



PLEASE READ THE ENTIRE CONTENTS OF THIS MANUAL PRIOR TO INSTALLATION AND OPERATION. BY PROCEEDING YOU AGREE THAT YOU FULLY UNDERSTAND AND COMPREHEND THE FULL CONTENTS OF THIS MANUAL. FORWARD THIS MANUAL TO ALL OPERATORS. FAILURE TO OPERATE THIS EQUIPMENT AS DIRECTED MAY CAUSE INJURY OR DEATH.

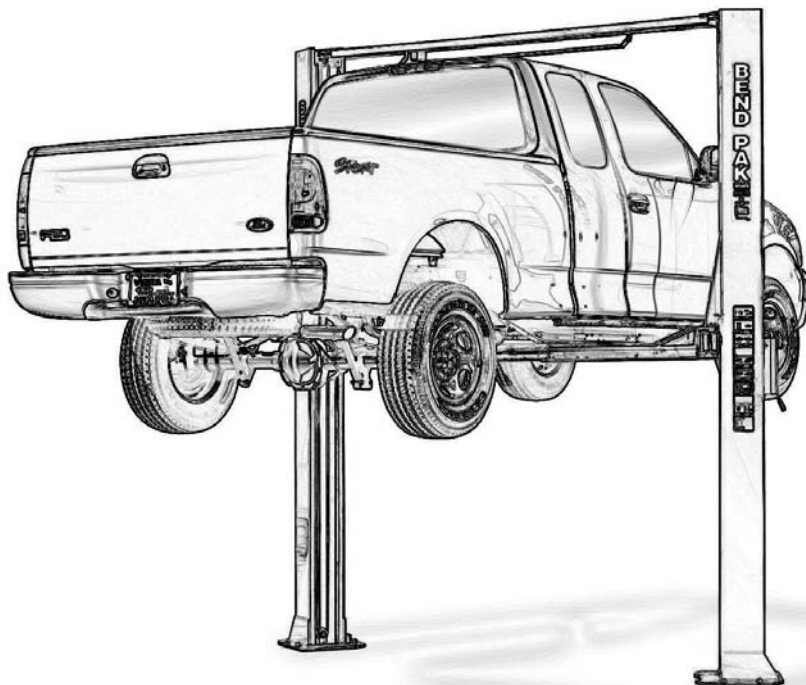
REV B 10-24-07

## INSTALLATION AND OPERATION MANUAL

10,000 POUND CAPACITY  
12,000 POUND CAPACITY  
15,000 POUND CAPACITY  
18,000 POUND CAPACITY  
SURFACE MOUNTED  
TWO-POST LIFTS

### MODELS:

XP-10C  
XP-10CX  
XP-10AC  
XP-10ACX  
XP-12CTA  
XP-15C  
XP-18C



Keep this operation manual near the machine at all times. Make sure that ALL USERS read this manual .

### SHIPPING DAMAGE CLAIMS

When this equipment is shipped, title passes to the purchaser upon receipt from the carrier. Consequently, claims for the material damaged in shipment must be made by the purchaser against the transportation company at the time shipment is received.

### BE SAFE

Your new lift was designed and built with safety in mind. However, your overall safety can be increased by proper training and thoughtful operation on the part of the operator. DO NOT operate or repair this equipment without reading this manual and the important safety instructions shown inside.



1645 Lemonwood Dr.  
Santa Paula, CA. 93060, USA  
Toll Free 1-800-253-2363  
Tel: 1-805-933-9970  
Fax: 1-805-933-9160

# TWO-POST SURFACE MOUNTED AUTO AND LIGHT DUTY TRUCK

This instruction manual has been prepared especially for you.




Your new lift is the product of over 35 years of continuous research, testing and development; it is the most technically advanced lift on the market today.

**READ THIS ENTIRE MANUAL BEFORE INSTALLATION & OPERATION BEGINS.**

RECORD HERE THE LIFT AND  
POWER UNIT INFORMATION WHICH IS  
LOCATED ON THE SERIAL NUMBER  
DATA PLATES ON THE LIFT AND  
ON THE POWER UNIT

Power Unit Model # \_\_\_\_\_  
Power Unit Date Of Mfg. \_\_\_\_\_  
Power Unit Serial # \_\_\_\_\_

This information is required when  
calling for parts or warranty issues.

  		
1645 Lemonwood Dr., Santa Paula, CA 93060 USA Tel: 1-805-933-9970 Fax: 1-805-933-9160 www.bendpak.com		
Model No.	Lifting Capacity	Serial No.
Date of Mfg.	Power Unit No.	Voltage / Amperage
Cable Length	A	C
	B	D
Cable Diameter		
Assembled in the US of US and Non-US Components.		

## PRODUCT WARRANTY

BendPak Two Post Lifts are warranted for five years on equipment structure, to be free of defects in material and workmanship. Power units, hydraulic cylinders, and all other assembly components such as turnplates, slip plates, cables, chains, valves, switches etc. are warranted for one year against defects in material or workmanship under normal use. BendPak Inc. shall repair or replace at their option for the warranty period those parts returned to the factory freight prepaid which prove upon inspection to be defective. BendPak Inc. will pay labor costs for the first 12 months only on parts returned as previously described.

The warranty does not extend to...

- ◆ defects caused by ordinary wear, abuse, misuse, shipping damage, improper installation, voltage or lack of required maintenance;
- ◆ damages resulting from purchaser's neglect or failure to operate products in accordance with instructions provided in the owner's manual(s) and/or other accompanying instructions supplied;
- ◆ normal wear items or service normally required to maintain the product in a safe operating condition;
- ◆ any component damaged in shipment;
- ◆ other items not listed but may be considered general wear parts;
- ◆ damage caused by rain, excessive humidity, corrosive environments or other contaminants.

**THESE WARRANTIES DO NOT EXTEND TO ANY COSMETIC DEFECT NOT INTERFERING WITH EQUIPMENT FUNCTIONALITY OR ANY INCIDENTAL, INDIRECT, OR CONSEQUENTIAL LOSS, DAMAGE, OR EXPENSE THAT MAY RESULT FROM ANY DEFECT, FAILURE, OR MALFUNCTION OF A BENDPAK INC. PRODUCT OR THE BREACH OR DELAY IN PERFORMANCE OF THE WARRANTY.**

**WARRANTY IS NOT VALID UNLESS  
WARRANTY CARD IS RETURNED.**

## IMPORTANT NOTICE

Do not attempt to install this lift if you have never been trained on basic automotive lift installation procedures. Never attempt to lift components without proper lifting tools such as forklift or cranes. Stay clear of any moving parts that can fall and cause injury. These instructions must be followed to insure proper installation and operation of your lift. Failure to comply with these instructions can result in serious bodily harm and void product warranty. Manufacturer will assume no liability for loss or damage of any kind, expressed or implied resulting from improper installation or use of this product.

### PLEASE READ ENTIRE MANUAL PRIOR TO INSTALLATION.

### DEFINITIONS OF HAZARD LEVELS

Identify the hazard levels used in this manual with the following definitions and signal words:



#### **DANGER !**

Watch for this symbol: It Means: Immediate hazards which will result in severe personal injury or death.



#### **WARNING !**

Watch for this symbol: It Means: Hazards or unsafe practices which could result in severe personal injury or death.



#### **CAUTION !**

Watch for this symbol: It Means: Hazards or unsafe practices which may result in minor personal injury, product or property damage.

## OWNER'S RESPONSIBILITY

To maintain the lift and user safety, the responsibility of the owner is to read and follow these instructions:

- ◆ Follow all installation and operation instructions.
- ◆ Make sure installation conforms to all applicable Local, State, and Federal Codes, Rules, and Regulations; such as State and Federal OSHA Regulations and Electrical Codes.
- ◆ Carefully check the lift for correct initial function.
- ◆ Read and follow the safety instructions. Keep them readily available for machine operators.
- ◆ Make certain all operators are properly trained, know how to safely and correctly operate the unit, and are properly supervised.
- ◆ Allow unit operation only with all parts in place and operating safely.
- ◆ Carefully inspect the unit on a regular basis and perform all maintenance as required.
- ◆ Service and maintain the unit only with authorized or approved replacement parts.
- ◆ Keep all instructions permanently with the unit and all decals on the unit clean and visible.

## BEFORE YOU BEGIN

### **Receiving:**

The shipment should be thoroughly inspected as soon as it is received. The signed bill of lading is acknowledgement by the carrier of receipt in good condition of shipment covered by your invoice. If any of the goods called for on this bill of lading are shorted or damaged, do not accept them until the carrier makes a notation on the freight bill of the shorted or damaged goods. Do this for your own protection.

**NOTIFY THE CARRIER AT ONCE** if any hidden loss or damage is discovered after receipt and request the carrier to make an inspection. If the carrier will not do so, prepare a signed statement to the effect that you have notified the carrier (on a specific date) and that the carrier has failed to comply with your request.

**IT IS DIFFICULT TO COLLECT FOR LOSS OR DAMAGE AFTER YOU HAVE GIVEN THE CARRIER A CLEAR RECEIPT.** File your claim with the carrier promptly. Support your claim with copies of the bill of lading, freight bill, invoice, and photographs, if available. Our willingness to assist in helping you process your claim does not make BendPak responsible for collection of claims or replacement of lost or damaged materials.

**When removing the lift from shipping angles pay close attention as the posts can slide and can cause injury. Prior to removing the bolts make sure the posts are held securely by a fork lift or some other heavy lifting devise.**

## PARTS INVENTORY

<b>QTY.</b>	<b>PART(S) DESCRIPTION</b>	<b>Part Number</b>	<b>WHERE USED</b>	<b>CHECK</b>
<b>PARTS BOX</b>				
1	Power side cover	5210006	Power side safety	_____
1	Power side safety weldment	5210007	Power side safety	_____
1	Off side safety cover	5210009	Off side safety	_____
1	Off side safety weldment	5210010	Off side safety	_____
2	Safety clevis hair pin	5505112	Secure safety clevis pin	_____
2	Safety clevis pin	5505113	Safety weldments	_____
2	Safety torsion spring	5540130	Safety clevis pin	_____
2	Washer	5545255	To tighten safety cable	_____
2	M12 hex nut	5535355	To tighten safety cable	_____
4	M10 hex head bolt	5530755	Secure safety covers to post	_____
4	Washer	5545250	Safety cover bolt	_____
4	XP-9/10 lift head pins		Lift arms	_____
4	Lift pad Assemblies	5210700	Lift arms	_____
2	3/8 Romex connectors	5520142	Electrical; motor & overhead sw.	_____
1	Overhead micro switch	5525110	Top trough assembly	_____
1	Micro switch cable 120"	5525215	Overhead micro switch	_____
2	6-32 slot head bolt	5530117	Secure overhead micro switch	_____
2	6-32 Hex nut	5535190	Secure overhead micro switch	_____
12	Anchor bolts 3/4 x 5	5530450	Secure posts to floor	_____
24	C-Shims	5545535	Level posts	_____
4	M8 hex head bolts	5530753	Mount power unit to post	_____
4	Lock washers	5545254	Mount power unit to post	_____
4	M8 hex nut	5535356	Mount power unit to post	_____
2	3/4-12 hex nylock nut	5535353	Equalizer cable nut	_____
2	3/4" flat washer	5545253	Equalizer cable washer	_____
4	M10 hex head bolt	5530751	Secure top trough assy	_____
4	M10 nylock nut	5535350	Secure top trough assy	_____
4	Washer	5545251	Secure top trough assy	_____
1	3/8" power unit fitting	5550183	Hydraulic fitting for power unit	_____
2	1/4" cylinder fittings	5550113	Hydraulic fitting for cylinders	_____
1	1/4 to 3/8" bulkhead fitting	5550185	Hydraulic tee fitting to cylinders	_____
1	1/4" x 90-1/2" hydraulic hose	5570832	Power side cyl hose all models	_____
1	3/8" x 48" hydraulic hose	5570102	Power unit hose all models	_____
4	3" lift pad extension	5746390	Raise the height of lift pad	_____
4	6" lift pad extension	5746395	Raise the height of lift pad	_____
1	1/4" crossover hose	see table	Crossover to offside cylinder	_____
1	Safety cable	see table	Cable to release safety	_____
2	Equalizer cables	see table	Cable to level lift arms	_____
1	Can Spray Paint		Touch Up Paint	_____
1	Instruction Manual		Instruction Manual	_____
1	ALI Safety Instructions		Safety Instructions	_____

**BE SURE TO TAKE A COMPLETE INVENTORY  
OF PARTS PRIOR TO INSTALLATION**

**SHIPMENT PARTS**

<b>QTY.</b>	<b>PART(S) DESCRIPTION</b>	<b>Part Number</b>	<b>WHERE USED</b>	<b>CHECK</b>
1	AB-1466 Power Unit	5585079	Hydraulic Power Source	_____
1	Powerside Column	5210008	Powerside Column	_____
1	Offside Column	5210011	Offside Column	_____
1	Top Trough	see table	Overhead Beam	_____
4	Lift Arms	see table	Lift Arms	_____

## Hose and Cable Chart

	<b>XP-12/15/18</b>
<b>Power Unit Hose</b>	5570102
	3/8 x 48 Power Unit Hose
<b>Powerside Cyl Hose</b>	5570832
	1/4 x 90-1/2 Powerside Cyl Hose
<b>Crossover Hose</b>	5570111
	1/4 x 378-1/2 Crossover Hose
<b>Equalizer Cable</b>	5595121
	Equalizer Cable 1/2 x 419
<b>Equalizer Cable</b>	5595121
	Equalizer Cable 1/2 x 419
<b>Safety Cable</b>	5595125
	3/32 x 327 Safety Cable
<b>Top Trough</b>	5210123
	Top Trough Assy XP-12/15/18

# Hose and Cable Chart

	<b>XP-10C</b>	<b>XP-10CX</b>
<b>Power Unit Hose</b>	5570102	5570102
	3/8 x 48 Power Unit Hose	3/8 x 48 Power Unit Hose
<b>Powerside Cyl Hose</b>	5570832	5570832
	1/4 x 90-1/2 Powerside Cyl Hose	1/4 x 90-1/2 Powerside Cyl Hose
<b>Crossover Hose</b>	5570107	5570106
	1/4 x 316-1/2 Crossover Hose	1/4 x 329 Crossover Hose
<b>Equalizer Cable</b>	5595111	5595112
	Equalizer Cable 3/8 x 355-1/2	Equalizer Cable 3/8 x 368
<b>Equalizer Cable</b>	5595111	5595112
	Equalizer Cable 3/8 x 355-1/2	Equalizer Cable 3/8 x 368
<b>Safety Cable</b>	5595110	5595113
	3/32 x 287 Safety Cable	3/32 x 300 Safety Cable
<b>Top Trough</b>	5210003	5210114
	Top Trough Assy XP-10C	Top Trough Assy XP-10CX
	<b>XP-10AC</b>	<b>XP-10ACX</b>
<b>Power Unit Hose</b>	5570102	5570102
	3/8 x 48 Power Unit Hose	3/8 x 48 Power Unit Hose
<b>Powerside Cyl Hose</b>	5570832	5570832
	1/4 x 90-1/2 Powerside Cyl Hose	1/4 x 90-1/2 Powerside Cyl Hose
<b>Crossover Hose</b>	5570107	5570106
	1/4 x 316-1/2 Crossover Hose	1/4 x 329 Crossover Hose
<b>Equalizer Cable</b>	5595114	5595118
	Equalizer Cable 3/8 x 351-1/2	Equalizer Cable 3/8 x 364-1/2
<b>Equalizer Cable</b>	5595115	5595117
	Equalizer Cable 3/8 x 356-1/2	Equalizer Cable 3/8 x 369-3/4
<b>Safety Cable</b>	5595110	5595113
	3/32 x 287 Safety Cable	3/21 x 300 Safety Cable
<b>Top Trough</b>	5210113	5210112
	Top Trough Assy XP-10-AC	Top Trough Assy XP-10ACX

## INSTALLER / OPERATOR

**PLEASE READ AND FULLY  
UNDERSTAND.  
BY PROCEEDING, YOU AGREE TO  
THE FOLLOWING:**

- ◆ I have visually inspected the site where the lift is to be installed and verified the concrete to be in good condition and free of cracks or other defects. I understand that installing a lift on cracked or defective concrete could cause lift failure resulting in personal injury or death.
- ◆ I understand that a level floor is required for proper installation and level lifting.
- ◆ I understand that I am responsible if my floor is of questionable slope and that I will be responsible for all charges related to pouring a new level concrete slab if required and any charges.
- ◆ I understand that the lifts are supplied with concrete fasteners meeting the criteria of the American National Standard "Automotive Lifts - Safety Requirements for Construction, Testing, and Validation" ANSI/ALI ALCTV-1998, and that I will be responsible for all charges related to any special regional structural and/or seismic anchoring requirements specified by any other agencies and/or codes such as the Uniform Building Code (UBC) and/or International Building Code (IBC).
- ◆ I will assume full responsibility for the concrete floor and condition thereof, now or later, where the above equipment model(s) are to be installed. Failure to follow danger, warning, and caution instructions may lead to serious personal injury or death to operator or bystander or damage to property.
- ◆ I understand that Bendpak lifts are designed to be installed in indoor locations only. Failure to follow installation instructions may lead to serious personal injury or death to operator or bystander or damage to property or lift.



Failure to follow danger, warning, and caution instructions may lead to serious personal injury or death to operator or bystander or damage to property.



Please read entire manual prior to installation. Do not operate this machine until you read and understand all the dangers, warnings and cautions in this manual. For additional copies or further information, contact:

### **BendPak Inc. / Ranger Products**

1645 Lemonwood Dr.

Santa Paula, CA. 93060

1-805-933-9970

[www.bendpak.com](http://www.bendpak.com)

## INSTALLER / OPERATOR PROTECTIVE EQUIPMENT

Personal protective equipment helps make installation and operation safer, however, it does not take the place of safe operating practices. Always wear durable work clothing during any installation and/or service activity. Shop aprons or shop coats may also be worn, however loose fitting clothing should be avoided. Tight fitting leather gloves are recommended to protect technician hands when handling parts. Sturdy leather work shoes with steel toes and oil resistant soles should be used by all service personnel to help prevent injury during typical installation and operation activities.

Eye protection is essential during installation and operation activities. Safety glasses with side shields, goggles, or face shields are acceptable. Back belts provide support during lifting activities and are also helpful in providing worker protection. Consideration should also be given to the use of hearing protection if service activity is performed in an enclosed area, or if noise levels are high.



**THIS SYMBOL POINTS OUT IMPORTANT SAFETY INSTRUCTIONS WHICH IF NOT FOLLOWED COULD ENDANGER THE PERSONAL SAFETY AND/OR PROPERTY OF YOURSELF AND OTHERS AND CAN CAUSE PERSONAL INJURY OR DEATH. READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL BEFORE ATTEMPTING TO OPERATE THIS MACHINE.**

## INTRODUCTION

1. Carefully remove the crating and packing materials.  
**CAUTION!** Be careful when cutting steel banding material as items may become loose and fall causing personal harm or injury.

2. Check the voltage, phase and proper amperage requirements for the motor shown on the motor plate. Wiring should be performed by a certified electrician only.

## IMPORTANT SAFETY INSTRUCTIONS

*Read these safety instructions entirely!*

### IMPORTANT NOTICE

Do not attempt to install this lift if you have never been trained on basic automotive lift installation procedures. Never attempt to lift components without proper lifting tools such as forklift or cranes.

Stay clear of any moving parts that can fall and cause injury.

1. **READ AND UNDERSTAND** all safety warning procedures before operating lift.

2. **KEEP HANDS AND FEET CLEAR.** Remove hands and feet from any moving parts. Keep feet clear of lift when lowering. Avoid pinch points.

3. **KEEP WORK AREA CLEAN.** Cluttered work areas invite injuries.

4. Consider work area environment. Do not expose equipment to rain. **DO NOT** use in damp or wet locations. Keep area well lighted.

5. **ONLY TRAINED OPERATORS** should operate this lift. All non-trained personnel should be kept away from work area. Never let non-trained personnel come in contact with, or operate lift.

6. **USE LIFT CORRECTLY.** Use lift in the proper manner. Never use lifting adapters other than what is approved by the manufacturer.

7. **DO NOT** override self-closing lift controls.

8. **REMAIN CLEAR** of lift when raising or lowering vehicle.

9. **CLEAR AREA** if vehicle is in danger of falling.

10. **ALWAYS INSURE** that the safeties are engaged before any attempt is made to work on or near vehicle.

11. **DRESS PROPERLY.** Non-skid steel-toe footwear is recommended when operating lift.

12. **GUARD AGAINST ELECTRIC SHOCK.** This lift must be grounded while in use to protect the operator from electric shock. Never connect the green power cord wire to a live terminal. This is for ground only.



13. **DANGER!** The power unit used on this lift contains high voltage. Disconnect power at the receptacle before performing any electrical repairs. Secure plug so that it cannot be accidentally plugged in during service.



14. **WARNING! RISK OF EXPLOSION.** This equipment has internal arcing or sparking parts which should not be exposed to flammable vapors. This machine should not be located in a recessed area or below floor level.



15. **MAINTAIN WITH CARE.** Keep lift clean for better and safer performance. Follow manual for proper lubrication and maintenance instructions. Keep control handles and/or buttons dry, clean and free from grease and oil.

16. **STAY ALERT.** Watch what you are doing. Use common sense. Be aware.

17. **CHECK FOR DAMAGED PARTS.** Check for alignment of moving parts, breakage of parts or any condition that may affect its operation. Do not use lift if any component is broken or damaged.

18. **NEVER** remove safety related components from the lift. Do not use lift if safety related components are damaged or missing.



- Rotary Hammer Drill Or Similar
- 3/4" Masonry Bit
- Hammer
- 4 Foot Level
- Open-End Wrench Set: 7/16" - 1-1/8"
- Socket And Ratchet Set: 7/16" - 1-1/8"
- Hex-Key / Allen Wrench Set
- Medium Crescent Wrench
- Medium Pipe Wrench
- Crow Bar For Shim Installation
- Chalk Line
- Medium Flat Screwdriver
- Tape Measure: 25 Foot Minimum
- Needle Nose Pliers

## IMPORTANT NOTICE

These instructions must be followed to insure proper installation and operation of your lift. Failure to comply with these instructions can result in serious bodily harm and void product warranty. Manufacturer will assume no liability for loss or damage of any kind, expressed or implied resulting from improper installation or use of this product.

**PLEASE READ ENTIRE MANUAL PRIOR TO INSTALLATION.**

## STEP ONE

( Selecting Site )

Before installing your new lift, check the following.

1. **LIFT LOCATION:** Always use architects plans when available. Check layout dimension against floorplan requirements making sure that adequate space is available.
2. **OVERHEAD OBSTRUCTIONS:** The area where the lift will be located should be free of overhead obstructions such as heaters, building supports, electrical lines etc.
3. **DEFECTIVE CONCRETE:** Visually inspect the site where the lift is to be installed and check for cracked or defective concrete.



4. **OPERATING TEMPERATURE.** Operate lift only between temperatures of 41° -104° F.
5. Lift is designed for **INDOOR INSTALLATION ONLY.**

## STEP TWO

( Floor Requirements )



This lift must be installed on a solid level concrete floor with no more than 3-degrees of slope. Failure to do so could cause personal injury or death.

A level floor is suggested for proper installation. If a floor is of questionable slope, consider a survey of the site and/or the possibility of pouring a new level concrete slab.



- DO NOT install this lift on any asphalt surface or any surface other than concrete.
- DO NOT install this lift on expansion seams or on cracked or defective concrete.
- DO NOT install this lift on a second /elevated floor without first consulting building architect.
- DO NOT install this lift outdoors unless special consideration has been made to protect the power unit from inclement weather conditions.

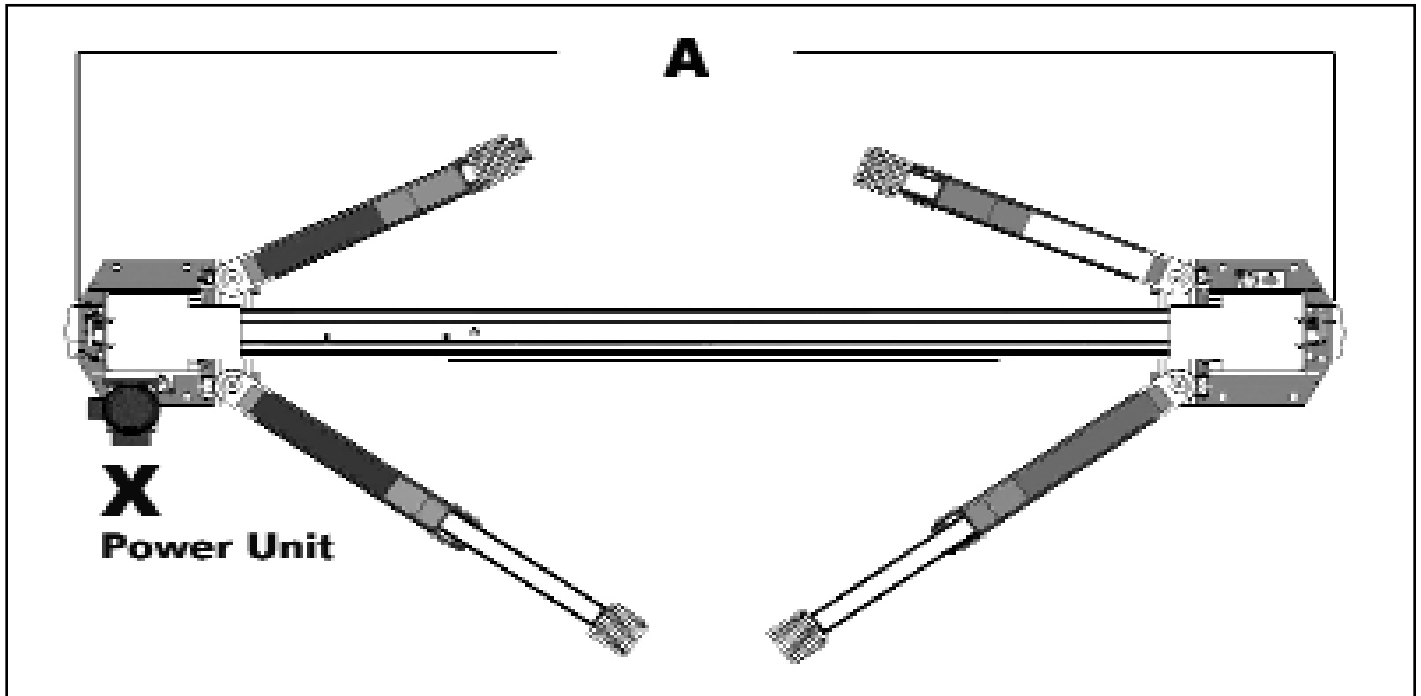
## CONCRETE SPECIFICATIONS

LIFT MODEL	CONCRETE REQUIREMENT
7,000 Lb. Models	4" Min. Thickness / 3000 PSI
10,000 Lb. Models	4" Min. Thickness / 3000 PSI
12,000 Lb. Models	6" Min. Thickness / 3000 PSI
15,000 Lb. Models	6" Min. Thickness / 3000 PSI
18,000 Lb. Models	8" Min. Thickness / 3000 PSI

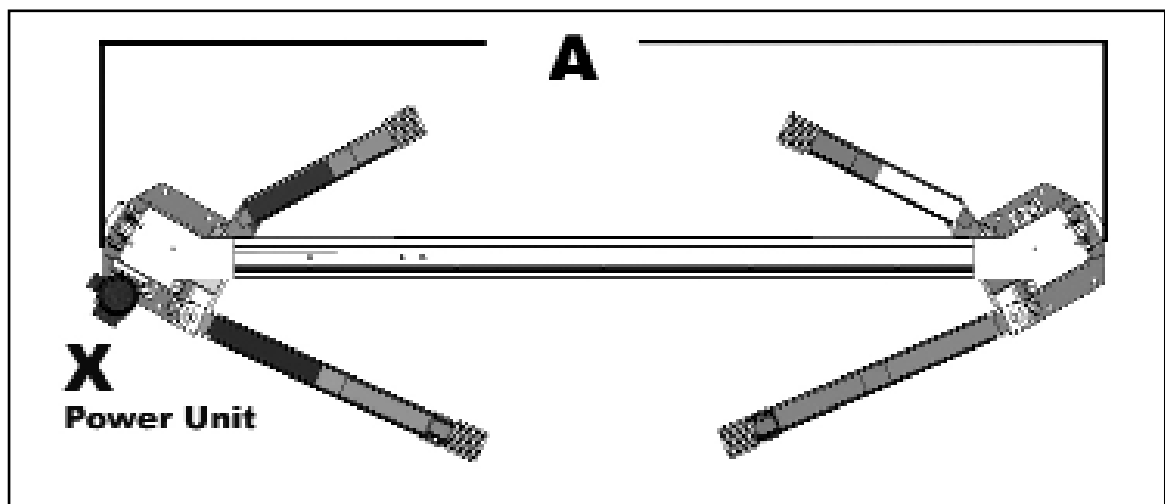
## NOTE

All models **MUST** be installed on 3000 PSI concrete only conforming to the minimum requirements shown above. New concrete must be adequately cured by at least 28 days minimum.

## FLOORPLAN/ CAPACITY



Model	A	Capacity
XP-10C	132"	10,000 LBS
XP-10CX	145"	10,000 LBS
XP-12CTA	155"	12,000 LBS
XP-15C	155"	15,000 LBS
XP-18C	155"	18,000 LBS



Model	A	Capacity
XP-10AC	132"	10,000 LBS
XP-10ACX	145"	10,000 LBS



**When removing the lift from shipping angles pay close attention as the posts can slide and can cause injury.**

**Prior to removing the bolts make sure the posts are held securely by a fork lift or some other heavy lifting devise.**

## STEP THREE

( Site Layout )

1. Determine which side will be the approach side.
2. Now determine where the power unit will be located. The POWERSIDE column has the power-unit mounting bracket attached to the side.
3. Once a location is determined, use a carpenters chalk line to layout a grid for the post locations. Keep all dimensions and squareness within 1/8" or malfunctioning of the lift can occur.
4. After the post locations are properly marked, use a chalk or crayon to make an outline of the posts on the floor at each location using the post base plates as a template. (See below Fig 1)
5. Double check all dimensions and make sure that the layout is perfectly square.

## COMPLETE THE FOLLOWING PRIOR TO STANDING COLUMNS.

(1) Route the plug end of each equalizer cables around the bottom pulley and lock into bottom plate of carriage. (Fig. 2) Feed threaded end up through carriage. Leave excess cable resting on top of carriage until further steps are required. (NOTE: Asymmetric models have two different length cables.)

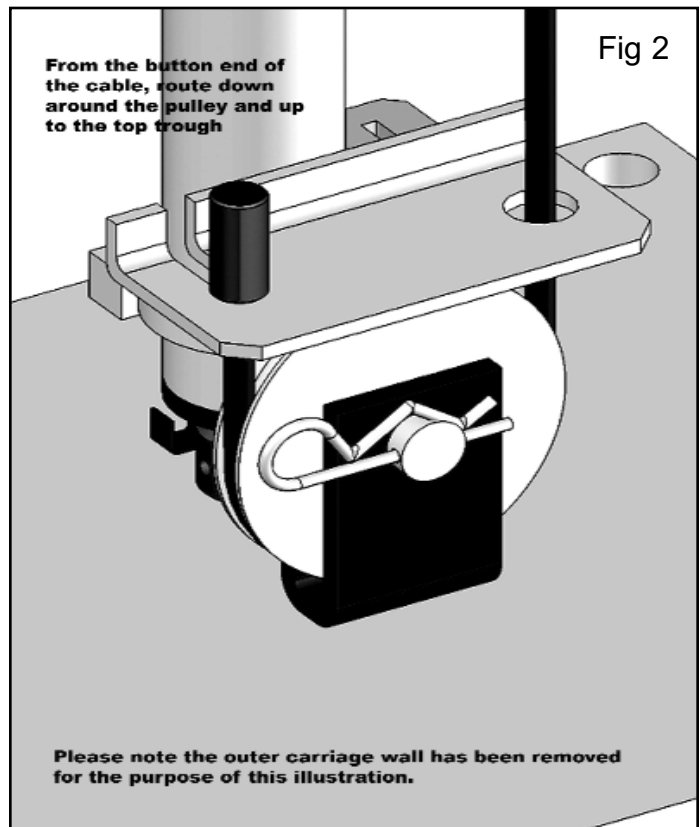
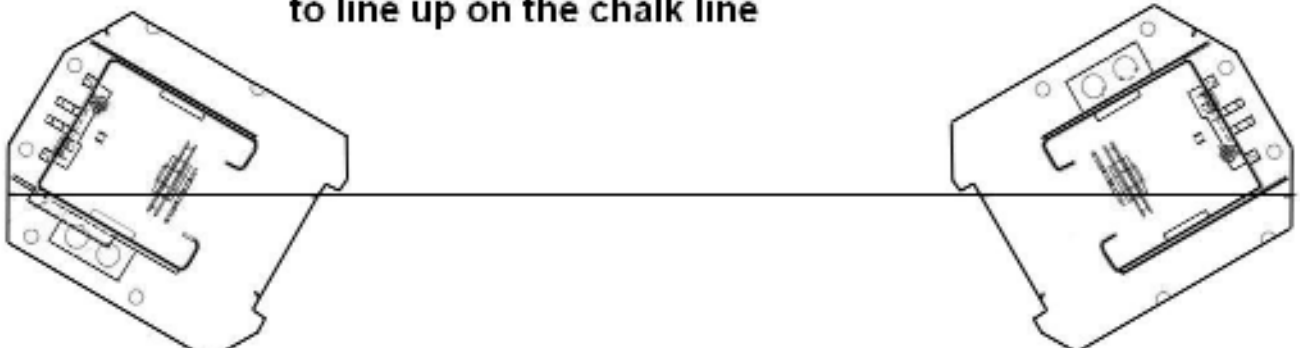
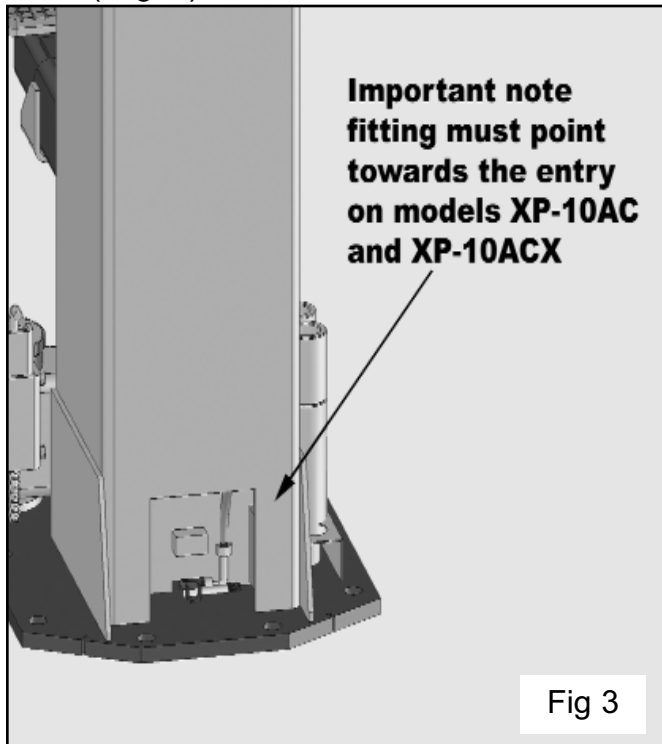


Fig. 1

**Use notched cut-outs in the base plate to line up on the chalk line**

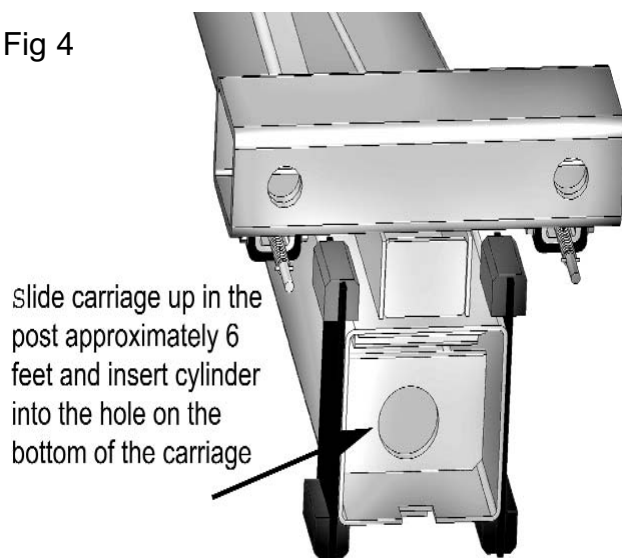


2. Install the cylinder fittings in cylinder ports so that each fitting points towards the entrance side of lift. ( Fig 3 ).



3. At this point install the cylinders into the carriages. With the **post on the ground** slide the carriage towards the top of the post approximately 6 feet. Insert the casing side of the cylinder into the entry hole on the bottom of the carriage. Push the cylinder in all the way until the collar touches on the carriage. Slide the carriage all of the way back down until the cylinder makes contact with the base plate of the post. (Fig 4).

Fig 4



5. Route both hoses in their respective columns PRIOR to raising columns to their vertical position. When routing the hydraulic hose through the columns, make sure to route through the retaining clips welded inside each column. Make sure that the hose is clear of any moving parts. It may be necessary to tie hose clear of obstruction by using nylon tie straps or wire.

## Important Note

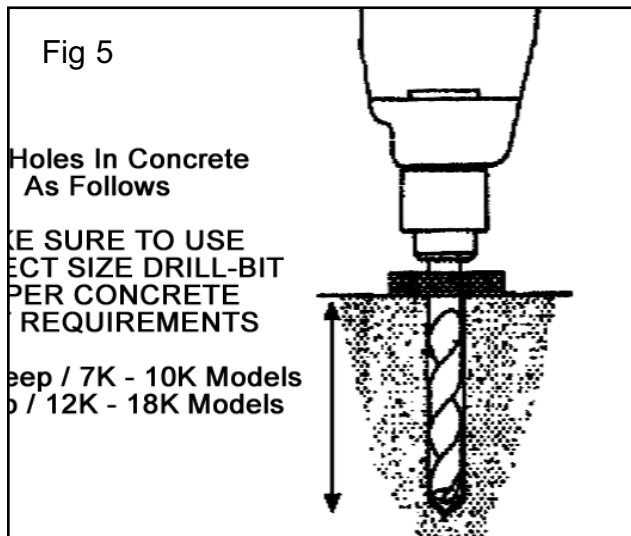
**When routing the hydraulic hose through the columns, make sure to route through the retaining clips welded inside each column.**

## STEP FOUR

( Installing The POWERSIDE Column )

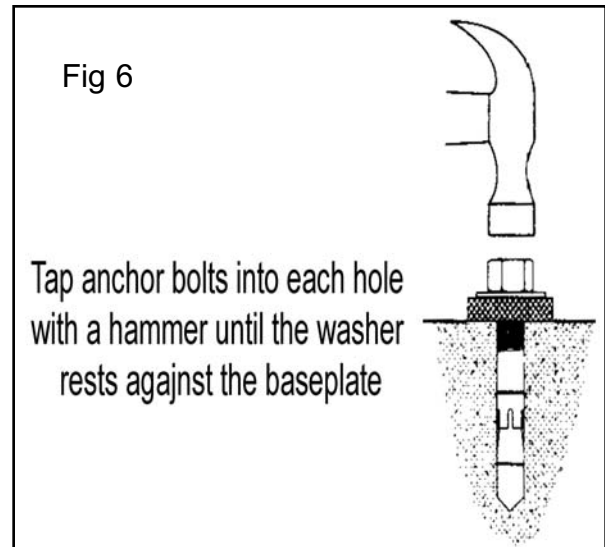
1. Before proceeding, double the check measurements and make certain that the bases of each column are aligned with the chalk line.

2. Using the base plate on the POWERSIDE column as a guide, drill each anchor hole in the concrete ( approximately 4-1/2" deep for 10K models and 6" deep for 12K and 15K models ) using a rotary hammer drill and 3/4" concrete drill-bit. To assure full holding power, do not ream the hole or allow the drill to wobble. ( Fig. 5 )

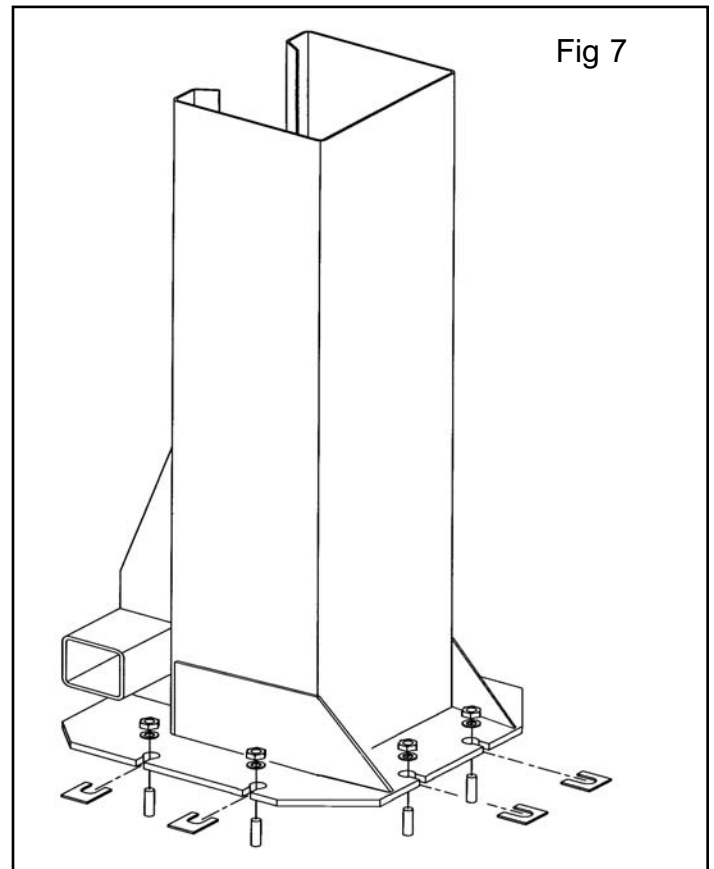


3. After drilling, remove dust thoroughly from each hole making certain that the column remains aligned with the chalk line.

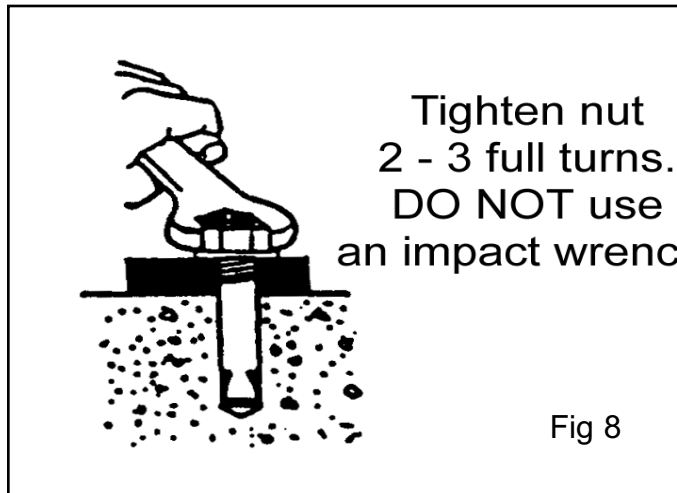
4. Assemble the washers and nuts on the anchors then tap into each hole with a hammer until the washer rests against the base plate. Be sure that if shimming is required that enough threads are left exposed. ( See Fig. 6 )



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. 7 )



6. With the shims and anchor bolts in place, tighten by securing the nut to the base then turning 2 - 3 full turns clockwise. DO NOT use an impact wrench for this procedure. ( See Fig. 8 )



## STEP FIVE

( Mounting The OFFSIDE column. )

1. Position the OFFSIDE column at the designated chalk locations and secure to the floor following the same procedures as outlined in STEP FOUR

### NOTE:

To ease installation of the top beam, it helps to keep the anchor bolts loose on one of the columns until the top beam is mounted.

## STEP SIX

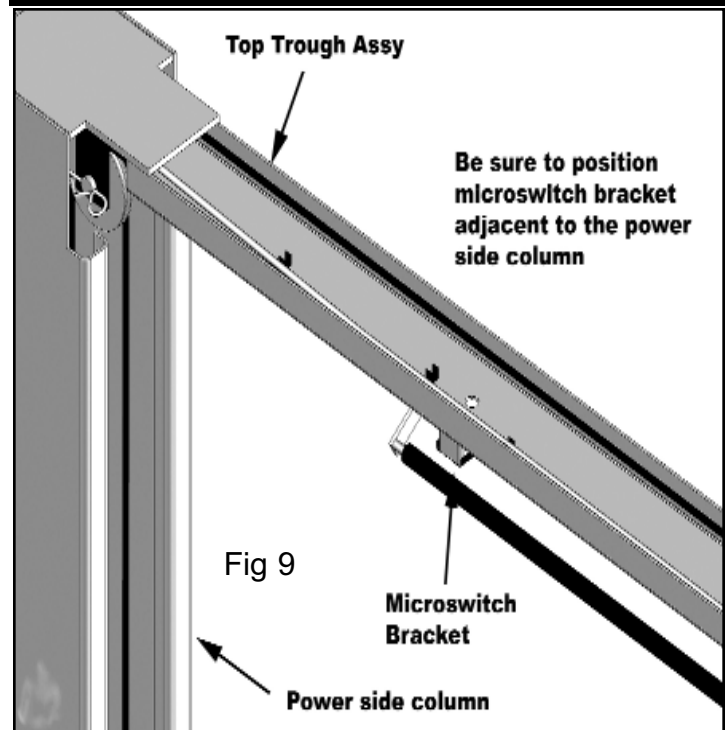
( Mounting the OVERHEAD BEAM. )

1. Remove all of the Equalizer pulleys in preparation of installing the Top Trough assy.

2. Using a lifting device, raise the OVERHEAD beam into position on top of the columns. Bolt to the columns using the 10 mm Hex Bolts, Nuts and Washers. **YOU MUST** POSITION THE SWITCH ENCLOSURE ADJACENT POWERSIDE COLUMN. (Fig 9)

## Important Note

**YOU MUST POSITION THE SWITCH ENCLOSURE ADJACENT POWERSIDE COLUMN**



### NOTE:

**In order to route the equalizer cables the pulleys must be removed**

## STEP SEVEN

( Mounting The POWER UNIT )

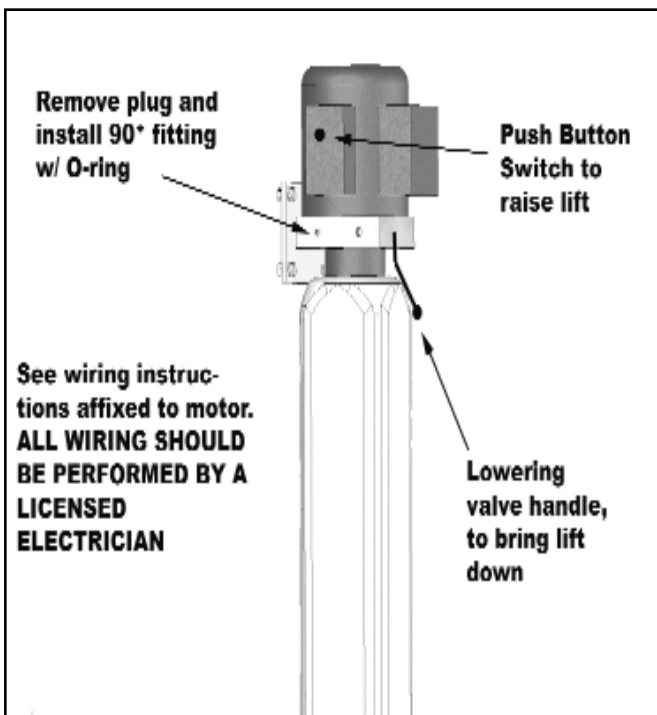
1. Attach the power unit to the POWERSIDE COLUMN using four M8 hex bolts and nuts supplied. **Fill the reservoir with 10 WT. HYDRAULIC OIL OR DEXRON TYPE III ATF**, approximately four gallons. Make sure the funnel used to fill the power unit is clean.

### IMPORTANT NOTE:

When installing hydraulic fittings and hoses it is not necessary to use Teflon tape or other sealant.

Teflon tape and other sealing compounds can contaminate the system and cause malfunctioning of lift.

2. Remove plug from power unit and install the 90° fitting w/ O-ring into the power port on the power unit. (Fig 10 )



3. The standard power unit for your lift is 220 volt, 60HZ, single phase. All wiring must be performed by a certified electrician only. SEE WIRING INSTRUCTIONS AFFIXED TO MOTOR FOR PROPER WIRING INSTRUCTIONS



# DANGER

ALL WIRING MUST BE PERFORMED BY A CERTIFIED ELECTRICIAN



# DANGER



**DANGER!**

**DO NOT PERFORM ANY MAINTENANCE OR INSTALLATION OF ANY COMPONENTS WITHOUT FIRST ENSURING THAT ELECTRICAL POWER HAS BEEN DISCONNECTED AT THE SOURCE OR PANEL AND CANNOT BE RE-ENERGIZED UNTIL ALL MAINTENANCE AND/OR INSTALLATION PROCEDURES ARE COMPLETED.**



# WARNING

**"DO NOT run power unit with no oil. Damage to pump can occur.**

**"The power unit must be kept dry. Damage to power unit caused by water or other liquids such as detergents, acid etc., is not covered under warranty.**

**Operate lift only between temperatures of 41 °- 104° F.**

**"Improper electrical hook-up can damage motor and will not be covered under warranty.**

**"Motor can not run on 50HZ without a physical change in motor.**

**"Use a separate breaker for each power unit.**

**"Protect each circuit with time delay fuse or circuit breaker.**

**" For 208-230 volt, single phase, use a 25 amp fuse.**

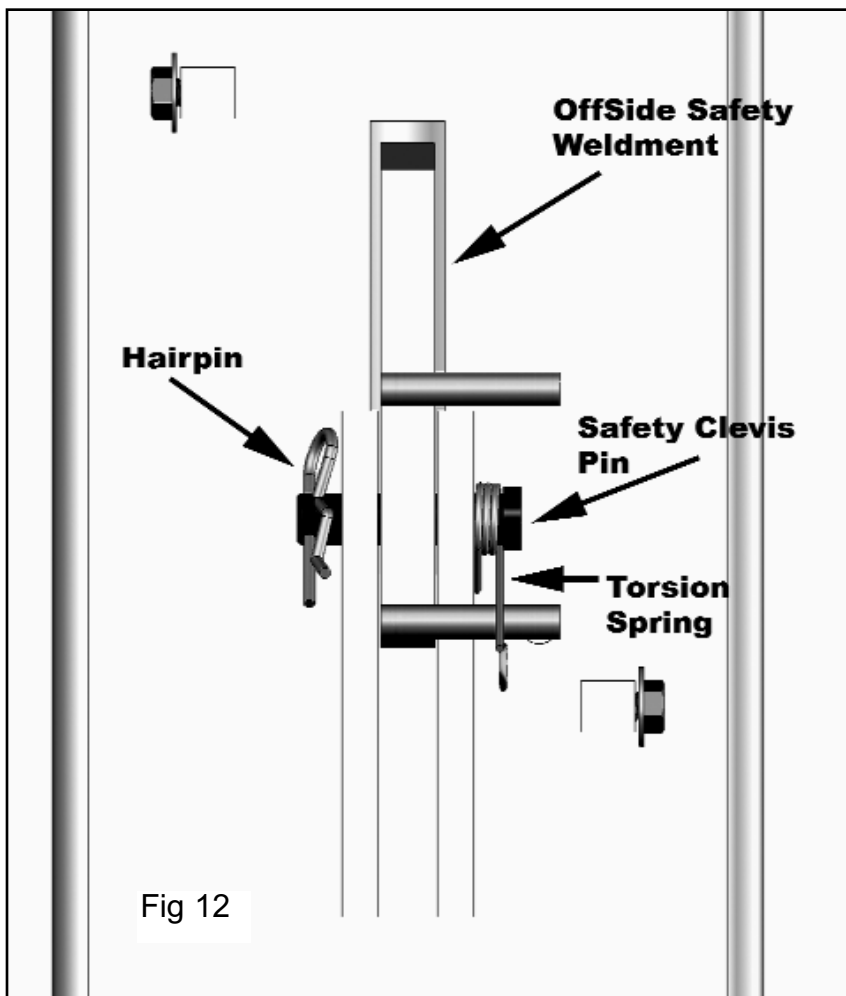
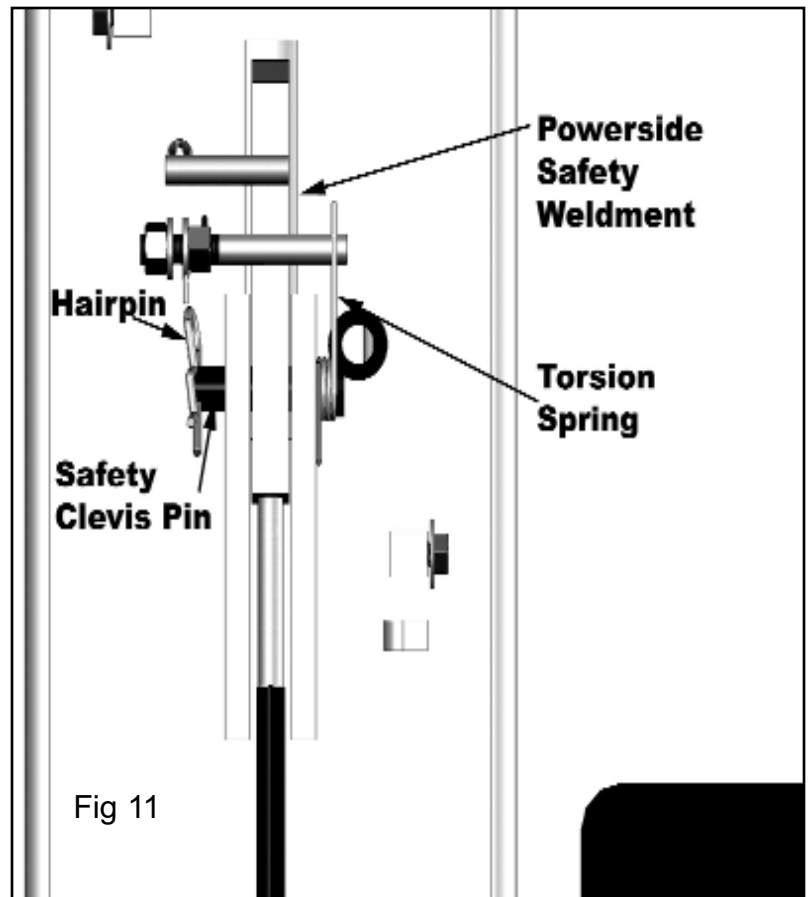
**" For 208-230 volt, three phase, use a 20 amp fuse.**

**" For 380-440 volt, three phase, use a 15 amp fuse.**

## STEP EIGHT

( Installing the safeties and safety cable )

1. Install safety weldments into each respective post. (Fig 11 & 12)

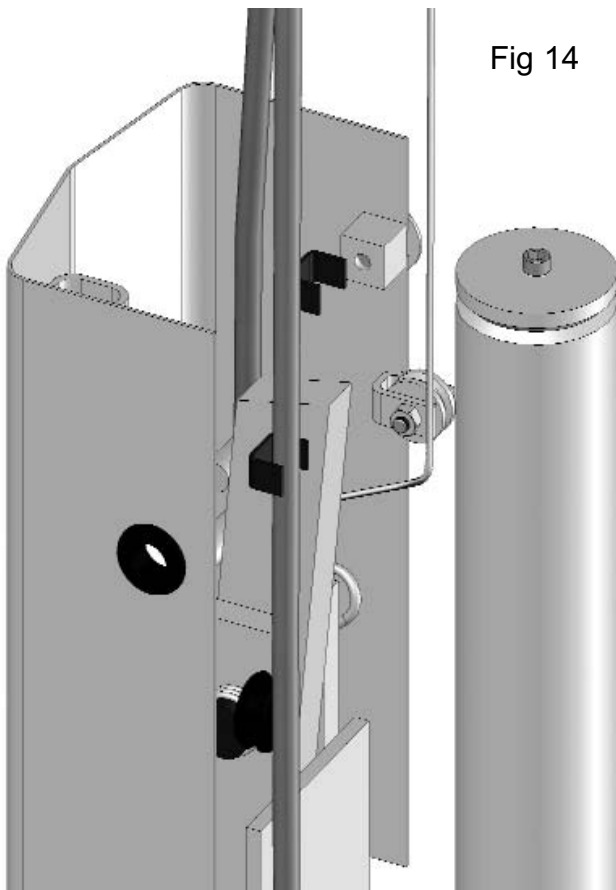
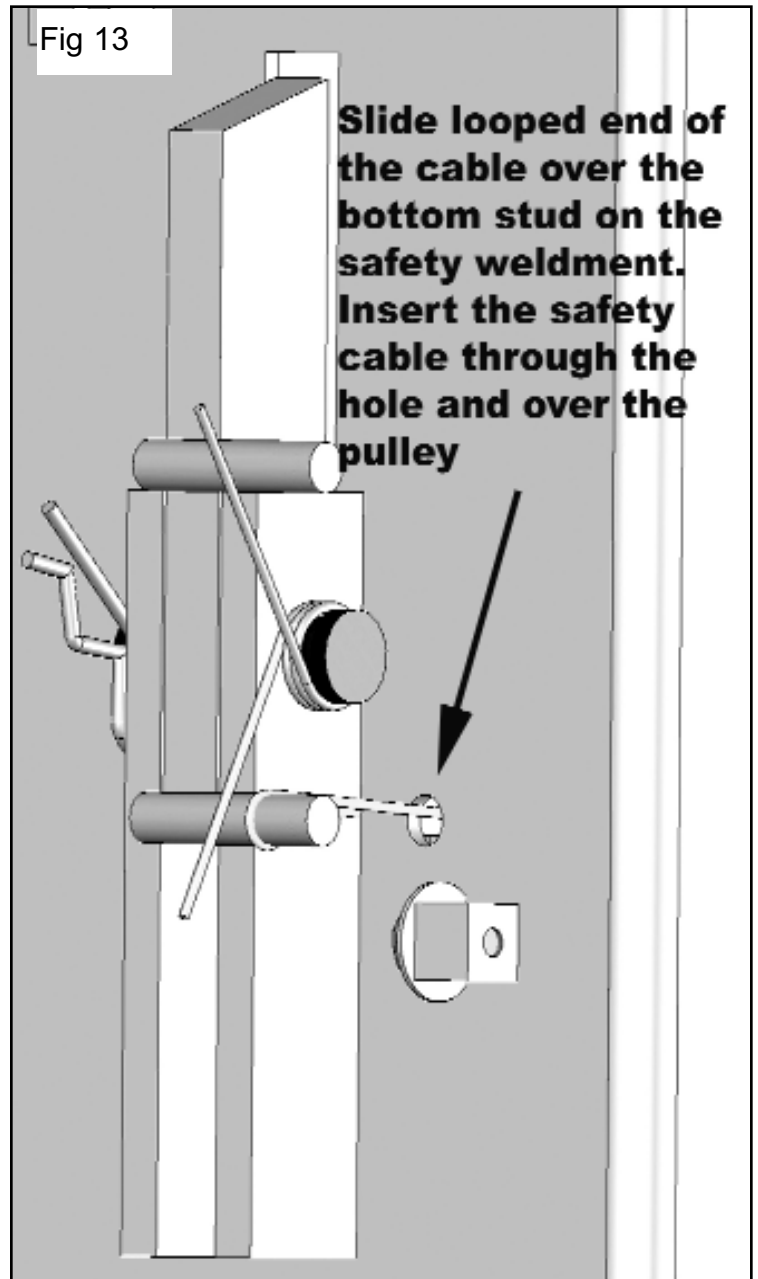




2. From the offside column insert the non looped end of the safety cable through the hole located to the right of the offside safety weldment. (Fig 13)

3. Route the cable under the pulley and take it up to the Top Trough. (Fig 14)

4. Route the cable through the pulley and across the lift. (Fig 15 & 16)



**ENSURE THAT BOTH THE POWERSIDE AND OFF-SIDE SAFETIES ENGAGE PROPERLY PRIOR TO OPERATING THE LIFT**

**Safety Cable Assemetrical Models**

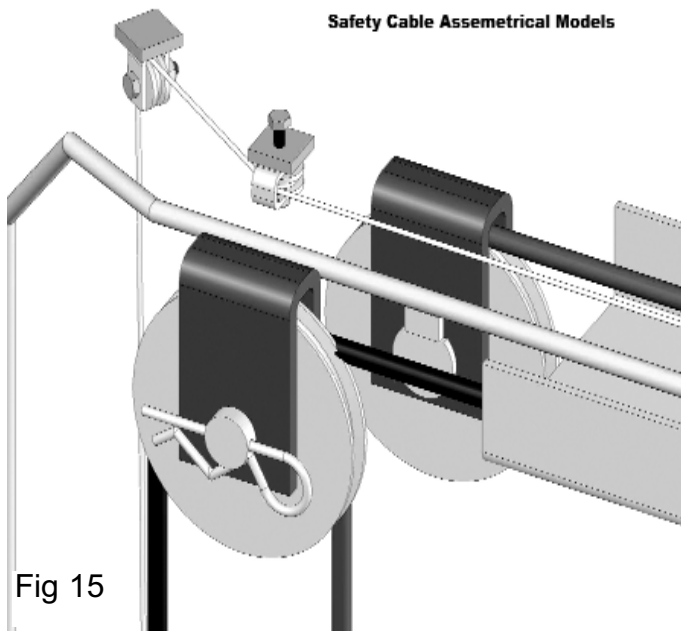


Fig 15

**Safety Cable Semmetrical Models**

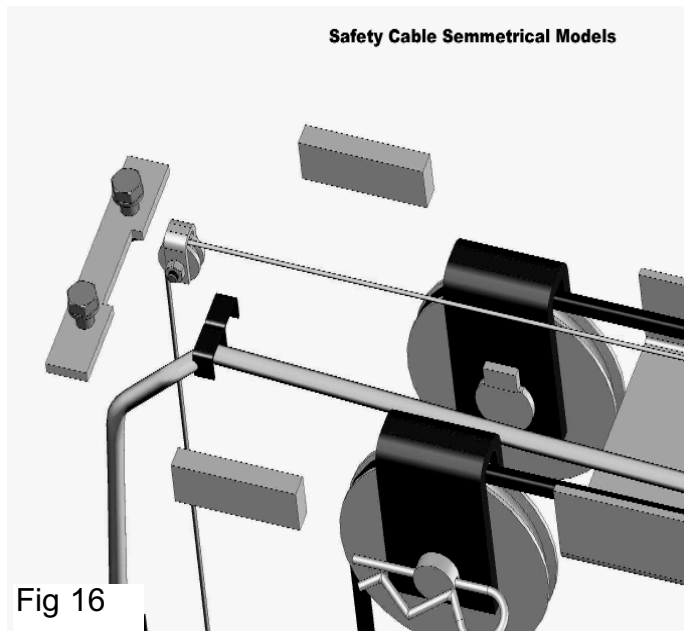


Fig 16

### Note:

**Assymetrical models have an additional safety pulley to route the cable out of the path of the cylinder**

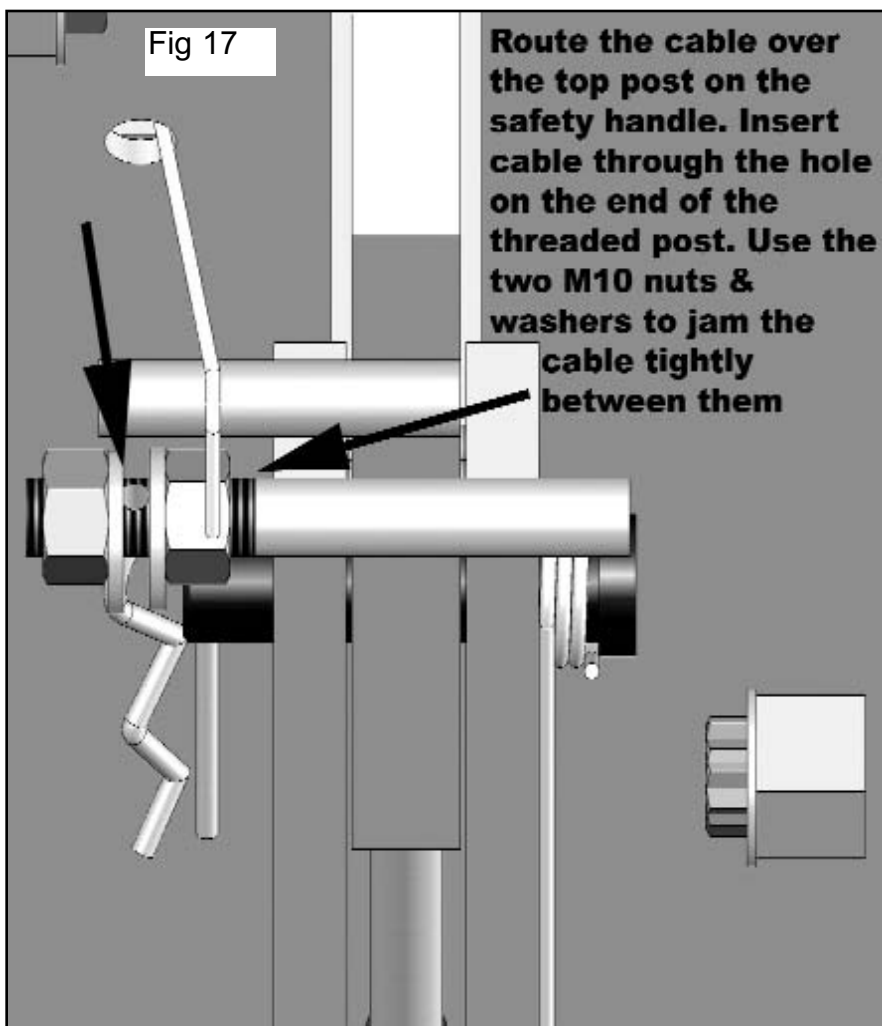
5. Route the cable the same way on the power side going back down the post.

6. Route the cable over the top post on the safety handle. Insert the cable end through the hole on the threaded post

7. Pull the slack out the safety cable and hold tension as the cable is being tightened.. Tighten jam nuts on either side of the cable to secure it into place. (Fig 17)

**Make sure to tighten both nuts equally so as to keep the safety cable centered**

Fig 17



**Route the cable over the top post on the safety handle. Insert cable through the hole on the end of the threaded post. Use the two M10 nuts & washers to jam the cable tightly between them**

## STEP NINE

( Installing The HYDRAULIC LINES. )

1. Install the Bulkhead Tee fitting into the powerside post. The through hole is located approximately 90 inches from the floor on the back wall of the powerside post.

2. Connect the power side cylinder hose to the tee fitting. Be sure to route the hose through the retainer rings inside the columns.

3. Route the offside cylinder hose (crossover hose) up through the post and across the top trough, down the post and connect it to the bulkhead tee fitting.

Fig 18

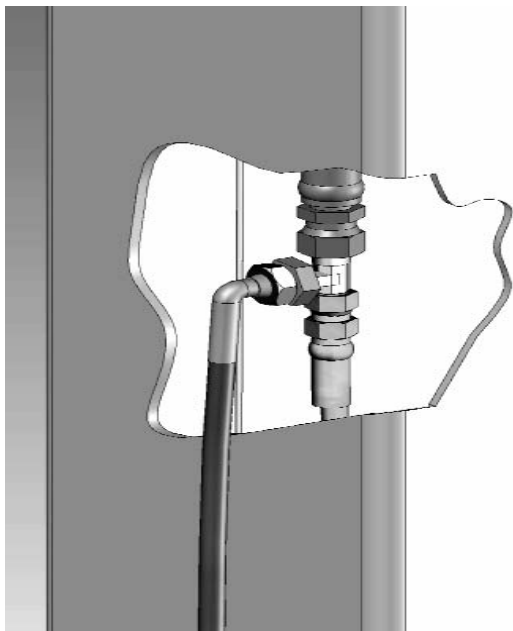


Fig 18

## ! WARNING

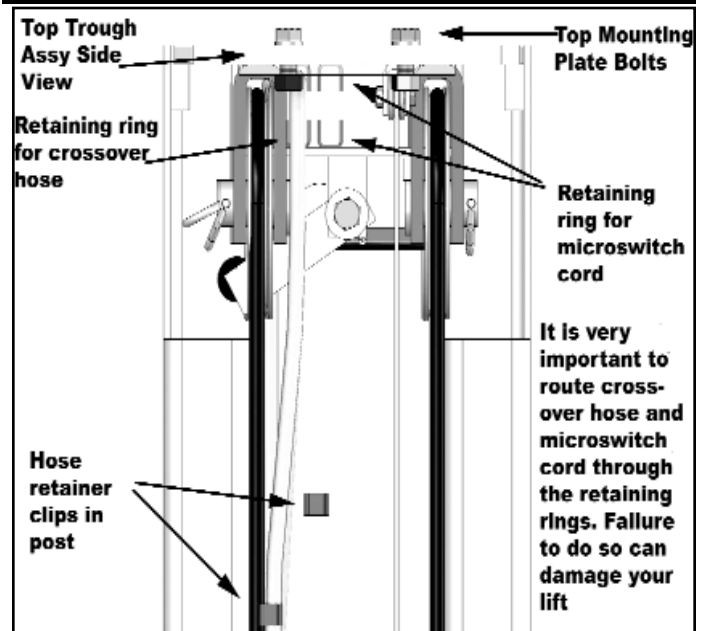
### NOTE:

When routing the hydraulic hose through the columns, make sure to route through the retaining rings welded inside each column. Make sure that the hose is clear of any moving parts. It may be necessary to tie hose clear by using nylon tie straps or wire.



## DANGER

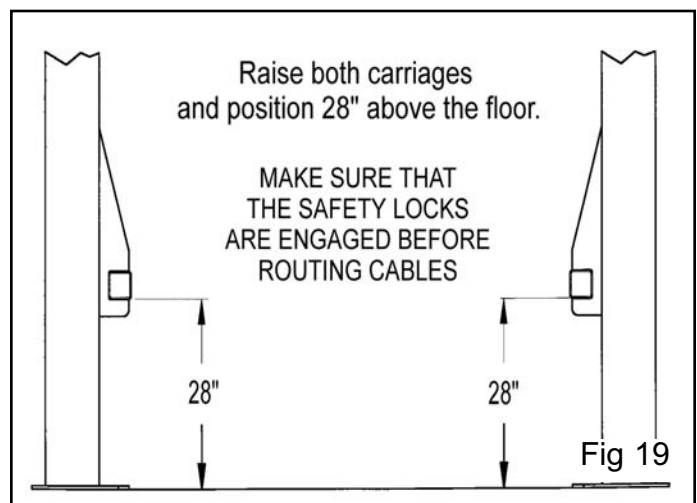
**Make sure that the safety locks on each column are fully engaged before attempting to route equalizer cables and/or hoses. Carriages must be equal height from the floor before proceeding**



## STEP TEN

( Routing The EQUALIZER CABLES )

1. Raise and lock each carriage approximately 28" above the ground. See Fig. 19





## WARNING

### WARNING!

WHEN THE CABLE ADJUSTING NUTS BOTTOM OUT ON THE THREADED END OF THE CABLE CONNECTOR AND THERE IS STILL SLACK IN THE CABLES, THE CABLES HAVE STRETCHED BEYOND THE SAFE USEFUL LENGTH AND NEED TO BE REPLACED WITH FACTORY APPROVED CABLE ASSEMBLIES. DO NOT PLACE WASHERS, SPACERS OR OTHER DEVICES TO "SHORTEN" THE EFFECTIVE CABLE LENGTH AS DAMAGE TO THE LIFT OR INJURY TO PERSONS MAY OCCUR.

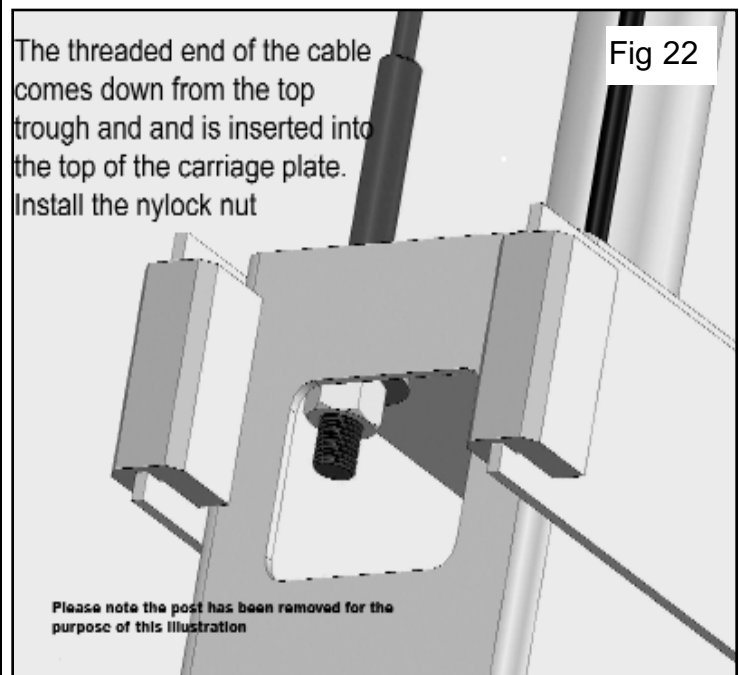
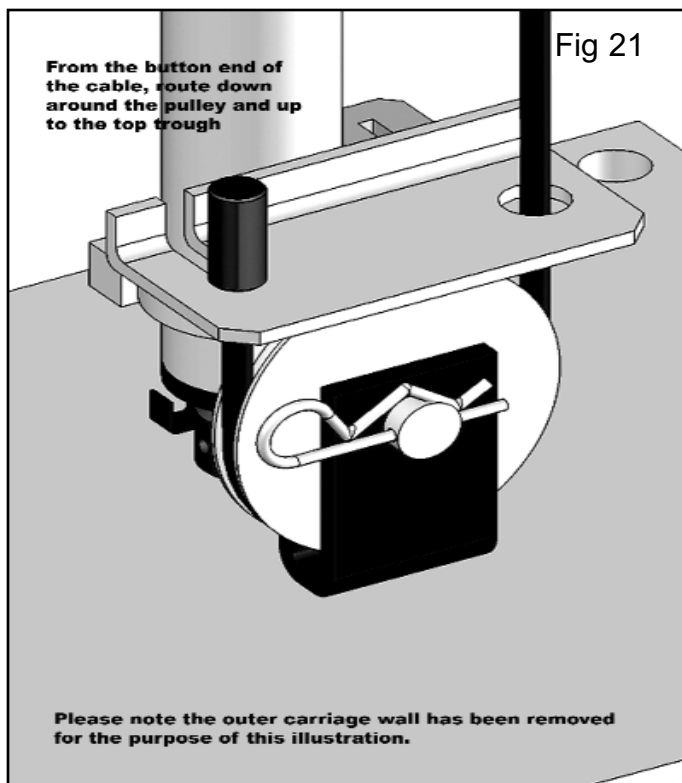
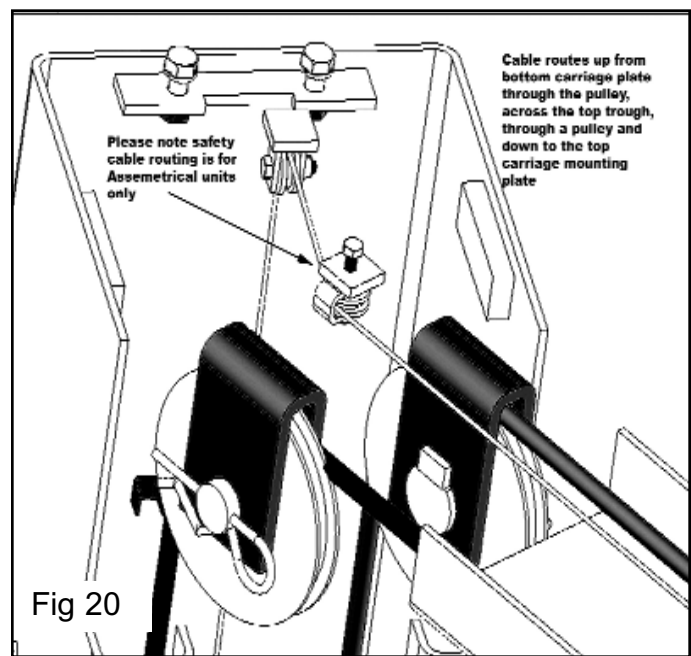
**Make sure that the safety locks on each column are fully engaged before attempting to route equalizer cables and/or hoses.**  
**Carriages must be equal height from the floor before proceeding.**

2. With the carriages in equal position from the floor, route the equalizer cables. If you have already routed them in the post as stated in step 3. Remove the pulley and route the cable around the pulley and reinstall it.

3. Take the cable across the top trough, remove the pulley, route the cable around the pulley and reinstall it.

4. Insert the threaded end of the cable through the hole on top of the carriage put on the equalizer cable nylock nut.

5. Route the other cable the same way.





### DANGER!

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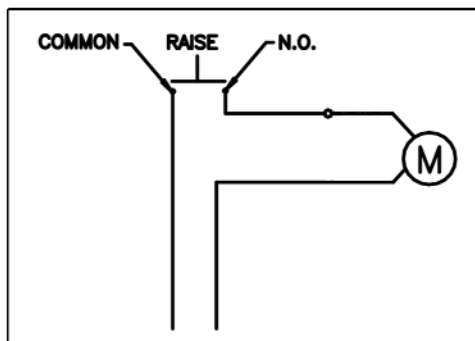
## IMPORTANT POWER-UNIT INSTALLATION NOTES

- DO NOT run power unit with no oil. Damage to pump can occur.
- The power unit must be kept dry. Damage to power unit caused by water or other liquids such as detergents, acid etc., is not covered under warranty.
- Improper electrical hook-up can damage motor and will not be covered under warranty.
- Motor can not run on 50HZ without a physical change in motor.
- Use a separate breaker for each power unit.
- Protect each circuit with time delay fuse or circuit breaker.
- For 208-230 volt, single phase, use a 25 amp fuse.
- For 208-230 volt, three phase, use a 20 amp fuse.
- For 380-440 volt, three phase, use a 15 amp fuse.

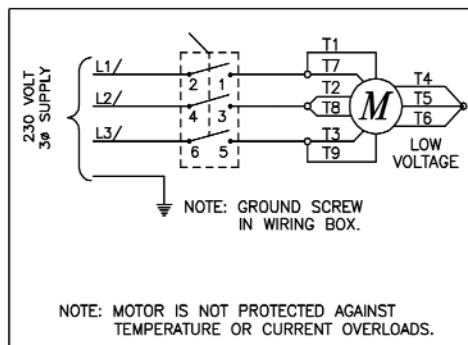
Installation and adjustment. DO NOT attempt to raise vehicle until a thorough operation check has been completed.

All wiring must be performed by a certified electrician only.

### Single Phase



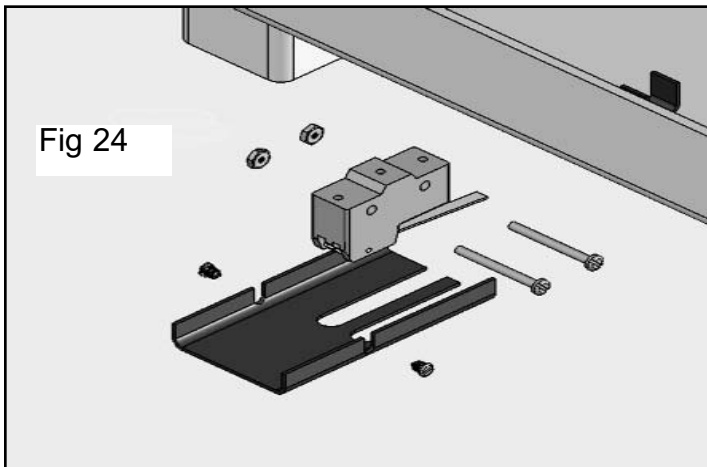
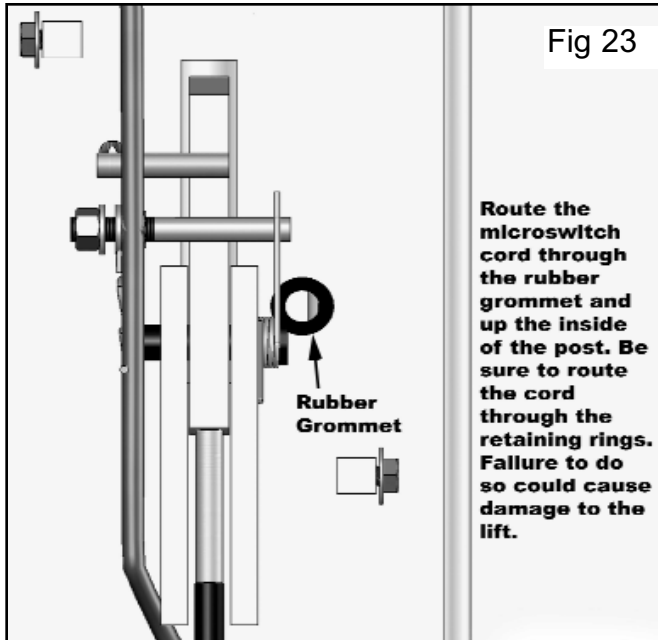
### Three Phase



## STEP ELEVEN

( Installing Overhead MICRO SWITCH. )

1. Install the overhead Micro Switch as shown below. Be sure to keep wire clear of moving parts. **WIRING MUST BE PERFORMED BY A CERTIFIED ELECTRICIAN.** Fig 23 & 24.



## STEP TWELVE

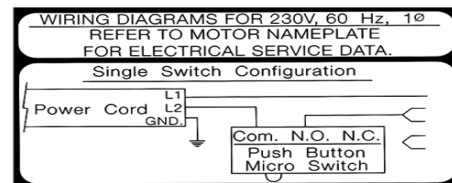
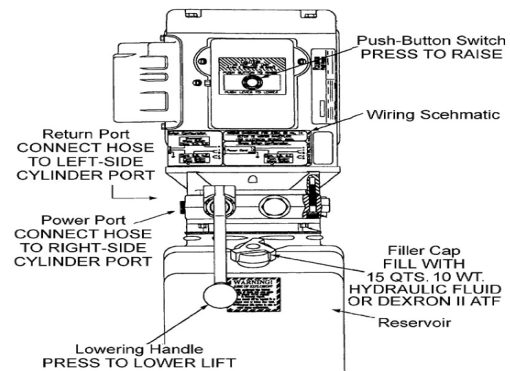
( Power Unit Installation and Start-Up. )



### DANGER!

**DO NOT PERFORM ANY MAINTENANCE OR INSTALLATION OF ANY COMPONENTS WITHOUT FIRST ENSURING THAT ELECTRICAL POWER HAS BEEN DISCONNECTED AT THE SOURCE OR PANEL AND CANNOT BE RE-ENERGIZED UNTIL ALL MAINTENANCE AND/OR INSTALLATION PROCEDURES ARE COMPLETED.**

1. The standard power unit for your lift is 220 volt, 60HZ, single phase. All wiring must be performed by a certified electrician only. SEE WIRING INSTRUCTIONS AFFIXED TO MOTOR FOR PROPER WIRING INSTRUCTIONS.



### IMPORTANT NOTE:

**CAUTION** Never operate the motor on line voltage less than 208V. Motor damage may occur which is not covered under warranty.

Have a certified electrician run appropriate power supply to motor.

Size wire for 25amp circuit. See Motor Operating Data Table.

**IMPORTANT:** Use separate circuit for each power unit.

Protect each circuit with time delay fuse or circuit breaker. For single phase 208-230V, use 25 amp fuse.

Three phase 208-240V, use 25 amp fuse. For three phase 400V and above, use 15 amp fuse. All wiring must comply with NECK and all local electrical codes.

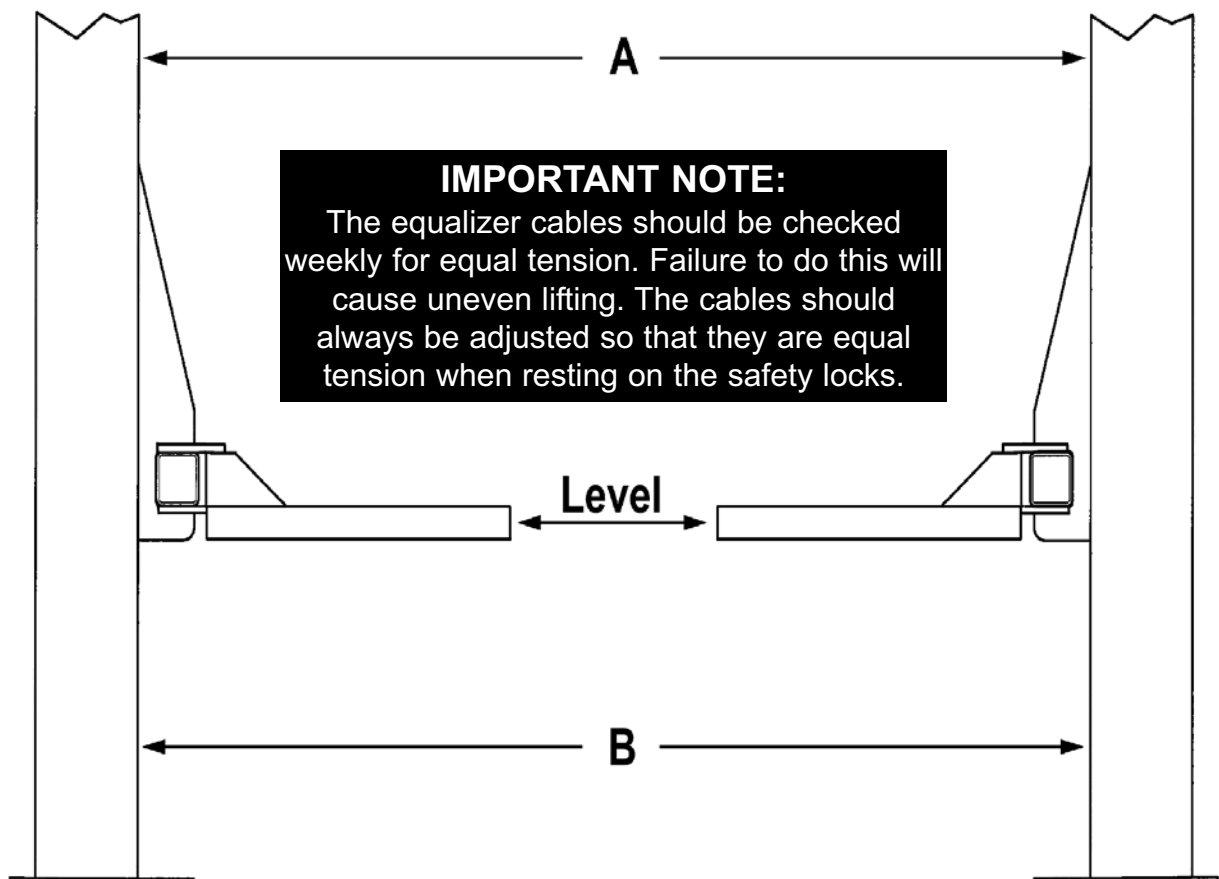


## IMPORTANT LEVELING INSTRUCTIONS

Before operating your lift, check to make sure that both "A" and "B" measurements are EQUAL.

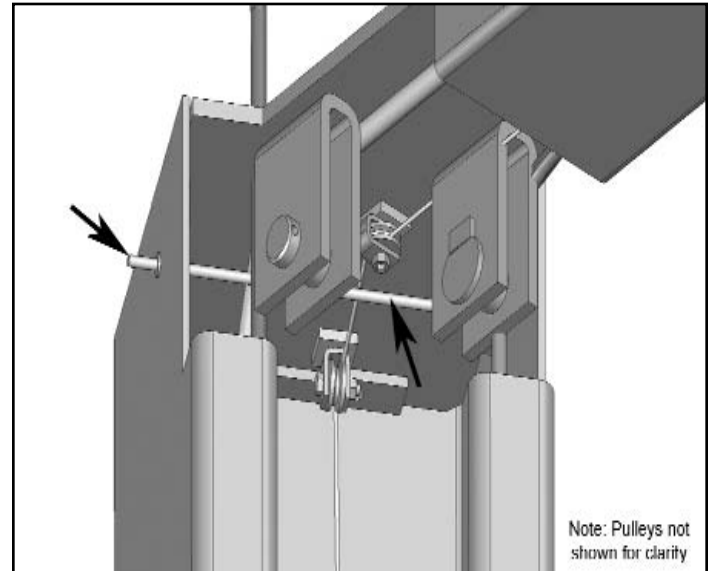
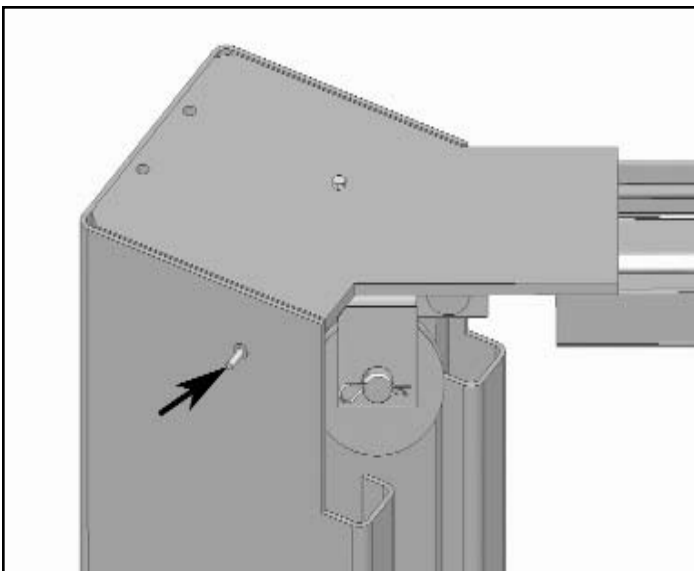
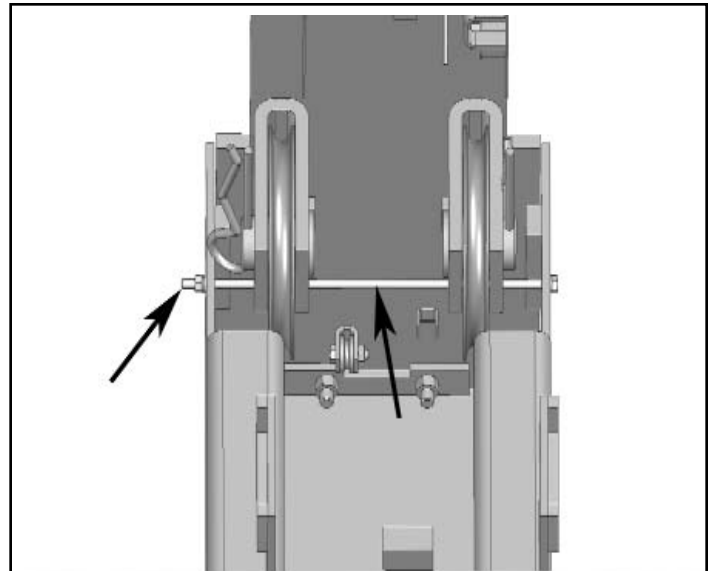
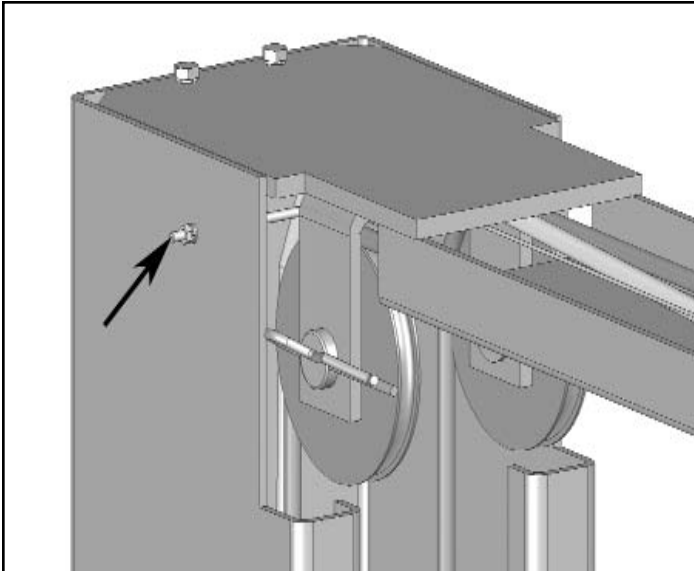
The swing arms must be level before operation.

If your swing arms are not level shim the columns as required.



# **WARNING**

You **MUST** re-install top carriage-stop bolt (shown below) after top beam/plate is installed and secured. Tighten carriage-stop bolt to ~~20~~<sup>20</sup> lbs. of torque upon final installation inspection. These instructions must be followed to insure proper installation and operation of your lift. Failure to comply with these instructions can result in serious bodily injury and or death and or void product warranty. Manufacturer will assume no liability for loss or damage of any kind, expressed or implied resulting from improper installation or use of this product.





## POST-INSTALLATION CHECK-OFF

- Columns Properly Shimmed And Stable
- Anchor Bolts Tightened
- Pivot / Sheave Pins Properly Attached
- Carriage Stop bolts Torqued to 20 Lbs
- Electric Power Supply Confirmed
- Cables Adjusted Properly
- Safety Locks Functioning Properly
- Check For Hydraulic Leaks
- Oil Level
- Lubrication of Critical Components
- Check For Overhead Obstructions
- Lift Arms Level
- All Screws, Bolts, and Pins Secured
- Surrounding Area Clean
- Operation, Maintenance and Safety Manuals on Site.

### STEP THIRTEEN

( Lift Start Up / Final Adjustments )

1. Make sure the power unit reservoir is full with 4 Gallons of 10-WT hydraulic oil or Dexron-III automatic transmission fluid.
2. Test the power unit by pressing the push-button switch. 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 sounds peculiar, stop and check all electrical connections.
3. 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.
4. Check to make sure that all slack safety locks are cleared and free.

### NOTE:

There will be initial stretching of the cables in the beginning and/or with increased loads. Adjust the cables as outlined above a week after first use, then every three to six months thereafter depending on usage and/or to compensate for stretch.



## WARNING

### WARNING!

WHEN THE CABLE ADJUSTING NUTS BOTTOM OUT ON THE THREADED END OF THE CABLE CONNECTOR AND THERE IS STILL SLACK IN THE CABLES, THE CABLES HAVE STRETCHED BEYOND THE SAFE USEFUL LENGTH AND NEED TO BE REPLACED WITH FACTORY APPROVED CABLE ASSEMBLIES. DO NOT PLACE WASHERS, SPACERS OR OTHER DEVICES TO "SHORTEN" THE EFFECTIVE CABLE LENGTH AS DAMAGE TO THE LIFT OR INJURY TO PERSONS MAY OCCUR.

**KEEP HANDS AND FEET CLEAR.** Remove hands and feet from any moving parts. Keep feet clear of lift when lowering. Avoid pinch points.

5. Check all MAIN SAFETY LOCKS to make sure they move freely and spring back to the lock position when released. Lubricate all SAFETY PIVOT points with WD-40 or equal.
6. Run the lift up and down a few times to insure that the locks are engaging uniformly and that the safety release mechanisms are functioning. Re-adjust if necessary.
9. Raise the lift to full height. Listen and watch as the locking latches click in place. Synchronize by adjusting the cables so that both latches click at same time. Make necessary adjustments to the cables allowing compensation for initial stretching.

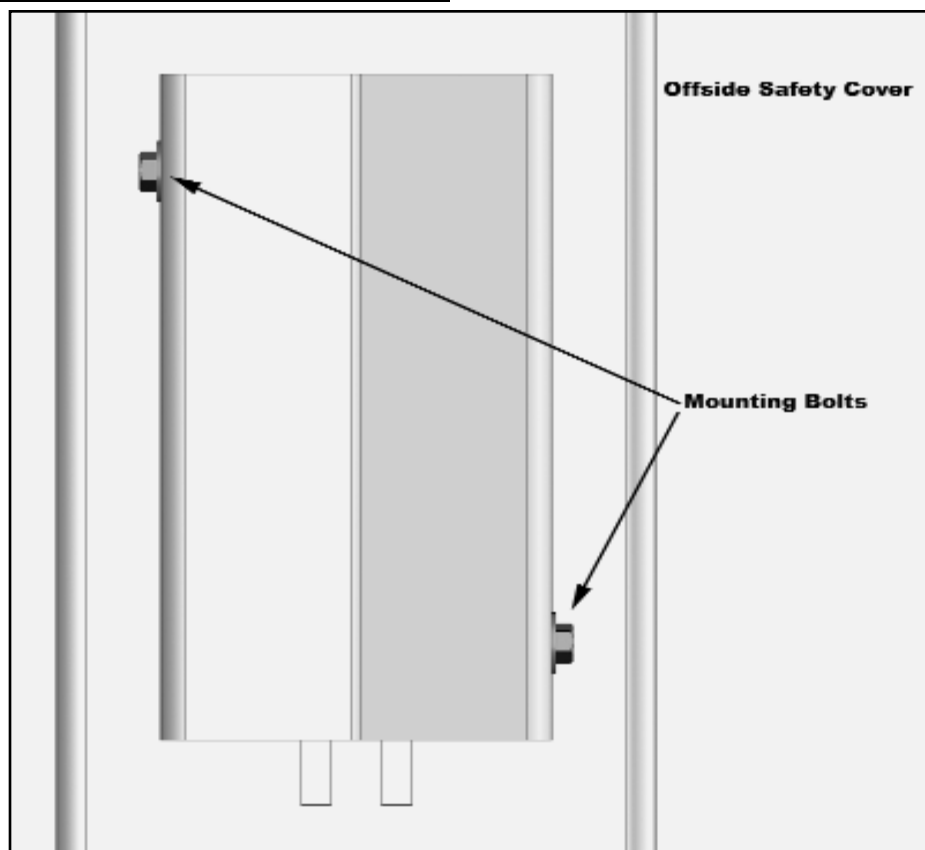
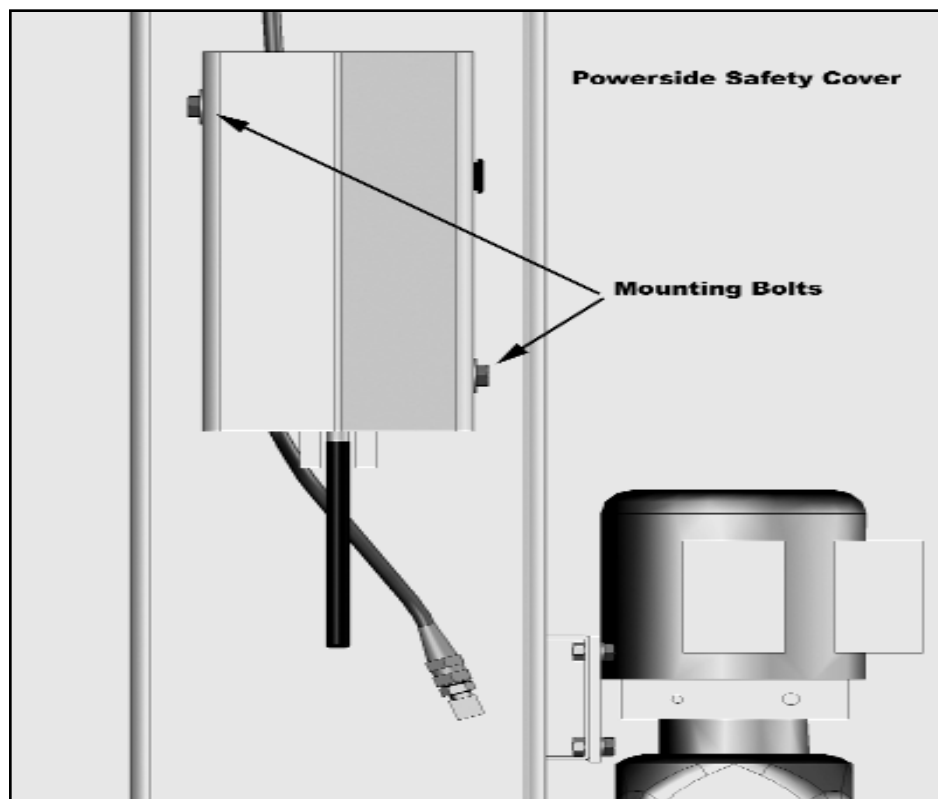
### NOTE:

Safety locks may not click in at exactly the same time when vehicles are being raised. They should be close to simultaneous as possible.

## STEP FOURTEEN

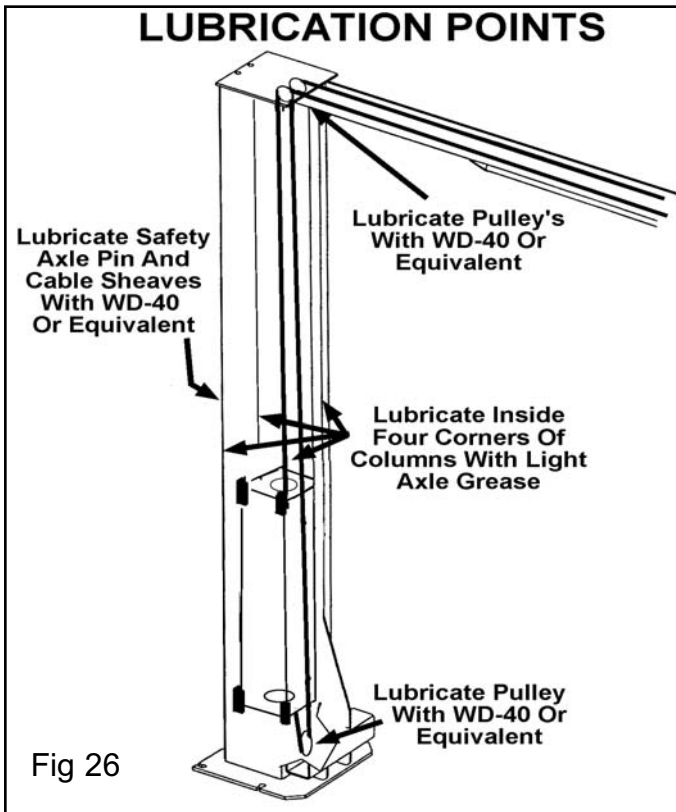
( Installation Of SAFETY COVER. )

1. After safeties have been adjusted and checked for proper operation, install the two cover plates as shown below. ( See Fig. 24 & 25)



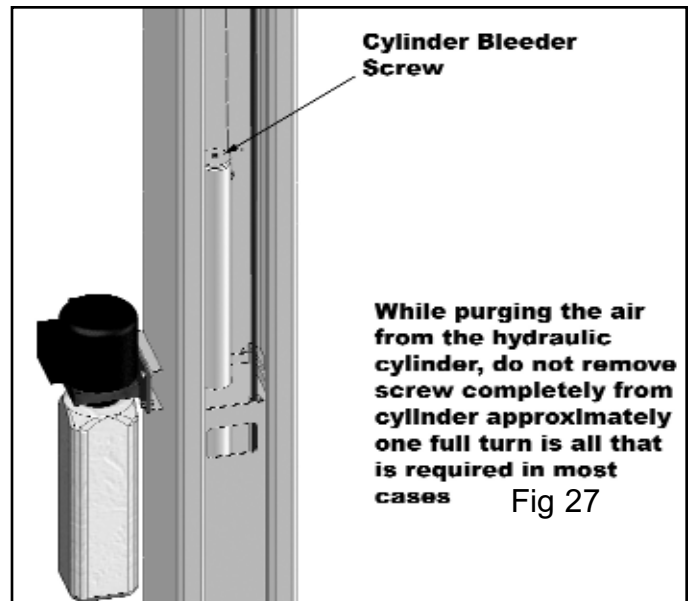
## LUBRICATION

1. After installation and start up has been completed, lubricate lift components as described below. ( See Fig. 26 )



3. Lower the lift only HALF WAY by pressing the SAFETY RELEASE handle inward then pressing in the DOWN lever on power unit.

4. With the lift at half height, slowly loosen the BLEED SCREWS located at the top of each cylinder to bleed trapped air. DO NOT completely remove bleed screws. Retighten after trapped air has escaped. (See Fig. 27)



## START-UP AND BLEEDING

1. After electrical power is connected and oil reservoir is full press button to raise lift. Cylinders may "jump" upon initial start up which is normal.

2. Continue raising until lift cylinders bottom out at full height. DO NOT continue pressing button after lift reaches full height. Damage to motor can occur if continued.



**VISUALLY CONFIRM THAT ALL PRIMARY SAFETY LOCKS ARE ENGAGED BEFORE ENTERING WORK AREA.**

Suspension components on this lift are intended to raise and lower lift only and are not meant to be load holding devices. Remain clear of elevated lift unless visual confirmation is made that all primary safety locks are fully engaged and the lift is LOWERED onto the safety locks. Refer to installation /operation manual for proper safety lock procedures and /or further instruction.

5. Lower the lift completely by pressing the SAFETY RELEASE handle inward then pressing the DOWN lever on power unit and repeat bleeding process one additional time.

## BE AWARE!

During the START-UP procedure, observe all operating components and check for proper installation and adjustment. DO NOT attempt to raise vehicle until a thorough operational check has been completed.



**RISK OF EXPLOSION!!** This equipment has internal arcing or sparking parts which should not be exposed to flammable vapors.

# Utility Air-Electric Workstation

Utility Station may be mounted on the vertical column of the lift or on a wall.

**IMPORTANT: Check State or Local codes for any height requirements for the electrical outlets before mounting.**

To mount the Utility Station on a Lift Column, use the Box as a template, mark and drill 11/32" diameter holes. Use 5/16" diameter bolts and lock nuts to secure to the side of the lift.

**IMPORTANT: The hole locations are critical to avoid interference with the carriage slide blocks.**

For Wall mounting, mount in the same fashion, use appropriate hardware for either sheet rock or concrete.

**IMPORTANT: All electrical wiring shall comply with all State and Local Codes.**

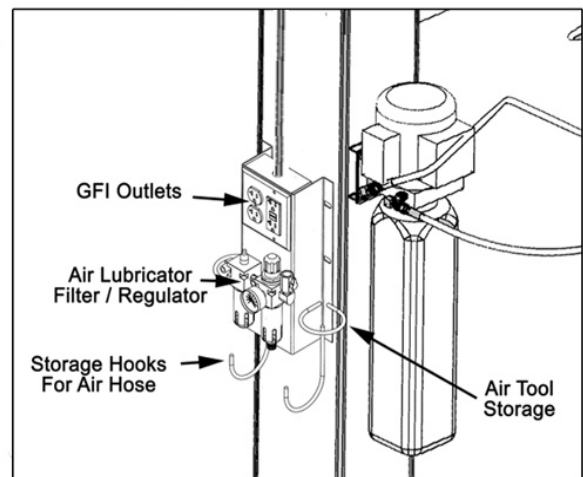
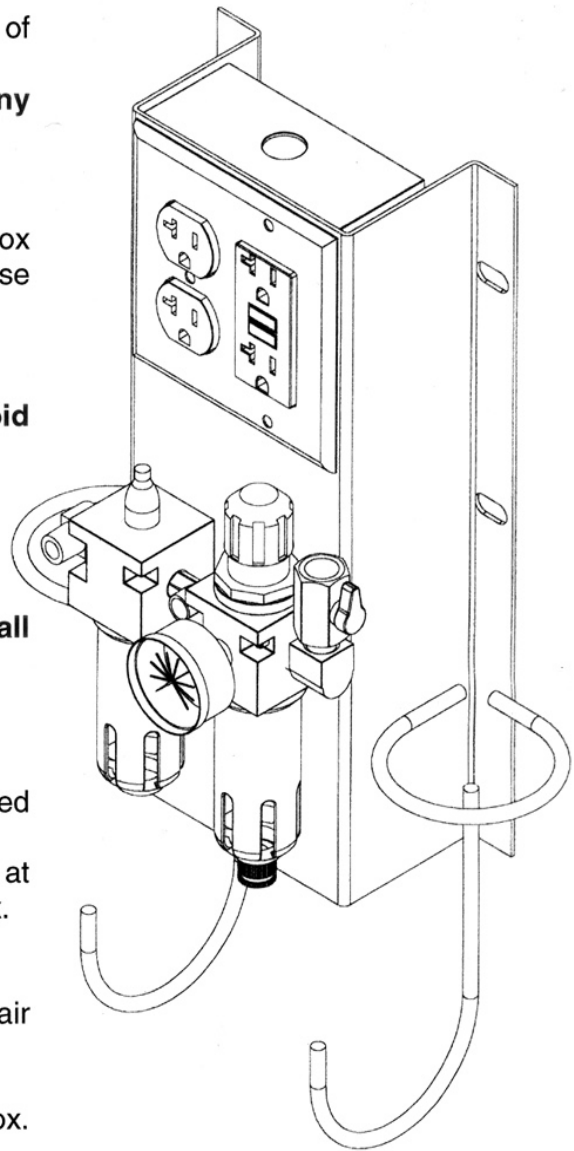
Connect electrical wiring to single phase, 60Hz 115 volt electrical supply using suitable conduit (not supplied). The duplex receptacle must be connected through the GFCI with the input line to the box connected to a circuit breaker or time delay fuse rated at 20 amps. Both receptacles must be grounded to the box.

Connect main air supply to 1/4" ball valve inlet on the Utility Station (Run 1/2" line from compressor or main air system to Utility Station.)

Install Quick Couplers to the 1/4" male fittings on the box. The air supply between the filter and the lubricator will be non-lubricated, used for tire inflation or blowing off. The air outlet on the left side will be lubricated for air tool use.

## Regulator Instructions

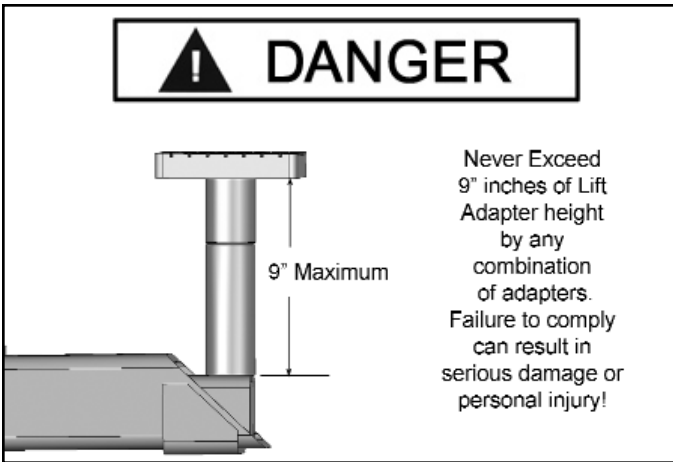
- Regulate pressure by raising the knob, then turning clockwise to increase and counterclockwise to decrease. Push knob down to lock setting.
- Adjust the oil mist using the screwdriver slot located on top of the lubricator.
- To fill the lubricator, first depressurize the air system, remove the slotted screw plug in the body. Replace the screw before repressurizing.



## OPERATION

### To Raise Lift;

- ◆ Load vehicle onto the lift using Vehicle Lifting Guide to determine proper lifting points.



- ◆ Set parking brake or use wheel chock to hold vehicle in position.
- ◆ Before raising vehicle, be sure all personnel are clear of the lift and surrounding area. Pay careful attention to overhead clearances.
- ◆ Raise the lift to the desired height by pressing the push button on the power unit.



### **VISUALLY CONFIRM THAT ALL PRIMARY SAFETY LOCKS ARE ENGAGED BEFORE ENTERING WORK AREA.**

Suspension components on this lift are intended to raise and lower lift only and are not meant to be load holding devices. Remain clear of elevated lift unless visual confirmation is made that all primary safety locks are fully engaged and the lift is LOWERED onto the safety locks. Refer to installation /operation manual for proper safety lock procedures and /or further instruction.

- ◆ After vehicle is raised to the desired height, lower the lift onto the nearest safety lock. Do not allow cables to become slack. **ALWAYS INSURE SAFETY LOCKS ARE ENGAGED** before entering work area.

### To Lower Lift;

- ◆ Raise the lift off the safety locks by pressing the push button on the power unit. Make sure you raise the lift by at least two inches to allow adequate clearance for the locks to clear.

- ◆ Push the powerside safety handle and HOLD.
- ◆ Push the LOWERING HANDLE on the power unit until the lift has descended completely.

## WEEKLY MAINTENANCE

- ◆ Lubricate all rollers with general purpose oil or WD-40.
- ◆ Check all cable connections, bolts and pins to insure proper mounting.
- ◆ Lubricate safety lock pivot points with general purpose oil or WD-40.

## MONTHLY MAINTENANCE

- ◆ Check safety locks to insure they are in good operating condition.
- ◆ Check all cables for excessive signs of wear
- ◆ Make a visual inspection of ALL MOVING PARTS and check for excessive signs of wear
- ◆ Replace ALL FAULTY PARTS before lift is put back into operation.



- ◆ **NEVER EXCEED THE RATED CAPACITY** of lift.
- ◆ **DO NOT USE LIFT** if any component is found to be defective or worn.
- ◆ **NEVER OPERATE LIFT** with any person or equipment below.
- ◆ **ALWAYS STAND CLEAR** of lift when lowering or raising.
- ◆ **ALWAYS INSURE SAFETY LOCKS ARE ENGAGED** before entering work area.
- ◆ **NEVER LEAVE LIFT IN ELEVATED CONDITION** unless all four safety locks are engaged

When lowering the lift PAY CAREFUL ATTENTION that all personnel and objects are kept clear. ALWAYS keep a visual line of site on the lift AT ALL TIMES. ALWAYS make sure that all FOUR LOCKS are disengaged. If one of the locks inadvertently locks on descent the lift and/or vehicle may disrupt causing personal injury or death.

## TO RAISE LIFT

- ◆ Read operating and Safety manuals before using lift.
- ◆ Always lift a vehicle according to the manufactures recommended lifting points.
- ◆ Position vehicle between columns.
- ◆ Adjust swing arms so that the vehicle is positioned with the center of gravity midway between pads.
- ◆ Use truck adapters as needed. Never exceed 9" of combined Pad height.
- ◆ Raise the vehicle by depressing button until the vehicle just lifts off the ground. Recheck to make sure the vehicle is secure and all locking pins are lock in place.
- ◆ Raise vehicle to desired height. Lower vehicle onto nearest safety,
- ◆ Always ensure safeties are engaged before any attempt is made to work on or near vehicle.

## TO LOWER THE LIFT

- ◆ First raise the lift clear to the safeties.
- ◆ Release safeties by pulling on the safety handle.
- ◆ Be sure tool trays, stands or personnel are cleared from under the vehicle.
- ◆ Lower vehicle by activating lowering handle on power unit.
- ◆ Before removing vehicle from lift; positron lift arms and supports to provide an unobstructed exit.
- ◆ **NEVER**, Drive over lift arms.

## REQUIRED MONTHLY MAINTENANCE

- ◆ Check all arm adjusting locks for proper operation.
- ◆ Check all cables connections, bolts and pins to insure proper mounting and torque.
- ◆ Visually inspect safeties for proper operation.
- ◆ Lubricate columns with grease.
- ◆ Inspect all anchors bolts and retighten if necessary.
- ◆ Check all columns for squareness and plumb.
- ◆ Inspect all pivot arms pins making sure they are properly secure.
- ◆ Check equalizer cable tension, and adjust if necessary.
- ◆ If lift is equipped with over head cut-off switch, check for proper operation.



1. **WARNING:** If cement anchor bolts are loose or any component of the the lift is found to be defective, **DO NOT USE THE LIFT!!**
2. Never operate the lift with any person or equipment below the vehicle.
3. Never exceed the rated lift capacity.
4. Always insure the safeties are engaged before any attempt is made to work on or near the vehicle.
5. Never leave lift in elevated position unless the safeties are engaged.
6. Do not permit electric motor to get wet! Motor damage caused by dampness is not covered under warranty.



**NEVER LIFT ANY VEHICLE IN ANY MANNER WITH  
LESS THE ALL FOUR (4) ARMS. RATED CAPACITY OF  
EACH LIFT ARM IS NO GREATER THAT ONE FOURTH  
(1/4) OF THE OVERALL LIFT CAPACITY.**

## Safe Lift Operation

Automotive and truck lifts are critical to the operation and profitability of your business. The safe use of this and other lifts in your shop is critical in preventing employee injuries and damage to customer's vehicles. By operating lifts safely you can insure that your shop is profitable, productive and safe.

Safe operation of automotive lifts requires that only trained employees should be allowed to use the lift.

### ***TRAINING SHOULD INCLUDE, BUT NOT LIMITED TO:***

- ◆ Proper positioning of the vehicle on the runway. (See manufacturers minimize wheel base loading requirements.)
- ◆ Use of the operating controls.
- ◆ Understanding the lift capacity.
- ◆ Proper use of jack stands or other load supporting devices.
- ◆ Proper use, understanding and visual identification of safety lock devices and their operation.
- ◆ Reviewing the safety rules.
- ◆ Proper housekeeping procedures (lift area should be free of grease, oil, tools, equipment, trash, and other debris)
- ◆ A daily inspection of the lift should be completed prior to its use. Safety devices, operating controls, lift arms and other critical parts should be inspected prior to using the lift.
- ◆ All maintenance and repairs of the lift should be completed by following the manufacturer's requirements. Lift repair or replacement parts must be genuine OEM supplied parts. Repairs should only be completed by a qualified lift technician.
- ◆ The vehicle manufacturer's recommendations should be used for spotting and lifting the vehicle.

### ***LIFT OPERATION SAFETY***

- ◆ It is important that you know the load limit. Be careful that you do not overload the lift . If you are unsure what the load limit is, check the data plate found on one of the lift columns or contact the manufacturer.
- ◆ The center of gravity should be followed closely to what the manufacturer recommends.
- ◆ Always make sure you have proper overhead clearance. Additionally, check that attachments, ( vehicle signs, campers antennas, etc. ) are not in the way.
- ◆ Be sure that prior to the vehicle being raised, the doors, trunk, and hood are closed securely
- ◆ Prior to being raised, make sure there is no one standing closer than six feet from the lift
- ◆ After positioning the vehicle on the lift runways, set the emergency brake, make sure the ignition is off, the doors are closed, overhead obstructions are cleared, and the transmission is in neutral.
- ◆ Double check that the automatic chock devices are in position and then when the lift is raised, observe the chocks
- ◆ Put pads or adapters in the right position under the contact points that have been recommended
- ◆ The lift should be raised just until the vehicle's wheels are about one foot off the ground. If contact with the vehicle is uneven or it appears that the vehicle is not sitting secure, carefully lower the lift and readjust.
- ◆ Always consider potential problems that might cause a vehicle to slip, i.e., heavy cargo, undercoating, etc.
- ◆ Pay attention when walking under a vehicle that is up on the hydraulic lift.



- ◆ **DO NOT** Leave the controls while the lift is still in motion.
- ◆ **DO NOT** stand directly in front of the vehicle or in the bay when vehicle is being loaded or driven into position.
- ◆ **DO NOT** Go near vehicle or attempt to work on the vehicle when being raised or lowered. **REMAIN CLEAR** of lift when raising or lowering vehicle.
- ◆ **DO NOT** rock the vehicle while on the lift or remove any heavy components from vehicle that may cause excessive weight shift.
- ◆ **DO NOT** lower the vehicle until people, materials, and tools are clear
- ◆ **ALWAYS INSURE** that the safeties are engaged before any attempt is made to work on or near vehicle.
- ◆ Some vehicle maintenance and repair activities may cause the vehicle to shift. Follow the manufacturer's guidelines when performing these operations. The use of jack stands or alternate lift points may be required when completing some repairs.
- ◆ **READ AND UNDERSTAND** all safety warning procedures before operating lift.
- ◆ **KEEP HANDS AND FEET CLEAR.** Remove hands and feet from any moving parts. Keep feet clear of lift when lowering. Avoid pinch points.
- ◆ **ONLY TRAINED OPERATORS** should operate this lift. All non-trained personnel should be kept away from work area. Never let non-trained personnel come in contact with, or operate lift.
- ◆ **USE LIFT CORRECTLY.** Use lift in the proper manner. Never use lifting adapters other than what is approved by the manufacturer.
- ◆ **DO NOT** override self-closing lift controls.
- ◆ **CLEAR AREA** if vehicle is on danger of falling.
- ◆ **STAY ALERT.** Watch what you are doing. Use common sense. Be aware.
- ◆ **CHECK FOR DAMAGED PARTS.** Check for alignment of moving parts, breakage of parts or any condition that may affect its operation. Do not use lift if any component is broken or damaged.
- ◆ **NEVER** remove safety related components from the lift. Do not use lift if safety related components are damaged or missing.
- ◆ When the lift is being lowered, make sure everyone is standing at least six feet away.
- ◆ Be sure there are no jacks, tools, equipment, left under the lift before lowering.
- ◆ Always lower the vehicle down slowly and smoothly.



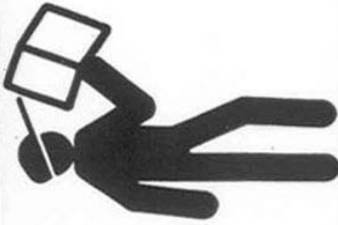
# ! WARNING

## WIRE ROPE INSPECTION AND MAINTENANCE

- Lifting cables should be replaced every three years or when visible signs of damage are apparent. **DO NOT USE LIFT WITH DEFECTIVE / WORN CABLES.**
- Wire rope should be maintained in a well-lubricated condition at all times. Wire rope is only fully protected when each wire strand is lubricated both internal and external. Excessive wear will shorten the life of the wire rope. The factory suggested wire rope lubricant that penetrates to the core of the rope and provides long-term lubrication between each individual strand is AMSOIL Synthetic Open Gear and Wire Rope Compound or 90-WT gear oil or similar heavy lubricant. In order to make sure that the inner layers of the rope remain well lubricated, lubrication should be carried out at intervals not exceeding three months during operation.
- All sheaves and guide rollers in contact with the moving rope should be given regular visual checks for surface wear and lubricated to make sure that they run freely. This operation should be carried out at appropriate intervals generally not exceeding three months during operation. For all sheave axles, the factory recommends standard wheel bearing grease. For all sheaves and/or guide rollers, the factory recommends 90-WT gear oil or similar heavy lubricant applied by any method including pump / spray dispensing, brush, hand and/or swabbing.

**Failure to read, understand, and follow these instructions may cause death or serious injury.**  
**Read and understand these instructions before using lift.**

## SAFETY INSTRUCTIONS



Read operating and safety manuals before using lift.

©

## SAFETY INSTRUCTIONS



Proper maintenance and inspection is necessary for safe operation.

©

## SAFETY INSTRUCTIONS



Do not operate a damaged lift.

©

The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style

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ALI/WL101a



## WIRE ROPE INSPECTION AND MAINTENANCE

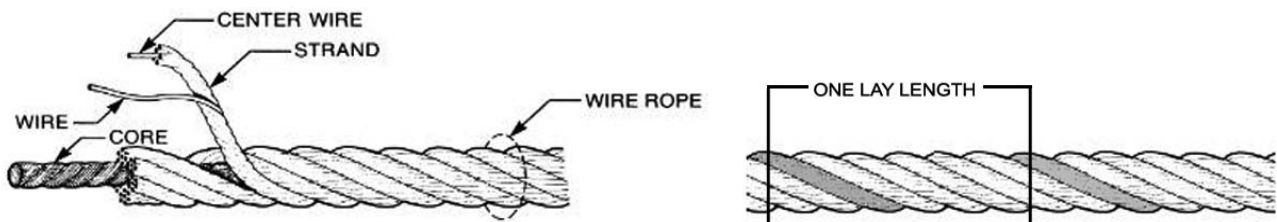
- ◆ Lifting cables should be replaced every three - five years or when visible signs of damage are apparent. **DO NOT USE LIFT WITH DEFECTIVE / WORN CABLES.**
- ◆ Lifting cables should be maintained in a well-lubricated condition at all times. Wire rope is only fully protected when each wire strand is lubricated both internal and external. Excessive wear will shorten the life of the wire rope. The factory suggested wire rope lubricant that penetrates to the core of the rope and provides long-term lubrication between each individual strand is 90-WT gear oil or ALMASOL® Wire Rope Lubricant. In order to make sure that the inner layers of the rope remain well lubricated, lubrication should be carried out at intervals not exceeding three months during operation.
- ◆ All sheaves and guide rollers in contact with the moving rope should be given regular visual checks for surface wear and lubricated to make sure that they run freely. This operation should be carried out at appropriate intervals generally not exceeding three months during operation. For all sheave axles, the factory recommends standard wheel bearing grease. For all sheaves and/or guide rollers, the factory recommends 90-WT gear oil or similar heavy lubricant applied by any method including pump / spray dispensing, brush, hand and/or swabbing.

### HOW OFTEN TO INSPECT

- ◆ Lifting cables should be visually inspected at least once each day when in use, as suggested by American Petroleum Institute (API) RP54 guidelines.
- ◆ Any lifting cables that have met the criteria for removal must be immediately replaced.

### WHEN TO REPLACE LIFTING CABLES DUE TO BROKEN WIRES

- ◆ Lifting cables should be removed from service when you see six randomly distributed broken wires within any one lay length, or three broken wires in one strand within one lay length.



The three basic components of a typical wire rope.

### OTHER REASONS TO REPLACE LIFTING CABLES

- ◆ Corrosion that pits the wires and/or connectors.
- ◆ Evidence of kinking, crushing, cutting, bird-caging or a popped core.
- ◆ Wear that exceeds 10% of a wire's original diameter.
- ◆ Evidence of heat damage.

### HOW TO FIND BROKEN WIRES

- ◆ The first step is to relax your rope to a stationary position and move the pick-up points off the sheaves. Clean the surface of the rope with a cloth — a wire brush, if necessary — so you can see any breaks.
- ◆ Flex the rope to expose any broken wires hidden in the valleys between the strands.
- ◆ Visually check for any broken wires. One way to check for crown breaks is to run a cloth along the rope to check for possible snags.
- ◆ With an awl, probe between wires and strands and lift any wires that appear loose. Evidence of internal broken wires may require a more extensive rope examination.

**⚠ CAUTION**



Lift to be used by trained operator only.

©

**⚠ CAUTION**



Authorized personnel only in lift area.

©

**⚠ WARNING**



Clear area if vehicle is in danger of falling.

©

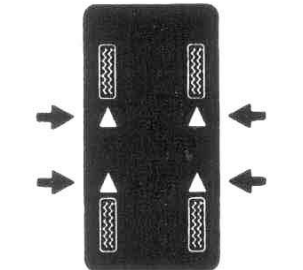
**⚠ WARNING**



Position vehicle with center of gravity midway between adapters.

©

**⚠ CAUTION**



Use vehicle manufacturer's lift points.

©

**⚠ CAUTION**



Always use safety stands when removing or installing heavy components.

©

**⚠ WARNING**



Remain clear of lift when raising or lowering vehicle.

©

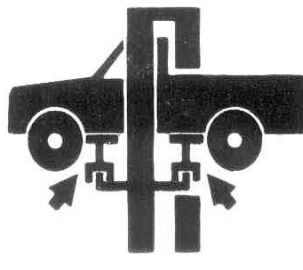
**⚠ WARNING**



Avoid excessive rocking of vehicle while on lift.

©

**⚠ CAUTION**



Use height extenders when necessary to ensure good contact.

©

**⚠ CAUTION**



Auxiliary adapters may reduce load capacity.

©

**⚠ WARNING**



Do not override self-closing lift controls.

©

**⚠ WARNING**



Keep feet clear of lift while lowering.

©

The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style.

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## LIFT WILL NOT RAISE

### **POSSIBLE CAUSE**

1. Air in oil, (1,2,8,13)
2. Cylinder binding, (9)
3. Cylinder leaks internally, (9)
4. Motor run backward under pressure, (11)
5. Lowering valve leaks, (3,4,6,10,11)
6. Motor runs backwards, (7,14,11)
7. Pump damaged, (10,11)
8. Pump won't prime, (1,8,13,14,3,12,10,11)
9. Relief valve leaks, (10,11)
10. Voltage to motor incorrect, (7,14,11)

### **REMEDY**

### **INSTRUCTION**

- |  |  |
|--|--|
| 1. Check for proper oil level. . . . .                                   | The oil level should be up to the bleed screw in the reservoir with the lift all the way down. |
| 2. Bleed cylinders. . . . .  | See Installation Manual  |
| 3. Flush- Release valve to get rid of. . . . .<br>possible contamination | Hold release handle down and start unit allowing it to run for 15 seconds.                     |
| 4. Dirty oil. . . . .  | Replace oil with clean Dexron ATF.   |
| 5. Tighten all fasteners. . . . .  | Tighten fasteners to recommended torques.  |
| 6. Check for free movement of release. . . . .                           | If handle does not move freely, replace bracket or handle assembly.                            |
| 7. Check motor is wired correctly. . . . .                               | Compare wiring of motor to electrical diagram on drawing.                                      |
| 8. Oil seal damaged or cocked . . . . .                                  | Replace oil seal around pump shaft.  |
| 9. See Installation Manual . . . . .                                     | Consult Lift Manufacturer.   |
| 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**

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)

### **REMEDY**

- | <b>REMEDY</b>                                     | <b>INSTRUCTION</b>   |
|---|--|
| 1. Check for correct voltage . . . . .            | .Compare supply voltage with voltage on motor nametag. 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 208/230 VAC.  |

## LIFT LOWERS SLOWLY OR NOT AT ALL

### **POSSIBLE CAUSE**

1. Cylinders binding, (1)
2. Release valve clogged, (5,4,2,3)
3. Pressure fitting too long, (6)

### **REMEDY**

- | <b>REMEDY</b>                                       | <b>INSTRUCTION</b>  |
|---|---|
| 1. See Installation Manual . . . . .                | .Consult Lift Manufacturer.   |
| 2. Replace with new part . . . . .                  | .Replace with new part.   |
| 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.  |

## WILL NOT RAISE LOADED LIFT

### **POSSIBLE CAUSE**

1. Air in oil, (1,2,3,4)
2. Cylinder binding, (5)
3. Cylinder leaks internally, (5)
4. Lift overloaded, (6,5)
5. Lowering valve leaks, (7,8,1,5,9)
6. Motor runs backwards, (10,12,9)
7. Pump damaged, (5,9)
8. Pump won't prime, (1,2,3,4,5,11,9)
9. Relief valve leaks, (8,5,9)
10. Voltage to motor incorrect, (10,12,5)

### **REMEDY**

### **INSTRUCTION**

- |  |  |
|--|--|
| 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. Check/Tighten inlet tubes . . . . .             | Replace inlet hose assembly.   |
| 3. Oil seal damaged or cocked . . . . .            | Replace oil seal and install.  |
| 4. Bleed cylinders . . . . .                       | See Installation Manual.   |
| 5. See Installation Manual . . . . .               | Consult Lift Manufacturer.   |
| 6. Check vehicle weight . . . . .                  | Compare weight of vehicle to weight limit of the lift.   |
| 7. Flush release valve . . . . .                   | Hold release handle down and start unit allowing it to run for 15 seconds.                       |
| 8. Replace with new part . . . . .                 | Replace with new part.   |
| 9. Return unit for repair . . . . .                | Return unit for repair.  |
| 10. Check motor is wired correctly . . . . .       | Compare wiring of motor to electrical diagram on power 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 WILL NOT STAY UP

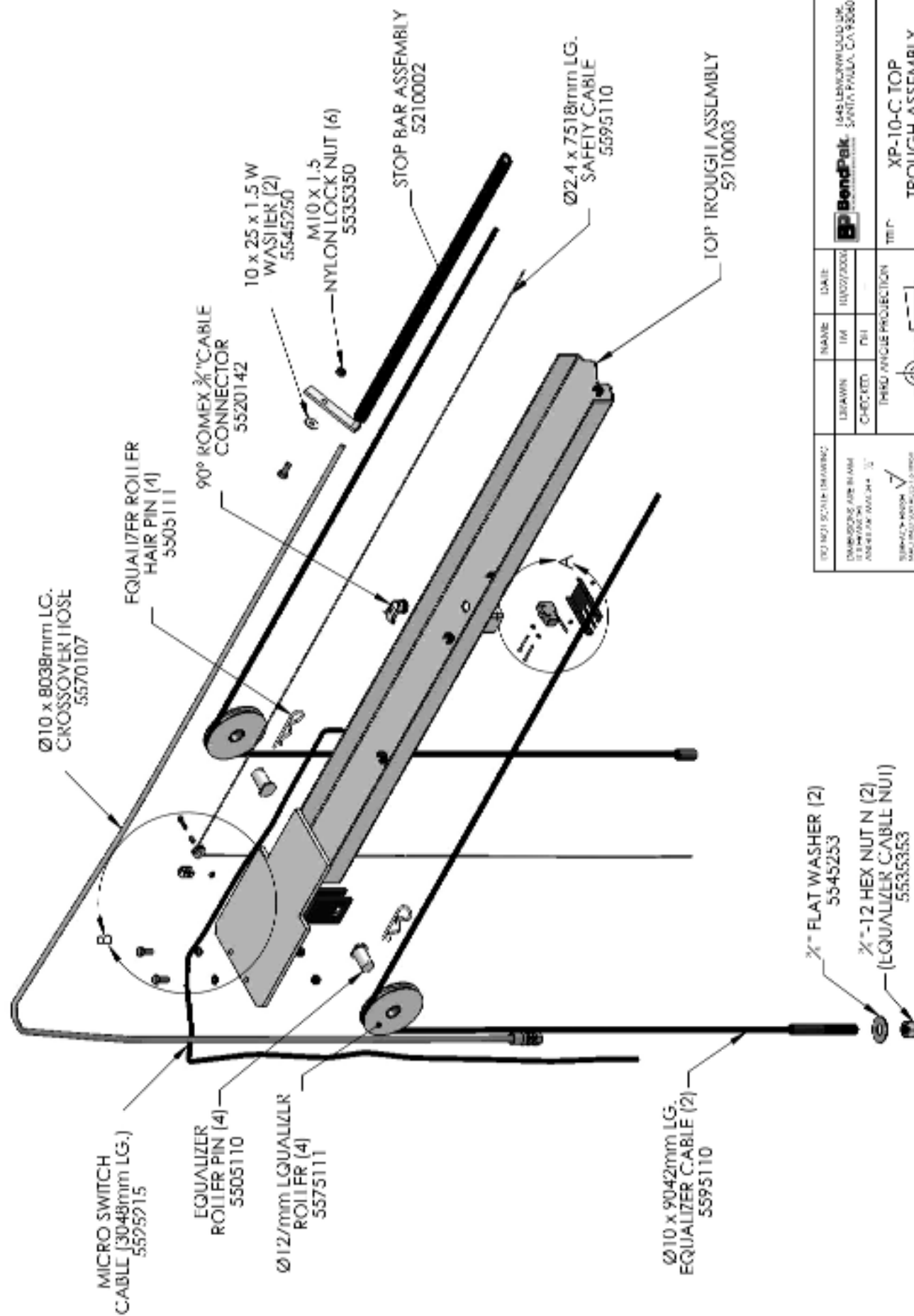
### **POSSIBLE CAUSE**

1. Air in oil, (1,2,3)
2. Check valve leaks, (6)
3. Cylinders leak internally, (7)
4. Lowering valve leaks, (4,5,1,7,6)
5. Leaking fittings, (8)

### **REMEDY**

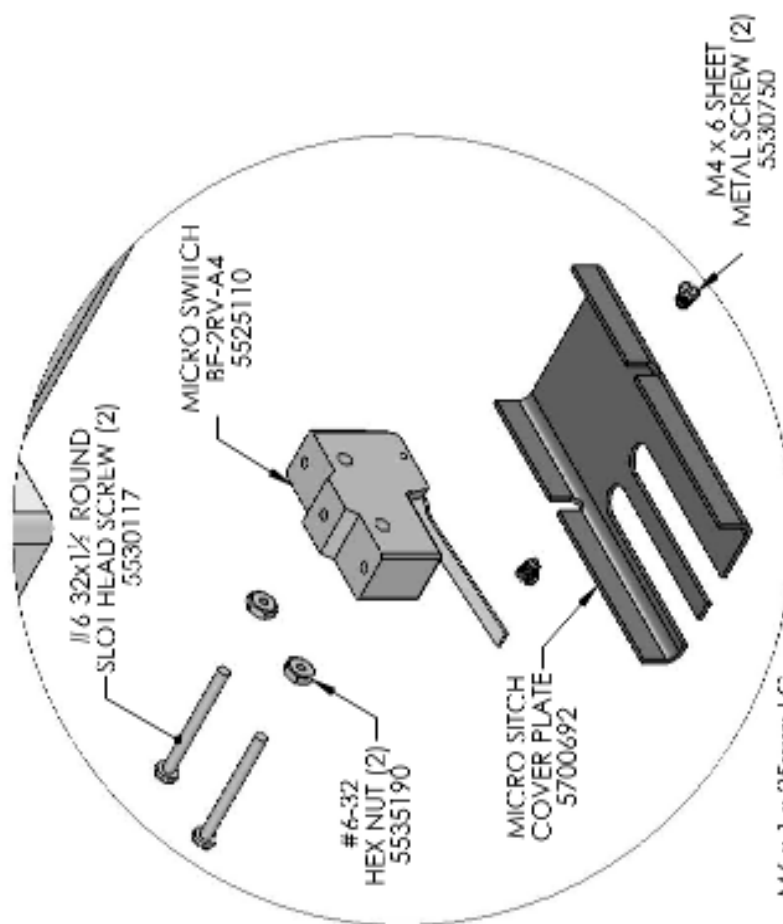
### **INSTRUCTION**

- |   |  |
|---|--|
| 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. Oil seal damaged and cocked . . . . .              | Replace oil seal around pump shaft.  |
| 3. Bleed cylinder . . . . .                           | Refer to Installation Manual.  |
| 4. Flush release valve . . . . .                      | Hold release handle down and start unit allowing it to run for 15 seconds.                     |
| 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. . . . . | Tighten all hydraulics fittings and inspects all hoses.  |

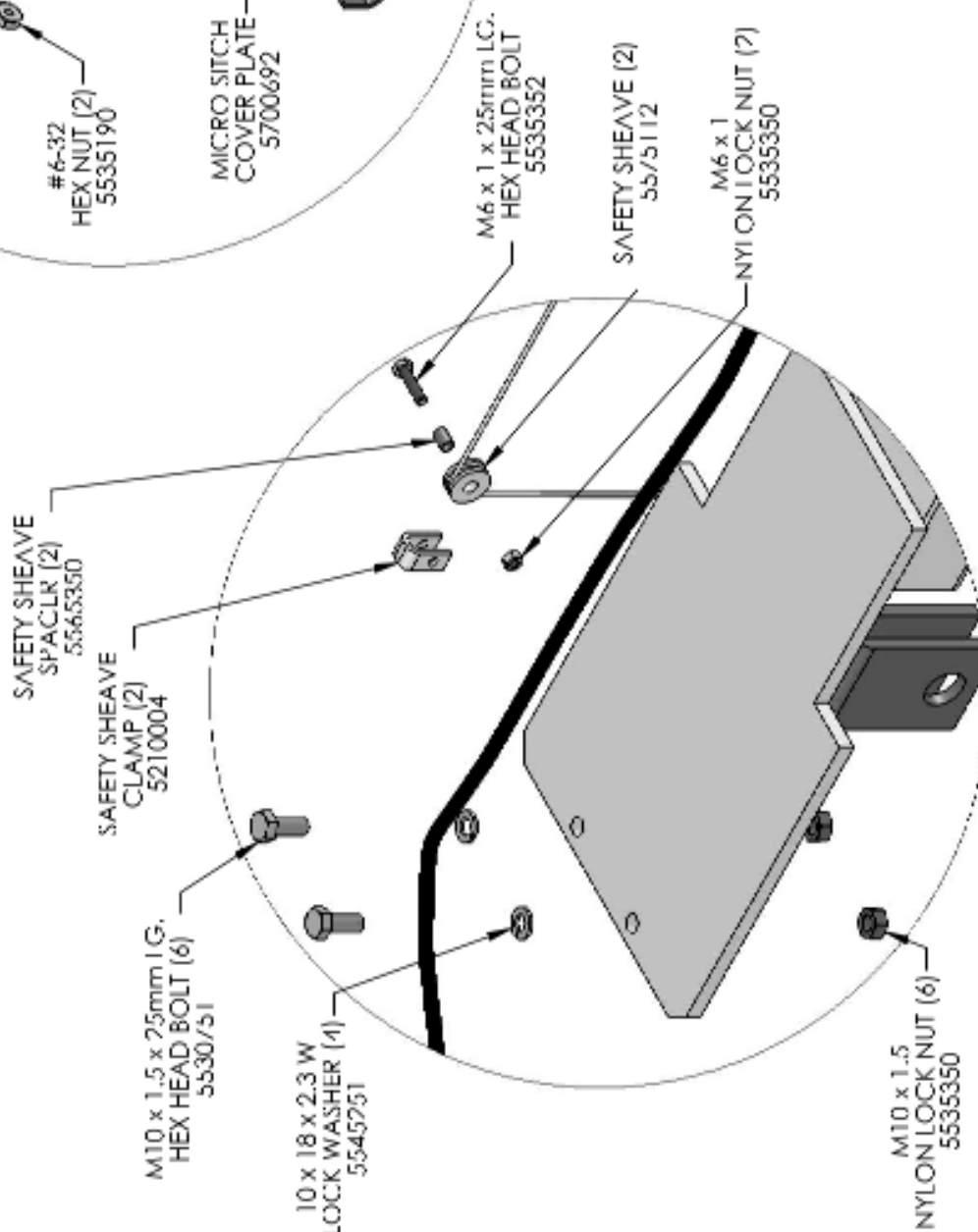


1. DETAIL VIEWS ON PAGE 2.  
2. QUANTITIES PER ASSEMBLY ONLY.  
**NOTE: UNLESS OTHERWISE SPECIFIED.**





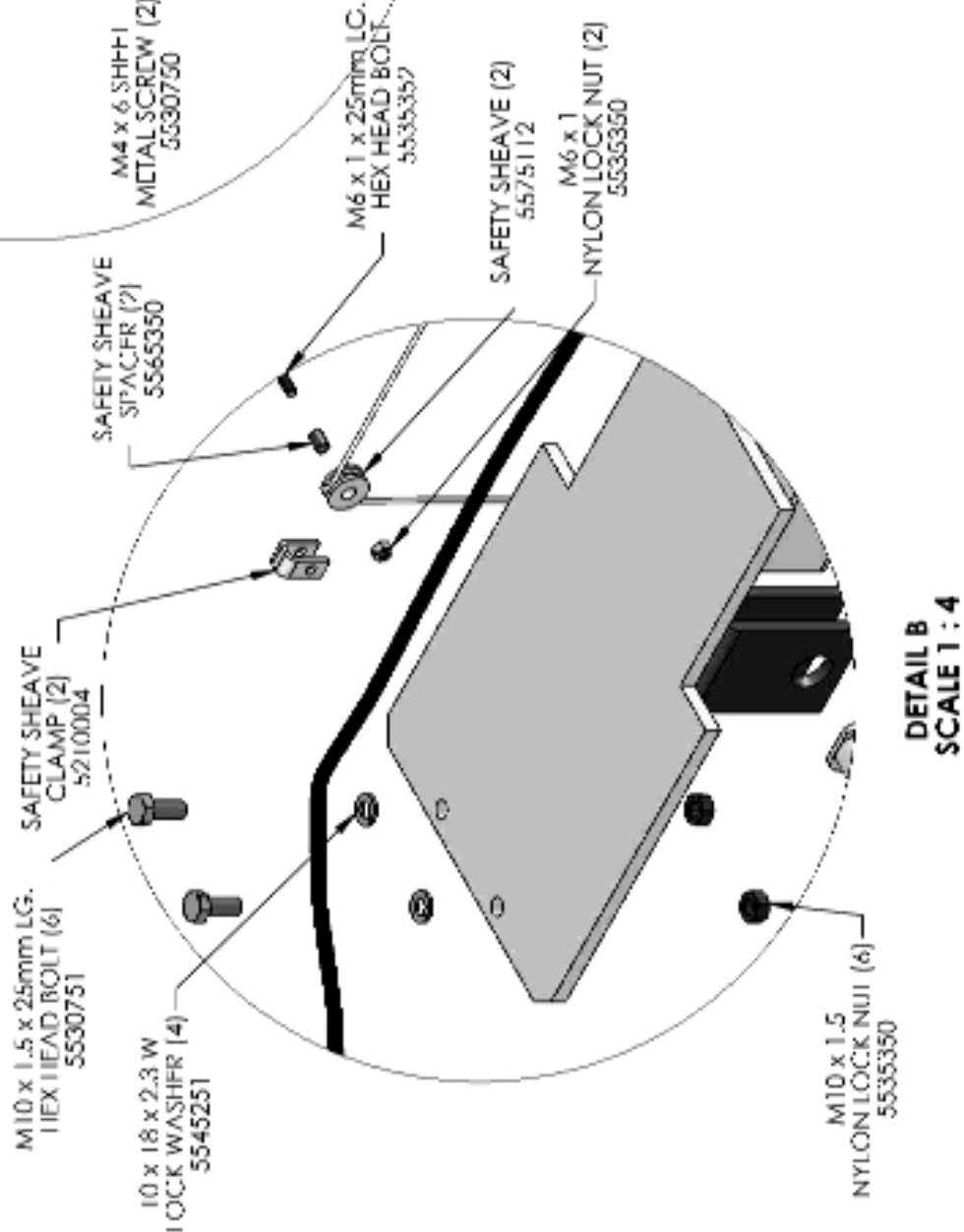
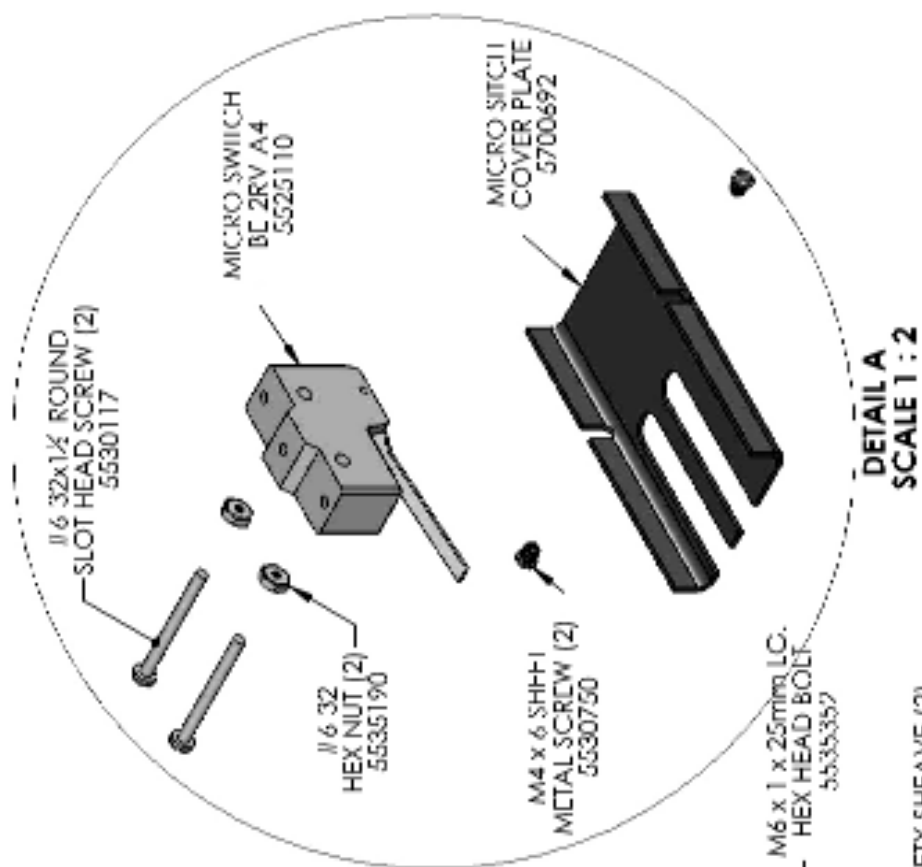
**DETAIL A**  
SCALE 1 : 2



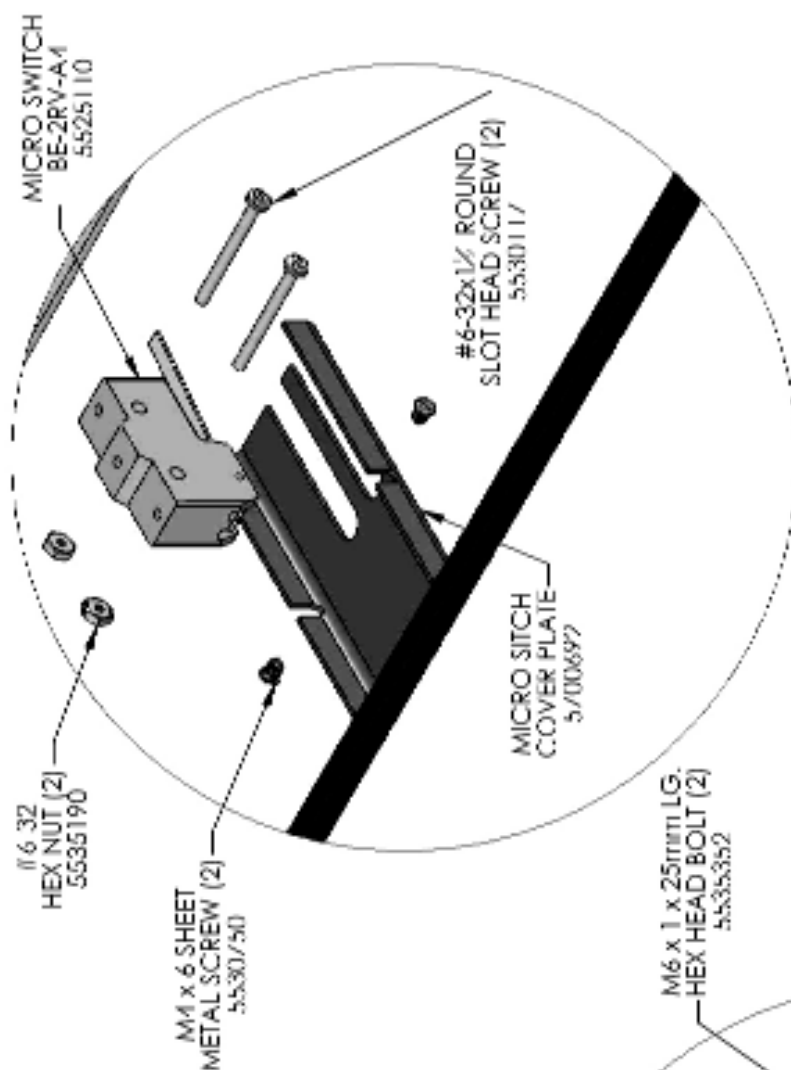
**DETAIL B**  
SCALE 1 : 4



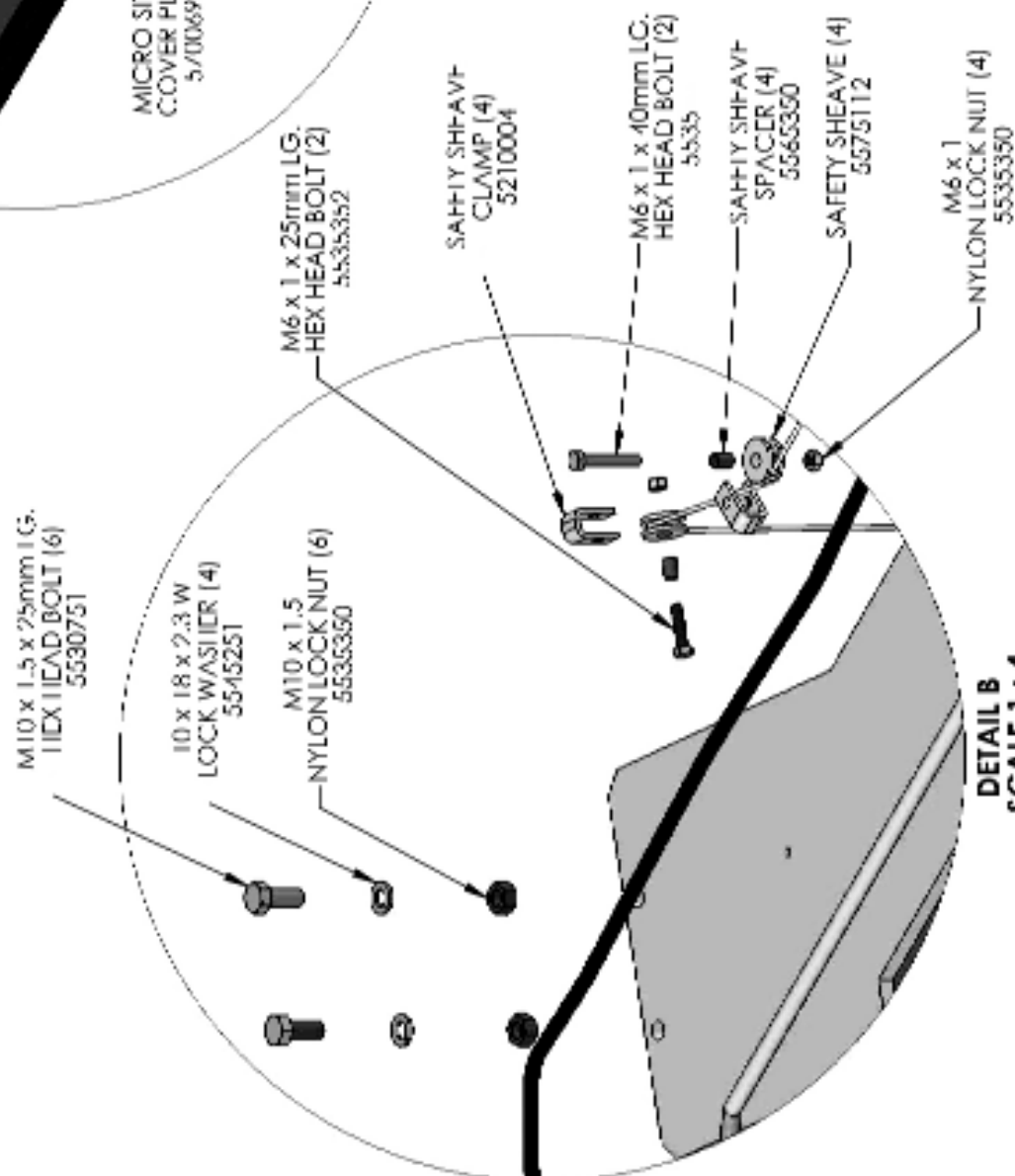
 1445 LAMAR AVENUE SAN RAFAEL, CA 94901			
ITEM:	XP 10 CX		
TOP TROUGH ASSEMBLY			
SIZE	FWG NO	REV	
A	800210	N/C	
SCALE: 1:12		SHEET 2 OF 2	







**DETAIL A**  
**SCALE 1 : 2**



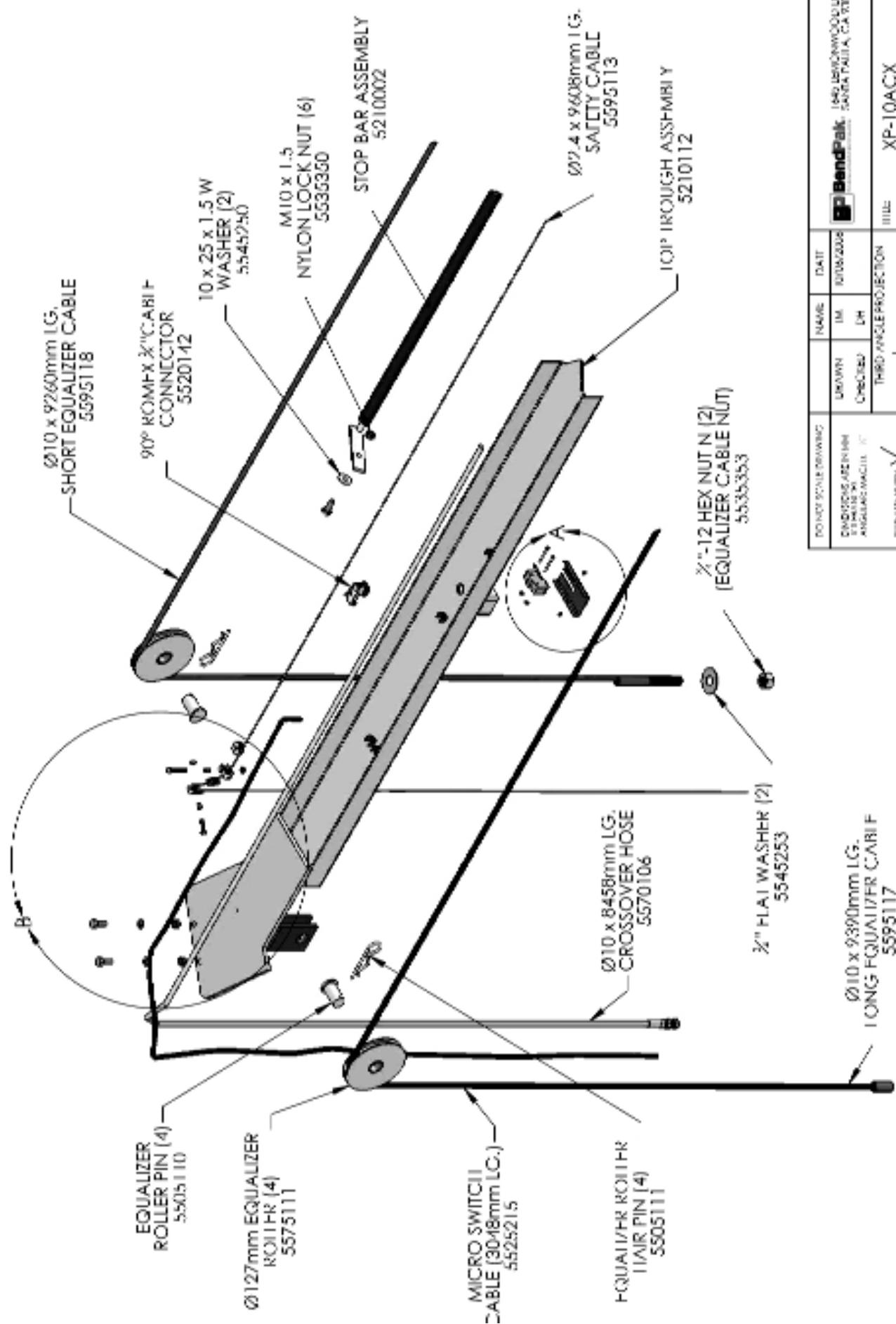
**DETAIL B**  
**SCALE 1 : 4**

**Bendpak** 1545 LEWISWOOD DR.  
SANTA PAULA, CA 91080

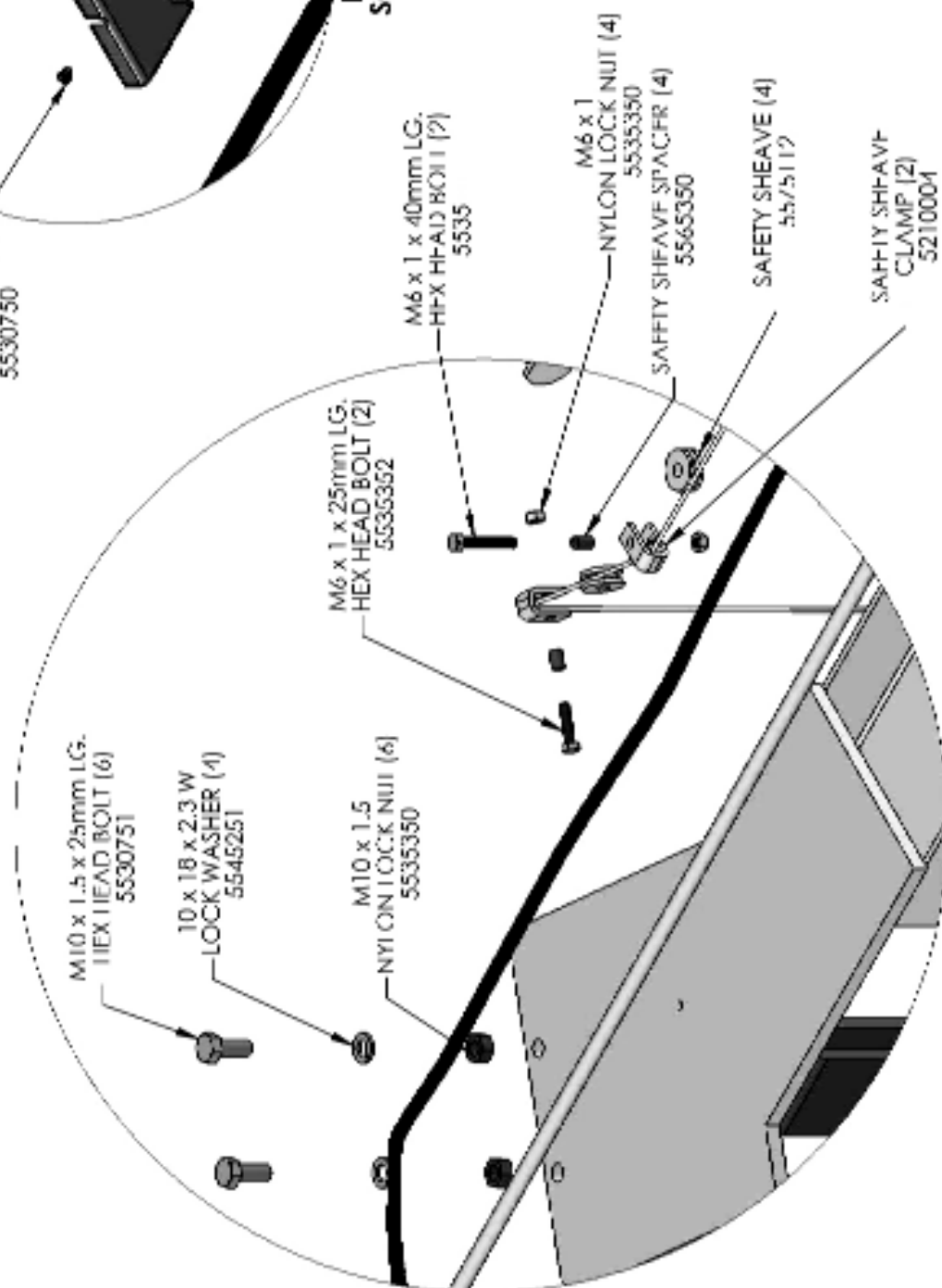
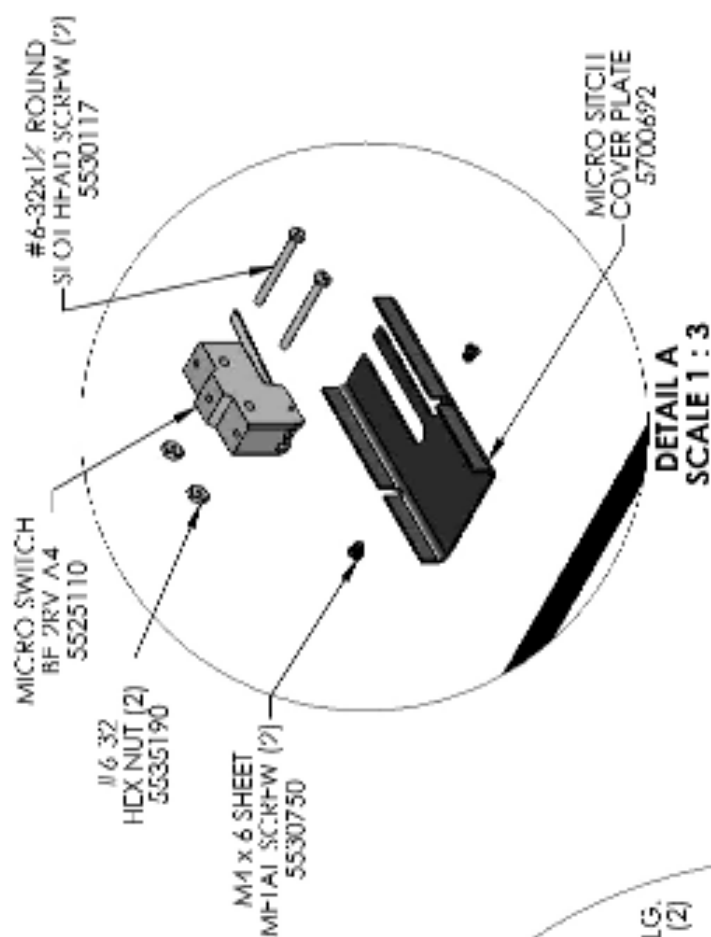
TOP TROUGH ASSEMBLY

REV  
A 800201 N/C

SCALE: 1:12 18 RTT 2 OF 2



1. DETAIL VIEWS ON PAGE 2.  
2. QUANTITIES PER ASSEMBLY ONLY.  
**NOTE: UNLESS OTHERWISE SPECIFIED,**

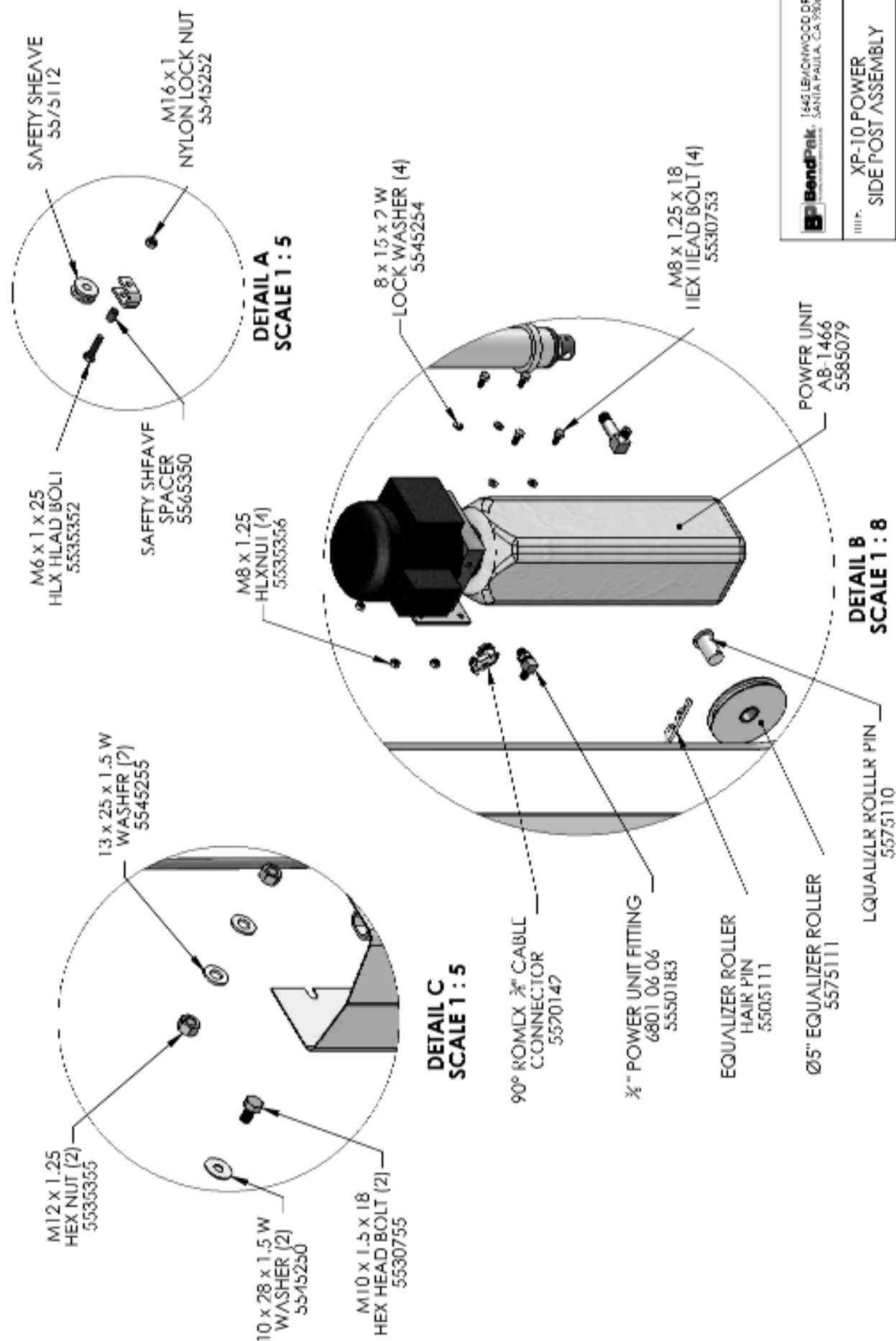


 <b>BendPak</b> 1445 JASONWOOD LN. SANTA FE, CA 97059			
TITLE:		XP 10ACX	
		TOP TROUGH ASSEMBLY	
SHEET NO.	A	FIGURE NO.	800229
		REV.	N/C
SCALE: 1:12		SHEET 2 OF 2	

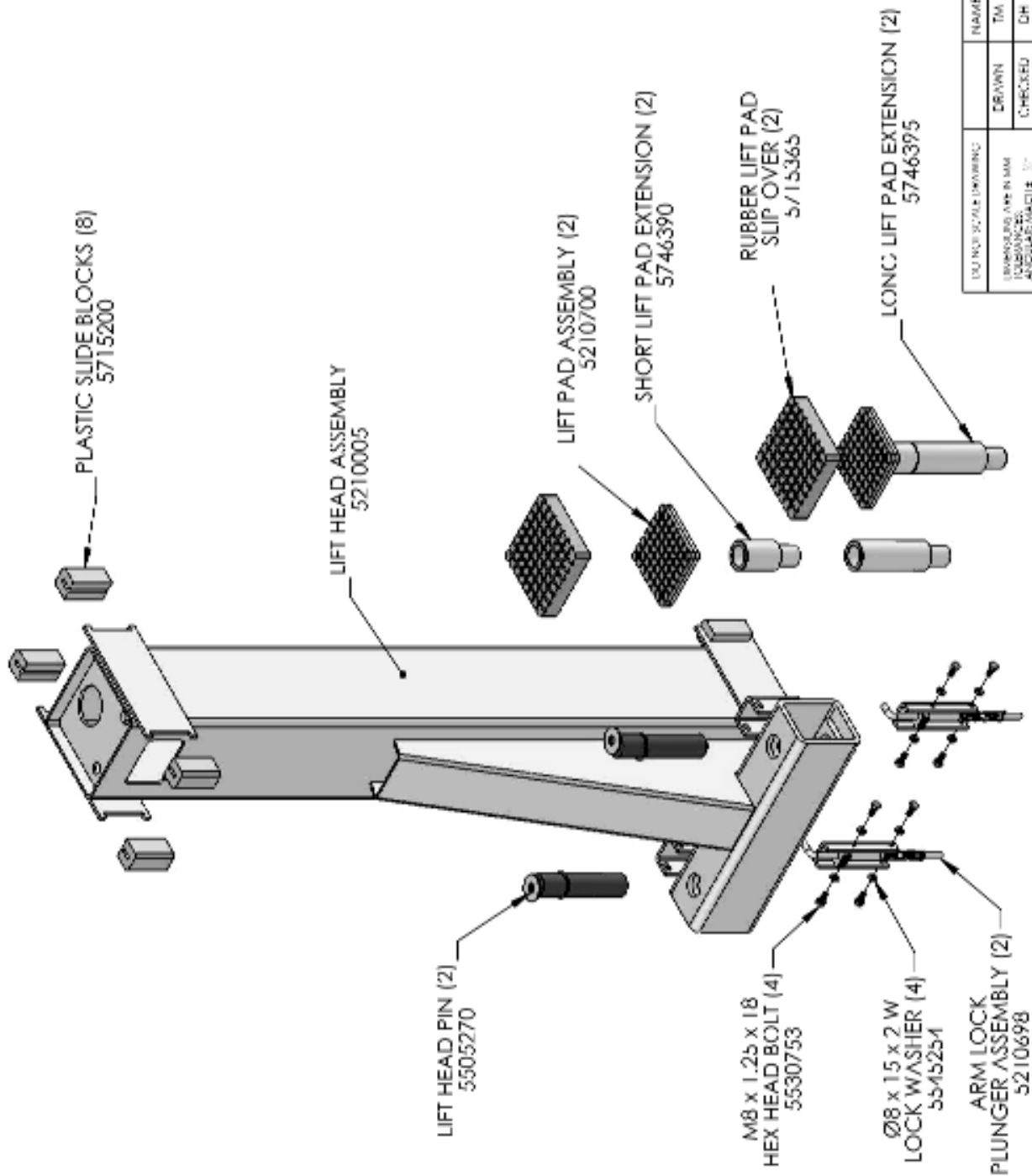








1645 LEMMONWOOD DR. SANTA PAULA, CA 95060	
<b>XP-10 POWER</b> SIDE POST ASSEMBLY	REV
SUP. DWG. NO. <b>A</b> 800146	N/C
SCALE: 1:20	SHEET 2 OF 2



BendPak 1645 LEMMONWOOD DR. SAN DIEGO, CA 92108		DATE	10/04/2008
DRAWN	TIM	DATE	10/04/2008
CHECKED	CH	DATE	
THIRD ANGLE PROJECTION			
DIMENSIONS ARE IN INCHES DIMENSIONS IN PARENTHESES ARE IN MILLIMETERS DIMENSIONS IN PARENTHESES ARE IN MILLIMETERS DIMENSIONS IN PARENTHESES ARE IN MILLIMETERS		DIMENSIONS ARE IN INCHES DIMENSIONS IN PARENTHESES ARE IN MILLIMETERS DIMENSIONS IN PARENTHESES ARE IN MILLIMETERS DIMENSIONS IN PARENTHESES ARE IN MILLIMETERS	
TITLE		XP-10 LII I HEAD ASSEMBLY	
SIZE		A	
DWG. NO.		800151	
REV		N/C	
SCALE		1:10	

1. QUANTITIES ARE PER ASSEMBLY ONLY.  
**NOTE: UNLESS OTHERWISE SPECIFIED.**



*The best automotive service equipment on the planet.*

**For Parts or Service  
Contact:**

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Santa Paula, CA. 93060**

**Tel: 1-805-933-9970  
Toll Free: 1-800-253-2363  
Fax: 1-805-933-9160**

**[www.bendpak.com](http://www.bendpak.com)  
[www.rangerproducts.com](http://www.rangerproducts.com)**

