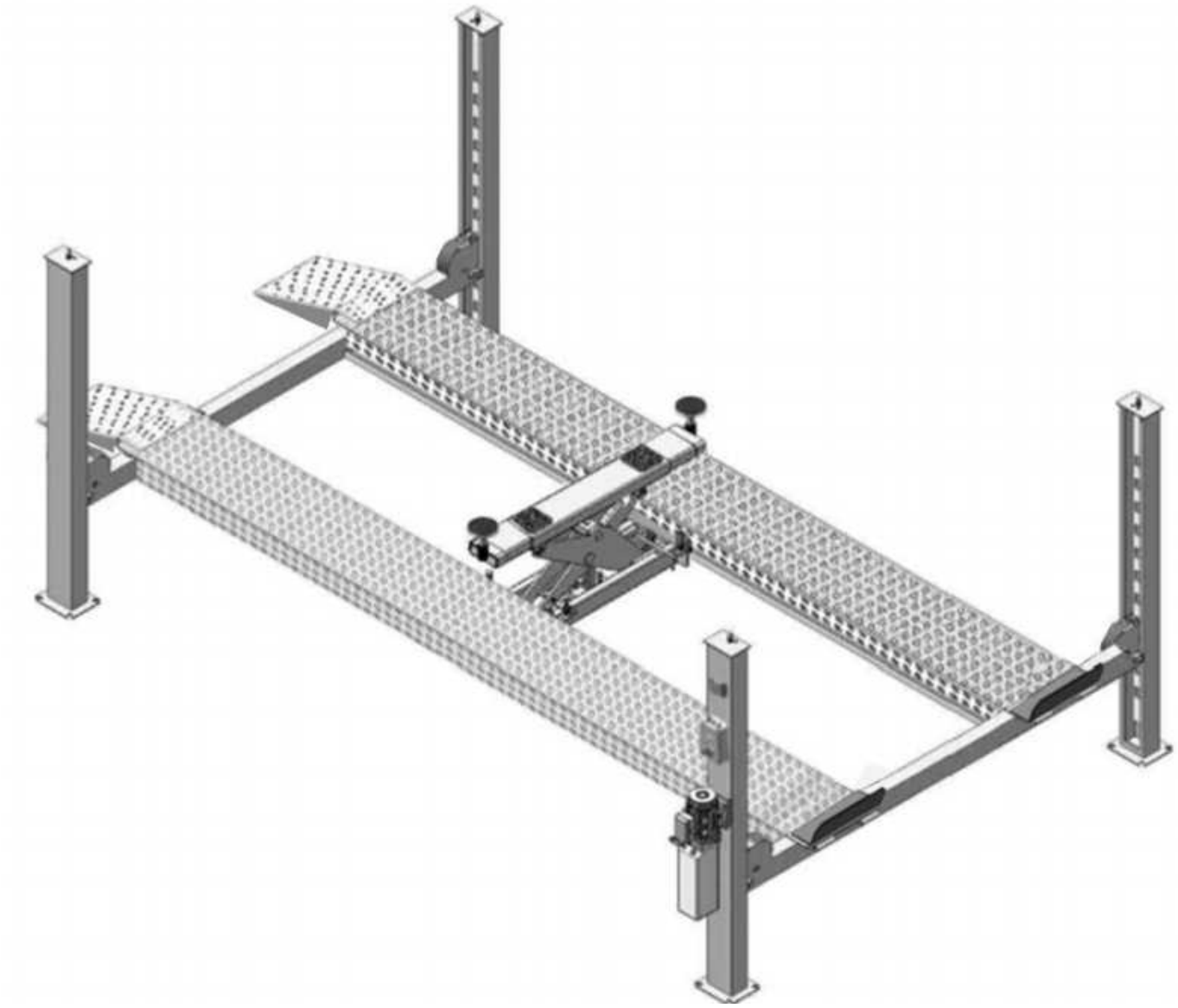
AMGO®

Original

# Installation And Service Manual



**FOUR POST LIFT**

**Model: 430 430E**

# CONTENTS

## I. PRODUCT FEATURES AND SPECIFICATIONS

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

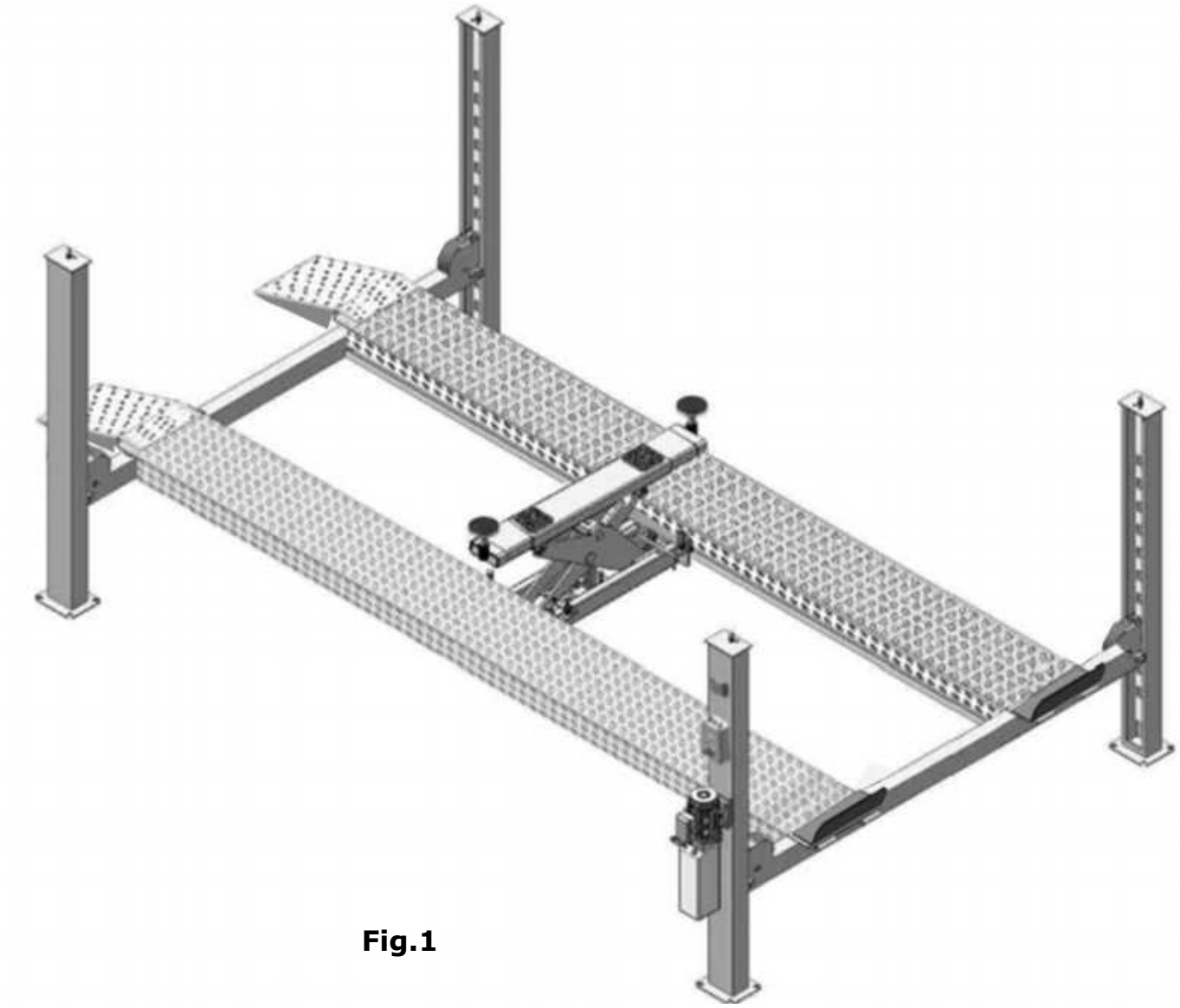


**Fig.1**

## Model: 430
## MODEL SPECIFICATIONS

| Model | Lifting Capacity | Lifting Height | Lifting Time | Overall Length (Inc. Ramps) | Overall Width | Width Between Columns | Motor |
|---|---|---|---|---|---|---|---|
| 430 | 13500kg | 1900mm | 116S | 7800mm | 3794mm | 3348mm | 4.0HP |

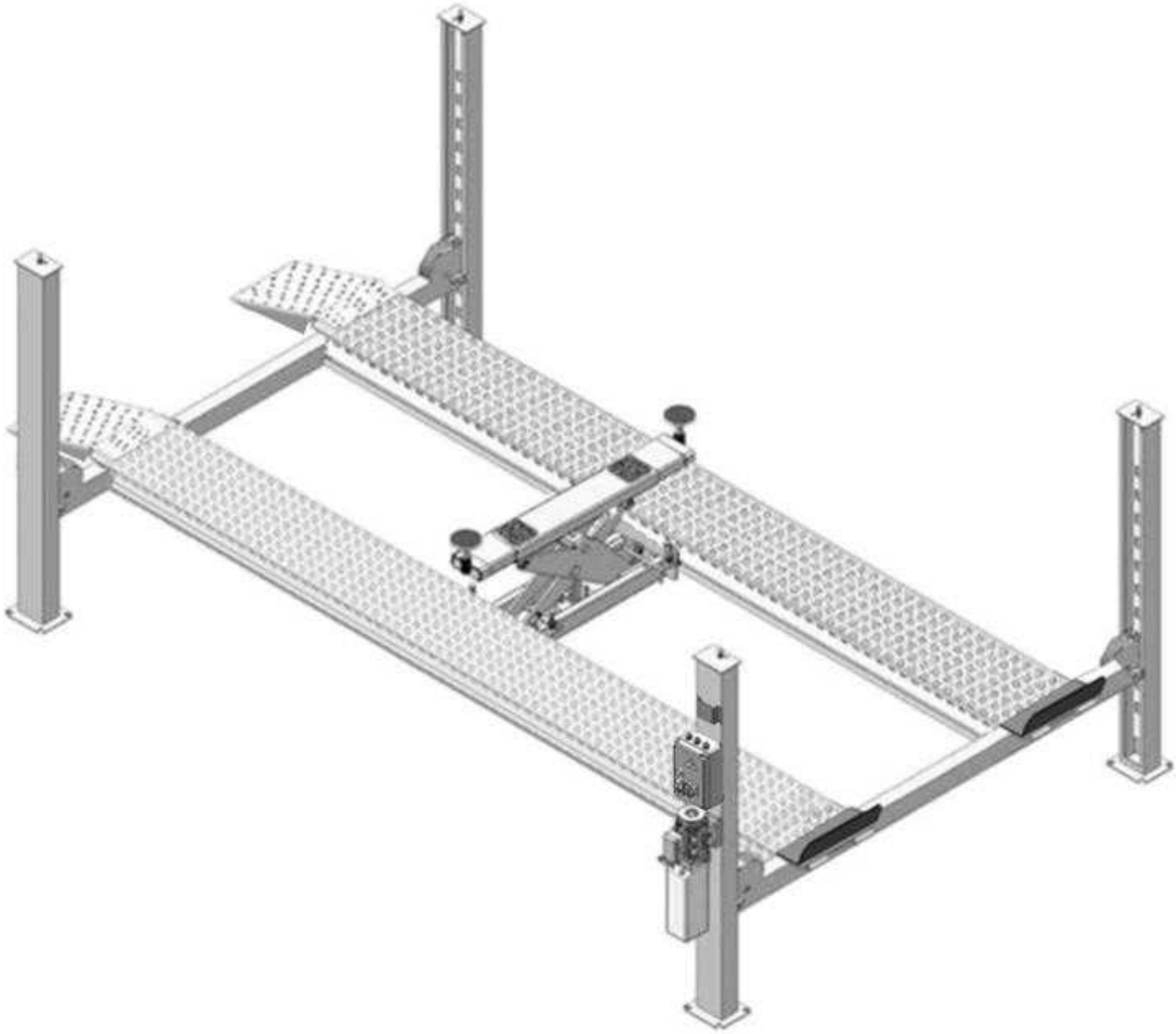


**Fig.2**

## Model: 430E
## MODEL SPECIFICATIONS

| Model | Lifting Capacity | Lifting Height | Lifting Time | Overall Length (Inc. Ramps) | Overall Width | Width Between Columns | Motor |
|---|---|---|---|---|---|---|---|
| 430E | 13500kg | 1900mm | 116S | 9300mm | 3794mm | 3348mm | 4.0HP |

## 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 (295-1/4")

- 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. The equipment should be unload and transfer by forklift.**

**Fig. 4**

**D. SPECIFICATIONS OF CONCRETE (See Fig. 5)**

**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 120mm 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 210kg/cm$^2$ minimum.
3. Floors must be level and no cracks.

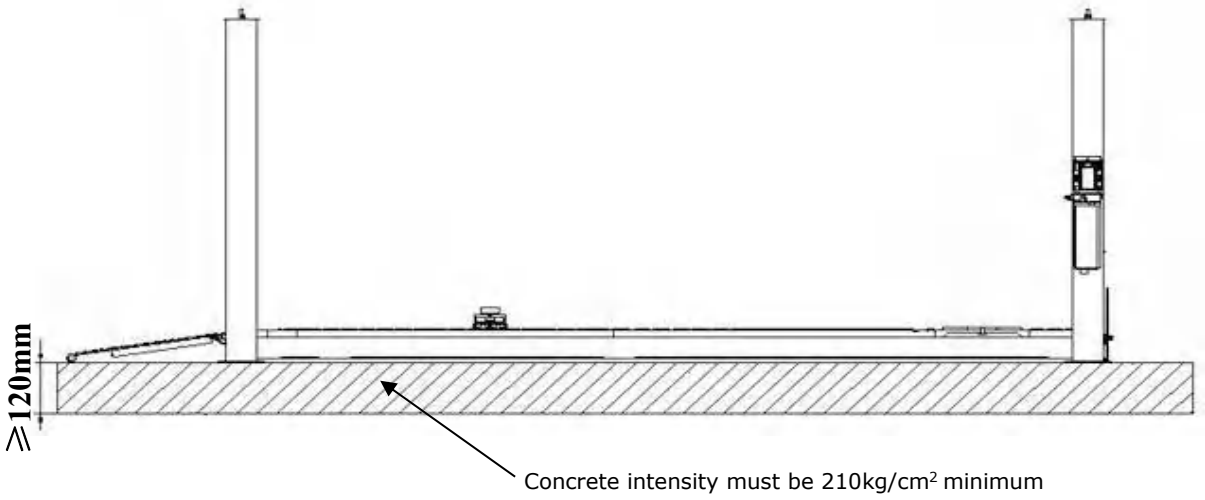



**Fig. 5**

**D. AIR SUPPLY**

Air pressure requirement: 0.5Mpa~0.8Mpa, Air line size Φ8*Φ6 .

**E. POWER SUPPLY**

The electrical source must be 4HP minimum. The source cable size must be 2.5mm² and in good condition of contacting with floor. Single phase power unit connect fire, zero and ground lines (Total 3 wires); 3 phase power unit connect fire, zero and ground lines (Total 5 lines).

## 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.6)**

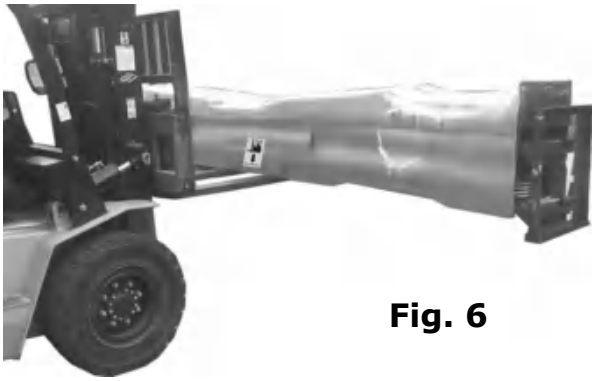


**Fig. 6**

2.Received lift with hydraulic power unit **(See Fig. 7)**.


**Fig. 7**

3. Open the outer packing, check all the parts according to the parts list **(See Fig. 8)**.

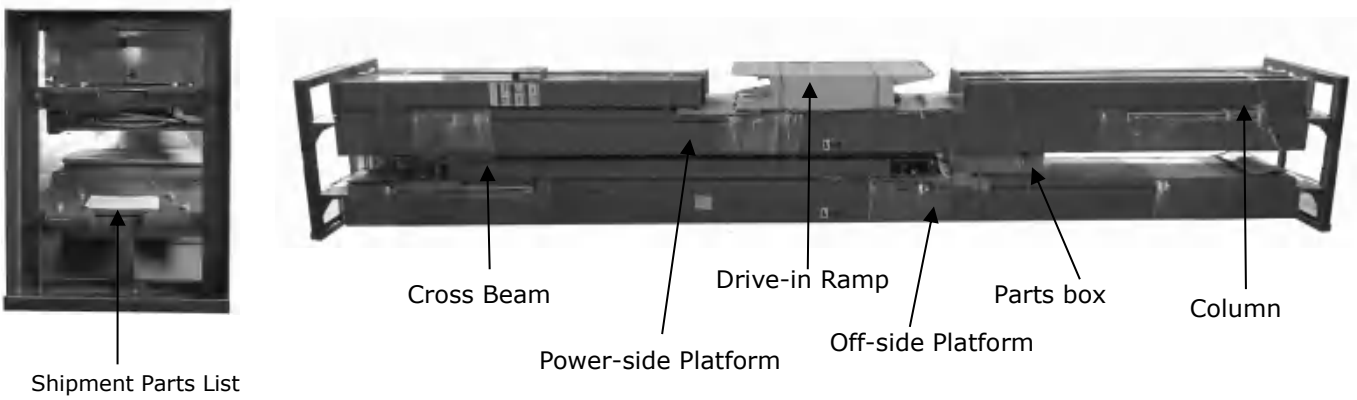



**Fig.8**

4. Take off the Drive-in Ramps and Columns **(See Fig.9)**.

**Fig. 9**

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. 10)**.

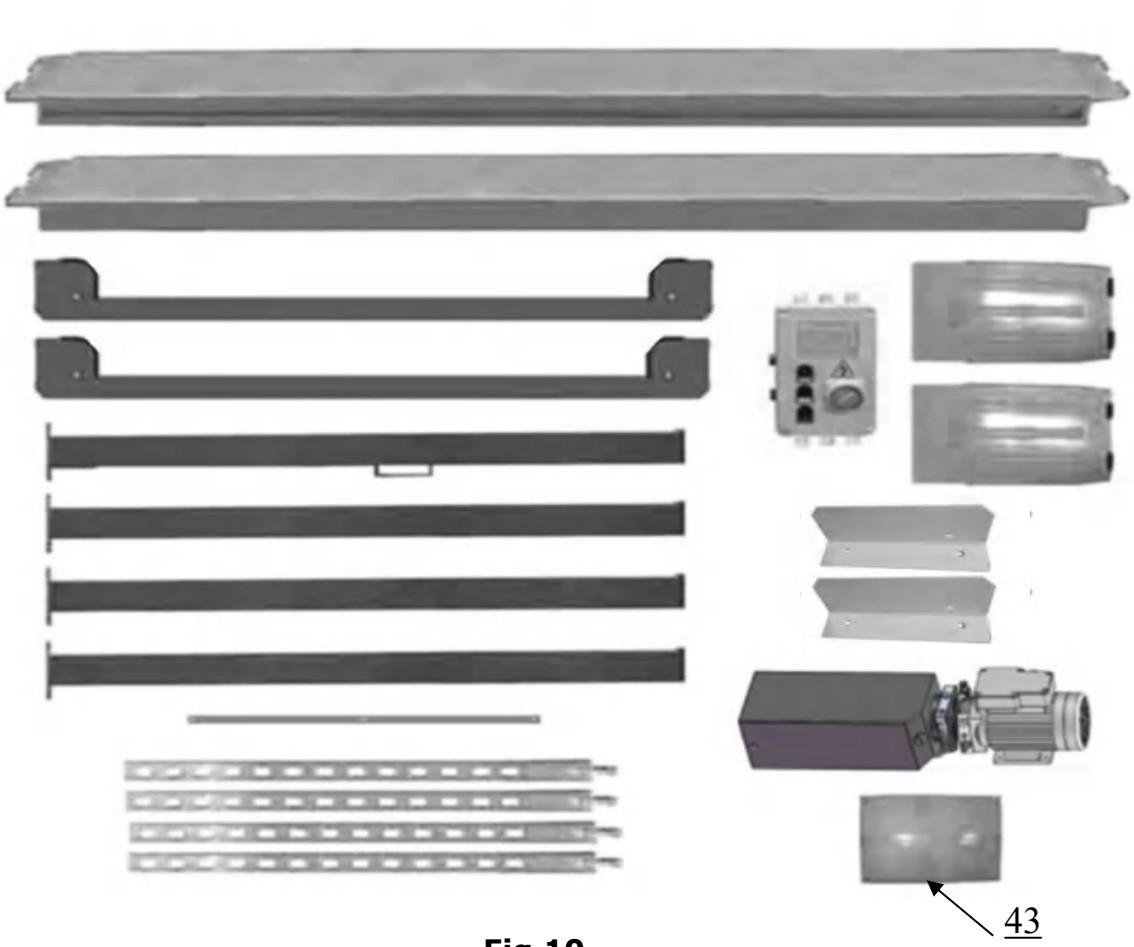



**Fig.10**

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

**Fig. 11**

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

**Parts bag 1**

**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.**

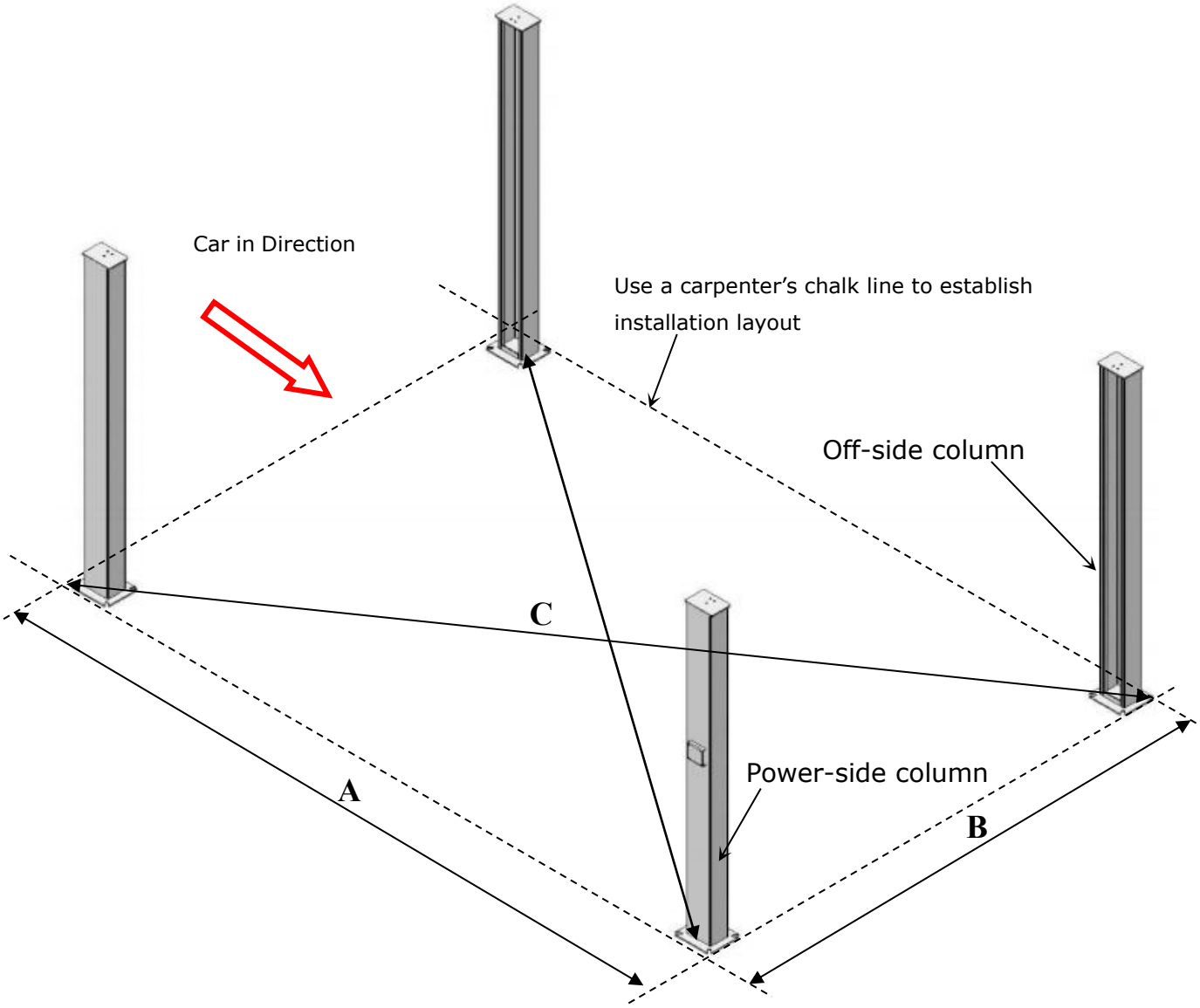



**Fig. 12**

| Model | A | B | C |
|---|---|---|---|
| 430 | 6514mm | 3794mm | 7538mm |
| 430E | 8014mm | 3794mm | 8867mm |

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

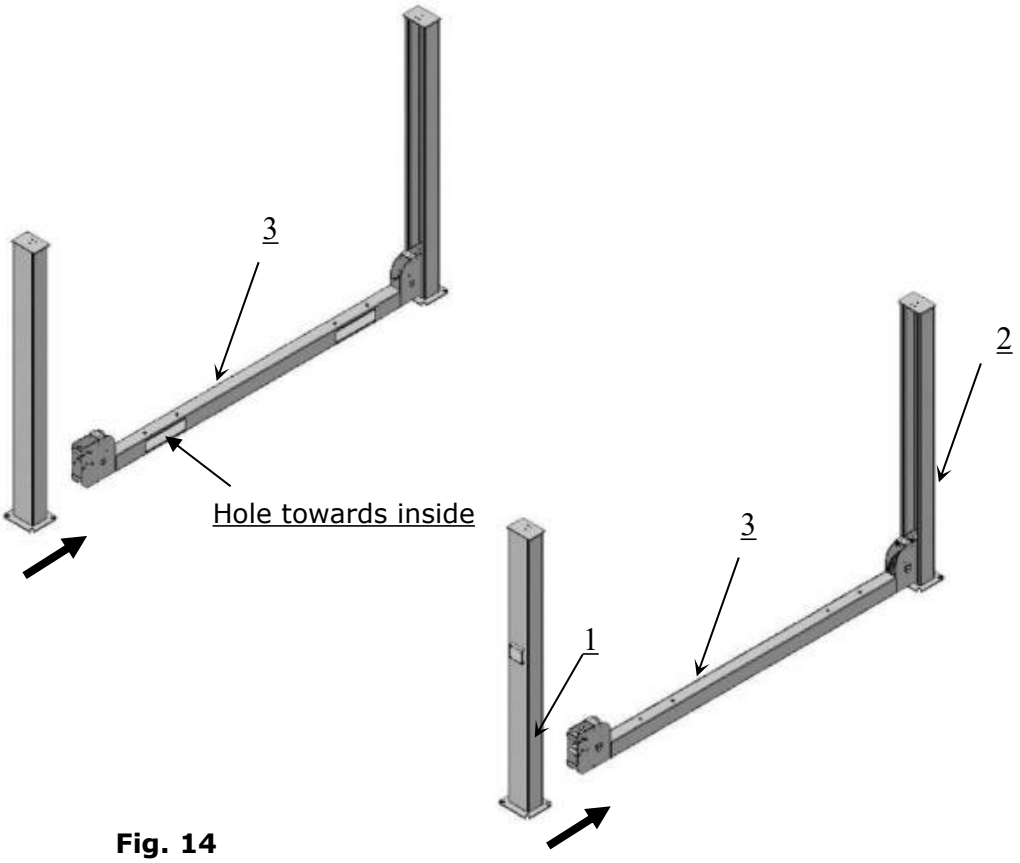



**Fig. 14**

**E. Fix the anchor bolts**

1. Prepare the anchor bolts **(See Fig. 15).**

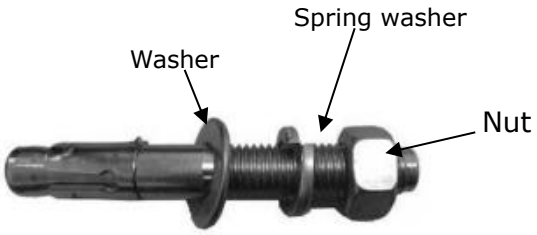



**Fig. 15**

**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. 16).**

Note: Minimum embedment of anchors is 110mm.

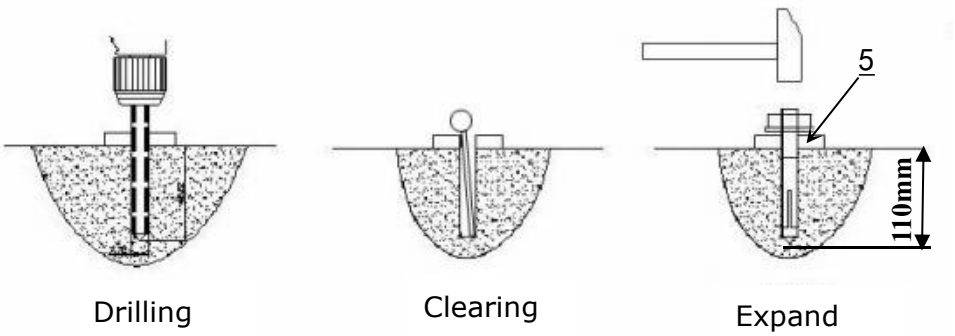



**Fig. 16**

**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. 17)**.

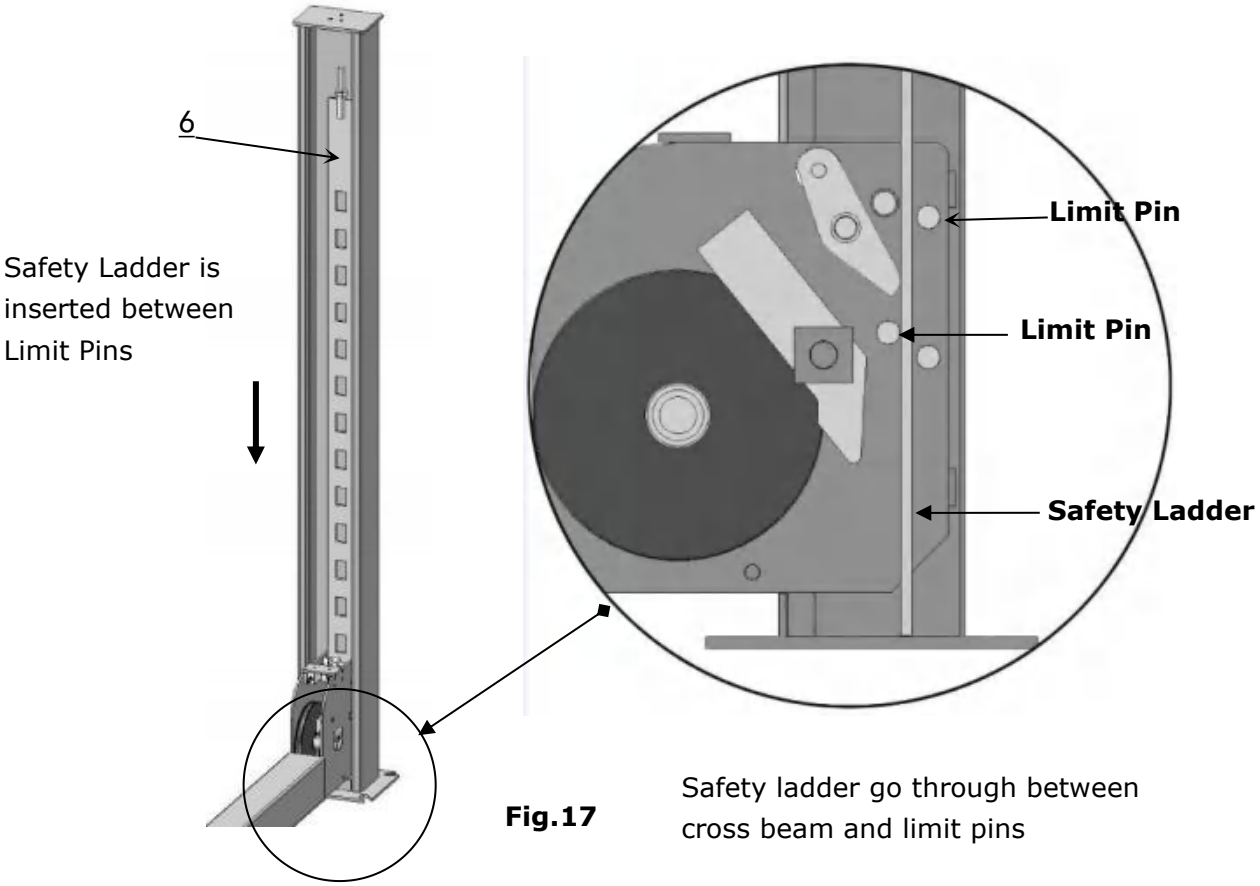



**Fig.17**

Safety ladder go through between cross beam and limit pins

2. Install safety ladders **(See Fig. 18)**

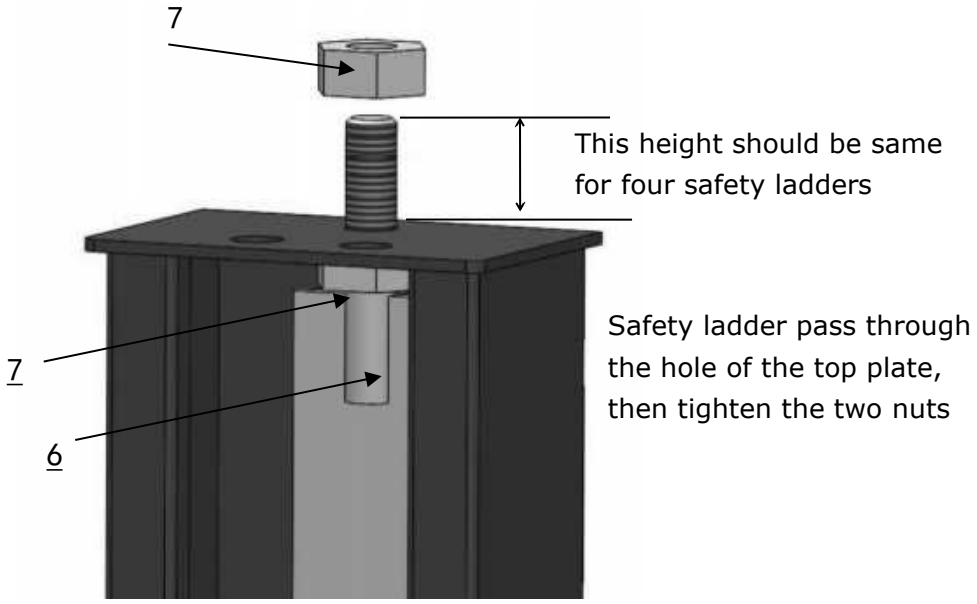



**Fig. 18**

## G. Put the Cross Beams at the same height (See Fig. 19).

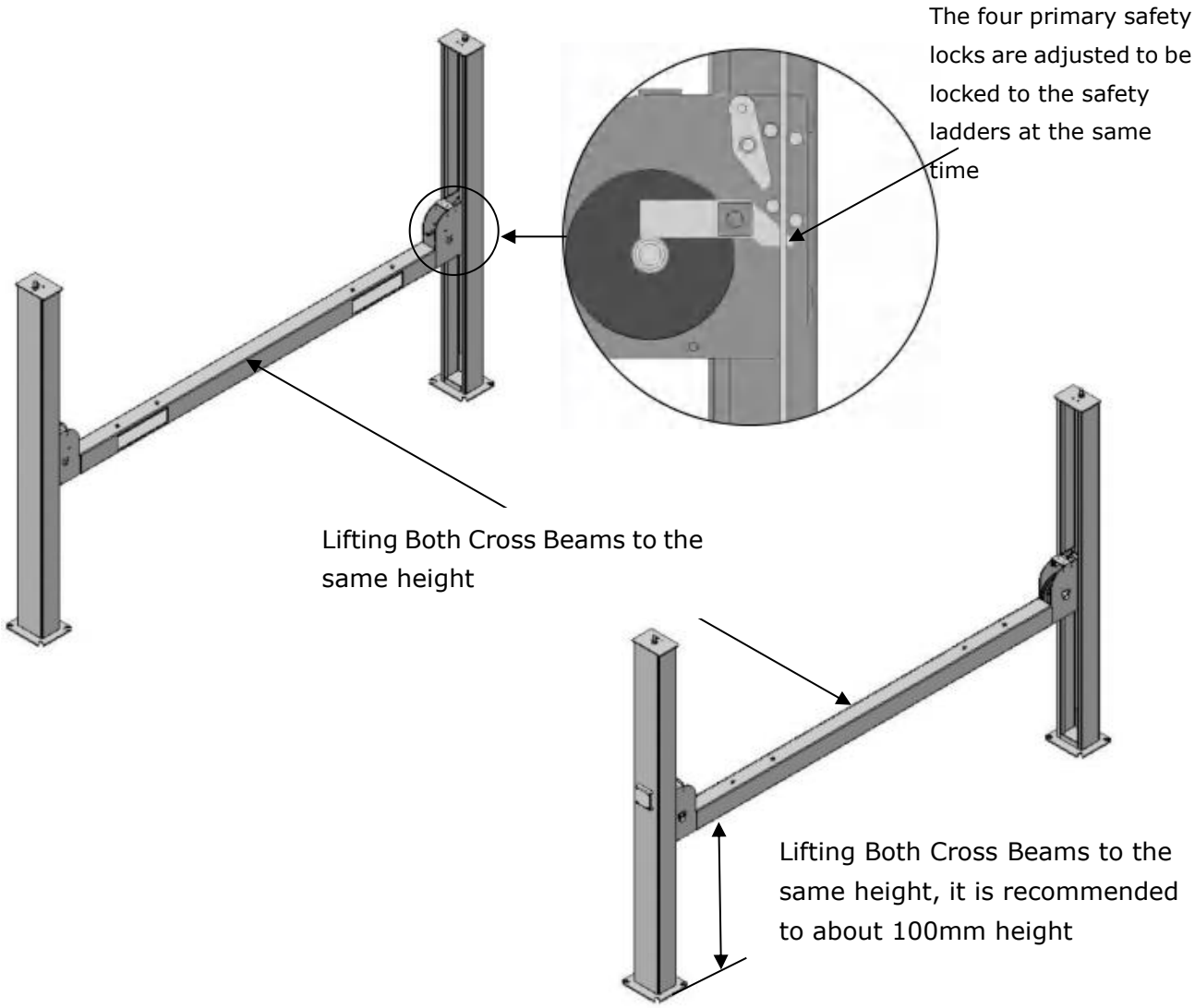
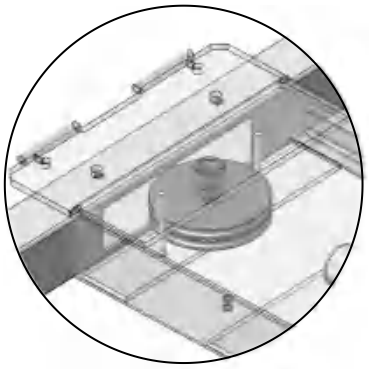



**Fig. 19**

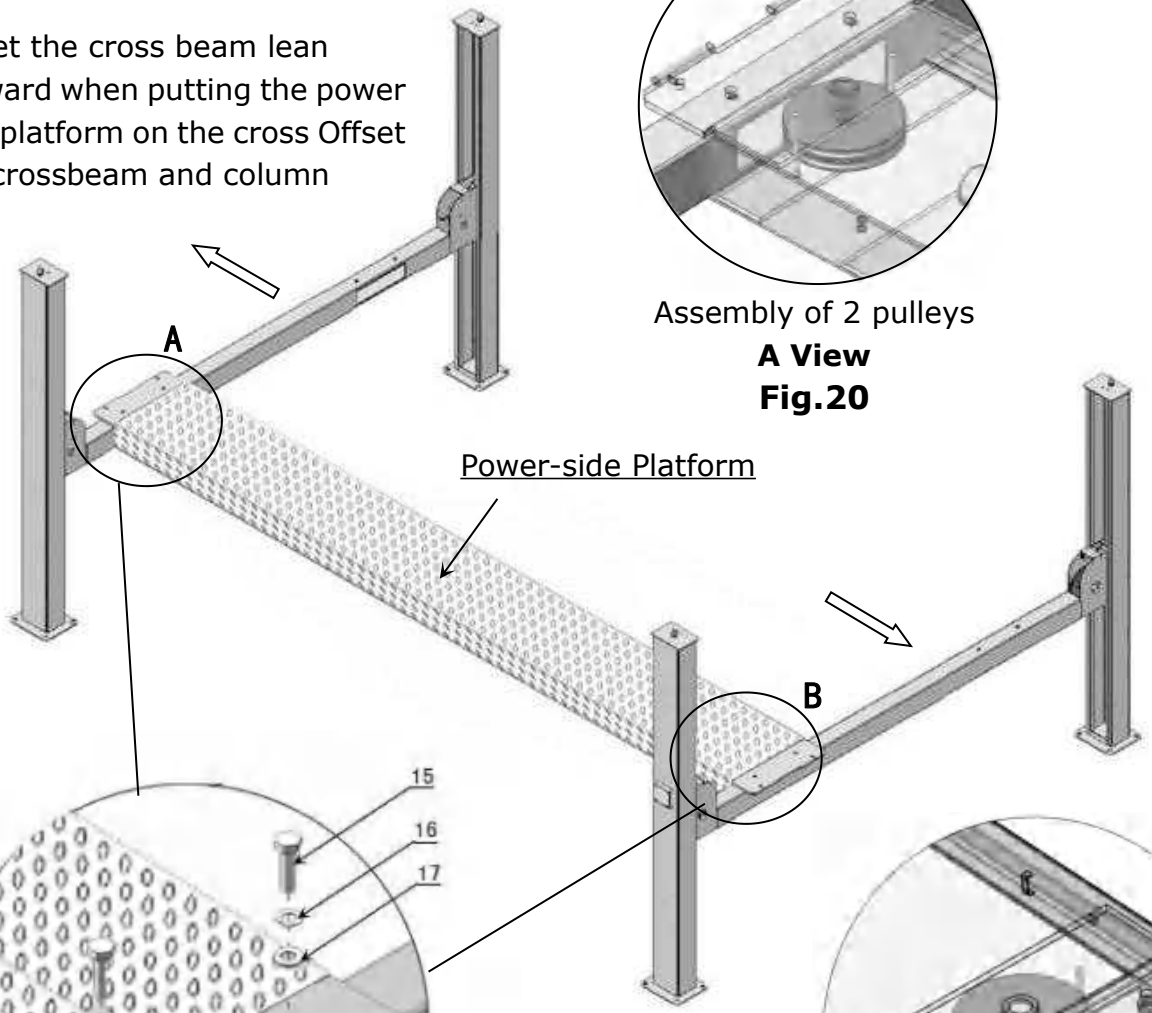
**H. Install power side platform.**

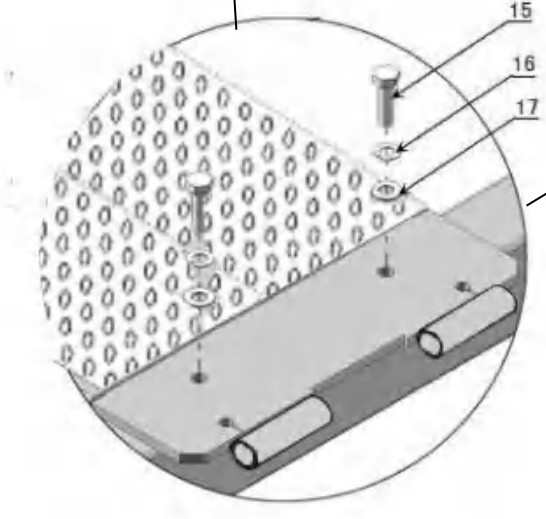
1. Put the power-side platform upon the cross beams by fork lift or manual, offset the cross beam to the outside till the pulleys of both platforms can set up into the cross beam **(See Fig.20)**, Install the power-side platform and screw up the bolts **(See Fig.21).**

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

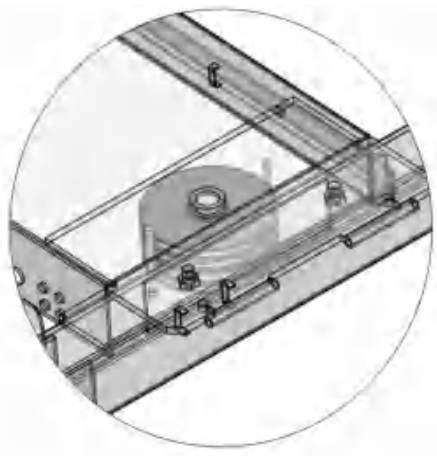


Assembly of 2 pulleys
**A View**
**Fig.20**



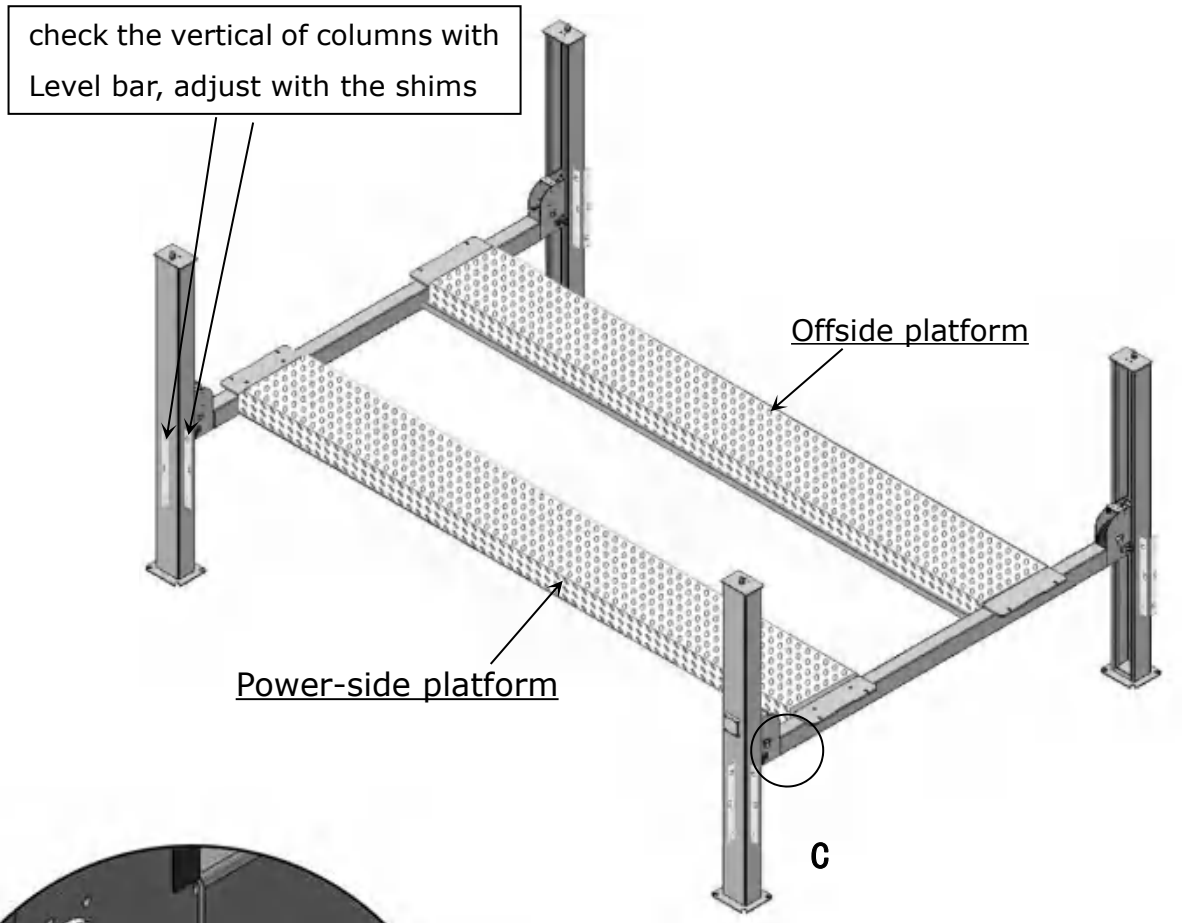



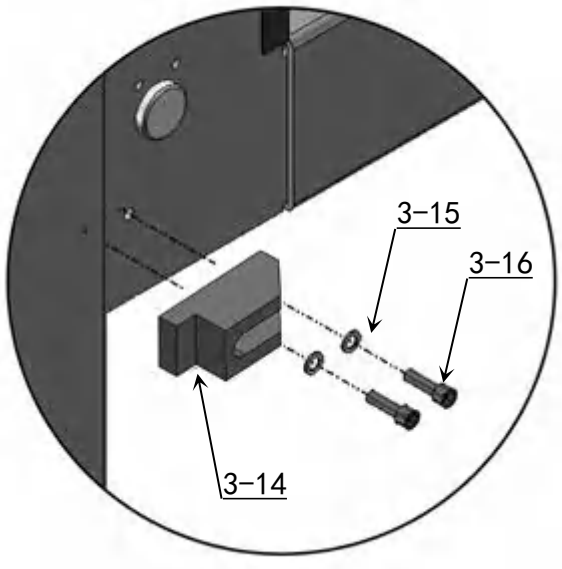

Install the power side platform with M30*60 hex bolt and screw up the bolts
**Fig.21**



Assembly of 4 pulleys
**B View**
**Fig.20**

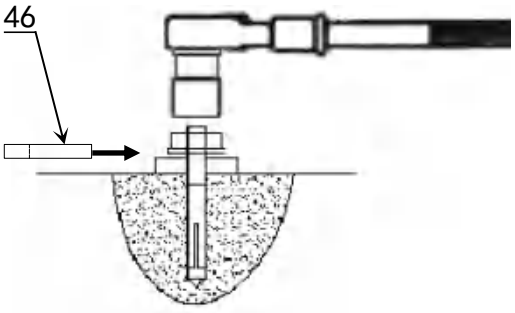
**I. Assemble offside platform and slider block. (see Fig.22), check the vertical of columns with Level bar, adjust with the shims if not, and then tighten the anchor bolts (See Fig. 23)**




**Install the slider block**
**C View**
**Fig.22**

Note: Torque of Anchors is 150N.m.




Using the ratchet spanner with socket to tighten the bolts

**Fig. 23**

## J. Install cables (See Fig. 24)

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

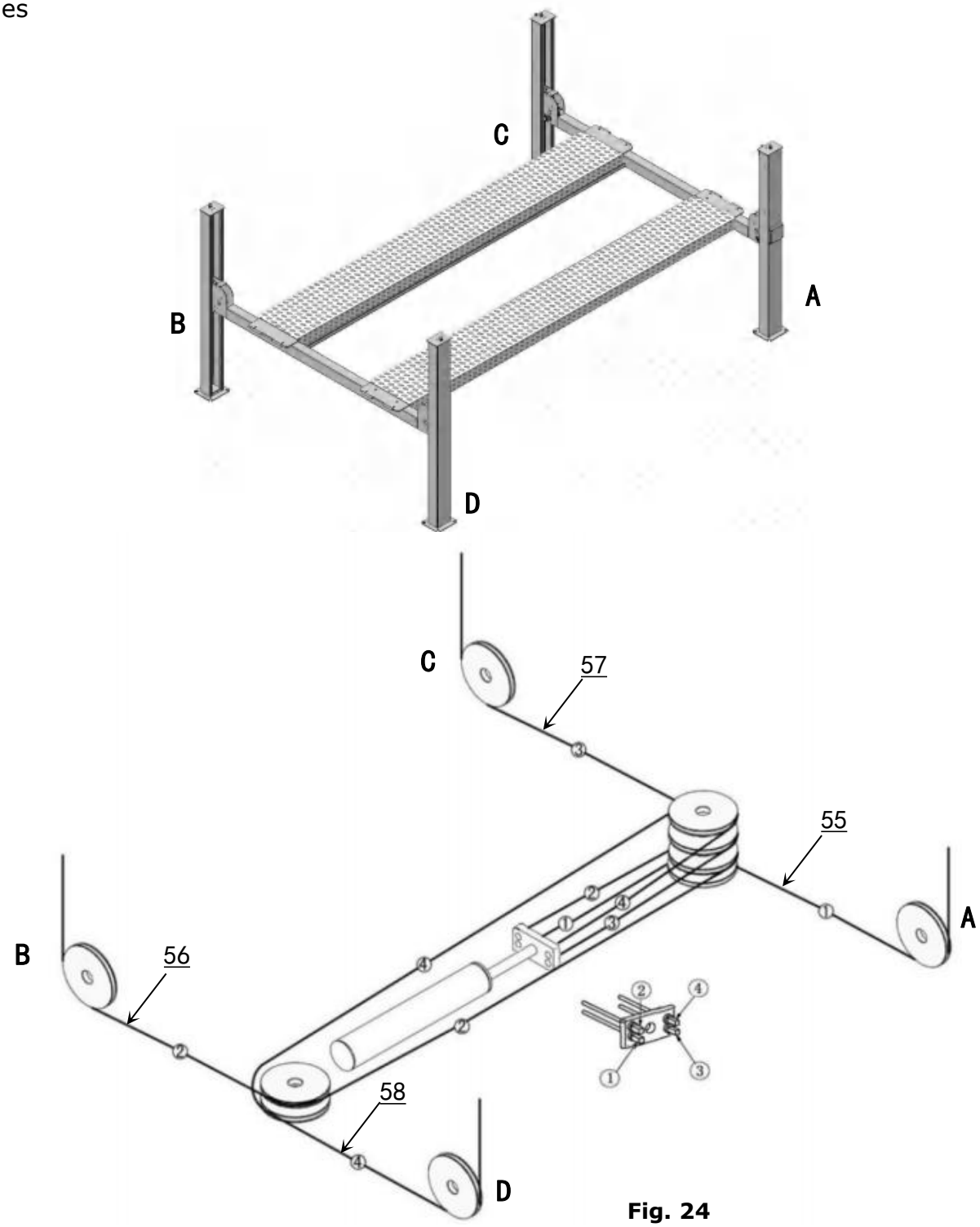



**Fig. 24**

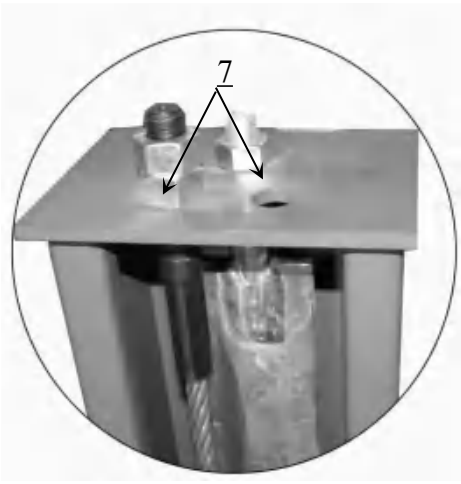
| No. / Cable | ① | ② | ③ | ④ |
|---|---|---|---|---|
| 430 Length (inc. connecting fitting) | 5135mm | 13325mm | 7135mm | 11350mm |
| 430E Length (inc. connecting fitting) | 4865mm | 14550mm | 6860mm | 12250mm |

2. The cable pass through the cross beam to top plate of columns and be screwed with cable nuts **(See Fig. 25, Fig.26),** then install cable limit pin **(See Fig.27)**

Cable pass through between the big pulley and tension pulley

**D View**

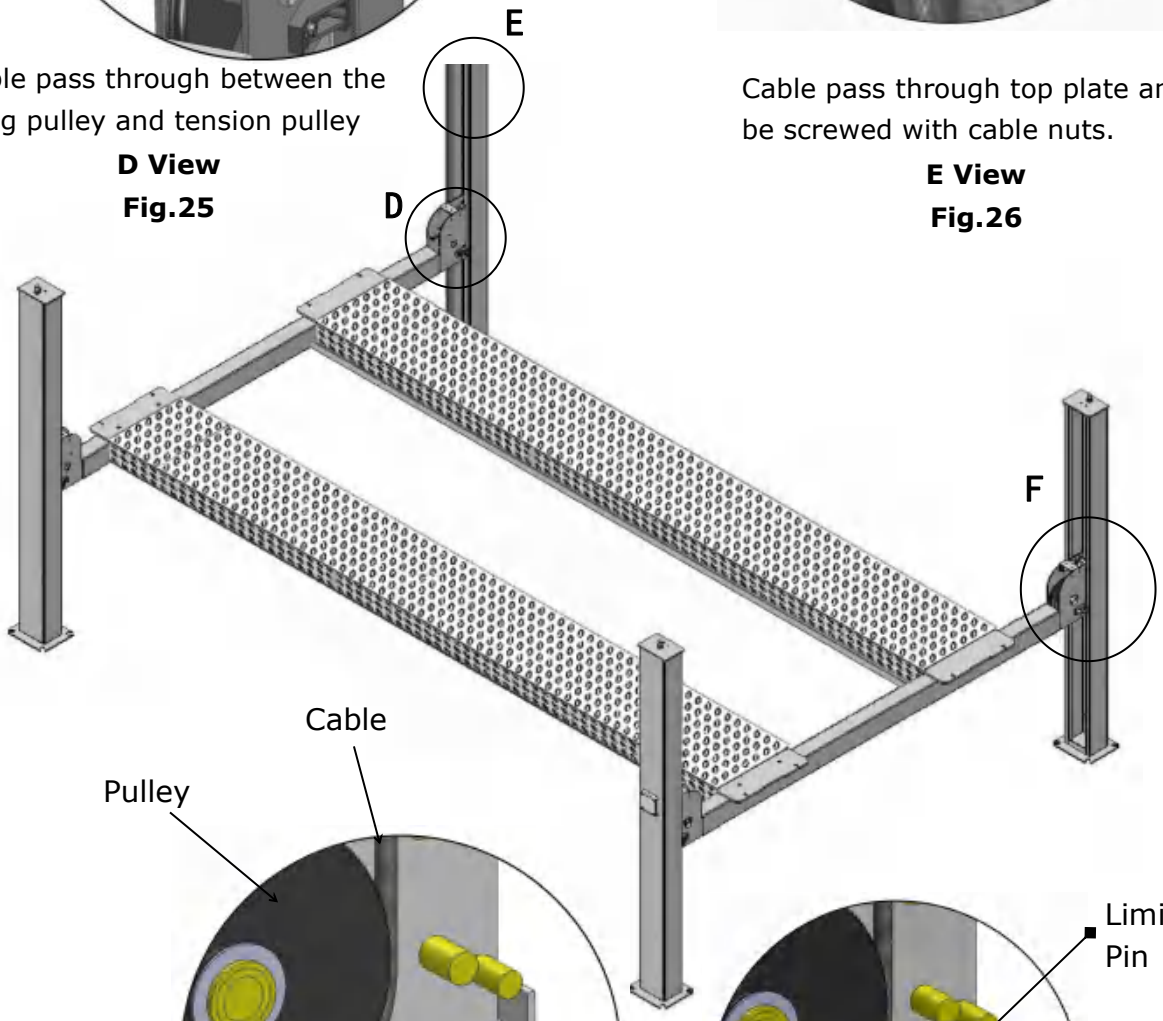
**Fig.25**

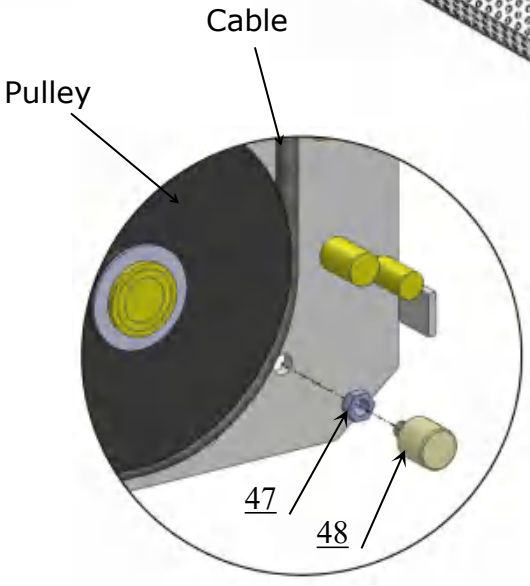



Cable pass through top plate and be screwed with cable nuts.

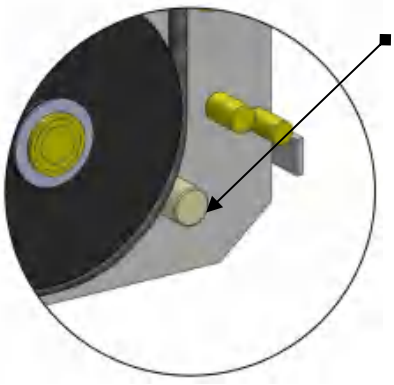
**E View**

**Fig.26**




Install cable limit pin




After installation

**F View**

**Fig. 27**

3. Illustration for platform cables **(See Fig. 28, Fig.29, Fig.30)**

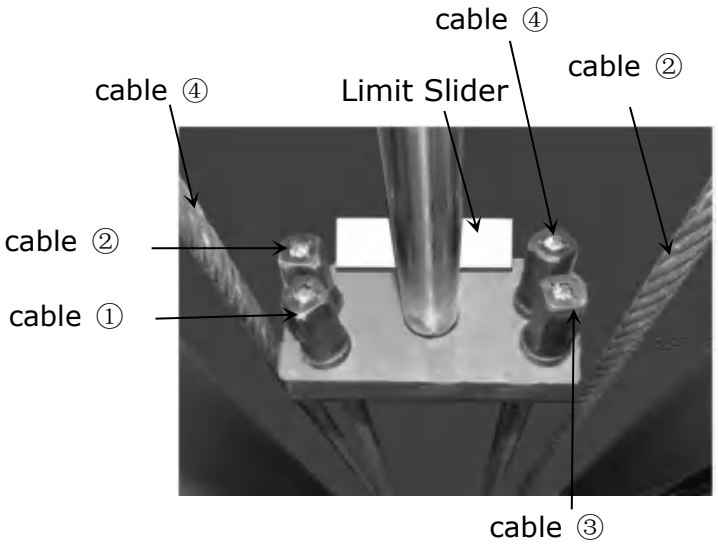



**Fig.28**

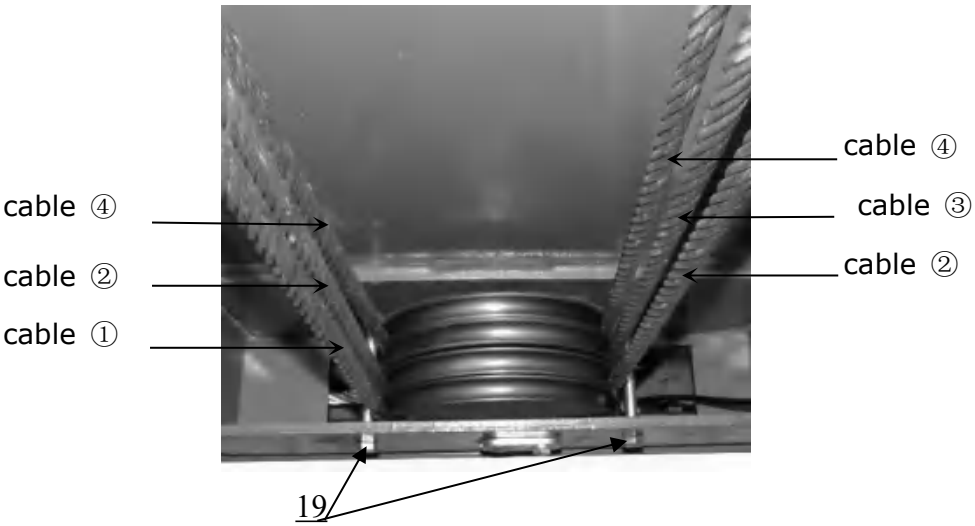



**Fig.29**

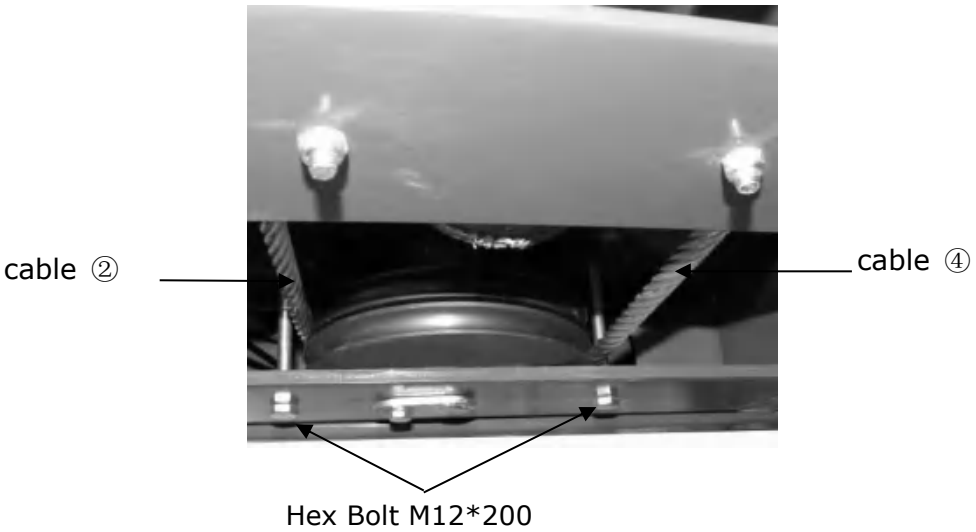
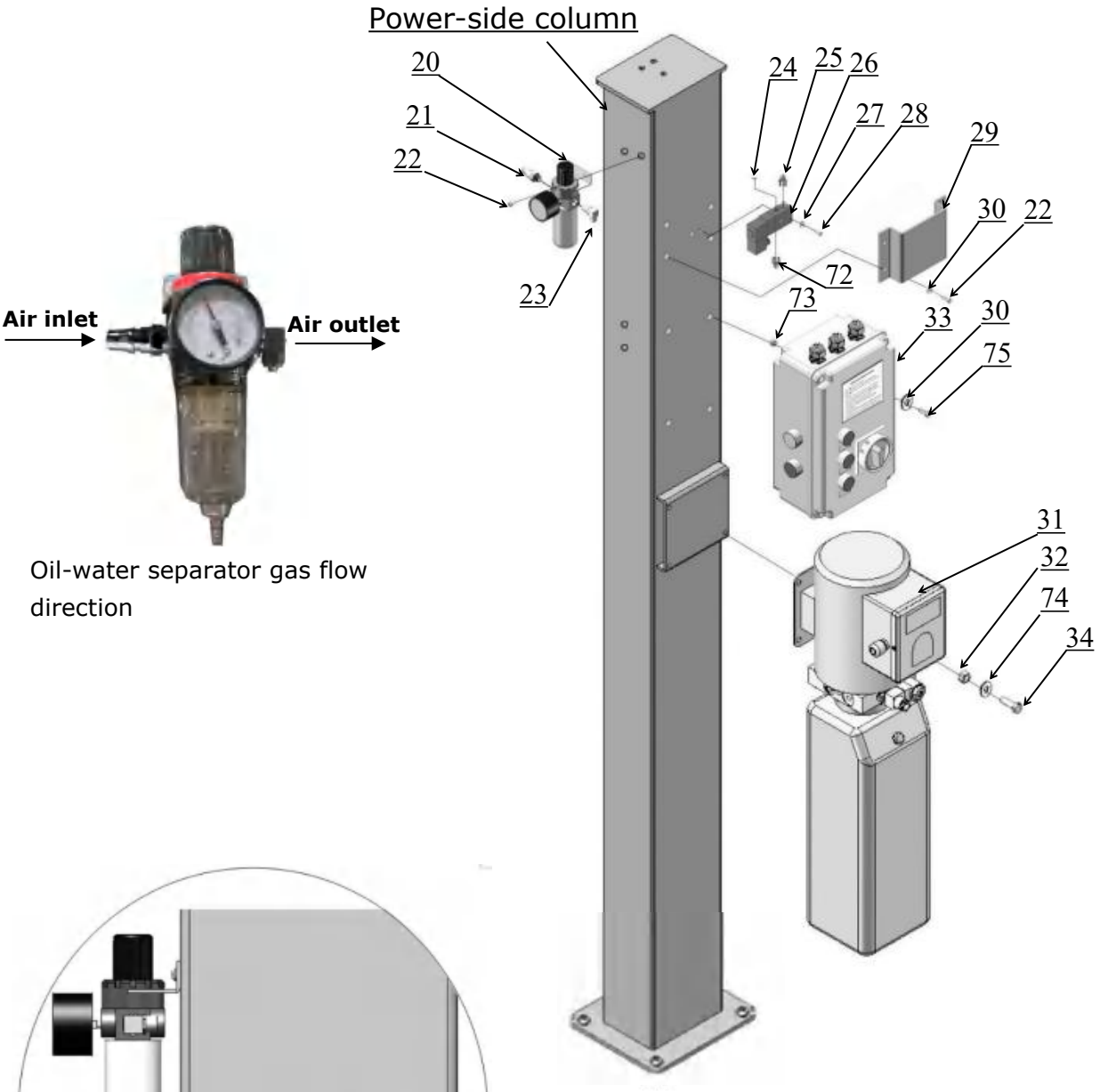



**Fig.30**

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

**(See Fig.31 )**




Oil-water separator gas flow direction

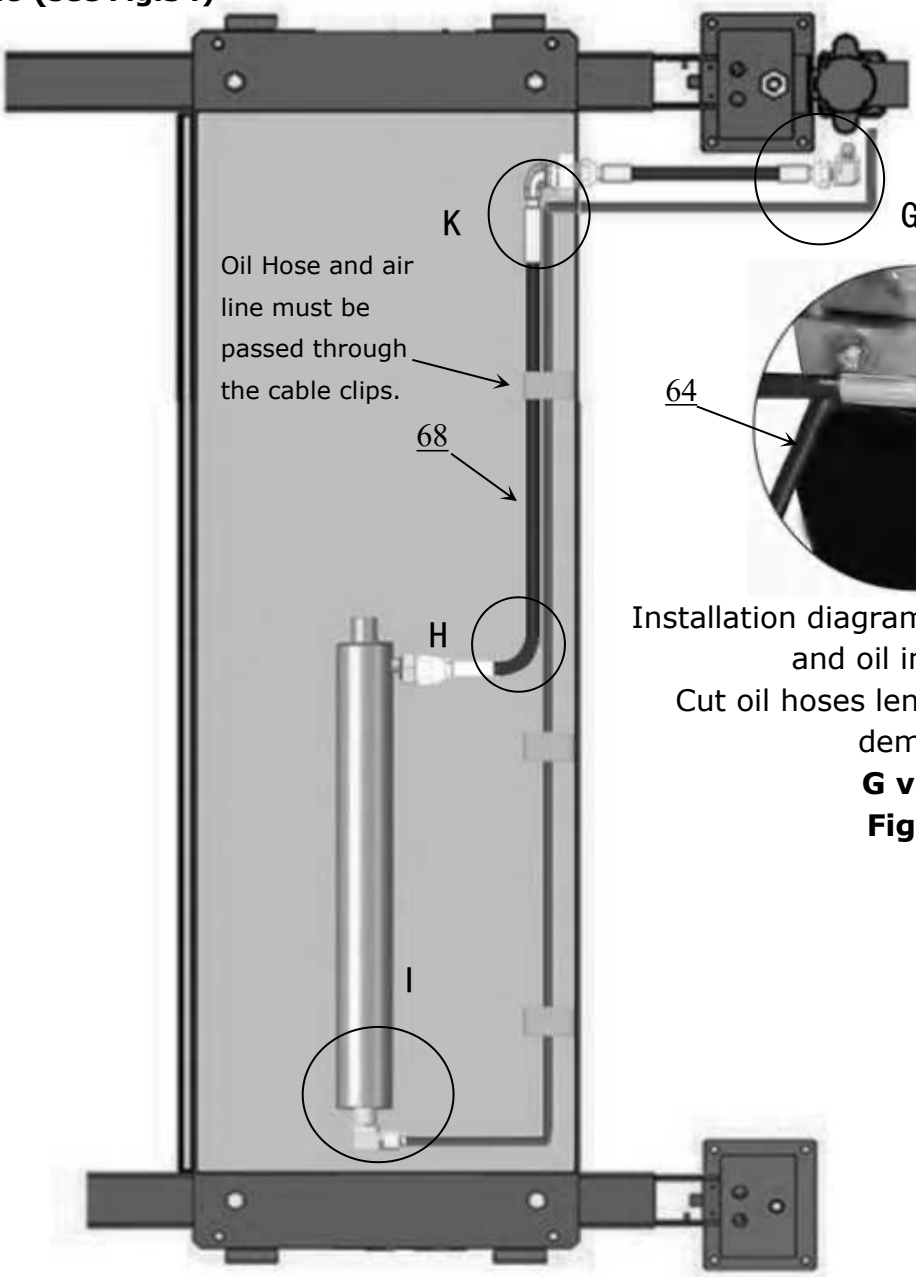
Oil-water separator and Air Solenoid Valve

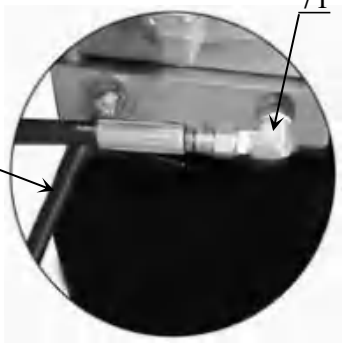
**Fig.31**

| Item | Part# | Description | QTY |
|---|---|---|---|
| 20 | 10420145 | Oil-water separator AFR-2000 | 1 |
| 21 | 10420146 | Straight fitting for air line | 1 |
| 22 | 10209009 | Cup head bolt | 6 |
| 23 | 10420076 | $90^0$ fitting for air line | 1 |
| 24 | 10201034 | Bleeding Plug | 1 |
| 25 | 10420147 | Straight Fitting for Air Line | 1 |
| 26 | 10420077 | Air Solenoid Valve | 1 |
| 27 | 10420148 | Washer | 2 |
| 28 | 10420149 | Cup head bolt | 2 |
| 29 | 11420150 | Cover of Air Solenoid Valve | 1 |
| 30 | 10420045 | Washer | 28 |
| 31 | 81523049 | Electric power unit 220V/50HZ | 1 |
| | 81523050 | Electric power unit 380V/50HZ | |
| 32 | 10209005 | Self locking nut | 14 |
| 33 | 10209004 | Rubber ring | 4 |
| 34 | 10209003 | Hex Bolt | 4 |
| 72 | 10420151 | Straight Fitting for Air Line | 1 |
| 73 | 10420018 | Self locking Nut | 6 |
| 74 | 10420281 | Control Box (Single Phase) | 1 or 1 |
| | 10420016 | Control Box (Three Phase) | |
| 75 | 10420153 | Cup head bolt | 9 |

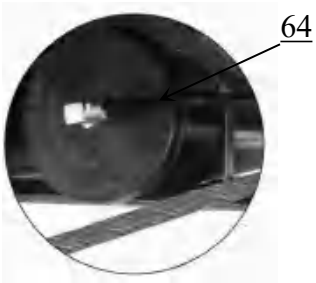
**L. Install hydraulic system (See Fig.32, Fig.33, Fig.34)**

**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)**



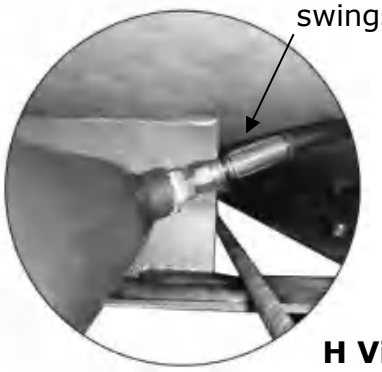




Installation diagram for oil return hose and oil inlet hose
Cut oil hoses length according to demand
**G view**
**Fig.32**




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

Cylinder inlet port swings upward



**H View**
**Fig.33**

**M. Install air-line system**

1. Cut ϕ8*ϕ6 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 ϕ8*ϕ6 black air line (the actual length of air line can be cut by user) **(See Fig.36)**

3. Connecting air solenoid valve using ϕ8*ϕ6 black air line (the actual length of air line can be cut by user) **(See Fig. 37)**

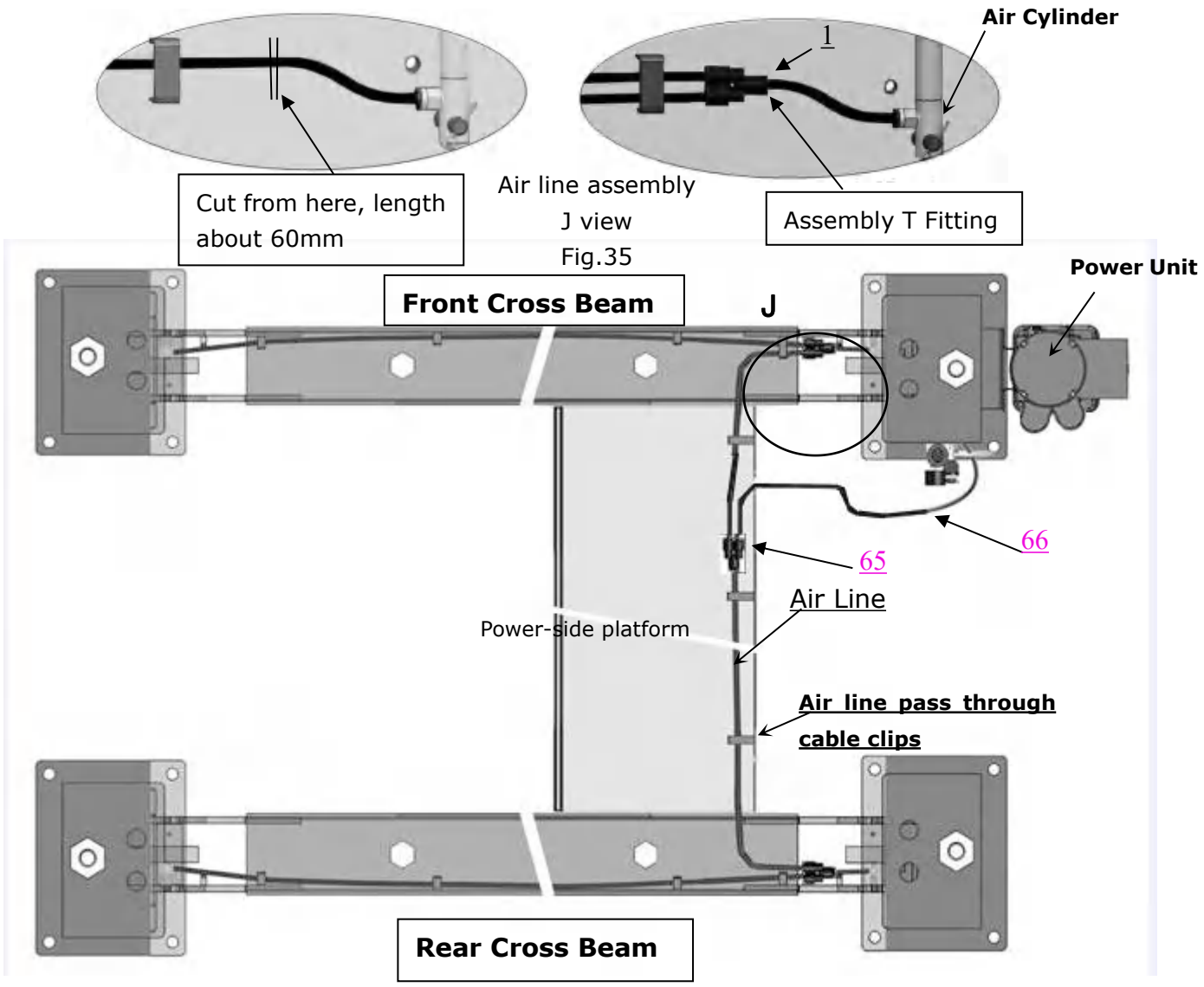
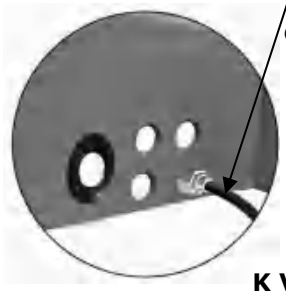



Fig.36




**K View**

**Fig 37**

| Item | Part# | Description | 430 | 430E |
|---|---|---|---|---|
| 65 | 85090120 | T- FITTING for Air Line | 3 | 3 |
| 66 | 10481013 | Air Line φ6*φ8*10000mm (black) | 1 | 0 |
| | 10481065 | Air Line φ6*φ8*11600mm(black) | 0 | 1 |
| 67 | 10420167B | φ8*φ6*220mm black air line | 1 | 1 |

4. Connecting Oil-water separator and Air solenoid valve by air line **(See Fig. 38)**.

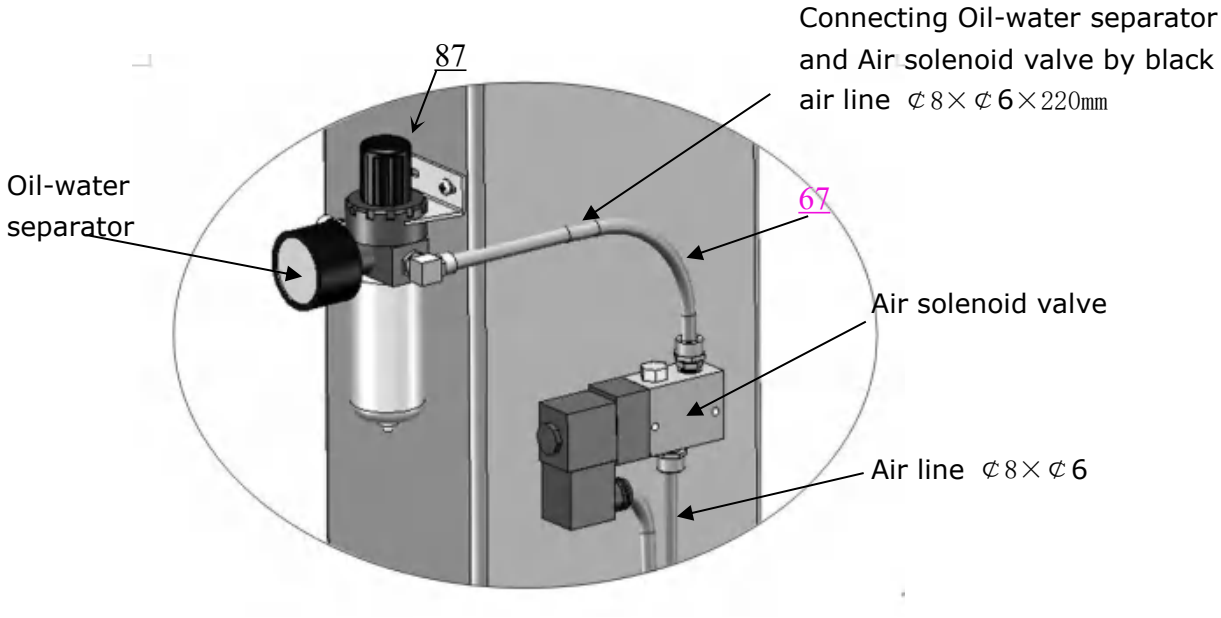



**Fig. 38**

5. Connecting air inlet (Air supply pressure 0.8MPa), adjusting the air pressure of Oil-water separator to 0.8MPa **(See Fig. 39)**.

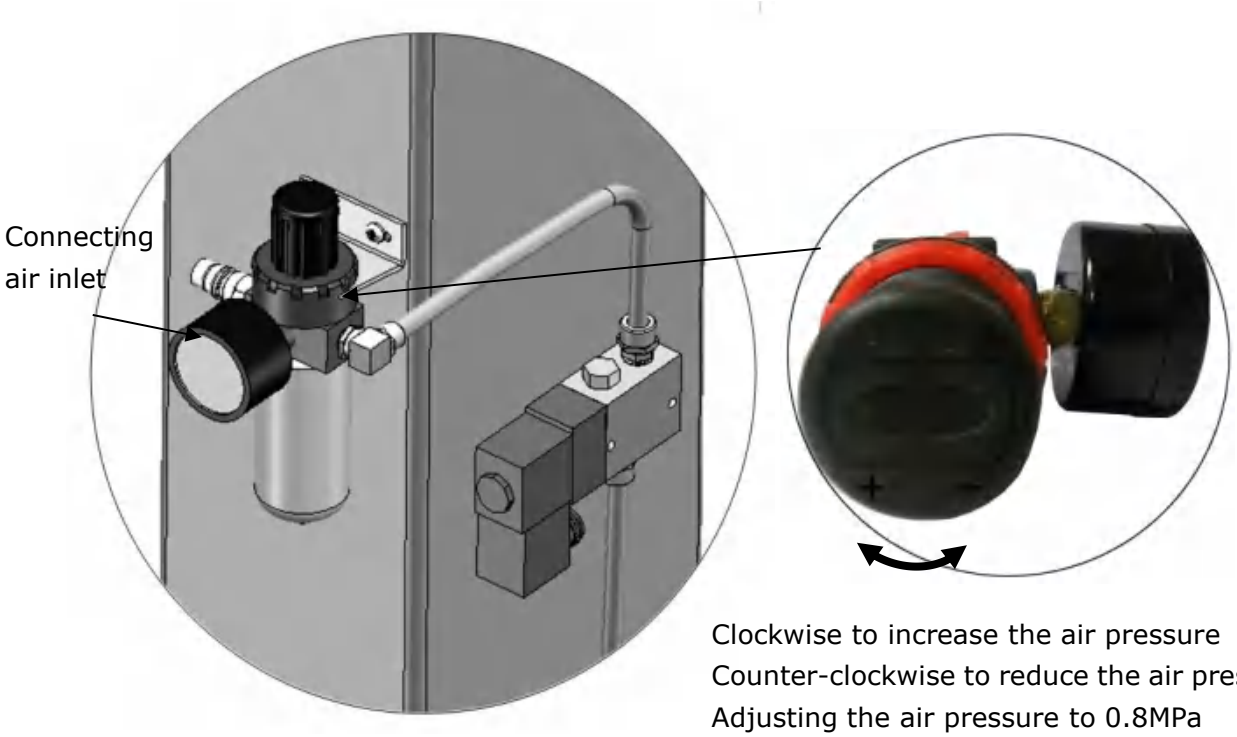



**Fig.39**

## N. Install electrical system

1. Install high limit switch **(See Fig. 40)**

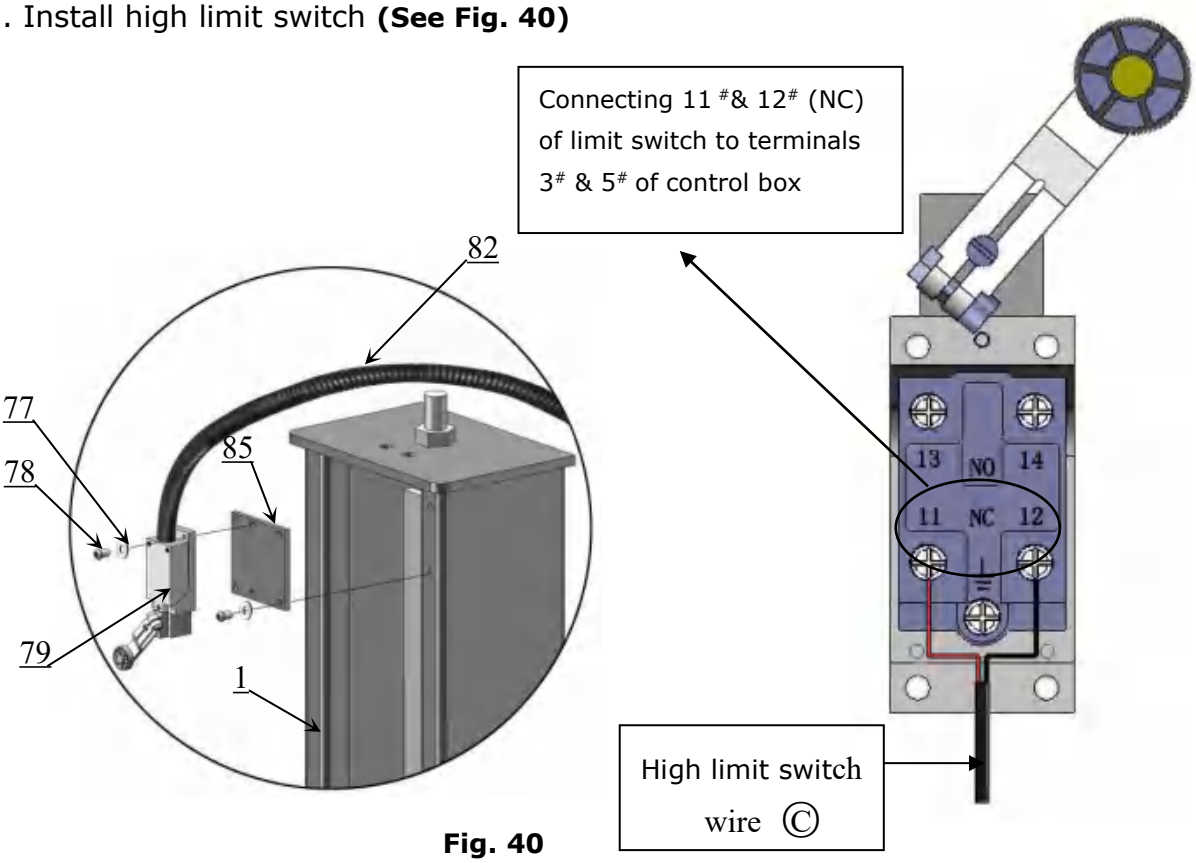



**Fig. 40**

2. Install lower alarm limit switch **(See Fig. 41)**

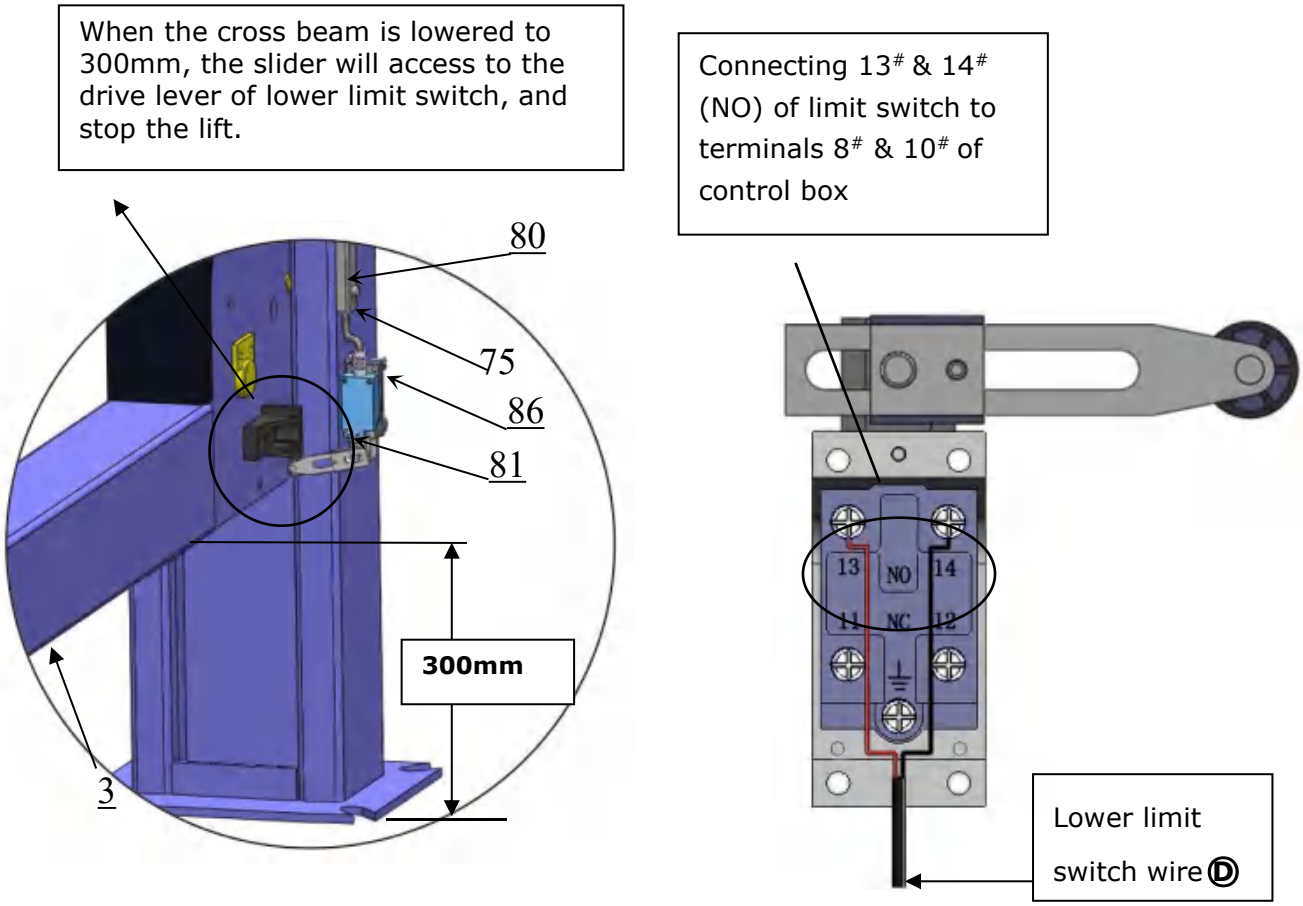
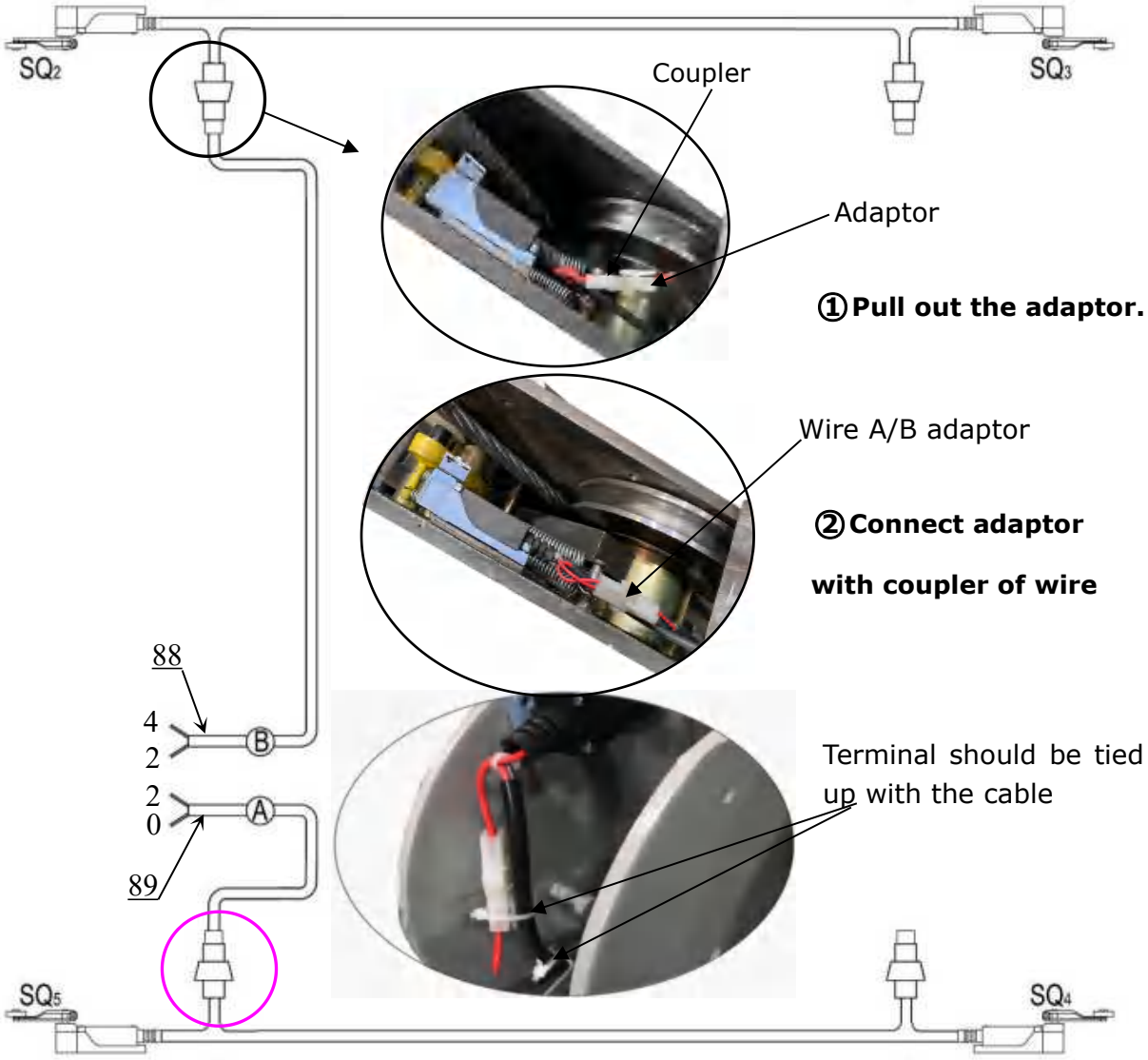
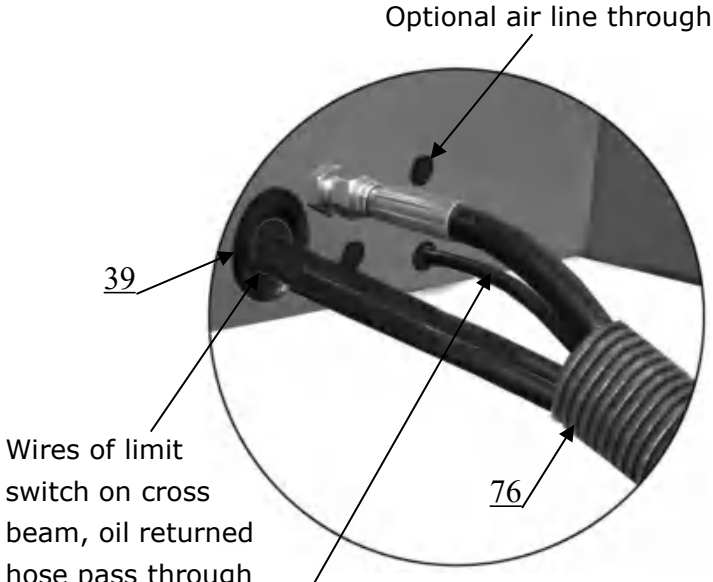
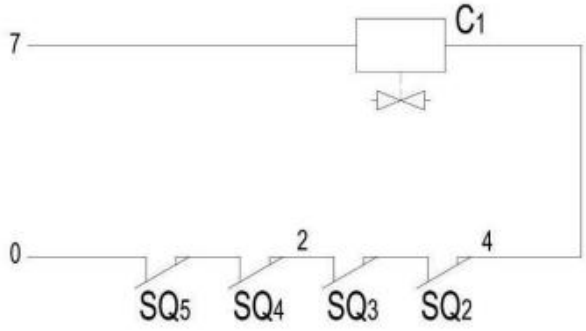



**Fig. 41**

3. Connecting wire of limit switch on cross beam **(See Fig. 42)**




**Circuit Diagram**

Limit Switch ($SQ_2$~$SQ_5$) on Cross Beam

**Fig.42**

4. Connecting wire with control box **(See Fig. 43)**.

**Note: 1) Specification for limit switch and Air solenoid valve of wire are 2∗1mm$^2$, Power source and motor cables uses cable 4∗2.5mm$^{2.}$**

**2) Using white bobbin to wind around wire and air line.**

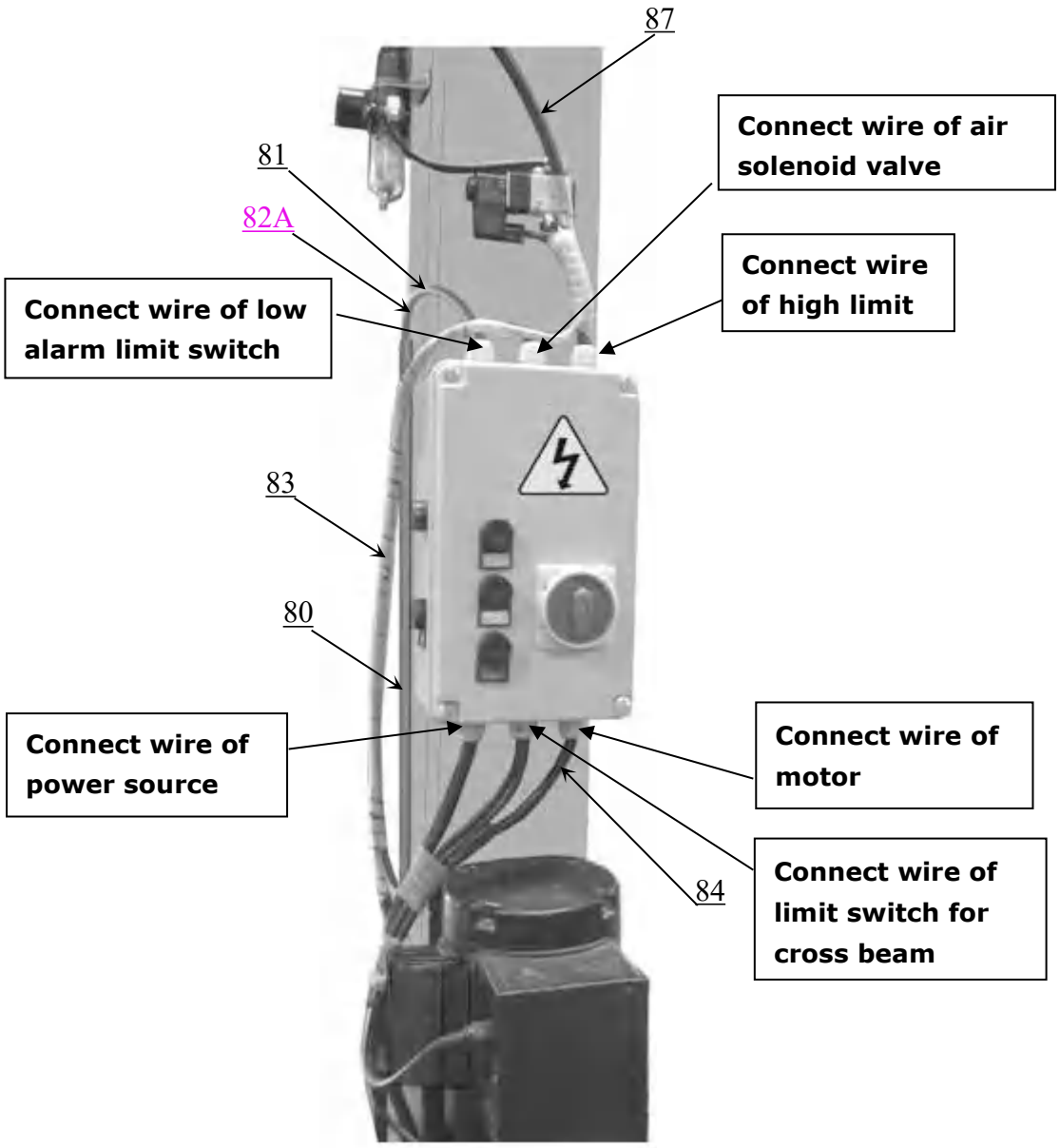



**Fig. 43**

5. 380V Wire connection and circuit diagram

5.1 Wire connection diagram in the control box **(See Fig.44)**.

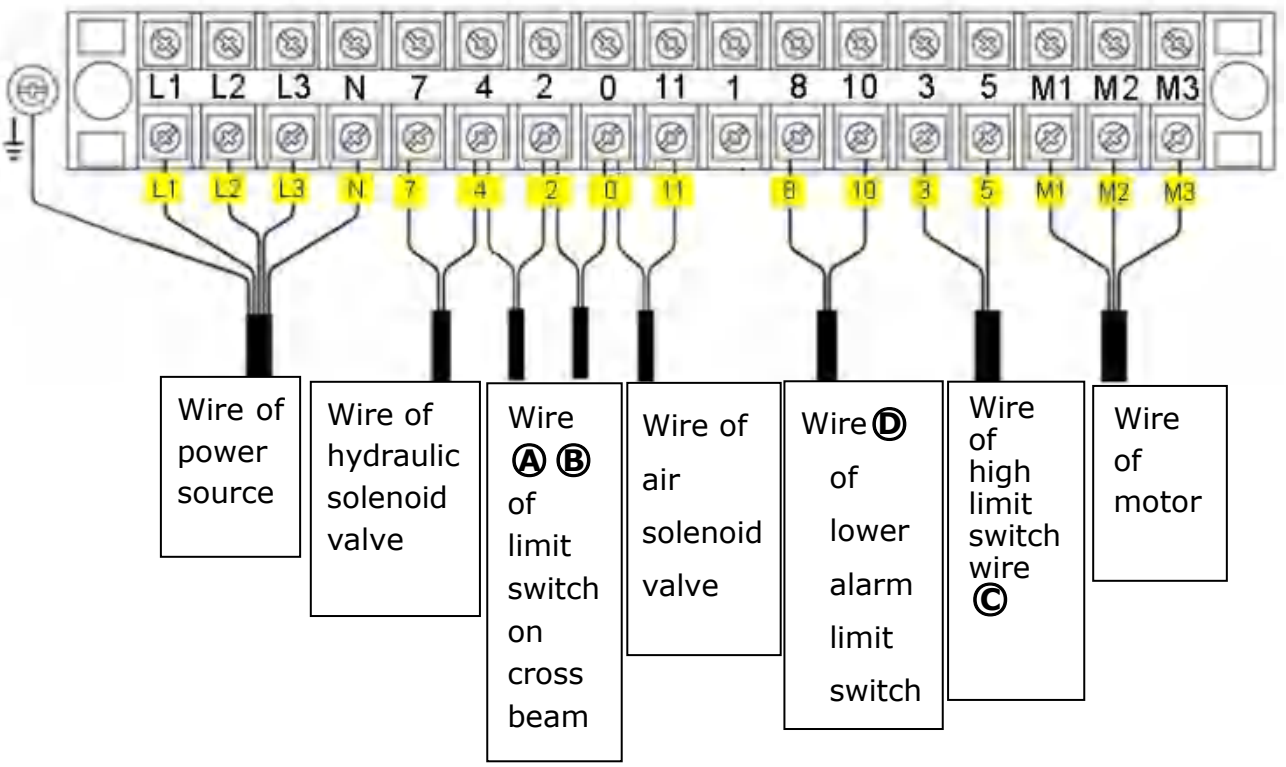



**Fig. 44**

5.2 380V Wire connection diagram of hydraulic motor **(See Fig.45)**.

Motor wire (M1、M2、M3) are connected to the three wires in the motor.

Turn on the power, push button **"UP"**, if motor run but lift is not worked, please exchange the M1, M2 wires connection.

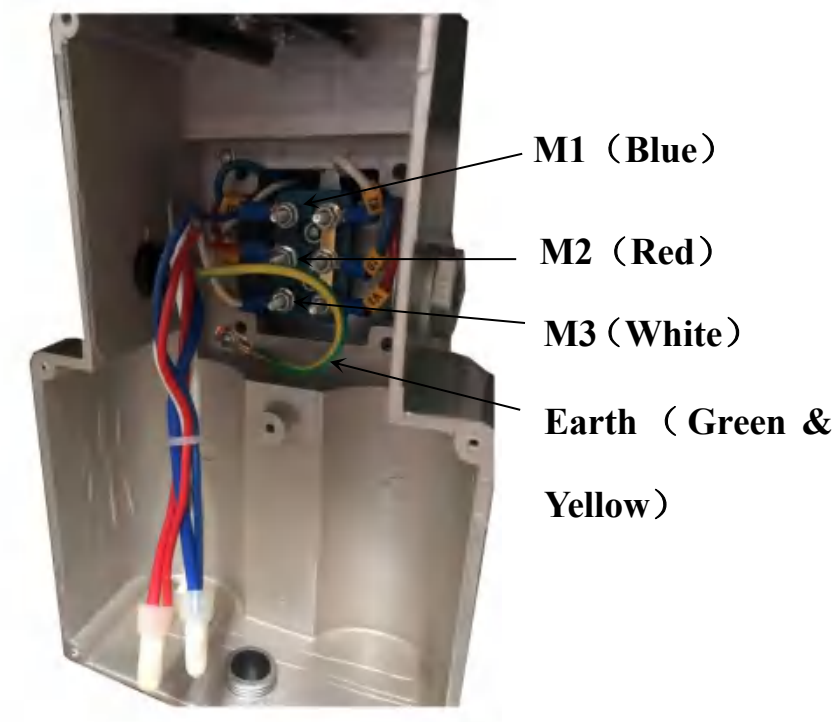



**Fig. 45**

5.3 380V Circuit diagram **(See Fig.46)**.

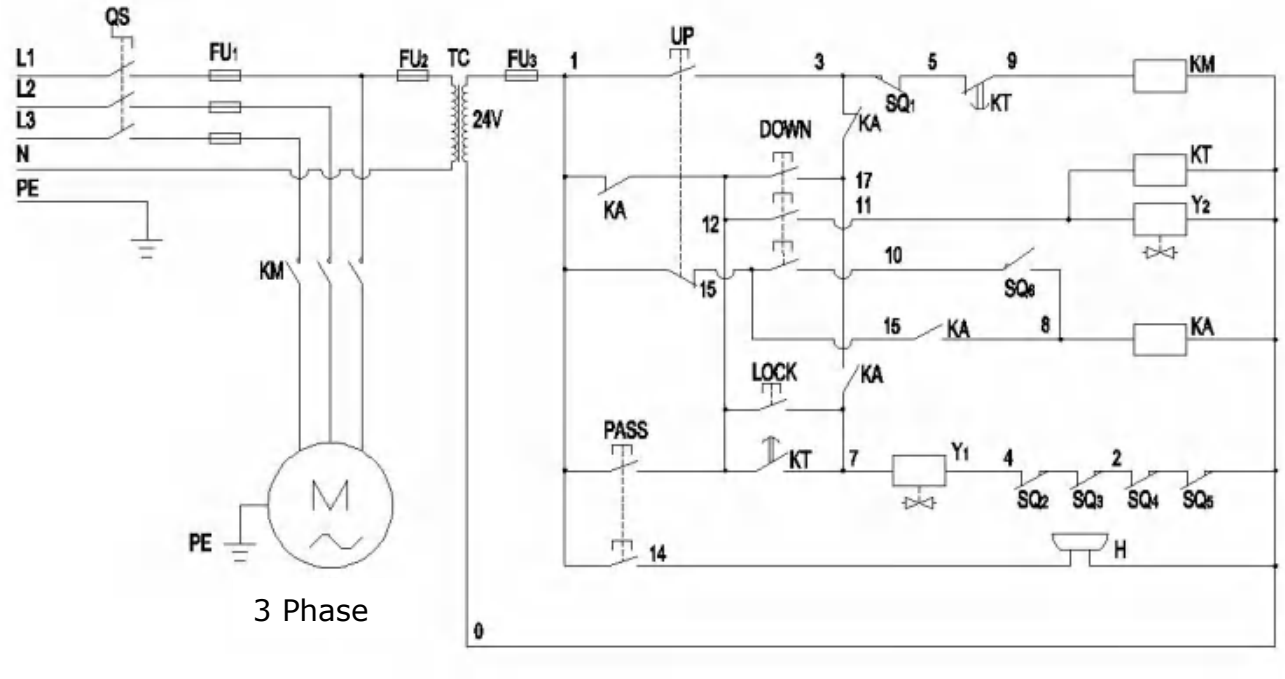



**Fig. 46**

**Circuit component**

| Item | Name | Code | Specification | | Item | Name | Code | Specification |
|---|---|---|---|---|---|---|---|---|
| 1 | Power switch | QS | 380V AC | | 10 | Push button | UP | Duplex |
| 2 | Breaker | $FU_1$ | 3P | | 11 | Push button | Down | Triplex |
| 3 | Breaker | $FU_2$ | 1P | | | | Pass | Duplex |
| 4 | Breaker | $FU_3$ | 1P | | 12 | Push button | Lock | Single |
| 5 | AC contactor | KM | 24V AC | | 13 | Motor | M | 3 Phase |
| 6 | Time relay | KT | 24V AC | | 14 | Transformer | TC | 24V AC |
| 7 | Limit switch | $SQ_{(1\sim6)}$ | 10A | | 15 | Intermediate relay | KA | 24V AC |
| 8 | Air solenoid valve | Y2 | 24V AC | | 16 | Alarm | H | 24V AC |
| 9 | Hydraulic solenoid valve | Y1 | 24V AC | | | | | |

6. 220V Wire connection and circuit diagram

6.1 Wire Connection diagram in the control box **(See Fig. 47)**.

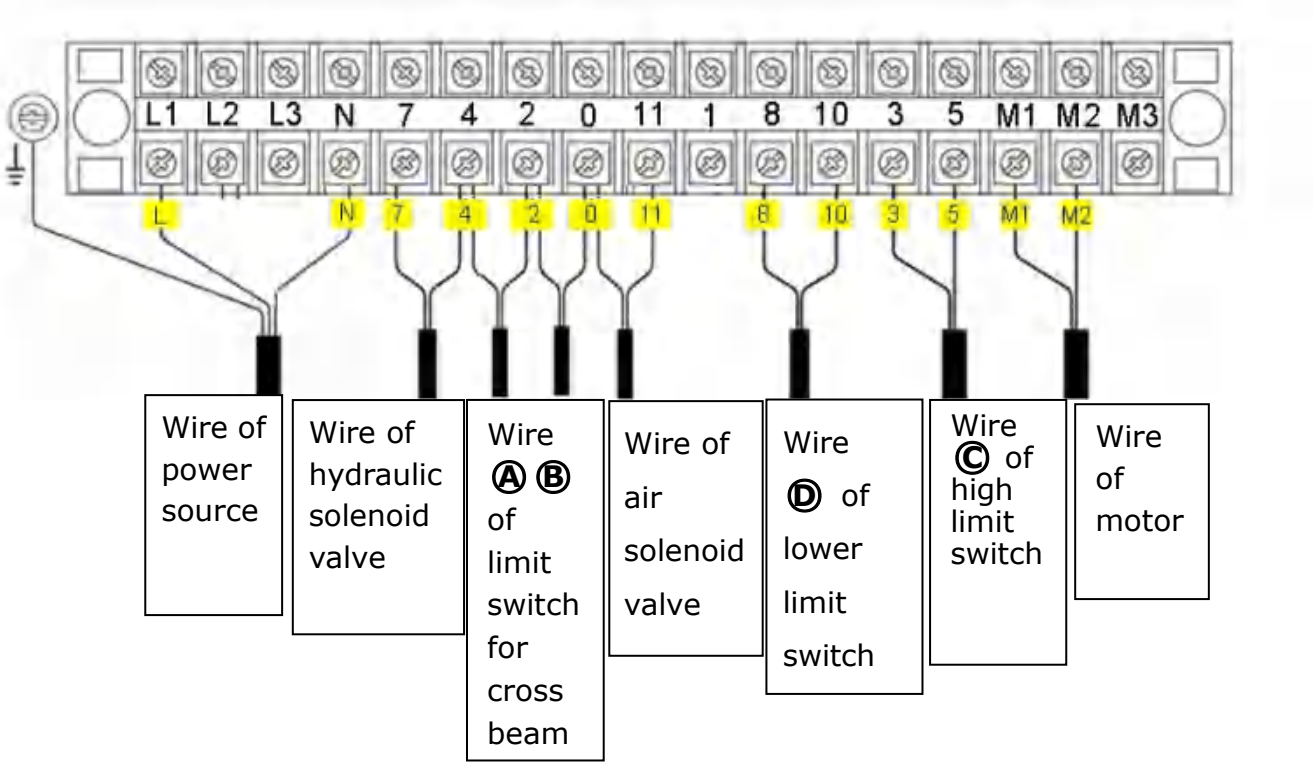



**Fig. 47**

6.2 220V Wire connection of hydraulic power unit **(See Fig. 48)**.

Motor wire (M1、M2) separately connected to two wires in the motor

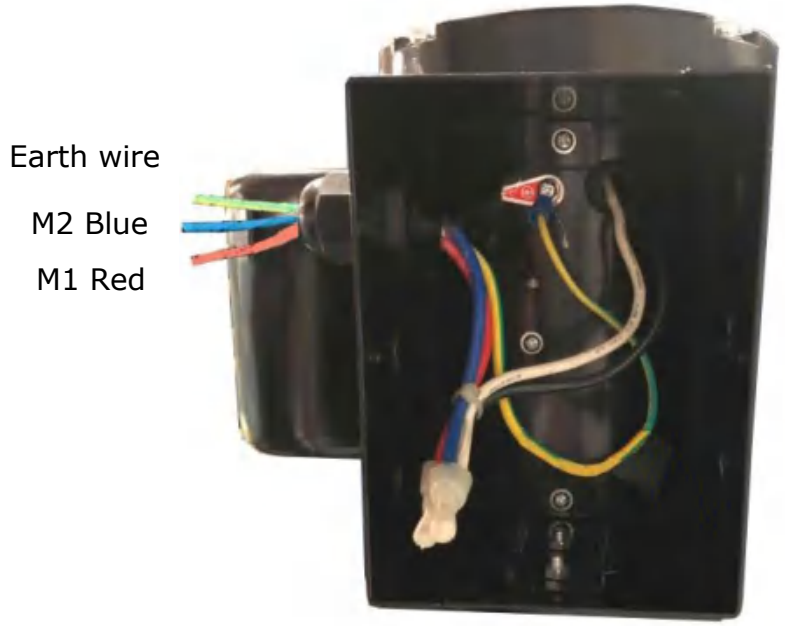
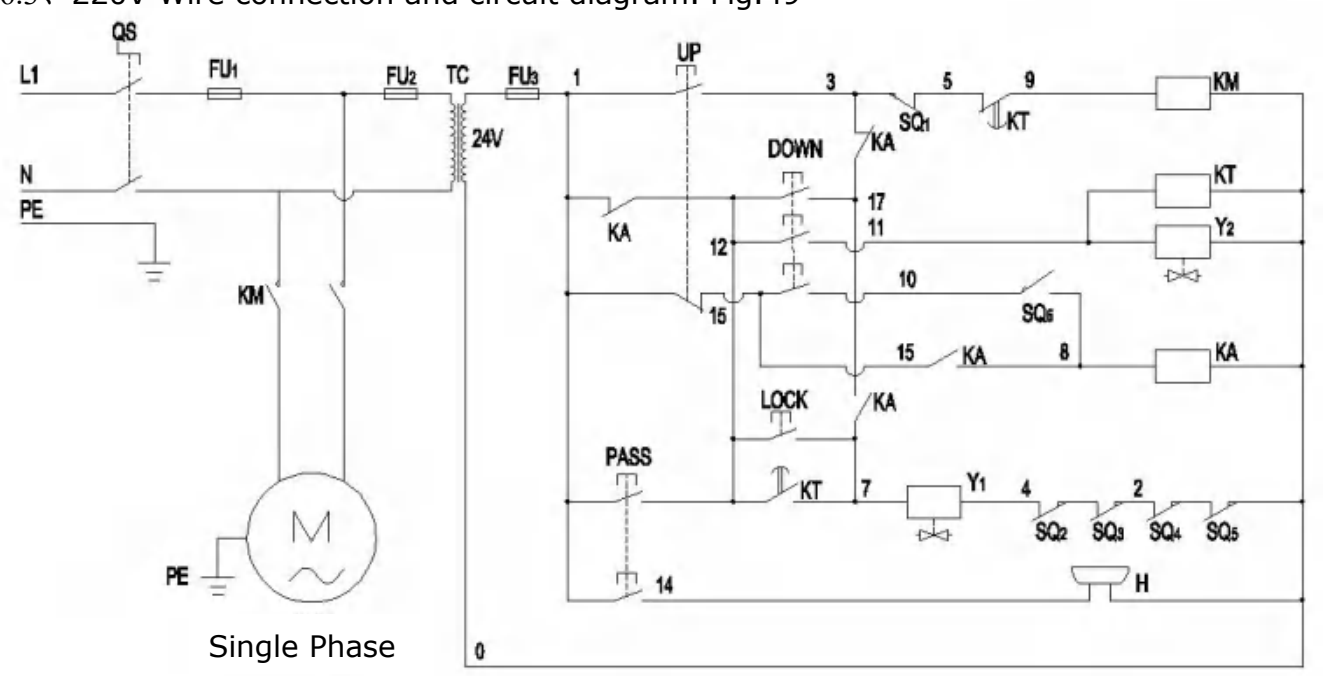



**Fig. 48**

6.3、220V Wire connection and circuit diagram. Fig.49




Single Phase

**Fig. 49**

**Circuit component**

| Item | Name | Code | Specification | | Item | Name | Code | Specification |
|---|---|---|---|---|---|---|---|---|
| 1 | Power switch | QS | 220V AC | | 10 | Push button | UP | Duplex |
| 2 | Breaker | $FU_1$ | 2P | | 11 | Push button | Down | Triplex |
| 3 | Breaker | $FU_2$ | 1P | | | Push button | PASS | Duplex |
| 4 | Breaker | $FU_3$ | 1P | | 12 | Push button | LOCK | Single |
| 5 | AC contactor | KM | 24V AC | | 13 | Motor | M | Single phase |
| 6 | Time relay | KT | 24V AC | | 14 | Transformer | TC | 24V AC |
| 7 | Limit switch | $SQ_{(1\sim6)}$ | 10A | | 15 | Intermediate relay | KA | 24V AC |
| 8 | Air solenoid valve | Y2 | 24V AC | | 16 | Alarm | H | 24V AC |
| 9 | Hydraulic solenoid valve | Y1 | 24V AC | | | | | |

## O. Install spring and safety cover of cross beam (See Fig. 50)

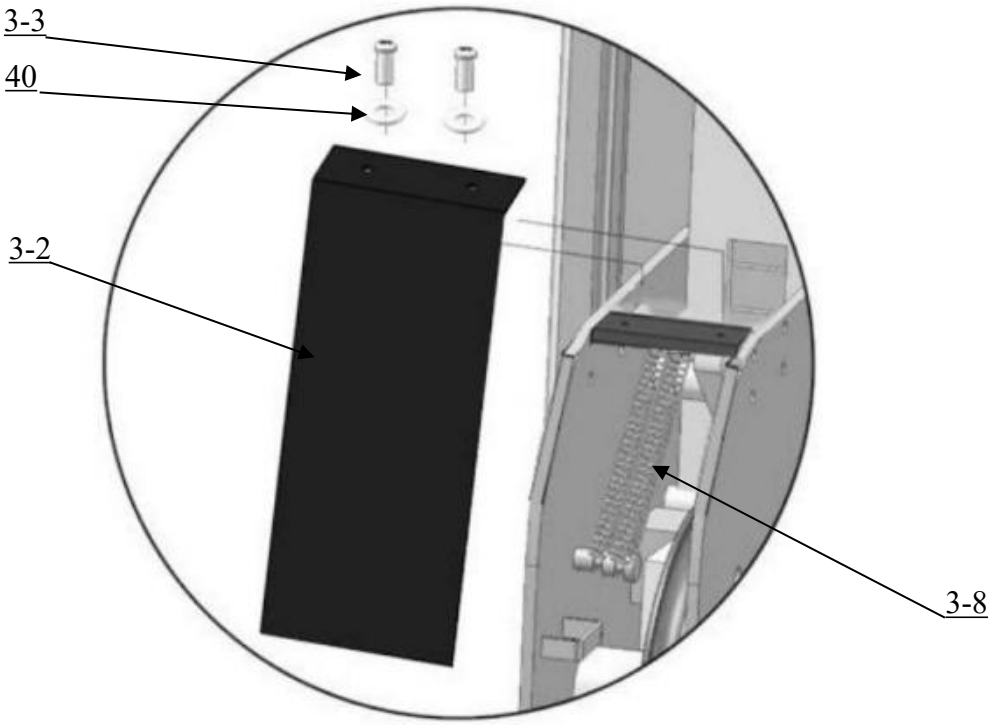



**Fig. 50**

## P. Install Drive-in ramp, Tire stop plate. (See Fig. 51, Fig.52)

Install Drive-in ramp

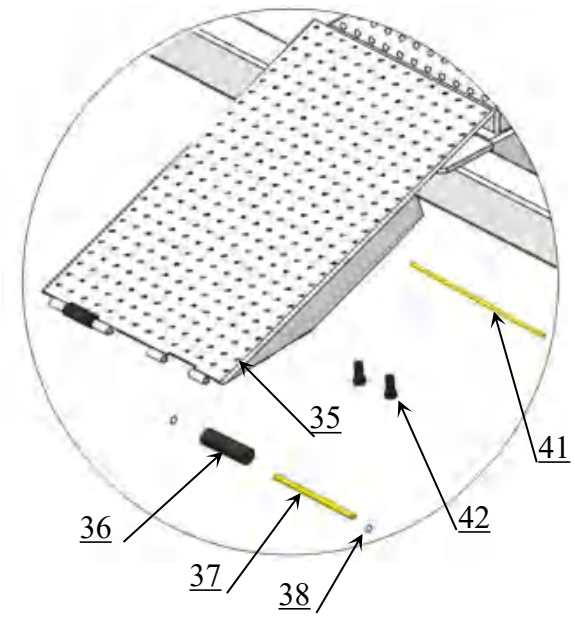



**Fig.51**

Install Tire stop plate

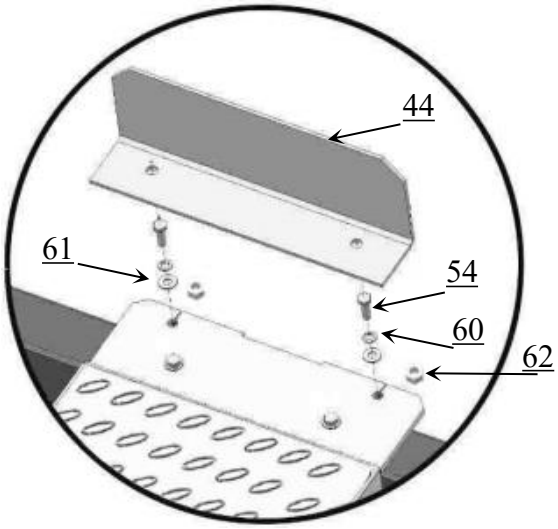



**Fig. 52**

**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.53, Fig 54**)

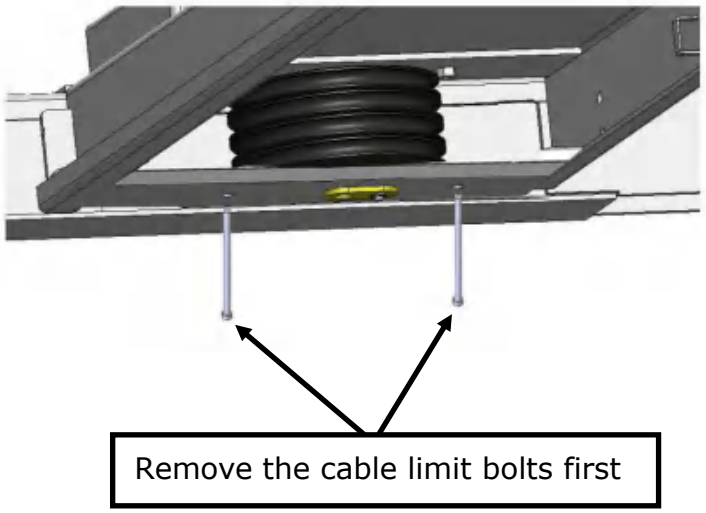



**Fig.53**

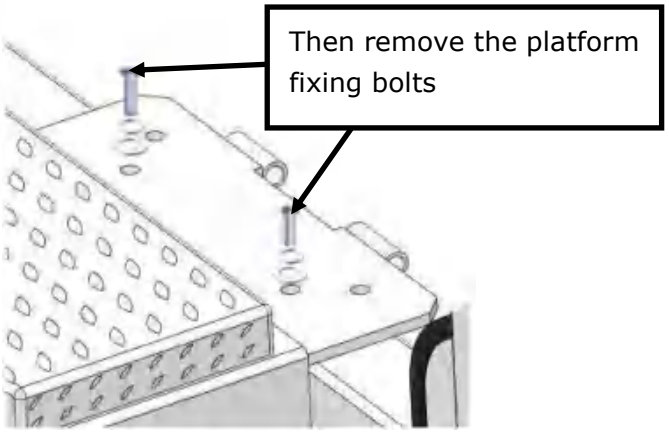



**Fig.54**

2.Put the extension kits into the platform, then tighten with the bolts. (**see Fig.55, Fig.56**)

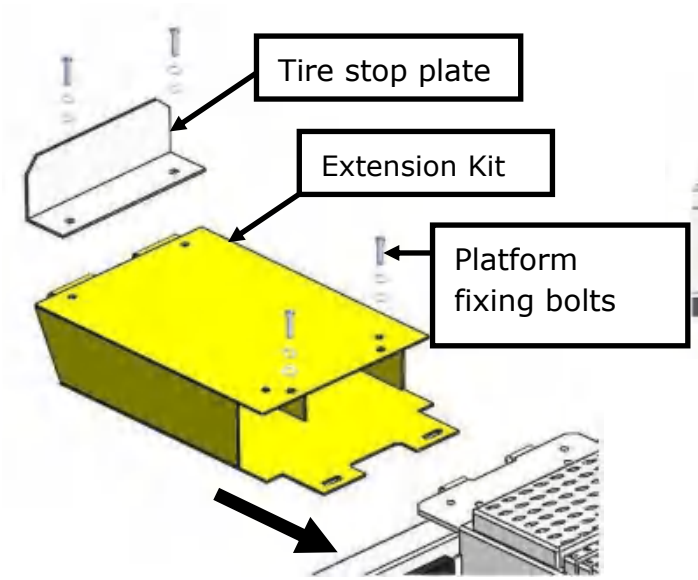



**Fig.55**

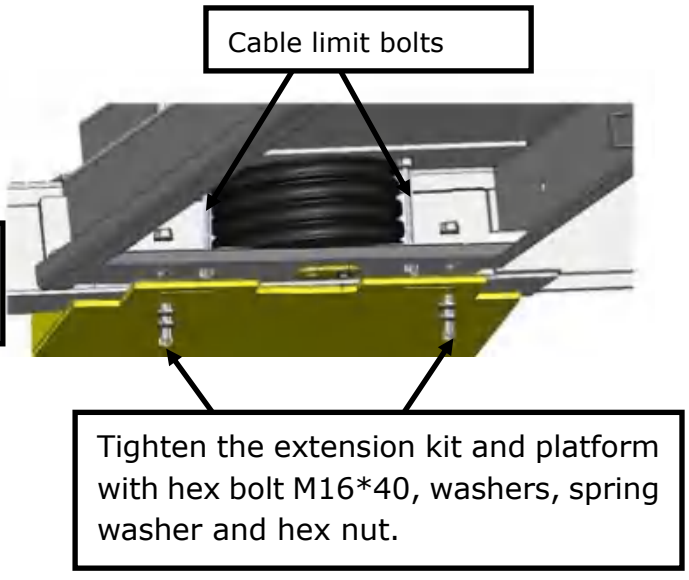



**Fig.56**

| Item. | Part# | Description | Quantity | Available for |
|---|---|---|---|---|
| 1 | 1043001 | Extension Kit | 1set (2pcs) | 430 |

## IV. EXPLODED VIEW

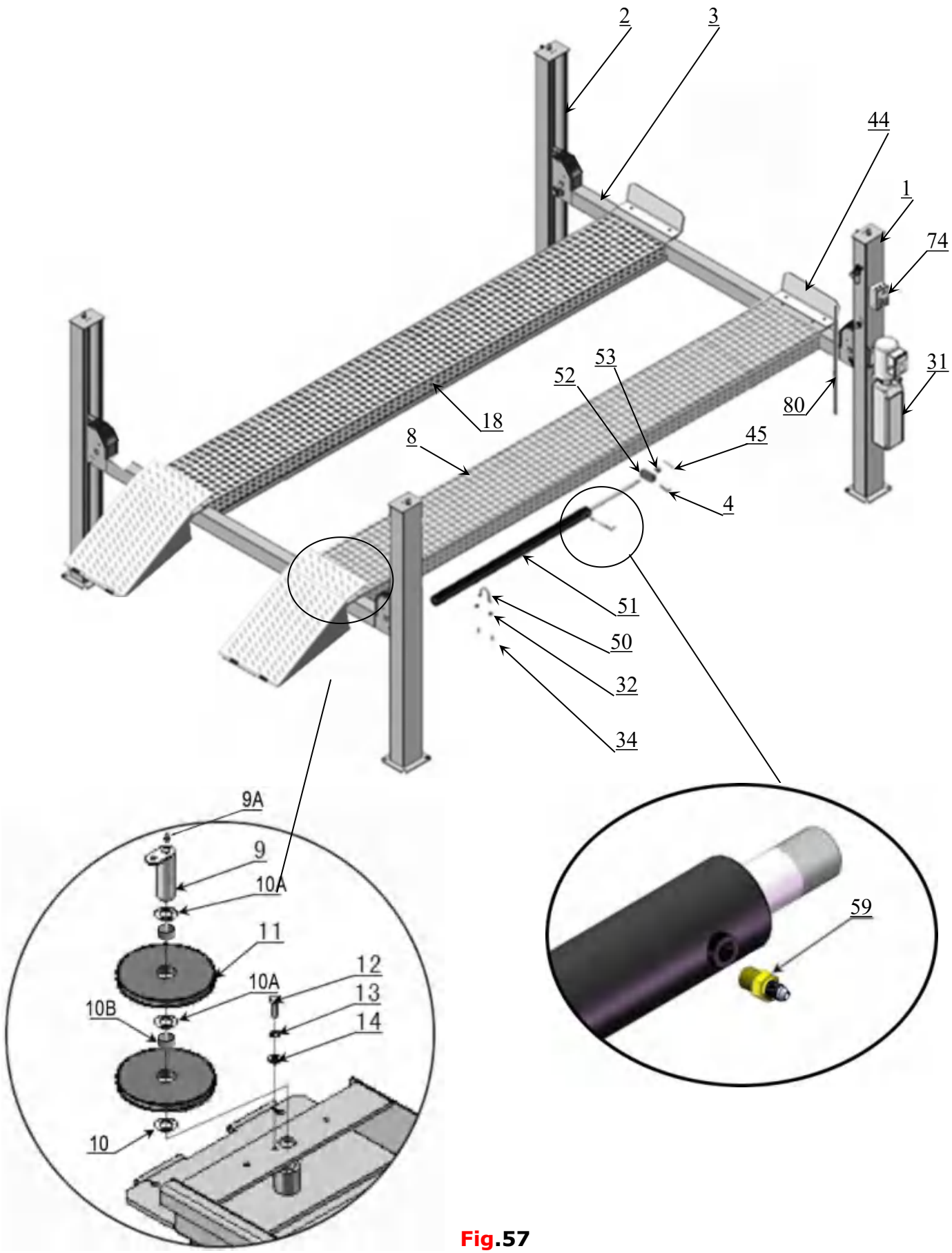



**Fig.57**

## Parts list

| Item | Part# | Description | 430 | 430E |
|---|---|---|---|---|
| 1 | 1104481002 | Power-side Column | 1 | 1 |
| 2 | 11481641 | Off-side Column | 3 | 3 |
| 3 | 10481086 | Cross Beam | 2 | 2 |
| 4 | 10481023 | Slider block | 1 | 1 |
| 5 | 10201140 | Anchor Bolt | 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 | 1104483001A | Pulley shaft | 1 | 1 |
| | 1104483002A | | 1 | 1 |
| 9A | 10620064 | Greasing Fitting M6 | 6 | 6 |
| 10 | 10481069 | Pulley washer φ115*φ76*2.5 | 10 | 10 |
| 10A | 10481021-01 | Pulley shim φ120*φ76*8 | 4 | 4 |
| 10B | 10481025 | Bronze bush φ85*φ75*8 | 10 | 10 |
| 10C | 11481617 | Pulley φ204*32 | 4 | 4 |
| 11 | 11481639 | Pulley φ310*32 | 6 | 6 |
| 12 | 10206017 | Hex bolt M10*20 | 2 | 2 |
| 13 | 10209039 | Lock Washer φ10 | 2 | 2 |
| 14 | 10209022 | φ10*1.5 Washer | 2 | 2 |
| 15 | 10481078 | Hex bolt M24*60 | 8 | 8 |
| 16 | 10481002 | Lock Washer φ24 | 8 | 8 |
| 17 | 10481003 | Washer φ24 | 8 | 8 |
| 18 | 11481042 | Offside platform | 1 | 0 |
| | 11481068 | | 0 | 1 |
| 19 | 10481017 | Socket bolt M12*200 | 4 | 4 |
| 20 | 10420145 | Oil-water separator | 1 | 1 |
| 21 | 10420146 | Straight fitting for air line | 1 | 1 |
| 22 | 10209009 | Cup head bolt M6*8 | 14 | 14 |
| 23 | 10420076 | $90^0$ fitting for air line | 1 | 1 |
| 24 | 10201034 | Muffler | 1 | 1 |
| 25 | 10420147 | Straight fitting | 1 | 1 |
| 26 | 10420077 | Air solenoid valve | 1 | 1 |
| 27 | 10420148 | Washer φ4 | 2 | 2 |
| 28 | 10420149 | Cup head bolt | 2 | 2 |
| 29 | 11420150 | Cover of solenoid valve | 1 | 1 |
| 30 | 10420045 | Washer φ6 | 28 | 28 |
| 31 | 81523049 | Electric power unit 220V/50Hz | 1or1 | 1or1 |
| | 81523050 | Electric power unit 380V/50Hz | | |
| 32 | 10209005 | Self locking nut M8 | 14 | 14 |
| 33 | 10420281 | Control box (single phase) | 1or1 | 1or1 |
| | 10420016 | Control box (three phase) | | |
| 34 | 10209003 | Hex Bolt M8*25 | 6 | 6 |
| 35 | 11481044 | Drive-in ramp | 2 | 2 |
| 36 | 11610667 | Drive-in ramp roller | 4 | 4 |
| 37 | 11620043 | Drive-in ramp pulley pin | 4 | 4 |

| Item | Part# | Description | 430 | 430E |
|---|---|---|---|---|
| 38 | 10209010 | φ10 Snap ring | 12 | 12 |
| 39 | 10420156 | Protecting ring φ24 | 1 | 1 |
| 40 | 10420045 | φ6 Washer | 12 | 12 |
| 41 | 11481016 | Pin for Drive-in ramp | 2 | 2 |
| 42 | 10420005 | Socket fixing bolt | 4 | 4 |
| 43 | 10481500 | Parts box | 1 | 1 |
| 44 | 11481638 | Tire stop plate | 2 | 2 |
| 45 | 10481020 | Split pin φ5*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 | Wire protective pipe φ40*2*1500mm | 1 | 1 |
| 50 | 11481034 | Fixed ring for cylinder | 1 | 1 |
| 51 | 10481045 | Cylinder φ120*1650 | 1 | 1 |
| 52 | 11481673 | Cylinder connecting plate | 1 | 0 |
| | 11481084 | | 0 | 1 |
| 53 | 10481019 | Hex nut M39*4 | 1 | 1 |
| 54 | 10481077 | Hex bolt M20*60 | 4 | 4 |
| 55 | 10481007-01 | ① Cable φ19*5135mm | 1 | 0 |
| | 10481079-01 | ① Cable φ19*4865mm | 0 | 1 |
| 56 | 10481010-01 | ② Cable φ19*13325mm | 1 | 0 |
| | 10481082-01 | ② Cable φ19*14550mm | 0 | 1 |
| 57 | 10481008-01 | ③ Cable φ19*7135mm | 1 | 0 |
| | 10481080-01 | ③ Cable φ19*6860mm | 0 | 1 |
| 58 | 10481009-01 | ④ Cable φ19*11350mm | 1 | 0 |
| | 10481081-01 | ④ Cable φ19*12550mm | 0 | 1 |
| 59 | 10420119 | Straight fitting 1/4JIC(M)*3/8NPT(M) | 1 | 1 |
| 60 | 10201114 | Lock washer φ20 | 4 | 4 |
| 61 | 10209128 | Washer φ20 | 4 | 4 |
| 62 | 10420175A | Hex nut M20 | 4 | 4 |
| 63 | 10420166 | $90^0$ Fitting | 1 | 1 |
| 64 | 10481013 | Oil Return pipe (black) φ6*φ4*7300mm | 1 | 0 |
| | 10481066-01 | Oil Return pipe (black)φ6*φ4*7025mm | 0 | 1 |
| 65 | 85090120 | Y- FITTING for Air Line | 3 | 3 |
| 66 | 10481013 | Air Line φ6*φ8*10000mm (black) | 1 | 0 |
| | 10481065 | Air Line φ6*φ8*11600mm(black) | 0 | 1 |
| 67 | 10420167B | φ8*φ6*220mm black air line | 1 | 1 |
| 68 | 10481012-03 | Oil hose 5/16”*3735mm | 1 | 0 |
| | 1048108301-02 | Oil hose 5/16”*3435mm | 0 | 1 |
| 69 | 10420120 | Extended straight fitting with nut 1/4”JIC(M)*1/4”JIC(M) | 1 | 1 |
| 70 | 10160038 | Oil Hose 5/16”*1500mm | 1 | 1 |
| 71 | 10209060 | $90^0$ Fitting for power unit 3/8”SAEO/R(M)*1/4”JIC(M) | 1 | 1 |
| 72 | 10420151 | Straight fitting | 1 | 1 |
| 73 | 10420018 | Self locking nut M6 | 6 | 6 |

| Item | Part# | Description | 430 | 430E |
|---|---|---|---|---|
| 74 | 10209004 | Rubber ring φ8*20*3 | 4 | 4 |
| 75 | 10420153 | Cup head bolt M6*20 | 9 | 9 |
| 76 | 10420016B | Pipe φ40*2*1500mm | 1 | 1 |
| 77 | 10420152 | Washerφ5 | 18 | 18 |
| 78 | 10206011 | Cup head bolt M5*12 | 18 | 18 |
| 79 | 1004481010 | High limit switch assy.(L=1400mm wire) | 1 | 1 |
| 80 | 11420204 | Protective Cover | 1 | 1 |
| 81 | 1004481007 | Low limit switch assy.(L=2250mm wire) | 1 | 1 |
| 82 | 10420009A | Pipe φ10*1*750mm | 1 | 1 |
| 82A | 10420009B | Pipe φ10*1*220mm | 1 | 1 |
| 83 | 10420468 | Pipe φ10*2000mm | 1 | 1 |
| 84 | 10420016A | Wire 4*2.5²*800mm | 1 | 1 |
| 85 | 11420010A | Limit switch fixing plate | 1 | 1 |
| 86 | 11420203 | Limit switch fixing block | 1 | 1 |
| 87 | 10420009B | Pipe φ10*1*220mm | 1 | 1 |
| 88 | 1004481003 | Wire B assy.(L=9340mm ) | 1 | 0 |
| | 1004491001 | Wire B assy.(L=10840mm ) | 0 | 1 |
| 89 | 1004481002 | Wire A assy.(L=3570mm ) | 1 | 1 |
| 90 | 1104354001 | Plate for cable fitting φ54*20 | 4 | 4 |

## 4.1 Crossbeam (11481086) Exploded View

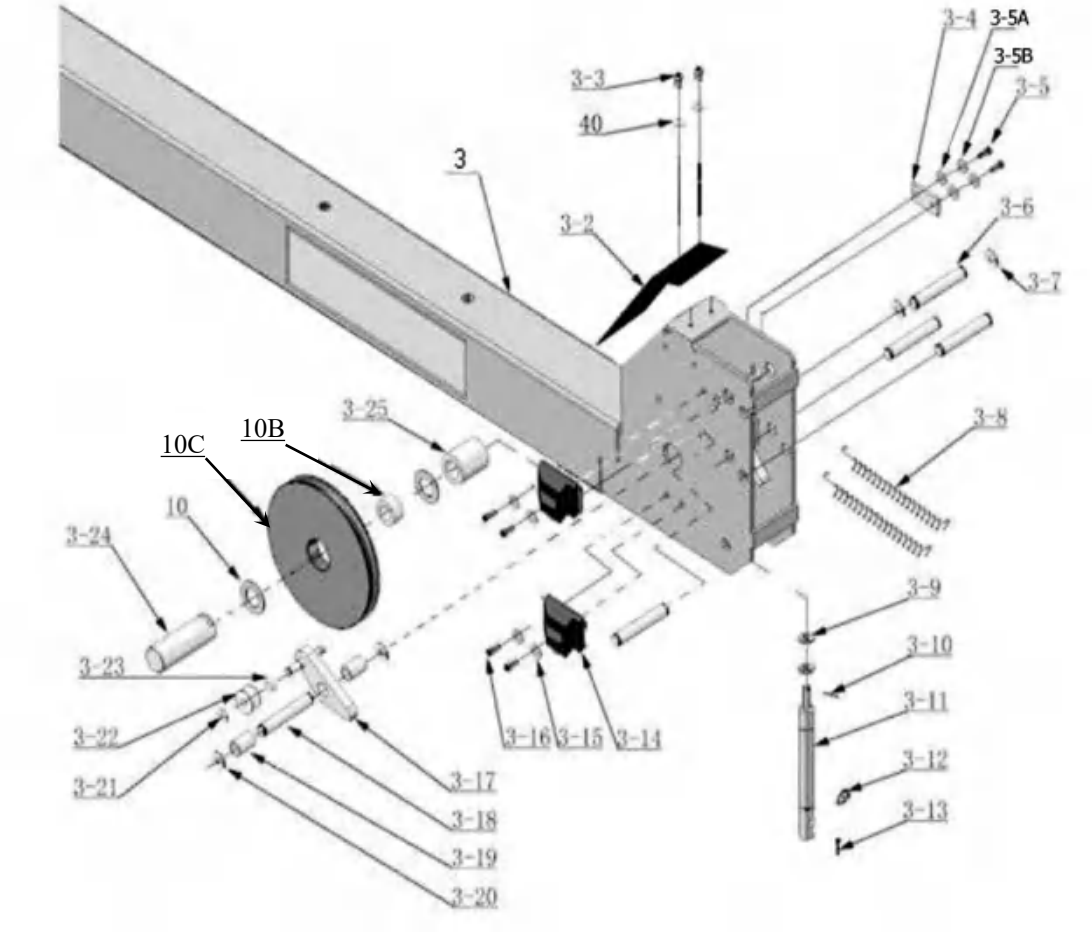
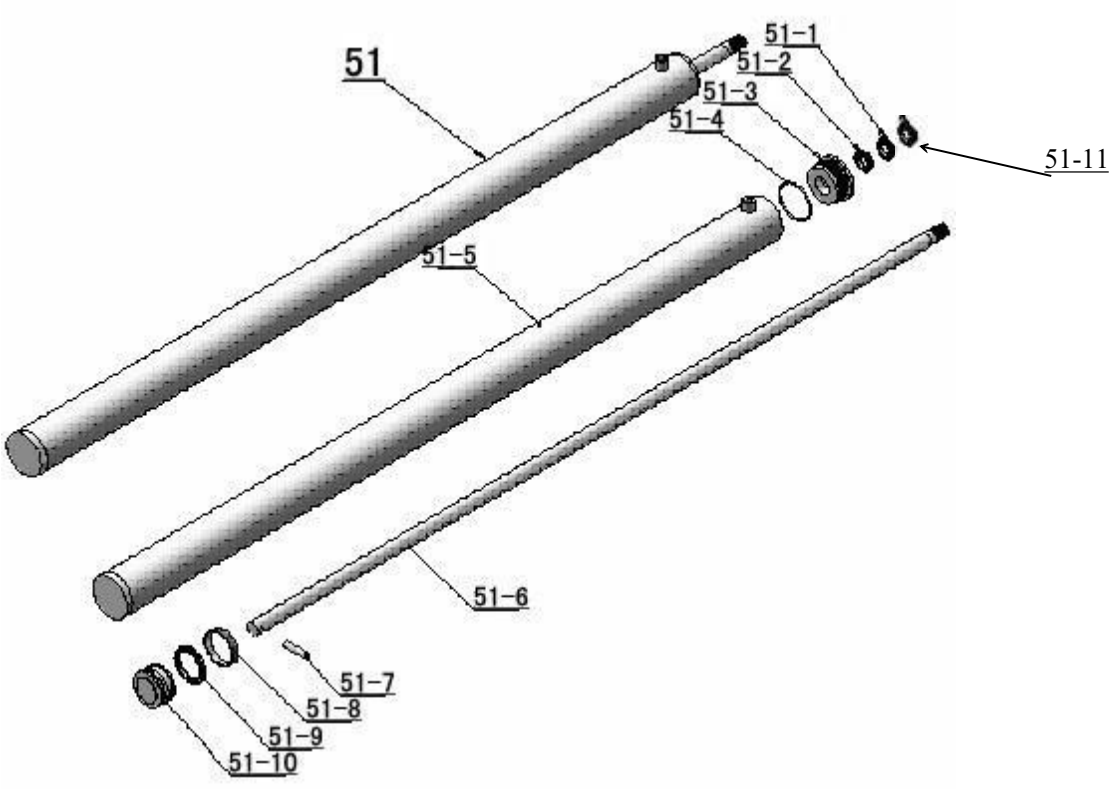



**Fig.58**

| Item | Part# | Description | QTY |
|---|---|---|---|
| 3-1 | 11481086 | Cross Beam | 2 |
| 3-2 | 11481618 | Cross Beam Cover | 4 |
| 3-3 | 10209009 | Cup 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 | Lock washer φ12 | 8 |
| 3-5B | 10206006 | Washer φ12 | 8 |
| 3-6 | 11481029 | Pin φ16*148 | 12 |
| 3.7 | 10420037 | Snap ring φ16 | 24 |
| 3-8 | 10420033 | Spring 14*1.8*100 | 8 |
| 3-9 | 10209021 | Hex Nut M10 | 8 |
| 3-10 | 10420049 | Split Pin φ2*16 | 4 |
| 3-11 | 10400020 | Air Cylinder Φ20*35 | 4 |
| 3-12 | 10481073 | Fitting for Air Cylinder | 4 |
| 3-13 | 10420046 | Split Pin φ4*30 | 4 |
| 3-14 | 10481070 | Slider（HK018）85*42*35 | 16 |
| 3-15 | 10209033 | φ8 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*148 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*154 | 4 |
| 3-25 | 11481031 | Pulley Bush | 4 |

## 4.2 Cylinder (10481045) Exploded View




| Item | Part# | Description | QTY |
|---|---|---|---|
| 51-1 | 10209078A | Dust Ring Φ40*Φ48*(5～6.5) | 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 CONTROL BOX

**Part No.: 10420016 Three Phase**

**10420281 Single Phase**

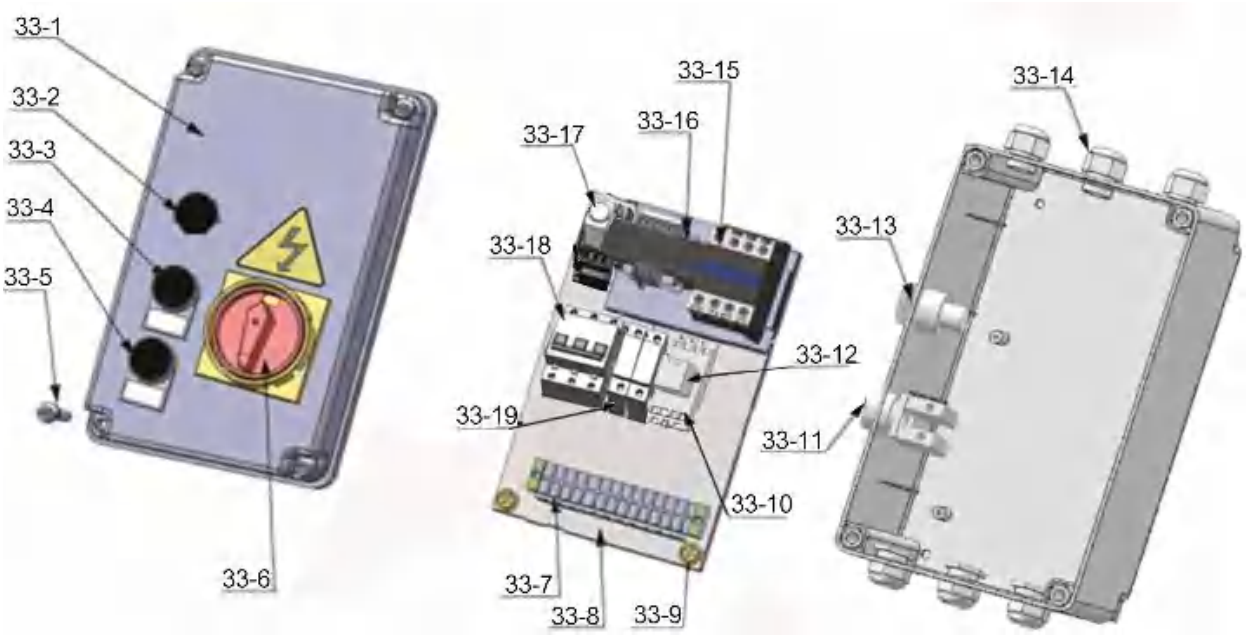
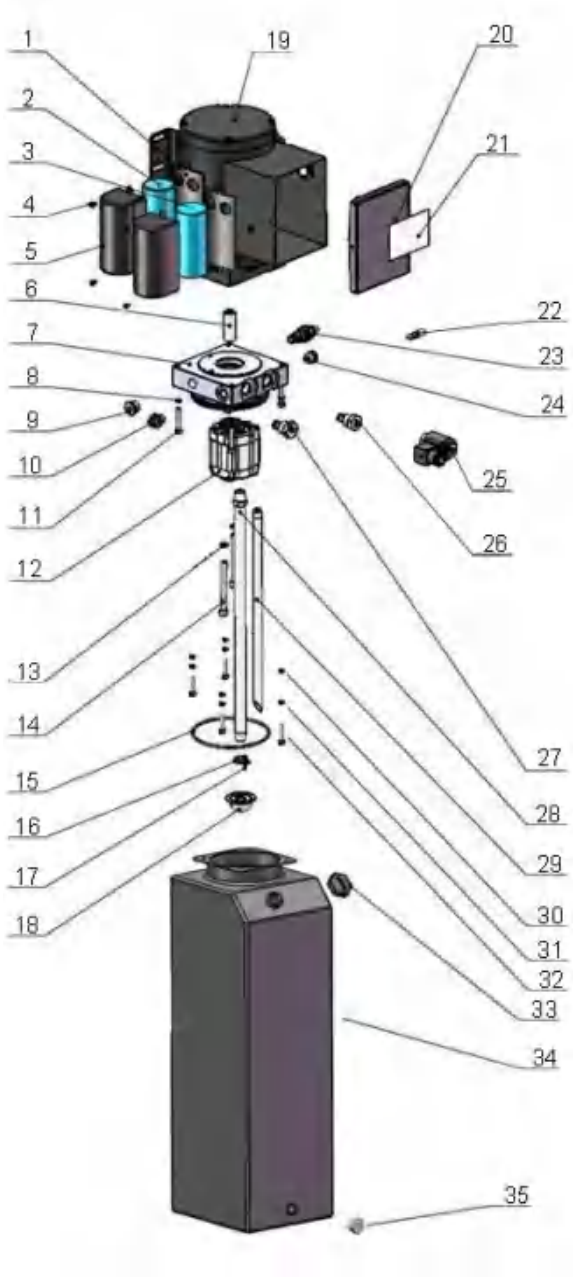



**Fig.60**

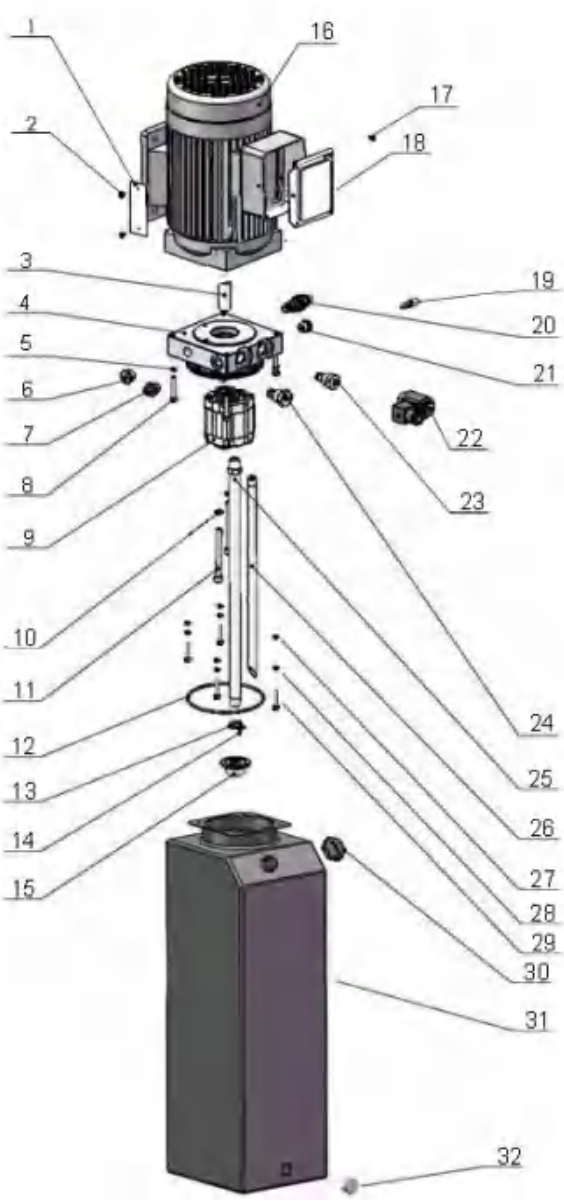
**Parts for Control Box**

| Item | Part# | Description | QTY. | Note |
|---|---|---|---|---|
| 33-1 | 10420069A | Cover of Control Box | 1 | |
| 33-2 | 10420071 | Push Button | 1 | |
| 33-3 | 10420070 | Push Button | 1 | |
| 33-4 | 10420072 | Push Button | 1 | |
| 33-5 | 10420139 | Screw | 4 | |
| 33-6 | 41010217 | Power Switch (QS1) | 1 | |
| 33-7 | 10420075A | Terminal Group | 1 | |
| 33-8 | 10420133A | Panel for Installing Element | 1 | |
| 33-9 | 10420073 | Cup Head Bolt | 4 | |
| 33-10 | 10420135 | Thermal Relay Connector | 2 | |
| 33-11 | 10420142 | Push Button | 1 | |
| 33-12 | 10420141 | Intermediate Relay (KA) | 1 | |
| 33-13 | 10420143 | Alarm Lamp | 1 | |
| 33-14 | 10420088 | Fitting for White Wire | 6 | |
| 33-15 | 10420084A | 24V AC Contactor (KM) | 1 | |
| 33-16 | 10580114 | Transformer (TC) | 1 | |
| 33-17 | 10420083 | Timer Relay (KT) | 1 | |
| 33-18 | 10202046 | Circuit Breaker 2P Only for Single phase | 1 | |
| | 10202047 | Circuit Breaker 2P Only for Three phase | 1 | |
| 33-19 | 10202049 | Circuit Breaker 2P | 2 | |

## 4.4 Power Unit (81523049/81523050) Exploded View




220V/50/60Hz
Electric Power Unit
Exploded View




380/415V 50Hz Electric
Power Unit
Exploded View

**Fig.61**

**Parts for Electric Power Unit 220V/50/60HZ**

| Item | Part# | Description | QTY |
|---|---|---|---|
| 1 | 81400180 | Rubber Gasket | 2 |
| 2 | 81400250 | Start Capacitor | 1 |
| 3 | 81400200 | Run Capacitor | 1 |
| 4 | 10420148 | Cup Head Bolt with Washer | 6 |
| 5 | 81400066 | Cover of Capacitor | 2 |
| 6 | 81400363 | Motor Connecting Shaft | 1 |
| 7 | 81400369 | Manifold Block | 1 |
| 8 | 10209149 | Lock Washer | 4 |
| 9 | 81400276 | Socket Iron Plug | 1 |
| 10 | 81400259 | Red Plastic Plug | 1 |
| 11 | 85090142 | Socket Bolt | 4 |
| 12 | 81400292 | Gear Pump | 1 |
| 13 | 10209034 | Lock 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 | 81400590 | Steel Motor | 1 |
| 20 | 81400528 | Cover of Motor Terminal Box | 1 |
| 21 | 71111242 | AMGO Name Plate | 1 |
| 22 | 81400560 | Throttle Valve | 1 |
| 23 | 81400266 | Relief Valve | 1 |
| 24 | 81400284 | Socket Iron Plug | 1 |
| 25 | 81400420 | Hydraulic Solenoid Valve Coil | 1 |
| 26 | 81400423 | Electric Release Valve | 1 |
| 27 | 81400267 | Check Valve | 1 |
| 28 | 81400589 | Oil Suction Pipe | 1 |
| 29 | 81400367 | Oil Return Pipe | 1 |
| 30 | 10420152 | Washer φ5 | 4 |
| 31 | 10209143 | Lock Washer φ5 | 4 |
| 32 | 81400438 | Hex Bolt | 4 |
| 33 | 81400263 | Oil tank Cap | 1 |
| 34 | 81400493 | Oil tank | 1 |
| 35 | 81400276 | Socket Iron Plug | 1 |

## Part lift for 380V/415V 50Hz Electric Power Unit

| Item | Part# | Description | QTY |
|---|---|---|---|
| 1 | 71150010 | AMGO Power Unit name plate | 1 |
| 2 | 81400300 | Cup Head Bolt | 2 |
| 3 | 81400363 | Motor Connecting Shaft | 1 |
| 4 | 81400369 | Manifold Block | 1 |
| 5 | 10209149 | Lock Washer | 4 |
| 6 | 81400276 | Socket Iron Plug | 1 |
| 7 | 81400259 | Red Plastic Plug | 1 |
| 8 | 85090142 | Socket Bolt | 4 |
| 9 | 81400292 | Gear Pump | 1 |
| 10 | 10209034 | Lock Washer | 2 |
| 11 | 81400295 | Socket Bolt | 2 |
| 12 | 81400365 | O ring | 1 |
| 13 | 10209152 | Ties | 1 |
| 14 | 85090167 | Magnet | 1 |
| 15 | 81400290 | Filter net | 1 |
| 16 | 81400309 | Aluminum Motor | 1 |
| 17 | 10420148 | Cup Head Bolts with Washer | 2 |
| 18 | 81400481 | Cover of Motor Terminal Box | 1 |
| 19 | 81400560 | Throttle Valve | 1 |
| 20 | 81400266 | Relief Valve | 1 |
| 21 | 81400284 | Socket Iron Plug | 1 |
| 22 | 81400420 | Solenoid valve coil | 1 |
| 23 | 81400423 | Electric Release Valve | 1 |
| 24 | 81400267 | Check Valve | 1 |
| 25 | 81400589 | Oil Suction Pipe | 1 |
| 26 | 81400367 | Oil Return Pipe | 1 |
| 27 | 10420152 | Washer φ5 | 4 |
| 28 | 10209143 | Lock Washer φ5 | 4 |
| 29 | 81400438 | Socket Bolt | 4 |
| 30 | 81400263 | Oil tank Cap | 1 |
| 31 | 81400563 | Oil tank | 1 |
| 32 | 81400276 | Socket Iron Plug | 1 |

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

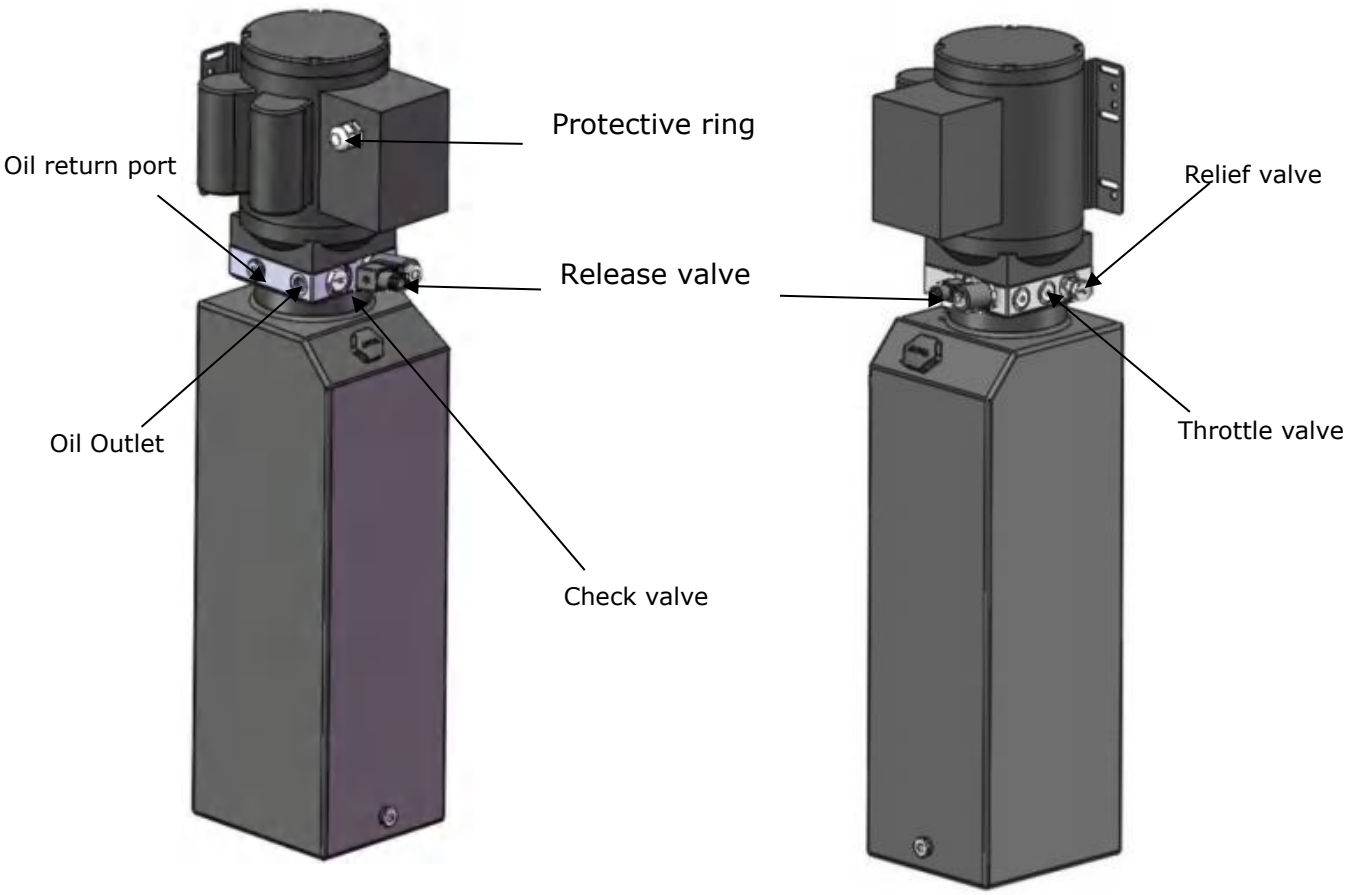


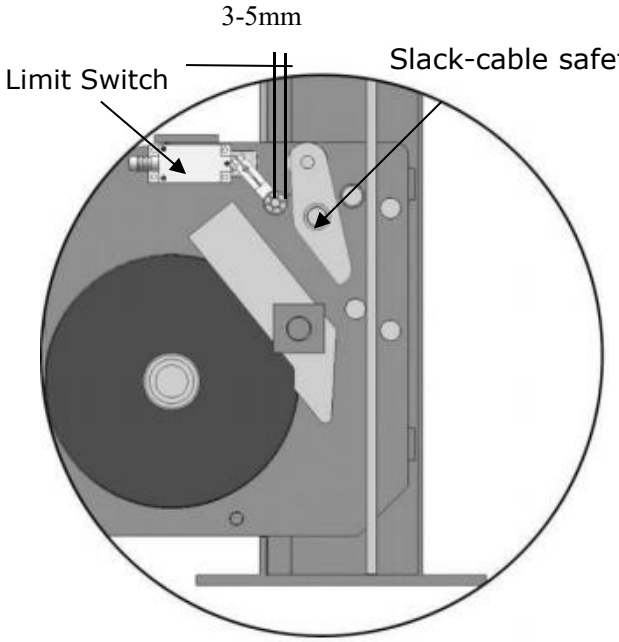

**Fig.62**

## V. TEST RUN

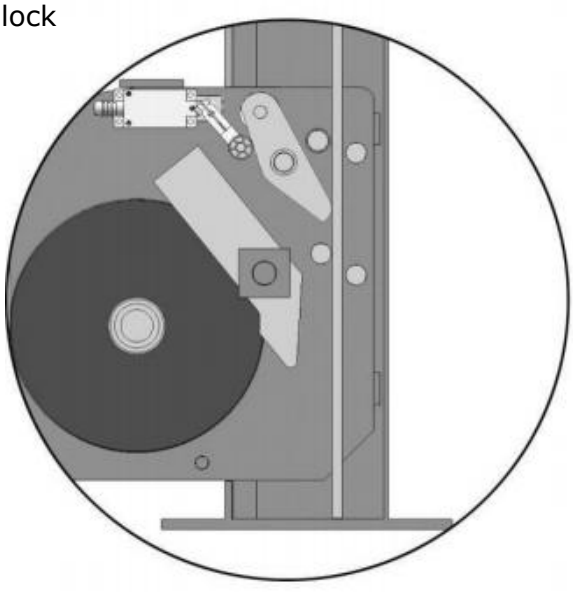
1. Fill the reservoir with approximately 26L Hydraulic Oil (**Note**: In consideration of Power Unit's durability，please use **Hydraulic Oil 46#**).
2. Push button UP ↑ the Cables will be strained. Check whether the Cables match the Pulley. Make sure the Cables are not across.
3. Push self-lock button Lock ↓, the Cross-beam will be locked to the safety ladders, and then adjust the platforms to be level by adjusting the nuts of Safety Ladders. After the leveler, the upper and lower nuts of the safety support shall be tightened.
4. Adjusting the tension of the cable by cable nuts. You need to run the lift up and down for several times, meanwhile do the synchronous adjustment till the four Safety Devices can lock and release at the same time. Do not forget to fasten the 2pcs cable nut.
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. Adjust Limit Switch on Cross Beam:

6.1 Push button UP ↑ the Cables will be strained. Check whether the distance between lever of Limit Switch on Cross Beam and the Slack-cable safety lock is 3-5mm. If not, please adjust the distance correctly **(See Fig. 63)**.

6.2 Push self-lock buttor Lock ↓ the cross beam will be locked to the safety ladders, and the cables are released. Check whether lever of Limit Switch on Cross Beam touch the Slack-cable safety lock and whether Limit Switch is open completely. If not be opened, then adjust the lever of limit switch till the Slack-cable safety lock can completely open the switch **(See Fig. 64)**.




**Tighten cable**
**Fig. 63**



**Release cable**
**Fig. 64**

7. After finishing the above adjustment, test running the lift with load. Run the lift with Platforms in low position first, make sure the Platforms can rise and lower synchronously and the Safety Device can lock and release synchronously. And then test run the lift to the top completely. If there are anything improper, repeat the above adjustment.

**Circuit Diagram of Hydraulic System**

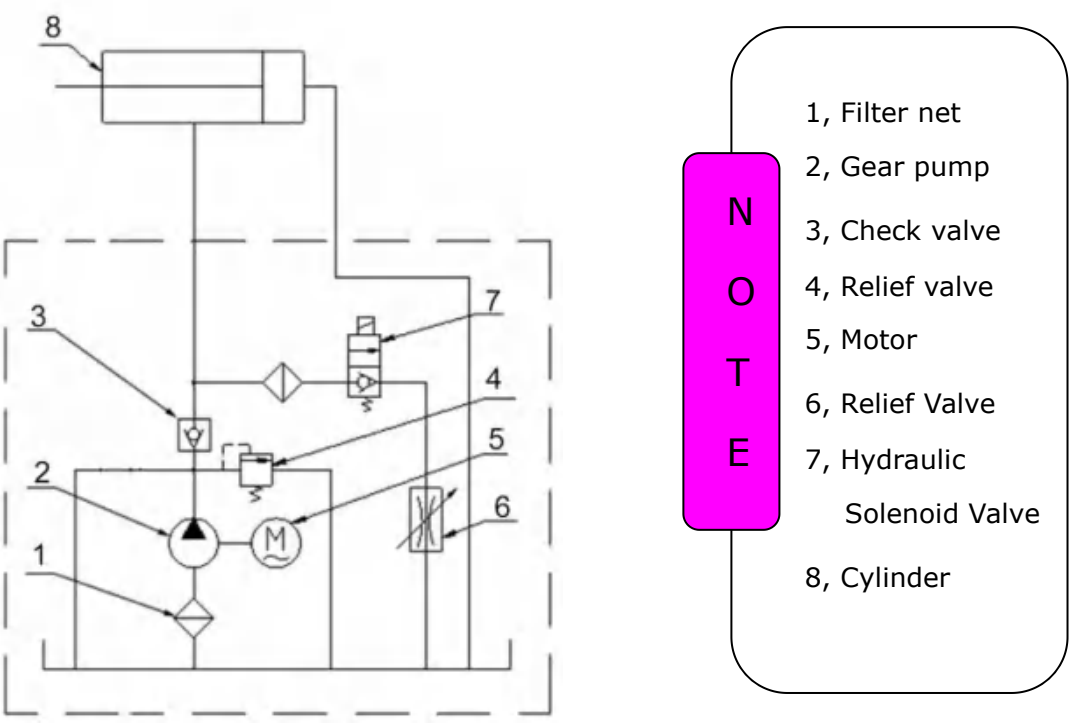



**Fig. 65**

## 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 push button **UP**, raise the lift to the working position;
   **Note: make sure the vehicle is steady when the lift is raised.**
4. Push button **LOCK**, 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. Push button **DOWN**, the lift will be raised for 3-5 seconds, and then the safety device would be released and the lift starts being lowered automatically. The lift will be stopped automatically when coming down about 300mm from ground, check around and make sure it is safety and no any obstacle under the lift, then push both **DOWN** buttons (frontal and beside) at the same time, the lift would be lowered with the tone alarm.
3. Drive away the vehicle when the lift is lowered to the lowest position.
4. Turn off the power.

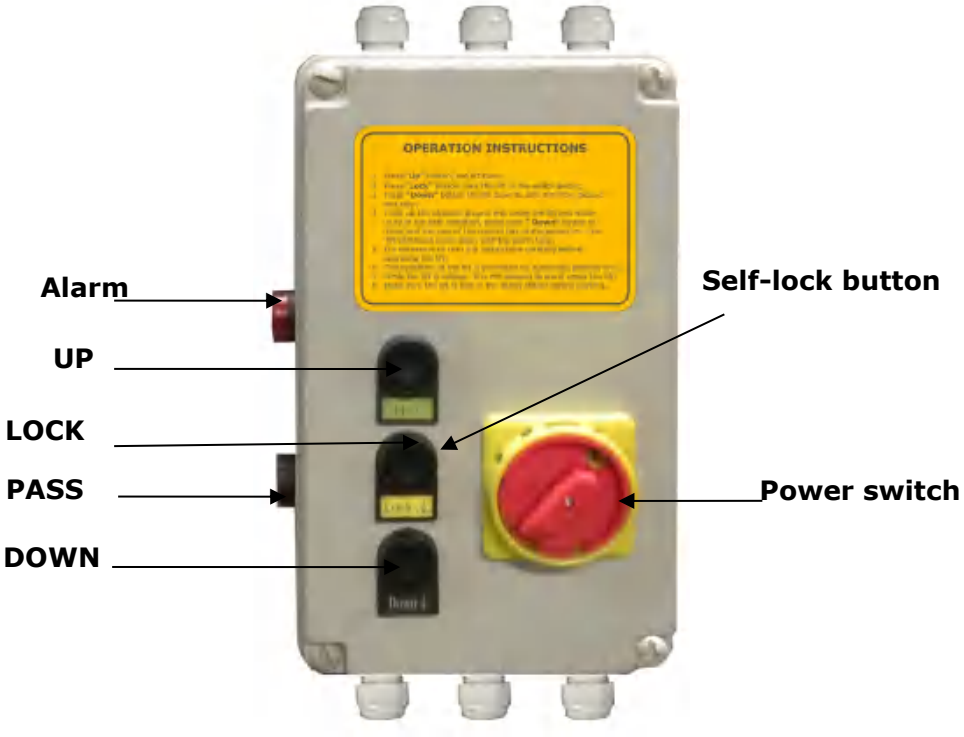



**Fig. 66**

## 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>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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