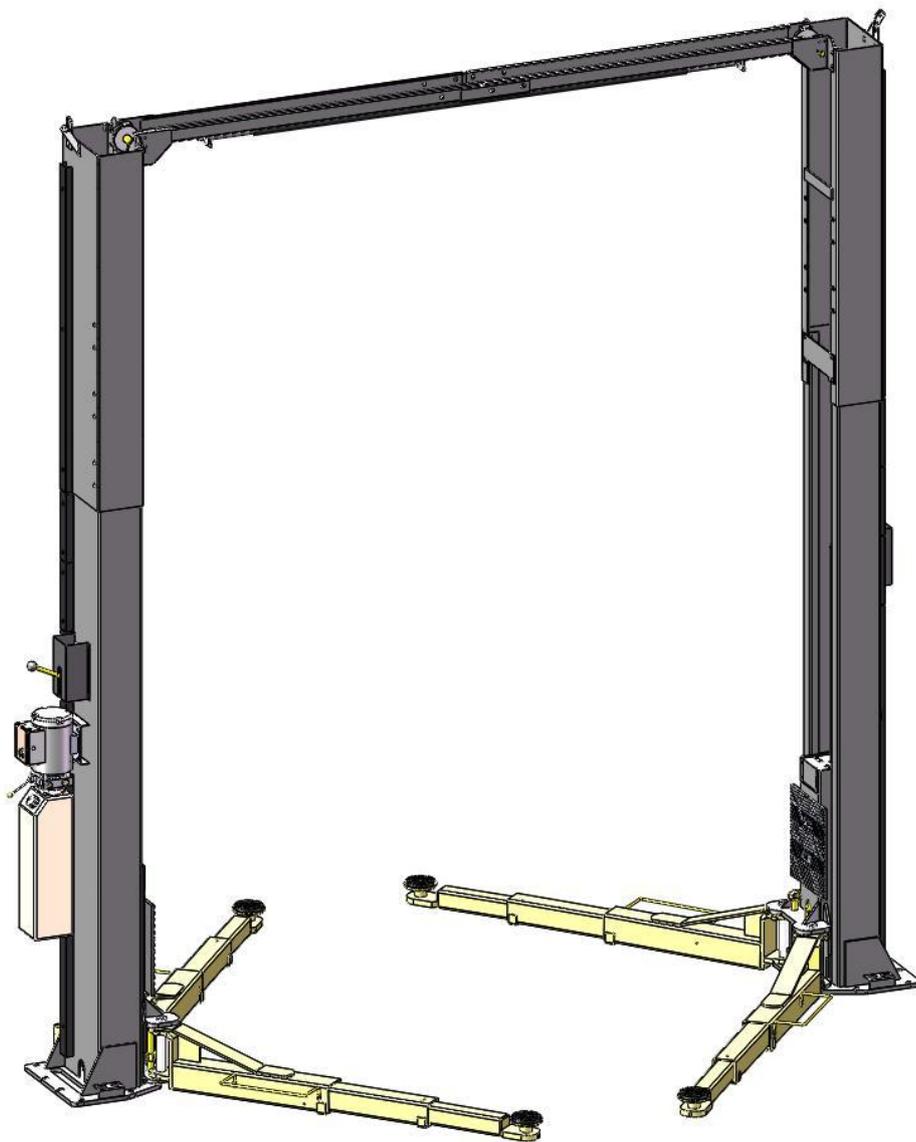


**AMGO**  <sup>®</sup> **Hydraulics**

Original

# Installation And Service Manual



**TWO-POST LIFT**

**MODEL: OH-12 OH-12S**

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## **Explanation of the safety warning symbols used in this manual**

-  **DANGER** Risk of death or injury
-  **WARNING** Dangerous or unsafe practices that may result in death or injury
-  **CAUTION** Dangerous or unsafe practices that may result in personal injury, product damage or property damage
- ATTENTION** Conditions that may result in damage to products or property

## **WARRANTY**

The warranty period for the steel structure part of new lift machine is 5 years, hydraulic components, bronze bush, slider and plastic parts warranty for 3 years, electrical components and cable warranty for 2 years, rubber pad is consumable without warranty. During the warranty period, the manufacturer will repair or replace the defective parts free of charge and bear the freight [cost](#).

This warranty does not cover damage caused by wearing parts or improper use, damage in transit and damage caused by non-maintenance as required.

This warranty is unique and supersedes what is expressed and implied in all other warranties. The manufacturer shall not be liable for any particular, indirect or accidental damage resulting in breach of or delay in the execution of the warranty. The manufacturer reserves the right to design and improve the product and has no obligation to [make notice of the changes in advance](#).

The product warranty based on the above clause is based on the model number and serial number of the equipment. This information must be provided in conjunction with all warranty information at the time of service and warranty.

# SAFETY WARNING LABEL

**! WARNING !**



Never allow unauthorized personnel near the equipment



Keep away from the equipment during operation



Always wear protective shoes and mind your feet during lowering



Please mind your hands during operation.



Do not rock or shake raised vehicles



Use the support points provided by the vehicle manufacturers.



Please lock the safety device before repairing the vehicle.



Please run away quickly from any falling objects.

**PLEASE READ THE PRECAUTIONS CAREFULLY**

No.71030136

Fig. 1

## **SAFETY INSTRUCTION**

In order to properly maintain your product and ensure operator safety, it is the responsibility of the product owner to read and follow these instructions!

1. Ensure product installation complies with all applicable local regulations and rules, such as Occupational Safety and Health Administration regulations and electrical codes.
2. Ensure that all operators are properly trained, know how to operate the unit safely, and are properly supervised.
3. Do not operate the product until you are sure all parts are in place and operating correctly.
4. Keep your hands and feet away from the machine. Keep hands and feet away from any moving parts. Keep your feet away from the lift as it descends to avoid pressing on pointed objects.
5. Keep the work area clean. A cluttered workspace can lead to injuries.
6. The machine is only approved for indoor installation and use. Outdoor installation is prohibited.
7. Only trained operators are allowed to handle the lift machine. All untrained persons must stay away from the workplace. Never allow untrained persons to handle or operate the machine.
8. Use the lift properly. Use the lift in the correct way.
9. Warning! Keep no one under the lift when lifting the car.
10. If the vehicle is at risk of falling, keep no one around the lift.
11. Before preparing to approach or service the vehicle, ensure that the safety device is in effect.
12. Dress appropriately when operating machines, and consider wearing non-slip steel-soled shoes for added safety..
13. Beware of electric shock. In order to protect the operator from electric shock, the lift in use must be grounded. Do not connect the green wire to the terminal. This is the ground wire.

14. Danger! The power supply used in this type of lift has high voltage. Please disconnect the power supply before any circuit repair. Unplug in case the power supply is accidentally switched on during maintenance.
15. Warning! There is a risk of explosion. There are parts in the equipment that produce arc light and spark. Do not be exposed to easy gas. This machine should not be placed in the lounge or basement.
16. Maintain with care. Keep the machine clean for better and safer operation. Perform proper lubrication and maintenance procedures according to the manual. Keep handles or buttons clean, dry, and free of oil.
17. Stay alert. Use common sense to observe what you are doing and stay alert.
18. Check for damaged parts. Check for adjustments to moving parts, damage to parts, or anything that may affect their operation. Do not use the machine if the parts are damaged.
19. Do not remove relevant safety parts from the machine. Do not use a lift if it is damaged or missing.
20. Operate the lift only temperature from 41<sup>0</sup>F to 104<sup>0</sup>F (5<sup>0</sup>C to 40<sup>0</sup>C).

 **DANGER** Be very careful when installing, operating, maintaining or repairing this equipment. Failure to comply may result in property damage, product damage, injury or (in very rare cases) death. Ensure that only authorized personnel operate the equipment. All repairs must be carried out by an authorized technician. Do not modify the machine, this voids the warranty and increases the probability of personal injury or property damage.

# I. PRODUCT FEATURES AND SPECIFICATIONS

## CLEAR-FLOOR DIRECT-DRIVED MODEL FEATURES

### Model OH-12, OH-12S (See Fig. 1)

- Direct-driven design, minimize the lift wear parts and failure rate.
- 4pcs 3-stage arms with a large adjustment range are suitable for vehicles with different wheelbases.
- Self- lubricating UHMW Polyethylene sliders and bronze bush.
- Single-point safety release device with dual safety design.
- Clear-floor design, provide unobstructed floor use.
- Overhead safety shut-off device prevents vehicle damage.
- Standard adjustable heights accommodates varying ceiling heights.

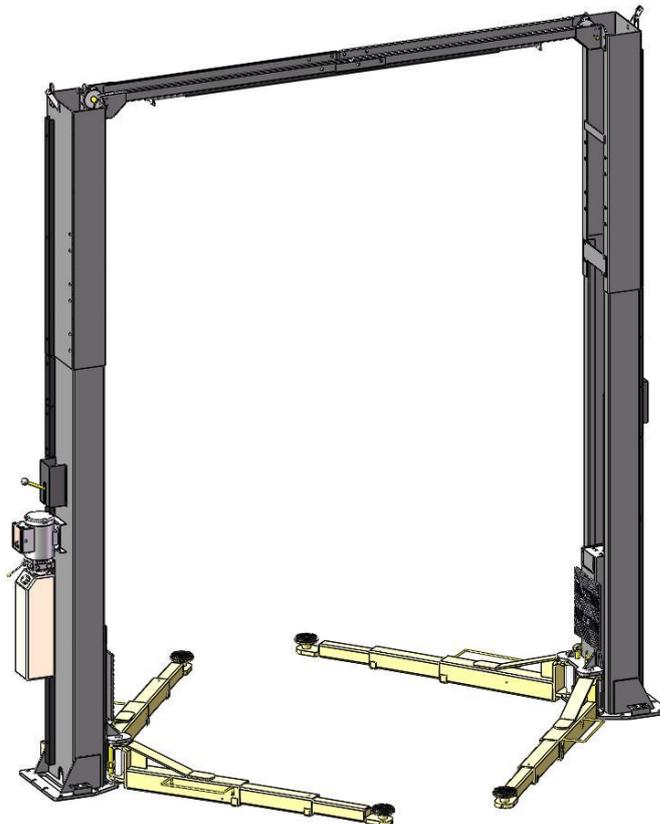


Fig. 2

## MODEL OH-12 SPECIFICATIONS

### Arm Swings View

Model	Lifting Capacity	Lifting Time	Lifting Height	Overall Height	Overall Width	Minimum Pad Height	Motor
OH-12	12,000lbs (5500kg)	69S	72 1/2" - 81 1/2" (1842-2071mm)	174"/186"/198" (4420/4725/5029mm)	150 3/4" (3829mm)	4 1/2" (115mm)	2.0 HP
OH-12S	12,000lbs (5500kg)	69S	72 1/2" - 81 1/2" (1842-2071mm)	143 1/8"/155 1/8"/167 1/8" (3635/3940/4245mm)	150 3/4" (3829mm)	4 1/2" (115mm)	2.0 HP

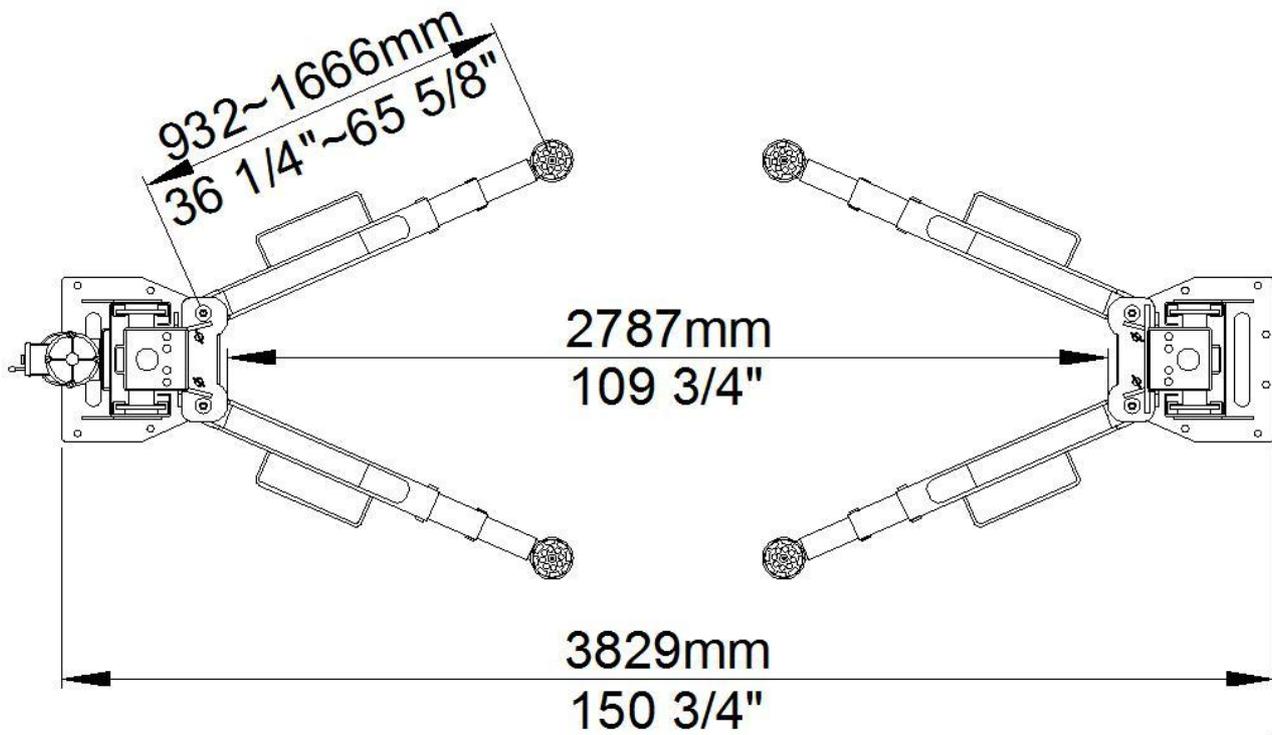


Fig. 3

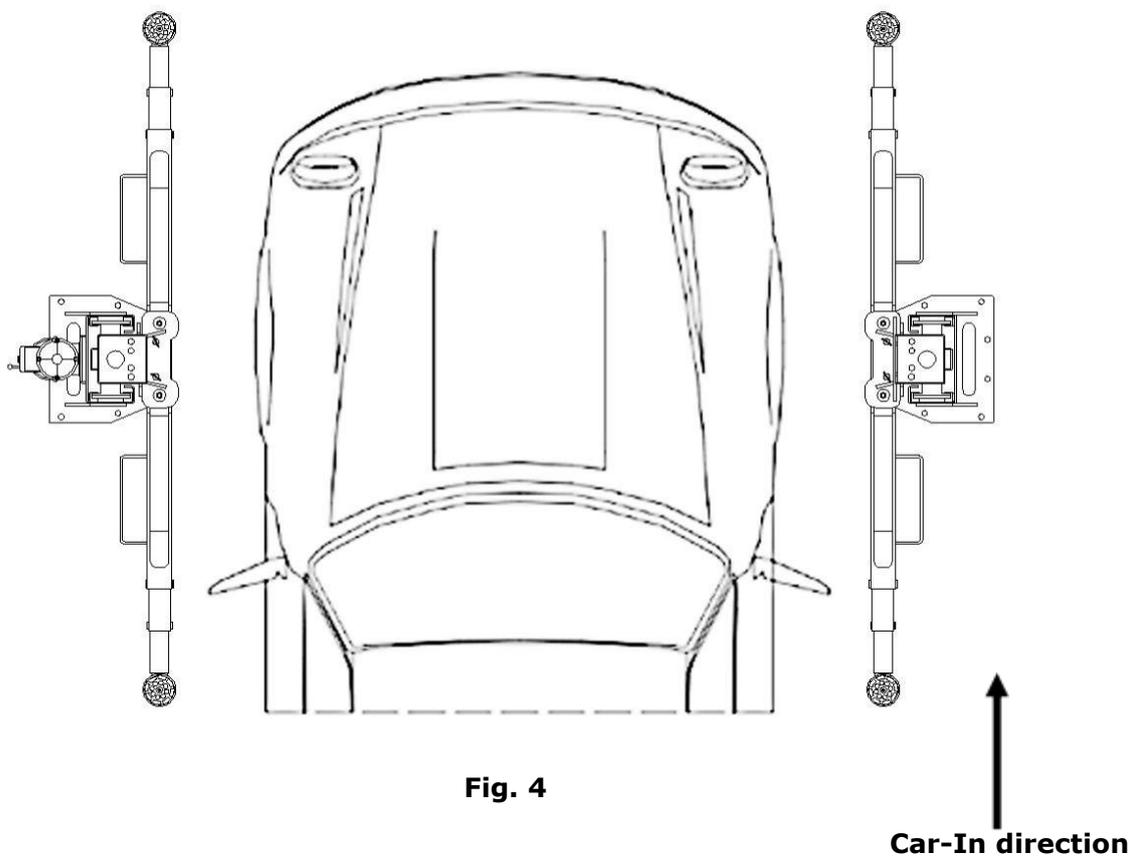


Fig. 4

⚠ CAUTION When driving the vehicle into the lift, ensure that it is positioned in middle of two columns. Any contact with the lift could result in damage to either the vehicle or lift.

## II. INSTALLATION REQUIREMENT

### A. TOOLS REQUIRED

- ✓ Rotary Hammer Drill ( $\Phi 19$ )



- ✓ Hammer



- ✓ Level Bar



- ✓ English Spanner (12")



- ✓ Wrench set

(10#, 13#, 14#, 15#, 17#, 19#, 24#, 27#, 30#)



- ✓ Ratchet Spanner With Socket (28#)



- ✓ Carpenter's Chalk



- ✓ Screw Sets



- ✓ Tape Measure (7.5m)



- ✓ Pliers



- ✓ Lock wrench



- ✓ Socket Head Wrench (3#, 5#, 8#)



Fig. 5

## **B. Equipment storage and installation requirements.**

- 1 . Store the equipment in a dry, non-moldy, non-flammable environment.
- 2 . The lift is only approved for indoor installation and use, and outdoor installation is prohibited.
- 3 . When installing the device, take safety precautions according to the instructions to avoid device damage.
- 4 . Do not install the device outdoors if the installation area is not protected.
- 5 . During installation, all parts should be fastened to ensure the stability and smooth operation of the machine.
- 6 . After installation, the whole machine should be checked to make sure that every component is working properly.

## **C. The equipment should be unload and transfer by forklift.**

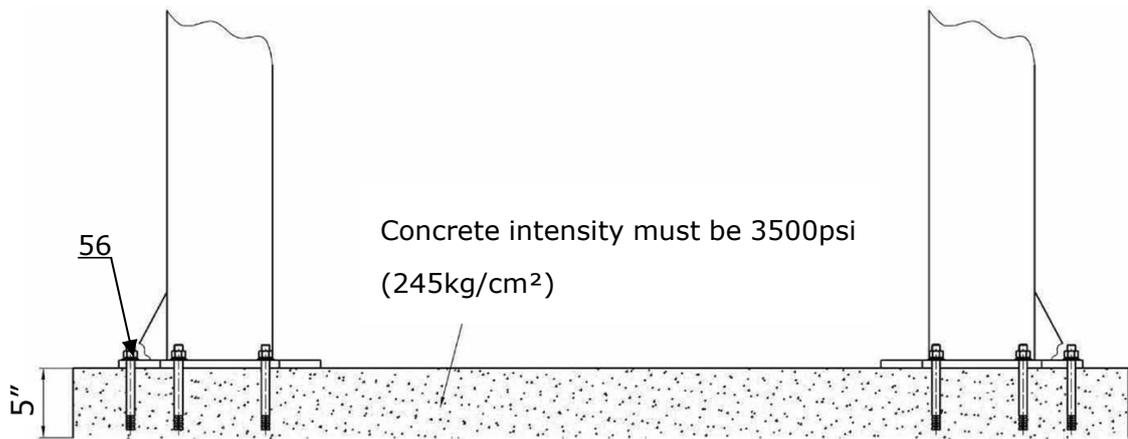


**Fig.6**

## **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 5"(127mm) minimum and without reinforcing steel bars, and must be totally dry before lift installation.
2. Concrete must be in good condition and must be of test strength 3500psi (245kg/cm<sup>2</sup>) minimum. Solidify at least 15 days.
3. The installation ground must be smooth and level without cracks.
4. Do not install the lift on asphalt or any surface other than concrete.



**Fig. 7**

## **E. POWER SUPPLY**

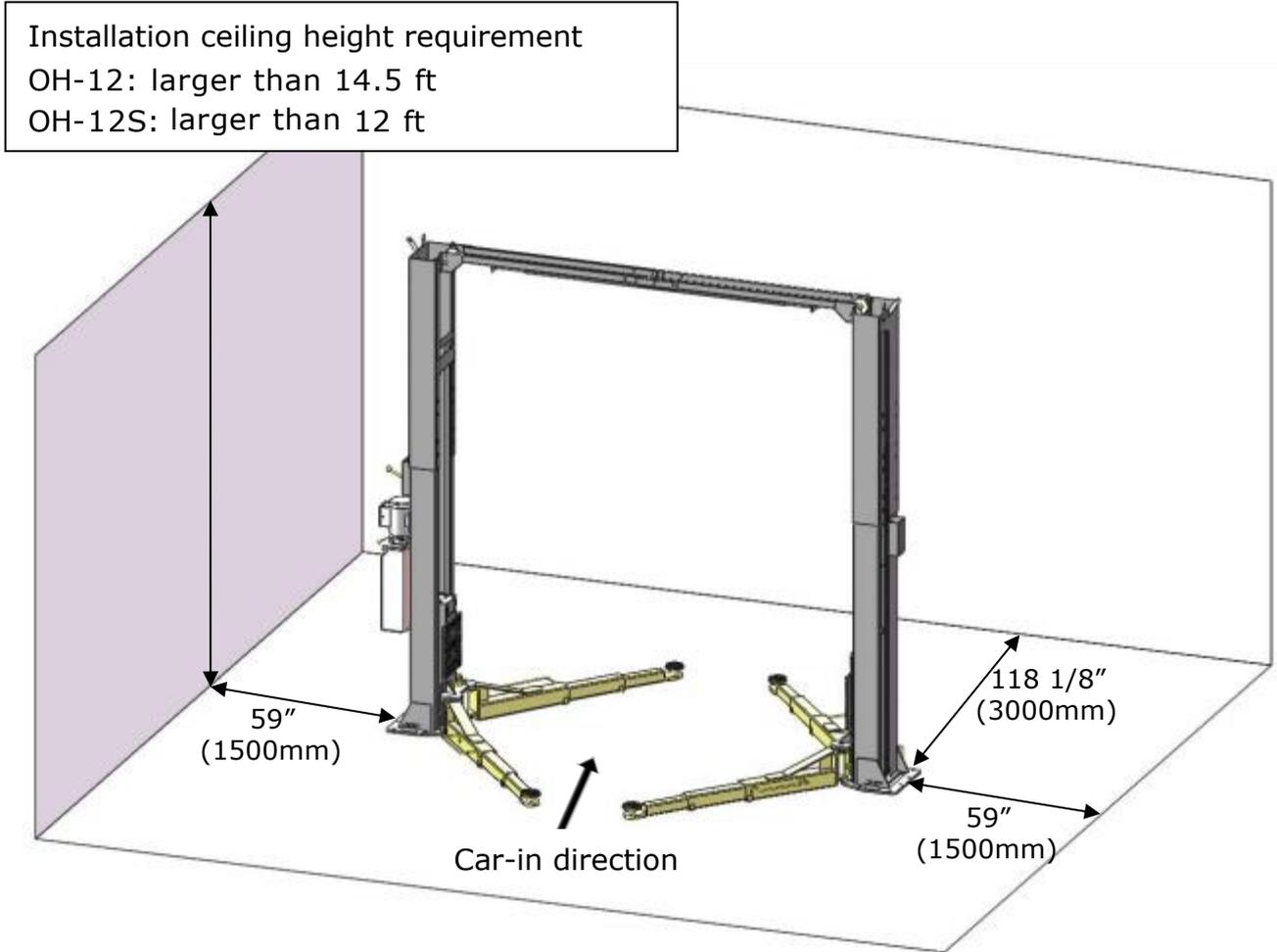
1. You are required to engage a licensed and qualified electrician for the installation process.
2. The power supply must be 220VAC/60Hz, with a **cord** larger than 12AWG, and must be properly grounded.

**⚠ DANGER** All electrical wiring must be performed by a licensed and certified electrician. Attempting to connect the circuit without proper certification may result in damage to the lift or electrocution, resulting in serious injury or death.

## **III. INSTALLATION STEPS**

### **A. Location of installation**

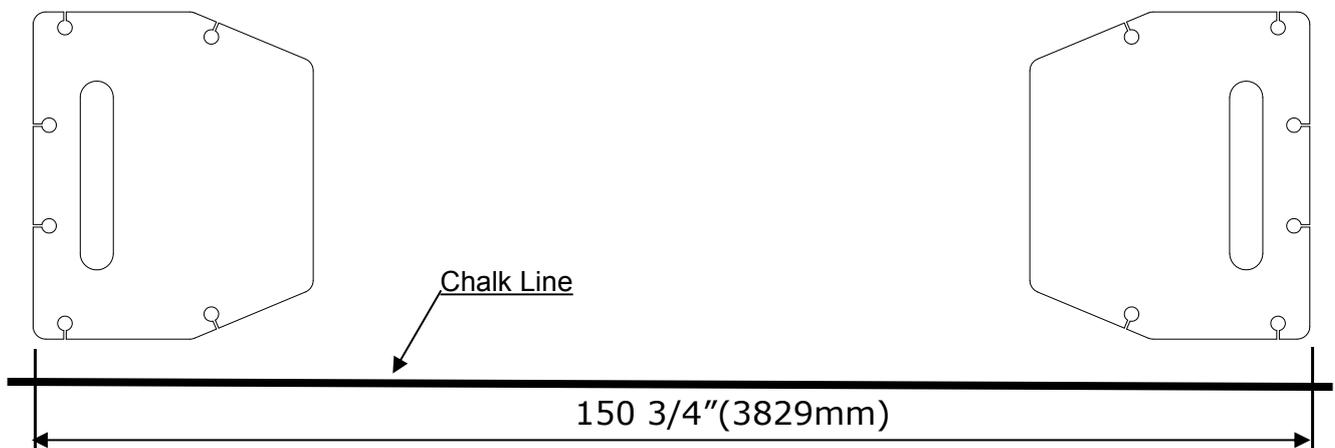
1. Installation space: Ensure there is enough space for the lift. Accurately measure the front, back, side and top mounting dimensions and refer to the below figure data (**See Fig. 8**).
2. Overhead obstacle: Check for overhead obstacles, such as building supports, heaters, lights, wires, and low ceilings, etc..
3. Installation: The lift is only approved for indoor installation and use, and outdoor installation is prohibited.
4. Floor: Install lift only on flat concrete floor. Do not install on asphalt or any other surface. The surface must be flat. Do not install if the surface slope exceeds 3°.



**Fig. 8**

Lift installation and concrete construction must comply with the latest version of the National standard "Automotive Lifts - Safety Requirements for Construction, Testing and Verification". Uniform building codes of other agencies or International Building Codes (IBC) for any special regional structures must meet seismic standards.

**B. Use a carpenter's chalk line to establish installation layout of base-plate (See Fig. 9).**



**Fig. 9**

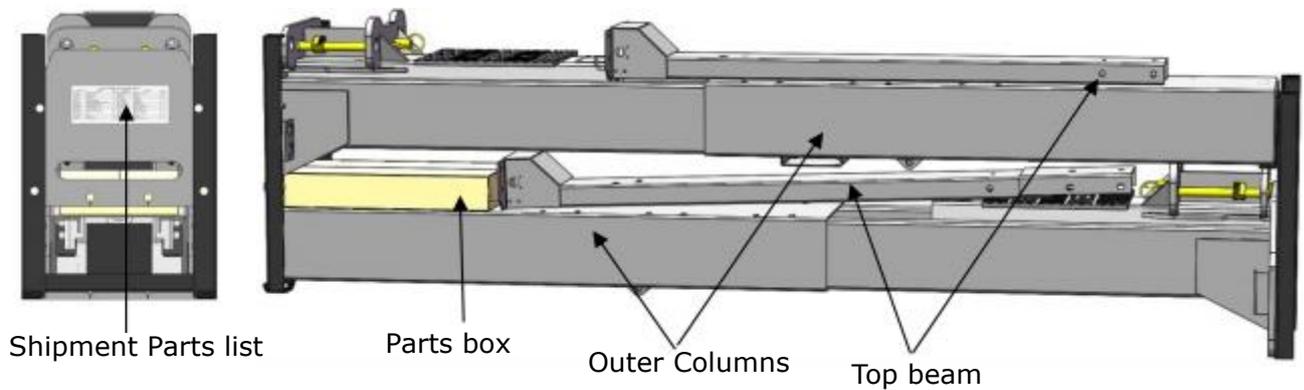
**C. Check the parts before assembly. (The model OH-12S is used as a demonstration of the packing method.)**

1. Packaged lift and hydraulic power unit(See Fig. 10).



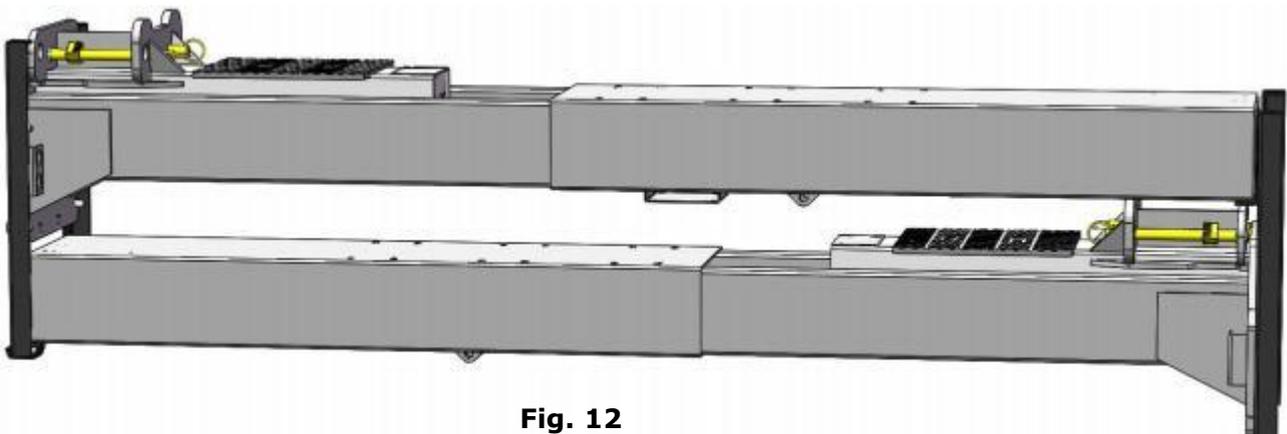
**Fig. 10**

2. Move the lift aside with a fork lift or hoist, unpack the lift, tear off the shipment parts list and check the components in the package according to the list. (See Fig. 11)



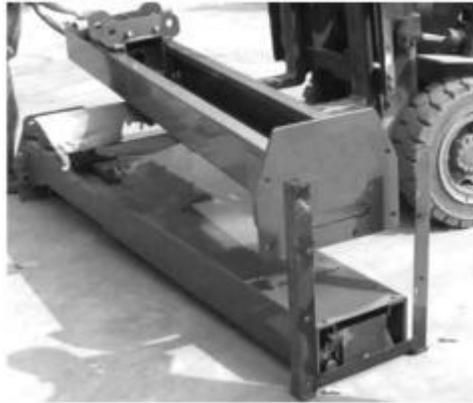
**Fig. 11**

3. Take out 2pcs top beam, then move them to the installation position. (See Fig. 12).



**Fig. 12**

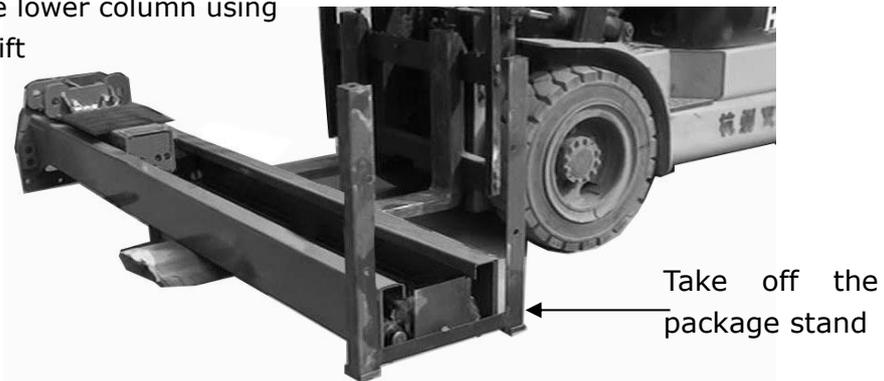
- Lift the upper column with a fork lift or hoist, loose the bolts of the upper package bracket, then take out outer column and the parts inside the column. **(See Fig. 13)**



**Fig. 13**

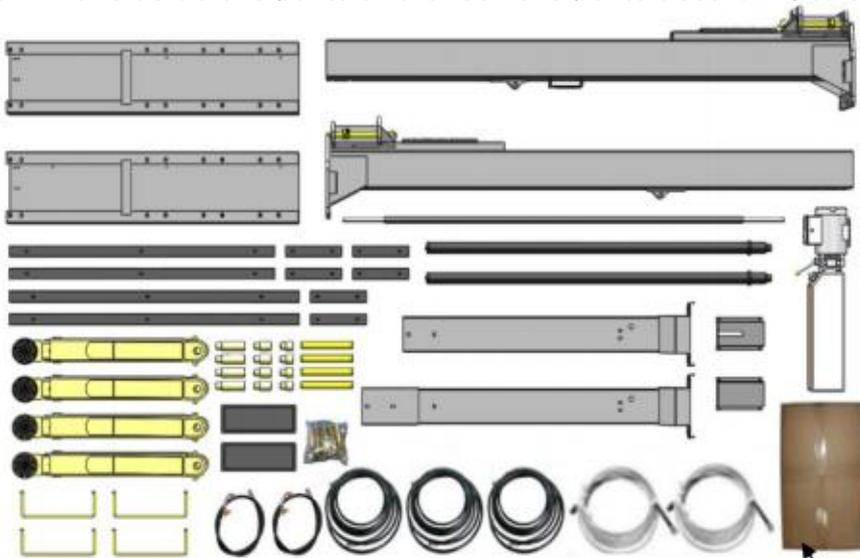
- Lift the lower column with a fork lift or hoist, take off the package bracket, take out outer column and the parts in the inner column. **(See Fig. 14)**

Lift the lower column using a forklift



**Fig. 14**

- Move aside the parts and check the parts according to the shipment parts list. **(See**



Parts list  
**Fig. 15**

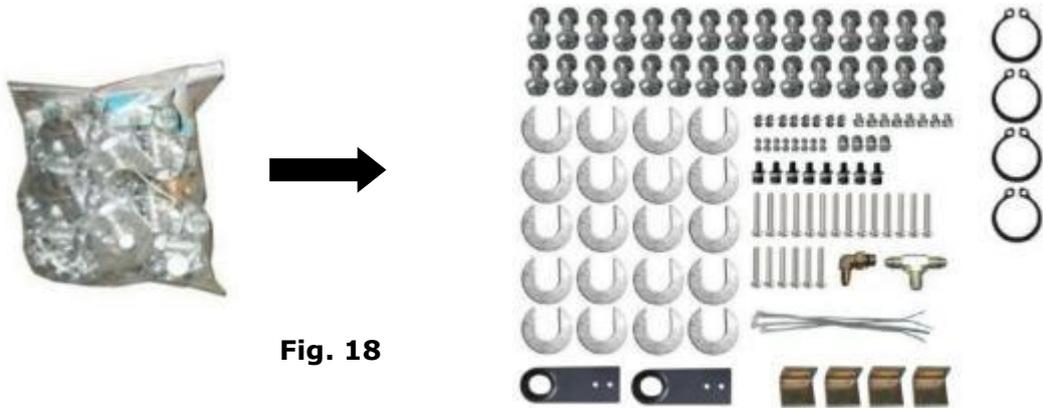


Parts box list (111)  
**Fig. 16**

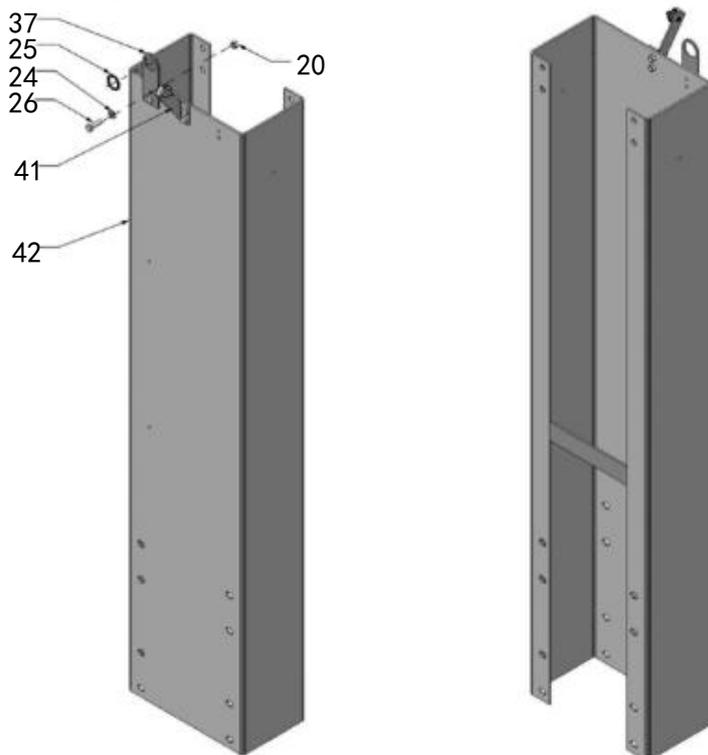
7. Check the parts of the parts bag 1 & 2 according to parts bag list (**See Fig. 17**).



8. Check the parts of the parts bag 3 according to parts bag list (**See Fig. 18**)

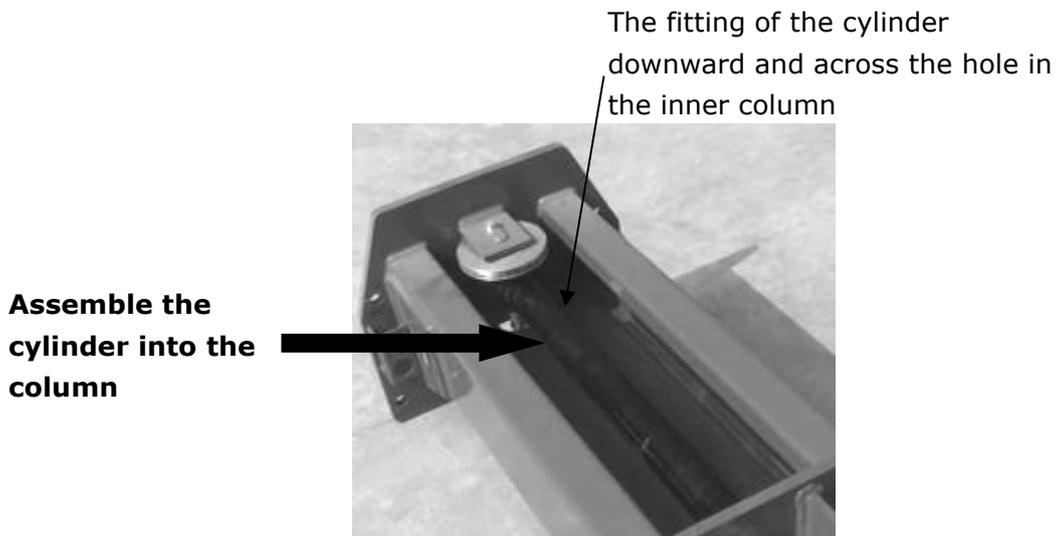
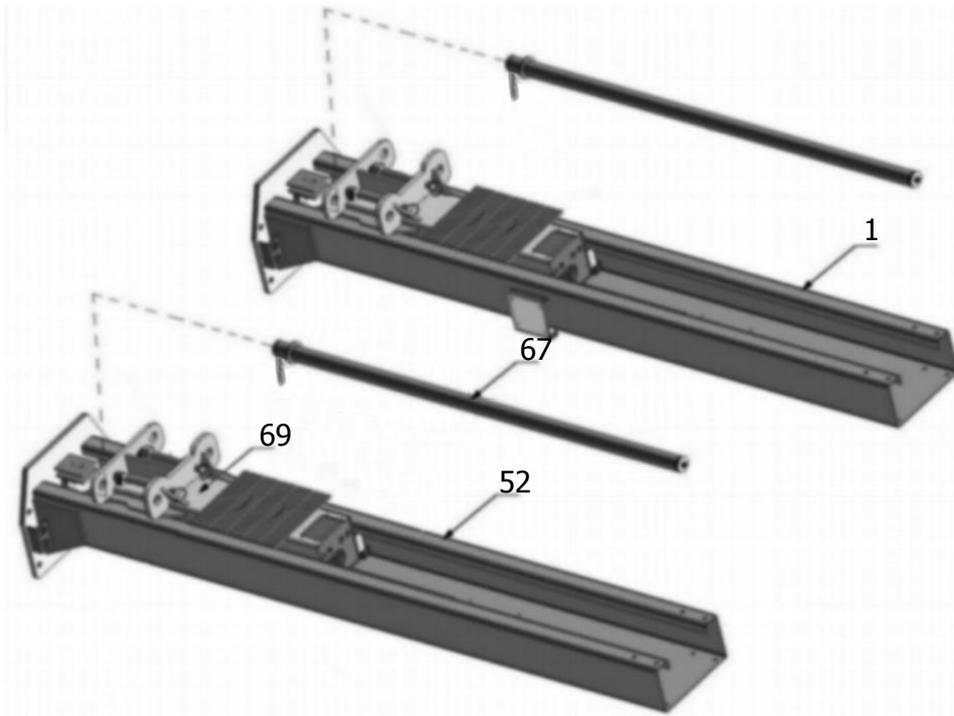


**D. Install parts of outer columns (See Fig. 19).**



### E. Confirm installation site and install cylinder

The two columns are placed upside down on the ground of the installation site, and the installation position of the power-side column is determined according to the condition of the installation site. Generally, the power-side column is installed on the right side of the vehicle entering direction. Then install the cylinder. **(See Fig. 20).**



**Fig. 20**

## F. Installation of inner and outer columns.

The lift is designed with three height settings, choose high setting, medium setting or low setting on your workshop.

Install OH-12:

The high setting is suitable for workshops with a height of over 16.5 ft;

The medium setting is suitable for workshops with a height between 15.5-16.5 ft;

The low setting is suitable for workshops with a height between 14.5-15.5 ft;

The lift is not suitable for workshops with a height less than 14.5 ft.

Install OH-12S:

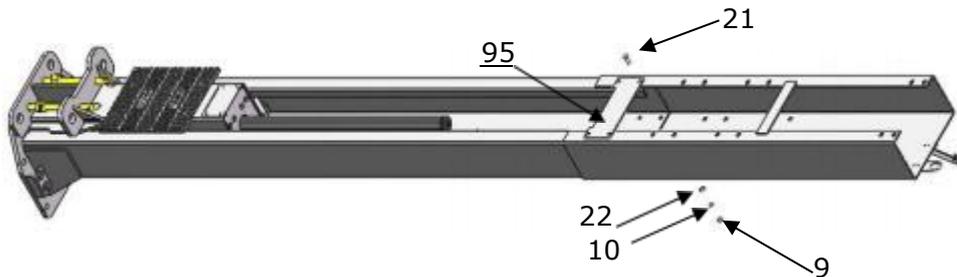
The high setting is suitable for workshops with a height of over 14 ft;

The medium setting is suitable for workshops with a height between 13-14 ft;

The low setting is suitable for workshops with a height between 12-13 ft;

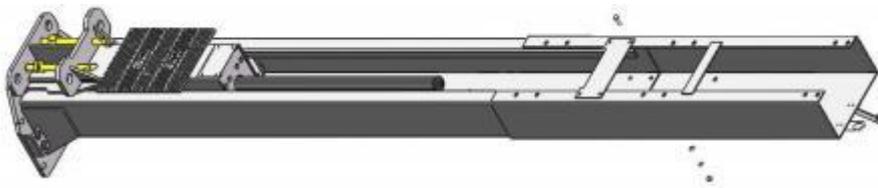
The lift is not suitable for workshops with a height less than 12 ft.

1. High Setting, connecting the lower holes of outer columns with inner columns (**See Fig. 21**).



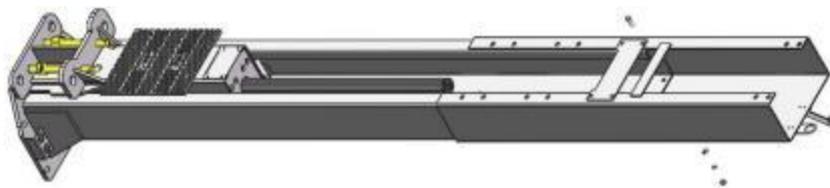
**Fig. 21 High Setting**

2. Medium Setting, connecting the middle holes of outer columns with the inner columns. (**See Fig.22**)



**Fig. 22 Medium Setting**

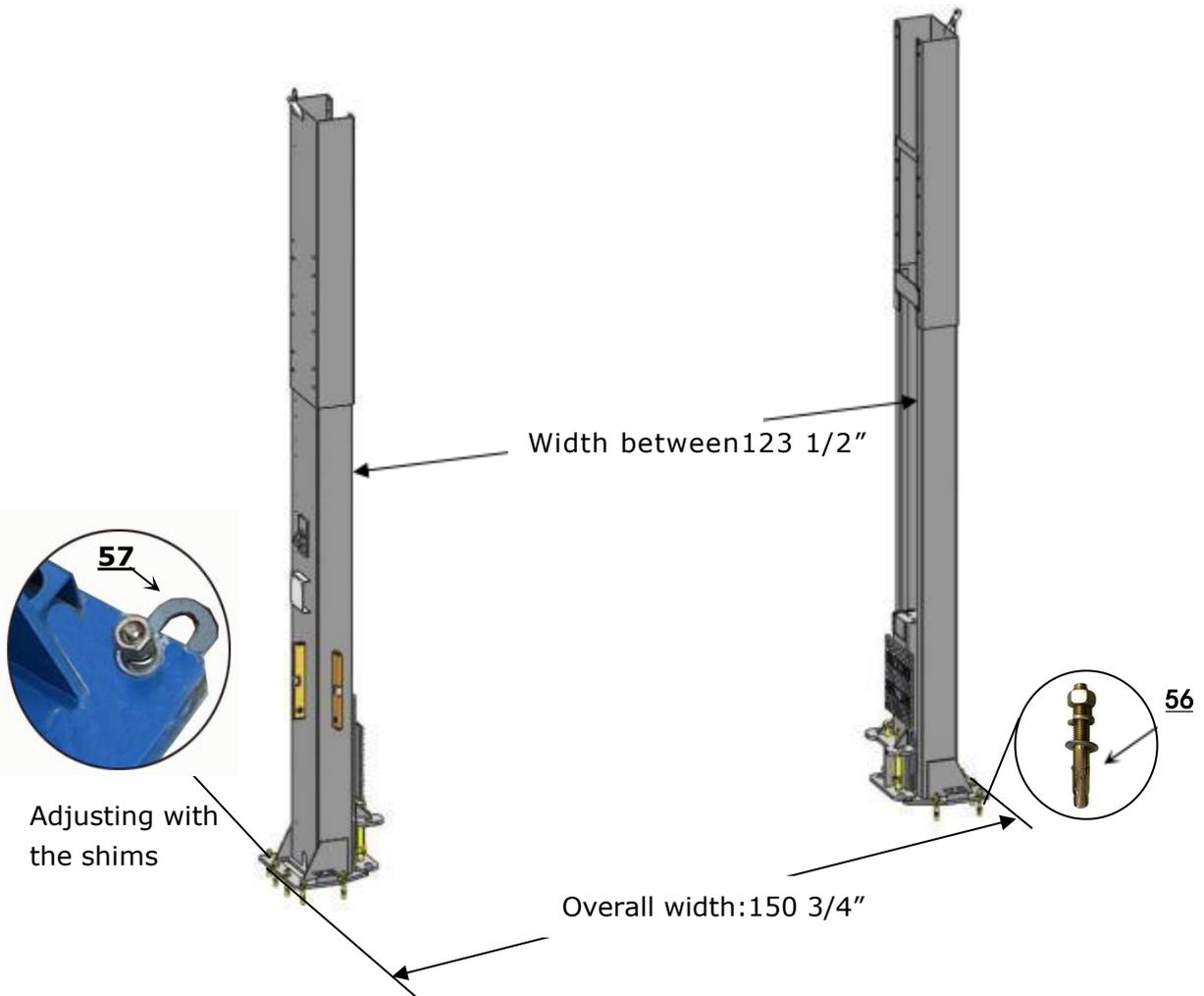
3. Low Setting, connecting the upper holes of outer columns with the inner columns. (**See Fig.23**)



**Fig. 23 Low Setting**

**G. Install anchor bolts.**

Position the columns on the installation layout. Check the columns verticality with level bar, and adjusting with the shims if the columns are not vertical. Do not tighten the anchor bolts at this time. **(See Fig.24).**



**Attention:** Minimum embedment of Anchors is 4 3/8"(110mm).

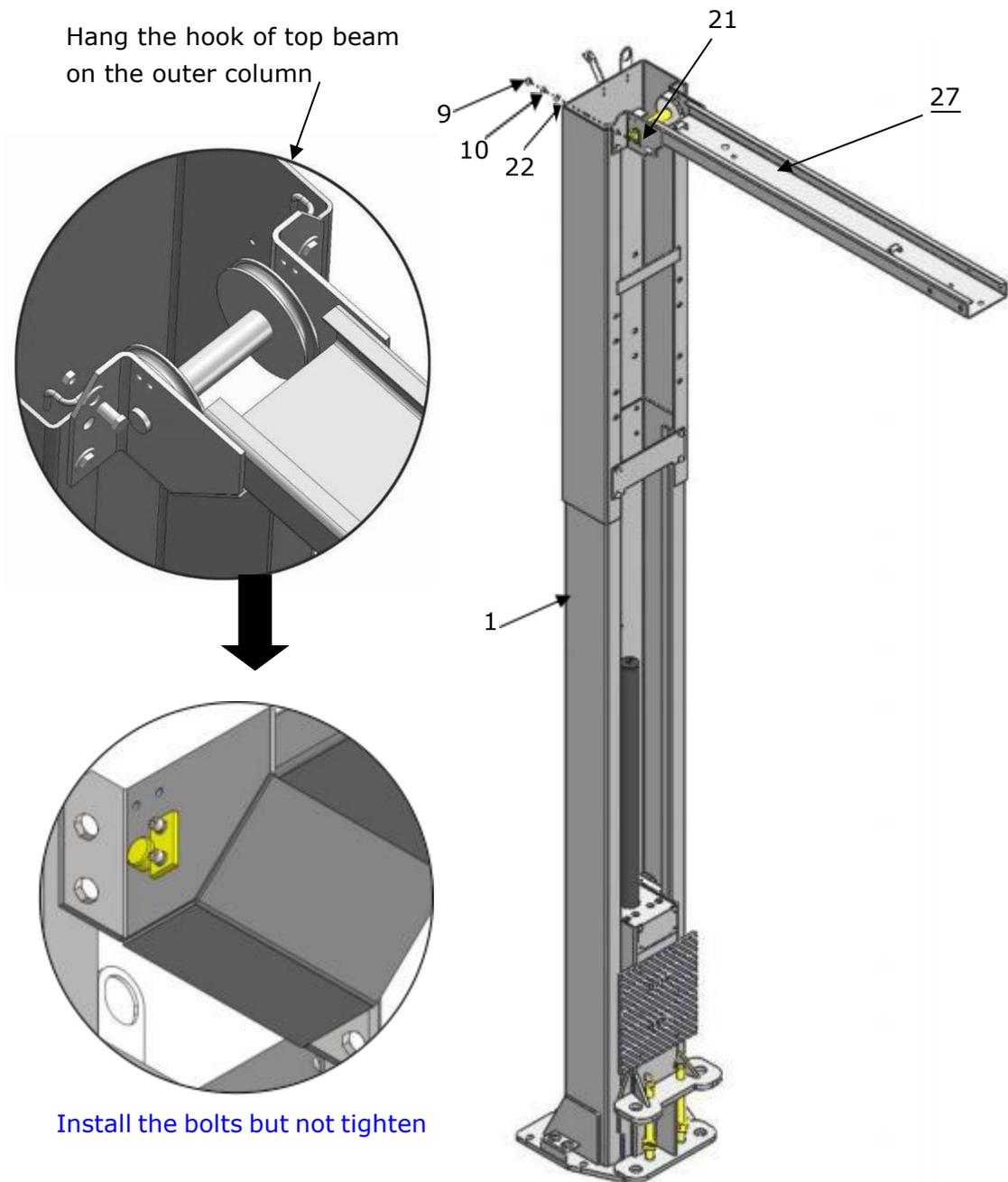


**Fig. 24**

**⚠ CAUTION** Concrete and anchor bolts must comply with above specifications. Install lifts only on concrete surfaces. If you are in asphalt or either any other surface on which the lift is mounted, or the concrete or anchor bolts do not meet these specifications, may result in product damage, vehicle damage, personal injury, or even loss of life.

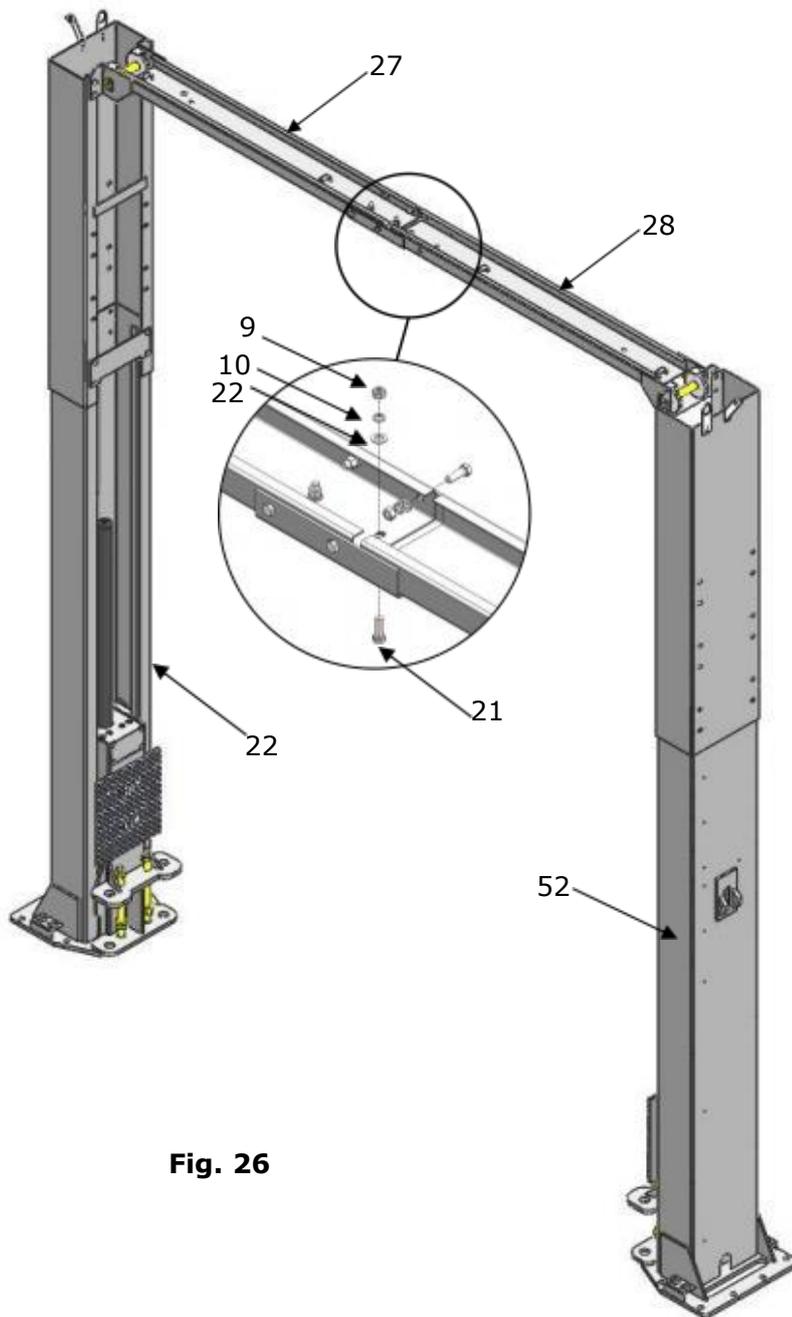
## H. Install top beam

1. Hang the hook of top beam(Left) on the outer column, and then align the holes and **install** the bolts. (See Fig. 25).



**Fig. 25**

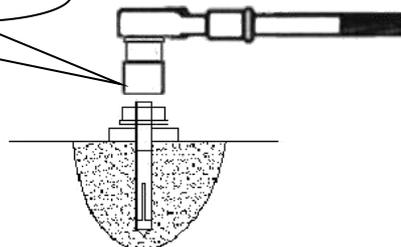
2. Hang the hook of top beam(Right) on the other outer column, and then connect the left and right top beam with bolts. Tighten all the bolts. (See Fig. 26).



**Fig. 26**

3. Tighten all anchor bolts shown in Fig.27.

**Tighten the anchor bolts with socket wrench.**  
Re-torque the anchor bolts to 150N.m



**Fig. 27**

## I. Installing the limit control bar and limit switch (See Fig. 28).

### 1. Fix the control bar on to the top beam.

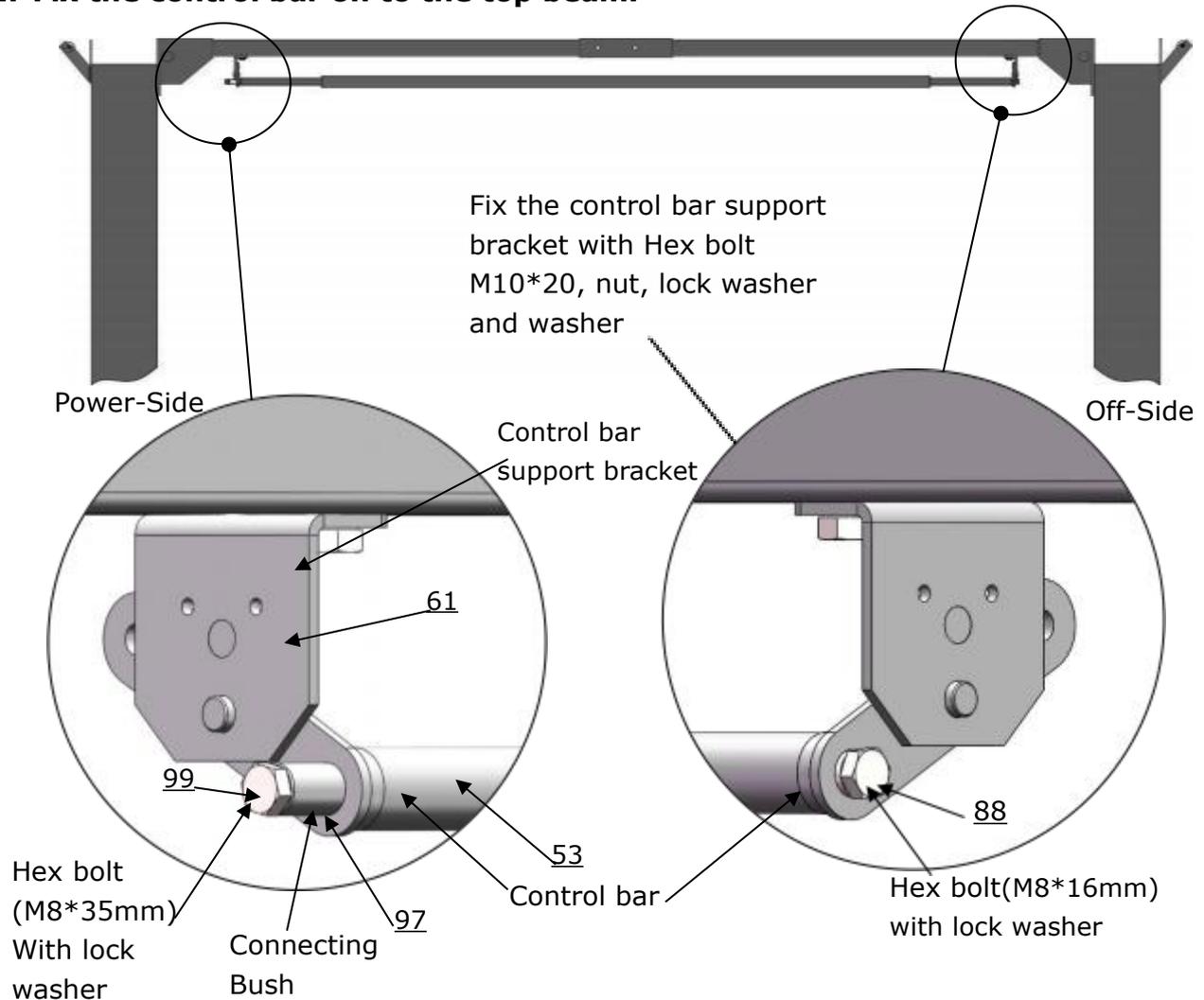


Fig.28

### 2. Installing the limit assy..

Install the limit switch assy. to the power-side control bar support bracket as shown.

The wire across the top beam hole and [along the column to terminal box of the power unit.](#)

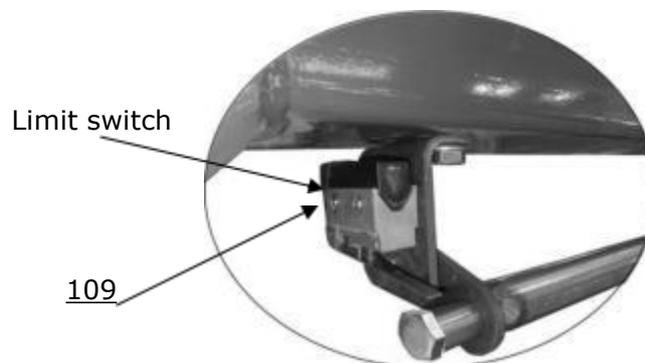
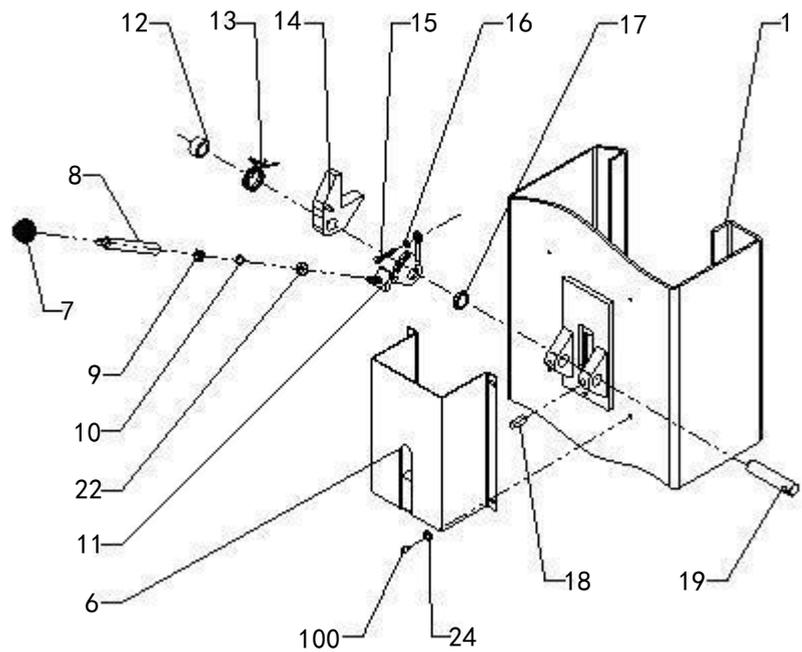
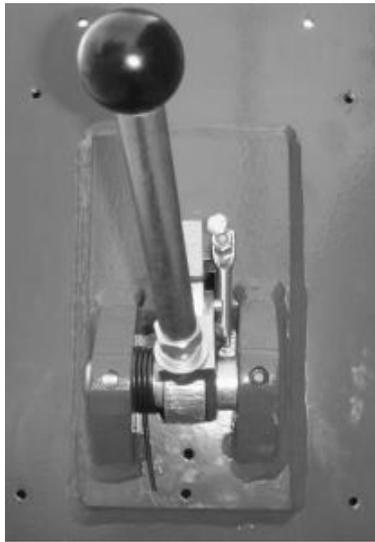


Fig.29

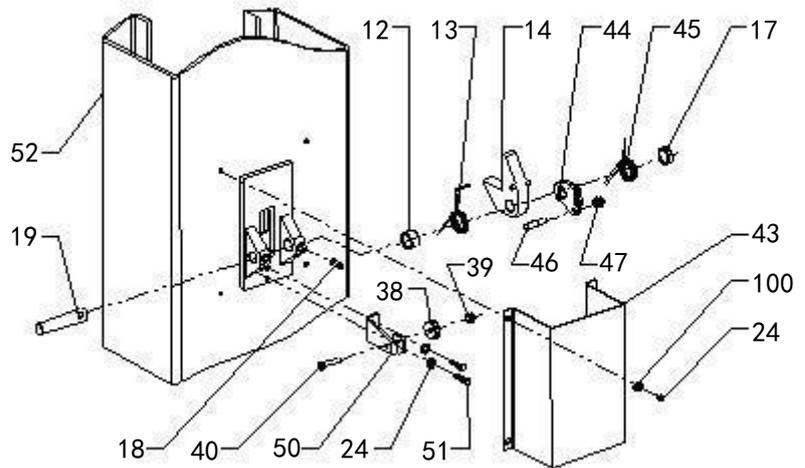
**⚠ DANGER** All wiring must be done by a licensed certified electrician. Do not perform any maintenance or installation of the lift without confirming that the main power had been disconnected from the lift and cannot be reactivated until all procedures have been completed.

**J. Install safety device (See Fig. 30 & Fig. 31).**



**Power-side safety device**

**Fig. 30**



**Off-side safety device**

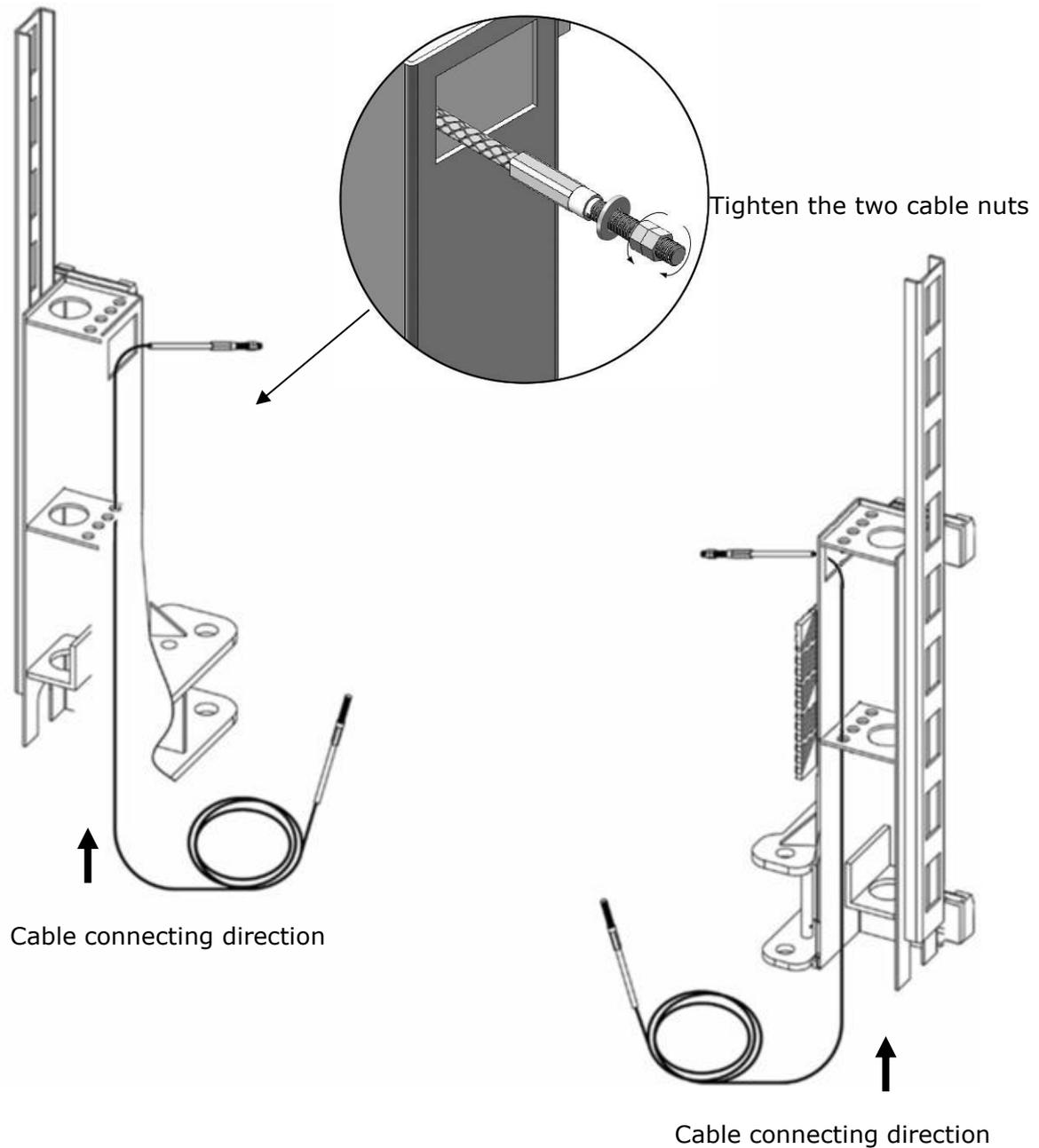
**Fig. 31**

## K. Install cables

Raise both sides of carriage, secured them to the same level of safety lock.

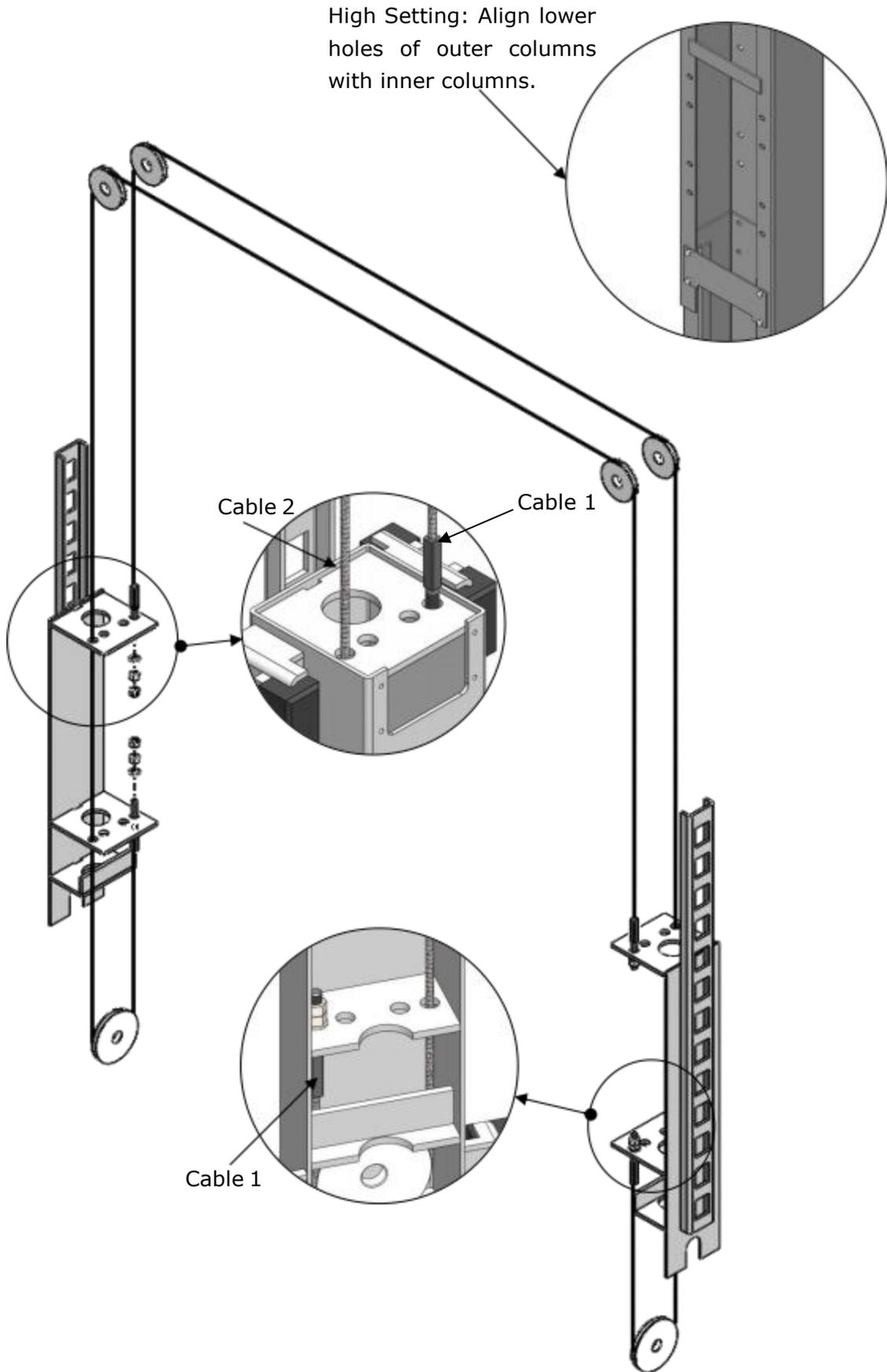
### 1. Cable connecting of high setting installation

1.1 Remove the plastic cover of carriage, cable across from the bottom of the carriage and pull it out from the hole of carriage, then tighten two cable nuts. **(See Fig. 32)**



**Fig.32**

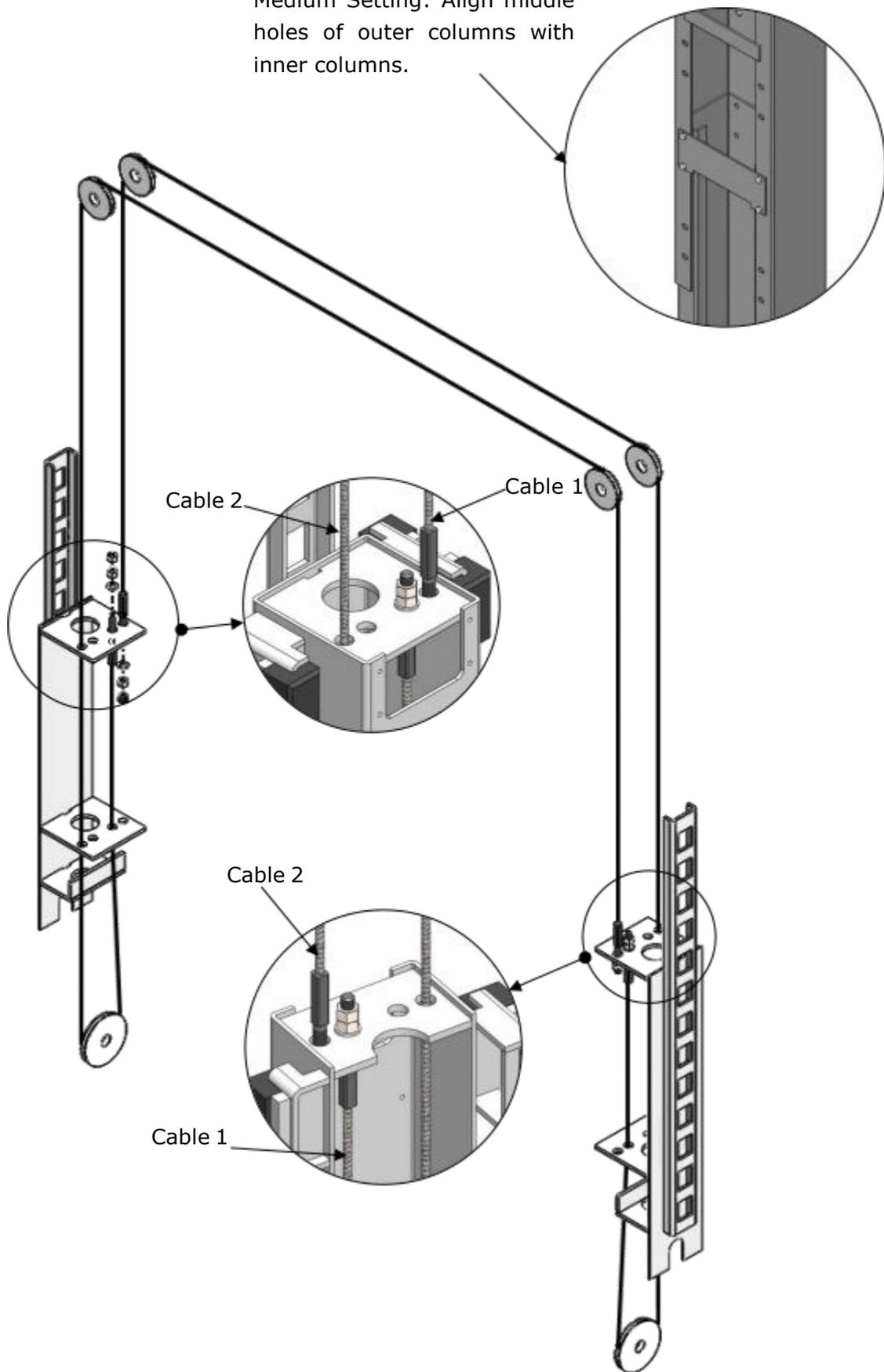
1.2 Connecting cable for high setting (**See Fig. 33**)



**Fig.33**

**2. Cable connecting of medium setting installation. (See Fig. 34)**

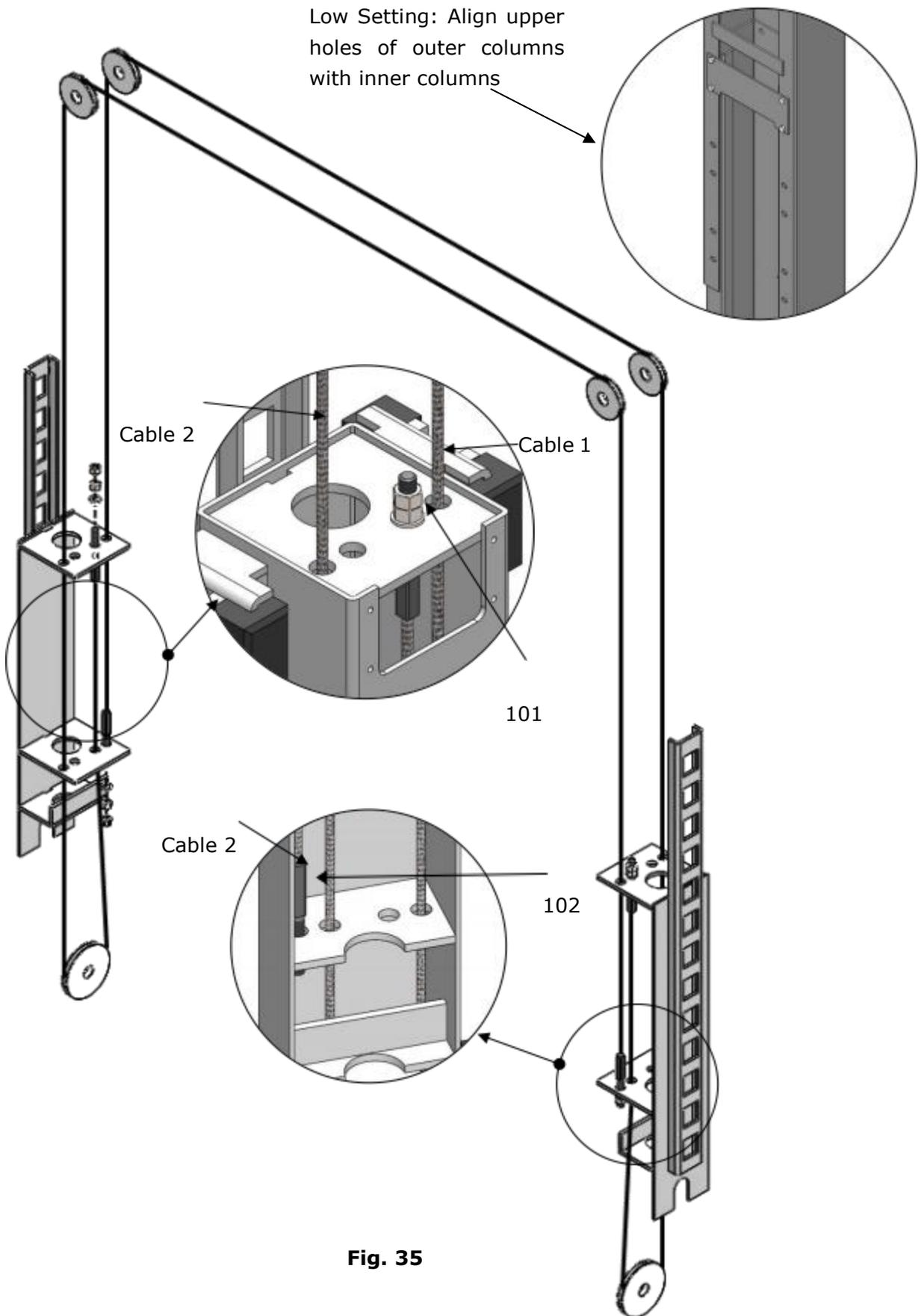
Medium Setting: Align middle holes of outer columns with inner columns.



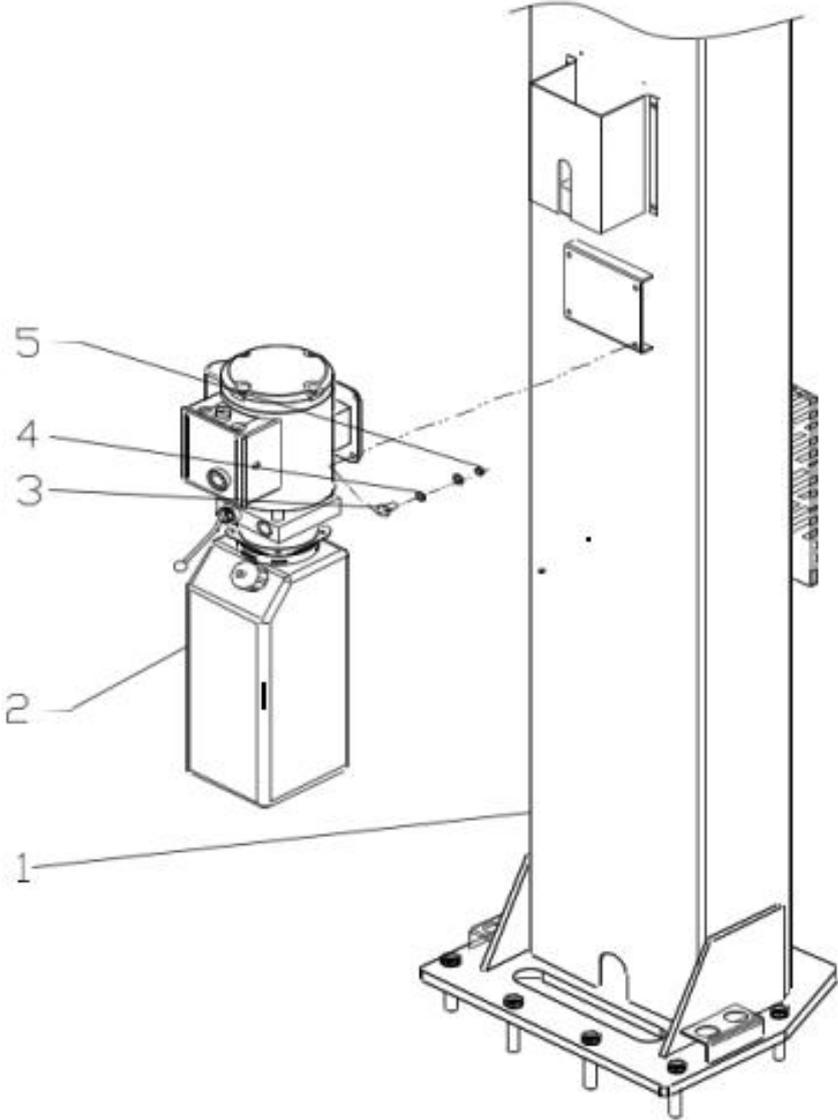
**Fig. 34**

**3. Cable connecting of low setting installation. (See Fig. 35)**

**Attention: the cable should be along inside of the column.**



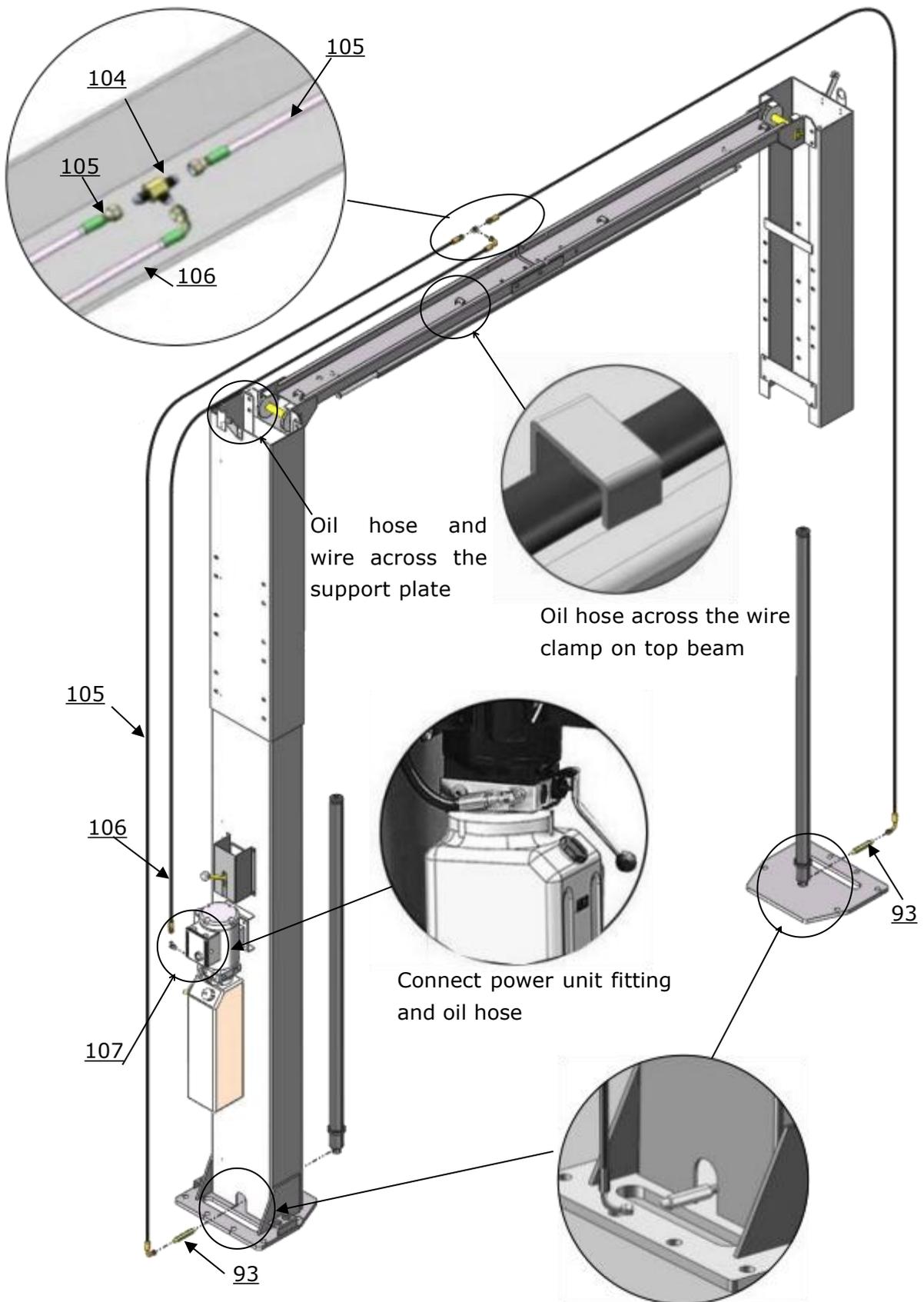
**L. Install power unit (See Fig. 36)**



**Fig. 36**

**M. Install oil hose of high, medium and low setting.**

**1. Oil hose installation of low setting.(Fig.37)**



**Fig. 37**

## 2. Oil hose installation of medium setting.(Fig.38)

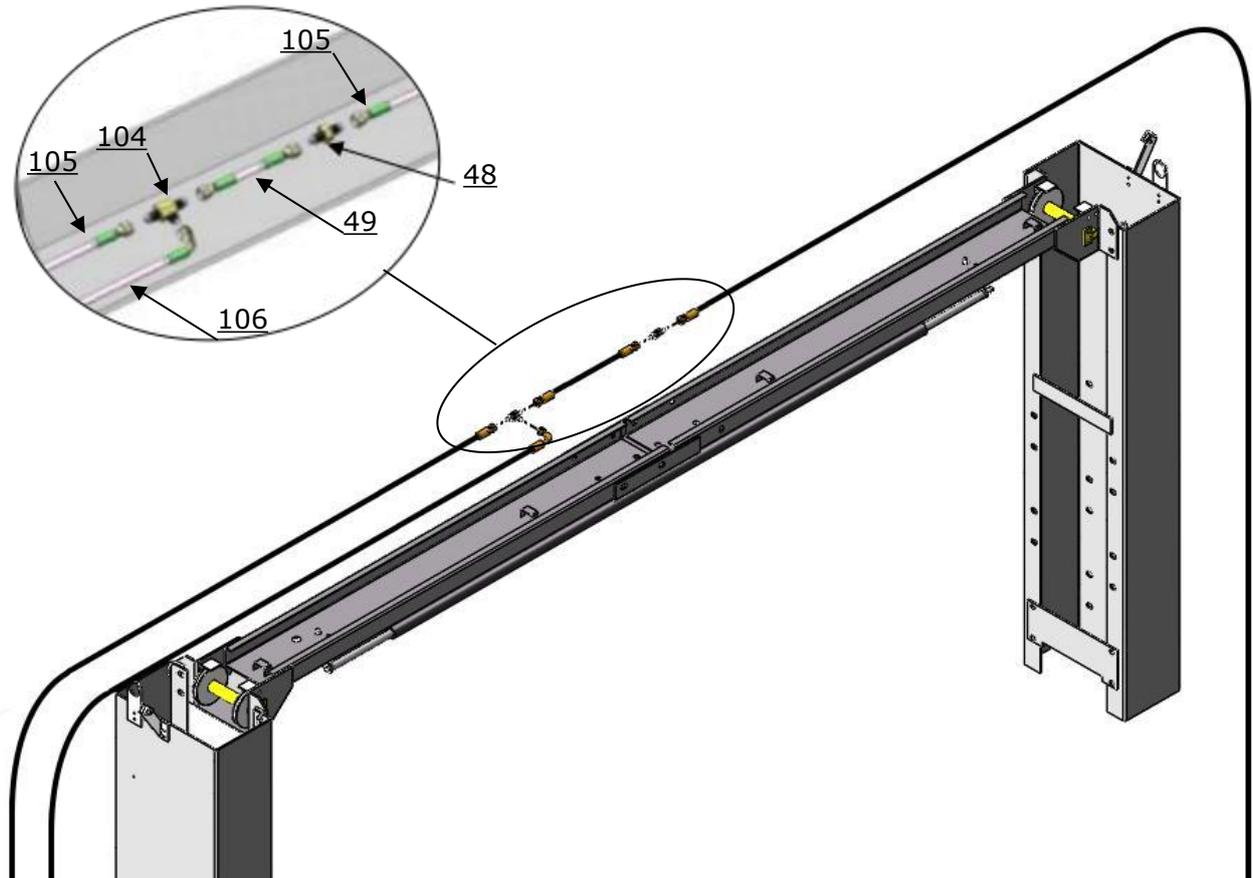


Fig. 38

## 3. Oil hose installation of high setting.(Fig.39)

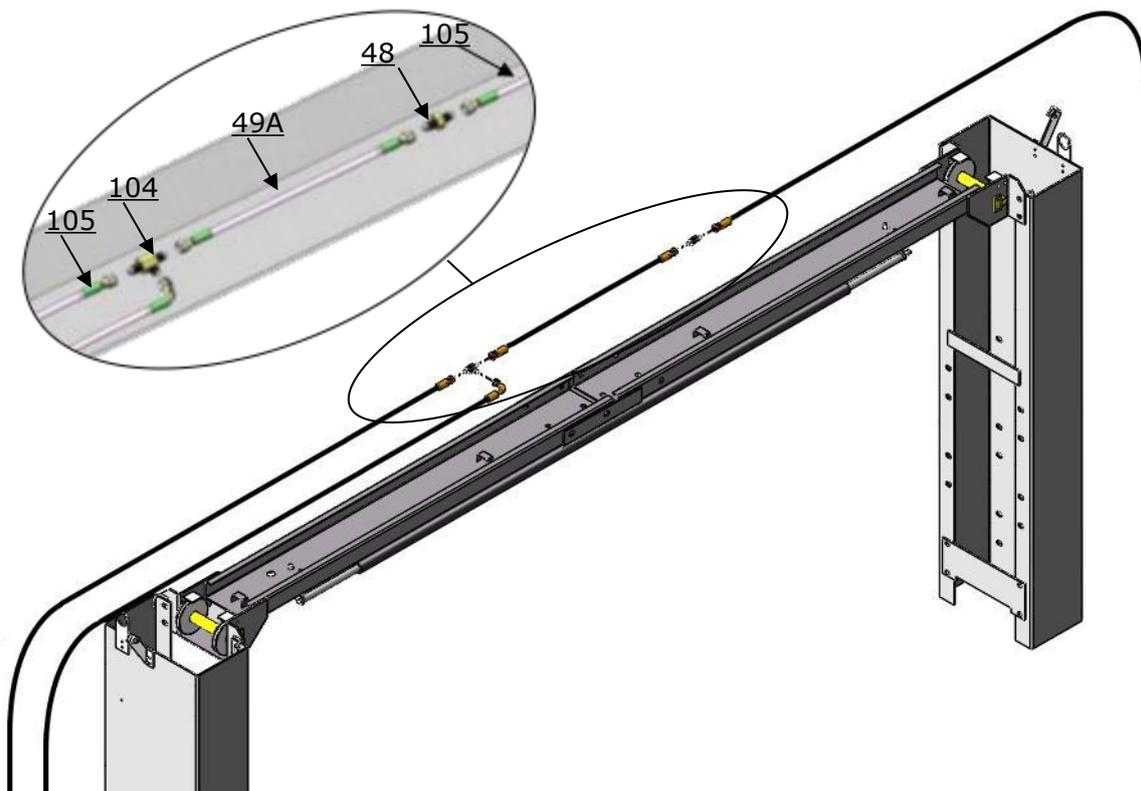
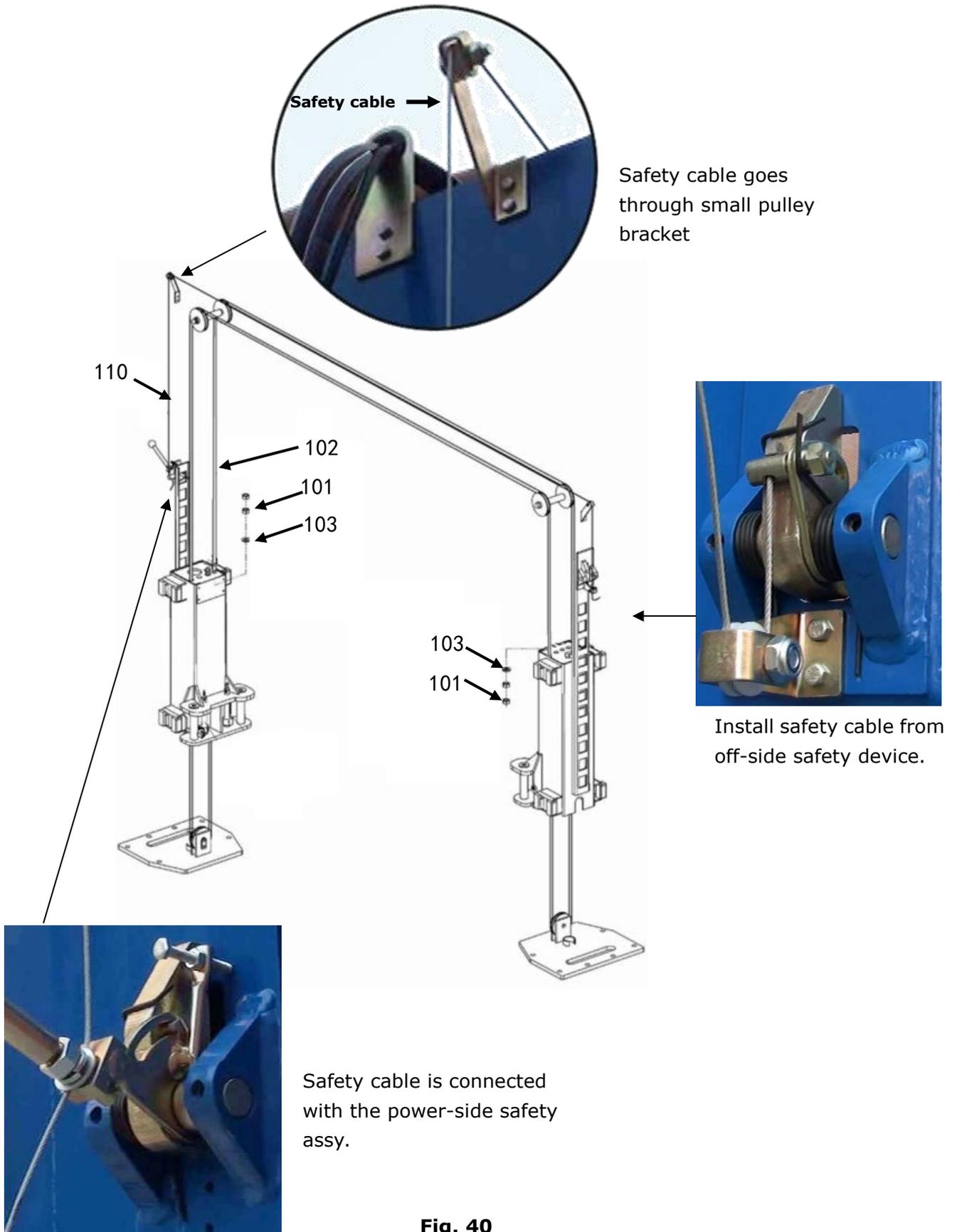


Fig. 39

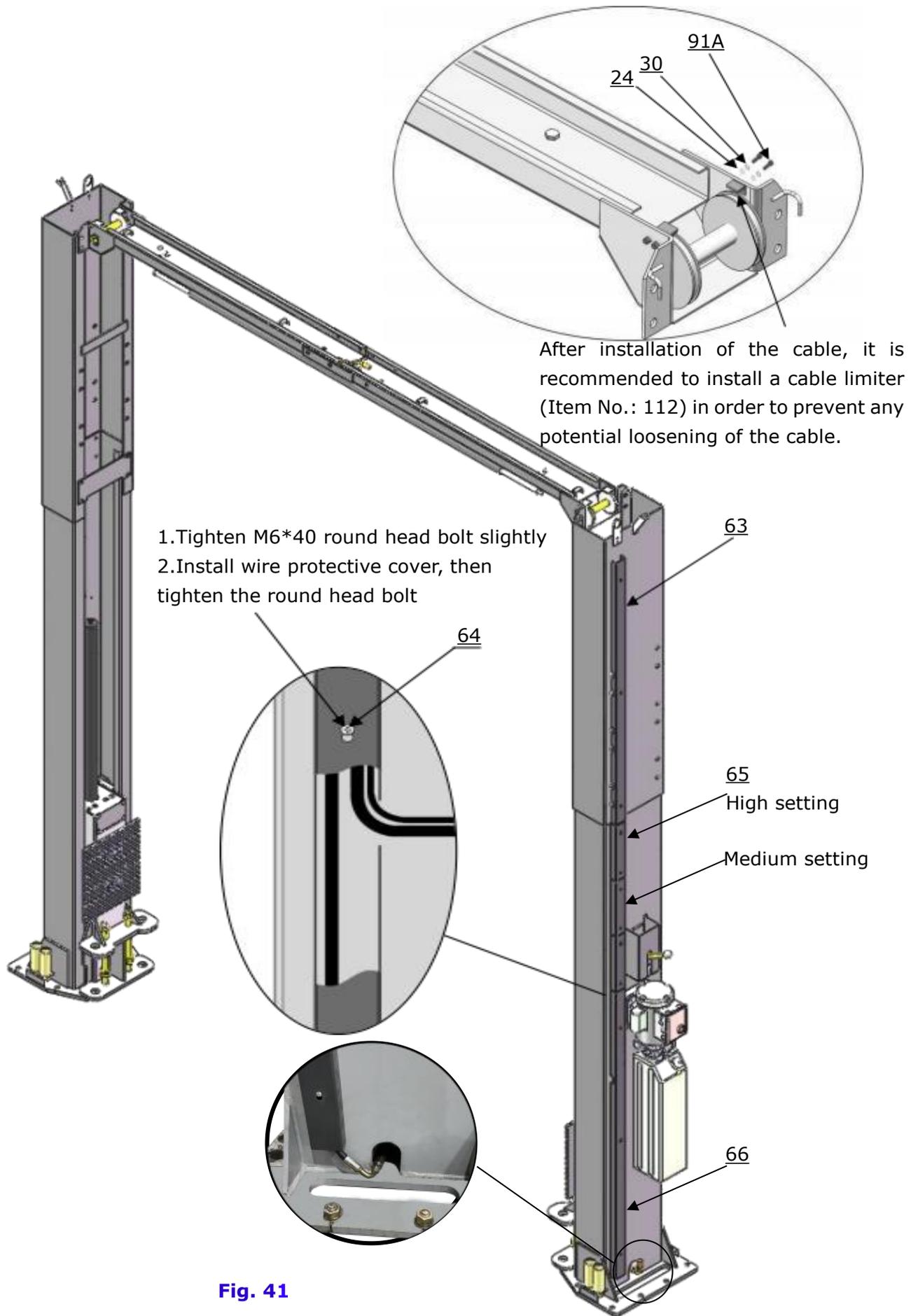
**N. Install safety cable.**

Install safety cable start from off-side safety device, then pass it through the top beam, finally connect to power-side safety device. **(See Fig. 40)**



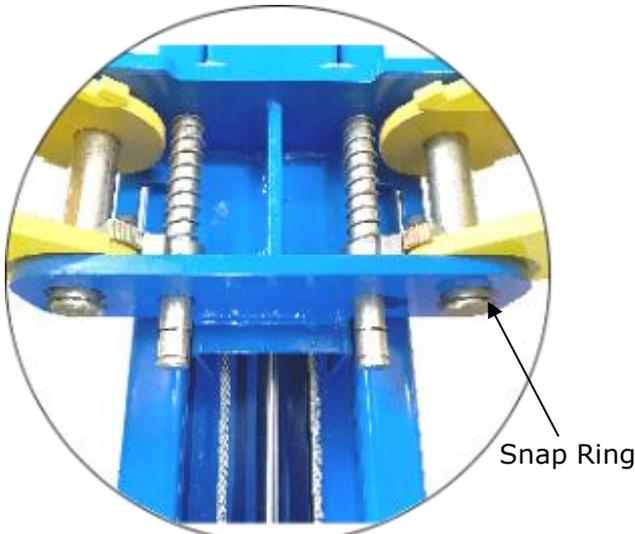
**Fig. 40**

**O. Install wire protective cover and cable limit block.(See Fig. 41)**

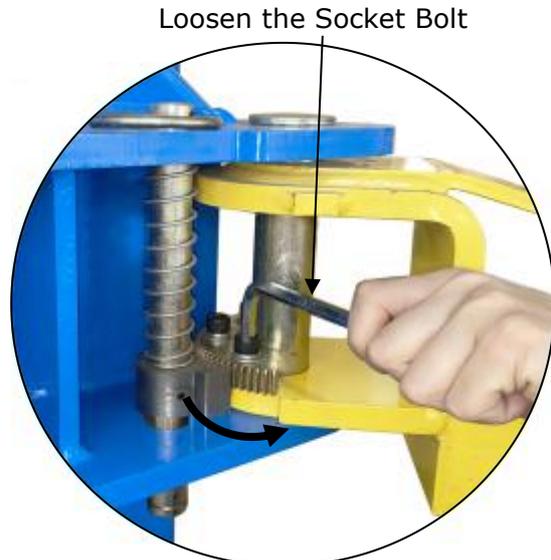


**Fig. 41**

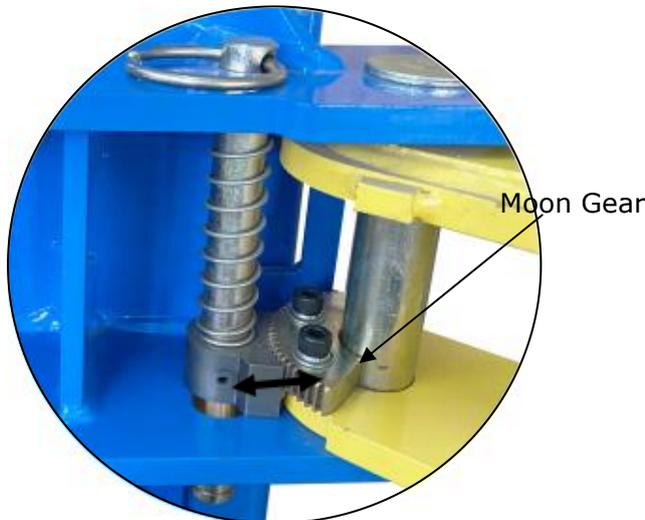
**P. Install lifting arms (See Fig. 42); Lower the carriages to the lowest position, then use a 10# socket head wrench to loosen the bolt.(See Fig.43); Adjusted moon gear as direction of arrow (See Fig.44); Adjusted the moon gear and arm lock to mesh, then tightened the socket bolts of arm lock (See Fig.45).**



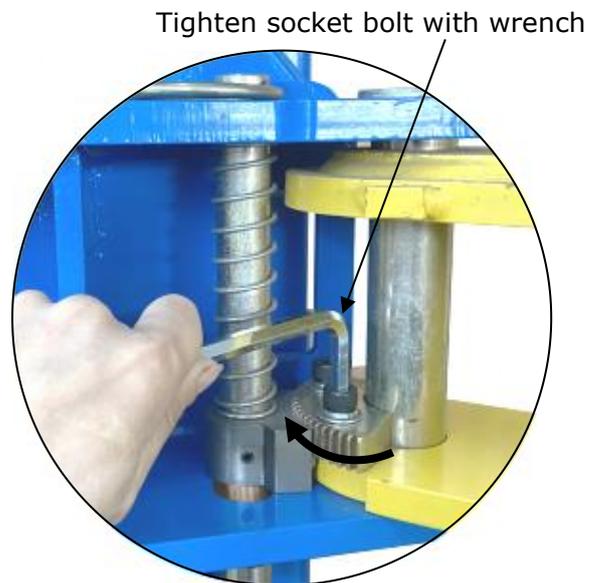
**Fig. 42**  
Install lifting arms



**Fig. 43**  
Use the 10# socket head wrench to loosen the socket bolt



**Fig. 44**  
Adjust moon gear to engage arm lock



**Fig. 45**  
After engaging the moon gear and arm lock, tighten the bolts.

**⚠ DANGER** The lift should not be operated until the gears are fully engaged, and it is important to regularly check and adjust the arm restraint gears on all four arms. Failure to do so can result in vehicle damage, injury, or even death.

**Q. Tighten all the oil hose fittings and fill the hydraulic oil. In consideration of Hydraulic Power Unit's durability and keep the equipment running in good performance, please use Hydraulic Oil 46#.**

## **R. Install electrical system**

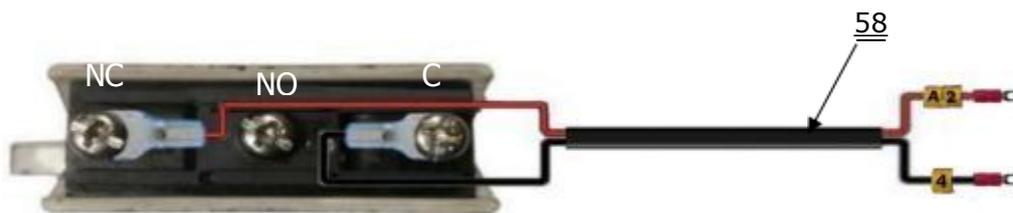
Connect the power source on the data plate of Power Unit.

**ATTENTION: Install limit switch; For the safety of operators, the power wiring must contact the floor well.**

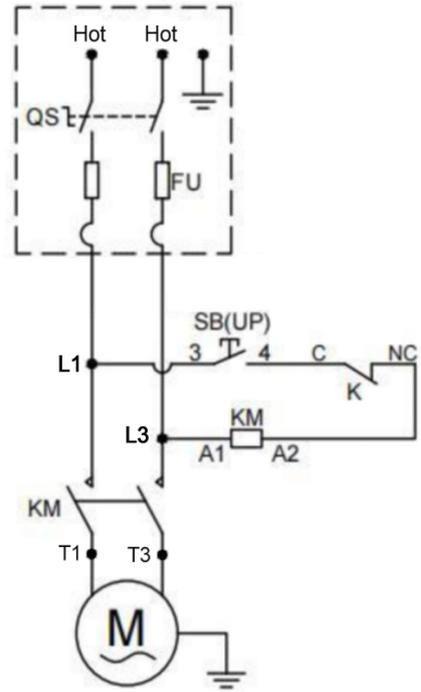
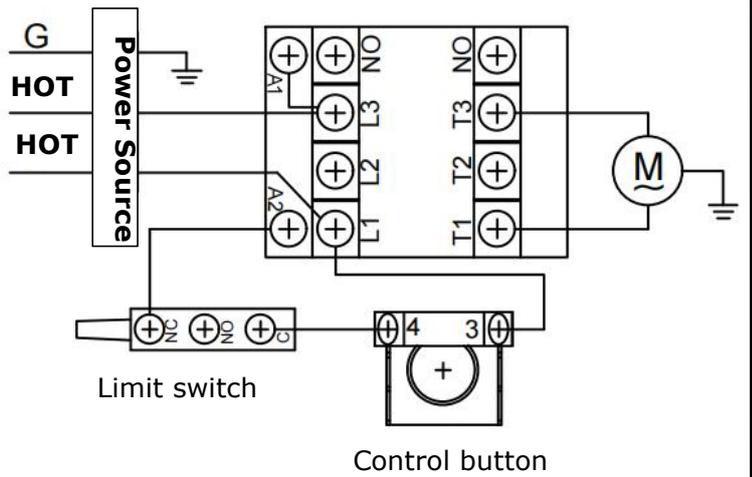
### **220V Single phase motor**

1. The two live wires of the input power supply are respectively connected to the terminals marked L1 and L3 on the AC contactor.
2. Connecting the limit switch wire: Remove the short wire that connects # 4 and # A2 as shown in Fig.45. Then according to the wire number of the limit switch, connect them respectively to terminal 4# of control button and A2# of AC contactor.

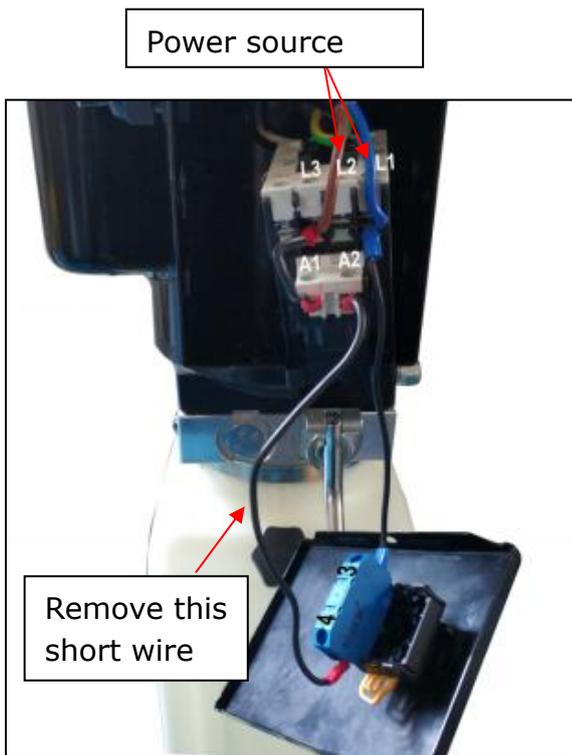
**Internal wiring diagram of limit switch: The cable has been connected.**



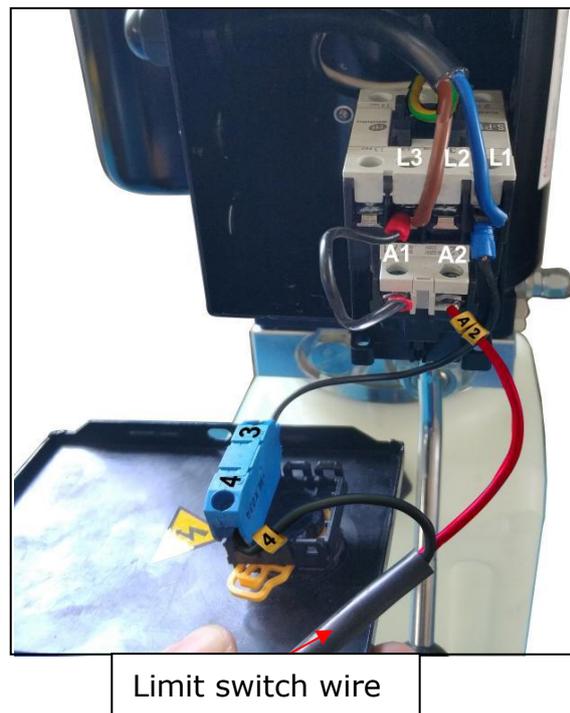
**Fig.46**



**Fig.47**



**Fig. 48**



**Fig. 49**

**⚠ DANGER** If the wire is damaged or badly worn, refrain from using the lift. In case of raising the vehicle without noticing any damage or wear, lower it to the ground with utmost care. Once lowered, immediately disconnect and remove power supply.

# IV. EXPLODED VIEW

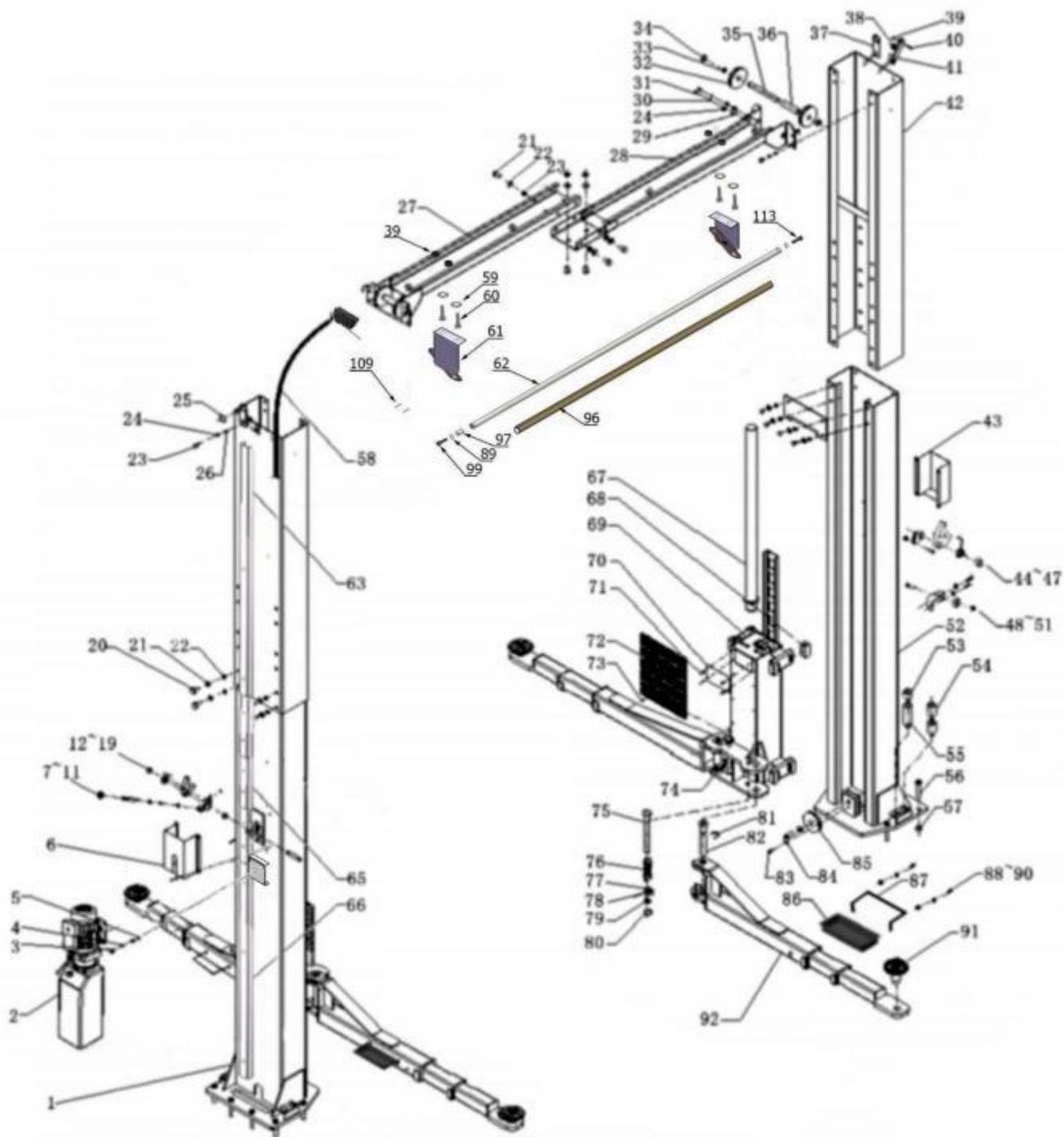


Fig.50

## Parts list

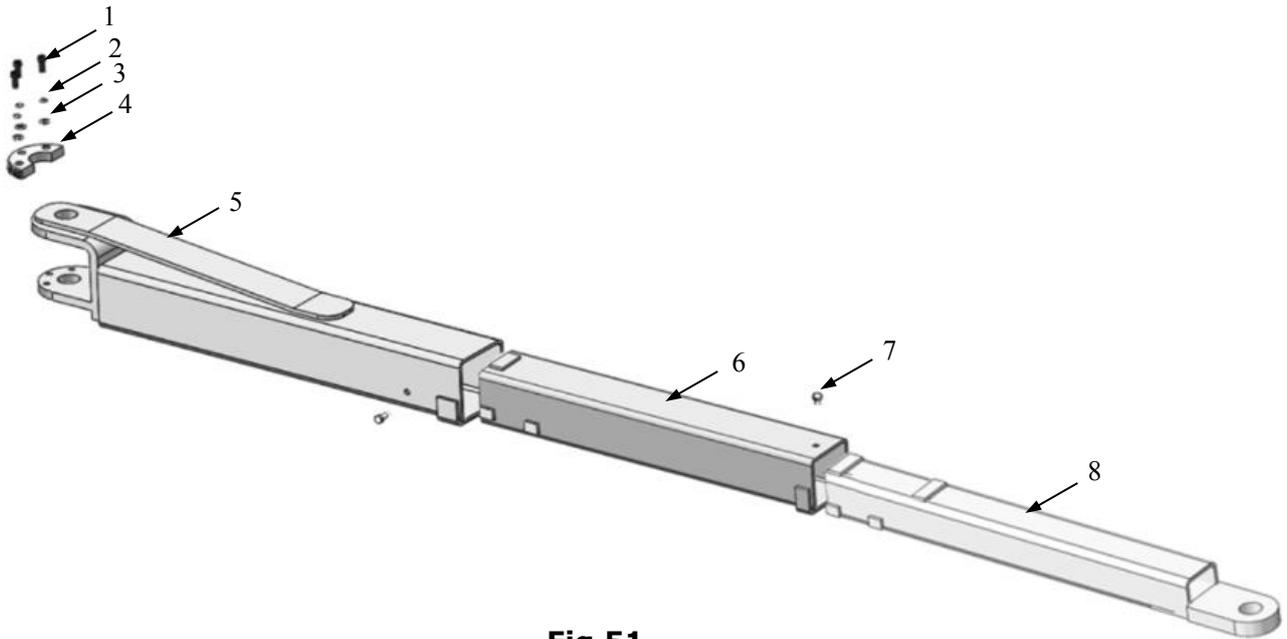
Item	Part#	Description	Qty	
			OH-12	OH-12S
1	11217458-01	Power-side column	1	1
2	071102	Power unit	1	1
3	10209003	Hex Bolt M8*25	4	4
4	10209033	Washer φ8	4	4
5	10217002	Hex Nut M8	4	4
6	11217405	Power-side safety cover	1	1
7	11217005	Plastic Ball M10	1	1
8	11217006	Safety lock handle	1	1
9	10206023A	Hex Nut M12	31	31
10	10420026	Lock Washer φ12	31	31
11	11217004	Main cam lock	1	1
12	11217436	Safety device spacer φ36*15.5	2	2
13	10217030	Spring φ2.0*120°	2	2
14	11217009	Main lock	1	1
15	10217010	Hex Bolt M6*40	1	1
16	11217011	Hex Nut M6	9	9
17	11217012	Safety device spacer φ27*10	2	2
18	10217051	Socket Bolt M10*10	2	2
19	11217050	Safety Pin	2	2
20	10620095	Hex nut M4	2	2
21	10209127	Hex bolt M12*35	30	30
22	10206006	Washer φ12	31	31
23	10217013	Hex bolt M6*20	8	8
24	10420045	Washer φ6	38	38
25	1061K074	Protective ring	2	2
26	10217013	Hex Bolt M6*20	8	8
27	11217016B-01	Top Beam (Left)	1	1
28	11217015B-01	Top Beam (Right)	1	1
29	11420044	Limit Plate	2	2
30	10209149	Lock Washer φ6	12	12
31	10420138	Socket Bolt M6*16	4	4
32	11217019-01	Top Pulley	4	4
33	10217020	Bronze bush for pulley φ31*φ25.1*16	6	6
34	11217021	Top Pulley Spacer (Short)	4	4

Item	Part#	Description	Qty	
			OH-12	OH-12S
35	11217022	Pin of Top Pulley	2	2
36	11217023	Pin Spacer (Long)	2	2
37	11217024	Oil Hose Support Plate	2	2
38	10206009	Plastic Small Pulley	3	3
39	10209021	Hex nut M10	7	7
40	10209046	Hex Bolt M10*35	3	3
41	11217379	Safety Cable Bracket	2	2
42	11217470-01	Outer Column (L=2356mm)	2	0
	1102781003A	Outer column (L=1572mm)	0	2
43	11217406	Off-side safety cover	1	1
44	11217031	Off-side cam Lock	1	1
45	10217008	Spring $\phi 2.5 \times 145^\circ$	1	1
46	10217032	Cable connecting pin	1	1
47	10217033	Nylok Nut	1	1
48	10620079	Straight Fitting (High & Medium setting)	1	1
49	1002785006	Oil hose assy. ( Medium setting)	1	1
49A	1002185001-01	Oil hose assy.(High setting)	1	1
50	11217029	Small Pulley Bracket	1	1
51	10217066	Hex Bolt M6*15	3	3
52	11217459-01	Off-side Column	1	1
53	11209051B	Adapter 1.5"	4	4
54	11209052B	Adapter 2.5"	4	4
55	11209053B	Adapter 5"	4	4
56	10201140	Anchor bolt 3/4 " *6-1/2	12	12
57	10620065	Shim (2mm)	10	10
	10201090	Shim (1mm)	10	10
58	1002185004	Limit switch assy.(Inc. wire L=5200mm)	1	0
	1002785010	Limit switch assy.(Inc. wire L=4215mm)	0	1
59	10209022	Washer $\phi 10$	4	4
60	10209125	Hex Bolt M10*30	4	4
61	1103072003A-01	Control Bar fixing bracket	2	2
62	1102072001A	Control bar $\phi 22 \times 2400$	1	1
63	11217478-01	Wire Protective cover L=2230mm	2	0
	1102781002	Wire Protective cover L=1440mm	0	2
64	10206079	Round head Bolt M6*40	24	24

Item	Part#	Description	Qty	
			OH-12	OH-12S
65	1102781001	Wire Protective cover L=305mm	6	6
66	231059-02	Wire Protective cover L=1575mm	2	2
67	10217056A	Cylinder $\phi 55 \times 1727$	2	2
68	100275515	Slider	16	16
69	11217479-01	Carriage	2	2
70	11217054	Carriage Plastic Cover	2	2
71	10209009	Round Head Bolt M6*8	8	8
72	10217053	Protective Rubber	2	2
73	10209019	Flat Head Screw M6*16	12	12
74	11217046C	Arm Lock Bar(Right) $\phi 30 \times 324.5$	2	2
75	11217046B	Arm Lock Bar(left) $\phi 30 \times 324.5$	2	2
76	10217045A-01	Spring $\phi 31 \times \phi 36 \times \phi 2.5$ (L=214.5)	4	4
77	1002163001	Arm Lock M1.5*72*24	4	4
78	10206036-01	Snap pin $\phi 6 \times 45$	4	4
79	1102163002	Washer $\phi 39 \times 4 \times 18$	4	4
80	10610008	Snap Ring $\phi 30$	4	4
81	10520023	Snap Ring $\phi 38$	4	4
82	11217047B	Arm Pin	4	4
83	10209038	Hex Bolt M10*16	6	6
84	11217037	Bottom pulley Pin	2	2
85	11217036-01	Bottom Pulley	2	2
86	10206156	Tool tray	2	2
87	11206154	Rear guard bar	4	4
88	10201002	Hex bolt M8*16	9	9
89	10209034	Lock Washer $\phi 8$	9	9
90	10209033	Washer $\phi 8$	8	8
91	10217114A	Rubber pad assy.	4	4
91A	10420138	Socket bolt M6*16	12	12
91B	10209134	Rubber Pad	4	4
91C	11680030B	Rubber Pad Frame	4	4
92	10217327-01	Lifting Arm Assy.	4	4
93	1102186001	Extended Straight Fitting (J0076) 1/4JIC(M)*3/8NPT(M)	2	2
94	10209153	Arm lock handle ring $\phi 70 \times \phi 6$	4	4
95	11217068	Column Reinforce Plate	2	2

Item	Part#	Description	Qty	
			OH-12	OH-12S
96	10206025A	Control Bar Foam Pipe	11	1
97	110207007	Connecting Sleeve $\phi$ 14*2*20	1	1
98	10209039	Lock Washer $\phi$ 10	7	7
99	10201122	Hex Bolt M8*35	1	1
100	10209009	Cup Head Bolt M6*8	8	8
101	10209066	Cable nut M16	8	8
102	10217452	Cable Assy. $\phi$ 9.52*12540mm	2	0
	10027850001	Cable Assy. $\phi$ 9.52*1097mm	0	2
103	10420029	Cable shim $\phi$ 16	4	4
104	10211016	T-Fitting 1/4JIC(M)*1/4JIC(M)*1/4JIC(M)	1	1
105	10217455-01	Oil hose Assy. 5/16*6125mm	2	0
	1002785004	Oil hose assy. 5/16*5340mm	0	2
106	<a href="#">10217456-02</a>	Oil hose Assy. 5/16*5050mm	1	0
	1002785005	Oil hose assy. 5/16*4255mm	0	1
107	10209060	90° fitting for power unit	1	1
109	10420164	Round Head Bolt M4*30	2	2
110	10217453	Safety Cable L=10370mm	1	0
	1002785002	Safety Cable L=8800mm	0	1
111	10217501B	Parts box	1	1
112	1102075001	Cable Limit Plate	4	4
113	10720002	Socket Bolt M10*25	1	1

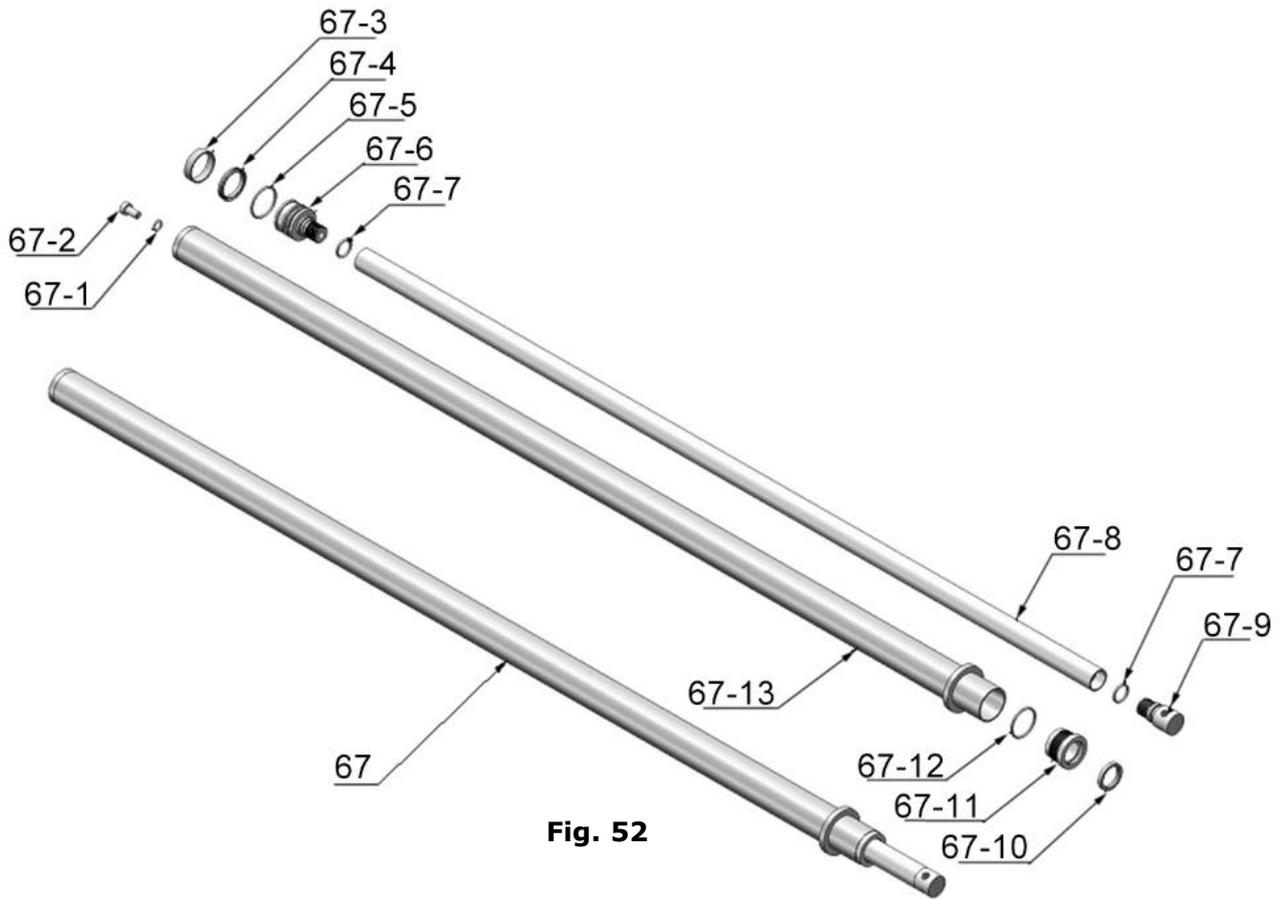
## 1. Lifting Arm (10217327-01)



**Fig.51**

Item	Part#	Description	Qty.	Note
1	1102163005	Socket bolt M12*48	12	
2	10420026	Lock washer φ12	12	
3	10206006	Washer φ12	12	
4	1102163001	Moon Gear	4	
5	11217834	Outer Arm	4	
6	11217337	Middle Arm	4	
7	10201149	Flat Head Screw M8*12	8	
8	11217336-01	Inner Arm	4	

## 2. Cylinders (10217056A)



**Fig. 52**

### Parts list for Cylinder

Item	Part#	Description	Qty.	Note
67-1	10209069	O-Ring	2	
67-2	10209070	Bleeding Plug	2	
67-3	10217071	Support Ring	2	
67-4	10217072	Y-Ring OSI	2	
67-5	10217073	O-Ring	2	
67-6	11217074	Piston	2	
67-7	10217075	O-Ring	2	
67-8	11217089	Piston rod	2	
67-9	11217077	Piston rod fitting	2	
67-10	10217078	Dust Ring	2	
67-11	11217079A	Head Cap	2	
67-12	10217080A	O-Ring	2	
67-13	11217090	Bore weldment	2	

### 3. Illustration of hydraulic valve for hydraulic power unit

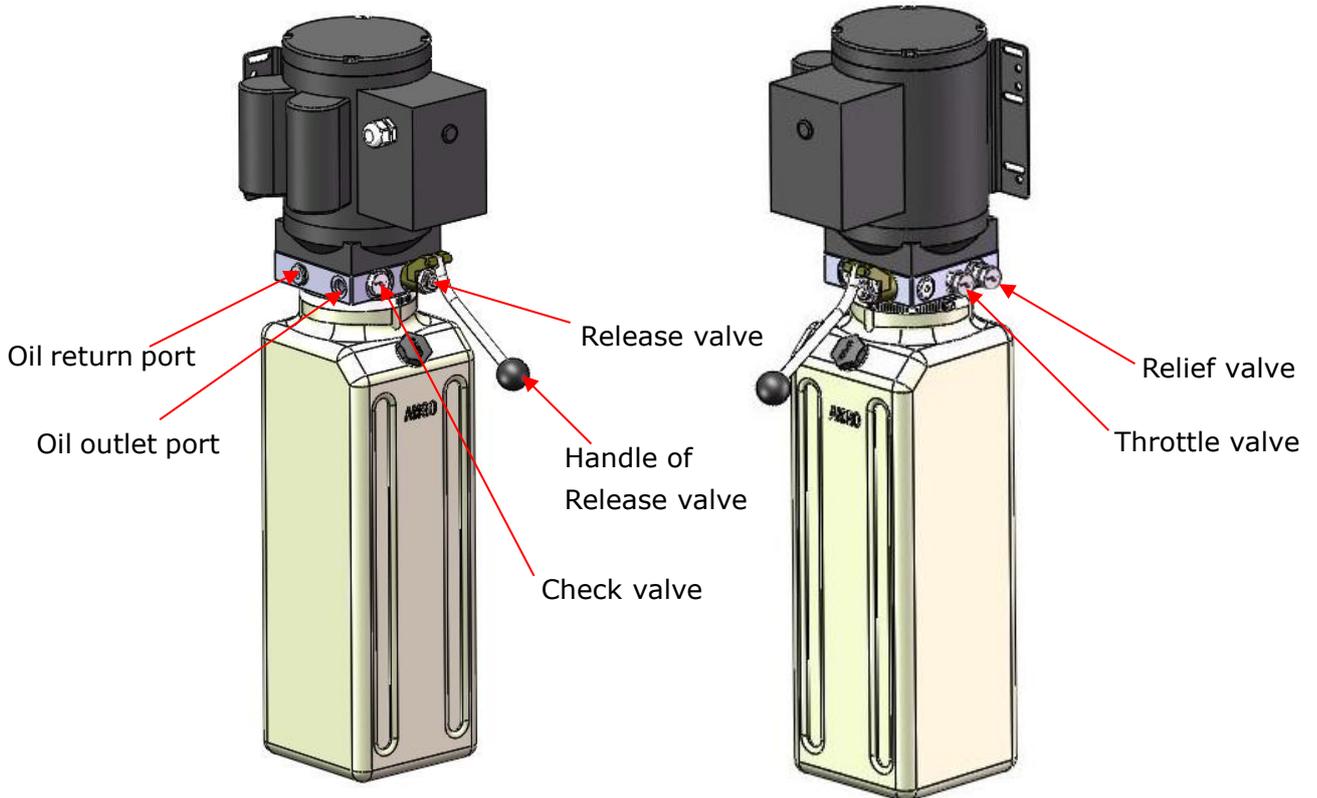


Fig.53

## V. TEST RUN

### 1. Adjust synchronous cable (See Fig. 54)

Use an open spanner to clamp the cable joint, and use a ratchet wrench to tighten the cable nut until the two synchronous cables are adjusted to a certain tension force and are consistent. If the carriage on both sides do not run synchronously when the lift rises/falls, tighten the cable nut on the lower carriage until the lift can rise and fall synchronously.

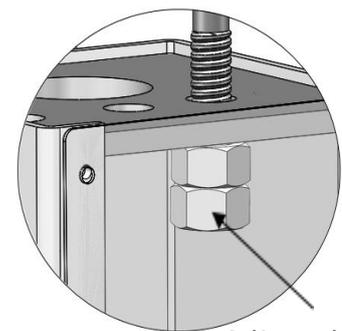


Fig. 54

Adjust the cable nuts

### 2. Adjust safety cable

Lift both carriages and lock them at the same height, strain the safety cable and then release a little, finally tighten the cable nuts. Ensure that the safety device can always be locked and unlocked properly.

### 3. Exhaust air

This hydraulic system is designed to bleed air by loosening the bleeding plug. Lift the carriages to a height about 1 meter, loosen the bleeding plug, and the air will be bled automatically. Finally tighten the plug after bleeding, and the lift would work stably and smoothly. Otherwise, repeat these steps. (See Fig. 55)

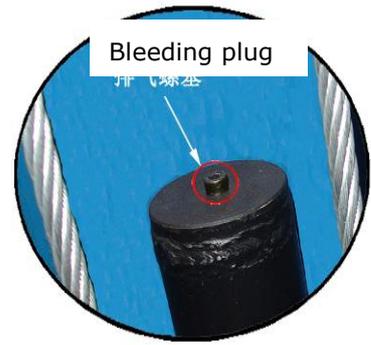


Fig. 55

### 4. Adjust the lower speed

If necessary, you can adjust the lower speed of the lift by turning the throttle valve clockwise to decrease it, or counterclockwise to increase the lower speed.

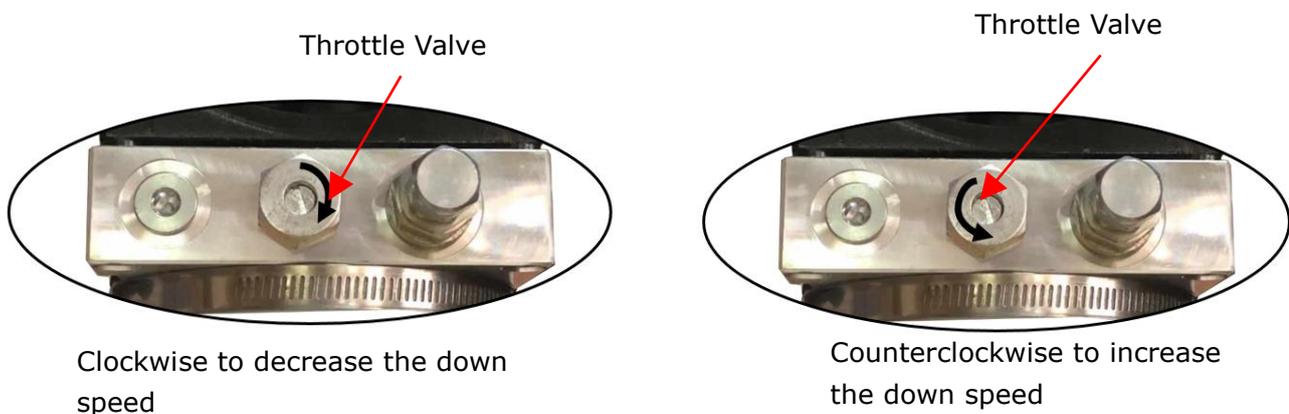
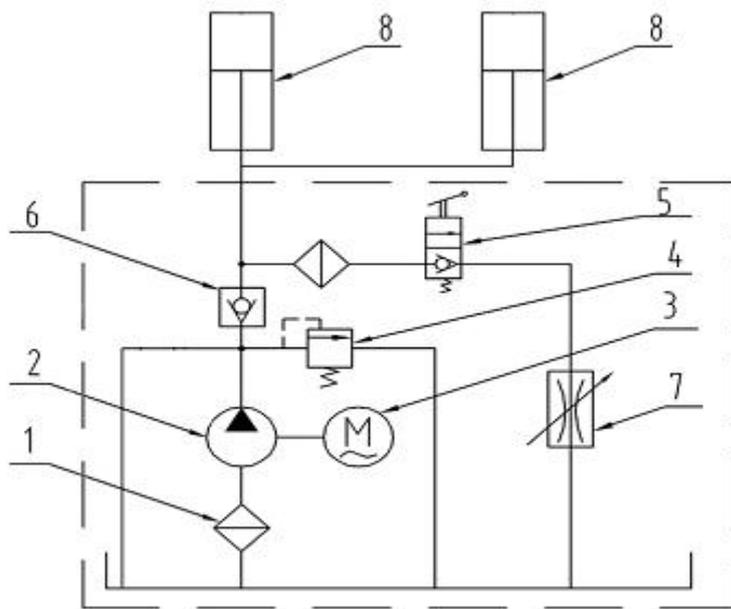


Fig. 56

**⚠ WARNING** Do not lift a vehicle that exceed the rated capacity of the lift. Do not leave the controls until the lift is locked. Only trained personnel can operate the lift.

### 5. Load Test

The load test should be conducted after the above adjustments have been completed, test running the lift with load. Run the lift at low level several times first, ensure that both side safety lock can lock and unlock in synchronization. When there is no other abnormal phenomenon, run the whole process. Repeat the above adjustment if there is any abnormal phenomenon.



1. Filter
2. Gearpump
3. Motor
4. Relief Valve
5. Release Valve
6. Check Valve
7. Throttle Valve
8. Hydraulic Cylinder

**Fig. 57**  
**Hydraulic Schematic Diagram**

## 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. Lower the lifting arm to its lowest position;
3. Retract the lifting arm to the shortest position;
4. Open the lifting arms out to the sides;
5. Put the vehicle between columns;
6. Move the lifting arms to the vehicle's lifting point;

**ATTENTION: All four lifting arms must simultaneously touch the vehicle. Lift the vehicle lifting points as required by the manufacturer.**

7. Push **UP** button until the lifting pads contact underside of vehicle totally and recheck lifting points;
8. Continue to raise the lift slowly, ensure the balance of vehicle, lift the vehicle to the desired height, release the **UP** button.

 **WARNING** It is unsafe to work when the lift without locking at safety device after it has been raised. The vehicle may fall, potentially causing damage the vehicle and lift, even causing injury or death to someone nearby.

 **DANGER** When using the lifting points on the chassis recommended by the vehicle manufacturer, be sure to follow the instructions carefully. If you don't, the vehicle can become unstable and fall, which can damage the vehicle and lift, injure or even kill anyone under the vehicle.

### **To lower vehicle**

1. Clear obstructions around and under the lift and no people around the lift;
2. Push **UP** button to raise the vehicle slightly, and then unlock the safety device, lower vehicle by pushing lowering handle.
3. Open the lifting arms out to the sides and retract the lifting arm to the shortest position;
4. Drive away the vehicle.

## **VII. MAINTENANCE SCHEDULE**

### **Monthly:**

1. Tighten the anchor bolts with to 150 Nm torque force;
2. Check all fittings, bolts and pins to ensure proper connections;
3. Lubricate cable and slider with lubricant;
4. Make a visual inspection of all oil 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;

**ATTENTION: 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.

**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.

 **DANGER** Ensure that the lift is completely disconnected from the power supply before performing any maintenance on the lift. If your lift external electrical devices have locks/shutdowns, make sure to implement them before performing any maintenance. If you come into contact with high voltage/current, it may result in injury or even death.

## VIII. TROUBLE SHOOTING

TROUBLE	CAUSE	REMEDY
Motor does not run	<ol style="list-style-type: none"> <li>1. Start Button does not work</li> <li>2. Wiring connections are not in good condition</li> <li>3. Motor burned out</li> <li>4. AC contactor burned out</li> <li>5. Height limit switch is damaged</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace start button</li> <li>2. Repair all wiring connections</li> <li>3. Repair or replace motor</li> <li>4. Replace AC contactor</li> <li>5. Repair or Replace</li> </ol>
Motor runs but the lift is not raised	<ol style="list-style-type: none"> <li>1. Gear pump out of operation</li> <li>2. Release valve in damage</li> <li>3. Relief valve or check valve in damage</li> <li>4. Low oil level</li> </ol>	<ol style="list-style-type: none"> <li>1. Repair or replace</li> <li>2. Repair or replace</li> <li>3. Repair or replace</li> <li>4. 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 slowly	<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>

 **WARNING** Lifts are dangerous when operated by inexperienced or distracted individuals. Operators must be fully aware that lifting a car is a potentially life-threatening operation, especially if mandatory safety precautions are disregarded.

## **IX. CAR LIFT SAFETY TIPS**

Put this safety tips in a place where you can always alert the operator. Please reference to the lift manufacturer's manual for specific information about the lift.

1. Check the lift daily. If the machine breaks down or has damaged parts, do not operate, and use the parts of original equipment to repair.
2. Do not overload the lift. The rated weight of the manufacturer design is indicated on the label of the lift.
3. Position control of the vehicle and operation of the lift can only be done by a trained and authorized person.
4. You can not lift a car with people inside. When the lift is working, the customer or other people should not be around the machine.
5. Keep the place around the lift without obstacles, lubricants, grease, garbage and other debris for a long time.
6. Before driving the car into the lift, put the lifting arm and rubber pad in the proper position to ensure barrier-free space. Do not hit or run over the lift arm and rubber pad of the lift, otherwise it will cause damage to the lift machine or the car.
7. Rise the lift to the required height for operation. **Note**, if you are working under a car, raise the lift high enough and make sure the safety device has locked.
8. Note, removing(or installing) parts from a car can cause a sudden shift of gravity that unstable the raised car. Reference to the car manufacturer's service manual as a recommended procedure when removing parts from the car.
9. Before lower the lift , make sure that the tool tray, tool rack, etc. are removed under the car. Open the lock before lower the lift.
10. Before removing the car from the lift, put the lifting arm and rubber pad in place to open an unobstructed exit.
11. When not in use, make sure to remove the device from the power socket. Never use a wire to pull the plug from a socket. Grab the socket and pull it out to disconnect.
12. To reduce the risk of fire, do not operate the lift near open containers of flammable liquids (gasoline).
13. To reduce the risk of electric shock, do not install and use in wet or exposed to rain.

## **X. 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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**Revision Date: 2023/05**