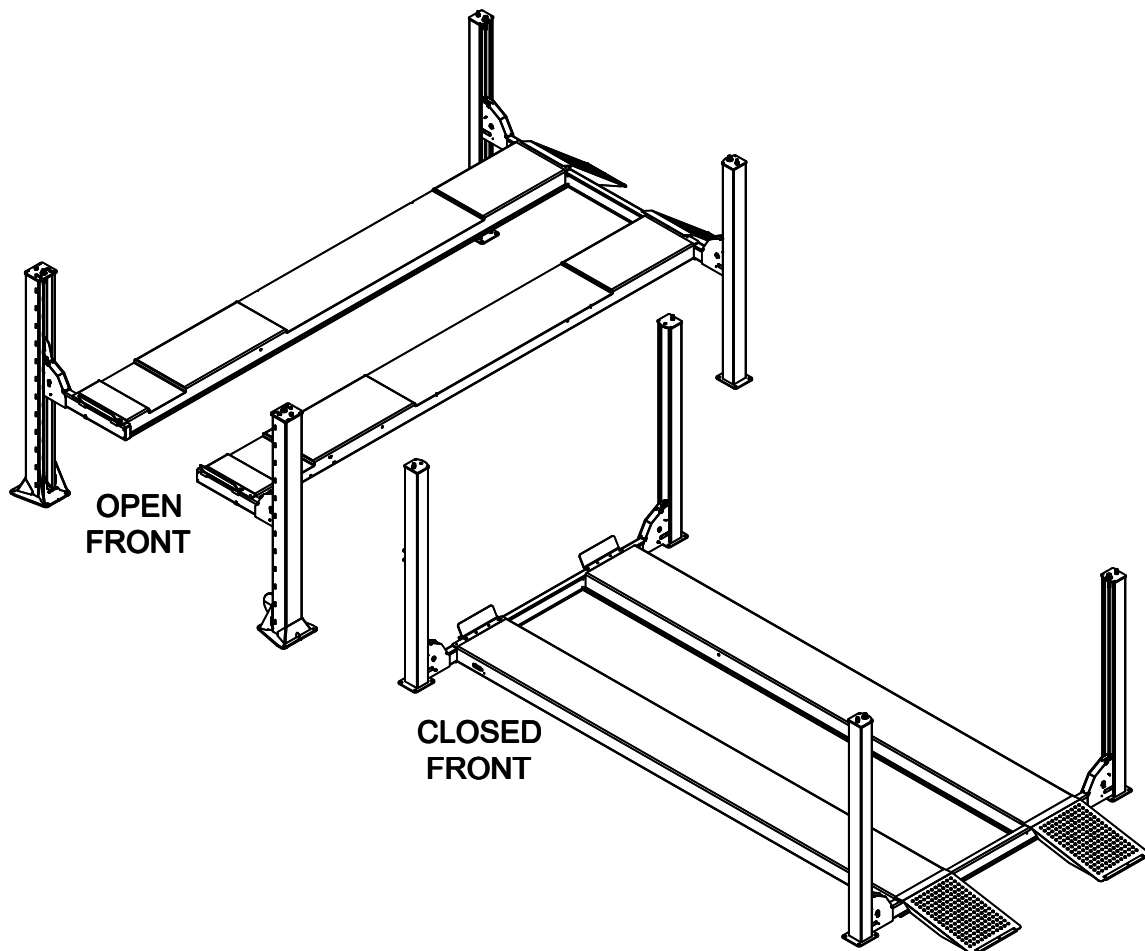




Installation, Operation & Maintenance Manual

Four Post

Surface Mounted Lift



Model 4115

Open Front and Closed Front
(15,000 lb. Capacity)

2311 South Park Rd Louisville, Kentucky 40206

Email: sales@challengerlifts.com Web site: www.challengerlifts.com

Office 800-648-5438 / 502-625-0700 Fax 502-587-1933

IMPORTANT: READ THIS MANUAL COMPLETELY BEFORE
INSTALLING or OPERATING LIFT

GENERAL SPECIFICATIONS

MODEL: 4115 [E OR X] [A OR F] [O OR X]

[LENGTH]) [ALIGN OR FLAT DECK] [OPEN OR CLOSED FRONT]

| SPECIFICATIONS | 4115EAO | 4115XAO | 4115EFO | 4115XFO |
|--|---------------------------------|----------------|---------------|----------------|
| A Length Overall | 20' 10 3/4" | 23' 1" | 20' 10 3/4" | 23' 1" |
| B Width Overall | 11' 10" Front - 11' 9 3/4" Rear | | | |
| C Inside Columns | 120 3/4" Front - 125 1/2" Rear | | | |
| D Between Columns | 16' 3" | 18' 6½" | 16' 3" | 18' 6½" |
| E Height of Columns | 99 1/4" front - 98" rear | | | |
| F Height of Runways | 7" | | | |
| G Width of Runways | 26 3/8" | | | |
| H Width Between Runways | 40 5/8" | | | |
| I Max/Min Wheelbase * | 183"/ 89 1/2" | 210 1/2"/ 113" | 183"/ 89 1/2" | 210 1/2"/ 113" |
| J Max. 2 Wheel Alignment | 167 3/4" | 195 1/4" | N/A | |
| K 4 Wheel Alignment | 68" - 158" | | N/A | |
| L Rise Height | 78" | | | |
| Lifting Capacity (Hydraulic Pressure at Cap.) | 15,000 lbs. (2190 psi) | | | |
| Air Supply Required | 90-120 psi Clean & Dry | | | |
| Motor | 3HP | | | |
| Voltage (Single Phase Std.) ** | 208v-230V, 60Hz | | | |
| Rise Time | 85 Seconds (approximate) | | | |
| Min. Recommended Bay Size | 14' x 24' | 14' x 26' | 14' x 24' | 14' x 26' |
| Approximate Shipping Weight | 4350~4550 lbs. | | | |

* Wheelbase is based on a tire diameter of 30"

** Optional 3 phase, 50/60Hz, 208, 230 or 460V available.

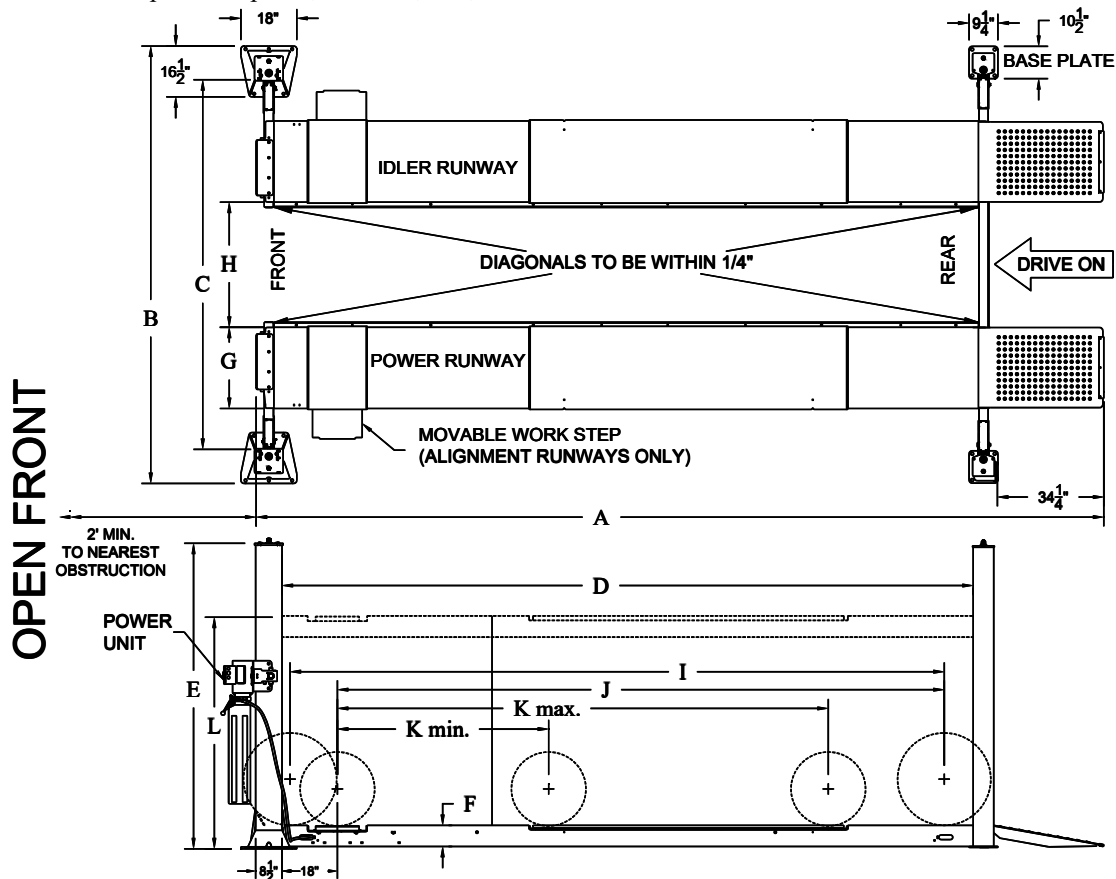
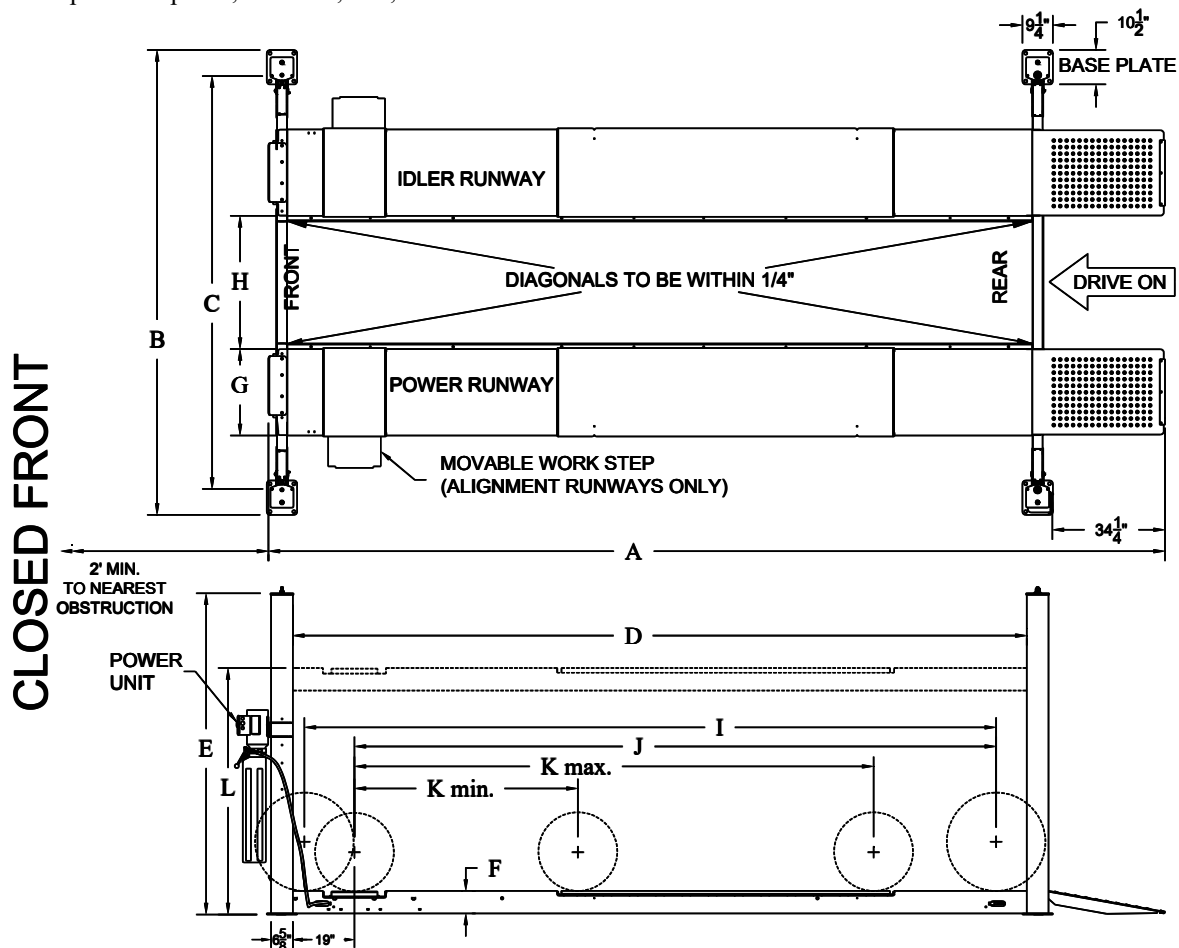


Fig 1a - General Specifications and Service Bay Layout

MODEL: 4115 [E OR X] [A OR F] [O OR X]

| SPECIFICATIONS | 4115EAX | 4115XAX | 4115EFX | 4115XFX | | |
|--|---------------------------|-------------|------------|-------------|--|--|
| A Length Overall | 20' 7 5/8" | 22' 11 1/2" | 20' 7 5/8" | 22' 11 1/2" | | |
| B Width Overall | 11' 9 3/4" | | | | | |
| C Inside Columns | 125 1/2" | | | | | |
| D Between Columns | 16' 4 3/8" | 18' 7 3/8" | 16' 4 3/8" | 18' 7 3/8" | | |
| E Height of Columns | 98" | | | | | |
| F Height of Runways | 7" | | | | | |
| G Width of Runways | 26 3/8" | | | | | |
| H Width Between Runways | 40 5/8" | | | | | |
| I Maximum Wheelbase * | 183" | 210 1/2" | 183" | 210 1/2" | | |
| J Max. 2 Wheel Alignment | 167 3/4" | 195 1/4" | N/A | | | |
| K 4 Wheel Alignment | 68" - 158" | | N/A | | | |
| L Rise Height | 78" | | | | | |
| Lifting Capacity (Hydraulic Pressure at Cap.) | 15,000 lbs. (2190 psi) | | | | | |
| Air Supply Required | 90-120 psi Clean & Dry | | | | | |
| Motor | 3HP | | | | | |
| Voltage (Single Phase Std.) ** | 208v-230V, 60Hz | | | | | |
| Rise Time | 85 Seconds (approximate) | | | | | |
| Min. Recommended Bay Size | 12' x 24' | 12' x 26' | 12' x 24' | 12' x 26' | | |
| Approximate Shipping Weight | 4000~4150 lbs. | | | | | |

** Optional 3 phase, 50/60Hz, 208, 230 or 460V available.



3

VERTICAL CLEARANCE

Check the height of the area where the lift is to be installed. Clearance should be calculated based on the full raised height of the lift.



WARNING Failure by purchaser to provide adequate clearance could result in unsatisfactory lift performance, property damage, or personal injury.

FLOORING

Be certain you have the proper concrete floor to properly handle the loaded lift. Floor should be in generally good condition with no large cracks, spalling or deterioration.

Minimum requirements for concrete are 4 inches minimum depth, with steel reinforcement, 3500 psi, cured for 28 days per local commercial practice. This lift is designed to accommodate a 3 inch total variation in elevation at the base of the four posts. Floor should be level within 1/2 inch from side-to-side and 2 1/2 front-to-rear to avoid special shimming. No anchors should be installed within 8 inches of any crack, edge, or expansion joint. If these conditions cannot be met, a pad may be poured to accommodate the lift.

Check with local building inspectors and/or permits office for any special instructions or approvals required for your installation.

A qualified person should be consulted to address seismic loads and other local or state requirements.



WARNING Failure by purchaser to provide the recommended mounting surface could result in unsatisfactory lift performance, property damage, or personal injury.

LOCATION

This lift has been evaluated for indoor use only with an operating ambient temp. range of 5 – 40°C (41-104°F). Outdoor Installation is Prohibited.

ELECTRICAL REQUIREMENTS

For lift installation and operation it is necessary to have a dedicated circuit with circuit breaker or time delay fuse. Refer to wiring diagram for circuit sizing.

AIR REQUIREMENTS

This lift is equipped with an air operated lock release system. **The air supplied to the lift must be clean, dry, lubricated, and regulated to 90-120 psi, FRL (Filter/Regulator/Lubricator).** The FRL must be within 30 feet of lift. **Failure to provide clean, dry, lubricated, and pressure regulated air will void warranty on pneumatic components.**

SAFETY NOTICES AND DECALS

For your safety, and the safety of others, read and understand all of the safety notices and decals included here.

READ ENTIRE MANUAL BEFORE ASSEMBLING, INSTALLING, OPERATING, OR SERVICING THIS EQUIPMENT.

PROPER MAINTENANCE AND INSPECTION IS NECESSARY FOR SAFE OPERATION.

DO NOT OPERATE A DAMAGED LIFT.

Safety decals similar to those shown here are found on a properly installed lift. Be sure that all safety decals have been correctly installed on the Power Unit reservoir. Verify that all authorized operators know the location of these decals and fully understand their meaning. Replace worn, faded, or damaged decals promptly.

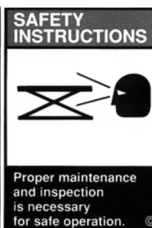


WARNING Do not attempt to raise a vehicle on the lift until the lift has been correctly installed and adjusted as described in this manual.

SAFETY INSTRUCTIONS

If attachments, accessories or configuration modifying components that are located in the load path, affect operation of the lift, affect the lift electrical listing or affect intended vehicle accommodation are used on this lift and, if they are not certified for use on this lift, then the certification of this lift shall become null and void. Contact the participant for information pertaining to certified attachments, accessories or configuration modifying components.

www.autolift.org ©2007 by ALI, Inc. ALI/WLSIA01



The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style.
Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 33116 Indianapolis, FL 32903.
They are protected by copyright. Set of labels may be obtained from ALI or its member companies.
© 1992 by ALI, Inc. ALI/WLS200a

The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style.
Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 33116 Indianapolis, FL 32903.
They are protected by copyright. Set of labels may be obtained from ALI or its member companies.
© 1992 by ALI, Inc. ALI/WLS200a

RECEIVING

The shipment should be thoroughly inspected as soon as it is received. The signed bill of lading is acknowledgement by the carrier of receipt in good condition of shipment covered by our invoice.

If any of the goods called for on this bill of lading are shorted or damaged, do not accept them until the carrier makes a notation on the freight bill of the shorted or damaged goods. Do this for your own protection.

NOTIFY **Challenger Lifts** AT ONCE if any hidden loss or damage is discovered after receipt.

IT IS DIFFICULT TO COLLECT FOR LOSS OR DAMAGE AFTER YOU HAVE GIVEN THE CARRIER A CLEAR RECEIPT.

File your claim with **Challenger Lifts** promptly. Support your claim with copies of the bill of lading, freight bill, and photographs, if available.

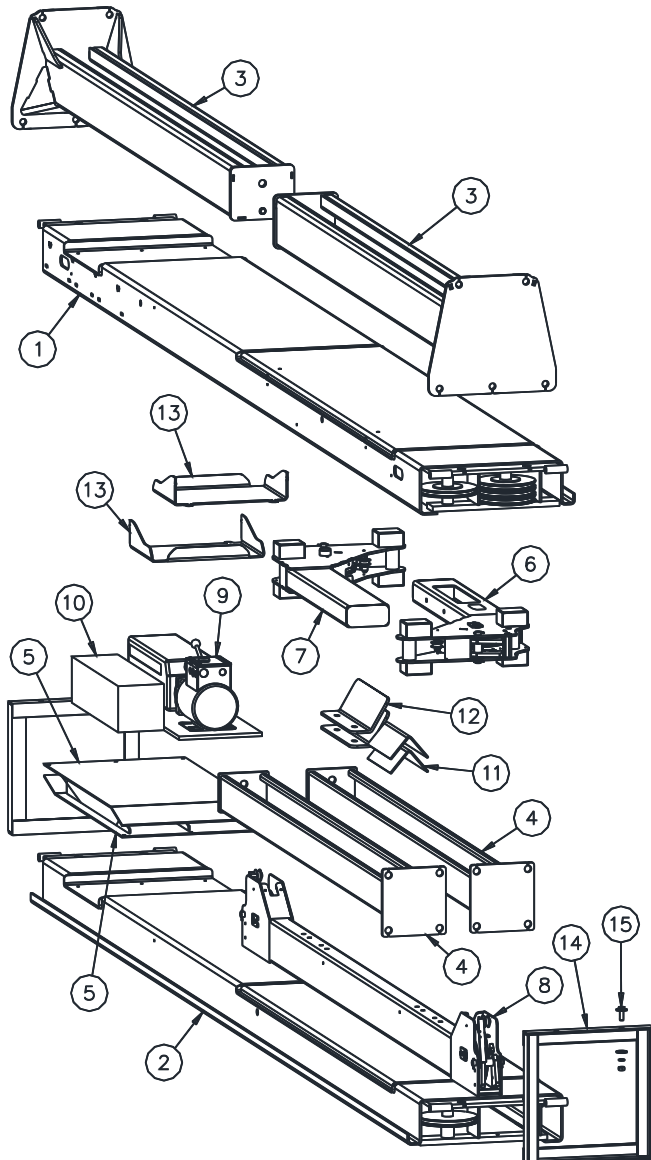


Fig 2 – Package Components

Component Packing List

| ITEM # | QTY/ LIFT | DESCRIPTION |
|--------|-----------|----------------------------------|
| 1 | 1 | POWER RUNWAY ASS'Y. |
| 2 | 1 | IDLER RUNWAY ASS'Y |
| 3 | 2 | FRONT COLUMN ASS'Y |
| 4 | 2 | REAR COLUMN ASS'Y |
| 5 | 2 | ENTRANCE RAMP WELD |
| 6 | 1 | FRONT POWER CROSSBEAM |
| 7 | 1 | FRONT IDLER CROSSBEAM |
| 8 | 1 | REAR CROSSBEAM ASS'Y |
| 9 | 1 | POWER UNIT |
| 10 | 1 | HARDWARE BOX |
| 11 | 2 | MOVABLE WHEEL CHOCK |
| 12 | 2 | FRONT WHEEL STOP |
| 13 | 2 | WORK STEP (alignment lifts only) |
| 14 | 2 | SHIPPING BRACKET WELD |
| 15 | 8 | 1/2" SHIPPING HARDWARE |

Edition of Standards Referenced

Where any ANSI standard is referenced within this manual, the most recent edition approved by the American National Standards Institute, Inc. shall apply.

INSTALLATION

IMPORTANT: Always wear safety glasses while installing lift.

Refer to ANSI/ALI ALIS (current edition)

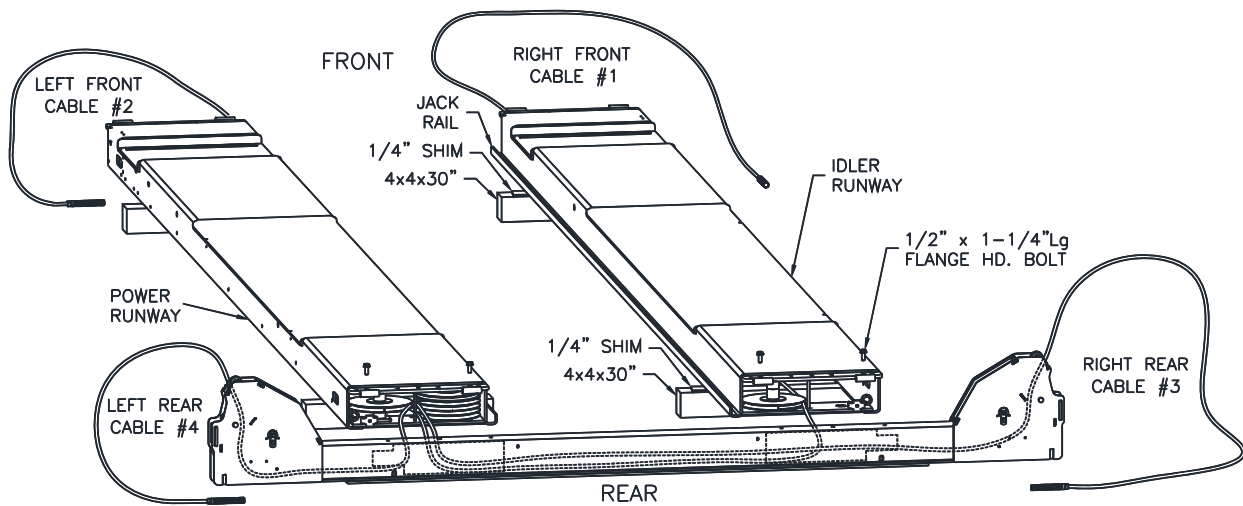
TOOLS (MINIMUM REQUIRED)

- Tape measure, 25ft
- Chalk line
- 4ft level
- 10" & 12" adjustable wrench (1-1/4 Opening)
- Standard open end wrenches 3/8", 7/16", 1/2", 9/16", 5/8", (2) 11/16", 3/4", 15/16", 1-1/8"
- Box knife
- Thread locking compound
- Thread tape sealant (for air line)
- Needle nose pliers
- Hammer drill with 3/4" diameter carbide tipped bits
- 2lb hammer
- Rolling Head Pry Bar
- Torque wrench: 150 foot pounds minimum with 1-1/8" socket
- 8 ft. Step ladder
- Blocking – (4) 4x4x30", (4) 1/4" shim
- Transit for leveling alignment lift

LAYOUT

- Layout the service bay according to the architect's plans or owners instructions (**see Fig 1**). Be certain that the proper conditions exist, see **page 2 & 3**.

- 2) Unpack lift. Remove all packaging from Power Runway (power runway has four cable sheaves at rear of the deck). Cut the white cable ties, but leave the black cable ties. Pull the three threaded cable ends out the rear and one threaded cable out the front. See **Fig 3**.
- 3) Position runways on blocking (**see Fig 3**) per layout lines established in **Step 1**. Use four 30" long 4x4's spanning the width of the runway to shim up the runway. **Cable #1, #3, & #4** should be extending out from the rear of the power runway and **Cable #2** from the front of the power runway, **Fig 3**. **Check Cables to make sure each is being retained/routed as shown in Fig 4.**
- 4) Position the rear crossbeam near the end of the runways as in **Fig 5**. Reach in through both of the access holes in the Rear Crossbeam and pull out the roll of 4mm dia. plastic airline. Each airline has already been run through the chase tube and connected to an air cylinder. Insert the air line into the first Ring of each runway end. See **Fig 4 and 5**.



– Runway Layout

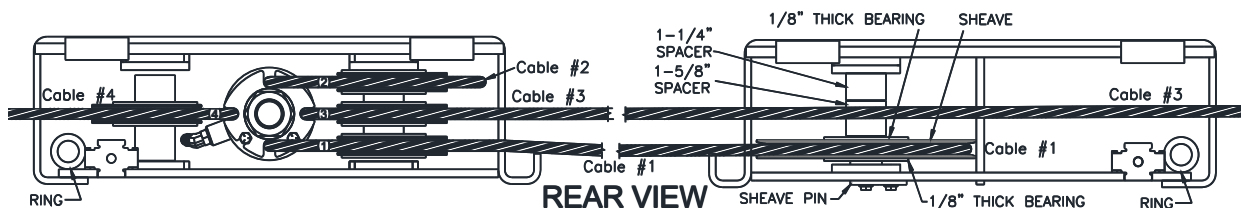


Fig 4 – Power Runway 3-Stack & Single Stack

REAR VIEW

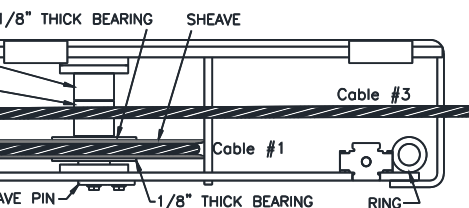


Fig 5 – Idler Runway Single-Stack

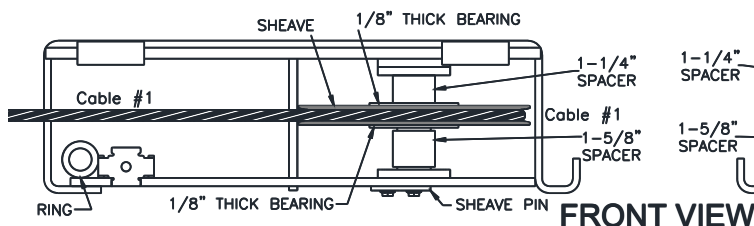


Fig 6 – Idler Runway Single Stack

FRONT VIEW

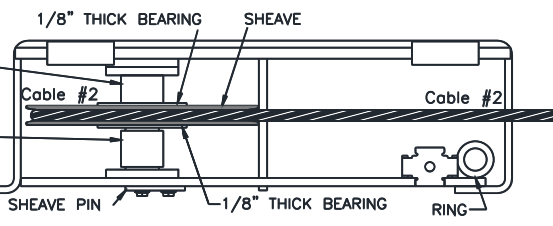


Fig 7 – Power Runway Single-Stack

- 5) Remove the two sheave guards, two sheave Pins, four bearings, four spacers, and two sheaves from the rear crossbeam noting the assembly order.
- 6) Drop the two sheave pins from the idler runway (runway without hydraulic cylinder) just enough to remove the sheaves, bearing, and spacers. The sheave pins do not need to be removed.
- 7) Starting from the rear of the lift. Identify **Cable #4** using **Fig 4**. Route **Cable #4** from the left single stack through the access hole and up out the end of the crossbeam as shown in **Fig 8**.

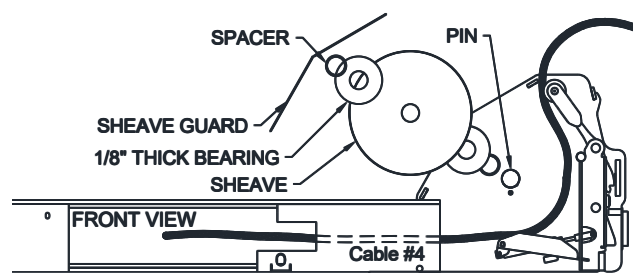


Fig 8 – Cable #4 Routing

- 8) Starting from the rear of the lift. Identify **Cable #1** using **Fig 4**. Route **Cable #1** through the

access hole of the rear crossbeam, and back out the idler side access hole as shown in Fig 9.



Fig 9 – Cable #1 Routing

- 9) Then route **Cable #1** through the rear of the Idler Runway. Reinstall the rear idler runway sheave, bearings, and spacers being sure to set the cable into the Sheave channel as shown in Fig 5 & 10.

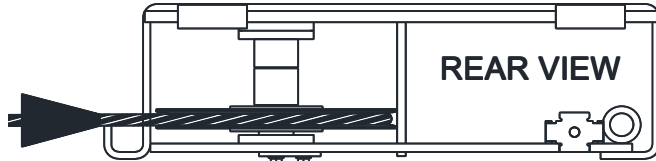


Fig 10 – Cable #1 Routing

- 10) Route **Cable #1** through the idler runway (don't forget to route it up over the cross-braces in the bottom of the runway) and out the front of the runway. Reinstall the front idler runway sheave, bearings, and spacers being sure to set the cable into the Sheave channel as shown in Fig 6 & 11.

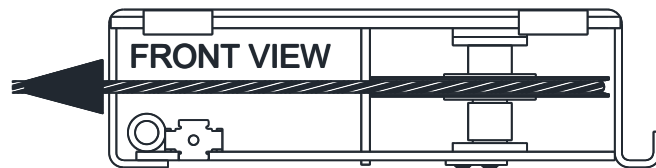


Fig 11 – Cable #1 Routing

- 11) Starting from the rear of the lift. Identify **Cable #3** using Fig 4. Route **Cable #3** through the access hole and out the end of the crossbeam. Fig 12 & 13.

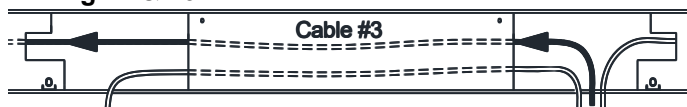


Fig 12 – Cable #3 Routing

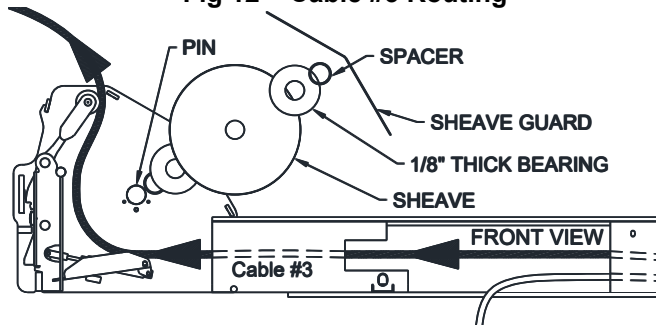


Fig 13 – Cable #3 Routing

NOTE: Look through the idler end of the crossbeam and ensure that cable #1 and #3 have not crossed. **Cable #3** should be above **Cable #1**.

- 12) Double check to make sure **Cable #3** is above **Cable #1** and not crossed. See Fig 4 and 5.
- 13) Reinstall the crossbeam sheave for **Cable #3** and **Cable #4**. Slide the sheave pin through the hole, slide one sheave spacer onto the pin followed by one 1/8" plastic bearing washer, and the sheave. Set the cable into the Sheave channel and proceed to adding a 1/8" plastic washer and sheave spacer to the pin. Install the 5/16 x 3/4 bolt to retain the sheave. Reinstall the sheave guards. See Fig 8 & 13.
- 14) Remove slack and route each 4mm air line through the first ring in the runway for both sides, see Fig 4 and 5. Bring the crossbeam up to the runways being careful to not pinch the air line, cables, and sheaves.
- 15) The runways to crossbeam positioning can be located using a tapered punch to pry on the locating holes in the runway and crossbeam **NOTE:** The locating holes are not threaded. See Fig 17.
- 16) Attach the rear crossbeam to the runways (Fig. 5) with 1/2 x 1-1/4" lg. flange head bolts. (Leave the airlines hanging out the bottom of the runway at this time. They will be fed in through the runway after the lift is raised.) **The outermost runway holes should be in line with the outermost holes in the top of the crossbeam, see Fig. 17.** Do not torque bolts yet.
- 17) Check the layout of the lift in the bay. (This is the last opportunity to reposition the lift. Take a moment to determine the position of the front column anchors to ensure proper clearance from any crack, edge, or expansion joint. Ensure proper clearance for the lift operator at the Power Unit Controls). Adjust the position of the runways so the distance from power side jack rail to idler side jack rail is the same at the front and rear and the diagonal measurements from the front tip of one rail to the rear tip of the opposite rail are within 1/4", Fig 14.

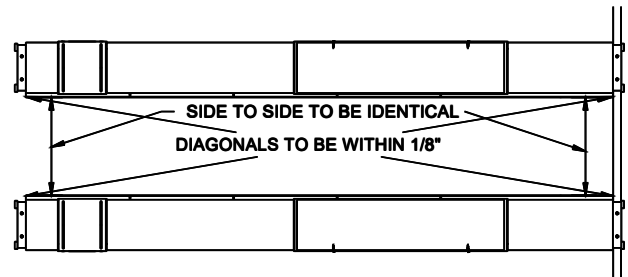


Fig 14 – Final Runway Positioning

- 18) Tighten rear crossbeam bolts to 60-80ft-lb.

REAR COLUMNS

- 19) Stand up both rear (small base) column assemblies near the rear corners of the lift. Do not use the column with a power unit bracket. Thread the locking ladder jam nut (located under the column top plate) down approximately 9.5" to allow the ladder to be lifted freely.

NOTE: The Close Front Lift will have one column that is different with a Power Unit Bracket welded to the column. This column will be positioned on the Front Drive Side.

- 20) Slide power side column onto crossbeam until the end of the crossbeam is approximately one inch from the back of the column. Position slide blocks as shown in **Fig 15** and attach with 5/16-18 x 3/4" bolts. Lift the column and place on wood 2" x 4"s.

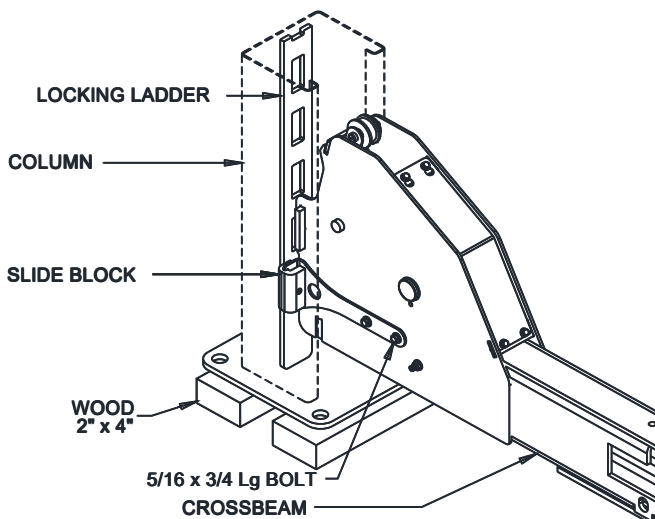


Fig 15 – Slide Block Installation

- 21) Raise the locking ladder, push the column against the slide blocks, and lower the ladder into crossbeam slot, **Fig 16**. Remove the Wood 2" x 4"s and push the column so the slide blocks are in the rear of the column as shown in **Fig 16**.

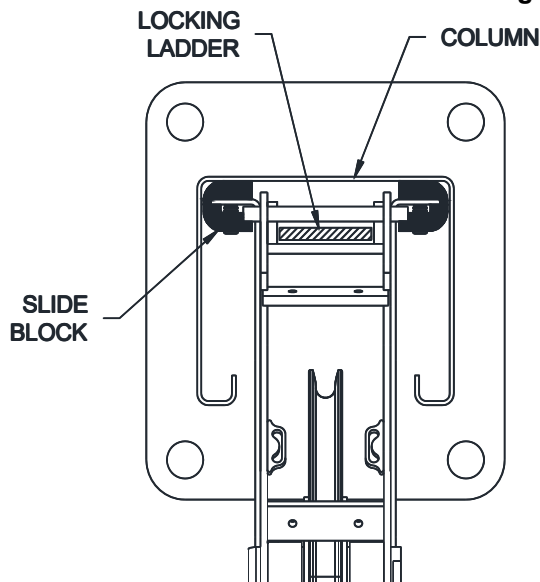


Fig 16 – Locking Ladder Orientation

- 22) Repeat for idler side rear column.

ANCHORING (rear columns only at this time)

- 23) The anchor bolts must be installed at least 8" from any crack, edge, or expansion joint.
- 24) Use a concrete hammer drill with a 3/4 inch carbide bit. Tip diameter should conform to ANSI Standard B212.15 (.775 to .787). Do not use excessively worn bits or bits which have been incorrectly sharpened. A core bit may be necessary if an obstruction is encountered. **Never substitute with shorter anchor.**
- 25) Drill the anchor holes using the base plate as a template. Drill through the floor if possible or to a depth of 5 inches minimum.
- 26) Vacuum dust from the hole for proper holding power.
- 27) Shim columns to plumb using the shims provided or steel washers. DO NOT shim more than 1/2" at any given point. Use a level no less than 24" in length to plumb columns.
- 28) Assemble washer and nut to anchor with nut just below impact section of bolt. Drive anchor into hole until nut and washer contact base. Tighten anchor bolts and recheck column for plumb. Re-shim as required.

NOTE: Level bubble should not only be between the lines, the bubble should be centered between the lines. If the provided shims do not allow sufficient centering of the bubble, it is best to lean the rear columns or closed front columns in the direction toward each other and the open front columns in the direction away from each other.

- 29) For Open Front Lifts proceed to **Step 39**.

CLOSE FRONT COLUMNS/CROSSBEAM

- 30) Position the Front crossbeam near the front of the runways with the opening facing the rear. Reach in through both of the access holes in the Front Crossbeam and pull out the roll of 4mm dia. plastic airline. Each airline has already been run through the chase tube and connected to an air cylinder. Insert the air line into the first Ring of each runway end. See **Fig 6 and 7**.
- 31) From the Front Crossbeam, remove the two sheave guards, two sheave Pins, four bearings, four spacers, and two sheaves from the rear crossbeam noting the assembly order.
- 32) Route **Cable #1** through the access hole and up and out the end of the Front Crossbeam in the same way **Cable #4** as shown in **Fig 8**
- 33) Route **Cable #2** through the Power side access hole and up and out the end of the Front Crossbeam in the same way **Cable #3** as shown in **Fig 13**.

- 34) Reinstall the crossbeam sheave for **Cable #1 and Cable #4**. Slide the sheave pin through the hole, slide one sheave spacer onto the pin followed by one 1/8" plastic bearing washer, and the sheave. Set the cable into the Sheave channel and proceed to adding a 1/8" plastic washer and sheave spacer to the pin. Install the 5/16 x 3/4 bolt to retain the sheave. Reinstall the sheave guards. See **Fig 8 & 13**.
- 35) Bring the crossbeam up to the runways pulling the slack out of the airlines and cables being sure to not pinch either.
- 36) The runways to crossbeam positioning can be located using a tapered punch to pry on the locating holes in the runway and crossbeam
NOTE: The locating holes are not threaded. See **Fig 17**.
- 37) Attach the rear crossbeam to the runways (**Fig. 5**) with 1/2 x 1-1/4" lg. flange head bolts. (Do not torque bolts yet. For Flat decks, install the wheel stops before tightening runway bolts in **Step 12**. See **Fig 17**. Alignment Wheel Stop will be installed in a later step.
- 38) The Column with the Power Unit Bracket needs to be placed in the Front Drivers Side. Repeat **Steps 19-22** for Front Crossbeam and Columns.

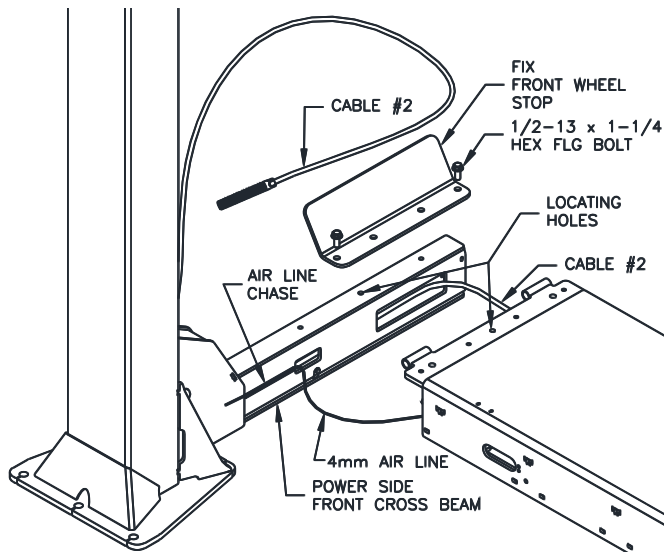


Fig 17 – Front CrossBeam Installation

- 39) Repeat **Steps 12-15**. Make sure the columns are pushed all the way against the slide blocks and the runways. Make sure **Step 10** and **Step 11** are complete before proceeding.
- 40) Repeat **Steps 23-28** to anchor the Closed Front Columns.
- 41) Skip to **Step 51**.

OPEN FRONT COLUMNS/CROSSBEAMS

- 42) Position the two front columns near the front corners of the lift on their sides; remove the pins from the top of the column and slide the top plate/ladder assembly out. Reach inside and pull out the Slide Blocks out of each crossbeam and place on 2"x4" ends. Insert the front

crossbeams as shown in **Fig 18**. Notice that the front columns are identical, but the crossbeams are not. Make sure the slide block contact areas are greased with heavy viscous grease

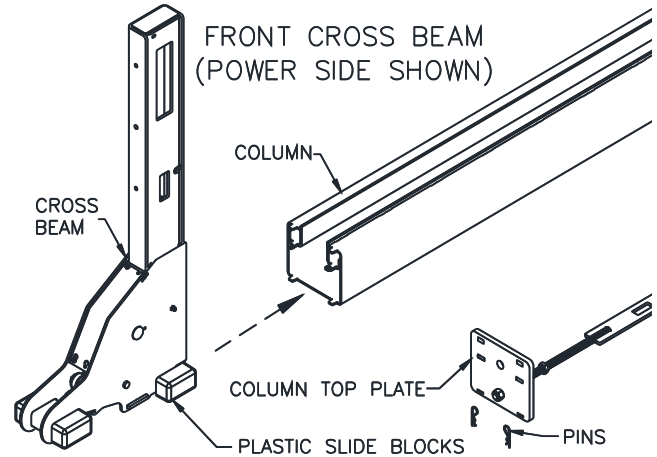


Fig 18 – Front CrossBeam Installation

- 43) Ensure that the power side front crossbeam is touching the power column base plate and stand the column up. Insert the Lock Ladder into the slot, **Fig 19**, and reinstall the Column Top Plate and pins. Move the column into position and remove the crossbeam sheave. Reach in through the small access hole in the crossbeam tube, **Fig 17**, and pull out the 6 ft. roll of 4mm dia. plastic airline connected to the air cylinder at the end of the crossbeam.
- 44) Remove the crossbeam sheave guard, sheave, Pin etc. Feed **Cable #2** into the crossbeam's large access hole and back out the top, **Fig 17**. Insert the air line into the first Ring in the runway end. See **Fig 6 and 7** for ring location.

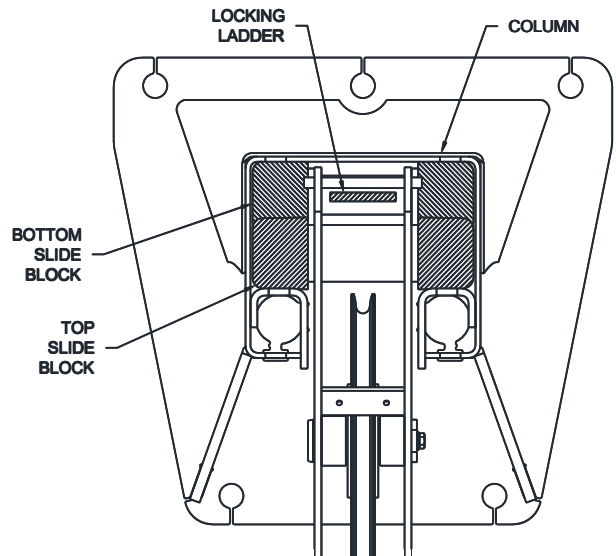


Fig 19 – Locking Ladder Orientation

- 45) Reinstall the crossbeam sheave for **Cable #2**. Slide the sheave pin through the hole, slide one sheave spacer onto the pin followed by one 1/8" plastic bearing washer, and the sheave. Set the cable into the Sheave channel and proceed to adding a 1/8" plastic washer and sheave spacer to the pin. Install the 5/16 x 3/4 bolt to retain the pin. Reinstall the sheave guards. See **Fig 8 & 13**.
- 46) Attach the crossbeam to the runway with 1/2 x 1-1/4 lg. flange head bolts being careful not to pinch the air line. (Leave the airline hanging out the bottom of the runway at this time. It will be fed in through the runway after the lift is raised.) Center the crossbeam bolts with slots in runway while squaring the cross tube with the runway (gap between the front of the runway and cross tube should be the same on both sides of the runway). Torque runway bolts to 60-80 foot pounds.
- 47) Repeat for idler side crossbeam.
- 48) Recheck the four runway measurements from **Fig 14**.
- 49) After ensuring column is touching lower Slide Block and not the upper Slide Blocks, drill and install anchors per **Steps 17-22**.
- 50) After properly shimming column plumb, loosen anchors and add one shim to both of the two inside anchors to lean the column outward slightly. Make sure lower Slide Blocks are in contact with column and torque all anchor bolts to 150 foot-pounds, **Fig 14**.

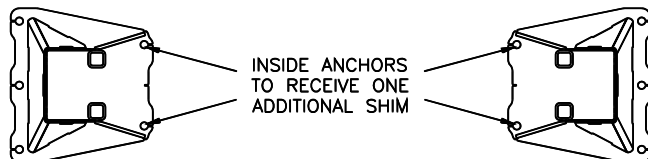


Fig 20 – Front Column Shimming

OPEN FRONT POWER UNIT BRACKET INSTALL

- 51) **POWER COLUMN ONLY** – To install the Power unit, slide the Power Unit Bracket in place. On the open side of the column screw in the 5/16" x 1" flange head bolt, see **Fig 21a**. Using the nuts at the top of the column to lower the lock ladder until it contacts the top of the column baseplate. Now look inside the column, the 2 upper holes for the power unit should be visible through the lock ladder window. Insert two 5/16" x 1" flange head bolts from the inside out and screw on the two 5/16 nuts. **Note:** The bracket may need to be pivoted to align the bracket holes with the column holes.

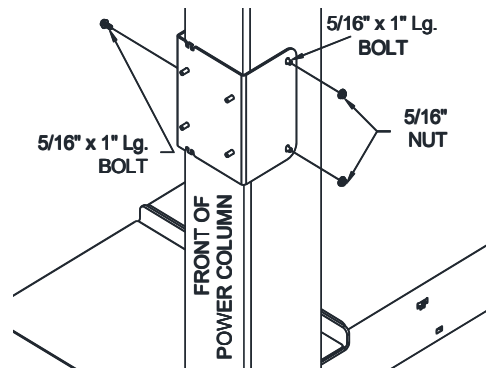


Fig 21a – Power Unit Bracket

CLOSED/OPEN FRONT POWER UNIT INSTALL

- 52) Note the Power Unit bracket is welded on the Closed Front Power Column. Place the power unit on the studs and start to thread each nut on just to hold the power unit on the studs. Slip the FLR mounting bracket behind the power unit and tighten all 4 nuts down. See **Fig 21b**.

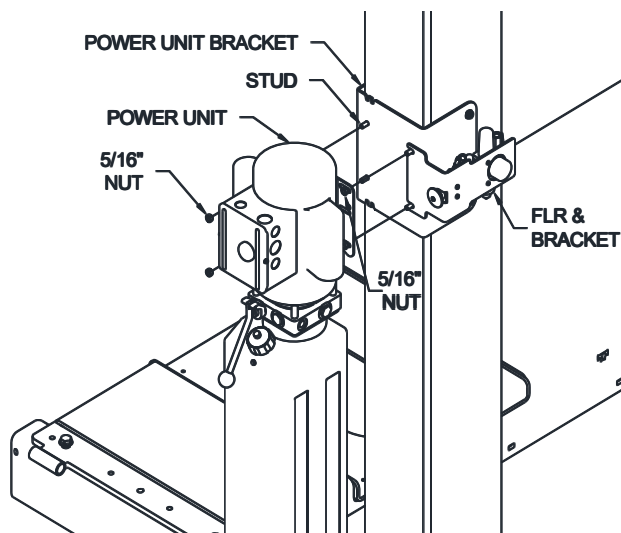


Fig 21b – Power Unit Bracket & Power Unit Mounting

- 53) Install the four cable ends with one flat washer, one load nut, and one jam nut. Thread the nut all the way down the threaded stud to maximize stroke (rise height).
- 54) Install O-Ring end of 90 degree hydraulic elbow (9/16-18 O-Ring x 37° Male JIC) to power unit output port. The hydraulic hose is pre-installed to the hydraulic cylinder and secured inside the runway. Pull loose end out through the opening and attach to the elbow fitting.

Do Not Use Teflon Tape or Pipe Dope on fittings.

- 55) Have a certified electrician connect the power unit to a suitable electrical power source as shown in **Fig 22**.

Wiring Diagram

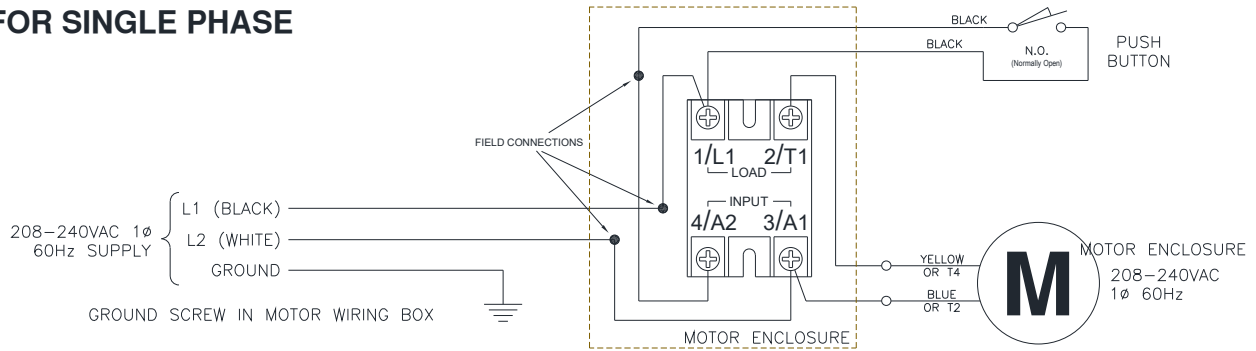
* EACH LIFT SHOULD HAVE A DEDICATED CIRCUIT WITH A DOUBLE POLE (THREE POLE FOR 3 PHASE) BREAKER OR TIME DELAY FUSE SIZED ACCORDING TO THE FOLLOWING CHART.

* WIRING MUST COMPLY WITH ALL LOCAL ELECTRICAL CODES.

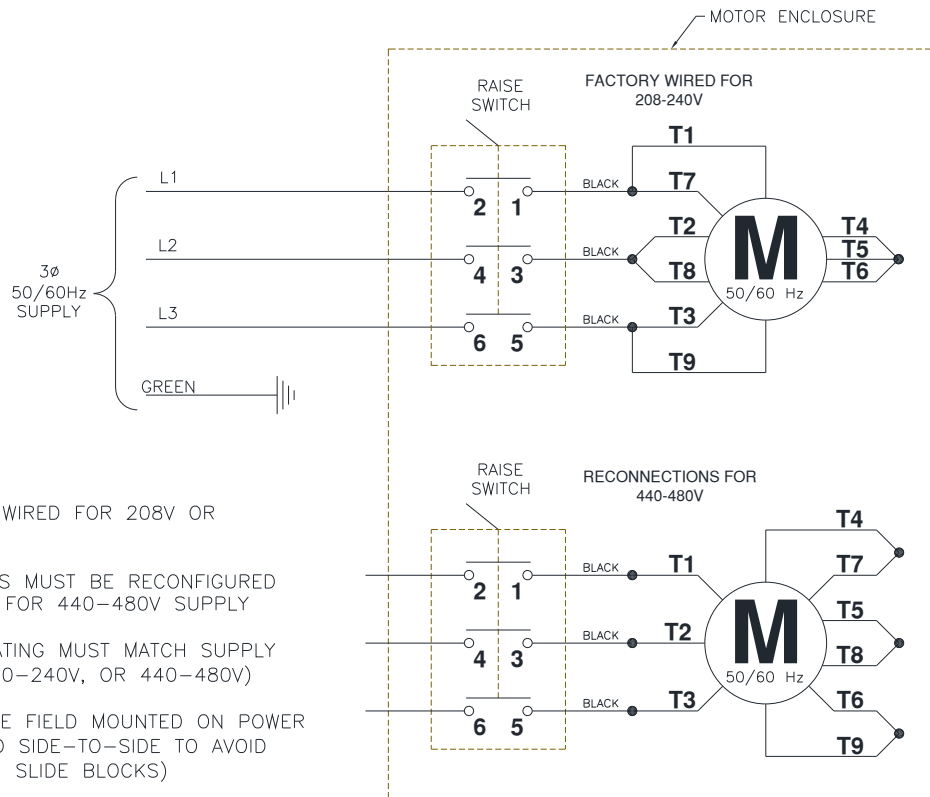
* ELECTRICAL CODE REQUIRES A SERVICE DISCONNECT FOR THIS DEVICE. WE SUGGEST THIS SERVICE DISCONNECT BE LOCATED NEAR THE POINT OF OPERATION.

| | 1 ϕ | 3 ϕ | 3 ϕ | 3 ϕ |
|-----|----------|----------|----------|----------|
| | 208-240V | 208V | 220-240V | 440-480V |
| 3Hp | 30amp | 15amp | 15amp | 5amp |

FOR SINGLE PHASE



FOR THREE PHASE



NOTES:

- 1) MOTOR IS FACTORY WIRED FOR 208V OR 220-240V SUPPLY
- 2) MOTOR CONNECTIONS MUST BE RECONFIGURED PER THIS DIAGRAM FOR 440-480V SUPPLY
- 3) CONTACTOR COIL RATING MUST MATCH SUPPLY VOLTAGE (208V, 220-240V, OR 440-480V)
- 4) CONTACTOR MUST BE FIELD MOUNTED ON POWER COLUMN (CENTERED SIDE-TO-SIDE TO AVOID INTERFERENCE WITH SLIDE BLOCKS)
- 5) MOTOR ROTATION IS COUNTER CLOCKWISE FROM TOP OF MOTOR

Fig 22 – Electrical Wiring Diagram

56) **BE CERTAIN ALL FITTINGS AND CONNECTIONS ARE TIGHT. IT IS THE INSTALLERS RESPONSIBILITY TO INSURE SYSTEM IS LEAK-FREE.** Fill the Power Unit with three gallons of clean 10wt anti-foam anti-rust hydraulic oil or Dexron III ATF. **Do Not Use OILS WITH DETERGENTS.**

57) Energize the power unit and raise the lift approximately 1 ft off the ground and look underneath the power runway to verify that the cable lugs are resting firmly against the cylinder pull bar.

58) Install 4mm air line from air valve assembly thru opening in runway to Tee. See **Fig 23**

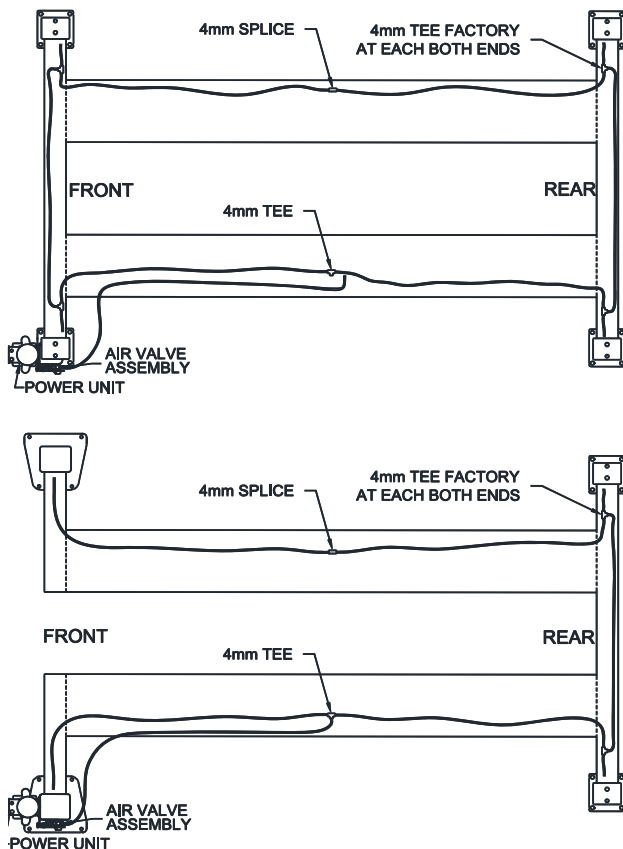


Fig 23 – Lock Release Air Line Routing

59) Route power side front and rear crossbeam air lines through power runway rings to Tee. Route idler side front and rear crossbeam air lines through idler runway rings and connect together with 4mm airline space provided.

60) Using a screwdriver remove the filler cap on the top of the FRL. Fill FRL to the max line. Re-install the oil filler cap. Adjust the drips to 2-3 per minute.

61) Using a suitable air source, connect the air source to the Female 1/4" NPT ball valve fitting.

62) Pull up on the regulator knob and adjust the pressure to 100psi (allowable range 90-120 psi).

63) Press the lock release air valve button and ensure that all air cylinders are working properly.

64) If lift is an alignment lift, use the hinge pin and cotter pins to install the wheel stop. See **Fig 27**

65) Raise and lower lift several times to bleed hydraulic cylinder. Hydraulic cylinder is self-bleeding. Lower lift and check fluid level in reservoir. Add fluid as needed.

66) Pressure test hydraulic system. Energize power unit, raise lift to full rise and continue to run motor for additional 10 seconds. (NOTE: pressure relief will make a high pitch squeal sound for these 10 seconds.) Check hydraulic system for leaks

67) Place the two provided wheel chocks on top of the drivers side runway one wheel chocks on each runway.

LIFT LEVELING

68) Adjust all four column lock ladders so the bottom of the ladder is floating just above the column base plate. Lower the lift into a lock position.

69) Using a 4ft level placed at the following four different locations, find the highest corner of the lift, **Fig 24**:

- Spanning the two runways at the front turn plate cutouts
- Spanning the two runways at the middle of the rear slip plates
- Placed in-line with the power side runway just in front of the rear slip plate
- Placed in-line with the idler side runway just in front of the rear slip plate

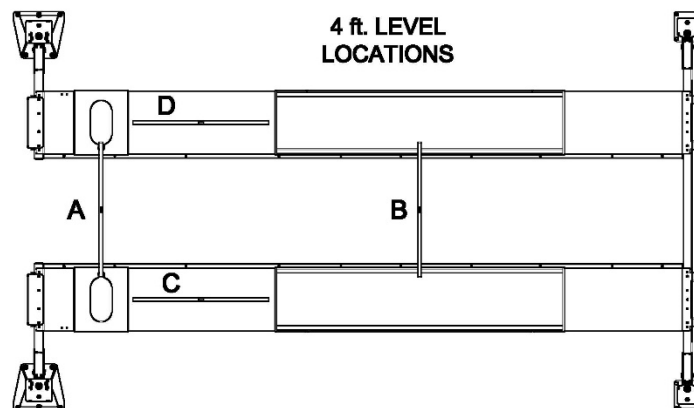


Fig 24 – 4 ft. Level Locations

70) Adjust the other three column ladders until the runways are level front-to-rear and side-to-side based on the four level locations shown above. Note: the ladder at the highest corner determined in **Step 52** should not be adjusted.

71) To synchronize all four locks, start with each cable nut threaded all the way down on its stud, as noted in the cable assembly instructions, to maximize lift stroke (rise height). Press the power unit raise button and listen to determine the lowest corner (last latch to engage). Loosen the other three cable nuts until the latches are synchronized with the lowest corner.

72) Raise lift to the Max Height and place a piece of tape on the power column lined up with the

bottom of the crossbeam. Lower the lift into the nearest lock position and measure from the bottom of the crossbeam to the tape, **Fig 25**.

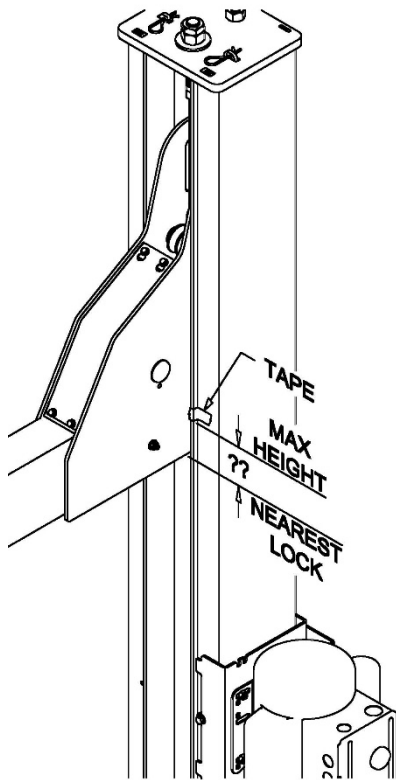


Fig 25 – Lock Clearance Measurement

- 73) If this distance is less than 1", adjust all four column ladders up by 12 revolutions (approx. 1-1/4") to ensure proper latch engagement in the highest position.

FRONT TURNPLATE LEVELING

(Alignment Only)

- 74) Place the level in a front turn plate cutout, **Fig 26**. Place three 1/16" thick column shims (3/16" total thickness) under the level at the outside edge of the cutout and adjust the runway pitch leveling screws until the bubble is centered between the lines. Make sure all leveling screws are touching the crossbeam. Torque runway bolts to 60-80 foot pounds and recheck the level. Repeat for other side. (The rear of the runway usually does not require pitch adjustment as this is a closed rear crossbeam.)

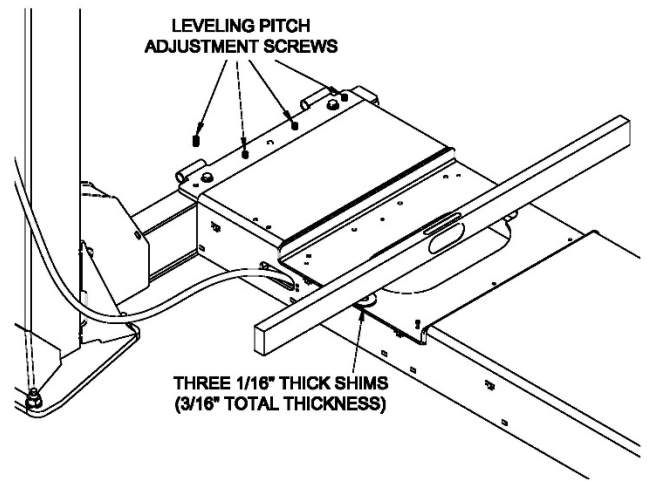


Fig 26 – Runway Pitch Adjustment

LEVELING WITH A TRANSIT

(Alignment Only)

- 75) Use a transit to fine-tune the lift leveling while the lift is resting in its locks. Place the target on the center of the turn plate and the center of the rear slip plate. Adjust the column ladders as needed so all 4 target locations are on the same level plane.
- 76) Re-adjust cables until all four locks are synchronized when lift is raised.

FINALIZING LIFT LEVELING

- 77) Tighten lock ladder jam nut against bottom side of each column top plate.
- 78) Tighten cable jam nuts against adjustment nuts.
- 79) Referring to **Fig 27**, locate the filler plate, guide bars, and #10-24 hardware in the accessory box and attach them to the turnplate pockets as shown.
- 80) Use the hinge pin and cotter pins to install the alignment wheel stop. See **Fig 27**.
- 81) Attach a Work Step to each runway. (The Work Step may be located in three different positions on each runway.) See **Fig 27**.
- 82) Install Handle to Drop-In Spacer and position behind rear Guide Bar. The Drop-In Spacer is provided for "Roll Back" alignment.

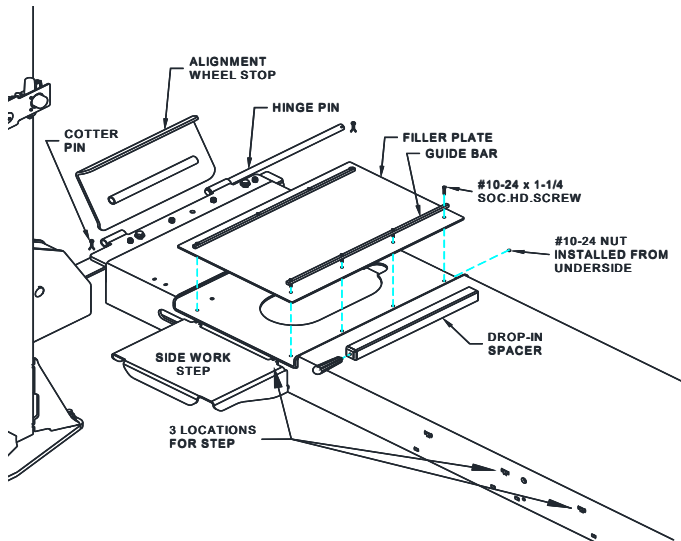


Fig 27 – Alignment Wheel Stop & Turn Plate Installation

COLUMN DECAL PLACEMENT

- 83) Apply decal 4" from top of columns, **Fig 22**. Center a decal on the front driver's side column and rear passenger side column.

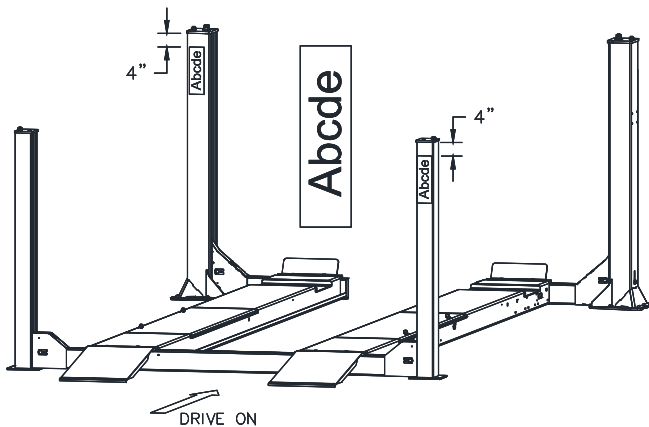


Fig 28 – Decal Placement

- 84) Place the Warning Decal, Notice Decal, and Caution Decal as shown in **Fig 29**.

POWER COLUMN LABEL LOCATION

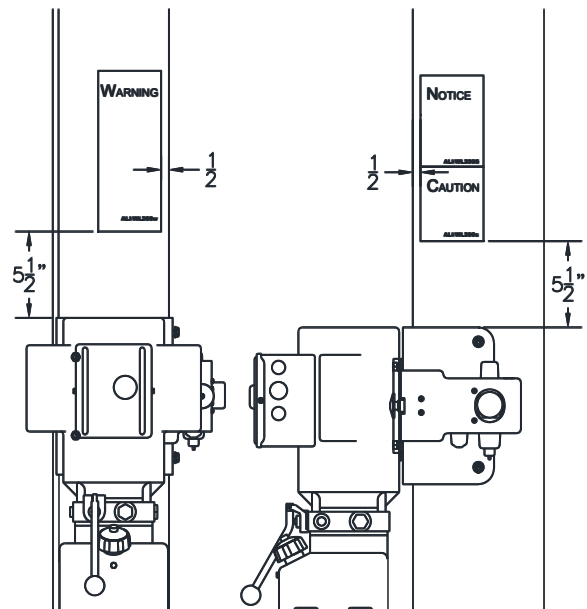


Fig 29 – Warning & Caution Decal

RAMP INSTALLATION

- 85) Install the four 1/2-13 x 4" bolts through front and rear crossbeam and into the runways. Torque to 60-80 foot pounds. See **Fig 30**.
86) Assemble each Ramp using the hinge pins and cotter pins. See **Fig 30**.

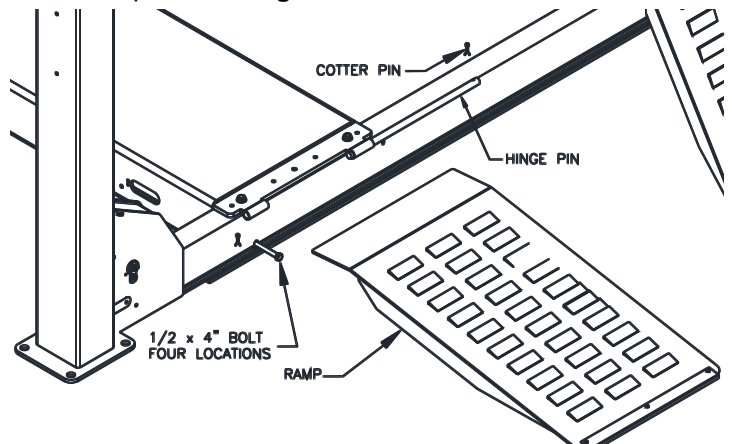


Fig 30 – Crossbeam Bolts and Ramp Install

FINAL CHECKOUT PROCEDURE

- 87) Demonstrate the operation of the lift to the owner/operator/employer using a typical vehicle and review correct and safe lifting procedures using the Lifting It Right booklet as a guide.
88) Return all provided literature (including this manual) to the literature pack envelope and deliver the envelope to the owner/operator/employer.
89) Complete the online warranty registration (refer to the included warranty statement).

OPERATION PROCEDURE

SAFETY NOTICES AND DECALS

This product is furnished with graphic safety warning labels, which are reproduced on page 3 of these instructions. Do not remove or deface these warning labels, or allow them to be removed or defaced. For your safety, and the safety of others, read and understand all of the safety notices and decals included.

OWNER/EMPLOYER RESPONSIBILITIES

This lift has been designed and constructed according to ANSI/ALI ALCTV standard. The standard applies to lift manufactures, as well as to owners and employers. The owner/employer's responsibilities as prescribed by ANSI/ALI ALOIM, are summarized below. For exact wording refer to the actual standard provided with this manual in the literature pack.

The Owner/Employer shall insure 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/SM, *ALI Lifting it Right safety manual*; ALI/ST, *ALI Safety Tips card*; ANSI/ALI ALOIM, *American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance*; ALI/WL Series, *ALI Uniform Warning Label Decals/Placards*; and in case of frame engaging lifts, ALI/LP-GUIDE, *Vehicle Lifting Points/Quick Reference Guide for Frame Engaging Lifts*.

The Owner/Employer shall establish procedures to periodically inspect the lift in accordance with the lift manufacturer's instructions or ANSI/ALI ALOIM, *American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance*; and the employer shall insure that the lift inspectors are qualified and that they are adequately trained in the inspection of the lift.

The Owner/Employer shall establish procedures to periodically maintain the lift in accordance with the lift manufacturer's instructions or ANSI/ALIOIM, *American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance*; and the employer shall ensure that the lift maintenance personnel are qualified and that they are adequately trained in the maintenance of the lift.

The Owner/Employer shall maintain the periodic inspection and maintenance records recommended by the manufacturer or ANSI/ALI ALOIM, *American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance*.

The Owner/Employer 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, *American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance*; and in the case of frame engaging lift, 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.

IMPORTANT SAFETY INSTRUCTIONS

When using your garage equipment, basic safety precautions should always be followed, including the following:

1. Read all instructions.
2. Care must be taken as burns can occur from touching hot parts.
3. To reduce the risk of fire, do not operate equipment in the vicinity of open containers of flammable liquids (gasoline).
4. Keep hair, loose clothing, fingers, and all parts of body away from moving parts.
5. Use only as described in this manual. Use only manufacturer's recommended attachments.
6. ALWAYS WEAR SAFETY GLASSES. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses.

SAVE THESE INSTRUCTIONS

OPERATING INSTRUCTIONS

For lifts equipped with vehicle alignment capability, ensure that each front and rear slip plate is locked in position.

DO NOT ATTEMPT TO MOVE THE VEHICLE, OR RAISE OR LOWER THE LIFT, WHILE THE SLIP PLATES ARE UNLOCKED.

LIFTING A VEHICLE

Drive vehicle onto lift. Set parking brake and use wheel chocks that are provided with lift. Wheel chocks should be used at the front and back of the same wheel.

Press and hold the power unit raise button until the vehicle has reached the desired working height. Push the power unit lowering valve handle to lower the lift until its nearest set of locks are engaged. The vehicle should remain level when all locks are engaged. If one side engages and the other continues to descend, stop lowering the vehicle, raise it several inches, and try again to engage all four locks.

IMPORTANT, Before walking under the lift ensure that all locks are properly engaged.

It is not safe to work under the vehicle unless all locks are engaged, and the vehicle is level.

LOWERING A VEHICLE

Ensure that the area under the vehicle is clear of personnel and tools.

Raise the vehicle until locks are free to disengage.

Disengage the locks by depressing and holding the lock release palm button.

Lower the vehicle by depressing the lowering valve handle while continuing to depress the lock release palm button. Watch lift to insure that the lift is lowering evenly. If not, raise lift and check all locks to insure they are disengaged before trying to lower lift again.

Continue to lower the vehicle until the crossbeams stop against the base plate. It is important to fully lower the lift to release hydraulic pressure on the system.

LOSS OF POWER

If for any reason, the lift will not raise off the locks or the locks will not retract, consult factory authorized personnel.

DO NOT OVERRIDE ANY SAFETY FEATURE IN AN ATTEMPT TO LOWER THE LIFT.

IMPORTANT!

Failure to keep lift free of corrosive agents and solvents will lead to reduced service life, which could result in property damage and/or personal injury. If any problems are encountered, contact your local service representative.

MAINTENANCE

To avoid personal injury, permit only qualified personnel to perform maintenance on this equipment. Maintenance personnel should follow lockout/tagout instructions per ANSI Z244.1.

The following maintenance points are suggested as the basis of a routine maintenance program. The actual maintenance program should be tailored to the installation. See ANSI/ALI ALOIM booklet for periodic inspection checklist and maintenance log sheet.

- If lift stops short of full rise or chatters, check fluid level.
- Replace all Safety, Warning or Caution Labels if missing or damaged. (**See *Installation instructions* page 3.**)

Daily

- Keep lift components clean. **To keep alignment lifts with rear slip plates working properly use compressed air to blow out any debris from the bearing area.**
- Check for loose or broken parts.
- Check hydraulic system for fluid leaks.
- Check lock release activation.

Weekly

- Check cables and sheaves for wear or damage. Replace as required with genuine Challenger Lifts parts.
- Inspect lock mechanism for proper function.

Monthly

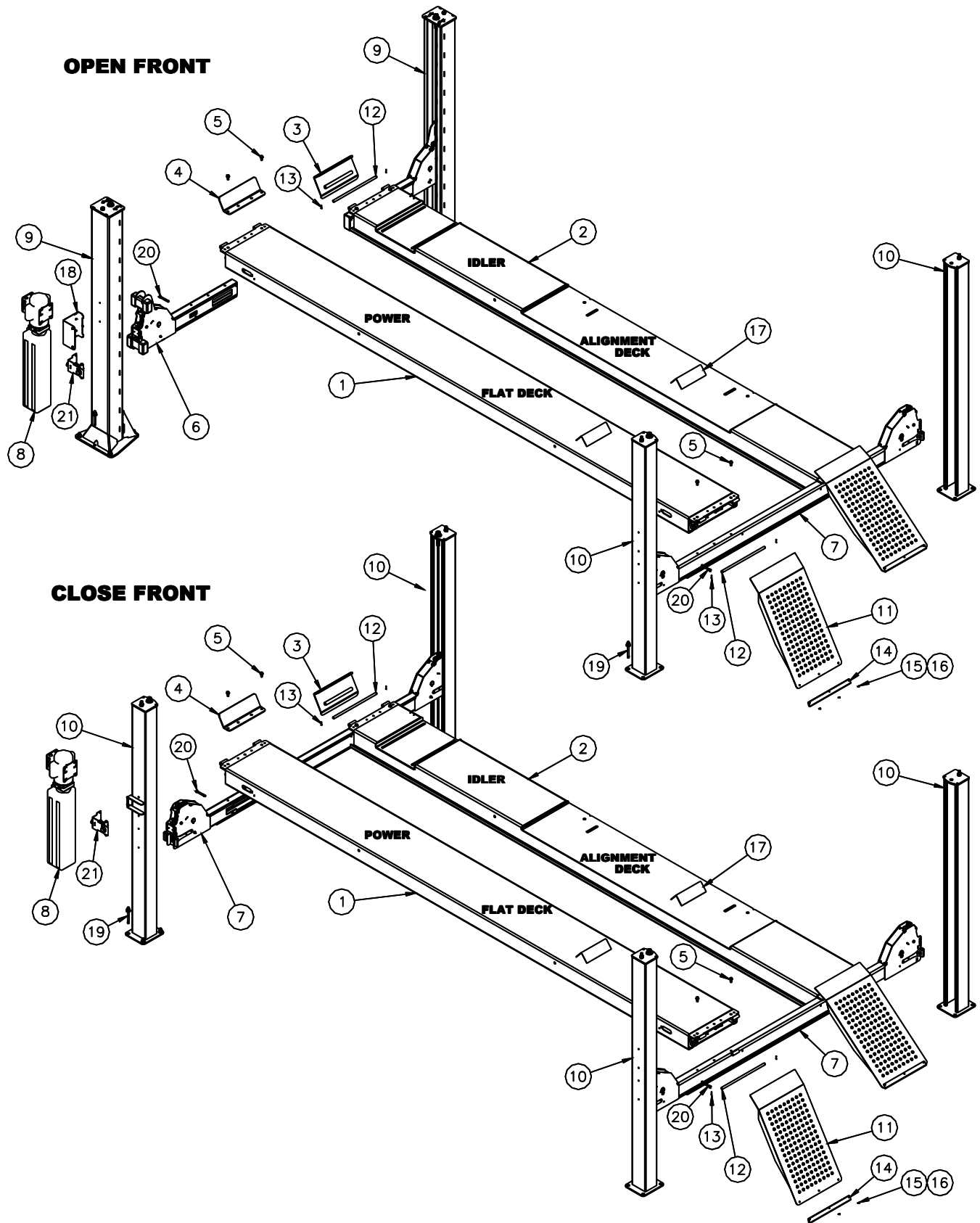
- Lubricate Open Front slide tracks with heavy viscous grease. (Grease all four slide block contact areas on Open Front Columns.)
- Torque concrete anchor bolts to 80 ft-lbs.
- Clean and inspect cables and sheaves for wear or damage. Lubricate cables and sheaves with light oil.
- Visually inspect concrete floor for cracks and/or spalls within 12" of base plate

IMPORTANT! Failure to keep lift free of corrosive agents and solvents will lead to reduced service life, which could result in property damage and/or personal injury.

If any problems are encountered, contact your local service representative.

Parts Breakdown

Fig A. General Layout



Model 4115
Installation, Operation and Maintenance

PARTS BREAKDOWN (continued)

Table A. General Layout

| ITEM # | PART # | QTY/LIFT | DESCRIPTION |
|--------|-----------|----------|--------------------------------------|
| 1 | 40791W | 1 | FLAT DECK POWER RUNWAY WELD (4115XF) |
| | 40781W | | FLAT DECK POWER RUNWAY WELD (4115EF) |
| | 40796W | | ALIGNMENT POWER RUNWAY WELD (4115XA) |
| | 40786W | | ALIGNMENT POWER RUNWAY WELD (4115EA) |
| 2 | 40793W | 1 | FLAT DECK IDLER RUNWAY WELD (4115XF) |
| | 40783W | | FLAT DECK IDLER RUNWAY WELD (4115EF) |
| | 40798W | | ALIGNMENT IDLER RUNWAY WELD (4115XA) |
| | 40788W | | ALIGNMENT IDLER RUNWAY WELD (4115EA) |
| 3 | 40801 | 2 | FOLD-DOWN FRONT WHEEL STOP |
| 4 | 40705 | 2 | WHEEL STOP |
| 5 | 40083 | 8 | 1/2-13 x 1-1/4 HEX.FLG.HD.CAP SCREW |
| 6 | 40719 - P | 1 | FRONT POWER CROSSBEAM ASSEMBLY |
| | 40719 - I | 1 | FRONT IDLER CROSSBEAM ASSEMBLY |
| 7 | 40760 | 1 | REAR CROSSBEAM ASSEMBLY |
| 8 | AB-81795 | 1 | POWER UNIT 1 PHASE, 60Hz, 208-230VAC |
| | AD-81795 | | POWER UNIT 3 PHASE, 230/460VAC |
| 9 | 40710 | 2 | FRONT COLUMN ASSEMBLY |
| 10 | 40755 - P | 1 | POWER CLOSE COLUMN ASSEMBLY |
| 10 | 40755 - I | 3 | IDLER CLOSE COLUMN ASSEMBLY |
| 11 | 40874 | 2 | ENTRANCE RAMP, 26" |
| 12 | 40165 | 2 | RAMP HINGE PIN |
| 13 | 40126 | 8 | 1/8 x 1 1/2" Lg. COTTER PIN |
| 14 | 40168 | 2 | RAMP SLIDE |
| 15 | 31062 | 6 | 1/4-20NC x 3/4" Lg. PAN HEAD SCREW |
| 16 | 40085 | 6 | 1/4-20NC HEX FLANGE NUT |
| 17 | 40265 | 2 | WHEEL CHOCK |
| 18 | 40872 | 1 | POWER UNIT BRACKET ASSEMBLY |
| 19 | 31058 | 18 | ANCHOR BOLT, 3/4 x 5 1/2" |
| 20 | 40809 | 4 | 1/2 -13 x 4" HEX.HD.CAP SCREW |
| 21 | 40878 | 1 | AIR CONTROL BRACKET ASSEMBLY |
| 22 | 480589 | 2 | SHIM KIT (NOT SHOWN) |

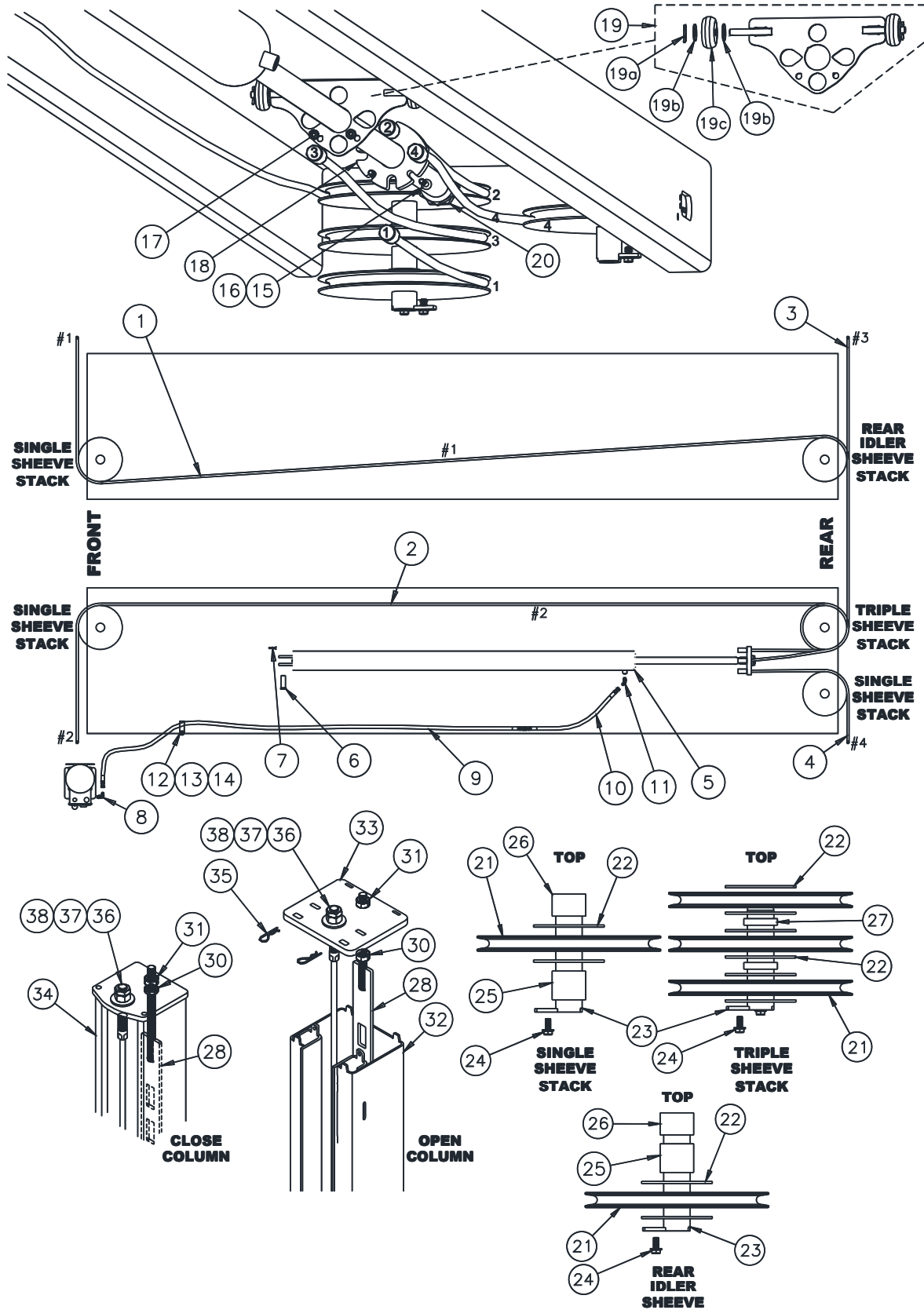
Replace all worn, damaged, or broken parts with parts approved by **Challenger Lifts Inc.** or with parts meeting **Challenger Lifts Inc.** specifications.

Contact your local Challenger Lifts Parts Distributor for pricing and availability.

(Call Challenger Lifts Inc. (502) 625-0700 for the Parts Distributor in your area)

PARTS BREAKDOWN (continued)

Fig B. Cables, Sheave Assembly, & Column Assembly



Model 4115
Installation, Operation and Maintenance

PARTS BREAKDOWN (continued)

Table B. Cables, Sheeve Assembly, & Column Assembly

| ITEM # | PART # | QTY/LIFT | DESCRIPTION |
|--------|-------------|----------|---|
| 1 | 40703 - X1 | 1 | RIGHT FRONT CABLE #1 (4115X) (36' 7") |
| | 40703 - E1 | | RIGHT FRONT CABLE #1 (4115E) (34' 3-1/2") |
| 2 | 40703 - X2 | 1 | LEFT FRONT CABLE #2 (4115X) (32' 2") |
| | 40703 - E2 | | LEFT FRONT CABLE #2 (4115E) (29' 10-1/2") |
| 3 | 40703 - 3 | 1 | RIGHT REAR CABLE #3 (17') |
| 4 | 40703 - 4 | 1 | LEFT REAR CABLE #4 (11' 8-1/2") |
| 5 | 40611 | 1 | HYDRAULIC CYLINDER |
| 6 | 40082 | 1 | CLEVIS PIN |
| 7 | 40126 | 1 | 1/8 x 1 1/2" Lg. COTTER PIN |
| 8 | 16167 | 1 | 90 DEGREE ADAPTER ELBOW – MALE #6 O-RING x MALE #6 J.I.C. |
| 9 | 40349 | 1 | HYDRAULIC HOSE – FEMALE #6 J.I.C. BOTH ENDS |
| 10 | 39101 - 024 | 1 | HYDRAULIC HOSE EXTENSION – 2 ft (Model 4115E) |
| | 39101 - 048 | | HYDRAULIC HOSE EXTENSION – 4 ft (Model 4115X) |
| 11 | A2128 | 1 | 45 deg ELBOW - #6 O-RING x #6 JIC 37 deg |
| 12 | A1122 - 12 | 1 | HOSE CLAMP |
| 13 | A1153 | 1 | 3/8-16NC x 3/4 HEX. FLG. HD. CAP SCREW |
| 14 | A1154 | 1 | 3/8-16NC HEX FLANGE NUT |
| 15 | 44207 | 2 | 5/16-18NC x 2 HEX HD CAP SCREW |
| 16 | 6 - 0295 | 2 | 5/16 SAE FLAT WASHER |
| 17 | 4100237 | 2 | 5/16-18NC FLANGE HD LOCKING HEX NUT |
| 18 | 40770 | 1 | CABLE PULL BAR |
| 19 | 40995 | 1 | CABLE RETAINER ASSEMBLY |
| 19a | 40999 | 2 | ROLLER |
| 19b | 31036 | 4 | 3/8 FLAT WASHER |
| 19c | CL6 - 0267 | 2 | COTTER PIN 1/8 X 1 |
| 20 | 44015 | 2 | 1 3/8-12NF JAM NUT |
| 21 | B40650 | 11 | SHEAVES |
| 22 | 40053 | 22 | 1/8" THICK BEARING |
| 23 | B40055 | 4 | SHEAVE PIN WELD (RUNWAY) |
| 24 | 40807 | 10 | 5/16 – 18NC x 3/4 HEX. SER. FLG. HD. CAP SCREW |
| 25 | 40774 - B | 4 | SHEAVE SPACER, BOTTOM 1-5/8 |
| 26 | 40774 - T | 4 | SHEAVE SPACER, TOP 1-1/4 |
| 27 | 40774 - S | 2 | SHEAVE SPACER, 3-STACK 3/8 |
| 28 | 40750 | 2 | LADDER WELD |
| 30 | CL40130 | 4 | 3/4-10NC HEX JAM NUT |
| 31 | 40129 | 4 | 3/4-10NC HEX NUT |
| 32 | 40712 | 2 O | OPEN FRONT COLUMN WELD |
| 33 | 40711 | 2 O | OPEN FRONT COLUMN TOP PLATE |
| 34 | 40756 | 2 X/ 4 O | IDLER COLUMN WELD |
| 35 | 40126 | 4 O | 1/8 x 1-1/2" Lg. COTTER PIN |
| 36 | 40147 | 4 | 7/8-9NC HEX NUT |
| 37 | 40148 | 4 | 7/8-9NC HEX JAM NUT |
| 38 | CL40149 | 4 | 7/8 FLAT WASHER |

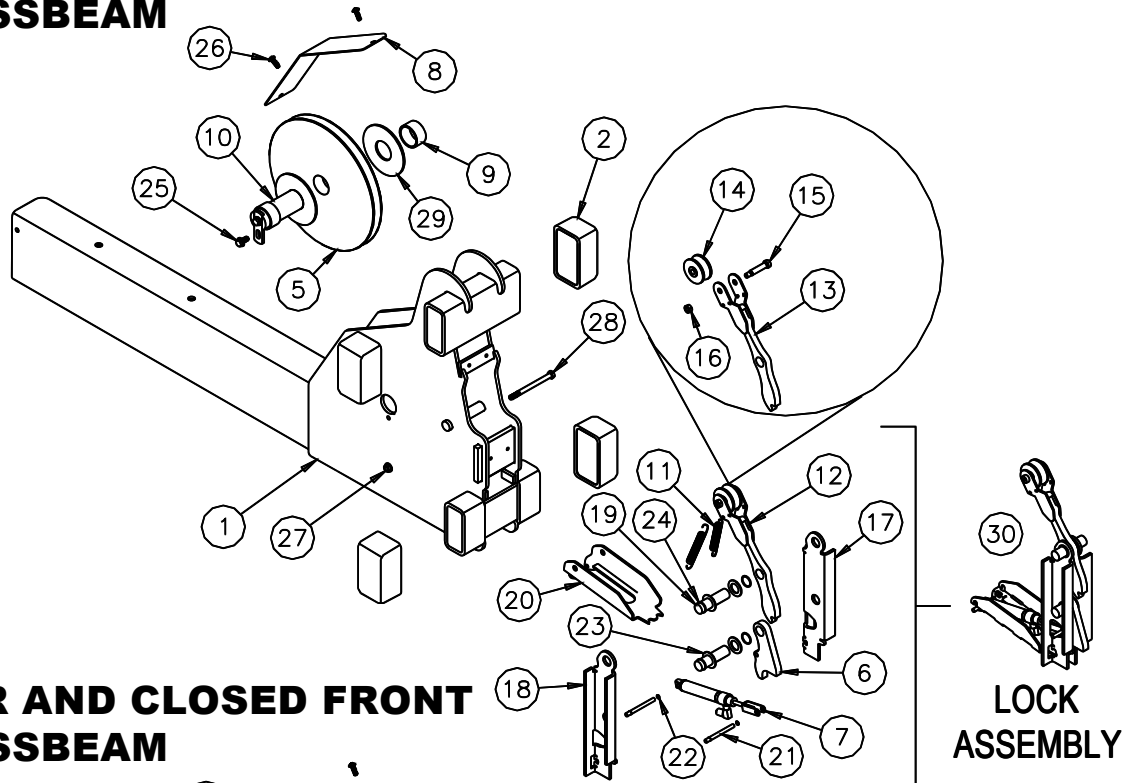
Replace all worn, damaged, or broken parts with parts approved by **Challenger Lifts Inc.** or with parts meeting **Challenger Lifts Inc.** specifications.

Contact your local Challenger Lifts Parts Distributor for pricing and availability.
(Call Challenger Lifts Inc. (502) 625-0700 for the Parts Distributor in your area)

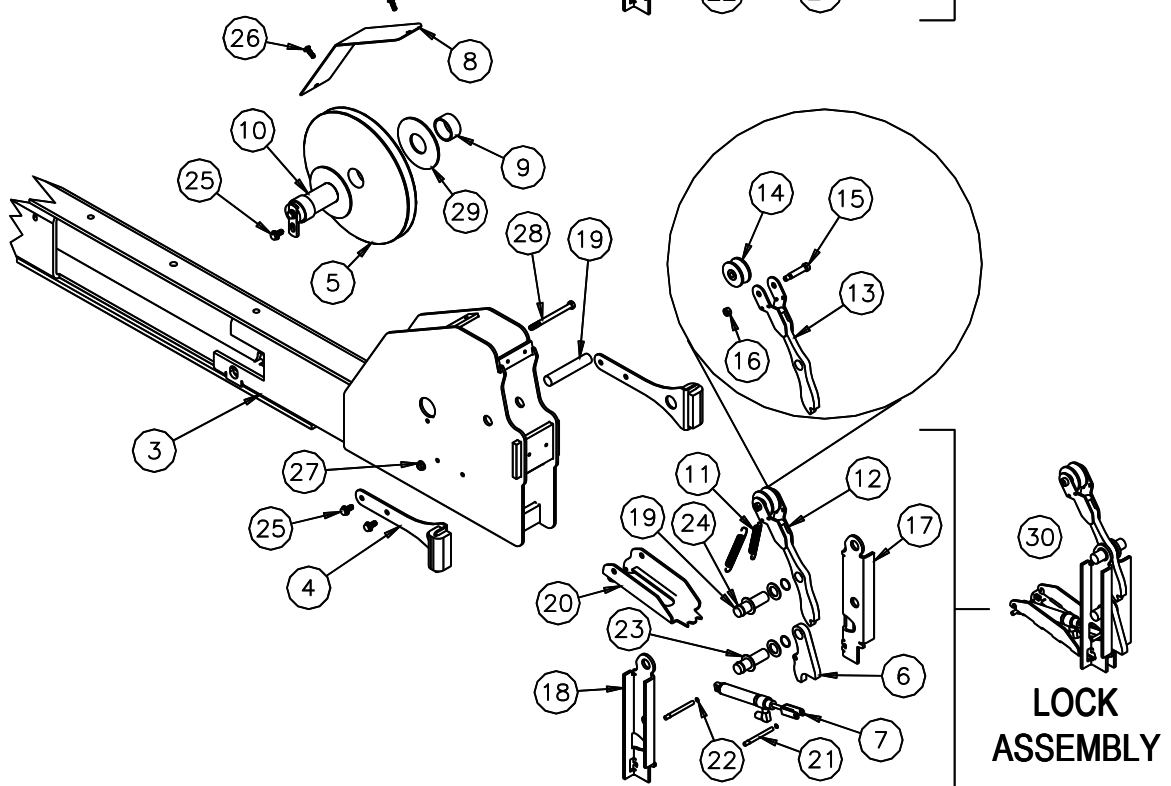
PARTS BREAKDOWN (continued)

Fig C. Front and Rear CrossBeam Assembly

**OPEN FRONT
CROSSBEAM**



**REAR AND CLOSED FRONT
CROSSBEAM**



Model 4115
Installation, Operation and Maintenance

PARTS BREAKDOWN (continued)

Table C. Front and Rear CrossBeam Assembly

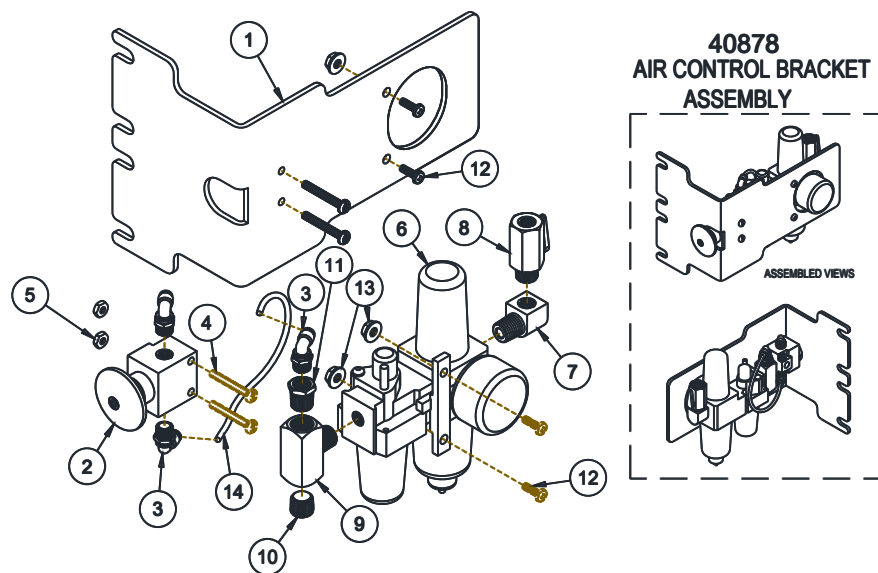
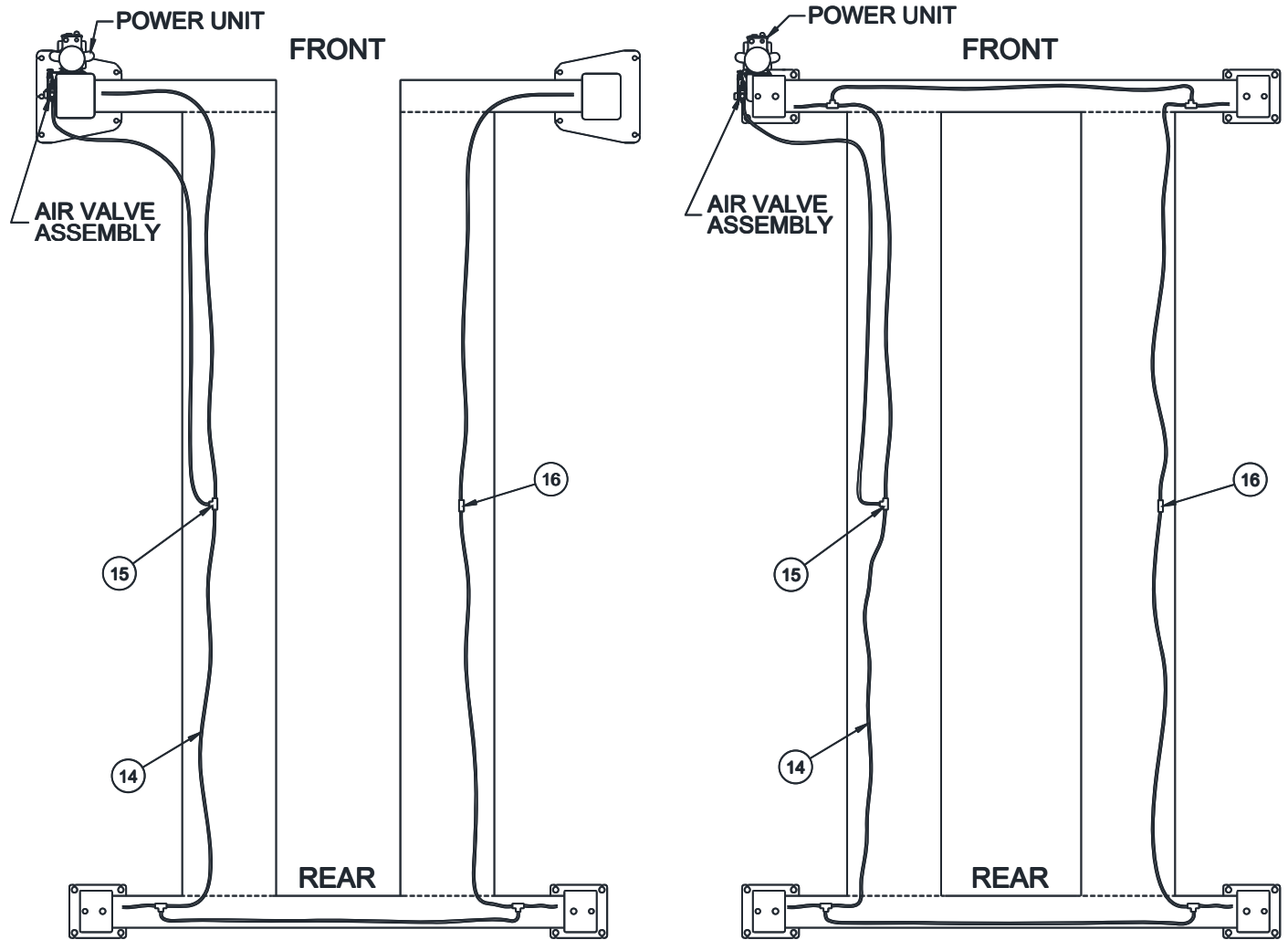
| ITEM # | PART # | QTY/LIFT | DESCRIPTION |
|--------|-----------|----------|--|
| 1 | 40720 - P | 1 | OPEN CROSSBEAM WELD, POWER |
| | 40720 - I | 1 | OPEN CROSSBEAM WELD, IDLER |
| 2 | 2-0772 | 8 O/ 0 X | OPEN SLIDE BLOCKS |
| 3 | 40761 | 1 O/ 2 X | CROSSBEAM WELD |
| 4 | 40766 | 4 | CLOSE SLIDE BLOCKS ASSEMBLY |
| 5 | B40650 | 11 | SHEAVE |
| 6 | 40625 | 4 | PRIMARY LOCK PAWL |
| 7 | 40882 | 4 | AIR CYLINDER ASSEMBLY |
| 8 | 40844 | 4 | SHEAVE GUARD |
| 9 | 40774 - X | 8 | SHEAVE SPACER BUSHING (CROSSBEAM) |
| 10 | B40116 | 4 | SHEAVE PIN (CROSSBEAM) |
| 11 | CL40139 | 8 | EXTENSION SPRING |
| 12 | 40741 | 4 | SLACK LATCH ASSEMBLY |
| 13 | 40742 | 4 | SLACK LATCH WELD |
| 14 | 40745 | 4 | CABLE ROLLER |
| 15 | 36065 | 4 | 3/8 x 1-1/2 SHOULDER BOLT |
| 16 | 70081 | 4 | 5/16 – 18 KEPS NUT |
| 17 | 40746 - L | 4 | LOCK SUPPORT CHANNEL, LEFT |
| 18 | 40746 - R | 4 | LOCK SUPPORT CHANNEL, RIGHT |
| 19 | 40747 | 8 | LATCH PIVOT PIN |
| 20 | 40748 | 4 | AIR CYLINDER SUPPORT BRACKET |
| 21 | 40749 | 8 | AIR CYLINDER PIVOT PIN |
| 22 | 40732 | 16 | O-RING, AIR CYLINDER ROD |
| 23 | 40734 | 16 | FLAT WASHER, 3/4 x 1-1/4 |
| 24 | 40733 | 16 | O-RING, LATCH PIVOT PIN |
| 25 | 40807 | 8 | 5/16-18NC x 3/4 HEX. SER. FLG. HD. CAP SCREW |
| 26 | 31062 | 8 | 1/4-20NC x 3/4" Lg. PHILIPS PAN HEAD |
| 27 | 4100237 | 4 | HEX FL HD SL NUT 5/16-18NC |
| 28 | 40808 | 4 | 5/16-18NC x 4 HHCS GR5 PLATED |
| 29 | 40053 | 22 | SHEAVE THRUST BEARING (1/8" THICK) |
| 30 | 40740 | 4 | LOCK ASSEMBLY |

Replace all worn, damaged, or broken parts with parts approved by **Challenger Lifts Inc.** or with parts meeting **Challenger Lifts Inc.** specifications.

Contact your local Challenger Lifts Parts Distributor for pricing and availability.
(Call Challenger Lifts Inc. (502) 625-0700 for the Parts Distributor in your area)

PARTS BREAKDOWN (continued)

Fig D. Air Lock Release



Model 4115
Installation, Operation and Maintenance

PARTS BREAKDOWN (continued)

Table D. Air Lock Release

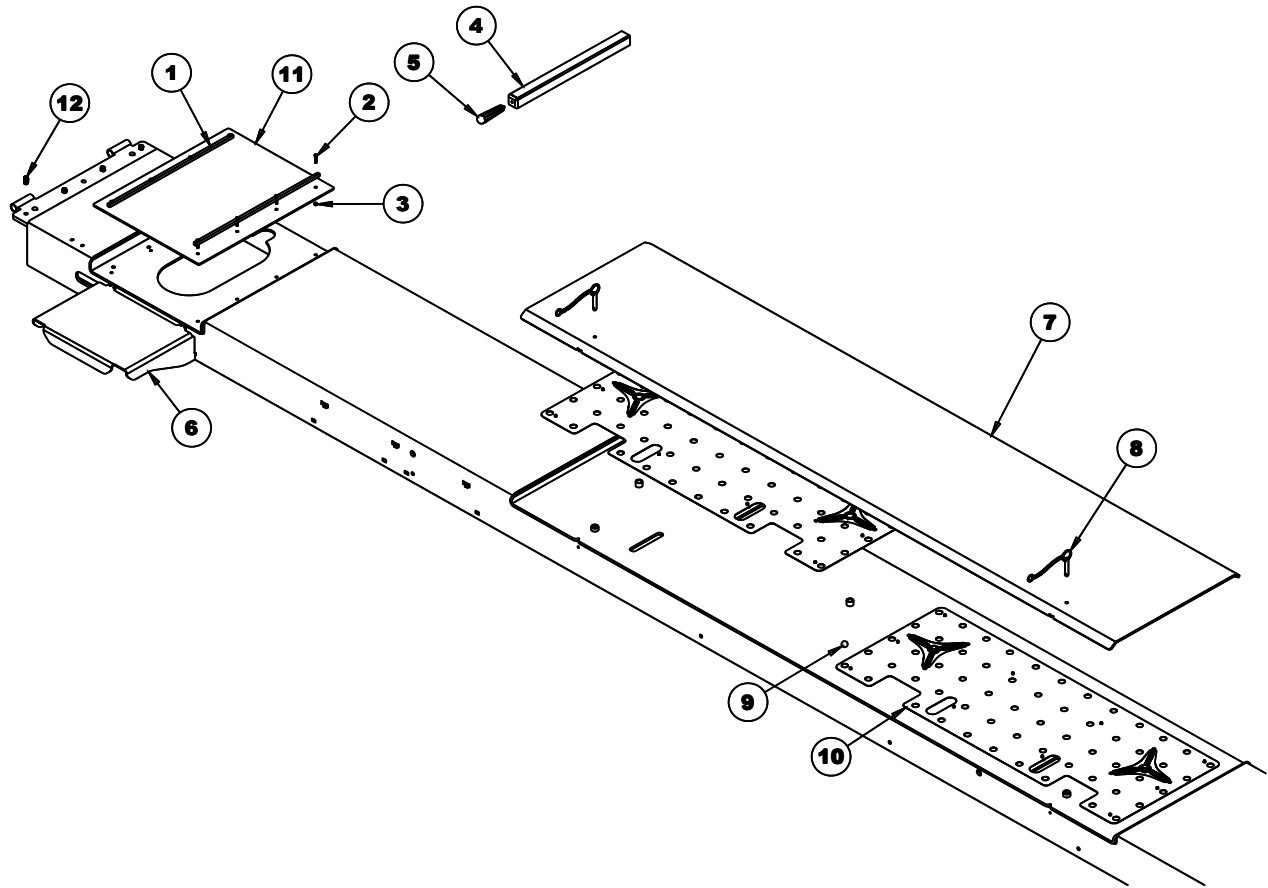
| ITEM # | PART # | QTY/LIFT | DESCRIPTION |
|--------|-------------|-----------|--------------------------------------|
| 1 | 40879 | 1 | AIR CONTROL BRACKET |
| 2 | 37016 | 1 | PNEUMATIC VALVE (MAC) |
| 3 | B37019 | 1 | ELBOW 1/8 NPT MALE x 4mm PUSH-LOCK |
| 4 | 37022 | 2 | #8-32 x 1 1/4 PAN HEAD SCREW |
| 5 | CL37024 | 2 | #8-32 HEX NUT |
| 6 | 40803 | 1 | FRL ASSEMBLY |
| 7 | 24104 | 1 | STREET ELBOW, 1/4 NPT |
| 8 | RJ6-32 | 1 | BALL VALVE, 1/4 NPT MALE x FEMALE |
| 9 | 40236 | 1 | BRANCH TEE, 1/4 NPT |
| 10 | 40237 | 1 | HEX SOCKET PLUG, 1/4 NPT |
| 11 | 40805 | 1 | REDUCER, 1/4 NPT x 1/8 NPT |
| 12 | VS10-40-18 | 2 | #10-32 x 1/2 PHILLIPS PAN HEAD SCREW |
| 13 | A1206-15-14 | 2 | #10-32 SERRATED FLG. HEX. NUT |
| 14 | 00909 | 60 ft | 4mm DIA. PLASTIC AIR LINE |
| 15 | B37032 | 3 O / 5 X | 4mm UNION TEE |
| 16 | B40445 | 1 | 4mm STRAIGHT UNION |

Replace all worn, damaged, or broken parts with parts approved by **Challenger Lifts Inc.** or with parts meeting **Challenger Lifts Inc.** specifications.

Contact your local Challenger Lifts Parts Distributor for pricing and availability.
(Call Challenger Lifts Inc. (502) 625-0700 for the Parts Distributor in your area)

PARTS BREAKDOWN (continued)

Fig E. Alignment Equipment



| ITEM # | PART # | QTY/LIFT | DESCRIPTION |
|--------|---------|----------|---------------------------------|
| 1 | 40842W | 4 | GUIDE BAR 3/8 SQ, 4115W |
| 2 | 40299 | 16 | #10-24 x 1.25" SOC.HD.CAP SCREW |
| 3 | 055-127 | 16 | #10-24 HEX LOCK NUT |
| 4 | 40296 | 2 | DROP-IN SPACER |
| 5 | 40295 | 2 | HANDLE |
| 6 | 40506 | 2 | WORK STEP |
| 7 | 40833W | 2 | REAR SLIP PLATE WELDMENT, 4115W |
| 8 | 40220 | 4 | PIN ASSEMBLY |
| 9 | 40211 | 116 | 3/4" DIA. BALL |
| 10 | 40835W | 2 | BALL RETAINER ASSEMBLY, 4115W |
| | 40836W | 2 | BALL RETAINER SHEET, 4115W |
| | 40527 | 28 | STAND-OFF PIN |
| | 40528 | 28 | STAND-OFF SPACER (GROMMET) |
| | 40221 | 24 | 1/2" DIA. EXTENSION SPRING |
| | CL40219 | 8 | 7/8" INTERNAL TOOTH LOCK WASHER |
| 11 | 40840W | 2 | FRONT PAN FILLER PLATE, 4115W |
| 12 | 6-0726 | 8 | 1/2-13NC x 1 SET SCREW |

Replace all worn, damaged, or broken parts with parts approved by **Challenger Lifts Inc.** or with parts meeting **Challenger Lifts Inc.** specifications.

Contact your local Challenger Lifts Parts Distributor for pricing and availability.
(Call **Challenger Lifts Inc. (502) 625-0700** for the **Parts Distributor** in your area)

REVISIONS

- 2020/02/07 - ADDED STEP FOR ADJUSTING RUNWAY PITCH. ADDED STEP FOR PLACING THE WARNING DECAL, NOTICE DECAL, AND CAUTION DECAL ON THE POWER COLUMN. ADDED APPROXIMATE SHIPPING WEIGHTS TO GENERAL SPECIFICATION.
- 2020/02/17 - ADDED STEPS FOR INSTALLING THROUGH BOLTS FOR CROSSBEAM AND RUNWAYS. ADDED STEPS TO INSTALL RAMPS
- 2020/03/18 - CHANGE THE TYPE OF LUBRICATION USED FOR THE COLUMNS.
- 2020/05/23 - CORRECTED SPEC PAGE
- 2020/05/29 - CORRECTED CABLES IN FIG B OF PARTS BREAKDOWN.
- 2020/09/23 - CORRECTED FIG A AND FIG D OF PARTS BREAKDOWN, FIG 1A & 1B, FIG 15A, FIG 15B, FIG 17, FIG 18, AND FIG 21 TO SHOW CORRECT POWER UNIT BRACKET AND DESIGN
- 2021/01/28 - UPDATED CABLE IDENTIFICATION ON FIGURES, UPDATED ROUTING AND CABLE INSTALLATIONS
- 2021/02/15 - UPDATED CABLE ROUTING AND STEPS TO BETTER OUTLINE THE PROCESS FOR OPEN FRONTS AND CLOSE FRONT LIFTS.
- 2021/03/15 - UPDATED ANTI-ROTATOR ASSEMBLY
- 2021/03/26 - UPDATED THE PBD QUANTITIES
- 2021/07/26 - UPDATED ELECTRICAL WIRING DIAGRAM
- 2021/10/01 - OUTDOOR INSTALLATION IS PROHIBITED AND REMOVE 40452 AND CHANGE 40750 QTY TO 4
- 2022/02/10 - CORRECTED PARTS BREAKDOWN LOCK RELEASE AIR CYLINDER P/N 40882
- 2022/04/20 - CORRECTED PARTS BREAKDOWN LOCK RELEASE PIN RETAINER RINGS 40850 & 40851.
- 2022/06/21 - CHANGED SHEAVE GUARD AND SHEAVE GUARD FASTENING SCREW PART NUMBERS, PARTS BREAKDOWN FIG. C, ITEMS 8 AND 26. CORRECTED MAINTENANCE SECTION, REMOVED REFERENCE TO ROLLERS.
- 2022/11/05 - CORRECTED FIG. 30 TITLE
- 2023/02/17 - ADDED OPERATING INSTRUCTION NOTE TO LOCK ALIGNMENT RUNWAY SLIP PLATES BEFORE MOVING VEHICLE OR LIFT. REMOVED REFERENCE TO ROLLERS FROM THE MAINTENANCE SECTION
- 2023/07/31 - ADDED LOCK ASSEMBLY, ITEM 30, TO PARTS BREAKDOWN Pgs. 22 & 23
- 2023/08/02 - CHANGED RUNWAY AND APPROACH RAMP WIDTH FROM 22" TO 26" WHICH AFFECTED THE FOLLOWING: SPECIFICATIONS p.2 & 3, p.13 ADDED STEP 79 TO INSTALL TURNPLATE GUIDE BARS AND FILLER PLATE AND ADDED DETAIL TO FIG. E, PARTS BREAKDOWN p.19 ADDED "W" TO THE END OF ALL RUNWAY WELD P/N's (ITEMS 1 & 2) AND 26" RAMP IS P/N 40874, p.25 UPDATED DRAWING AND INCREASED FILLER PLATE HARDWARE QUANTITY.
- 2024/04/04 - UPDATED ANSI/ALI REFERENCE MATERIAL. UPDATED ANCHORING REFERENCE. PG. 8. ADDED ANSI STANDARDS REFERENCE STATEMENT SECTION. PG. 4.