AMGO® Hydraulics

Original

# Installation And Service Manual

## FOUR POST LIFT
## Model: PRO-18  PRO-18A

**Cargo Claims**

If there is any missing or damaged product during transportation, the buyer must not ate on the shipping paperwork or refuse the shipment. NOTATE ALL DAMAGE OR REFUSE

⚠DANGER

Read the entire contents of this manual before using this product. Failure to follow instructions and safety precautions could result in serious injury or even death. Make sure all other operators also read this manual. Keep this manual near the machine so that it can be seen by all users. By proceeding with installation and operation, you agree that you are fully

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# I. PRODUCT FEATURES AND SPECIFICATIONS

## MODEL PRO-18(A) FEATURES

· Manual control system.

· Mechanical self-lock and air-drive safety release.

·Hydraulic power system, cable-drive.

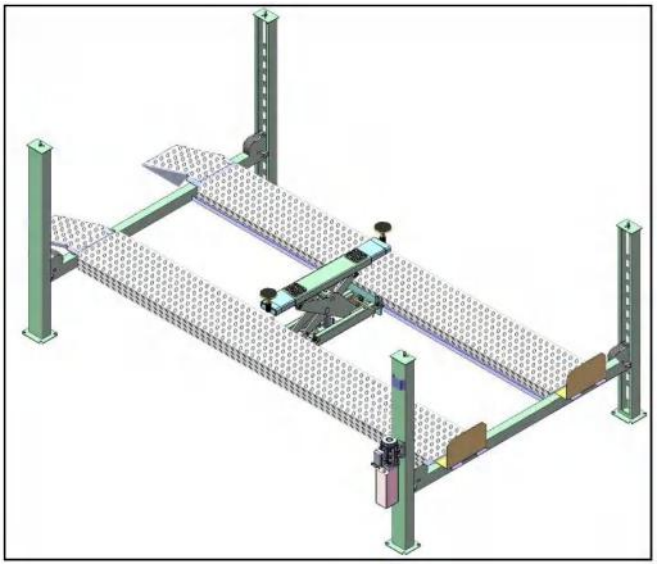
· Strengthen and Non-skid diamond platforms.

· Multiple turn plate pockets fit with different wheel base.

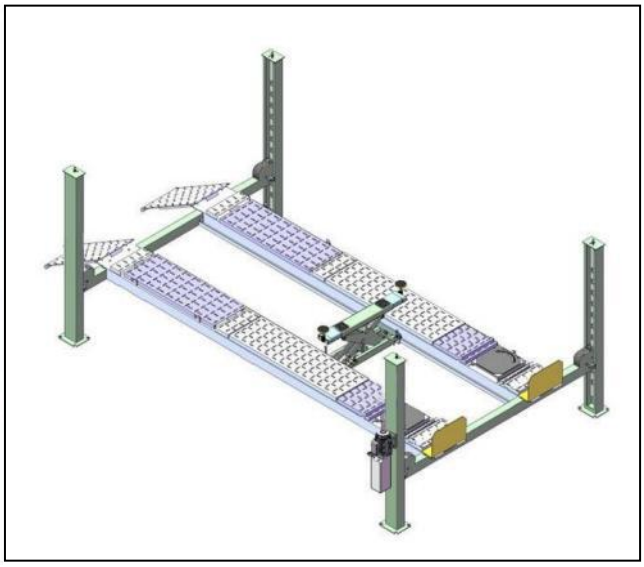
· Adjustable platform and adjustable safety lock ladders.

· Optional Jack**:** With hand pump/Air-operated hydraulic pump/Controlled by power unit.

. Optional Turn plate (Only for PRO-18A)



**PRO-18**
**Fig.1**



**PRO-18A**
**Fig.2**

## MODEL SPECIFICATIONS

| Model | Lifting Capacity | Lifting Height | Lifting Time | Overall Length (Inc. Ramps) | Overall Width | Width Between Columns | Motor |
|---|---|---|---|---|---|---|---|
| PRO-18 | 18000LBS | 75-1/8″ | 81S | 293-1/4″ | 137-1/8″ | 122-3/8″ | 2.0HP |
| PRO-18A | 18000LBS | 77-1/8″ | 81S | 292-3/4″ | 137-1/8″ | 122-3/8″ | 2.0HP |

## II. INSTALLATION REQUIREMEN

### A. TOOLS REQUIRED

✓ Rotary Hammer Drill (Φ3/4)



✓ Hammer



✓ Level Bar



✓ English Spanner (12")



✓ Wrench Set

(10#, 12#, 13#, 14#, 17#, 19#, 24#, 30#)



✓ Ratchet Spanner With Socket (28#)



✓ Carpenter's Chalk



✓ Screw Sets



✓ Tape Measure (295")



✓ Pliers



✓ Lock Wrench



✓ Socket Head Wrench (3#, 5#, 6#)



**Fig. 3**

**B. Equipment storage and installation requirements.**
**The equipment should be stored or installed in a shady, normal temperature, ventilated and dry place.**

**C. SPECIFICATIONS OF CONCRETE (See Fig. 4)**

**Specifications of concrete must be adhered to the specification as following. Failure to do so may result in lift and/or vehicle falling.**

1. Concrete must be thickness 4" minimum and without reinforcing steel bars，and must be dried completely before the installation.
2. Concrete must be in good condition and must be of test strength 3,000 psi minimum.
3. Floors must be level and no cracks.

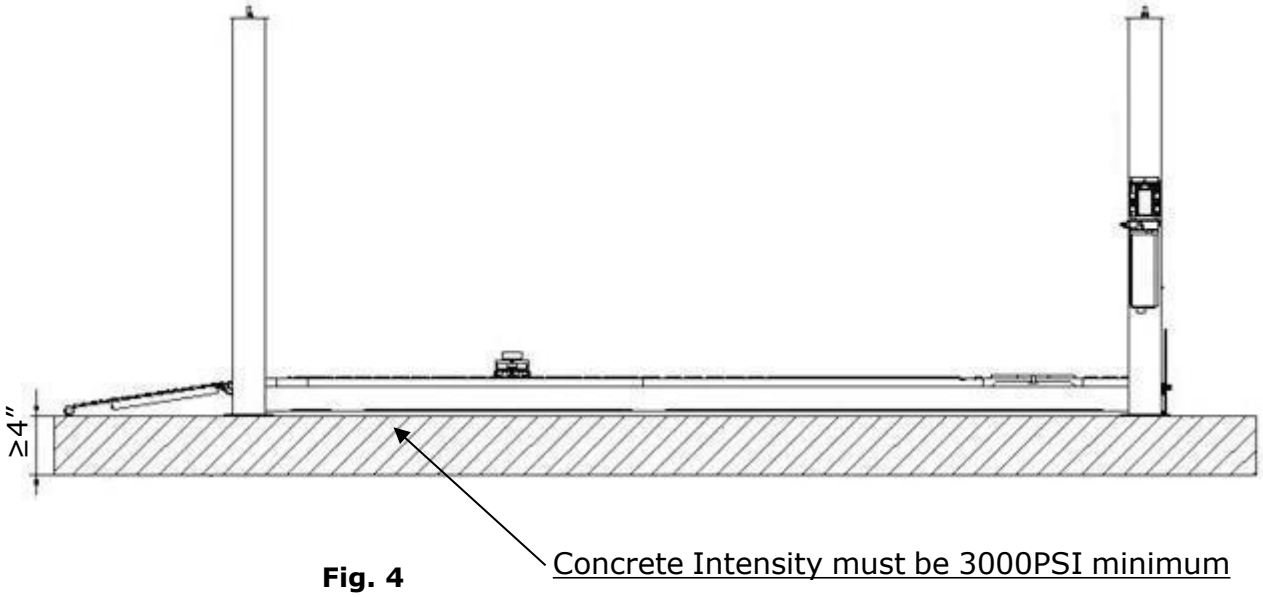



**Fig. 4**

**D. AIR SUPPLY**

Air pressure requirement: 0.5-0.8Mpa, Air line size Φ8*Φ6 and Φ6*Φ4.

**E. POWER SUPPLY**

The electrical source must be 2.0HP minimum. The source cable size must be 12AWG and in good condition of contacting with floor.

## III. STEPS OF INSTALLATION

### A. Location of installation

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

### B. Check the parts before assembly

**1, The equipment should be unload and transfer by forklift. (See Fig.5)**

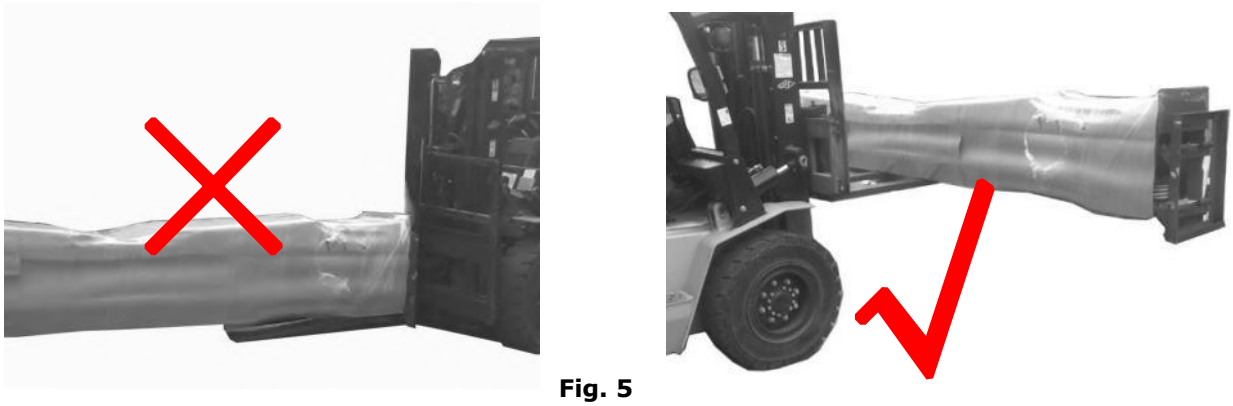


**Fig. 5**

2. Received lift and hydraulic power unit **(See Fig. 6)**.




**Fig. 6**

3. Open the outer packing carefully, check all the parts according to the parts list **(See Fig. 7)**.

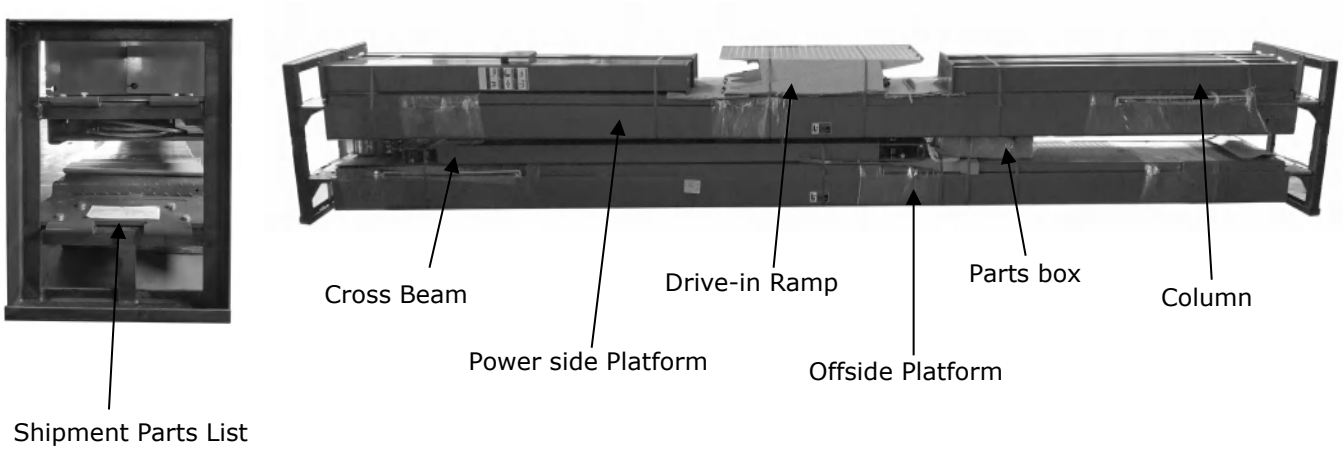



**Fig. 7**

4. Take off the Drive-in Ramps and Columns **(See Fig. 8)**.



**Fig. 8**

5. Loose the screws of the upper package stand, take off the offside platform, take out the parts inside the power side platform, than remove the package stand.

6. Move aside the parts and check the parts according to the shipment parts list **(See Fig. 9,Fig.10).**

## 6.1 Model PRO-18

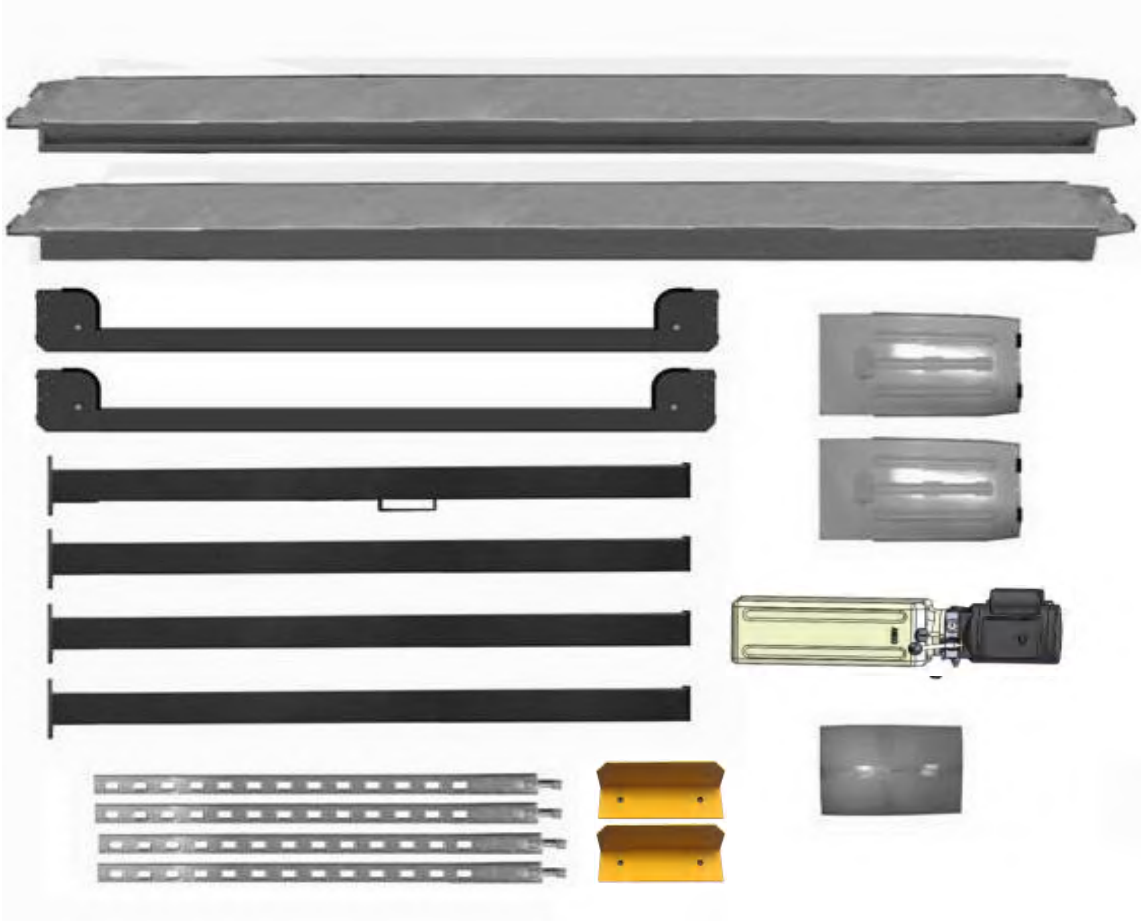


**Fig.9**

## 6.2 Model PRO-18A

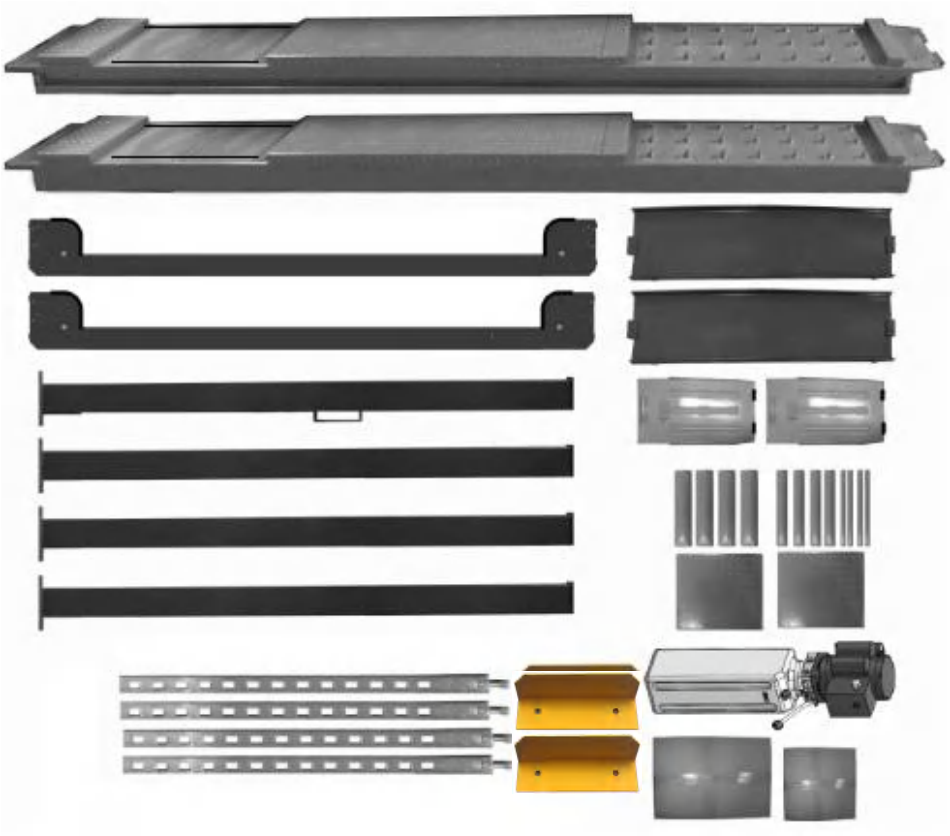


**Fig.10**

7. Open the carton of parts and check the parts according to the parts box list (**See Fig. 11**).



**Fig. 11**

8. Check the parts of the parts bag according to the parts bag list **(See Fig. 12)**.



**Parts bag 1 for PRO-18**





**Parts bag 1 for PRO-18A**





**Parts bag 2**

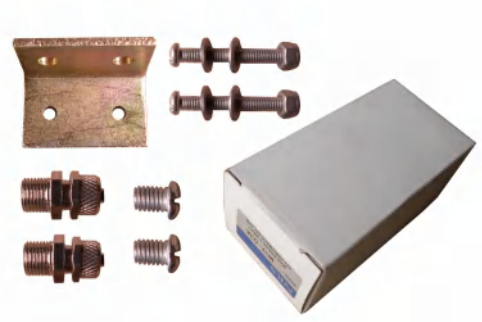


**Fig.12**

**C.** Use a carpenter's chalk line to establish installation layout, Make sure the size is right and base is flat. (**see Fig.13**)

**Note: Reserve space before and behind the installation site.**

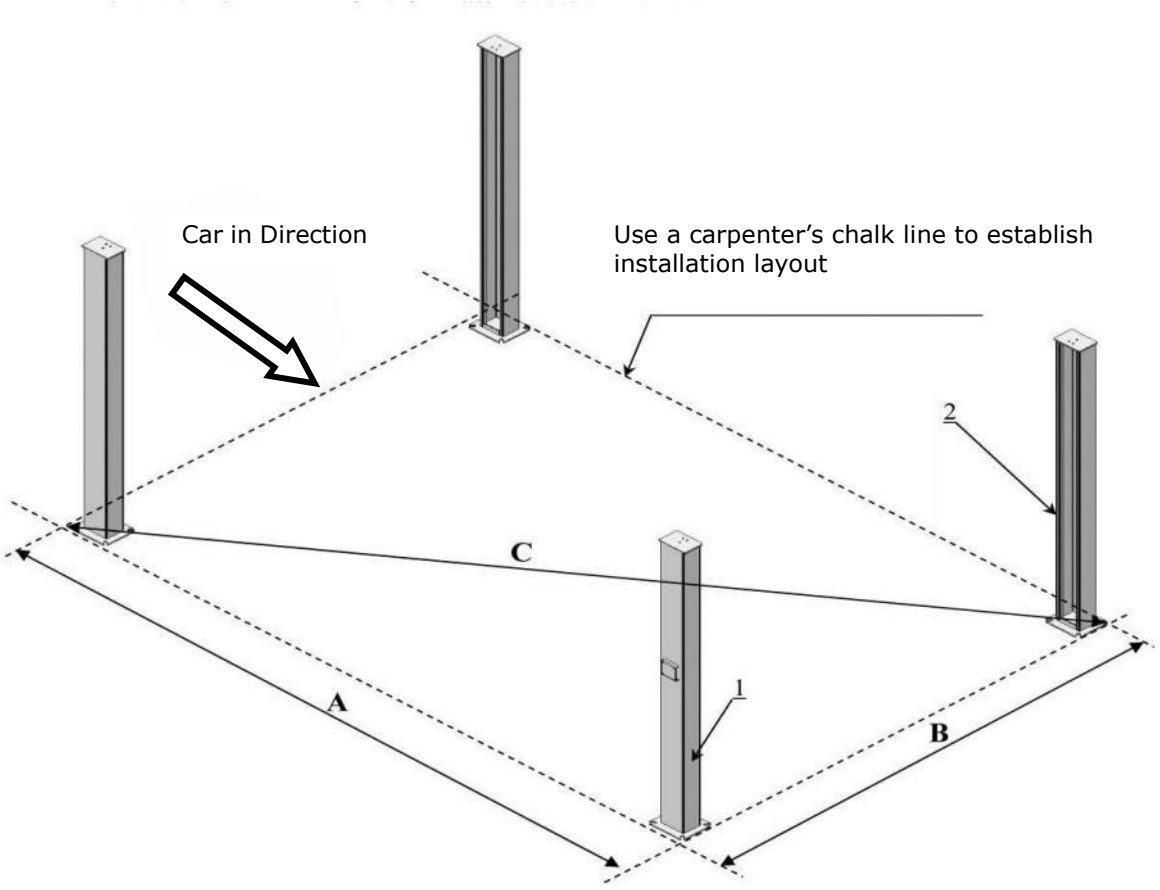



**Fig. 13**

| Model | A | B | C |
|---|---|---|---|
| PRO-18<br>PRO-18A | 252-1/4" | 137-1/8" | 287-1/8" |

**D. Install cross beams (See Fig. 14, Fig. 15).**

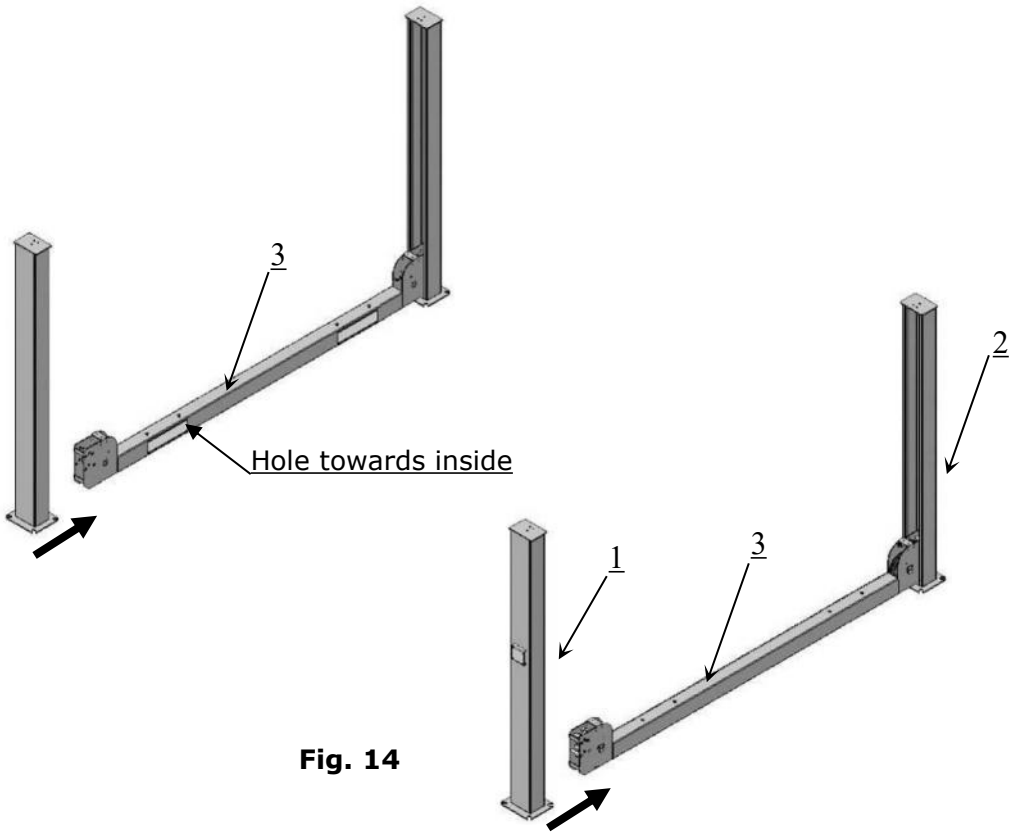



**Fig. 14**

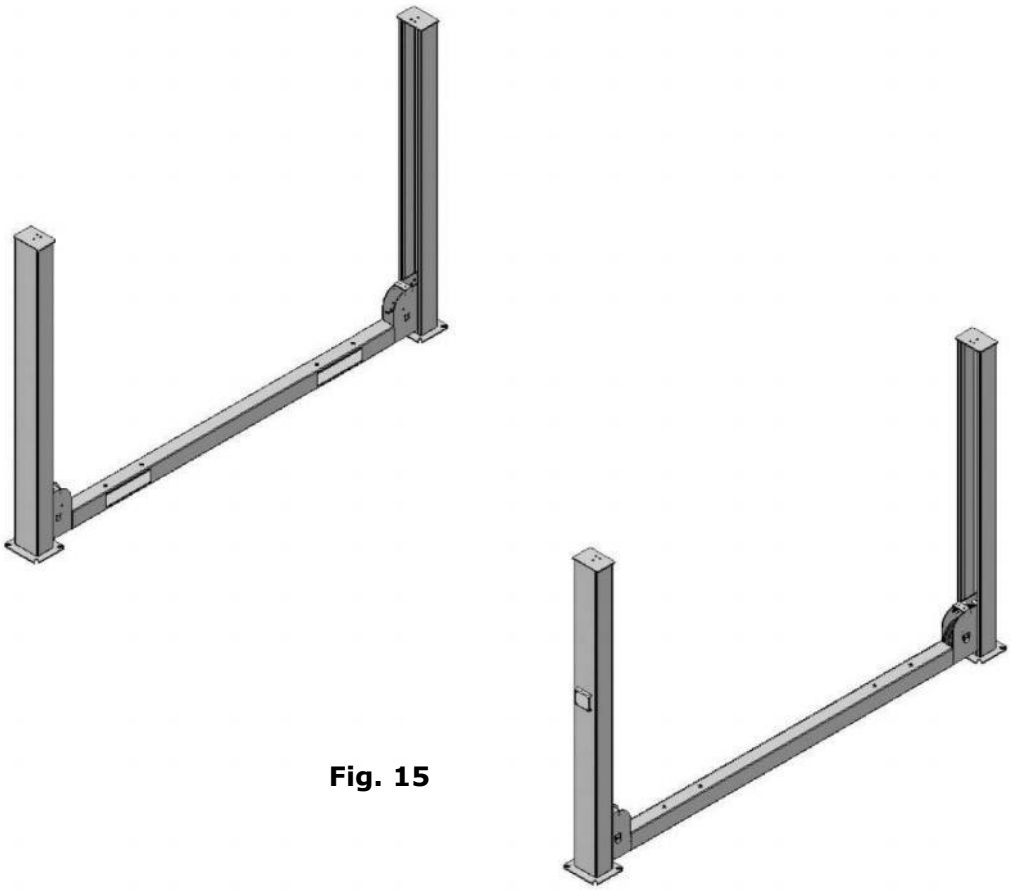


**Fig. 15**

**E. Fix the anchor bolts**

1. Prepare the anchor bolts **(See Fig. 16).**

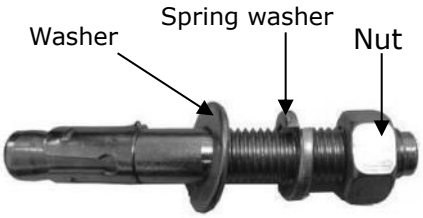



**Fig. 16**

2. Using the prescribed rotary hammer drill, and drill all the anchor holes and install the anchor bolts, do not tighten the anchor bolts first **(See Fig. 17).**
**Note:** Minimum embedment of anchors is **90mm**




**Fig. 17**

**F. Install the safety ladders**

1. Take off the pulley safety cover and unscrew the four upper nuts of the Safety Ladders, and then adjust the four lower nuts to be at the same position. Withdraw the Slack-cable safety lock of the Cross-beam to insert the Safety Ladder in, raise the Safety Ladder, and screw the upper nuts **(See Fig. 18)**.

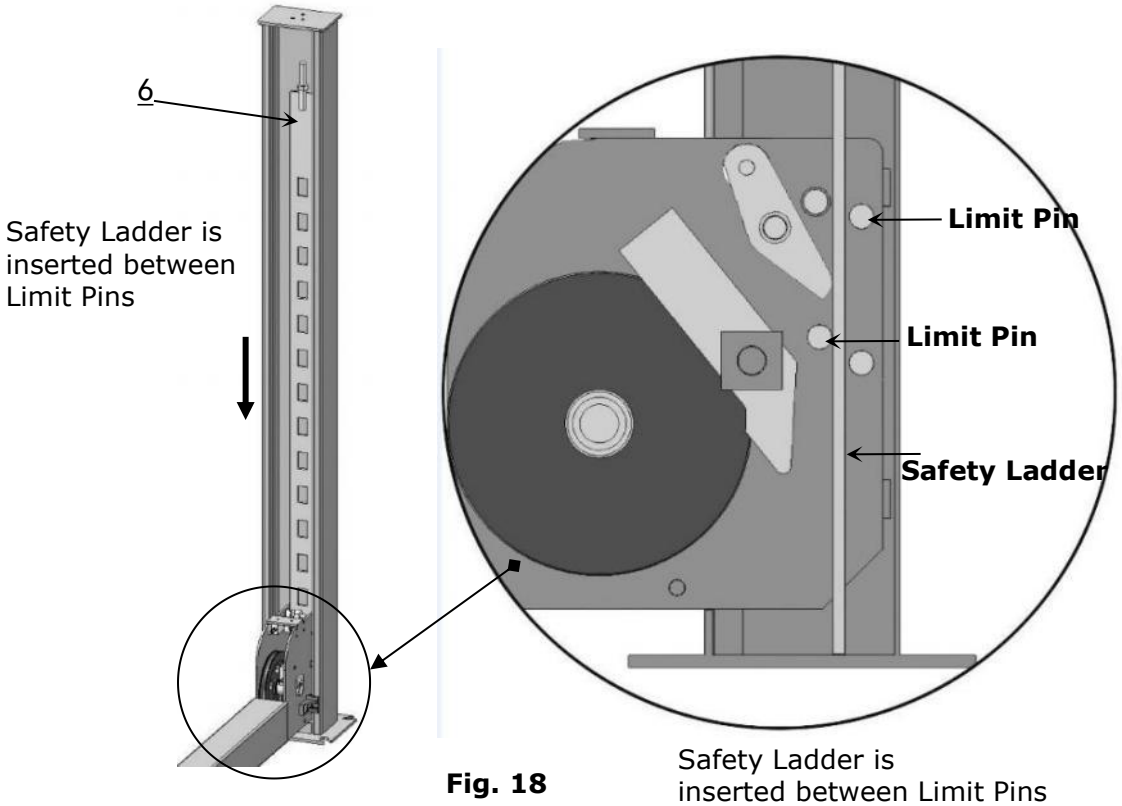
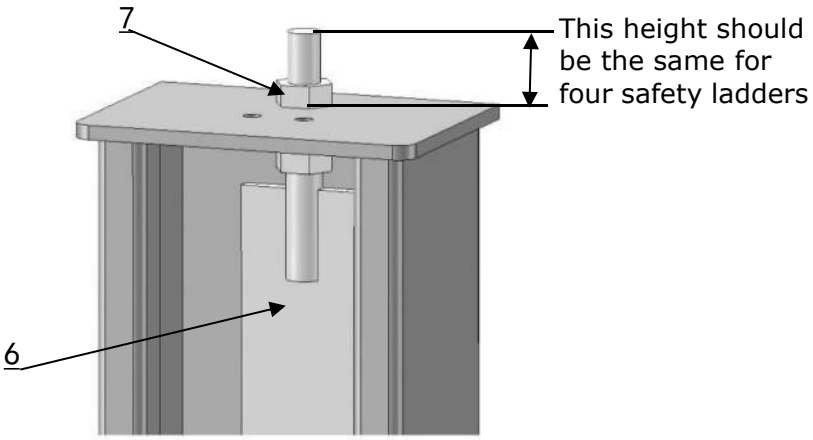



**Fig. 18**

2. Install safety ladders **(See Fig. 19).**




Safety ladder pass through the hole of the top plate, then tighten the two nuts

**Fig. 19**

**G. Put the Cross Beams at the same height (See Fig. 20).**

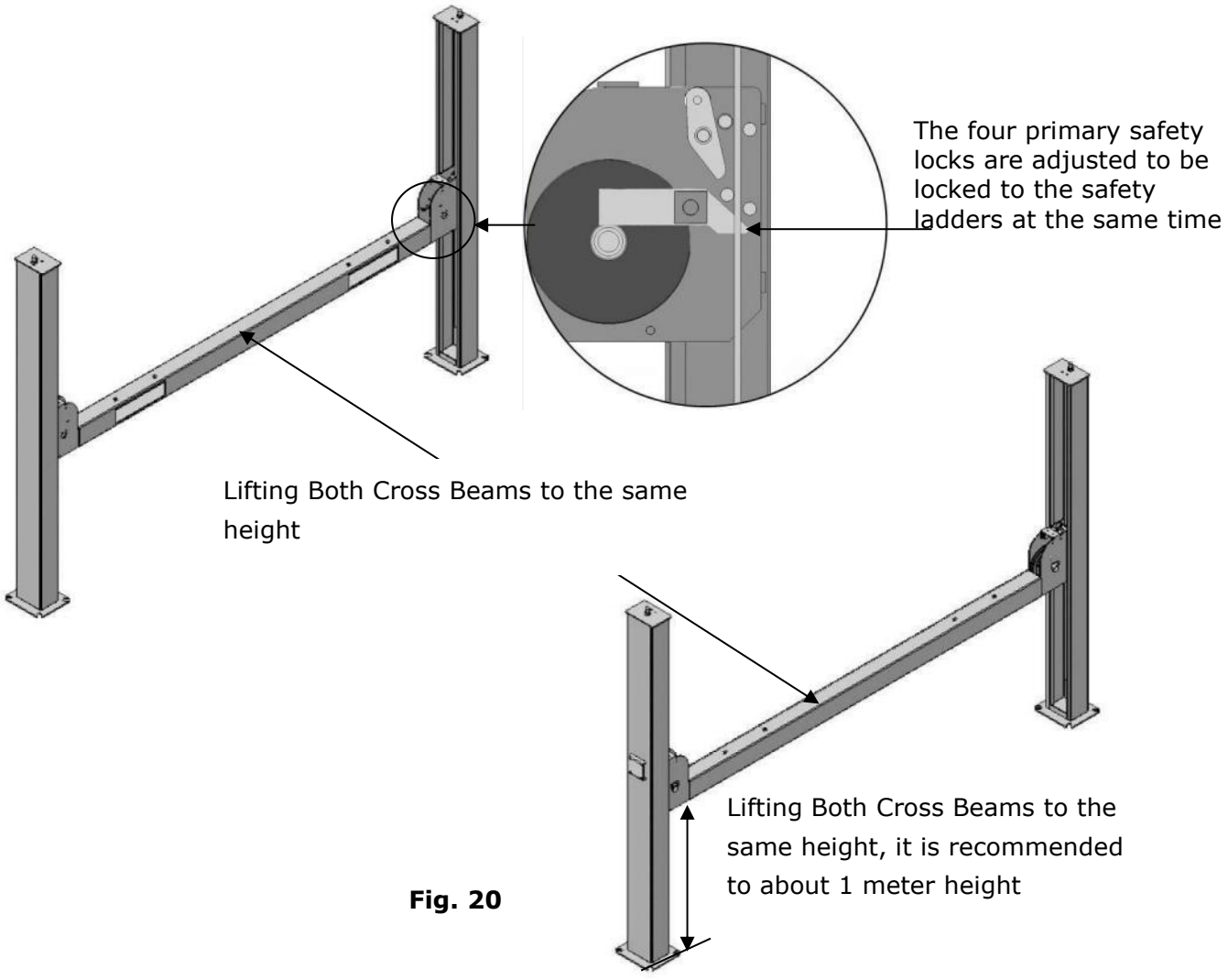



**Fig. 20**

**H. Install power side platform.**

1. Put the power side platform upon the cross beams by fork lift or manual, offset the cross beams to the outside till the pulleys of both platforms can set up into the cross beam **(See Fig.21)**, Install the power side platform and screw up the bolts.

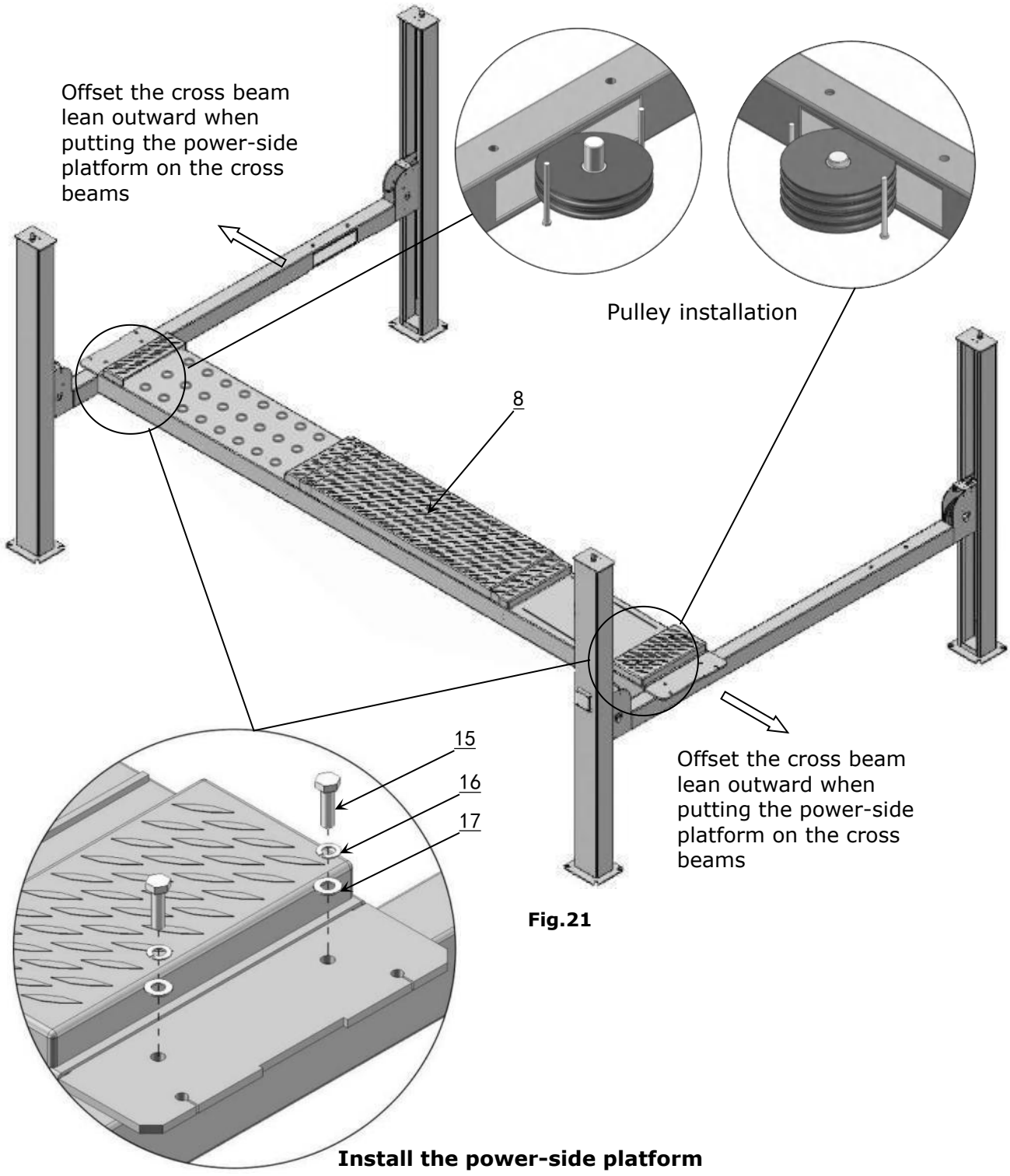



**Fig.21**

I. Assembly offside platform and slider block, check the vertical of columns with level bar, adjusting with the shims if not, and then tighten the anchor bolts **(See Fig. 22).**

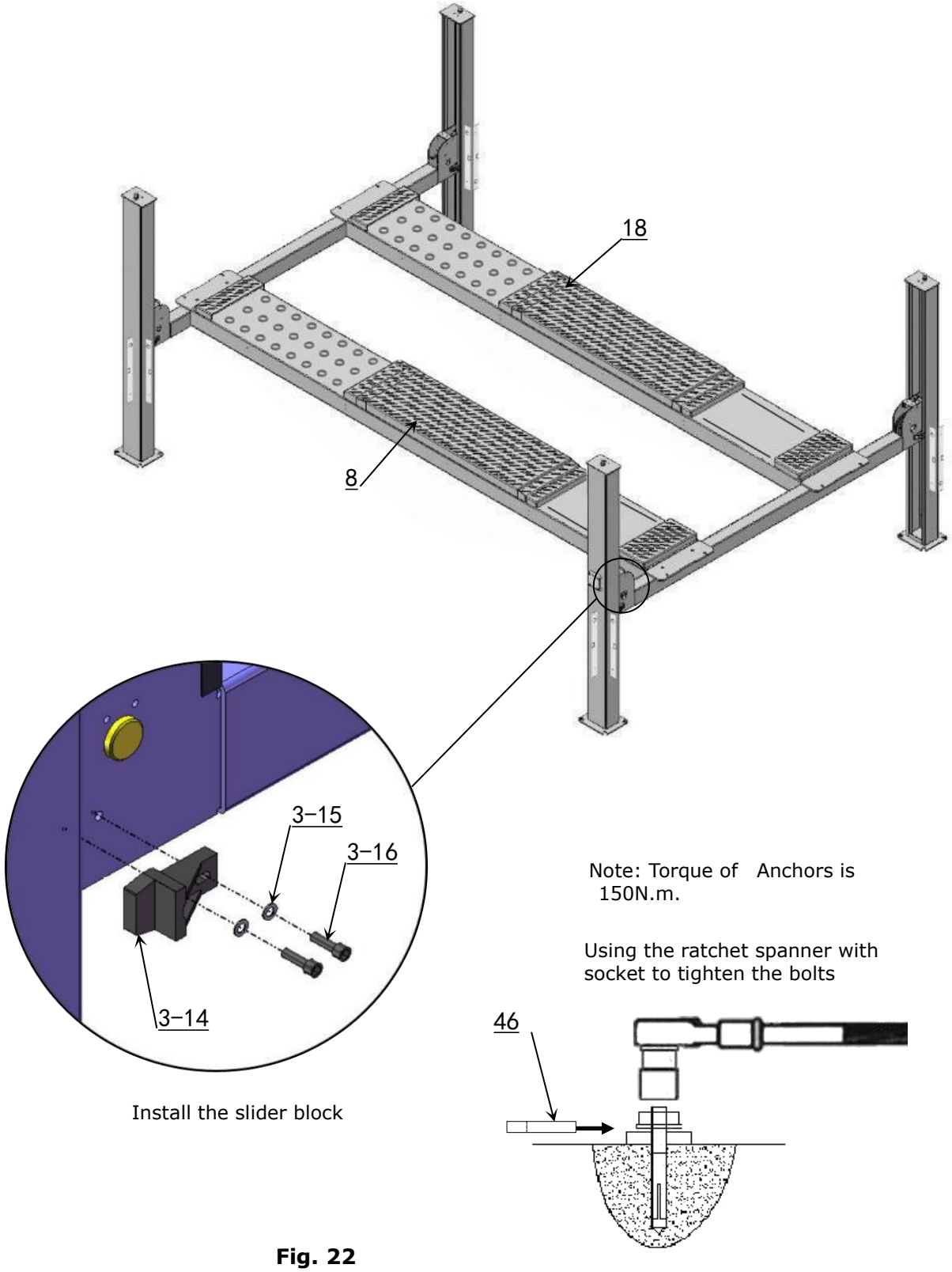



**Fig. 22**

## J. Install cables

1. Pass through the cables from the platform to the columns according to the number of the cables **(See Fig. 23).**

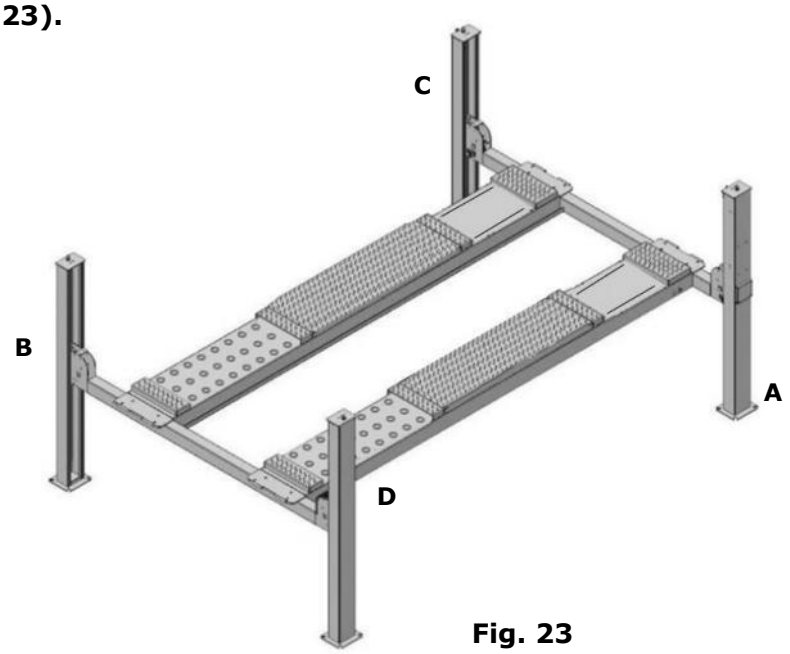



**Fig. 23**

| No. / Cable | ① | ② | ③ | ④ |
|---|---|---|---|---|
| Length for PRO-18 (A) (inc. connecting fitting) | 198-5/8″ | 515-3/4″ | 271-1/2″ | 442-1/8″ |

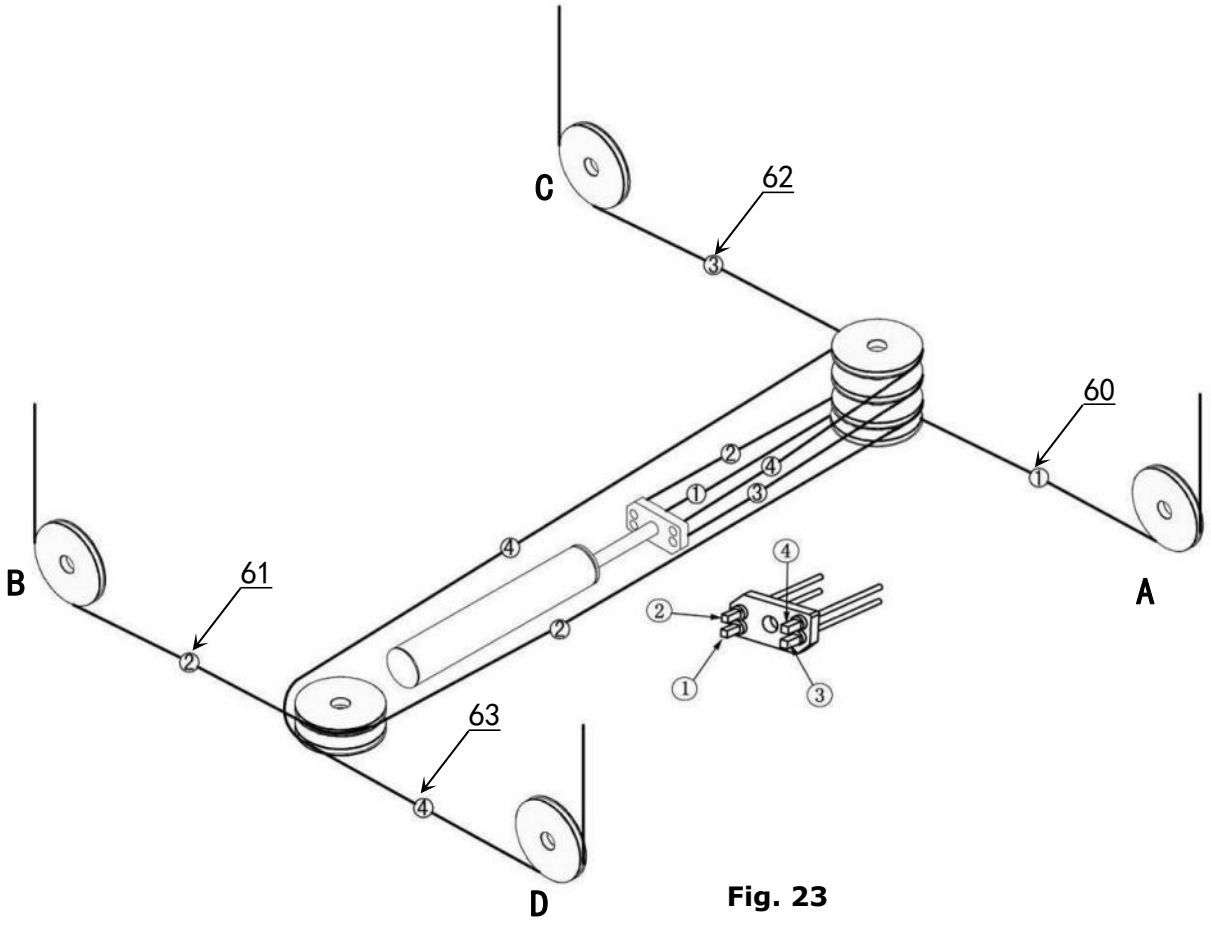



**Fig. 23**

2. The cable pass through the cross beam to top plate of columns and be screwed with cable nuts **(See Fig. 24).**

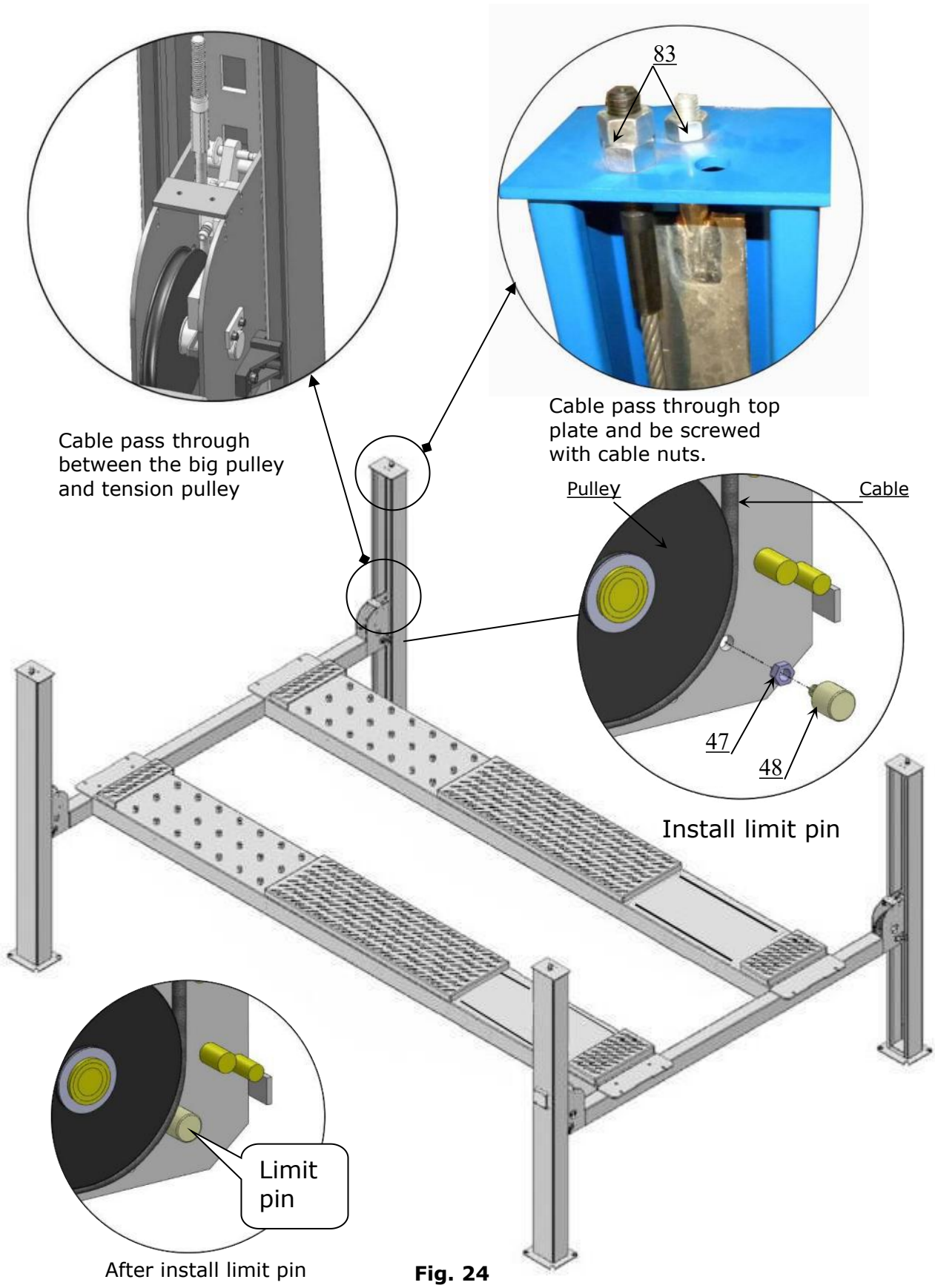



**Fig. 24**

3. Illustration for platform cables **(See Fig. 25).**

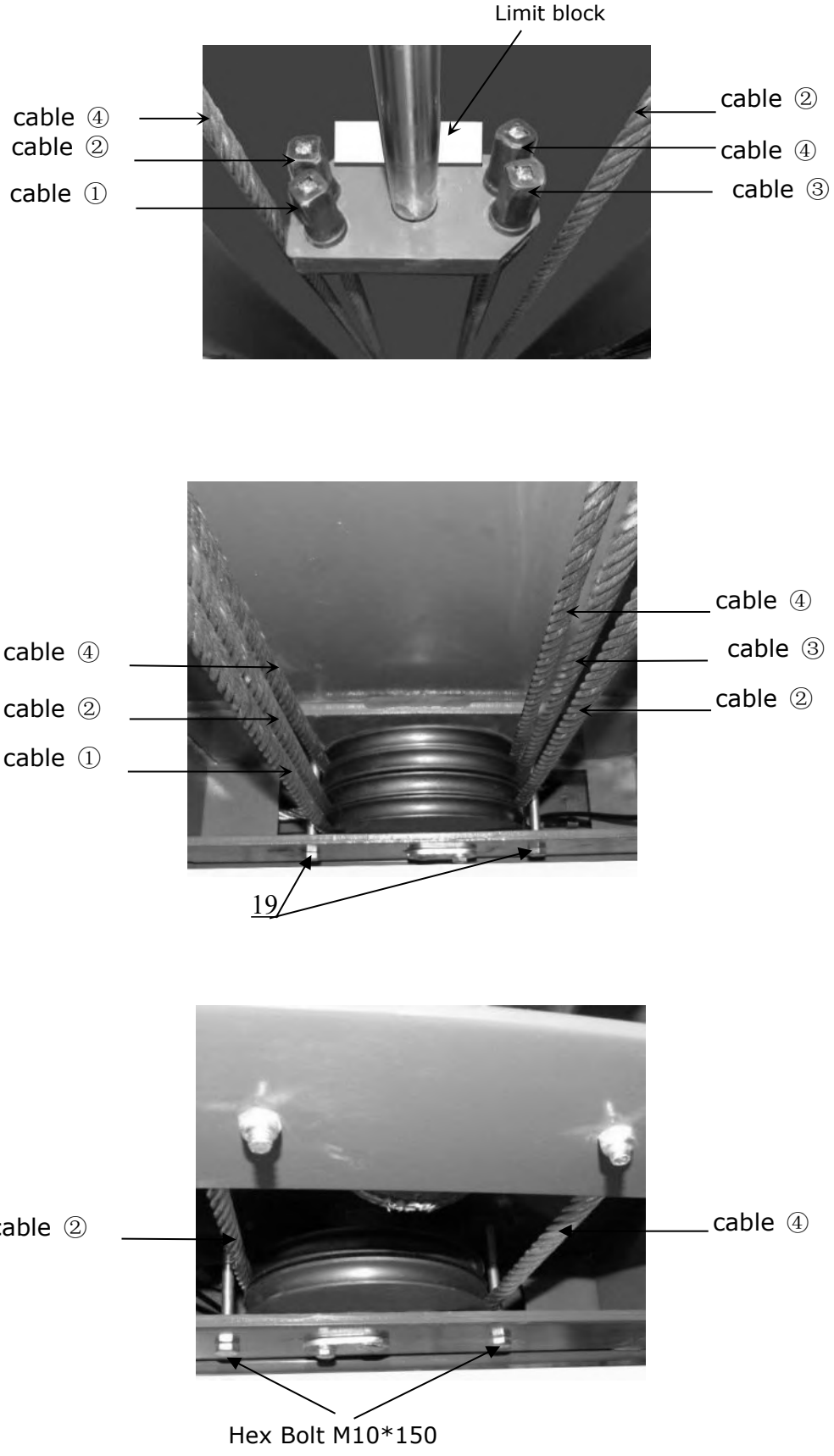



**Fig. 25**

## K. Install Oil-water separator, Manual control air valve and Power unit (See Fig. 26).

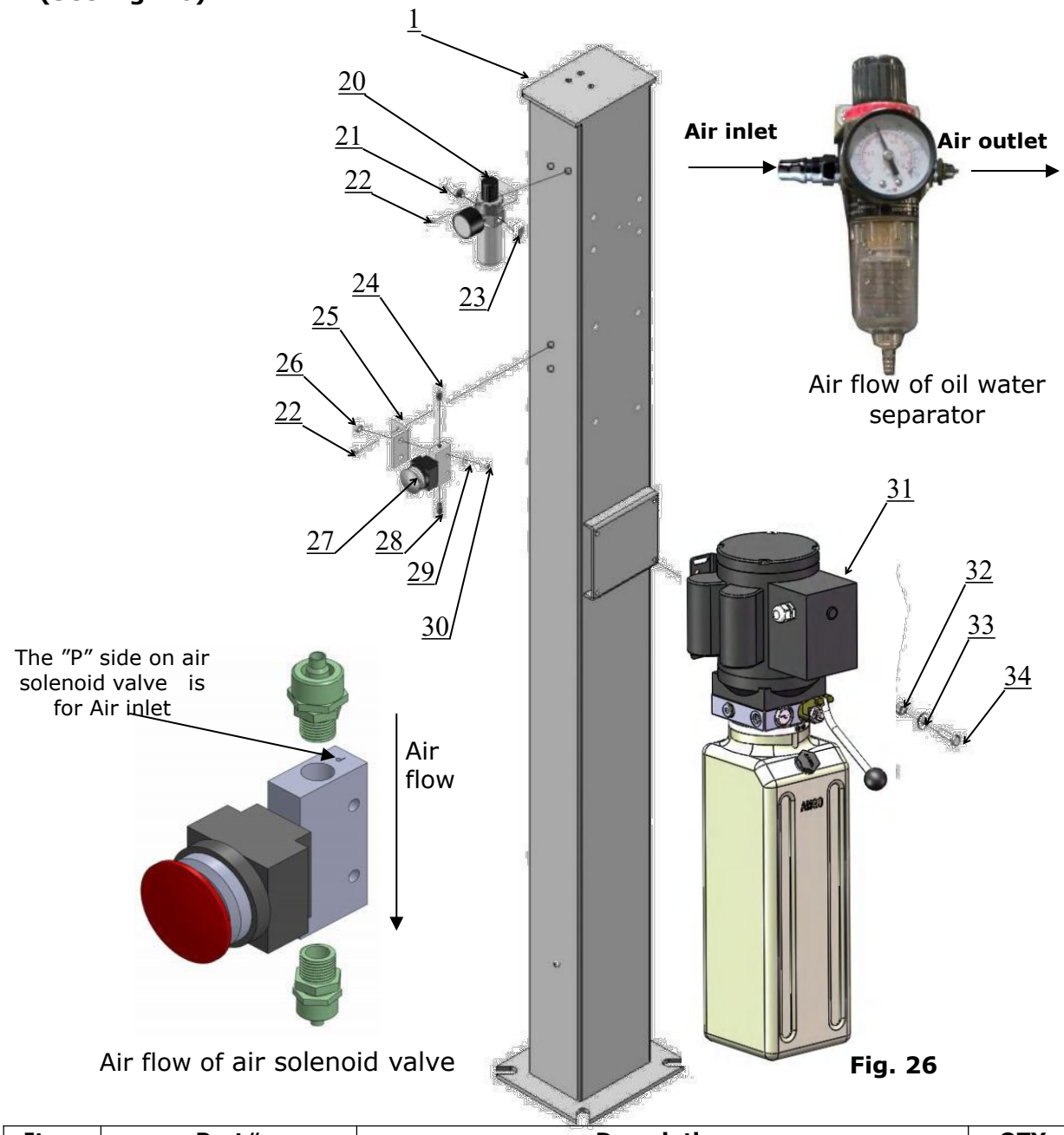



**Fig. 26**

| Item | Part# | Description | QTY |
|---|---|---|---|
| 20 | 10420145 | Oil water separator AFR-2000 | 1 |
| 21 | 10420146 | Straight Fitting for air line | 1 |
| 22 | 10209009 | Cap Head Bolt M6*8 | 8 |
| 23 | 10420076 | Fitting 6*8 screw thread | 1 |
| 24 | 10420159 | Straight Fitting 6*8 screw thread | 1 |
| 25 | 11420160 | Fixing plate of Manual Control Valve | 1 |
| 26 | 10420161 | Self locking nut M4 | 2 |
| 27 | 10420162 | Manual Control Air Valve | 1 |
| 28 | 10420163 | Straight Fitting for Air Line 6*4 screw thread | 1 |
| 29 | 10420148 | Washer φ4 | 4 |
| 30 | 10420164 | Cap Head Bolt M4*30 | 2 |
| 31 | 071102 | Manual power unit | 1 |
| 32 | 10209005 | Self locking nut M8 | 14 |
| 33 | 10209004 | Rubber Ring φ8*20*3 | 4 |
| 34 | 10209003 | Hex Bolt M8*25 | 4 |

**L. Install Hydraulic System (See Fig. 27).**

Note: Oil hoses connected to oil cylinder must be passed above the cable, cylinder inlet port must swing upward to avoid the oil hose and oil return pipe scratched by cable.

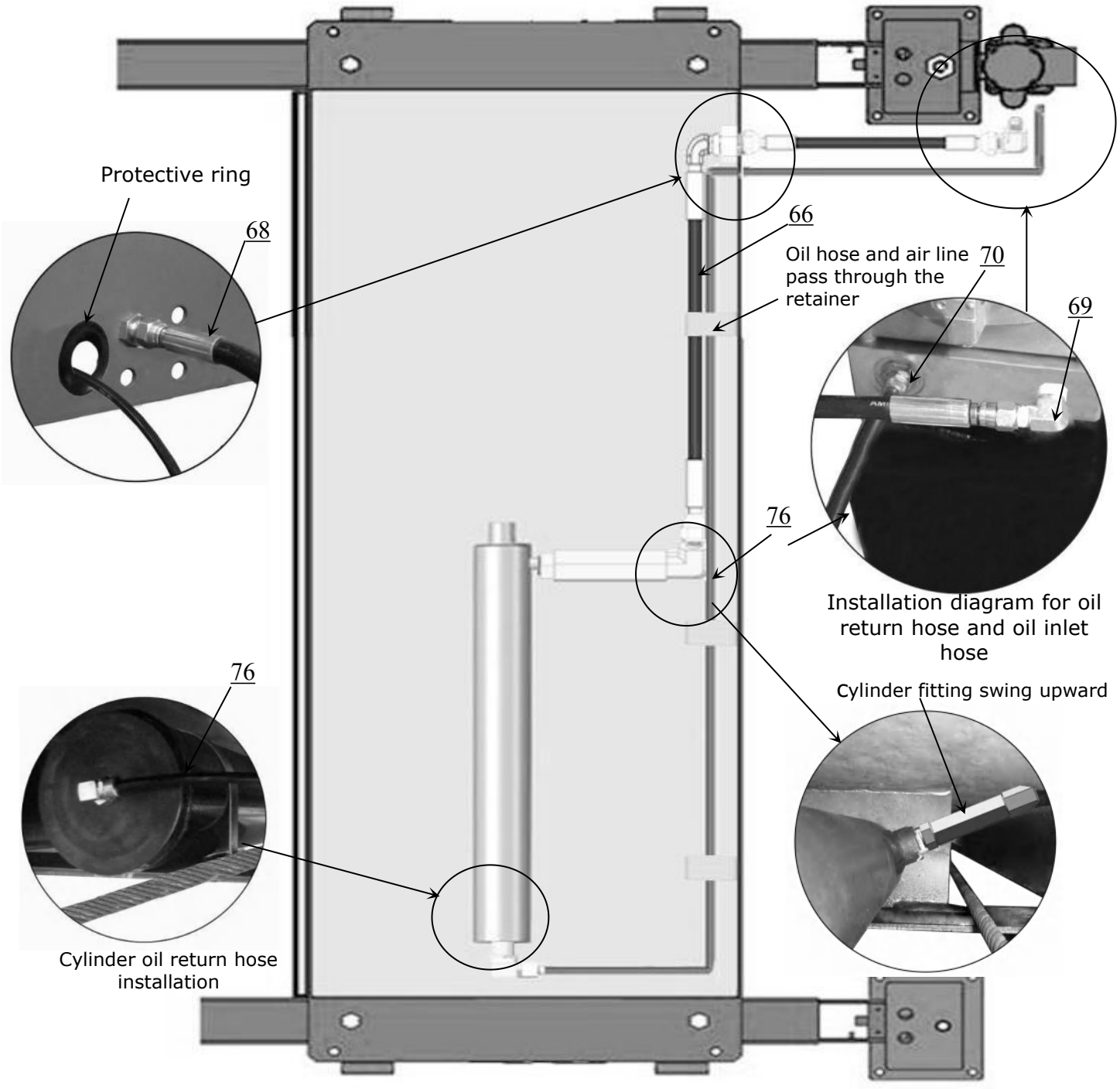



**Fig.27**

**M. Install air-line system**

1. Connecting front and rear Cross Beam cylinders by using 6*4 black air line. (the actual length of air line can be cut by user) **(See Fig.28)**

2. Cut the 6*4 black air line by scissor between two retainer, then connect the air line with T fitting. **(See Fig. 29).**

3. Connecting the solenoid valve using 6*4 black air line (the actual length of air line can be cut by user) **(See Fig. 30)**.

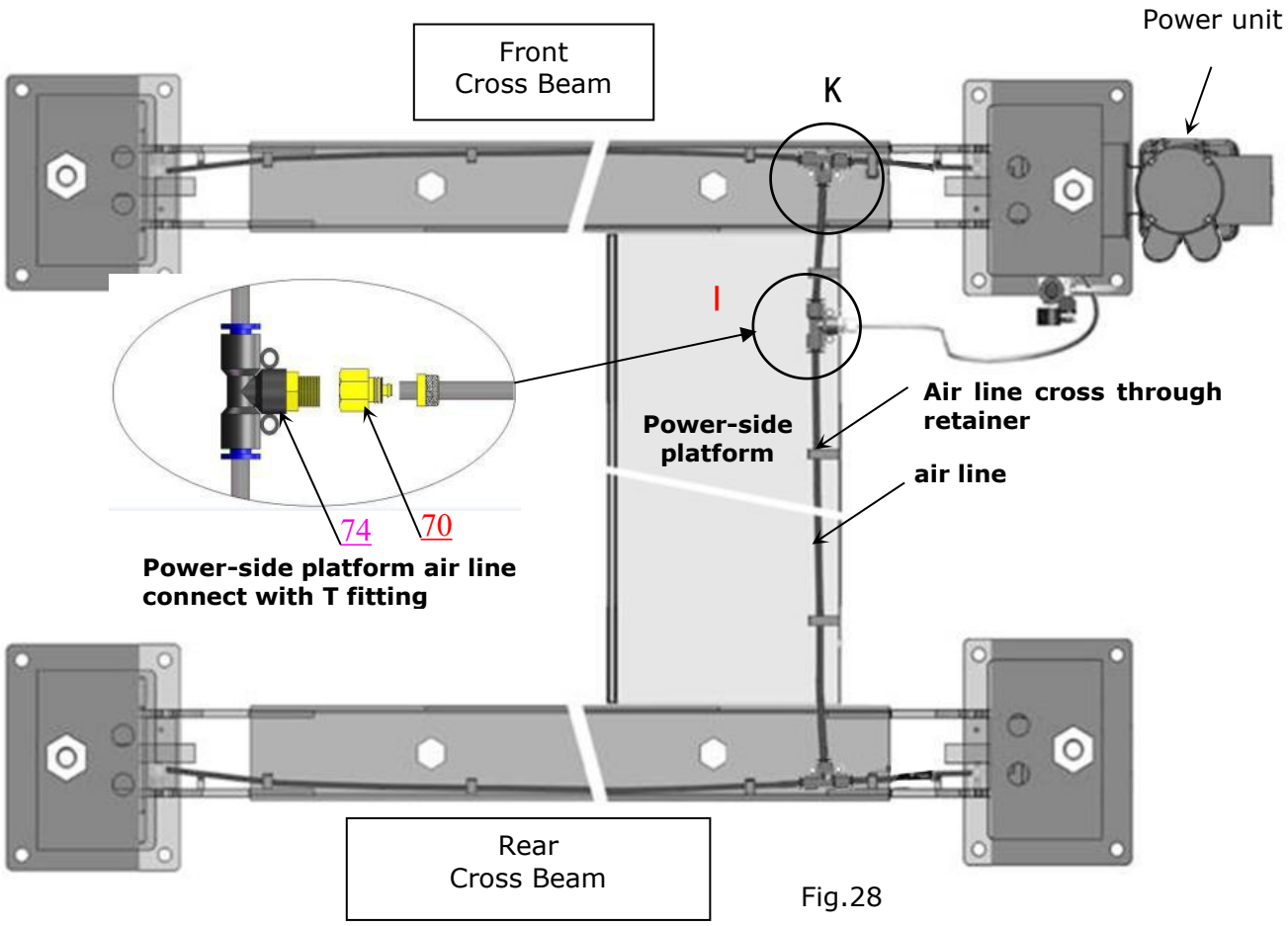
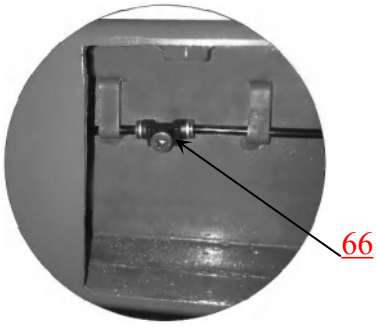
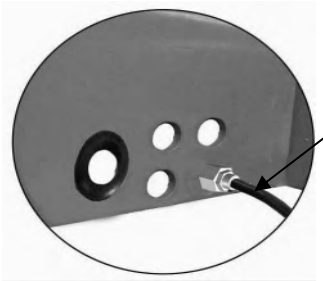



Fig.28




**K view**
**Fig.29**




**L view**
**Fig.30**

5. Install oil-water separator and manual control air valve. (see **Fig.31**)

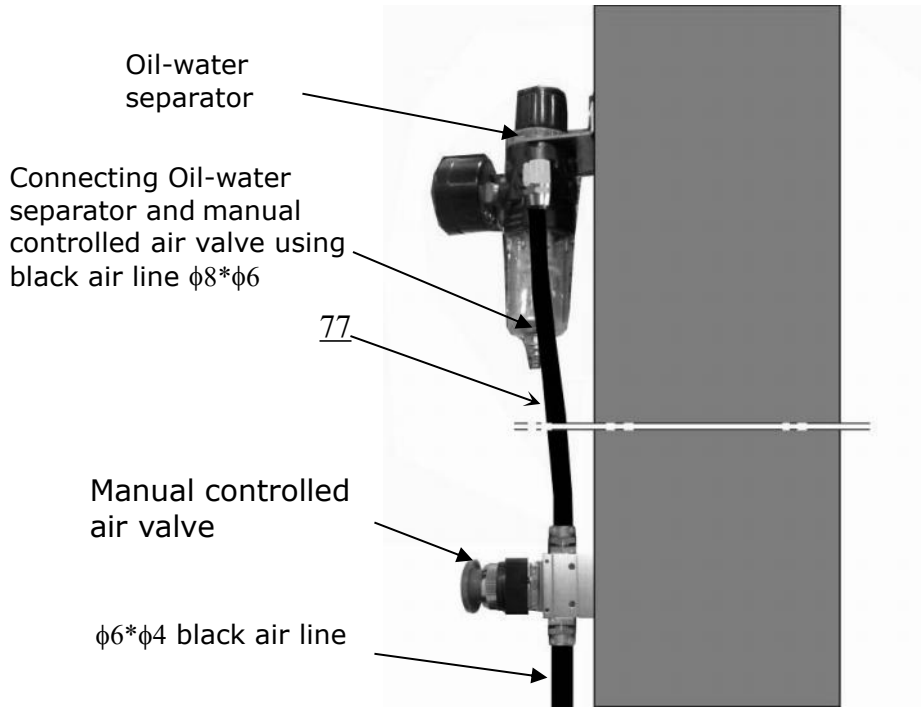



**Fig. 31**

6. Connecting air inlet (Air supply pressure 5kg/cm$^2$~8kg/cm$^2$), adjusting the air pressure of Oil-water separator to 0.8MPa **(See Fig. 32)**.

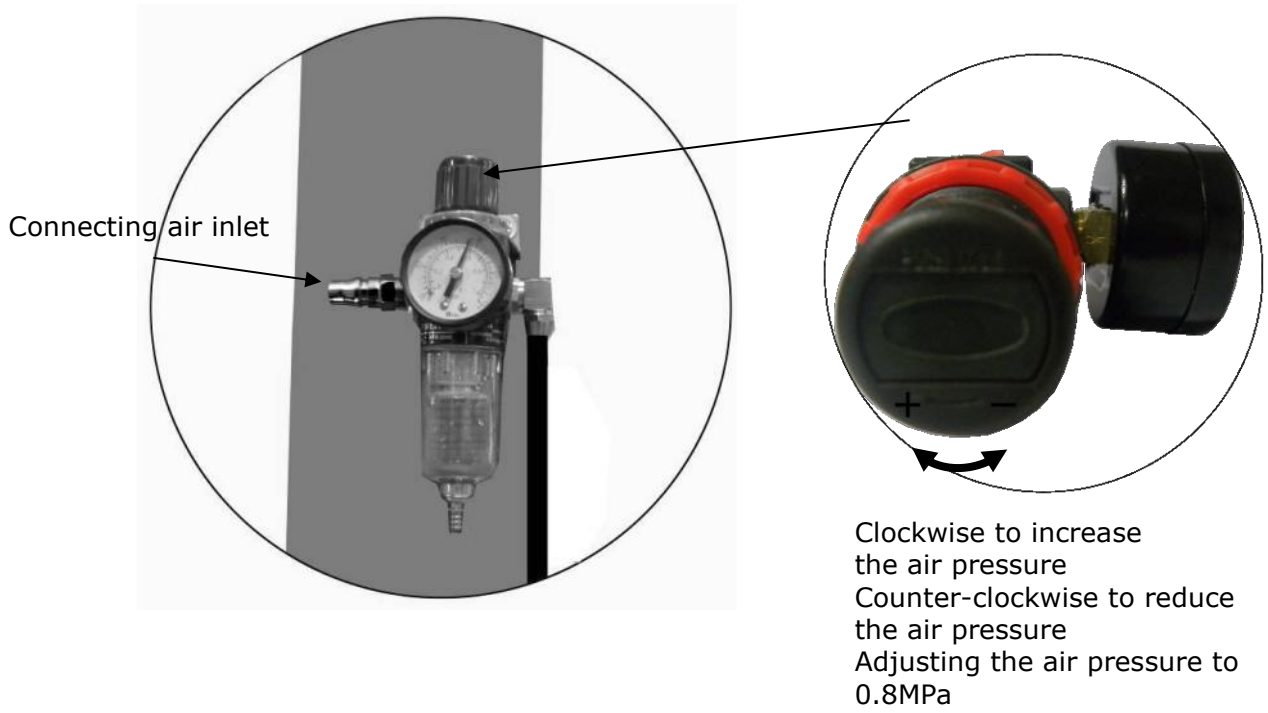



**Fig. 32**

## N. Install Electrical System

Connect the power source on the data plate of Motor.

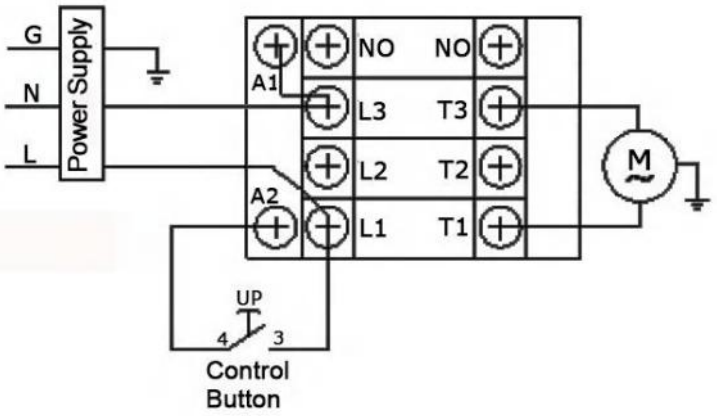
**Note: For the safety of operators, the power wiring must contact the floor well.**

**Single phase motor (See Fig. 33)**

1. Connecting the two power supply wires (active wire **L** and neutral wire **N**) to terminals of AC contactor marked L1, L3 respectively.

2. If the power supply wire both active wire L, then connect two wires to terminals of AC contractor marked L1, L3.

3. Earth wire( yellow and green wire) is connected with the earth wire terminal of the motor.



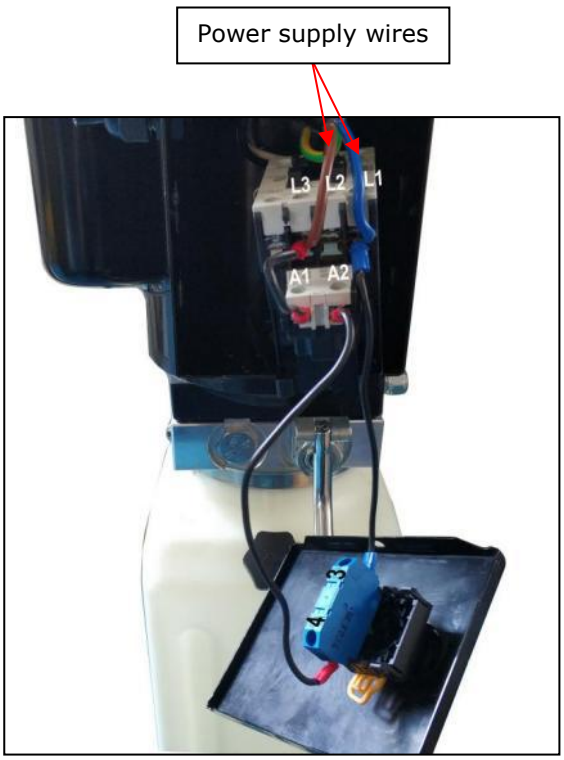




**Fig. 33**

## O. Install Spring and Safety Cover of Cross Beam (See Fig. 34).

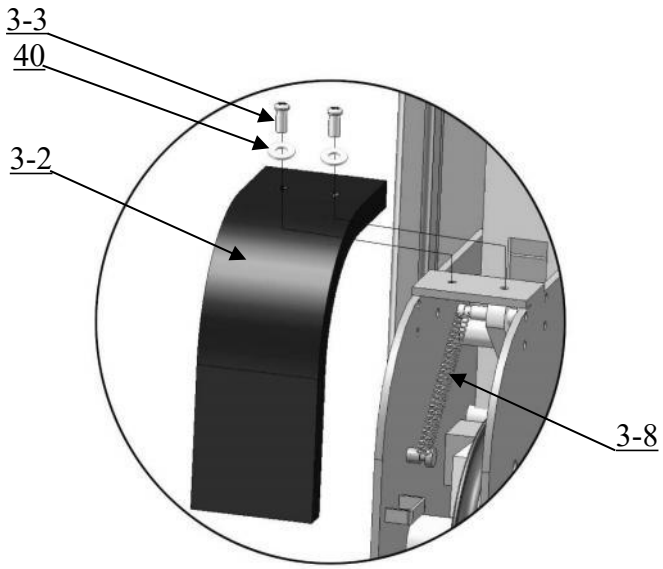
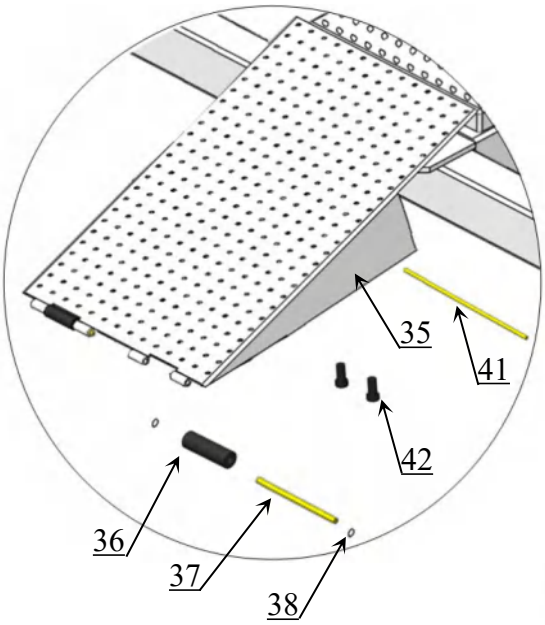


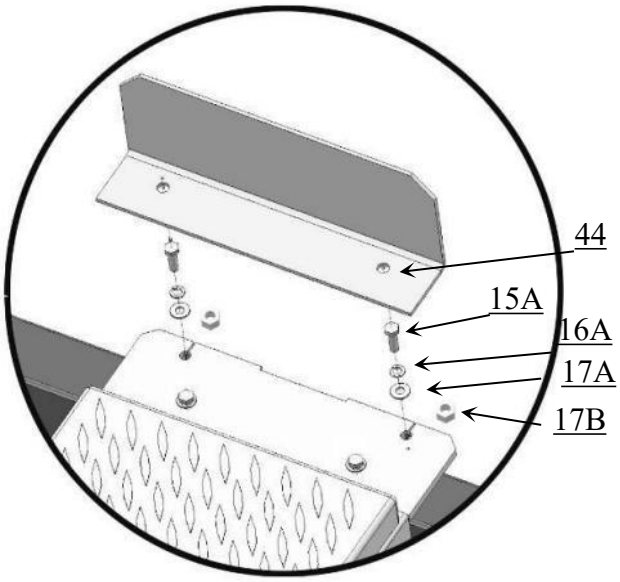

Fig.34

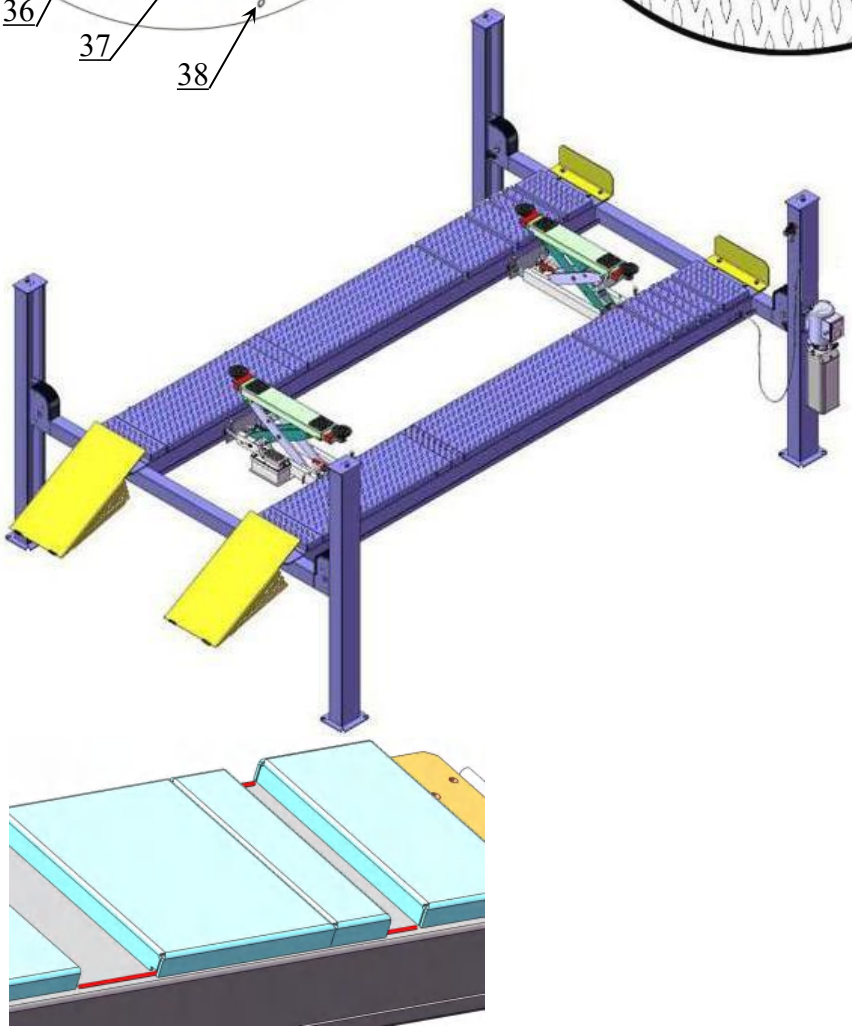
**P. Install Drive-in ramp, Tire stop plate, Steel ball set, Limit rod (See Fig. 35).**

Install Drive-in ramp




Install Tire stop plate



Install turnplate adjusting block

**Fig.35**

## IV. EXPLODED VIEW

### Model PRO-18

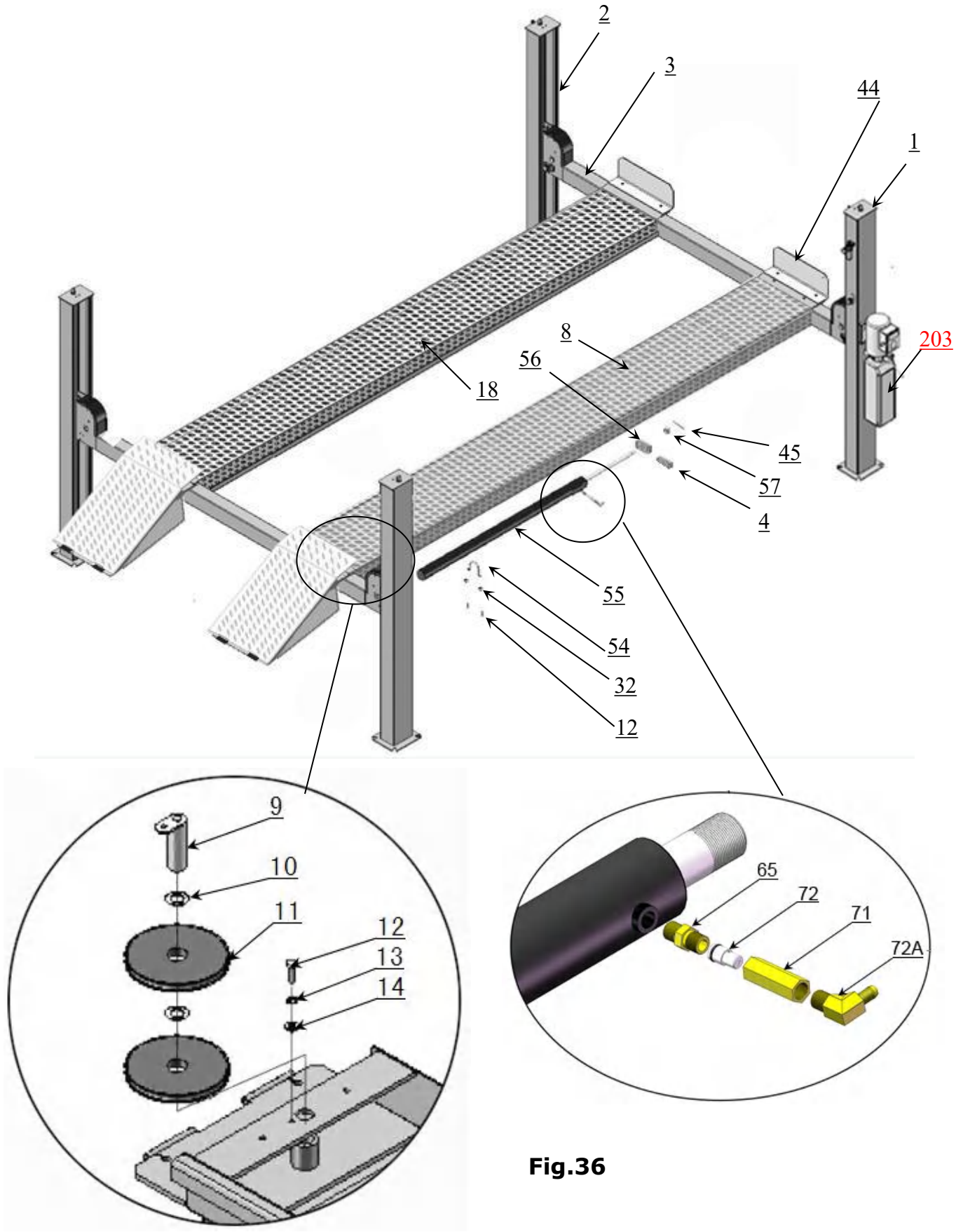



**Fig.36**

## Model PRO-18A

Optional turnplates
**When using turn plates, need to put a #1 adjustable block for turn plate with 35mm on each side.**

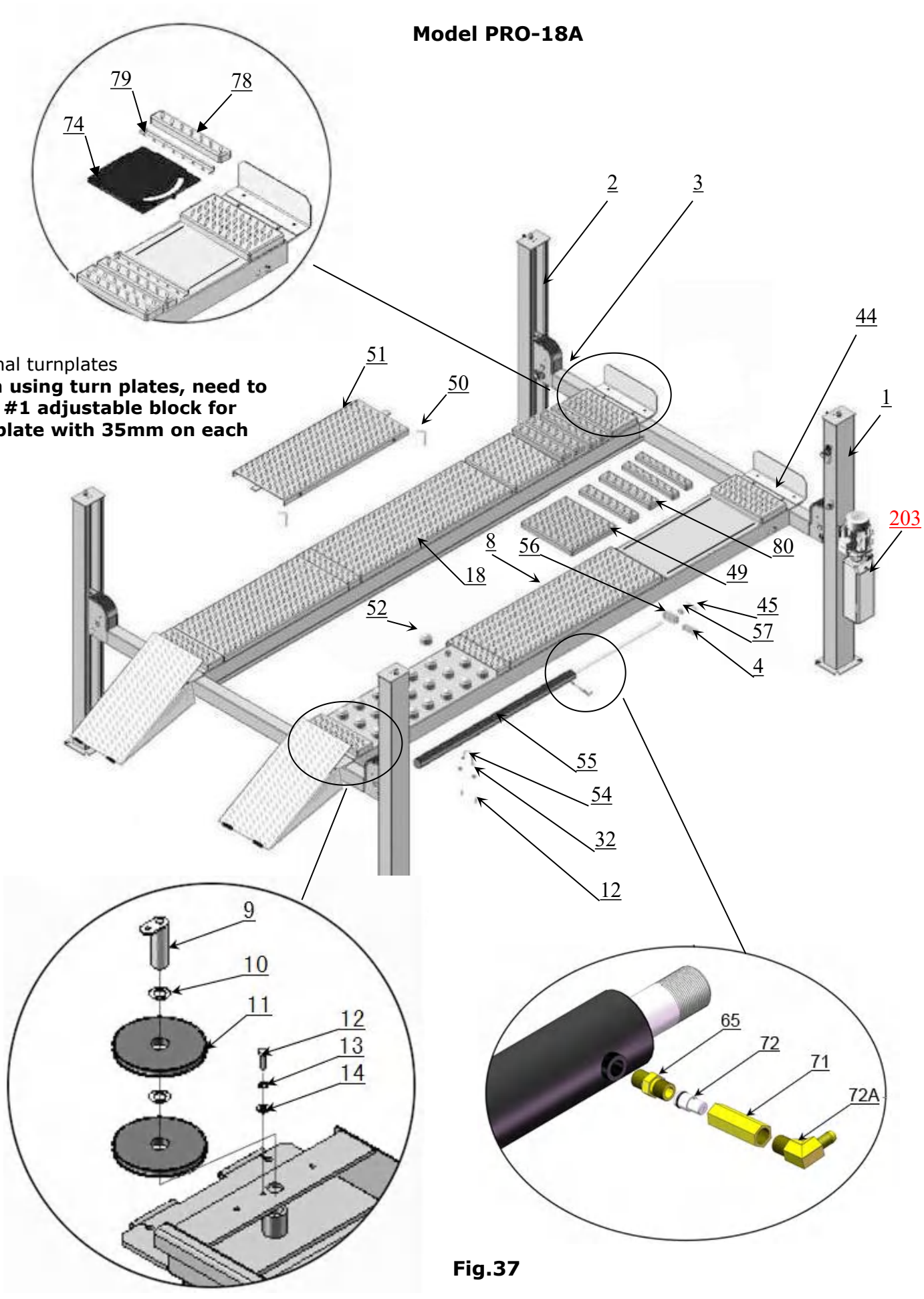



**Fig.37**

## Parts list for PRO-18 PRO-18A

| Item | Part# | Description | PRO-18 | PRO-18A |
|---|---|---|---|---|
| 1 | 11460021 | Power-side Column | 1 | 1 |
| 2 | 11460020 | Offside Column | 3 | 3 |
| 3 | 11476035 | Cross Beam assy. | 2 | 2 |
| 4 | 10476016 | Limit slider | 1 | 1 |
| 5 | 10209059 | Anchor Bolt 3/4*5-1/2 | 16 | 16 |
| 6 | 11460074 | Safety Ladder | 4 | 4 |
| 7 | 10476014 | Hex Nut M22 | 8 | 8 |
| 8 | 11460024-01 | Power-side Platform | 1 | 1 |
| 9 | 11476010 | Pulley Shaft Weldment | 2 | 2 |
| 10 | 10476029 | Washer for pulley φ100*φ51*5 (HK016) | 4 | 4 |
| 11 | 11476636 | Pulley | 6 | 6 |
| 11A | 10476025 | Bronze Bush for Pulley φ60*φ50*20 | 10 | 10 |
| 12 | 10209043 | Hex Bolt M8*20 | 12 | 12 |
| 13 | 10209034 | Lock Washer φ8 | 2 | 2 |
| 14 | 10420144 | Washer φ8*φ25*3 | 2 | 2 |
| 15A | 10101001 | Hex Bolt M20*40 M20*40 | 8 | 8 |
| 15 | 10420030 | Hex Bolt M16*40 M16*40 | 4 | 4 |
| 16A | 10201114 | Lock Washer Φ20 | 8 | 8 |
| 16 | 10420137 | Lock Washer Φ16 | 4 | 4 |
| 17A | 10209128 | Washer Φ20 | 8 | 8 |
| 17 | 10420029 | Washer Φ16 | 4 | 4 |
| 17B | 10209066 | Hex Nut M16 | 4 | 4 |
| 18 | 11460026-01 | Offside Platform | 1 | 1 |
| 19 | 10476015 | Hex Bolt M10*150 | 4 | 4 |
| 20 | 10420145 | Oil-water Separator AFR-2000 | 1 | 1 |
| 21 | 10420146 | Straight Fitting for Air Line | 1 | 1 |
| 22 | 10209009 | Cap Head Bolt M6*8 | 8 | 8 |
| 23 | 10420076 | 90° Fitting for Air Line 6*8 | 1 | 1 |
| 24 | 10420159 | Straight Fitting for Air Line 6*8 | 1 | 1 |
| 25 | 11420160 | Fixing plate of Manual Control Valve | 1 | 1 |
| 26 | 10420161 | Self locking nut | 2 | 2 |
| 27 | 10420162 | Manual Control Air Valve | 1 | 1 |
| 28 | 10420163 | Straight Fitting for Air Line 6*4 | 1 | 1 |
| 29 | 10420148 | Washer φ4 | 4 | 4 |
| 30 | 10420164 | Cap Head Bolt M4*30 | 2 | 2 |
| 31 | 071102 | Manual power unit | 1 | 1 |
| 32 | 10209005 | Self locking nut M8 | 14 | 14 |
| 33 | 10209004 | Rubber Ring φ8*20*3 | 4 | 4 |
| 34 | 10209003 | Hex Bolt M8*25 | 4 | 4 |
| 35 | 11476018 | Drive-in ramp assy. | 2 | 0 |
| | 11477004 | | 0 | 2 |
| 36 | 11610667 | Roller for Drive-thru Ramp | 4 | 4 |
| 37 | 11620043 | Roller pin | 4 | 4 |
| 38 | 10209010 | Snap φ10 | 8 | 8 |
| 39 | 10420156 | Protecting Rubber Ring φ24 | 1 | 1 |
| 40 | 10420045 | Washer φ6 | 20 | 20 |

| Item | Part# | Description | PRO-18 | PRO-18A |
|---|---|---|---|---|
| 41 | 10420004 | Pin for Drive-in Ramp | 2 | 2 |
| 42 | 10420005 | Fixing Bolt M5*8 | 4 | 4 |
| 43 | 10476500 | Parts box | 1 | 0 |
| | 10477500 | | 0 | 1 |
| 44 | 11420031-1 | Tire Stop Plate | 2 | 2 |
| 45 | 10201005 | Split pin φ4*50 | 1 | 1 |
| 46 | 10201090 | Shim(1mm) | 20 | 20 |
| | 10620065 | Shim(2mm/1mm) | 20 | 20 |
| 47 | 10209056 | Self locking nut M10 | 4 | 4 |
| 48 | 11420217 | Cable Limit Pin | 4 | 4 |
| 49 | 11477005-01 | Turn plate cover | 0 | 2 |
| 50 | 11520037 | Split pin | 0 | 4 |
| 51 | 11477003 | Slip Plate | 0 | 2 |
| 52 | 10420157 | Steel Ball Set | 0 | 106 |
| 54 | 11460029 | Fixing Ring For Oil Cylinder | 1 | 1 |
| 55 | 10460030 | Cylinder | 1 | 1 |
| 56 | 11460078 | Cable connecting plate | 1 | 1 |
| 57 | 10420014 | Hex Nut | 1 | 1 |
| 58 | 10420016B | Protective hose φ40*2*1500mm | 1 | 1 |
| 59 | 10420158 | Turnplate | 0 | 2 |
| 60 | 10476001 | No.① Cable | 1 | 1 |
| 61 | 10476004 | No.② Cable | 1 | 1 |
| 62 | 10476002 | No.③ Cable | 1 | 1 |
| 63 | 10476003 | No.④ Cable | 1 | 1 |
| 64 | 10420166 | 90° Fitting 6*4 screw thread | 1 | 1 |
| 65 | 11420243 | Straight Fitting | 1 | 1 |
| 66 | 10460060 | Oil Hose(straight+90°) | 1 | 1 |
| 67 | 10420120 | Extended Straight Fitting (with Nut) | 1 | 1 |
| 68 | 10460038 | Oil Hose L=1500mm (double straight) | 1 | 1 |
| 69 | 10209060 | 90° Fitting For Hydraulic Power Unit | 1 | 1 |
| 70 | 10420095 | Straight Fitting | 1 | 1 |
| 71 | 10420245 | Fitting | 1 | 1 |
| 72 | 10420247 | Compensation Valve | 1 | 1 |
| 72A | 10201020 | 90° Fitting | 1 | 1 |
| 73 | 10420124 | T-Fitting For Air Line | 2 | 2 |
| 74 | 10420242 | T-Fitting | 1 | 1 |
| 75 | 10420241 | Straight Fitting | 1 | 1 |
| 76 | 10476007 | Oil Return Hose φ6*φ4*6680mm black | 1 | 1 |
| 76A | 10460013 | Black Air Line φ6*φ4 | 1 | 1 |
| 77 | 10420167A | Black Air Line φ8*φ6*460mm | 1 | 1 |
| 78 | 11477007-01 | Turnplate adjusting block 533*76*50 | 0 | 4 |
| 79 | 11477008-01 | Turnplate adjusting block 533*35*35 | 0 | 4 |
| 80 | 11477006-01 | Turnplate adjusting block 533*141*50 | 0 | 4 |
| 81 | 11476635 | Pulley | 4 | 4 |
| 82 | 10476024 | Washer for Pulley 2.5*90*90 | 8 | 8 |
| 83 | 10476014 | Hex nut M22 | 8 | 8 |

## 4.1 CROSS BEAM EXPLODED VIEW (11460063)

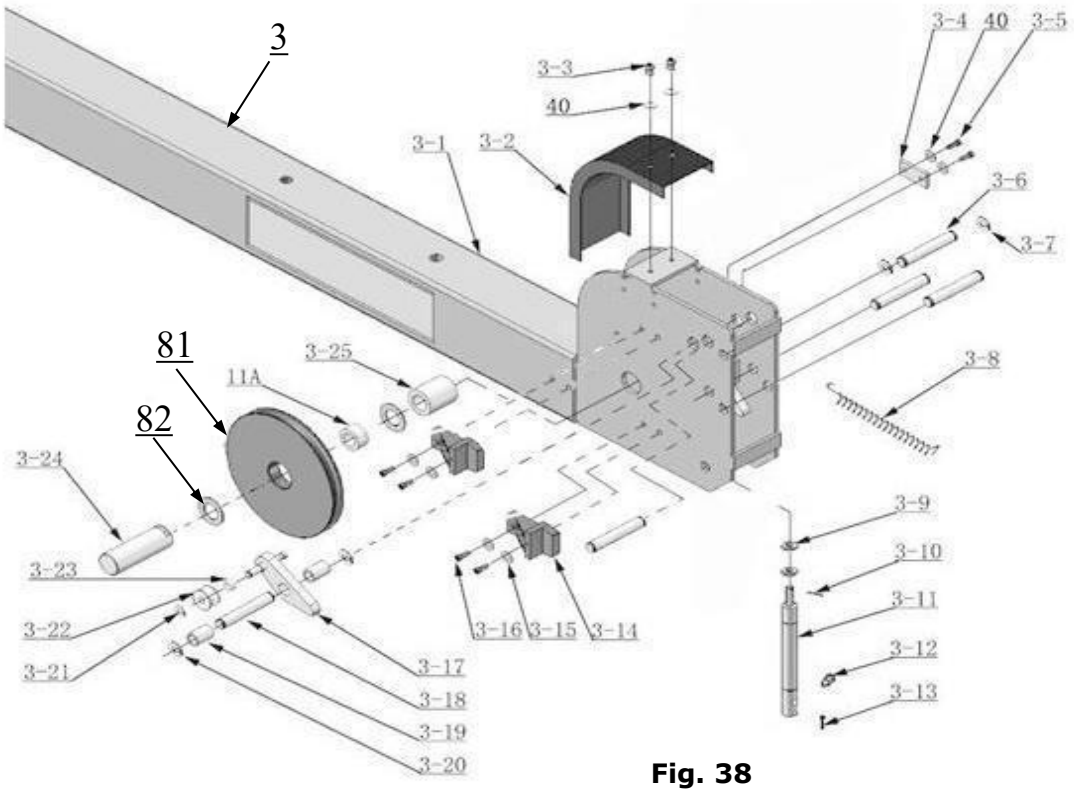



**Fig. 38**

| Item | Part# | Description | Qty | Note |
|---|---|---|---|---|
| 3-1 | 11460063 | Front Cross Beam | 2 | |
| 3-2 | 10460043 | Pulley Safety Cover | 4 | |
| 3-3 | 10209009 | Cap Head Bolt M6*8 | 8 | |
| 3-4 | 11420044 | Limit Plate | 4 | |
| 3-5 | 10420138 | Socket Bolt M6*16 | 8 | |
| 3-6 | 11420038 | Pin φ16 | 12 | |
| 3-7 | 10420037 | Snap Ring φ16 | 24 | |
| 3-8 | 10420033 | Spring | 4 | |
| 3-9 | 10209021 | Hex Nut M10 | 8 | |
| 3-10 | 10420049 | Split Pin φ2*16 | 4 | |
| 3-11 | 10420048 | Air Cylinder | 4 | |
| 3-12 | 10420047 | Fitting for Air Cylinder | 4 | |
| 3-13 | 10420046 | Split Pin φ4*30 | 8 | |
| 3-14 | 10420042 | Plastic Slider | 16 | |
| 3-15 | 10209033 | Washer φ8 | 40 | |
| 3-16 | 10420043 | Socket Bolt M8*20 | 32 | |
| 3-17 | 10420175 | Slack-cable safety lock (left & right ) | Each 2 | |
| 3-18 | 10420171 | Pin φ19 | 8 | |
| 3-19 | 10420172 | Pin Bush For Slack-cable safety lock | 8 | |
| 3-20 | 10206019 | Snap Ring φ19 | 16 | |
| 3-21 | 10209010 | Snap Ring φ10 | 4 | |
| 3-22 | 10420035 | Tension Pulley | 4 | |
| 3-23 | 11420174 | Spacer | 4 | |
| 3-24 | 11476026 | Pulley Pin | 4 | |
| 3-25 | 11460076 | Pulley shaft sleeve | 4 | |

## 4.2 CYLINDERS EXPLODED VIEW (10460030)

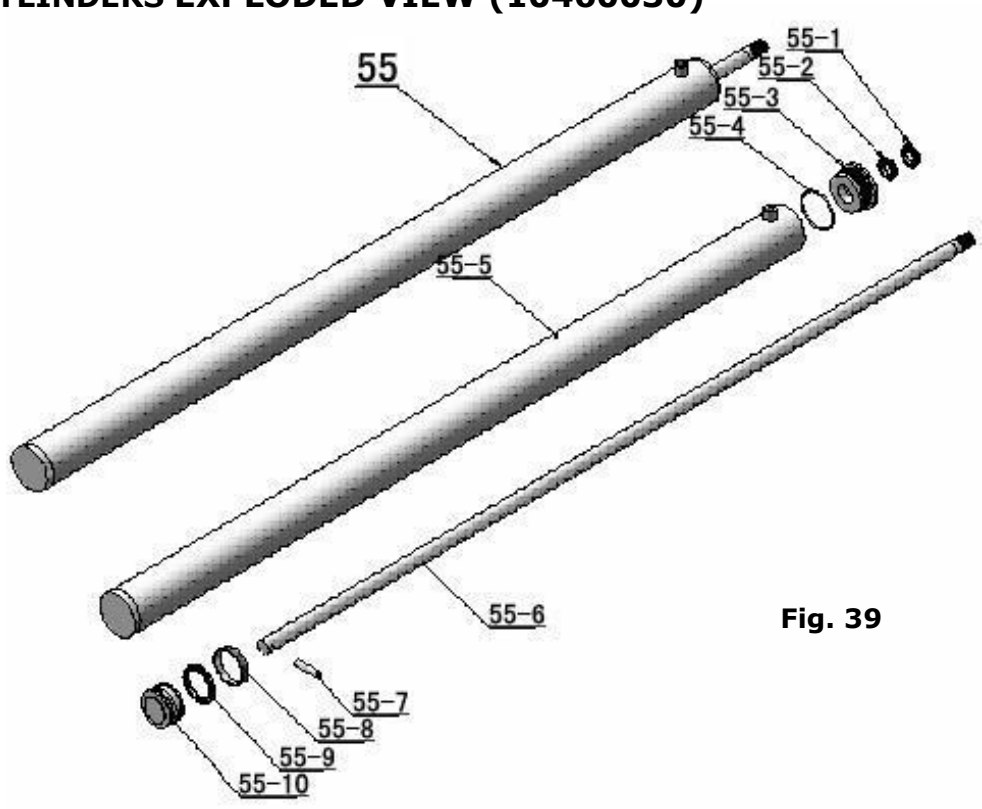



**Fig. 39**

| **Parts list For Cylinder** | | | | |
|---|---|---|---|---|
| **Item** | **Part#** | **Description** | **Qty** | **Note** |
| 55-1 | 10420059 | Dust Ring | 1 | |
| 55-2 | 10420060 | Y- Ring IDI | 1 | |
| 55-3 | 11460046 | Head Cap | 1 | |
| 55-4 | 10460047 | O- Ring | 1 | |
| 55-5 | 11460048 | Bore Weldment | 1 | |
| 55-6 | 11420064 | Piston Rod | 1 | |
| 55-7 | 11460050 | Pin | 1 | |
| 55-8 | 10460051 | Support Ring | 1 | |
| 55-9 | 10460052 | Y- Ring OSI | 1 | |
| 55-10 | 11460053 | Piston | 1 | |

## 4.3 POWER UNIT EXPLODED VIEW（071102）

**220V/60Hz Single Phase**

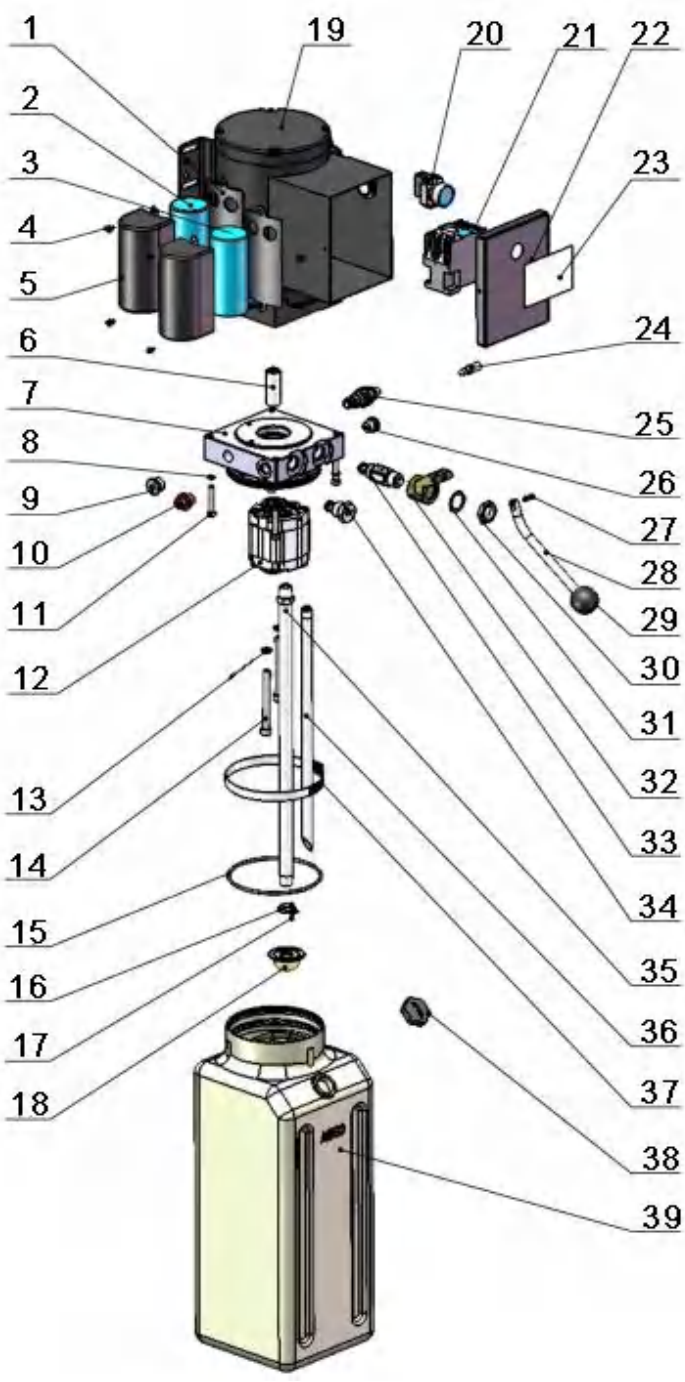



**Fig.40**

**Parts list for 220V/60Hz, Single Phase**

| Item | Part# | Description | Qty |
|---|---|---|---|
| 1 | 81400180 | Rubber Pad | 2 |
| 2 | 81400250 | Starting capacitor | 1 |
| 3 | 81400200 | Running capacitor | 1 |
| 4 | 10420148 | Cap Head Bolt with washer | 4 |
| 5 | 81400066 | Cover of Motor Terminal Box | 2 |
| 6 | 81400363 | Motor Connecting Shaft | 1 |
| 7 | 80101013 | Manifold block | 1 |
| 8 | 10209149 | Washer | 4 |
| 9 | 81400276 | Iron plug | 1 |
| 10 | 81400259 | Red rubber plug | 1 |
| 11 | 85090142 | Socket bolt | 4 |
| 12 | 81400280 | Gear pump | 1 |
| 13 | 10209034 | Washer | 2 |
| 14 | 81400295 | Socket bolt | 2 |
| 15 | 81400365 | O ring | 1 |
| 16 | 10209152 | Ties | 1 |
| 17 | 85090167 | Magnet | 1 |
| 18 | 81400290 | Filter net | 1 |
| 19 | 81400413 | Steel Motor | 1 |
| 20 | 10420070 | Push button | 1 |
| 21 | 41030055 | AC connector | 1 |
| 22 | 81400287 | Motor terminal box cover | 1 |
| 23 | 71111216 | AMGO power unit label | 1 |
| 24 | 81400560 | Throttle valve | 1 |
| 25 | 81400266 | Relief valve | 1 |
| 26 | 81400284 | Inner hex iron plug | 1 |
| 27 | 10720118 | Elastic pin | 1 |
| 28 | 81400451 | Release valve handle | 1 |
| 29 | 10209020 | Plastic ball for release handle | 1 |
| 30 | 81400421 | Release valve nut | 1 |
| 31 | 81400422 | Shim | 1 |
| 32 | 81400449 | Valve Seat(low) | 1 |
| 33 | 81400567 | Release Valve | 1 |
| 34 | 81400566 | Check Valve | 1 |
| 35 | 81400366 | Oil suction pipe | 1 |
| 36 | 81400289 | Oil return pipe | 1 |
| 37 | 81400364 | Clamp(stainless steel) | 1 |
| 38 | 81400263 | Oil tank cap | 1 |
| 39 | 81400319 | Oil tank | 1 |

**Illustration of hydraulic valve for power unit**

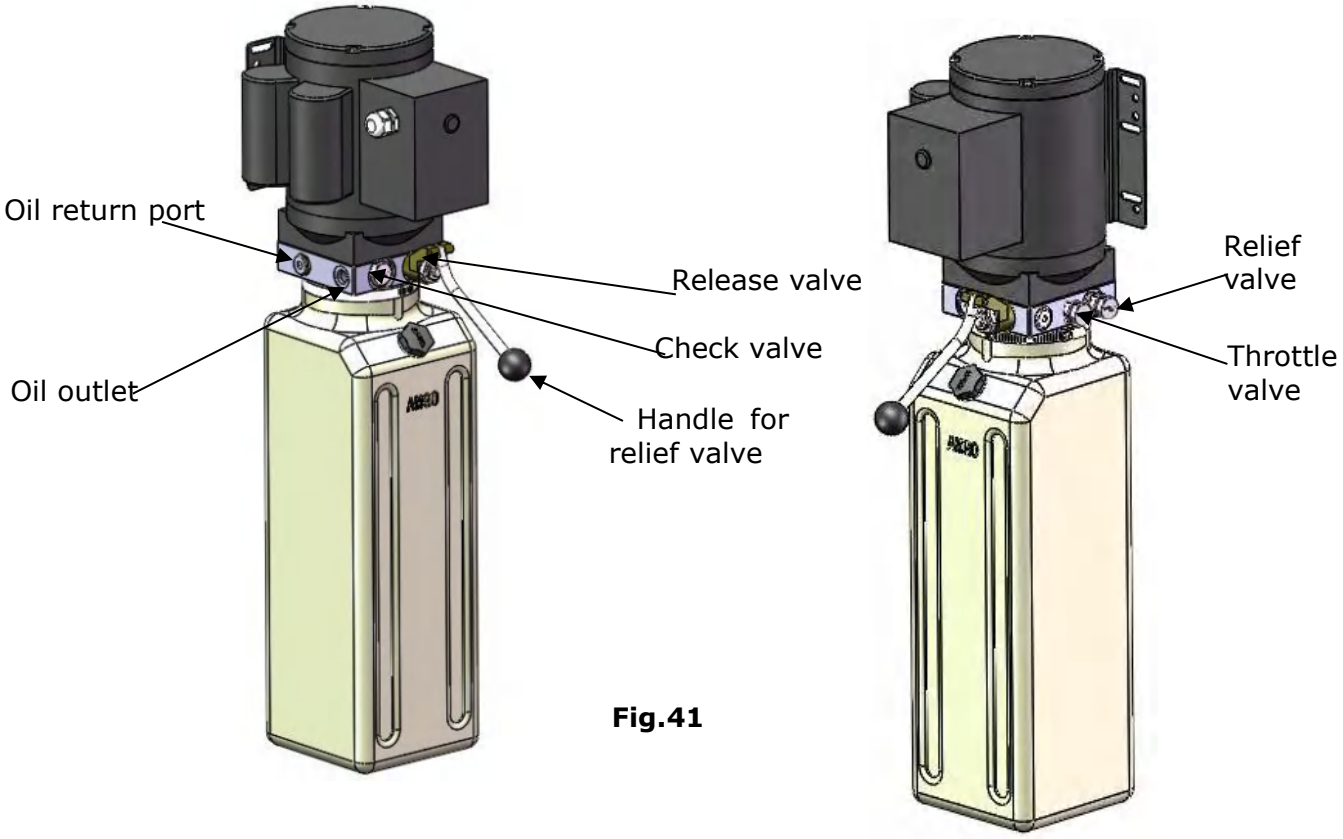



**Fig.41**

## V. TEST RUN

1. Fill the reservoir with approximately 14L Hydraulic Oil (**Note**: In consideration of Power Unit's durability，please use **Hydraulic Oil 46#**).
2. Press the button on the power unit, the Cables will be strained. Check whether the Cables match the Pulley. Make sure the Cables are not across.
3. Press the release handle of the power unit to lock the Cross-beam to the safety ladders, and then adjust the platforms to be level by adjusting the nuts of Safety Ladders.
4. Adjust the cable fitting Hex nuts to make platforms and four safety locks work synchronously. Lift up and down for several times, meanwhile do the synchronous adjustment till the four Safety Devices can be locked and released at the same time.
5. Adjust the clearance between the post and the plastic slider of Cross-beam to about 2mm, and then tighten the fixing nut of slider.
6. After finishing the above adjustment, testing the lift with load. Lift the Platforms in low position first, make sure the Platforms can be up and down synchronously and the Safety Device can be locked and released synchronously. And then raise the lift to the top completely. If there are anything improper, repeat the above adjustment.

**Circuit Diagram of Hydraulic System**

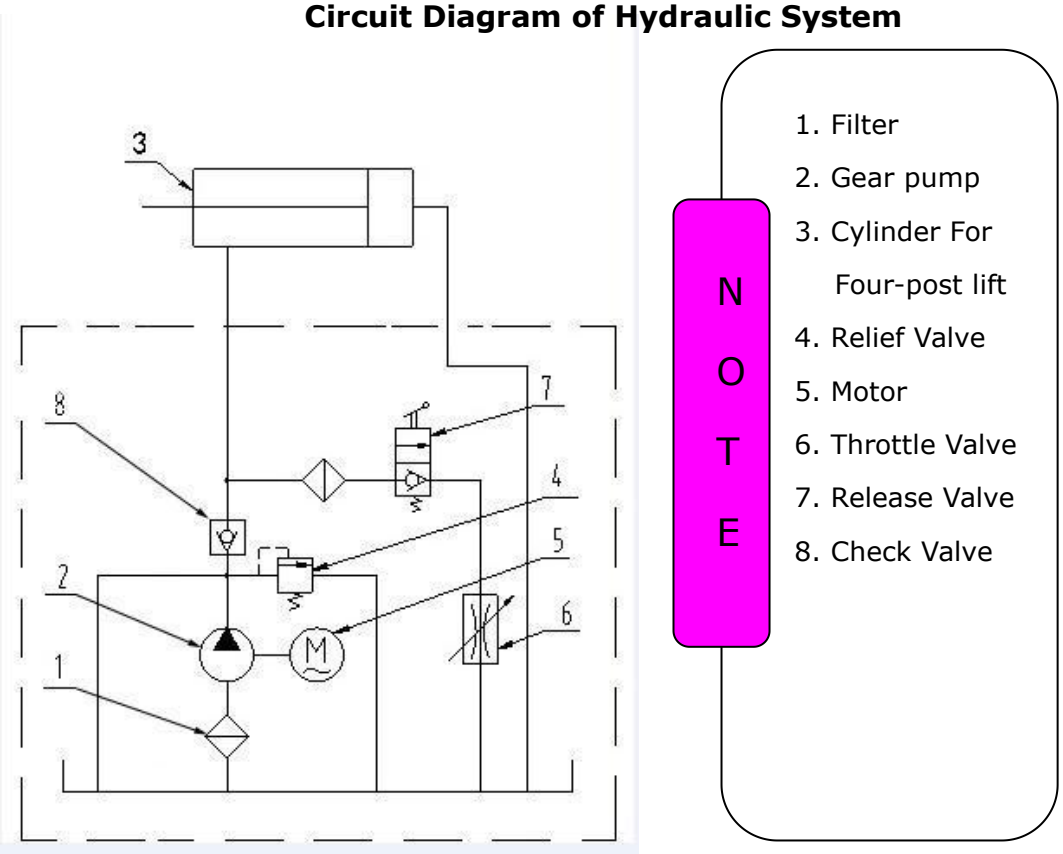



**Fig. 42**

## VI. OPERATION INSTRUCTIONS

### To lift vehicle

1. Keep clean of environment near the lift;
2. Drive vehicle to the Platform and put on the brake;
3. Turn on the power and press the button, raise the lift to the working position;
   **Note: make sure the vehicle is steady when the lift is raised.**
4. Press the Handle of release valve to lock the lift in the safety position. Make sure the Safety device is locked at the same height.

### To lower vehicle

1. Be sure the clearance of around and under the lift, only leaving operator in lift area;
2. Press the button, the lift will be raised for 3-5 seconds, and then press the button of Manual-controlled air valve by hand to make sure the safety device released, press the handle of release valve by the other hand then the lift starts being lowered automatically;
3. Drive away the vehicle when the lift is lowered to the lowest position.
4. Turn off the power.

## VII. MAINTENANCE SCHEDULE

**Monthly:**

1. Re-torque the anchor bolts to 150 Nm;
2. Lubricate cable with lubricant;
3. Check all cable connection, bolts and pins to insure proper mounting;
4. Make a visual inspection of all hydraulic hoses/lines for possible wear or leakage;
5. Lubricate all Rollers, Safety devices with 90wt. gear oil or equivalent.

**Note: All anchor bolts should take full torque. If any of the bolts does 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 to insure level lifting.
3. Check the vertical of columns.

### Oil cylinder maintenance:

In order to extend the service life of the oil cylinder, please operate according to the following requirements.

1. Recommend to use N46 anti-wear hydraulic oil.
2. The hydraulic oil of the lifts should be replaced regularly during using. Replace the hydraulic oil 3 months after the first installation, Replace the hydraulic oil once a year afterwards.
3. Make at least one full trip raising and lowering per day. For exhausting the air from the system, which could effectively avoid the corrosion of the cylinder and damage to the seals caused by presence of air or water in the system.
4. Protect the outer surface of the oil cylinder's piston rod from bumping and scratching, and timely clean up the debris on the oil cylinder dust-ring and the piston rod.

## VIII. TROUBLE SHOOTING

| TROUBLE | CAUSE | REMEDY |
|---|---|---|
| Motor does not run | 1. Start Button does not work<br>2.Wiring connections are not in good condition<br>3. Motor burned out<br>4. AC contactor burned out<br>5. Height limit switch is damaged | 1.Replace Start button<br>2.Repair all wiring connections<br>3.Repair or replace motor<br>4.Replace AC contactor<br>5.Replace |
| Motor runs but the lift is not raised | 1.Motor runs in reverse rotation<br>2. Release valve in damage<br>3. Gear pump in damage<br>4.Relief valve or check valve in damage<br>5.Low oil level | 1.Reverse two power wire<br>2.Repair or replace<br>3.Repair or replace<br>4.Repair or replace<br>5.Fill tank |
| Lift does not stay up | 1. Release valve out of work<br>2 Relief valve or check valve leakage.<br>3.Cylinder or fittings leaks | Repair or replace |
| Lift raises too slow | 1.Oil line is jammed<br>2.Motor running on low voltage<br>3. Oil mixed with Air<br>4.Pump leaks<br>5.Overload lifting | 1.Clean the oil line<br>2.Check electrical system<br>3. Fill tank<br>4.Replace Pump<br>5.Check load |
| Lift cannot lower | 1. Safety device are in activated<br>2. Release valve damaged<br>3. Air Cylinder damaged<br>4. Air line leaks | 1. Release the safeties<br>2. Replace or repair<br>3.Replace the cylinder<br>4. Check the air line |

## IX. LIFT DISPOSAL:

When the car lift cannot meet the requirements for normal use and needs to be disposed, it should follow local laws and regulations.

AMGO Hydraulics

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