

# INSTALLATION & OPERATION MANUAL



## Atlas PV-15PX 15,000 lb. Capacity Two-Post Overhead 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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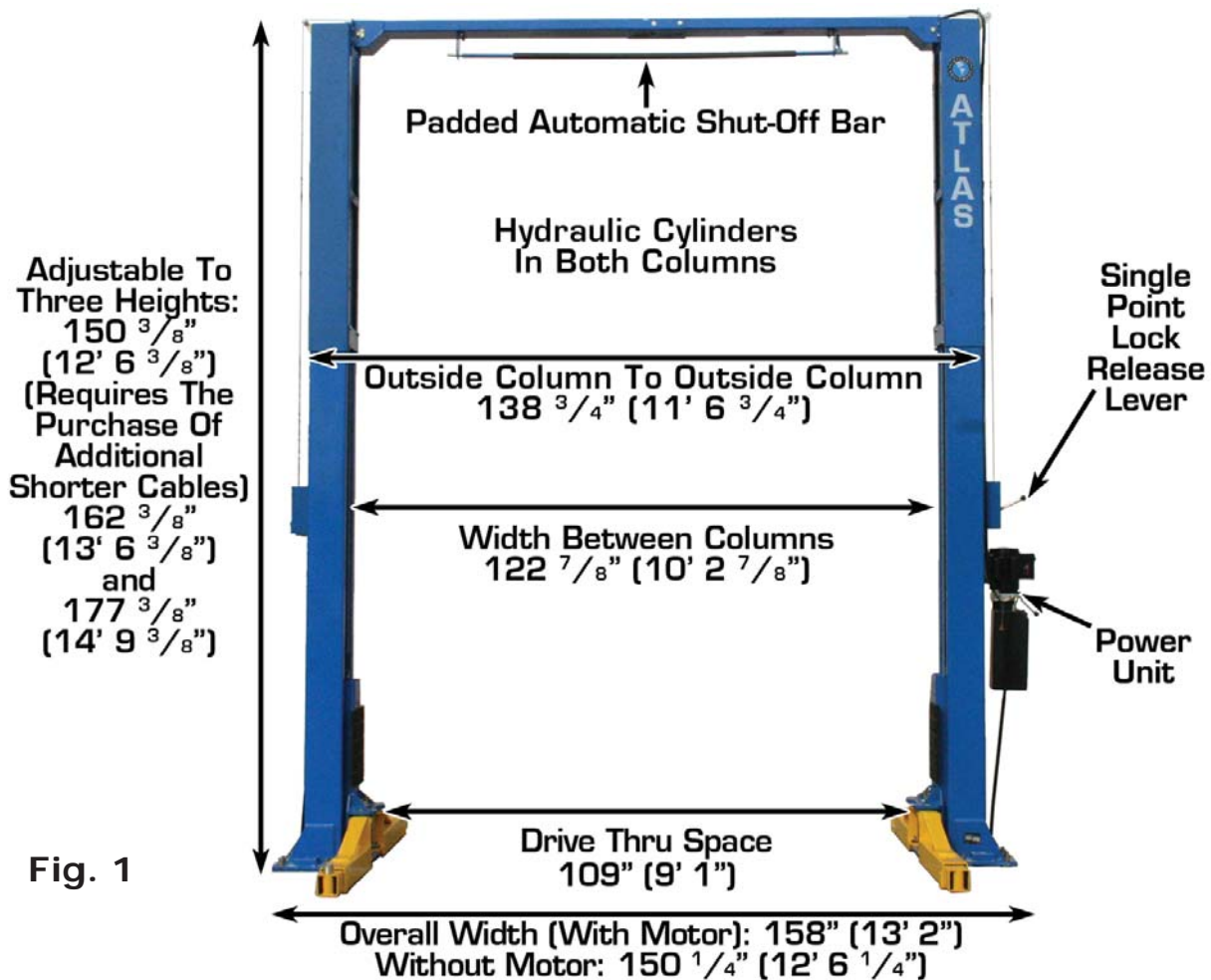
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# Specifications

## Clear-Floor Direct-Drive Model Features

### Model PV-15PX (See Fig. 1)

- Direct drive hydraulic cylinder design, minimizes the lift wear parts and breakdown ratio
- Dual hydraulic cylinders, designed and made on ANSI standards, utilizing NOK oil seal in cylinder
- Self-lubricating UHMW Polyethylene sliders and bronze bush
- Single-point safety release with dual safety design
- Clear-floor design, provides non-obstructed floor use
- Overhead safety shut-off device prevents vehicle damage
- Standard adjustable heights accommodates variety of ceiling heights



# Model PV-15PX Specifications

Style	Lifting Capacity	Lifting Time	Lifting Height	Overall Height	Overall Width	Width Between Columns	Minimum Pad Height	Motor
Clear-floor Direct-drive	6.8 T 15,000lbs	94S	1872-2101mm 73 3/4"-82 3/4"	3812/4192/4497mm 150"/165"/177"	3829mm 150 3/4"	3137mm 123 1/2"	145mm 5 3/4"	2.0HP

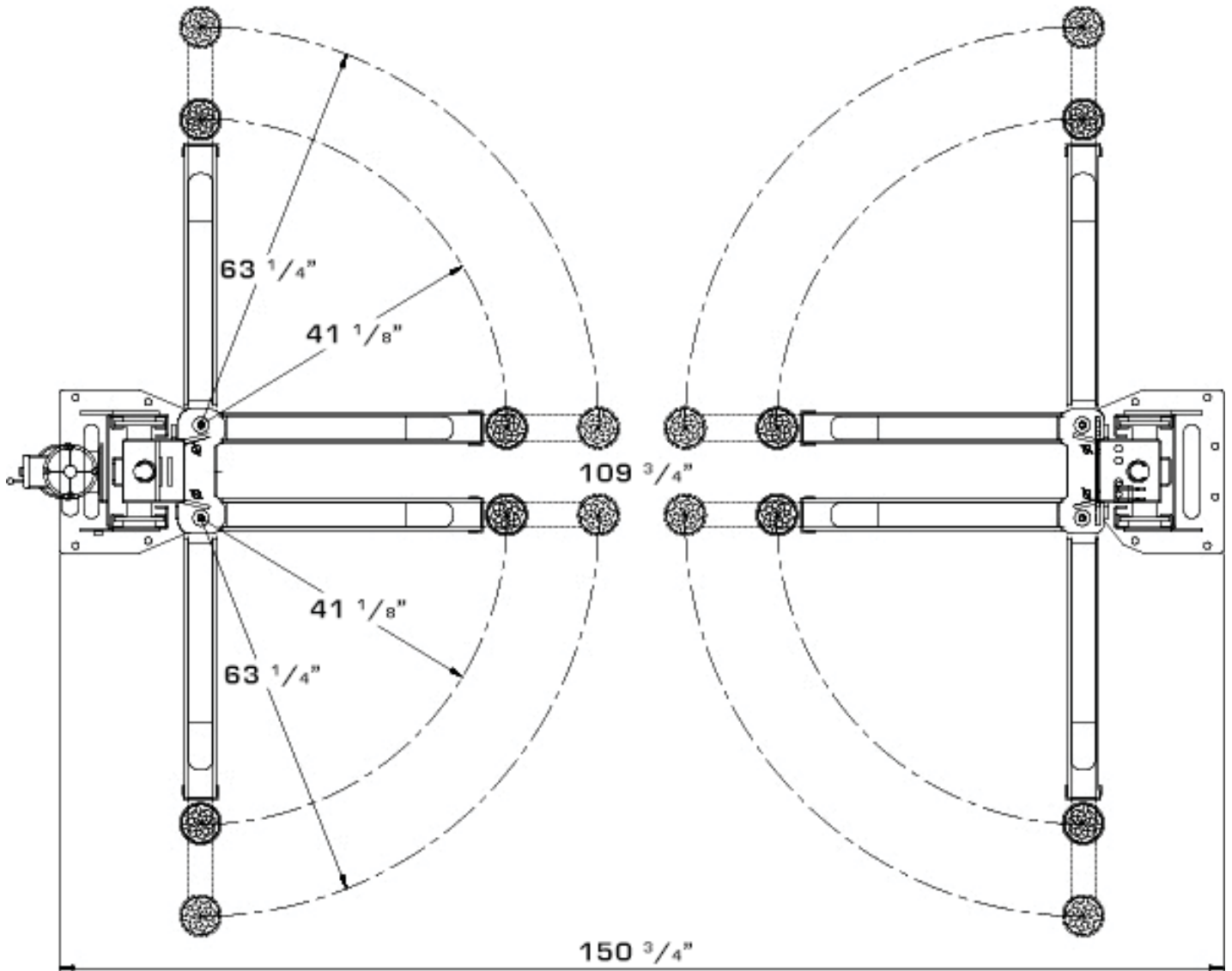


Fig. 2

# Installation Requirement

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## Tools Required

Rotary Hammer Drill (3/4in bit)



Carpenter's Chalk



Hammer



Screw Drivers



Level



Tape Measure (25ft)



Crescent Wrench (12")



Pliers



Ratchet & Socket (28mm)



Allen Head Wrench (3mm, 5mm, 8mm)



Wrench set (mm)  
(10#, 13#, 14#, 15#, 17#, 19#, 24#, 27#, 30#)



Vise Grips



**Fig. 3**

## Concrete Specifications (See Fig. 4)

Concrete specifications must be adhered to the following specifications. Failure to do so may result in lift and/or vehicle falling.

1. Concrete must have 6 inches minimum and must be totally cured before lift installation.
2. Concrete must be in good condition and must have a test strength of 3,000psi minimum.
3. Floors must be level with no cracks or holes.

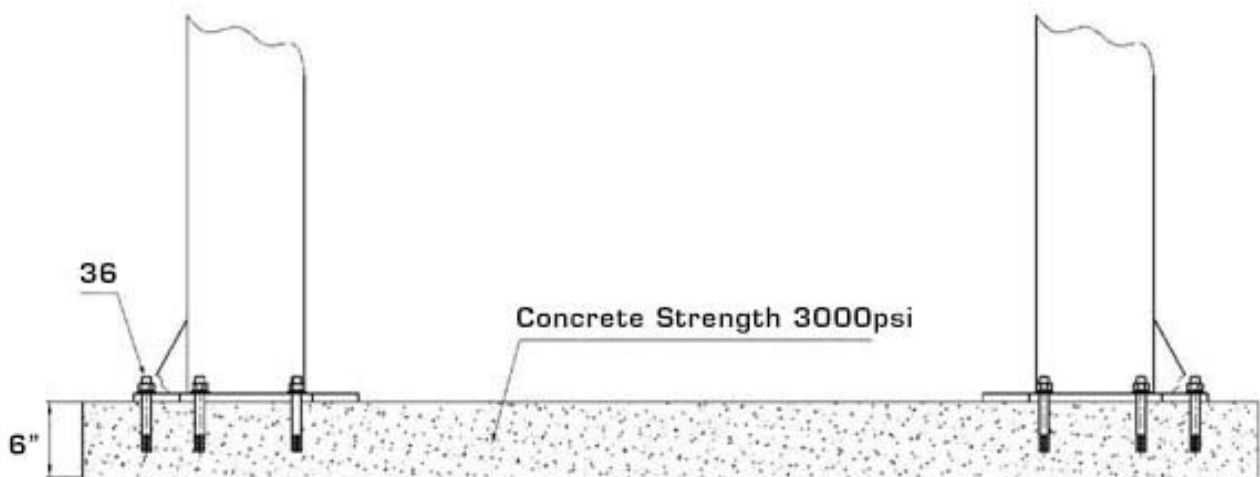


Fig.4

## Power Supply

220 volt single phase 30 amp breaker with minimum of 10 gauge wire

# Installation Steps

## A. Location of installation

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

## B. Use A Carpenter's Chalk Line To Establish Installation Layout Of The Base Plate (See Fig. 5)

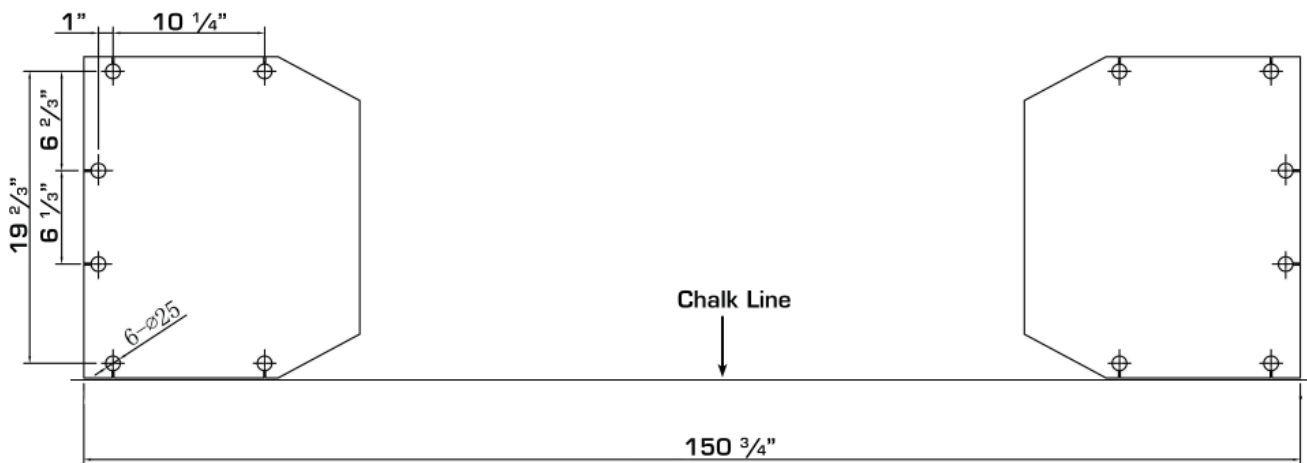


Fig. 5

## C. Check The Parts Before Assembly

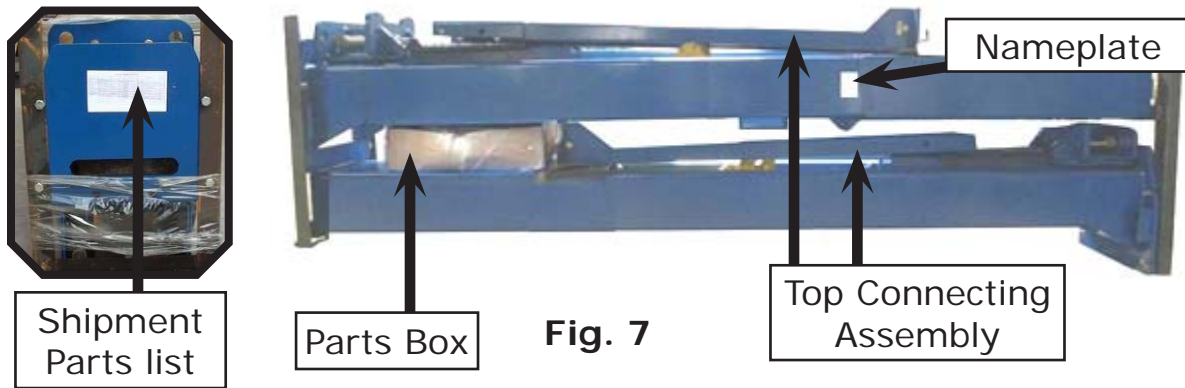
1. Packaged lift, hydraulic power unit, and parts box (See Fig. 6).



Fig. 6



2. Move the lift aside with a fork lift or hoist, and open the outer packing carefully (See Fig. 7).



3. Remove the top connecting assembly. (See Fig. 8).



Fig. 8

4. Lift the upper column with a fork lift or hoist. Remove the bolts on the upper package stand. Remove the upper column and remove the parts in the lower column (See Fig. 9).



Fig. 9

- Lift the lower column with a fork lift or hoist, remove the package stand and take off the lower column. Remove the parts in the lower column (See Fig. 10).

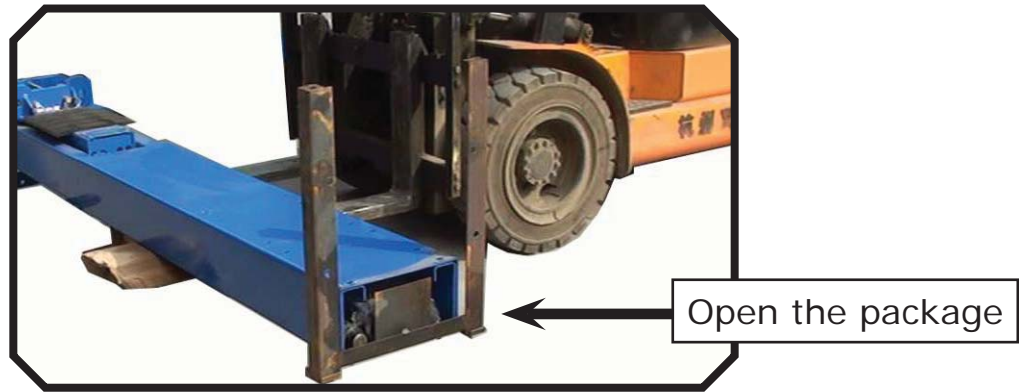


Fig. 10

- Set aside the parts and check the parts according to the shipment parts list (See Fig. 11).



Fig. 11

7. Open the carton of parts and check the parts according to parts box list (See Fig. 12).



Fig. 12

8. Check the parts in the part bag #1 according to parts bag list (See Fig. 13).

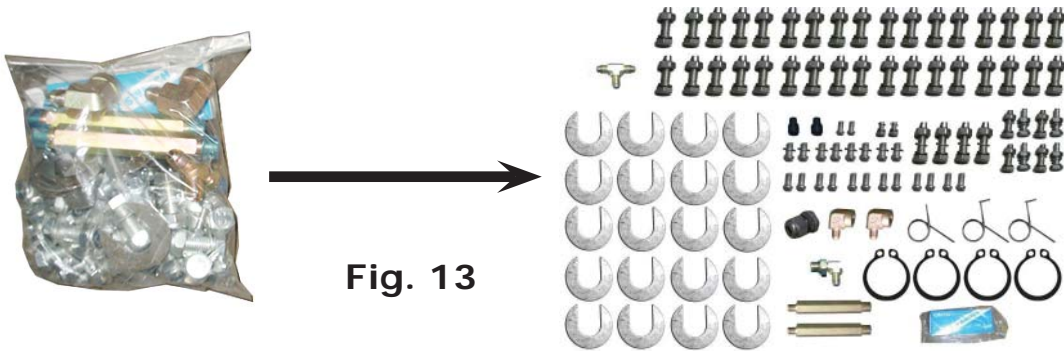


Fig. 13

9. Check the parts in the parts bag #2 according to parts bag list (See Fig. 14).

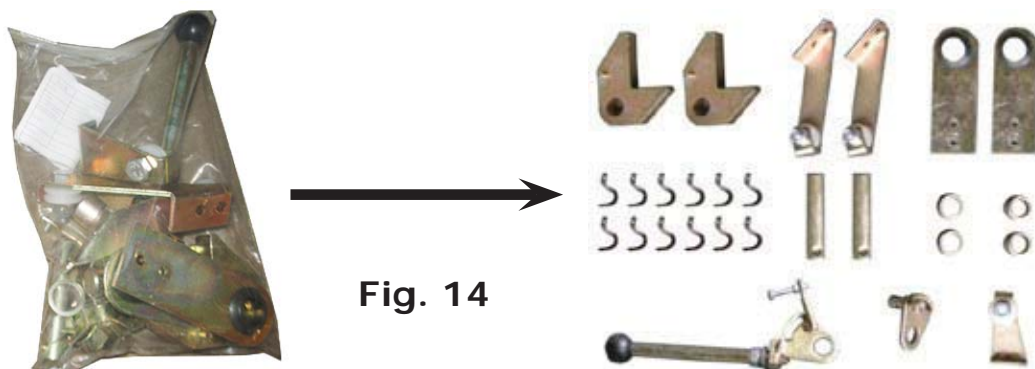
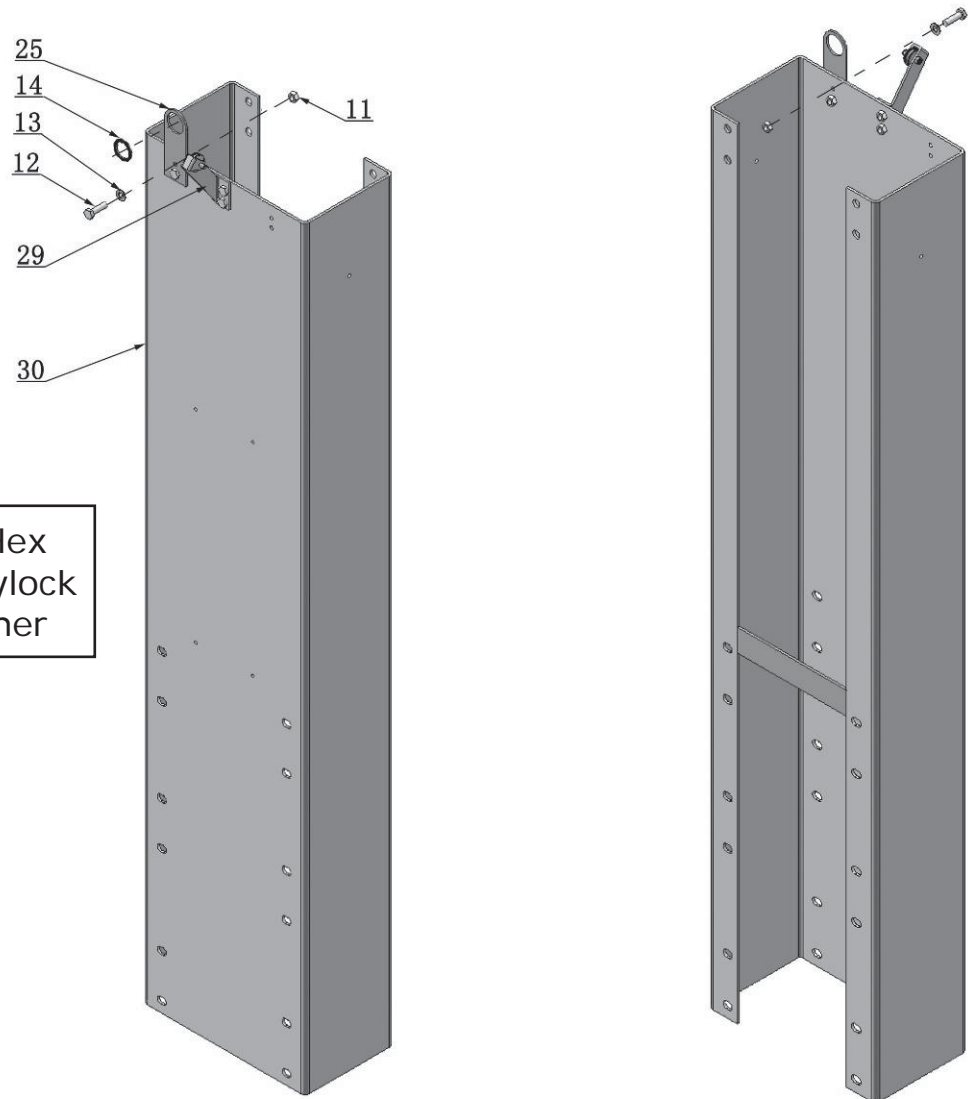


Fig. 14

## D. Install The Hose Brackets And The Safety Release Cable Brackets (See Fig. 15)

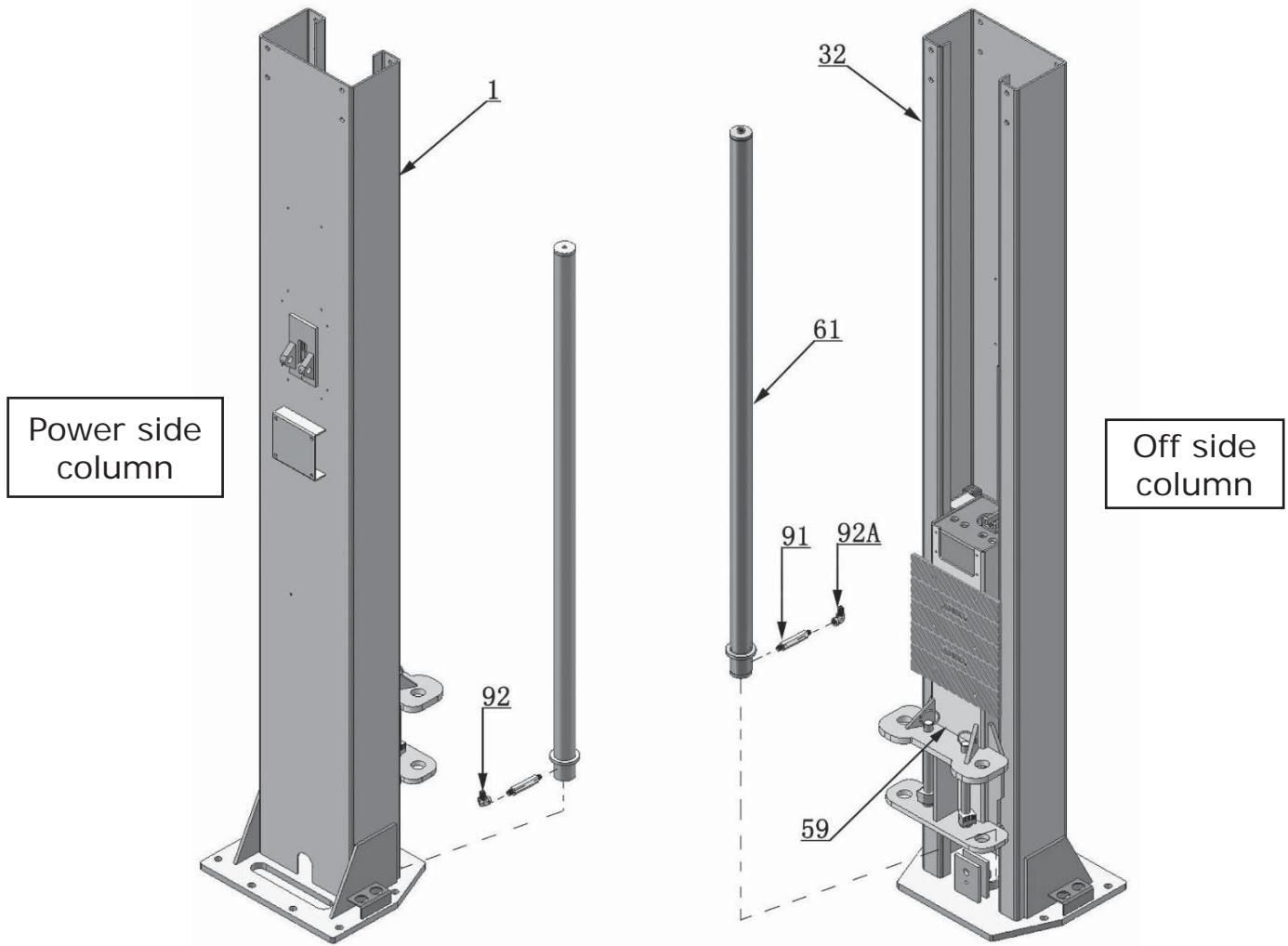


Use **M6 x 20** Hex Bolts with **M6** Nylock Nut & **M6** Washer

**Fig. 15**

## E. Install Hydraulic Cylinders

Connect the straight fitting extension and the 90° fitting, and then install the cylinders inside of the carriages (See Fig. 16).



Use Teflon tape to seal NPT pipe threads. Do **not** use Teflon tape on JIC hydraulic hose ends.

Fig. 16



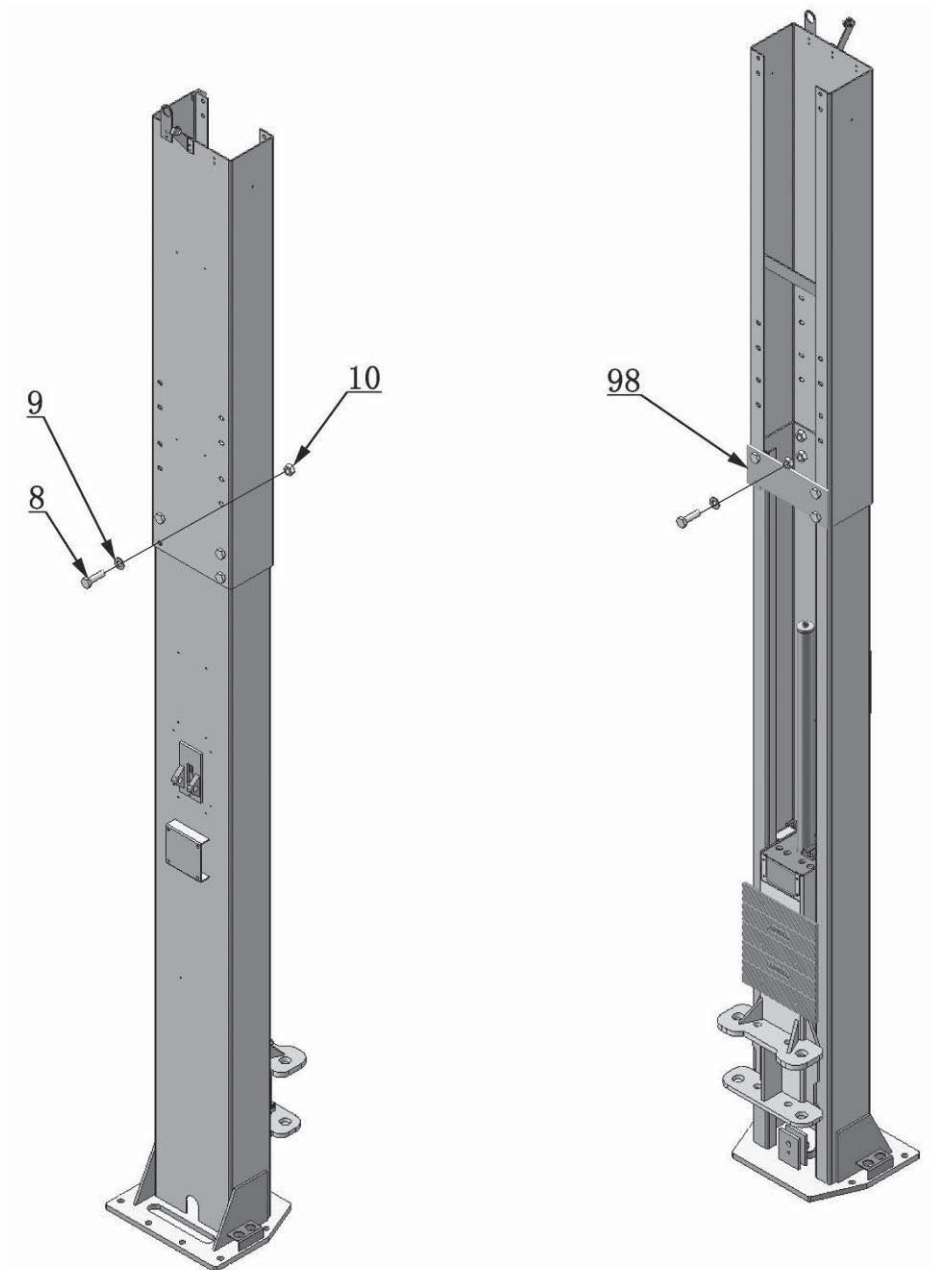
The direction of fitting

## F. Install Columns

**(Use M12 x 30 Hex Bolt, Nylock Nut & Washer to install extensions)**

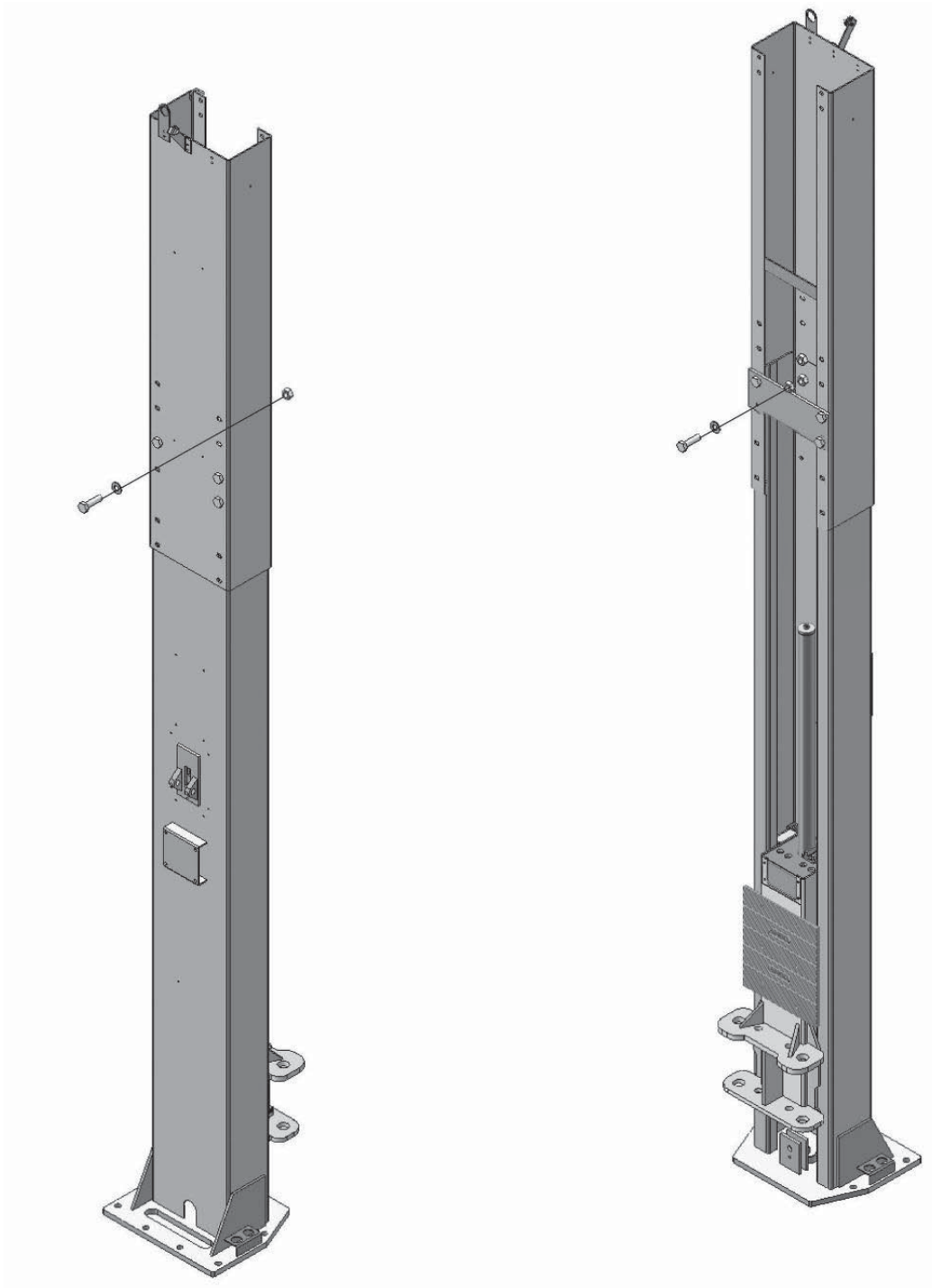
Lay down the two columns on the installation site parallel of each other. Position the power side column according to the actual installation site. This lift is designed with 2 sectional columns. Adjust the height according to your ceiling height.

1. When the ceiling height is over 4500mm (177 1/8"), connect the outer columns with the lower holes **(See Fig. 17)**.



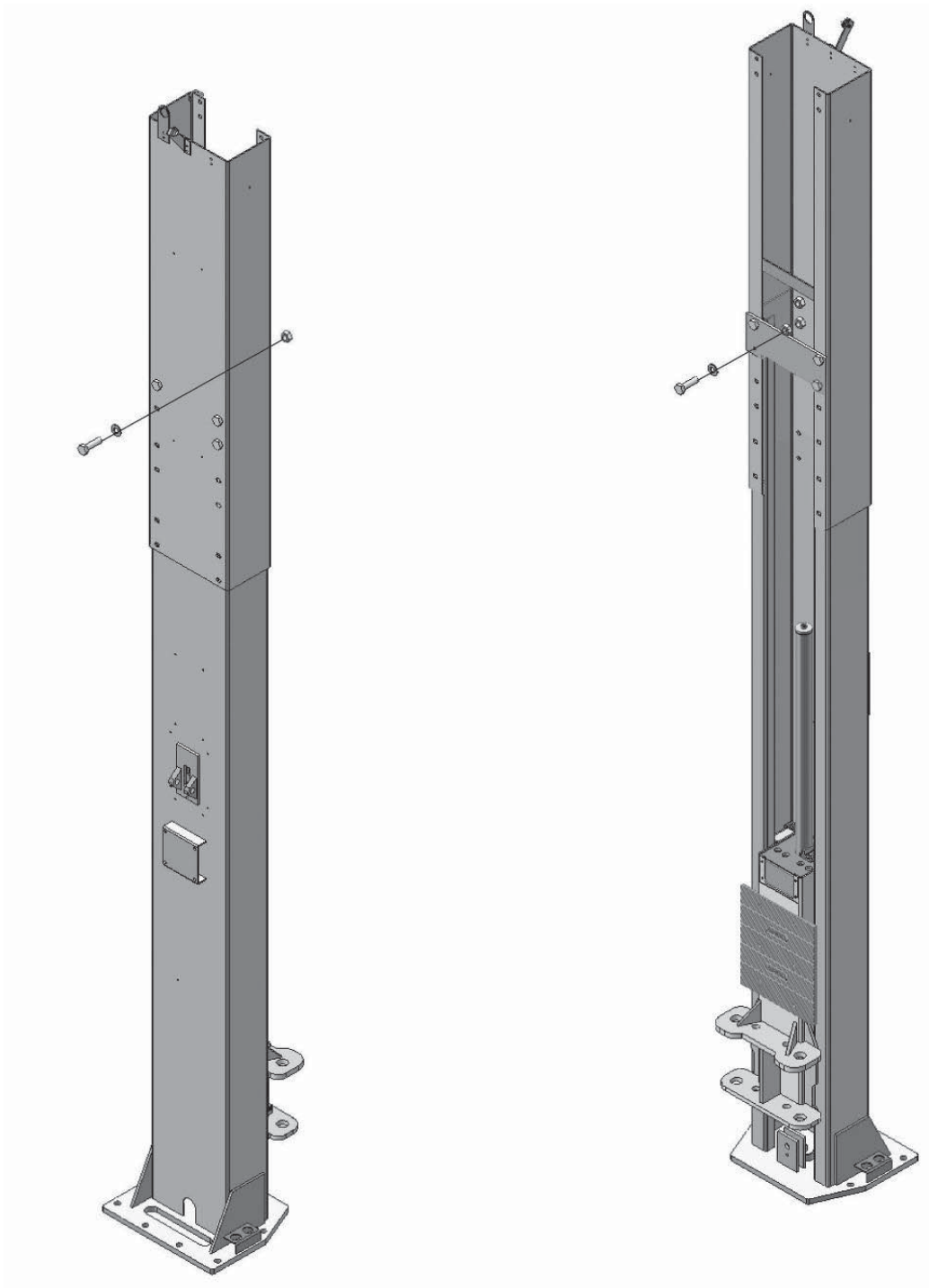
**Fig. 17 - High setting**

2. When the ceiling height is between 4200mm (165 3/8") to 4500mm (177 1/8"), connect the outer columns with the middle holes (**See Fig.18**).



**Fig. 18 - Low setting**

3. When the ceiling height is less than 4200mm (165 3/8"), connect the outer columns with the upper hole. For this height setting you will need to purchase the shorter cables (part#217063) (**See Fig. 19**).

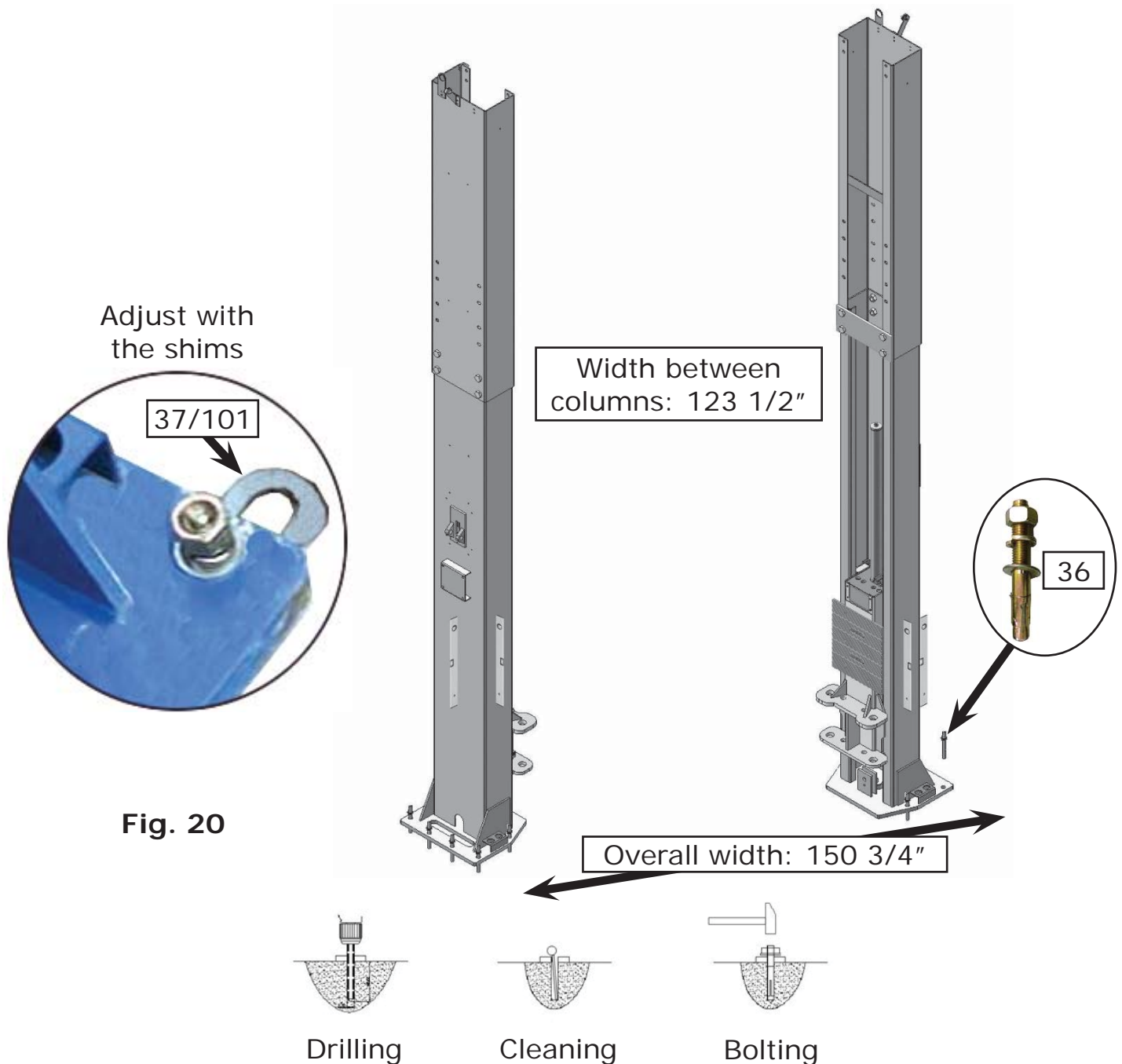


**Fig. 19 - Special Low Setting**



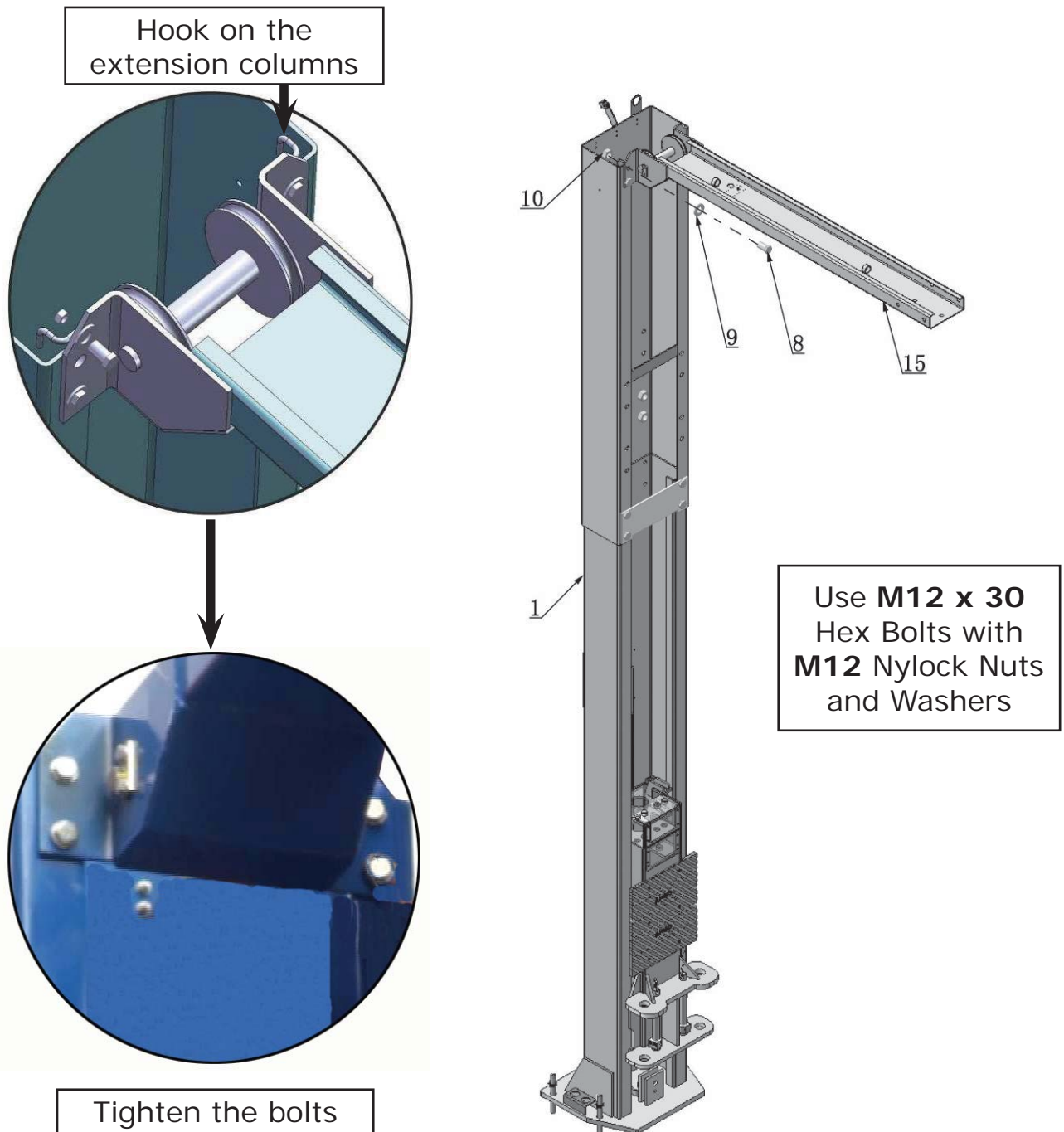
## G. Position Columns

1. Position the columns so the base plates line up with the chalk line. It is recommended to install the power side column on the passenger side of the vehicle. Meanwhile, assemble the overhead top beam (**See fig. 20, 21**). Spread the columns to approximately 122-5/8" from inside column to inside column. Install the overhead top beam.
2. Level and plumb the columns and shim where necessary.
3. Drill 3/4" holes. If the top of the anchor exceeds 2 inches above the floor grade, you **DO NOT** have enough embedment.



## H. Install Overhead Top Beam

1. With help of the hooks on the top beam, hang the top beam on top of the extension columns and connect the top beam to the extension columns with bolts, tighten the bolts (**See Fig. 21**).



**Fig. 21**

2. Assemble overhead top beam, tighten the anchor bolts between 60 and 86 foot pounds. (See Fig. 22).

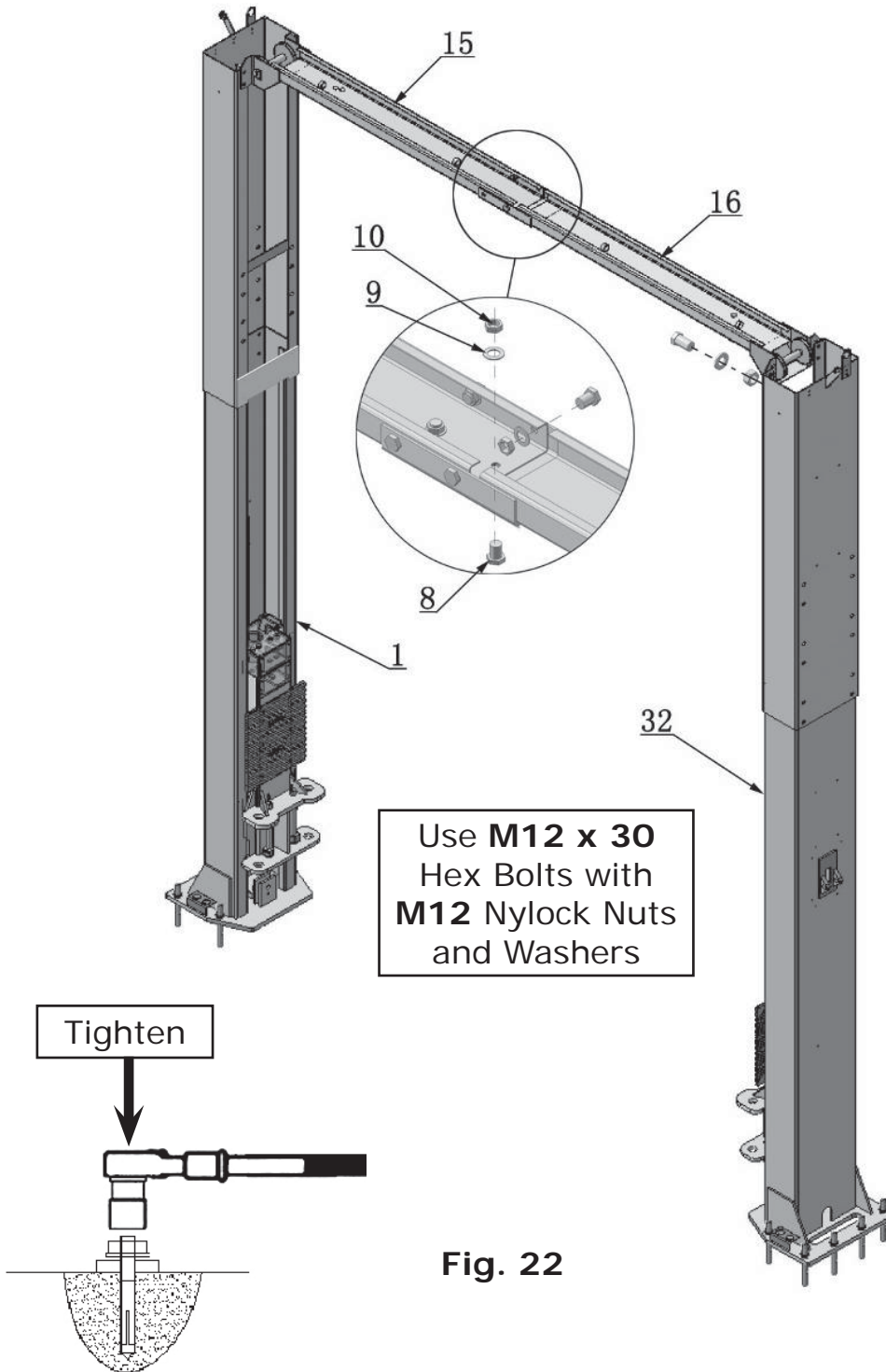


Fig. 22

# I. Installing The Limit Switch Control Bar And Limit Switch (See Fig. 23)

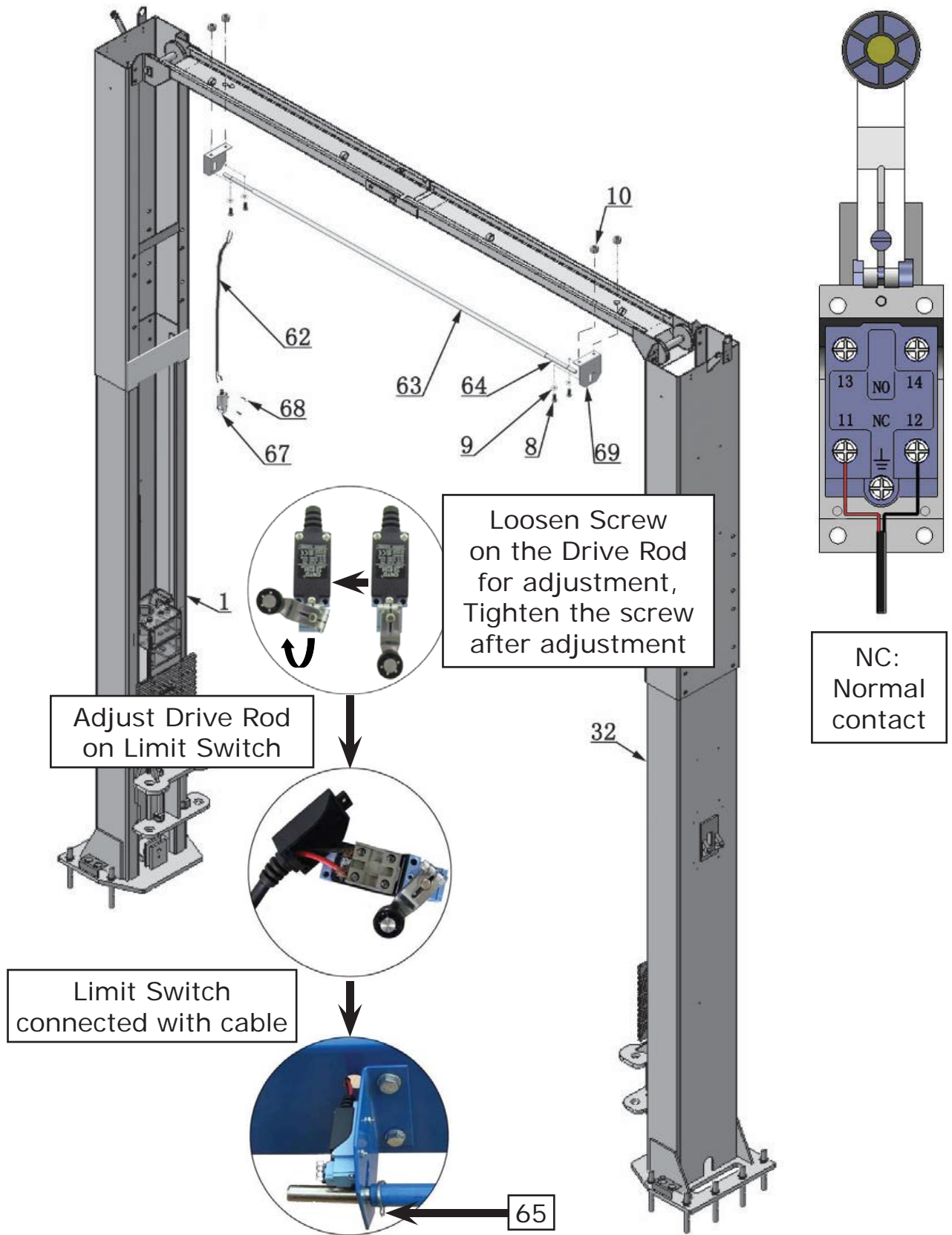
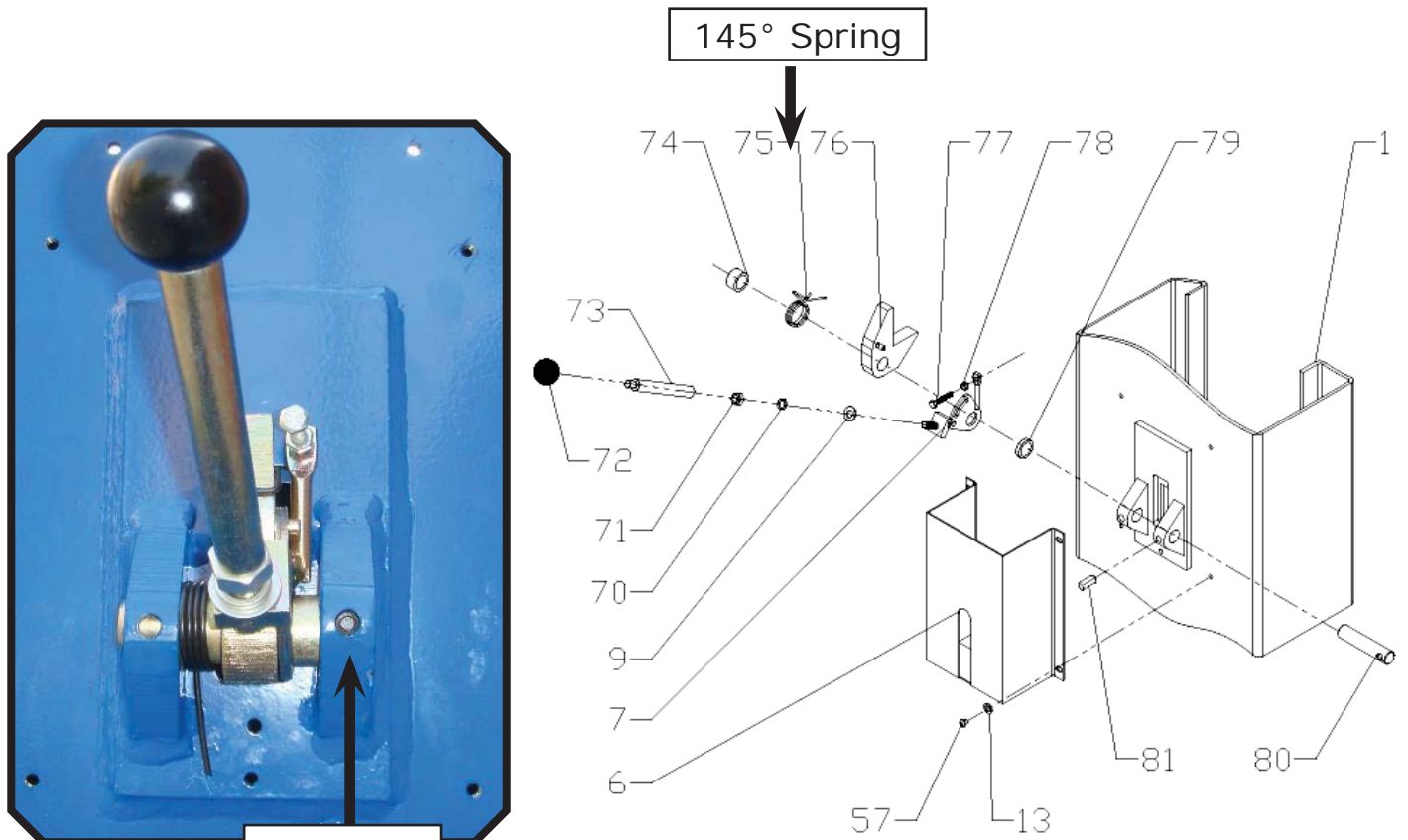


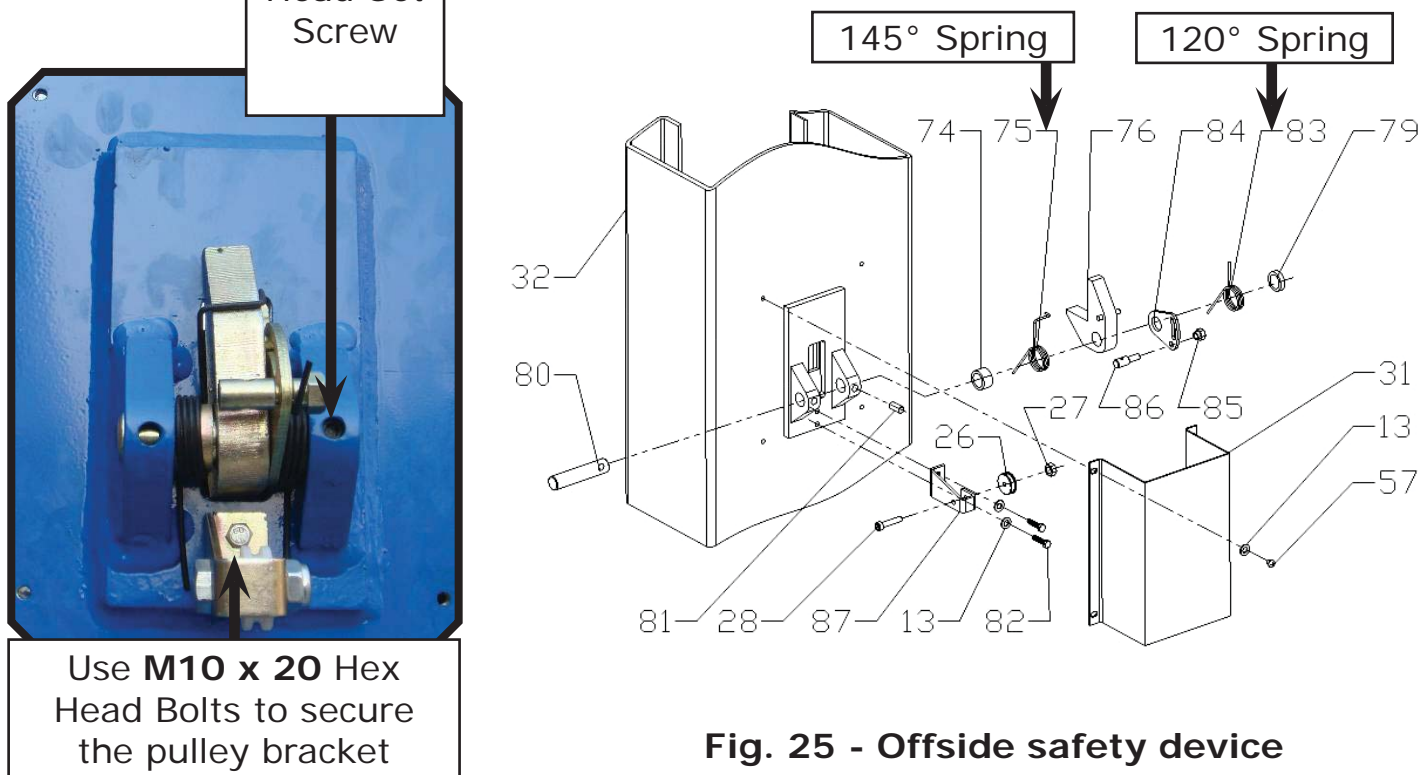
Fig. 23

## J. Install Safety Device (See Fig. 24 & Fig. 25)



Use **M10 x 10** Allen Head Set Screw

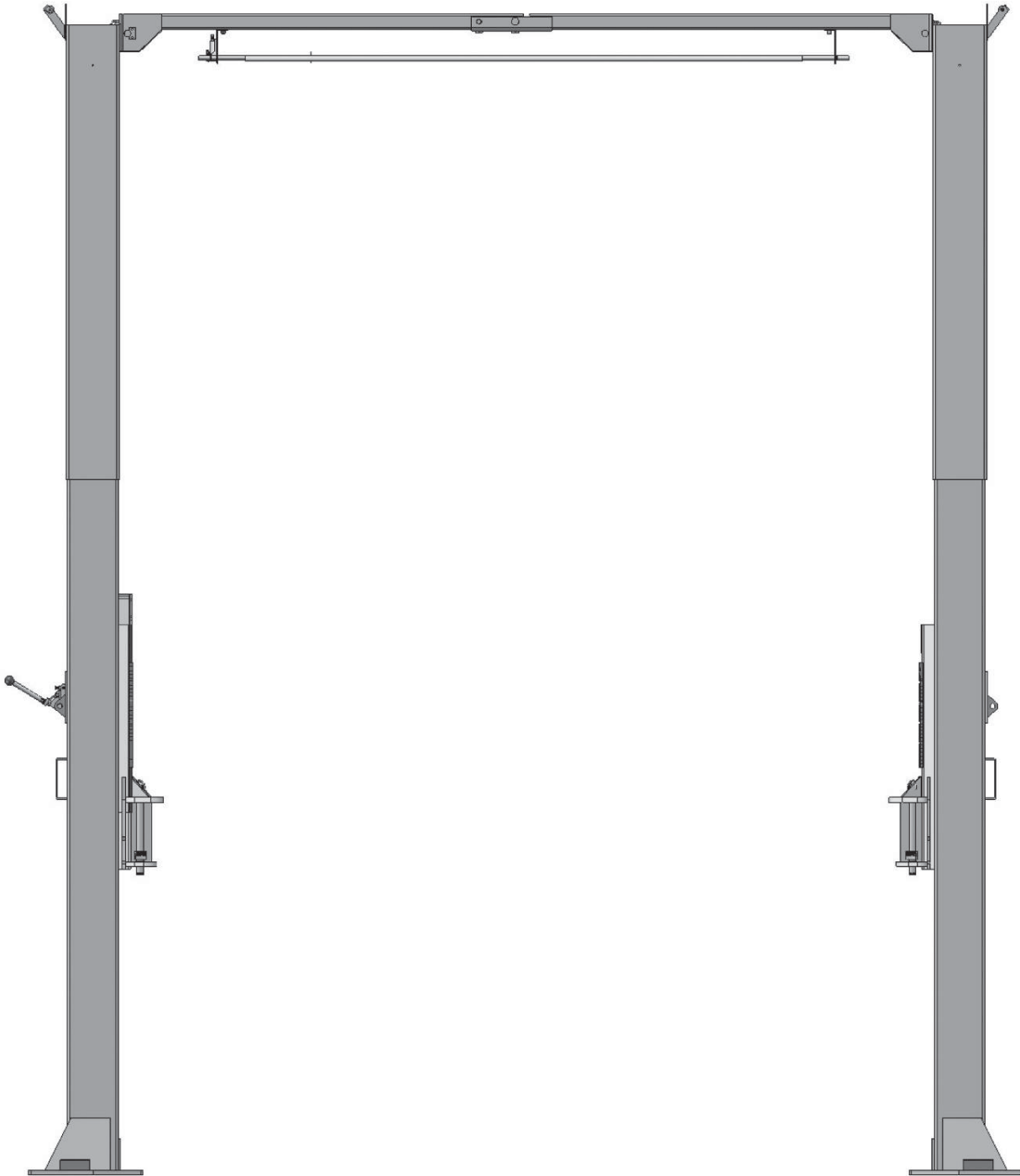
**Fig. 24 - Power side safety device**



Use **M10 x 20** Hex Head Bolts to secure the pulley bracket

**Fig. 25 - Offside safety device**

**K. Lift The Carriages Up By Hand And Lock Them At The Same Level (See Fig. 26)**

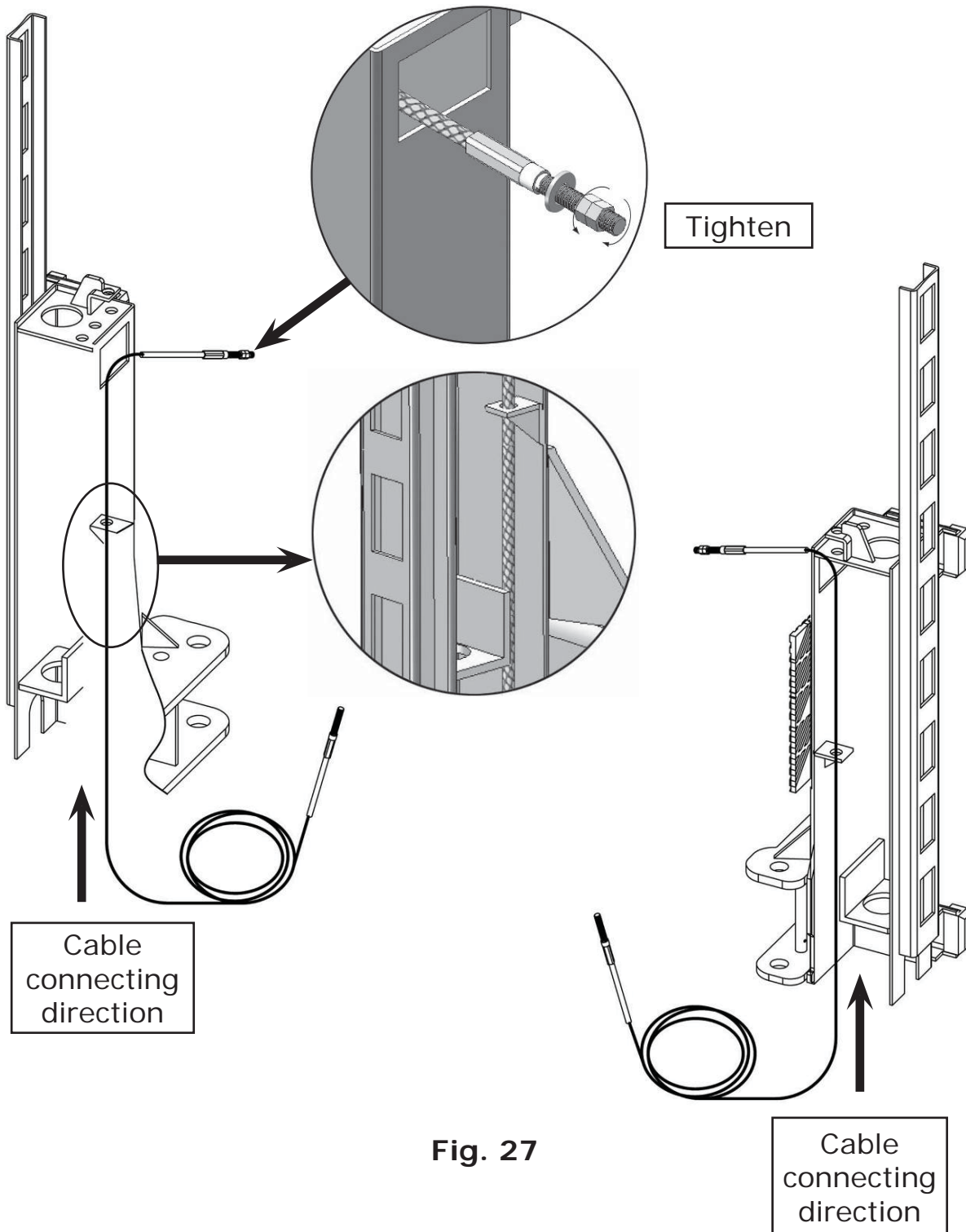


**Fig. 26**

## L. Install Cables

1. **High setting cable connection.** For ceiling height over 4500mm (177 1/8").

1.1 Remove the carriages' plastic covers. The cable passes through from the bottom of the carriages and is pulled out from the opening on the carriages. Install the two cable nuts (See Fig. 27).



## 1.2 Connecting the cable for high setting (See Fig. 28)

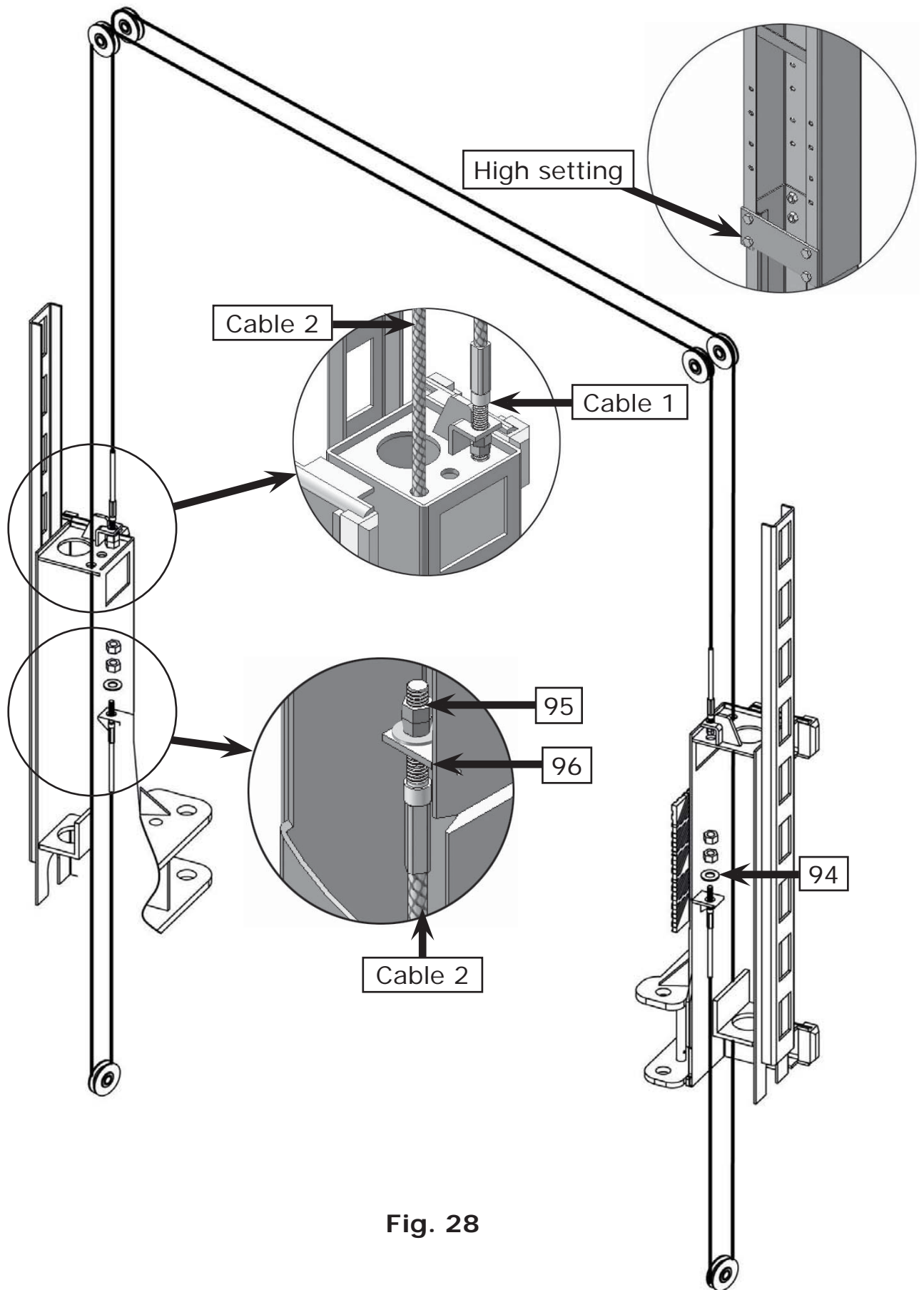


Fig. 28



2. **Low setting cable connection.** For ceiling heights between 4200mm (165 3/8") to 4500mm (177 1/8") (See Fig. 29).

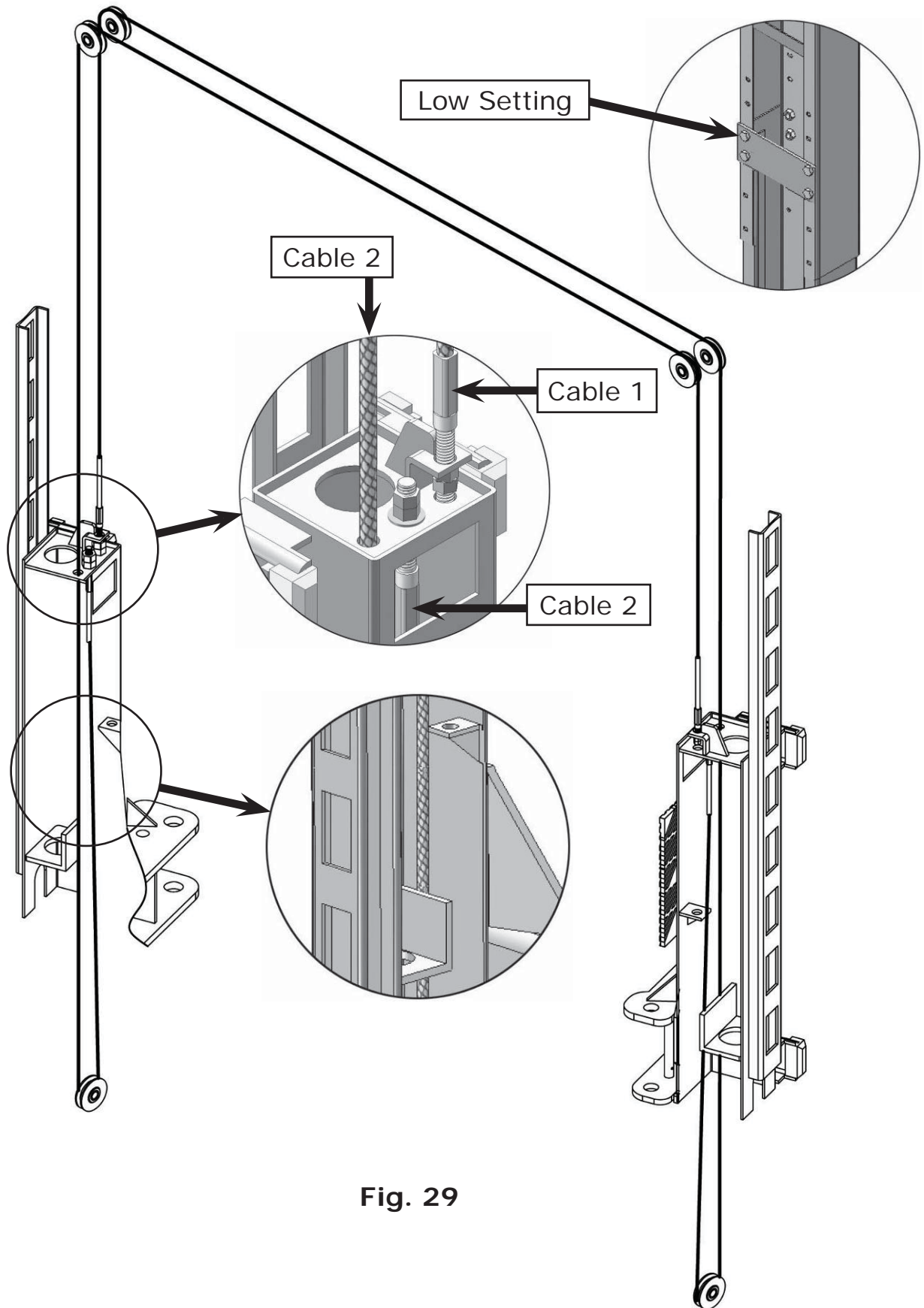


Fig. 29

3. **Special low setting cable connection.** Suitable for ceiling heights less than 4200mm (165 3/8") (See Fig. 30). This setting needs the optional short cable.

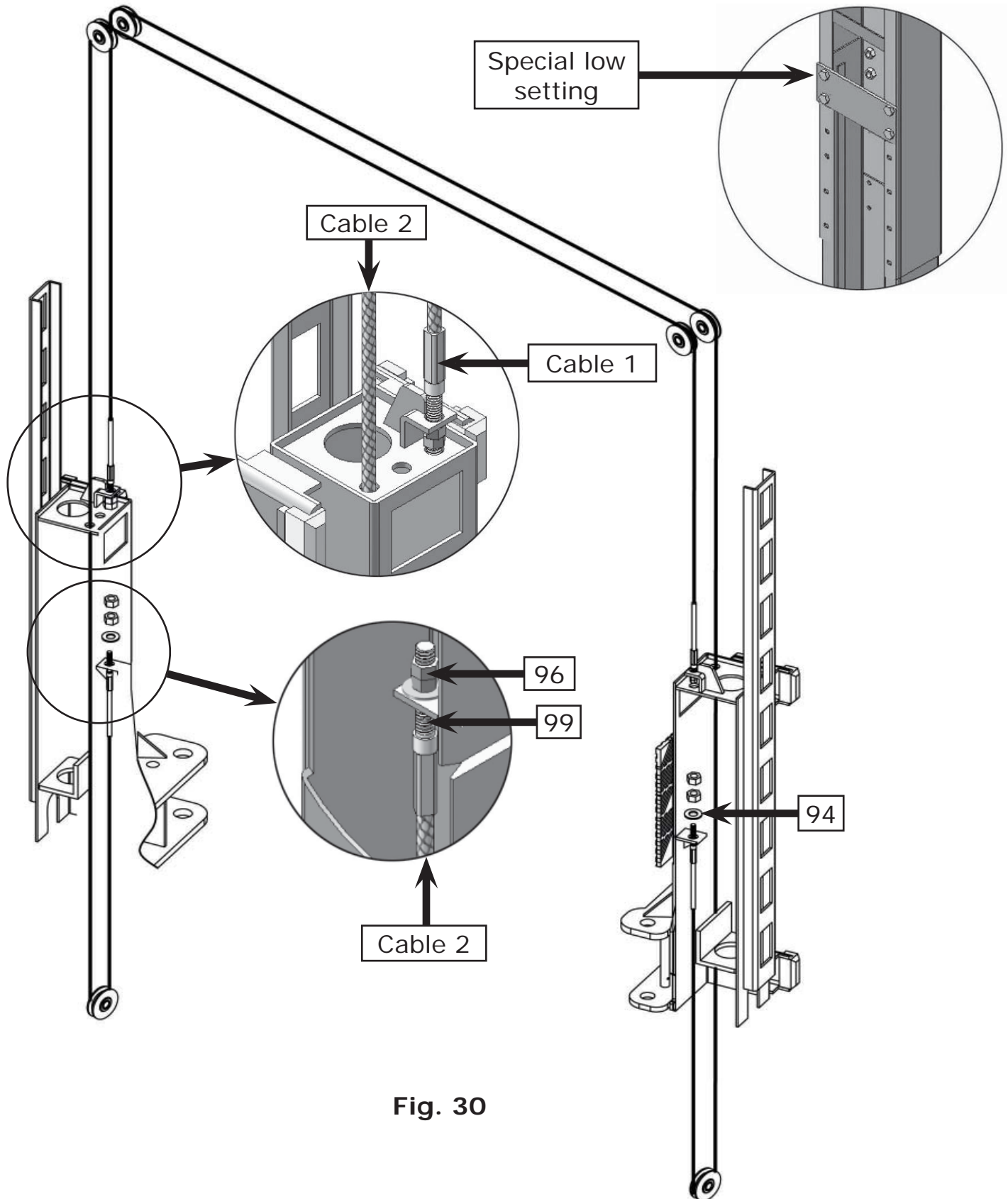


Fig. 30

## M. Install Power Unit (See Fig. 31)

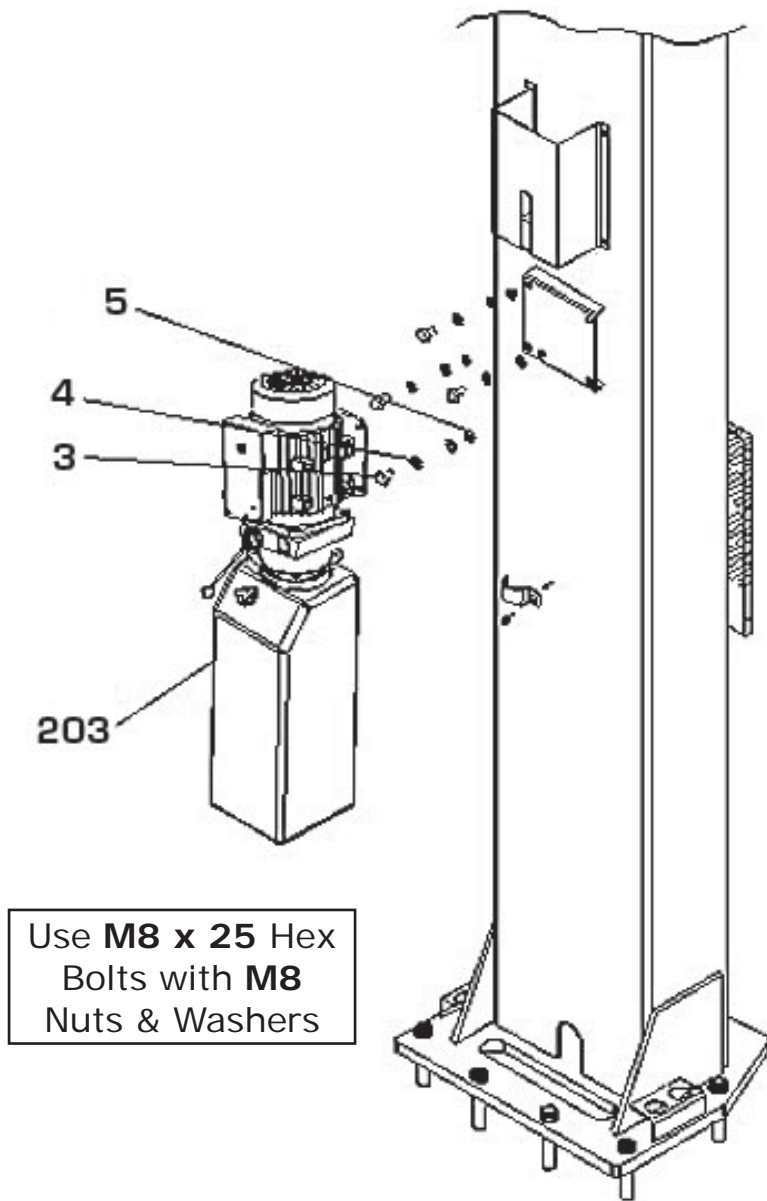


Fig. 31

## N. Install Oil Hose

### 1. High setting and low setting oil hose connection (See Fig. 32)

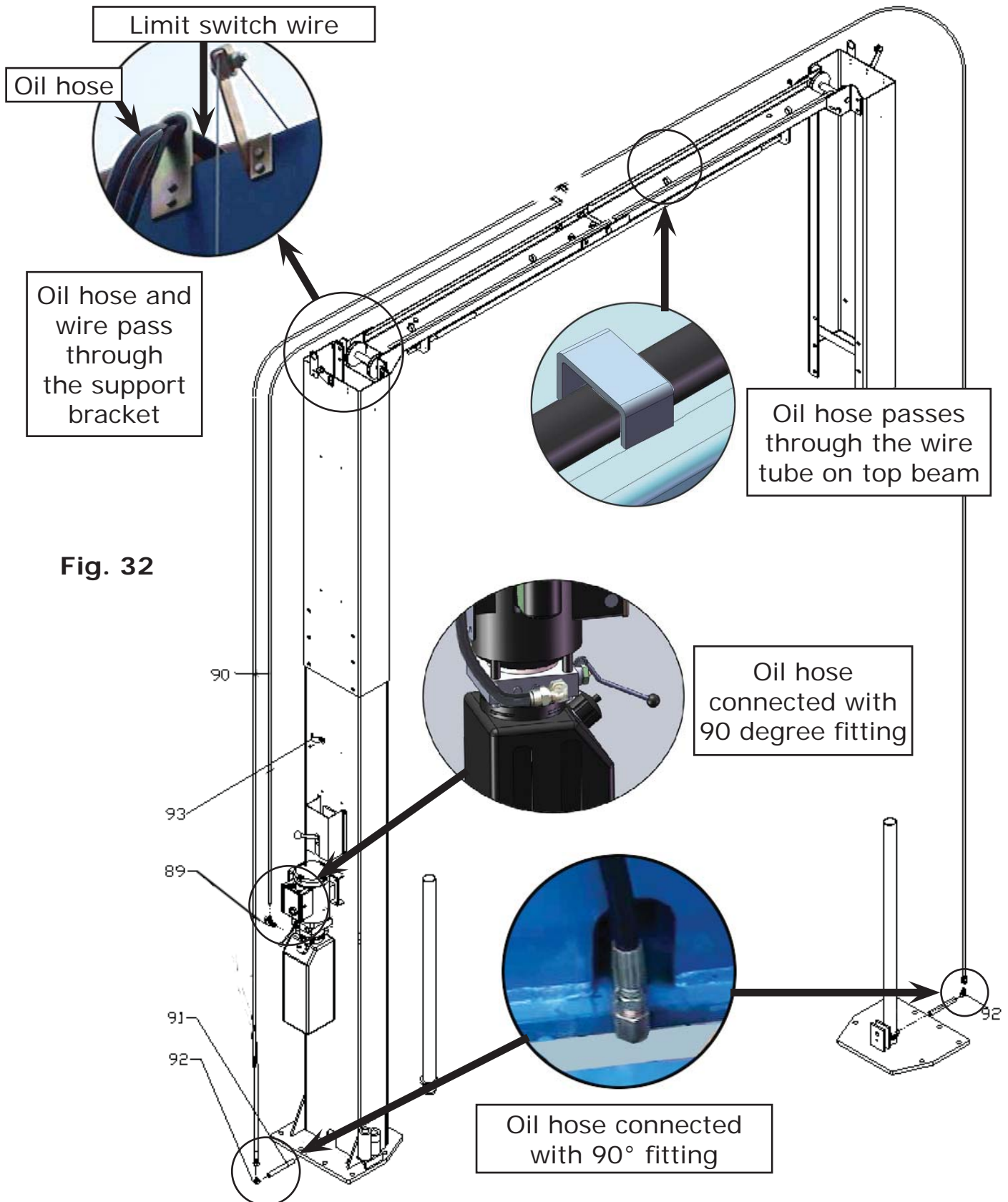


Fig. 32

## O. Install The Safety Cable

Install the safety cable from the off side safety assembly to the power side safety assembly (See Fig. 33).

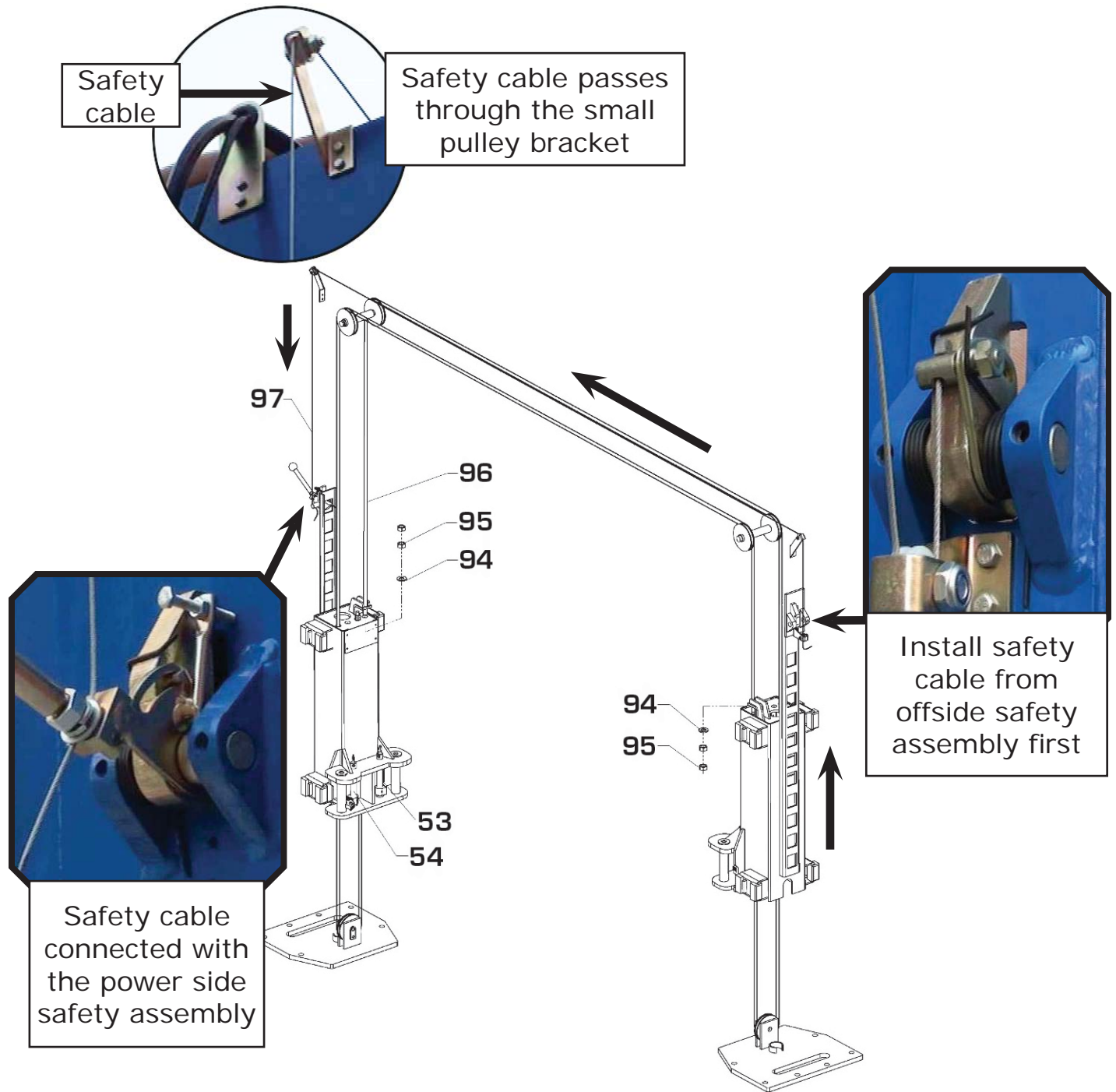


Fig. 33

## P. Install Retainers (See Fig. 34)

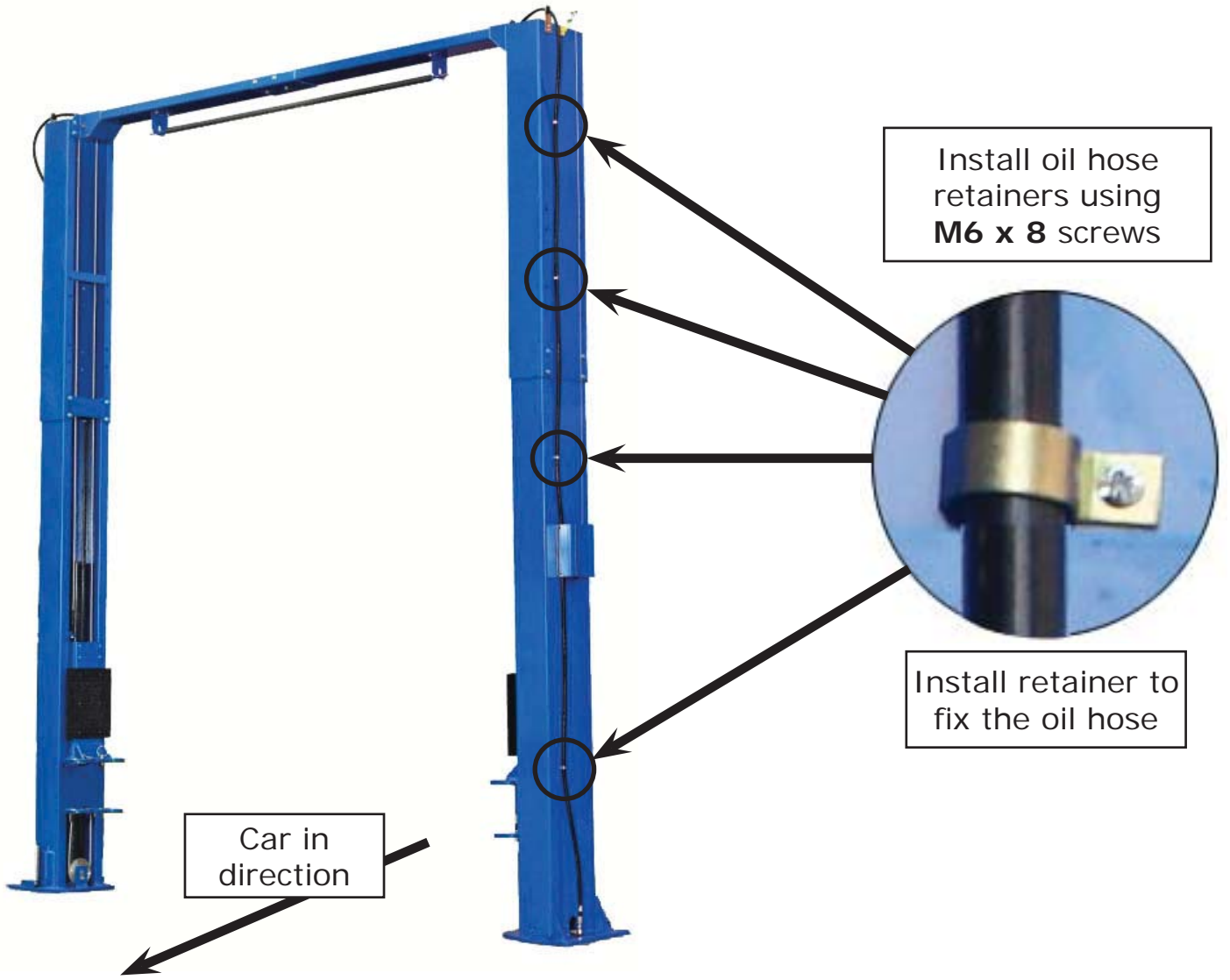


Fig. 34

## Q. Install The Lifting Arms (See Fig. 35)

Lower the carriages down to the lowest position. Then use the 8mm Allen head wrench to loosen the bolt (See Fig. 36). Adjust the arm lock in the direction of the arrow (See Fig. 37). Adjust the moon gear and arm locks so they mesh together, then tighten the Allen bolts on the arm locks (See Fig. 38).

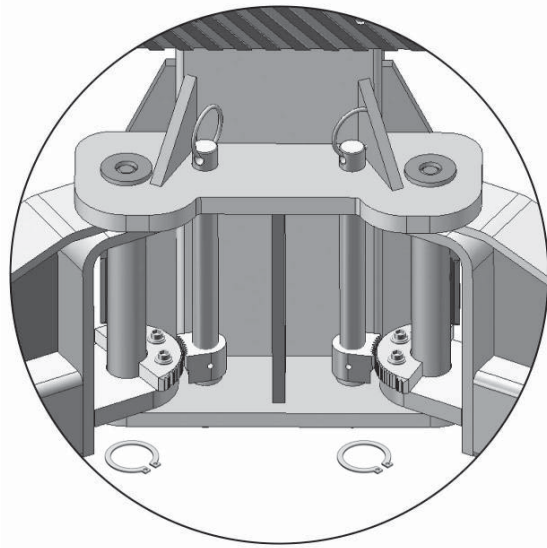


Fig. 35

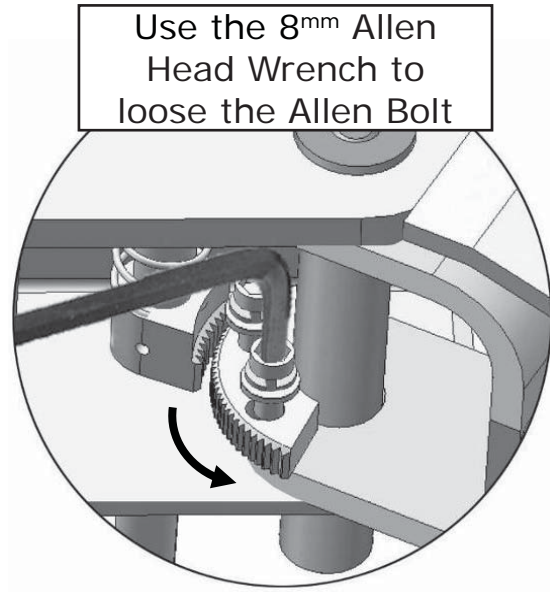


Fig. 36

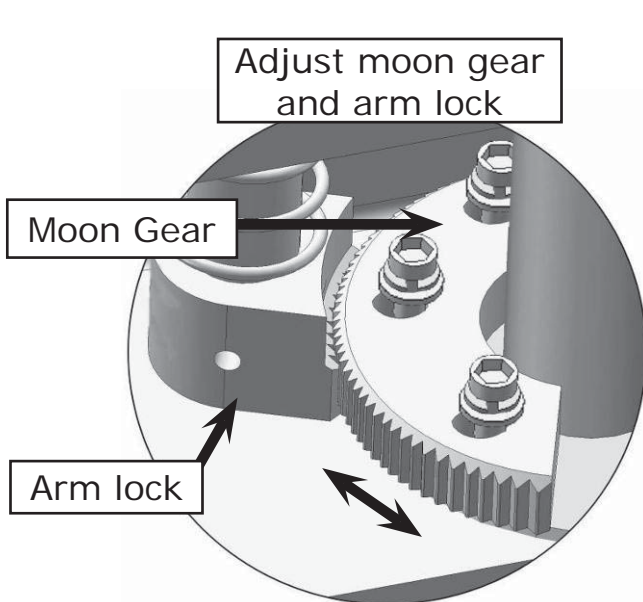


Fig. 37

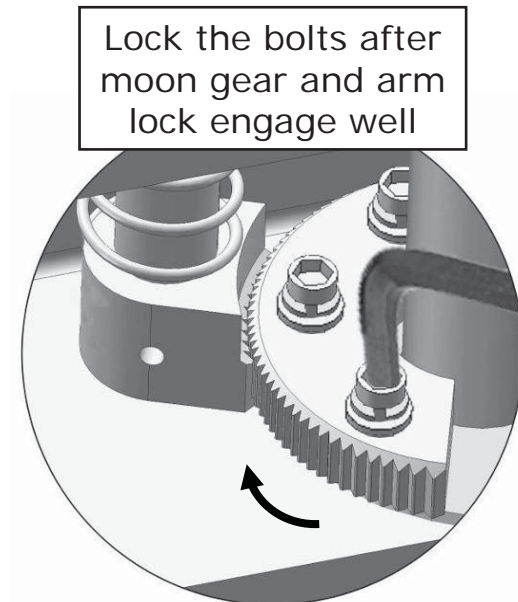


Fig. 38

## R. Tighten All Of The Hydraulic Fittings, And Fill The Reservoir With Hydraulic Oil (App. 4 Gal.)

Note: For the best motor performance, use AW32 series hydraulic oil.

### Install Electrical System

Connect the power source according to the data plate on the Power Unit.

1. Power supply wire (Fire wire L) is connected with wire **4#** of control button.
2. Wire **3#** of control button is connected with wire **6#** of the motor.
3. Wire **5#** of the motor is connected with Power supply wire (Null wire N).

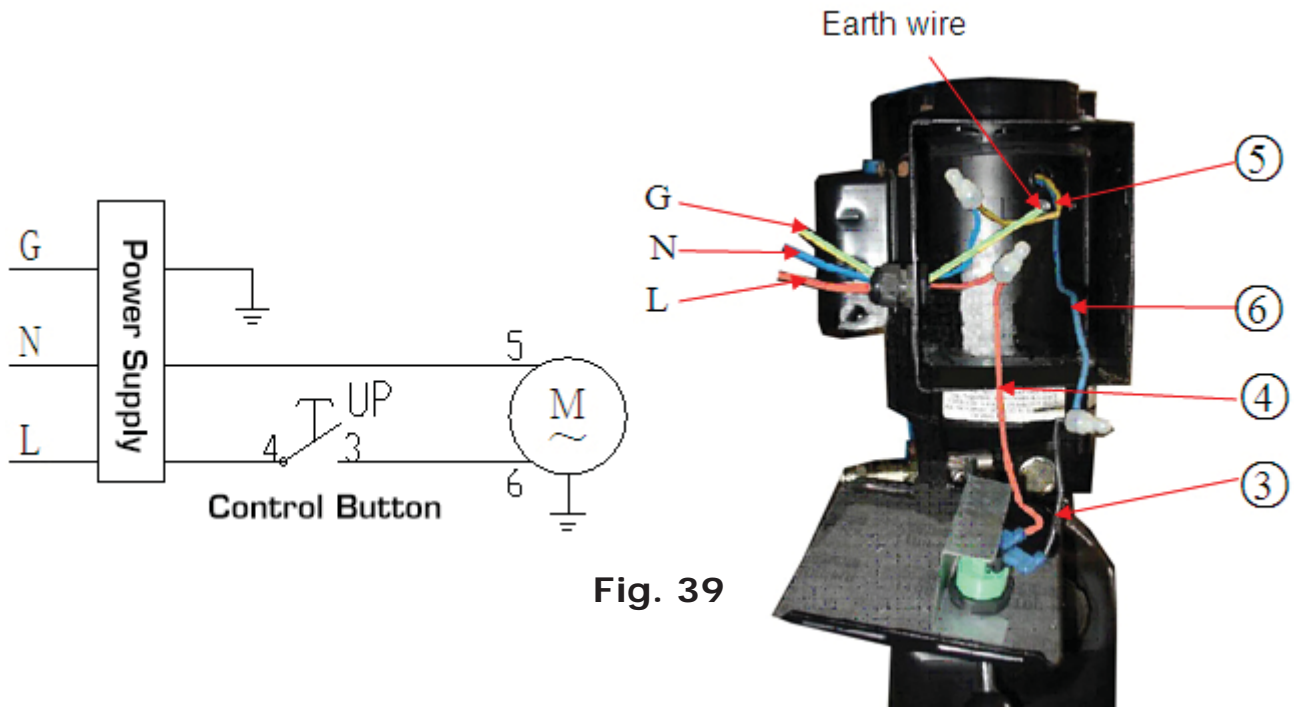


Fig. 39



# PV-15PX Exploded View

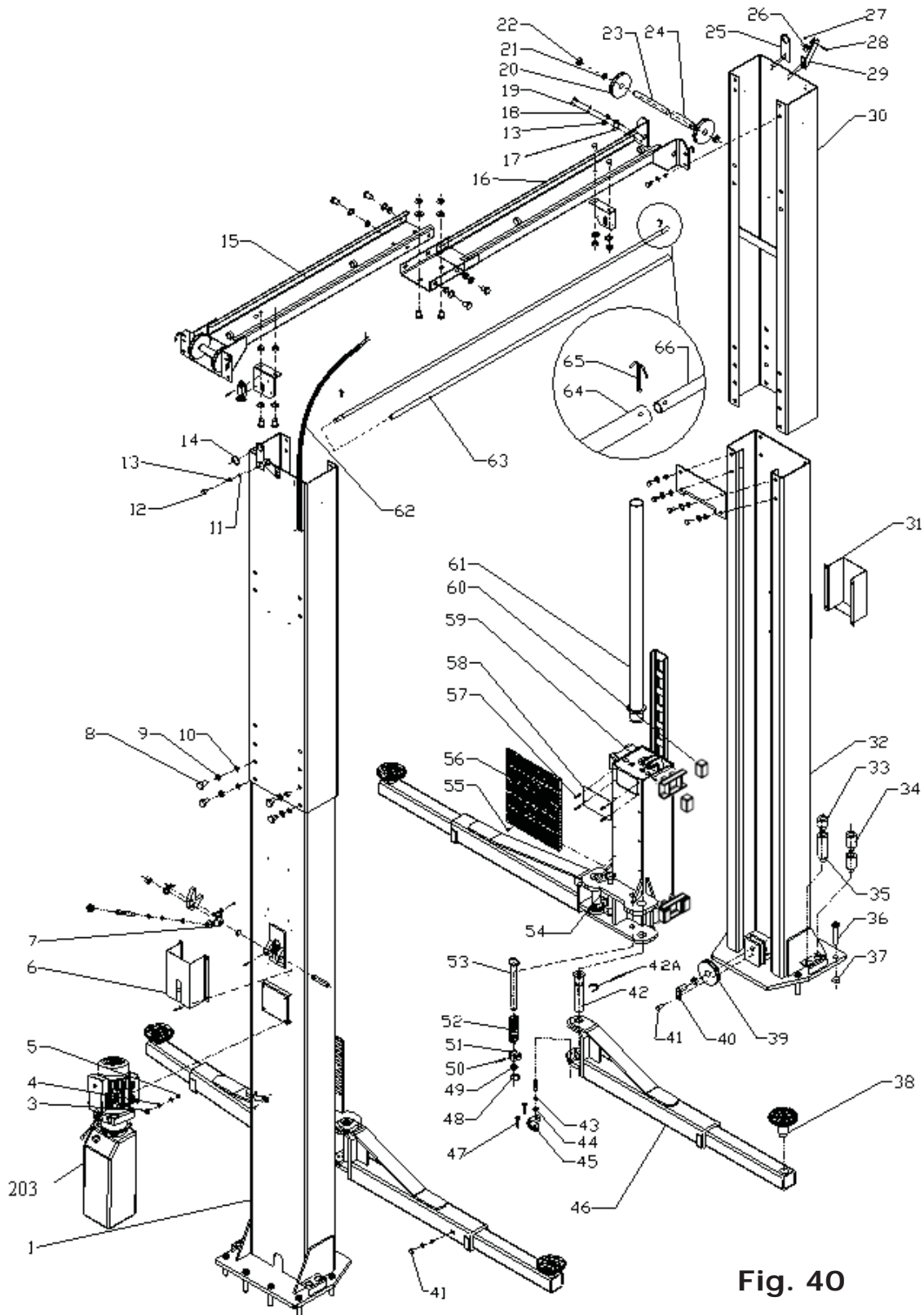


Fig. 40

# Cylinders

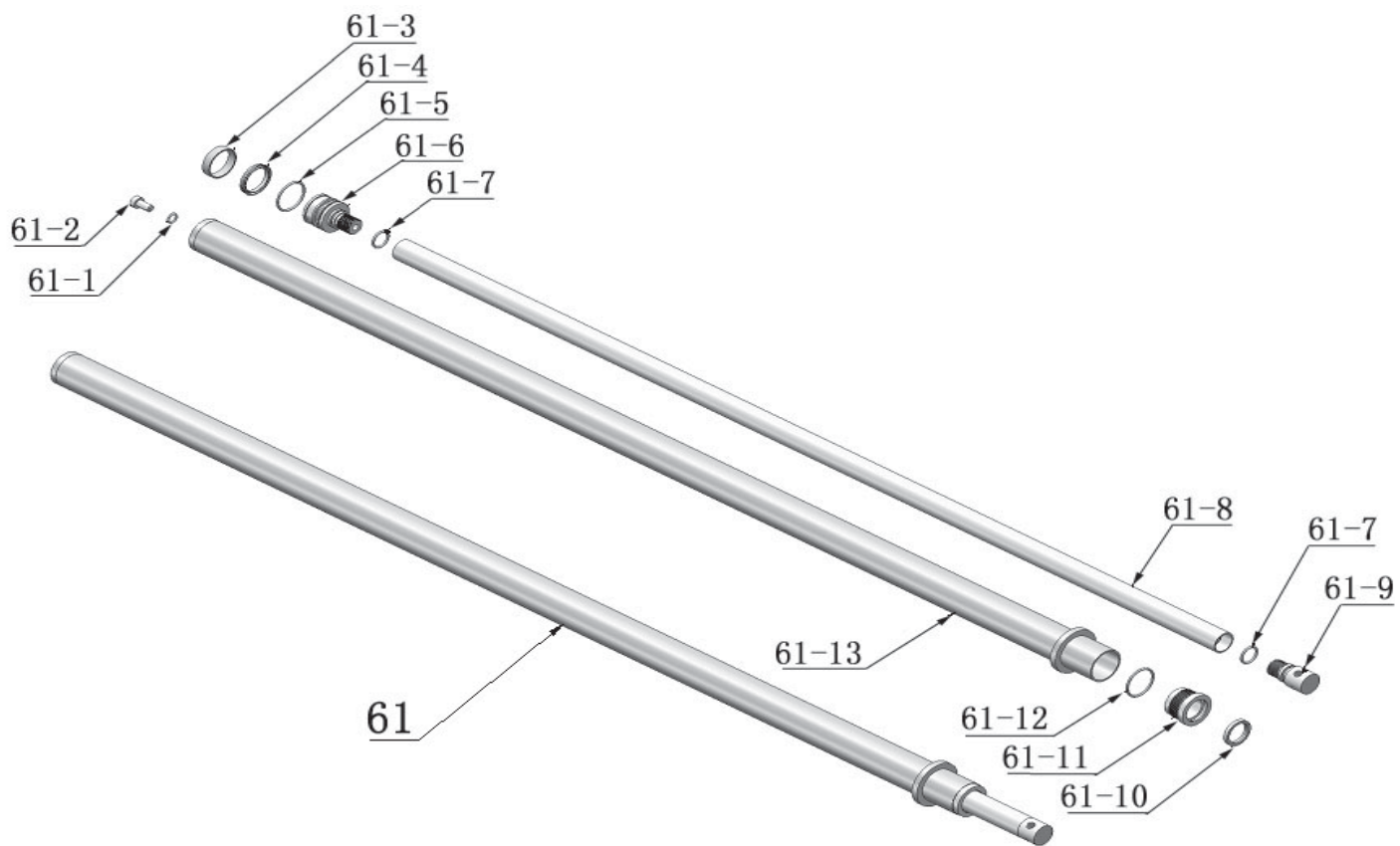


Fig. 41

# ATLAS Manual power unit (Fig. 42)

220V/60HZ, Single Phase

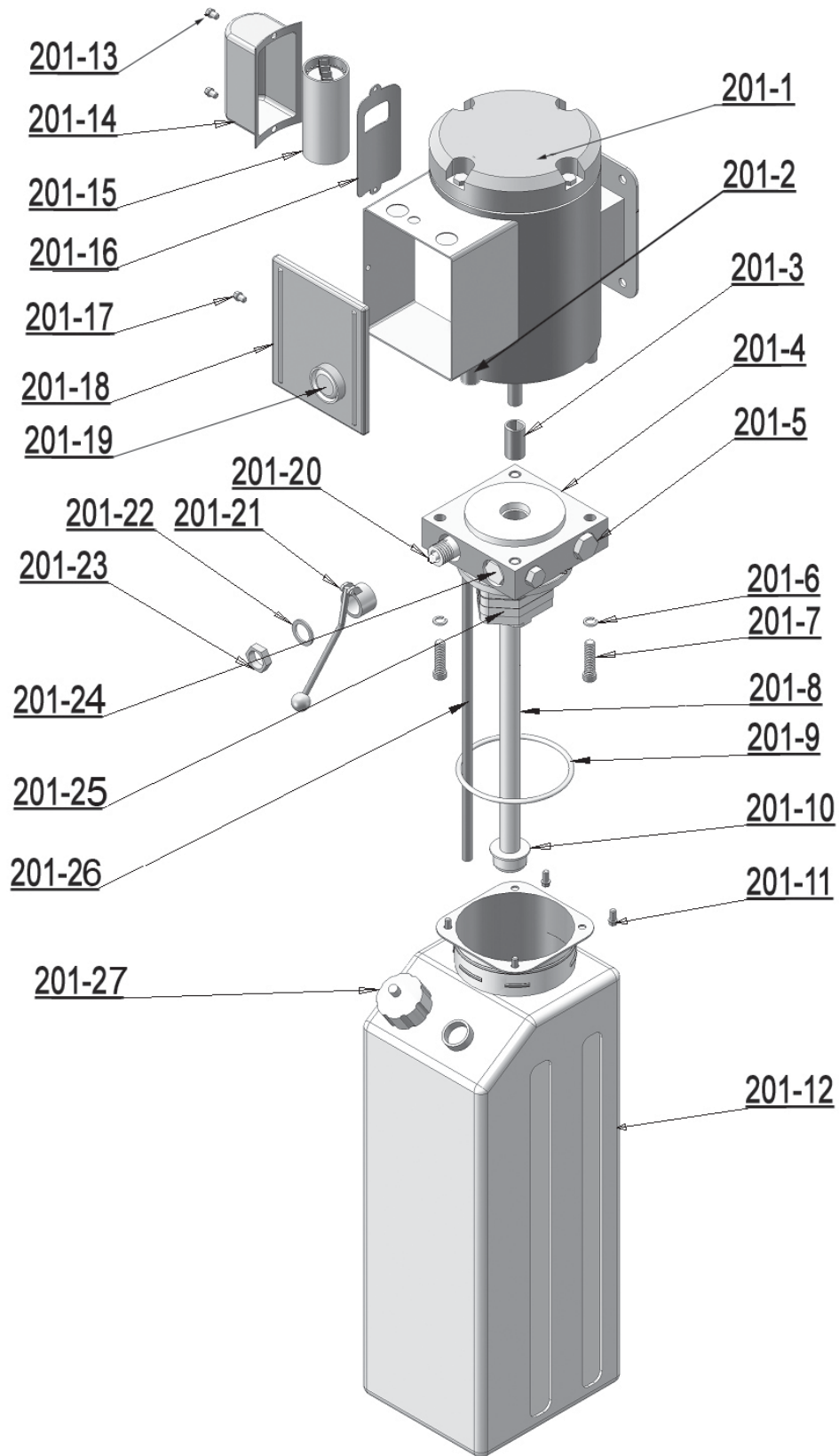


Fig. 42

## Illustration Of Hydraulic Valve



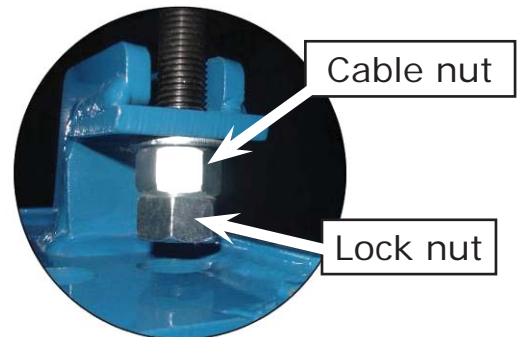
**Fig. 43**

# Test Run

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## 1. Adjust equalizing cables (See Fig. 44)

Use a wrench and hold the cable fitting, meanwhile use a ratchet to tighten the cable nut. Make sure the two cables have the same tension and the two carriages lift at the same time. Replace the cover on the lifting head.



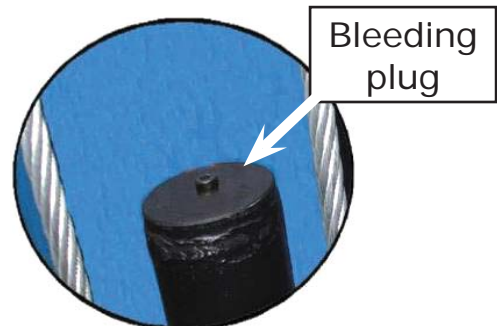
**Fig. 44**

## 2. Adjust safety lock cable

Lift the carriages and lock at the same height, pull the safety cable and then release a little, and then tighten the cable nuts. Make sure the safety locks click at the same time.

## 3. Bleeding the cylinders

This hydraulic system is designed to bleed air by loosening the bleeding screw. Lift the carriages to about 12 inches and loosen the bleeding plugs. Lower the lift until hydraulic fluid seeps from the tops of the cylinders, then tighten the plugs. (See Fig. 45).



**Fig. 45**

#### 4. Test with load

After finishing the above adjustment, test run the lift with a load. Run the lift in the low position several times. Run the lift to the top completely.

**NOTE: If the lift vibrates on the way up with a load, lubricate all pulley shafts and wear blocks. If the lift vibrates on the way down, the cylinders need to be bled.**

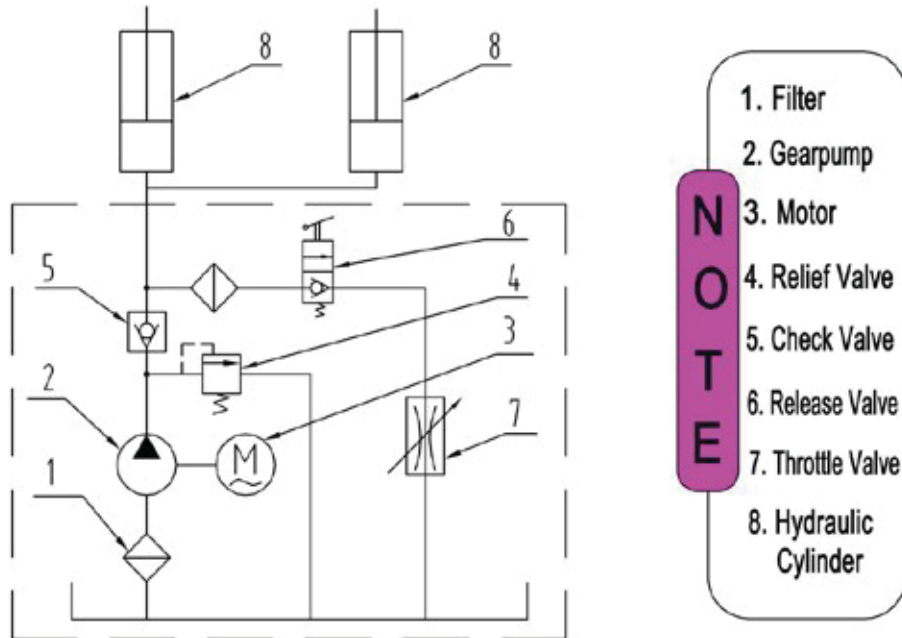


Fig. 46 Hydraulic System

# Operation Instructions

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Please read the safety tips carefully before operating the lift.

## To lift vehicle

1. Keep the lift area free of clutter;
2. Position lift arms to the lowest position;
3. Open lift arms;
4. Position vehicle between columns;
5. Move arms to the vehicle's lifting points;

**Note: The four lift arms must make contact at the same with the vehicle's lifting points and both axles must rise off of the ground at the same time.**

6. Press the **UP** button until the lift pads contact underside of vehicle. Check to make sure vehicle is secure;
7. Continue to raise the lift slowly to the desired working height, ensuring the balance of vehicle;
8. Push lowering handle to lower lift onto the nearest locks. The vehicle is ready to repair. **Note: The lift must always be on the safety locks!!!!**

## To lower vehicle

1. Keep the lift area free of clutter;
2. Press the button of **UP** to raise the vehicle slightly, and then release the safety device, lower vehicle by pushing lowering handle.
3. Open the arms and position them to the shortest length.
4. Drive away the vehicle.

# Maintenance Schedule

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## Monthly:

1. Re-torque the anchor bolts to 60-86 Ft Lbs;
2. Check all connectors, bolts and pins to insure proper mounting;
3. Lubricate cable with lubricant;
4. Make a visual inspection of all hydraulic hoses/lines for possible wear or leakage;
5. Check the condition of the safety lock device;
6. Lubricate all rollers and pins with 90wt. Gear oil or equivalent;

**Note: All anchor bolts should take full torque. If any of the bolts do not function for any reason, DO NOT use the lift until the bolt has been replaced.**

## Every six months:

1. Make a visual inspection of all moving parts for possible wear, interference or damage.
2. Check and adjust as necessary, equalizer tension of the cables to ensure level lifting.
3. Check columns for plumb.
4. Check rubber pads and replace as necessary.
5. Check safety lock device and make sure the condition is suitable.



# 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. Height limit switch is damaged</li> <li>5. AC contactor burned out</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace button</li> <li>2. Repair all wiring connections</li> <li>3. Repair or replace motor</li> <li>4. Replace the limit switch</li> <li>5. Replace AC contactor</li> </ol>
Motor runs but the lift is not raised	<ol style="list-style-type: none"> <li>1. Motor runs in reverse rotation</li> <li>2. Gear pump out of operation</li> <li>3. Release valve is damaged</li> <li>4. Relief valve or check valve is damaged</li> <li>5. Low oil level</li> </ol>	<ol style="list-style-type: none"> <li>1. Reverse the two power wire</li> <li>2. Repair or replace</li> <li>3. Repair or replace</li> <li>4. Repair or replace</li> <li>5. Fill tank</li> </ol>
Lift does not stay up	<ol style="list-style-type: none"> <li>1. Release valve is stuck open</li> <li>2. Relief valve or check valve leakage</li> <li>3. Cylinder or fittings leak</li> </ol>	Repair or replace
Lift raises slowly	<ol style="list-style-type: none"> <li>1. Oil line is jammed</li> <li>2. Motor running on low voltage</li> <li>3. Oil mixed with air</li> <li>4. Gear 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</li> <li>4. Replace pump</li> <li>5. Check load</li> </ol>
Lift can not lower	<ol style="list-style-type: none"> <li>1. Safety locks may be engaged</li> <li>2. Release valve damaged</li> <li>3. Safety cable broken</li> <li>4. Oil system is jammed</li> </ol>	<ol style="list-style-type: none"> <li>1. Release the safeties</li> <li>2. Repair or replace</li> <li>3. Replace</li> <li>4. Clean the oil system</li> </ol>

# PV-15PX Parts List

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Item	Part#	Description	Qty.	Note
1	217174A	Power side column	1	
203	209002A	Manual power unit	1	
3	209003	Socket Bolt	4	
4	209033	Lock washer	4	
5	209005	Self locking Nut	4	
6	217003	Power side lock cover	1	
7	217004	Main cam lock	1	
8	217069	Hex Bolt	34	
9	206006	Washer	35	
10	206023	Self locking nut	34	
11	420018	Self locking nut	8	
12	217013	Hex Bolt	8	
13	420045	Washer	30	
14	61K074	Protective ring	2	
15	217015B	Right overhead bar(right)	1	
16	217016B	Left overhead bar (left)	1	
17	420044	Pin stop	2	
18	209149	Washer	4	
19	420138	Socket Bolt	4	
20	217019	Top pulley	4	
21	217020	Bronze bush for pulley	6	
22	217021	Small spacer	4	
23	217022	Pin	2	
24	217023	Pin spacer	2	
25	217024	Hose support	2	

Item	Part#	Description	Qty.	Note
26	206009	Plastic pulley	3	
27	209056	Self locking nut	3	
28	209046	Hex Bolt	3	
29	217026	Safety cable bracket	2	
30	217192	Extension column	2	
31	217028	Offside lock cover	1	
32	217175A	Offside column	1	
33	209051B	Adapter 1.5"	4	
34	209052B	Adapter 2.5"	4	
35	209053B	Adapter 5"	4	
36	207045	Anchor bolt 3/4 x 7	12	
37	620065	Shim	10	
38	217114A	Rubber pad assy.	4	
38A	420138	Socket bolt	4	
38B	209134	Rubber Pad	4	
38C	680030B	Rubber Pad frame	4	
39	217036	Bottom pulley	2	
40	217037	Bottom pin	2	
41	209038	Hex Bolt	6	
42	217047B	Arm pin	4	
43	209039	Lock washer	4	
44	209023	Washer	18	
45	206049	Moon gear	18	
46	217052D	Lifting arm	4	
46A	217122	Outer lifting arm	4	
46B	217123A	Inner lifting arm	4	
47	206048	Socket bolt	4	
48	206032	Snap ring	12	
49	217043	Limit ring	4	
50	206036	Roll pin	4	

<b>Item</b>	<b>Part#</b>	<b>Description</b>	<b>Qty.</b>	<b>Note</b>
51	217044	Arm lock	4	
52	217045A	Spring	4	
53	217046C	Left arm lock bar	2	
54	217046B	Right arm lock bar	2	
55	209019	Screw	12	
56	217053	Protective Rubber	2	
57	209009	Cup head bolt	28	
58	217054	Carriage plastic cover	2	
59	217193	Carriage	2	
60	217188	Slider block	16	
61	217056B	Cylinder	2	
62	217173	Wire cable	1	
63	206025A	Foam Cushion	1	
64	206129	Limit bar	1	
65	201005	Split Pin	2	
66	206025C	Limit bar link	2	
67	206013	Limit switch	1	
68	206011	Cup head bolt	2	
69	206042	Limit bar bracket	2	
70	420026	Lock washer	1	
71	206023A	Hex Nut	1	
72	217005	Plastic ball	1	
73	217006	Lock handle	1	
74	217007	Large spacer	2	
75	217030	Main spring	2	
76	217009	Main lock	2	
77	217010	Hex Bolt	1	
78	217011	Hex Nut	1	
79	217012	Small spacer	2	
80	217050	Main lock pin	2	

Item	Part#	Description	Qty.	Note
81	217051	Socket bolt	2	
82	217066	Hex Bolt	2	
83	217008	Torsion spring	1	
84	217031	Cam lock	1	
85	217033	Self locking nut	1	
86	217032	Cable lock hold	1	
87	217029	Small pulley bracket	1	
88	690024	Oil hose	2	
89	217189	90 Fitting	1	
90	690025	Oil hose	1	
91	217060A	Cylinder pipe	2	
92	217061A	90 Fitting	2	
93	217191	Retainer	12	
94	420029	Cable nut washer	4	
95	209066	Cable nut	8	
96	217063B	Cable with hold	2	
97	217064B	Safety cable	1	
98	217068	Column connecting plate	2	
101	201090	Shim	10	
102	217195	T fitting	1	
103	217502B	Parts box	1	
<b>For optional short cable (See Fig. 30)</b>				
99	217112	Short cable	2	
<b>Parts For Hydraulic Cylinder (See Fig. 41)</b>				
61-1	209069	O-Ring	2	
61-2	209070	Bleeding Plug	2	
61-3	201029	Support Ring	2	
61-4	201030	Y-Ring	2	
61-5	201031	O-Ring	2	
61-6	217074A	Piston	2	

<b>Item</b>	<b>Part#</b>	<b>Description</b>	<b>Qty.</b>	<b>Note</b>
61-7	209075	O-Ring	2	
61-8	217089	Piston rod	2	
61-9	217077	Piston rod fitting	2	
61-10	217078	Dust ring	2	
61-11	217079	Head cap	2	
61-12	217080	O-Ring	2	
61-13	217091	Bore weldment	2	

**Parts For ATLAS Manual Power Unit, 220V/60Hz,  
Single phase (See Fig. 42)**

<b>Item</b>	<b>Part#</b>	<b>Description</b>	<b>Qty.</b>	<b>Note</b>
201-1	81400032	Motor	1	
201-2	81400159	Protective Ring	1	
201-3	81400063	Motor Connecting Shaft	1	
201-4	81400031	Valve Body	1	
201-5	81400160	Relief Valve	1	
201-6	81400161	Lock Washer	4	
201-7	81400162	Socket Bolt	4	
201-8	81400156	Inlet Pipe	1	
201-9	81400163	O-Ring	1	
201-10	81400164	Filter	1	
201-11	81400165	Hex bolt	4	
201-12	81400027	Reservoir	1	
201-13	81400166	Cross Bolt	2	
201-14	81400167	Cover of Capacitor	1	
201-15	81400087	Capacitor	1	
201-16	81400168	Rubber Gasket	1	
201-17	81400169	Hex bolt	1	
201-18	81400062	Cover of Motor Terminal Box	1	

201-19	81400028	Push Button	1	
201-20	81400105	Release Valve	1	
201-21	81400033	Handle For Release Valve	1	
201-22	81400170	Washer	1	
201-23	81400171	Hex Nut	1	
201-24	81400043	Check Valve	1	
201-25	81400133	Gear Pump	1	
201-26	81400157	Oil Return Pipe	1	
201-27	81400113	Filler Cap	1	

# Warranty

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**This item** is warranted for five (5) years on structural components, two (2) years on hydraulic cylinders, and one (1) year on electric or air / hydraulic power units 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.