FP14KC-X

Four Post Closed Front
Commercial Vehicle Lift
14,000 lb. Capacity

Installation & Operation Manual



IMPORTANT!!

READ THIS MANUAL THOROUGHLY BEFORE INSTALLING, OPERATING, OR MAINTAINING THIS LIFT. WHEN DONE WITH INSTALLATION BE SURE TO RETURN DOCUMENTS TO PACKAGE AND GIVE ALL MATERIALS TO LIFT OWNER / OPERATOR.

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1. Safety & Cautions

Important Statements:

Please do note the max weight capacity noted on the silver ID tag attached to the main post. Do not try to lift any load that exceeds the rated lifting capacity. Please read this manual carefully before installation and use of the lift, to avoid any property loss or personal injury caused by faulty operation. No one is allowed to modify the controls, parts, or other mechanical parts of the machine without the manufacturerôs permission.

Qualification of Operators and Users:

- Only personnel who have received professional training are allowed to operate and use the lift.
- Electrical connection must be performed by qualified electricians.
- Non-professionals shall not approach the lifting area.

Cautions:

- Do not install the lift on asphalt or tar ground. Concrete thickness must meet requirement.
- Please read and understand Safety Cautions carefully before operation of the lift.
- The lift shall not be used outdoors if not being customized to meet special water proofing requirements.
- Hands and feet shall be kept away from moving parts of the lift at all times.
- Only personnel who have received professional training are allowed to operate and use the lift.
- Operators should not wear loose clothes to avoid being clamped by any moving part when the machine is descending or rising.
- Area around the lift must be kept clean to help avoid accidents and possible lift malfunctions.
- The lift is designed to lift the entire vehicle, not part of it. Do not try to lift any vehicle beyond the liftôs rated lifting capacity.
- Make sure the lift is secured on the safety locks before working under the lifted vehicle.
- If using rolling bridge jack(s), lifting blocks must be positioned at the vehicleôs pickup points, noted by the OEM. Always lift the vehicle slowly, checking the vehicle is stable without any risk of tipping or falling, before lifting it to the desired height.
- Check for any missing, broken or seized parts or components that may contribute to improper wear & tear to lift. Once any anomaly is detected, stop use immediately and contact your dealer.
- Always fully lower lift to the lowest position before driving a vehicle On or Off the lift.
- It is not allowed to modify any part of the lift without the manufacturerôs permission.
- If the machine is to stand idle for a long period of time, the operator / user shall:
  a. Turn off electrical power & disconnect pneumatic air supply.
  b. Drain hydraulic oil from power unit. (Per local codes, depose of used oil responsibly.)
  c. Lubricate moving parts with grease.

Training:

- Lift operators must be qualified & trained for safe use & operation of lift as described in Manual.

Owner / Employer Responsibilities:

This is a vehicle lift installation / operation manual and no attempt is made or implied herein to instruct the user in lifting methods particular to an individual application. Rather, the contents of this manual are intended as a basis for operation and maintenance of the unit as it stands alone or as it is intended and anticipated to be used in conjunction with other equipment.

Proper application of the equipment described herein is limited to the parameters detailed in the specifications and the usages set forth in the descriptive passages. Any other proposed application of this equipment should be documented and submitted in writing to the factory for examination. The user assumes full responsibility for any equipment damage, personal injury, or alteration of the equipment described in this manual or any subsequent damages.

2. Product Information

Lift Description:

The iDEAL FP14KC-X 14,000 lb. Four Post Commercial Service Lift is a high-performance closed front, cable pull vehicle lift designed for Cars, SUVs, Vans & Trucks. The FP14KC-X Service Lift includes the latest in design & safety features including, narrow & wide runway mount positions, extended rise height for greater undercarriage vehicle access, concealed hydraulic / mechanical cable lift system with slack cable safety devices and durable pulley & shaft design incorporating convenient grease fittings to extended life of the lift. Easy lift operation is provided with single point pneumatic lock release & high quality DURO power unit, while providing additional safety & protection with self-chocking ramps and included wheel stops. The lift is standard with powder coat finished, 20òwide runways, adjustable lock stops for easy runway leveling and optional power unit mount positions. The modular design also provides the flexibility to extend the runways for servicing longer vehicles, while also providing the ability to convert into a high-quality Alignment Lift quickly & easily.

Lift Specifications:

FP14KC-X Lift Specifications	
Capacity	14,000 lbs.
Overall Length w/ Ramp	252-1/2”
Overall Width (Without Power Unit)	131-7/8”
Overall Width (With Power Unit)	142”
Overall Height	92-1/2”
Max Rise Height	77-1/2”
Min Height	7-7/8”
Width Between Posts	116-1/4”
Length Between Posts	196”
Widths Between Runways	43” or 46”
Width of Runways	20”
Max Wheelbase	182-1/2”
Ramp Length	44”
Max. Clearance Under Runway	69-5/8”
Drive-Thru Clearance	96”
Base Plate	10-1/2” x 9”
Power Requirement	220V - 20 Amp - 1PH
Ship Weight	2,690 lbs.
Min Bay Size	16’ x 25’

Lift Layout:

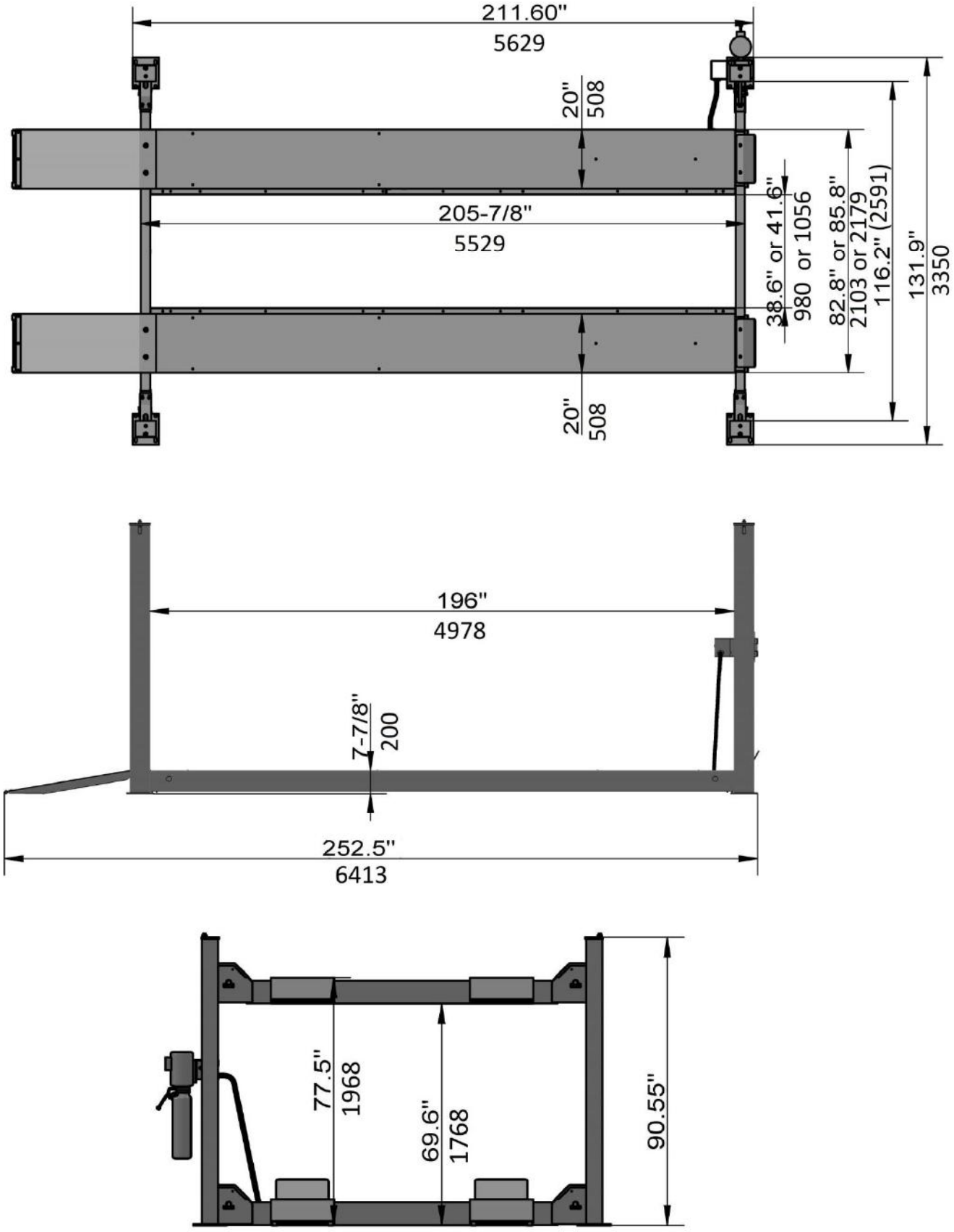


Fig 1.

Main Lift Components:

1. Main Side Post (w/ Power Unit Mounting Bracket)
2. Power Unit (w/ Start Up Button & Manual Release Valve Lever)
3. Main Side Runway (w/ Hydraulic Cylinder Underside)
4. Off Side Runway
5. Sub Posts
6. Crossbeams (Front & Rear)
7. Approach Ramp
8. Wheel Stop (Service Lift)
9. Air Control Bracket (w/ Latch Release Air Valve & Button)
10. Wheel Chocks

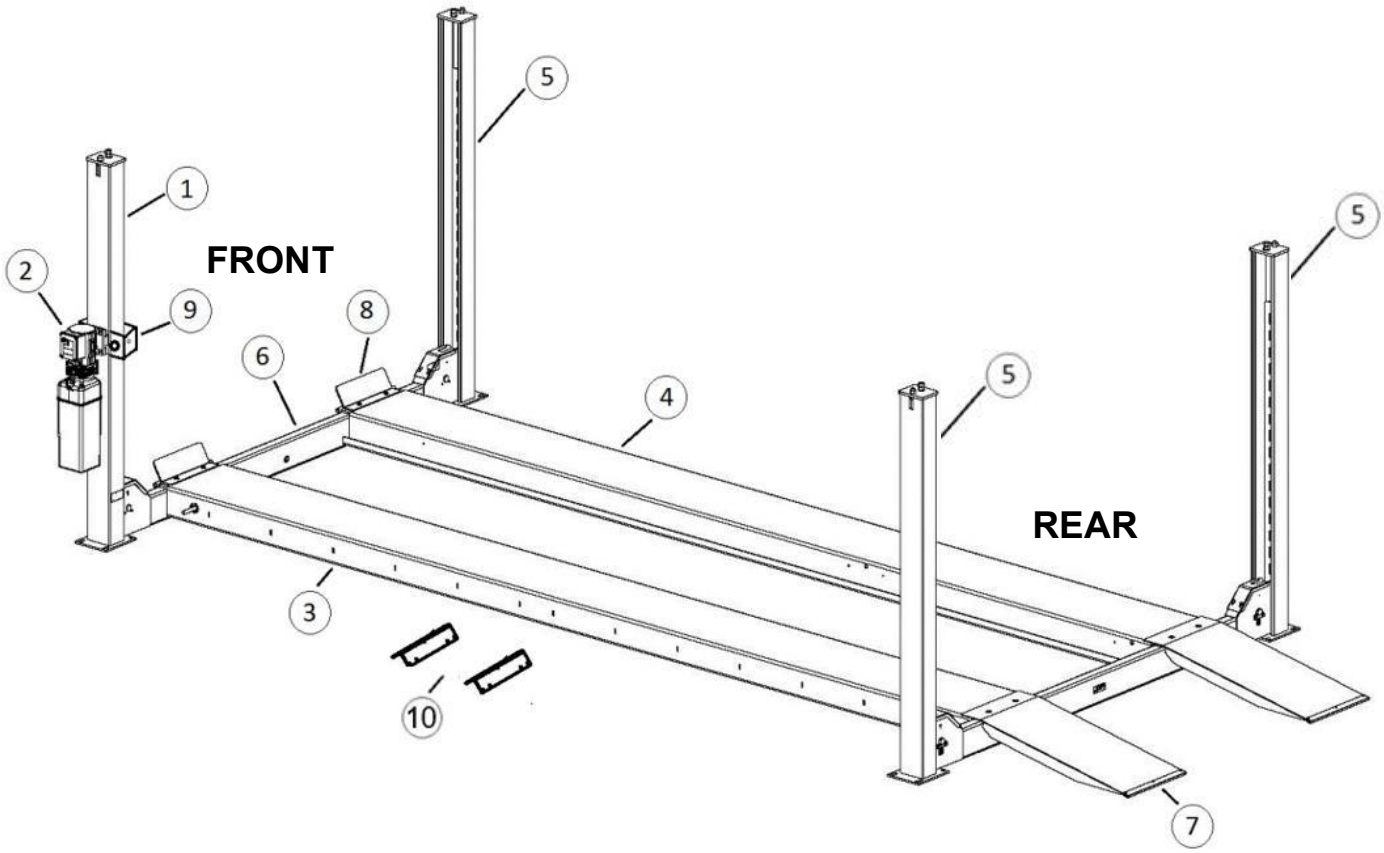


Fig. 2

Receiving & Handling:

Unloading the Lift: You will need a forklift that can handle about 4,000 to 5,000 pounds and operates on a smooth surface to unload from freight carrier trailer. The four post lift package alone weighs close to 2,700 pounds, not including any kits or optional accessories that may be included.

Un-banding the Lift: The steel bands which secure the lift parts to the lift package are heavy duty. You will need a pair of metal shears or tin snips to cut the steel banding. Be very careful cutting bands, as they will tend to fly apart when cut, along with possible shifting of heavy lift parts when freed from the bands. Stand to the side of bands when cutting, while using gloves & safety glasses.

Moving Lift Components: Recommend moving larger lift components to the garage or service bay with the forklift, dolly and/or engine hoist. Smaller pieces can typically be moved by one or two people.

Required Tools:

- Fork Lift (Offload lift package upon delivery & installation assist)
- Chalk line
- Transit & 3ôLevel
- 25ôTape Measure
- Rotary Hammer Drill
- 19mm (3/4ò) Masonry Drill Bit
- Hammer
- Hex-Key / Allen Wrench Set
- Sockets & Open Wrench Set (1/2òthru 1-1/2ò)
- Medium Crescent Wrench & Pipe Wrenches
- Medium Flat & Philip Screwdrivers
- Crow Bar
- Vise Grips
- Needle Nose Pliers
- 3.2 Gallons (12.8 Quarts) of *Hydraulic Oil
- Safety Glasses
- Gloves

***Recommended Oil:** Non-Detergent / Non-Foaming Hydraulic Oil - SAE-10, AW 32 or Equivalent.
NOTE: Use of ATF is Prohibited, as could damage Power Unit & Void Warranty.

Selecting Site:

NOTE: Before installing your new lift, ensure to check the following:

Overhead Obstructions:

The area where the lift will be located should be free of overhead obstructions such as heaters, building supports, electrical lines, etc. Ceiling and/or overhead clearance must be at least 92", plus the height of tallest vehicle to be lifted.

Floor Requirements:

Visually inspect the site where the lift is to be installed and check for cracked or defective concrete. This lift must be installed on a solid level concrete floor with no more than 2 degrees of slope. A level floor is suggested for proper installation and level lifting. If a floor is of questionable slope, consider a survey of the site and/or the possibility of pouring a new level concrete slab. This lift is designed to be installed on a minimum of 4-1/4" thick, 3000psi, with steel reinforced concrete. Do not install this lift on asphalt, wood, or any other surface other than described. This lift is only as strong as the foundation on which it is installed.

(See 'Next Page' for important Foundation & Anchoring Requirements)

DO NOT install this lift outdoors unless special consideration has been made to protect the power unit from weather conditions. **NOTE: The Power unit is not water proof!**

DO NOT install lift close to wall and/or obstruction. It is necessary to leave adequate clearance around the liftôs outer perimeter for safety. Suggested clearance to be 3 ft. (1 meter) minimally.

Operating Conditions:

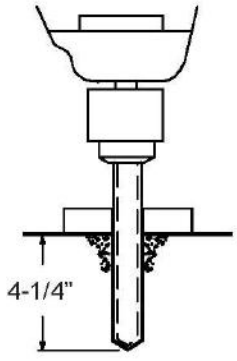
Lift is not intended for outdoor use and has an operating ambient temperature range of 41º - 104ºF (5º - 40ºC).

Foundation & Anchoring Requirements:

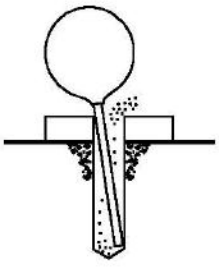
1. Concrete shall have compression strength of at least 3,000 PSI and a minimum thickness of 4-1/4òin order to achieve a minimum anchor embedment of 3-1/4ò NOTE: When using the standard supplied 3/4òx 5-1/2ò long anchors, if the top of the anchor exceeds 2-1/4ò above the floor grade, you DO NOT have enough embedment.
2. Maintain a 6òminimum distance from any slab edge or seam. Hole to hole spacing should be a minimum 6-1/2òin any direction. Hole depth should be a minimum of 4-1/4ò
3. DO NOT install on asphalt or other similar unstable surface. Columns are supported only by anchoring to floor.
4. Using the horseshoe shims provided, shim each column base as required until each column is plumb. If one column has to be elevated to match the plane of the other column, full size base shim plates should be used. Torque anchors to 130 ft-lbs. Shim thickness MUST NOT exceed 1/2òwhen using the 5-1/2òlong anchors provided with the lift.
5. If anchors do not tighten to 130 ft-lbs. installation torque, replace the concrete under each column base with a 2ôx 2ôx 6òthick 3,000 PSI minimum concrete pad keyed under and flush with the top of existing floor. Allow concrete to cure before installing lifts and anchors (typically 2 to 3 weeks).

Anchoring Tips

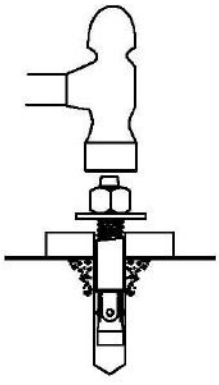
1. Use a concrete hammer drill with a carbide tip, solid drill bit the same diameter as the anchor, 3/4ò(.775 to .787 inches diameter). Do not use excessively worn bits or bits which have been incorrectly sharpened.
2. Keep the drill in a perpendicular line while drilling.
3. Let the drill do the work. Do not apply excessive pressure. Lift the drill up and down occasionally to remove residue to reduce binding.
4. Drill the hole to depth of 2òdeeper than the length of anchor. NOTE: Drilling thru concrete (recommended) will allow the anchor to be driven thru the bottom of foundation if the threads are damaged or if the lift will need to be relocated.
5. For better anchoring holding power, blow dust from the hole.
6. Place a flat washer and hex nut over threaded end of anchor, leaving the nut almost flush with the top of the anchor bolt. Carefully tap anchor into hole. Do not damage threads. Tap anchor into the concrete until nut and flat washer are against base plate. Do not use an impact wrench to tighten! Tighten the nut, two or three turns on average after the concrete has cured (28-day cure). If the concrete is very hard only one or two turns may be required.



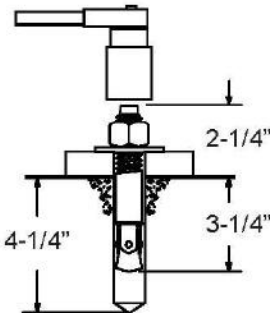
Drill holes using 3/4" carbide tipped masonry drill bit per ANSI standard B94.12.1977



Clean hole.



Run nut down just below impact section of bolt. Drive anchor into hole until nut and washer contacts base.



Tighten nut with Torque wrench to 130 ft.-lbs.

3. Installation Instructions

WARNING!! Improper installation can cause accelerated wear, resulting in catastrophic failure which may cause property damage and / or bodily injury. Manufacturer will assume no liability for loss or damage of any kind, expressed or implied, resulting from improper installation or use of this product. Read this installation manual in its entirety before attempting to install or operate the lift.

Step 1: Lift Location

1) If available, use architect plan to locate lift in service area or bay.

2) Determine which end of the lift will be approach end, along with ensuring to leave adequate clearance around the liftôs outer perimeter for safety clearance, as shown in **Fig. 3**. Ensure concrete floor is level & meets õFoundation & Anchoring Requirementsö on Page 8 .

NOTE: The Main Side 'Power' Runway & Main Side Post must be installed on the same Side & End, shown in Fig 2.)

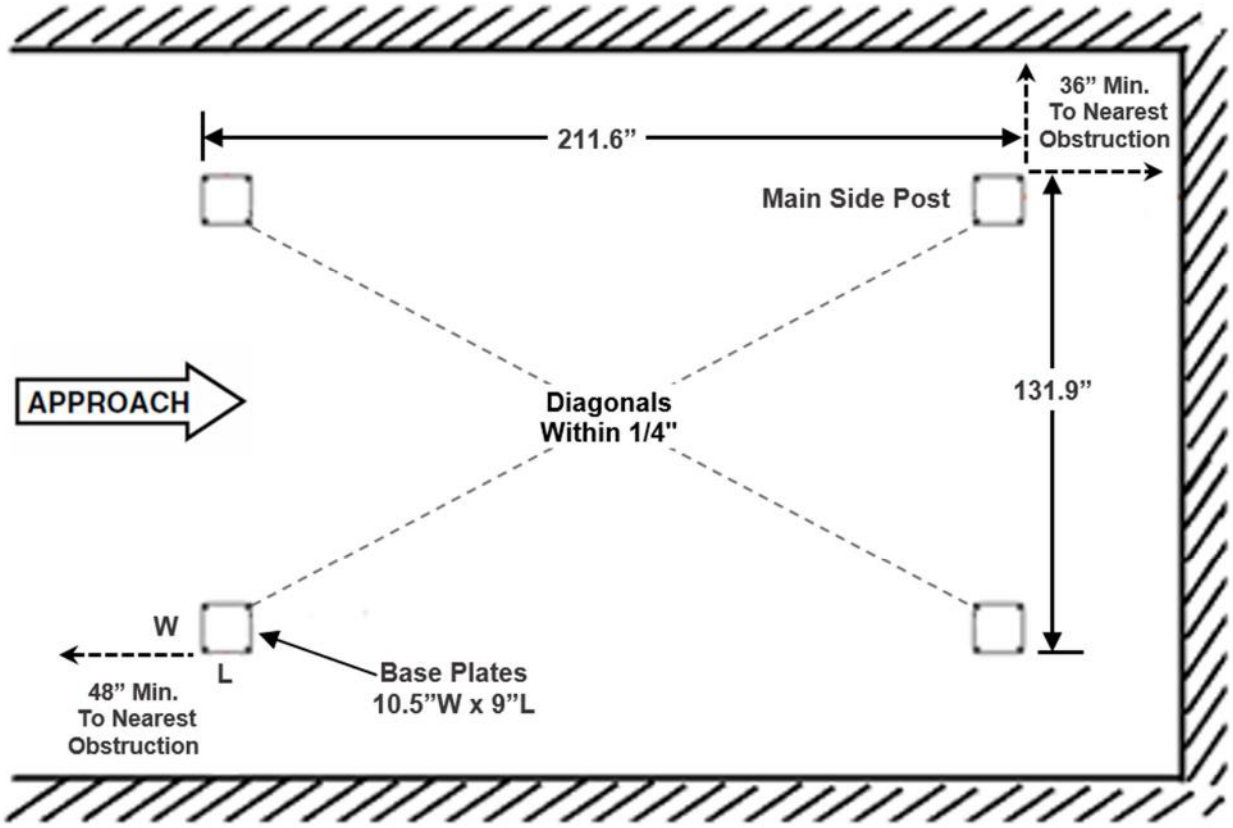


Fig. 3

NOTE: For Power Unit placement at the Passenger Side Rear Post, rotate lift 180 degrees, but leaving the Ramps, Chocks and Wheel Stops in their original positions.

3) Once a location is determined, mark locations with chalk line where lift posts will be positioned in bay. **Fig 3**. Ensure to determine drive-on approach direction, along with centering lift to bay door.

4) Double check all dimensions and make sure that the lift layout is perfectly square. Ensure diagonal measurements are within 1/4ò to the inside of each post base plates. **Fig 3**.

Step 2: Runways & Crossbeams Installations

NOTE: Lifting Cables & Pulleys are conveniently pre-assembled in Main Side Runway. As a result, the Runways will need to be elevated off floor a few inches allowing access to underside of Main Side Runway to access Cable Ends, Air Tubing, Hydraulic Hose, and Cylinder.

1) Position each runway in the predetermined location, making sure the jack rails on each runway are installed to the inside. Be aware of the specific location of the Main Side ópowerô Runway, making sure the hydraulic hose connection is positioned to the front of bay. **Fig 4**.

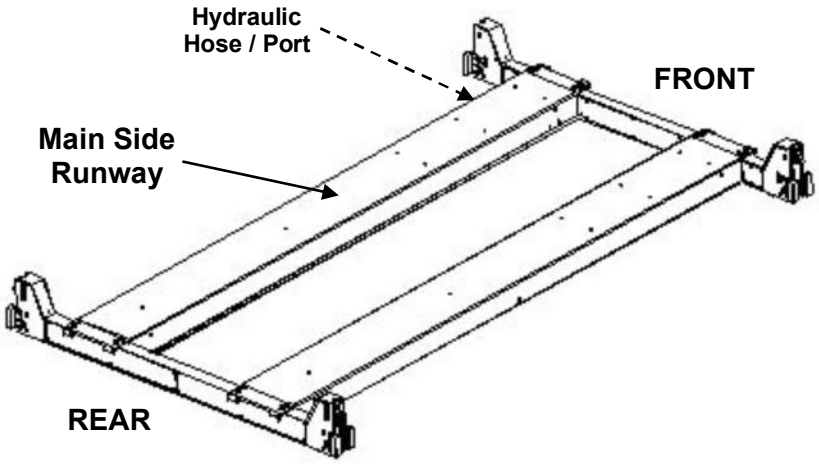


Fig. 4

2) Pull cable ends, air tubing and hydraulic lines out from the ends of the Main Side Runway for assembly. Ensure cables are in the proper sheave grooves, **Fig. 5**.

3) Place the Front & Fear Crossbeams at each ends of runways, as shown in **Fig 4**.

CAUTION! Ensure openings in the sides of the Front & Rear Crossbeams are aligned with the Cable Sheaves at each end of the Main Side Runway.

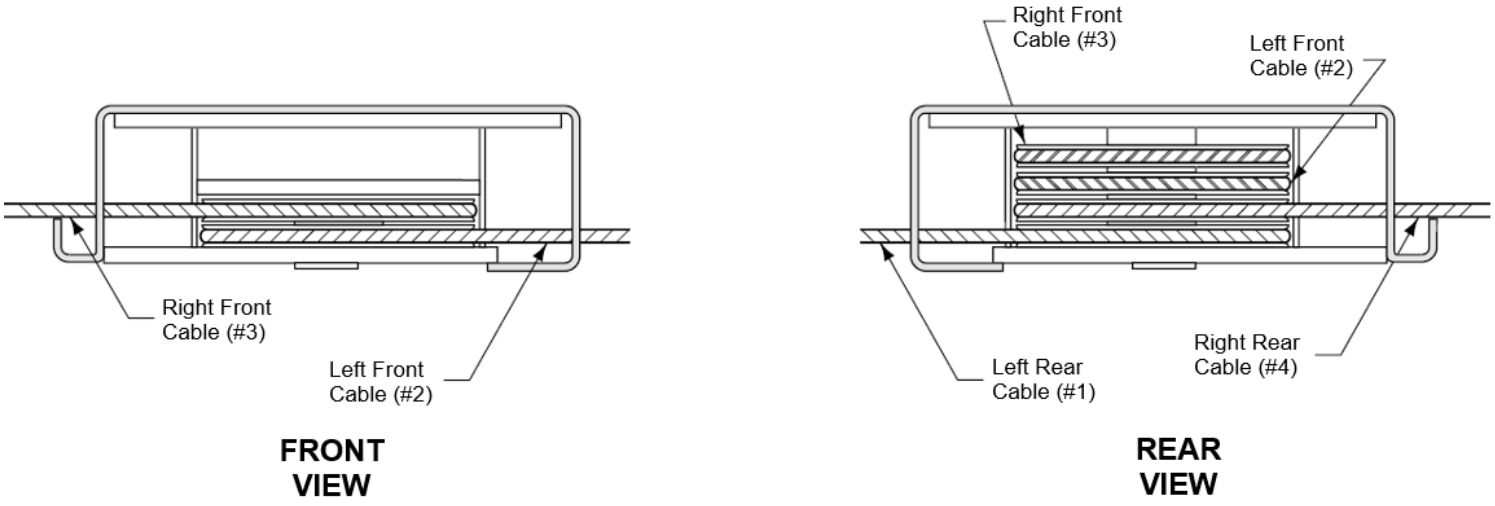


Fig. 5

4) With the front & rear crossbeams openings aligned with the cable sheaves at each end of the main side runway ends, carefully raise the cross beams to gain access to the underside of each end.

5) Remove cable guide tabs from the underside of each end of Crossbeam, using a hex head screwdriver, **Fig. 6**. Set Cable Guide Tabs & hardware aside for reassembly in the follwing steps.

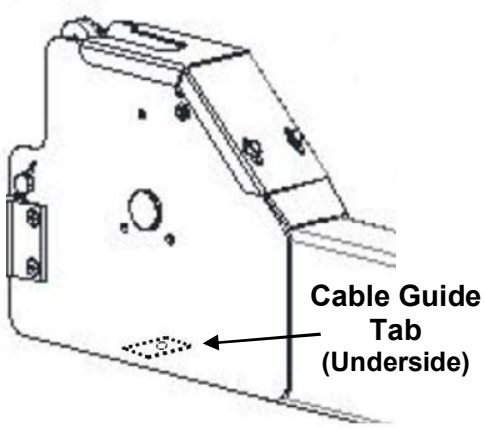


Fig. 6

6) Slide the cables from the ends of power-side runway and route the cables though the crossbeams referring to the routing diagram in **Fig 7**.

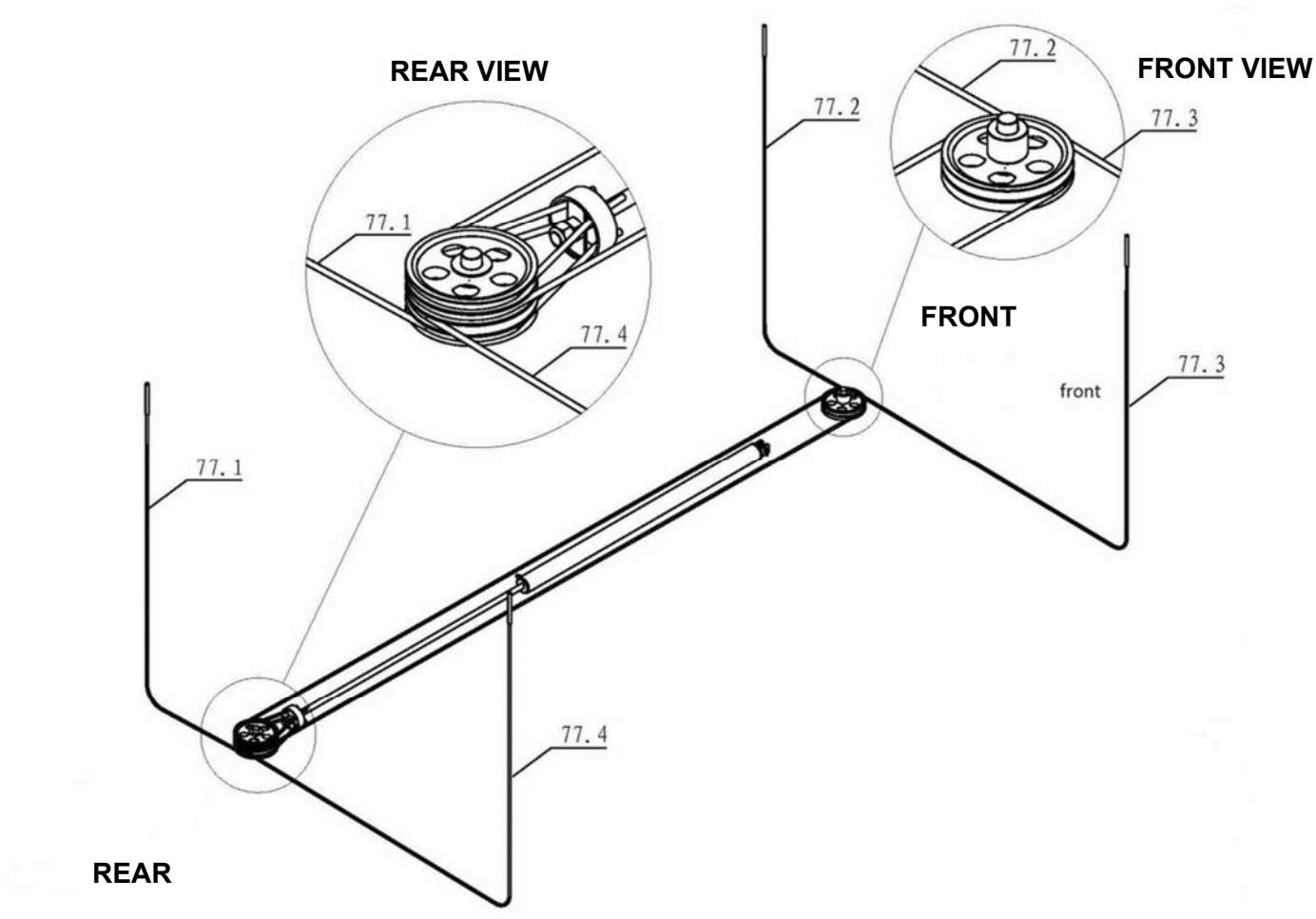


Fig 7

CAUTION! Ensure the Cables are not twisted during routing and routed on the correct pulleys in Runways.

7) Route specific cable ends ódown & aroundôeach crossbeam cable pulley and up, making sure cables are not crossed inside crossbeams, **Fig. 8**.

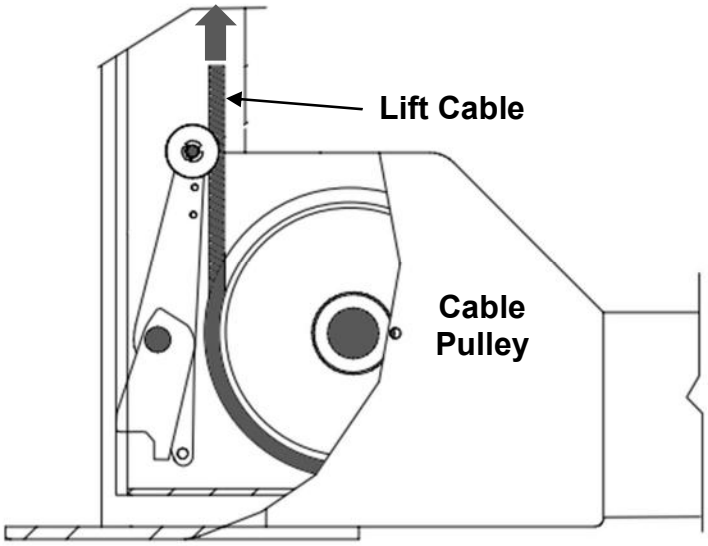


Fig. 8

8) Bolt the front of runways with wheel stops onto the front crossbeam by aligning the two holes in the top of the front crossbeam tube with the slots in the runway end plates and the holes in the front wheel stops. Secure runway & wheel stop to the crossbeam using four **M12 x 40mm** hex flange bolts, **Fig 9**.

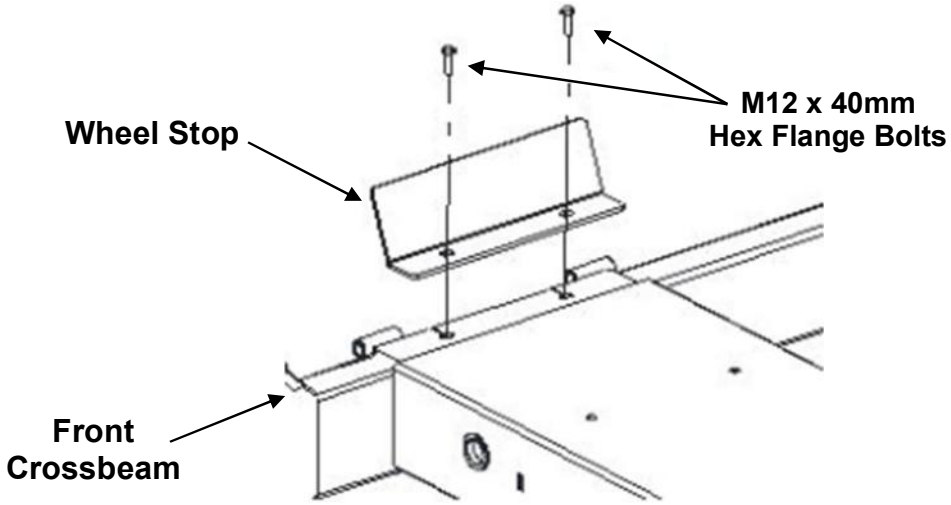


Fig. 9

9) Bolt the rear of runways onto the rear crossbeam by aligning the holes in the top of rear crossbeams tube, secure using four **M12 x 30mm** hex flange bolts.

NOTE: The Offside Side Runway can be mounted to the Crossbeams in two positions for either narrow or standard width configurations. Standard width is highly recommended.

Step 3: Posts & Crossbeams Installations

1) Position the Main Side Post (w/ Power Unit Mounting Bracket) at the left front corner of the Main Side Runway. Position the remaining three Sub Posts at the other remaining corners, shown in **Fig. 2**.

2) Locate the Latch Racks at the back of each Post and remove the **M8 x 12mm** screw & washer securing the Latch Rack to the lower section of posts, shown in **Figs 10 & 11**. Set M8 Screws & Washer aside for reassembly in the follwing steps.

3) Position Hex Nuts to the top of the Latch Rackôs threaded studs, shown in **Fig 10**. Ensure the Latch Rackôs threaded stud is inserted through the outer top plate hole for each Post.

4) Carefully position each Post to be centered around the Crossbeam ends while still allowing the Nylon Slider bolt holes to stay exposed. Bolt Sliders onto each side of the Crossbeam end, using the **M8 x 12mm** Countersink Screws, shown below in **Fig. 11**.

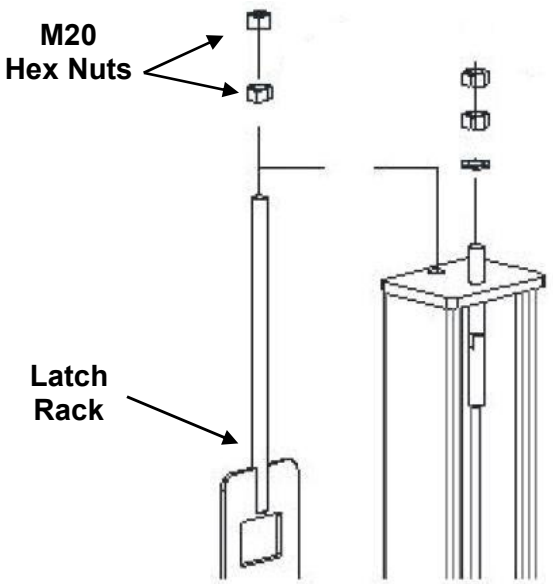


Fig. 10

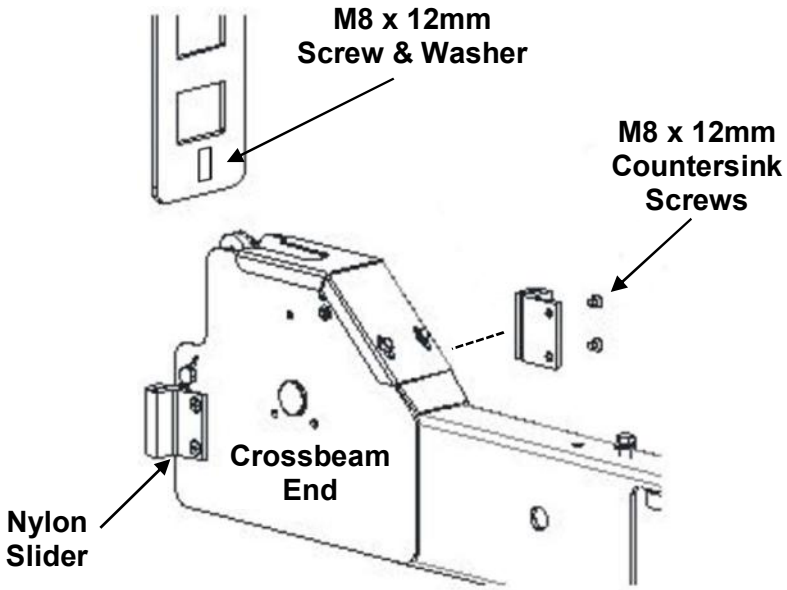


Fig. 11

5) Carefully position the Posts towards the Crossbeams ends until the Nylon Sliders contact the Latch Racks. Raise the Latch Rack above the Nylon Sliders to insert the Latch Rack into the Nylon Sliderôs slots, shown in **Figs 12 & 13.** Repeat for each Post & Crossbeam end.

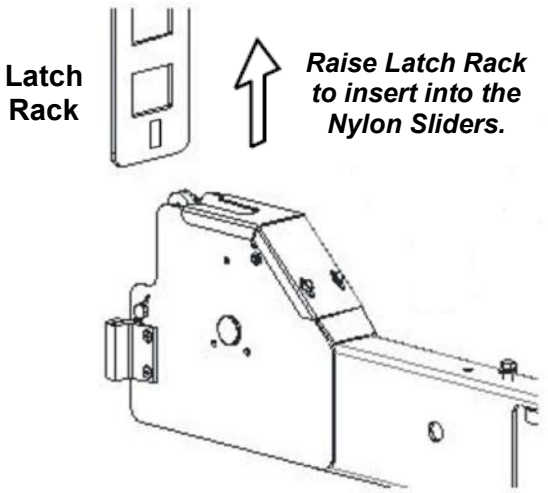


Fig. 12

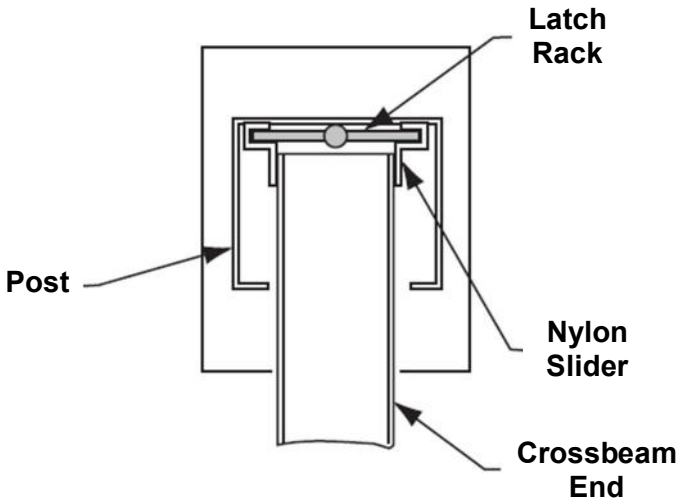


Fig. 13

6) Insert the steel Lift Cable through the Top Plate for each Post, as shown in **Fig 14**. Secure Cable End to the top of each post using **M20** Hex Nut & Washer. Ensure the Lift Cable is routed correctly on the Slack Cable Roller, as shown in the **Fig 15**.

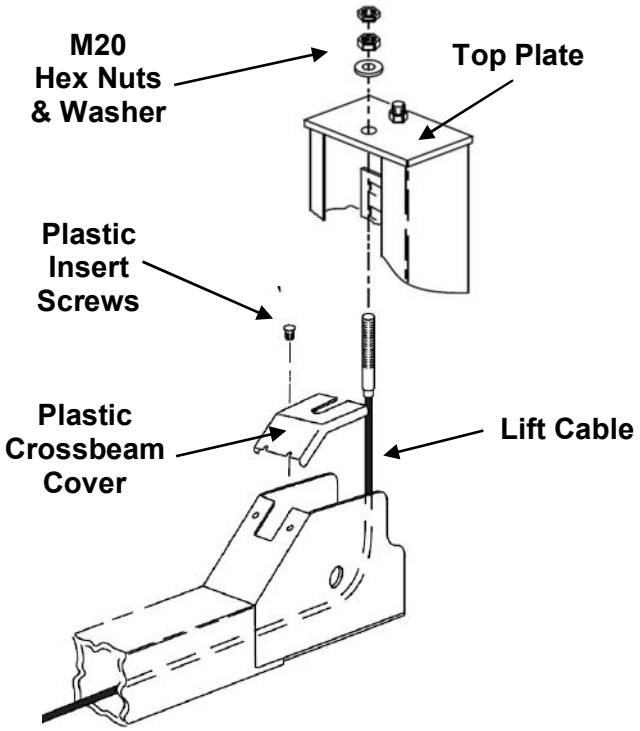


Fig. 14

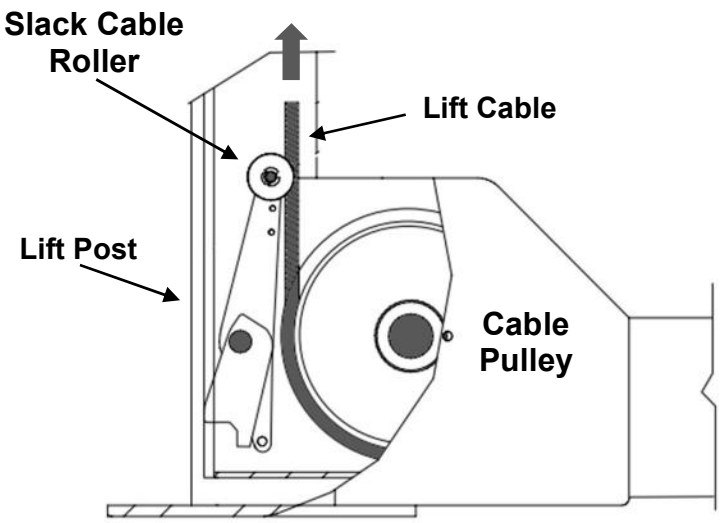


Fig. 15

CAUTION! Ensure the Lift Cables are not twisted and are fully engaged in the grooves of the Crossbeam Cable Pulleys, while also being properly routed for the Slack Cable Roller.

7) Locate the Plastic Crossbeam Covers and mount to the top of each Crossbeam ends using the Plastic Insert Screws, **Fig 14**.

8) Re-install Cable Guide Tabs to the underside of each end of Crossbeam, using the **M6 x 12mm** Screw & Lock Washer, shown below in **Fig. 16**.

9) Secure the Latch Racks to the back of each Post, using the **M8 x 12mm** Screw & Flat Washer, shown in **Fig 17**.

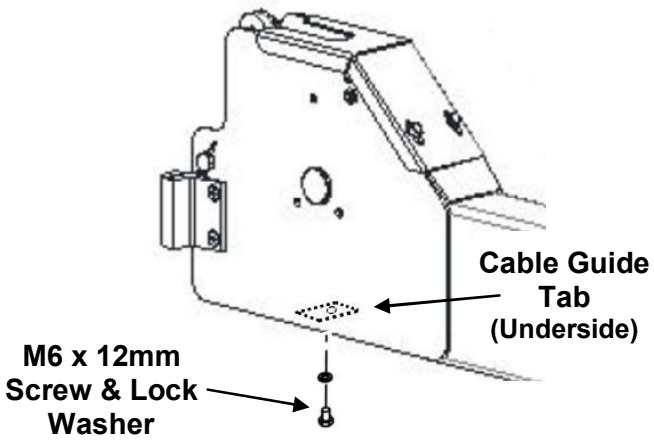


Fig. 16

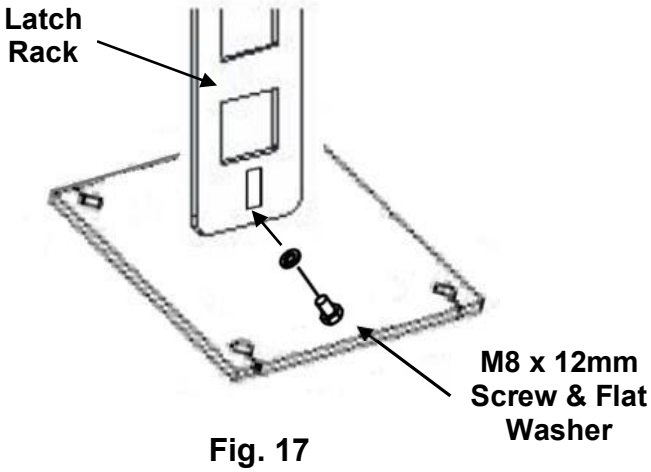


Fig. 17

Step 4: Anchoring Posts

1) Before proceeding, double check measurements using the diagram below, **Fig. 18**. Ensure to keep columns square to center line of lift while checking dimensions side-to-side, front-to-rear, and diagonally. Note: Diagonals must be equal to within 1/4".

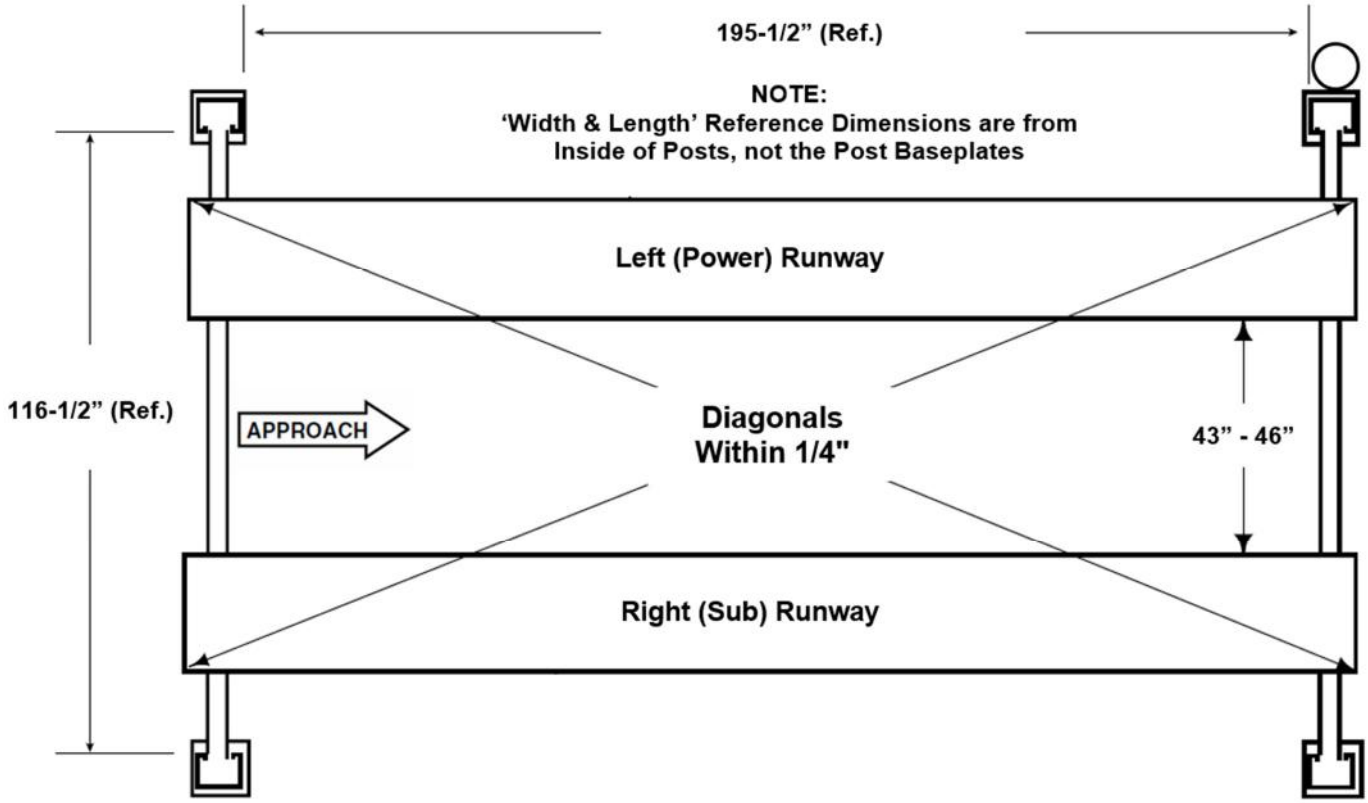


Fig. 18

IMPORTANT: Refer to 'FOUNDATION and ANCHORING REQUIREMENTS' noted on (Page 8).

2) Using the base plates of Posts as a guide, drill each anchor hole in the concrete approximately 5òdeep using a rotary hammer drill and 3/4òconcrete drill-bit. To assure full holding power, do not ream the hole or allow the drill to wobble.

NOTE: Drilling thru concrete (recommended) will allow the anchor to be driven thru the bottom of foundation if the threads are damaged or if the lift will need to be relocated.

3) After drilling, remove dust thoroughly from each hole using compressed air and/or wire brush. Make certain that the column remains aligned with the chalk line during this process.

4) Assemble the washers and nuts on the anchors then tap into each hole with a block of wood or rubber hammer (recommended) until the washer rests against the base plate. Be sure that if shimming is required that enough threads are left exposed. **(See Page 8 for Shimming requirement details)**

5) Using a level, check that posts are plumb for every side. If shimming is required, use the provided shim stock, placing the shims as close as possible to the hole locations to prevent bending the column base plates.

6) With the shims and anchor bolts in place, tighten by securing the nut to the base then turning 2-3 full turns clockwise. Torque anchors to 130 ft-lbs. **NOTE: DO NOT use an Impact Wrench to tighten!!**

Step 5: Power Unit & Control Bracket Installation

NOTE: There are two positions for mounting Power Unit & Control Bracket - Side of Post or Front of Post. Choose the desired position that best fits the service bay area. (Fig. 20)

1) Carefully remove Power Unit from the package and mount to the Main Side Post bracket using **M8 x 25mm** Bolts, Washers & Hex Nuts, keeping the left side slightly loose to mount Control Bracket, **Fig. 21.**

CAUTION! Due to the top heavy weight of Power Unit, an extra person is recommended to assist with mounting to the Main Side Post Bracket.

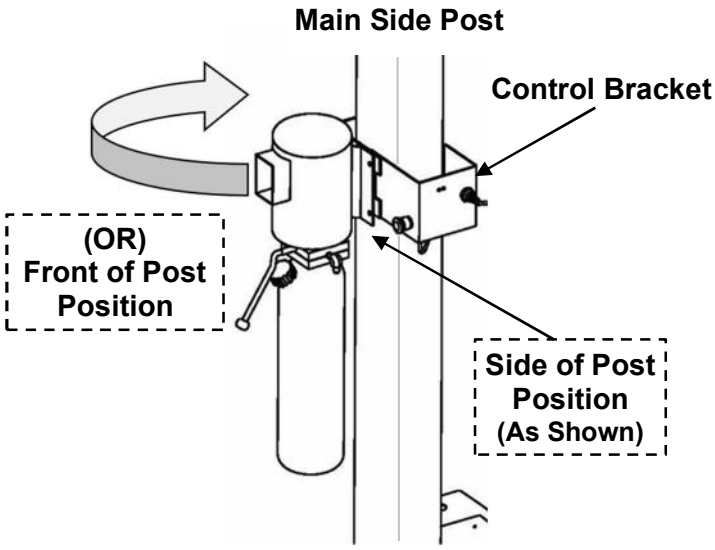


Fig. 20

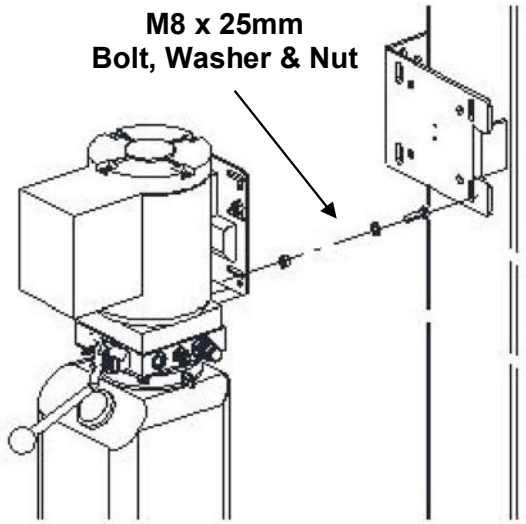


Fig. 21

2) Mount Control Bracket to the backside of the Main Side Post Bracketôs left side while using the same **M8 x 25mm** Bolts, M8 Washers & Hex Nuts to mount the Power Unit, **Fig 20**. Ensure to tighten all Bolts to fully secure Power Unit & Control Backet to Main Side Post.

3) Mount Air Valve and the Air Inlet ôquick disconnectô Fitting to the holes in the Control Bracket, as shown in **Fig. 22**.

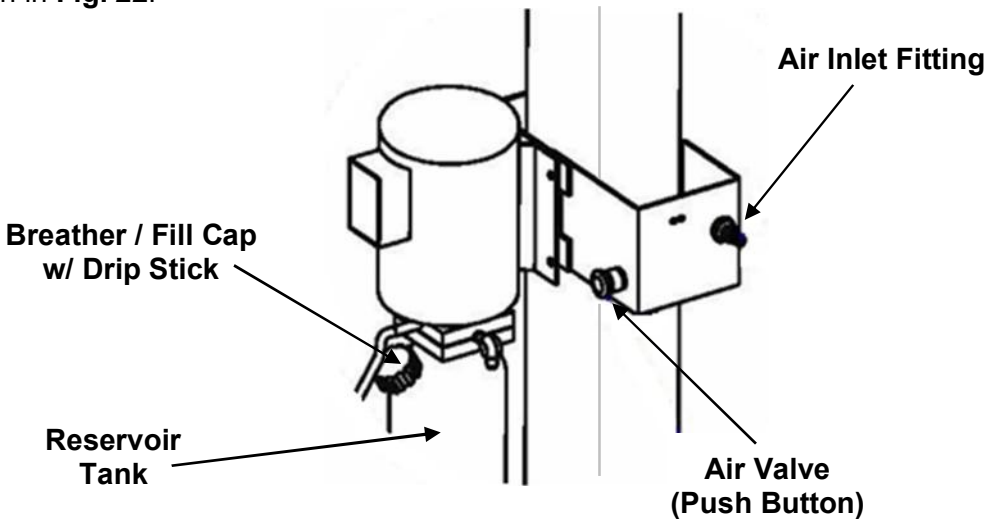


Fig. 22

4) Remove Breather / Fill Cap to add Hydraulic Oil (SAE-10, AW 32) to Power Unit Reservoir Tank, Add to Min. fill line on Drip Stick, approx.13 to 14 quarts, **Fig. 22**. **Do Not Use ATF!!**

Step 6: Hydraulic Hose & Airline Installations

CAUTION! Ensure Hydraulic Hose and Fittings are clean and there are no damages to Fitting threads. DO NOT use Teflon tape on Hydraulic Hose or Fitting connections.

1) Connect Hydraulic Hose with ó elbow fitting endô to the Cylinder Port Fitting. Route Hydraulic Hose through round metal rings on the underside of the Power Side Runway, as shown in **Fig. 23**.

2) Locate plastic Corrugated Flex Tubing and remove the Jam Nut from one end. Insert Flex Tubing end through the port hole located at the end of Power Side Runway, secure to runway with Jam Nut, **Fig 24**.

3) With the Hydraulic Hose connected to the Cylinder Port Fitting and routed through the metal rings, now route the ó straight fitting endô of Hydraulic Hose through the runway port hole with Corrugated Flex Tubing already attached. Gently pull hose slack through the Flex Tubing, **Figs 23 & 24**.

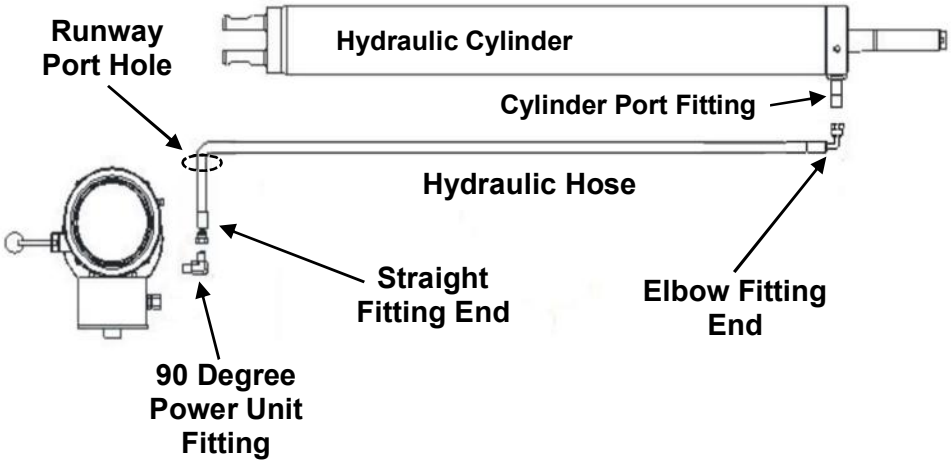


Fig. 23

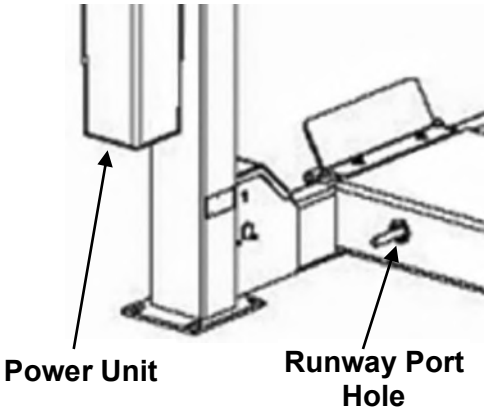


Fig. 24

4) Install 90 degree Power Unit Fitting to HP Port on left side of Power Unit, shown in **Fig. 25**. Position & tighten Power Unit Fitting at a 45 degree back-angle, towards the lift.

5) Remove Jam Nut from end of Corrugated Flex Tubing and route Hydraulic Hose through the large hole on backside of Control Bracket. Insert the Flex Tubing end through hole on backside of Control Bracket and secure to it with Jam Nut, **Fig 26**.

6) Route Hydraulic Hose extending from Flex Tubing under the Control Bracket & up to the ó angled backô 90 degree Power Unit Fitting to connect, **Fig 26**. Ensure not to overtighten JIC Fitting connections.

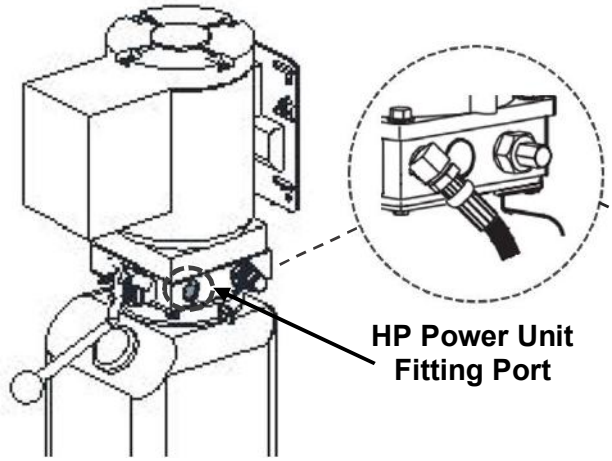


Fig. 25

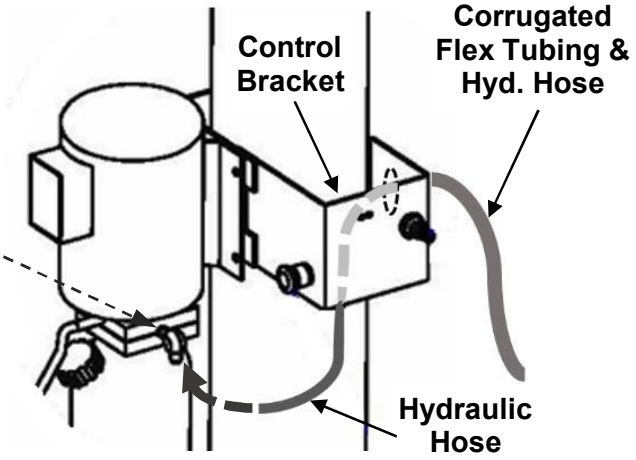


Fig. 26

CAUTION! Locking Latches require compressed air pressure of 90 PSI Min to 115 PSI Max for proper latch operation.

NOTE: To assemble airline tubing into push fittings, use firm pressure to push tubing into fitting until it bottoms out. Ensure tubing is cut square with no burrs, Fig 28.

7) Route and connect D6 Airlines to Lift for Latch operation, **Fig. 27**. Cut D6 airline to connect Air Fitting to Air Valve. Connect airline from Air Fitting to Air Valve using ‘Inlet’ to Valve Port ‘A’, **Figs. 27 A & B**.

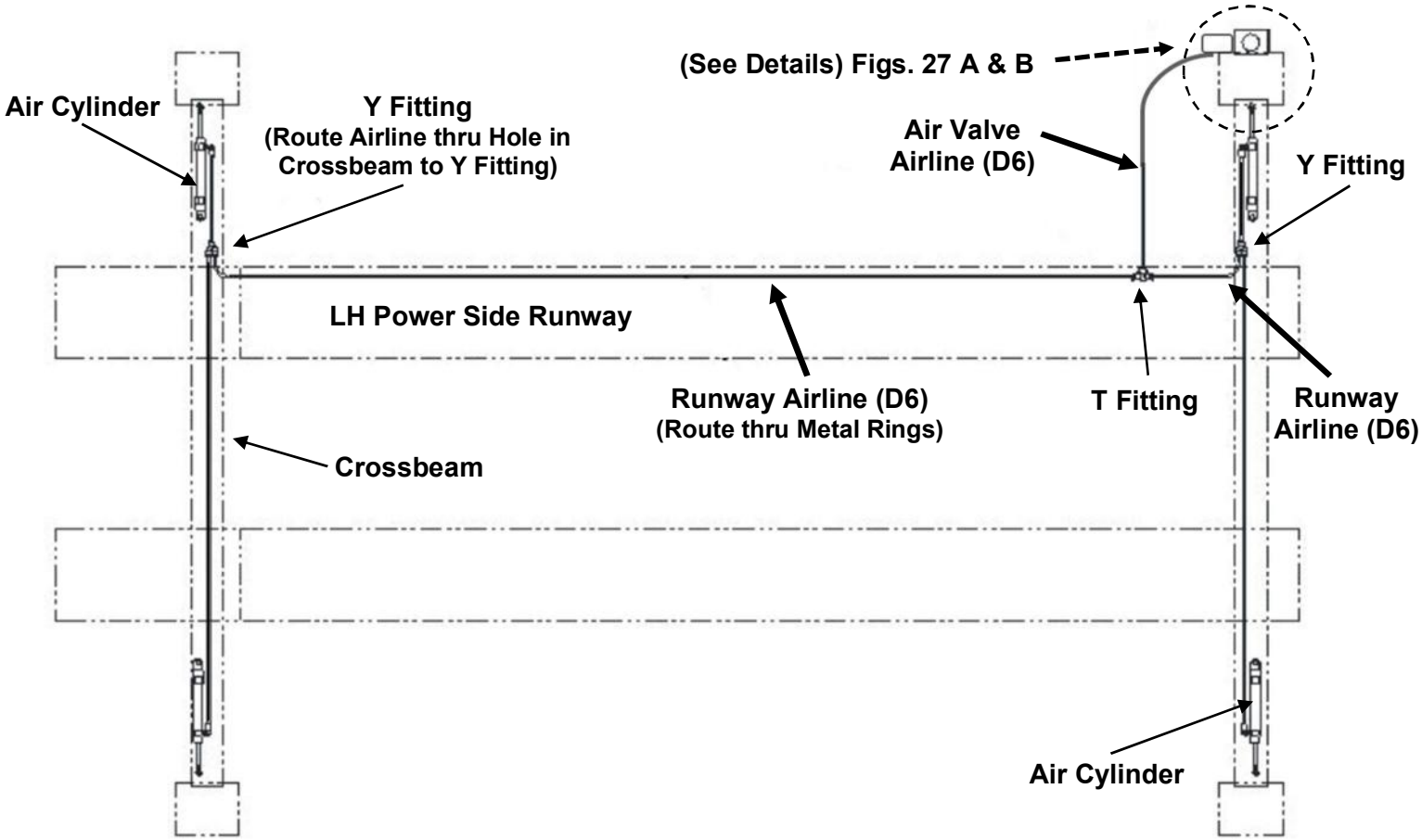


Fig. 27

8) Connect D6 Airline to the ‘Outlet’ to Valve Port ‘P’ and route through Flex Tubing to connect to T Fitting. Connect airlines to each end of T-Fitting, then connect to Y Fittings in Crossbeams, **Figs. 27, 27-A &-B.**

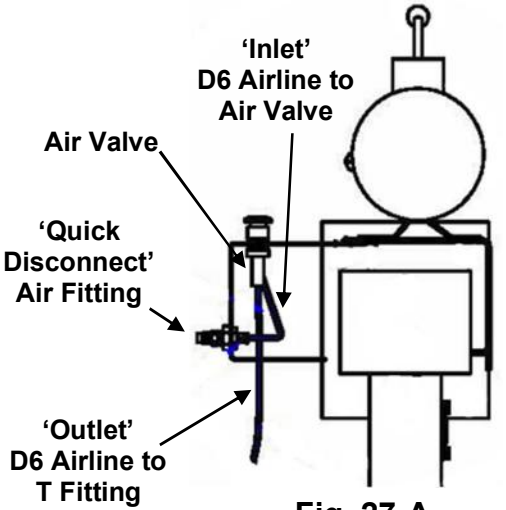


Fig. 27-A

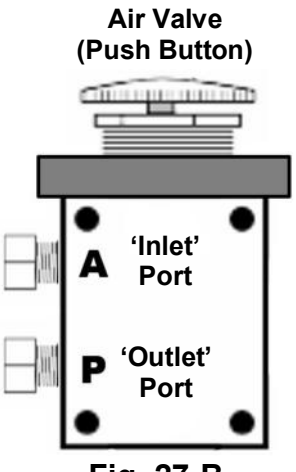


Fig. 27-B

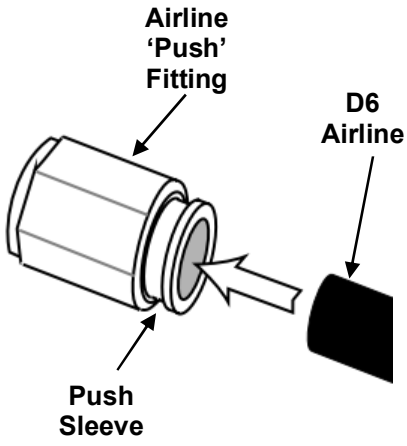


Fig. 28

Step 7: Power Unit Electrical Connection

<u>WARNING</u>: Electrical Wiring must comply with local code. Use separate circuit for each power unit and protect each circuit with time delay fuse. For 208V-230V single phase, use 20 amp fuse.

1) Have a Certified Electrician make the electrical connection from power supply to the power unit. Use separate circuit for each power unit, **Fig. 29**.

208 - 230VAC, 1PH, 60Hz

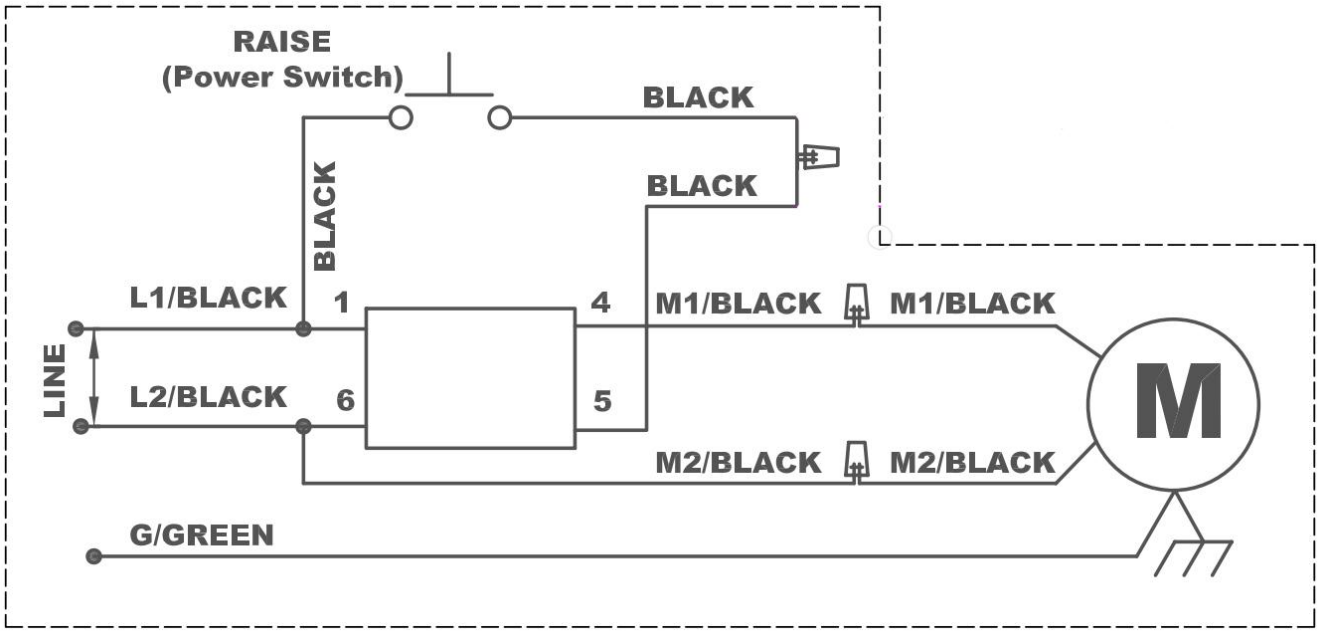


Fig. 29

CAUTION! Never operate the Power Unit in-line voltage less than 208VAC, as motor damage may occur. Never operate Power Unit with no hydraulic oil, as pump damage may occur.

Step 8: Cycle Testing & Bleeding Hydraulics

CAUTION! DO NOT place Vehicle on Lift for the following Test Steps.

1) **To Cycle Test Lift**, first turn on 220VAC electrical supply to Power unit and connect shop air to Quick Disconnect Air Fitting on Control Bracket. <u>Ensure shop air supply to Air Fitting is between 90 - 115 PSI for proper Latch operation</u>, **Fig. 30**.

2) Press the START/UP button on the motor to slightly raise lift, but <u>only until the steel cables are tensioned in each Post</u>, then release START/UP button. **<u>IMPORTANT</u>**: **Inspect & confirm the steel cables are properly engaged in grooves of all cable pulleys** - **Ref. Figs 7 & 8**.

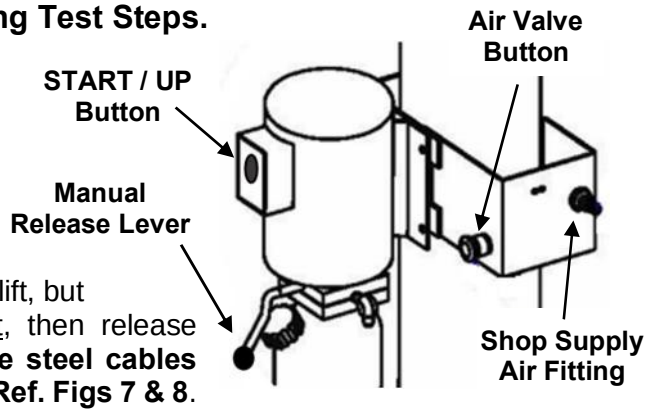


Fig. 30

3) **To Bleed Hydraulics**, cycle the lift (Up & Down) fully 2 to 3 times to bleed (remove air) from the hydraulic system or until the lift lowers smoothly. **<u>OPERATION NOTE</u>: To Lower Lift press the Manual Release Lever to release hydraulic pressure, while at the same time pressing the 'Red' Button on the Air Valve to release latches allowing lift to lower without engaging Latch Racks, Fig 30.**

4) **If Lift Does Not Raise to Full Height**, additional hydraulic fluid may be required. If required, first ensure the lift is fully lowered, then check fluid level using the Dip Stick on Reservoir, **Fig. 22**. **NOTE**: **Only add oil in small increments, never adding hydraulic fluid past the Max Fill Line on Drip Stick.**

CAUTION! Only ADD Hydraulic Fluid to Reservoir Tank when the Lift is fully Lowered. Failure to do so could result in overfilling reservoir tank causing possible damages.

Step 9: Ramp Installation & Leveling Adjustments

1) To install the Approach Ramps, it will be best to have the runways raised about 3 to 4 feet. Attach Ramps to the rear of each Runway using the Ramp Pivot Pin & Cotter Pins, shown in **Fig. 31**.
NOTE: Ensure Cotter Pins are positioned to the outside of the Runway Pivot Tubes.

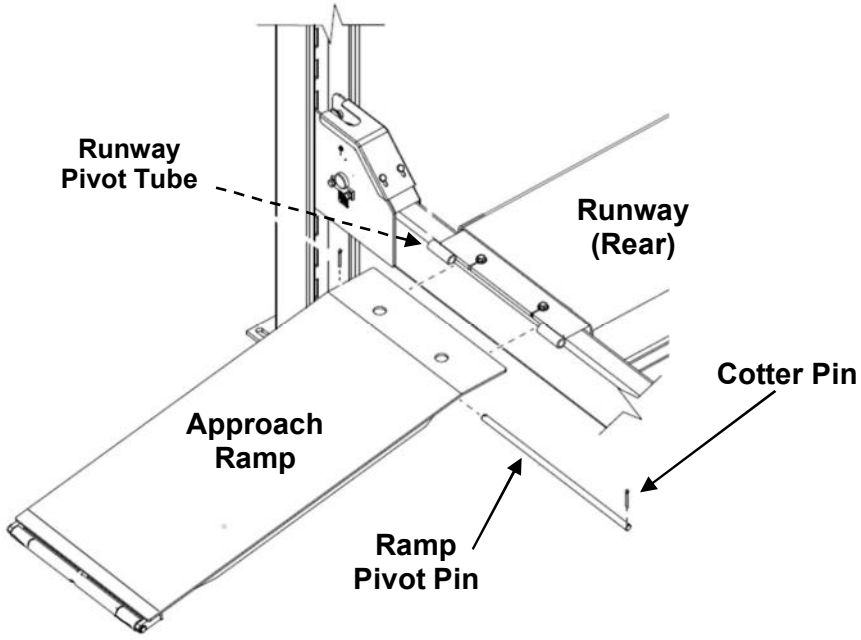


Fig. 31

Cable Leveling Adjustment:

2) Adjust cable(s) with lift fully lowered and with Crossbeams touching Base Plates. Loosen ótopôjam nut and tighten nut on cable stud, on top of Post, until the Crossbeam end is raised 1/4ö(6.4 mm), then back off nut one turn, **Fig. 14** (Page 14). Retighten ótopôjam nut.

3) Repeat for all four cables.

4) Confirm runways are horizontally level using either a large level, water gauge or transit.

NOTE: Runways must be level 'side to side' & 'front to rear'. Max tolerance cannot exceed 9/16".

Final Leveling Adjustments with Vehicle:

5) Load a typical vehicle on lift, ensuring to apply Wheel Chocks behind vehicle front wheels, after loading.

6) Raise lift as high as it will travel (full height). You should hear the locking latches óclickô through all 18ea latch slots simultaneously or very close to each other.

7) Lower lift onto the top latch position.

8) Check clearance, starting with the right front post by using a straight edge to mark the position of the bottom of the crossbeam on the post.

9) Raise lift to full height again. Mark second position. If the gap between two marks is less than 2ò, adjust locking latch bar to reach clearance of 2ò. Repeat for the other three posts.

10) Adjust locking latch bar adjustment nut so that the bottom of the top most latch bar slot is at least 2ò below locking latch. After adjustment, tighten jam nut on post top plate.

11) If the entire 2ò clearance cannot be attained by adjusting the locking latch bar, adjust the cable. Turn cable adjusting nut to raise the locking latch 2ò above bottom of latch bar slot. Tighten cable jam nut.

12) Lower lift, remove wheel chocks and carefully back vehicle off lift.

13) Raise the lift to full height. LISTEN and WATCH as the first locking latch clicks into place. Synchronize the other three columns with this column by adjusting their cables so all four latches click at same time. Tighten cable jam nuts.

NOTE: When making changes to adjustment nuts on cable end or latch bar stud, always leave at least two threads showing between top nut and stud end. Be sure all four corners have passed the locking latch bar slot before lowering lift on locking latches.

Step 10: Final Installation Checks

- Check that the posts are plumb, and runways are level.
- Check that all anchor bolts are installed, and properly torqued.
- Check that the nylon slider guides inside posts are installed, tightened, and greased properly.
- Check that all cable pulleys are installed correctly and properly greased using the grease zerks.
- Check that all bolts, nuts, and screws are securely tightened.
- Check that all cables are routed correctly and are on the correct pulleys.
- Check that the cable in each post is properly positioned to the slack cable roller.
- Check that all hydraulic hose connections are secure with no leakages.
- Check that all airlines are connected properly, and shop air pressure is set 90 to 115 PSI.
- Check that the air valve and air cylinders are functioning for proper latch release operation.
- Check that all four latches are engaging the latch racks at the same time.
- Check for proper oil level in reservoir tank when lift is fully lowered.
- Check for any strange noises during lifting and lowering.

The Lift Installation is now Complete.

4. Operation Safety

SAVE THESE INSTRUCTIONS

Safety Instructions

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

- Read Safety & Operating Instructions procedures in Manual completely before operating lift.
- Keep hands and feet away from pinch points at all times.
- Do not operate equipment that is damaged, until it has been examined by a qualified service person.
- To reduce the risk of fire, do not operate equipment in the vicinity of open containers of flammable
- liquids (gasoline).
- Adequate ventilation should be provided when working on operating internal combustion engines.
- Keep hair, loose clothing, fingers, and all parts of body away from moving parts.
- To reduce the risk of electric shock, do not use on wet surfaces or expose to rain.
- Care must be taken as burns can occur from touching hot parts.
- Always use safety jack stands when removing or installing heavy components.
- Use only manufacturerôs recommended attachments.
- ALWAYS WEAR SAFETY GLASSES.

Safety Procedures

- Total lift capacity is 14,000 lbs. (7,000 lbs. per axel). Do not exceed this capacity.
- Never allow unauthorized persons to operate lift. Thoroughly train new persons/employees in the use, operation, and care of lift.
- Prohibit unauthorized persons from being in shop area while lift is in use.
- Stay clear of lift during raising or lowering procedures.
- Properly maintain and inspect lift in accordance with ownerôs manual.
- Do not operate a lift that is damaged or in need of repair.
- Never override the lift operating and safety controls.
- **CAUTION! Be aware, power unit operates at high pressure.**
- Remove passengers before raising vehicle.
- If lift and/or vehicle is suspected of falling, clear area immediately.
- Prior to lifting and/or lowering vehicle, walk around the lift and check for any objects that might interfere with the operation of lift and safety latches; tools, air hoses, shop equipment.
- When approaching the lift with vehicle, make sure to center the vehicle between the columns for proper wheel tracking onto ramps and runways.
- Slowly drive the vehicle ón or offô lift with someone (outside vehicle) guiding the driver.

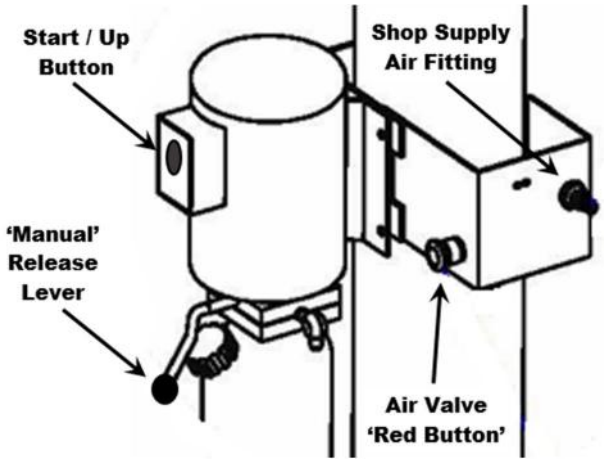
WARNING!! Motors and all electrical components are not sealed against the weather and moisture. Install this lift in a protected indoor location. Failure by the owner to provide the recommended shelter could result in unsatisfactory lift performance, property damage, or personal injury.

5. Operation Instructions

NOTE: Read & adhere to all WARNING, CAUTION and SAFETY INSTRUCTIONS labels on lift.

Vehicle Loading:

- Position vehicle on lift by having another person assisting to guide driver onto the runways. Check for proper weight distribution (center of gravity should be evenly distributed between columns).
- Set vehicle parking brake and chock tires to prevent vehicle movement.
- Use caution before lifting pickup trucks, sport utility and other type vehicles. The individual axle weight capacity should not exceed 1/2 of liftôs capacity.
- Make sure vehicle is neither front nor rear heavy.



CAUTION! Always Chock Wheels and Set Parking Brake Before Lifting Vehicle.

Raising Lift:

- Push START / UP button to raise lift until runways clear the floor.
- Stop and check for vehicle movement and vehicle weight distribution. If secure, raise to desired height.
- Always lower the lift to the nearest lock position by pressing the lower lever to relieve the hydraulic pressure and let the latches set tight in a lock position.
- Never work under a lift that is not in the locked position at all four corners of lift.

WARNING!! Always have the Lift in the Locked Position before going under the vehicle. Never Allow any Person(s) to go under Lift whenever Raising or Lowering.

Lowering Lift:

- Clear all obstacles from under lift and vehicle and ensure only lift operator is in the lift area.
- Stay clear of lift and raise lift off the safety locks.
- Push Safety Latch Release ôRed Buttonôwhile at the same time pushing down on the Release Lever on Power Unit to lower lift.
- Ensure lift is fully lowered before driving vehicle off lift.
- Having another person help guide driver to carefully ôunload the liftôby backing off the lift runways and ramps.

NOTE: It is normal for an Empty Lift to lower slowly - it may be necessary to Add Weight.

WARNING!! Pay close attention to the lowering speed of all four corners to make sure they are moving down at the same speed to either lower onto safety latches or lowering to the ground. If one corner or corners do not properly lower, stop the lowering the operation immediately. Adjustments to Latch Rack and/or Lift Cables may be required, noted in Step 9.

6. Troubleshooting

Common lift issues may be encountered over time. Please see probable causes & possible solutions covered in the paragraphs below. If the troubleshooting guide does not provide assistance to resolve the lift issue(s), please contact the distributor / manufacturer for help. We will help you solve the problem as soon as possible.

- **Motor Does Not Operate:**
  1. Breaker or fuse blowné é é é (Contact Electrician)
  2. Faulty wiring connectionsé é ..(Contact Electrician)
  3. Defective start / up buttoné é .(Contact Electrician)

WARNING!! Failure to properly relieve pressure in the following steps can cause injury to personnel.

- **Motor Functions but Lift Will Not Rise:**
  1. Power Unit is not priming correctlyé é ..(See Power Unit Prime Procedure on next page.)
  2. A piece of trash is under release ólownôvalveé ..(Push lowering handle down, while pushing the start / up button at the same time. Hold for 10-15 seconds. This should flush debris from release valve.)
  3. Motor spins backwardsé ..(Carefully remove the check valve cover and clean check ball, spring & seat.)
  4. Oil level too lowé .(Oil level should be at the MAX fill line located on the reservoir tank when lift is fully lowered.) **NOTE: Ensure to fully lower lift to relieve all hydraulic pressure before adding add oil.**

- **Oil Blows out Breather of Power Unit:**
  1. Oil reservoir tank overfilledé (Relieve all pressure and siphon out hydraulic fluid until at a proper level.)
  2. Lift lowered too quickly while under a heavy loadé .(Lower the lift slowly under heavy loads.)

- **Motor Hums and Will Not Run:**
  1. Lift overloadedé ..(Remove excessive weight from lift.)

WARNING!! The voltages used in the lift can cause death or injury. In the following steps, make sure that a qualified electrician is used to perform maintenance.

  2. Faulty wiringé é é é (Contact Electrician)
  3. Bad capacitoré é é ..(Contact Electrician)
  4. Low voltageé é é é ..(Contact Electrician)

- **Lift Jerks Going Up and Down:**
  1. If the lift jerks while going up and down, it is usually a sign of air in the hydraulic systemé ..(Raise lift all the way to top and return to floor. Repeat 4-6 times, ensuring not overheat power unit.)

- **Oil Leaks:**
  1. Power Unit: if the power unit leaks hydraulic oil around the tank-mount flange, check the oil level in the tank. The level should be two inches below the flange of the tank when the lift is fully lowered.
  2. Cylinder / Piston Rod: the rod seal of the cylinder is defective. Rebuild or replace the cylinder.
  3. Cylinder / Vent: the piston seal of the cylinder is out. Rebuild or replace the cylinder.

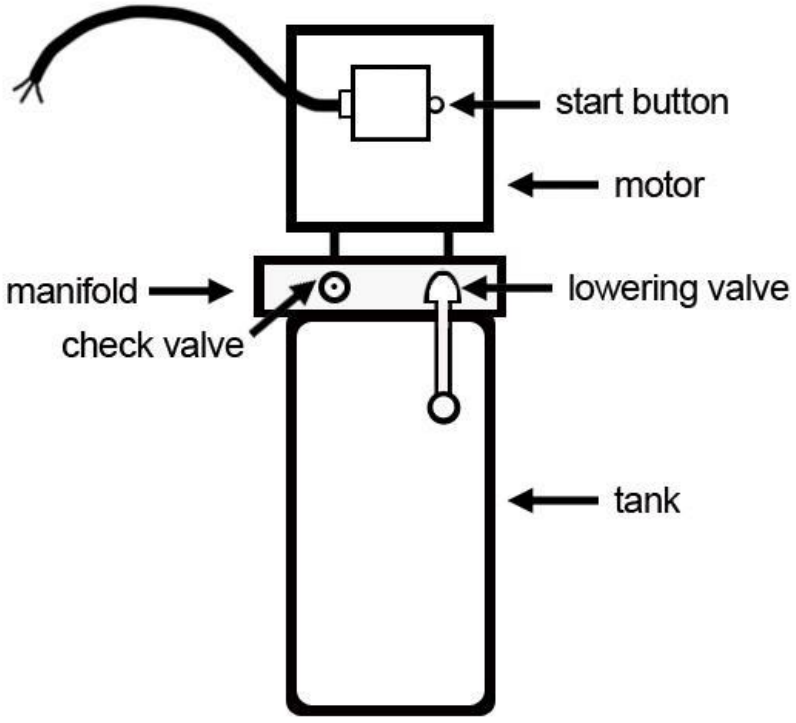
- **Lift makes Excessive Noise / Vibrates:**
  1. Cross beam ends are rubbing the columnsé é ..(Re-adjustment needed.)
  2. Cylinder too tighté é ..(load lift half capacity and cycle up and down a few times to break in seals.)
  3. Possible excessive wear to cable sheaves and shaftsé ..(Replace as required.)

7. Power Unit Priming Procedure

THE PROBLEM: Power unit runs fine but will not pump any fluid.

WARNING!! Failure to properly relieve hydraulic pressure in the following steps can cause injury to personnel.

Step 1 ï Locate the check valve, the flush plug to the left of the lowering valve.



Step 2 ï Using an Allen wrench and shop towel ï with shop towel in place to catch fluid ï loosen the check valve plug 2-½ turns to allow it to leak.

Step 3 ï Push the START button for one second, then release for three seconds. Repeat these steps until unit starts pumping fluid.

Step 4 ï Tighten the check valve plug.

YOUR POWER UNIT SHOULD NOW BE PRIMED & READY TO GO!

8. Preventive Maintenance

The periodic Preventive Maintenance Schedule provided is the suggested minimum requirements at minimum intervals for Daily, Weekly & Yearly periods or accumulated hours, whichever comes sooner.

Periodic maintenance is to be performed on a daily, weekly, and yearly basis as given in the following paragraphs.

NOTE: Do not modify the lift in any manner without the prior written consent of the manufacturer.

WARNING!! Failure to perform the daily pre-operational check can result in expensive property damage, lost production time, serious personal injury, and even death. The safety latch system must be checked and working properly before the lift is put into use.

WARNING!! If you hear a noise not associated with normal lift operation or if there is any indications of impending lift failure CEASE OPERATION IMMEDIATELY! Inspect, correct and/or replace parts as required. Failure to heed this warning can result in death or serious injury, or damage to equipment.

Daily Pre-Operation Check: (Every 8-Hours)

- Check safety latches audibly and visually while in operation.
- Check safety latches for free movement and full engagement with latch rack.
- Check hydraulic connections, and hoses for leakages.
- Check cables anchoring connections for cracks and/or for loose nuts.
- Check for frayed cables in both raised and lowered position.
- Check snap rings at all rollers and sheaves.
- Check bolts, nuts, and screws and tighten if needed.
- Check wiring & switches for any damages.
- Check floor for stress cracks near posts / columns.
- Check for proper lubrication for cable sheaves and shafts.

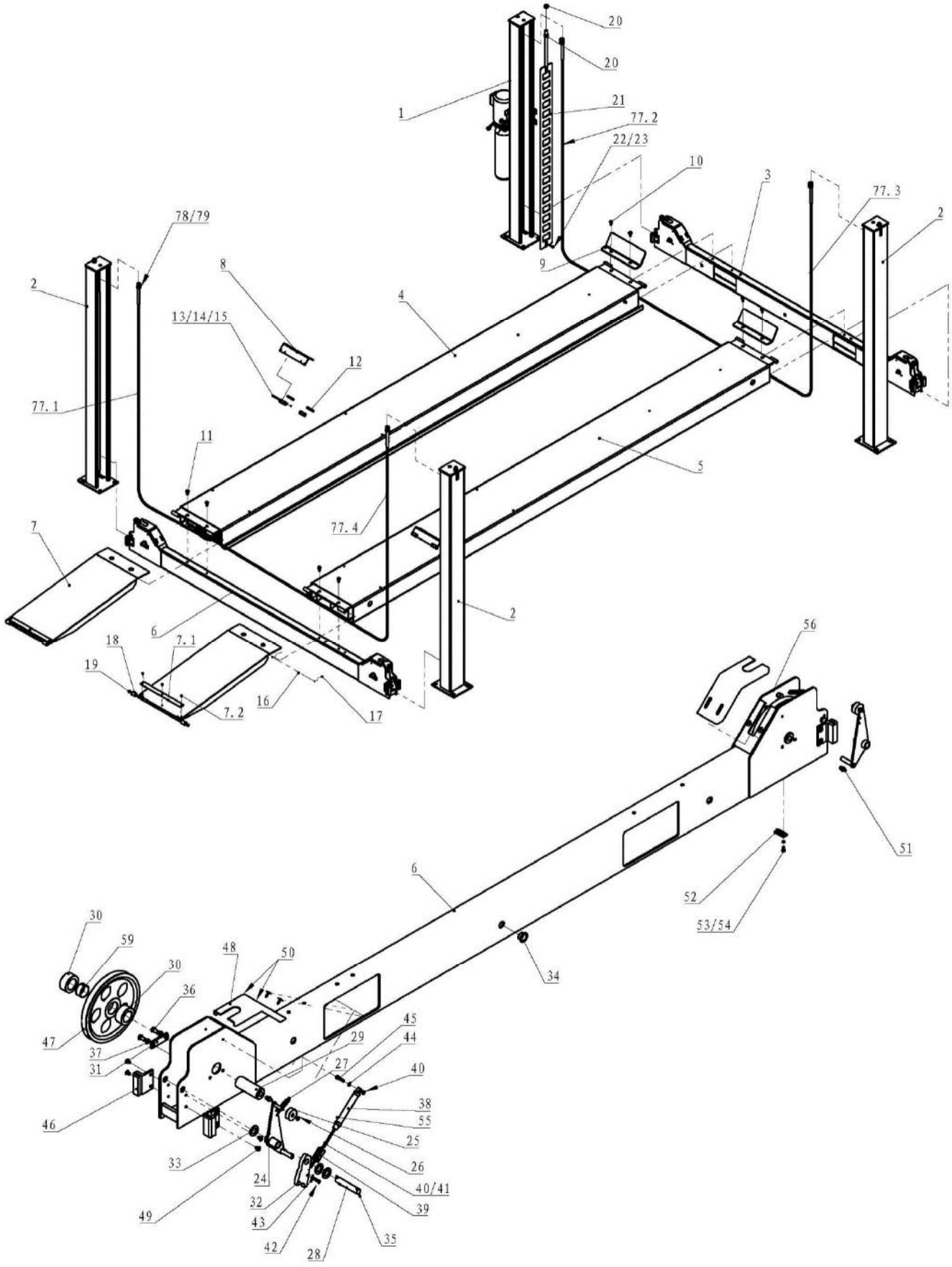
Weekly Maintenance: (Every 40-Hours)

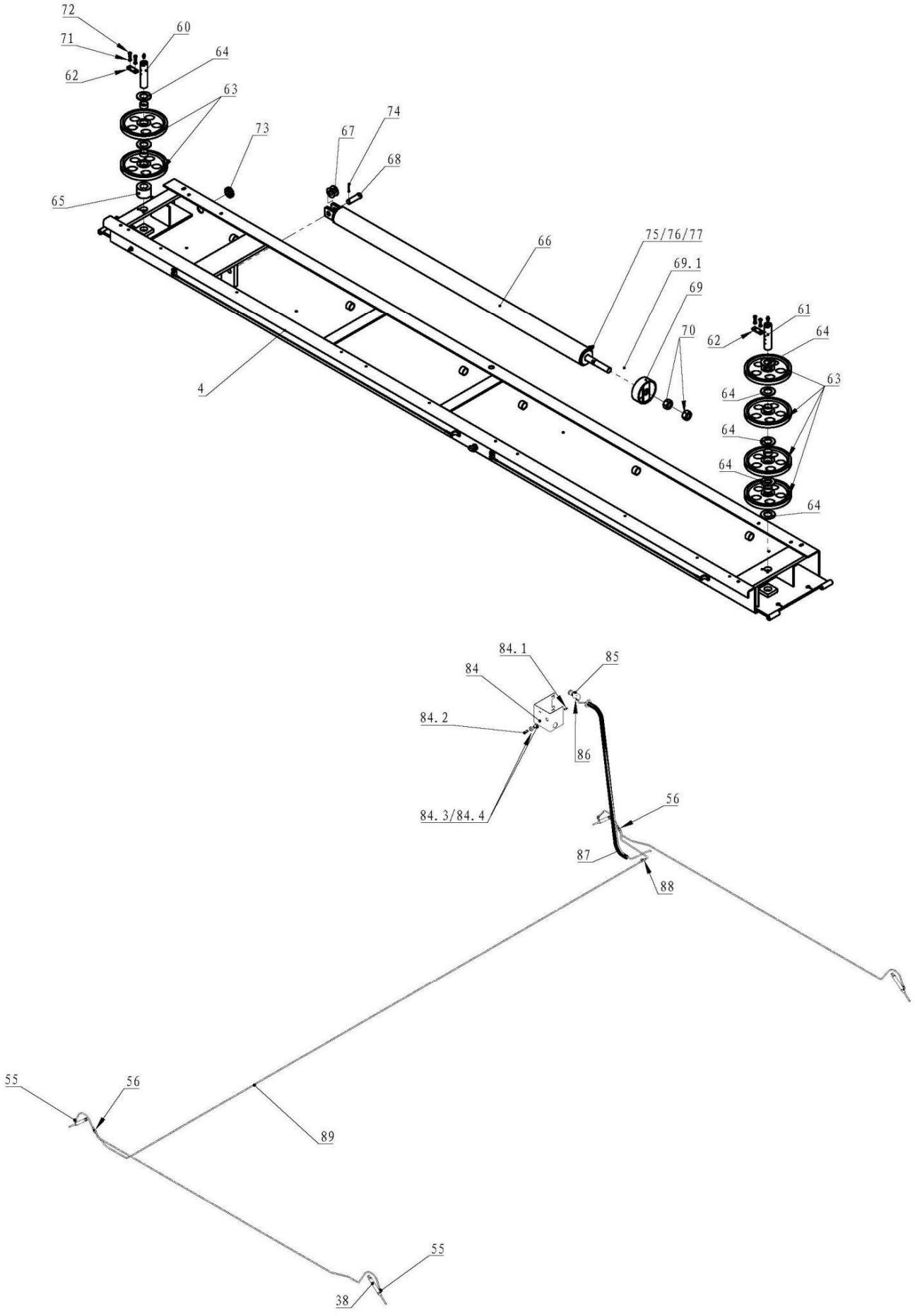
- Check anchor bolts torque to 130 ft-lbs. for the 3/4 in. anchor bolts. Do not use an impact wrench to tighten anchor bolts.
- Check floor for stress cracks near columns.
- Check hydraulic oil level.
- Check and tighten bolts, nuts, and screws.
- Check all cable sheave assemblies for free movement or excessive wear on cable sheave shaft.

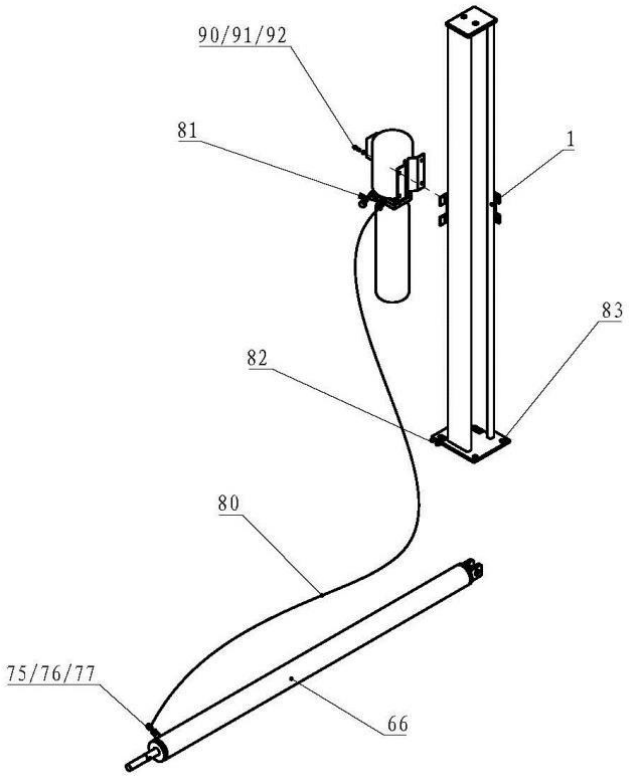
Yearly Maintenance: (Annually)

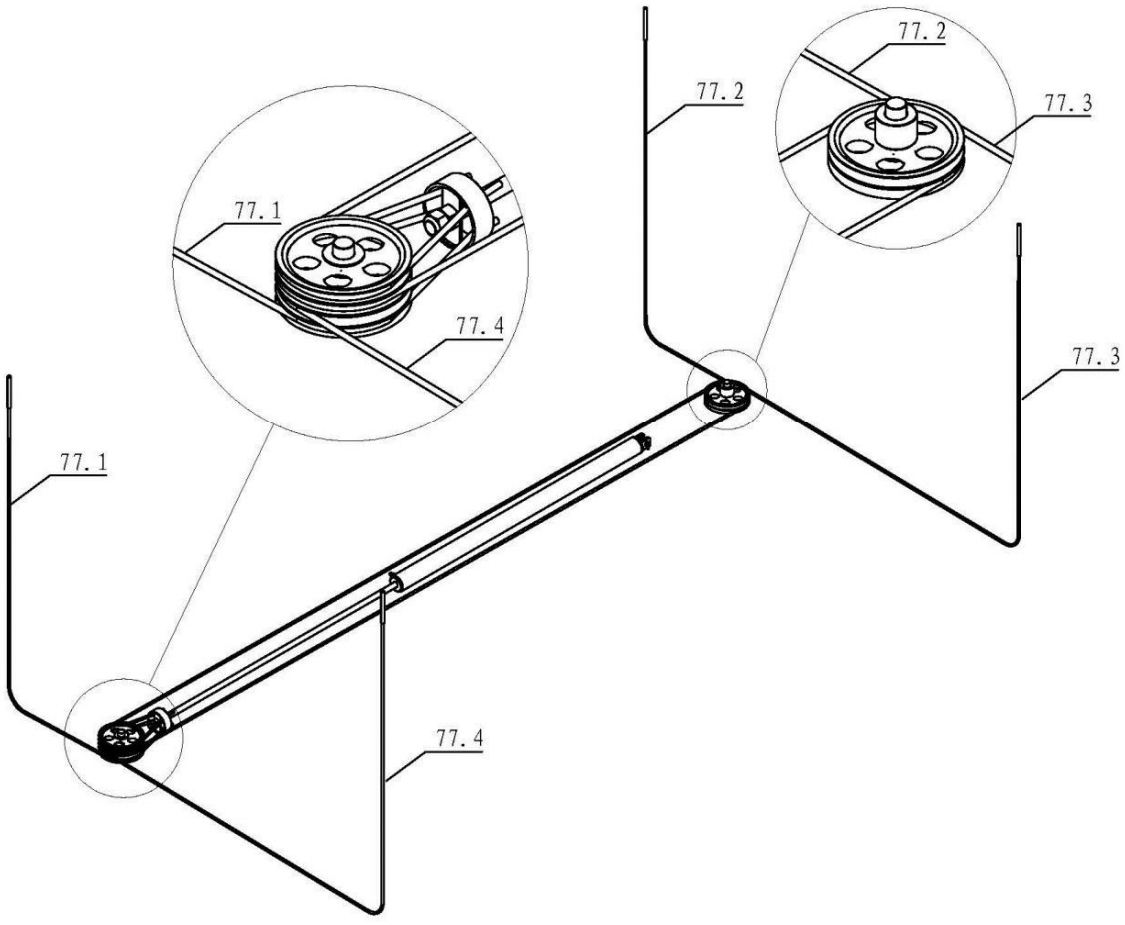
- Lubricate the cable sheave shafts at least once a year, after the lift is in service.
- Check for excessive wear of cables. Replace, if necessary.
- Change the hydraulic fluid, as operating temperature, type of service, contamination levels, filtration, and chemical composition of fluid should be considered. If operating in dusty environment shorter interval may be required.

Exploded Views (Structure)




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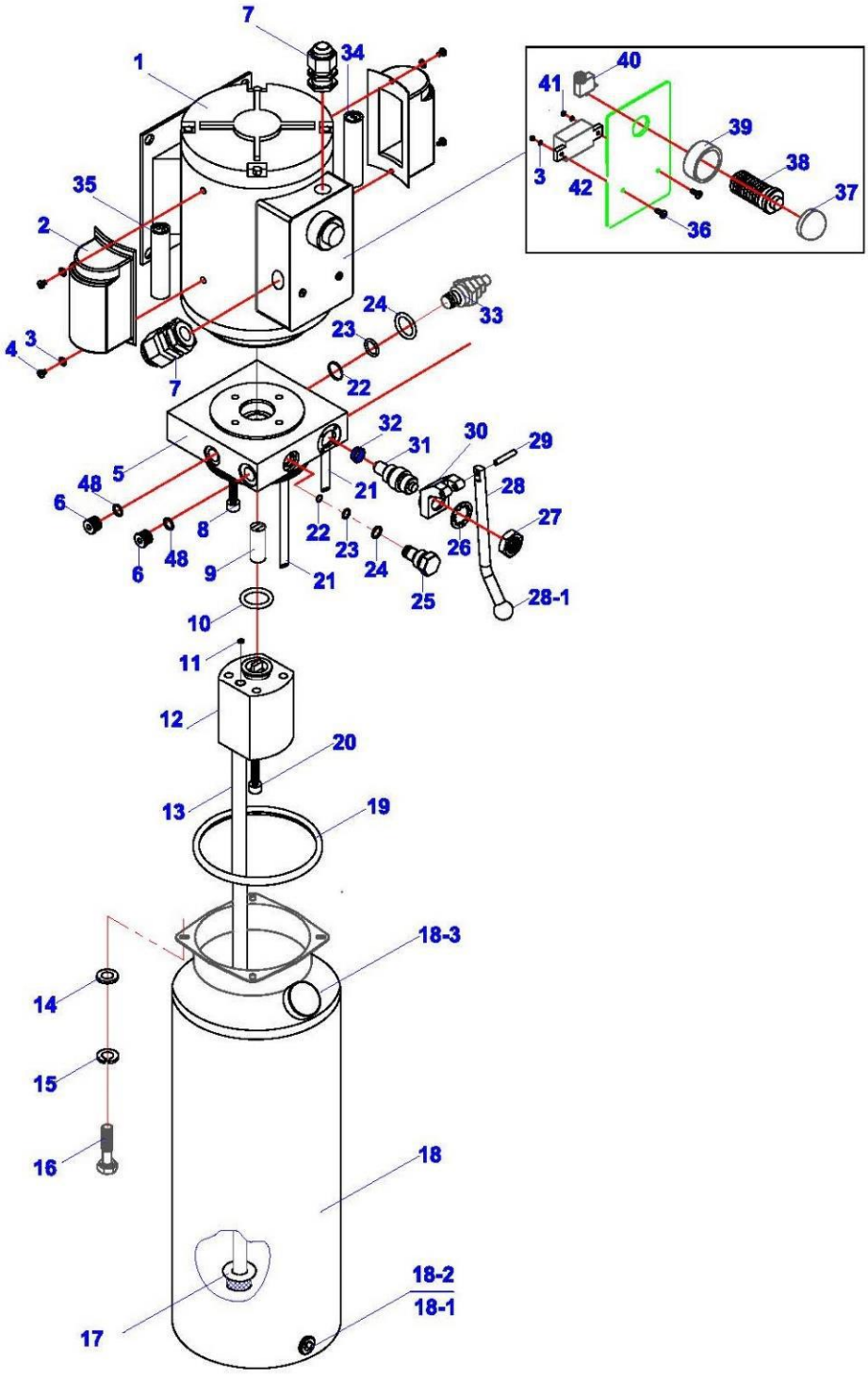

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Parts List (Structure)

ITEM	Tux P/N	M-REF P/N	DESCRIPTION	QTY
1	FP14KCX-001	TT-8861-200-00A-HJ	Main Post w/ PU Bracket	1
2	FP14KCX-002	TT-8861-200-00B-HJ	Sub Post	3
3	FP14KCX-003	TT-8861-100-00A-HJ	Crossbeam (Front)	1
4	FP14KCX-004	TT-8861-300-00A-HJ	Main Side Runway	1
5	FP14KCX-005	TT-8861-300-00B-HJ	Off Side Runway	1
6	FP14KCX-006	TT-8861-100-00B-HJ	Crossbeam (Rear)	1
7	FP14KCX-007	TT-8861-400-00-HJ	Ramp	2
7.1	FP14KCX-007.1	TT-8136J-500-01	Warning Strip Ramp	2
7.2	FP14KCX-007.2	GB818-2000 M6*12	Screw, M6 x 12mm	6
8	FP14KCX-008	TT-8861-300-10-01	Wheel Chock	2
9	FP14KCX-009	TT-8861-300-11	Wheel Stop (FP14KCX)	2
10	FP14KCX-010	GB/T5789-1986 M12X40	Flange Bolt, M12 x 40mm	4
11	FP14KCX-011	GB/T5789-1986 M12X30	Flange Bolt, M12 x 30mm	4
12	FP14KCX-012	TT-8861-300-10-02	Rubber Base	8
13	FP14KCX-013	GB95-1985 D5	Flat Washer, D5	16
14	FP14KCX-014	GB818-2000 M5x20	Screw, M5 x 20mm	16
15	FP14KCX-015	GB6170-2000 M5	Nut, M5	16
16	FP14KCX-016	TT-8861-400-02	Ramp Pivot Pin	2
17	FP14KCX-017	GB/T91-2000 5X40	Cotter Pin, 5mm x 40mm	4
18	FP14KCX-018	TT5D-400-02	Nylon Roller	4
19	FP14KCX-019	GB894.1-2000 D16	Circlip, D16	4
20	FP14KCX-020	GB6170-2000 M20	Nut, M20	8
21	FP14KCX-021	TT-8861-200-01-HJ	Latch Rack	4
22	FP14KCX-022	GB95-1985 D8	Flat Washer, D8	4
23	FP14KCX-023	GB70.1-2000 M8*12	Screw, M8 x 12mm	4
24	FP14KCX-024	TT-8861-100-01B-HJ	Slack Cable Latch (LH)	4
25	FP14KCX-025	TT-8861-100-01-05	Slack Cable Roller	4
26	FP14KCX-026	GB894.1 D10	Circlip, D10	4
27	FP14KCX-027	TT-8861-100-01-06	Spring	8
28	FP14KCX-028	TT-8861-100-01-07	Latch Pin	4
29	FP14KCX-029	TT-8861-100-01-08	Pulley Shaft (Crossbeam)	4
30	FP14KCX-030	TT-8861-100-01-09	Nylon Spacer	8
31	FP14KCX-031	TT-8861-100-01-10	Shaft Lock Plate (Crossbeam)	4
32	FP14KCX-032	TT-8861-100-01-11	Latch	4
33	FP14KCX-033	GB95-1985 D20	Flat Washer, D20	12
34	FP14KCX-034	TT-8861-100-01-12	Rubber Grommet (Crossbeam)	2
35	FP14KCX-035	GB/T91-2000 3.2X40	Cotter Pin, 3.2mm x 40mm	8
36	FP14KCX-036	GB5783-2000 M10X16	Bolt, M10 x 16mm	8
37	FP14KCX-037	GB93-1987 D10	Lock Washer, D10	8
38	FP14KCX-038	MTAL 16X50	Air Cylinder, 16mm x 50mm	4
39	FP14KCX-039	TT-8861-100-01-13	U-Bracket	4
40	FP14KCX-040	GB6170-2000 M6	Nut, M6	8
41	FP14KCX-041	GB889.1-2000 M6	Lock Nut, M6	4
42	FP14KCX-042	TT-8861-100-01-14	Pin	4
43	FP14KCX-043	GB/T91-2000 1.6X20	Split Pin, 1.6mm x 20mm	4
44	FP14KCX-044	GB5783-2000 M6X30	Bolt, M6 x 30mm	4
45	FP14KCX-045	GB95-1985 D6	Flat Washer, D6	4
46	FP14KCX-046	TT-8861-100-01-17	Slider	8
47	FP14KCX-047	TT-8861-100-01-16	Cable Pulley (Crossbeam)	4
48	FP14KCX-048	TT-8861-100-01-18	Plastic Crossbeam Cover	4

49	FP14KCX-049	GB819-2000 M8*12	Countersink Screw, M8 x 12mm	16
50	FP14KCX-050	TT-8861-100-01-15	Plastic Insert Screw	8
51	FP14KCX-051	M10X1.0	Grease Zerk, M10 x 1.0mm	6
52	FP14KCX-052	TT-8861-100-02-00	Cable Block Plate	4
53	FP14KCX-053	GB818-2000 M6*12	Screw, M6 x 12mm	4
54	FP14KCX-054	GB93-1985 D6	Lock Washer, D6	4
55	FP14KCX-055	SPL6-M5	Air Fitting 90 Connector	4
56	FP14KCX-056	SPY-6	Air Fitting T-Connector	2
57	FP14KCX-057		Air Tubing-1	2
58	FP14KCX-058		Air Tubing-2	1
59	FP14KCX-059	FB090 4020	Pulley Bushing	10
60	FP14KCX-060	TT-8861-300-01B	Short Pulley Shaft (Runway)	1
61	FP14KCX-061	TT-8861-300-01A	Long Pulley Shaft (Runway)	1
62	FP14KCX-062	TT-8861-300-02	Shaft Lock Plate (Runway)	2
63	FP14KCX-063	TT-8861-100-01-16	Cable Pulley (Runway)	6
64	FP14KCX-064	TT-8861-300-03	Nylon Washer	7
65	FP14KCX-065	TT-8861-300-04	Nylon Sleeve	1
66	FP14KCX-066	TT-8861-YG-ZP	Hydraulic Cylinder	1
67	FP14KCX-067	TT-8861-300-05	Cylinder Washer	2
68	FP14KCX-068	TT-8861-300-06	Cylinder Pin	1
69	FP14KCX-069	TT-8861-300-07-HJ	Cable Retainer Ring	1
69.1	FP14KCX-069.1	TT-8861-300-08	Shaft Lock Plate (Runway)	1
70	FP14KCX-070	GB6171-2000 M30X1.5	Nut, M30 x 1.5mm	2
71	FP14KCX-071	GB93-1987 D10	Lock Washer, D10	4
72	FP14KCX-072	GB70.2-2000 M10X25	Screw, M10 x 25mm	4
73	FP14KCX-073	TT-8861-300-09	Rubber Grommet (Runway)	2
74	FP14KCX-074	GB/T91-2000 5X40	Split Pin, 5mm x 40mm	1
75	FP14KCX-075	8045-401G	Cylinder Connector	1
76	FP14KCX-076	8045-400G	Throttle Valve	1
77	FP14KCX-077	D14	Combined Washer, D14	1
77.1	FP14KCX-077.1	TT-8861-300-15	Steel Cable-A (142.71ò)	1
77.2	FP14KCX-077.2	TT-8861-300-15	Steel Cable-C (350.78ò)	1
77.3	FP14KCX-077.3	TT-8861-300-15	Steel Cable-D (407.87ò)	1
77.4	FP14KCX-077.4	TT-8861-300-15	Steel Cable-B (200.19ò)	1
78	FP14KCX-078	GB6170-2000 M20	Hex Nut, M20	8
79	FP14KCX-079	GB95-1985 D20	Flat Washer, D20	4
80	FP14KCX-080	TT-8861-300-16	Hydraulic Hose (181ò)	1
81	FP14KCX-081	TPF4-500-05	90 Degree, Hydraulic PU Fitting	1
82	FP14KCX-082	TT-8861-500-01	Poly Anchor Shims	16
83	FP14KCX-083	19*140	Anchor Bolt (3/4òx 5.5ò)	16
84	FP14KCX-084	TT-8861-200-02	Power Unit / Control Bracket	1
84.1	FP14KCX-084.1	SPC6-02	Air Fitting (Straight)	1
84.2	FP14KCX-084.2	TT-8861-600-08A	Air Inlet Fitting, 1/4òType D	1
84.3	FP14KCX-084.3	TT-8861-600-03	Bolt	1
84.4	FP14KCX-084.4	TT-8861-600-04	Nut	1
85	FP14KCX-085	S3PM-06 AIR TAC	Manual Air Valve	1
86	FP14KCX-086	SPC6-01	Direct Air Connector	2
87	FP14KCX-087		Corrugated Flex Tubing	1
88	FP14KCX-088	SPE-6	T-Air Connector	1
89	FP14KCX-089	Ø6 L=18.3	Air Tubing M6 x 18.3ô	1
90	FP14KCX-090	GB5781-2000 M8*25	Bolt, M8 x 25mm	4
91	FP14KCX-091	GB/T 6177.1-2000 M8	Nut, M8	4
92	FP14KCX-092	GB95-1985 D8	Flat Washer, D8	4

Exploded View (Power Unit) PU-220V-FP14KCX



Parts List (Power Unit) PU-220V-FP14KCX

ITEM	Tux P/N	M-REF P/N	DESCRIPTION	QTY
1	PU-220V-FP14KCX-001	BZ02-05001-U00	Motor	1
2	PU-220V-FP14KCX-002	BZ01-05008-000	Capacitor Case	2
3	PU-220V-FP14KCX-003	5301-00004-000	Flat Washer, D4	4
4	PU-220V-FP14KCX-004	5110-04008-000	Screw, M4	4
5	PU-220V-FP14KCX-005	BZ01-04001-C00	Valve Block	1
6	PU-220V-FP14KCX-006	BZ01-04008-000	Cap Nut, 9/16ò18UNF	2
7	PU-220V-FP14KCX-007	BZ02-05006-U00	Cable Nut, 13.5mm	2
8	PU-220V-FP14KCX-008	5105-06055-000	Hex Socket Bolt, M6 x 55mm	4
9	PU-220V-FP14KCX-009	BZ14-00003-000	Pump Coupler, D18 x 46mm	1
10	PU-220V-FP14KCX-010	5901-00277-000	O-ring, D27.7 x 2.4mm	1
11	PU-220V-FP14KCX-011	5901-00925-000	O-ring, D9.25 x 1.78mm	1
12	PU-220V-FP14KCX-012	BZ01-03000-000	Gear Pump, 21Mpa	1
13	PU-220V-FP14KCX-013	BZ01-01001-E00	Suction Tube, D18 x 415mm	1
14	PU-220V-FP14KCX-014	5301-00006-000	Flat Washer, D6	4
15	PU-220V-FP14KCX-015	5303-00006-000	Lock Washer, D6	4
16	PU-220V-FP14KCX-016	5101-06010-000	Bolt, M6 x 10mm	4
17	PU-220V-FP14KCX-017	BZ01-01002-000	Mesh Filter (Suction Tube)	1
18	PU-220V-FP14KCX-018	BZ01-02100-E00	Steel Reservoir Tank, 12L	1
18-1	PU-220V-FP14KCX-018.1	BZ01-02101-E00	Combined Washer	1
18-2	PU-220V-FP14KCX-018.2	BZ01-02102-E00	Close Nut	1
18-3	PU-220V-FP14KCX-018.3	BZ01-02200-E00	Reservoir Fill Cap	1
19	PU-220V-FP14KCX-019	5901-01120-355	O-Ring, D112 x 3.55mm	1
20	PU-220V-FP14KCX-020	5105-08080-000	Hex Socket Bolt, M8 x 80mm	2
21	PU-220V-FP14KCX-021	BZ01-00001-100	Return Pipe, D18 x 370mm	1
22	PU-220V-FP14KCX-022	5901-00125-000	Circlip, 12mm x 1.5mm	1
23	PU-220V-FP14KCX-023	5901-00095-000	O-Ring, D9.5 x 1.8mm	1
24	PU-220V-FP14KCX-024	5901-00160-000	O-Ring, D16 x 2mm	1
25	PU-220V-FP14KCX-025	BZ20-04007-000	Check Valve	1
26	PU-220V-FP14KCX-026	5308-00018-000	Tooth Washer, D18	1
27	PU-220V-FP14KCX-027	BZ01-04006-000	Nut, 3/4-16 UNF	1
28	PU-220V-FP14KCX-028	BZ01-04202-000	Release Handle	1
28-1	PU-220V-FP14KCX-028.1	BZ01-04203-000	Handle Knob	1
29	PU-220V-FP14KCX-029	5402-05025-000	Pivot Pin, D5 x 25mm	1
30	PU-220V-FP14KCX-030	BZ01-04201-000	Release Handle Bracket	1
31	PU-220V-FP14KCX-031	BZ01-04000-000	Pressure Release Valve	1
32	PU-220V-FP14KCX-032	BZ01-04011-000	Mesh Filter (Release Valve)	1
33	PU-220V-FP14KCX-033	BZ20-04002-000	Over-Flow Relief Valve	1
34	PU-220V-FP14KCX-034	BZ01-05004-000	Start Capacitor	1
35	PU-220V-FP14KCX-035	BZ01-05005-000	Running Capacitor	1
36	PU-220V-FP14KCX-036	5110-04014-D00	Screw, M4 x 14mm	2
37	PU-220V-FP14KCX-037	BZ02-05302-U00	Rubber Cap	1
38	PU-220V-FP14KCX-038	BZ02-05305-U00	Switch Support	1
39	PU-220V-FP14KCX-039	BZ02-05303-U00	Plastic Ring	1
40	PU-220V-FP14KCX-040	BZ02-05301-U00	Start Micro Switch, 25A	1
41	PU-220V-FP14KCX-041	5206-00004-000	Lock Nut	2
42	PU-220V-FP14KCX-042	BZ02-05306-U00	Contactor	1

LIMITED WARRANTY

Structural Warranty:

The following parts and structural components carry a five-year warranty:

Columns	Arms	Uprights	Swivel Pins
Legs	Carriages	Overhead Beam	
Tracks	Cross Rails	Top Rail Beam	

Limited One-Year Warranty:

Tuxedo Distributors, LLC (iDEAL) offers a limited one-year warranty to the original purchaser of Lifts and Wheel Service equipment in the United States and Canada. Tuxedo will replace, without charge, any part found defective in materials or workmanship under normal use, for a period of one year after purchase. The purchaser is responsible for all shipping charges. This warranty does not apply to equipment that has been improperly installed or altered or that has not been operated or maintained according to specifications.

Other Limitations:

This warranty does not cover:

1. Parts needed for normal maintenance
2. Wear parts, including but not limited to cables, slider blocks, chains, rubber pads and pulleys
3. Replacement of lift and tire changer cylinders after the first 30 days. A seal kit and installation instructions will be sent for repairs thereafter.
4. On-site labor

Upon receipt, the customer must visually inspect the equipment for any potential freight damage before signing clear on the shipping receipt. Freight damage is not considered a warranty issue and therefore must be noted for any potential recovery with the shipping company.

The customer is required to notify Tuxedo of any missing parts within 72 hours. Timely notification must be received to be covered under warranty.

Tuxedo will replace any defective part under warranty at no charge as soon as such parts become available from the manufacturer. No guarantee is given as to the immediate availability of replacement parts.

Tuxedo reserves the right to make improvements and/or design changes to its lifts without any obligation to previously sold, assembled, or fabricated equipment.

There is no other express warranty on the Tuxedo lifts and this warranty is exclusive of and in lieu of all other warranties, expressed or implied, including all warranties of merchantability and fitness for a particular purpose.

To the fullest extent allowed by law, Tuxedo shall not be liable for loss of use, cost of cover, lost profits, inconvenience, lost time, commercial loss or other incidental or consequential damages.

This Limited Warranty is granted to the original purchaser only and is not transferable or assignable.

Some states do not allow exclusion or limitation of consequential damages or how long an implied warranty lasts, so the above limitations and exclusions may not apply. This warranty gives you specific legal rights and you may have other rights, which may vary from state to state.

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