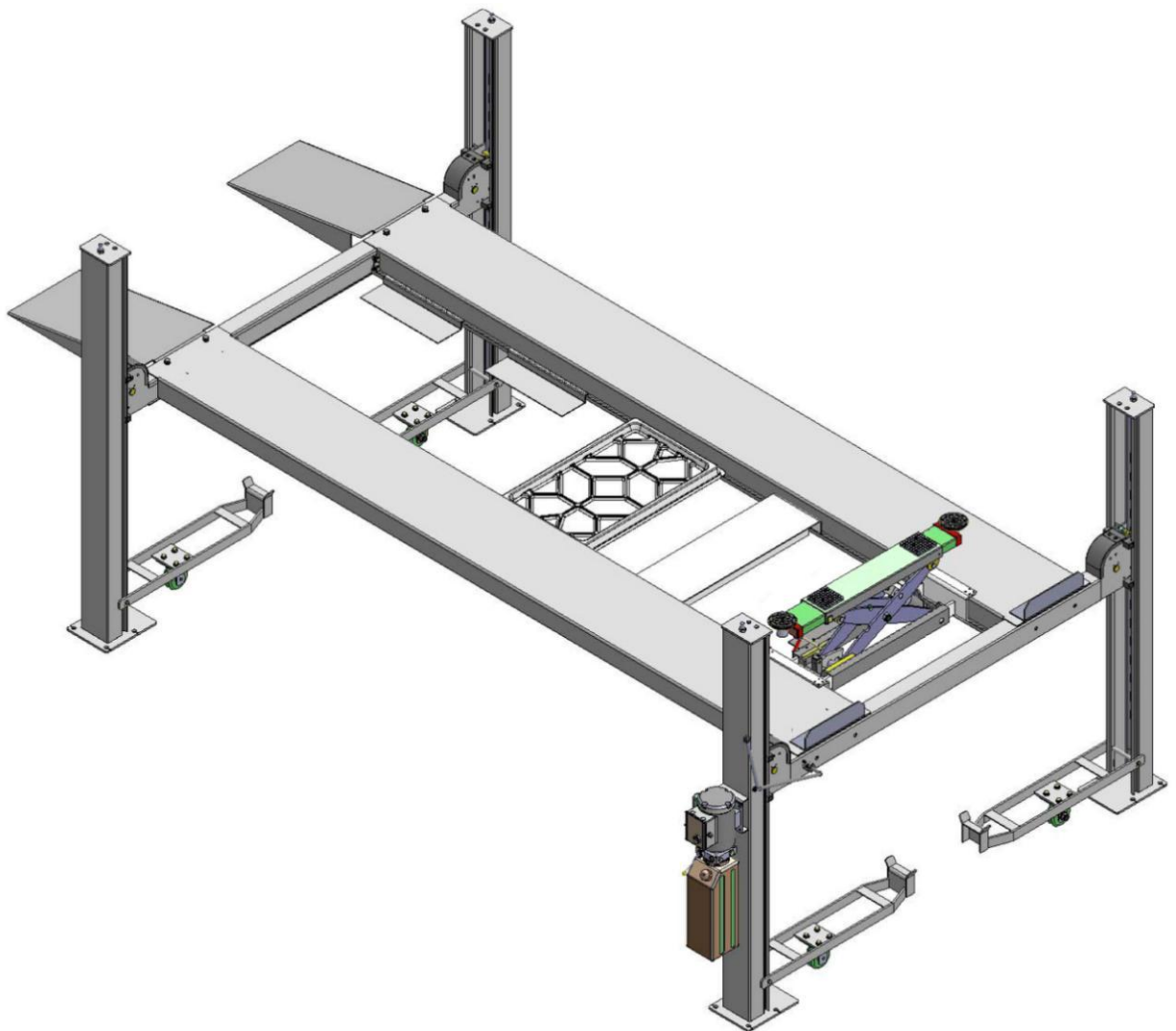


AMGO  **Hydraulics**

Original

Installation And Service Manual



Four-Post Lift
Model: 409-HP

CONTENTS

| | |
|---|----|
| Product Features and Specifications | 1 |
| Installation Requirement | 2 |
| Steps of Installation | 4 |
| Exploded View | 25 |
| Test Run | 31 |
| Operation Instruction | 32 |
| Maintenance | 33 |
| Trouble Shooting | 34 |
| Lift Disposal..... | 34 |

I. PRODUCT FEATURES AND SPECIFICATIONS

4-POST MODEL 409-HP FEATURES

- Single point manual safety release, more convenient and more reliable for decent operation.
- Four mechanical locking devices, each equipped with both primary and secondly safety locks.
- Power-side column can be installed at both side, front or rear.
- Non-skid diamond platforms and adjustable safety lock ladders.
- Optional kits: Rolling jack, caster kits.

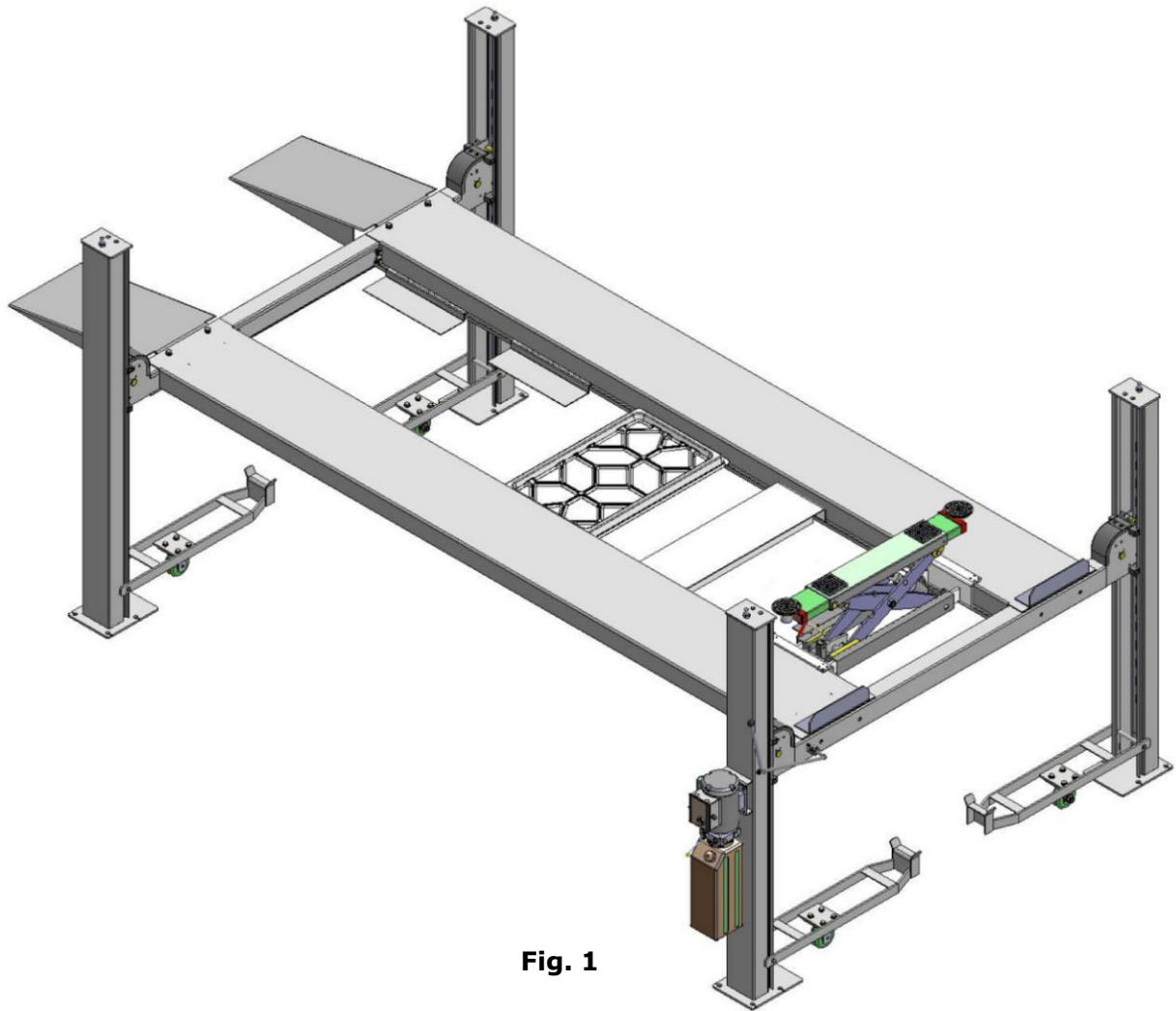


Fig. 1

MODEL 409-HP SPECIFICATIONS

| Model | Lifting Capacity | Lifting Height | Lifting Time | Overall Length (Inc. Ramps) | Overall Width | Width Between Columns | Motor |
|--------|---------------------|---------------------|--------------|-----------------------------|----------------------|-----------------------|------------|
| 409-HP | 4.0T (9,000 lbs) | 2227mm (87 3/4") | 122S | 5957mm (234 1/2") | 3206mm (126 1/4") | 2860mm (112 5/8") | 110V/1.0HP |

II. INSTALLATION REQUIREMENT

A. TOOLS REQUIRED

- ✓ Tape Measure (7.5m)



- ✓ Hammer



- ✓ Level Bar



- ✓ English Spanner (12")



- ✎ Wrench set
(12#, 13#, 14#, 15#, 17#, 19#, 24#, 30#)



- ✓ Carpenter's Chalk



- ✓ Screw Sets



- ✓ Pliers



- ✓ Lock Wrench



- ✎ Socket Head Wrench
(3#, 5#, 6#, 8#)



Fig. 2

B. Equipment storage and installation requirements.
The equipment should be stored or installed in a shady, normal temperature, ventilated and dry place.

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



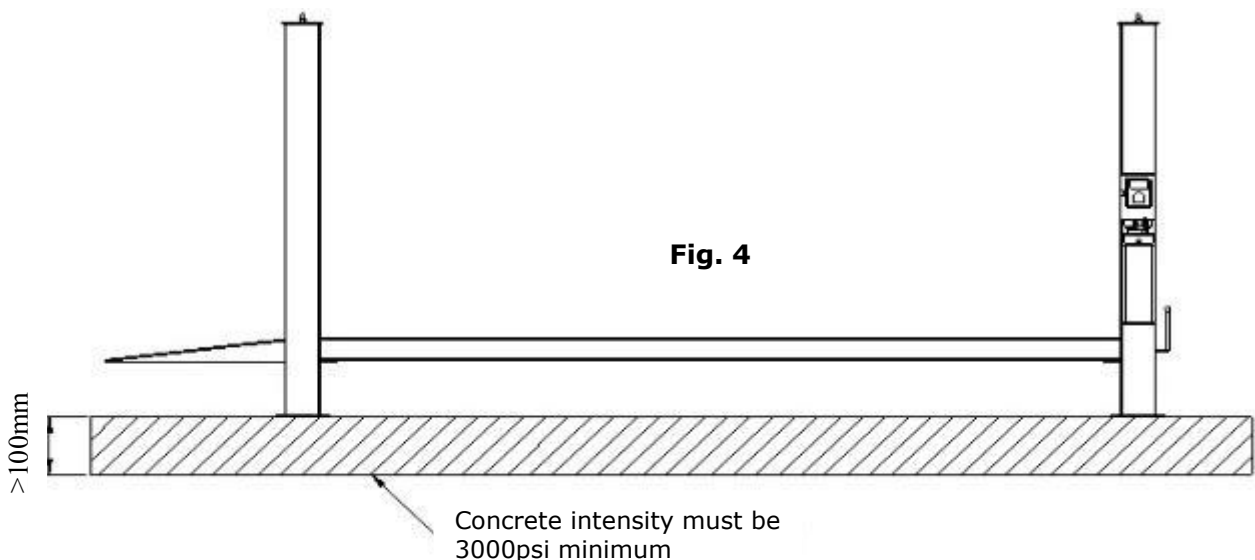
Fig.3

E. SPECIFICATIONS OF CONCRETE (See Fig. 4)

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 100mm minimum and without reinforcing steel bars, and must be dried completely before the installation.
2. Concrete must be in good condition and must be of test strength 3,000psi (210kg/cm²) minimum.
3. Floors must be level and no cracks.



F. POWER SUPPLY

The electrical source must be 2.0HP minimum. The source cable size must be 2.5mm² and in good condition of contacting with floor.

III. STEPS OF INSTALLATION

A. Check the parts before assembly

1. Packaged lift and Hydraulic Power Unit (See Fig. 5).



Fig. 5

2. Open the outer packing carefully, check the parts according to the shipment list. (See Fig. 6).

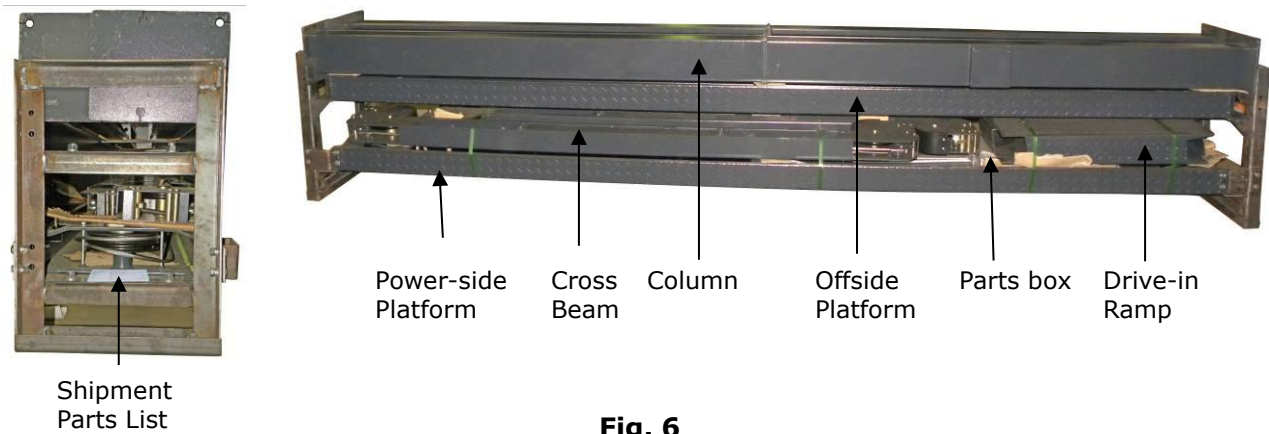


Fig. 6

3. Take off the drive-in ramps and columns (See Fig.7).

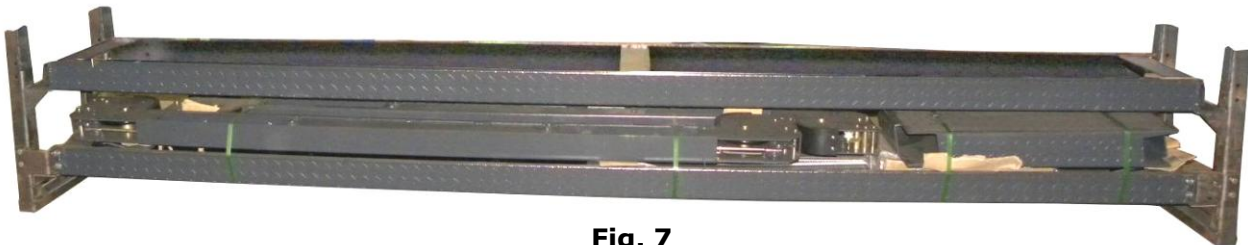


Fig. 7

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

5. Move aside the parts and check the parts according to the shipment parts list
(See Fig. 8).

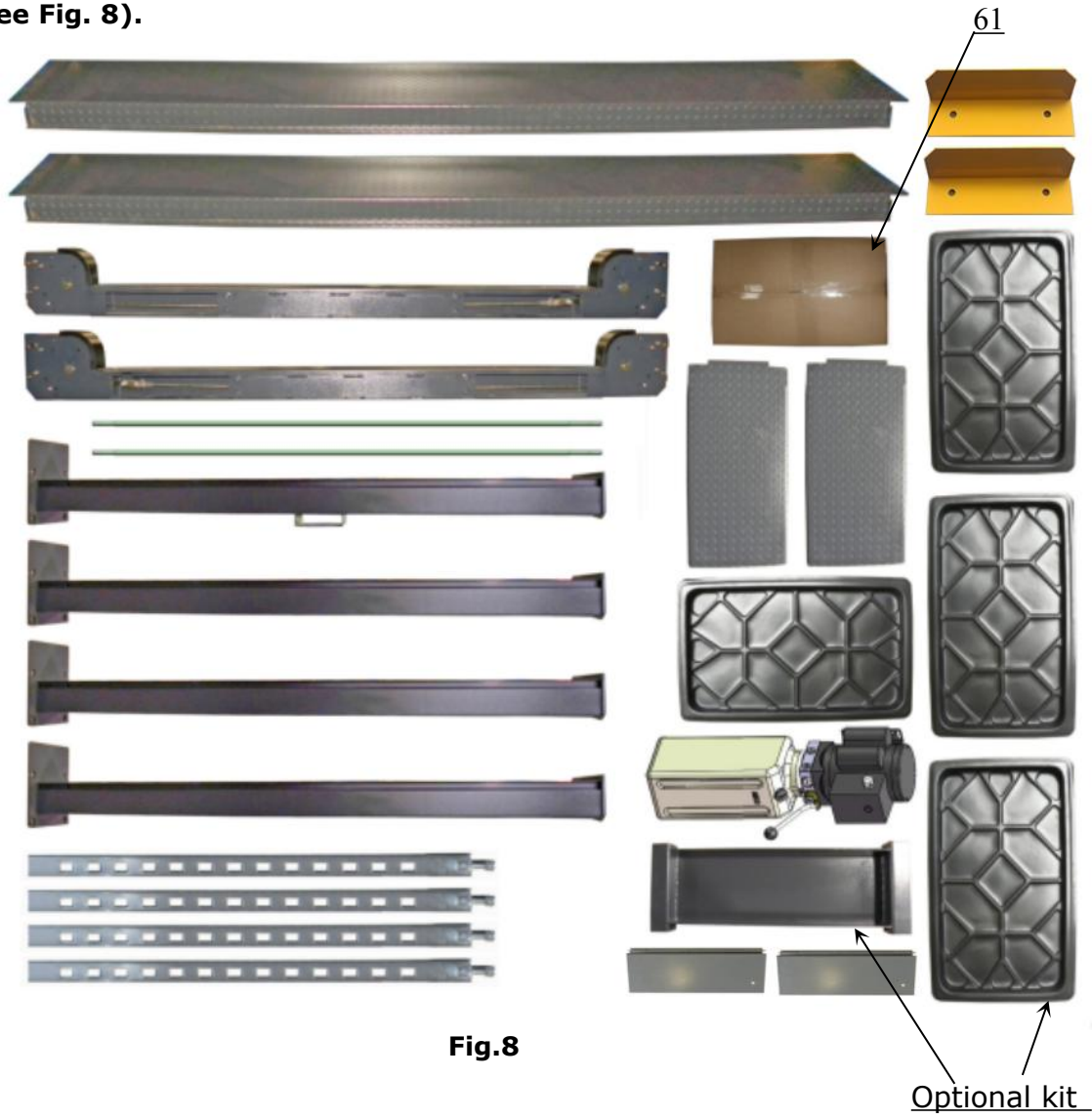


Fig.8

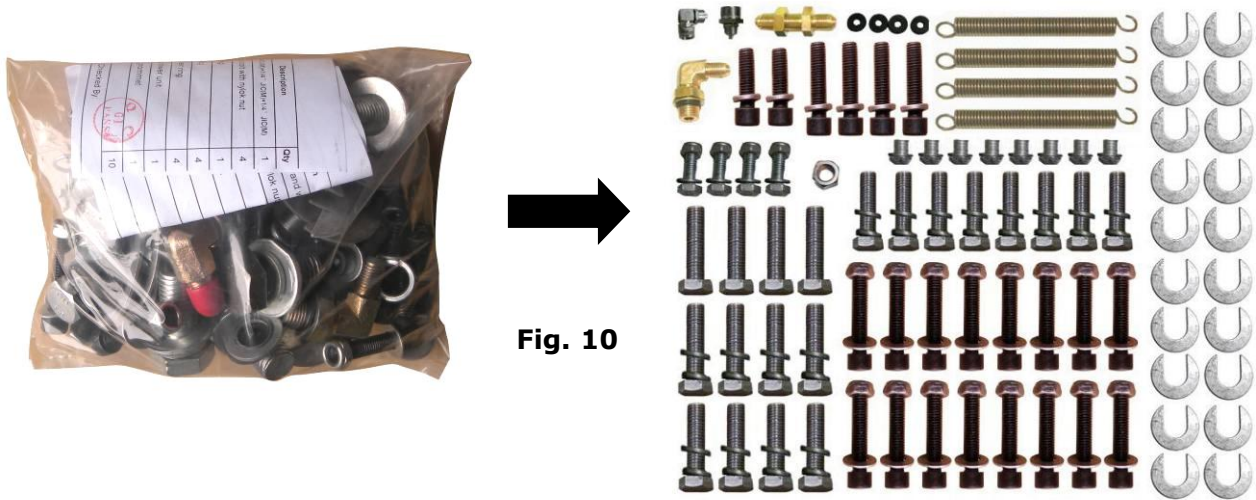
Optional kit

6. Open the carton of parts and check the parts according to the parts box list
(See Fig. 9).



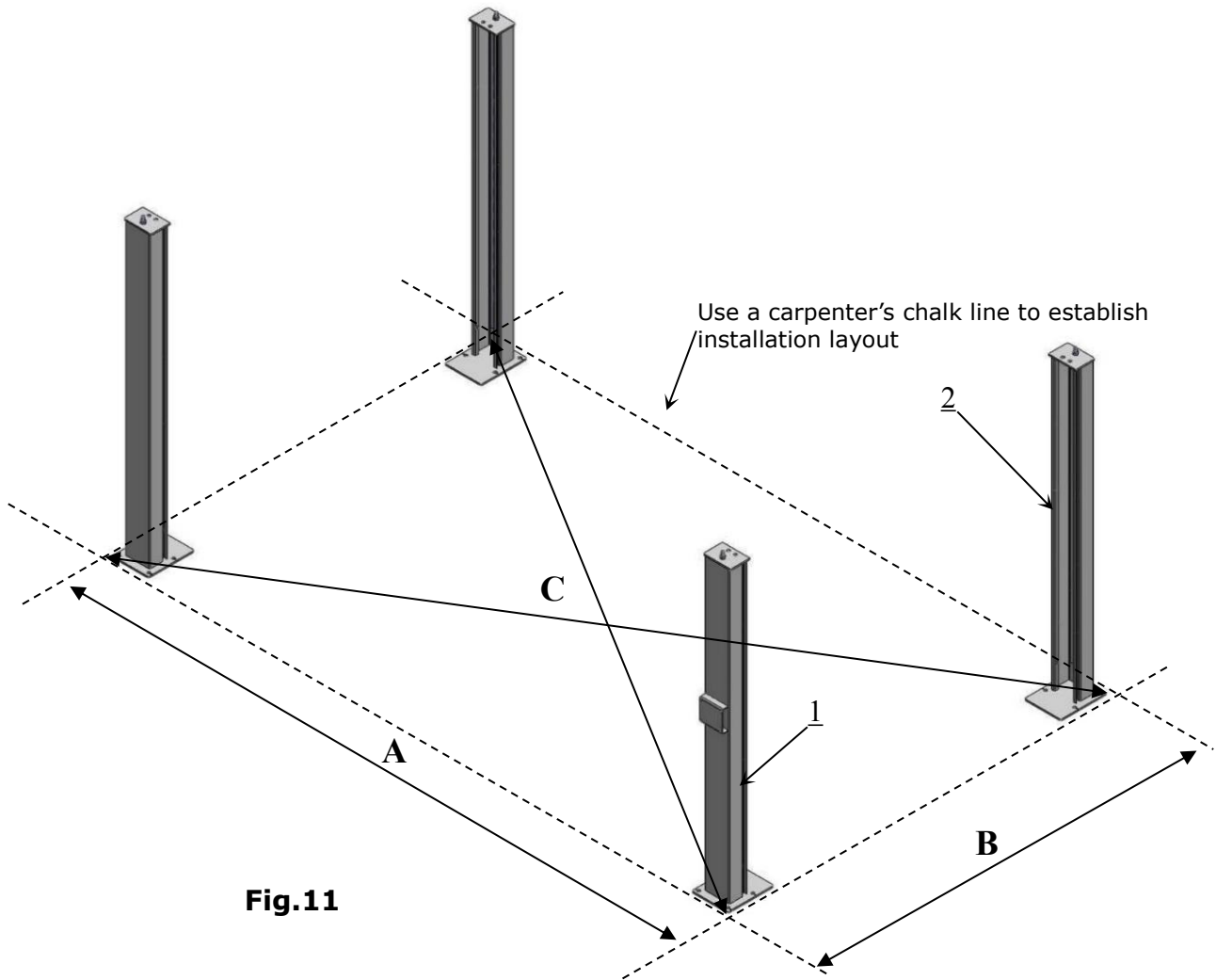
Fig. 9

7. Check the parts of the parts bag according to the parts bag list (See Fig. 10).



B. Use a carpenter’s chalk line to establish installation layout as per Table 1
 Make sure the size is right and base is flat (see Fig. 11).

Note: Reserve space front and behind the installation site.



| MODEL | A | B | C | REMARK |
|--------|--------------------|--------------------|--------------------|--------|
| 409-HP | 5100mm 200 3/4" | 3206mm 126 1/4" | 6024mm 237 1/8" | |

C. Install cross beams (See Fig.12, Fig.13).

The power-side column need to be installed according to the installed position of the safety lock release handle.

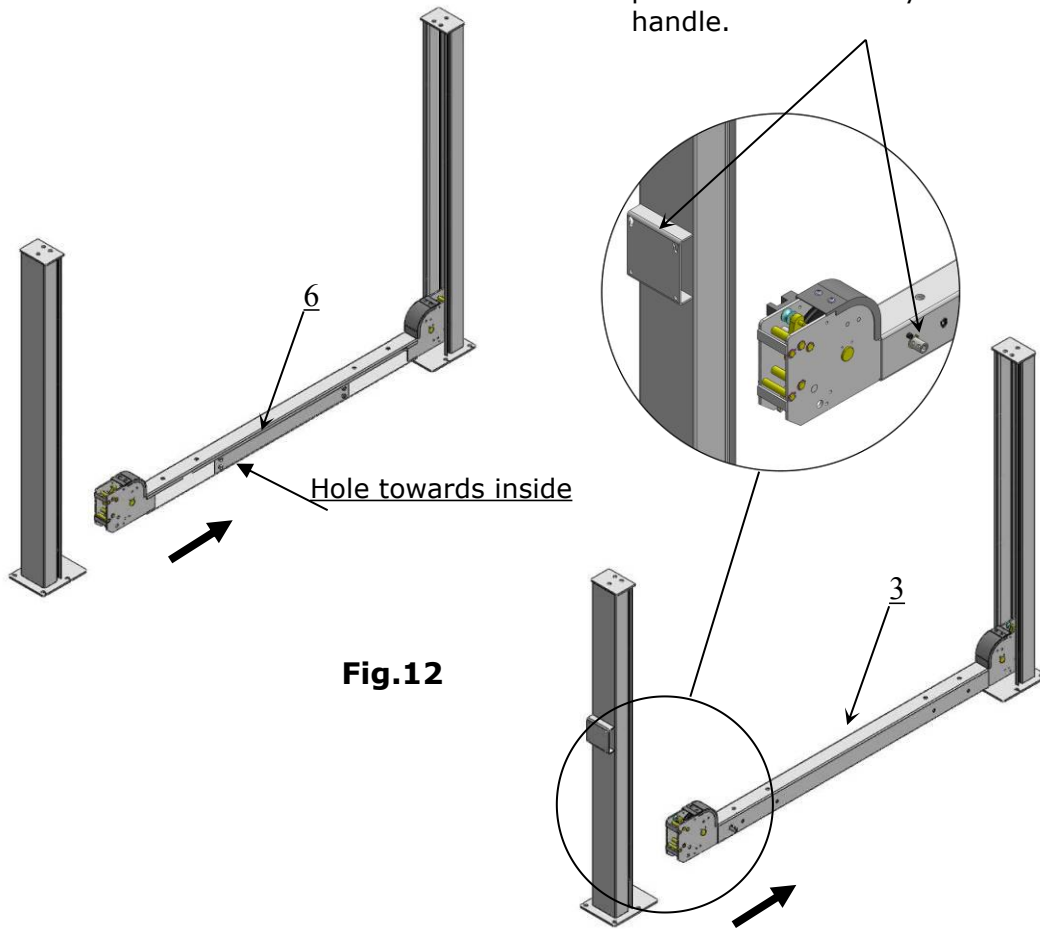


Fig.12

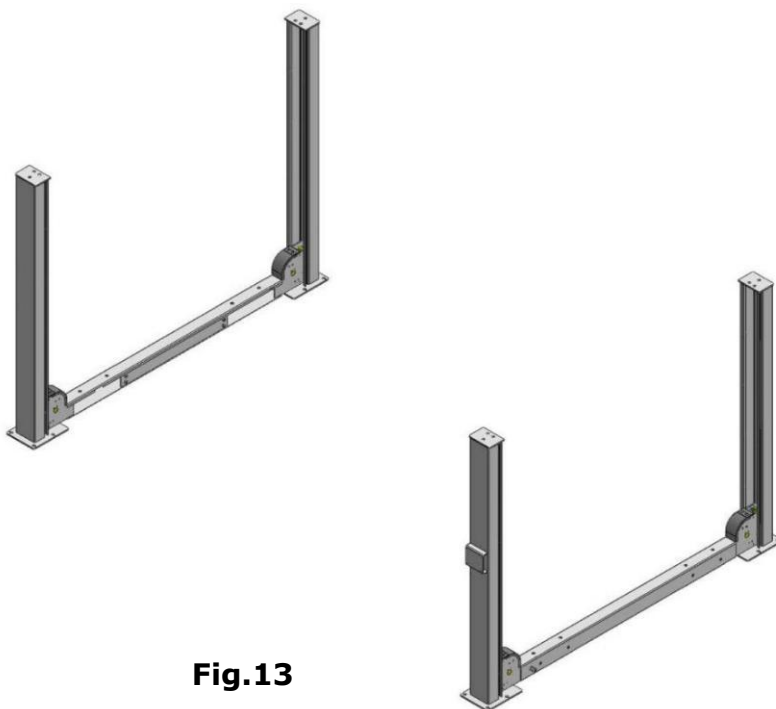


Fig.13

D. Install the Safety Ladders.

1. Take off the pulley safety cover and unscrew a nut of the safety ladders, and then adjust the four lower nuts to be at the same position. Then install the safety ladder (**See Fig. 14**).

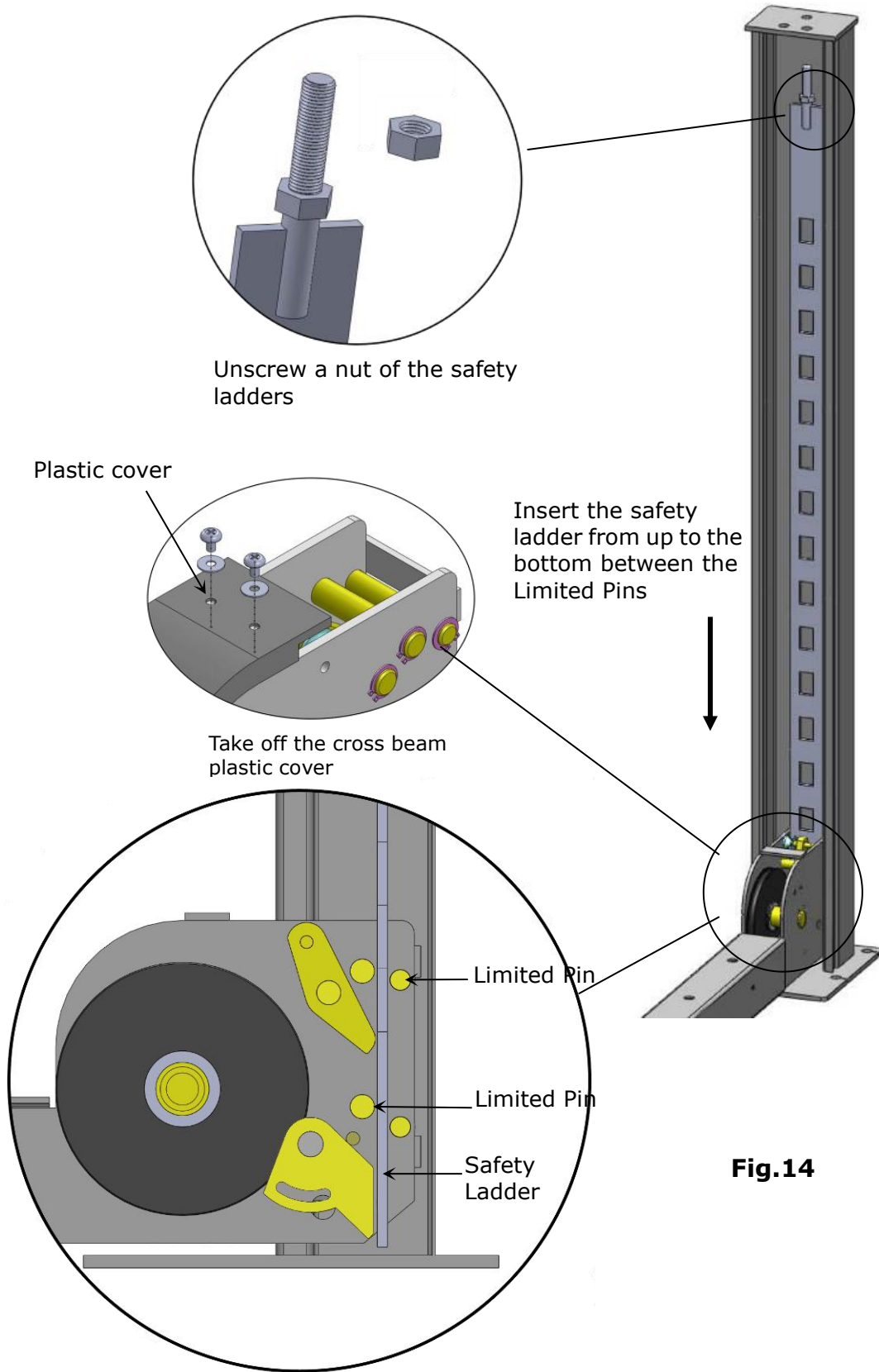
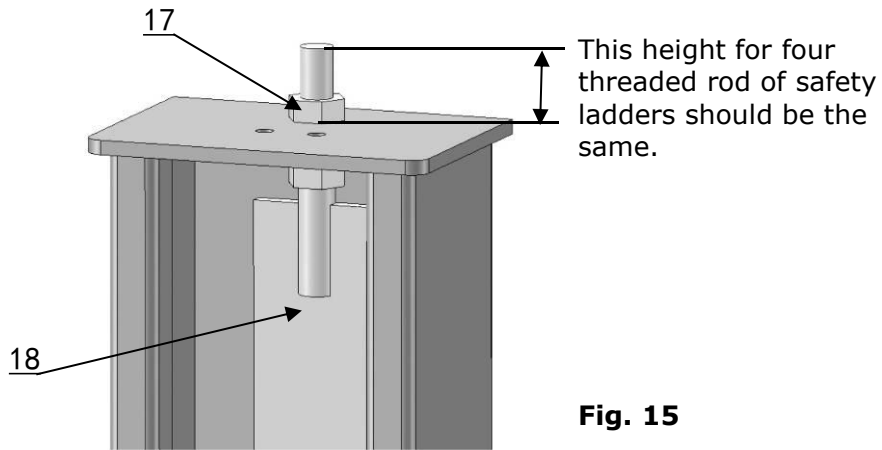


Fig.14

Safety Ladder is inserted between Limited Pins of the cross-beam

2. Install Safety Ladders (See Fig. 15).



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

E. Put the cross beams at the same height and lock on the safety ladder (See Fig. 16).

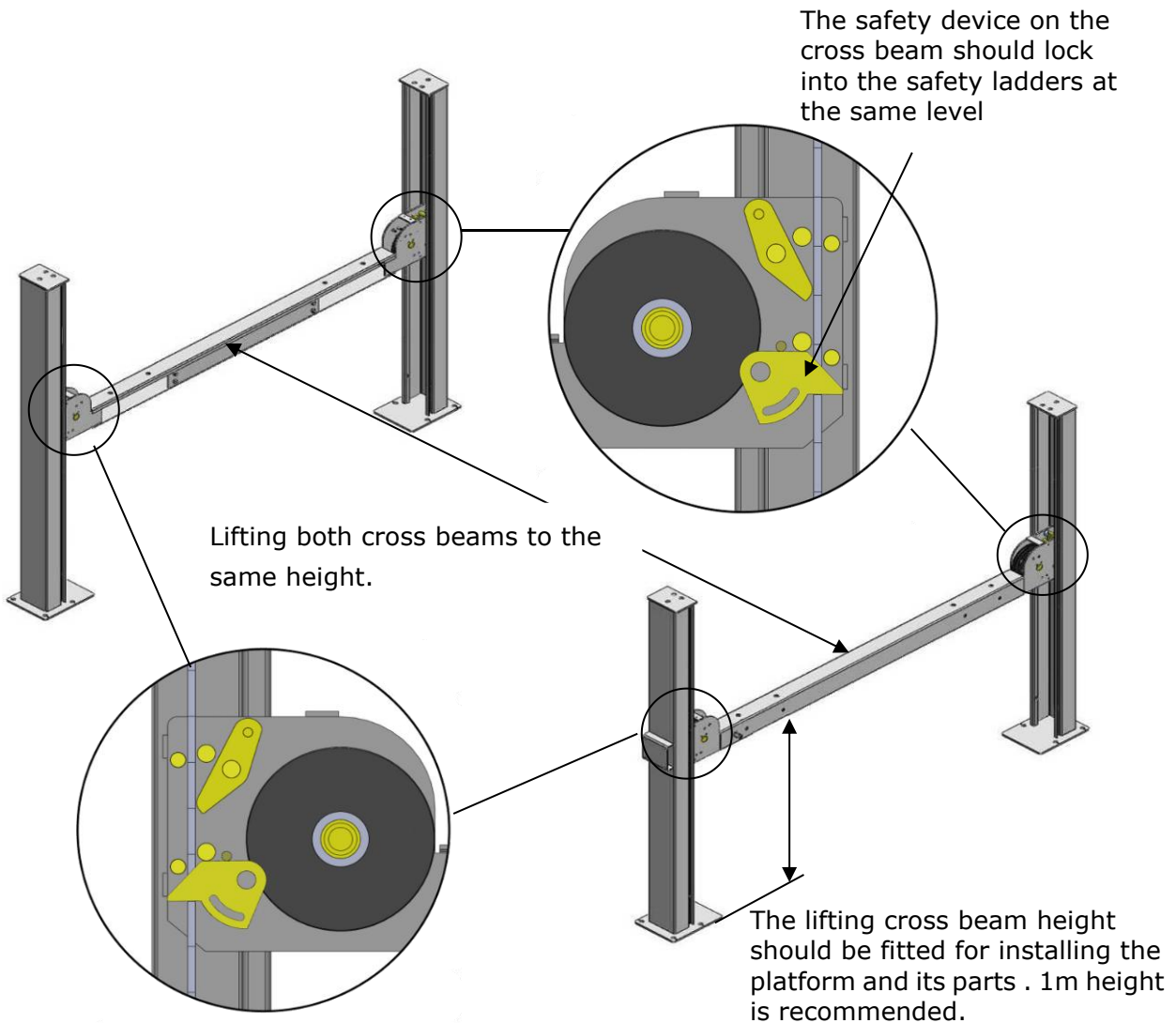


Fig. 16

F. Install power side platform.

1. Install the power side platform on the cross beams by a fork lift or manual, offset the cross beams to the outside till the pulleys of both platforms can rest into the cross beams' slots (See Fig.17), Install the power side platform and screw up the bolts.

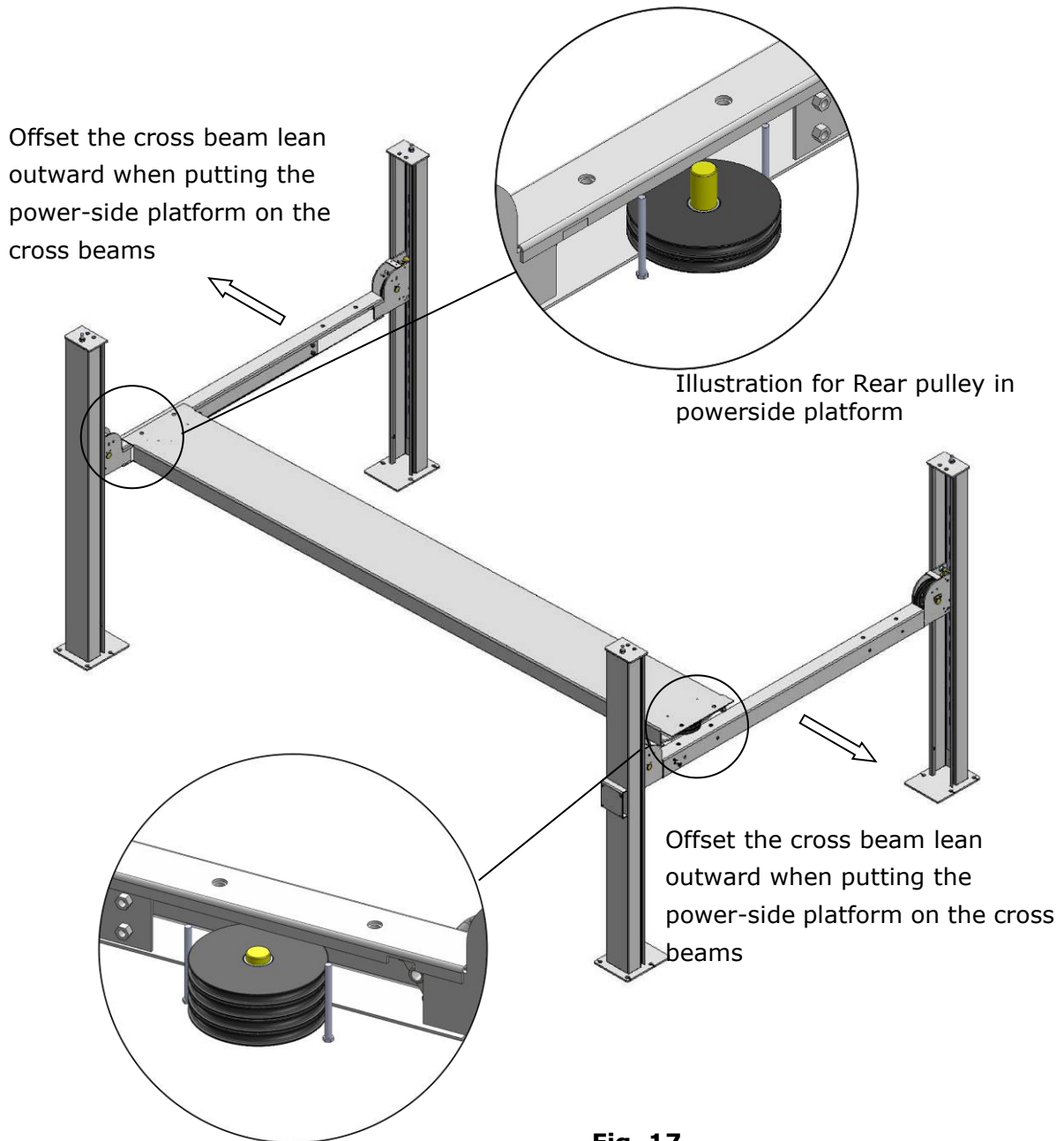


Fig. 17

Illustration for front pulley in power-side platform

2. **Install tire stop plate with bolts and washer on the platform:** Tighten the platform on cross beam **B** with bolts, tighten the tire stop plate on cross beam **A** with bolts

Note: The bolts for the side with tire stop plate is longer, pay attention when choosing the bolts (**See Fig.18**)

Instruction: 1). This lift is designed in both side (cross beam **A** and cross beam **B**) car in direction, user can install the lift according to the location. Below is the installation for the side of cross beam **B** car in direction. If choosing the side of cross beam **A** car in direction, then install the tire stop plate to the other side.

2). Powerside column can be installed at any position on customers' requirement, but the power unit must be installed near the side with the safety lock release handle.

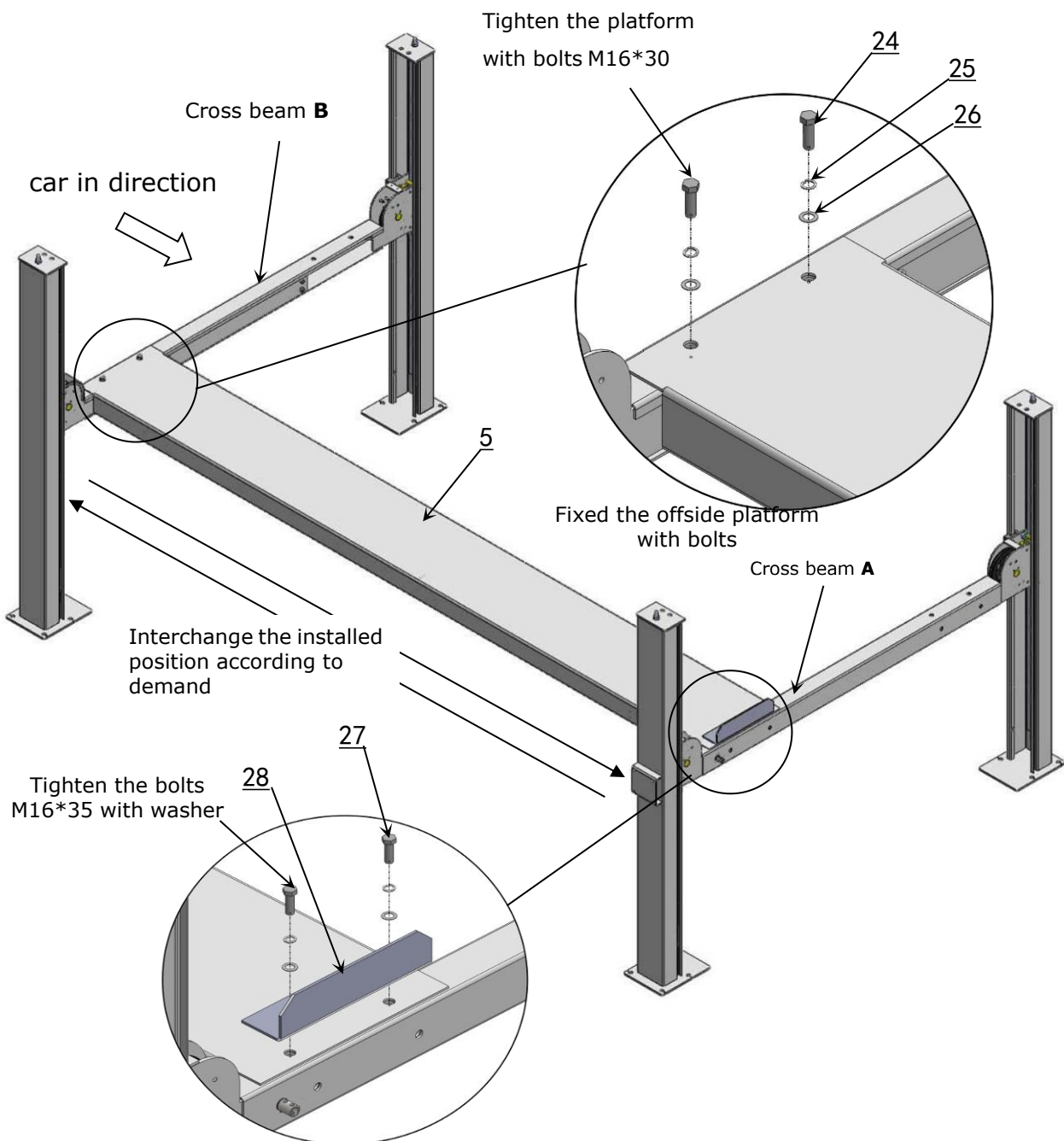
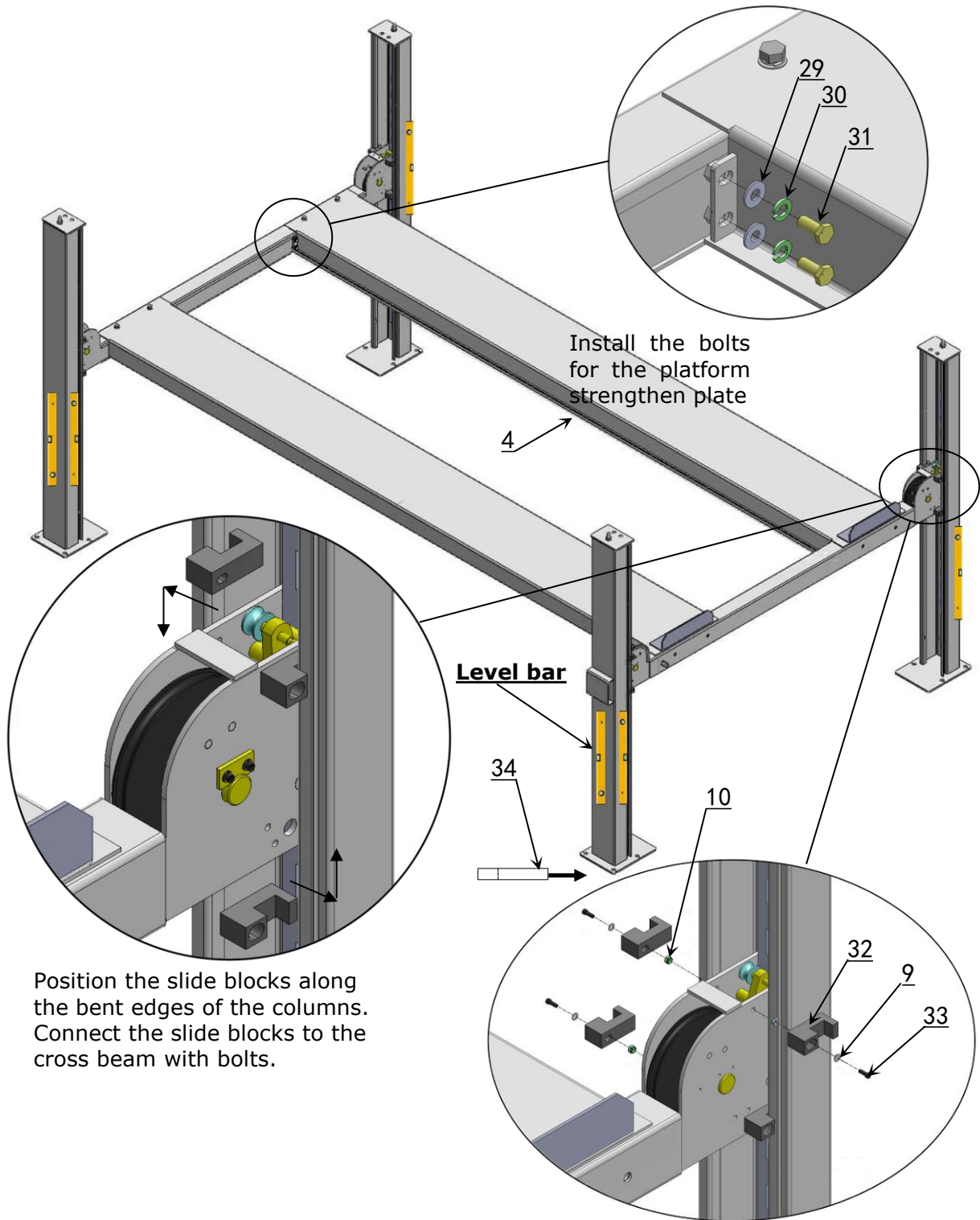


Fig. 18

G. Install offside platform and plastic block, then install the bolts for the platform strengthen plate, check the plumbness of columns with level and adjusting with the shims (**See Fig. 19**).



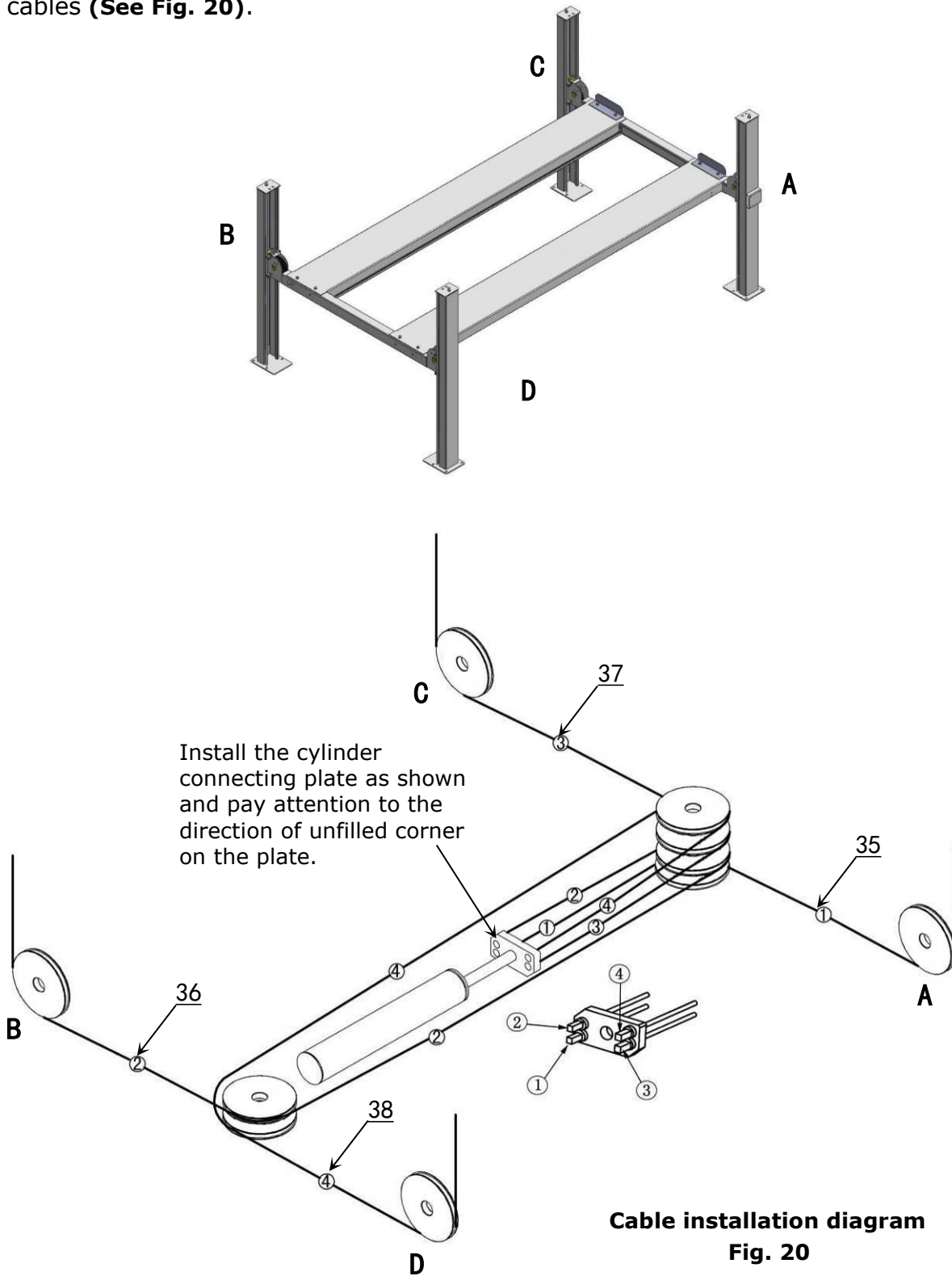
Position the slide blocks along the bent edges of the columns. Connect the slide blocks to the cross beam with bolts.

Note: DO NOT completely tighten the limit slide blocks. Loosen 1/4 lap after tightening.

Fig. 19

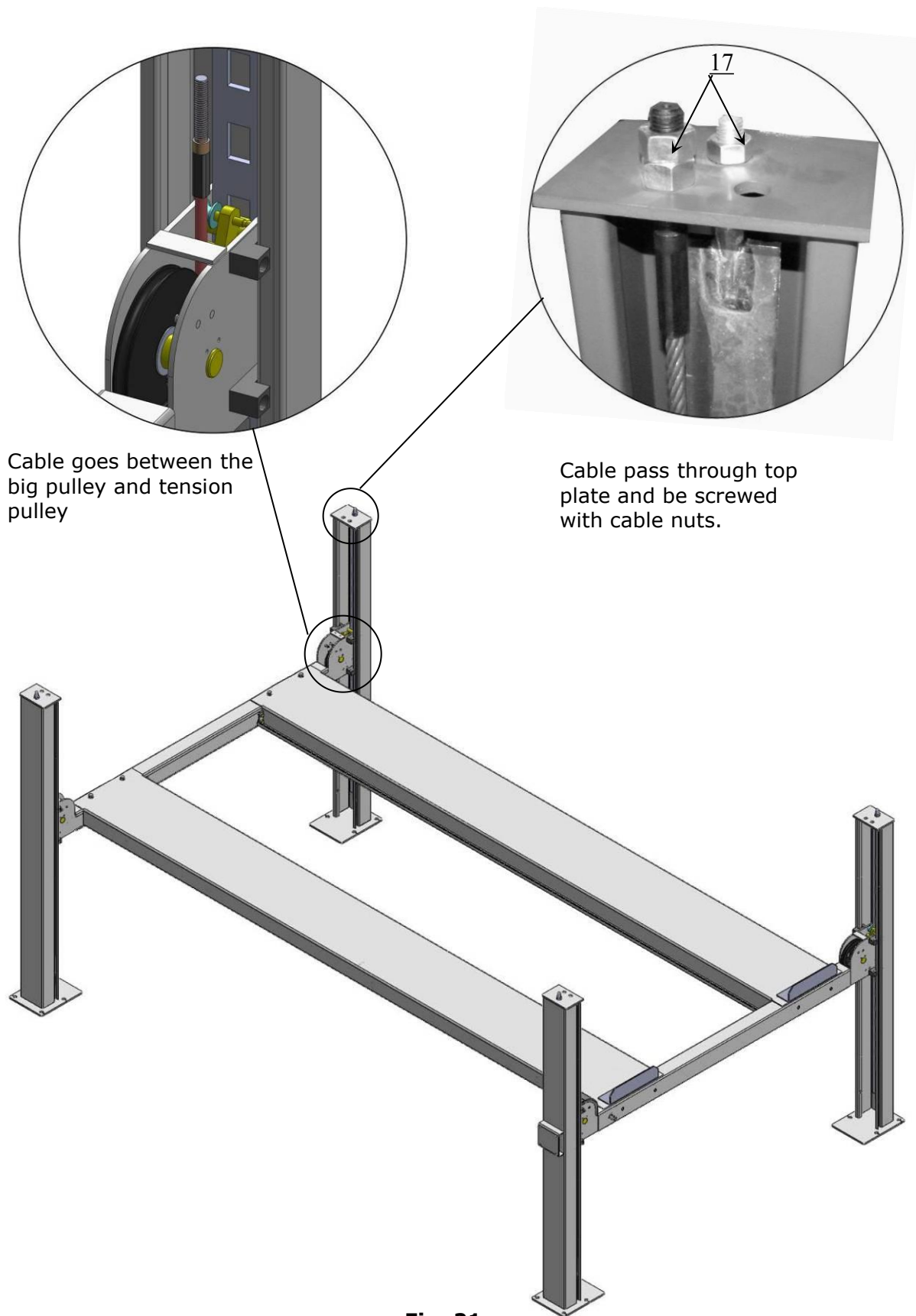
H. Illustration for cable installation

1. Pass through the cables from the platform to the columns according to the number of the cables (See Fig. 20).



| NO. | ① | ② | ③ | ④ |
|--|--------------------|--------------------|----------------|--------------------|
| Cable | | | | |
| Length for 409-HP (inc. connecting fitting) | 3400mm 133 7/4" | 9875mm 388 3/4" | 4980mm 196" | 8285mm 326 1/8" |

2. The cable goes through the cross beam to top plate of columns and be screwed with cable nuts (See Fig. 21).



3. Illustration for platform cables (See Fig. 22).

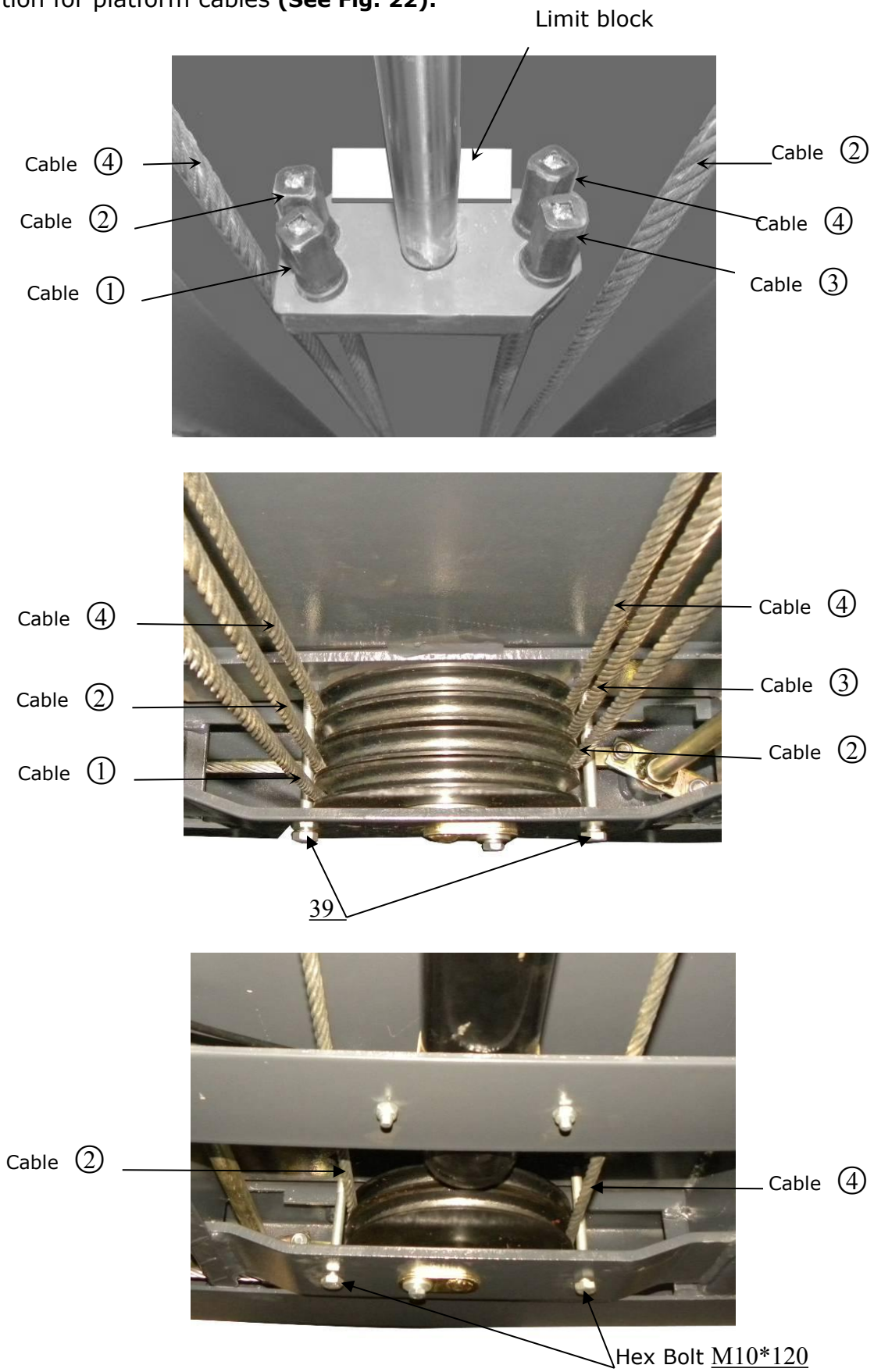


Fig. 22

I. Install connecting bar for safety device and release handle (See Fig. 23).

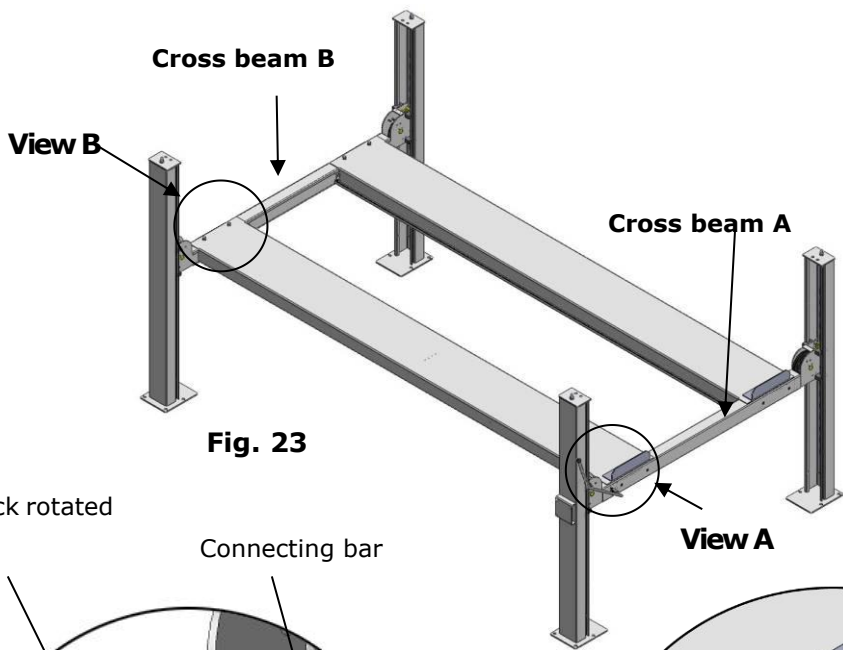
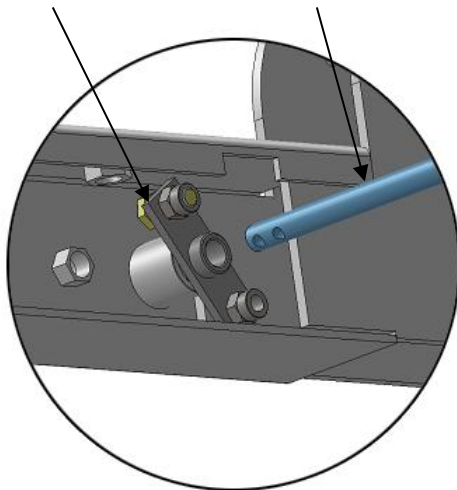


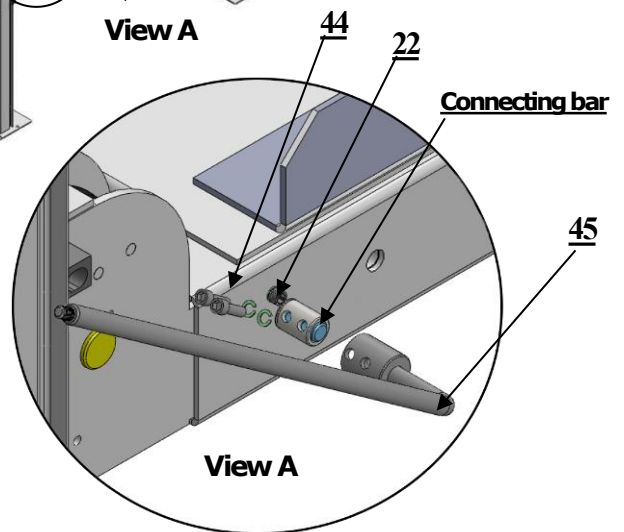
Fig. 23

Safety lock rotated Device

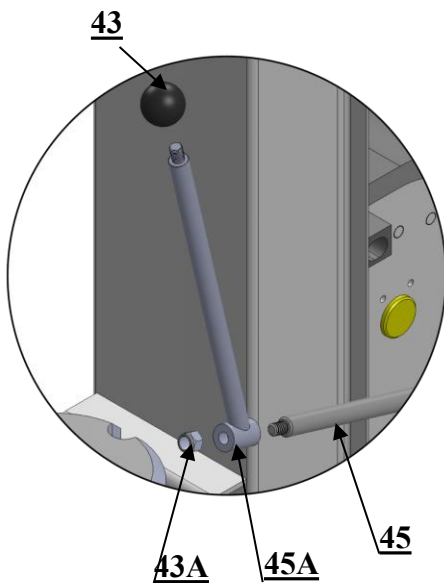
Connecting bar



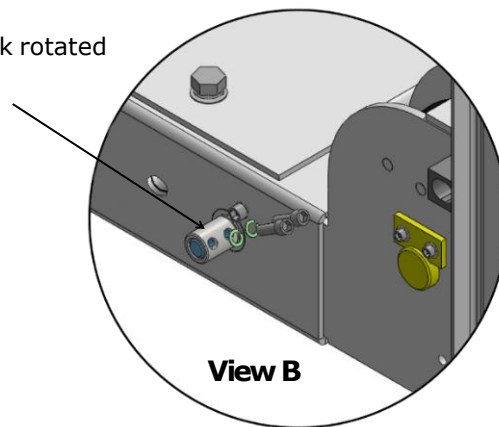
Pass through the connecting bar from the safety lock rotated device of cross beam **A/B**



According to the above diagram, Install lock release handle to the connecting bar with M8*35 bolts and washers on cross beam A.



Safety lock rotated Device

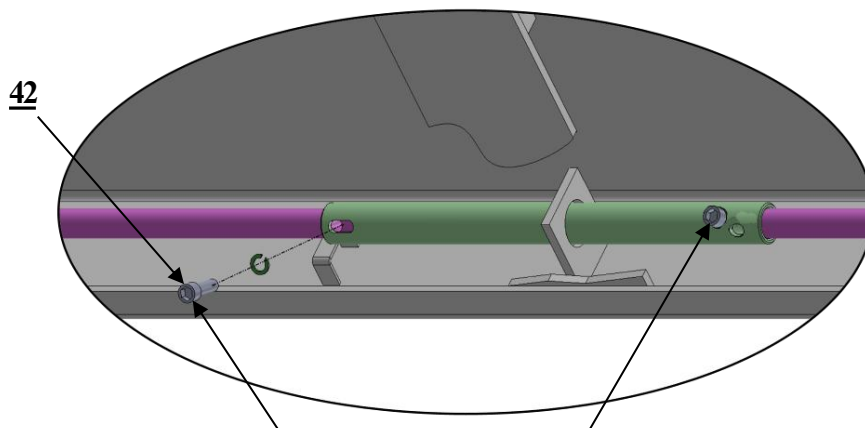
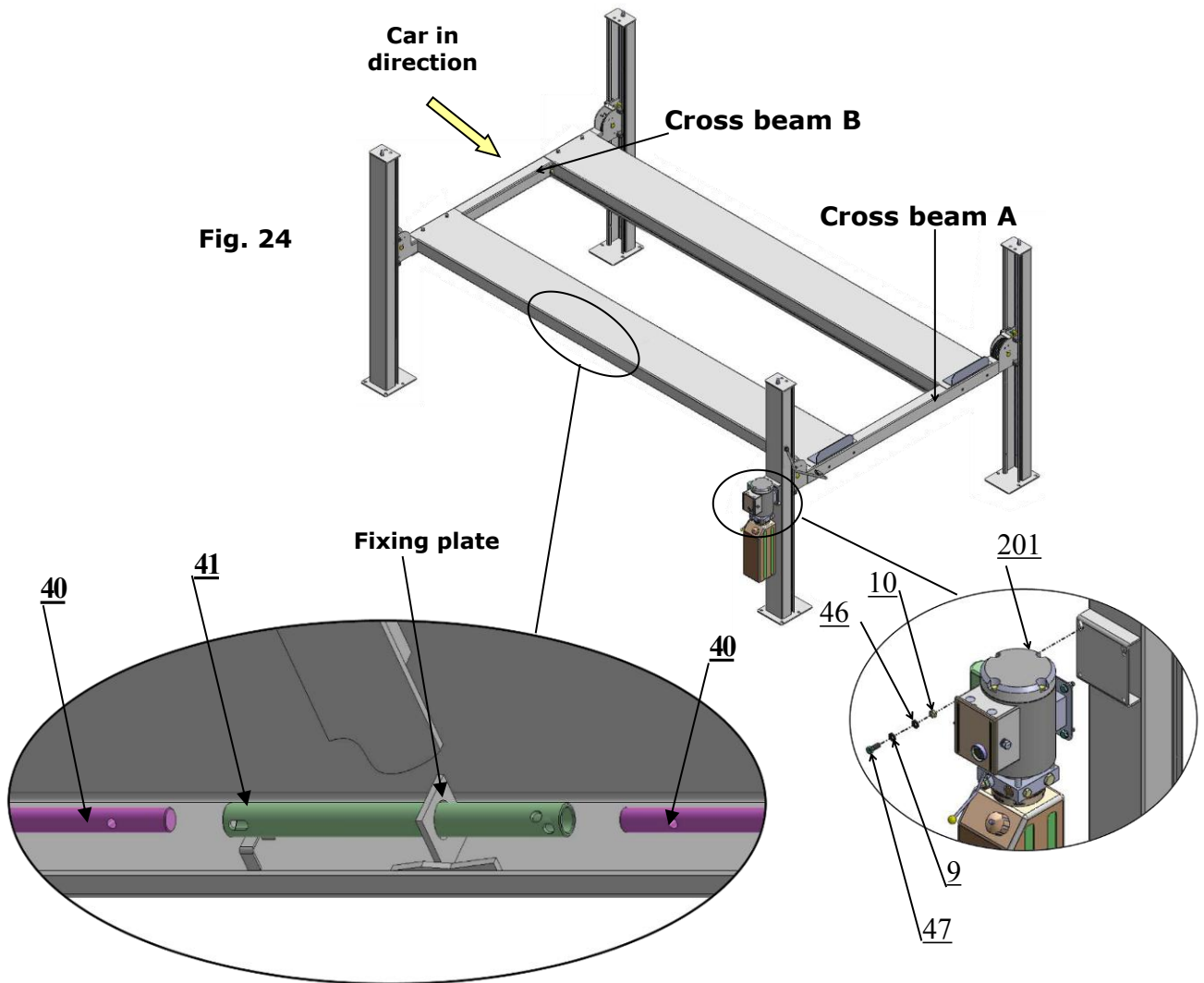


According to the above diagram, fix safety lock connecting bar and safety lock connecting assy. by M8*35 bolts and washers on cross beam B.

J. Install power unit

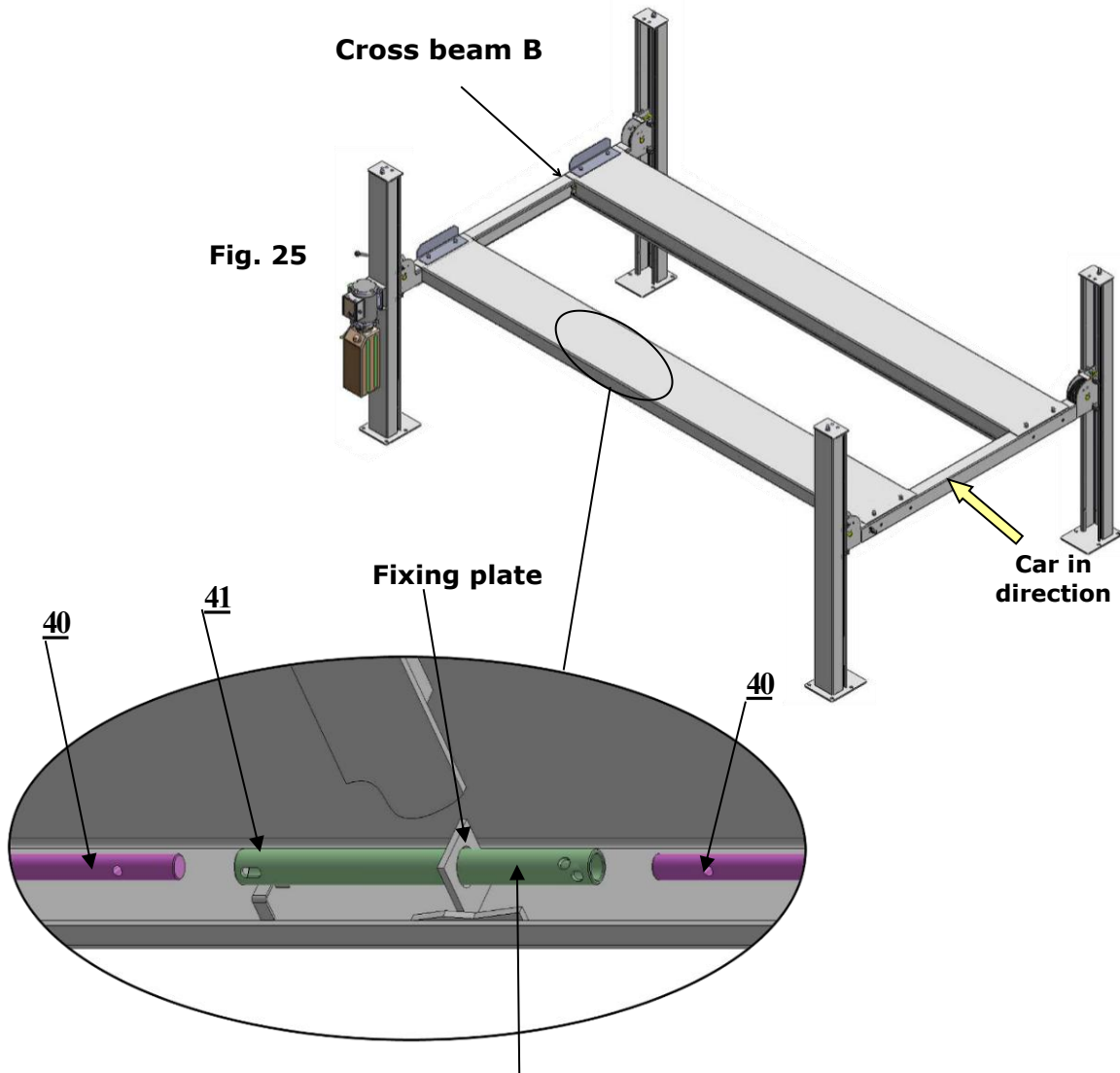
Note: Power unit must be installed near the safety release handle

1. Install Power unit on the cross beam **A**, the installation of Connection tube is as Fig.24

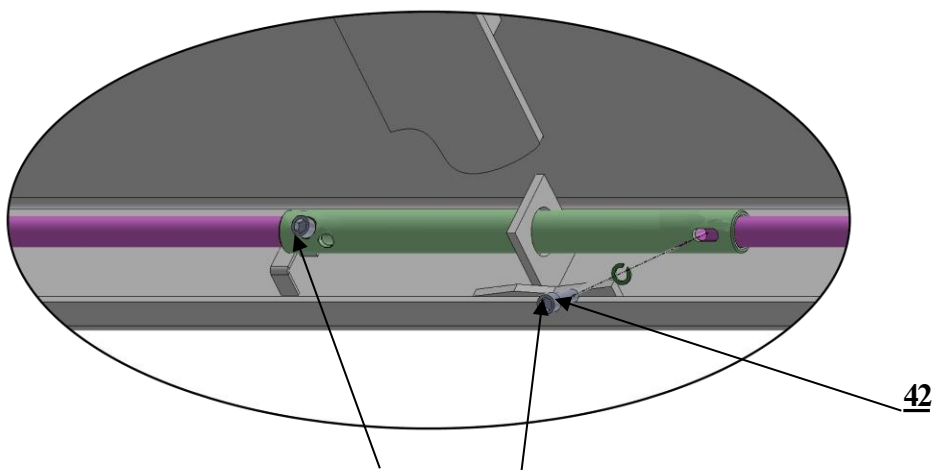


Install M8*25 Socket bolt with washer to these two holes.

2. Install Power unit on the cross beam **B** (See Fig.25.)



Connection tube passes through fixing plate



Install M8*25 Socket bolt with washer to these two holes.

K. Install Hydraulic System

1. For power unit attached to the column of cross beam **A** (See Fig. 26)

Note: Oil hoses connected to oil cylinder must be passed above the cable to avoid the oil hose scratched by cable.

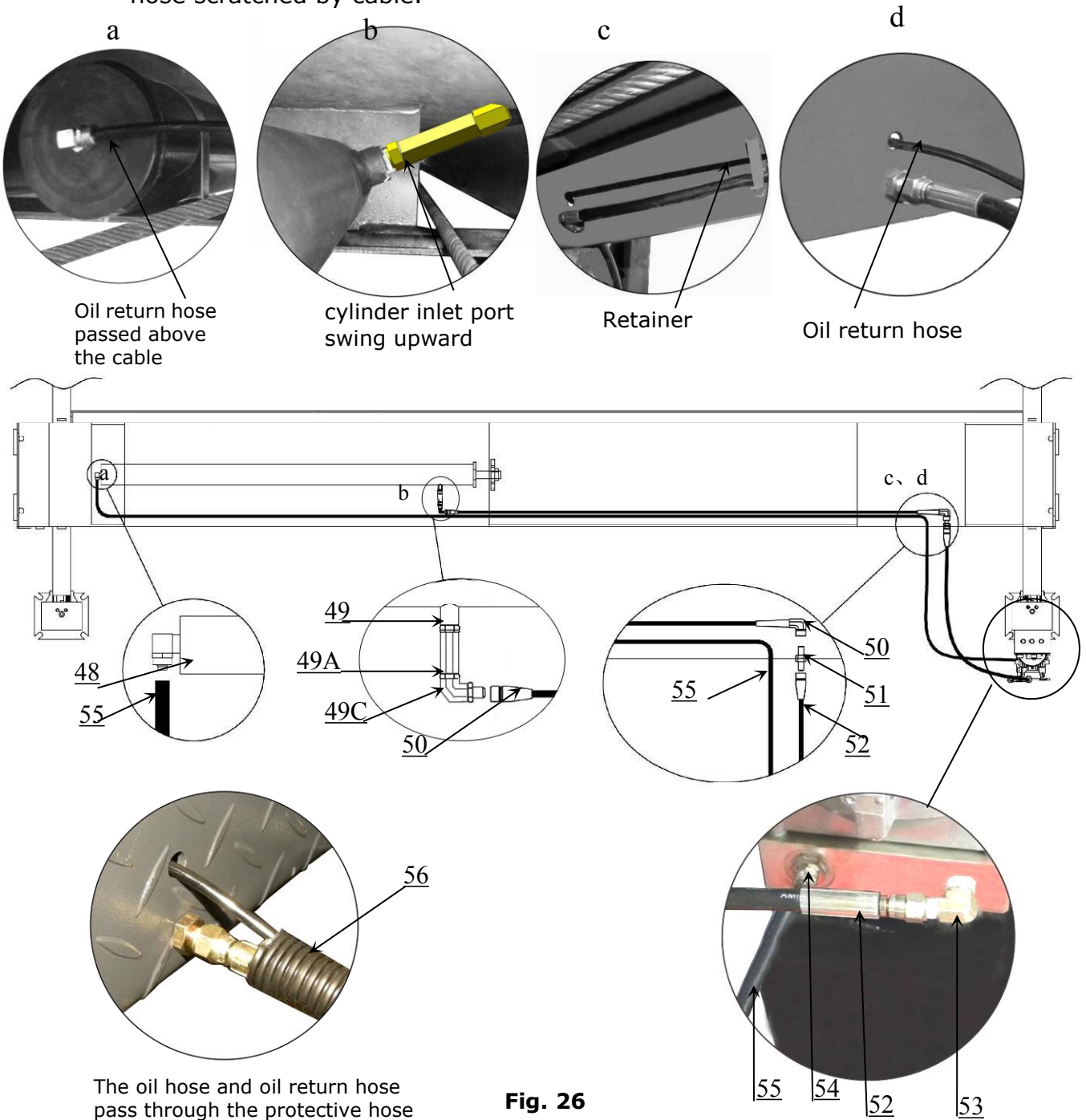


Fig. 26

2. For power unit attached to the column of cross beam **B** (See Fig. 27).

Note: The oil return hose can be adjusted when installation

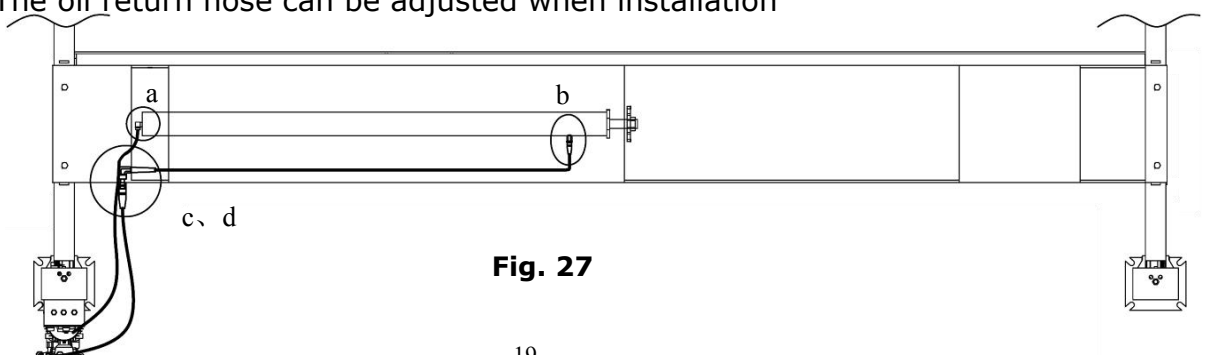


Fig. 27

L. Install Electrical System

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

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

Single phase motor

1. Circuit diagram (See Fig. 28)

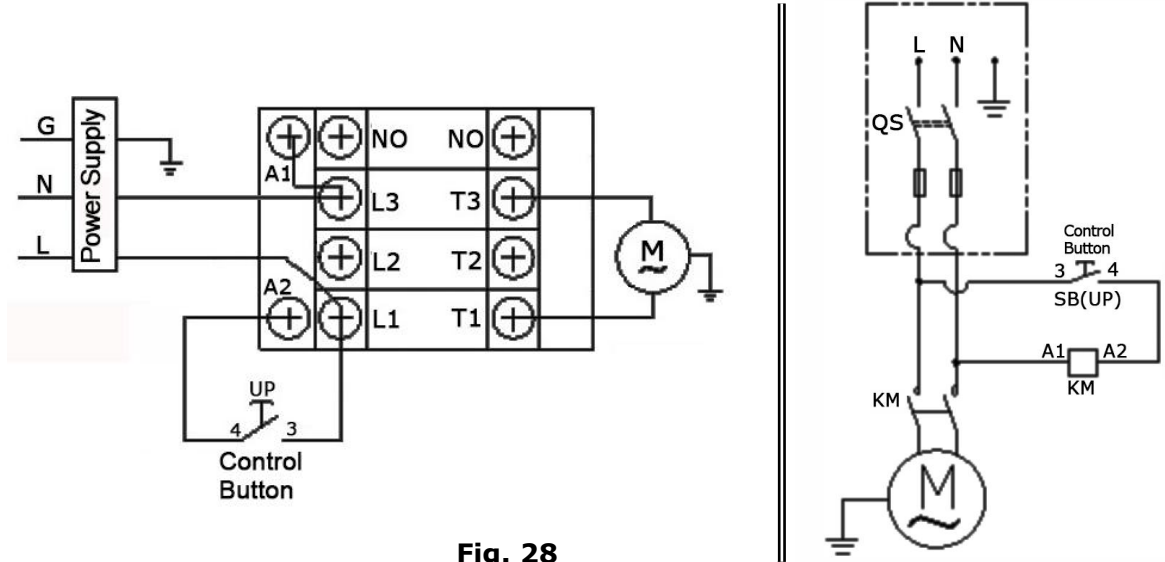


Fig. 28

2. Connection step (See Fig. 29)

Connecting the two power supply wires to terminals of AC contactor marked L1, L3 respectively.

Earth wire (yellow and green wire) is connected with the earth wire terminal of the motor

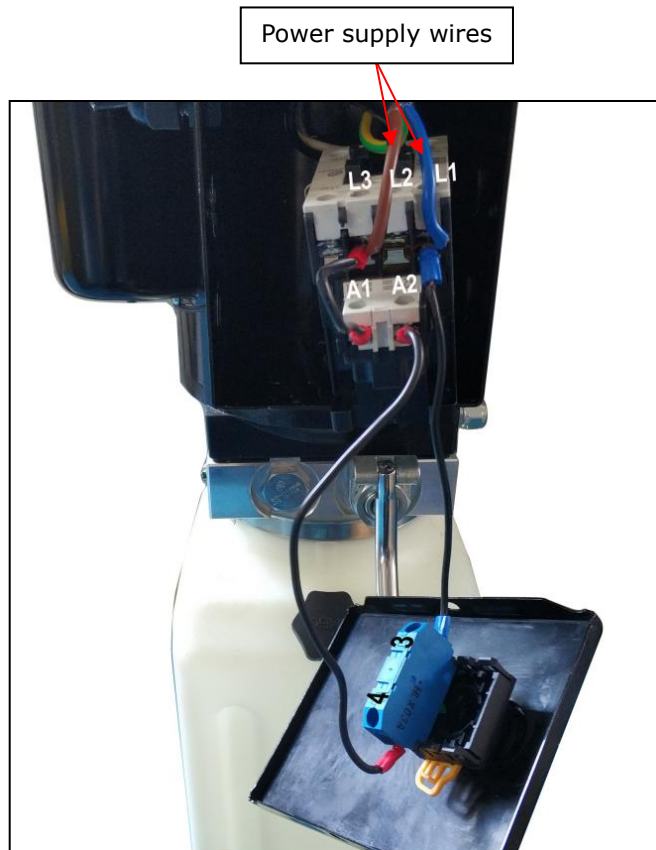


Fig. 29

M. Install spring and safety cover of cross beam (See Fig. 30).

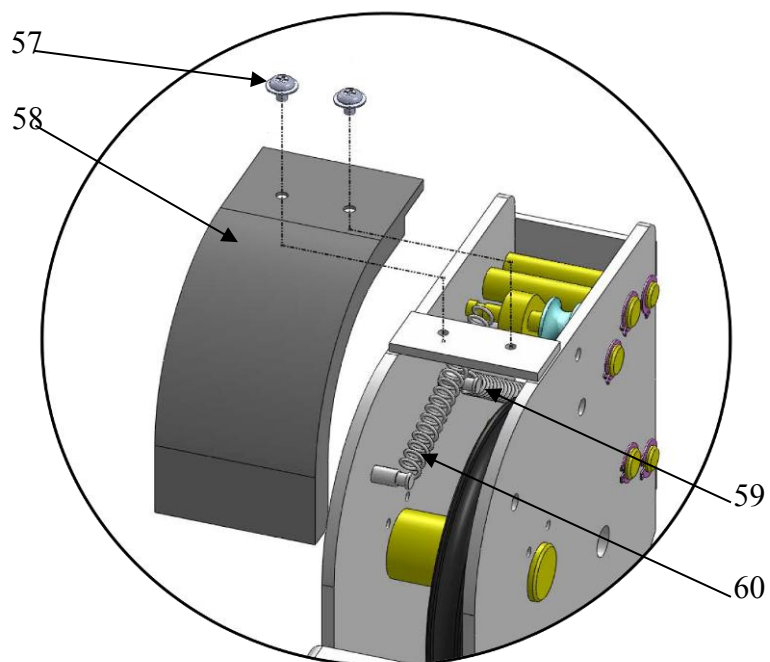


Fig. 30

N. Install drive-in ramp, jack tray and plastic oil pans (See Fig. 31).

According to the below diagram screw up the M16*30 bolts, then attach the drive-in ramp.

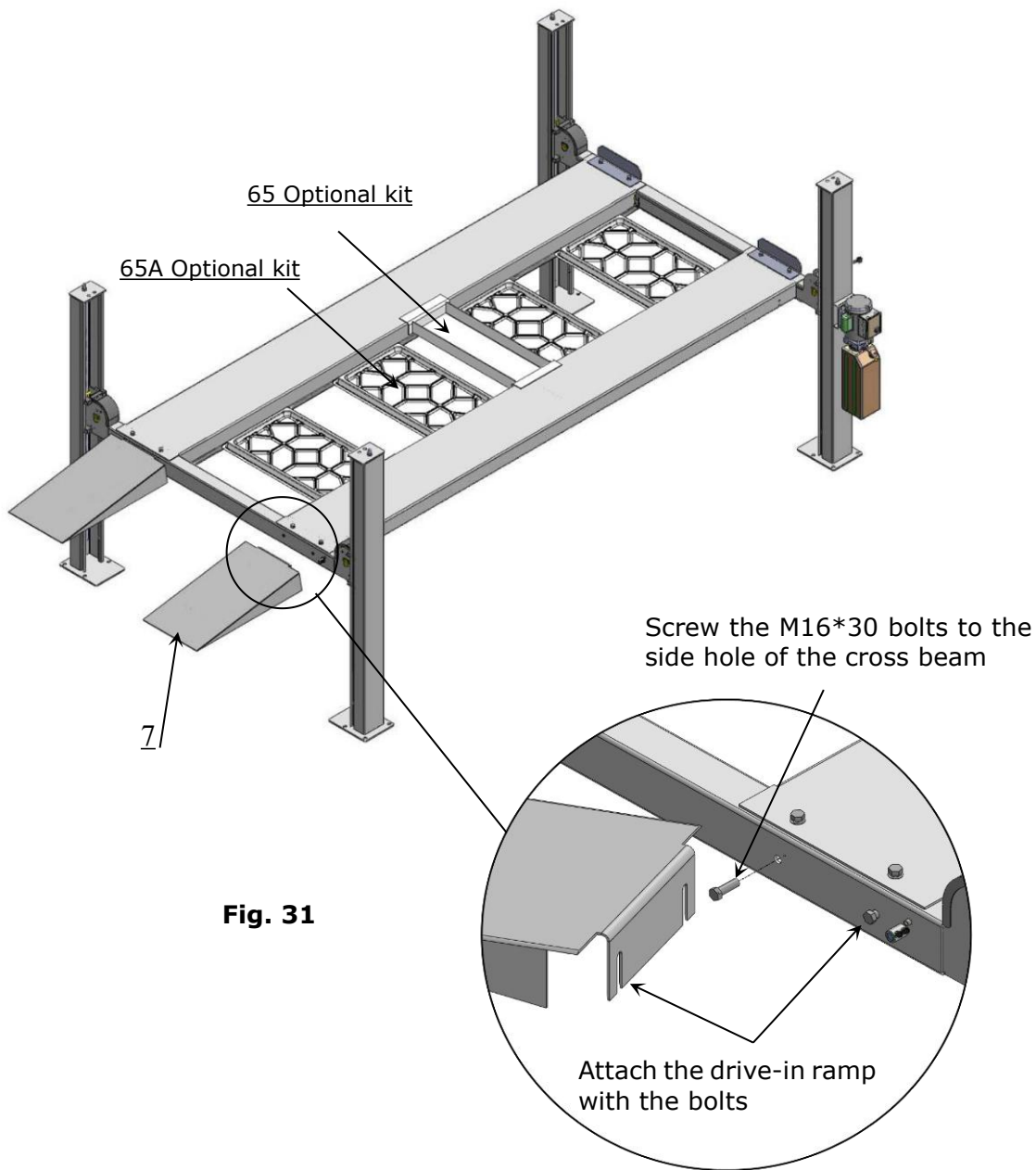


Fig. 31

O. Install Rear wheel stop plates (See Fig. 32)

After driving the vehicle on the lift, take off the drive-in ramp, install rear wheel stop plates to the drive-in ramp position.

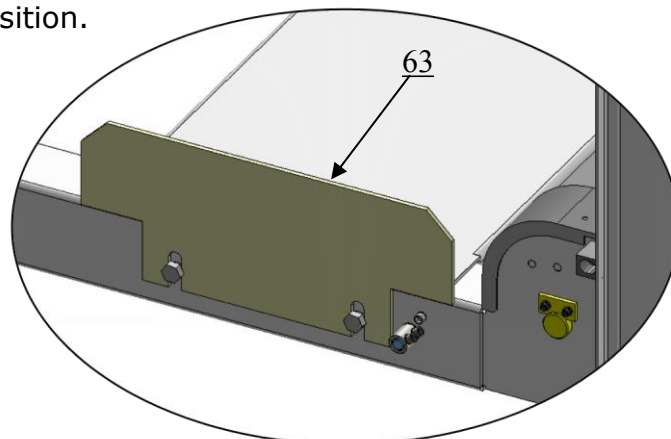


Fig. 32

P. Install Layer Board for Drive in Ramp

Take down the Drive in Ramp, and put it in the platform and layer board. (See Fig. 33)

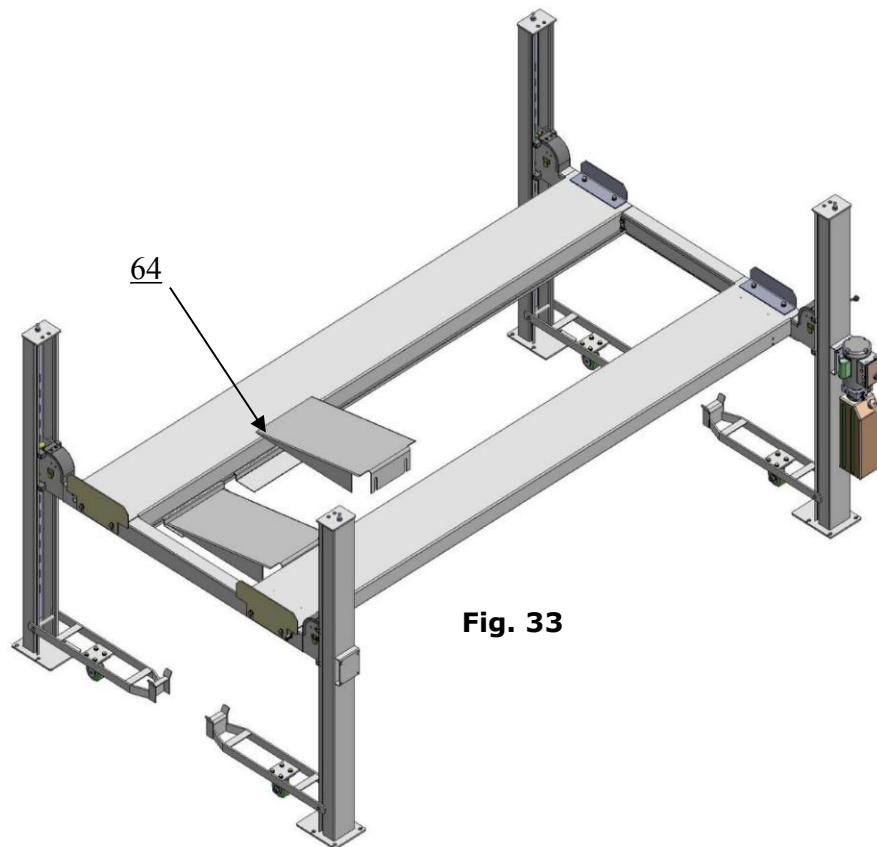


Fig. 33

For optional kits installation.

1. Install optional caster kits or Rolling jack (See Fig. 34)

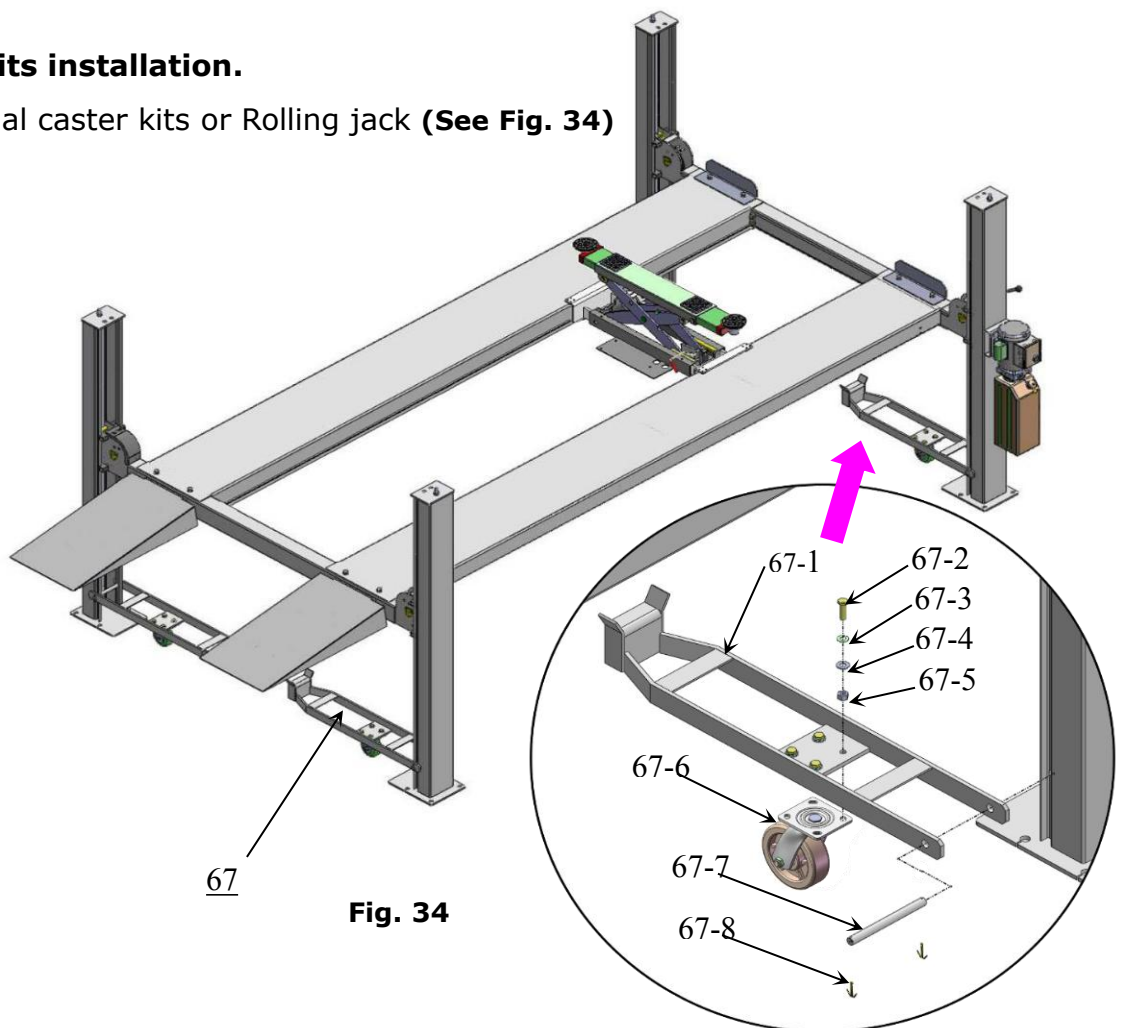


Fig. 34

2. Install optional motor fixing bracket (See Fig. 35, 36).

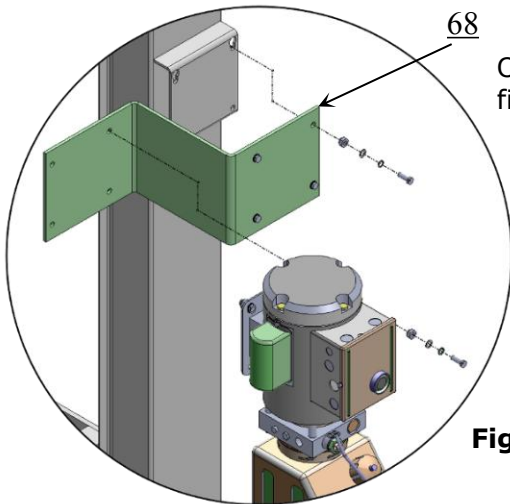


Fig. 35

Motor fixing bracket on cross beam A

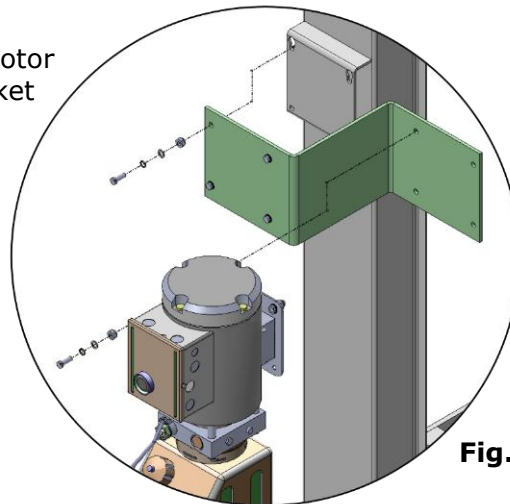


Fig. 36

Motor fixing bracket on cross beam B

Q. Fix the anchor bolts

1. Prepare the anchor bolts (See Fig. 37).

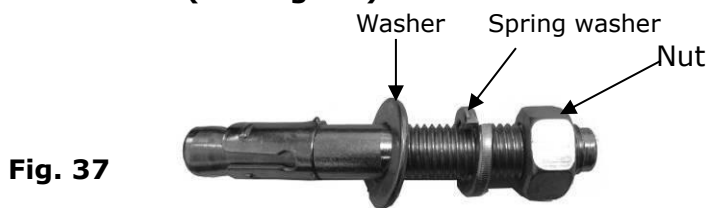


Fig. 37

2. Using the prescribed rotary hammer drill, and drill all the anchor holes and install the anchor bolts. Do not tighten the anchor bolts (See Fig. 38).

Note: The tightening torque for the anchor bolt is 150N.m ,Anchor bolts driven into the ground at least 90mm

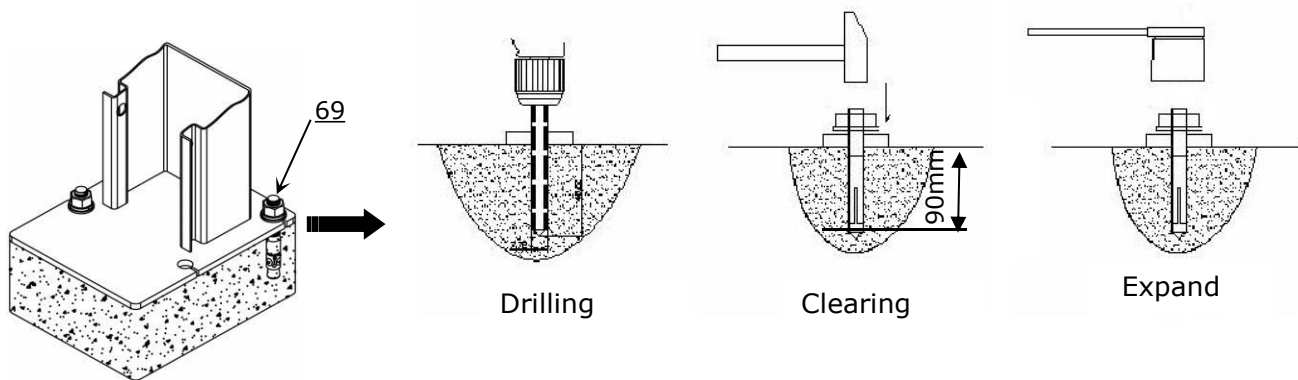


Fig. 38

IV. EXPLODED VIEW

Model 409-HP

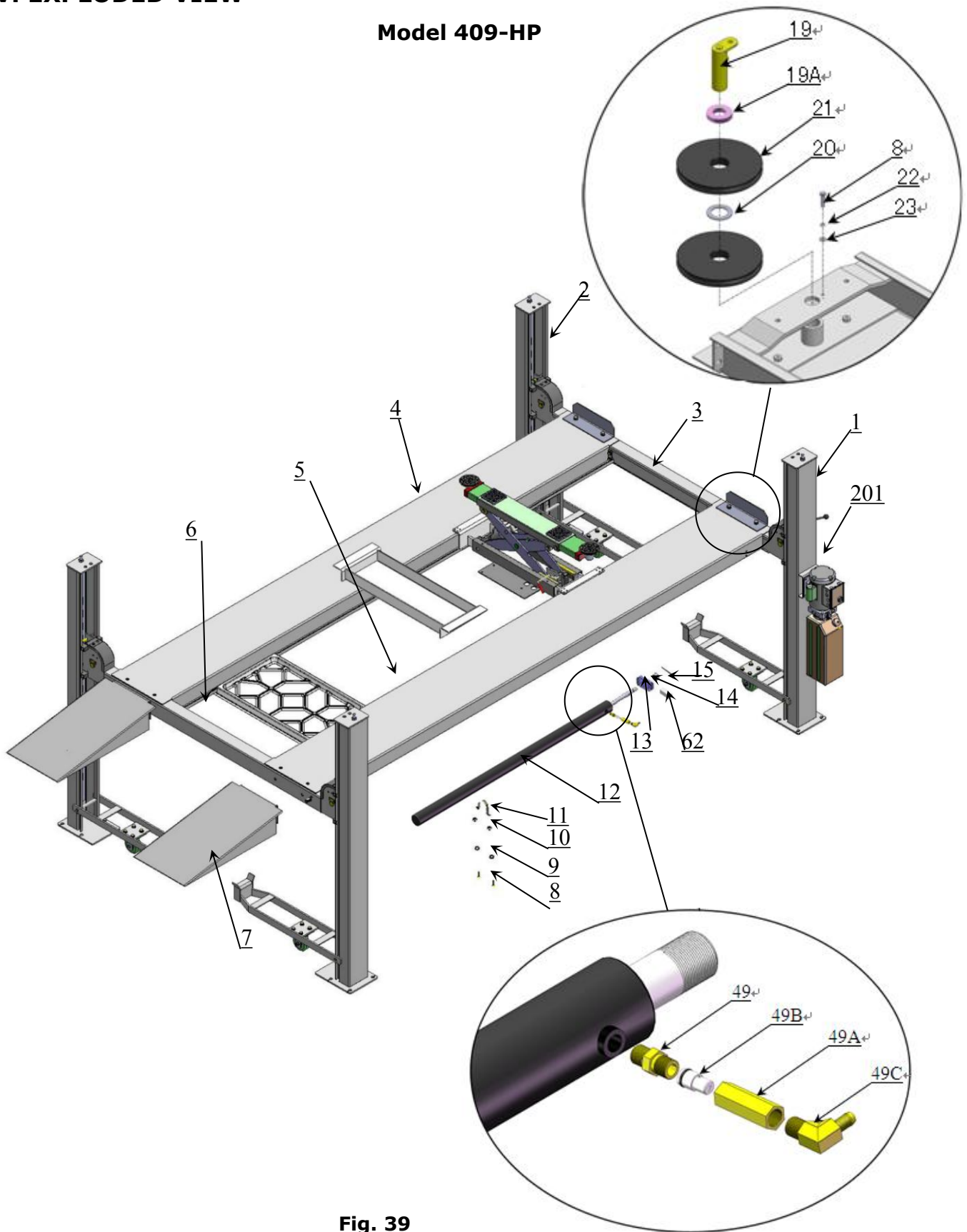


Fig. 39

PARTS LIST FOR MODEL 409-HP

| Item | Part# | Description | Qty. | Note |
|------|--------------|--|------|------|
| 1 | 11410074-01 | Power-side Column | 1 | |
| 2 | 11410075-01 | Offside Column | 3 | |
| 3 | 11410050 | Cross Beam A | 1 | |
| 4 | 11410076-01 | Offside Platform | 1 | |
| 5 | 11410077A-01 | Power-side Platform | 1 | |
| 6 | 11410053 | Cross Beam B | 1 | |
| 7 | 1104233002 | Drive-in ramp | 2 | |
| 8 | 10209043 | Hex Bolt M8*20 | 4 | |
| 9 | 10209033 | Washer φ8 | 28 | |
| 10 | 10209005 | Self locking Nut M8 | 26 | |
| 11 | 11410090 | Cylinder fixed ring | 1 | |
| 12 | 10410070-01 | Cylinder | 1 | |
| 13 | 11420626 | Cable connecting plate | 1 | |
| 14 | 10420014 | Hex Nut M27 | 1 | |
| 15 | 10201005 | Split Pin φ4*50 | 1 | |
| 201 | 071101 | Manual power unit 220V | 1or1 | |
| | 071109 | Manual power unit 110V | | |
| 17 | 10420175A | Hex nut M20 | 16 | |
| 18 | 11410073-01 | Safety ladder | 4 | |
| 19 | 11420022A | Pulley pin | 2 | |
| 19A | 10410106 | Cushion tube φ60*12*13 | 1 | |
| 20 | 10420023A | Washer φ36*φ65*3 | 13 | |
| 21 | 11420024B | Pulley | 10 | |
| 22 | 10209034 | Lock washer φ8 | 10 | |
| 23 | 10420144 | Washer φ8*φ25*3 | 2 | |
| 24 | 10410013 | Hex Bolt M16*30 | 8 | |
| 25 | 10420137 | Lock washer φ16 | 8 | |
| 26 | 10420029 | Washer φ16 | 8 | |
| 27 | 10410014 | Hex Bolt M16*35 | 4 | |
| 28 | 11410015 | Tire stop plate | 2 | |
| 29 | 10206006 | Washer φ12 | 12 | |
| 30 | 10420026 | Lock washer φ12 | 8 | |
| 31 | 10410105 | Hex Bolt M12*20 (grade 8.8) | 8 | |
| 32 | 10410016A | Slide block 81*38*38 | 16 | |
| 33 | 10410017 | Socket bolt M8*40 | 16 | |
| 34 | 10201090 | Shim(2mm) | 20 | |
| | 10620065 | Shim(1mm) | 20 | |
| 35 | 10410171-01 | ① Cable φ9.52*3400mm | 1 | |
| 36 | 10410172-01 | ② Cable φ9.52*9875mm | 1 | |
| 37 | 10410170-01 | ③ Cable φ9.52*4980mm | 1 | |
| 38 | 10410169-01 | ④ Cable φ9.52*8285mm | 1 | |
| 39 | 10410167 | Hex Bolt M10*120 | 4 | |
| 40 | 11410069-01 | Connecting bar for safety device φ19*2410mm | 2 | |
| 41 | 11410024 | Connecting tube | 1 | |

| Item | Part# | Description | Qty. | Note |
|------|-------------|-----------------------------------|---------------|------|
| 42 | 10209032 | Socket bolt M8*25 | 4 | |
| 43 | 10217005 | Plastic ball M10 | 1 | |
| 43A | 10209056 | Self locking Nut M10 | 1 | |
| 44 | 10410025 | Socket bolt M8*35 | 4 | |
| 45 | 11410026 | Safety release handle | 1 | |
| 45A | 11410100 | Extension release handle assy | 1 | |
| 46 | 10209004 | Rubber ring φ8*φ20*3 | 4 | |
| 47 | 10209003 | Hex Bolt M8*25 | 8 | |
| 48 | 10420166 | 90° Screw Fitting 6*8 | 1 | |
| 49 | 11420243 | Straight Fitting for cylinder | 1 | |
| 49A | 10420245 | Straight Fitting | 1 | |
| 49B | 10209119 | compensation valve | 1 | |
| 49C | 10201020 | 90° fitting | 1 | |
| 50 | 10410137-01 | Oil hose 1/4*2250mm straight+90° | 1 | |
| 51 | 10420120 | Extend straight fitting with nut | 1 | |
| 52 | 10207026 | Oil hose L=1520mm double straight | 1 | |
| 53 | 10209060 | 90° Fitting for power unit | 1 | |
| 54 | 10420095 | Straight screw fitting 6*4 | 1 | |
| 55 | 10410072-01 | Oil return hose L=6200mm | 1 | |
| 56 | 10410036 | Protective hose φ20*1*1500mm | 1 | |
| 57 | 10209145A | Cap head bolt with washer M6*12 | 8 | |
| 58 | 10410029 | Plastic cover for cross beam | 4 | |
| 59 | 10410146 | Spring φ14*2.0*75 | 4 | |
| 60 | 10420033 | Spring φ14*1.8*100 | 4 | |
| 61 | 10410502 | Parts box | 1 | |
| 62 | 10420239 | Limit block | 1 | |
| 63 | 11410094 | Rear wheel stop plate | 2 | |
| 64 | 11410101 | Layer board for drive in ramp | 2 | |
| 69 | 10209059 | Anchor bolt 3/4*5-1/2 | 16 | |
| 65 | 40809 | Jack tray | 1 | |
| 65A | 40807 | Oil tray | 1 set (4 pcs) | |
| 66 | 96600005 | Rolling Jack J6H | 1 | |
| 67 | 40801 | Mobile bracket assy. | 1 set (4 pcs) | |
| 68 | 40802 | Fixing plate for motor | 1 | |
| 67-1 | 11410042A | Support bracket | 4 | |
| 67-2 | 10209125 | Hex bolt M10*30 | 16 | |
| 67-3 | 10209039 | Lock washer φ10 | 16 | |
| 67-4 | 10209022 | Washer φ10 | 16 | |
| 67-5 | 10209021 | Hex nut M10 | 16 | |
| 67-6 | 10410035 | Plastic wheel 6 inch | 4 | |
| 67-7 | 11410034 | Connecting pin φ19*216 | 4 | |
| 67-8 | 10209012 | Hair Pin φ3.2 | 8 | |

4.1 CYLINDERS EXPLODED VIEW

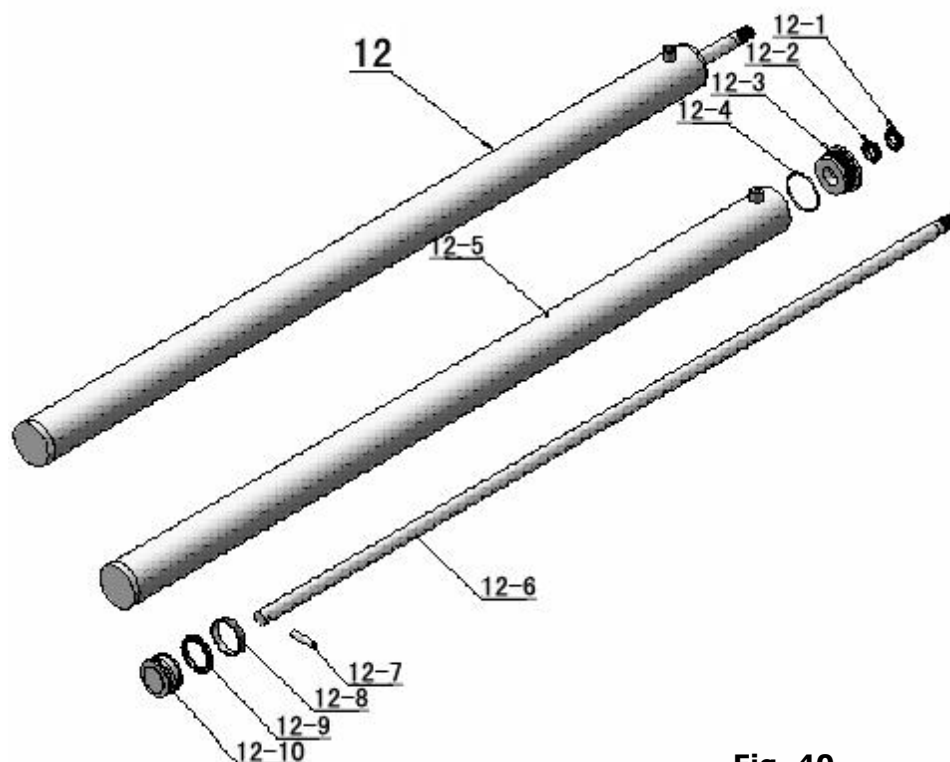


Fig. 40

| Item | Part# | Description | Qty. | Note |
|-------|-------------|---------------|------|------|
| 12-1 | 10420059 | Dust Ring | 1 | |
| 12-2 | 10420060 | Y- Ring ISI | 1 | |
| 12-3 | 11410082 | Head Cap | 1 | |
| 12-4 | 10410083 | O- Ring | 1 | |
| 12-5 | 11410078-01 | Bore Weldment | 1 | |
| 12-6 | 11410079-01 | Piston Rod | 1 | |
| 12-7 | 11410085 | Pin | 1 | |
| 12-8 | 10410086 | Support Ring | 1 | |
| 12-9 | 10410087 | Y- Ring OSI | 1 | |
| 12-10 | 11410088 | Piston | 1 | |

4.2 CROSS BEAM EXPLODED VIEW

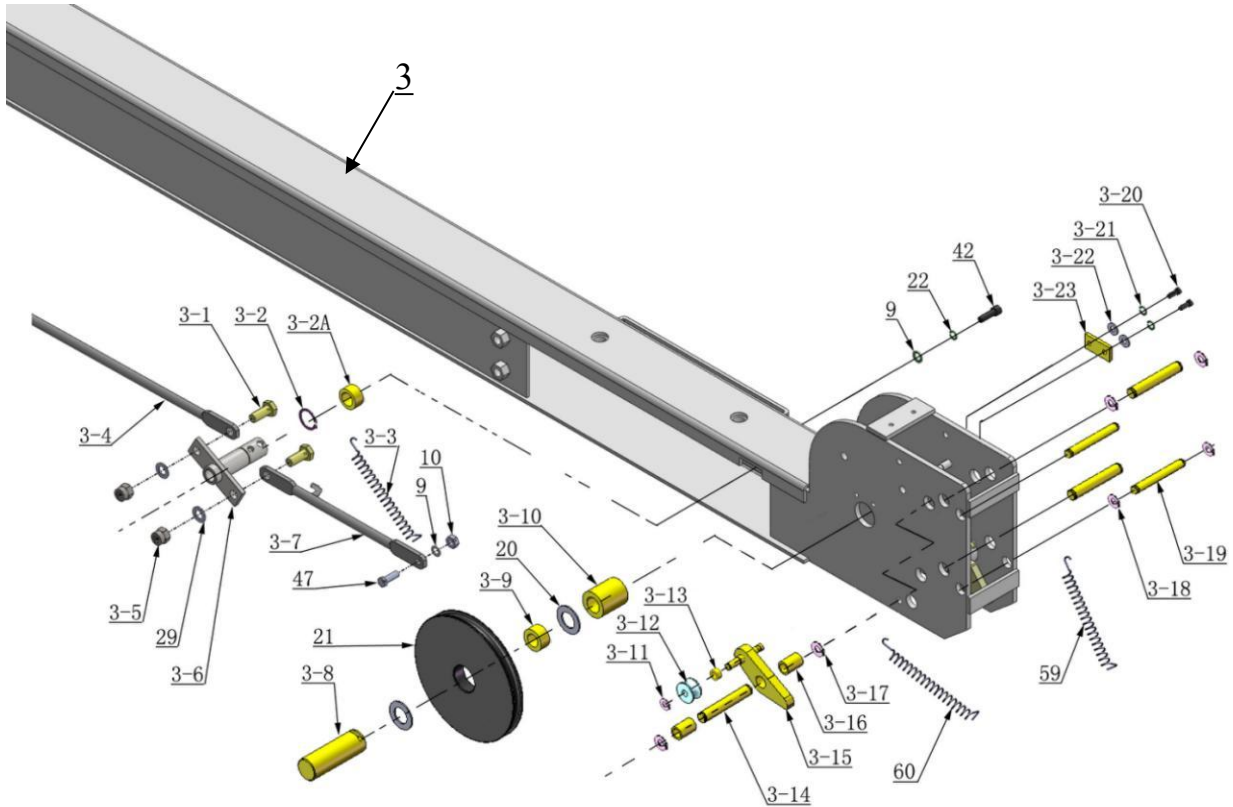


Fig.41

| Item | Part# | Description | QTY. | Note |
|------|-----------|--|-------|------|
| 3-1 | 10206024 | Hex bolt M12*25 | 4 | |
| 3-2 | 10206032 | Snap ring $\phi 25$ | 2 | |
| 3-2A | 10217020 | Bronze bush $\phi 31 * \phi 25.1 * 16$ | 2 | |
| 3-3 | 10410099 | Spring $\phi 14 * \phi 2.5 * 100$ | 2 | |
| 3-4 | 11410063 | Connecting bar for safety lock | 2 | |
| 3-5 | 10206023 | Self locking Nut M12 | 4 | |
| 3-6 | 11410032 | Safety lock rotated device | 2 | |
| 3-7 | 11410064 | Connecting bar for safety lock | 2 | |
| 3-8 | 11420041A | Pulley Pin | 4 | |
| 3-9 | 10420132A | Pulley Bush $\phi 41.3 * \phi 35.1 * 20$ | 10 | |
| 3-10 | 11420040A | Pulley pin sleeve | 4 | |
| 3-11 | 10209010 | Snap ring $\phi 10$ | 4 | |
| 3-12 | 10420035 | Tension pulley(white) | 4 | |
| 3-13 | 11420174 | Spacer | 4 | |
| 3-14 | 11420171 | Pin | 12 | |
| 3-15 | 11420175 | Slack-cable safety lock (Left & Right) | 2/ea. | |
| 3-16 | 11420172 | Pin Bush For Slack-cable safety lock | 8 | |
| 3-17 | 10206019 | Snap ring $\phi 19$ | 24 | |
| 3-18 | 10420037 | Snap ring $\phi 16$ | 16 | |
| 3-19 | 11420038 | Pin | 8 | |
| 3-20 | 10420138 | Socket Bolt M6*16 | 8 | |
| 3-21 | 10209149 | Lock washer $\phi 6$ | 8 | |
| 3-22 | 10420045 | Washer $\phi 6$ | 8 | |
| 3-23 | 11420044 | Stop block | 4 | |

4.3 Manual power unit 110V/60Hz (071109)

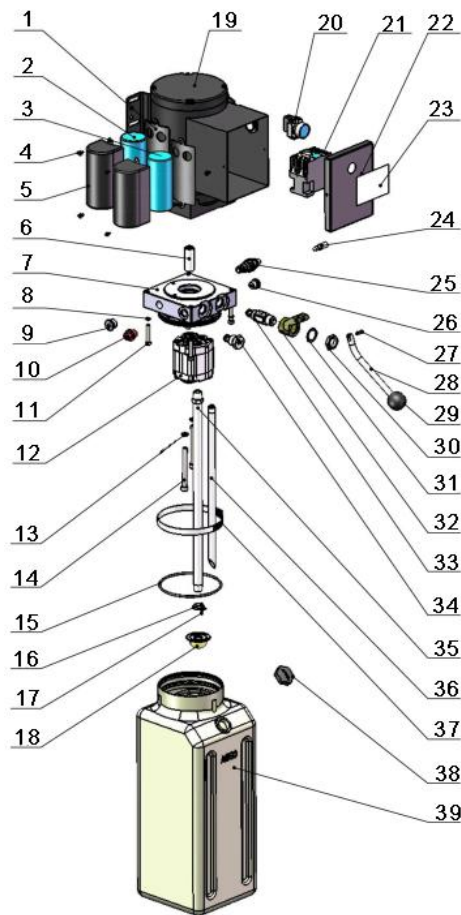


Fig.42

Parts list

| Item | Part# | Description | Qty. | Item | Part# | Description | Qty. |
|------|----------|-----------------------------|------|------|----------|--------------------------|------|
| 1 | 81400180 | Rubber Pad | 2 | 21 | 81400559 | AC connector | 1 |
| 2 | 81400250 | Starting capacitor | 1 | 22 | 81400287 | Motor terminal box cover | 1 |
| 3 | 81400200 | Running capacitor | 1 | 23 | 71111216 | AMGO power unit label | 1 |
| 4 | 10420148 | Cap Head Bolt with washer | 4 | 24 | 81400560 | Throttle valve | 1 |
| 5 | 81400066 | Cover of Motor Terminal Box | 2 | 25 | 81400266 | Relief valve | 1 |
| 6 | 81400363 | Motor Connecting Shaft | 1 | 26 | 81400284 | Inner hex iron plug | 1 |
| 7 | 80101013 | Manifold block | 1 | 27 | 10720118 | Elastic pin | 1 |
| 8 | 10209149 | Washer | 4 | 28 | 81400451 | Release valve handle | 1 |
| 9 | 81400276 | Iron plug | 1 | 29 | 10209020 | Plastic ball for handle | 1 |
| 10 | 81400259 | Red rubber plug | 1 | 30 | 81400421 | Release valve nut | 1 |
| 11 | 85090142 | Socket bolt | 4 | 31 | 81400422 | Self lock washer | 1 |
| 12 | 81400312 | Gear pump | 1 | 32 | 81400449 | Valve Seat(Low) | 1 |
| 13 | 10209034 | Washer | 2 | 33 | 81400567 | Release Valve | 1 |
| 14 | 81400295 | Socket bolt | 2 | 34 | 81400566 | Check Valve | 1 |
| 15 | 81400365 | O ring | 1 | 35 | 81400288 | Oil suction pipe | 1 |
| 16 | 10209152 | Ties | 1 | 36 | 81400289 | Oil return pipe | 1 |
| 17 | 85090167 | Magnet | 1 | 37 | 81400364 | Clamp(stainless steel) | 1 |
| 18 | 81400290 | Filter net | 1 | 38 | 81400319 | Oil tank cap | 1 |
| 19 | 81400412 | Steel Motor | 1 | 39 | 81400275 | Oil tank | 1 |
| 20 | 10420070 | Push button | 1 | | | | |

Illustration of hydraulic valve for power unit

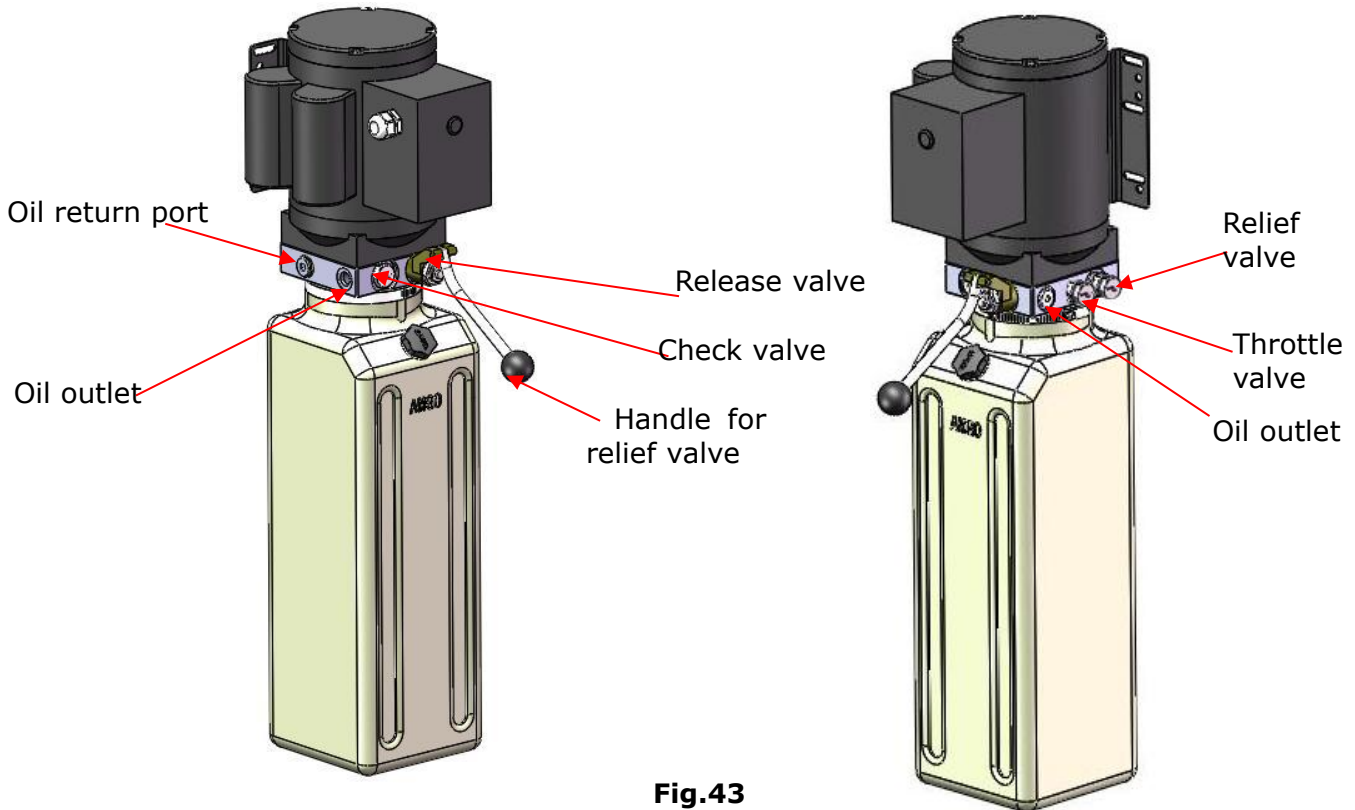
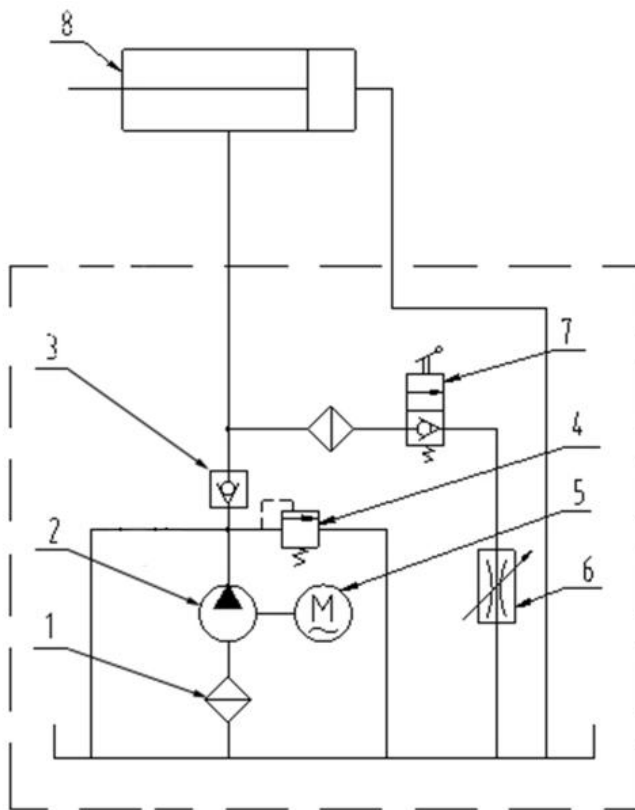


Fig.43

V. TEST RUN

1. Fill the reservoir with Hydraulic Oil (**Note:** In consideration of Power Unit's durability, please use **Hydraulic Oil 46#**).
2. Press the control button, the cables will be strained. Check whether the cables match the pulley. Make sure the cables are not across.
3. Press the release valve handle to lock the cross-beam to the safety ladders, and then adjust the platforms to be level by adjusting the nuts of safety ladders.
4. Adjust the cable fitting hex nuts to make platforms and four safety locks work synchronously. You need to run the lift up and down for several times, meanwhile do the synchronous adjustment till the four safety devices can lock and release at the same time.
5. Adjust the clearance between the column and the plastic slider of cross-beam to about 2mm, Do not tighten the bolts of the sliding block, let the sliding block can be turned after installing the bolts
6. After finishing the above adjustment, test running the lift with load. Run the lift with platforms in low position first, make sure the platforms can rise and lower synchronously and the safety device can lock and release synchronously. And then test run the lift to the top completely. If there are anything improper, repeat the above adjustment.

Circuit Diagram of Hydraulic System



**N
O
T
E**

1. Filter
2. Gear pump
3. Check valve
4. Relief Valve
5. Motor
6. Throttle Valve
7. Release Valve
8. Cylinder For Four-post lift

Fig.44

VI. OPERATION INSTRUCTIONS

To lift vehicle

1. Keep clear of environment near the lift.
2. Drive vehicle to the platform and put on the brake.
3. Take off the drive-in ramp, install rear wheel stop plates to the drive-in ramp position.
4. Turn on the power and press the control button, raise the lift to the working position.

Note: make sure the vehicle is steady when the lift is raised.

5. Press the release valve handle to lock the lift in the safety position. Make sure the safety device is locked at the same height.

To lower vehicle

1. Be sure the clearance of around and under the lift, only leaving operator in lift area.
2. Press the control button, the lift will be raised for 3-5 seconds, and then press the safety release handle, make sure the safety device released, press the release valve handle by the other hand, then the lift starts being lowered automatically.
3. Drive away the vehicle when the lift is lowered to the lowest position. Take off the rear wheel stop plates and install drive-in ramp, then left the lift.
4. Turn off the power.

VII. MAINTENANCE SCHEDULE

Monthly:

1. Lubricate cable with lubricant;
2. Check all cable connection, bolts and pins to insure proper mounting;
3. Make a visual inspection of all hydraulic hoses/lines for possible wear or leakage;
4. Lubricate all rollers, safety devices with 90wt. gear oil or equivalent.

Every six months:

1. Make a visual inspection of all moving parts for possible wear, interference or damage.
2. Check and adjust as necessary, equalizer tension to insure level lifting.
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.

VIII. TROUBLE SHOOTING

| TROUBLE | CAUSE | REMEDY |
|---------------------------------------|---|---|
| Motor does not run | <ol style="list-style-type: none"> 1. Start Button does not work 2. Wiring connections are not in good condition 3. Motor burned out 4. AC contactor burned out | <ol style="list-style-type: none"> 1. Replace start button 2. Repair all wiring connections 3. Repair or replace motor 4. Replace AC contactor |
| Motor runs but the lift is not raised | <ol style="list-style-type: none"> 1. Motor runs in reverse rotation 2. Release valve in damage 3. Gear pump in damage 4. Relief valve or check valve in damage 5. Low oil level | <ol style="list-style-type: none"> 1. Reverse two power wire 2. Repair or replace 3. Repair or replace 4. Repair or replace 5. 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 too slow | <ol style="list-style-type: none"> 1. Oil line is jammed 2. Motor running on low voltage 3. Oil mixed with Air 4. Pump leaks 5. Overload lifting | <ol style="list-style-type: none"> 1. Clean the oil line 2. Check electrical system 3. Fill tank 4. Repair or replace pump 5. Check load |
| Lift cannot lower | <ol style="list-style-type: none"> 1. Safety device are not in activated 2. Release valve damaged | <ol style="list-style-type: none"> 1. Operate again 2. Repair or replace |

IX. LIFT DISPOSAL:

When the car lift cannot meet the requirements for normal use and needs to be disposed, it should follow local laws and regulations.

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