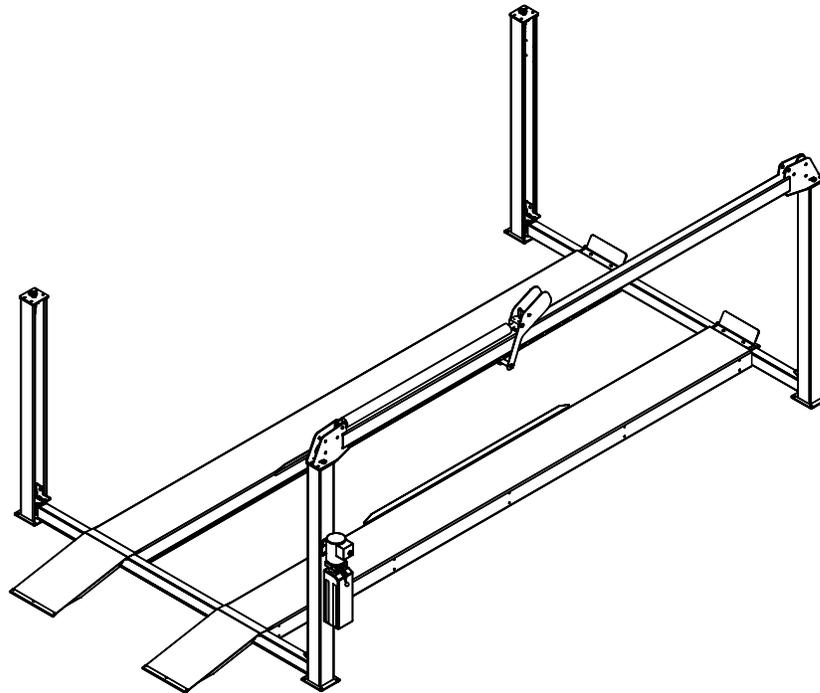


# INSTALLATION, OPERATION & MAINTENANCE MANUAL

## Four-Post Surface Mounted Lift



### MODEL 44000

Chain Drive  
(12,000 lb Capacity)

200 Cabel Street, P.O. Box 3944  
email: [sales@challengerlifts.com](mailto:sales@challengerlifts.com)

Louisville, Kentucky 40201-3944  
web site: [www.challengerlifts.com](http://www.challengerlifts.com)

**Office 800-648-5438 / 502-625-0700 Fax 502-587-1933**

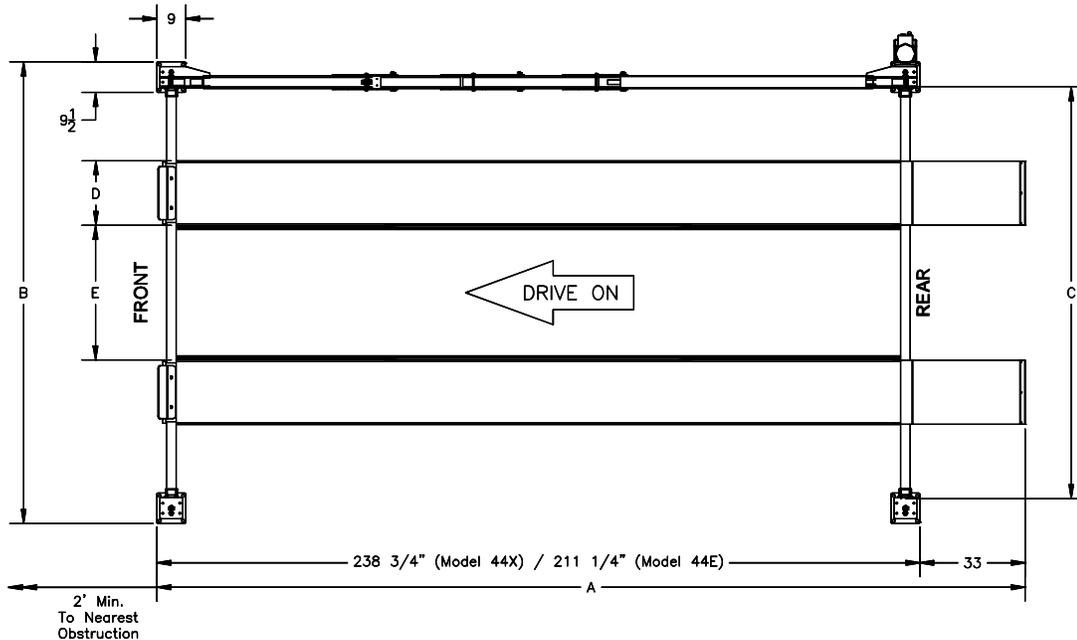
**IMPORTANT: READ THIS MANUAL COMPLETELY BEFORE  
INSTALLING or OPERATING LIFT**

*GENERAL SPECIFICATIONS*

<b>SPECIFICATIONS</b>	<b>44XAX</b>	<b>44XFX</b>	<b>44EAX</b>	<b>44EFX</b>	<b>44XRX</b>
Length Overall (A)	271 3/4"	271 3/4"	244 1/4"	244 1/4"	271 3/4"
Max. Wheelbase*	210"	210"	182 1/2"	182 1/2"	210"
Max. 2 Wheel Alignment*	194"	-	166 1/2"	-	-
Max./Min. 4 Wheel Alignment*	158" / 88"	-	158" / 88"	-	-
Width Overall (B)	144"				
Inside of Columns (C)	128 1/2"				
Maximum Capacity	12,000 lbs.				
Height of Columns/ Overall Height	89"/107"				
Runway Height at Full Rise	78 3/4"				
Runway Width (D)	20"				
Width Between Runways (E)	42"				
Lifting Time	72 Sec. (approximate)				
Motor	2HP, Single Phase, 60Hz, 208/230VAC Optional – 2HP, Three Phase, 50/60Hz, for 208 or 230 or 460V				

\* Wheelbase is based on a tire diameter of 30"

**Dimensions listed below are for layout purposes only.  
Actual dimensions may vary.**



**Fig 1  
(Overall Lift Dimensions)**

# **IMPORTANT!!!**

## BEFORE YOU INSTALL

Before installing your Challenger 4-Post lift, read the manual(s) thoroughly. Inspect the lift to insure that it is complete and undamaged. Challenger 4-Post lifts are shipped ready to assemble to facilitate shipping and reduce damage. If it is apparent that the lift has been mishandled in shipment, or if parts or assemblies are missing, note the damage or missing part(s) on the shipping papers and notify Challenger Lifts, Inc. Immediately.

Determine the location for the lift installation. Fig. 1 gives the overall dimensions of the lift, including the drive on ramps. There must be free access to load and unload the vehicles. There must be enough overhead clearance to raise vehicles six feet above the floor.

### **Vertical Clearance**

Check the height of the area where the lift is to be installed. Clearance should be calculated based on the full raised height of the lift.



**Failure by purchaser to provide adequate clearance could result in unsatisfactory lift performance, property damage, or personal injury.**

### **Flooring**

Be certain you have the proper concrete floor to handle the loaded lift. The floor should be in generally good condition with no large cracks, spalling or deterioration. **Minimum requirements for concrete are 4 inches minimum depth, with steel reinforcement per local commercial practice, 3500 psi, cured for 28 days.** Floor should be level within 3/8 inch over the installation area. The columns must be on the same plane to level the lift. This may be done by shimming, grouting or pouring new pads. No anchors should be installed within 8 inches of any crack, edge, or expansion joint. If these conditions cannot be met, pads may be poured to accommodate the lift. **Pads must be two feet square with a minimum thickness of twelve inches, concrete must be 3500 psi and reinforced as above. These pads must be mechanically attached to the existing floor.** Check with local building inspectors and/or permits office for any special instructions or approvals required for your installation.



**Failure by purchaser to provide the recommended mounting surface could result in unsatisfactory lift performance, property damage, or personal injury.**

### **Electrical Requirements**

For lift installation and operation of single-phase units, it is necessary to have a dedicated circuit with a double pole 25-amp circuit breaker or time delay fuse.

## Safety Notices and Decals

For your safety, and the safety of others, read and understand all of the safety notices and decals included here.

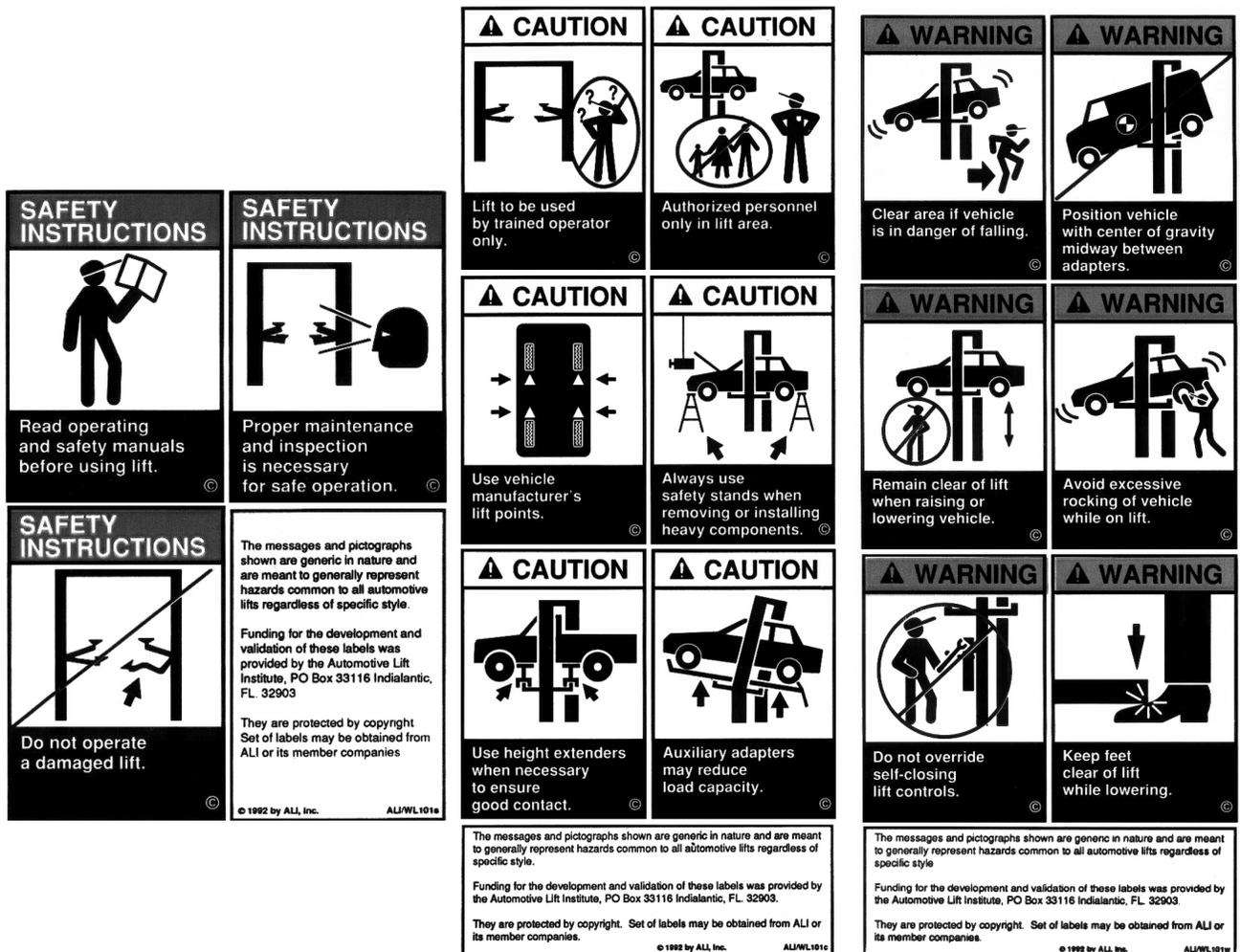
**Read entire manual before assembling, installing, operating, or servicing this equipment. Proper maintenance and inspection is necessary for safe operation. DO NOT operate a damaged lift.**

Safety decals similar to those shown here are found on a properly installed lift. Be sure that all safety decals have been correctly installed on the Power Unit reservoir. Verify that all authorized operators know the location of these decals and fully understand their meaning. Replace worn, faded, or damaged decals promptly.



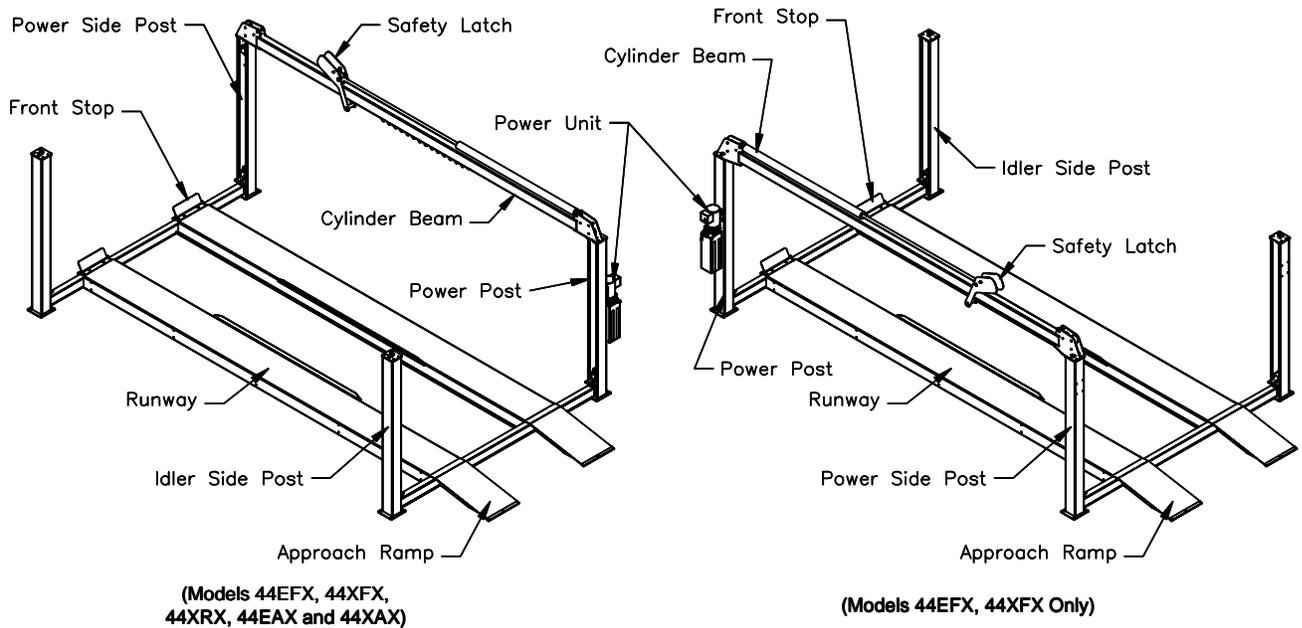
**WARNING**

**Do not attempt to raise a vehicle on the lift until the lift has been correctly installed and adjusted as described in this manual.**



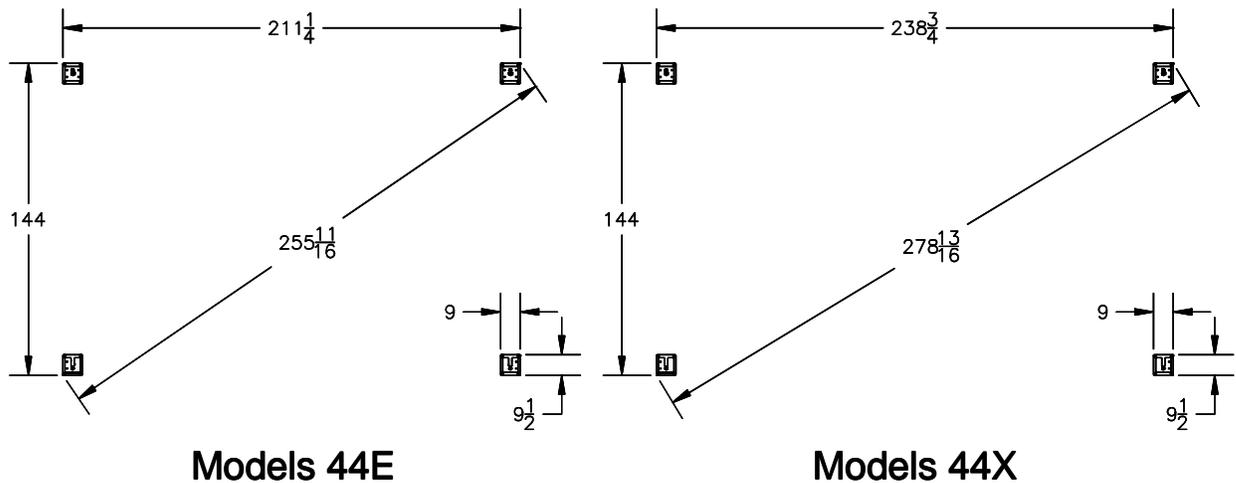
## Installation Procedure

- 1 Refer to Fig. 2, General Arrangement. For muffler work, it is satisfactory to erect the lift with the cylinder beam on the left, or driver's side. For alignment and work, which require access to the front seat of the car, the top rail can be positioned on the right side so it is out of the way.



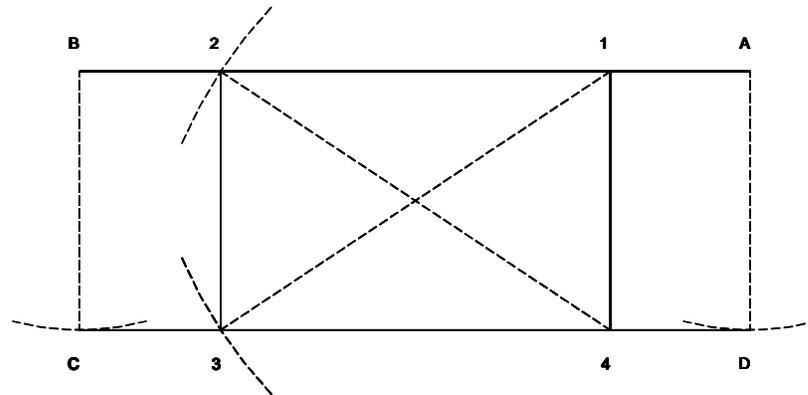
**Fig 2**  
**(General Arrangement)**

- 2 Refer to Fig. 3 to get the dimensions for the post base locations. Refer to Fig. 1 to determine where to locate the sides and ends of the post base plate with respect to walls and other obstacles at the installation. Include additional clearance where required near walls and obstacles.



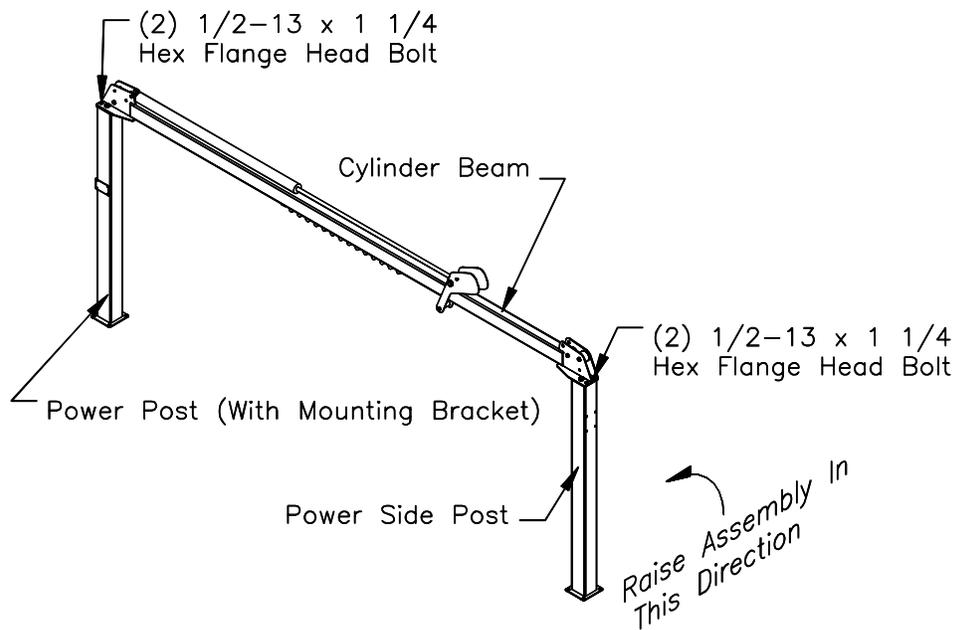
**Fig 3**  
**(Post Base Location)**

- Once the location is determined, use a chalk line to mark base line A-B to locate one side of the lift, refer to Fig 4. Use the width dimension from Fig 3 to measure off the dimensions A-D and B-C. Draw arcs as illustrated in Fig. 4. Draw a chalk line D-C tangent to the two arcs to establish the other side of the lift.



**Fig 4**  
**(Chalk Line layout)**

- Mark on one of the two parallel lines the points 1 and 2 to establish the ends of the post base plate as determined from Figs. 1 and 3. From points, 1 and 2 measure diagonally to the opposite parallel line to determine points 3 and 4. Draw a chalk line between points 1 and 4 and points 2 and 3. The four lines locate the four outside corners of the post base plates.
- Position the cylinder beam and the two power side posts as shown in Fig. 5. The power side post, which has the bracket on one side, is the power unit post. Loosely bolt the cylinder beam to the main side posts using  $\frac{1}{2}$ -13 x 1  $\frac{1}{4}$  flange head bolts and nuts supplied.



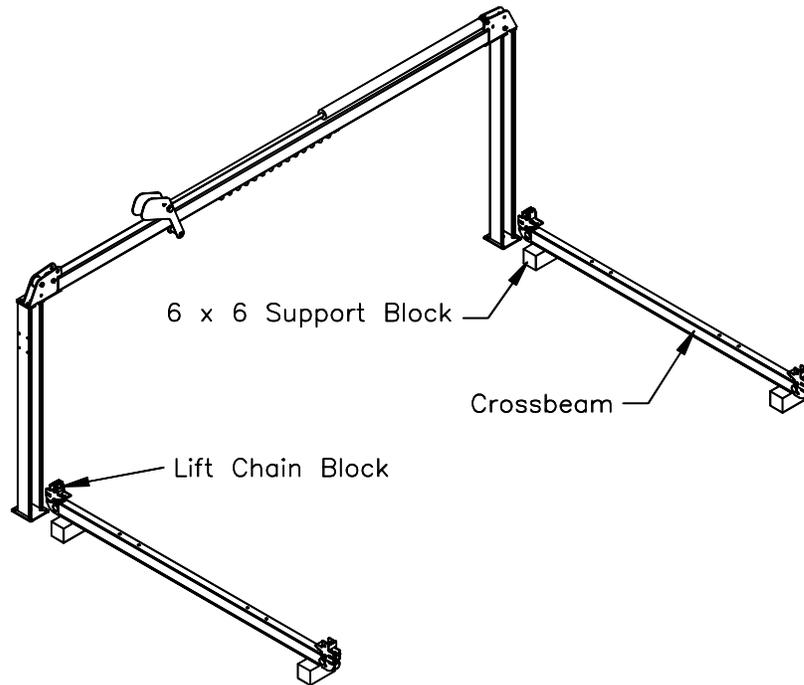
**Fig 5**  
**(Cylinder Beam / Power Side Post Assembly)**

- 6 Lift the assembled cylinder beam to the upright position. Place the post base plate into their corners of the chalk line rectangle.
- 7 Review the concrete anchor bolt instructions below. Drill, install, but do not tighten the 4 anchor bolts for the Power Post. **DO ONLY THE POWER SIDE POSTS AT THIS TIME.**

### **Anchor Bolt Installation**

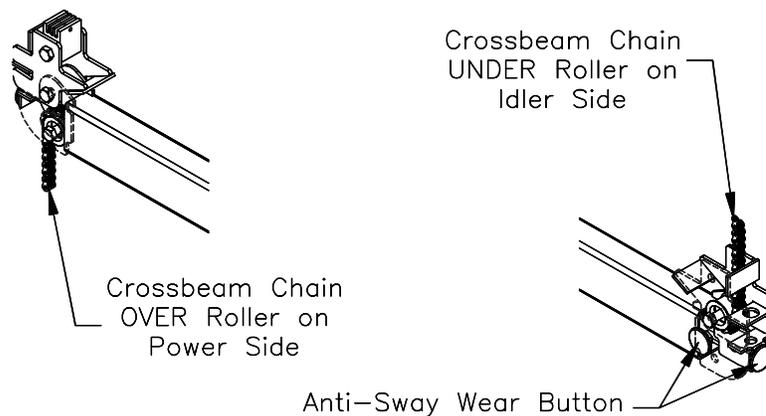
- a) Insure the concrete has had sufficient time to cure - 28 days minimum.
  - b) Always wear safety glasses.
  - c) Follow the drill manufacturers safety instruction.
  - d) Use only solid carbide-tipped drill bits meeting ANSI B94 tip diameter standards.
  - e) Drill the anchor bolt holes perpendicular to the work surface. To assure full holding power, do no ream the hole or allow the drill to wobble.
  - f) Drill the hole at least as deep as the full length of the anchor, completely through the slab if possible.
  - g) Clean the hole, using compressed air and a wire brush or vacuum. A clean hole is necessary for proper performance.
  - h) Assemble the washer and nut on the anchor bolt so that the anchor protrudes slightly beyond the nut.
  - i) Tap the anchor through the fixture (lift base plate) and into the hole, making sure that the nut rests solidly against the fixture.
  - j) Torque the nut to 150 ft-lbs.
- 
- 8 Plumb the post. Using a level, check both side-to-side and front to rear. Use shims provided or, 3/4" steel flat washers to plumb. Tighten the anchor bolts and recheck for plumb. Adjust if necessary.
  - 9 Align the Power Side Post with the chalk lines. Check and adjust plumb of this post. The base plate may vary from the measured dimensions slightly, but it is more important that the post be plumb and parallel with the other post. Install the anchor bolts in the Power Side Post and tighten. With both power side posts anchored and plumb, tighten the ½-13 hardware attaching the cylinder beam, shimming if necessary to avoid twisting the cylinder beam.

- 10 Support and position the crossbeams off the ground and in their approximate locations as seen in Fig 6. The lift chain block must be at the Power Side Post location.



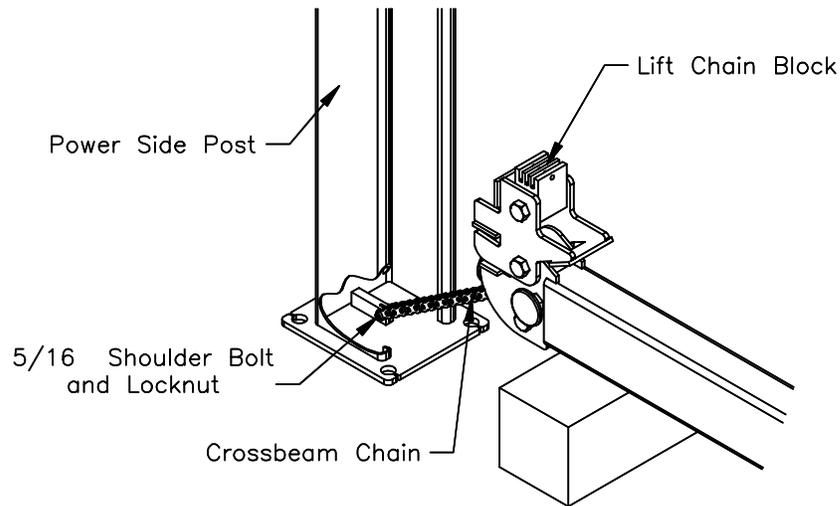
**Fig 6  
(Crossbeams)**

- 11 Use a pull wire to pull the crossbeam chain through the crossbeam tube. The chain runs over the sheave at the power side end and under the sheave at the idler side end. See Fig. 7. Repeat for the other crossbeam.



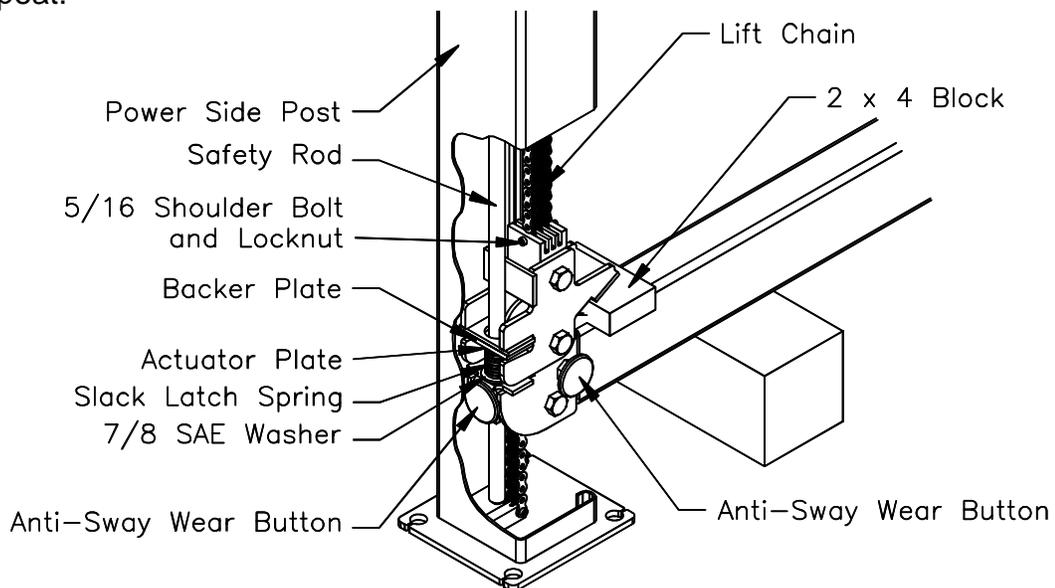
**Fig 7  
(Crossbeam Chain Arrangement)**

- 12 Attach the crossbeam chains to the main side post chain anchors with the 5/16 x 1 shoulder bolts and 1/4-20 nylon locknuts provided, insuring the bolt passes through all three chain leaves. See Fig. 8.



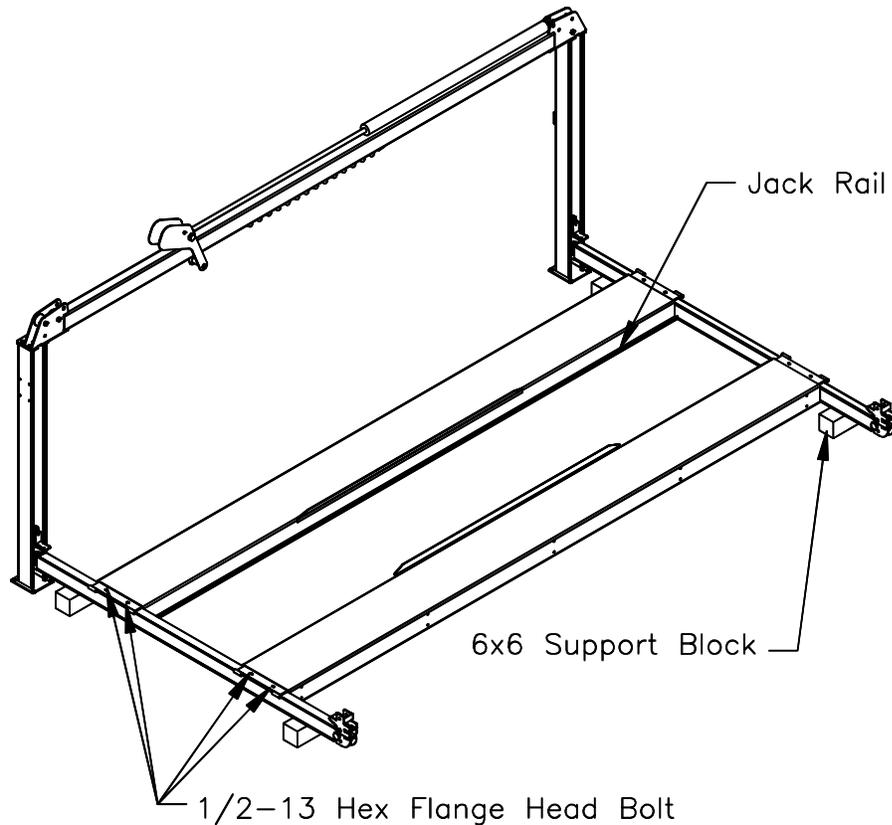
**Fig 8**  
**(Crossbeam Chain Attachment)**

- 13 Position a 2 x 4 block under the safety latch on the power side end of the cross rail as shown in Fig. 9. Remove the safety rod from the column assembly. Turn the 7/8-9 jam nut to the bottom of the thread. Remove the packing pin from the cross rail end assembly. Insert the safety rod into the space previously occupied by the packing pin in the cross rail end assembly. Slide the crossbeam and safety rod into the column until the anti-sway wear button is against the back of the column. Insert the threaded end of the safety rod into the hole at the top back of the power side post. Secure the top of the safety rod with a 7/8-9 nut. The nut should be flush with the end of the safety rod and the jam nut should be tightened against the post top cap. Remove the wooden block. Repeat.



**Fig 9**  
**(Safety Rod Installation)**

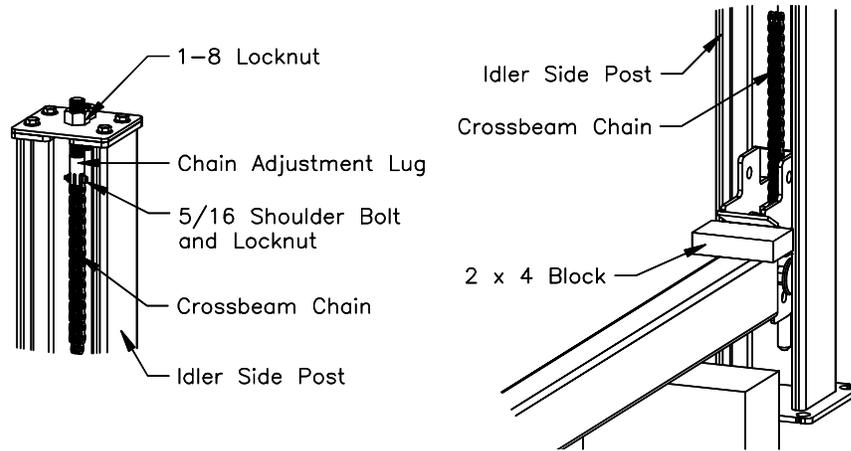
- 14 Remove the cap from the front cylinder port. Manually extend the cylinder ram. Attach the lifting chains to each Lift Chain Block using the 5/16 x 2 shoulder bolts and 1/4-20 lock nuts provided. See Fig. 9.
- 15 Place the runways on the crossbeams with the jack rails facing one another and loosely attach with the 1/2-13 hex flange head bolts provided. See Fig 10.



**Fig 10**  
**(Runway Placement)**

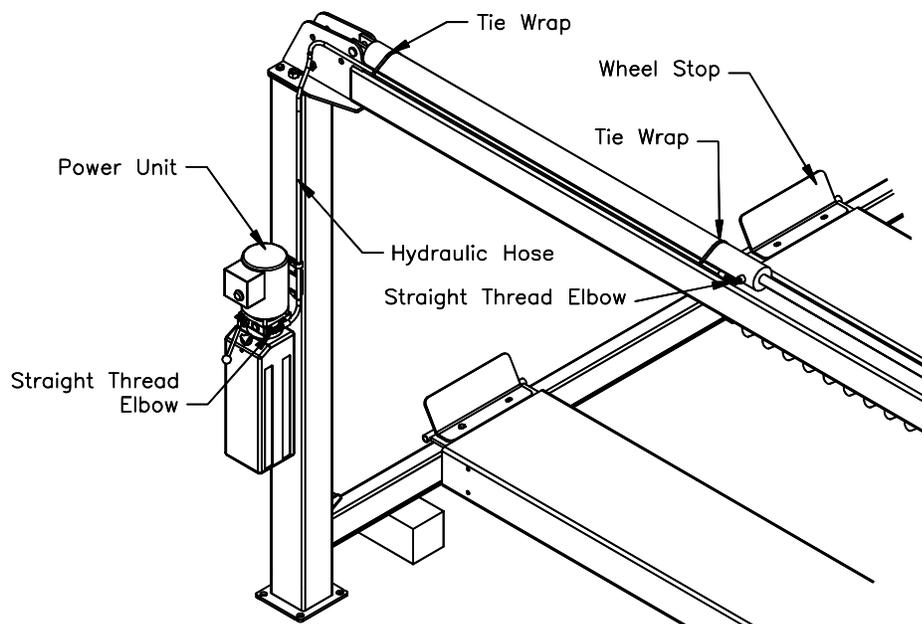
- 16 Position a 2 x 4 block under the safety latch on the idler side end of the cross rail as before in Fig. 9. Remove the safety rod from the column assembly. Turn the 7/8-9 jam nut to the bottom of the thread. Remove the packing pin from the cross rail end assembly. Insert the safety rod into the space previously occupied by the packing pin in the cross rail end assembly.
- 17 Place the Idler side columns in their approximate positions on the chalk lines. Insert the threaded end of the safety rod into the hole at the top back of the idler side post. Secure the top of the safety rod with a 7/8-9 nut. The nut should be flush with the end of the safety rod and the jam nut should be tightened against the post top cap. Remove the wooden block. Repeat.

- 18 Install the synch chain adjustment lug to the free end of the crossbeam chain with the 5-16 x 1 shoulder bolt and 1/4-20 lock nut provided. Attach this adjustment lug to the top cap with the 1-8 lock nut provided. See Fig 11. Hold the chain with a crescent wrench and tighten the nut to remove most of the slack from the chain. Repeat for the other crossbeam.



**Fig 11**  
**(Idler Side Column Installation)**

- 19 Attach the power unit to the Power Post using the 5/16" hardware provided. Attach the hydraulic hose between the fitting at the rod end of the cylinder and the fitting just above the power unit tank. Secure the hose to the cylinder with the tie wraps. See Fig. 12. Connect the power unit to a dedicated 25-amp electrical branch circuit, using wiring methods prescribed by local codes. Refer to Fig. 13 for wiring schematic.



**Fig 12**  
**(Power Unit and Hose)**

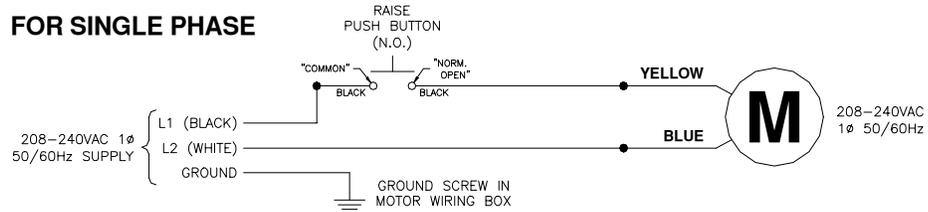
# Wiring Diagram

EACH LIFT SHOULD HAVE A DEDICATED CIRCUIT WITH A DOUBLE POLE (THREE POLE FOR 440-480V) BREAKER OR TIME DELAY FUSE SIZED ACCORDING TO THE FOLLOWING CHART

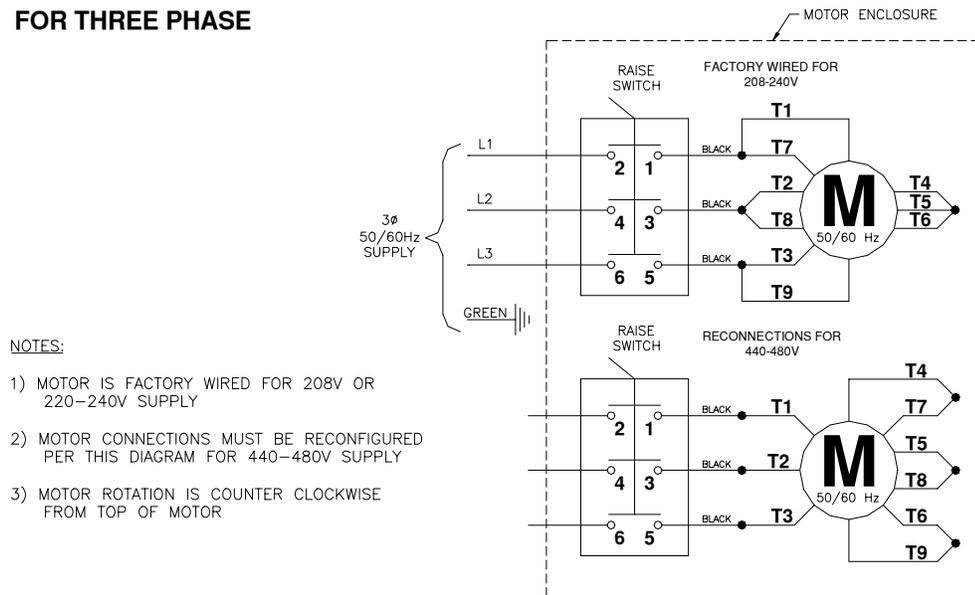
	1 $\phi$ 208-240V	3 $\phi$ 208V	3 $\phi$ 220-240V	3 $\phi$ 440-480V
2Hp	25amp	15amp	15amp	5amp

\* WIRING MUST COMPLY WITH ALL LOCAL ELECTRICAL CODES \*

## FOR SINGLE PHASE



## FOR THREE PHASE



### NOTES:

- 1) MOTOR IS FACTORY WIRED FOR 208V OR 220-240V SUPPLY
- 2) MOTOR CONNECTIONS MUST BE RECONFIGURED PER THIS DIAGRAM FOR 440-480V SUPPLY
- 3) MOTOR ROTATION IS COUNTER CLOCKWISE FROM TOP OF MOTOR

**Fig 13**  
**(Wiring Schematic)**

- 20 Fill the reservoir with 11 quarts of 10W hydraulic oil or Dexron III. DO NOT OVERFILL THE RESERVOIR. The oil level should be no higher than 2 inches below the mounting flange of the tank.
- 21 Using the power unit, raise the crossbeams and runways off of the supports about 6 inches. Position the Idler Side Posts so that the crossbeam chain hangs straight in the Idler Side Posts and lift chain hangs straight in the Power Side posts. Level the crossbeams by adjusting the crossbeam chain tension at the top of the Idler Side Posts. Use a level to check the crossbeams. Square the runways to one another and tighten the 1/2-13 hex flange head bolts.

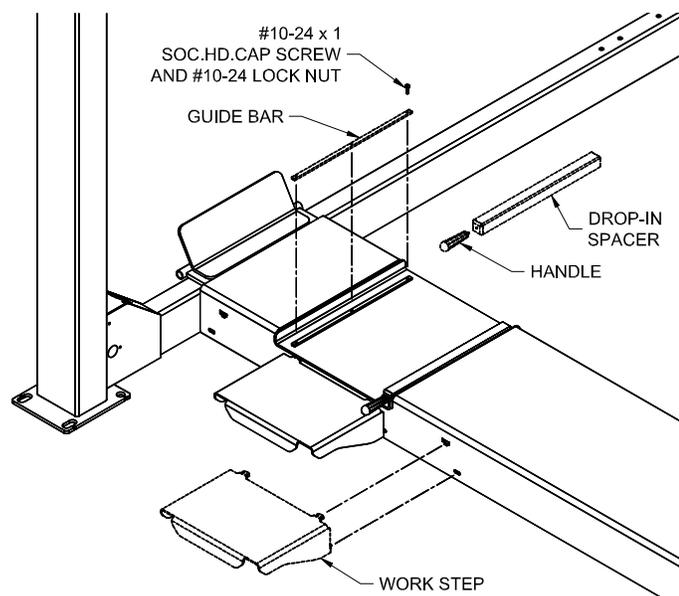
**DO NOT DRILL OR INSTALL THE ANCHOR BOLTS AT THIS TIME FOR THE IDLER SIDE POSTS. THE LIFT MUST BE CYCLED UP AND DOWN AND CHECKED FOR CORRECT ALIGNMENT BEFORE THE BOLTS ARE INSTALLED.**

**THE IDLER SIDE POSTS MAY VARY SLIGHTLY FROM THE CHALK LINE LAYOUT POSITIONS. IT IS MORE IMPORTANT THAT THE POSTS BE SQUARE AND PLUMB AND THE LIFT CYCLES FREELY.**

- 22 Raise the lift to the top of its travel. Check the positioning of the crossbeams in the posts as the lift is raised. The single point safety release will move across the rack at the bottom of the cylinder beam. At the top of the lifts travel, pull down the safety release until the cam locks it in this position. Lower the lift. Check the operation and positioning of the lift as it is being lowered. Correct any problems by adjusting the position of the Idler Side Posts. When the lift is operating correctly, drill and install the anchor bolts for the Idler Side Posts.
- 23 Complete the installation of Models 44EFX and 44XFX by installing the runway end chocks and the approach ramps. The wheel stops are bolted through at the front end of each runway. The approach ramps are installed with a hinge pin and cotter pins provided.
- 24 Cycle the lift fully three times to bleed the air from the hydraulic system.

**Alignment Runways (Models 44EAX and 44XAX)**

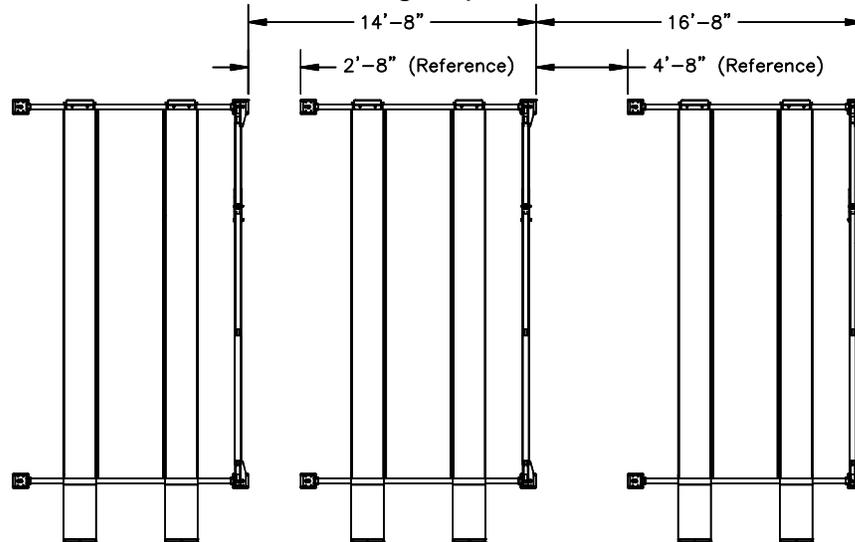
- 1 Position Front Turn Plates (SOLD SEPARATELY) and install Guide Bars to runway using (3) #10-24 x 1" Socket Head Cap Screws and lock nuts provided. Ensure that the Turn Plates will slide freely and tighten Guide Bars.
- 2 Attach Work Step to each runway. (The Work Step may be located in three different positions on each runway.)
- 3 Install Handle to Drop-In Spacer and position behind rear Guide Bar. The Drop-In Spacer is provided for "Roll Back" alignment.



**Fig 14  
(Alignment Runway)**

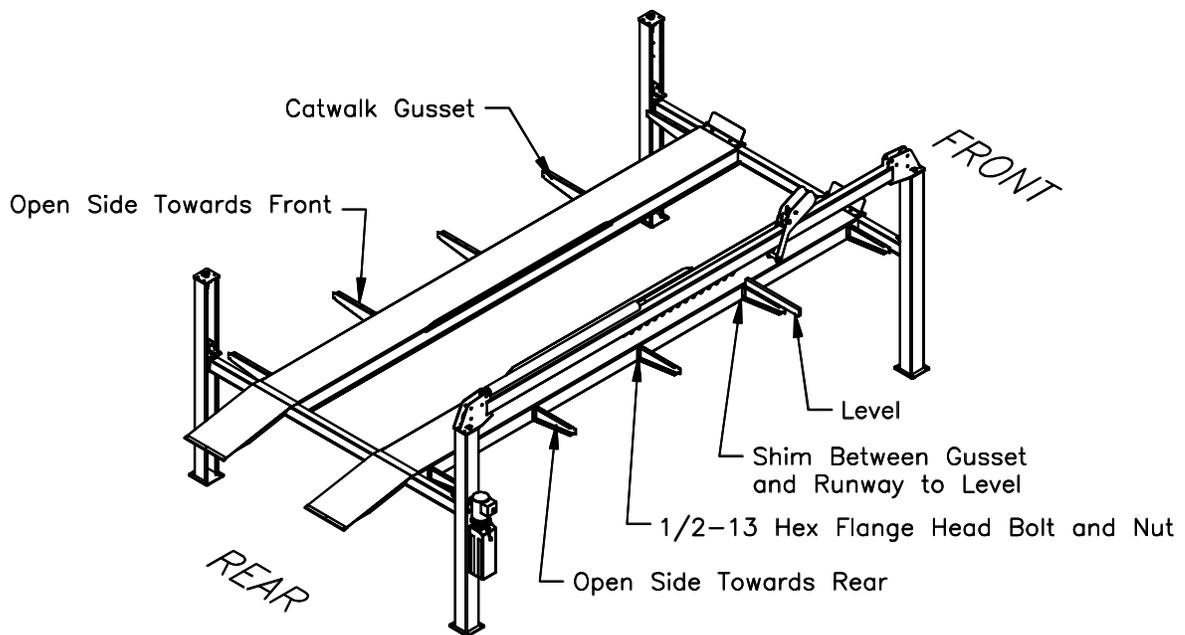
## Modular Lube Rack (Model 44XRX)

- 1 The Modular Lube Racks can be set on 14'-8" centers or 16'-8" centers joining as many lifts together as is required. Refer to Fig 15 to determine position of lifts that will be joined. Install all lifts following steps 1-24 above.



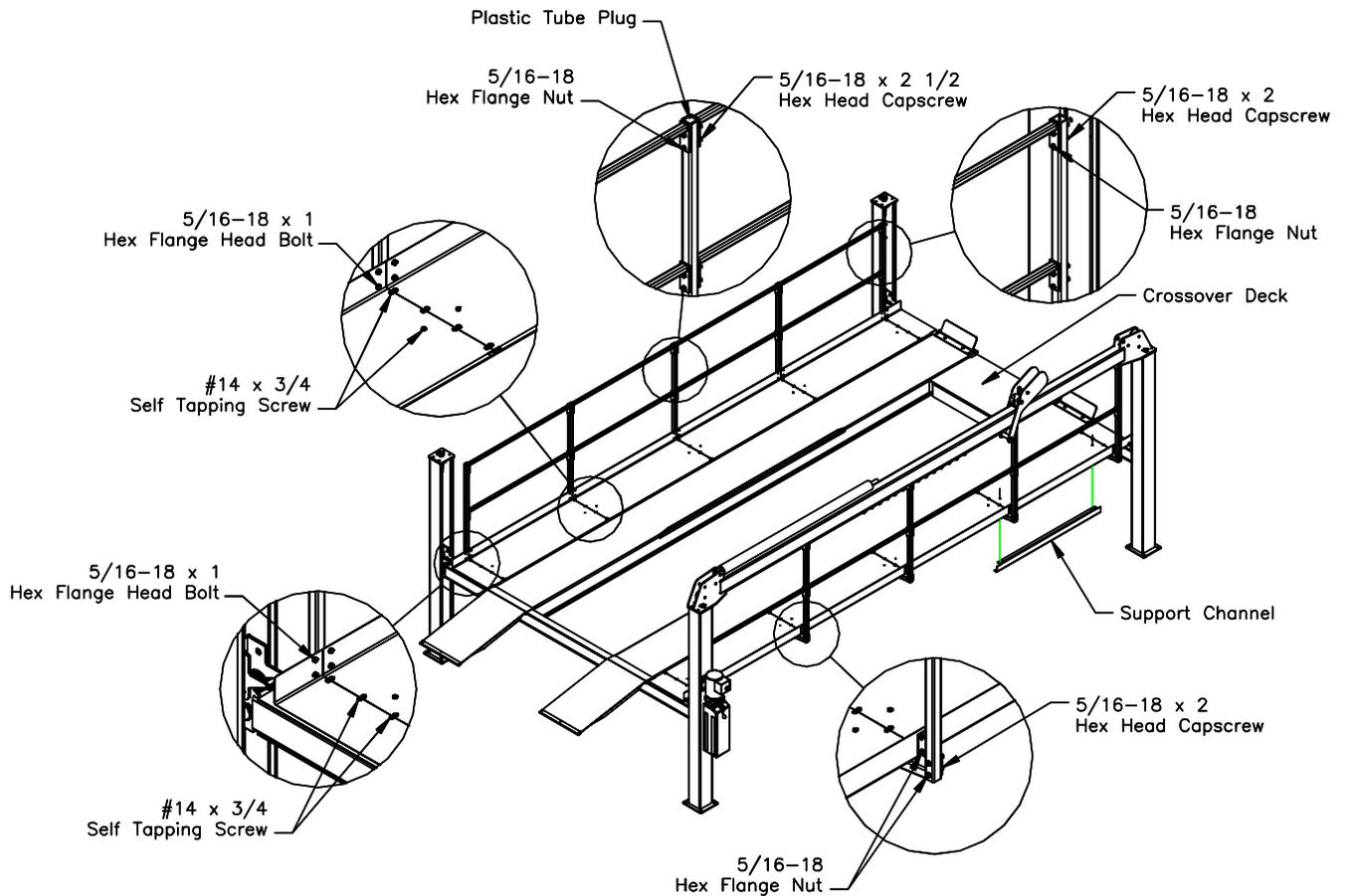
**Fig 15**  
**(Lift Spacing)**

- 2 Raise unit to a comfortable working height that will give access to the inside of the runways. Loosely attach each of the Catwalk Gussets to the runway with the 1/2-13 x 1 1/4 Hex Flange Bolts and Nuts provide. Level each gusset using 1/2" washers (provided) as shims. The open side of the gusset faces forward on the driver side and rearward on the passenger side. See Fig 16. Repeat for additional lifts.



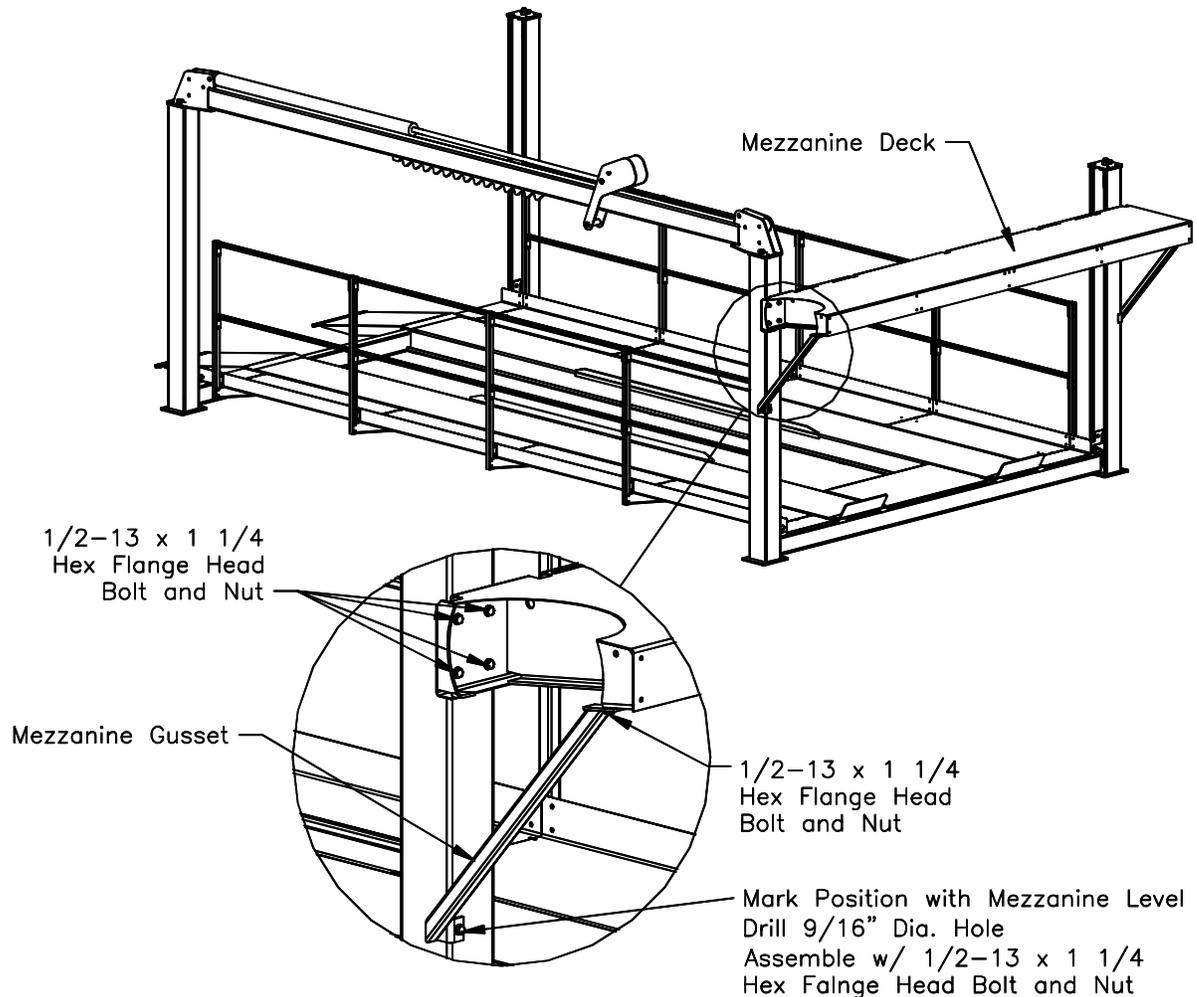
**Fig 16**  
**(Catwalk Gussets)**

- 3 Assemble Catwalk Deck to gussets with #14 (1/4-20) Self Tapping Screws provided. Loosely assemble Catwalk Posts to the Gussets and Decking using the 5/16-18 hardware provided. Loosely install the Catwalk Rail with the 5/16 hardware provided. Once all decking, posts and rails are in place, tighten all loose hardware and check decking, railing and post for level. Install Support Channel with #14 (1/4-20) Self-Tapping Screws. Place Crossover Deck on the Jack Rail in the full forward position. Raise unit to full stroke to insure passenger side rail misses the cylinder beam and latch assembly. Adjust if necessary. Finish installation by installing a plastic tube plug in each post. See Fig 17. Repeat for additional lifts.



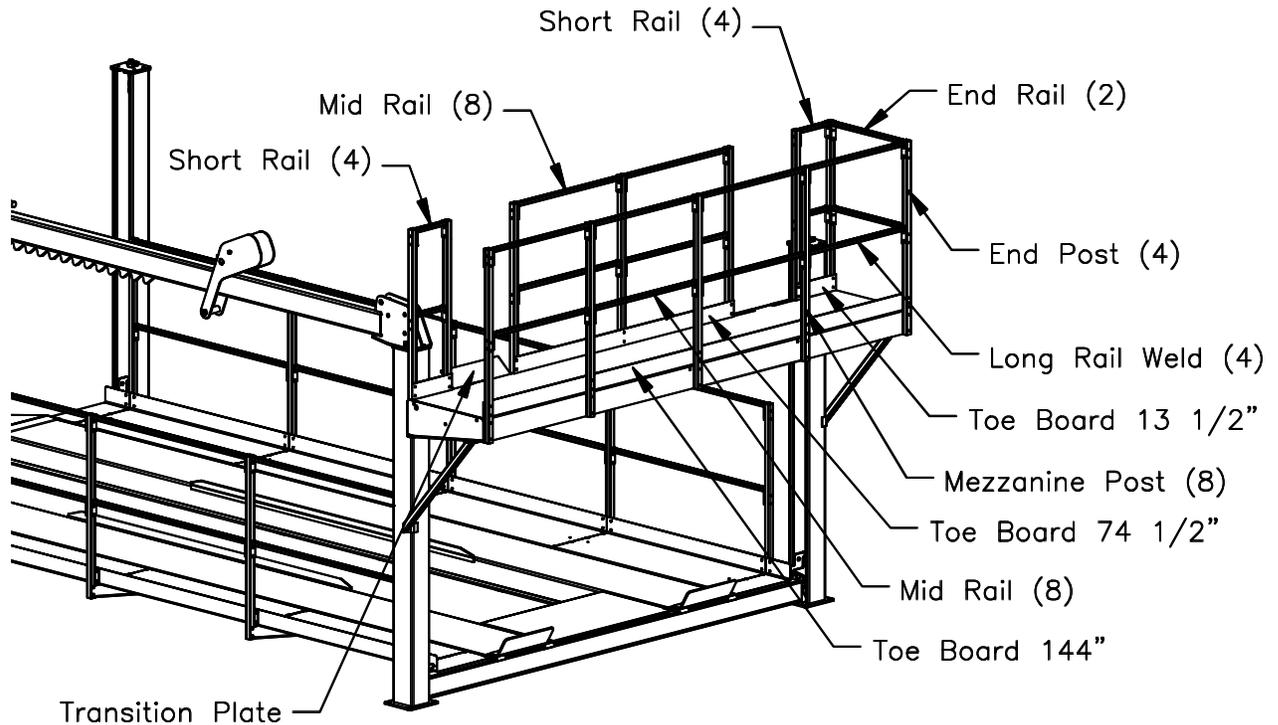
**Fig 17**  
**(Catwalk)**

- 4 Completely lower lift. Lift Mezzanine into position on the front posts and loosely attach with the  $\frac{1}{2}$ -13 x 1  $\frac{1}{4}$  Hex Flange Head Bolts and Nuts (4 per column) provided. Loosely attach the mezzanine gussets to the underside of the mezzanine. Center Mezzanine left to right and Level (1<sup>st</sup> lift). For additional lifts the mezzanine may not be completely centered but rather butted against the stair landing of the adjacent lift. Mark and drill  $\frac{9}{16}$ " diameter hole in front columns for the Mezzanine Gusset. Install  $\frac{1}{2}$ -13 x 1  $\frac{1}{4}$  Hex Flange Head Bolt and Nut through the mezzanine gusset and front columns. Recheck level of deck. Tighten all hardware. See Fig 18. Do not repeat this step for additional lifts until the stair landing are in place (Steps 6 and 7).



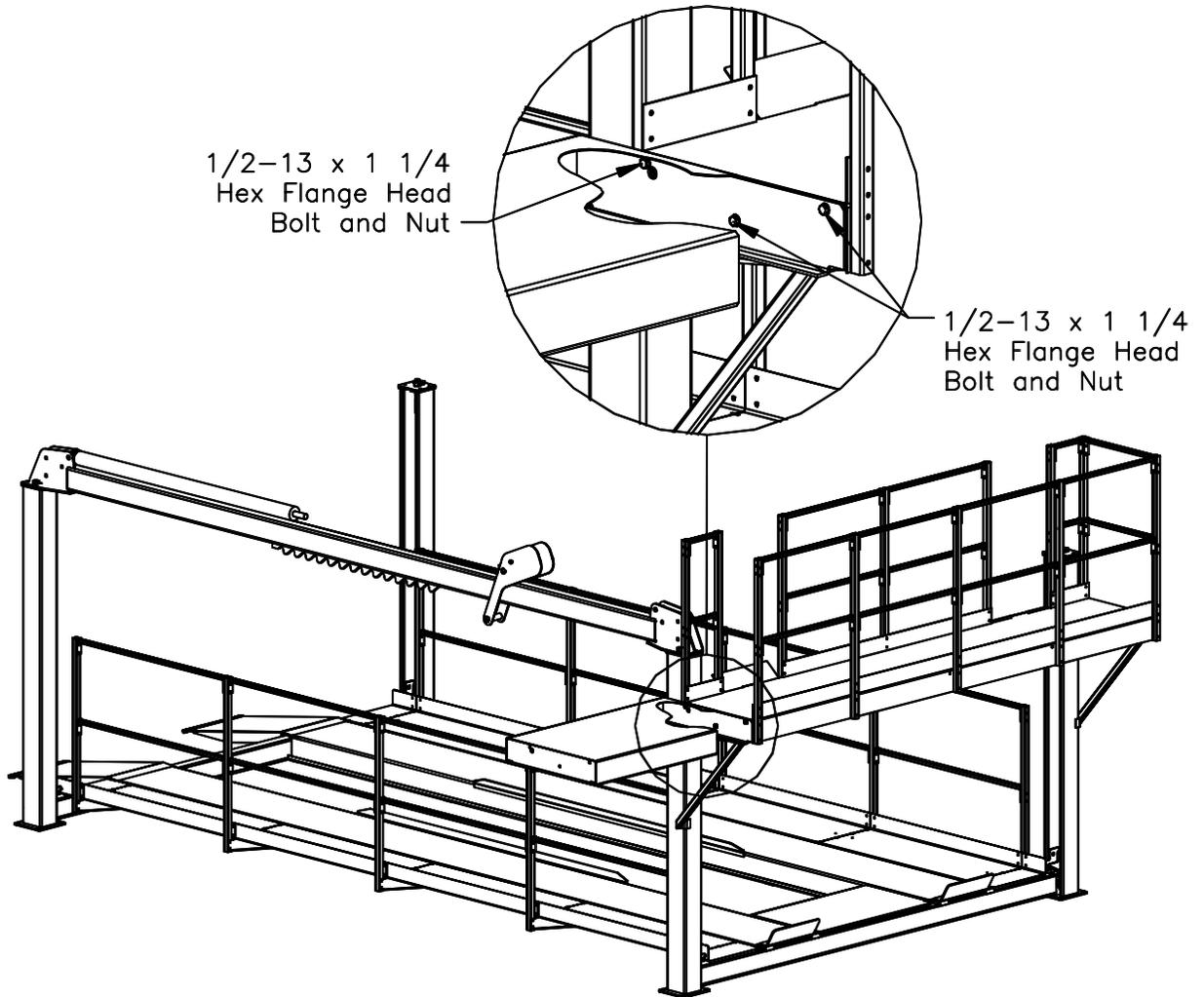
**Fig 18**  
**(Mezzanine Deck)**

- 5 Loosely attach the (4) End Posts and (8) Mezzanine posts (7 w/ Offset Storage Unit. See Fig. 24) to the Mezzanine Deck with the 5/16-18 x 2 Hex Head Bolts And Flange Nuts provided. Loosely attach the (2) End Rails (opposite stair landing), (8) Mid Rails (4 w/Offset Storage Unit), (4) Long Rails and (4) Short Rails using the appropriate hardware provided. Use 5/16-18 x 2 1/2" Bolts where two rails meet at a post and 5/16-18 x 2" Bolts elsewhere. Tighten all Hardware once all pieces are fitted together. Install the Transition Plates into the corresponding slots of the deck. Install (2) Short 13 1/2", (1) Mid 74 1/2" and (1) Long 144" Toe Board using the 5/16-18 x 2 Bolts and Flange Nuts provided. Install Plastic Tube Plug in end of each post. Refer to Fig 19.



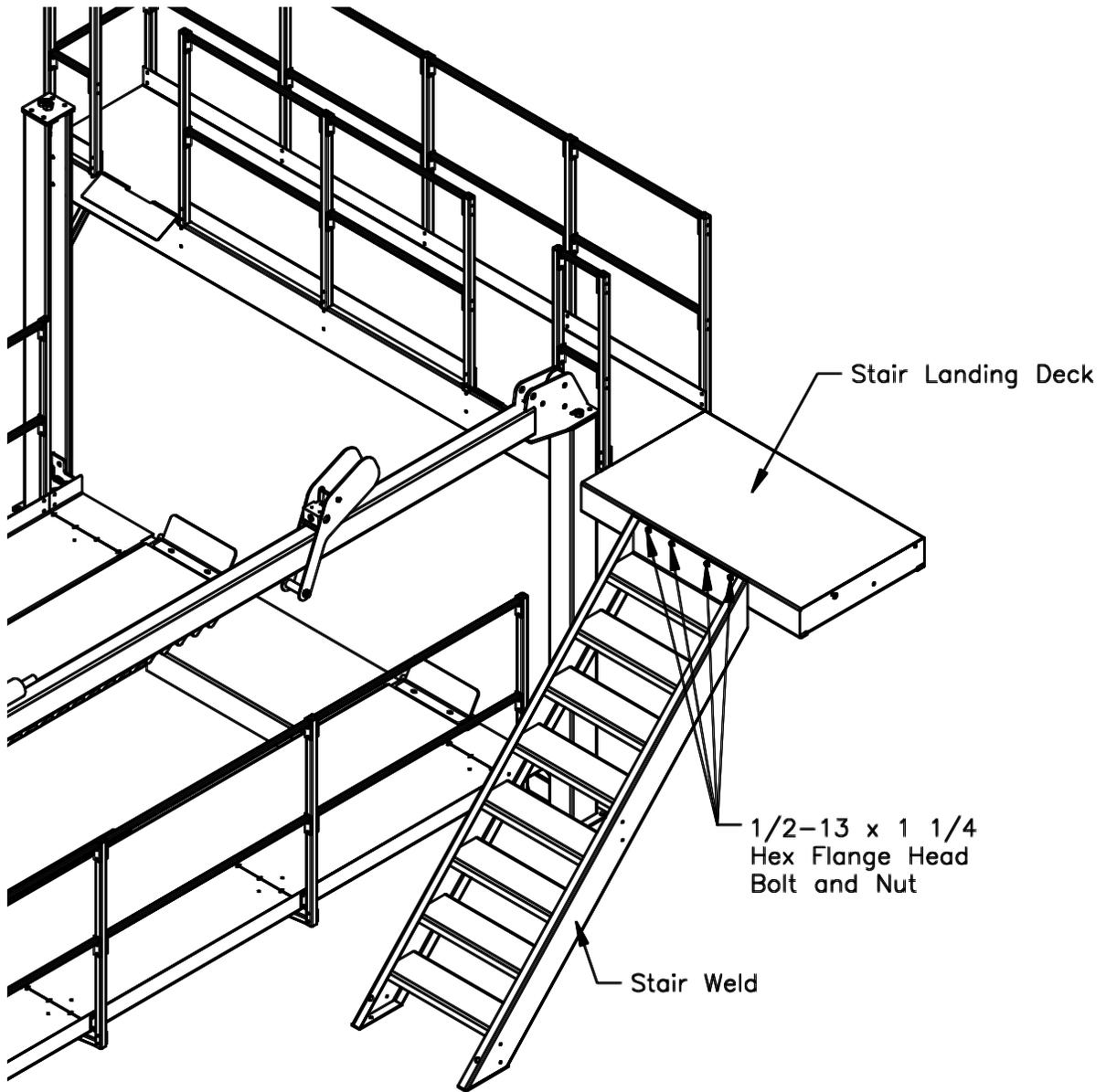
**Fig 19**  
**(Mezzanine Assembly)**

- 6 Determine the proper Stair landing to be used based on the lift spacing 2'-8" or 4'-8". See Fig 15. Support the landing in position at the end of the mezzanine. The front face should be flush with the front of the mezzanine. Attach Stair Landing to end of Mezzanine Deck using (3) 1/2-13 x 1 1/4 Hex Flange Head Bolts and Nuts. See Fig 20.



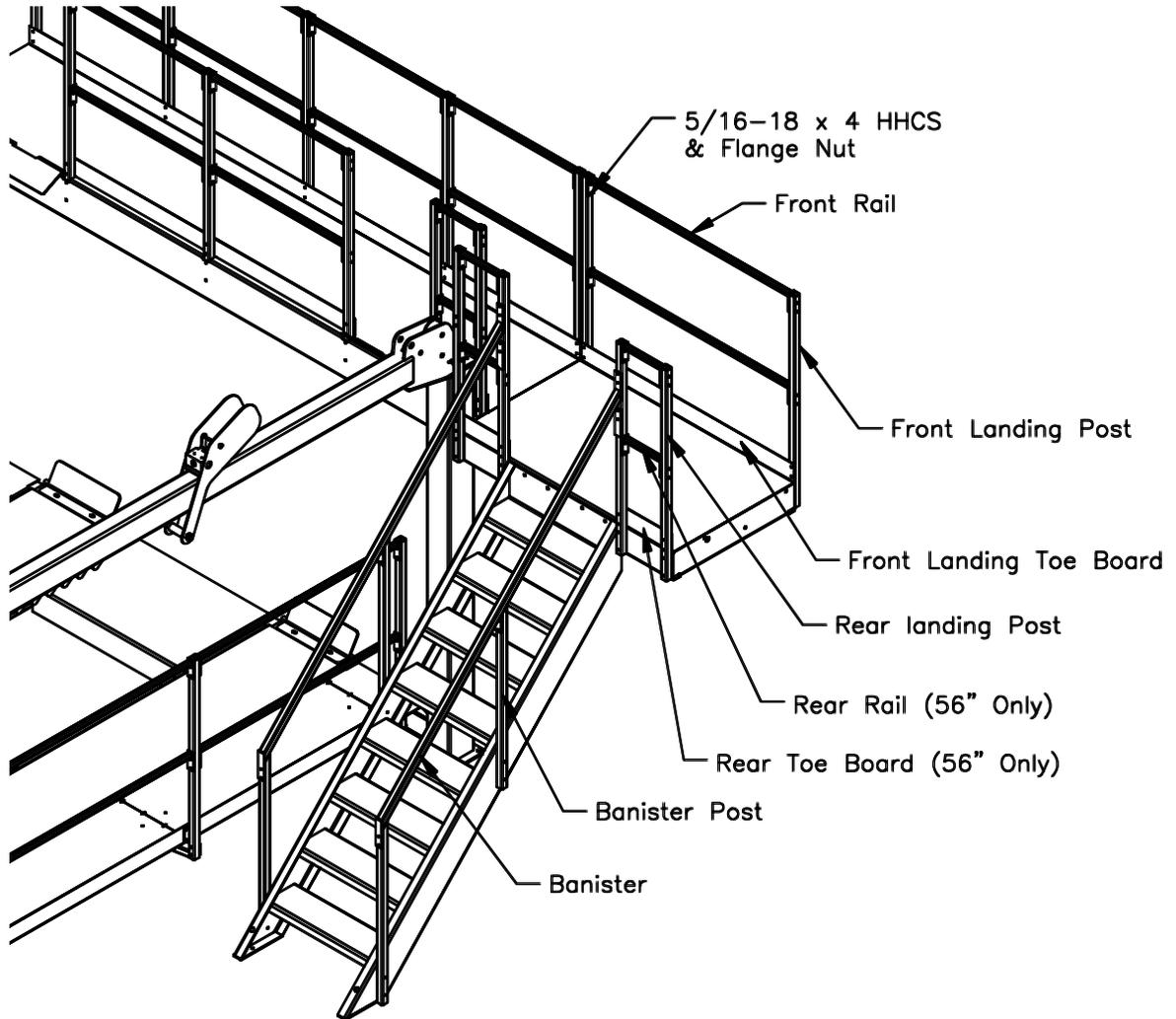
**Fig 20**  
**(Stair Landing)**

- 7 Attach Stair Weld to the back of the Stair Landing using the  $\frac{1}{2}$ -13 x 1  $\frac{1}{4}$  Hex Flange Bolts and Nuts provided. See Fig 21.



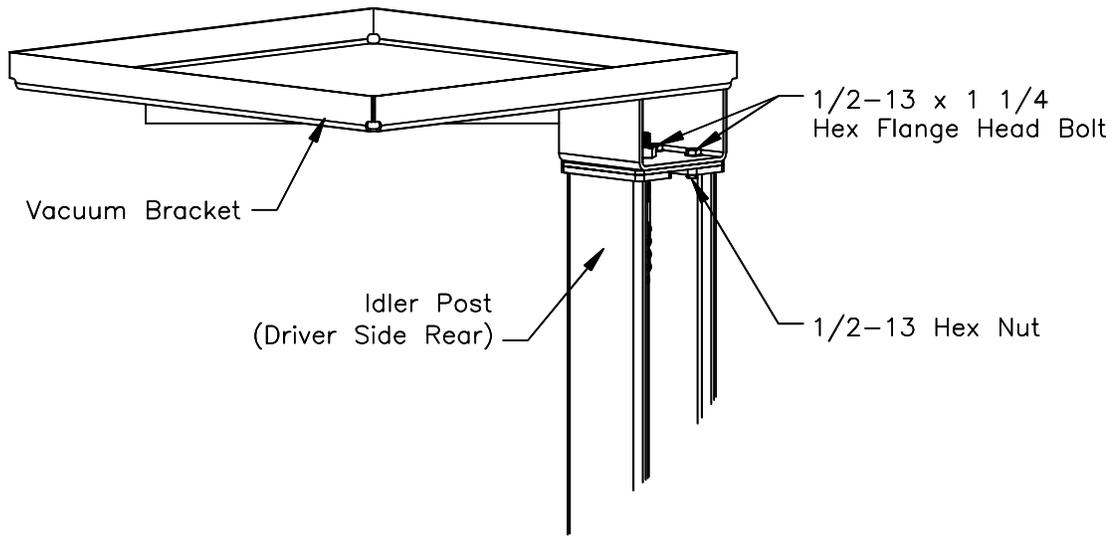
**Fig 21**  
**(Stair Assembly)**

- 8 Assemble (4) Banister Posts, (2) Banister Welds, (4 – 56", 2 – 32") Rear Landing Posts, (2) Front Landing Posts, (2) Front Landing Rail, and (4 – 56" Landing Only) Rear Landing Rail with the appropriate hardware provided. Use 5/16-18 x 4 where two posts are side-by-side bolting all the way through both posts, and 5/16-18 x 2" Bolts elsewhere. Tighten all Hardware once all pieces are fitted together. See Fig 22. Repeat Steps 4-8 for remaining lifts.



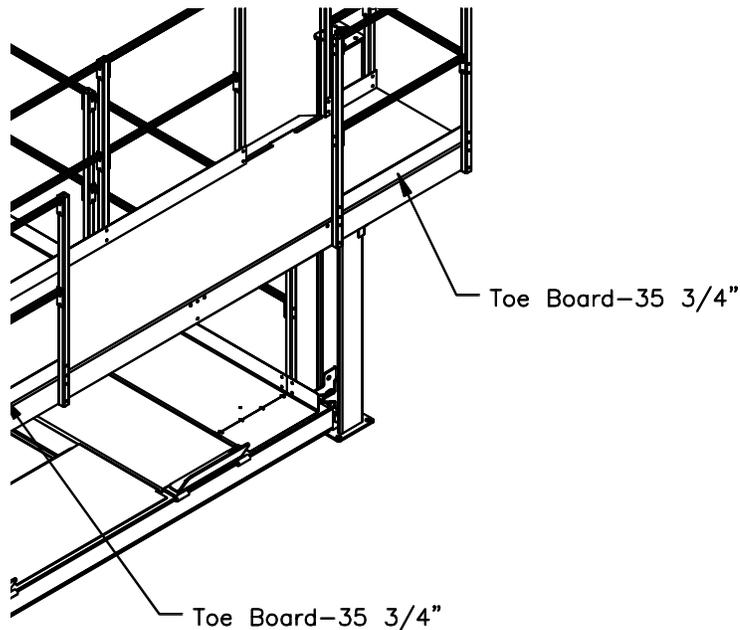
**Fig 22**  
**(Stair Railing Assembly)**

- 9 Install Vacuum Bracket on top of the Idler Post at the Driver Side Rear using the 1/2-13 hardware provided. See Fig 23.



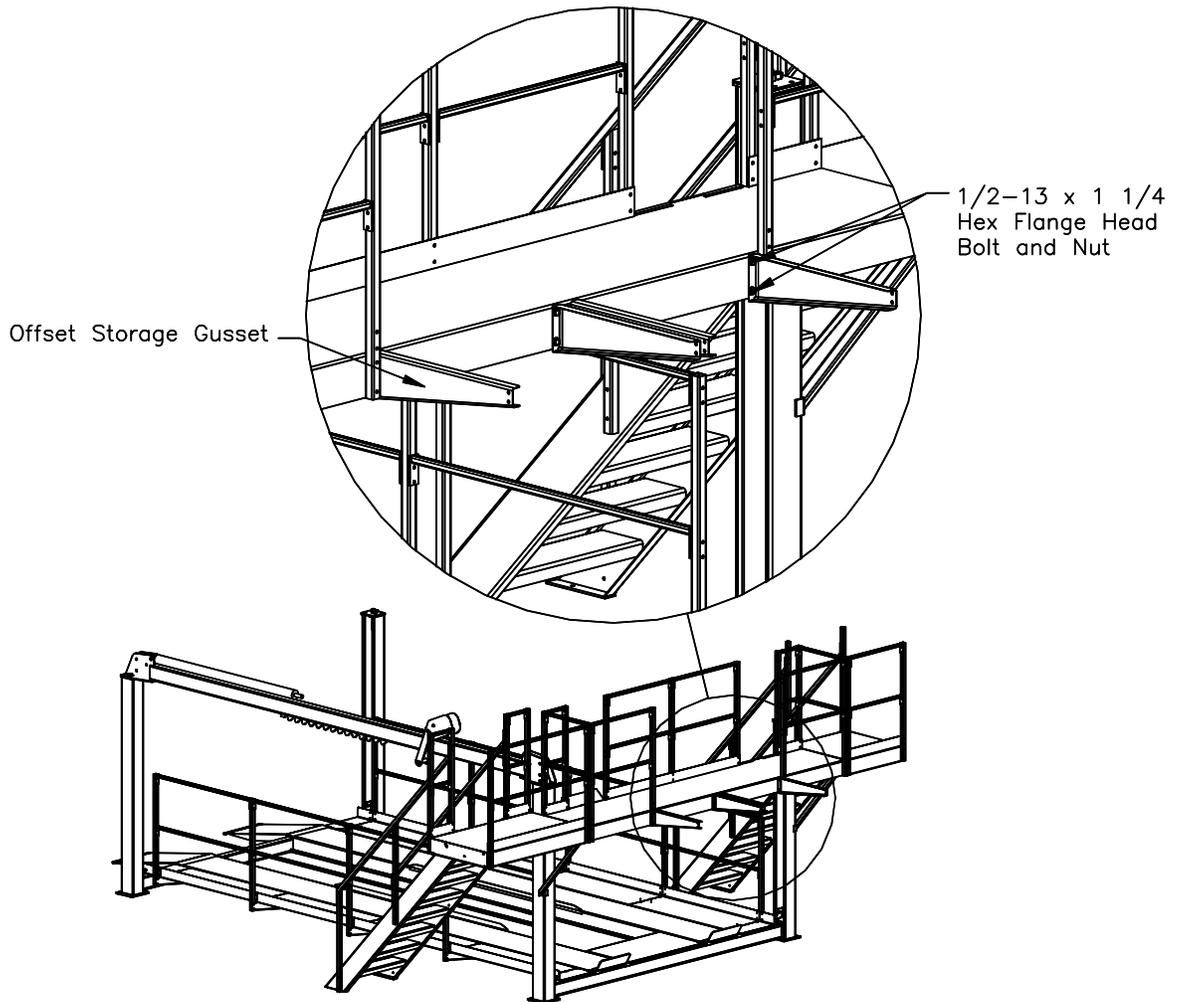
**Fig 23**  
**(Vacuum Bracket)**

- 10 The Offset Storage Unit (when required) is installed on the front side of the Mezzanine. Begin by removing the center post, railings (used later Fig. 26) and toe board from the front side of the mezzanine. Install two 35 3/4" Toe Boards. See Fig. 24.



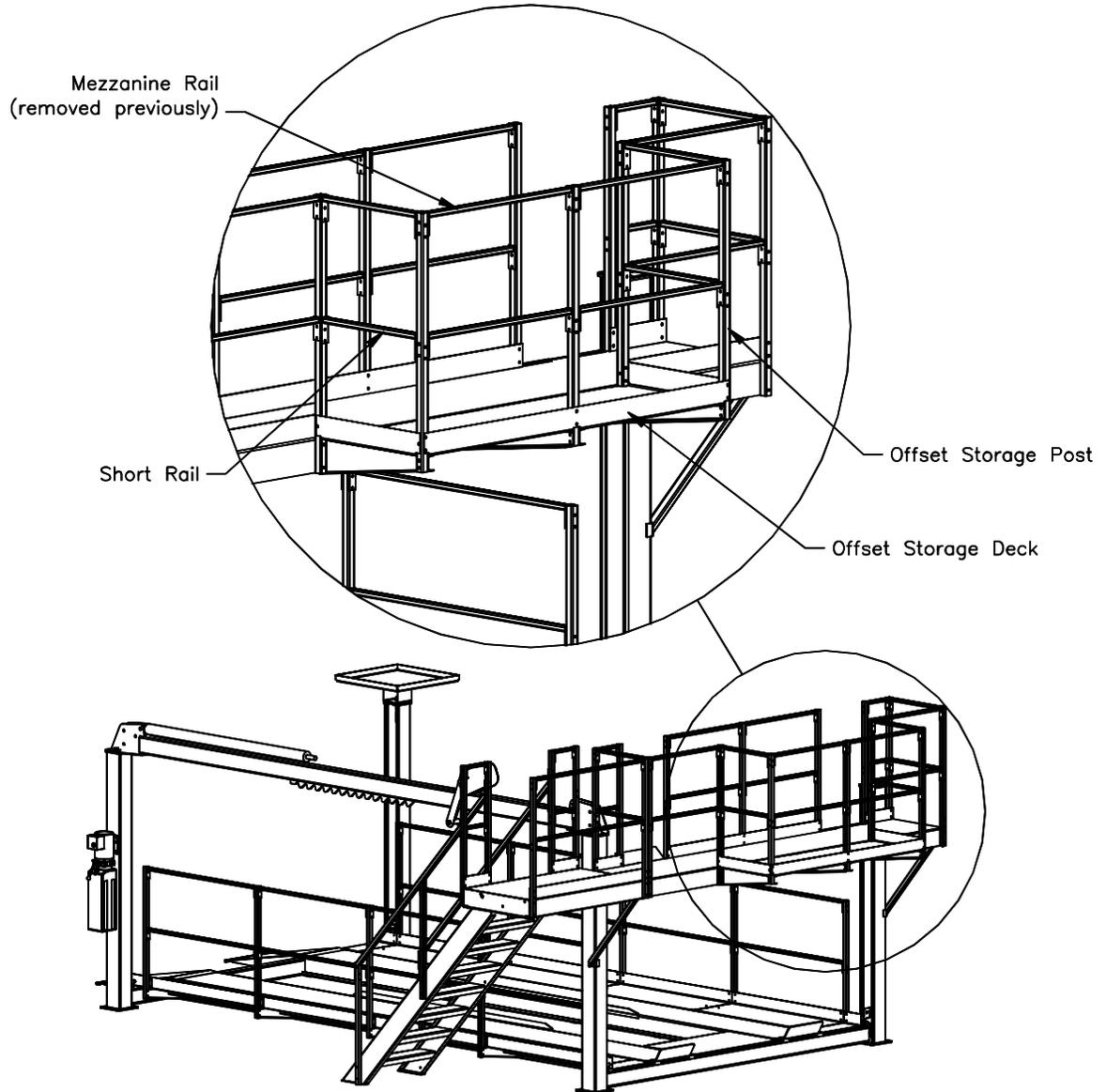
**Fig 24**  
**(Offset Storage Location)**

- 11 Assemble the Offset Storage Gussets to the front side of the Mezzanine using the 1/2-13 hardware provided. See Fig 25.



**Fig 25**  
**(Offset Storage Gussets)**

- 12 Position the Offset Storage deck on top of the Gussets. Loosely assemble each post to the gussets and deck using the 5/16 x 2 Hex Bolts and Nuts provided. Loosely assemble the railing to each post using the appropriate 5/16" hardware. Use 5/16-18 x 2 1/2" Bolts where two rails meet at a post and 5/16-18 x 2" Bolts elsewhere. Once all post and railing are in place tighten all hardware.



**Fig 26**  
**(Offset Storage)**

## Owner/Operator Checklist

**SAVE THESE INSTRUCTIONS** deliver them to owner/user/employee along with other materials furnished with this lift.

Demonstrate the operation of the lift to the owner/operator and review correct and safe lifting procedures using the **Lifting It Right** booklet as a guide.

Complete the Installation Checklist/Warranty Validation questionnaire with the owner. Review the terms of the warranty registration card, and return the card and a copy of the questionnaires to:

*Challenger Lifts, Inc.*  
200 Cabel Street  
Louisville, KY. 40206

## Safety Notices and Decals

This product is furnished with graphic safety warning labels, which are reproduced on page 3 of these instructions. Do not remove or deface these warning labels, or allow them to be removed or defaced. For your safety, and the safety of others, read and understand all of the safety notices and decals included.

## Owner/Employer Responsibilities

This lift has been designed and constructed according to ANSI/ALI ALCTV-1998 standard. The standard applies to lift manufactures, as well as to owners and employers. The owner/employer's responsibilities as prescribed by ANSI/ALI ALOIM-2000, are summarized below. For exact wording refer to the actual standard provided with this manual in the literature pack.

**The Owner/Employer shall** insure that lift operators are qualified and that they are trained in the safe use and operation of the lift using the manufacturer's operating instructions; ALI/SM 93 -1, ALI Lifting it Right safety manual; ALI/ST-90 ALI Safety Tips card; ANSI/ALI ALOIM-2000, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; ALI/WL Series, ALI Uniform Warning Label Decals/Placards; and in case of frame engaging lifts, ALI/LP-GUIDE, Vehicle Lifting Points/Quick Reference Guide for Frame Engaging Lifts.

**The Owner/Employer shall** establish procedures to periodically inspect the lift in accordance with the lift manufacturer's instructions or ANSI/ALI ALOIM-2000, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and the employer shall insure that the lift inspectors are qualified and that they are adequately trained in the inspection of the lift.

**The Owner/Employer shall** establish procedures to periodically maintain the lift in accordance with the lift manufacturer's instructions or ANSI/ALIOIM-2000, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and the employer shall insure that the lift maintenance personnel are qualified and that they are adequately trained in the maintenance of the lift.

**The Owner/Employer shall** maintain the periodic inspection and maintenance records recommended by the manufacturer or ANSI/ALI ALOIM-2000, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance.

**The Owner/Employer shall** display the lift manufacturer's operating instructions; ALI/SM 93 -1, ALI Lifting it Right safety manual; ALI/ST-90 ALI Safety Tips card; ANSI/ALI ALOIM-2000, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and in the case of frame engaging lift, ALI/LP-GUIDE, Vehicle Lifting Points/Quick Reference Guide for Frame Engaging Lifts; in a conspicuous location in the lift area convenient to the operator. Demonstrate the operation of the lift to the owner and review correct and safe lifting procedure, using the "Lifting It Right " booklet as a guide.

## **Important Safety Instructions**

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

- 1** Read all instructions.
- 2** Care must be taken as burns can occur from touching hot parts.
- 3** To reduce the risk of fire, do not operate equipment in the vicinity of open containers of flammable liquids (gasoline).
- 4** Adequate ventilation should be provided when working on operating internal combustion engines.
- 5** Keep hair, loose clothing, fingers, and all parts of body away from moving parts.
- 6** To reduce the risk of electric shock, do not use on wet surfaces or expose to rain.
- 7** Use only as described in this manual. Use only manufacturer's recommended attachments.

## **Save These Instructions**

## Lift Operation Instructions

### Raising Vehicles

- 1 Drive the vehicle onto lift. Set the parking brake.
- 2 Push the power button on the power unit to raise the vehicle to the desired height.
- 3 Depress the lowering valve handle on the power unit to lower the lift onto the safety latch.
- 4 **Before walking under the lift, verify that the safety latch, locking pin is positioned in the latch rack under the top rail tube.**

### Lowering Vehicles

- 1 Raise the lift off the safety latch by pushing the raise button on the power unit.
- 2 Release the safety latch by pulling down on the latch until the cam sets to hold this position.
- 3 Lower the lift by depressing the lowering valve handle on the power unit.

### IMPORTANT

**DO NOT WORK OR WALK UNDER THE LIFT WHEN THE SAFETY LATCH IS IN THE RELEASE POSITION. IF IT IS NECESSARY TO RETURN UNDER THE VEHICLE, RESET THE LEVER BY LOWERING THE LIFT SLIGHTLY, THEN RAISING IT AGAIN. VERIFY THAT THE SAFETY LATCH LOCK PIN IS ENGAGED IN THE LATCH RACK.**

### IMPORTANT

**THE SAFETY LATCH WILL AUTOMATICALLY RESET WHEN THE LIFT IS RAISED OFF THE GROUND. ALWAYS VERIFY THAT THE LATCH IS OPERATING WHEN THE LIFT IS BEING USED. CORRECT ANY PROBLEM BEFORE USING THE LIFT.**

## **Maintenance**

The following maintenance points are suggested as the basis of a preventive maintenance program. The actual maintenance program should be tailored to the installation site.

### **Daily**

Inspect the lift for loose anchor bolts (if loose tighten to 70-80 ft-lbs), fluid leaks and loose connections.

ALL ANCHOR BOLTS SHOULD TAKE FULL TORQUE

### **Weekly**

Check fluid level in the power unit reservoir.

### **Monthly**

Check crossbeam and lift chains for wear and tension, adjust if necessary. Lubricate chain with light oil to reduce drag.

## **Trouble Shooting Guide**

Lift will not raise when button is pushed.

- 1 Blown Fuse - Replace fuse
- 2 Micro switch not operating - call factory for replacement
- 3 Oil supply is low - fill reservoir with proper oil
- 4 Lift overload - remove load.

Lift will not lower.

- 1 Lift is obstructed by foreign body - remove object
- 2 Lock has not been released - raise lift and release latch.

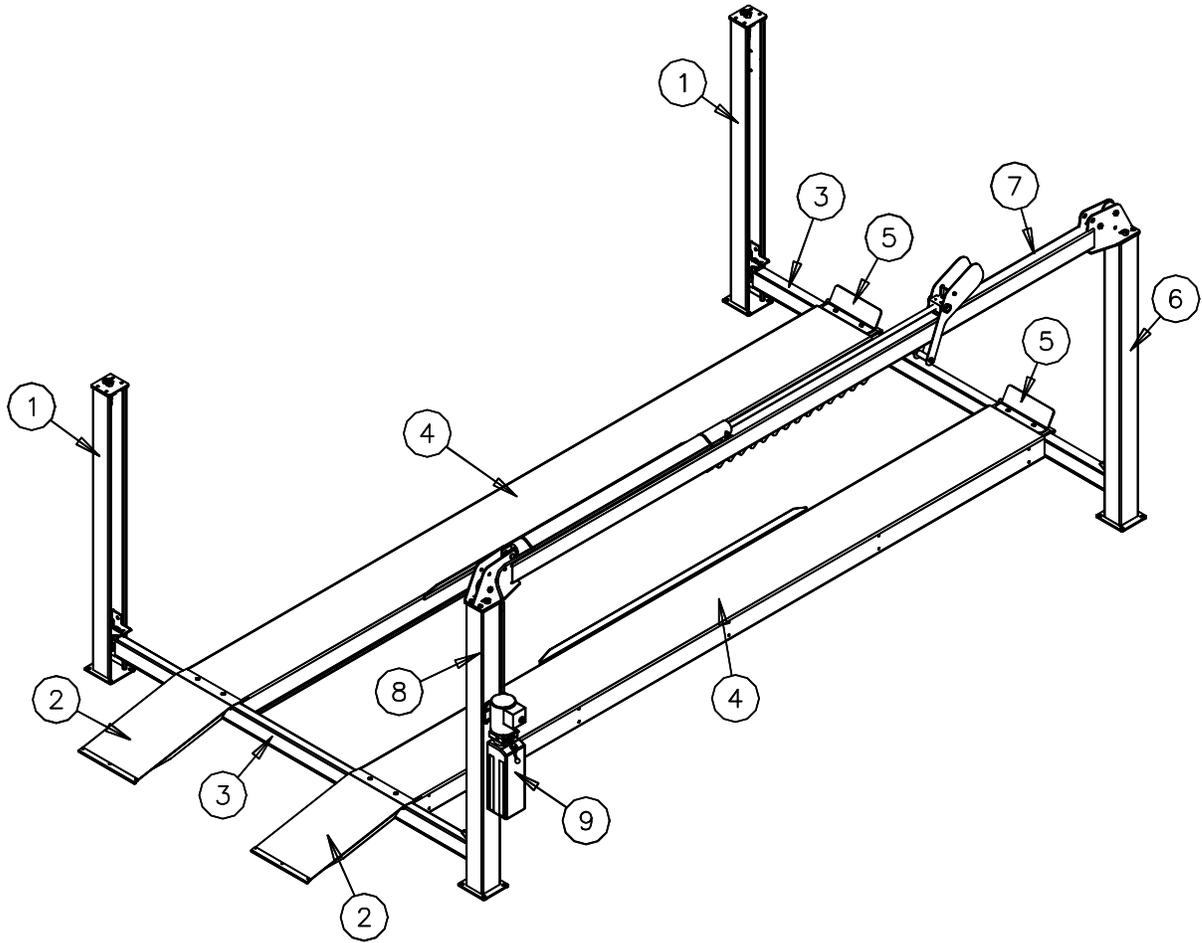
Lift will drift down when upward travel stops.

- 1 Debris is lodged in the lowering valve – depress valve handle and energize pump at the same time. This will purge the valve.
- 2 Check Valve is open – remove and clean with compressed air

Lift will not lift vehicle to top position.

- 1 Low on oil - Fill reservoir with proper oil

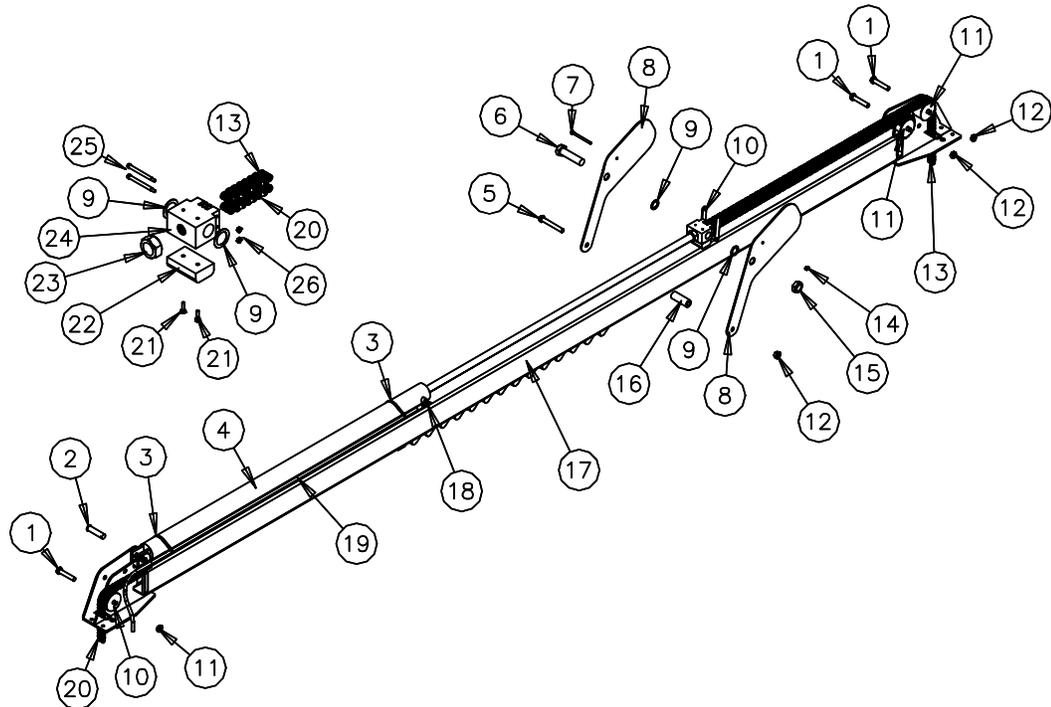
### Parts Breakdown



Item Number	Part Number	Description	Qty/Lift
1	44004	Idler Side Column Assembly	2
2	40161	Approach Ramp Weld	2
3	44002	Crossbeam Assembly	2
4	40020	Idler Runway Weldment (44EFX)	2
	40283	Idler Runway Weldment (44XFX)	2
	40283-M	Idler Runway Weldment (44XRX)	2
	44008	Power Runway Assembly (44EAX)	1
	40505	Idler Runway Assembly (44EAX)	1
	44009	Power Runway Assembly (44XAX)	1
5	40266	Wheel Stop	2
6	44003	Power Side Column Assembly	1
7	44001-E	Cylinder Beam Assembly (44E)	1
	44001-X	Cylinder Beam Assembly (44X)	1
8	44005	Power Column Assembly	1
9	31368-19	2HP, 230 V Single Phase Power Unit	1
	24081-4HP	4HP, 230 V Single Phase Power Unit	1

Replace all worn or broken parts with genuine **Challenger Lifts Inc.** parts.  
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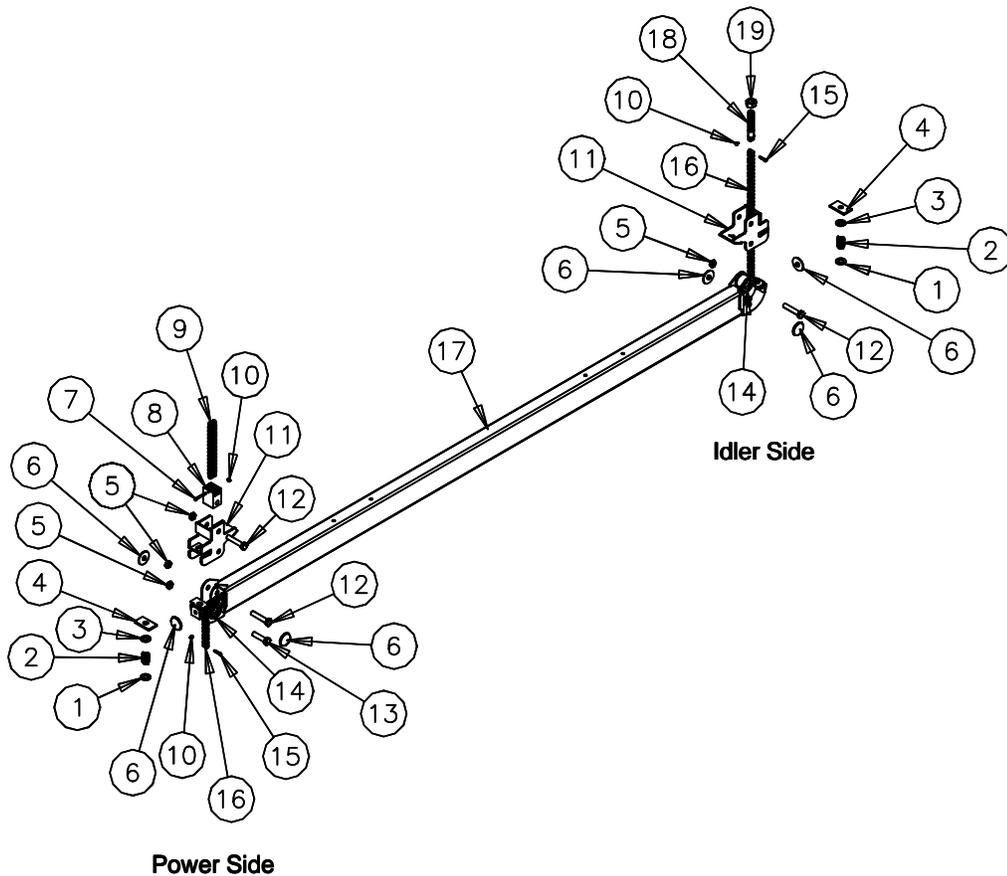
Model 44000  
Installation, Operation & Maintenance



Item Number	Part Number	Description	Qty/Lift
1	44028M	¾-10 x 4 HHCS, machined	3
2	44024	1 x 3 ½ Clevis Pin with Cotter	1
3	44095	Nylon Zip Tie (Black)	2
4	44011	Hydraulic Cylinder	1
5	44022M	¾-10 x 5 ½ HHCS, machined	1
6	44025M	1 3/8-12 x 5 ½ HHCS, machined	1
7	44020M	3/8-16 x 5 HHCS, machined	1
8	44017	Lock Plate	2
9	31020	1.392 x 2 x.0625 Washer	2
10	44019	Lock Release Cam Weld	1
11	44027	Lift Chain Roller Assembly	3
12	44023	¾-10 Nylon Lock Jam Nut	4
13	44013-(E or X)	Short Lifting Chain	1
14	10024	3/8-16 Nylon Locknut	1
15	44026	1 3/8-12 Nylon Lock Jam Nut	1
16	44021	Lock Bolt Sleeve	1
17	44010-(E or X)	Cylinder Beam Weld	1
18	16167	9/16 'O' Ring to #6 37 Deg. Elbow	1
19	44094	Hydraulic Hose	1
20	44012-(E or X)	Long Lifting Chain	1
21	36095	¼-20 x 1 HHCS	2
22	44016	Slide Block	1
23	44015	1 3/8-12 Jam Nut	1
24	44014	Cylinder Rod End	1
25	44029	5/16 x 3 Shoulder Bolt	2
26	08097	¼-20 Nylon Locknut	2

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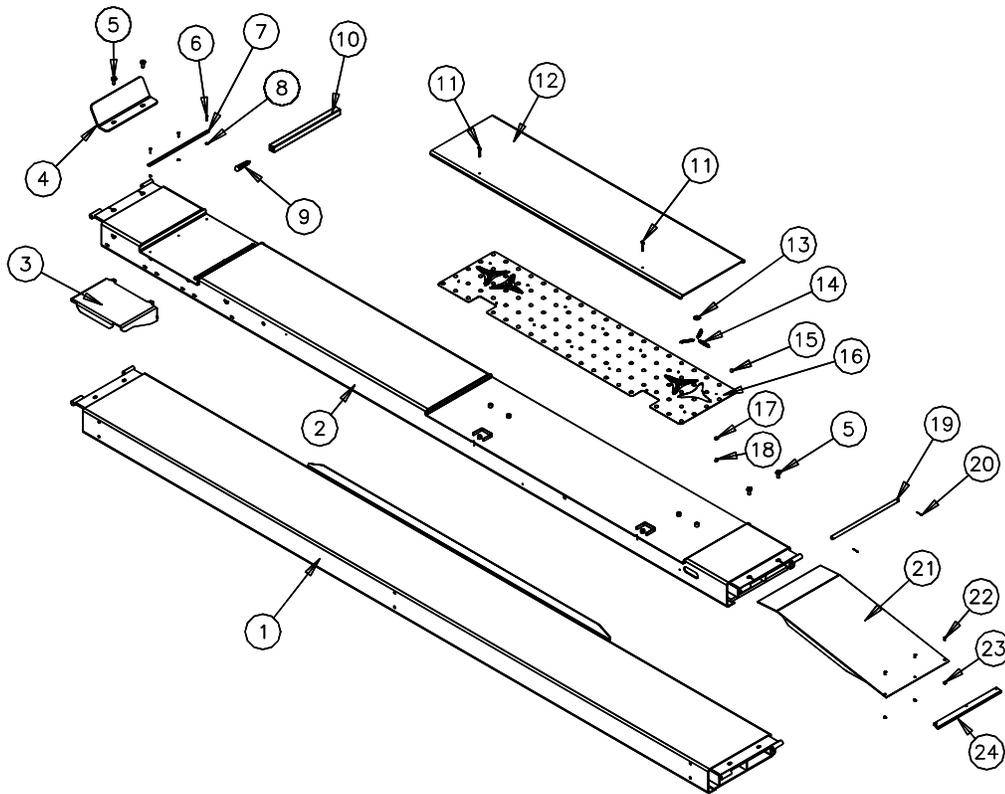
Model 44000  
Installation, Operation & Maintenance



<b>Item Number</b>	<b>Part Number</b>	<b>Description</b>	<b>Qty/Lift</b>
1	40149	7/8" SAE Flat Washer	4
2	44043	Slack Chain Spring	4
3	44049	.891 ID x 1.75 OD Actuator	4
4	44042	Slack Chain Latch Plate	4
5	44023	3/4-10 Nylon Lock Jam Nut	8
6	40425	2 1/2" Wear Button	12
7	44048	5/16 x 2 Shoulder Bolt	2
8	44046	Lift Chain Block	2
9	44012-*/44013-*	Lifting Chain	1 ea.
10	08097	1/4-20 Nylon Locknut	6
11	44041	Slack Latch Weld	4
12	44028M	3/4-10 x 4 HHCS, machined	6
13	44047M	3/4-10 x 3 1/2 HHCS, machined	2
14	44044	Synch Chain Roller	4
15	44061	5/16 x 1 Shoulder Bolt	4
16	44045	Synchronizing Chain	2
17	44040	Crossbeam Weld	2
18	44092	Synch. Chain Adjustment Stud	2
19	44093	1-8 Hex Nut	2

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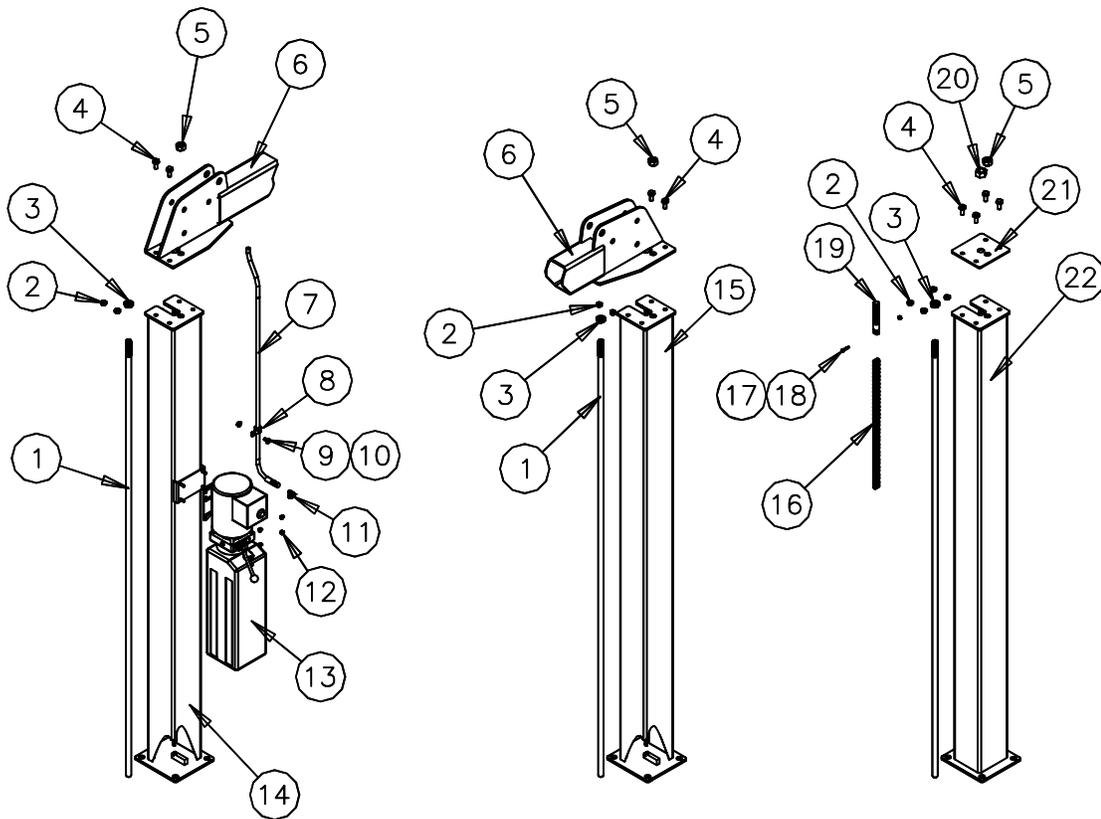
Model 44000  
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Item Number	Part Number	Description	Qty/Lift
1	40020/40283/40283M	Runway Weld	2
2	40501,40502/40511,40512	Alignment Runway Weld	1 ea.
3	40506	Work Step	2
4	40266	Front Wheel Stop	2
5	40083	1/2-13 1 1/4 Hex Flange Head Bolt	8
6	40299	#10-24 x 1 Socket Head Bolt	12
7	40291	Guide Bar	4
8	055-127	#10-24 Nylon Locknut	12
9	40295	Handle	2
10	40296	Drop In Spacer	2
11	40220	Pin Assembly (w/ chain and cotter)	4
12	40530	Rear Slip Plate	2
13	40219	7/8' Internal Tooth Lock Washer	8
14	40221	1/2" Diameter Extension Spring	24
15	40211	3/4" Delrin Ball	196
16	40526	Ball Retainer Sheet	2
17	40528	Stand Off Spacer (Grommet)	28
18	40527	Stand Off Pin	28
19	40165	Ramp Hinge Pin	2
20	40126	1/8 x 1 1/2 Cotter Pin	4
21	40161	Approach Ramp	2
22	31062	1/4-20 x 3/4 Pan Head Screw	6
23	40085	1/4-20 Hex Nut	6
24	40168	Ramp Slide	2

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Installation, Operation & Maintenance



Power Column

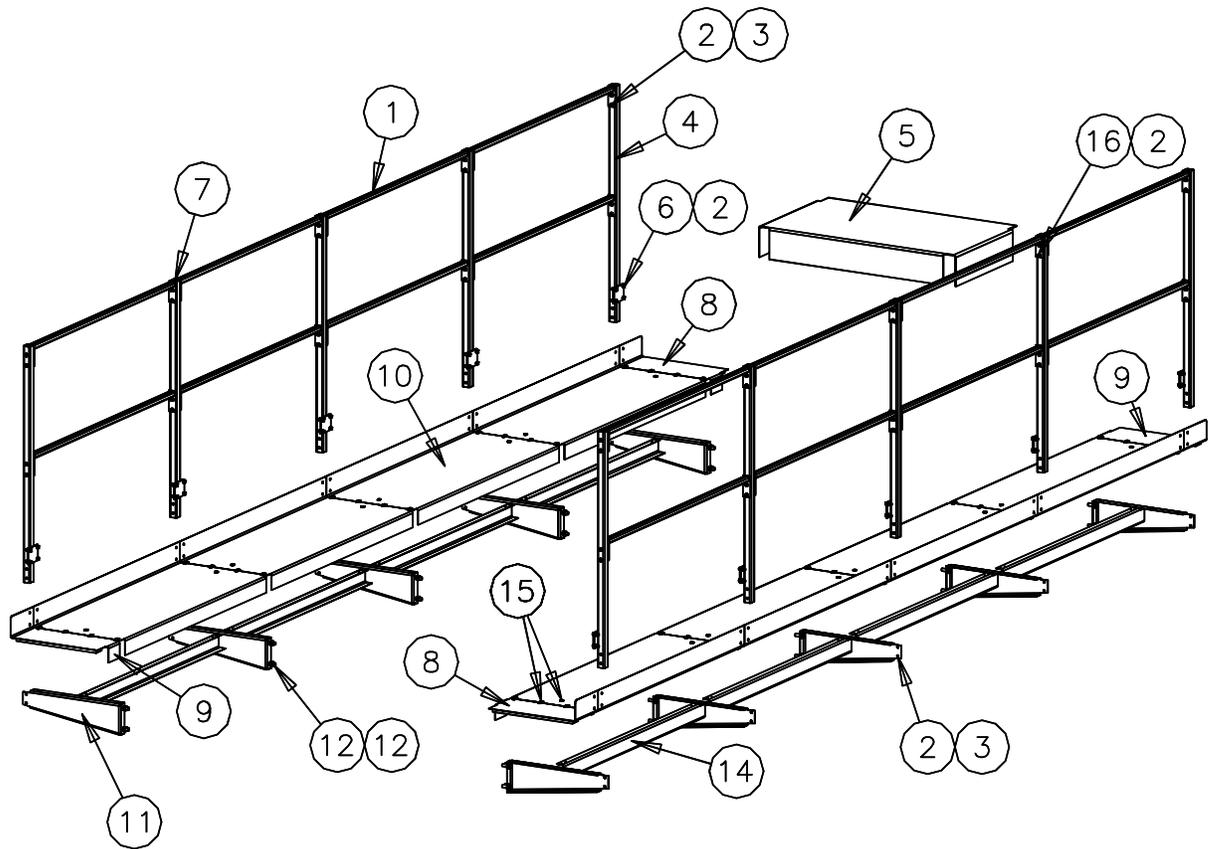
Power Side Column

Idler Column

Item Number	Part Number	Description	Qty/Lift
1	44062	Safety Rod 7/8"	4
2	16159	1/2-13 Hex Nut	12
3	40148	7/8-9 Jam Nut	4
4	40083	1/2-13 x 1 1/4 Hex Flange Head Bolt	12
5	40147	7/8-9 Hex Nut	4
6	44010-(E or X)	Cylinder Beam Weld	1
7	44094	Hydraulic Hose Assembly	1
8	A1122-12	3/8" Hose Clamp	1
9	A1153	3/8-16 x 3/4 Hex Flange Head Bolt	1
10	A1154	3/8-16 Hex Flange Nut	1
11	16167	9/16 'O' Ring x 37 Deg. Flare Elbow	2
12	31189	5/16-18 Hex Nut	4
13	31368-19/24081-4HP	Power Unit	1
14	44080	Power Column Weld	1
15	44060	Power Side Column Weld	1
16	44045	Synchronizing Chain	2
17	44061	5/16 x 1 Shoulder Bolt	4
18	08097	1/4-20 Nylon Lock Nut	4
19	44092	Synch. Chain Adjustment Stud	2
20	44093	1-8 Hex Nut	2
21	44071	Idler Column Cap	2
22	44070	Idler Side Column Weld	2

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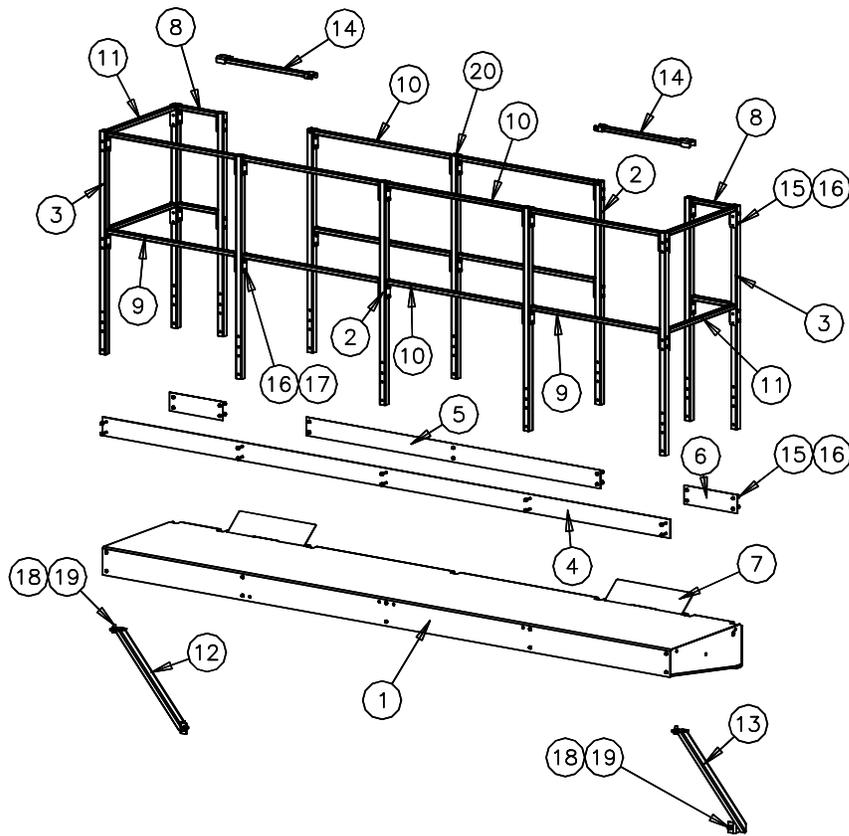
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Item Number	Part Number	Description	Qty/Lift
1	44206	Catwalk Rail	16
2	4100237	5/16-18 Hex Flange Nut	100
3	44207	5/16-187 x 2 HHCS	36
4	44205	Catwalk Post Weld	10
5	44204	Crossover Deck Weld	1
6	A1069	5/16-18 x 1 Hex Flange Head Capscrew	40
7	44210	Tube Cap	10
8	44203L	Catwalk End Piece – Left	2
9	44203R	Catwalk End Piece – Right	2
10	44202	Catwalk Deck	8
11	44201	Catwalk Gusset Weld	10
12	40083	1/2-13 x 1 1/4 Hex Flange Head Capscrew	20
13	16159	1/2-13 Hex Nut	20
14	44211	Catwalk Channel	8
15	44209	#14 x 3/4 Thread Forming Screw	96
16	44208	5/16-18 x 2 1/2 HHCS	24

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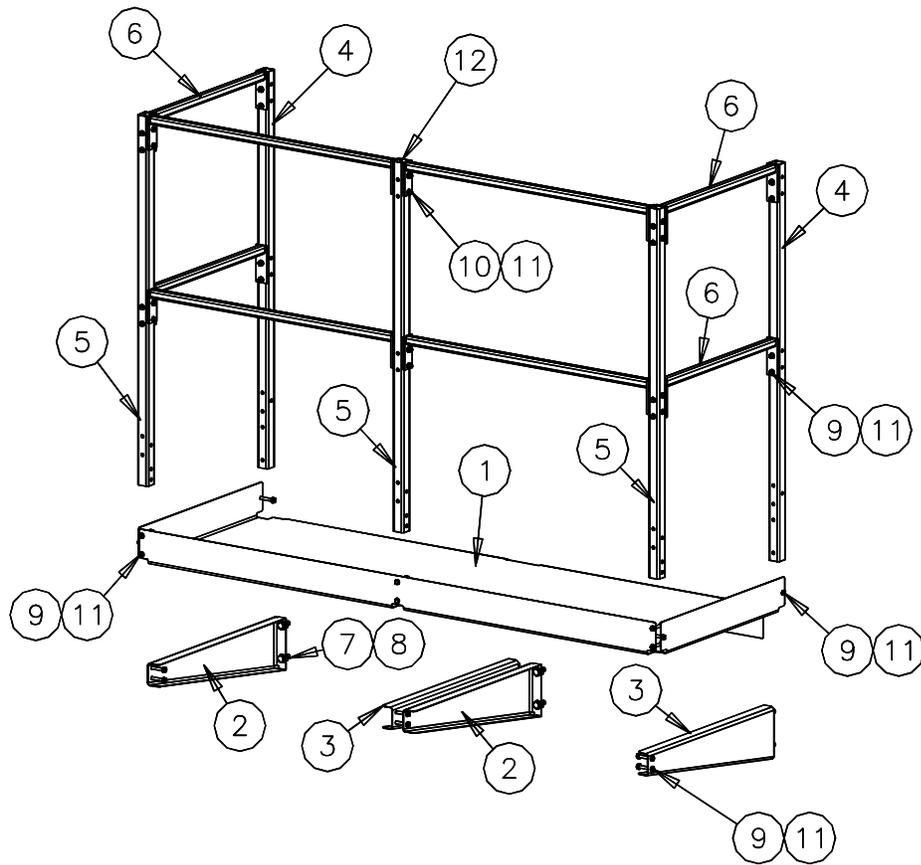
Model 44000  
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<b>Item Number</b>	<b>Part Number</b>	<b>Description</b>	<b>Qty/Lift</b>
1	44301	Mezzanine Deck Weld	1
2	44302	Mezzanine Post	8
3	44303	End Post	4
4	44304	Toe Board 144"	1
5	44305	Toe Board 74 1/2"	1
6	44306	Toe Board 13 1/2"	2
7	44307	Transition Plate	2
8	44308	Short Rail Weld	4
9	44309	Mid Rail Weld	4
10	44310	Long Rail Weld	8
11	44311	End Rail Weld	4
12	44312L	Brace Weld LH	1
13	44312R	Brace Weld RH	1
14	44314	Pivot Rail	2
15	44207	5/16-18 x 2 HHCS	98
16	4100237	5/16-18 Hex Flange Nut	114
17	44208	5/16-18 x 2 1/2 HHCS	16
18	40083	1/2-13 x 11/4 Hex Flange Head Capscrew	12
19	16159	1/2-13 Hex Nut	12
20	44210	Tube Cap	12

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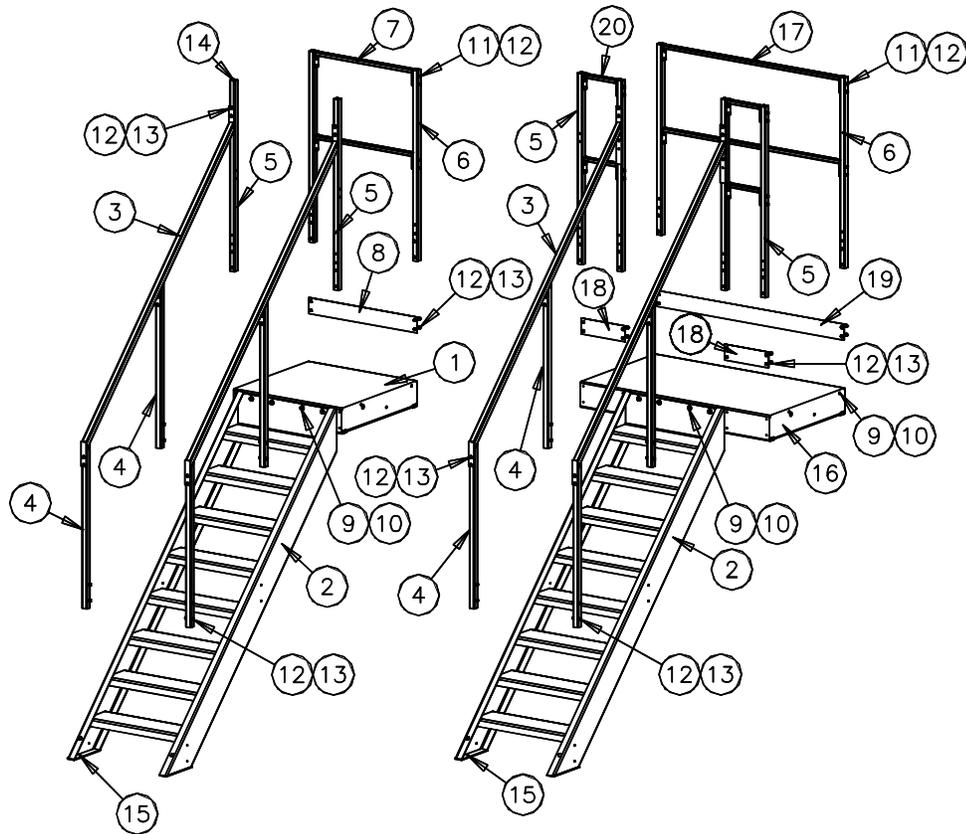
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<i>Item Number</i>	<i>Part Number</i>	<i>Description</i>	<i>Qty/Lift</i>
1	44401	Offset Storage Deck	1
2	44402L	Offset Storage Gusset LH	2
3	44402R	Offset Storage Gusset RH	2
4	44403	Long Post	2
5	44404	Short Post	3
6	44406	Short Rail Weld	4
7	40083	½-13 x 1 ¼ Hex Flange Head Capscrew	8
8	16159	½-13 Hex Nut	8
9	44207	5/16-18 x 2 HHCS	44
10	44208	5/16-18 x 2 ½ HHCS	4
11	4100237	5/16-18 Hex Flange Nut	48
12	44210	Tube Cap	5

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Item Number	Part Number	Description	Qty/Lift
1	44502	32" Landing Weld	1
2	44503	Stair Weld	1
3	44504	Banister Weld	2
4	44505	Banister Post	4
5	44506	Rear Post	2/4
6	44507	Front Post	2
7	44508	Rail Weld	2
8	44509	Toe Board 32"	1
9	40083	1/2-13 x 1 1/4 Hex Flange Head Capscrew	10
10	16159	1/2-13 Hex Nut	10
11	44524	5/16-18 x 4 HHCS	8
12	4100237	5/16-18 Hex Flange Nut	40/68
13	44207	5/16-18 x 2 HHCS	32/60
14	44210	Tube Cap	4/6
15	26028	3/8 x 3 3/4 Anchor Bolt	2
16	44511	56" Landing Weld	1
17	44512	Long Rail Weld	2
18	44526	Short Toe Board	2
19	44514	Toe Board 56"	1
20	44308	Short Rail Weld	4

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