



## **INSTALLATION, OPERATION, & MAINTENANCE MANUAL**



### **HD4P-12000 4 POST LIFT**

**⚠ FOLLOW THIS MANUAL CAREFULLY TO ENSURE THE MACHINE WILL FUNCTION CORRECTLY AND PROVIDE MANY YEARS OF DEPENDABLE SERVICE. FAILURE TO FOLLOW THESE INSTRUCTIONS AND SAFETY WARNINGS MAY RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE. KEEP THIS MANUAL IN A SAFE DRY PLACE FOR FUTURE REFERENCE.**



**TITAN MARKETING, LLC**

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To Our Valued Customers:

Thank you for purchasing a Titan Lifts® product. We hope this high quality equipment provides you with years of dependable service.

It is unfortunate that rare situations may occur with the products you purchase from Titan Lifts®. We value your business as well as the trust you have and need to maintain your relationship with us. Titan Lifts® carries liability coverage that may protect our customers if a situation does occur. However, as in all accidents there must be proof of liability for a claim to be made. Our insurance company requires the following procedures be observed in order to consider a claim:

- A. The claimant must contact the Titan Lifts® distributor immediately with the facts of the situation.
- B. If any equipment is damaged, including vehicles or shop equipment, Titan Lifts® must be given the opportunity to send an impartial representative to the site for proper assessment of the situation.
- C. The Vehicle cannot be moved until either an impartial representative has reviewed the accident or clear and precise pictures are taken that reflect all the pertinent information for an impartial representative to be able to access the information from a distance. Titan Lifts® or its representatives must approve the pictures before anything can be moved.
- D. If any potential liability is determined on behalf of Titan Lifts®, two estimates must be submitted for damages to be reimbursed.

It is imperative that the claimant complies with these procedures, because without proper assessment of the situation a claim will be denied.

#### ARBITRATION NOTICE

The installation or use of this equipment shall constitute an acknowledgement that the user agrees to resolve any and all disputes or claims of any kind whatsoever, which relate in any way to the equipment, by way of binding arbitration, not litigation. No suit or legal action may be filed in any state or federal court. Any arbitration shall be governed by the Federal Arbitration Act, and administered by the American Mediation Association, Indianapolis Indiana. The maximum amount that an arbitrator may award and all damages shall not exceed the retail value of this equipment.

#### WARRANTY NOTICE

This equipment must be installed by a "Professional Installer" assembled and used in the manner according to the documentation provided to be covered by warranty.

Damaged or missing components must be reported within 72 hours of receipt to your freight carrier and to the distributor. Claims must be filed to cover cost.

If you have any questions or if we can be of any further assistance, please don't hesitate to contact a Titan Lifts® representative at 1-888-908-4826. Thank you for the opportunity to continue to serve your lift equipment needs.

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# **INSTRUCTIONS**

## **1.SAFETY**

### **1.1 INTRODUCTION**



**WARNING:** READ ENTIRE MANUAL AND COMPLY WITH ALL SAFETY AND SERVICE PRECAUTIONS. DEATH, PERSONAL INJURY AND / OR PROPERTY DAMAGE MAY OCCUR IF INSTRUCTIONS ARE NOT FOLLOWED CAREFULLY.

Personal injury and property damage incurred due to non-compliance with these safety instructions are not covered by the product liability regulations.

### **SYMBOLS**

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**FAILURE TO COMPLY WITH INSTRUCTIONS COULD RESULT IN PERSONAL INJURY.**

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**FAILURE TO COMPLY WITH INSTRUCTIONS COULD RESULT IN PROPERTY DAMAGE.**

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**IMPORTANT INFORMATION.**

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### **1.2 SAFETY INSTRUCTIONS FOR COMMISSIONING**

- The lift may be installed and commissioned by authorized service personnel only.
- The lift may not be installed and commissioned in the vicinity of explosives or flammable liquids, outdoors or in moist rooms (e.g. car wash).

### **1.3 SAFETY INSTRUCTIONS FOR OPERATION**

- Read this entire manual.
- Load should not exceed rated capacity for this lift – 12000lbs
- Indoor use recommended.
- Protect all parts of the electrical equipment from humidity and moisture.
- Only trained authorized personnel over the age of 18 years should operate the lift.
- 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.

- 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 person.
- Maintain a safe working environment. The work area should be clean, dry, clutter free, and sufficiently lit.
- Vehicle doors should be closed during the raising and lowering cycles.
- Closely watch the vehicle and lift during the raising and lowering cycles.
- Do not operate the lift in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Power equipment can create sparks which may ignite flammables.
- Keep hands, tools, and other extremities from under carriage and moving parts.
- Never operate this lift with someone on it.
- Do not allow anyone on the lift or inside a raised vehicle.
- Keep children and bystanders away from work area. Do not let children operate or play on lift.
- Wear proper safety attire. Do not wear loose fitting clothing while operating lift. Long hair, jewelry and sleeves should be secured.
- Move the lift only when it is lowered.
- Do not move the lift while loaded. Never leave the lift unattended while under a load that is not in a level safety locked position.
- Do not operate this lift if under the influence of drugs, alcohol, or medication. Operator must be alert at all times when using heavy lift equipment.
- Comply with all applicable accident prevention regulations.
- Only use the vehicle manufacturer's recommended lifting points.
- After positioning the vehicle, apply the parking brake.
- Use caution when removing or installing heavy vehicle components which may result in center-of-gravity displacement.
- Use this lift only for the work it is intended and only use Titan Lifts® recommended attachments. Do not use this product for an application for which it was not designed. Misuse can lead to personal injury and/or property damage.



**WARNING:** Use this lift only in well ventilated areas. Carbon monoxide exhausted from running vehicle engines is a colorless, odorless fume that, if inhaled, can cause serious personal injury or death.



**WARNING:** People with pacemakers should consult their physician(s) before using this product. Operation of electrical equipment in close proximity to a heart pacemaker could cause interference or failure of the pacemaker.



**WARNING:** This product contains or produces a chemical known to the State of California to cause cancer and birth defects (or other reproductive harm). (California Health & Safety Code 25249.5 et seq.)

## 1.4 SAFETY INSTRUCTIONS FOR MAINTENANCE

- Maintenance or repair work should be done by authorized service personnel only.
- Work on the electrical equipment by certified licensed electricians only.
- Ensure that ecologically harmful substances are disposed of only in accordance with the appropriate regulations.
- To prevent the risk of damage, do not use high pressure / steam jet cleaners or caustic cleaning agents.
- Do not replace or override the safety devices.

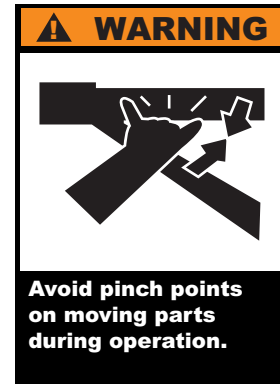
## 1.5 RISKS



**WARNING:** Risks that personnel could encounter, due to an improper use of the lift, are described in this section.

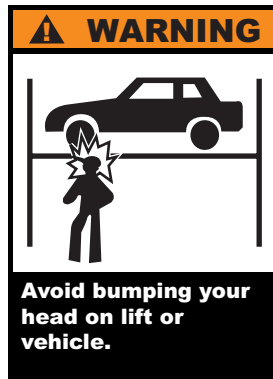
### CRUSHING RISKS

During lowering of runways and vehicles, personnel must not be within the area covered by the lowering trajectory. The operator must be sure no one is in danger before operating the lift.



### BUMPING RISK

When the lift is stopped at relatively low height for working, the risk of bumping against projecting parts occurs.



### TILTING RISK

When lowering use caution, to make sure the tracks stay level with locks.



## **2. UNPACKING & SET-UP**

Only skilled personnel who are familiar with the lift and this manual shall be allowed to carry out, lifting, handling, transport and unpacking operations.

### **2.1 DELIVERY AND CHECK OF PACKAGES**

When the lift is delivered, carefully unpack the lift making sure all the parts have been included. Check for possible damages due to transport and storage; verify that what is specified in the confirmation of order is included. In case of damage in transit, the customer must immediately inform the carrier of the problem.

Remove the lift and all parts from delivery pallet and place on a clean, solid, flat surface. Packages must be opened paying attention not to cause damage to people (keep a safe distance when opening straps) and parts of the lift (be careful the objects do not drop from the package when opening).

### **2.2 LIFTING AND HANDLING**

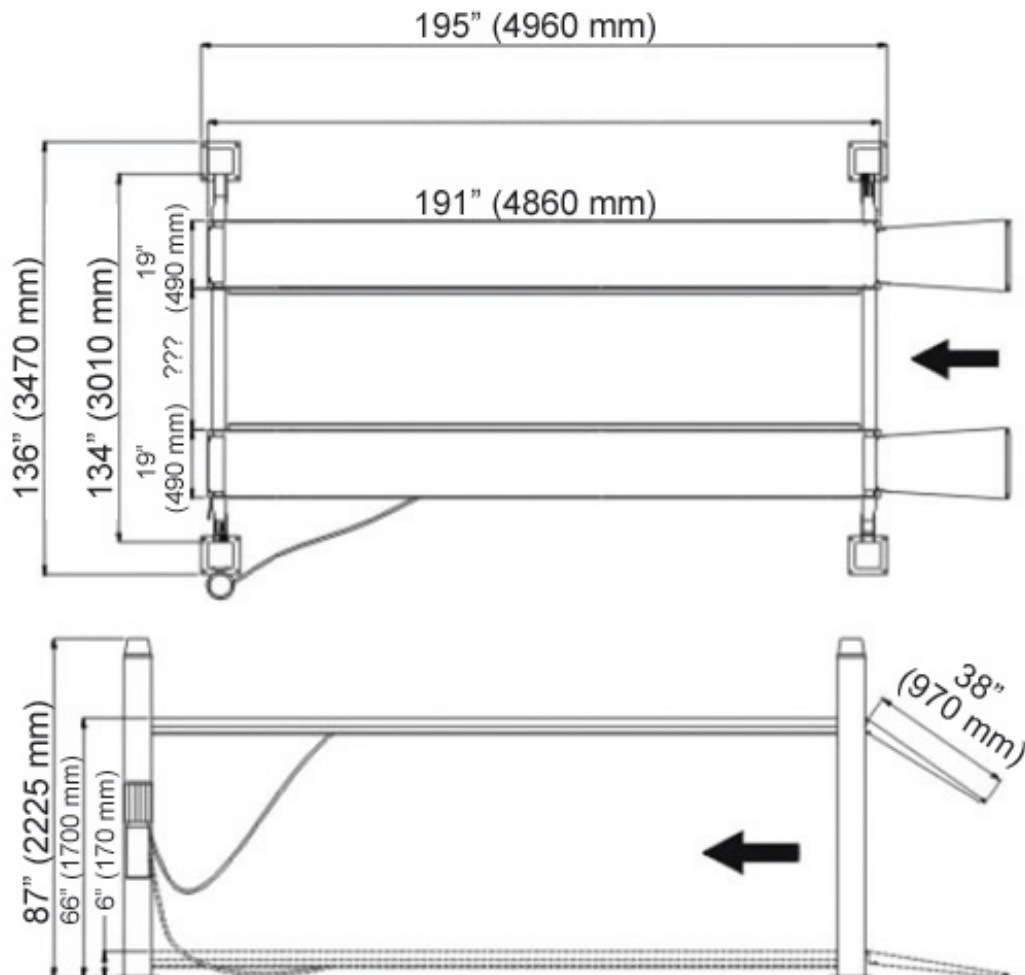
When loading/unloading or transporting the equipment to the site, be sure to use suitable loading (e.g. cranes, trucks) and hoisting means. Be sure to hoist and transport the components securely so that they cannot drop, taking into consideration the package's size, weight and center of gravity and it's fragile parts.

 **WARNING: LIFT AND HANDLE ONLY ONE PACKAGE AT A TIME**

### 3. SPECIFICATIONS

Specifications	HD4P-12000
Overall Height	87" (2225mm)
Overall Width	136" (3470mm)
Raising / Lowering time	Approx. 51s
Lifting height max.	66" (1700mm)
Lifting height min.	6" (170mm)
Drive-through clearance max.	118" (3010mm)
Runway Width	19" (490mm)
Runway Length	191" (4860mm)
Load capacity	12,000 lbs" (5500kg)
Net weight	2,866 lbs (1300kg)
Concrete grade min.	C20/25(DIN 1045:2001-07)
Motor power	2.2KW
Power supply	3~380V +PE
Sound pressure level	≤75dB(A)

**i** **IMPORTANT: COMPONENTS AND SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.**



## **4. FLOOR REQUIREMENT**

These notes are for your guidance prior to installation.

### **4.1 SELECTING THE SITE AREA**

Make sure that adequate space and height is available.

### **4.2 FLOOR REQUIREMENTS**

Do not use the lift on any asphalt surface. Make sure the lift is used on a dry, oil/grease free, flat level CONCRETE surface capable of supporting the weight of the lift, the vehicle being lifted, and any additional tools and equipment. The concrete floor surface should have a minimum thickness of 6". The concrete must have a minimum strength of 3,000 PSI, and should be aged at least 30 days prior to use. Do not use the lift on concrete expansion seams or on cracked, defective concrete.



**WARNING: SPECIFICATIONS OF CONCRETE MUST BE ADHERED TO. FAILURE TO DO SO COULD CAUSE LIFT FAILURE RESULTING IN PERSONAL INJURY OR DEATH. THE FLOOR SHOULD BE A REINFORCED CONCRETE SLAB NOT LESS THAN 6" (101.6MM) THICK, COMPRESSIVE STRENGTH OF CONCRETE NO LESS THAN 3,000 PSI (20.68MPA).**



**DANGER: FOR CORRECT INSTALLATION OF THE LIFT, THE FLOOR MUST BE FLAT AND LEVEL. CHECK WITH STRAIGHT EDGE AND LEVEL. IF A FLOOR IS OF QUESTIONABLE SLOPE, CONSIDER A SURVEY OF THE SITE AND/OR THE POSSIBILITY OF POURING A NEW LEVEL CONCRETE SLAB.**



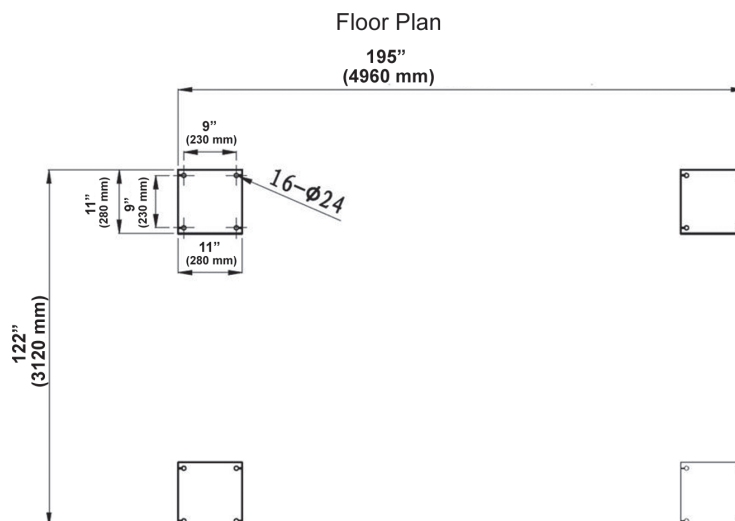
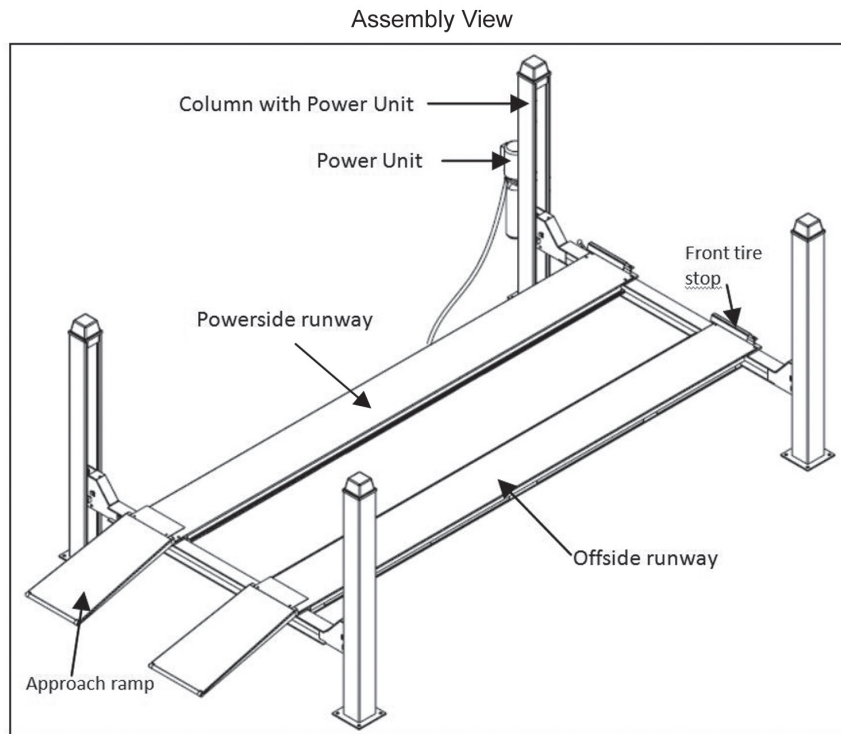
**IMPORTANT: NEW CONCRETE MUST BE ADEQUATELY CURED AT LEAST 30 DAYS MINIMUM. NO LIABILITY FOR ANY DAMAGES WILL BE ACCEPTED SHOULD YOU INSTALL THE LIFT ON AN UNSUITABLE FLOOR.**

# 5. INSTALLATION INSTRUCTIONS

## 5.1 ASSEMBLY VIEW & FLOOR PLAN

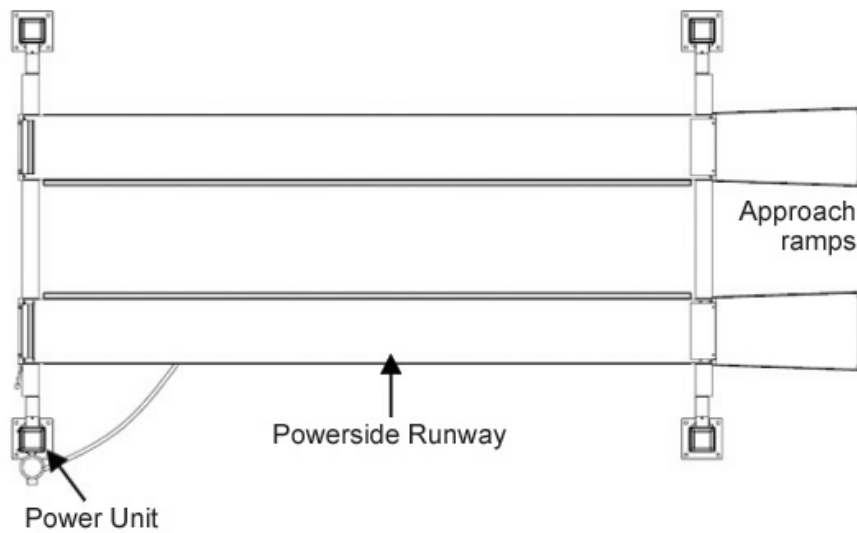


**IMPORTANT: BEFORE ATTEMPTING TO ASSEMBLE THIS LIFT TO MAKE SURE THAT THERE IS ENOUGH ROOM FOR ALL COMPONENTS. THE SAFETY ROD ASSEMBLY WILL TAKE UP ADDITIONAL SPACE WHILE BEING INSTALLED. KEEP THE FLOOR AREA CLEAR OF THE LIFT COMPONENTS UNTIL THEY ARE READY TO BE INSTALLED.**



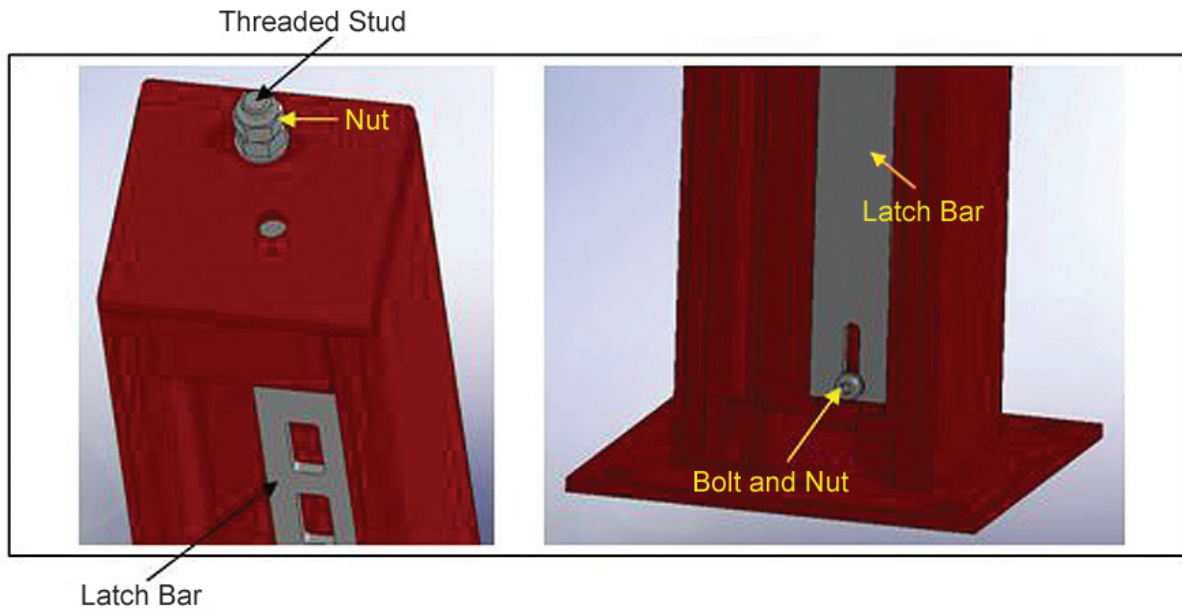
## 5.2 POWER UNIT LOCATION

The power unit should be located at SAME SIDE as the POWERSIDE runway (with cylinder.) Utility rails on the side of each runway MUST be installed to the inside. **For the remainder of this instruction manual we will illustrate the power unit mounted at the DRIVER-SIDE (LEFT) FRONT column.**



## 5.3 COLUMN & CROSSBEAM INSTALLATION

5.3.1 Install the latch bar (safety lock ladders) into columns with threaded stud end exposed through the hole in top plate. DO NOT tighten the top nut and DO NOT secure the bottom of latch bar at this time. (See Fig. 5.3.1)



5.3.2 Place a chalk line on the floor according to the floor plan layout. Stand the columns at their respective locations. DO NOT BOLT columns down at this time. Use caution to prevent the columns from falling over. Place one crossbeam next to their appropriate columns with cable sheave window positioned inward. Hold the threaded stud and raise the Latch Bar to clear space for assembling crossbeams into columns (making sure the plastic slide blocks are still in position,) then drop down the latch bar through the slide block guide slots on crossbeams until the ladders come to rest on the base plates. Tighten the top nut on top plate and secure the bottom latch bar with bolt, nut and washer. Complete the same process for the other crossbeam.

## 5.4 RAISING THE CROSSBEAMS

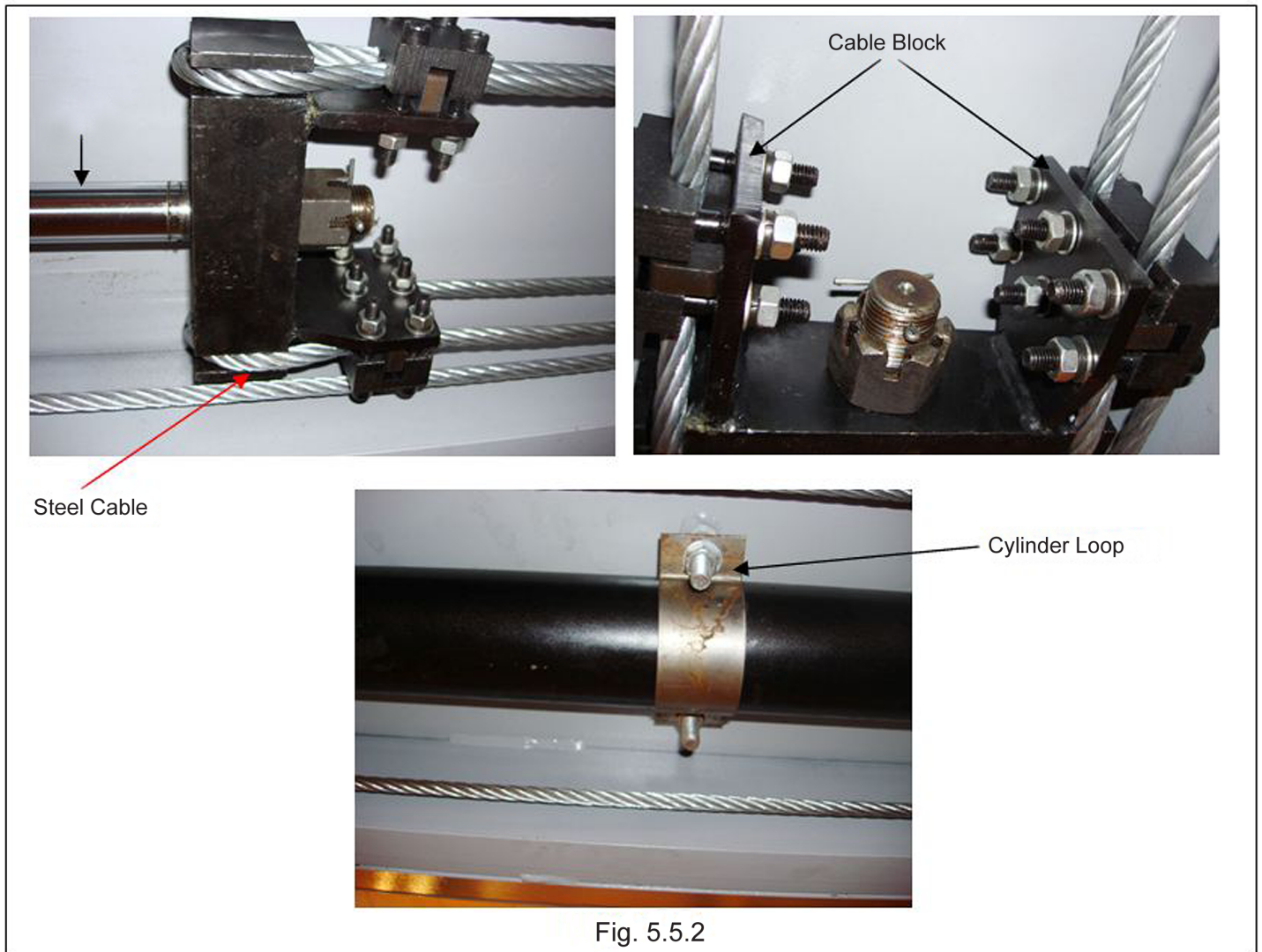
5.4.1 Raise the crossbeams until the primary safety locks engage to facilitate Cable routing and final assembly.

5.4.2 The COLUMNS and CROSSBEAMS will now be in position and spaced properly for the runways. Be careful not to disturb the Columns and Crossbeams at this time as they may tip over causing personal injury or harm.

## 5.5 CYLINDER INSTALLATION

5.5.1 Locate the POWERSIDE RUNWAY easily identified by the Cylinder and Sheave roller mounting structures welded on the underside. The Powerside Runway will be positioned on the left of the lift where the Power Unit is installed.

5.5.2 In order to install the cables, it is necessary to first extend the HYDRAULIC CYLINDER. Install Cylinder and Cables as shown in Explosive Diagram and Fig.5.5.2.



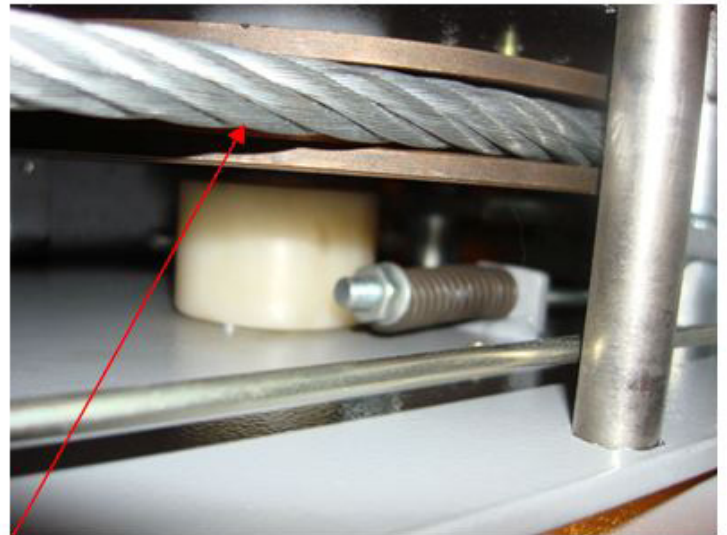
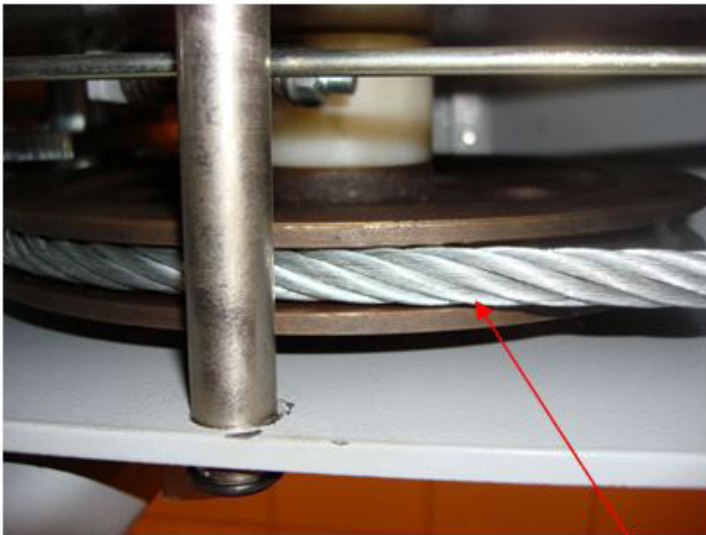
5.5.3 Install the SHEAVES with AXLES under the Powerside Runway and route cables. (Refer to Explosive Diagram & Fig.5.5.3)



**Fig. 5.5.3**

5.5.4 Route the Cable ends through the ends of each Crossbeam over the SLACK SAFETY SHEAVE then to the top of each column. Tighten the nut using Hex Nuts and Flat Washers.

5.5.5 After routing the Cables double-check to make sure all are properly positioned and REMAIN WITHIN THE GROOVES of ALL Sheaves. (See Fig.5.5.5)

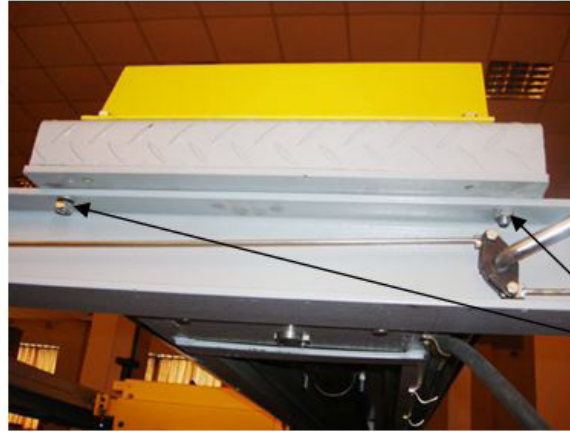


All cables MUST remain in sheave grooves. Before lift start-up check all cables for proper routing.

**Fig. 5.5.5**

## 5.6 RUNWAY INSTALLATION

Before routing ends through the ends of each crossbeam over the slack safety sheave to top of each column, position the POWERSIDE RUNWAY on top of the Crossbeams with the UTILITY RAIL towards the center. The fitting holes located at the side of the Powerside Runway should be adjacent the POWER UNIT COLUMN. Align the holes in the runway with the holes on the Crossbeams and bolt together (torque to 35-45 PSI) using hex head bolts and nuts. (Refer to Explosive Diagram & Fig.5.7.1.) Complete the same process for the offside runway.



Bolt runway to the Crossbeams using hex head bolts and nuts.

Fig. 5.7.1

## 5.7 POWER UNIT INSTALLATION

Mount the POWER UNIT to the Mounting Bracket using the M8 Hex Bolts and nuts (torque to 35-45 PSI) then FILL THE RESERVOIR with 20-quarts of 10-WT hydraulic oil or Dexron III automatic transmission fluid.

## 5.8 ROUTING HYDRAULIC HOSES

Install the hydraulic fittings to the power unit and base end of the cylinder under runway, run the power unit hose through the front crossbeam tube to the cylinder base.(refer to Explosive diagram & Fig. 5.8)



Fig. 5.8

## 5.9 LIFT START UP / FINAL ADJUSTMENTS

5.9.1 Make sure the POWER UNIT RESERVOIR is full. Fill the oil tank with a premium quality ISO-32, Akl-46 Hydraulic Oil or premium quality ATF-DEXRON-III/MERCON.

5.9.2 Spray a light lubricant to the inside of the columns where the slide blocks glide.

5.9.3 Test the power unit by pressing “UP” button. If the motor sounds like it is operating properly, raise the lift and check all hose connections for leaks. If the motor gets hot or makes unusual sounds, stop and check all electrical connections.

5.9.4 Before proceeding, double-check to make sure all cables are properly positioned within the grooves of ALL sheaves. Make sure all cable sheave retaining pins and/or clips are secure.

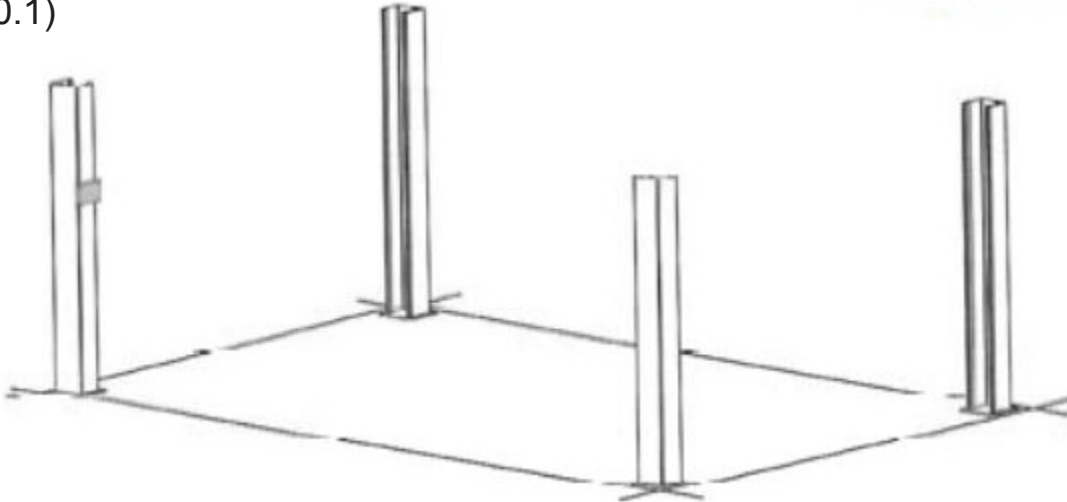
5.9.5 Check to make sure that all slack safety locks are cleared and free.

5.9.6 Continue pressing the “UP” button until the cables get taught and the lift starts to move.

5.9.7 RAISE LIFT UNTIL THE CYLINDER BOTTOMS OUT AND THE LIFT STOPS. ADJUST EACH CABLE SO THAT EACH SAFETY LOCK RESTS ABOVE THE TOP SAFETY LOCK POSITION. It may be necessary to tighten or loosen each cable to reach the proper height. The cable nuts **MUST** be tightened until there is at least one inch of threads protruding through the nut.

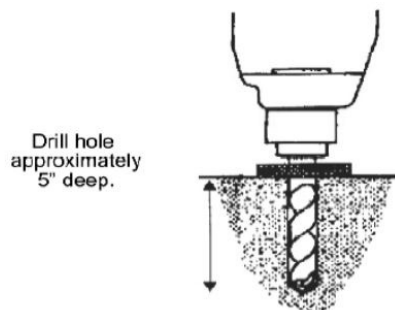
## 5.10 ANCHORING THE COLUMNS

5.10.1 Before proceeding, **DOUBLE CHECK MEASUREMENTS** and make certain that the bases of each column are square and aligned with the chalk line. Raise the lift up and down and make sure it operates properly at the locations prescribed by the markings on the floor. (See Fig. 5.10.1)



**Fig. 5.10.1**

5.10.2 Using the BASE PLATE on each column as a guide, drill each anchor hole approximately 5” deep using a rotary hammer drill and 3/4” concrete bit. ( See Fig. 5.10.2)



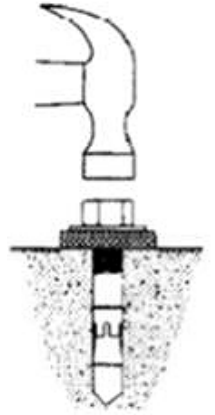
**Fig. 5.10.2**

5.10.3 After drilling, REMOVE DUST thoroughly from each hole using compressed air and/or bristle brush. Make certain that the columns remain aligned with the chalk line.

5.10.4 Assemble the washers and nuts on the anchors then tap into each hole with a hammer until the washer rests against the base plate. Be sure that if shimming is required, enough **THREADS ARE LEFT EXPOSED**. ( See Fig. 5.10.4)

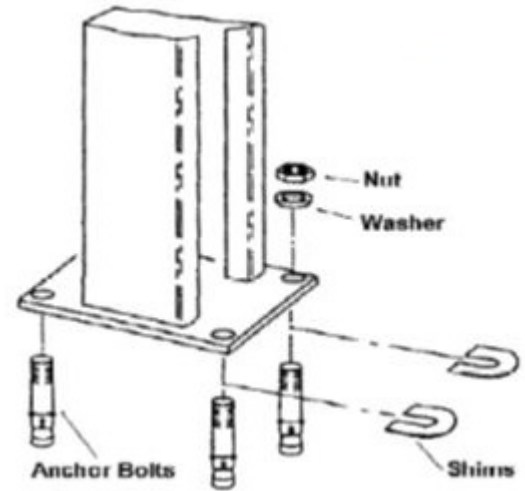
**Fig. 5.10.4**

Tap anchor bolts into each hole with a hammer until the washer rests against the baseplate.



5.10.5 If shimming is required, insert the shims as necessary under the base plate so that when the anchor bolts are tightened, the columns will be plumb. (See Fig. 5.10.5)

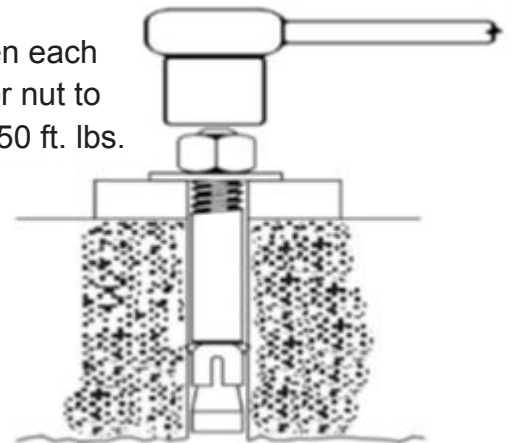
**Fig. 5.10.5**



5.10.6 After any necessary shims are installed, tighten each anchor nut to 125-150 ft. lbs. **IMPORTANT** - If anchor bolts do not hold when torqued to required amount, concrete must be replaced. Saw cut and remove 24" x 24" square area under each column base then repour with reinforced 3000 PSI concrete to a depth of six inches minimum, keying new concrete under existing floor. (See Fig. 5.10.6)

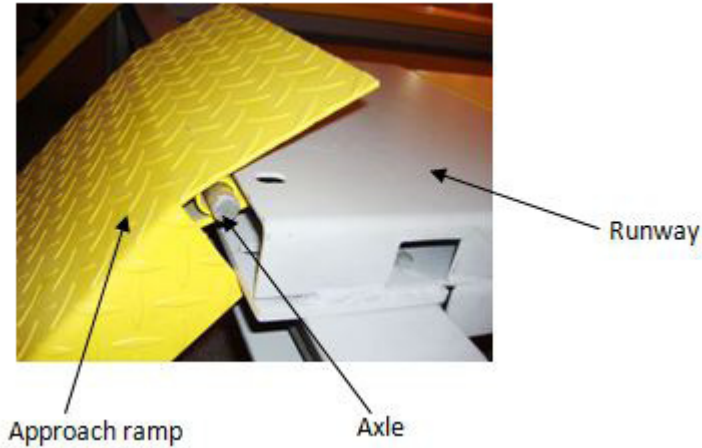
**Fig. 5.10.6**

Tighten each anchor nut to 125-150 ft. lbs.



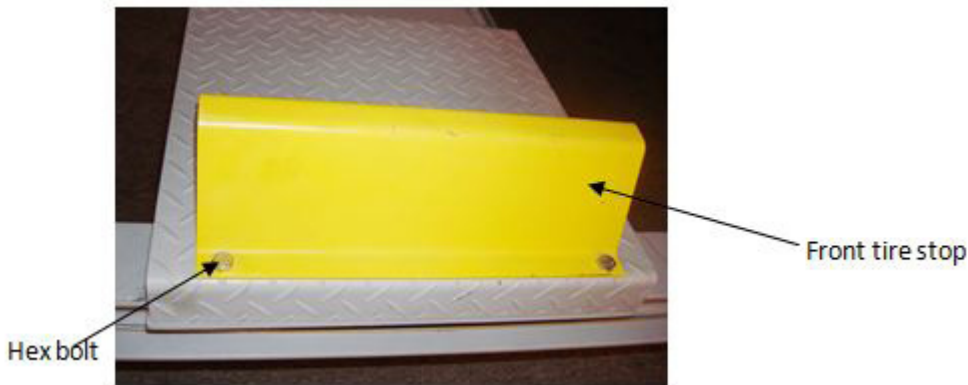
## 5.11 FINAL ASSEMBLY

5.11.1 Install the approach ramps on the entry side of the lift.



**Fig. 5.11.1**

5.11.2 Install the front tire stops at the forward side of the lift using hex bolts, nuts and washers. Torque to 35-45 PSI.



**Fig. 5.11.2**

## 5.12 LEVELING/SYNCHRONIZING

5.12.1 Using an engineer's automatic Level (transit), locate the Level, at a convenient location in the shop that allows an unobstructed view of all four corners of the runways.

5.12.2 Follow the Level manufacturer's instructions for proper setup of the Level. Be sure it is ADJUSTED LEVEL in all directions.

5.12.3 Raise the lift approximately 30"- 40". Then lower lift until all locking latches are engaged in each column and the runways are in full down position on locks.

5.12.4 Place a Level target on the right/front corner of the runway. (See Fig. 5.12)

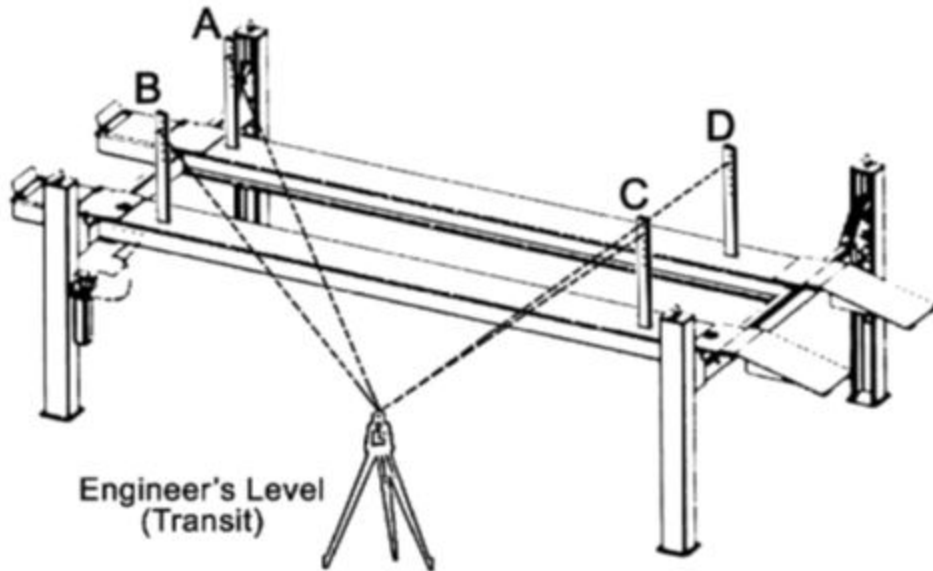
5.12.5 Beginning with "A" position, sight the level to the target and mark the number or the graduation on the inch scale of the target that aligns to the cross hairs of the Level. (See Fig. 5.12)

5.12.6 Next, move the target and place it at point “B” on the runway. (See Fig. 5.12)

5.12.7 Rotate the Level and focus on the target scale.

5.12.8 Adjust the adjustment nut on the safety ladder bar at the top of the Column at “B” until the cross hair of the Level align to reference mark on the target scale. (See Fig. 5.12)

5.12.9 Repeat steps locating the target assembly at points “C” and “D” and adjusting safety ladders at each corresponding column until the reference mark on the target scale is on the cross hair of the Level. The runways are now level at all four points. (See Fig. 3.14)



**Fig. 5.12**

5.12.10 To complete the leveling procedures, SNUG EACH SAFETY LADDER TOP NUT against the bottom of the Column Top Plate. Torque to 35-45 PSI.

5.12.11 Next, load vehicle onto the lift.

5.12.12 Raise the lift to full height. Listen and watch as the locking latches click in place. SYNCHRONIZE BY ADJUSTING THE CABLES so that all four latches click at the same time. Make necessary adjustments to the cables allowing COMPENSATION FOR STRETCH.



Safety locks may not click in at exactly the same time when vehicles are being raised. They should be close. Be sure that all four corners have passed the SAME safety Ladder Bar slot before lowering lift on the safety locks. NEVER lower lift on different safety lock position or damage to the lift may result.

## **5.13 BLEEDING**

5.13.1 Lift must be fully lowered before changing or adding fluid.

5.13.2 Raise and lower lift six times. The cylinder is self-bleeding. After bleeding system, fluid level in power unit reservoir may be down. Add more fluid if necessary to raise lift to full height. It is only necessary to add fluid to allow full height raise.

5.13.3 To pressure test, run lift to full rise and run motor for approximately 3-seconds after lift stops. This will place pressure on the hydraulic system. Stop and check all fittings and hose connections. Tighten or reseal if required.

## 6. OPERATION INSTRUCTIONS

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Lift operation by trained authorized personnel over 18 years only.

Apply the parking brake after positioning the vehicle on the lift.

Do not allow anyone to stay in lift area during raising and lowering cycles.

Closely watch the vehicle and the lift during raising and lowering cycles.

Observe the rated load capacity and load distribution.

Do not allow anyone to climb on lift or stay inside vehicle.

Before raising and lowering the lift, always secure the vehicle with wheel chocks.

Make sure the vehicle doors are closed during raising and lowering cycles.

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### 6.1 DEFECTS/MALFUNCTIONS

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In case of defects or malfunctions such as jerky lift movement or deformation of the superstructure, support or lower the lift immediately.

Turn off the power and Contact qualified service personnel.

---

### 6.2 CONTROLS

#### 6.2.1 UP CONTROL

Once the up button (Fig. 6.2.1) is pressed, the lift moves up until the button is released or the limit stop is reached.

#### 6.2.2 LOWERING CONTROL

Press Up button enough to make the safety lock blocks disengage the safety stops on the columns. Pull and hold the safety lock release handle, and then press the lowering handle (Fig 6.2.2) at same time, until the lift is completely lowered.

### 6.2.3 SAFETY LOCK CONTROL

Press and hold the lowering control (Fig. 6.2.2) until the safety lock blocks are engaged to level safety ladder stops on the columns. (Fig. 6.2.3)

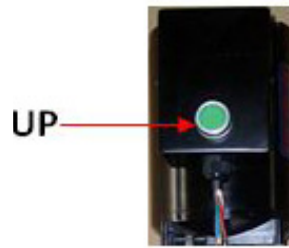


Fig. 6.2.1

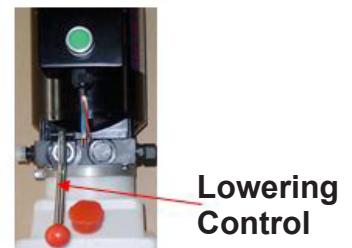


Fig. 6.2.2

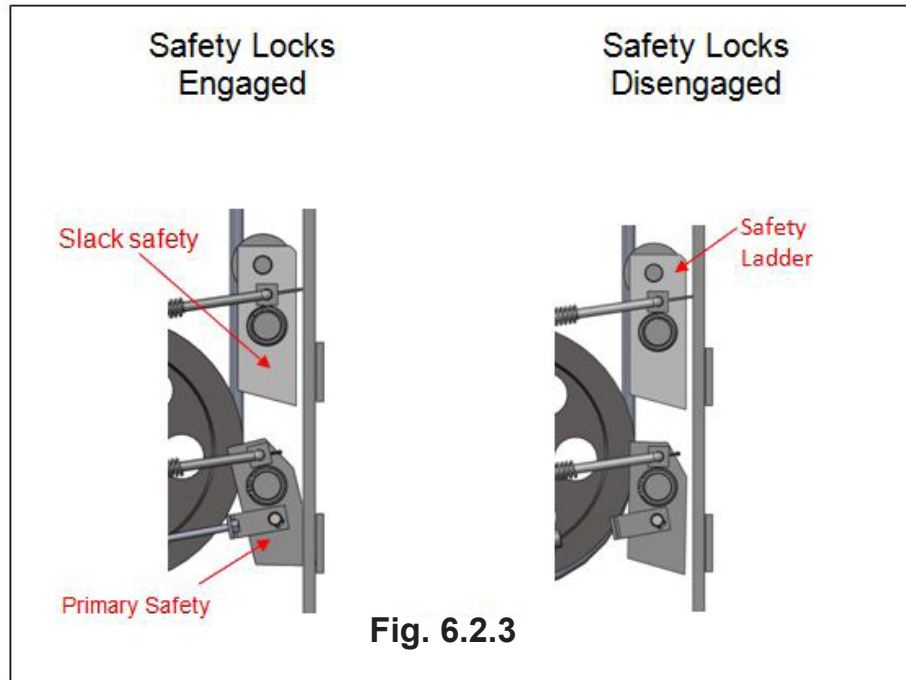


Fig. 6.2.3

## 6.3 OPERATION

### 6.3.1 VEHICLE LOADING

1. Make sure front tire stop plates are in place and, position vehicle on lift runways by having another person guide you onto the runways.
2. Check for proper weight distribution (center of gravity should be evenly distributed between columns).
3. Set vehicle parking brake and chock tires to prevent vehicle movement.
4. Use caution before lifting pickup trucks, suv's and other vehicles. The individual axle weight capacity should not exceed 1/2 of lift capacity.
5. Make sure vehicle is neither front nor rear heavy.
6. Make sure to install all front and rear tire stop plates prior to raising the lift with a vehicle.

### 6.3.2 RAISING LIFT

1. Push the up button to raise lift until platform runways clear the floor.
2. Stop and check for vehicle movement and vehicle weight distribution. If secure raise to desired height.
4. Always lower the lift to the nearest lock position by pressing the lowering handle to relieve the hydraulic pressure and let the safety lock blocks set in a handle locked position.
5. Never work under a lift that is not in a level safety locked position.

### 6.3.3 LOWERING LIFT

1. Clear all obstacles from under lift and vehicle, and ensure only lift operator is in the lift area.
2. Stay clear of lift and raise the lift off the safety locks.
3. Pull safety lock release handle and press the lowering handle to begin descent.
4. Ensure lift is fully lowered, and remove tire stop plates prior to unloading the vehicle.
5. Make sure to install the ramps.
6. Having another person guide you, carefully unload the lift by driving off of the lift runways.



**WARNING: 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.**



**IMPORTANT: It is normal for an empty lift to lower slowly - it may be necessary to add weight.**



**WARNING: THE OPERATOR MUST BE TRAINED AND AUTHORIZED TO OPERATE THE LIFT.**



**WARNING: DO NOT GO UNDER VEHICLE UNDER ANY CIRCUMSTANCES WHILE VEHICLE IS BEING LIFTED OR LOWERED.**

## 7. MAINTENANCE



**WARNING: DISCONNECT THE POWER BEFORE SERVICING THE LIFT.**



**IMPORTANT: THE MAINTENANCE INTERVALS INDICATED BELOW APPLY TO AVERAGE WORKSHOP USE. THE LIFT SHOULD BE INSPECTED MORE FREQUENTLY FOR SEVERE USE APPLICATIONS.**

### 7.1 MAINTENANCE SCHEDULE

It is important to keep the lift clean, dry, and well maintained by establishing a periodic preventive maintenance program to ensure trouble-free operation and long service life.

### **7.1.1 DAILY**

1. Check safety lock audibly and visually while in operation
2. Check safety latches for free movement and full engagement with the safety stops on the column.
3. Check hydraulic connections, and hoses for leakage.
4. Check cables connections bends, cracks-and for loose fittings.
5. Check for frayed cables in both raised and lowered position.
6. Check snap rings at all rollers and sheaves.
7. Check bolts, nuts, and screws and tighten if needed.
8. Check wiring & switches for damage.
9. Check floor for stress cracks near columns.
10. Check Lubrications on cable sheaves and shafts.

### **7.1.2 WEEKLY**

1. IF LIFT IS ANCHORED TO FLOOR - Check anchor bolts torque to 50 ft-lbs for the  $\frac{3}{4}$ " anchor bolts. Do not use an impact wrench to tighten anchor bolts.
2. Check floor for stress cracks near column.
3. Check hydraulic oil level.
4. Check and tighten bolts, nuts, and screws.
5. Check all cable sheaves/assembly for free movement or excessive wear on cable sheave shaft.
6. Check for any locks and tighten as necessary.

### **7.1.3 YEARLY**

1. Lubricate the cables sheave shaft by using grease gun at least once a year after the lift is in service.
2. Check for excessive wear of cable. Replace them if necessary.
3. Change the hydraulic fluid - good maintenance procedure makes it mandatory to keep hydraulic fluid clean. 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.

### **7.1.4 SPECIAL MAINTENANCE TASKS**

**NOTE:** The following items should only be performed by a trained maintenance expert:

1. Replacement of hydraulic hoses.
2. Replacement of cables and sheaves.
3. Replacement or rebuilding air and hydraulic cylinders as required.
4. Replacement or rebuilding pumps / motors as required.
5. Checking of hydraulic cylinder rod and rod end (threads) for deformation or damage.

## 7.2 MAINTENANCE BY OPERATOR

1. All moving parts have been lubricated at the factory and should be re-lubricated before the first use and at least once every six months to prevent damage.

### 7.2.1 HYDRAULIC SYSTEM (FIG. 6)

1. Check the fluid level with the lift fully lowered and add fluid as required. Use premium quality ISO-32, AW-32, or AW-46 hydraulic oil, or premium quality ATF DEXRON-III/MERCON.
2. Visually check all hydraulic hoses and connections for tightness before each use to ensure proper working condition.
3. Lightly oil the cylinder rod at least once every six months or when it becomes dry.



**Fig. 6**

### 7.2.2 GREASING POINTS

Slide Tracks:

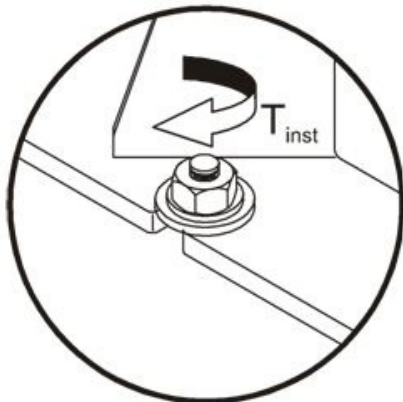
The slide tracks should be greased every six months (or more frequently in case of noise generation).

Lightly grease the slide tracks over their whole length using a brush.

### 7.2.3 OPERATION AND WEAR CHECKS.

1. Examine lift for structural cracks, bends, or other signs of damage prior to each use. Do not use this product if worn or damaged.

### 7.2.4 LIFT STABILITY



1. Every six months check the nuts of all anchor bolts for correct installation torque of 125 - 150 lbs.
2. Retighten them as required.

## 7.3 CLEANING



**DANGER: DO NOT USE HIGH PRESSURE / STEAM JET CLEANERS OR CAUSTIC CLEANING AGENTS.**

**RISK OF DAMAGE!**

- 1. PERIODICALLY WASH OFF AGGRESSIVE SUBSTANCES AND TREAT THE LIFT WITH OIL OR WAX SPRAY.**
- 2. REPAIR THE DAMAGE TO THE PAINTWORK IMMEDIATELY TO PREVENT CORROSION. THE RAL NUMBER IS AVAILABLE THROUGH THE MANUFACTURER.**

## 7.4 TROUBLESHOOTING GUIDE

The following are suggestions to consider if you have problems with the lift. Please call a qualified lift technician and/or a qualified electrician for further clarification and information.

# **LIFT WILL NOT RAISE**

POSSIBLE CAUSE	REMEDY	INSTRUCTION
1. Air in oil, (1,2,8,13)	1. Check for proper oil level	The oil level should be up to the bleed screw in the
2. Cylinder binding, (9)	2. Bleed cylinders	See Installation Manual
3. Cylinder leaks internally, (9)	3. Flush- Release valve to get rid of possible contamination.	Hold release handle down and start unit allowing it to run for 15 seconds.
4. Motor run backward under pressure, (11)	4. Dirty oil	Replace oil with clean <u>Dexron</u> ATF
5. Lowering valve leaks, (3,4,6,10,11)	5. Tighten all fasteners	Tighten fasteners to recommended torques.
6. Motor runs backwards, (7,14,11)	6. Check for free movement of release	If handle does not move freely, replace bracket or
7. Pump damaged, (10,11)	7. Check motor is wired correctly.	Compare wiring of motor to electrical diagram on drawing.
8. Pump won't prime, (1,8,13,14,3,12,10,11)	8. Oil seal damaged or cocked	Replace oil seal around pump shaft.
9. Relief valve leaks, (10,11)	9. See Installation Manual	Consult Lift Manufacturer
10. Voltage to motor incorrect, (7,14,11)	10. Replace with new part	Replace with new part
	11. Return unit for repair	Return unit for repair
	12. Check pump-mounting bolts	Bolts should be 15 to 18 ft. lbs.
	13. Inlet screen clogged	Clean inlet screen or replace
	14. Check wall outlet voltages and wiring	Make sure unit and wall outlet are wired properly.

# **MOTOR WILL NOT RUN**

POSSIBLE CAUSE	REMEDY	INSTRUCTION
1. Fuse blown, (5,2,1,3,4)  2. Limit switch burned out, (1,2,3,4)  3. Microswitch burned out, (1,2,3,4)  4. Motor burned out, (1,2,3,4,6)  5. Voltage to motor incorrect, (2,1,8)	1. Check for correct voltage	Compare supply voltage with voltage on motor name tag. Check that the wire is sized correctly. N.E.C. table 310-12 requires AWG 10 for 25 Amps.
	2. Check motor is wired correctly	Compare wiring of motor to electrical diagram on drawing.
	3. Don't use extension cords	According to N.E.C.: "The size of the conductors... should be such that the voltage drop would not exceed 3% to the farthest outlet for power..." Do not run motor at 115 VAC – damage to the motor will occur.
	4. Replace with new part	Replace with new part
	5. Reset circuit breaker/fuse	Reset circuit breaker/fuse
	6. Return unit for repair	Return unit for repair
	7. See Installation Manual	See Installation Manual
	8. Check wall outlet voltage and wiring	Make sure unit and wall outlet is wired properly. Motor must run at 380V.

# **LIFT WILL NOT STAY UP**

POSSIBLE CAUSE	REMEDY	INSTRUCTION
1. Air in oil, (1,2,3)	1. Check oil level	The oil level should be up to bleed screw with lift down.
2. Check valve leaks, (6)	2. Oil seal damaged and cocked	Replaced oil seal around pump shaft.
3. Cylinders leak internally, (7)	3. Bleed cylinder	Refer to Installation Manual
4. Lowering valve leaks, (4,5,1,7,6)	4. Flush release valve	Hold release handle down and start unit allowing it to run for 15 seconds.
5. Leaking fittings, (8)	5. Replace with new valve	Replace with new valve
	6. Return unit for repair	Return unit for repair
	7. See Installation Manual	Consult Lift Manufacturer
	8. Check complete hydraulic system for leaks	

# **WILL NOT RAISE LOADED LIFT**

POSSIBLE CAUSE	REMEDY	INSTRUCTION
1. Air in oil, (1,2,3,4)	1. Check oil level	The oil level should be up to the bleed screw in the reservoir with the lift all the way down.
2. Cylinder binding, (5)	2. Check/Tighten inlet tubes	Replace inlet hose assembly.
3. Cylinder leaks internally, (5)	3. Oil seal damaged or cocked	Replace oil seal and install
4. Lift overloaded, (6,5)	4. Bleed cylinders	See Installation Manual
5. Lowering valve leaks, (7,8,1,5,9)	5. See Installation Manual	Consult Lift Manufacturer
6. Motor runs backwards, (10,12,9)	6. Check vehicle weight	Compare weight of vehicle to weight limit of the lift.
7. Pump damaged, (5,9)	7. Flush release valve	Hold release handle down and start unit allowing it to run for 15 seconds.
8. Pump won't prime, (1,2,3,4,5,11,9)	8. Replace with new part	Replace with new part
9. Relief valve leaks, (8,5,9)	9. Return unit for repair	Return unit for repair
10. Voltage to motor incorrect, (10,12,5)	10. Check motor is wired correctly	Compare wiring of motor to electrical diagram on unit drawing
	11. Inlet screen clogged	Clean inlet screen or replace.
	12. Check wall outlet voltage and wiring	Make sure unit and wall outlet is wired properly.

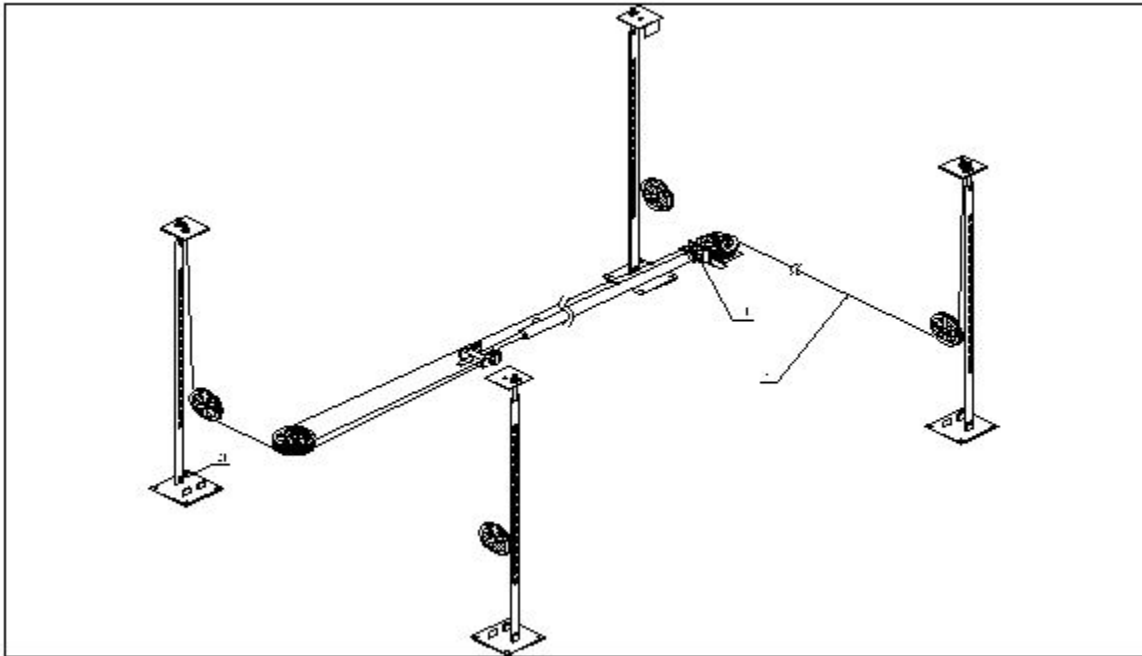
# LIFT LOWERS SLOWLY OR NOT AT ALL

POSSIBLE CAUSE	REMEDY	INSTRUCTION
1. Cylinders binding, (1)	1. See Installation Manual	Consult Lift Manufacturer
2. Release valve clogged, (5,4,2,3)	2. Replace with new part	Replace with new part
3. Pressure fitting too long, (6)	3. Return for repair	Return for repair
	4. Check oil	Use clean 10-WT hydraulic oil or Dexron-III automatic transmission fluid only. If ATF is contaminated, replace with clean ATF and clean entire system.
	5. Clean release valve	Wash release valve in solvent and blow out with air.
	6. Replace fitting with short thread lead	Replace fitting with short thread lead

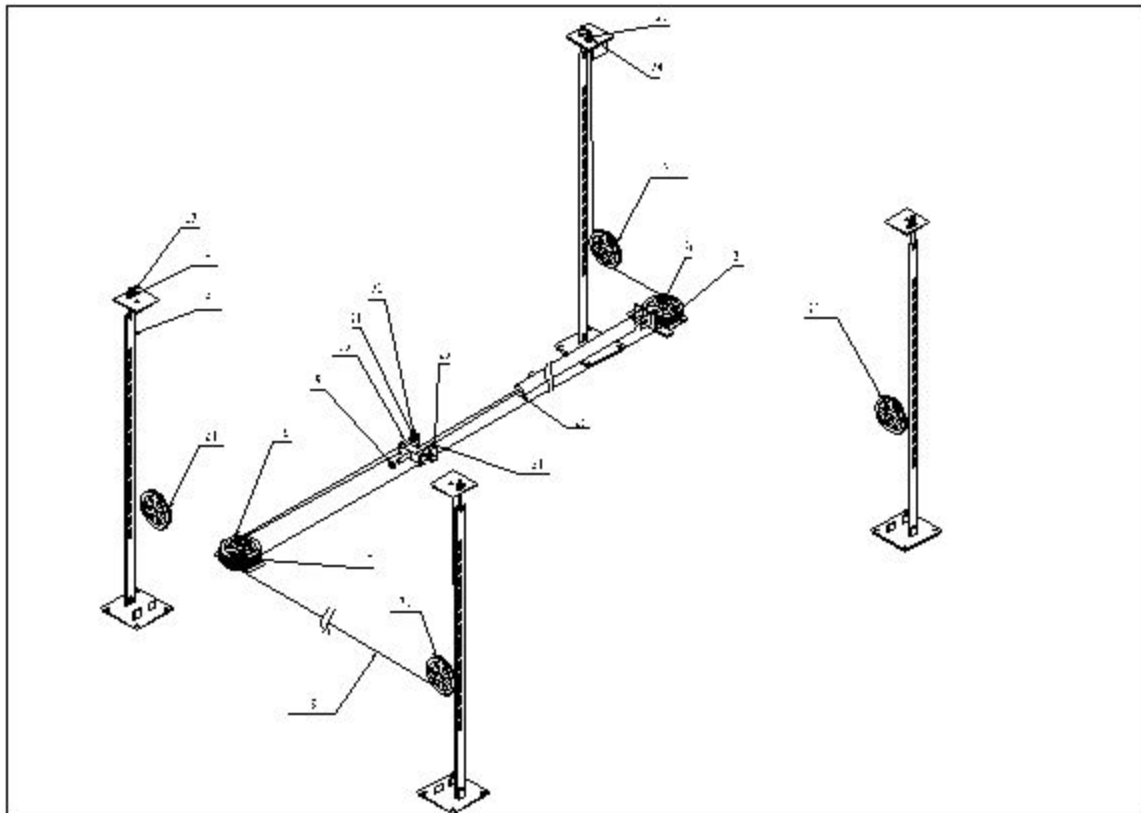
# **8. DIAGRAMS & PARTS LIST**

## **8.1 DIAGRAMS**

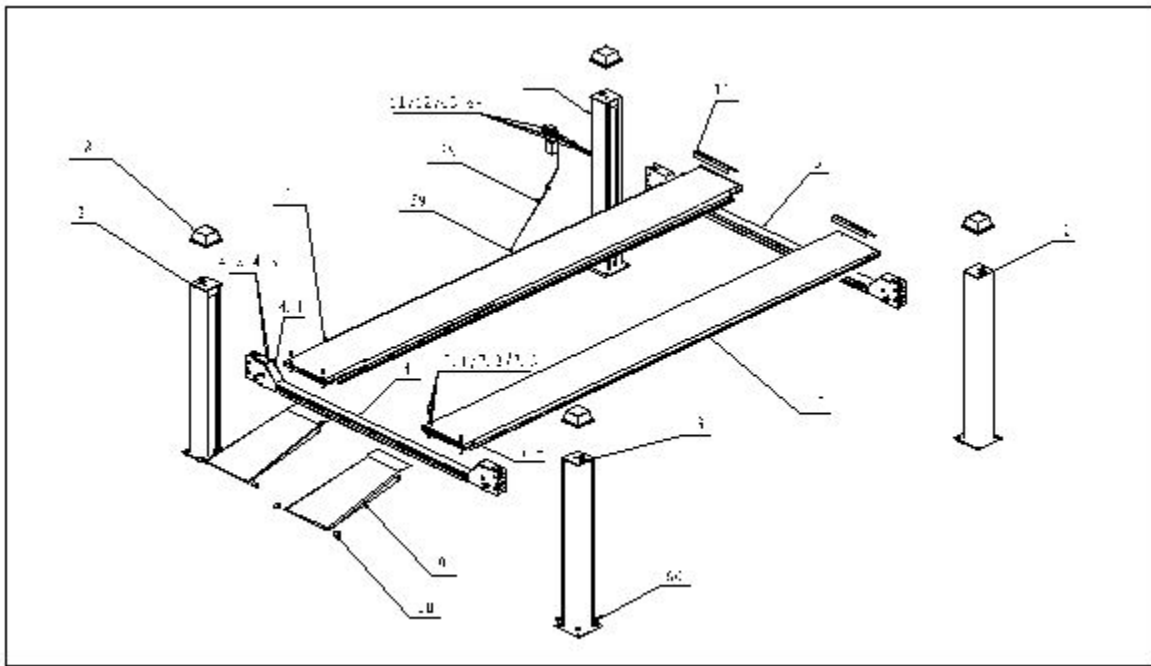
**FIG. 1**



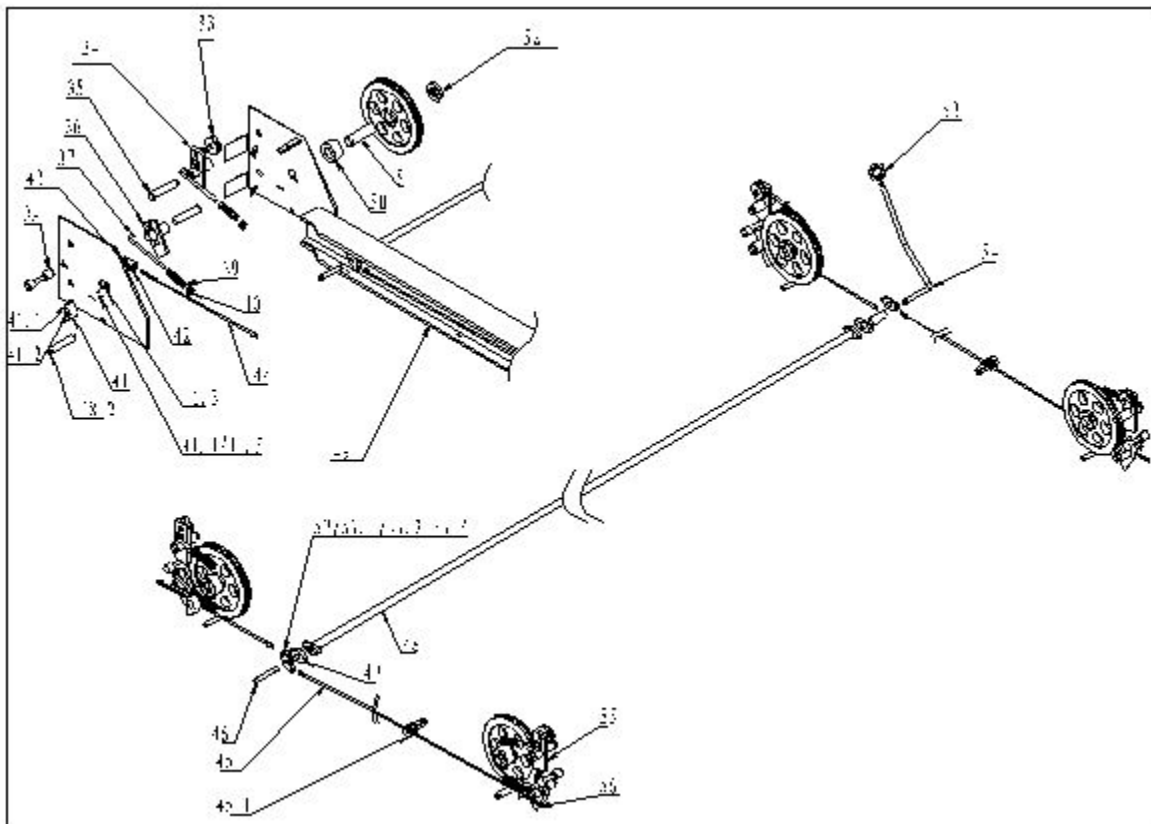
**FIG. 2**



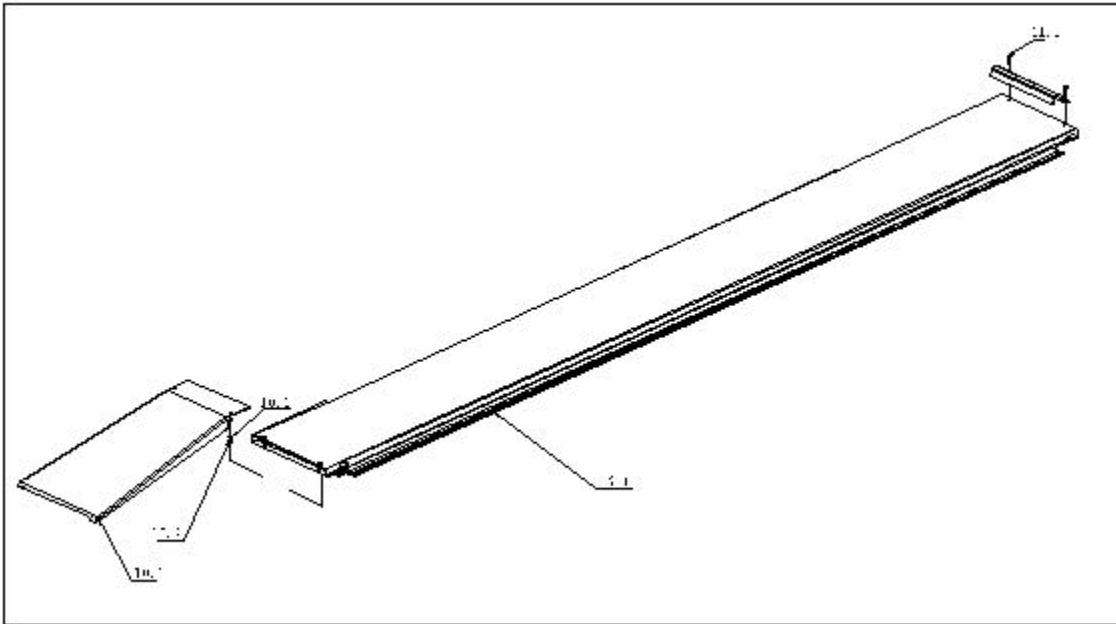
**FIG. 3**



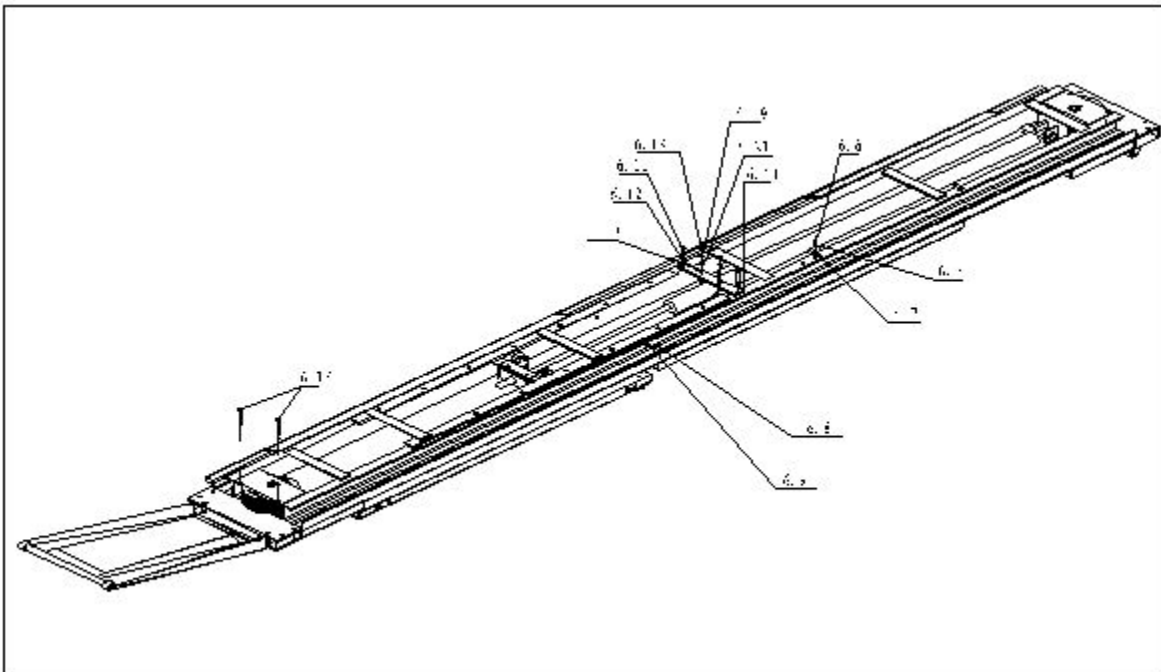
**FIG. 4**



**FIG. 5**



**FIG. 6**



## **8.2 PARTS LIST**

NO.	DESCRIPTION	QTY
1	Main column parts 1	1
2	Column parts 2	2
3	Column parts 3	1
4	Cross beam parts 1	1
4.1	Hiding board	4
4.2	Z Cross bolt	4
4.3	Flat washer C	4
5	Cross beam parts 2	1
6	Runaway 1	1
6.1	Runaway 1 Jointing parts	1
6.5	Big washer A & C	3
6.6	Z Cross bolt	3
6.7	Pose pump board	3
6.8	Safety transmission pole clasp	1
6.9	Hexangular nut	2
6.11	Hexangular bolt C	2
6.12	Flat washer C	4
6.13	Orientation bolt	4
6.14	Profiled bar connection	1
6.17	U Bolt	1
6.18	Hexangular nut	2
6.19	Spring washer	2
6.21	Flat washer C	2
7	Runaway 2	1
7.1	Hexangular bolt C	9
7.2	Hexangular nut C	9
7.3	Flat washer C	9
7.4	Hexangular bolt C	3
8	Column cover	4
9	Front board	2
10	Small wheel	4
10.1	Spring washer A	4
10.2	Hexangular nut	4
10.3	Flat washer	4
11	Front wheel block	2
11.1	Hexangular bolt C	4
13	Hexangular nut	8
14	Flat washer C	4
15	Safety card	4
16	Beam wheel 3	2
17	Beam wheel 2	1
18	Steel cable	1
19	Hexangular nut	1
19.1	Flat washer C	1

NO.	DESCRIPTION	QTY
19.2	Snap ring	1
20	Cable stable	1
21	Cable block 2	1
22	Cable block 1	1
22.1	Inner hexangular screw	10
22.2	Flat washer C 10	10
22.3	Spring washer	10
23	Cable block 3	1
24	Cable block 4	1
25	Hydraulic cylinder	1
26	Set Beam wheel spindle	1
27	Beam wheel 1	6
27.1	Beam wheel spindle	1
27.2	Bush	6
27.3	Revolving oil cup A	2
28	Hexangular nut	8
29	Flat washer C	4
30	Inner hexangular screw	4
30.1	Flat washer C	4
31	Hydraulic cylinder spindle	1
31.1	Spindle spring washer A	1
32	Steel cable	1
33	Safety idler wheel	4
34	Safety block 1	2
35	Spindle 1	8
35.1	Spring washer A	16
36	Handle safety 1	2
37	Spindle pull handle	8
38	Spindle 2	4
38.1	Spring washer A	8
38.2	Spindle 3	4
39	Constringent spring	8
40	Hexangular nut	16
40.1	Flat washer	8
41	Rubber block	8
41.1	Cross bolt	8
41.2	Cross bolt	8
41.3	Orientation board	4
41.4	Z Cross screw	8
42	Pull block	4
43	Hexangular nut	8
44	Safety screw pole 1	2
45	Safety screw pole 2	2
45.1	???	2

## **8.2 PARTS LIST CON'T.**

NO.	DESCRIPTION	QTY
46	Safety handle spindle	1
47	Connection	2
48	Safety transmission pole	1
49	Beam 1 jointing	1
50	Spindle bush 2	4
51	Wheel spindle	4
52	Spindle bush 1	4
53	Safety handle	1
54	Safety handle	1
55	Safety block 2	2
56	Handle safety 2	2
57	Safety handle pole - Connect 1	2
57.1	Inner hexangular screw	4
57.2	Spring washer	8
57.3	Pin	4
58	Hydraulic rubber pump	1
59	Hydraulic hose fitting	2
60	Anchor bolt	16
61	Hexangular bolt C	4
62	Flat washer	4
63	Spring washer	4



## **WARNING**



The warnings, precautions and instructions in this manual cannot cover all possible conditions and situations that may occur. The operator must understand that the operator must supply common sense and examine caution factors when using this product to determine safety in all circumstances being used.



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