



Service Manual for:

# **NL**

## **Millennium 2**

### **Series**

**Public Use Wheelchair Lifts**

## **Series AD**

### **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

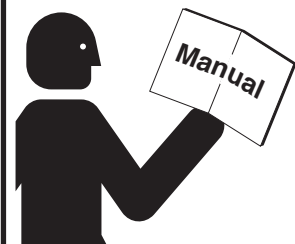


**4-12  
UPDATE**

**33836 Rev. B**  
**March**  
**2008**

Patent #5,261,779	Patent #6,599,079
Patent #6,065,924	Patent #6,692,217
Patent #6,238,169	Patent #6,739,824
Patent #6,464,447	Patents Pending

### **! WARNING**



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

**Braun Millennium 2 Series**

## Congratulations

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

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

Braun Millennium 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	
NL917FIB-2 AD-00025 64 14BI	
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#	
NL917FIB-2	
Max. Lifting Capacity - 800 lbs.	
SERIAL NUMBER	
AD-00025	
PUMP CODE	CYLINDER
64	14BI
MFG DATE	
02/26/07	
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
Outer Barrier Fold Pressure Adjustment .....	5
Platform Angle Adjustment .....	6-7
Platform Stop Blocks .....	7
Tower Microswitch Adjustment.....	8
Lubrication Diagram.....	9
Maintenance and Lubrication Schedule.....	10-12
Lift Electrical Schematic .....	13
Lift Wiring Diagram .....	14

## Hydraulics

Hydraulic Schematic .....	15
Hydraulics Parts List .....	16
Hydraulics Diagram .....	17

## Repair Parts

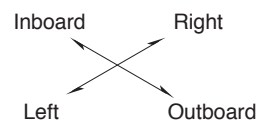
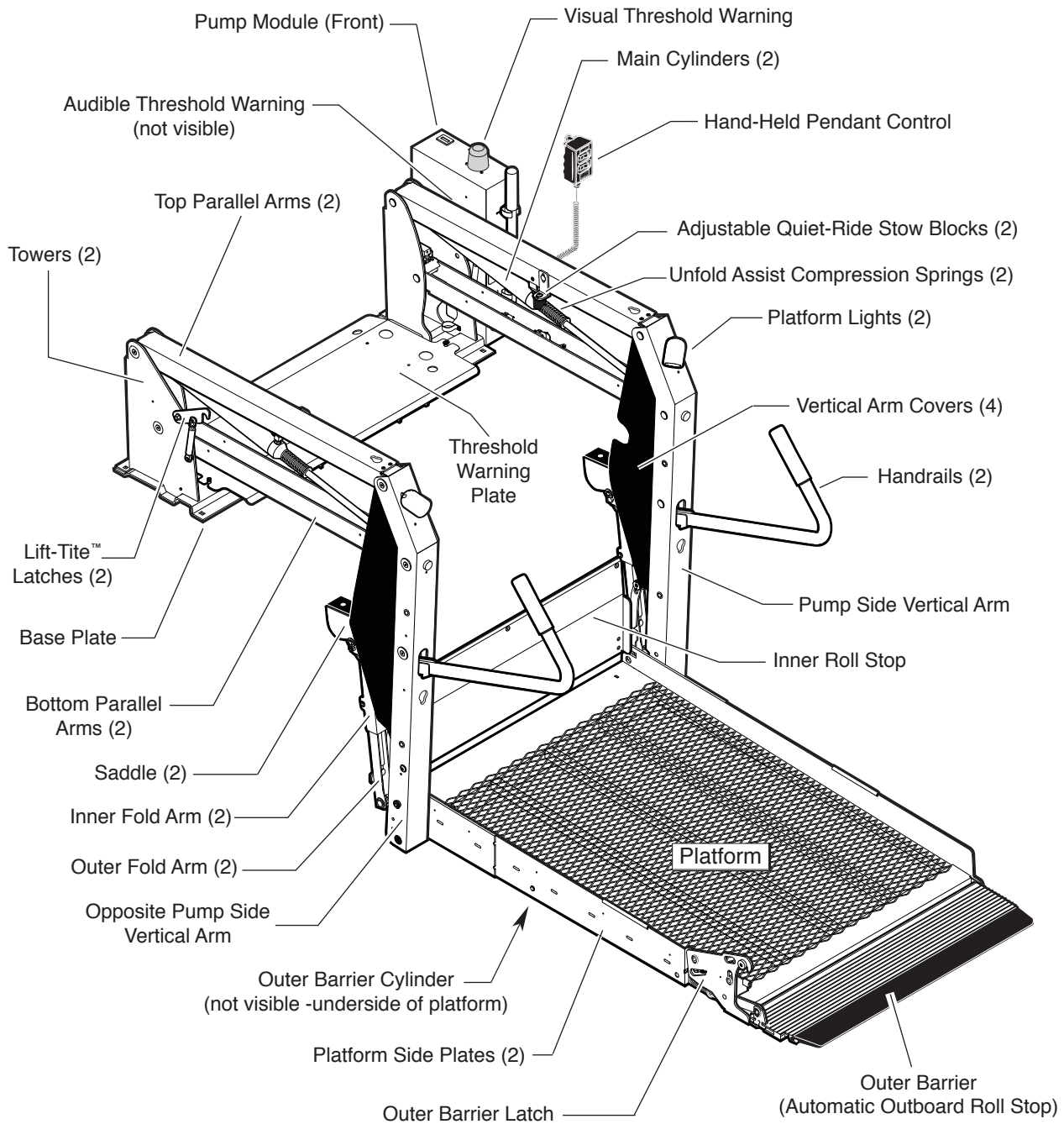
### Pump Module

Pump Module Parts List .....	18
Pump Module Diagram .....	19

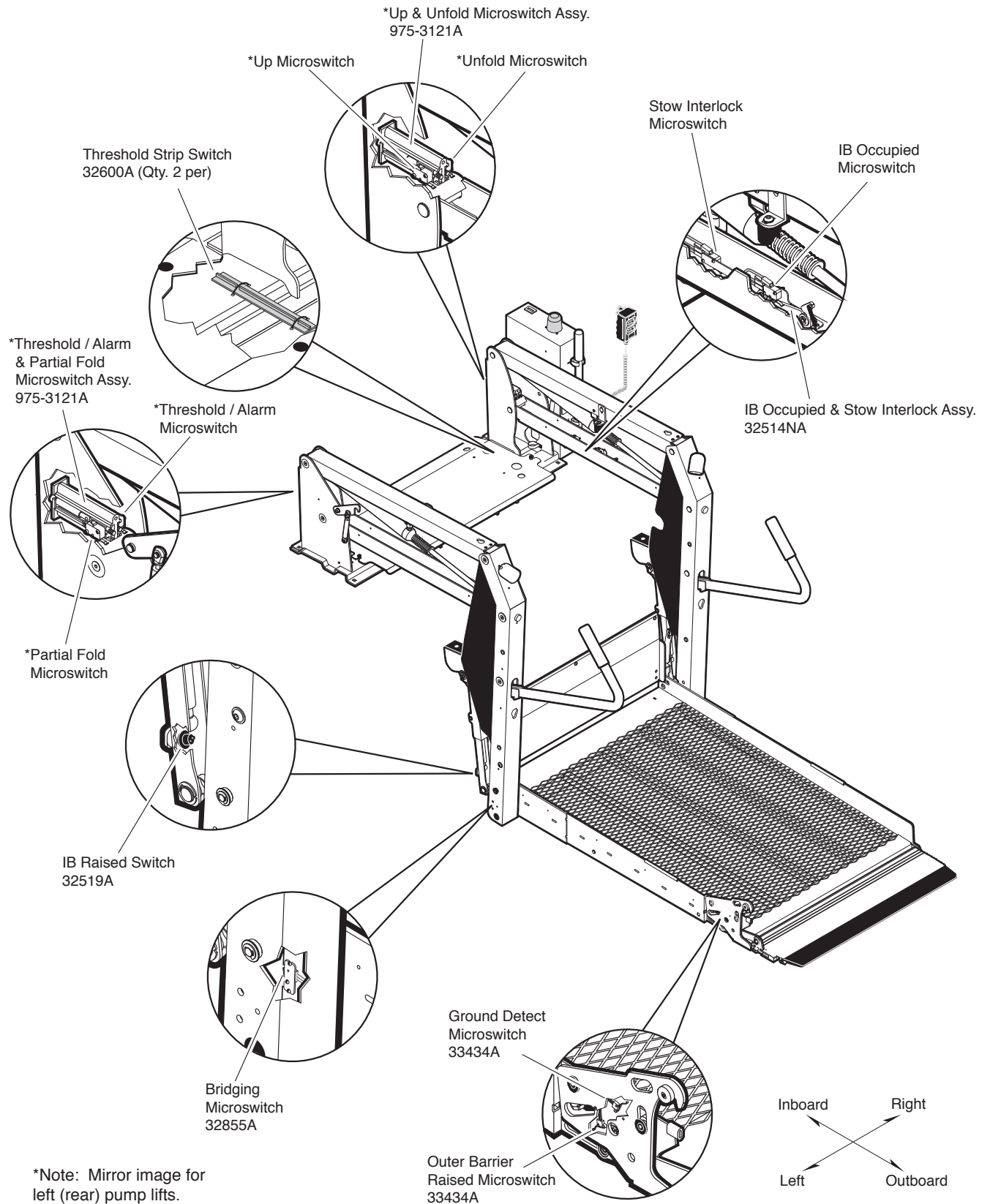
### Lift Exploded Views and Parts Lists

NL917IB-2 Base Plate Assembly .....	20
NL917FIB-2 Base Plate Assembly .....	21
NL919IB-2 Base Plate Assembly .....	22
NL919FIB-2 Base Plate Assembly .....	23
Top Parallel Arm Assembly .....	24
Bottom Parallel Arm Assembly.....	25
Hydraulic Cylinder Assembly - Main .....	26
Vertical Arm Assembly .....	27
Handrail Assembly .....	28
NL917IB-2 & NL917FIB-2 Platform Assembly .....	29
NL919IB-2 & NL919FIB-2 Platform Assembly .....	30

# Lift Terminology



# Switch and Sensor Locations



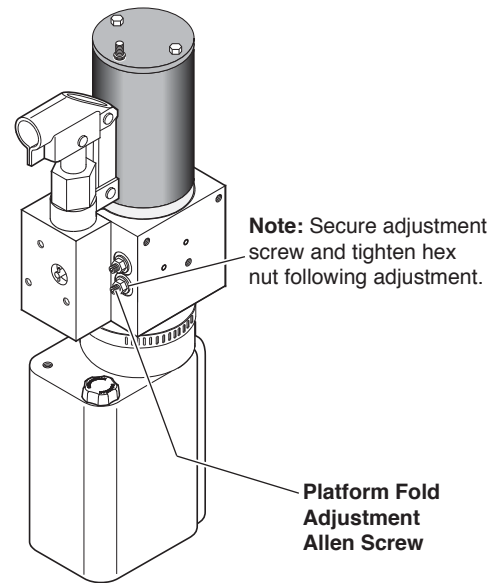
## **Certification Checklist Diagnostic Procedures**

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 stowed signal - pin 9 has a ground signal OR lift not stowed signal - pin 5 has a open 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.
  - Refer to Outer Barrier Fold Pressure Adjustment procedures.
  
- Verify platform lighting when lift is deployed and pendant illumination when lift is powered.
  - 1. Replace bulb(s) in the light housing.
  
- 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
  - 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

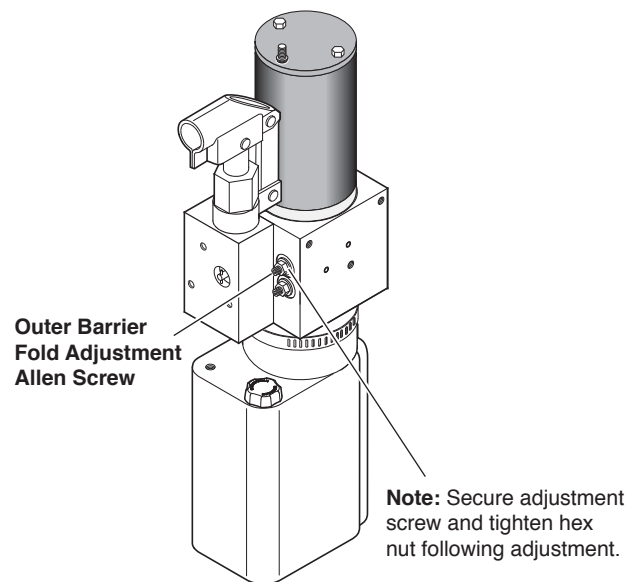
1. See Tower 4 (Fold) Switch Adjustment in the Tower Microswitch Adjustment section for proper microswitch setting before adjusting the platform fold pressure.
2. Position the platform at the floor level loading position.
3. Loosen the hex nut on the adjustment screw (do not remove hex nut).
4. Turn the adjustment screw counter clockwise until the platform does not fold when the Fold button is pressed.
5. 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.
6. Turn the adjustment screw an additional 1/8 turn after the platform folds successfully.
7. Tighten the hex nut without moving the adjustment screw.
8. Verify the platform will not stow while occupied.



**Figure A**

## Outer Barrier Fold Pressure Adjustment

1. Lower the platform to the ground 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 outer barrier does not raise when the Up button is pressed.
4. Turn the adjustment screw clockwise in 1/4 turn increments until the outer barrier raises and fully locks in position when the Up button is pressed.
5. Turn the adjustment screw an additional 1/8 turn after the outer barrier folds successfully.
6. Tighten the hex nut without moving the adjustment screw.
7. Verify the outer barrier will not raise when occupied.



**Figure B**



## 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.

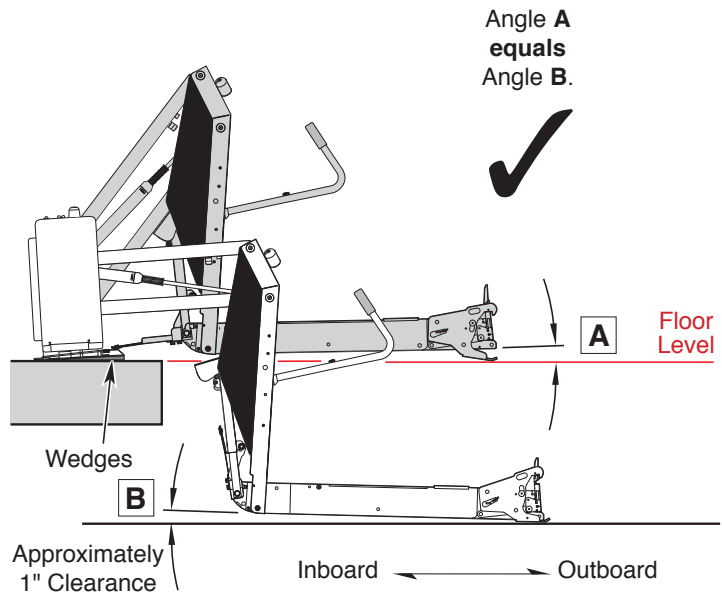
**Base Plate Wedges:** Installations where base plate wedges are used require more platform angle adjustment than normal.

**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 **Tower Microswitch Adjustment** (details on page 8).

### Millennium “NL” Series

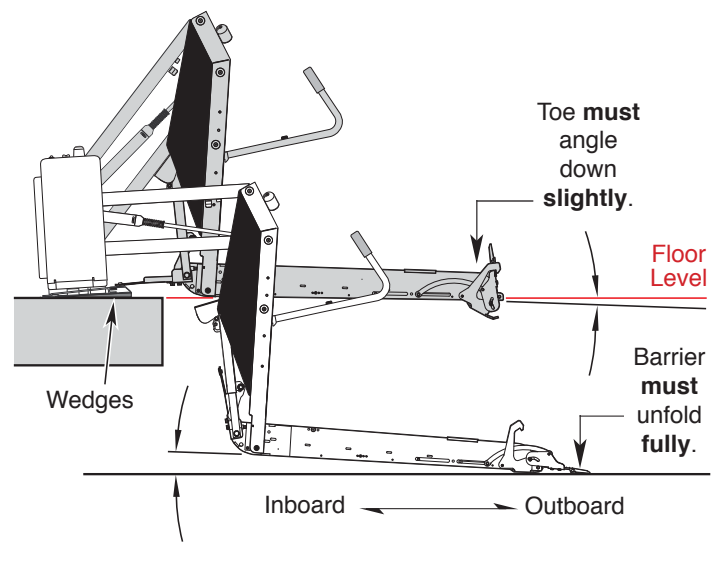
### Figure C



### Century “NCL” Series

### Vista “NVL” Series

### Figure D





## Platform Angle Adjustment

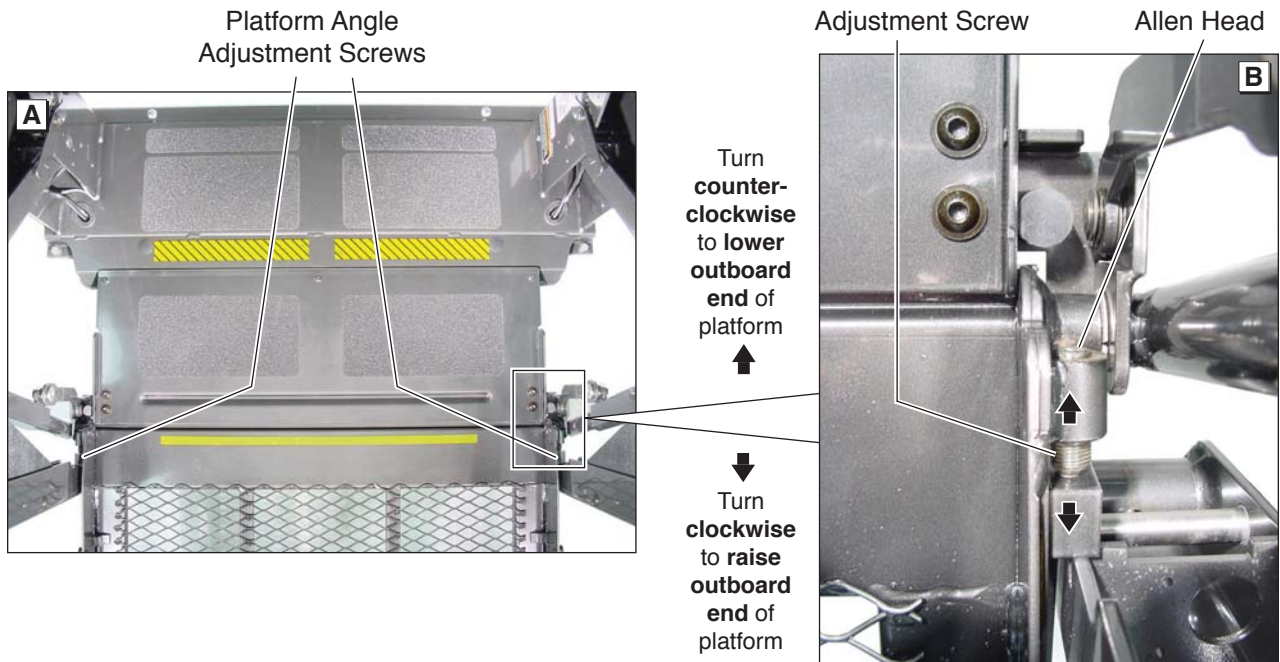
Adjustment Allen screws are provided on each side of the lift platform for adjusting the platform angle. Adjust platform angle as specified on previous page.

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

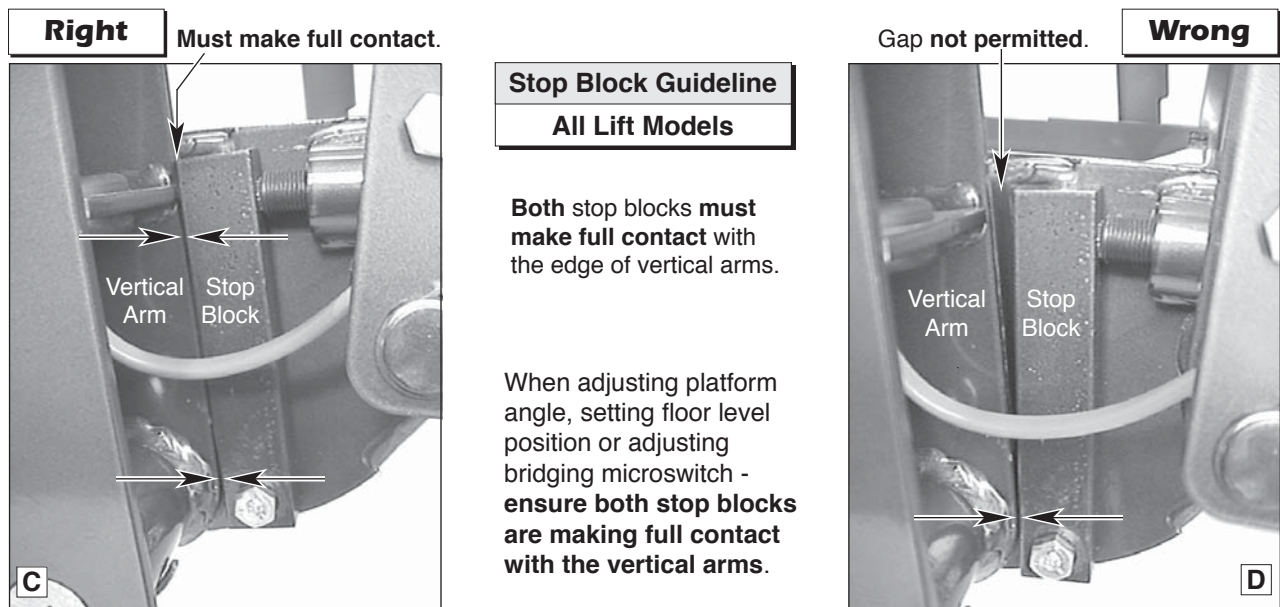
To **lower** the **outboard end** of platform - turn adjustment screw **counterclockwise**.

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

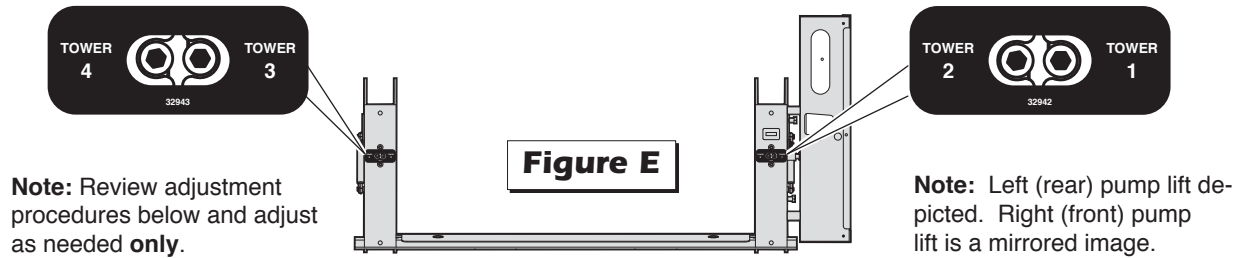
Apply Loctite® to adjustment screws following adjustment.



## Platform Stop Blocks



## Tower Microswitch Adjustment

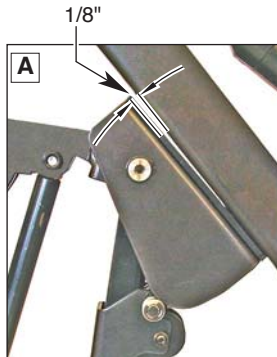


### Tower 1 (Unfold) Switch Adjustment Floor Position from Stow

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

#### Proper Adjustment Criteria:

- Bridge plate should just rest on threshold plate (base plate).
- Should be an approximate 1/8" clearance between outboard end of rotating pivot slide arm saddle and the lower parallel arm. See Photo A.



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

1. Lower platform a minimum of 6" below floor level position using the manual hand pump or pendant control.
2. Turn switch adjustment screw counterclockwise 3 full turns.
3. Press pendant UP switch (continue pressing switch until platform stops).
4. When platform stops, turn switch adjustment screw clockwise while pressing the pendant UP switch. Platform position will change. Adjust platform to meet criteria listed for Tower 1 Proper Adjustment Criteria.

Radius of Tower 4 Micro-switch Blade activated by Apex of Activation Plate.



### Tower 3 (Alarm) Switch Adjustment Threshold Alarm Switch

1. Position platform at the fully raised (floor level) position using the pendant control.
2. Place pressure on the threshold warning plate (base plate). Continue applying pressure to threshold plate and turn switch adjustment screw clockwise until alarm sounds. If alarm sounds when pressure is first applied go to Step 3.
3. Continue applying pressure to threshold plate and slowly turn switch adjustment screw counterclockwise until the alarm stops sounding.

### Tower 4 (Fold) Switch Adjustment Partial Fold

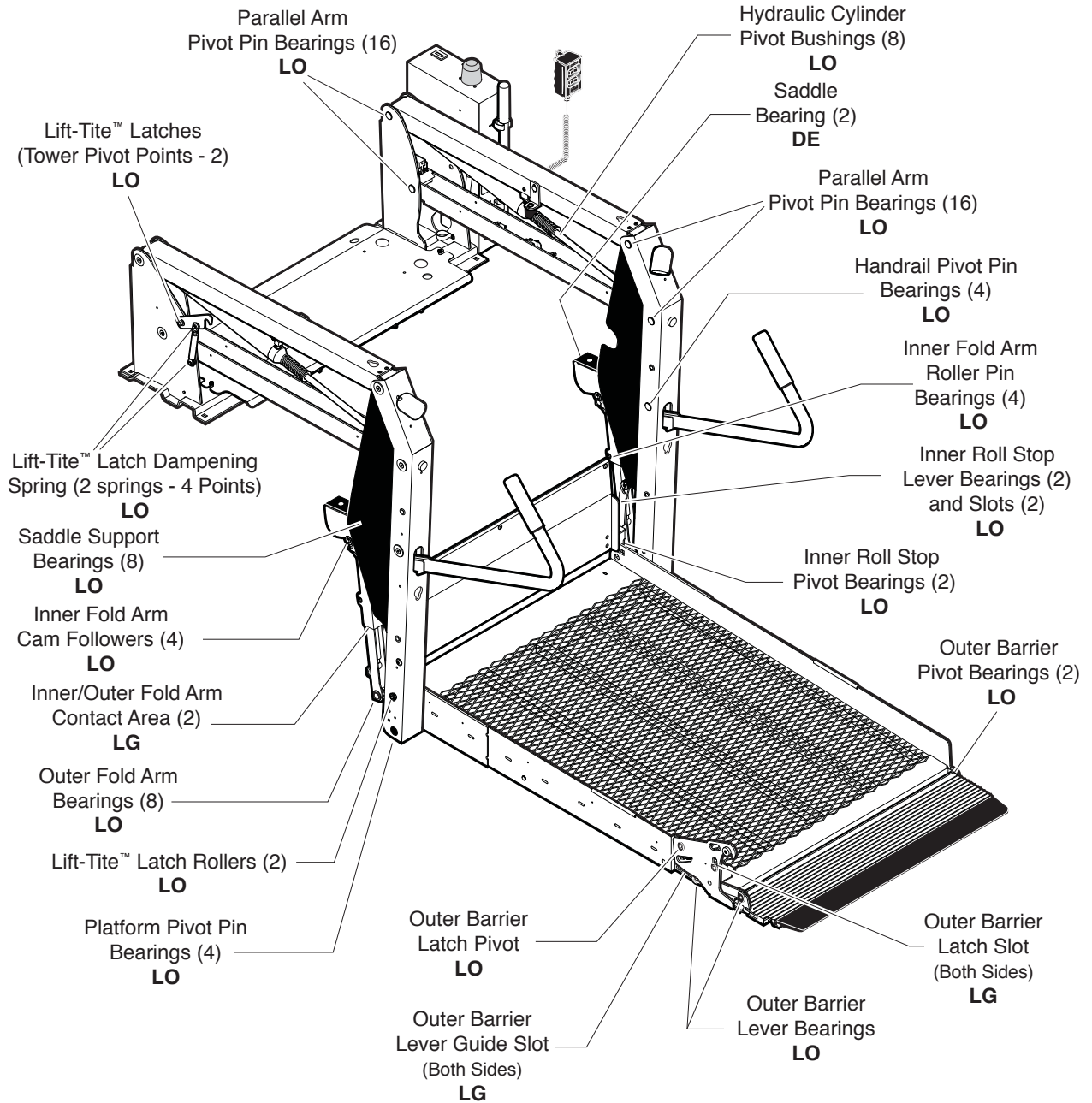
1. Position platform at 45° angle using the manual hand pump or pendant control.
2. View the Tower 4 microswitch inside the lift tower (see Photo B). Turn the switch adjustment screw in or out as needed until the radius of the microswitch blade rides on the apex of the activation plate.
3. Verify proper adjustment. Criteria below **must be met**.

#### Proper Adjustment Criteria:

- Apply pressure (push down) on outboard end of platform by pressing the hand pendant FOLD switch. The platform should not fold (stow) with light pressure applied.
- When folding fully, the platform should stow tightly (snug with stow blocks).

# 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.
<b>LO - Light Oil</b>	Light Penetrating Oil (30 weight or equivalent)	LPS2, General Purpose Penetrating Oil	11 oz. Aerosol Can	15807
<b>DE - Door-Ease</b>	Stainless Stick Style (tube)	Door-Ease Stick (tube)	1.68 oz.	15806
<b>LG - Light Grease</b>	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 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.

**Cycle Counter:** NL-2 Series lift models are equipped with a cycle counter located on the top of the pump module. This cycle counter allows the lift attendant/operator to easily track the number of cycles during daily inspections of the lift.

**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.**

<b>750 Cycles</b>	Outer barrier pivot points (2)	Apply Light Oil - See Lubrication Diagram
	Outer barrier latch pivot point	Apply Light Oil - See Lubrication Diagram
	Outer barrier latch slot	Apply Light Grease to both sides of slot. See Lubrication diagram
	Outer barrier lever bearings (2)	Apply Light Oil - See Lubrication Diagram
	Lift-Tite™ latches (tower pivot points - 2)	Apply Light Oil - See Lubrication Diagram
	Lift-Tite™ latch gas (dampening) spring pivot points (2 springs - 4 points)	Apply Light Oil - See Lubrication Diagram
	Inspect Lift-Tite™ latches and gas springs for wear or damage (bent, deformed or misaligned), positive securement (lock nuts / external snap rings) and proper operation	Resecure, replace damaged parts or otherwise correct as needed. <b>Note:</b> Apply Light Grease to Lift-Tite™ latch tower pivot point if replacing latch.
	Inspect outer barrier for proper operation	Correct or replace damaged parts.
	Inspect outer barrier latch for proper operation, positive securement, and detached or missing spring	Correct or replace damaged parts and/or relubricate. See Lubrication Diagram
continued	Inspect lift for wear, damage or any abnormal condition	Correct as needed.



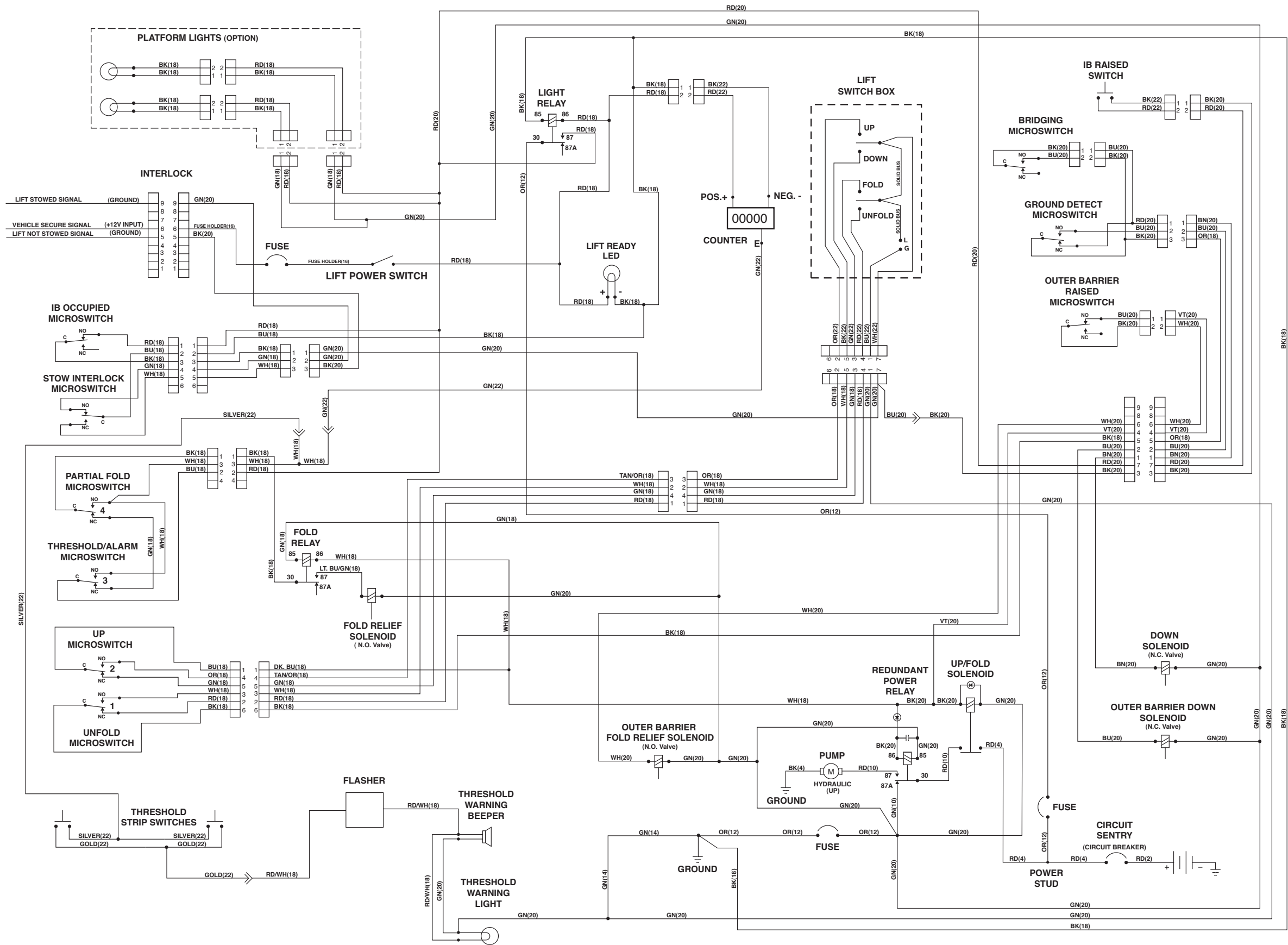
## Maintenance and Lubrication Schedule

<b>750 Cycles</b>	Inspect lift for rattles	Correct as needed.
<b>1500 Cycles</b>	<b>Perform all procedures listed in previous section also</b>	
	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
	Outer barrier lever guide slot	Apply Light Grease to both sides of slot. 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.
	Inspect inner roll stop for: • 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 external snap rings: • Outer fold arm (6) • Lift-Tite™ latch roller (2) • Lift-Tite™ latch gas (dampening) spring (4) • Inner fold arm cam followers (4) • Inner fold arm roller pins (4) • Outer barrier hydraulic cylinder mounting pin (2) • Inner roll stop lever bracket pins (2)	Resecure or replace if needed.
continued	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

<b>1500 Cycles</b>	<div> <p>Inspect outer fold arm pins (2), axles (2) and bearings (8) for wear or damage and positive securement</p> <p>Replace damaged parts and resecure as needed. Apply Light Oil.</p> </div> <div> <p>Remove pump module cover and inspect:</p> <ul style="list-style-type: none"> <li>Hydraulic hoses, fittings and connections for wear or leaks</li> <li>Harness cables, wires, terminals and connections for securement or damage</li> <li>Relays, fuses, power switch and lights for securement or damage</li> </ul> <p>Resecure, replace or correct as needed.</p> </div>
<b>4500 Cycles</b>	<div> <p><b>Perform all procedures listed in previous section also</b></p> </div> <div> <p>Inspect cotter pins on platform pivot pin (2)</p> <p>Resecure, replace or correct as needed</p> </div> <div> <p>Hydraulic Fluid (Pump) - Check level. <b>Note:</b> 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>Use Braun 32840-QT (Exxon® Unis HVI 26) hydraulic fluid (<b>do not mix</b> with Dextron III or other hydraulic fluids). Check fluid level with <b>platform lowered fully and roll stop unfolded fully</b>. Fill to within 1/2" of the bottom of the 1 1/2" fill tube (neck).</p> </div> <div> <p>Inspect cylinders, fittings and hydraulic connections for wear, damage or leaks</p> <p>Tighten, repair or replace if needed.</p> </div> <div> <p>Inspect outer barrier cylinder hose assembly (hose, fasteners, connections, etc.) for wear, damage or leakage</p> <p>Tighten, repair or replace if needed.</p> </div> <div> <p>Inspect parallel arms, bearings and pivot pins for visible wear or damage</p> <p>Replace if needed.</p> </div> <div> <p>Inspect parallel arm pivot pin mounting bolts (8)</p> <p>Tighten or replace if needed.</p> </div> <div> <p>Inspect platform pivot pins, bearings and vertical arms for wear, damage and positive securement</p> <p>Replace damaged parts and resecure as needed. Apply Light Grease during reassembly procedures.</p> </div> <div> <p>Inspect inner/outer fold arms, saddle, saddle support and associated pivot pins and bearings for visible wear or damage</p> <p>Replace if needed.</p> </div> <div> <p>Inspect gas springs (cylinders - 4) for wear or damage, proper operation and positive securement</p> <p>Tighten, replace or correct as needed</p> </div> <div> <p>Inspect saddle bearing (UHMW - 2)</p> <p>Apply Door-Ease or replace if needed. See Lubrication Diagram.</p> </div> <div> <p>Inspect vertical arm plastic covers</p> <p>Resecure or replace if needed.</p> </div> <div> <p>Inspect power cable</p> <p>Resecure, repair or replace if needed.</p> </div> <div> <p>Mounting</p> <p>Check to see that the lift is securely anchored to the vehicle and there are no loose bolts, broken welds, or stress fractures.</p> </div> <div> <p>Decals and Antiskid</p> <p>Replace decals if worn, missing or illegible. Replace antiskid if worn or missing.</p> </div>
<b>Consecutive 750 Cycle Intervals</b>	<p><b>Repeat all</b> previously listed inspection, lubrication and maintenance procedures at 750 cycle intervals.</p>

Lift Electrical Schematic



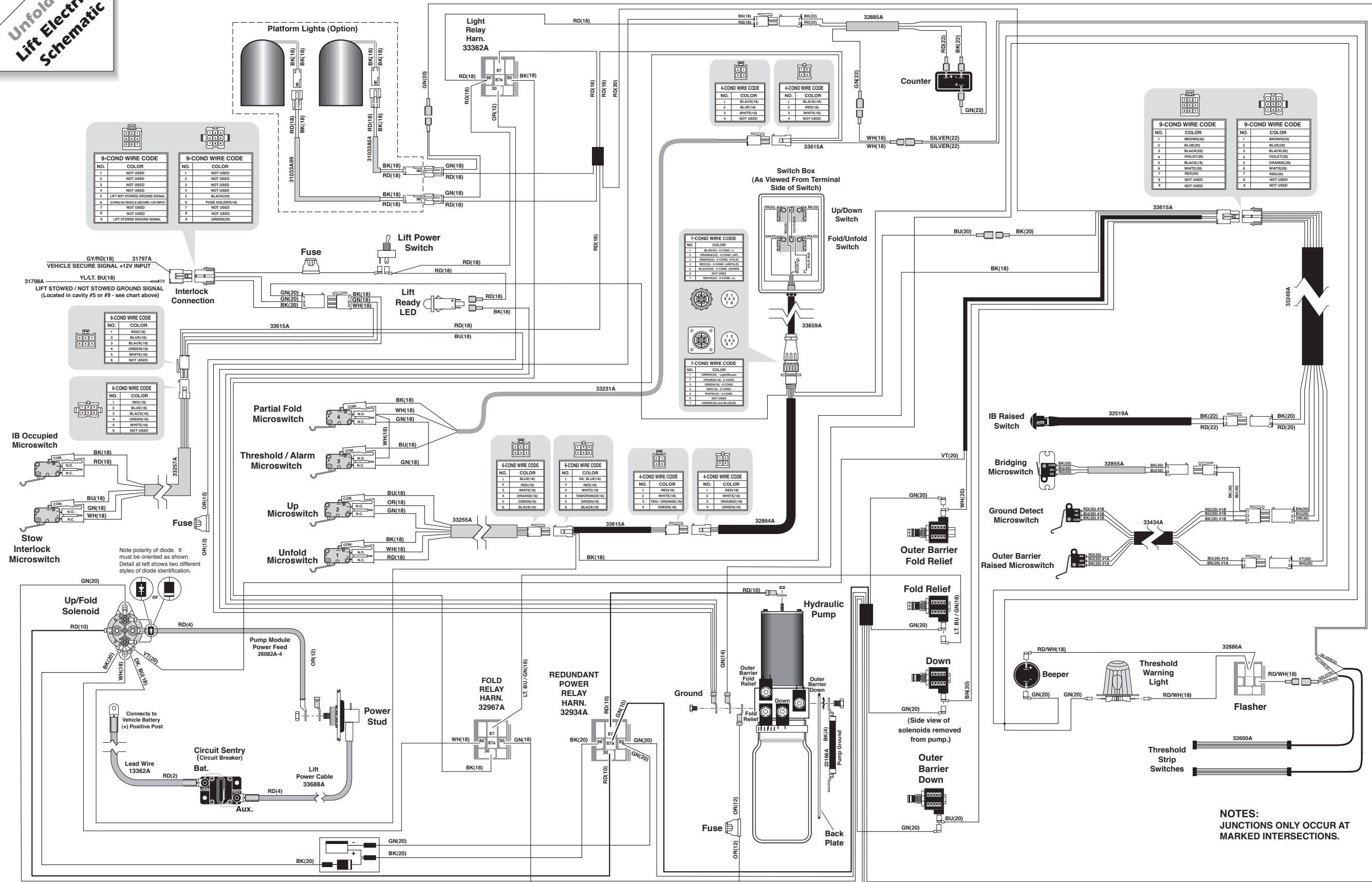
DESCRIPTION	SYMBOL
CAPACITOR	
MICROSWITCH	
PRESSURE SWITCH	
DIODE	
FLASHER	
COUNTER	
RELAY	
LIGHT	
BEEPER	
BATTERY	
CHASSIS GROUND	
CIRCUIT BREAKER	
JUNCTION	
MOTOR	
SOLENOID	
SWITCH	
CONNECTER	

NOTES:  
1) JUNCTIONS ONLY OCCUR AT MARKED INTERSECTIONS.

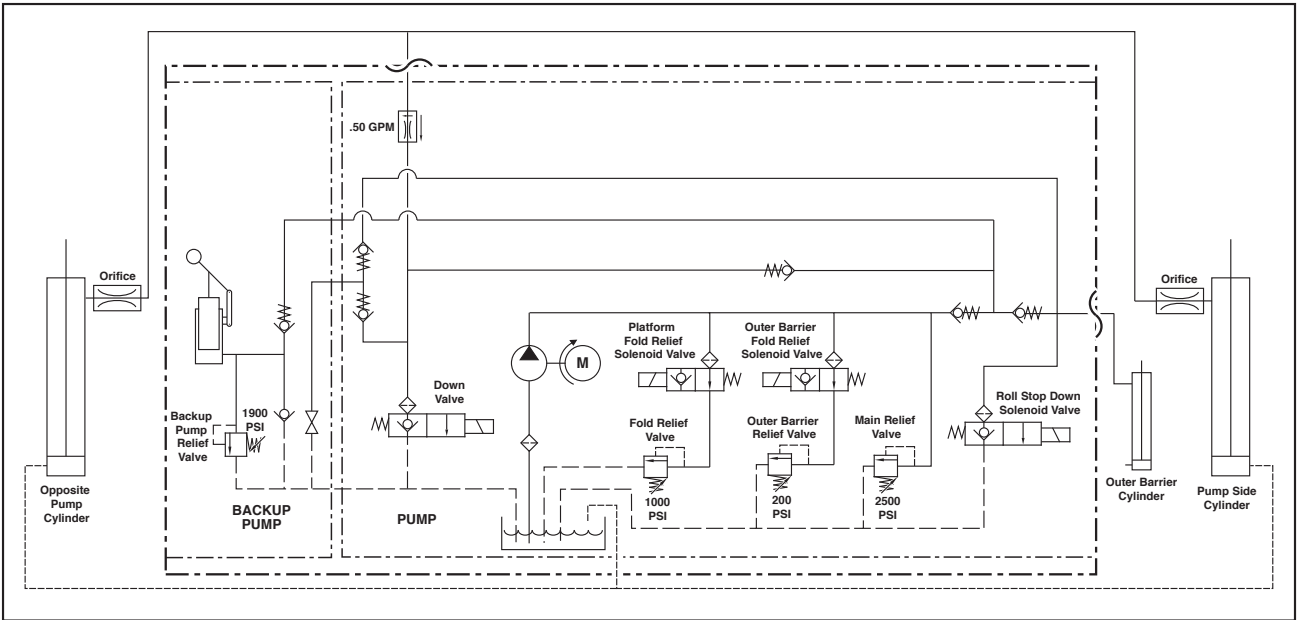





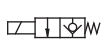


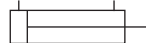








# Lift Wiring Diagram

Unfold for:  
Lift Electrical  
Schematic



# 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		Orifice	
Pressure Switch			

## Hydraulics Parts List

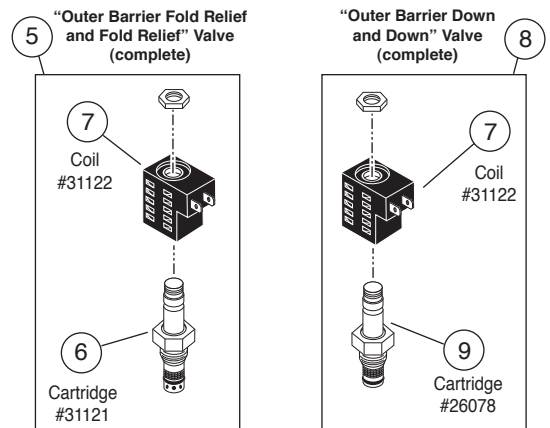
Item	Qty.	Description	Part #
1	1	Pump Assembly (M-268-0114) 120G / 12V / Triple Relief	32915-12V
2	1	Clamp, Reservoir - H-48 (M259)	17069
3	1	Solenoid, 4-Post - Trombetta (Flat Mount)	31374
4	1	Motor, Pump - 12 Volt - Low RPM	31350
5	2	Valve Assembly, "Outer Barrier Fold Relief and Fold Relief" (complete)	31120K
6	2	Cartridge (only), "Outer Barrier Fold Relief and Fold Relief" Valve - (shown below)	31121
7	4	Coil (only) - (shown below)	31122
8	2	Valve Assembly, "Outer Barrier Down and Down" (complete)	31348K
9	2	Cartridge (only), "Outer Barrier Down and Down" Valve - (shown below)	26078
10	3	Screw, 1/4-20 x 2-1/4", Allen Head	26080
11	1	Hand Pump (Backup) with O-Rings (Item 12)	34397
12	4	O-Ring (only), Hand Pump Mounting	17351
13	1	Reservoir, Hydraulic Fluid	30160
14	1	Cap, Reservoir Filler - Screw On	30167
15	1	Fitting, 90° - 1/8" NPT x 1/8" Barb - Plastic	87563
16	1	Connector, Plastic "Y", 1/8" O.D.	18877
17	1	Hose, Thermal Plastic - Black, 1/8" I.D.	23742R*
18	1	Handle with Grip	17206A
19	2	Fitting, Male 7-16-20 SAE O-Ring to Male 7/16-20 JIC 37°	24504
20	1	Elbow, 7/16-20 JIC 37 Female Swivel (1) - 7/16-20 JIC 37° Male (2)	26579
21	1	Hose Assembly, 1/8" (Opposite-Pump-Side)	16004A-086
22	1	Hose Assembly, 1/8" (Pump-Side)	16004A-046
23	2	Elbow, 90°, 7/16-20 SAE O-Ring Male - 7/16-20 JIC 37° Male, Orifice	26667
24	2	Cylinder ✓	C1514.3-0408N
25	2	Elbow, 90°, 1/4 NPT Male to 1/4" Barbed	15150
26	1	Cylinder, Rollstop w/Breather Vent (Complete 915-3318NA Includes Items 29 & 30)	25309NA
27	1	Fitting, 90° - Male 9/16-18 SAE O-Ring to Male 7/16-20 JIC 37°	87622
28	1	Nut, 1/2-20 Hex Jam	83022
29	1	Breather Vent, 1/4" NPT	26200-2
30	1	<b>(Rear Pump)</b> Hose Assembly, 139" x 3/16" Dia. w/Two Guards	915-2601-139
31	1	<b>(Front Pump)</b> Hose Assembly, 92.5" x 3/16" Dia. w/Two Guards (Complete 915F5604A-179)	915-5602-92.5
32	1	<b>(Front Pump)</b> Hose Assembly, 86.5" x 3/16" Dia.	915-5603-86.5
33	1	Diode Assembly, Up Solenoid	73906A
34	1	Kit, Hydraulic Port Service Cap	27049K

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

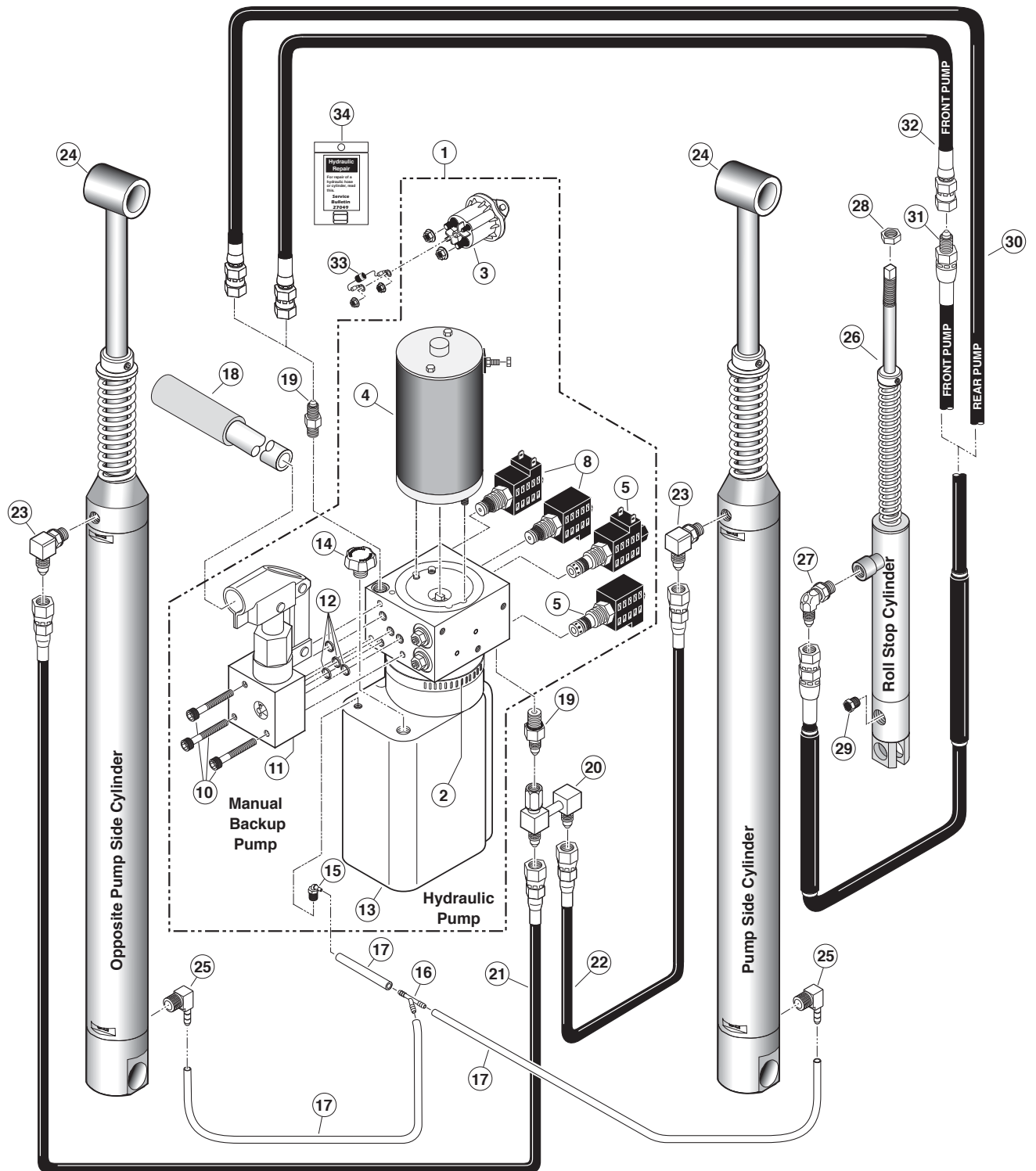
\* Raw material items ordered and priced per inch (order specified length).

### Hydraulic Fluid

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



# Hydraulics Diagram



## Pump Module Parts List

Item	Qty.	Description	NL917IB-2	NL917FIB-2
			NL919IB-2	NL919FIB-2
	1	Pump Module (complete), 12 Volt, Rear	947-2516RNA	947-2516FNA
1	1	Pump Assembly (M268-0114) 12V-120G - Triple Relief (Includes Items 1 & 2)	32915-12V	32915-12V
2	1	Solenoid, Up - 4-Post - Trombetta (Flat Mount)	31374	31374
3	1	Housing, Pump (Complete Assembly 947-0513RNA or 947-0513FNA Includes Items 3 - 16)	947-0513RN	947-0513FN
4	1	Beeper, Constant - High Output	33251	33251
5	1	Switch, Toggle w/ Gold Contacts	31787	31787
6	1	Stud, Power Feed	26084	26084
7	1	Lens, Threshold Warning - Red	30704	30704
8	1	Spacer, Lens - NHTSA	31386	31386
9	1	Metal Ring Base - Lamp	30971	30971
10	1	Socket, Lamp	30703	30703
11	3	Screw, #8-32 x 1/2" Pan Head Phillips - Thread Cut	30974	30974
12	1	Bulb, Light	19841	19841
13	2	Clamp, Spring - Pump Handle	12350	12350
14	4	Rivet, Pop, SD43BS - 1/8" - .13"/.19"	12954	12954
15	5	Rivet, Pop, SD64BS - 3/16" - .13"/.25"	11513	11513
16	1	Diode, Green LED	29545	29545
17	1	Cover, Pump Module	947-0519RN	947-0519FN
18	2	Fitting, Male 7/16-20 O-Ring to Male 7/16-20 JIC 37°	24504	24504
19	1	Elbow, Female Swivel 7/16-20 JIC 37° to (2) Male 7/16-20 JIC 37°	26579	26579
20	4	Rivet, Snap, .122" Dia. - .158" - .197" Thick	25759	25759
21	1	Washer, 5/16" External Tooth	16368	16368
22	2	Bolt, 5/16-18 x 3/4", Nylock, Hex * See note below	29608	29608
23	2	Bolt, 5/16-18 x 1/2", Nylock, Hex * See note below	10012	10012
24	2	Washer, 5/16" Flat	10063	10063
25	1	Pump Handle with Grip	17206A	17206A
26	1	Cycle Counter, LCD w/o Reset	30547	30547
27	1	Flasher, 12V	32461	32461
28	2	Relay, 30/40A SPDT 12V	18087	18087
29	3	Nut, #10-32 w/Lockwasher	18349	18349
30	1	Screw, #10-32 x 3/8", T-Head, Thumb	33435	33435
31	2	Rivet, Snap, .201" x .217"/.256"	25973	25973
32	1	Cable, Pump Module Power	26082A-4	26082A-4
33	1	Harness, Main w/Redundant Fuse	32934A	32934A
34	1	Harness, Ground Interlock	32864A	32864A
35	1	Cable, Lift / Chassis Ground	22166A	22166A
36	1	Harness, Threshold / Flasher	32886A	32886A
37	1	Harness, Fold Relay	32967A	32967A
38	1	Harness, Light Relay	33362A	33362A
39	1	Wire Assembly, Lift Interlock Connection	31797A	31797A
40	1	Wire Assembly, Lift Stowed Connection ♦ See note below	31798A	31798A
41	1	Rubber Boot, Red ♦ See note below	82046	82046
42	1	Control, Hand Pendant Assembly - Non Electronic / Non Shielded - Coiled ♦ See note below	33659A	33659A
43	1	Diode Assembly, Up Solenoid	73906A	73906A
44	1	Harness, Lift Power ♦ See note below	33688A	33688A
45	1	Harness, Tower / Opposite Pump (Not shown - see Wiring Diagram)	33231A	33231A
46	1	Harness, Bridge Inputs (Not shown - see Wiring Diagram)	33249A	33249A
47	1	Harness, IB Occupied / Stow (Not shown - see Wiring Diagram)	33257A	33257A
48	1	Harness, Cycle Counter (Not shown - see Wiring Diagram)	32885A	32885A
49	1	Harness, Tower / Pump Side (Not shown - see Wiring Diagram)	33255A	33255A
50	1	Harness, Extension Lighting - 54" (Not shown - see Wiring Diagram)	31033A54	31033A54
51	1	Harness, Extension Lighting - 99" (Not shown - see Wiring Diagram)	31033A99	31033A99
52	1	Harness, IB / OB / Bridge / Towers 1 & 2 (Not shown - see Wiring Diagram)	33615A	33615A
53	1	Hose Assembly, 86" - 1/8" Dia. - Swivel Ends (Not shown - see Hydraulic Diagram)	16004A-086	16004A-086
54	1	Hose Assembly, 46" - 1/8" Dia. - Swivel Ends (Not shown - see Hydraulic Diagram)	16004A-046	16004A-046
55	1	Hose Assembly, 3/16" Dia. w/Two Guards (Not shown - see Hydraulic Diagram)	915-2601-139	915F5604A-179
56	1	Hose, 1/8" Thermal Plastic (Not shown - see Hydraulic Diagram)	23742R	23742R
57	1	Decal, Warning / Pressure Relief Valve (Not shown) ♦ See note below	22249	22249
58	1	Decal, Lift Power - On/Off (Not shown) ♦ See note below	21494	21494
59	1	Decal, Fold & Barrier Relief Valve Adjustment (Not shown) ♦ See note below	33233	33233
60	1	Decal, Manual Instructions - Public (Not shown) ♦ See note below	32940	32940

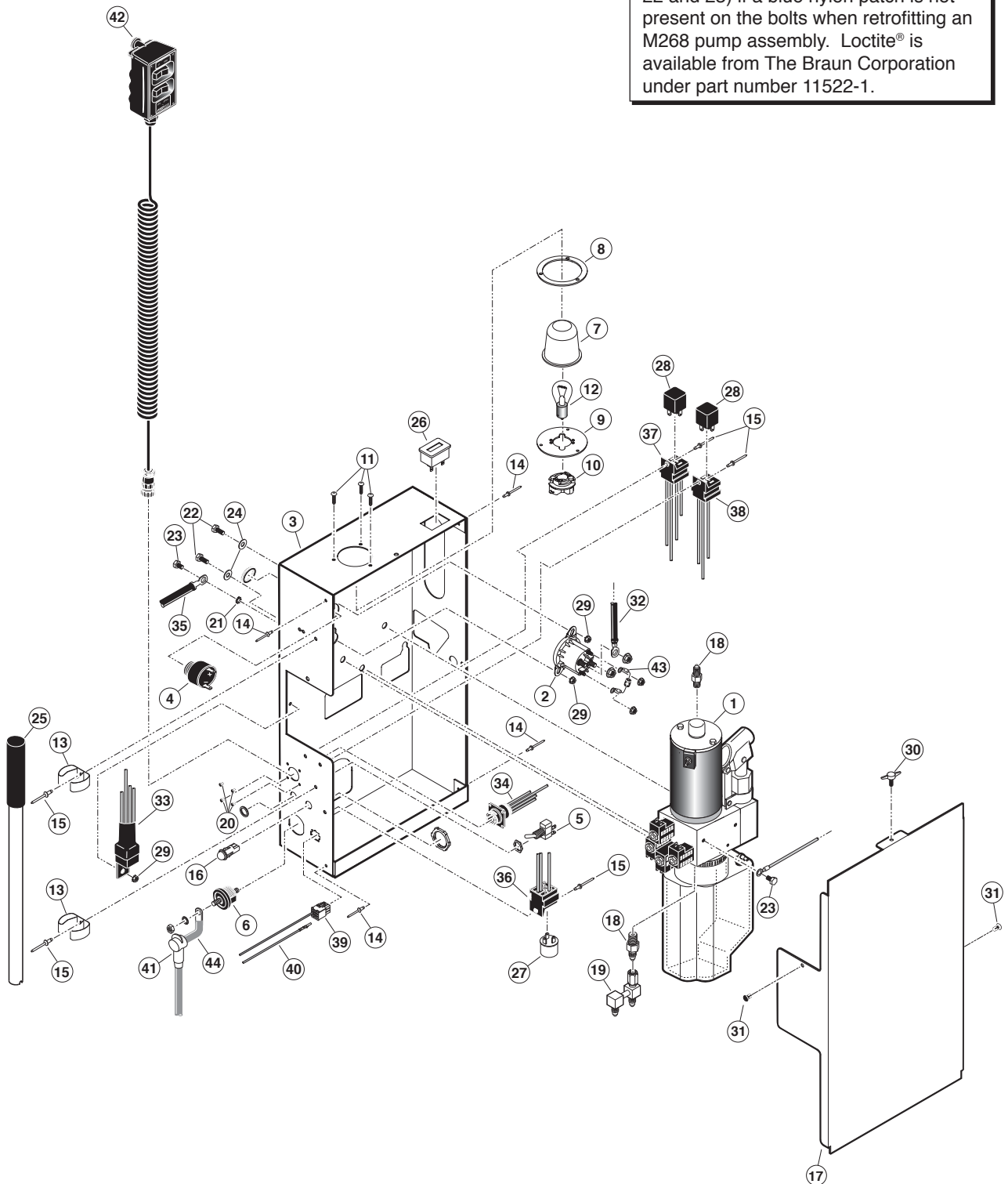
\* Apply red #271 Thread Locker Loctite® to the four hex bolts (items 22 and 23) if a blue nylon patch is not present on the bolts when retrofitting an M268-0114 pump assembly. Loctite® is available from The Braun Corporation under part number 11522-1.

♦ 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 22 and 23) 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.



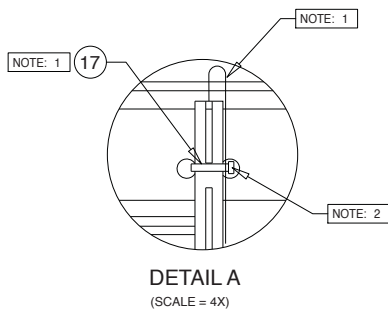
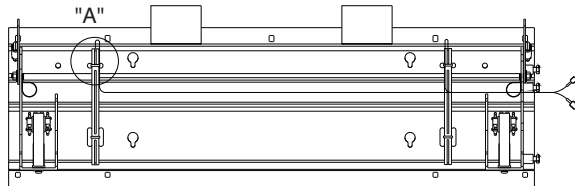
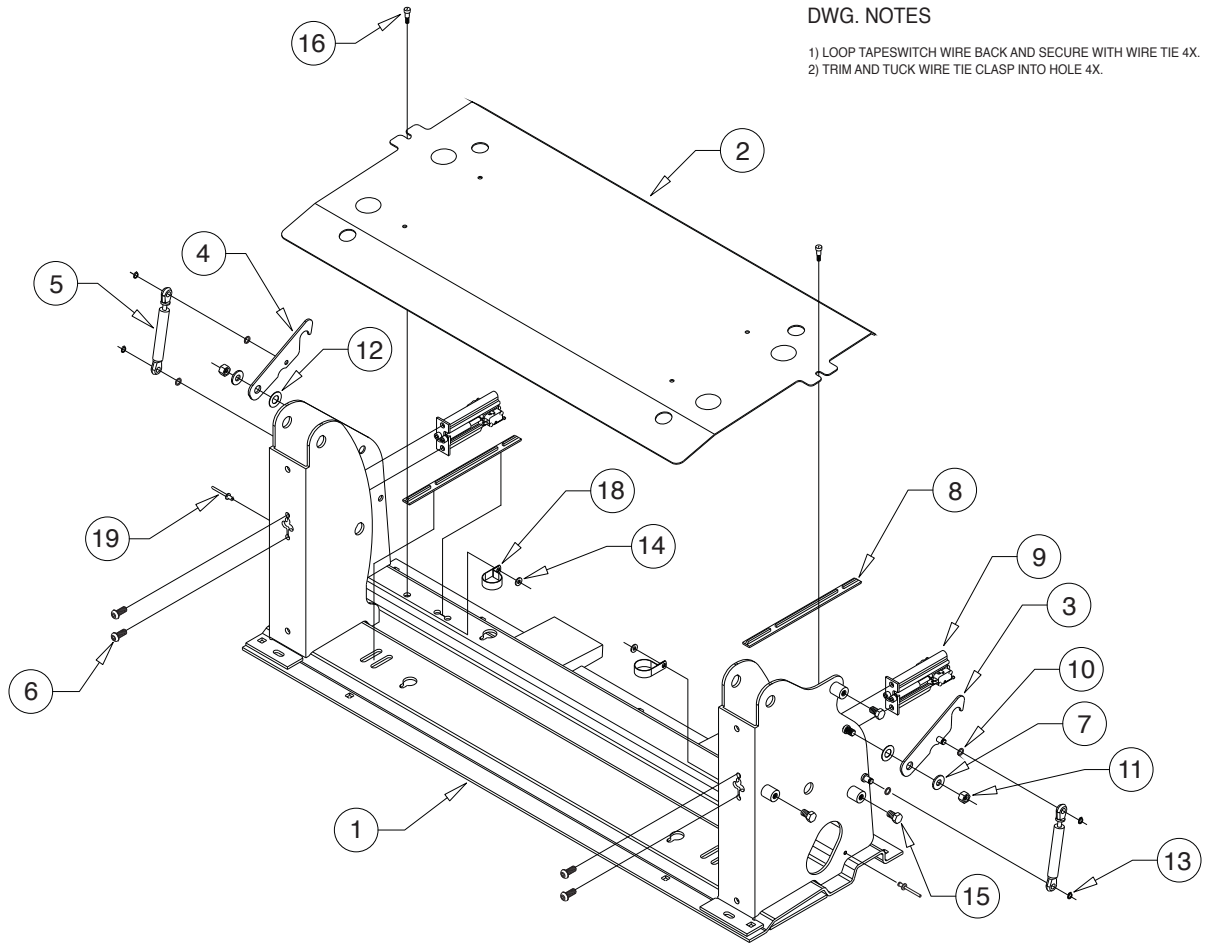
Note: Front pump module shown,  
rear pump module mirror image.

# Exploded Views and Parts Lists

## NL917IB-2 Base Plate Assembly

### DWG. NOTES

- 1) LOOP TAPESWITCH WIRE BACK AND SECURE WITH WIRE TIE 4X.
- 2) TRIM AND TUCK WIRE TIE CLASP INTO HOLE 4X.

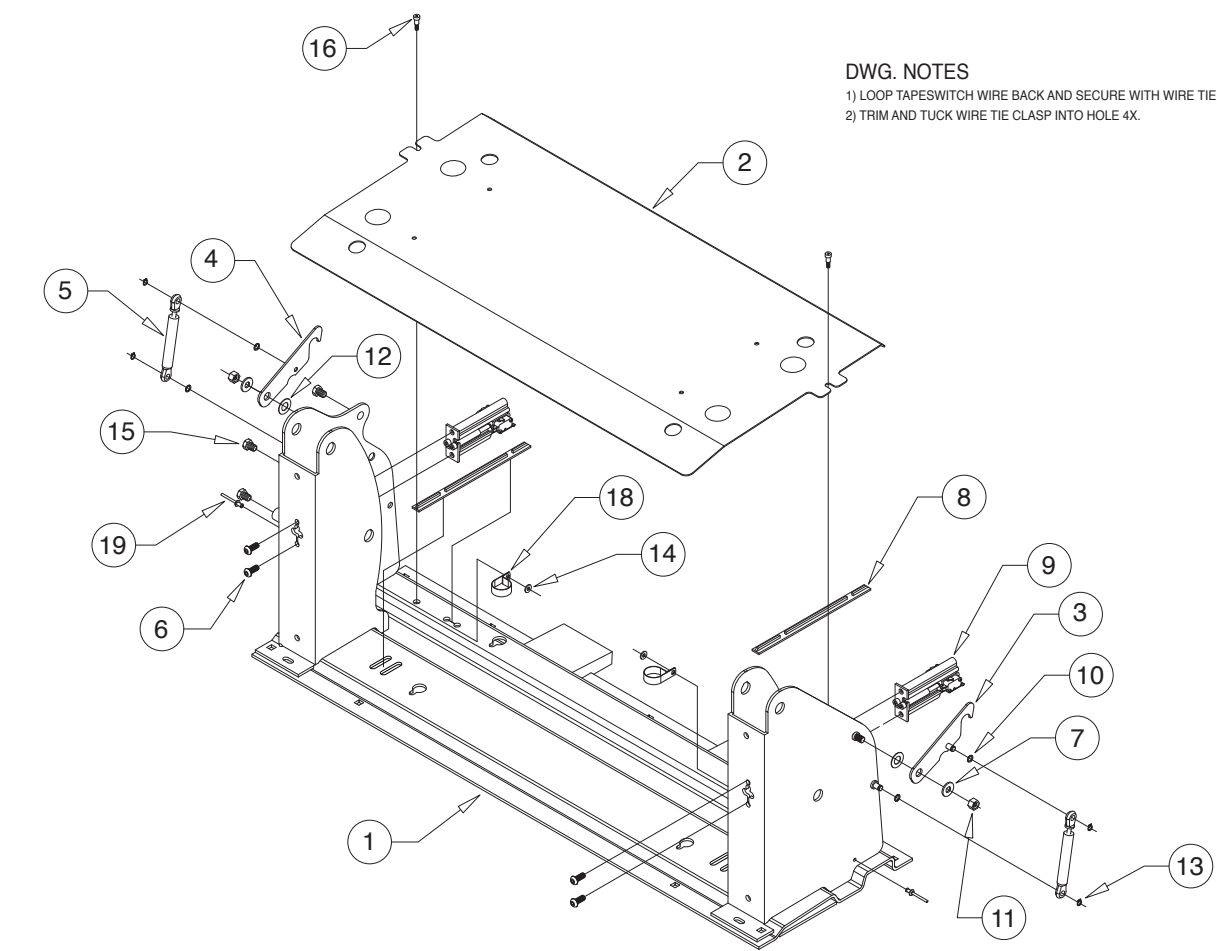


19	2	14993	RIV-POP-SD66BS-3/16"- .25/.38/AUTO-BK
18	2	29765	CLAMP-INSULATED-1 3/8"
17	4	10091	CABLE TIE-11" SOLID
16	2	31816	BOLT-SHOULDER, 5/16 X 5/8-1/4-20 SS W/PC
15	3	29729	BOLT-3/8-16 X 1/2 W/NYLOCK PATCH
14	2	11541	WASHER-#10 FLAT/AUTO-BK
13	4	24570	RING-5/16 EXT SNAP/ZINC PLATED
12	2	15328	WASHER-.516ID X 1OD X .0269/AUTO-BK
11	2	13617	NUT-3/8-16 UNC HEX LOCK/AUTO-BK
10	4	26614	O-RING 5/16 ID X 1/16
9	2	975-3121A	MICRO SWITCH ASSY
8	2	33337A	ASSY-THRESHOLD-STRIP SWITCH-NHTSA/945
7	2	10063	WASHER-5/16 FLAT
6	4	24440	BOLT-5/16-18 X 3/4-BHSC/AUTO-BK
5	2	26963	SPRING-DAMP5.67 E/4.291 C,P1=3.37N-RET
4	1	27208RW	WMT-LATCH-LIFT-TITE REAR-RETRO
3	1	27208FW	WMT-LATCH-LIFT-TITE FRONT-RETRO
2	1	975-6148CNA33Y	THRESHOLD PLATE ASSEMBLY
1	1	945-2148RNW33	WMT-BASE-REAR/48" FTG
ITEM	QTY.	PART NO.	DESCRIPTION



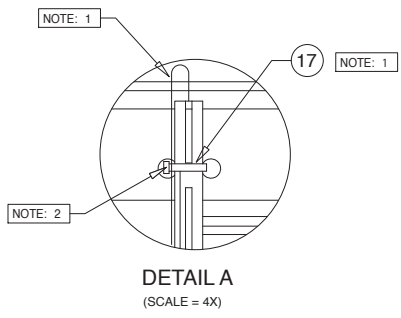
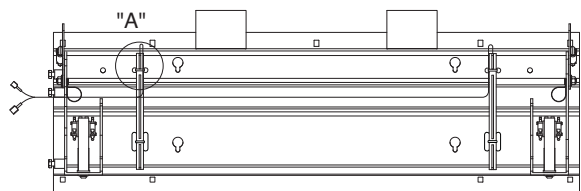
# Exploded Views and Parts Lists

## NL917FIB-2 Base Plate Assembly



### DWG. NOTES

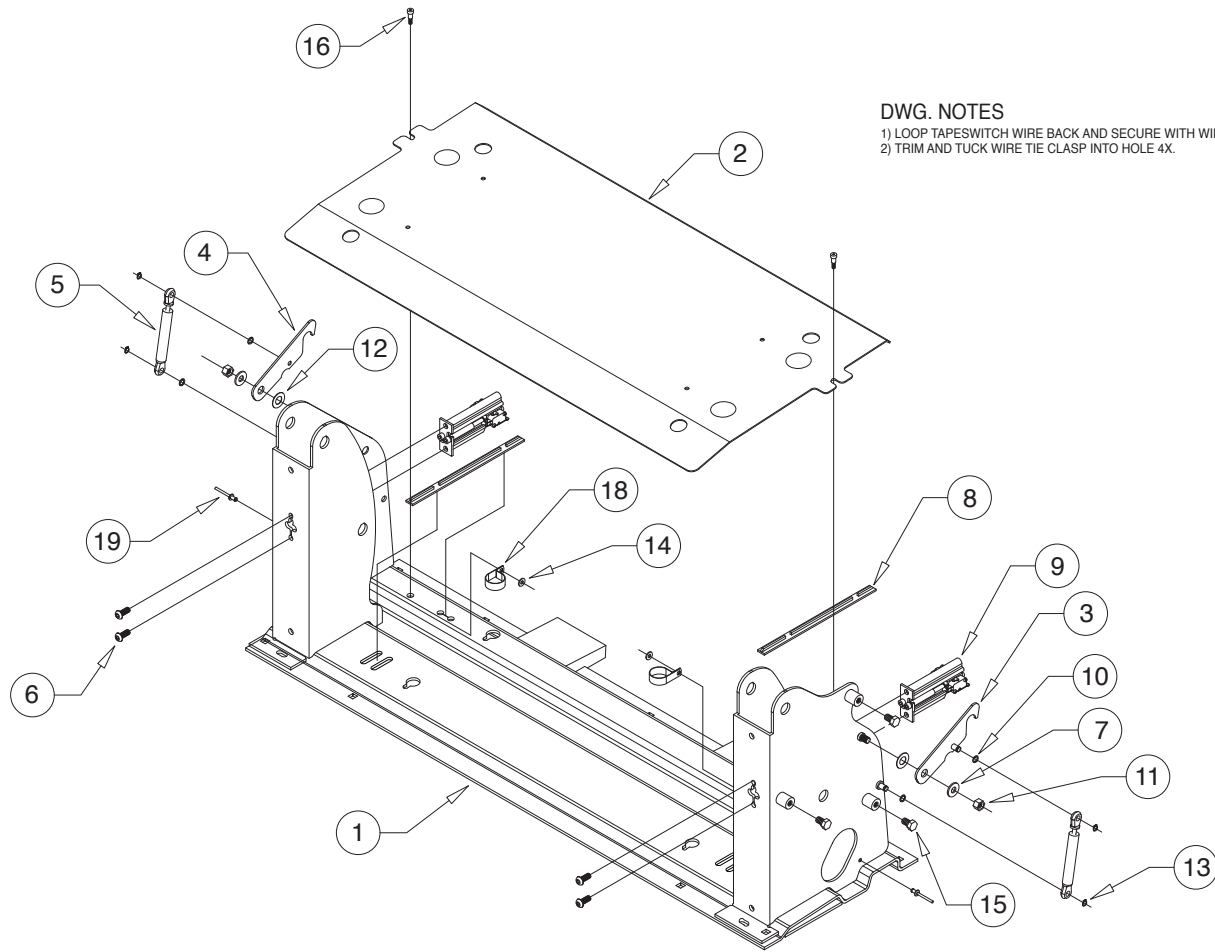
- 1) LOOP TAPESWITCH WIRE BACK AND SECURE WITH WIRE TIE 4X.
- 2) TRIM AND TUCK WIRE TIE CLASP INTO HOLE 4X.



19	2	14993	RIV-POP-SD66BS-3/16"-.25/38/AUTO-BK
18	2	29765	CLAMP-INSULATED-1 3/8"
17	4	10091	CABLE TIE-11" SOLID
16	2	31816	BOLT-SHOULDER, 5/16 X 5/8-1/4-20 SS W/PC
15	3	29729	BOLT-3/8-16 X 1 1/2 W/NYLOCK PATCH
14	2	11541	WASHER-#10 FLAT/AUTO-BK
13	4	24570	RING-5/16 EXT SNAP/ZINC PLATED
12	2	15328	WASHER-.516ID X 1OD X .0269/AUTO-BK
11	2	13617	NUT-3/8-16 UNC HEX LOCK/AUTO-BK
10	4	26614	O-RING 5/16 ID X 1/16
9	2	975-3121A	MICRO SWITCH ASSY
8	2	33337A	ASSY-THRESHOLD-STRIP SWITCH-NHTSA/945
7	2	10063	WASHER-5/16 FLAT
6	4	24440	BOLT-5/16-18 X 3/4-BHSC/AUTO-BK
5	2	26963	SPRING-DAMP5.67 E/4.291 C,P1=3.37N-RET
4	1	27208RW	WMT-LATCH-LIFT-TITE REAR-RETRO
3	1	27208FW	WMT-LATCH-LIFT-TITE FRONT-RETRO
2	1	975-6148CNA33Y	THRESHOLD PLATE ASSEMBLY
1	1	945-2148FNV33	WMT-BASE-FRONT/48" FTG
ITEM	QTY.	PART NO.	DESCRIPTION

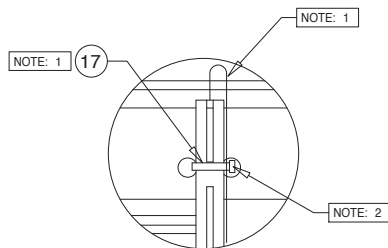
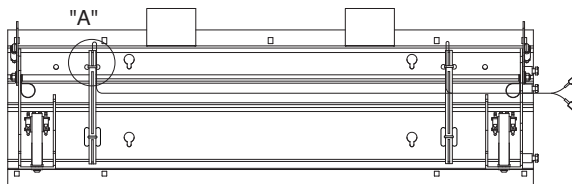
# Exploded Views and Parts Lists

## NL919IB-2 Base Plate Assembly



### DWG. NOTES

- 1) LOOP TAPESWITCH WIRE BACK AND SECURE WITH WIRE TIE
- 2) TRIM AND TUCK WIRE TIE CLASP INTO HOLE 4X.

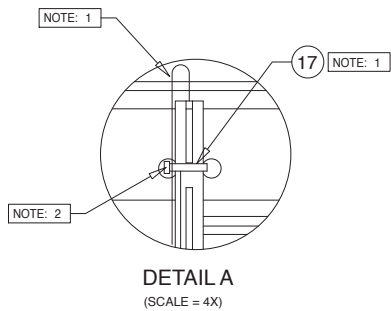
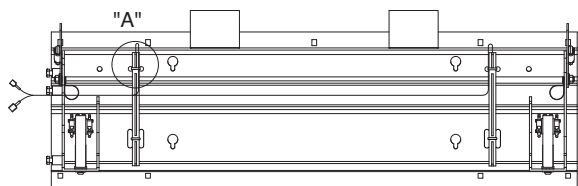
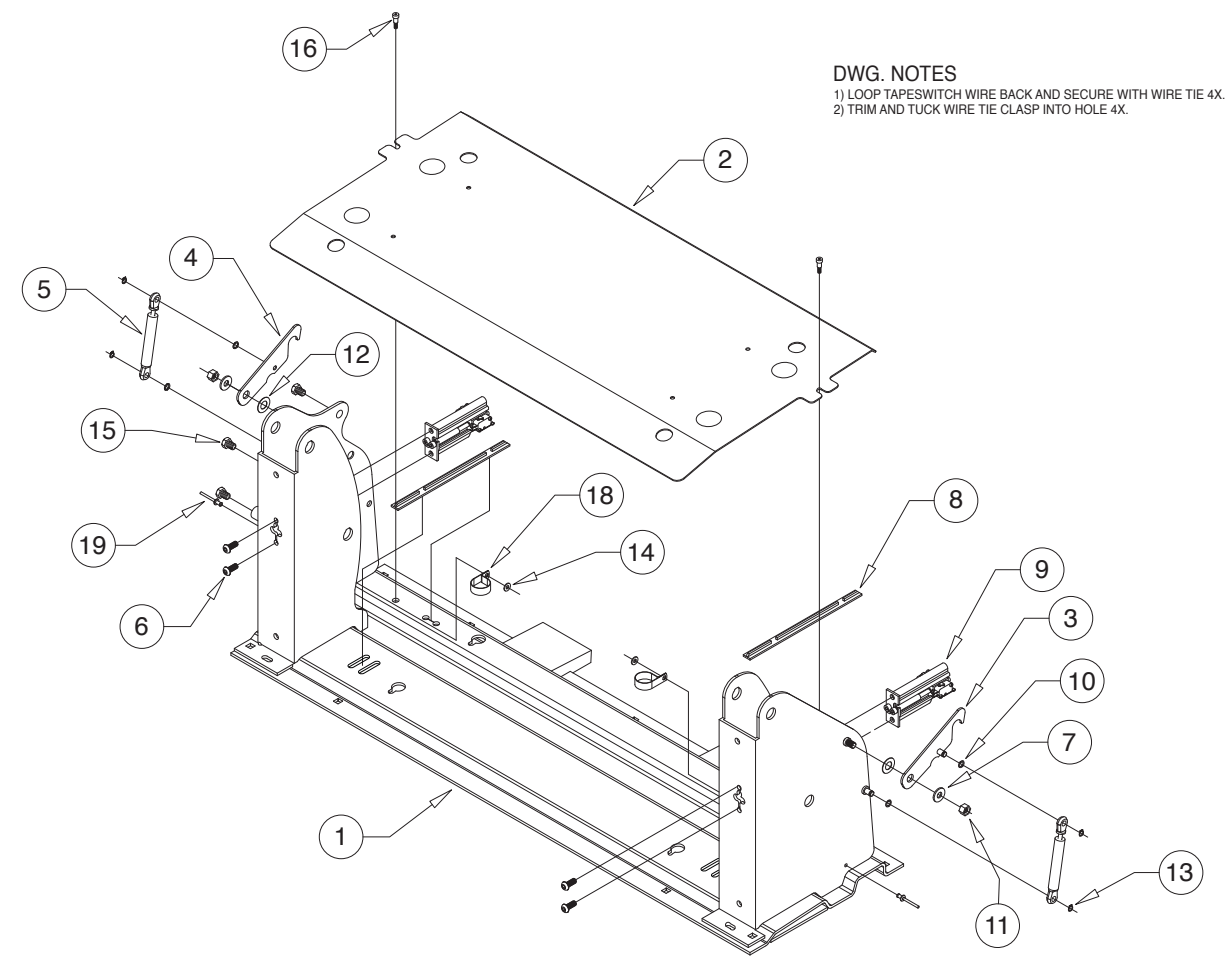


**DETAIL A**  
(SCALE = 4X)

19	2	14993	RIV-POP-SD66BS-3/16"-.25/38/AUTO-BK
18	2	29765	CLAMP-INSULATED-1 3/8"
17	4	10091	CABLE TIE-11" SOLID
16	2	31816	BOLT-SHOULDER, 5/16 X 5/8-1/4-20 SS W/PC
15	3	29729	BOLT-3/8-16 X 1/2 W/NYLOCK PATCH
14	2	11541	WASHER-#10 FLAT/AUTO-BK
13	4	24570	RING-5/16 EXT SNAP/ZINC PLATED
12	2	15328	WASHER-.516ID X 1 OD X .0269/AUTO-BK
11	2	13617	NUT-3/8-16 UNC HEX LOCK/AUTO-BK
10	4	26614	O-RING 5/16 ID X 1/16
9	2	975-3121A	MICRO SWITCH ASSY
8	2	33337A	ASSY-THRESHOLD-STRIP SWITCH-NHTSA/945
7	2	10063	WASHER-5/16 FLAT
6	4	24440	BOLT-5/16-18 X 3/4-BHSC/AUTO-BK
5	2	26963	SPRING-DAMP5.67 E/4.291 C,P1=3.37N-RET
4	1	27208RW	WMT-LATCH-LIFT-TITE REAR-RETRO
3	1	27208FW	WMT-LATCH-LIFT-TITE FRONT-RETRO
2	1	975-6148CNA34Y	THRESHOLD PLATE ASSEMBLY
1	1	945-2148RNW34	WMT-BASE-REAR/48" FTG
ITEM	QTY.	PART NO.	DESCRIPTION

# Exploded Views and Parts Lists

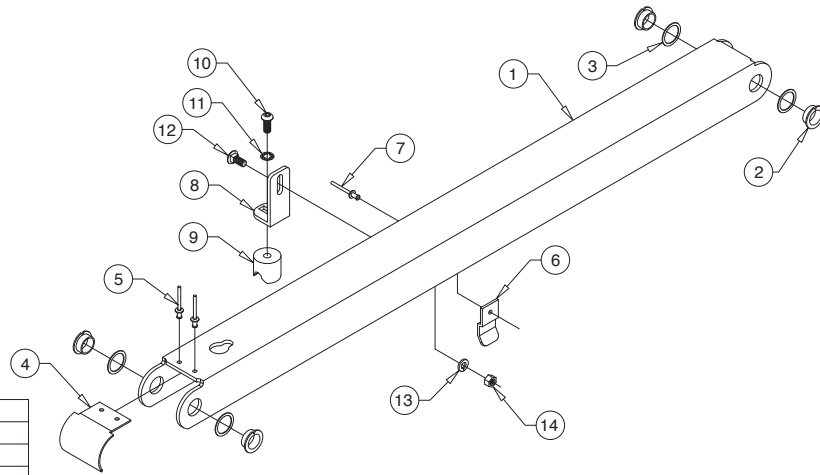
## NL919FIB-2 Base Plate Assembly



19	2	14993	RIV-POP-SD66BS-3/16"-.25/38/AUTO-BK
18	2	29765	CLAMP-INSULATED-1 3/8"
17	4	10091	CABLE TIE-11" SOLID
16	2	31816	BOLT-SHOULDER, 5/16 X 5/8-1/4-20 SS W/PC
15	3	29729	BOLT-3/8-16 X 1/2 W/nylock Patch
14	2	11541	WASHER-#10 FLAT/AUTO-BK
13	4	24570	RING-5/16 EXT SNAP/ZINC PLATED
12	2	15328	WASHER-.516ID X 1.0D X .0269/AUTO-BK
11	2	13617	NUT-3/8-16 UNC HEX LOCK/AUTO-BK
10	4	26614	O-RING 5/16 ID X 1/16
9	2	975-3121A	MICRO SWITCH ASSY
8	2	33337A	ASSY-THRESHOLD-STRIP SWITCH-NHTSA/945
7	2	10063	WASHER-5/16 FLAT
6	4	24440	BOLT-5/16-18 X 3/4-BHSC/AUTO-BK
5	2	26963	SPRING-DAMP5.67 E/4.291 C,P1=3.37N-RET
4	1	27208RW	WMT-LATCH-LIFT-TITE REAR-RETRO
3	1	27208FW	WMT-LATCH-LIFT-TITE FRONT-RETRO
2	1	975-6148CNA34Y	THRESHOLD PLATE ASSEMBLY
1	1	945-2148FNW34	WMT-BASE-FRONT/48" FTG
ITEM	QTY.	PART NO.	DESCRIPTION

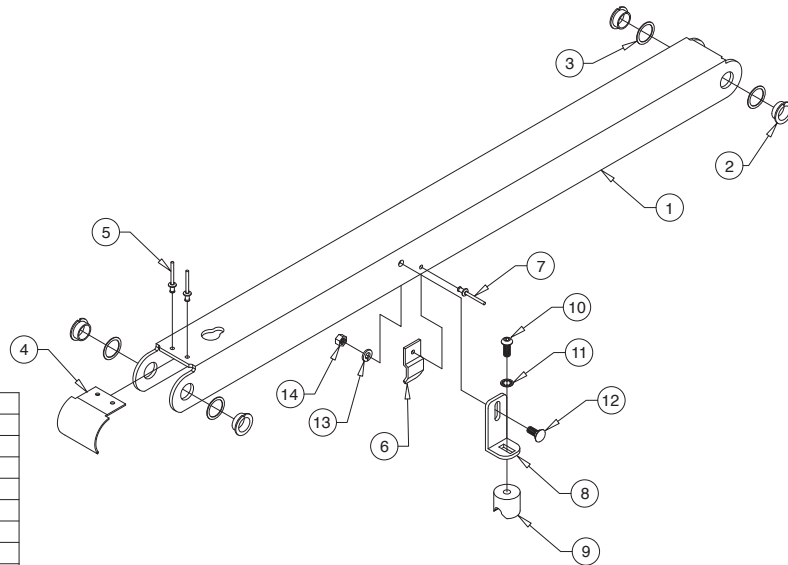
## Exploded Views and Parts Lists

### Top Parallel Arm Assembly - Front



14	1	10058	NUT-5/16-18 HEX/AUTO-BK
13	1	10068	WASHER-5/16" LOCK/AUTO-BK
12	1	15858BK	BOLT-CARR 5/16-18 X 3/4/AUTO-BK
11	1	16368	WASHER-5/16" EXTERNAL TOOTH
10	1	24440	BOLT-5/16-18 X 3/4-BHSC/AUTO-BK
9	1	28593A	ASSY-BLOCK-GUIDE-PLATFORM-STOW
8	1	955-2392	BKT.-QUIET-RIDE MTG.-955
7	1	14993	RIV-POP-SD66BS-3/16"-.25/38/AUTO-BK
6	1	915-0703	BRACKET-INNER SIDE PANEL GUIDE
5	2	11513	RIV-POP-SD64BS-3/16"-.13/25/AUTO-BK
4	1	996-0449	CAP-PARALLEL ARM
3	4	31771	SHIM WASHER-0.906"IDx1.156"ODx.030" T/SS
2	4	24011	BEARING-FLANGE-3/4" X 3/8"-12FDU06
1	1	945-0419FNKS	ARM-PARALLEL/TOP-FRONT (Incl. Items 2-7)
ITEM	QTY.	PART NO.	DESCRIPTION

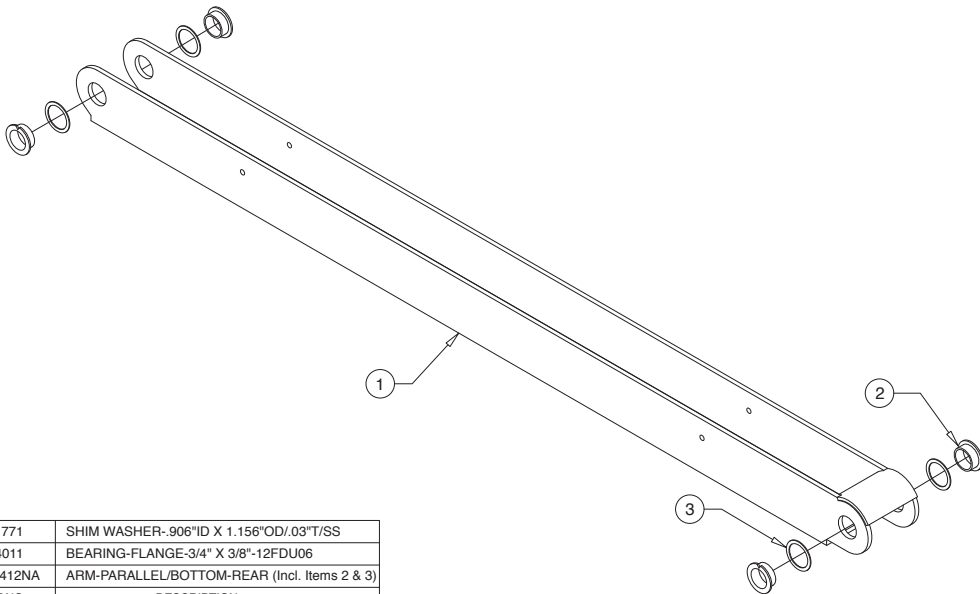
### Top Parallel Arm Assembly - Rear



14	1	10058	NUT-5/16-18 HEX/AUTO-BK
13	1	10068	WASHER-5/16" LOCK/AUTO-BK
12	1	15858BK	BOLT-CARR 5/16-18 X 3/4/AUTO-BK
11	1	16368	WASHER-5/16" EXTERNAL TOOTH
10	1	24440	BOLT-5/16-18 X 3/4-BHSC/AUTO-BK
9	1	28593A	ASSY-BLOCK-GUIDE-PLATFORM-STOW
8	1	955-2392	BKT.-QUIET-RIDE MTG.-955
7	1	14993	RIV-POP-SD66BS-3/16"-.25/38/AUTO-BK
6	1	915-0703	BRACKET-INNER SIDE PANEL GUIDE
5	2	11513	RIV-POP-SD64BS-3/16"-.13/25/AUTO-BK
4	1	996-0449	CAP-PARALLEL ARM
3	4	31771	SHIM WASHER-0.906"IDx1.156"ODx.030" T/SS
2	4	24011	BEARING-FLANGE-3/4" X 3/8"-12FDU06
1	1	945-0419RNKS	ARM-PARALLEL/TOP-REAR (Incl. Items 2-7)
ITEM	QTY.	PART NO.	DESCRIPTION

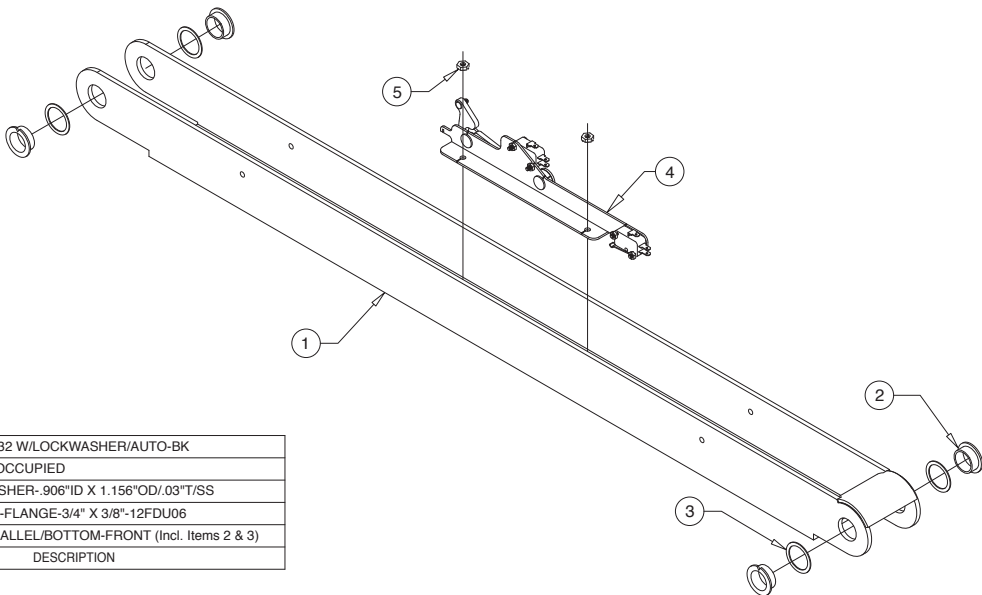
# Exploded Views and Parts Lists

## Bottom Parallel Arm Assembly - Opposite Pump Side

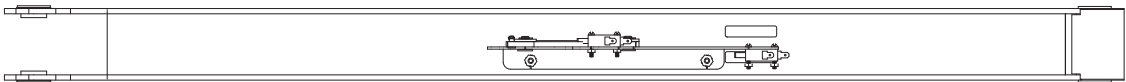


3	4	31771	SHIM WASHER-.906"ID X 1.156"OD/.03"T/SS
2	4	24011	BEARING-FLANGE-3/4" X 3/8"-12FDU06
1	1	945-0412NA	ARM-PARALLEL/BOTTOM-REAR (Incl. Items 2 & 3)
ITEM	QTY.	PART NO.	DESCRIPTION

## Bottom Parallel Arm Assembly - Pump Side

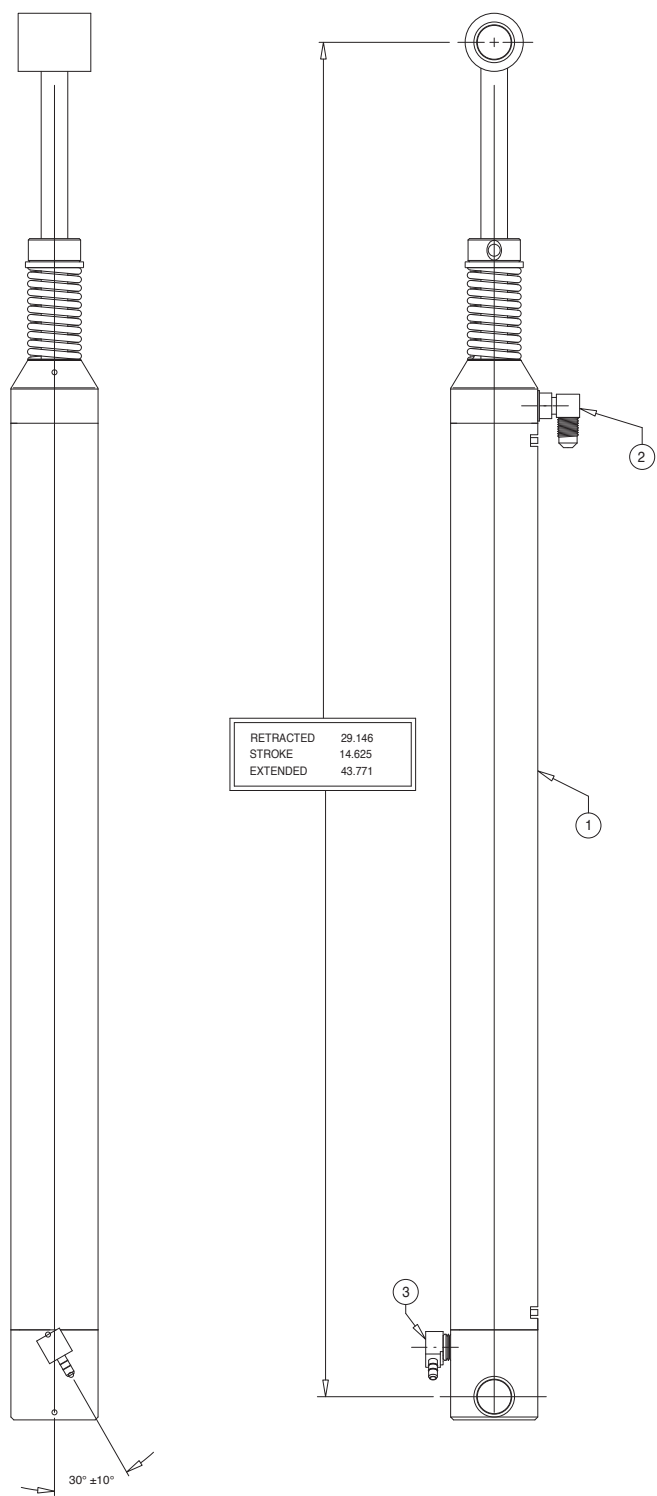


5	2	18349	NUT-#10-32 W/LOCKWASHER/AUTO-BK
4	1	32514NA	ASSY-IB OCCUPIED
3	4	31771	SHIM WASHER-.906"ID X 1.156"OD/.03"T/SS
2	4	24011	BEARING-FLANGE-3/4" X 3/8"-12FDU06
1	1	945-0458NKS	ARM-PARALLEL/BOTTOM-FRONT (Incl. Items 2 & 3)
ITEM	QTY.	PART NO.	DESCRIPTION



**Exploded Views and Parts Lists**

**Hydraulic Cylinder Assembly - Main**



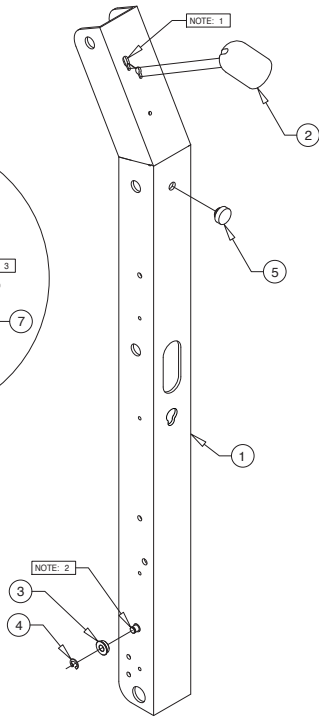
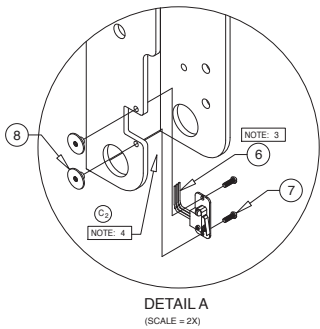
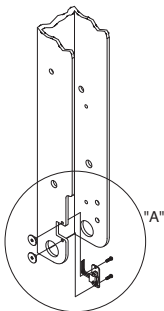
3	1	15150	ELBOW-1/4 NPT 90° 1/4 BARB
2	1	26667	ELBOW-7/16-20 M/O-RNG/37°/.035 ORFICE
1	1	C1514.3-0408N	CYLINDER-14.625"/29.146 RETRACTED
ITEM	QTY.	PART NO.	DESCRIPTION

# Exploded Views and Parts Lists

## Vertical Arm Assembly - Rear

### DWG. NOTES

- 1) INSERT SOCKET OF LIGHT ASSY THRU TOP KEY WHILE INSTALLING LIGHT. TIGHTEN SCREWS.
- 2) APPLY GREASE TO PIN PRIOR TO INSTALLING ROLLER.
- 3) HARNESS TO BE TUCKED INSIDE CHANNEL.
- 4) BUSHING NOT SHOWN.

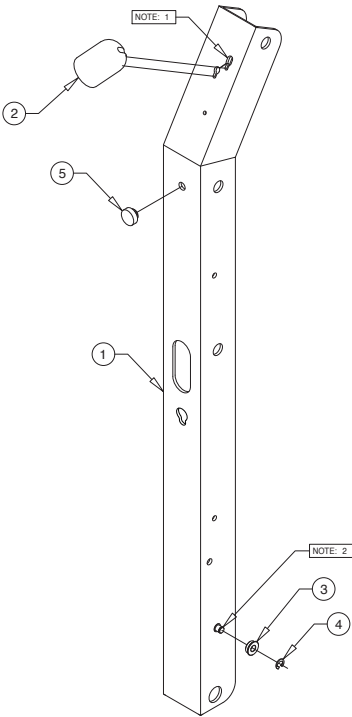


8	2	32949	WELD NUT-#4-40 X 1/8" BARREL-ZINC
7	2	11481	SCREW-#4-40 X 3/8" RD. HD.
6	1	32855A	HARN-BRIDGE-NL/NCL-2
5	1	32408	RUBBER BUMPER-VERT CHAN.
4	1	84383	E CLIP-3/8 SHAFT
3	1	32734	ROLLER-LIFT TITE
2	1	31062A	ASSY-LIGHT-VERT. CHANNEL/PHILIPS SOCKET
1	1	945-0448RNW	WMT-VERTICAL CHANNEL-REAR-48"
ITEM	QTY.	PART NO.	DESCRIPTION

## Vertical Arm Assembly - Front

### DWG. NOTES

- 1) INSERT SOCKET OF LIGHT ASSY THRU TOP KEY WHILE INSTALLING LIGHT. TIGHTEN SCREWS.
- 2) APPLY GREASE TO PIN PRIOR TO INSTALLING ROLLER.



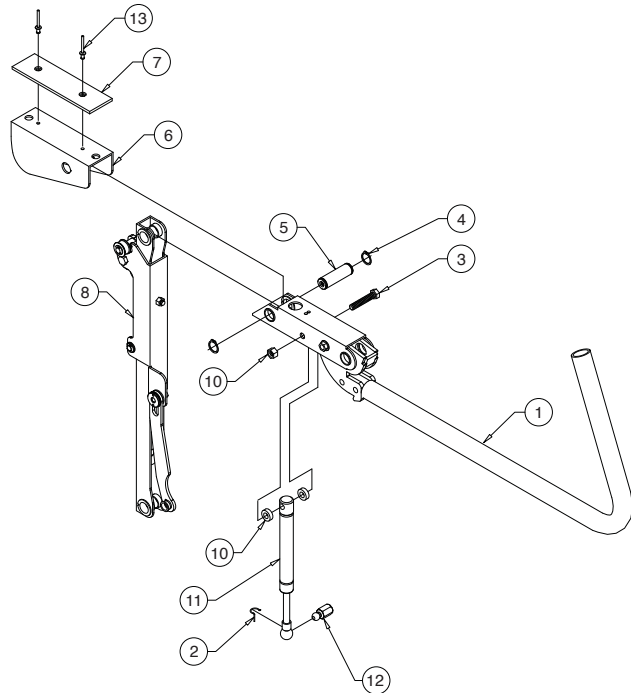
5	1	32408	RUBBER BUMPER-VERT CHAN.
4	1	84383	E CLIP-3/8 SHAFT
3	1	32734	ROLLER-LIFT TITE
2	1	31062A	ASSY-LIGHT-VERT. CHANNEL/PHILIPS SOCKET
1	1	945-0448FNW	WMT-VERTICAL CHANNEL-FRONT-48"
ITEM	QTY.	PART NO.	DESCRIPTION



# Exploded Views and Parts Lists

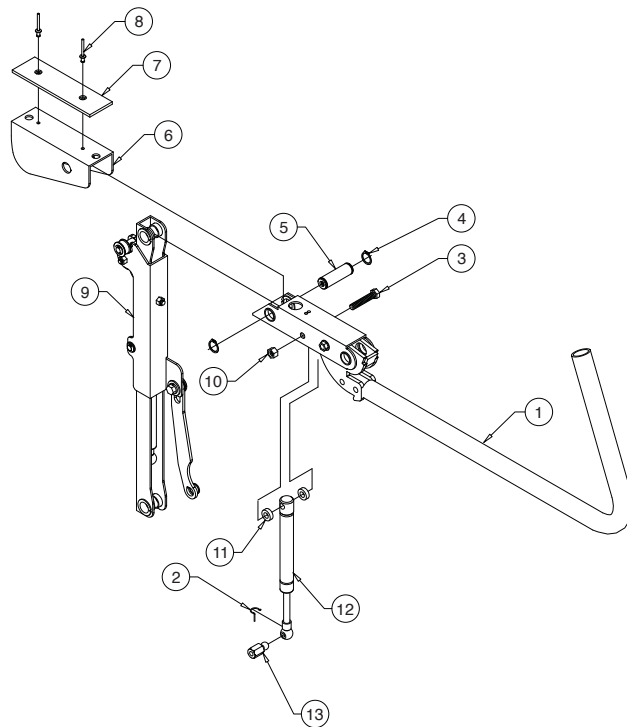
## Front Handrail Assembly

13	2	11513	RIV-POP-SD64BS-3/16"-.13/.25/AUTO-BK
12	1	29185	BALL STUD-13MM W/ 3/8-16 FEMALE THREAD
11	1	29186	GAS SPRING-14.468 EXT/8.956 COM-P1=1150N
10	2	30227	WASHER-UHMW 0.75 OD X 0.39 ID X 0.25
9	1	13617	NUT-3/8-16 UNC HEX LOCK/AUTO-BK
8	1	945-0640FNA	ASSY-FOLD ARM-48 FTG-FRONT
7	1	31677	SLIDE-UHMW-PLATFORM SLIDE-2X6.9"
6	1	985-0606N	SLIDE-PLATFORM ROTATE HANDRAIL
5	1	900-0413N	PIN-PIVOT LOWER ARM
4	2	18657	RING-3/4 EXT SNAP/AUTO-BK
3	1	10027	BOLT-3/8-16 X 2" HEX HD. CAP
2	1	12608	CLIP-SAFETY (GAS SPRING)
1	1	945-0618NA	HANDRAIL ASSY-NHTSA
ITEM	QTY.	PART NO.	DESCRIPTION



## Rear Handrail Assembly

* INDICATES ITEMS NOT SHOWN			
14	1	* 32519A	SWITCH ASSEMBLY
13	1	29185	BALL STUD-13MM W/ 3/8-16 FEMALE THREAD
12	1	29186	GAS SPRING-14.468 EXT/8.956 COM-P1=1150N
11	2	30227	WASHER-UHMW 0.75 OD X 0.39 ID X 0.25
10	1	13617	NUT-3/8-16 UNC HEX LOCK/AUTO-BK
9	1	945-0640RNA	ASSY-FOLD ARM-48 FTG-REAR
8	2	11513	RIV-POP-SD64BS-3/16"-.13/.25/AUTO-BK
7	1	31677	SLIDE-UHMW-PLATFORM SLIDE-2X6.9"
6	1	985-0606N	SLIDE-PLATFORM ROTATE HANDRAIL
5	1	900-0413N	PIN-PIVOT LOWER ARM
4	2	18657	RING-3/4 EXT SNAP/AUTO-BK
3	1	10027	BOLT-3/8-16 X 2" HEX HD. CAP
2	1	12608	CLIP-SAFETY (GAS SPRING)
1	1	945-0618NA	HANDRAIL ASSY-NHTSA
ITEM	QTY.	PART NO.	DESCRIPTION

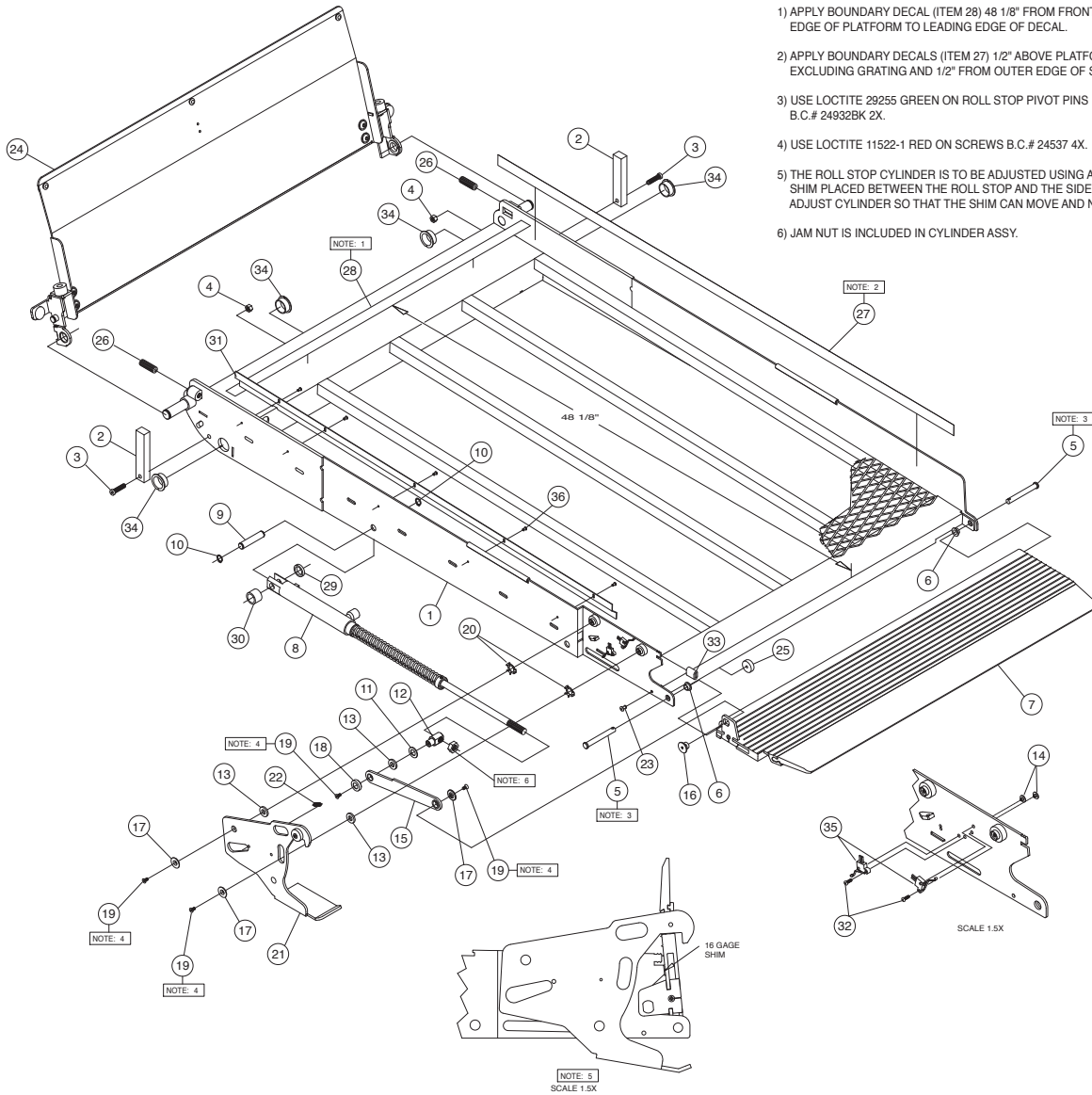


# Exploded Views and Parts Lists

## NL917IB-2 & NL917FIB-2 Platform Assembly

### DWG NOTES

- 1) APPLY BOUNDARY DECAL (ITEM 28) 48 1/8" FROM FRONT EDGE OF PLATFORM TO LEADING EDGE OF DECAL.
- 2) APPLY BOUNDARY DECALS (ITEM 27) 1/2" ABOVE PLATFORM SURFACE EXCLUDING GRATING AND 1/2" FROM OUTER EDGE OF SIDE PLATE.
- 3) USE LOCTITE 29255 GREEN ON ROLL STOP PIVOT PINS B.C.# 24932BK 2X.
- 4) USE LOCTITE 11522-1 RED ON SCREWS B.C.# 24537 4X.
- 5) THE ROLL STOP CYLINDER IS TO BE ADJUSTED USING A 16 GAGE SHIM PLACED BETWEEN THE ROLL STOP AND THE SIDEPLATE WHEN ADJUST CYLINDER SO THAT THE SHIM CAN MOVE AND NOT PINCH.
- 6) JAM NUT IS INCLUDED IN CYLINDER ASSY.



20	2	27276	WASHER-FINGER DISC SPRING 1.004 X .516
19	4	24537	SCREW-#10-32X3/8 FL HD-HX SKT/AUTO-BK
18	1	915-0341N	ADAPT-CYL/ROLL STOP LEVER
17	3	990-0341	ADAPT-CYL/ROLL STOP LEVER-OUT
16	1	24550	PIVOT-ROLL STOP LEVER-L915
15	1	947-0345NA	LEVER-ROLL STOP LATCH-ASSY
14	2	32949	WELD NUT-#4-40 X 1/8" BARREL
13	3	15328	WASHER-.516ID X 1OD X .0269/AUTO-BK
12	1	947-0344N	ADAPTER-CYL/ROLL STOP LEVER
11	1	29371	WASHER-THRUST-.875 OD/.50 ID/.0585T
10	2	20946	RING-1/2 EXT SNAP/AUTO-BK
9	1	915-0414	PIN-PLATFORM CYLINDER
8	1	915-3318NA	CYLINDER-FLAP ASSY
7	1	915R4312A-33Y	ROLL-STOP ALUM./RUBBER END/ASSY-.33/YEL
6	2	24028	BRG-PLASTIC-FLANGE-3/8IDX1/4"
5	2	24932BK	PIN-CLEVIS 3/8 X 3" EFF LEN.-W/O HOLE/BK
4	2	28324BK	NUT-5/16-18 TOP LOCK/AUTO-BK
3	2	26327	BOLT-5/16-18 X 1 1/4"-LHSHCS/AUTO-BK
2	2	900-0311	STOP-PLATFORM
1	1	947-23350NW	WMT-PLATFORM-NL917-2 /33 X 50"/IB
ITEM	QTY.	PART NO.	DESCRIPTION

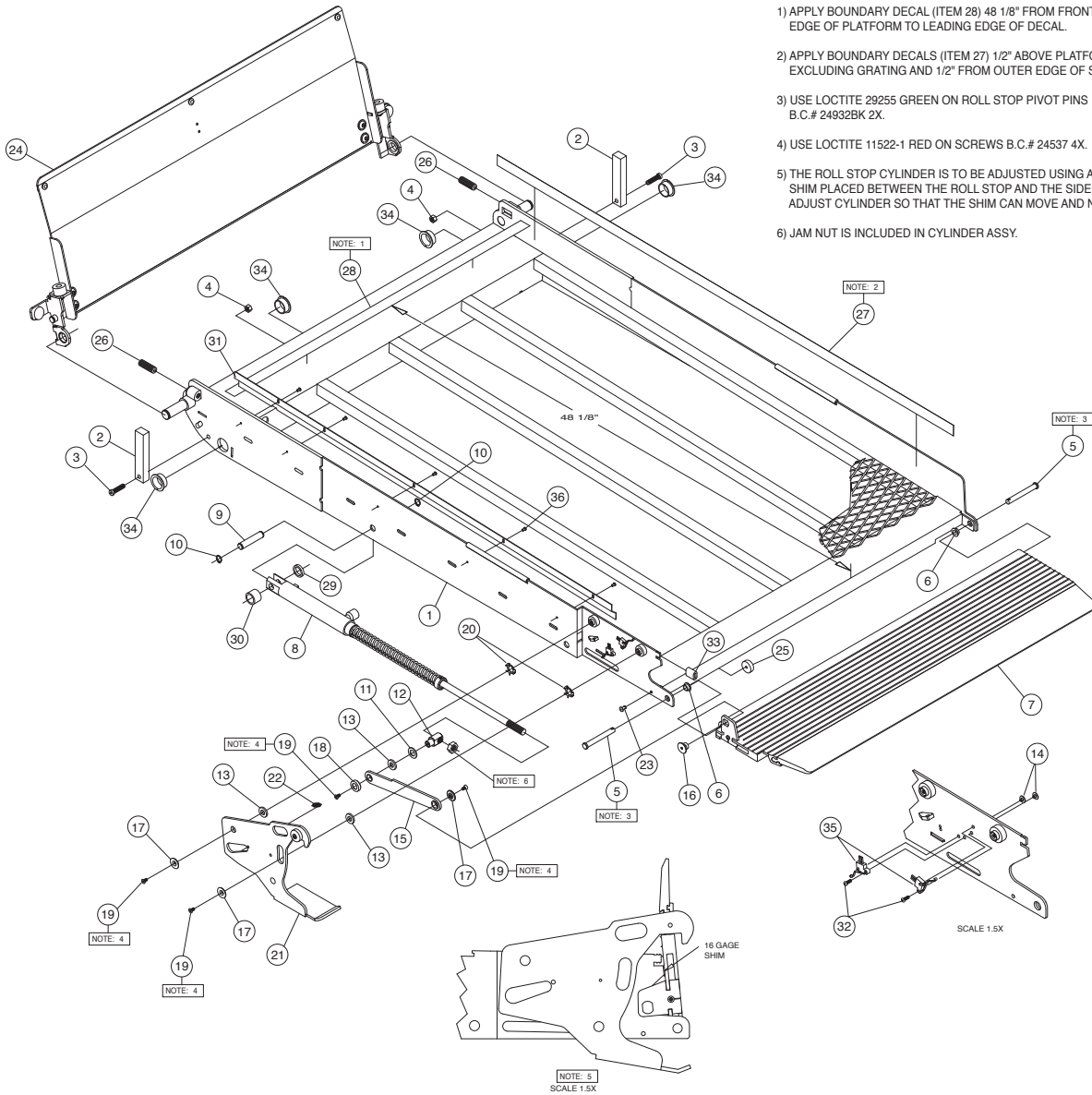
36	5	13906	RIV-POP-SD45BS-1/8".25/31
35	1	33434A	HARNESS-ROLLSTOP OCC-NL2
34	4	28031	BEARING-FLANGE-1 X 1/2-16FDU08
33	1	28630R000.81	TUBING-POLYURETHANE 1/4ID X 1/2OD X .81"
32	2	11481	SCREW-#4-40 X 3/8" RD. HD.
31	1	915-0368N50Y	GUARD-WIRING-PLT-OUTER BARRIER SENSOR
30	1	915-0415	SPACER-FLAP CYL/0.625
29	1	915-0416	SPACER-FLAP CYL/0.184
28	1	30236R032.5	DECAL-BOUNDARY YELLOW LEXAN 1" X 32 1/2"
27	1	30236R048.5	DECAL-BOUNDARY YELLOW LEXAN 1" X 48 1/2"
26	2	18663	SCREW-1/2-20 X 1.5 SET-LOCK/AUTO-BK
25	1	10950	BUMPER-RUBBER RECES.31/32 OD
24	1	945-0147NA	ASSY-BRIDGE PLATE-PLT-34/48" FTG
23	1	11513	RIV-POP-SD64BS-3/16".13/25/AUTO-BK
22	1	10774	SPRING-1/4 X 1" EXT. W/HOOKS/AUTO-BK
21	1	947-3343NA	ASSY-LATCH-ROLL STOP
ITEM	QTY.	PART NO.	DESCRIPTION

# Exploded Views and Parts Lists

## NL919IB-2 & NL919FIB-2 Platform Assembly

### DWG NOTES

- 1) APPLY BOUNDARY DECAL (ITEM 28) 48 1/8" FROM FRONT EDGE OF PLATFORM TO LEADING EDGE OF DECAL.
- 2) APPLY BOUNDARY DECALS (ITEM 27) 1/2" ABOVE PLATFORM SURFACE EXCLUDING GRATING AND 1/2" FROM OUTER EDGE OF SIDE PLATE.
- 3) USE LOCTITE 29255 GREEN ON ROLL STOP PIVOT PINS B.C.# 24932BK 2X.
- 4) USE LOCTITE 11522-1 RED ON SCREWS B.C.# 24537 4X.
- 5) THE ROLL STOP CYLINDER IS TO BE ADJUSTED USING A 16 GAGE (.060) SHIM PLACED BETWEEN THE ROLL STOP AND THE SIDEPLATE WHERE NOTED. ADJUST CYLINDER SO THAT THE SHIM CAN MOVE AND NOT PINCHED TIGHT.
- 6) JAM NUT IS INCLUDED IN CYLINDER ASSY.



20	2	27276	WASHER-FINGER DISC SPRING 1.004 X .516
19	4	24537	SCREW-#10-32X3/8 FL HD-HX SKT/AUTO-BK
18	1	915-0341N	ADAPT-CYL/ROLL STOP LEVER
17	3	990-0341	ADAPT-CYL/ROLL STOP LEVER-OUT
16	1	24550	PIVOT-ROLL STOP LEVER-L915
15	1	947-0345NA	LEVER-ROLL STOP LATCH-ASSY
14	2	32949	WELD NUT-#4-40 X 1/8" BARREL
13	3	15328	WASHER-.516ID X 1.0D X .0269/AUTO-BK
12	1	947-0344N	ADAPTER-CYL/ROLL STOP LEVER
11	1	29371	WASHER-THRUST-.875 OD/.50 ID/.0585T
10	2	20946	RING-1/2 EXT SNAP/AUTO-BK
9	1	915-0414	PIN-PLATFORM CYLINDER
8	1	915-3318NA	CYLINDER-FLAP ASSY
7	1	915R4312A-34Y	ROLL-STOP ALUM./RUBBER END/ASSY-.34"/YEL
6	2	24028	BRG-PLASTIC-FLANGE-3/8IDX1/4"
5	2	24932BK	PIN-CLEVIS 3/8 X 3" EFF LEN.-W/O HOLE/BK
4	2	28324BK	NUT-5/16-18 TOP LOCK/AUTO-BK
3	2	26327	BOLT-5/16-18 X 1 1/4"-LHSHCS/AUTO-BK
2	2	900-0311	STOP-PLATFORM
1	1	947-23450NW	WMT-PLATFORM-NL917-2 /34 X 50"/IB
ITEM	QTY.	PART NO.	DESCRIPTION

36	5	13906	RIV-POP-SD45BS-1/8"- .25/ .31
35	1	33434A	HARNES-ROLLSTOP OCC-NL2
34	4	28031	BEARING-FLANGE-1 X 1/2-16F DU08
33	1	28630R000.81	TUBING-POLYURETHANE 1/4ID X 1/2OD X .81"
32	2	11481	SCREW-#4-40 X 3/8" RD. HD.
31	1	915-0368N50Y	GUARD-WIRING-PLT-OUTER BARRIER SENSOR
30	1	915-0415	SPACER-FLAP CYL/0.625
29	1	915-0416	SPACER-FLAP CYL/0.184
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27	1	30236R048.5	DECAL-BOUNDARY YELLOW LEXAN 1" X 48 1/2"
26	2	18663	SCREW-1/2-20 X 1.5 SET-LOCK/AUTO-BK
25	1	10950	BUMPER-RUBBER RECES.31/32 OD
24	1	945-0147NA34Y	ASSY-BRIDGE PLATE-PLT-34/48" FTG
23	1	11513	RIV-POP-SD64BS-3/16"- .13/.25/AUTO-BK
22	1	10774	SPRING-1/4 X 1" EXT. W/HOOKS/AUTO-BK
21	1	947-3343NA	ASSY-LATCH-ROLL STOP
ITEM	QTY.	PART NO.	DESCRIPTION

# **"Providing Access to the World"®**



**Over 300 Braun  
Dealers Worldwide**

 **THE BRAUN  
CORPORATION®**  
"Providing Access to the World"



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

**Millennium 2****Series****Public Use  
Wheelchair Lifts****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 five years\*, providing the lift is installed, operated and maintained properly. 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. 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 authorized Braun representative. (A labor schedule determines cost allowance for repairs and is available upon request).

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
- 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



**33836 Rev. B**  
**March 2008**

**4-12**  
**UPDATE**

All illustrations, descriptions and specifications in this manual are based on the latest product information available at the time of publication. The Braun Corporation reserves the right to make changes at any time without notice.

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

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