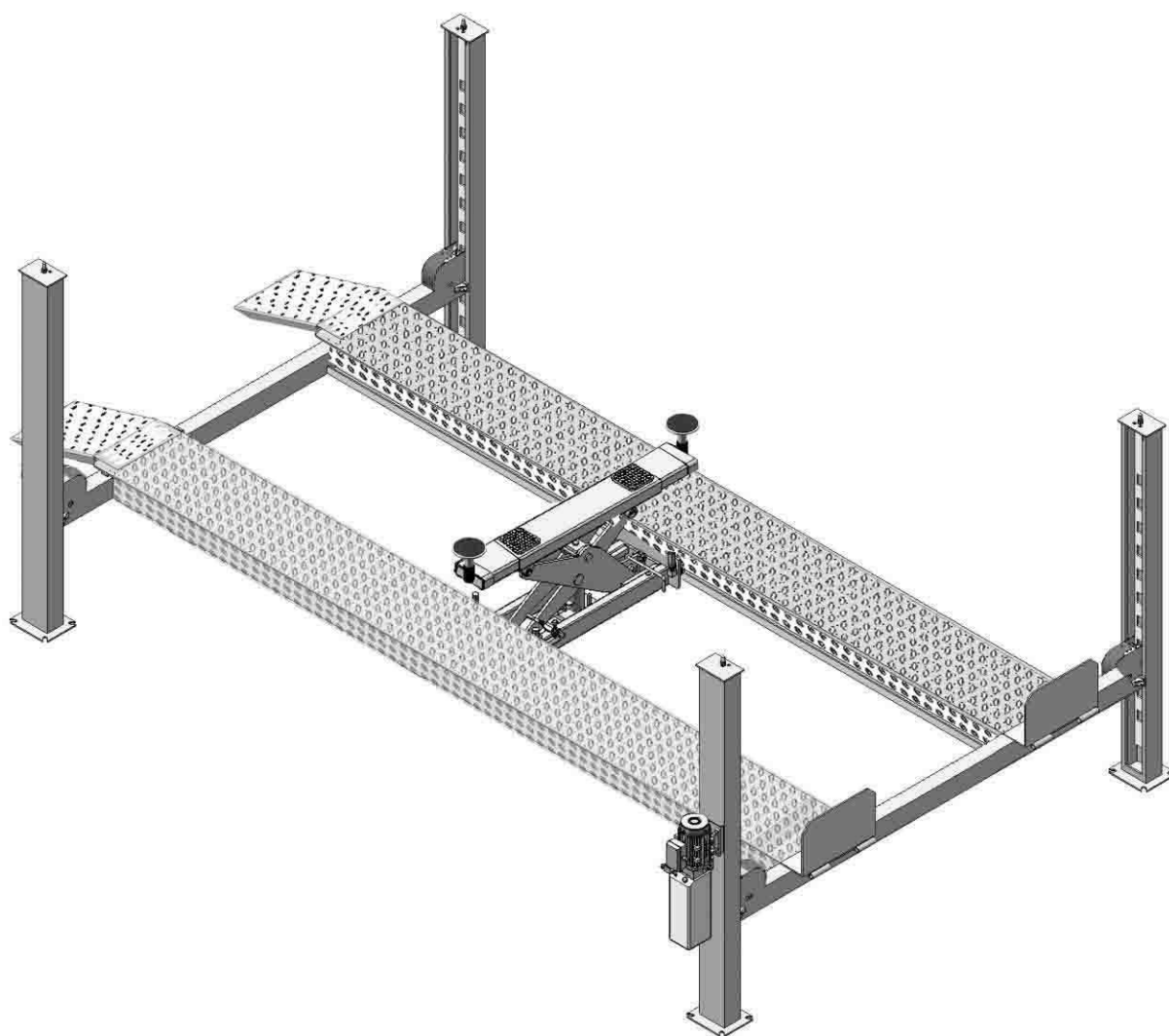




# Installation And Service Manual

Original



**FOUR POST LIFT**

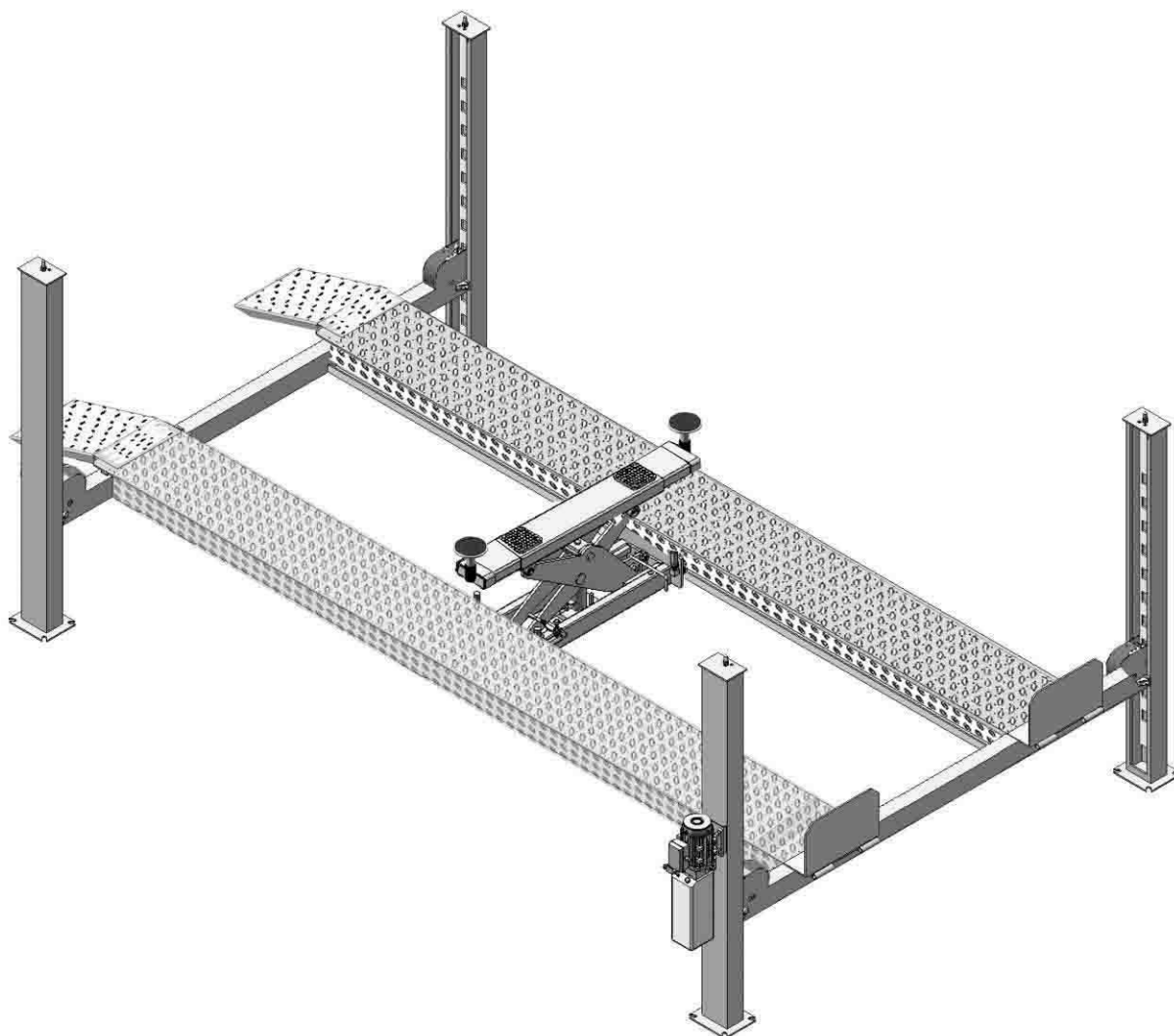
**Model: PRO-30 PRO-30E**

# CONTENTS

|                                           |    |
|-------------------------------------------|----|
| Product Features and Specifications ..... | 1  |
| Installation Requirement .....            | 2  |
| Steps of Installation .....               | 4  |
| Exploded View .....                       | 23 |
| Test Run .....                            | 32 |
| Operation Instruction .....               | 33 |
| Maintenance .....                         | 33 |
| Trouble Shooting .....                    | 35 |
| List Disposal.....                        | 35 |

## I. PRODUCT FEATURES AND SPECIFICATIONS

- Manual control system
- Mechanical self-lock and pneumatic safety release
- Manual hydraulic power system, cable-driven.
- Strengthen and Non-skid diamond platforms.
- Adjustable platform and adjustable safety lock ladders.
- Optional Jack: With Pneumatic hydraulic pump.



**Fig .1**

## MODEL SPECIFICATIONS

| Model   | Lifting Capacity | Lifting Height | Lifting Time | Overall Length (Inc. Ramps) | Overall Width | Width Between Columns | Motor |
|---------|------------------|----------------|--------------|-----------------------------|---------------|-----------------------|-------|
| PRO-30  | 30000lbs         | 74-3/4"        | 116S         | 307 1/8"                    | 149-3/8"      | 131-3/4"              | 2.0HP |
| PRO-30E |                  |                |              | 367 1/8"                    |               |                       |       |

## II. INSTALLATION REQUIREMEN

### A TOOLS REQUIRED

- ✓ Rotary Hammer Drill ( $\Phi 3/4$ )



- ✓ 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 (295-1/4")



- ✓ Pliers



- ✓ Lock Wrench



- ✓ Socket Head Wrench  
(3", 5", 6")



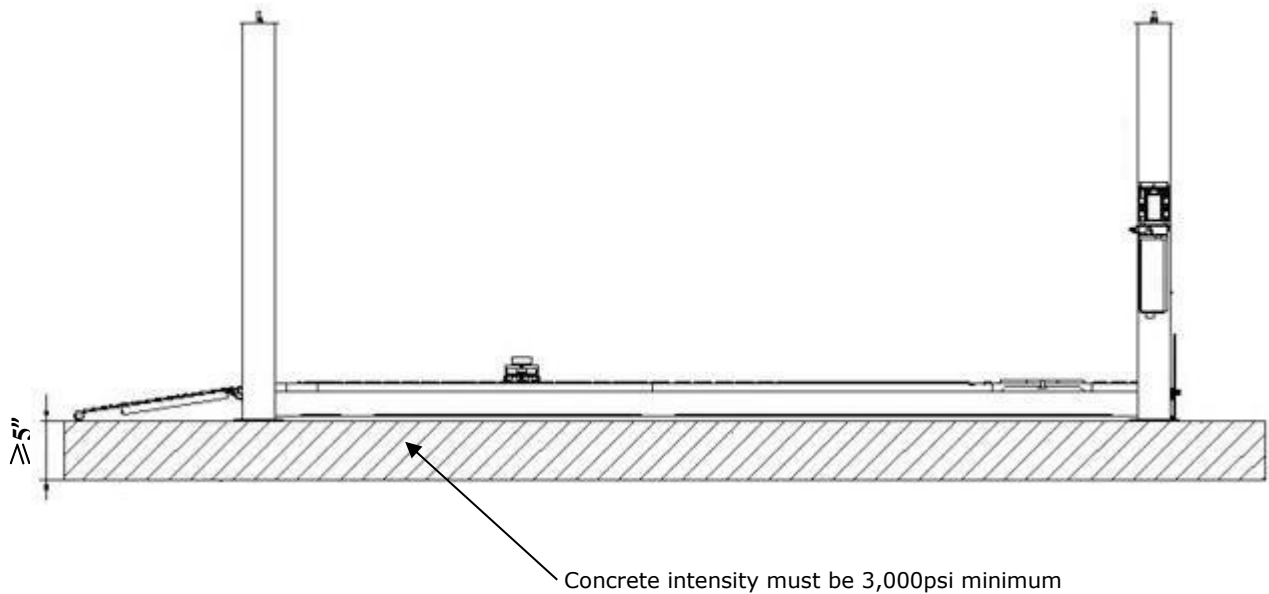
Fig. 3

## **B. 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 5" 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**

## **C. AIR SUPPLY**

Air pressure requirement: 0.5Mpa~0.8Mpa, Air line size  $\Phi 8 * \Phi 6$  .

## **D. POWER SUPPLY**

The electrical source must be 2HP minimum. The source cable size must be 2.5mm<sup>2</sup> 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)

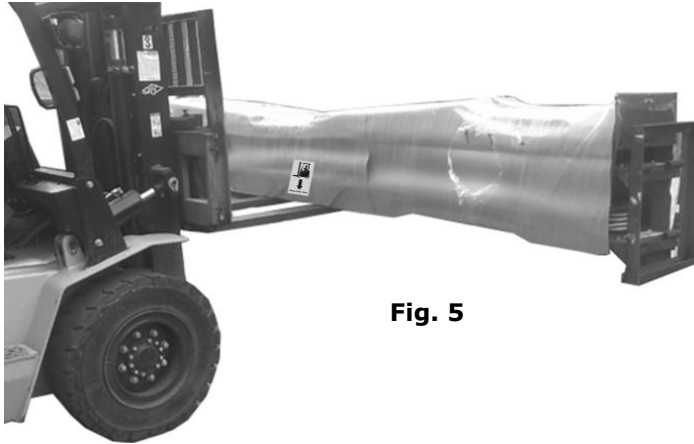


Fig. 5

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



Fig. 6

Power unit

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



Shipment Parts List

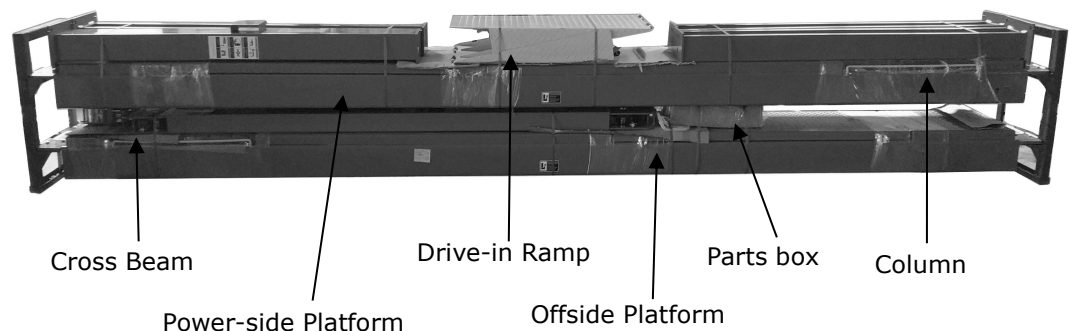


Fig.7

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, then remove the package stand.
6. Move aside the parts and check the parts according to the shipment parts list **(See Fig. 9).**



**Fig.9**

7. Open the parts box and check the parts according to the parts box list **(See Fig. 10)**



**Fig. 10**

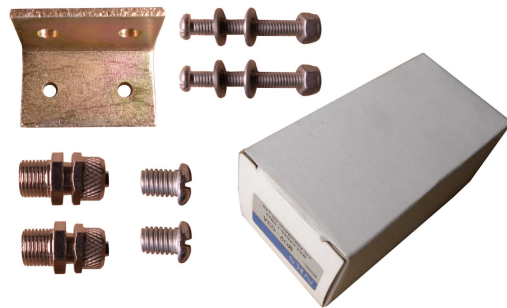
8. Check the Parts bag according to the parts bag list (**See Fig. 11**).



**Parts bag 1**



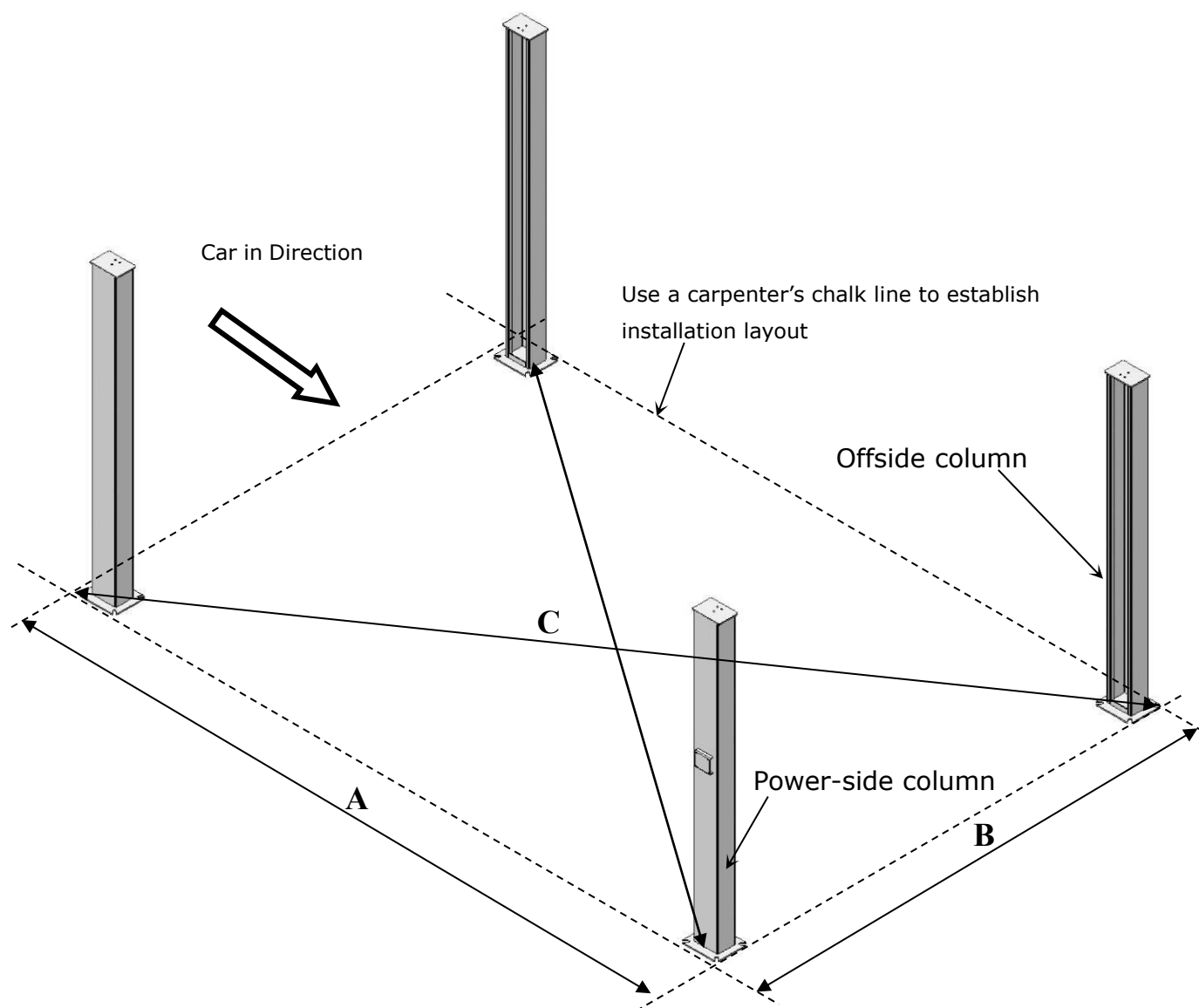
**Parts bag 2**



**Fig.11**

**C.** Use a carpenter's chalk line to establish installation layout , make sure the size is right and base is flat (**see Fig. 12**).

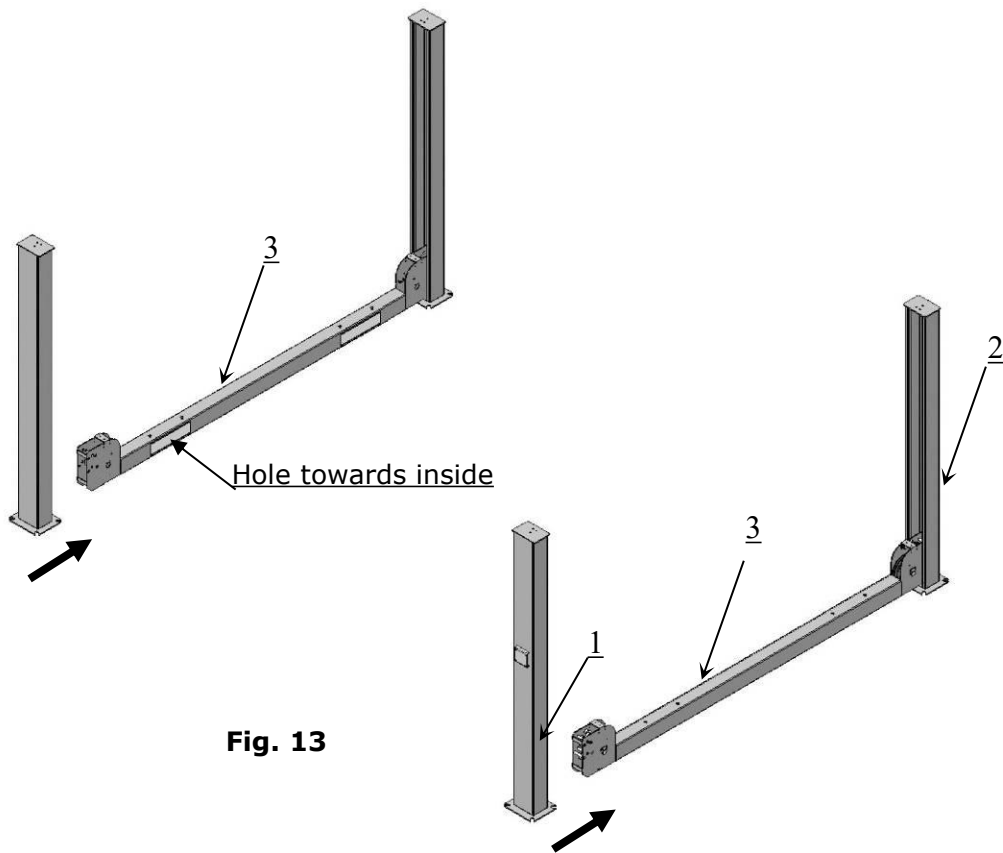
**Note: Reserve space before and behind the installation site.**



**Fig. 12**

| Model   | A        | B        | C        |
|---------|----------|----------|----------|
| PRO-30  | 256-1/2" | 149-3/8" | 296-3/4" |
| PRO-30E | 316-1/2" | 149-3/8" | 350"     |

**D. Install cross beams (See Fig. 13).**

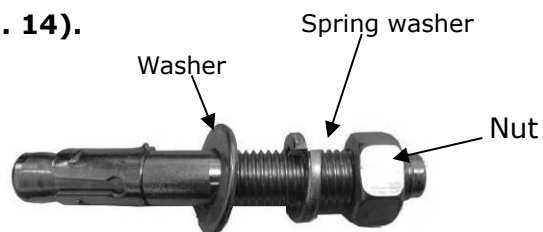


**Fig. 13**

**E. Fix the anchor bolts**

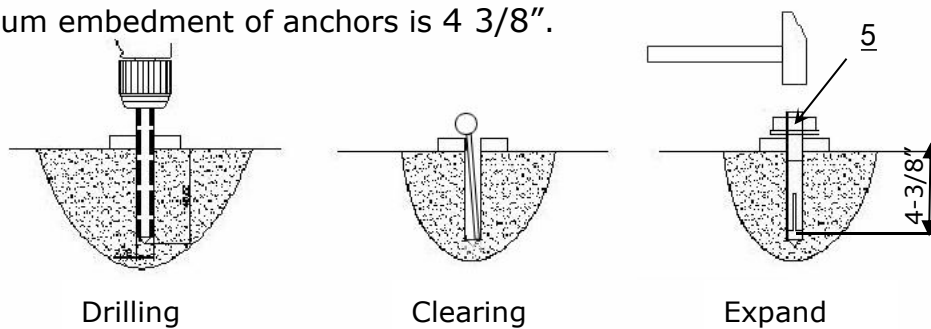
1. Prepare the anchor bolts (See Fig. 14).

**Fig. 14**



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. 15).

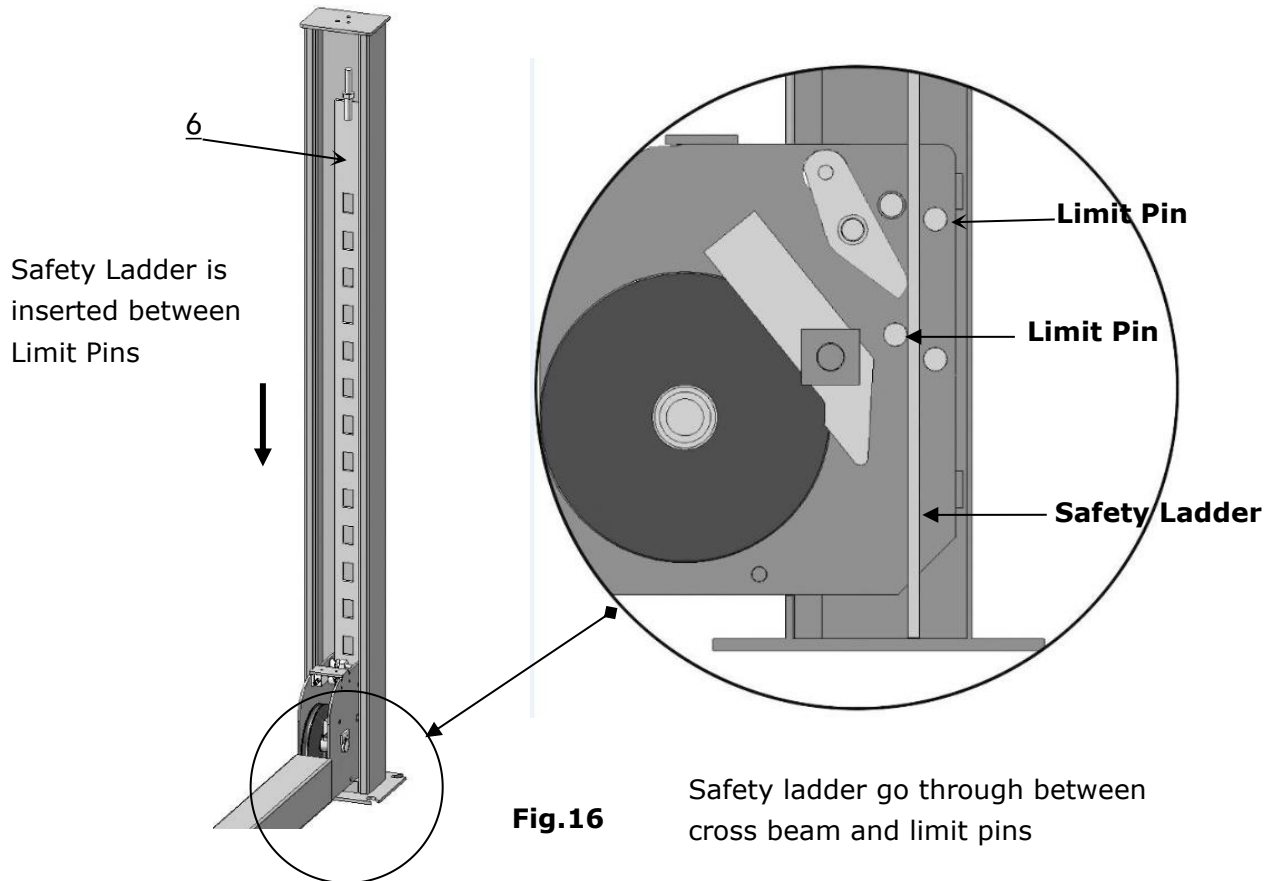
Note: Minimum embedment of anchors is 4 3/8".



**Fig. 15**

## 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, then install the safety ladders(See Fig. 16).



2. Install safety ladders (See Fig. 17)

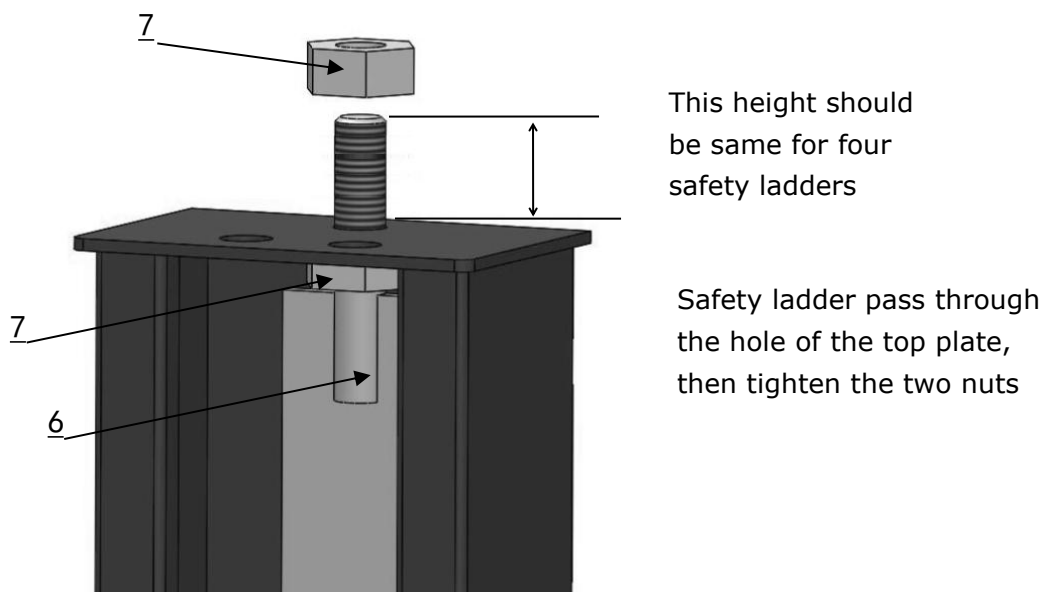
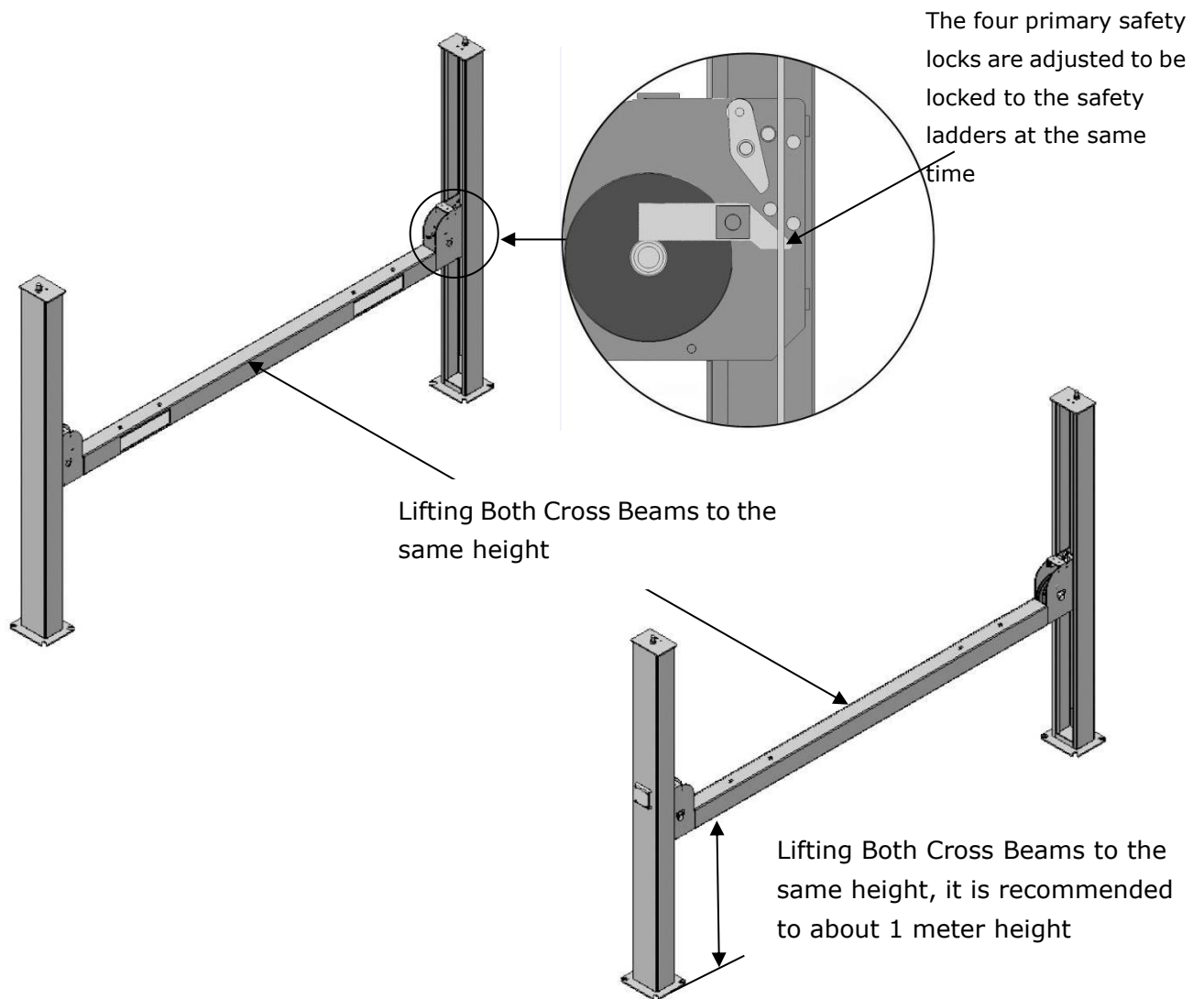


Fig. 17

**G. Put the Cross Beams at the same height (See Fig. 18).**

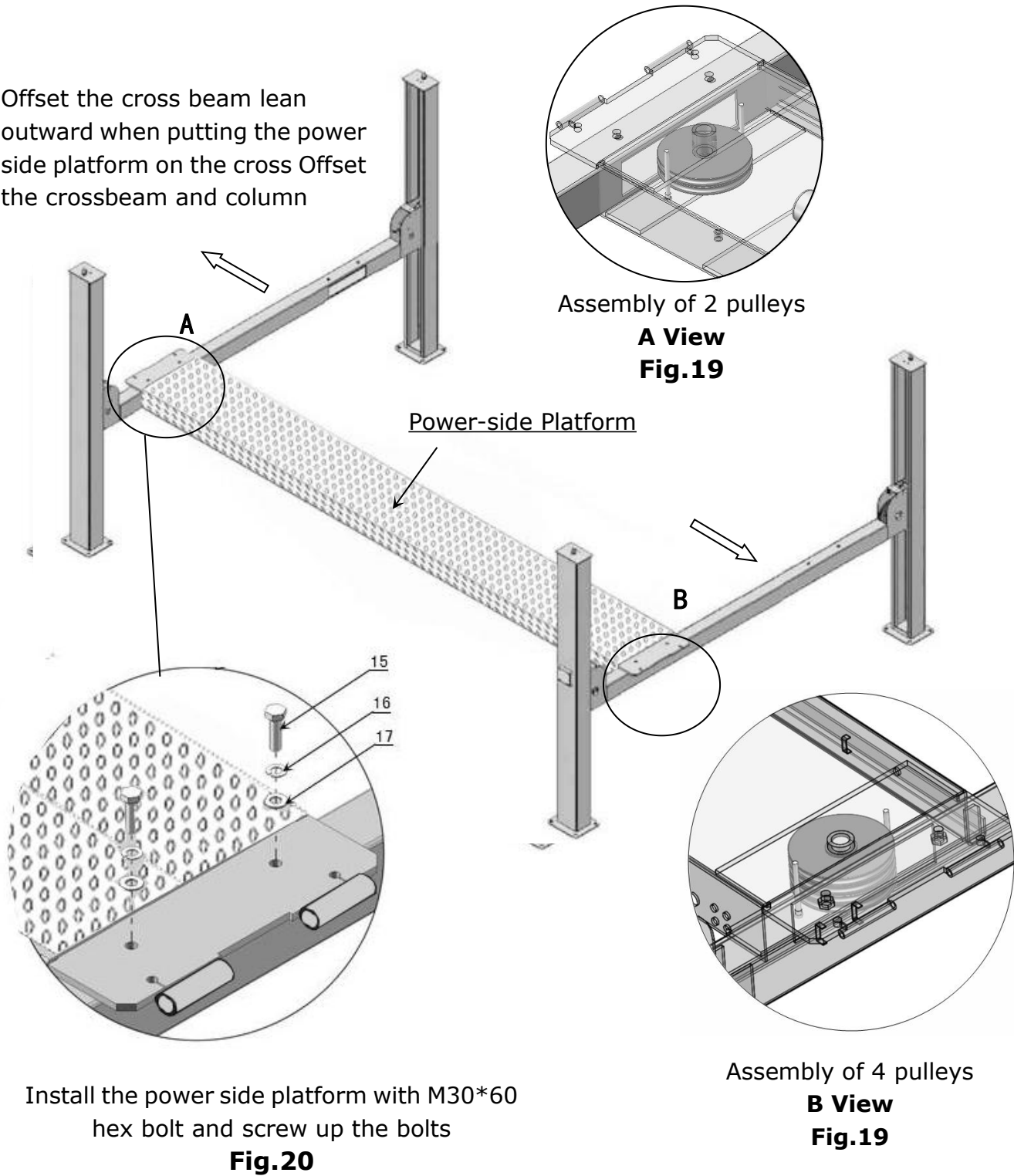


**Fig. 18**

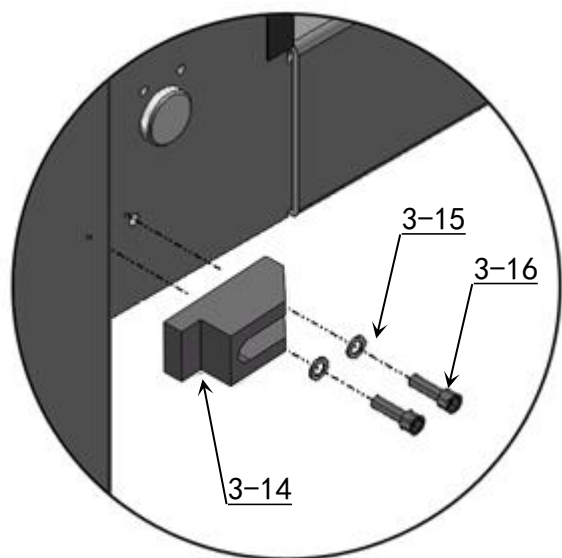
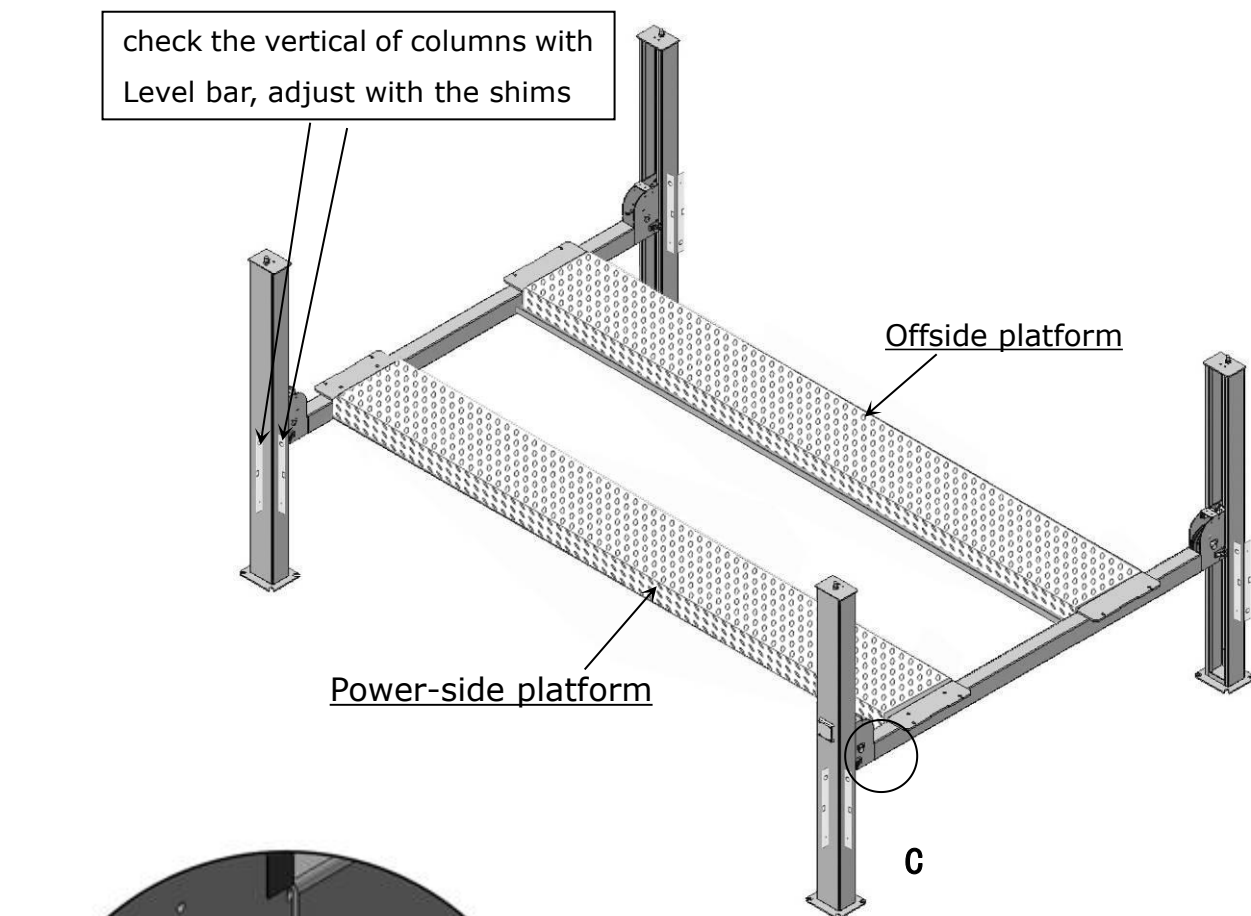
## H. Install power side platform.

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.19), Install the power side platform and screw up the bolts (See Fig.20)

Offset the cross beam lean outward when putting the power side platform on the cross Offset the crossbeam and column

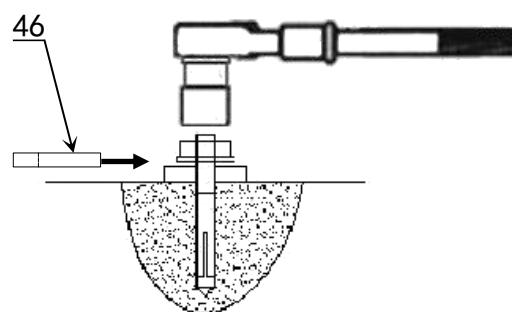


I. Assemble offside platform and slider block. ( **see Fig.21**), check the vertical of columns with Level bar, adjust with the shims if not, and then tighten the anchor bolts (**See Fig. 22**)



**Install the slider block**  
**C View**  
**Fig 21**

Note: Torque of Anchors is 150N.m.

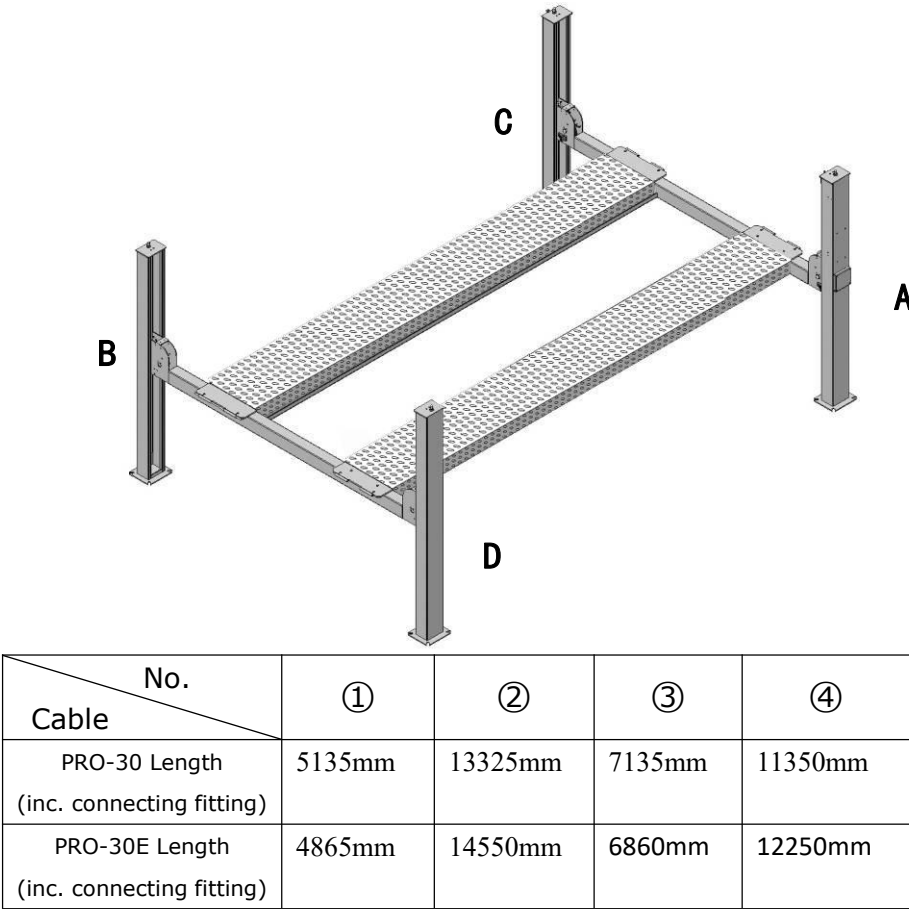


Using the ratchet spanner with socket to tighten the

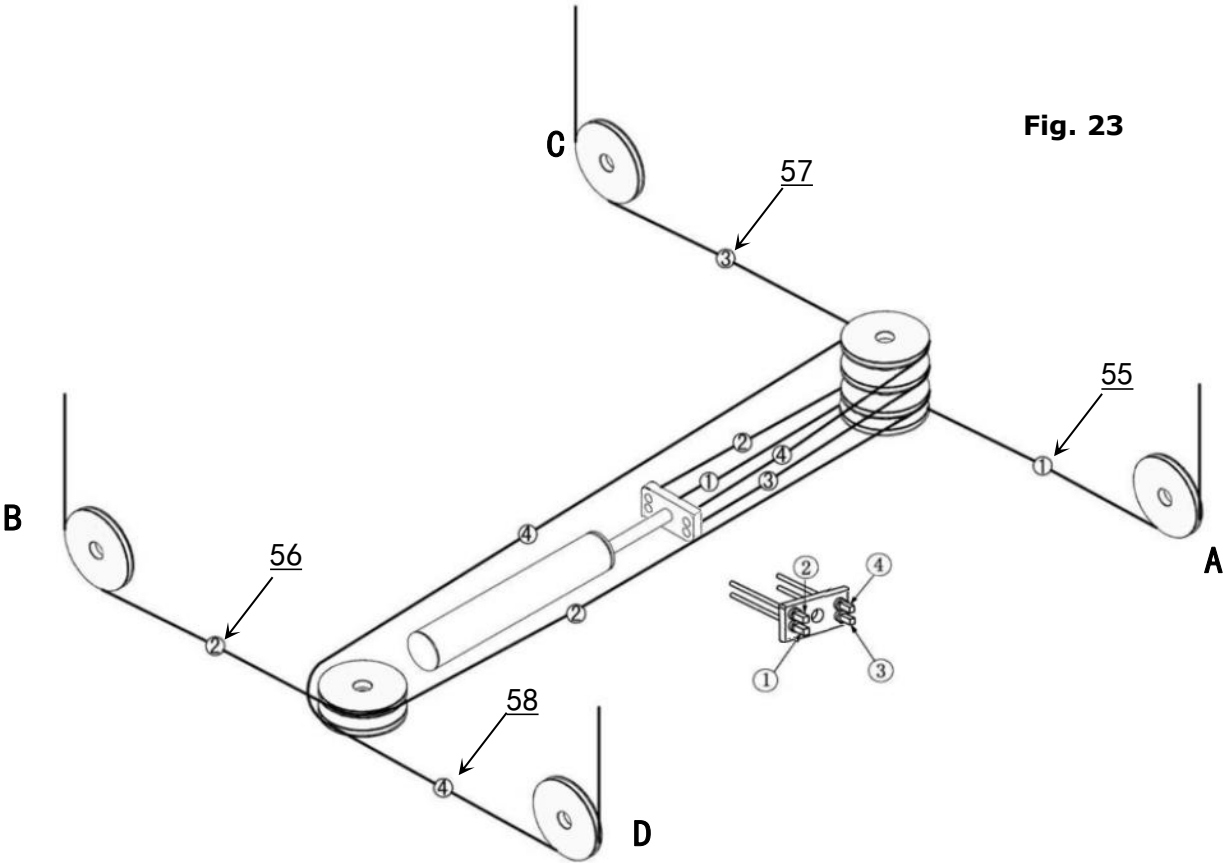
**Fig. 22**

**J. Install cables (See Fig. 23)**

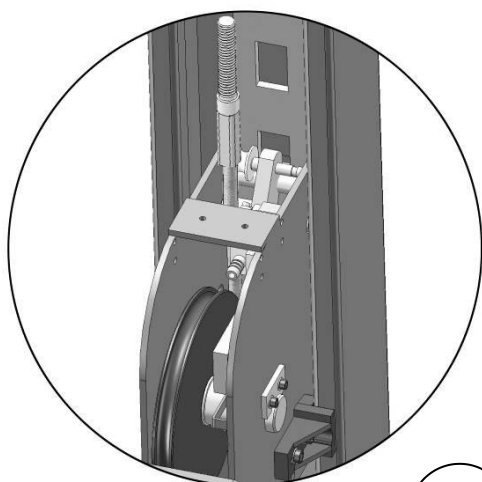
- 1. Pass through the cables from the platform to the columns according to the number of the cables



**Fig. 23**

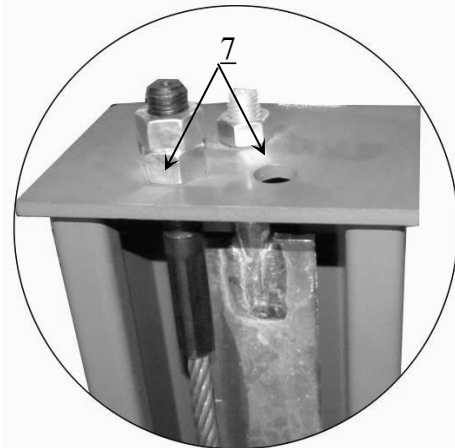


2. The cable pass through the cross beam to top plate of columns and be screwed with cable nuts (See Fig. 24, Fig.25), then install cable limit pin (See Fig.26)



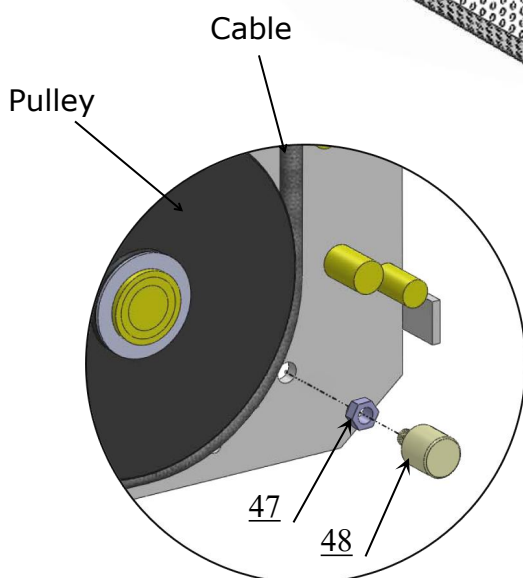
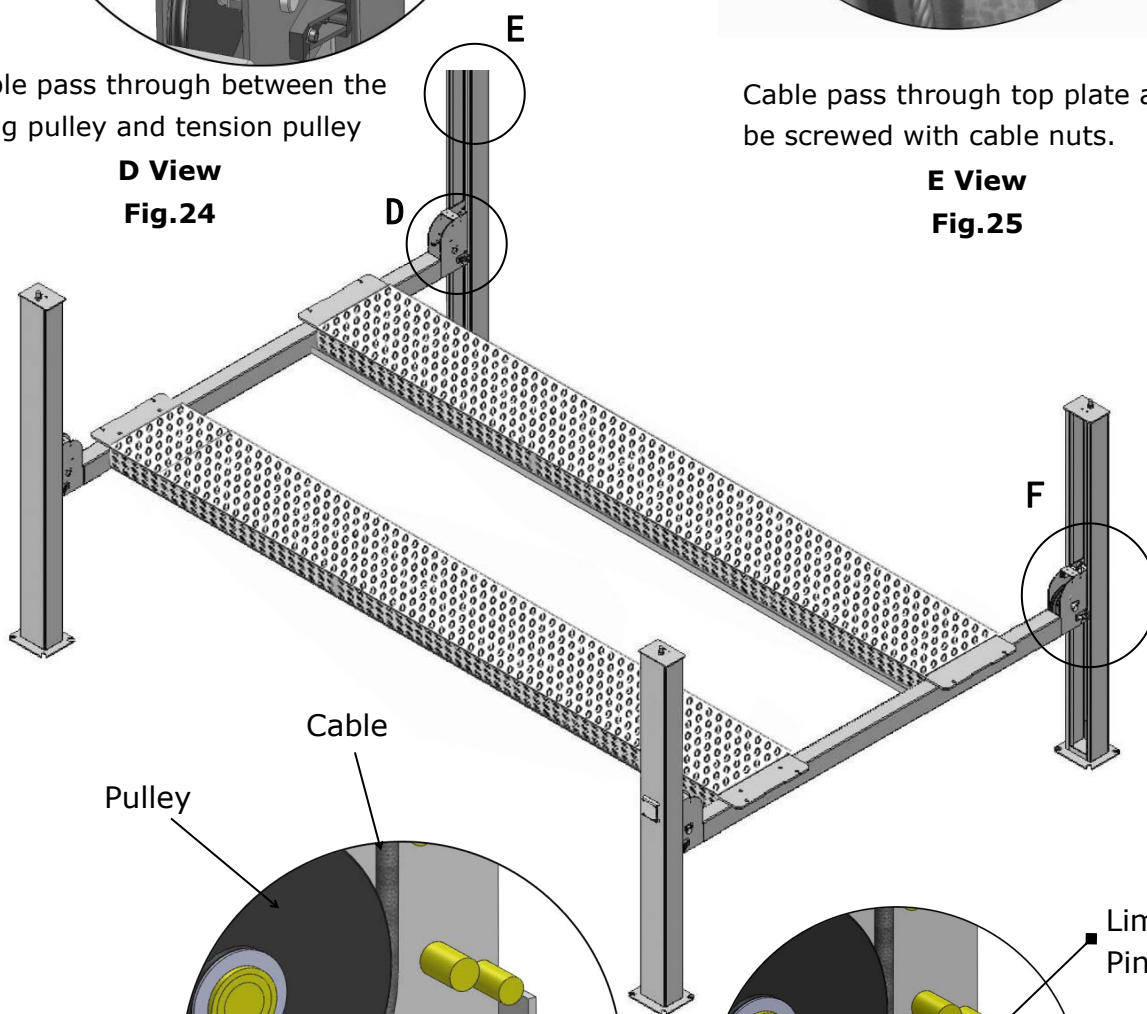
Cable pass through between the big pulley and tension pulley

**D View**  
**Fig.24**

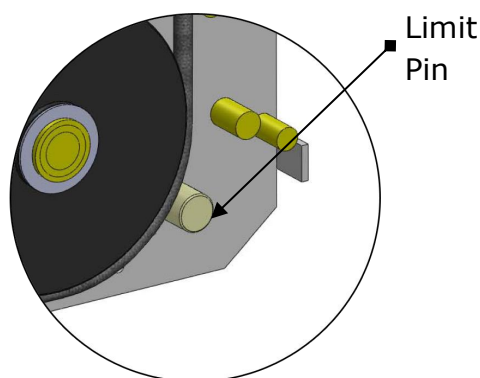


Cable pass through top plate and be screwed with cable nuts.

**E View**  
**Fig.25**



Install cable limit pin



After installation

**F View**  
**Fig. 26**

3. Illustration for platform cables (See Fig. 27, Fig.28, Fig.29)

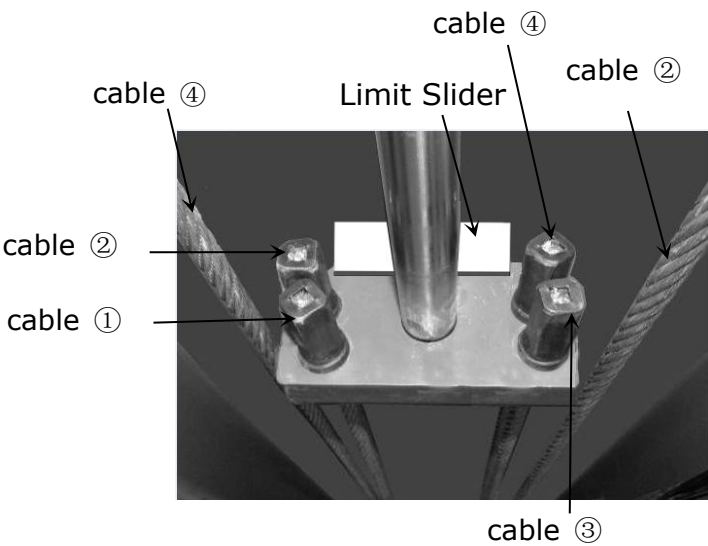


Fig.27

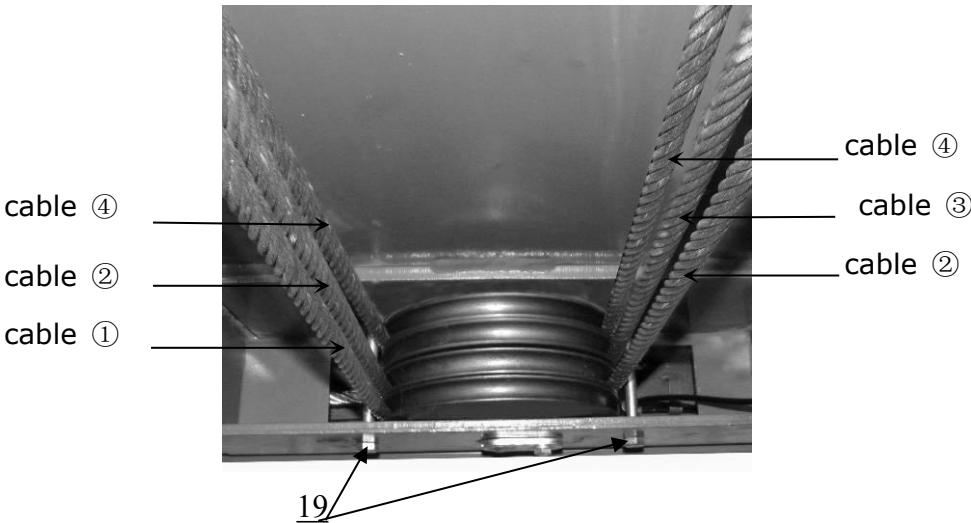


Fig.28

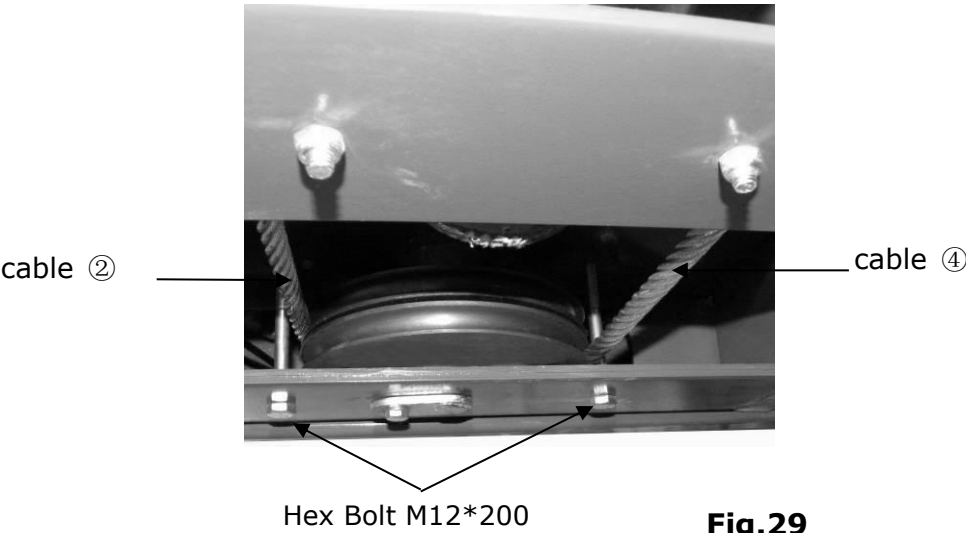
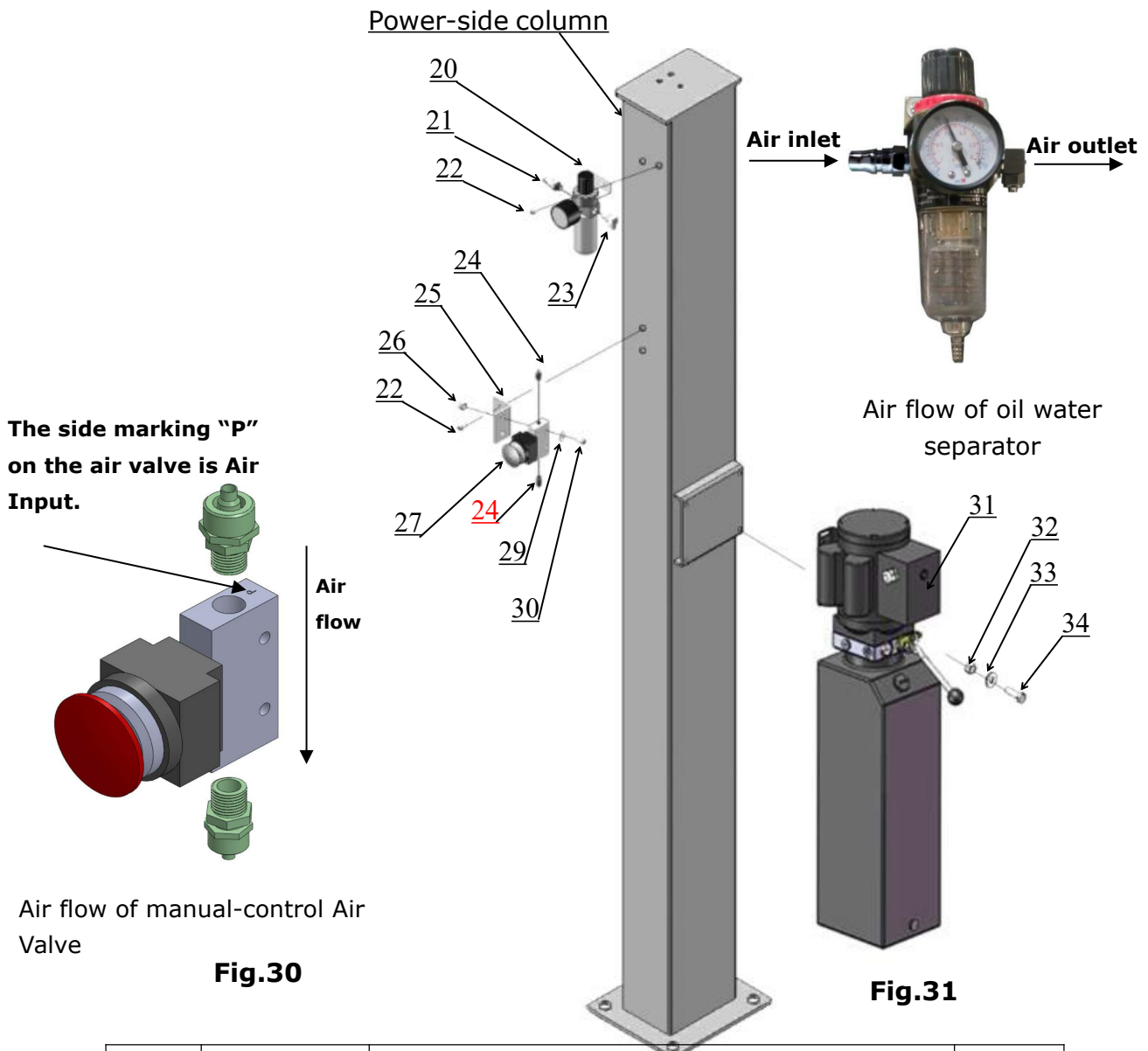


Fig.29

## K. Install oil-water separator, manual control air valve and power unit

(See Fig. 30, Fig.31 )



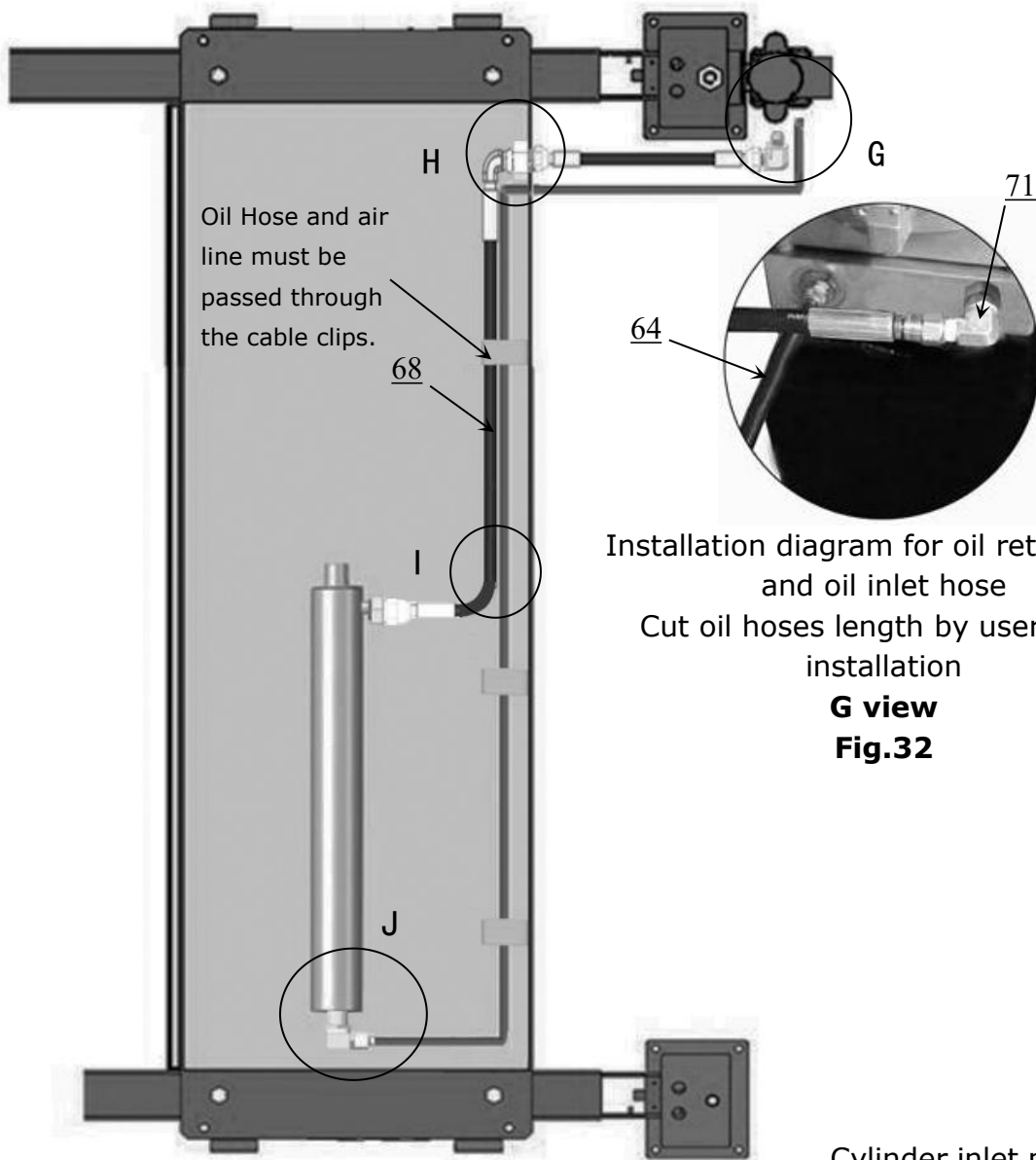
**Fig.30**

**Fig.31**

| 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                            | 10  |
| 23   | 10420076 | 90° fitting for air line 6*8 screw thread     | 1   |
| 24   | 10420159 | Straight fitting for air line 6*8 crew thread | 2   |
| 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             | 1   |
| 29   | 10420148 | Washer $\phi 4$                               | 4   |
| 30   | 10420164 | Cap head bolt M4*30                           | 2   |
| 31   | 071107   | Manual hydraulic power unit                   | 1   |
| 32   | 10209005 | Self locking nut M8                           | 14  |
| 33   | 10209004 | Rubber ring $\phi 8*20*3$                     | 4   |
| 34   | 10209003 | Hex bolt M8*25                                | 4   |

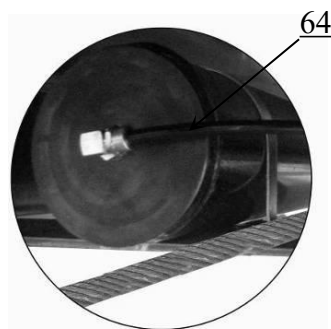
**L. Install hydraulic system (See Fig. 32, Fig.33, Fig.34)**

**Note:** Oil hoses and oil return pipe connected to oil cylinder must be passed above the cable and cylinder inlet port must swing upward to avoid the oil hose and oil return pipe scratched by cable (see Fig.34)

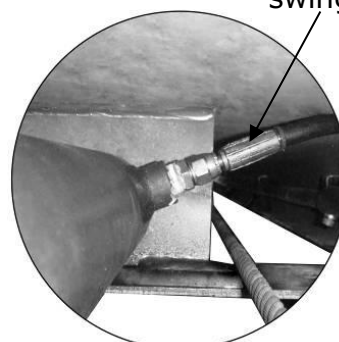


Installation diagram for oil return hose and oil inlet hose  
Cut oil hoses length by user when installation

**G view**  
**Fig.32**



Assembly of oil return pipe  
**J View**  
**Fig.34**

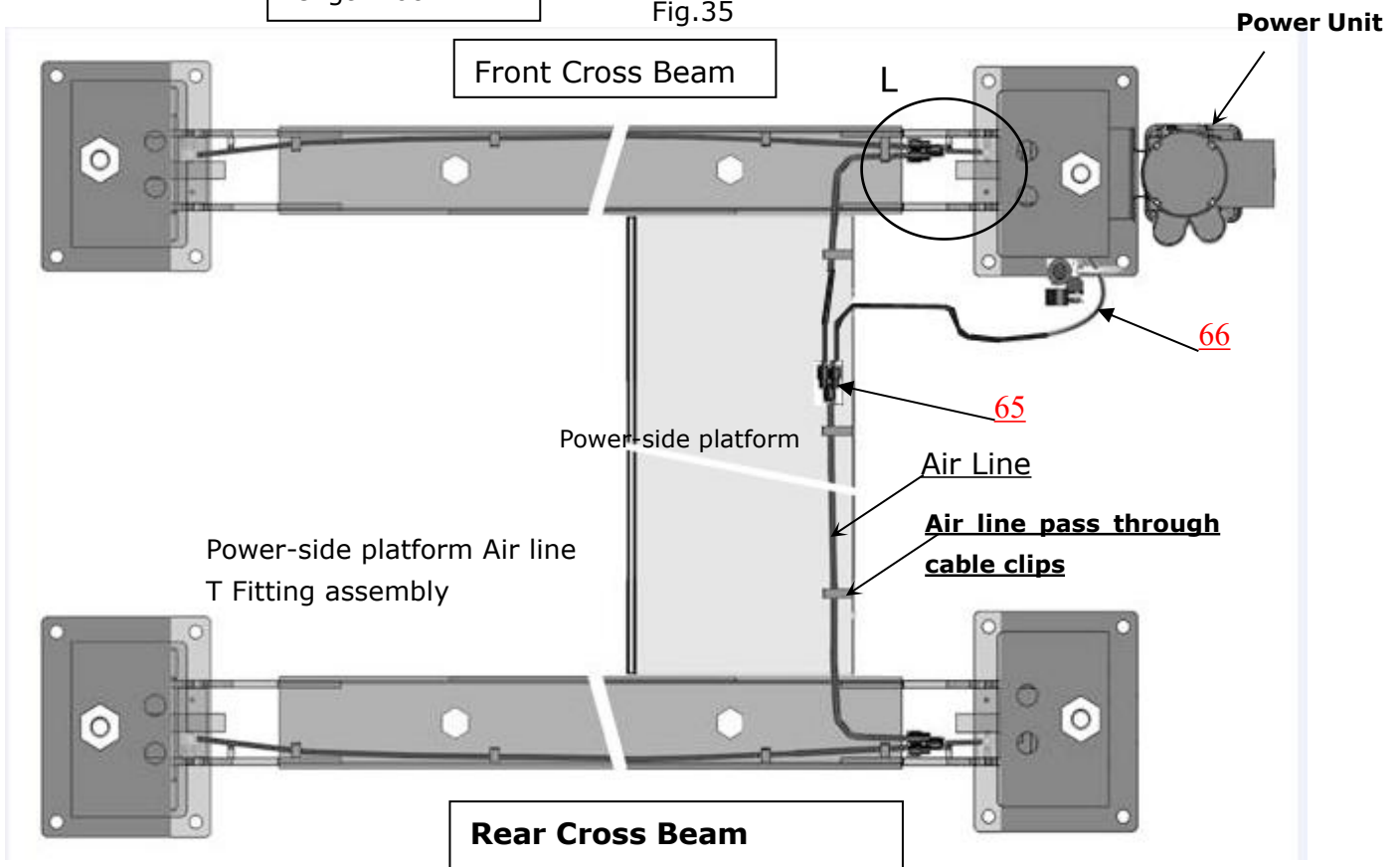
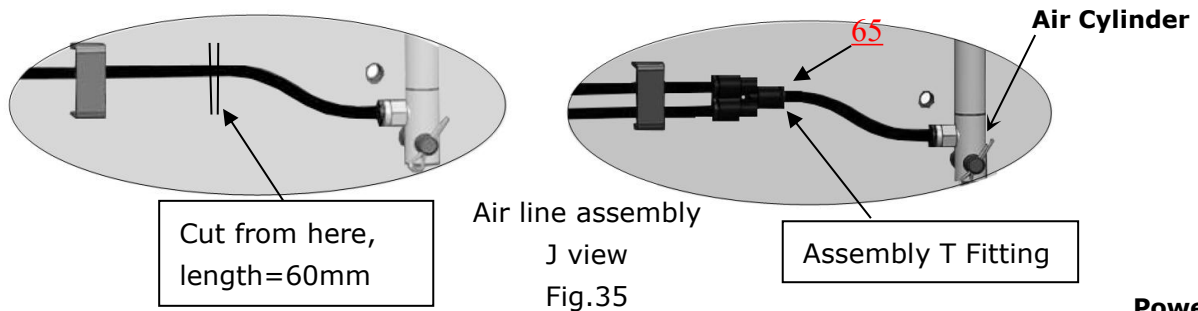


**I View**  
**Fig.33**

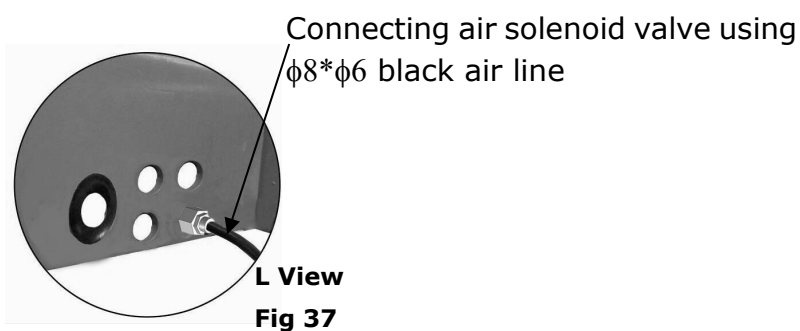
Cylinder inlet port swings upward

## M. Install air-line system

1. Cut  $\phi 8 \times \phi 6$  black air line on the front and rear cross beam ( cut the air line at the position about 60mm from air cylinder) , and then connect to T-fitting. **(See Fig.35)**
2. Connecting front and rear cross beam cylinders by using  $\phi 8 \times \phi 6$  black air line (the actual length of air line can be cut by user) **(See Fig.36)**
3. Connecting air solenoid valve using  $\phi 8 \times \phi 6$  black air line (the actual length of air line can be cut by user) **(See Fig. 37)**

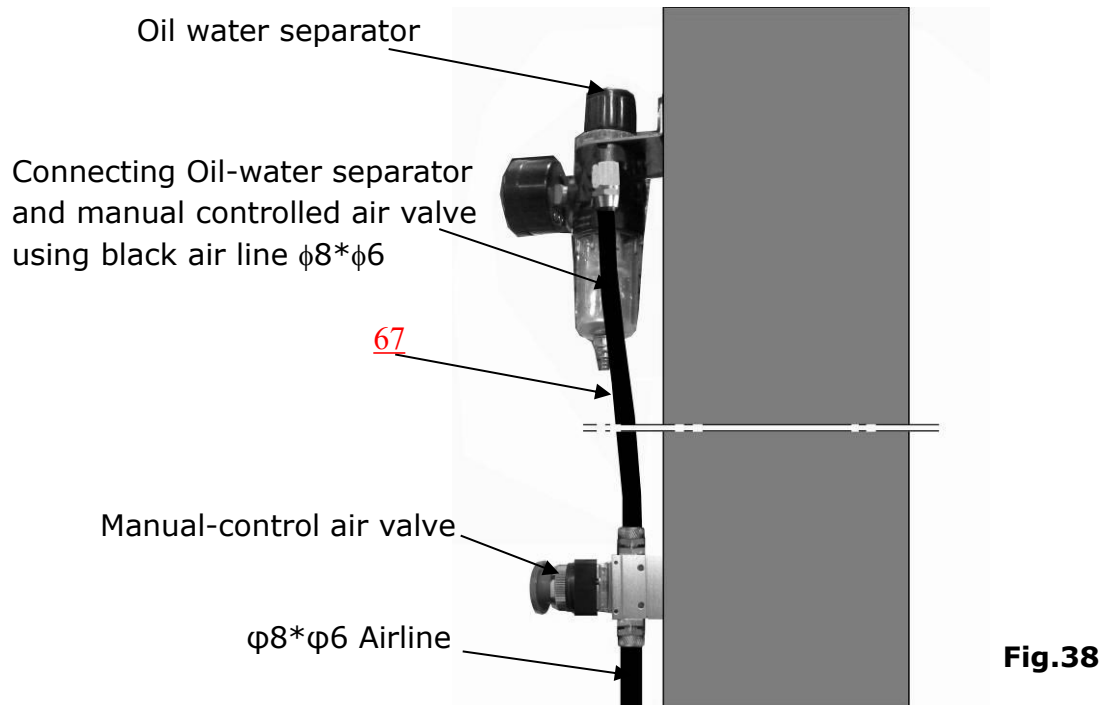


**Fig.36**

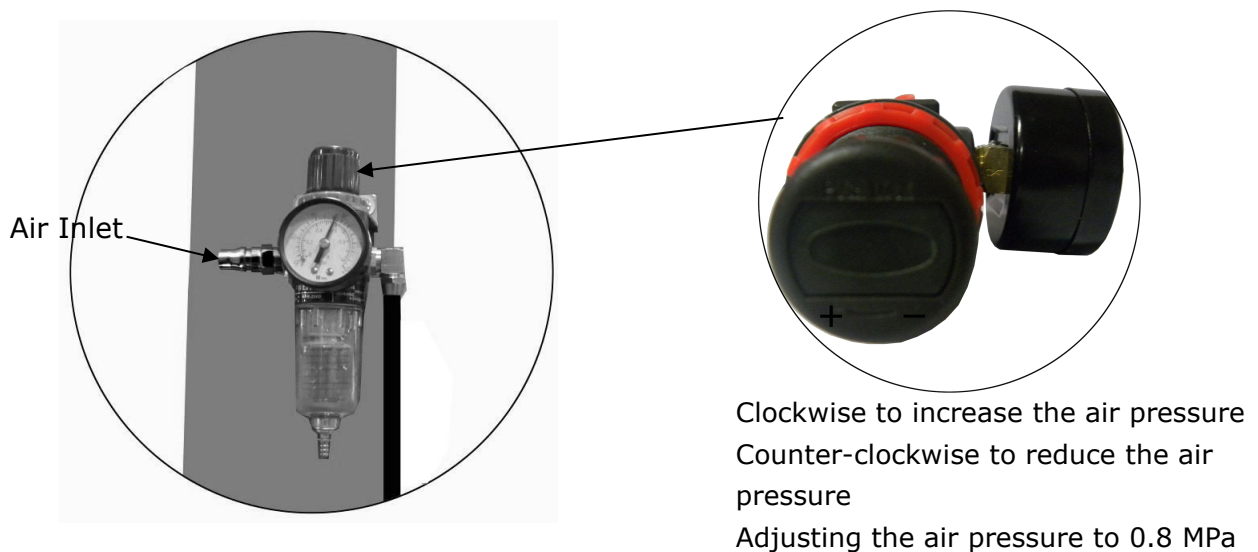


| Item | Part#     | Description                                                   | PRO-30 | PRO-30E |
|------|-----------|---------------------------------------------------------------|--------|---------|
| 65   | 85090120  | T- Fitting For Air Line                                       | 3      | 3       |
| 66   | 10481013  | Air Line $\phi 6 \times \phi 8 \times 10000\text{mm}$ (black) | 1      | 0       |
|      | 10481065  | Air Line $\phi 6 \times \phi 8 \times 11600\text{mm}$ (black) | 0      | 1       |
| 67   | 10420167A | $\phi 8 \times \phi 6 \times 460\text{mm}$ black air line     | 1      | 1       |

4. Connect Airline with oil-water separator and manual control air valve. **(See Fig.38)**



5. Connecting air inlet (Air supply pressure  $5 \text{ kg/cm}^2 - 8 \text{ kg/cm}^2$ ), adjusting the air pressure of Oil-water separator to  $0.8 \text{ MPa}$  **(See Fig.39)**



**Fig.39**

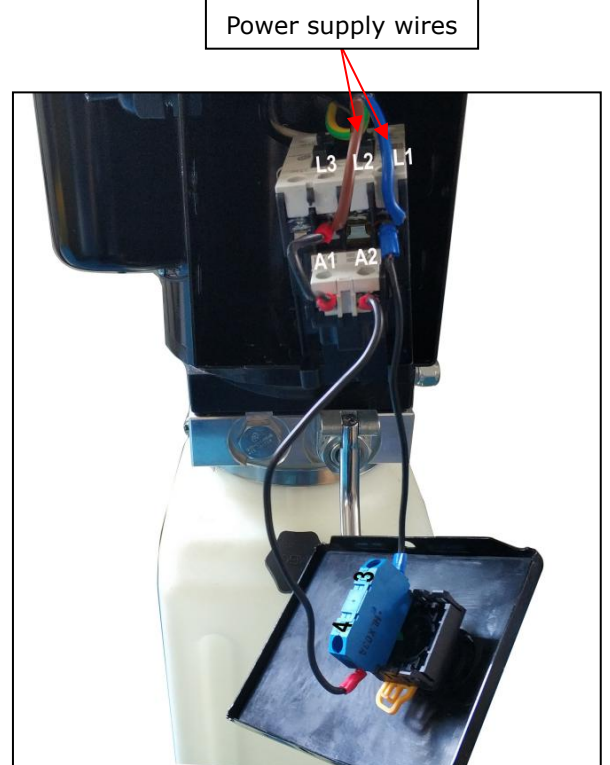
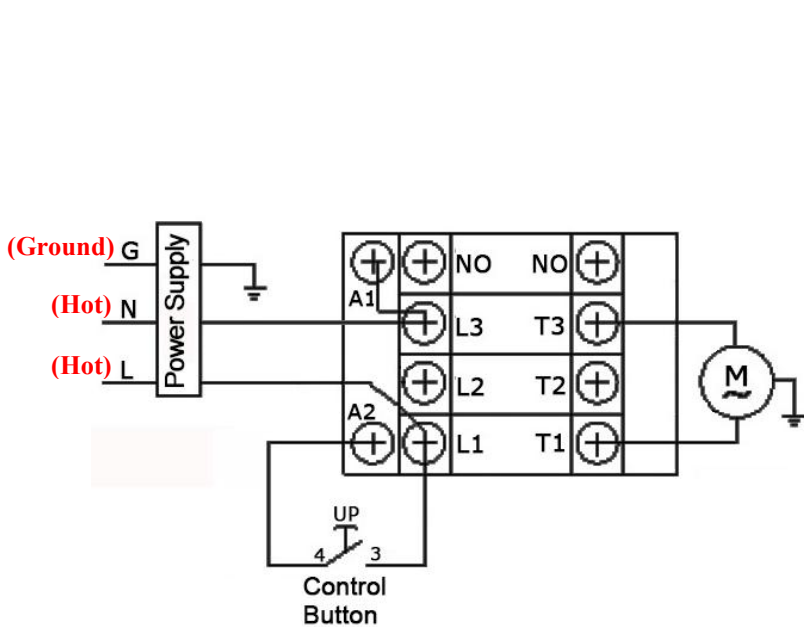
## N. Install Electrical System

Connect the power source on the data plate of Motor.

### Single phase motor (See Fig. 40)

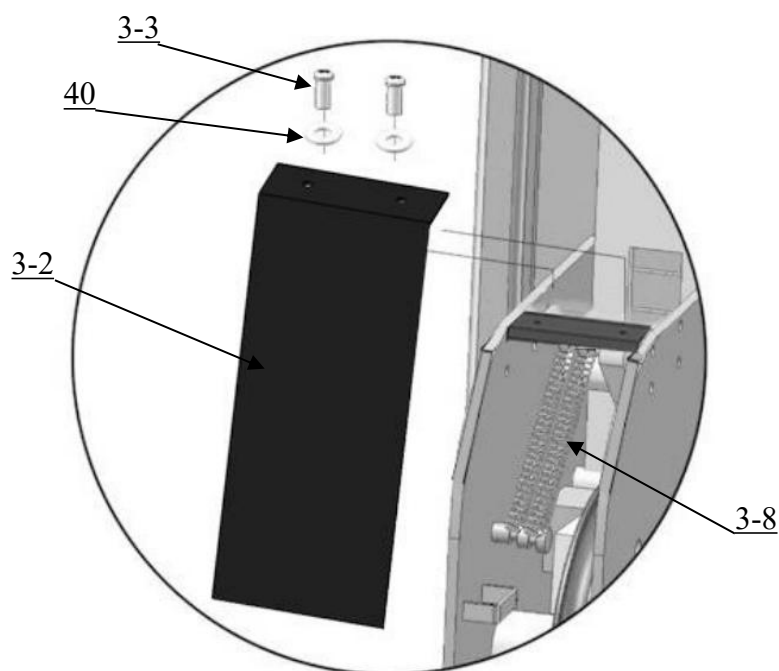
Connecting the two power supply wires to terminals of AC contactor marked L1, L3 respectively.

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



**Fig. 40**

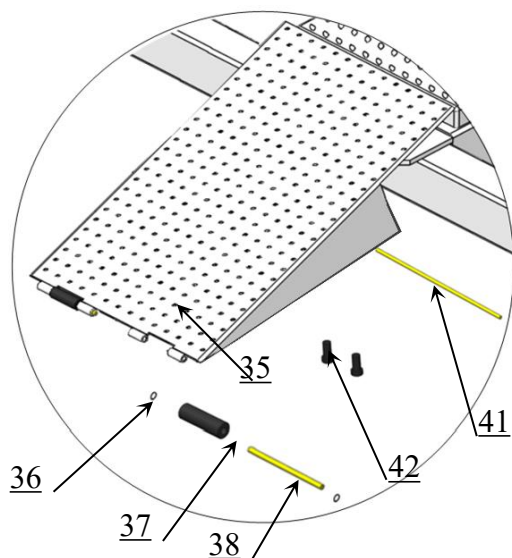
## O. Install spring and safety cover of cross beam (See Fig. 41)



**Fig. 41**

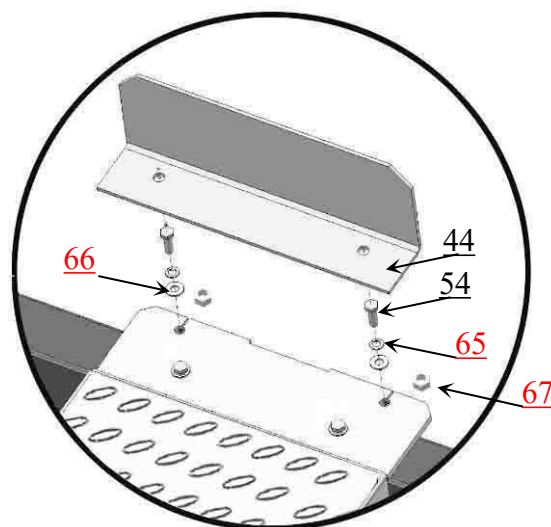
**P. Install Drive-in ramp, Tire stop plate. (See Fig. 42, Fig. 43)**

Install Drive-in ramp



**Fig. 42**

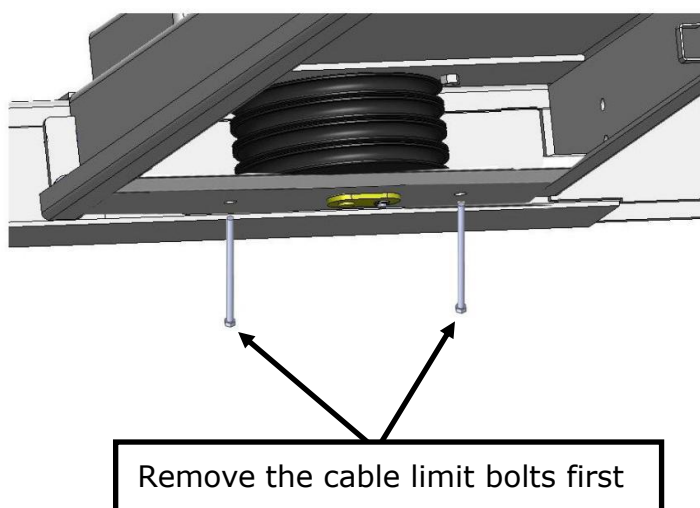
Install Tire stop plate



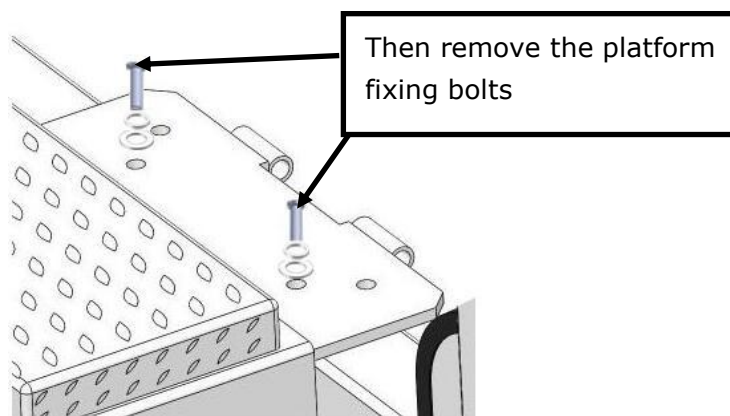
**Fig. 43**

**Q. Install Extension Kit (optional)**

1. Lift the equipment to about 1400mm from ground, lock it to the safety ladder, remove the cable limit bolts and platform fixing bolts (see Fig. 39, Fig. 40)

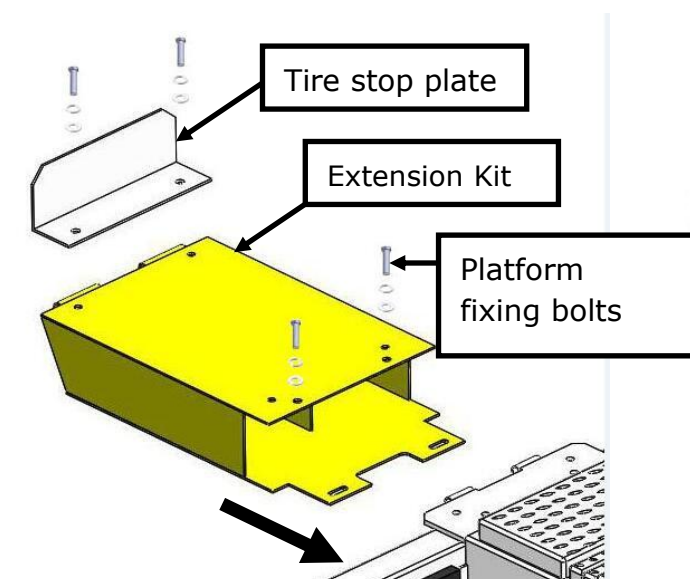


**Fig. 44**

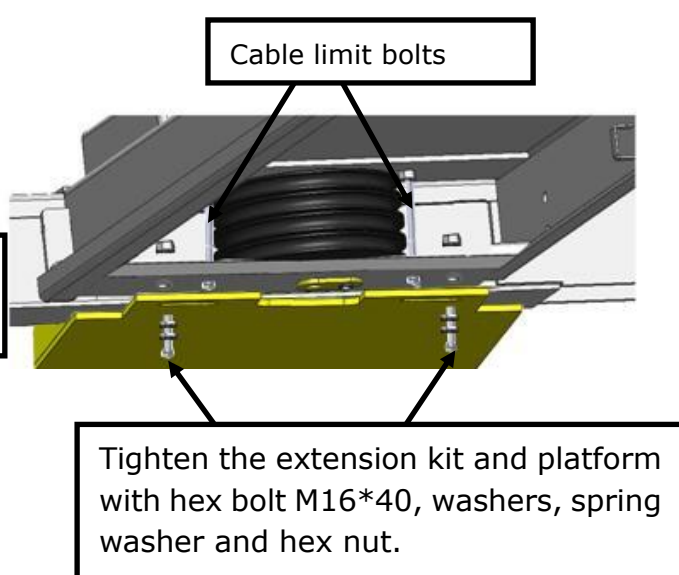


**Fig. 45**

2.Put the extension kits into the platform, then tighten with the bolts. (see **Fig.46**, **Fig.47**)



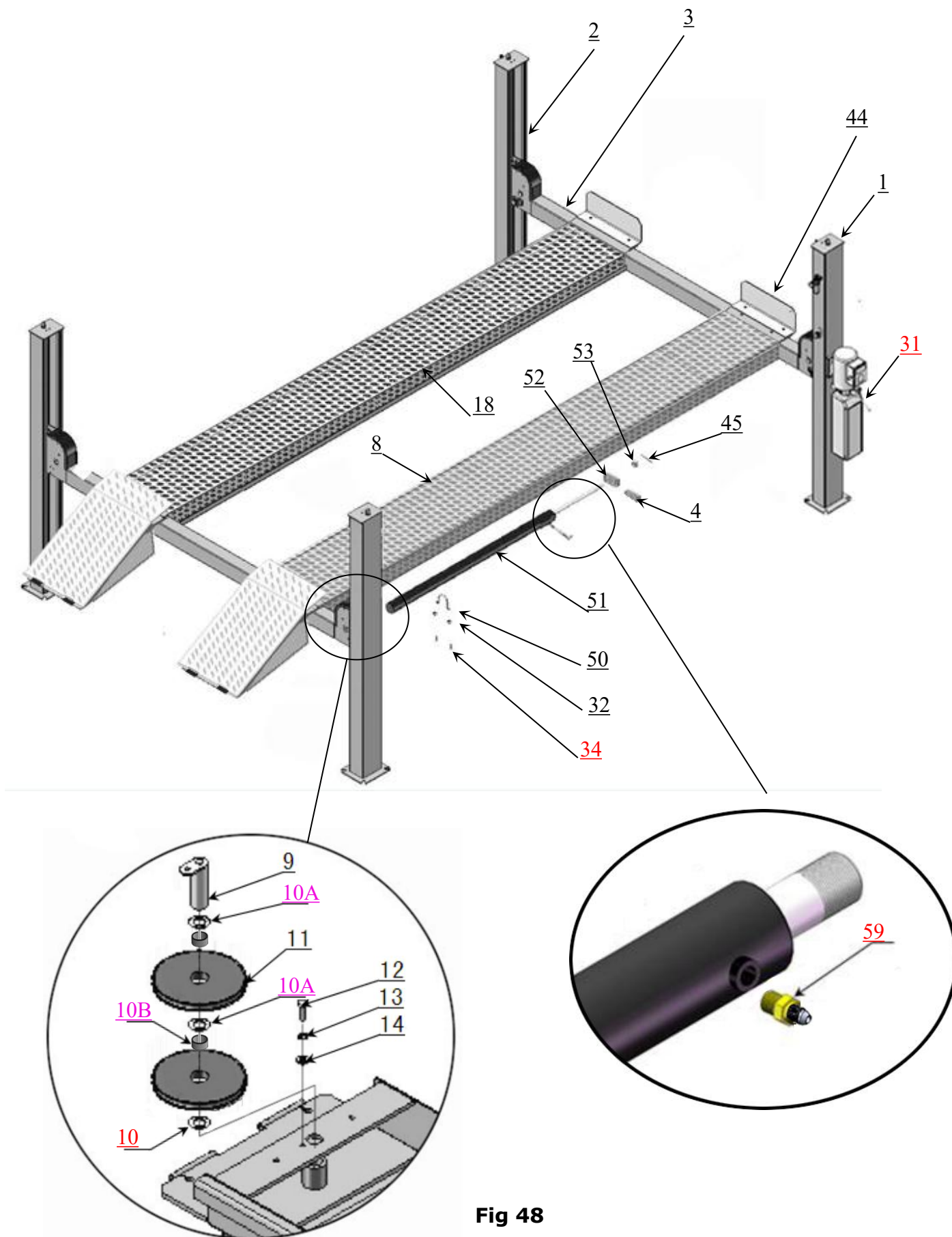
**Fig.46**



**Fig.47**

| Item. | Part#   | Description   | Quantity     | Available for |
|-------|---------|---------------|--------------|---------------|
| 1     | 1043001 | Extension Kit | 1set (2 pcs) | PRO-30        |

#### IV. EXPLODED VIEW



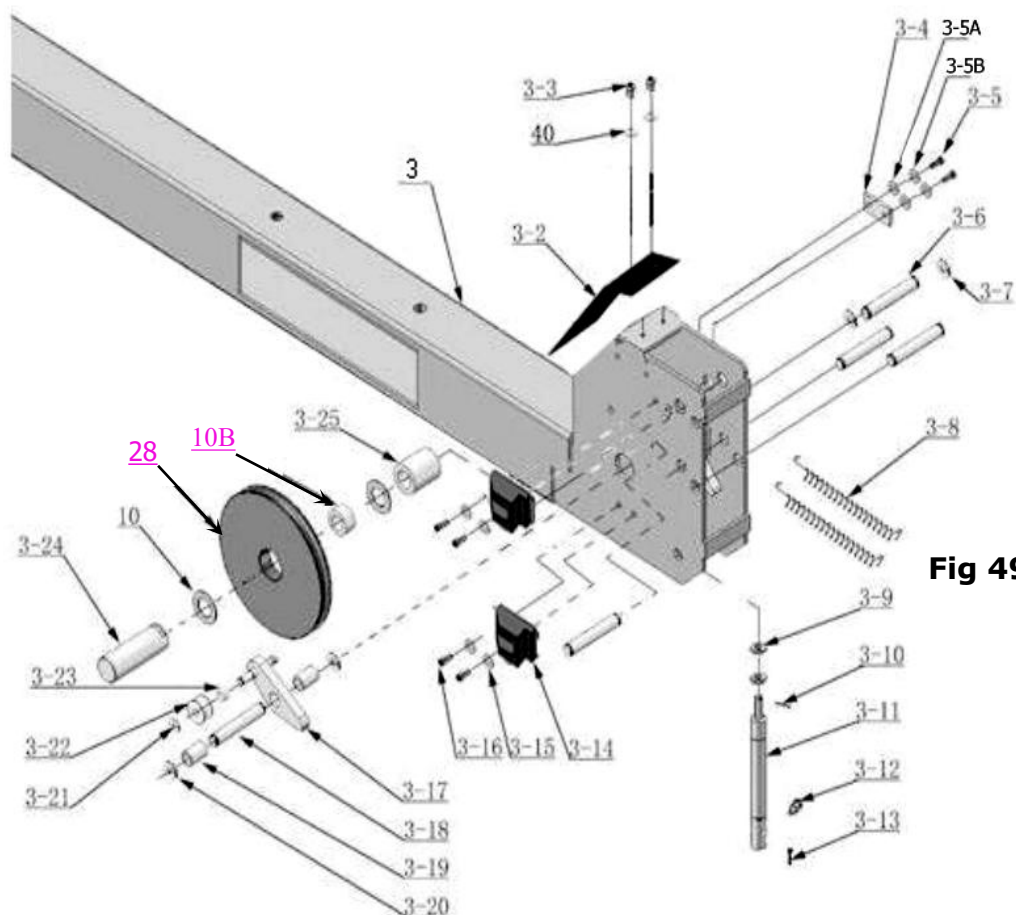
**Fig 48**

**Parts list for PRO-30 PRO-30E**

| Item | Part#       | Description                                   | PRO-30 | PRO-30E |
|------|-------------|-----------------------------------------------|--------|---------|
| 1    | 1104481002  | Power side Column                             | 1      | 1       |
| 2    | 11481641    | Offside Column                                | 3      | 3       |
| 3    | 10481076    | Cross Beam Assy.                              | 2      | 2       |
| 4    | 10481023    | Slider block (HK018)                          | 1      | 1       |
| 5    | 10201140    | Anchor Bolt 3/4*6-1/2                         | 16     | 16      |
| 6    | 11481036    | Safety Ladder                                 | 4      | 4       |
| 7    | 10481018    | Hex Nut M33*3.5                               | 16     | 16      |
| 8    | 11481041    | Power-side Platform                           | 1      | 0       |
|      | 11481067    |                                               | 0      | 1       |
| 9    | 11481035    | Pulley shaft                                  | 2      | 2       |
| 10   | 10481069    | Pulley washer $\phi$ 115* $\phi$ 76*2         | 10     | 10      |
| 10A  | 10481021-01 | Pulley washer $\phi$ 120* $\phi$ 76*8 (HK017) | 4      | 4       |
| 10B  | 10481025    | Bronze Bush $\phi$ 85* $\phi$ 75*30           | 10     | 10      |
| 11   | 11481639    | Pulley $\phi$ 310*32                          | 6      | 6       |
| 12   | 10206017    | Hex bolt M8*20                                | 2      | 2       |
| 13   | 10209039    | $\phi$ 10 Spring Washer                       | 2      | 2       |
| 14   | 10209022    | $\phi$ 10*1.5 Washer                          | 2      | 2       |
| 15   | 10481004    | Hex bolt M30*60                               | 8      | 8       |
| 16   | 10481006    | $\phi$ 30 Spring Washer                       | 8      | 8       |
| 17   | 10481005    | $\phi$ 30 Washer                              | 8      | 8       |
| 18   | 11481042    | Offside platform                              | 1      | 0       |
|      | 11481068    |                                               | 0      | 1       |
| 19   | 10481017    | Hex bolt M12*200                              | 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                            | 10     | 10      |
| 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 M4                           | 2      | 2       |
| 27   | 10420162    | Manual control air valve                      | 1      | 1       |
| 28   | 11481617    | Pulley $\phi$ 204*32                          | 4      | 4       |
| 29   | 10420148    | $\phi$ 4 Washer                               | 4      | 4       |
| 30   | 10420164    | Cut head bolt M4*30                           | 2      | 2       |
| 31   | 071107      | Manual hydraulic power unit                   | 1      | 1       |
| 32   | 10209005    | Self locking nut M8                           | 14     | 14      |
| 33   | 10209004    | Rubber ring $\phi$ 8*20*3                     | 4      | 4       |
| 34   | 10209003    | Hex Bolt M8*25                                | 6      | 6       |
| 35   | 11481044    | Drive-in ramp                                 | 2      | 2       |
| 36   | 11610667    | Drive-in ramp pulley                          | 4      | 4       |
| 37   | 11620043    | Drive-in ramp pulley pin                      | 4      | 4       |
| 38   | 10209010    | $\phi$ 10 Snap ring                           | 12     | 12      |
| 39   | 10420156    | Protecting ring $\phi$ 24                     | 1      | 1       |
| 40   | 10420045    | $\phi$ 6 Washer                               | 20     | 20      |

| Item | Part#         | Description                                                         | PRO-30 | PRO-30E |
|------|---------------|---------------------------------------------------------------------|--------|---------|
| 41   | 11481016      | Pin for Drive-in ramp                                               | 2      | 2       |
| 42   | 10420005      | Fixing bolt M5*8                                                    | 4      | 4       |
| 43   | 10481500      | Parts box                                                           | 1      | 1       |
| 44   | 11481638      | Tire stop plate                                                     | 2      | 2       |
| 45   | 10481020      | Split pin $\phi 5 \times 60$                                        | 1      | 1       |
| 46   | 10620065      | Shim (2mm)                                                          | 20     | 20      |
|      | 10201090      | Shim (1mm)                                                          | 20     | 20      |
| 47   | 10209056      | Self locking nut M10                                                | 4      | 4       |
| 48   | 11481046      | Cable limit pin                                                     | 4      | 4       |
| 49   | 10420016B     | Platform lock plate $\phi 40 \times 2 \times 1500\text{mm}$         | 1      | 1       |
| 50   | 11481034      | Fixed ring for cylinder                                             | 1      | 1       |
| 51   | 10481045      | Cylinder $\phi 120 \times 1650$                                     | 1      | 1       |
| 52   | 11481637      | Cylinder connecting plate                                           | 1      | 1       |
| 53   | 10481019      | Hex nut M39*4                                                       | 1      | 1       |
| 54   | 10481001      | Hex screw M24                                                       | 4      | 4       |
| 55   | 10481007-01   | ① Cable $\phi 19 \times 5135\text{mm}$                              | 1      | 0       |
|      | 10481079-01   | ① Cable $\phi 19 \times 4865\text{mm}$                              | 0      | 1       |
| 56   | 10481010-01   | ② Cable $\phi 19 \times 13325\text{mm}$                             | 1      | 0       |
|      | 10481082-01   | ② Cable $\phi 19 \times 14550\text{mm}$                             | 0      | 1       |
| 57   | 10481008-01   | ③ Cable $\phi 19 \times 7135\text{mm}$                              | 1      | 0       |
|      | 10481080-01   | ③ Cable $\phi 19 \times 6860\text{mm}$                              | 0      | 1       |
| 58   | 10481009-01   | ④ Cable $\phi 19 \times 11350\text{mm}$                             | 1      | 0       |
|      | 10481081-01   | ④ Cable $\phi 19 \times 12550\text{mm}$                             | 0      | 1       |
| 59   | 11420119      | Ftting 1/4JIC(M)*3/8NPT(M)                                          | 1      | 1       |
| 60   | 10201114      | Spring Washer $\phi 20$                                             | 1      | 1       |
| 61   | 10209128      | Washer $\phi 20$                                                    | 1      | 1       |
| 62   | 10420175A     | Hex screw M20                                                       | 1      | 1       |
| 63   | 10420166      | 90° Fitting                                                         | 1      | 1       |
| 64   | 10481013      | Oil Return pipe (black) $\phi 6 \times \phi 4 \times 7300\text{mm}$ | 1      | 0       |
|      | 10481066-01   | Oil Return pipe (black) $\phi 6 \times \phi 4 \times 7025\text{mm}$ | 0      | 1       |
| 65   | 85090120      | Y fitting for air hose                                              | 3      | 3       |
| 66   | 10481013      | Air hose $\phi 6 \times \phi 8 \times 10000\text{mm}$ (black)       | 1      | 0       |
|      | 10481065      | Air hose $\phi 6 \times \phi 8 \times 11600\text{mm}$ (black)       | 0      | 1       |
| 67   | 10420167A     | Air hose $\phi 6 \times \phi 8 \times 460\text{mm}$ (black)         | 1      | 2       |
| 68   | 10481012-03   | Oil hose 5/16" * 3735mm                                             | 1      | 0       |
|      | 1048108301-02 | Oil hose 5/16" * 3435mm                                             | 0      | 1       |
| 69   | 10420120      | Fitting 1/4" JIC(M)* 1/4" JIC(M)                                    | 1      | 1       |
| 70   | 10160038      | Oil Hose 5/16" * 1500mm                                             | 1      | 1       |
| 71   | 10209060      | 90° Fitting for power unit 3/8'SAEO/R(M)*1/4'JIC(M)                 | 1      | 1       |
| 72   | 1104354001    | Backing plate $\phi 54 \times 20$                                   | 4      | 4       |

## 4.1 Crossbeam (11481043) Exploded View

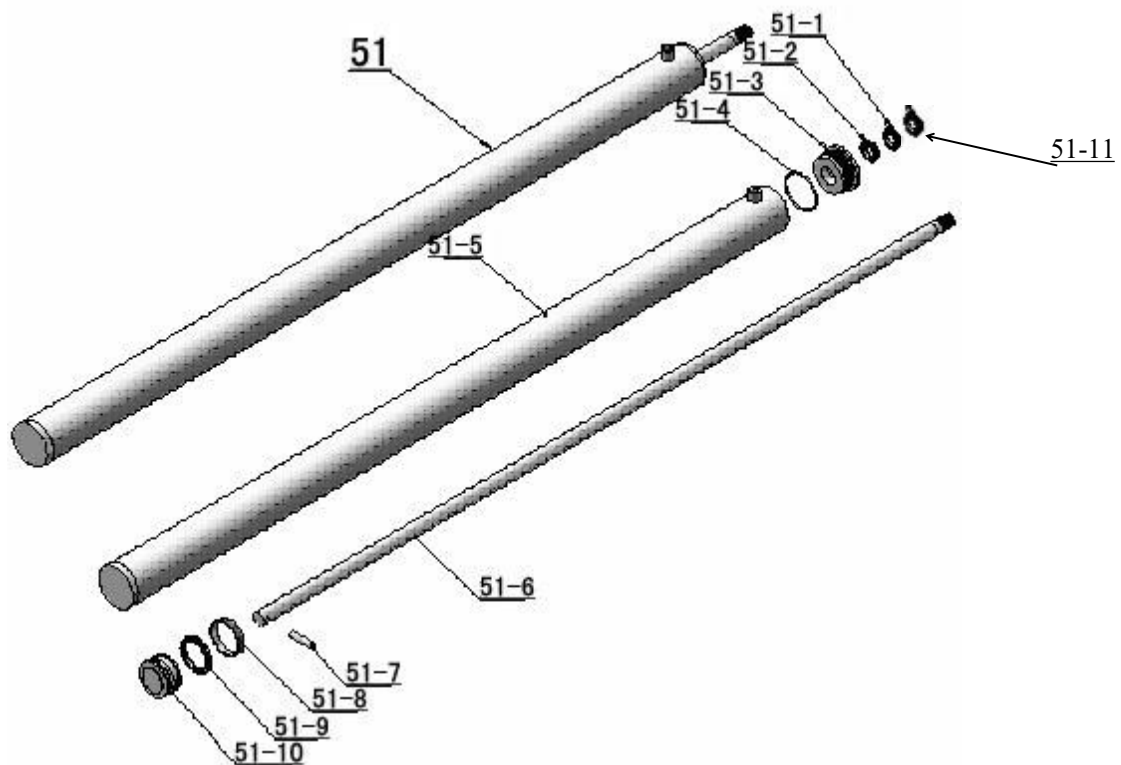


**Fig 49**

| Item | Part#         | Description                      | QTY |
|------|---------------|----------------------------------|-----|
| 3-1  | 11481043      | Cross Beam Assy.                 | 2   |
| 3-2  | 11481618      | Cross Beam Cover                 | 4   |
| 3-3  | 10209009      | Cap Head Bolt M6*8               | 8   |
| 3-4  | 1104332001-01 | Limit Plate 7.75*70*40           | 4   |
| 3-5  | 10101029      | Socket Bolt M12*20               | 8   |
| 3-5A | 10420026      | Spring Washer $\phi 12$          | 8   |
| 3-5B | 10206006      | Washer $\phi 12$                 | 8   |
| 3-6  | 11481029      | Pin $\phi 16 \times 148$         | 12  |
| 3-7  | 10420037      | $\phi 16$ Snap Ring              | 24  |
| 3-8  | 10420033      | Spring 14*1.8*100                | 8   |
| 3-9  | 10209021      | Hex Nut M10                      | 8   |
| 3-10 | 10420049      | Split Pin $\phi 2 \times 16$     | 4   |
| 3-11 | 10400020      | Air Cylinder $\Phi 20 \times 35$ | 4   |
| 3-12 | 10481073      | Fitting for Air Cylinder         | 4   |
| 3-13 | 10420046      | Split Pin $\phi 4 \times 30$     | 4   |
| 3-14 | 10481070      | Slider Block (HK020)             | 16  |
| 3-15 | 10209033      | $\phi 8$ Washer                  | 40  |
| 3-16 | 10420043      | Socket Bolt M8*20                | 32  |
| 3-17 | 11481642      | Slack-cable safety lock (Left)   | 2   |
|      | 11481643      | Slack-cable safety lock (Right)  | 2   |

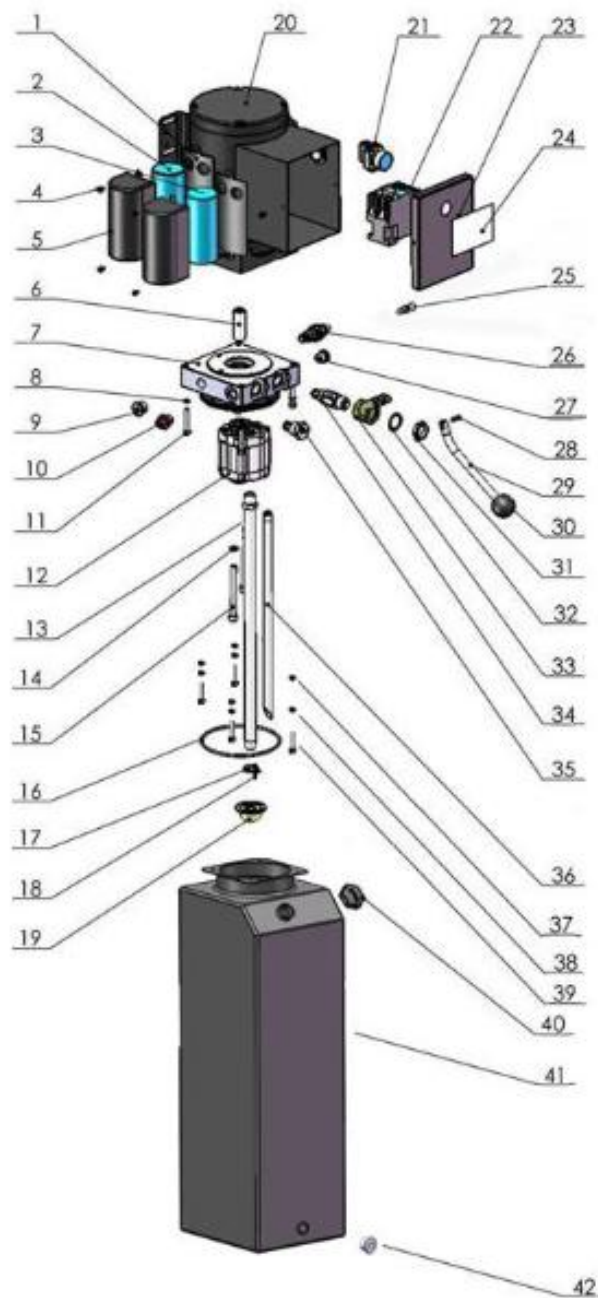
|      |             |                                      |    |
|------|-------------|--------------------------------------|----|
| 3-18 | 11481028    | φ30 Pin                              | 8  |
| 3-19 | 11481032    | Pin Bush For Slack-cable Safety Lock | 8  |
| 3-20 | 10610008    | φ30 Snap Ring                        | 16 |
| 3-21 | 10209010    | φ10 Snap Ring                        | 4  |
| 3-22 | 10481027    | Tension Pulley                       | 4  |
| 3-23 | 11420174    | Spacer                               | 4  |
| 3-24 | 11481030-01 | Pulley shaft φ75*151                 | 4  |
| 3-25 | 11481031    | Pulley Bush                          | 4  |

## 4.2 Cylinder (10481045) Exploded View



| Item  | Part#       | Description                 | QTY |
|-------|-------------|-----------------------------|-----|
| 51-1  | 10209078A   | Dust Ring                   | 1   |
| 51-2  | 1004336001  | Y- Ring IDI φ40*φ50*8       | 1   |
| 51-3  | 11481053-01 | Head Cap                    | 1   |
| 51-4  | 1004336002  | O- Ring φ120*5.3 90°        | 1   |
| 51-5  | 11481055    | Bore Weldment               | 1   |
| 51-6  | 11481049    | Piston Rod                  | 1   |
| 51-7  | 11481040    | Pin                         | 1   |
| 51-8  | 10520056-01 | Support Ring Φ114*Φ120*20*3 | 1   |
| 51-9  | 10520055    | Y- Ring OSI Φ105*Φ120*9     | 1   |
| 51-10 | 11481054    | Piston                      | 1   |
| 51-11 | 1004336003  | Support Ring φ40*φ46*15*3   | 1   |

### 4.3 Power Unit (071107) Exploded View



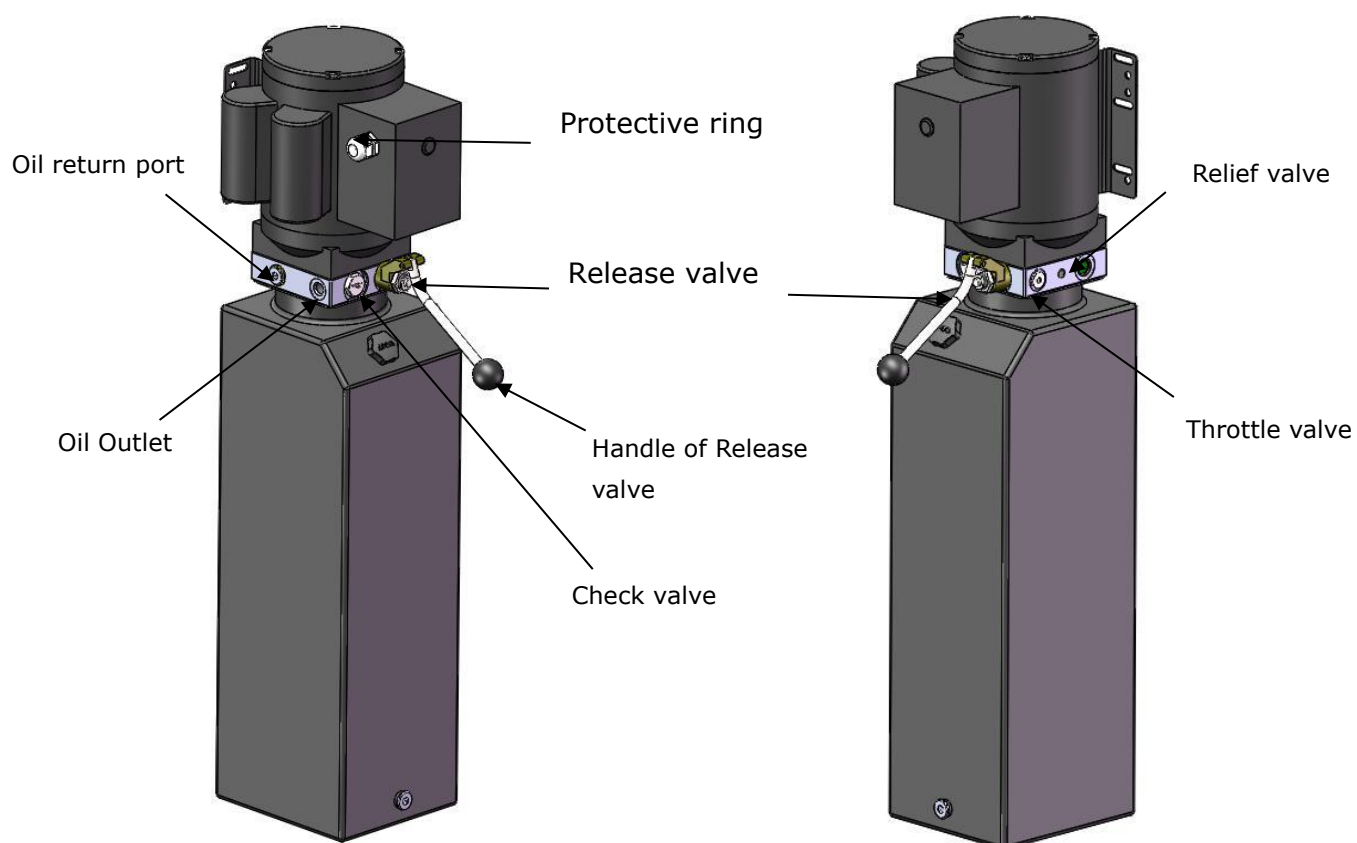
**Fig.51**

220V/60Hz Single Phase  
Manual Power Unit  
Exploded View

## Part lift for 220V/60Hz Single Phase Manual Power Unit

| Item | Part#    | Description                     | QTY |
|------|----------|---------------------------------|-----|
| 1    | 81400180 | Rubber pad                      | 2   |
| 2    | 81400250 | Start capacitor                 | 1   |
| 3    | 81400200 | Run capacitor                   | 1   |
| 4    | 10420148 | Cap head bolt                   | 6   |
| 5    | 81400066 | Capacitor cap                   | 2   |
| 6    | 81400363 | Motor Connecting Shaft          | 1   |
| 7    | 81400369 | Manifold block                  | 1   |
| 8    | 10209149 | Spring washer                   | 4   |
| 9    | 81400276 | Iron plug                       | 1   |
| 10   | 81400259 | Red rubber plug                 | 1   |
| 11   | 85090142 | Socket bolt                     | 4   |
| 12   | 81400292 | Gear Pump                       | 1   |
| 13   | 81400589 | Oil suction pipe                | 1   |
| 14   | 10209034 | Spring washer                   | 2   |
| 15   | 81400295 | Socket bolt                     | 2   |
| 16   | 81400365 | O Ring                          | 1   |
| 17   | 10209152 | Ties                            | 1   |
| 18   | 85090167 | Magnet                          | 1   |
| 19   | 81400290 | Filter net                      | 1   |
| 20   | 81400413 | Motor                           | 1   |
| 21   | 10420070 | Push button                     | 1   |
| 22   | 41030055 | AC contactor                    | 1   |
| 23   | 81400287 | Cover of Motor Terminal Box     | 1   |
| 24   | 71111168 | Sticker for AMGO Power unit     | 1   |
| 25   | 81400560 | Throttle valve                  | 1   |
| 26   | 81400266 | Relief valve                    | 1   |
| 27   | 81400284 | Iron plug                       | 1   |
| 28   | 10720118 | Elastic pin                     | 1   |
| 29   | 81400451 | Handle of Release Valve         | 1   |
| 30   | 10209020 | Plastic ball for release handle | 1   |
| 31   | 81400125 | Release valve nut               | 1   |
| 32   | 81400422 | Self-locking washer             | 1   |
| 33   | 81400449 | Valve seat (low)                | 1   |
| 34   | 81400567 | Release valve (low)             | 1   |
| 35   | 81400566 | Check valve                     | 1   |
| 36   | 81400367 | Oil return pipe                 | 1   |
| 37   | 10420152 | Washer                          | 4   |
| 38   | 10209143 | Spring washer                   | 4   |
| 39   | 81400438 | Hex bolt                        | 4   |
| 40   | 81400263 | Oil tank cap                    | 1   |
| 41   | 81400563 | Oil tank                        | 1   |
| 42   | 81400276 | Iron plug                       | 1   |

**Illustration of Hydraulic Valve for power unit (See Fig.52)**

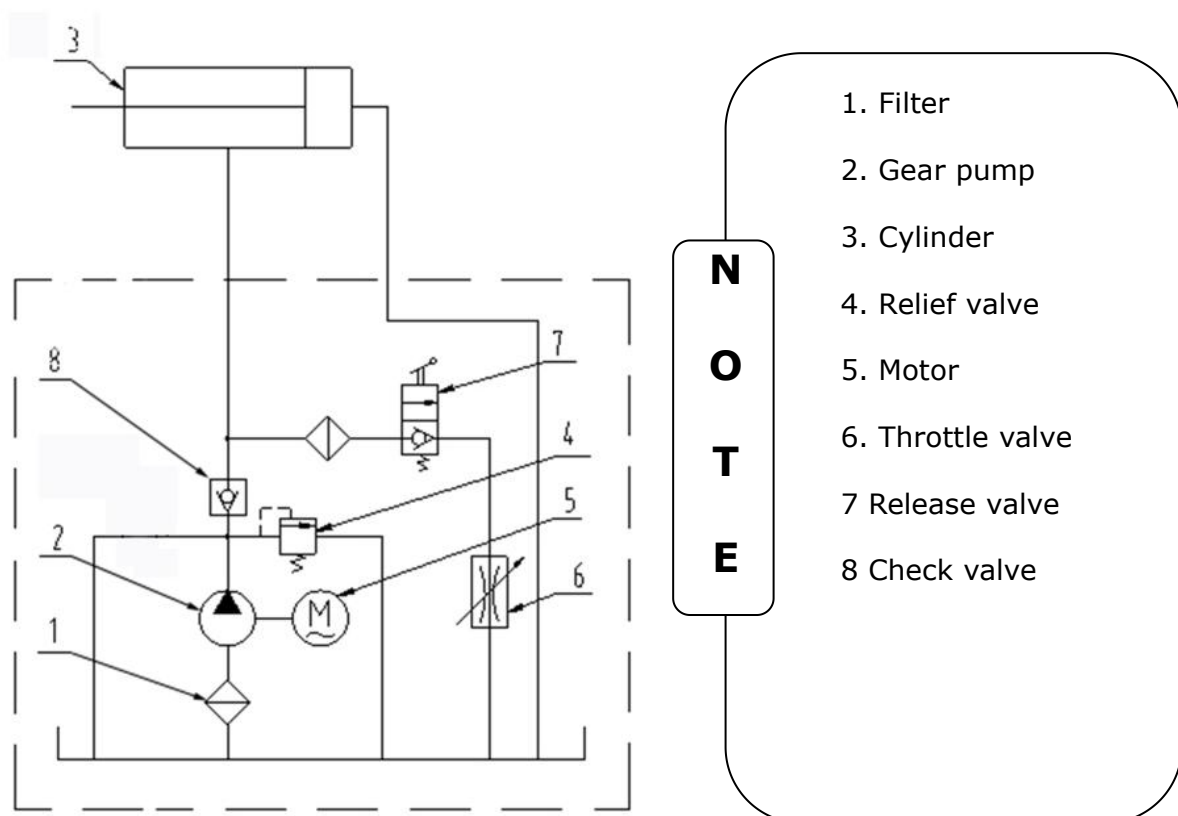


**Fig.52**

## V. TEST RUN

1. Fill the reservoir with approximately 26L 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.53**

## **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.Press start button.<br>2.Repair all wiring connections<br><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.



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