ATLAS PV-15P
15,000 lb. Capacity
Two-Post Overhead Lift

INSTALLATION & OPERATION MANUAL

INDIANA

GREG SMITH EQUIPMENT SALES INC.
5800 MASSACHUSETTS AVE.
INDIANAPOLIS, IN 46218

PHONE: (800) 262-1950
FAX: (317) 542-1448

DELAWARE

GREG SMITH EQUIPMENT, INC.
250 EXECUTIVE DRIVE, SUITE 1
NEWARK, DE 19702

PHONE: (800) 715-1950
FAX: (302) 894-9136

GEORGIA

GREG SMITH EQUIPMENT, INC.
5405 BUFORD HWY.
NORCROSS, GA 30071

PHONE: (800) 768-4104
FAX: (678) 781-0149

ARIZONA

GREG SMITH EQUIPMENT, INC.
8399 W VAN BUREN ST., SUITE 210
TOLLESON, AZ 85353

PHONE: (800) 602-9928
FAX: (602) 490-3495

CONTENTS

I. PRODUCT FEATURES AND SPECIFICATIONS

CLEAR-FLOOR DIRECT-DRIVED MODEL FEATURES

Model PV-15P (See Fig. 1)

· Direct-drive design, minimizes the lift wear parts and breakdown ratio

· Dual hydraulic cylinders, designed and made on ANSI standards, utilizing NOK oil seal in the cylinders

· Self- lubricating UHMW Polyethylene sliders and bronze bushings

· Single-point safety release with dual safety design

. Clear-floor design, provides unobstructed floor use

. Overhead safety shut-off device prevents vehicle damage

. Standard adjustable heights accommodates different ceiling heights

Fig. 1

MODEL PV-15 SPECIFICATIONS

Model	Style	Lifting Capacity	Lifting Time	Lifting Height	Overall Height	Overall Width	Width Between columns	Minimum Pad Height for stackable adapter	Motor
PV-15P	Clear-floor Direct-drive	6.8 T 15,000lbs	72S	1872-2142mm 73 3/4"–84 3 /8"	3812/4192/4497mm 150"/165"/177"	3829mm 150 3/4"	3137mm 123 1/2"	145 5 3/4"	4.0HP

Arm Swings View For Model PV-15P

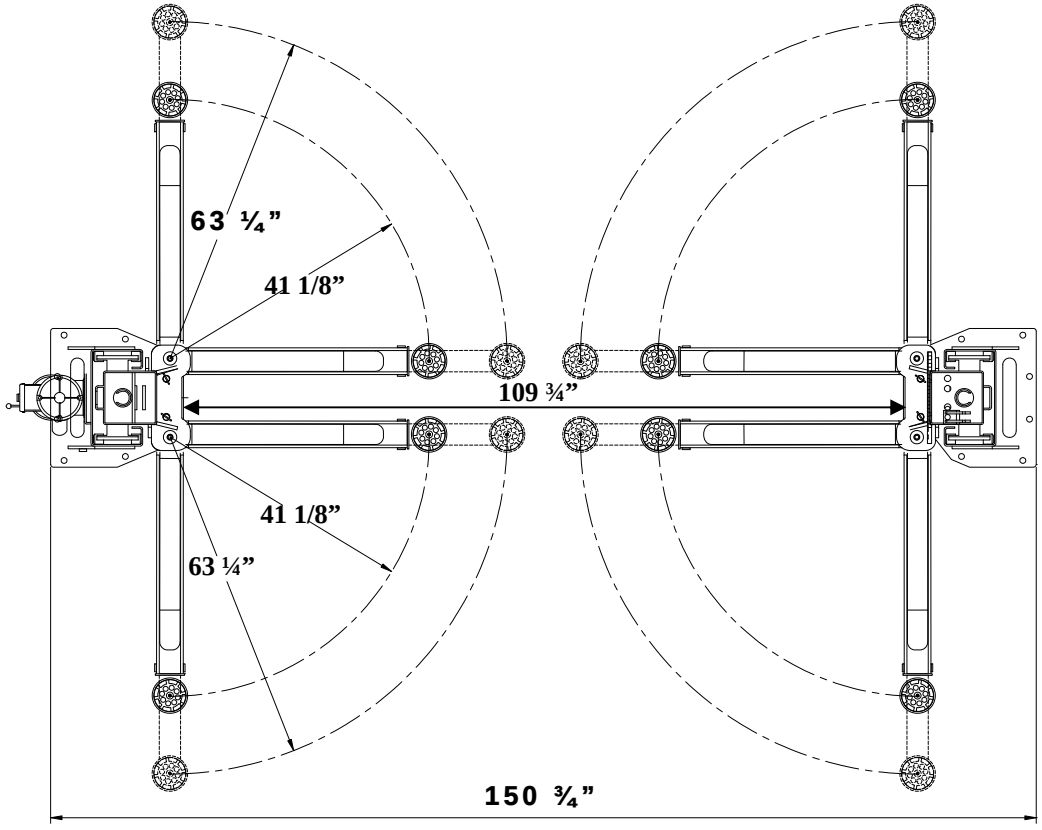


Fig. 2

II. INSTALLATION REQUIREMENT

A. TOOLS REQUIRED

✓ Rotary Hammer Drill (19mm / ¾")

✓ Hammer

✓ Level

✓Crescent Wrench (12")

✓ Wrench set：(10#、13#、14#、15#、17#
19#、24#、27#、30#)

✓ Ratchet Spanner With Socket (28mm)

✓ Carpenter's Chalk

✓ Screw Sets

✓ Tape Measure (25ft)

✓ Pliers

✓ Lock Wrench

✓ Socket Head Wrench (3#, 5#, 8#)

Fig.3

B. CONCRETE SPECIFICATIONS (See Fig. 4)

Concrete specifications must be adhered to the following specification.

Failure to do so may result in lift and/or vehicle falling.

1. Concrete must be thickness 6 inches minimum and without reinforcing steel bars, and must be totally dry before lift installation.
2. Concrete must be in good condition and must have a test strength 3,500psi (250kg/cm²) minimum.
3. Floors must be level with no cracks or holes.

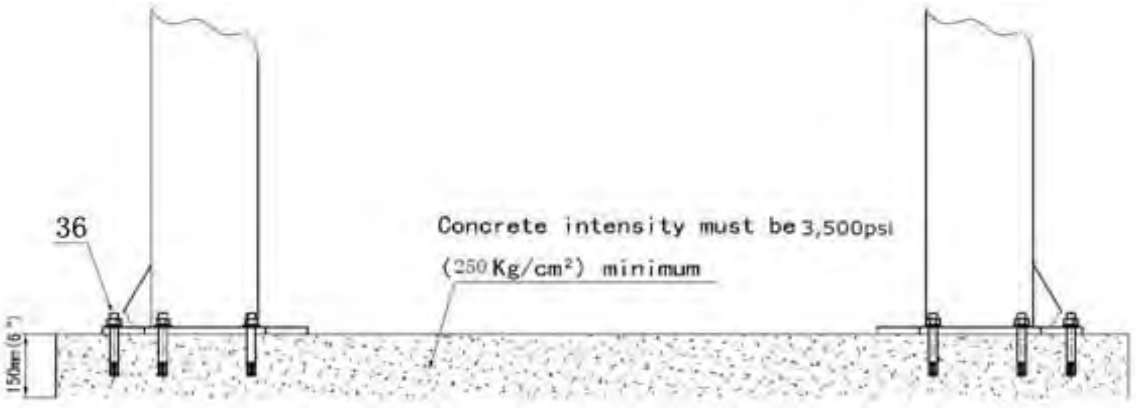


Fig.4

C. POWER SUPPLY

The electrical source must be 3HP minimum. The source cable size must be 2.5mm² and in good condition of contacting with floor.

III. 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)**

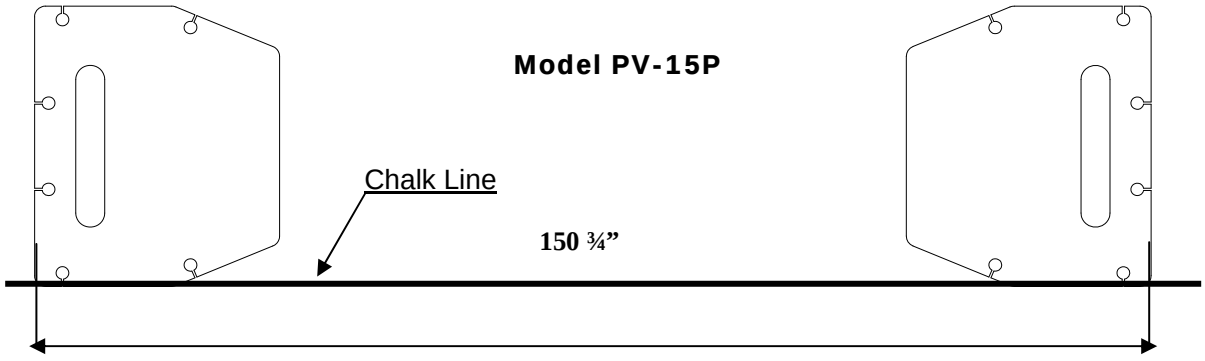


Fig. 5

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).**

Fig. 7

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

Fig. 8

4. Lift the upper column with a fork lift or hoist, loosen the bolts on the upper package stand, take off the upper outer column, then take out the parts in the inner column **(See Fig. 9).**

Fig. 9

5. Lift the lower column with a fork lift or hoist, take down the package stand, then take off the lower outer column, take out the parts in the inner column **(See Fig. 10).**

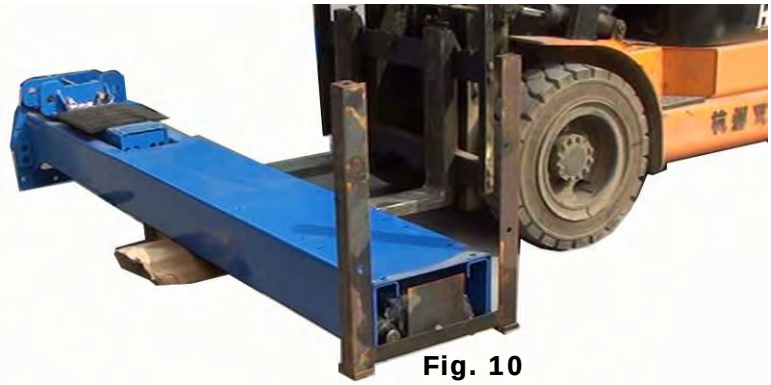


Fig. 10

6. Move 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).**

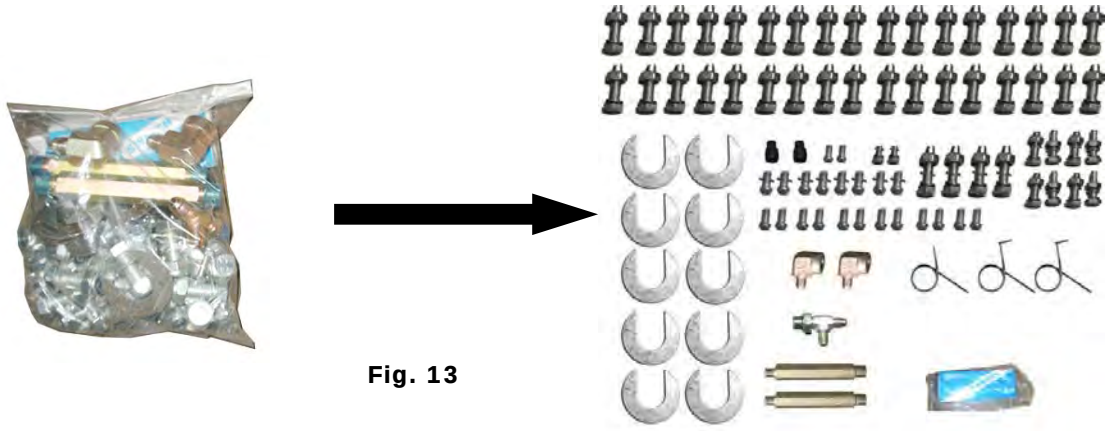


Fig. 13

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

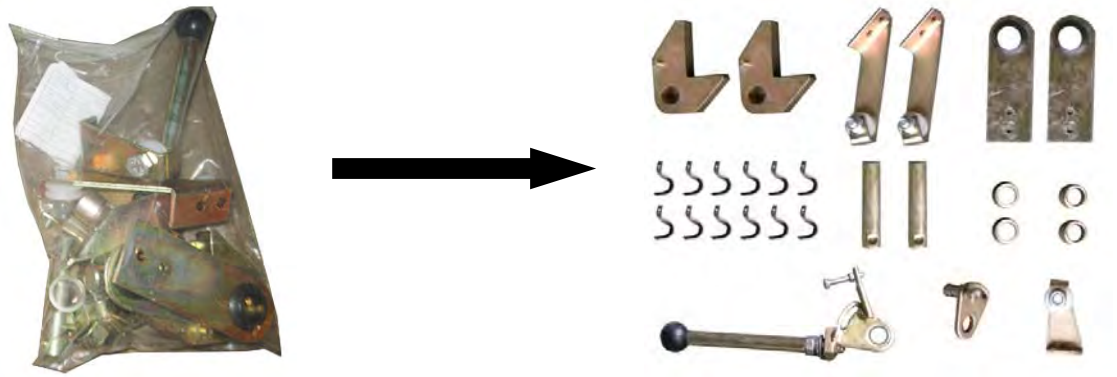


Fig. 14

D. Install parts on the extension columns (See Fig. 15).

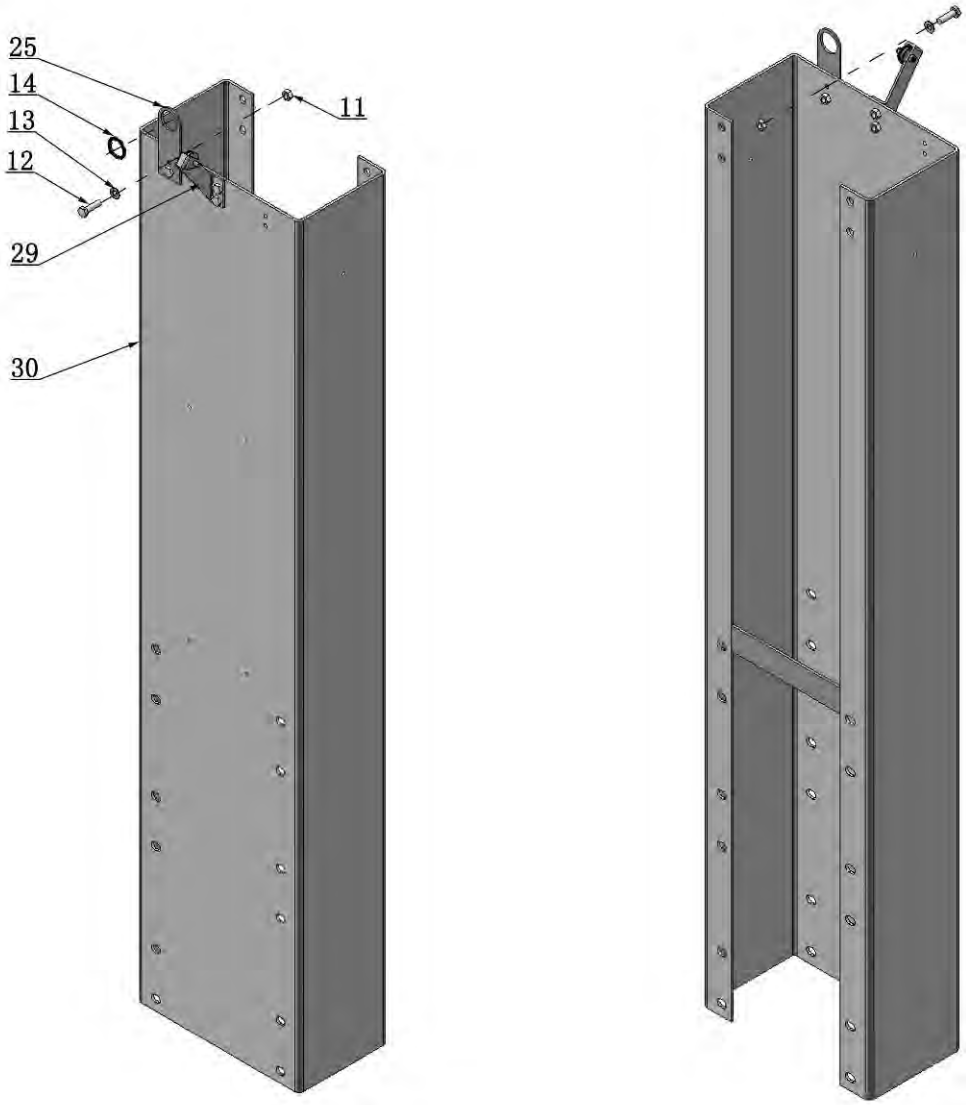
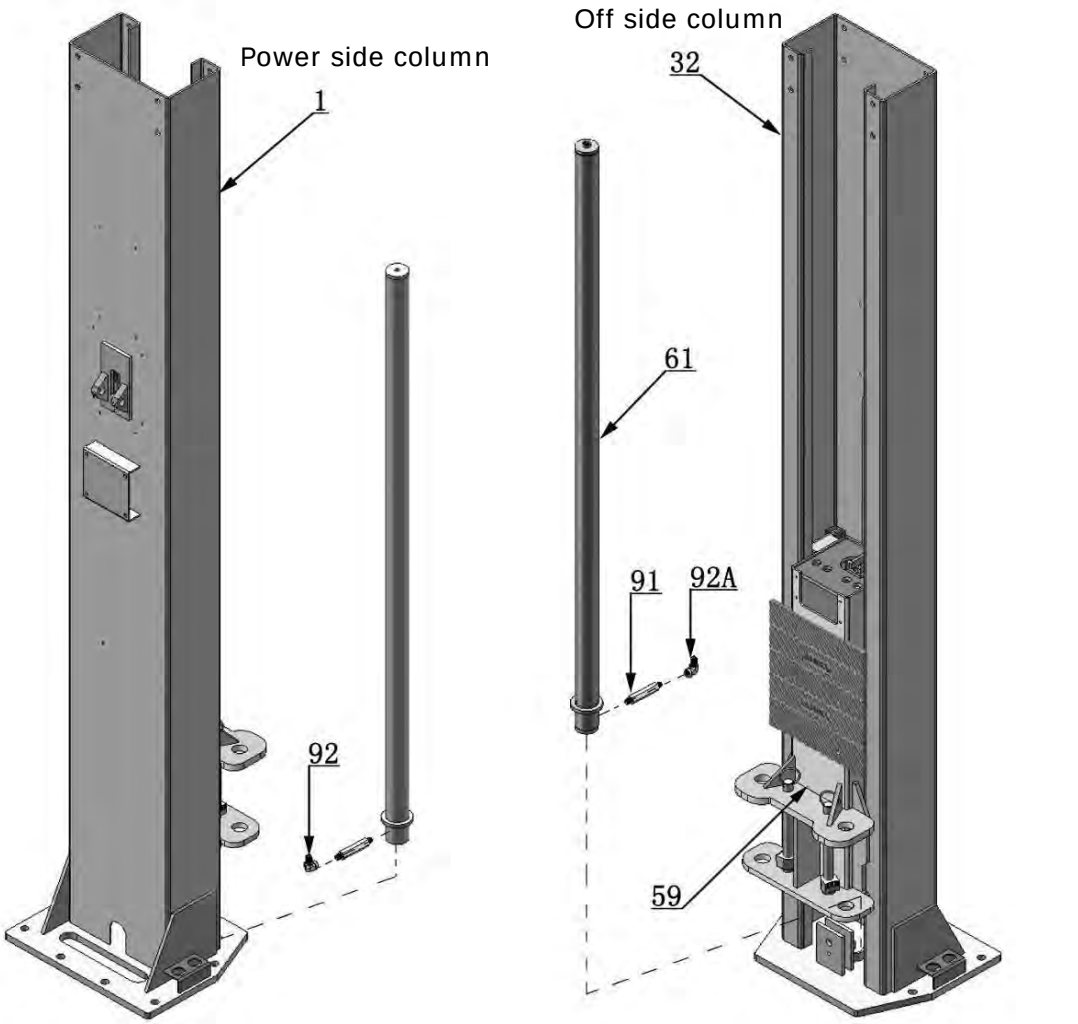


Fig. 15

E. Install hydraulic cylinders

Connect the extended straight fitting and 90° fitting, and then install the cylinder inside the carriages **(See Fig. 16)**.



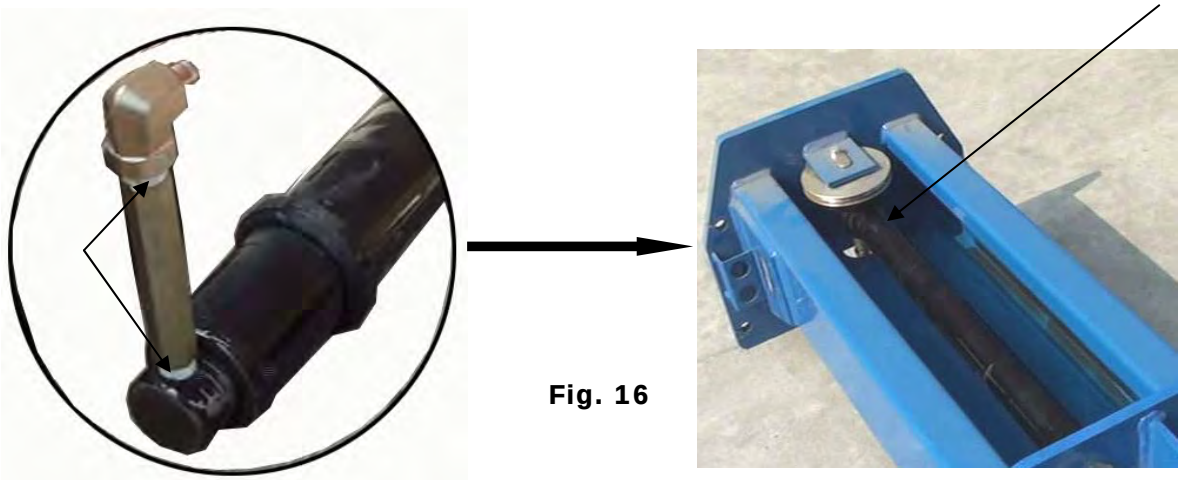


Fig. 16

F. Install columns

Lay down the two columns on the installation site parallel, position the power side column according to the actual installation site. Usually, it is suggested to install power side column on the front-right side from which vehicles are driven to the lift. This lift is designed with 2-Section columns. Adjust the height according to the ceiling height and connect the inner and outer columns.

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

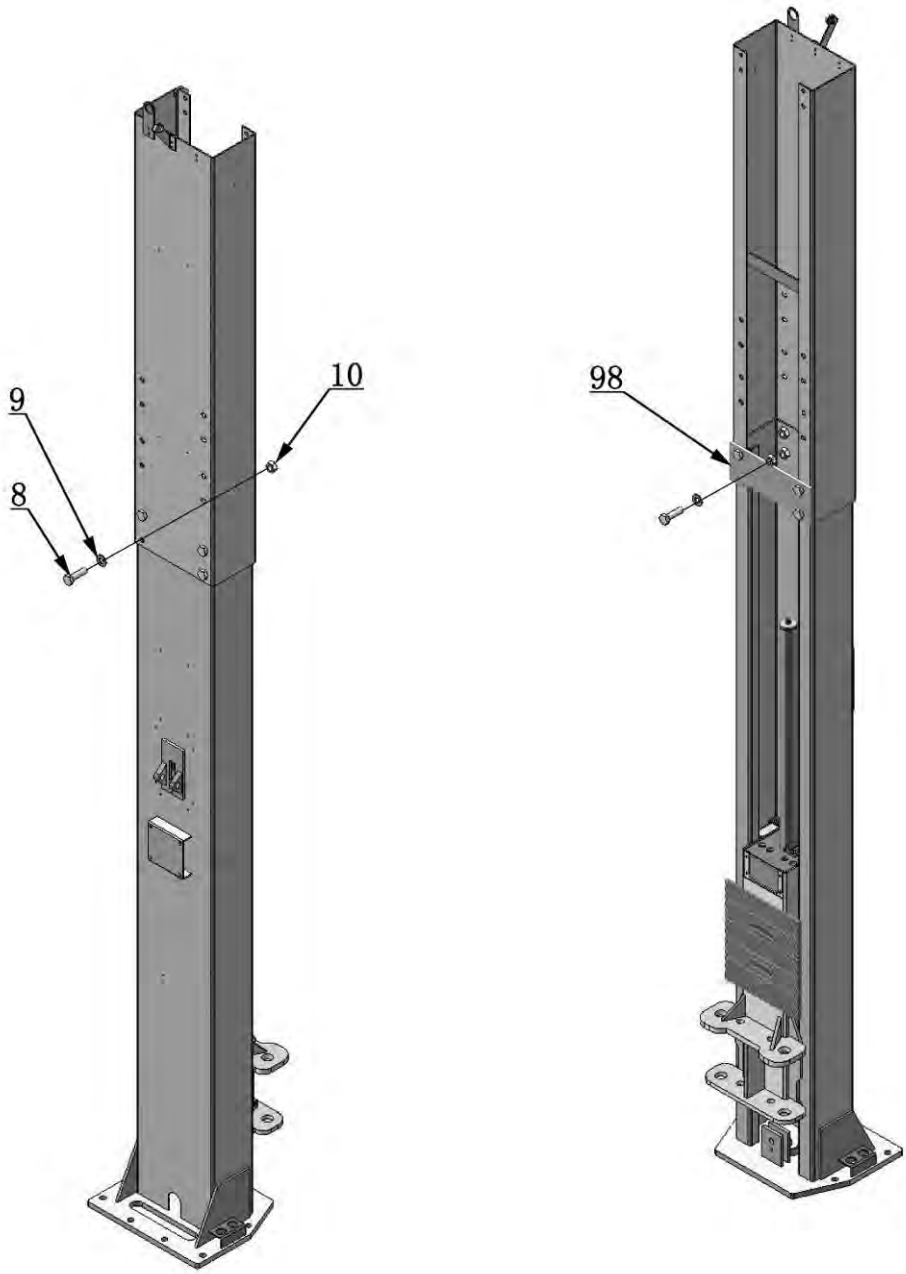


Fig. 17 High setting

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

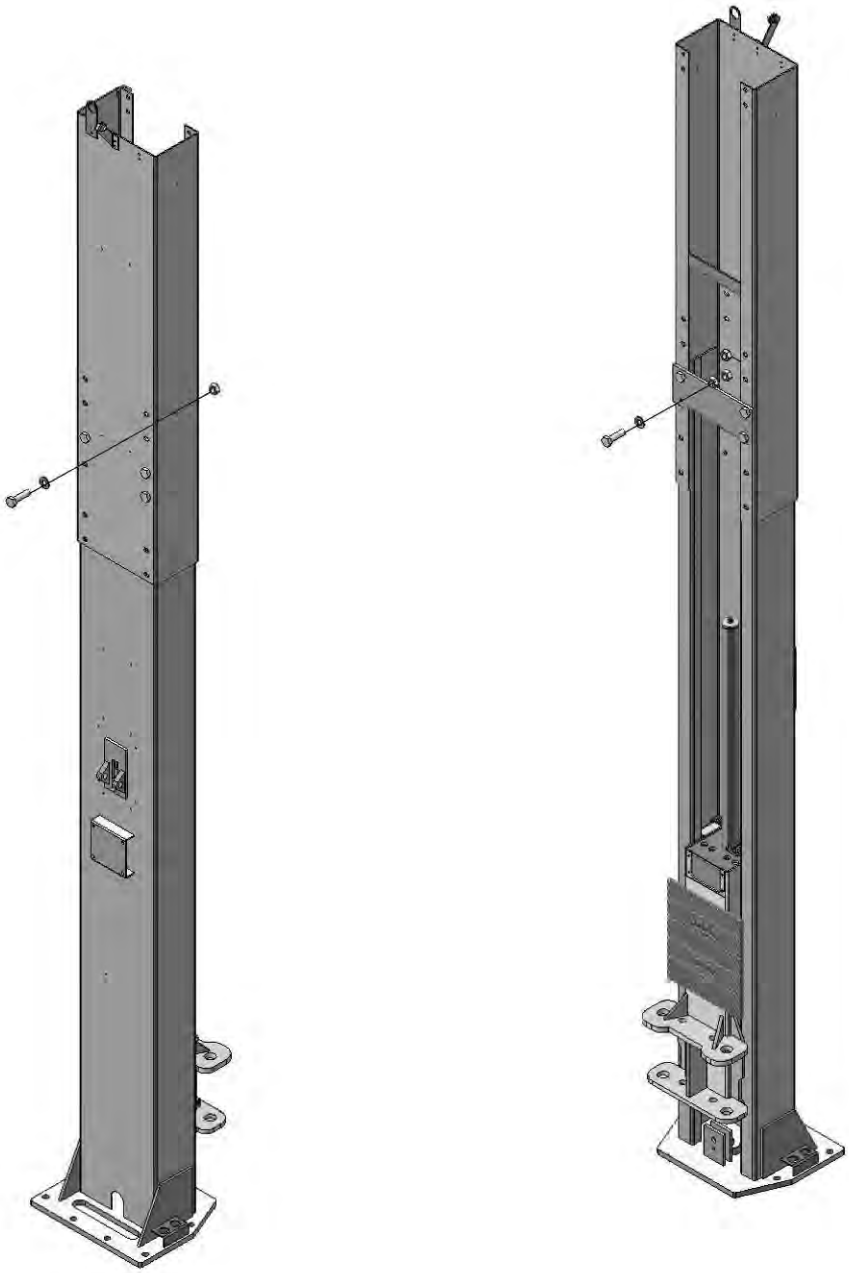


Fig. 18 Low setting

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)**.

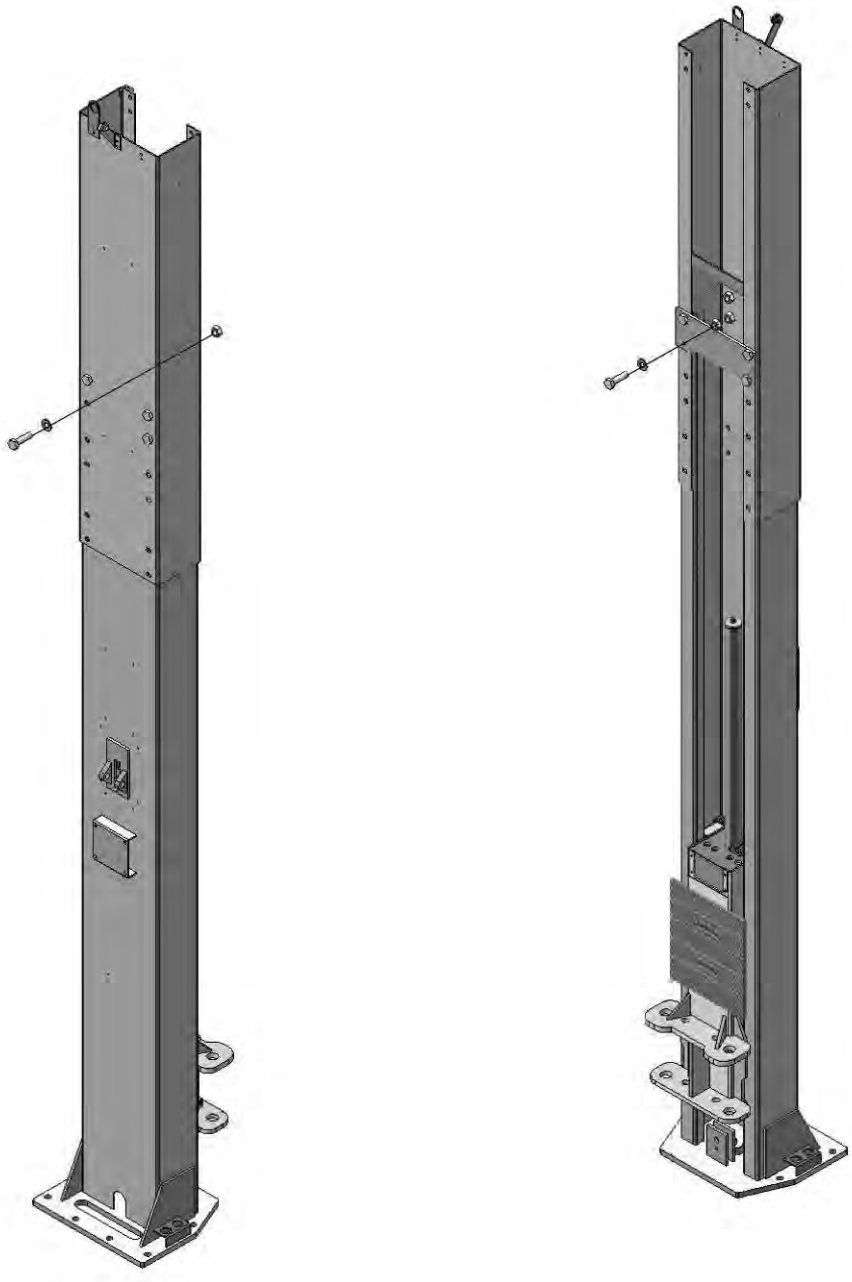


Fig. 19 Special low setting

G. Position columns (Do not drill anchor holes at this time)

Position the power side column in its designated place. Place the off side column approximately 12 1/2" from the power side column. Install the overhead top beam. Once the overhead top beam is in place and secured, the anchor holes can be drilled. **(See Fig.20 & 21).**

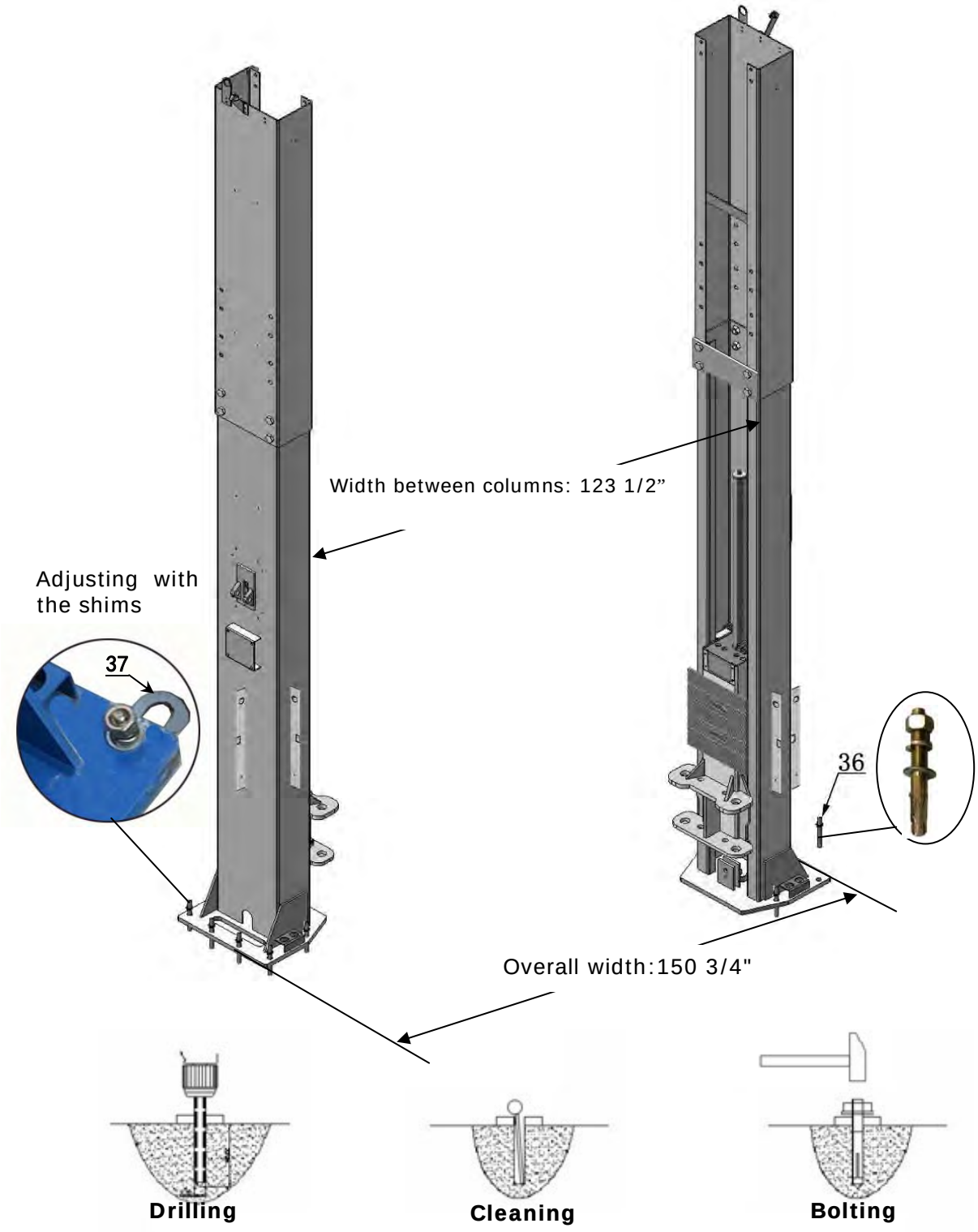


Fig. 20

H. Install overhead top beam

1. With help of the hook on the top beam, put one side of the top beam on top of the extension column and connect the top beam to the extension column with bolts, tighten the bolts. Then assemble the connecting bracket **(See Fig. 21).**

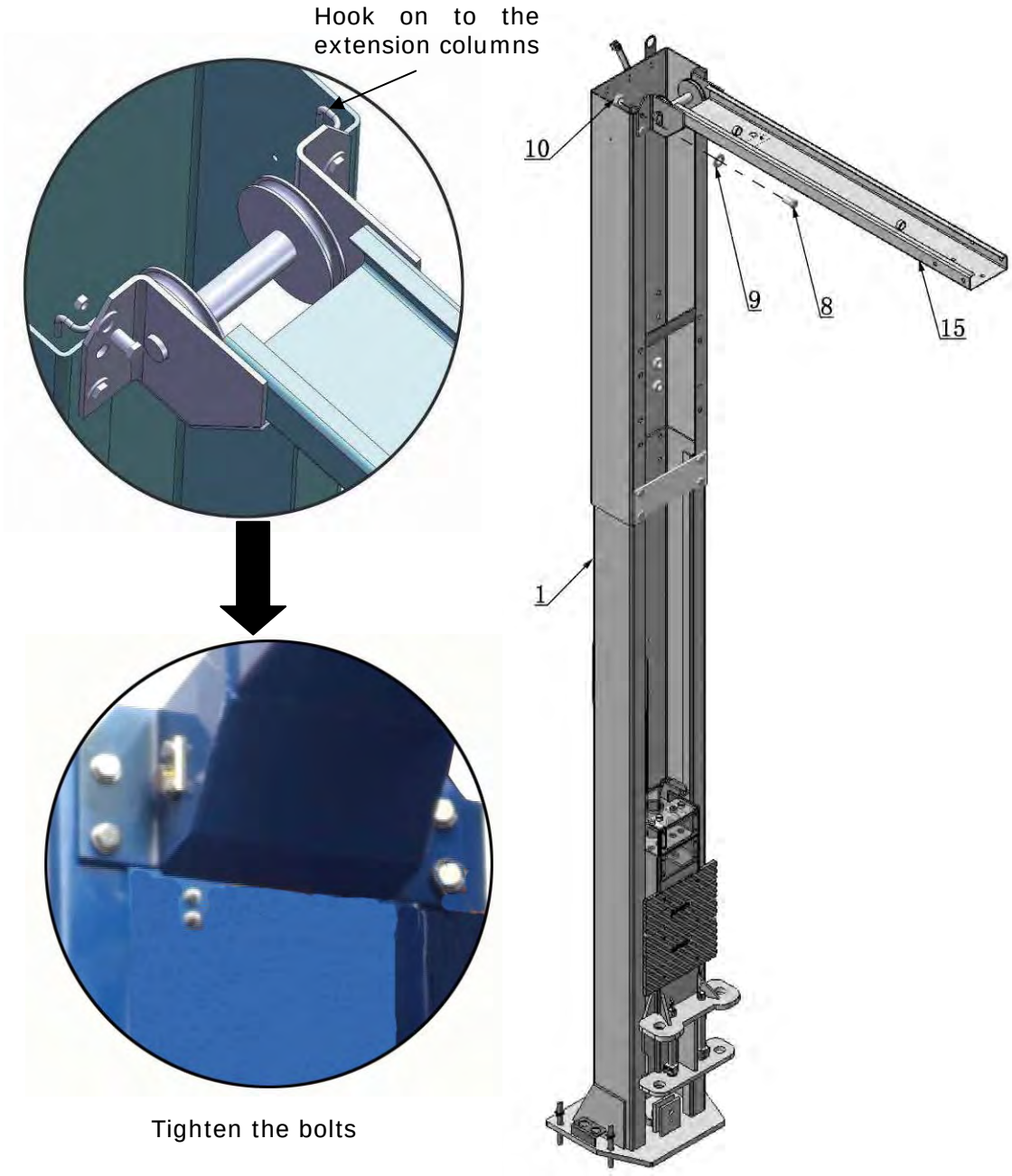


Fig. 21

2. Assemble overhead top beam, tighten the columns anchor bolts **(See Fig. 22)**.

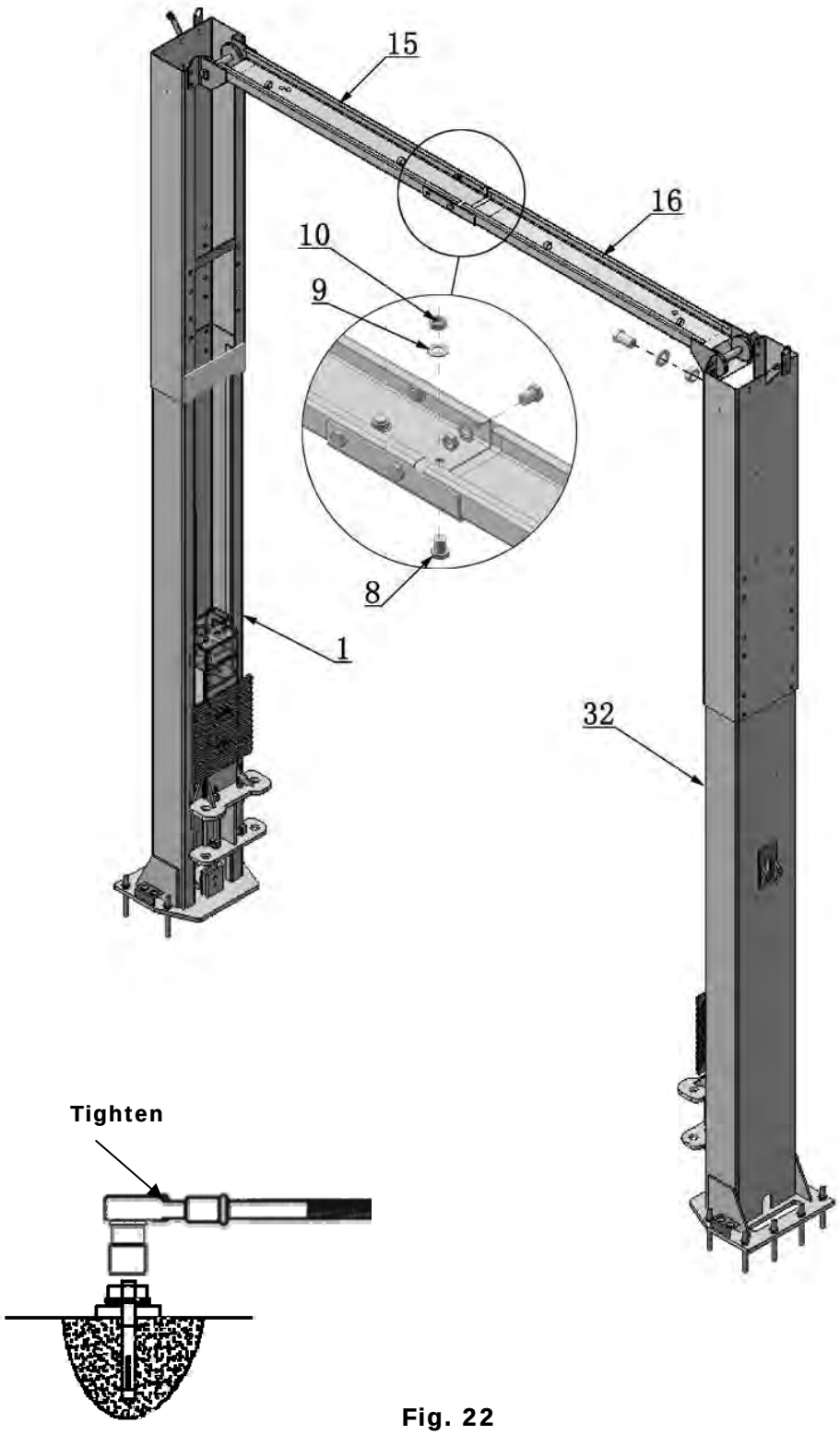


Fig. 22

I. Installing the limit switch control bar and limit switch (See Fig. 23).

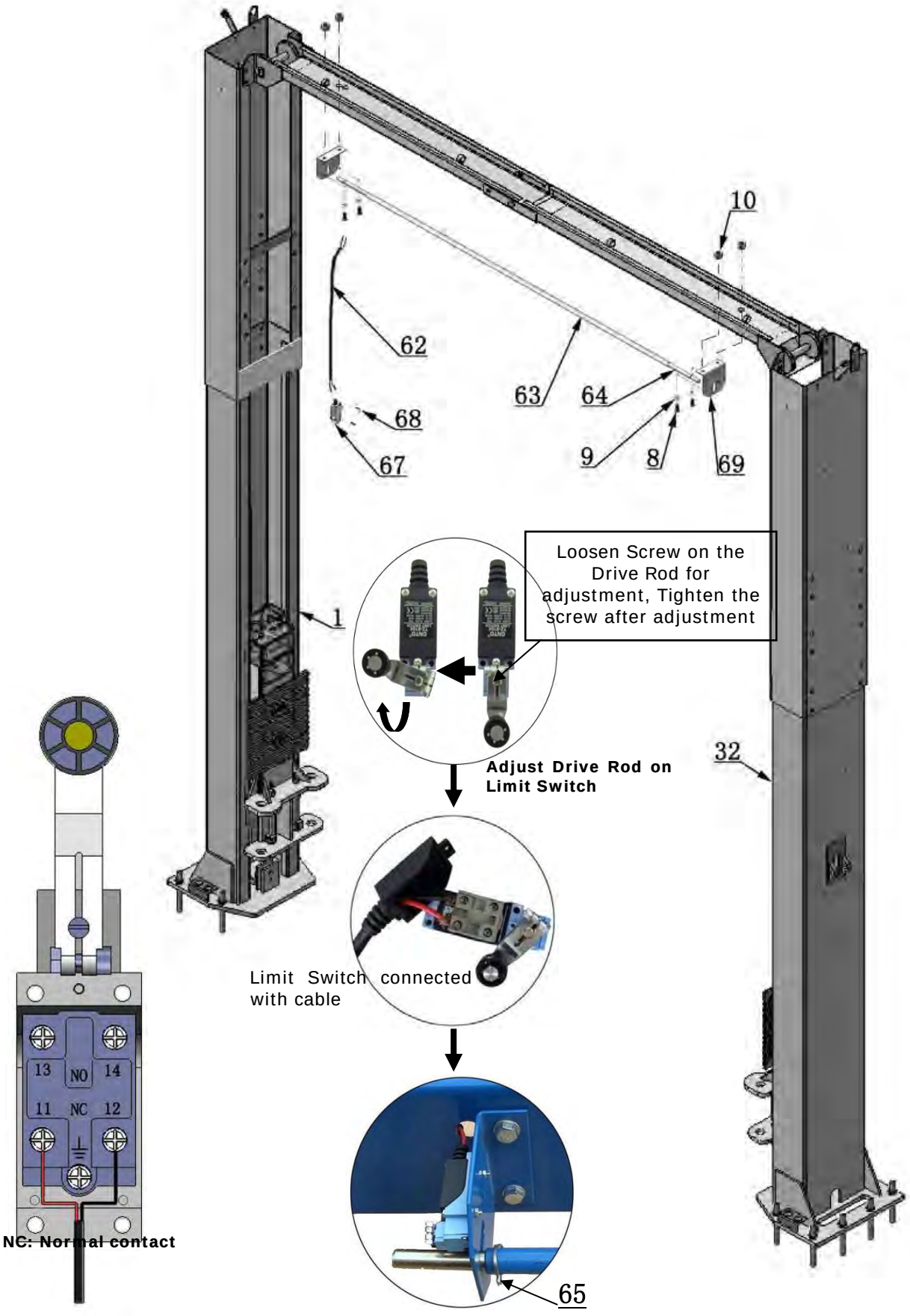


Fig. 23

J. Install safety device (See Fig. 24 & Fig. 25).

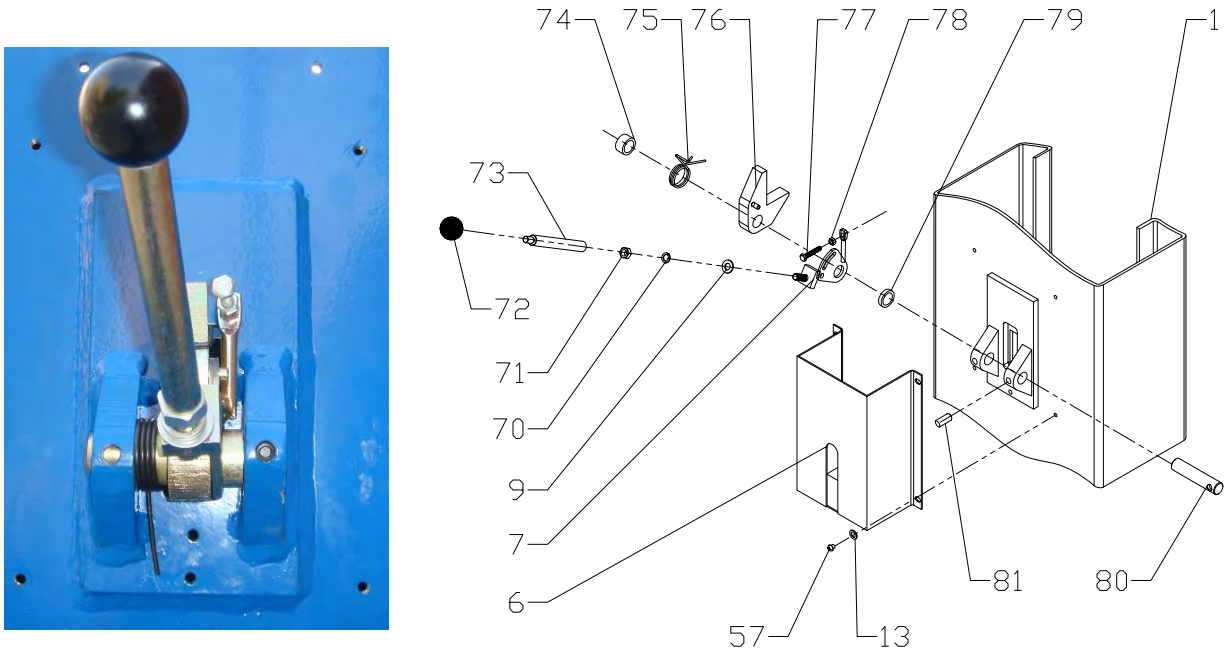


Fig. 24 Power side safety device

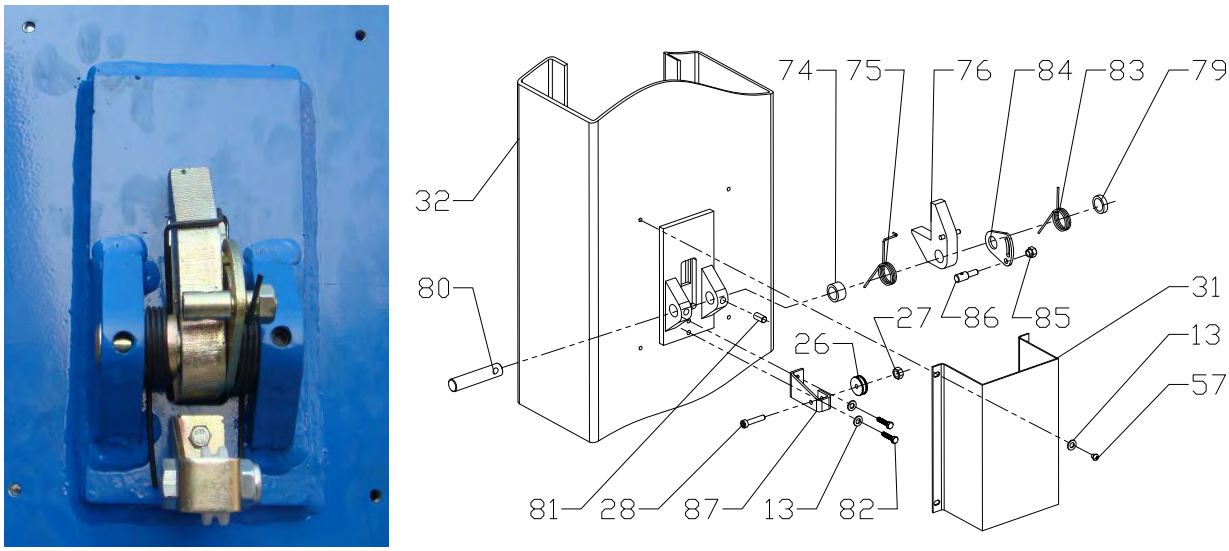


Fig. 25 Off side safety device

K. Lift the carriages up by hand and lock them at the same level **(See Fig. 26).**

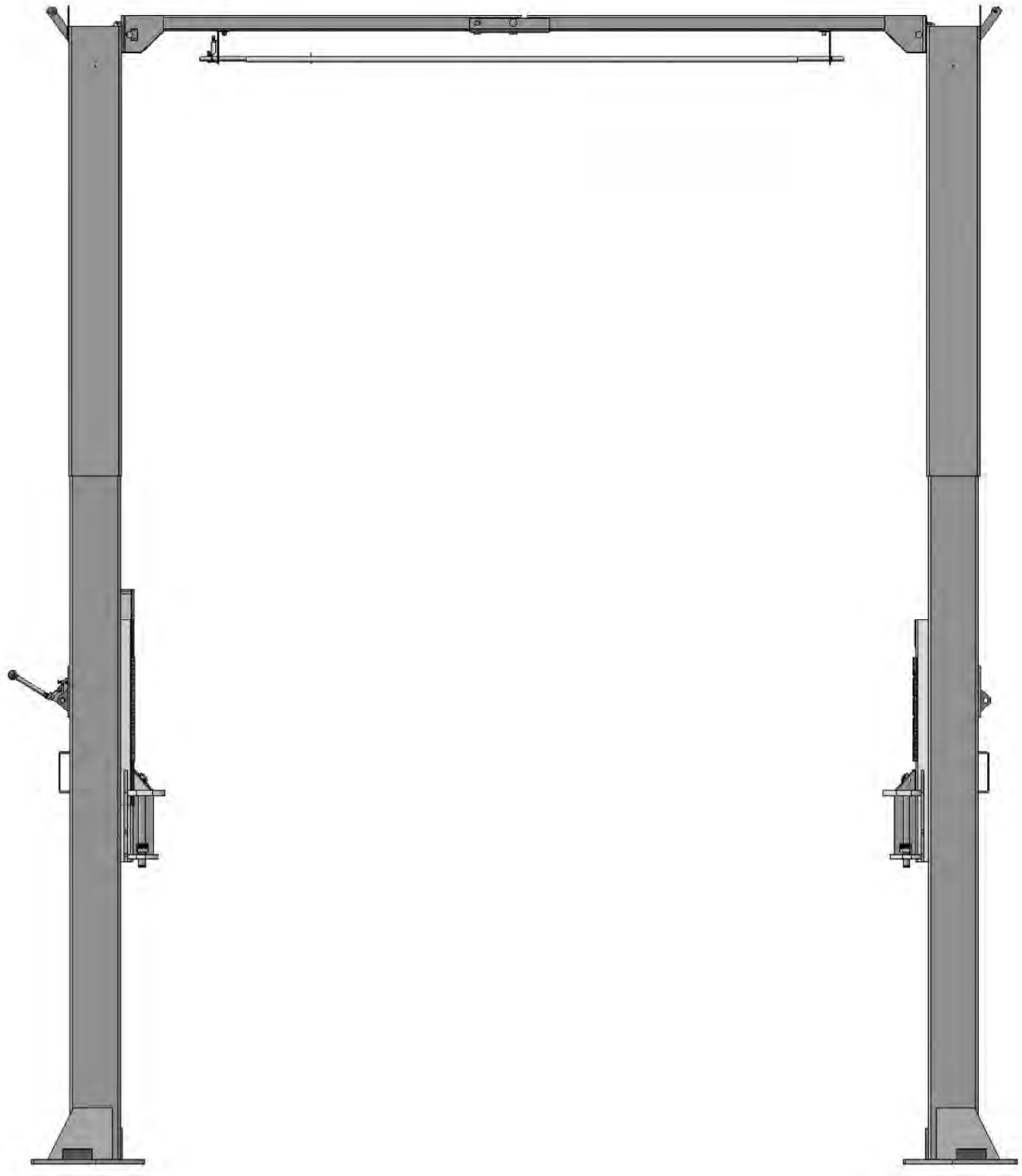


Fig. 26

L. Install cables

1. **High setting cable connection.** Suitable for ceiling height over 4500mm (177 1/8”).

1.1 Take off the carriages plastic cover, the cable passes through from the bottom of the carriages and is pulled out from the opening of the carriages, then screw the two cable nuts **(See Fig. 27).**

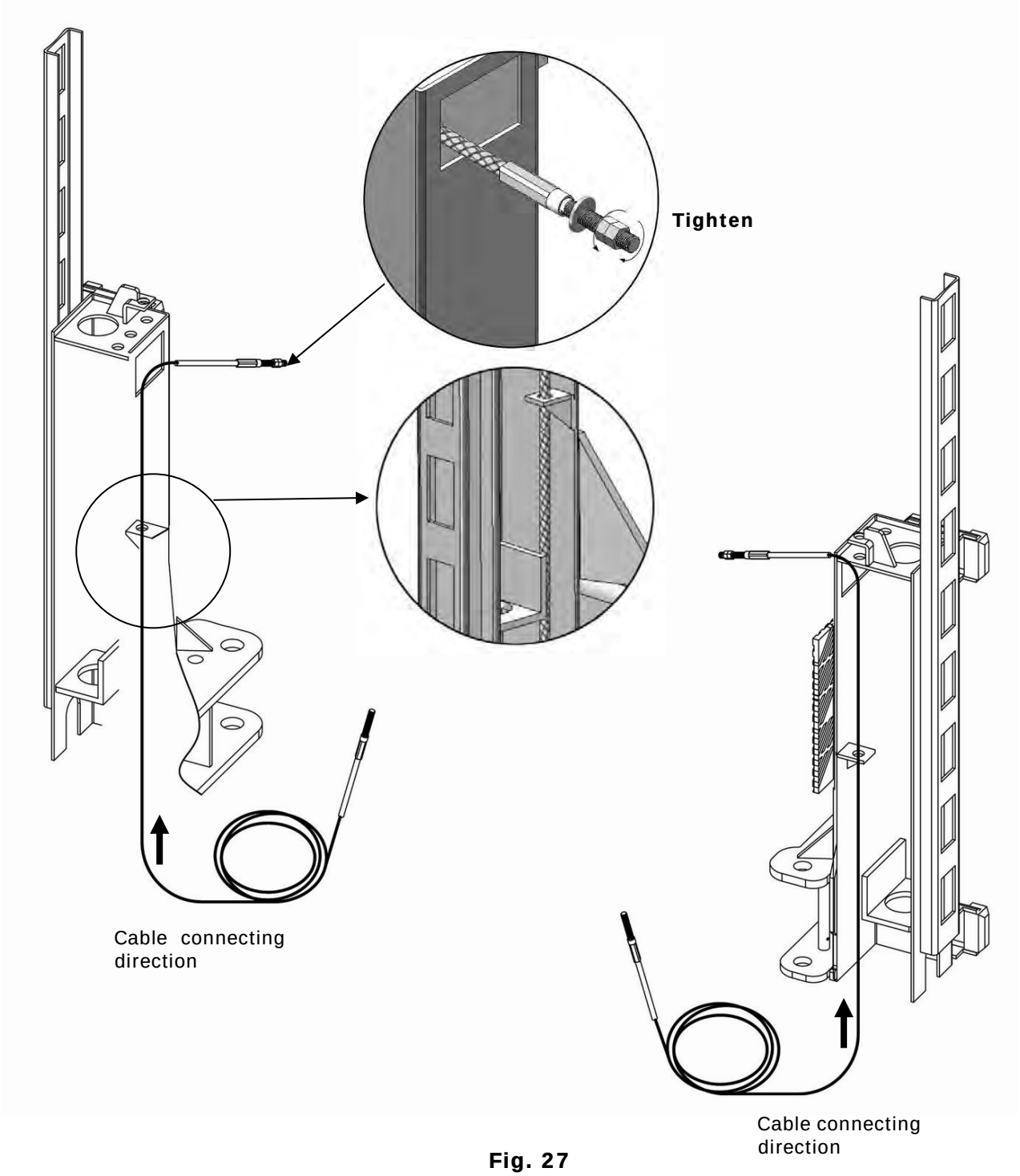


Fig. 27

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

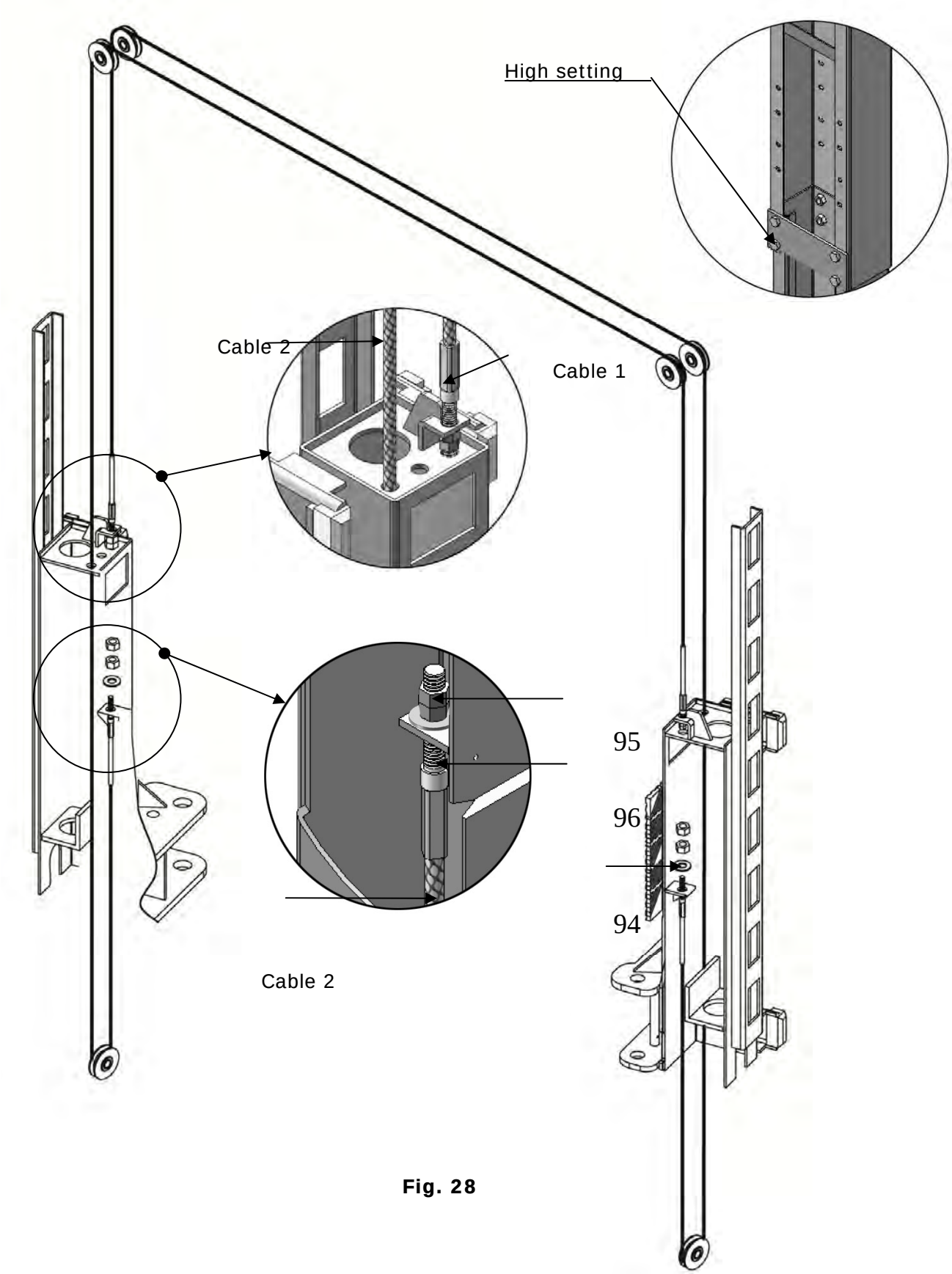


Fig. 28

2. Low setting cable connection. Suitable for ceiling height between 4200mm (165 3/8”) to 4500mm (177 1/8”) **(See Fig. 29)**.

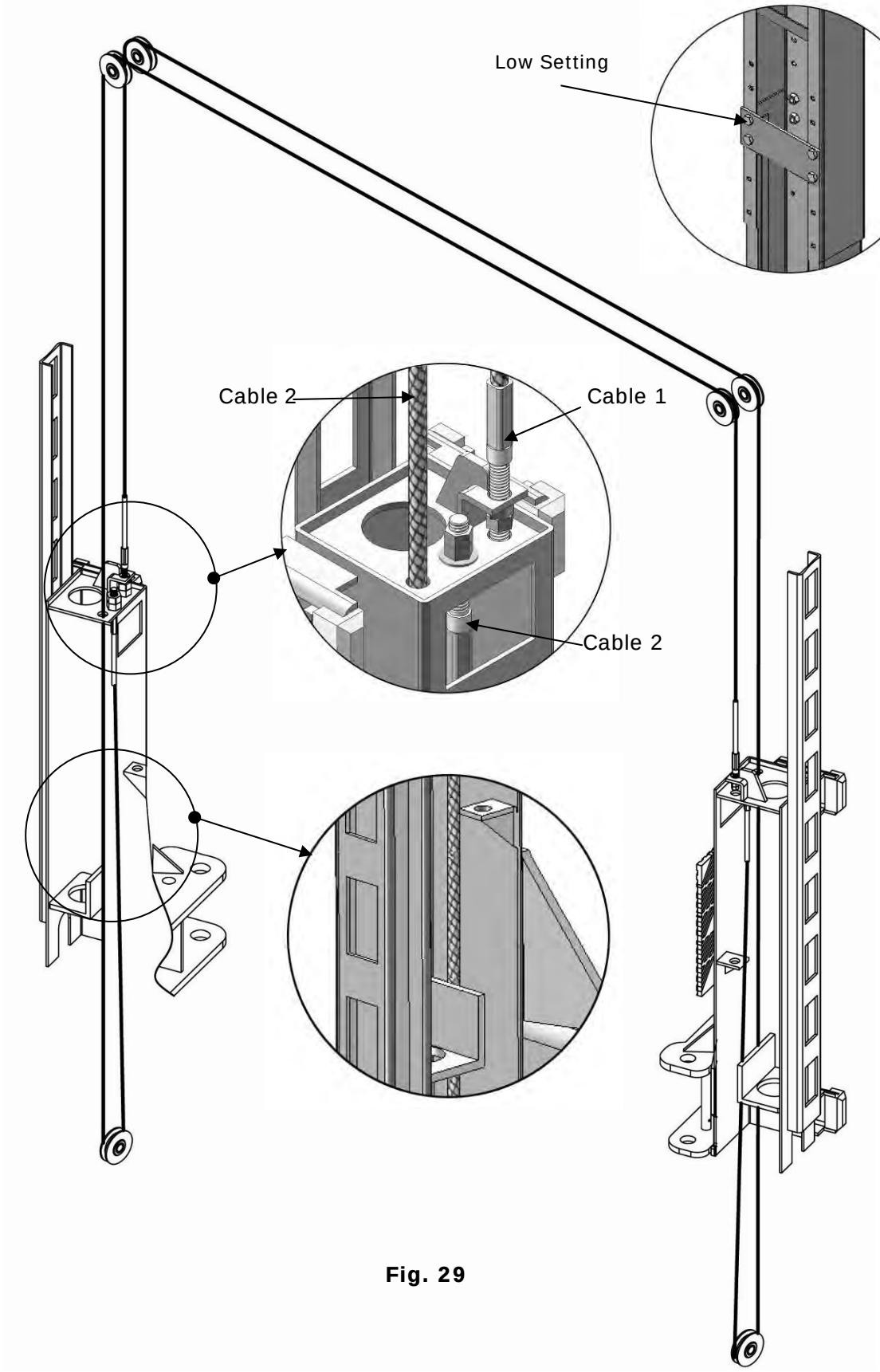


Fig. 29

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.

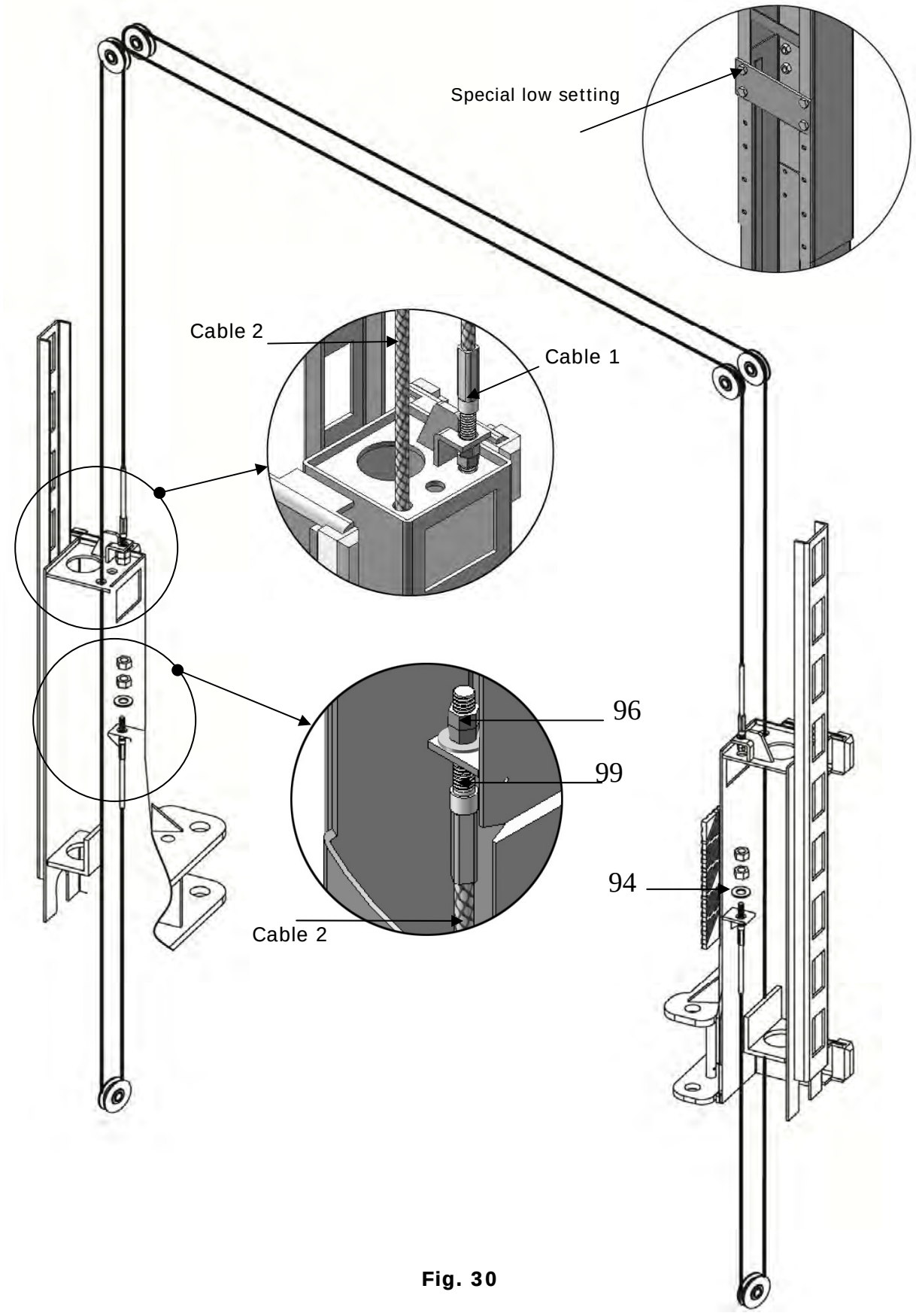


Fig. 30

M. Install power unit (See Fig. 31)

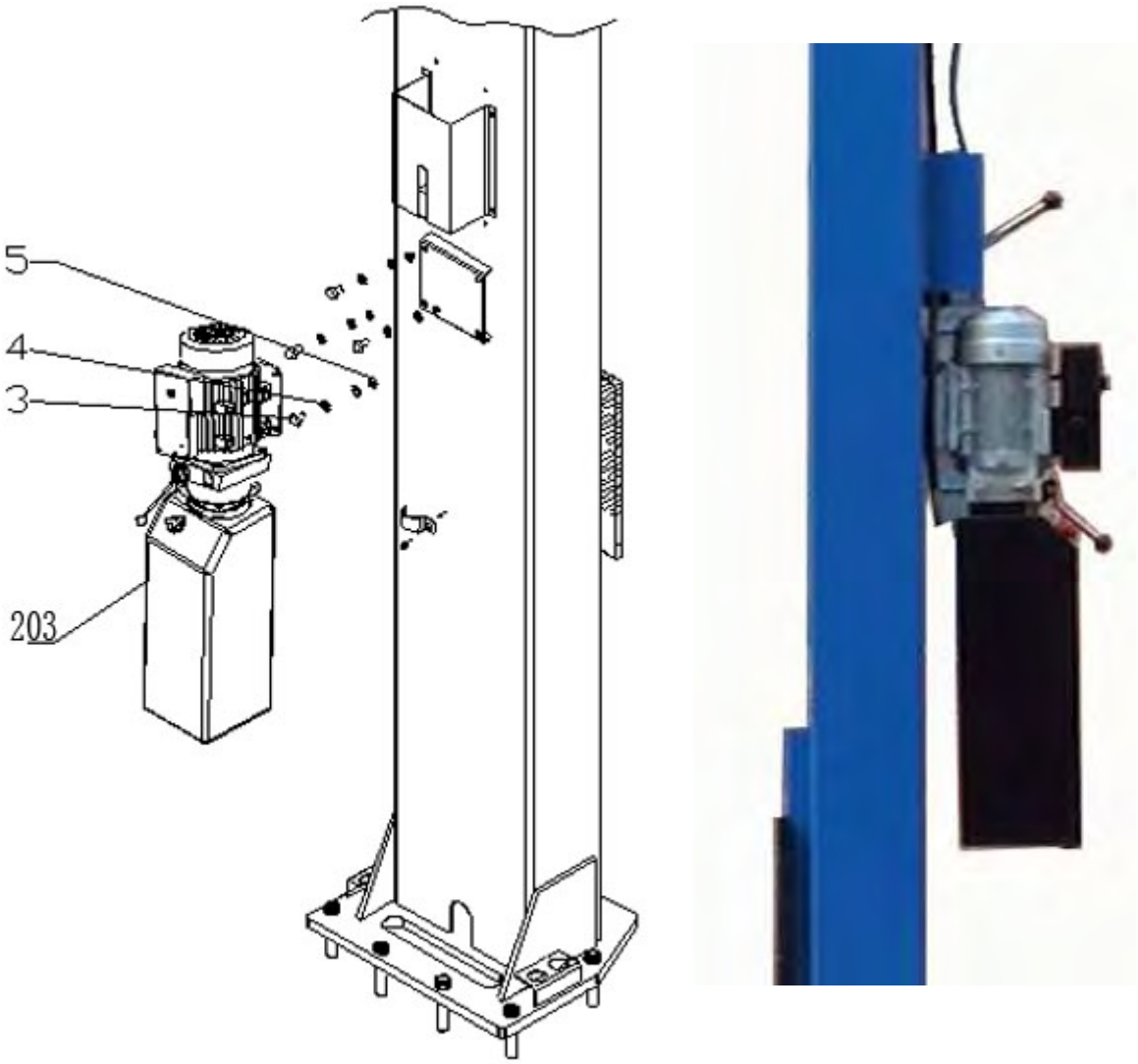


Fig. 31

N. Install oil hose.

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

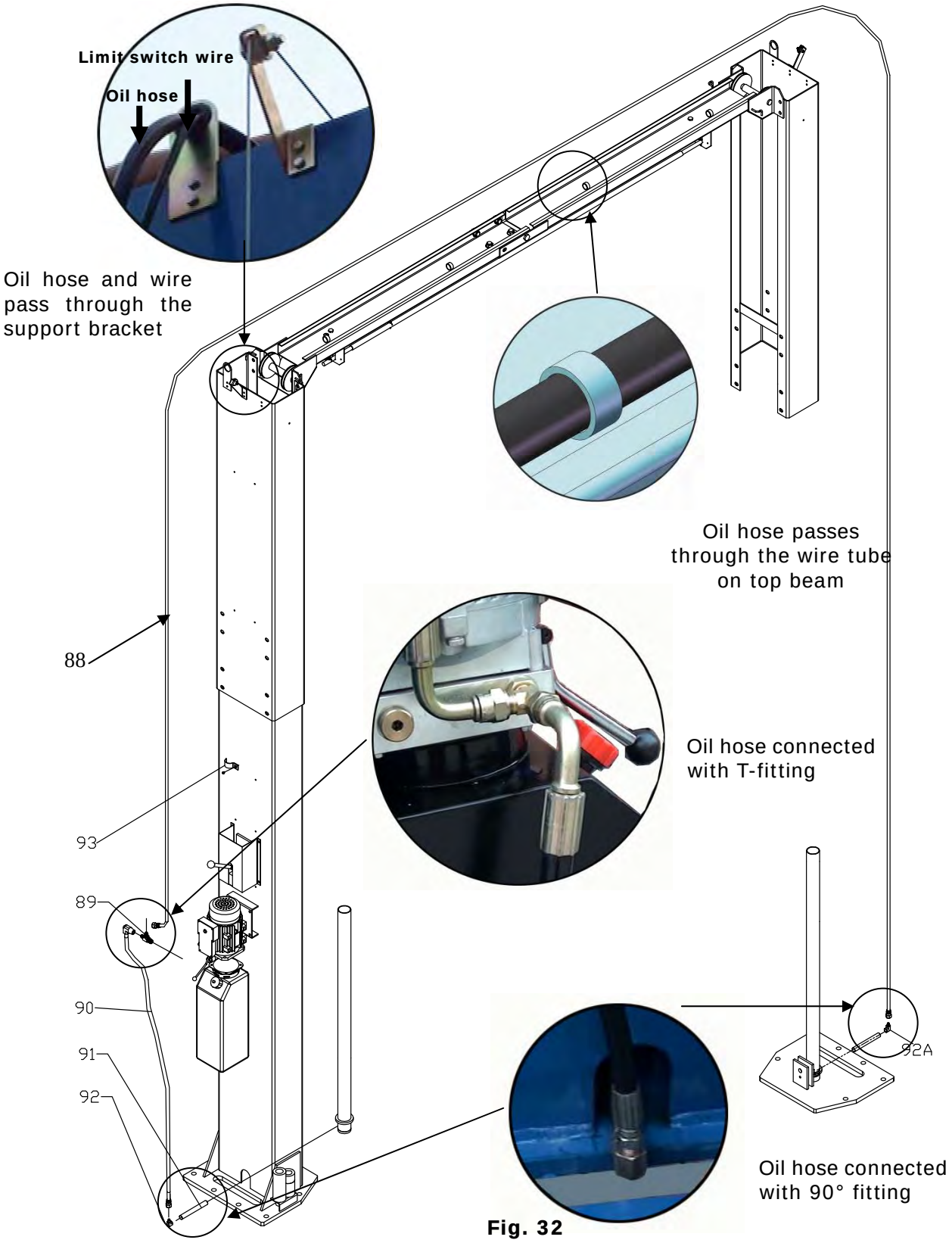


Fig. 32

O. Install the safety cable.

Install safety cable from offside safety assembly to power side safety assy., pass through the top beam **(See Fig. 33)**.

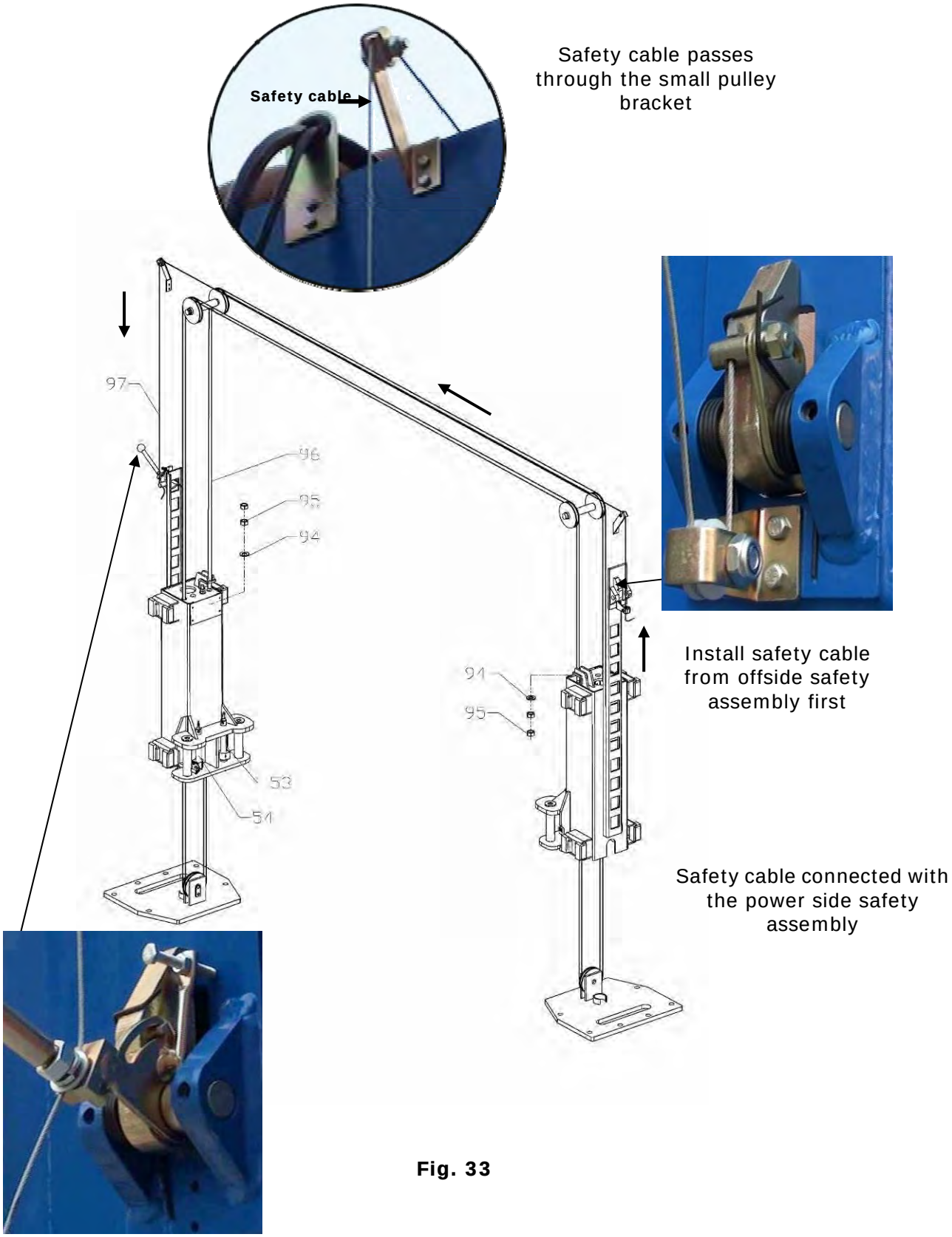


Fig. 33

P. Install retainers (See Fig. 34).

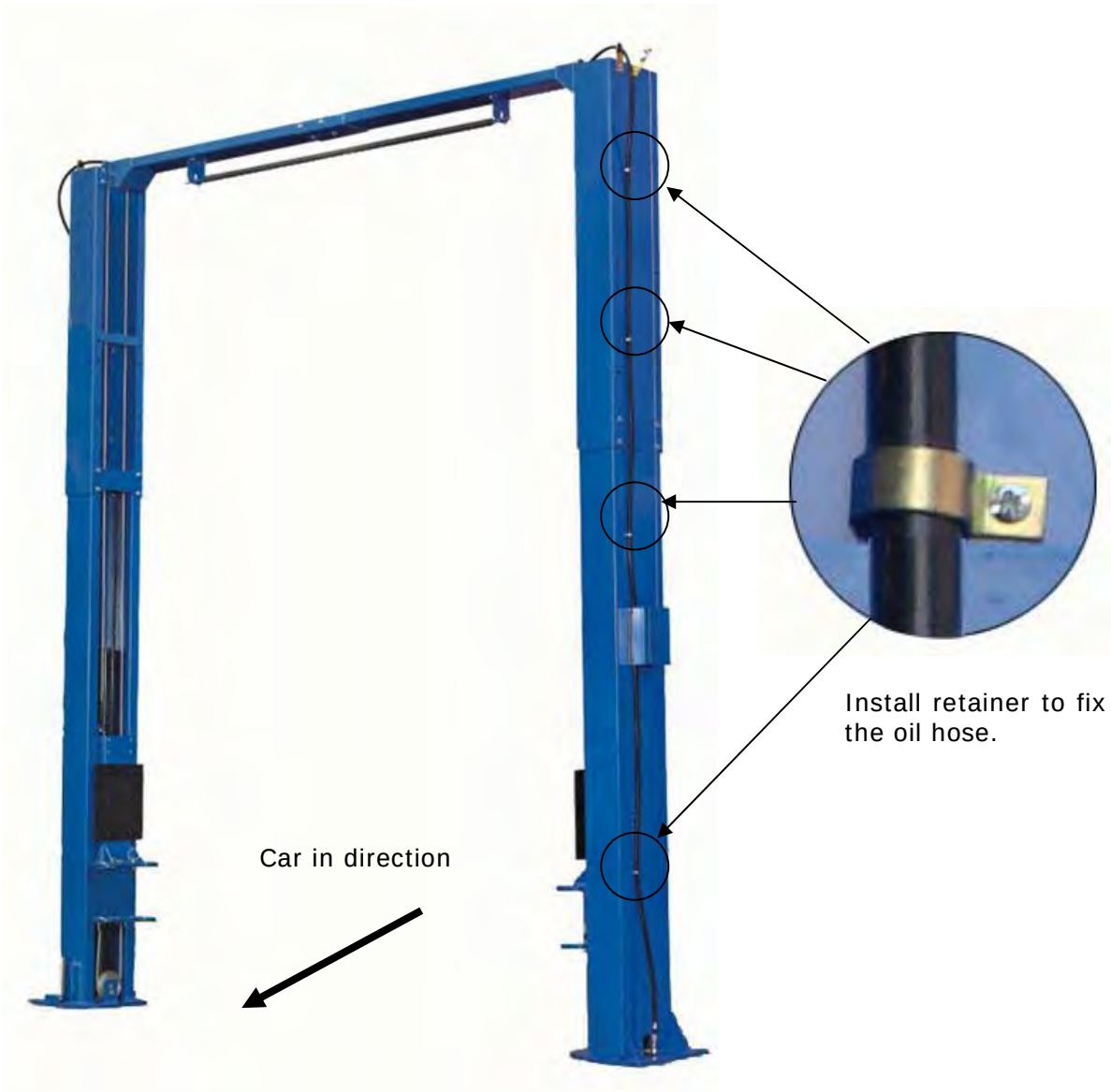


Fig. 34

Q. Install the lifting arms **(See Fig. 35)**

Lower the carriages down to the lowest position. Then use the 8# socket 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 socket bolts on the arm locks (**See Fig.38**).

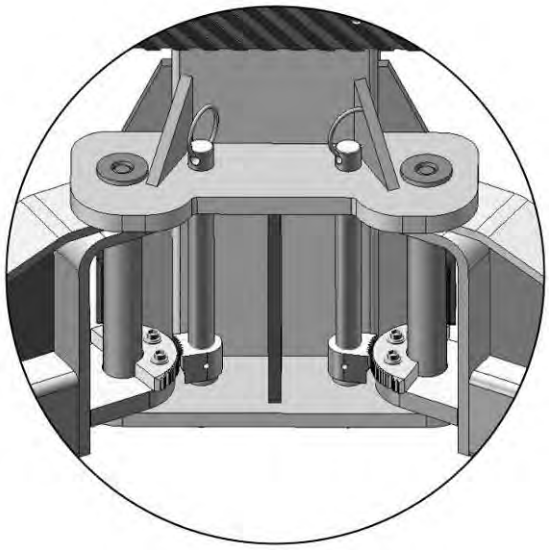
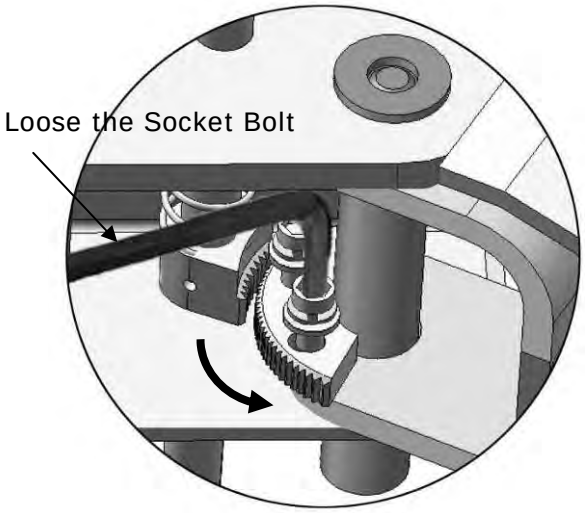
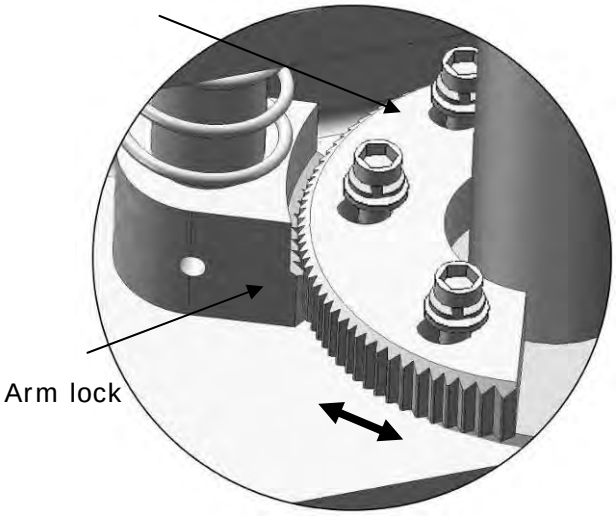


Fig. 35



Use the 8# Socket Head Wrench to loose the Socket Bolt

Fig. 36



Adjust moon gear and arm lock

Fig. 37

Locking the bolts after moon gear and arm lock engage well

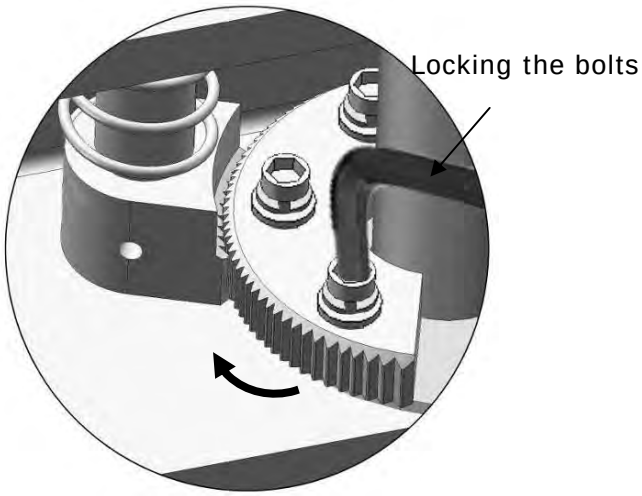


Fig. 38

R. Tighten all of the hydraulic fittings, and fill the reservoir with hydraulic oil (App. 4 gal.).

Note: For the best motor performance, use only a #46 series hydraulic oil.

S. Install electrical system

Connect the power source on the data plate of Power Unit.

Note: 1. For safety purposes, the power wiring must contact a sufficient ground.

ATLAS single phase motor

1. Remove the line of connecting terminal **4#** on the control button and **L1** on the AC contactor **(See Fig. 39)**.

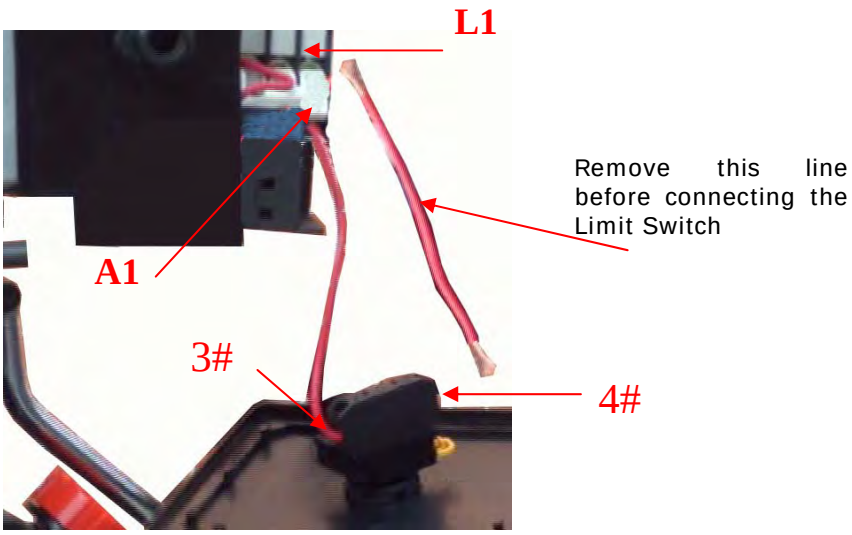


Fig. 39

2. Circuit diagram **(See Fig. 40)**

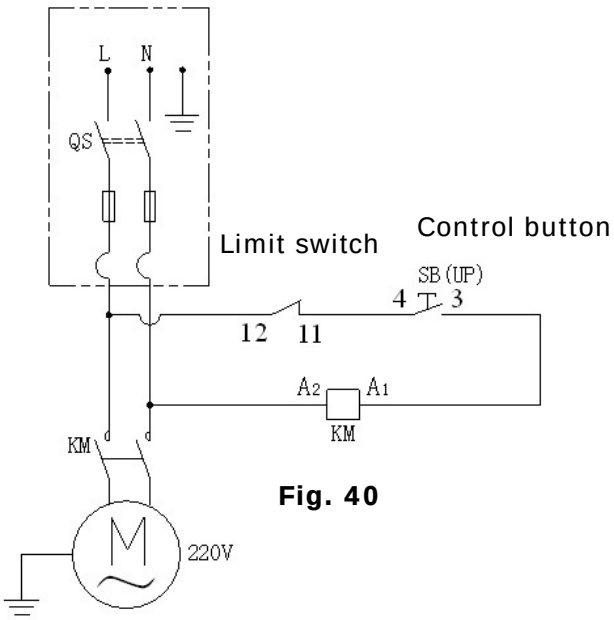


Fig. 40

3. Connection step **(See Fig. 4**

a. Connect the two power supply lines (fire wire **L** and zero wire **N**) to terminals on the AC

contactor marked **L1, L2**.

b. Connect wire **12#** on the limit switch with terminal **L1** on the AC contactor; Connect wire **11#** with terminal **4#** on the control button**.**

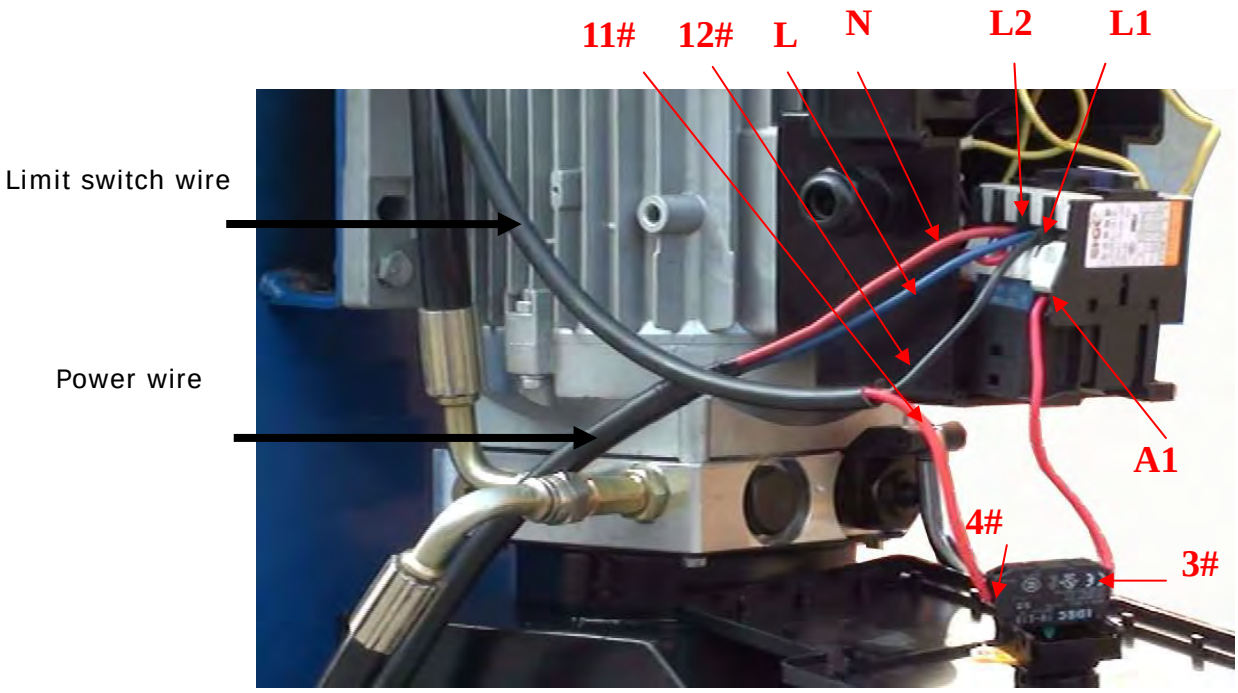


Fig. 41

4. Connection wire **(See Fig. 42)**

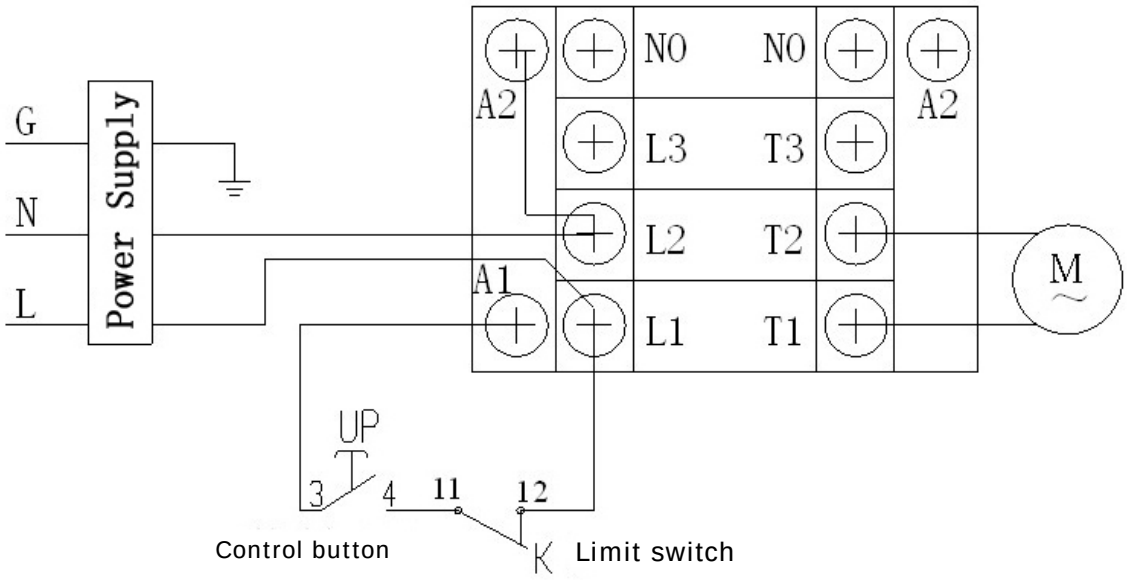


Fig. 42

III. EXPLODED VIEW

Model：PV-15P

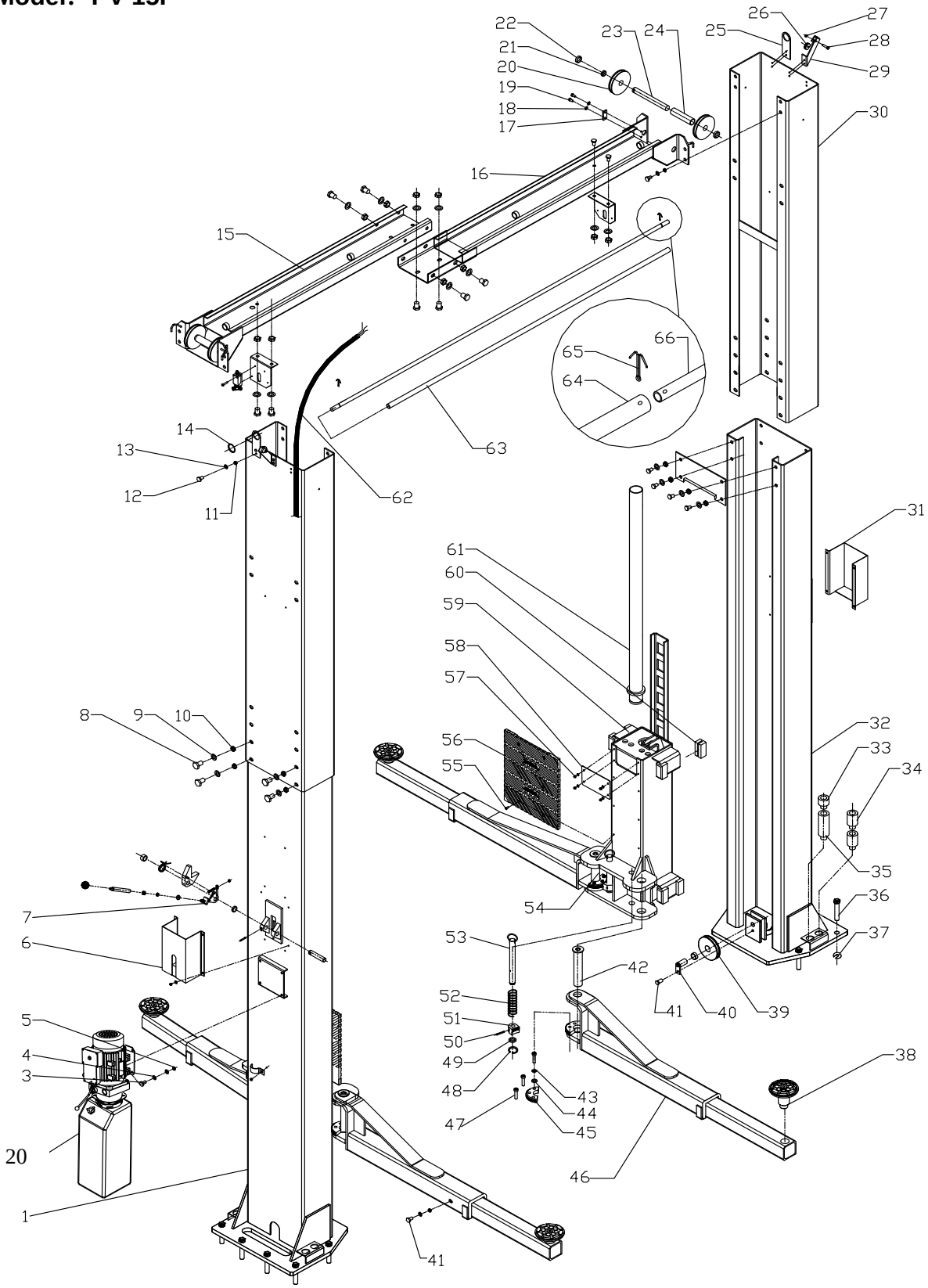


Fig. 43

Cylinders

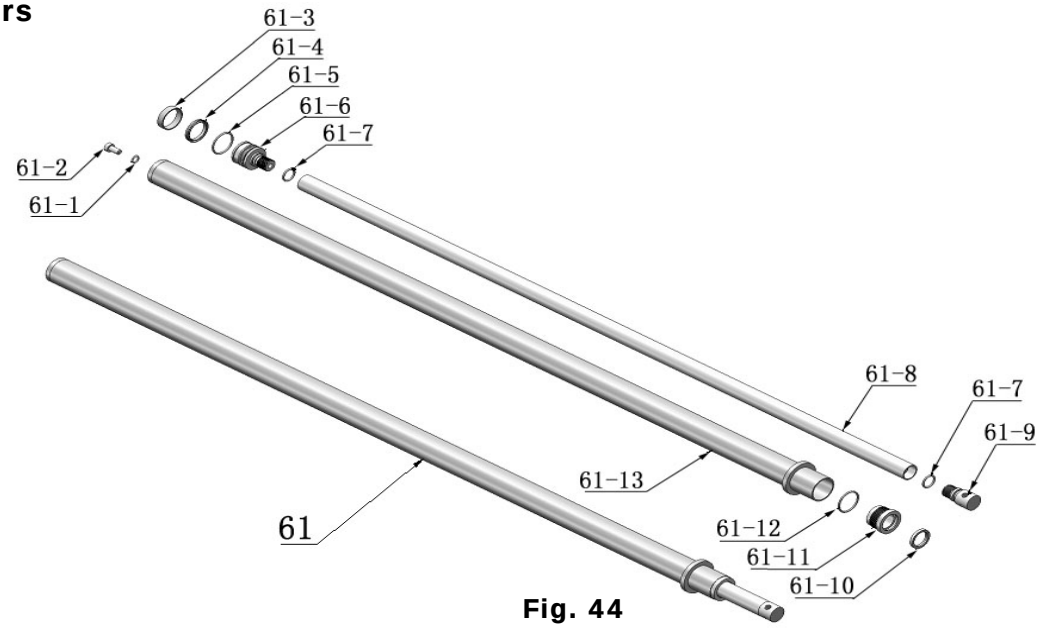


Fig. 44

ATLAS Manual power unit (Fig. 50)

220V/50HZ, Single Phase

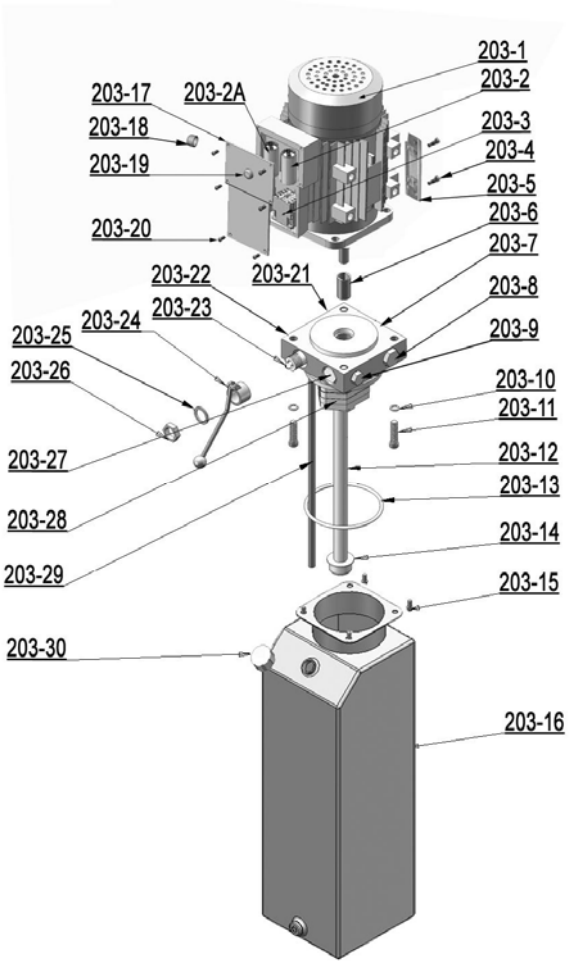


Fig. 45

Illustration of the hydraulic valve for ATLAS hydraulic power unit

a. PEAK manual power unit, 220V/50HZ, Single phase (See Fig. 51)

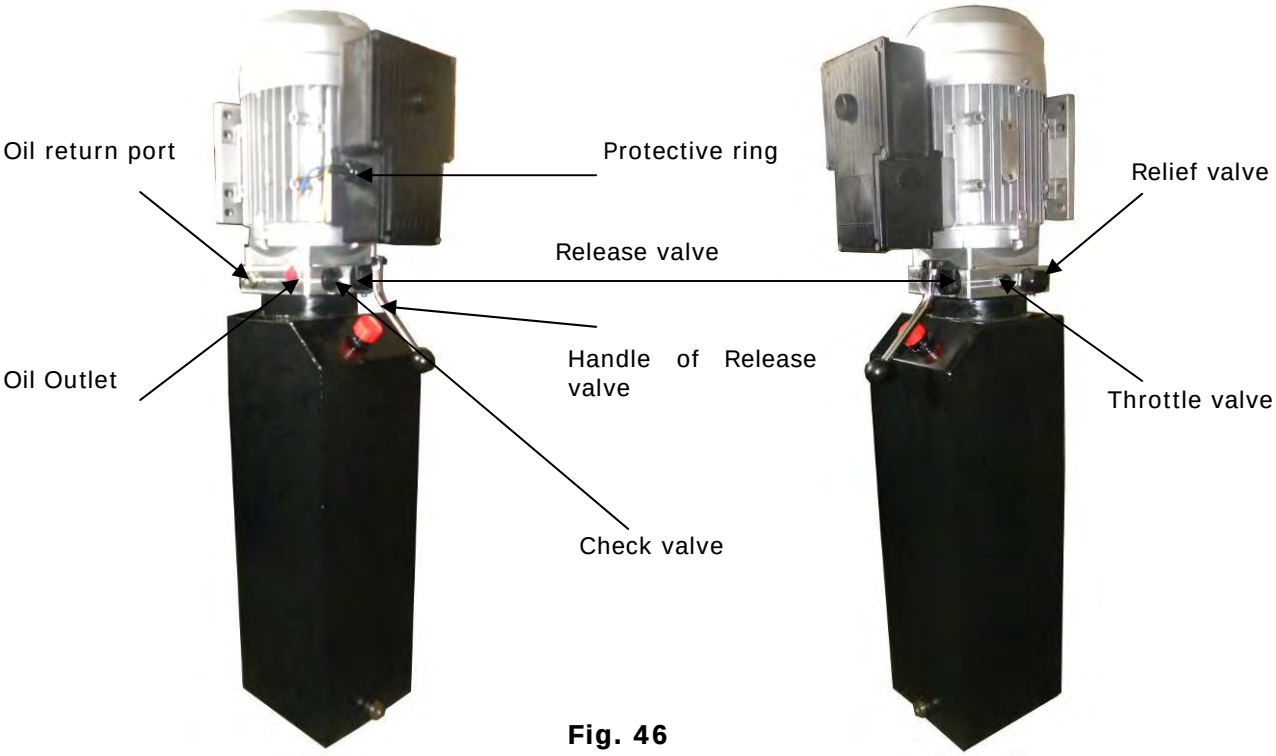


Fig. 46

Ⅴ. TEST RUN

1. Adjust synchronizing cable (See Fig. 47)

Use Spanner to hold the cable fitting. Meanwhile, use ratchet spanner to tighten the cable nut. Make sure two cables have the same tension so the two carriages locks click at the same time. Replace the plastic covers on the carriages.

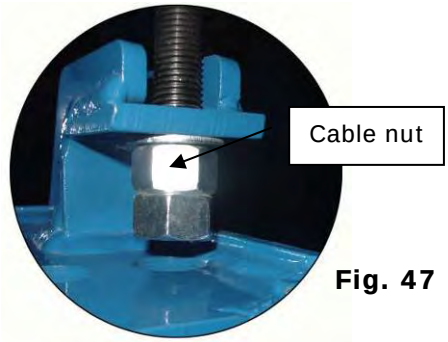


Fig. 47

If the carriage does not synchronize when lifting, please tighten the cable nut.

2. Adjust the safety cable

Lift the carriages and lock them at the same height, strain the safety cable and then release a little, and then tighten the cable nuts. Check for proper operation.

3. Exhaust air

This hydraulic system is designed to bleed air by loosing the bleeding plug. Lift the carriages to about 12" and loosen the bleeding plugs. Lower the lift until fluid comes out og the bleeding plugs. Retighten bleeding plugs. **(See Fig. 48)**.

Fig. 48

4. Adjust the lower speed (Only for PEAK power unit)

You can adjust the lowering speed of the lift if needed: Loosen the fixing nut on the throttle valve, and then turn the throttle valve clockwise to decrease the lower speed, or counterclockwise to increase the lower speed. Do not forget to tighten the fixing nut after the lowering speed adjustment has been done.

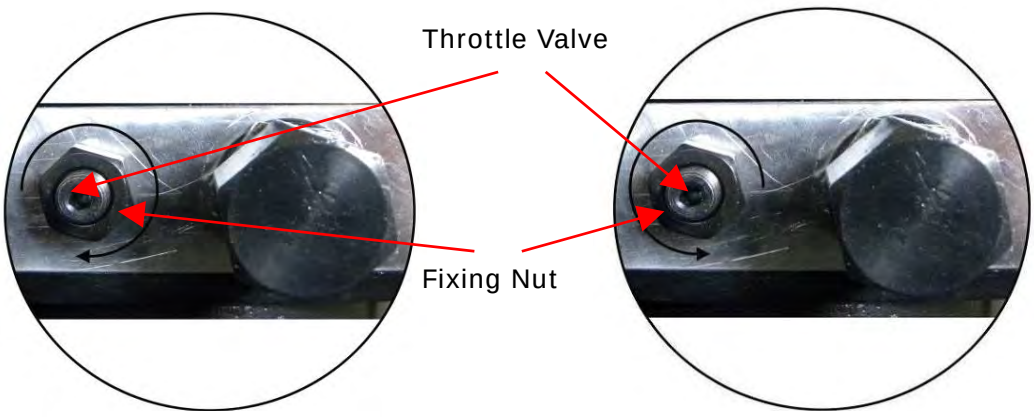


Fig. 49

5. Test with load

After finishing the above adjustment, test run the lift with a load. Run the lift in low position several times first, make sure the carriages raise and lower at the same time. The safety locks should lock and release at the same time. Test run the lift to the top.

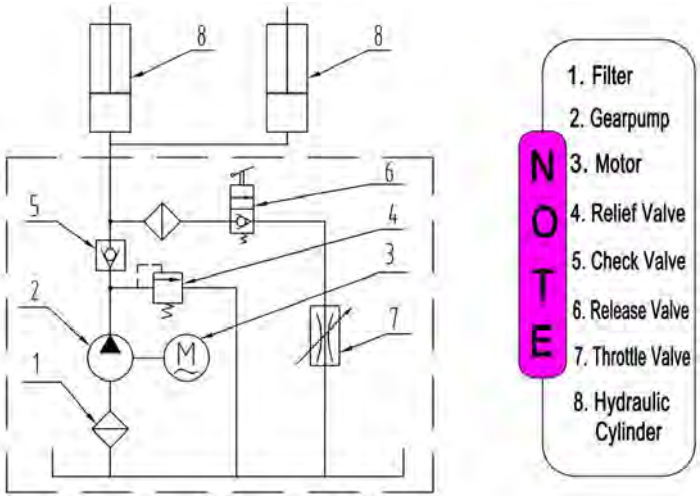


Fig. 50 Hydraulic System

Ⅵ. OPERATION INSTRUCTIONS

Please read the safety tips carefully before operating the lift

To lift vehicle

1. Keep clean of site near the lift;
2. Position lift arms to the lowest position;
3. To shortest lift arms;
4. Open lift arms;
5. Position vehicle between columns;
6. Move arms to the vehicle's lifting point;
   Note: The four lift arms must at the same time contact the vehicle's lifting point where manufacturers recommended
7. Press the **UP** button until the lift pads contact underside of vehicle totally. Recheck to make sure vehicle is secure;
8. Continue to raise the lift slowly to the desired working height, ensuring the balance of the vehicle;
9. Push lowering handle to lower lift onto the nearest safety lock. The vehicle is ready to repair.

To lower vehicle

1. Be sure clear of around and under the lift, only leaving operator in lift area;
2. Press the button of **UP** to raise the vehicle slightly, and then release the safety locks, lower vehicle by pushing lowering handle.
3. Open the arms and position them to the shortest length;
4. Drive away the vehicle.

IV. MAINTENANCE SCHEDULE

Monthly:

1. Re-torque the anchor bolts to 80-100ft 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 safety locks and make sure they are in good condition;
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 tighten, 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 the condition and function of the safety locks

V. TROUBLE SHOOTING

TROUBLE	CAUSE	REMEDY
Motor does not run	1. Button does not work 2. Wiring connections are not in good condition 3. Motor burned out 4. Height limit switch is damaged 5. AC contactor burned out	1. Replace button 2.Repair all wiring connections 3. Repair or replace motor 4.Replace the limit switch 5. Replace AC contactor
Motor runs but the lift is not raised	1. Motor runs in reverse rotation 2. Gear pump out of operation 3. Release valve is damaged 4. Relief valve or check valve is damaged 5. Low oil level	1.Reverse the two power wire 2.Repair or replace 3. Repair or replace 4.Repair or replace 5.Fill tank
Lift does not stay up	1. Release valve is stuck open 2. Relief valve or check valve leakage 3. Cylinder or fittings leak	Repair or replace
Lift raises slowly	1. Oil line is jammed 2. Motor running on low voltage 3. Oil mixed with air 4. Gear pump leaks 5. Overload lifting	1. Clean the oil line 2. Check electrical system 3. Fill tank 4. Replace pump 5. Check load
Lift can not lower	1. Safety locks may be engaged 2. Release valve damaged 3. Safety cable broken 4. Oil system is jammed	1. Release the safeties 2. Repair or replace 3. Replace 4. Clean the oil system

IX. PARTS LIST FOR MODEL PV-15P

Item	Part#	Description	Qty.	Note
1	217001A	Power side column	1	
203	209002A	Power unit	1	
3	209003	Bolt	4	
4	209034	Lock washer	4	
5	217002	Nut	4	
6	217003	Power side lock cover	1	
7	217004	Main cam lock	1	
8	217069	Bolt	34	
9	206006	Washer	35	
10	206023	Self locking nut	34	
11	420018	Self locking nut	8	
12	217013	Bolt	8	
13	420045	Washer	26	
14	217025	Protective ring	2	
15	217015A	Right overhead bar	1	
16	217016A	Left overhead bar	1	
17	217017	Pin stop	2	
18	209033	Washer	8	
19	209055	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	
26	206009	Plastic pulley	3	
27	209056	Self locking nut	3	
28	209046	Bolt	3	
29	217026	Safety cable bracket	2	
30	217027A	Extension column	2	
31	217028	Offside lock cover	1	
32	217034A	Offside column	1	
33	209051	Adapter 1.5”	4	
34	209052	Adapter 3”	4	
35	209053	Adapter 6”	4	
36	209059A	Anchor bolt	12	

Item	Part#	Description	Qty.	Note
37	620065	Shim	10	
38	680030	Rubber pad frame support	4	
39	217036	Bottom pulley	2	
40	217037	Bottom pin	2	
41	209038	Bolt	6	
42	217047A	Arm pin	4	
43	209039	Lock washer	18	
44	209022	Washer	18	
45	206049	Moon gear	4	
46	217052B	Lifting arm	4	
47	206048	Allen bolt	12	
48	206032	C-clip	4	
49	217043	Limit ring	4	
50	206036	Roll pin	4	
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	Flat head screw	12	
56	217053	Rubber pad	2	
57	209009	Cup head bolt	28	
58	217054	Carriage plastic cover	2	
59	217055B	Carriage	2	
60	217070	Slider block	16	
61	217056B	Cylinder	2	
62	217065B	Wire cable	1	
63	206025A	Foam Cushion	1	
64	206025	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	Nut	1	
72	217005	Plastic ball	1	
73	217006	Lock handle	1	
74	217007	Large spacer	2	

Item	Part#	Description	Qty.	Note
75	217008	Main spring	2	
76	217009	Main lock	2	
77	217010	Bolt	1	
78	217011	Nut	1	
79	217012	Small spacer	2	
80	217050	Main lock pin	2	
81	217051	Screw	2	
82	217066	Bolt	2	
83	217030	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	217057B	Overhead hose	1	
89	217058A	T-fitting for power unit	1	
90	217059	Short hose	1	
91	217060A	Cylinder pipe	2	
92	217061A	90 Fitting	1	
92A	217061B	90 Fitting	1	
93	217048	Hose clamp	12	
94	420029	Cable nut washer	4	
95	209066	Cable nut	8	
96	217063B	Cable with nut	2	
97	217064B	Safety cable	1	
98	217068	Column connecting plate	2	
For optional short cable and hose				
99	217112	Short cable	2	
100	217113	Short hose	1	

Parts For Hydraulic Cylinder (See Fig. 49)				
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	
61-7	209075	O-Ring	2	
61-8	217089	Piston rod	2	
61-9	217077	Piston rod fitting	2	
61-10	209078	Dust ring	2	
Item	**Part#**	**Description**	**Qty.**	**Note**
61-11	217079	Head cap	2	
61-12	217080	O-Ring	2	
61-13	217091	Bore weldment	2	

Parts For PEAK Manual Power Unit, 220V/50Hz, Single phase (See Fig. 50)				
203-1	440014	Motor	1	
203-2	440015	Start capacitor	1	
203-2A	440016	Run capacitor	1	
203-3	209112	AC contactor	1	
203-4	440017	Allen bolt	4	
203-5	440018	Motor fix frame	2	
203-6	209083A	Motor connecting shaft	1	
203-7	440019	Valve body	1	
203-8	209085A	Relief valve	1	
203-9	209113	Throttle valve	1	
203-10	209086A	Lock washer	4	
203-11	209087A	Allen bolt	4	
203-12	440020	Inlet pipe	1	
203-13	209089A	O-Ring	1	
203-14	209090A	Filter	1	
203-15	440021	bolt	4	
203-16	440022	Reservoir	1	
203-17	440023	Cover of motor terminal box	1	
203-18	209109	Protective ring	1	
203-19	209099A	Push button	1	
203-20	440024	Screw	6	
203-21	209110A	Oil return port	1	
203-22	209100A	Oil outlet	1	
203-23	209101A	Release valve	1	
203-24	209102A	Handle of release valve	1	
203-25	209103A	Washer	1	
203-26	209104A	Nut	1	
203-27	209105A	Check valve	1	
203-28	440025	Gear pump	1	
203-29	440026	Oil return pipe	1	
203-30	440027	Filler cap	1	

Parts For PEAK Manual Power Unit 380V/50Hz, Three phase (See Fig. 50)				
203A-1	440028	Motor	1	
203A-2	209112	AC contactor	1	
203A-3	440017	Allen bolt	4	
203A-4	440018	Motor fix frame	2	
203A-5	209083A	Motor connecting shaft	1	
203A-6	440019	Valve body	1	
203A-7	209085A	Relief valve	1	
203A-8	209113	Throttle valve	1	
203A-9	209086A	Lock washer	4	
203A-10	209087A	Allen bolt	4	
203A-11	440020	Inlet pipe	1	
203A-12	209089A	O-Ring	1	
203A-13	209090A	Filter	1	
203A-14	440021	Bolt	4	
203A-15	440022	Reservoir	1	
203A-16	440029	Cover of motor terminal box	1	
203A-17	209109	Protective ring	1	
203A-18	209099A	Push button	1	
203A-19	440024	Screw	2	
203A-20	209110A	Oil return port	1	
203A-21	209100A	Oil outlet	1	
203A-22	209101A	Release Valve	1	
203A-23	209102A	Handle of release valve	1	
203A-24	209103A	Washer	1	
203A-25	209104A	Nut	1	
203A-26	209105A	Check valve	1	
203A-27	440025	Gear pump	1	
203A-28	440026	Oil return pipe	1	
203A-29	440027	Filler cap	1	