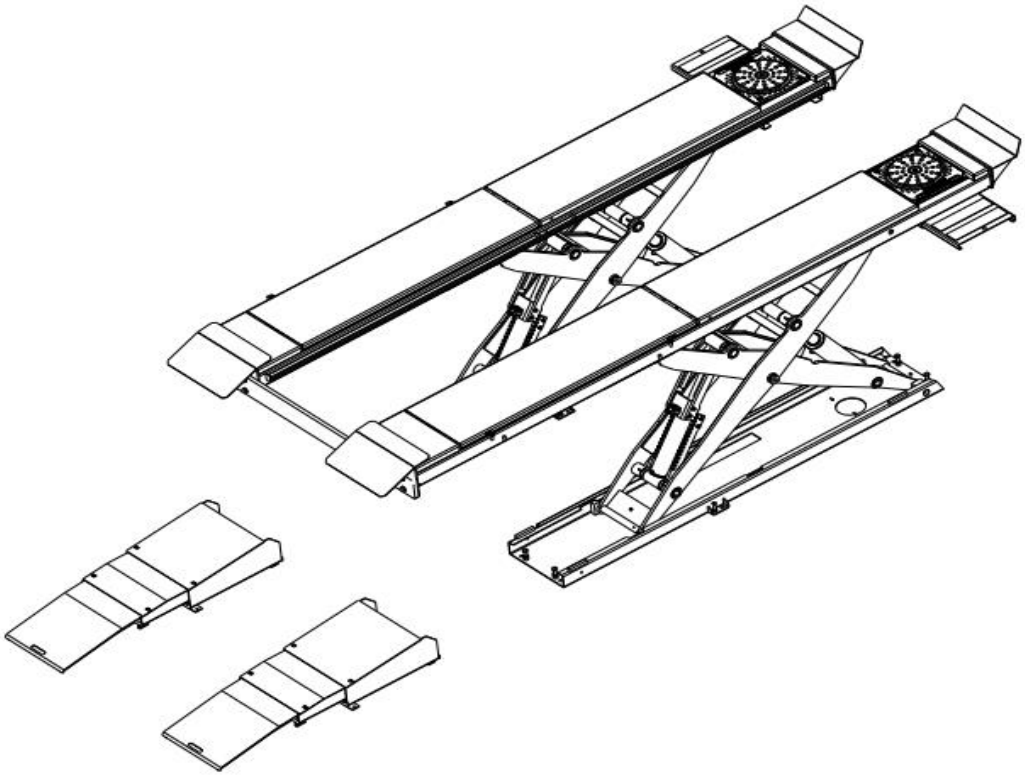
# Snap-on Equipment

## INSTALLATION AND OPERATING MANUAL

## READ THOROUGHLY BEFORE INSTALLING, SERVICING OR MAINTAINING THE LIFT.

## SAVE THIS MANUAL



# INSTALLATION and OPERATION MANUAL

# 12K SCISSOR LIFT

EELR501A, EELR525A

EELR709A, EELR724A

Nov. 2019 REV.F

**309 EXCHANGE AVENUE, CONWAY, ARKANSAS, 72032**
**TEL: 501-450-1500 FAX: 501-450-1585**

EAZ0080V44A

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# 1.0 IMPORTANT SAFETY INSTRUCTIONS


When using this lift, basic safety precautions should always be followed, including the following:

1. Only trained and authorized personnel should operate the lift or rolling jacks. Do not allow customers or bystanders to operate the lift or be in the shop area while lift is in use.
2. Read all instructions in this manual and on the lift thoroughly before installing, operating, servicing or maintaining the lift. Thoroughly train all employees in the use and care of lift and rolling jacks.
3. Inspect the lift DAILY. Do not operate if it malfunctions or problems have been encountered.
4. Ensure no one is standing in front or behind the lift while vehicle is being driven onto, or backed off the lift.
5. Before driving vehicle on, make sure lift is in the fully down position.
6. Before removing vehicle from the lift, make sure lift is in the fully down position and ensure that all tools have been removed from the deck surfaces.
7. Always raise the lift off safety locks before lowering.
8. Do not allow rear tires or portion of the vehicle to interfere with approach ramp.
9. Be sure front wheel stops are always installed on the lift.
10. Never allow front wheels to strike the front wheel stops.
11. Always use wheel chocks to keep the vehicle from rolling freely on the runways. Wheel chocks should be used at front and back of the same wheel.
12. Never attempt to overload the lift. The manufacturer's rated capacity is shown on the identification label on side of the deck. Do not override the operating controls or safety devices.
13. Do not permit employees or customers on lift when it is either being raised or lowered.
14. Never raise a vehicle with passengers inside.
15. Always stand clear of lift when raising or lowering and observe "Pinch Points" warning.
16. **CAUTION! Never work under the lift unless mechanical safety locks are engaged.**
17. Always use Personal Protective Equipment (PPE) when installing or servicing the lift.
18. Always keep the lift area free of obstruction and debris. Grease and oil spills should always be cleaned up immediately.
19. Always chock vehicle wheels before raising or lowering the lift.
20. Before lowering check the area for any obstructions including people.
21. To protect against risk of fire, do not operate the lift in the vicinity of open containers of flammable liquids.
22. Adequate ventilation should be provided when working on internal combustion engines.
23. Never open hydraulic lines under pressure.
24. Do not raise or lower the lift with the vehicle on the Jackbeam.
25. For Jackbeam Safety Instructions, see Jackbeam Installation, Operation Manual.

**READ AND SAVE THESE INSTRUCTIONS**

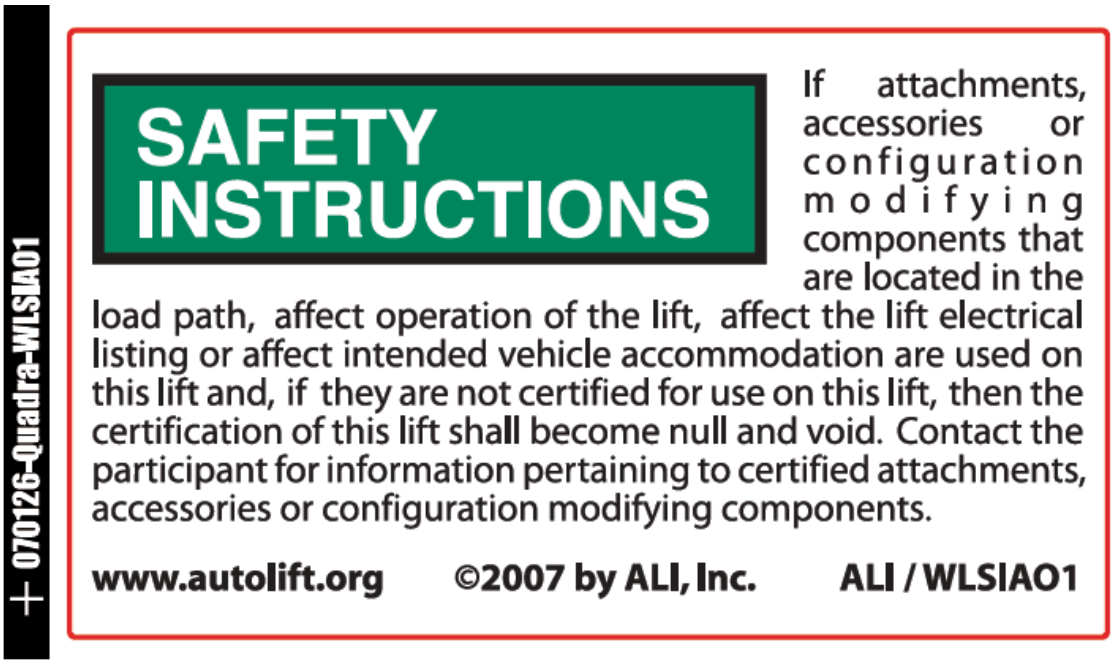
Installation shall be performed in accordance with ANSO/ALI ALIS, Safety Requirements for Installation and Service of Automotive Lifts.

For additional safety instructions regarding lifting, lift types, warning labels, preparing to lift, vehicle spotting, vehicle lifting, maintaining load stability, emergency procedures, vehicle lowering, lift limitations, lift maintenance, good shop practices, installation, operator training and owner/employer responsibilities, please refer to “Lifting It Right” (ALI/SM) and “Safety Tips” (ALI/ST).

For additional instruction on general requirements for lift operation, please refer to “Automotive Lift- Safety Requirements for Operation, Inspection and Maintenance” (ANSI/ALI ALOIM).

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

**ATTENTION!** This lift is intended for indoor installation only. It is prohibited to install this product outdoors. Operating environment temperature range should be 41 – 104 °F (5 – 40 °C). Failure to adhere will result in decertification, loss of warranty, and possible damage to the equipment.



## 2.0 SAFETY WARNING DECALS

**Automotive Lift Institute, Inc.**


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 85 Cortland, NY 13045.

Replacement label sets may be obtained from the original lift manufacturer and ALI's member companies. They are protected by copyright.

www.autolift.org © 2009 by ALI, Inc. ALI/WL200c



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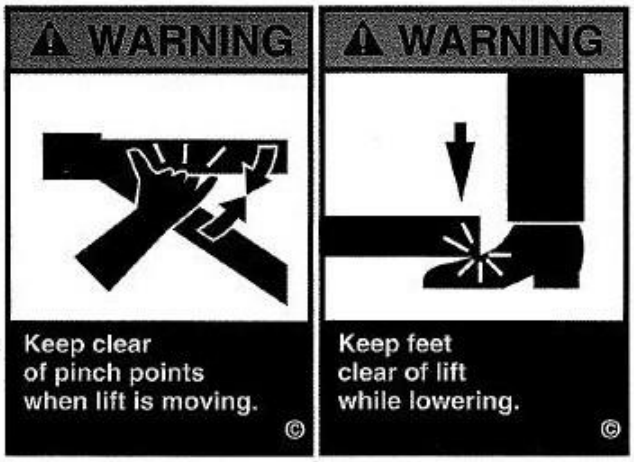
**WL200 Series Label Kit**



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## 3.0 SPECIFICATIONS

| | | |
|---|---|---|
| Maximum Capacity: | 12000 lbs | 5443 kg |
| Overall Width: | 90 Inches | 2288 mm |
| Overall Length: | 242 - 294 Inches | 6143 - 7467 mm |
| Maximum Raised Height: | 70 Inches | 1772 mm |
| Minimum Lowered Height: | 12-1/4 Inches | 311 mm |
| Runway Width: | 24 Inches | 612 mm |
| Minimum 4 Wheel Alignment W/B: | 89 Inches | 2260 mm |
| Maximum 4 Wheel Alignment W/B: | 158 Inches | 4013 mm |
| Maximum 2 Wheel Alignment W/B: | 165 Inches @Ø30" Tire OD | 4190 mm |
| Maximum General Wheelbase: | 179 Inches @Ø30" Tire OD | 4546 mm |
| Raising/Lowering Time (approx.): | 95 Seconds / 45 Seconds | |
| Power Ratings: | 230V, 1 Ph, 60Hz, 20A | |
| Max. Operation Hydraulic Pressure: | 2800 psi | |
| Air Supply requirements: | 90 to 140 PSI @5-10CFM | |
| Pneumatic Lubrication Oil Type: | Snap-On #IM6 or Equivalent | |
| Hydraulic Oil Capacity: | Tank size: 4.0 gal | Lift capacity: 6.0 gal |
| Hydraulic Oil Type: | ISO 32 (10 weight) hydraulic oil | |
| Shipping Weight (Lift Only): | 6614 lbs | 3000 kg |
| Jack Beam Fully Raised Up | 14-3/4 Inches | 377 mm |
| Jack Beam Fully Collapsed | 3-5/8 Inches | 92 mm |
| Extension Adapter for Jack Beam | 2-7/16 Inches | 62 mm |

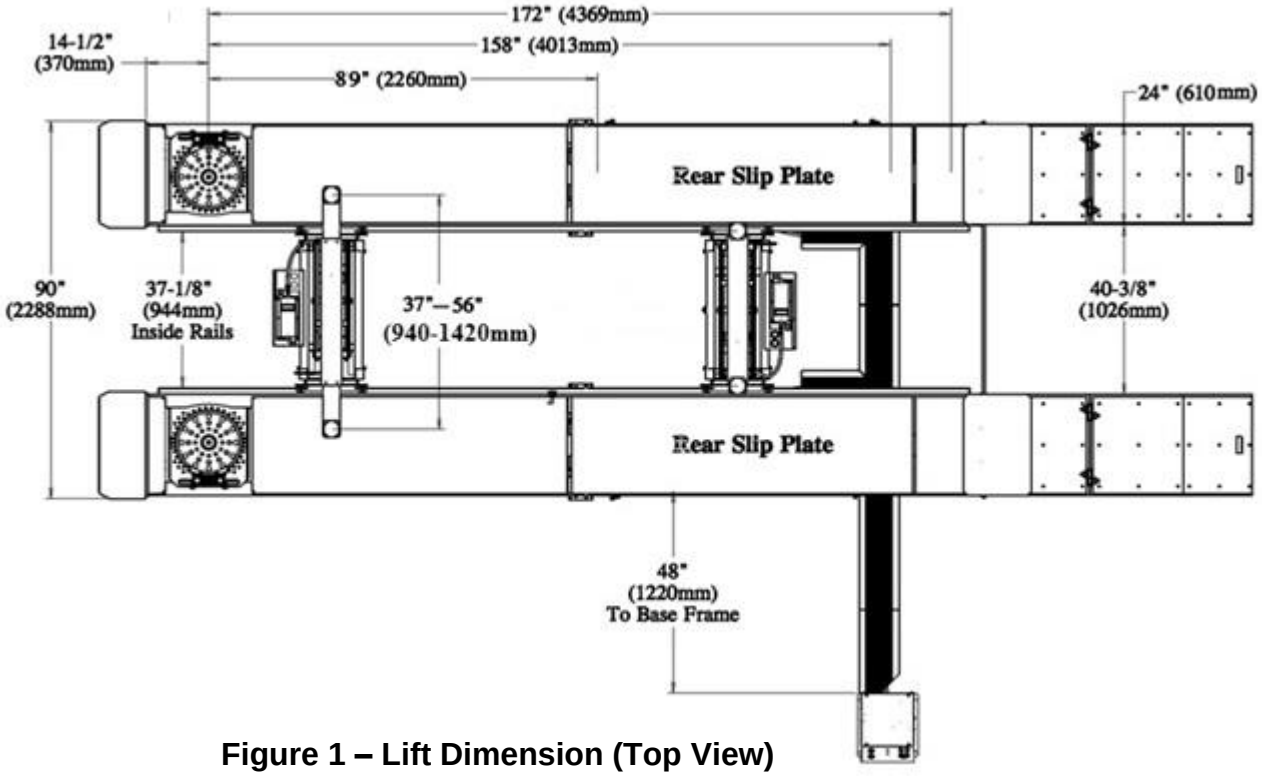


**Figure 1 – Lift Dimension (Top View)**

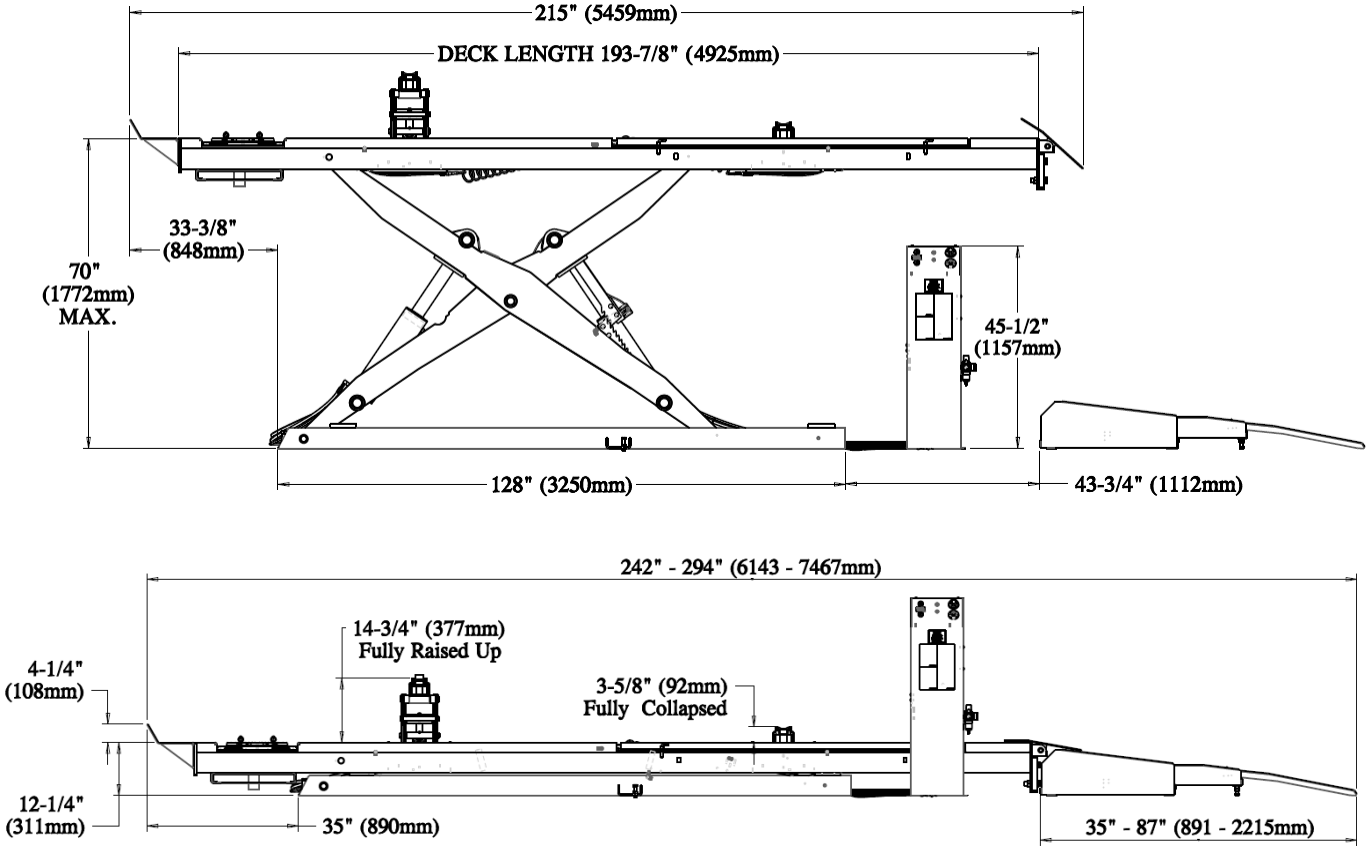


**Figure 2 - Lift Dimensions (Side View)**

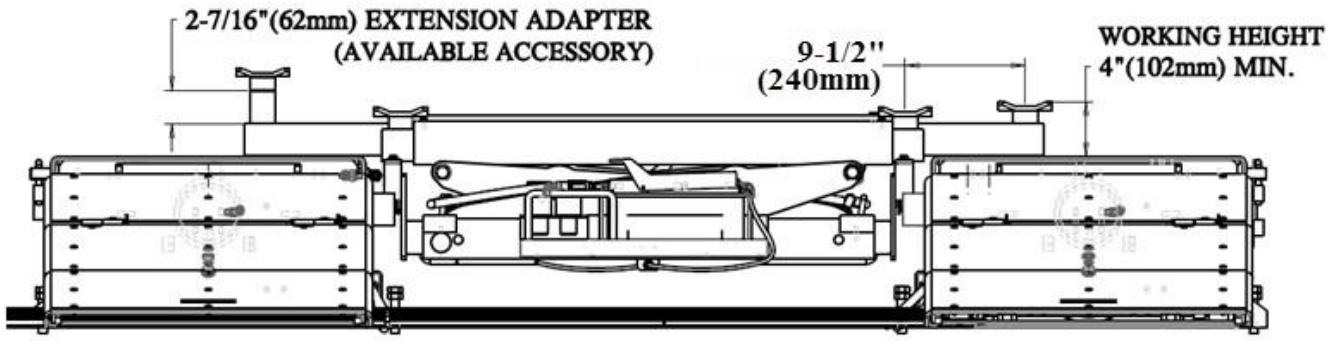


**Figure 3 - Lift Dimensions (Back View)**

## 4.0 CONTENTS

The complete lift is contained in two (2) packages:
1. The main structural components are pre-assembled and packaged on top of each other.
2. The remaining parts are packed in a console/accessory box. Refer to the packing slip inside the accessory box for a list contents.

Components include:

1pc. – Left Side Assembly
1pc. – Right Side Assembly
2pc. – Jack beams (If ordered)
2pc. – Approaching Ramps
1pc. – Console and Accessory box. (See accessory box list for contents)
1pc. – Grout container
1pc. – Customer care kit including manuals

## 5.0 TOOLS REQUIRED FOR INSTALLATION OF LIFT

- ☐ Hammer Drill or similar, 1/4”, 1/2” and 3/4" Concrete Drill Bits
- ☐ 4’ Level
- ☐ Metric and SAE Wrenches and Sockets
- ☐ Hammer
- ☐ Pry Bar – 5’ Long
- ☐ Chalk Line
- ☐ Tape Measure
- ☐ Side Cutters
- ☐ Screw Drivers
- ☐ Funnel
- ☐ Utility Knife
- ☐ Torque Wrench

Recommended:

- ☐ Self-leveling laser level
- ☐ Plumb Bob
- ☐ Impact Gun
- ☐ Boom with appropriate capacity, see weight in specification section
- ☐ Sling and rigging as needed to lift and place structure

Note: Apply LOCTITE #242 on required fasteners where symbol is shown. If fasteners are removed reapply LOCTITE before re-installing.

## 6.0 INSTALLATION OVERVIEW

This is the order in which this installation is to take place:

1. Layout the Bay
2. Unpacking the Lift
3. Inspect the Lift
4. Connect Hydraulic Lines
5. Connect Air Lines
6. Connect Electrical
7. Initial Run of Lift
8. Level, Shim and Anchor
9. Install Accessories
10. Install Front Turnplates
11. Final Check
12. Clean
13. Train Customer on Operation of the Lift

**IMPORTANT: Shop air must be connected to the inlet port at the FRL unit on the console.**

## 7.0 INSTALLATION INSTRUCTIONS

When the lift arrives on site please read the owner's installation and operation manual completely. Check the contents to make sure no parts are missing before starting installation. Gather all of the tools listed and make sure that the instructions are fully understood before commencing with the installation.

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**IMPORTANT:** It is the user's responsibility to provide a satisfactory installation area for the lift. Lifts should only be installed on a level concrete floor with a minimum thickness of four and a quarter (4¼) inches or 108 mm. Concrete must have a minimum strength of 3000 psi or 21 MPa and should be aged thirty (30) days prior to installation. Please consult the architect, contractor or engineer if doubt exists as to the strength and feasibility of the floor to enable proper lift installation and operation.

---

**IMPORTANT**: It is the user's responsibility to provide all wiring for electrical hook-up prior to installation and to ensure that the electrical installation conforms to local building codes. Where required, it is the user's responsibility to provide an electrical isolation switch located in close proximity to the lift that will enable emergency stop capability and isolate electrical power from the lift for any servicing requirements.

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

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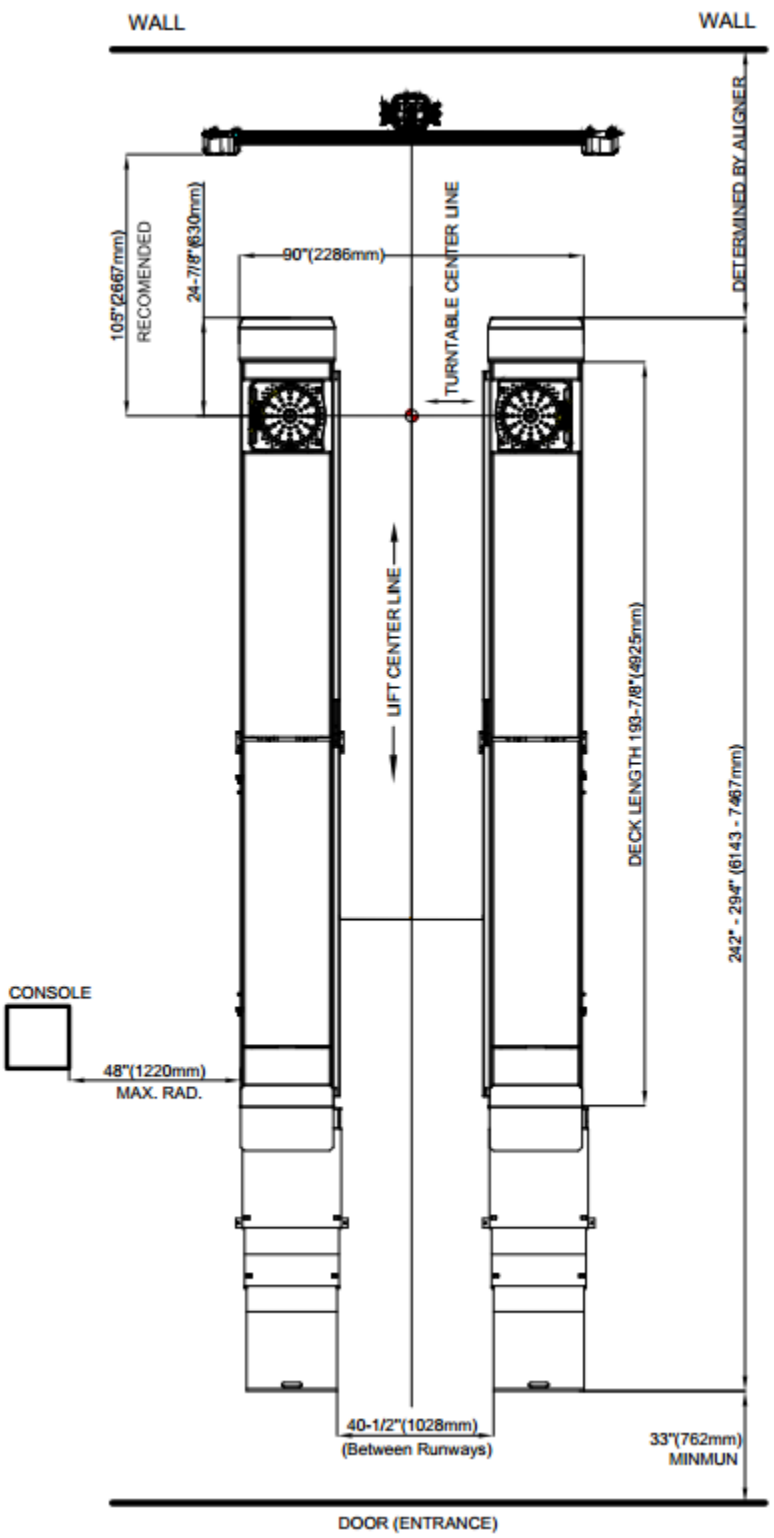
## 7.1 Surface Mount Bay Layout




**NOTE:** Leave any additional room for any desired aisle or work area. Recommended clearance around the lift is a minimum of three (3) feet. Ensure clearance conforms to local building and fire codes.

Recommended overhead clearance is a minimum of twelve (12) foot ceiling providing 6 feet for the maximum lift height and 6 feet for the supported vehicle. For vehicles taller than 6 feet it is recommended that the user provides additional overhead clearance or a shut off mechanism to stop the lift from raising the vehicle too high.

**Please contact customer service for latest installation diagram as it may change without notice.**

**Note:**
Console could be placed on left or right of lift.

**Figure 4 - Typical Bay Layout**

## 7.2 Base frame Location

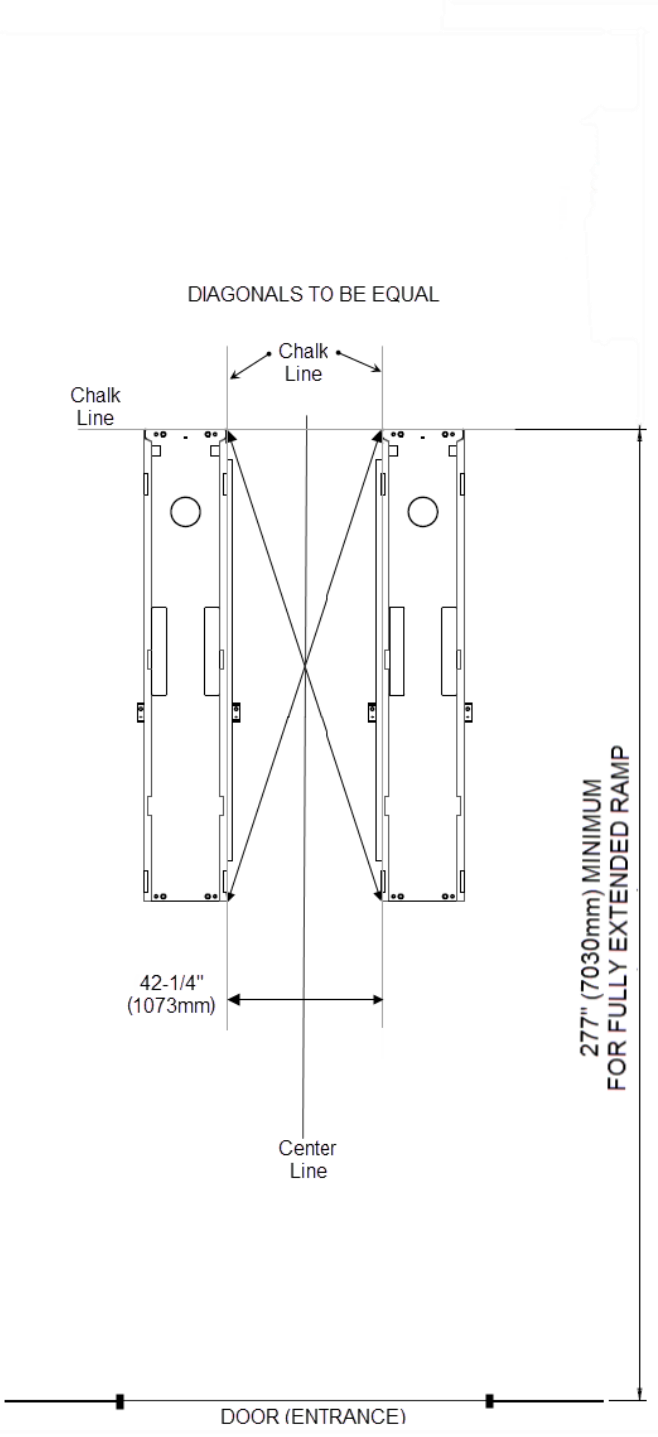



**Figure 5 – Base frame Locations**

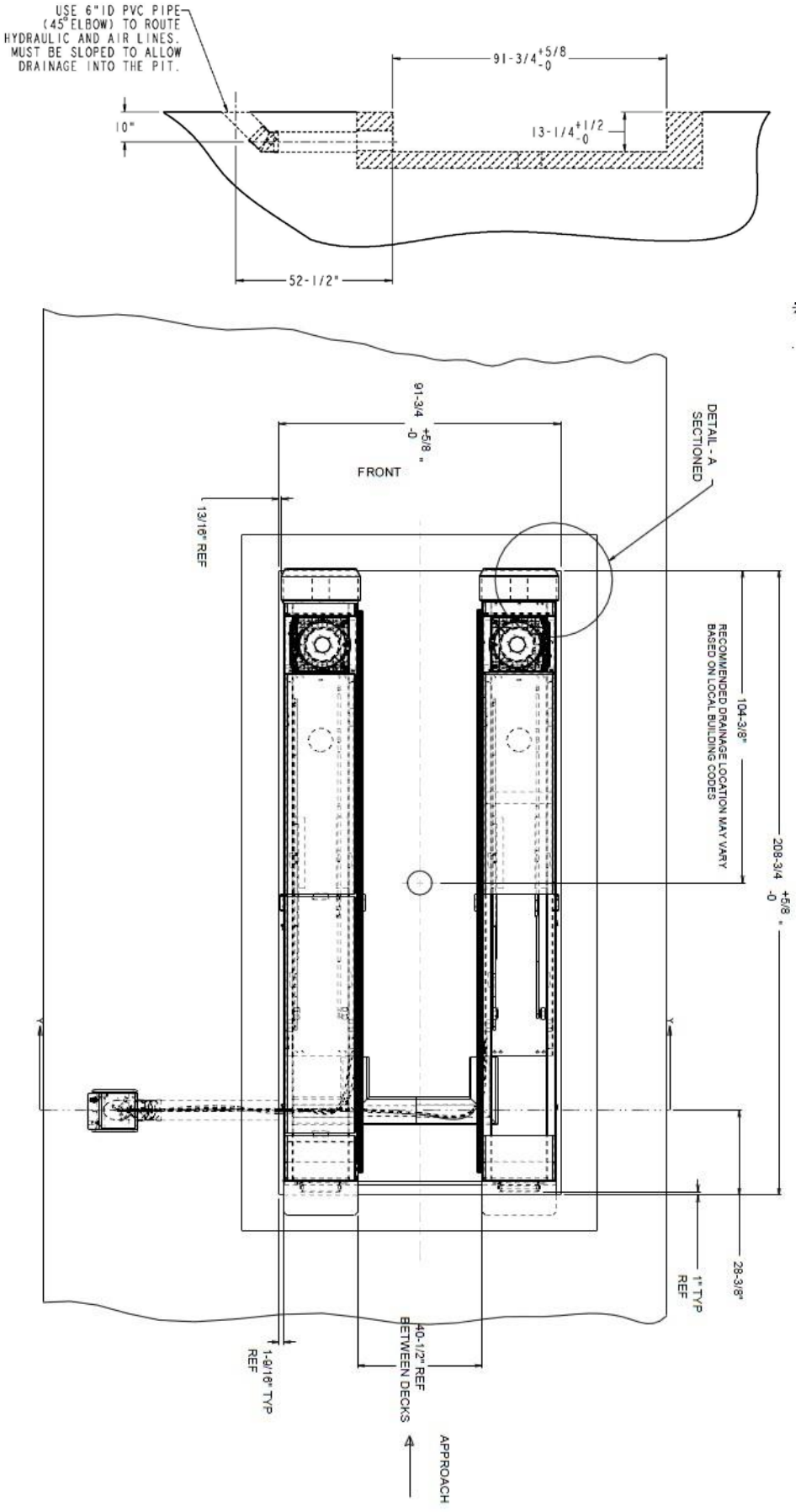
**IMPORTANT: DO NOT CUT THE SHIPPING STRAPS HOLDING EACH SCISSOR ASSEMBLY TOGETHER UNTIL INSTRUCTED TO DO SO.**

1. With reference to **Figure 4**, the installer should determine the most suitable location in the bay for the lift.
2. Snap a chalk line for the centerline of the lift ensuring that it matches the centerline of the bay door.
3. Measure and snap two (2) parallel chalk lines on either side of the centerline for the inside edges of the base frames. Refer to **Figure 5** for the dimensions necessary to provide the desired width between the two runways. A distance of 42-1/4" (1073mm) between the inside edges of the base frames will provide the standard width of 40-1/2” (1028mm) between the inside of the runways, shown on **Figure 4**.
4. Measure and snap a chalk line parallel to the shop door for the front of the base frames, a minimum distance of 262- 3/8" (6675mm) is recommended.
5. Before proceeding, ensure that once the runways are installed adequate workspace will remain in front of the lift. Refer to the minimum requirements listed in the installation and operation manual of any alignment equipment as needed.

**Note:**
The chalk lines are for reference only.

**Refer to the minimum requirements listed in the installation and operation manual of any alignment equipment as needed.**

## 7.3 Flush Mount Bay Layout (Rear Mount Console)




**NOTE:** Leave any additional room for any desired aisle or work area. Recommended clearance around the lift is a minimum of three (3) feet. Ensure clearance conforms to local building and fire codes.

Recommended overhead clearance is a minimum of twelve (12) foot ceiling providing 6 feet for the maximum lift height and 6 feet for the supported vehicle. For vehicles taller than 6 feet it is recommended that the user provides additional overhead clearance or a shut off mechanism to stop the lift from raising the vehicle too high.

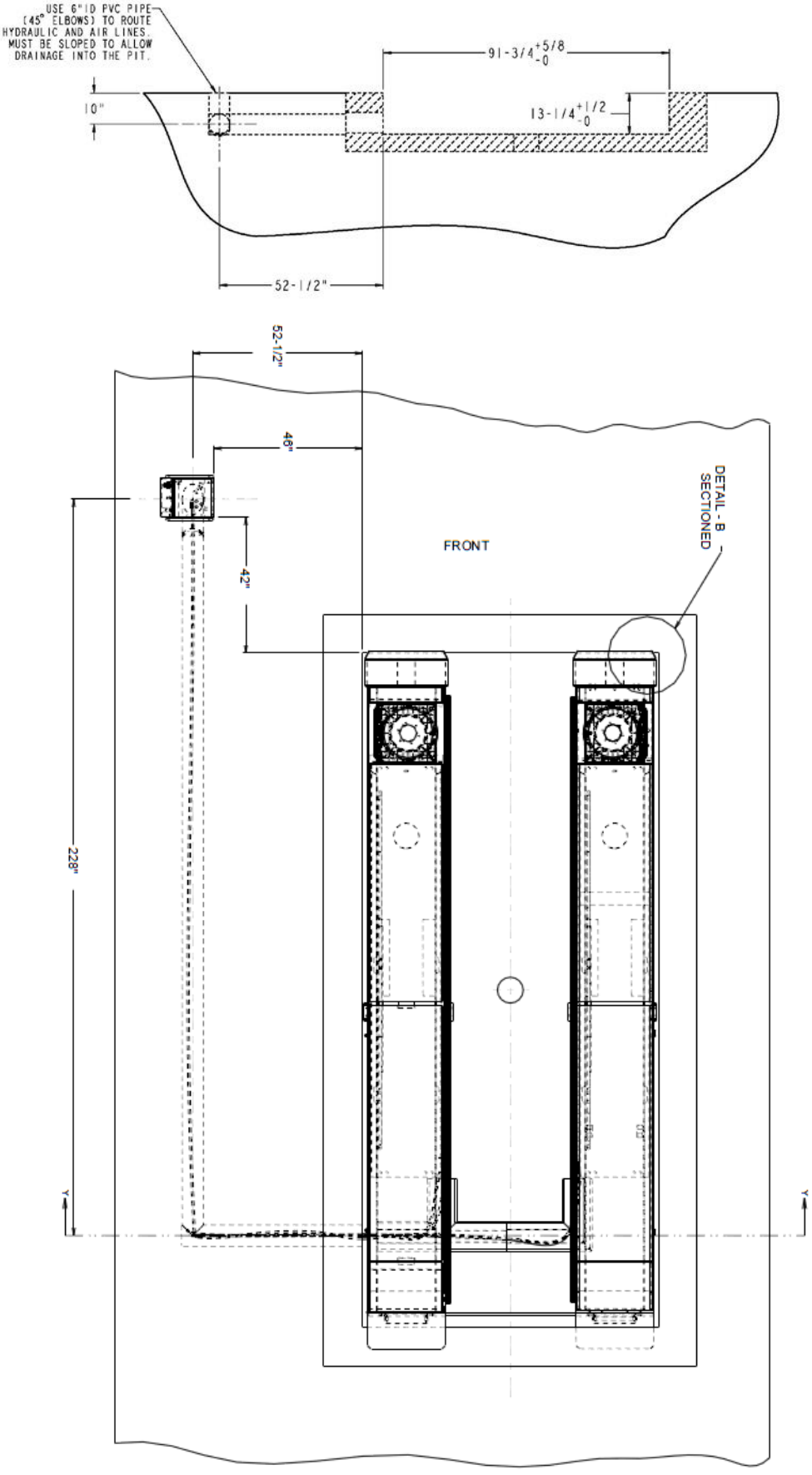
**Please contact customer service for latest installation diagram as it may change without notice.**

**Figure 6 - Typical Flush Mount Bay Layout**

**(Console in Back)**

**Note:**
Console could be placed on left or right of lift.

## 7.4 Flush Mount Bay Layout (Front Mount Console)




**NOTE:** Leave any additional room for any desired aisle or work area. Recommended clearance around the lift is a minimum of three (3) feet. Ensure clearance conforms to local building and fire codes.

Recommended overhead clearance is a minimum of twelve (12) foot ceiling providing 6 feet for the maximum lift height and 6 feet for the supported vehicle. For vehicles taller than 6 feet it is recommended that the user provides additional overhead clearance or a shut off mechanism to stop the lift from raising the vehicle too high.

**Please contact customer service for latest installation diagram as it may change without notice.**

Hose Extension Kit
**EAK0299T19A**
must be ordered for this routing option.

**Figure 7 - Typical Flush Mount Bay Layout**

**(Console in Front)**

**Note:**
Console could be placed on left or right of lift.

## 7.5 Unpacking the Lift

1. Unpack the console and place it in the desired location at the rear of the lift, see **Figure 1** and **Figure 4**. The console can be placed on either the left or right hand side of the lift.
2. Unpack the runways and lay each base frame along the chalk lines. See **Figure 8**.

**Do not remove the individual strapping on the runways until they have been positioned on the chalk lines.**

3. Position the inside edge of the base frames along chalk lines, and ensure that the runways are parallel. Ensure that both the inside dimensions (front and back) of the runways as well the diagonal distances are equal. Refer to **Figure 4** for runways dimension, Chalk lines are for reference only. If minor adjustments are needed to make the runways parallel, this should be performed.
4. Remove the remaining packing straps, and remove the hydraulic hoses, polytubes air hoses from under the deck. Hoses are located under the rear portion of the runway and are factory pre-installed.
5. Inspect lift for damage or any irregularities. If any are found, please contact customer service before proceeding.

**Note: Do not pull excessively on the hoses as it may strain the connections to the base frame. Ensure that the turntable pockets are at the front, and that Jack Beam rails for each runway face each other.**

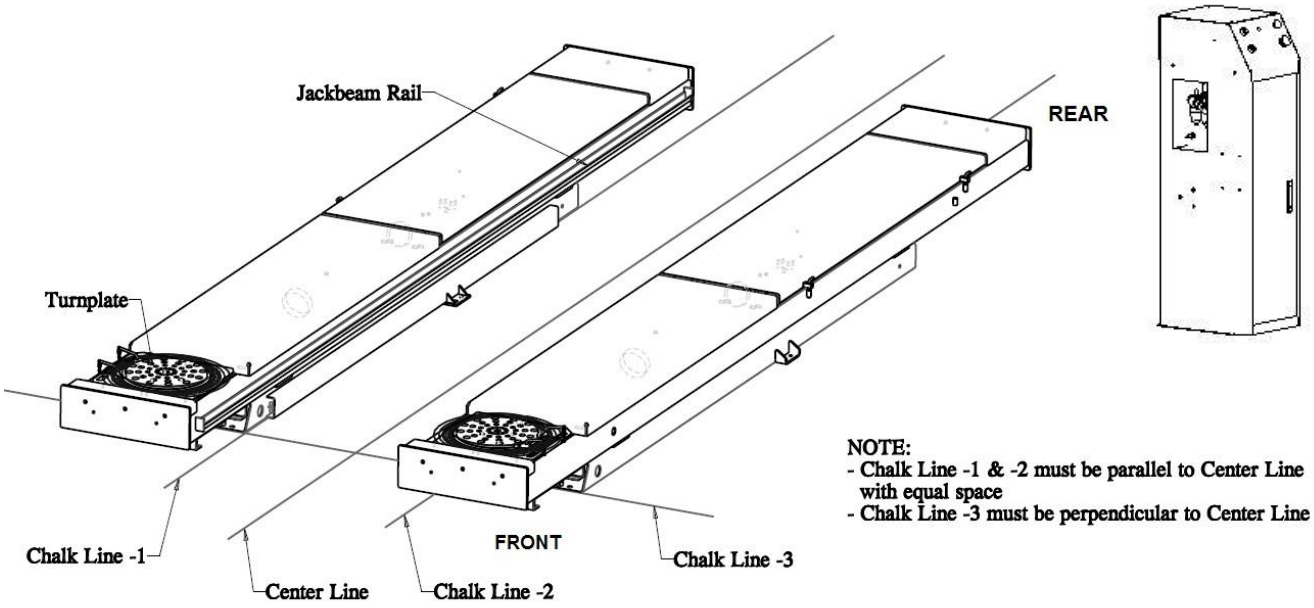



**Figure 8 – Locate the Lift**

**Note:**
**Chalk lines are for reference only.**
**Runways must be made parallel by measurement.**

## 7.6 Hydraulic Connections

### 1. Install Hydraulic Equalization Circuit

Open the rear access cover of the console. Install the hydraulic equalization circuit on the right side wall of console by using provided hard wares. See **Figure 9**.

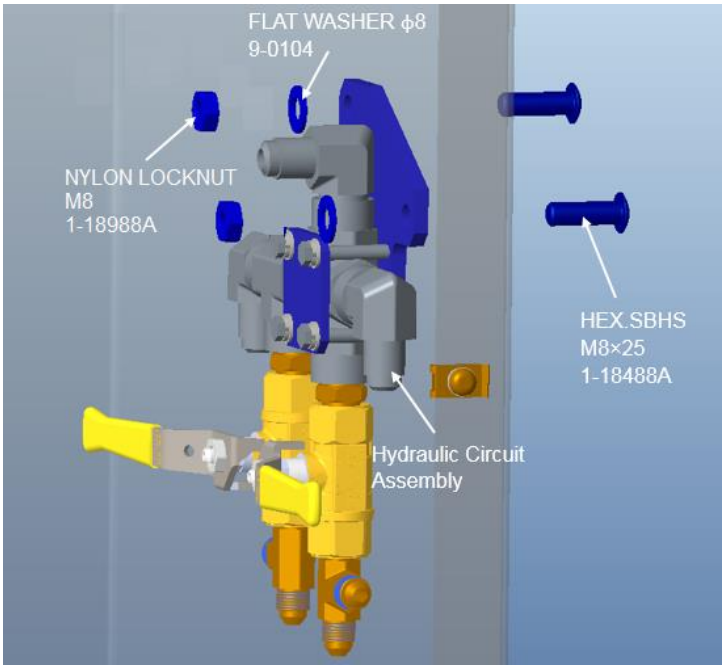



**Figure 9 – Hydraulic Circuit Installation**

### 2. Connect Hydraulic Hose to Power unit

Find the short hydraulic hose (9-0601) from accessory box, one elbow end connect to the straight fitting on power unit, and connect the straight end to the top elbow of the hydraulic equalization circuit. See **Figure 10**.

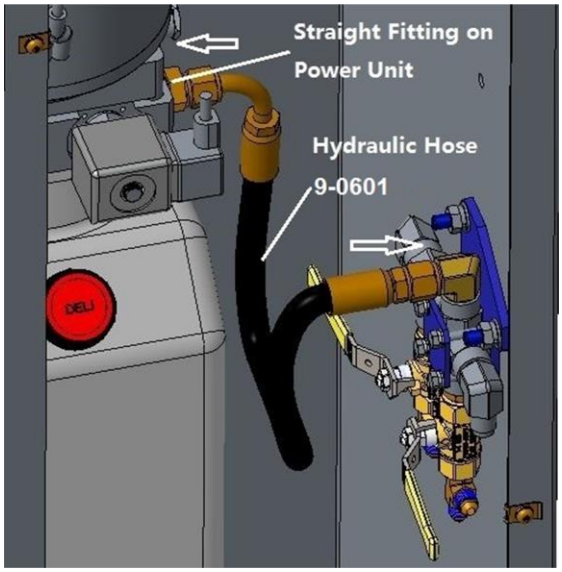



**Figure 10 – Hydraulic Hose Installation**

## 3. Connect Hydraulic Hoses From Console to Lift

The hydraulic equalization circuit orientation and ports layout refers to **Figure 11.**

The primary supply lines and equalizing lines from each runway are:

| **Left Side (L):** | **Right Side (R):** |
|---|---|
| CL | CR |
| EQL | EQR |

("C" for "Cylinder" and "EQ" for "Equalize")

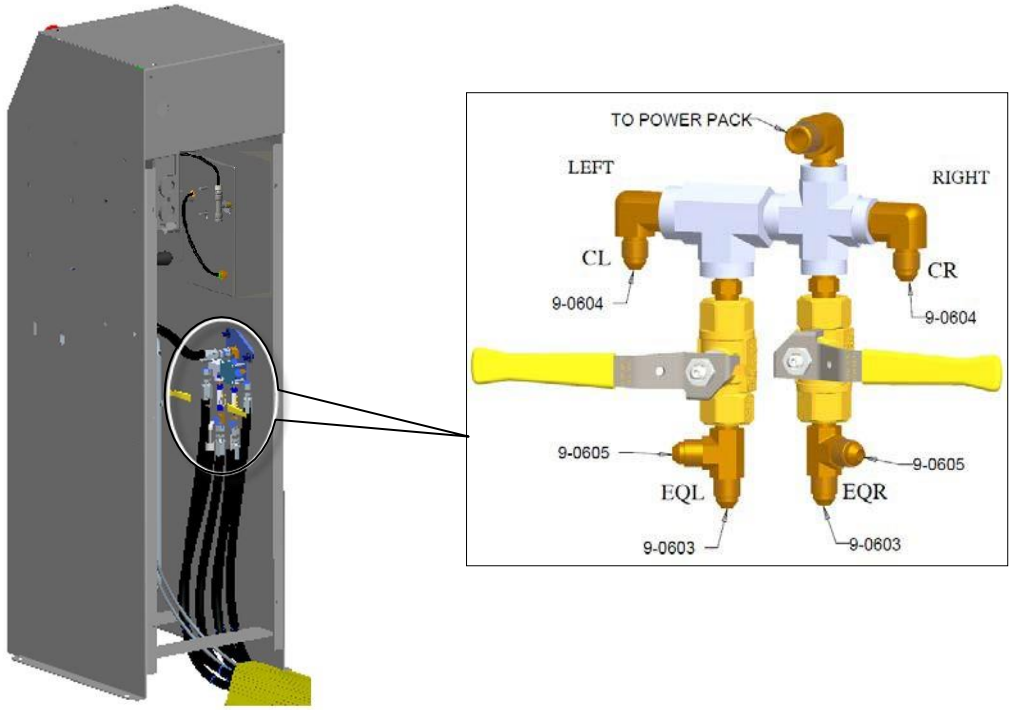



**Figure 11 Hydraulic Equalization Circuit**

- Unravel all hydraulic hoses and air lines from each runway, and connect each hydraulic lines as shown in **Figure 11** and **Figure 12.**

- Check the return lines are located beside the base frame slider and tied with other hydraulic hose, reference to Section 16.1 item #9 in **Figure 50**.

**⚠WARNING**

- **Always make sure that the connections are clean to avoid contaminating the hydraulic system**.
- **Do not kink hydraulic hoses or air lines.**
- **Do not remove hydraulic fittings while under pressure**

**For a flush mount installation with a front mount console requiring a hose extension, refer to installation instructions 6-4189 provided with kit EAK0299T19A**

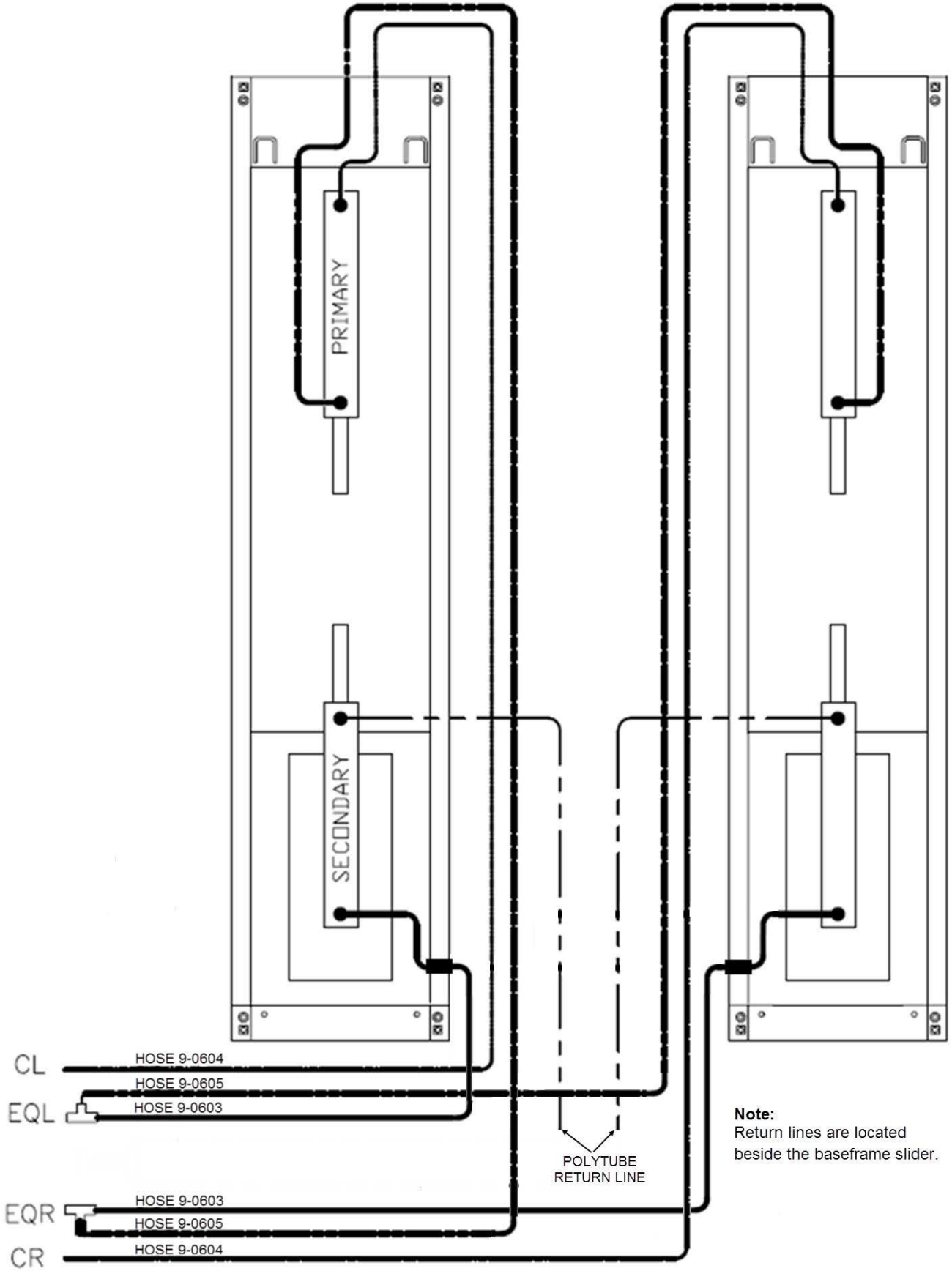



**Figure 12 - Hydraulic Connections**

## 7.7 Air Safety and Auxiliary Air connections

**⚠WARNING** **WEAR SAFETY GOGGLES AND PRACTICE CAUTION WHILE WORKINGWITH COMPRESSED AIR.**

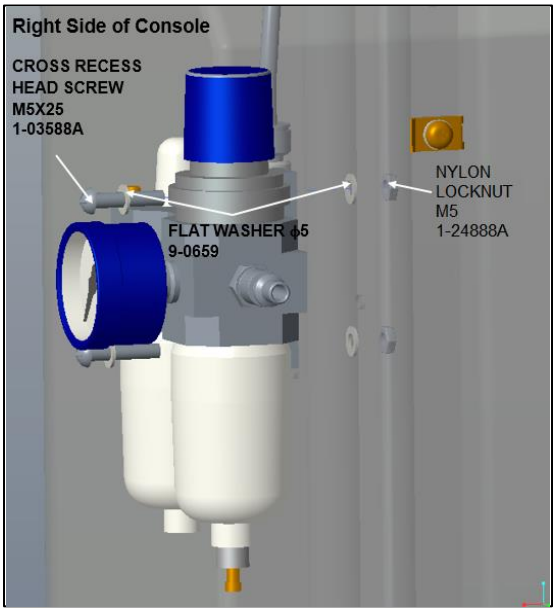
### 1. Install FRL and Swivel Tee

Find the FRL (Filter/Regulator/Lubricator) assembly with elbow and Swivel Tee poly from accessory box, see **Figure 13 a)**.

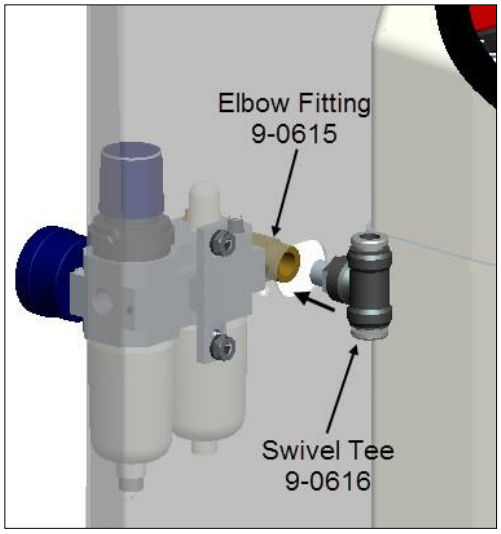
- Mount FRL assembly on the right side of the console by using provided hard wares, see **Figure 13 b)**.
  **Note:** do not tighten the nuts at this time.

- Install the Swivel Tee from inside of console through the big hole on console box to the elbow on the FRL, **see Figure 13 c)**


a)




b)




c)

**Figure 13 – FRL and Swivel Tee Installation**

### 2. Install Air Control Valve and Air Lines

Find the air fittings such as Swivel elbow (9-0619), Adapter (9-0620), Reducer (9-0617), Union Y (9-0618), Ø6mm air hose (9-0622) and Ø6mm air hose (EAH0069V14A) from accessory box.

- Open the top cover of the console, install the swivel elbow and the adapter onto the air valve that mounted on console panel as show on **Figure 14**.

- Insert the reducer into the Swivel Tee, route air hoses and connect to the air fittings on air control valve, reducer and union Y as show on **Figure 14**.

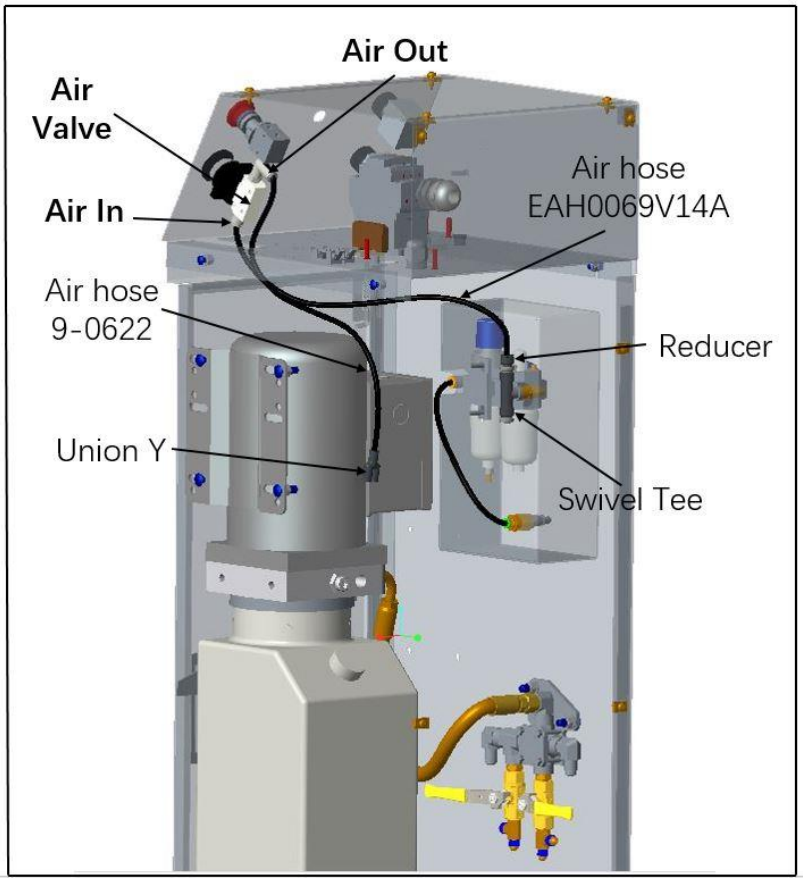



**Figure 14 – Air Control Valve and Air lines**

## 3. Connect Air Hoses and Run Testing

- Uncoil the polytubes under each runway that is connected to the safety lock release air cylinder shown on **Figure 15**. Route these two lines from base frames to the union 'Y' connector in the console. See **Figure 14**.

- Uncoil the polytube that one end is connected to the Terminal bolt for Jackbeam on the driver side runway, shown on **Figure 15**. Connect other end to the Swivel Tee in the console, See **Figure 14**.
  **IMPORTANT: Use one 1/4" NPT cap to plug terminal bolt before connect to air supply.**

- Mount a 1/4" NPT fitting (**not supplied)** to the inlet port at FRL unit. Connect the shop air supply line to this fitting. **IMPORTANT: Shop air must be connected to the inlet port at the FRL unit on the console, in order for lift to operate.**

- Remove the black hex socket cap on the top of Lubricator, Fill the Lubricator Reservoir with Snap-On Air Motor Oil #IM6 or Equivalent up to 4/5 of oil reservoir height, re-install the cap. How to fill oil and adjustment reference to **Section 12.3.**

- After connecting the main air line, check the air system for any leaks.

**Note: The console is equipped with an air Filter/Regulator/Lubricator to ensure a clean air supply is provided to the safety release cylinders, Jackbeams, The Air Regulator should be set between 0.62 - 0.83Mpa (90-120psi).**

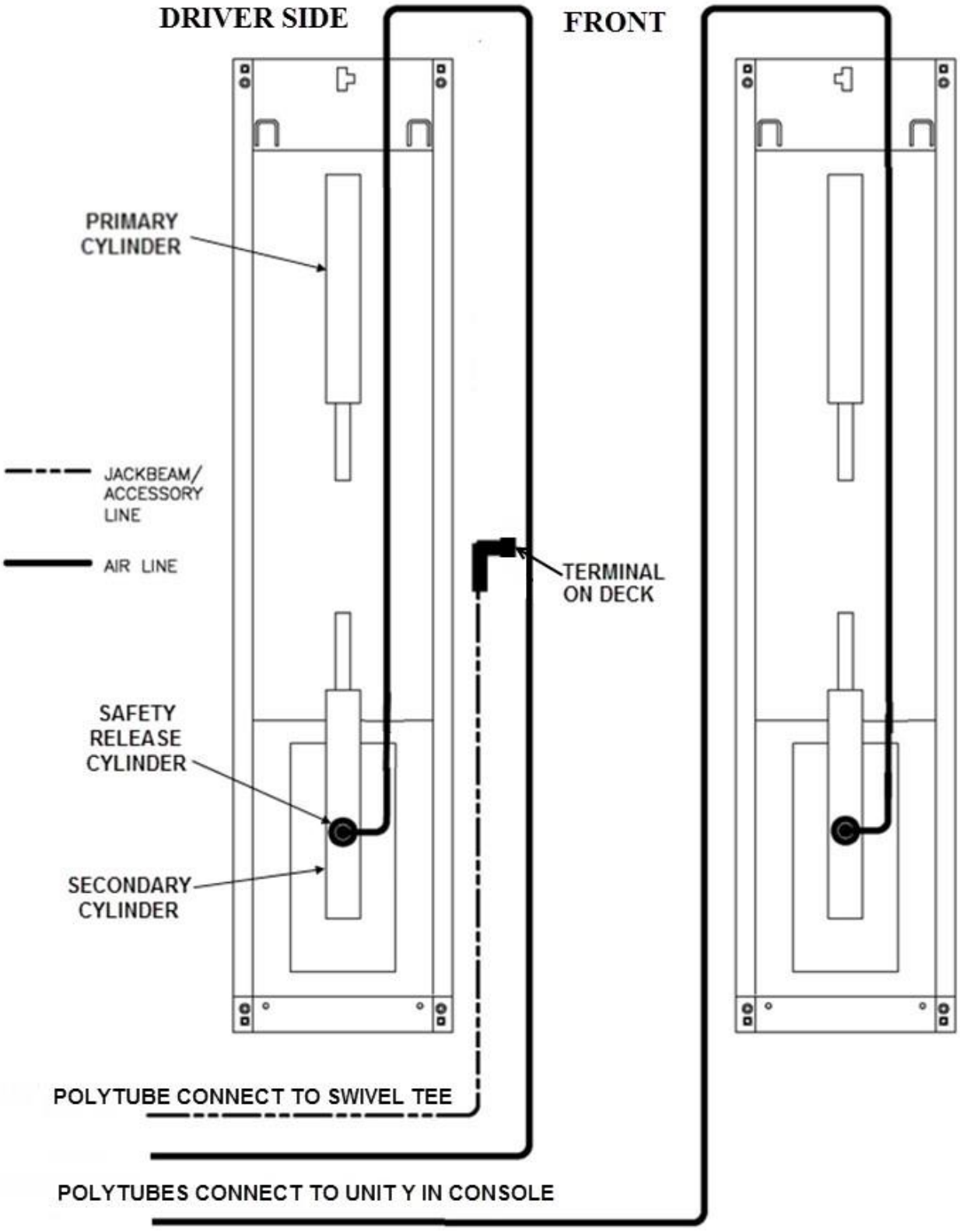



**Figure 15 - Air Safety & Auxiliary Air Connections**

**For a flush mount installation with a front mount console requiring a hose extension, refer to installation instructions 6-4189 provided with kit EAK0299T19A**

## 7.8 Electrical Connections

**DANGER!** – Ensure that electrical connections are completed by a licensed electrician. Electrical shock can cause serious injury or even death.

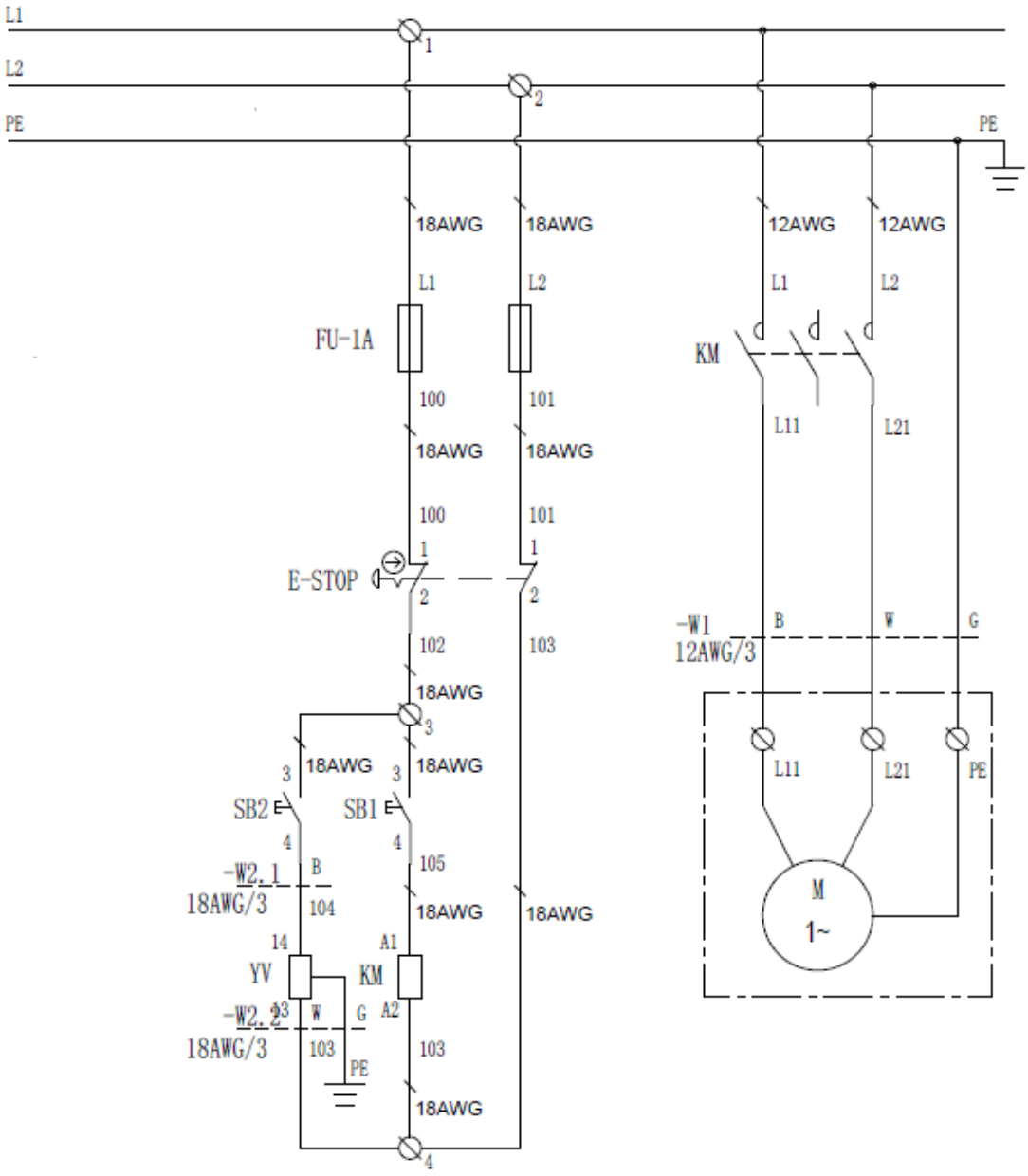



**Figure 16 - Console Circuit Connections**

**CAUTION:**
MOTOR NOT PROTECTED BY THERMAL OVERLOAD--- EXTERNAL OVERHEAT PROTECTION IN ACCORDANCY WITH CE CODE, PART I, MUST BE PROVIDED.
- MINIMUM CIRCUIT AMPACITY OF CONDUCTOR IS **20** A.
- MAXIMUM BRANCH CIRCUIT FUSE IS **20** A.

## 7.9 Initial Operation

**⚠WARNING**

**EQUALIZER VALVES ON THE HYDRAULIC EQUALIZATION CIRCUIT MUST REMAIN IN THE CLOSED POSITION DURING NORMAL OPERATION. REFERENCE FIGURE 17 (b).**
**REAR BOLSTER BAR AND JACK BEAMS CANNOT BE INSTALLED UNTIL THE LIFT HAS BEEN BLED.**
**THE FOLLOWING PROCEDURE SHOULD BE PERFORMED WITHOUT LOAD ON THE LIFT.**

1. Fill hydraulic fluid in reservoir (ISO 32 10wt). Oil capacity for the lift is approximately 4 gallons. Make sure the funnel used to fill the power unit is clean and incorporates a filter device.

2. Connect shop air to the inlet port at the FRL unit in the console.

3. Raise lift by pressing the up button located on the front of the console.
   Raise the lift approximately 4 ft and check all the hoses at the lift for any hydraulic leaks.

4. Continue raising the lift slowly and monitoring the fluid level in the reservoir at same time, add hydraulic oil if necessary, until the lift cylinders reach their maximum extension.

   - **During this stage the secondary cylinders are not yet full of oil. During the following steps, one side of the lift may raise higher than the other.**

5. Press the mechanical safety release button and then lower the lift by pressing the down button. Bring the lift to the fully lowered position.

6. Repeat this process at least three times to equalize the oil pressure in each cylinder.

## 7.10 Bleed The Hydraulic System

**⚠WARNING**

**EQUALIZER VALVES ON THE HYDRAULIC EQUALIZATION CIRCUIT MUST REMAIN IN THE CLOSED POSITION DURING NORMAL OPERATION. FAILURE TO CLOSE VALVES DURING NORMAL OPERATION MAY DAMAGE LIFT STRUCTURE.THE FOLLOWING PROCEDURE SHOULD BE PERFORMED WITHOUT LOAD ON THE LIFT.**

1. With the lift in the fully lowered position, place the valve handles on the hydraulic equalization circuit until both handles are PARALLEL with the valve body that is OPEN position. See **Figure 17 (a).**

2. Raise the lift to the maximum raised position, the runways may raise unevenly during this time.

3. Raise the lift until both runways reach full height and cylinders are at maximum extension. Once the lift stops raising, continue pressing the "UP" button for 15 seconds to fill all the cylinders with hydraulic oil.

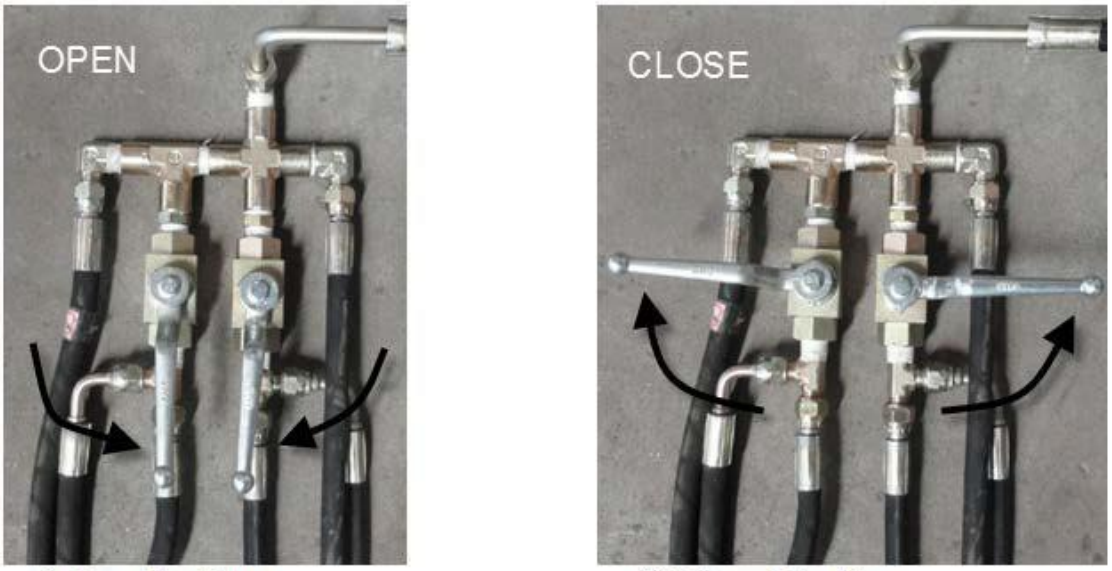
4. After the cylinders are filled, position the handles on the hydraulic equalization circuit back to the CLOSED position - PERPENDICULAR WITH THE VALVE BODY. See **Figure 17 (b).**

5. Press the mechanical safety release button and lower the lift to the fully lowered position.

6. Raised the lift midway and lower onto a safety lock position.

7. After a visual confirmation that both sides are on the Same Lock Position. Open both valve handles, you may hear a "swoosh" as the fluid in all four cylinders equalizes. Once this is done (about 10 seconds later) close the valve handles.

8. Your lift should now be equalized. **Be sure to repeat this procedure step 1-7 if the lift requires equalization in the future.**




a) Open Position b) Closed Position

**Figure 17 – Ball Valve Handle Positions**

## 7.11 Level and Support

**NOTICE -** CORRECT LEVELING IS IMPORTANT TO ENSURE THE PROPER OPERATION OF THE LIFT. TAKE PRECAUTIONS TO ENSURE ACCURATE LEVEL READINGS WHEN PERFORMING THIS PROCEDURE. IT IS HIGHLY RECOMMENDED TO PERFORM THE LEVELLING PROCEDURE USING A SELF-LEVELLING LASER LEVEL.

Side-to-side leveling measurements should be taken off the base frame, and measurements should be taken on each base frame as well as between the two base frames. Front-to-back level checks should be made on the runways.

1. Press the up button and raise the lift to the fully extended operating position. Check the location of the base frames and runways compared to **Figure 4**, and make minor adjustments as required.
2. Install the Leveling bolts and nuts (8 x M16 and 4 x M16 per lift) provided in accessory box onto the base frames see **Figure 18,** Level the base frames using these leveling bolts at each of the four (4) corners and the middle of base frames.

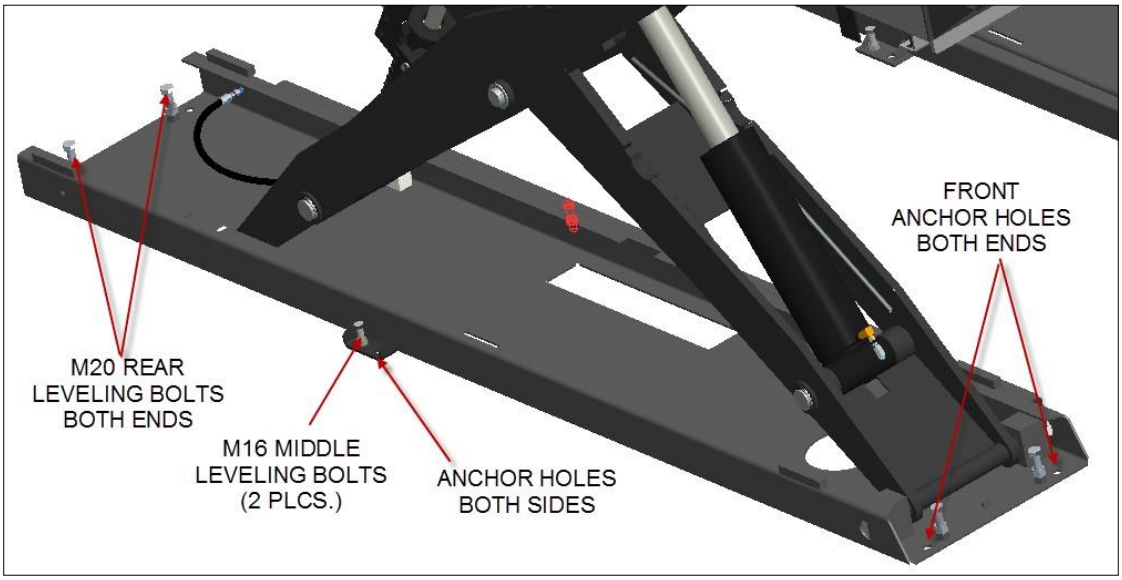



**Figure 18 – Leveling Bolts Location**

3. Use shims provided to support under glide block area of base frame, front hinges and middle area. See **Figure 19**.
4. Verify that the base frames are level side-to-side and that the runways are level front-to-back. Check that the spacing between the runways is as desired, and that this spacing is equal at both the front and rear of the lift. Check that the diagonal measurements between opposite corners of the base frames are equal.
5. Lower and raise the lift and repeat check measurements at top, mid-points and bottom to ensure the lift is not tracking.
6. Once lift is level, back off all leveling bolts so that the base is firmly sitting on the shims. Re-check to make sure the lift is still level and shims are holding properly.

**Note: These bolts must be removed once the shims are installed under the base correctly (same as the center bolt on the base).**

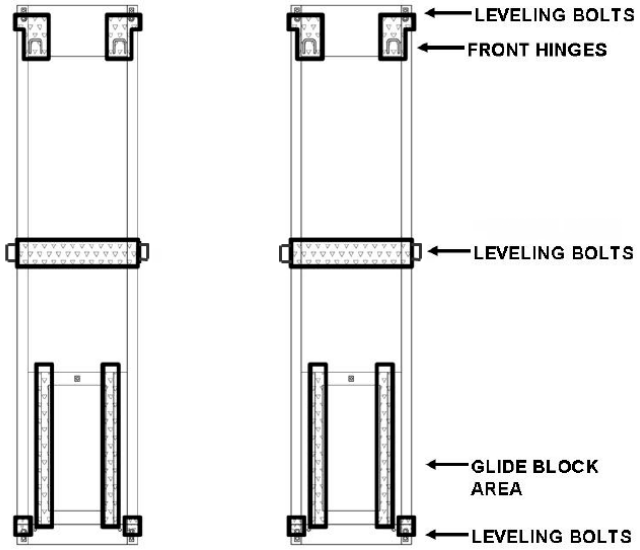



**Figure 19 – Shimming**

## 7.12 Anchoring Procedure

**CAUTION!** WEAR PERSONAL PROTECTIVE EQUIPMENT (PPE) AND PRACTICE CAUTION WHILE DRILLING CONCRETE.

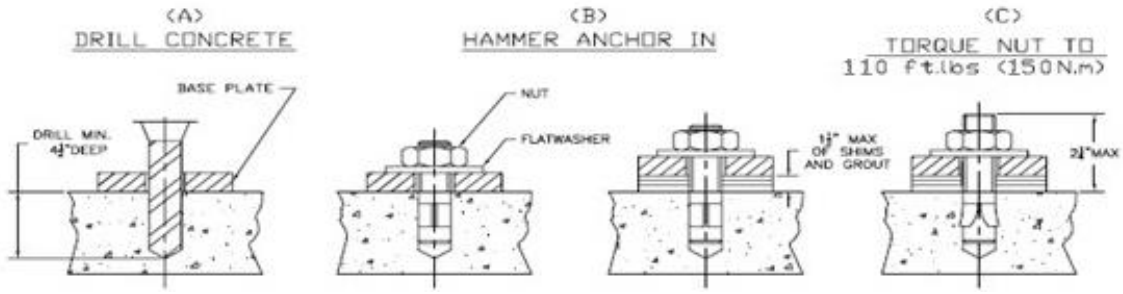



**Figure 20 – Anchoring**

1. Using a rotary hammer drill and a 3/4” concrete bit, drill through the floor at each of the six (6) anchor bolt locations beside the six (6) leveling bolts on each of the base frames. Refer to **Figure 18** and **Figure 20**.
2. Assemble the nut and washer onto the 3/4” x 5-1/2” long wedge anchor bolts supplied.
3. Clean out the drilling dust from the holes and hammer in the anchors until they make contacts with the baseplate.
4. Torque all anchor bolts to **MAX. 110 lbs-ft (150 Nm).**
5. Position the console in the final desired location see **Figure 4**. Using a rotary hammer drill and a 1/4” concrete bit, drill and anchor the console to the floor using the Nail in Anchors provided in the hardware kit.

If anchor bolts do not tighten to 110 lbs-ft (150 Nm). OR project more than 2-1/4” above the concrete surface, the concrete should be replaced by an appropriate concrete pad.

## 7.13 Grouting Procedure (Optional)

1. Pour grouting under the load area of each base frame as shown in **Figure 21**. Ensure that grout is evenly distributed under the frame and finish the edges with a 45 degree chamfer. Refer to specific grouting instructions on the package. Leave a drain area to allow any liquids to escape.
2. GROUTING MUST FULLY CURE BEFORE PROCEEDING. Do not operate the lift while grout is curing. Refer to instructions on the package for recommended cure times. [Non-Shrink Grout (3000psi min. in 24hrs, 7000psi min. in 30 days)]

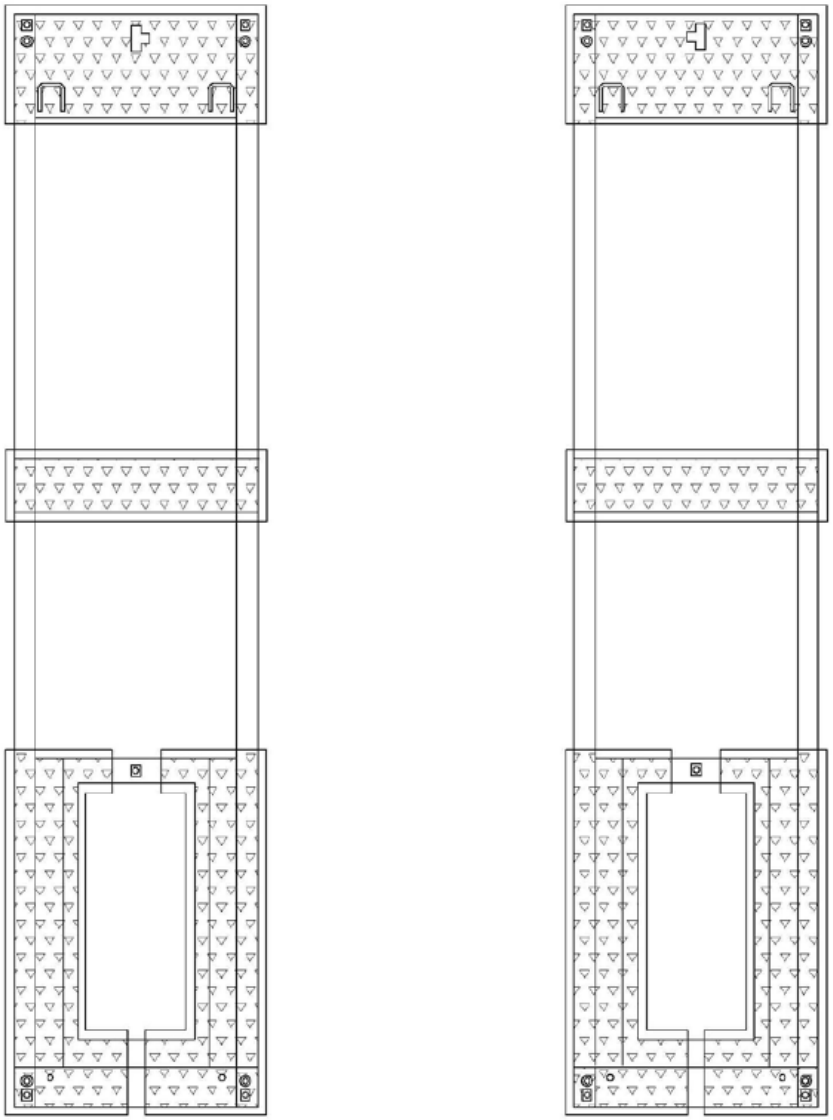


**Figure 21 - Grouting Locations**

## 8.0 ACCESSORY INSTALLATION

**Position lift to a** comfortable working height and place the lift on the mechanical safety locks to continue with the installation.

### 8.1 Installation of Wheel Stops

Install the front wheel stops located in the accessory box by using three M14 hex bolts, washers, and hex nuts located in the hardware kit for each runway. **See Figure 22**.

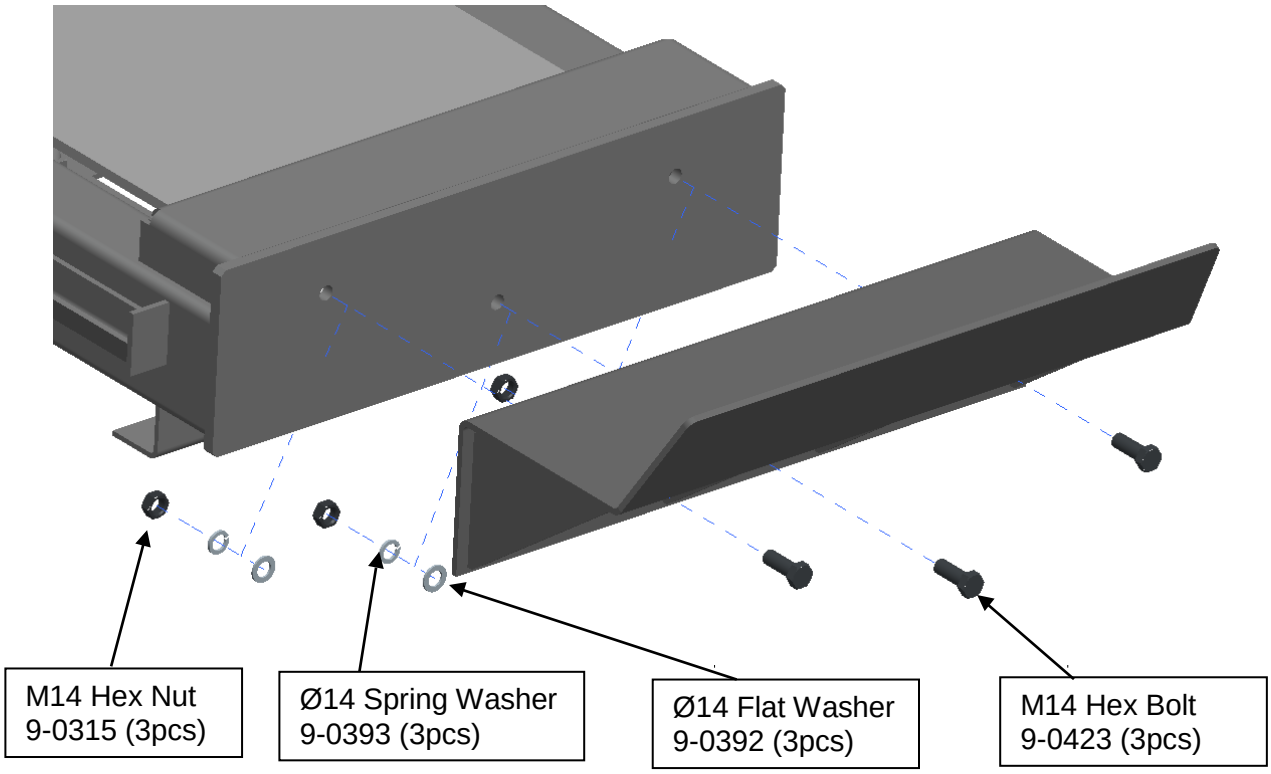



**Figure 22 – Wheel stop Installation**

**⚠WARNING**

**The wheel stops are designed as a secondary means to restrain a vehicle from inadvertently rolling off the runways. Property damage and physical injuries may occur if this warning is not adhered to.**

## 8.2 Installation of Rear Bolster Bar

Install the bolster bar to the rear end of both runways by using eight M24 Hex bolts, washers and Hex nuts located in the hardware kit. See **Figure 23.**

Engine crane or floor jack will be required to lift and position the bolster bar. It may be necessary to lower the lift to accommodate the installation.

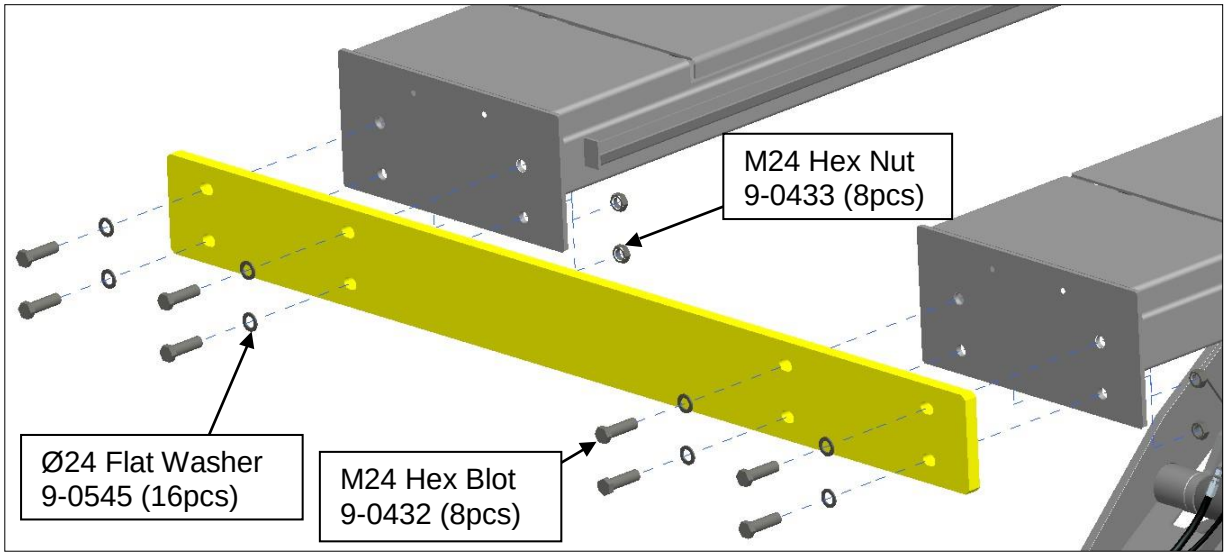



**Figure 23-Bolster Bar Installation**

## 8.3 Installation of Transition Ramps

- Install the mounting bracket to the runways using hardware provided.
- Retain the transition ramps to the mounting bracket using the pin supplied.
- Ensure that both circlips are installed on either end of the pin.

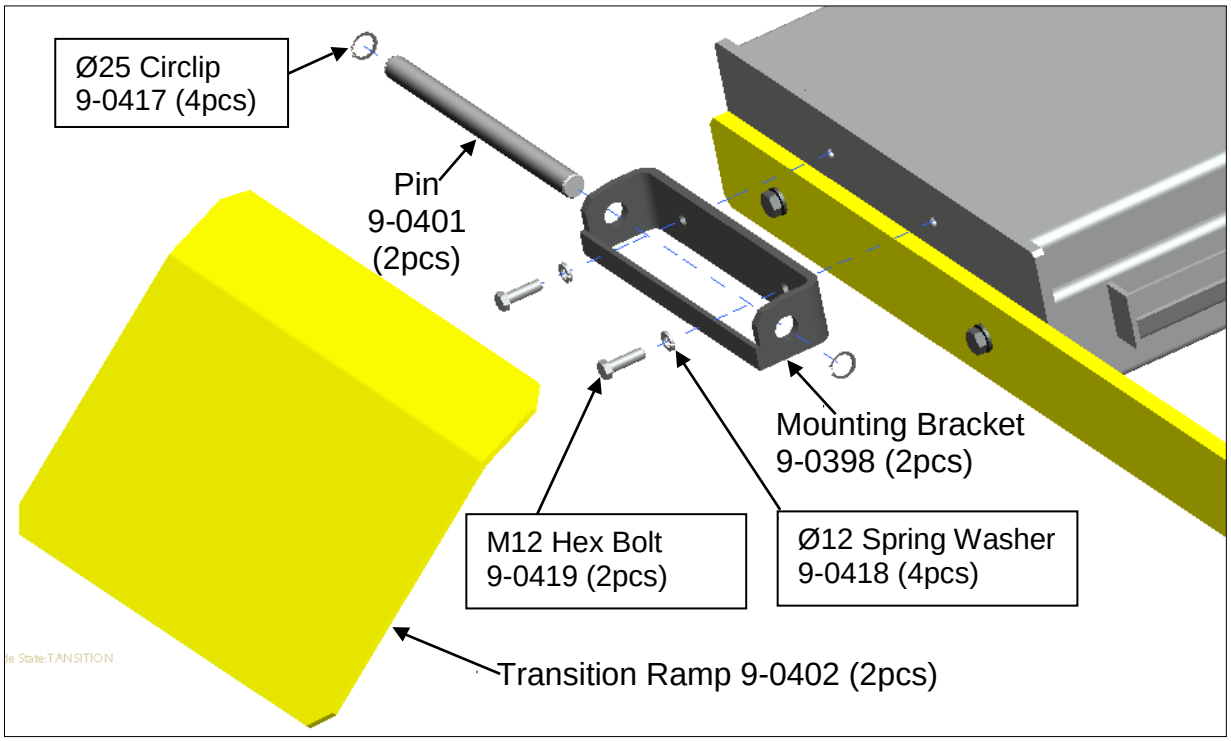



**Figure 24 – Transition Ramps Installation**

## 8.4 Position of approaching ramps

### 1. Position the approaching ramps in the desired location

**NOTE: RAMP OPERATION INSTRUCTION REFERENCE TO THE SECTION 19.0.**

- Raise the lift up to the top lock position;
- Open the ramps package to get two fully retracted ramps (9-2180), position them in the desired location, see **Figure 25.**

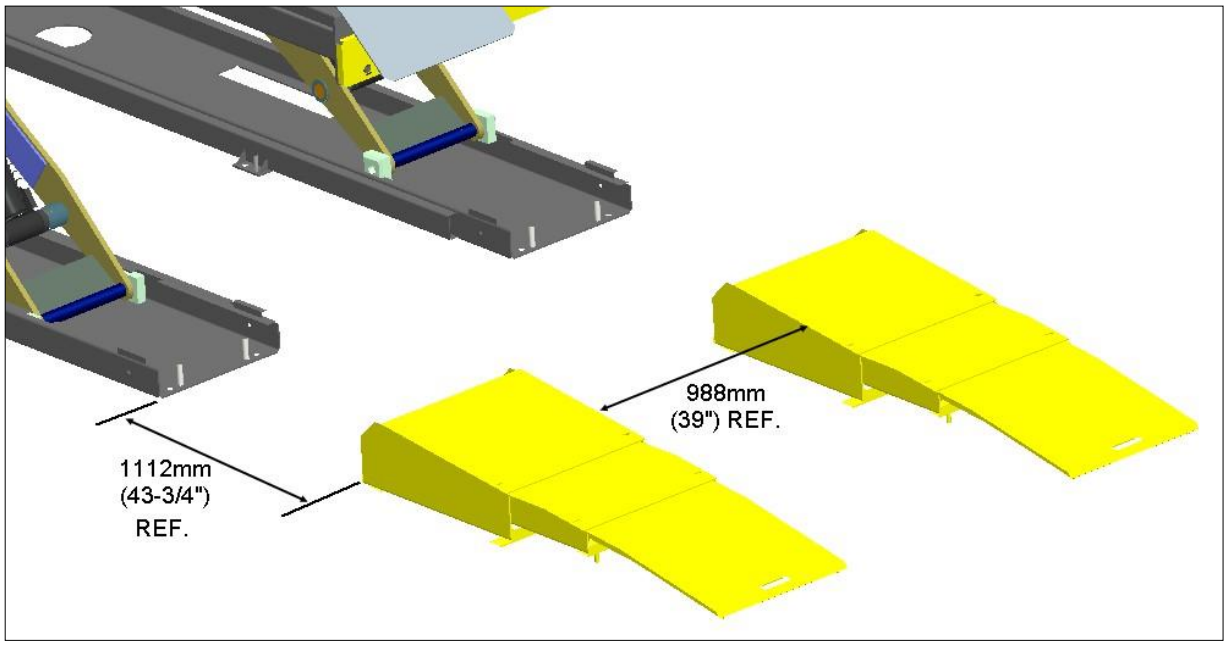



**Figure 25 – Position the Approaching ramps**

- Use small digital level to check each ramp levelling, use supplied shims to make ramp level if necessary, see **Figure 26, Figure 27.**

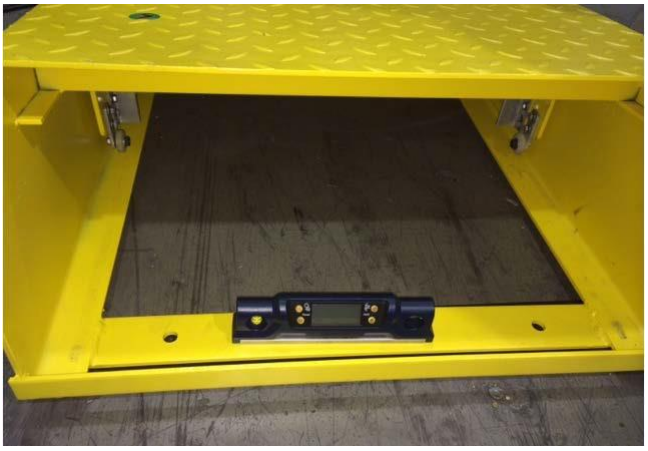


**Figure 26 – Side to Side Level**

**Figure 27 – Front to End Level**

- Lower the lift and verify sufficient clearance between the deck ends and the approach ramps.

- Review the function of the transition ramps, if the ramp is too lower, use supplied shims to shim up desired height (total can raise up 60mm or 2-3/8"), and ensure the transition ramp functioning.

**2. Anchor the Ramps**

- Raise lift up to top lock position again to give space to anchor the ramps.

- Anchor the approaching ramps by using four 1/2” x 4-1/2” long wedge anchor bolts supplied for each ramp, see **Figure 28**

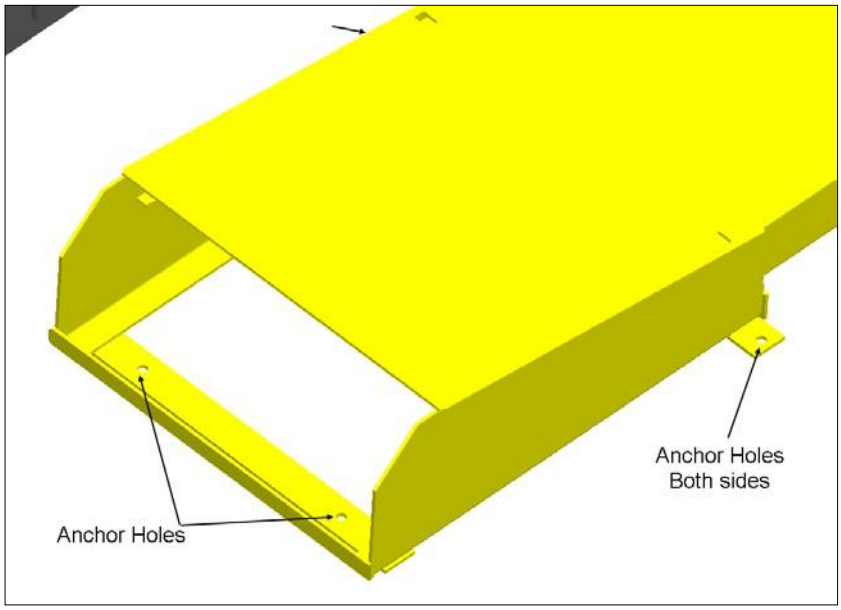



**Figure 28 – Anchoring approaching ramps**

**3. Operation Instruction**

See **Section 11.3**

## 8.5 Position of Jack Beams

- Refer to **Figure 1,** Position two Jack beams on scissor lift, make sure that the air/ hydraulic pump of front jack beam oriented to front and the air/ hydraulic pump of rear jack beam oriented to rear for easy operation. And also make sure that all rollers seat on the rail on both sides of runways, see **Figure 29.**

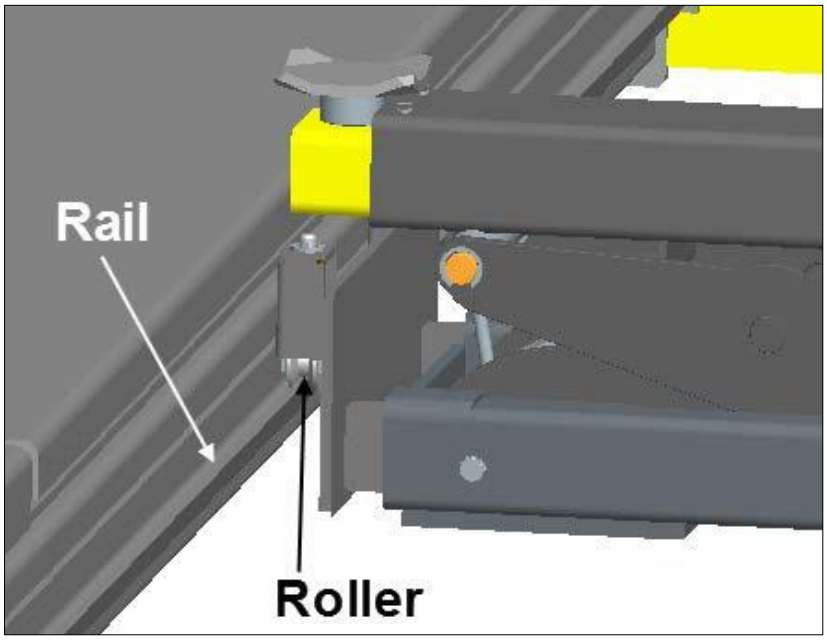



**Figure 29– Position of Jack beam**

- Disconnect the compressed air supply to the lift.

- Remove the cap from the Terminal bolt on the driver side runway that were installed during lift initial testing prior to turning on the air supply.

- Install the Branch Tee (9-0672) supplied in Accessory box to the Terminal bolt on driver side runway,
  See **Figure 30**.

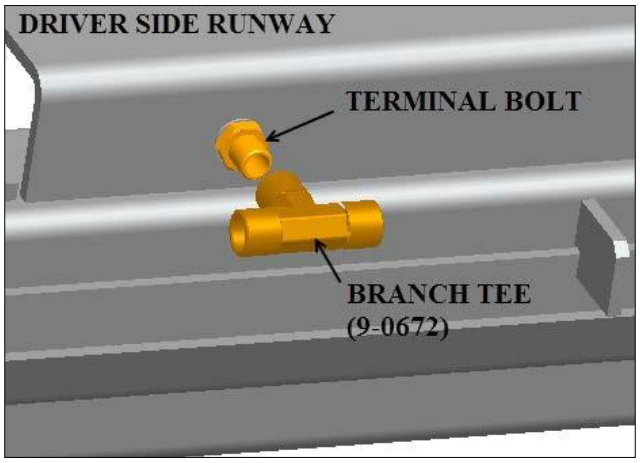



**Figure 30 – Install Branch Tee**

- Connect the 12ft recoil hose located in accessory kit from jack beam to branch Tee fitting on inside of runway of the driver side. See **Figure 31.**

**NOTE: Refer to Jackbeam installation and operation manual for detailed specifications and Jackbeam operation.**

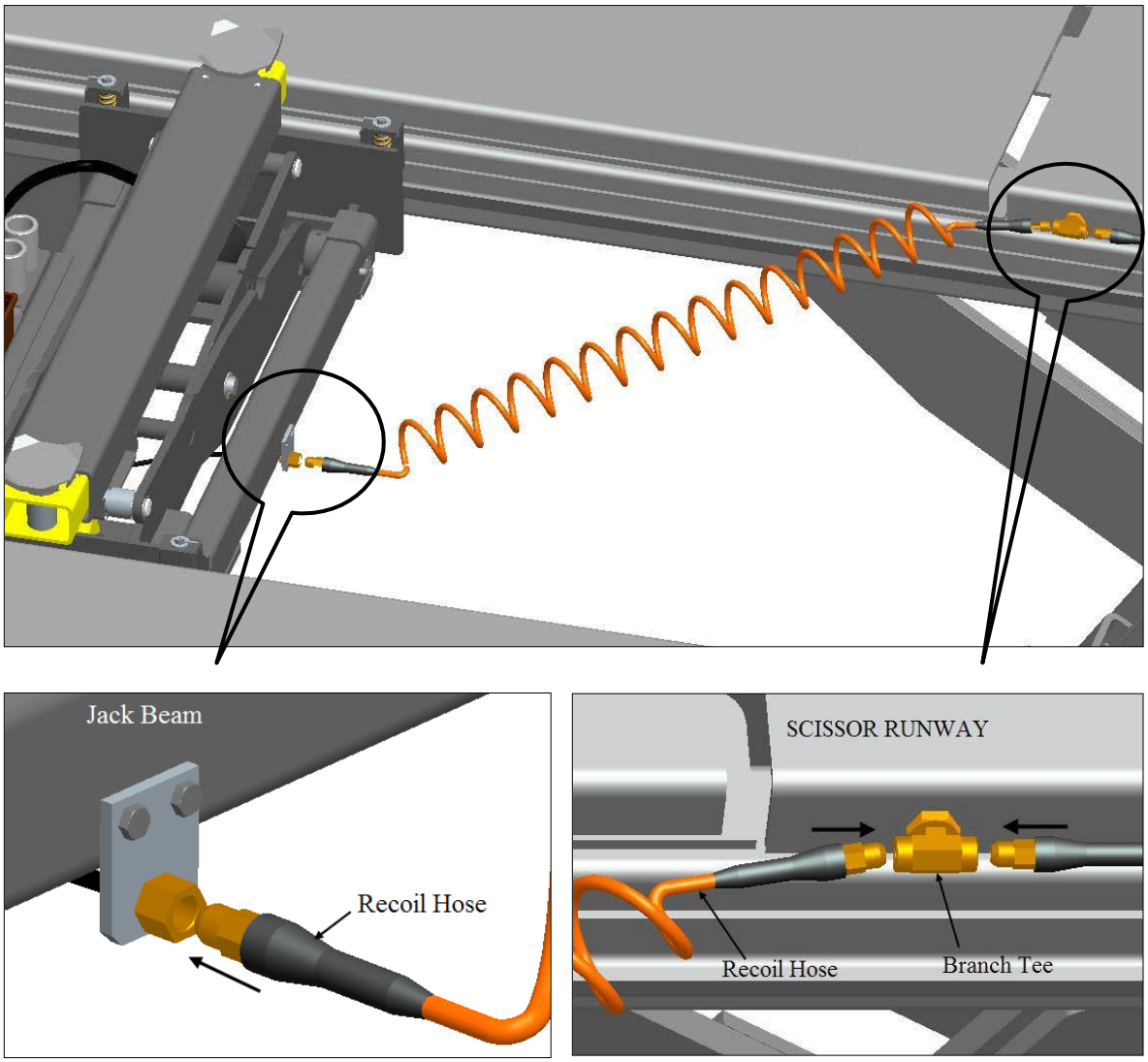



**Figure 31 – Connection of Air Recoil Hose**

## 8.6 Installation of Line Covers

1. Install line covers once console is installed and hydraulic lines are routed.

2. Position line cover “A” behind the base frames as shown.

3. Place line cover “B” close to line cover “A”, and adjust the position to make the square holes of the line cover “B” covered by line cover “A”.

4. Position the line cover “C” close to the line cover “B”, and lay the other line cover “C” close to the located line cover “C” as shown.

5. The number along each side of the line covers represents the quantity of fasteners required to secure them in place. Using a Ø8 concrete drill bit, drill holes as required and install the supplied “HEXAGONAL EXPANSION SCREW (1-10789A).

**Note: Tapcon or equivalent concrete screws can be used as an option for future removal.**

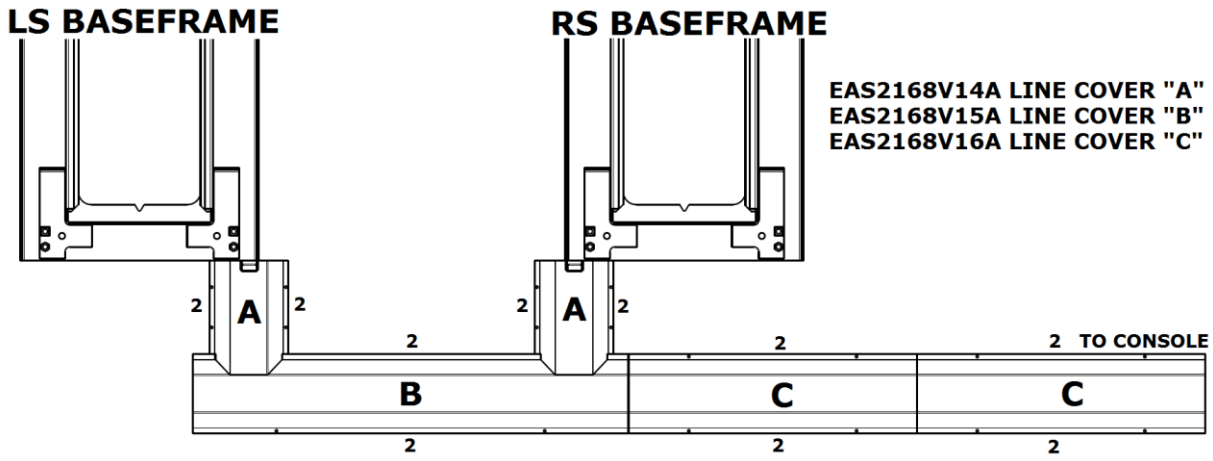



**Figure 32 - Line Covers Layout**

**Optional:** To locate the console on left side of lift, please put the line cover “C” on the other side.

## 8.7 Installation of Extension Line Covers

### Installation of extension line covers ( Hose extension kit )

1. Install line covers “E” and “D” to form an angle (as shown) that will route the hoses to the front of the lift.

2. Position 5 line covers “C” after line cover “D” as shown toward the console already in position.

3. Position the line cover “F” close to the line cover “C”

4. The number along each side of the line covers represents the quantity of fasteners required to secure them in place. Using a Ø8 concrete drill bit, drill holes as required and install the supplied “HEXAGONAL EXPANSION SCREW (1-10789A)”.

**Note: Tapcon or equivalent concrete screws can be used as an option for future removal.**

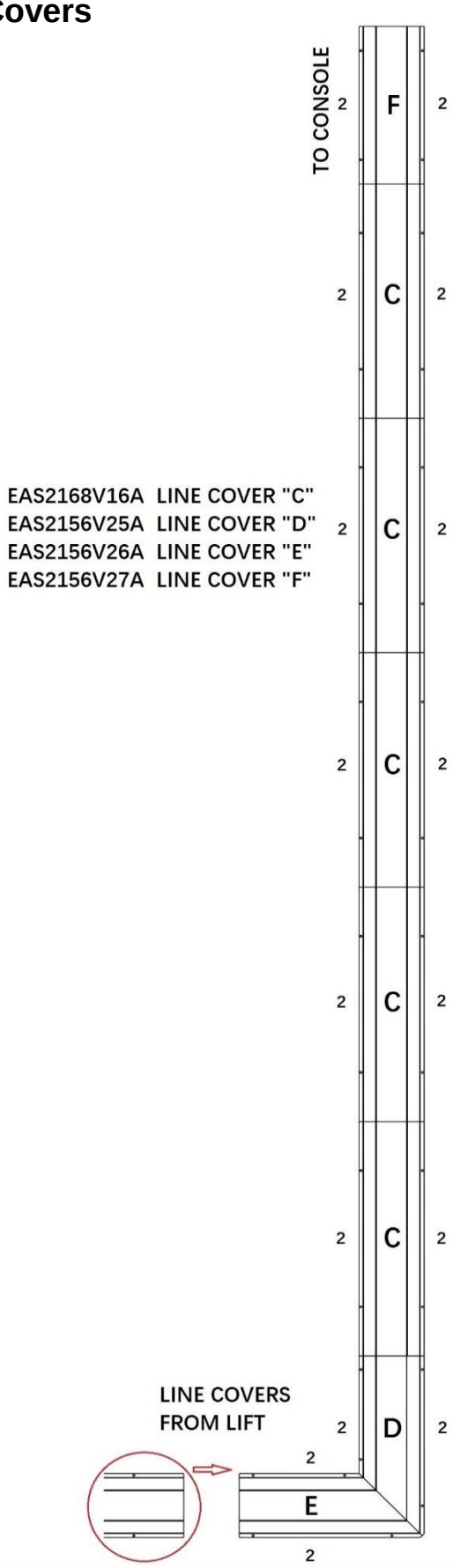



**Figure 33 – Extension Line Covers Layout**

# 9.0 INSTALL FRONT TURNTABLES

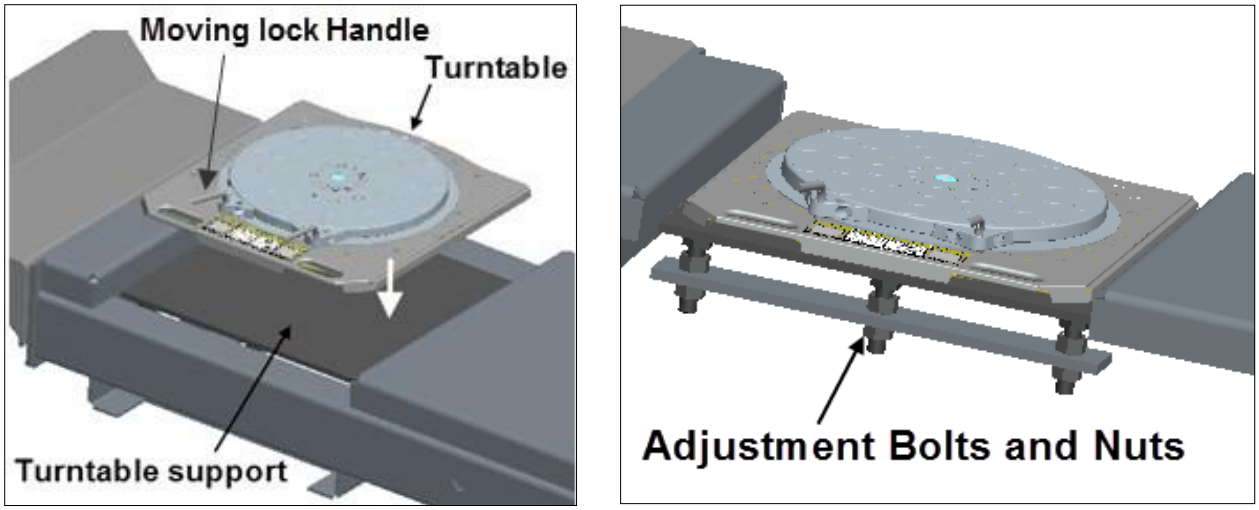
## 9.1 Installation of Front Turntables

1. Position the lift at a comfortable working height and lower onto a mechanical safety lock.

2. Place each front turntable assembly on the front alignment pan of the runway. Moving lock handles of the turntables should be oriented to the outside of lift, See **Figure 34 (a)**.

3. If the surface of turntable is not flat with the runway, the turntable support can be adjusted to level with runway by using the 6 adjustment bolts under the support plate. See **Figure 34 (b)**. Tighten the jam nuts on the adjusting screws after adjusting.

4. Verify that the turntable assembly is completely seated in the front alignment pan. Gently slide each turntable in the alignment pan, left and right, to verify that they can be positioned for different car widths.




**a. Position Turntable** **b. Turntable Height Adjustment**

**Figure 34 – Turntable Position and Adjustment**

## 9.2 Moving and Locking the Rear Slip Plate

- The Rear slip plates are pre-assembled on runway, seat on the 31 transfer balls and locked by two 90º angle lock pins, see **Figure 36;**

- During alignment process as needed, pull out two lock pins and insert into pin storage;

- The slip plate can now move as required

**⚠WARNING** **Do not insert fingers in the front or rear alignment pan cut-out, See Figure 35 and Figure 36.**
**During normal use, the front turntables and rear slip plates may move rapidly, Creating pinch points for your fingers or hands. Keep hands clear of these pinch points when moving it.**

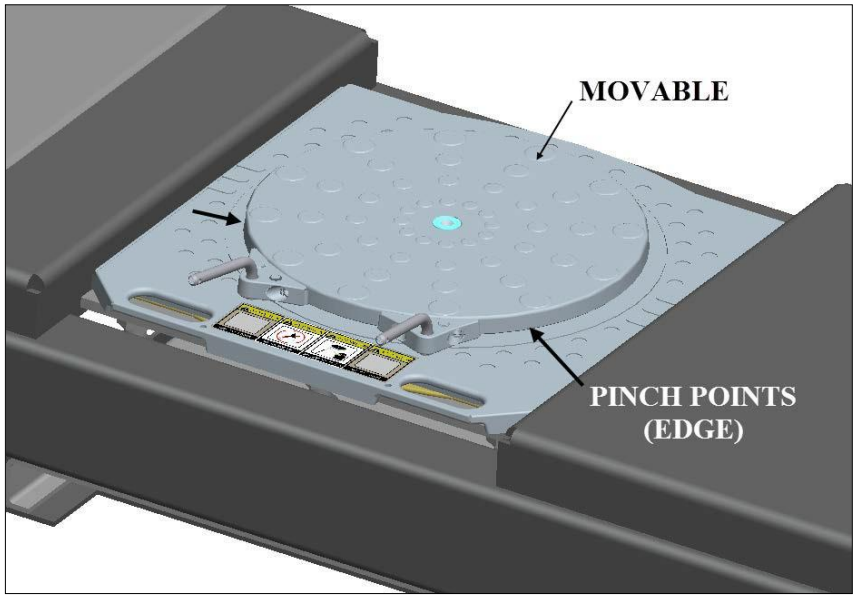



**Figure 35 – Turntable Pinch Points**

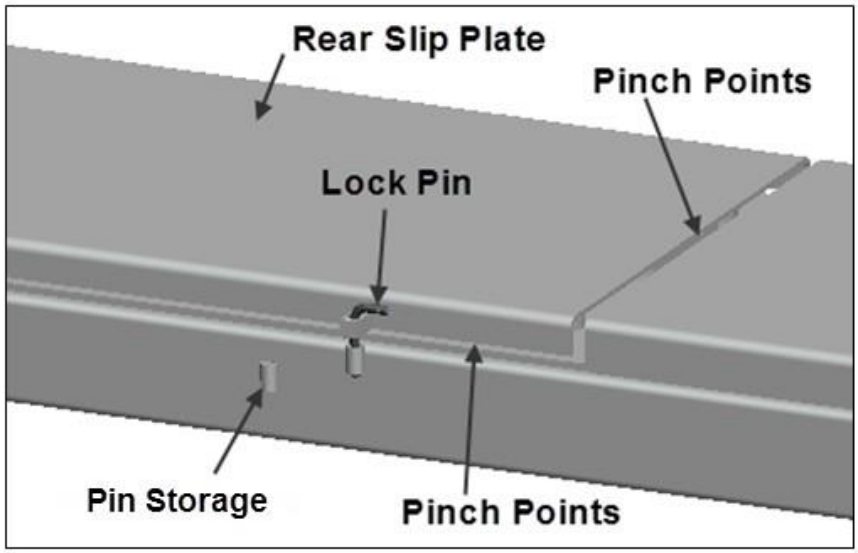



**Figure 36 – Rear Slip Plate Locking and Pinch Points**

# 10.0 FINAL PROCEDURES

## 10.1 Check of Assembled Lift

1. Final dimension check after anchoring. ____
2. Check for air and hydraulic leaks. ____
3. Check hydraulic fluid level in reservoir and top up as required using appropriate fluid. ____
4. Check all fasteners, tighten if necessary. ____
5. Check torque of anchor bolts (Section 7.12) ____
6. Operate lift to full stroke then lower to ground while checking for proper functionality. Ensure Safety Release is operational. ____
7. Ensure Customer Care Kit is complete and given to operator. ____
    a. Operation Manuals (Lift and Jacking beam) ____
    b. ANSI / ALI Lift It Right Manual ____
    c. ANSI / ALI Safety Tip Card ____
    d. ANSI / ALI ALIS Safety Requirements for Installation and Service of Automotive Lifts ____
    e. ANSI / ALI Quick Reference Guide ____
8. Ensure Oil has been added to the Filter / Regulator / Lubricator (Section 7.7) ____
9. Bleeding and equalization procedure completed. ____
10. Train end user on operation of lift. ____

## 10.2 Operation Test with Vehicle

1. Lower lift to the ground. ____
2. Drive vehicle on to lift and Chock the vehicle in position. ____
3. Raise the lift, and lower onto 3-4 different locking positions until the full lifting height is reached. Check that all locks are working correctly. ____
4. Lower lift to the ground and drive vehicle off lift. ____

**If any problems occur during the final checkout or operation of the lift please contact customer service at 1-800-225-5786.**

# 11.0 LIFT OPERATION

## 11.1 Raising the Lift

1. If the lift is equipped with sliding Jack Beam(s), be sure that the Beam(s) are positioned at the front or mid travel of the lift, fully down, and with the risers removed and stored. Never store Jack Beams at the rear of the lift.
2. Ensure that the lift is fully lowered before attempting to load or unload a vehicle.
3. Ensure that locking pins are secured in the front turntables and rear slip plates before driving a vehicle onto the lift.
4. Position the vehicle on the lift ensuring the resulting load on the runway is distributed as evenly as possible.
5. Chock the vehicle using the wheel chocks provided.
6. Check that there are no obstructions above the lift that could damage the lift or vehicles.
7. Raise the lift by pressing the up button on the control console. Raise the lift past the desired working height until both mechanical safeties are heard engaging. Press the down button to lower the lift down onto both of the mechanical safeties.
8. Verify that the lift is placed on the same safety lock for both sides.

---

**⚠WARNING** **NEVER WORK UNDER A VEHICLE OR THE LIFT UNLESS IT IS POSITIONED ON BOTH MECHANICAL SAFETIES!**
**DO NOT RAISE OR LOWER THE LIFT WITH THE VEHICLE ON THE JACKBEAM!**

---

## 11.2 Lowering the Lift

1. Check that there are no obstructions under the lift or vehicle. Be sure that the sliding Jack Beams are fully lowered and positioned at the front or mid section of the lift.
2. Raise the lift by pressing the up button until both runways are clear of their mechanical safety locks.
3. Press the air safety release button to release the mechanical safeties.
4. While holding the air safety release button, press the down button and lower the lift to the fully lowered position.
5. Remove wheel chocks and ensure that locking pins are secured in the front turnplates and rear slip plates before driving a vehicle off the lift.
6. Be certain that the lift is completely lowered before removing the vehicle from the lift.

---

**⚠WARNING** **THE OPERATOR MUST ALWAYS KEEP THEIR ATTENTION ON THE OPERATION OF THE LIFT WHILE RAISING OR LOWERING. IF AN OBSTRUCTION IS SEEN, RELEASE BOTH THE AIR SAFETY RELEASE BUTTON AND THE DOWN BUTTON TO STOP THE LIFT.**

---

## 11.3 Approaching Ramp Operation

This sliding approaching ramp have three following working positions, Customer can chose any one by their service needs.

### a) Fully Retracted Position

See **Figure 37**, this position is for customer with limit space in garage, which need to fully retract the ramp to close garage door.

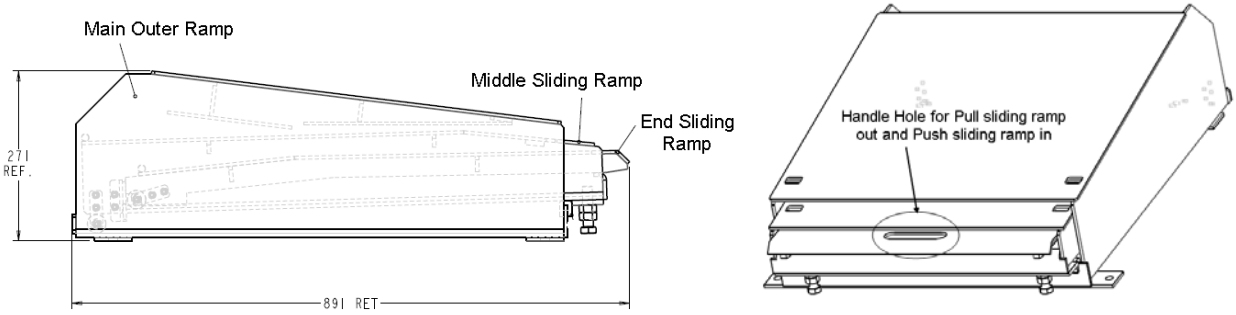



**Figure 37 – Ramp Fully Retracted Position**

### b) Normal Working Position

- See **Figure 38**, Insert your one hand finger into the handle hole to lift the end sliding ramp up and raise the middle sliding ramp up slightly;
- Pull the end and middle sliding ramps out slowly until the middle ramp engage into **Lock A**;
- Hold the middle ramp in **Lock A** and fully pull the end sliding ramp out, lower the end ramp to ground and **Lock B** engaged.
- Adjust the bolt height at the end of the middle sliding ramp, and set the middle sliding ramp end seat on ground, make sure all locks functioning.
- After day work, if more clearance space needs for close the garage door, lift the end sliding ramp end and push back fully, than lift the middle ramp up slightly and push back to fully retract position see **Figure 37**

### c) Fully Extended Working Position

- See **Figure 39**, Insert your one hand finger into the handle hole to lift the end sliding ramp up and raise the middle sliding ramp up slightly;
- Pull the end and middle sliding ramps out slowly until the middle ramp engage into **Lock C**;
- Fully pull the end sliding ramp out, lower the end ramp to ground and **Lock B** engaged.
- Adjust the bolt height at the end of the middle sliding ramp, and set the middle sliding ramp end seat on ground, make sure all locks functioning.

- After day work, if more clearance space needs for close the garage door, lift the end sliding ramp end and push back fully, than lift the middle ramp up slightly and push back to fully retract position see **Figure 37**.

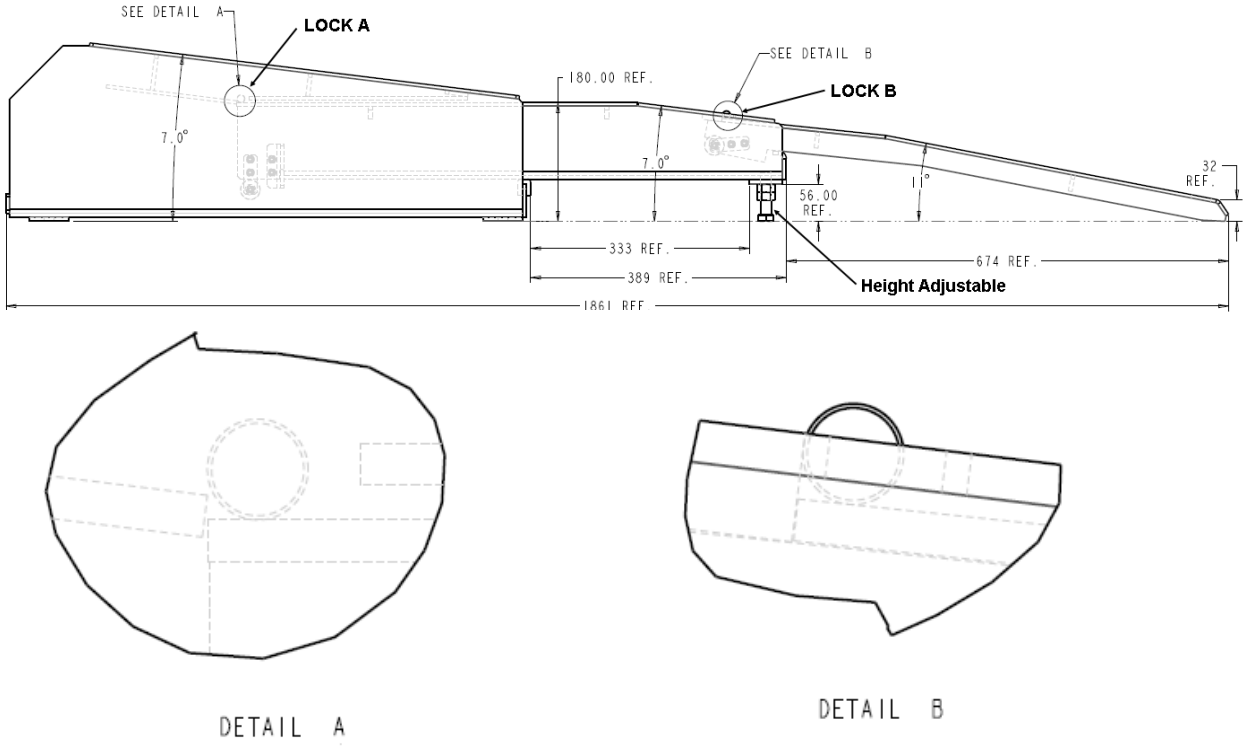



**Figure 38 – Normal Working Position**

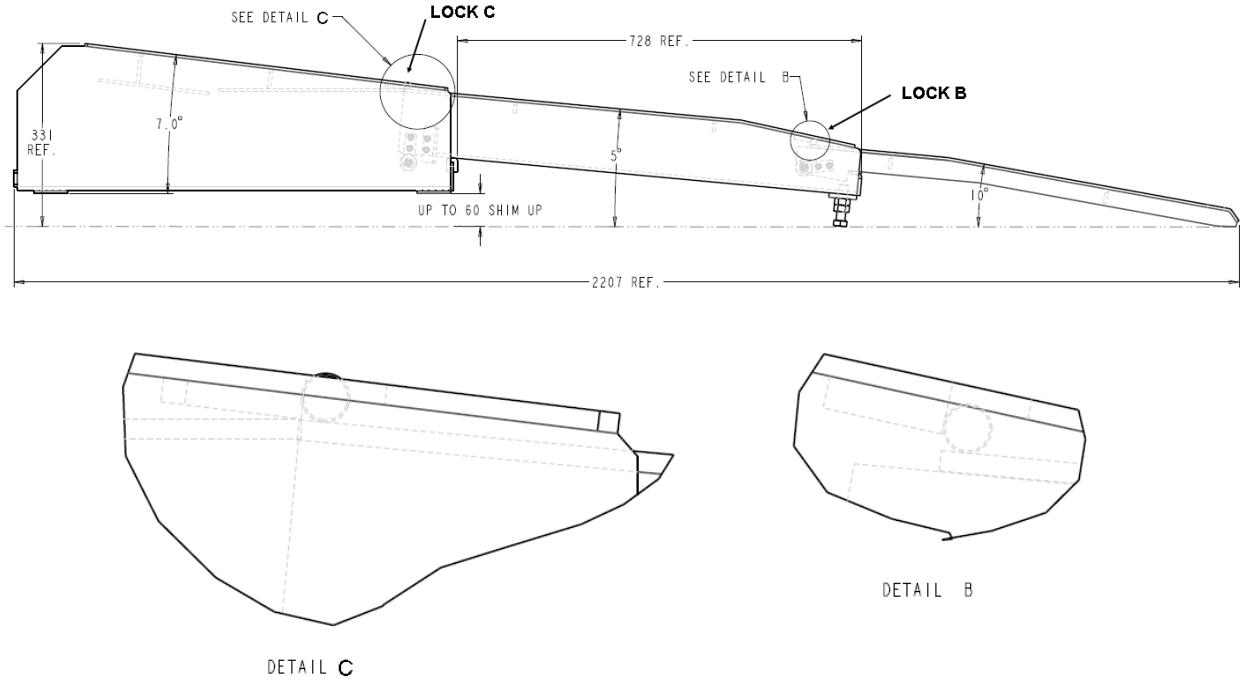



**Figure 39 – Extended Working Position**

# 12.0 RECOMMENDED INSPECTION AND MAINTENANCE

## 12.1 Lubrication SPECS

Where hydraulic oil is required > ISO 32 10W - non detergent hydraulic oil
Where grease is required > multi-purpose lithium grease
Where multipurpose lube is required > multi-purpose SAE 30 lubricating oil
Where pneumatic oil is required > Snap-On air motor oil IM1PT

**⚠WARNING** **If you are not completely familiar with automotive lift maintenance procedures, STOP. Contact Snap-on Equipment Technical Support for instructions.**
**To avoid personal injury, permit only qualified lift service personnel to perform maintenance on this equipment.**
**Always raise lift when cleaning floor area with solvents and/or cleaning compounds.**

Please refer to the following table for specific inspection and maintenance frequency.

| COMPONENT | INSPECTION FREQUENCY | | | | | |
|---|---|---|---|---|---|---|
| | DAILY | WEEKLY | MONTHLY | QUARTERLY | SEMI-ANNUALY | ANNUALY |
| Entire Lift and surrounding area | 12.12 | | | | | As shown before, and ALI Standard |
| Entire Lift Operation | 12.12 | | 12.13 | | | |
| Fasteners | | 12.7 | | | | |
| Safety Locks | 12.2 | | 12.7 | | | |
| Air Filter, Regulator, Lubricator | 12.3 | | | | | |
| Transition Ramps, Chocks, Wheel Stops | 12.8 | | | | | |
| Base Frame and Approach Ramps | | | 12.6.1 | | | |
| Anchor Bolts | | | 12.6.2 | | | |
| Turn Tables and Rear Slip Plates | 12.10.1 | | 12.10.2 | 12.10.3 | 12.10.4 | |
| Runways | | | 12.9.1 | | | |
| Air cylinders, Lines, Fittings | | | 12.3 | | | |
| Hydraulic Power Pack, Hose, Fittings | | | 12.4 | | | 12.4 |
| Hydraulic Cylinder | | | | 12.5 | | |
| Jack Beam Rails, Oil Drain Pan | | | | 12.9.2 | | |
| Anti-skid Surfaces | | | | 12.10.4 | | |
| Rolling Air Jacks | | | 12.11 | | | |

## 12.2 Mechanical Safety Locks

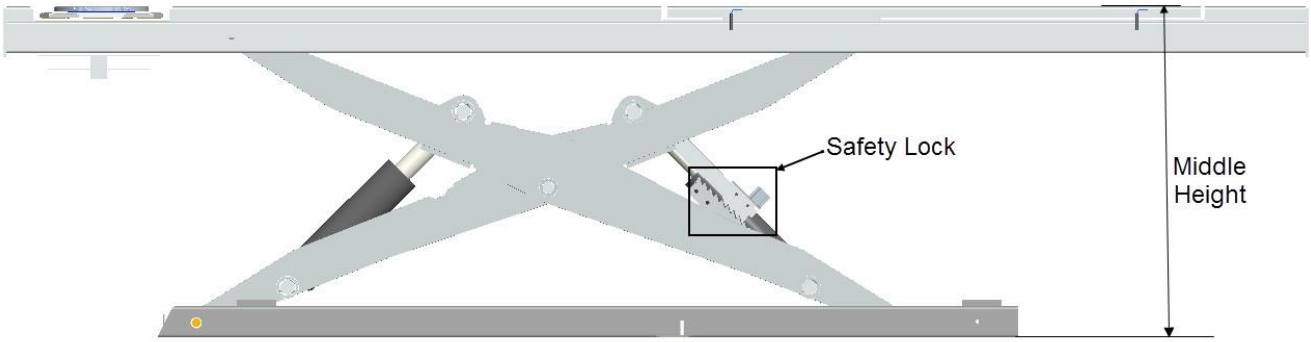
Watch and listen to safety locks operation during lift operation, to ensure that locks move as required, Stop using the lift if any malfunction or damage is observed.

- If the safety locks on both sides sound not even or unsynchronized, bleed the hydraulic system again, reference to **Section 7.10.**
- If the top lock and bottom lock mesh not correctly or not aligned, readjust the safety lock by the following procedure:

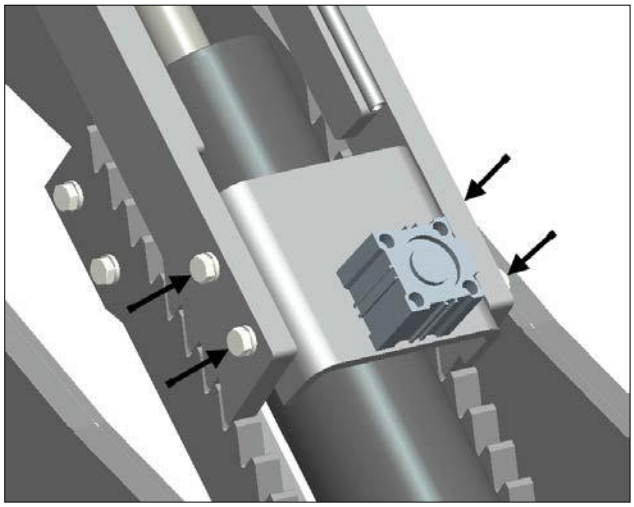
**Adjustment of Safety Locks**

**⚠CAUTION** **Use appropriate stands or blocks on sliders as back up when performing this task.**

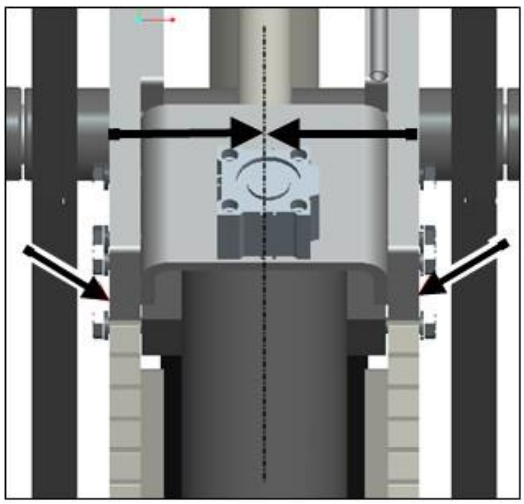
1. Raise the lift to its middle position, do not seat lift on lock and leave a small gap for moving the top lock. See **Figure 40 (a)**
2. Loosen all the bolts on the top locks with an #18 open wrench. See **Figure 40 (b)**
3. Center the top safety rack in between the bottom safety rack. See **Figure 40 (c)**
4. Tighten each bolt in sequence (one side and other side). Check the alignment after tightening each bolt.
5. Raise the lift and then lower it down, and visually inspect to make sure the adjustment is even. If the adjustment is not even, follow each step again until safety locks touch evenly.




**(a)**



**(b)**



**(c)**

**Figure 40 – Safety Lock Adjustment**

## 12.3 Air Cylinders, Air Lines, Valve and Fittings

Check FRL (Filter/Regulator/Lubricator) in the right side of console.
Drain water trap filter bowl and adjust oil feed according to manufacturer's instructions.
Drain water bowl on lift supplied water separator. Press valve at the bottom of the bowl to clear.
Check operation of air release valve for air leaks.
Check air cylinders for visible damage.
Check air lines for leaks, wear or kinks.

1. The Air Lubricator is located on the outside of the console which allows for easy monitoring of the oil level.
2. If oil level is low:
    a. Unscrew the filler cap from the Lubricator.
    b. Refill using Snap-On Air Oil #IM6 or equivalent. The oil level should not be higher than 4/5 of the oil reservoir height.
    c. Reinstall the filler cap.

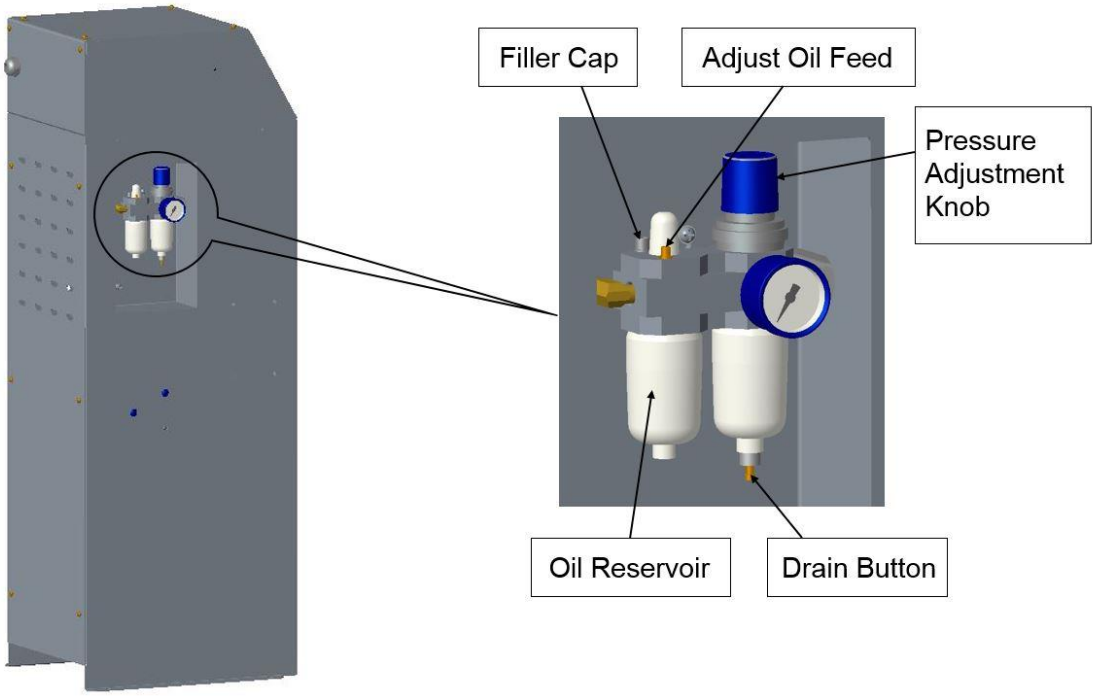



**Figure 41 – Check Oil Level of Air Lubricator**

**NOTE: Failure to maintain oil level in lubricator will void warranty on all pneumatic components.**

## 12.4 Hydraulic Power Pack and Hose

Check all air and hydraulic hoses, fittings and cylinders for leaks.
Check level of oil in power pack reservoir when lift is in the lowered position. Add if required.
Check fluid level of lift power unit and refill if needed. If refill was needed, inspect all fittings, hoses and seals. Tighten, repair or replace as required.
Change hydraulic fluid every 2 years.

## 12.5 Hydraulic Cylinders

Inspect the hydraulic cylinder mounting to the runway. Inspect cylinder and hydraulic hose for leaks. Repair or replace as required.
Check and tighten the hydraulic cylinder rod nuts holding the cable flange.
Inspect bolts holding anti-rotation bar onto cable flange and tighten if required. (If applicable)
Inspect sliders on anti-rotation bar for excessive wear or damage. Replace if required. (If applicable)

**⚠WARNING** **Failure to do so will lead to reduced service life, which could result in property damage and/or personal injury.**

## 12.6 Check Base Frames and Approach Ramps

### 12.6.1 CHECK BASE FRAMES and APPROACH RAMPS

Check base frames and approaching ramps for corrosion, giving special attention to the area at the bases facing ground. Check severely corroded areas by pecking with an awl or welder's chipping hammer. If column is corroded through at any point, it must be replaced immediately. If not corroded through, remove old paint and rust scale, then coat with a high quality corrosion resistant paint.
Clean and lubricate glide blocks.
Inspect hinge pins on approach ramps. Replace if excessively worn or damage.

### 12.6.2 CHECK ANCHOR BOLTS

Check anchor bolts on base frames and approaching ramps for tightness. If loose, re-torque base frame anchors to 110 ft-lb and approaching ramp anchors to 55 ft-lb. If anchors do not tighten to required torque, or continue to loosen, contact Snap-on Equipment Technical Support.
Verify proper embedment of anchors after tightening.

**NOTE:** The Ø3/4"×5-1/2" wedge anchors supplied must have a minimum embedment of 3-1/4" and the Ø1/2"×4½" wedge anchors supplied must have a minimum embedment of 2" into the concrete floor.

**NOTE:** If anchors do not tighten to required torque, OR if Ø3/4" anchors project more than 2-1/4" above the concrete surface, OR if Ø1/2" anchors project more than 2½" above the concrete surface due to floor slope, contact a foundation engineer to determine the best course of action.

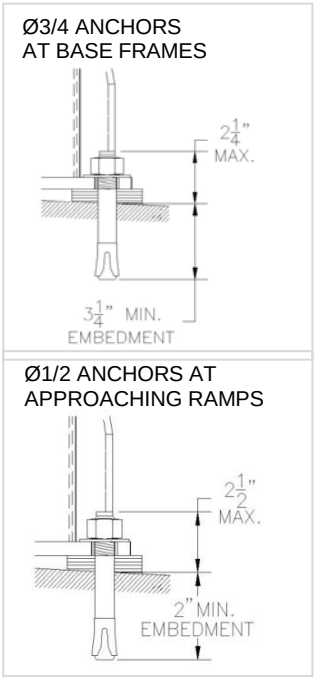



**Figure 42 – Anchor Bolts Embedment**

## 12.7 Fasteners

Check all the attaching bolts and nuts for tightness.
Note: Air cylinder bolts and nuts should allow movement of the cylinder.

## 12.8 Transition Ramps, Chocks, Front Wheel Stops

Inspect for excessive wear or damage. Repair or replace if required.
Inspect hinge pins. Replace if excessively worn. Lubricate if in good condition.

## 12.9 Runways

#### 12.9.1 CHECK RUNWAYS
Check runways for damage or abnormal deformation. If such conditions exist, contact Snap-on Equipment Technical Support.

#### 12.9.2 INSPECT JACK BEAM TRACKS
Inspect rolling jack / oil drain pan tracks for cleanliness, corrosion, excessive wear or damage. Clean dirty tracks. Worn or damaged tracks should be repaired immediately.

## 12.10 Front and Rear Steer Plates

#### 12.10.1 VISUAL INSPECTION
Check front turn tables and rear slip plates for unusual deflection, damage, fluid spills. Clean or further inspect if needed.

#### 12.10.2 CLEAN REAR SLIP PLATES AND FRONT TURN TABLES
Clean foreign debris from front turn tables and rear slip plates by blowing out with compressed air. Check and clean steer plates. Lubricate with oil or light grease.

#### 12.10.3 MAINTENANCE OF REAR STEER PLATES
Inspect the non-skid coating on rear slip plates for wear. All areas found to be worn smooth should be resurfaced with an Anti-Slip abrasive floor tread tape or a heavy duty Anti-Slip Floor Coating.

Remove rear slip plates. Clean runway surface and touch up any paint wear with a rust resistant paint. Allow paint to dry thoroughly. Inspect transfer balls for excessive wear, deformations or corrosion. Replace if needed.

#### 12.10.4 ANTI-SKID COATING ON REAR STEER PLATES
Inspect the non-skid coating on rear steer plates for wear. All areas found to be worn smooth should be resurfaced with an Anti-Slip abrasive floor tread tape or a heavy duty Anti-Slip Floor Coating.

## 12.11 Rolling Air Jacks

Lubricate roller bearings and roller guide springs.
Dismantle and clean lift arms.
Clean and lubricate rollers/sliders and hinge points.
Clean and lubricate safety mechanism.
Change hydraulic oil every two years.

## 12.12 Entire Lift

**All lift components and moving areas should be kept free of corrosive agents, solvents, and road salts. If such agents are spilled or splashed on any lift component, immediately rinse thoroughly with water and wipe down with a clean rag. Lubricate again where the lubricate required.**

**Check general operation of lift. Observe any structural noise, imbalance, binding, or other malfunctions.**


**Failure to keep the lift free of corrosive agents and solvents will lead to reduced component service life, cable failure, etc., which could result in property damage and/or personal injury.**

## 12.13 Lubrication of Pivot Point and Sliders

In some instances, a clicking noise can be heard from the pivot points and rear slides of the scissor lift. This noise is a result of low contact pressure on the bearing surface that creates a stick-slip situation. In order to reduce or even eliminate this noise immediately, it is recommended to use a motorcycle chain lube like a *Kleenflo Honey Goo CHAIN LUBE* at all slider and pivot point locations. This product can be used for ongoing maintenance on a monthly or as needed basis.

### Instructions:

- Raise the lift to its maximum working height without any weight or vehicle on the lift.
- Apply the lubrication using a straw attached to the nozzle.
- The lubrication can be applied to all pivot points and sliders.
- Review **Figures 43 - 47** for more information on applying the lubrication to specific locations.
- After spraying the lubrication, operate the lift for a few cycles to move the lube into the pressure face of the slider or bushing.
- Re-application may be necessary in some locations.
- If noise still persists after application, have someone operate the lift while you spray the lubrication into the pivot or slider location.

**Figure 43 – Lubrication points (opposite side of all locations should be lubricated as well)**

- For all **bushing locations**, spray the lubrication between the shaft and the bushing (**Figure 44**). Spray all accessible locations of the shaft on either side of the bushings, example in **Figure 45**.

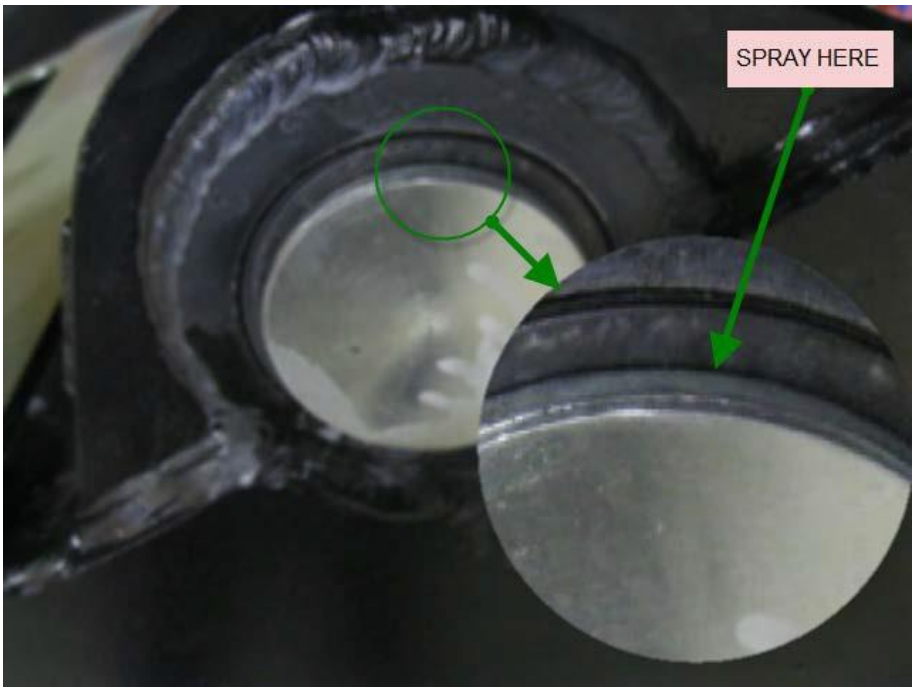



**Figure 44**

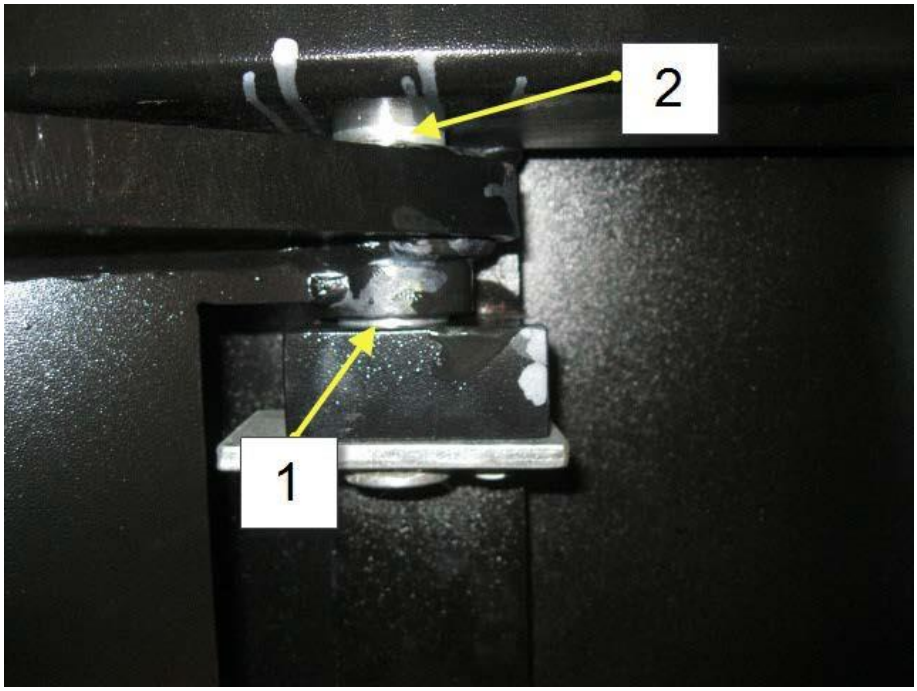



**Figure 45**

- For all **<u>slider locations</u>** on the base frame (**Figure 46**) and under the runway (**Figure 47**), lubricate the shaft of the slider (1), the travel path of the slider (2) and the slider face (3)

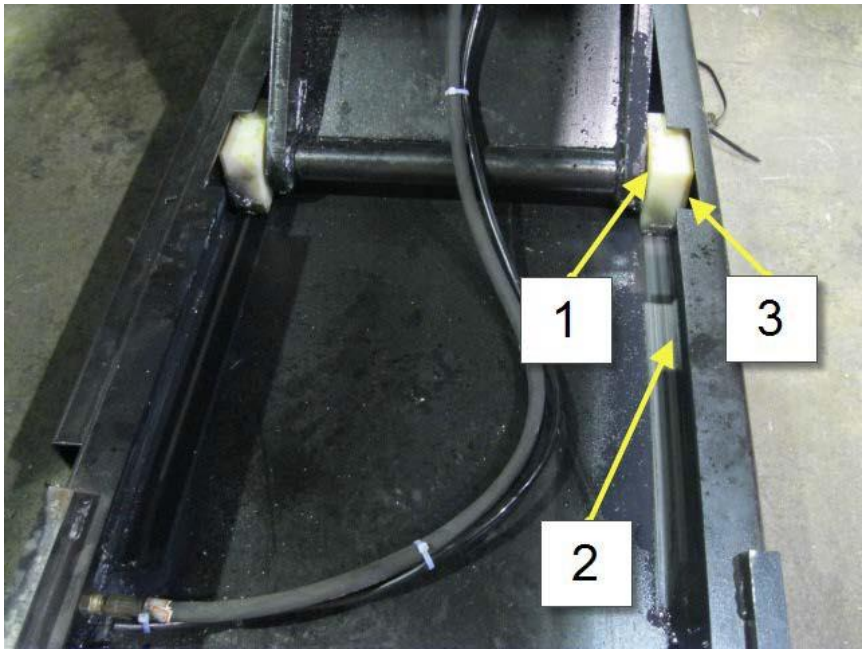



**Figure 46**

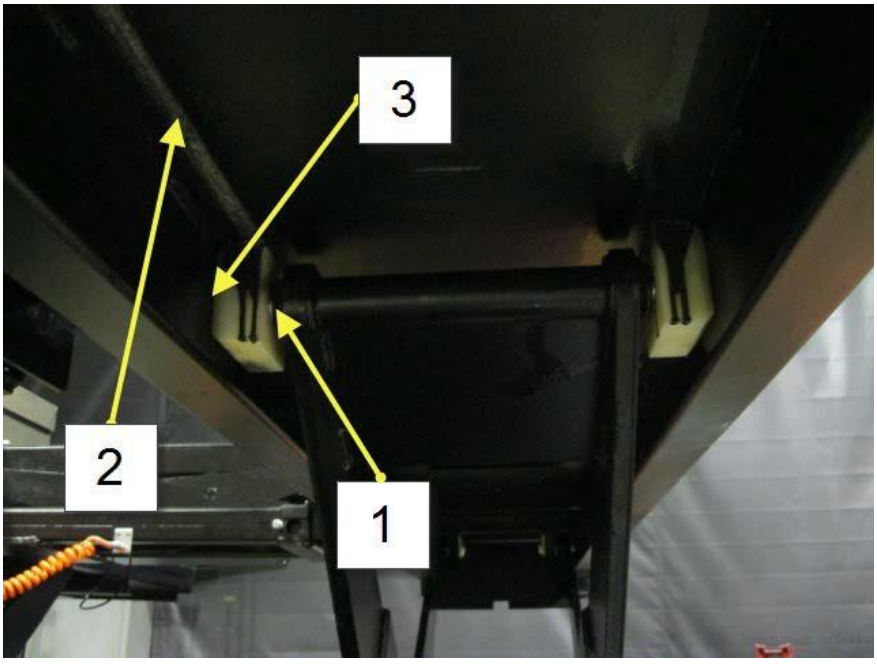



**Figure 47**

## 12.14 Lock Out and Tag Out Instructions

**IMPORTANT: This machine does not have integral devices that will isolate the electrical, pneumatic, stored and hydraulic energy source. Appropriate isolation or blocking devices must be used that have the provisions to be switched in the off position and locked in that position**.

**ALL MAINTANANCE AND SERVICE MUST BE PERFORMED BY A QUALIFIED PERSON.**

**ALL MAINTANANCE AND SERVICE MUST BE PERFORMED WITH THE LIFT UNLOADED.**

**IT IS THE SHOP OWNERS RESPONSIBILITY TO ENSURE ENERGY ISOLATING DEVICES ARE:**

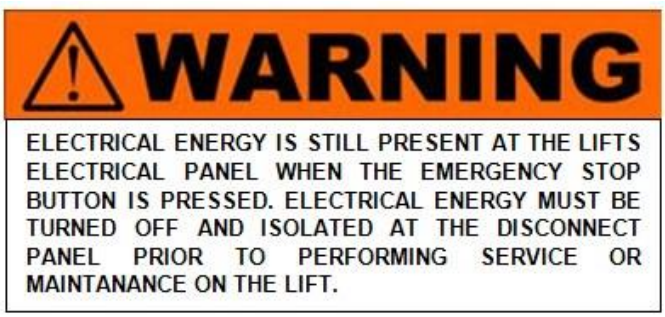
- **Accessible**
- **Conveniently located to facilitate the application of lockout devices during service and maintenance**
- **Located outside any hazardous area.**
- **At a convenient manipulating height (i.e. not overhead, on ladders or under machinery)**
- **Adequately labeled or marked. Identification shall include machine ID, energy type and magnitude.**
- **Capable of being locked or otherwise secured in an effective isolating position.**

Effective hazardous energy control procedures will protect employees during machine and equipment servicing and maintenance where the unexpected energization, start up or release of stored energy could occur and cause injury, as well as while working on or near exposed de-energized electrical conductors and parts of electrical equipment. Hazards being guard against include being caught in, being crushed by, being struck by, being thrown from, or contacting live electrical circuits/parts.

In preparation for lockout, an initial survey must be made to locate and identify all energy isolating devices to be certain which switch, valve, or other energy isolating devices apply to the machine / equipment to be locked out. More than one energy source (electrical, hydraulic, pneumatic, or others) may be involved.

### - SHUT DOWN PROCEDURE:

- Notify all affected employees that a lockout or tagout system is going to be utilized and the reason for. The authorized employee shall know the type and magnitude of energy that the lift utilizes and shall understand the associated hazards.
- ELECTRICAL: Located at the user control panel, press the “E-STOP” button to disconnect the raise and lower functions.



## - ISOLATION AND VERIFICAITON PROCEDURES:

## ISOLATION AND VERIFICATION PROCEDURES:

| ENERGY TYPE AND SOURCE | LOCKOUT LOCATION (TO BE COMPLETED BY END USER) | PROCEDURE FOR LOCKING OUT AND OR RELEASING ENERGIES | VERIFY PROCEDURES |
|---|---|---|---|
| **STORED ENERGY**<br><br>**AND**<br><br>**HYDRAULIC PRESSURE 3000-5000 PSI** | | LOWER THE LIFT TO ITS LOWEST REST POSTION. IF THE LIFT MUST BE SERVICED OR MAINTAINED IN THE RAISED POSITION, ENSURE THAT THE LIFT IS PLACED ON THE MECHANICAL LOCKS AND SUPPORTED BY SUPPLEMENTARY JACK STANDS, BLOCKED AT THE SLIDERS AND A COME ALONG SECURED BETWEEN THE SCISSORS. | VERIFY THAT THE LIFT IS CONTACTING THE SUPPLEMENTARY JACK STANDS, THE BLOCKS ARE SECURLY PLACED AND THE COME ALONG IS SECURED BETWEEN THE SCISSORS.<br><br>PRESS THE DOWN BUTTON ON THE CONSOLE AND VERIFY THAT THE LIFT DOES NOT LOWER. VERIFY HYDRAULIC PRESSURE HAS BEEN REMOVED BY SLOWLY OPENING THE MAIN HYDRAULIC FITTING AT THE POWER UNIT ONLY. IF FLUID IS PRESENT UNDER PRESSURE, IMMEDIATLY TIGHTEN AND REPEAT LOWER PROCESS. ENSURE THAT BOTH STRUCTURES ARE SECURELY PLACED ON THE STANDS AND BLOCKED. |
| **ELECTRICAL 240VOLTS** | | AT THE LIFT, PRESS THE EMERGENCY STOP BUTTON COMPLETELY TO DE-ENERGIZE THE CONTROL BUTTONS.<br><br>AT THE DISCONNECT PLANEL, PLACE THE DISCONNECT HANDLE IN OFF POSITION. ATTACH A MULTIPLE LOCKOUT DEVICE. LOCK AND TAG.<br><br>**DANGER:**<br>**LINE SIDE OF DISCONNECT REMAINS ENERGIZED** | ATEMPT TO RESTART THE SYSTEM, THE SYSTEM MUST NOT START. VISUALLY VERIFY OPEN DISCONNECTS AND LOCKING DEVICE INSTALLED.<br><br>ADD A VOLTMETER CHECK TO ENSURE THAT THE INPUT POWER SOURCE HAS BEEN DISCONNECTED. |
| **PNEUMATIC UPTO 160PSI** | | SLOWLY CLOSE LOCKOUT VALVE TO RELEASE AIR PRESSURE GRADUALLY. ATTACH MULTIPLE LOCKOUT DEVICE, LOCK AND TAG.<br><br>**DANGER:**<br>**LINE SIDE OF DISCONNECT REMAINS PRESSURIZED** | VERIFY THE VALVE IS CLOSED AND LOCKOUT DEVICE IS PROPERLY ATTACHED. OPERATE THE PNEUMATIC SYSTEM TO ENSURE THE SYSTEM IS DE-ENERGIZED. IT MAY BE NECESSARY TO BLEED THE SYSTEM OF REMAINING COMPRESSED AIR, THIS CAN BE PERFORMED AT THE BASE OF THE WATER SEPARATOR BOWL. |

**- RETURNING TO SERVICE:**

- Check the lift and the immediate area around the lift to ensure that nonessential items, tools and parts are removed and that the lift components are operationally intact.
- Check the work area to ensure that all employees have been safely positioned or removed from the work area.
- Notify all employees that the lockout/tagout is going to be removed and the lift is going to restart.
- Remove the lockout/tagouts in the reverse order as the installation.
- Verify the proper operation of the equipment.
- Notify affected employees that the maintenance/service is completed and the machine is ready for operation.

## 12.15 Emergency Operation

If the lift becomes inoperative in the raised position, it is best to wait until the electrical power is restored before lowering the lift. However, if it's critical to safety that the lift be lowered, the following steps should be taken.

**⚠WARNING** **DO NOT LOOSEN OR REMOVE HYDRAULIC CONNECTIONS OR FITTINGS UNDER PRESSURE. SERIOUS INJURY OR DEATH COULD OCCUR.**

**NOTE: Safely performing this process requires 3 people. All personnel should stay clear of the path of the lift. All tools and other non-secured items should be removed from the surface of the runways.**

1) Survey the area surrounding the lift; remove any items and personnel from area before proceeding with this procedure.
2) Perform the appropriate lockout/tag out procedure on the electrical energy.
3) Add additional chocks to the vehicle to secure it from movement in the forward and rear direction.
4) Use a second person standing at a safe distance away from the lift to keep watch on the area, lift, vehicle and other personnel throughout the process. This person should signal the person performing the procedure to stop if necessary.
5) Use a caution tape or similar to barrier the area around the lift to avoid personnel from accidently entering the area while this process is being performed.
6) Do not proceed with this procedure if you are unfamiliar with the lift or its function.

**IF THE MECHANICAL LOCKS ARE NOT ENGAGED**:

1) **If there is air pressure in the pneumatic system**; have another person press and hold the mechanical safety release button to disengage the mechanical locks. Confirm that both mechanical locks have been disengaged and will allow the lift to lower.
   **If there is no air pressure in the pneumatic system**; use a rag to raise the upper mechanical locks to sufficiently clear the lower locks on both sides.
2) Remove the 6 screws retaining the rear cover of the control console.
3) Locate the descent valve on the hydraulic power unit, see **Figure 48**.

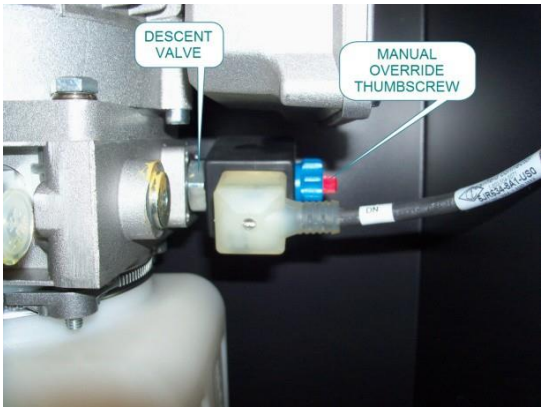



**Figure 48 – Image of descent valve**

4) Locate the manual override thumbscrew (red) on the top of the descent valve (Applicable to the power packs with the manual override function).
5) Verbally indicate to all those involved that the lift will now be lowered.
6) Slowly turn the manual override thumbscrew in the counterclockwise direction until the lift starts to move.
7) Keep a close eye on the movement of the lift and the position of the vehicle; turn the manual override thumbscrew clockwise if any abnormal movement is detected.
8) Once the lift is fully lowered, turn the override thumbscrew in the clockwise direction until tight.
9) If a rag was used to bypass the mechanical locks, ensure that the rag is removed after the lift has been put back into operation.
10) Once power is restored follow the lockout/tag out procedure to return the lift back into service.

**IF THE MECHANICAL LOCKS ARE ENGAGED:**

Various methods can be used to raise the lift in order to get sufficient clearance to disengage the mechanical locks. The safest method would employ temporary electrical power to the lift using a portable power generator. Any electrical connections should be done by a licensed electrician; lock out/tag out procedures should also be employed at this time.

This process should only be performed by a trained professional. Contact customer service or a local service professional for further assistance.

## 13.0 TROUBLE SHOOTING

| PROBLEM | REASON | SOLUTION |
|---|---|---|
| Motor does not run. | Bad fuse or contactor. | Re place fuse or contactor. |
| | Incorrect voltage to motor. | Provide proper voltage to motor. |
| | Incorrect wiring. | Have certified electrician check |
| | Motor switch is malfunctioning | Replace motor switch. |
| | Motor burned out | Re place motor. |
| Motor runs but lift doesn't go up. | L ow oil level | Fill reservoir with proper hydraulic oil. |
| | Wrong rotation | Check for oil flow & reverse electrical leads |
| Lift doesn't come down. | Dirt in hydraulic lines<br>Check power to hydraulic lines | *Secure vehicle on lift, and clean hydraulic lines. |
| | No power to solenoids | Check power to solenoids |
| Safety doesn't disengage. | Lift not raised high enough for disengagement | Press Up button for longer period of time. |
| | Air not supplied to air cylinder | Check if supply line has air. |
| | Air cylinder malfunctioning | Replace air cylinder. |
| Lift goes up un-level. | Flow-divider defective | Reverse hydraulic connections |
| | Blockage in hydraulic hose | Remove & inspect flow through line |
| Anchor Bolts do not stay tight | Holes are too large. | Relocate lift using proper drill Size. |
| | Incorrect concrete floor specification. (Thickness and Strength) | Concrete should be replaced by an appropriate concrete pad. (Consult Product Manufacturer / Supplier for further details) |
| Clicking noise from sliders and pivot points | Result of low contact pressure on bearing surfaces that create a stick-slip situation. | Use Lubrication kit # EAK0299T39A on all affected locations. |

## 14.0 RECORD OF MAINTENANCE / TRAINING

Records of all lift maintenance and operator training should be recorded in the following table.

| MAINTENANCE & TRAINING PERFORMED | DATE | BY: | NOTES |
|---|---|---|---|
| | | | |
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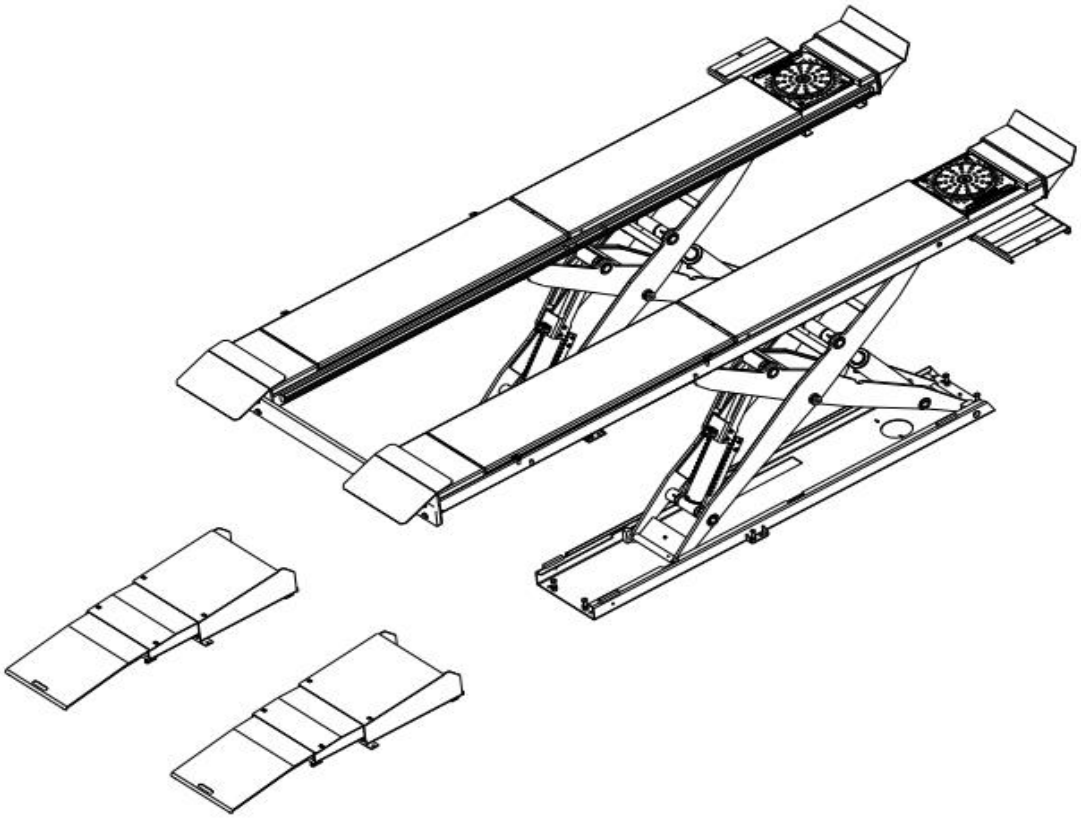
# Snap-on Equipment

## PARTS LIST

## SAVE THIS MANUAL



# 12K SCISSOR LIFT

## EELR501A, EELR525A
## EELR709A, EELR724A

Nov. 2019 REV. F

**309 EXCHANGE AVENUE, CONWAY, ARKANSAS, 72032**
**TEL: 501-450-1500 FAX: 501-450-1585**

EAZ0080V44A

# 15.0 LIFT PARTS LIST

REPLACE WORN, DAMAGED OR BROKEN PARTS WITH PARTS APPROVED BY THE ORIGINAL EQUIPMENT MANUFACTURER ONLY.

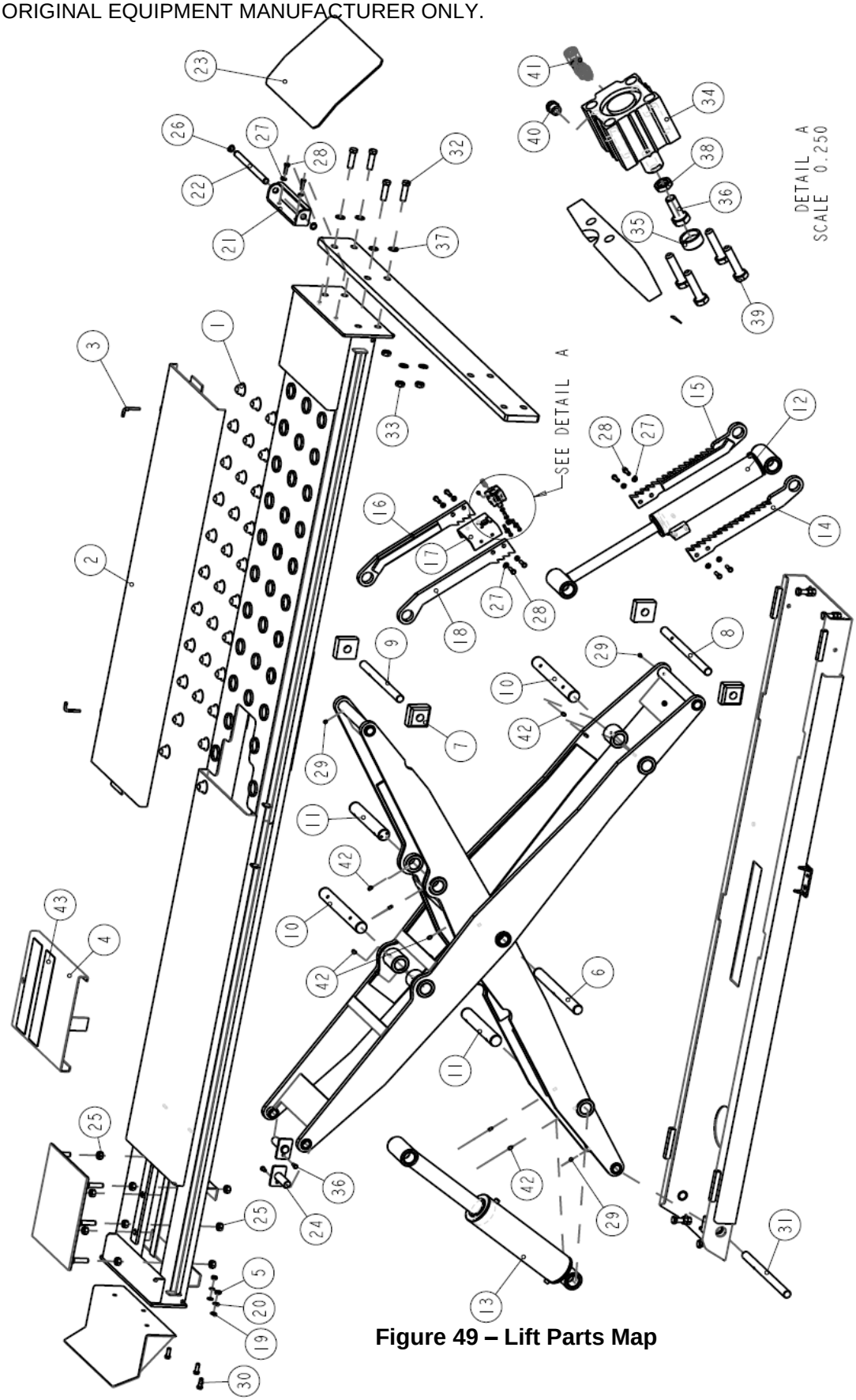



**Figure 49 – Lift Parts Map**

## 15.1 Lift Parts List

| ITEM# | PART# | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | 9-0284 | BALL TRANSFER, FLANGE, BALL Ø25mm | 62 |
| 2 | 9-2351 | TOP DECK REMOVABLE WELDMENT | 2 |
| 3 | 9-0288 | PIN LOCKING - SLIP PLATE | 4 |
| 4 | 9-0292 | PULLOUT STEP | 2 |
| 5 | 9-0315 | HEX NUT M14 | 6 |
| 6 | 9-2383 | PIN CENTER | 2 |
| 7 | 9-0343 | NYLON BLOCK TOP | 8 |
| 8 | 9-0344 | PIN SLIDING END BOTTOM | 2 |
| 9 | 9-0345 | PIN SLIDING END TOP | 2 |
| 10 | 9-2384 | PIN - PRIMARY CYLINDER TOP | 2 |
| 11 | 9-2385 | PIN - SECONDARY CYLINDER TOP | 2 |
| 12 | 9-0349 | SECONDARY CYLINDER | 2 |
| 13 | 9-0350 | PRIMARY CYLINDER | 2 |
| 14 | 9-0352 | SAFETY LOCK WELDMENT-LH BOTTOM | 2 |
| 15 | 9-0353 | SAFETY LOCK WELDMENT-RH BOTTOM | 2 |
| 16 | 9-0378 | SAFETY LOCK WELDMENT - RH TOP | 2 |
| 17 | 9-2388 | BRACKET-SAFETY LOCK TOP | 2 |
| 18 | 9-0380 | SAFETY LOCK WELDMENT - LH TOP | 2 |
| 19 | 9-0392 | FLAT WASHER Ø14 GB/T 95-2002 | 6 |
| 20 | 9-0393 | SPRING WASHER Ø14 GB/T 93-1987 | 6 |
| 21 | 9-0398 | FLIP-UP MOUNTING BRACKET | 2 |
| 22 | 9-0401 | FLIP UP PIN | 2 |
| 23 | 9-0402 | FLIP UP WELDMENT | 2 |
|  | 2-3016CN | FLIP UP WELDMENT, FLUSHMOUNT | 2 |
| 24 | 9-0405 | PIN WELDMENT-FIXED END TOP | 4 |
| 25 | 9-0414 | HEX NUT M20 | 24 |
| 26 | 9-0417 | CIRCLIP DIA 25 | 4 |
| 27 | 9-0418 | SPRING WASHER Ø12 | 20 |
| 28 | 9-0419 | HEX BOLT M12X1.75X40 L | 20 |
| 29 | 9-0420 | GRUB SCREW M8 x12L | 6 |
| 30 | 9-0423 | HEX BOLT M14 X 40L | 6 |
| 31 | 9-0426 | PIN-FIXED END BOTTOM | 2 |
| 32 | 9-0432 | HEX BOLT M24x3 x 80 LG | 8 |
| 33 | 9-0433 | HEX NUT M24 | 8 |
| 34 | 9-0510 | PNUEMATIC ACTUATOR | 2 |
| 35 | 9-0516 | HEAD CAP_NYLON MC907 OD22 X 10 | 2 |
| 36 | 9-0518 | HEX BOLT M10X1.5X25 L | 6 |
| 37 | 9-0545 | PLAIN WASHER Ø24 | 16 |
| 38 | 9-0573 | HEXJAM NUT M10 | 2 |
| 39 | 9-0574 | HEX BOLT M8 X35L | 8 |
| 40 | 9-0628 | EXHAUST MUFFLER, 1/4"NPT-M | 2 |
| 41 | 9-0675 | SWIVEL ELBOW, EPL0602, 1/4" NPT-M - Ø6 POLY | 2 |
| 42 | 9-1979 | SET SCREW M10 X20L | 18 |
| 43 | 9-2210 | ANTI-STEP TAPE | 4 |

## 15.2 Ramp Parts List

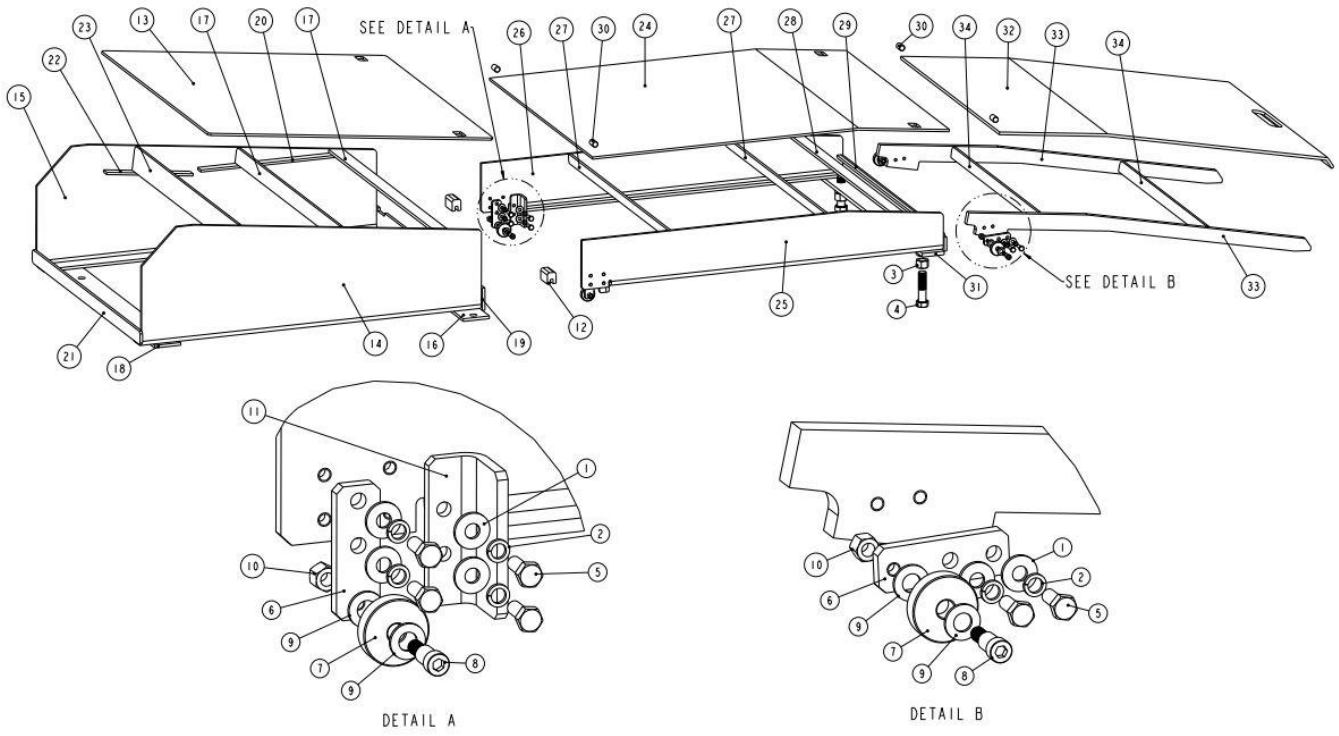



**Figure 50 – Ramp Parts Map**

RAMP SPARE PART LIST (Assembly number: 9-2180):

| ITEM# | PART# | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | 9-0130 | FLAT WASHER Ø6 GB/T 95-2002 | 24 |
| 2 | 9-0131 | SPRING LOCK WASHER Ø6 GB/T 93-1987 | 24 |
| 3 | 9-0425 | HEX NUT M16 GB/T 41-2000 | 4 |
| 4 | 9-2219 | HEX BOLT M16X2X65L GB/T 5781-2000 | 4 |
| 5 | 9-0554 | HEX BOLT M6x16L GB/T 5781-2000 | 24 |
| 6 | 9-1990 | ROLLER MOUNT PLATE | 8 |
| 7 | 9-1991 | RAMP ROLLER | 8 |
| 8 | 9-0158 | HEX SOCKET SHOULDER SCREW M6x12 | 8 |
| 9 | 9-0104 | FLAT WASHER Ø8 GB/T 95-2002 | 16 |
| 10 | 9-0126 | NYLON LOCK HEX NUT M6 GB/T 889.1-2000 | 8 |
| 11 | 9-2202 | MIDDLE RAMP STOPPER | 8 |
| 12 | 9-2207 | SUPPORT SLIDE BLOCK | 4 |

| ITEM# | PART# | DESCRIPTION | QTY. |
|---|---|---|---|
| 13 | 9-2186 | MAIN RAMP TOP | 2 |
| 14 | 9-2187 | RAMP SIDE WALL-LEFT | 2 |
| 15 | 9-2188 | RAMP SIDE WALL-RIGHT | 2 |
| 16 | 9-2208 | MAIN RAMP MOUNTING BAR | 2 |
| 17 | 9-1997 | MAIN RAMP STIFFENER | 4 |
| 18 | 9-2189 | MAIN RAMP MOUNTING BAR | 2 |
| 19 | 9-2192 | END SUPPORT | 2 |
| 20 | 9-2191 | RAMP GUIDE PLATE | 4 |
| 21 | 9-2156 | BACK STOP BAR | 2 |
| 22 | 9-2206 | RAMP GUIDE PLATE | 4 |
| 23 | 9-2190 | MAIN RAMP STIFFENER | 2 |
| 24 | 9-2195 | MIDDLE RAMP TOP PLATE | 2 |
| 25 | 9-2194 | MIDDLE RAMP SIDE WALL-RIGHT | 2 |
| 26 | 9-2193 | MIDDLE RAMP SIDE WALL-LIFT | 2 |
| 27 | 9-2196 | MIDDLE RAMP STIFFENER | 4 |
| 28 | 9-2197 | MIDDLE RAMP STIFFENE | 2 |
| 29 | 9-2198 | MIDDLE RAMP SUPPOOR | 2 |
| 30 | 9-2201 | SLIDE RAMP STOP | 8 |
| 31 | 9-2200 | MIDDLE RAMP END SUPPORT | 2 |
| 32 | 9-2204 | END RAMP TOP PLATE | 2 |
| 33 | 9-2203 | END RAMP SIDE WALL | 4 |
| 34 | 9-2205 | END RAMP STIFFENER | 4 |

# 16.0 HYDRAULIC AND AIR LINE ASSEMBLY

## 16.1 Hydraulic Line Routing Map

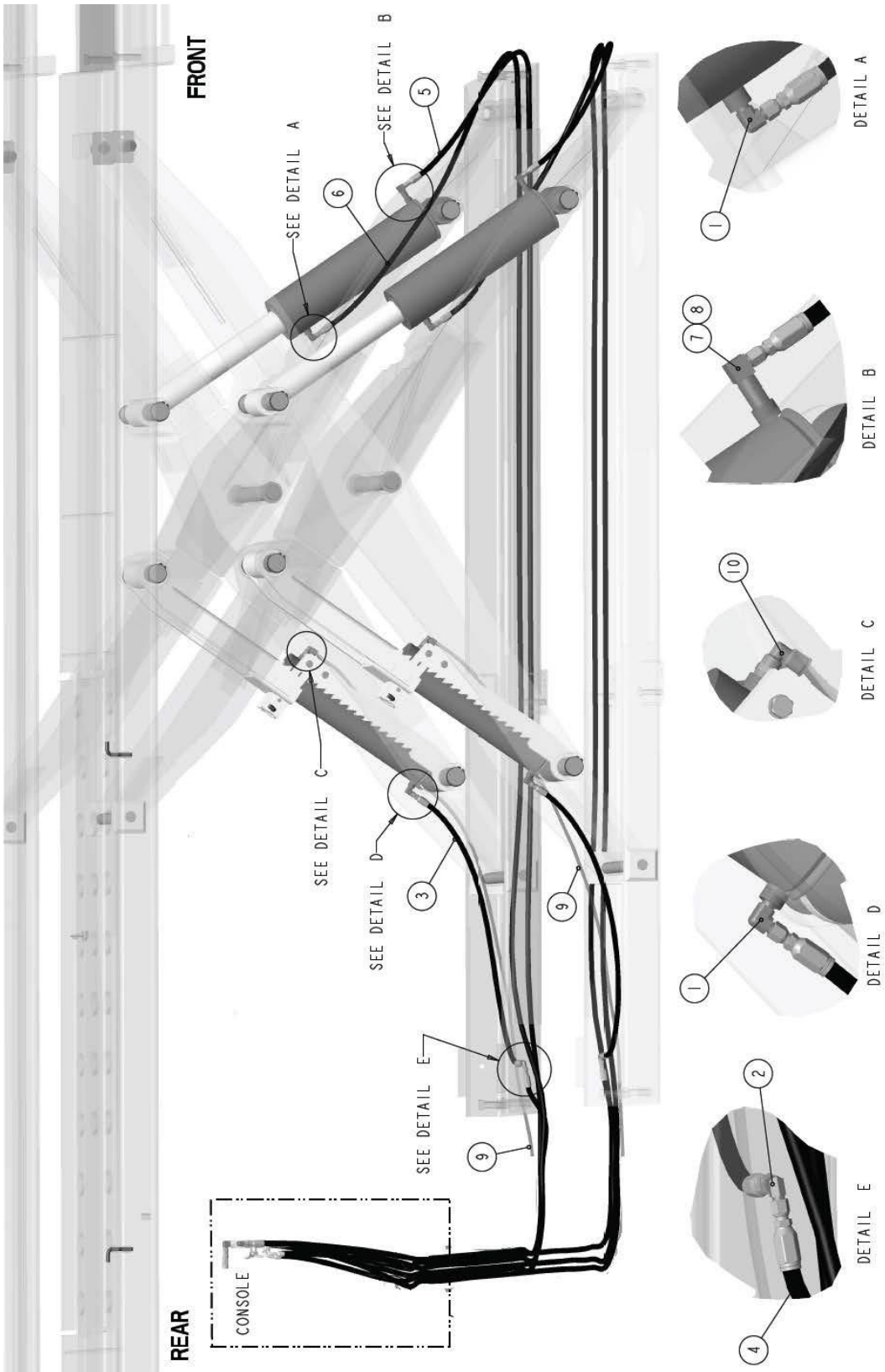



**Figure 51 – Hydraulic Items Map**

## 16.2 Hydraulic Line Routing Parts List

| ITEM# | PART# | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | 9-0588 | ELBOW-90° 3/8" NPT M / JIC-06-M | 4 |
| 2 | 9-0594 | 90° ELBOW WITH NUT, JIC-06-M | 2 |
| 3 | 9-0602 | HYDRAULIC HOSE -REAR CYLINDER | 2 |
| 4 | 9-0603 | HYDRAULIC HOSE -BASE FITTING | 2 |
| 5 | 9-0604 | HYDRAULIC HOSE -PRI. CYL. BOTT | 2 |
| 6 | 9-0605 | HYDRAULIC HOSE -PRI. CYL. TOP | 2 |
| 7 | 9-0606 | FLOW RESTRICTOR 3/8" NPT-F / JIC-06-M | 2 |
| 8 | 9-0607 | ELBOW-90° 3/8" NPT-M | 2 |
| 9 | 9-0624 | Ø10 POLYTUBE PU10*6.5,  1.8m (6FT) | 2 |
| 10 | 9-0678 | ELBOW, EPL1002, 3/8" NPT-M - Ø10 POLY | 2 |

## 16.3 Hydraulic Circuit Map

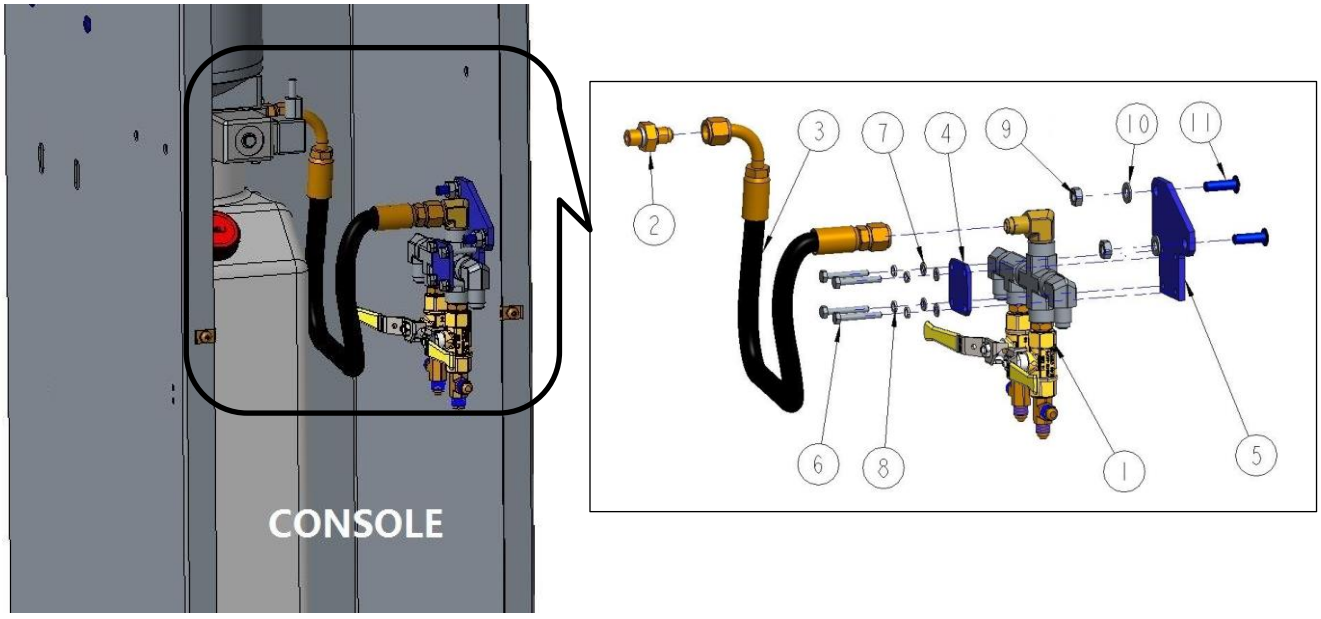



**Figure 52 – Hydraulic Circuit Assembly**

## 16.4 Hydraulic Circuit Parts List

| ITEM# | PART# | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | 9-0590 | HYDRAULIC EQUALIZATION CIRCUIT | 1 |
| 2 | EAH0061V41A | PIPE JOINT YBZ3-EH1/1-04 | 1 |
| 3 | 9-0601 | HYDRAULIC HOSE - POWER PACK | 1 |
| 4 | 9-0656 | HYD. CIRCUIT MOUNT TOP | 1 |
| 5 | 9-0657 | HYD. CIRCUIT MOUNT BOTTOM | 1 |
| 6 | 1-04888A | HEX. BOLT M5x35L | 4 |
| 7 | 9-0659 | FLAT WASHER Ø5 | 4 |
| 8 | 9-0660 | SPRING WASHER Ø5 | 4 |
| 9 | 1-18988A | NYLON LOCKNUT M8 GB/T 889.2-2000 | 2 |
| 10 | 9-0104 | FLAT WASHER, GB/T 848-2002 $\phi$8 | 2 |
| 11 | 1-18488A | HEX.SBHS, M8x25, GB/T70.2-2008, G.R 8.8 | 2 |

## 16.5 Air Line Routing Part List

| ITEM# | PART# | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | 9-0572 | AIR CYLINDER, SDA 50-30, MAX. PRESSURE 0.7 MPa | 2 |
| 2 | 9-0675 | SWIVEL ELBOW, EPL0602 - 1/4” NPT-M | 2 |
| 3 | 9-0628 | EXHAUST MUFFLER 1/4" NPT-M | 2 |
| 4 | 9-0623 | Ø6 POLYTUBE PU 6*4, 10m (33FT) | 2 |
| 5 | 9-0629 | SWIVEL ELBOW, EPL1002 - 1/4" NPT-M | 1 |
| 6 | 9-0621 | TERMINAL BOLT M14x1, 1/4" NPT-M | 1 |
| 7 | 9-0672 | BRANCH TEE FITTING-1/4" NPT- 3F | 1 |
| 8 | 9-0625 | Ø10 POLYTUBE PU 10*6.5, 15m (50FT) | 1 |

## 16.6 Air Line Routing Map

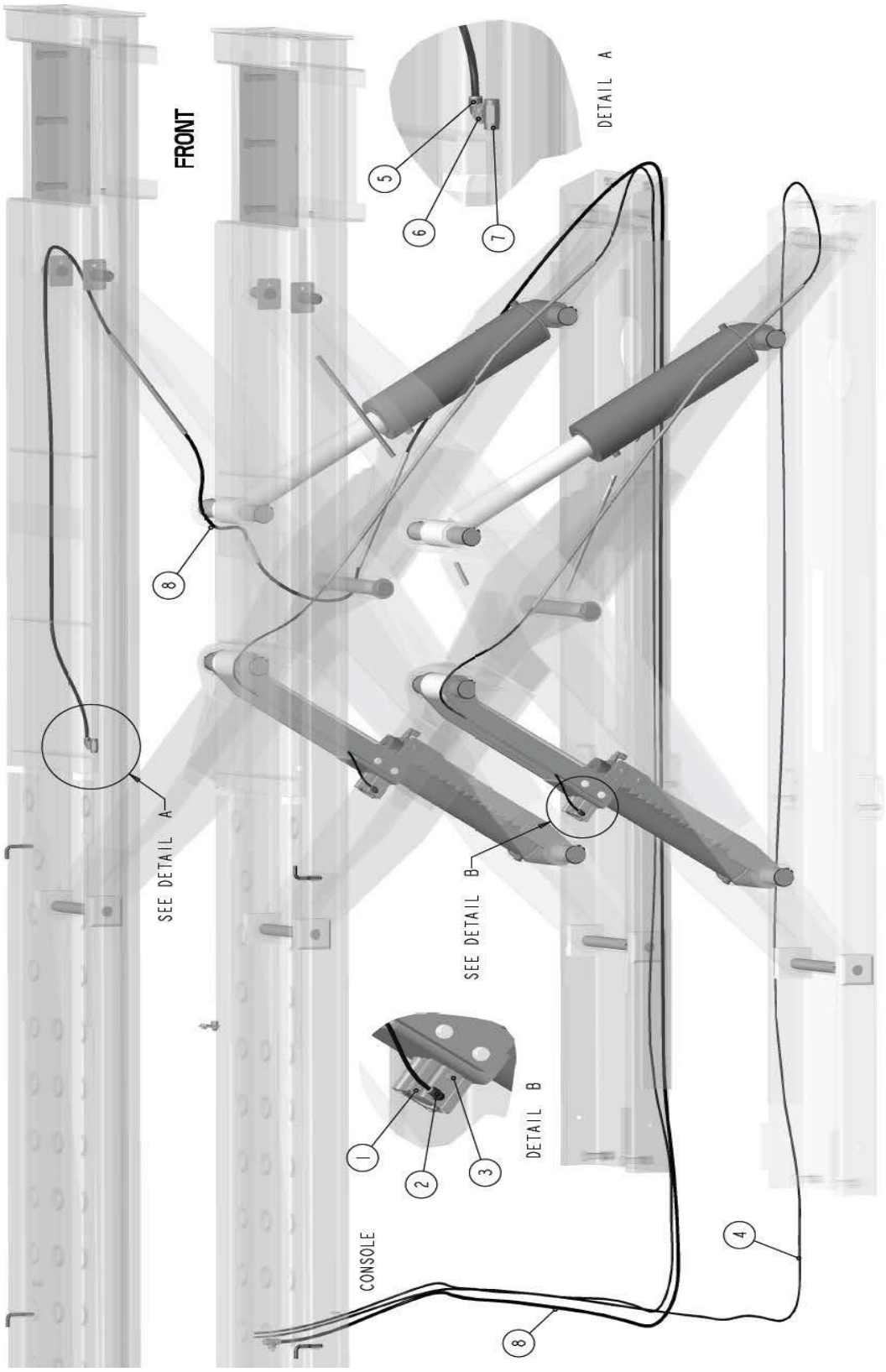



**Figure 53 – Air Hose Assembly**

# 17.0 CONSOLE ASSEMBLY

## 17.1 Electrical and Control Panel

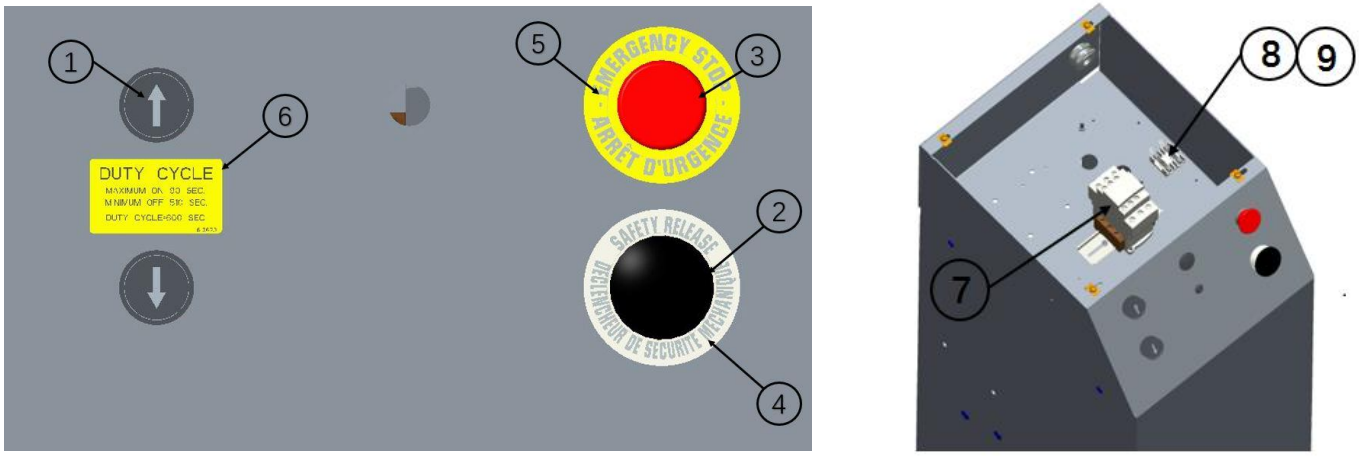
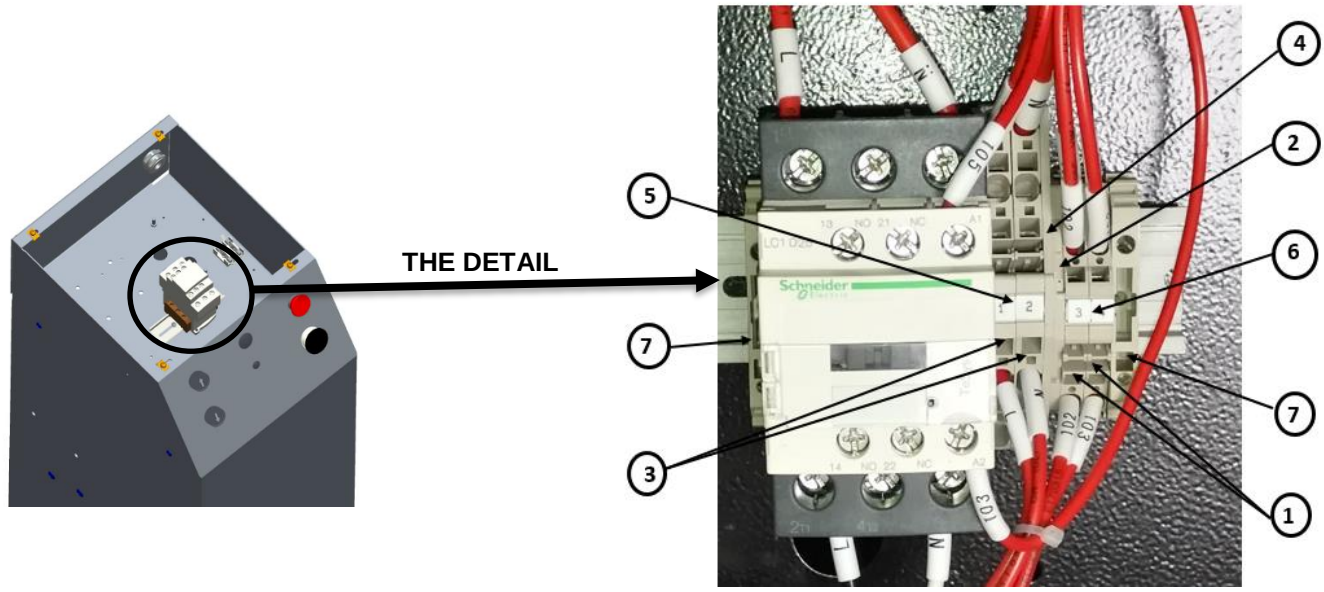



**Figure 54 – Electrical and Control Panel**

| Item # | Part # | Description | Qty. |
|---|---|---|---|
| 1 | EAE0076V19A | Push Button 1NO with Arrow | 2 |
| | EAE0073V39A | Part of push button | 2 |
| | EAE0073V40A | Part of push button | 2 |
| 2 | — | Air Valve Assembly | 1 |
| | 6-4275 | Air Control Valve | 1 |
| | 9-0619 | Swivel Elbow, EPL0602 (1/8” NPT-M x Ø6 Poly) | 1 |
| | 9-0620 | Adapter EPC0601 (1/8" NPT-M x Ø6 Poly) | 1 |
| 3 | EAE0076V20A | Emergency Stop Button | 1 |
| | EAE0073V41A | Part of EMERGENCE STOP | 1 |
| | EAE0073V42A | Part of PART OF PUSH BUTTON NC | 1 |
| 4 | 6-3558 | Safety Release Decal | 1 |
| 5 | 6-3557 | Emergency Stop Decal | 1 |
| 6 | 6-3623 | Duty Cycle Decal | 1 |
| 7 | EAE0076V49A | Contactor, 230V / 1 PH | 1 |
| 8 | 6-3595 | Fuse Holder - 2 Pole, 20A/250V | 1 |
| 9 | 6-3597 | Fuse 1A, 250V Time Delay 6x32 | 2 |

## 17.2 TERMINAL ASSEMBLY FOR 12K ALI CONSOLE




| Item # | Part # | Description | Qty. |
|---|---|---|---|
| — | EAK0346V15A | TERMINAL ASSEMBLY FOR 12K ALI CONSOLE | 1 |
| 1 | EAE0070V26A | Terminal ZDU 2.5-2/3AN 2.5 mm² | 2 |
| 2 | EAE0070V28A | Terminal Cover ZAP/TW7 | 1 |
| 3 | EAE0073V10A | Terminal, ZDU 4-2/4AN, 4mm2 | 2 |
| 4 | EAE0073V12A | Terminal Cover, ZAP ZDU4-2/4AN | 1 |
| 5 | EAE0073V13A | Terminal marker,5x6 mm,Print:1,2,White | 1 |
| 6 | EAE0073V26A | Terminal marker,5x5 mm,Print:3,4,White | 1 |
| 7 | EAE0068V54A | End bracket, ZEW ,WxHxD:6x55x40mm,Mounting rail TS35 | 2 |

## 17.3 Console: Pneumatic & Filtering System

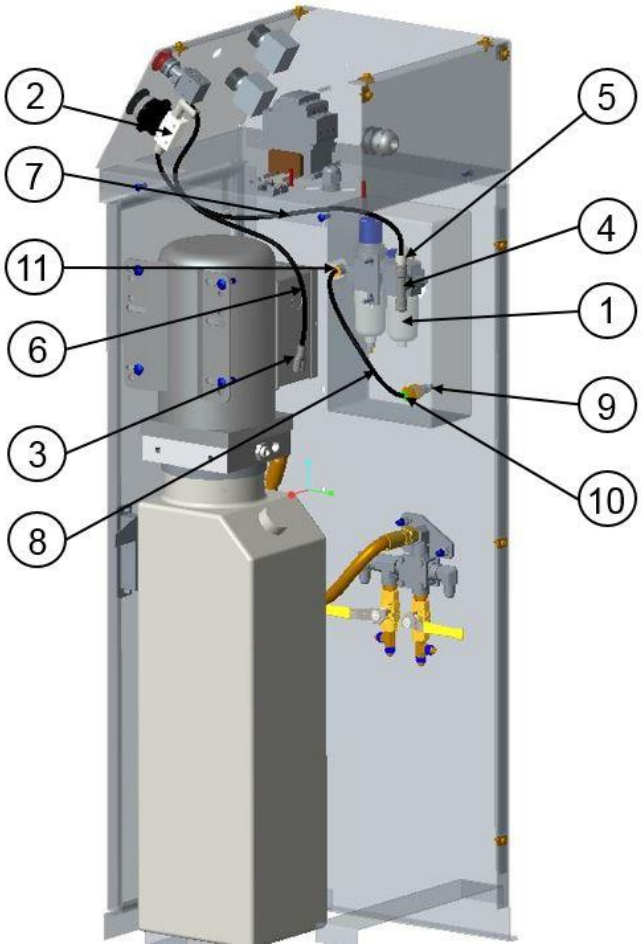



**Figure 55 – Pneumatic & Filter System**

| Item # | Part # | Description | Qty. |
|---|---|---|---|
| 1 | | FRL Assembly | |
| | 9-0613 | FRL (Filter / Regulator / Lubricator) , JAC2000-02 | 1 |
| | 9-0615 | 90° Elbow 1/4" NPT M-F | 1 |
| 2 | | Air Valve Assembly | |
| | 6-4275 | Air Control Valve | 1 |
| | 9-0619 | Swivel Elbow, EPL0601 (1/8” NPT-M x Ø6 Poly) | 1 |
| | 9-0620 | Adapter EPC0601 (1/8" NPT-M x Ø6 Poly) | 1 |
| 3 | 9-0618 | Union ‘Y’, EPY06 (Ø6 Poly) | 1 |
| 4 | 9-0616 | Swivel ‘T’, EPB1002 (1/4" NPT M x Ø10 Poly) | 1 |
| 5 | 9-0617 | Reducer, EPGJ1006 (Ø10 - Ø6 Poly) | 1 |
| 6 | 9-0622 | Ø6 Polytube PU 6*4, 0.9m (35") | 1 |
| 7 | EAH0069V14A | POLYTUBE ODØ6MM-450MM | 1 |
| 8 | EAH0065V65A | POLYTUBE ODØ6MM-400MM | 1 |
| 9 | 9-0673 | 12K SCISSOR TERMINAL FITTING M14×1 | 1 |
| 10 | 1-41680A | AIR QUICK FITTING | 1 |
| 11 | 9-0675 | SWIVEL ELBOW, 1/4 NPT-M | 1 |

## 17.4 Console Box Assembly

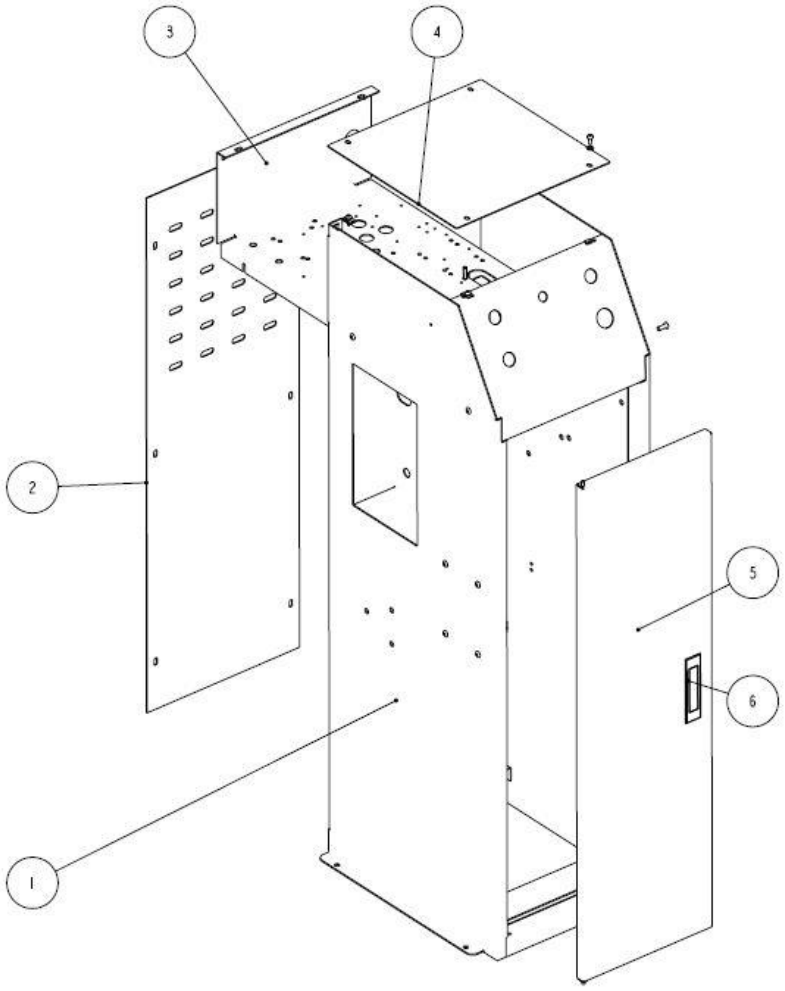



**Figure 56 – Console Box Assembly**

* Note: may not be exactly as shown.

| Item# | Part# | Description | Qty. |
|---|---|---|---|
| 1 | EAS2215V02A | CONSOLE BOX WELDMENT | 1 |
| 2 | EAM0113V30A | REAR COVER | 1 |
| 3 | EAS2168V03A | ELECTRICAL BACK PLATE COVER WELDMENT | 1 |
| 4 | EAM0113V31A | TOP COVER | 1 |
| 5 | EAS2215V03A | DOOR WELDMENT | 1 |
| 6 | 8-73637A | FLAT LOCK, MS730 | 1 |
| includes | 6-0141 | Concrete Nail ¼" x 1" Lg. | 4 |
| | 1-18588A | Screw ST4.8×16 | 12 |
| | EAM0113V36A | U-Type Fastener | 12 |
| | 9-0659 | Flat Washer, ϕ5 | 12 |
| | 1-09288A | SCREW, GB/T 70.2-2008 M6X16 | 4 |
| | 1-04488A | FLAT WASHER GB/T 95-2002 Ø6 | 4 |
| | 9-N1006V | NYLON LOCKNUT, GB/T889.2-2000 M6 | 4 |

## 17.5 Console Labeling

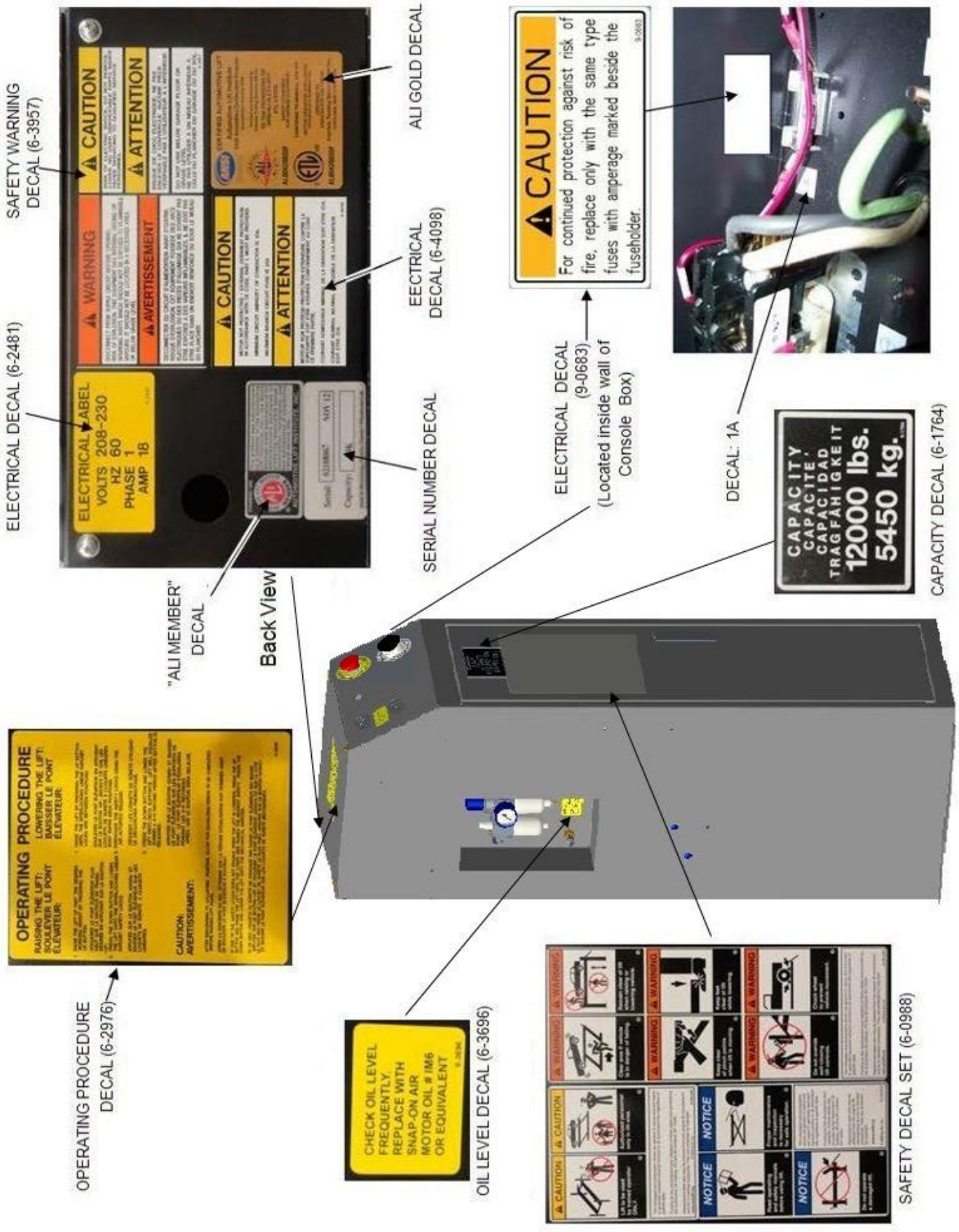



**Figure 57 – Console Labeling**

## 17.6 Power Pack

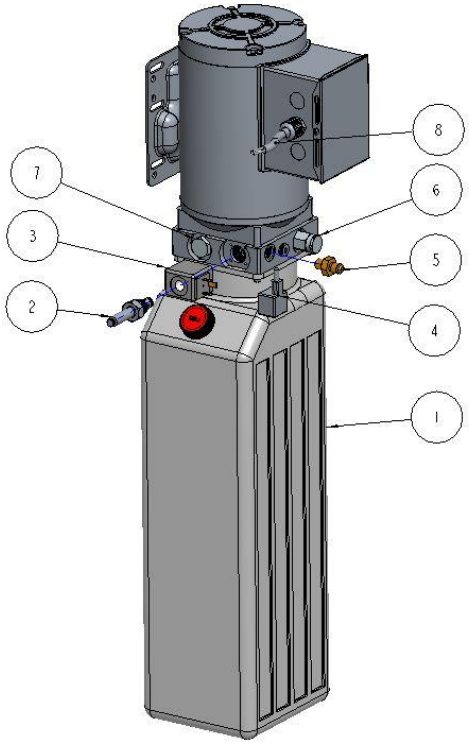



**Figure 58 – Power Pack Assembly**

| ITEM# | PART# | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | EAA0407T21A | COMPLETE POWERPACK ASSEMBLY | 1 |
| 2 | EAH0061V40A | SOLENOID VALVE LSV-08-2NCP | 1 |
| 3 | EAE0080V13A | COIL 10148-79 | 1 |
| 4 | EAE0080V14A | MOULDED DIN CONNECTOR | 1 |
| 5 | EAH0061V41A | PIPE JOINT YBZ3-EH1/1-04 | 1 |
| 6 | EAH0061V42A | RELIEF VALVE LHRV-08-42 | 1 |
| 7 | EAH0061V43A | CHECK VALVE DF08-01-00 | 1 |
| 8 | EAE0080V15A | ELECTRICAL CABLE | 610MM |

## Mounting Hardware:

| ITEM# | PART# | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | 1-18988A | NYLON LOCKNUT M8 GB/T 889.2-2000 | 4 |
| 2 | 9-0104 | FLAT WASHER, $\phi$8 | 4 |
| 3 | 1-18488A | BHCS, M8$\times$25 | 4 |

# 18.0 ACCESSORY

## 18.1 Line Covers and Nails

**The Layout of line covers and Nails distribution refer to Figure 32.**

| ITEM# | PART# | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | EAS2168V14A | LINE COVER A WELDMENT (RAL1023 yellow) | 2 |
| 2 | EAS2168V15A | LINE COVER B WELDMENT (RAL1023 yellow) | 1 |
| 3 | EAS2168V16A | LINE COVER C WELDMENT (RAL1023 yellow) | 2 |
| 4 | 1-10789A | HEXAGONAL EXPANSION SCREW M6X50 | 20 |

**The Layout of extension line covers and Nails distribution refer to Figure 33.**

| ITEM# | PART# | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | EAK0346V18A | SERVICE KIT FOR 14K SCISSOR EXTENSION LINE COVER (OPTIONAL) | 1 |

## 18.2 Wedge Anchors

| ITEM# | PART# | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | 6-1379 | WEDGE ANCHOR 3/4" x 5 1/2" LG | 12 |
| 2 | 6-0140 | WEDGE ANCHOR 1/2" x 4 1/2" LG | 8 |

## 18.3 Turntables

| ITEM# | PART# | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | EAK0289J05 | TURNTABLE (OPTIONAL) | 2 |

## 18.4 Jackbeam and Accessory

| ITEM# | PART# | DESCRIPTION | QTY. |
|---|---|---|---|
| 1 | EELR512A-John Beam | 6K JACK BEAM | 2 |
| 2 | 9-0626 | RECOIL HOSE Ø8 PU 8*6, 1/4" NPT-M, 12FT | 2 |

## 18.5 Hose Extension Kit for Flush Mount - Front Console

| ITEM# | PART# | DESCRIPTION | QTY. |
|---|---|---|---|
| EAK0299T19A | | HOSE EXTENSION KIT (OPTIONAL) | 1 |

**Contains the following:**

| | | | |
|---|---|---|---|
| 1 | 2-1049 | HYDRAULIC HOSE 252" LG | 2 |
| 2 | 6-0922 | 90° ELBOW 3/8 JIC M X 3/8 JIC M | 2 |
| 3 | 2-2997 | HYDRAULIC HOSE 250" LG, M-F | 4 |

| | | | |
|---|---|---|---|
| 4 | 8-0385 | POLYTUBE 10mm OD | 25ft |
| 5 | 6-4190 | 10mm PUSHLOCK UNION | 1 |
| 6 | 8-0384 | POLYTUBE 6mm OD | 45ft |
| 7 | 6-4187 | 6mm PUSHLOCK UNION | 2 |

## 18.6 Shim kit

| ITEM# | PART# | DESCRIPTION | QTY. |
|---|---|---|---|
| EAK0299T41A | | SCISSOR LIFT SHIM KIT (included) | 1 |

** If additional shims are required, please order the above item #.*

**Contains the following:**

| | | |
|---|---|---|
| 1 | SHIM PLATE, 1/16" THK | 8 |
| 2 | SHIM PLATE, 1/8" THK | 8 |
| 3 | SHIM PLATE, 1/4" THK | 8 |

## 18.7 14L tank kit

| ITEM# | PART# | DESCRIPTION | QTY. |
|---|---|---|---|
| EAK0346V10A | | 14L TANK KIT FOR 12K ALI CONSOLE | 1 |

**REPLACE 12L TANK WITH EAK0346V10A #.*

**Contains the following:**

| P/N | QTY. | DESCRIPTION |
|---|---|---|
| EAM0111V20A | 1 | BRACKET |
| 1-22488A | 2 | HEX. SOCKET BUTTON HEAD SCREW.GB/T 70.2-2008 M8×12 |
| 1-00988A | 2 | SPRING LOCK WASHER ϕ8 GB93-1987 |
| 1-15188A | 2 | FLAT WASHER GB/T 848-2002 ϕ8 |
| YBZ-SLYX-14L-L-A | 1 | 14L, TANSPARENT, PLASTIC |
| YBZ-SJYG-475 | 1 | 14L SUNCTION TUBE |
| JBC64368000 | 1 | INSTALLATION INSTRUCTIONS |

| ITEM# | PART# | DESCRIPTION | QTY. |
|---|---|---|---|
| EAK0346V12A | | BRACKET KIT FOR INSTALLING POWER UNIT WITH 14L TANK | 1 |

**Contains the following:**

| P/N | QTY. | DESCRIPTION |
|---|---|---|
| EAM0111V20A | 1 | BRACKET |
| 1-22488A | 2 | HEX. SOCKET BUTTON HEAD SCREW.GB/T 70.2-2008 M8×12 |
| 1-00988A | 2 | SPRING LOCK WASHER ϕ8 GB93-1987 |
| 1-15188A | 2 | FLAT WASHER GB/T 848-2002 ϕ8 |

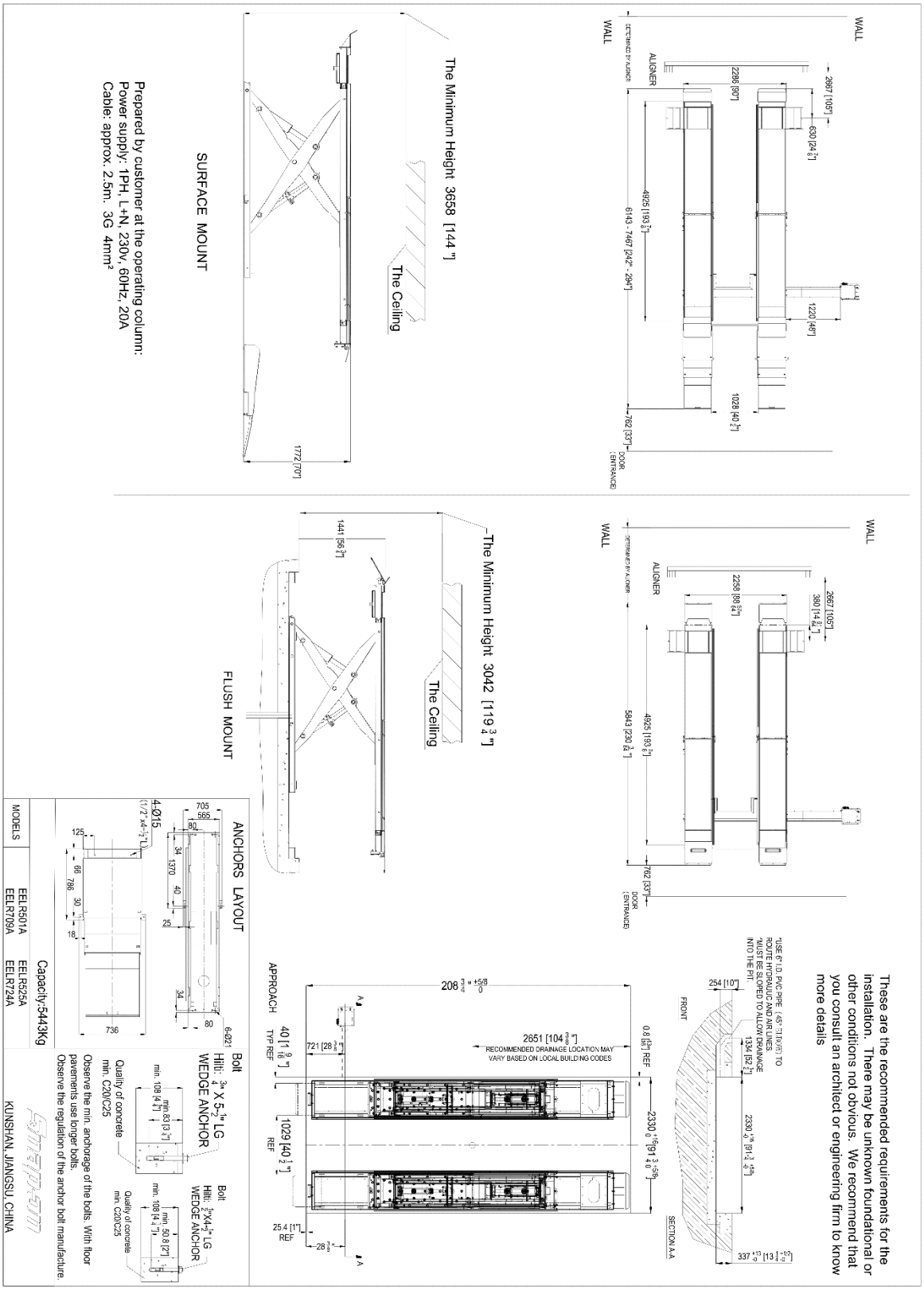
| ITEM# | PART# | DESCRIPTION | QTY. |
|---|---|---|---|
| EAK0346V13A | | 14L TANK SERVICE KIT FOR 12K SCISSOR LIFT | 1 |

**REPLACE 12L CAPACITY POWER UNIT WITH EAK0346V13A #.*

**Contains the following:**

| P/N | QTY. | DESCRIPTION |
|---|---|---|
| EAA0453T05A | 1 | 12K SS POWERPACK ASSY 230V/1PH |
| EAK0346V12A | 1 | BRACKET KIT FOR INSTALLING POWER UNIT WITH 14L TANK |
| JBC64368000 | 1 | INSTALLATION INSTRUCTION |

# APPENDIX
# Foundation Plan



## Product Change Notice

| REV. | PCN | DESCRIPTION | DATE | BY |
|---|---|---|---|---|
| C | DG07042 | Add parts list cover on the page 55, and the foundation plan on the page 72. | 03JUN2019 | RY |
| D | DG07067 | Update the line cover on page 34, 70. | 21OCT2019 | RY |
| E | DG07230 | Update the console box in page 15、16、17、19、20、43、61、62、64、66、67、68、69. | 19NOV2019 | KW |
| F | DG07246 | Add the Installation of Extension Line Covers in page 35、71. | 05DEC2019 | KW |