

Installation And Service Manual

DIRECT-DRIVE TWO POST LIFT

Model: OH-12S

Cargo Claims

If there is any missing or damaged product during transportation, the buyer must notate on the shipping paperwork or refuse the shipment. NOTATE ALL DAMAGE OR REFUSE DAMAGED SHIPMENT!




DANGER

Read the entire contents of this manual before using this product. Failure to follow instructions and safety precautions could result in serious injury or even death. Make sure all other operators also read this manual. Keep this manual near the machine so that it can be seen by all users. By proceeding with installation and operation, you agree that you are fully understand the contents of this manual and take full responsibility for the use of the product.

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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

PROFILE

The two post lift is a commonly used vehicle repair and maintenance tool that uses a pneumatic hydraulic or electric system that can lift the car up to a certain height so that the vehicle can be placed in a suitable position for inspection and repair. Car lifts can be divided into pneumatic and electric, which have the characteristics of safe and reliable, simple structure and quick installation.

This instruction manual is specially prepared for you. Your new lift is the product of over a decade of continuous research, testing and development and is the most technologically advanced lift on the market today.

Please make sure to read through this manual before operating the lift.

Record the information on the nameplate label here:

Model No.: _____

Serial No.: _____

Manufacturer date: _____

WARRANTY

The warranty period for the steel structure part of new car lift is 5 years, hydraulic components, bronze bushings, sliders are warranty for 3 years, and electrical components and sync cable, lock release cable are warranty for 2 years. Rubber pads are without warranty. During the warranty period, the manufacturer will repair or replace the defective parts free of charge including shipping costs.

This warranty does not cover damage caused by normal wear and tear, improper use, damage in transit, or damage caused by lack of maintenance.

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

IMPORTANT SAFETY INSTRUCTIONS

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 lift 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 persons and objects from the lift when lifting the a vehicle.
10. If the vehicle is at risk of falling, make sure no one is 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-toe 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 operate near flammable 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. Only operate the lift at temperature between 41°F to 104°F (5°C to 40°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. Ensure to read and follow this instructions on the label.

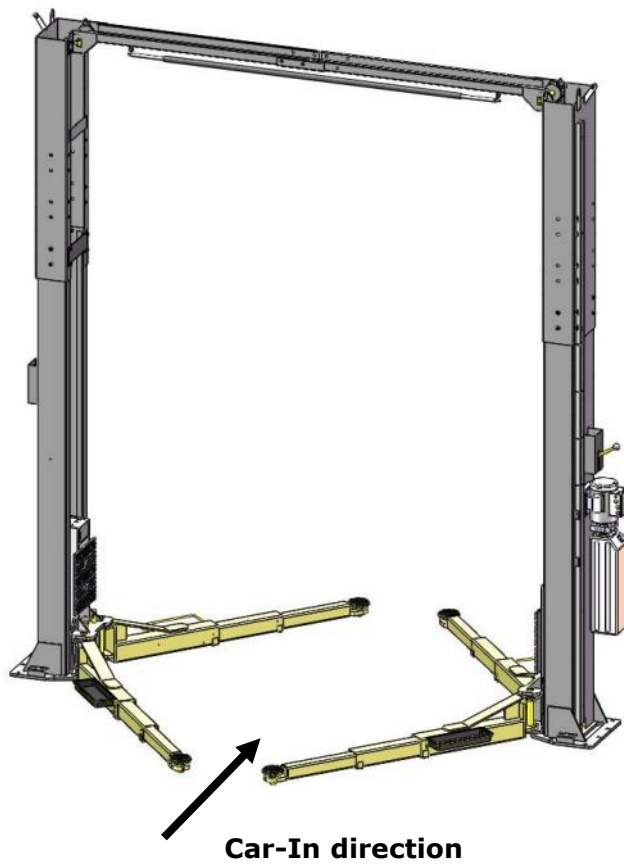


Fig. 2

I. PRODUCT FEATURES AND SPECIFICATIONS

CLEAR-FLOOR DIRECT-DRIVE MODEL FEATURES

Model OH-12S

- Direct-drive design, minimize the lift wear parts and breakdown ratio
- 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 with dual safety design
- Clear-floor design, provide unobstructed floor use
- Overhead safety shut-off device prevents vehicle damage
- Standard adjustable heights accommodate varying ceiling heights

SPECIFICATION

Model	Lifting Capacity	Lifting Time	Max. Lifting Height		Max. safety lock height		Overall Height	Overall Width	Min. Pad Height	Motor
			Without extension	Include extension	Without extension	Include extension				
OH-12S	12,000lbs	69S	72 1/2" -73 7/8"	81 9/16" -82 7/8"	70 9/16" -71 7/8"	79 9/16" -80 15/16"	143 1/8" 155 1/8" 167 1/8"	150 3/4"	4 1/2"	2.0HP

Arm Swings View

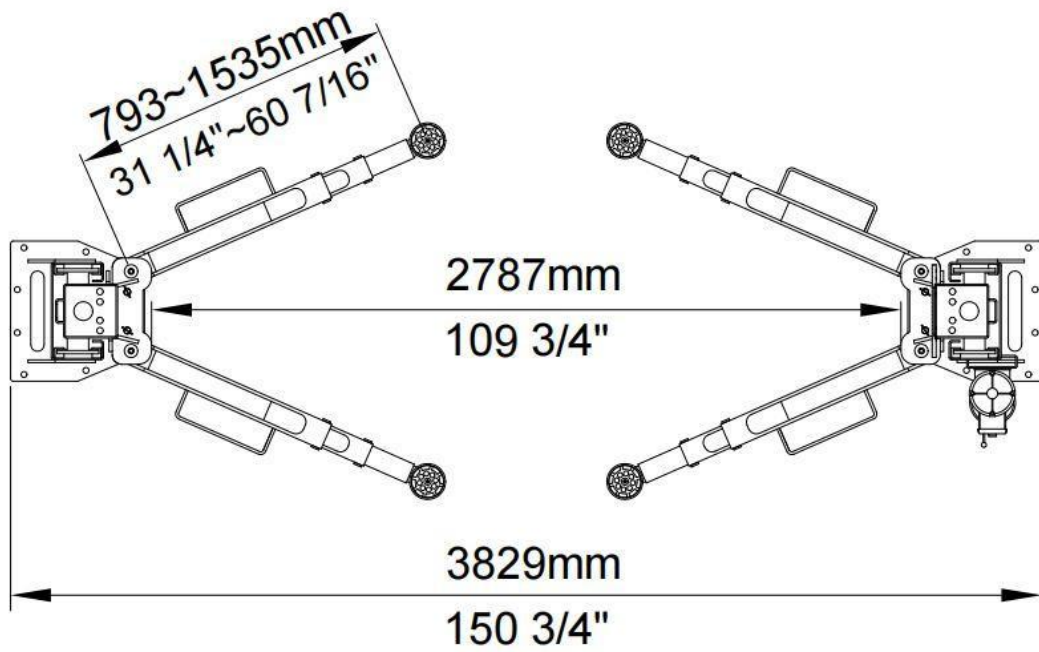


Fig. 3

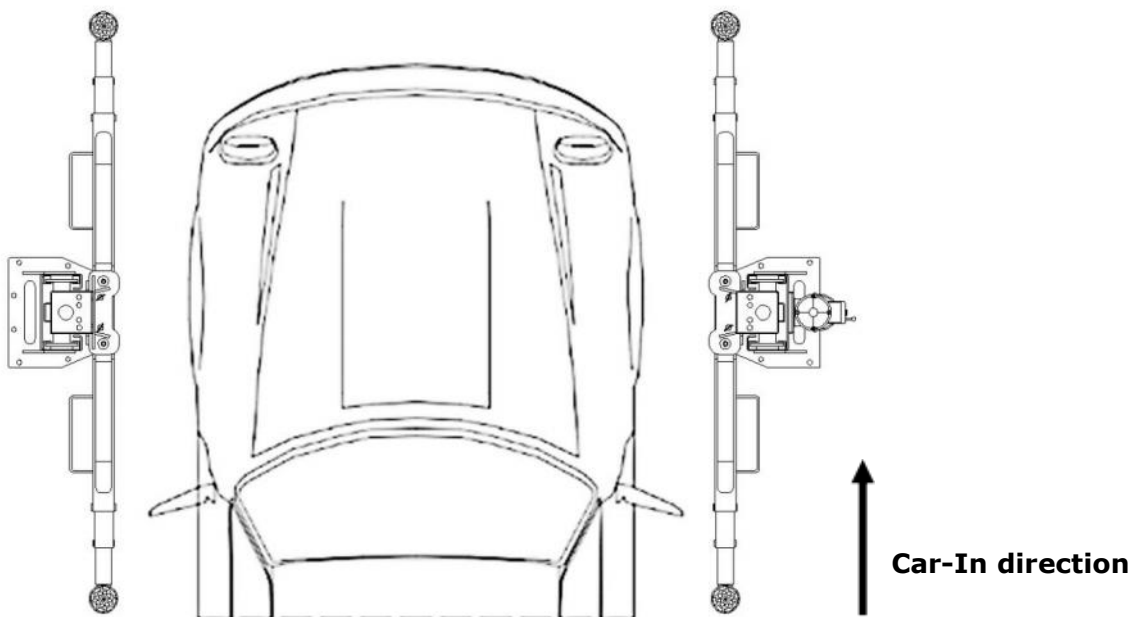


Fig. 4

⚠ 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.

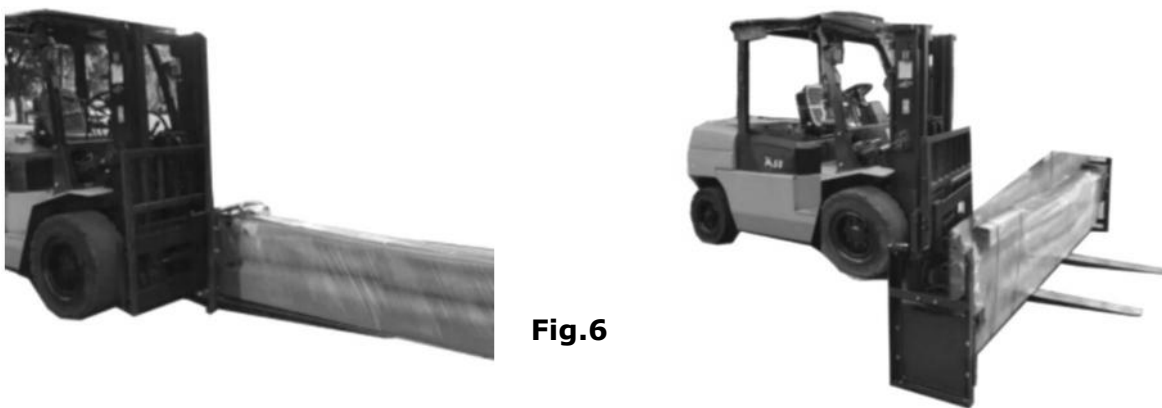


Fig.6

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” 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 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.

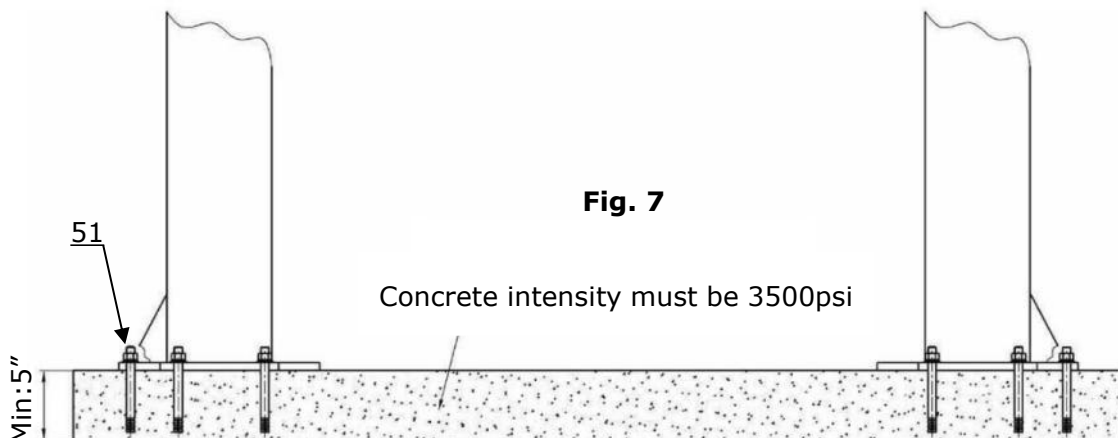


Fig. 7

E. POWER SUPPLY

1. You are required to engage a licensed and qualified electrician for the installation process.
2. The power supply must be 2.0HP, 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°.

Installation ceiling height requirement
OH-12S: larger than 12ft

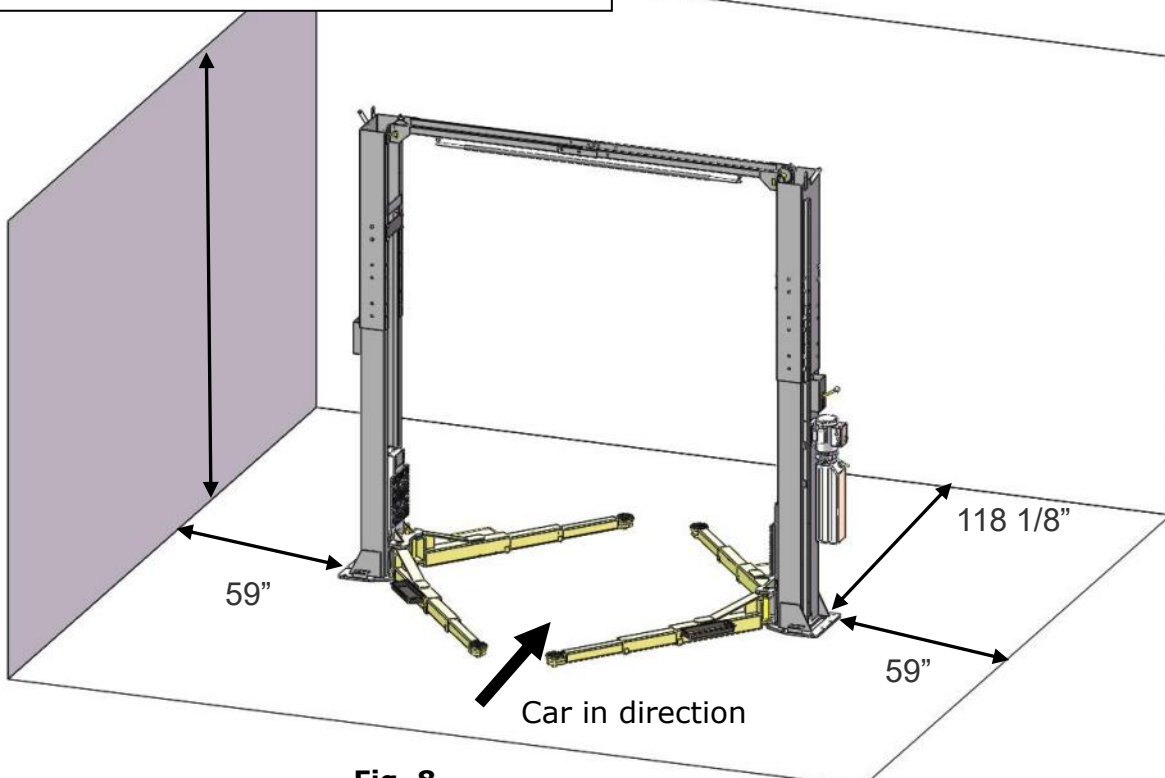


Fig. 8

⚠ CAUTION Installing the lift on a surface with slopes more than 3° could lead to injury or even death. This lift is designed for installation on a flat and level surface only. (Defined as no more than 3/8" difference over the installation area). If the floor cannot be leveled, consider changing installation locations.

ATTENTION The lift installation and concrete construction must meet the latest version of the national standard "Automotive Hoist-Safety Requirements for Construction, Testing and Verification".

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

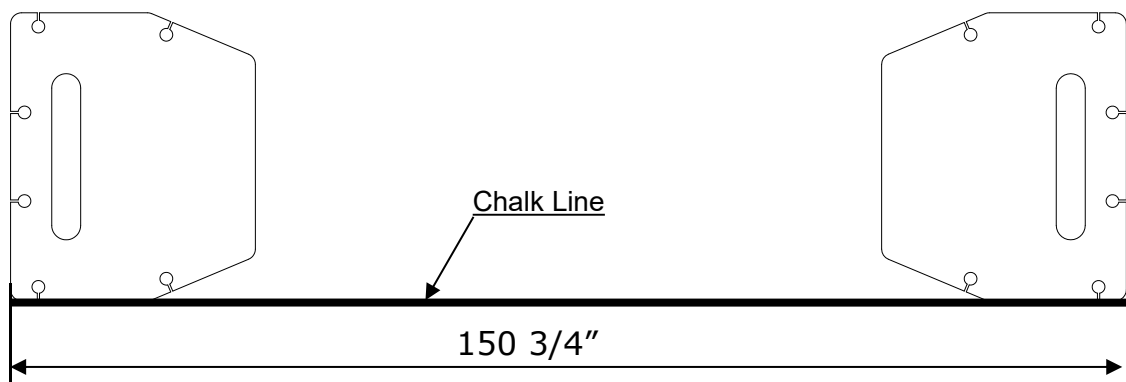


Fig. 9

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

1. Whole set of one unit (Packaged lift and hydraulic power unit)(See Fig. 10).

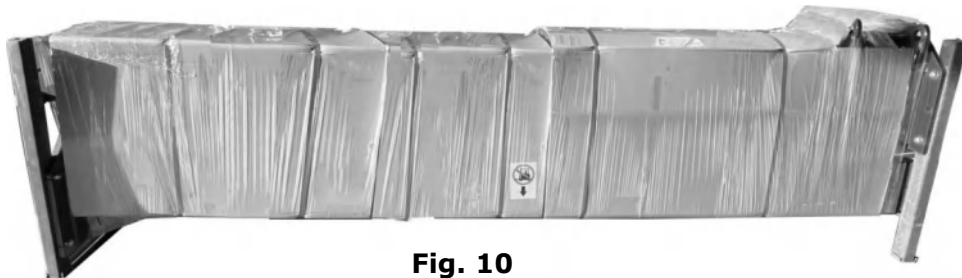


Fig. 10

2. Move the lift aside with a fork lift or hoist, open the package and check the parts according the shipment list. (See Fig. 11)

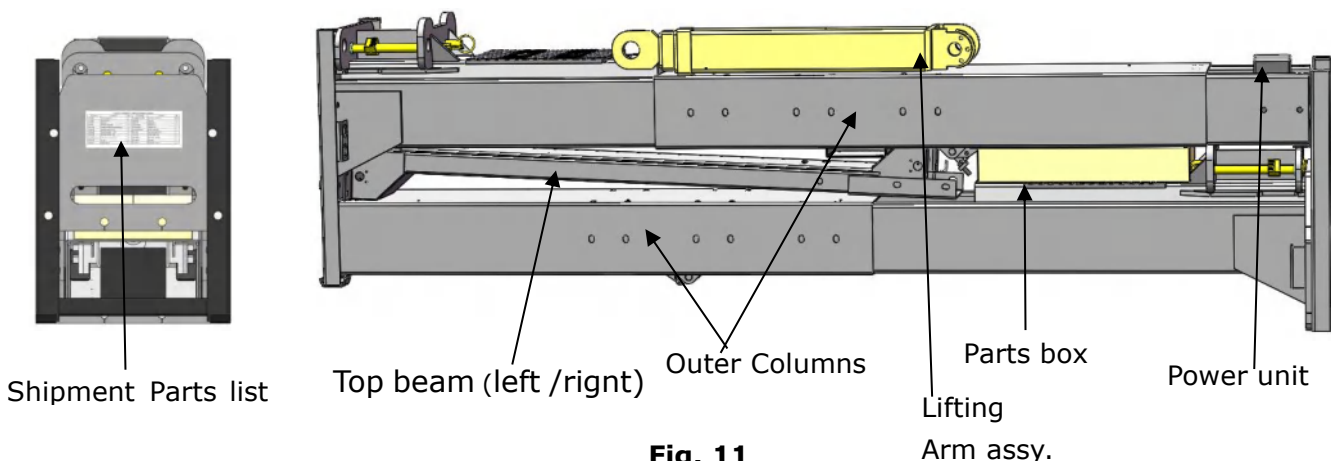


Fig. 11

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

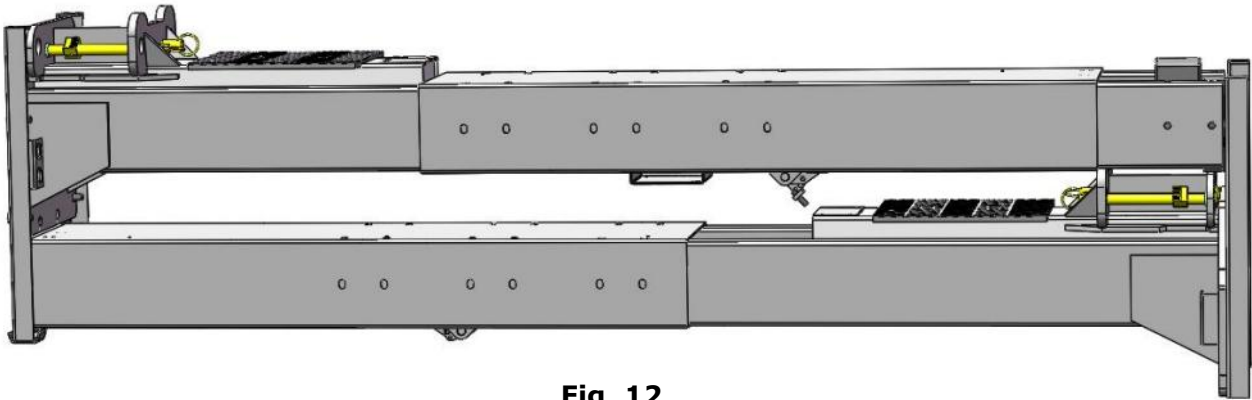


Fig. 12

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

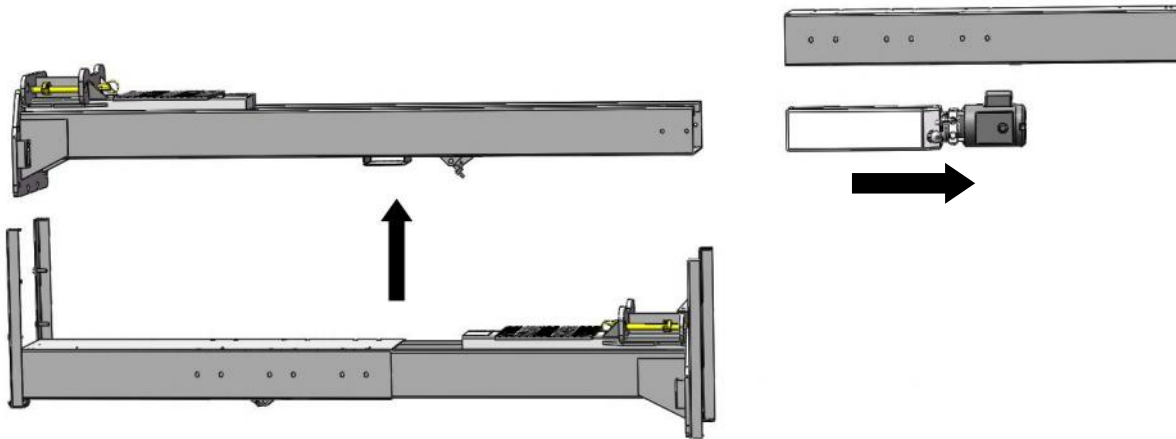


Fig. 13

5. Lift the lower column with a fork lift or hoist, take off the package bracket, then take out the outer column and parts inside the column. (See Fig. 14)

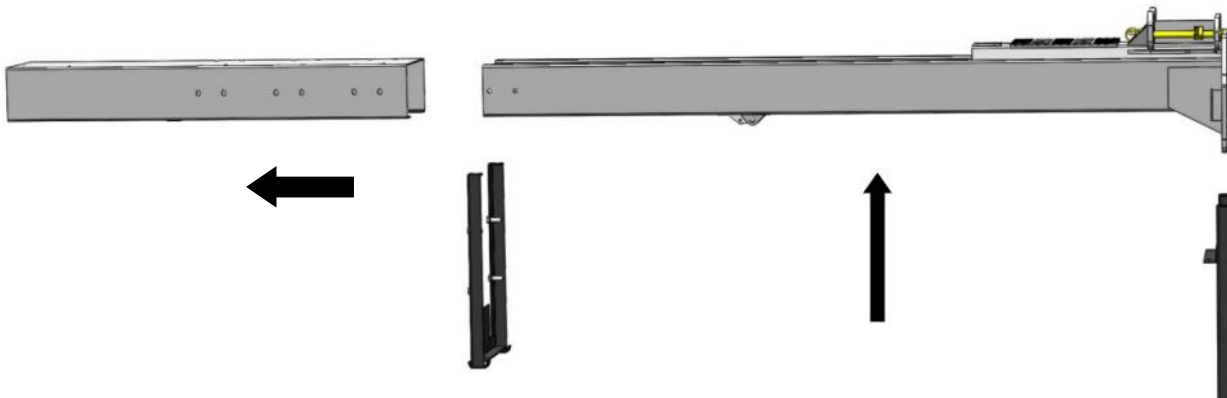
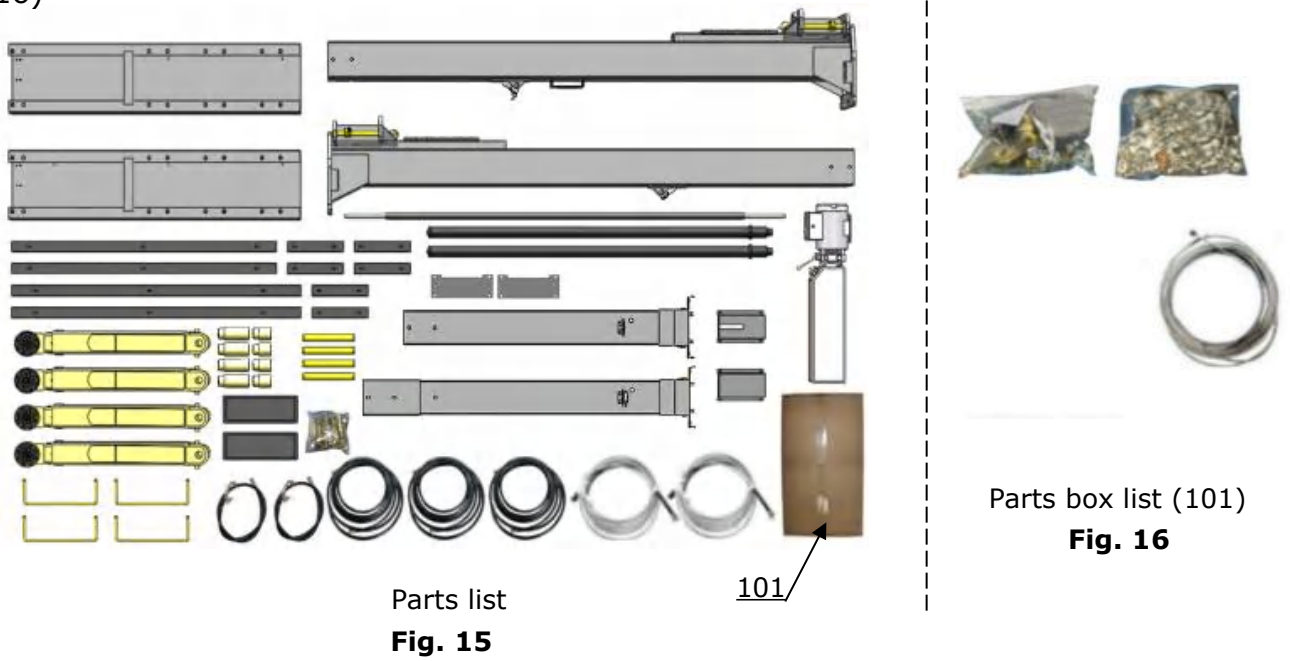


Fig. 14

6. Move aside the parts and check the parts according to the shipment parts lift. (See Fig.15 & 16)



7. Check the parts of the parts bag 1, 2, 3 according to parts bag list. (See Fig. 17)

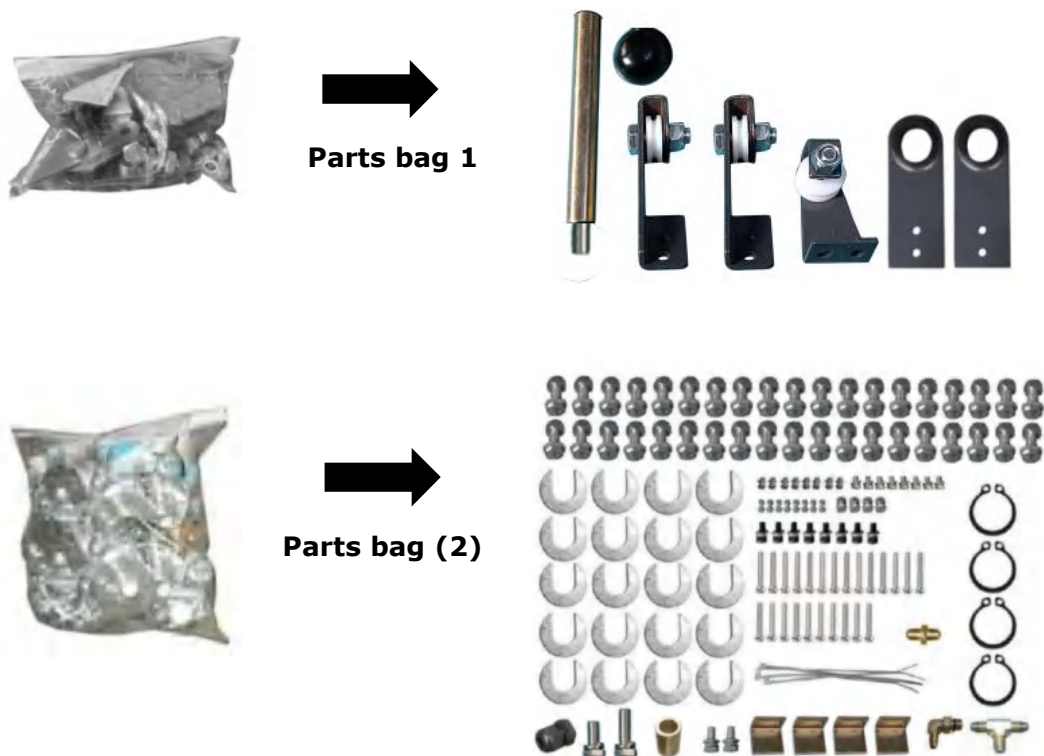


Fig. 17

D. Install parts of outer columns (See Fig. 18).

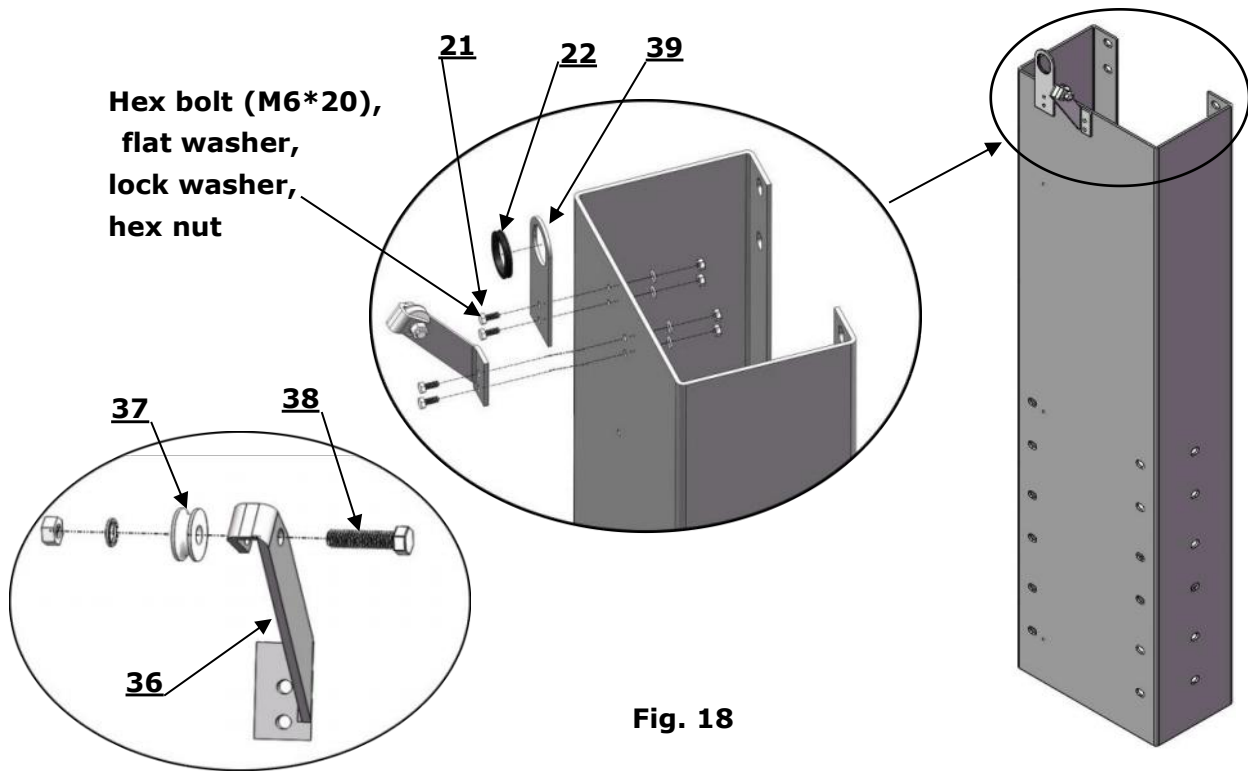


Fig. 18

E. Confirm the installation location and install hydraulic 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. 19).

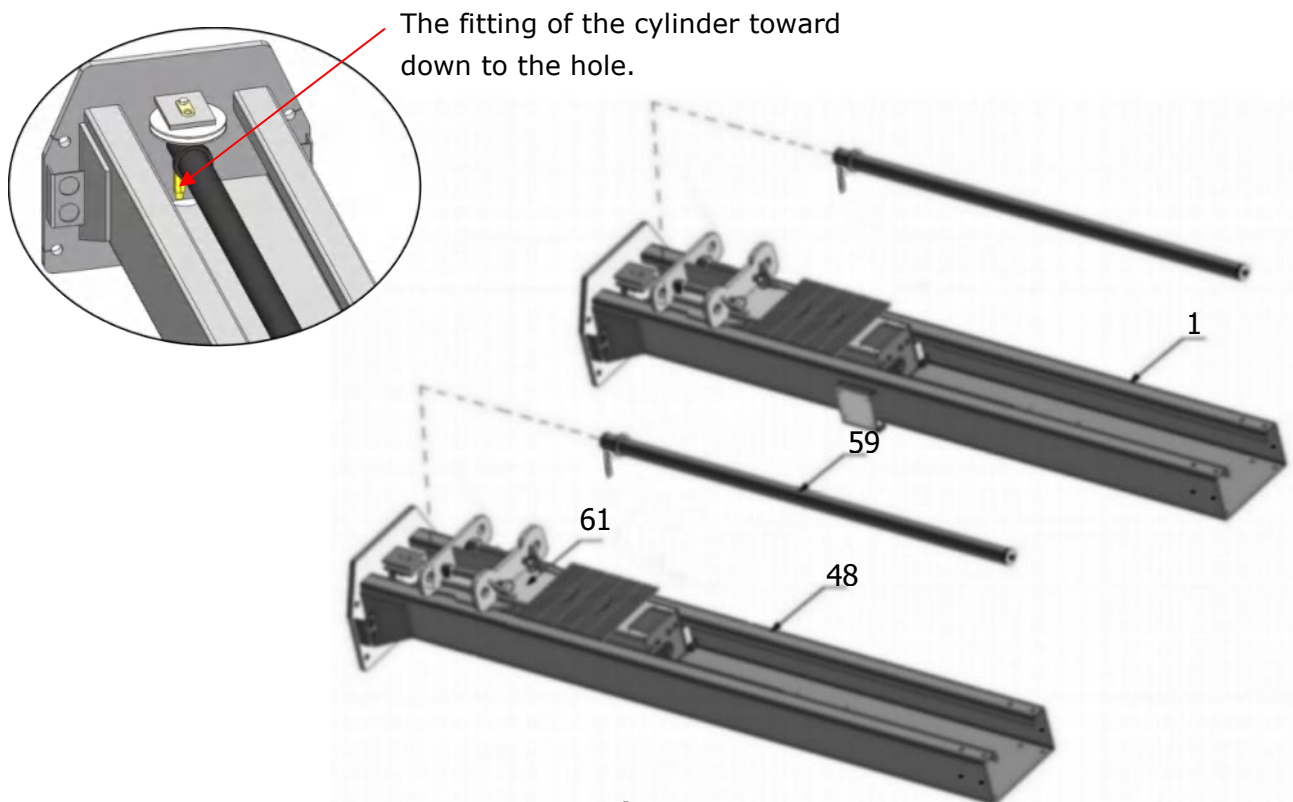


Fig. 19

F. Install outer columns

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

Install OH-12S:

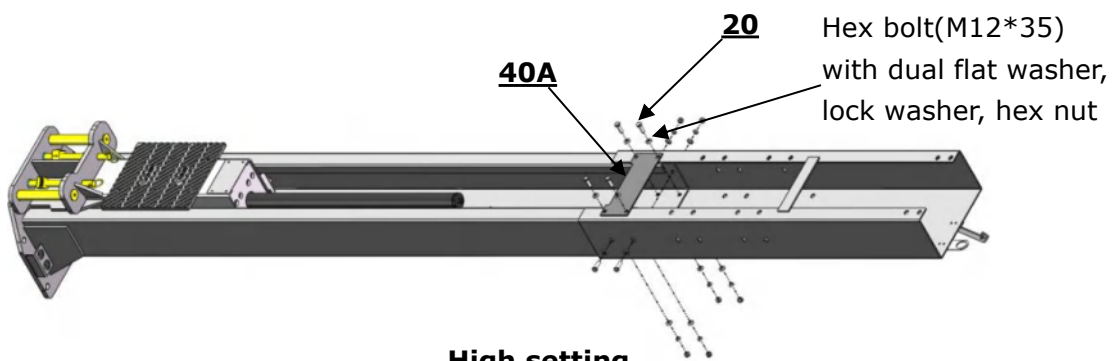
The high setting is suitable for workshops with a height of over 14 ft;

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;

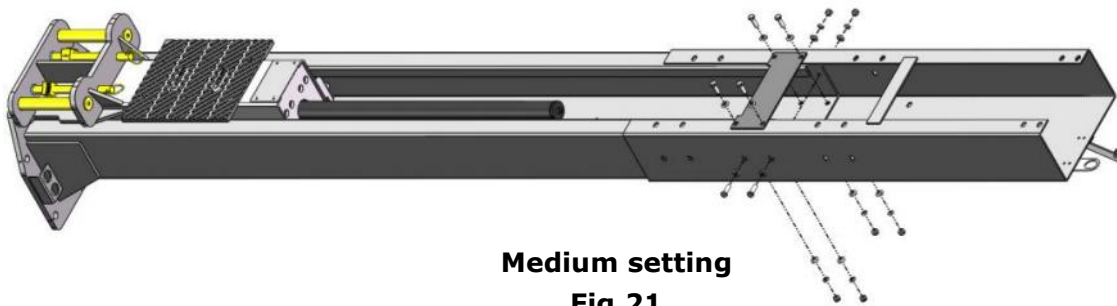
The lift is not suitable for workshops with a height less than 12 ft.

1.High Setting: connecting the lower holes of outer columns with inner columns. (See Fig. 20)



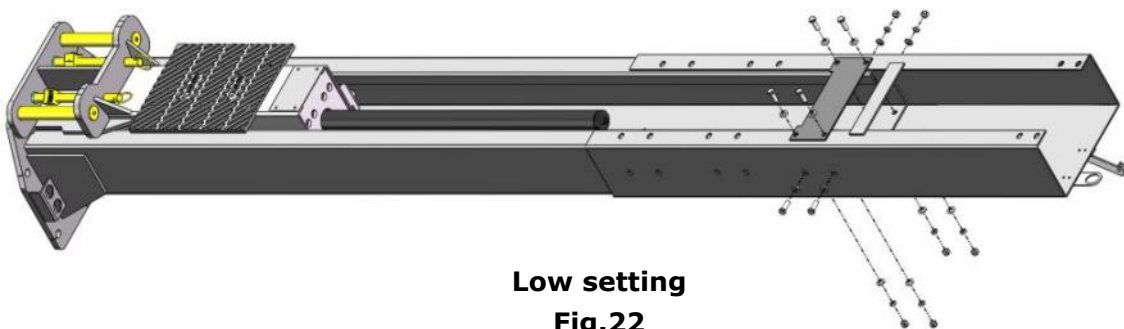
High setting
Fig.20

2. Medium Setting: connecting the middle holes of outer columns with the inner columns.(See Fig.21)



Medium setting
Fig.21

3. Low Setting: connecting the upper holes of outer columns with the inner columns. (See Fig.22)



Low setting
Fig.22

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.23).

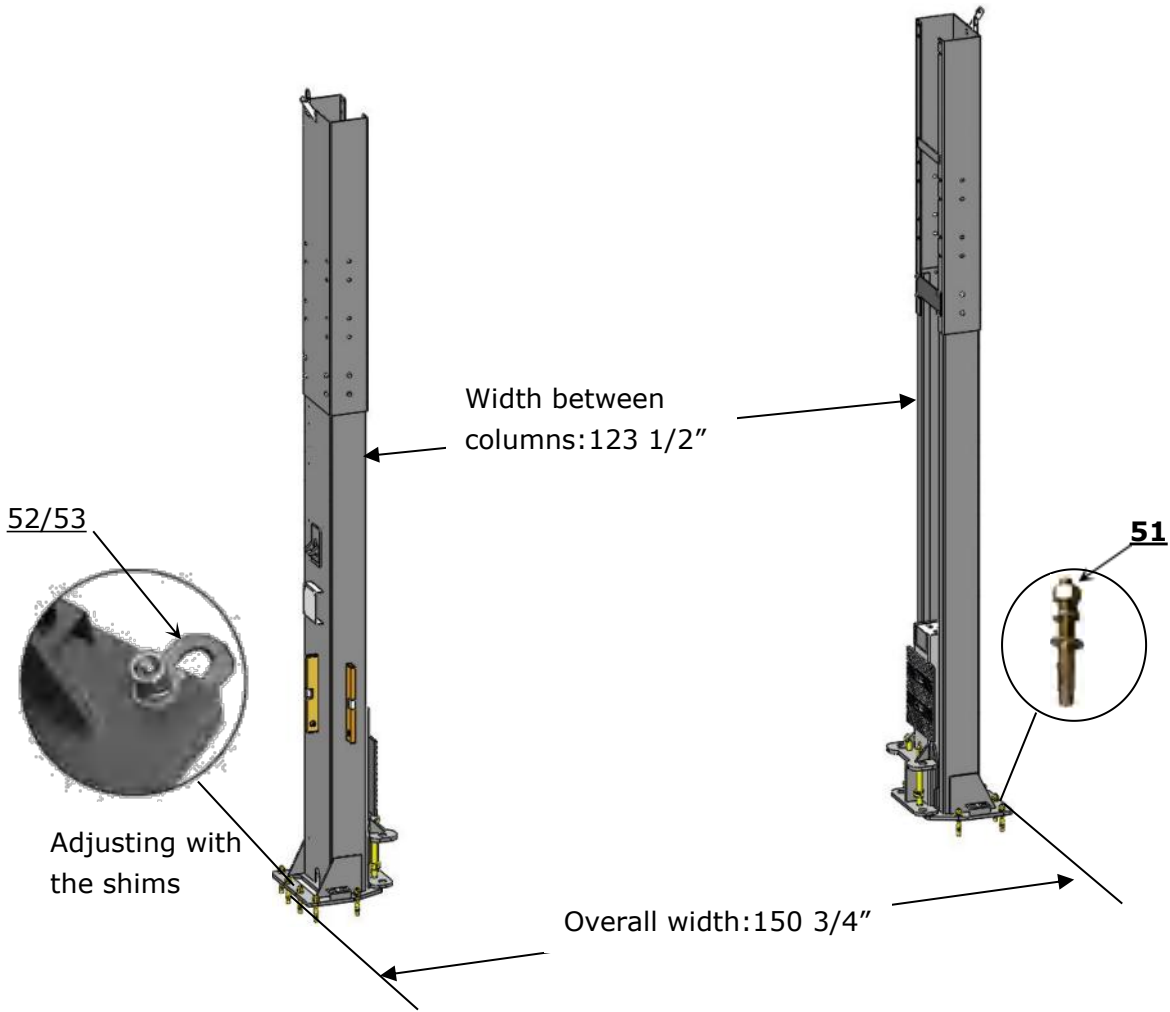


Fig. 23

Attention: Minimum embedment of Anchors is 4 3/8\".



⚠ 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, it 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

The top beam limited switch should be installed on the column of power side.

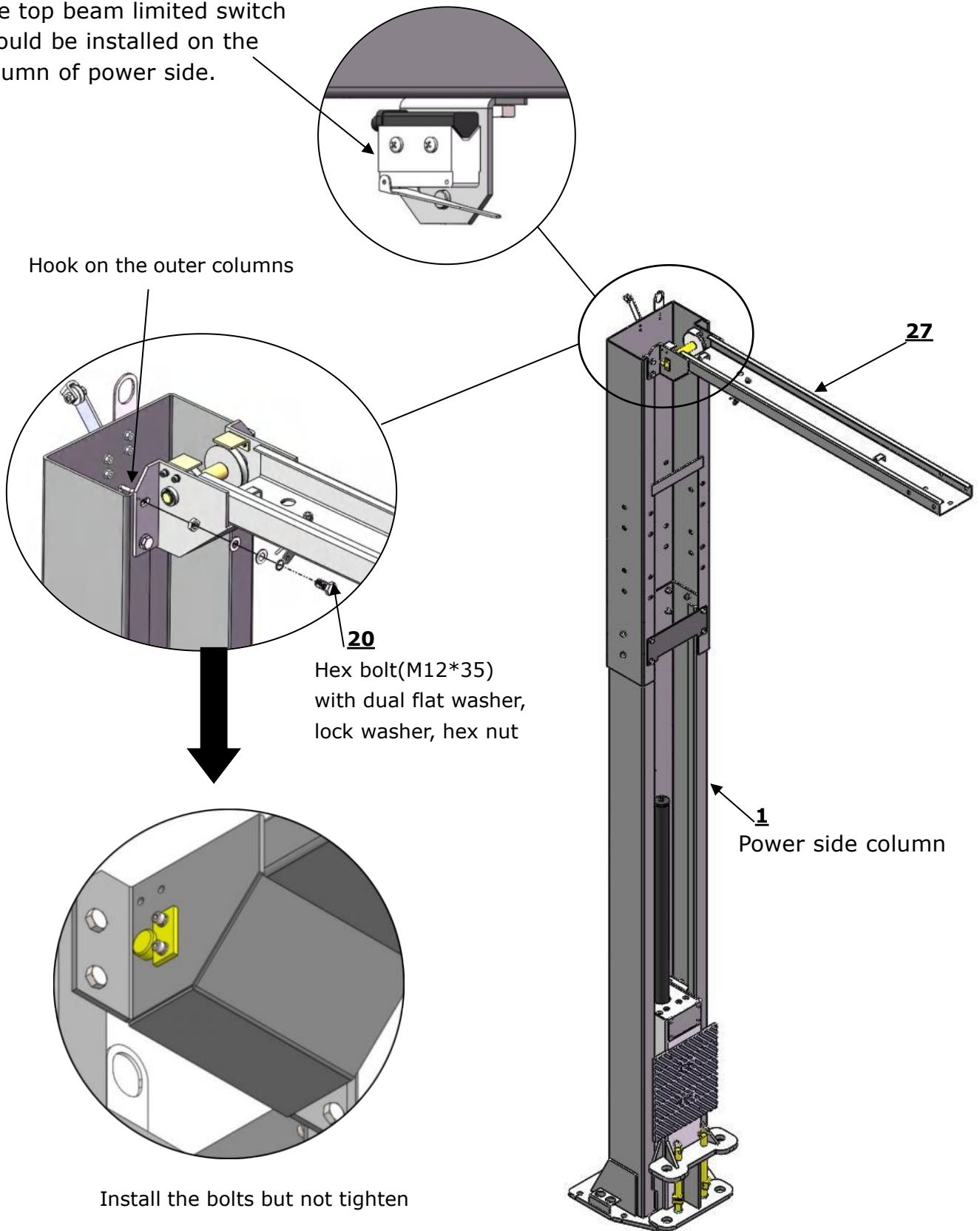
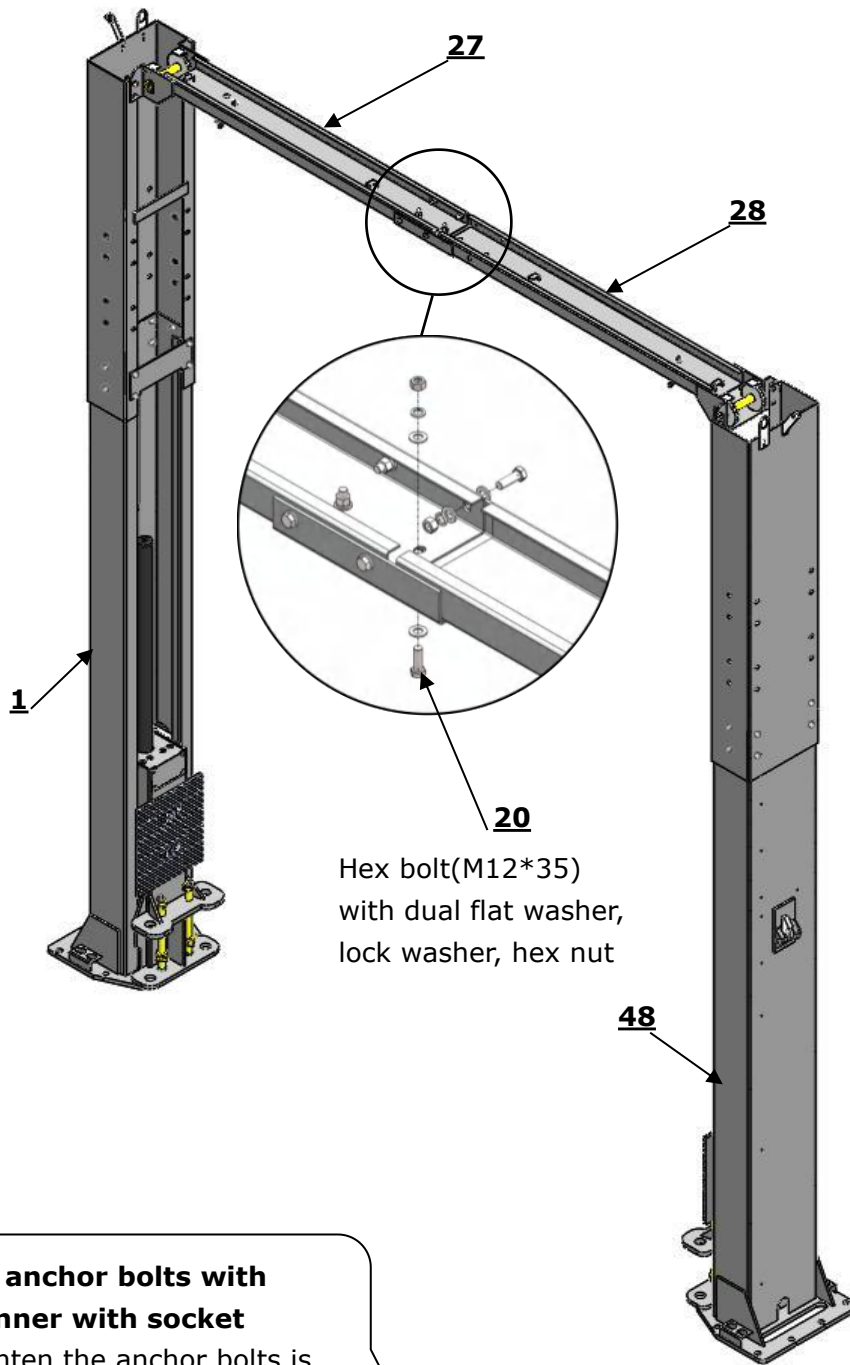


Fig. 24

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. 25)



Tighten the anchor bolts with ratchet spanner with socket
Torque of tighten the anchor bolts is 150 N.m(1328lbf.in)

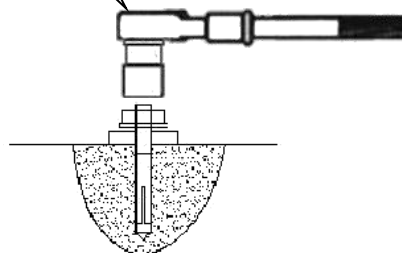
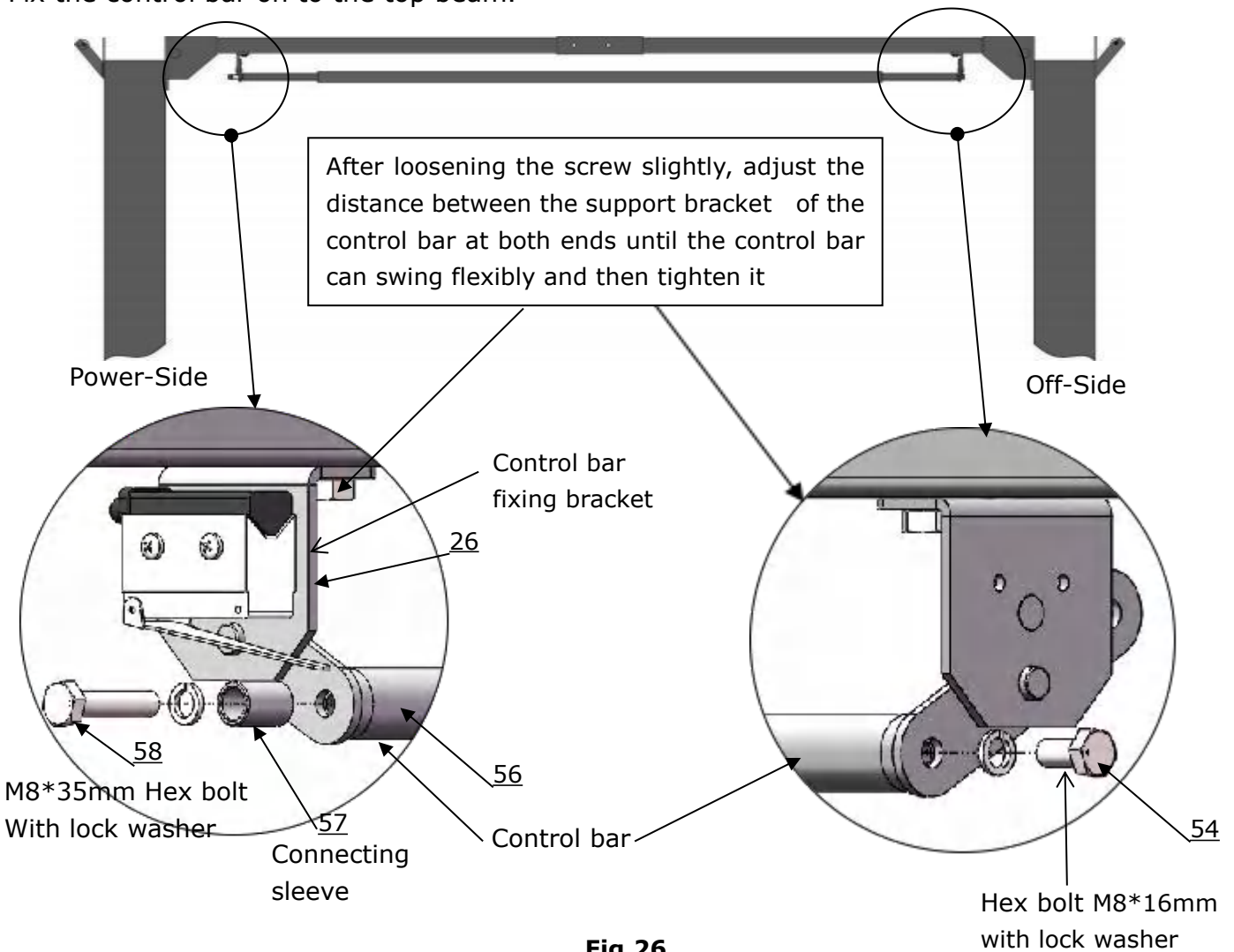


Fig.25

I. Installing the limit control bar and limit switch (See Fig. 26).

Fix the control bar on to the top beam.



⚠ 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 control bar for limit switch (See Fig. 27)

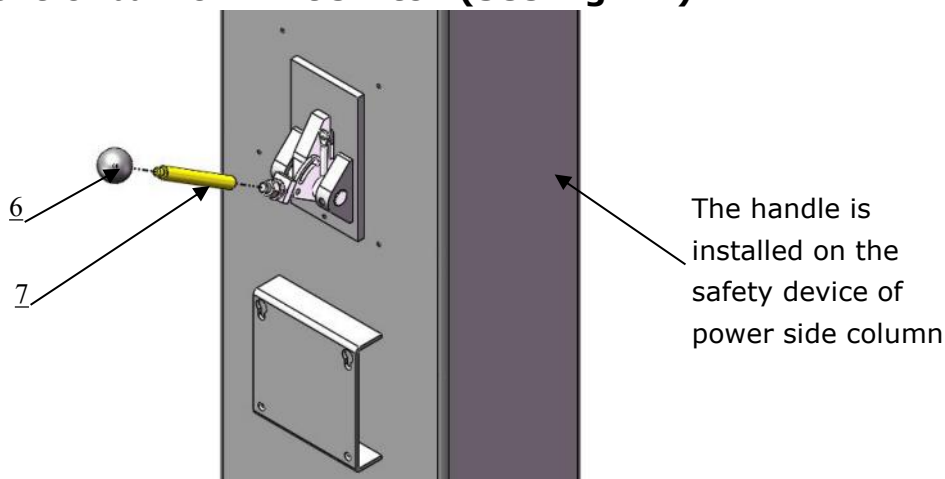


Fig. 27

K. Install cables

Raise both sides of carriages and lock them to the same level..

1. Sync cable connection of high setting installation

1.1 Remove the carriages plastic cover, sync cable across from the bottom of the carriages and pull it out from the hole of carriage, then tighten two cable nuts. (See Fig. 28)

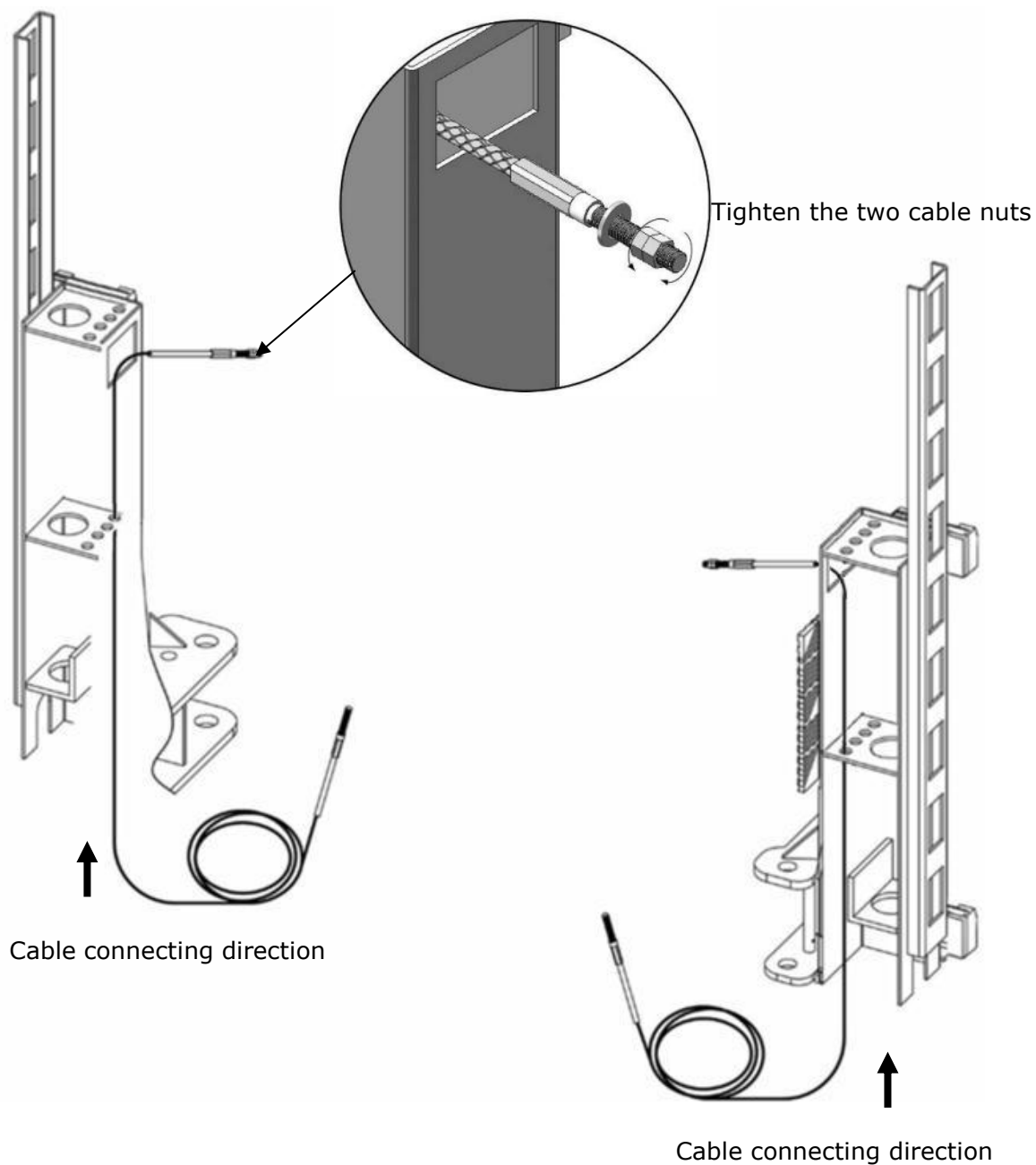


Fig.28

1.2 Connecting sync cable for high setting (See Fig. 29)

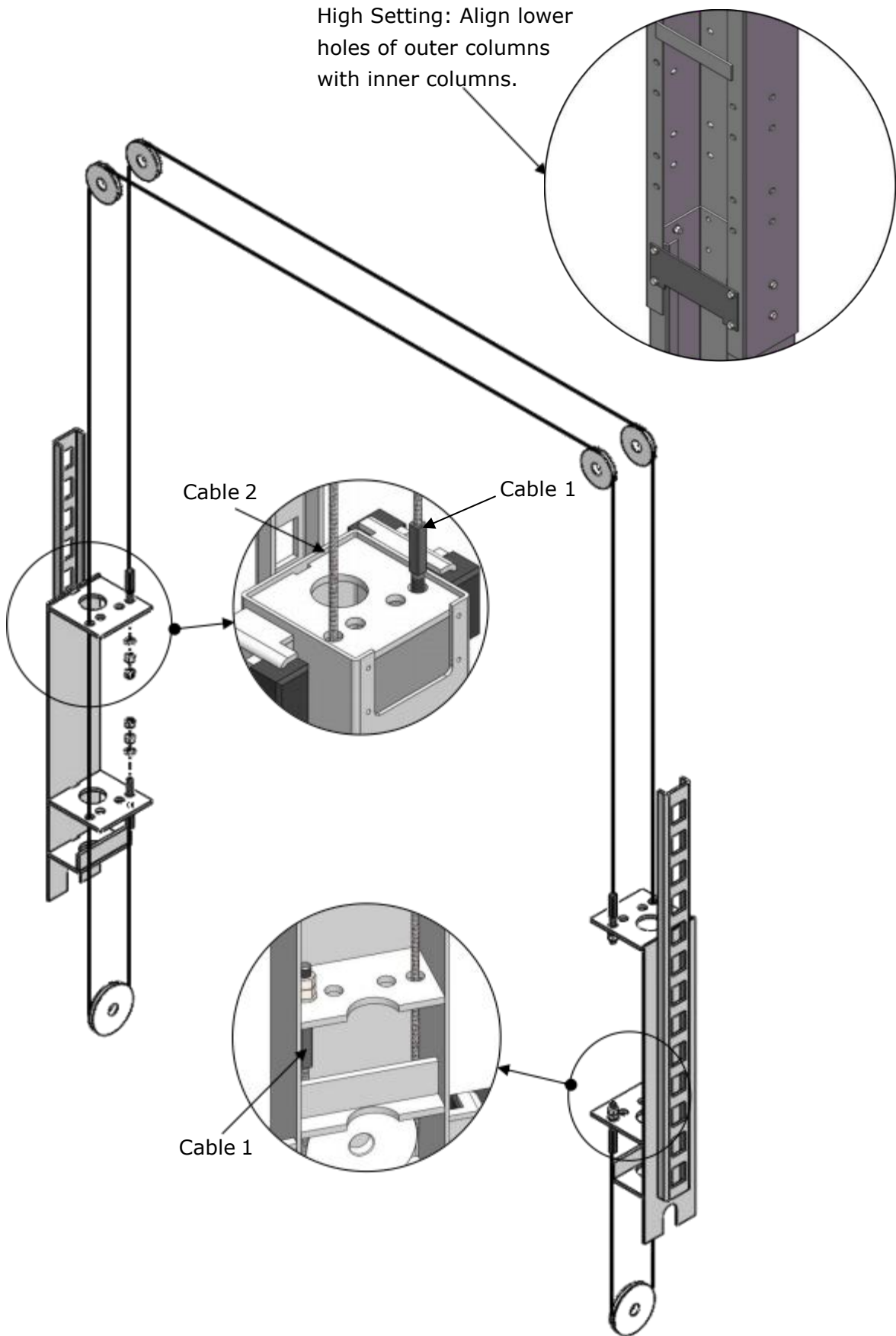


Fig.29

2. Sync cable connection of medium setting installation. (See Fig. 30)

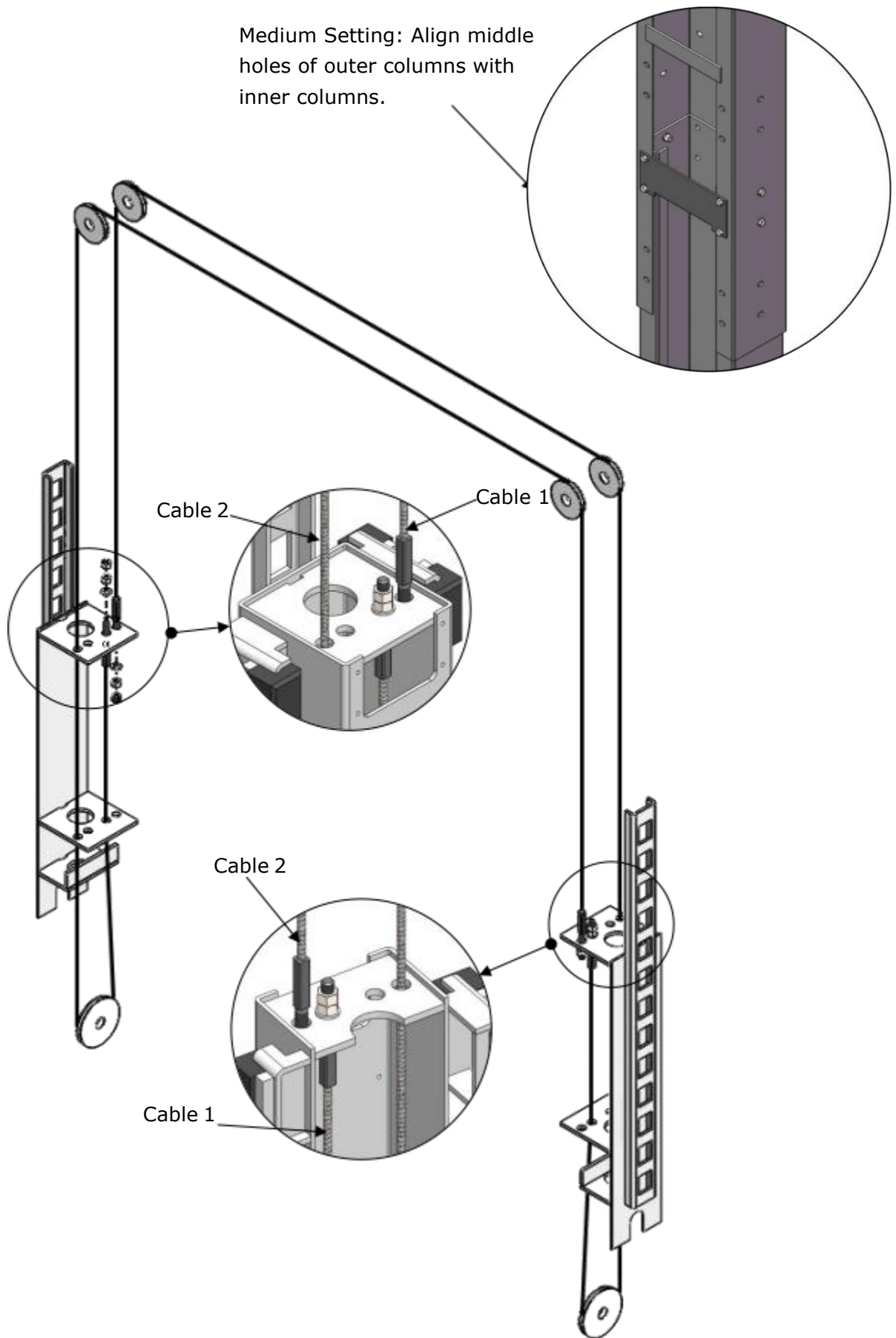


Fig. 30

3. Sync cable connection of low setting installation. (See Fig. 31)

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

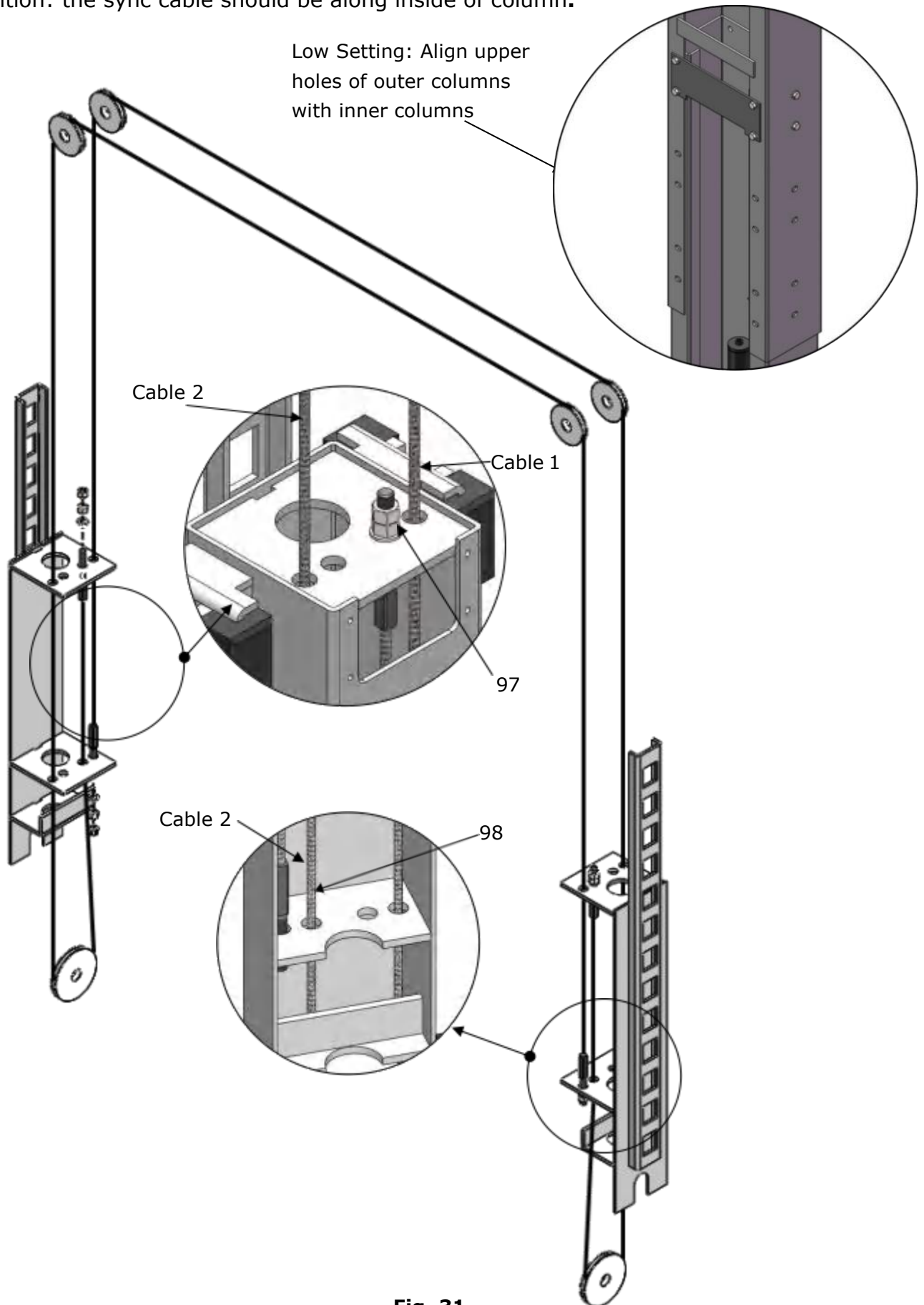


Fig. 31

L. Install power unit (See Fig. 32)

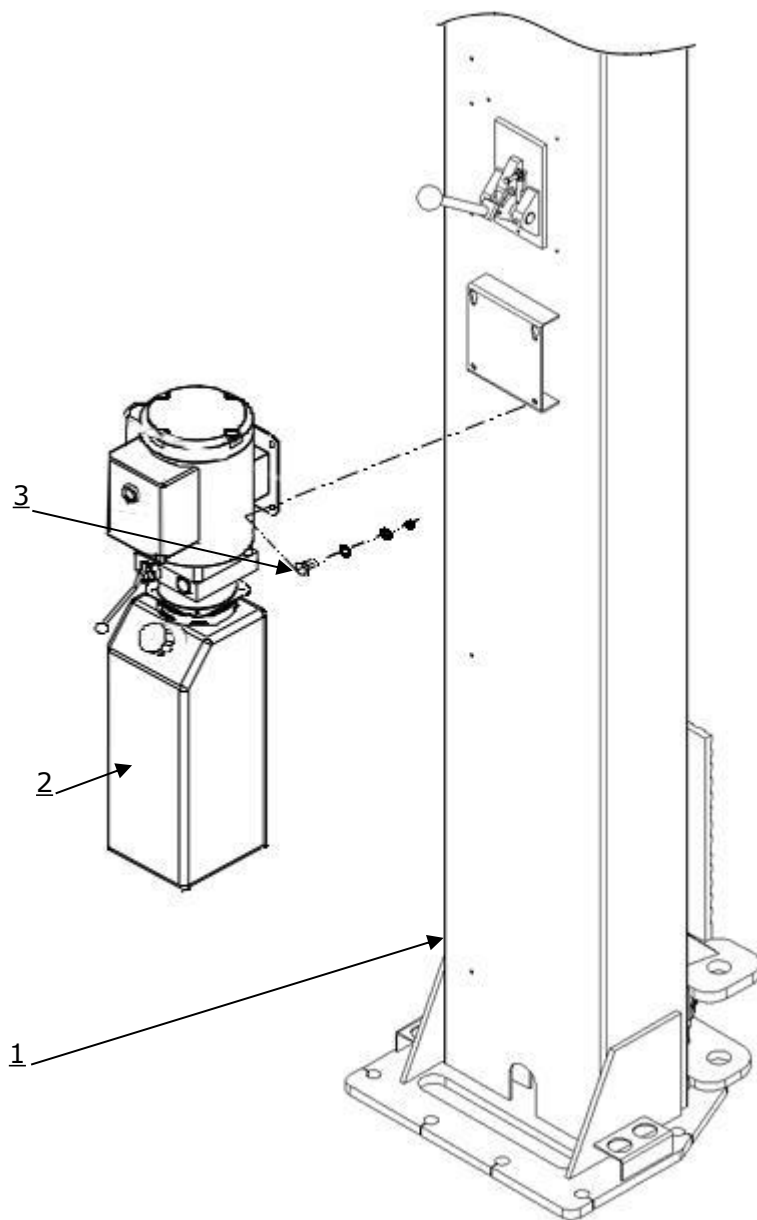


Fig. 32

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

1. Oil hose installation of high setting.(Fig.33)

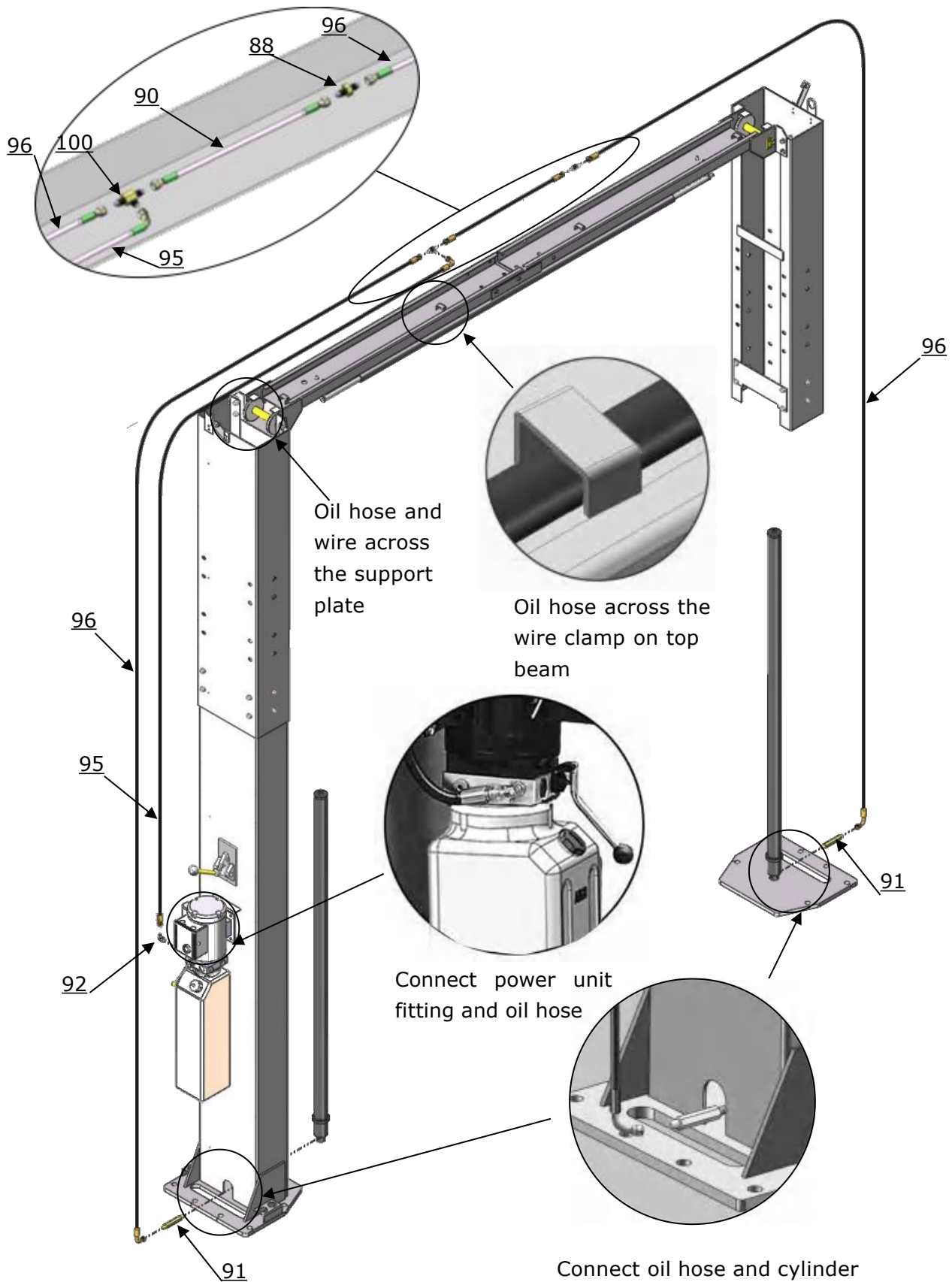


Fig.33

2. Oil hose installation of medium setting.(Fig.34)

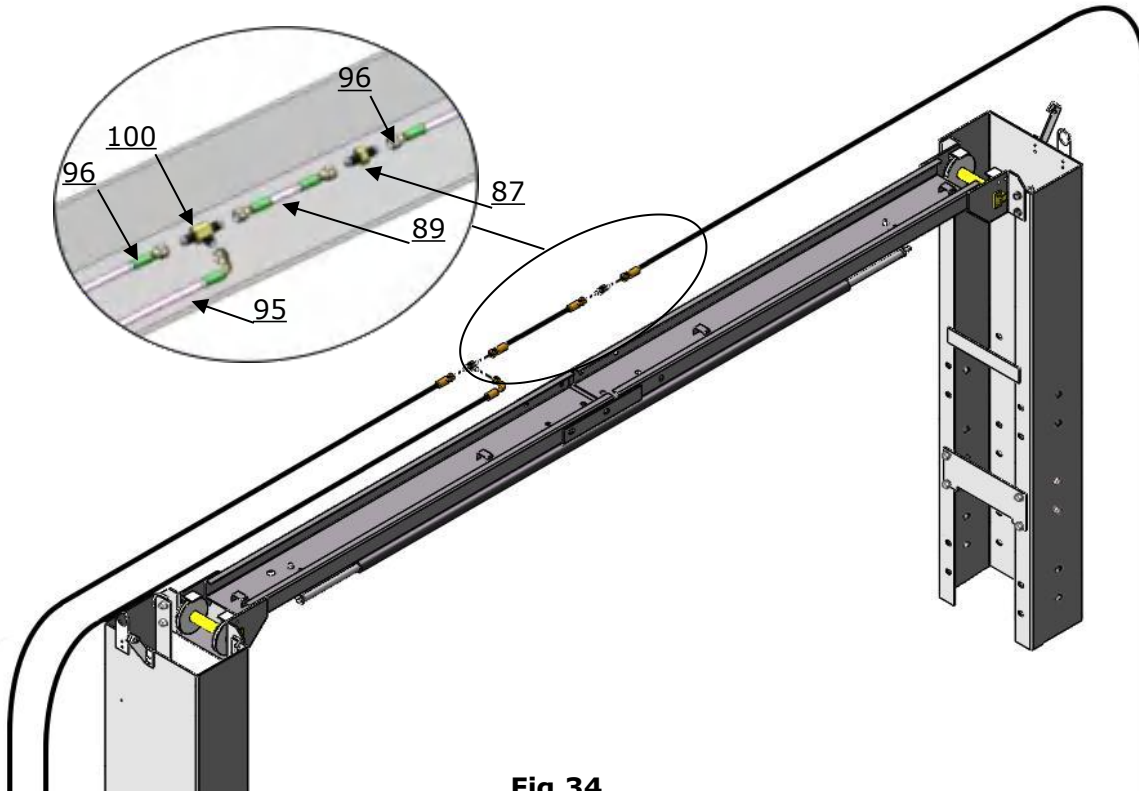


Fig.34

3. Oil hose installation of low setting.(Fig.35)

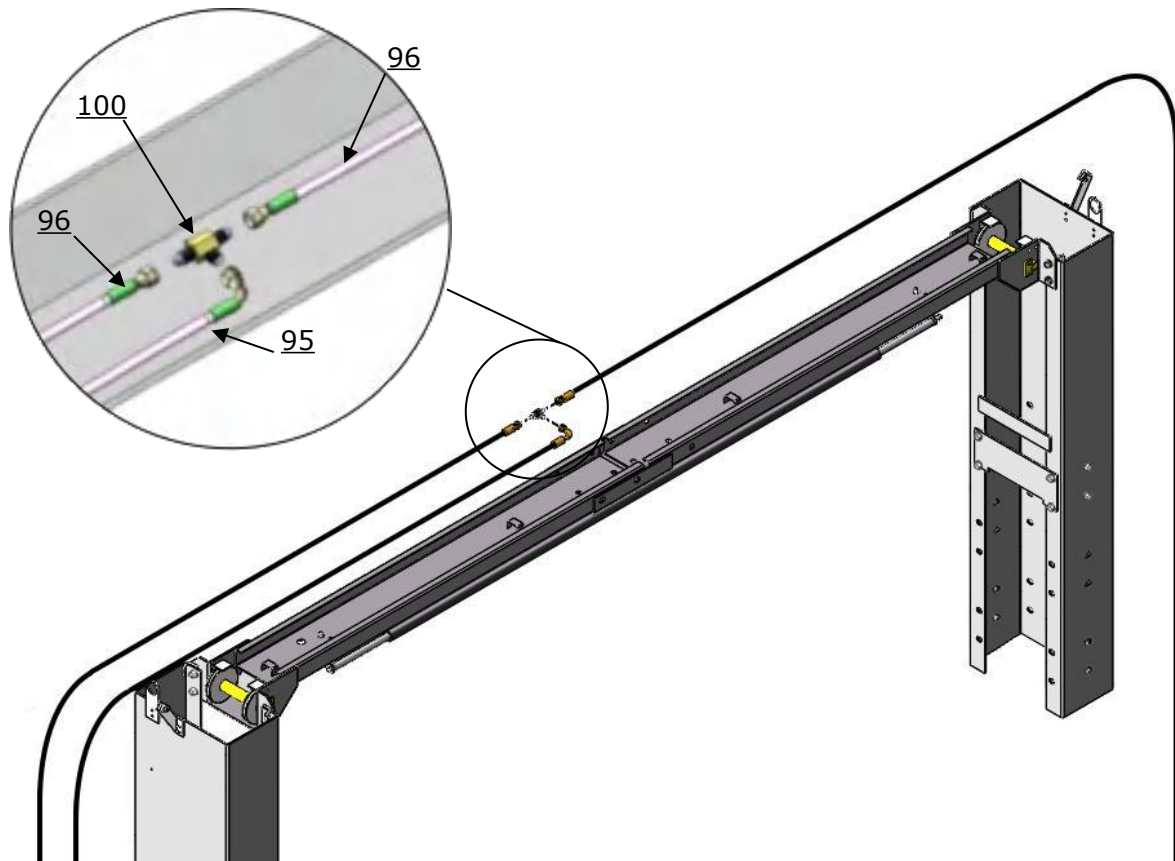


Fig.35

N. Install wire protective cover and sync cable limit plate.(See Fig.36)

(No.86 wire protective cover: Install 1pc for each column in low setting; install 2pcs for each column in medium setting; install 3pcs for each column in high setting)

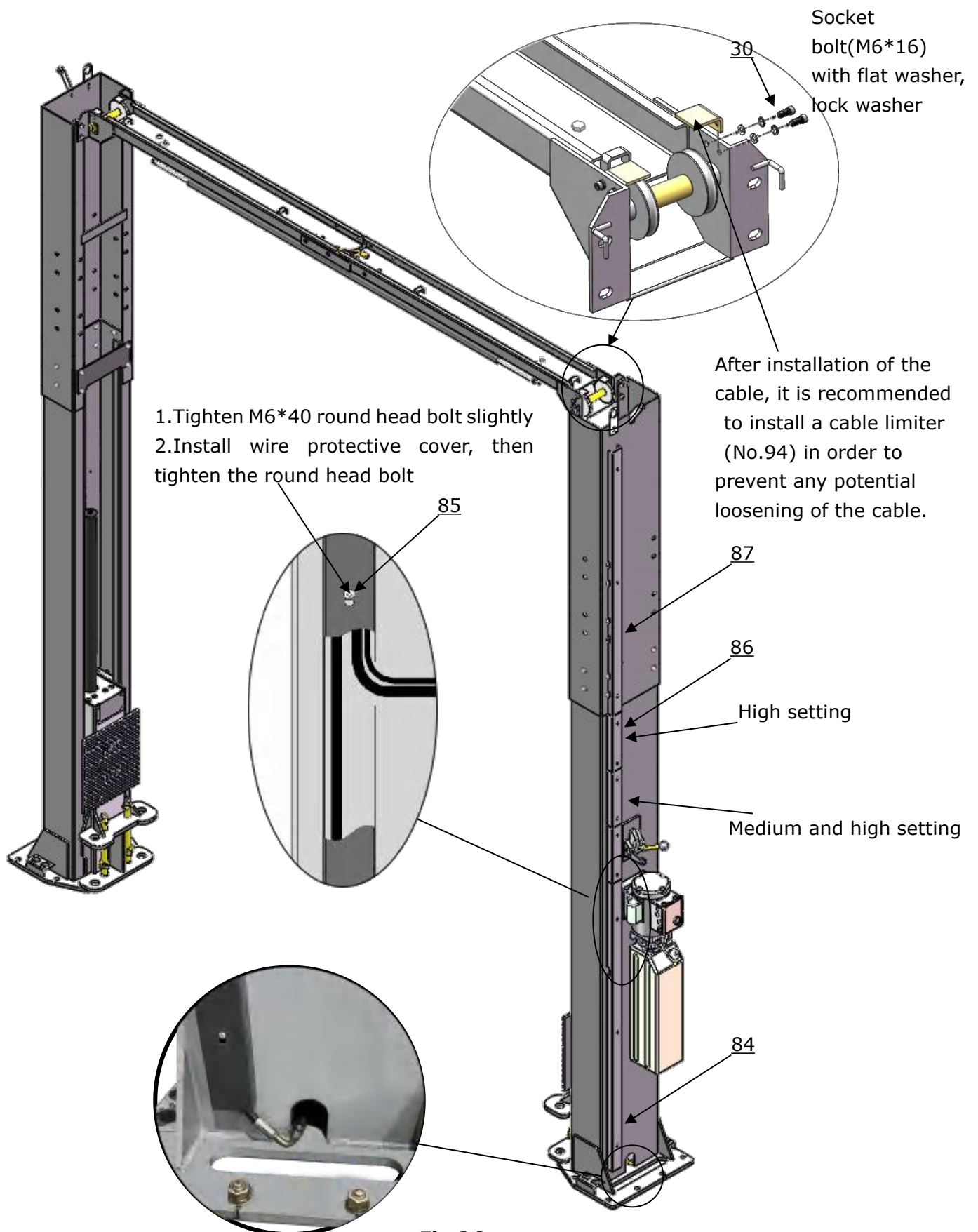


Fig.36

O. Install lock release cable

Install lock release cable. Start from off-side safety device, then pass it through the top beam, finally connect to power-side safety device. (See Fig. 37)

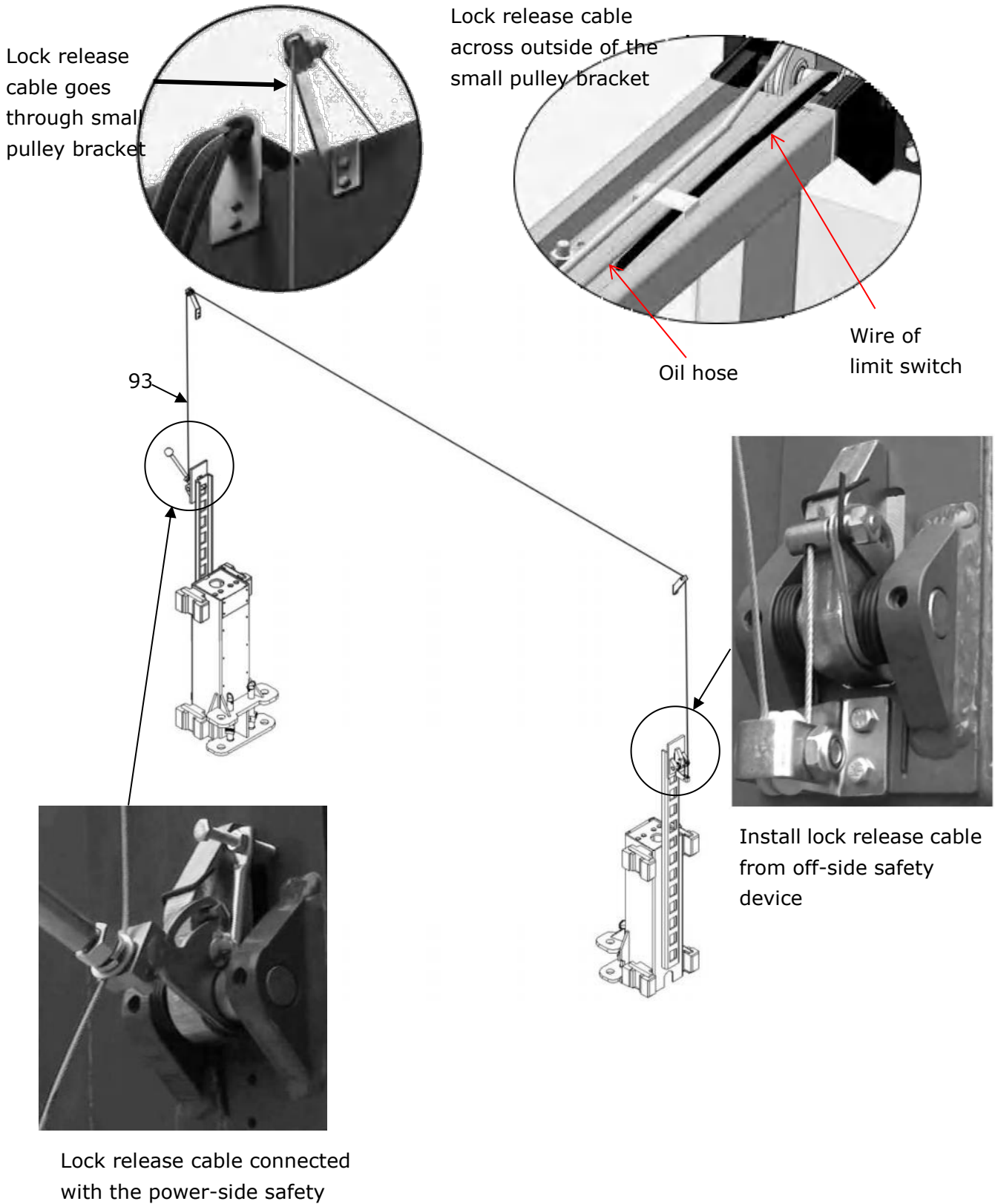


Fig.37

P. Install safety device cover (See Fig. 38)

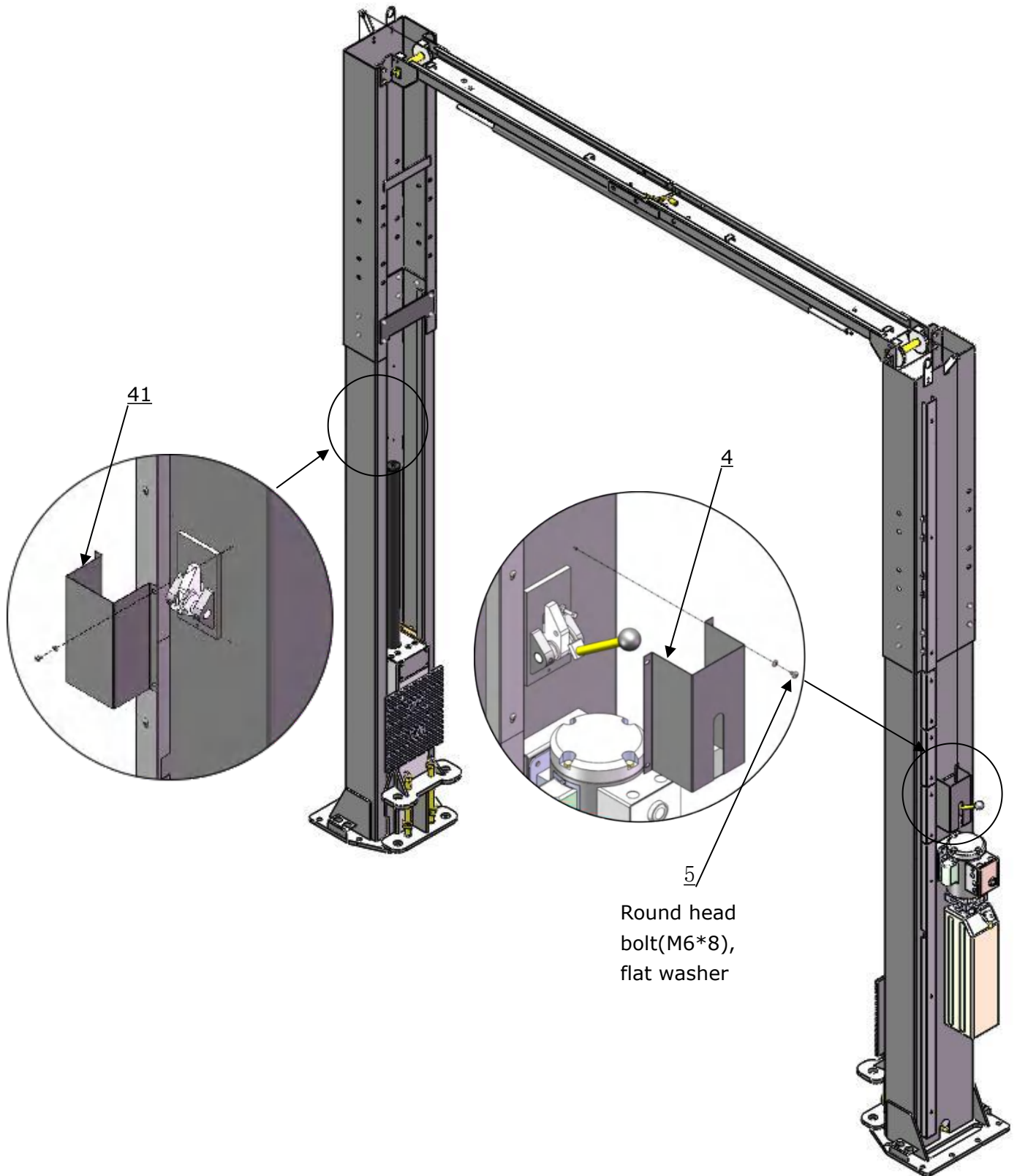


Fig.38

Q. Install lifting arms

1. Install lifting arms according to the figure, then install spring on the arm pin, last install guard bar.(See Fig.39)

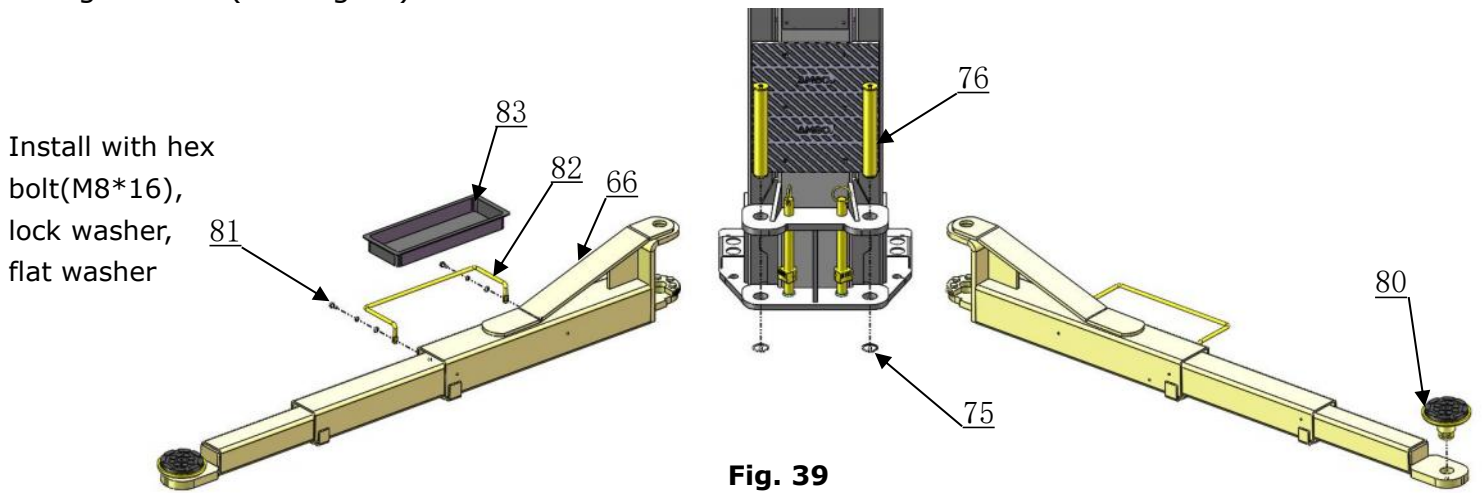
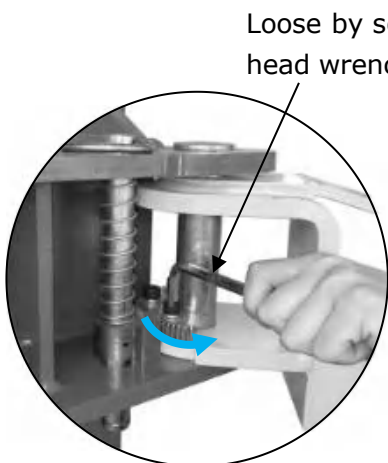


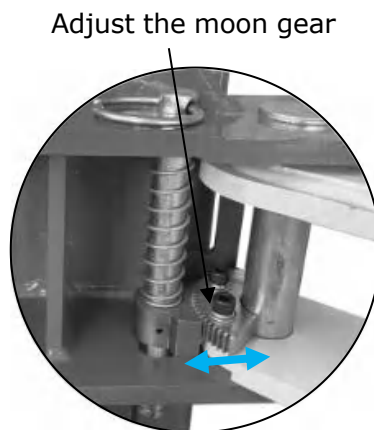
Fig. 39

2. Lowering the carriages down to the lowest position, then use the 10# socket head wrench to loosen the socket bolt (See Fig. 40); follow the arrow direction to adjust the moon gear(See Fig. 41); lock the bolts after the moon gear and arm lock are engaged well(See Fig. 42).



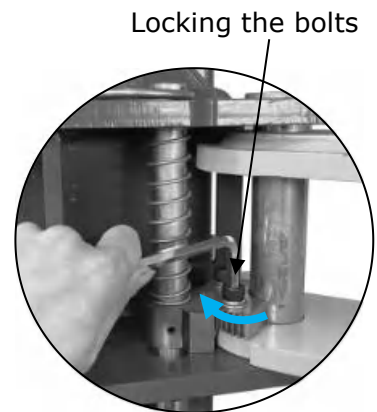
2.1 Use the 10# socket head wrench to loose the socket bolt.

Fig.40



2.2 Follow the arrow direction to adjust the moon gear

Fig.41



2.3 Lock the bolts after the moon gear and arm lock are engaged well

Fig.42

⚠ DANGER Moon gear must be positioned and adjusted correctly. 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.

⚠ WARNING Each arm restraint assembly must be inspected and adjusted before you use the Lift each and every time. Do not operate the Lift if any of the four arm restraint systems are not functioning properly. Replace any broken components or components with broken teeth with authorized replacement parts only.

R. Tighten all the oil pipe joints and fill the hydraulic station with hydraulic oil (to ensure the service life of the hydraulic system and ensure the best operation of the equipment, please add No. 46 high-quality anti-wear hydraulic oil).

S. Connect the power with schematic circuit diagram according to the requirement on the motor plate.

Note: To ensure the safety of operators, the lift must be grounded. Test the lift after installation to check if works fine.

Single phase motor

1. Connect the two hot wires of power supply respectively to the terminals of AC contactor marked L1 and L3 .
2. Connecting the limit switch wire: Remove the short wire that connects # 4 and # A2. 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.

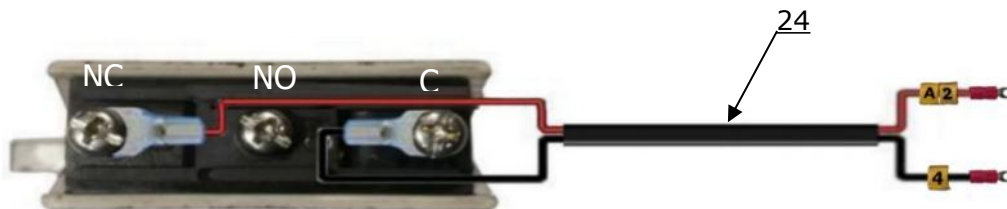


Fig. 43

Motor wiring diagram of single phase power unit

Circuit diagram

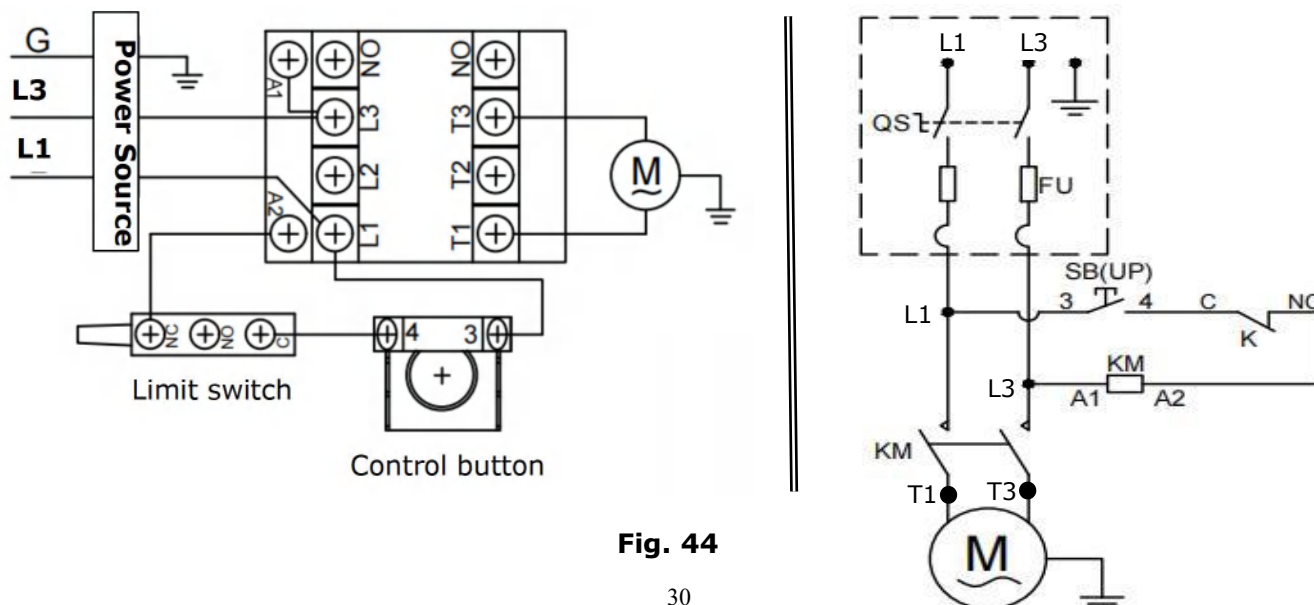


Fig. 44

Power source wires

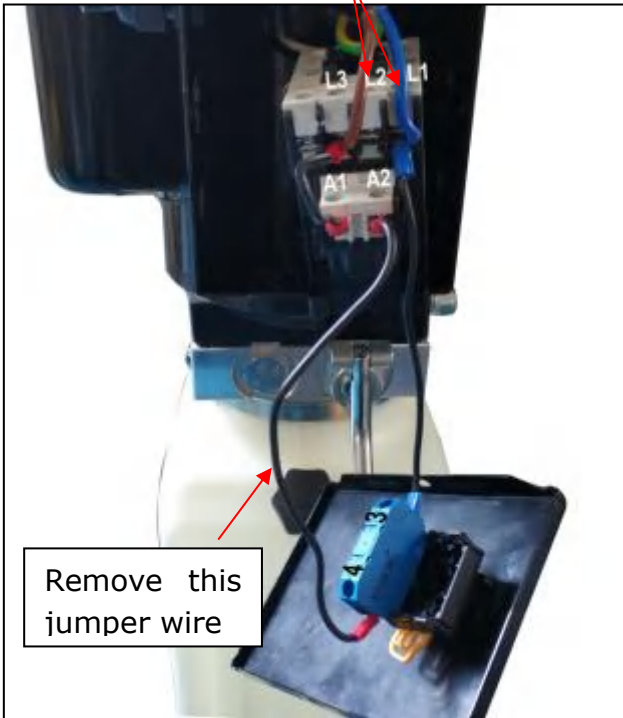


Fig. 45

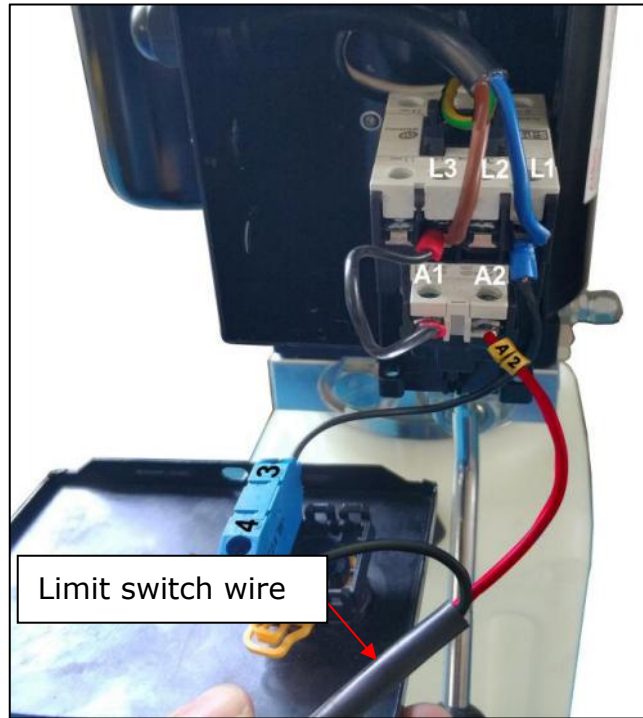


Fig. 46

⚠ DANGER All wiring must be performed by a licensed, certified Electrician. Do not perform any maintenance or installation of the lift without first ensuring that the main power supply has been disconnected from the lift and that it cannot be re-energized until all procedures have been completed.

⚠ DANGER Do not use the lift if the wires are damaged or severely worn. If the vehicle rises without noticing damage or extreme wear, carefully lower the vehicle to the ground. Once the lift is on the ground, remove it, disconnect the power, and arrange for protection.

IV. EXPLODED VIEW

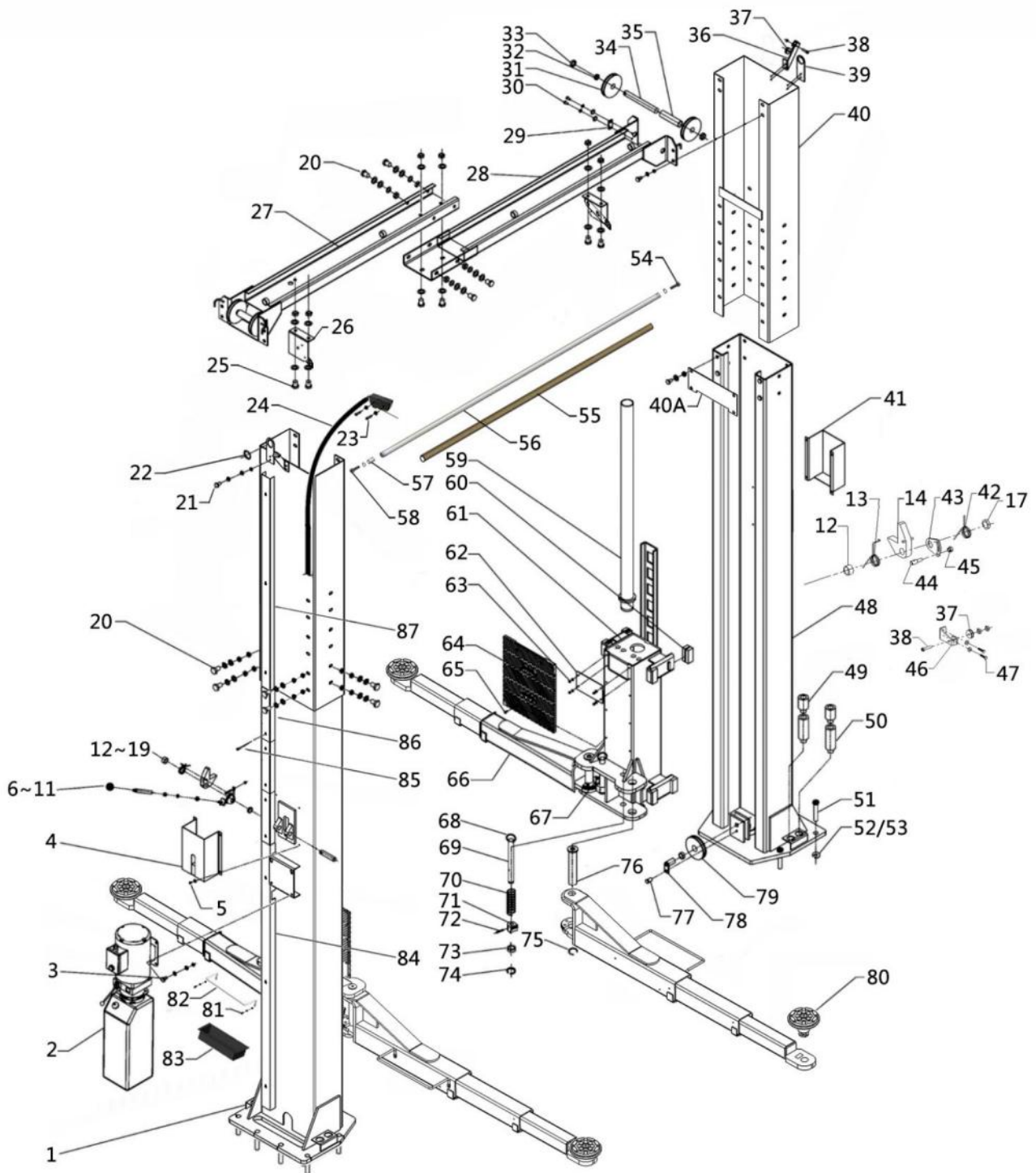


Fig.47

Parts list

Item	Part No.	Description	Qty.
1	11217458-03	Power-side column	1
2		Power unit	1
3	1002735003	Hex bolt M8*30 (Include flat washer, lock washer, hex nut)	4
4	11217405	Power-side safety cover	1
5	1002735004	Round head bolt M6*8(Include flat washer)	8
6	11217005	Plastic Ball M10	1
7	11217006	Safety lock handle	1
8	10206023A	Hex Nut M12	1
9	10420026	Lock Washer ϕ 12	1
10	10206006	Flat washer ϕ 12	1
11	11217004	Main cam lock	1
12	11217436	Safety device spacer	2
13	10217030	Spring ϕ 2.0*120°	2
14	11217009	Main lock	1
15	10217010	Hex Bolt M6*40	1
16	11217011	Hex Nut M6	9
17	11217012	Safety device spacer	2
18	10217051	Socket Bolt M10*10	2
19	11217050	Safety Pin	2
20	1002735005	Hex bolt M12*35(Include dual flat washer, lock washer, hex nut)	38
21	1002735006	Hex bolt M6*20(Include flat washer, lock washer, hex nut)	8
22	1061K074	Protective ring	2
23	1002735007	Round head bolt M6*20 (Include hex nut)	2
24	1002785010	Limit switch	1
25	1002735008	Hex bolt M10*20(Include flat washer, lock washer, hex nut)	4
26	1102022003A-01	Control Bar fixing bracket	2
27	11217016B-01	Top Beam (Left)	1
28	11217015B-01	Top Beam (Right)	1
29	11420044	Limit Plate	2
30	1002735009	Socket bolt M6*16(Include flat washer, lock washer)	12
31	11217019-02	Top pulley	4
32	10217020	Bronze Bush for Pulley	6
33	11217021	Top Pulley Spacer	4
34	11217022	Pin for Top Pulley	2

Item	Part No.	Description	Qty.
35	11217023	Top Pulley Spacer	2
36	11217379	Lock release cable bracket	2
37	10206009	Plastic Small Pulley	3
38	1002735010	Hex bolt M10*35(Include lock washer, hex nut)	3
39	11217024	Oil hose supporter	2
40	1102781003A-01	Outer column	2
40A	11217068	Column Reinforce Plate	2
41	11217406	Offside safety device cover	1
42	10217008	Safety Spring	1
43	11217031	Offside Cam Lock	1
44	10217032	Cable connecting pin	1
45	10217033	Nylok Nut	1
46	11217029	Pulley bracket	1
47	1002735011	Hex bolt M6*15 (Include flat washer)	2
48	11217459-03	Offside column	1
49	1102214016A-01	3" Stackable adapter	4
50	1102504001-01	6" Stackable adapter	4
51	10201140	Anchor Bolt	12
52	10620065	Shim(2mm)	10
53	10201090	Shim(1mm)	10
54	1002735014	Hex bolt M8*16(Include lock washer)	1
55	10206025A	Control Bar Foam Pipe	1
56	1102022001A-01	Control bar	1
57	1102022007	Connecting Sleeve	1
58	1002735013	Hex bolt M8*35 (Include lock washer)	1
59	C804208	Cylinder	2
60	1002755015	Slide Block	16
61	11217479-02	Carriage	2
62	11217054	Carriage Plastic Cover	2
63	10209009	Round Head Screw M6*8	8
64	10217053	Protective Rubber	2
65	10209019	Flat head screw M6*16	12
66	10212303001C	Lifting Arm assy.	4
67	11217046C	Arm Lock bar (Right)	2
68	10209153	Pull ring of arm lock bar	4
69	11217046B	Arm Lock bar (Left)	2
70	10217045A-01	Spring	4
71	1002163001	Arm Lock	4
72	10206036-01	Cotter Pin	4

Item	Part No.	Description	Qty.
73	1102163002	Sleeve	4
74	10610008	Clip Ring	4
75	10520023	Clip Ring	4
76	11217047B	Pin for Lifting arm	4
77	1002205001	Hex Bolt M10*15(Include flat washer, lock washer)	2
78	11217037	Bottom pin	2
79	11217036-02	Bottom pulley	2
80	1102214015C	Single screw rubber pad assy.	4
81	100273012	Hex bolt M8*16/(Include flat washer, lock washer)	4
82	11206191	Short guardrail	4
83	10206190	Tool tray	2
84	11203778-01	Wire Protective cover	2
85	10206079	Round Head Bolt M6*40	24
86	1102781001	Wire Protective cover	6
87	1102781002	Wire Protective cover	2
88	10620079	Straight Fitting (Medium & High setting)	1
89	1002785006	Oil hose L=23 5/8"(Medium setting)	1
90	1002185001-01	Oil hose L=47 15/16"(High setting)	1
91	1102186001	Extended straight fitting	2
92	10209060	90° Fitting for power unit	1
93	1002785002	Lock release cable L=346 15/32"	1
94	1102075001	Cable Limit Plate	4
95	1002785005	Oil hose assy. L=167 17/32"	1
96	1002785004	Oil hose assy. L=210 1/4"	2
97	10610096	Hex nut M18	8
98	1002785001-01	Sync Cable L=432 11/16"	2
99	1004334003	Flat washer φ18	4
100	10211016	T-Fitting	1
101	10217501B	Parts box	1

4.1 Lifting Arm (10212303001C)

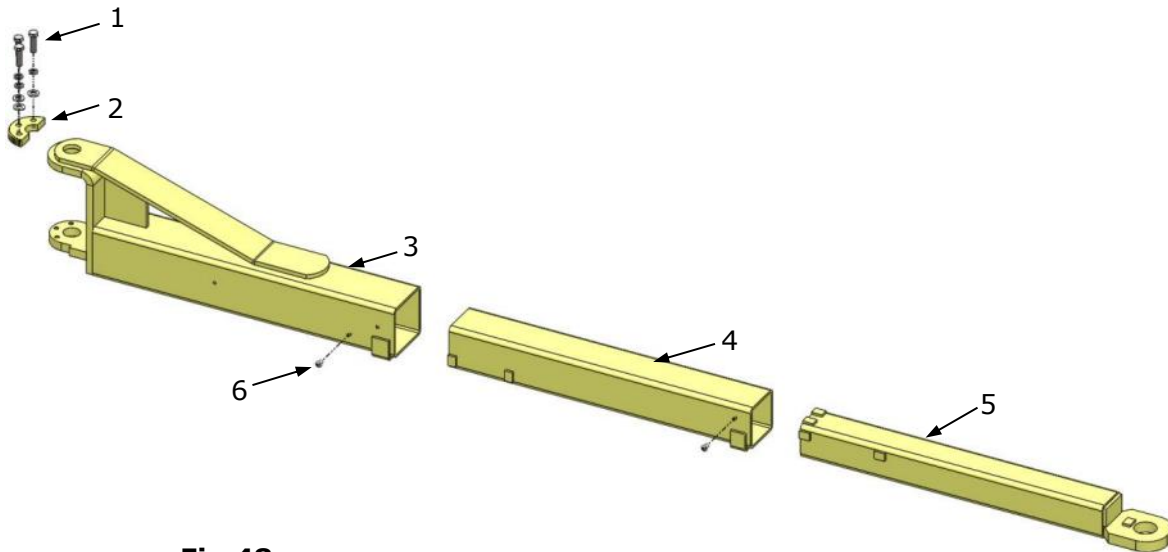


Fig.48

Item	Part No.	Description	Qty.
1	1002205004	Socket bolt M12*48 (Include flat washer, lock washer)	12
2	1102163001	Moon Gear	4
3	10212303001A	Outer Arm	4
4	10212003003A	Middle Arm	4
5	10212303002A	Inner Arm	4
6	10201149	Round head bolt M8*12	8

4.2 Single Screw Rubber Pad Assy. Exploded View (1102214015C) :

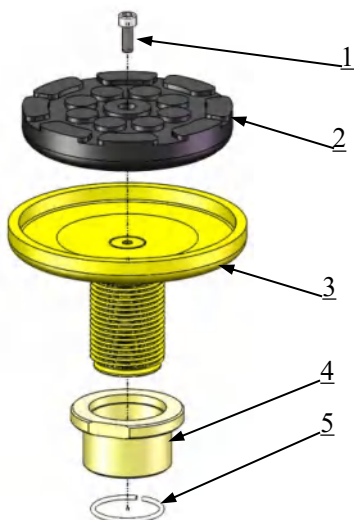


Fig.49

Item	Part No.	Description	Qty.
1	10420138	Socket Bolt M6*16	4
2	10209134	Rubber Pad	4
3	1102214015	Support frame	4
4	1101043004	Adjusting sleeve	4
5	10203042	Snap ring	4

4.3 Cylinders **C804208** (Old code 10217056A-01)

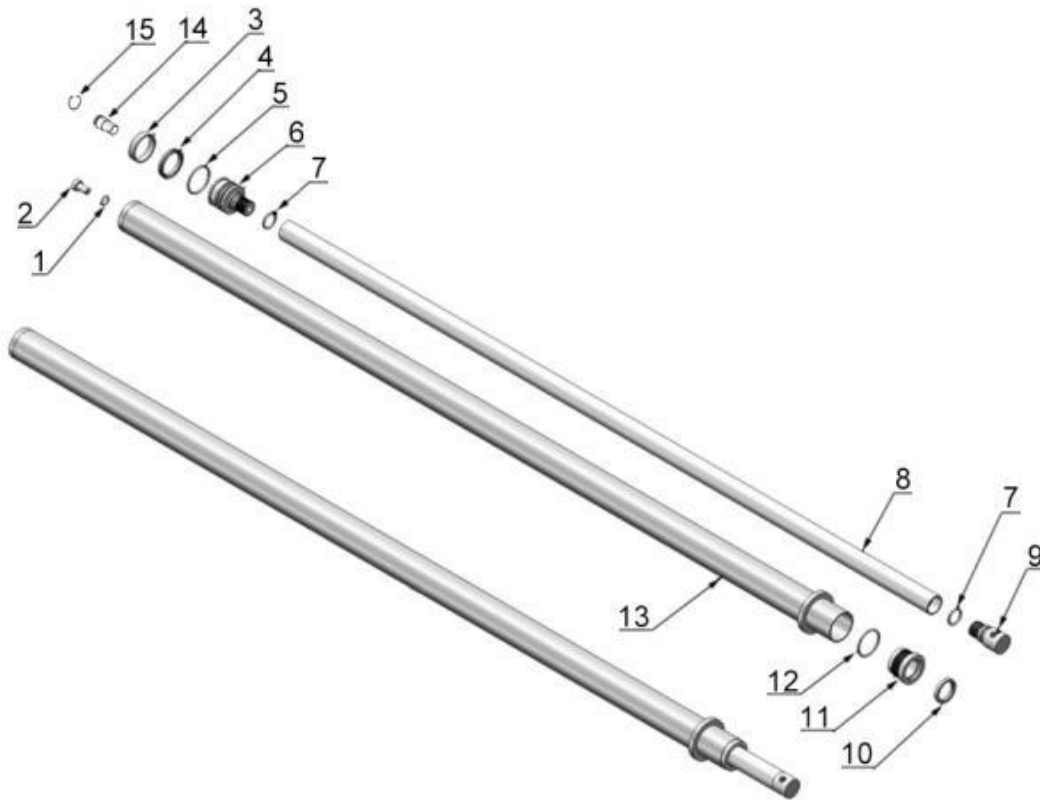


Fig. 50

Parts list for Cylinder

Item	Part No.	Description	Qty.
1	10209069	O-Ring	2
2	10209231	Bleeding Plug	2
3	10217071	Support Ring	2
4	10217072-01	Y-Ring USH	2
5	10217073	O-Ring	2
6	11217074-01	Piston	2
7	10217075	O-Ring	2
8	11217089	Piston rod	2
9	11217077	Piston rod fitting	2
10	10217078	Dust Ring	2
11	11217079A	Head Cap	2
12	10217080A	O-Ring	2
13	11217090	Bore weldment	2
14	C802004	Flow compensated valve	2
15	1002576003	Support ring	2

4.4 Illustration of hydraulic valve for hydraulic power unit

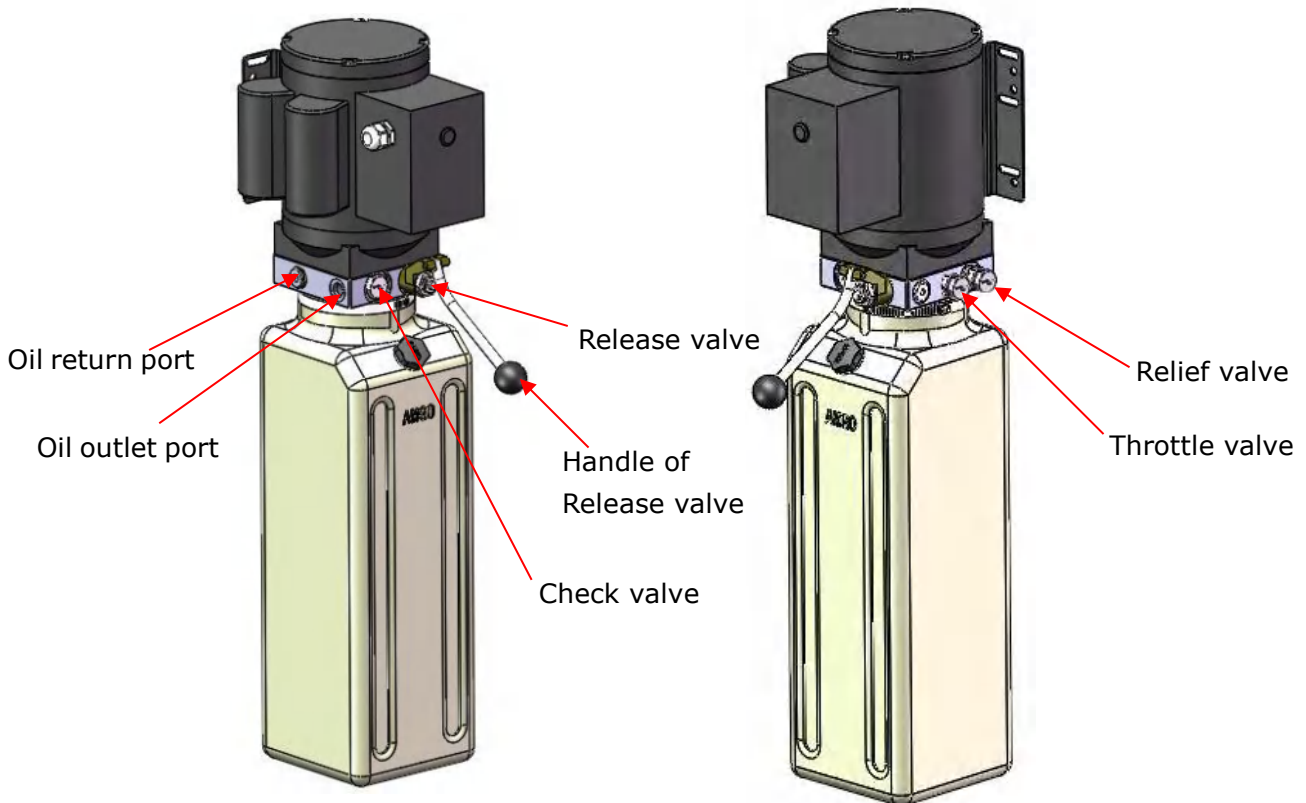


Fig.51

V. TEST RUN

1. Adjustment of sync cable (See Fig. 52)

Use an open spanner to clamp the cable joint, and use a ratchet wrench to tighten the cable nut until the two sync 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.

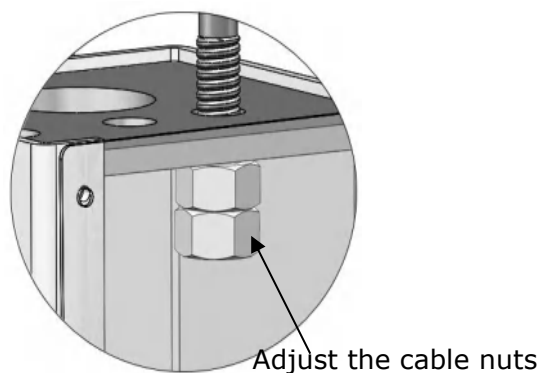


Fig. 52

2. Adjust lock release cable

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

3. Exhaust air from cylinder(See Fig. 53)

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.

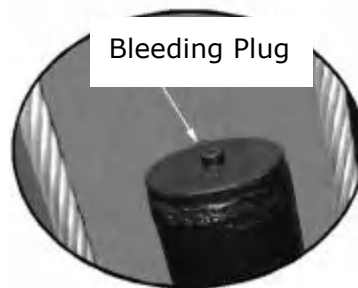


Fig. 53

4. Adjust the lowering 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.



Throttle Valve

Clockwise to decrease the lowering speed



Throttle Valve

Counterclockwise to increase lowering speed

Fig. 54

⚠ WARNING Do not lift vehicles that exceed the rated capacity of the lift. Please do not release the safety handle until the lift safety lock is locked. Only trained personnel are authorized to operate the lift.

5. Test with a typical vehicle

The test should be conducted after the above adjustments have been completed, test running the lift with typical vehicle. 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.

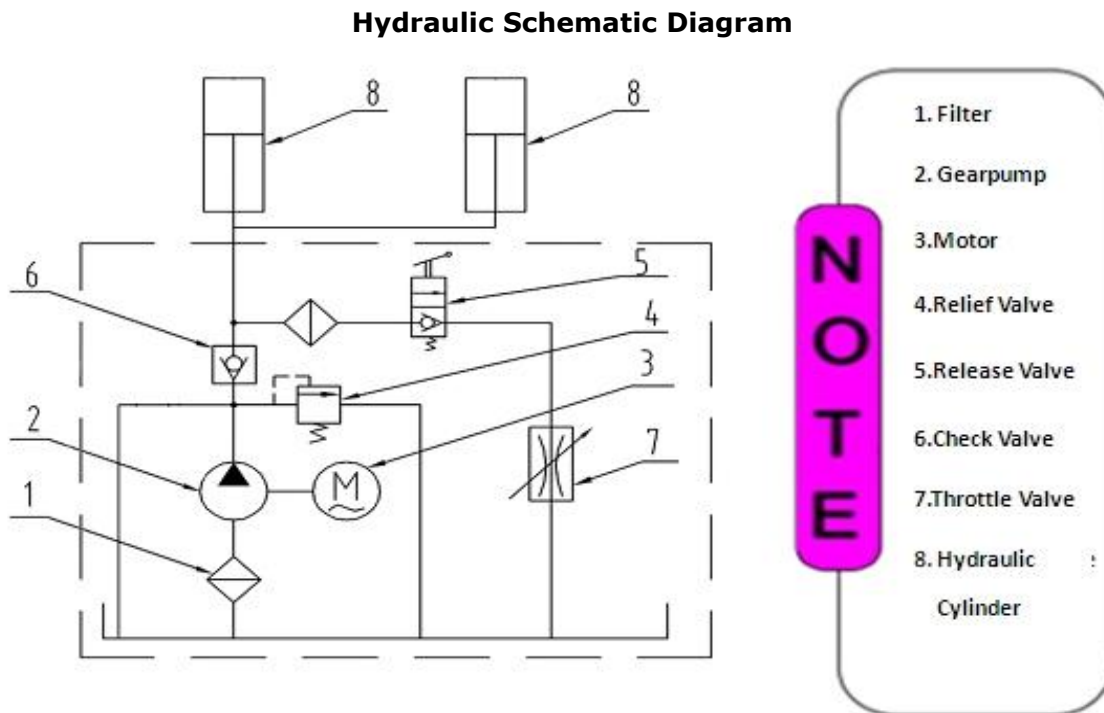


Fig. 55

VI. OPERATION INSTRUCTIONS

Please read the safety tips carefully before operating the lift


To lift vehicle


1. Keep operation site clean;
2. Lower the lifting arm to the shortest position;
3. Retract the lifting arm to the shortest position;
4. Open lifting arms out to the sides;
5. Move the vehicle between columns;
6. Move the lifting arms to the vehicle's lifting point;

ATTENTION: Use the carrier adapter provided by the AMGO manufacturer.

Swing the lifting arms under the vehicle, lift the vehicle lifting points as recommend by the vehicle manufacturer. If necessary, use the stackable extension adapter or optional saddle adapter to ensure good contact.

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;
9. Press the release handle on power unit to lower the lift to the safety lock position. The vehicle cannot be repaired unless safety in lock position.

 **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 be certain no people are around the lift;
2. Push UP button to raise the vehicle slightly, and then unlock the safety device, lower vehicle by pushing release handle on the power unit.
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.

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:

7. Make a visual inspection of all moving parts for possible wear, interference or damage;
8. Check and adjust as necessary, equalizer tension of the sync cables to insure level lifting;
9. Check columns for plumbness;
10. Check Rubber Pads and replace as necessary;
11. Check Safety device and make sure proper condition;
12. Check limit switch and make sure in proper condition;
13. Check the oil level of power unit and ensure is normal;
14. Check the moon gear and arm lock and ensure 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.

 **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"> 1. Button does not work 2. Wiring connections are not in good condition 3. Motor burned out 4. Height limit switch is damaged 5. AC contactor burned out 	<ol style="list-style-type: none"> 1. Replace button 2. Repair all wiring connections 3. Repair or replace motor 4. Replace the limit switch 5. Replace AC contactor
Motor runs but the lift is not raised	<ol style="list-style-type: none"> 1. Release valve in damage 2. Gear pump out of operation 3. Relief valve or check valve in damage 4. Low oil level 	<ol style="list-style-type: none"> 1. Repair or replace 2. Repair or replace 3. Repair or replace 4. Fill tank
Lift does not stay up	<ol style="list-style-type: none"> 1. Release valve out of work 2. Relief valve or check valve leakage 3. Cylinder or fittings leaks 	Repair or replace
Lift raises slowly	<ol style="list-style-type: none"> 1. Oil line is jammed 2. Motor running on low voltage 3. Oil mixed with air 4. Gear pump leaks 5. Overload lifting 	<ol style="list-style-type: none"> 1. Clean the oil line 2. Check electrical system 3. Fill tank 4. Replace pump 5. Check load
Lift cannot lower	<ol style="list-style-type: none"> 1. Safety device are in activated 2. Release valve in damage 3. Safety cable broken 4. Oil system is jammed 	<ol style="list-style-type: none"> 1. Release the safeties 2. Repair or replace 3. Replace 4. Clean the oil system

 **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 is unstable for 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 from under the car. Open the lock before lowering 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, be sure to unplug the lift from the power socket. Never pull the plug out only using the wire. Grab the plug 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 the lift 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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<http://www.amgohyd.com>

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