FP8K-B, FP8K-DX & FP8K-DX-XLT

Four Post Storage Lifts

8,000 lbs. Capacity

(4,000 lbs. per axle)



INSTALLATION / OWNERS MANUAL

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. WHEN INSTALLATION IS COMPLETE BE SURE TO RUN LIFT UP AND DOWN A FEW CYCLES WITH AND WITHOUT "TYPICAL" VEHICLE LOADED ON LIFT.

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IMPORTANT INFORMATION

1. Always inspect the lift for damage and make note of any damage on the bill of lading.
2. In case of freight damage, call the truck line immediately and report the damage as a freight claim.
3. ***IMPORTANT!*** *Make sure you have extra help or heavy duty lifting equipment when unloading and assembling the lift.*
4. Please read the safety procedures and operating instructions in this manual before operating lift. Keep this manual near lift at all times. Make sure all operators read this manual.
5. ***IMPORTANT!*** *Are you installing in a level location? (Lift must be anchored in place if slope is greater than 1/8" per foot.)*
6. Make sure you have enough room to install the lock rods. You will need at least 6ôof clearance from the opposite end of the power unit end of the lift and 6ôat the power unit end. The power unit may be installed on the driver front or the passenger rear corner.
7. Never raise a car until you have double checked all bolts, nuts and hose fittings.
8. Always lower the lift to locks before going under the vehicle or storing another vehicle underneath lift.
9. Never allow anyone to go under the lift when raising or lowering.

OWNER / EMPLOYER RESPONSIBILITY

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.

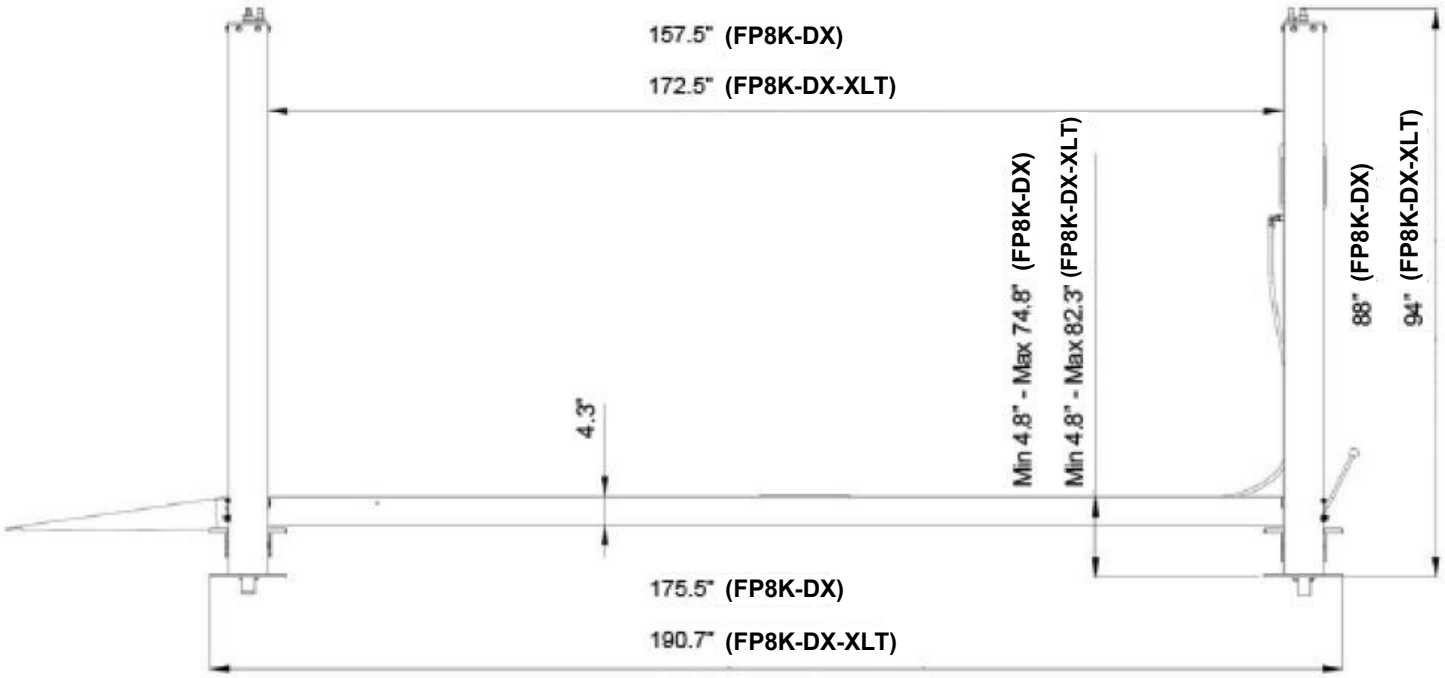
Proper application of the equipment described herein is limited to the parameters detailed in the specifications and the uses set forth in the descriptive passages. Any other proposed application of this equipment should be documented and submitted in writing to the factory for examination. The user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

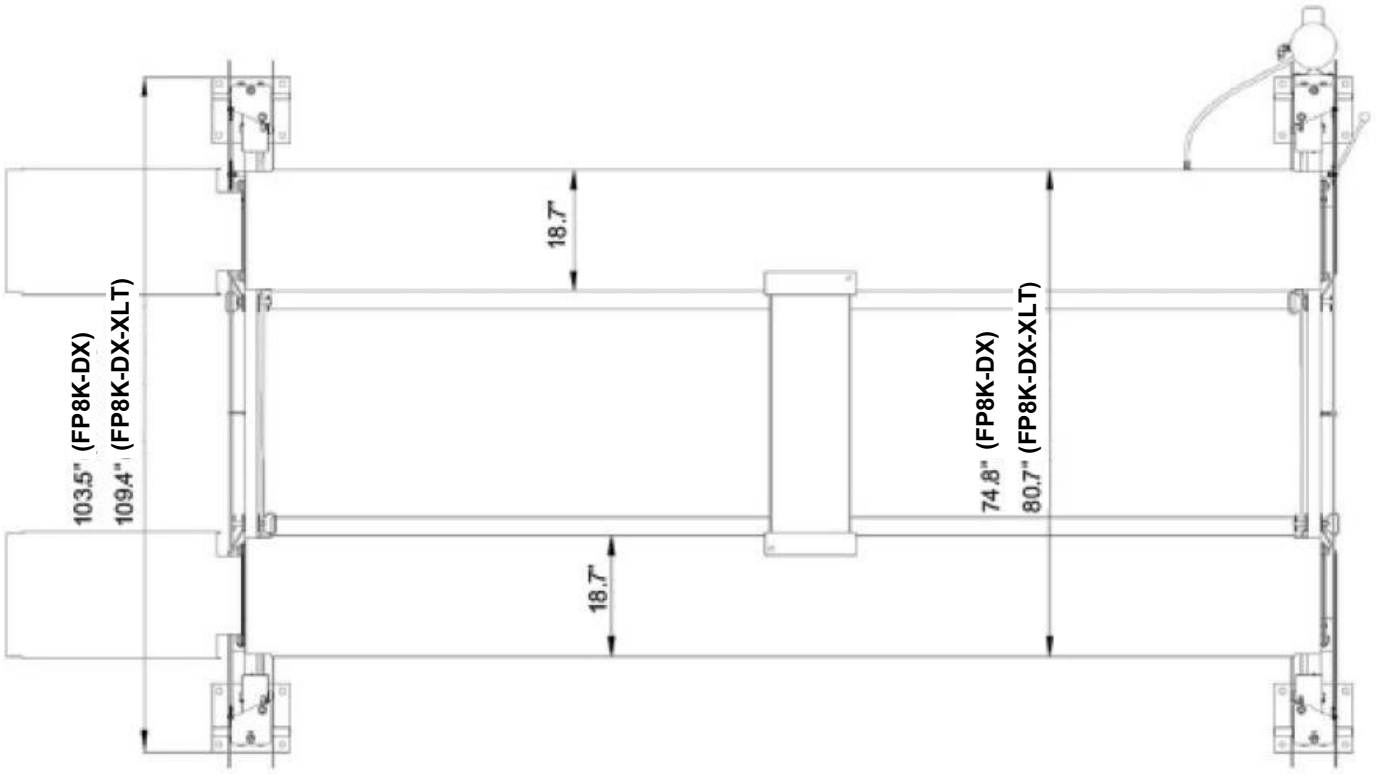
LIFT SPECIFICATIONS

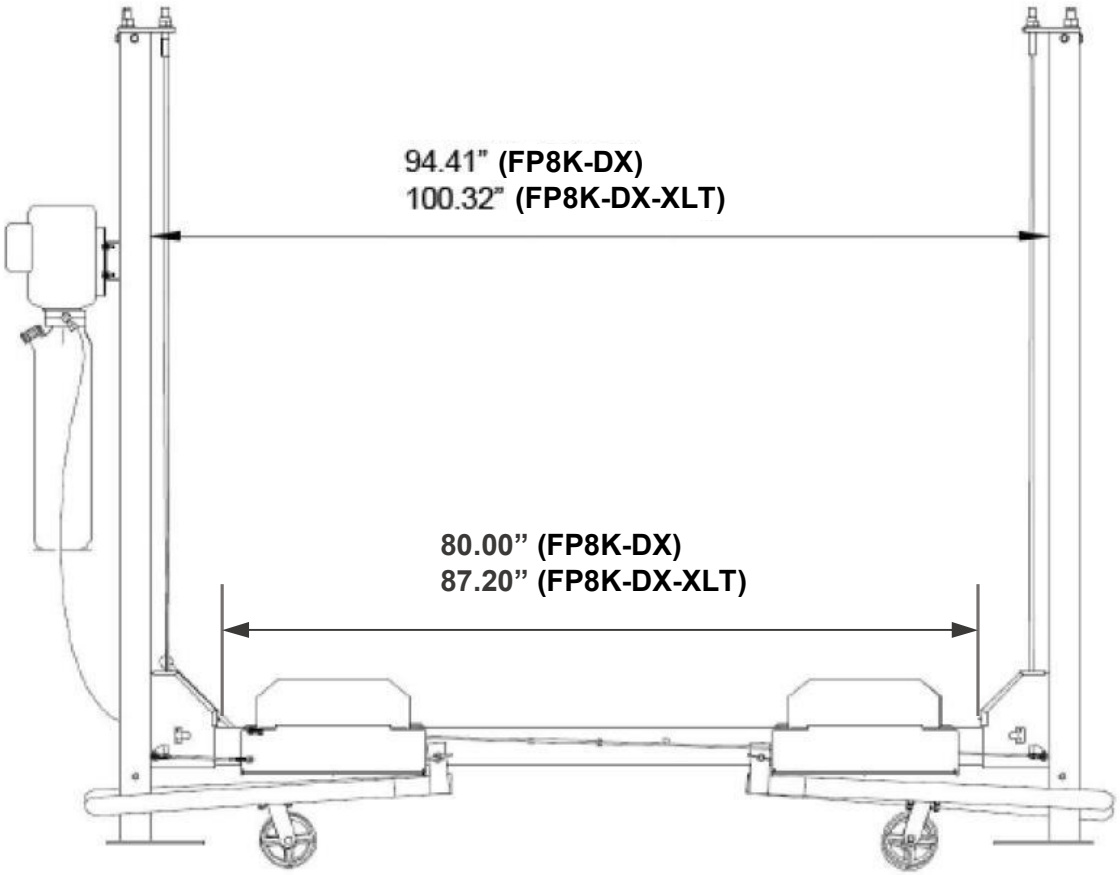
Specifications	FP8K-B / FP8K-DX	FP8K-DX-XLT
Lifting Capacity	8,000 lbs.	8,000 lbs.
Lifting Height	74.8ò	82.3ò
Overall Length w/ Ramps	207.3ò	222.5ò
Overall Length/ No Ramps	175.5ò	190.7ò
Overall Width	103.5ò	109.4ò
Runway Tread Width	18.7ò	18.7ò
Runway Length	165.5ò	180.5ò
Runway Height	4.3ò	4.3ò
Column Height	86ò	94ò
Clearance between Columns	94.4ò	100.3ò
Clearance between Runways	37.2	42.2ò
Outside Runway to Outside Runway	74.8ò	80.7ò
Clearance Under Runways	70ò	78ò
Drive Thru Width	80ò	87.2
Locking Positions	10	12
Base Plate Size	10òx 12ò	10òx 12ò
Power	115V-20 Amp / 1PH	115V-20 Amp / 1PH
Ship Weight	1,545 lbs. / 1,695 lbs.	1,805 lbs.

Note: The FP8K-B Lift model is the same Lift as the FP8K-DX, just without the Poly Caster Kit, Drip Trays & Jack Tray.

FLOOR PLAN LAYOUT




18.7"
103.5" (FP8K-DX)
109.4" (FP8K-DX-XLT)
74.8" (FP8K-DX)
80.7" (FP8K-DX-XLT)
18.7"


94.41" (FP8K-DX)
100.32" (FP8K-DX-XLT)
80.00" (FP8K-DX)
87.20" (FP8K-DX-XLT)

TOOLS REQUIRED

- Set of Metric Wrenches and/or Sockets
- Adjustable Wrench
- Locking Pliers
- 25ôTape Measure
- Step Ladder
- Hammer
- Crow Bar
- 4 Foot Level
- Chalk Line
- Flat Screwdriver
- Hex-Key / Allen Wrench Set
- Needle Nose Pliers
- Rotary Hammer Drill (If anchoring)
- 3/4" Masonry Bit (If anchoring)
- 3 Gallons of Hydraulic Oil*

*Recommended Oil: ISO 32 Light Hydraulic Oil

SELECTING SITE

Before installing your new lift, check the following.

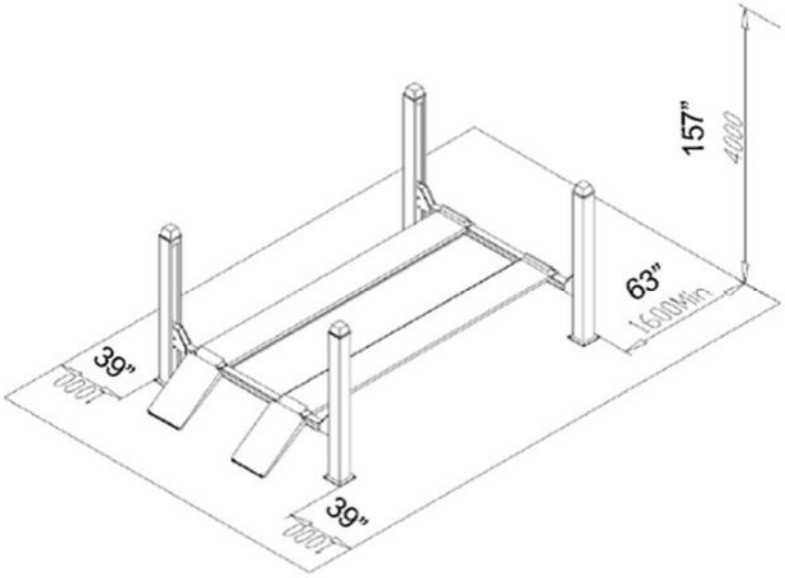
OVERHEAD OBSTRUCTIONS: The area where the lift will be located should be free of overhead obstructions such as heaters, building supports, electrical lines etc.

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 4-1/4ð' 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.

***NOTE:* This Lift does not require bolting to the floor (BUT) If you choose the option to anchor the Lift to the floor, please follow the detailed instructions in the manual and criteria above. (See page 16)**

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

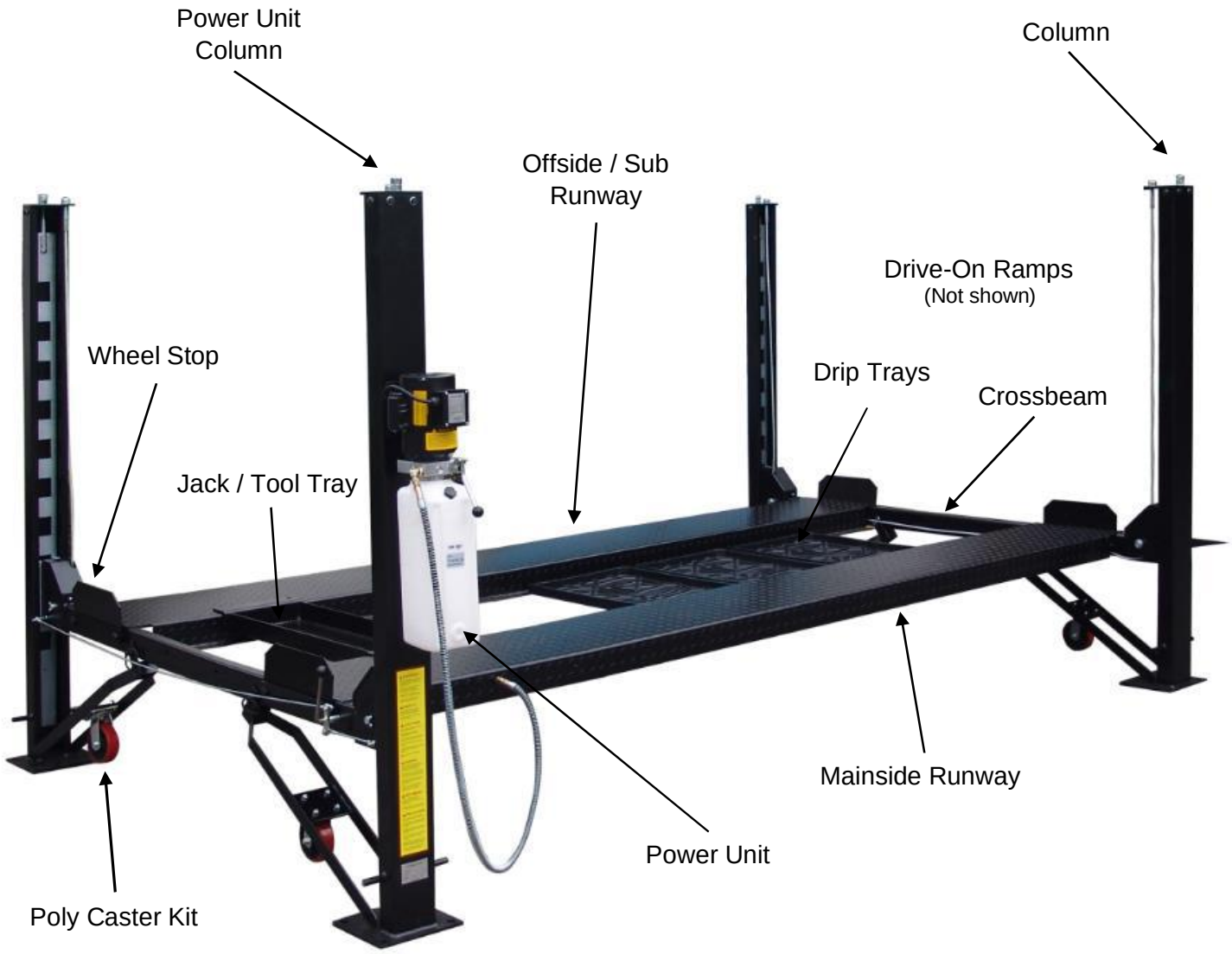
DO NOT install lift close to wall. It is necessary to leave adequate clearance for safe movement around lift. Suggested clearance to be 1 meter (3 feet) at minimum.



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

MAIN COMPONENTS IDENTIFICATION

FP8K-DX & FP8K-DX-XLT



Note: The FP8K-B Lift model is the same Lift as the FP8K-DX, just without the Poly Caster Kit, Drip Trays & Jack Tray.

OPTIONAL ACCESSORIES NOT SHOWN:

- SJ-35 Sliding Scissor Jack ï 3,500 lbs. capacity
- Aluminum Drive-On Ramps
- 90 Degree Power Unit Bracket Kit (only to the rear of Mainside Column for FP8K Lifts)

INSTALLATION INSTRUCTIONS

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.

1. Remove plastic wrap from top Runway and remove all hardware. This includes the Power Unit, ówire braidedôHydraulic Hose, Jack Tray, Lock Ladders and Hardware Box.

2. While the Mainside Runway (Fig. 2) is upside down, find the end of the Hydraulic Hose that is already connected to the Cylinder. Locate hole on the side of the Mainside Runway and install the 90 degree fitting securing to runway with Jam Nut. Also remove the plastic shipping ties securing the pre-installed Cables.

3. With the Mainside Runway upside down, pull to extend the Cable Ends through the holes on each end of the Runway. Also, ensure the hydraulic fittings are tightened.

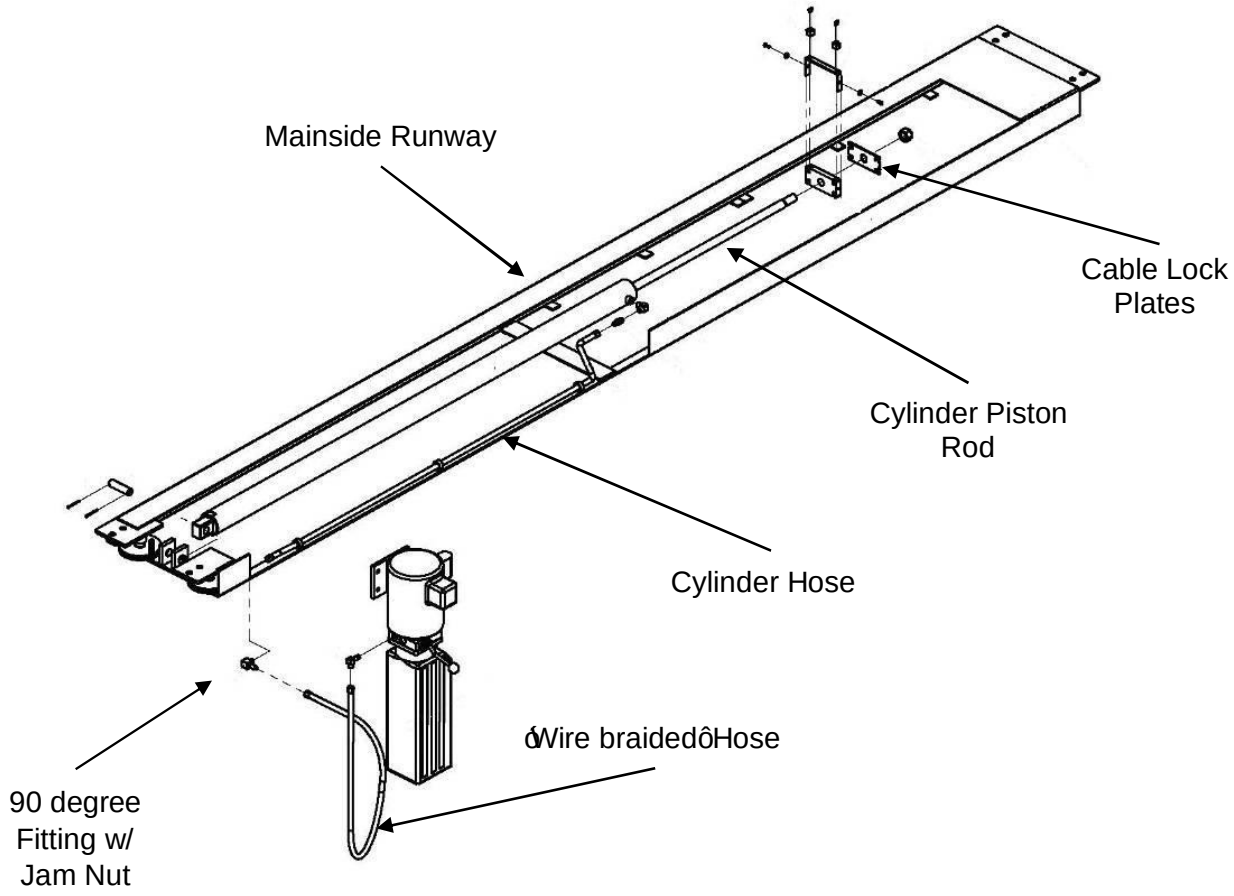


Fig. 2

4. Fully extend the Cylinder Piston Rod by pushing or pulling on the Cable Lock Plates mounted on the end of the Cylinder.

5. Now unbolt the top Mainside Runway (#51) taking the necessary safety precautions to support runway, as it will need to be flipped over. ***Note:*** ***Using some type of hoist is recommended to carefully flip the Runway over, so it's no longer upside down.***

6. Locate the Mainside Runway in your bay with the Hydraulic Fitting (#86) facing toward your previously chosen corner for the Power Unit.

7. Unbolt all four Columns from the shipping brackets and place the Power Unit Column (#1) with mount bracket in the above chosen corner. Arrange the other three Sub Columns (#2) in the remaining corners.

8. Unpack the Crossbeams, Ramps, Drip Trays, and Caster Kit from the lower Sub Runway. Remove the Safety Latch covers (#14) from Crossbeams. They will be reinstalled later.

9. Arrange the Crossbeams so that the LatchesôLinkage Rods are facing outward and the Short Rod (#70) is closest to the Power Unit Column, as shown below in Fig.3.

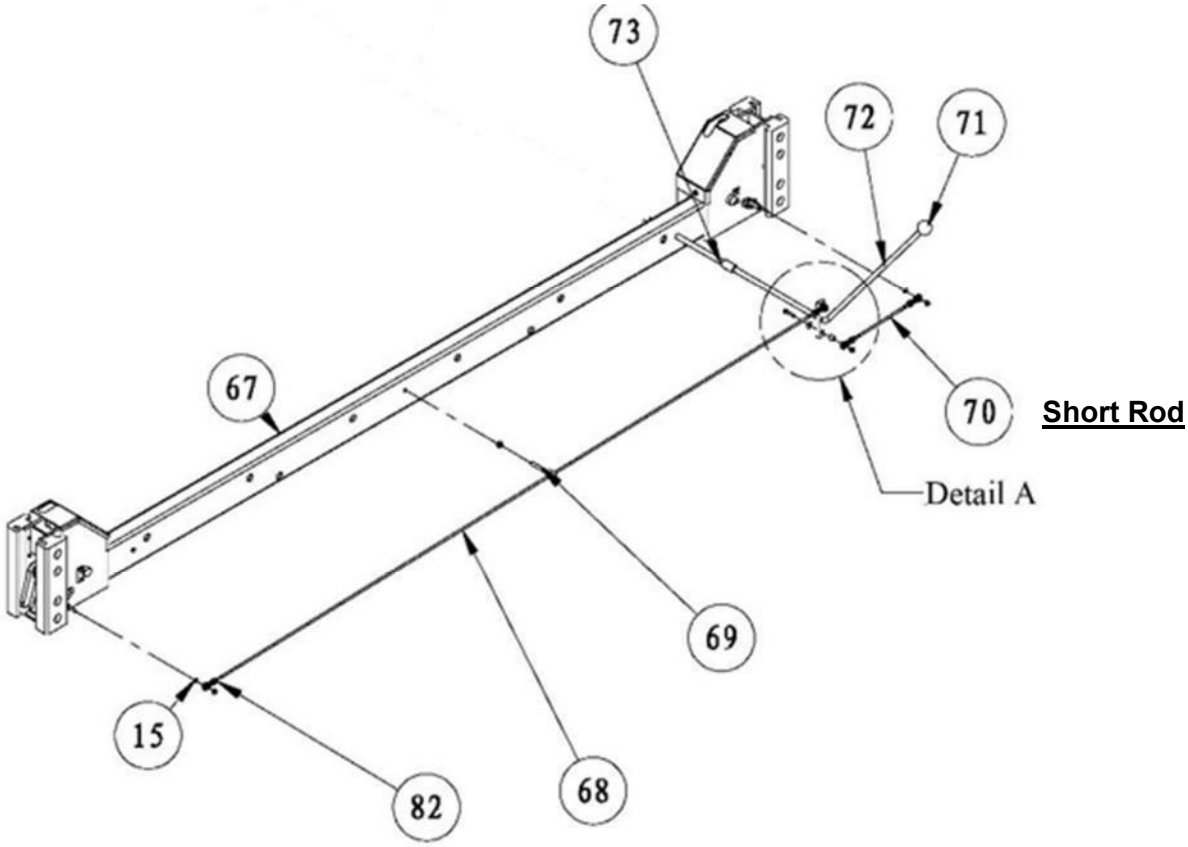


Fig. 3

10. If you have means for securely lifting the Crossbeam, lower it into the tops of the Columns. If not, the Columns will have to be placed horizontally, in order to install the Crossbeams into the Columns. Then, the entire end structure (two columns and crossbeam) will need to be stood up as one.

11. Unpack the Lock Ladders (Fig. 4) from the package and slide them into the precut slot on the Rub Blocks (#56) inside each column. After removing the top Nut from the Lock Ladder, you are ready to install the Top Caps A & B (#3 & #4) on the columns.

12. Be aware of the offset hole in columns Top Caps. Arrange Top Caps so that the cable mounting holes are closest to the runways. Use provided Bolts, Nuts, Washers and Lock Washers to install Top Caps, as shown in Fig. 4 & 4b.

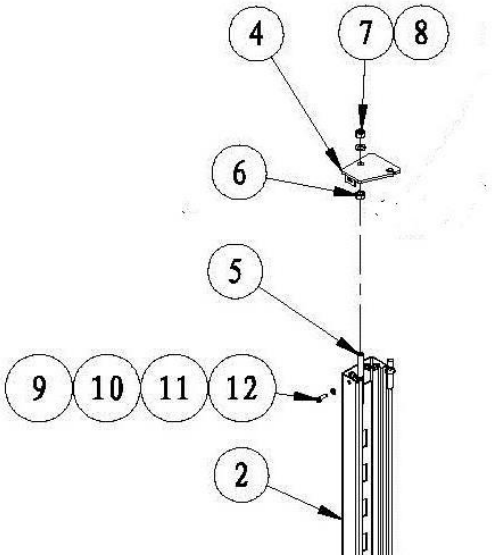


Fig. 4b

13. Secure Top Cap and Lock Ladder assemblies together with Washer and Nut as shown in Fig 4b. ***Note: Ensure Jam Nut is positioned below Top Caps***. Position the Crossbeams at the second lowest locking position on all columns

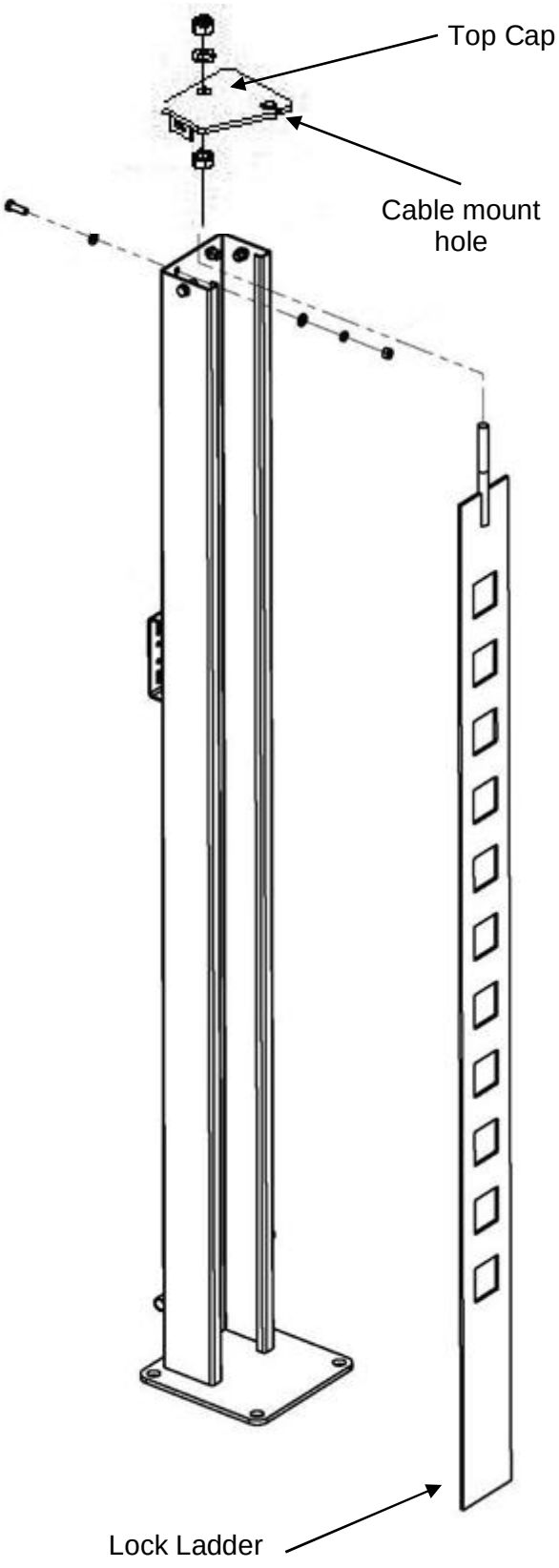
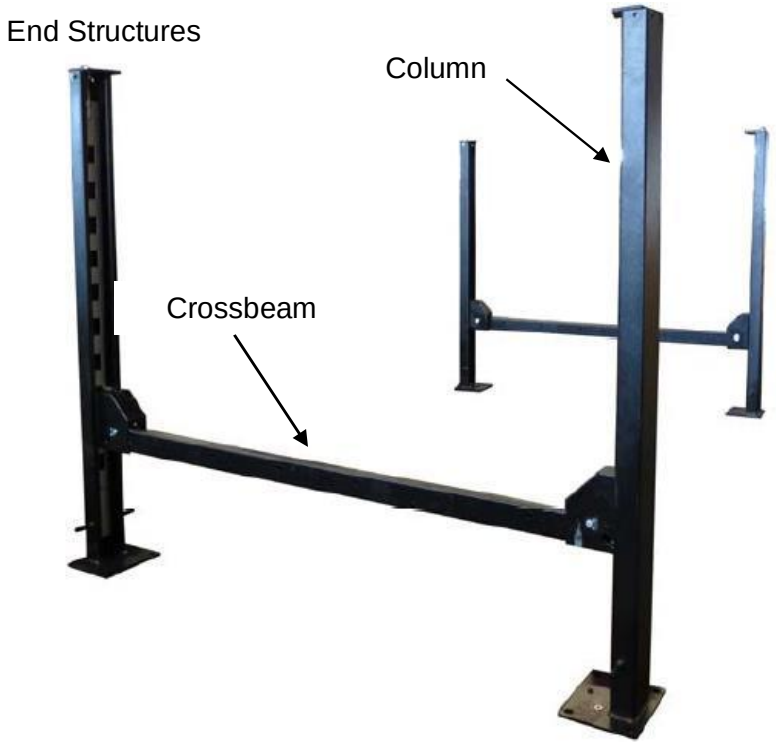


Fig. 4

14. Stand up and arrange the two end structures (Columns & Crossbeams) so that the outside of the Crossbeam rail to the outside of the other Crossbeam rail ódiagonalô measurements are close. Compare the measurements from the left and the right until they are diagonally within 1/2ò ***<u>Note:</u> The ½" variance will help in mounting the Runways later.***



15. Carefully lift and position each Runway into place and secure to Crossbeams ends with the provided Hex Bolts (#44), Mounting Plate (#42) and hardware (#19, 45, 46 & 47) as shown in Fig. 5 & 5b. The lift will square itself as you further assemble it.

<u>Note:</u> Ensure to install the 'offside' Sub Runway opposite from the Main side Runway and Power unit Column, as shown in Fig.5b.

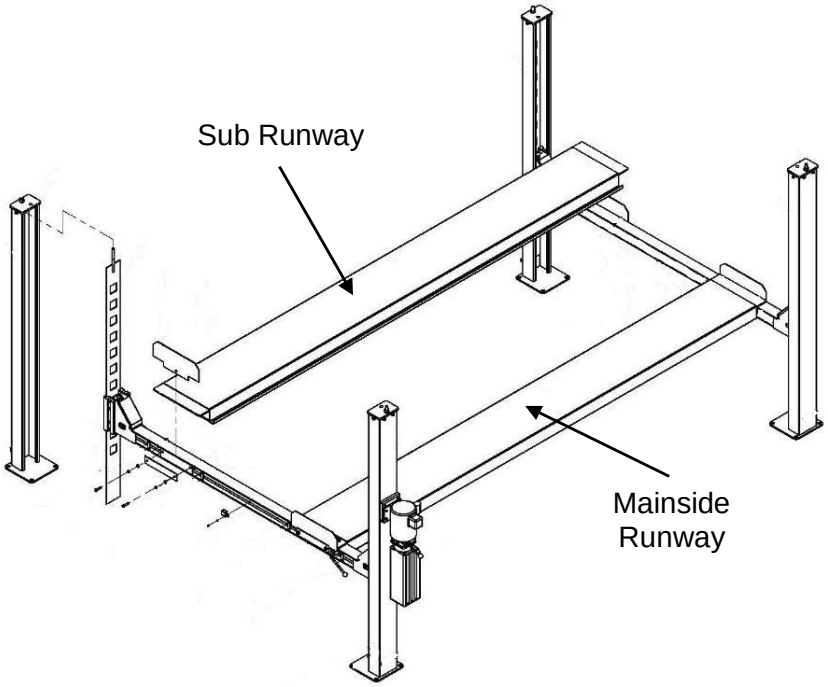


Fig. 5

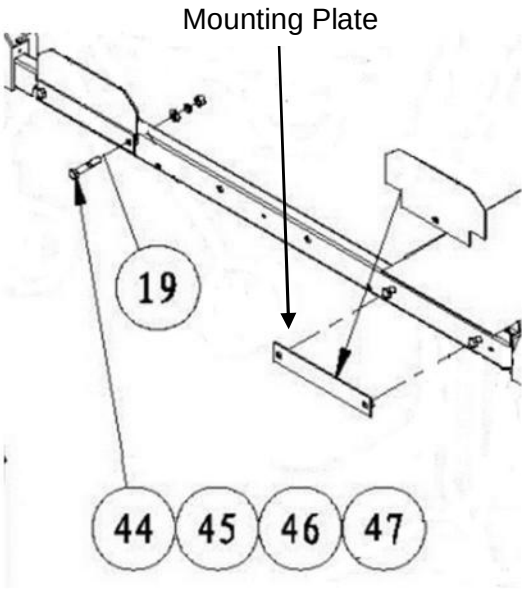


Fig. 5b

16. Begin cable routing installation to Column Top Caps by first ensuring the pre-installed steel Cables are properly routed around each Cable Sheave and are not in a bind.

17. Pull the slack for each Cable from the corner ends of the Mainside Runway and route the appropriate Cable(s) to each Column Top Caps, <u>while ensuring that the Crossbeam's Cable Pulley is between the Cable and the Lock Ladder as shown in Fig.6.</u> This will allow the secondary Slack Cable Lock to function properly. See Fig.6 below for Cable routing installation.

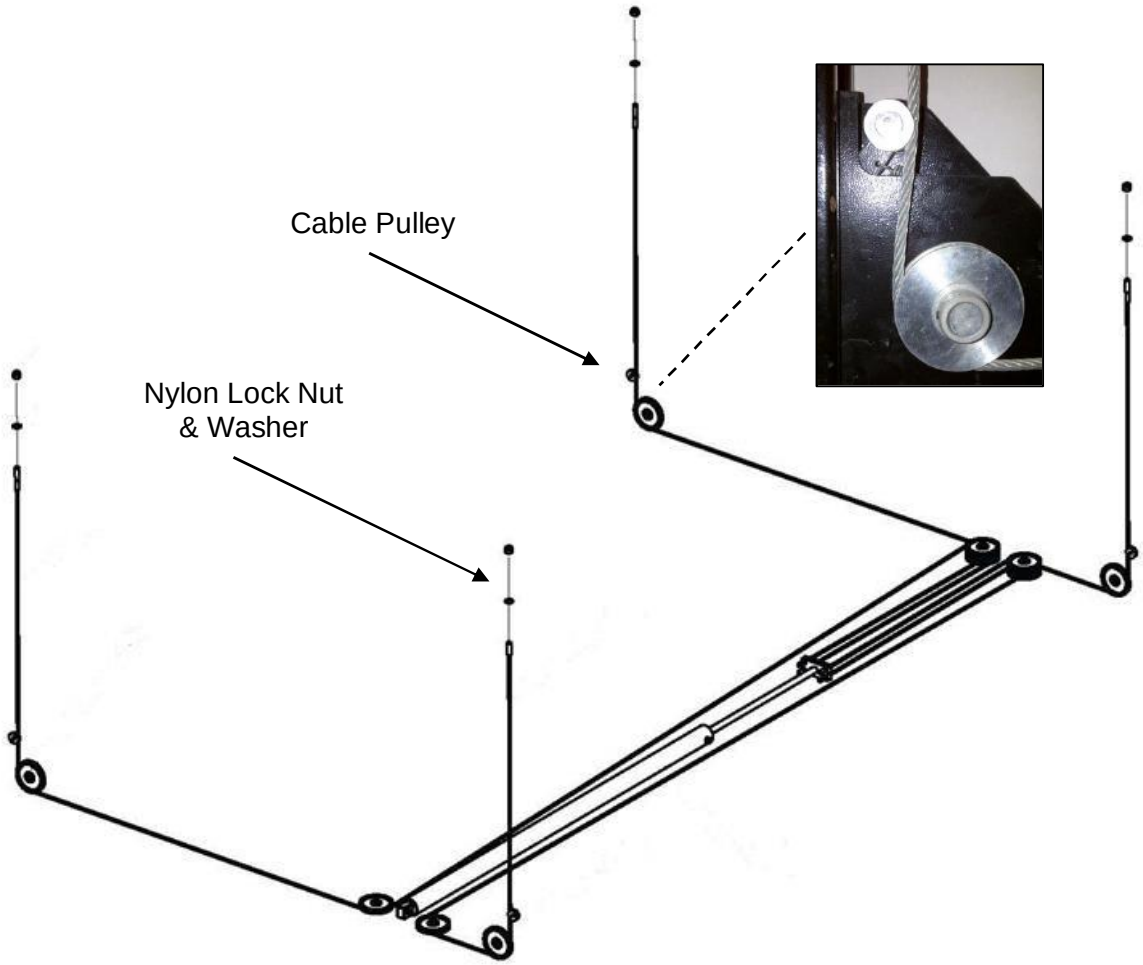


Fig. 6

18. Install Cable Guide Bolts & Nuts (#21B) to the underside of the <u>Mainside Runway</u> at each end, as illustrated in Fig. 7. Four Guide Bolts will be installed at one end and two at the other end. **<u>Note:</u> Cable Guide Bolts assists in keeping the Cables properly engaged to the Pulleys.**

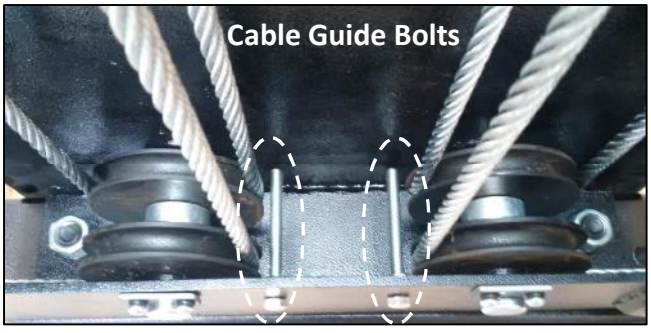


Fig. 7

19. Install Cable Guide Bolts (#21A) thru the side of the Crossbeam Latch Plates at each end, as illustrated in Fig.8 below. One Guide Bolt will be installed at end of both Crossbeams.
<u>Note:</u> Cable Guide Bolts assists in keeping the Cables properly engaged to the Pulleys.

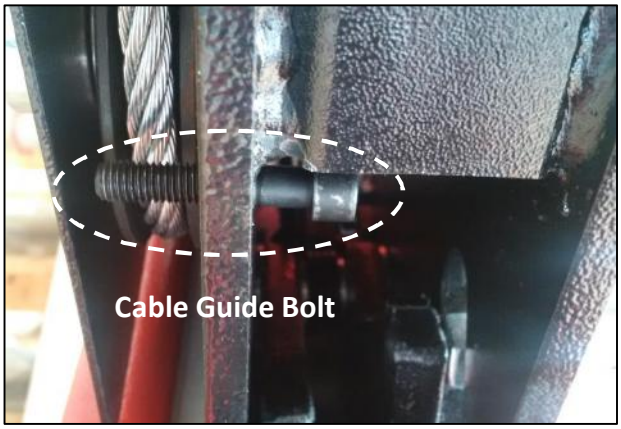
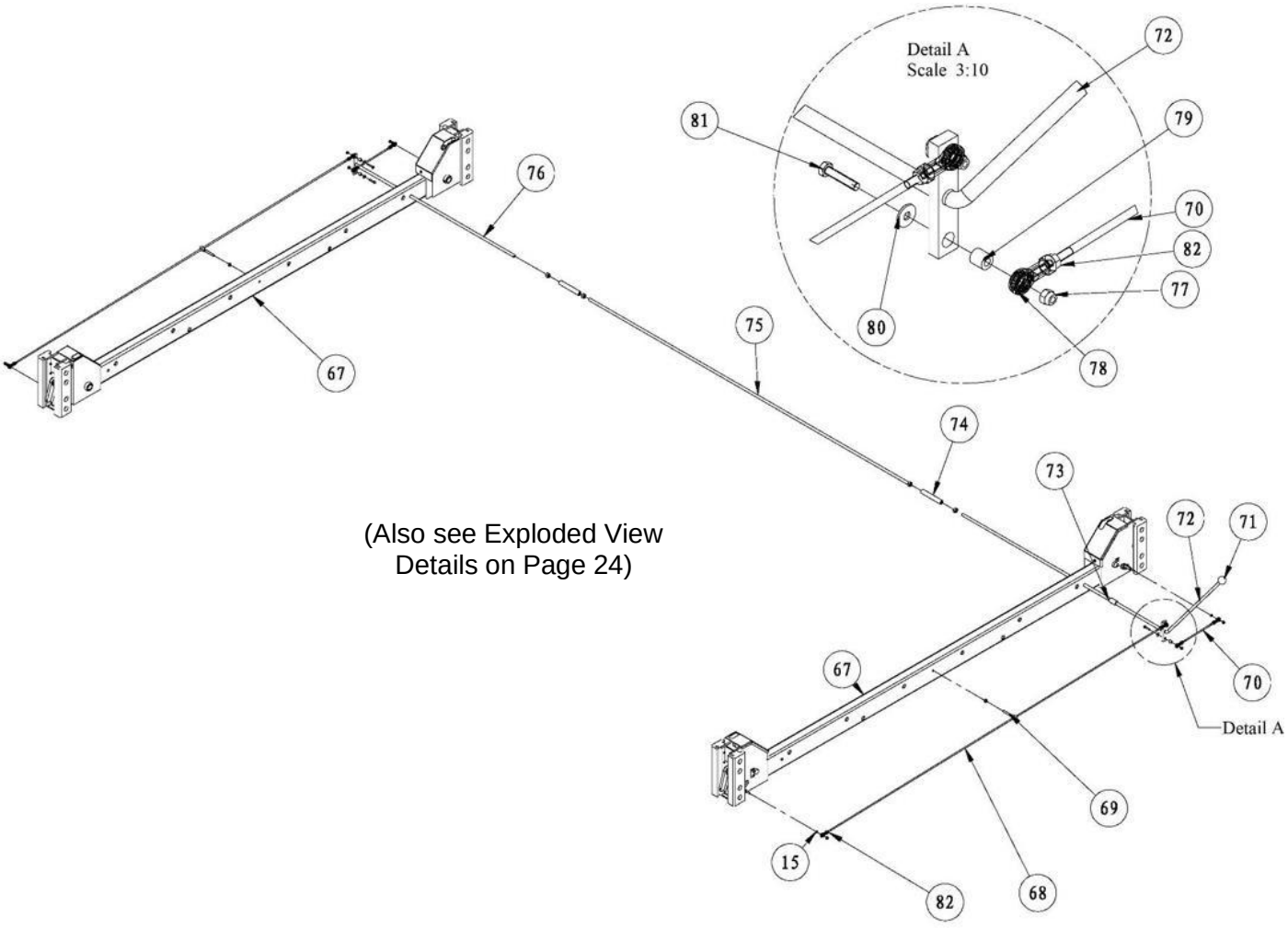


Fig. 8

20. Install Lock Rods & Linkage components per the drawing Fig.9 below. Ensure to install Eye bolts (#69) to outside / middle of each Crossbeam, secure each Eye bolt with Hex Nut.
<u>Note:</u> Ensure the 'front to back' Linkage Rods are properly routed through guide ring weldments, located on the underside of the Mainside Runway.



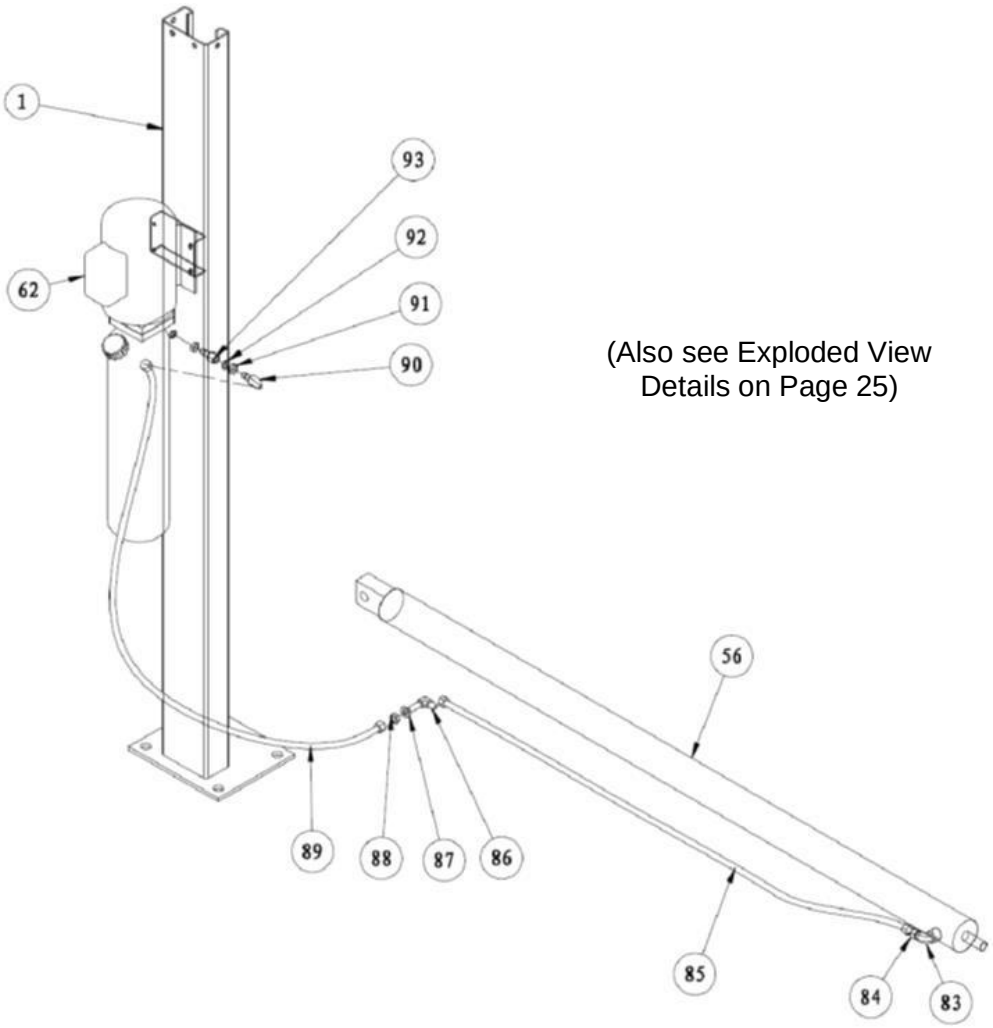
(Also see Exploded View Details on Page 24)

Fig. 9

21. Mount Power Unit (Item # 62) to the Mainside Column with the attached mounting bracket using the hardware provided, shown in Figure # 10. Once mounted, fill the Power Unit reservoir tank with hydraulic fluid.

22. Install the 90 degree Hydraulic Fitting, Nuts & Washer (# 90, 91, 92 & 93) to the high pressure port on the Power Unit, shown in Figure 10. Connect the 115VAC electrical power to the Power Unit.

23. Install the ñwire braidedò Hydraulic Hose (#89) to the Fitting on the side of the Main side Runway and attach the other end to the 90 degree Fitting on the Power Unit, as shown in Fig.10.



(Also see Exploded View Details on Page 25)

Fig. 10

24. Now raise the complete unit (Lift) and set at one of the bottom lock positions. Place level on crossbeam.

25. Tighten Lock Ladder Rod Nut located on the top of each Column. This will raise the corner of the lift to adjust for leveling. Each Column has this adjustment. Adjust the proper columns to level the lift. Place a level on each runway and crossbeam and check for proper levelness. ***Note:*** ***You may have to loosen the Jam Nut under the Top Cap to make adjustments.***

26. After leveling is complete, tighten the Jam Nut on the Lock Ladder, underneath the Top Cap on each post. This will secure the Lock Ladder in position.

27. Raise lift off all locks until cables are supporting the lift. Adjust the Cableôs Nylon Lock Nut (#89) as shown in Fig 6, located on the top of each post until lift is level on crossbeams and runways. This will ensure the lift travels up and down level.
<u>Note:</u> You may need to use locking pliers to hold the Cable from turning when adjusting the Nylon Nut. Make sure that threads engage through the nylon on each Nylon Nut.

28. Install the Plastic ódripôBoards (# 51A) into the bracket slots on the underside of the Mainside Runway, as shown below in Fig 11.

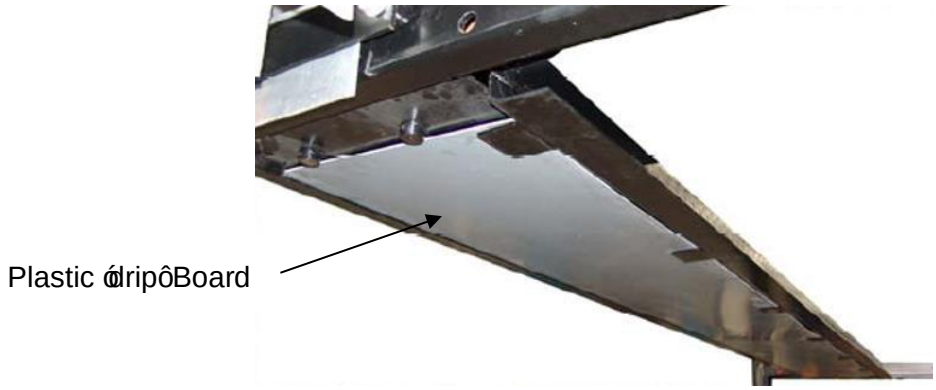


Fig.11

29. Insert Wheel Stop Plates (Item # 43) at each end of Runways, as shown below Fig 12.
<u>Note:</u> The usage of additional Wheel Stop Plates are recommended when lifting and/or storing a vehicle, with or without the Drive-On Ramps.

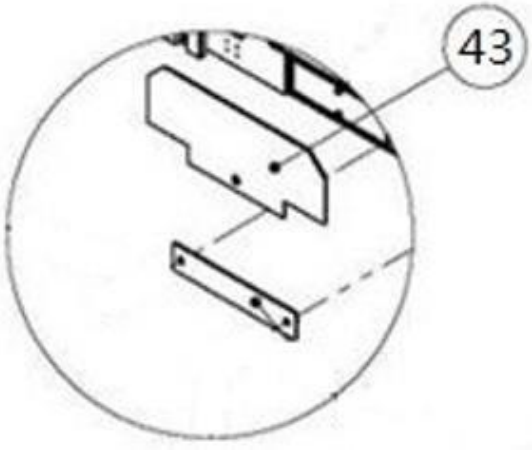


Fig. 12

30. Install ódrive-onôRamps (#53) at rear of Lift.

31. Install the Jack / Tool Tray & Drip Trays between the Runways.

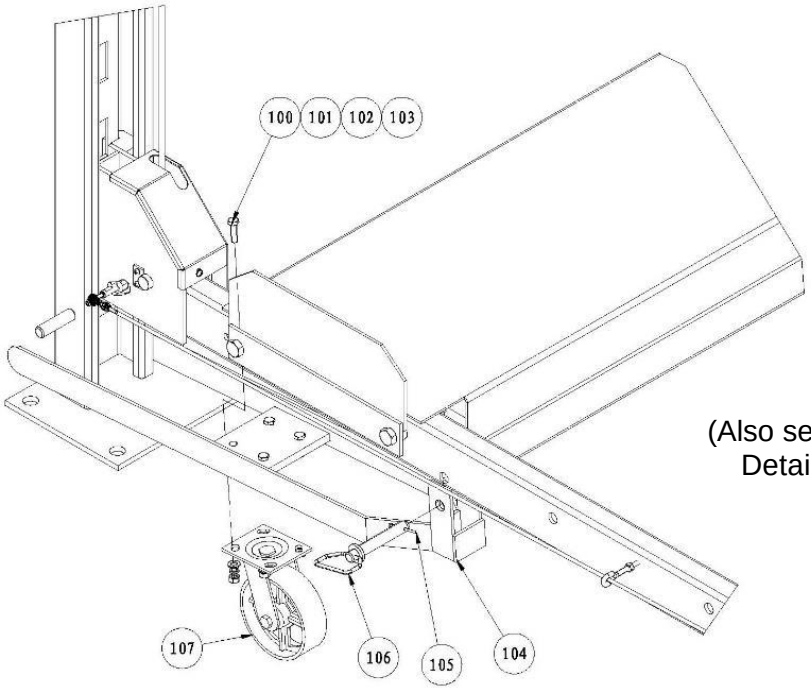
<u>NOTE:</u> Ensure to lubricate ALL Cable Sheaves, Bearings and Shafts with grease prior to operating Lift.

The Lift installation is now complete.

CASTER KIT ASSEMBLY / INSTALLATION

1. Raise the Lift two to four feet high.

2. Assemble Caster assemblies as shown below.



(Also see Exploded View Details on Page 27)

3. Position each of the four Caster assemblies below the Crossbeam rails.

4. Install the four Pivot Pins (#106) and Hairpin Cotter Pins (#105) to secure Caster assembly to each crossbeam.

5. Lower the Lift confirming that the Caster assemblies engage the columns and all four Columns rise to clear the floor.



6. Now the lift can be moved.

CAUTION: DO NOT maneuver Lift with Casters, while vehicle is on Lift.

Read Safety & Operation Instructions before operating Lift.

FOUNDATION and 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 5-1/2òlong anchors, if the top of the anchor exceeds 2-1/4òabove 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 6-1/2ò in 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.

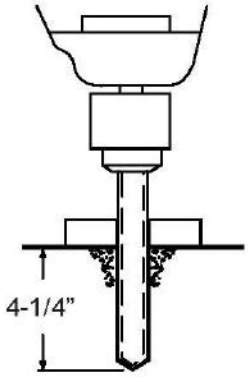
2. Keep the drill in a perpendicular line while drilling.

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.

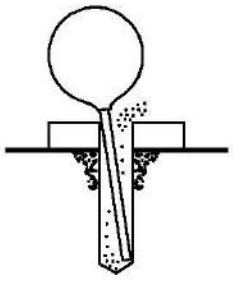
4. Drill the hole to depth of 2òdeeper than the length of anchor. NOTE: Drilling thru concrete (recommended) will allow the anchor to be driven thru the bottom of foundation if the threads are damaged or if the lift will need to be relocated.

5. For better holding power blow dust from the hole.

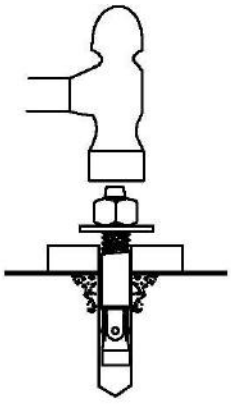
6. Place a flat washer and hex nut over threaded end of anchor, leaving the nut almost flush with the top of the anchor bolt. Carefully tap anchor into hole. Do not damage threads. Tap anchor into the concrete until nut and flat washer are against base plate. Do not use an impact wrench to tighten! Tighten 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.



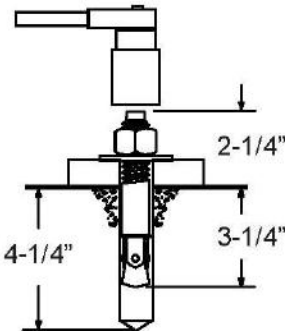
Drill holes using 3/4ò carbide tipped masonry drill bit per ANSI standard B94.12.1977



Clean hole.



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



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

SAVE THESE INSTRUCTIONS

SAFETY INSTRUCTIONS

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

- Read all instructions
- Care must be taken as burns can occur from touching hot parts.
- Do not operate equipment with a damaged cord or if the equipment has been dropped or damaged - until it has been examined by a qualified service technician.
- Do not let a cord hang over the edge of the table, bench, or counter or come in contact with hot manifolds or moving fan blades.
- If an extension cord is necessary, a cord with a current rating equal to or more than that of the equipment should be used. Cords rated for less current than the equipment may overheat.
- Always unplug equipment from electrical outlet when not in use. Never use the cord to pull the plug from the outlet. Grasp plug and pull to disconnect.
- Let equipment cool completely before putting away. Loop cord loosely around equipment when storing.
- 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.
- Use only as described in this manual. Use only manufacturerõs recommended attachments.
- ALWAYS WEAR SAFETY GLASSES. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses.

SAFETY PROCEDURES

- Never allow unauthorized persons to operate lift. Thoroughly train new persons/employees in the use, operation and care of lift.
- **CAUTION! Power unit operates at high pressure.**
- Remove passengers before raising vehicle.
- Prohibit unauthorized persons from being in shop area while lift is in use.
- Total lift capacity is 8,000 lbs. (4,000 lbs. per axle). Do not exceed this capacity.
- Prior to lifting 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 a vehicle, make sure to center the vehicle between the columns. Slowly drive the vehicle up with someone outside the vehicle guiding the driver.
- Prior to 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.
- Slowly drive the vehicle on and off of the lift. Have someone outside the vehicle guide the driver.

CAUTION!
LUBRICATE ALL CABLE SHEAVES, BEARINGS, AND SHAFTS WITH GREASE PRIOR TO OPERATING THE LIFT. LUBRICATE ALL ON AN ANNUAL BASIS.

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.

OPERATION INSTRUCTIONS

***NOTE:* ALWAYS CHOCK WHEELS AND SET PARKING BRAKE BEFORE LIFTING VEHICLE!**

Read Safety & Operating Instructions procedures in Manual completely before operating lift.

- Properly maintain and inspect lift in accordance to owner's manual.
- Do not operate a lift that is damaged or in need of repair.
- Allow only authorized personnel in the lift bay.
- Stay clear of lift when raising or lowering (no riders).
- Keep hands and feet away from pinch points at all times.
- Never override the lift operating and safety controls.
- If a vehicle is suspected of falling, clear area immediately.
- Do not rock vehicle while positioned on lift.
- Always use safety jack stands when removing or installing heavy components.

Vehicle Loading:

- Position vehicle on lift runways by having another person guide you 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 lift capacity.
- Make sure vehicle is neither front nor rear heavy.

Raising Lift:

- Push up switch to raise lift until platform runways clear 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 latch set tight in a lock position.
- Never work under a lift that is not in the locked position.

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 the lift off the safety locks.
- Pull safety latch releases and press the lower lever to begin descent.
- Ensure lift is fully lowered, and having another person guide you, carefully unload the lift by driving off of the lift runways.

CAUTION!

PAY ATTENTION TO THE LOWERING SPEED OF ALL FOUR CORNERS. MAKE SURE THEY ARE MOVING DOWN AT THE SAME SPEED. STOP LOWERING THE LIFT BY RELEASING THE LOWERING LEVER ON THE POWER UNIT AND MOVING THE LOCK LEVER TO THE LOCK POSITION IF ANY CORNER STOPS MOVING OR IS SLOWER IN DESCENT. ALWAYS LOCK THE LIFT BEFORE GOING UNDER THE VEHICLE. NEVER ALLOW ANYONE TO GO UNDER THE LIFT WHEN RAISING OR LOWERING.

***NOTE:* It is normal for an empty lift to lower slowly - it may be necessary to add weight. Read and adhere to all *WARNING*, *CAUTION* and *SAFETY INSTRUCTIONS* labels on lift.**

PREVENTIVE MAINTENANCE SCHEDULE

The periodic Preventive Maintenance Schedule given is the suggested minimum requirements & minimum intervals; accumulated hours or monthly period, whichever comes sooner.

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

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 to use.

Failure to heed this warning can result in death or serious injury, or damage to equipment. 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.

Daily Pre-Operation Check (8-Hours)

- Check safety lock audibly and visually while in operation
- Check safety latches for free movement and full engagement with rack.
- Check hydraulic connections, and hoses for leakage.
- Check cables connections for bends, cracks and proper tension.
- 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 damage.
- Check floor for stress cracks near columns.
- Check lubrication on cable sheaves and shafts.

Weekly Maintenance (every 40-Hours)

- IF LIFT IS ANCHORED TO FLOOR - Check anchor bolts torque to 130 ft-lbs for the ¾ 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 sheaves/assembly for free movement or excessive wear on cable sheave shaft.

Yearly Maintenance

- Lubricate the cable sheave shafts at least once a year, after the lift is in service.
- Check for excessive wear of cable. Replace them if necessary.
- Change the hydraulic fluid - 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.

TROUBLESHOOTING

The common problems that may be encountered and their probable causes are covered in the following paragraphs:

- **Motor Does Not Operate:**
  1. Breaker or fuse blown
  2. Faulty wiring connections
  3. Defective up button

  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 correctly. (See Power Unit Prime Procedure on next page.)
  2. A piece of debris is under release ódownô valve. Push handle down and push the up button at the same time. Hold for 10-15 seconds. This should flush debris from valve.
  3. Remove the check valve cover and clean ball and seat.
  4. Oil level too low. Oil level should be at the MAX fill line located on the reservoir tank, when lift is fully lowered. Ensure to lower lift to relieve all hydraulic pressure and add oil as required.

- **Oil Blows out Breather of Power Unit:**
  1. Oil reservoir overfilled. Relieve all pressure and siphon out hydraulic fluid to the proper level.
  2. Lift lowered too quickly while under a heavy load. Lower the lift slowly under heavy loads.

- **Motor Hums and Will Not Run:**
  1. Lift overloaded. 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 wiring
  3. Bad capacitor
  4. Low voltage

- **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 system. Raise lift all the way to top and return to floor. Repeat 4-6 times, ensuring not to overheat the power unit.

- **Oil Leaks:**
  1. Power Unit: if the power unit leaks hydraulic oil around the tank-mounting flange check the oil level in the tank. The level should be two inches below the flange of the tank. A screwdriver can be used as a ñdipstickò
  2. Cylinder / Piston Rod: the rod seal of the cylinder is out. 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 columns. Readjustment needed.
  2. Cylinder too tight. Load lift to half capacity and cycle up and down a few times to break in.
  3. May have excessive wear on cable sheaves or shafts. Replace them.

POWER UNIT PRIMING PROCEDURE

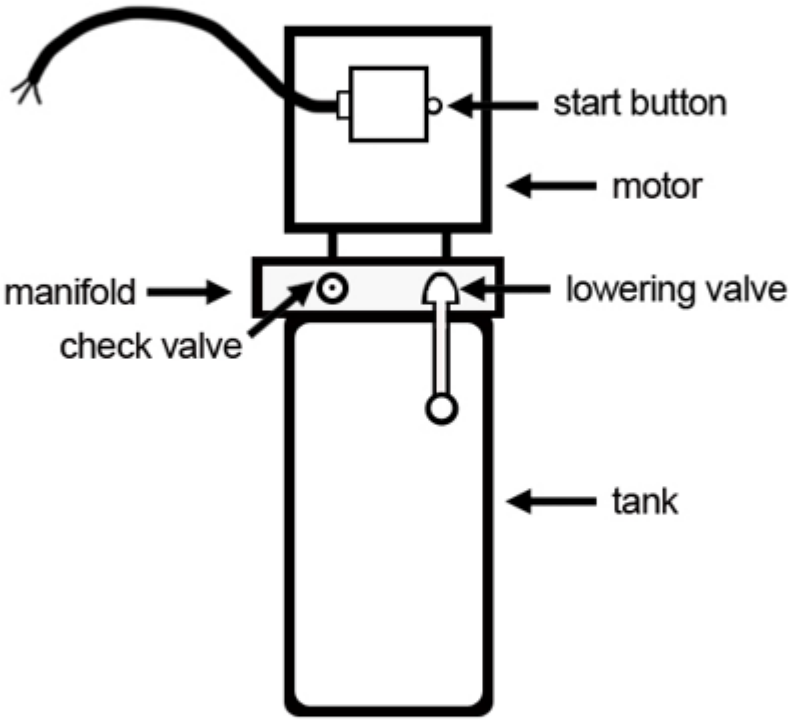
WARNING!! Failure to properly relieve pressure in the following steps can cause injury to personnel.

IMPORTANT

POWER UNIT PRIMING PROCEDURE

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

Step 1 – Locate the check valve. It's the flush plug to the left of the lowering valve.



Step 2 – Using a Hex wrench and shop towel – with shop towel in place to catch fluid – loosen the check valve plug by approximately 2-½ turns and allow fluid to bleed off.

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

Step 4 – Tighten the check valve plug.

YOUR POWER UNIT SHOULD NOW BE PRIMED

LATCH & CABLE INSPECTION / ADJUSTMENTS

WARNING!! Failure to perform routine inspections can lead to reduced service life, which could result in property damage and/or personal injury. Check locking latches for proper operation. Inspect for worn or missing parts. Replace worn or damaged parts and adjust as required.

- **Latch Mechanism Inspection**

  Latches and Latch Bar Alignment:
  - Check for proper latch operation on all four corners.
  - Observe locking latches during lift operation to ensure that all latches line up with slots in latch bar located in all four columns. If not, relocate and/or re-shim columns.
  - Check slack cable devices for proper operation. Inspect for worn or missing parts. Replace worn or damaged parts as required.
  - Observe both locking latches and slack cable devices during lift operation to ensure that all latches line up with slots in latch bar located in all four columns.

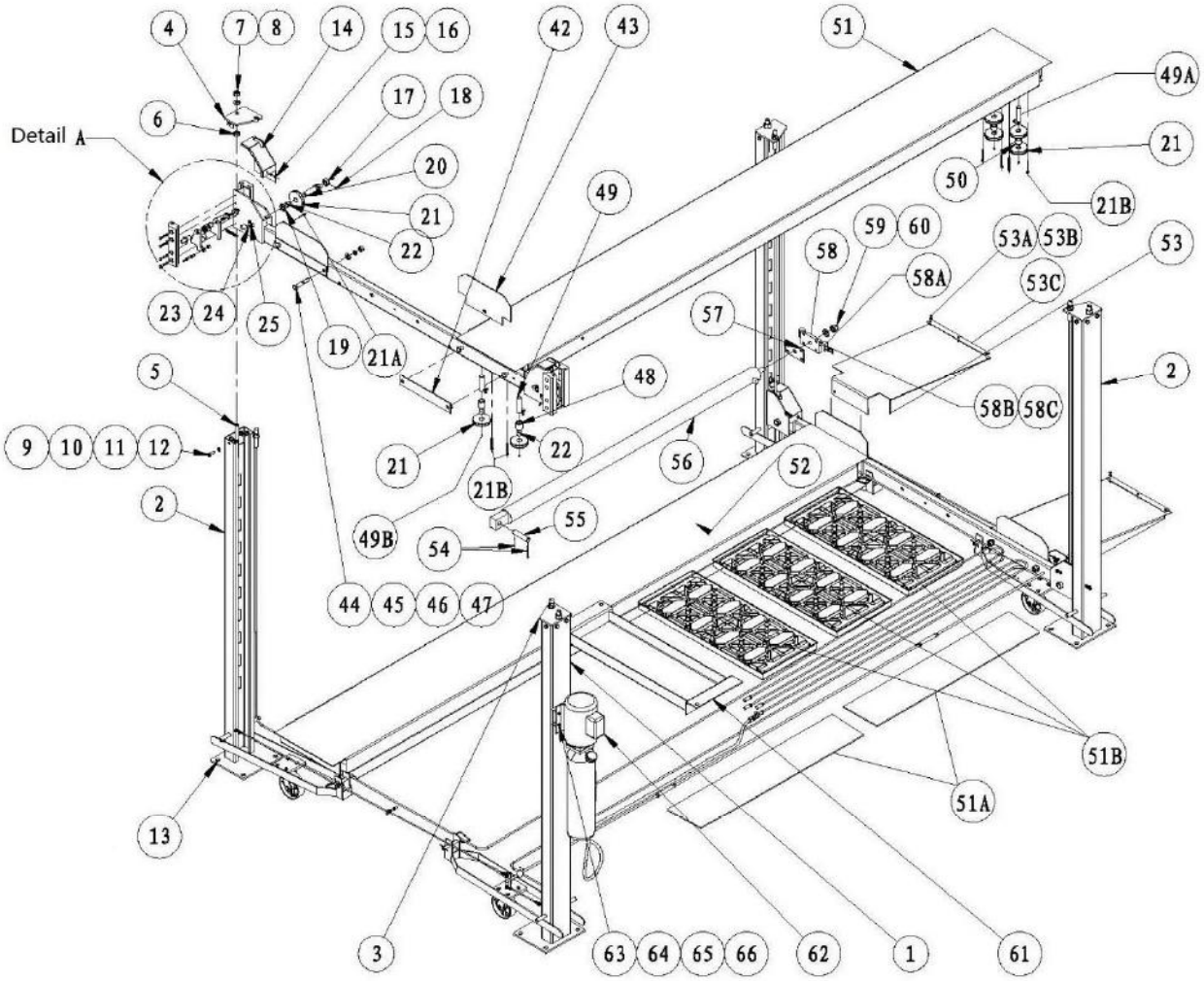
- **Leveling – Cable & Lock Ladder Adjustments**

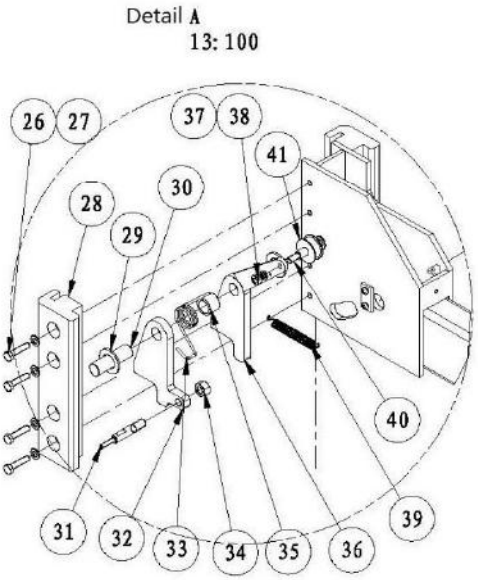
  A. Initial Adjustment
  - Adjust cable with lift fully lowered. Loosen jam nut and tighten nut on cable stud on top of column until yoke end is raised 1/4ò(6.4 mm) and back off nut one turn. Retighten jam nut.
  - Repeat for all four cables.

  B. Final Adjustment
  1. Load a typical vehicle on lift.
  2. Raise lift as high as it will travel (full height). You should hear the locking latches click through all latch slots simultaneously.
  3. Lower lift onto top latch position.
  4. Check clearance, starting with the right front column, use a straight edge to mark the position of the yoke bottom on the column.
  5. Raise lift to full height again. Mark second position. If gap between two marks is less than 2ò, adjust locking latch bar to reach clearance of 2ò Repeat for the other three columns.
  6. Adjust locking latch bar adjusting nut so that the bottom of the topmost latch bar slot is at least 2òbelow locking latch. After adjustment, tighten jam nut underneath column top plate,
  7. If entire 2òclearance cannot be attained by adjusting the locking latch bar, adjust the cable. Turn cable adjusting nut to raise the locking latch 2òabove bottom of latch bar slot. Tighten cable jam nut.
  8. Lower lift and remove vehicle.
  9. 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 jam nuts.

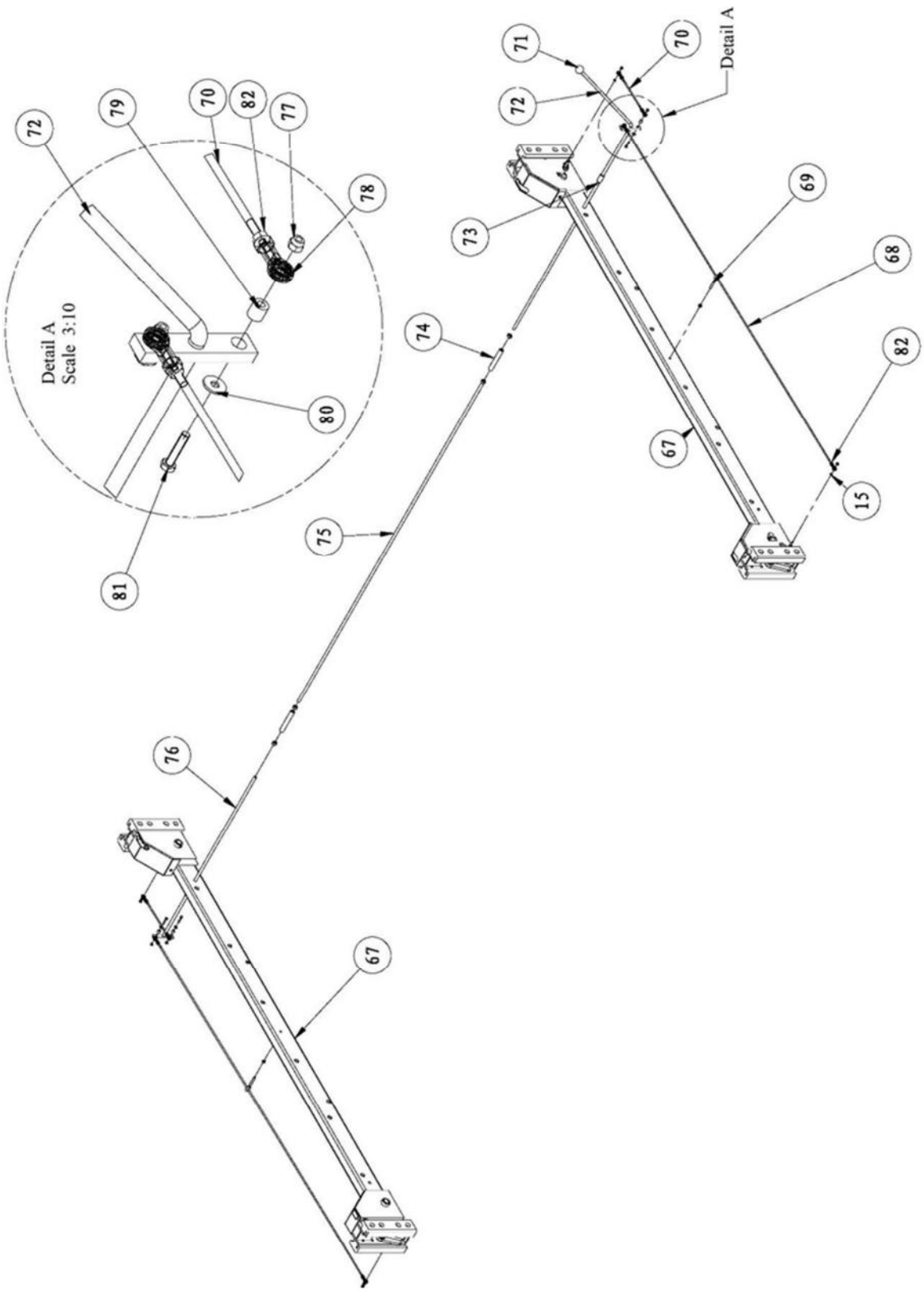
NOTE: ***When making changes to adjustment nuts on cable end or latch bar stud, always leave at least two threads showing between nut and stud end. Latches may not click in at the same time when vehicle is being raised but should be close. Be sure all four corners have passed the locking latch bar slot before lowering lift on locking latches.***

EXPLODED VIEW #1

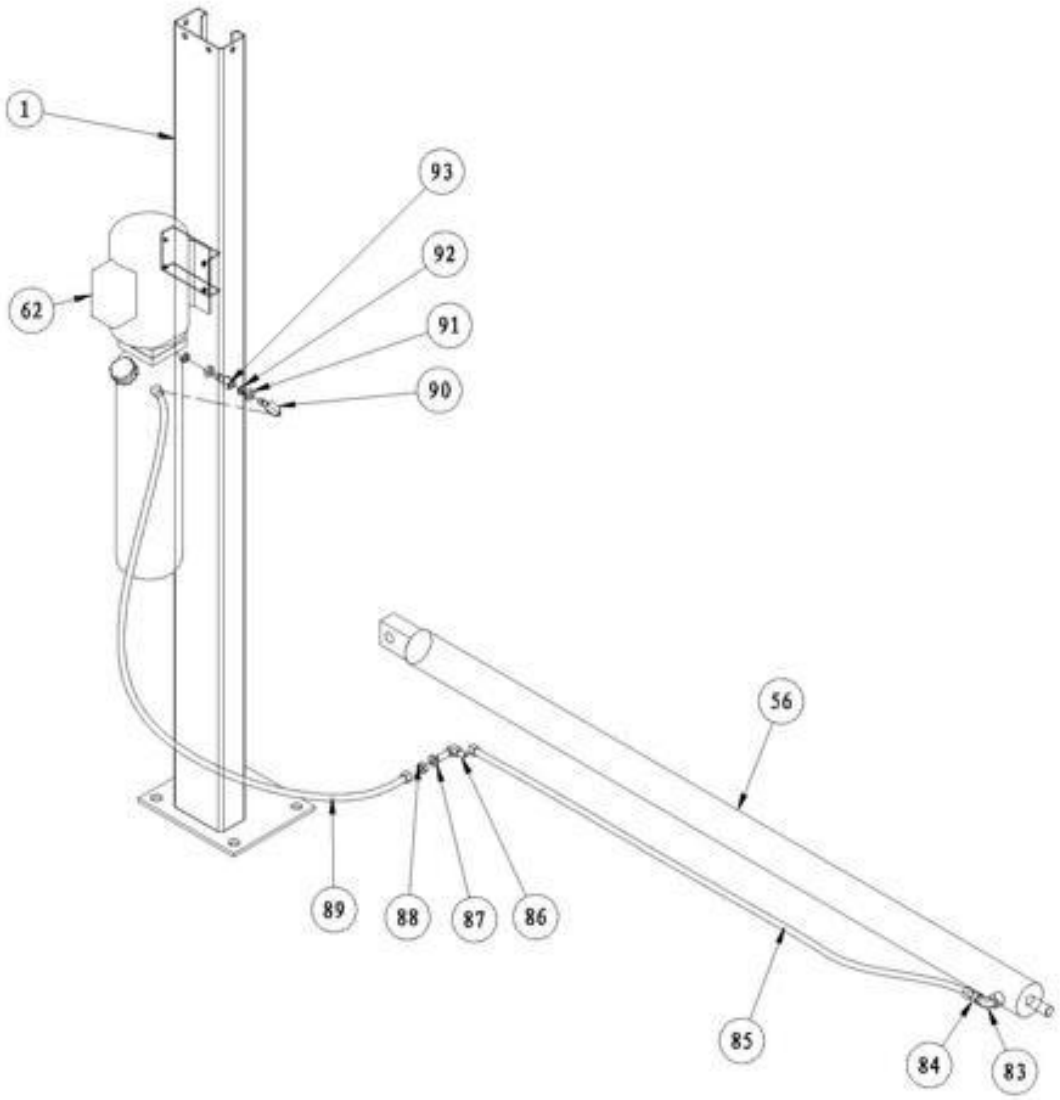




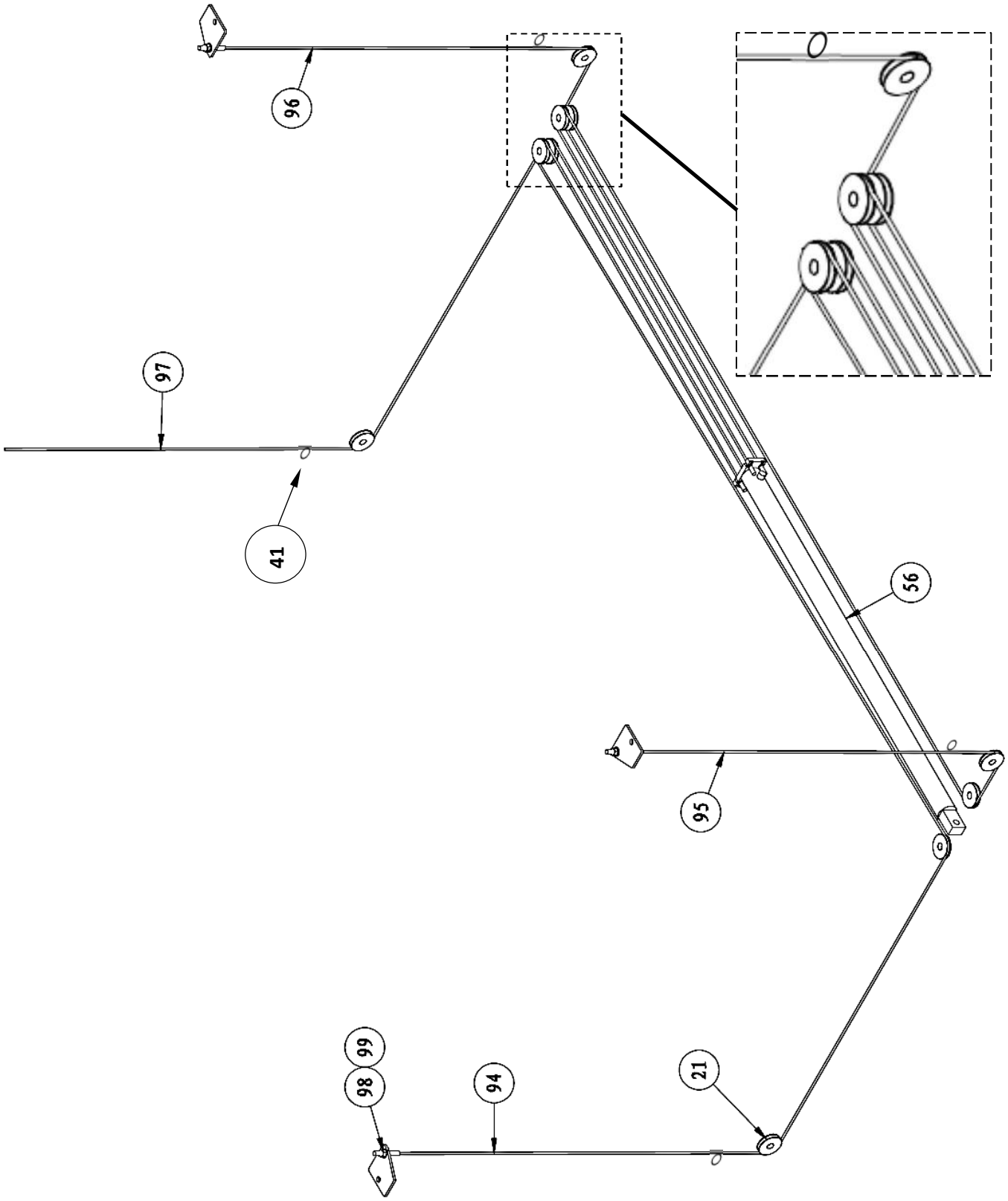
EXPLODED VIEW #2



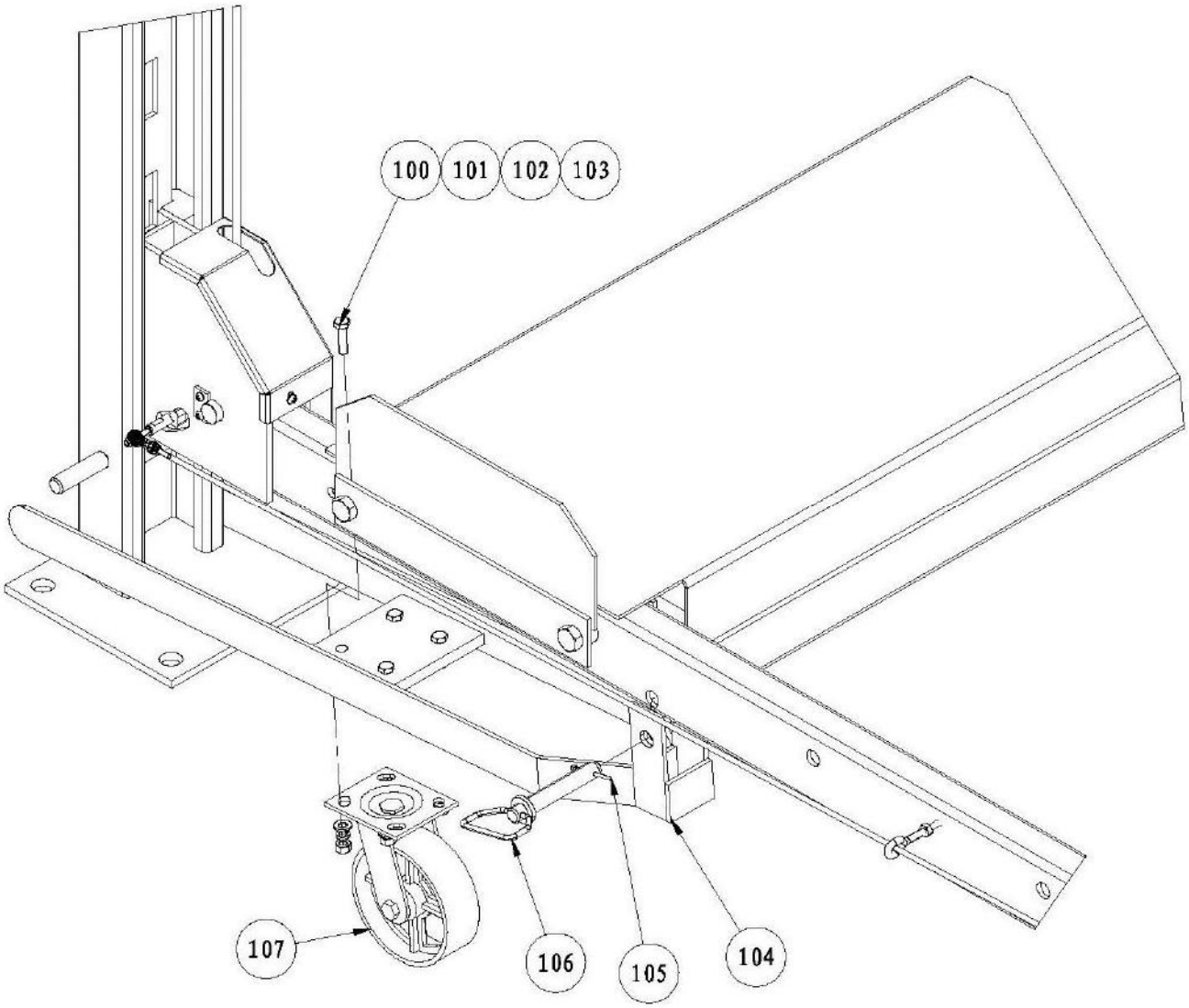
EXPLODED VIEW #3



EXPLODED VIEW #4



EXPLODED VIEW #5



PARTS LIST
FP8K-DX

ITEM	Prod ID	M REF P/N	DESCRIPTION	QTY
1	FP8K-DS/DX-001	TT7B-100-01-00	Main Post w/ PU Bracket (DS / DX)	1
2	FP8K-DS/DX-002	TT7B-100-02-00	Sub Post (DS / DX)	3
3	FP8K-DS/DX/XLT-003	TT7B-100-04-00	Top Cap A	2
4	FP8K-DS/DX/XLT-004	TT7B-100-03-00	Top Cap B	2
5	FP8K-DS/DX-005	TT7B-100-05-00	Lock Ladder (DS / DX)	4
6	FP8K-DS/DX/XLT-006	GB41	Jam Nut, M20	4
7	FP8K-DS/DX/XLT-007	GB6175	Hex Nut, M20	4
8	FP8K-DS/DX/XLT-008	GB95	Flat Washer, D20	24
9	FP8K-DS/DX/XLT-009	GB95	Flat Washer, D12	32
10	FP8K-DS/DX/XLT-010	GB5781	Hex Bolt, M12x35	16
11	FP8K-DS/DX/XLT-011	GB93	Spring Washer, D12	16
12	FP8K-DS/DX/XLT-012	GB41	Hex Nut, M12	16
13	WA0.75X512-C		Anchor Bolt (0.75 X 5 1/2")	16
14A	FP8K-DS/DX/XLT-014A	TT7B-200-09A	Cover Plate, RH	2
14B	FP8K-DS/DX/XLT-014B	TT7B-200-09B	Cover Plate, LH	2
15	FP8K-DS/DX/XLT-015	GB93	Lock Washer, D6	24
16	FP8K-DS/DX/XLT-016	GB818	Screw, M6x10	16
17	FP8K-DS/DX/XLT-017	TT7B-200-10	Locking Collar	4
18	FP8K-DS/DX/XLT-018	GB78	Set Screw, M8x12	4
19	FP8K-DS/DX/XLT-019	GB95	Flat Washer, D24	13
20	FP8K-DS/DX/XLT-020	TT7B-200-11NEW	Sheave Shaft-GZ, Crossbeam	4
21	FP8K-DS/DX/XLT-021	TT7B-200-08	Cable Sheave	10
21A	FP8K-DS/DX/XLT-021A	GB70.1-2000 M8*40	Cable Guide Bolt, Crossbeam, M8x40	4
21B	FP8K-DS/DX/XLT-021B	GB70.1-2000 M8*80	Cable Guide Bolt, Mainside Runway, M8x80	6
22	FP8K-DS/DX/XLT-022	SF2518	Complex Bushing	10
23	FP8K-DS/DX/XLT-023	GB93	Lock Washer, D6	8
24	FP8K-DS/DX/XLT-024	GB818	Cross Bolt	8
25	FP8K-DS/DX/XLT-025	SGM-802-08	Lock Tab	8
26	FP8K-DS/DX/XLT-026	GB5781	Hex Bolt, M8x35	32
27	FP8K-DS/DX/XLT-027	GB95	Flat Washer, D8	32
28	FP8K-DS/DX/XLT-028	TT7B-200-14	Nylon Guide Block	8
29	FP8K-DS/DX/XLT-029	GB95	Flat Washer, D20	4
30	FP8K-DS/DX/XLT-030	TT7B-200-06	Latch Pivot Shaft, Crossbeam	4
31	FP8K-DS/DX/XLT-031	TT7B-200-05	Bolt, Crossbeam	4
32	FP8K-DS/DX/XLT-032	TT7B-200-04	Locking Latch, Main	4
33A	FP8K-DS/DX/XLT-033A	TT7B-200-07A	Torque Spring, LH	1
33B	FP8K-DS/DX/XLT-033B	TT7B-200-07B	Torque Spring, RH	1
34	FP8K-DS/DX/XLT-034	GB6170	Hex Nut, M12	8
35	FP8K-DS/DX/XLT-035	TT7B-200-02	Spacer Bushing, Crossbeam	4
36A	FP8K-DS/DX/XLT-036A	TT7B-200-03-00A	Locking Latch, Secondary / Slack Cable (LH)	2
36B	FP8K-DS/DX/XLT-036B	TT7B-200-03-00B	Locking Latch, Secondary / Slack Cable (RH)	2
37	FP8K-DS/DX/XLT-037	GB93	Lock Washer, D8	8
38	FP8K-DS/DX/XLT-038	GB6170	Hex Nut, M8	10

39	FP8K-DS/DX/XLT-039	TT7B-200-15	Spring	8
40	FP8K-DS/DX/XLT-040	TT7B-200-12-00	Lock Shaft, Slack Cable	4
41	FP8K-DS/DX/XLT-041	TT7B-200-13N	Pulley, Slack Cable, D44	4
42	FP8K-DS/DX/XLT-042	DPF4-3.2-300-07-00	Mount Bracket, Runway	4
43	FP8K-DS/DX/XLT-043	DPF4-3.2-300-06	Wheel Stop Plate	4
44	FP8K-DS/DX/XLT-044	GB5780	Hex Bolt, M18x100	8
45	FP8K-DS/DX/XLT-045	GB93	Lock Washer, D18	8
46	FP8K-DS/DX/XLT-046	GB6170	Hex Nut, M18	8
47	FP8K-DS/DX/XLT-047	GB95	Flat Washer, D18	8
48	FP8K-DS/DX/XLT-048	TT7B-300-01-04	Runway Spacer Bushing (Tall)	2
49	FP8K-DS/DX/XLT-049	TT7B-300-01-05B	Sheave Shaft-GZ (Short), Runway	2
49A	FP8K-DS/DX/XLT-049A	TT7B-300-01-05A	Sheave Shaft-GZ (Long), Runway	2
49B	FP8K-DS/DX/XLT-049B	GB1155-89 D8X10	Grease Zerk, D8x10	8
50	FP8K-DS/DX/XLT-050	TT7B-300-01-07	Runway Spacer Bushing (Short)	2
51	FP8K-DS/DX-051	TT7B-300-02-00	Main Side Runway (DS / DX)	1
51A	FP8K-DS/DX-051A	DPF4-300-08	Plastic ‘drip’ Board (DS / DX)	2
51B	FP8K-DS/DX-DT		Drip Tray - 37"W (DS / DX)	3
52	FP8K-DS/DX-052	TT7B-300-01-00	Sub Offside Runway (DS / DX)	1
53	FP8K-DS/DX/XLT-053	TT-8136J-500-04-00	Approach Ramp	2
53A	FP8K-DS/DX/XLT-053A	GB818-2000 M6X8	Screw, M6x8mm	6
53B	FP8K-DS/DX/XLT-053B	GB93-1987 D6	Lock Washer, D6	6
53C	FP8K-DS/DX/XLT-053C	TT-8136J-500-01	Ramp, Yellow Caution ‘metal’ Strip (DX)	2
54	FP8K-DS/DX/XLT-054	GB91	Cotter Pin, D5x60	2
55	FP8K-DS/DX/XLT-055	DPF4-3.2-500-02	Cylinder Pin	1
56	FP7K/8K-4039		HYDRAULIC CYLINDER, FP7K & 8K (DS/DX)	1
57	FP8K-DS/DX/XLT-057	DPF4-3.2-500-04	Cable Lock Plate	1
58	FP8K-DS/DX/XLT-058	DPF4-3.2-500-03	Cable Retainer Plate	1
58A	FP8K-DS/DX/XLT-058A	DPF4-3.2-500-03-A	Nylon Cylinder Guide	2
58B	FP8K-DS/DX/XLT-058B	GB818-2000 M6X16	Screw, M6x16	4
58C	FP8K-DS/DX/XLT-058C	GB95-1985 D6	Flat Washer, D6	4
59	FP8K-DS/DX/XLT-059	GB889	Cylinder Lock Nut, M24	1
60	FP8K-DS/DX/XLT-060	GB95	Flat Washer, D24	1
61	FP8K-DS/DX-JT	DPF4-3.2-600-00	Jack / Tool Tray - 37"x12" (DS / DX)	1
62	PU-110V-L-K		Power Unit, 115VAC	1
63	FP8K-DS/DX/XLT-063	GB5781	Hex Bolt, M8x25	4
64	FP8K-DS/DX/XLT-064	GB95	Flat Washer, D8	4
65	FP8K-DS/DX/XLT-065	GB93	Lock Washer, D8	4
66	FP8K-DS/DX/XLT-066	GB6170	Lock Nut, M8	4
67	FP8K-DS/DX-067	TT7B-200-01-00	Crossbeam (DS / DX)	2
68	FP8K-DS/DX-068	TT7B-500-02	Linkage Rod-Long, Crossbeam (DS / DX)	2
69	FP8K-DS/DX/XLT-069	TT7B-500-03	Eye Bolt	2
70	FP8K-DS/DX/XLT-070	TT7B-500-01	Linkage Rod-Short, Crossbeam	2
71	FP8K-DS/DX/XLT-071	FP8K-DS-071	Plastic Knob, Handle	1
72	FP8K-DS/DX-072	DPF4-3.2-400-01-00	Lock Release Handle (DS / DX)	1
73	FP8K-DS/DX/XLT-073	DPF4-3.2-400-04	Spacer	2
74	FP8K-DS/DX/XLT-074	DPF4-3.2-400-03	Coupler Hex Nut	2
75	FP8K-DS/DX/XLT-075	DPF4-3.2-400-11	Linkage Rod-Long, Runway	1

76	FP8K-DS/DX/XLT-076	DPF4-400-02-00	Linkage Lock Rod 'T', Runway	1
77	FP8K-DS/DX/XLT-077	GB889	Lock Nut, M6	8
78	FP8K-DS/DX/XLT-078	SI6TK	Heim Bearing End, M6	8
79	FP8K-DS/DX/XLT-079	DPF4-3.2-400-09	Spacer	4
80	FP8K-DS/DX/XLT-080	GB96	Flat Washer, D6	4
81	FP8K-DS/DX/XLT-081	GB5781	Hex Bolt, M6x30	4
82	FP8K-DS/DX/XLT-082	GB6170	Hex Nut, M6	8
83	FP8K-DS/DX/XLT-083	TT7B-400-03	Elbow Fitting, Cylinder	1
84	FP8K-DS/DX/XLT-084	TT7B-400-04-00	Throttle Valve Fitting	1
85	FP8K-DS/DX-085	DPF4-3.2-500-10	Hydraulic Hose (DS / DX)	1
86	FP8K-DS/DX/XLT-086	DPF4-3.2-500-07	Elbow Bulk Head Fitting, Runway	1
87	FP8K-DS/DX/XLT-087	GB95	Flat Washer, D14	1
88	FP8K-DS/DX/XLT-088	DPF4-3.2-500-06	Bulk Head Nut, Runway	1
89	FP8K-DS/DX/XLT-089	DPF4-3.2-500-11	'Wire Braided' Hose 57.67"	1
90	FP8K-DS/DX/XLT-090	TPF4-500-05	Elbow Fitting, Power Unit	1
91	FP8K-DS/DX/XLT-091	TPF4-500-09	Hex Nut, Power Unit	2
92	FP8K-DS/DX/XLT-092	TPF4-500-08	Washer, Power Unit	2
93	FP8K-DS/DX/XLT-093	TPF4-500-07	Fitting, Power Unit	1
94	FP8K-DS/DX-094	TT7B-500-03A	Steel Cable A - FP8K (DS / DX) 26' 9-7/8"	1
95	FP8K-DS/DX-095	TT7B-500-03B	Steel Cable B - FP8K (DS / DX) 22' 1-3/4"	1
96	FP8K-DS/DX-096	TT7B-500-03D	Steel Cable D - FP8K (DS / DX) 8' 10-5/8"	1
97	FP8K-DS/DX-097	TT7B-500-04C	Steel Cable C - FP8K (DS / DX) 13' 6-3/8"	1
98	FP8K-DS/DX/XLT-098	GB95	Flat Washer, D20	4
99	FP8K-DS/DX/XLT-099	DPF4-500-12	Nylon Lock Nut, Steel Cable, M20	4
100	FP8K-DS/DX/XLT-100	GB5783	Hex Bolt, M10x35	16
101	FP8K-DS/DX/XLT-101	GB93	Lock Washer, D10	16
102	FP8K-DS/DX/XLT-102	GB6170	Hex Nut, M10	16
103	FP8K-DS/DX/XLT-103	GB95	Flat Washer, D10	16
104	FP8K-DS/DX/XLT-104	DPF4-3.2-700-01-00	Caster Bracket Frame	4
105	FP8K-DS/DX/XLT-105	GB91	Cotter Pin, D4x50	4
106	FP8K-DS/DX/XLT-106	DPF4-3.2-700-02-00	Caster Bracket Pin	4
107	FP8K-DS/DX/XLT-107		Poly Caster 6"	4

Specific Parts for FP8K-DX-XLT, noted on next page.

Parts specific for FP8K-DX-XLT

ITEM	Prod ID	M REF P/N	DESCRIPTION	QTY
1	FP8K-DS/DX-XLT-001	TT-8138-100-01-00	Main Post w/ PU Bracket (DS/DX-XLT)	1
2	FP8K-DS/DX-XLT-002	TT-8138-100-02-00	Sub Post (DS/DX-XLT)	3
5	FP8K-DS/DX-XLT-005	TT-8138-100-05-00	Lock Ladder (DS/DX-XLT)	4
51	FP8K-DS/DX-XLT-051	TT-8138-300-02-00	Main Side Runway (DS/DX-XLT)	1
51A	FP8K-DS/DX-XLT-051A	DPF4-300-08K	Plastic ‘drip’ Board (DS/DX-XLT)	2
51B	FP8K-DS/DX-XLT-DT		Drip Tray - 42"W (DS/DX-XLT)	3
52	FP8K-DS/DX-XLT-052	TT-8138-300-01-00	Sub Offside Runway (DS/DX-XLT)	1
56	FP7K/8K-4047		HYDRAULIC CYLINDER, FP7K & 8K (DS/DX-XLT)	1
61	FP8K-DS/DX-XLT-JT	DPF4-3.2-600-00T	Jack / Tool Tray - 42"x12" (DS/DX-XLT)	1
67	FP8K-DS/DX-XLT-067	TT-8138-200-01-00	Crossbeam (DS/DX-XLT)	2
68	FP8K-DS/DX-XLT-068	TT-8138-500-02	Linkage Rod-Long, Crossbeam (DS/DX-XLT)	2
72	FP8K-DS/DX-XLT-072	DPF4-3.2-400-01-00K	Lock Release Handle (DS / DX-XLT)	1
85	FP8K-DS/DX-XLT-085	DPF4-3.2-500-10K	Hydraulic Hose (DS / DX-XLT)	1
94	FP8K-DS/DX-XLT-094	TT-8138-500-03A	Steel Cable A - FP8K (DS / DX-XLT) 29’ 2-3/8”	1
95	FP8K-DS/DX-XLT-095	TT-8138-500-03B	Steel Cable B - FP8K (DS / DX-XLT) 24’ 9/16”	1
96	FP8K-DS/DX-XLT-096	TT-8138-500-03D	Steel Cable D - FP8K (DS / DX-XLT) 9’ 6-9/16”	1
97	FP8K-DS/DX-XLT-097	TT-8138-500-04C	Steel Cable C - FP8K (DS / DX-XLT) 14’ 8-3/8”	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 (Tuxedo) 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.

8320 E Hwy 67, Alvarado, TX 76009
Ph. 817-558-9337 / Fax 817-558-9740