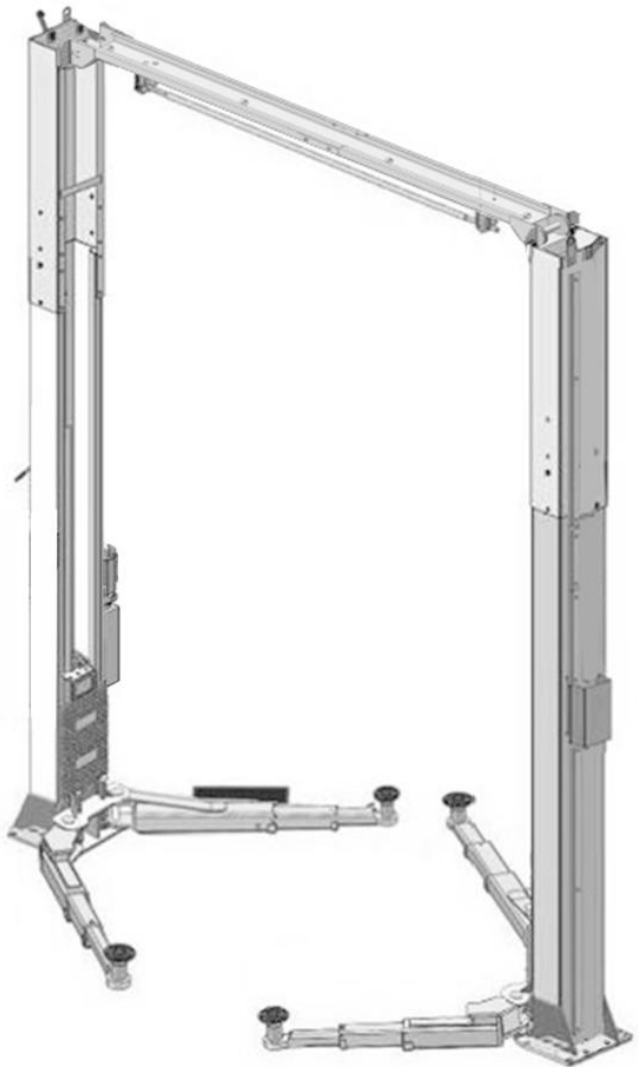
BEAR®

# Installation And Service Manual



**TWO POST LIFT**
**Model: 30-20904A-10, 30-20905A-10**

# CONTENTS

# I. PRODUCT FEATURES AND SPECIFICATIONS

## CLEAR-FLOOR DIRECT-DRIVED MODEL FEATURES

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

· Direct-drived 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

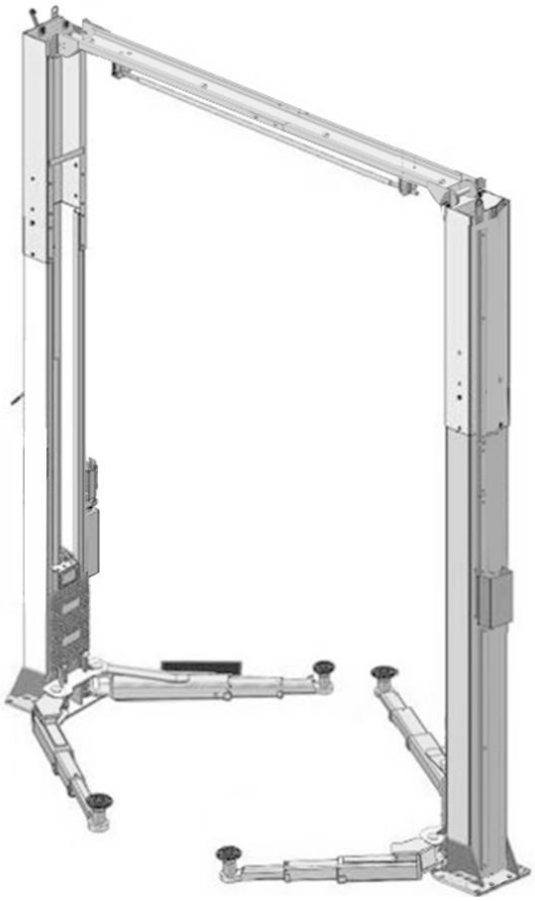


**Fig. 1**

### O30-20904A-10,30-20905A-10 SPECIFICATIONS

| Model | Style | Lifting Capacity | Lifting Time | Lifting Height | Overall Height | Overall Width | Width Between Columns | Minimum Pad Height | Motor |
|---|---|---|---|---|---|---|---|---|---|
| 20904A-10 | Clear-floor Direct-drived | 9,000 lbs | 56S | 71 1/2''-84 1/2'' | 142-1/2"/150-1/2" | 135" | 112 1/4" | 3 1/2''-12 1/2'' | 2.0 HP |
| | | | | | 166-5/8"/174-1/2" | | | | |
| 20905A-10 | | 10,000 lbs | 56S | | 142-1/2"/150-1/2" | | | | |
| | | | | | 166-5/8"/174-1/2" | | | | |

## Arm Swings View
## For Model OH-9(H) OH-10(H)

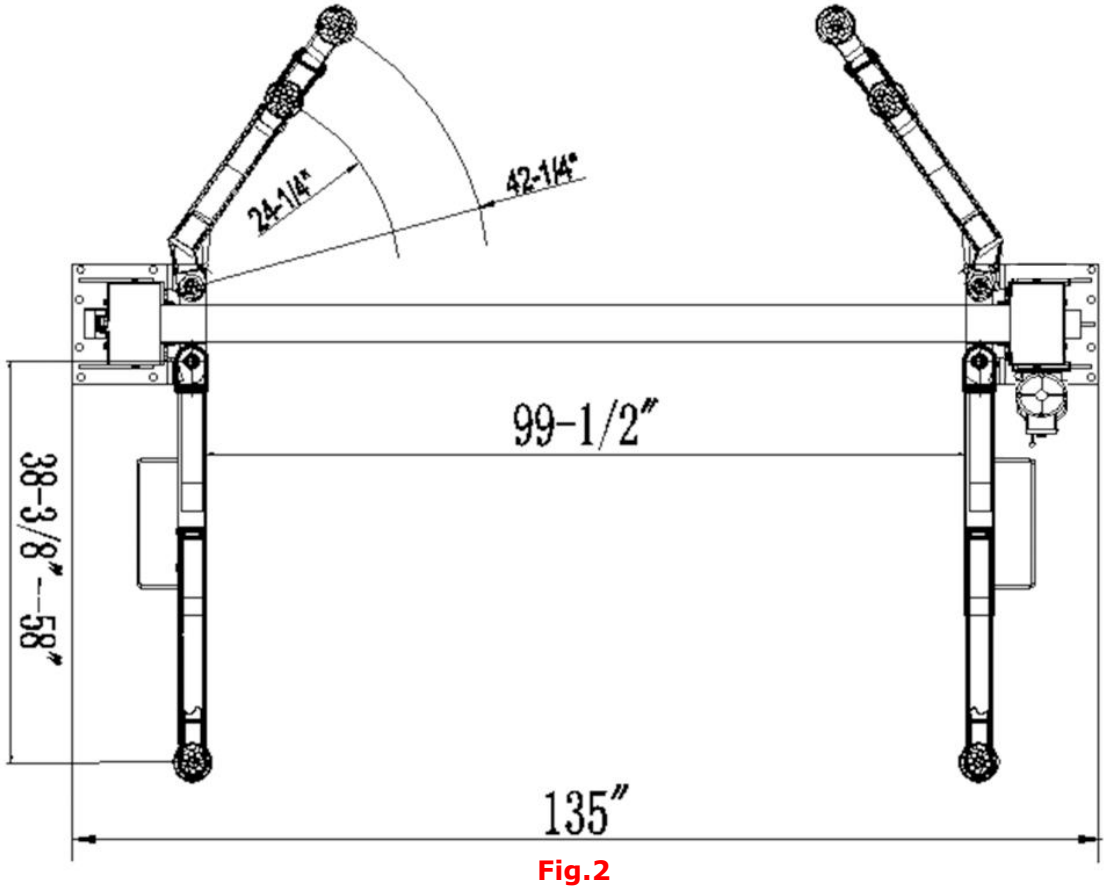



Fig.2

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

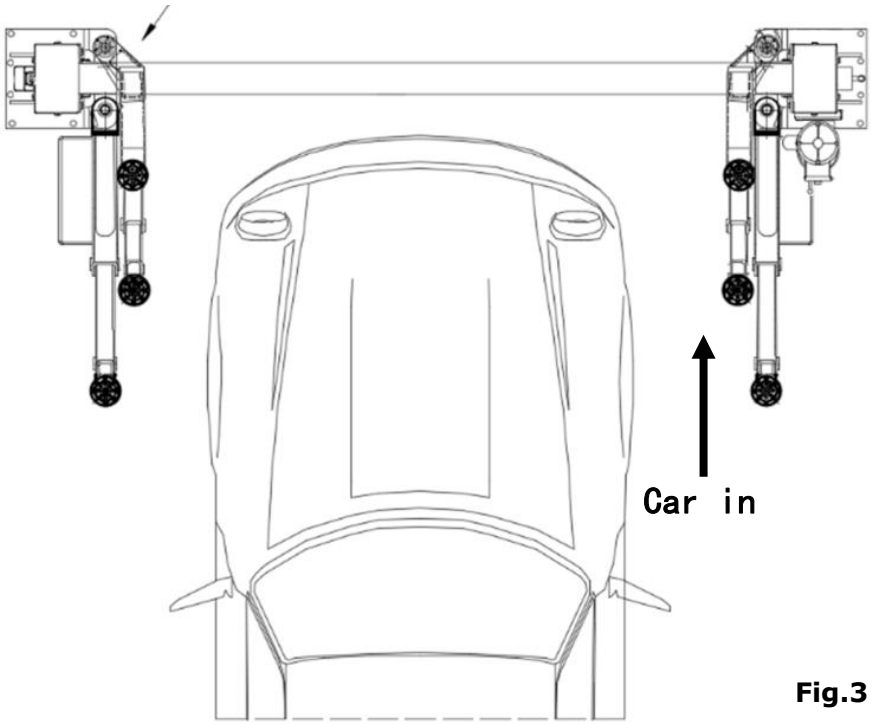



Fig.3

Swing and extending the arms to the lifting point of vehicle

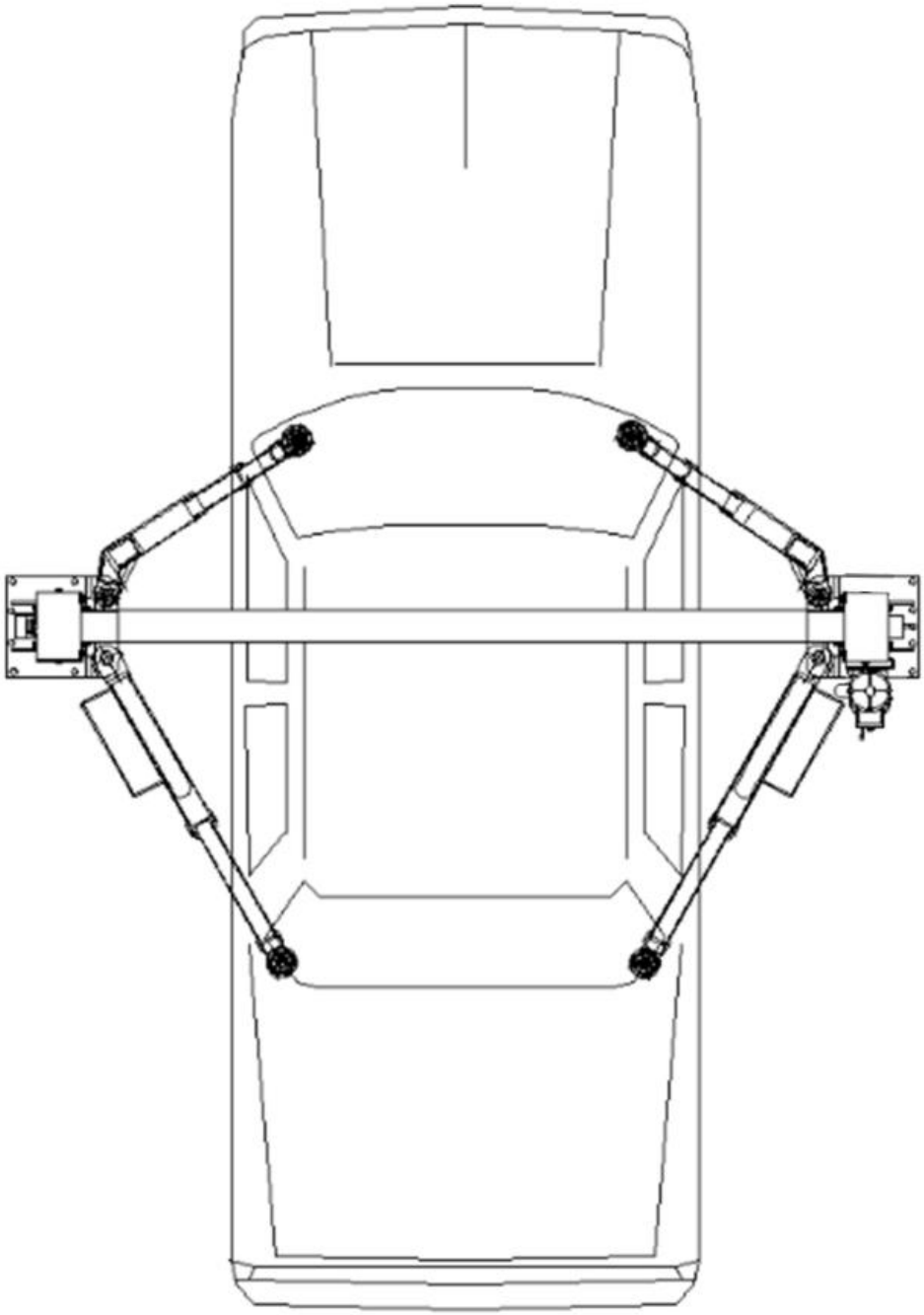


**Fig.4**

## II. INSTALLATION REQUIREMENT

### A. TOOLS REQUIRED

✓ Rotary Hammer Drill (Φ19)

✓ Carpenter's Chalk

✓ Hammer

✓ Screw Sets

✓ Level Bar

✓ Tape Measure (7.5m)

✓ English Spanner (12")

✓ Pliers

✓ Ratchet Spanner with Socket (28#)

✓ Socket Head Wrench (3#, 5#, 8#)

- Wrench set

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

- 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 6” 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.

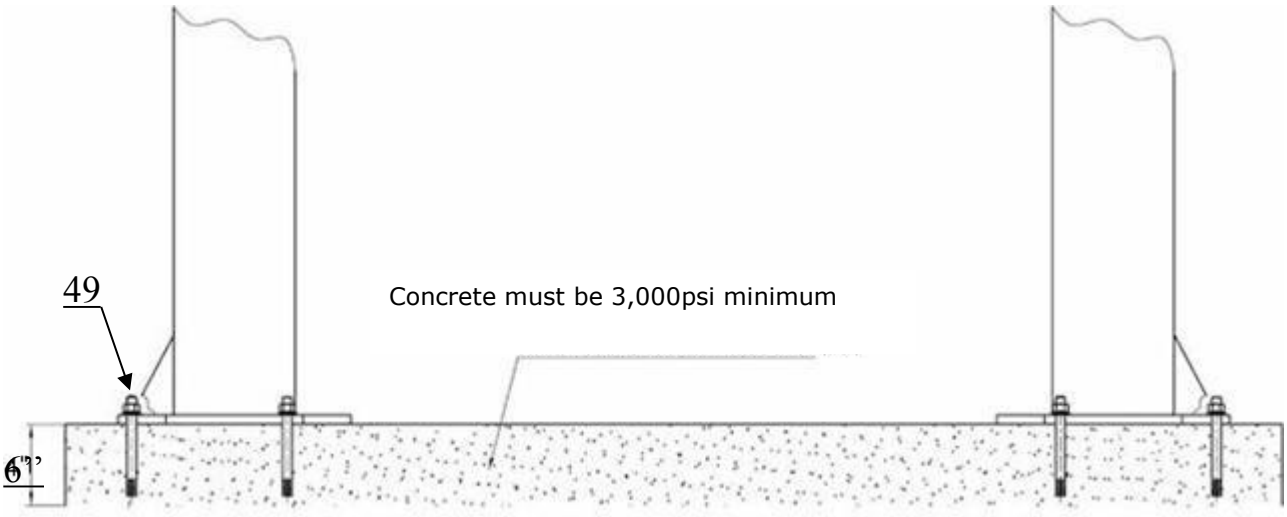



**Fig. 7**

**E. POWER SUPPLY**

The electrical source must be 2.0HP minimum. The source cable size must be 2.5mm² 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 chalk line to establish installation layout of base-plate **(See Fig.8)**.

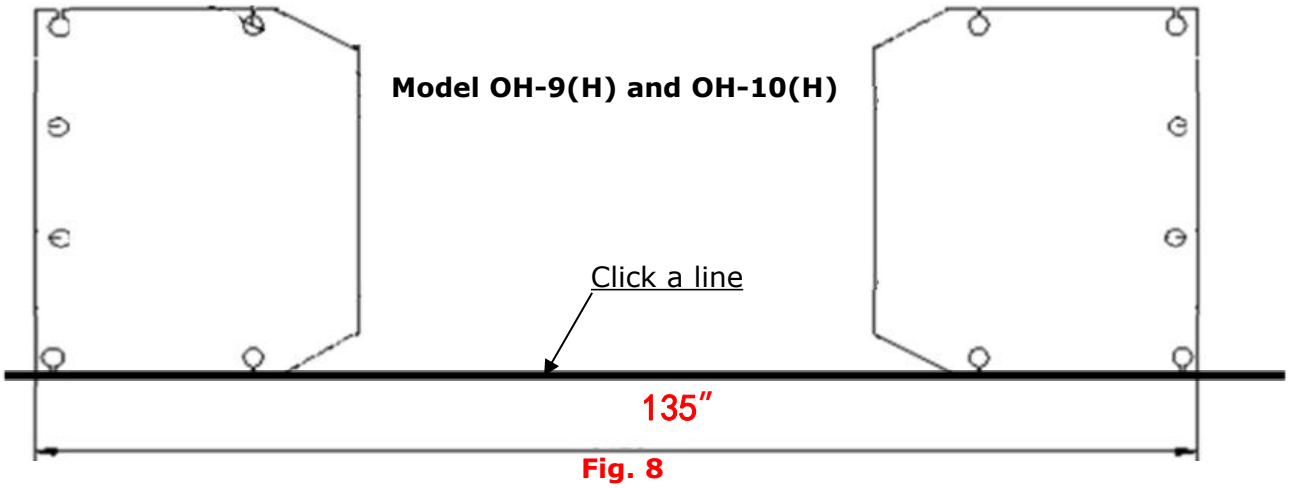



**Fig. 8**

### C. Check the parts before assembly.

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


**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).**

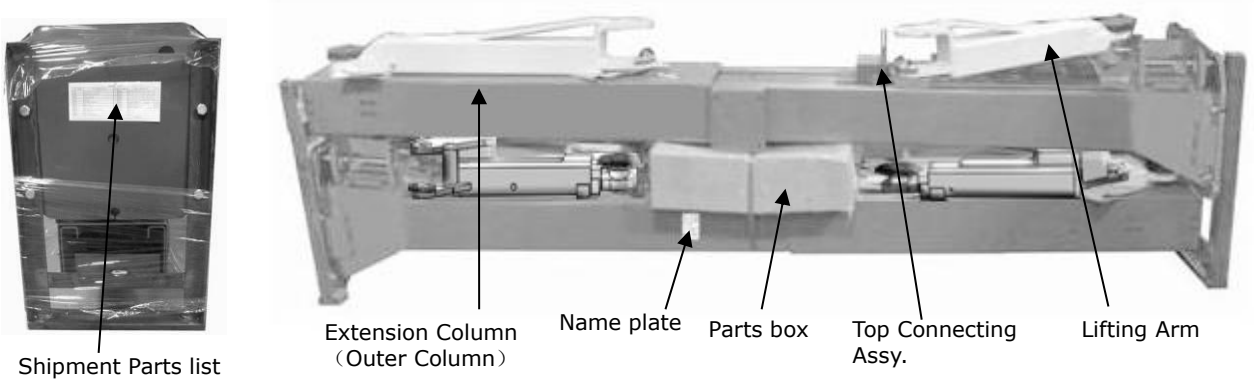



**Fig.10**

3. Loose 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).**

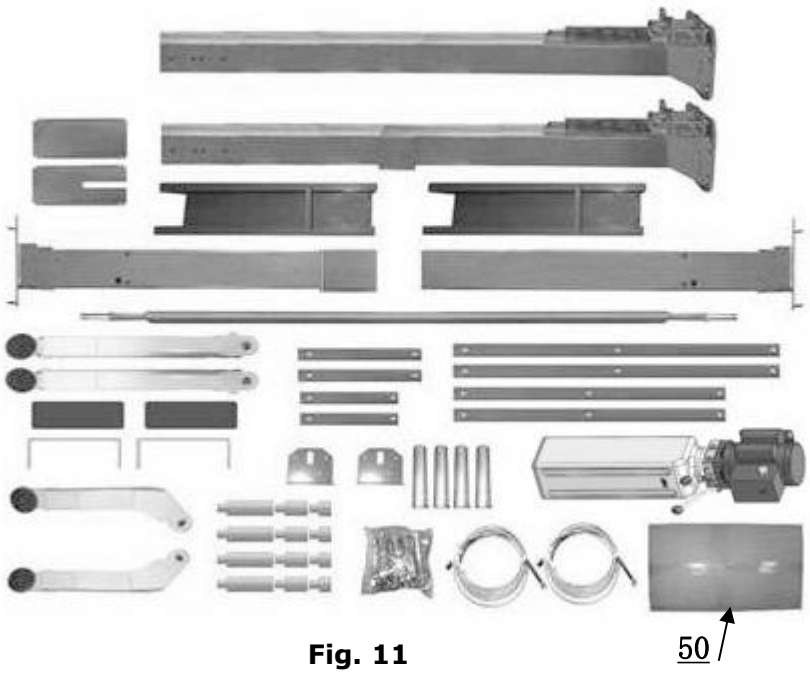



**Fig. 11**
Parts in the shipment parts list

**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).**

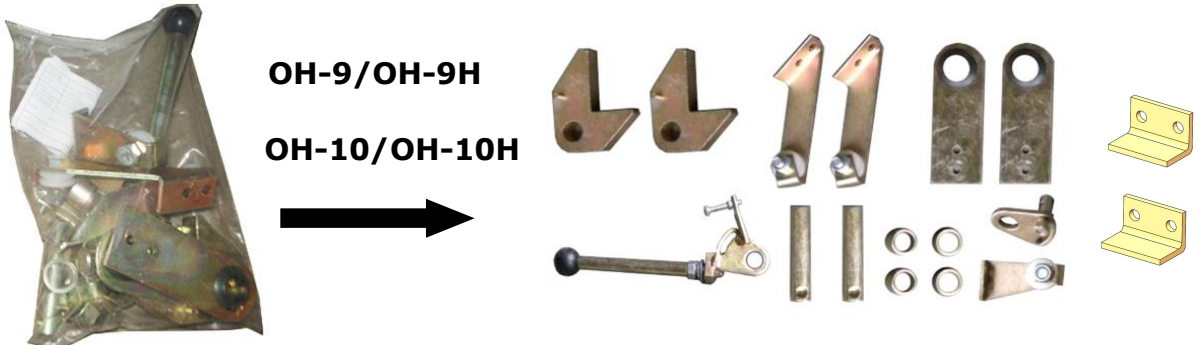



**Fig. 14**

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

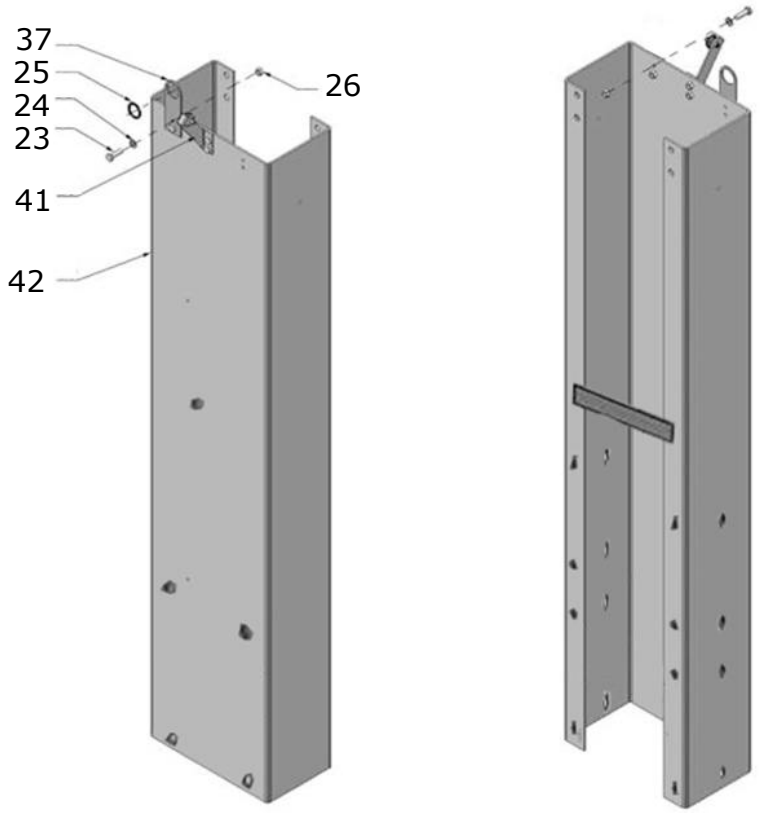



**Fig. 15**

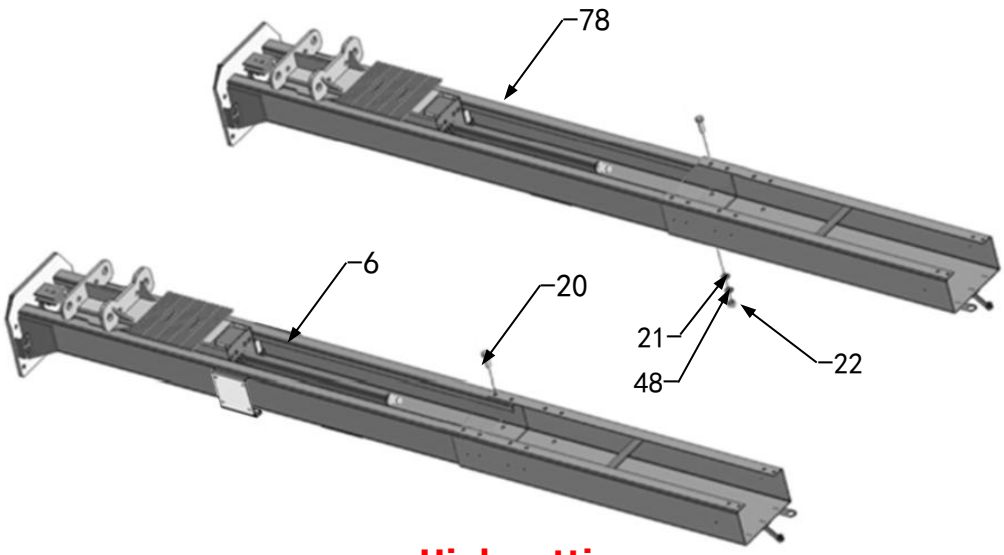
**E. Position power-side column**

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

OH-9, OH-10: 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;

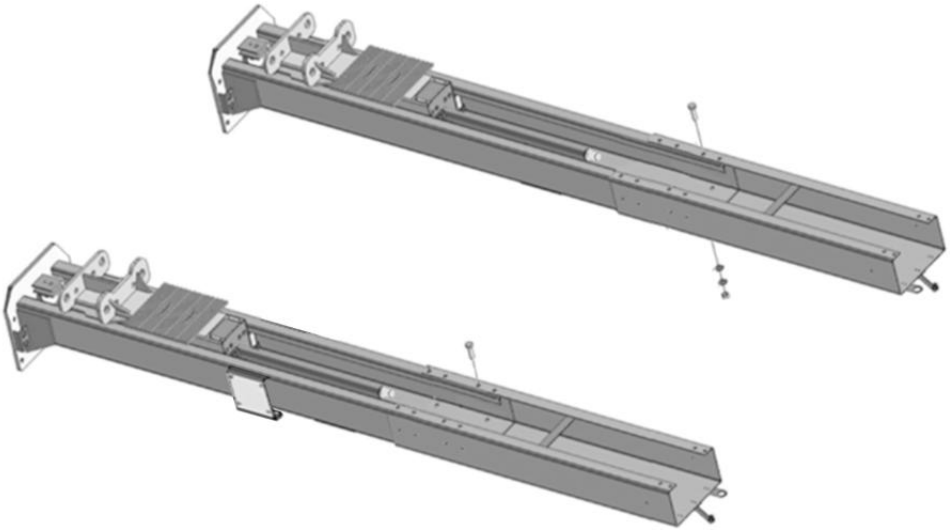
OH-9H, OH-10H: Not suitable for installation when the workshop height is less than 167-3/8"; only low setting installation for height between 167-3/8" ~ 175-1/4"; the height of the workshop is greater than 175-1/4”, installation can be in both high and low setting;

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




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

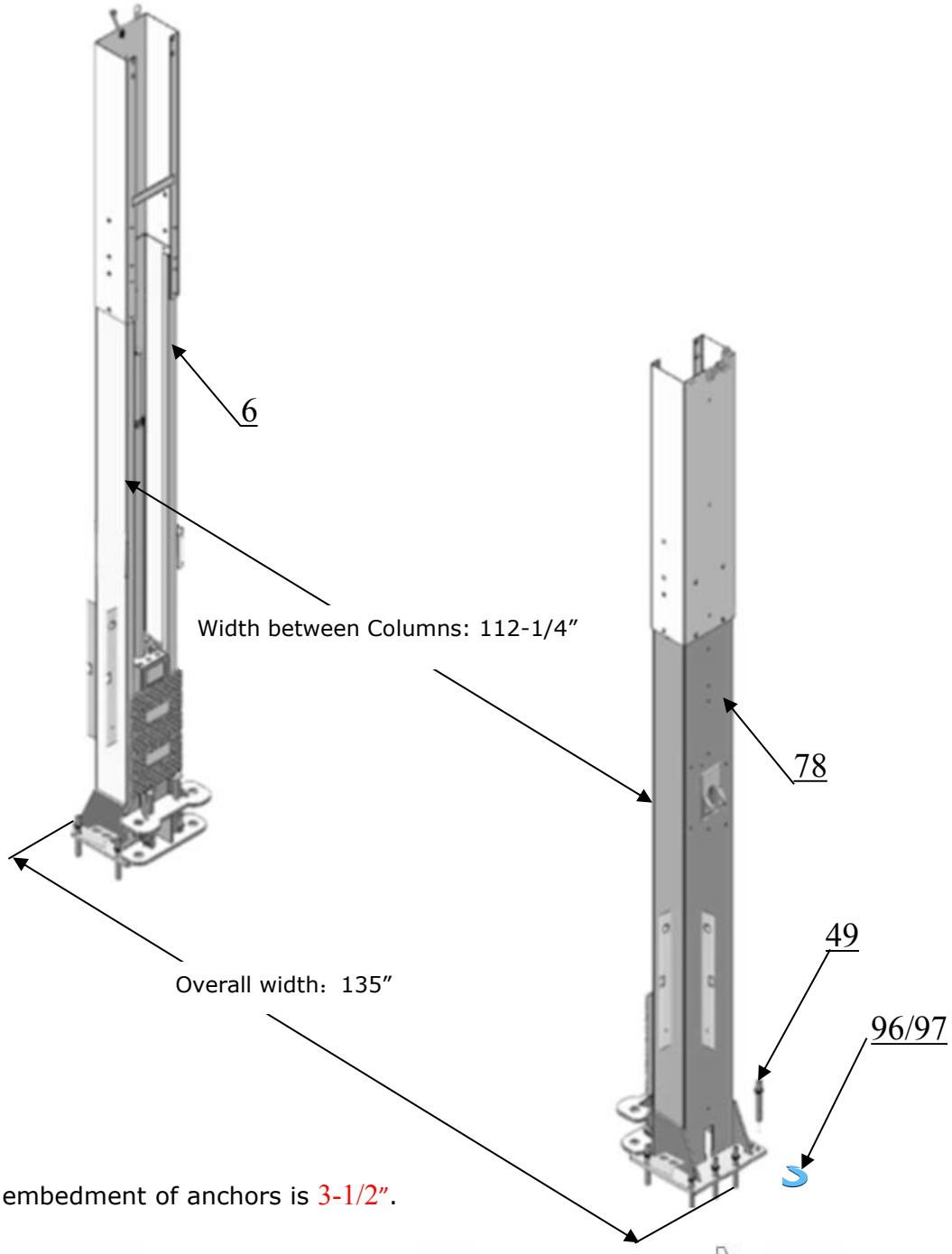
2. Low setting installation, choose the high position holes of the outer column and install with the inner column. (See Fig.17).



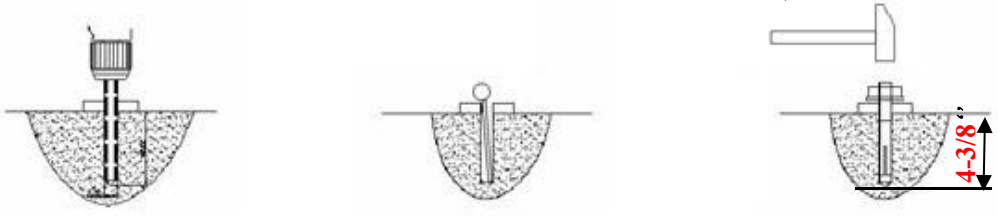
**Low setting**
**Fig.17**

**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 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)**.

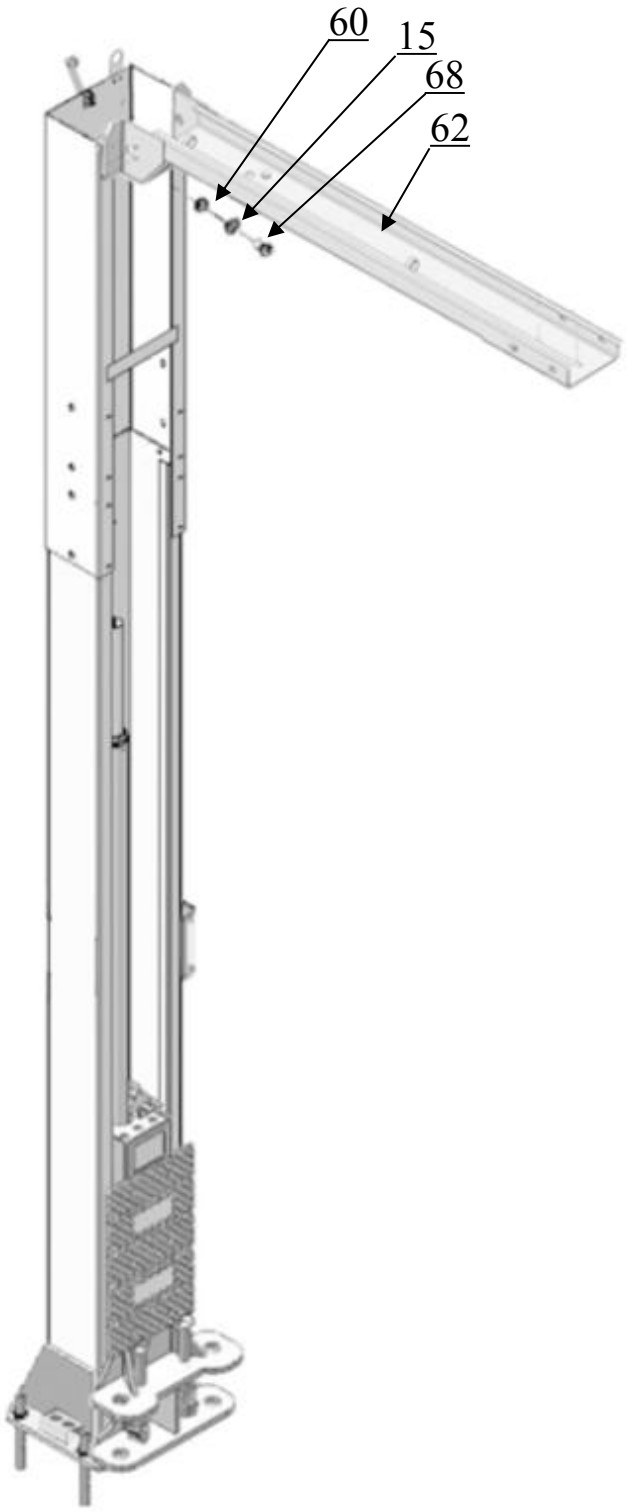



**Fig. 19**

2. Install the top beam, fixed the anchor bolts.

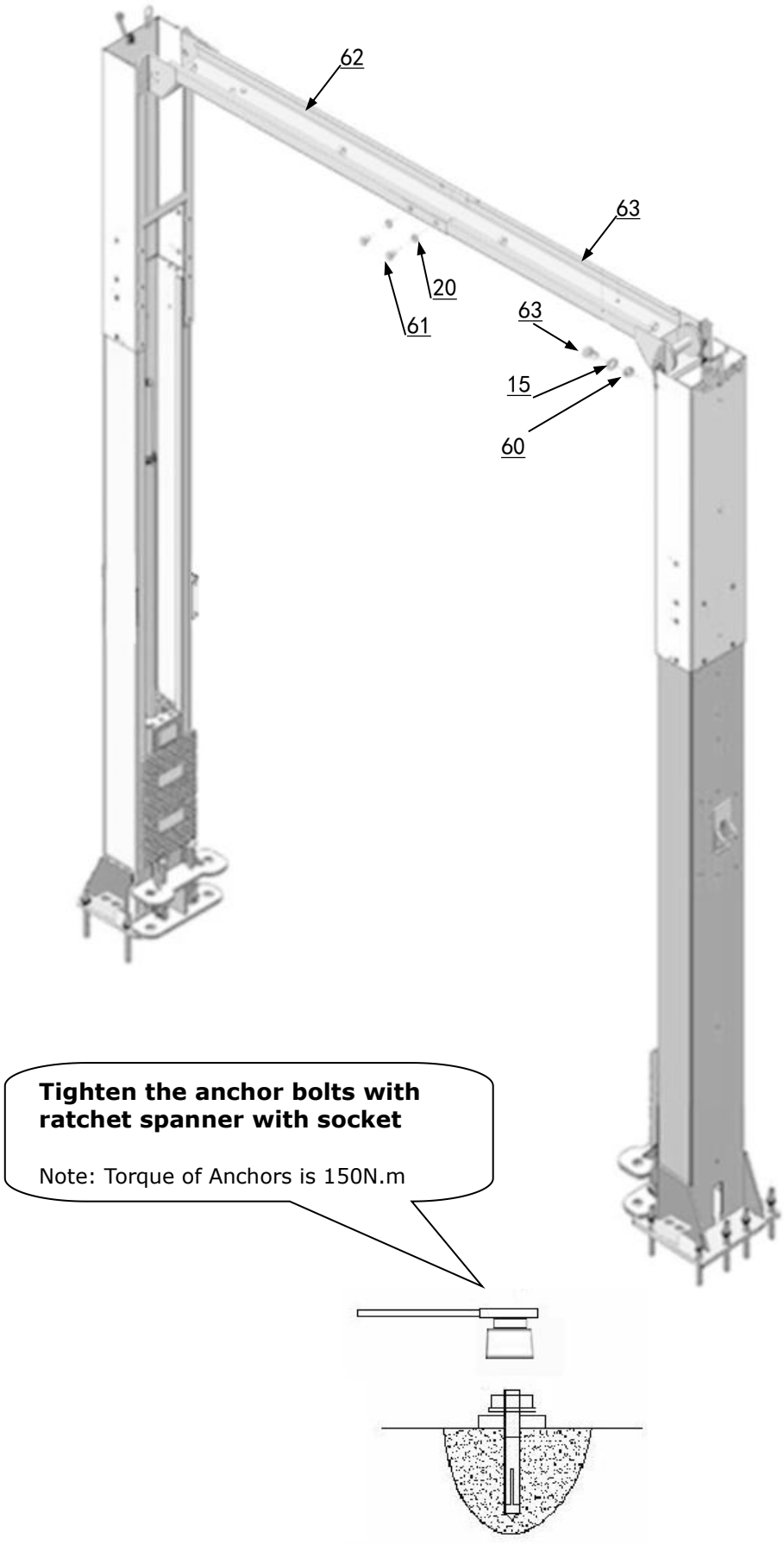
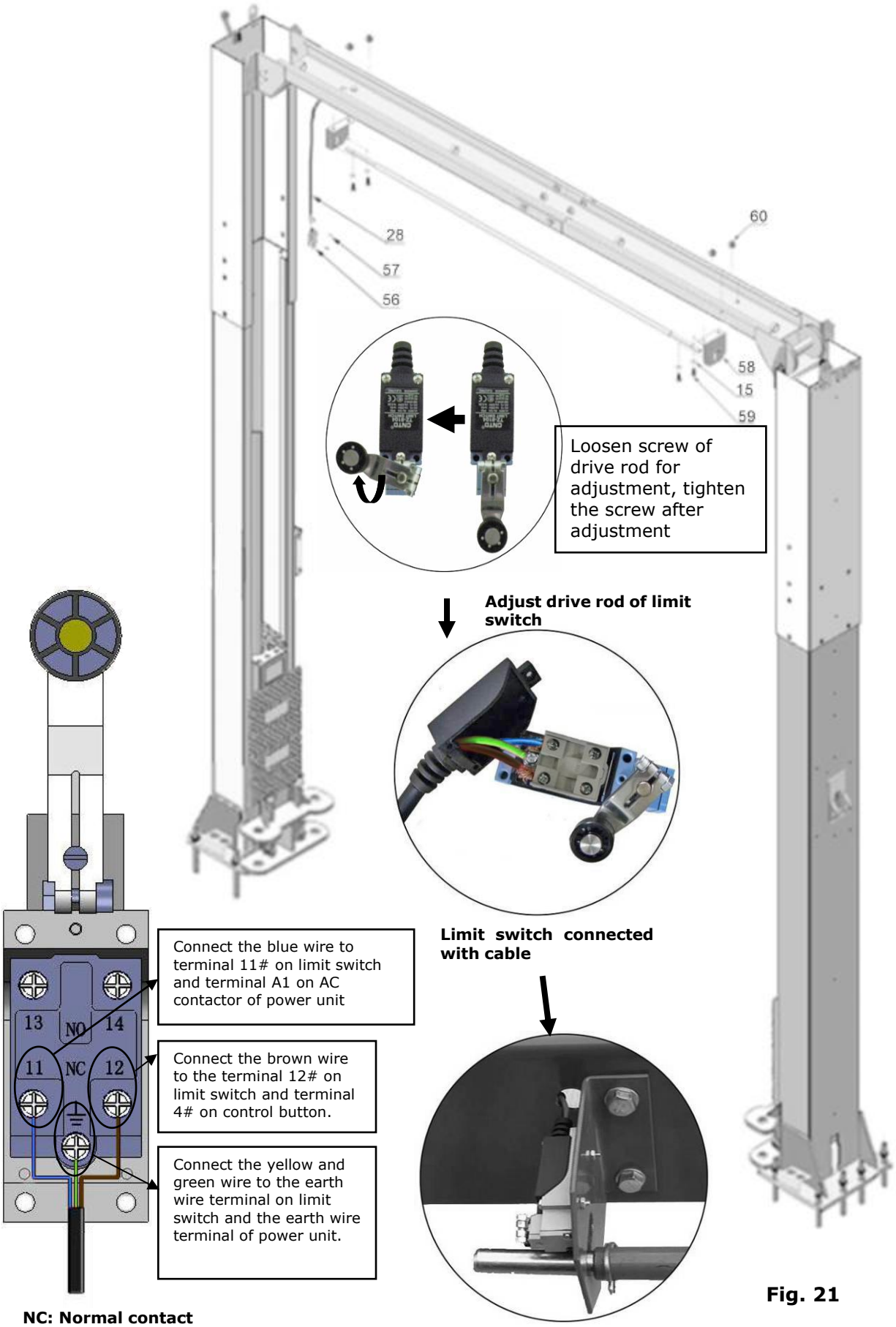



Fig. 20

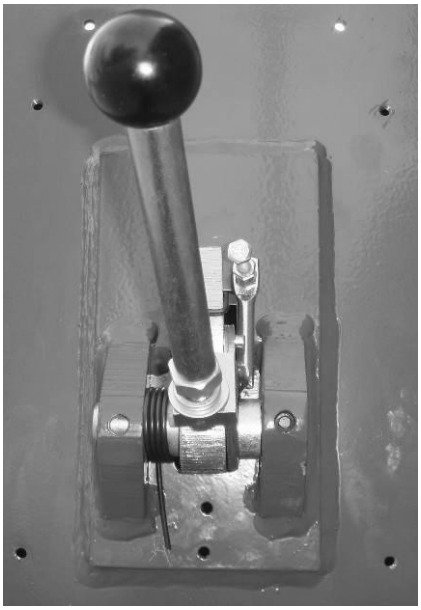
## H. Installing the limit switch control bar and limit switch (See Fig. 21).

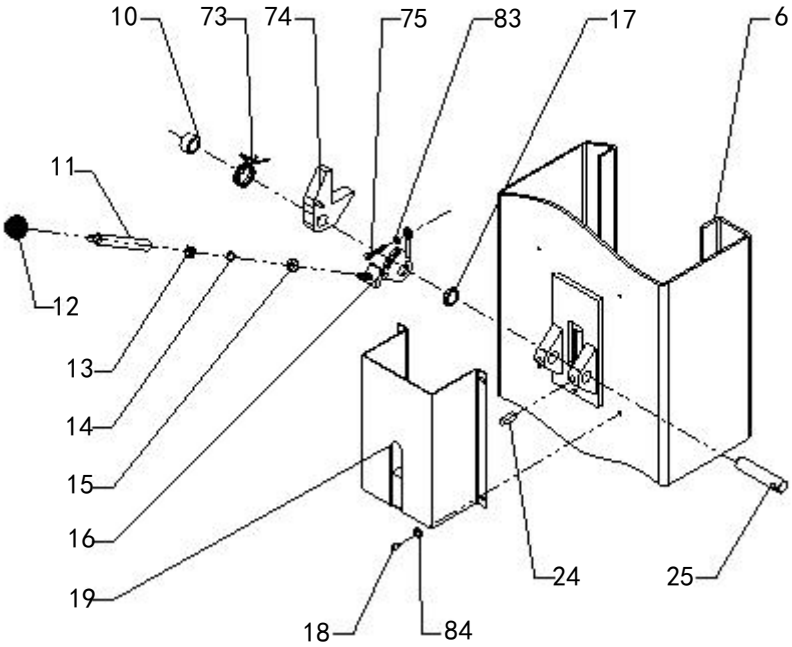



**NC: Normal contact**

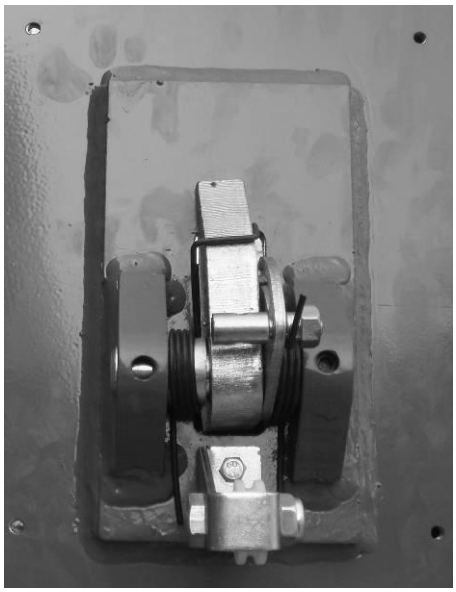
**Fig. 21**

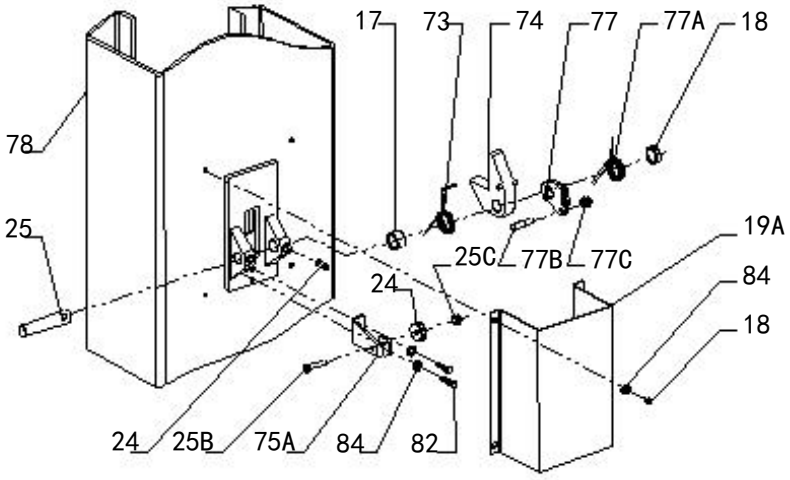
## I. Install safety device (See Fig. 22 & Fig. 23).






**Power-side safety device**
**Fig.22**






**Off-side safety device**
**Fig.23**

**J.** Lift the carriages up and make them be locked at the same level **(See Fig. 24).**

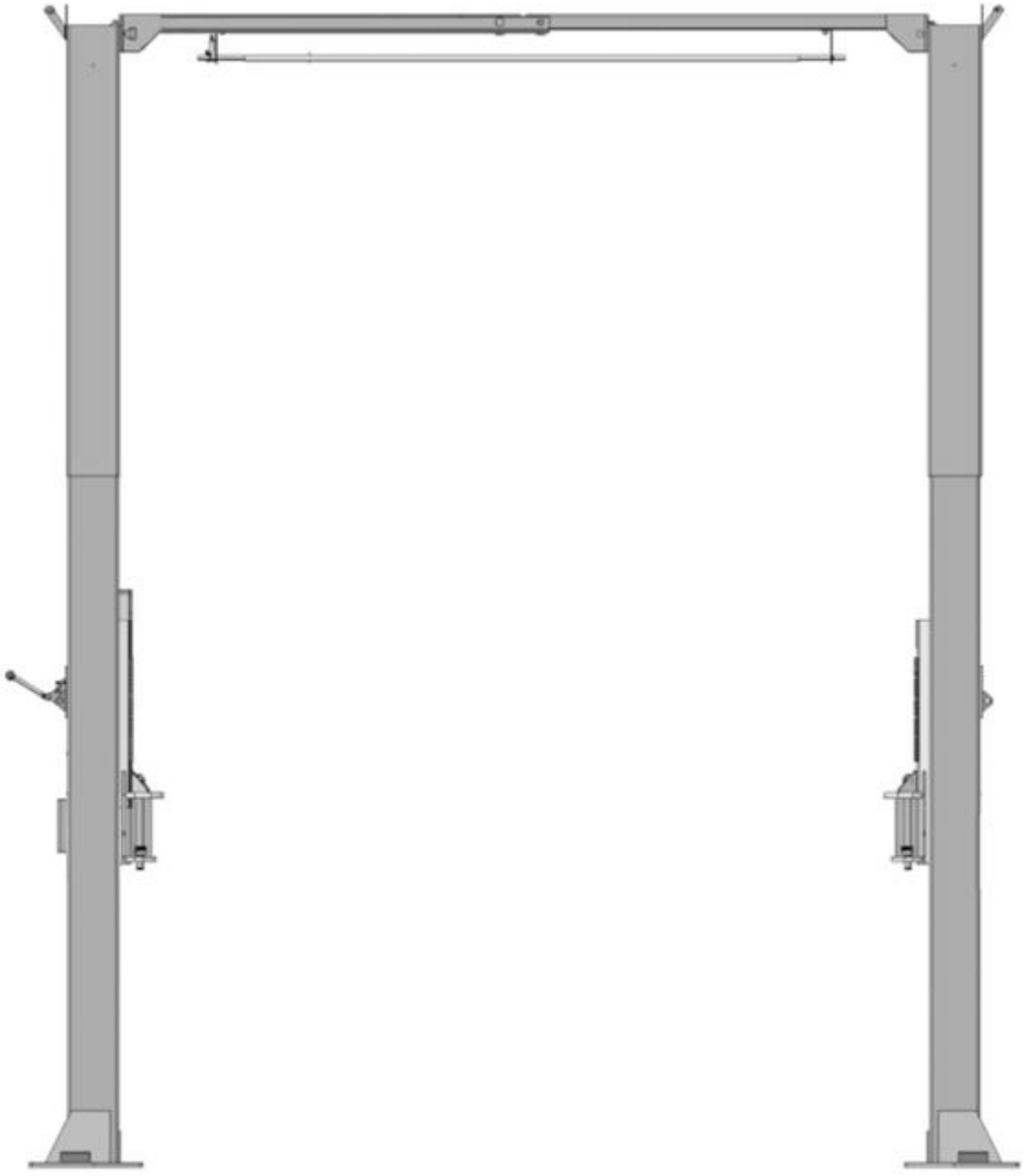


**Fig. 24**

## K. Install cables

1. Low setting cable connection **(See Fig. 25).**

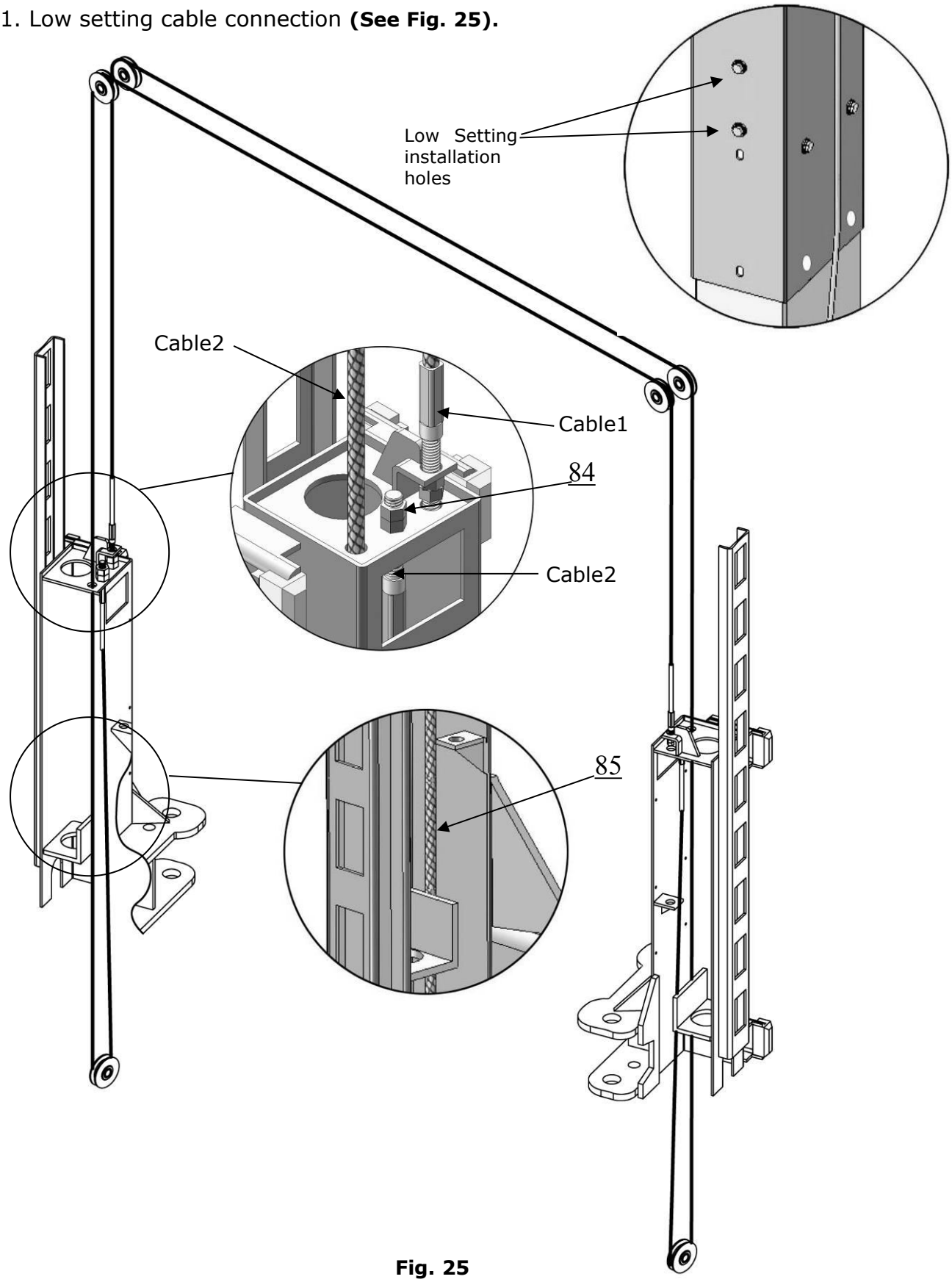



**Fig. 25**

## 2. High setting cable connection

2.1. Cable pass through from the bottom of the carriages and be pulled out from the open of carriages, then screw the two cable nuts **(See Fig. 26).**

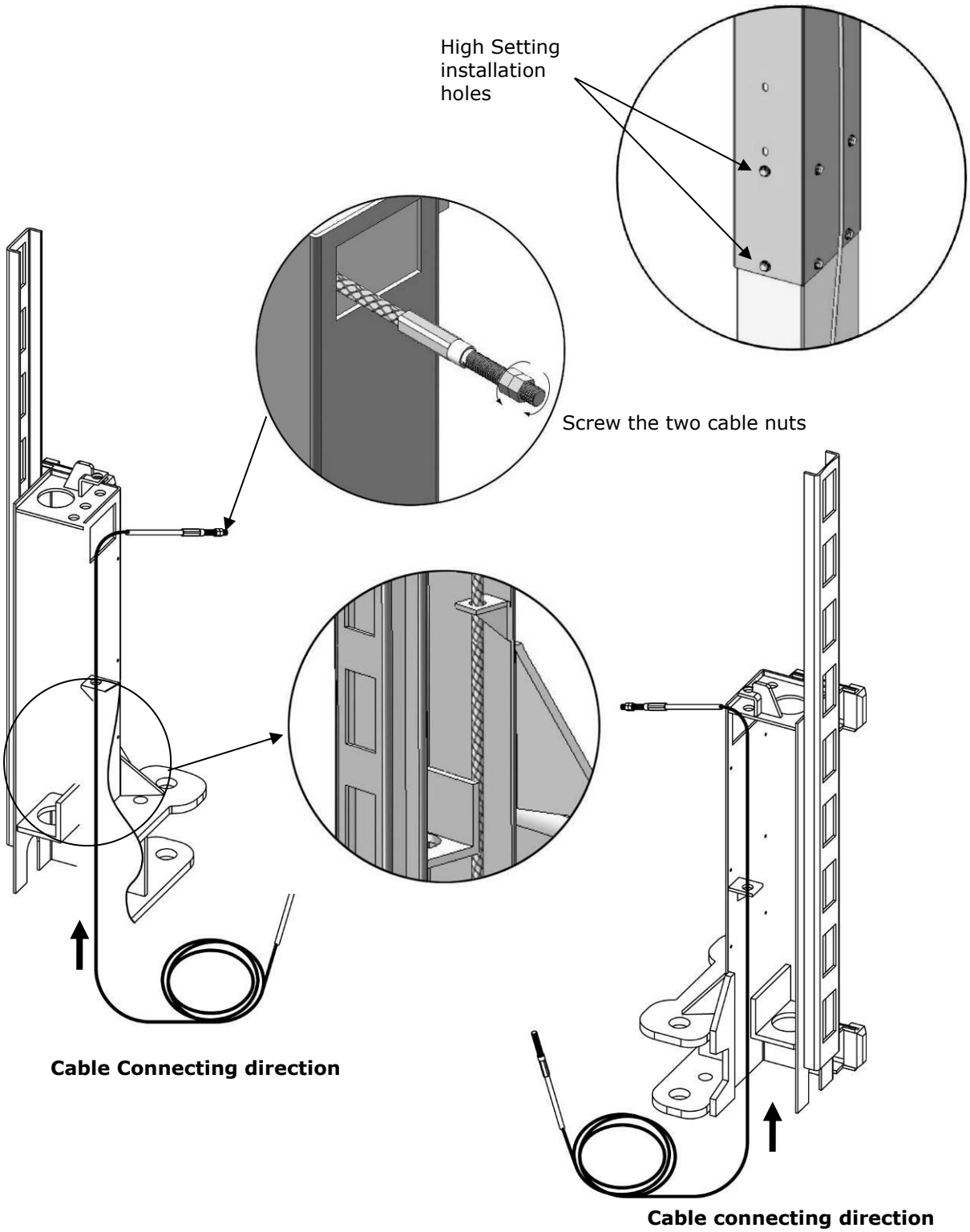



**Fig. 26**

2.2 Connecting cable for high setting **(See Fig. 27).**

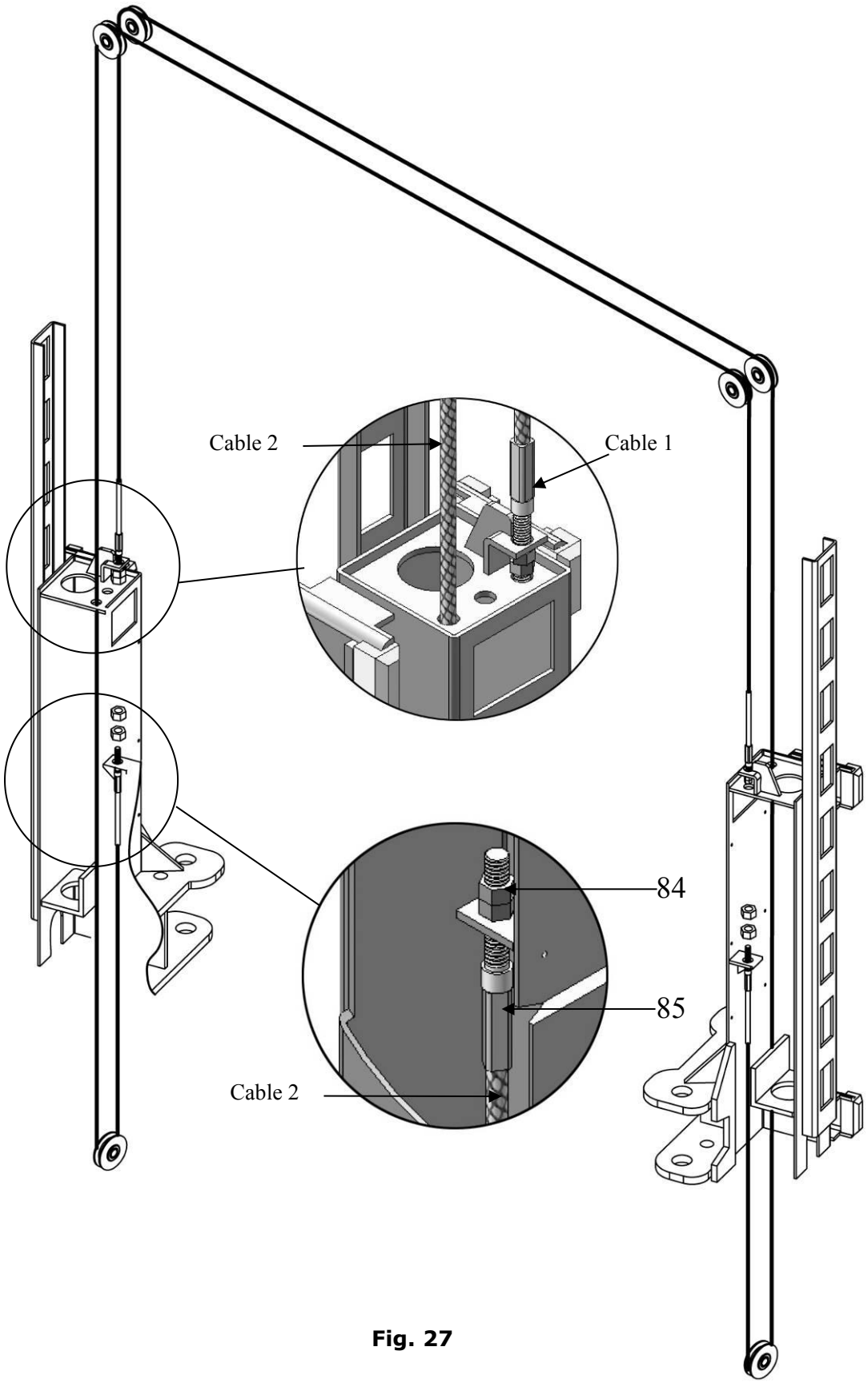



**Fig. 27**

**L. Install oil hose. (See Fig. 28).**

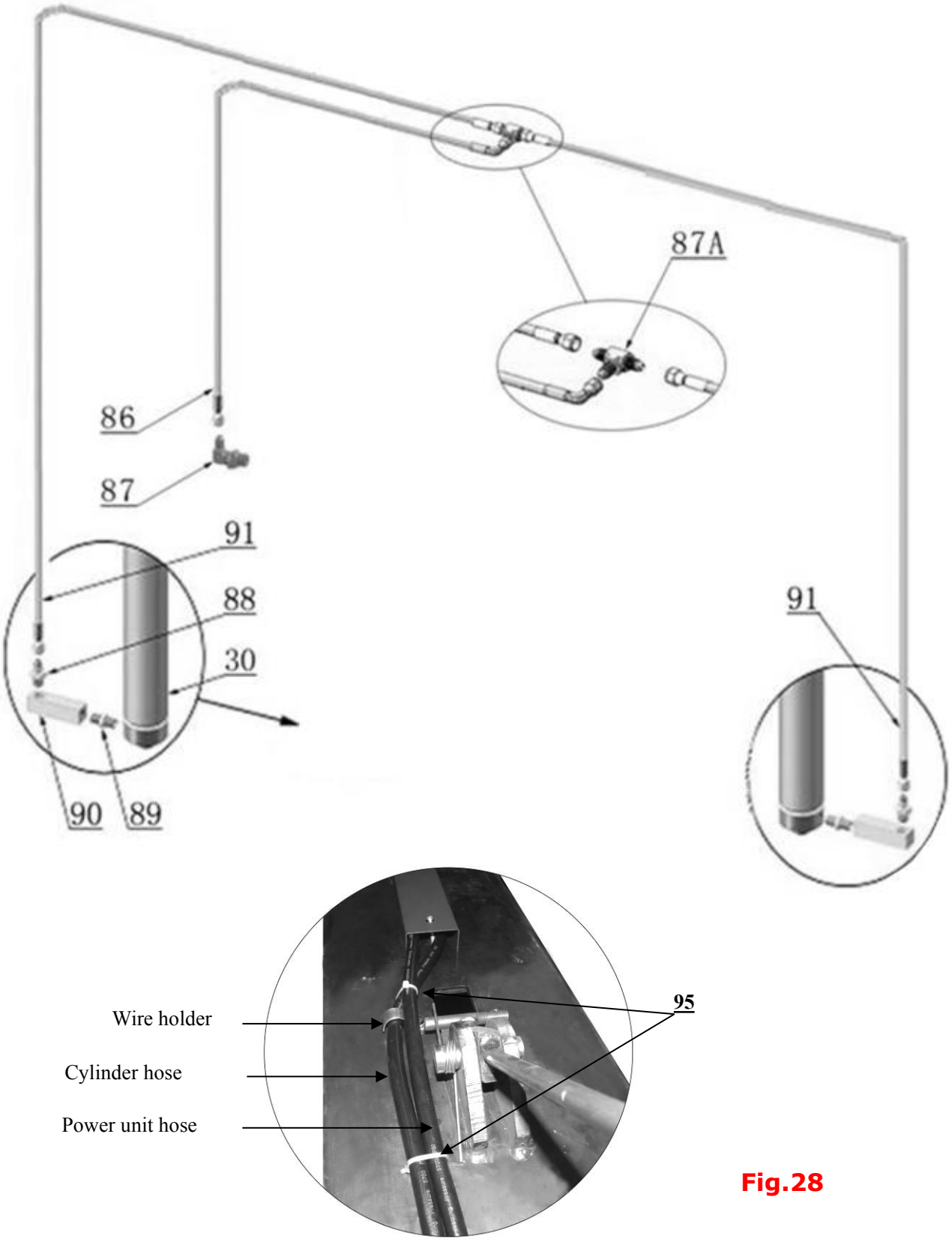



**Fig.28**

**Following the above fig., first fix the cylinder hose with a wire holder, and then tie the power unit hose and the cylinder hose together with two cable ties**

**M. Install protective cover. (Fig.29)**

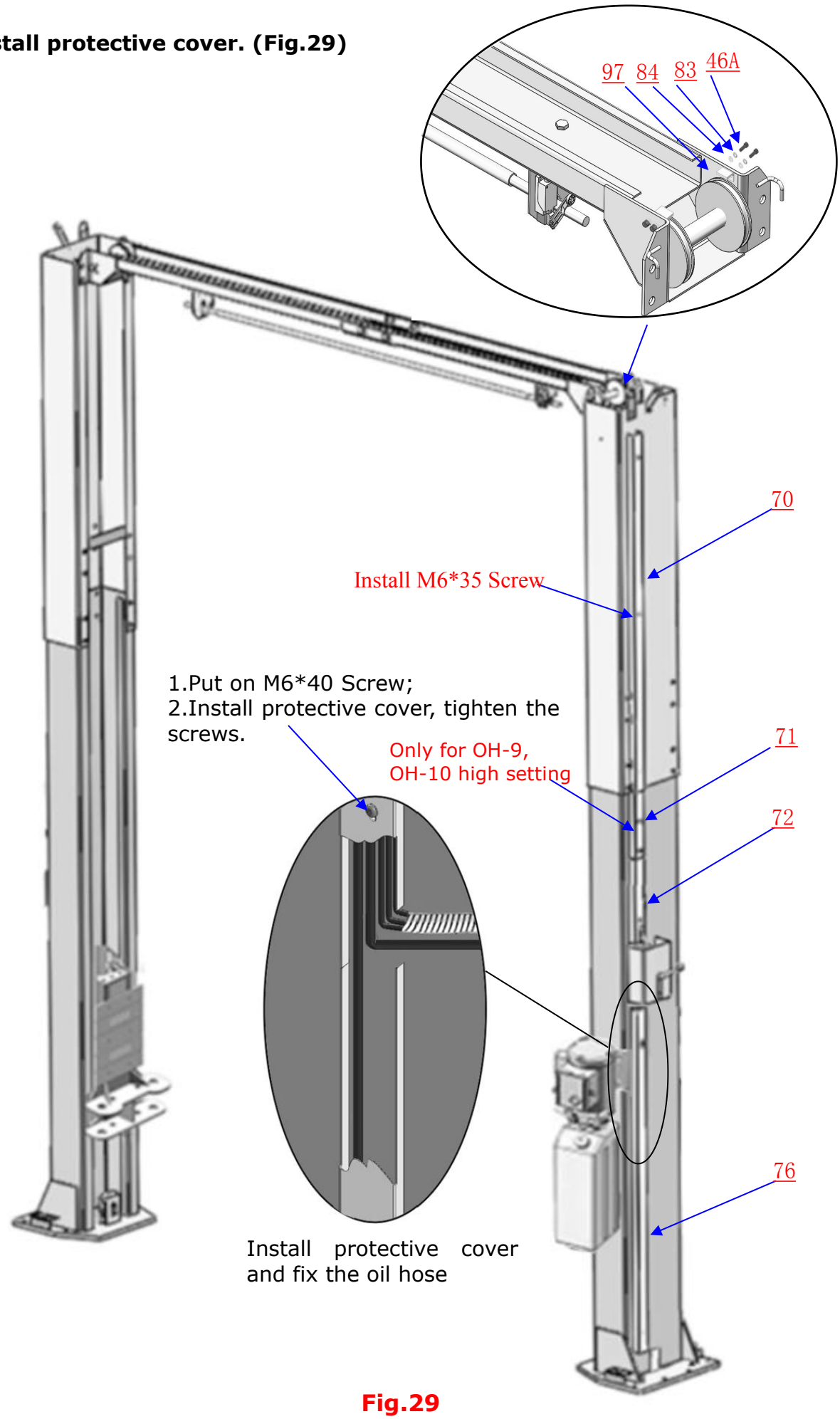



**Fig.29**

**N. Install safety cable (See Fig. 30)**

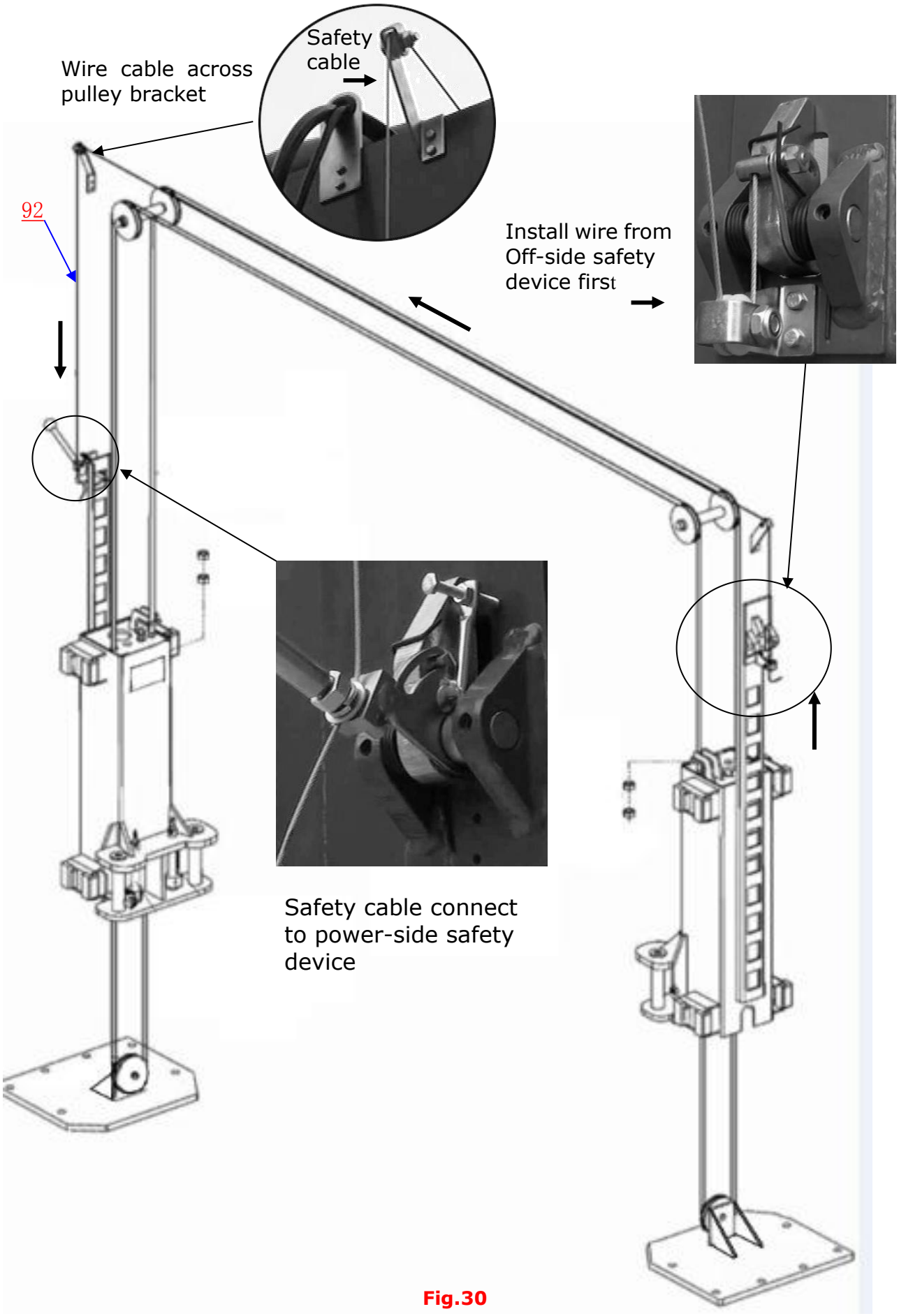


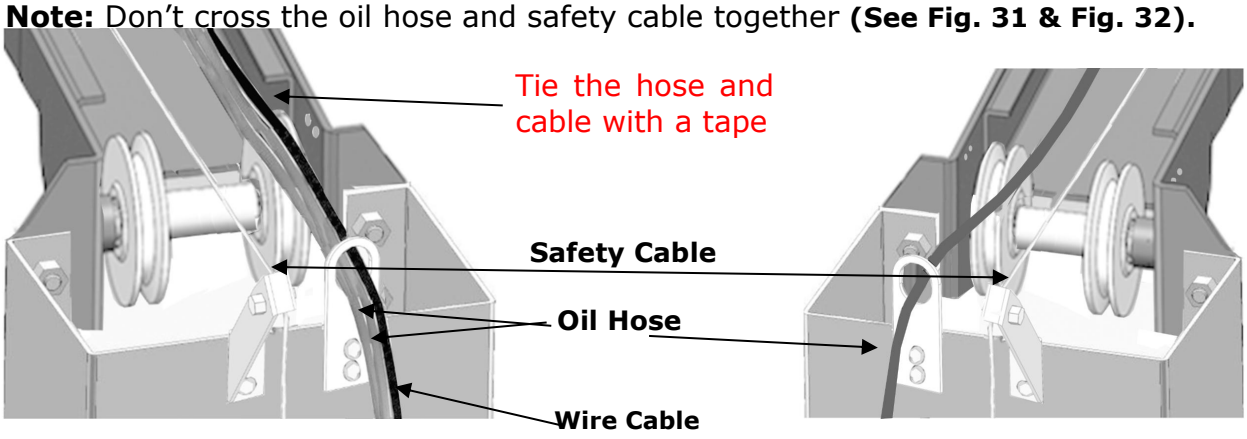

**Fig.30**

## O. Install Protective Covers

Note: Requirement of installation for oil hose and safety device.

1. Install Oil Hose.

**Note:** Don't cross the oil hose and safety cable together **(See Fig. 31 & Fig. 32).**

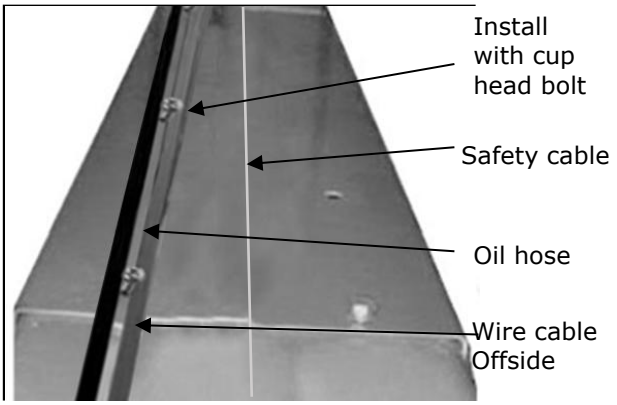



**Power-side Safety Device**
**Fig. 31**

**Offside Safety Device**
**Fig. 32**

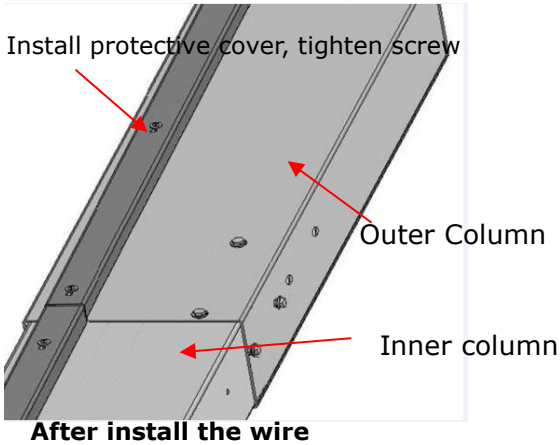
2. Install safety cable, oil hose and protective cover **(See Fig. 32 & Fig. 33 & Fig. 34).**

**Note:** Install the protective cover on the extension column with M6*35 cup head bolt, Install the protective cover on the inner column with M6*40 cup head bolt.




**Before install the wire protective cover**

**Fig. 33**




**After install the wire protective cover**

**Fig. 34**

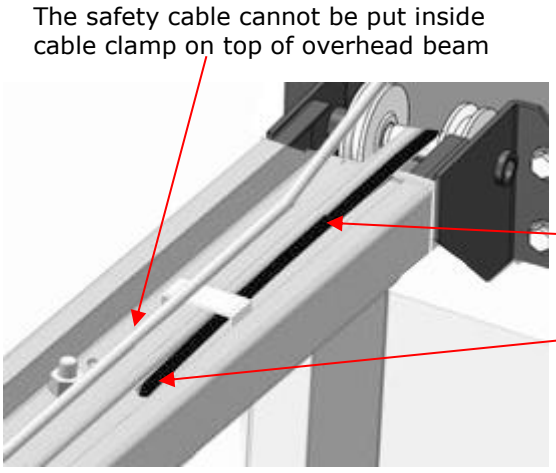



**Fig. 35**

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

1. Install the lifting arms **(See Fig. 36).**
2. Lowing the carriages down to the lowest position, then use the 8# socket head wrench to loosen the socket bolt **(See Fig. 37).**

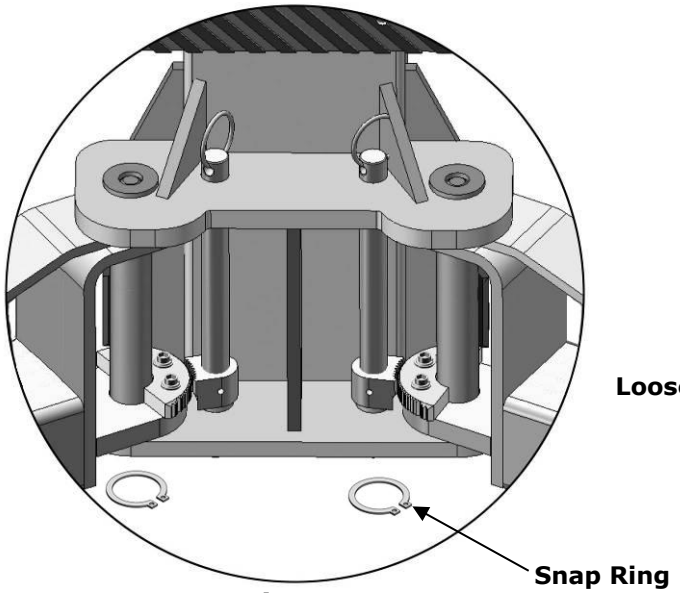
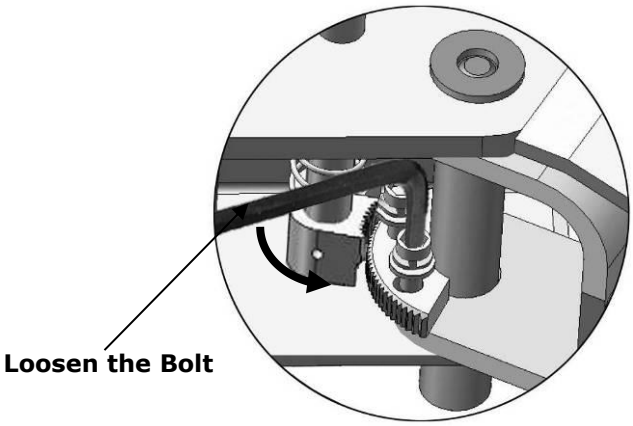



**Fig. 36**




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

**Fig. 37**

3. Adjust the arm lock as direction of arrow **(See Fig. 38)**

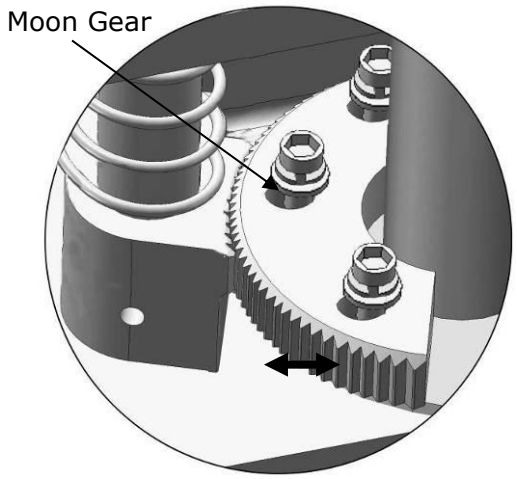



**Fig. 38**

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

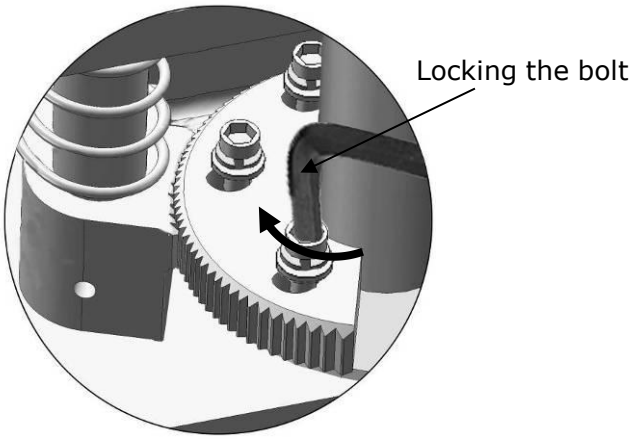



**Fig. 39**

4. Adjust moon gear and arm lock to make it to be meshed, then tighten the socket bolts of arm lock **(See Fig. 39).**

**Q. 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#.**

## R. Install electrical system

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

**Note: 1. Install the limit switch.**

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

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

**Single phase motor wiring (See Fig. 40).**

1. Connecting the two power supply wires (active wire **L** and neutral wire **N**) to terminals of AC contactor marked L1, L2 respectively.
2. Connecting the two motor wires to terminals of AC contactor marked **T1, T2**.
3. Connecting **A2** to **L2** of AC contactor.
4. Terminal **4#** of control button is connected with terminals **A1**of AC contactor; Terminal **3#** of control button is connected with terminals **L1**of AC contactor.

Power unit motor wiring diagram

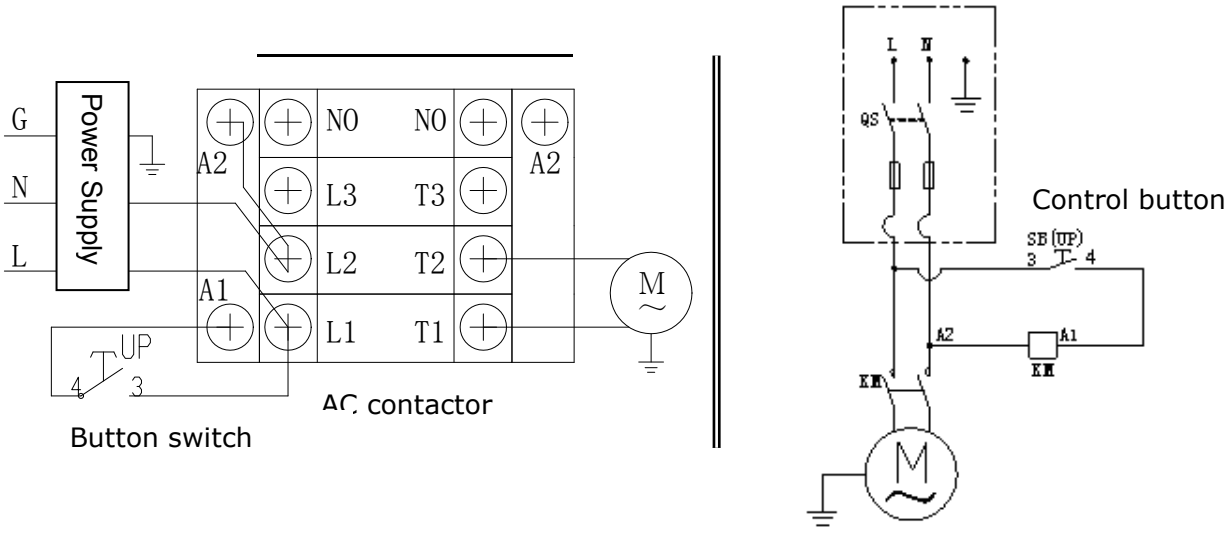



**Fig. 40** Single phase

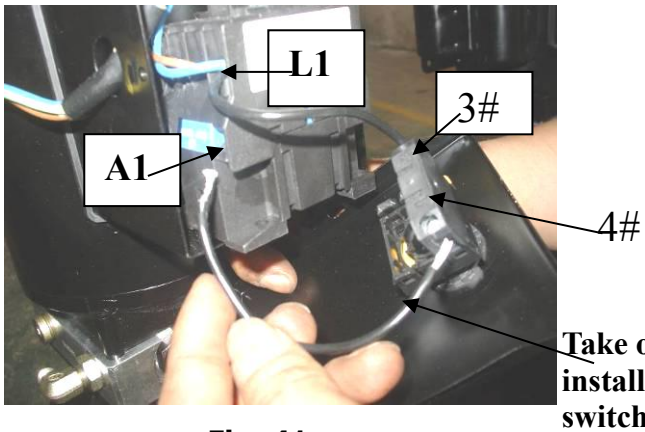



**Fig. 41**

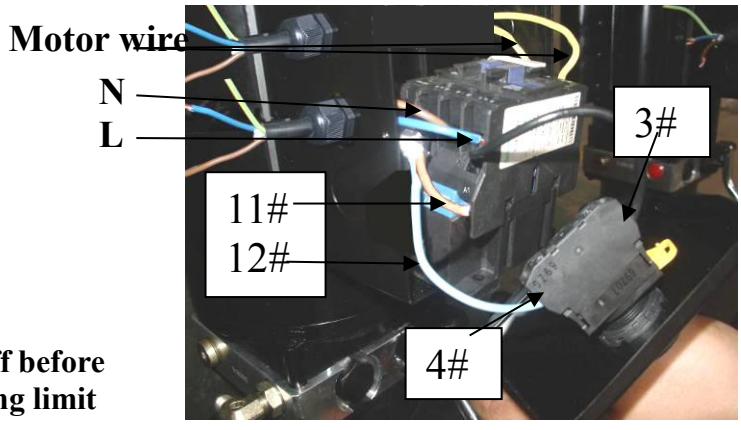



**Fig. 42**

## IV. EXPLODED VIEW

# OH-9/OH-9H/OH-10/OH-10H

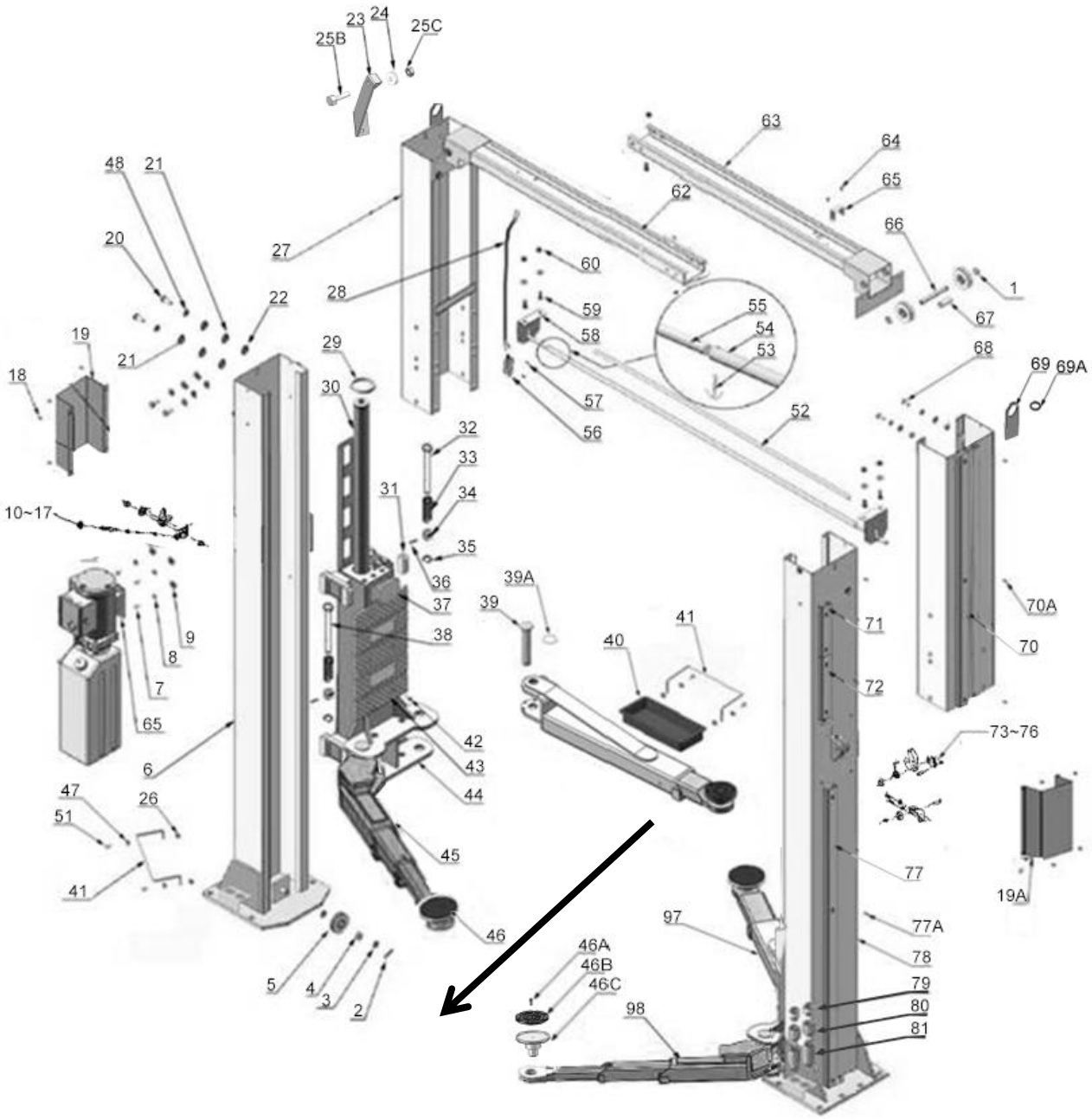



**Fig. 43**

## IX. PARTS LIST FOR OH-9 and OH-9H

| Item | Part No. | Description | QTY | | | |
|---|---|---|---|---|---|---|
| | | | OH-9 | OH-9H | OH-10 | OH-10H |
| 1 | 10206019 | Snap Ring | 4 | 4 | 4 | 4 |
| 2 | 10209012 | Elastic latch | 2 | 2 | 2 | 2 |
| 3 | 10209128 | Washer φ20 | 4 | 4 | 4 | 4 |
| 4 | 10209057B | Bronze Bush for Pulley | 6 | 6 | 6 | 6 |
| 5 | 11206020 | Pulley | 6 | 6 | 6 | 6 |
| 6 | 11206202 | Power-side Inner Column | 1 | 1 | 0 | 0 |
| | 11279023 | | 0 | 0 | 1 | 1 |
| 7 | 10209003 | Hex Bolt | 8 | 8 | 8 | 8 |
| 8 | 10209004 | Rubber Ring | 4 | 4 | 4 | 4 |
| 9 | 10209005 | Self-locking Nut | 8 | 8 | 8 | 8 |
| 10 | 11217436 | Safety device spacer | 2 | 2 | 2 | 2 |
| 11 | 11217006 | Safety device control stick | 1 | 1 | 1 | 1 |
| 12 | 10217005 | Plastic ball | 1 | 1 | 1 | 1 |
| 13 | 10206023A | Hex bolt | 1 | 1 | 1 | 1 |
| 14 | 10420026 | Lock Washer | 1 | 1 | 1 | 1 |
| 15 | 10206006 | Washer | 27 | 27 | 27 | 27 |
| 16 | 11217009 | Safety device | 1 | 1 | 1 | 1 |
| 17 | 11217012 | Safety device spacer | 2 | 2 | 2 | 2 |
| 18 | 10209009 | Cup head screw | 10 | 10 | 10 | 10 |
| 19 | 11217405 | Cover for power-side safety device | 1 | 1 | 1 | 1 |
| 19A | 11217406 | Cover for offside safety device | 1 | 1 | 1 | 1 |
| 20 | 10209126 | Hex Bolt | 20 | 20 | 20 | 20 |
| 21 | 10209022 | Washer | 40 | 40 | 40 | 40 |
| 22 | 10209021 | Hex Nut | 20 | 20 | 20 | 20 |
| 23 | 11217026 | Wire cable Bracket | 2 | 2 | 2 | 2 |
| 24 | 10206009 | Plastic Pulley | 3 | 3 | 3 | 3 |
| 25 | 10217013 | Hex bolt | 8 | 8 | 8 | 8 |
| 25A | 10420018 | Self-locking nut | 8 | 8 | 8 | 8 |
| 25B | 10209046 | Hex bolt | 3 | 3 | 3 | 3 |
| 25C | 10209056 | Self-locking nut | 3 | 3 | 3 | 3 |
| 26 | 10209033 | Washer | 12 | 12 | 12 | 12 |
| 27 | 11206204 | Extension Column L=1240mm | 2 | 0 | 0 | 0 |
| | 11206207 | Extension Column L=1850mm | 0 | 2 | 0 | 0 |
| | 11203221 | Extension Column L=1240mm | 0 | 0 | 2 | 0 |
| | 11203222 | Extension Column L=1850mm | 0 | 0 | 0 | 2 |
| 28 | 10206137 | Wire Cable L=3700 | 1 | 0 | 1 | 0 |
| | 10206138 | Wire Cable L=4310 | 0 | 1 | 0 | 1 |
| 29 | 10209111 | Protective Ring for Cylinder | 2 | 2 | 2 | 2 |
| 30 | 11217056 | Cylinder | 2 | 2 | 2 | 2 |
| 31 | 10209015 | Slider Block | 16 | 16 | 16 | 16 |
| 32 | 11206046A | Arm Lock Bar (left) | 2 | 2 | 2 | 2 |
| 33 | 10206050A | Spring | 4 | 4 | 4 | 4 |
| 34 | 10217044 | Arm Lock | 4 | 4 | 4 | 4 |
| 35 | 206032 | Snap Ring φ25 | 4 | 4 | 4 | 4 |
| 36 | 10206036 | Hair Pin φ6*40 | 4 | 4 | 4 | 4 |
| 37 | 10209016 | Carriage Plastic Cover | 2 | 2 | 2 | 2 |

| Item | Part No. | Description | QTY | | | |
|---|---|---|---|---|---|---|
| | | | OH-9 | OH-9H | OH-10 | OH-10H |
| 38 | 11206046 | Arm Lock Bar (right) | 2 | 2 | 2 | 2 |
| 39 | 11217168 | Arm pin assy. | 4 | 4 | 4 | 4 |
| 39A | 10520023 | Snap Ring | 4 | 4 | 4 | 4 |
| 40 | 10206190 | Tool tray (Short) | 2 | 2 | 2 | 2 |
| 41 | 11206191 | Toe guard bar | 4 | 4 | 4 | 4 |
| 42 | 10209019 | Screw | 12 | 12 | 12 | 12 |
| 43 | 10209018 | Protective Rubber | 2 | 2 | 2 | 2 |
| 44 | 11279004 | Carriage | 2 | 2 | 2 | 2 |
| 45 | 10279010 | Front right Arm | 1 | 1 | 1 | 1 |
| 45A | 10279009 | Front left Arm | 1 | 1 | 1 | 1 |
| 46 | 10201046A | Rubber pad assy. | 4 | 4 | 4 | 4 |
| 46A | 10420138 | Hex bolt | 12 | 12 | 12 | 12 |
| 46B | 10209134 | Rubber pad | 4 | 4 | 4 | 4 |
| 46C | 11680030C | Rubber pad bracket | 4 | 4 | 4 | 4 |
| 47 | 10209034 | Lock Washer | 14 | 14 | 14 | 14 |
| 48 | 10209039 | Lock washer | 32 | 32 | 32 | 32 |
| 49 | 10209059B | Anchor bolt | 12 | 12 | 12 | 12 |
| 50 | 10206500B | Parts box | 1 | 0 | 1 | 0 |
| | 10206501B | | 0 | 1 | 0 | 1 |
| 51 | 10201002 | Hex Bolt | 14 | 14 | 14 | 14 |
| 52 | 10206025A | Foam Cushion with handle | 1 | 1 | 1 | 1 |
| 53 | 10201005 | Split Pin | 2 | 2 | 2 | 2 |
| 54 | 11206129 | Control Bar | 1 | 1 | 1 | 1 |
| 55 | 11206025C | Connecting Pin for Control Bar | 2 | 2 | 2 | 2 |
| 56 | 10206013 | Limit Switch | 1 | 1 | 1 | 1 |
| 57 | 10206011 | Cup Head Bolt | 2 | 2 | 2 | 2 |
| 58 | 11206042 | Control Bar Support Bracket | 2 | 2 | 2 | 2 |
| 59 | 10206041 | Hex Bolt | 4 | 4 | 4 | 4 |
| 60 | 10206023 | Self-locking Nut | 12 | 12 | 12 | 12 |
| 61 | 10209056 | Self-locking Nut | 4 | 4 | 4 | 4 |
| 62 | 11206205 | Top Beam (Part A) | 1 | 1 | 1 | 1 |
| 63 | 11206206 | Top Beam (Part B) | 1 | 1 | 1 | 1 |
| 64 | 10206028 | Cup Head Bolt | 4 | 4 | 4 | 4 |
| 65 | 071101 | Power unit | 1 | 1 | 1 | 1 |
| 66 | 11206021 | Pin for Pulley | 2 | 2 | 2 | 2 |
| 67 | 11206022 | Top Pulley spacer | 2 | 2 | 2 | 2 |
| 68 | 10206024 | Hex Bolt | 8 | 8 | 8 | 8 |
| 69 | 11217024 | Oil hose retainer | 2 | 2 | 2 | 2 |
| 69A | 1061K074 | Wire guard | 2 | 2 | 2 | 2 |
| 70 | 11203752 | Wire protective cover L=1140 | 2 | 0 | 2 | 0 |
| | 11203756 | Wire protective cover L=1750 | 0 | 2 | 0 | 2 |
| 70A | 10206110 | Cup head bolt | 6 | 6 | 6 | 6 |
| 71 | 11206084 | Protective Cover(L=200mm) | 2 | 2 | 2 | 2 |
| 72 | 11206083 | Protective Cover(L=385mm) | 2 | 2 | 2 | 2 |
| 73 | 11217004 | Active safety control block | 1 | 1 | 1 | 1 |
| 74 | 11217029 | Safety Pulley Bracket | 1 | 1 | 1 | 1 |
| 75 | 10217008 | Torsion spring | 1 | 1 | 1 | 1 |

| Item | Part No. | Description | QTY | | | |
|---|---|---|---|---|---|---|
| | | | OH-9 | OH-9H | OH-10 | OH-10H |
| 76 | 11217031 | Driven safety control block | 1 | 1 | 1 | 1 |
| 76A | 10217032 | Wire cable connecting pin | 1 | 1 | 1 | 1 |
| 76B | 10217033 | Tension nut | 1 | 1 | 1 | 1 |
| 77 | 10203778 | Protective Cover | 2 | 2 | 2 | 2 |
| 77A | 10206079 | Cup Head Bolt | 14 | 14 | 14 | 14 |
| 78 | 11206203 | Offside Inner column | 1 | 1 | 0 | 0 |
| | 11279024 | | 0 | 0 | 1 | 1 |
| 79 | 11209051B | Stackable Adapter (1.5”) | 4 | 4 | 4 | 4 |
| 80 | 11209052B | Stackable Adapter (2.5”) | 4 | 4 | 4 | 4 |
| 81 | 11209053B | Stackable Adapter (5”) | 4 | 4 | 4 | 4 |
| 82 | 10217066 | Anchor Bolt | 2 | 2 | 2 | 2 |
| 83 | 10209149 | Washer | 10 | 10 | 10 | 10 |
| 84 | 10420045 | Washer | 26 | 26 | 26 | 26 |
| 85 | 10206064A | Cable l=10048mm | 2 | 0 | 2 | 0 |
| | 10206064B | Cable L=11268mm | 0 | 2 | 0 | 2 |
| 86 | 10206132 | Oil hose L=4465mm | 1 | 0 | 2 | 0 |
| | 10206133 | Oil hose L=5055mm | 0 | 1 | 0 | 2 |
| 87 | 10209060 | 90° fitting for power unit | 1 | 1 | 1 | 1 |
| 87A | 10211016 | T fitting | 1 | 1 | 1 | 1 |
| 88 | 10209064 | Straight Fitting | 2 | 2 | 2 | 2 |
| 89 | 10206062 | Straight Fitting | 2 | 2 | 2 | 2 |
| 90 | 10233009 | Hose fitting | 2 | 2 | 2 | 2 |
| 91 | 10206130 | Oil Hose L=5325mm | 2 | 0 | 2 | 0 |
| | 10206131 | Oil Hose L=5935mm | 0 | 2 | 0 | 2 |
| 92 | 10260149 | Safety cable L=7750mm | 1 | 0 | 1 | 0 |
| | 10206065A | Safety cable L=8970mm | 0 | 1 | 0 | 1 |
| 93 | 10209066 | Hex bolt | 8 | 8 | 8 | 8 |
| 94 | 10201090 | Shim (1mm) | 10 | 10 | 10 | 10 |
| | 10620065 | Shim (2mm) | 10 | 10 | 10 | 10 |
| 95 | 10209152 | Tape | 4 | 4 | 4 | 4 |
| 96 | 10279011 | Rear Arm assy. | 2 | 2 | 2 | 2 |
| 97 | 1102075001 | Cable limit plate | 4 | 4 | 4 | 4 |

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

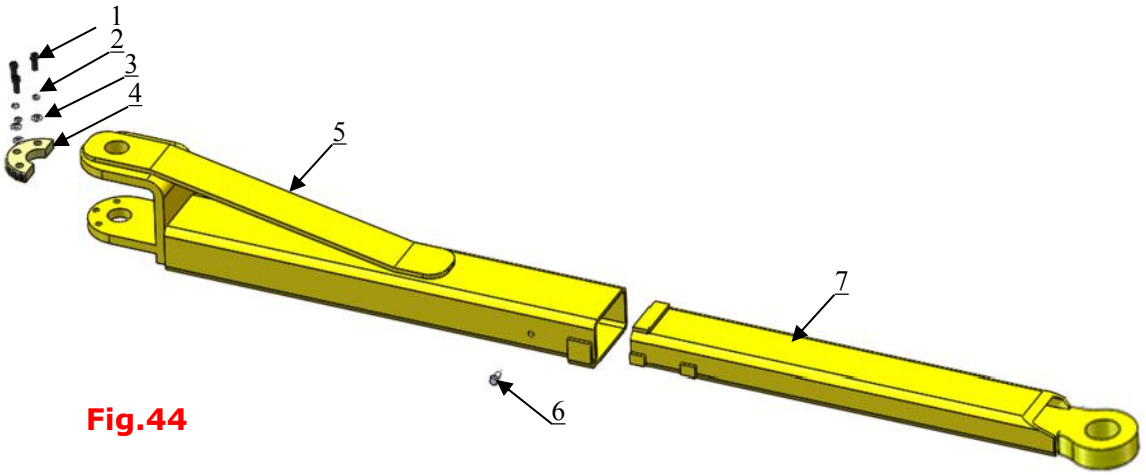



Fig.44

| No | Part no | Name | QTY |
|---|---|---|---|
| 1 | 10206048 | Hex nut | 6 |
| 2 | 10209039 | washer | 6 |
| 3 | 10209022 | washer | 6 |
| 4 | 11206049 | Moon gear | 2 |
| 5 | 11206192 | Rear outer arm | 2 |
| 6 | 10201149 | Cup head bolt | 2 |
| 7 | 11206193 | Rear inner arm | 2 |

## 4.2 Left front arm assy. (10279009) explosive view

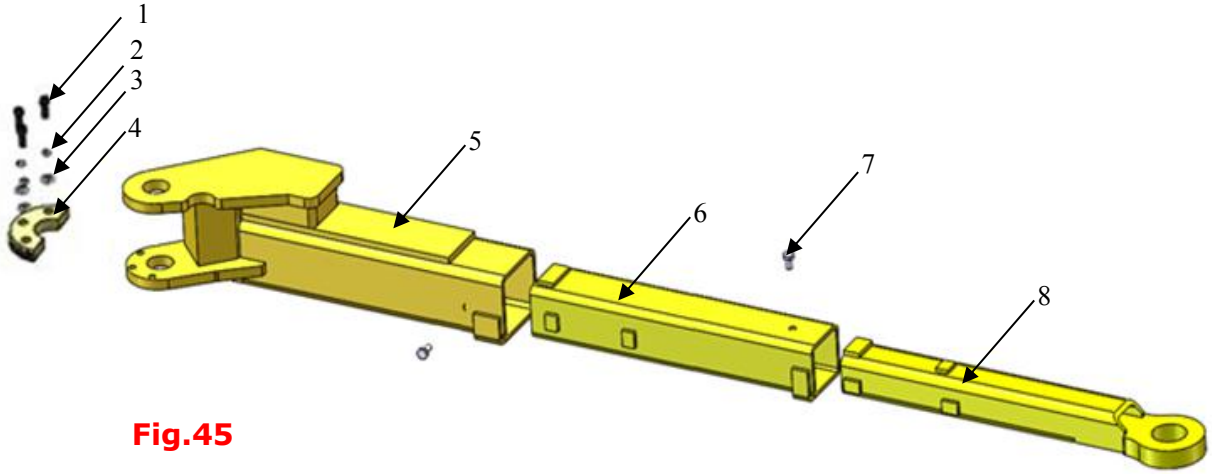



Fig.45

| No | Part no | Name | QTY |
|---|---|---|---|
| 1 | 10206048 | Hex nut | 3 |
| 2 | 10209039 | washer | 3 |
| 3 | 10209022 | washer | 3 |
| 4 | 11206049 | Moon gear | 1 |
| 5 | 11206183 | Rear outer arm | 1 |
| 6 | 11206189 | Front middle arm | 1 |
| 7 | 10201149 | Cup head bolt | 2 |
| 8 | 11201049A | Front inner arm | 1 |

### 4.3 Right front arm assy. (10279010) explosive view

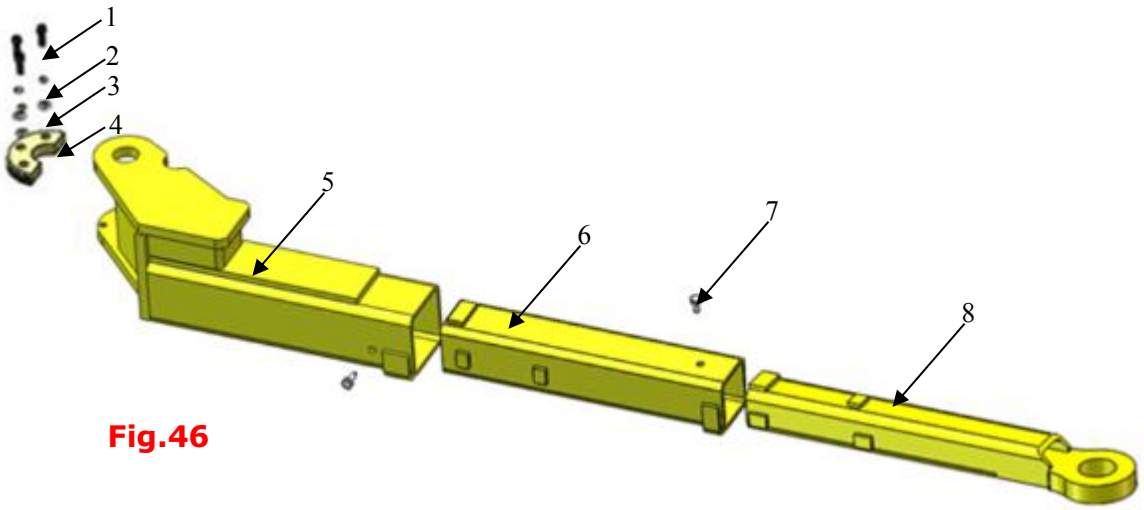



Fig.46

| No | Part no | Name | QTY |
|---|---|---|---|
| 1 | 10206048 | Hex nut | 3 |
| 2 | 10209039 | washer | 3 |
| 3 | 10209022 | washer | 3 |
| 4 | 11206049 | Moon gear | 1 |
| 5 | 11206182 | Front left outer arm | 1 |
| 6 | 11206189 | Front middle arm | 1 |
| 7 | 10201149 | Cup head bolt | 2 |
| 8 | 11201049A | Front inner arm | 1 |

## 4.4 Cylinder (11217056) explosive view

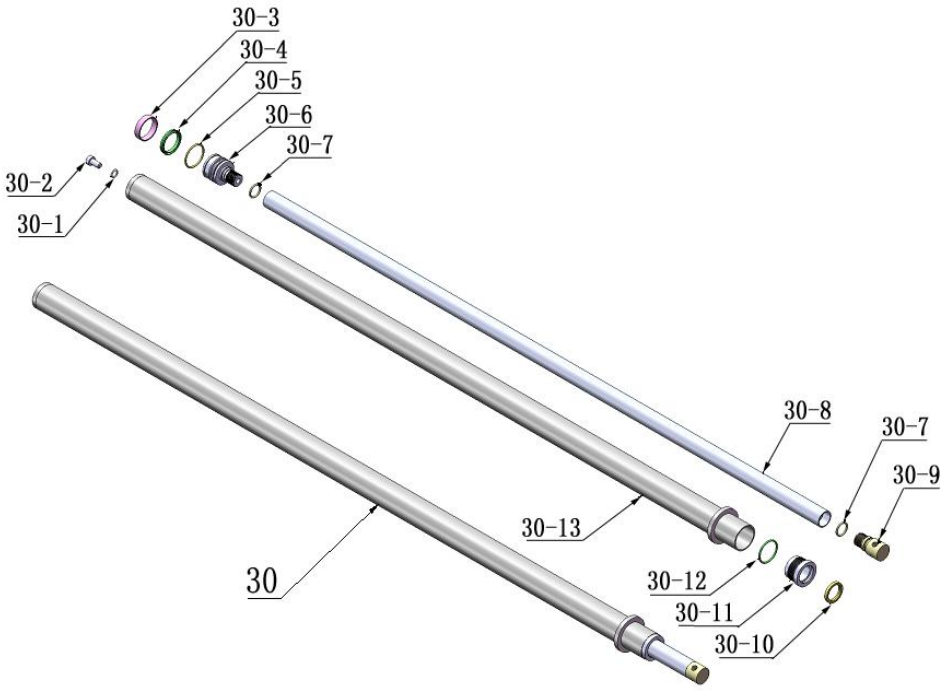



Fig. 47

## Part list for cylinder

| No | Part no | Name | QTY |
|---|---|---|---|
| 30-1 | 10209069 | O-ring | 2 |
| 30-2 | 10209070 | Bleeding Plug | 2 |
| 30-3 | 10209071 | Support Ring | 2 |
| 30-4 | 10209072 | Y-ring | 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 wing | 2 |
| 30-11 | 11209079 | cover | 2 |
| 30-12 | 10209080 | O ring | 2 |
| 30-13 | 11209081A | Bore Weldment | 2 |

## 4.5Power unit (071101) explosive view

**single phase,220V/60HZ**

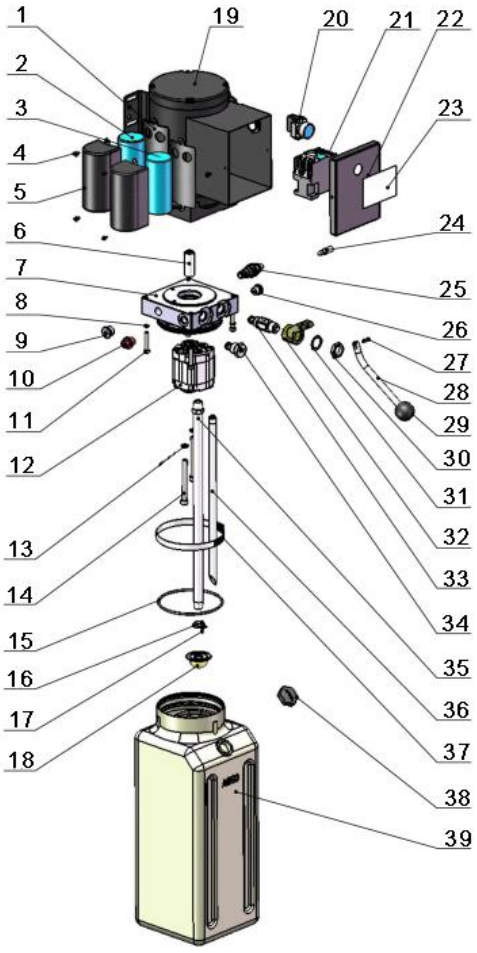



**Fig. 48**

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

| No | Part no | Name | QTY | | No | Part no | Name | QTY |
|---|---|---|---|---|---|---|---|---|
| 1 | 81400180 | Rubber pad | 2 | | 22 | 81400287 | AC contractor | 1 |
| 2 | 81400130 | Starting capacitor | 1 | | 23 | 71111104 | Motor wiring cover | 1 |
| 3 | 81400088 | Running capacitor | 1 | | 24 | 81400560 | Throttle valve | 1 |
| 4 | 10420148 | Screw with washer | 4 | | 25 | 81400266 | Relief valve | 1 |
| 5 | 81400066 | Capacitor cover | 2 | | 26 | 81400284 | Plug | 1 |
| 6 | 81400363 | Motor connector | 1 | | 27 | 10720118 | Elastic pin | 1 |
| 7 | 090101 | Manifold block | 1 | | 28 | 81400451 | Release handle | 1 |
| 8 | 10209149 | Washer | 4 | | 29 | 10209020 | Plastic ball | 1 |
| 9 | 81400276 | Plug | 1 | | 30 | 81400421 | Release valve nut | 1 |
| 10 | 81400259 | Red plug | 1 | | 31 | 81400422 | Release handle | 1 |
| 11 | 85090142 | Hex bolt | 4 | | 32 | 81400449 | valve seat(short) | 1 |
| 12 | 81400280 | Gear pump | 1 | | 33 | 81400567 | Release valve | 1 |
| 13 | 10209034 | washer | 2 | | 34 | 81400566 | Check washer | 1 |
| 14 | 81400295 | Hex nut | 2 | | 35 | 81400288 | Oil suction hose | 1 |
| 15 | 81400365 | O-ring | 1 | | 36 | 81400289 | Oil return hose | 1 |
| 16 | 10209152 | Tape | 1 | | 37 | 81400364 | Hose clamp | 1 |
| 17 | 85090167 | Magnet | 1 | | 38 | 81400263 | Oil tank cap | 1 |
| 18 | 81400290 | Filter | 1 | | 39 | 81400275 | Oil tank | 1 |
| 19 | 81400413 | Motor | 1 | | | | | |
| 20 | 10420070 | Button switch | 1 | | | | | |
| 21 | 41030055 | AC contractor | 1 | | | | | |

## Illustration of hydraulic valve for hydraulic power unit

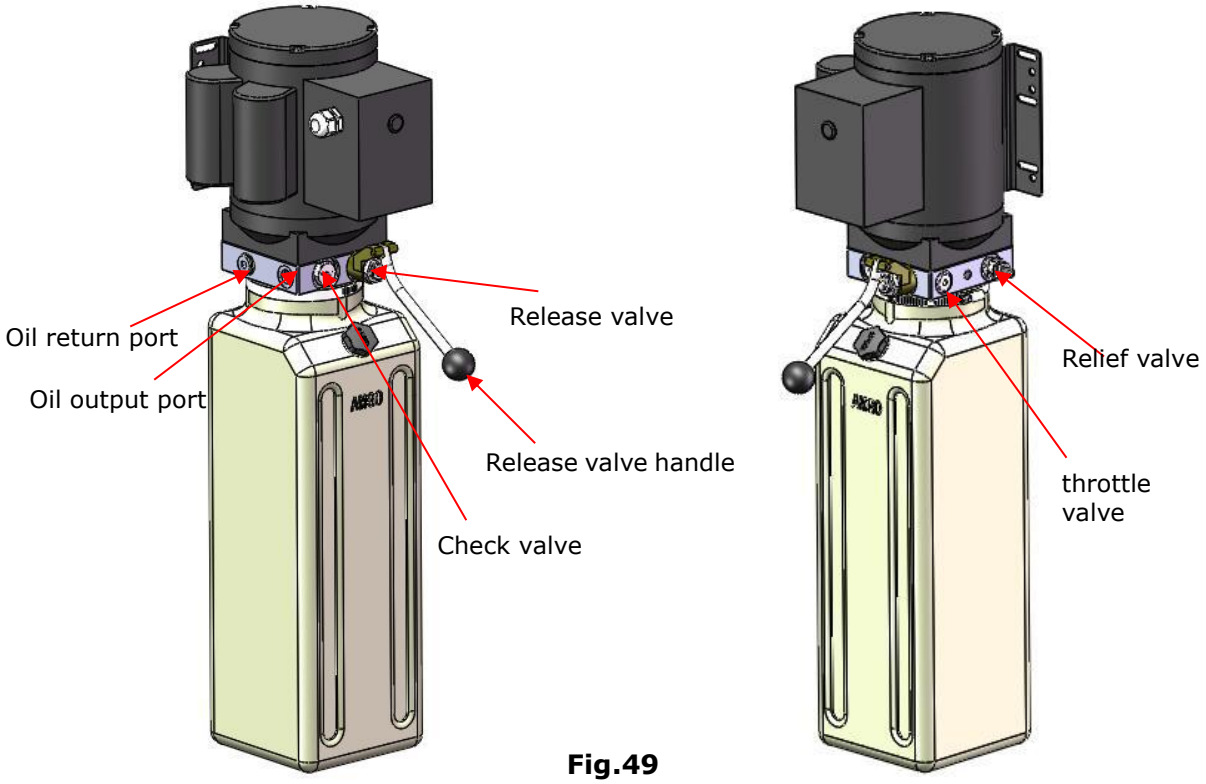



**Fig.49**

## V. TEST RUN

### 1. Adjust synchronous cable (See Fig.50)

Use wrench to hold the cable fitting, meanwhile use ratchet spanner to tighten the cable nut. Make sure two cables are with the same tension so that two carriages can work synchronously. Fit the plastic hole cover on the lifting head.

**If the carriage does not Synchronize when lifting, please tighten the cable nut of lower side carriage.**

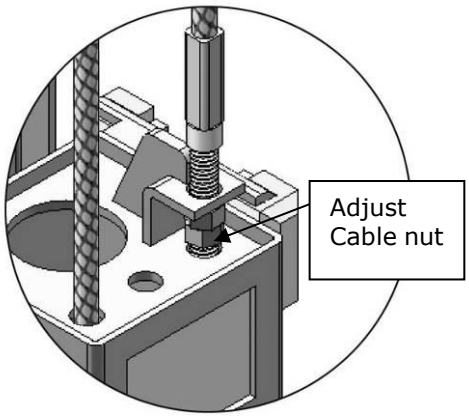



**Fig. 50**

### 2. Adjust Safety Cable

Lifting the carriage and lock at the same height, strain the safety cable and then release a little, and then tighten the cable nuts. Make sure the safety device can always be worked properly.

### 3. Bleeding air

This hydraulic system is designed to bleeding air by loosing the bleeding plug. Lifting the carriages to about 1 meter height, and loose the bleeding plug, the air would be bled automatically, then tighten the plug after bleeding, the lift would work stably and smoothly, otherwise repeat bleeding **(See Fig. 51)**.

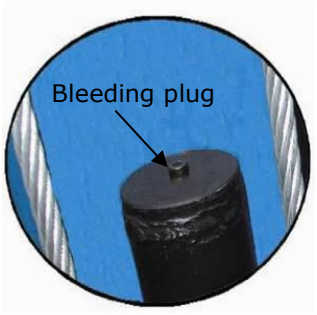
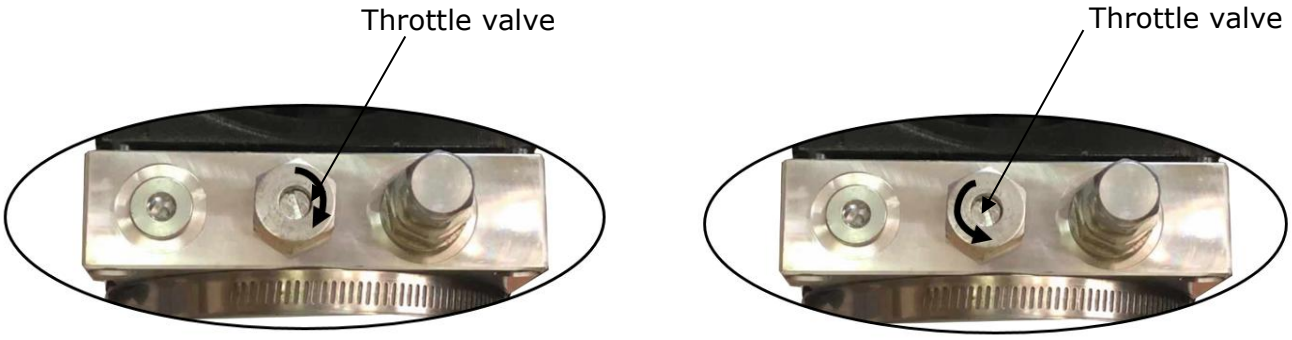



**Fig. 51**

### 4. Adjust the lower speed

You can adjust the lower speed of the lift if needing: Turn the Throttle Valve in clockwise direction to decrease the lower speed, or increase the speed in counterclockwise direction.




Clockwise to decrease the down speed

Counterclockwise to decrease the down speed

**Fig.52**

**5. Test with load**

After finishing the above adjustment, test running the lift with load. Run the lift in low position for several times first, 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.**

**Hydraulic System**

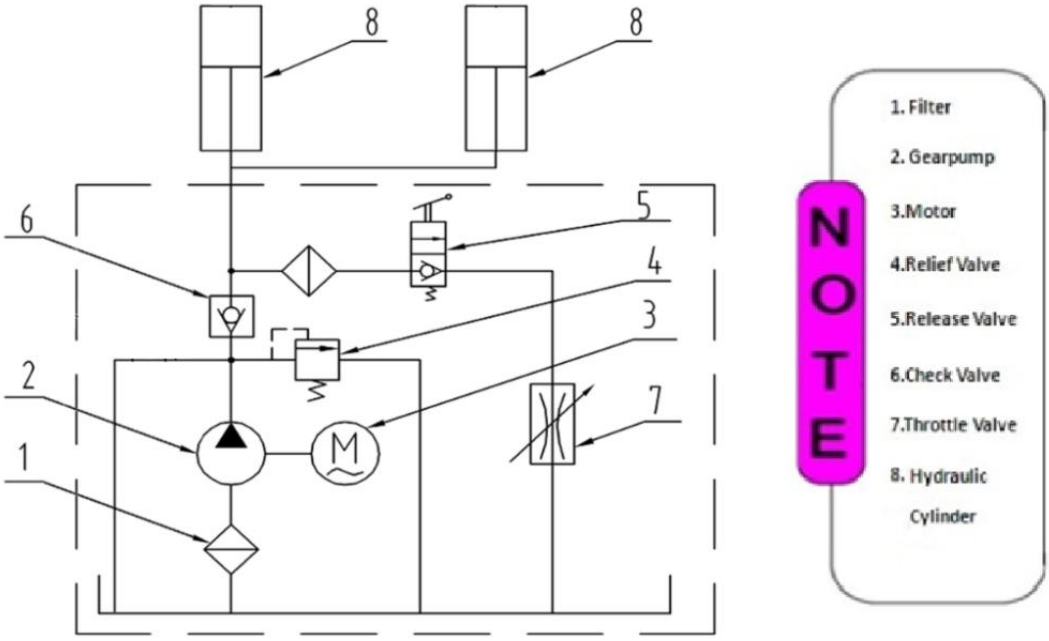



**Fig.53**

**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 lowering 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 lowering 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 to 150 NM;
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 does not function for any reason, DO NOT use the lift until the bolt has been replaced.**

**Every six months:**

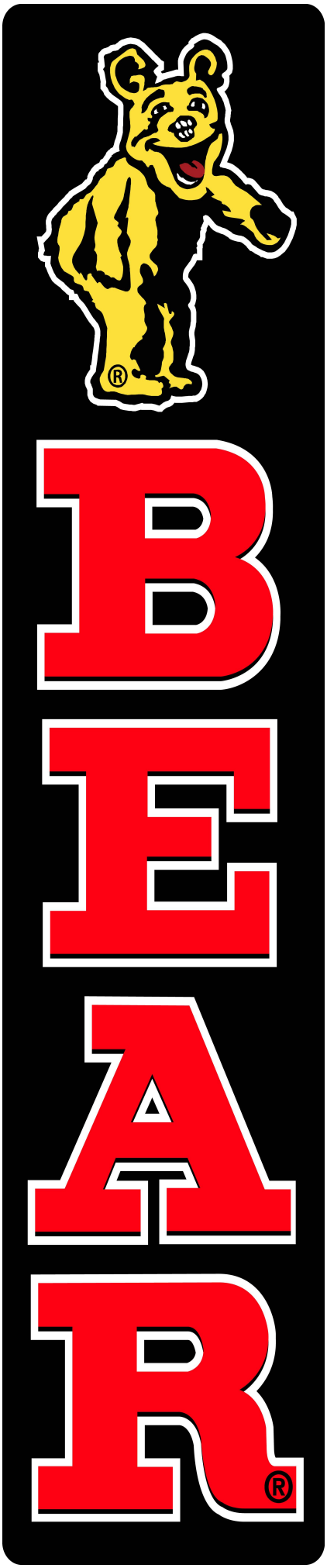
1. Make a visual inspection of all moving parts for possible wear, interference or damage.
2. Check and adjust as necessary, equalizer tension of the cables to insure level lifting.
3. Check columns for plumbness.
4. Check Rubber Pads and replace as necessary.
5. Check Safety device and make sure proper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

## VIII.TROUBLE SHOOTING

| TROUBLE | CAUSE | REMEDY |
|---|---|---|
| Motor does not run | 1. Button does not work<br>2. Wiring connections are not in good condition<br>3. Motor burned out<br>4. Height Limit Switch is damaged<br>5. AC contactor burned out | 1. Replace button<br>2.Repair all wiring connections<br>3. Repair or replace motor<br>4.Replace the Limit Switch<br>5. Replace AC Contactor |
| Motor runs but the lift is not raised | 1. Motor runs in reverse rotation<br>2. Gear Pump out of operation<br>3. Release Valve 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 slowly | 1. Oil line is jammed<br>2. Motor running on low voltage<br>3. Oil mixed with air<br>4. Gear 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 in damage<br>3. Safety cable broken<br>4. Oil system is jammed | 1. Release the safeties<br>2. Repair or replace<br>3. Replace<br>4. Clean the oil system |

## 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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