

# INSTALLATION & OPERATION MANUAL



## Atlas 409-HP 9,000 lb. Capacity Four-Post Storage Lift



**Atlas Automotive Equipment**  
[www.atlasautoequipment.com](http://www.atlasautoequipment.com)  
(866) 898-2604

**Read this entire manual before operation begins.**

Record below the following information which is located on the serial number data plate.

Serial No. \_\_\_\_\_

Model No. \_\_\_\_\_

Date of Installation \_\_\_\_\_

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# Specifications

## 409-HP Features

- Single point manual safety release.
- Four mechanical locking devices, each equipped with both primary and secondary safety locks.
- Skid proof diamond plate platforms and adjustable safety lock ladders.

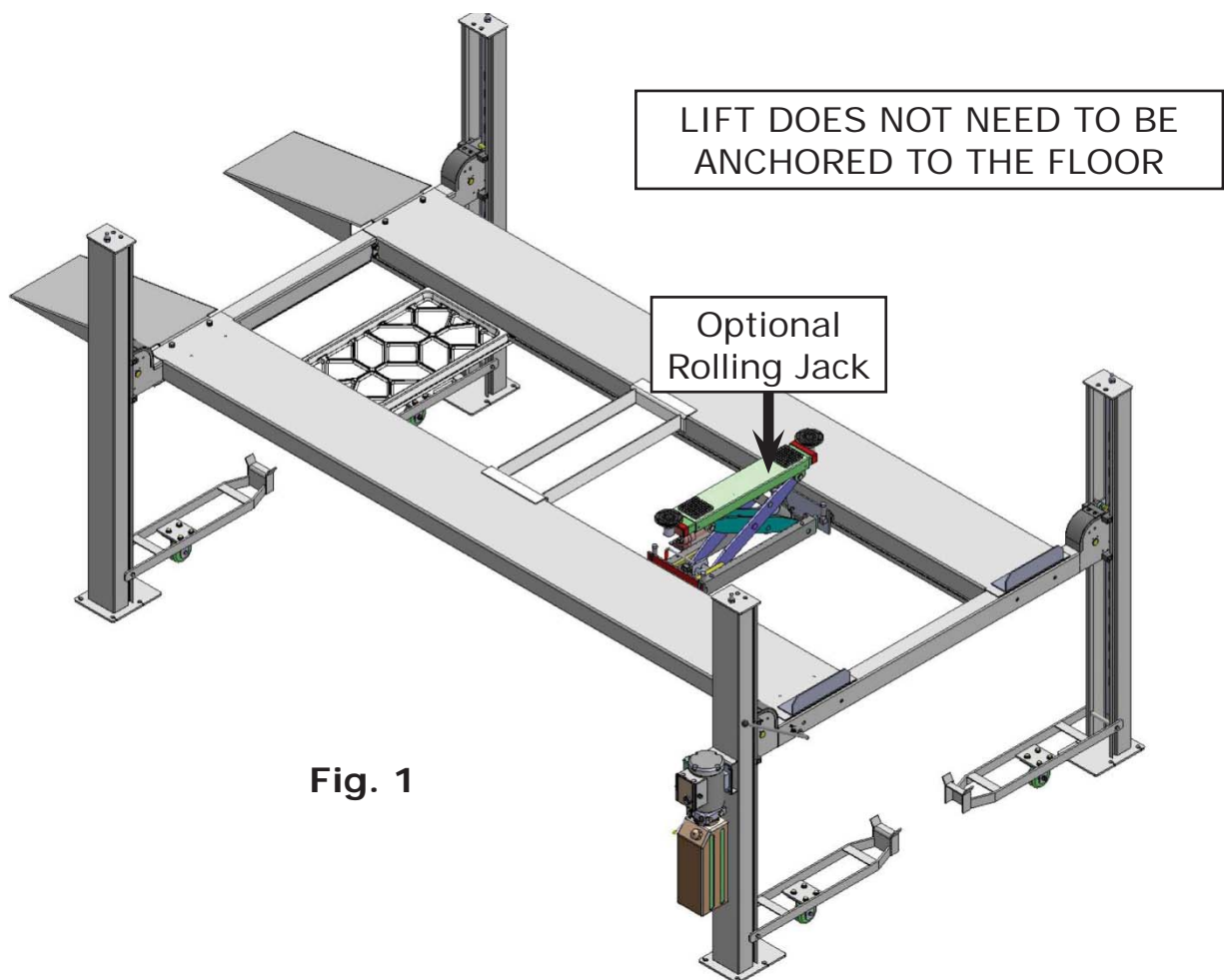


Fig. 1

Model	Lifting Capacity	Lifting Height	Lifting Time	Overall Length (Inc. Ramps)	Overall Width	Width Between Columns	Gross Weight	Motor
409-HP	9,000 LBS.	2172mm (85 1/2")	122S	5857mm (230 5/8")	3206mm (126 1/4")	2860mm (112 5/8")	990Kg 2180 lbs	110V, 1.5HP

# Installation Requirement

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## Tools Required

Screw Drivers



Tape Measure (25ft)



Level Bar



Pliers



Crescent Wrench (12")



Vise Grips



Ratchet Spanner With Socket (28#)



Allen Head Wrench (3#, 5#, 6#, 8#)



Wrench set (mm)

(12#, 13#, 14#, 15#, 17#, 19#, 24#, 30#)



Fig. 2

## Specifications Of Concrete

1. Concrete must be in good condition and must have a of test strength of 3,000psi (4" minimum).
2. Floors must be level with no cracks or holes.

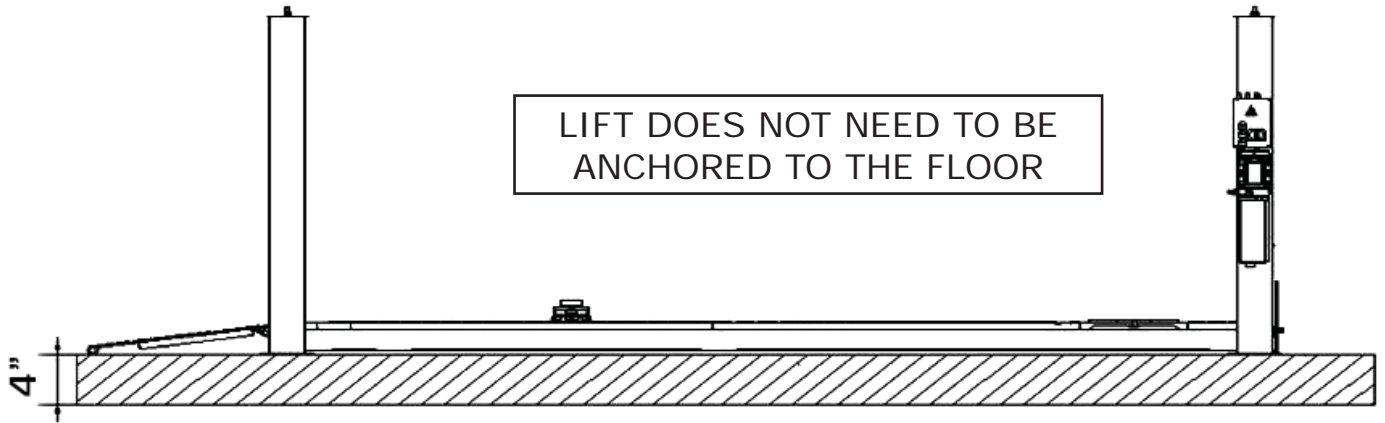


Fig. 3

## Power Supply

The electrical source must be 110V. 20AMP breaker minimum is required. Electrical cord is supplied with the 110V power unit. If a longer cord is needed to reach the electrical supply, use only a commercial grade extension cord not exceeding 20 ft., or use a minimum 10 gauge cord with a 20AMP plug. The original cord may be removed from the A/C contactor and the replacement cord inserted into the same legs on the A/C contactor.

# Steps Of Installation

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## A. Installation Location

Check and ensure the installation location (concrete, layout, space size etc.) is suitable for lift installation.

## B. Check The Parts Before Assembly

1. Packaged lift and Hydraulic Power Unit (See Fig. 4).



Fig. 4

2. Open the outer packing carefully; check the parts according to the shipment list. (See Fig. 5).

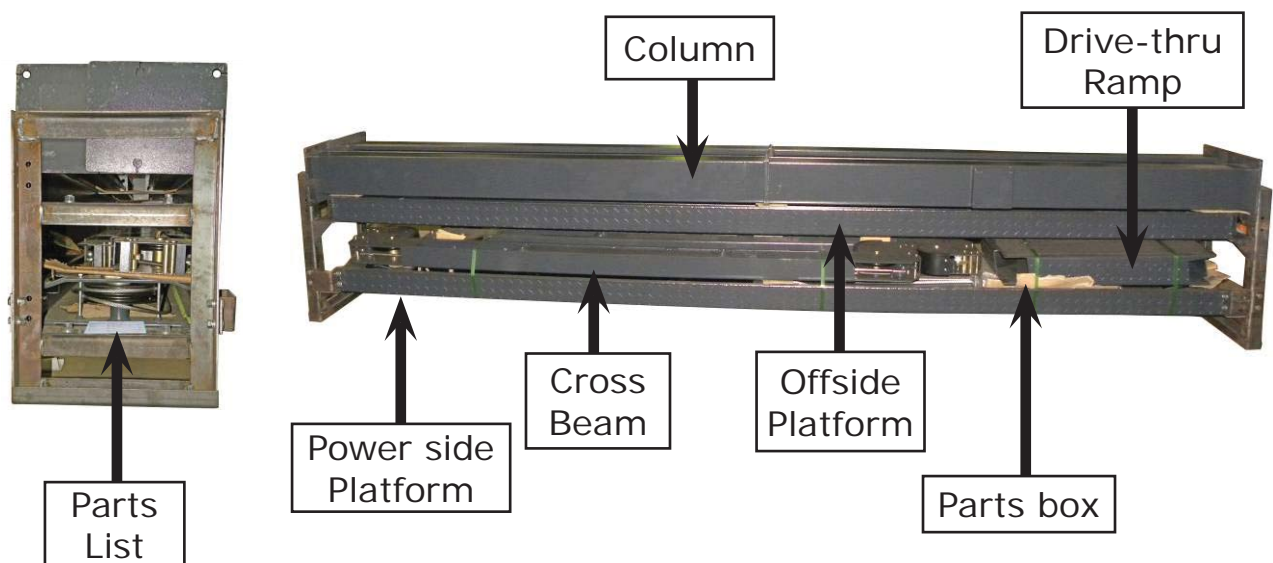


Fig. 5



3. Remove the approach ramps and the four columns (See Fig. 6).



**Fig. 6**

4. Loosen the screws on the upper package stand, remove the offside platform, take out the parts inside the power side (cylinder) platform and remove the package stand.
5. Move the parts to the side and check the parts according to the shipment parts list (See Fig. 7).



**Fig. 7**



6. Open the box of parts and check the parts according to the parts box list (See Fig. 8).



Fig. 8

7. Check the parts in the parts bag according to the parts bag list (See Fig. 9).

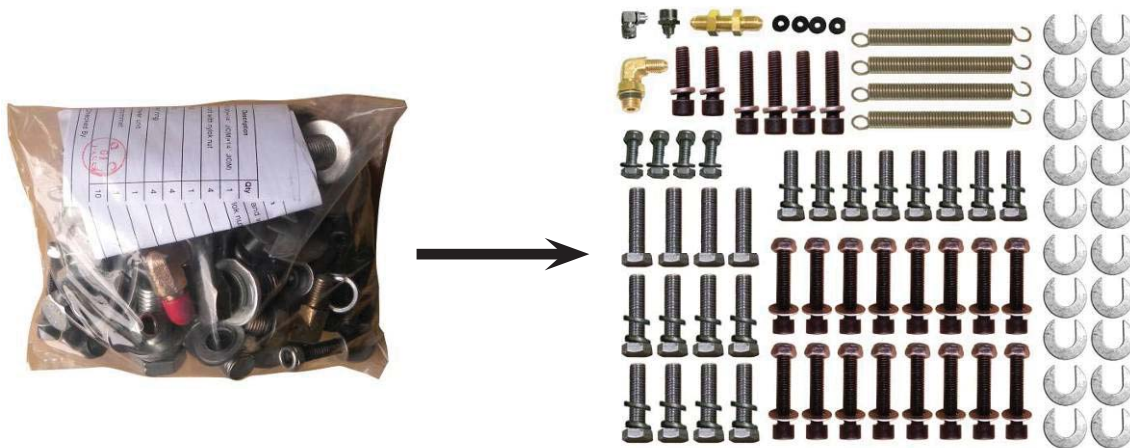
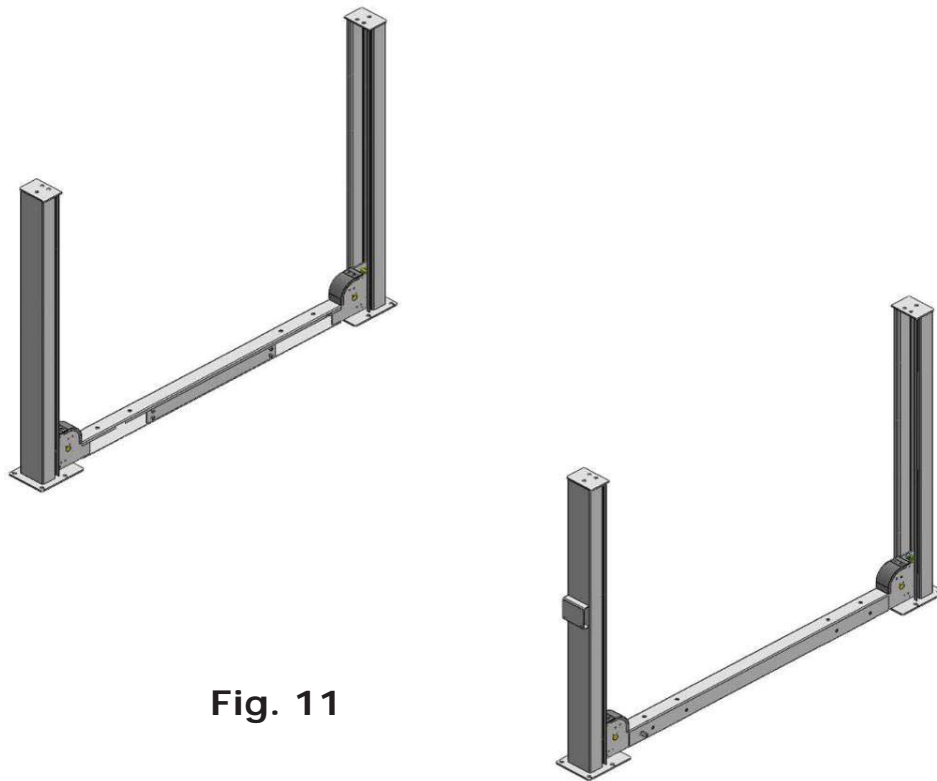
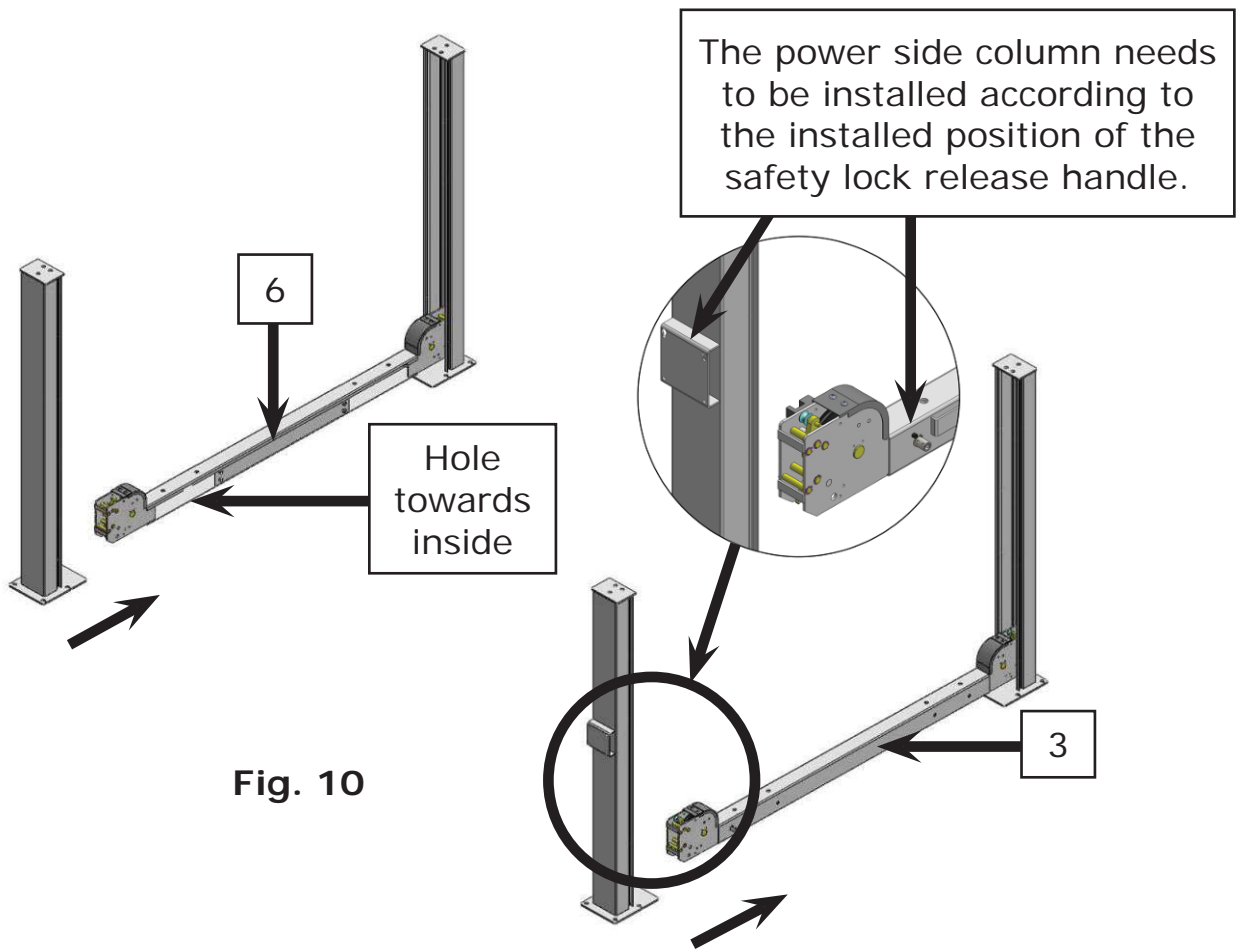


Fig. 9

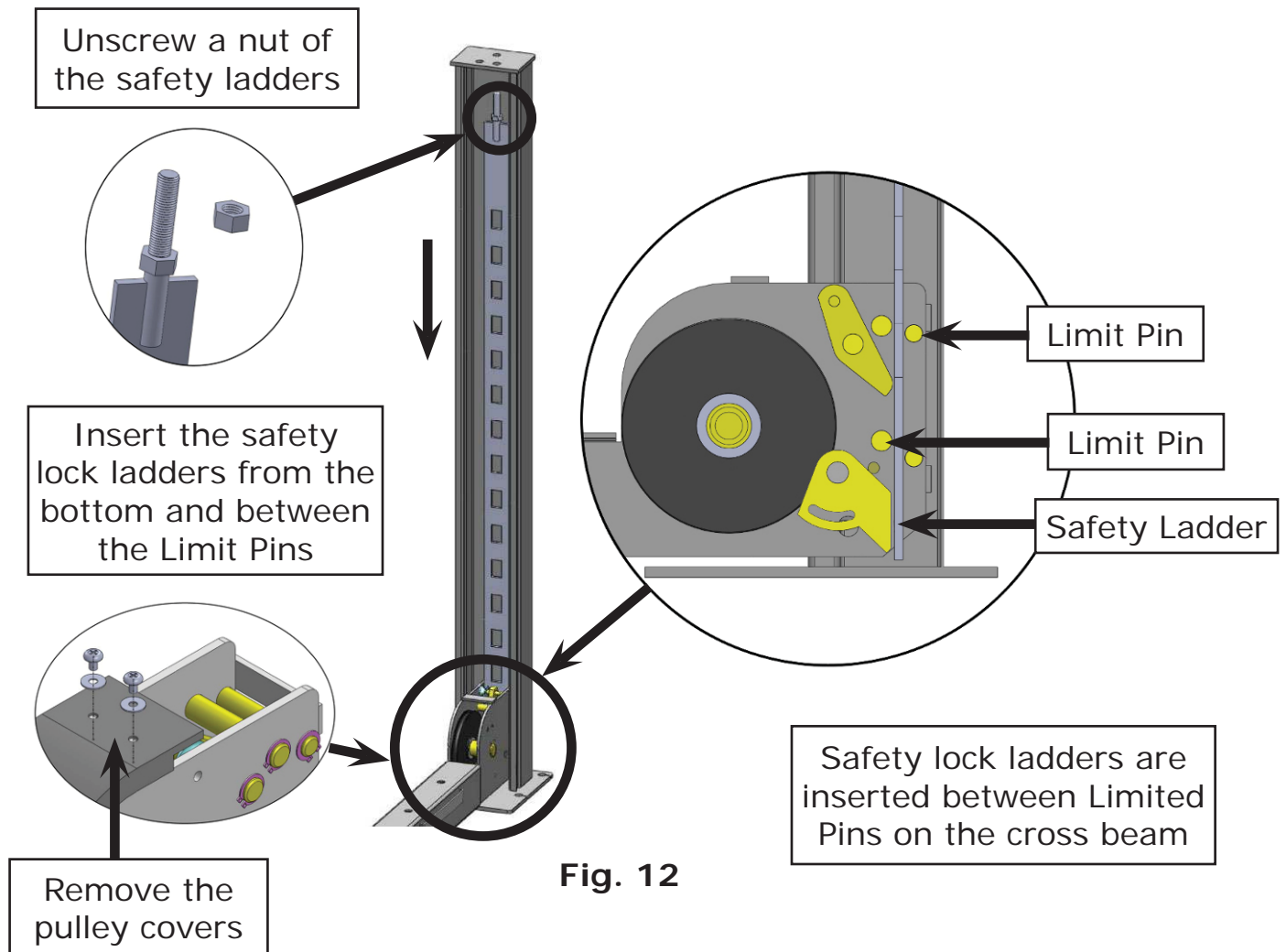
## C. Install Cross Beams

**Installation Note:** For the operator's convenience, the power unit may be installed on any of the four corners. However, the power unit column (with motor bracket) and the power side platform (with cylinder) must always stay together on the same side. Example: The power unit is positioned on the driver's front or rear (left front/left rear corner) and the power side (with cylinder) platform must be installed the left side.

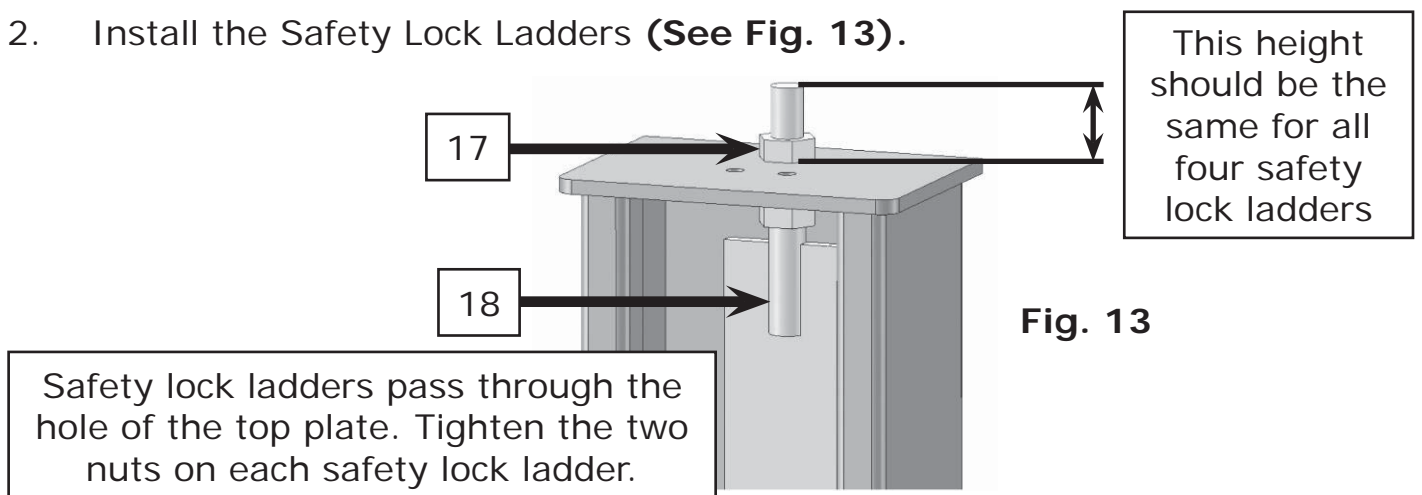


## D. Install The Safety Lock Ladders

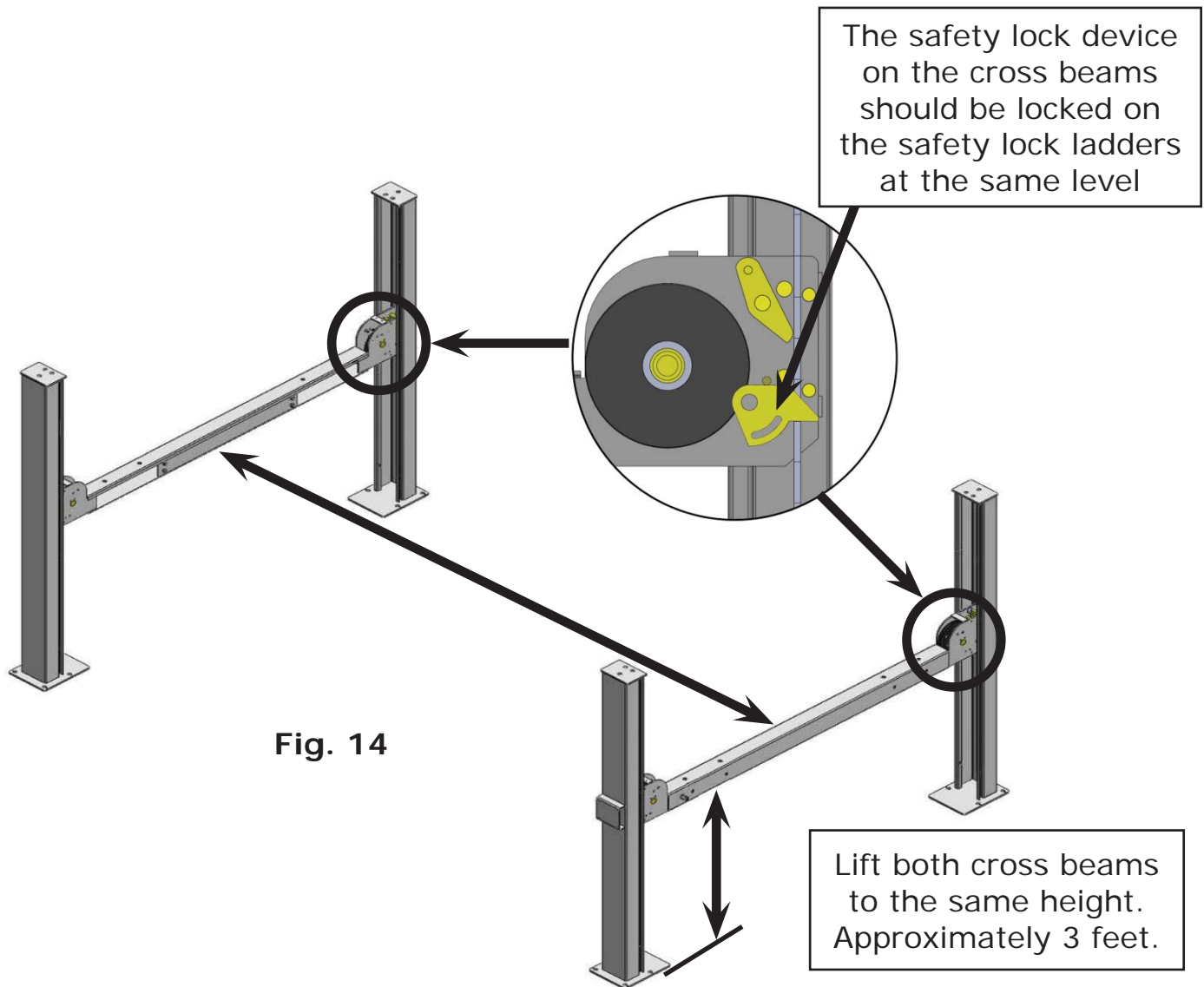
1. Remove the pulley covers and unscrew one nut from each of the safety lock ladders, and adjust the four lower nuts to the same position. Install the safety ladders (See Fig. 12).



2. Install the Safety Lock Ladders (See Fig. 13).



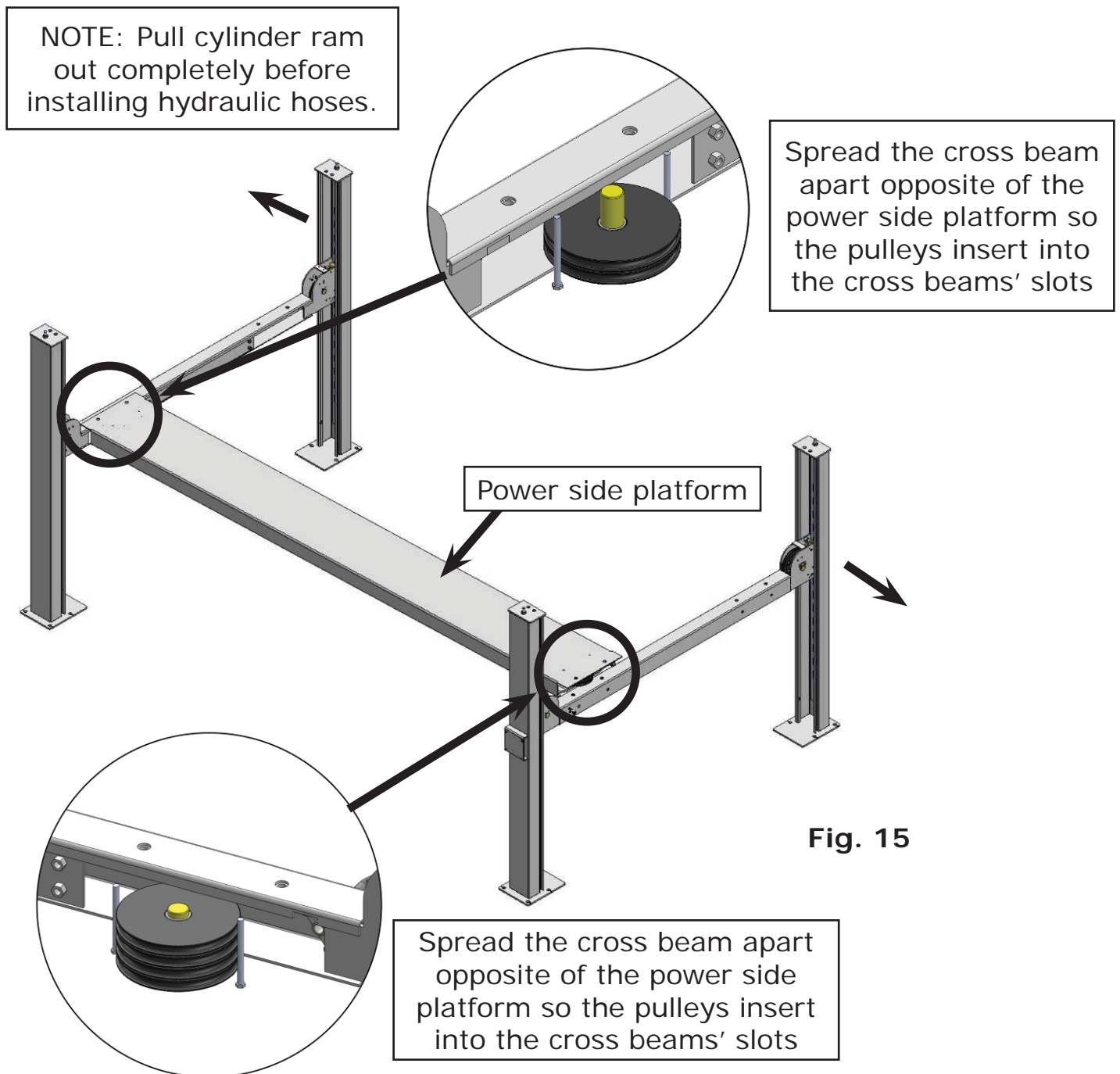
## E. Install The Cross Beams At The Same Height And Lock On The Safety Lock Ladders



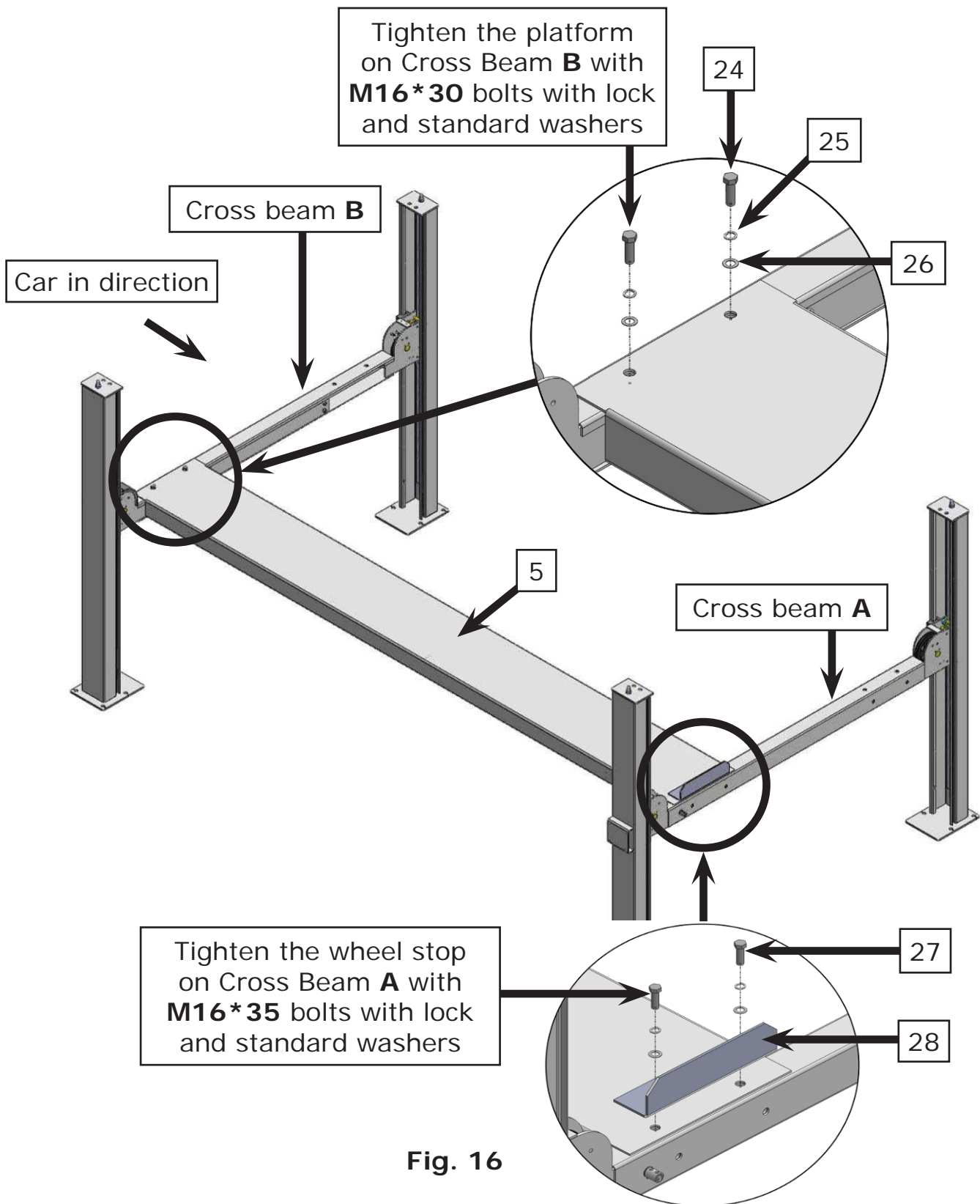
## F. Install the Power Side and Offside Platforms

**Note:** Before installing the power side platform, pull the cylinder ram (not the whole cylinder) out until it stops.

1. Install the power side platform on the cross beams by a fork lift or other lifting device, offset the cross beams (**spread opposite corners**) to the outside until the pulleys on both platforms can rest into the cross beams' slots (**See Fig.15**), Install the power side platform and install the bolts (**See Fig.16**). Do not tighten bolts until the offside platform is installed.
2. Pull the cross beams back together and install the offside platform.



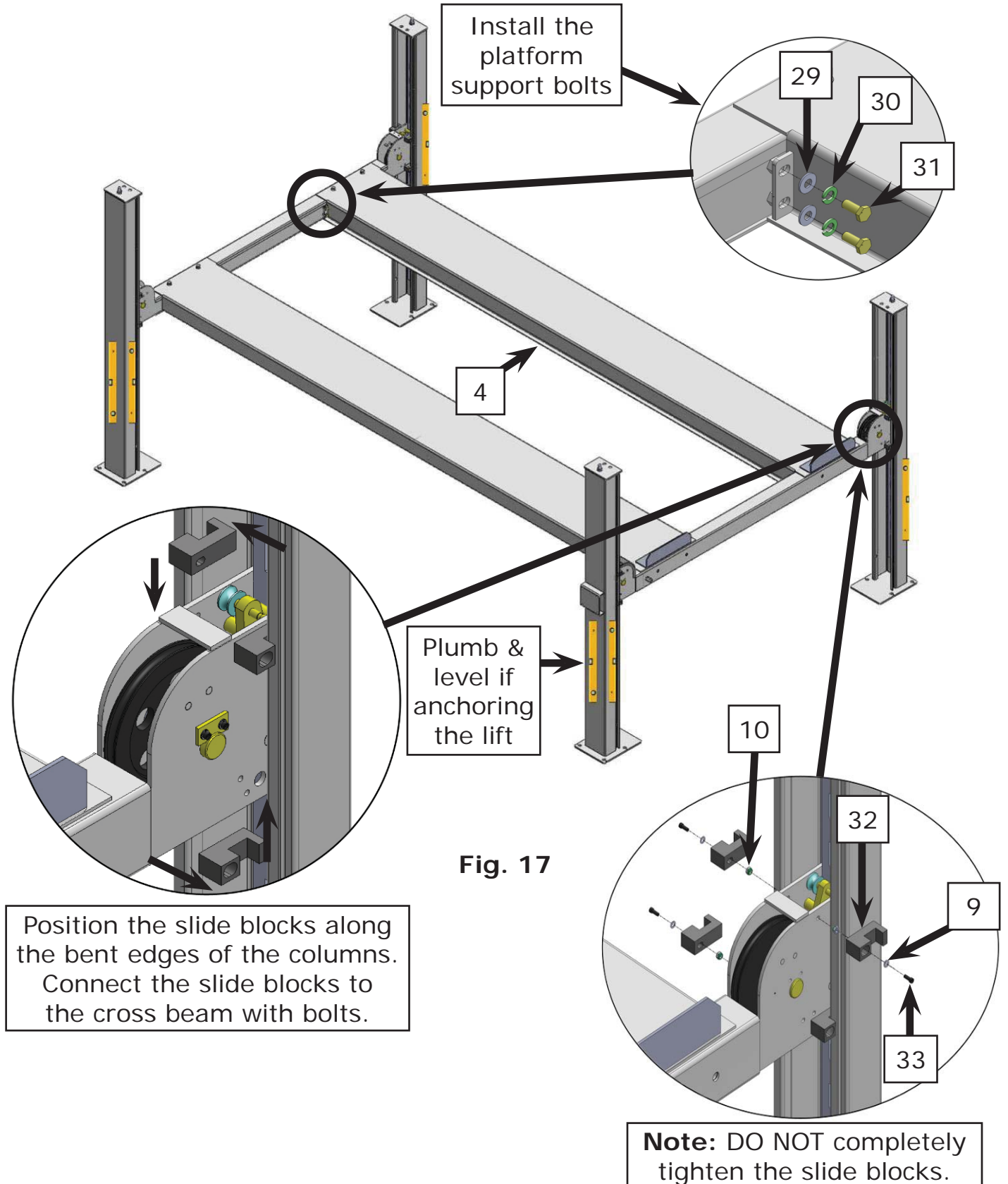
3. Install wheel stop plates with bolts and washers on the platforms. Tighten the platforms on cross beam **B** with bolts and washers. Tighten the wheel stop plates on cross beam **A** with bolts and washers.  
**Note:** The bolts for the wheel stop plates are longer. Pay attention when choosing the bolts (**See Fig.16**)



**Fig. 16**



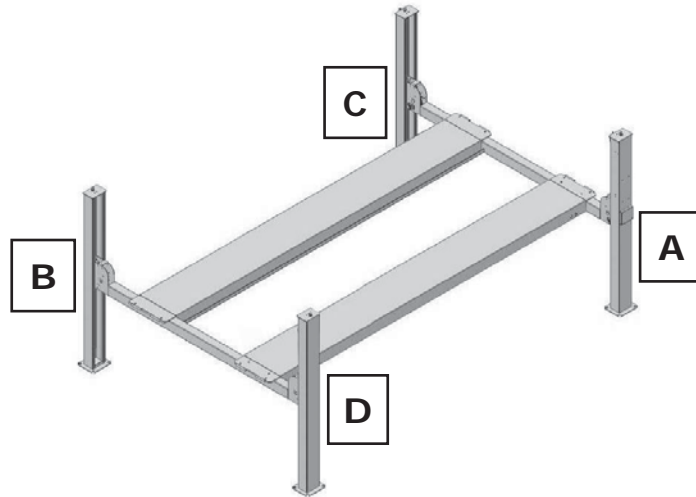
## G. Install the Platform Support Bolts and the Cross Beam Guide Blocks





## H. Cable Installation

1. Pass the cables through the platform to the columns according to the letter on the cables (See Fig. 18).



Cable \ NO.	A	B	C	D
Length (includes the cable ends)	3370mm 132 5/8"	9735mm 383 1/4"	4945mm 194 5/8"	8170mm 321 5/8"

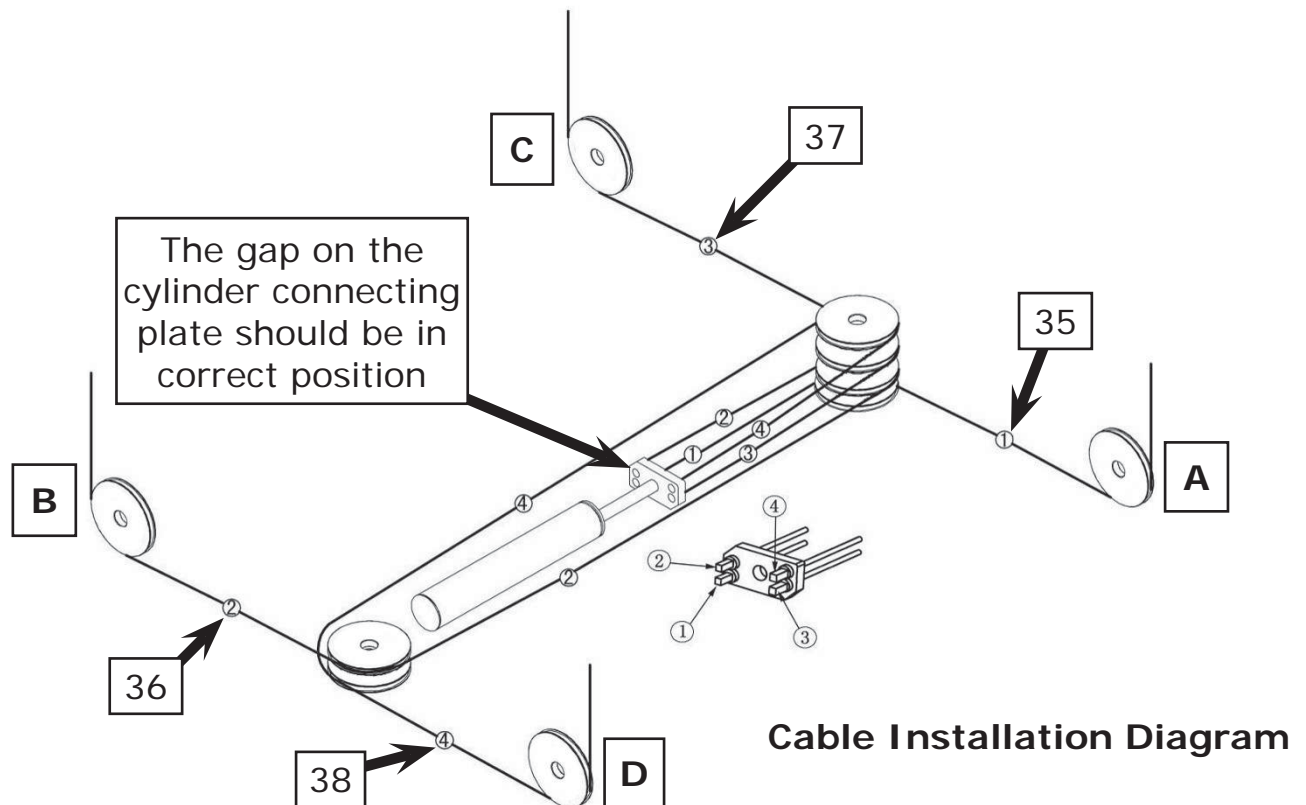
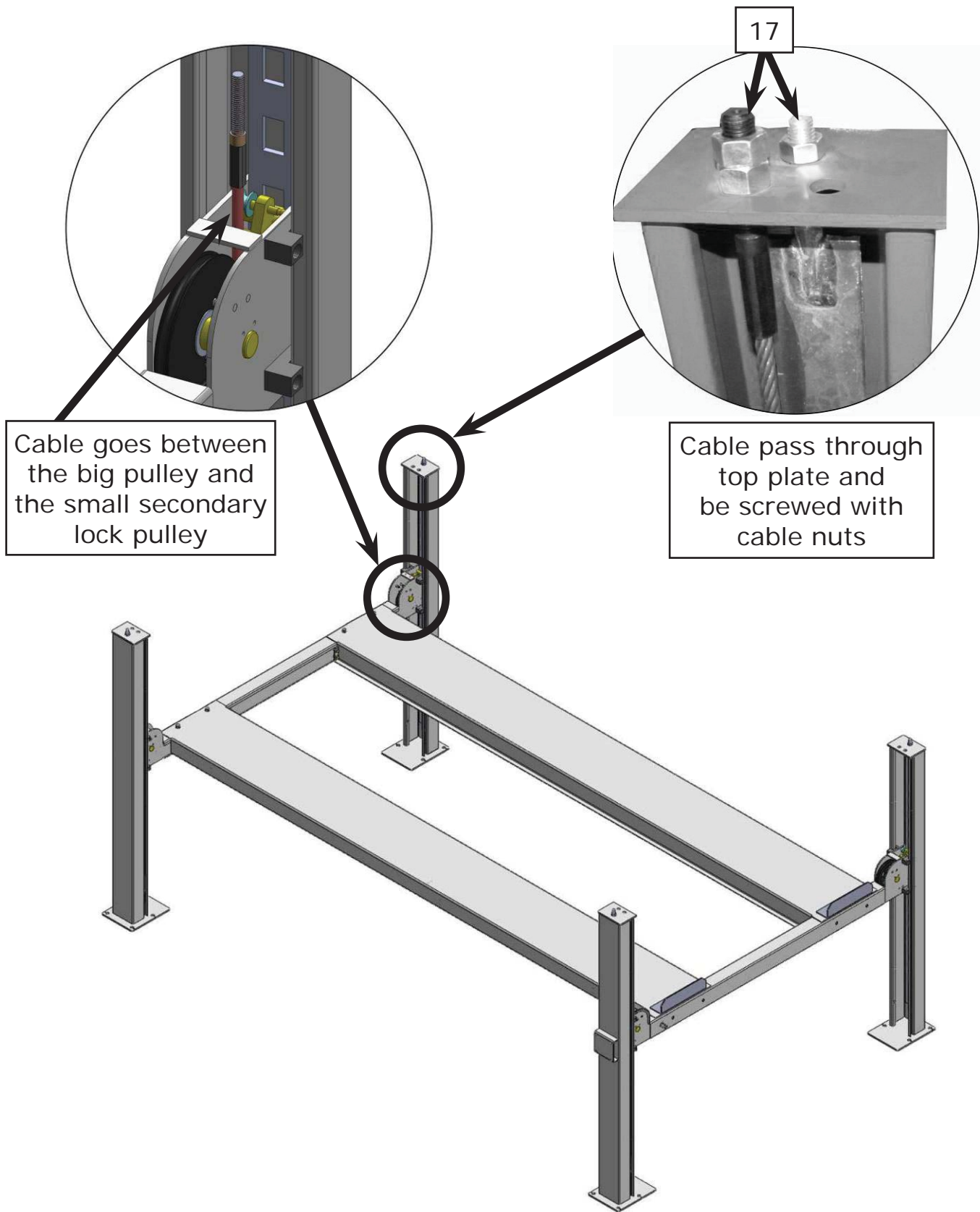


Fig. 18

2. The cable goes through the cross beam to the top plates on the columns (See Fig. 19).



**Fig. 19**

3. Illustration for cables under the platform (See Fig. 20).

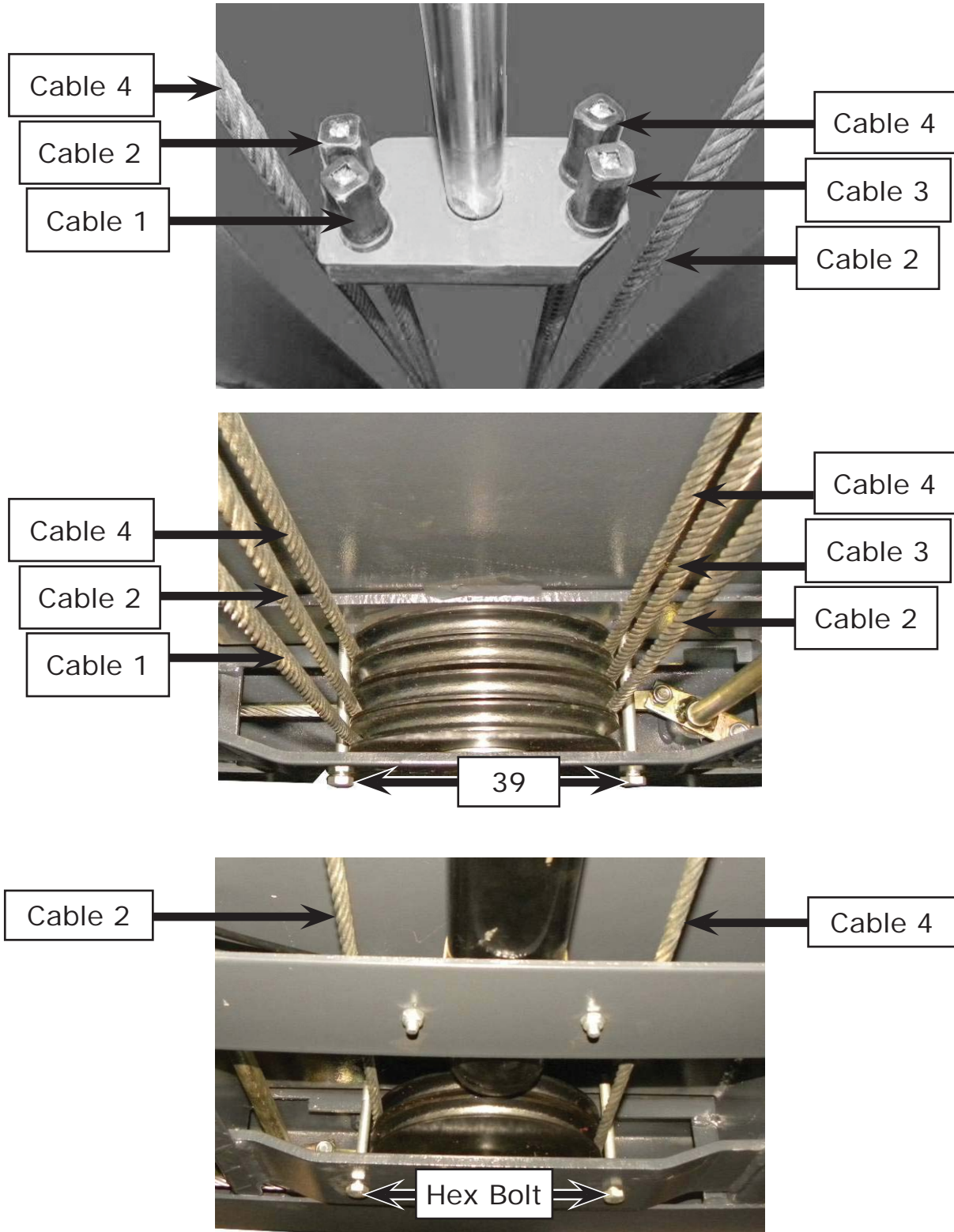
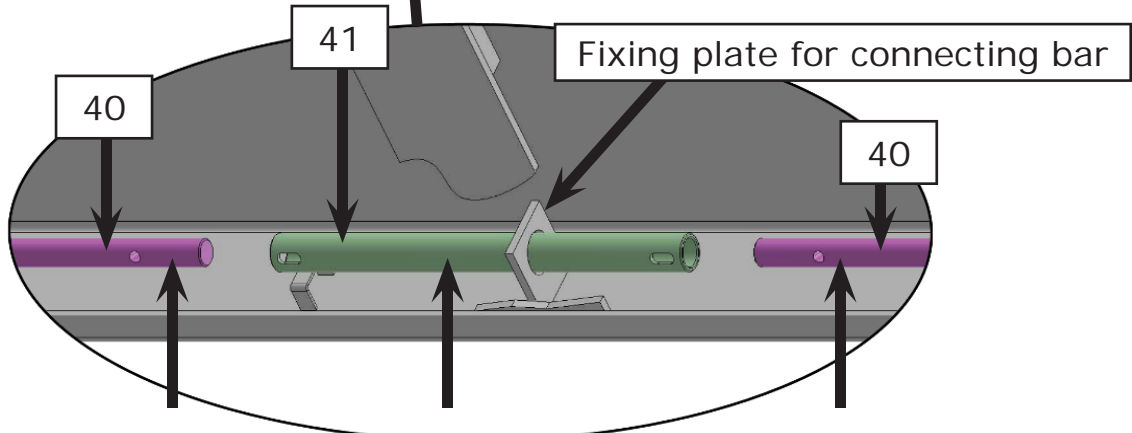
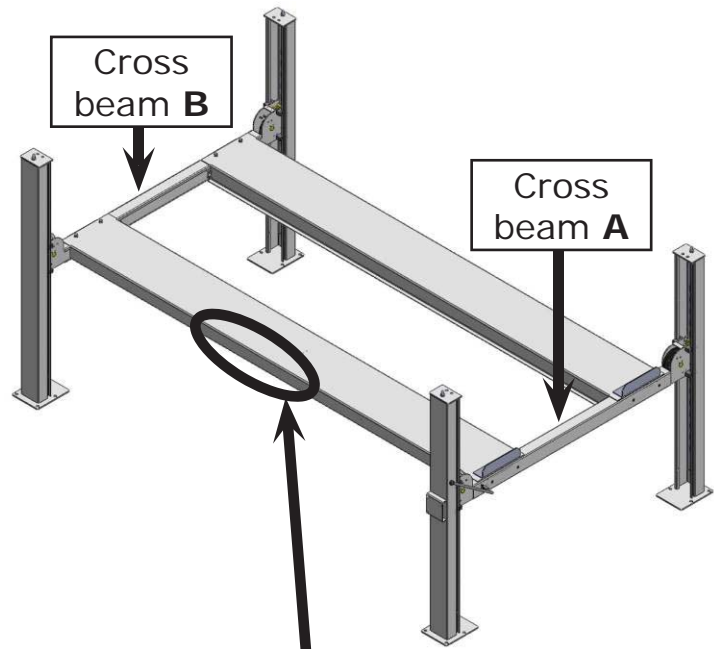


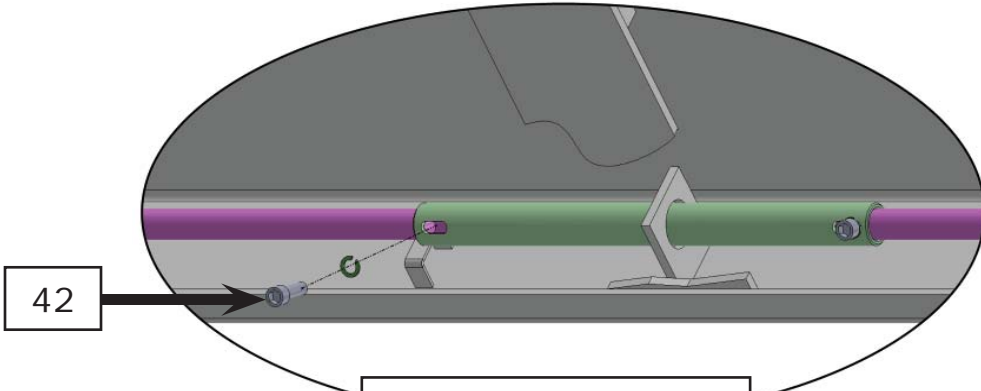
Fig. 20

# I. Installation For The Connecting Bar, Safety Lock Device And Release Handle

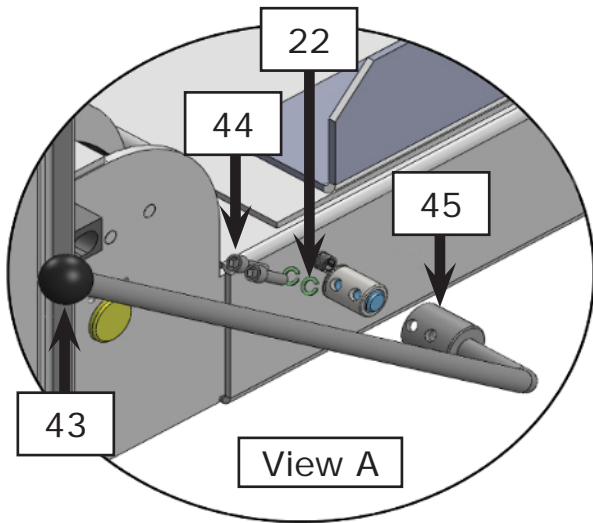
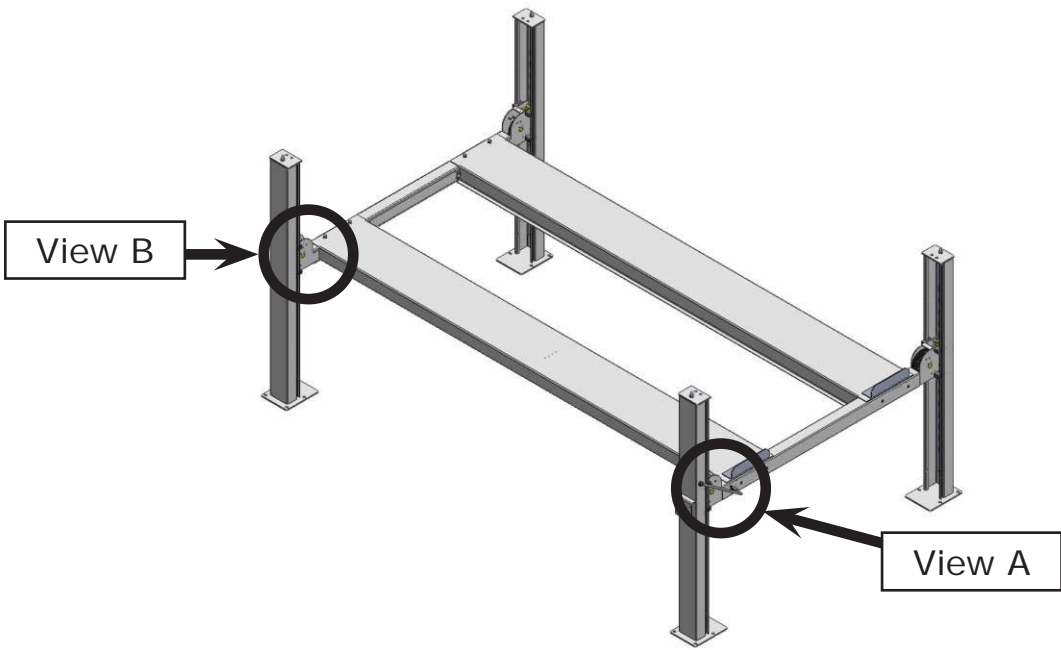
Fig. 21



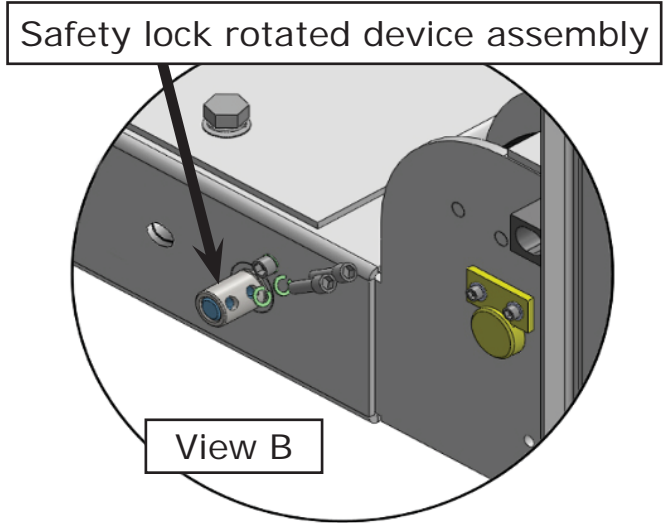
Pass through the connecting tube from the fixing plate



Connect the tube and bar with M8\*25 bolts and washer



Install lock release handle to the connecting bar with M8\*35 bolts and washers on crossbeam **A**.



Install M8\*35 bolts and washers on crossbeam **B**.

**Fig. 21 (cont.)**

## J. Install Power Unit

Install power unit on the column with the motor bracket. (See Fig. 22).

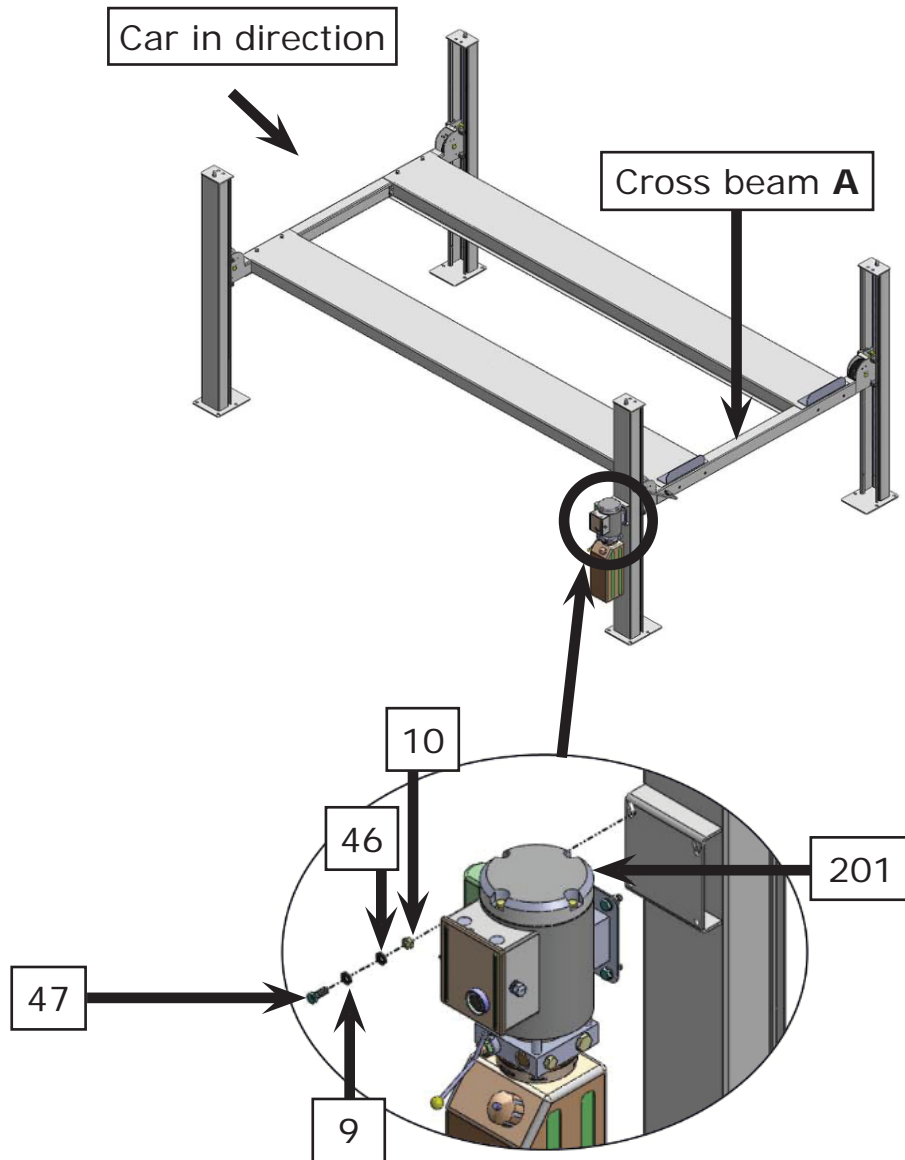


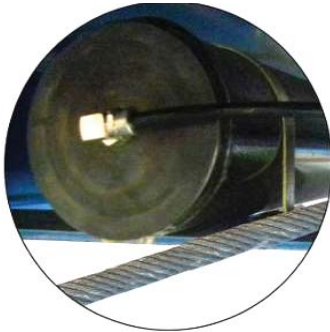
Fig. 22



## K. Install Hydraulic System

**Note:** Oil hoses connected to the oil cylinder must be passed above the cable to avoid the oil hose being scratched by the cable.

a



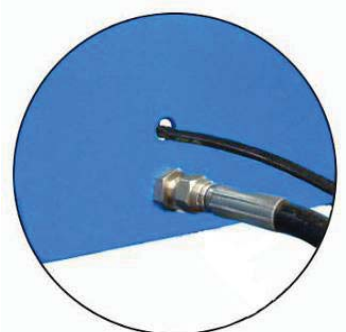
b



c

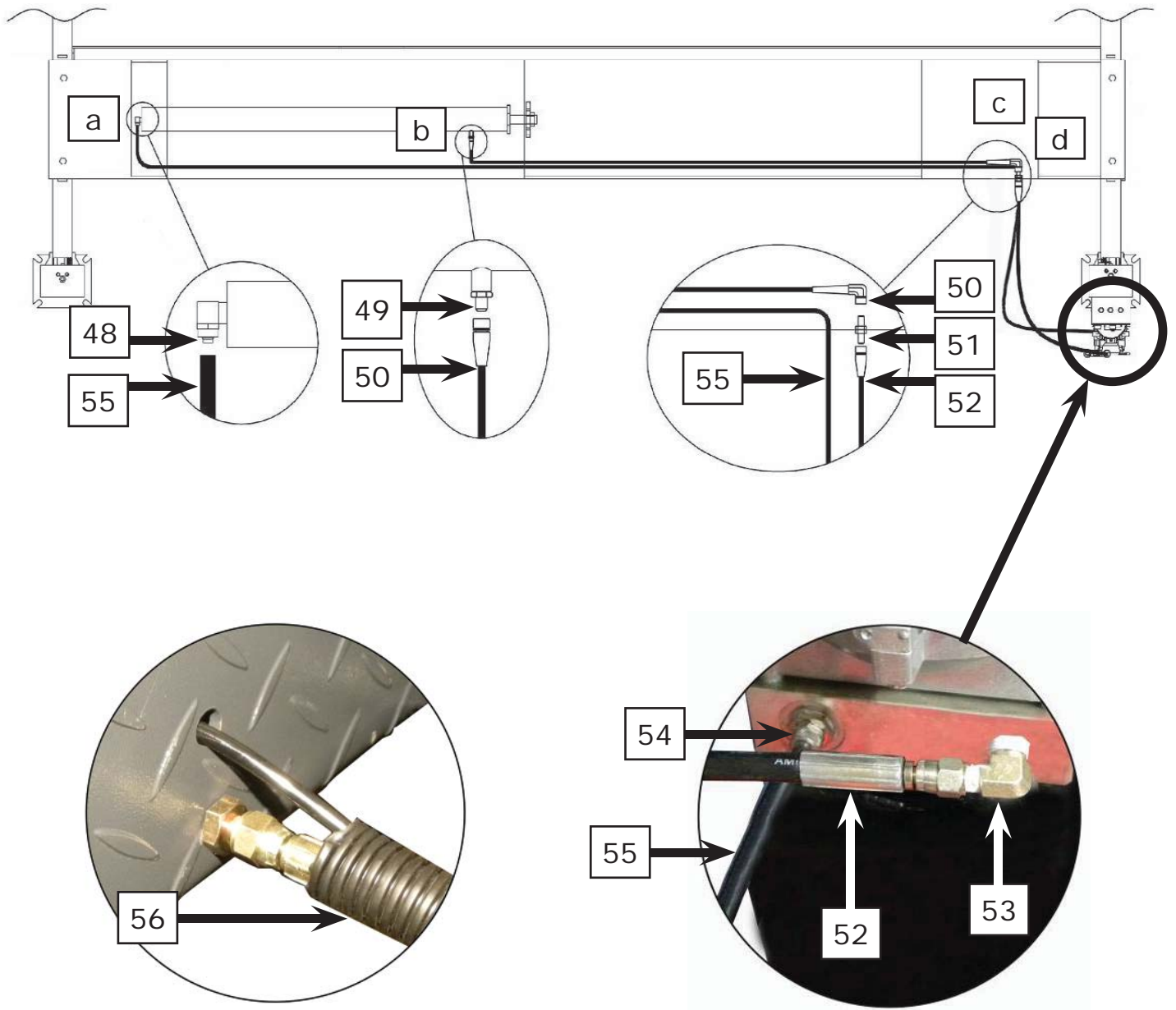


d



<p>Overflow oil return hose passed above the cable.</p> <p>Optional - Does not have to be installed</p>	<p>Oil hose passed above the cable</p>	<p>Retainer</p>	<p>Overflow oil return hose.</p> <p>Optional - Does not have to be installed</p>
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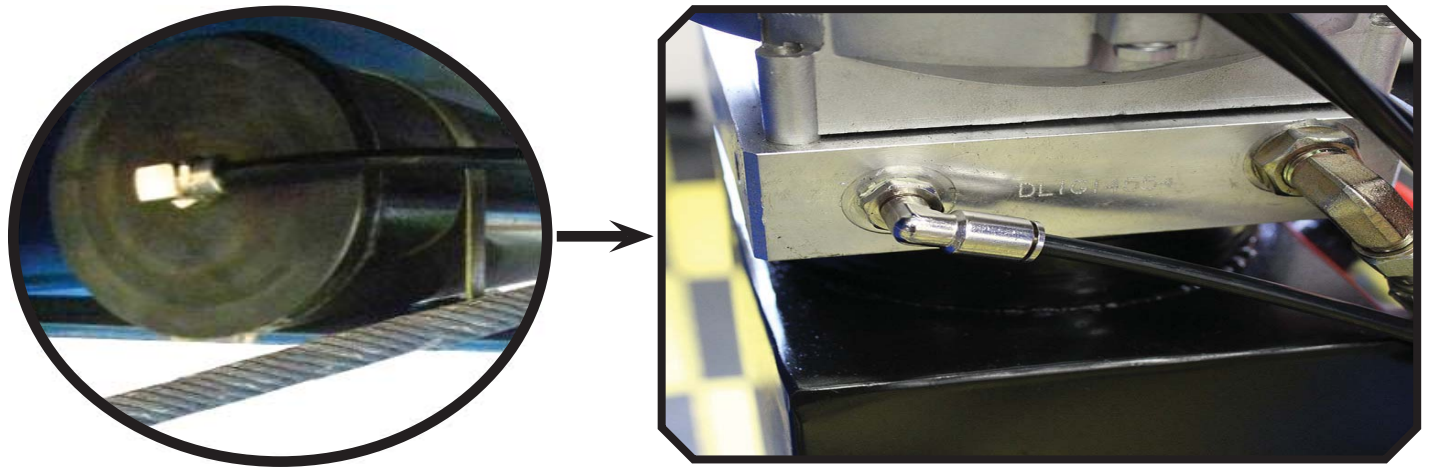




**Fig. 23**

## Optional Hose Installation Guide

This section shows how to connect a 90 degree fitting and plastic line/hose to the rear of the cylinder. This line is then connected to the Power Unit (see below).



This is an *option* and is not necessary for your lift to function properly. Atlas cylinders and seal are manufactured to exact tolerances. In the unlikely event that a leak were to develop in the cylinder cup seal, the hydraulic fluid leaking past that seal would drip on the floor. This optional line (if installed) would trap any fluid leaking past the cup seal and return leaked oil to the fluid reservoir.

Certain countries (not the USA) require these "overflow" lines to be installed. We believe that if the cylinder were to develop a leak, it would be advantageous to "see the leak" and take steps to replace a cylinder seal. The installation of this optional "overflow" line would prevent the user to observe any cylinder leakage.

## L. Install spring and safety cover on the cross beams

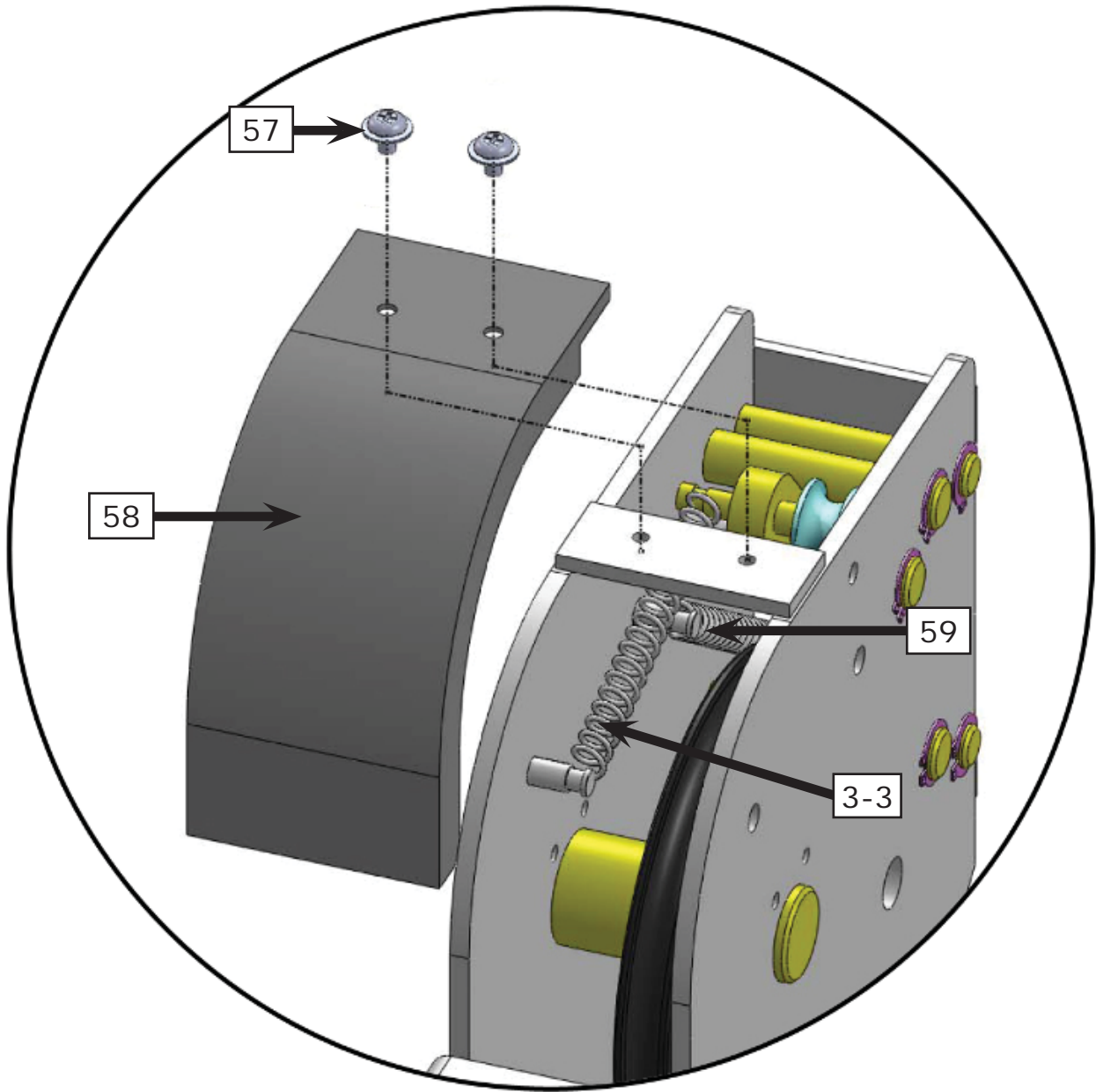


Fig. 24

## M. Install drive-in ramps

According to the below diagram install the M16\*30 bolts and attach the drive-in ramps.

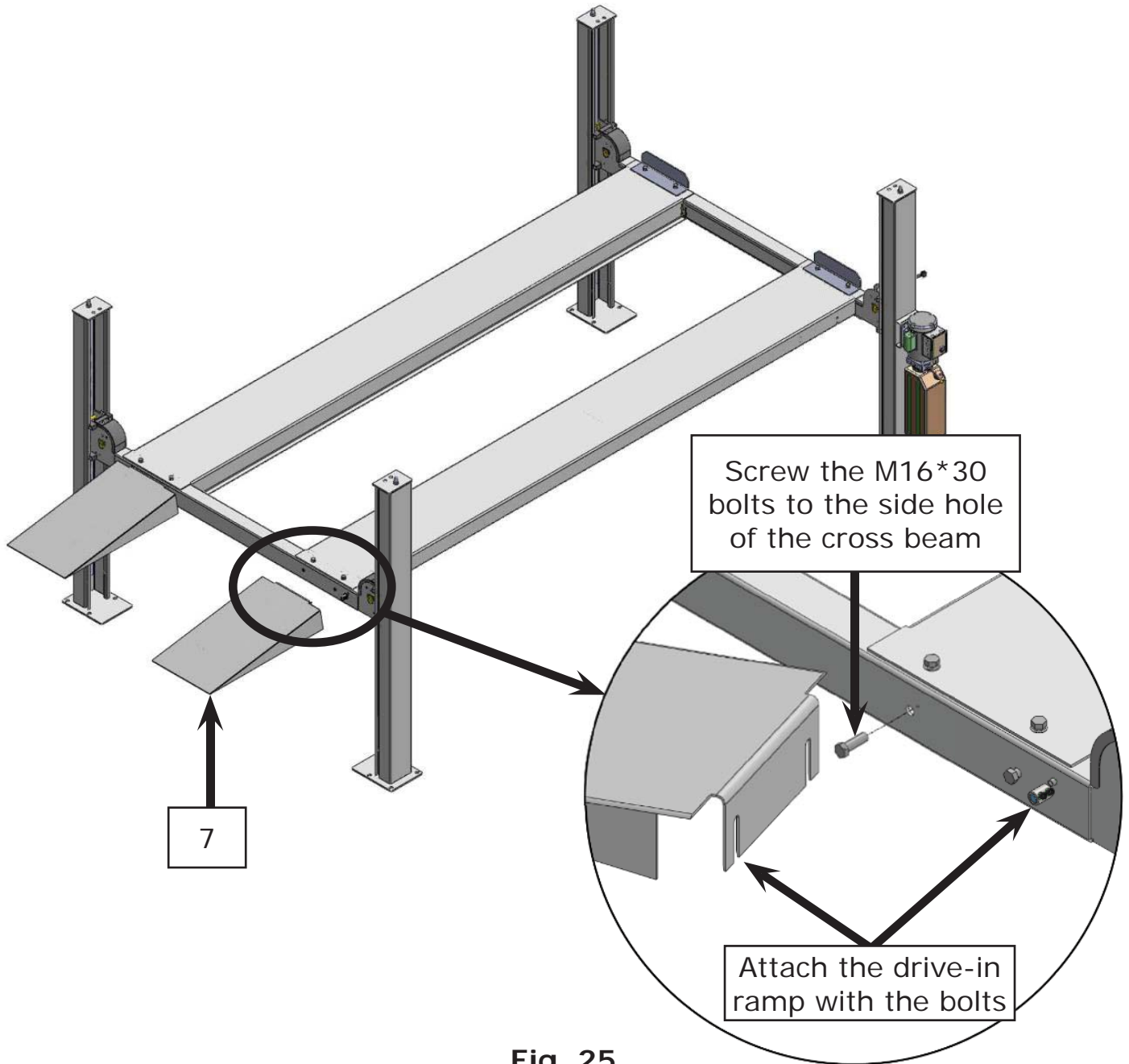


Fig. 25

## N. Install rear wheel stop plates

After driving the vehicle on the lift, take off the drive-in ramps; install wheel stop plates to the drive-in ramp position.

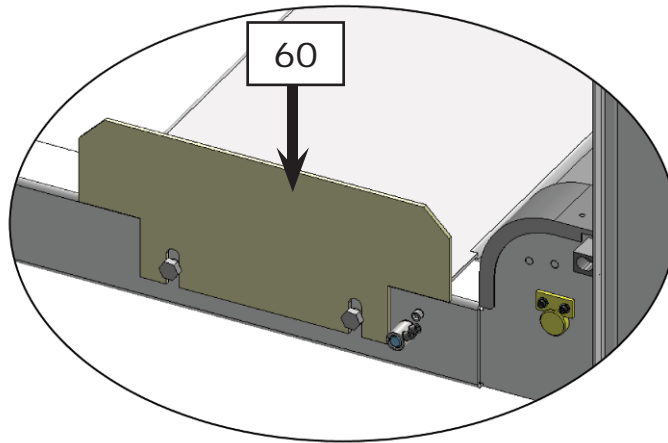


Fig. 26

## O. Installation For Optional Kits

1. Install optional caster kit (See Fig. 27)

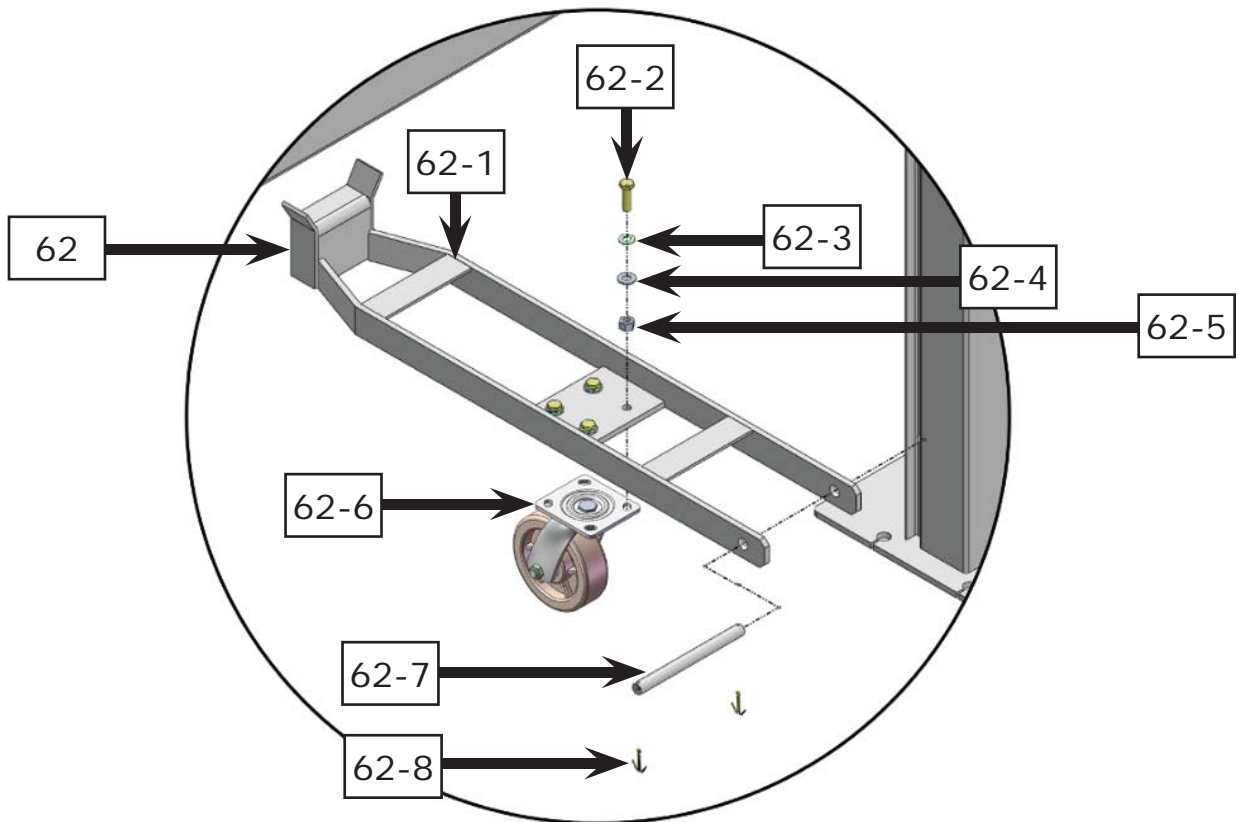


Fig. 27

2. Install steel jack tray, plastic oil pans and **optional** rolling jacks. (See Fig. 28).

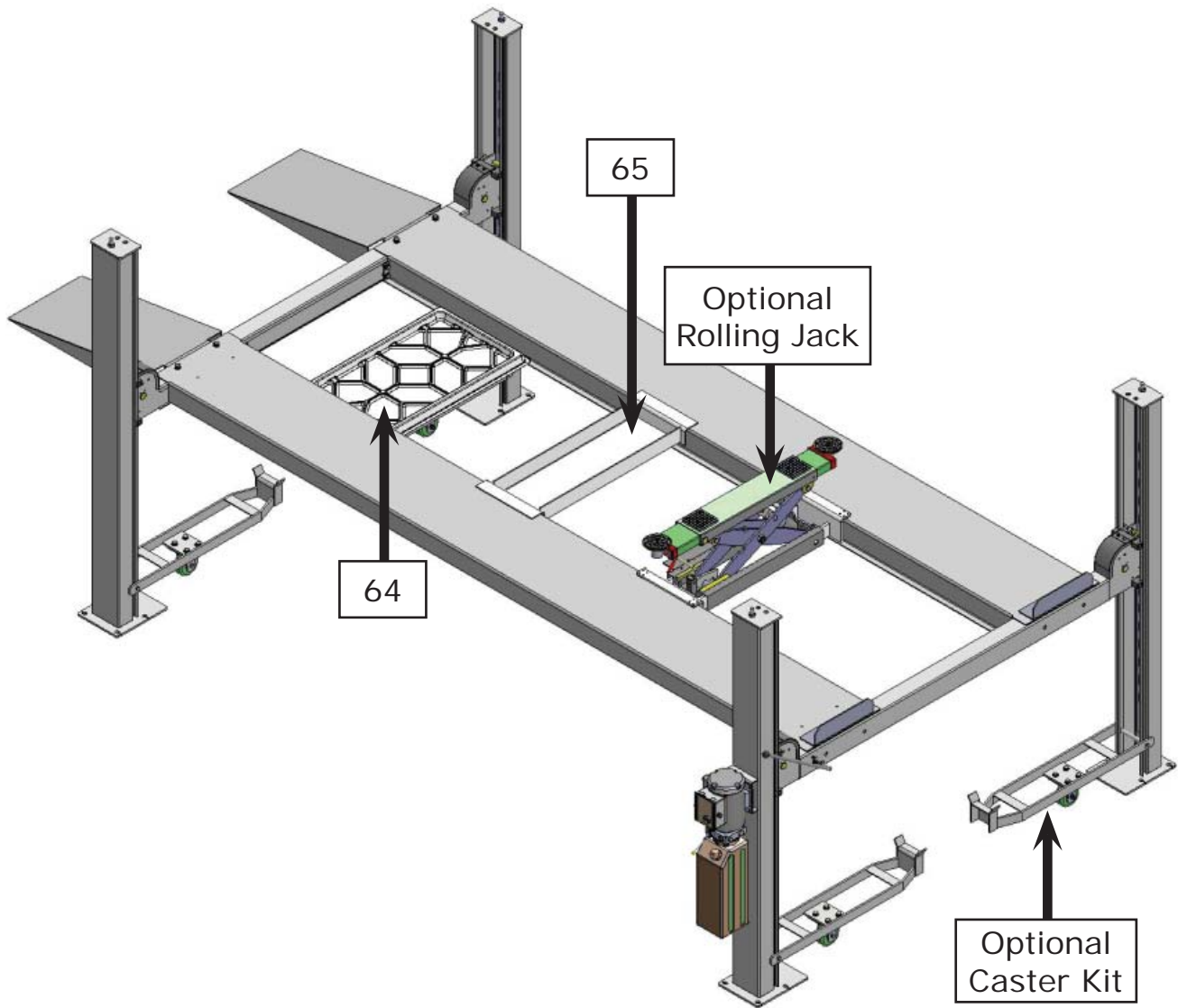


Fig. 28



# Exploded View

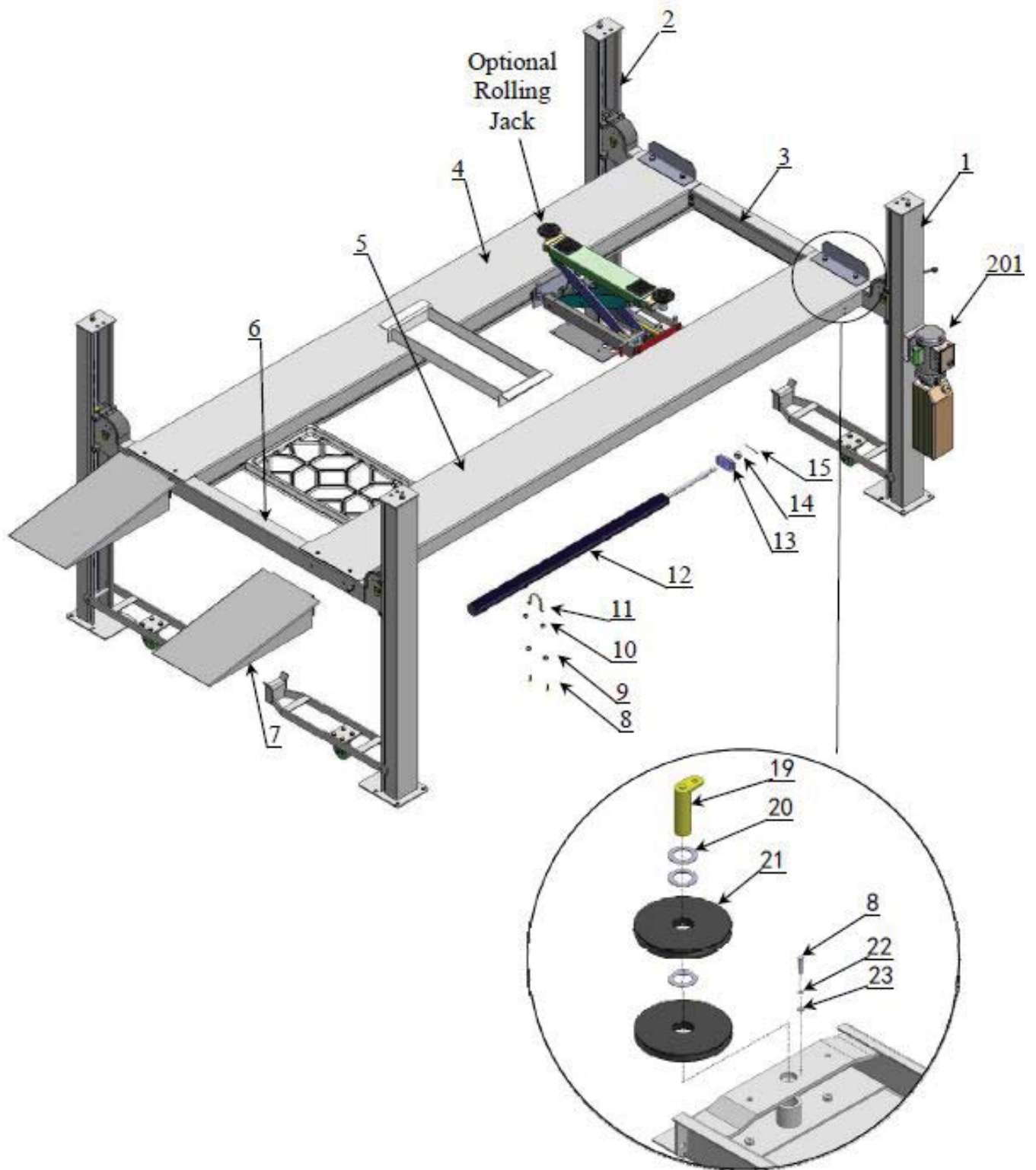


Fig. 29



# Cross Beam

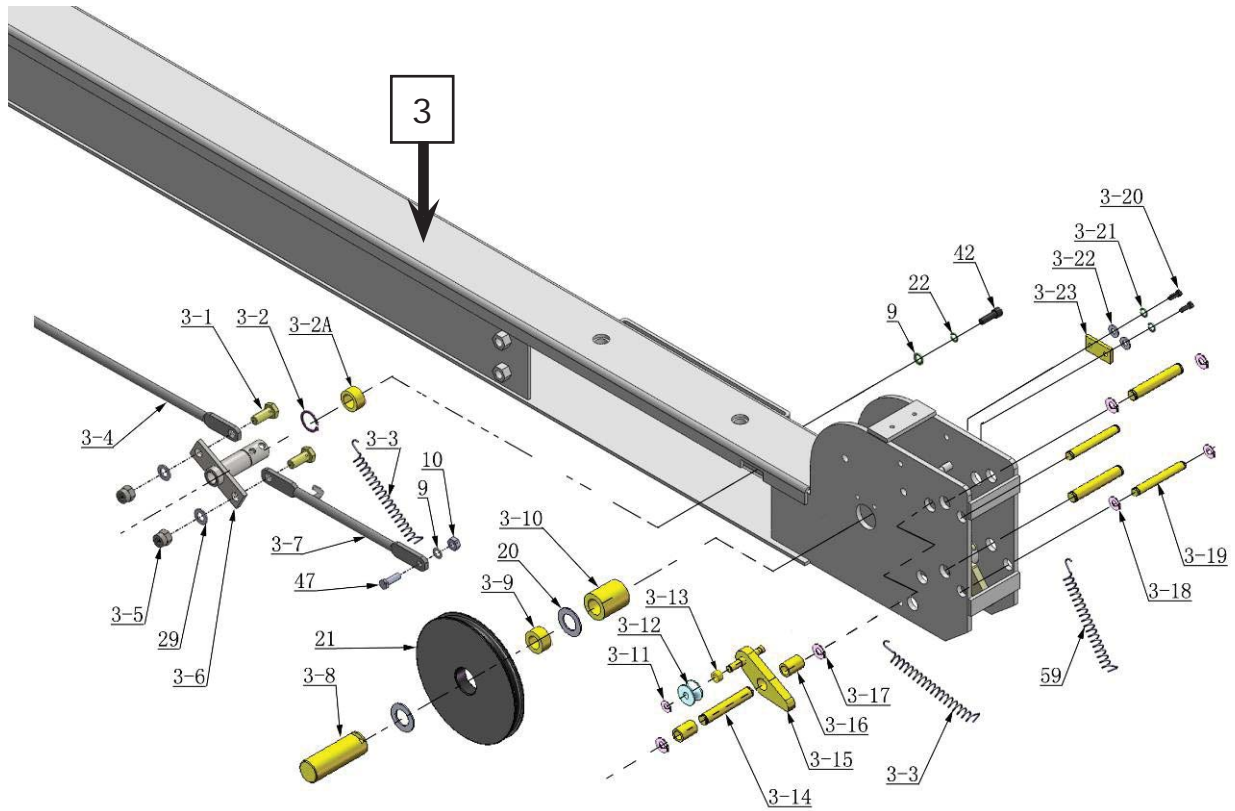


Fig. 30

# Cylinders

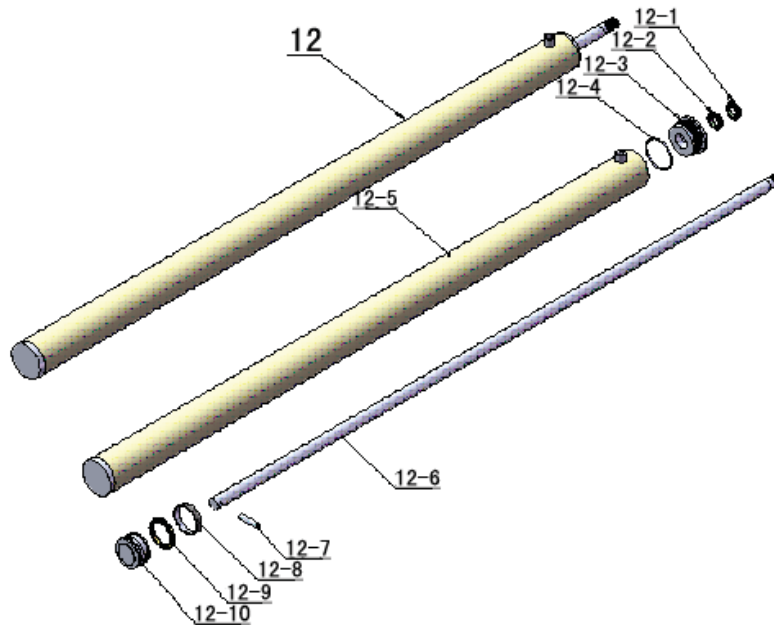


Fig. 31

# Atlas Manual Power Unit 110V, 60Hz, 1 Phase

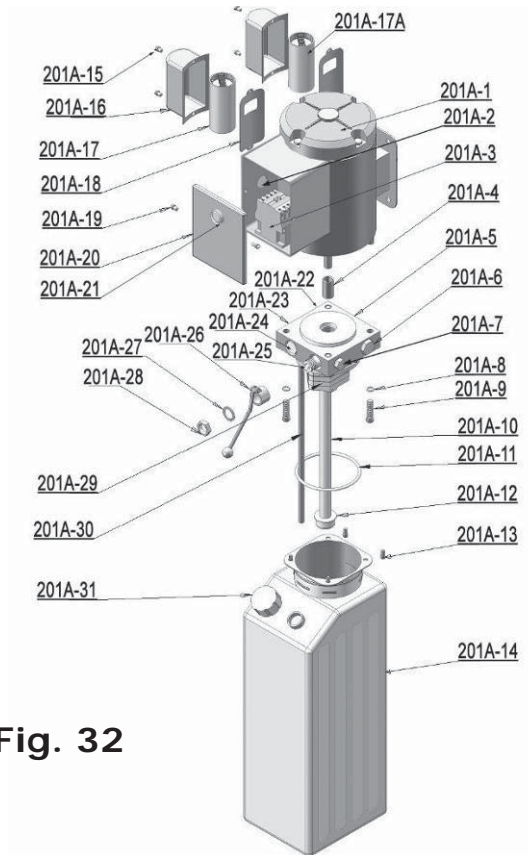


Fig. 32

# Atlas Hydraulic Power Unit 110V, 60Hz, 1 Phase

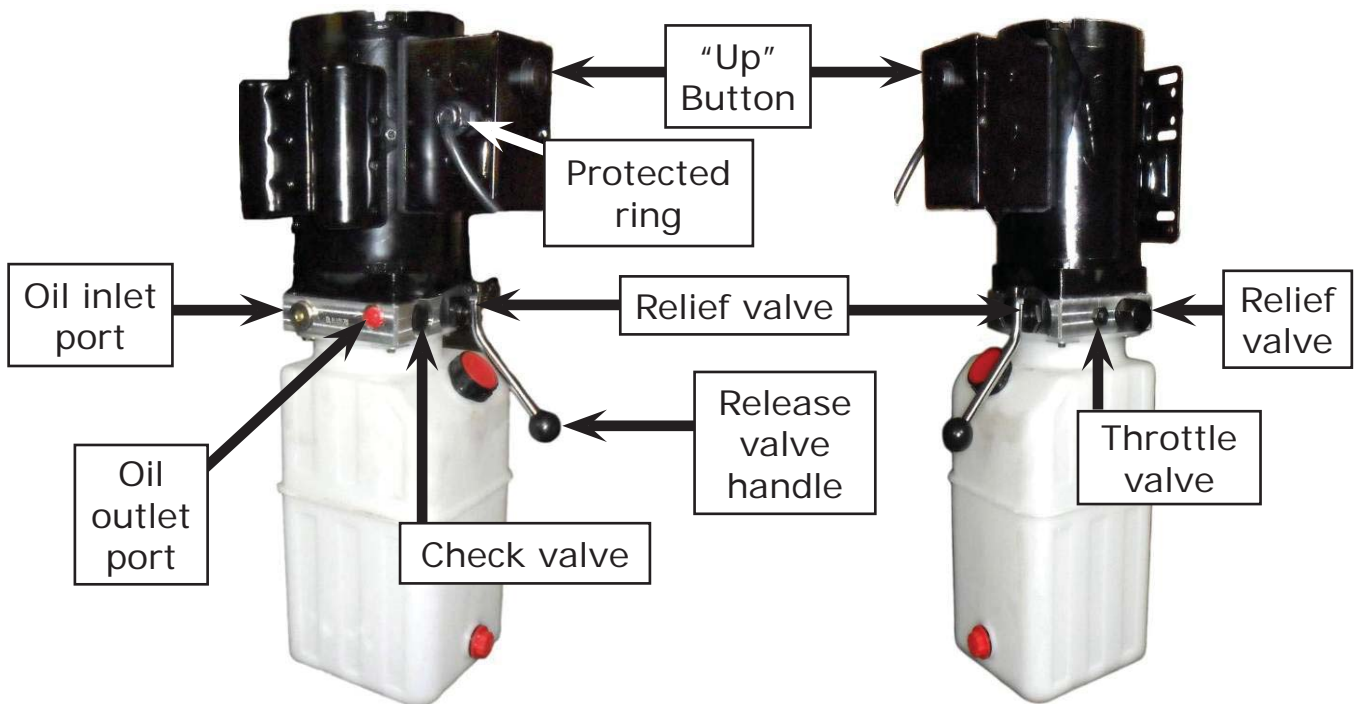
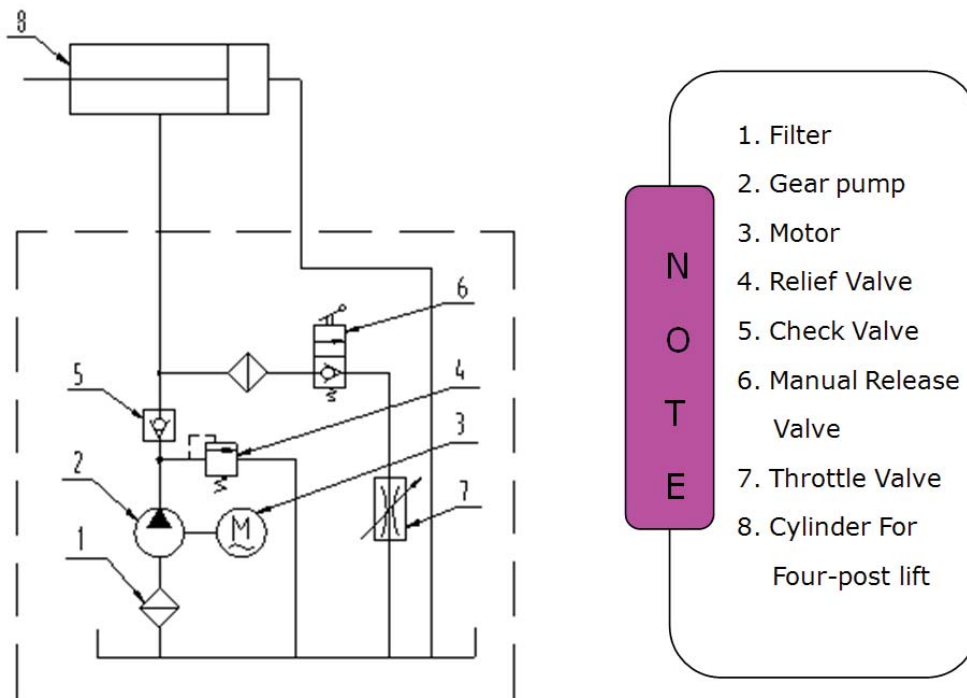


Fig. 33

# Test Run

1. Fill the reservoir with approximately 2 gallons of hydraulic oil (**Note:** In consideration of the power unit's durability and performance please use **(Hydraulic Oil AW32)**. <http://www.gregsmithequipment.com/Whats-The-Best-Oil-For-My-Lift>
2. Press the "UP" button, the cables will tighten. Double check the cables and confirm they are in the proper pulley positions.
3. Press the release valve handle on the power unit to lock the cross-beams to the safety ladders. To level the platforms, adjust the safety/lock ladder nuts.
4. **Cable adjustment:** With the platforms on their locks; tighten all 4 cable nuts until the 4 cables have the same tension. **Note:** Do not over-tighten the cables.
5. Lower the lift to ground level. Raise the lift and listen for the locks to click/synchronize at the same time. Adjust as needed. This step may need to be repeated several times until the locks click/synchronize at the same time. **Note: After lifting with a load, the cables may need to be readjusted.**

**Circuit Diagram of Hydraulic System**



**Fig. 34**

# Cylinder Bleeding Procedure

(Removing air from the hydraulic system)

**PERFORM THIS PROCEDURE IMMEDIATELY AFTER INSTALLATION and BEFORE YOU PUT A VEHICLE ON THE LIFT**

1. Press the UP Button to raise the runways 2 to 3 inches off of the safety locks. **DO NOT RAISE THE RUNWAYS TO THE MAXIMUM HEIGHT.**
2. Disengage the safety locks using the Mechanical Lock Release Handle or Air Lock Release Valve (depending on the model of 4 Post Lift you have). While activating the lock release, depress the Lowering Valve handle to lower the lift runways completely to the ground. Once the lift runways are resting on the ground maintain pressure on the lowering valve handle for several seconds more.



**Air Lock Release Valve**



**Mechanical Lock Release Handle**



**Lowering Valve**



**Mechanical Lock &  
Lowering Valve Combination**



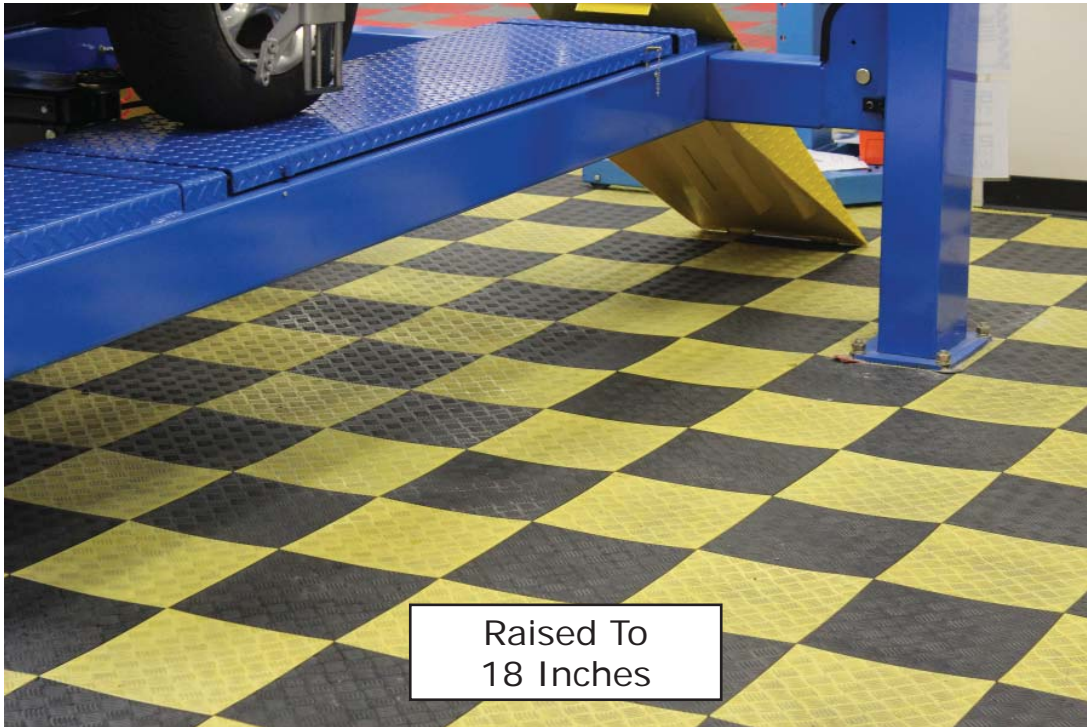
**Air Lock Release Valve &  
Lowering Valve Combination**



**Resting On The Ground**



3. Press the UP Button to raise your lift runways about 18 inches from the floor and repeat STEPS 1 & 2. Do this at least 2 or 3 more times. This will ensure that any air in the lifts hydraulic system is completely removed.



After doing this procedure the lift runways should travel up and down smoothly and at a consistent speed during operation.

# Operation Instructions

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## To lift vehicle

1. Keep work area clean around and near the lift.
2. Carefully drive vehicle on lift.
3. Remove the drive-in ramps and install wheel stop plates.
4. With power on press the **“UP”** button, raise the lift to the desired height.  
**Note: Make sure the vehicle is not in neutral.**
5. Press the lowering/release valve handle until the lift is locked into position.

## To lower vehicle

1. Make sure nothing is under the lift before lowering.
2. Press the **“UP”** button until the lift is off of the locks and pull the safety lock handle, press the lower/release valve handle with the other hand.
3. Remove the safety stop plates. Install the ramps. Slowly back the vehicle off of the lift.

# Maintenance Schedule

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## **Monthly:**

1. Lubricate cable with a spray lubricant;
2. Check all cable connection, bolts and pins to insure proper mounting;
3. Make a visual inspection of all hydraulic hoses/lines for possible wear or leakage;
4. Lubricate all rollers, safety devices with 90wt. gear oil or equivalent.

## **Every six months:**

1. Make a visual inspection of all moving parts for possible wear, interference or damage.
2. Check and adjust as necessary, the cable tension to insure level lifting.



# Trouble Shooting

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TROUBLE	CAUSE	REMEDY
Motor does not run	<ol style="list-style-type: none"> <li>1. Button does not work</li> <li>2. Wiring connections are not in good condition</li> <li>3. Motor burned out</li> <li>4. AC contactor burned out</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace switch</li> <li>2. Repair all wiring connections</li> <li>3. Repair or replace motor</li> <li>4. Replace AC contactor</li> </ol>
Motor runs but the lift is not raised	<ol style="list-style-type: none"> <li>1. Release valve is damaged</li> <li>2. Gear pump is damaged</li> <li>3. Relief valve or check valve is damaged</li> <li>4. Low oil level</li> </ol>	<ol style="list-style-type: none"> <li>1. Repair or replace</li> <li>2. Repair or replace</li> <li>3. Repair or replace</li> <li>4. Fill tank</li> </ol>
Lift does not stay up	<ol style="list-style-type: none"> <li>1. Release valve is leaking</li> <li>2. Relief valve or check valve is leaking</li> <li>3. Cylinder or fittings leaks</li> </ol>	Repair or replace. Locks will support runways.
Lift raises too slow	<ol style="list-style-type: none"> <li>1. Oil line is clogged</li> <li>2. Motor running on low voltage</li> <li>3. Oil mixed with Air</li> <li>4. Pump leaks</li> <li>5. Overload lifting</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean the oil line</li> <li>2. Check electrical system</li> <li>3. Fill tank and bleed system</li> <li>4. Repair or replace pump</li> <li>5. Check weight of load</li> </ol>
Lift will not lower	<ol style="list-style-type: none"> <li>1. Safety device is not released</li> <li>2. Release valve damaged</li> </ol>	<ol style="list-style-type: none"> <li>1. Raise lift and release locks</li> <li>2. Repair or replace</li> </ol>

# Parts List

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Item	Part#	Description	Qty.
1	410074	Power side Column	1
2	410075	Offside Column	3
3	410050	Cross Beam <b>A</b>	1
4	410076	Offside Platform	1
5	410077	Power side Platform	1
6	410053	Cross Beam <b>B</b>	1
7	410007	Drive-in ramp	2
8	209043	Hex Bolt	4
9	209033	Washer	28
10	209005	Nylok Nut	26
11	410090	Cylinder fixed ring	1
12	410070	Cylinder	1
13	420013	Cylinder connecting plate	1
14	420014	Hex Nut	1
15	201005	Split Pin	1
200	410095	Manual power unit	1
17	420175A	Hex nut	16
18	410073	Safety ladder	4
19	420022A	Pulley pin assembly	2
20	420023A	Washer	14
21	420024B	Pulley	10
22	209034	Lock washer	10
23	420144	Washer	2
24	410013	Hex Bolt	8
25	420137	Lock washer	8
26	420029	Washer	8
27	410014	Hex Bolt	4

<b>Item</b>	<b>Part#</b>	<b>Description</b>	<b>Qty.</b>
28	410015	Tire stop plate	2
29	206006	Washer	12
30	420026	Lock washer	8
31	206041	Hex Bolt	8
32	410016A	Plastic block	16
33	410017	Socket bolt	16
34	620065	Shim	20
35	410065	Cable 1	1
36	410066	Cable 2	1
37	410067	Cable 3	1
38	410068	Cable 4	1
39	420020B	Hex Bolt	4
40	410069	Connecting bar for safety device	2
41	410024	Connecting tube	1
42	209032	Socket bolt	4
43	217005	Plastic ball	1
44	410025	Socket bolt	4
45	410026	Safety release handle	1
46	209004	Rubber ring	4
47	209003	Hex Bolt	8
48	420166	900 Fitting	1
49	420119	Straight Fitting for cylinder	1
50	410071	Oil hose	1
51	420120	Extend straight fitting with nut	1
52	420121	Oil hose	1
53	209060	900 Fitting for power unit	1
54	420095	Straight fitting	1
55	410072	Oil return hose	1
56	410036	Protective hose	1
57	209145A	Cup head bolt with washer	8
58	410029	Plastic cover for cross beam	4

<b>Item</b>	<b>Part#</b>	<b>Description</b>	<b>Qty.</b>
59	410030	Spring	4
60	410094	Wheel stop plate	2
61	410502	Parts box	1
<b>Optional kits</b>			
62	410037A	Caster kits	4
63	410038	Motor fixing bracket	1
64	410095	Plastic oil pan (standard equip)	3
65	410062	Steel Jack tray (standard equip)	1
66		Rolling Jack	1
<b>Parts for optional caster kits</b>			
62-1	410042A	Support bracket	4
62-2	209125	Hex bolt	16
62-3	209039	Lock washer	16
62-4	209022	Washer	16
62-5	209021	Hex nut	16
62-6	410035	Plastic wheel	4
62-7	410034	Connecting pin	4
62-8	209012	Hair Pin	8
<b>Parts For Cross Beam</b>			
3-1	206024	Hex bolt	4
3-2	206032	Snap ring	2
3-2A	217020	Bronze bush	2
3-3	420033	Spring	6
3-4	410063	Connecting bar for safety lock	2
3-5	206023	Nylok Nut	4
3-6	410032	Safety lock rotated device assembly	2
3-7	410064	Connecting bar assembly for safety lock	2
3-8	420041A	Pulley Pin	4
3-9	420132A	Pulley Bush	10
3-10	420040A	Pulley pin sleeve	4
3-11	209010	Snap ring	4

<b>Item</b>	<b>Part#</b>	<b>Description</b>	<b>Qty.</b>
3-12	420035	Tension pulley	4
3-13	420174	Spacer	4
3-14	420171	Pin	12
3-15	420175	Slack-cable safety lock (Left & Right)	2/ea.
3-16	420172	Pin Bush For Slack-cable safety lock	8
3-17	206019	Snap ring	24
3-18	420037	Snap ring	16
3-19	420038	Pin	8
3-20	420138	Socket Bolt	8
3-21	209149	Lock washer	8
3-22	420045	Washer	8
3-23	420044	Stop block	4
<b>Parts For Cylinder</b>			
12-1	420059	Dust Ring	1
12-2	420060	Y- Ring	1
12-3	410082	Head Cap	1
12-4	410083	O- Ring	1
12-5	410078	Bore Weldment	1
12-6	410079	Piston Rod	1
12-7	410085	Pin	1
12-8	410086	Support Ring	1
12-9	410087	Y- Ring	1
12-10	410088	Piston	1
<b>Parts For Atlas Manual Power Unit, 110V/60Hz/1 phase</b>			
200-1	209119A	Motor	1
200-2	209109	Protective Ring	1
200-3	209112	AC Contactor	1
200-4	209083A	Motor Connecting Shaft	1
200-5	209084A	Valve Body	1
200-6	209085A	Relief Valve	1
200-7	209113	Throttle Valve	1

<b>Item</b>	<b>Part#</b>	<b>Description</b>	<b>Qty.</b>
200-8	209086A	Lock Washer	4
200-9	209087A	Socket Bolt	4
200-10	209120A	Inlet Pipe	1
200-11	209089A	O-ring	1
200-12	209090A	Filter	1
200-13	209091A	Socket Bolt	4
200-14	209092	Reservoir (10 Liter)	1
200-15	209093A	Cup Head Bolt with washer	4
200-16	209094A	Cover of Capacitor	2
200-17	209122A	Start Capacitor	1
200-17A	209123A	Running Capacitor	1
200-18	209096A	Rubber Gasket	2
200-19	209097A	Cup Head Bolt with washer	2
200-20	209098A	Cover of Motor Terminal Box	1
200-21	209099A	Control Button	1
200-22	209110A	Oil Return Port	1
200-23	209100A	Oil Outlet	1
200-24	209105A	Check Valve	1
200-25	209101A	Release Valve	1
200-26	209102A	Release Valve Handle	1
200-27	209103A	Washer	1
200-28	209104A	Hex Nut	1
200-29	209124A	Gear pump	1
200-30	209125A	Oil Return Pipe	1
200-31	209108	Filler Cap	1



# Warranty

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**This item** is warranted for two (2) years on structural components and two (2) years on hydraulic power units and cylinders from invoice date. Wear items are covered by a 90 day warranty.

This LIMITED warranty policy does **not include a labor** warranty.

**NOTE: ALL WARRANTY CLAIMS MUST BE PRE-APPROVED BY THE MANUFACTURER TO BE VALID.**

The Manufacturer shall repair or replace at their option for this period those parts returned to the factory freight prepaid, which prove after inspection to be defective. This warranty will not apply unless the product is installed, used and maintained in accordance with the Manufacturers installation, operation and maintenance instructions.

This warranty applies to the ORIGINAL purchaser only, and is non-transferable. The warranty covers the products to be free of defects in material and workmanship but, does not cover normal maintenance or adjustments, damage or malfunction caused by: improper handling, installation, abuse, misuse, negligence, carelessness of operation or normal wear and tear. In addition, this warranty does not cover equipment when repairs or alterations have been made or attempted to the Manufacturer's products.

THIS WARRANTY IS EXCLUSIVE AND IS LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING ANY IMPLIED WARRANTY OR MERCHANTABILITY OR ANY IMPLIED WARRANTY OF FITNESS FROM A PARTICULAR PURPOSE, AND ALL SUCH IMPLIED WARRANTIES ARE EXPRESSLY EXCLUDED.

THE REMEDIES DESCRIBED ARE EXCLUSIVE AND IN NO EVENT SHALL THE MANUFACTURER, NOR ANY SALES AGENT OR OTHER COMPANY AFFILIATED WITH IT OR THEM, BE LIABLE FOR SPECIAL CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR THE BREACH OF OR DELAY IN PERFORMANCE OF THIS WARRANTY. THIS INCLUDES, BUT IS NOT LIMITED TO, LOSS OF PROFIT, RENTAL OR SUBSTITUTE EQUIPMENT OR OTHER COMMERCIAL LOSS.

**PRICES:** Prices and specifications are subject to change without notice. All orders will be invoiced at prices prevailing at time of shipment. Prices do not include any local, state or federal taxes.

**RETURNS:** Products may not be returned without prior written approval from the Manufacturer.

DUE TO THE COMPETITIVENESS OF THE SELLING PRICE OF THESE LIFTS, THIS WARRANTY POLICY WILL BE STRICTLY ADMINISTERED AND ADHERED TO.