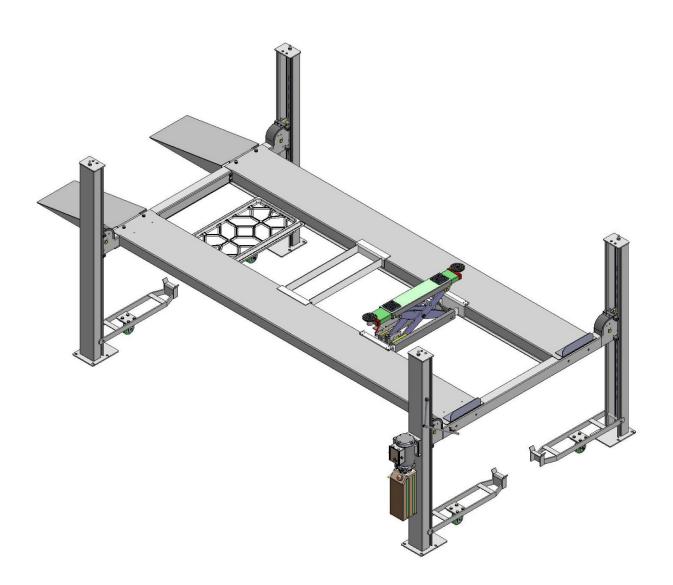
Original



Installation And Service Manual



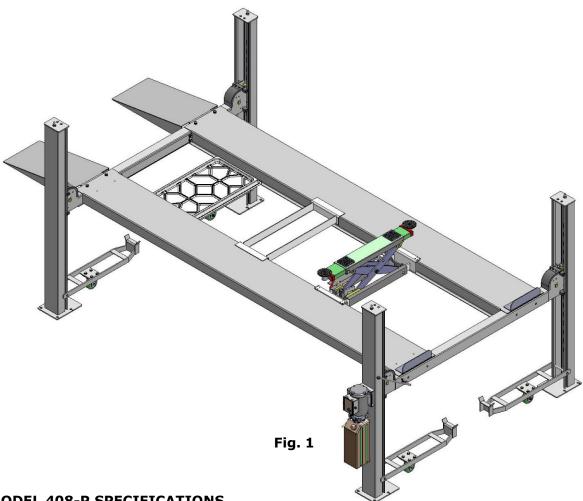
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I. PRODUCT FEATURES AND SPECIFICATIONS

4-POST MODEL 408-P FEATURES

- · Single point manual safety release.
- 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: Sliding jack with hand pump, caster kits, Jack tray, plastic oil tray.



MODEL 408-P SPECIFICATIONS

| Model | Lifting Capacity | Lifting Height | Lifting Time | Overall Length (Inc. Ramps) | Overall Width | Width Between Columns |
|-------|---------------------|-------------------|-----------------|--------------------------------|------------------|-----------------------------|
| 408-P | 3500KG | 1872mm | 40S | 5257mm | 2784mm | 2438mm |

II. INSTALLATION REQUIREMENT

A. TOOLS REQUIRED

✓ Tape Measure (7.5m)



✓ Hammer



✓ Level Bar



✓ Carpenter's Chalk



✓ Screw Sets



✓ Pliers



✓ English Spanner (12")



✓ Lock Wrench



✓
Wrench set
(12[#], 13[#], 14[#], 15[#], 17[#], 19[#], 24[#], 30[#])



✓ 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.

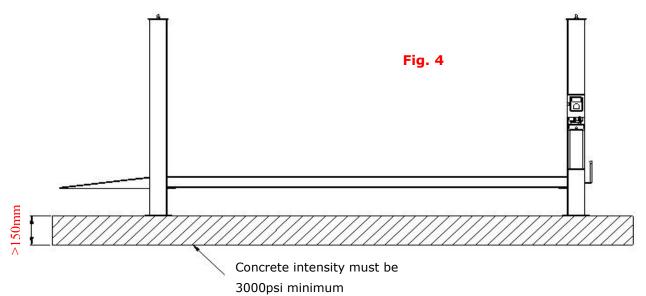


C. The equipment should be unload and transfer by forklift.

D.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.

- Concrete must be thickness 150mm minimum and without reinforcing steel bars, and must be dried completely before lift installation.
- Concrete must be in good condition and must be of test strength 210kg/cm² (3,000psi) minimum.
- 3. Floors must be level and no cracks.



E. POWER SUPPLY

The electrical source must be 3HP minimum. The source cable size must be 2.5mm² minimum and in good condition of contacting with floor.

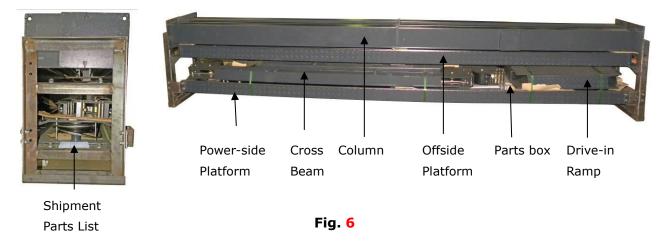
III. STEPS OF INSTALLATION

A. Check the parts before assembly

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



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



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





4. Loose 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).**



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



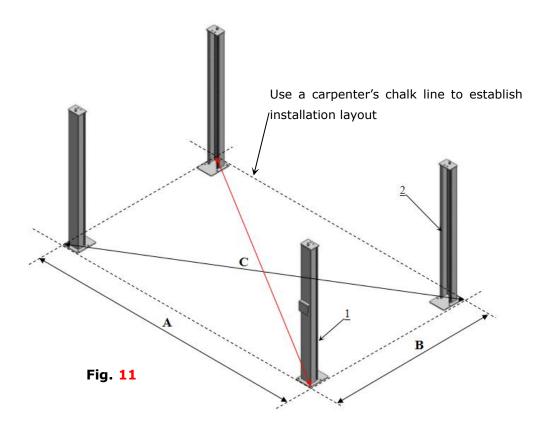
Fig. 9

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).

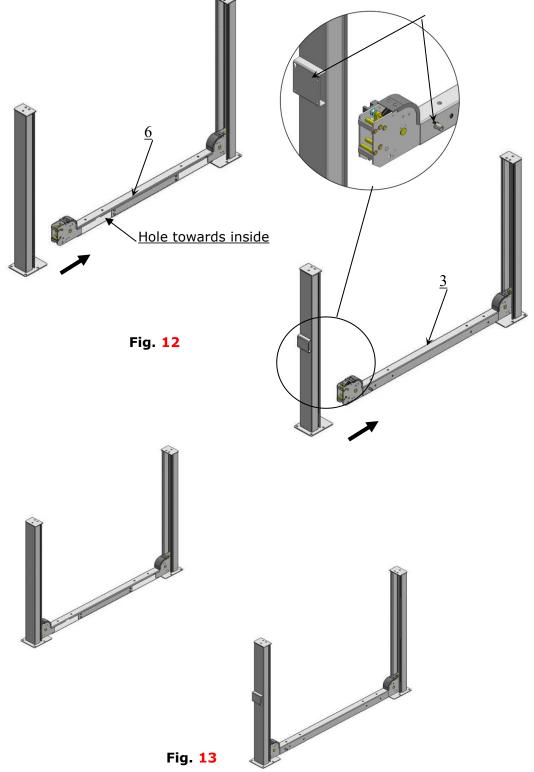
Note: Reserve space front and behind the installation site.



| MODEL | Α | В | С |
|-------|--------|--------|--------|
| 408-P | 4400mm | 2784mm | 5207mm |

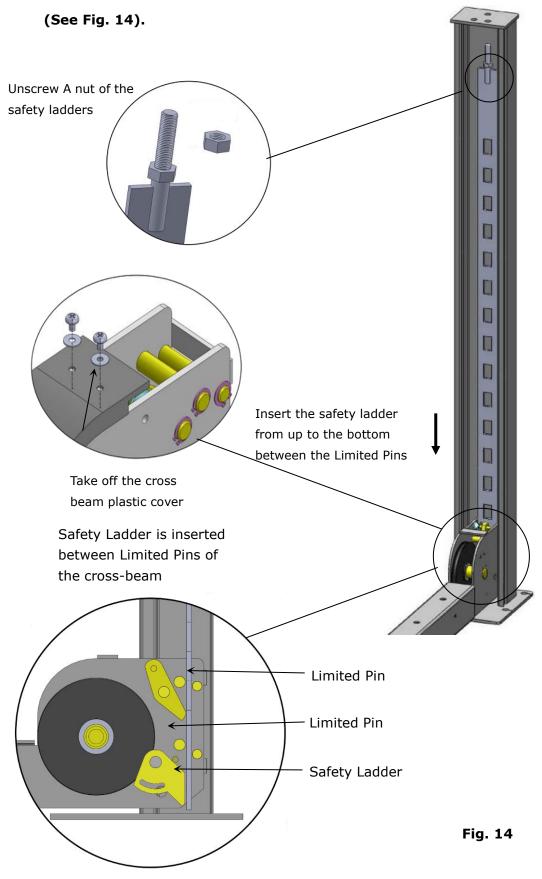
C. Install cross beams (See Fig.12, Fig.13).

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

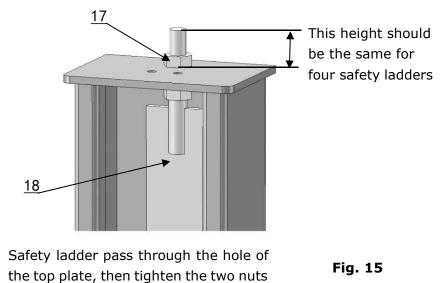


D. Install the Safety Ladders.

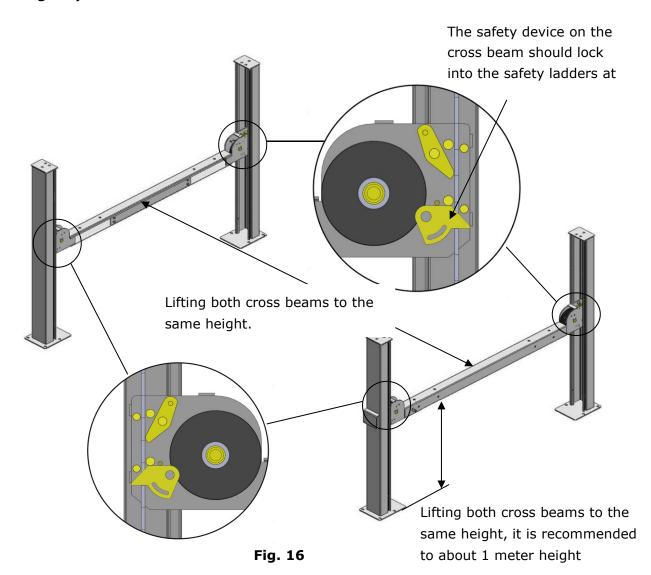
1. Take off the pulley safety cover and unscrew a nut of the safety ladders, and then adjust the four lower nuts to be at the same position. Then install the safety ladder



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

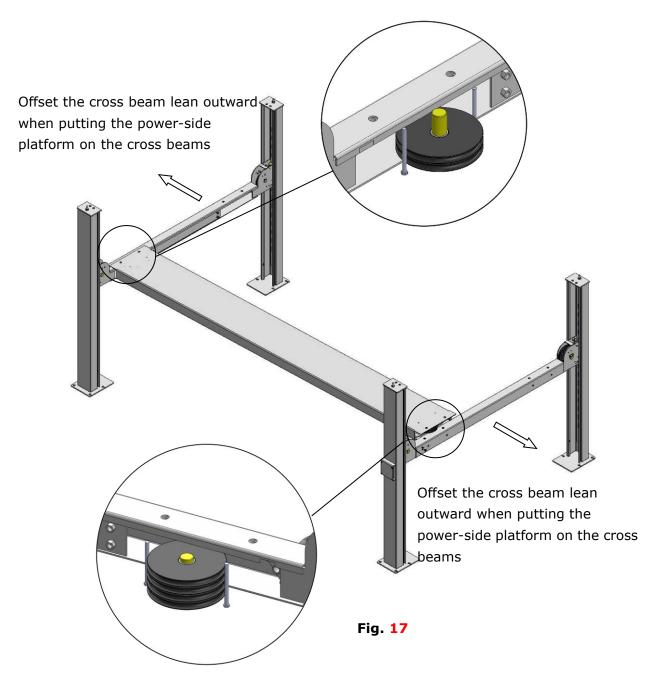


E. Put the cross beams at the same height and lock on the safety ladder (See Fig. 15).



F. Install power side platform.

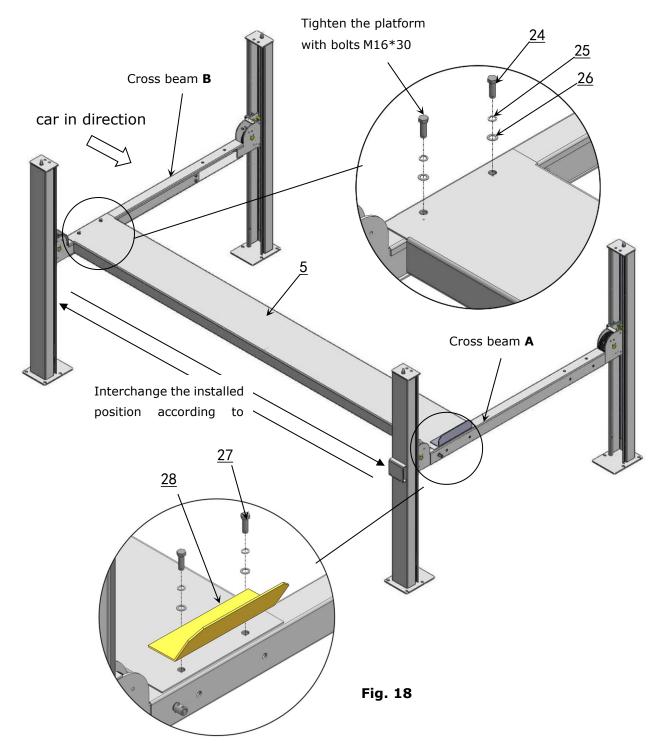
 Install the power side platform on the cross beams by a fork lift or manual, offset the cross beams to the outside till the pulleys of both platforms can rest into the cross beams' slots (See Fig.17), Install the power side platform and screw up the bolts.



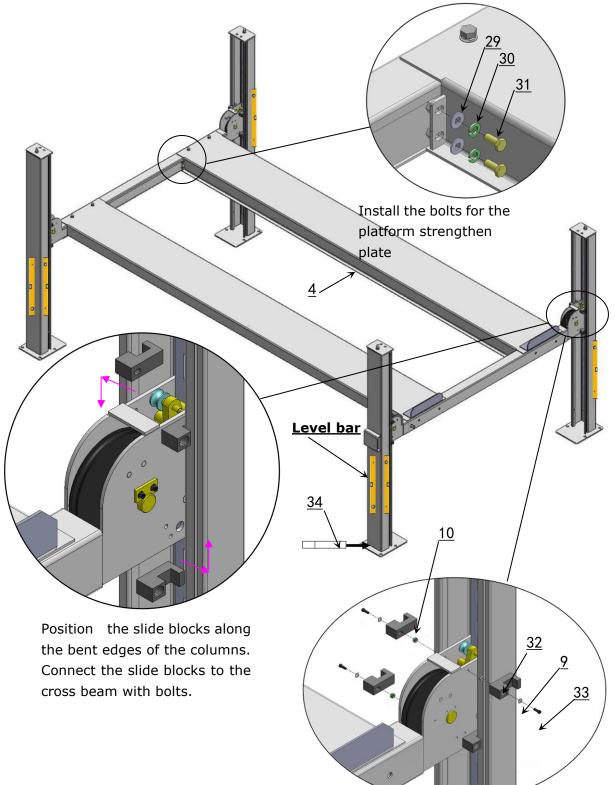
- Install tire stop plate with bolts and washer on the platform: Tighten the platform on cross beam B with bolts, tighten the tire stop plate on cross beam A with bolts
 - **Note:** The bolts for the side with tire stop plate is longer, pay attention when choosing the bolts (See Fig.18)

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). Power-side 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.



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).

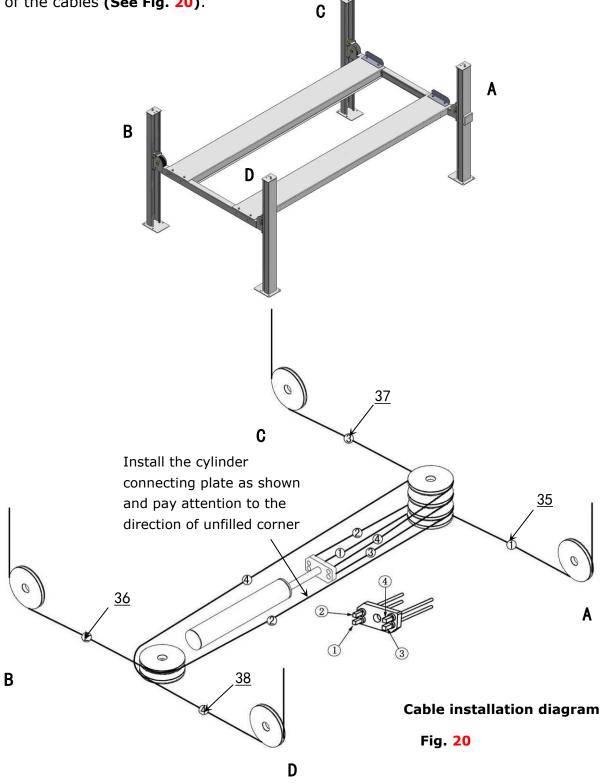


Note: DO NOT completely tighten the limit slide blocks. Loosen 1/4 lap after tightening.

Fig. 19

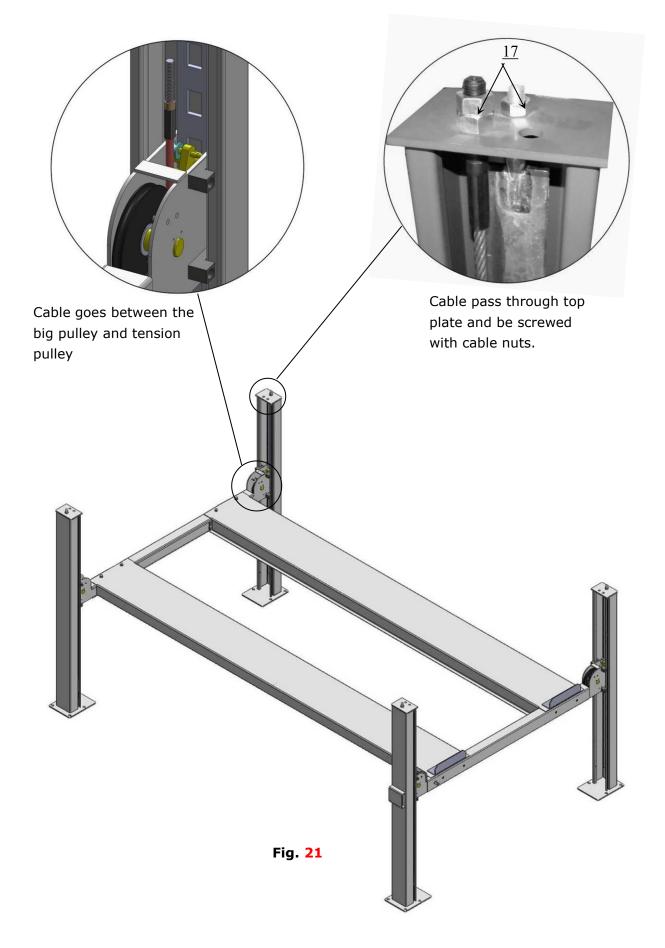
H. Illustration for cable installation

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



| NO. Cable | 1 | 2 | 3 | 4 |
|-------------------------------------|--------|--------|--------|--------|
| Length (inc. connecting fitting) | 2940mm | 8535mm | 4350mm | 7120mm |

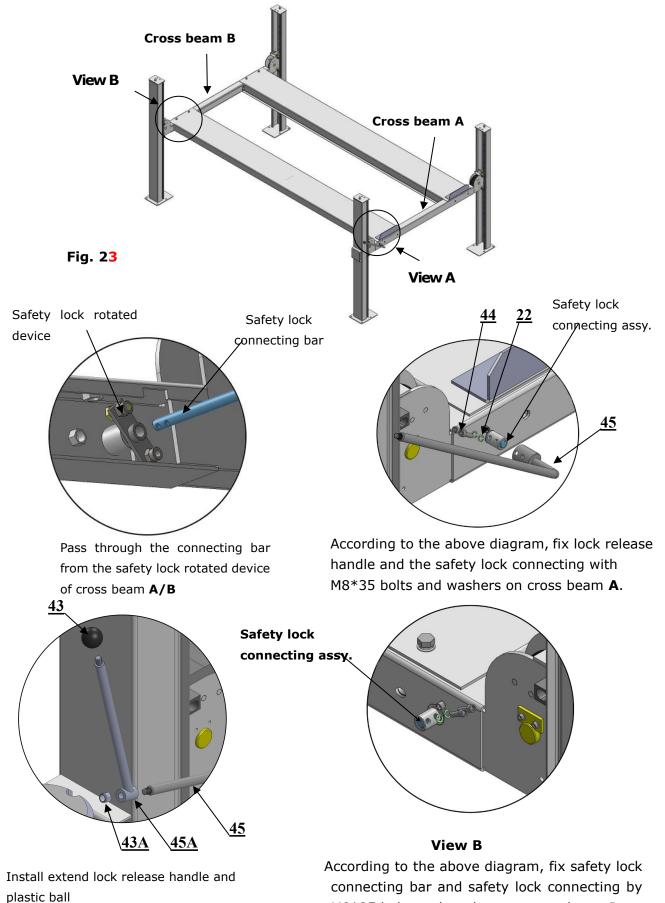
2. The cable goes through the cross beam to top plate of columns and be screwed with cable nuts (See Fig. 21).



- Limit slider -Cable (2) Cable (4) Cable (4) Cable (2) Cable (1) Cable ③ Cable (4) Cable (4) Cable ③ Cable (2) Cable (2) Cable (1) <u>39</u> Cable (2) Cable (4) Hex Bolt <u>M10*120</u> Fig. 22
- 3. Illustration for platform cables (See Fig. 22).

I. Install release handle assy. See Fig.23

Noted: Power unit must be installed near the safety release handle.

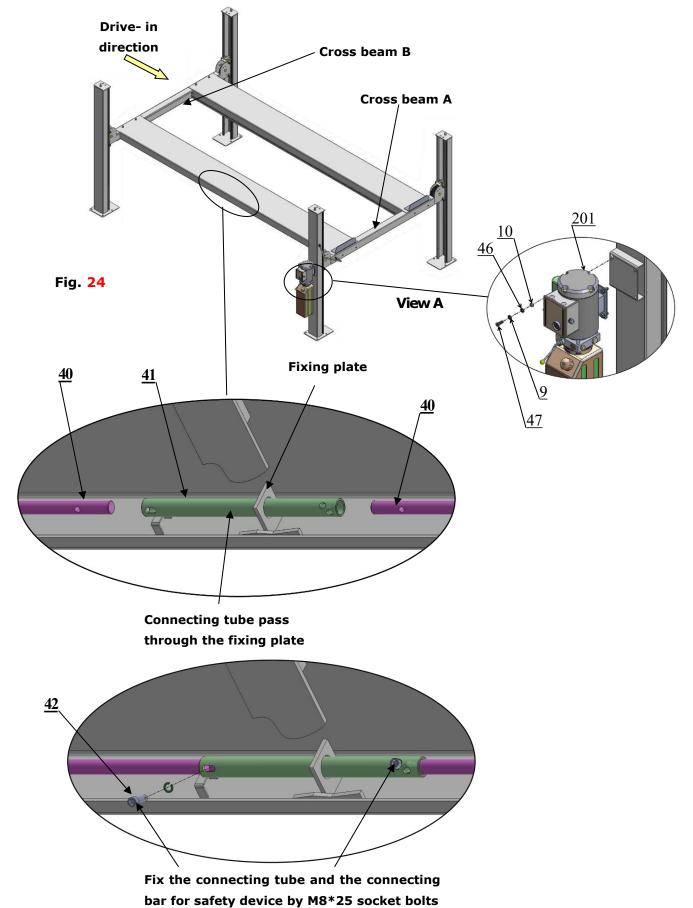


M8*35 bolts and washers on cross beam B.

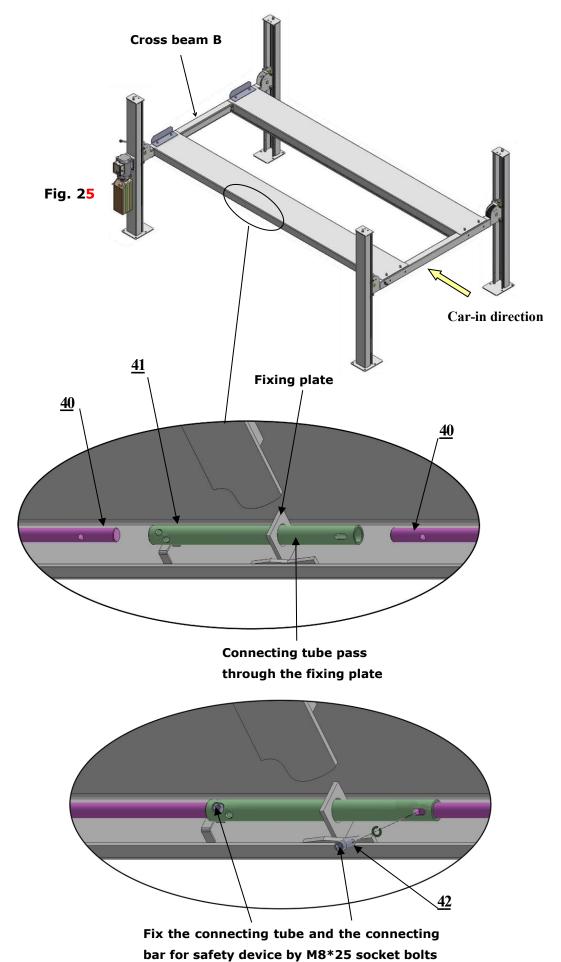
J. Install power unit and connecting tube (See Fig. 24).

Noted: Power unit must be installed near the safety release handle.

1.Install Power unit on the cross beam A

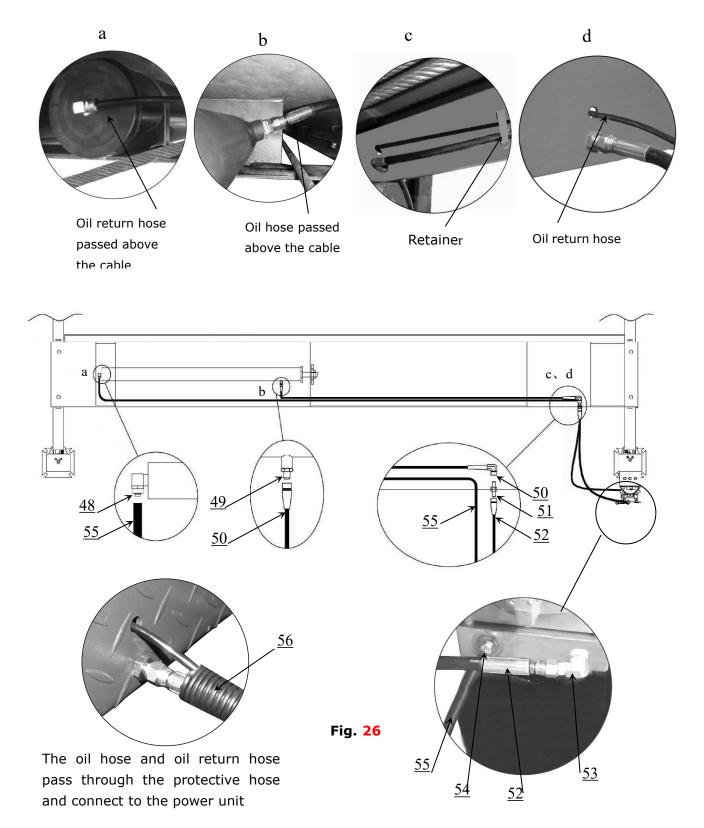


2.Install Power unit on the cross beam **B** (See Fig. 25).



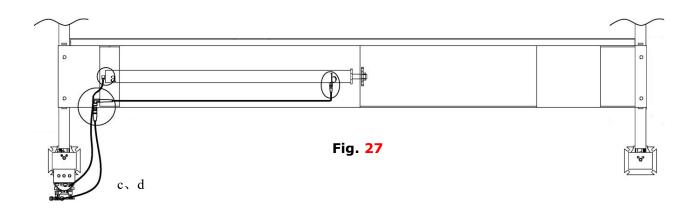
K. Install Hydraulic System

- 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.



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

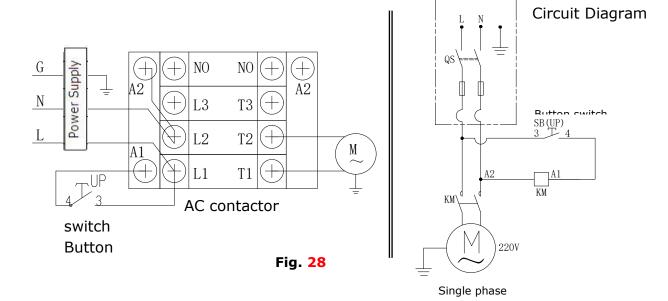


L. Install Electrical System

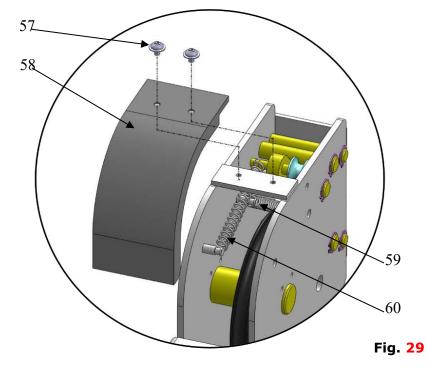
Connect the power source on the data plate of Power Unit.

Note: For the safety of operators, the power wiring must contact the floor well. Single phase motor (See Fig. 28).

- 1. Connecting the two power supply lines (active wire **L** and neutral wire **N**) to terminals of AC contactor marked **L1**, **L2** respectively.
- 2. Connecting the two motor wires to terminals of AC contactor marked **T1**, **T2**.
- 3. Connecting **A2** to **L2** of AC contactor.
- 4. Connecting the two wire of the button switch to the terminals of AC contactor marked **A1**, **L1**.

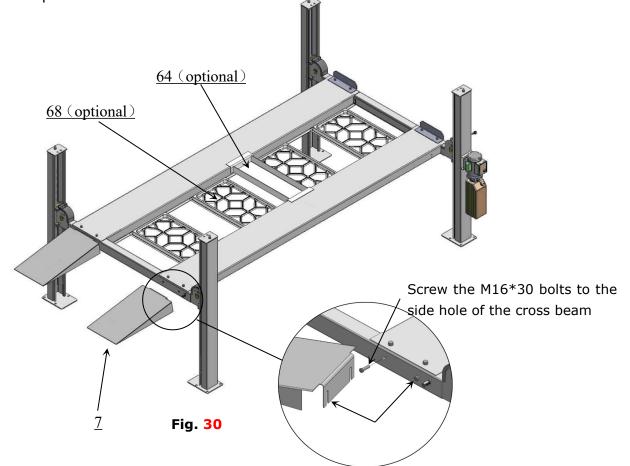


M. Install spring and safety cover of cross beam (See Fig. 29).



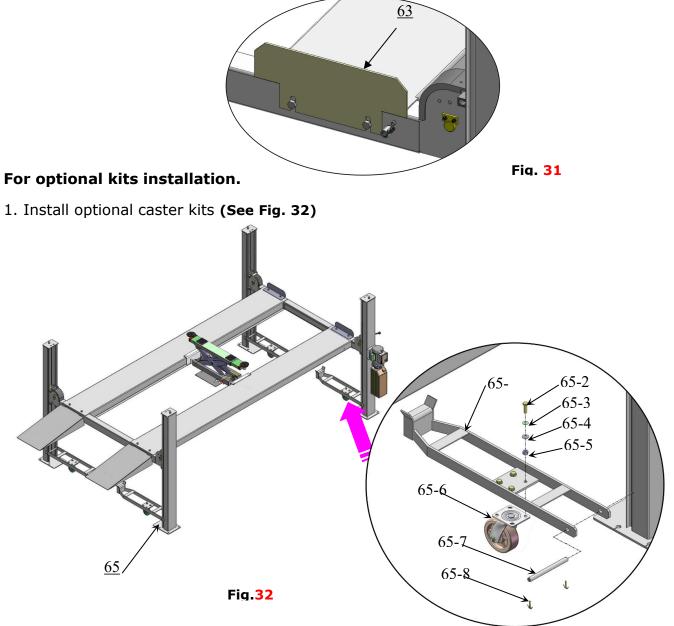
N. Install drive-in ramp, optional jack tray and optional plastic oil pans (See Fig. 30).

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



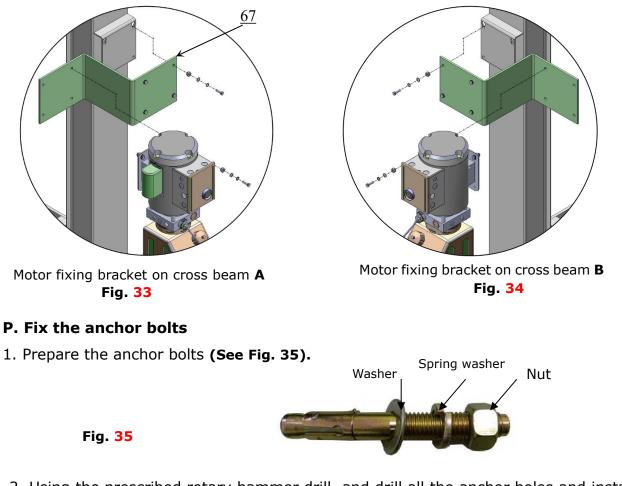
O. Install Rear wheel stop plates (See Fig. 31)

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



| Item | Part# | Description | QTY. | Note |
|------|-----------|-----------------|------|------|
| 65-1 | 11410042A | Support bracket | 4 | |
| 65-2 | 10209125 | Hex bolt | 16 | |
| 65-3 | 10209039 | Lock washer | 16 | |
| 65-4 | 10209022 | Washer | 16 | |
| 65-5 | 10209021 | Hex nut | 16 | |
| 65-6 | 10410035 | Plastic wheel | 4 | |
| 65-7 | 11410034 | Connecting pin | 4 | |
| 65-8 | 10209012 | Hair Pin | 8 | |

2. Install optional motor fixing bracket (See Fig. 33, Fig.34).



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. 36).

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

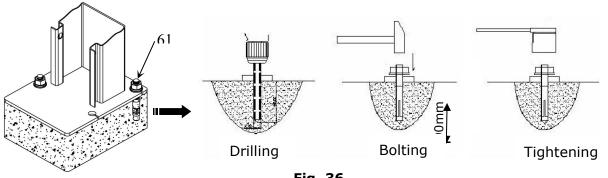
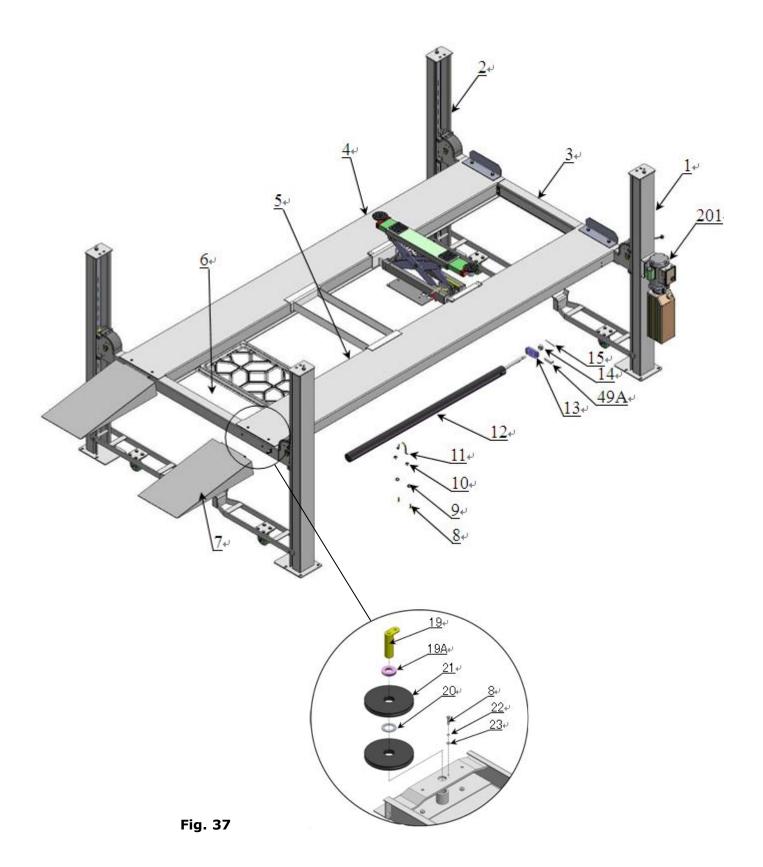


Fig. 36

IV. EXPLODED VIEW



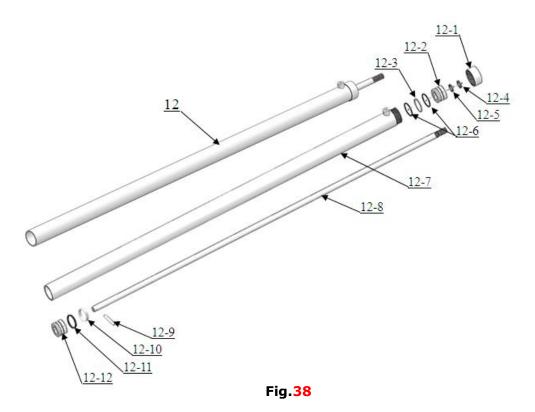


PARTS LIST FOR MODEL 408-P

| Item | Part# | Description | QTY. | Note |
|-------------------|------------|----------------------------------|------|------|
| 1 | 11410001 | Power-side Column | 1 | |
| 2 | 11410002 | Offside Column | 3 | |
| 3 | 11410003 | Cross Beam A | 1 | |
| 4 | 11410004 | Offside Platform | 1 | |
| 5 | 11410005 | Power-side Platform | 1 | |
| 6 | 11410006 | Cross Beam B | 1 | |
| 7 | 11410007 | Drive-in ramp | 2 | |
| 8 | 10209043 | Hex Bolt | 4 | |
| 9 | 10209033 | Washer | 28 | |
| 10 | 10209005 | Self locking Nut | 26 | |
| 11 | 11410008 | Cylinder fixed ring | 1 | |
| 12 | 10410009 | Cylinder | 1 | |
| 13 | 11410642 | Cylinder connecting plate | 1 | |
| 14 | 10410012 | Hex Nut | 1 | |
| 15 | 10201005 | Split Pin | 1 | |
| 20 <mark>1</mark> | 81513006 | Manual Power Unit | 1 | |
| 17 | 10420175A | Hex nut | 16 | |
| 18 | 11410022 | Safety ladder | 4 | |
| 19 | 10420022A | Pulley pin | 2 | |
| 19A | 11410106 | Washer | 1 | |
| 20 | 10420023A | Washer | 13 | |
| 21 | 11420024B | Pulley | 10 | |
| 22 | 10209034 | Lock washer | 10 | |
| 23 | 10420144 | Washer | 2 | |
| 24 | 10410013 | Hex Bolt | 8 | |
| 25 | 10420137 | Lock washer | 8 | |
| 26 | 10420029 | Washer | 8 | |
| 27 | 10410014 | Hex Bolt | 4 | |
| 28 | 11410116-1 | Tire stop plate | 2 | |
| 29 | 10206006 | Washer | 12 | |
| 30 | 10420026 | Lock washer | 8 | |
| 31 | 10410105 | Hex Bolt | 8 | |
| 32 | 10410016A | Plastic block | 16 | |
| 33 | 10410017 | Socket bolt | 16 | |
| 24 | 10201090 | Shim (1mm) | 20 | |
| 34 | 10620065 | Shim (2mm) | 20 | |
| 35 | 10410019 | Cable D | 1 | |
| 36 | 10410020 | Cable 🖉 | 1 | |
| 37 | 10410018 | Cable 3 | 1 | |
| 38 | 10410021 | Cable | 1 | |
| 39 | 10600015 | Socket Bolt | 4 | |
| 40 | 11410023 | Connecting bar for safety device | 2 | |

| Item | Part# | Description | QTY. | Note |
|----------|-----------|--|------|------|
| 41 | 11410024 | Connecting tube | 1 | |
| 42 | 10209032 | Socket bolt | 4 | |
| 43 | 10217005 | Plastic ball | 1 | |
| 43A | 10209056 | Self locking Nut | 1 | |
| 44 | 10410025 | Socket bolt | 4 | |
| 45 | 11410026 | Safety release handle | 1 | |
| 45A | 11410100 | Extension lock release handle | 1 | |
| 46 | 10209004 | Rubber ring | 4 | |
| 47 | 10209003 | Hex Bolt | 8 | |
| 48 | 10420166 | 90° Fitting | 1 | |
| 49 | 10420119 | Straight Fitting for cylinder | 1 | |
| 49A | 10410135 | Limit block | 1 | |
| 50 | 10410027 | Oil hose | 1 | |
| 51 | 10420120 | Extend straight fitting with nut | 1 | |
| 52 | 10207026 | Oil hose | 1 | |
| 53 | 10209060 | 90 ⁰ Fitting for power unit | 1 | |
| 54 | 10420095 | Straight fitting | 1 | |
| 55 | 10410028 | Oil return hose | 1 | |
| 56 | 10410036 | Protective hose | 1 | |
| 57 | 10209145A | Cup head bolt with washer | 8 | |
| 58 | 10410029 | Plastic cover for cross beam | 4 | |
| 59 | 10410146 | Spring | 4 | |
| 60 | 10420033 | Spring | 4 | |
| 61 | 10209059 | Anchor bolt | 16 | |
| 62 | 10410500A | Parts box | 1 | |
| 63 | 11410094 | Tire stop plate | 2 | |
| Optional | kits | | · | |
| 64 | 11410040 | Jack tray | 1 | |
| 65 | 1040801 | Caster kits | 4 | |
| 66 | 96600002 | Sliding jack | 1 | |
| 67 | 1140802B | Motor fixing bracket | 1 | |
| 68 | 10410039 | Plastic oil tray | 4 | |

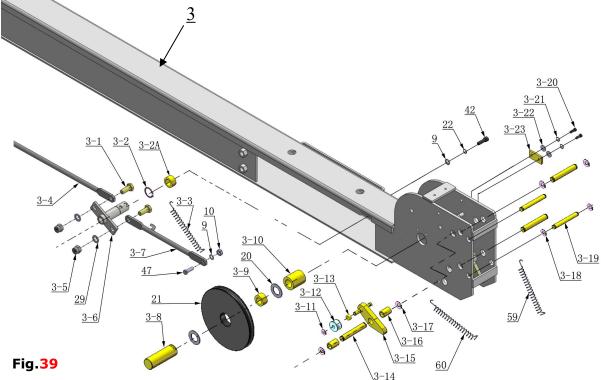
4.1 CYLINDERS (10410009)



Parts For Cylinder

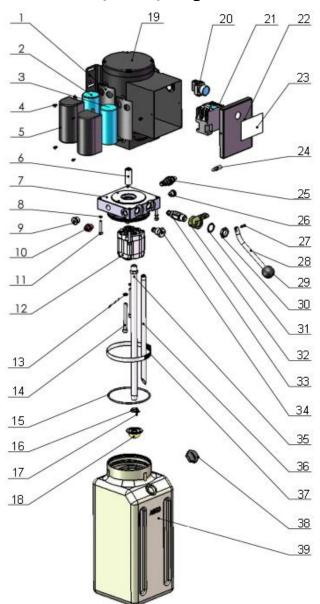
| Item | Part# | Description | QTY. | Note |
|-------|----------|----------------|------|------|
| 12-1 | 11410044 | Head Cap | 1 | |
| 12-2 | 11440620 | Head Cap cover | 1 | |
| 12-3 | 10410142 | Support Ring | 1 | |
| 12-4 | 10410080 | Dust Ring | 1 | |
| 12-5 | 10410104 | Y- Ring | 1 | |
| 12-6 | 10201031 | O- Ring | 2 | |
| 12-7 | 11410046 | Bore Weldment | 1 | |
| 12-8 | 11410047 | Piston Rod | 1 | |
| 12-9 | 11410049 | Pin | 1 | |
| 12-10 | 10520052 | Support Ring | 1 | |
| 12-11 | 10201030 | Y- Ring | 1 | |
| 12-12 | 11410048 | Piston | 1 | |

4.2 CROSS BEAM (10410003/10410006)



| Ttom | Bart# | <u>V3-14</u> | ATY | |
|------|-----------|--|------------|------|
| Item | Part# | Description | QTY. | Note |
| 3-1 | 10206024 | Hex Bolt | 4 | |
| 3-2 | 10206032 | Snap Ring | 2 | |
| 3-2A | 10217020 | Bronze Bush | 2 | |
| 3-3 | 10410099 | Spring | 2 | |
| 3-4 | 11410031 | Connecting bar for safety lock | 2 | |
| 3-5 | 10206023 | Self locking Nut | 4 | |
| 3-6 | 11410032 | Safety lock rotated device assy. | 2 | |
| 3-7 | 11410033 | Connecting bar assy. for safety lock | 2 | |
| 3-8 | 11420041A | Pulley Pin | 4 | |
| 3-9 | 10420132A | Pulley Bush | 10 | |
| 3-10 | 11420040A | Pulley pin sleeve | 4 | |
| 3-11 | 10209010 | Snap ring | 4 | |
| 3-12 | 10420035 | Tension pulley | 4 | |
| 3-13 | 11420174 | Spacer | 4 | |
| 3-14 | 11420171 | Pin | 12 | |
| 3-15 | 11420175 | Slack-cable safety lock (Left & Right) | 2 each | |
| 3-16 | 11420172 | Pin Bush For Slack-cable safety lock | 8 | |
| 3-17 | 10206019 | Snap ring | 24 | |
| 3-18 | 10420037 | Snap ring | 16 | |
| 3-19 | 11420038 | Pin | 8 | |
| 3-20 | 10420138 | Socket Bolt | 8 | |
| 3-21 | 10209149 | Lock washer | 8 | |
| 3-22 | 10420045 | Washer | 8 | |
| 3-23 | 11420044 | Stop block | 4 | |

4.3 Manual Power Unit (81513006)



220V/50HZ/Single Phase

Fig. 40

| Item | Part# | Description | QTY. | Note |
|------|----------|---------------------------|------|------|
| 1 | 81400180 | Rubber Pad | 2 | |
| 2 | 81400130 | Start Capacitor | 1 | |
| 3 | 81400088 | Run Capacitor | 1 | |
| 4 | 10420148 | Cup Head bolt with washer | 4 | |
| 5 | 81400066 | Capacitor cover | 2 | |
| 6 | 81400363 | Motor Connecting Shaft | 1 | |
| 7 | 80101013 | Manifold Block | 1 | |
| 8 | 10209149 | Lock washer | 4 | |
| 9 | 81400276 | Iron Plug | 1 | |
| 10 | 81400259 | Rubber Plug | 1 | |
| 11 | 85090142 | Socket Bolt | 4 | |
| 12 | 81400280 | Gear Pump | 1 | |
| 13 | 10209034 | Lock Washer | 2 | |
| 14 | 81400295 | Socket Bolt | 2 | |
| 15 | 81400365 | O Ring | 1 | |
| 16 | 10209152 | Tie | 1 | |
| 17 | 85090167 | Magnet | 1 | |
| 18 | 81400290 | Filter | 1 | |
| 19 | 81400413 | Motor | 1 | |
| 20 | 10420070 | Button | 1 | |
| 21 | 41030055 | Ac Contactor | 1 | |
| 22 | 81400287 | Terminal Box Cover | 1 | |
| 23 | 71111174 | Sticker | 1 | |
| 24 | 81400560 | Throttle valve | 1 | |
| 25 | 81400266 | Relief Valve | 1 | |
| 26 | 81400284 | Iron Plug | 1 | |
| 27 | 10720118 | Pin | 1 | |
| 28 | 81400451 | Release Valve Handle | 1 | |
| 29 | 10209020 | Plastic Ball | 1 | |
| 30 | 81400421 | Release Valve Nut | 1 | |
| 31 | 81400422 | Self Lock washer | 1 | |
| 32 | 81400449 | Valve Seat | 1 | |
| 33 | 81400567 | Release Valve | 1 | |
| 34 | 81400566 | Check Valve | 1 | |
| 35 | 81400288 | Oil suction hose | 1 | |
| 36 | 81400289 | Oil return hose | 1 | |
| 37 | 81400364 | clamp | 1 | |
| 38 | 81400263 | Oil tank cover | 1 | |
| 39 | 81400320 | Oil tank | 1 | |

Illustration of hydraulic valve for hydraulic power unit

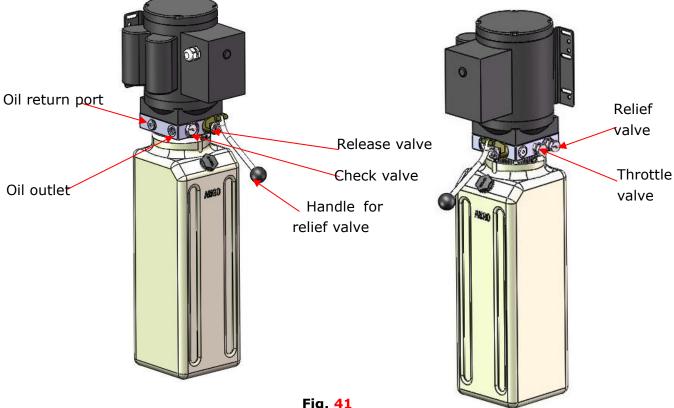
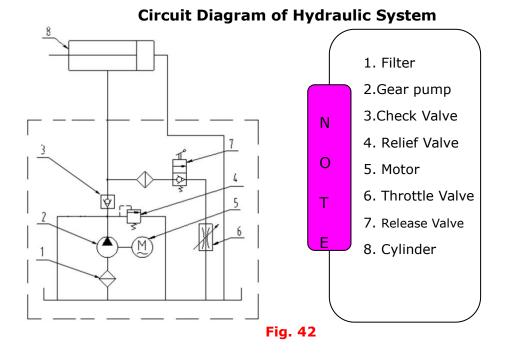


Fig. 41

V. TEST RUN

- 1. Fill the reservoir with Hydraulic Oil (Note: In consideration of Power Unit's durability, please use **<u>Hydraulic Oil 46#</u>**).
- 2. Press the control button on the power unit till the cables are strained. Check the cables and confirm they are in the proper pulley position. Make sure the cables are not across.
- 3. Press the release valve handle on the power unit to lock the cross-beam on the safety ladders, and then adjust the platforms to be level by adjusting the nuts of safety ladders. Tighten the nuts above and under the safety ladder top plate after leveling.
- 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, make sure the plastic slider can be slid in the column smoothly. Do not tighten too much of the sliding block.

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.



VI. OPERATION INSTRUCTIONS

To lift vehicle

- 1. Keep clean 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.

VIII. TROUBLE SHOOTING

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

IX. SCARPING OF EQUIPMENT

Once the equipment is unusable and needs to be scarped, please follow the local laws and regulations.



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