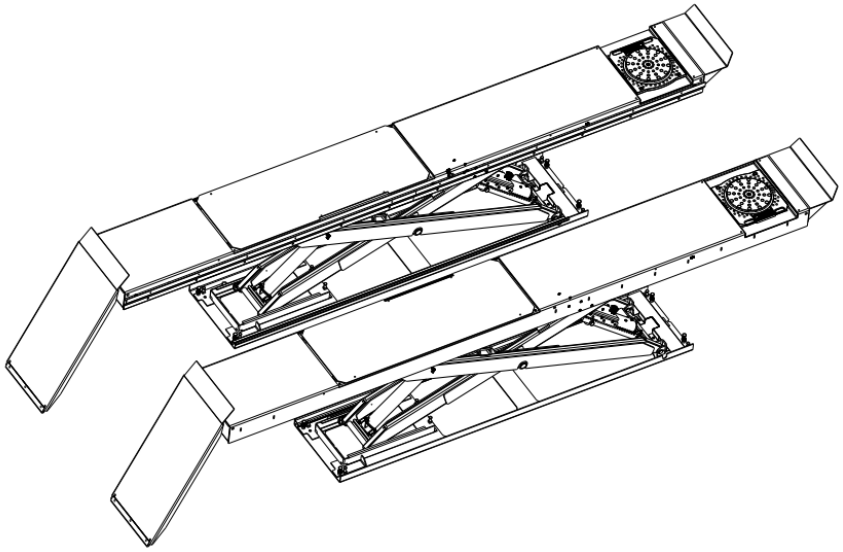
Snap-on Equipment

INSTALLATION AND OPERATING MANUAL

READ THOROUGHLY BEFORE INSTALLING,
SERVICING OR MAINTAINING THE LIFT.

SAVE THIS MANUAL



INSTALLATION and OPERATION MANUAL

14K SCISSOR LIFT

Standard Models:

EELR591A, EELR592A, EELR593A, EELR594A

EELR787A, EELR788A, EELR789A, EELR790A

Short Models:

EELR587A, EELR588A, EELR589A, EELR590A

EELR783A, EELR784A, EELR785A, EELR786A

DEC 2024 REV. T

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

EAZ0080V42A

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1.0 OWNER / EMPLOYER OBLIGATIONS

1. The Owner/Employer shall ensure that lift operators are qualified and that they are trained in the safe use and operation of the lift using the manufacturer's operating instructions; ALI/SM 93-1, ALI Lifting it Right safety manual; ALI/ST-90 ALI Safety Tips card; ANSI/ALI ALOIM-2008, American National Standard for Automotive Lifts - Safety Requirements for Operation, Inspection and Maintenance; ALI/WL Series, ALI Uniform Warning Label Decals/Placards; and in the case of frame engaging lifts, ALI/LP-GUIDE, Vehicle Lifting Points/Quick Reference Guide for Frame Engaging Lifts.

2. The Owner/Employer shall establish procedures to periodically inspect the lift in accordance with the lift manufacturer's instructions or ANSI/ALI ALOIM-2008, American National Standard for Automotive Lifts - Safety Requirements for Operation, Inspection and Maintenance; and the Employer shall ensure that the lift inspectors are qualified and that they are adequately trained in the inspection of the lift.

3. The Owner/Employer shall establish procedures to periodically maintain the lift in accordance with the lift manufacturer's instructions or ANSI/ALI ALOIM-2008, 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.

4. The Owner/Employer shall maintain the periodic inspection and maintenance records recommended by the lift manufacturer's instructions or ANSI/ALI ALOIM-2008, American National Standard for Automotive Lifts - Safety Requirements for Operation, Inspection and Maintenance.

5. The Owner/Employer shall display the lift manufacturer's operating instructions; ALI/SM 93-1, ALI Lifting it Right safety manual; ALI/ST-90 ALI Safety Tips card; ANSI/ALI ALOIM-2008, American National Standard for Automotive Lifts - Safety Requirements for Operation, Inspection and Maintenance; ALI/WL Series, ALI Uniform Warning Label Decals/Placards; and in the case of frame engaging lifts, ALI/LP-GUIDE, Vehicle Lifting Points/Quick Reference Guide for Frame Engaging Lifts in a conspicuous location in the lift area convenient to the operator.

6. The Owner/Operator shall provide necessary lockout/tagout means for energy sources per ANSI Z244.1-1982 (R1993), Safety Requirements for the Lockout/Tagout of Energy Sources, before beginning any lift repairs and maintenance.

2.0 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 Jack beam.

25. For Jack beam Safety Instructions, see Jack beam Installation, Operation Manual.

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) and vehicle lift points for service garage lifting SAE J2184.

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

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

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.

SAVE THESE INSTRUCTIONS

Note: Some images in this manual are generic and may not resemble the lift you have purchased.

3.0 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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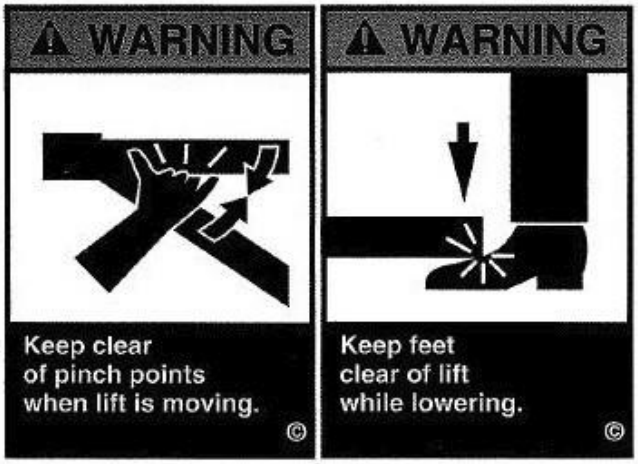
WL200 Series Label Kit



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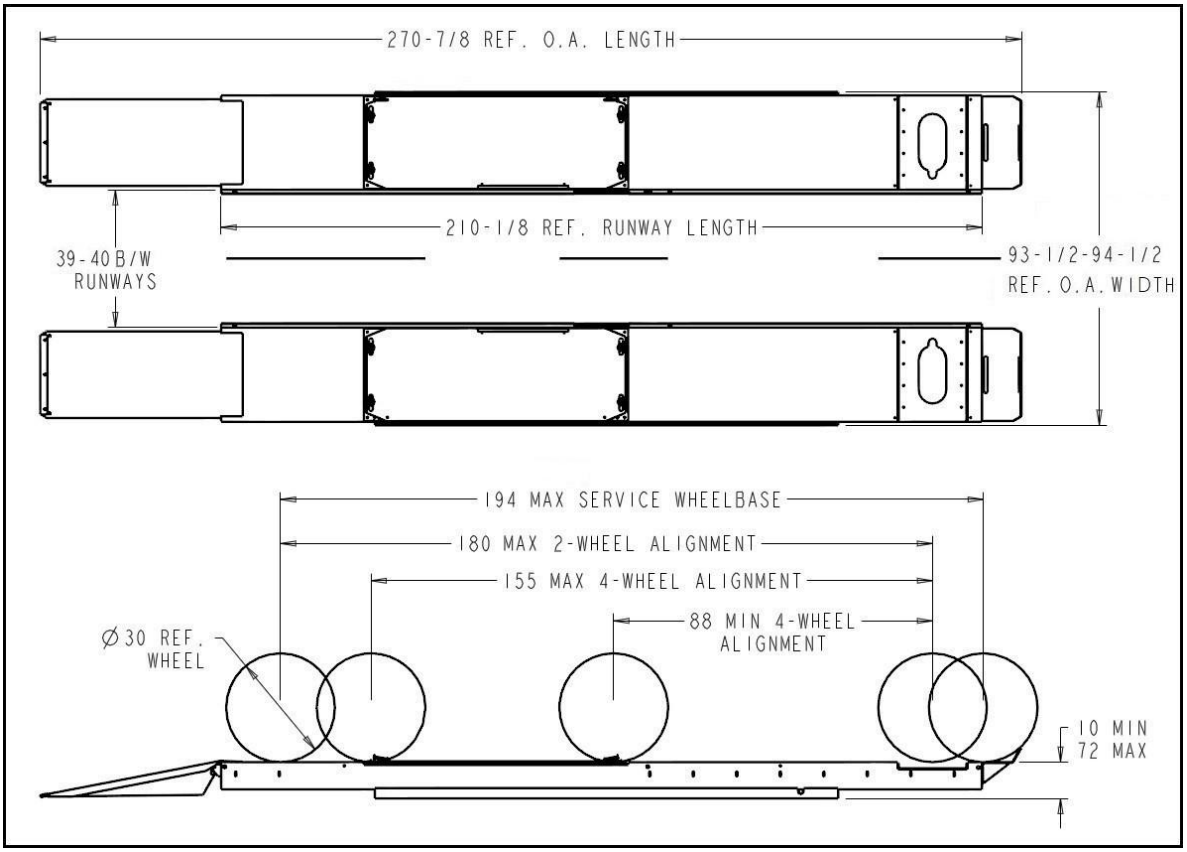
4.0 SPECIFICATIONS

Maximum Capacity:		14 000 lbs.	6363 kg
Overall Width:		93½”-94½” Inches	2375-2400 mm
Overall Length:	Long (SM):	270-7/8 Inches	6880 mm
	Short (SM):	256-3/16" Inches	6507 mm
Maximum Raised Height:		72 Inches	1829 mm
Minimum Lowered Height:		10 Inches	254 mm
Runway Width		26 Inches	660 mm
Max 4-Wheel Alignment	All:	155 Inches	3937 mm
Min 4-Wheel Alignment	All:	88 Inches	2235 mm
Max 2-Wheel Alignment	Long:	180 Inches	4572 mm
	Short:	165 Inches	4191 mm
Max General Service	Long:	194 Inches	4928 mm
	Short:	179 Inches	4547 mm
Lifting Time (approx.):		75 - 85 Seconds: depending on load	
Power Ratings:		230V, 1 Ph, 60Hz, 20A	
Maximum Operating Pressure @ Rated Load:		4600 PSI	
Air Supply requirements:		90 to 120 PSI	
Pneumatic Filtration 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:		5490 lbs.	2490 kg



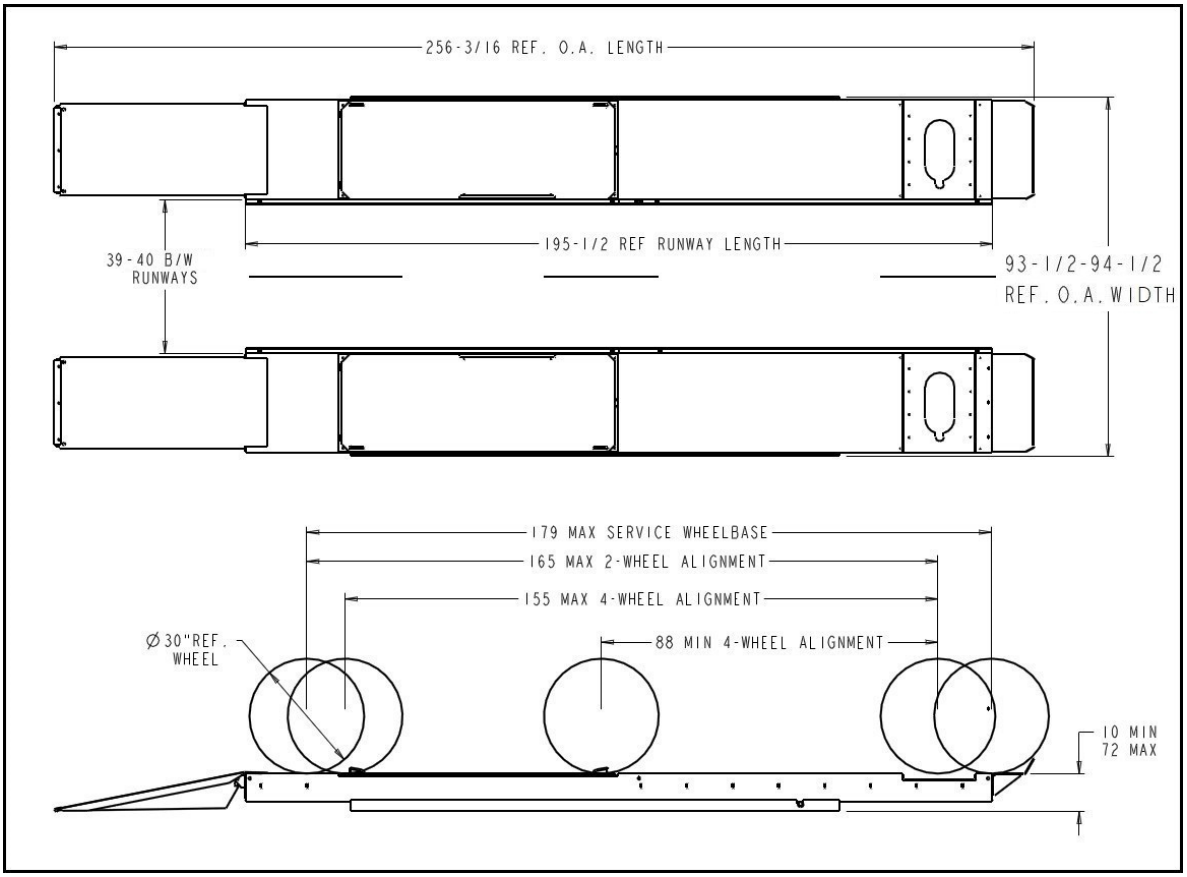


Figure 1 - Lift Dimensions, Long Model (Top) & Short Model (Bottom)

5.0 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 Main Frame Assembly: Runway, Scissors and Base Frame
1pc. - Right Side Main Frame Assembly: Runway, Scissors and Base Frame
1pc. - Console and Accessory box. (See accessory box list for contents)
1pc. - Grout container
1pc. - Customer care kit including manuals

6.0 TOOLS REQUIRED FOR INSTALLATION OF LIFT

- □ Hammer Drill or similar, Ø8, 1/4''and 1/2'' Concrete Drill Bits
- □ 4' Level
- □ SAE Wrenches and Sockets
- □ Hammer
- □ Pry Bar - 5' Long
- □ Chalk Line
- □ Tape Measure
- □ Side Cutters
- □ Screw Drivers
- □ Funnel
- □ Utility Knife
- □ Torque Wrench

Recommended:

- □ Laser Leveler
- □ Plumb Bob
- □ Impact Gun
- □ Boom and/or Engine Hoist
- □ 8' Sling
- □ Engine Crane

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

7.0 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 Pneumatic Sensors
7. Connect Electrical
8. Initial Run of Lift
9. Level, Shim and Anchor
10. Install Accessories
11. Locking Front Turn plates and Rear Slip Plates / Light System (Optional)
12. Final Check
13. Clean
14. Train Customer on Operation of the Lift

IMPORTANT: Shop air must be connected to the inlet port at the FRL unit on the console, in order for lift to operate.

8.0 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.

IMPORTANT: It is the user's responsibility to provide a satisfactory installation area for the lift. Lifts should only be installed on level concrete floors with a minimum thickness of four inches (4") or 101 mm. Concrete must have a minimum strength of 4350 psi or 30 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.

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

It is the user's responsibility to provide all wiring for electrical hook-up prior to installation and to insure 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.

8.1 Flush 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.

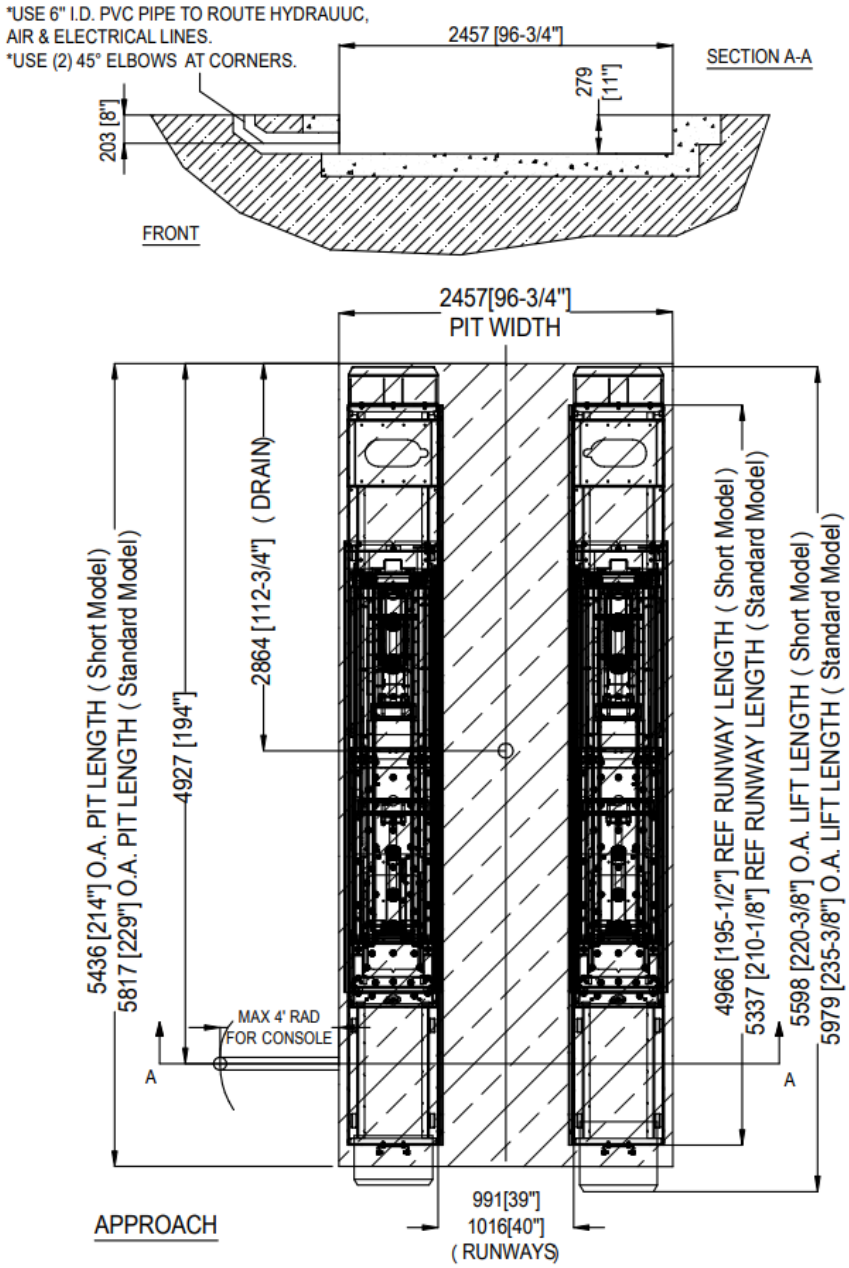
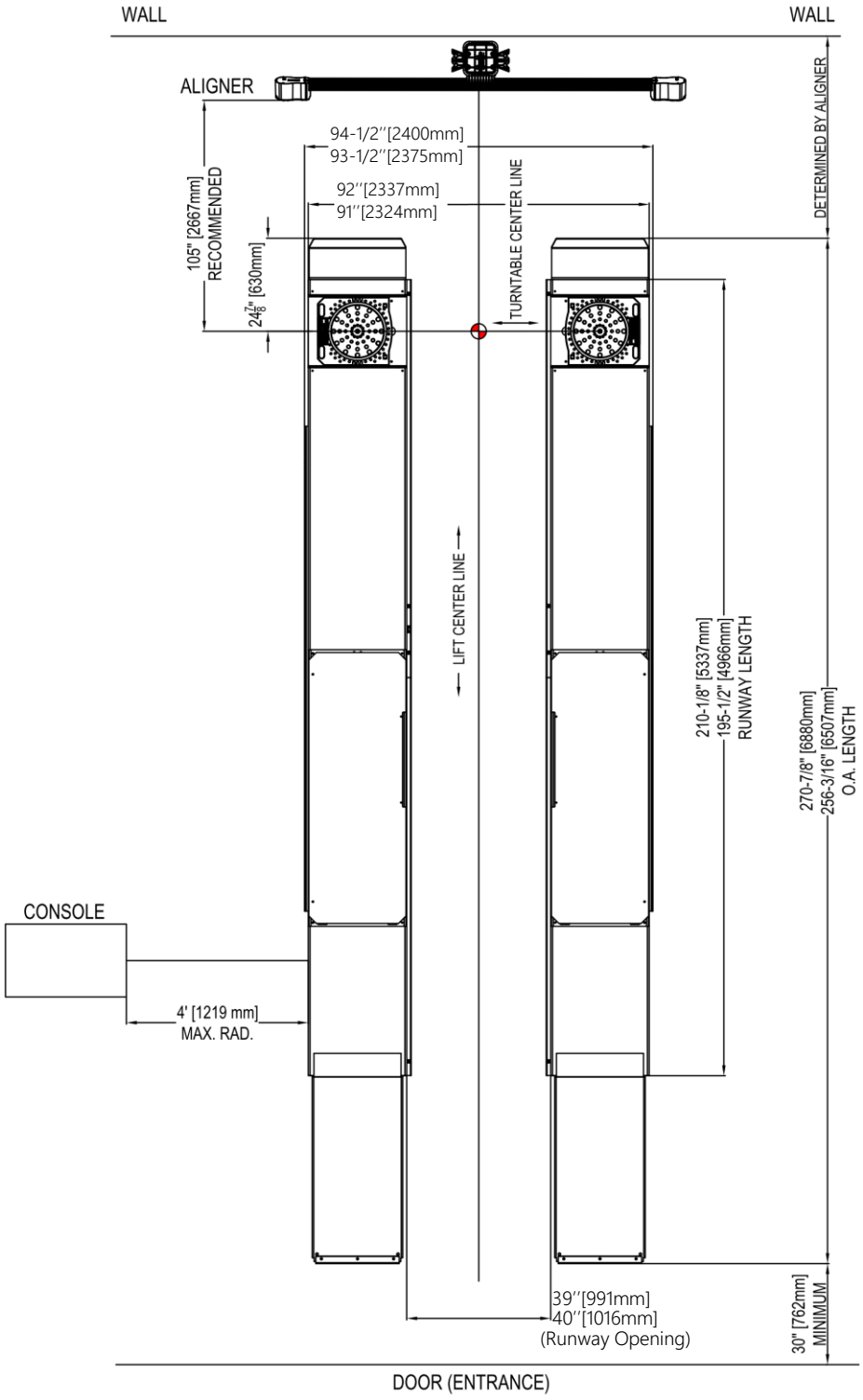


Figure 2 - Typical Bay Layout (Flush Mount)

8.2 Surface mount Bay Layout



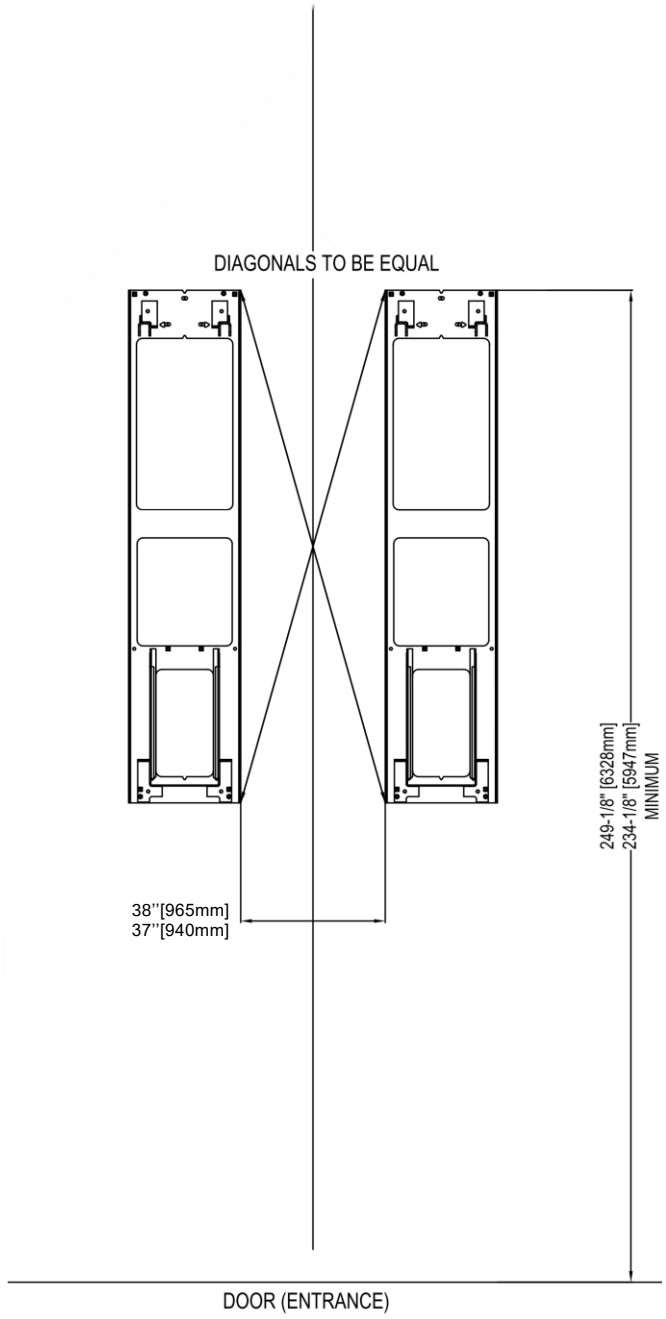
NOTE: Leave any additional room for any desired aisle or work area. Recommended clearance around the equipment is a minimum of three (3) feet. Ensure clearance conforms to local building and fire codes.

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 3 - Typical Bay Layout (Surface Mount)

8.3 Base frame Location



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

1. With reference to Figure 3, the installer should locate the most suitable location in the shop 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 the centerline for the inside edges of the base frames. Refer to Figure 4 for the dimensions necessary to provide the desired width between the two runways. A distance of 37''- 38''(940mm-965mm) between the base frames will provide the standard width of 39"-40'' (991mm-1016mm) between the inside of the runways.
4. Measure and snap a chalk line parallel to the shop door for the front of the base frames, a minimum distance of 249 1/8" (6328mm) for the standard length lift is recommended. For short length lifts, use a minimum of 234-1/8" (5947mm).
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.

Figure 4 - Base frame Locations

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

8.4 Anchor Location

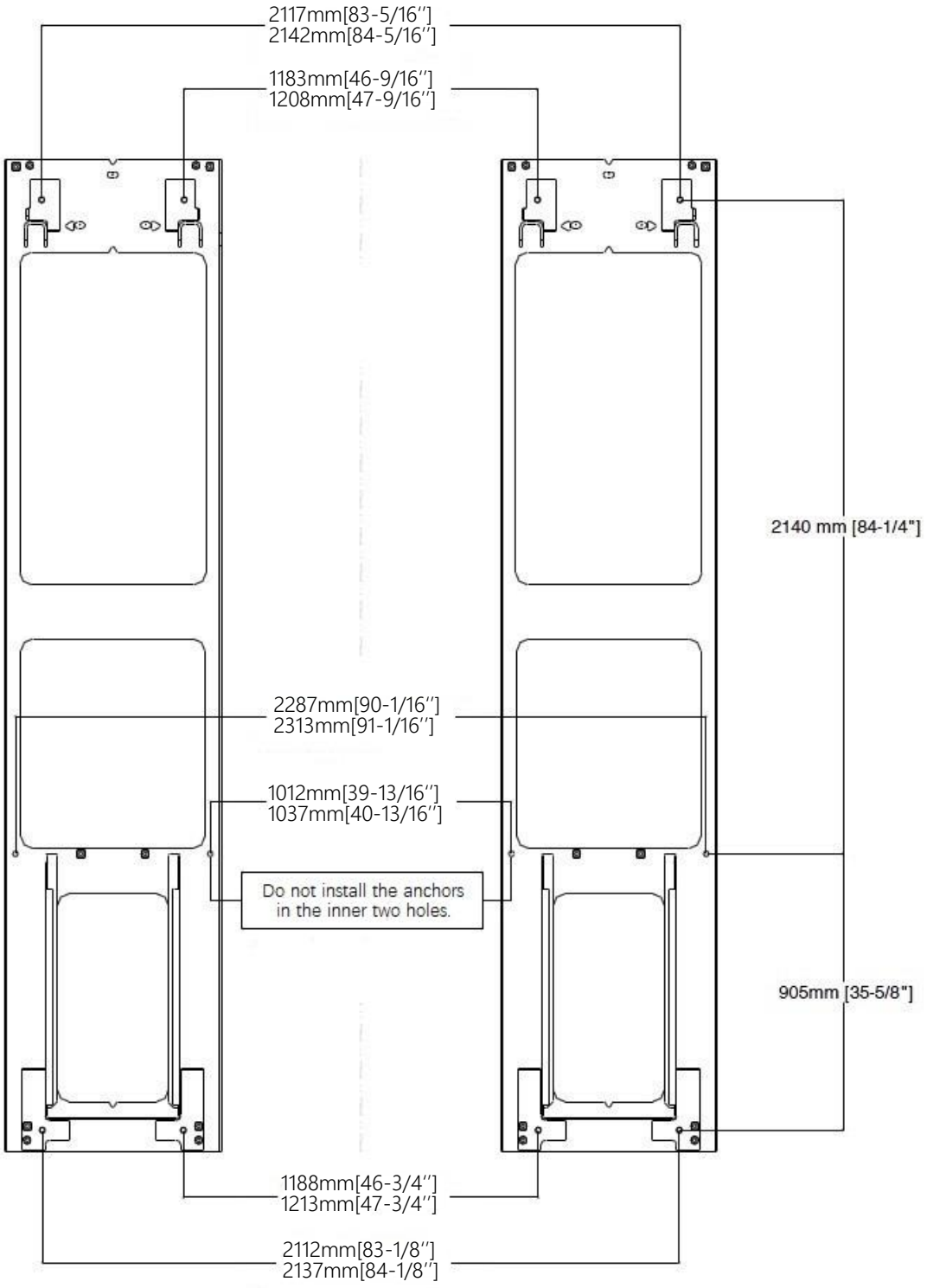


Figure 5 - Anchor Locations

8.5 Unpacking the Lift

1. Unpack the console and place it in the desired location at the rear of the lift. 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.

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

---

3. Position the base frames on chalk lines and ensure that the runways are parallel. Ensure that both the inside dimensions (front and back) of the base frames as well as the diagonal distances are equal.
4. Remove the remaining packing straps, and remove the hydraulic hoses, polytubes and proximity switch wires from under the deck. Hoses and wiring are located under the rear portion of the deck 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 and wiring as it may strain the connections to the base frame.

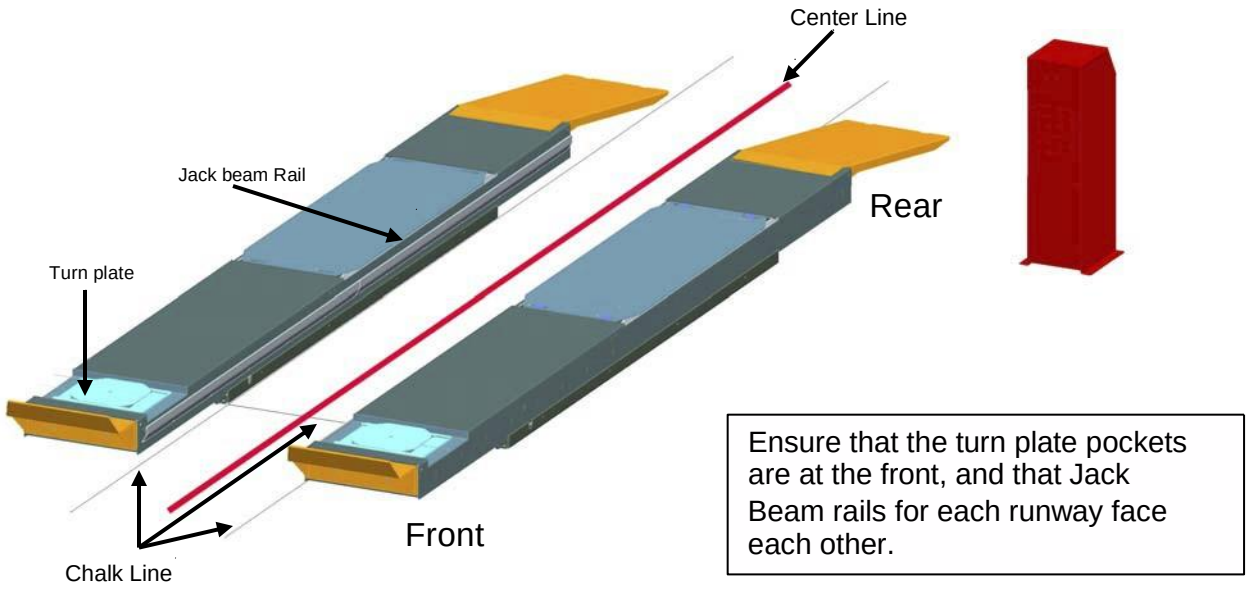


Figure 6 - Runway Locations

8.6 Hydraulic Connections

WARNING! DO NOT REMOVE HYDRAULIC FITTINGS WHILE SYSTEM IS UNDER PRESSURE.

1. Open the front and rear access covers of the console.

2. Unravel all hoses, air lines, and sensor cables from each runway and connect the hydraulic lines as shown in Figure 8. Save the caps from the hydraulic lines for capping other fittings mentioned in the next step.

    - Always make sure that the connections are clean to avoid contaminating the hydraulic system.
    - Do not kink hydraulic hoses or air lines.

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

    Left Side (L):
    CL
    EQL + 2-2718CN
    (“C” for “Cylinder” and “EQ” for “Equalize”)

    Right Side (R):
    CR
    EQR + 2-2719CN

4. The two Ø10 mm polytube return lines from both base frames should be joined inside the console by using an Ø10 “T” connector (Figure 7) from the hardware kit.

5. Cut off one approximately 6” to 8” (152.4mm to 203.2mm) from either polytube supplied, and connect one end to the “T” connector to the tank. Next, Insert the other end of the tube to the pump connection marked “T” (Tank) (Figure 8).

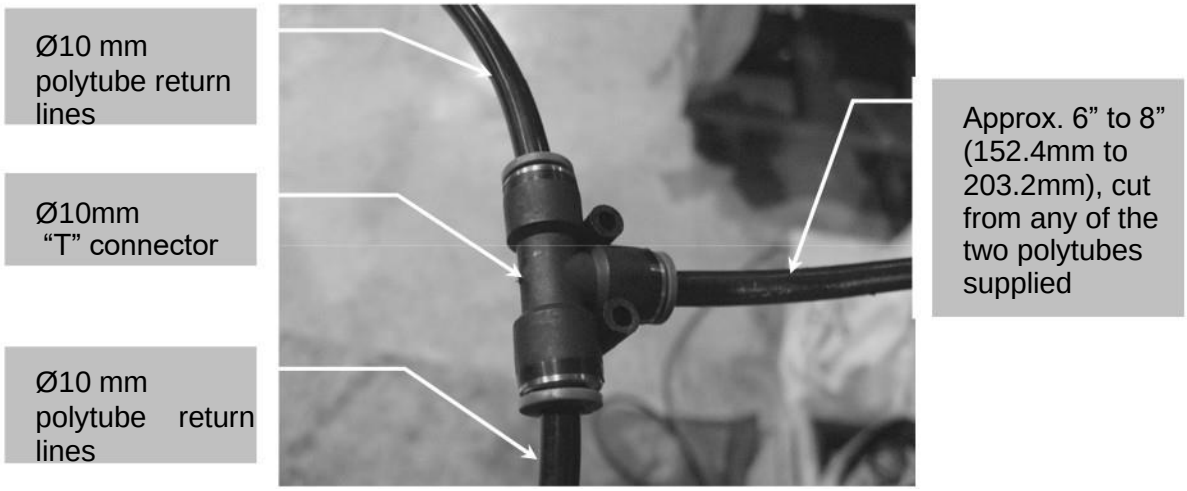


Figure 7 - "T" Connector

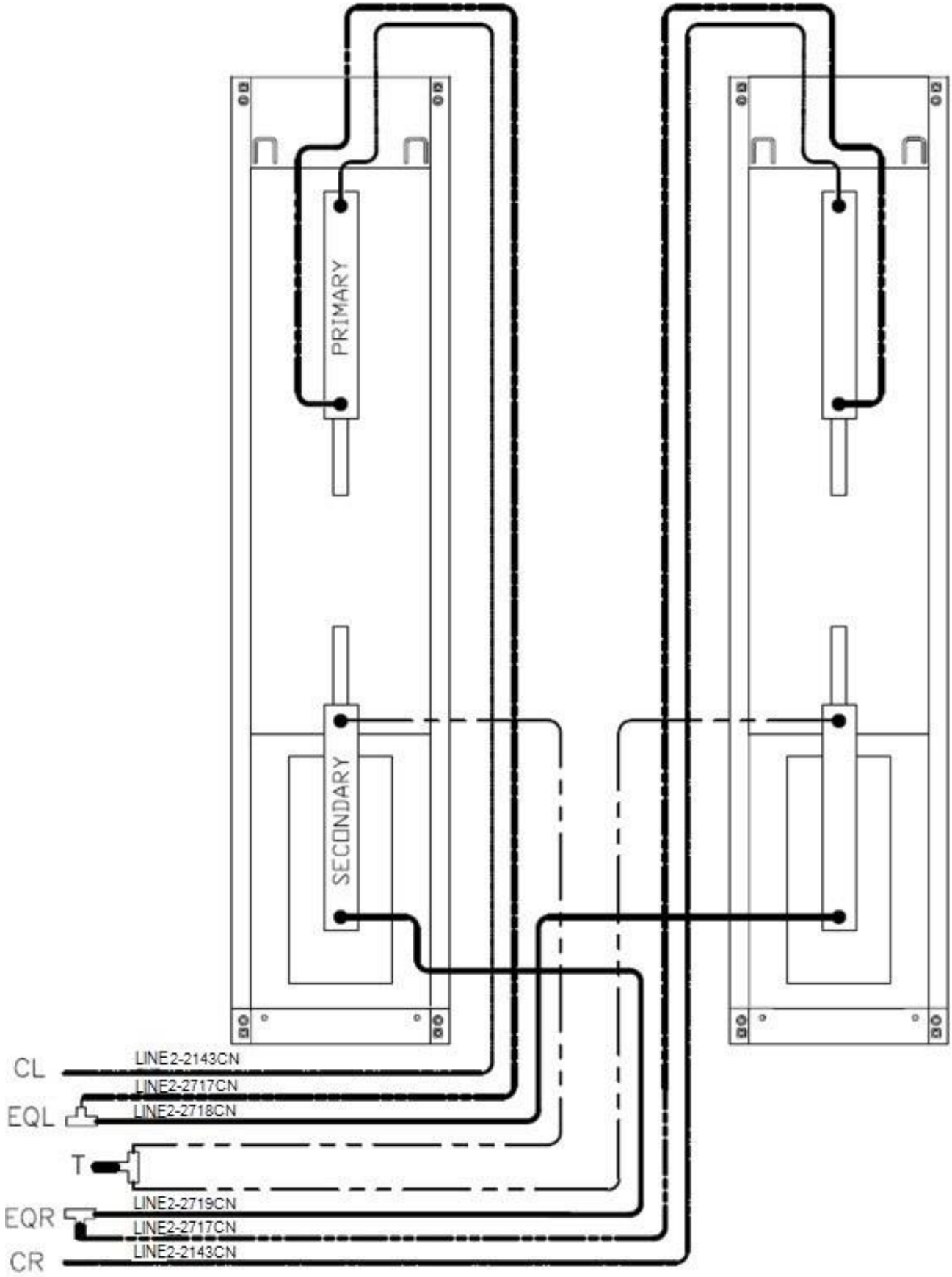


Figure 8 - Hydraulic Connections

8.7 Air Safety and Auxiliary Air connections

WARNING! WEAR SAFETY GOGGLES AND PRACTICE CAUTION WHILE WORKING WITH COMPRESSED AIR.

1. Uncoil the Ø6mm polytube from each base frame that is connected to the air release cylinder. Route this line to the 'Y' connector in the console. (Figure 9, Figure 11)

2. The Ø10mm polytube for the auxiliary air connections is coiled from left side base frame. Route this hose to the console and connect it to the T- fitting inside the console. (Figure 9, Figure 11)

3. A 3/8" NPT fitting (not supplied), is needed to connect shop air supply to the Air Filter / Regulator/ Lubricator Unit. Connect airline to the FRL unit located on the outside of the console.

   IMPORTANT: Shop air must be connected to the inlet port at the FRL unit on the console, in order for lift to operate.

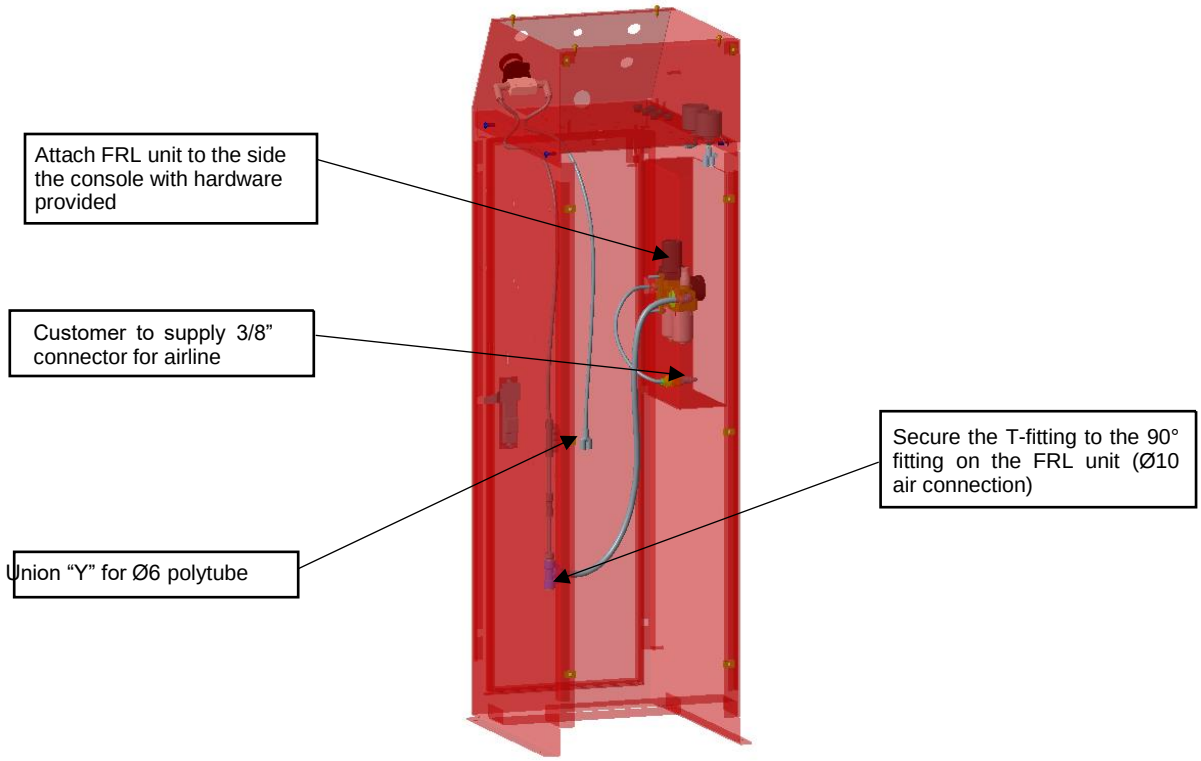


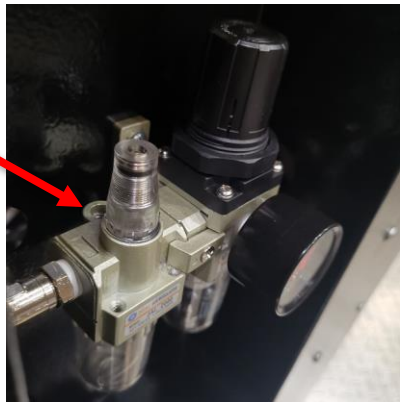
Figure 9 - Air Safety & Auxiliary Air Connections

PROCEDURE FOR PREPARING FRL FOR USE WITH LIFT:

1. Disconnect shop air from FRL inlet. Adding Oil to the lubricator cannot take place under a pressurized condition.

Disconnect shop air.

2. Using a slotted screwdriver or an Allen key, remove the filler cap from the top of the FRL.



3. Fill FRL using Snap-on Air Oil #IM6 or equivalent. Oil to be filled to the MAX line marked on reservoir. If unit does not have MAX line mark, reservoir should be 80% full.

4. Replace filler cap to top of FRL.

5. With the output end of the FRL disconnected (remove the quick disconnect fitting), reconnect the airline to the FRL unit. Air will flow freely through the FRL.

6. Perform Drip Check / Adjustment: Drips to be set to 2-3 per minute.

JELPC Brand - SCREW VERSION

i. Using a flat head screwdriver, turn the screw clockwise until it is closed.

ii. Open the screw by turning counterclockwise a 1/4 turn.

iii. Adjust by turning screw slowly in either direction to reach the desired drip rate.

7. PRESSURE ADJUSTMENT:

   Pull up on the regulator knob and adjust the pressure to 100 psi. Pressure should be set between 90 - 120 psi.

8. Reconnect all airlines and check system for air leaks.

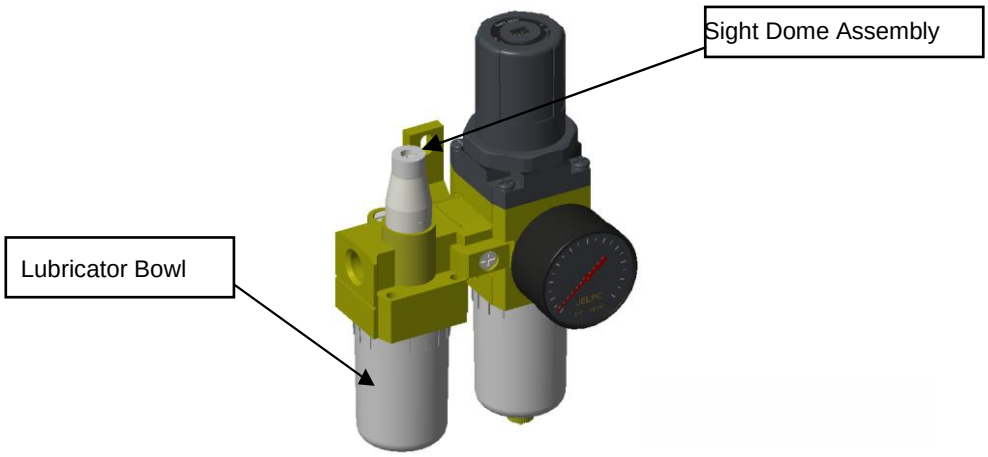


Figure 10 - FRL

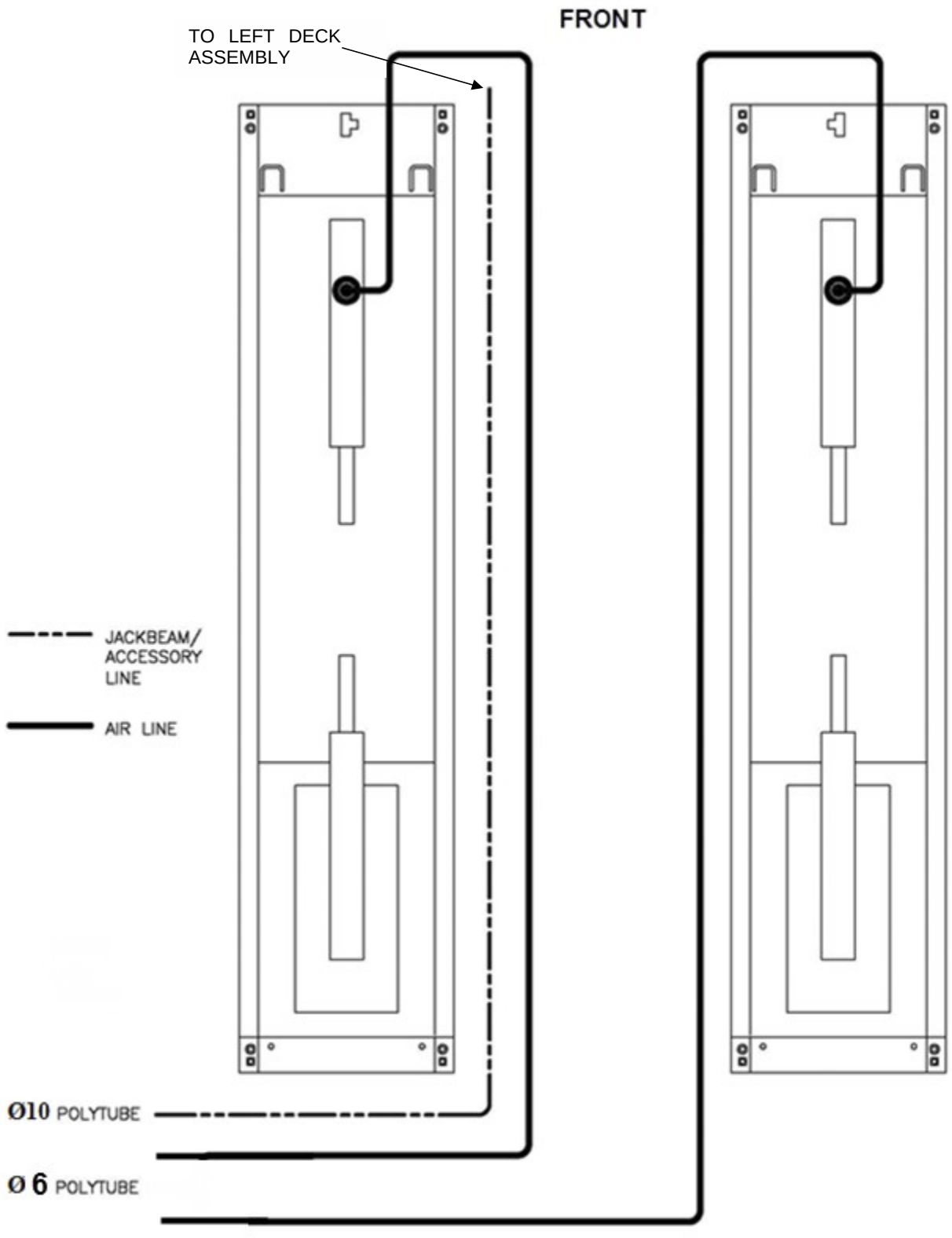


Figure 11 - Air Safety & Auxiliary Air Connections

8.8 Pneumatic Sensor Connections

There are three (3) pneumatic limit switches on this lift. Each runway is outfitted with an individual equalizing pneumatic switch mounted on a bracket located under the front of the runway. The third pneumatic switch, used for height limit detection, is located under the rear slip plate area on the left scissor assembly. Each Pneumatic Switch has a Ø4mm air supply line (Red) and a Ø4mm air return line (Blue). See Figure 12a & 12b.

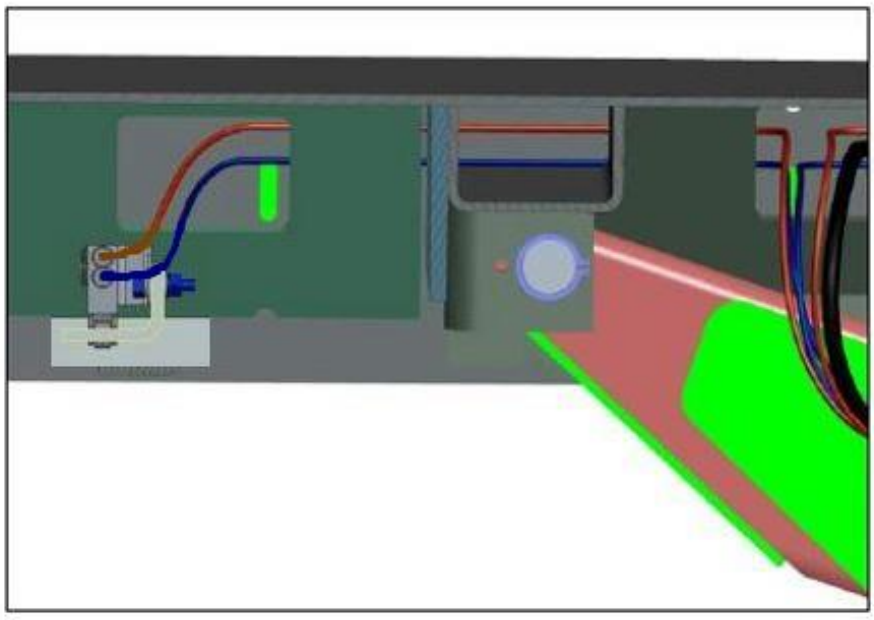


Figure 12a - Equalizing Pneumatic Switch. (View under LS Deck - Front)

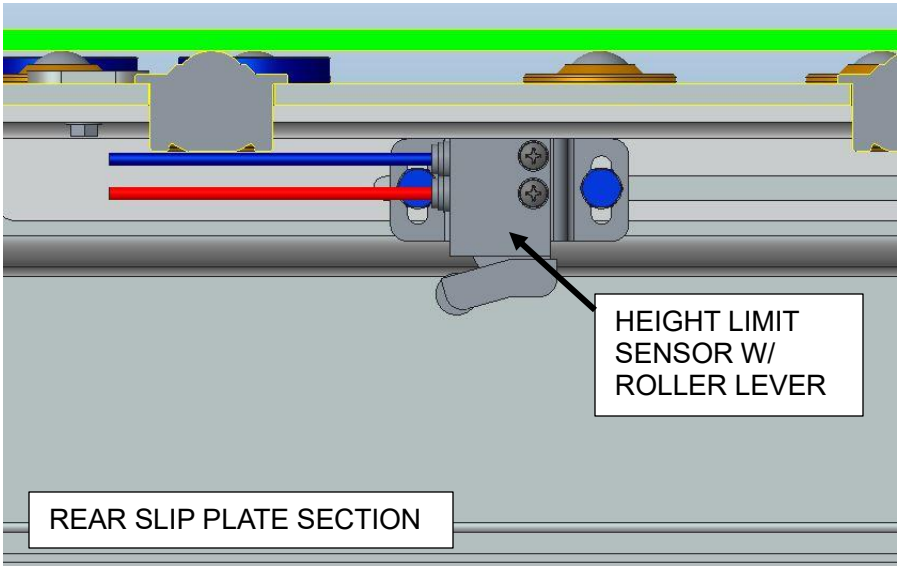


Figure 12b - Upper Limit Pneumatic Switch. (View under LS Deck - Rear)

1. Route two red Ø4mm air lines labeled with “EQ SUPPLY” and “LMT SUPPLY” from left side base frame and one red Ø4mm air lines labeled with “EQ SUPPLY” from right side base frame to console and connect them to the “5 PORTS MANIFOLD” fitting in console (Figure 13).

2. Route two blue Ø4mm air lines labeled with “EQ RETURN” from left side and right side base frame to console and connect them to a union ‘Y’ fitting in the console (Figure 14).

3. Route one blue Ø4mm air lines labeled with “LMT RETURN” from left side base frame to console and connect to the pressure switch fitting in the console (Figure 14).

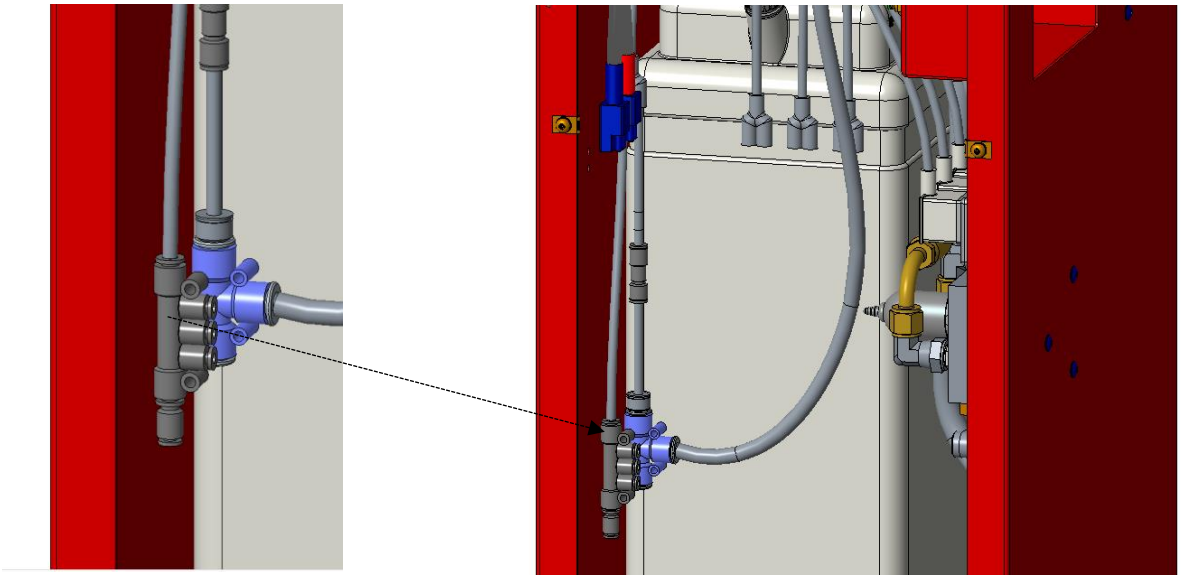


Figure 13 - Pneumatic Switch Supply Line Connections (Console)

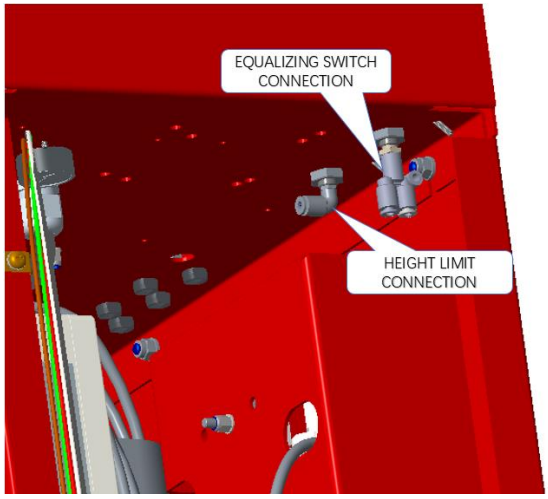


Figure 14 - Pneumatic Switch Return Line Connections (Console)

8.9 Electrical Connections

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

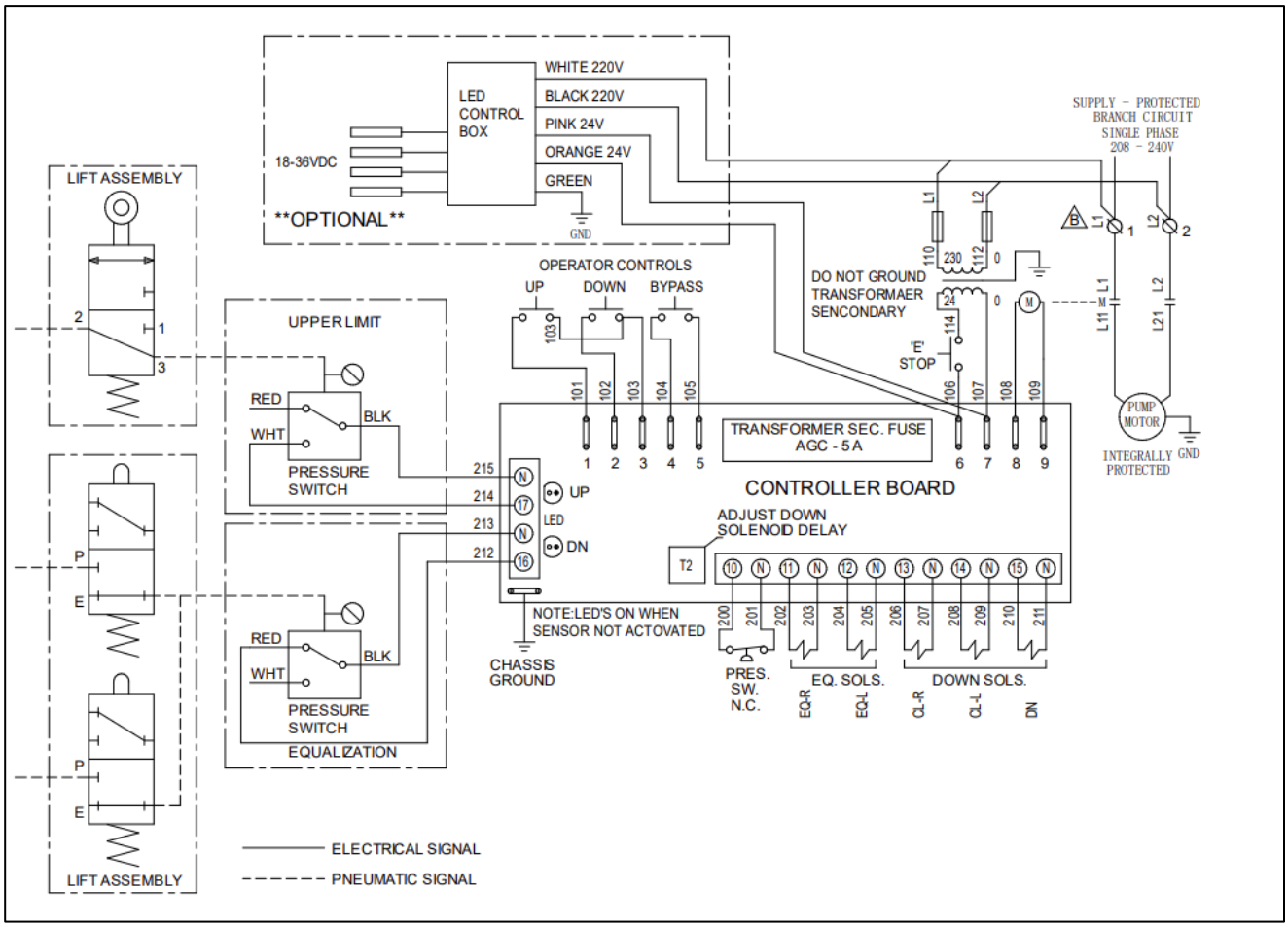


Figure 15a - Console Circuit Connections

** Optional for locking and lights. See next page for electrical diagram of LED driver box.

NOTE: Overload fuse does not come with single phase power unit

NOTE: Optional Voltage and Phase power units will include separate wiring diagrams.

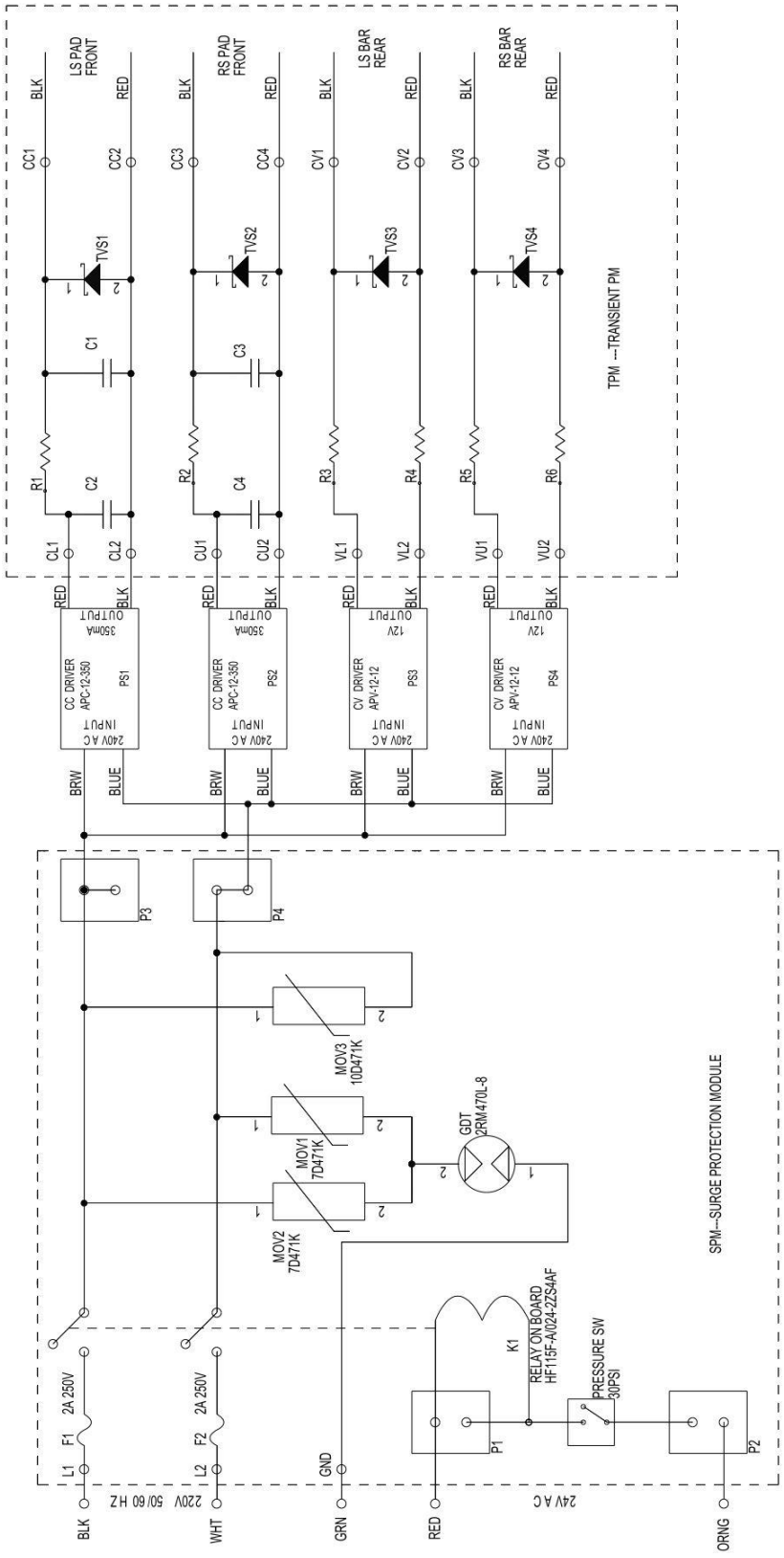


Figure 15b - **Optional: LED Driver Box Circuit Connections

8.10 Initial Operation

1. Add hydraulic fluid to reservoir (ISO 32 10wt). Oil capacity for the lift is approximately 6 gallons.

   IMPORTANT: Shop air must be connected to the inlet port at the FRL unit in the console, in order for lift to operate.

2. Raise lift to 2 ft, lower and repeat 3 to 4 times, using “UP” and “DOWN” controls on the front of the console.

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

3. Using the “BYPASS” button inside the console see Figure 17, start raising the lift to the last lock position as shown in Figure 16.

   Monitor the fluid level during this procedure. At approximately half way, add 10 liters of oil to the reservoir. Continue to raise the lift.

   NOTE: Ensure the gauges inside the console are monitored and pressure does not reach 1000 psi. If 1000 psi is reached, lower the lift onto the locks to relieve the pressure. Continue to raise the lift until both sides of the lift are on the last lock position. (Figure 15)

IMPORTANT: The unit must be on the last locking position to bleed the lift.

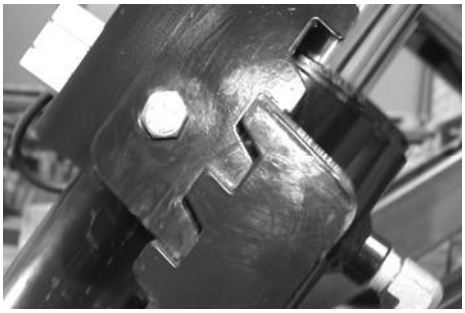


Figure 16-Safety lock position for bleeding.

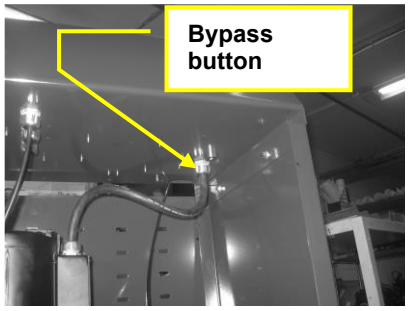


Figure 17- Location of bypass button.

4. BLEED THE SYSTEM: Once the lift is placed on the last safety position, remove the polytube return lines, at the Tee fitting (Figure 7) and place them into a funnel over the reservoir. Press the bypass button until a clear stream of oil is flowing from the return lines. Release the bypass button and wait for 5 -10 seconds and continue to bleed. Repeat this “wait and bleed” procedure 5 times or until air is no longer visible in the return lines. Connect polytube lines back to the Tee fitting.

5. RELEASE THE SAFETY LOCKS: Place a rag or drip pan directly under the secondary cylinder and remove the 90 deg. push lock fittings on the top of the secondary cylinders (see Figure 18). Cap the port using the plugs provided (see Figure 19).

   Holding the air safety release button on the console, raise the lift using the “BYPASS” button until the safety locks disengage. DO NOT BUILD PRESSURE OVER 1000 PSI.

6. Lower the lift to the next safety lock. Remove the plugs and reinstall the 90 deg push lock fittings. Lower the lift to a comfortable working height and continue the installation.

Figure 18- Remove fitting.

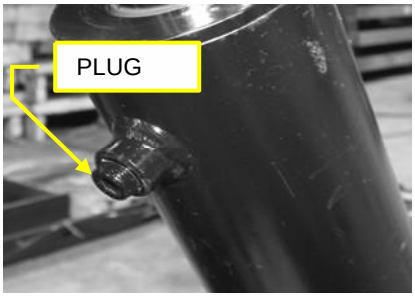


Figure 19- Cap port using plug provided.

8.11 Equalizing Function Check

Check:
To verify that the pneumatic switches are functioning, remove the rear panel on the console and locate the five (5) Din Connector/Solenoid assemblies; (four (4) on manifold block and one (1) on the pump). When the lift reaches its fully lowered position, these din connectors will emit a red light for 3 to 5 seconds. (see Figure 20).

If this does not occur, check the pneumatic connections at the sensors and at the console.

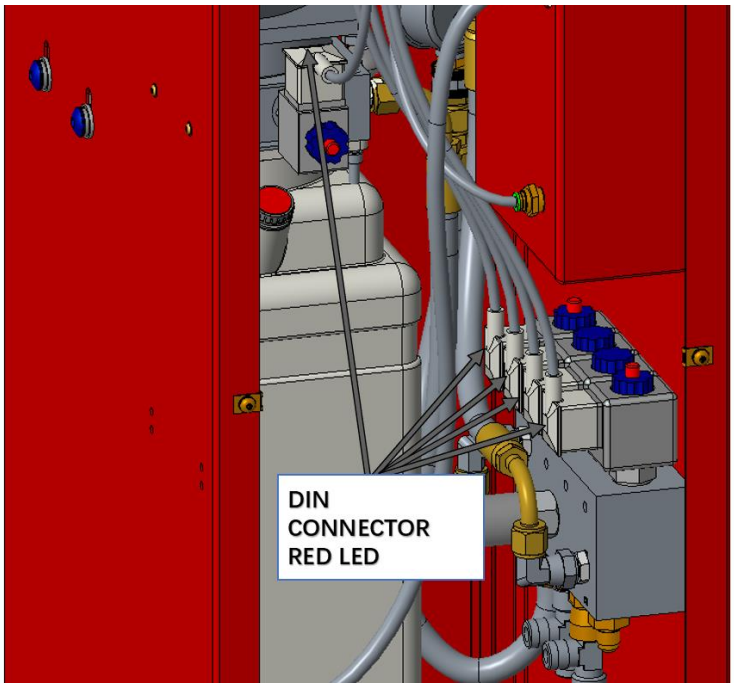


Figure 20 - Din Connector/Solenoid assemblies.

8.12 Maximum Height Adjustment

The lift has been pre-adjusted at the factory to a 72” working height. If a lower height limit is required, the system can be adjusted to a minimum of 43”.

1. Raise lift to full height by pressing the up button (do not press the by-pass button).
2. The limit switch (see Figure 21) should automatically stop the lift once the 72” working height (bottom of base frame to top of runway) is reached.
3. Lower the lift to the desired working height ensuring the safety locks can be disengaged.
4. Loosen the M6 adjustment bolts and slide the limit switch and bracket assembly towards the scissor cross-tube until the roller lever on the switch is fully depressed. Hold in place and tighten M6 bolts.

   NOTE: Switch must be installed in front of the cross-tube.

   CHECK: Lower the lift to the ground, then raise until the lift stops. Perform this function a few times to verify the upper limit is set correctly.

   NOTE: Make sure locks can be disengaged at the maximum or desired height.

   UPPER LIMIT PNEUMATIC SWITCH

   LOCATION: Underside of Driver Runway.

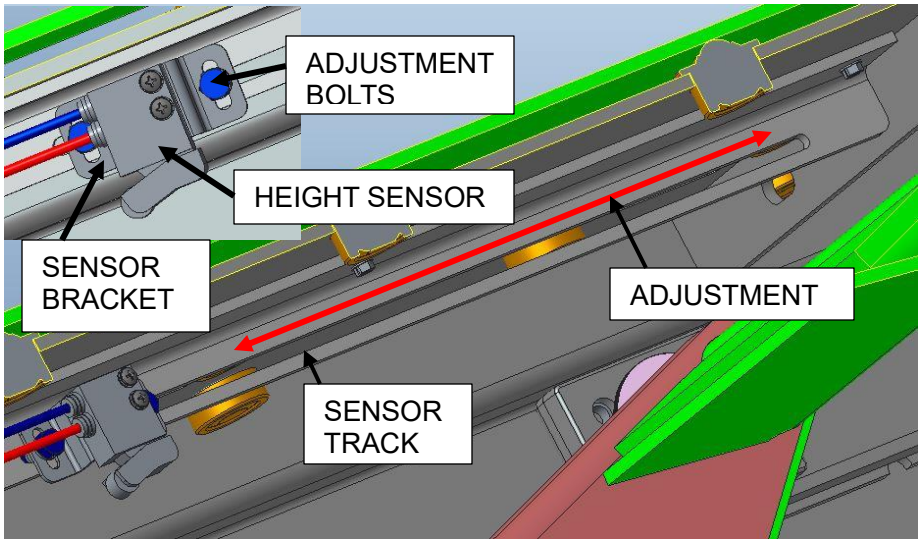


Figure 21 - Upper limit proximity sensor

NOTICE

The limit switch should never allow the working height to be above 72”. If the automatic stop height is above 72”, damage or failure of the hydraulic seals in the cylinder can occur.

8.13 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

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 measurements should be taken 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 compared to Figure 4 and make minor adjustments as required.
2. Level the base frames using the leveling bolts provided at each of the four (4) corners.
3. Use shims provided to support under glide block area of base frame and under front hinges. See Figure 22.

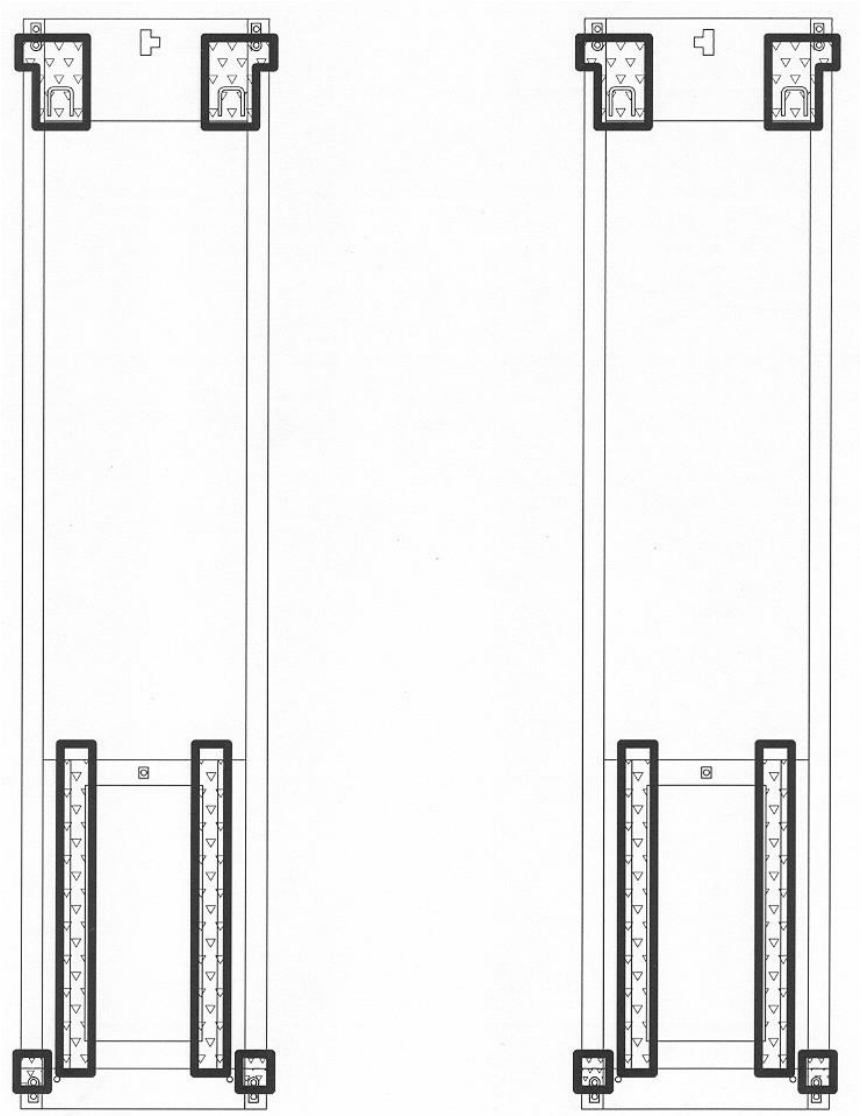


Figure 22 - Shimming

4. Verify that the base frames are level side-to-side and that the runways are level front-to-back. The front turn plate and rear slip plate are the areas of interest. 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. Lower and raise the lift and repeat these measurements.
5. Adjust the M16 support bolts on the four (4) corners of the base frames to level the runway at fully collapsed position.
6. Once lift is level, back off the 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).

8.14 Anchoring Procedure

CAUTION! WEAR SAFETY GOGGLES AND PRACTICE CAUTION WHILE DRILLING CONCRETE.

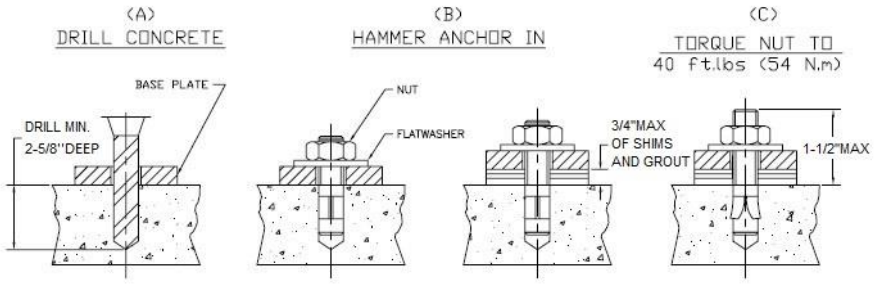


Figure 23 - Anchoring

1. Lower the lift and measure the distance between the Jack beam rails at front and rear of the lift.
2. Raise the lift to full height and repeat the measurements, and ensure there are no differences.
3. Using a rotary hammer drill and a 1/2” concrete bit, drill through the floor at each of the five (5) anchor bolt locations on each of the base frames. Refer to Figure 23.
4. Assemble the nut and washer onto the 1/2” x 3-3/4” long wedge anchor bolts supplied. A minimum of six threads must be visible below the surface of the nut.
5. Clean out the drilling dust from the holes and hammer in the anchors until they make contact with the baseplate. Hand tighten all anchor bolts.
6. Torque all anchor bolts to 40 ft-lbs.
7. Position the console in the final desired location. Using a rotary hammer drill and a 1/4” concrete bit drill and anchor the console to the floor using the anchor bolt, self-tapping screw and flat washer located in the hardware kit.
8. Use the line covers to protect all cables, hoses, and wiring running to the lift. Using a rotary hammer drill and a Ø8 concrete bit drill and anchor the line covers using the anchor bolt, self-tapping screw and flat washer located in the hardware kit.

If anchor bolts do not tighten to 40 ft-lbs. OR project more than 1 -1/2” above the concrete surface, the concrete should be replaced by an appropriate concrete pad.

8.15 Grouting Procedure (Optional)

1. Pour grouting under the load area of each base frame as shown in Figure 24. 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)]

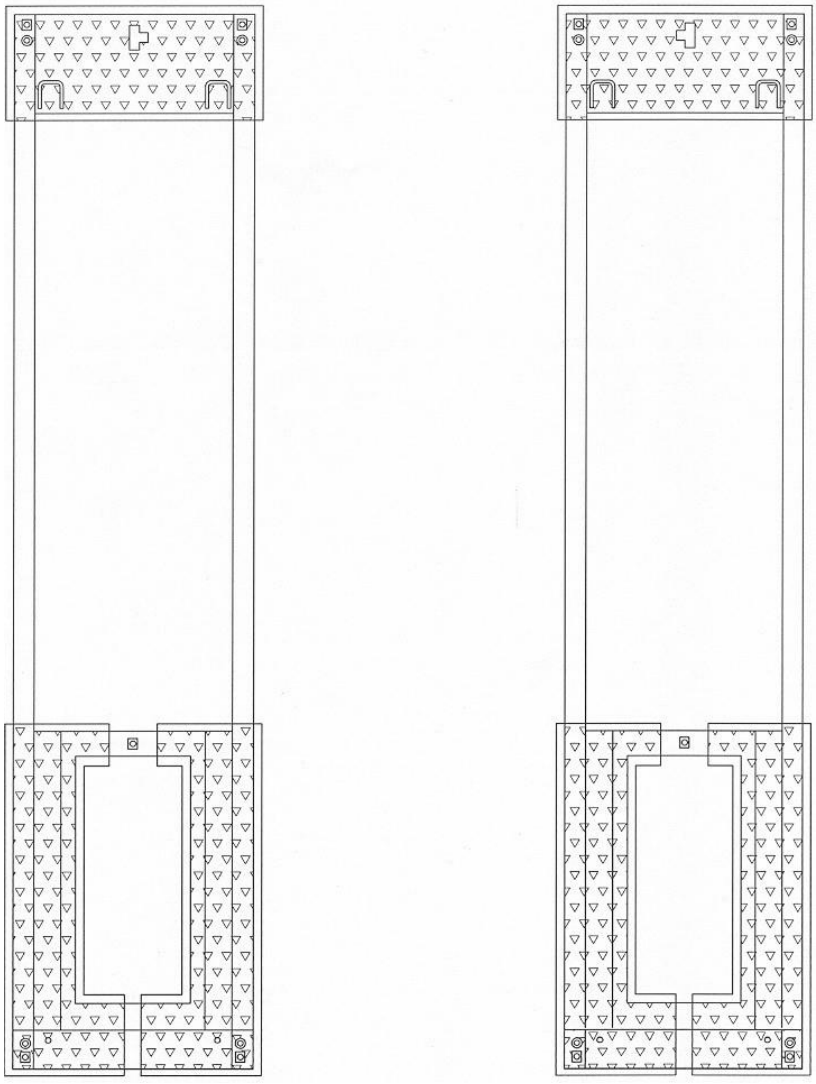


Figure 24 - Grouting Locations

9.0 ACCESSORY INSTALLATION

1. Install the front runway stops located in the accessory box using the M12 hex bolts, washers, lock washers, and hex nuts located in the hardware kit. (See Figure 25)

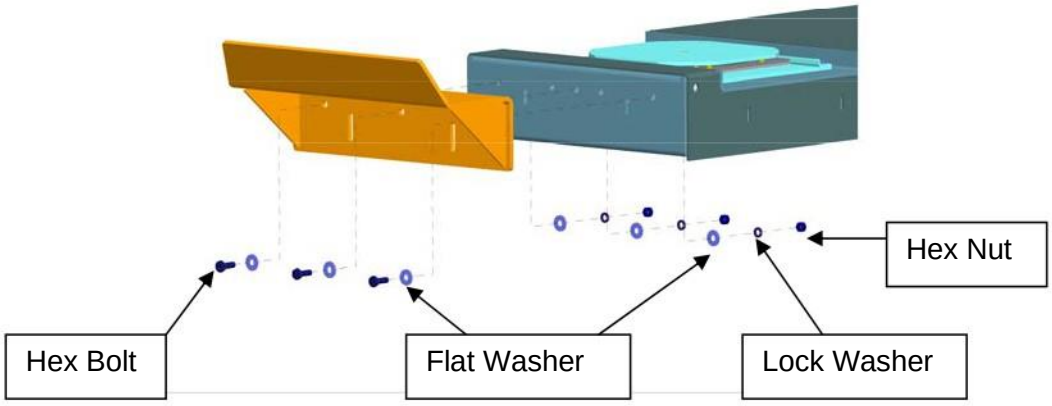


Figure 25 - Runway Stops Installation

The runway 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.

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2. Install the mounting bracket and then the rear approach ramps using the Approach Ramp Pins located in the accessory box, and the hex head bolts, flat washers, lock washers, hex nuts and cotter pins located in the hardware kit. (See Figure 26)

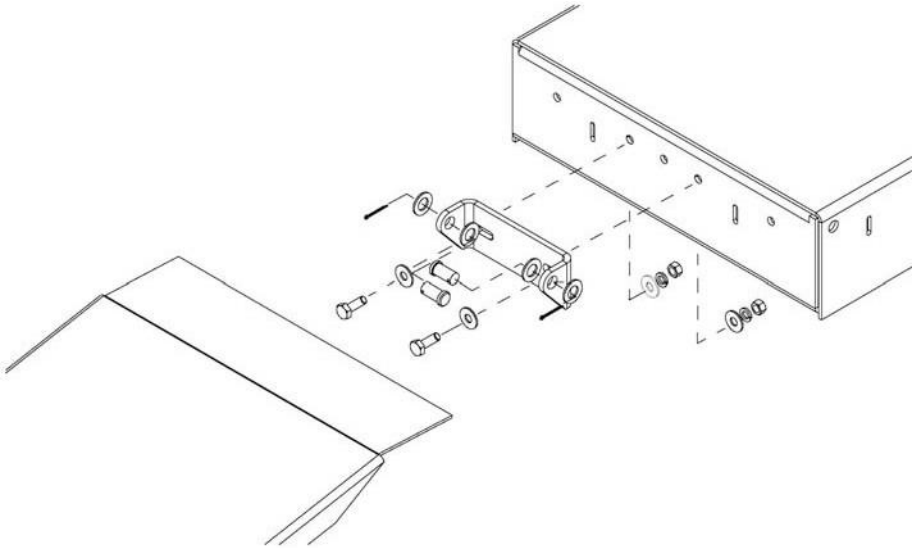

Figure 26 - Approach Ramps Installation

3. Position the moveable work step in the desired location. There are slots along the span of each runway where the work step can be mounted. When not in use, the work step can be stored under the front section of the runway. (See Figure 27)

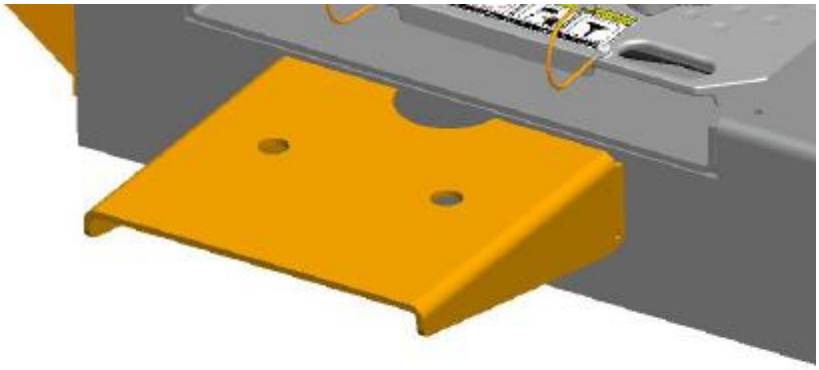

Figure 27 - Position Movable Work step

WARNING!! ENSURE THE WORKSTEP IS FULLY ENGAGED PRIOR TO USE. IF MORE THAN ONE WORKSTEP IS IN USE, DO NOT TRY TO STEP ACROSS OR JUMP FROM ONE STEP TO ANOTHER. NEVER USE THE WORKSTEP WHILE THE LIFT IS IN OPERATION. SERIOUS INJURY COULD RESULT FROM IMPROPER USAGE OF THE WORKSTEPS.

WARNING! WORKSTEP MAXIMUM CAPACITY IS 250 LBS.

WARNING! FOR FLUSHMOUNT INSTALLATIONS ENSURE WORKSTEP IS REMOVED BEFORE RAISING OR LOWERING THE LIFT.

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4. Install Jack beams with reference to the Jack beam user manual.

5. *Required for Flush mount installation only.*

   Position the filler angle (1-3038CN) alongside of pit, as shown in Figure 28.

   Ensure top of angle is flush with the top of the concrete. Using the angle as a template, mark holes for drilling.

   Drill 1/2 holes in concrete and secure filler angle with 1/2 Wedge Anchors provided.
   Repeat for the remaining 3 angles along first side and perform the same procedure for the opposite side of the pit

   * If a short deck assembly is being installed, cut the 4th filler angle to the desired length.

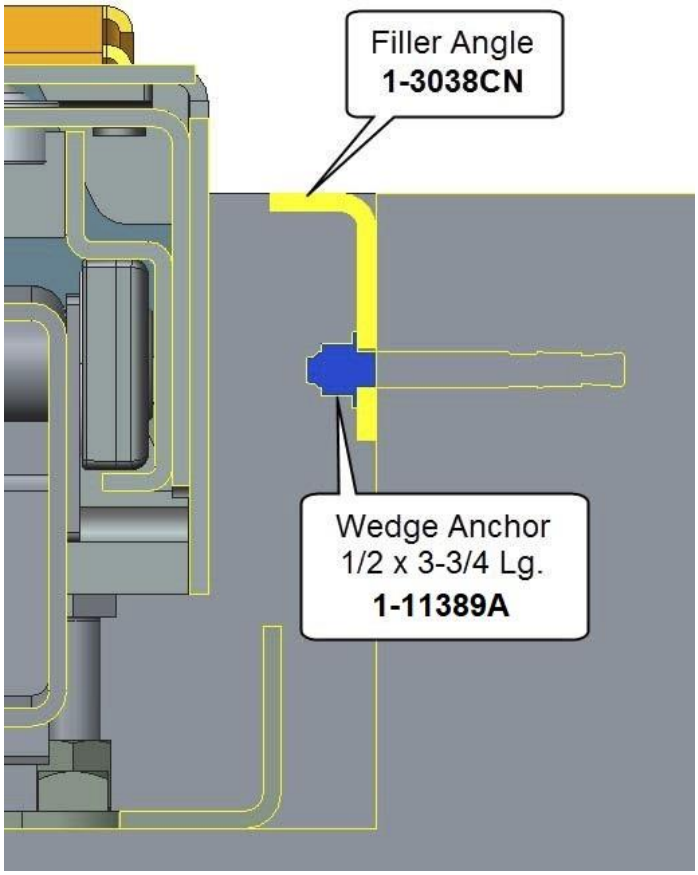


Figure 28 - Filler Angle Installation

9.1 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. Position the end cap “G” to the other side of the line cover “B”, and then fasten it with “HEX SBHS SCREW” (1-09288A) as shown.

6. The number along each side of the line covers represents the quantity of fasteners required to secure them in place. Using a Ø8（5/16”）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.

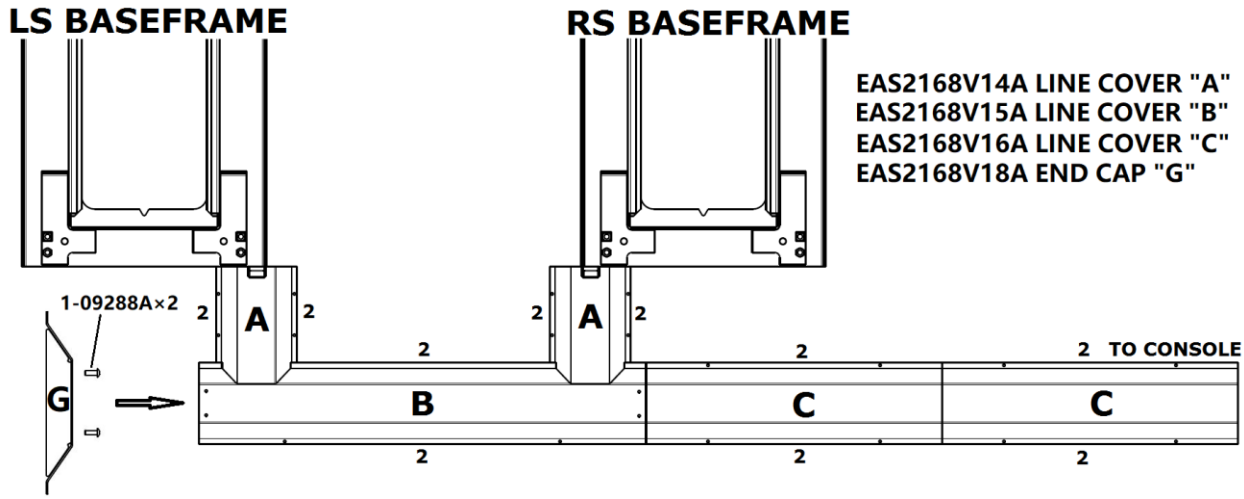


Figure 29 - Line Covers Layout

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

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 represent the quantity of fasteners required to secure them in place. Using a Ø8 （5/16”）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.

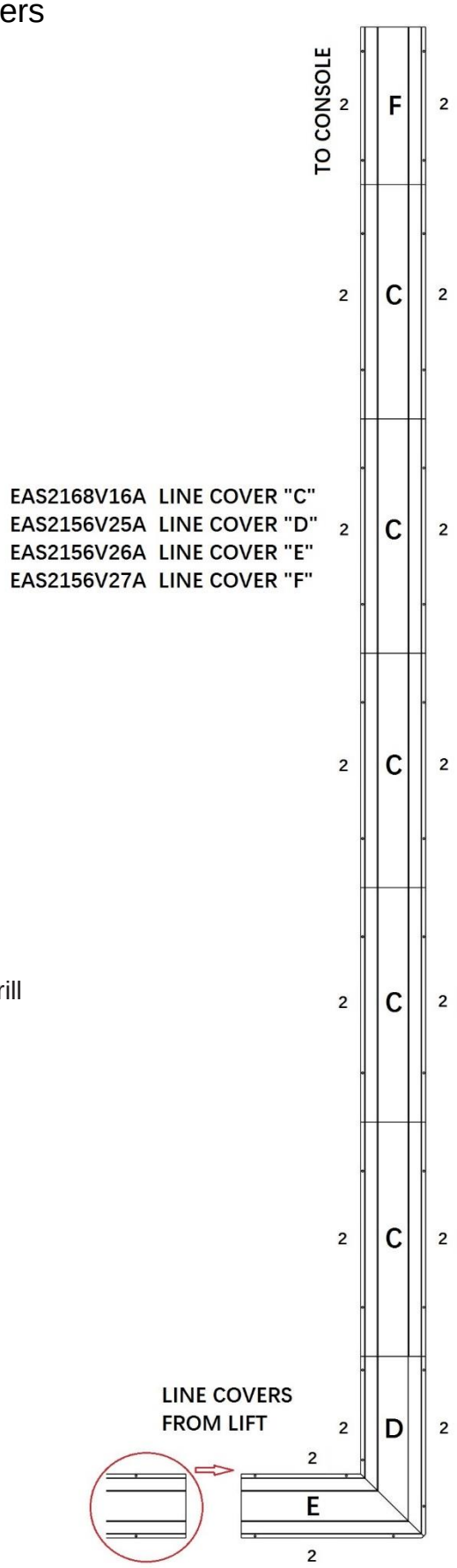


Figure 30 – Extension Line Covers Layout

10.0 LOCKING FRONT TURNPLATES & REAR SLIP PLATES (OPTIONAL)

10.1 Installation of Front Turn plates

Avoid inserting fingers in the front alignment pan cut-out, if position of the turn plate assembly exposes such openings.

Ensure that air supply to the lift is turned off and no person is operating on the console during maintenance of clamping elements of the locking system.

During normal use, the front turn plates and rear slip plates may move rapidly, when locking system is activated. This creates pinch points for your fingers or hands. Keep hands clear of these pinch points when lift air supply is connected. No person shall operate console while maintenance or inspection of the slip plates is in process.

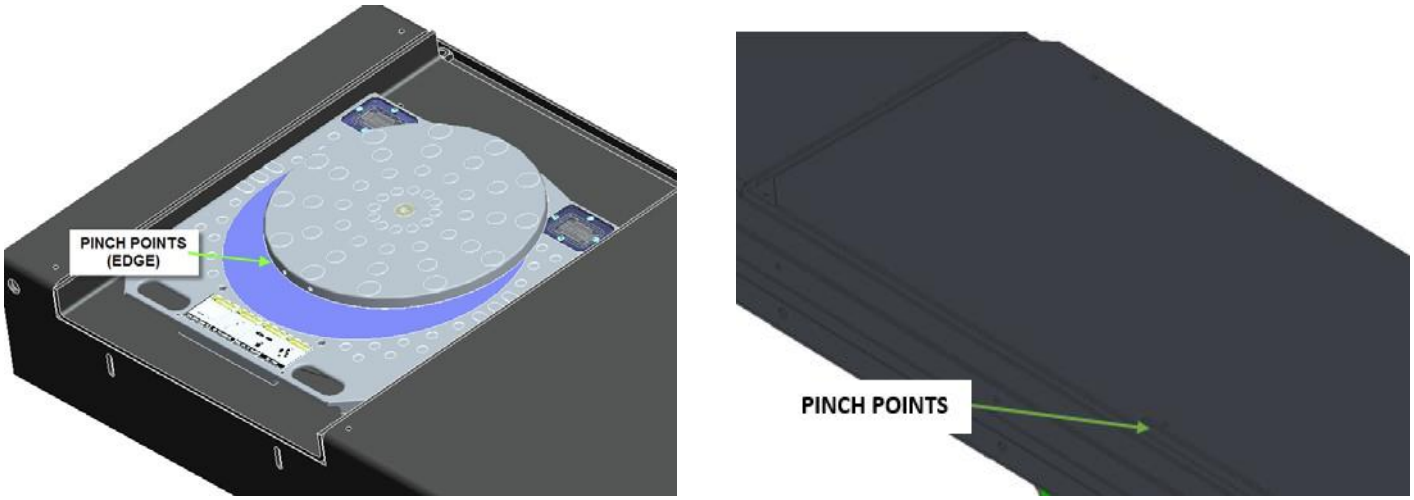


Figure 31 - Pinch Points

1. Lower lift to a comfort height.
2. Place each front turn plate assembly, one by one, on the front alignment pan on runway. Moving handles of the turn plates should be oriented to the outside of lift, shown below. See Figure 32.
3. Verify that the turn plate assembly is completely seated in the front alignment pan. Gently slide each turn plate in the alignment pan, left and right, to verify that they can be positioned for different car widths. Do not hit plastic locking ring forcefully against the edges of the cut-out in the front alignment pan.

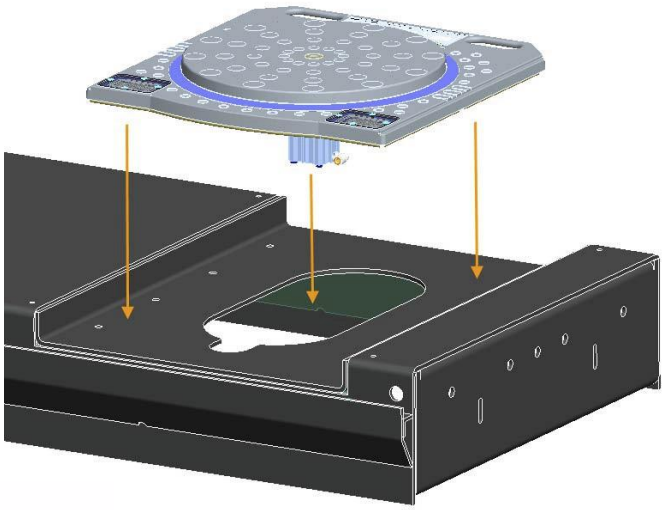


Figure 32 - Position Turn plates

Ensure that the locking system components on the bottom of the turn plate (air cylinder, fittings, and plastic clamping parts) are not hit against the runway during placement.

4. Connect free ends of front air lines to the turn plate locking cylinder: blue airline to the cylinder port marked with a blue dot and red airline to the cylinder port marked with a red dot [Figure 33 shown below].

5. Plug the electrical connector on the turn plate light cord into the electrical connector on the cable at the front.

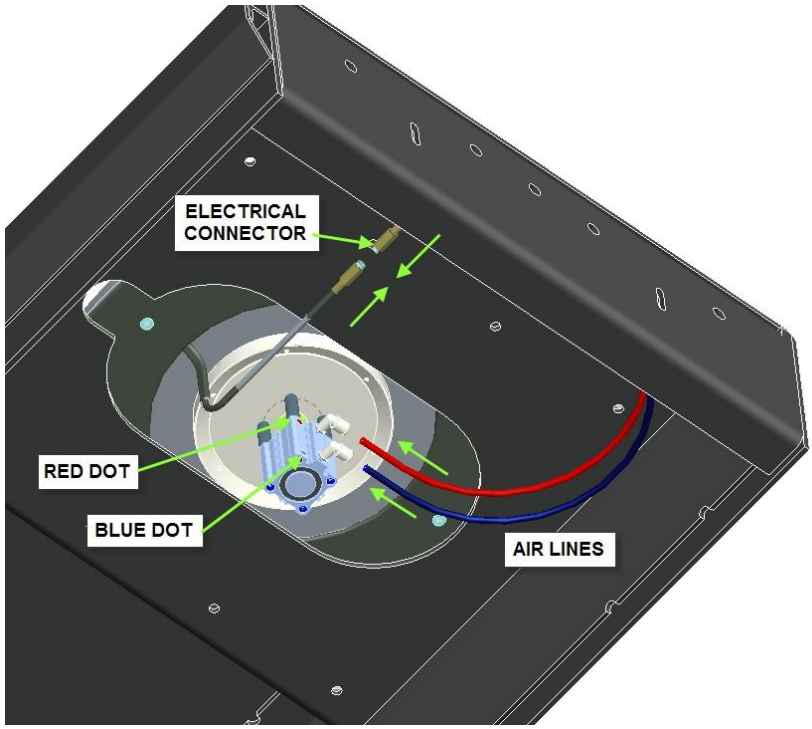


Figure 33 - Turn plates Air Lines Connection

*Note: Objects in pictures may not be exactly as shown.

10.2 Console Connections for Locking & Lights

Locking & Light System

1. Connect the (2) red & blue polytubes from lift to corresponding “y” fitting in the console (see Detail B).

2. Connect the 4mm blue polytube labeled “LIGHTS” to pushlock fitting on the LED driver box. Connect the other 4mm red polytube labeled “LIGHTS” to the pushlock “5 PORTS MANIFOLD” reducer (see Detail A and Detail C)

3. Connect the red & blue electrical connectors from lift to corresponding red & blue electrical connectors from the LED driver box (see Detail B).

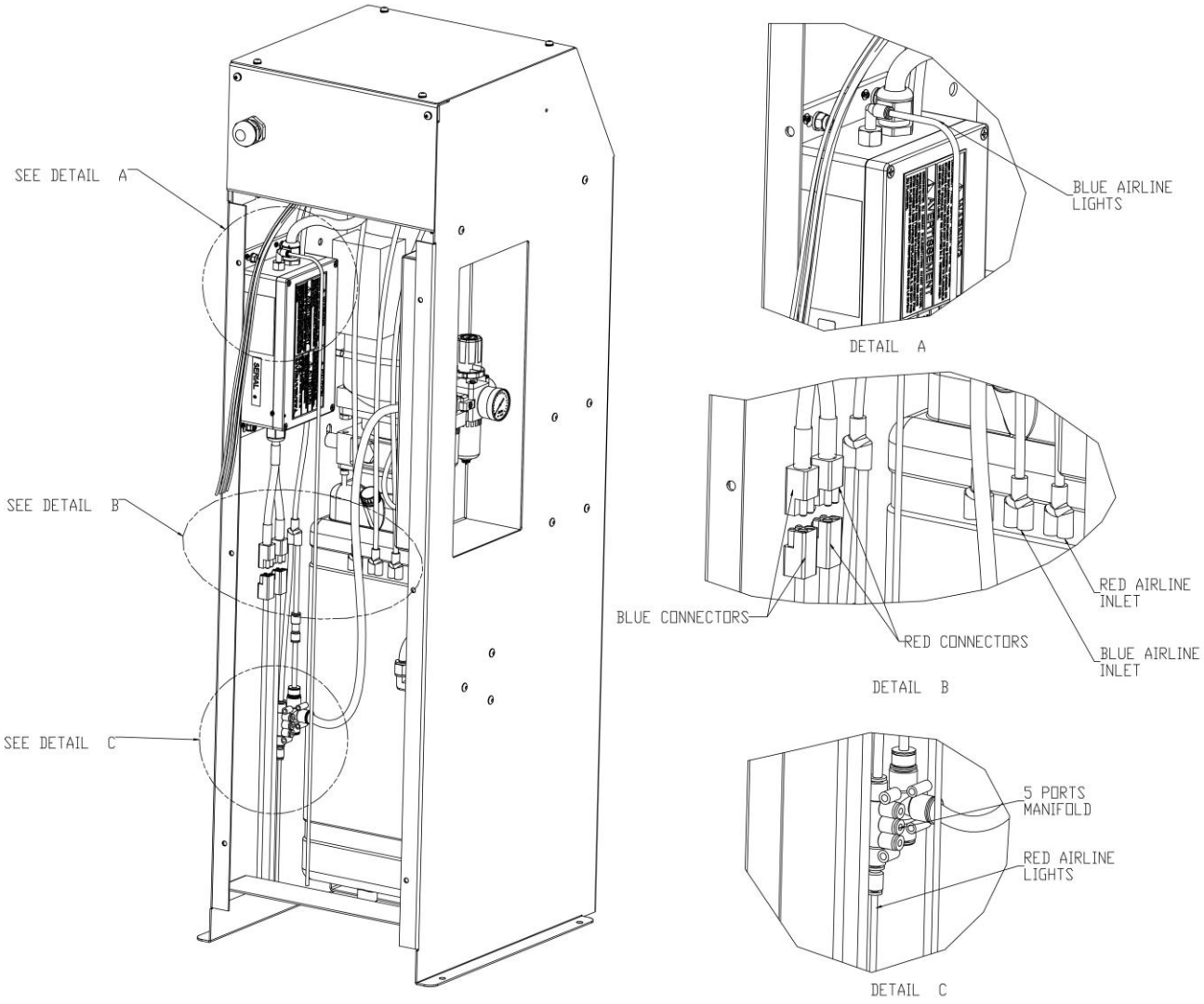


Figure 34 - Air Lines Connection and Electrical Wiring

4. Once all connections are made, test system as follows:

   a. Light System - Lift must be fully collapsed. Start raising lift. At approximately 30" from the ground, the lights will illuminate. If not, please check that the 4mm polytube connections are correct as they may be reversed.

      Comparable to the Upper Limit System (see Section 8.8), the Light kit is turned on by a similar method. This system will have its own Cam and Sensor, located on the upper hinge at the front right side runway.

      NOTE: Unlike the Upper Limit System, this system is not adjustable and is factory set.

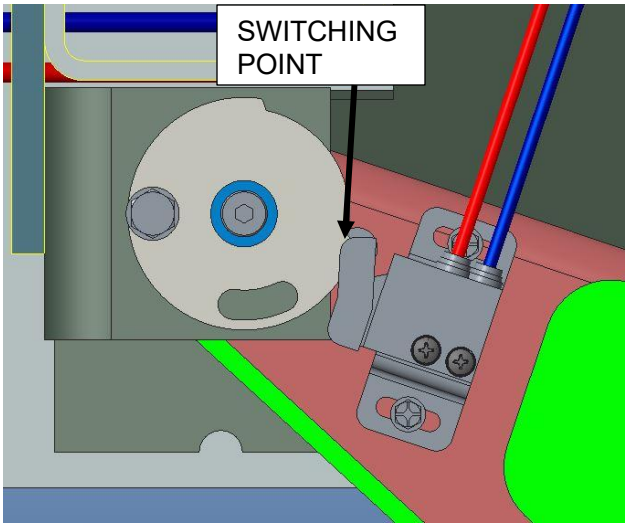


Figure 35

   b. Locking System - On front of console, switch the Slip Plate lever to "Unlock". All locking plates should be free to move, please verify. Now switch the lever to "Lock", all locking plates should be centered and locked, please verify. If not, check that all polytube connections are correct and there is 90-120 psi of air pressure.

11.0 FINAL PROCEDURES

11.1 Check of Assembled Lift

1. Final dimension check after anchoring. ____
2. Check for air and hydraulic leaks. ____
3. Re-check level of decks, front to rear, side to side. ____
4. Check all fasteners, tighten if necessary. ____
5. Check torque of anchor bolts (Sect. 8.14) ____
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 Manual ____
    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 (Sect. 8.7) ____
9. Upper limit switch and height shut off ____
10. Equalizing switch operation ____
11. Train end user on operation of lift. ____

11.2 Operation Test with Vehicle

1. Lower lift to the ground. (Make sure Green Light is OFF) ____
2. Drive vehicle on to lift. ____
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

12.0 LIFT OPERATION

12.1 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 in the front turn plates and rear slip plates before driving a vehicle onto the lift.
4. Position the vehicle on the lift ensuring the resulting load on the deck is distributed as evenly as possible. Under no circumstances should a vehicle be lifted if the weight distribution is unbalanced by more than 10% on either side. Maximum wheelbase for this lift is 176".

   ATTENTION: THE VEHICLE IS POSITIONED CORRECTLY WHEN THE DISTANCE FROM THE CENTER OF THE TIRES TO THE INSIDE EDGE IF THE RUNWAYS IS EQUAL ON BOTH RUNWAYS, FOR BOTH THE FRONT AND REAR TIRES.
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. Do not raise or lower the lift with the vehicle on the Jack Beam.
9. When using the function of the slip plate, ensure that the Jack Beam is not in the red area, to avoid the light damage during the slip plate moving. See Figure 36.

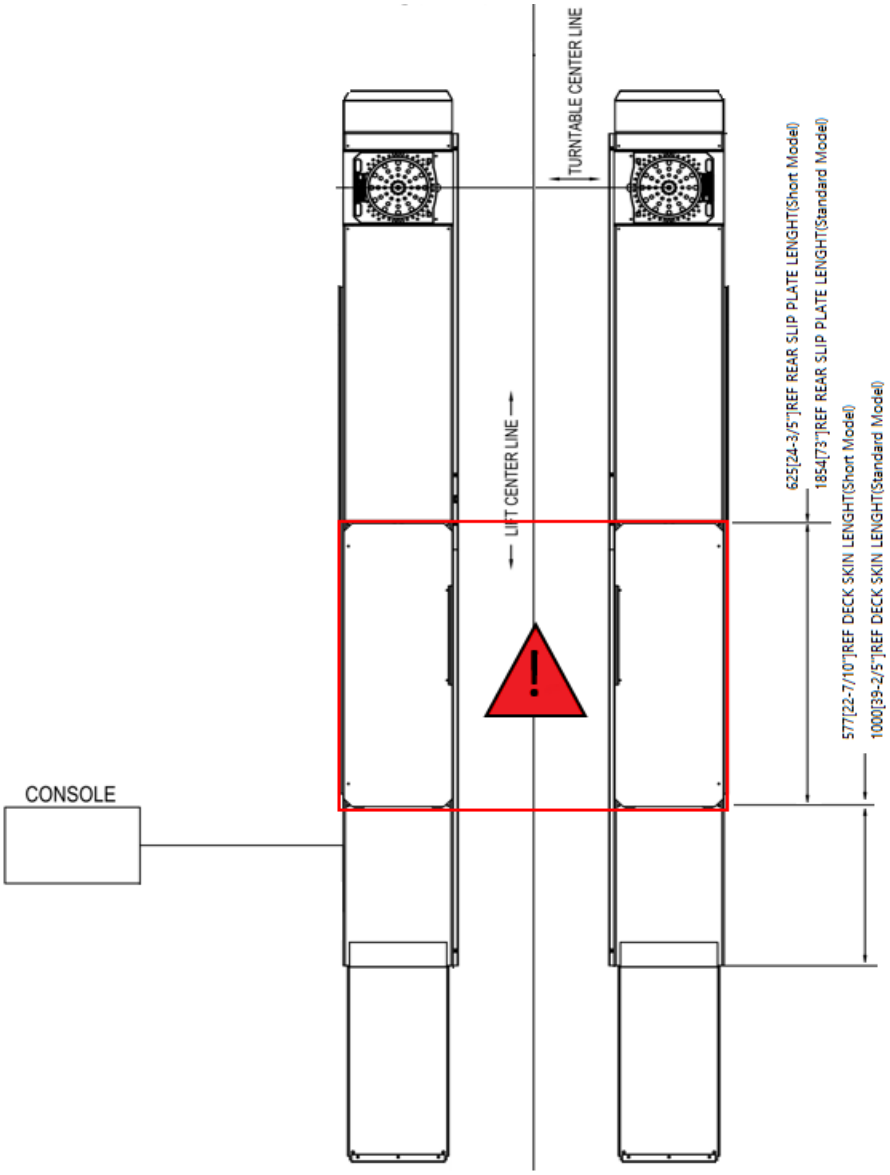


Figure 36

WARNING! NEVER WORK UNDER A VEHICLE OR THE LIFT UNLESS IT IS POSITIONED ON BOTH MECHANICAL SAFETIES!

12.2 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 completely collapsed position.
5. Remove wheel chocks and ensure that locking pins are in the front turn plates 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.
7. Do not raise or lower the lift with the vehicle on the Jack Beam.

ATTENTION: 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.

13.0 RECOMMENDED MAINTENANCE

The following maintenance schedule is recommended for ensuring the operation of the lift. A record of maintenance performed should be maintained and any items that resulted in additional service should be noted.

Schedule	Maintenance Required
Daily	Check that the upper and lower glide tracks are clean and free of debris. This area should be checked before raising or lowering the lift.
	Inspect the operation of the lift by raising and lowering the lift fully.
	Check for the proper engagement and release of mechanical safety locks. If bolts are removed for maintenance re-apply LOCTITE #242 before re-assembly
	Check hydraulic lines for leaks and fraying. Frayed hoses must be replaced immediately.
Weekly	Check the fluid level in the reservoir with the lift fully lowered. Top up reservoir with ISO 32 (10 weight) hydraulic oil as needed.
	Check Oil Level in Air Line Lubricator and refill if required (See 13.1)
Monthly	Check anchor bolts for tightness. Torque to 40 ft-lbs. if needed.
	Inspect the electrical and mechanical operation of all switches.
	Inspect runway stop fasteners monthly.
5 Year	Change the hydraulic fluid every five years. Use only ISO 32 (10 weight) hydraulic oil.

NOTE: FAILURE TO FOLLOW RECOMMENDATION MAY AFFECT WARRANY OF LIFT

13.1 Checking Oil Level for Air Lubricator

The Air Lubricator is located on the outside of the console to allow for easy monitoring of the oil level.

MAINTENANCE

- Refill oil reservoir using instructions in Section 8.7 before the oil level reaches the 1/5 of the oil reservoir height.

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

- Recheck drip rate after refilling.
- Check pressure is adjusted to 100 psi.
- The FRL unit is auto-draining. However, you can drain the water trap filter bowl by pressing valve at the bottom of the bowl until all water has drained.

13.2 Maintenance of Turn plate & Slip Plate Locking System (Opt.)

1. Observe locking mechanisms with every lift rise for airline connection integrity. Also ensure that no foreign objects are trapped in the clamping components.

2. Once a week inspect the mating conical surfaces of the front turn table locking mechanism. If necessary, blow with compressed air or wipe with a clean cloth any road dust, salt or other contaminants, including liquids. Greasing of these surfaces is not required and not recommended.

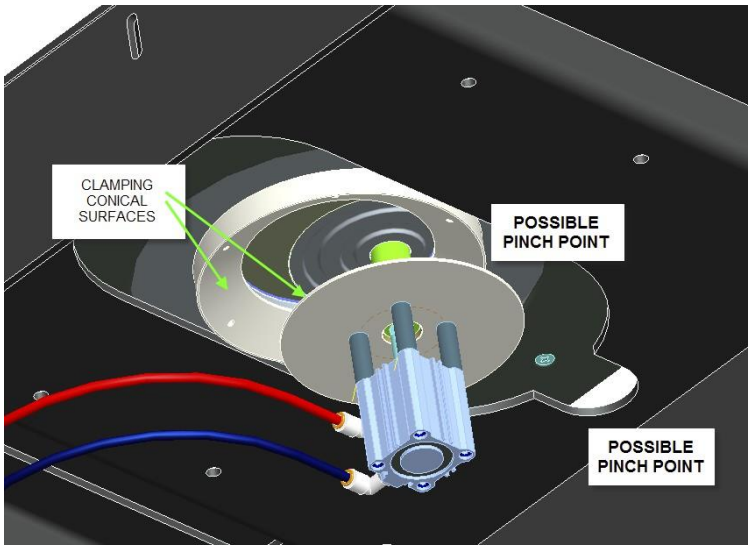


Figure 37

3. After extended use, it may be required that some components of the front turn plate will need replacement, due to normal wear. Please ensure to re-apply *Loctite* where needed, as detailed in the exploded view of the front turn plate - Section 20.1.

4. Once a week inspect locking mechanisms of the rear slip plates. Ensure that clamping jaws are securely attached to cylinder clevises and to pivot pins, and that mounting hardware and air fittings are properly fastened.

5. If replacement of rear clamping components becomes necessary after extended use, re-apply *Loctite* to the threads of the rear cylinder shoulder bolts. Exploded view of one of the 4 rear clamps on the lift is shown in Section 20.2.

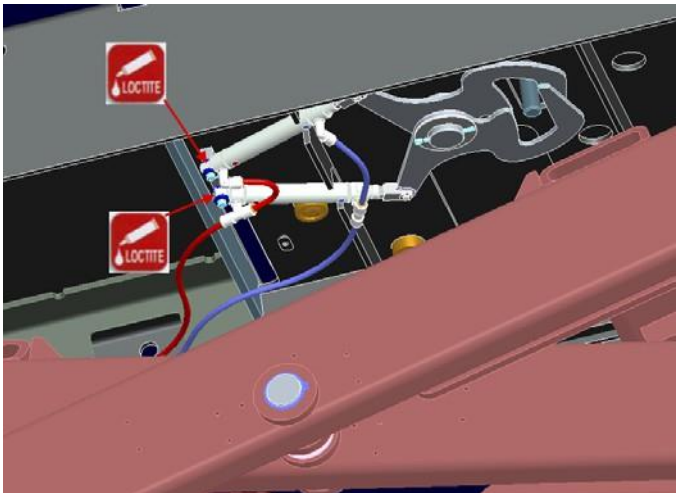


Figure 38

** Re-apply *Loctite* to bolt threads if removing bolts. Tighten shoulder bolts completely in their sockets

13.3 Adjustment of Safety Locks

1. Loosen all the bolts with an 17mm open wrench

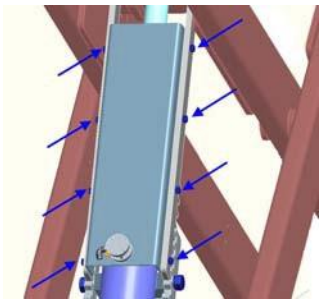


Figure 39a

2. Raise lift the lift to its highest position

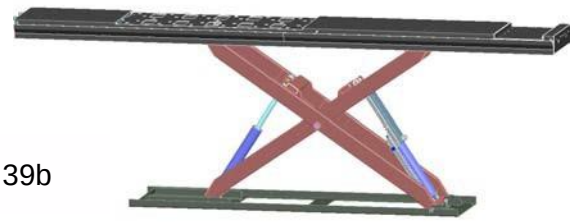


Figure 39b

3. Center the top safety rack in between the bottom safety rack.

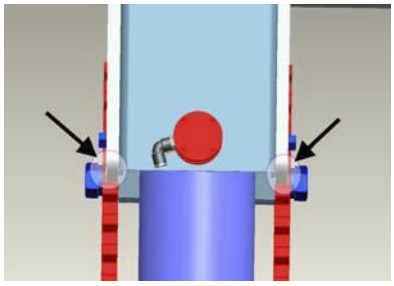


Figure 39c

4. Tighten each bolt in sequence as shown in the figure below. Check the alignment after tightening each bolt.

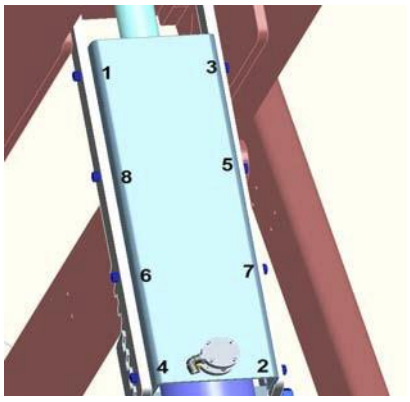


Figure 39d

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.

14.0 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 MAINTENANCE AND SERVICE MUST BE PERFORMED BY A QUALIFIED PERSON.

ALL MAINTENANCE AND SERVICE MUST BE PERFORMED WITH THE LIFT UNLOADED.

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

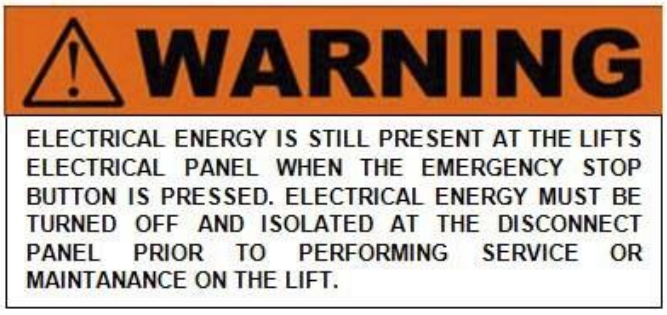
- **Accessible**
- **Conveniently located to facilitate the application of lockout devices during service and maintenance**
- **Located outside any hazardous area.**
- **At a convenient manipulating height (i.e. not overhead, on ladders or under machinery)**
- **Adequately labeled or marked. Identification 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.



14.1 Isolation and Verification Procedure:

Table 1: ISOLATION AND VERIFICATION PROCEDURES:

ENERGY TYPE AND SOURCE	LOCKOUT LOCATION (TO BE COMPLETED BY END USER)	PROCEDURE FOR LOCING OUT AND OR RELEASING ENERGIES	VERIFY PROCEDURES
STORED ENERGY AND 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. 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. AT THE DISCONNECT PLANEL, PLACE THE DISCONNECT HANDLE IN OFF POSITION. ATTACH A MULTIPLE LOCKOUT DEVICE. LOCK AND TAG. DANGER: LINE SIDE OF DISCONNECT REMAINS ENERGIZED	ATEMPT TO RESTART THE SYSTEM, THE SYSTEM MUST NOT START. VISUALLY VERIFY OPEN DISCONNECTS AND LOCKING DEVICE INSTALLED.
PNEUMATIC UPTO 160PSI		SLOWLY CLOSE LOCKOUT VALVE TO RELEASE AIR PRESSURE GRADUALLY. ATTACH MULTIPLE LOCKOUT DEVICE, LOCK AND TAG. DANGER: 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 restarted.
  - Remove the lockout/tag outs 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.

14.2 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 vehicle. 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 flow divider and remove the red caps on the two outer descent valves.

4) Slowly turn each manual override thumbscrew in the counterclockwise direction. The lift should not come down at this point.

5) Locate the descent valve on the hydraulic power unit, see Figure 41.

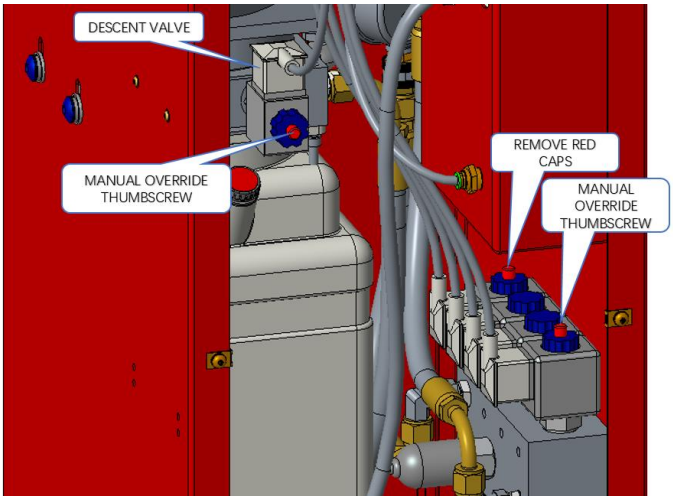
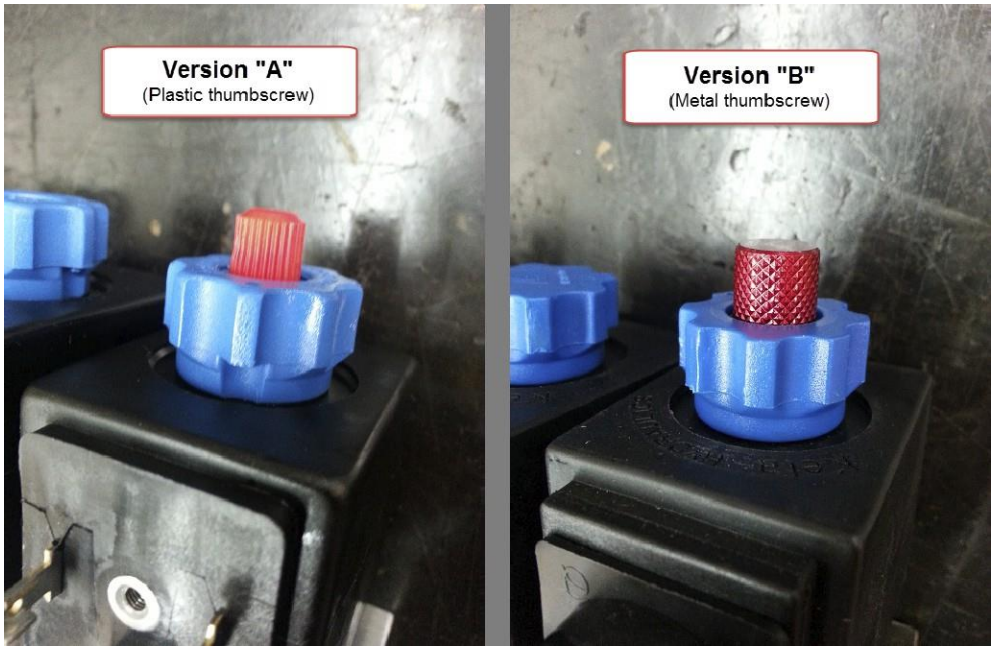


Figure 41 - Image of descent valves

6) Locate the manual override thumbscrew (red) on the top of the descent valve, see Figure 39.

7) Verbally indicate to all those involved that the lift will now be lowered.

NOTE: There are 2 different variations of descent valves as shown below. Please follow specific instructions for each decent valve.



8) A: Slowly turn the manual override thumbscrew in the counterclockwise direction until the lift starts to move.
B: Push down and turn the thumbscrew counterclockwise direction until released and pops up.

9) Keep a close eye on the movement of the lift and the position of the vehicle;
A: turn the manual override thumbscrew clockwise if any abnormal movement is detected.
B: Push in and turn the manual override thumbscrew clockwise into the locked position.

10) Once the lift is fully lowered:
    A: Turn the override thumbscrew in the clockwise direction until tight.
    B: Push in and turn the override thumbscrew in the clockwise direction until tight.
11) 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.
12) 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.

15.0 TROUBLE SHOOTING

PROBLEM	REASON	SOLUTION
Motor does no turn.	Bad fuse or circuit breaker.	Replace fuse or reset breaker.
	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	Replace motor.
Motor runs but lift doesn't go up.	Low 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 Check power to hydraulic lines	*Secure vehicle on lift and refer to section 14.0 Lock Out and Tag Out Instruction. Contact customer service.
	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 to 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)
Airline doesn't work fine.	Polytubes broken	STD refers to EAZ0119V62A
		L&L refers to EAZ0119V63A

16.0 RECORD OF MAINTENANCE / TRAINING

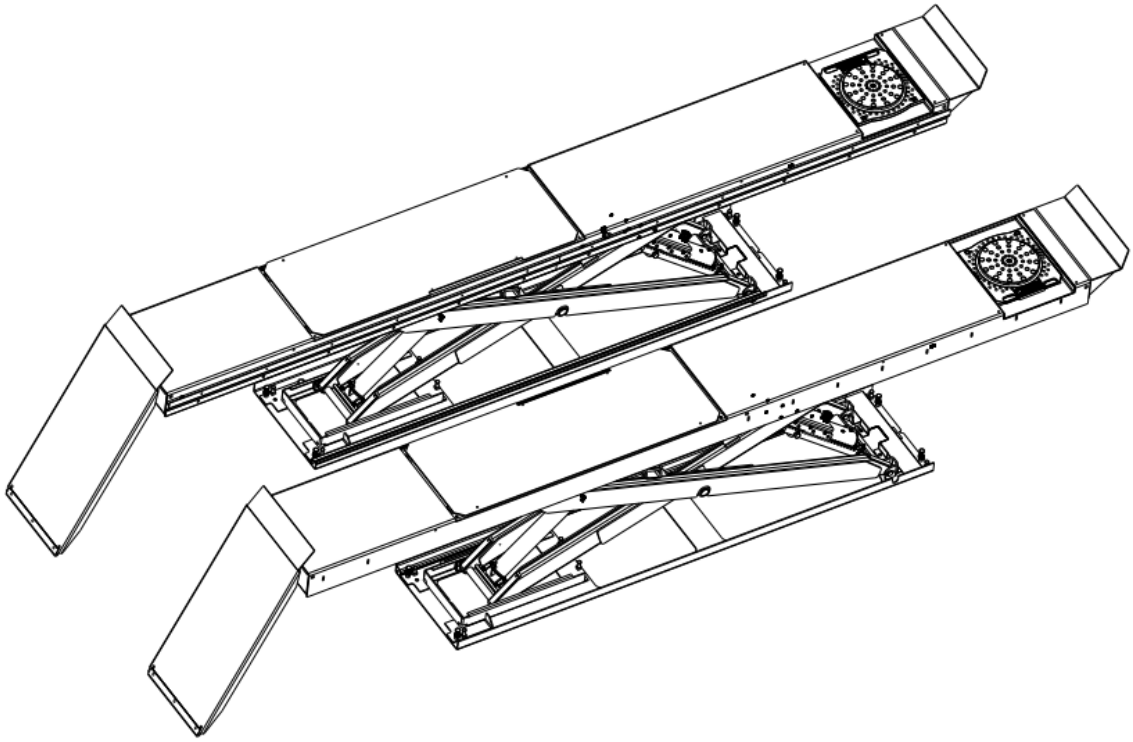
Records of all lift maintenance and operator training should be recorded in the following table.

MAINTENANCE & TRAINING PERFORMED	DATE	BY:	NOTES

Snap-on Equipment

PARTS LIST

SAVE THIS MANUAL



14K SCISSOR LIFT

Standard Models:

EELR591A, EELR592A, EELR593A, EELR594A

EELR787A, EELR788A, EELR789A, EELR790A

Short Models:

EELR587A, EELR588A, EELR589A, EELR590A

EELR783A, EELR784A, EELR785A, EELR786A

DEC 2024 REV. T

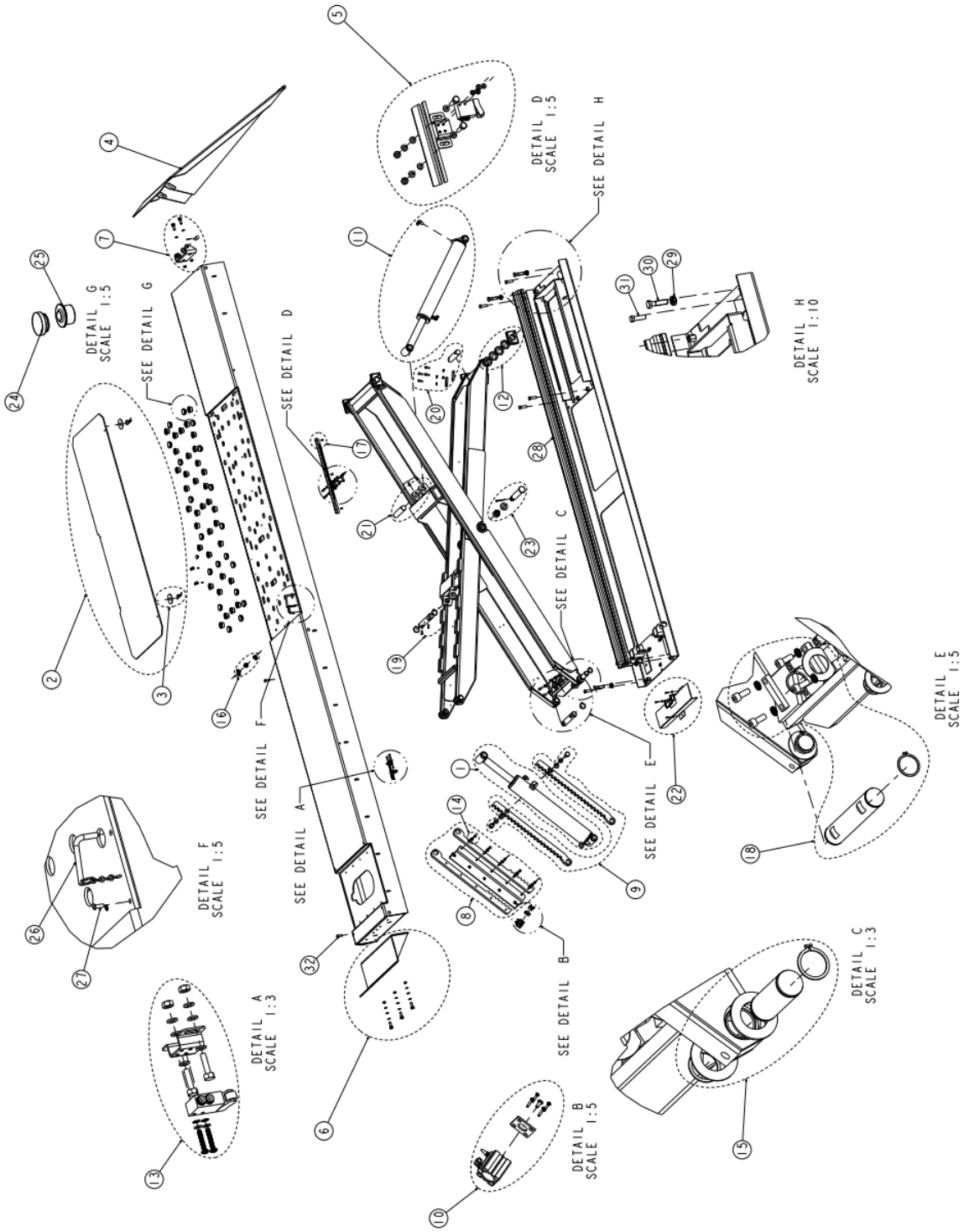
309 EXCHANGE AVENUE, CONWAY, ARKANSAS, 72032
TEL: 501-450-1500, FAX: 501-450-1585

EAZ0080V42A

17.0 LIFT ASSEMBLY

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

17.1 Lift Assembly Parts List

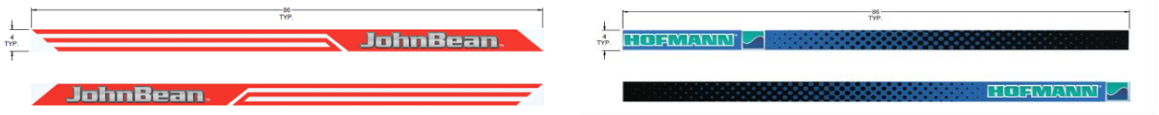


Item #	Part #	Description	Qty.
1	EAK0336V01A	Primary Cylinder Kit	2
	3-0896-3CN	Primary Cylinder Assembly w/ Fittings	1
	1-04188A	Spring Washer D20	2
	6-0738CN	Flat Washer D20	2
	6-2936CN	Hex Bolt M20 x 35	2
2	EAK0336T11B	Rear Slip Plate Kit w/ Hardware, Std LS	1
	2-3032CN	Rear Slip Plate Weldment LS	1
	1-4104CN	Retaining Washer, Std	2
	1-04287A	Hitch Pin 5x100	2
	EAK0336T11C	Rear Slip Plate Kit w/Hardware, Std RS	1
	2-3033CN	Rear Slip Plate Weldment RS	1
	1-4104CN	Retaining Washer, Std	2
	1-04287A	Hitch Pin 5x100	2
	EAK0336T11D	Rear Slip Plate Kit w/Hardware, L&L LS (Optional - Lights & Locks)	1
	2-3032CN	Rear Slip Plate Weldment LS	1
	1-4103CN	Retaining Washer, L&L	2
	1-01388A	Lock Washer M10	2
	6-0030CN	Hex Bolt M10 x 20	2
	EAK0336T11E	Rear Slip Plate Kit w/Hardware, L&L RS (Optional - Lights & Locks)	1
	2-3033CN	Rear Slip Plate Weldment RS	1
	1-4103CN	Retaining Washer, L&L	2
	1-01388A	Lock Washer M10	2
	6-0030CN	Hex Bolt M10 x 20	2
3	EAK0336T12B	Rear Slip Plate Hardware Kit V2	2
	1-4104CN	Retaining Washer, Std	2
	1-04287A	Hitch Pin 5x100	2
	EAK0336T12C	Rear Slip Plate Hardware Kit V3 (Optional - Lights & Locks)	2
	1-4103CN	Retaining Washer, L&L	2
	1-01388A	Lock Washer M10	2
	6-0030CN	Hex Bolt M10 x 20	2
4	EAK0336T05A	Surface mount Ramp Kit	1
	3-0905CN	Ramp Assembly, Surface mount	2
	EAK0336T08A	Flush mount Ramp Kit (optional)	1
	2-3015CN	Flush mount Ramp Weldment	2
	1-3038CN	Filler Angle	8
	1-11389A	Wedge Anchor 1/2’’x3-3/4’’LG	24

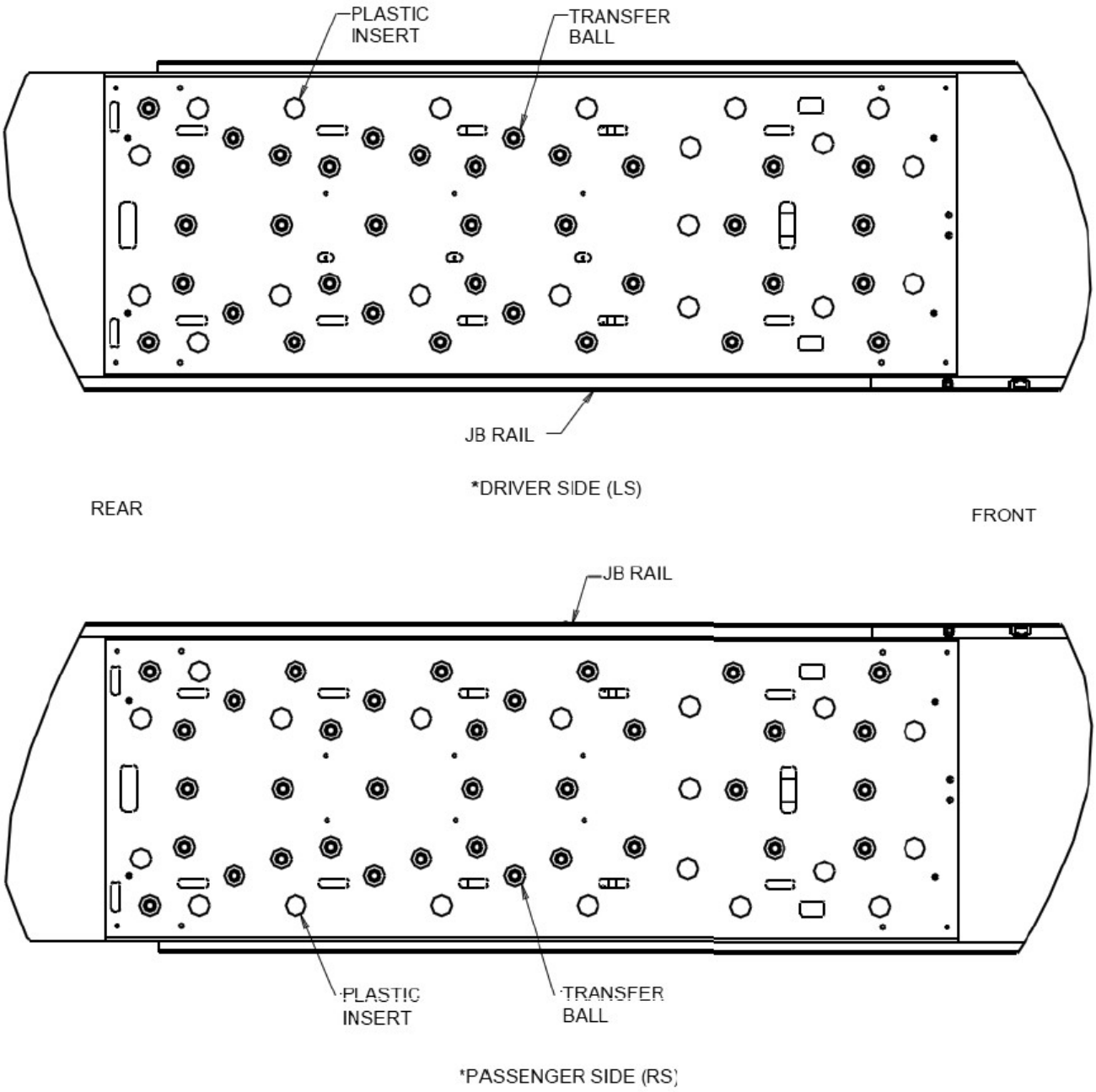
5	EAK0336T13B	Height Limit Switch Kit V2	1
	EAA0441V09A	Limit Switch w/ Roller Lever	1
	6-3465CN	Lock Washer, 4mm ID	2
	6-3966CN	Flat Washer, 4mm ID	2
	6-3965CN	Truss Pan HD M4 x 25	2
	1-01188A	Screw M6 x 25	2
	EAM0113V37A	Sensor Bracket	1
	1-04488A	Flat Washer, 6mm ID	4
	1-04588A	Spring Washer, 6mm ID	2
	1-27133A	Hex Nut, M6	2
6	EAK0336T14A	Front Wheel stop Kit	2
	2-2117CN	Wheel stop Weldment	1
	9-0160	Hex Nut, M12	3
	9-0162	Spring Washer, 12mm ID	3
	9-0161	Flat Washer, 12mm ID	6
	6-0291CN	Hex Bolt M12 x 40	3
7	EAK0336T15A	Ramp Adapter Kit	2
	1-3159CN	Adapter Plate	1
	1-1887CN	Headed Pin	2
	6-0978CN	Cotter Pin	2
	9-0160	Hex Nut, M12	2
	9-0162	Spring Washer, 12mm ID	2
	9-0161	Flat Washer, 12mm ID	4
	6-0291CN	Hex Bolt M12 x 40	2
8	EAK0336T16A	Upper Safety Rack Kit	2
	EAM0113V18A	Upper Safety Rack	2
	EAS2168V01A	Safety Cover Weldment	1
	1-13988A	Hex Bolt M10 x 40	10
	1-01388A	Lock Washer, M10	10
	6-0034CN	Hex Nut, M10	10
9	EAK0336T17A	Lower Safety Rack Kit	2
	EAM0113V16A	Safety Bar, Bottom LS	1
	EAM0113V17A	Safety Bar, Bottom RS	1
	6-0259	Spring Washer, 3/4	2
	1-04188A	Ø20 Spring Washer	2
	6-0738CN	Flat Washer, M20	2
	6-2936CN	Hex Bolt, M20 x 35	2
	1-2905CN	Spacer, Safety Lock	2
	6-2936	Hex Bolt, 3/4-16UNF x 1-1/2 lg Gr. 8	2
	6-0738	Flat Washer, 3/4 ID SAE	2
10	EAK0336T21A	Safety Cylinder Kit	2
	1-4098	Safety Cylinder Assembly	1
	EAM0113V21A	Safety Cylinder Spacer	1
	6-4247CN	Safety Button	1
	6-2281CN	Screw, M6 x 20	4

11	EAK0336T18A	Secondary Cylinder Kit	2
	3-0897-3CN	Secondary Cylinder Assembly w/ Fitting	1
12	EAK0336T19A	Slider Block Kit	4
	2-2725CN	Slider Block	2
	1-3171CN	Thrust Washer, Plastic	10
13	EAK0336T20B	Equalization Sensor Kit	2
	EAA0441V10A	Limit Switch w/ Roller Lever	1
	6-3465CN	Lock Washer, 4mm ID	2
	6-3966CN	Flat Washer, 4mm ID	2
	6-3965CN	Truss Pan HD M4 x 25	2
	1-01188A	Screw M6 x 25	2
	EAM0113V37A	Sensor Bracket	1
	1-04488A	Flat Washer, 6mm ID	4
	1-04588A	Spring Washer, 6mm ID	2
	1-27133A	Hex Nut, M6	2
14	EAK0336T22A	Upper Safety Hardware Kit	2
	1-13988A	Hex Bolt, M10 x 40	10
	1-01388A	Lock Washer M10	10
	6-0034CN	Hex Nut, M10	10
15	EAK0336T23A	Scissor Hinge Pin Kit	8
	1-2788CN	Scissor Hinge Pin	1
	1-3256CN	Hinge Spacer, 3mm Thick	1
	1-3255CN	Hinge Spacer, 1.5mm Thick	1
	6-0340CN	Snap Ring 32mm	2
	6-4071CN	Polygon Bushing	1
16	EAK0336T24A	Jack beam Connection Kit	1
	6-3896CN	Pneumatic Fitting, 1/4 NPT F/F/M	1
	1-03289A	Terminal Bolt	1
	6-3010CN	90 Deg Elbow 1/4 NPT M - 10mm poly	1
17	EAK0336T25A	Height Limit Bracket Kit	1
	1-3770CN	Sensor Track	1
	6-1134	Self-Tapping Screw	3
18	EAK0336T26A	Primary Cylinder Lower Pin Kit	2
	EAM0113V19A	Primary Cylinder Pin	1
	6-0233CN	Snap Ring 38mm Dia.	2
	1-2905CN	Spacer, Safety Lock	2
	1-2793CN	Cylinder Retainer	2
	1-01388A	Lock Washer 10mm	4
	9-W1025V	SHCS, M10 x 25	4
19	EAK0336T33A	Primary Cylinder Upper Pin Kit	2
	EAM0113V19A	Primary Cylinder Pin	1
	6-0233CN	Snap Ring, 38mm	2
	9-1979	Set Screw, M10 x 20	2

20	EAK0336T34A	Secondary Cylinder Kit Lower Pin Kit	2
	1-2790CN	Secondary Cylinder Pin	1
	1-2793CN	Cylinder Retainer	2
	1-01388A	Lock Washer 10mm	4
	9-W1025V	SHCS, M10 x 25	4
21	EAK0336T35A	Secondary Cylinder Kit Upper Pin Kit	2
	1-2790CN	Secondary Cylinder Pin	1
	9-1979	Set Screw, M10 x 20	2
22	EAK0336T27A	Front Cover Kit	2
	2-2803CN	Front Cover	1
	6-3920CN	Lip Trim, 660 mm	1
	6-0178CN	Hex Bolt, M6 x 20	3
	9-0130P4	Flat Washer, 6mm	3
23	EAK0336V59A	SCISSOR PIN KIT	4
	EAM0113V92A	SCISSOR LIFT SCISSOR PIN	1
	1-26088A	M36 HEX SLOTTED NUT GB/T6179-1986	1
	1-06187A	COTTER PIN GB/T 91-2000	1
	1-26188A	D30 FLAT WASHER GB/T97.1-2002	1
	6-2899CN	POLYGON BUSHING	4
24	1-3762CN	Plastic Insert	38
25	6-3974CN	Ball Transfer	70
26	2-0637	Locking Pin Assembly	4
27	6-2565CN	BHCS, M6 x 20	4
28	EAS2168V17A	BASE FRAME LINE COVER WELDMENT	4
29	80259000CN	Jam Nut, M16	8
30	6-3569CN	Hex Bolt M16 x 70	8
31	6-1670CN	Hex Bolt M16 x 50	12
32	1-24388A	Hex Bolt M12 x 25	8
ITEMS NOT SHOWN			
	6-1366CN	Shim Plate, 1.5mm	8
	6-1367CN	Shim Plate, 3mm	8
	6-1368CN	Shim Plate, 6mm	8
	EAC0079J62A	Rubber Wheel Chock	2
	2-2119CN	Work Step	2
	1-11389A	Wedge Anchor 1/2”x3-3/4”LG	10
	6-4322L/R	John bean	2
	6-4321L/R	Hofmann	2

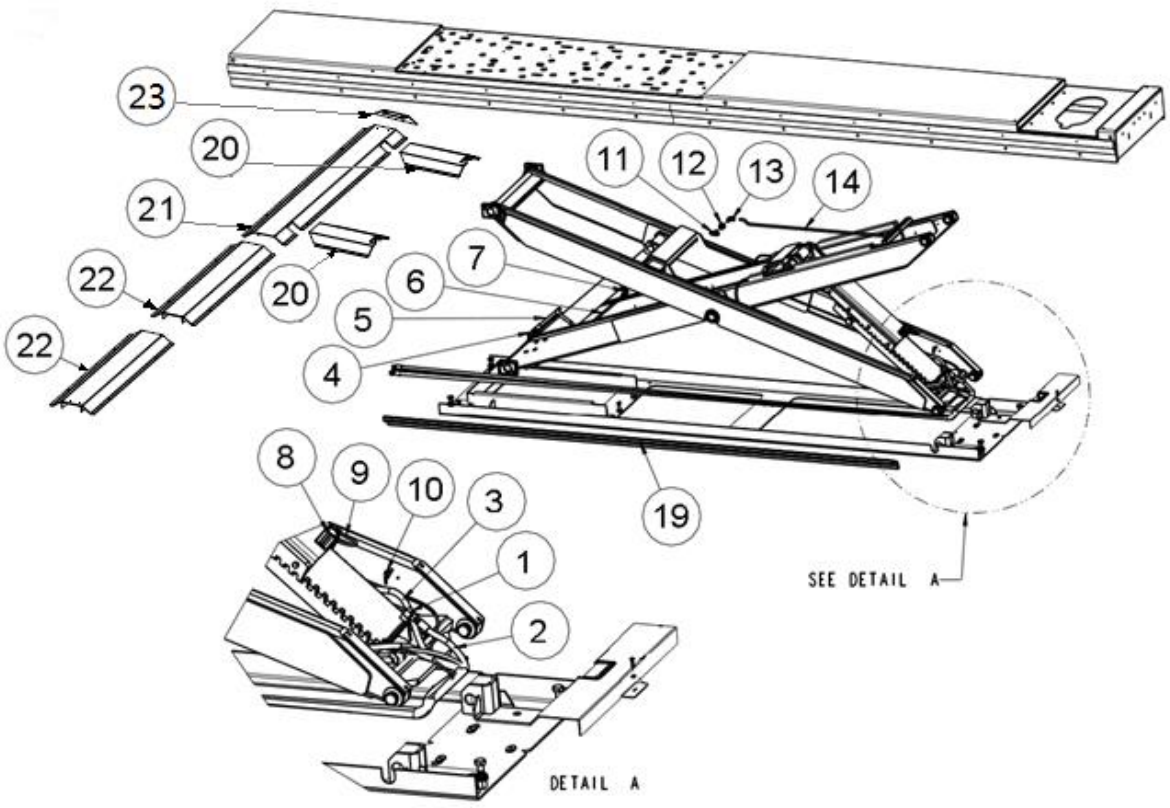


18.0 REAR SLIP PLATE TRANSFER BALL ARRANGEMENT



Item	Part #	Description	Qty. / Deck
1	1-3762CN	Plastic Insert	19
2	6-3974CN	Transfer Ball	35

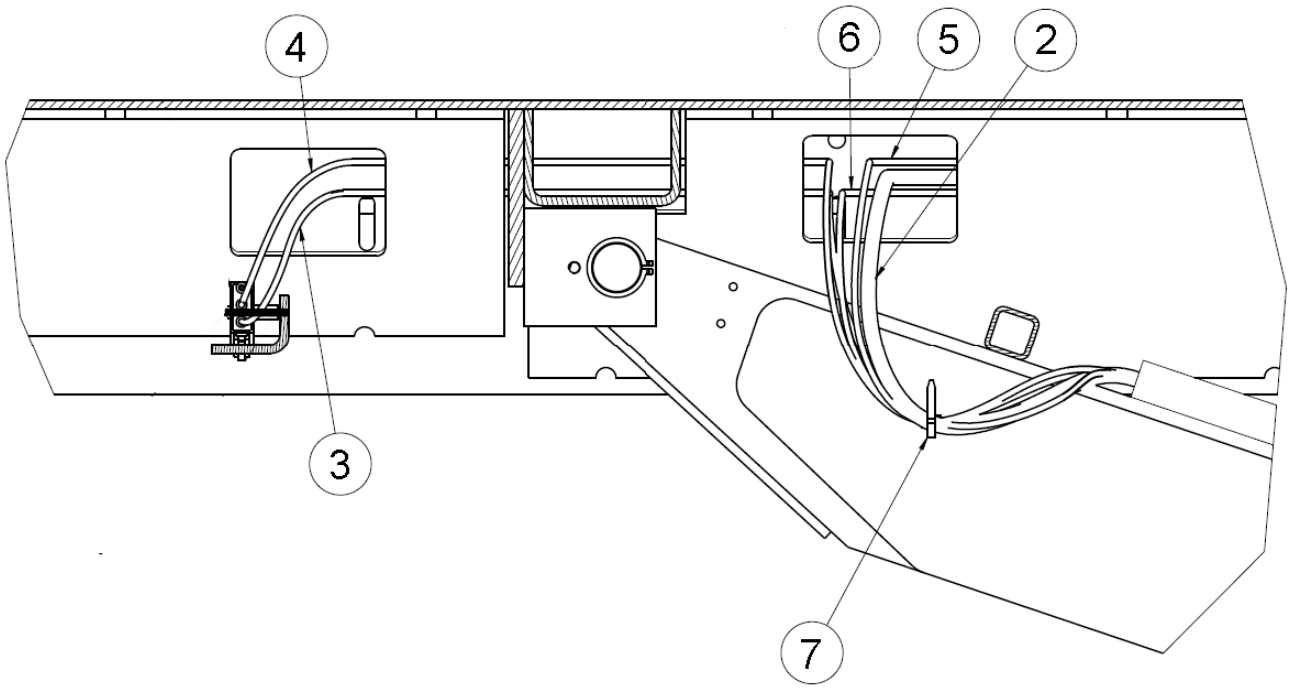
19.0 HYDRAULIC & AIR ASSEMBLY



19.1 Hydraulic & Air Parts List

Item	Part #	Description	Qty. / Lift
1	6-2956	VELOCITY FUSE, 4GPM 90ELBOW 3/8"	2
2	2-2143CN	HYDRAULIC HOSE - CYLINDER (LS/RS), 306"	2
3	2-2717CN	HYDRAULIC HOSE - EQUALIZE (LS/RS)	2
4	6-3008CN	90 HYD ELBW FRGD 3/8NPT-3/8JIC	4
5	2-2718CN	3/8” HYDRAULIC HOSE - LS	1
	2-2719CN	3/8” HYDRAULIC HOSE - RS	1
6	EAH0069V34A	POLYTUBE, Φ10-Φ6.5 BLACK,L=13000mm	2
7	6-3058CN	90 DEG ELBOW, 3/8” NPT-M, 3/8” POLYTUBE	2
8	EAK0336T21A	AIR CYLINDER (Complete w/ Fittings)	2
9	EAH0069V32A	POLYTUBE, Φ6-Φ4 BLACK,L=14000m	2
10	6-3998CN	SCREW MASONARY MOUNTS	22
11	EAK0336T24A	BRANCH TEE FITTING, ¼ NPT, F-F-M	1
12		TERMINAL BOLT	1
13		90 DEG ELBOW, ¼” NPT-M, Φ10 POLYTUBE	1
14	EAH0069V33A	POLYTUBE, Φ10-Φ6.5 BLACK,L=14000mm	1
19	EAS2168V17A	BASE FRAME LINE COVER WELDMENT	4
20	EAS2168V14A	LINE COVER A WELDMENT (RAL1023 yellow)	2
21	EAS2168V15A	LINE COVER B WELDMENT (RAL1023 yellow)	1
22	EAS2168V16A	LINE COVER C WELDMENT (RAL1023 yellow)	2
	1-10789A	HEXAGONAL EXPANSION SCREW M6X50	20
23	EAS2168V18A	END CAP WELDMENT (RAL1023 yellow)	1
	1-09288A	HEX SBHS M6X16 GB/T70.2-2008, G.R 8.8	2

19.2 VARIOUS POLYTUBES

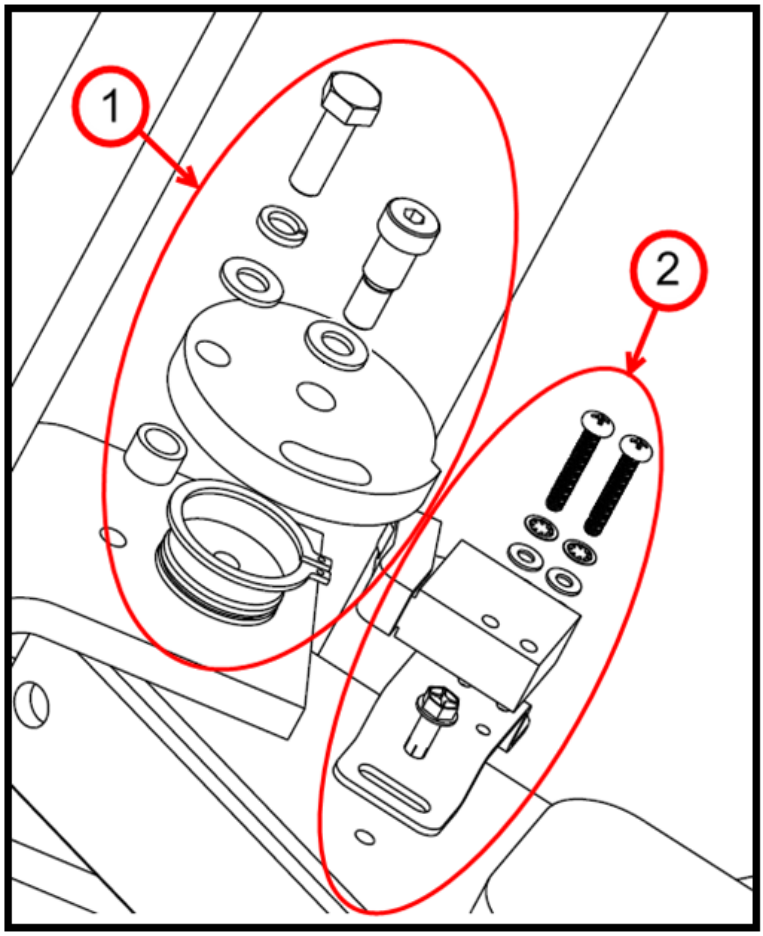


Note: Equalizing Sensors are located under Front of Driver & Passenger Side Deck.

19.3 POLYTUBE PARTS LIST

Item #	Part #	Description	Qty.
2	EAH0069V33A	POLYTUBE, Φ10-Φ6.5 BLACK,L=14000mm	1
3	EAH0069V29A	POLYTUBE, Φ4-Φ2.5 BLUE,L=13000mm	1
4	EAH0069V28A	POLYTUBE, Φ4-Φ2.5 RED,L=13000mm	1
5	EAH0069V31A	POLYTUBE, Φ4-Φ2.5 BLUE,L=15000mm	1
6	EAH0069V30A	POLYTUBE, Φ4-Φ2.5 RED,L=15000mm	1
7	6-3998CN	Screw Masonry Mounts	22

19.4 OPTIONAL: LIGHT KIT SENSOR PARTS LIST

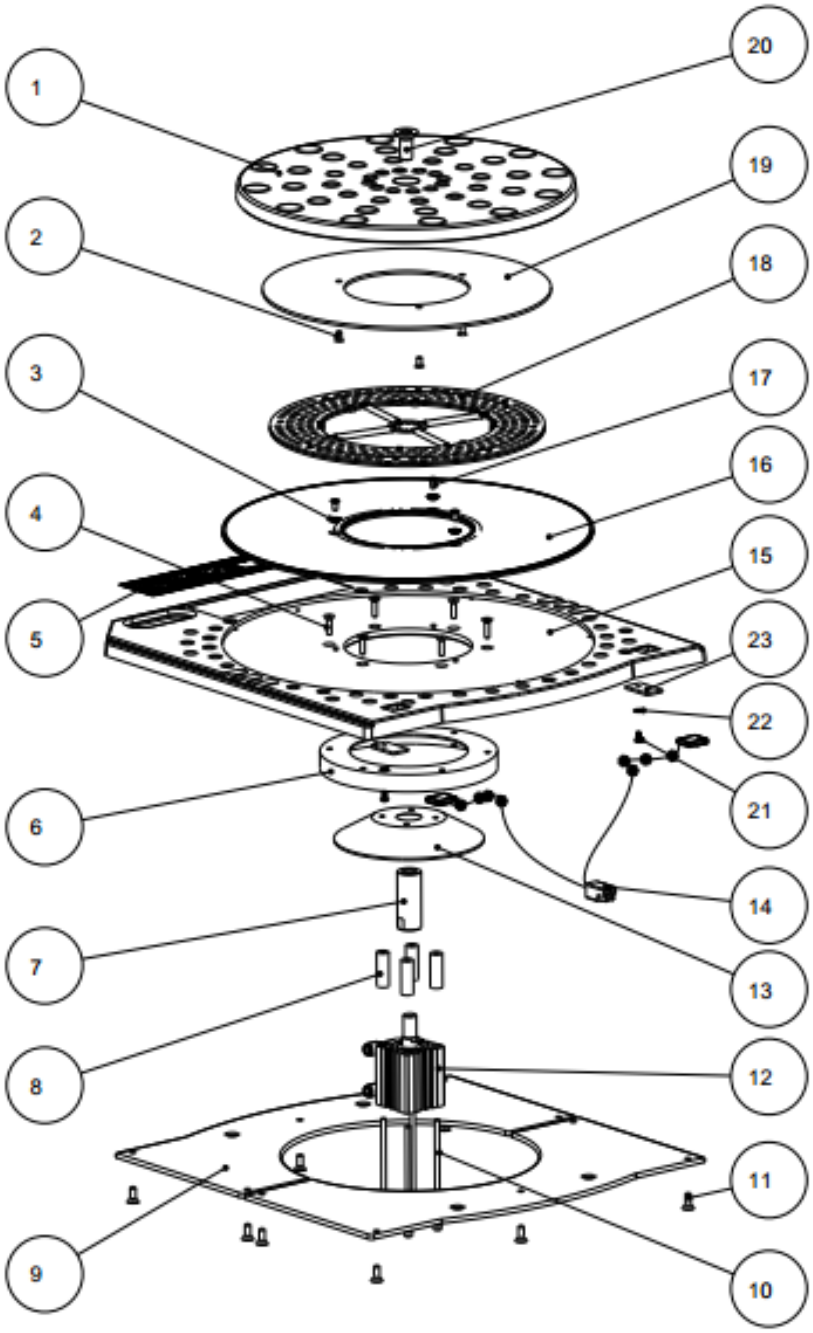


Item #	Part #	Description	Qty.
1	EAK0336T28A	L&L Cam Kit	1
	2-2757CN	Cam	1
	1-3752CN	Spacer, Cam	1
	6-0293CN	Hex Bolt M8 x 25	1
	1-31341A	Lock Washer, 8mm	1
	6-1792CN	Shoulder Bolt M8 x 13	1
	1-00688A	Flat Washer, 8mm	1
	6-0340CN	Snap Ring 35mm	1
	2PL-07P4	Flat Washer, D10	1
2	EAK0336T29B	Cam Switch Kit v2	1
	EAM0113V37A	Sensor Bracket	1
	EAA0441V10A	Limit Switch	1
	6-3965CN	Machine Screw M4 x 25	2
	6-3465CN	Lock Washer, 4mm	2
	6-3966CN	Flat Washer, D4	2
	6-1134	Self-Tapping Screw #12 x 1-1/2"	2

Note: Light Kit Sensor Assembly is located under Passenger Side Deck.

20.0 ACCESSORY ASSEMBLY

20.1 Front Turn plate

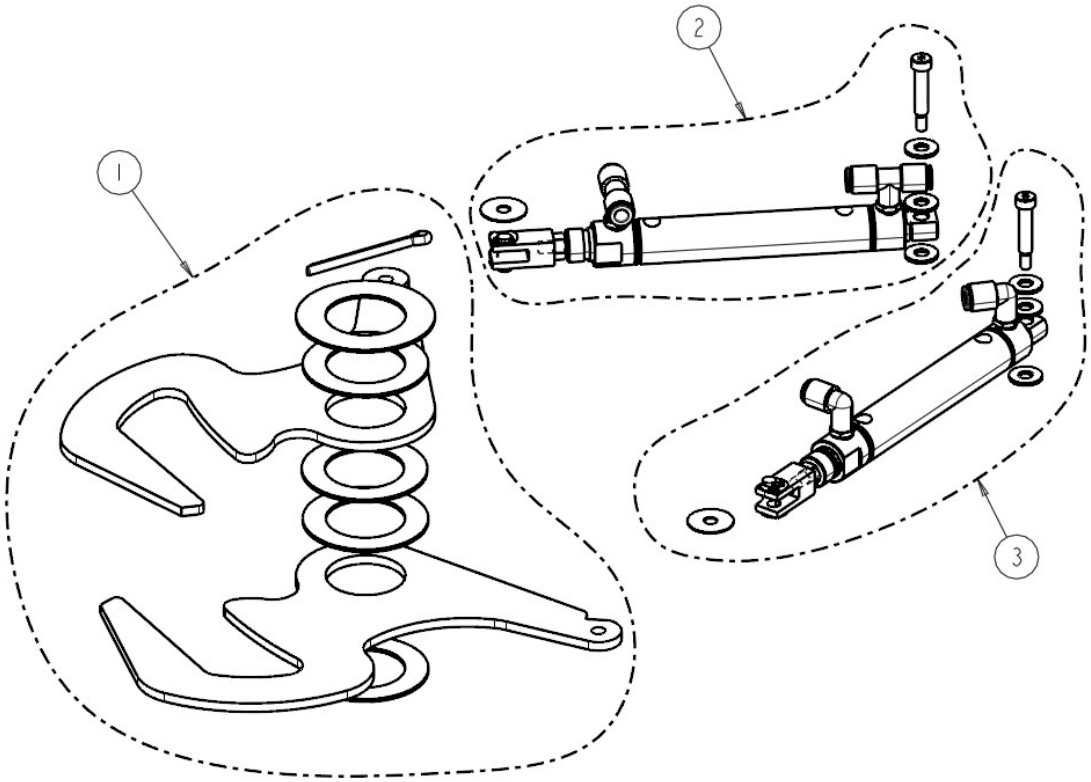


TURNPLATE ASSEMBLY: PARTS LIST

Item#	P/N#	Description	Qty
1	EAM0047J60A	TOP - TT, MACH.	1
2	6-3954	SCREW GB/T 70.3-2008 M5X10	3
3	EAC0105J18A	SEPARATOR-SCREW,TT	3
4	1-19388A	FHCS,#10-32 UNF X 3/4,STAINLESS STEEL	6
5	1-3719	TURN TABLE,LOCKING LABEL-	1
6	EAM0113V40A	LOCKING MECHANISM CENTERING RING	1
7	EAM0113V41A	LOCKING MECHANISMSTUB SHAFT	1
8	EAM0113V42A	LOCKING MECHANISM CYLINDER STAND-OFF	4
9	EAM0047J52A	PAD - TT	2
10	1-19488A	HEX SCREWGB/T 70.1-2008 M5X115	4
11	6-3955	PHIL SCREW - M6 X 16mm	10
12	EAH0069V01A	LOCKING CYLINDER ASSEMBLY	1
13	EAM0113V43A	LOCKING MECHANISM CENTERING CONE	1
14	EAA0441V53A	FRONT LED LIGHT ASSY	1
15	2-2931	TT BASE MACH,LOCKS & LIGHT	1
16	EAA0361J20A	PLATE ASM.-BOTTOM,TT	1
17	1-26603A	SCREW-FHSC,M5X10mm FHMS,PHIL	3
18	EAA0333J59A	BALL PLATE ASM.	1
19	EAM0047J57A	WEAR PLATE-TOP	1
20	6-3956	SCREW GB/T 70.3-2008 M14X30	1
21	1-0326A	M4X8 SCREW	2
22	1-3347	WASHER	2
23	EAM0113V94A	BACK PLATE	2

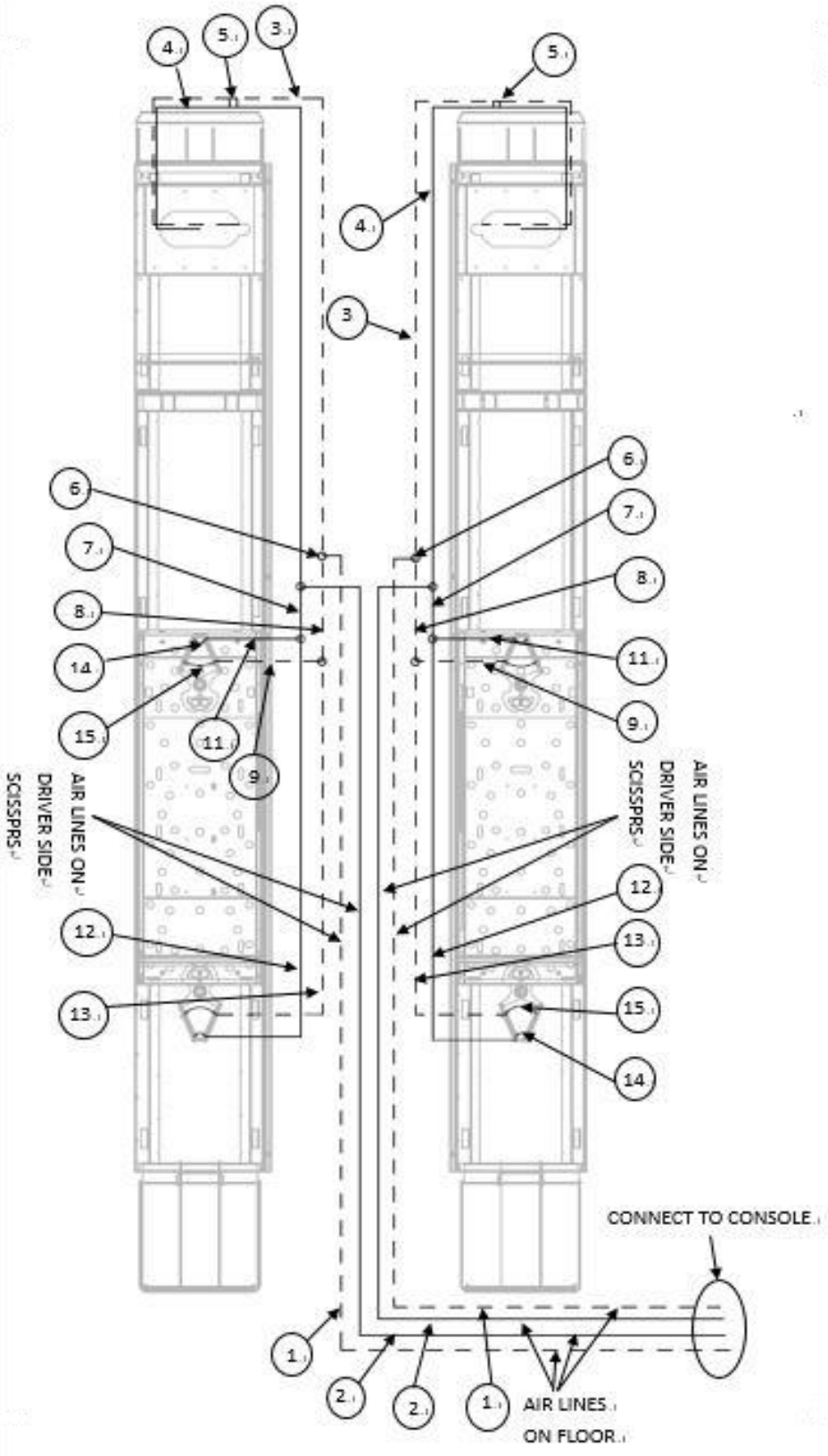
Note: Please contact customer service for items not listed.

20.2 Rear Slip Plate Locking Mechanism



Item #	Part #	Description	Qty.
1	EAK0336T30A	Locking Jaw Kit	4
	1-0757CN	Nylon Thrust Washer	4
	1-3686CN	Spacer Washer	1
	2-2712CN	Retainer Jaw	2
	6-3929CN	Cotter Pin	1
2	EAK0336T31A	Primary Locking Cylinder Assembly	4
	6-3900CN	Cylinder Assembly w/ Tee Fittings	1
	6-3882CN	Nylon Thrust Washer	1
	6-3907CN	Shoulder Bolt	1
	1-04488A	Flat Washer 6mm	4
3	EAK0336T32A	Secondary Locking Cylinder Assembly	4
	6-3883CN	Cylinder Assembly w/ Elbow Fittings	1
	6-3882CN	Nylon Thrust Washer	1
	6-3907CN	Shoulder Bolt	1
	1-04488A	Flat Washer 6mm	4

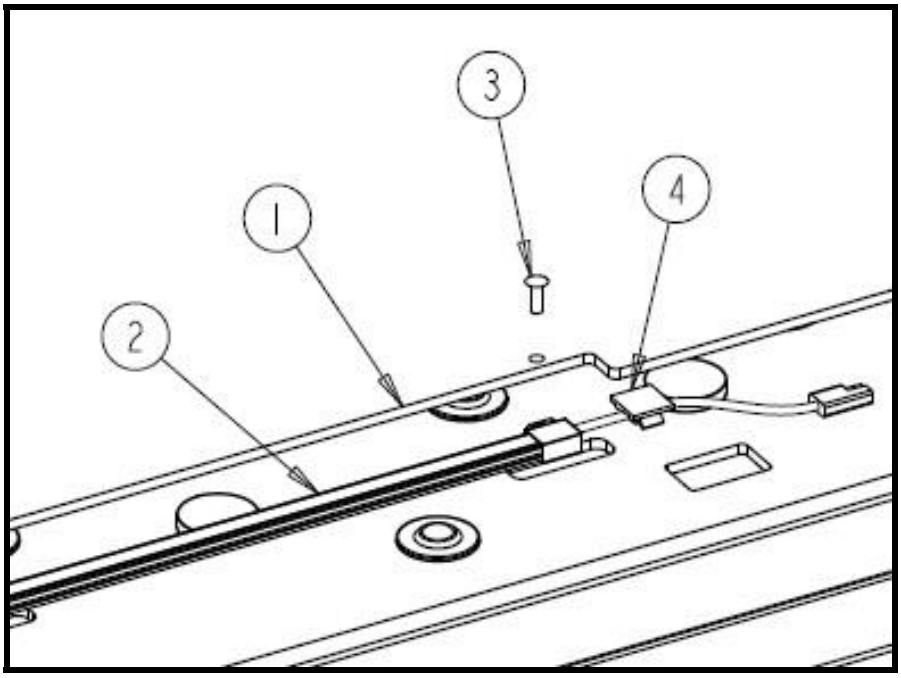
20.3 Airline Routing for Locking Turn plates and Rear Slip Plates



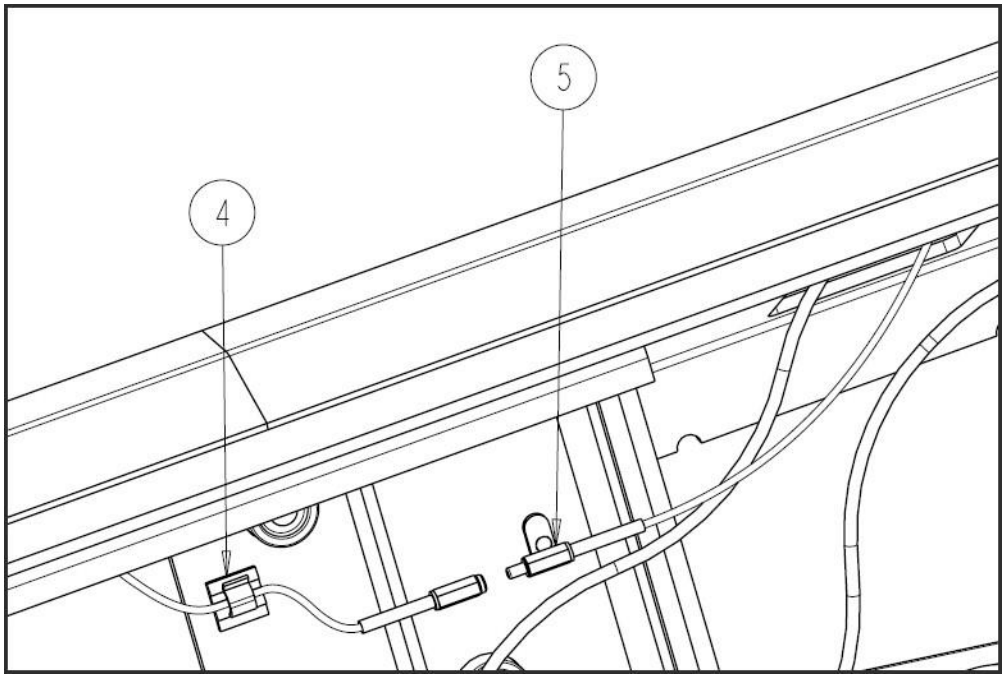
Airline Parts List

Item	Part Number	Description	Location	Qty/Lift
1	EAH0069V38A	POLYTUBE, Φ6-Φ4 BLUE,L=13000mm	From Console, on floor, on scissors, up to deck hinge	2
2	EAH0069V37A	POLYTUBE, Φ6-Φ4 RED,L=13000mm	From Console, on floor, on scissors, up to deck hinge	2
3	EAH0069V43A	POLYTUBE, Φ6-Φ4 BLUE,L=2400mm	On decks, from hinge to front	2
4	EAH0069V39A	POLYTUBE, Φ6-Φ4 RED,L=2400mm	On decks, from hinge to front	2
5	6-3940CN	Tube Clamp	On decks, at front	2
6	6-3729CN	Fitting, Tee, 6mm	On decks / On decks, at middle	8
7	EAH0069V41A	POLYTUBE, Φ6-Φ4 RED,L=960mm	On decks, from hinge to middle	2
8	EAH0069V45A	POLYTUBE, Φ6-Φ4 BLUE,L=960mm	On decks, from hinge to middle	2
9	EAH0069V46A	POLYTUBE, Φ6-Φ4 BLUE,L=400mm	On decks, feeding middle clamp	2
11	EAH0069V42A	POLYTUBE, Φ6-Φ4 RED,L=400mm	On decks, feeding middle clamp	2
12	EAH0069V40A	POLYTUBE, Φ6-Φ4 RED,L=2600mm	On decks, middle to rear	2
13	EAH0069V44A	POLYTUBE, Φ6-Φ4 BLUE,L=2600mm	On decks, middle to rear	2
14	EAH0069V47A	POLYTUBE, Φ6-Φ4 RED,L=140mm	Between clamp cylinders, rear and middle	4
15	EAH0069V48A	POLYTUBE, Φ6-Φ4 BLUE,L=180mm	Between clamp cylinders, rear and middle	4
*	6-3940CN	Adhesive Clamps 9/32”	Front to turn plate	2

20.4 Rear LED Light Assembly: Exploded View



Top of Deck - Rear Slip Plate



Underside of Deck - Connection of LED Light Bar

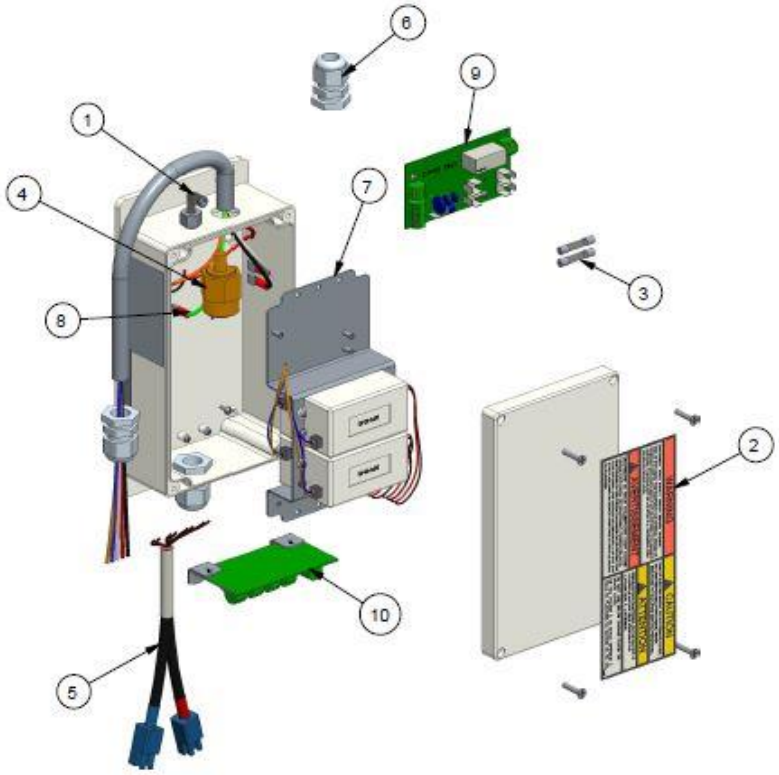
*Note: Objects in pictures may not be exactly as shown.

REAR LED LIGHT ASSEMBLY: Parts List

Item #	Part #	Description	Qty.
1	2-3032CN	Slip Plate Weldment, LS	1
	2-3033CN	Slip Plate Weldment, RS	1
2	EAA0441V51A	10K/14K SCISSOR LED LIGHT BAR-RS	1
	EAA0441V52A	10K/14K SCISSOR LED LIGHT BAR-LS	1
3	6-4215	Stainless Steel Rivet 1/4 x 5/8	4
4	6-3940CN	Adhesive Back Clamps	6
5	EAA0441V54A	LIGHT KIT,SCISSORS CABLE ASSEMBLY,LS	1
	EAA0441V55A	LIGHT KIT,SCISSORS CABLE ASSEMBLY,RS	1

20.5 LED CONTROL BOX

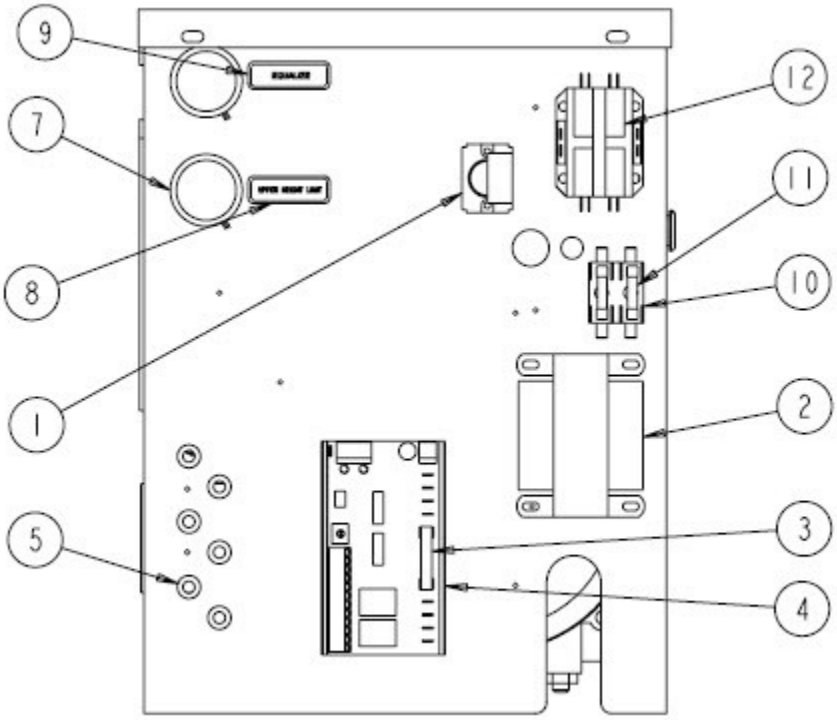
Complete Assembly EAA0441V61A



Item #	Part #	Description	Qty.
1	EAH0069V26A	90DEG ELBOW 1/8NPT - 4PLYT	1
2	6-3957	CONSOLE DECAL	1
3	EAE0073V33A	FUSE, 250V, 2AMP, 6X32mm	2
4	EAE0073V32A	PRESSURE SWITCH	1
5	EAA0441V48A	8-POLE CABLE ASSY	1
6	EAE0073V28A	CABLE GLAND	3
7	EAA0441V50A	LED POWER SUPPLY AND FRAME ASSEMBLY	1
8	EAE0073V27A	POWER CABLE	1
9	EAE0073V31A	SURGE PROTECT MODULE (SPM)	1
10	EAE0073V30A	TRANSIENT PROTECTION MODULE (TPM)	1

21.0 CONSOLE ASSEMBLY

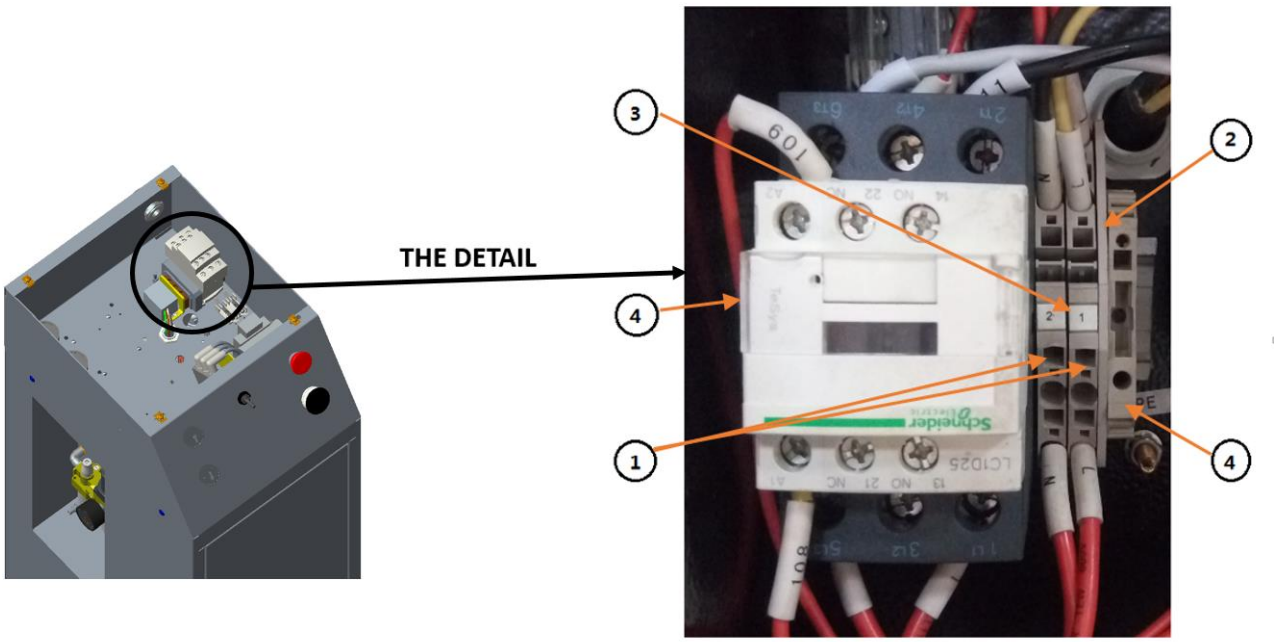
21.1 Electrical Panel



Item #	Part #	Description	Qty.
1	EAE0076V19A	PUSH BUTTON 1NO WITH ARROW	1
	EAE0073V39A	Push Button- Arrow	1
	EAE0073V40A	Push Button Contact NO	1
2	EAE0073V05A	SERVICED KIT(Transformer)	1
3	-	FUSE 5A	1
4	EAP0301V01A	Circuit Board	1
5	EAE0076V06A	STRAIN RELIEF BUSHING	6
7	EAH0069V23A	PRESSURE GAUGE WITH SWITCH	2
8	6-3067	Decal, “UPPER HEIGHT LIMIT”	1
9	6-3068	Decal, “EQUALIZE”	1
10	6-3595	FUSE HOLDER - 2 POLE, 20A/250V	1
11	6-3597	FUSE 1A, 250V TIME DELAY 6x32	2
12	EAE0073V14A	CONTACTOR	1

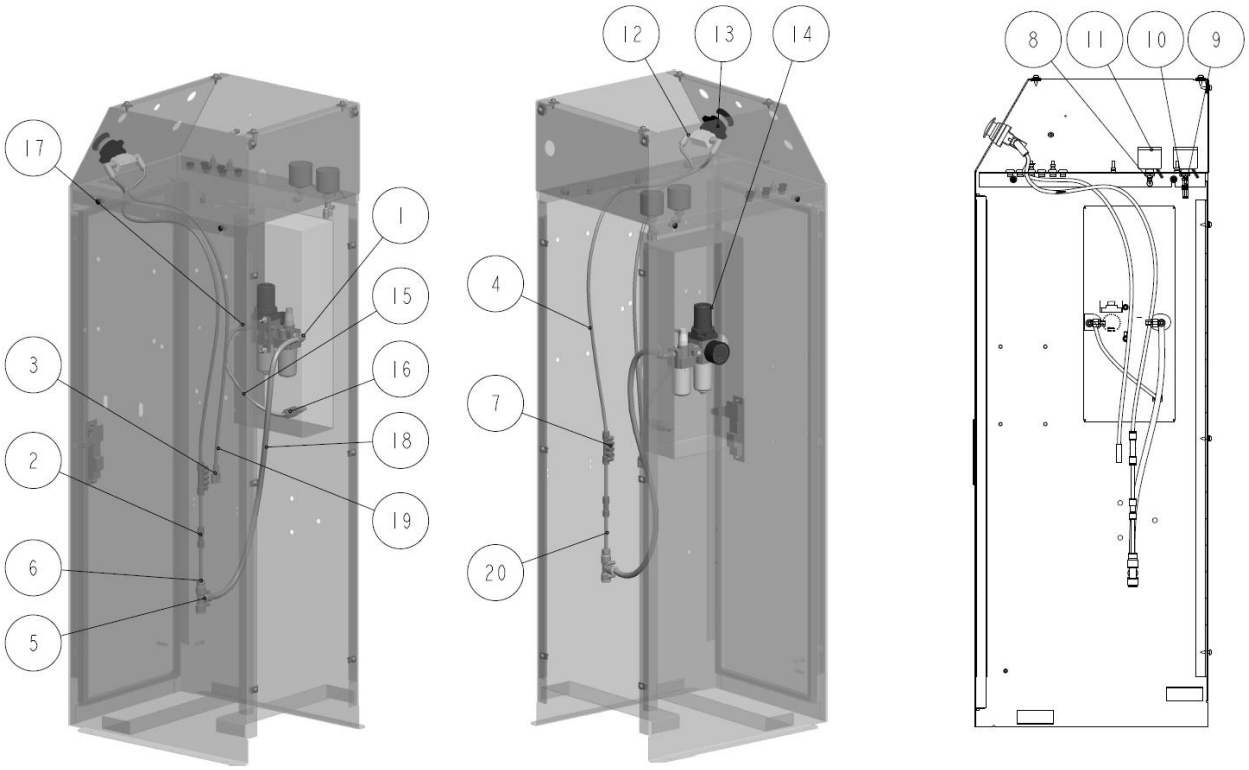
NOTE: Standard Console Assembly is Part # EAA0441V18A
Optional Console Assembly (Locking & Lighting System) is Part # EAA0441V17A

21.2 Terminal Assembly for 14K ALI Console



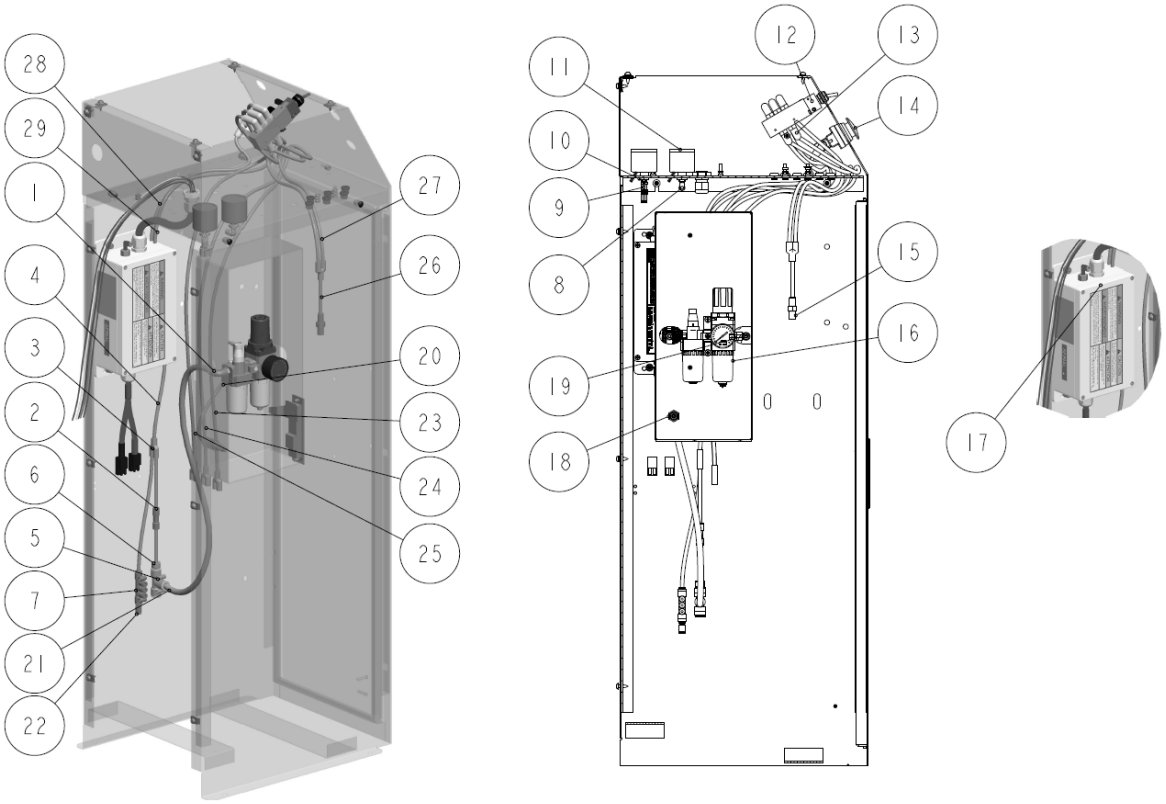
Item #	Part #	Description	Qty.
—	EAK0336V60A	TERMINAL ASSEMBLY FOR 14K ALI CONSOLE	1
1	EAK0073V10A	Terminal, ZDU 4-2/4AN,4mm²	2
2	EAK0073V12A	Terminal Cover，ZAP ZDU 4-2/4AN	1
3	EAK0073V13A	Terminal marker,5x6 mm,Print:1,2White	1
4	EAK0073V54A	End bracket, ZEW, WxHxD:6x55x40mm,Mounting rail TS35	2

21.3 Console: Pneumatic & Filtering System



Item#	P/N#	Description	Qty
1	9-0629	SWIVEL ELBOW 1/4 NPT M	1
2	EAH0069V09A	Check Valve, Ø6 Poly	1
3	9-0618	UNION "Y" DIA6	1
4	EAH0069V25A	POLYTUBE ODØ6MM-550MM	1
5	6-3011CN	TEE Ø 10 POLYTUBE PUSHLOCK	1
6	9-0617	REDUCER Ø10-Ø6	1
7	EAH0069V11A	5 PORTS MANIFOLD	1
8	EAH0069V64A	90°, M5 x 4mm Polytube	1
9	EAH0069V06A	Branch Y, M5 x 4mm Polytube	1
10	EAM0113V47A	NUT-NPT1/8	2
11	EAH0069V23A	Pressure Gauge with Switch	2
12	9-0619	SWIVEL ELBOW,1/8 NPT-M	2
13	6-4275	SAFETY RELEASE PUSHBUTTON	1
14	9-0613	FILTER /REGULATOR/ LUBRICATOR	1
15	EAH0069V65A	POLYTUBE ODØ6MM-400MM	1
16	9-0673	12K SCISSOR TERMINAL FITTING M14×1	1
17	9-0675	SWIVEL ELBOW, 1/4 NPT-M	1
18	EAH0069V67A	POLYTUBE ODΦ10MM-650MM	1
19	EAH0069V13A	POLYTUBE ODØ6MM-950MM	1
20	EAH0069V16A	POLYTUBE ODØ6MM-80MM	1

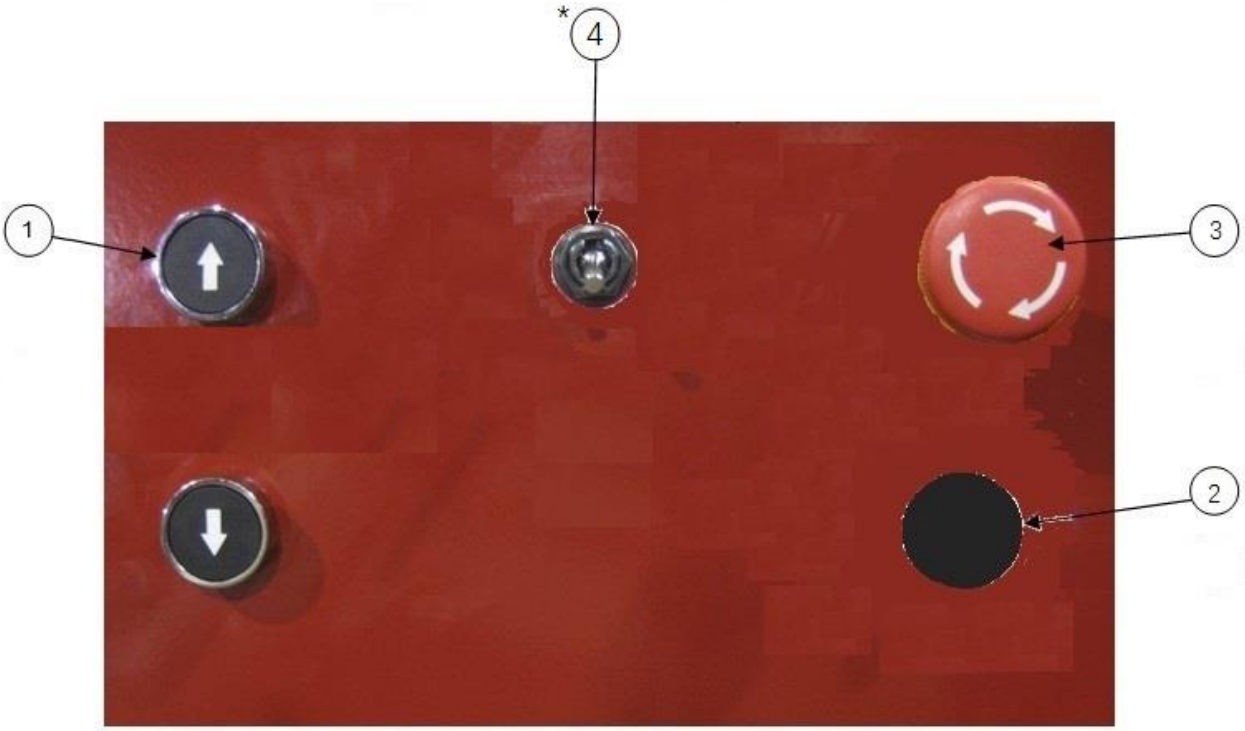
21.4 Console: Pneumatic & Filtering System - Locking & Light System (Optional)



Item#	P/N#	Description	Qty
1	9-0629	SWIVEL ELBOW 1/4 NPT-M	1
2	EAH0069V09A	Check Valve, Ø6 Poly	1
3	9-0618	UNION "Y" DIA6	6
4	EAH0069V15A	POLYTUBE ODØ6MM-120MM	1
5	6-3011CN	TEE Ø10 POLYTUBE PUSHLOCK	1
6	9-0617	REDUCER Ø10-Ø6	1
7	EAH0069V11A	5 PORTS MANIFOLD	1
8	EAH0069V64A	90°, M5 x 4mm Polytube	1
9	EAH0069V06A	Branch Y, M5 x 4mm Polytube	1
10	EAM0113V47A	NUT-NPT1/8	2
11	EAH0069V23A	Pressure Gauge with Switch	2
12	EAH0069V24A	5 PORTS MECHANICAL VALVE	1
13	9-0619	SWIVEL ELBOW,1/8 NPT-M	7
14	6-4275	SAFETY RELEASE PUSHBUTTON	1
15	EAH0069V22A	BREATHER,MALE R1/8	1
16	9-0613	FILTER /REGULATOR/ LUBRICATOR	1
17	EAA0441V61A	LED CONTROL BOX	1
18	9-0673	12K SCISSOR TERMINAL FITTING M14×1	1
19	9-0675	SWIVEL ELBOW, 1/4 NPT-M	1
20	EAH0069V65A	POLYTUBE ODØ6MM-400MM	1
21	EAH0069V67A	POLYTUBE ODØ10MM-650MM	1

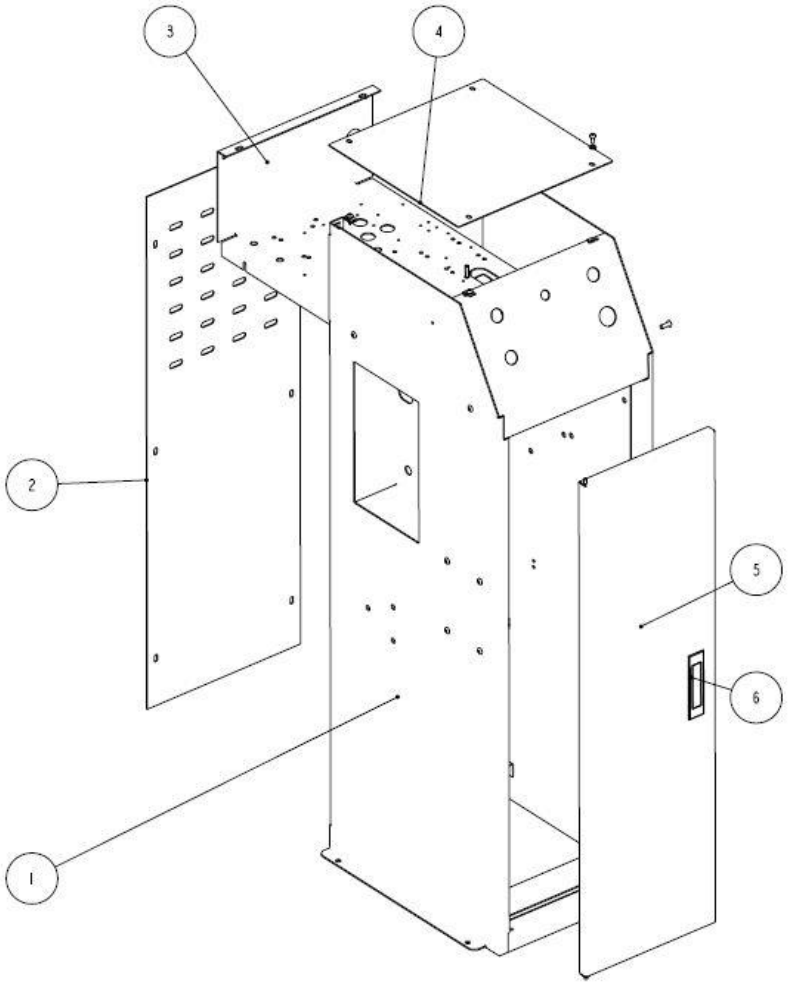
22	EAH0069V20A	PLUG-IN REDUCER D6-D4	1
23	EAH0069V17A	POLYTUBE(RED) ODØ6MM-950MM	1
24	EAH0069V21A	POLYTUBE(BLUE) ODØ6MM-950MM	1
25	EAH0069V13A	POLYTUBE ODØ6MM-950MM	1
26	EAH0069V16A	POLYTUBE ODØ6MM-80MM	3
27	EAH0069V19A	POLYTUBE ODØ6MM-350MM	3
28	EAH0069V14A	POLYTUBE ODØ6MM-450MM	1
29	EAH0069V18A	POLYTUBE ODØ6MM-650MM	1

21.5 Control Panel



Item #	Part #	Description	Qty.
1	EAE0076V19A	PUSH BUTTON 1NO WITH ARROW	2
	EAE0073V39A	Push Button- Arrow	1
	EAE0073V40A	Push Button Contact NO	1
2	6-4275	SAFETY RELEASE PUSHBUTTON	1
3	EAE0073V04A	EMERGENCY STOP BUTTON	1
	EAE0073V41A	Emergency Stop Push Button	1
	EAE0073V42A	Part of Emergency Stop Push Button NC	1
* Optional: Locking Turn plates & Slip Plates			
4	EAH0069V24A	PORTS MECHANICAL VALVE	1
	EAL0459V08A	CONSOLE OVERLAY JOHN BEAN STD	1
	EAL0459V06A	CONSOLE OVERLAY JOHN BEAN LL	1
	EAL0459V09A	CONSOLE OVERLAY HOFMANN STD	1
	EAL0459V07A	CONSOLE OVERLAY HOFMANN LL	1

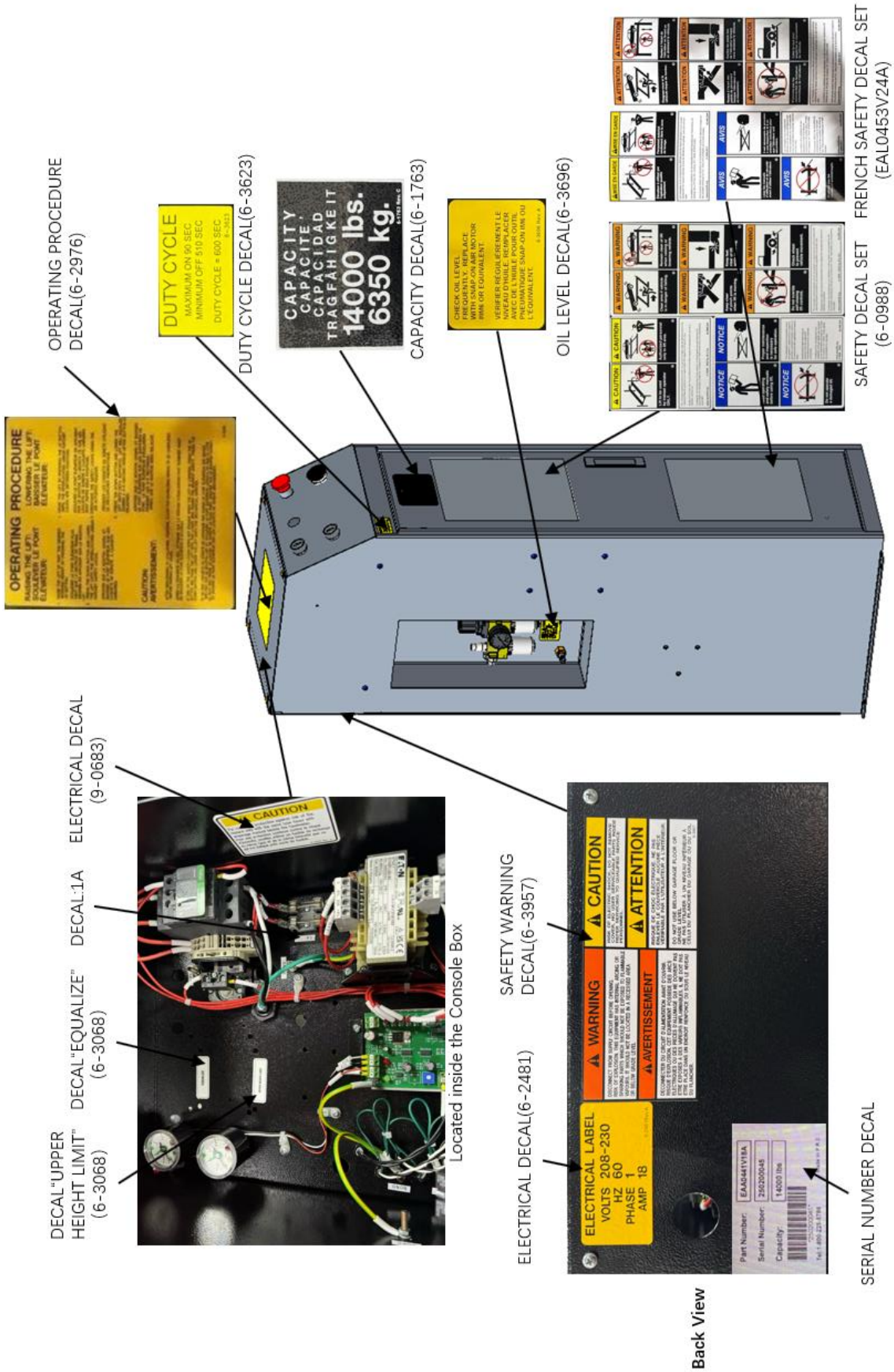
21.6 Console Panel Assembly



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	EAM0113V36A	U-TYPE FASTENER	12
	9-0659	FLAT WASHER n5 GB/T95-2002	12
	1-18588A	SELF TAPPING SCREW GB/T 845-1985 ST4.8×16	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
	6-0141	Concrete Nail ¼” x 1” Lg.	4

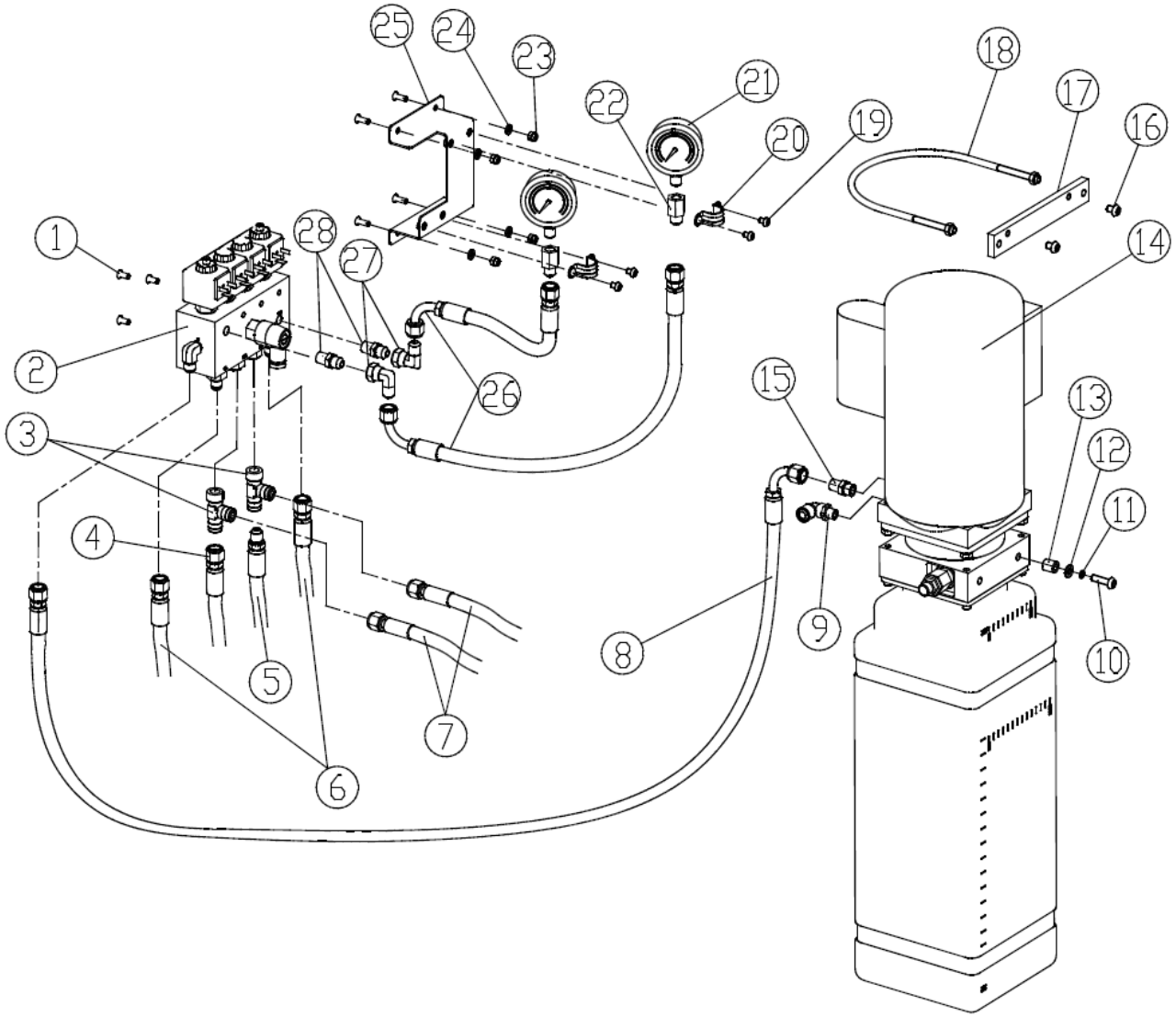
* Note: may not be exactly as shown.

21.7 Console Labeling



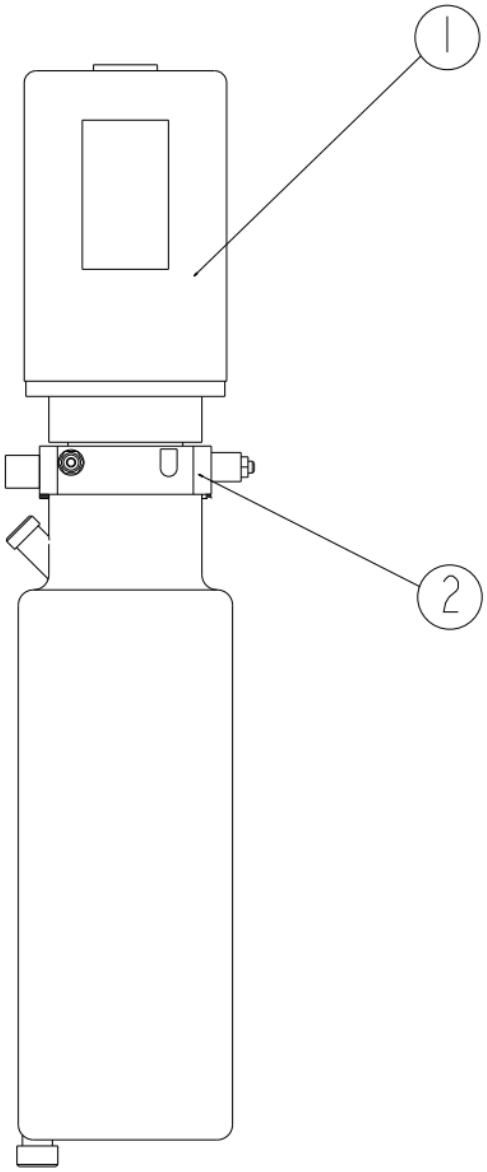
22.0 POWERPACK ASSEMBLY

22.1 Powerpack Assembly (EAA0441V72A)



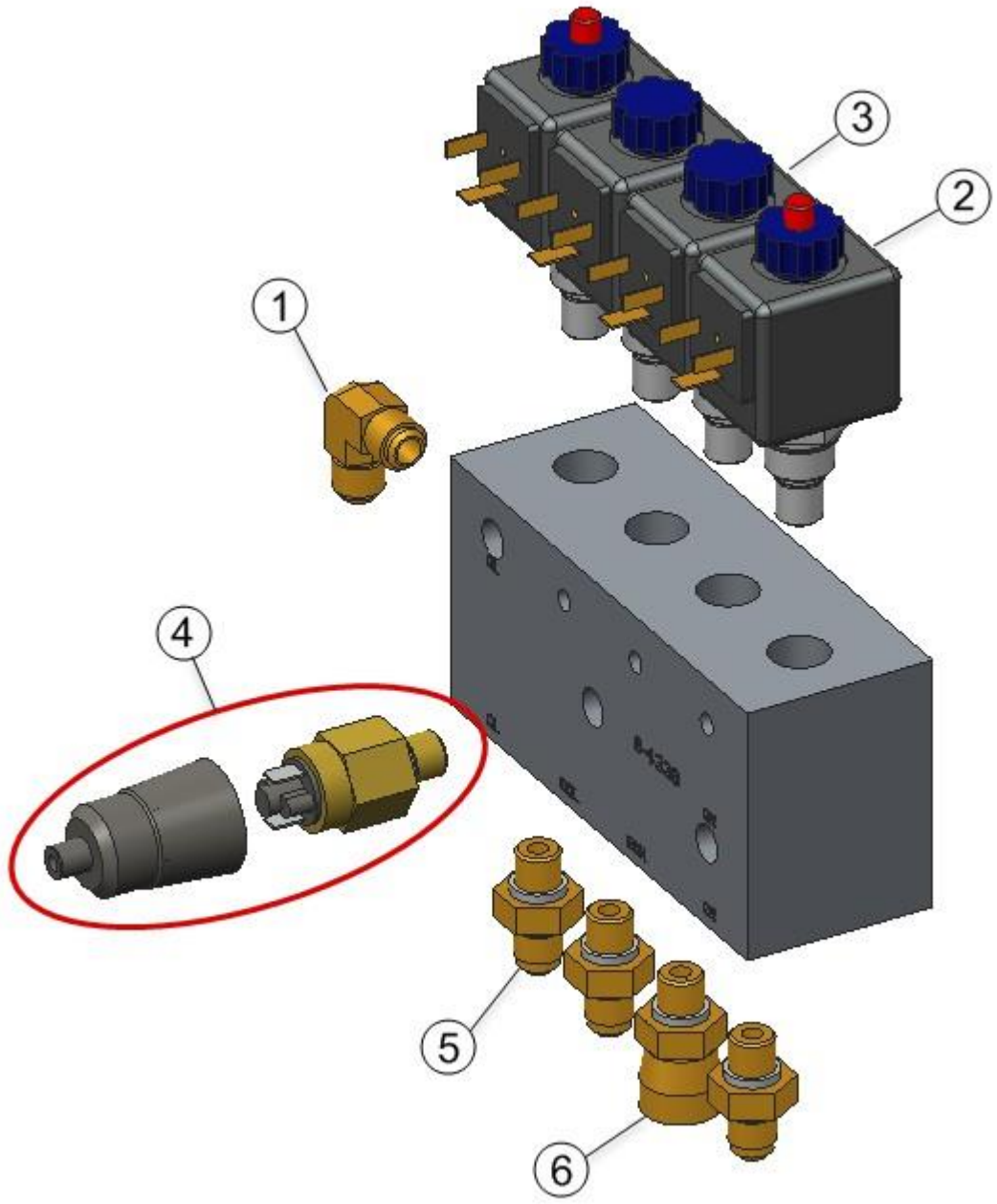
Item#	P/N#	Description	Qty
1	1-21188A	HEX.SOCKET BUTTON HEAD SCREW 1/4-20X1/2	3
2	6-3877CN	MANIFOLD ASSEMBLY	1
3	6-0284CN	TEE 3/8"F,JIC, SWIV3/8"M,JIC	2
4	2-2718CN	Hydraulic hose	1
5	2-2719CN	Hydraulic hose	1
6	2-2143CN	Hydraulic hose	2
7	2-2717CN	Equalizing hydraulic hose	2
8	2-2592CN	HYDRAULIC HOSE ASSEMBLY	1
9	EAH0069V59A	GAS CONNECTOR G1/4-D10	1
10	1-20988A	HEX.SBHS M10X45	2
11	1-01388A	LOCK WASHER 10	2
12	1-05388A	FLAT WASHER 10	2
13	EAM0113V46A	STEEL TUBE D18X3MM	2
14	EAA0441V72A	POWER PACK	1
15	EAH0069V53A	Fitting	1
16	1-31488A	HEX.SBHS M8X10 GB/T70.2-2008.G.R 8.8	2
17	EAM0176V11A	THICKENED PLATE	1
18	1-06882A	“U” CLAMP	1
19	1-09288A	HEX.SBHS M6x16	8
20	1-06982A	STEEL-RUBBER CLAMP D20	2
21	EAH0069V27A	OIL-FILLED PRESOIL FILLED HYD.GAUGE	2
22	EAH0069V66A	FITTING 1/4NPT FEMALE /9-16-18 MALE	2
23	9-N1006V	NUT	4
24	1-04488A	FLAT WASHER GB/T 848-2002 Ø6	4
25	EAA0441V77A	PRESSURE GAUGE FIXING PLATE ASSY	1
26	EAH0069V70A	HYDRULIC HOSE ASSEMBLY	2
27	EAH0053T04A	90 ANGLE FITTING	2
28	EAH0069V63A	FITTING ON PRESSURE GAUGE	2

22.2 Powerpack Assembly (EAA0441V72A)



Item #	Part #	Description	Qty.
1	EAA0441V63A	Motor with flange, 230V 1 PH,3 HP	1
2	EAA0441V68A	Pump assembly, 14K Scissor	1

22.3 Manifold Parts List

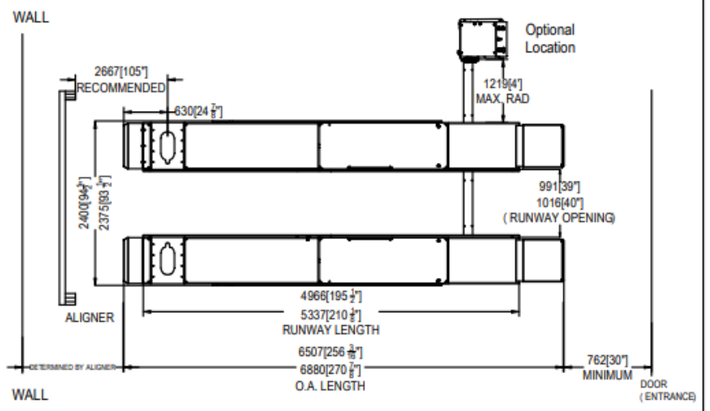


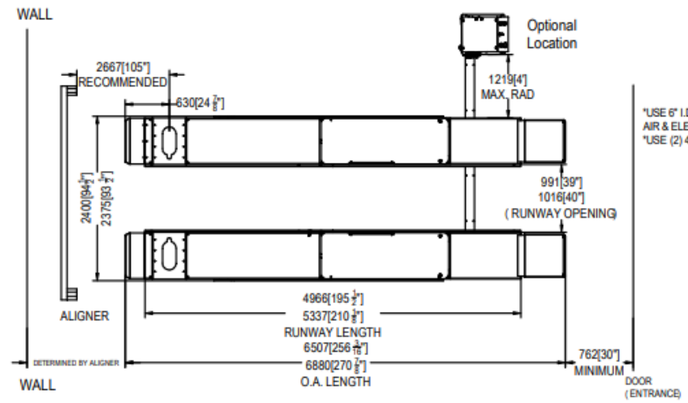
Item#	Part#	Description	Qty.
1	6-0804CN	90 deg Elbow 1/4 NPT	1
2	6-2129CN	Cartridge w/Coil w/Override	2
3	6-3403CN	Cartridge w/Coil	2
4	6-4315CN	Pressure Switch w/Cover	1
5	6-3001CN	Adapter, NPT 1/4-M - 9/16-18-M	3
6	6-3888CN	Adapter, NPT 1/4-M - 9/16-18-FM	1

Note: Complete Assembly Part # 6-3877CN

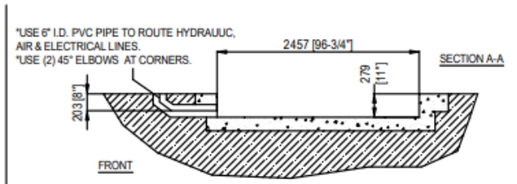
*Image for reference only, may not be exactly as shown.

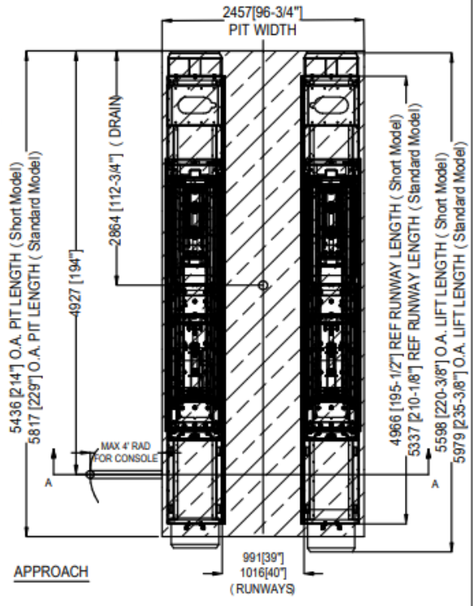
Foundation Plan



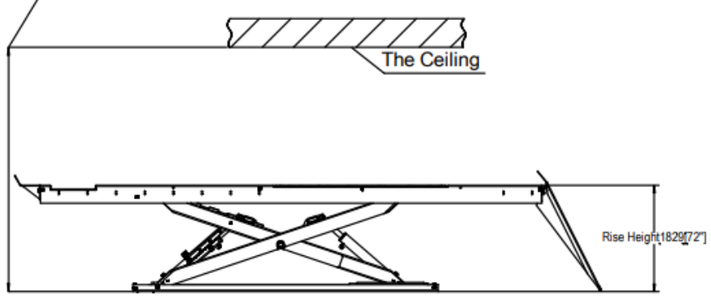


These are the recommended requirements for the installation. There may be unknown foundational or other conditions not obvious. We recommend that you consult an architect or engineering firm to know more details



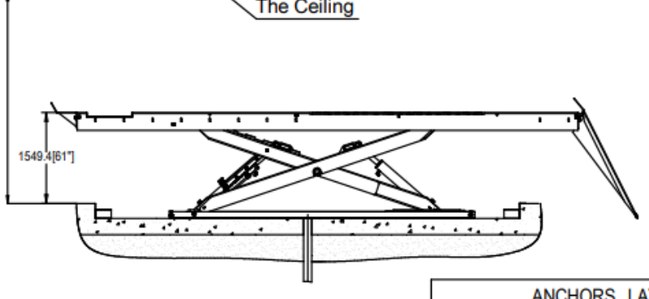


The Minimum Height 3657.6 [144 "]



SURFACE MOUNT

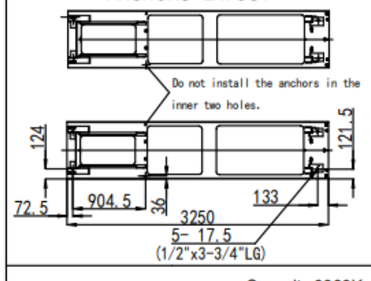
The Minimum Height 3378.2 [133 "]



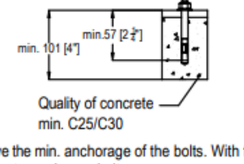
FLUSH MOUNT

Prepared by customer at the operating column:
Power supply: 1PH, L+N, 230v, 60Hz, 20A
Cable: approx. 2.5m. 3G 4mm²

ANCHORS LAYOUT



Bolt
Hilti: ½"X3-3/4" LG
WEDGE ANCHOR



Observe the min. anchorage of the bolts. With floor pavements use longer bolts.
Observe the regulation of the anchor bolt manufacture.

Capacity:6363Kg

SHORT MODLS	EELR587A EELR588A EELR589A EELR590A EELR783A EELR784A EELR785A EELR786A
STANDARD MODELS	EELR591A EELR592A EELR593A EELR594A EELR787A EELR788A EELR789A EELR790A

Snap-on

KUNSHAN, JIANGSU, CHINA

Product Change Notice

REV.	PCN	DESCRIPTION	DATE	BY
E	DG07037	Use the new design of the line cover on page 36, add the foundation plan on page 79.	27MAY2019	RY
F	DG07112	Update the console box on page 73、74、76.	17SEP2019	KW
G	DG07179	Update the console assembly on page19、24、28、39、49、77	27SEP2019	LM
H	DG07078	Update the line cover on page 60. Update the table on page 76. Correct the P/N of hydraulic hose on page 78.	21OCT2019	RY
I	DG07229	Add the location of the console conduit for short model on page 12,82. Add the Installation of Extension Line Covers on page 37. Remove excess decal on page 76.	27NOV2019	KW
J	DG07415	Update the air and Hydraulic connections of the console, and update the related figures. Add work step part number on page 59.	23APR2020	KW / ND
K	DG07417	Update the FRL and the air and Hydraulic connections of the console, and update the related figures on page 19、20、21、24、28、40、44、50、73、74、75、76、79、80.	05JUN2020	KW
L	DG07488	Update the concrete requirements and anchor bolt on page 10、11、31、35、56、59、83.	07AUG2020	KW
M	DG07573	Add the end cap to line cover, and update the related figures and content on the page 36、61.	27OCT2020	KW
N	DG07764	Update the runway width in the specification sheet on page 8 to 40 inches and the relevant figures and content on page 9、12、13、14、15、83,and change to continuous straight pit wall on page12 and delete excess holes on page 15 and delete the 3PH on page 25 and add warning on page43、44,and add branding decal and part numbers59、77.	15JUL2021	KW / AX
O	DG07949	Modify the installation dimensions of the underframe opening and the runway opening on page 9、12、13、14、85.	25OCT2021	AX
P	DG08020	Change 6 inches to 4 inches on page 11.	18FEB2022	AX
Q	DG08609	Updated drawings on pages 12 and 85, updated EAK0336T17A on page 59, updated the airline connections on page 40.	07DEC2023	AX
R	DG08173	Updated EAK0073V05A on page 74 to EAE0073V05A. Updated drawing on page 57. Add Hex Bolt to number 32 on page 59.	29FEB24	AX
S	DG08779	Added 6-4071CN Polygon Bushing on page 60. Added 6-2899CN Polygon Bushing on page 61.	13AUG24	AX
T	DG08837	Added Section 21.7 Console Labeling on page 81. Updated EAH0069V07A on page 77 to EAH0069V64A.	20DEC24	AX