

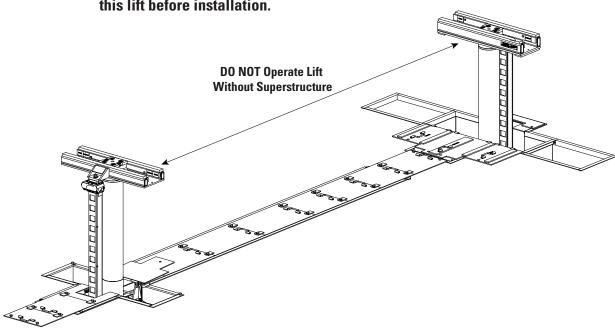
### Models: HDI225 (100 Series) INGROUND LIFTS

Capacity 50,000lbs. 25,000 lbs. Front Post 25,000 lbs. Rear Post

# HDI325 (100 Series) INGROUND LIFTS

Capacity 75,000lbs. 25.000 lbs. Each Post

IMPORTANT We assume no responsibility for installation errors where instructions other than those shipped with equipment are used. Read all literature and engineering drawings provided with this lift before installation.



#### Recommended Fluid Specifications for Rotary Lifts

Fluids recommended for use in automotive lifts should conform to the following specifications.

Viscosity Range 150 SUS (32CST) ISO32 / 10W

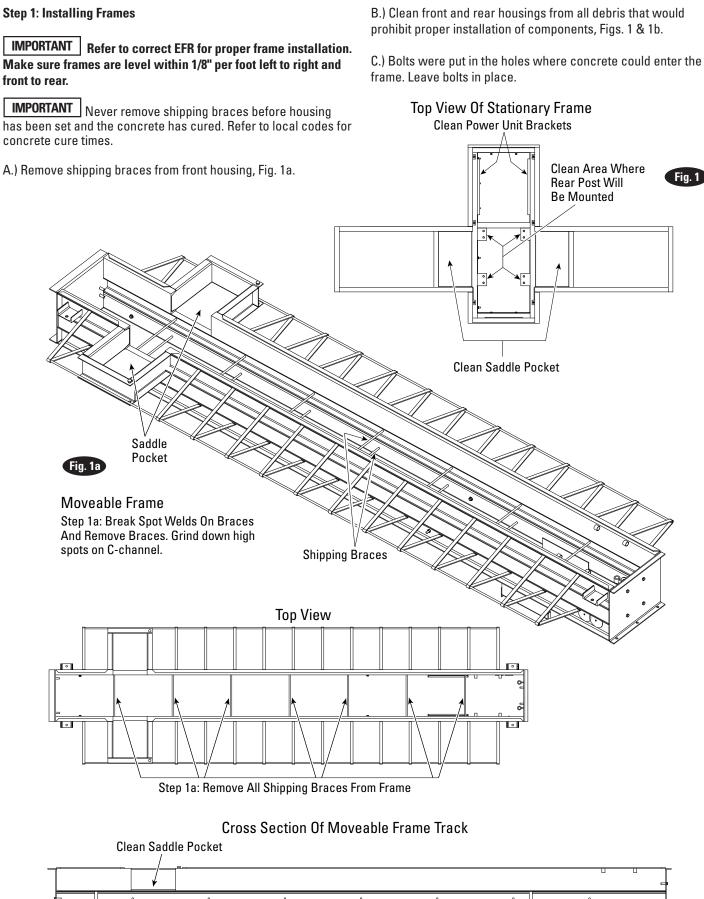
Aniline Point: 210° F Min.
Viscosity Index: 95 Min.
Additives: Anti-Foam
Anti-Rust

Anti-Oxidation

Pour Point: 20° F below operating temp.

Tank Capacity: 28 Gallons

LPHDIIG Rev. - 2/17/2025



# Step 2: Installing Post Position Sensors Onto Post Position Sensor Adapter Bracket:

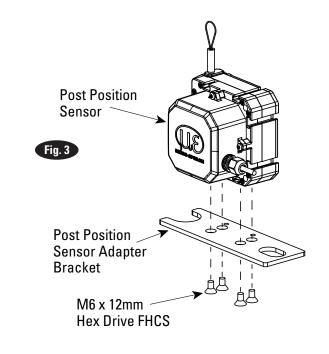
A.) Attach post position sensor onto post position sensor bracket using M6 x 12mm hex drive FHCS, Fig. 3.

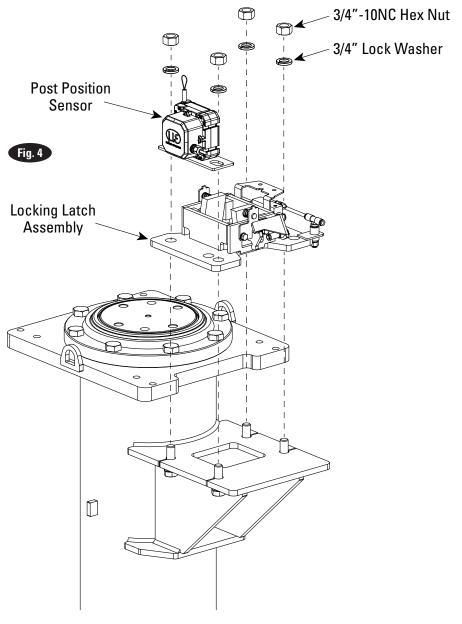
# Step 3: Installing Locking Latch Assemblies And Position Sensors To Latch Plates On Stationary Post:

**Note: Stationary Post only** - All components can be mounted to the posts before lowering them into the front and rear housings.

A.) Install latch assemblies and post position sensors onto latch plates of posts with 3/4"-10NC hex nuts, bolts and lock washers, Fig. 4.

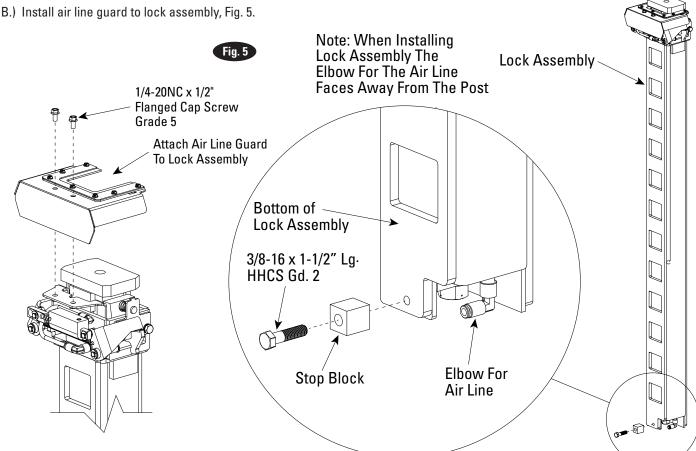
**Note:** Pay attention to the orientation of the post position sensor mounting. The string protruding out of the top of the sensor goes next to the post.

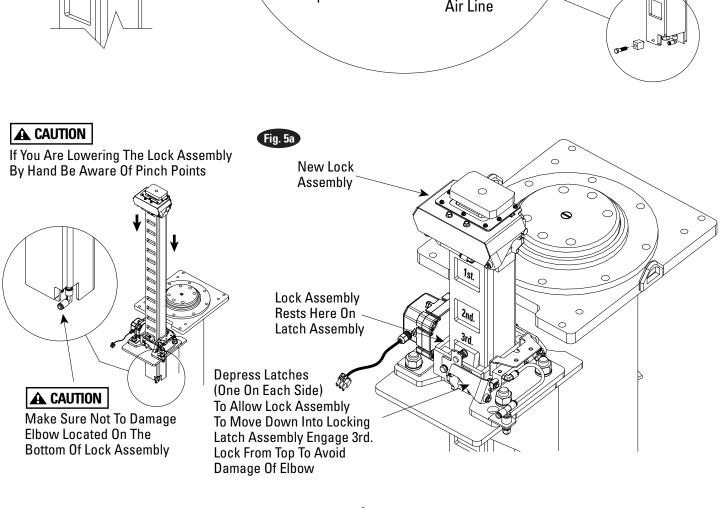




# Step 4: Installing Lock Assembly Into Locking Latch Assembly, Stationary Post:

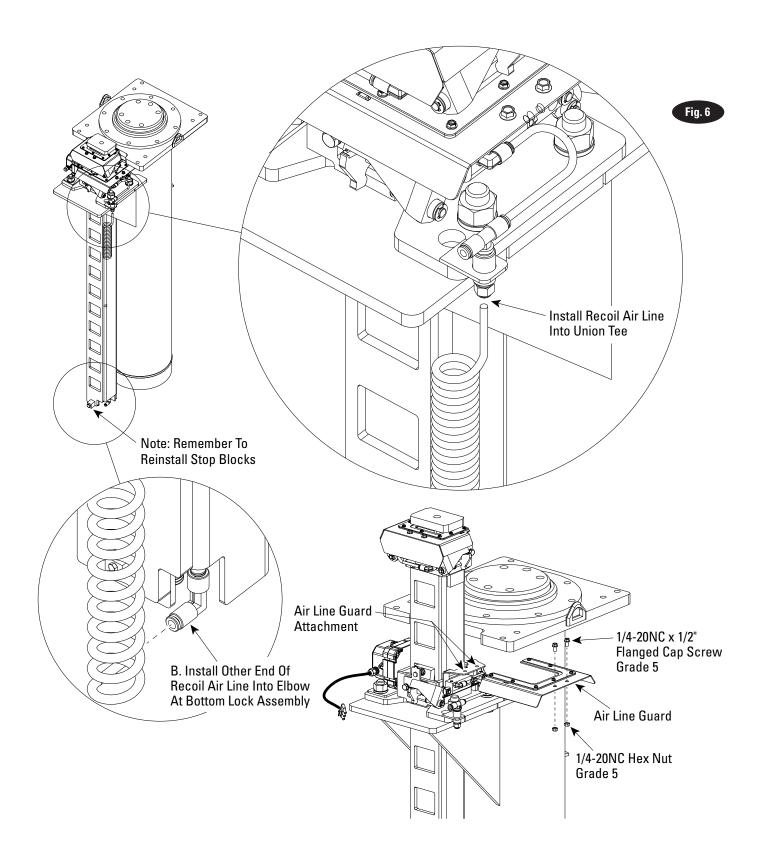
- A.) **IMPORTANT** The stop blocks must be removed before lock assemblies can be lowered into position, Fig. 5.
- C.) Pull locks back on locking leg assemblies and lower lock assemblies into locking leg assemblies, Fig 5a.
- D.) Reinstall the stop blocks after the lock assemblies have been lowered into position.





#### **Step 5: Installing Recoil Air Hoses, Stationary Post:**

- A.) Install recoil air lines per, Fig. 6.
- B.) Install second air line guard, Fig. 6.



#### Step 6: Attaching Hydraulic Hoses To Stationary Post:

IMPORTANT Review Figs. 7 and 8 thoroughly before installing hydraulic hoses. Both have 42" hoses but have different fittings.

**Note:** Longest hose will be installed to moveable post with bracket supports and axle/chain adjustment brackets.

### Fig. 7

#### **Flared Fittings Tightening Procedure**

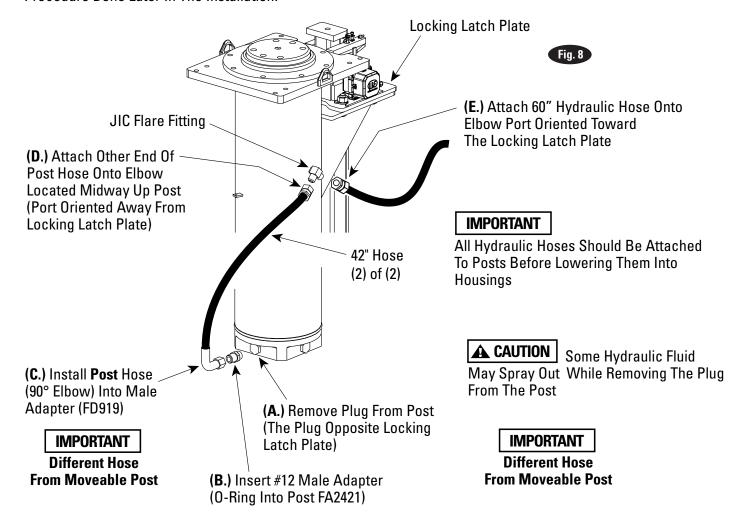
1. Screw the fittings together finger tight. Then, tighten to 85 ft lbs or (1-1/4 hex flats).

**IMPORTANT** Flare seat **MUST NOT** rotate when tightening. Only the nut should turn.

- 2. Back the fitting off one full turn then re-torque 85 ft lbs or (1 hex flat).
- 3. This will complete the tightening procedure and develop a pressure tight seal.

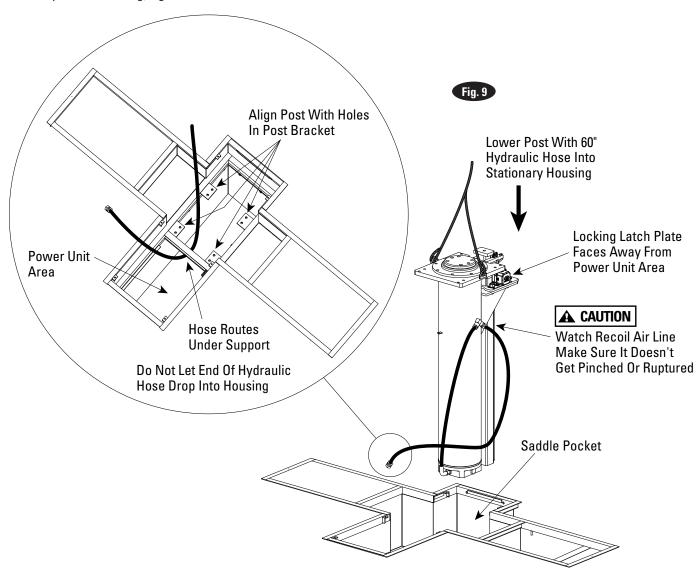
**IMPORTANT** Over tightening will damage fittings resulting in fluid leakage.

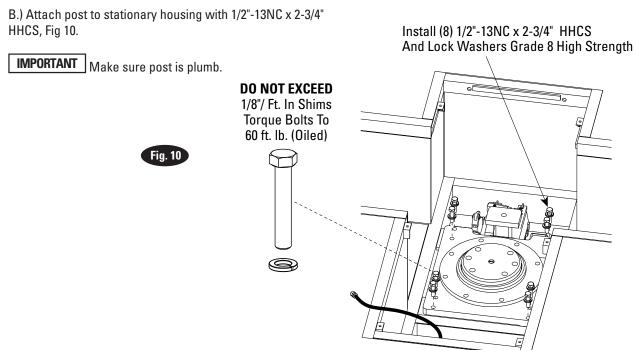
IMPORTANT Hydraulic Hoses Should Be Installed With Posts Laying down. Laying Posts Down Prevents The Piston In The Post From Pushing Out Too Much Hydraulic Fluid While Installing The Male Adapter And Hydraulic Hose. This Is Important To The Bleeding Procedure Done Later In The Installation.



#### **Step 7: Installing Post Into Stationary Housing:**

A.) Lower post into housing, Fig. 9.





7

#### **Step 8: Installing Power Unit Into Stationary Housing:**

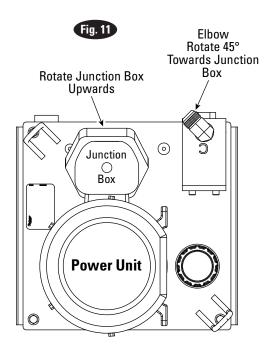
**Note:** The following illustrations show the installation of the power units. Although not shown you may want to wire all motors before lowering them into the front and rear housings.

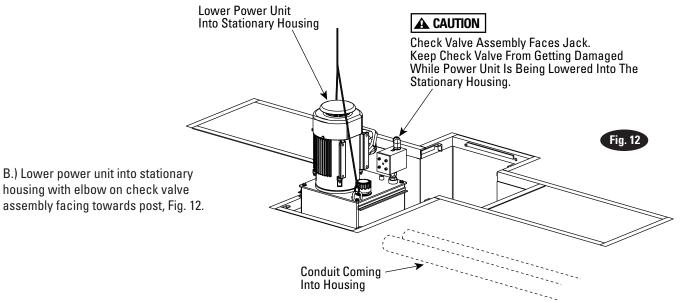
A.) Make adjustments to power unit for stationary housing, Fig. 11.

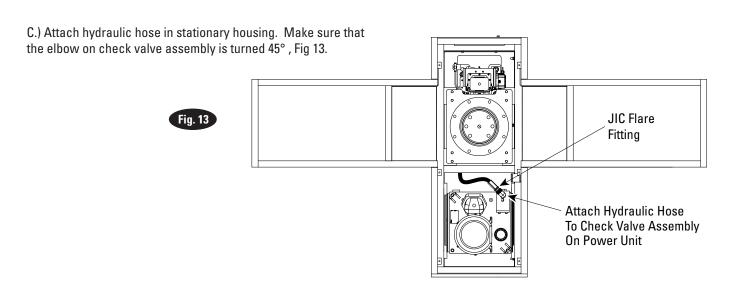
#### **IMPORTANT**

Adjustments Must Be Made To The Stationary Housing Power Unit. These Adjustments Should Be Made Before Lowering It Into The Stationary Housing.

- 1.) Install (1) Male Connector
- 2.) The Junction Box Should Be Rotated With The Hole Facing Upwards







#### Step 9: Attaching Hydraulic Hoses To Moveable Post:

IMPORTANT Review Figs. 13 and 14 thoroughly before installing hydraulic hoses. Both have 42" hoses but have different fittings.

**Note:** Longest hose will be installed to moveable post with bracket supports and axle/chain adjustment brackets.

Fig. 13

IMPORTANT Hydraulic Hoses Should Be Installed With Posts Laying down. Laying Posts Down Prevents The Piston In The Post From Pushing Out Too Much Hydraulic Fluid While Installing The Male Adapter And Hydraulic Hose. This Is Important To The Bleeding Procedure Done Later In The Installation.

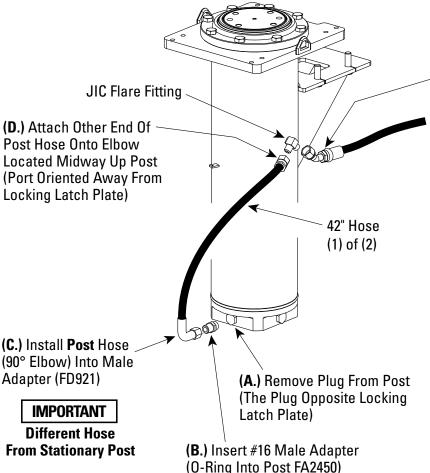
#### Flared Fittings Tightening Procedure

1. Screw the fittings together finger tight. Then, tighten to 85 ft lbs or (1-1/4 hex flats).

**IMPORTANT** Flare seat **MUST NOT** rotate when tightening. Only the nut should turn.

- 2. Back the fitting off one full turn then re-torque 85 ft lbs or (1 hex flat).
- 3. This will complete the tightening procedure and develop a pressure tight seal.

**IMPORTANT** Over tightening will damage fittings resulting in fluid leakage.



(E.) Attach Longest Hydraulic Hose Onto Post With Bracket Supports And Axle/

Chain Adjustment Brackets, Refer To Step 2

Hose End With 90° Fitting Will Attach

To Check Valve On Power Unit

### IMPORTANT

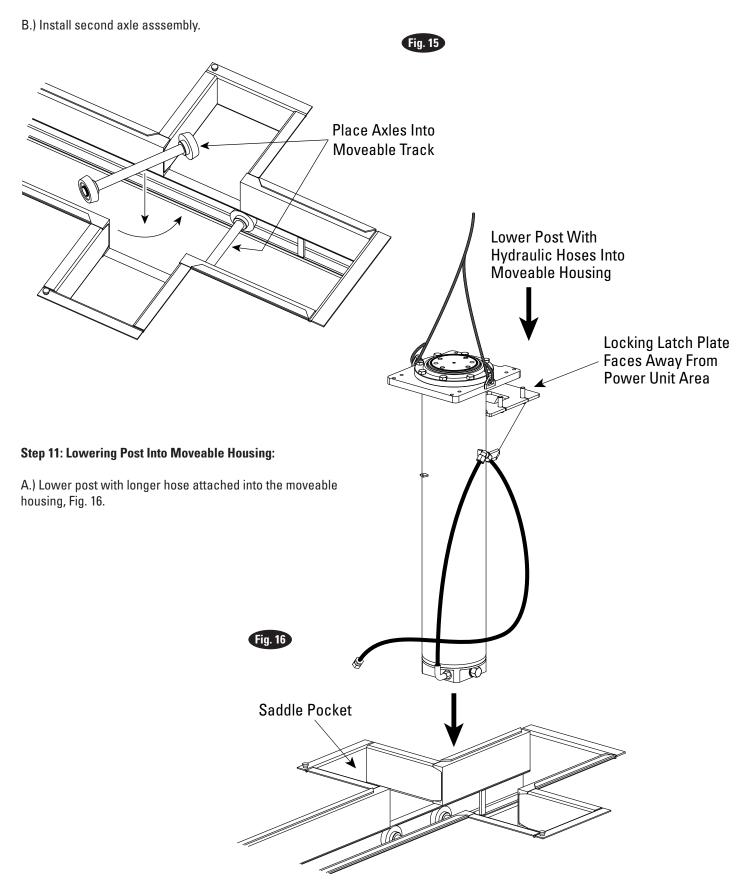
All Hydraulic Hoses Should Be Attached To Posts Before Lowering Them Into Housings Moveable Post Hose To Be Attached So It Runs Straight Out From Post

A CAUTION Some Hydraulic Fluid
May Spray Out While Removing The Plug
From The Post

Different Hose
From Stationary Post

# Step 10: Install Moveable Jack Axle Assembly Into Moveable Housing:

A.) Install jack axle assembly into moveable housing by inserting into axle channel at an angle and turning perpendicular to housing as shown, Fig. 15.



# Step 12: Installing Bracket Supports And Axle/Chain Adjustment Brackets, Movable Post:

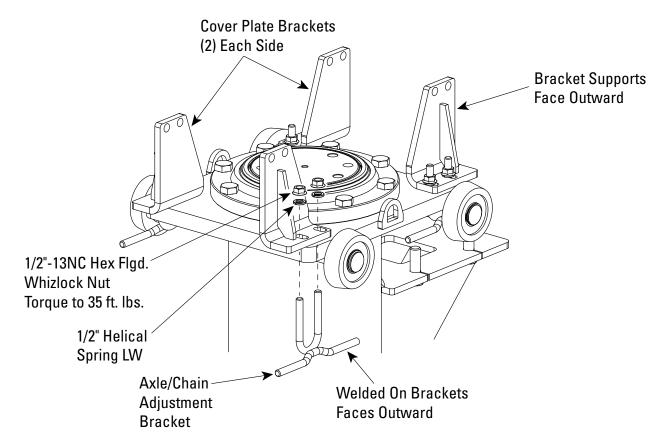
A.) Install bracket supports and axle/chain adjustment brackets with (8) 1/2" whizlock hex nuts and 1/2" LW, torque to 35 ft. lbs., Fig. 17.

B.) Roll installed post into saddle pocket, Fig. 16.



### IMPORTANT

Do Not Tighten Fasteners Completely.
Adjustments Will Be Made After Shutter Plate Installation.



Step 13: Installing Post Position Sensors Onto Post Position Sensor Adapter Bracket:

A.) See Step 2, same installation process as stationary post.

# Step 14: Installing Locking Latch Assemblies And Position Sensors To Latch Plates On Moveable Post:

A.) See **Step 3**, same installation process as stationary post.

# Step 15: Installing Lock Assembly Into Locking Latch Assembly, Moveable Post:

A.) See Step 4, same installation process as stationary post.

#### Step 16: Installing Recoil Air Hoses, Moveable Post:

A.) See **Step 5**, same installation process as stationary post.

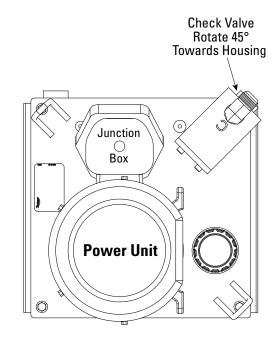
**IMPORTANT** Several types of motors are used on the hydraulic tank assemblies. Adjustments may be needed to the check valve if it rubs against the power unit.

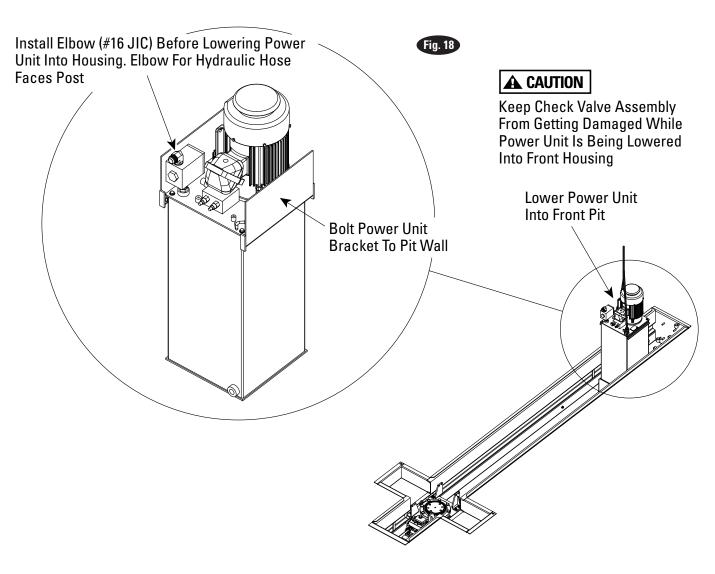
The check valve should only be rotated just enough to keep it from rubbing against the power unit. If it's rotated too much it may interfere with the drive chain from the drive in the moveable housing. Interference issues should be checked during the installation of the drive chain.

#### Step 17: Lowering The Power Unit Into Moveable Housing:

**Note:** The following illustrations show the installation of the power units. Although not shown you may want to wire all motors before lowering them into the front and rear housings.

A.) Lower power unit and tank into front housing and onto the power unit bracket just behind the position sensor, Fig. 18.





**IMPORTANT** Review Figs. 19 and 20 thoroughly before installing hydraulic hoses.

**Note:** Longest hose will be installed to moveable post with bracket supports and axle/chain adjustment brackets.

#### Flared Fittings Tightening Procedure

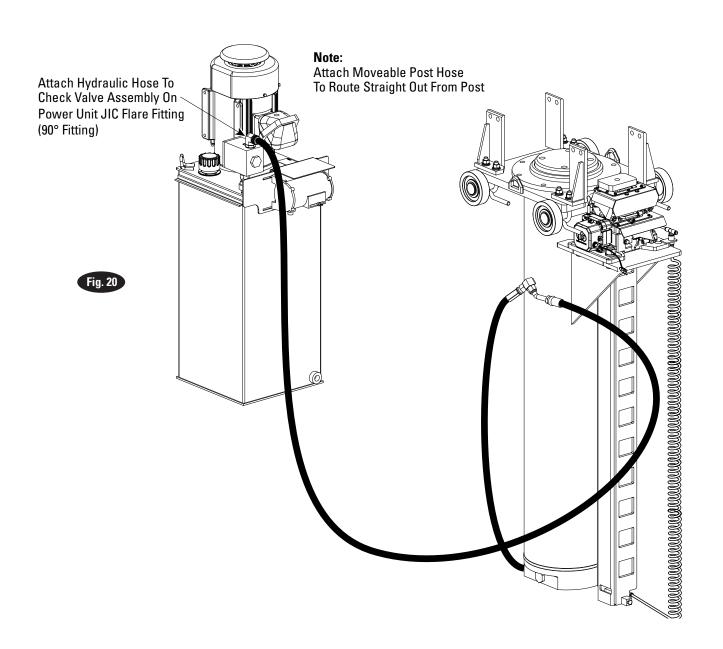
1. Screw the fittings together finger tight. Then, tighten to 85 ft lbs or (1-1/4 hex flats).

**IMPORTANT** Flare seat **MUST NOT** rotate when tightening. Only the nut should turn.

- 2. Back the fitting off one full turn then re-torque 85 ft lbs or (1 hex flat).
- 3. This will complete the tightening procedure and develop a pressure tight seal.

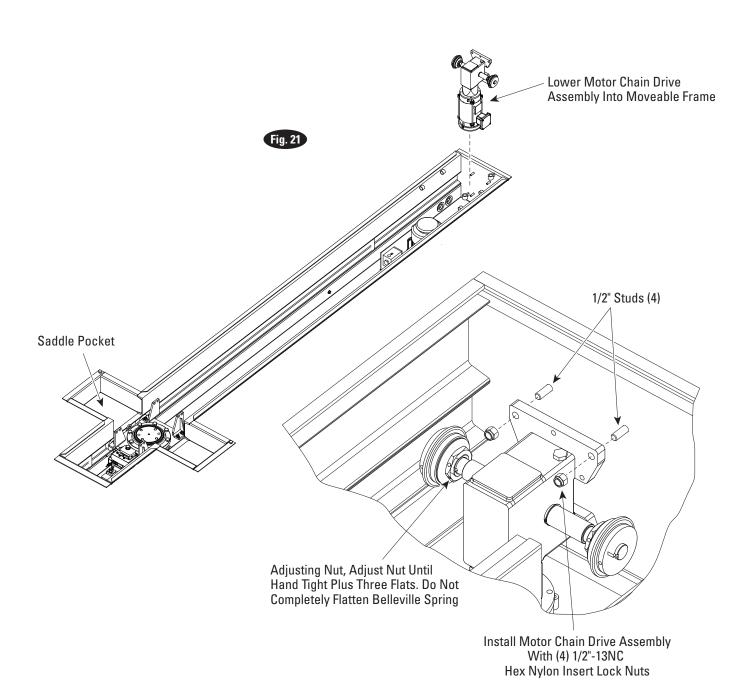
**IMPORTANT** Over tightening will damage fittings resulting in fluid leakage.





#### **Step 18: Installing The Motor Chain Drive Assembly:**

A.) Install the motor chain drive assembly in the end of the moveable frame, (end opposite saddle pocket), with 1/2"-13NC hex nylon insert lock nuts, Fig. 21.



#### Step 19: Filling Power Unit Tanks:

A.) Fill power unit tanks with hydraulic fluid (see Fig. 22 for fluid specifications.)

#### Step 20: Running Air Lines, Connecting Position Sensors and **Wiring Motors:**

Figures 29-34 are simplified overviews of the components in both front and rear pits. Before installing air lines, connecting position sensors, and wiring power unit motors review all illustrations pertaining to these components in the pages to follow.

#### **IMPORTANT** | Review Fig 39.

Determine lift configuration to control panel. Notice (1) is always to the left when viewing lift from behind control panel.

IMPORTANT | All electrical work must be done by a qualified electrician adhering to all local, state and national codes. Full schematics provided in the back.

#### Recommended Fluid Specifications for Rotary Lifts

Fluids recommended for use in automotive lifts should conform to the following specifications.

Viscosity Range: 150 SUS (32CST) ISO32 / 10W

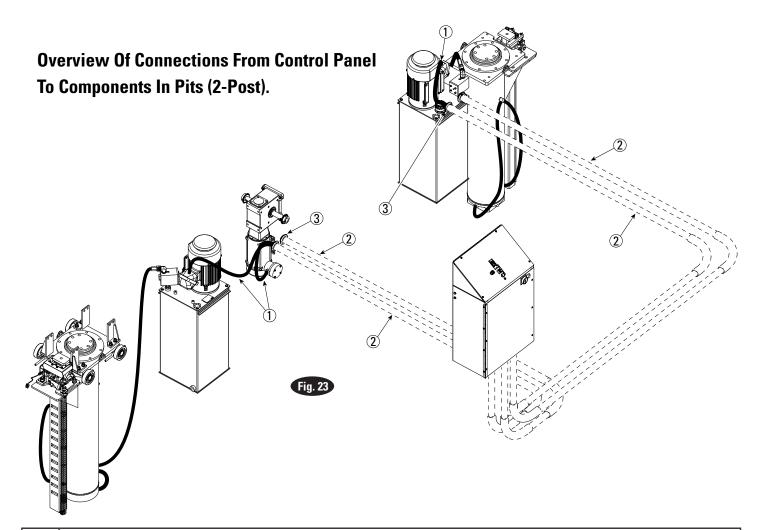
Aniline Point: 210° F Min. Viscosity Index: 95 Min. Anti-Foam Additives:



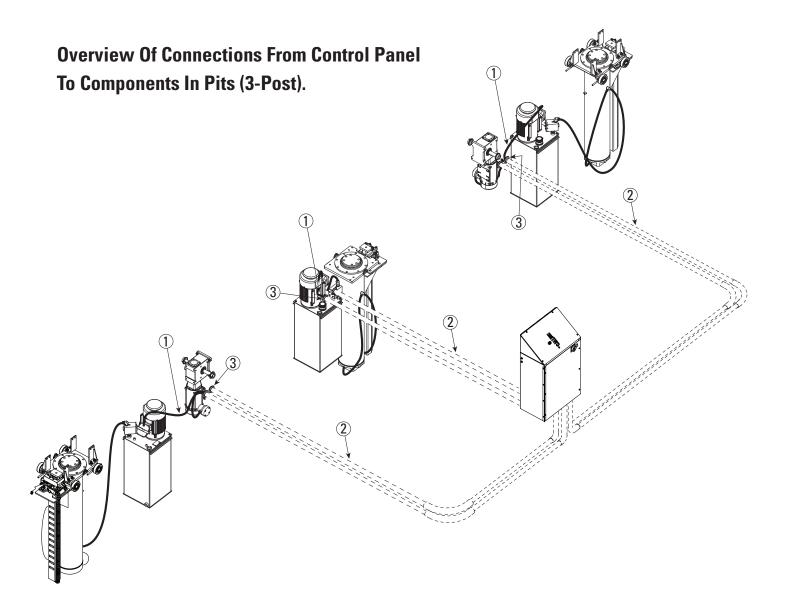
Anti-Rust Anti-Oxidation

Pour Point: 20° F below operating temp. 28 Gallons (MOD35 Series Lifts) Tank Capacity:

**IMPORTANT** Field wiring in hazardous locations are involved with the installation of this product. Review your planned wiring methods with your local Authority Having Jurisdiction (AHJ)/ Inspector prior to construction, and covering of conduits.

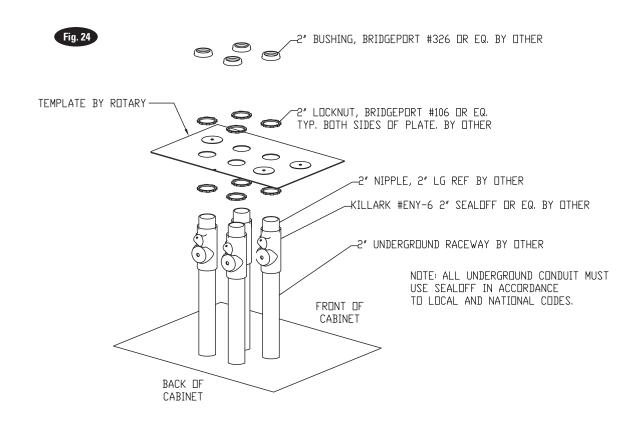


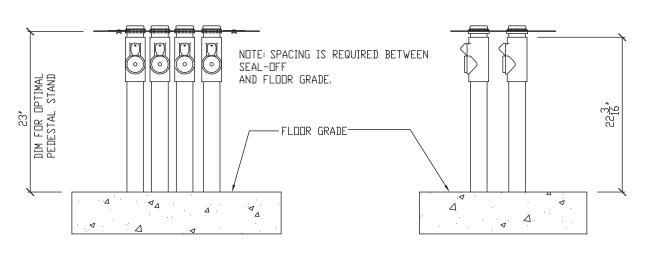
- Type MC-HL Metal Clad Cable, 4 Conductor, 600V Minimum, For Use In Class 1, Div. 1, Hazardous Locations. Fittings Must Be Compatible With Cable And Suitable For Class 1, Div. 1, Hazardous Locations From Outlet Boxes To Electric Motors In Housings (See Wiring Schematic).
- 2 All Service Lines Run To And From Control Panel Through Underground Electrical Conduit Or Raceway.
- 3 2" Rubber Grommets Required At Each End Of Buried Underground Electrical Conduit Or Raceway.

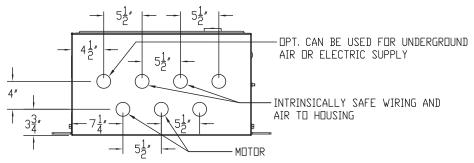


	Type MC-HL Metal - Clad Cable, 4 Conductor, 600V Minimum, For Use In Class 1, Div. 1, Hazardous Locations. Fittings Must Be Compatible With Cable And Suitable For Class 1, Div. 1, Hazardous Locations From Outlet Boxes To Electric Motors In Housings (See Wiring Schematic).
2	All Service Lines Run To And From Control Panel Through Underground Electrical Conduit Or Raceway.

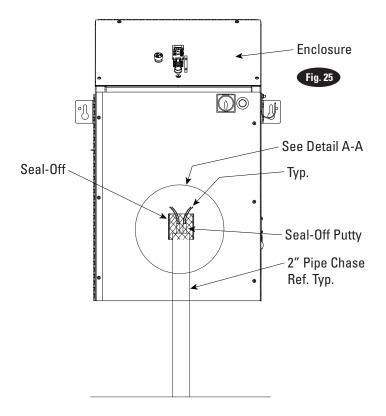
2" Rubber Grommets Required At Each End Of Buried Underground Electrical Conduit Or Raceway.

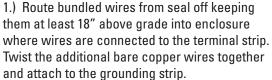


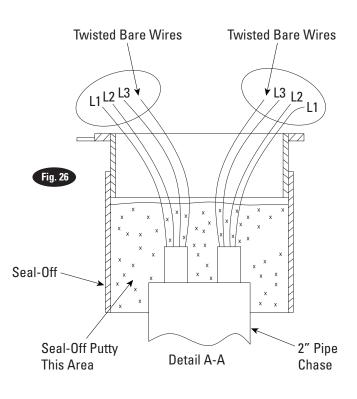




CABINET CONDUIT PROFILE

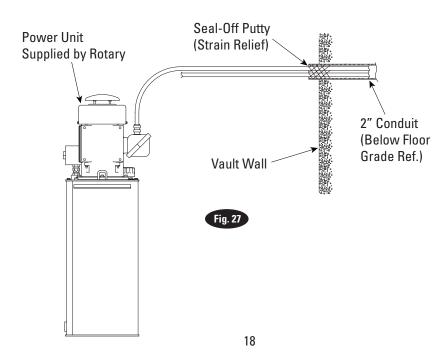






#### **General Notes:**

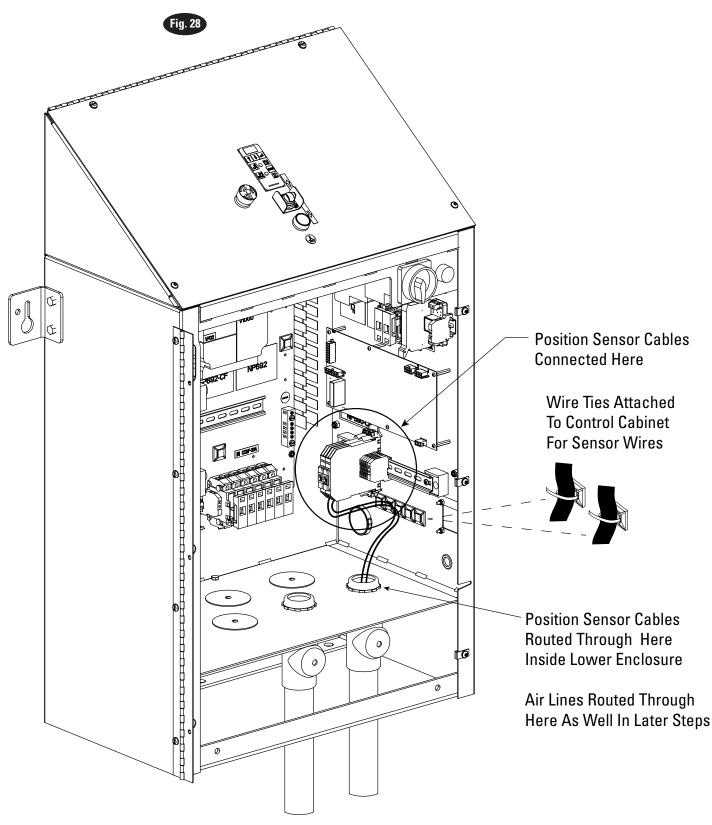
- 1.) This method may be used to seal-off the pipe chase coming into the console. This method is not to be construed as the only method of doing so. Always check local codes and regulations before proceeding.
- 2.) Ground strip in panel to be connected to facility ground or high integrity ground installed at panel.
- 3.) Repeat wiring method for all electrical raceways terminated in enclosure.



# Step 21: Option "A" Connecting Position Sensors Cables Into Console:

- A.) Remove the screw from the enclosure door, Fig. 28.
- B.) Route the rise position sensor cable through the conduit and plug them into their appropriate sensor, Fig. 28. Sensors only plug in one way and use dielectric grease on both connectors.
- C.) Position sensor cables are all intrinsically safe wires and must be separated from non-intrinsically safe wires by at least 2". Larger schematic provided in back of instructions.
- D.) Review Fig. 39.

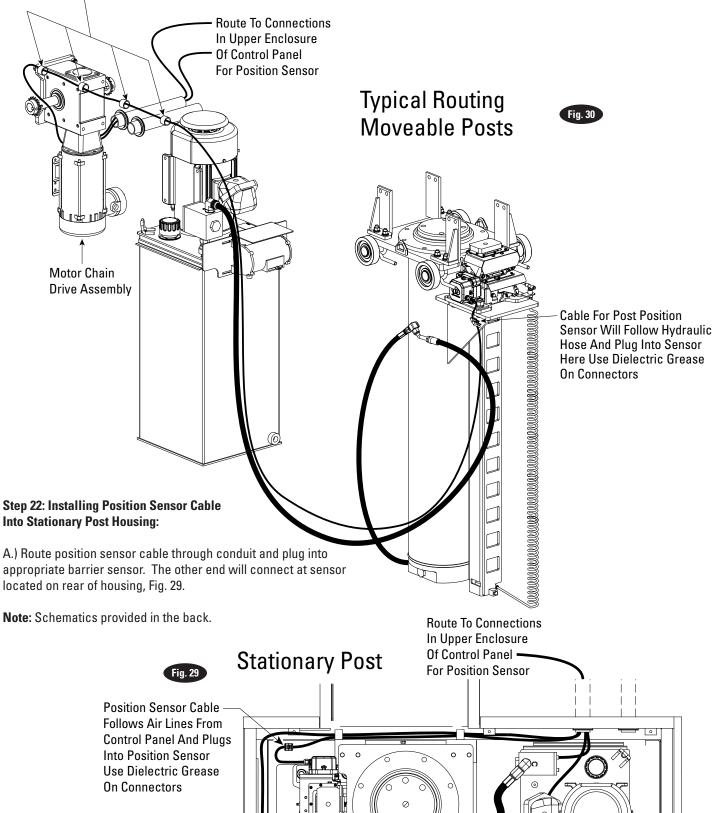
Determine lift configuration to control panel. Notice (1) is always to the left when viewing lift from behind control panel.



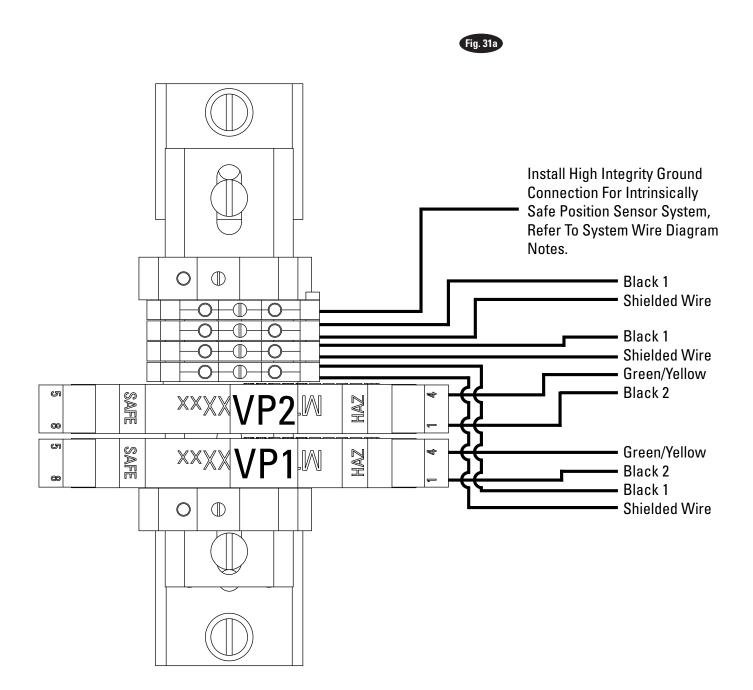
Route Position Sensor Cable From Control Panel, Through Conduit And Around Drive Chain Assembly And Through Guides In Housing

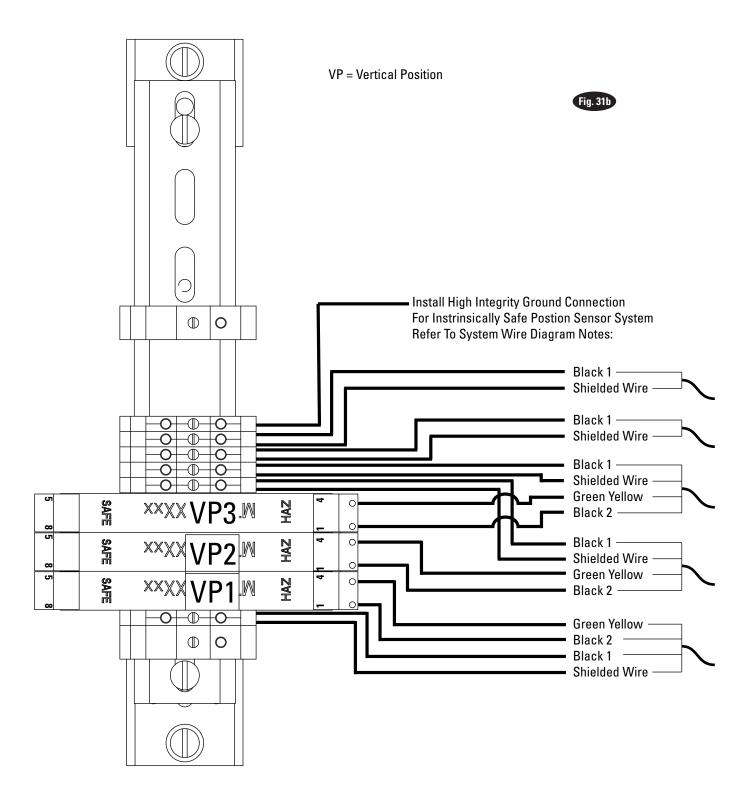
# Step 23: Installing Position Sensor Cable Into Moveable Post Housing:

A.) Remove the screw from the enclosure door, Fig. 30.



Air Line

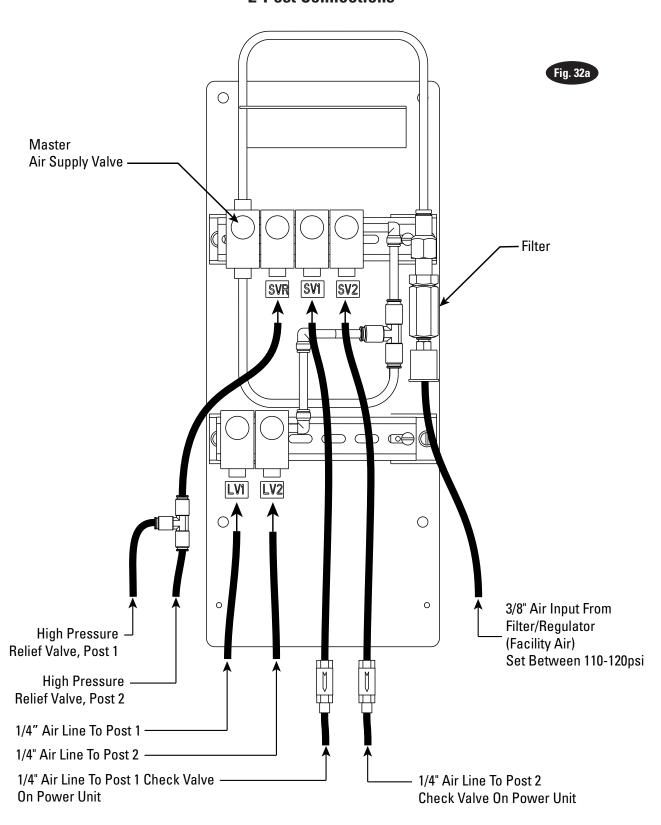


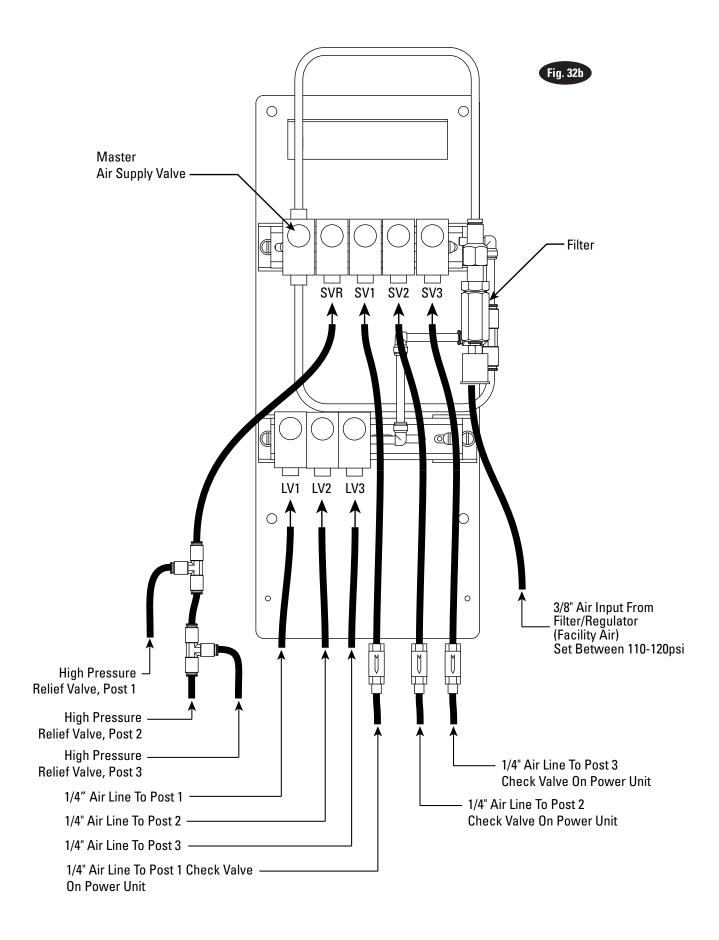


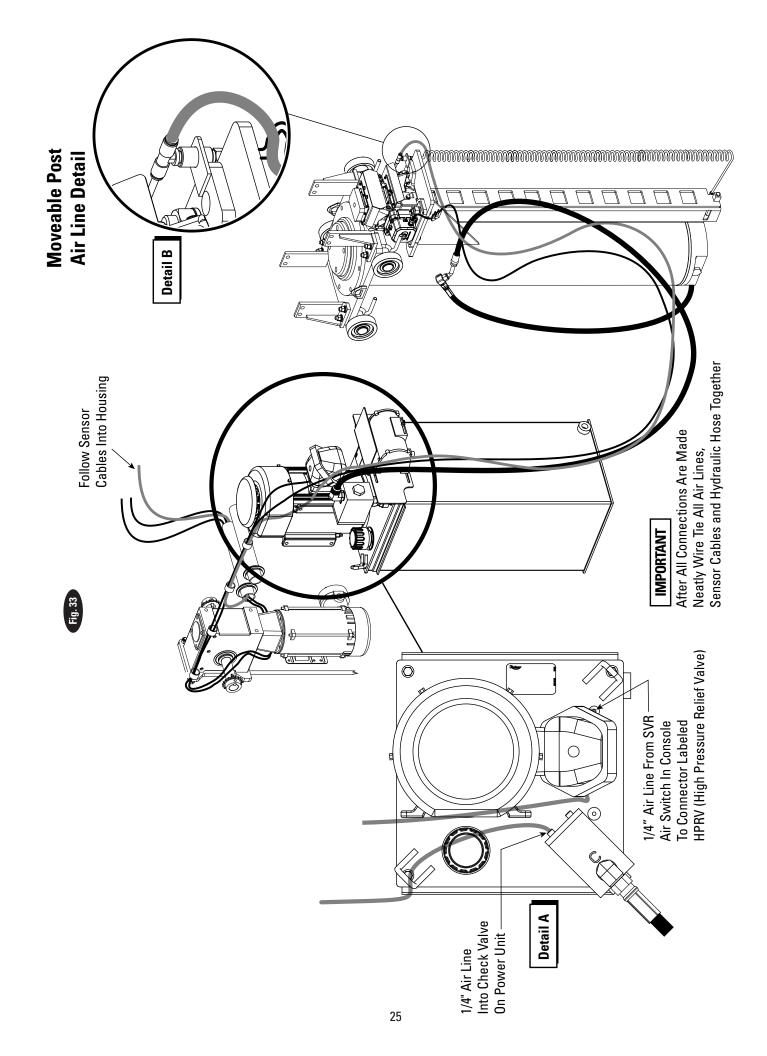
#### **Step 24: Making Air Line Connections Into Housings:**

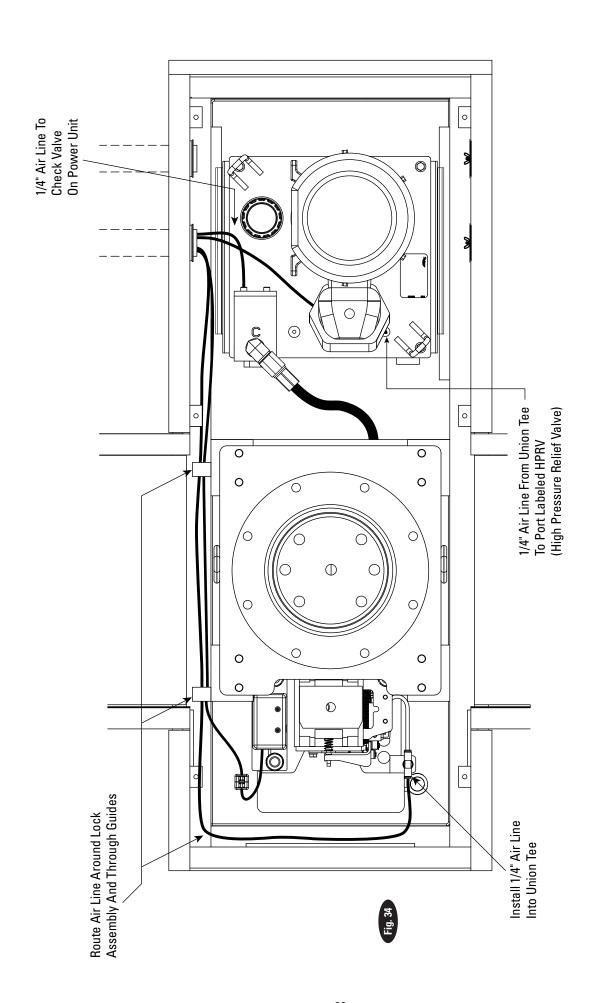
- B.) Route 1/4" air lines through service conduits and make connections per Figs. 32a thru 34.
- C.) Review Fig. 39a and Fig. 39b. Determine lift configuration to control panel. Notice (1) is always to the left when viewing lift from behind control panel.

IMPORTANT A filter/regulator, included in parts box, must be installed on air supply at the control panel. Failure to do so will void the warranty.





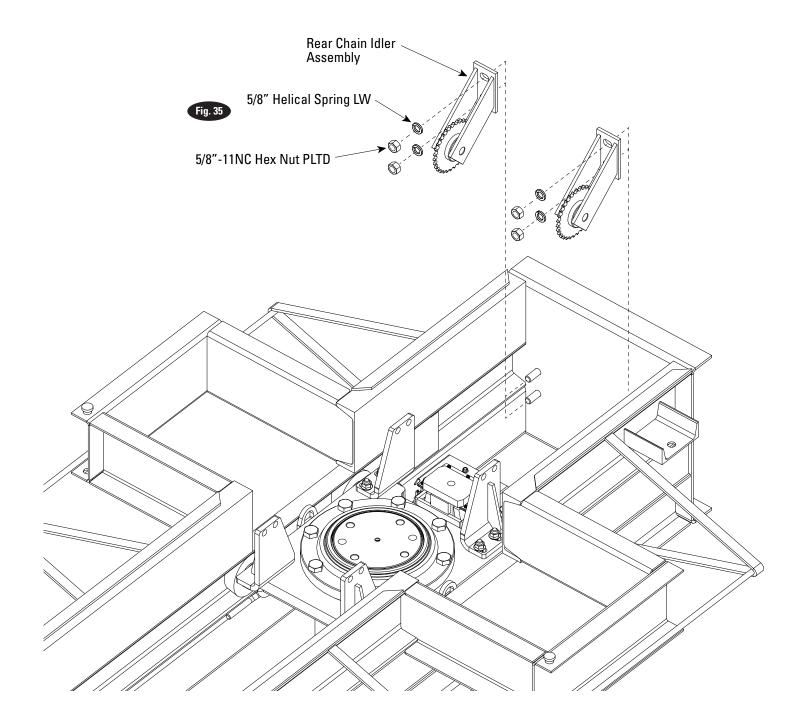




#### **Step 25: Installing Chain Idler Assemblies:**

A.) Install chain idler assembly with (4) 5/8"-11NC hex nuts and (4) 5/8" LW, Fig. 35.

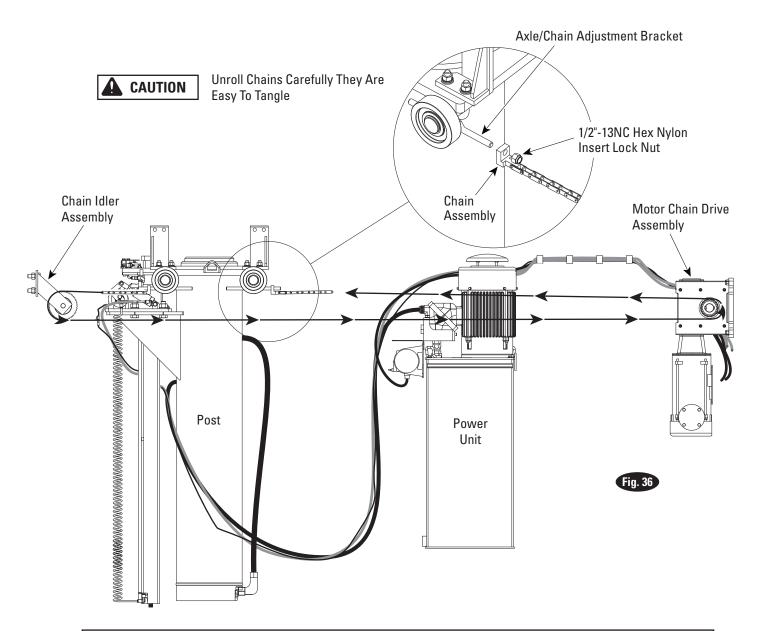
**NOTE:** Notice in Fig. 35 that the sprockets will be facing downward into housing.



#### **Step 26: Installing Drive Chains Into Front Frame:**

- A.) Install one end of drive chain onto axle/chain adjustment bracket with 1/2"-13NC hex nylon insert lock nut, Fig. 36.
- B.) Route drive chain around sprocket on motor chain drive assembly and sprocket on chain idler assembly and attach other end to of drive chain to axle/chain adjustment bracket with 1/2"-13NC hex nylon insert lock nut, Fig. 36.
- C.) Repeat steps A and B for other drive chain.

After drive chains have been installed slack in chains should not exceed 1", see Fig. 36.



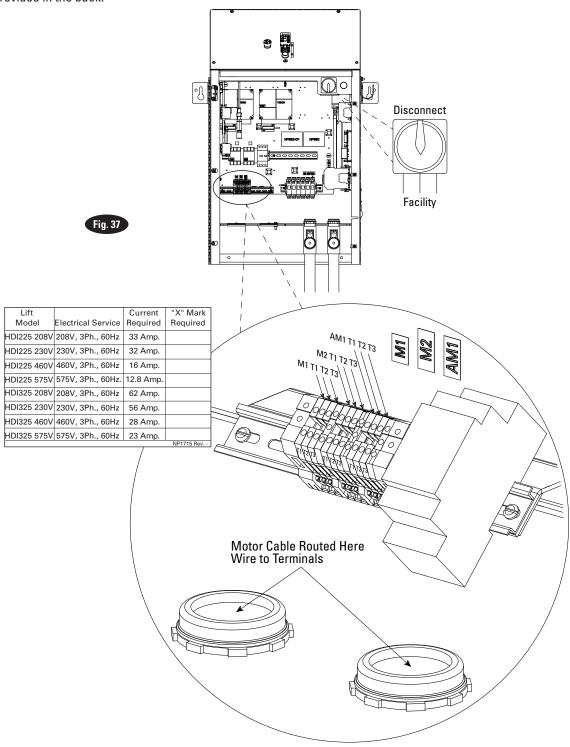
After Both Chains Have Been Installed Slack In The Chain Should Not Exceed 1"
Should Not Exceed 1".
Make Adjustments Accordingly.

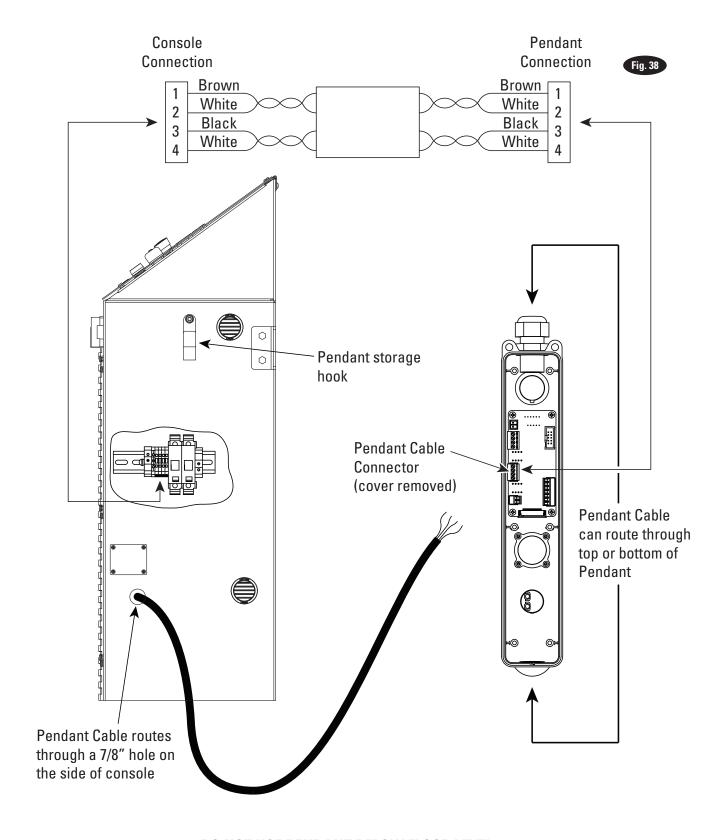
#### **Step 27: Making Electrical Connections:**

- A.) Before making wire connections, review Fig. 39. This will help determine lift configuration to control panel. Notice that (M1) motor at lift is always to the left when viewing lift from behind control panel. Make wiring connection in panel that matches lift configuration selected.
- B.) Wire in (facility) electrical service into the control panel at disconnect, at panel and wire in the electrical service from the front and rear housing into the control panel, Fig. 37. All wiring must comply with NEC and all local electrical codes. Full schematics provided in the back.

#### Step 28: Detailing Air Lines And Cables:

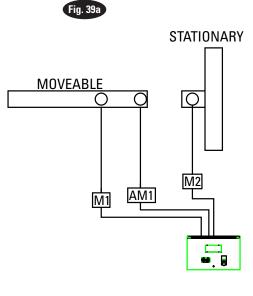
A.) Inspect and wire tie all air lines and cables pulling any excess to the control panel. Make sure air lines have enough radius in their bends to prevent kinking. Air line, position senor cable, and hydraulic hose coming from the post in the front housing should be wire tied together. All air lines and sensor cable should be routed through guides as illustrated in previous steps.

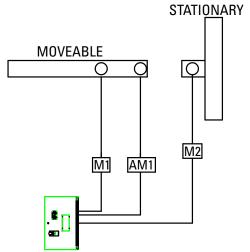


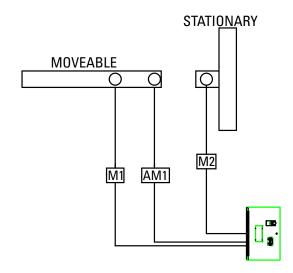


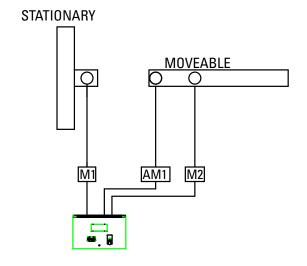
#### **DO NOT USE PENDANT BELOW FLOOR LEVEL**

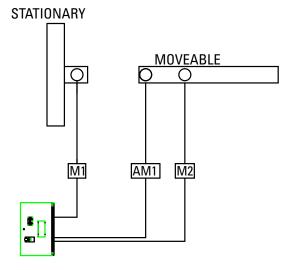


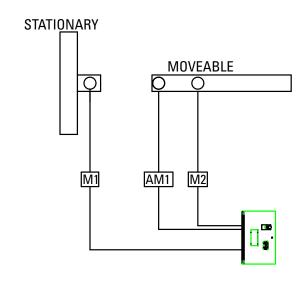




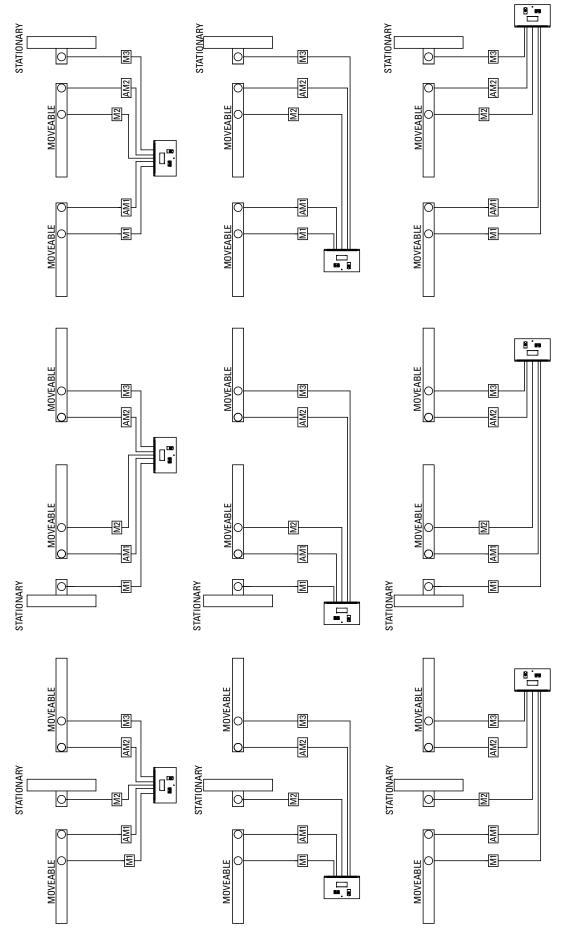






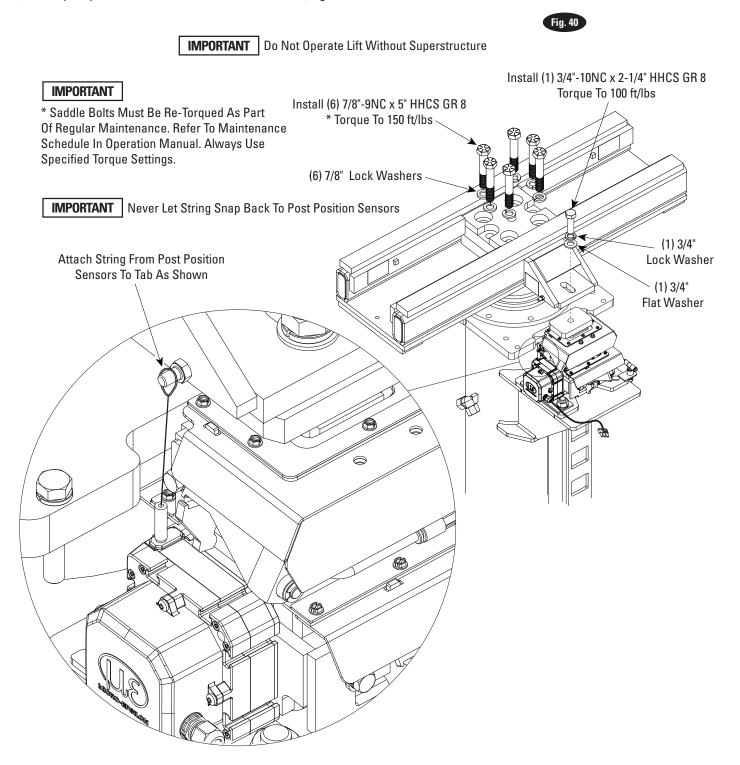






#### **Step 29: Installing Saddles To Posts:**

- A.) Attach saddles to front and rear posts, Fig. 40.
- B.) Attach post position sensors to 5/16" stud on saddles, Fig. 40.

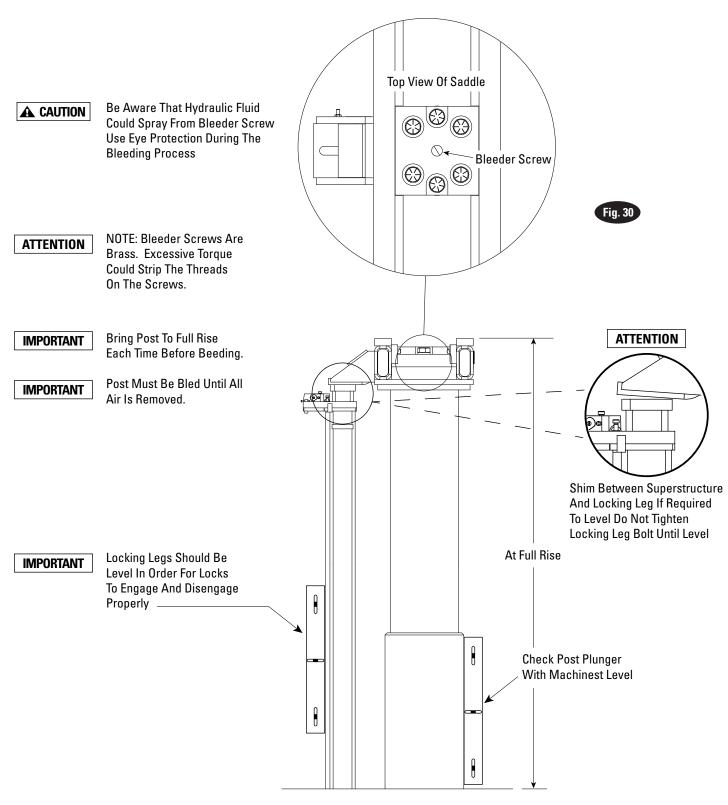


#### Step 30: Bleeding Posts (One Post At A Time):

- A.) Bring post to full rise. (Let set at full rise for several minutes).
- B.) Turn bleeder screw on top of post until fluid flows out of post, Fig. 30.
- C.) Close bleeder screw and lower post.
- D.) Repeat process until all air is out of the hydraulic systems.

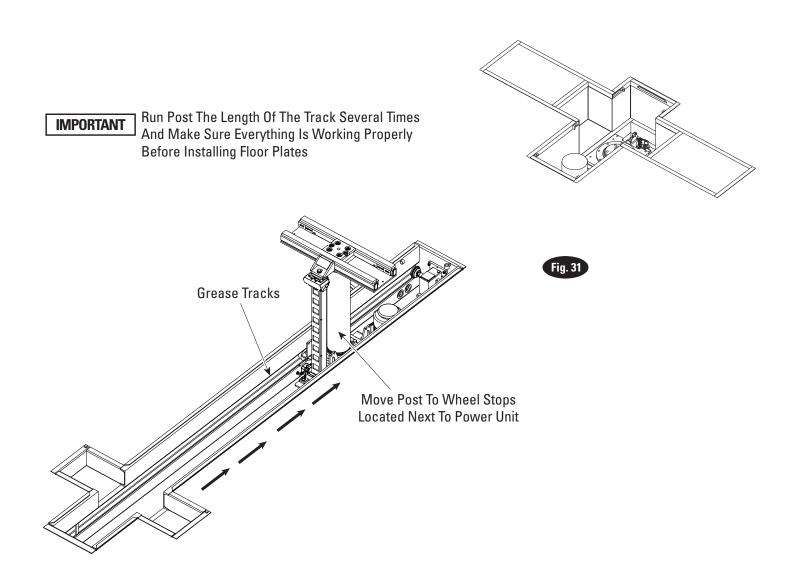
#### Step 31: Leveling The Posts And Locking Leg Assembly:

- A.) Bring posts to full rise and check with a machinist level, Fig. 30.
- B.) Plumb posts with shims under post housings.
- C.) Plumb locking leg assemblies shim if required, Fig. 30.



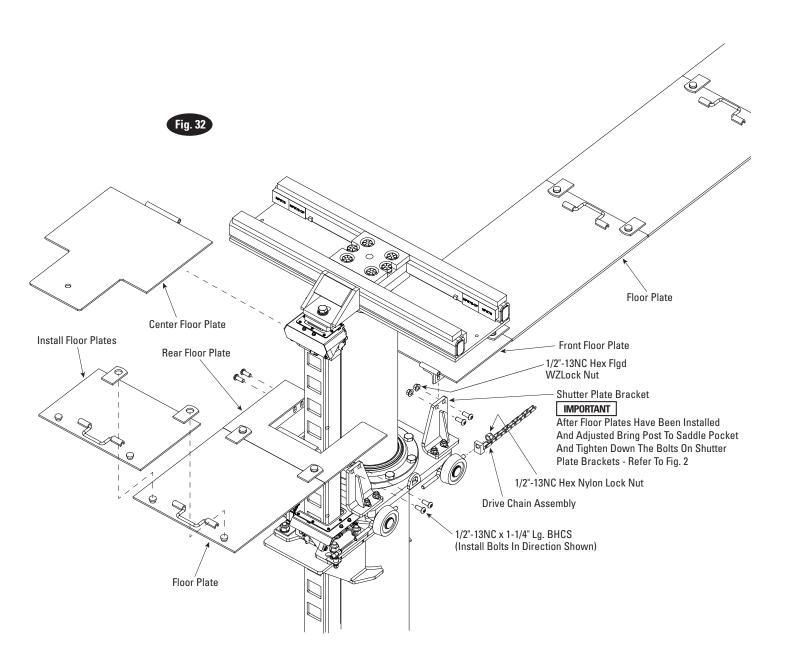
#### **Step 32: Installing Cover Plates In Front Housing:**

**Note:** Run Post the length of the track several time and make sure everything is working properly before installing floor plates, Fig. 31.



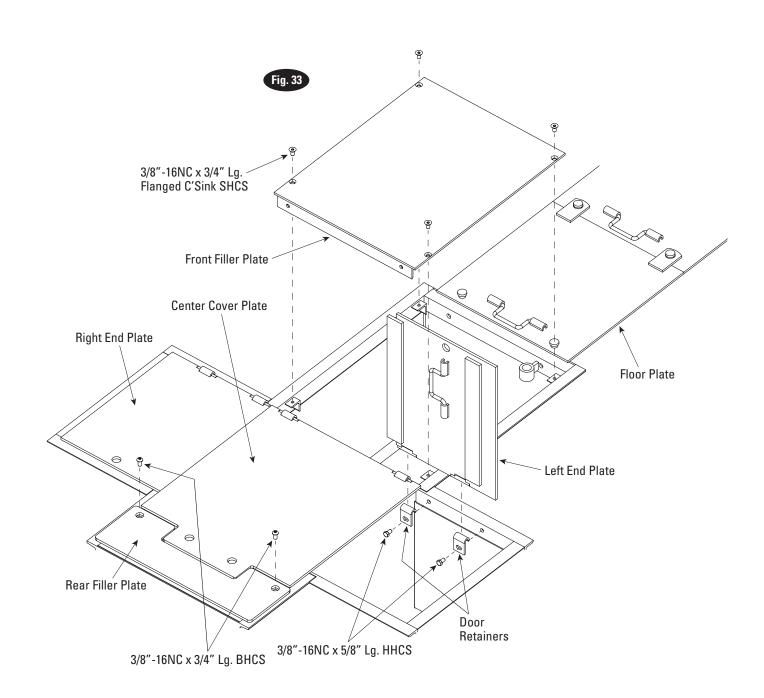
#### **Step 33: Installing Floor Plates To Front Housings:**

- A.) Grease tracks before floor plate installation.
- B.) Move post to wheelstops and install post floor plates as shown in Fig. 32 with 1/2"-13NC BHCS and 1/2" WZLock nuts.
- C.) Install floor plates as shown on each side of saddle pocket, Fig. 32.



#### Step 34: Installing Cover Plates to Rear Housing:

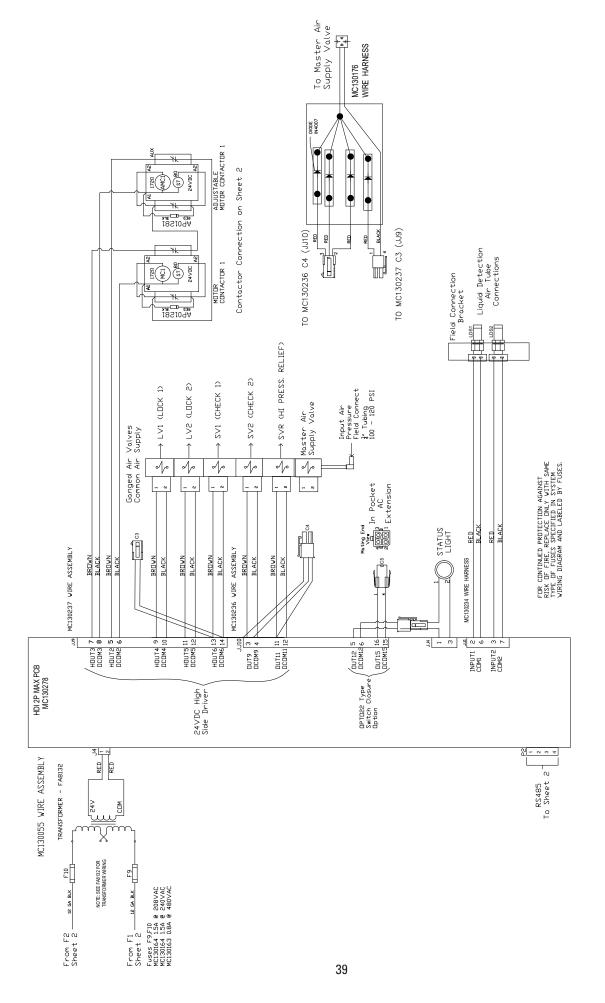
- A.) Install front filler plate with (4) 3/8"-16NC x 3/4" flanged c'sink SHCS, Fig. 33.
- B.) Install rear filler plate with (2) 3/8"-16NC x 3/4" BHCS, Fig. 33.
- C.) Install left end plate, right end plate, and center cover plate with door retainers and 3/8"-16NC x 5/8" HHCS. Two retainers per plate, Fig. 33.

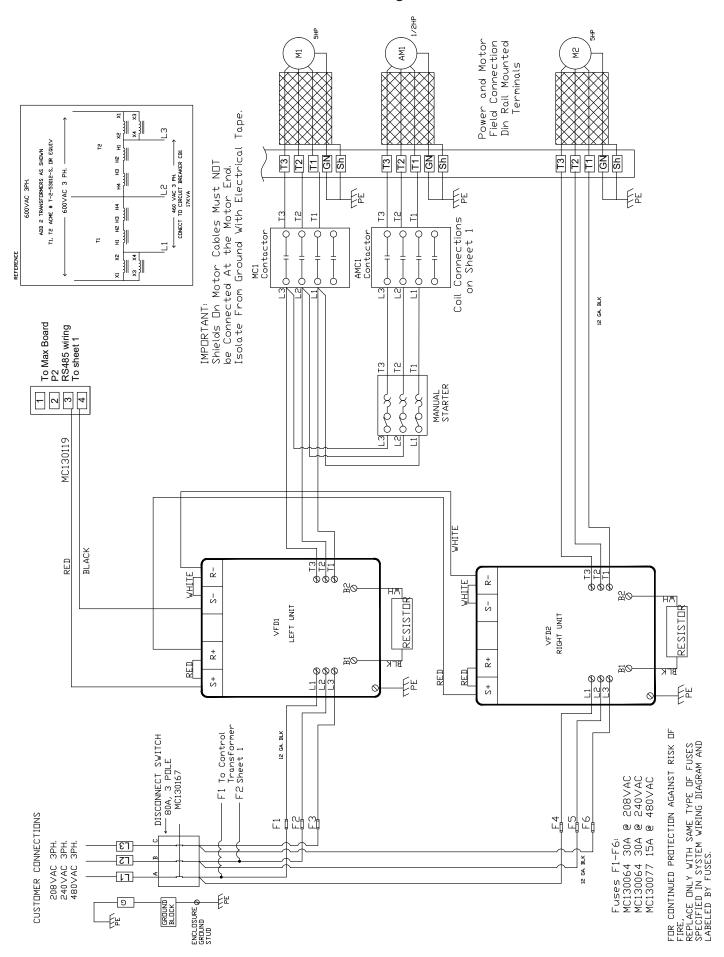


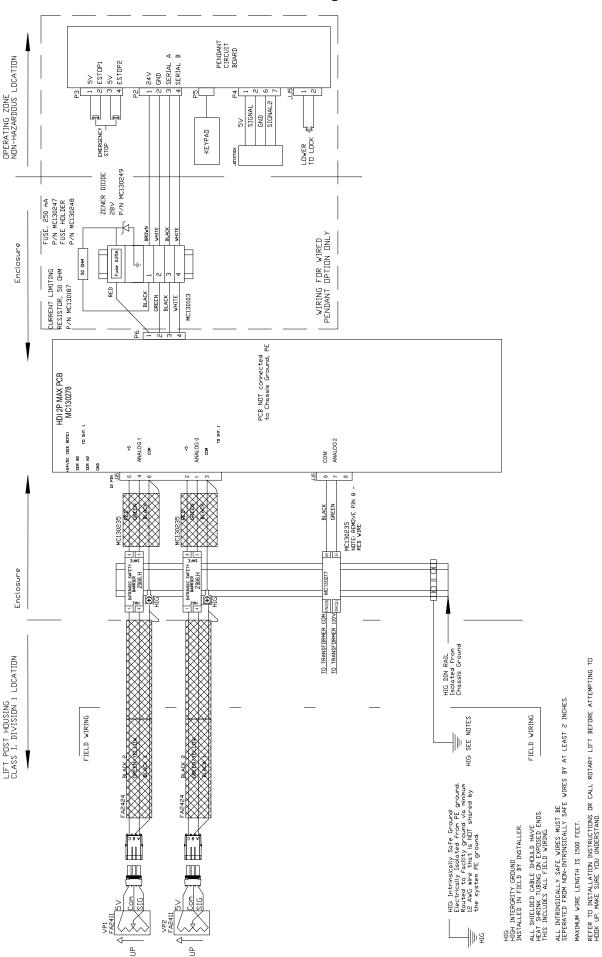
#### **Step 35: Lift Operation:**

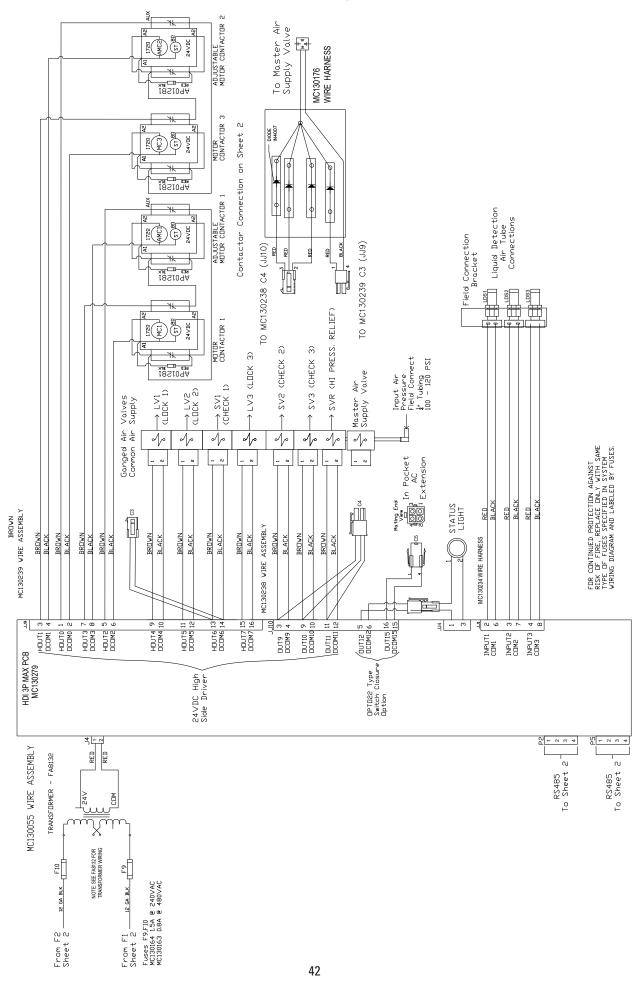
Review the operations and owner's manual to become familiar with the setup of the control panel and to set up the remaining features which should be done with a vehicle on the lift. User memory card should be installed after lift features have been set. Refer to operations manual for changing out memory cards. Make sure all personnel are thoroughly trained in the operation of the lift.

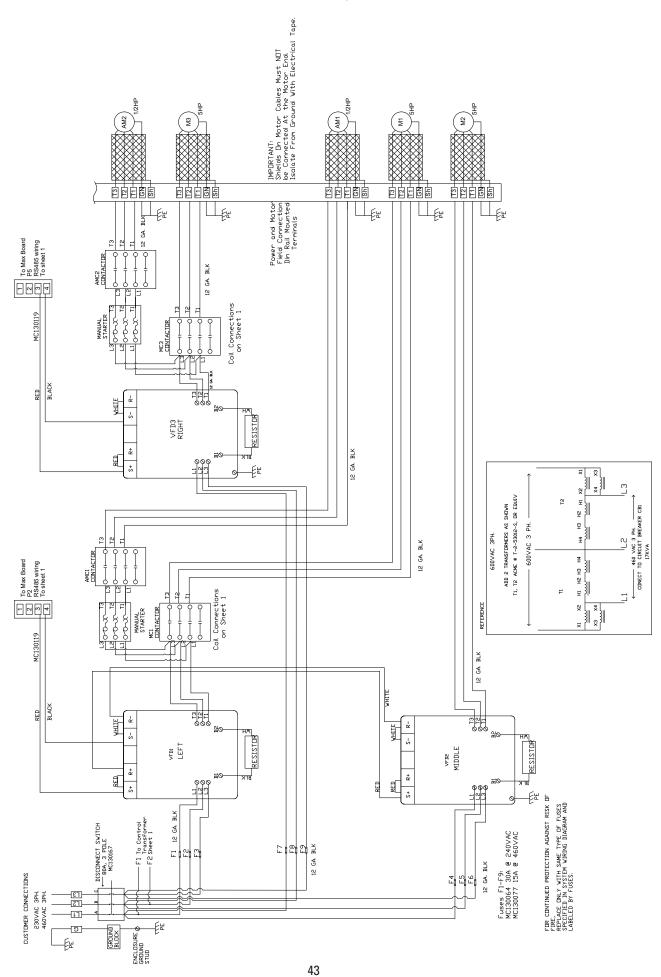
**IMPORTANT** Lift is not intended for outdoor use and has an operating ambient temperature range of 41° - 104° (5° - 40C).

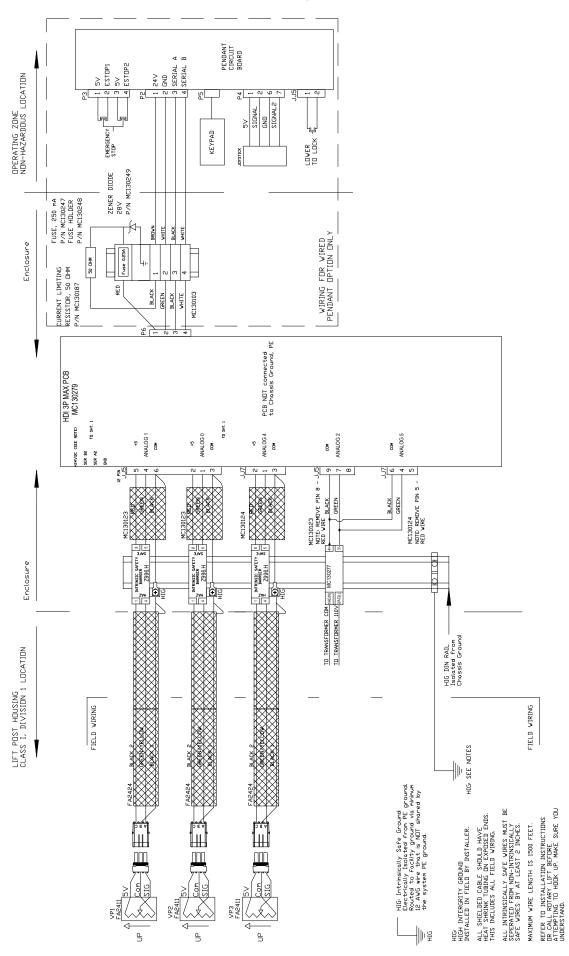




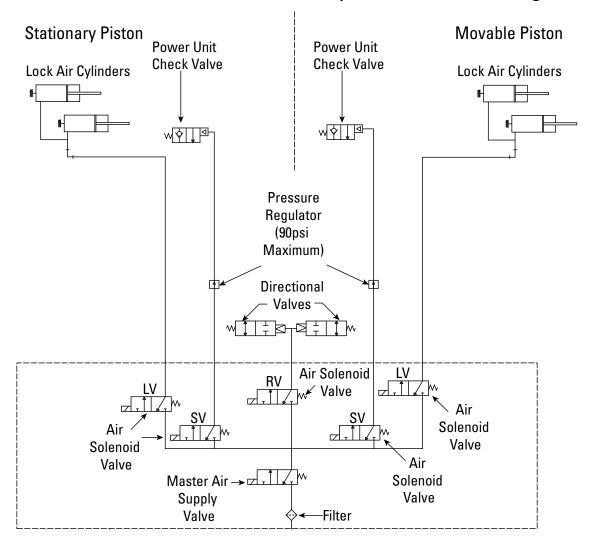


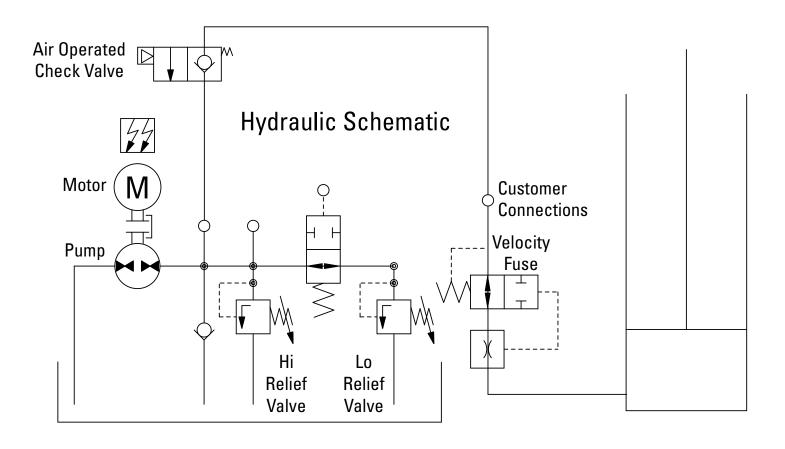






# Pneumatic Schematic For Stationary And Movable Housings





# Notes

## Installer:

Please return this booklet to literature package, and give to lift owner/operator.

## Thank You

Trained Operators and Regular Maintenance Ensures Satisfactory Performance of Your Rotary Lift.

Contact Your Nearest Authorized Rotary Parts Distributor for Genuine Rotary Replacement Parts. See Literature Package for Parts Breakdown.



#### **Rotary World Headquarters**

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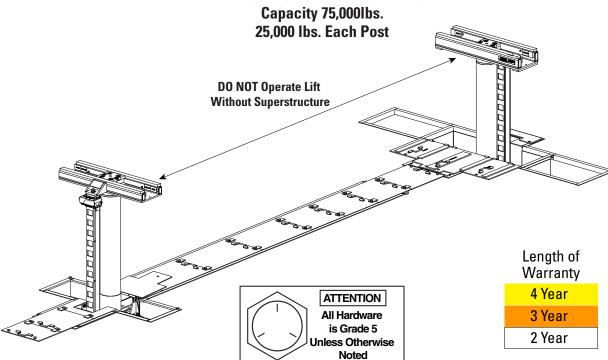




# Models: HDI225 (100 Series) INGROUND LIFTS

Capacity 50,000lbs. 25,000 lbs. Front Post 25,000 lbs. Rear Post

# HDI325 (100 Series) INGROUND LIFTS



**IMPORTANT:** When ordering parts or requesting service always give exact model and jack serial number. Model number is shown on nameplate attached to cover plate. Jack serial number is located on the side of the plunger at point of attachment.

	Date Installed
	Installed in Bay #
OWNERS RECORD	Post Serial #
Complete information	Moveable Post 1
at right and keep in	Moveable Post 2
a safe place.	Stationary Post
	Lift Serial #
	Factory Order #
	Lift Model #
NOTE: For replacement part	s - See your nearest Rotary Parts Distributor.

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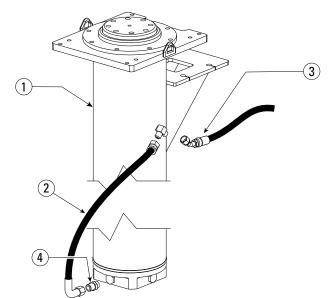
CO12781.1

LP20696

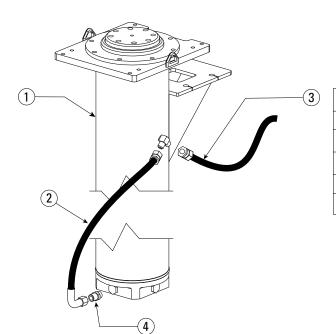
LPHDIIG

Rev. - 2/17/2025

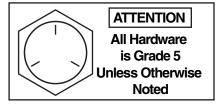
BREAKDOWN

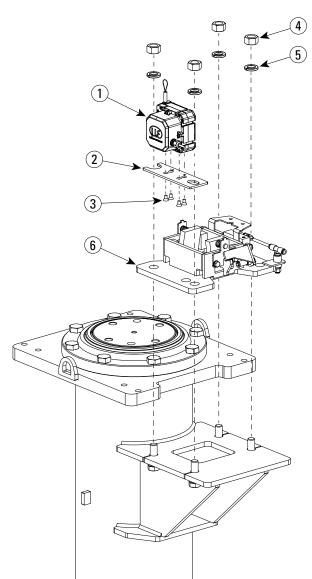


MOVEABLE POST AND HOSES		
ITEM NO.	DESCRIPTION	PART NO.
1	Telescoping Hydraulic Post	JT14
2	Post Hose 42" FD921	
3	Front Post Hose (Housing):	
	HDI25-16 FI	
	HDI25-18 FD92	
	HDI25-20	FD929
4	Male Adapter	FA2450



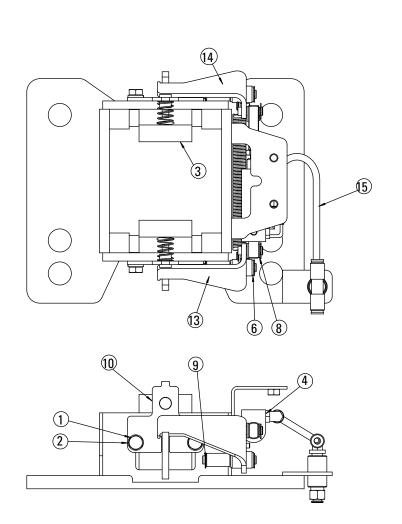
	STATIONARY POST AND HOSES	
ITEM NO.	DESCRIPTION	PART NO.
1	Telescoping Hydraulic Post	JT14
2	Post Hose 42" FD919	
3	Rear Stationary Post Hose	FD915
4	Male Adapter	FA2421

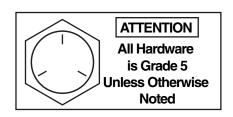


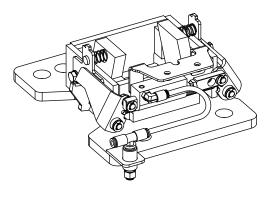


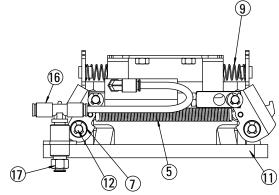
POST POSITION SENSOR, LOCKING LATCH ASSEMBLY AND HARDWARE		
ITEM NO.	DESCRIPTION	PART NO.
1.	Post Position Sensor	MC110174
2.	Post Position Sensor Adapter Brkt.	MC120116
3.	3. M6-12mm Hex Drive FHCS B23-6x12	
4.	3/4"-10NC Hex Nut	40760
5.	3/4" Helical Spring Lock Washer	40917
6. Locking Latch Assembly FA2452-1		
Note: These Components Are The Same For All Post		

# Locking Latch Assembly

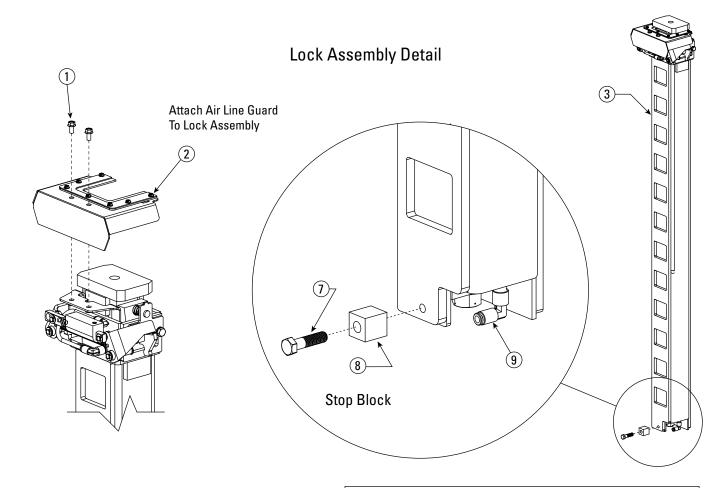


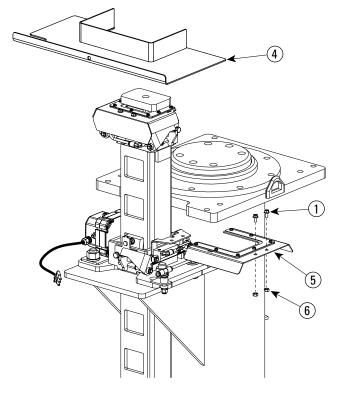




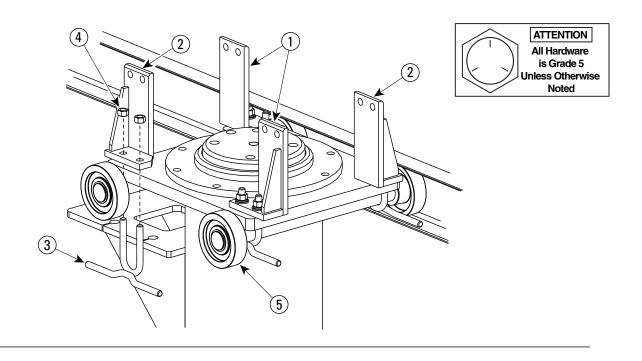


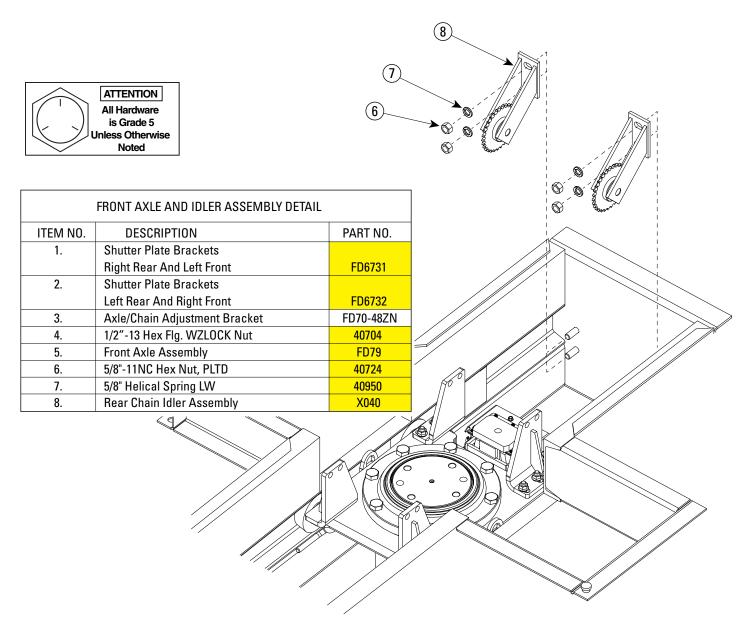
ITEM	QTY	PART NO.	DESCRIPTION
1	4	40401	5/16"-18NC x 1/2" Lg. HHCS, PLTD
2	4	40850	5/16" HELICAL SPRING LW, PLTD
3	2	FA2452-10	LATCH WELDMENT
4	1	FA2452-13	AIR CYLINDER ASSEMBLY
5	1	FA2452-14	CONTROL PLATE SPRING
6	6	FA2452-15	FLANGED BUSHING
7	6	FA2452-16	5/16" SHAFT RETAINING RING
8	4	FA2452-17	NYLON WASHER
9	2	FA2452-18	LATCH SPRING
10	2	FA2452-19	RETAINER PLATE WELD
11	1	FA2452-2	LATCH BASE WELDMENT
12	2	FA2452-22	PIVOT PIN
13	1	FA2452-23	L.H. CONTROL PLATE WELD
14	1	FA2452-28	R.H. CONTROL PLATE WELD
15	1	FA2452-30	AIR LINE
16	1	FA2452-31	MALE BRANCH TEE - 1/4" NPT TO 1/4" TUBE
17	1	FC5191-6	1/4" TUBE TO 1/4" NPT PUSH CONNECTOR

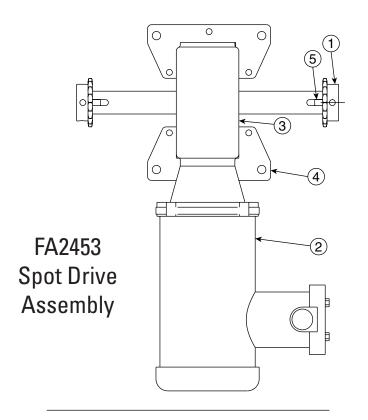


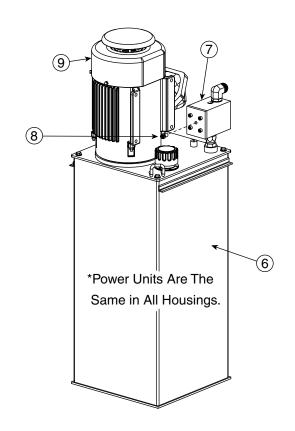


	LOCK ASSEMBLY DETAIL		
ITEM NO.	ITEM NO. DESCRIPTION PART NO.		
1.	1/4-20NC x 1/2"		
	Flanged Cap Screw Grade 5	40078	
2.	Upper Cover Assembly	FA2452-51	
3.	Lock Assembly	FA2452-32	
4.	Splash Shield FD6744		
5.	Lower Cover Assembly	FA2452-47	
6.	1/4-20NC Hex Nut Grade 5	40624	
7.	Lock Bolt Gd. 2	FA2452-57	
8.	Bolting Bar	FA2444-27	
9.	Female Elbow	FA3209-7	

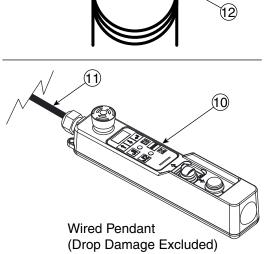


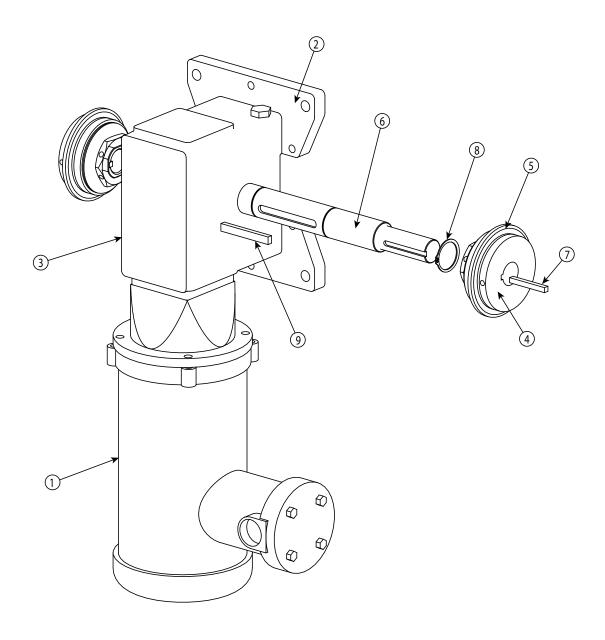




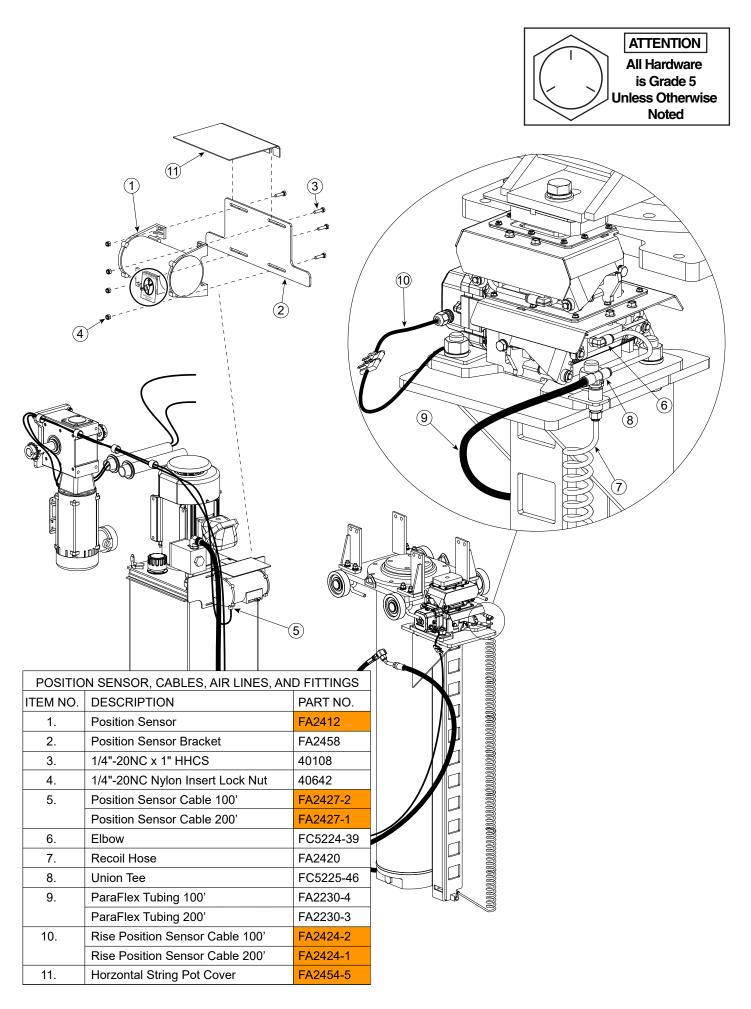


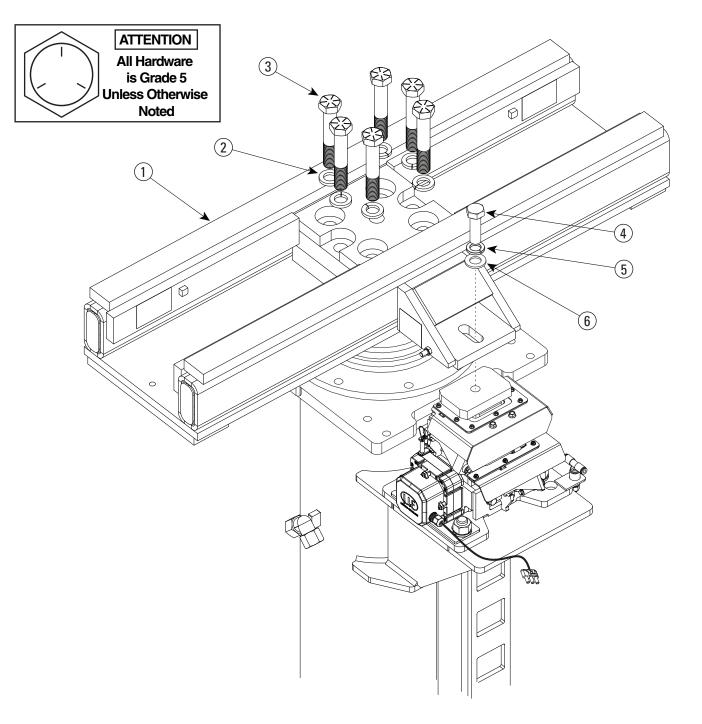
MOTOR CHAIN DRIVE ASSEMBLY AND POWER UNIT			
ITEM NO.	DESCRIPTION PART NO.		
1.	Sprocket	FA2414-4	
2.	1/2hp. Motor T.E.F.C.	FA2453-1	
3.	Gear Box 40:1	FA2453-2	
4.	Mounting Base Bar	FA2453-4	
5.	3/8" x 3/8" x 1-1/2" Key	FD7120PC5	
6.	208/230/460V Power Unit P2014		
7.	Check Valve	FA2443	
8.	Male Connector FC5191-6		
9.	Motor 5hp. 208/230/460V	P2000-12	
10.	Wired 2-Post Pendant	FA9125	
	Wired 3-Post Pendant	FA9123	
11.	Wired Pendant Cable, 100' FA9123-18		
	Wired Pendant Cable, 200'	FA9123-19	
12.	Metal Clad Motor Cable, 100'	FA2446-2	
	Metal Clad Motor Cable, 200'	FA2446-1	



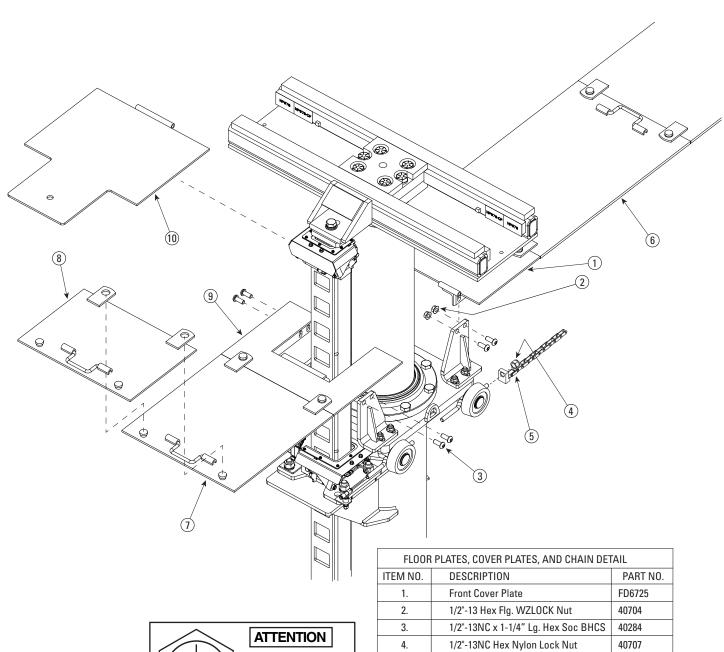


	FA2456 SPOT DRIVE ASSEMBLY W/ CLUTCH		
ITEM	QTY	PART NO. DESCRIPTION	
1	1	FA2467	2 HP MOTOR
2	2	FA2453-4	MOUNTING BASE BAR
3	1	FA2453-6	GEARBOX 40:1
4	2	FD7171-1	CLUTCH
5	2	FD7171-2	SPROCKET #40 - 26 TEETH
6	1	FD7171-3	GEAR BOX SHAFT
7	2	FD7171-4	SLIP CLUTCH SPROCKET KEY
8	2	FD7171-5	SNAP RING
9	1	FD7171-6	GEAR BOX KEY



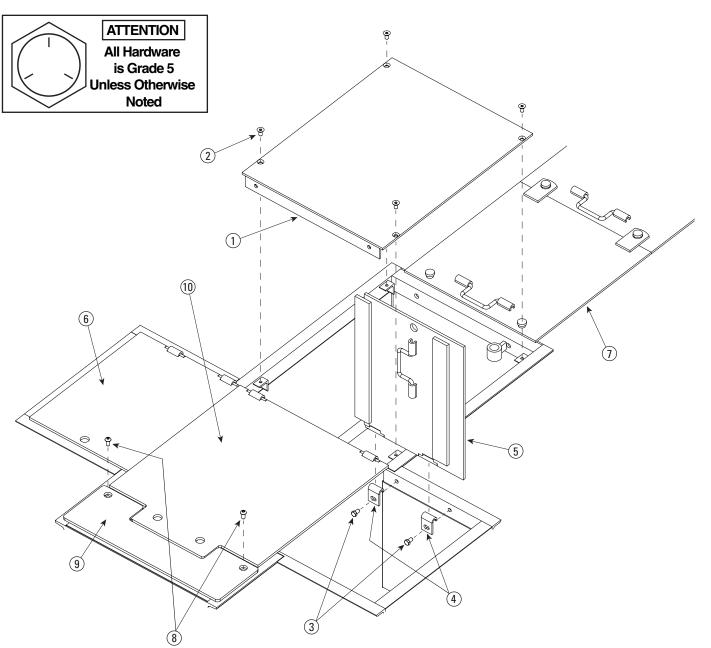


35,000 Lb. CAPACITY SADDLE DETAIL			
ITEM NO.	NO. DESCRIPTION PART NO.		
1.	35,000 Lb. Cap. LP Saddle	FD2427	
	35,000 Lb. Cap. Saddle	FD2428	
2.	7/8" Lock Washer 41071 CHW		
3.	7/8"-9NC x 5" HHCS GRD. 8 40523 CHW		
	7/8" x 2-3/4" SHCS GRD. 8 (ULP)	FD2377-8	
4.	3/4"-10NC x 2-1/2" HHCS	40471	
5.	3/4" Lock Washer 40917		
6.	3/4" Flat Washer 41021		



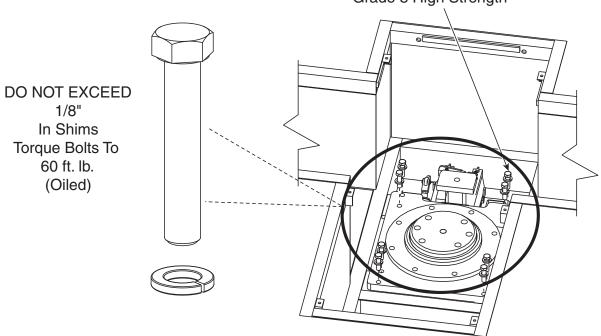


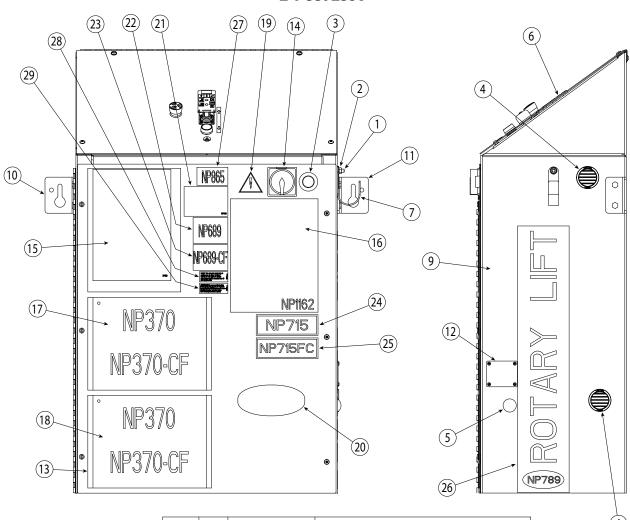
FLOUR PLATES, COVER PLATES, AND CHAIN DETAIL		
ITEM NO.	DESCRIPTION PART NO.	
1.	Front Cover Plate	FD6725
2.	1/2"-13 Hex Flg. WZLOCK Nut	40704
3.	1/2"-13NC x 1-1/4" Lg. Hex Soc BHCS	40284
4.	1/2"-13NC Hex Nylon Lock Nut	40707
5.	Drive Chain Assembly	
	HDI-16	FD7175
	HDI-18	FD7176
	HDI-20	FD7177
6.	29-1/2" Floor Plate	FD6364
7.	19-1/2" Floor Plate FD6363	
8.	13" Floor Plate FD6724	
9.	Rear Floor Plate FD6737	
10.	Center Floor Plate FD6738	



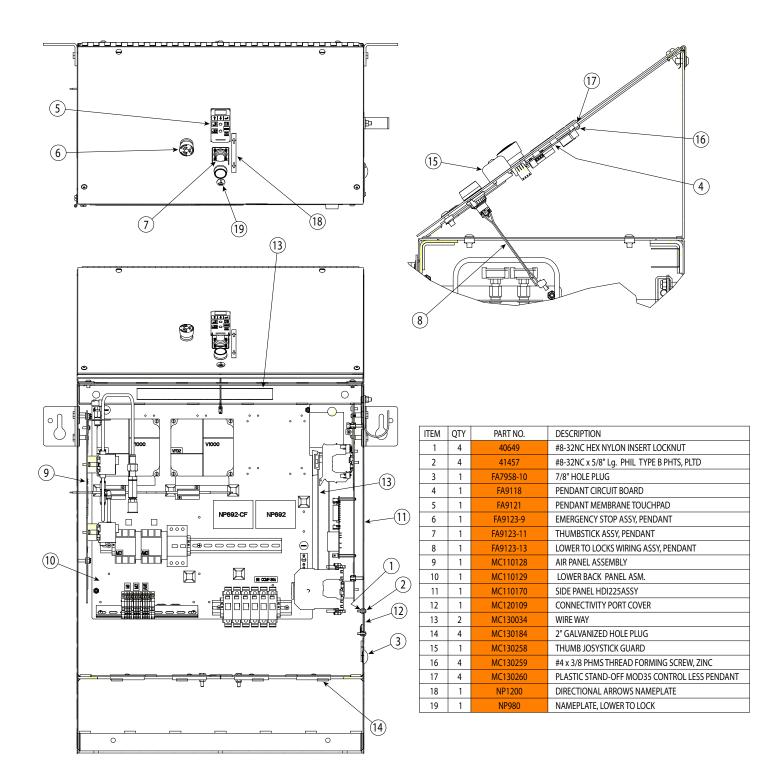
STATIONARY POST FLOOR PLATES AND COVER PLATES		
ITEM NO.	DESCRIPTION PART NO.	
1.	Front Filler Plate	FD6686
2.	3/8"-16NC x 3/4" Lg. Flg. C'Sink SHCS	40133
3.	3/8"-16NC x 5/8" Lg. HHCS	40155
4.	Door Retainers	FF634-7
5.	Left End Plate FD6689	
6.	Right End Plate	FD6688
7.	19-1/2" Floor Plate	FD6363
8.	3/8"-16NC x 3/4" Lg. BHCS	40157
9.	Rear Filler Plate	FD6648-17
10.	Center Cover Plate	FD6648-21

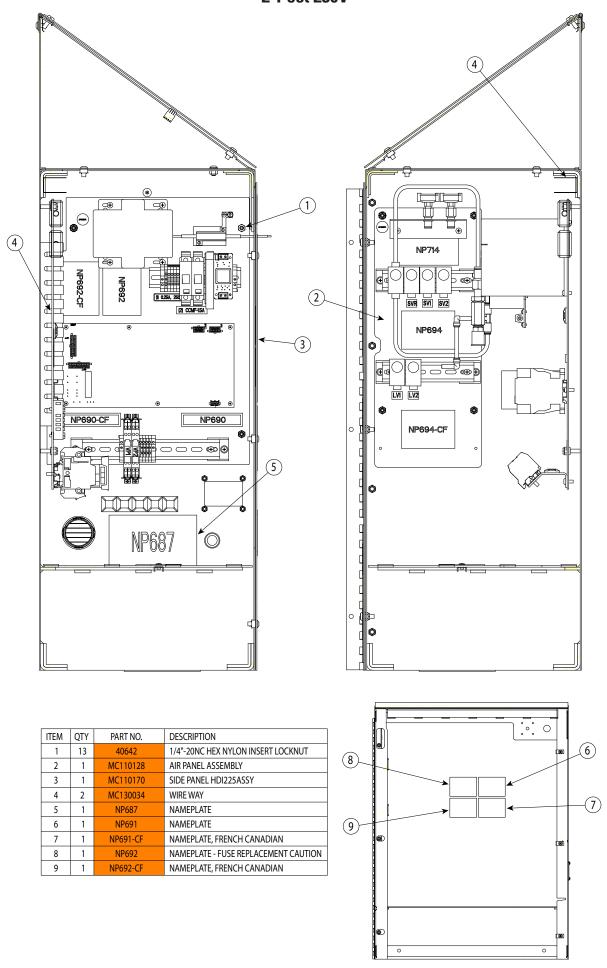
Install (8)
1/2"-13NC x 2-3/4" (Part Number 40356) HHCS And Lock Washers
Grade 8 High Strength

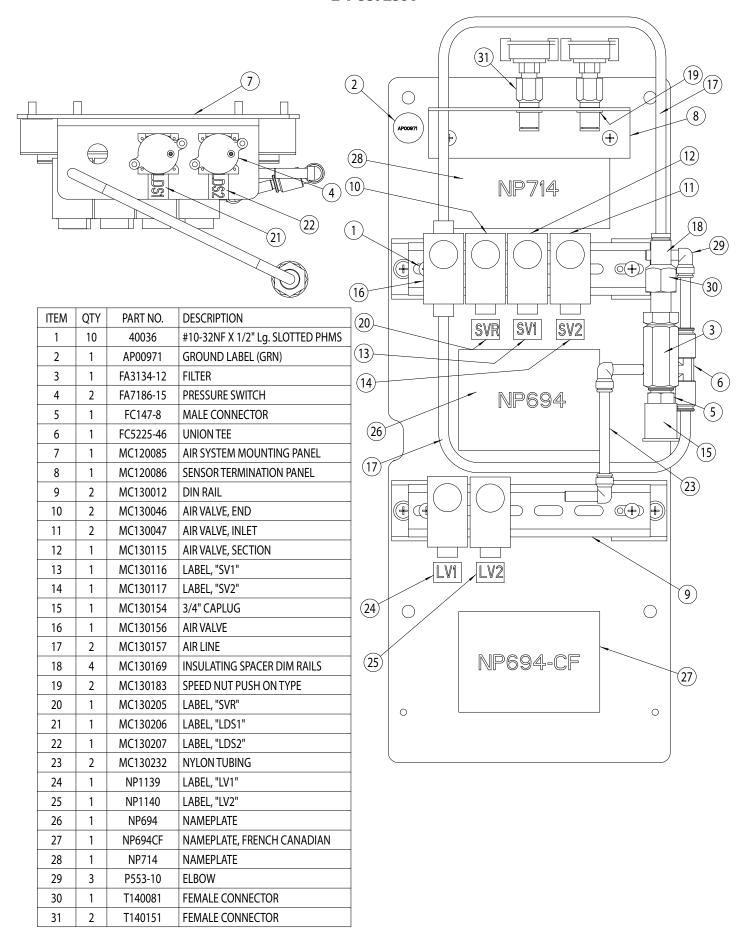


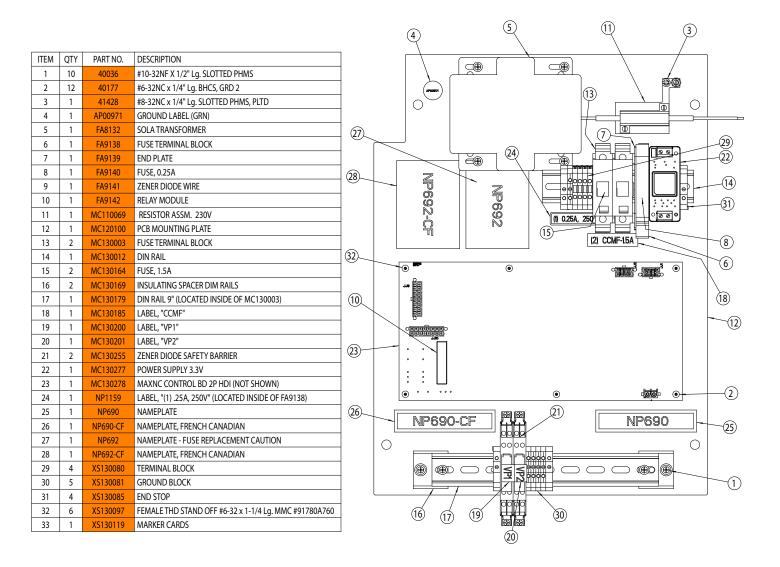


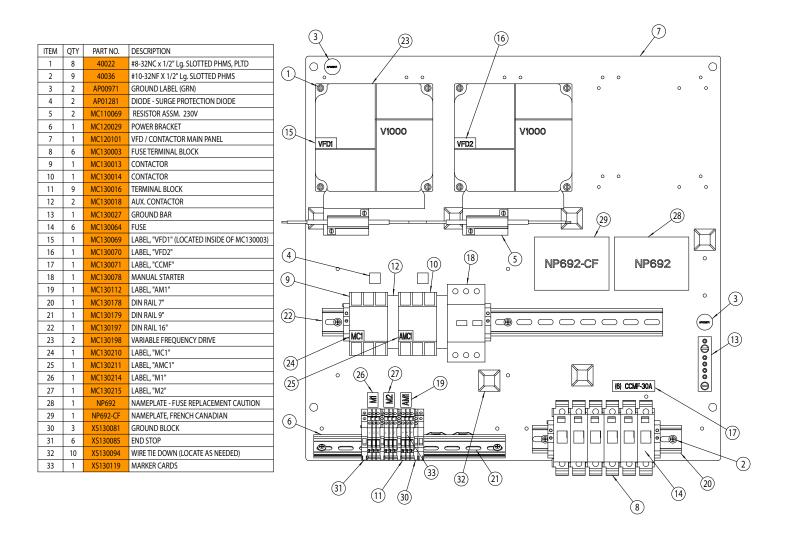
ITEM	QTY	PART NO.	DESCRIPTION
1	1	40322	5/16-18NC x 3/4" Lg. HEX SOC BHCS, PLTD
2	1	40678	5/16"-18NC HEX FLGD WZLOCK NUT, PLTD
3	1	AC700029	COMPLETE, LIGHT, GREEN
4	2	FA5311	LOUVERED/FILTERED HOLE PLUG 2" DIAMETER
5	1	FA7958-10	7/8" HOLE PLUG
6	1	FA9121	PENDANT MEMBRANE TOUCHPAD
7	1	M120262	REEL CORD HANGER
8	1	MC110135	WIRE & HARNESS KIT, MOD235 2-POST
9	1	MC110170	SIDE PANEL HDI225ASSY
10	1	MC120093LH	WALL MOUNT LEFT
11	1	MC120093RH	WALL MOUNT RIGHT
12	1	MC120109	CONNECTIVITY PORT COVER
13	3	MC130054	POUCH
14	1	MC130167	DISCONNECT SWITCH
15	1	NP1113	NAMEPLATE
16	1	NP1162	NAMEPLATE - PREVENTIVE MAINTENANCE
17	2	NP370	PLACARD W/BLACK PLASTIC TIE (ALI/WL500w)
18	2	NP370CF	PLACARD (ALI/WL500w) FRENCH CANADIAN
19	1	NP584	HIGH VOLTAGE NAMEPLATE
20	1	NP607	NAMEPLATE
21	1	NP1715	NAMEPLATE
22	1	NP689	NAMEPLATE
23	1	NP689-CF	NAMEPLATE, FRENCH CANADIAN
24	1	NP715	NAMEPLATE
25	1	NP715FC	NAMEPLATE, FRENCH CANADIAN
26	2	NP789	ROTARY DECAL
27	1	NP865	ETL ACCESSORY LABEL
28	1	NP870	PENDANT WARNING LABEL
29	1	NP884	PENDANT WARNING LABEL, FRENCH CANADIAN



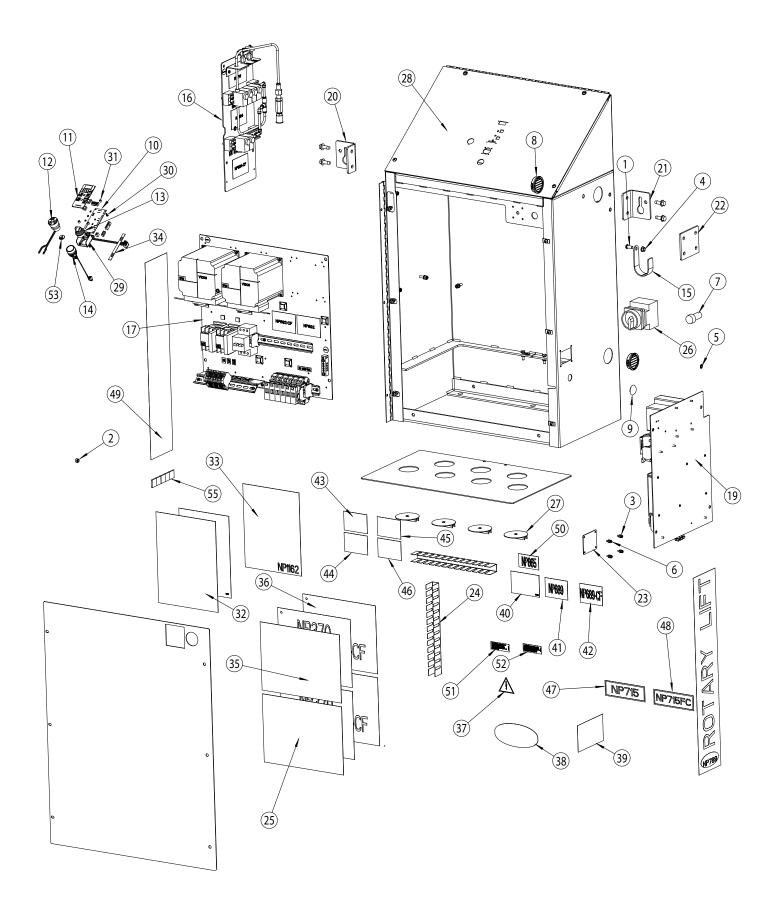


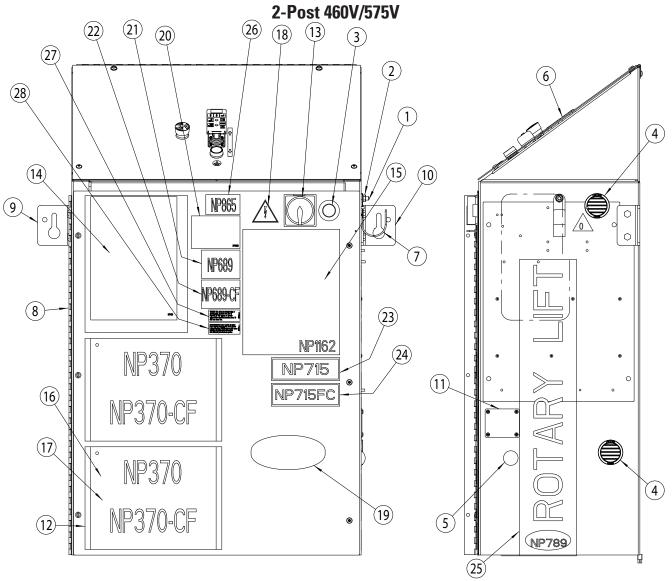






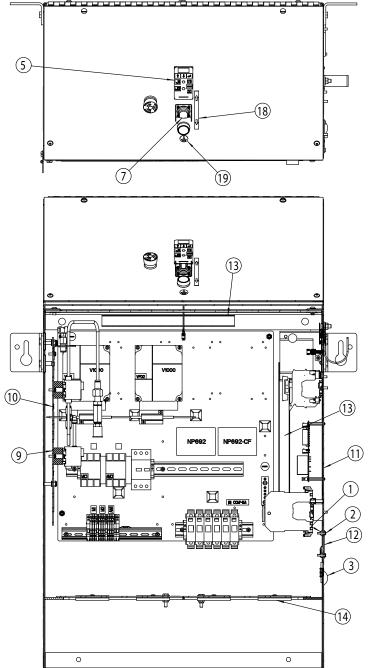
ITEM	QTY	PART NO.	DESCRIPTION
1	1	40322	5/16-18NC x 3/4" Lg. HEX SOC BHCS, PLTD (NOT SHOWN)
2	13	40642	1/4"-20NC HEX NYLON INSERT LOCKNUT
3	4	40649	#8-32NC HEX NYLON INSERT LOCKNUT
4	1	40678	5/16"-18NC HEX FLGD WZLOCK NUT, PLTD
5	3	40779	1/4" EXT TOOTH LW
6	4	41457	#8-32NC x 5/8" Lg. PHIL TYPE B PHTS, PLTD
7	1	AC700029	COMPLETE, LIGHT, GREEN
8	2	FA5311	LOUVERED/FILTERED HOLE PLUG 2" DIAMETER
9	1	FA7958-10	7/8" HOLE PLUG
10	1	FA9118	PENDANT CIRCUIT BOARD
11	1	FA9121	PENDANT MEMBRANE TOUCHPAD
12	1	FA9123-9	EMERGENCY STOP ASSY, PENDANT
13	1	FA9123-11	THUMBSTICK ASSY, PENDANT
14	1	FA9123-13	LOWER TO LOCKS WIRING ASSY, PENDANT
15	1	M120262	REEL CORD HANGER
16	1	MC110128	AIR PANEL ASSEMBLY
17	1	MC110129	LOWER BACK PANEL ASM.
18	1	MC110135	WIRE & HARNESS KIT, MOD235 2-POST
19	1	MC110170	SIDE PANEL HDI225ASSY
20	1	MC120093LH	WALL MOUNT LEFT
21	1	MC120093RH	WALL MOUNT RIGHT
22	1	MC120108	CABINET TO CABINET MOUNTING PLATE
23	1	MC120109	CONNECTIVITY PORT COVER
24	2	MC130034	WIRE WAY
25	3	MC130054	POUCH
26	1	MC130167	DISCONNECT SWITCH
27	4	MC130184	2" GALVANIZED HOLE PLUG
28	1	MC130257	CABINET ASSEMBLY, MODx35
29	1	MC130258	THUMB JOSYSTICK GUARD
30	4	MC130259	#4 x 3/8 PHMS THREAD FORMING SCREW, ZINC
31	4	MC130260	PLASTIC STAND-OFF MOD35 CONTROL LESS PENDANT
32	1	NP1113	NAMEPLATE
33	1	NP1162	NAMEPLATE - PREVENTIVE MAINTENANCE
34	1	NP1200	DIRECTIONAL ARROWS NAMEPLATE
35	2	NP370	PLACARD W/BLACK PLASTIC TIE (ALI/WL500w)
36	2	NP370CF	PLACARD (ALI/WL500w) FRENCH CANADIAN
37	1	NP584	HIGH VOLTAGE NAMEPLATE (NOT SHOWN)
38	1	NP607	NAMEPLATE
39	1	NP687	NAMEPLATE
40	1	NP1715	NAMEPLATE
	1		NAMEPLATE NAMEPLATE
41		NP689	
42	1	NP689-CF	NAMEPLATE, FRENCH CANADIAN
43	1	NP691	NAMERIATE EDENGLI CANADIANI
44	1	NP691-CF	NAMEPLATE, FRENCH CANADIAN
45	1	NP692	NAMEPLATE - FUSE REPLACEMENT CAUTION
46	1	NP692-CF	NAMEPLATE, FRENCH CANADIAN
47	1	NP715	NAMEPLATE
48	1	NP715FC	NAMEPLATE, FRENCH CANADIAN
49	2	NP789	ROTARY DECAL
50	1	NP865	ETL ACCESSORY LABEL
51	1	NP870	PENDANT WARNING LABEL
52	1	NP884	PENDANT WARNING LABEL, FRENCH CANADIAN
53	1	NP980	NAMEPLATE, LOWER TO LOCK
54	1	WD057	CONTROL SYSTEM DRAWING
55	5	XS130094	WIRE TIE DOWN

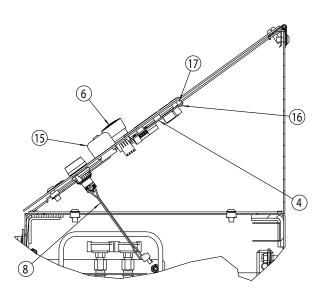




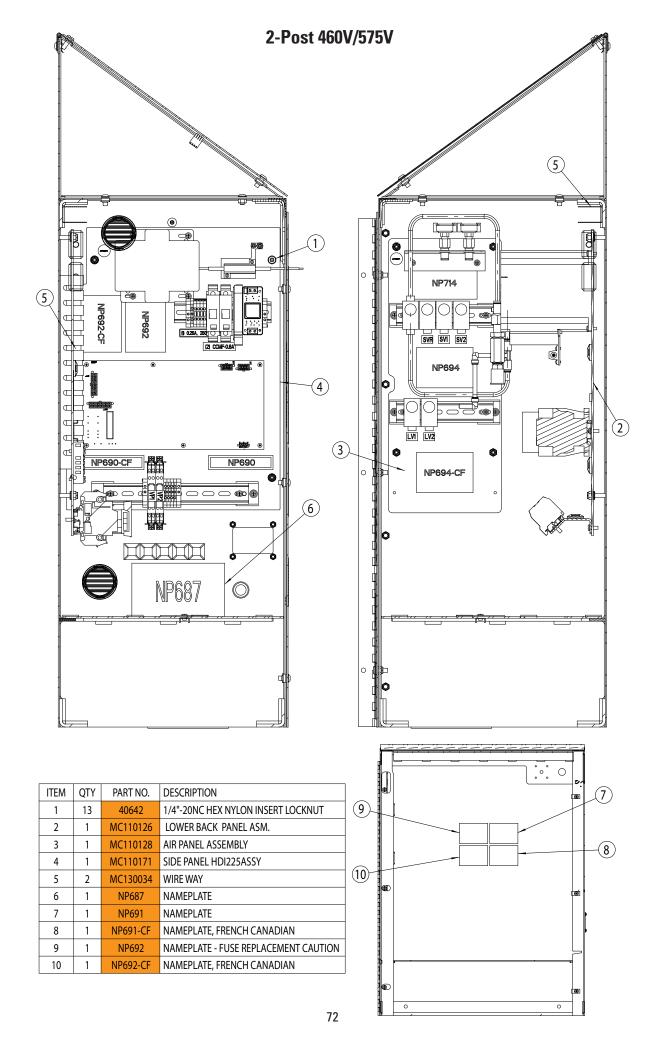
QTY	PART NO.	DESCRIPTION
1	40322	5/16-18NC x 3/4" Lg. HEX SOC BHCS, PLTD
1	40678	5/16"-18NC HEX FLGD WZLOCK NUT, PLTD
1	AC700029	COMPLETE, LIGHT, GREEN
2	FA5311	LOUVERED/FILTERED HOLE PLUG 2" DIAMETER
1	FA7958-10	7/8" HOLE PLUG
1	FA9121	PENDANT MEMBRANE TOUCHPAD
1	M120262	REEL CORD HANGER
1	MC110171	SIDE PANEL HDI225ASSY
1	MC120093LH	WALL MOUNT LEFT
1	MC120093RH	WALL MOUNT RIGHT
1	MC120109	CONNECTIVITY PORT COVER
3	MC130054	POUCH
1	MC130167	DISCONNECT SWITCH
1	NP1113	NAMEPLATE
1	NP1162	NAMEPLATE - PREVENTIVE MAINTENANCE
2	NP370	PLACARD W/BLACK PLASTIC TIE (ALI/WL500w)
2	NP370CF	PLACARD (ALI/WL500w) FRENCH CANADIAN
1	NP584	HIGH VOLTAGE NAMEPLATE
1	NP607	NAMEPLATE
1	NP1715	NAMEPLATE
1	NP689	NAMEPLATE
1	NP689-CF	NAMEPLATE, FRENCH CANADIAN
1	NP715	NAMEPLATE
1	NP715FC	NAMEPLATE, FRENCH CANADIAN
2	NP789	ROTARY DECAL
1	NP865	ETL ACCESSORY LABEL
1	NP870	PENDANT WARNING LABEL
1	NP884	PENDANT WARNING LABEL, FRENCH CANADIAN
	1 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 40322 1 40678 1 AC700029 2 FA5311 1 FA7958-10 1 FA9121 1 M120262 1 MC110171 1 MC120093LH 1 MC120093RH 1 MC120109 3 MC130054 1 MC130167 1 NP1113 1 NP1162 2 NP370 2 NP370CF 1 NP584 1 NP689 1 NP689 1 NP689 1 NP715 1 NP715 1 NP715 1 NP715 1 NP715 1 NP715 1 NP789 1 NP865 1 NP865 1 NP870

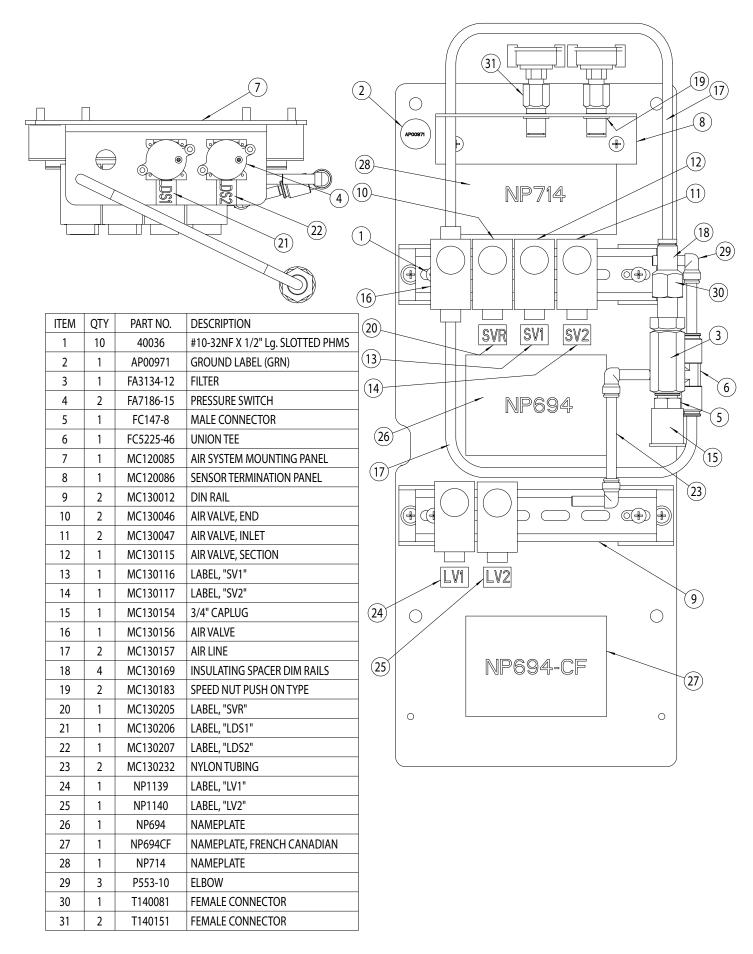
# 2-Post 460V/575V

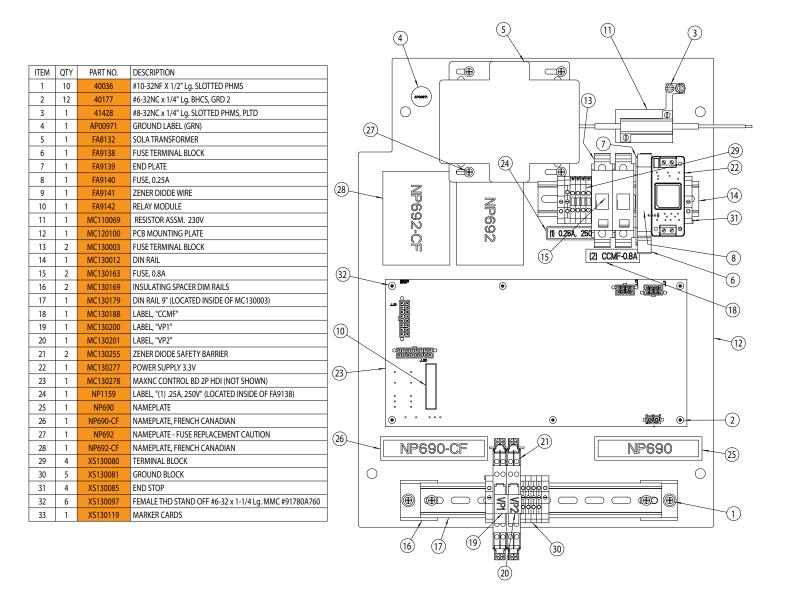


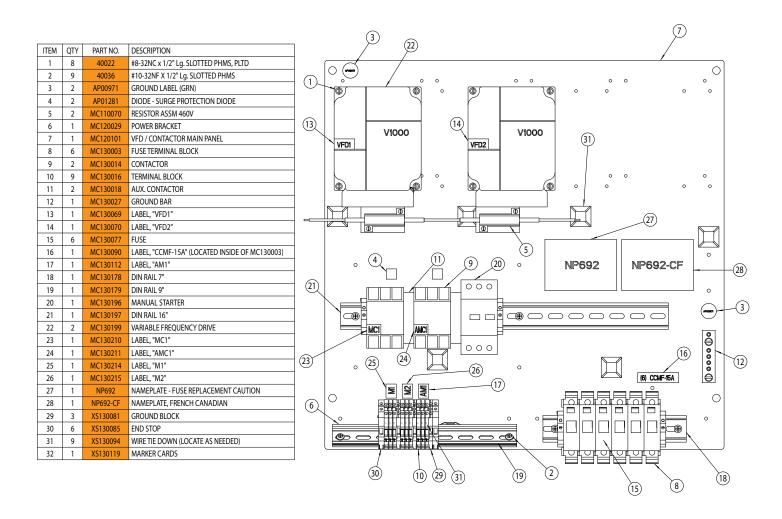


ITEM	QTY	PART NO.	DESCRIPTION
1	4	40649	#8-32NC HEX NYLON INSERT LOCKNUT
2	4	41457	#8-32NC x 5/8" Lg. PHIL TYPE B PHTS, PLTD
3	1	FA7958-10	7/8" HOLE PLUG
4	1	FA9118	PENDANT CIRCUIT BOARD
5	1	FA9121	PENDANT MEMBRANE TOUCHPAD
6	1	FA9123-9	EMERGENCY STOP ASSY, PENDANT
7	1	FA9123-11	THUMBSTICK ASSY, PENDANT
8	1	FA9123-13	LOWER TO LOCKS WIRING ASSY, PENDANT
9	1	MC110126	LOWER BACK PANEL ASM.
10	1	MC110128	AIR PANEL ASSEMBLY
11	1	MC110171	SIDE PANEL HDI225ASSY
12	1	MC120109	CONNECTIVITY PORT COVER
13	2	MC130034	WIRE WAY
14	4	MC130184	2" GALVANIZED HOLE PLUG
15	1	MC130258	THUMB JOSYSTICK GUARD
16	4	MC130259	#4 x 3/8 PHMS THREAD FORMING SCREW, ZINC
17	4	MC130260	PLASTIC STAND-OFF MOD35 CONTROL LESS PENDANT
18	1	NP1200	DIRECTIONAL ARROWS NAMEPLATE
19	1	NP980	NAMEPLATE, LOWER TO LOCK

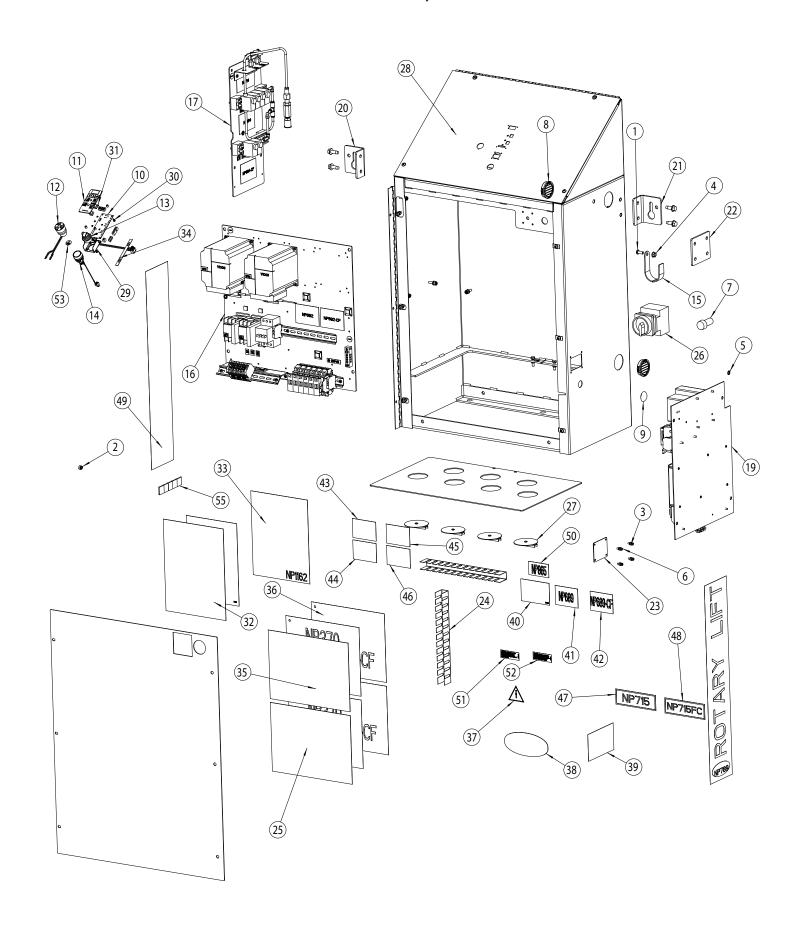


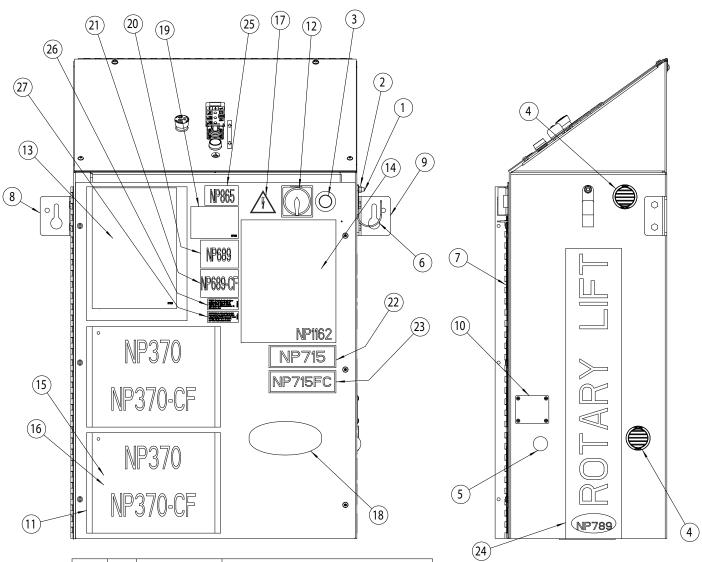




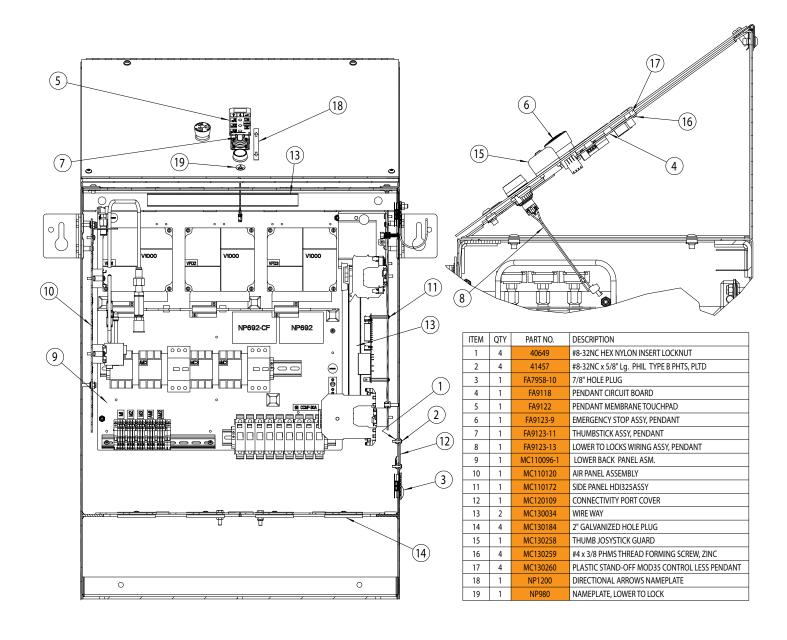


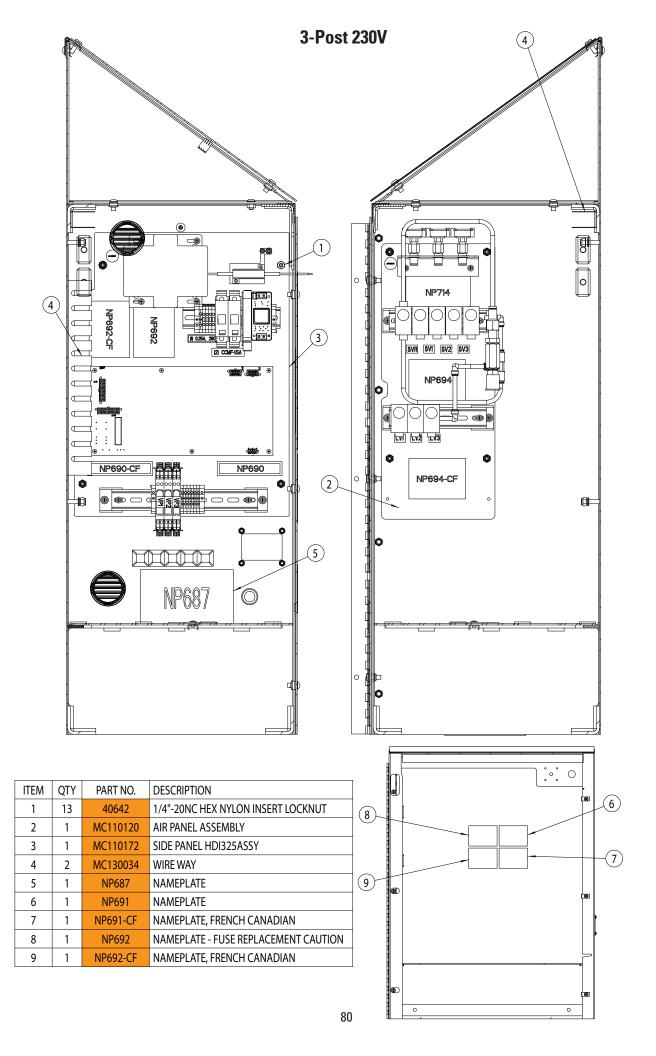
ITEM	QTY	PART NO.	DESCRIPTION		
1	1	40322	5/16-18NC x 3/4" Lg. HEX SOC BHCS, PLTD (NOT SHOWN)		
2	13	40642	1/4"-20NC HEX NYLON INSERT LOCKNUT		
3	4		#8-32NC HEX NYLON INSERT LOCKNUT		
	1	40649	5/16"-18NC HEX FLGD WZLOCK NUT, PLTD		
		40678	1/4" EXT TOOTH LW		
5	3	40779			
6	4	41457	#8-32NC x 5/8" Lg. PHIL TYPE B PHTS, PLTD		
7	1	AC700029	COMPLETE, LIGHT, GREEN		
8	2	FA5311	LOUVERED/FILTERED HOLE PLUG 2" DIAMETER		
9	1	FA7958-10	7/8" HOLE PLUG		
10	1	FA9118	PENDANT CIRCUIT BOARD		
11	1	FA9121	PENDANT MEMBRANE TOUCHPAD		
12	1	FA9123-9	EMERGENCY STOP ASSY, PENDANT		
13	1	FA9123-11	THUMBSTICK ASSY, PENDANT		
14	1	FA9123-13	LOWER TO LOCKS WIRING ASSY, PENDANT		
15	1	M120262	REEL CORD HANGER		
16	1	MC110126	LOWER BACK PANEL ASM.		
17	1	MC110128	AIR PANEL ASSEMBLY		
18	1	MC110135	WIRE & HARNESS KIT, MOD235 2-POST		
19	1	MC110171	SIDE PANEL HDI225ASSY		
20	1	MC120093LH	WALL MOUNT LEFT		
21	1	MC120093RH	WALL MOUNT RIGHT		
22	1	MC120108	CABINET TO CABINET MOUNTING PLATE		
23	1	MC120109	CONNECTIVITY PORT COVER		
24	2	MC130034	WIRE WAY		
25	3	MC130051	POUCH		
26	1	MC130054	DISCONNECT SWITCH		
27	4	MC130107	2" GALVANIZED HOLE PLUG		
28	1	MC130164 MC130257	CABINET ASSEMBLY, MODX35		
			<u> </u>		
29	1	MC130258	THUMB JOSYSTICK GUARD		
30	4	MC130259	#4 x 3/8 PHMS THREAD FORMING SCREW, ZINC		
31	4	MC130260	PLASTIC STAND-OFF MOD35 CONTROL LESS PENDANT		
32	1	NP1113	NAMEPLATE		
33	1	NP1162	NAMEPLATE - PREVENTIVE MAINTENANCE		
34	1	NP1200	DIRECTIONAL ARROWS NAMEPLATE		
35	2	NP370	PLACARD W/BLACK PLASTIC TIE (ALI/WL500w)		
36	2	NP370CF	PLACARD (ALI/WL500w) FRENCH CANADIAN		
37	1	NP584	HIGH VOLTAGE NAMEPLATE (NOT SHOWN)		
38	1	NP607	NAMEPLATE		
39	1	NP687	NAMEPLATE		
40	1	NP1715	NAMEPLATE		
41	1	NP689	NAMEPLATE		
42	1	NP689-CF	NAMEPLATE, FRENCH CANADIAN		
43	1	NP691	NAMEPLATE		
44	1	NP691-CF	NAMEPLATE, FRENCH CANADIAN		
45	1	NP692	NAMEPLATE - FUSE REPLACEMENT CAUTION		
46	1	NP692-CF	NAMEPLATE, FRENCH CANADIAN		
47	1	NP715	NAMEPLATE		
48	1	NP715FC	NAMEPLATE, FRENCH CANADIAN		
49	2	NP789	ROTARY DECAL		
50	1	NP865	ETL ACCESSORY LABEL		
51	1	NP870	PENDANT WARNING LABEL		
52	1	NP884	PENDANT WARNING LABEL, FRENCH CANADIAN		
53	1	NP980	NAMEPLATE, LOWER TO LOCK		
54	1	WD057	CONTROL SYSTEM DRAWING		
55	5	XS130094	WIRE TIE DOWN		

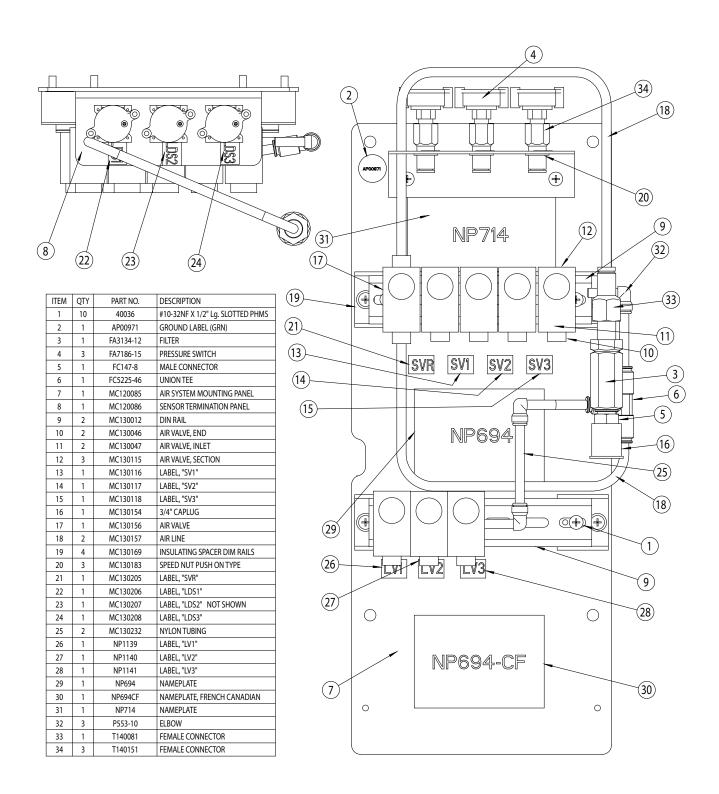




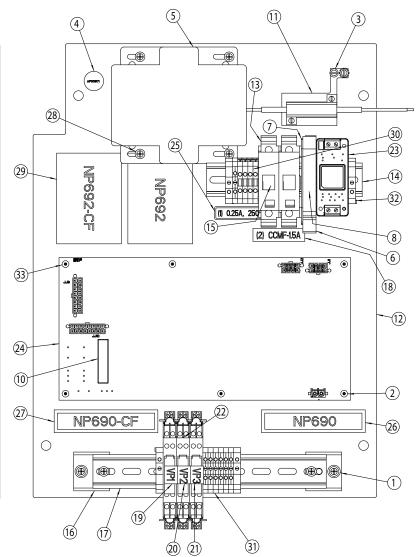
ITEM	OTY	PART NO.	DESCRIPTION	
1	1	40322	5/16-18NC x 3/4" Lg. HEX SOC BHCS, PLTD	
2	1	40678	5/16"-18NC HEX FLGD WZLOCK NUT, PLTD	
3	1	AC700029	COMPLETE, LIGHT, GREEN	
4	2	FA5311	LOUVERED/FILTERED HOLE PLUG 2" DIAMETER	
5	1	FA7958-10	7/8" HOLE PLUG	
6	1	M120262	REEL CORD HANGER	
7	1	MC110172	SIDE PANEL HDI325ASSY	
8	1	MC120093LH	WALL MOUNT LEFT	
9	1	MC120093RH	WALL MOUNT RIGHT	
10	1	MC120109	CONNECTIVITY PORT COVER	
11	3	MC130054	POUCH	
12	1	MC130167	DISCONNECT SWITCH	
13	1	NP1113	NAMEPLATE	
14	1	NP1162	NAMEPLATE - PREVENTIVE MAINTENANCE	
15	2	NP370	PLACARD W/BLACK PLASTIC TIE (ALI/WL500w)	
16	2	NP370CF	PLACARD (ALI/WL500w) FRENCH CANADIAN	
17	1	NP584	HIGH VOLTAGE NAMEPLATE	
18	1	NP607	NAMEPLATE	
19	1	NP1715	NAMEPLATE	
20	1	NP689	NAMEPLATE	
21	1	NP689-CF	NAMEPLATE, FRENCH CANADIAN	
22	1	NP715	NAMEPLATE	
23	1	NP715FC	NAMEPLATE, FRENCH CANADIAN	
24	2	NP789	ROTARY DECAL	
25	1	NP865	ETL ACCESSORY LABEL	
26	1	NP870	PENDANT WARNING LABEL	
27	1	NP884	PENDANT WARNING LABEL, FRENCH CANADIAN	

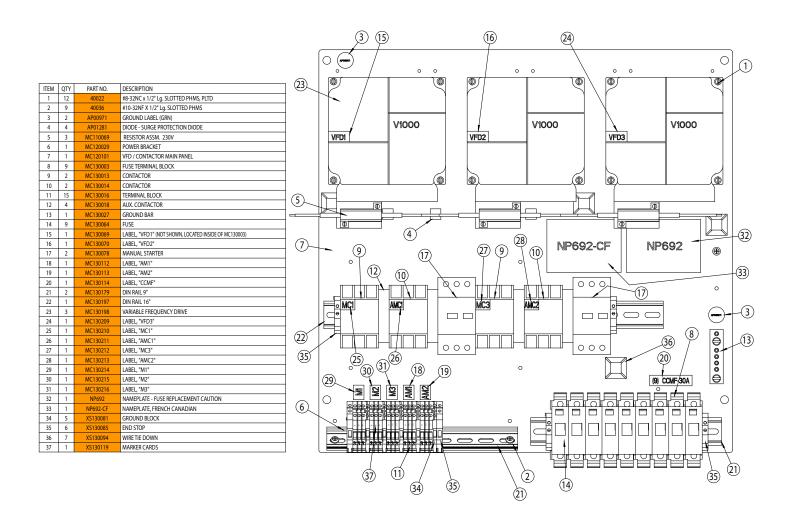




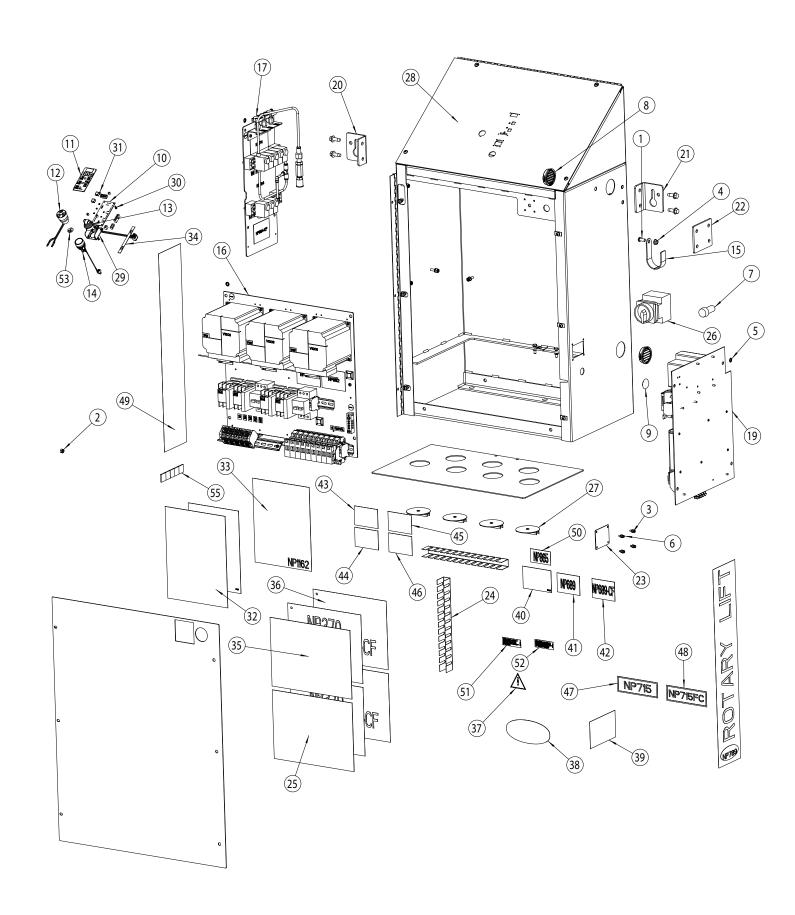


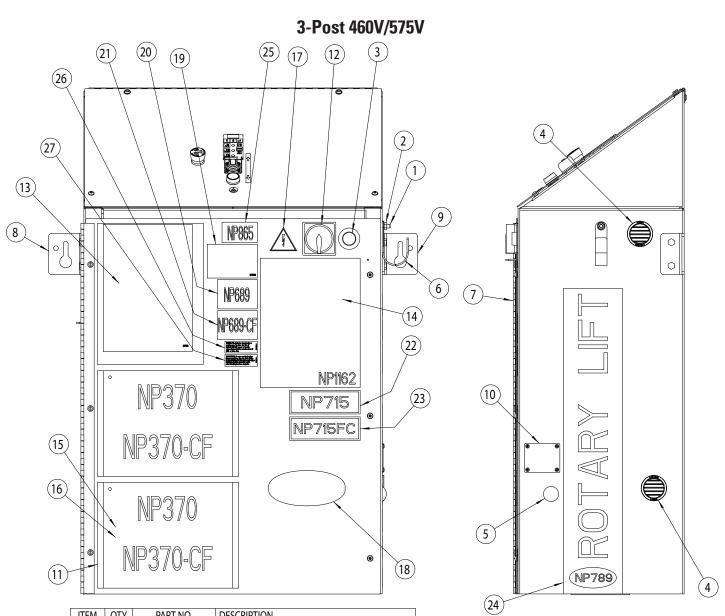
ITEM	QTY	PART NO.	DESCRIPTION				
1	10	40036	#10-32NF X 1/2" Lg. SLOTTED PHMS				
2	12	40177	#6-32NC x 1/4" Lg. BHCS, GRD 2				
3	1	41428	#8-32NC x 1/4" Lg. SLOTTED PHMS, PLTD				
4	1	AP00971	GROUND LABEL (GRN)				
5	1	FA8132	SOLA TRANSFORMER				
6	1	FA9138	FUSE TERMINAL BLOCK				
7	1	FA9139	END PLATE				
8	1	FA9140	FUSE, 0.25A				
9	1	FA9141	ZENER DIODE WIRE				
10	1	FA9142	RELAY MODULE				
11	1	MC110069	RESISTOR ASSM. 230V				
12	1	MC120100	PCB MOUNTING PLATE				
13	2	MC130003	FUSE TERMINAL BLOCK				
14	1	MC130012	DIN RAIL				
15	2	MC130164	FUSE, 1.5A				
16	2	MC130169	INSULATING SPACER DIM RAILS				
17	1	MC130179	DIN RAIL 9"				
18	1	MC130185	LABEL, "CCMF" (LOCATED INSIDE OF MC130003)				
19	1	MC130200	LABEL, "VP1"				
20	1	MC130201	LABEL, "VP2"				
21	1	MC130202	LABEL, "VP3"				
22	3	MC130255	ZENER DIODE SAFETY BARRIER				
23	1	MC130277	POWER SUPPLY 3.3V				
24	1	MC130279	MAXNC CONTROL BD 3P HDI (NOT SHOWN)				
25	1	NP1159	LABEL, "(1) .25A, 250V" (LOCATED INSIDE OF FA9138)				
26	1	NP690	NAMEPLATE				
27	1	NP690-CF	NAMEPLATE, FRENCH CANADIAN				
28	1	NP692	NAMEPLATE - FUSE REPLACEMENT CAUTION				
29	1	NP692-CF	NAMEPLATE, FRENCH CANADIAN				
30	4	XS130080	TERMINAL BLOCK				
31	7	XS130081	GROUND BLOCK				
32	4	XS130085	END STOP				
33	6	XS130097	FEMALE THD STAND OFF #6-32 x 1-1/4 Lg. MMC #91780A760				
34	1	XS130119	MARKER CARDS				



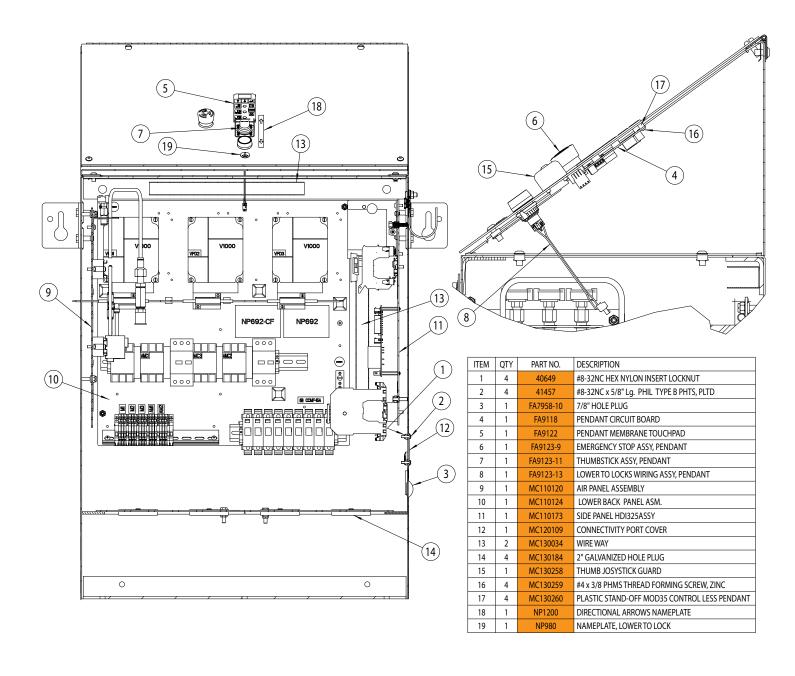


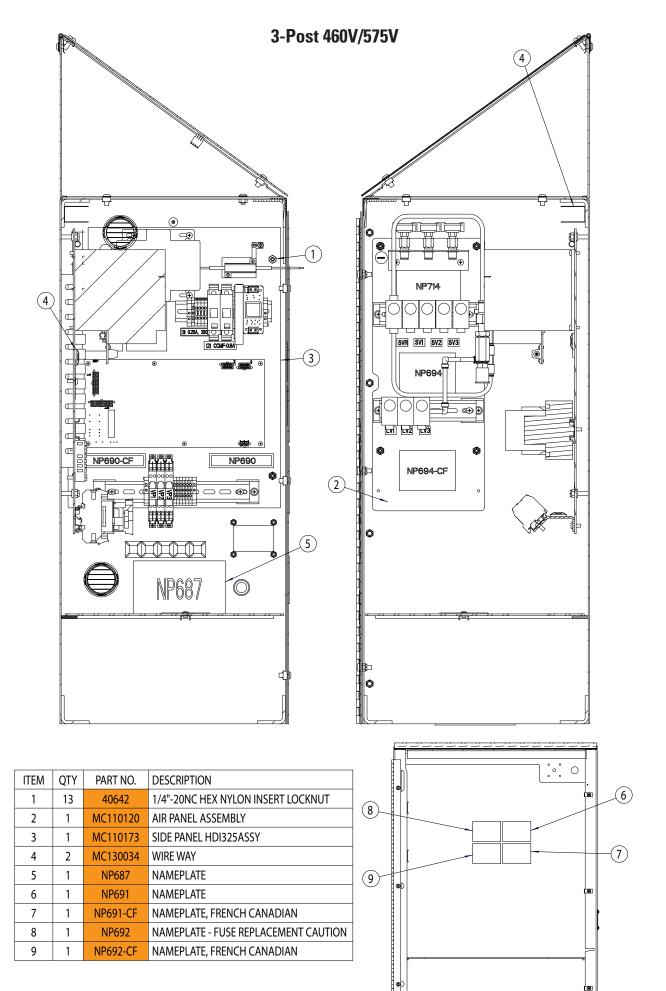
-	ART NO.	DESCRIPTION			
1 1		···· ·····			
	40322	5/16-18NC x 3/4" Lg. HEX SOC BHCS, PLTD (NOT SHOWN)			
2 13		1/4"-20NC HEX NYLON INSERT LOCKNUT			
3 4	40649	#8-32NC HEX NYLON INSERT LOCKNUT			
4 1	40678	5/16"-18NC HEX FLGD WZLOCK NUT, PLTD			
		1/4" EXT TOOTH LW			
		#8-32NC x 5/8" Lg. PHIL TYPE B PHTS, PLTD			
-					
		COMPLETE, LIGHT, GREEN LOUVERED/FILTERED HOLE PLUG 2" DIAMETER			
		LOUVERED/FILTERED HOLE PLUG 2" DIAMETER			
		7/8" HOLE PLUG PENDANT CIRCUIT BOARD			
-					
		PENDANT MEMBRANE TOUCHPAD			
		EMERGENCY STOP ASSY, PENDANT			
		THUMBSTICK ASSY, PENDANT			
		LOWER TO LOCKS WIRING ASSY, PENDANT			
15 1 N	1120262	REEL CORD HANGER			
16 1 MC	110096-1	LOWER BACK PANEL ASM.			
17 1 M	C110120	AIR PANEL ASSEMBLY			
18 1 M	C110134	WIRE & HARNESS KIT, MOD335 3-POST			
19 1 M	C110172	SIDE PANEL HDI325ASSY			
20 1 MC	120093LH	WALL MOUNT LEFT			
21 1 MC	120093RH	WALL MOUNT RIGHT			
22 1 M	C120108	CABINET TO CABINET MOUNTING PLATE			
23 1 M	C120109	CONNECTIVITY PORT COVER			
24 2 M	C130034	WIRE WAY			
25 3 M	C130054	POUCH			
26 1 M	C130167	DISCONNECT SWITCH			
		2" GALVANIZED HOLE PLUG			
	C130257	CABINET ASSEMBLY, MODx35			
		THUMB JOSYSTICK GUARD			
		#4 x 3/8 PHMS THREAD FORMING SCREW, ZINC			
		PLASTIC STAND-OFF MOD35 CONTROL LESS PENDANT			
-		NAMEPLATE			
		· · · · · · · · · · · · · · · · · · ·			
		NAMEPLATE - PREVENTIVE MAINTENANCE			
		DIRECTIONAL ARROWS NAMEPLATE			
		PLACARD W/BLACK PLASTIC TIE (ALI/WL500w)			
		PLACARD (ALI/WL500w) FRENCH CANADIAN			
		HIGH VOLTAGE NAMEPLATE (NOT SHOWN)			
	NP607	NAMEPLATE			
39 1	NP687	NAMEPLATE			
40 1 1	NP1715	NAMEPLATE			
41 1	NP689	NAMEPLATE			
42 1 N	P689-CF	NAMEPLATE, FRENCH CANADIAN			
43 1	NP691	NAMEPLATE			
44 1 N	P691-CF	NAMEPLATE, FRENCH CANADIAN			
45 1	NP692	NAMEPLATE - FUSE REPLACEMENT CAUTION			
46 1 N	P692-CF	NAMEPLATE, FRENCH CANADIAN			
47 1	NP715	NAMEPLATE			
		NAMEPLATE, FRENCH CANADIAN			
		ROTARY DECAL			
		ETL ACCESSORY LABEL			
		PENDANT WARNING LABEL			
		PENDANT WARNING LABEL, FRENCH CANADIAN			
		NAMEPLATE, LOWER TO LOCK			
		· · · · · · · · · · · · · · · · · · ·			
		CONTROL SYSTEM DRAWING			
55 5 X	S130094	WIRE TIE DOWN			

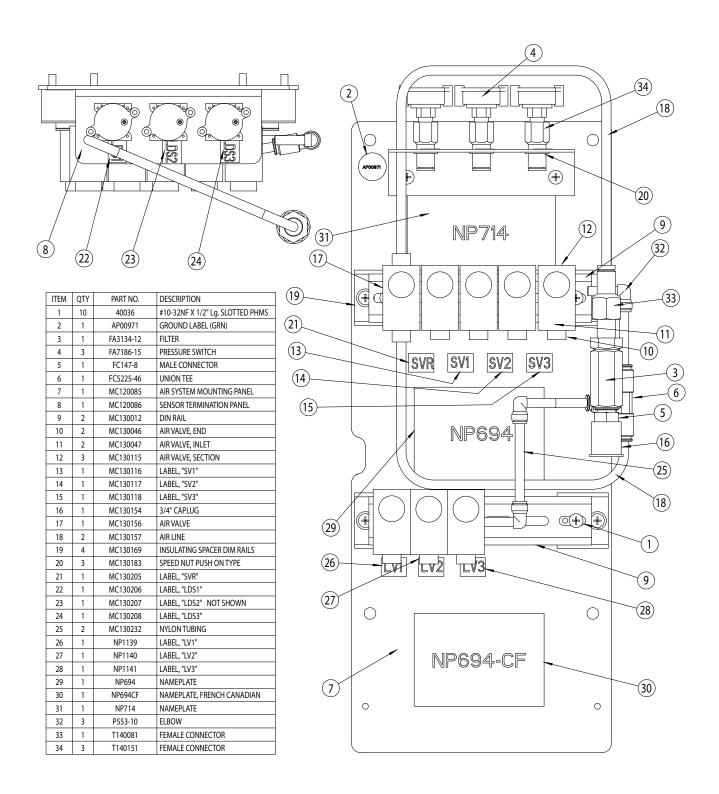




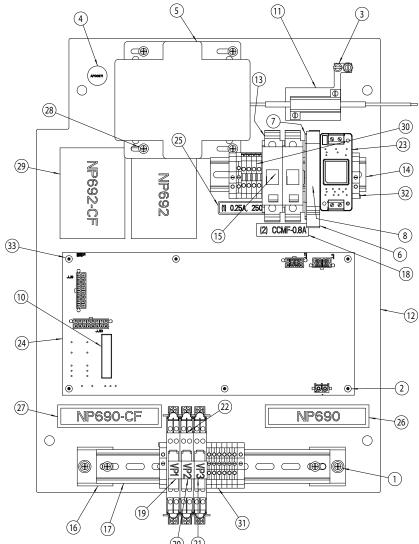
ITEM	QTY	PART NO.	DESCRIPTION
1	1	40322	5/16"-18NC x 3/4" Lg. HEX SOC BHCS, PLTD
2	1	40678	5/16"-18NC HEX FLGD WZLOCK NUT, PLTD
3	1	AC700029	COMPLETE, LIGHT, GREEN
4	2	FA5311	LOUVERED/FILTERED HOLE PLUG 2" DIAMETER
5	1	FA7958-10	7/8" HOLE PLUG
6	1	M120262	REEL CORD HANGER
7	1	MC110173	SIDE PANEL HDI325ASSY
8	1	MC120093LH	WALL MOUNT LEFT
9	1	MC120093RH	WALL MOUNT RIGHT
10	1	MC120109	CONNECTIVITY PORT COVER
11	3	MC130054	POUCH
12	1	MC130167	DISCONNECT SWITCH
13	1	NP1113	NAMEPLATE
14	1	NP1162	NAMEPLATE - PREVENTIVE MAINTENANCE
15	2	NP370	PLACARD W/BLACK PLASTIC TIE (ALI/WL500w)
16	2	NP370CF	PLACARD (ALI/WL500w) FRENCH CANADIAN
17	1	NP584	HIGH VOLTAGE NAMEPLATE
18	1	NP607	NAMEPLATE
19	1	NP1715	NAMEPLATE
20	1	NP689	NAMEPLATE
21	1	NP689-CF	NAMEPLATE, FRENCH CANADIAN
22	1	NP715	NAMEPLATE
23	1	NP715FC	NAMEPLATE, FRENCH CANADIAN
24	2	NP789	ROTARY DECAL
25	1	NP865	ETL ACCESSORY LABEL
26	1	NP870	PENDANT WARNING LABEL
27	1	NP884	PENDANT WARNING LABEL, FRENCH CANADIAN

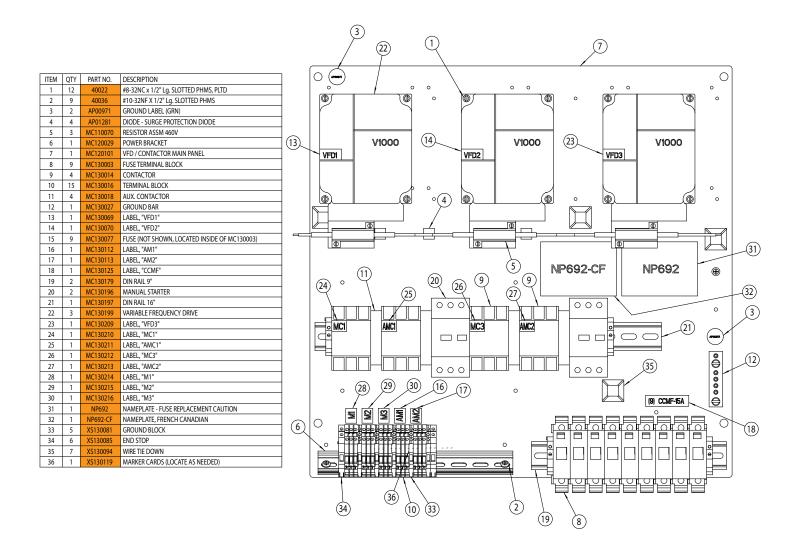




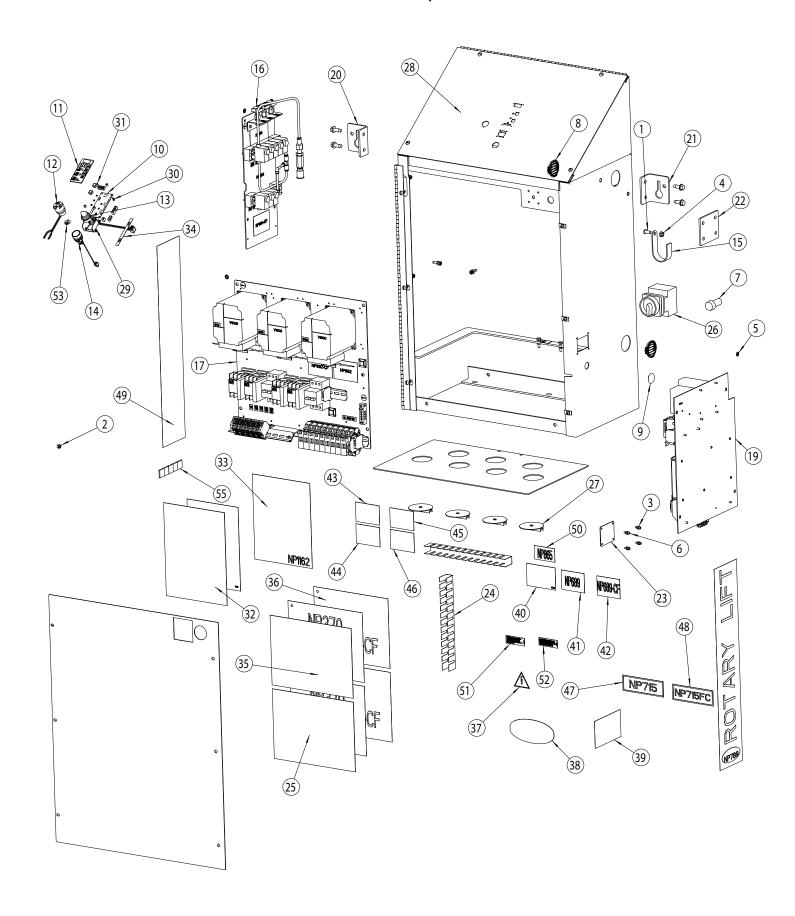




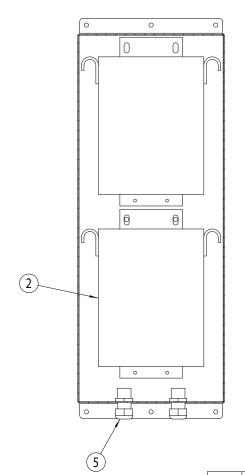


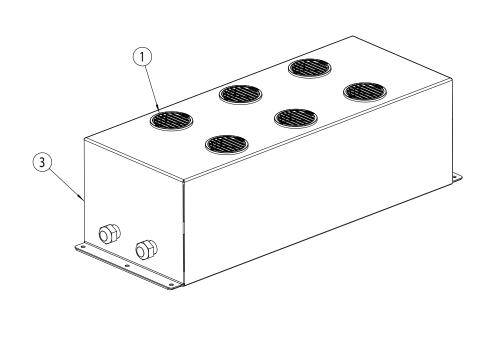


		U	FUST 400 V/3/3V			
ITEM	QTY	PART NO.	DESCRIPTION			
1	1	40322	5/16-18NC x 3/4" Lg. HEX SOC BHCS, PLTD (NOT SHOWN)			
2	13	40642	1/4"-20NC HEX NYLON INSERT LOCKNUT			
3	4	40649	#8-32NC HEX NYLON INSERT LOCKNUT			
4	1	40678	5/16"-18NC HEX FLGD WZLOCK NUT, PLTD			
5	3	40779	1/4" EXT TOOTH LW			
6	4	41457	#8-32NC x 5/8" Lg. PHIL TYPE B PHTS, PLTD			
7	1	AC700029				
8	2	FA5311	COMPLETE, LIGHT, GREEN LOUVERED/FILTERED HOLE PLUG 2" DIAMETER			
9	1	FA7958-10	LOUVERED/FILTERED HOLE PLUG 2" DIAMETER 7/8" HOLE PLUG			
10	1	FA9118	PENDANT CIRCUIT BOARD			
11	1	FA9122	PENDANT MEMBRANE TOUCHPAD			
12	1	FA9123-9	EMERGENCY STOP ASSY, PENDANT			
13	1	FA9123-11	THUMBSTICK ASSY, PENDANT			
14	1	FA9123-11	LOWER TO LOCKS WIRING ASSY, PENDANT			
15	1	M120262	REEL CORD HANGER			
16	1		AIR PANEL ASSEMBLY			
		MC110120	· · · · · · · · · · · · · · · · · · ·			
17	1	MC110124	LOWER BACK PANEL ASM.			
18	1	MC110134	WIRE & HARNESS KIT, MOD335 3-POST			
19	1	MC110173	SIDE PANEL HDI325ASSY			
20	1	MC120093LH	WALL MOUNT LEFT			
21	1	MC120093RH	WALL MOUNT RIGHT			
22	1	MC120108	CABINET TO CABINET MOUNTING PLATE			
23	1	MC120109	CONNECTIVITY PORT COVER			
24	2	MC130034	WIRE WAY			
25	3	MC130054	POUCH			
26	1	MC130167	DISCONNECT SWITCH			
27	4	MC130184	2" GALVANIZED HOLE PLUG			
28	1	MC130257	CABINET ASSEMBLY, MODx35			
29	1	MC130258	THUMB JOSYSTICK GUARD			
30	4	MC130259	#4 x 3/8 PHMS THREAD FORMING SCREW, ZINC			
31	4	MC130260	PLASTIC STAND-OFF MOD35 CONTROL LESS PENDANT			
32	1	NP1113	NAMEPLATE			
33	1	NP1162	NAMEPLATE - PREVENTIVE MAINTENANCE			
34	1	NP1200	DIRECTIONAL ARROWS NAMEPLATE			
35	2	NP370	PLACARD W/BLACK PLASTIC TIE (ALI/WL500w)			
36	2	NP370CF	PLACARD (ALI/WL500w) FRENCH CANADIAN			
37	1	NP584	HIGH VOLTAGE NAMEPLATE (NOT SHOWN)			
	1	NP607	NAMEPLATE			
38	1					
39		NP687	NAMEPLATE			
40	1	NP1715	NAMEPLATE NAMEDIATE			
41	1	NP689	NAMEPLATE FRENCH CANADIAN			
42	1	NP689-CF	NAMEPLATE, FRENCH CANADIAN			
43	1	NP691	NAMEPLATE - PRENSIL GANARIAN			
44	1	NP691-CF	NAMEPLATE, FRENCH CANADIAN			
45	1	NP692	NAMEPLATE - FUSE REPLACEMENT CAUTION			
46	1	NP692-CF	NAMEPLATE, FRENCH CANADIAN			
47	1	NP715	NAMEPLATE			
48	1	NP715FC	NAMEPLATE, FRENCH CANADIAN			
49	2	NP789	ROTARY DECAL			
50	1	NP865	ETL ACCESSORY LABEL			
51	1	NP870	PENDANT WARNING LABEL			
52	1	NP884	PENDANT WARNING LABEL, FRENCH CANADIAN			
53	1	NP980	NAMEPLATE, LOWER TO LOCK			
			· · · · · · · · · · · · · · · · · · ·			
54	1	WD057	CONTROL SYSTEM DRAWING			



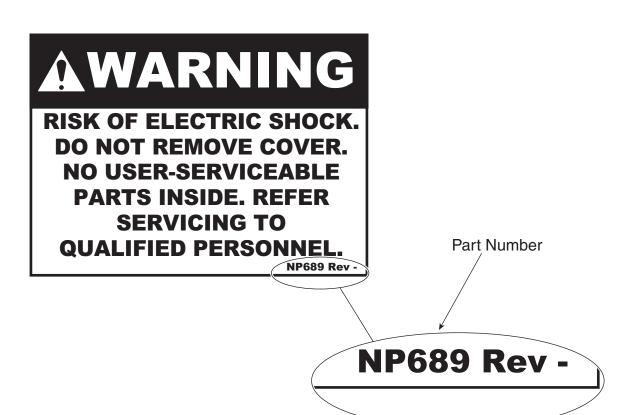
# **575V KIT**





ITEM	QTY	PART NO.	DESCRIPTION
1	6	FA5309	LOUVERED HOLE PLUG 3" DIAMETER
2	2	FA7501	TRANSFORMER 600 V, 3 KVA
3	1	MC120095	MODx35 575V BOX
4	1	MC120097	575V BASE ASSY
5	3	MC130024	CORD GRIP
6	9	MC130091	WIRENUT (NOT SHOWN)
7	1	MC130135	WIRE (NOT SHOWN)

**IMPORTANT** Labels Placed On The Lift And Control Panel Display Information Concerning Safety, Operation, And Maintenance. Labels Must Be Replaced As They Become Faded And Worn. They Can Be Ordered By The Part Number Listed On The Label. Labels For This Lift Are Displayed In The Following Pages For Ease Of Ordering.



# **Intrinsically Safe Circuit**

Provides Intrinsically Safe Circuit
Extensions For Use In Class I, Div. 1, Group D
Hazardous (Classified) Locations
When Connected Per Control Panel
Drawing No. WD039

NP714 Rev. A



# AWARNING

This unit is supplied by more than one source of energy. Be sure to disconnect all energy sources at main power supply using appropriate lockout/tagout procedures. Before servicing this control panel the lift MUST be lowered. Only allow qualified lift service personnel to service control panel.

# **A CAUTION**

SET THERMAL OVERLOAD PROTECTION TO PROPER SETTING FOR OPERATING VOLTAGE.

NP693 Rev -

# **A DANGER**

Always keep stop bolts securely in place at all times.

NP678 REV



CAPACITY

25,000 LBS. (11,340 Kg.)

NP252 Rev. A

# CAPACITY

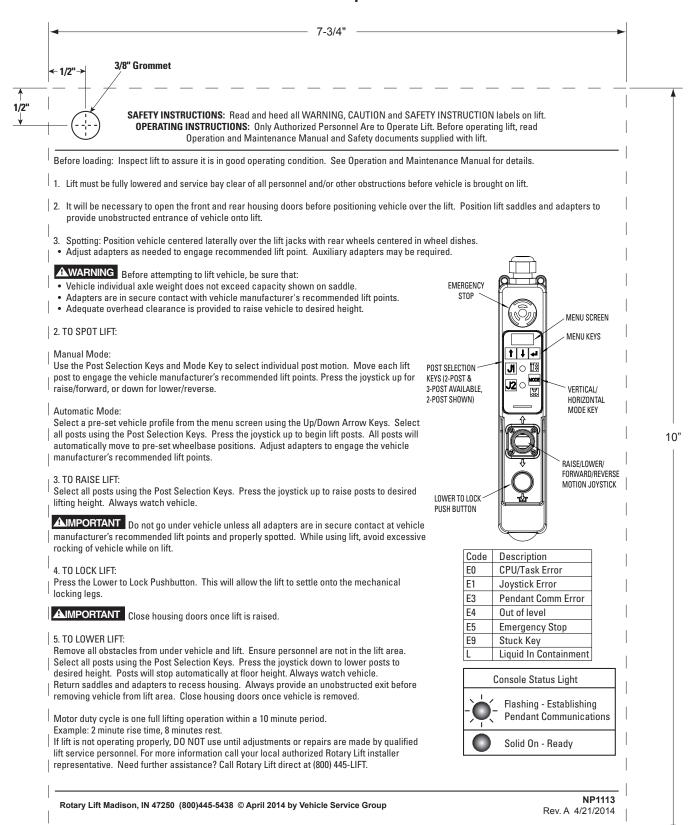
12,500 LBS.EACH (5681 Kg. EACH) See Saddle For Maximum Capacity Rating NP1071 REV. A

# **A CAUTION**

ALWAYS KEEP TRENCH COVERS IN POSITION.

NP683 REV-

#### 2-Post/3-Post Operations Decal



Lift Model	Electrical Service	Current Required	"X" Mark Required
HDI225 208V	208V, 3Ph., 60Hz	33 Amp.	
HDI225 230V	230V, 3Ph., 60Hz	32 Amp.	
HDI225 460V	460V, 3Ph., 60Hz	16 Amp.	
HDI225 575V	575V, 3Ph., 60Hz.	12.8 Amp.	
HDI325 208V	208V, 3Ph., 60Hz	62 Amp.	
HDI325 230V	230V, 3Ph., 60Hz	56 Amp.	
HDI325 460V	460V, 3Ph., 60Hz	28 Amp.	
HDI325 575V	575V, 3Ph., 60Hz	23 Amp.	NP1715 Rev

# **A CAUTION**

FOR CONTINUED PROTECTION
AGAINST RISK OF FIRE,
REPLACE ONLY WITH SAME
TYPE FUSES AS SPECIFIED IN
SYSTEM WIRING DIAGRAM.

NP692 Rev -

# **A CAUTION**

INTRINSICALLY SAFE WIRING.

NP690 Rev

# **A CAUTION**

IF CONNECTED TO
A CIRCUIT, PROTECTED
BY FUSES, USE
TIME-DELAY FUSES WITH
THIS EQUIPMENT.

NP691 Rev -

# **A CAUTION**

AIR SUPPLIED TO LIFT MUST BE BETWEEN 100PSI (7 BARS) AND 120PSI (8 BARS)

NP694 Rev -

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**ROTARY LIFT** INTRINSICALLY SAFE POSITION SENSING SYSTEM INTRINSICALLY SAFE SENSOR (STRING POTENTIOMETER FA2411)

CLASS I, DIVISION 1, GROUP D T4 WARNING: SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY READ MANUAL BEFORE INSTALLATION/OPERATION



SECURITE INTRINSEQUE ADVERTISSEMENT: LA SUBSTITUTION DE COMPOSANTS PEUT COMPROMETTRE LA SECURITE INTRINSEQUE NP684 REV-

#### SAFETY WARNING LABELS FOR INGROUND LIFTS

#### Lift Owner/User Responsibilities:

- A. This Safety Warning placard SHALL be displayed in a conspicuous location in the lift area.
- B. Use one of the mounting arrangements illustrated on back of this placard.
- C. These Safety Warning labels supplement other documents supplied with the lift.

or 4 stands to support vehicle.

D. Be certain all lift operators read and understand these labels, operating instructions and other safety related

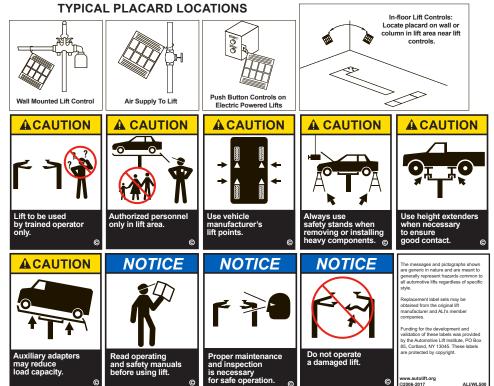






**WARNING** 





to prevent vehicle movement.

# ROTARY LIFT MOD35 AND HD125 PREVENTIVE MAINTENANCE SCHEDULE INTERVAL IN MONTHS (REPEAT AFTER 2 YEARS)

 $To insure your safety, and to keep your lift operating properly, you \ \textbf{MUST} follow \ this \ maintenance \ schedule.$ 

PROGRAMME D'ENTRETIEN PRÉVENTIF MOD35 Y HD125 DE ROTARY LIFT INTERVALLE EN MOIS (À RÉPÉTER APRÈS 2 ANS) Pour garantir votre sécurité, et afin de vous assurer que votre pont élévateur fonctionne correctement, vous DEVEZ respecter ce programme d'entretien.



If you are not completely familiar with automotive lift maintenance procedures,

STOP: contact factory for instructions. Permit only qualified personnel to perform maintenance on this equipment.																									
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#### **Rotary World Headquarters**

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technicalsupport@rotarylift.com

**Government Sales:** 

800.445.5438 X5655

rotarylift.com/Government-Purchasing-Assistance/

Additional information at rotarylift.com

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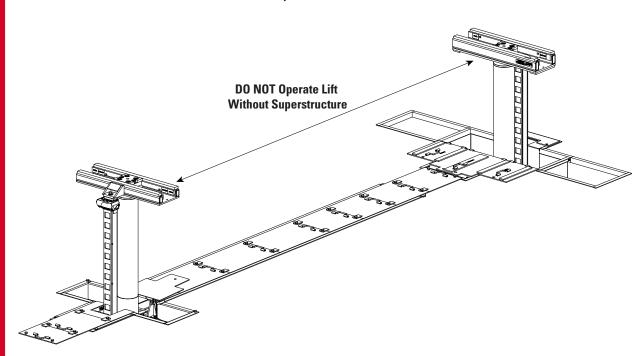


# Models: HDI225 (100 Series) INGROUND LIFTS

Capacity 50,000lbs. 25,000 lbs. Front Post 25,000 lbs. Rear Post

# HDI325 (100 Series) INGROUND LIFTS

Capacity 75,000lbs. 25,000 lbs. Each Post



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Installer: Please return this booklet to literature package and give to lift owner/operator.

A-NTENANCE MANUA

Rev. -

#### OWNER/EMPLOYER RESPONSIBILITIES

#### The Owner/Employer:

- Shall ensure that lift operators are qualified and that they are trained in the safe use and operation of
  the lift using the manufacturer's operating instructions; ALI/SM01-1, ALI Lifting it Right safety manual;
  ALI/ST ALI Safety Tips card; ANSI/ALI ALOIM: 2020, or latest edition, American National Standard for
  Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; ALI/WL Series, ALI
  Uniform Warning Label Decals/Placards; and in the case of frame engaging lifts, ALI/LP-GUIDE, Vehicle
  Lifting Points/Quick Reference Guide for Frame Engaging Lifts.
- Shall establish procedures to periodically inspect the lift in accordance with the lift manufacturer's
  instructions or ANSI/ALI ALOIM: 2020, or latest edition, American National Standard for Automotive
  Lifts-Safety Requirements for Operation, Inspection and Maintenance; and The Employer Shall ensure
  that lift inspectors are qualified and that they are adequately trained in the inspection of the lift.
- Shall establish procedures to periodically maintain the lift in accordance with the lift manufacturer's
  instructions or ANSI/ALI ALOIM: 2020, or latest edition, American National Standard for
  Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and The Employer
  Shall ensure that lift maintenance personnel are qualified and that they are adequately trained in the
  maintenance of the lift.
- Shall maintain the periodic inspection and maintenance records recommended by the manufacturer or ANSI/ALI ALOIM: 2020, or latest edition, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance.
- Shall display the lift manufacturer's operating instructions; ALI/SM, ALI Lifting it Right safety manual;
   ALI/ST ALI Safety Tips card; ANSI/ALI ALOIM: 2020, or latest edition, American National Standard for
   Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and in the case of
   frame engaging lifts, ALI/LP-GUIDE, Vehicle Lifting Points/Quick Reference Guide for Frame Engaging
   Lifts; in a conspicuous location in the lift area convenient to the operator.
- Shall provide necessary lockout/tagout means for energy sources per ANSI Z244.1, Safety Requirements for the Lockout/Tagout of Energy Sources, before beginning any lift repairs.
- Shall not modify the lift in any manner without the prior written consent of the manufacturer.

For the latest manuals mentioned please contact Rotary or Autolift.org.



Autolift.org

#### **SAFETY INSTRUCTIONS**

- Daily inspect your lift. Never operate if it malfunctions or if it has broken or damaged parts. Use only qualified lift service personnel and genuine Rotary parts to make repairs.
- Thoroughly train all employees in use and care of lift, using manufacturer's instructions and "Lifting It Right" and "Safety Tips" supplied with the lift.
- Never allow unauthorized or untrained persons to position vehicle or operate lift.
- Prohibit unauthorized persons from being in shop area while lift is in use.
- Do Not permit anyone on lift or inside vehicle when it is either being raised or lowered.
- Always keep area around lift free of tools, debris, grease and oil.
- Never overload lift. Capacity of lift is shown on nameplate affixed to the lift.
- Do Not stand in front of the lift or vehicle while it is being positioned in the lift bay.
- Do Not hit or run over lift superstructure, saddle or adapters. This could damage lift or vehicle. Before driving vehicle into bay, position adapters inboard to provide unobstructed entrance onto lift.
- Always use all four adapters when raising vehicle.
   Never use just two adapters to raise just one side or one end of the vehicle.
- Load vehicle on lift carefully. Position lift adapters to contact the vehicle at vehicle manufacturer's recommended lift points.
- · The center cover is designed for foot traffic only.
- If you are working under vehicle, lift should be raised high enough for locking latch to engage.

- Do Not block open or override self-closing lift controls, they are designed to return to the Off or Neutral position when released.
- · Remain clear of lift and vehicle when lowering.
- Always use safety stands when removing or installing heavy components.
- Avoid excessive rocking of vehicle while on lift.
- Clear area if vehicle is in danger of falling.
- Remove tool trays, stands, etc. before lowering lift.
   Release locking latch before attempting to lower lift.
- **Position** lift adapters inboard to provide an unobstructed exit before removing vehicle from lift area.
- Do Not perform any maintenance on the power unit, control valves, air or fluid lines, hydraulic cylinders, or check fluid level until lift has been fully lowered and all pressure has been released from system. Follow OSHA Lockout/Tagout procedures as they apply; reference ANSI Z244.1.
- Do Not go under vehicle if locking latches are not engaged.
- Never use remote or pendant below floor grade.
- · Always remain in line of sight when operating lift.

#### **SAFETY WARNING LABELS**

#### SAFETY WARNING LABELS FOR INGROUND LIFTS

#### Lift Owner/User Responsibilities:

- in a conspicuous location in the lift area.
- **B.** Use one of the mounting arrangements illustrated on back of this placard.
- A. This Safety Warning placard SHALL be displayed C. These Safety Warning labels supplement other documents supplied with the lift.
  - D. Be certain all lift operators read and understand these labels, operating instructions and other safety related information supplied with the lift.



Do not override self-closing lift controls.

# WARNING



DO NOT remove oil fill plug before reading manufacturer's manuals.

## WARNING



Position vehicle center of gravity over lift.

#### WARNING



Remain clear of lift when raising or lowering vehicle.

# WARNING

Keep feet clear of lift while lowering.

#### WARNING



Clear area if vehicle is in danger of falling.

#### WARNING



**Avoid excessive** rocking of vehicle while on lift.

#### WARNING



Chock wheel to prevent vehicle movement.

#### WARNING



Use lift locking device or 4 stands to support vehicle.

shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style.

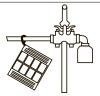
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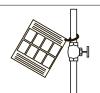
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ALI/WL500

#### TYPICAL PLACARD LOCATIONS



Wall Mounted Lift Control



Air Supply To Lift



**Push Button Controls on Electric Powered Lifts** 

#### In-floor Lift Controls: Locate placard on wall or column in lift area near lift controls

#### CAUTION



Lift to be used by trained operator only.

#### CAUTION



Authorized personnel only in lift area.

#### CAUTION



Use vehicle manufacturer's lift points.

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#### **A** CAUTION



Always use safety stands when removing or installing heavy components.

#### A CAUTION



Use height extenders when necessary to ensure good contact.

The messages and pictographs

#### **A** CAUTION



Auxiliary adapters may reduce load capacity.

#### NOTICE



Read operating and safety manuals before using lift.

#### NOTICE

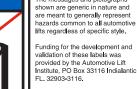


Proper maintenance and inspection is necessary for safe operation.

#### NOTICE



Do not operate a damaged lift.



Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 33116 Indialantic. FL. 32903-3116.

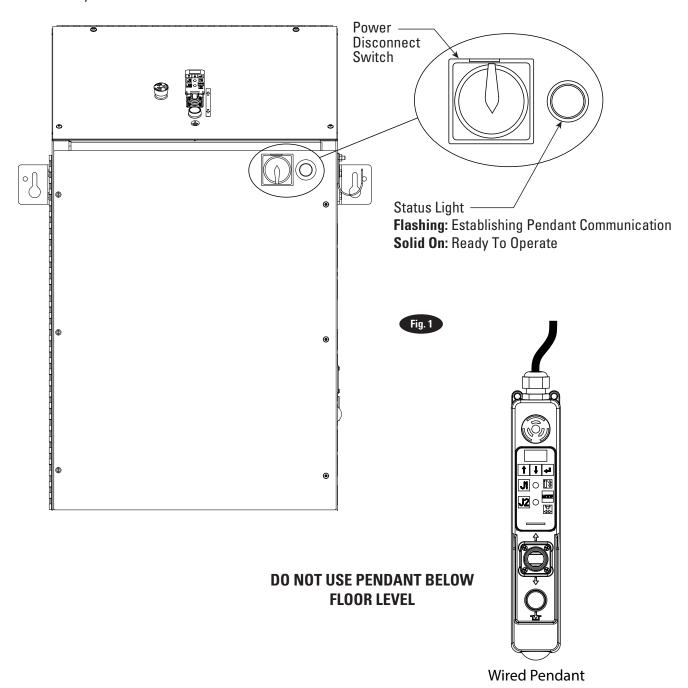
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ALI/WL500c

## **CONTROL PANEL OVERVIEW**

Review Fig. 1 to get a quick overview of the control panel and it's functionality.





### OPERATING INSTRUCTIONS

### 2-Post/3-Post Operations Decal

SAFETY INSTRUCTIONS: Read and heed all WARNING, CAUTION and SAFETY INSTRUCTION labels on lift. OPERATING INSTRUCTIONS: Only Authorized Personnel Are to Operate Lift. Before operating lift, read Operation and Maintenance Manual and Safety documents supplied with lift.

Before loading: Inspect lift to assure it is in good operating condition. See Operation and Maintenance Manual for details.

- 1. Lift must be fully lowered and service bay clear of all personnel and/or other obstructions before vehicle is brought on lift.
- 2. It will be necessary to open the front and rear housing doors before positioning vehicle over the lift. Position lift saddles and adapters to provide unobstructed entrance of vehicle onto lift.
- 3. Spotting: Position vehicle centered laterally over the lift jacks with rear wheels centered in wheel dishes.
- Adjust adapters as needed to engage recommended lift point. Auxiliary adapters may be required.

## **MARNING** Before attempting to lift vehicle, be sure that:

- · Vehicle individual axle weight does not exceed capacity shown on saddle
- · Adapters are in secure contact with vehicle manufacturer's recommended lift points.
- Adequate overhead clearance is provided to raise vehicle to desired height.

#### 2. TO SPOT LIFT:

#### Manual Mode:

Use the Post Selection Keys and Mode Key to select individual post motion. Move each lift post to engage the vehicle manufacturer's recommended lift points. Press the joystick up for raise/forward, or down for lower/reverse.

#### Automatic Mode:

Select a pre-set vehicle profile from the menu screen using the Up/Down Arrow Keys. Select all posts using the Post Selection Keys. Press the joystick up to begin lift posts. All posts will automatically

**Wired Pendant** 

move to pre-set wheelbase positions. Adjust adapters to engage the vehicle manufacturer's recommended lift points.

#### 3 TO RAISE LIFT.

Select all posts using the Post Selection Keys. Press the joystick up to raise posts to desired lifting height. Always watch vehicle.

**IMPORTANT** Do not go under vehicle unless all adapters are in secure contact at vehicle manufacturer's recommended lift points and properly spotted. While using lift, avoid excessive rocking of vehicle while on lift.

#### 4. TO LOCK LIFT:

Press the Lower to Lock Pushbutton. This will allow the lift to settle onto the mechanical locking legs.

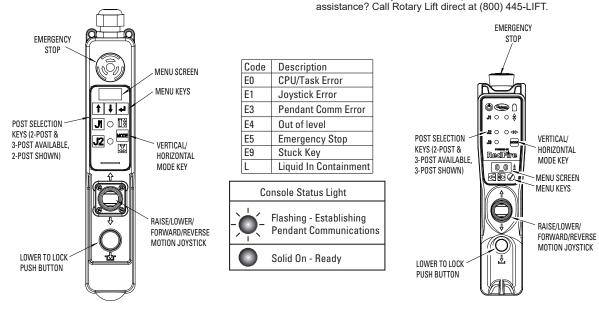
IMPORTANT | Close housing doors once lift is raised.

#### 5. TO LOWER LIFT:

Remove all obstacles from under vehicle and lift. Ensure personnel are not in the lift area. If lift is on the locks it must first be raised off the locks before it can be lowered. Select all posts using the Post Selection Keys. Press the joystick up to get the lift off the locks. Press the joystick down to lower posts to desired height. Posts will stop automatically at floor height. Always watch vehicle. Return saddles and adapters to recess housing. Always provide an unobstructed exit before removing vehicle from lift area. Close housing doors once vehicle is removed.

Motor duty cycle is one full lifting operation within a 10 minute period

Example: 2 minute rise time, 8 minutes rest. If lift is not operating properly, DO NOT use until adjustments or repairs are made by qualified lift service personnel. For more information call your local authorized Rotary Lift installer representative. Need further



Rotary Lift Madison, IN 47250 (800)445-5438 © August 2018 by Vehicle Service Group

NP1113

Rev. D 8.6.18

**Wireless Pendant** 

### **MAINTENANCE INSTRUCTIONS**

If you are not completely familiar with automotive lift maintenance procedures **STOP**. Contact factory for instructions. To avoid personal injury, permit only qualified personnel to perform maintenance on this equipment.

- Always replace all Caution, Warning, or Safety Related decals on the lift when unable to read or missing.
- · Always keep lift components clean.
- Always if oil leakage is observed, call a Rotary Authorized Installer.
- Always if electrical problems develop, call a Rotary Authorized Installer.

### Every 7 Days Check for accumulation of water.

Drain as needed. DO NOT rely on automatic drains as they can malfunction.

### **Every 14 Days** Check Post Position Sensor Cables

- Check cable for fraying or abrasion.
- Check cable connection that it is secure.
- Check cable tension that cable is not slack and readily retracts back into housing.
- Check that position sensor mounting hardware is secure.

### Every 30 Days Inspect Adapters For Damage

 Deformed or broken parts should be replaced with Genuine Rotary Replacement Parts. Contact your local Rotary Authorized Installer.

### **Every 30 Days** Check Fluid Seals At Each Post For Leakage

 If seals are worn or damaged, replace with Genuine Rotary Replacement parts.

### Every 30 Days Check Bolts For Tightness

• IMPORTANT Check structural hardware for secureness.

Saddle and locking leg bolts should be torqued to 150 ft-lbs.

# **Every 30 Days** Lubricate The Pivot Pins On The Latch Release Air Cylinders And Locking Latches.

 Check that all locking latch components are functioning properly. Lubricate pivot pins on upper locking latch.

### **Every 180 Days** Inspect Hydraulic System

 Check all hoses, pipes, and fittings for leaks, damage, or deterioration. Replace as required.

### Every 180 Days Check Post Drive Sensor Cables

- Check cable for fraying or abrasion.
- · Check cable connection that it is secure.
- Check cable tension that cable is not slack and readily retracts back into housing.
- Check that position sensor mounting hardware is secure.

# **Every 180 Days** Lubricate And Inspect Carriage Rollers, Housing Door Hinges, Trench Chains And Sprockets.

 Lubricate with a good grade of chain oil. Check chain tension to ensure it is not slack.

### **Every 180 Days** Clear Post Carriage Roller Channel Of Debris

• IMPORTANT Keep roller channel clear of debris.

### **Every 180 Days** Check Power Unit Fluid Level

 Check the level of the hydraulic oil using the dipstick. The lift should be in the fully lowered position to check the oil level. If oil level is low, add oil to the reservoir before using lift again. Approved hydraulic oil includes either ISO32 or AW32.

## Every 5 Years Replace Hydraulic Oil

 Replace with recommended oil grade ISO32 or AW32. The lift should be in the fully lowered position for servicing and checking the oil level.

### Pendant Error Code Troubleshooting

		_
Code	Description	Troubleshooting Steps
E0	CPU/Task Error	Control board fault - Consult factory
E1	Joystick Error	Error reading joystick position. Check wiring, replace if needed
E3	Pendant Comm Error	Check wiring between main board and pendant pins 2 and 3
E4	Out of Level	See out of level condition in the main troubleshooting section
E5	Emergency Stop	To restore function, reset Emergency Stop button
E8	Connection Error	Multiple units trying to connect to the same channel
E9	Stuck Key	A key or motion press was detected at start-up, or, a key or motion press has been engaged longer than 3 minutes
L	Liquid in Containment	Check containment for liquid and evacuate using clean out tube

Troubleshooting Description	Possible Cause	Remedy
Oil Blowing Out Fill-Breather Cap	Air Mixed With Oil	Change oil using ISOVG32 Hydraulic Oil.
	Air Mixed With Oil Suction	Tighten all suction line fittings.
Lift Drifts Down	Hydraulic Check Valve Is Malfunctioning	Check air supply to pilot port on valve or replace check valve.
	Air Solenoid Valve Malfunction	Replace air solenoid valve.
	External Oil Leak	Check for leaks between check valve and cylinder. Repair external leaks.
	Bad Post Seal	Check for leaks. Contact an authorized service representative.
Locking Latch Will Not Release	Load On Locking Leg	Raise lift until locking latch engages the next locking position. Lower lift.
	Locking Latch Seized	Check for damage to components- Replace damaged components immediately. Clean and lubricate locking latch components so they operate freely. Check spring tension. Check for burrs on inner tube lock stops.
	Air Leak	Check tubing from air valve to locking latch cylinders.
	Dirty Air Line Filter	Clean air filter.
	No Air Supply	Check tubing and compressor.
	Air Valve Stuck Close	Cycle/toggle, replace valve if necessary.
	Air Cylinder Malfunction	Check cylinder for proper operation. Replace air cylinder.
Locking Latches Do Not Engage	Locking Latch Seized	Check for damage to components. Replace damaged components immediately. Clean and lubricate locking latch components so they operate freely.
	Air Valve Stuck Open	Replace air solenoid valve.
Lift Will Not Raise Off Of Latches	Motor, Pump, Or Cylinder Failure.	Contact lift manufacturer's Customer Service.
Control Panel Does Not Power Up	No 24V Power Supply To Main Control Board	Check for 24V power coming from transformer.
Pendant Does Not Power Up, Or, Flashing Light On Console Stays Lit	No Power Or Communication With Pendant	Check pendant cable wiring, check for 24V power to pendant pins 1 and 4.

Troubleshooting Description	Possible Cause	Remedy
Low Air Pressure	Air supply not functioning or not adequate	Check air compressor for required air pressure. Minimum 100 PSI is required to operate the lift system. Check that all supply valves to control cabinet are on.
	The set point on the air pressure switch is adjusted incorrectly	Adjust set point to increase air pressure.
	Broken air lines, leaking fittings, loose or damaged wiring to air pressure switch inside control cabinet	Repair air lines and fittings. Tighten all wiring connections. Repair or replace damaged wiring.
Out Of Level Condition	Vehicle weight and distribution not within rated lift capacity	Verify axle weights are within rated post capacity.
	Check for obstructions preventing lift from raising or lowering	The lift must be raised/lowered manually to bring the posts back to within operating limits.
	Hydraulic check valve is malfunctioning	No or low air supply to pilot on hydraulic check valve or replace check valve.
	Main control board not operating properly	Contact an authorized service representative.
	Post position sensor not operating properly	Contact an authorized service representative.
	Damaged hydraulic hoses or loose fittings	Replace damaged hoses or fittings.
	Low oil level	Add hydraulic oil to the reservoir. Approved hydraulic oil includes either ISO32 or AW32.

Troubleshooting Description	Possible Cause	Remedy								
Lift Fails To Raise Or Lower	When joystick is pushed forward	Follow troubleshooting instructions for fault displays.								
		Motor/pump runs but will not lift load- vehicle weight and/or distribution not within lift rated capacity.								
		Motor rotation incorrect- motor rotation is clockwise from top.								
		Upper height limit not set properly- reset upper height limit.								
		Joystick malfunctions- check wiring connections. Replace joystick if damaged.								
	When joystick is pulled backward	Follow troubleshooting instructions for fault displays.								
		Joystick malfunctions- check wiring connections. Replace joystick if damaged.								
		Locks not fully disengaging- check air valve and lock operation.								
		Hydraulic check valve is malfunctioning- check air supply to pilot on hydraulic check valve or replace hydraulic check valve.								
		Velocity fuses malfunctioning- pressurize lift hydraulically then manually operate the motor controller to release hydraulic pressure.								
Lift Shakes Or Shudders	Low oil level	Check the level of the hydraulic oil using the dipstick. The lift should be in the fully lowered position to check the oil level. Add oil to the reservoir if required, before using the lift again. Approved hydraulic oil includes either ISO32 or AW32. See installation instructions for proper bleeding procedures.								
	Control system wiring not clean and tight	Clean and reconnect wiring making sure all connections are tight.								
	Air in the hydraulic system	See installation instructions for proper bleeding procedures.								
All Posts Don't Operate	Connections to main control board or to electrical components incorrect or loose	Refer to electrical schematic in installation instructions. Check and tighten all connections as required. Check all wiring harnesses for abrasion and cuts.								
	Main control board not operating properly	Contact an authorized service representative.								
	Motor controller malfunctioning	Contact an authorized service representative.								
	Internal oil leak	Have hydraulic system serviced by an authorized service representative.								

<b>Troubleshooting Description</b>	Possible Cause	Remedy
All Posts Don't Operate continued	Velocity fuses malfunctioning	Pressurize lift hydraulically then manually operate the motor controller to release hydraulic pressure.
	External oil leak	Have hydraulic system serviced by an authorized service representative.
	Low oil level	Check the level of the hydraulic oil using the dipstick. The lift should be in the fully lowered position to check the oil level. Add oil to the reservoir if required, before using the lift again. Approved hydraulic oil includes either ISO32 or AW32. See installation instructions for proper bleeding procedures.
Motor/pump Runs But Will Not Lift Load	Vehicle weight and/or distribution not within lift rated capacity	Verify axle weights are within rated post capacity.
	External oil leak	Have hydraulic system serviced by an authorized service representative.
	Internal oil leak	Have hydraulic system serviced by an authorized service representative.
	Pump malfunctioning	Have hydraulic system serviced by an authorized service representative.
Post Will Not Adjust Fore/Aft	Chain broken	Replace chain. See installation manual for adjustment procedures.

<b>Troubleshooting Description</b>	Possible Cause	Remedy
	Loose connections at terminal blocks and position sensors	Clean and tighten wiring connections.
	Damaged or broken position sensor cables	Replace position sensor.
	Damaged or broken position sensor	Replace position sensor.
	Broken mechanical connections to position sensors	Repair connections or replace position sensor.
	Incorrect voltage supply to position sensor	5V supply is required to operate the position sensor.
Constant Flashing Status Light On Control Panel	Emergency stop is pressed	Check emergency stop on pendant control.
	Pendant communication error	Check wiring between pendant control and control console.

## **EMERGENCY LOWERING PROCEDURE**

- 1. Replace facility air with a compressor set at 110psi.
- 2. Replace facility power with a generator rated for 3-phase, 10kw at the appropriate voltage for the control cabinet.
- 3. Raise each post off of locks individually. Only run one motor at a time during raise. Lower in synchronized (all) mode.

### LIFT LOCKOUT/TAGOUT PROCEDURE

### **Purpose**

This procedure establishes the minimum requirements for the lockout of energy that could cause injury to personnel by the operation of lifts in need of repair or being serviced. All employees shall comply with this procedure.

### Responsibility

The responsibility for assuring that this procedure is followed is binding upon all employees and service personnel from outside service companies (i.e., Authorized Rotary Installers, contractors, etc.). All employees shall be instructed in the safety significance of the lockout procedure by the facility owner/manager. Each new or transferred employee along with visiting outside service personnel shall be instructed by the owner/manager (or assigned designee) in the purpose and use of the lockout procedure.

### **Preparation**

Employees authorized to perform lockout shall ensure that the appropriate energy isolating device (i.e., circuit breaker, fuse, disconnect, etc.) is identified for the lift being locked out. Other such devices for other equipment may be located in close proximity of the appropriate energy isolating device. If the identity of the device is in question, see the shop supervisor for resolution. Assure that proper authorization is received prior to performing the lockout procedure.

### **Sequence of Lockout Procedure**

- 1) Notify all affected employees that a lockout is being performed and the reason for it.
- 2) Unload the subject lift. Shut it down and assure the disconnect switch is "OFF" if one is provided on the lift.
- The authorized lockout person operates the main energy isolation device removing power to the subject lift.
  - If this is a lockable device, the authorized lockout person places the assigned padlock on the device to prevent its
    unintentional reactivation. An appropriate tag is applied stating the person's name, at least 3" x 6" in size, an easily
    noticeably color, and states not to operate device or remove tag.
  - If this device is a non-lockable circuit breaker or fuse, replace with a "dummy" device and tag it appropriately as mentioned above.
- Attempt to operate lift to assure the lockout is working. Be sure to return any switches to the "OFF" position.
- 5) The equipment is now locked out and ready for the required maintenance or service.

### **Restoring Equipment to Service**

- 1) Assure the work on the lift is complete and the area is clear of tools, vehicles, and personnel.
- 2) At this point, the authorized person can remove the lock (or dummy circuit breaker or fuse) & tag and activate the energy isolating device so that the lift may again be placed into operation.

### **Rules for Using Lockout Procedure**

Use the Lockout Procedure whenever the lift is being repaired or serviced, waiting for repair when current operation could cause possible injury to personnel, or for any other situation when unintentional operation could injure personnel. No attempt shall be made to operate the lift when the energy isolating device is locked out.

## **OPERATING CONDITIONS**

Lift is not intended for outdoor use and has an operating ambient temperature range of 41°-104°F (5°-40°C).

# (Copies can be made of this page for future maintenance tracking)

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# Trained Operators and Regular Maintenance Ensures Satisfactory Performance of Your Rotary Lift.

**Replacement Parts:** See installers package for parts breakdown sheet. Order Genuine Rotary replacement parts from your nearest Authorized Parts Distributor.

Maintenance Assistance: Contact your local Rotary distributor.

Should further assistance be required, contact Rotary Lift, at one of the phone numbers listed below.



### **Rotary World Headquarters**

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technicalsupport@rotarylift.com

### **Government Sales:**

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rotarylift.com/Government-Purchasing-Assistance/

Additional information at rotarylift.com

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