier switch lever pivot point	Apply Light Oil - See Lubrication Diagram
	Outer barrier latch roller bearing (2)	Apply Light Oil - See Lubrication Diagram
	Outer barrier gas springs (2 springs - 4 points)	Apply Light Oil - See Lubrication Diagram
	Lift-Tite™ latches (tower pivot points - 2)	Apply Light Oil - See Lubrication Diagram
	Lift-Tite™ latch gas (dampening) spring pivot points (2 springs - 4 points)	Apply Light Oil - See Lubrication Diagram
	Inspect Lift-Tite™ latches and gas (dampening) springs for wear or damage (bent, deformed or misaligned), positive securement (lock nuts / external snap rings) and proper operation	Resecure, replace damaged parts or otherwise correct as needed. Note: Apply Light Grease to Lift-Tite™ latch tower pivot point if replacing latch.
continued	Inspect outer barrier for proper operation	Correct or replace damaged parts.

Maintenance and Lubrication Schedule

<div>continued</div> <div>750 Cycles</div>	Inspect outer barrier latch for proper operation, positive securement, and detached or missing spring(s)	Correct or replace damaged parts and/or relubricate. See Lubrication Diagram
	Adjust fold pressure	See Platform Fold Pressure Adjustment
	Verify FMVSS 403/404 Certification Checklist	See Certification Checklist Diagnostic Procedures
	Inspect lift for wear, damage or any abnormal condition	Correct as needed.
	Inspect lift for rattles	Correct as needed.
<div>1500 Cycles</div> <div>continued</div>	Perform all procedures listed in previous section also	
	Inner/outer fold arms (2)	Apply grease (synthetic) to contact areas between inner/outer fold arms. See Lubrication Diagram
	Platform pivot pin bearings (4)	Apply Light Oil - See Lubrication Diagram
	Outer fold arm bearings (8)	Apply Light Oil - See Lubrication Diagram
	Inner roll stop pivot bearings (2)	Apply Light Oil - See Lubrication Diagram
	Inner roll stop lever bearings (2)	Apply Light Oil - See Lubrication Diagram
	Inner roll stop lever slot (2)	Apply Light Oil - See Lubrication Diagram
	Saddle support bearings (8)	Apply Light Oil - See Lubrication Diagram
	Inner fold arm roller pin bearings (4)	Apply Light Oil - See Lubrication Diagram
	Inner fold arm cam followers (4)	Apply Light Oil - See Lubrication Diagram
	Parallel arm pivot pin bearings (16)	Apply Light Oil - See Lubrication Diagram
	Handrail pivot pin bearings (4)	Apply Light Oil - See Lubrication Diagram
	Hydraulic cylinder pivot bushings (8)	Apply Light Oil - See Lubrication Diagram
	Inspect Lift-Tite™ latch rollers for wear or damage, positive securement and proper operation (2)	Correct, replace damaged parts and/or relubricate. See Lubrication Diagram.
	Inspect inner roll stop for: <ul style="list-style-type: none"> • Wear or damage • Proper operation. Roll stop should just rest on top surface of the threshold plate. • Positive securement (both ends) 	Resecure, replace or correct as needed. See Platform Angle Instructions and Tower Microswitch Adjustment Instructions.
	Inspect handrail components for wear or damage, and for proper operation	Replace damaged parts.
	Inspect microswitches for securement and proper adjustment.	Resecure, replace or adjust as needed. See Microswitch Adjustment Instructions.
	Make sure lift operates smoothly	Realign towers and vertical arms. Lubricate or correct as needed.
	Inspect inner roll stop locks (2) and torsion springs (2) for wear or damage and for proper operation	Replace damaged parts. Apply Light Oil to inner roll stop lock pivot point.

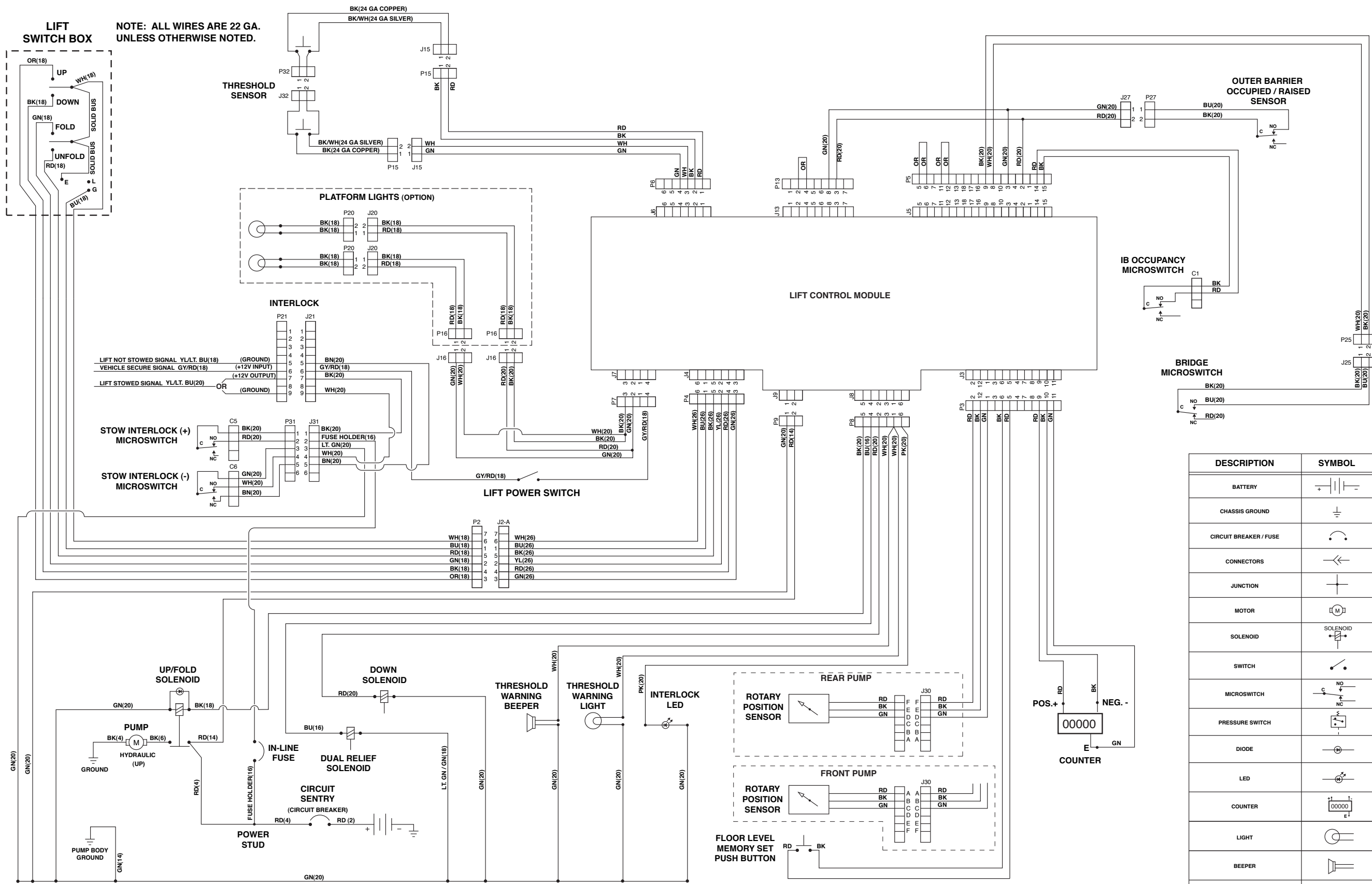
Maintenance and Lubrication Schedule

<p>continued</p> <p>1500 Cycles</p>	<p>Inspect external snap rings:</p> <ul style="list-style-type: none"> • Outer fold arms (6) • Lift-Tite™ latch rollers (2) • Lift-Tite™ latch gas (dampening) springs (4) • Outer barrier latch gas springs (2) • Outer barrier latch pivots (2) • Outer barrier switch lever pivot (1) • Outer barrier latch rollers (2) • Inner fold arm cam followers (4) • Inner fold arm roller pins (4) • Inner roll stop lever bracket pins (2) <p>Inspect outer fold arm pins (2), axles (2) and bearings (8) for wear or damage and positive securement</p> <p>Remove pump module cover and inspect:</p> <ul style="list-style-type: none"> • Hydraulic hoses, fittings and connections for wear or leaks • Harness cables, wires, terminals and connections for securement or damage • Control board, circuit breaker, power switch and lights for securement or damage 	<p>Resecure or replace if needed.</p> <p>Replace damaged parts and resecure as needed. Apply Light Oil.</p> <p>Resecure, replace or correct as needed.</p>
<p>4500 Cycles</p> <p>continued</p>	<p>Perform all procedures listed in previous section also</p> <p>Inspect cotter pins on platform pivot pin (2)</p> <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 cylinders, fittings and hydraulic connections for wear, damage or leaks</p> <p>Inspect parallel arms, bearings and pivot pins for visible wear or damage</p> <p>Inspect parallel arm pivot pin mounting bolts (8)</p> <p>Inspect platform pivot pins, bearings and vertical arms for wear, damage and positive securement</p> <p>Inspect inner/outer fold arms, saddle, saddle support and associated pivot pins and bearings for visible wear or damage</p> <p>Inspect gas springs (cylinders - 6) for wear or damage, proper operation and positive securement</p> <p>Inspect saddle bearing (UHMW - 2)</p> <p>Inspect vertical arm plastic covers</p>	<p>Resecure, replace or correct as needed</p> <p>Use Braun 32840-QT (Exxon® Unis HVI 26) hydraulic fluid (do not mix with Dextron III or other hydraulic fluids). Check fluid level with platform lowered fully and roll stop unfolded fully. Fill to within 1/2" of the bottom of the 1-1/2" fill tube (neck).</p> <p>Tighten, repair or replace if needed.</p> <p>Replace if needed.</p> <p>Tighten or replace if needed.</p> <p>Replace damaged parts and resecure as needed. Apply Light Grease during reassembly procedures.</p> <p>Replace if needed.</p> <p>Tighten, replace or correct as needed</p> <p>Apply Door-Ease or replace if needed. See Lubrication Diagram.</p> <p>Resecure or replace if needed.</p>

Maintenance and Lubrication Schedule

<div>continued</div> <div>4500 Cycles</div>	<div>Inspect power cable</div> <div>Resecure, repair or replace if needed.</div> <div>Mounting</div> <div>Check to see that the lift is securely anchored to the vehicle and there are no loose bolts, broken welds, or stress fractures.</div> <div>Decals and Antiskid</div> <div>Replace decals if worn, missing or illegible. Replace antiskid if worn or missing.</div>
<div>Consecutive 750 Cycle Intervals</div>	<div>Repeat all previously listed inspection, lubrication and maintenance procedures at 750 cycle intervals.</div>

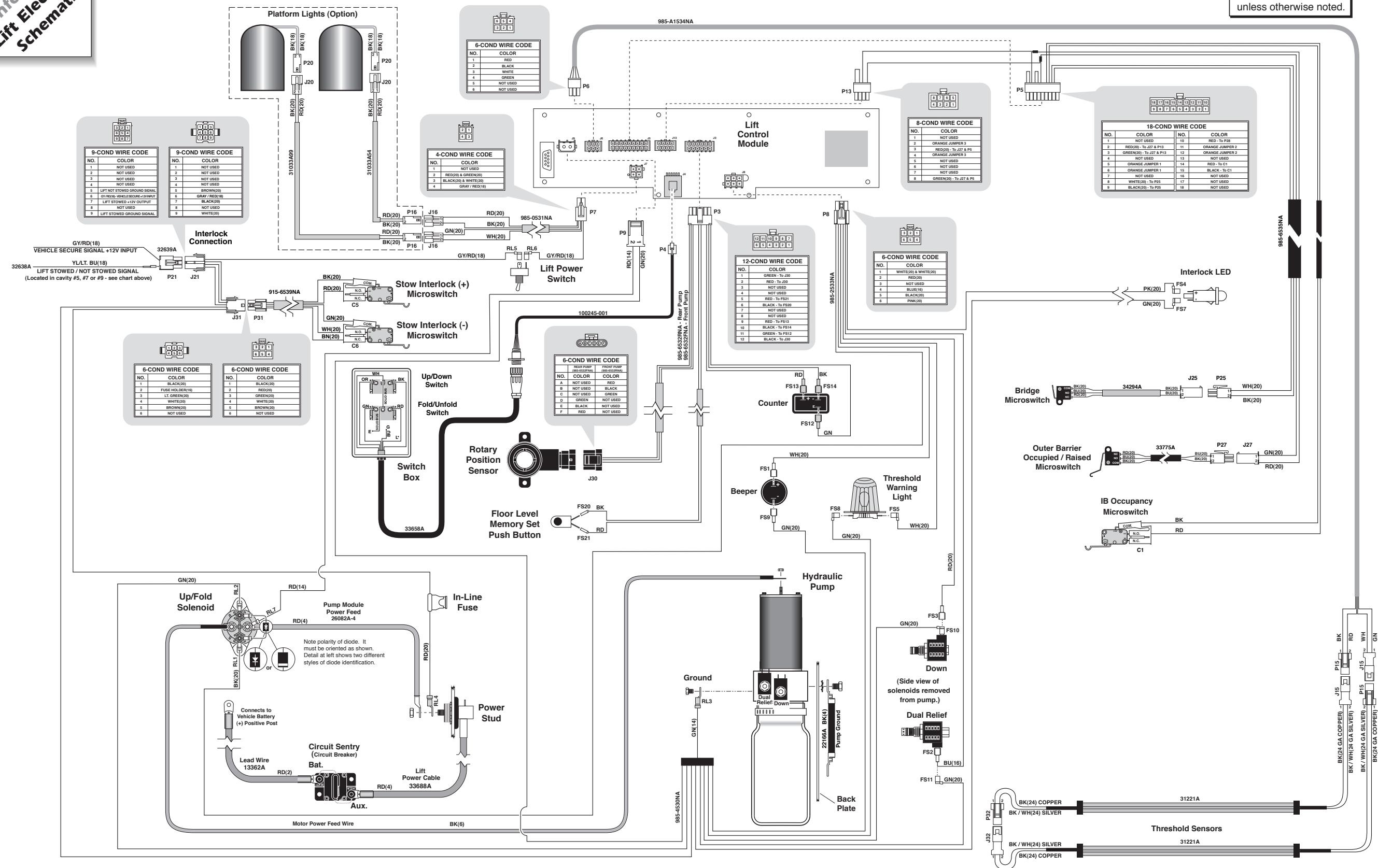
Lift Electrical Schematic



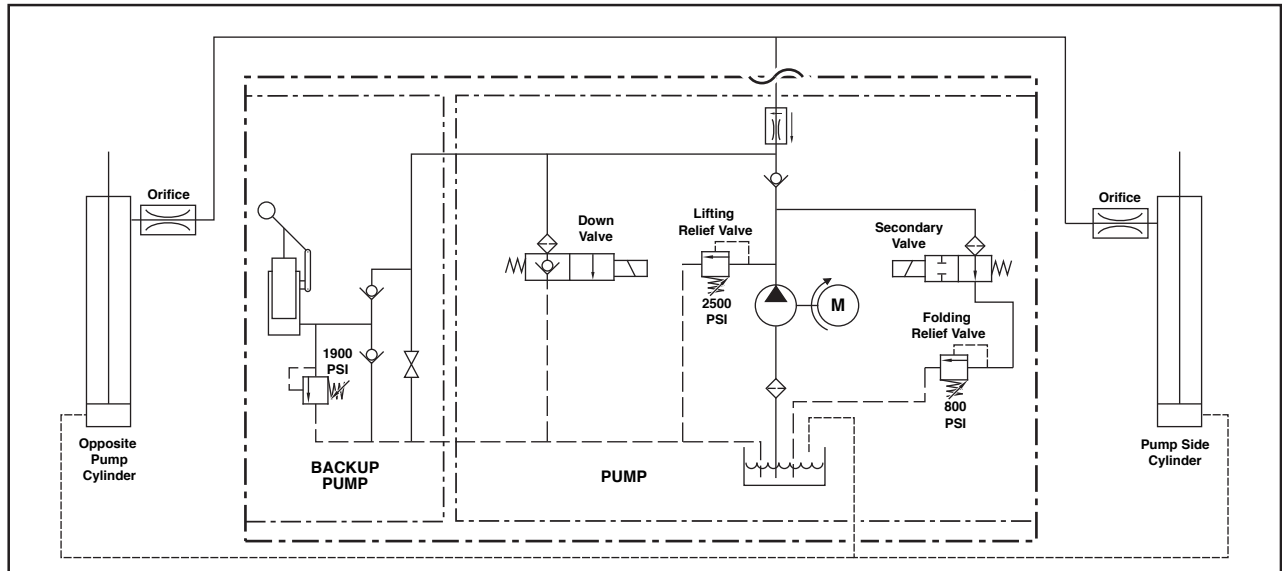
Note: Shown with lift in stowed position.

**Unfold for:
Lift Electrical
Schematic**

Note: All wires 22 GA.
unless otherwise noted.



Hydraulic Schematic



Description	Symbol	Description	Symbol
Fixed Displacement Pump		Hydraulic Port	
Pump Motor		2 Way 2 Position Solenoid Valve	
Backup Pump		Pressure Compensated Flow Control	
Single Acting Cylinder		Relief Valve	
Check Valve		Filter Screen	
Unfold Orifice		Vented Reservoir	
Manual Shutoff Valve			

Hydraulics Parts List

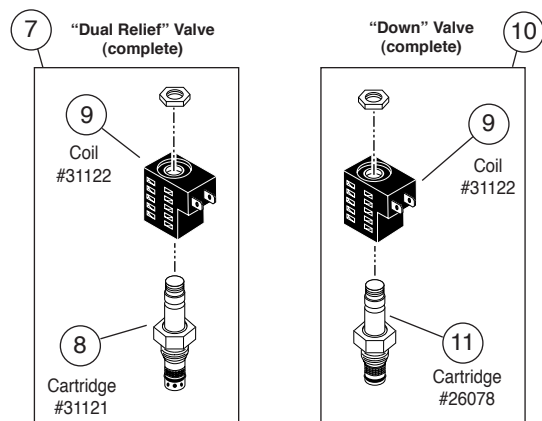
Item	Qty.	Description	Part #
1	1	Pump Assembly (M-268-0116) 120G / 12V / Dual Relief	32858-12V
2	1	Lead Wire Assembly, #6 Gauge	29049
3	2	Nut, #10-32 Serrated Flange	83080
4	1	Diode Assembly, Up Solenoid	73906A
5	1	Solenoid, 4-Post - Trombetta (Flat Mount)	31374
6	1	Motor, Pump - 12 Volt - Low RPM	29690
7	1	Valve Assembly, "Dual Relief" (complete)	31120K
8	1	Cartridge (only), "Dual Relief" Valve - (shown below)	31121
9	2	Coil (only) - (shown below)	31122
10	1	Valve Assembly, "Down" (complete)	31348K
11	1	Cartridge (only), "Down" Valve - (shown below)	26078
12	3	Screw, 1/4-20 x 2-1/4", Allen Head	26080
13	1	Hand Pump (Backup) with O-Rings (Item 14)	26074
14	4	O-Ring (only), Hand Pump Mounting	17351
15	1	Clamp, Reservoir - H-48 (M259)	17069
16	1	Reservoir, Hydraulic Fluid	30160
17	1	Cap, Reservoir Filler - Screw On	30167
18	1	Fitting, 90° - 1/8" NPT x 1/8" Barb - Plastic	87563
19	1	Connector, Plastic "Y", 1/8" O.D.	18877
20	1	Hose, Thermal Plastic - Black, 1/8" I.D.	23742R* (6")
21	1	Handle with Grip	17206A
22	1	Fitting, Male 7-16-20 SAE O-Ring to Male 7/16-20 JIC 37°	24504
23	1	Elbow, 7/16-20 JIC 37 Female Swivel (1) - 7/16-20 JIC 37° Male (2)	26579
24	1	Hose Assembly, 1/8" (Opposite-Pump-Side)	16004A-086
25	1	Hose Assembly, 1/8" (Pump-Side)	16004A-046
26	2	Elbow, 90°, 7/16-20 SAE O-Ring Male - 7/16-20 JIC 37° Male, Orifice	26667
27	2	Cylinder ✓	C1514.3-10408
28	2	Elbow, 90°, 1/4 NPT Male to 1/4" Barbed	15150
29	1	Hose, Thermal Plastic - Black, 1/8" I.D.	23742R* (68")
30	1	Hose, Thermal Plastic - Black, 1/8" I.D.	23742R* (30")

✓ **Seal Kits:** If repairing a cylinder, order Seal Kit #1500-0500P.

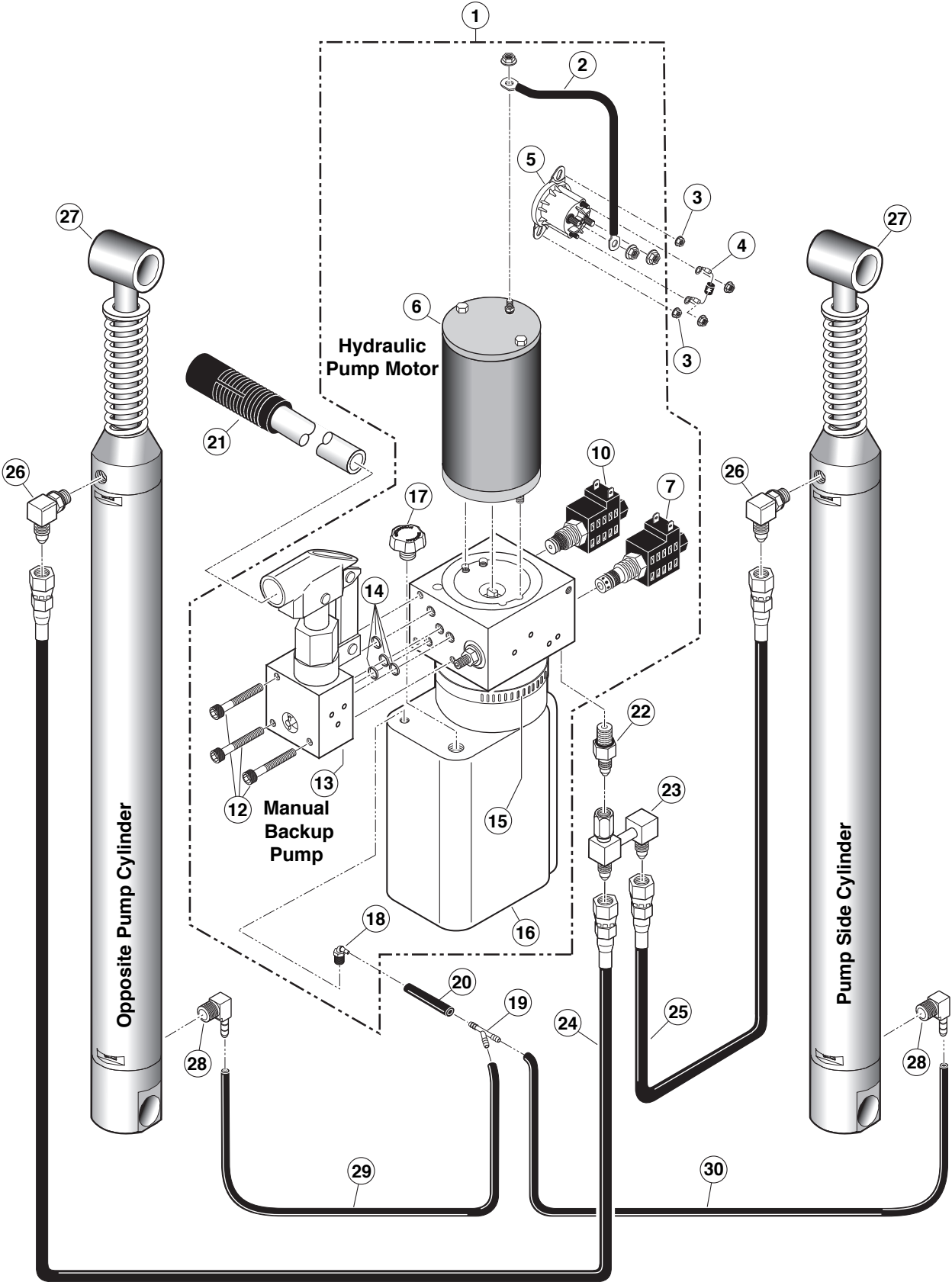
* Raw material items ordered and priced per inch (order specified length).

Hydraulic Fluid

When adding or changing hydraulic fluid, use Braun 32840-QT (Exxon® Unisolv HVI 26) hydraulic fluid (**do not mix** with Dextron III or other hydraulic fluids).



Hydraulics Diagram



Pump Module Parts List

[illegible]

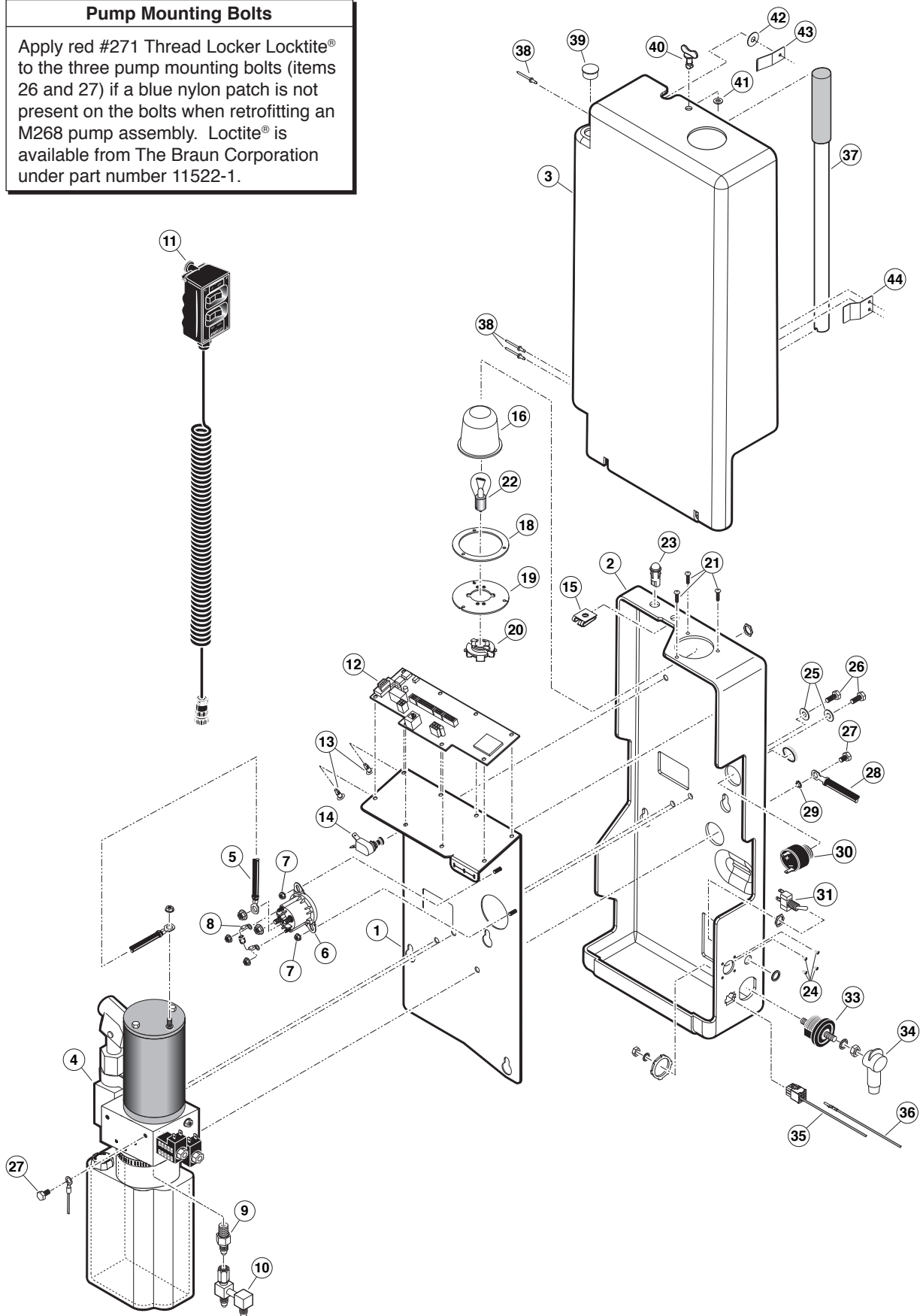
* Apply red #271 Thread Locker Loctite® to the four hex bolts (items 26 and 27) if a blue nylon patch is not present on the bolts when retrofitting an M268 pump assembly. Loctite® is available from The Braun Corporation under part number 11522-1.

◆ Indicates items available for replacement part purposes **only**. These items **are not** included with replacement pump modules.

Pump Module Diagram

Pump Mounting Bolts

Apply red #271 Thread Locker Locktite® to the three pump mounting bolts (items 26 and 27) if a blue nylon patch is not present on the bolts when retrofitting an M268 pump assembly. Locktite® is available from The Braun Corporation under part number 11522-1.



Repair Parts

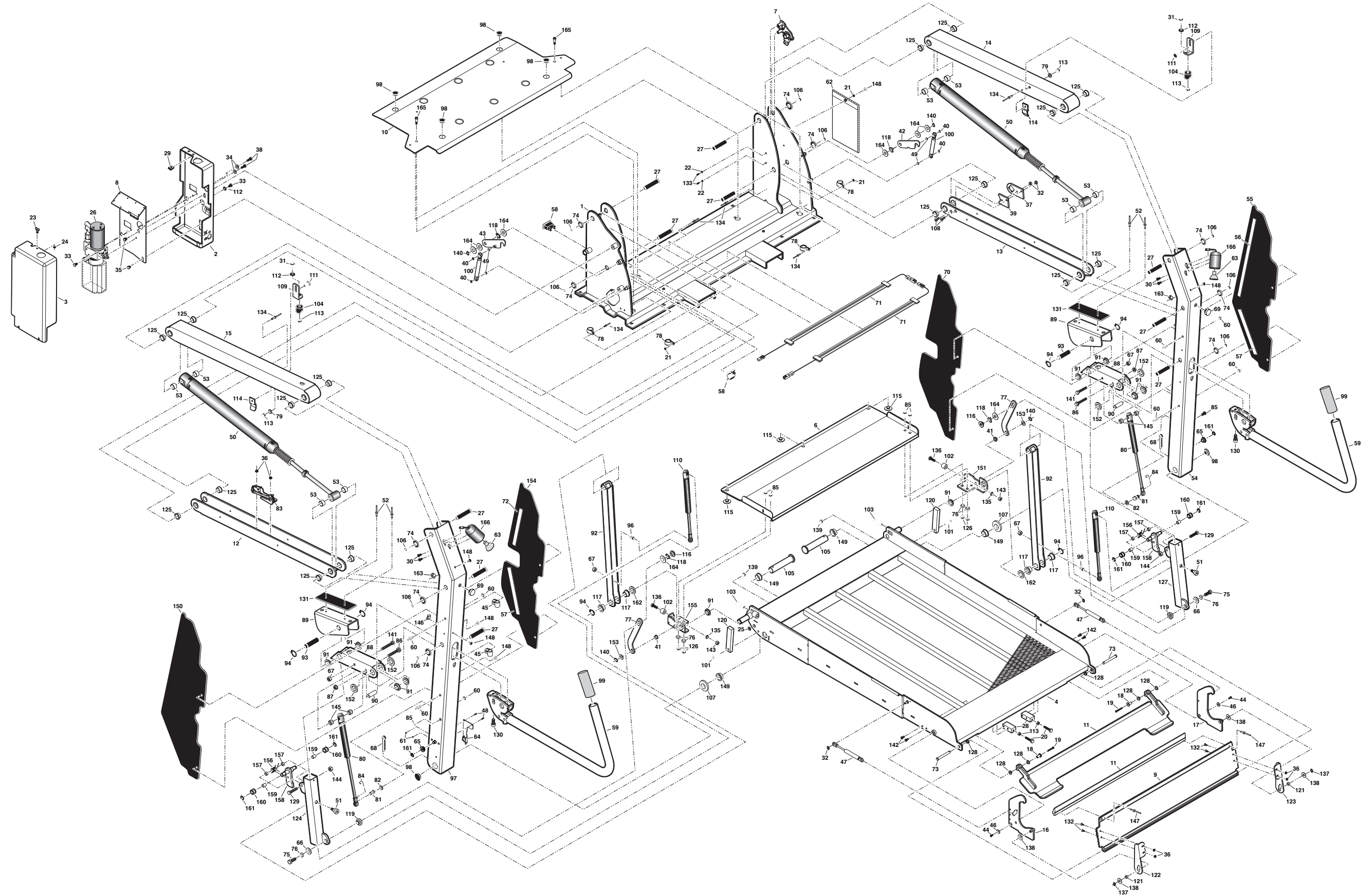
Part Numbers of Items Dedicated per Lift Model

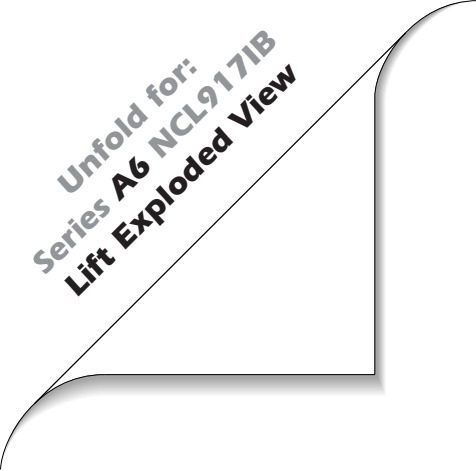
Item	Qty.	Description	NCL917IB	NCL917FIB	NCL919IB	NCL919FIB
1	1	Base Weldment	985R6148NW33	985F6148NW33	985R6148NW34	985F6148NW34
2	1	Cover, Pump, 2-Piece, Back-Bottom	915-0513RNPT	915-0513FNPT	915-0513RNPT	915-0513FNPT
3	1	Cover, Pump, 2-Piece, Top-Front	915-0519RNPT	915-0519FNPT	915-0519RNPT	915-0519FNPT
4	1	Platform Weldment	985-63351NW	985-63351NW	985-63451NW	985-63451NW
5	1	Outer Barrier	945-0312NY	945-0312NY	945-0312N34Y	945-0312N34Y
6	1	Inner Roll Stop	915-0147NWY	915-0147NWY	915-0147NW34Y	915-0147NW34Y
7	1	Assembly, Rotary Position Sensor	31094A	31094RA	31094A	31094RA
8	1	Plate, Backing/Mounting	985-2501RN	985-2501FN	985-2501RN	985-2501FN
9	1	Rubber Nose	32862-33	32862-33	32862-34	32862-34
10	1	Base Cover Assembly (Traction Tape Not Shown)	975-5148CNA33Y	975-5148CNA33Y	975-5148CNA34Y	975-5148CNA34Y
11	1	Outer Barrier Actuation Foot	945-0200NW-33	945-0200NW-33	945-0200NW-34	945-0200NW-34
12	1	Parallel Arm Assy., Bottom w/Bearings and Sensors - Rear	917-4458FNA	985-6458NA	917-4458FNA	985-6458NA
13	1	Parallel Arm Assy., Bottom w/Bearings-Front	917-4458RNA	917-4457NA	917-4458RNA	917-4457NA

Part Numbers of Items Identical on All Lift Models

Item	Qty.	Description	Part No.	Item	Qty.	Description	Part No.
14	1	Parallel Arm Assy., Top-Front w/Bearings	917-6419FNA	97	1	Vertical Channel Weldment, Rear	945-2448RNW
15	1	Parallel Arm Assy., Top-Rear w/Bearings	917-6419RNA	98	6	Plastic End Cap, 1" I.D. x 1 1/4" O.D.	20474
16	1	Roll Stop Latch/Occupied Switch Assembly	945-2206RNA	99	2	Grip, Handle, Yellow	19074
17	1	Latch, Roll Stop - Front	945-0206FN	100	2	Spring, Dampener, Retract	26963
18	2	Standoff, Foot Mount	32759	101	2	Bolt, 5/16-18 x 1 1/4" Low Socket Hd., Cap, Bk.	26327
19	2	Screw, 10-32 x 1.25" SHCS	40-1092-0	102	2	Bumper, 1" x 5/8" Long	33603
20	2	Bolt, 5/16-18 x 1", Hex Cap	10013	103	2	Screw, 1/2-20 x 1 1/2" Set Lock, Black	18663
21	3	Washer, #10, Flat, Auto BK	11541	104	2	Block, Guide-Platform Stow	28593
22	2	Washer, External Tooth	83588	105	2	Pin, Platform	975-2325
23	1	Stud, Wing Head	28804	106	10	Screw, 5/16-18 x 3/4", SHFS	25527
24	1	Retainer, Push-On	28805	107	2	Spacer, UHMW, Vertical Channel	945-0320N
25	1	Grommet, ID .312", FR .250", GD .813" T500"	27726	108	2	Screw, 1/4-20 x 3/4", Flat Head Countersink	28986
26	1	Pump Assembly, (M268 with Backup Pump)	32858-12V	109	2	Bracket, Mounting, Quiet Ride	955-2392CLXT
27	10	Pin, Pivot, Parallel Arm	936-0403	110	2	Gas Spring, 12.2" Extended/8.3" Compressed	30550A
28	2	Bracket, Split Foot Adjust	33411	111	2	Bolt, 5/16-18 x 3/4", Carriage, Black	15858BK
29	1	Receptacle, Clip-On	28803	112	3	Washer, 5/16", External Tooth	16368
30	4	Screw, #10-32 x 1/2" BHSCS, Auto, Black	30375	113	6	Nut, 5/16-18 Hex	10058
31	2	Bolt, 5/16-18 x 3/4", BHSC, Auto, Black	24440	114	2	Bracket, Inner Side Panel Guide	915-0703
32	2	Snap Ring, 5/16" External	24570	115	3	Bearing, UHMW, Flat, Thin, Black	916-5406
33	2	Bolt, 5/16-18 x 1/2" Nylock, Hex	10012	116	2	Pivot, Bridge Plate Lever, Upper, Inside	916-5433
34	2	Washer, 5/16" Flat	10063	117	4	Bearing, Flange - 3/4" x 1/2"	24027
35	2	Bolt, 3/8-16 x 1/2" Nylock, Hex	29729	118	4	Washer, Finger, Disc Spring	27276
36	6	Nut, #10-32 w/Lockwasher	18349	119	2	Pivot, Inner Roll Stop	916-5434
37	1	Position Sensor Collet	31093	120	2	Block, Platform Stop	900-0311
38	2	Bolt, 5/16-18 x 3/4" Nylock, Hex	29608	121	2	Bearing, Platform Slide	945-0336N
39	1	Position Sensor Spacer	31092	122	1	Bracket, Latch / Roll Stop - Rear	945-0202RN
40	6	Snap-Ring 5/16"	24570	123	1	Bracket, Latch / Roll Stop - Front	945-0202FN
41	2	Bearing, Flange, 1/2" x 1/4"	24442	124	1	Weldment, Tube-IB Fold Arm-Rear	985-0625RNW
42	1	Weldment, Latch, Lift/Tite, Rear	27013RW	125	16	Bearing, Flange, 3/4" x 3/8"	24011
43	1	Weldment, Latch, Lift/Tite, Front	27013FW	126	4	Nut, 3/8-16, Hex	10059BK
44	2	Screw, 10-32 x 3/8", FL HD SKT	24537	127	1	Weldment, Tube-IB Fold Arm-Front	985-0625FNW
45	2	Clip, Cable, 5/16", Plastic	26948	128	6	Bearing, Plastic Flange, 3/8 I.D. x 1/4"	24028
46	2	Adapter, Cyl/Roll Stop Lever-Out	990-0341	129	2	Bolt, 5/16-18 x 1 1/2" Hex Head, Cap	10014
47	2	Gas Spring, 3.54" x 9.65" - 30lb	32831	130	2	Bolt, 7/16-20 x 1", SHCS, w/Nylock Patch	28474
48	2	Screw, #4-40 x 3/8" RD HD	11481	131	2	Slide, UHMW, Platform Rotate	31677
49	4	O-Ring, 5/16" I.D. x 1/16" O.D.	26614	132	4	Screw, #10-32 x 1/2, Flat Head-Hex w/Patch	17192P
50	2	Cylinder, 14.625"/29.146" Retracted	C1514.3-10408	133	2	Screw, 1/4-20 x 3/4" BHSCS 18-8 SS	81068-000
51	2	Screw, Socket Head, 3/8-16 x 1/2" with 1/2" Shoulder	25929	134	6	Rivet, Pop, 3/16"- .25"/.38", Black	14993
52	4	Rivet, Pop, 3/16" - .13/.25" - SD64BS	11513	135	2	Washer, 1/4" External Tooth, Lock	83588
53	8	Bushing, 3/4" I.D. x 1/2"	900-0456	136	2	Bolt, 1/4-20 x 1", Hex	10001
54	1	Vertical Channel Weldment, Front, 48"	945-2448FNW	137	2	Ring, 3/8" Retaining Snap	13889
55	1	Cover, Plastic, Parallel Arm, O/S Front-w/Tape	915-0704NA	138	4	Washer, Thrust, .875" O.D., .50" I.D., .0585"T	29371
56	2	Tape, 1" Wide S-Face Foam, x 14" (1 Shown)	82015R014	139	2	Nut, 5/16-18, Top Lock, Black	28324BK
57	4	Tape, 1" Wide S-Face Foam, x 10" (2 Shown)	82015R010	140	4	Snap-Ring 1/2"	13273
58	1	Cycle Counter-LCD Without Reset	30547	141	2	Bolt, 3/8-16 x 2", Hex Head, Cap	10027
59	2	Handrail Weldment	945-0618NW	142	4	Bolt, 1/4-20 x 3/4" BHCS, Nylock, BKZN	25371
60	8	Rivet, Push In - 8MM	30063	143	2	Nut, 1/4-20 Hex	10057
61	2	Weld Nut, #4-40 x 1/8" Barrel	32949	144	2	Nut, 5/16-18 Hex, Lock	11387BK
62	1	Bag, Vinyl - 7" x 10"	31174	145	4	Spacer, UHMW-.75" O.D. x .39" I.D. x .25"	30227
63	2	Bulb, Light 20-W, Halogen Reflector	31060	146	1	Clamp, 1/4" I.D. - Nylon Loop	84396
64	1	Bridge Switch Assembly w/Harness	33689A	147	2	Rivet, Pop, 3/16" x .06"/.13"	11512
65	2	Roller, Lift-Tite	32734	148	8	Rivet, Snap, .201" x .256"/.295"	26362
66	2	Washer, 3/8" Flat, Black	10064	149	4	Bearing, Flange, 1" x 1/2-16FDU08	28031
67	4	Nut, 3/8-16, Hex Lock	13617	150	1	Cover, Plastic, Parallel Arm, O/S Rear-w/Tape	915-0702NA
68	2	Cotter Pin, 1/4" x 2", Black	15886BK	151	1	Weldment, Bridgeplate Bracket, Front	985-0431FNW
69	2	Bumper, Rubber - Vertical Channel	32408	152	4	Spacer, Handrail, .375" Thk. UHMW	995-0301
70	1	Cover, Plastic, Parallel Arm, I/S Front-w/Tape	945-0701NA	153	2	Washer, .516" I.D. x .75" O.D. x .250", Black	25336
71	2	Threshold Strip Switch	31221A	154	1	Cover, Plastic, Parallel Arm, I/S Rear-w/Tape	945-0703NA
72	2	Tape, 1" Wide S-Face Foam x 7" (1 Shown)	82015R007	155	1	Weldment, Bridgeplate Bracket, Rear	985-0431RNW
73	2	Pin, Clevis 3/8 x 3" EFF, LEN. w/o Hole, Black	24932BK	156	2	Spring, Torsion - .366 I.D. x .05"	30386
74	10	Washer, 1/2" Flat Black Zinc	25346	157	4	Spacer, IB Lock	30394
75	2	Bolt, 3/8-16 x 1", Hex	10025	158	2	Weldment, IB Lock	985-0630NW
76	6	Washer, 3/8", Lock, Black	10069BK	159	4	Bearing, 3/8" I.D. x 1/2" Long	30405
77	2	Lever, Inboard Barrier	985-0404N	160	4	Roller, .65" O.D. x 1/2" Long	985-0631N
78	4	Clamp, Insulate, 1 3/8" I.D.	29765	161	6	E-Clip, 3/8" Shaft	84383
79	2	Washer, 5/16" Lock, Black	10068	162	2	Spacer, Handrail, .230" Thk. UHMW	911-5301
80	2	Gas Spring, Fold Arm	29186	163	2	Clamp, 1/2" I.D. - Nylon Loop	10092
81	2	Ball Stud, Gas Spring, 13MM x 3/8-16 F. Thread	29185	164	8	Washer, .516" I.D. x 1" O.D. x .0269", Auto BK	15328
82	2	Washer, 3/8", Lock	10069	165	2	Bolt, Shoulder, 5/16" x 5/8" - 1/4-20	31816
83	1	Assembly, IB Occupied	33779A	166	2	Light Assy, Vertical Channel	31062A
84	2	Clip, Safety, 3/8-16 x 3/4", Flange	12608				
85	6	Bolt, 3/8-16 X 3/4", Flange Button Head, Socket Cap	25171				
86	2	Bolt, 5/16-18 x 2", Flange, Hex	25130				
87	2	Nut, 5/16-18, Serrated Flange	25131				
88	2	Arm, Slide Support (Replace In Pairs)	985-6612N				
89	2	Slide, Platform, Rotate, Weldment	985-0606N				
90	2	Spacer, .5" O.D. x .334" I.D. x 1.515" LG	25132				
91	10	Bearing, Flange, 3/4" x 1/4"	24012				
92	2	Weldment, Platform Pivot Arm - 48"	985-0640NW-BKN				
93	2	Pin, Pivot, Lower Arm	900-0413N				
94	6	Ring, Snap, 3/4", External	18657				
95	2	Bearing, UHMW, Flat, 1.226"	205-1760				
96	2	Ball Stud, 10MM	21301				

48" Floor-to-Ground Lift Exploded View





NOTES

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"Providing Access to the World"®



**Over 300 Braun
Dealers Worldwide**

 **THE BRAUN
CORPORATION®**
"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

Braun™ Five-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 up to five years*, providing the lift is installed, 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 into service, providing the warranty registration card is completed and received by The Braun Corporation within twenty days of purchase. If no warranty card is received, the warranty will expire three years from the date of manufacture as identified on the lift serial number tag.

This warranty also covers the cost of labor for the repair (or replacement at Braun's sole option) of parts for three years when performed by an approved Braun Dealer. (A labor schedule determines cost allowance for repairs, which can be provided upon request by an approved Braun Dealer).

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, incidental or consequential damages related to the lift, or vehicle in which it is installed.

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.

* The five-year portion of this warranty covers the following lift's power train parts:

- Cable ▪ Cylinder ▪ Flow Control ▪ Gear Box ▪ Motor ▪ Pump ▪ Hydraulic Hose & Fittings
- Solid State Controller

All remaining lift components are covered by a three-year warranty.

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® 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.



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



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August 2008