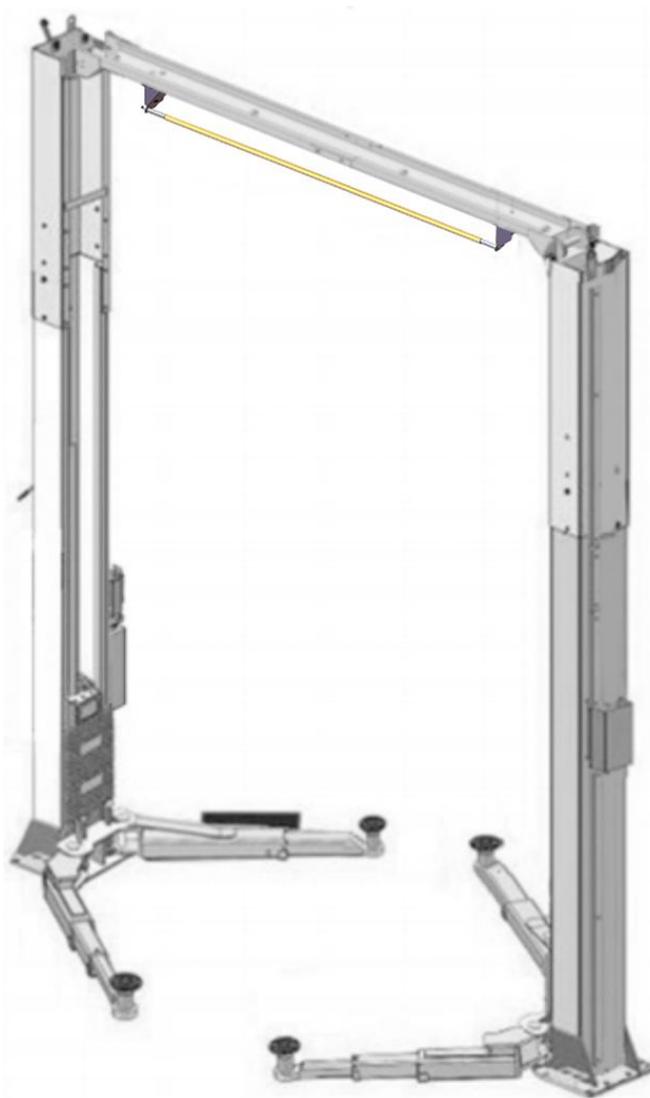


**AMGO**  <sup>®</sup> **Hydraulics**

## **Installation And Service Manual**

Original



**TWO POST LIFT**  
**Model: OH-9**

# CONTENTS

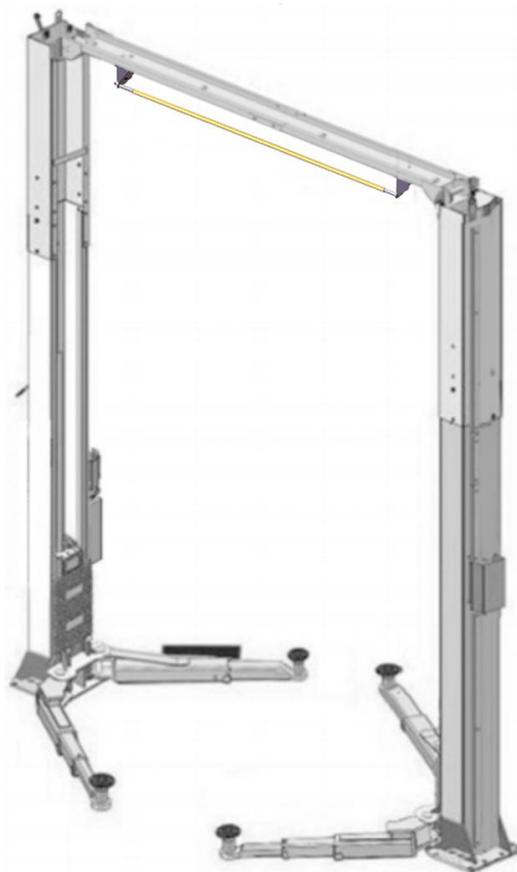
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# I. PRODUCT FEATURES AND SPECIFICATIONS

## CLEAR-FLOOR DIRECT-DRIVED MODEL FEATURES

### Model OH-9(H), OH-10(H) (See Fig. 1)

- Direct-driven design, minimize the lift spare parts and breakdown ratio
- Dual hydraulic cylinders, designed and made as standards, utilizing oil seal in cylinder
- Self-lubricating UHMW Polyethylene sliders and bronze bush
- Single-point safety release, and dual safety design
- Clear-floor design, provide unobstructed floor use
- Overhead safety shut-off device prevents vehicle damage
- Super-asymmetric arms design can fit extremely wide vehicles, stackable rubber pads
- Standard adjustable heights accommodate varying ceiling heights

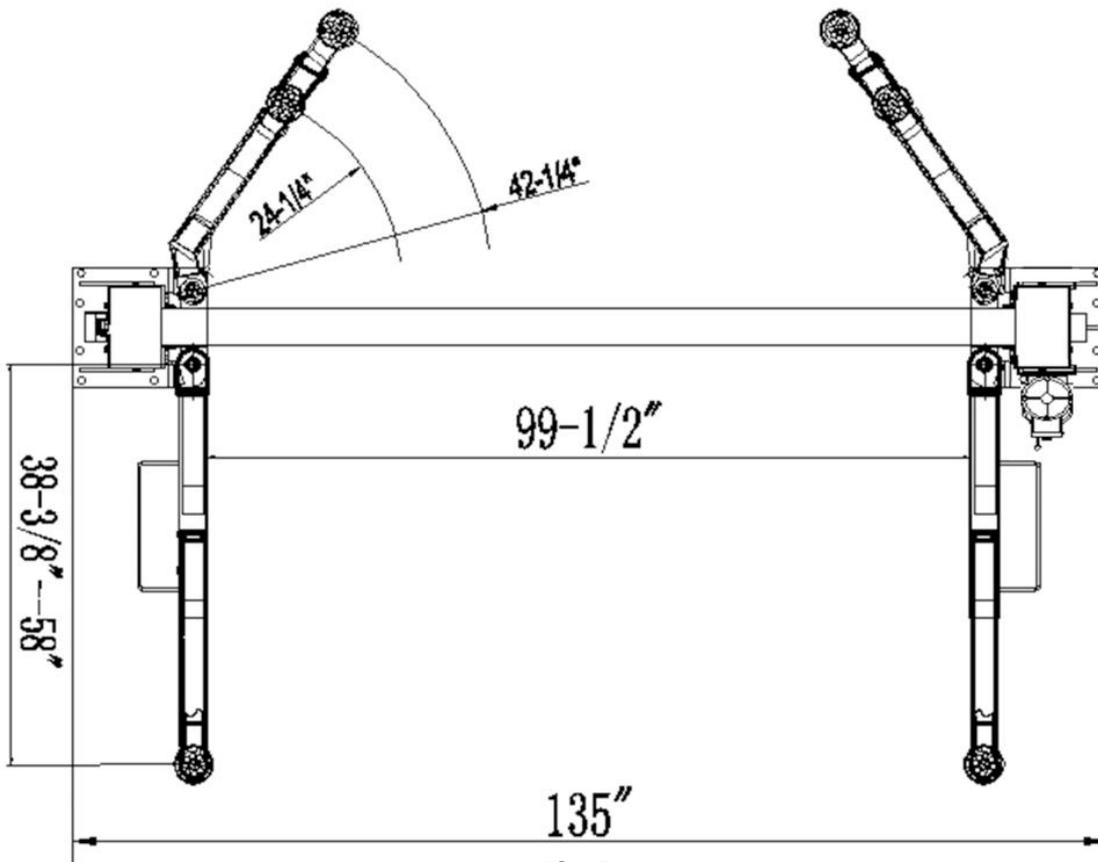


**Fig. 1**

## OH-9, OH-9H, OH-10, OH-10H SPECIFICATIONS

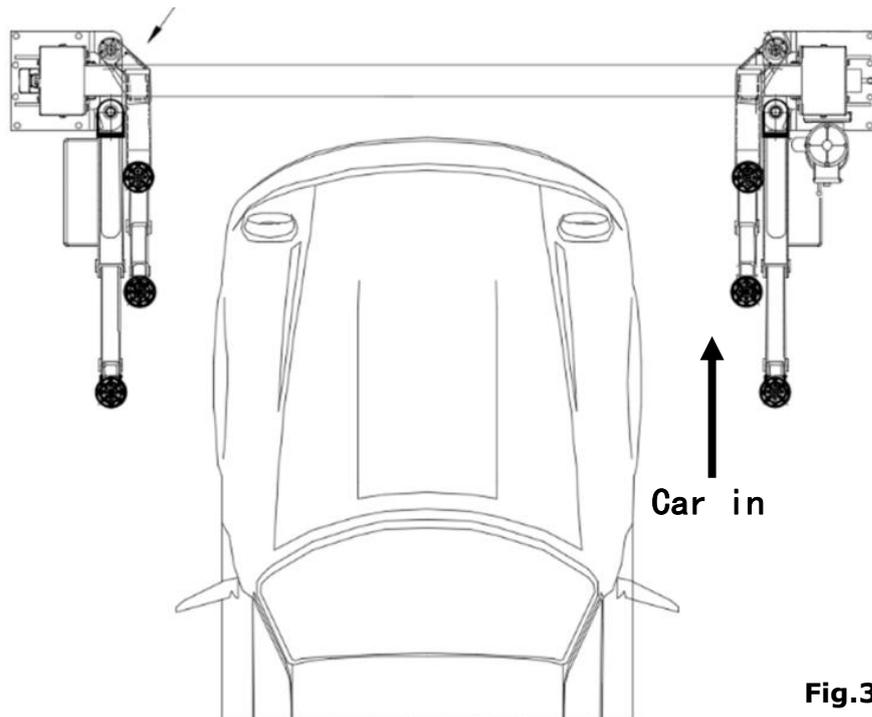
| Model | Style                        | Lifting Capacity | Lifting Time | Lifting Height          | Overall Height    | Overall Width | Width Between Columns | Minimum Pad Height | Motor  |
|-------|------------------------------|------------------|--------------|-------------------------|-------------------|---------------|-----------------------|--------------------|--------|
| OH-9  | Clear-floor<br>Direct-driven | 9,000 lbs        | 56S          | 71 1/2' ' -84<br>1/2' ' | 142-1/2"/150-1/2" | 135"          | 112 1/4"              | 3 1/2"-12 1/2"     | 2.0 HP |

**Arm Swings View  
For Model OH-9**



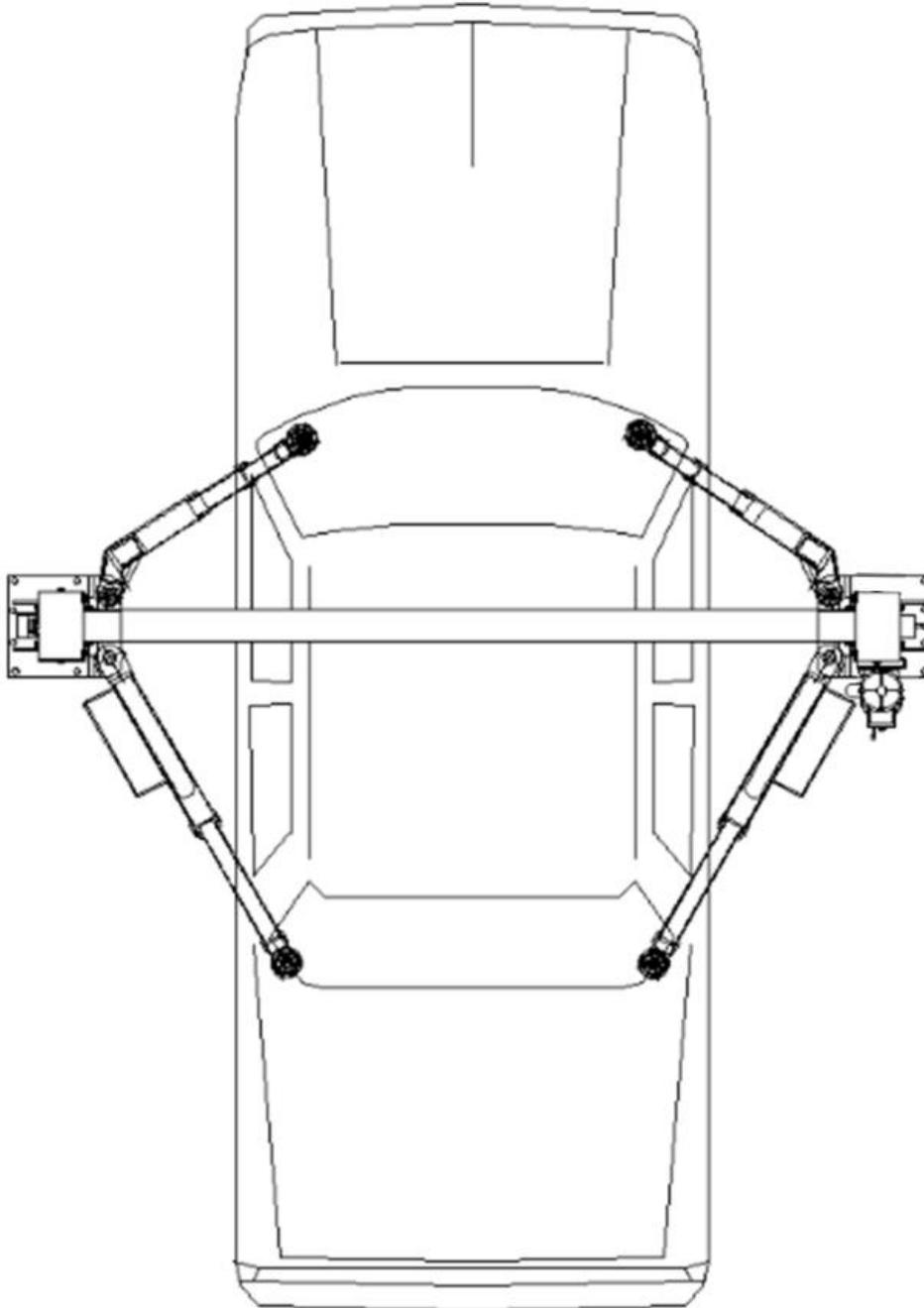
**Fig.2**

**Attention! Please make sure to place the arms in correct position before car drive in!**



**Fig.3**

Swing and **extending** the arms to the lifting point of vehicle



**Fig.4**

## II. INSTALLATION REQUIREMENT

### A. TOOLS REQUIRED

- ✓ Rotary Hammer Drill ( $\Phi 19$ )



- ✓ Hammer



- ✓ Level Bar



- ✓ English Spanner (12")



- ✓ Ratchet Spanner with Socket (28#)



↳

Wrench set

(8#, 10#, 13#, 14#, 17#, 19#, 24#)



- ✓ Carpenter's ink marker



- ✓ Screw Sets



- ✓ Tape Measure (7.5m)



- ✓ Pliers



- ✓ Socket Head Wrench (3#, 5#, 8#)



↳

Lock Wrench



Fig.5

**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.**



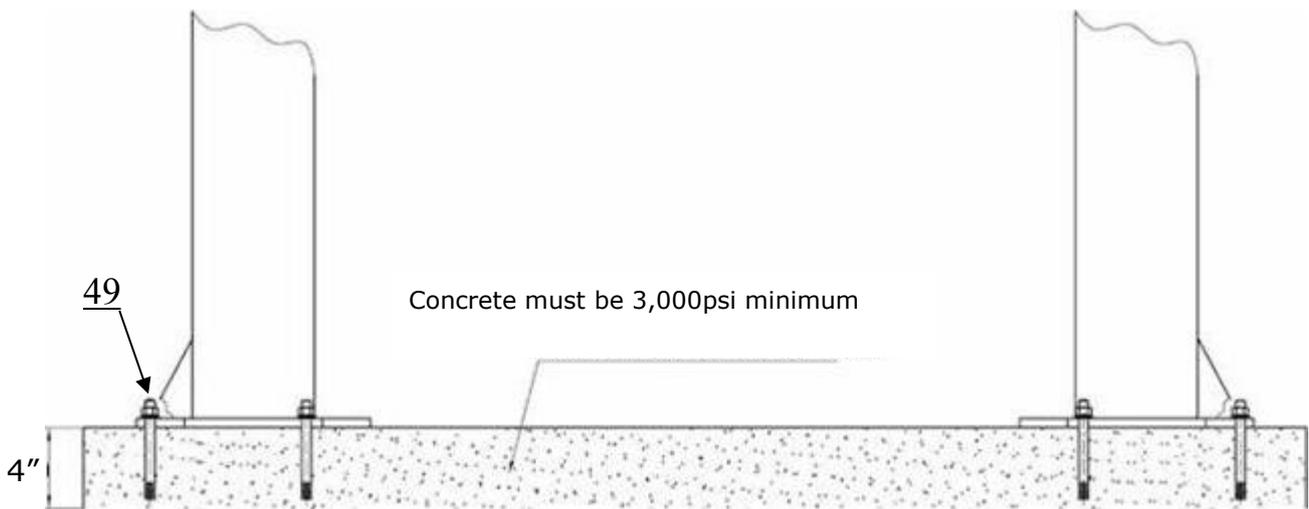
**Fig.6**

**D. SPECIFICATIONS OF CONCRETE (See Fig. 7)**

**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 3,000psi minimum.
3. Floors must be level and no cracks.



**Fig. 7**

**E. POWER SUPPLY**

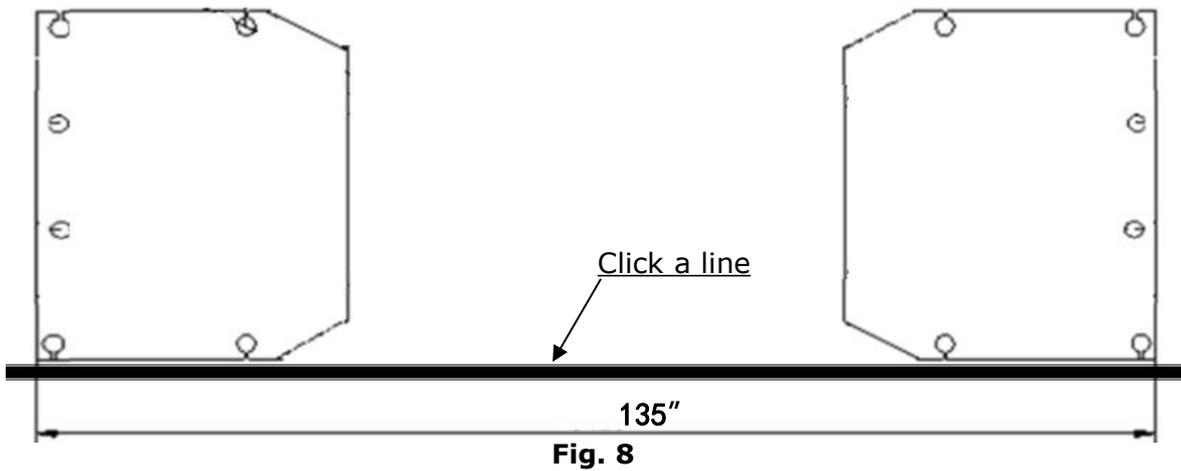
The electrical source must be 3.0HP minimum. The source cable size must be 2.5mm<sup>2</sup> and in good condition of contacting with floor.

### 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.** Use a carpenter's **ink marker** line to establish installation layout of base-plate (See Fig.8).

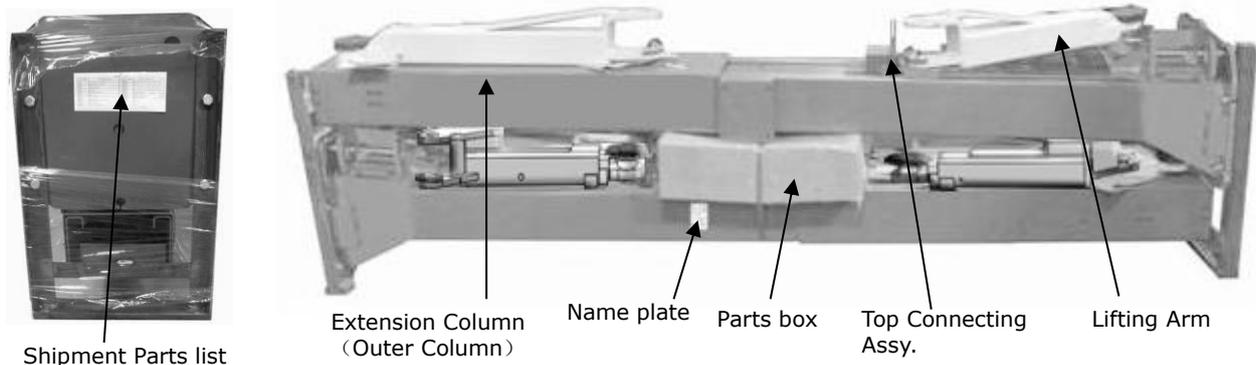


#### C. Check the parts before assembly.

1. Packaged lift and power unit (See Fig. 9).

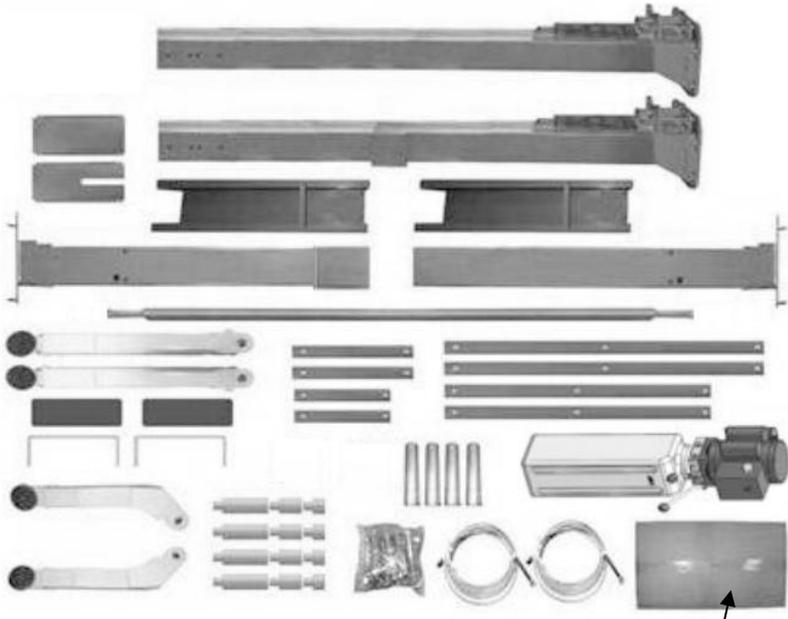


2. Move aside the lift with fork lift or hoist, and open the extension packing carefully, take off the lifting arms and parts box from upper and inside the column, then move them to location nearby installation site, check the parts according to the shipment parts list (See Fig.10).



3. Loosen the screws of the upper package stand, take off the upper extension columns, take out the parts in the inner column and remove the package stand.
4. Move aside the parts and check the parts according to the shipment parts list.

(See Fig.11, 12).



**Fig. 11**  
Parts in the shipment parts list



**Fig. 12**  
Parts in the parts box (50)

5. Open the bag 1 of parts and check the parts according to parts box list (See Fig. 13).



**Fig. 13**



6. Open the bag 2 of parts and check the parts according to parts bag list (See Fig. 14).

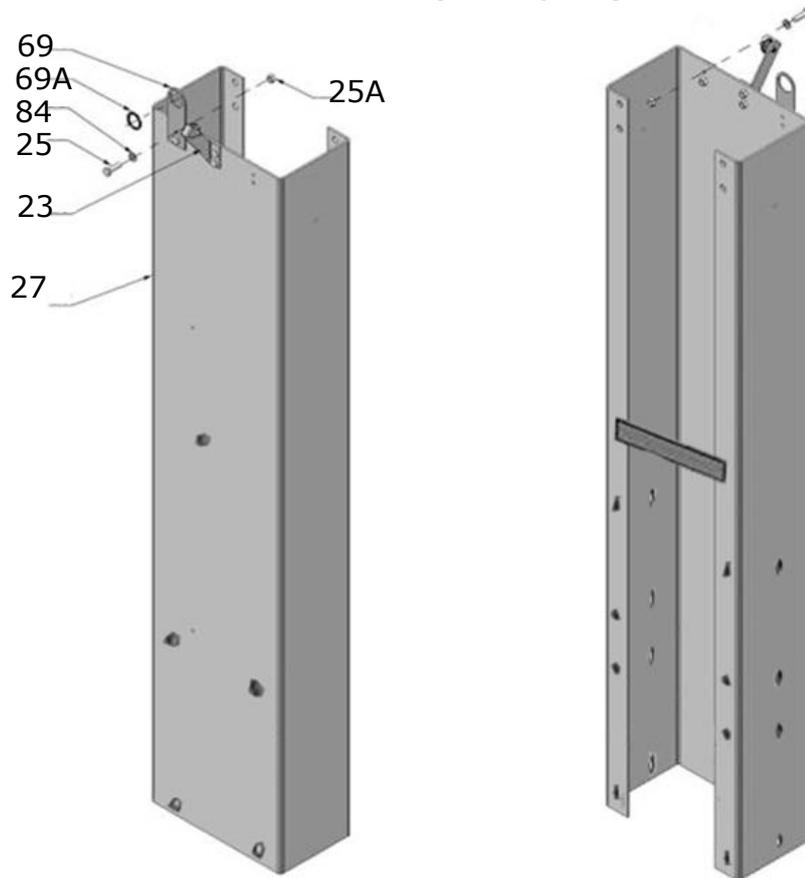


**OH-9/OH-9H**  
**OH-10/OH-10H**



**Fig. 14**

**D. Install parts of extension columns (See Fig. 15).**



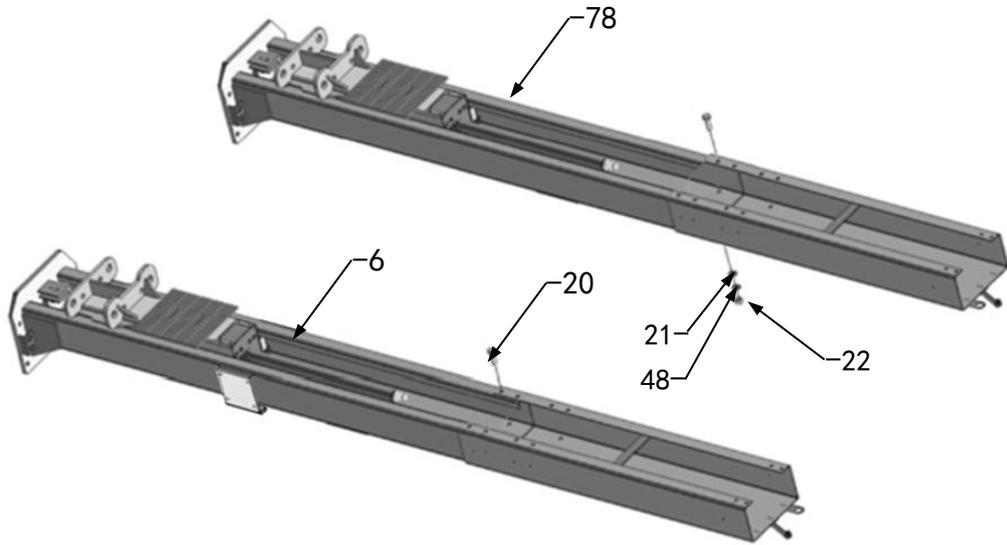
**Fig. 15**

**E. Position power-side column**

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

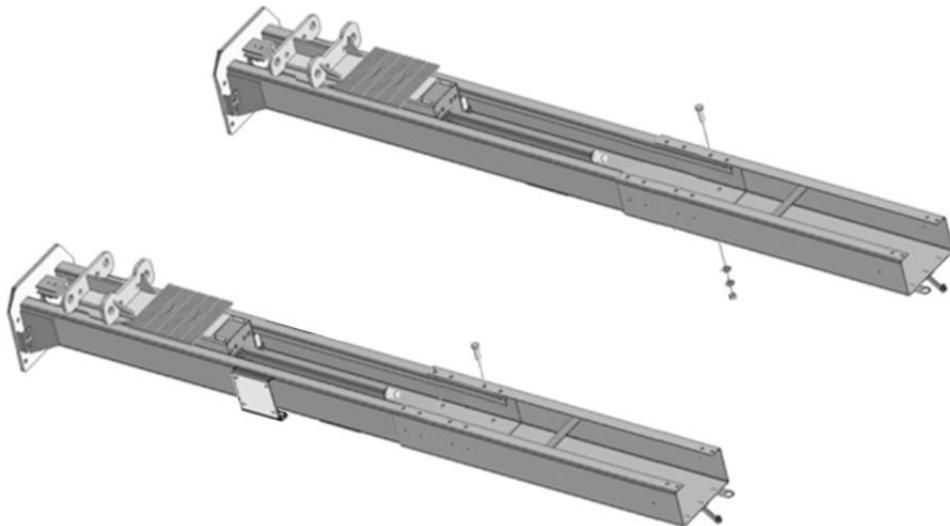
OH-9, : Not suitable for installation when the height of the workshop is less than 143-3/4"; only low setting installation for height between 143-3/4" - 151-1/2 "; the height of the workshop is greater than 151-1/2", installation can be in both high and low setting;

1. High setting installation, choose the low holes of the outer column and install with the inner column.



**High setting**  
**Fig.16**

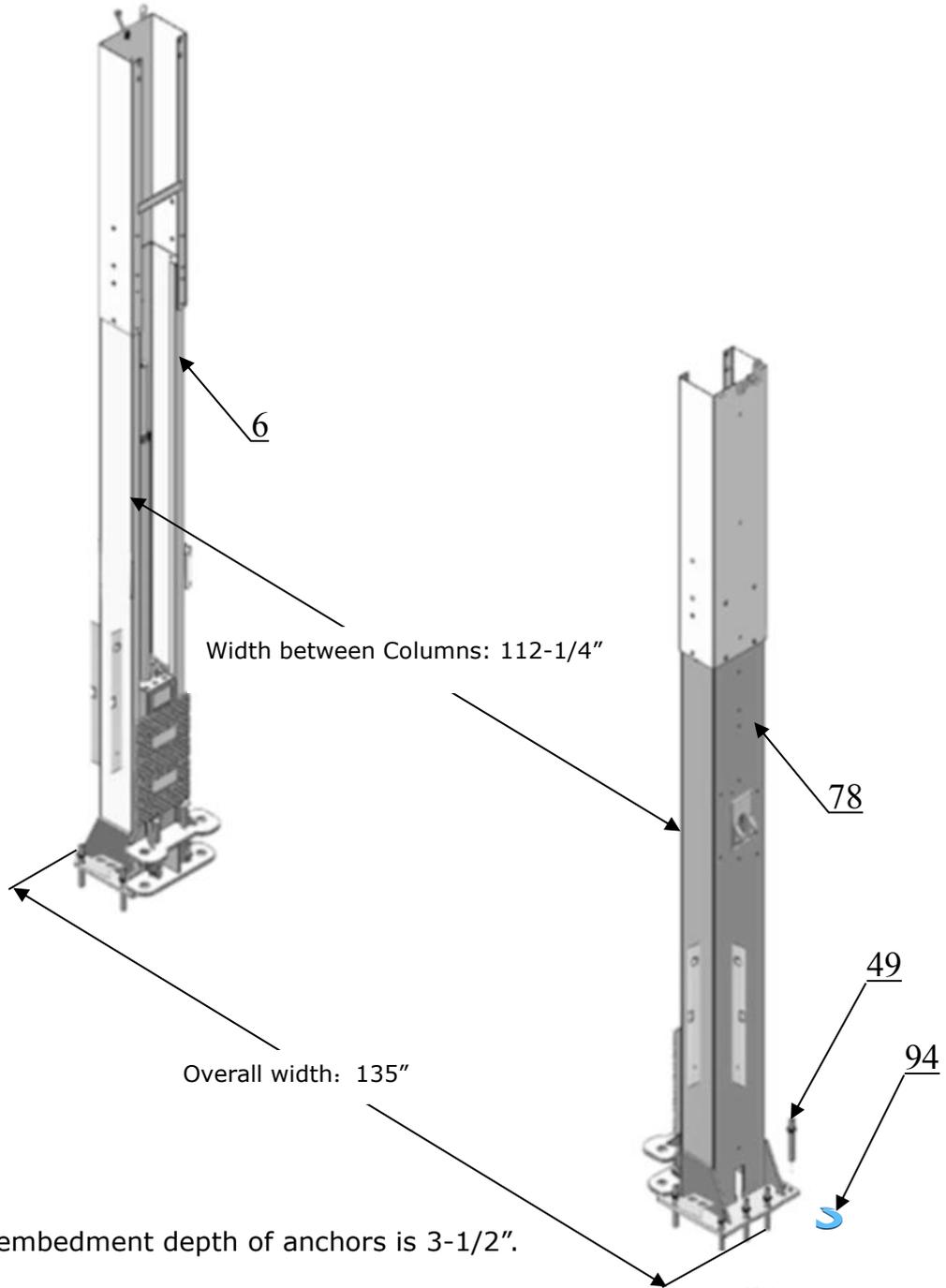
2. Low setting installation, choose the high position holes of the outer column and install with the inner column. (See Fig.17).



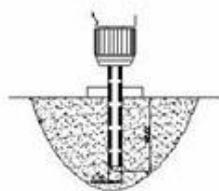
**Low setting**  
**Fig.17**

**F. Position columns (See Fig. 18)**

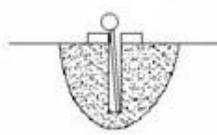
Position the columns on the installation layout of base-plate, Install the anchor bolts. Check the Columns plumpness with level bar, and adjusting with the shims if the columns are not vertical. Do not tighten the Anchor Bolts.



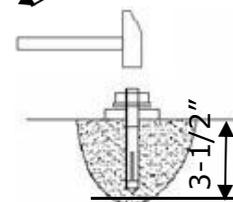
Note: Minimum embedment depth of anchors is 3-1/2".



**Drilling**



**Cleaning**

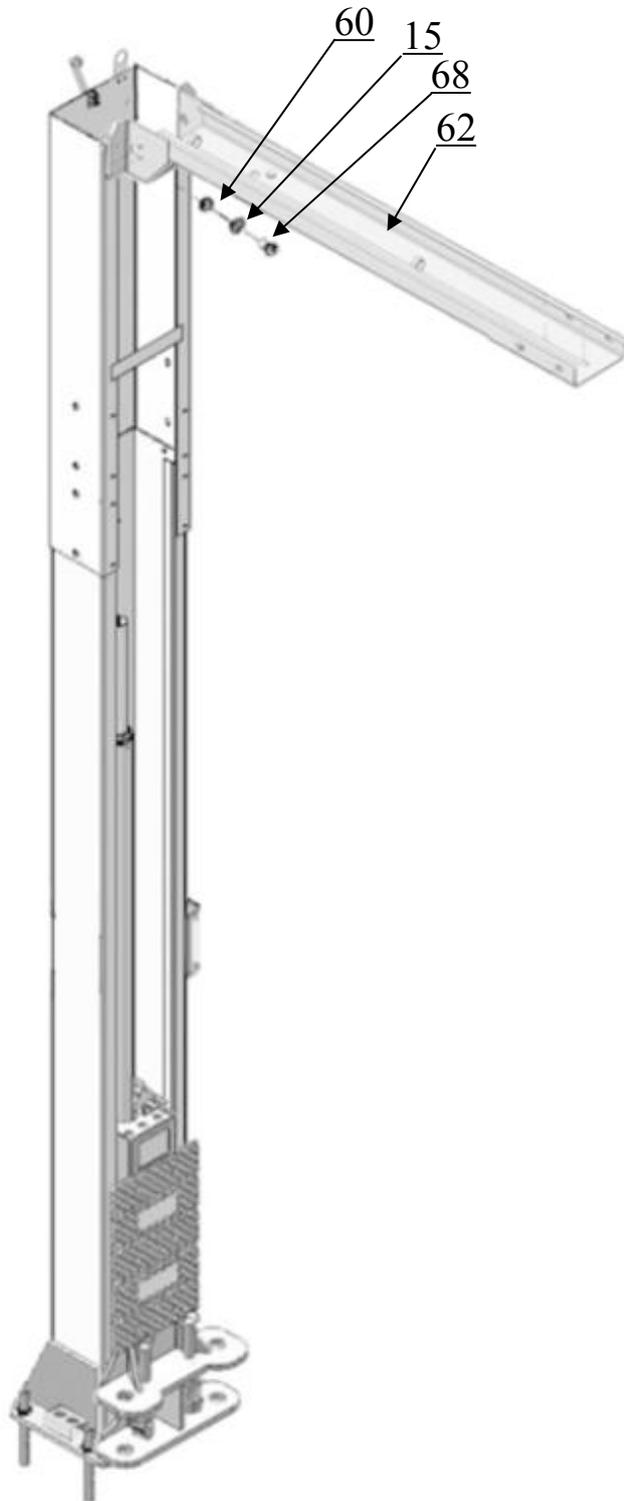


**Bolting**

**Fig. 18**

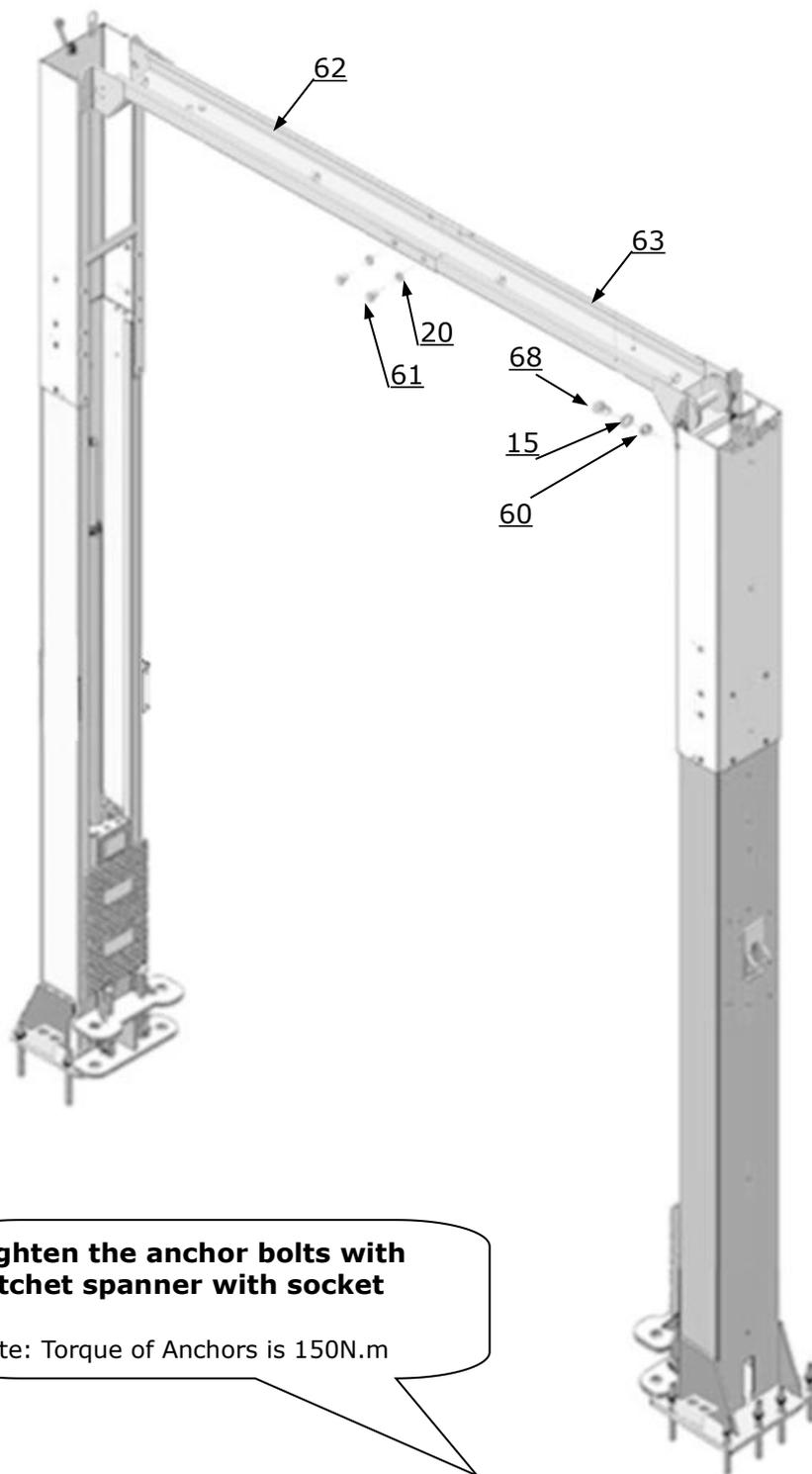
### G. Install overhead top beam

1. The hook on the top coupling assembly is hung on the outer column to lock the screws, and then the top beam is installed (**See Fig. 19**).

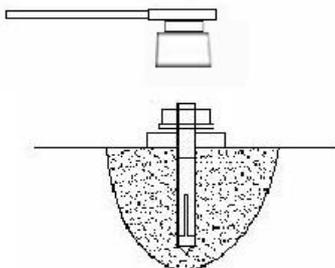


**Fig. 19**

2. Install the top beam, **fix** the anchor bolts.

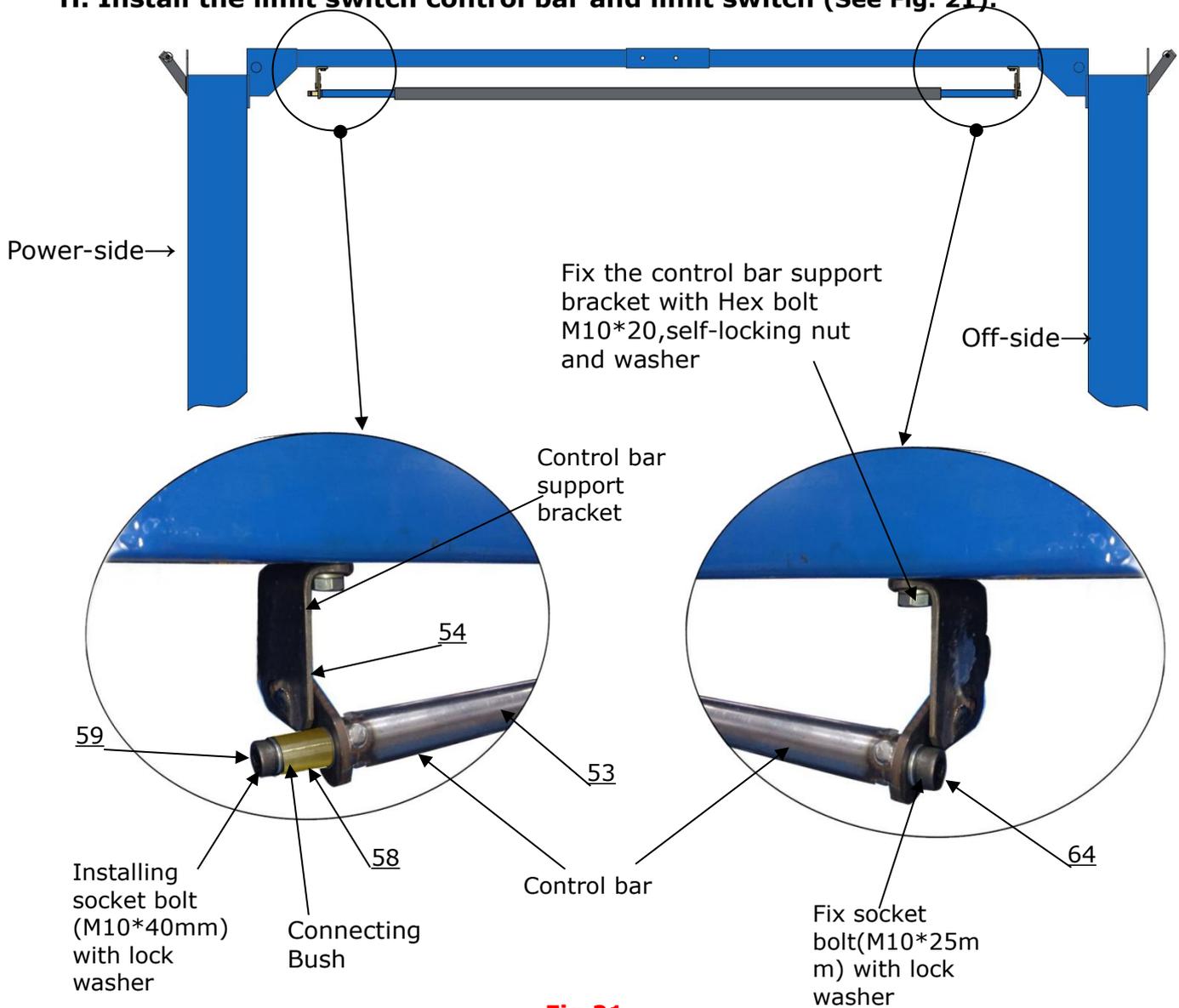


**Tighten the anchor bolts with ratchet spanner with socket**  
Note: Torque of Anchors is 150N.m



**Fig.20**

**H. Install the limit switch control bar and limit switch (See Fig. 21).**



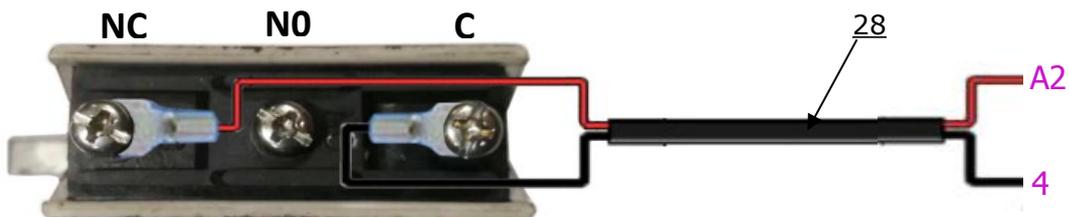
**Fig.21**

**Installing the limit switch and wire.**

1. Connect the wire:

Connect the red wire to terminal NC#, another side of the wire connect to the terminal A2 on AC contactor of power unit.

Connect the black wire to terminal C#, another side of the wire connect to the terminal 4 on control button of power unit.



**Wire of limit switch**

**Fig.22**

2. Tighten limit switch. Fix the limit switch on control bar support bracket of the power-side as the photo. The wire pass through the top beam and connected to the AC contactor of power unit.

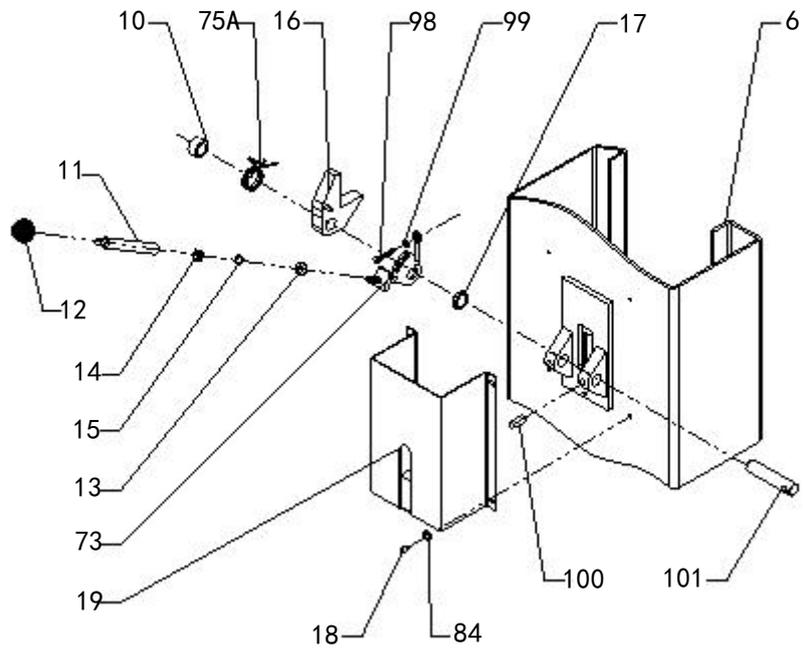
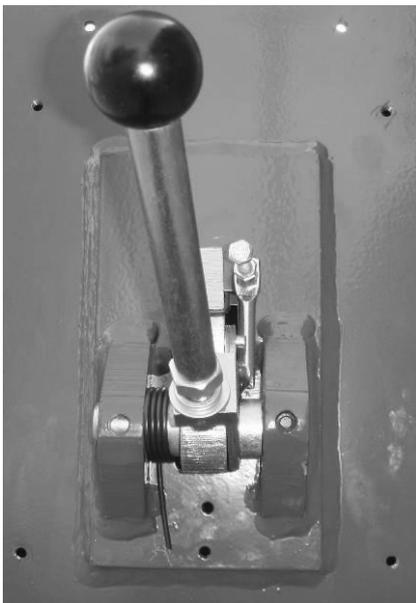
**Limit switch**



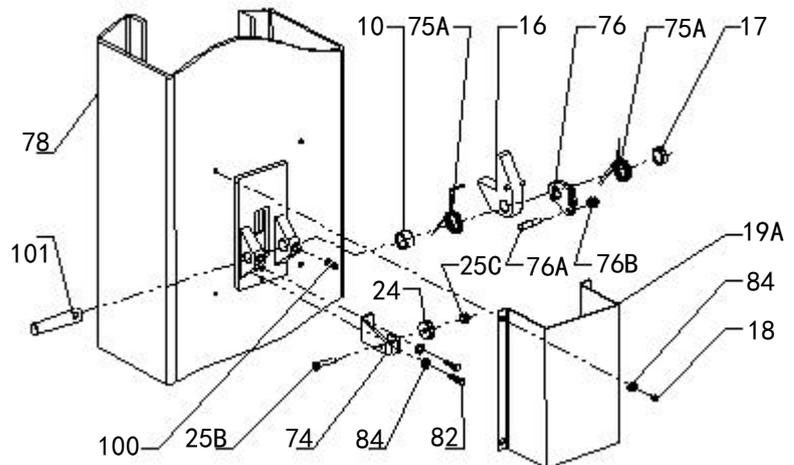
**Fig.23**

**57**

**I. Install safety device (See Fig. 24 & Fig. 25).**



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

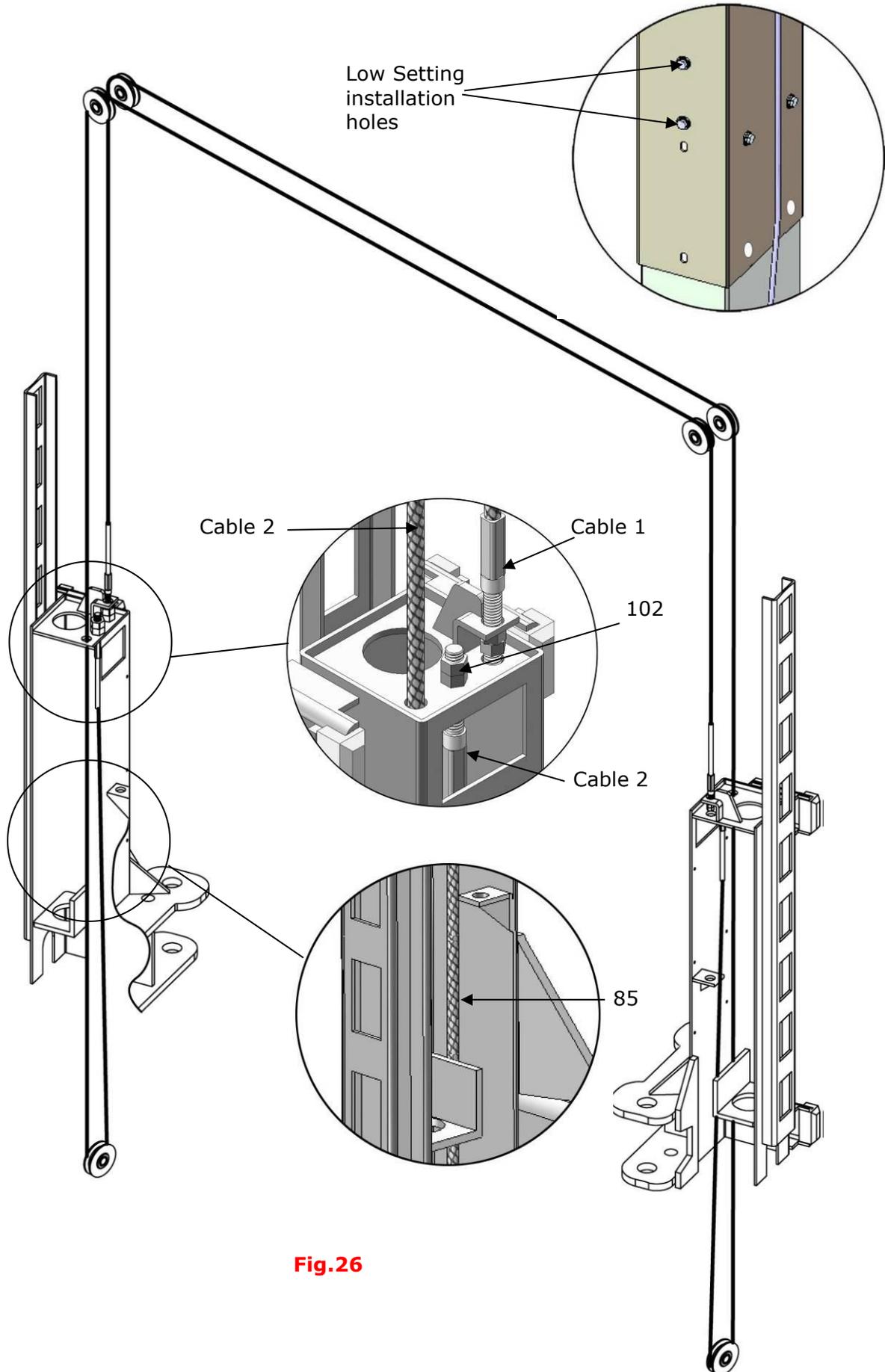


**Off-side safety device  
Fig.25**

## J. Install cables.

Lift the carriages up by hand and make them be locked at the same level

1. Low setting cable connection .(See Fig.26) Cable install inside the column.



**Fig.26**

2. High setting cable connection

2.1. Cable cross over from the bottom of the carriages and be pulled out from the open of carriages, then screw the two cable nuts (**See Fig. 27**).

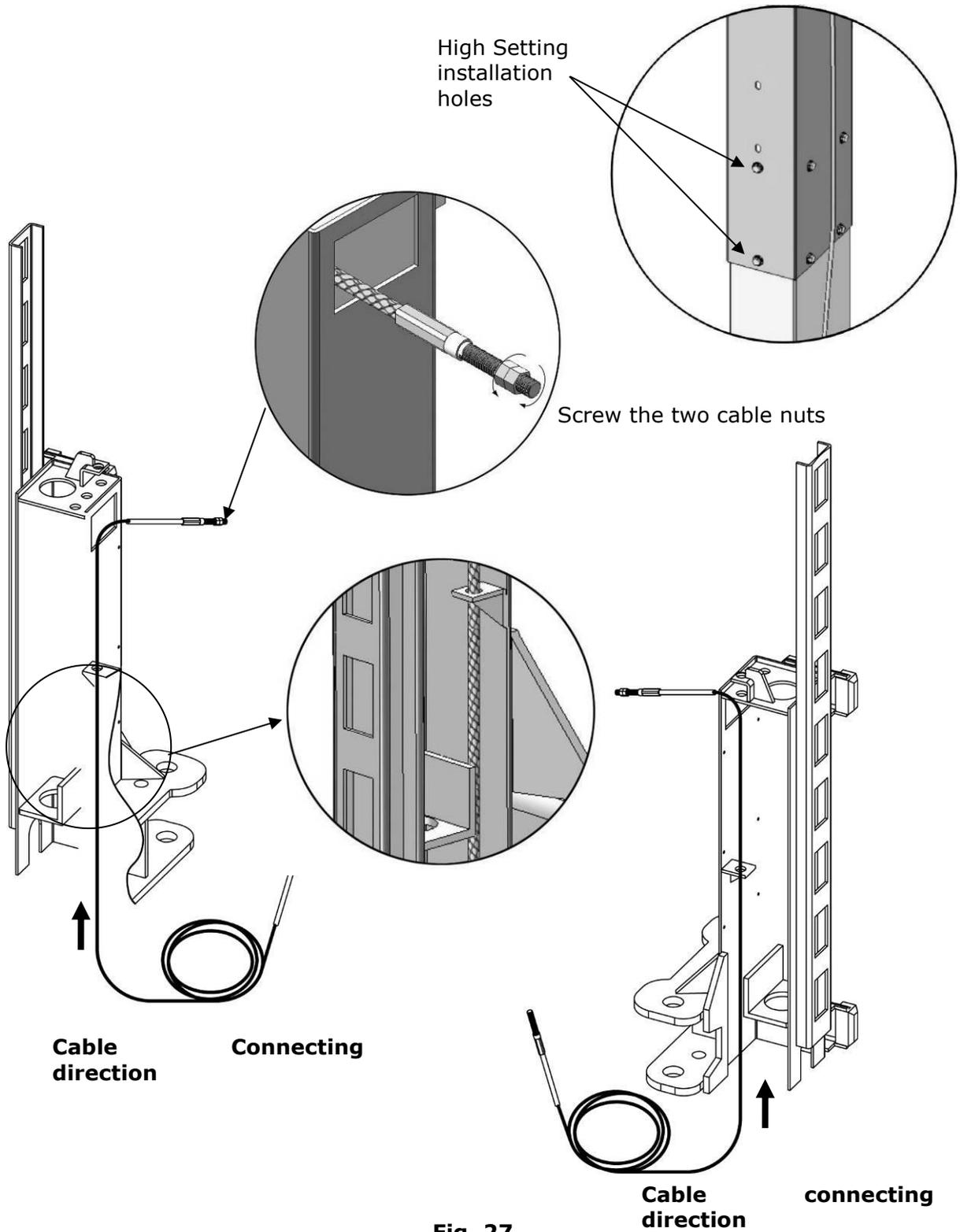


Fig. 27

2.2 Connecting cable for high setting (See Fig. 28).

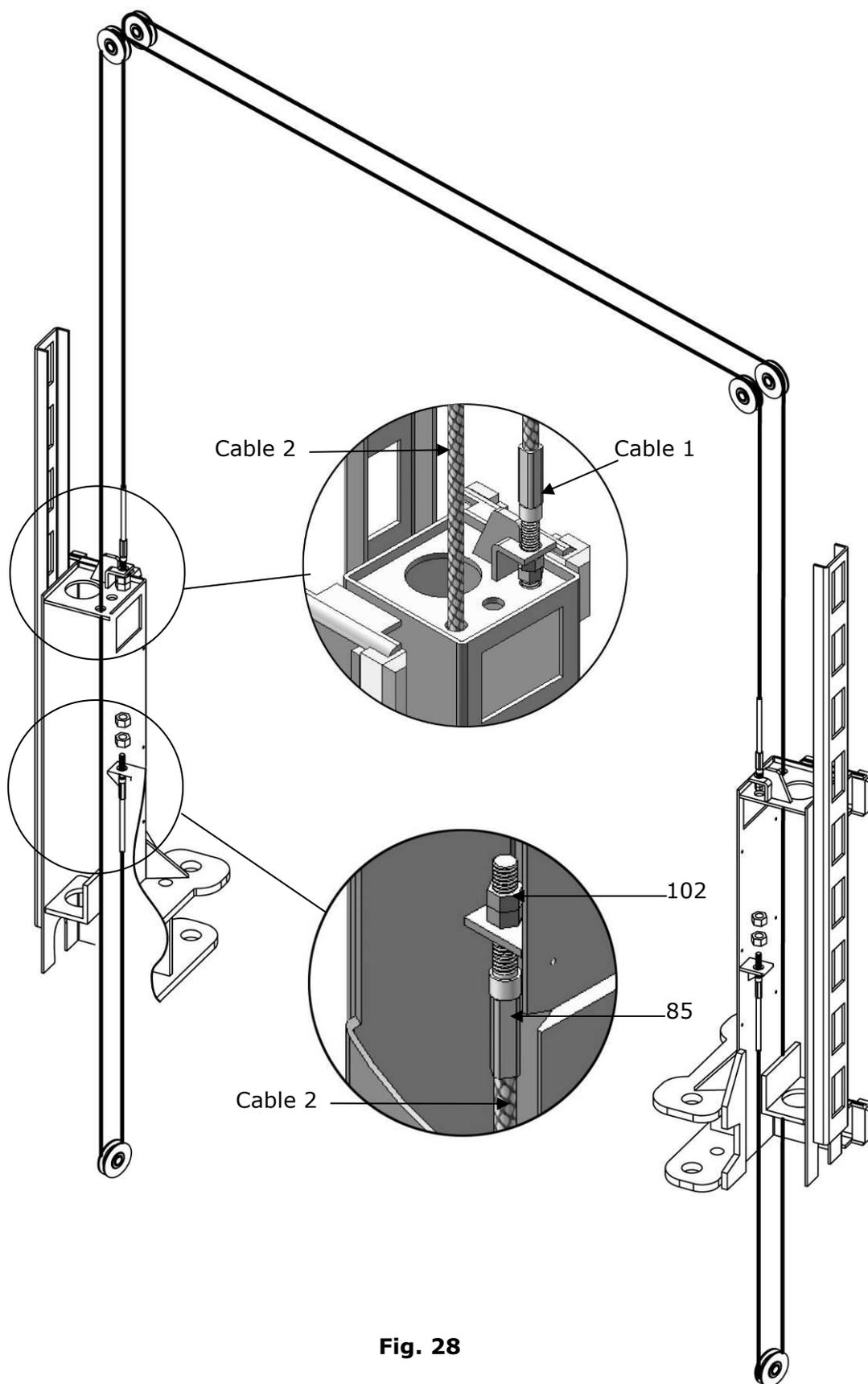
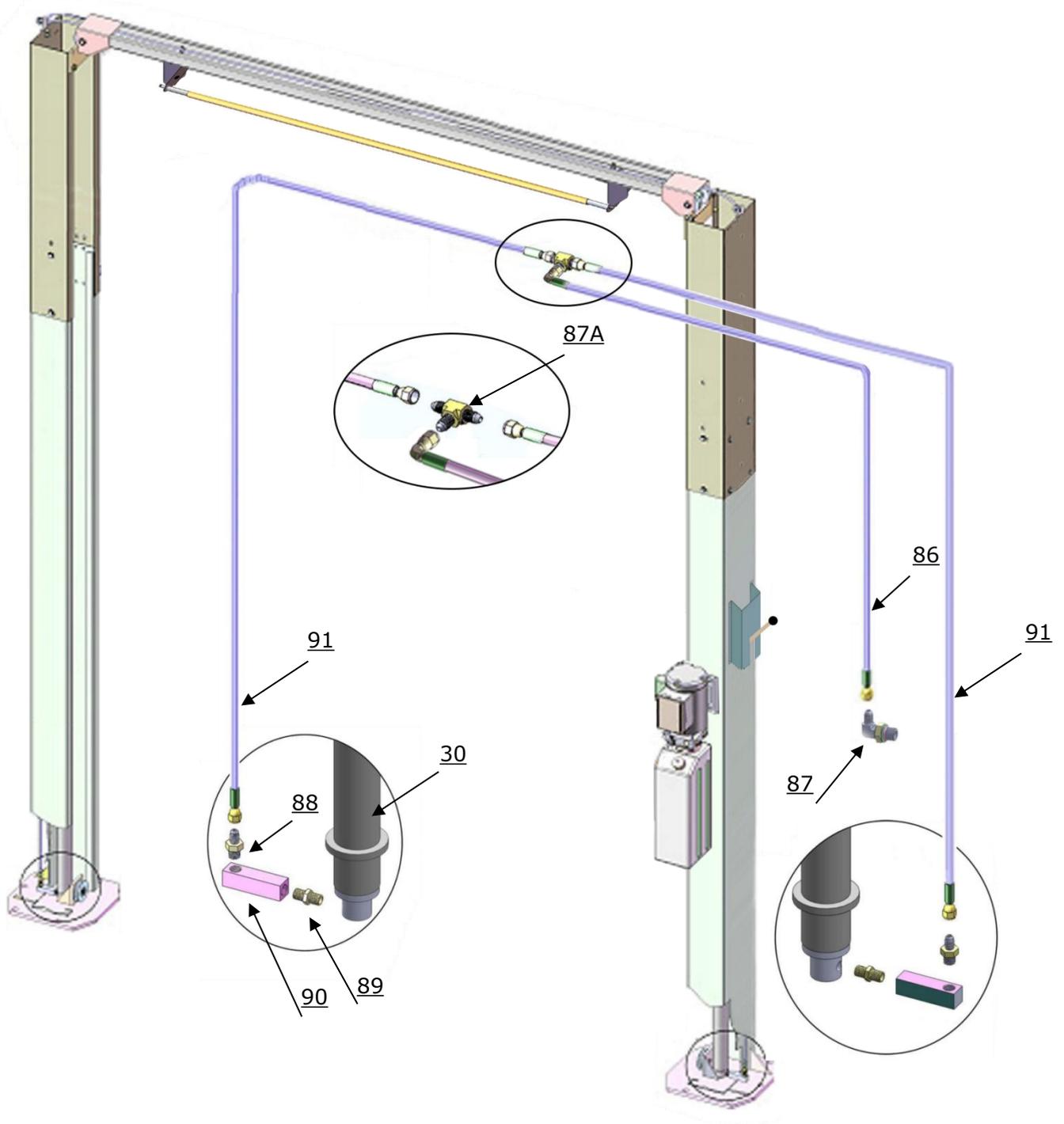


Fig. 28

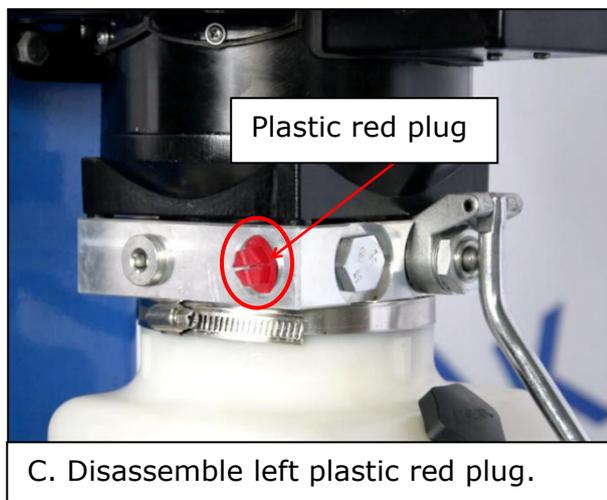
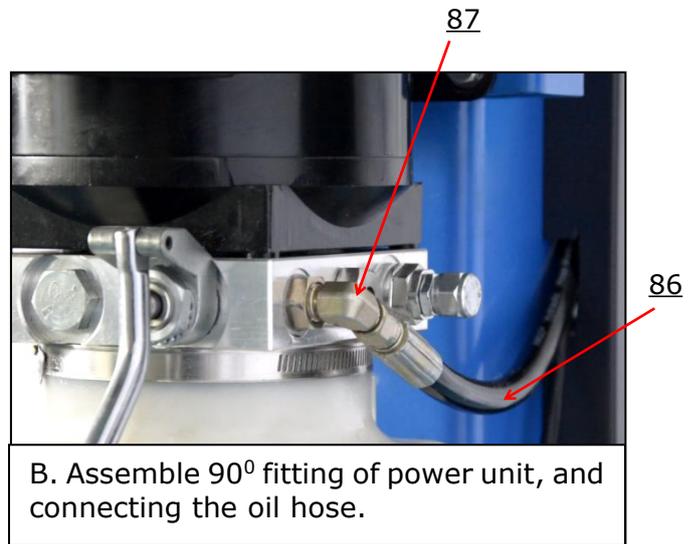
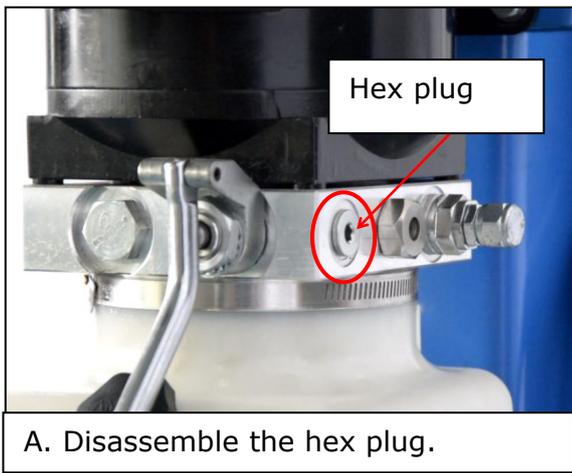
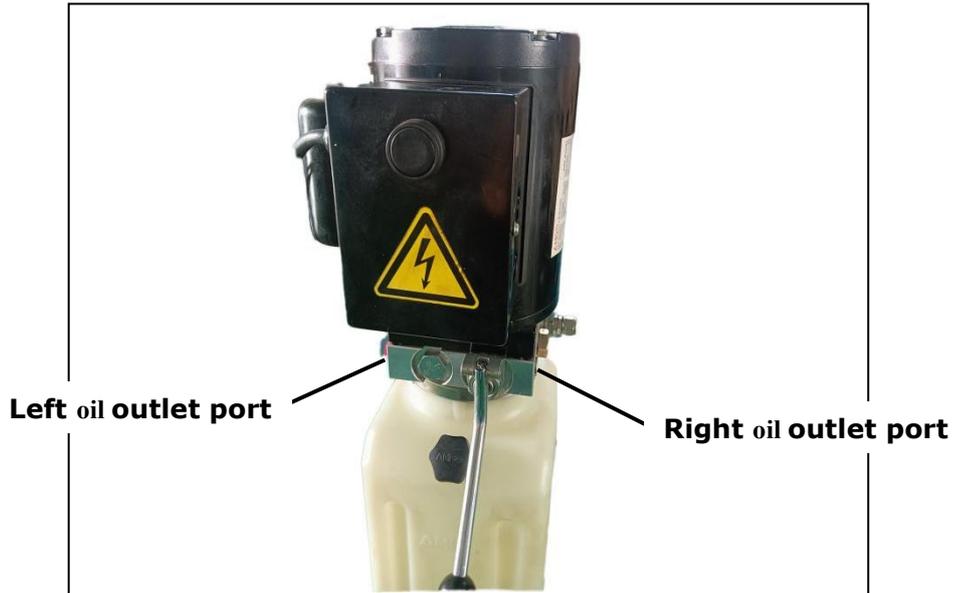
**K. Install oil hose.**

**1. Oil-line connecting drawing. (See Fig.29)**



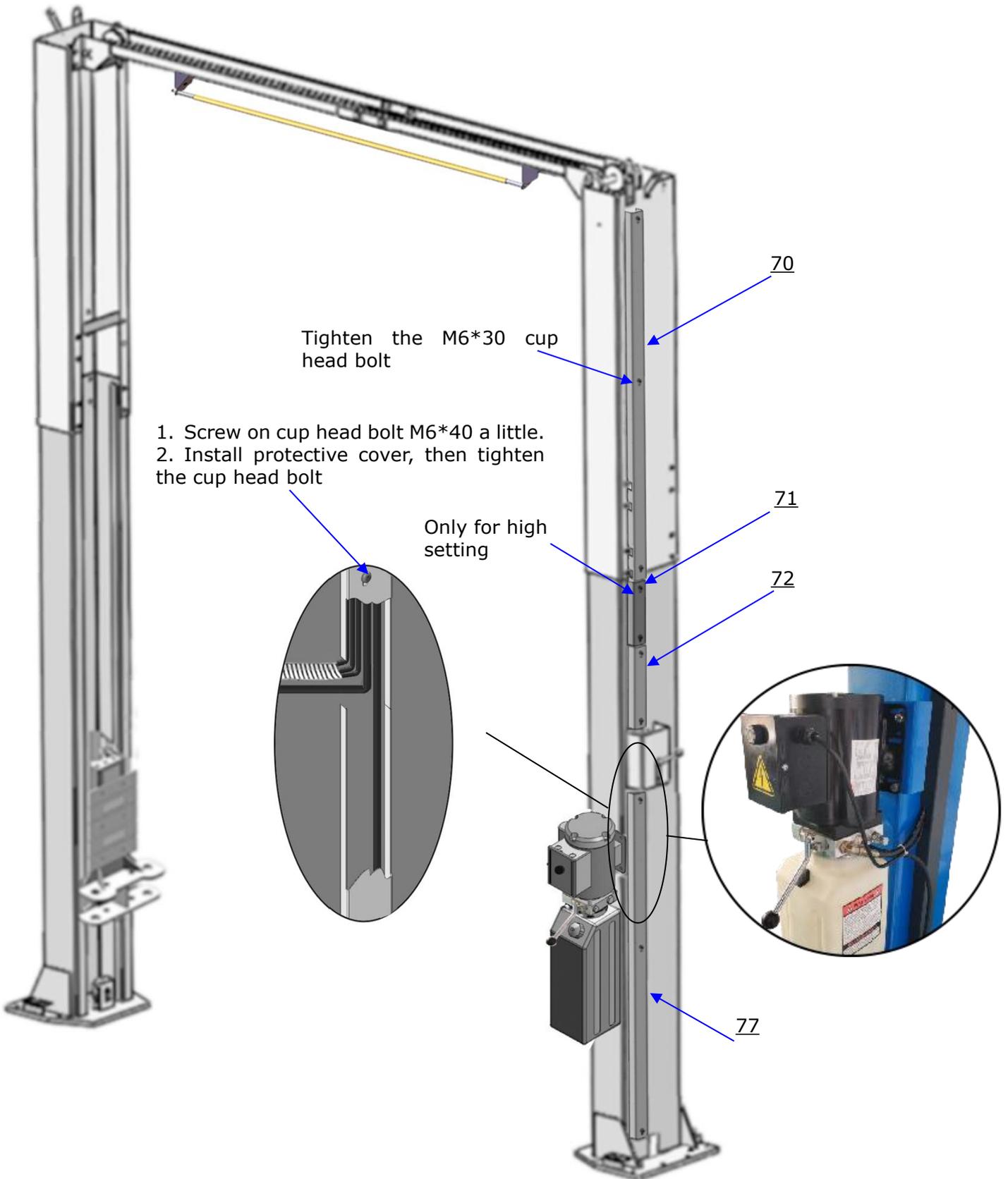
**Fig.29**

**2. Follow these step to connect the oil hose of power unit.**



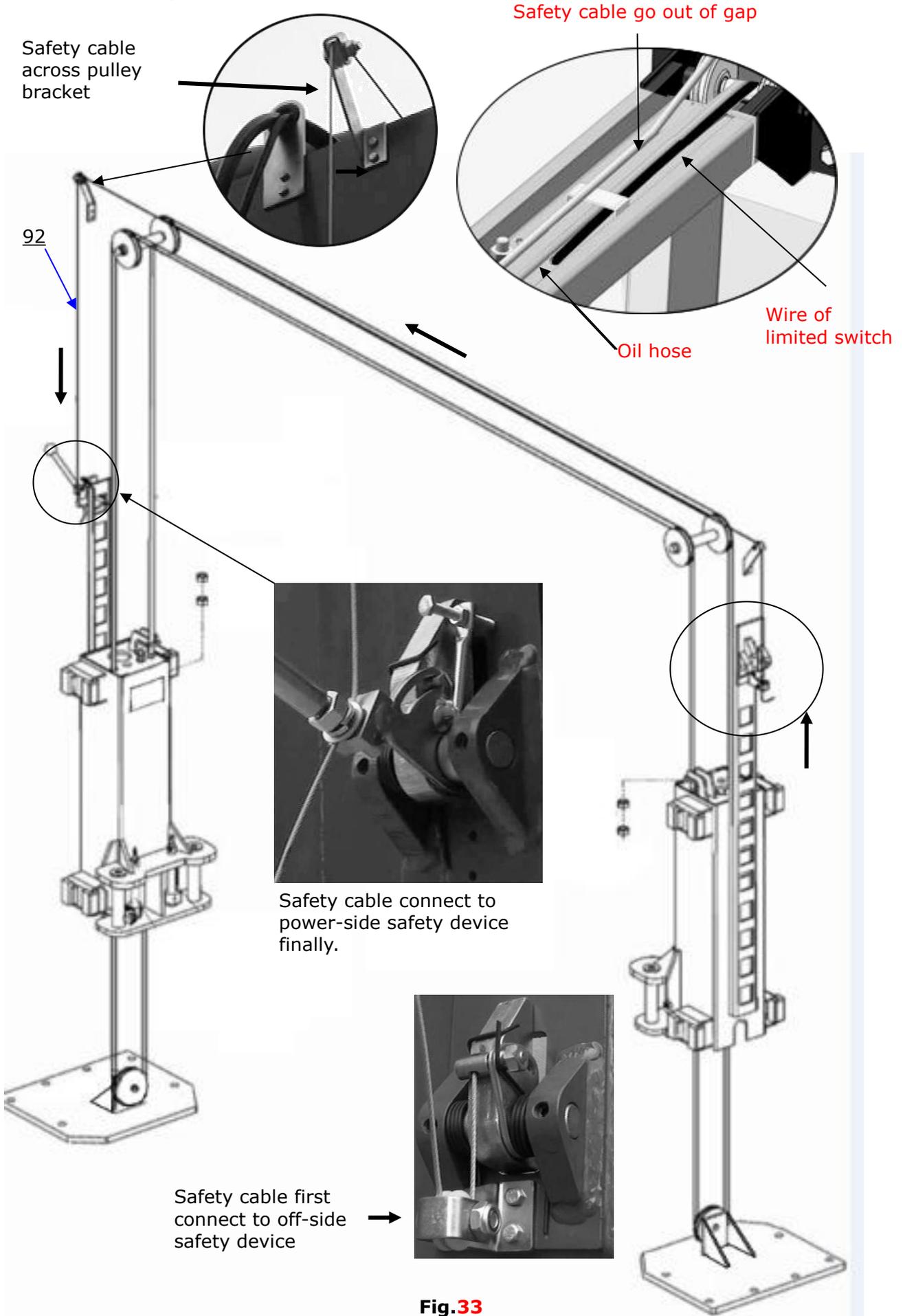
**Fig.30**

**L. Install protective cover. (Fig.31)**



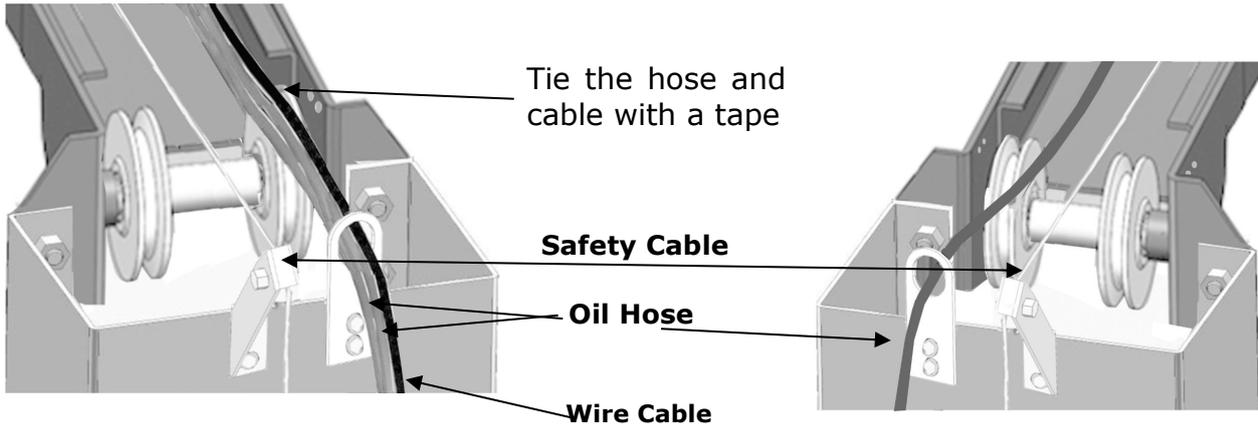
**Fig.32**

**M. Install safety cable (See Fig. 33)**



**Fig.33**

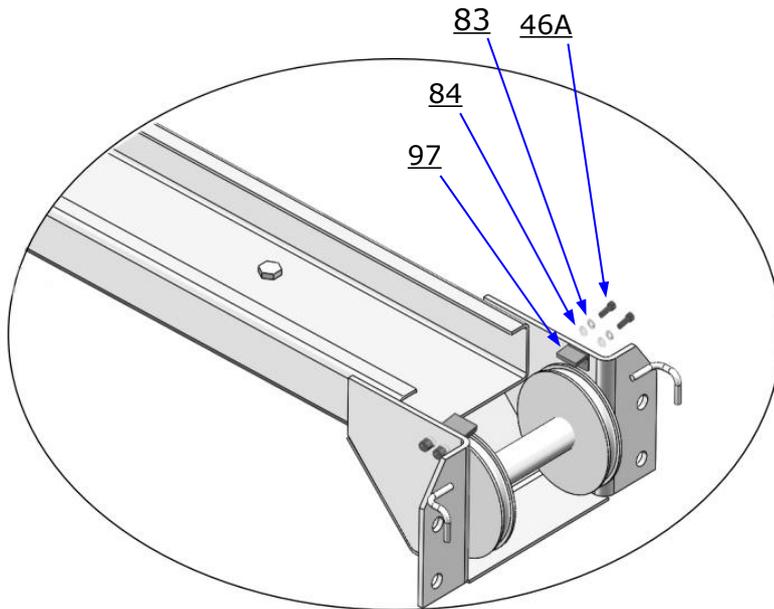
**Note:** Don't cross the oil hose and safety cable together (See Fig. 34 & Fig. 35).



**Power-side Safety Device**  
**Fig. 34**

**Offside Safety Device**  
**Fig. 35**

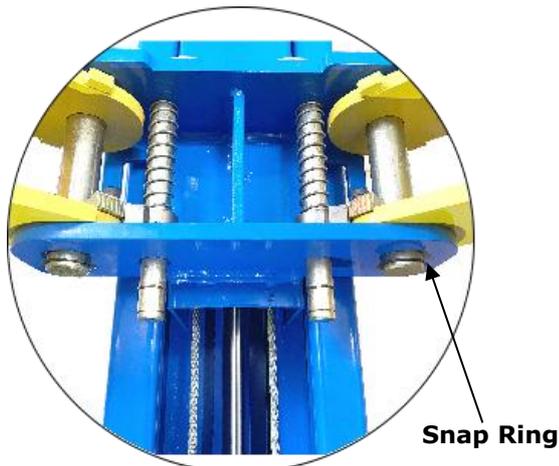
**N. Cable limited block Installation.**



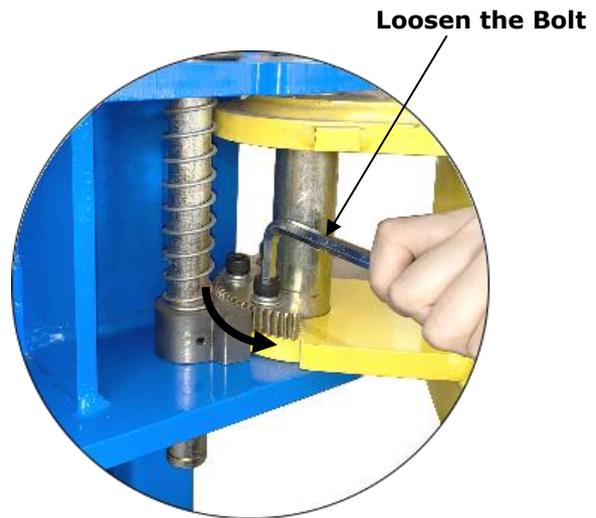
**Fig.36**

**O. Install lifting arms and adjust the arm locks.**

1. Install the lifting arms (See Fig. 37).
2. Lowering the carriages down to the lowest position, then use the 8# socket head wrench to loosen the socket bolt (See Fig. 38).



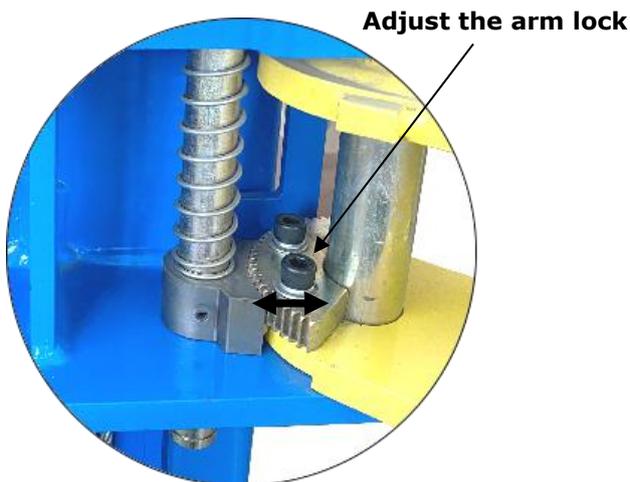
**Fig. 37**



**Fig. 38**

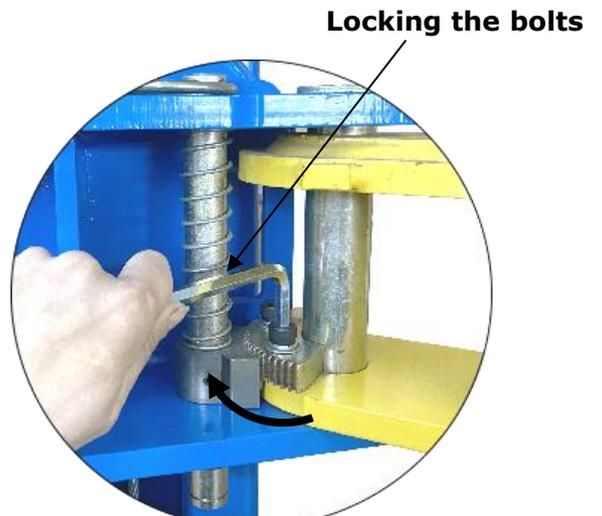
Use the 8# Socket Head Wrench to loosen the Socket Bolt.

3. Adjust the arm lock as direction of arrow (See Fig. 39)



**Fig. 39**

Adjusting moon gear and arm lock to mesh.



**Fig. 40**

Locking the bolts after the moon gear and arm lock engaged well.

4. Adjust moon gear and arm lock to make it to be meshed, then tighten the socket bolts of arm lock (See Fig. 40).

**P. Tighten all the hydraulic fittings, and fill the reservoir with hydraulic oil.**

**Note: In consideration of Hydraulic Power Unit's durability and keep the equipment running in the perfect condition, please use Hydraulic Oil 46#.**

**Q. Install electrical system**

Connect the power source on the data plate of power unit.

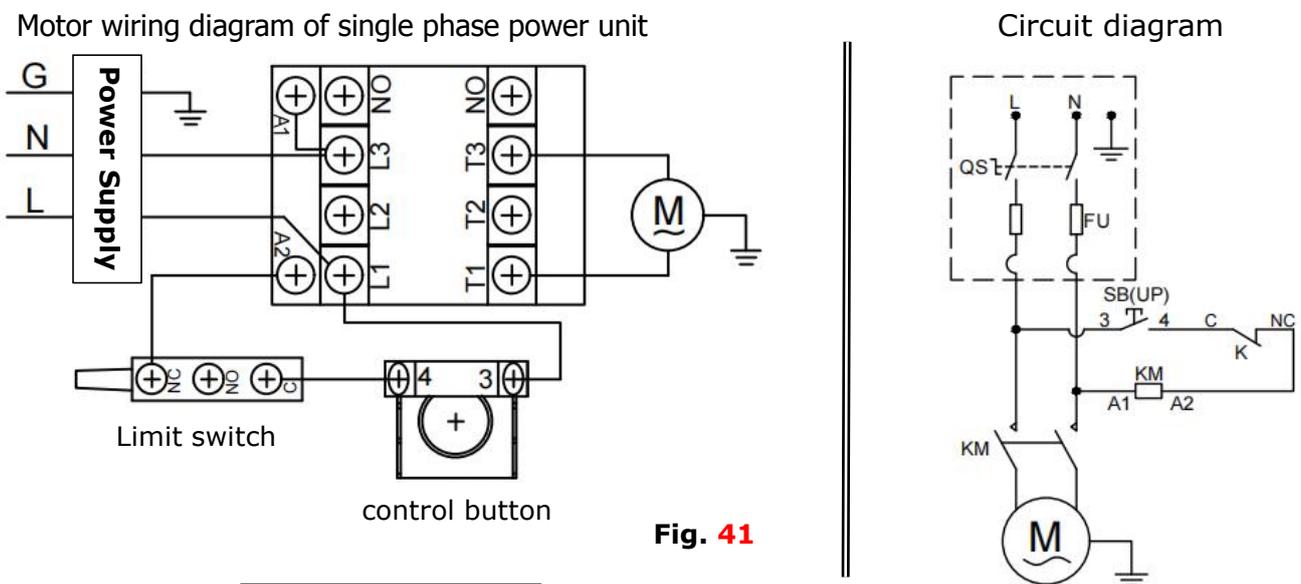
**Note: 1. For safety of operators, the power wiring must contact the floor well.**

**2. Pay attention to the direction of rotations when using three phase motors.**

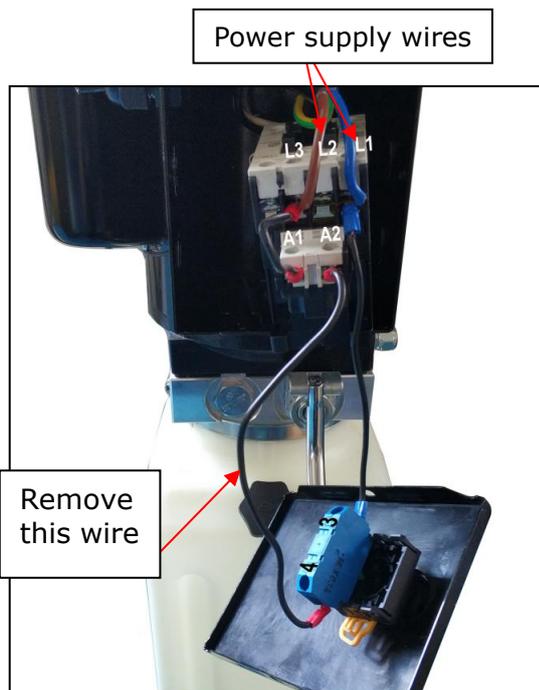
**Single phase motor wiring (See Fig. 41)**

- a. When power supply wires are active wire L and neutral wire N ,connecting active wire L to terminals of AC contactor marked L1, connecting neutral wire N to terminals of AC contactor marked L3.
- b. When power supply wires are two active wire L ,connecting to terminals of AC contactor marked L1, L3 respectively.
- c. Connecting the limit switch: Remove the short wire connecting terminal 4# of control button and A2 of AC contactor firstly (See Fig. 42), then connect wire C#(Black wire) of limit switch with terminal 4# of control button and connecting wire NC#(red wire) with terminals A2 of AC contactor respectively. (See Fig. 43)

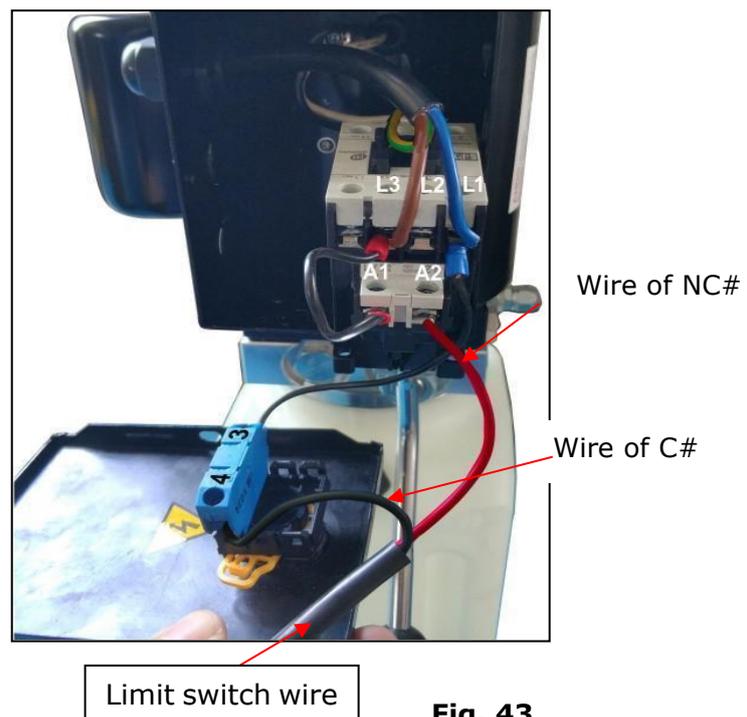
**The interior wire of limit switch connecting NC# and C#, refer to Step H.**



**Fig. 41**



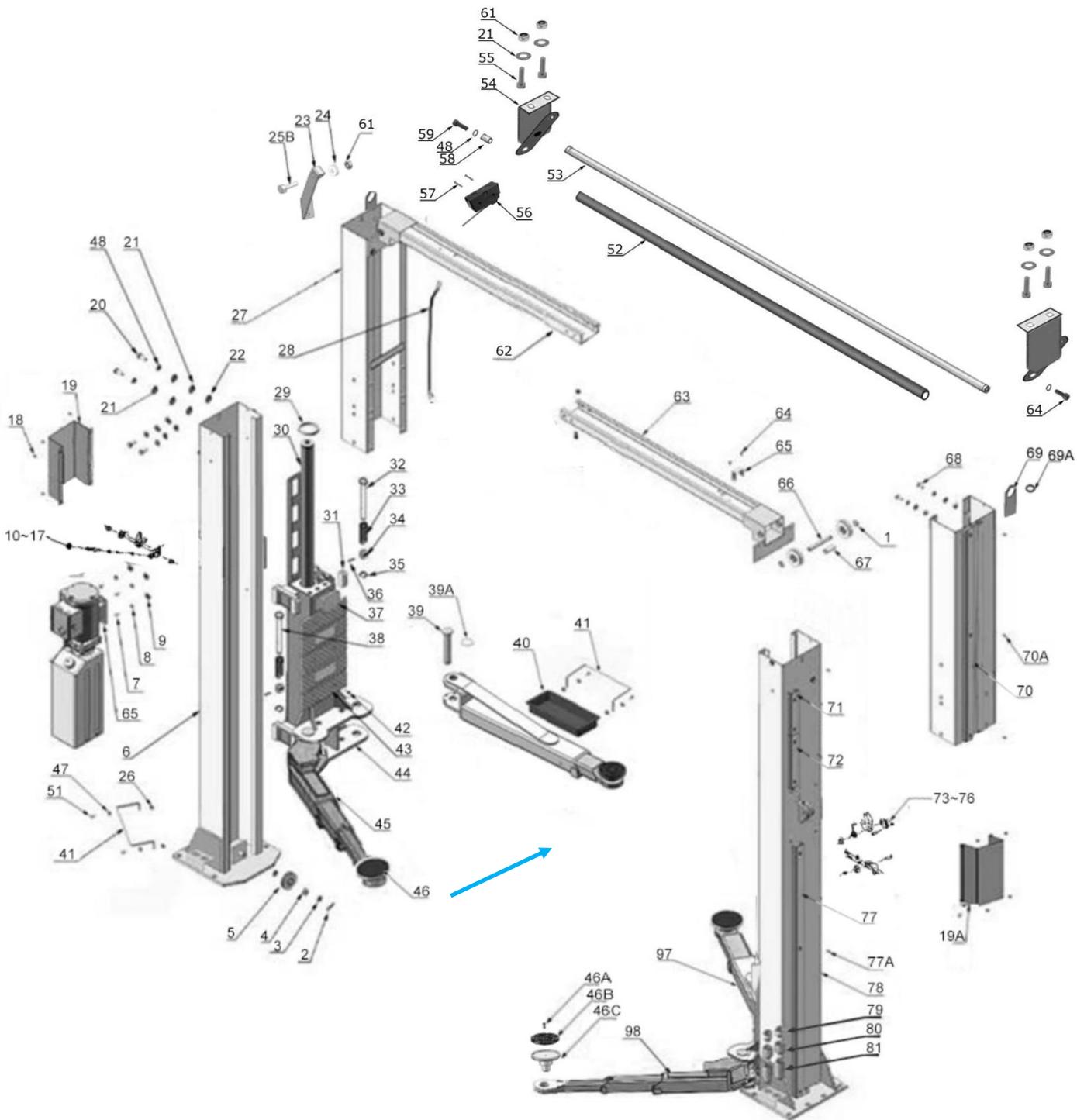
**Fig. 42**



**Fig. 43**

# IV. EXPLODED VIEW

## OH-9



**Fig. 44**

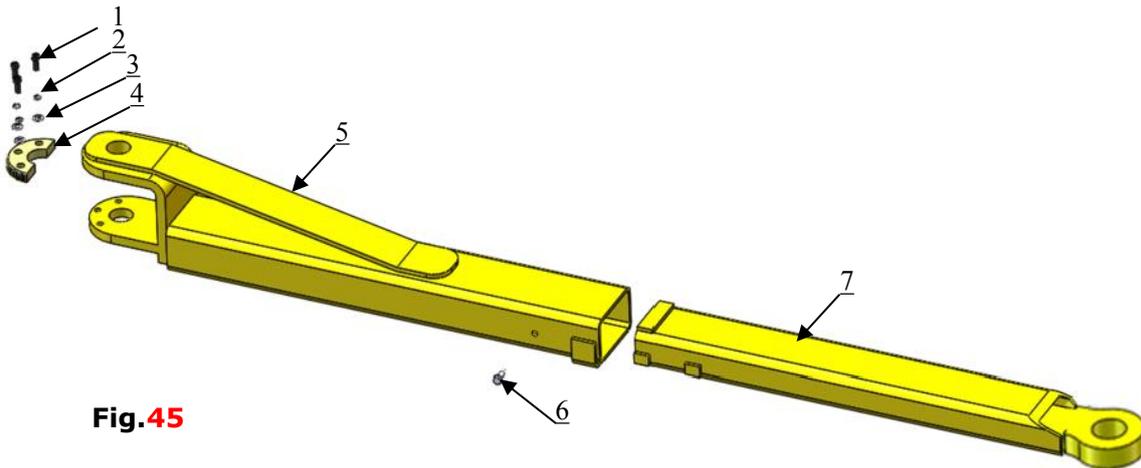
## PARTS LIST

| Item | Part No.    | Description  | OH-9 |
|------|-------------|--|------|
| 1    | 10206019    | Snap Ring $\phi$ 19                                    | 4    |
| 2    | 10209012    | Elastic latch $\phi$ 3.2                               | 2    |
| 3    | 10209128    | Washer $\phi$ 20                                       | 4    |
| 4    | 10209057A   | Bronzed bush for Pulley $\Phi$ *25.4* $\Phi$ 19.1*14.5 | 6    |
| 5    | 11206020    | Pulley   | 6    |
| 6    | 11206202    | Power-side Inner Column                                | 1    |
| 7    | 10209003    | Hex Bolt M8*25   | 8    |
| 8    | 10209004    | Rubber Ring $\phi$ 8*20*3                              | 4    |
| 9    | 10209005    | Self-locking Nut M8                                    | 8    |
| 10   | 11217436    | Safety device spacer $\phi$ 27*15                      | 2    |
| 11   | 11217006    | Safety device control stick                            | 1    |
| 12   | 10217005    | Plastic ball M10                                       | 1    |
| 13   | 10206023A   | Hex bolt M12   | 1    |
| 14   | 10420026    | Lock Washer $\phi$ 12                                  | 1    |
| 15   | 10206006    | Washer $\phi$ 12                                       | 27   |
| 16   | 11217009    | Safety device  | 1    |
| 17   | 11217012    | Safety device spacer $\phi$ 27*10                      | 2    |
| 18   | 10209009    | Cap head screw M6*8                                    | 10   |
| 19   | 11217405    | Cover for power-side safety device                     | 1    |
| 19A  | 11217406    | Cover for offside safety device                        | 1    |
| 20   | 10209126    | Hex Bolt M10*25  | 20   |
| 21   | 10209022    | Washer $\phi$ 10                                       | 44   |
| 22   | 10209021    | Hex Nut M10  | 20   |
| 23   | 11217379    | Safety Cable Bracket                                   | 2    |
| 24   | 10206009    | Plastic Pulley (white)                                 | 3    |
| 25   | 10217013    | Hex bolt M6*20   | 8    |
| 25A  | 10420018    | Self-locking nut M6                                    | 8    |
| 25B  | 10209046    | Hex bolt M10*35  | 3    |
| 26   | 10209033    | Washer $\phi$ 8  | 12   |
| 27   | 11206204    | Extension Column L=1240mm                              | 2    |
| 28   | 10206137    | Wire L=3700  | 1    |
| 29   | 10209111    | Protective Ring for Cylinder                           | 2    |
| 30   | 11217056    | Cylinder $\phi$ 50*1727                                | 2    |
| 31   | 10209015    | Slider Block   | 16   |
| 32   | 11217046A   | Arm Lock Bar (left)                                    | 2    |
| 33   | 10206050A   | Spring   | 4    |
| 34   | 10217044-01 | Arm Lock   | 4    |
| 35   | 10206032    | Snap Ring $\phi$ 25                                    | 4    |
| 36   | 10206036    | Hair Pin $\phi$ 6*40                                   | 4    |
| 37   | 10209016    | Carriage Plastic Cover                                 | 2    |
| 38   | 11217046    | Arm Lock Bar (right)                                   | 2    |
| 39   | 11217168    | Arm pin assy.  | 4    |
| 39A  | 10520023    | Snap Ring $\phi$ 38                                    | 4    |
| 40   | 10206190    | Tool tray (Short)                                      | 2    |

| Item | Part No.    | Description                  | OH-9 |
|------|-------------|------------------------------|------|
| 41   | 11206191    | Toe guard bar                | 4    |
| 42   | 10209019    | Screw M6*16                  | 12   |
| 43   | 10209018    | Protective Rubber            | 2    |
| 44   | 11279004    | Carriage                     | 2    |
| 45   | 10279010    | Front right Arm              | 1    |
| 45A  | 10279009    | Front left Arm               | 1    |
| 46   | 10201046A   | Rubber pad assy.             | 4    |
| 46A  | 10420138    | Socket bolt M6*16            | 12   |
| 46B  | 10209134    | Rubber pad                   | 4    |
| 46C  | 11680030C   | Rubber pad bracket           | 4    |
| 47   | 10209034    | Lock Washer φ8               | 14   |
| 48   | 10209039    | Lock washer φ10              | 22   |
| 49   | 10209059    | Anchor bolt 3/4*5-1/2        | 12   |
| 50   | 10206500B   | Parts box                    | 1    |
| 51   | 10201002    | Hex Bolt M8*16               | 14   |
| 52   | 10206025A   | Foam tube                    | 1    |
| 53   | 1102072001A | Control Bar φ22*2400         | 1    |
| 54   | 1103072003A | Control Bar Support Bracket  | 2    |
| 55   | 10206017    | Hex Bolt M10*20              | 4    |
| 56   | 1002022001  | Limit Switch CZ-7121         | 1    |
| 57   | 10420164    | Cap Head Bolt M4*30          | 2    |
| 58   | 110207007   | Connecting Bush φ14*2*20     | 1    |
| 59   | 10630100    | Socket Bolt M10*40           | 1    |
| 60   | 10206023    | Self-locking Nut M12         | 14   |
| 61   | 10209056    | Self-locking Nut M10         | 7    |
| 62   | 11206195-01 | Top Beam A                   | 1    |
| 63   | 11206196-01 | Top Beam B                   | 1    |
| 64   | 10720002    | Socket Bolt M10*25           | 1    |
| 65   | 071101      | Power unit                   | 1    |
| 66   | 11279016    | Pin for Pulley               | 2    |
| 67   | 11206022    | Top Pulley spacer            | 2    |
| 68   | 10206024    | Hex Bolt M12*25              | 8    |
| 69   | 11217024    | Oil hose retainer            | 2    |
| 69A  | 1061K074    | Wire guard                   | 2    |
| 70   | 11203752    | Wire protective cover L=1140 | 2    |
| 70A  | 10206110    | Cap head bolt M6*35          | 4    |
| 71   | 11279624    | Protective Cover(L=200mm)    | 2    |
| 72   | 11203754-01 | Protective Cover(L=385mm)    | 2    |
| 73   | 11217004    | Active safety control block  | 1    |
| 74   | 11217029    | Safety Pulley Bracket        | 1    |
| 75   | 10217008    | Torsion spring φ2.5*145°     | 1    |
| 75A  | 10217030    | Torsion spring φ2.5*120°     | 2    |
| 76   | 11217031    | Driven safety control block  | 1    |
| 76A  | 10217032    | Wire cable connecting pin    | 1    |
| 76B  | 11217033    | Tension nut                  | 1    |

| <b>Item</b> | <b>Part No.</b> | <b>Description</b>                | <b>OH-9</b> |
|-------------|-----------------|-----------------------------------|-------------|
| 77          | 10203778        | Protective Cover L=1545           | 2           |
| 77A         | 10206079        | Cap Head Bolt M6*40               | 14          |
| 78          | 11206203        | Offside Inner column              | 1           |
| 79          | 11209051B       | Stackable Adapter (1.5")          | 4           |
| 80          | 11209052B       | Stackable Adapter (2.5")          | 4           |
| 81          | 11209053B       | Stackable Adapter (5")            | 4           |
| 82          | 10217066        | Hex Bolt M6*15                    | 2           |
| 83          | 10209149        | Lock Washer φ6                    | 10          |
| 84          | 10420045        | Washer φ6                         | 26          |
| 85          | 10206064A       | Cable φ9.52*10048mm               | 2           |
| 86          | 10206132-01     | Oil hose 1/4*4470mm               | 1           |
| 87          | 10209060        | 90° fitting for power unit        | 1           |
| 87A         | 10211016        | T fitting                         | 1           |
| 88          | 10209064        | Straight Fitting                  | 2           |
| 89          | 10206062        | Straight Fitting                  | 2           |
| 90          | 10233009        | Oil hose straight fitting(square) | 2           |
| 91          | 10206130-01     | Oil Hose 1/4*5350mm               | 2           |
| 92          | 10260149        | Safety cable φ2.5*7750mm          | 1           |
| 93          | 10209066        | Hex nut M16                       | 8           |
| 94          | 10201090        | Shim (1mm)                        | 10          |
|             | 10620065        | Shim (2mm)                        | 10          |
| 95          | 10209152        | Ties 3*150mm                      | 4           |
| 96          | 10279011        | Rear Arm assy.                    | 2           |
| 97          | 1102075001      | Cable limit plate                 | 4           |
| 98          | 10217010        | Hex bolt M6*40                    | 1           |
| 99          | 10217011        | Hex nut M6                        | 1           |
| 100         | 10217051        | Socket bolt M10*10                | 2           |
| 101         | 11217050        | Safety device pin                 | 2           |
| 102         | 10209066        | Nut M16                           | 8           |

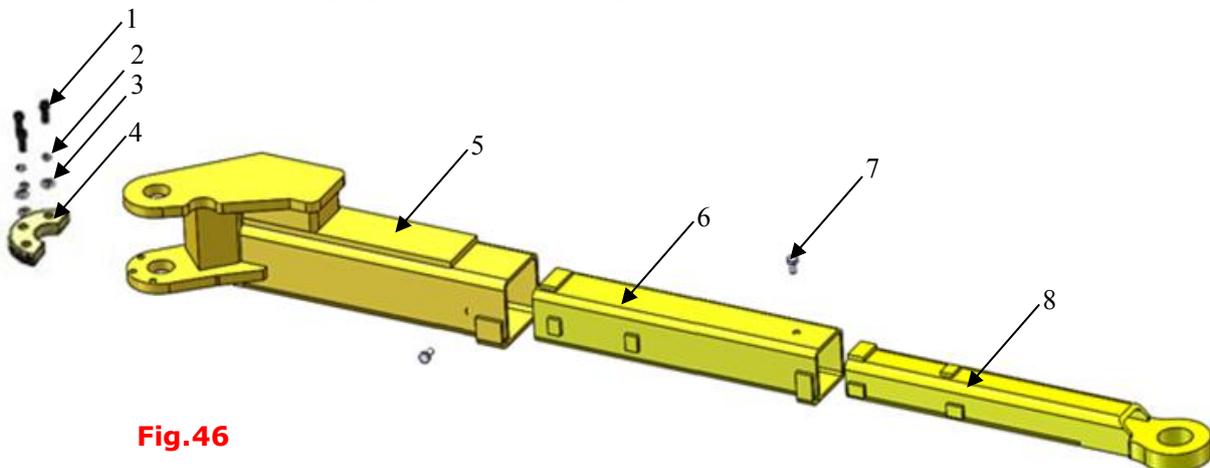
#### 4.1 Rear arm assy. (10279011) explosive view



**Fig.45**

| Item | Part No. | Description         | QTY. |
|------|----------|---------------------|------|
| 1    | 10206048 | Hex nut M10*30      | 6    |
| 2    | 10209039 | Washer φ10          | 6    |
| 3    | 10209022 | Washer φ10          | 6    |
| 4    | 11206049 | Moon gear           | 2    |
| 5    | 11206192 | Rear outer arm      | 2    |
| 6    | 10201149 | Cap head bolt M8*12 | 2    |
| 7    | 11206193 | Rear inner arm      | 2    |

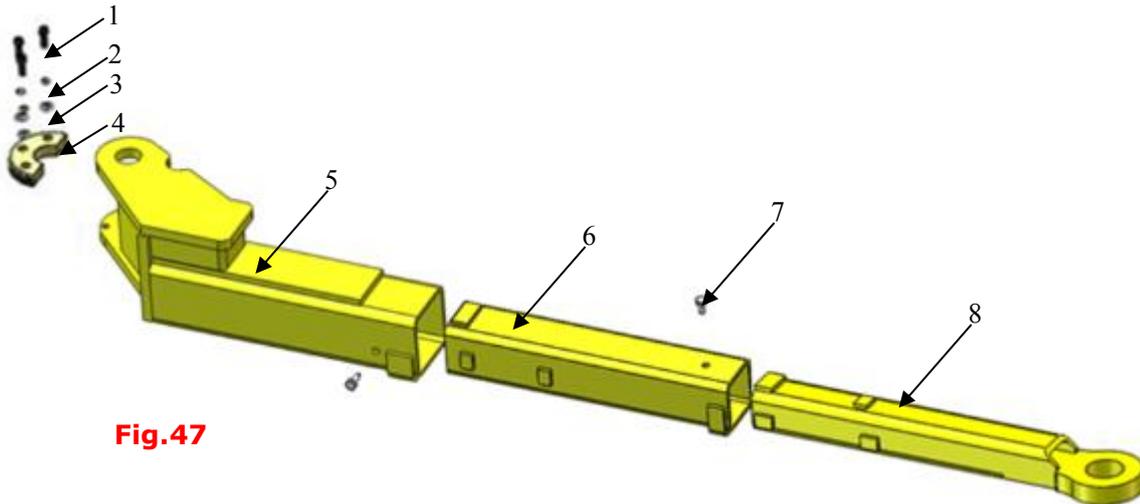
#### 4.2 Front left arm assy. (10279009) explosive view



**Fig.46**

| Item | Part No.        | Description            | QTY. |
|------|-----------------|------------------------|------|
| 1    | 10206048        | Hex nut M10*30         | 3    |
| 2    | 10209039        | Lock Washer φ10        | 3    |
| 3    | 10209022        | Washer φ10             | 3    |
| 4    | 11206049        | Moon gear              | 1    |
| 5    | <b>11279005</b> | Outer arm - Front left | 1    |
| 6    | 11206189        | Middle arm - Front     | 1    |
| 7    | 10201149        | Cap head bolt M8*12    | 2    |
| 8    | 11201049A       | Inner arm - Front      | 1    |

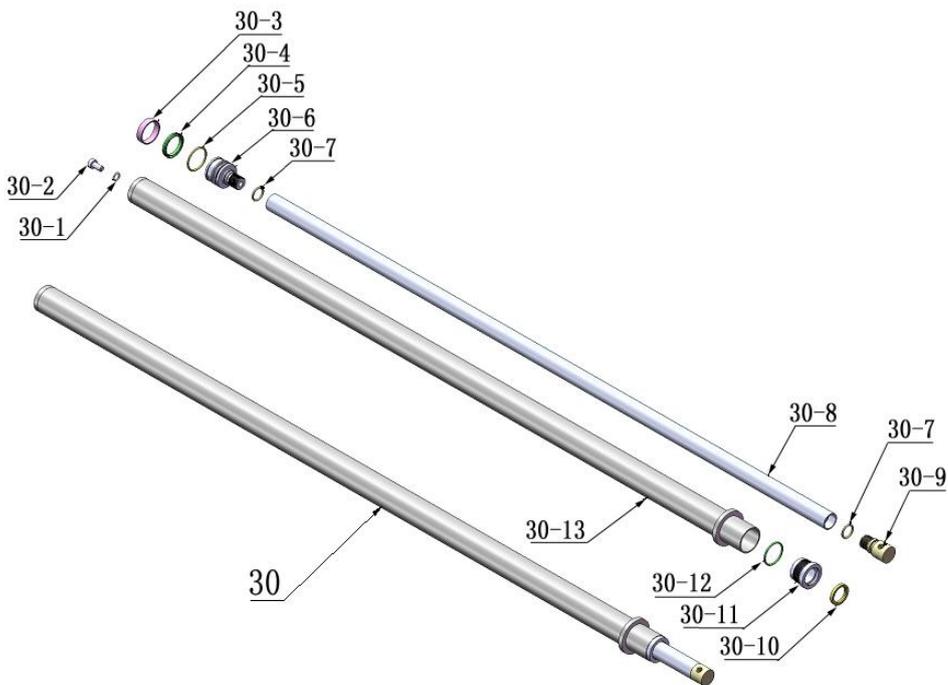
### 4.3 Front right arm assy. (10279010) explosive view



**Fig.47**

| Item | Part No.        | Description             | QTY. |
|------|-----------------|-------------------------|------|
| 1    | 10206048        | Hex nut M10*30          | 3    |
| 2    | 10209039        | Lock Washer φ10         | 3    |
| 3    | 10209022        | Washer φ10              | 3    |
| 4    | 11206049        | Moon gear               | 1    |
| 5    | <b>11279006</b> | Outer arm - Front right | 1    |
| 6    | 11206189        | Middle arm - Front      | 1    |
| 7    | 10201149        | Cap head bolt M8*12     | 2    |
| 8    | 11201049A       | Inner arm - Front       | 1    |

### 4.4 Cylinder (11217056) explosive view



**Fig. 48**

## Part list for cylinder

| Item  | Part No.  | Description        | QTY. |
|-------|-----------|--------------------|------|
| 30-1  | 10209069  | O-ring             | 2    |
| 30-2  | 10209070  | Bleeding Plug      | 2    |
| 30-3  | 10209071  | Support Ring       | 2    |
| 30-4  | 10209072  | Y-ring OSI         | 2    |
| 30-5  | 10209073  | O-ring             | 2    |
| 30-6  | 11209074  | Piston             | 2    |
| 30-7  | 10209075  | O-Ring             | 2    |
| 30-8  | 11217076  | Piston rod         | 2    |
| 30-9  | 11209077  | Piston Rod Fitting | 2    |
| 30-10 | 10209078  | Dust ring          | 2    |
| 30-11 | 11209079  | End cap            | 2    |
| 30-12 | 10209080  | O ring             | 2    |
| 30-13 | 11209081A | Bore Weldment      | 2    |

## 4.5 Power unit (071101) explosive view

single phase,220V/60HZ

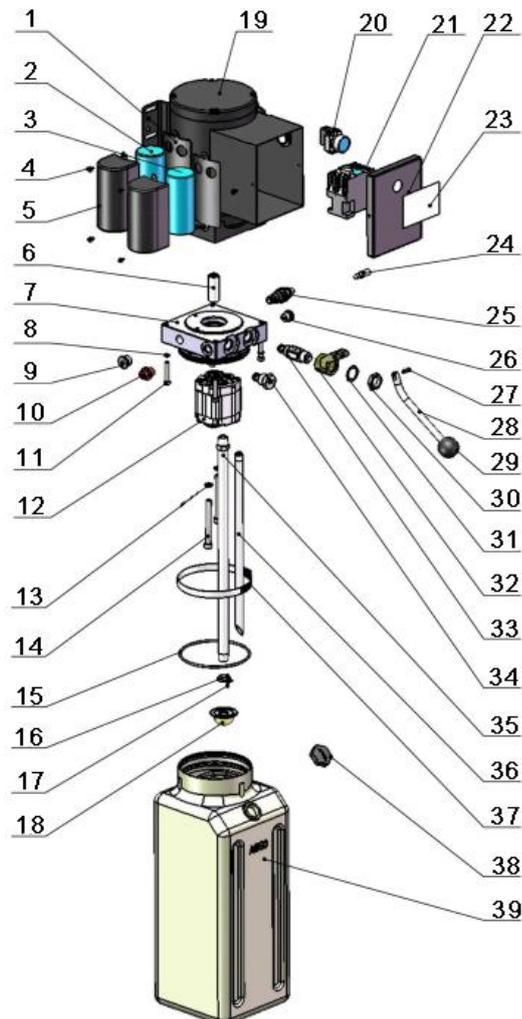
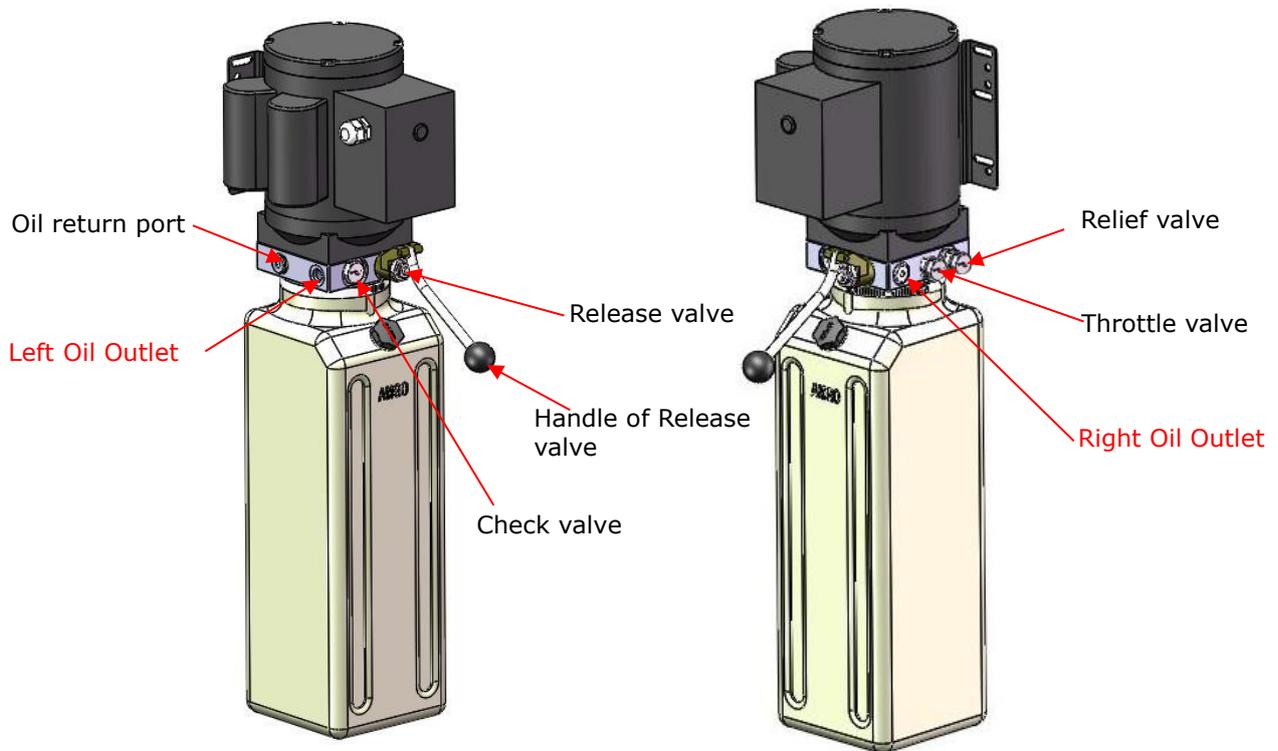


Fig. 49

### Part list of power unit (220V/60HZ/single phase)

| Item | Part No. | Description        | QTY. | Item | Part No. | Description             | QTY. |
|------|----------|--------------------|------|------|----------|-------------------------|------|
| 1    | 81400180 | Rubber pad         | 2    | 21   | 41030055 | AC contractor           | 1    |
| 2    | 81400250 | Starting capacitor | 1    | 22   | 81400287 | Motor wiring cover      | 1    |
| 3    | 81400200 | Running capacitor  | 1    | 23   | 71111104 | AMGO label              | 1    |
| 4    | 10420148 | Screw with washer  | 4    | 24   | 81400560 | Throttle valve          | 1    |
| 5    | 81400066 | Capacitor cover    | 2    | 25   | 81400266 | Relief valve            | 1    |
| 6    | 81400363 | Motor connector    | 1    | 26   | 81400284 | Plug                    | 1    |
| 7    | 80101013 | Manifold block     | 1    | 27   | 10720118 | Elastic pin             | 1    |
| 8    | 10209149 | Washer             | 4    | 28   | 81400451 | Release handle          | 1    |
| 9    | 81400276 | Iron Plug          | 1    | 29   | 10209020 | Plastic ball for handle | 1    |
| 10   | 81400259 | Red rubber plug    | 1    | 30   | 81400421 | Release valve nut       | 1    |
| 11   | 85090142 | Hex bolt           | 4    | 31   | 81400422 | Self-locking washer     | 1    |
| 12   | 81400280 | Gear pump          | 1    | 32   | 81400449 | valve seat(short)       | 1    |
| 13   | 10209034 | washer             | 2    | 33   | 81400567 | Release valve           | 1    |
| 14   | 81400295 | Hex nut            | 2    | 34   | 81400566 | Check valve             | 1    |
| 15   | 81400365 | O-ring             | 1    | 35   | 81400288 | Oil suction hose        | 1    |
| 16   | 10209152 | Ties               | 1    | 36   | 81400289 | Oil return hose         | 1    |
| 17   | 85090167 | Magnet             | 1    | 37   | 81400364 | Clamp(stainless steel)  | 1    |
| 18   | 81400290 | Filter             | 1    | 38   | 81400263 | Oil tank cap            | 1    |
| 19   | 81400413 | Motor              | 1    | 39   | 81400275 | Oil tank                | 1    |
| 20   | 10420070 | Button switch      | 1    |      |          |                         |      |

### 4.6 Illustration of hydraulic valve for hydraulic power unit



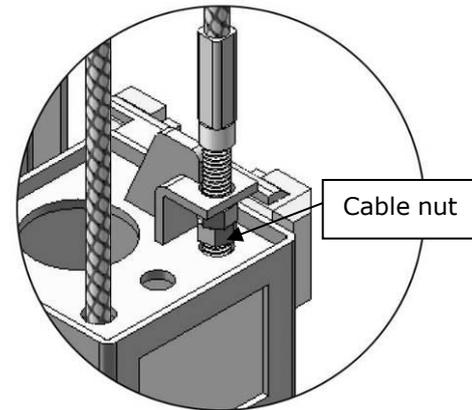
**Fig.50**

## V. TEST RUN

### 1. Adjustment of synchronous cable (See Fig. 51)

Use wrench to hold the cable fitting, meanwhile using ratchet spanner to tighten the cable nut until the two cables are in the same tension.

If the two vehicle carriages do not Synchronized when lifting and lowering, please screw and tighten the cable nut on the lower side carriage.



**Fig. 51**

### 2. Adjust safety cable

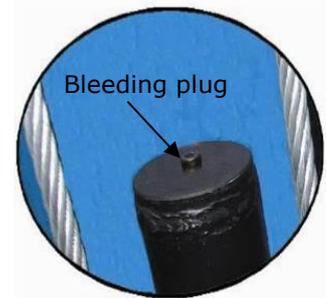
Rise the vehicle carriages and lock them at the same height, strain the safety cable and then release a little, and then tighten the safety cable nuts. Make sure the safety device can always lock the carriages properly.

At last, install the plastic cover of the safety device.

### 3. Bleeding air from oil cylinder (See Fig. 52)

Rise the vehicle carriages and lock them at the same height, strain the safety cable and then release a little, and then tighten the safety cable nuts. Make sure the safety device can always lock the carriages properly.

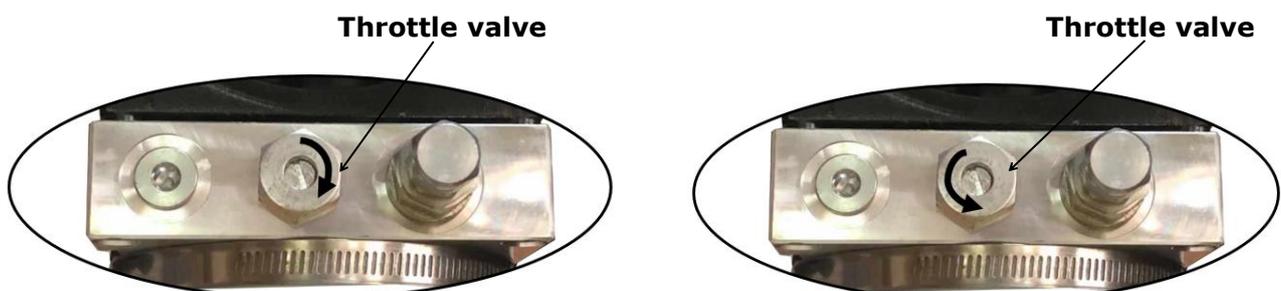
At last, install the plastic cover of the safety device.



**Fig. 52**

### 4. Adjust the lowering speed

You can adjust the lowering speed of the lift if needing: screw the throttle valve clockwise to decrease the lowering speed, or counterclockwise to increase the lowering speed.



Adjust clockwise, decrease lowering speed

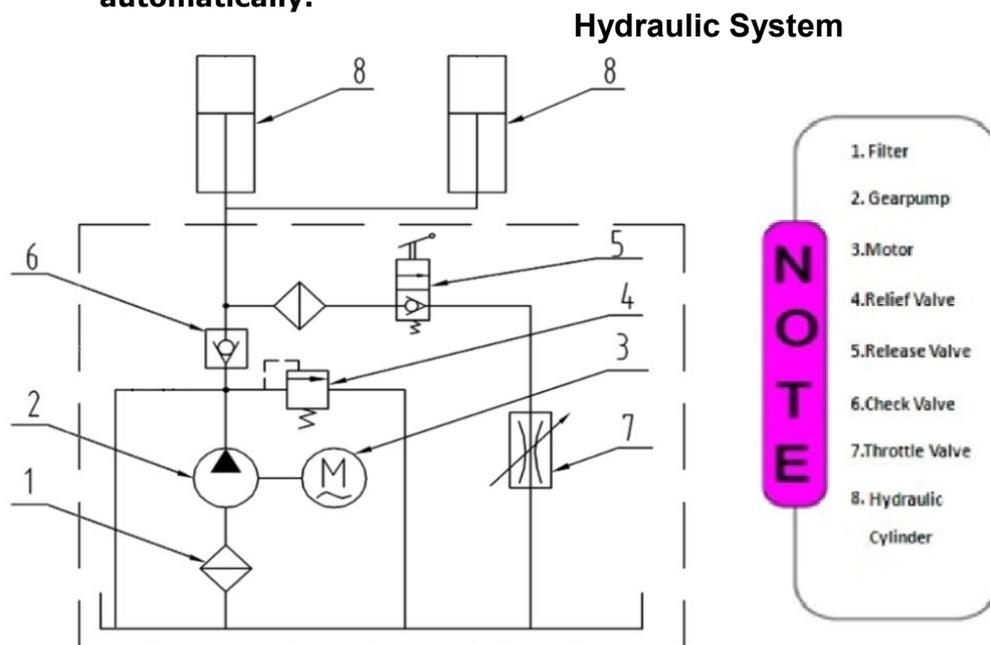
Counterclockwise, increase lowering speed

**Fig. 53**

## 5. Test with load

After finishing the above adjustment, test running the lift with load. Run the lift in low position for several times firstly, make sure the lift can rise and lower synchronously, 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.

**NOTE: It may be vibrated when lifting at start, please lifting it with load for several times, the air would be bled and the vibration would be disappeared automatically.**



**Fig.54**

## VI. OPERATION INSTRUCTIONS

**Please read the safety tips carefully before operating the lift**

### To lift vehicle

1. Keep clean of site near the lift;
2. Position lift arms to the lowest position;
3. To shortest lift arms;
4. Open lift arms;
5. Position vehicle between columns;
6. Move arms to the vehicle's lifting point;

**Note: The four lift arms must contact the vehicle's lifting point at the same time where manufacturers recommended**

7. Push button **UP** until the lift pads contact underside of vehicle totally. Recheck to make sure vehicle is secure;
8. Continue to raise the lift slowly to the desired working height, ensuring the balance of vehicle;
9. Push release handle to lower lift onto the nearest safety. The vehicle is ready to repair.

### **To lower vehicle**

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

Note: In order to extend the service life of the cylinder and seals, raise the machine to top at least once a day

### **VII. MAINTENANCE SCHEDULE**

#### **Monthly:**

1. Re-torque the anchor bolts with 150 N·M;
2. Check all connectors, bolts and pins to insure proper mounting;
3. Lubricate cable with lubricant;
4. Make a visual inspection of all hydraulic hoses/lines for possible wear or leakage;
5. Check Safety device and make sure proper condition;
6. Lubricate all Rollers and Pins with 90wt. Gear oil or equivalent;

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

#### **Every six months:**

1. Make a visual inspection of all moving parts for possible wear, interference or damage.
2. Check and adjust as necessary, equalizer tension of the cables to insure level lifting.
3. Check columns for plumbness.
4. Check Rubber Pads and replace as necessary.
5. Check Safety device and make sure in proper condition.

#### **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                    | <ol style="list-style-type: none"> <li>1. Button does not work</li> <li>2. Wiring connections are not in good condition</li> <li>3. Motor burned out</li> <li>4. Height Limit Switch is damaged</li> <li>5. AC contactor burned out</li> </ol> | <ol style="list-style-type: none"> <li>1. Replace button</li> <li>2. Repair all wiring connections</li> <li>3. Repair or replace motor</li> <li>4. Replace the Limit Switch</li> <li>5. Replace AC Contactor</li> </ol> |
| Motor runs but the lift is not raised | <ol style="list-style-type: none"> <li>1. Motor runs in reverse rotation</li> <li>2. Gear Pump out of operation</li> <li>3. Release Valve in damage</li> <li>4. Relief Valve or Check Valve in damage</li> <li>5. Low oil level</li> </ol>     | <ol style="list-style-type: none"> <li>1. Reverse two power wire</li> <li>2. Repair or replace</li> <li>3. Repair or replace</li> <li>4. Repair or replace</li> <li>5. Fill tank</li> </ol>                             |
| Lift does not stay up                 | <ol style="list-style-type: none"> <li>1. Release Valve out of work</li> <li>2. Relief Valve or Check Valve leakage</li> <li>3. Cylinder or Fittings leaks</li> </ol>  | Repair or replace   |
| Lift raises too slow                  | <ol style="list-style-type: none"> <li>1. Oil line is jammed</li> <li>2. Motor running on low voltage</li> <li>3. Oil mixed with air</li> <li>4. Gear Pump leaks</li> <li>5. Overload lifting</li> </ol>                                       | <ol style="list-style-type: none"> <li>1. Clean the oil line</li> <li>2. Check Electrical System</li> <li>3. Fill tank</li> <li>4. Replace Pump</li> <li>5. Check load</li> </ol>                                       |
| Lift cannot lower                     | <ol style="list-style-type: none"> <li>1. Safety device are in activated</li> <li>2. Release Valve in damage</li> <li>3. Safety cable broken</li> <li>4. Oil system is jammed</li> </ol>   | <ol style="list-style-type: none"> <li>1. Release the safeties</li> <li>2. Repair or replace</li> <li>3. Replace</li> <li>4. Clean the oil system</li> </ol>  |

## 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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