AMGO® Hydraulics

Original

# Installation And Service Manual

## FOUR POST PARKING LIFT

## Model: 407-P

**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

This installation and service 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, slider blocks and plastic parts are under warranty for 3 years, electrical components and cables warranty for 2 year. 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




**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 full complies with all applicable local and national rules, ordinances and regulations;
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 and 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 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. Operate the lift only at temperature between 5°C to 40°C (41°F to 104°F).

⚠ 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.

# I. PRODUCT FEATURES AND SPECIFICATIONS

## 407-P FEATURES

· Single-cylinder drive and cable transmission.

· Single-point manual safety release enhances the convenience and reliability of descent operations.

· Both automatic mechanical primary safety device and cable-slack secondary safety device are equipped for enhanced security.

· Optional:  Rolling jacks, caster kits

· Non-skid diamond platforms and adjustable safety lock ladders.

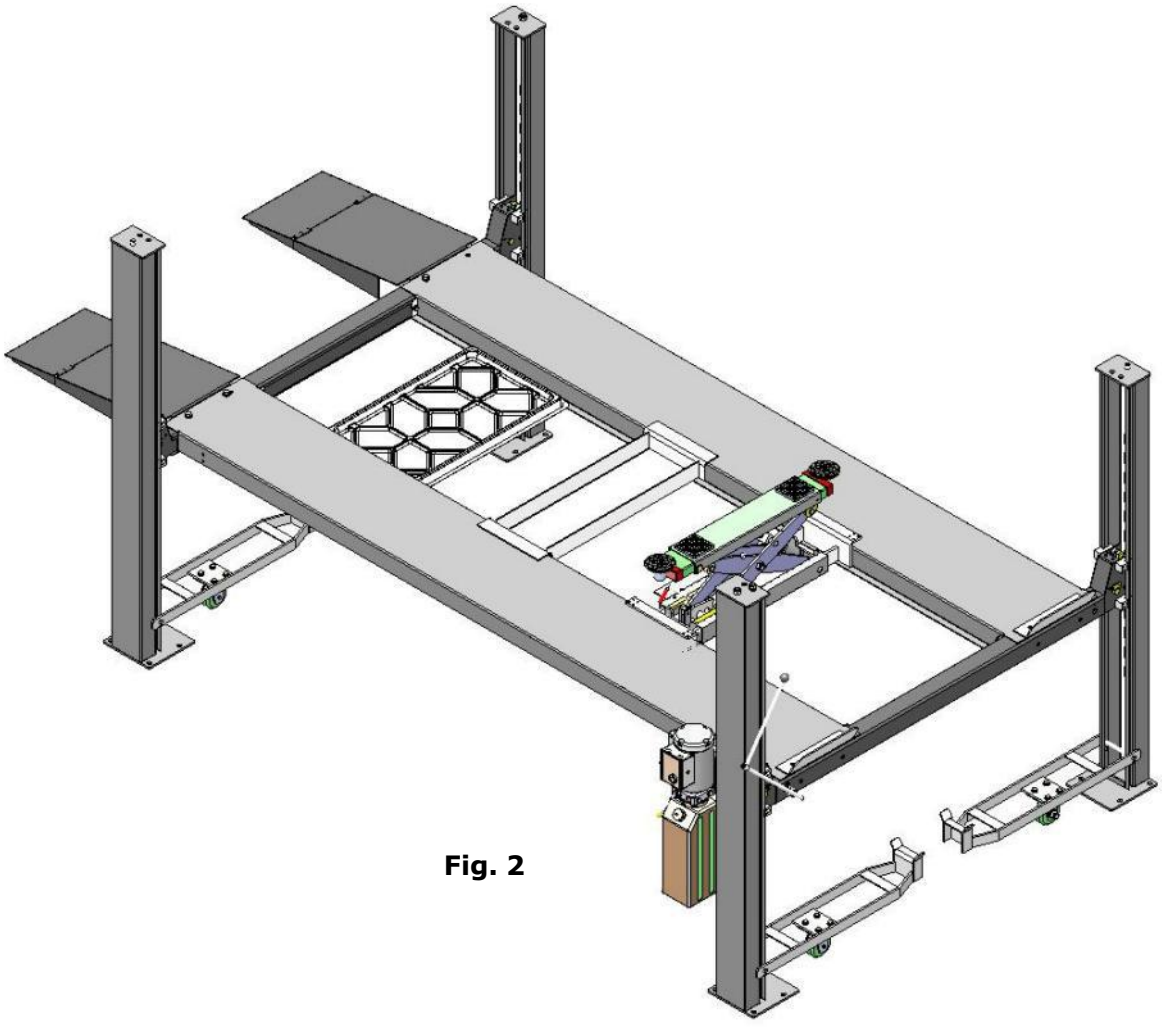
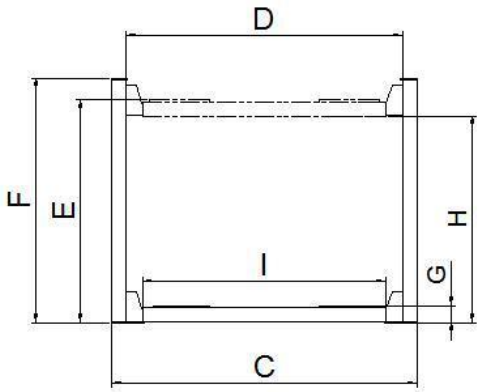


**Fig. 2**

## Dimension



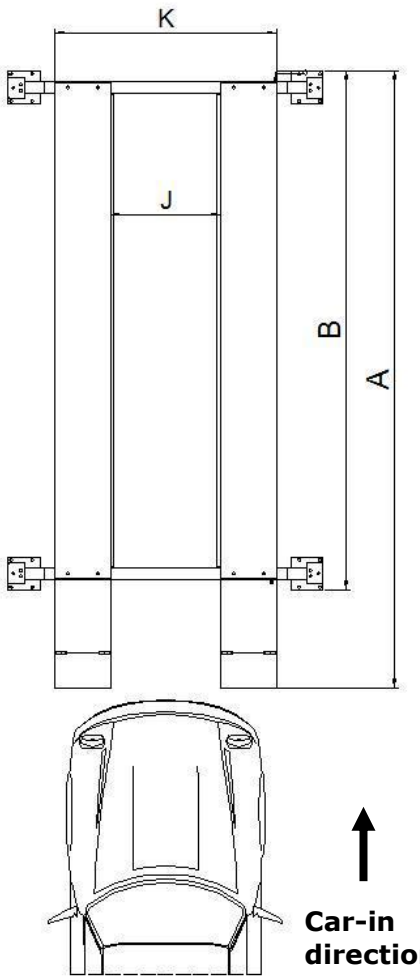




**Fig. 3**

**Car-in direction**

## SPECICATION

| Model | Lifting Capacity | Lifting Time | A | B | C | D | E | |
|---|---|---|---|---|---|---|---|---|
| | | | Overall Length (Inc. Ramps) | Overall Length ( Without Ramps) | Overall width | Width between posts | Max. Lifting Height | Max. Locking height |
| 407-P | 7000lbs | 83S<br>31S | 185 7/8″ | 152 5/8″ | 94 7/8″ | 85 3/8″ | 73 3/4″ | 70 9/16″ |

| F | G | H | | I | J | K | Motor |
|---|---|---|---|---|---|---|---|
| Overall height | Min. height | Max. height underneath runway | Max. Locking height underneath runway | Drive Through Width | Width between runway | Outside edge of runways | |
| 82 7/8″ | 5 3/8″ | 69 3/4″ | 66 5/8″ | 77″ | 37″ | 74 3/8″ | 1.0HP/110V<br>2.0HP/220V |

**⚠Warning** When driving the vehicle into the lift, make sure it is positioned in middle of either group of runways. Any hit of the lift could result in damage to either the vehicle or lift.

# II. INSTALLATION REQUIREMENT

## A. TOOLS REQUIRED

✓Rotary Hammer Drill (Φ19)



✓Carpenter's Chalk



✓Hammer



✓ Screw Sets



✓Level Bar



✓ Tape Measure (7.5m)



✓Adjustable Spanner (12")



✓Pliers



✓Wrench set

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



✓ Lock wrench



✓Ratchet Spanner With Socket (28#)



✓ Socket Head Wrench (3#, 5#, 8#)



**Fig. 4**

## B. Equipment storage and installation requirements.

1 . Store the equipment in a dry, non-moldy, non-flammable environment.

2 . The lift is generally approved for indoor installation and use. If need outdoor installation, the optional motor protect cover is required. (Kits No.: 40810)

3 . When installing the device, take safety precautions according to the instructions to avoid device damage.

4 . During installation, all parts should be fastened to ensure the stability and smooth operation of the machine.

5 . After installation, the whole machine should be checked to make sure that every component is working properly.

## C. The equipment should be unloaded and transferred by forklift.

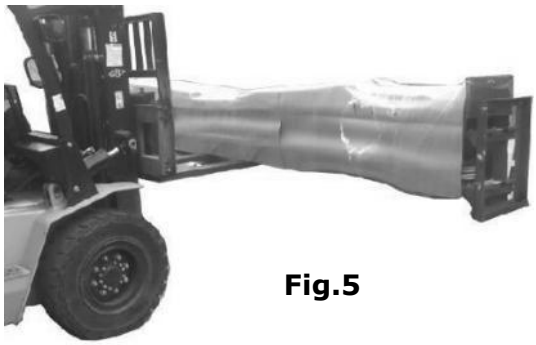


**Fig.5**

## D. SPECIFICATIONS OF CONCRETE (See Fig. 6)

**Specifications of concrete must be adhered to the specification as following.**
**Failure to do so may result in lift and/or vehicle falling.**

1. Concrete must be thickness 4” minimum and without reinforcing steel bars, and must be dried completely before the installation.
2. Concrete must be in good condition and must be of test strength 3000psi minimum. Solidify at least 15 days.
3. Floors must be level and no cracks.

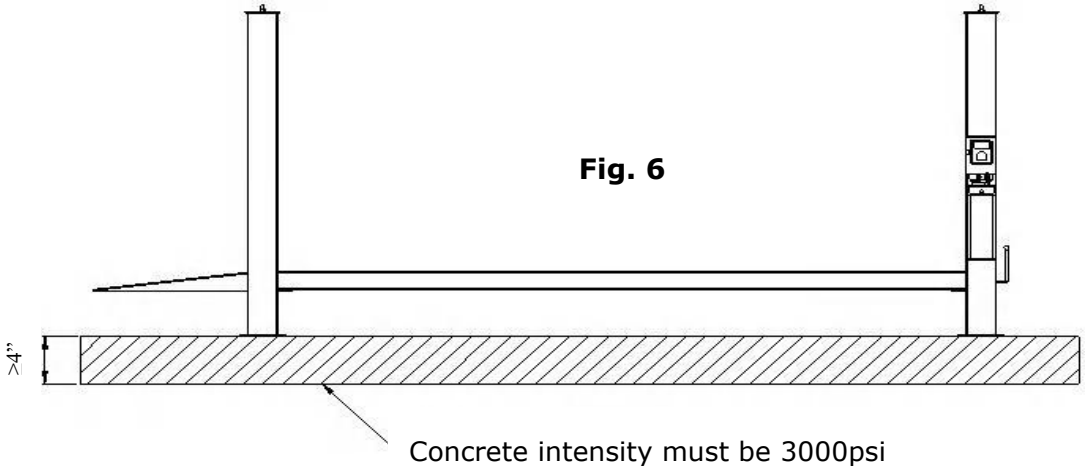



**Fig. 6**

### E. POWER SUPPLY

1. You are required to use a licensed and qualified electrician for the installation process.
2. The power supply capacity must be more than 3.0HP, 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 .
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.

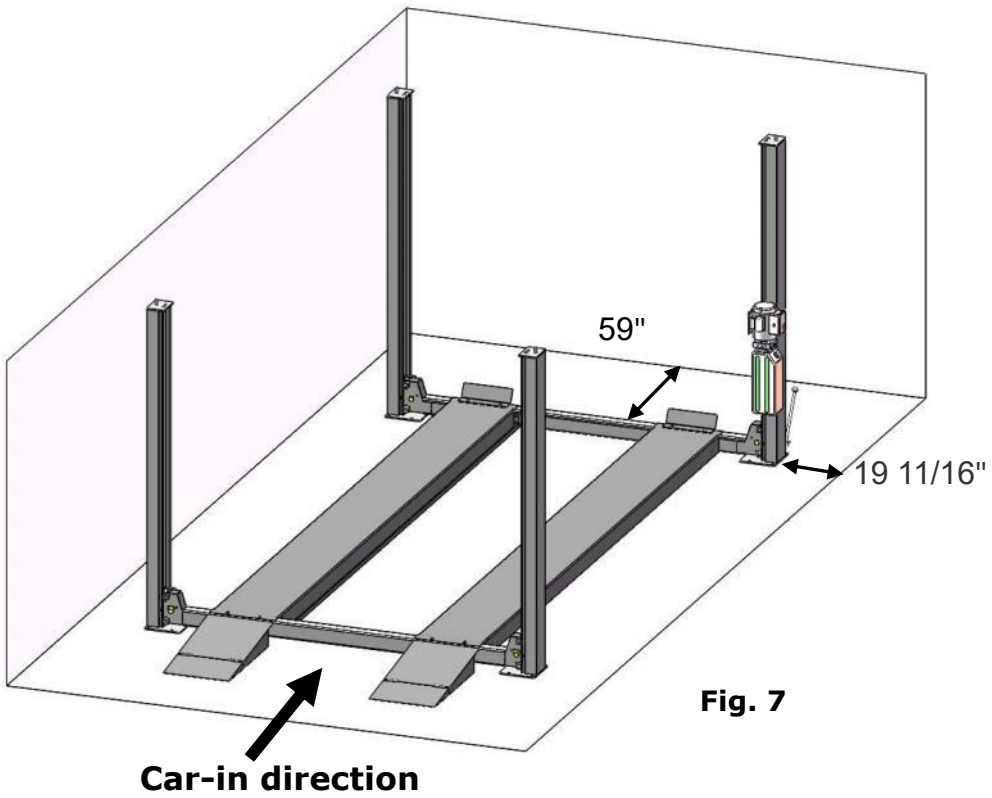



**Fig. 7**

⚠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 10mm difference over the installation area). If the floor cannot be leveled, consider changing installation locations.

## B. Check the parts before assembly.

1. Packaged lift and hydraulic power unit **(See Fig. 8)**.




**Fig. 8**

2. Move the lift aside with a fork lift or hoist, open the package and check the parts according the shipment list. **(See Fig. 9)**.

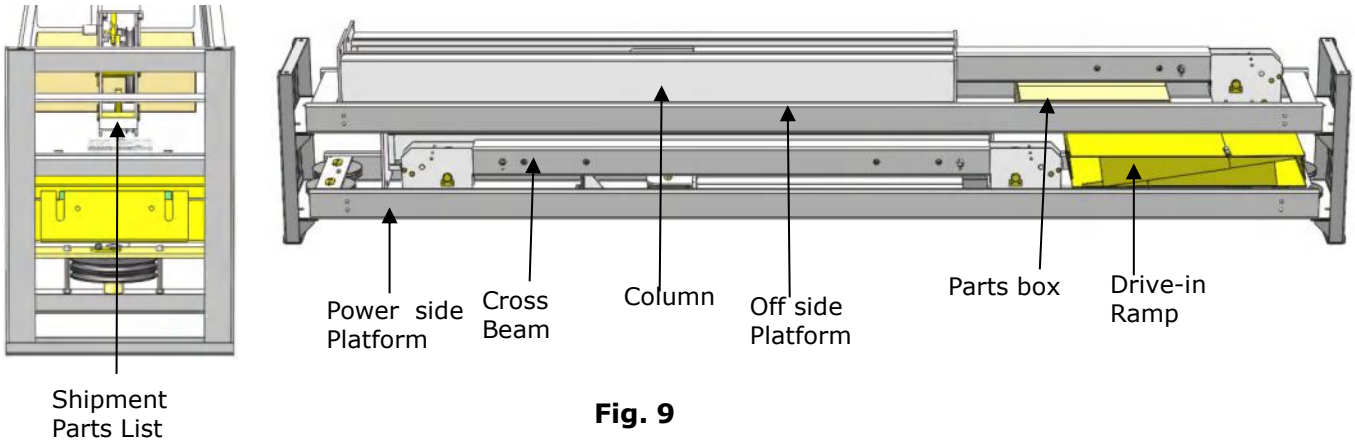



**Fig. 9**

3. Move the columns and cross beams aside to the installation position. (**see Fig 10**)

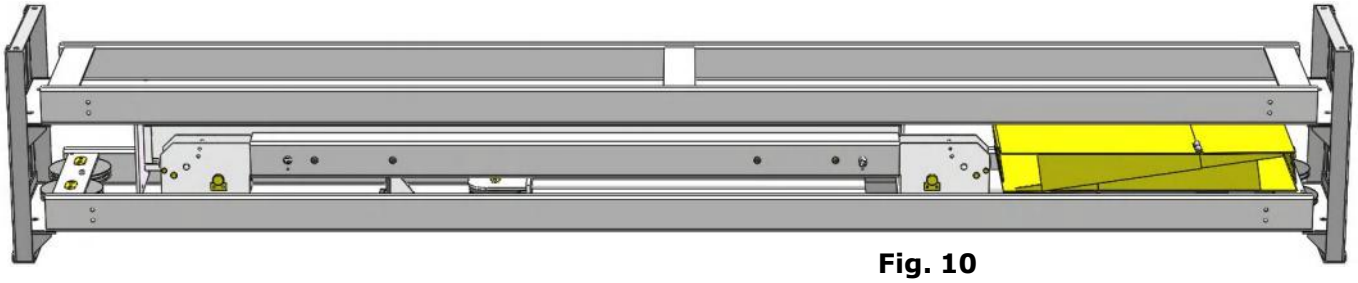


**Fig. 10**

4. Loose the screws of the upper package stand, take off the off side platform, take out the parts inside the power side platform, then remove the package stand.

5. Move aside all the parts to the installation position and check the parts according to the parts list **(See Fig. 11).**

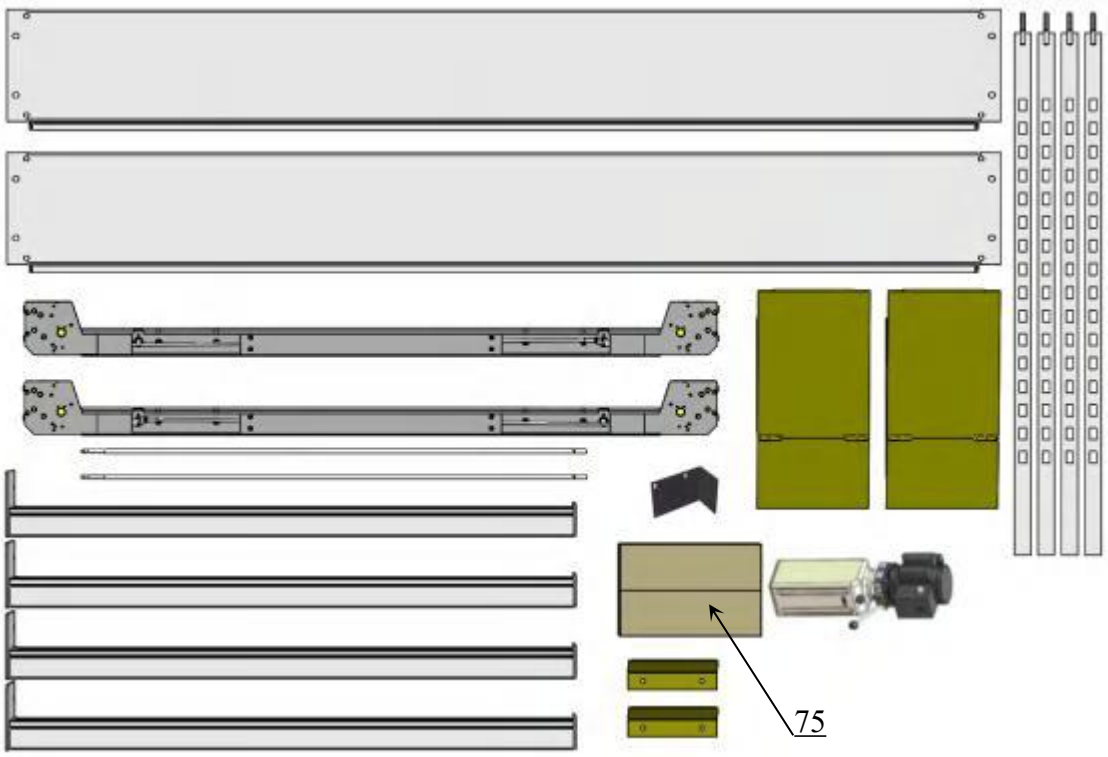



**Fig. 11**

6. Check the parts of parts box according to the parts box lift . (**See Fig. 12**).



**Fig. 12**

7. Check the parts of the parts bag according to the parts bag list **(See Fig. 13)**.

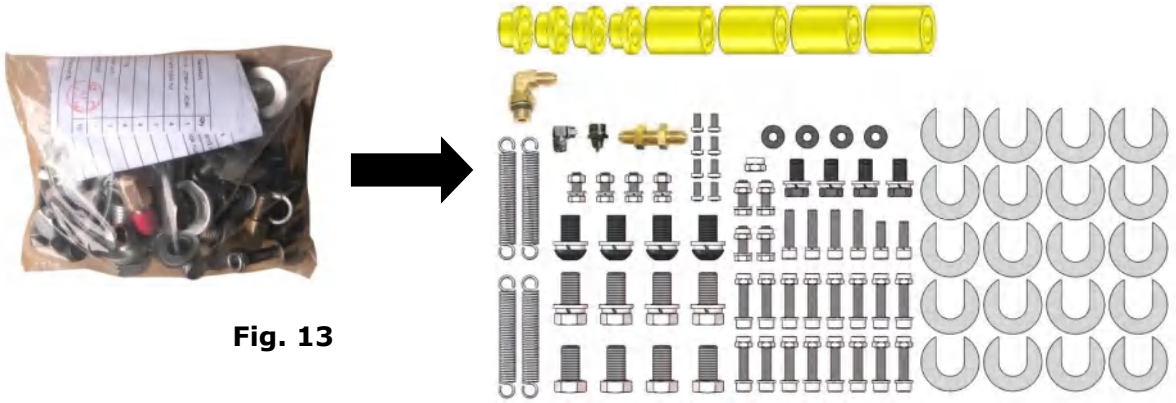


**Fig. 13**

**C. Use a carpenter's chalk line to establish installation layout (see Fig 14) .**

**Place the posts according to the installation dimension.**

**Note: Reserve space front and behind the installation site.**

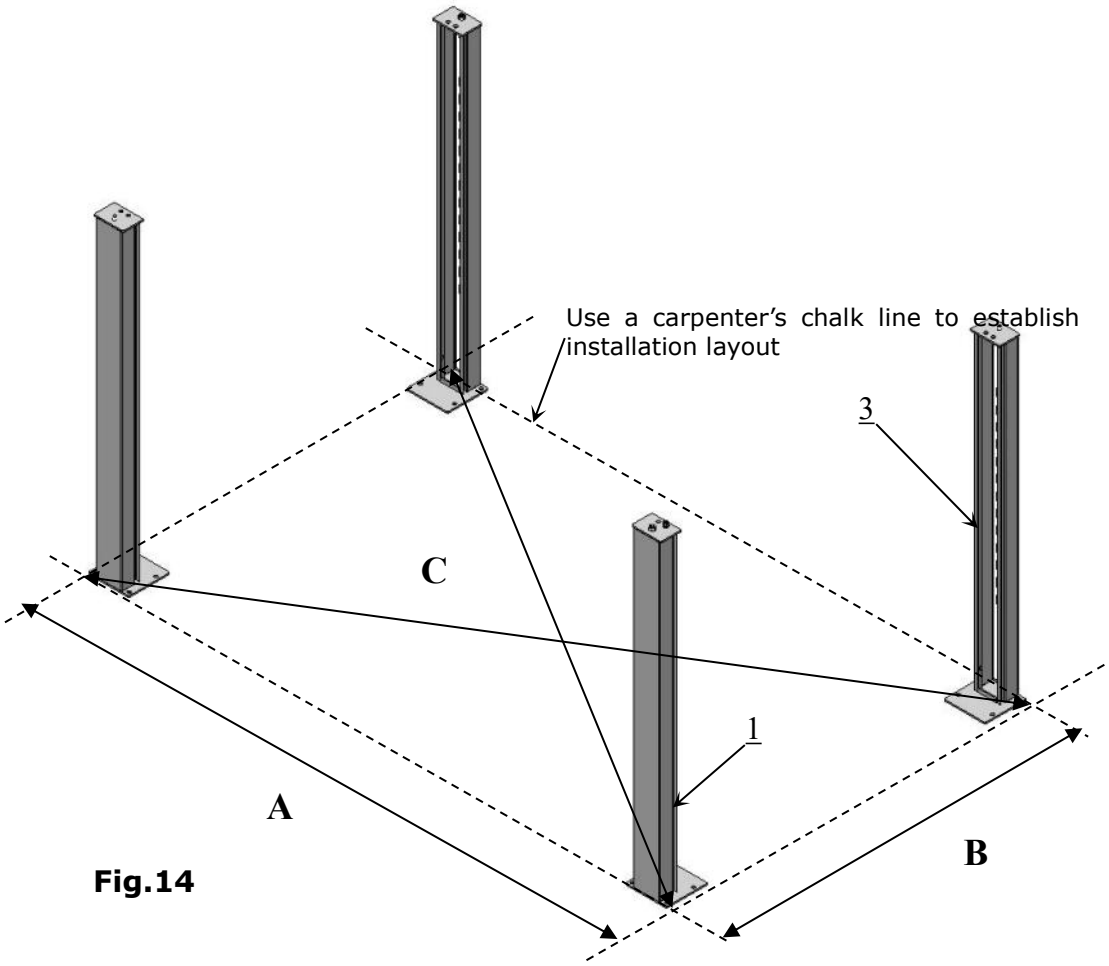



**Fig.14**

| MODEL | A | B | C |
|---|---|---|---|
| 407-P | 152 5/8" | 94 7/8" | 179 3/4" |

## D. Install cross beams (See Fig.15, Fig.16).

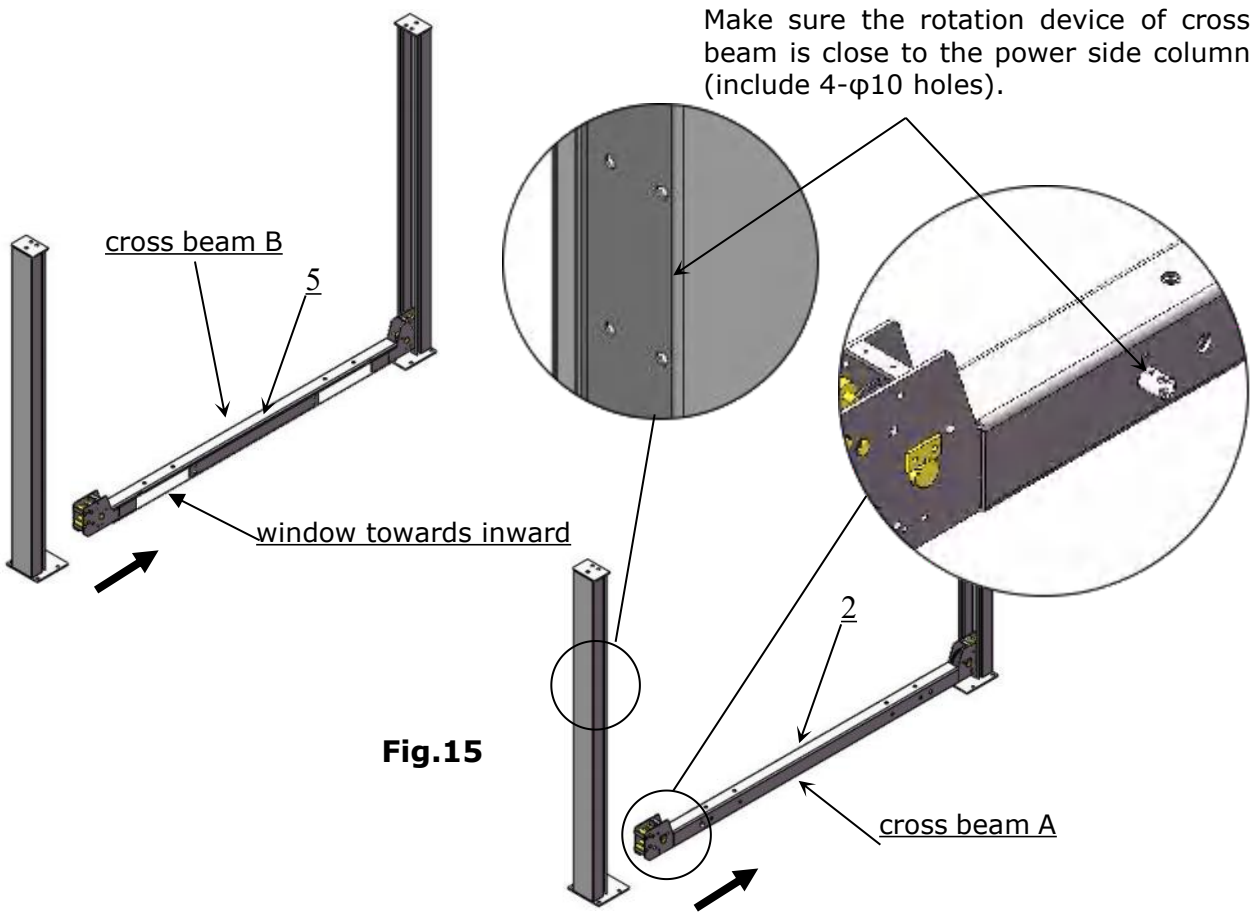



**Fig.15**



**Fig.16**

## E. Install the Safety ladders.

1. Take off the cross beam protective cover and remove one nut of the safety ladder, adjust the other nuts of four safety ladders to be at the same position. Then install the safety ladders **(See Fig. 17).**

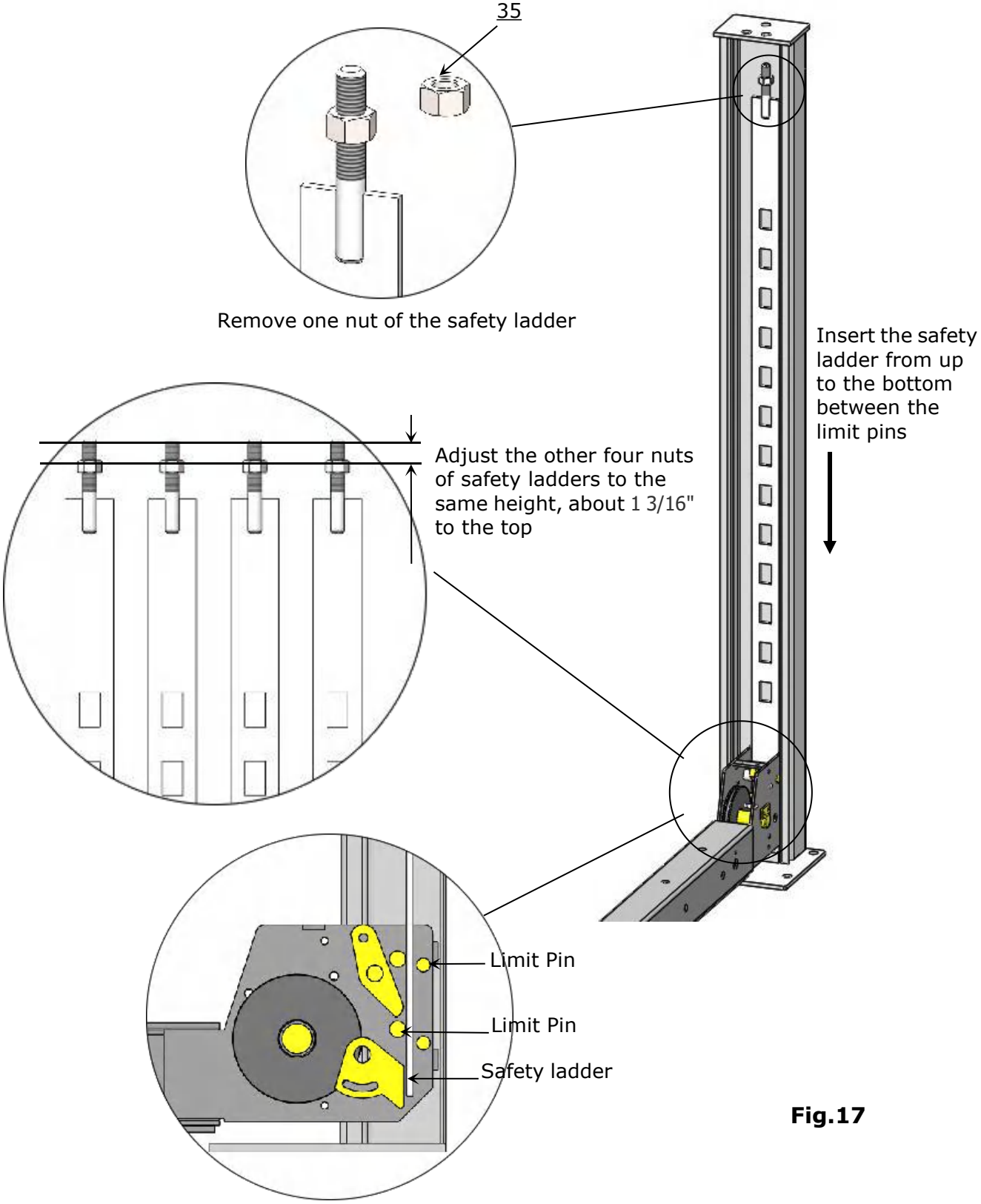
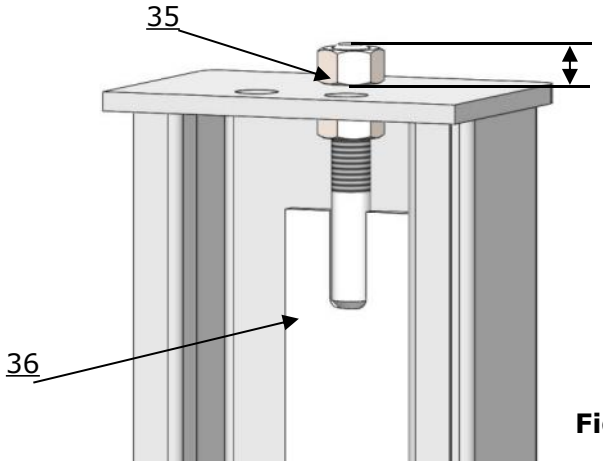



**Fig.17**

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




This height for four threaded rod of safety ladders should be the same.

**Fig. 18**

Safety ladder across the hole of the top plate, then tighten the two nuts

## F. Put the cross beams at the same height and lock on the safety ladders (See Fig. 19).

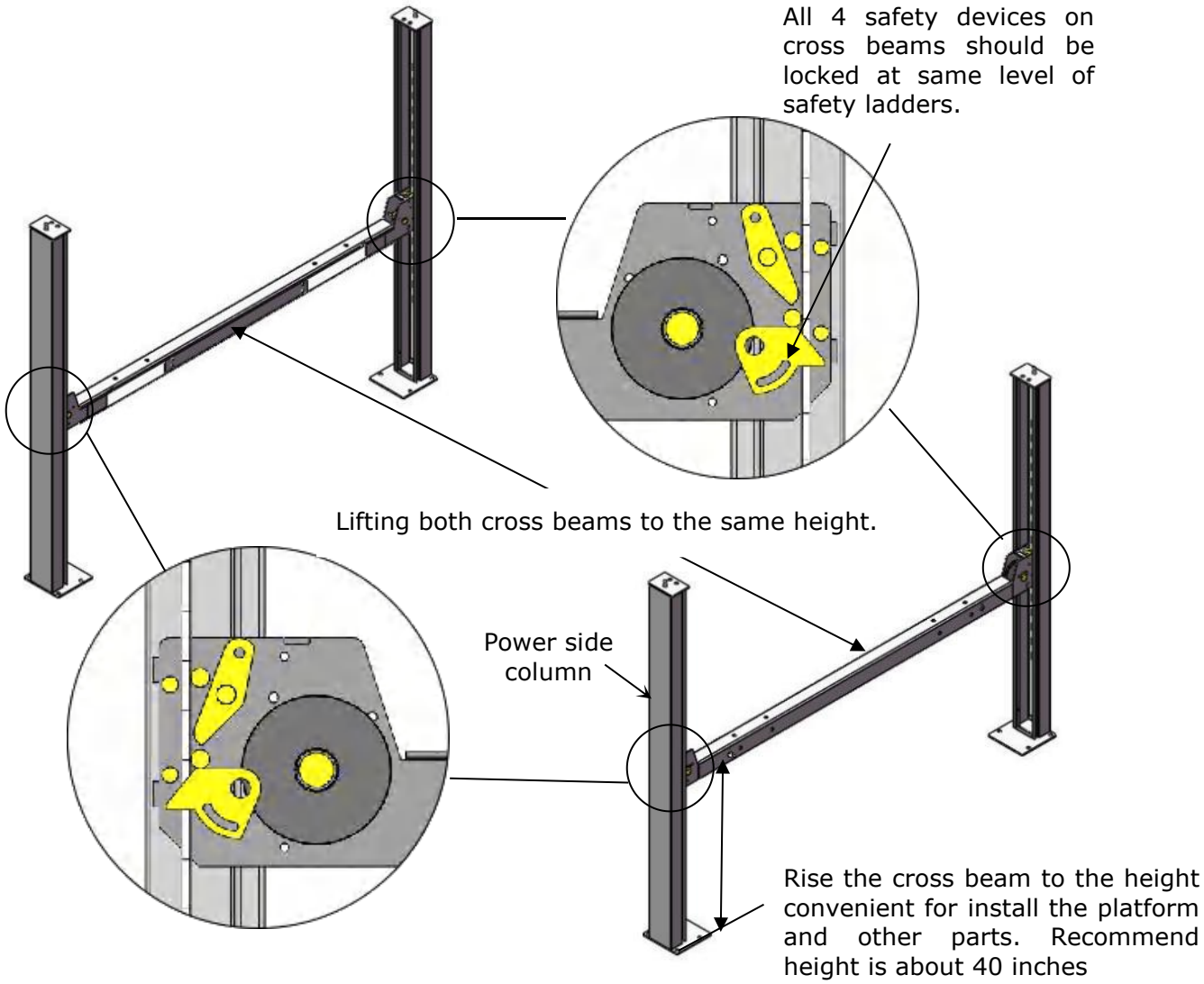



**Fig. 19**

## G. Install power side platform.

1. Install the power side platform on the cross beams by a forklift or manually, offset the cross beams leaning outward until the pulleys of both platforms can enter into the cross beam windows **(See Fig.20)**, align holes on the power side platform and cross beam, then screw up the bolts.

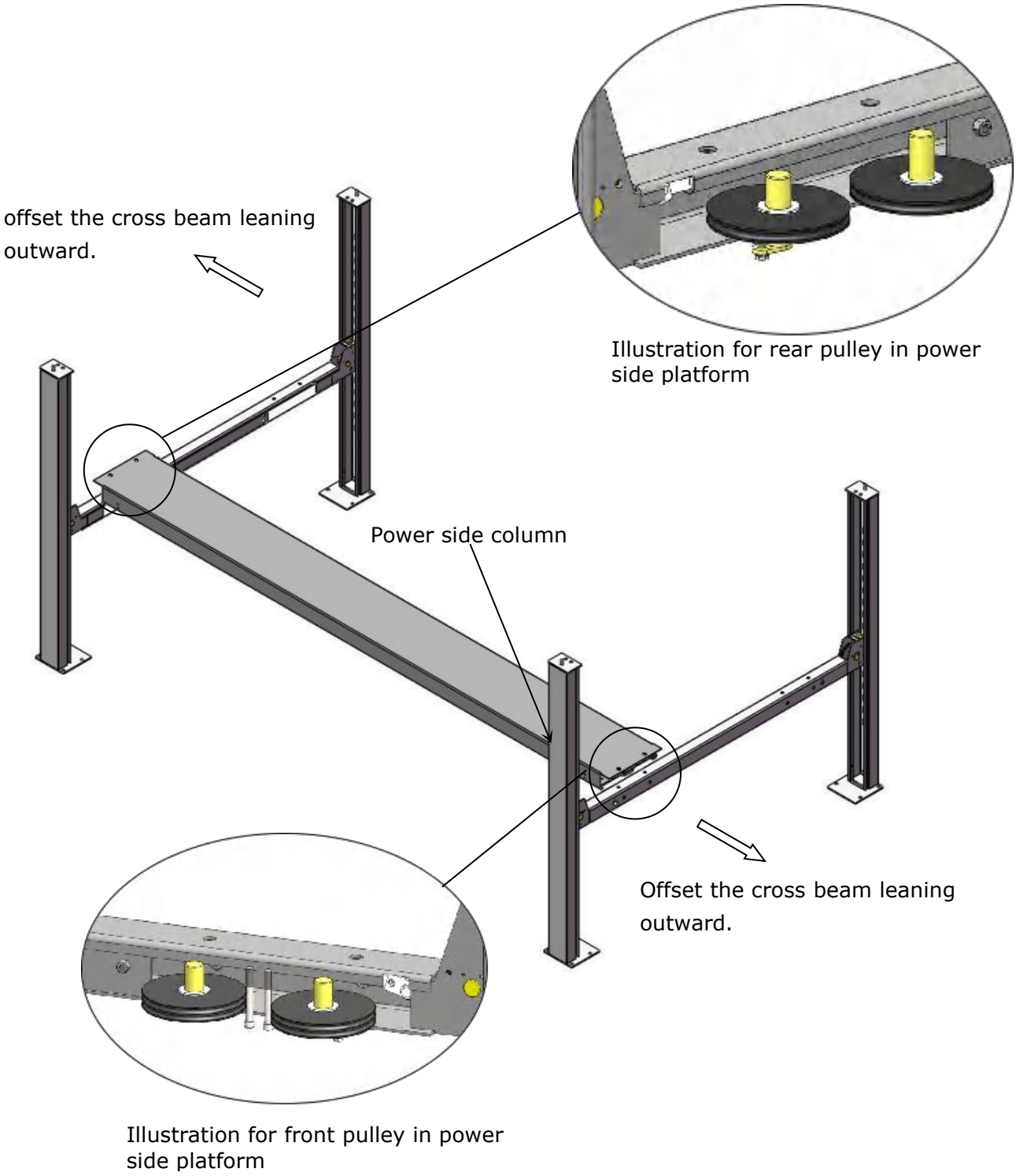



**Fig. 20**

2. Install connecting bolts of tire stop and platforms: Tighten cross beam B and platform with round head socket bolts, tighten tighten cross beam A, platform and tire stop plate with hex bolts. (Note: Tire stop plate should be installed at the front direction. Hex bolts are used for tire stop plate, and the round head socket bolts are for the other side), **See Fig.21**

**Notice:** The lift is designed for drive-in from either direction of cross beams. The diagram below shows the drive-in direction from cross beam B. If driving in from cross beam A direction, make sure the tire stop plate is installed on cross beam B with hex bolt. Install the power unit accordingly and place the control handle on the same side as the power unit.

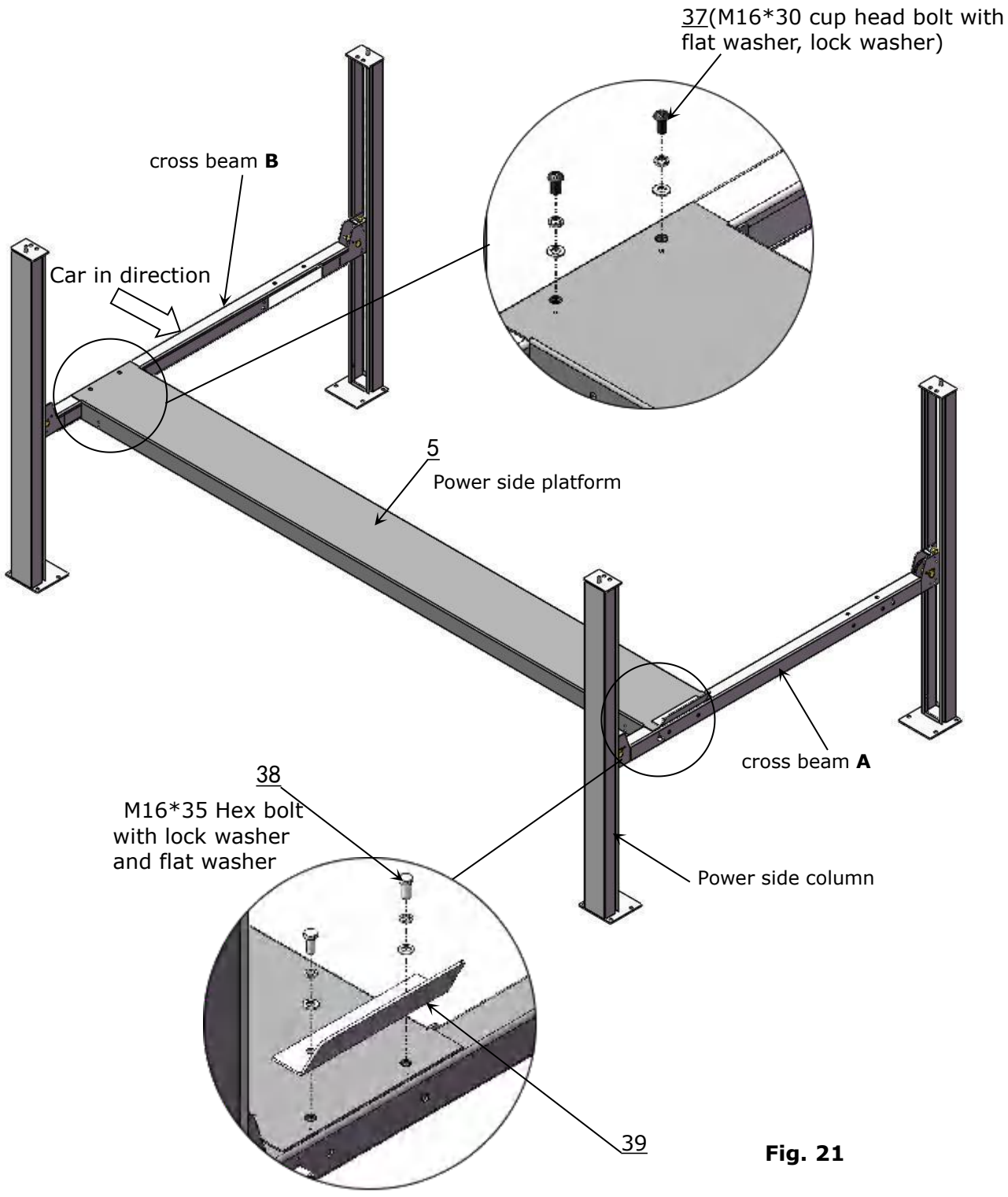
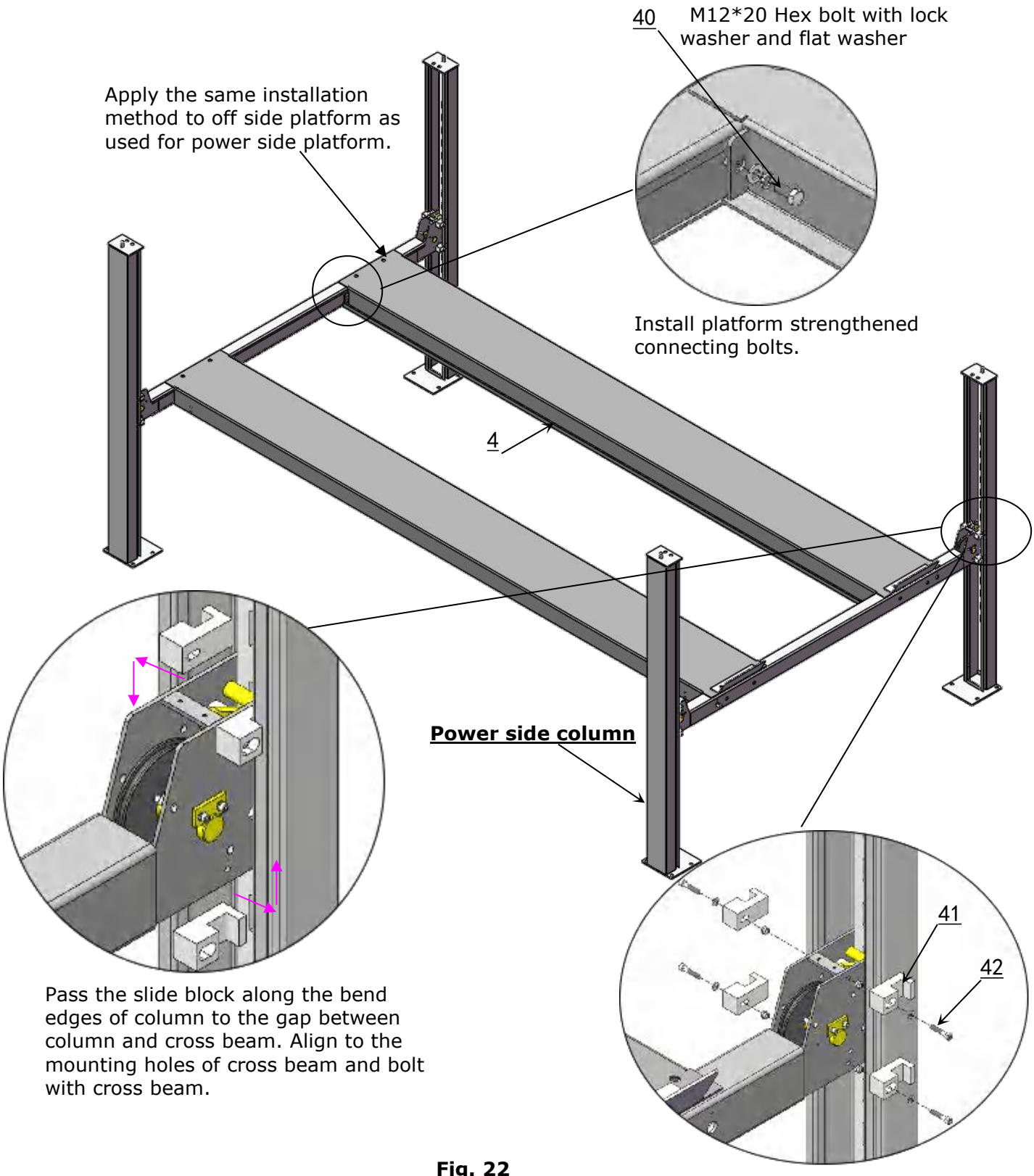



**Fig. 21**

## H. Install offside platform and limit slider (See Fig. 22).

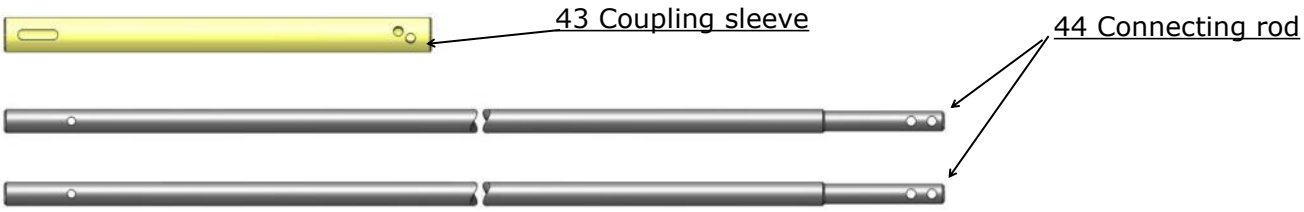



Pass the slide block along the bend edges of column to the gap between column and cross beam. Align to the mounting holes of cross beam and bolt with cross beam.

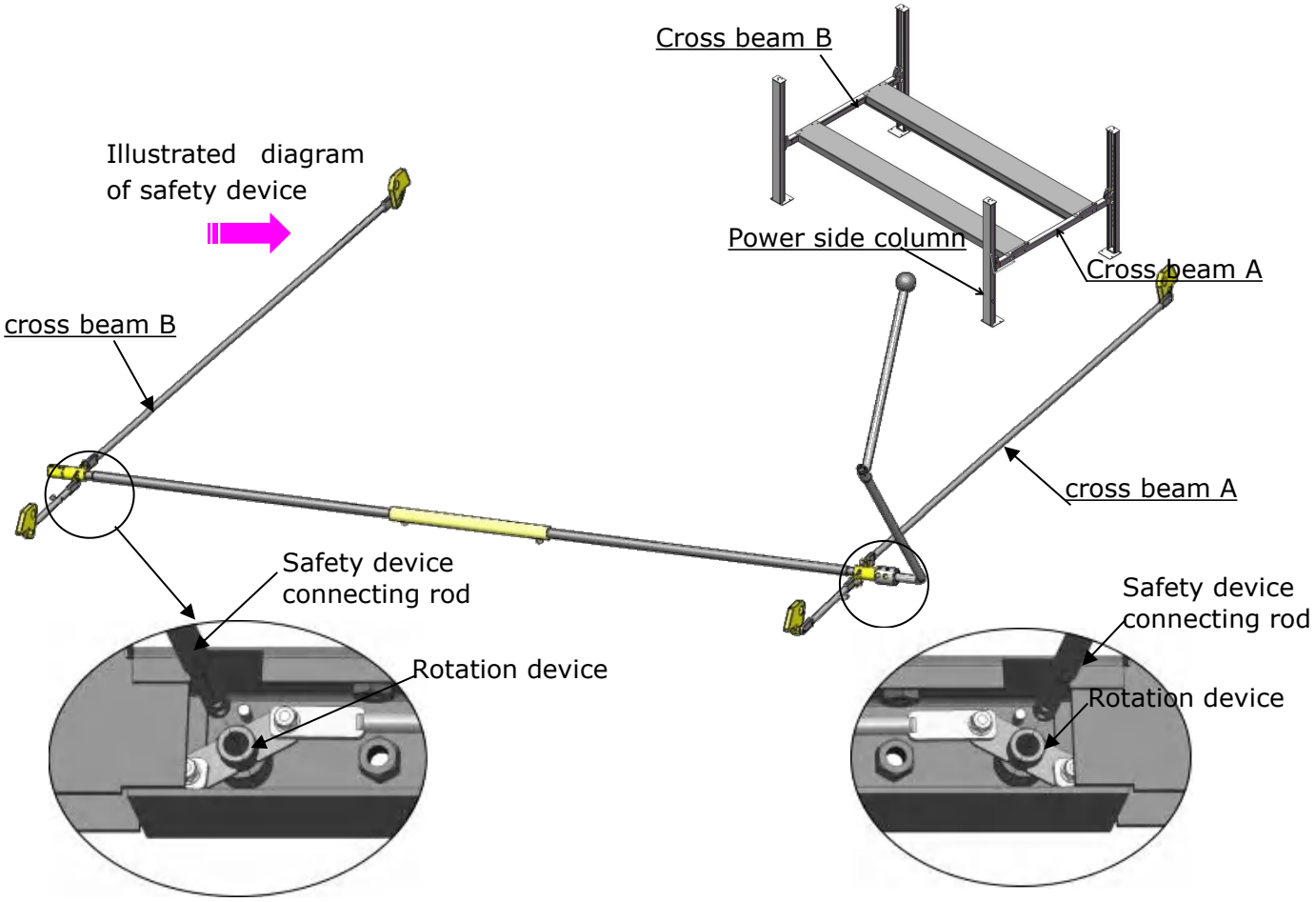
**Fig. 22**

**Note: DO NOT** completely tighten the limit sliders, loosen 1/4 turn after tighten the socket bolt and nylok nut .

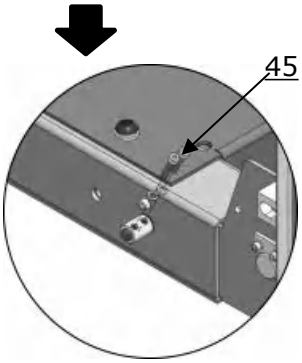
## I. Install safety device connecting rod, release handle and coupling sleeve.




1. Install safety device connecting rod and release handle, see fig 23



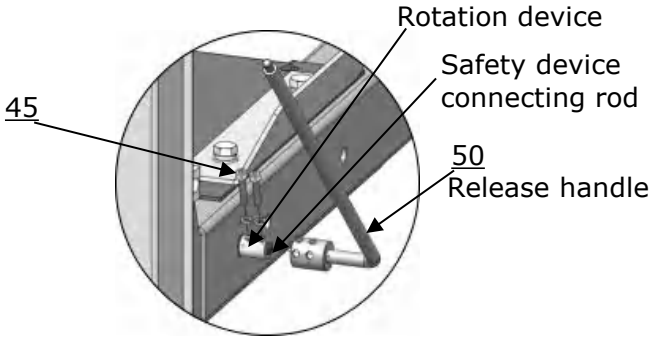

① Pass the end of connecting rod (with 2 holes) through the rotation device of inner side of cross beam B




② Align the mounting hole on the outside of cross beam B, tighten with M8*35 socket bolt with lock washer.

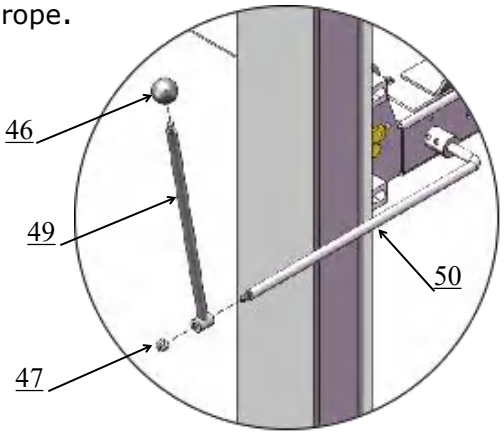
**Fig. 23**

③Following the same step to install another rod to cross beam A



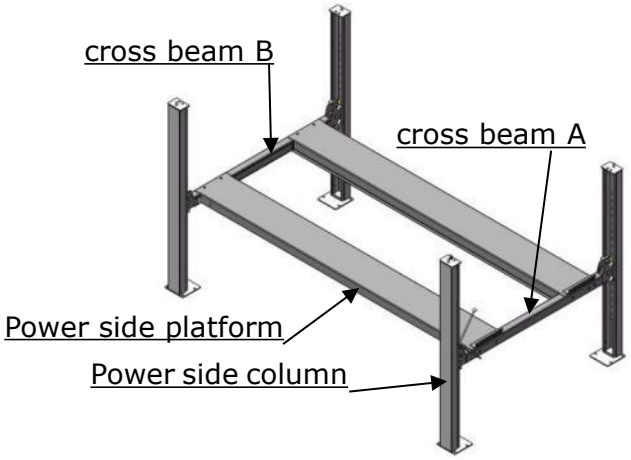

④ Install Release handle on the cross beam A, align the mounting hole, tighten with M8*35 socket bolt with lock washer.

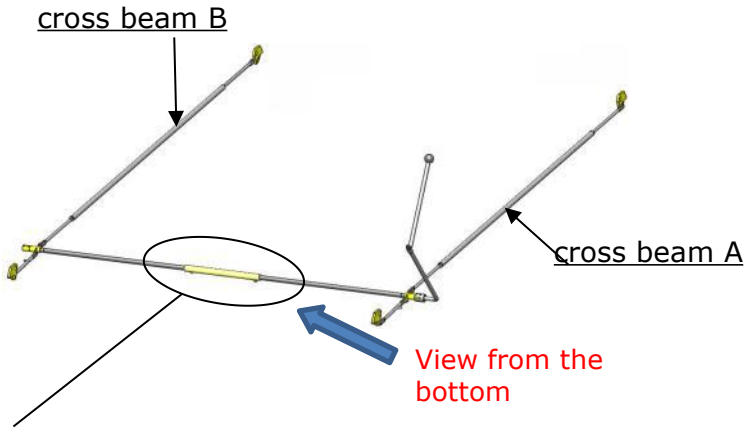
⑤ Install extended release handle and pull rope.

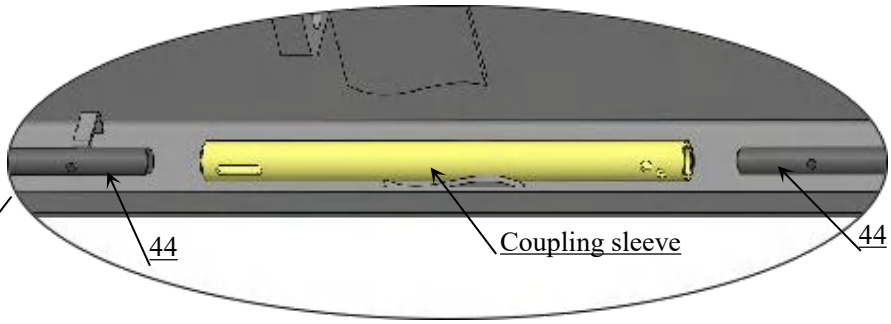



## 2. Install coupling sleeve

2.1, Coupling sleeve installation illustration when power side column is in the position as shown below. See fig 24.

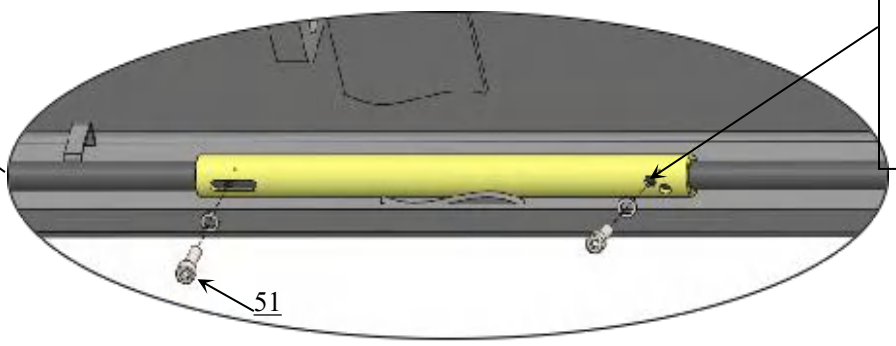



① Pass the coupling sleeve through retaining plate, then put the safety device connecting rod (threaded side) into it.

View from the bottom

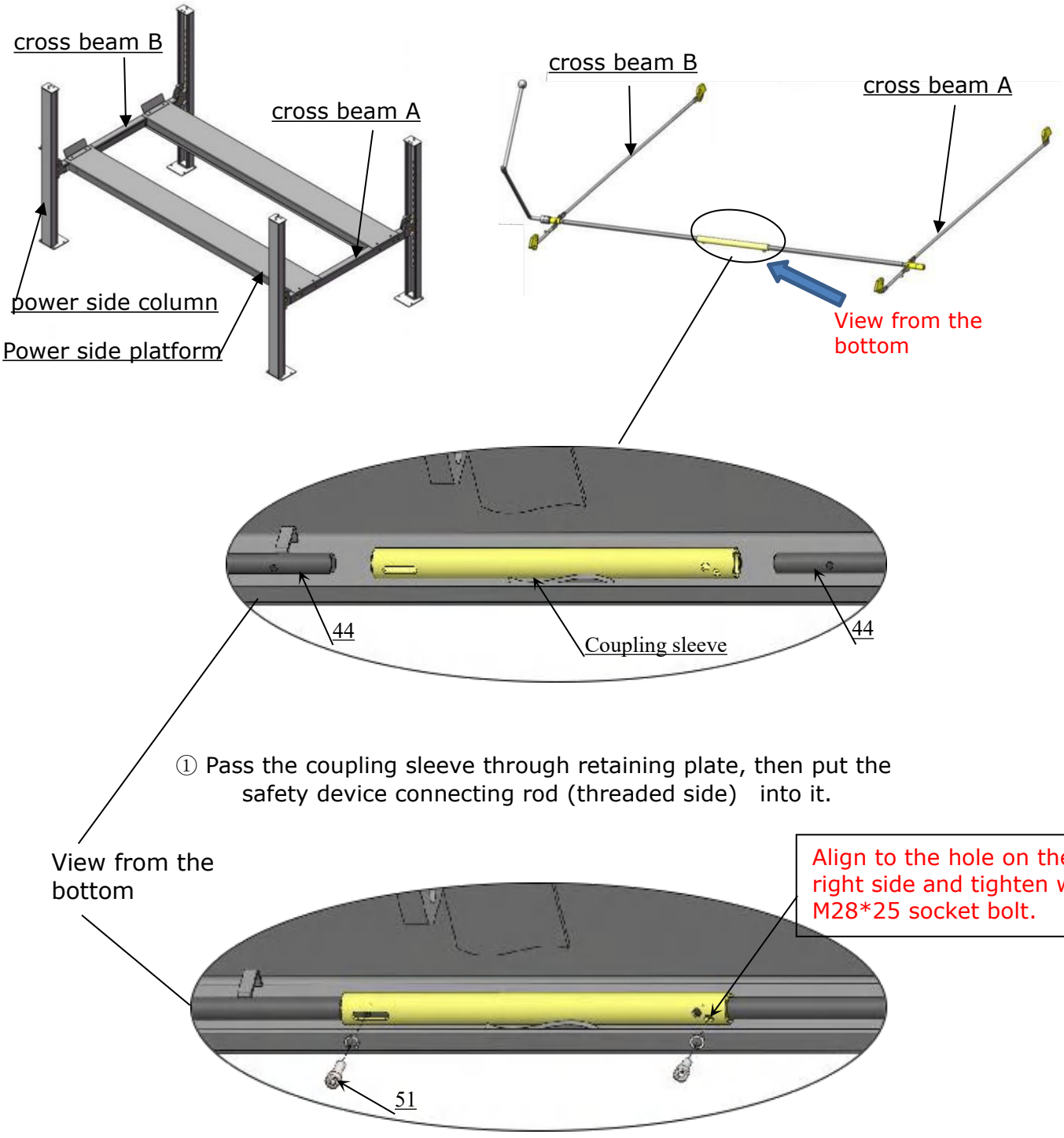



Align to the hole on the left side and tighten with M28*25 socket bolt.
.

**Fig. 24**

② Align the holes that connecting the connecting rod and coupling sleeve as show above, tighten with M28*25 socket bolt with lock washer.

2.2, Coupling sleeve installation illustration when power side column is in the position as shown below. See fig 25



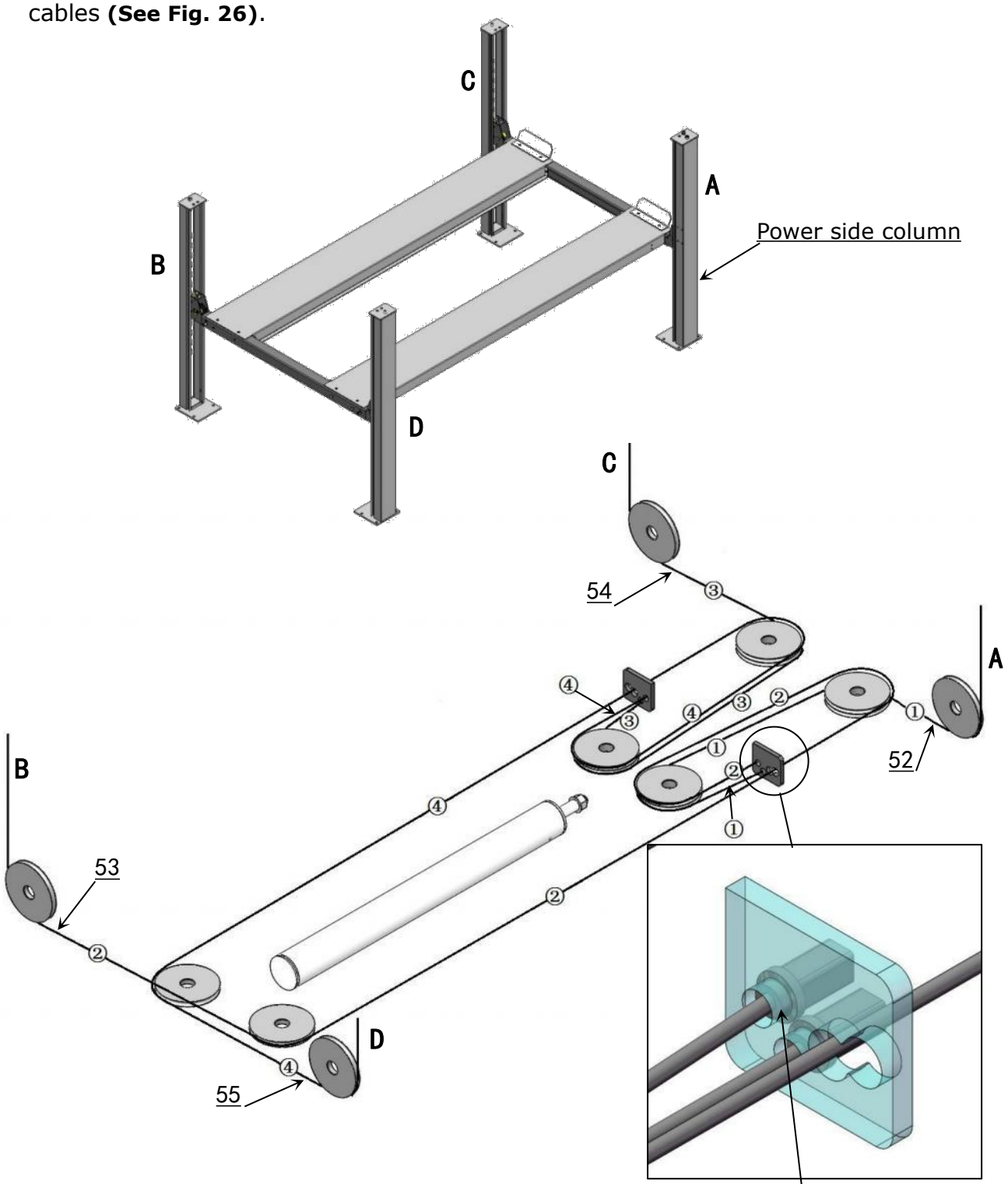

① Pass the coupling sleeve through retaining plate, then put the safety device connecting rod (threaded side) into it.

② Align the holes that connecting the connecting rod and coupling sleeve as show above, tighten with M28*25 socket bolt with lock washer.

**Fig. 25**

## J.Illustration for cable installation

1. Pass through the cables from the platform to the columns according to the number of the cables **(See Fig. 26)**.




**Cable installation diagram**
**Fig. 26**

| NO. / Cable | ① | ② | ③ | ④ |
|---|---|---|---|---|
| 407-P Length (inc. cable fitting) | 167 7/8" | 375 3/16" | 223 3/4" | 319 3/8" |

2. Pass The cables through the cross beam to top plate of columns and screw with cable nuts **(See Fig. 27).**

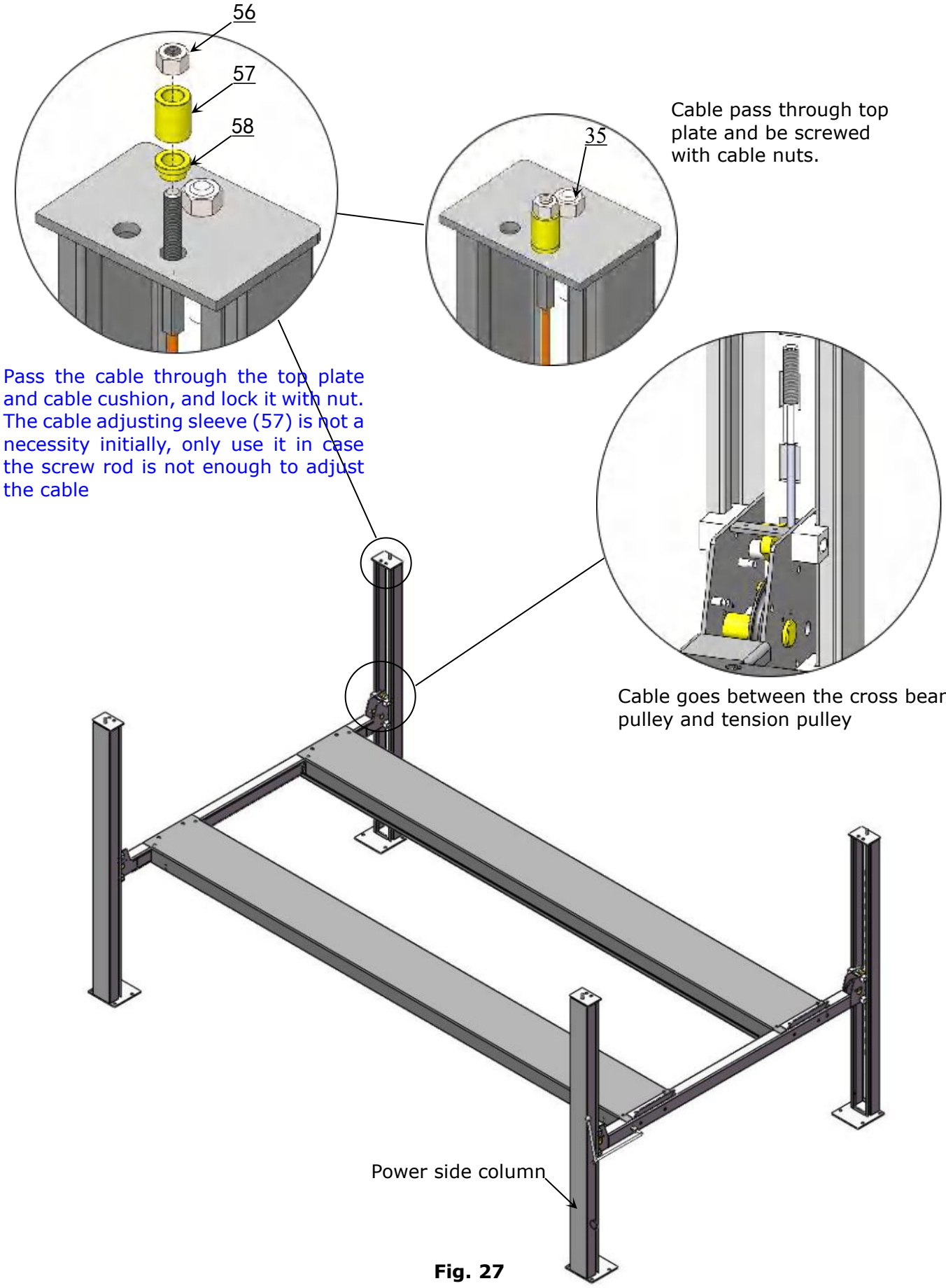



**Fig. 27**

3. The sketched overview of cables finally installed under platform. **(See Fig. 28).**

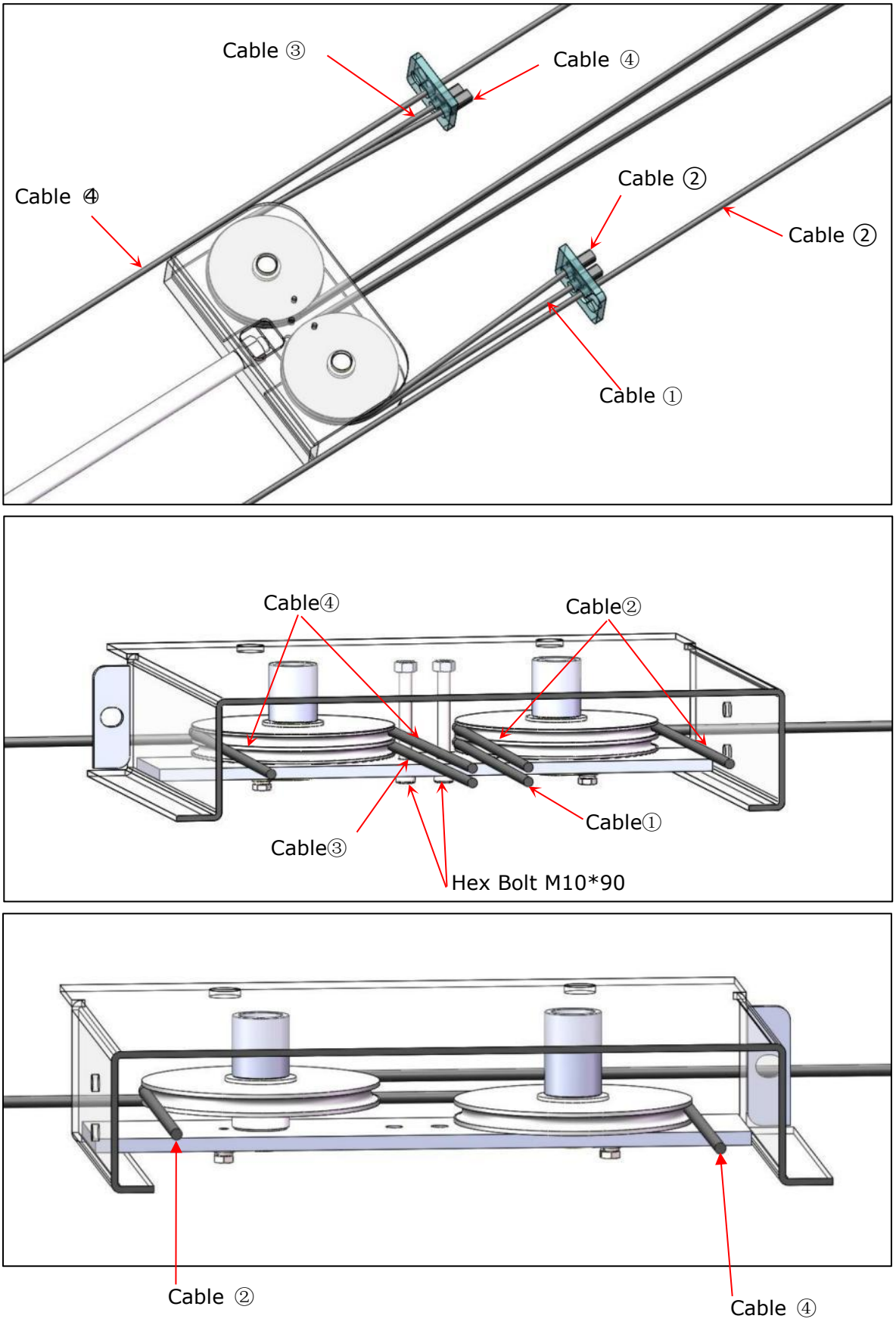



**Fig. 28**

4. Install tension spring and cross beam protective cover. **(See Fig. 29).**

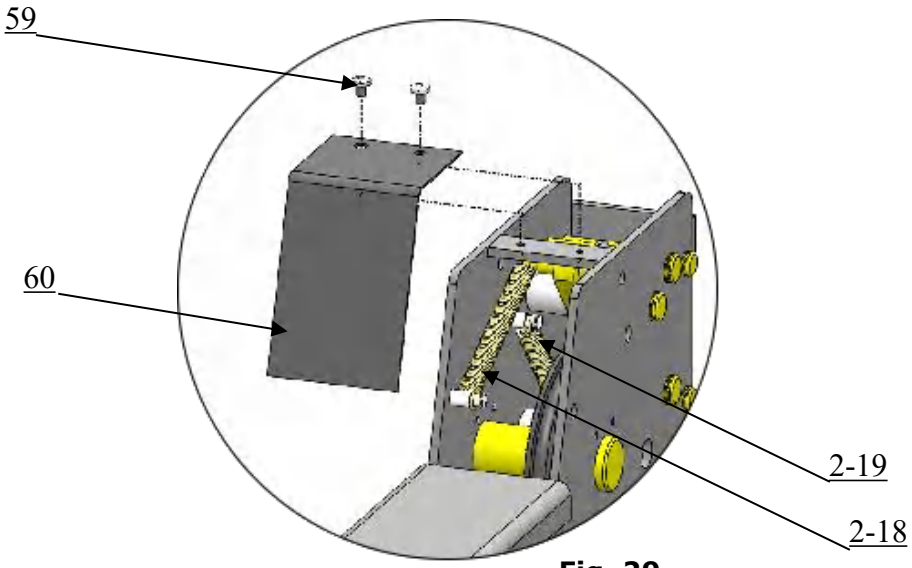



**Fig. 29**

## K. Install power unit

**Fixing the motor installing plate to the power side column. And install the power unit to the installing plate. See fig 30.**

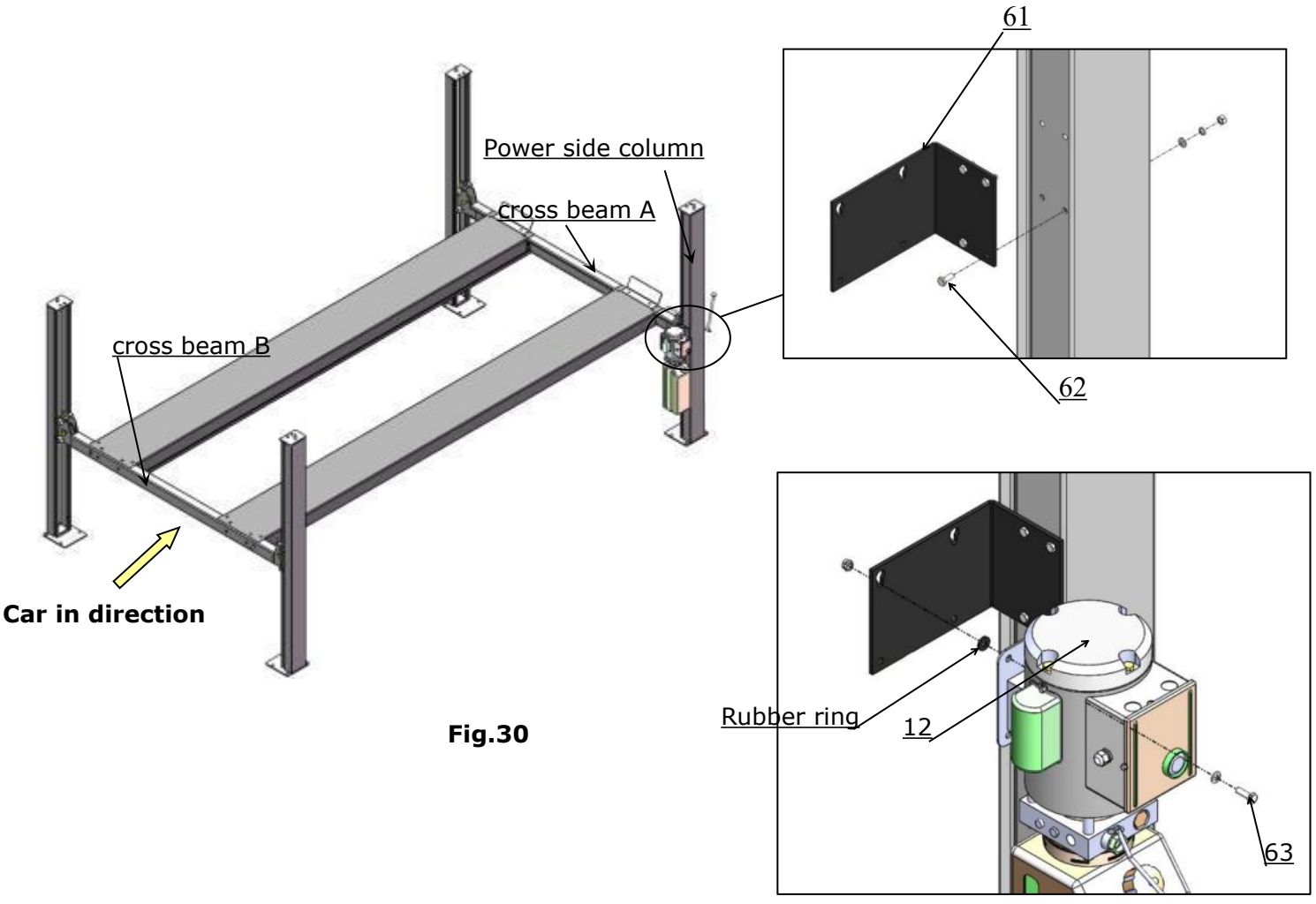
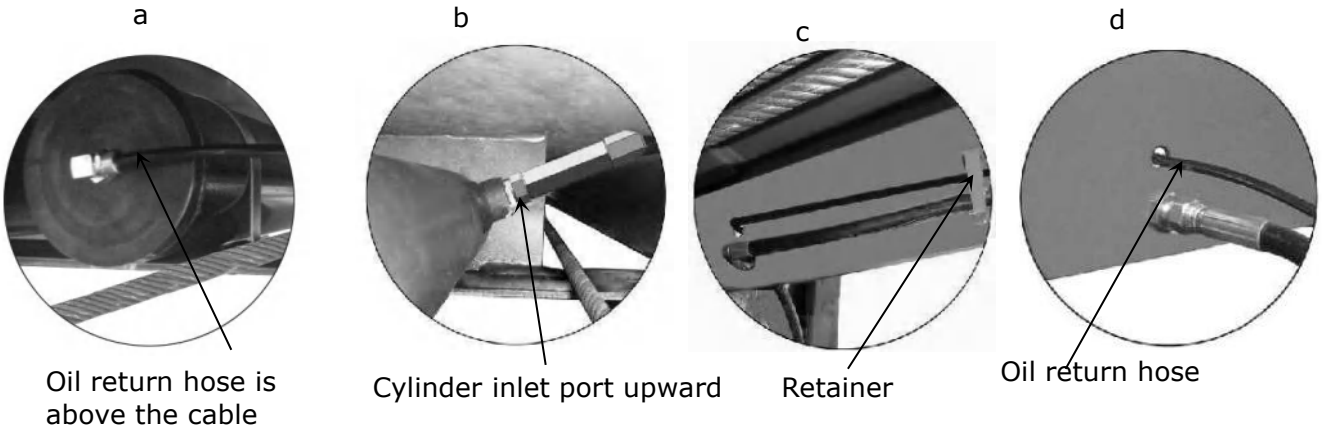


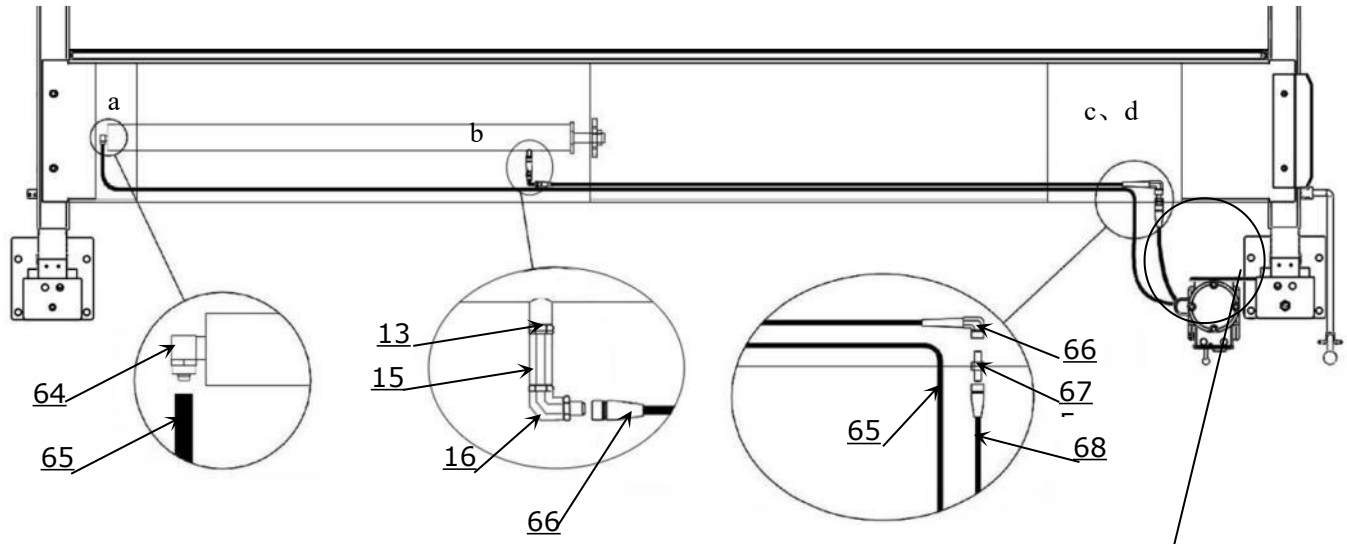

**Fig.30**

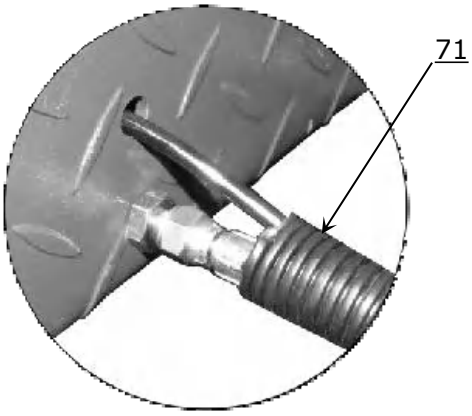
## L.Install Hydraulic System

1. For power unit installed to the column that connected to cross beam A **(See Fig. 31)**

**Note**: Oil hoses connected to oil cylinder must be passed above the cable and cylinder inlet port should be upward a little to avoid the oil hose scratched by cable.



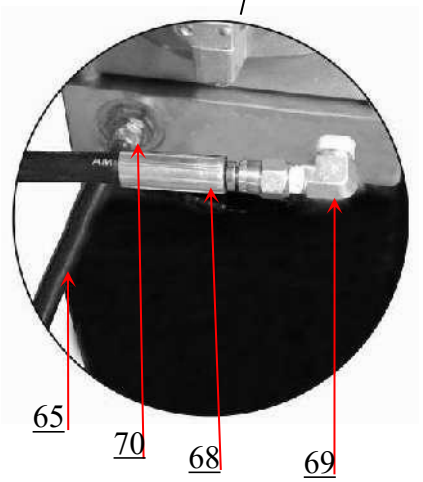




**Fig. 31**

Pass oil hoses, oil return hoses outside the platform through the bellow pipe, then connect to the power unit.

**M.Install the anchor bolts.**

**1.** Check the plumbness of columns with leveling instrument and adjusting with the shims.

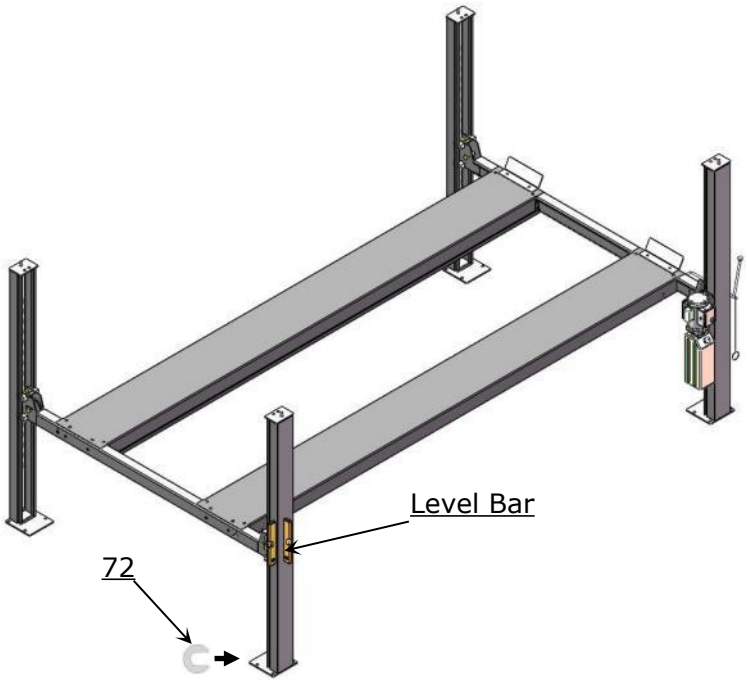



**Fig. 32**

2. Prepare the anchor bolts (See Fig. 33).

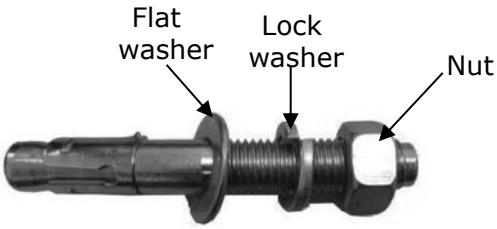



**Fig. 33**

3. Use the prescribed rotary hammer drill, drill all the anchor holes and install the anchor bolts and tighten all nuts. (See Fig. 34)

Note: The tightening torque for the anchor bolt is 150N.m ,anchor bolts should be driven into the ground at least 3 1/2".

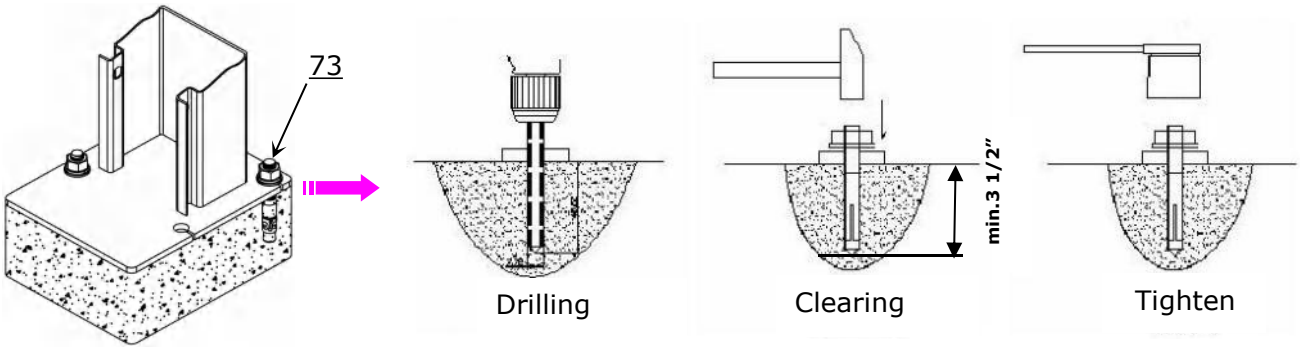



**Fig. 34**

**N.Install foldable drive-in ramp ass., jack tray and plastic oil tray.**

Install the M16*30 bolts into the cross beam according to the below diagram, then hang the 4 units foldable drive-in ramps assy. on the bolts. See fig 35.

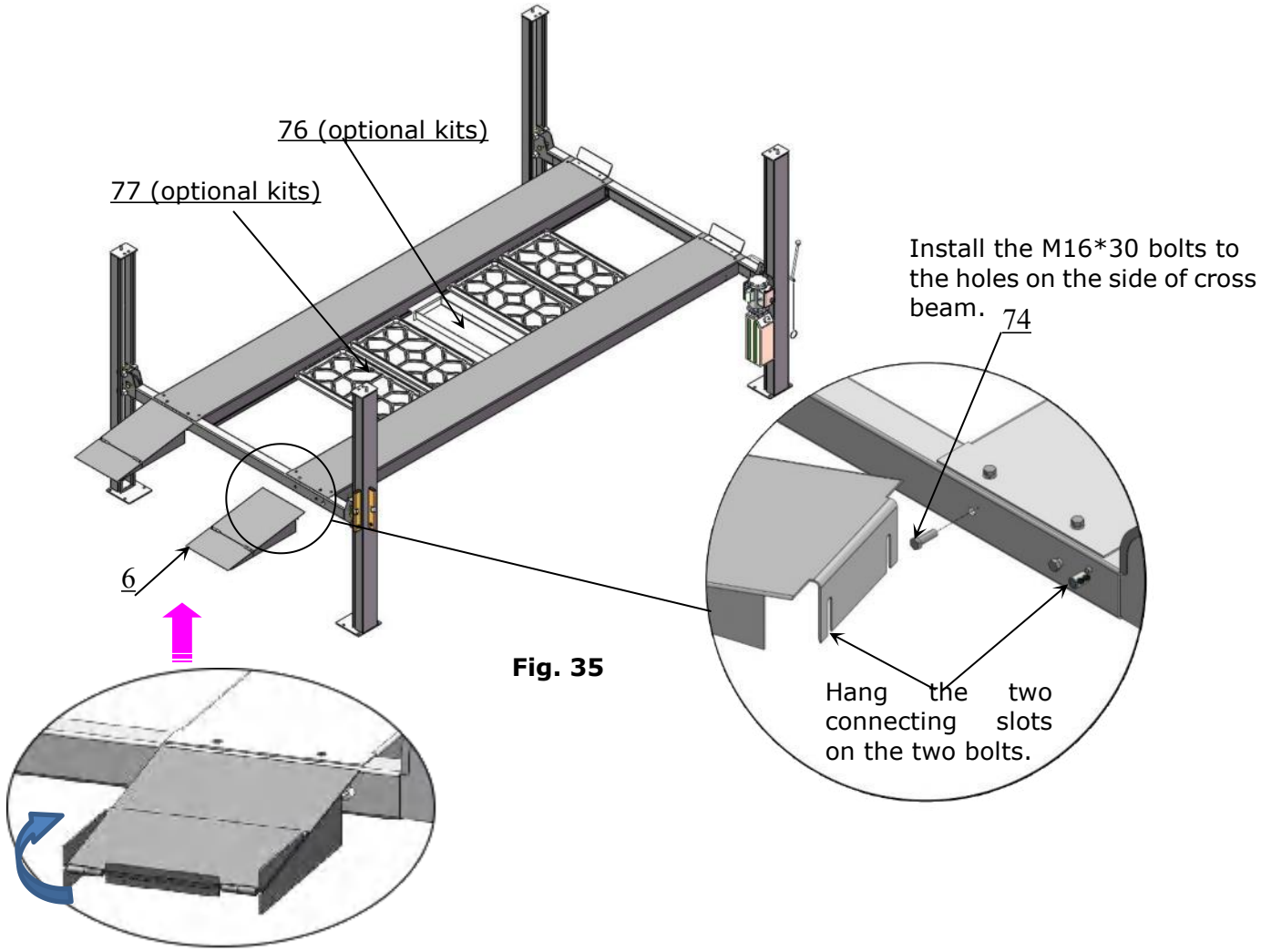



**Fig. 35**

**Exploded view of foldable drive-in ramps assembly**

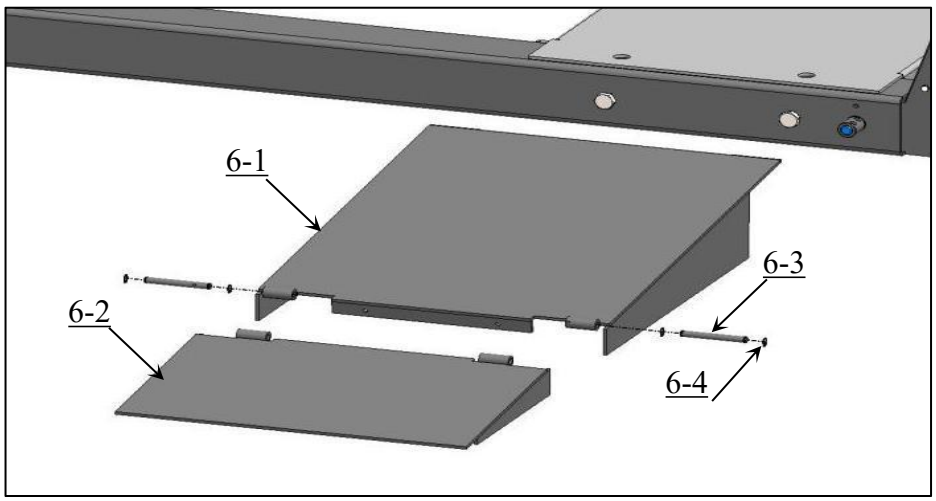



**Fig. 36**

## Parts List of foldable drive-in ramps assembly (1104543020C)

| No. | Part Number | Description | Qty |
|---|---|---|---|
| 6-1 | 1104543020A | Foldable drive-in ramps #1 | 2 |
| 6-2 | 1104533026A | Foldable drive-in ramps #2 | 2 |
| 6-3 | 1104543021 | Connect pin | 4 |
| 6-4 | 10209010 | φ10 Clip ring | 8 |

## O.Install Electrical System

Connect the power source according to the data plate of Motor.

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

### Single phase motor

Connect the two power supply wire (hot wire **L1** and **L3**) to terminals of AC contactor marked **L1, L3** respectively. Connect the earth wire to earth strip.

Note: if the local power are with 2 live wires, connect them to L1, L3 terminal of AC contactor respectively.

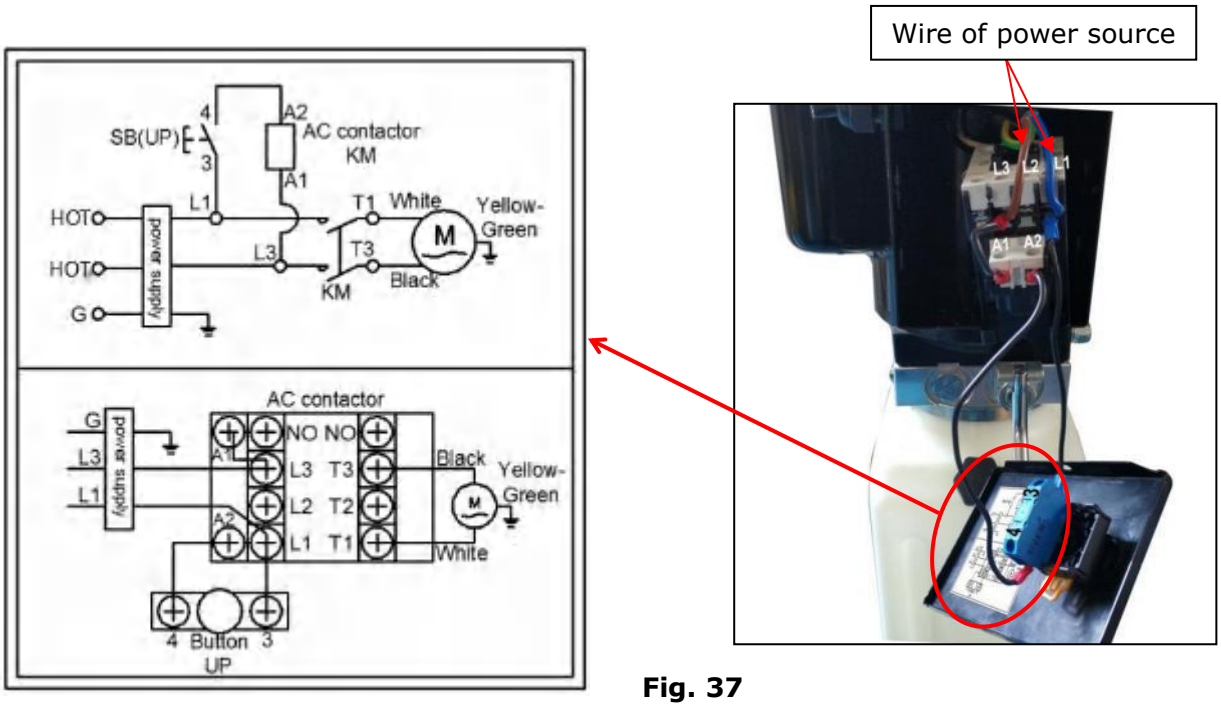



**Fig. 37**

⚠ DANGER All electrical wiring must be performed by a licensed and certified electrician. Before ensuring the main power has disconnected from the lift and cannot be re-applied until all procedures have been completed, don not perform any maintenance or installation to the lift.

⚠ 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

**Model 407-P**

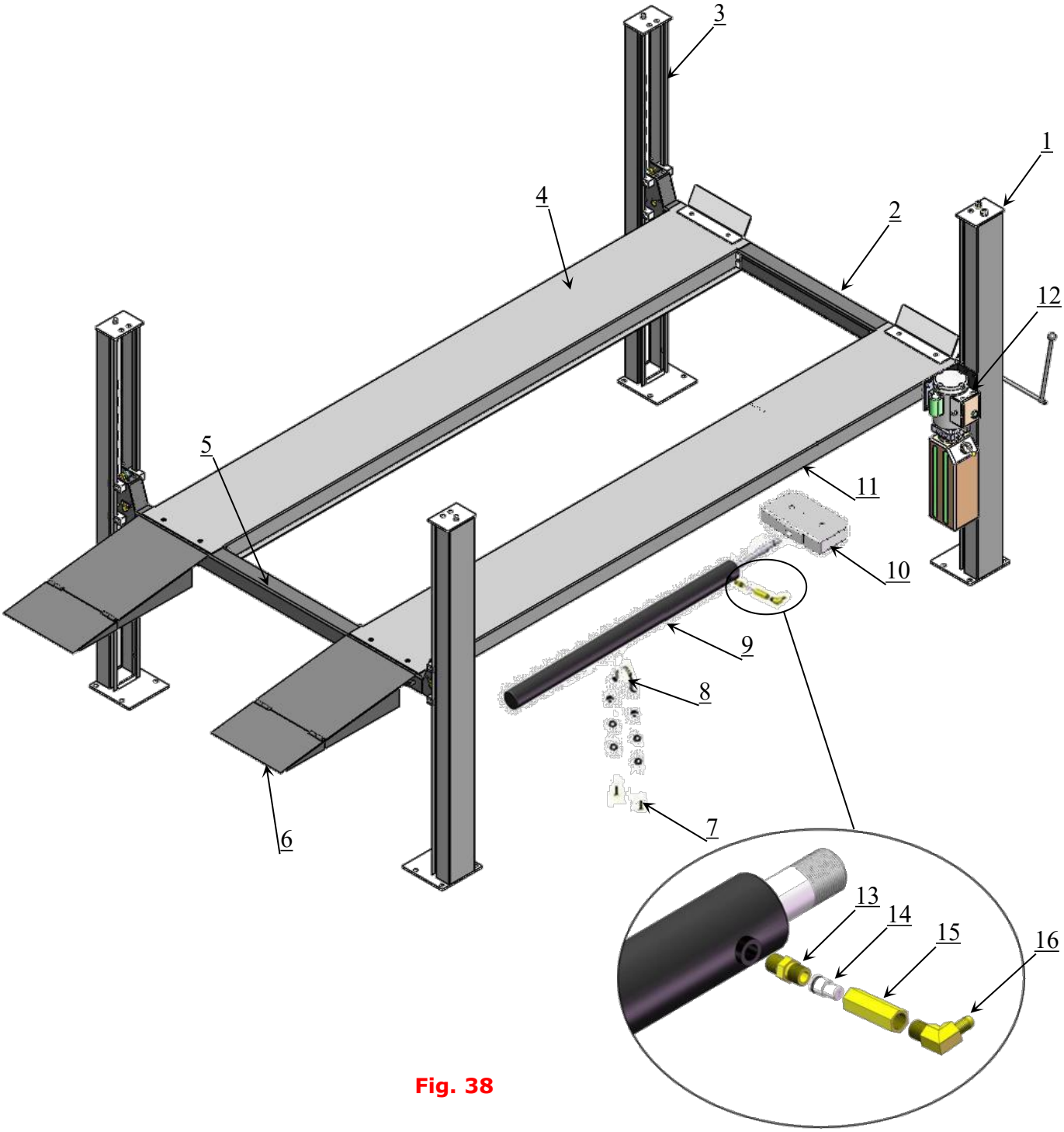



**Fig. 38**

## Power-side platform

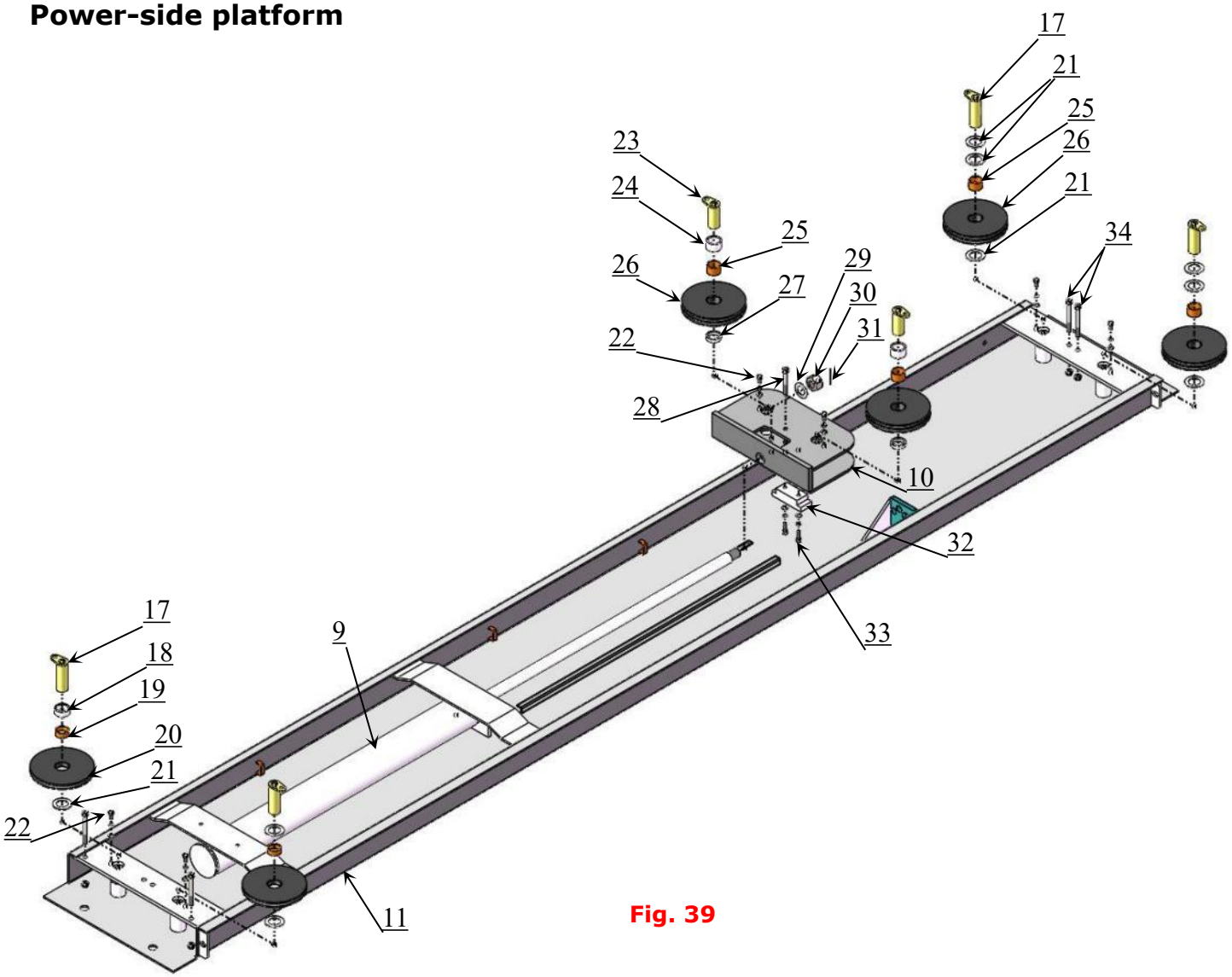



Fig. 39

## PARTS LIST FOR MODEL 407-P

| Item | Part# | Description | Qty. |
|---|---|---|---|
| 1 | 11410001-01 | Power-side Column | 1 |
| 2 | 1104542001C | Cross Beam A | 1 |
| 3 | 11410002-01 | Offside Column | 3 |
| 4 | 1104543001B | Offside Platform | 1 |
| 5 | 1104542001C | Cross Beam B | 1 |
| 6 | 1104543020C | Folding Drive-in ramp | 2 |
| 7 | 1004574011 | Hex Bolt M8*20 (with washer, spring washer and Outer hexagon nut) | 2 |
| 8 | 11423004 | Cylinder fixed ring | 1 |
| 9 | 1004546000 | Cylinder φ3 1/8"*34 1/2" | 1 |
| 10 | 1104533013A-01 | Piston rod connecting seat | 1 |
| 11 | 1104543001A | Power-side Platform | 1 |
| 12 | 81513006 | Manual Power Unit | 1 |
| 13 | 11420243 | Straight Fitting for cylinder | 1 |
| 14 | 11209119 | Compensation Valve | 1 |
| 15 | 11420245 | Straight Fitting J0065:G3/8-19(F)*3/8NPT(F) | 1 |

| Item | Part# | Description | Qty. |
|---|---|---|---|
| 16 | 10201020 | 90°degree fitting | 1 |
| 17 | 1104543009A | Pulley pin φ30*86.5 | 4 |
| 18 | 1104543016 | Adjusting sleeve of pulley φ40*4*18 | 1 |
| 19 | 1004542002 | Bronze bush for pulley φ36*φ30.1*15 | 6 |
| 20 | 1104543011 | Pulley φ170*16 | 2 |
| 21 | 10481005 | Washer φ30 | 21 |
| 22 | 1002735012 | Hex Bolt M8*16 (with washer, spring washer) | 6 |
| 23 | 1104533017A-01 | Pulley Pin φ25*77.5 | 2 |
| 24 | 1104533024 | Pad tube φ40*4*23 | 2 |
| 25 | 10620141 | Bronze bush φ36*φ30.1*24 | 4 |
| 26 | 1104543017 | Pulley φ170*25 | 4 |
| 27 | 1104543019 | Adjusting sleeve of pulley φ40*4*9 | 2 |
| 28 | 85090332 | Socket Bolt M10*70 | 1 |
| 29 | 10640109 | Washer Φ25.5*44*2 | 1 |
| 30 | 10410012 | Hex Nut M24 | 1 |
| 31 | 10201005 | Split Pin φ4*50 | 1 |
| 32 | 1004543006 | Slider block 106*40*29 | 1 |
| 33 | 1004544010 | Socket Bolt M8*15 （with washer, spring washer) | 2 |
| 34 | 85090099 | Socket Bolt M10*90 | 4 |
| 35 | 10420175A | Hex nut M20 | 8 |
| 36 | 11410022 | Safety ladder L=77 3/4" | 4 |
| 37 | 1004544011 | Cup Head Bolt M16*30 with Wahser | 4 |
| 38 | 1004574016 | Hex Bolt M16*35 (with washer, spring washer) | 4 |
| 39 | 11410015-1 | Tire stop plate | 2 |
| 40 | 1004574017 | Hex Bolt M12*20 (with washer, spring washer) | 4 |
| 41 | 10410016A | Plastic block 81*38*38mm | 16 |
| 42 | 1004574018 | Socket Bolt M8*40 （with washer, self-locking nut) | 16 |
| 43 | 11410024-01 | Connecting tube | 1 |
| 44 | 1104542009 | Connecting bar for safety device φ3/4"*70 1/2" | 2 |
| 45 | 1004574019 | Socket Bolt M8*35 （with spring washer) | 4 |
| 46 | 10217005 | Plastic ball M10 | 1 |
| 47 | 10209056 | Self locking Nut M10 | 1 |
| 49 | 11410100 | Extension lock release handle | 1 |
| 50 | 11410026 | Safety release handle | 1 |
| 51 | 1004574020 | Socket Bolt M8*25 （with spring washer) | 2 |
| 52 | 1004543003 | Cable ① 5/16"*167 7/8" | 1 |
| 53 | 1004543004 | Cable ② 5/16"*375 3/16" | 1 |
| 54 | 1004543002 | Cable ③ 5/16"*223 3/4" | 1 |
| 55 | 1004543001 | Cable ④ 5/16"*319 3/8" | 1 |
| 56 | 10209066 | Hex nut M16 | 8 |
| 57 | 1104541002 | Adjusting sleeve of cable | 4 |
| 58 | 1104541001 | Cable gasket | 4 |
| 59 | 10209145A | Cup head bolt with washer M6*12 | 8 |
| 60 | 1104542012 | Cover for cross beam | 4 |
| 61 | 1104551003 | 90 degree installation plate | 1 |
| 62 | 1004574011 | Hex Bolt M8*20 (with washer, spring washer， hex nut) | 4 |
| 63 | 1002215009 | Hex Bolt M8*30 (with washer, rubber ring,self-locking nut ) | 4 |

| Item | Part# | Description | Qty. |
|---|---|---|---|
| 64 | 10420166 | 90 degree fitting | 1 |
| 65 | 1004543007 | Oil return hose L=195 3/8" | 1 |
| 66 | 1004543005 | Oil hose | 1 |
| 67 | 10420120 | Extend straight fitting with nut | 1 |
| 68 | 1004544006 | Oil hose 1/4*44 1/16"(1 straight 1 bend) | 1 |
| 69 | 10209060 | 90 degree Fitting for power unit | 1 |
| 70 | 10420095 | Straight fitting | 1 |
| 71 | 1004544007 | Bellows pipe φ13/16"*1/16"*43 5/16" | 1 |
| 72 | 10201090 | Shim(1mm) | 20 |
| | 10620065 | Shim(2mm) | 20 |
| 73 | 10209059 | Anchor bolt 3/4*5-1/2 | 16 |
| 74 | 10410013 | Hex Bolt M16*30 | 4 |
| 75 | 1004544009 | Parts box | 1 |
| 76 | 11410040 | Jack tray (Optional part) | 1 |
| 77 | 10410039 | Plastic oil tray (Optional part) | 4 |

## 4.1 CYLINDERS EXPLODED VIEW

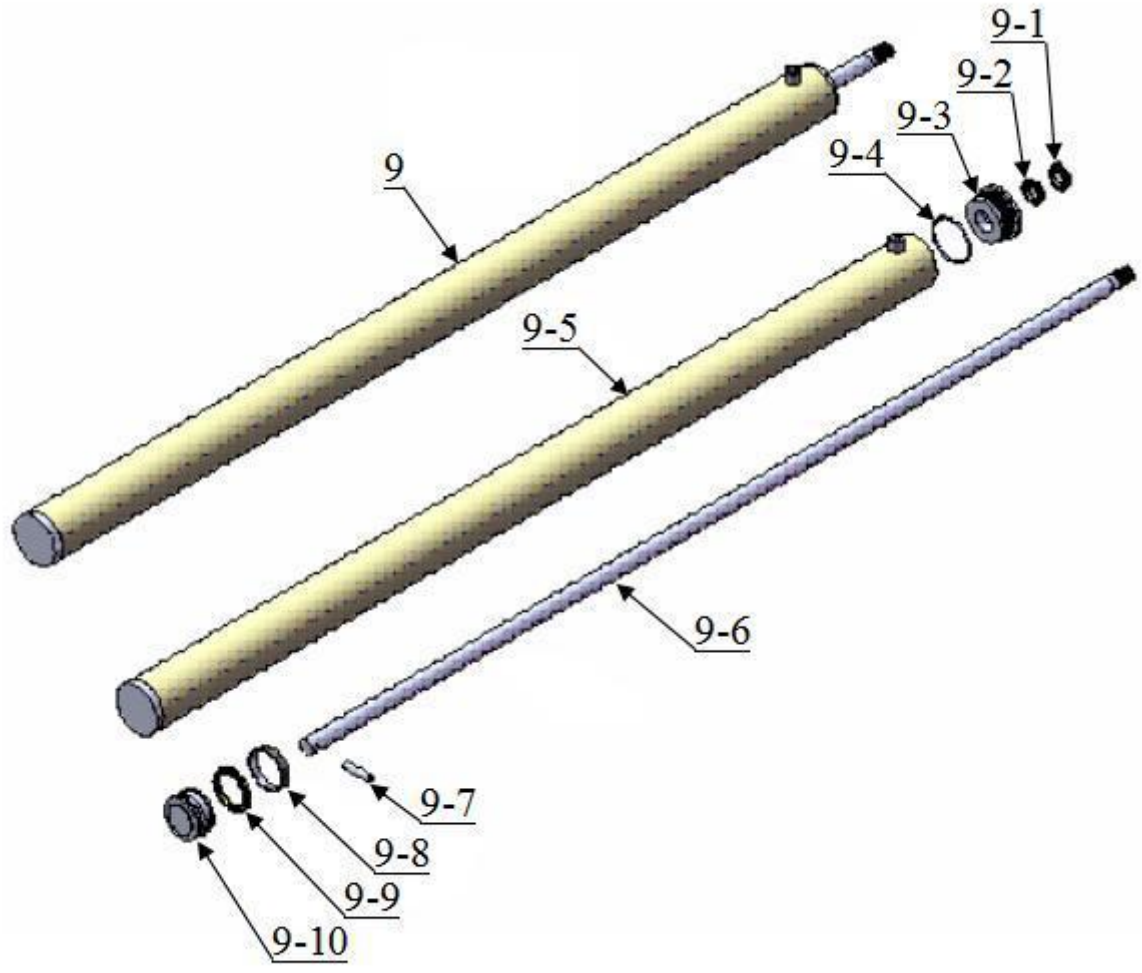



**Fig. 39**

## Parts List

| Item | Part# | Description | Qty. |
|---|---|---|---|
| 9-1 | 10420059 | Dust ring Φ30*Φ38*(5～6.5) | 1 |
| 9-2 | 1004016001 | Y- Ring USH Φ30*Φ40*6 | 1 |
| 9-3 | 11420061-01 | End cover | 1 |
| 9-4 | 10420062 | O- Ring Φ81.5*3.55 | 1 |
| 9-5 | 1004546001A | Cylinder components | 1 |
| 9-6 | 1104546002 | Piston Rod | 1 |
| 9-7 | 11420065 | Cylindrical pin | 1 |
| 9-8 | 10420066 | Support Ring Φ74*Φ80*15*3 | 1 |
| 9-9 | 10420067-01 | Y- Ring USH Φ70*Φ80*6 | 1 |
| 9-10 | 11420068 | Piston | 1 |

## 4.2 CROSS BEAM EXPLODED VIEW

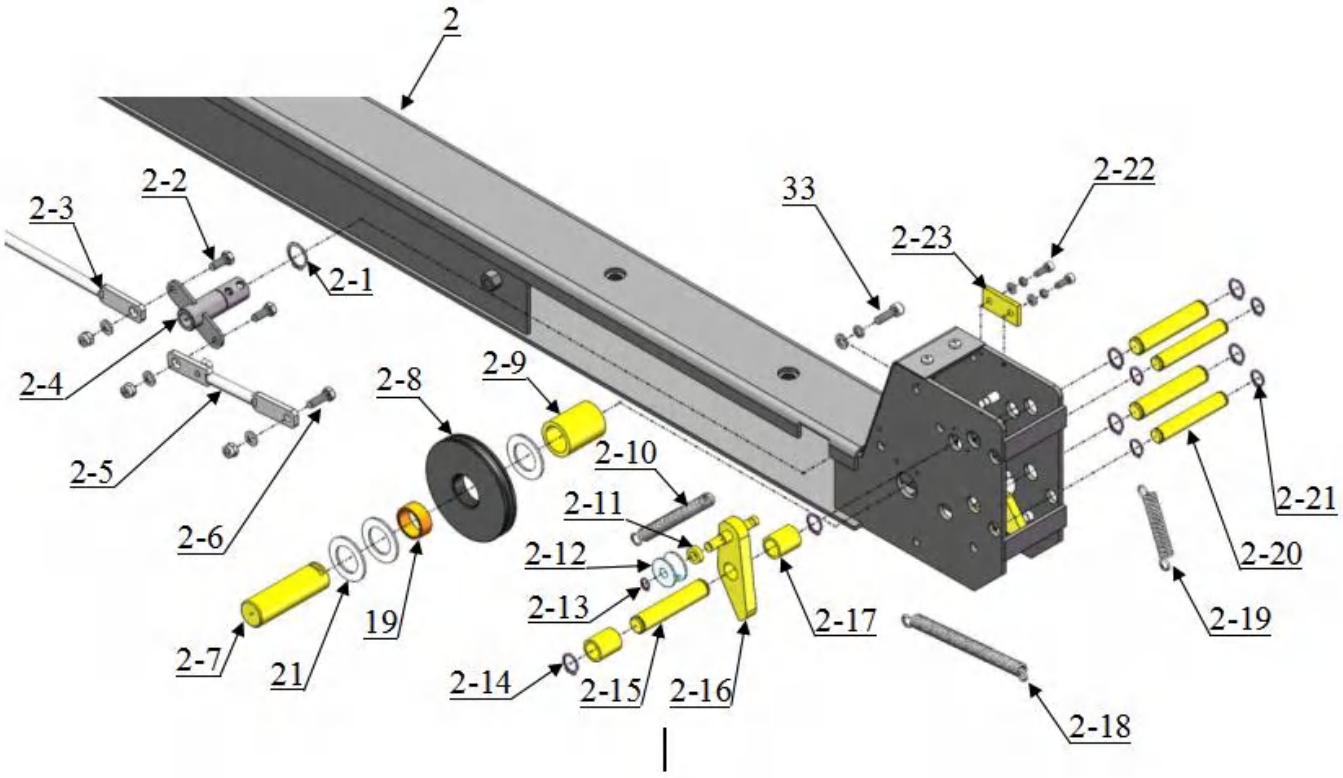



**Fig.40**

**Parts For cross beam**

| Item | Part# | Description | Qty. |
|---|---|---|---|
| 2-1 | 10206032 | Snap Ring φ25 | 2 |
| 2-2 | 1004574013 | Hex Bolt M8*20 (with washer, self-locking nut) | 4 |
| 2-3 | 1104542008-01 | Connecting bar for safety lock | 2 |
| 2-4 | 1104572003A | Safety lock rotated device assy. | 2 |
| 2-5 | 1104542011A-0 | Connecting bar assy. for safety lock | 2 |
| 2-6 | 1004574014 | Hex Bolt M8*25 (with washer, self-locking nut) | 4 |
| 2-7 | 1104542006-01 | Pulley pin φ30*100 | 4 |
| 2-8 | 1104542010 | Pulley φ115*16 | 4 |
| 2-9 | 1104542007 | Pulley pin sleeve φ40*4*51.5 | 4 |
| 2-10 | 10410146 | Spring φ14*2.0*75 | 4 |
| 2-11 | 11420174 | Spacer | 4 |
| 2-12 | 10420035 | Tension pulley | 4 |
| 2-13 | 10209010 | Snap ring φ10 | 4 |
| 2-14 | 10206019 | Snap ring φ19 | 24 |
| 2-15 | 11420171 | Pin φ19*98 | 12 |
| 2-16 | 11420175 | Slack-cable safety lock (Left & Right) | 2 each |
| 2-17 | 11420172 | Pin Bush For Slack-cable safety lock φ25*3*31 | 8 |
| 2-18 | 1004242001 | Spring φ14*φ2*100 | 2 |
| 2-19 | 1004542001 | Spring φ14*2.0*50 | 4 |
| 2-20 | 11420038 | Pin φ16*98 | 8 |
| 2-21 | 10420037 | Snap ring φ16 | 16 |
| 2-22 | 1002735009 | Socket Bolt M6*16 （with washer, spring washer) | 8 |
| 2-23 | 11420044 | Stop block | 4 |

## 4.3 Illustration of hydraulic valve for power unit

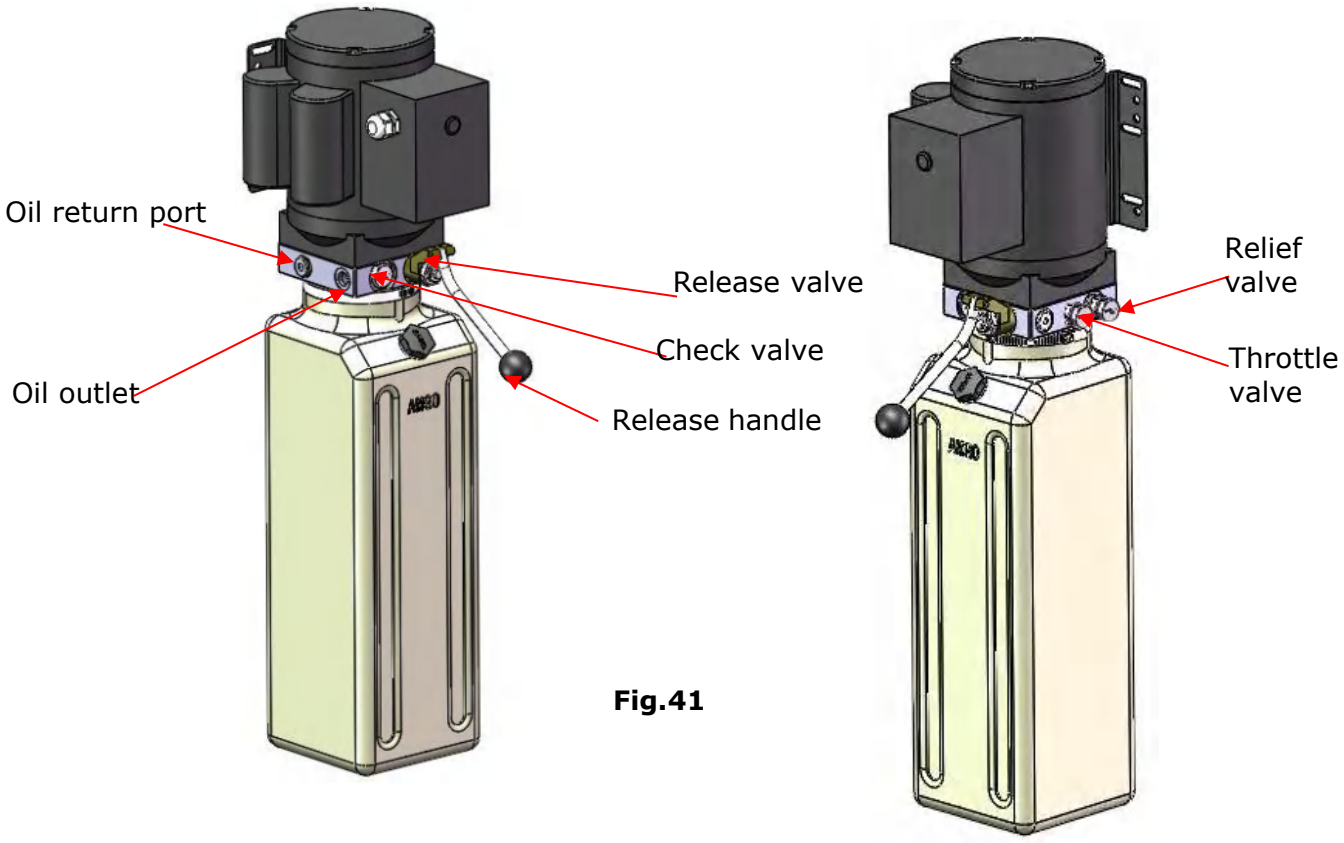



**Fig.41**

# V. TEST RUN

1. Fill the oil tank with around hydraulic oil (in order to ensure the service life of the hydraulic system and ensure the best condition of the equipment, please fill in #46 high-quality anti-wear hydraulic oil).
2. Press the power unit button, until the four cables are tightened. Check the coordination between the cables and the pulleys, the cables **SHALL NOT** cross or fall out of the pulley.
3. Press the power unit release handle to lock the cross beam on the safety ladder. Adjust the safety ladder nuts to make sure the platforms at same level. Then tighten both the top and bottom nuts of safety ladder.
4. Balance the tension of cables by adjusting the cable nuts. It is a must to run several cycles up/down of the lift when performing synchronization operation.
Make sure all four safety locks can be locked/released at the same time, then tightened all the cable nuts.
5. Make sure the cross beam slide blocks and columns are clearance fit, that the slider blocks can slide smoothly with the column. DO NOT tighten the slider blocks.
6. After all above adjustments finished, take the loading test. Firstly low-level load test are taken several times to check the synchronization of operation and all safety locks. If they are no other abnormal phenomena, then take the full cycle load tests several times, otherwise repeat the above adjustments.

**Circuit Diagram of Hydraulic System**

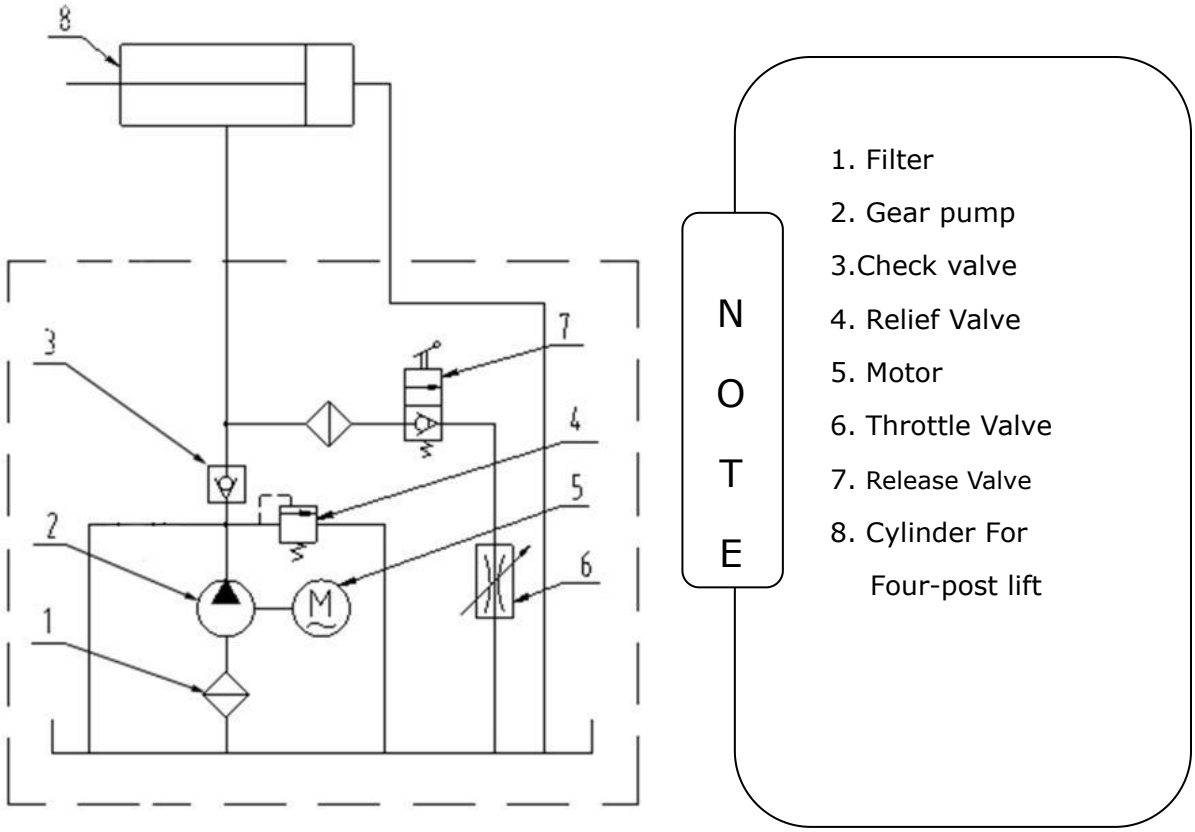



**Fig.42**

# VI. OPERATION INSTRUCTIONS

**To lift vehicle**

1. Keep clean of site near the lift;
2. Drive in the vehicles on platforms and apply the parking brake.
3. Fold up the front half of drive-in ramps.
4. Power on, push the power unit UP button, lift the vehicles to the working position.

**Note: Make sure the vehicles are in steady safe status.**

5. Press the power unit release handle, the lift goes down and be locked. Check and make sure the lift is locked at the same level locks .

⚠**WARNING** It is unsafe to work under the lift without locking at the safety device after it has been lifted up, which may causes vehicle fall, damage, lift damage, human injury or even death.

**To lower vehicle**

1. Clear obstructions around and under the lift and keep people away from the lift.
2. Push power unit **UP** button to raise the lift 3-5 seconds, then the safety lock is out of lock status. Pull the release handle, make sure the safety lock released, press the power unit release handle, the lift will start to lower.
3. Lower the lift to the lowest position, unfold the front half of drive-in ramps, and drive away the vehicles
4. Turn off the power.

# VII. MAINTENANCE SCHEDULE

**Monthly:**

1. Lubricate cables.
2. Make visual inspection of cables for possible wear or damage.
3. Make visual inspection of hydraulic hoses for possible wear or leakage.
4. Lubricate all rollers, pins and safety devices with 90WT gear oil.

**Every six months:**

1. Make a visual inspection of all moving parts for possible wear, interference or damage.
2. Check and adjust as necessary, cable tension to ensure synchronization.
3. Check columns for plumbness.

## 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**

Make sure the lift is completed disconnected from the power source before maintenance. If there is any external electrical lock/shutdown device, make sure to implement them before maintenance. The contact with high voltage/current, may cause injury or even death.

# VIII. TROUBLE SHOOTING

| TROUBLE | CAUSE | REMEDY |
|---|---|---|
| Motor does not run | 1. Start Button does not work<br>2.Wiring connections are not in good condition<br>3. Motor burned out<br>4. AC contactor burned out | 1.Replace start button<br>2.Repair all wiring connections<br>3.Repair or replace motor<br>4.Replace AC contactor |
| Motor runs but the lift is not raised | 1. Release valve in damage<br>2. Gear pump in damage<br>3.Relief valve or check valve in damage<br>4.Low oil level | 1.Repair or replace<br>2.Repair or replace<br>3.Repair or replace<br>4.Fill tank |
| Lift does not stay up | 1. Release valve out of work<br>2 Relief valve or check valve leakage.<br>3.Cylinder or fittings leaks | Repair or replace |
| Lift raises too slow | 1.Oil line is jammed<br>2.Motor running on low voltage<br>3. Oil mixed with air<br>4.Pump leaks<br>5.Overload lifting | 1.Clean the oil line<br>2.Check electrical system<br>3. Fill tank<br>4. Repair or replace pump<br>5.Check load |
| Lift cannot lower | 1. Safety device are not in activated<br>2. Release valve damaged | 1. Operate again<br>2. Repair or replace |

⚠**WARNING** A lift would be dangerous if operated by inexperienced or distracted operators. Operators should be fully aware that lifting a vehicle is a potentially life-threatening operation, especially if ignoring the mandatory safety precautions.

## 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 original equipment parts to repair.
2. **Do not** overload . 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. **Do not** lift a car with occupants inside. Keep the customers or bystanders away from the lift.
5. Keep the area around the lift free of obstacles, lubricating oil, grease, garbage and other debris for a long time.
6. Carefully drive the vehicle onto the lift and lifting up to the required height for operation. **Noted:** lift it high enough if you are working underneath, and make sure the safety devices are locked.
7. **Noted:** removing( install) parts from(to) a vehicle would cause a sudden shift of gravity which may result in instability of the vehicle. Please refer to the vehicle manufacturer's service manual as a recommended procedure if you need remove/install parts from(to) the vehicle
8. Before lowering the lift , make sure all obstacles underneath, include tool tray, tool rack etc., are all removed.

## 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.

AMGO Hydraulics

**Address:**
SC Division: 1931 Joe Rogers Jr Blvd, Manning, SC 29102, USA
TX Division: 4310 Adler Dr., Suite #200, Dallas, TX 75211, USA

http://www.amgohyd.com

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Revision Date: 2024/11