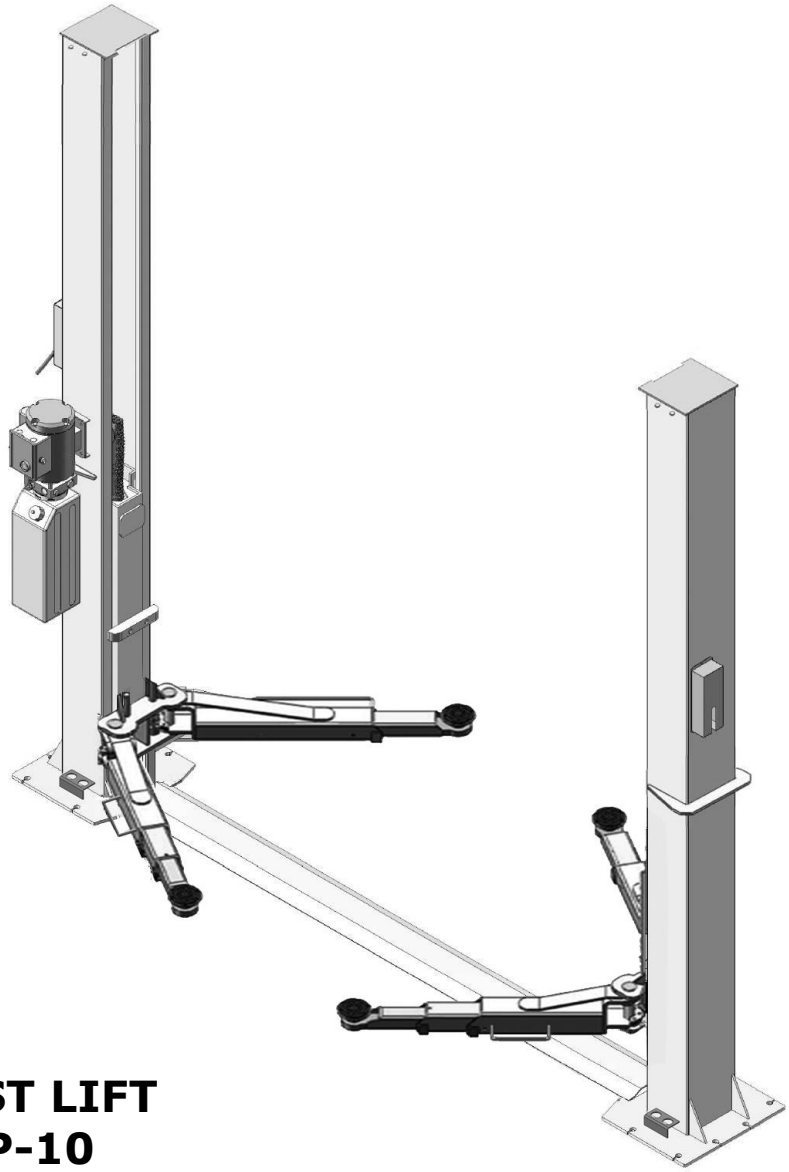
AMGO®

Installation And Service Manual



TWO-POST LIFT
Model: BP-10

CONTENTS

I. PRODUCT FEATURES AND SPECIFICATIONS

FLOORPLATE CHAIN-DRIVED MODEL FEATURES

MODEL BP-10 (See Fig.1)

· Compact design small footprint.

· Dual hydraulic chain-drive cylinders, designed and made on ANSI standard, utilizing oil seal in cylinder.

· Self-lubricating UHMW Polyethylene sliders and bronze bush.

· Single-point safety release, and dual safety design.

· Super-symmetric arms design, make lifts easily find the lift point of the car.

· Stackable adapters 1.5”, 2.5”, 5” as standard.

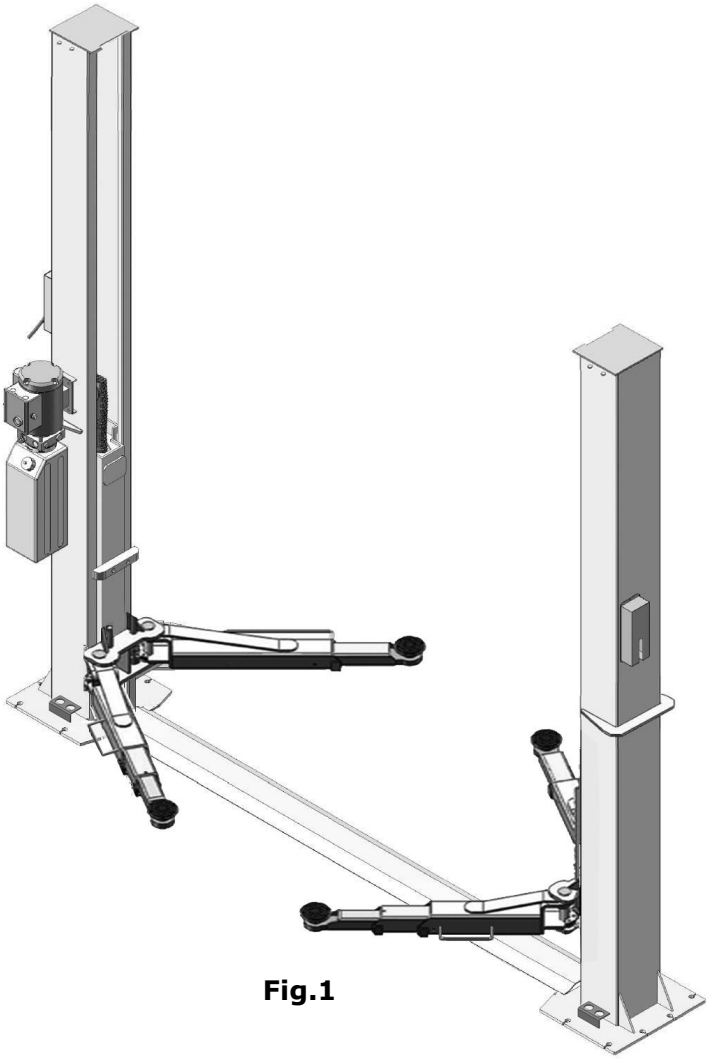


Fig.1

MODEL BP-10 SPECIFICATIONS

Model	Style	Lifting Capacity	Lifting Time	Lifting Height	Overall Height	Overall Width	Width Between Columns	Minimum Pad Height	Gross Weight	Motor
BP-10	Floor-plate Chain-drive	10,000 lbs	62S	77 1/4”-86 1/4”	112”	139 1/4”	112 1/4”	4 1/2” - 13 1/2”	1638lbs	3.0 HP

Arm Swings View

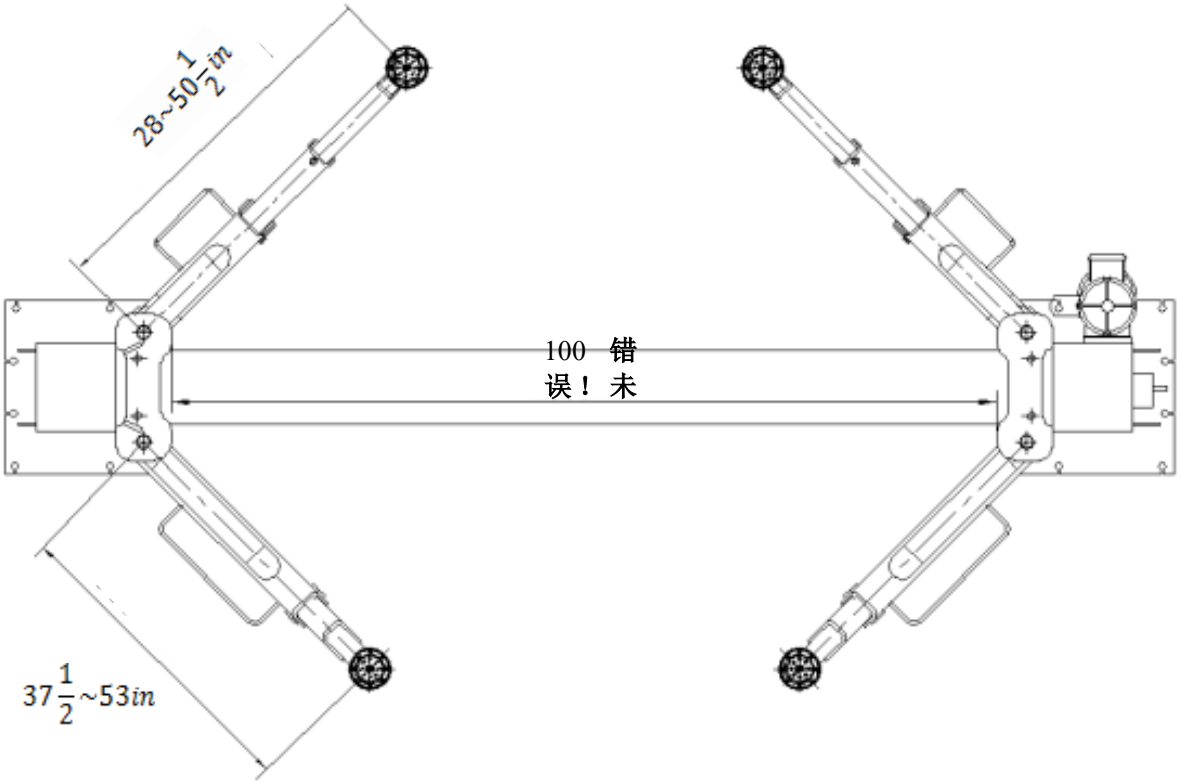


Fig. 2

II. INSTALLATION REQUIREMENT

A. TOOLS REQUIRED

- ✓ Rotary Hammer Drill (3/4")

- ✓ Carpenter's Chalk

- ✓ Hammer

- ✓ Screw Sets

- ✓ Level Bar

- ✓ Tape Measure(295")

- ✓ English Spanner (12")

- ✓ Pliers

- ✓ Ratchet Spanner With Socket (28#)

- ✓ Socket Head Wrench (6#)

- ✓ Wrench set

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

- ✓ Lock Wrench

Fig. 3

B. 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 4in 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 minimum.
3. Floors must be level and no cracks.

C. POWER SUPPLY

The electrical source must be 3HP minimum. The source cable size must be 0.003875sq.in and in good condition of contacting with floor.

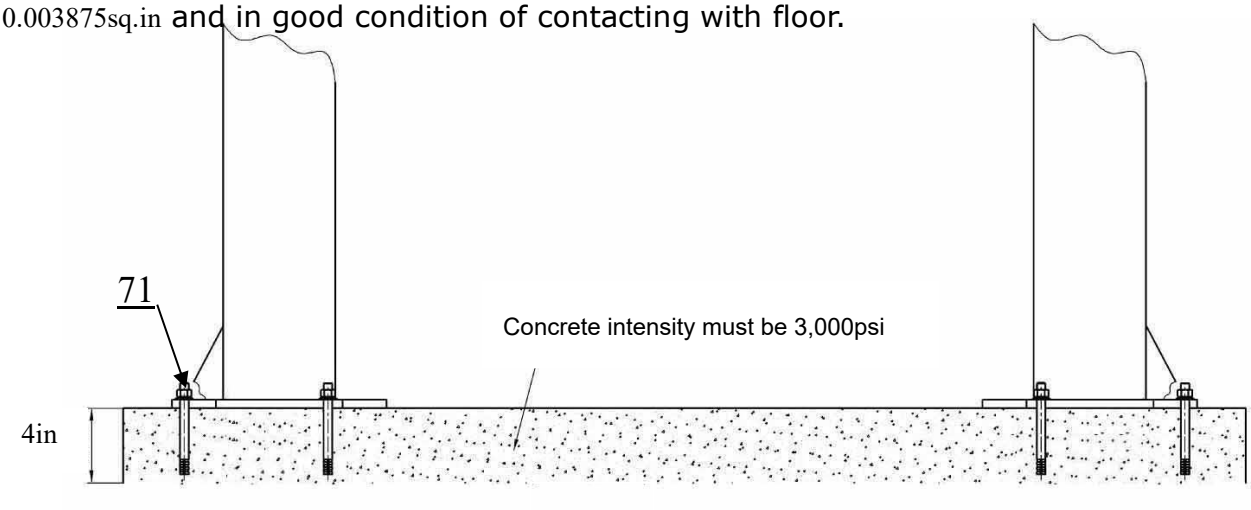


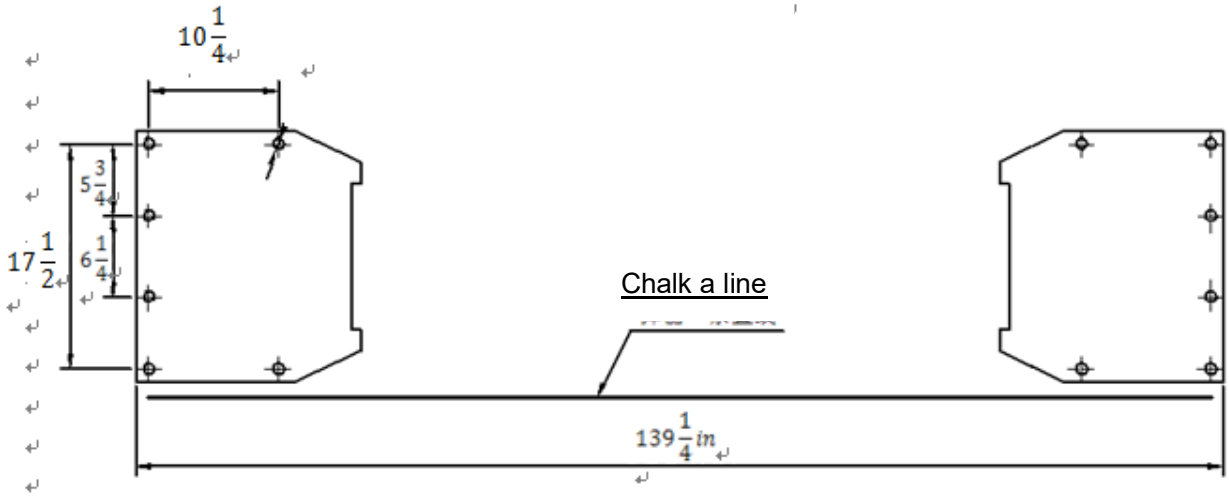
Fig. 4

III. STEPS OF INSTALLATION

A. Location of Installation

Check and insure the installation location (concrete, layout, space size etc.) is suitable for lift installation.

B. Use a carpenter's chalk line to establish installation layout of baseplate **(See Fig. 5).**



C. Check the parts before assembly

1. Packaged lift and hydraulic power unit **(See Fig. 6)**

Fig. 6

2. Move the lift aside with a fork lift or hoist, and open the outer packing carefully, take off the parts from upper and inside the column, take out the parts box，check the parts according to the shipment parts list **(See Fig. 7).**

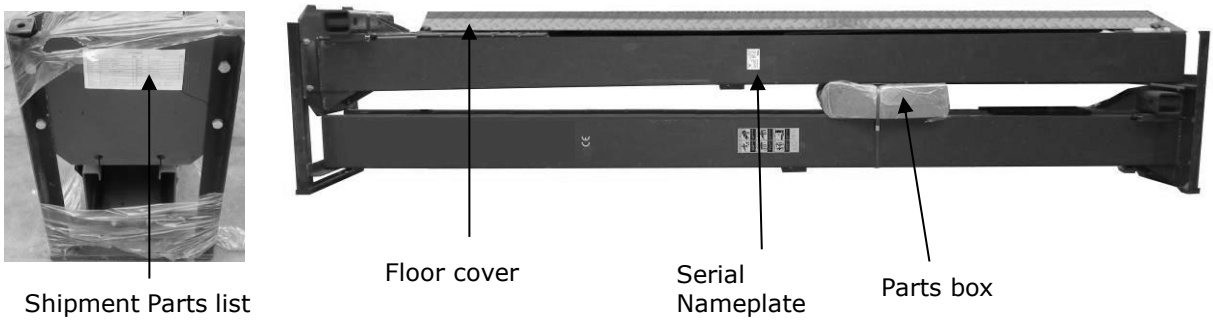


Fig. 7

3. Loose the screws of the upper package stand, take off the upper column and remove the package stand.
4. Move aside the parts and check the parts according to the shipment parts list **(See Fig. 8, 9)**.

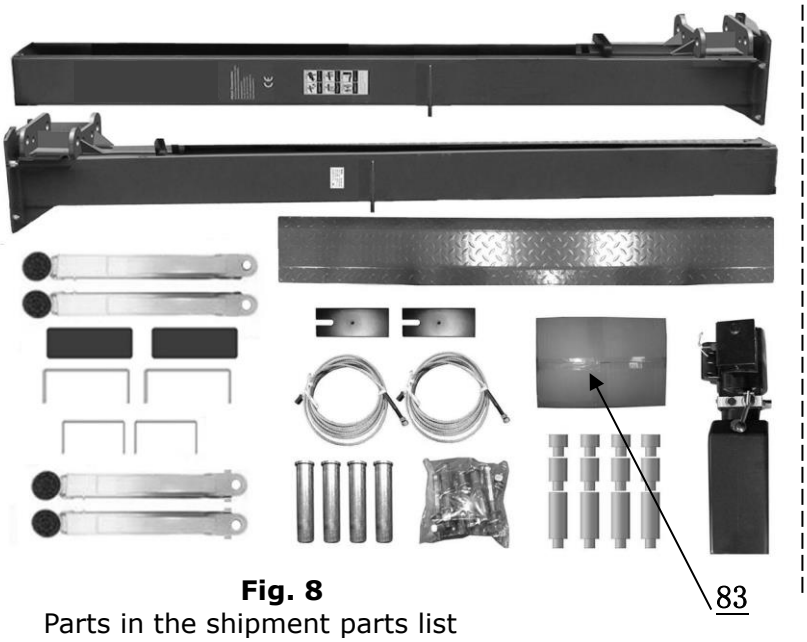


Fig. 8
Parts in the shipment parts list

Fig. 9
Parts in the parts box (83)

5. Open the parts bag and check the parts according to parts box list **(See Fig. 10).**

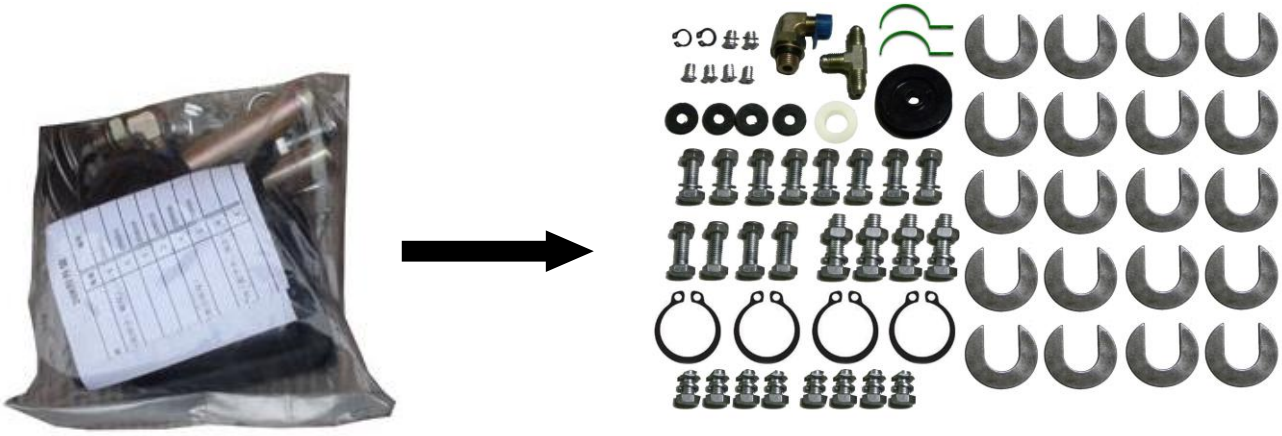


Fig. 10

D. Lay down two columns on the installation site parallelly, position the power-side column according to the actual installation site. Usually, it is suggested to install Power side column on the front-right side from which vehicles are driven to the lift. Then install the top plate **(See Fig. 11)**.

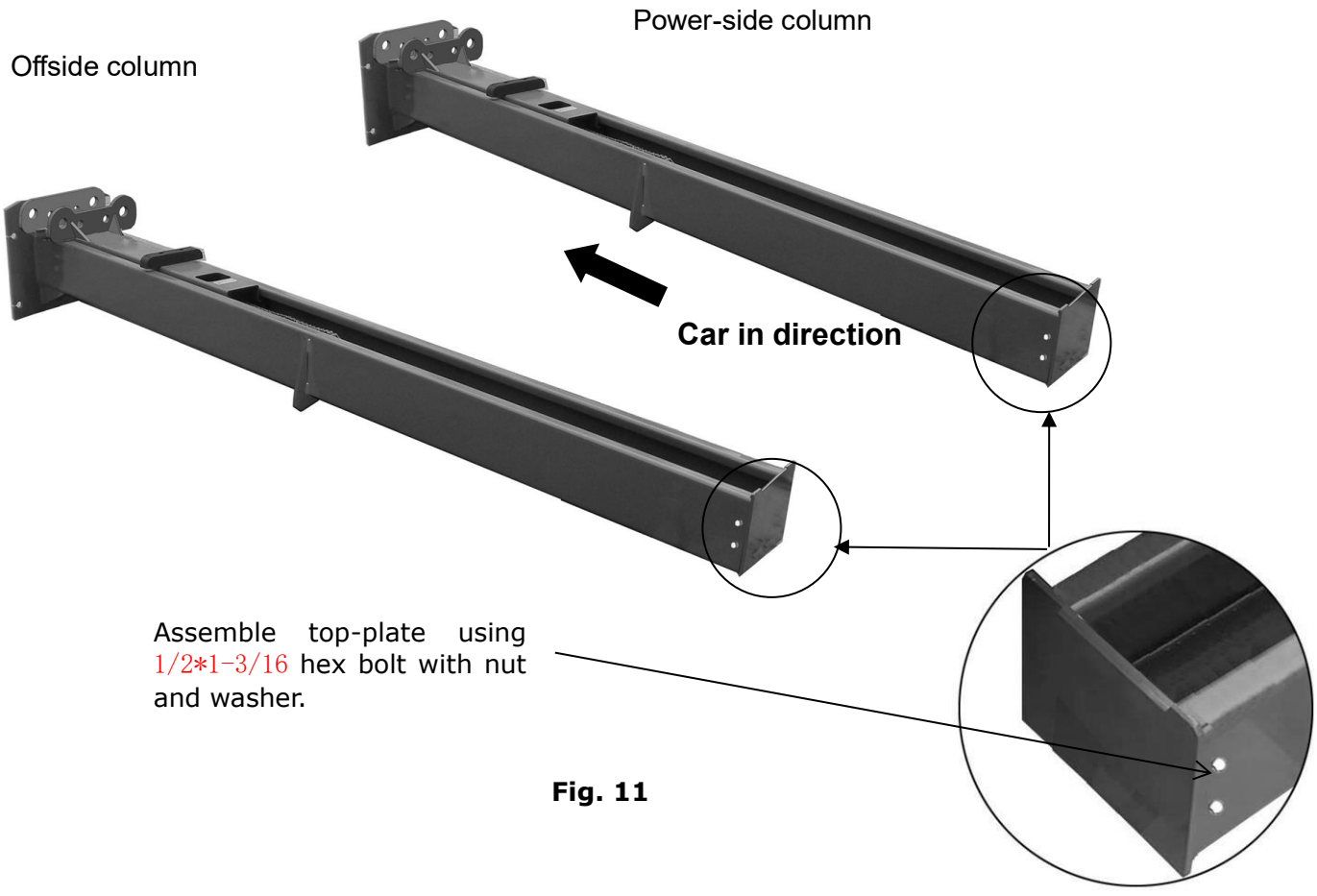


Fig. 11

E. Connecting cables (See Fig. 12)

1. Put down columns and then push the carriages higher than chain pulley。

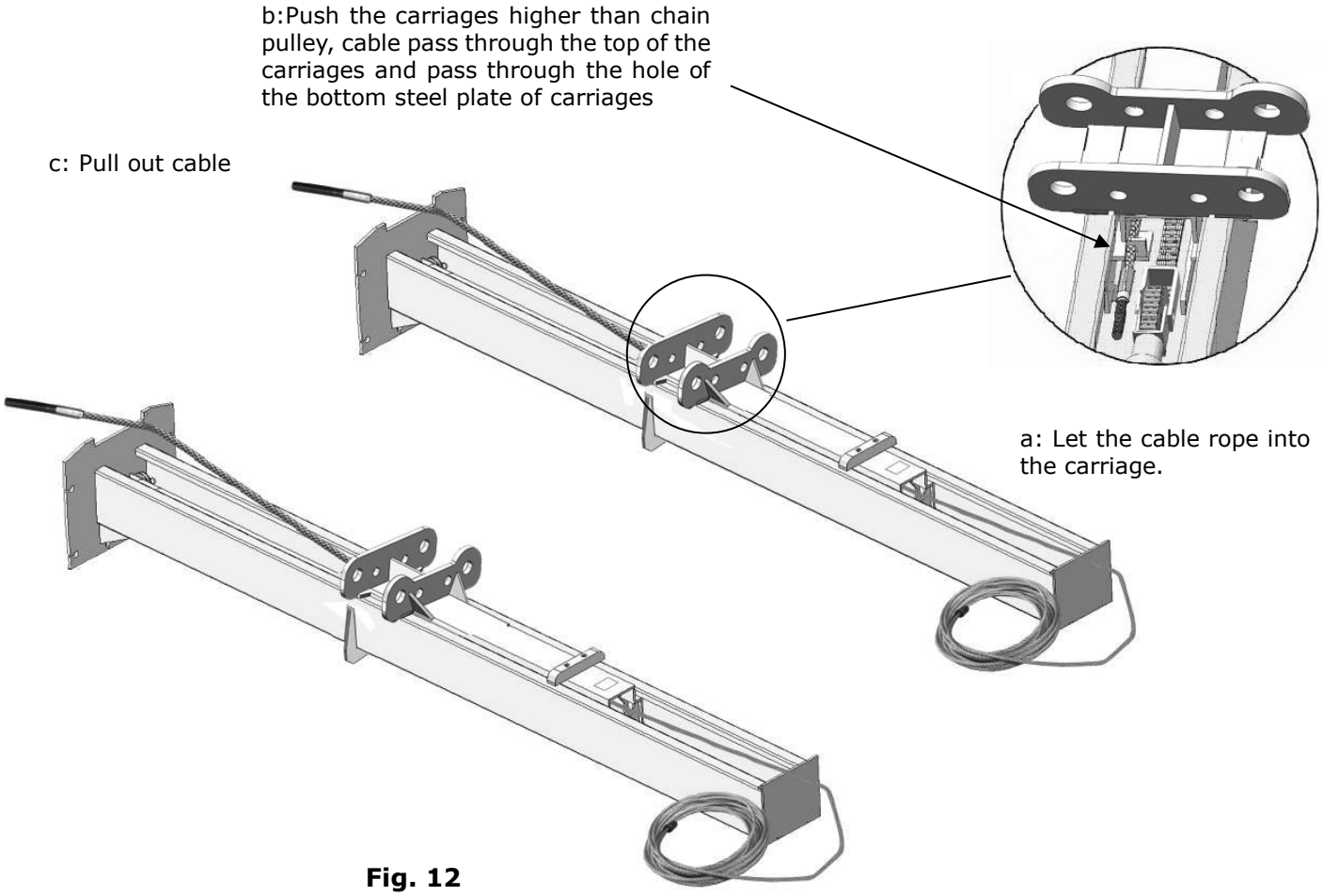


Fig. 12

2. Push the carriages to the bottom of the columns **(See Fig. 13).**

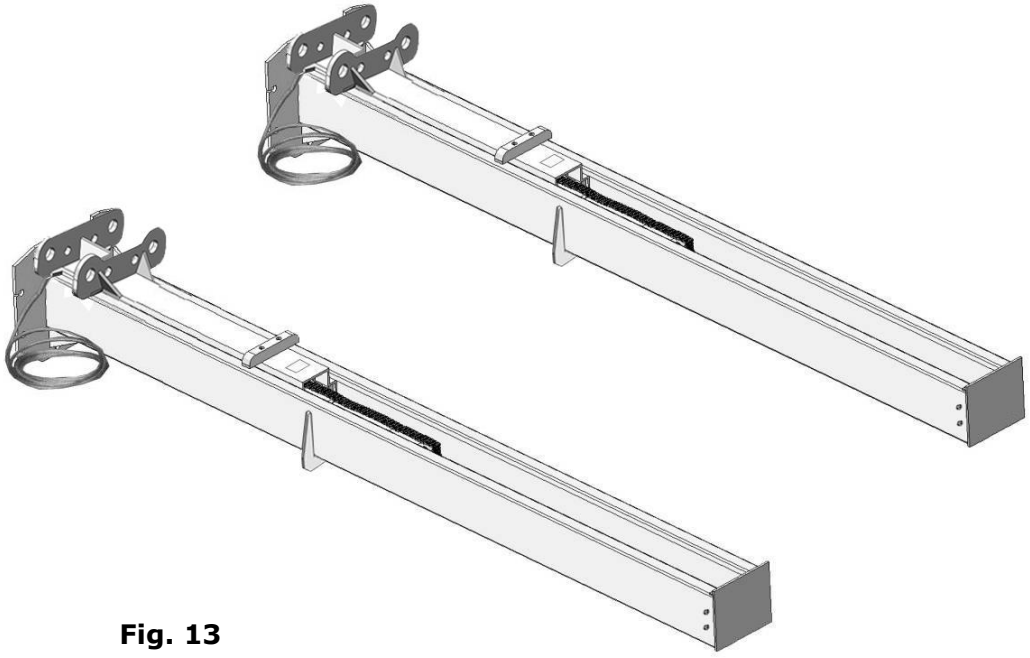


Fig. 13

F. Position columns and install safety device (See Fig. 14).

Check the columns plumbness with level bar, and adjusting with the shims if the columns are not vertical.

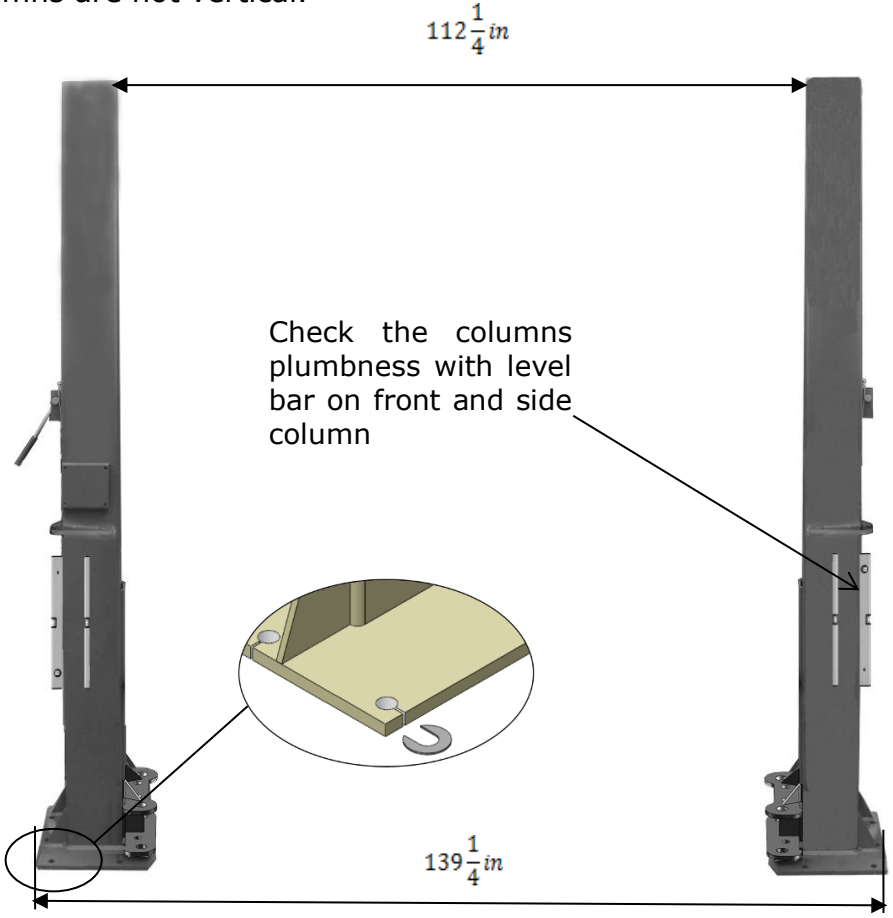


Fig. 14

G. Install anchor bolts

. Prepare the anchor bolts **(See Fig.15)**

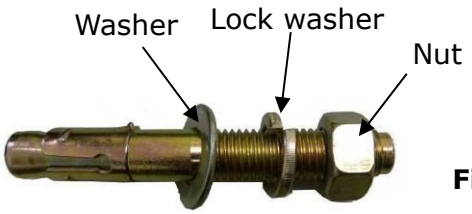
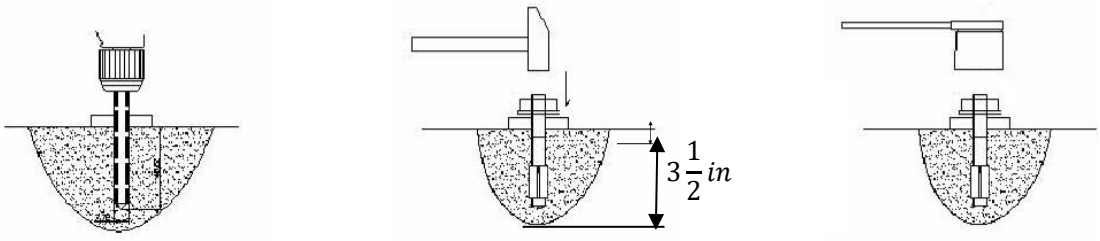


Fig. 15

2. Using the prescribed rotary hammer drill, and drill all the anchor holes and install the anchor bolts. Then tighten the anchor bolts **(See Fig. 16).**

Note: Torque of Anchors is 492N.Ft .Minimum embedment of Anchors is 错误！未找到引用源。.



Drilling **Tighten**

Fig. 16

H. Lift the carriages up by hand and make them be locked at the same level (See Fig.17).

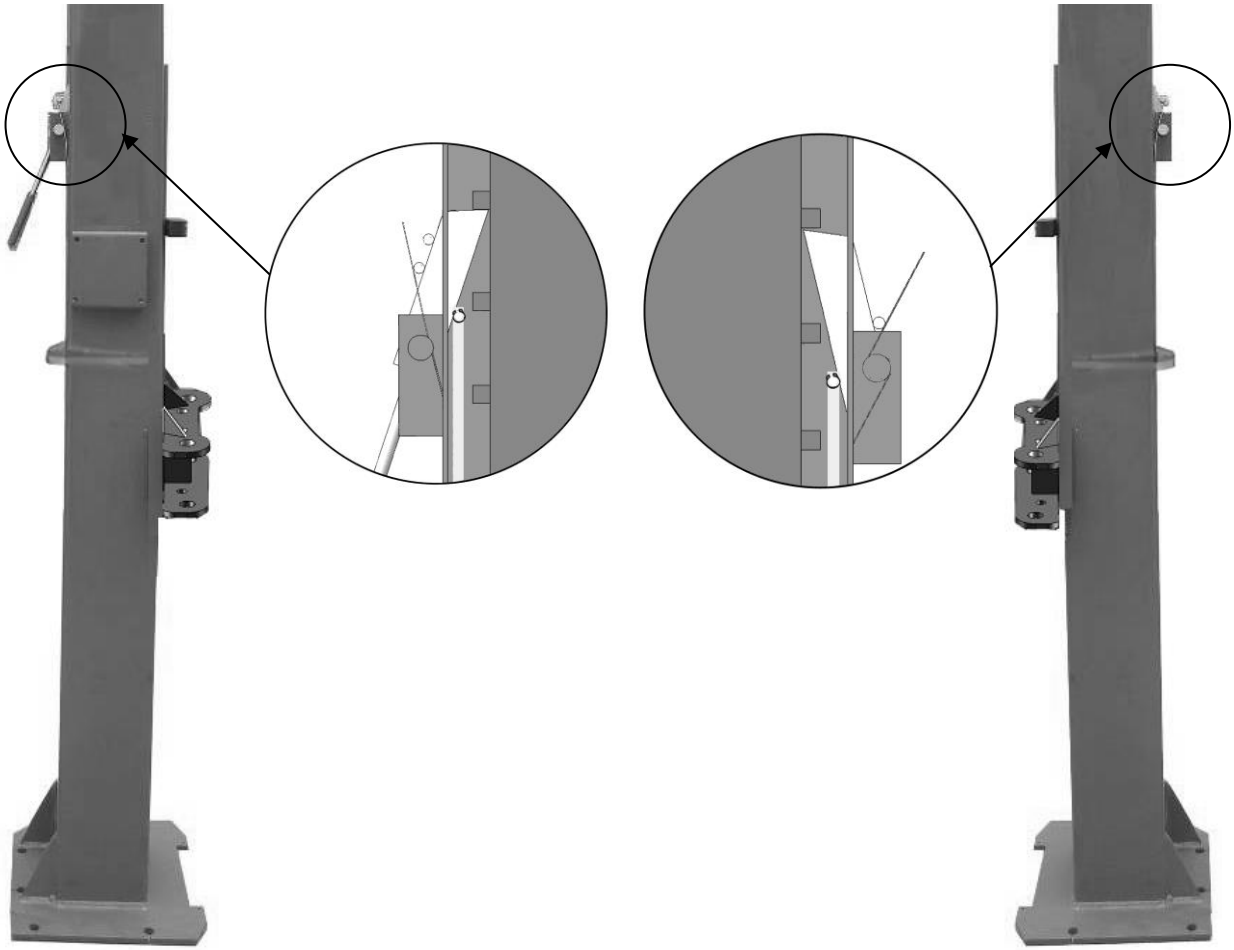


Fig. 17

I. Install cables (See Fig.18)

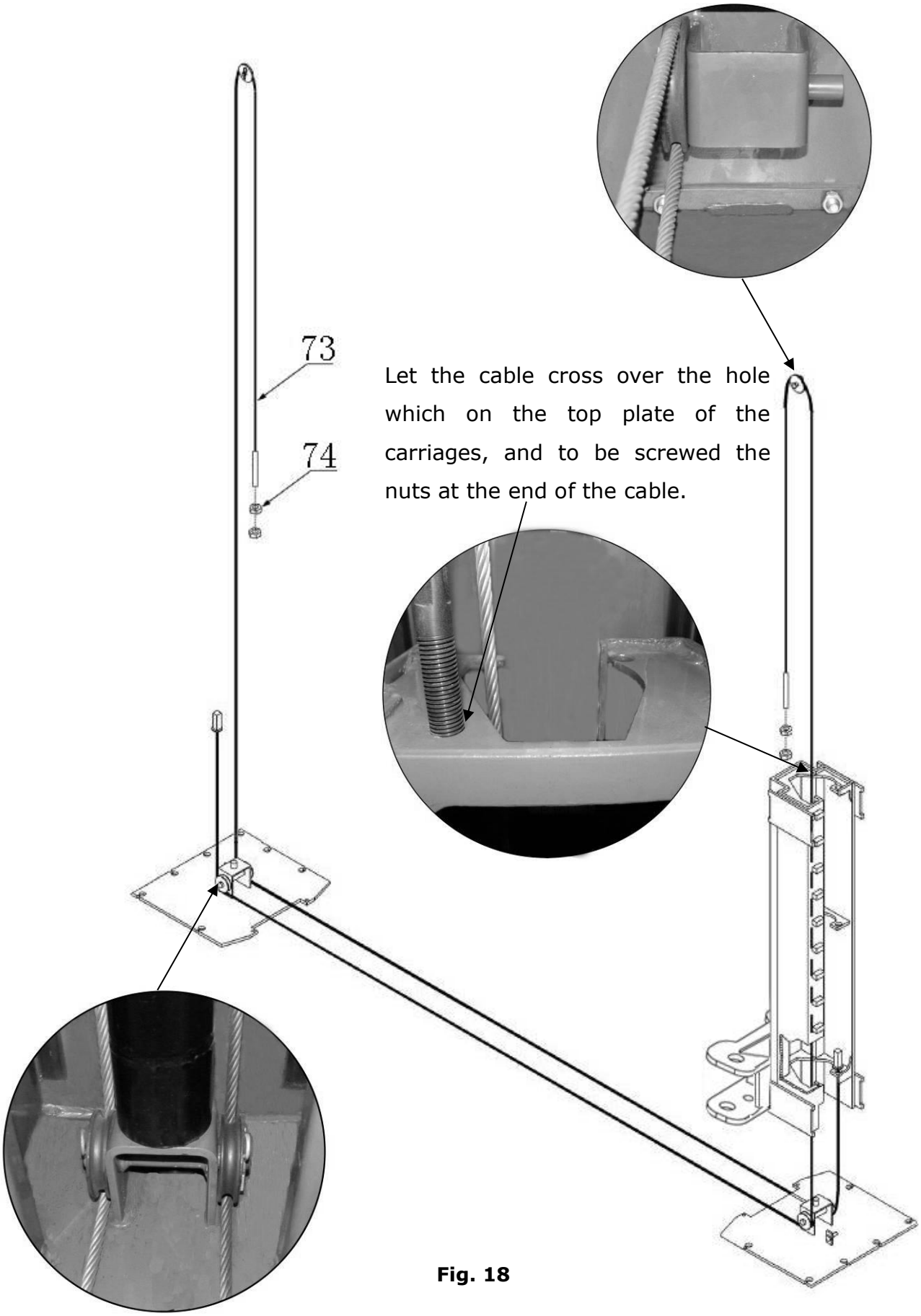


Fig. 18

J. Connecting oil hose (See Fig. 19)

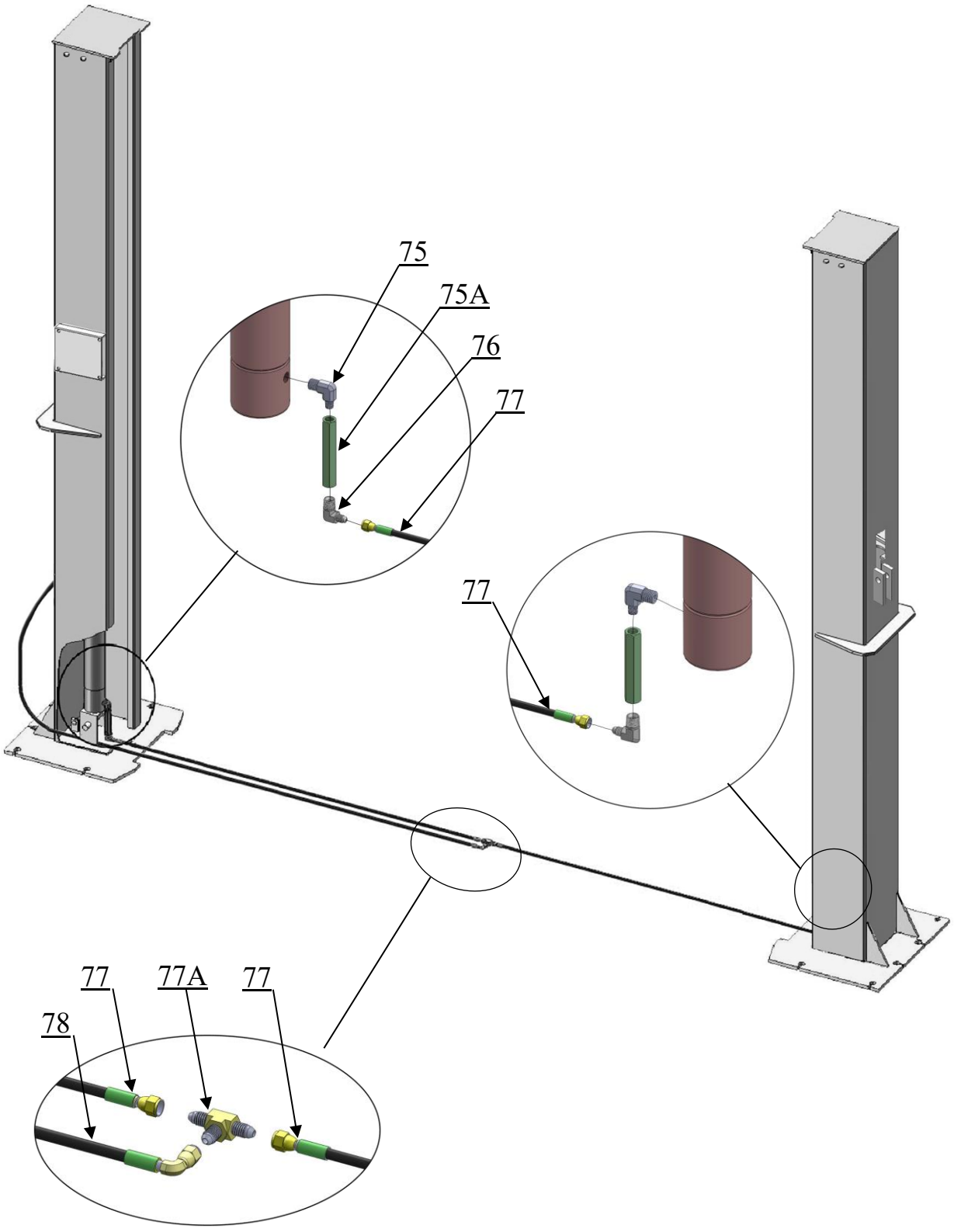


Fig. 19

K. Install power unit and oil hose (See Fig. 20)

Tighten all the hydraulic fittings, and fix the oil hose by retainer.

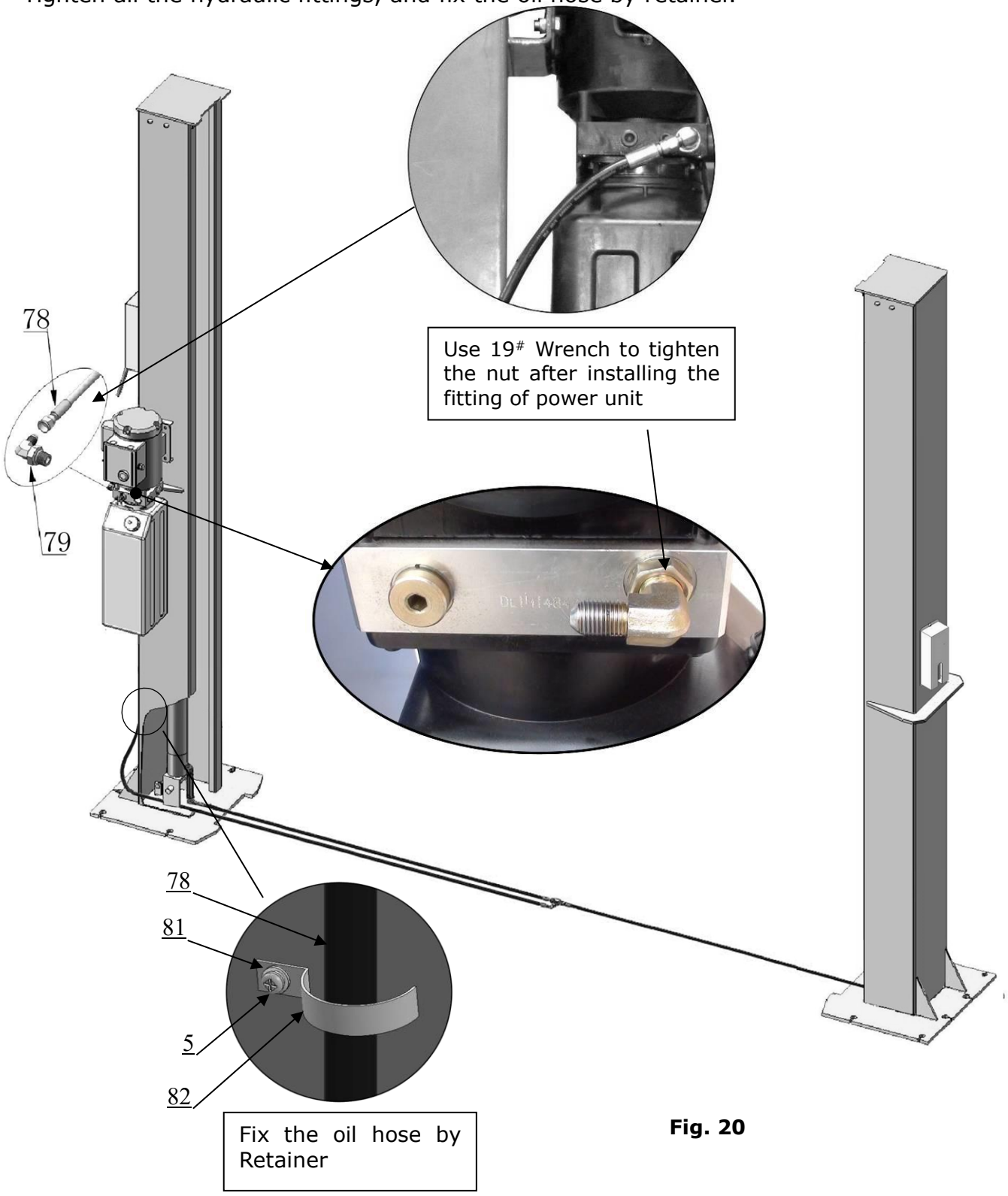


Fig. 20

L. Install safety cable

Install safety cable from offside safety lock to power-side safety lock **(See Fig. 21)**.

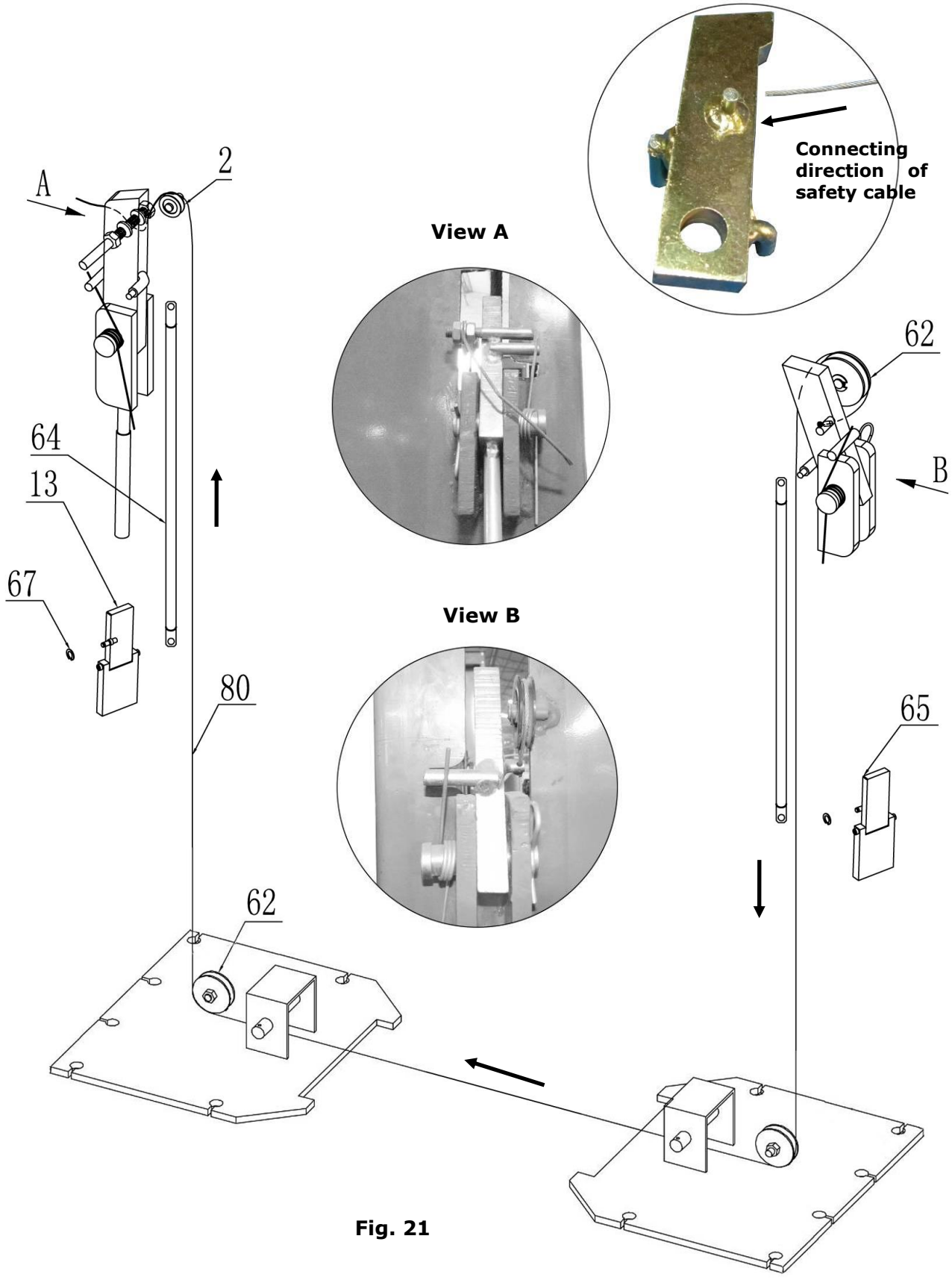


Fig. 21

M. Install floor cover (See Fig. 22).

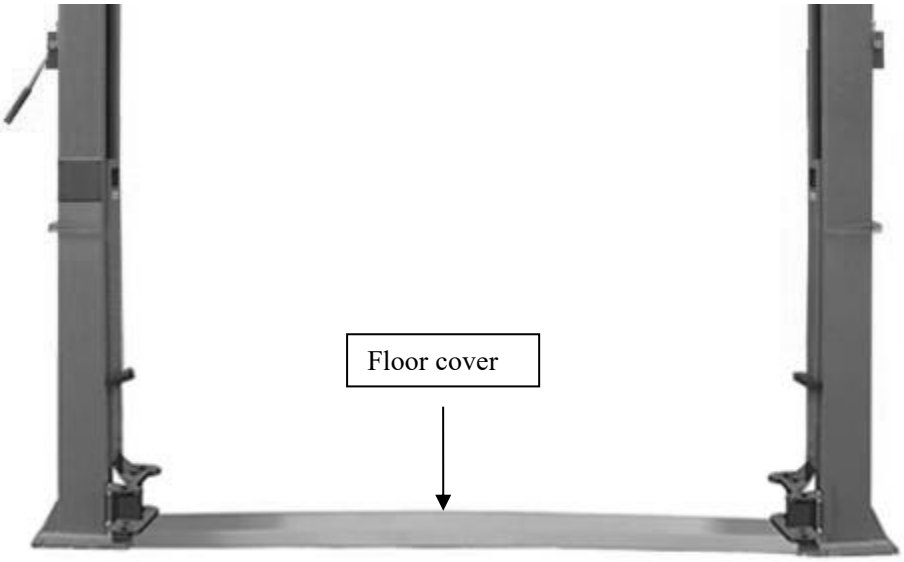


Fig. 22

N. Install lifting arms and adjust the arm locks

1. Install the lifting arms **(See Fig. 23)**
2. Lowing the carriages down to the lowest position, then use the 8# wrench to loosen the nut of arm lock **(See Fig. 24)**

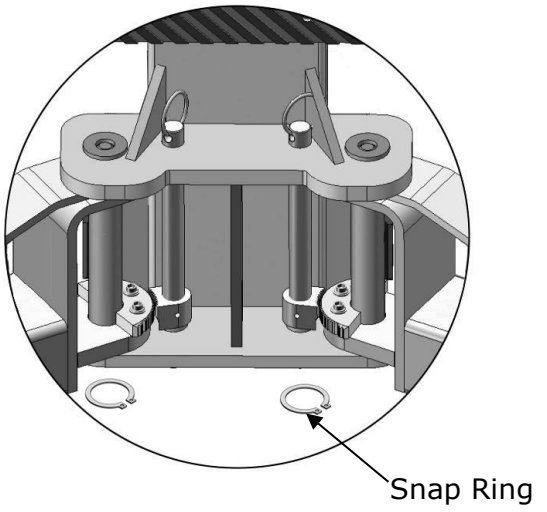


Fig. 23

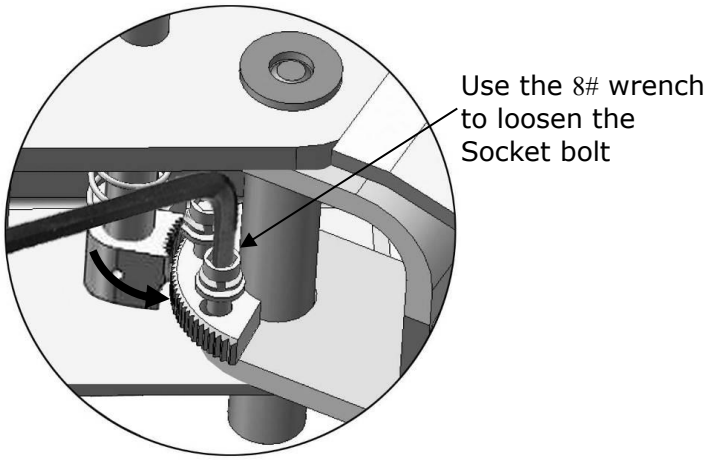


Fig. 24

3. Adjust the arm lock as arrow direction **(See Fig. 25).**
4. Adjust moon gear and arm lock to make it to be meshed, then tighten the nut of arm lock **(See Fig. 26).**

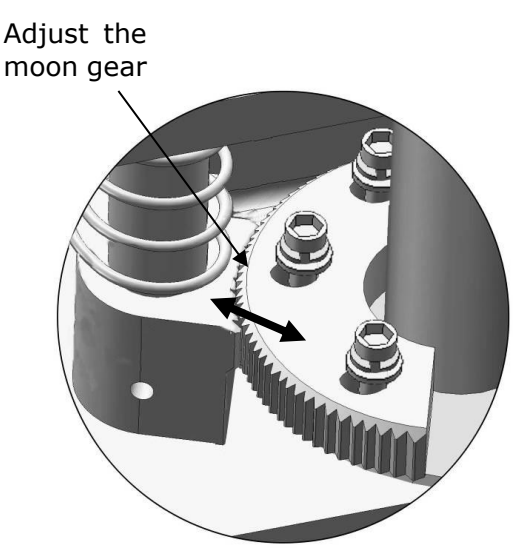


Fig. 25

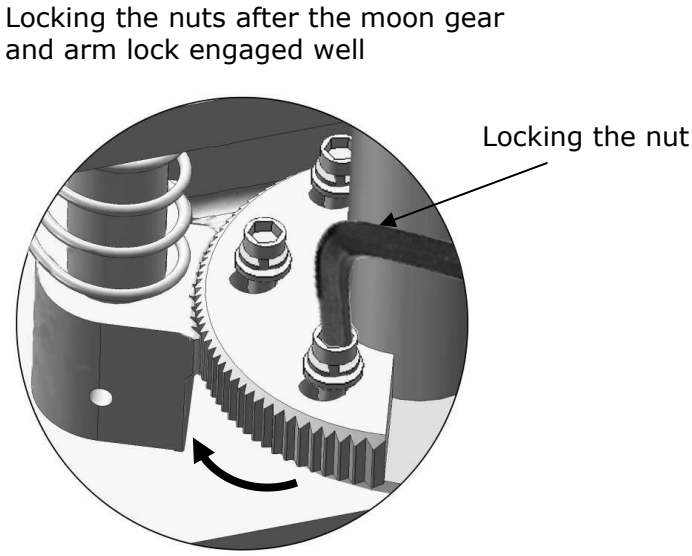


Fig. 26

O. Install Electrical System

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

Note: 1. For the safety of operators, the power wiring must contact the floor well.

2. Pay attention to the direction of rotations when using three phase motors.

AMGO single phase motor (See Fig. 27).

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. Control button (4#) connect with terminals of AC contactor marked **A1**; control button (3#) connect with terminals of AC contactor marked **L1**.

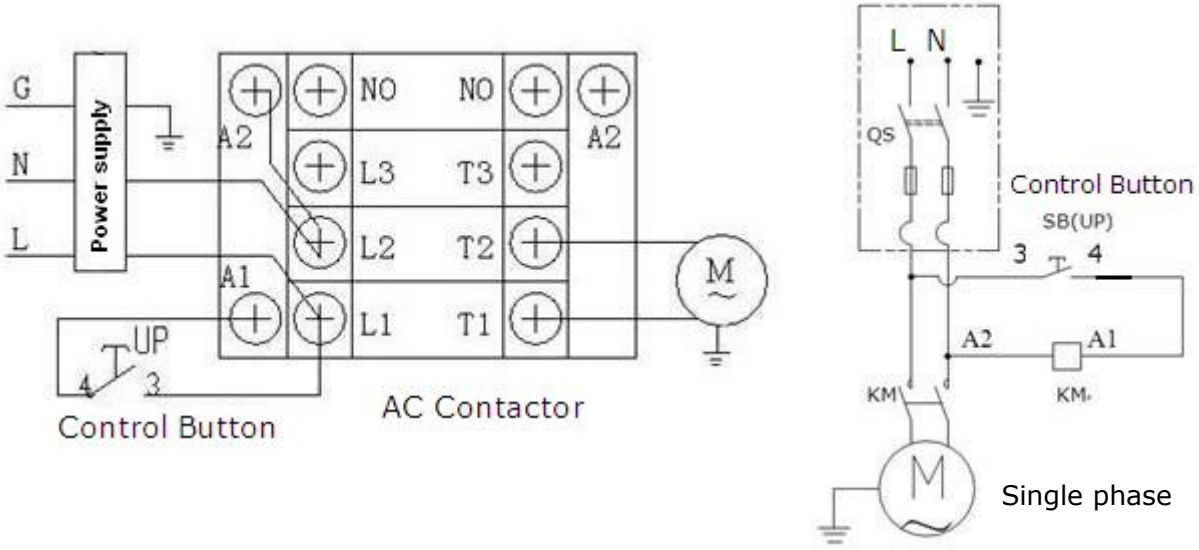


Fig. 27

AMGO 3 phase motor.

1、Circuit diagram(See Fig. 28).

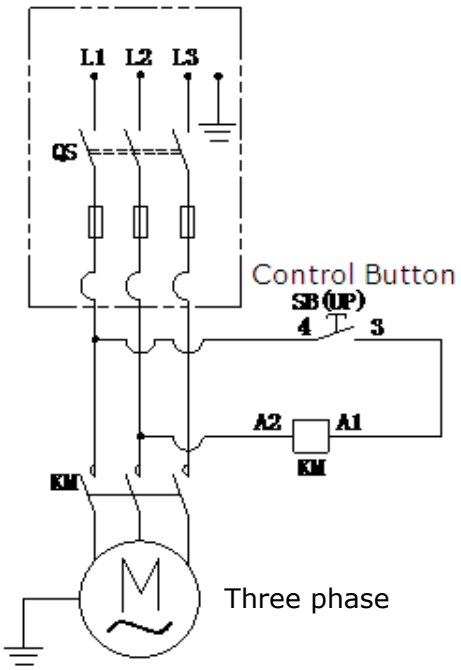


Fig. 28

2. Connection step **(See Fig. 29)**

a. The source wires **L1, L2, L3** connected with terminals of AC contactor marked **L1, L2, L3** respectively.

b. Terminals of AC contactor marked **L1** connected with terminals **4#** of control button; Terminals **A1** of AC contactor connected with terminals **3#** of control button.

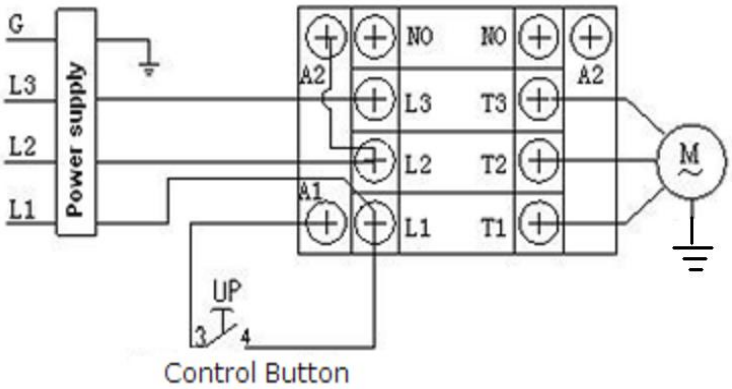
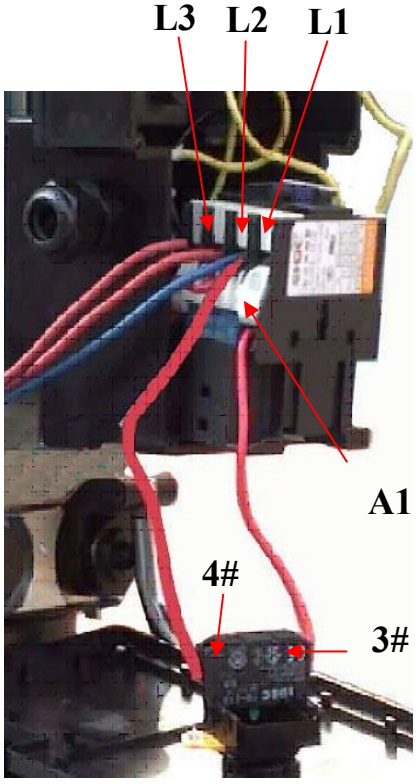


Fig. 29



IV. EXPLODED VIEW

Model BP-10

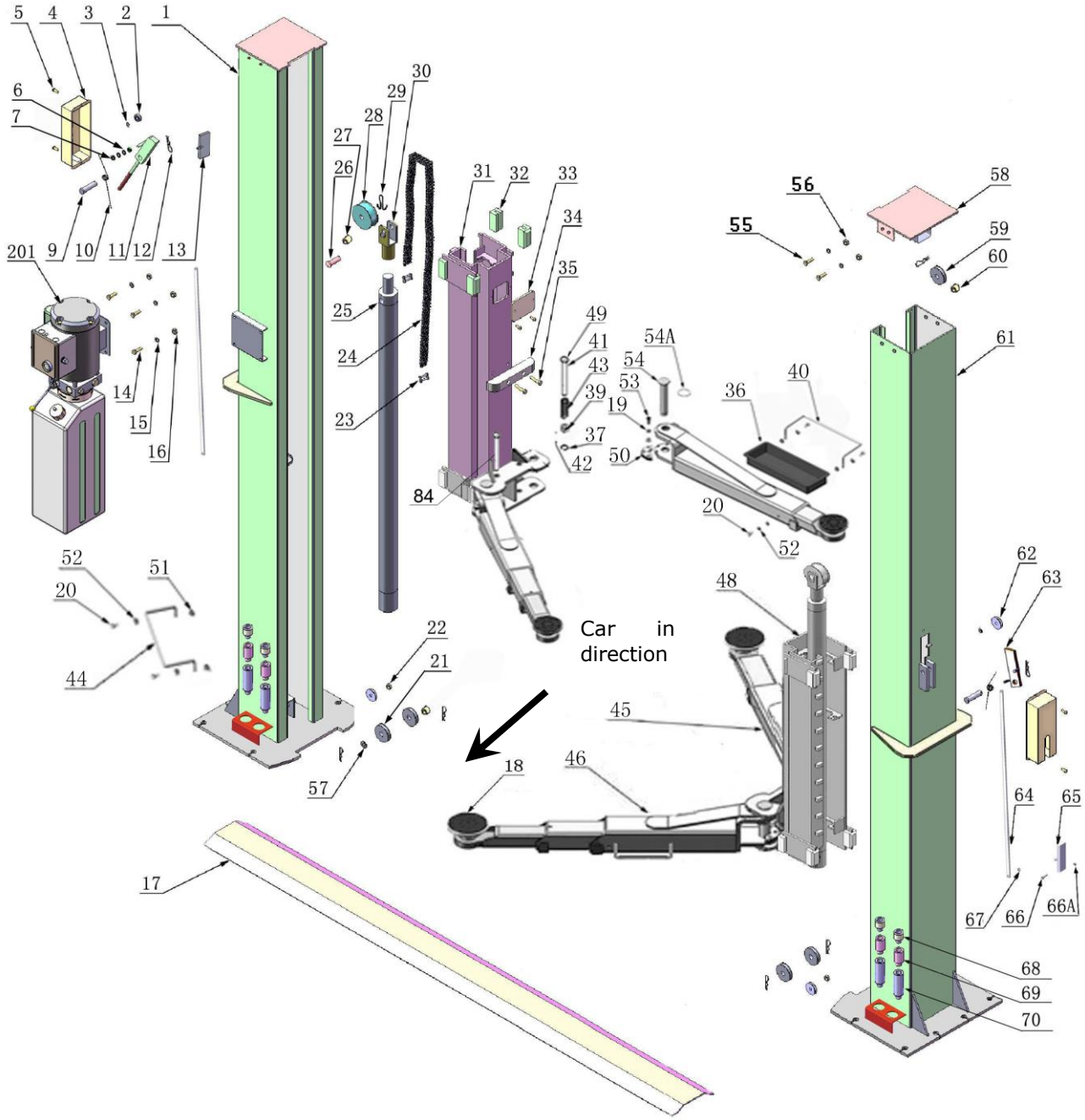


Fig. 30

Cylinder

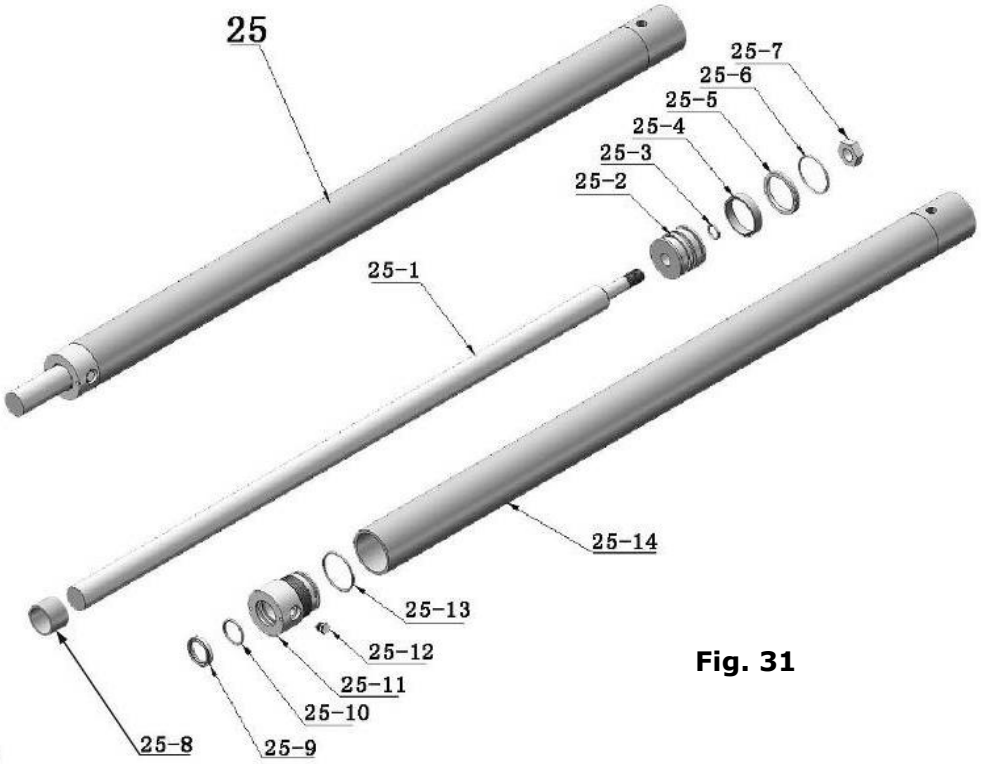
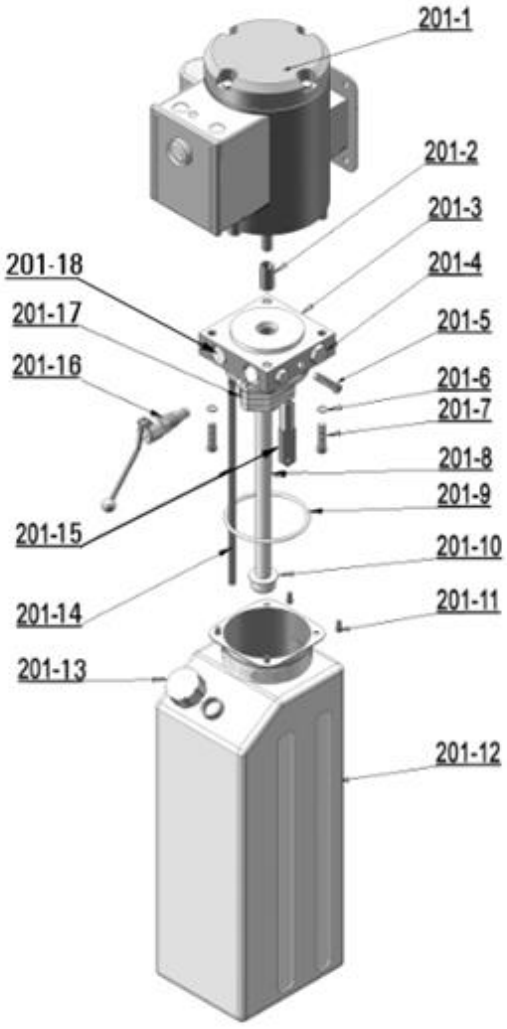


Fig. 31

AMGO MANUAL POWER UNIT

220V/50HZ/1 Phase



380V/50HZ/3 phase

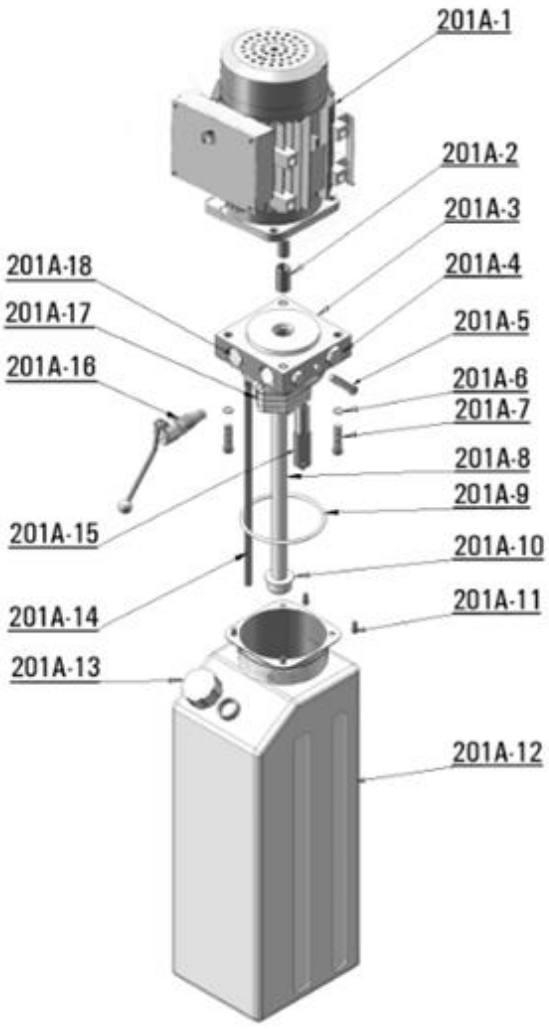


Fig. 32

Illustration of hydraulic valve for AMGO power unit

AMGO manual power unit, 220V/50HZ, Single phase (See Fig. 33)

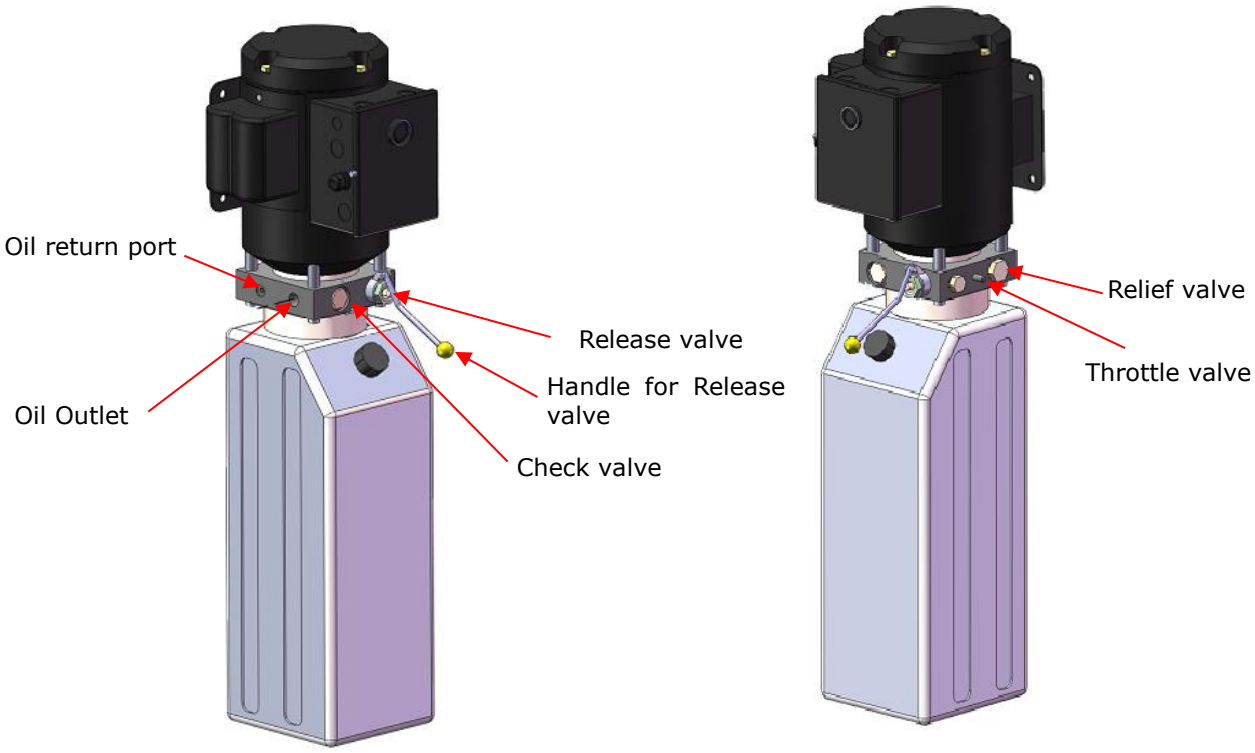


Fig. 33

V. TEST RUN

1. Adjust synchronous cable (See Fig. 35)

Press **UP** button to lift the carriage up to the position of the cable nut higher than chain pulley. Use wrench to hold the cable fitting, meanwhile use ratchet spanner to tighten the cable nut. Make sure two cables are in the same tension so that two lifting carriages can work synchronously.

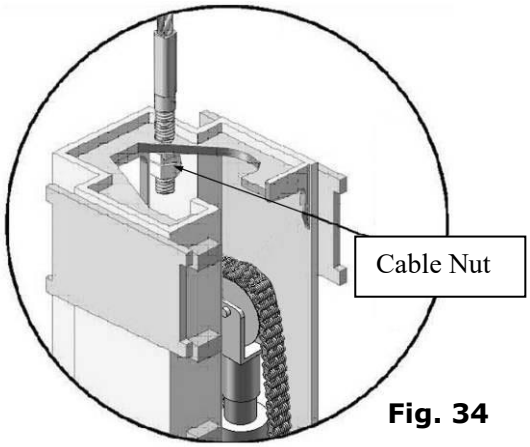


Fig. 34

If the carriage does not Synchronize when lifting, please tighten the cable nut of lower side carriage.

2. Adjust safety cable

Lifting the carriages and lock at the same height, strain the safety cable and then release a little, and then tighten the cable nuts. Make sure the safety device can always be worked properly. Last assemble the safety device cover.

3. Adjust the lower speed

You can adjust the lower speed of the lift if needing: Loosen the Fixing Nut of the Throttle Valve, and then turn the Throttle Valve clockwise to decrease the lower speed, or counterclockwise to increase the lower speed. Do not forget to tighten the Fixing Nut after the lower speed adjustment has been done.

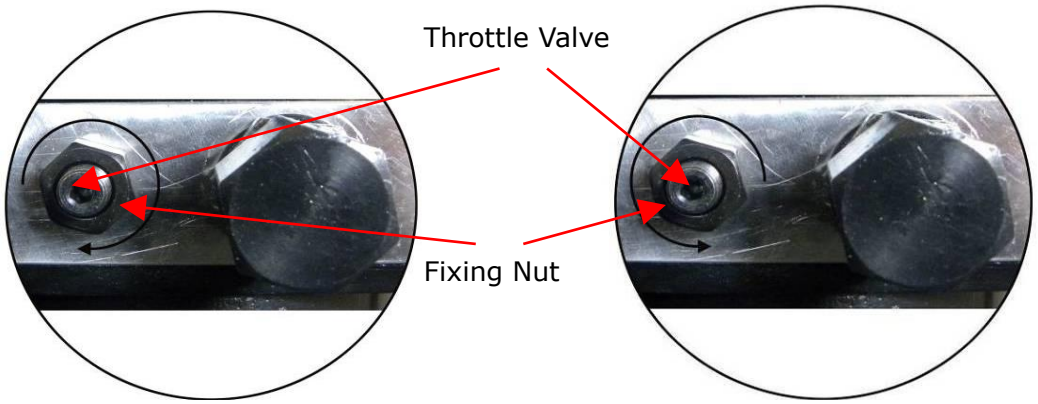


Fig. 35

4. Test with load

After finishing the above adjustment, test running the lift with load. Run the lift in low position for several times first, make sure the lift can rise and lower synchronously, the safety device can lock and release synchronously. And then test run the lift to the top completely. If there is anything improper, repeat the above adjustment.

NOTE: It may be vibrated when lifting at start, lifting it with load for several times, the air would be bled and the vibration would be disappeared automatically.

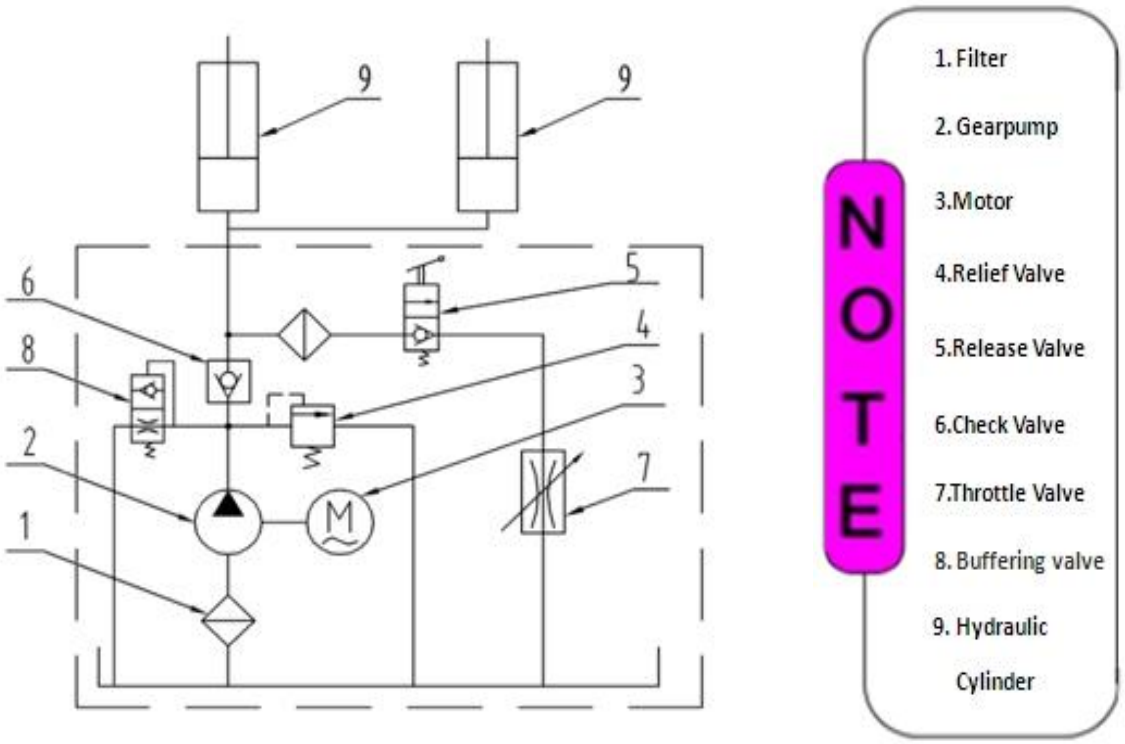


Fig. 36 Hydraulic System

VI. OPERATION INSTRUCTIONS

Please read the safety tips carefully before operating the lift

To lift vehicle

1. Keep clean of site near the lift;
2. Position lift arms to the lowest position;
3. To shortest lift arms;
4. Open lift arms;
5. Position vehicle between columns;
6. Move arms to the vehicle's lifting point;

Note: The four lift arms must at the same time contact the vehicle's lifting point

where manufacturers recommended

7. Push button "**UP"** until the lift pads contact underside of vehicle totally. Recheck to make sure vehicle is secure;
8. Continue to raise the lift slowly to the desired working height, ensuring the balance of vehicle;
9. Push lowering handle to lower lift onto the nearest safety. The vehicle is ready to repair.

To lower vehicle

1. Be sure clear of around and under the lift, only leaving operator in lift area;
2. Push button "**UP"** to raise the vehicle slightly, and then release the safety device, lower vehicle by pushing lowering handle.
3. Open the arms and position them to the shortest length;
4. Drive away the vehicle.
5. Turn off the power.

VII. MAINTENANCE SCHEDULE

Monthly:

1. Re-torque the anchor bolts to 150Nm;
2. Check all connectors, bolts and pins to insure proper mounting;
3. Lubricate cable with lubricant;
4. Make a visual inspection of all hydraulic hoses/lines for possible wear or leakage;
5. Check safety device and make sure proper condition;
6. Lubricate all rollers and pins with 90wt. Gear oil or equivalent;

Note: All anchor bolts should take full torque. If any of the bolts does not function for any reason, DO NOT use the lift until the bolt has been replaced.

Every six months:

1. Make a visual inspection of all moving parts for possible wear, interference or damage.
2. Check and adjust as necessary, equalizer tension of the cables to insure level lifting.
3. Check columns for plumbness.
4. Check rubber pads and replace as necessary.
5. Check safety device and make sure proper condition.

VIII.TROUBLE SHOOTING

TROUBLE	CAUSE	REMEDY
Motor does not run	1. Button does not work 2. Wiring connections are not in good condition 3. Motor burned out 4. AC contactor burned out	1. Replace button 2.Repair all wiring connections 3. Repair or replace motor 4. Replace AC Contactor
Motor runs but the lift is not raised	1. Motor runs in reverse rotation 2. Gear pump out of operation 3. Release valve in damage 4. Relief valve or check valve in damage 5. Low oil level	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	1. Release Valve out of work 2. Relief Valve or Check Valve leakage 3. Cylinder or Fittings leaks	Repair or replace
Lift raises slowly	1. Oil line is jammed 2. Motor running on low voltage 3. Oil mixed with air 4. Gear Pump leaks 5. Overload lifting	1. Clean the oil line 2. Check Electrical System 3. Fill tank 4. Replace Pump 5. Check load
Lift cannot lower	1. Safety device are locking. 2. Release valve in damage 3. Safety cable broken 4. Oil system is jammed	1. Release the safeties 2. Repair or replace 3. Replace 4. Clean the oil system

IX. PARTS LIST FOR Model BP-10

Item	Part#	Description	Qty.	Note
(See Fig. 30, Fig. 21, Fig. 20, Fig. 19, Fig. 18)				
1	203141	Power-side Column	1	
2	209011	Plastic Pulley	1	
3	209010	Snap Ring	2	
4	209008	Safety Cover	2	
5	209009	Cup Head Bolt	10	
6	206006	Washer	2	
7	206023A	Hex Nut	2	
201	209002	Manual Power Unit	1	
9	206002	Safety Pin	2	
10	209007	Safety Spring	2	
11	203002	Power-side Safety Lock	1	
12	209012	Hair Pin	8	
13	203015	Safety Block(Power-side)	1	
14	209003	Hex Bolt	4	
15	209004	Rubber Ring	4	
16	209005	Self locking nut	4	
17	203076	Protect Cover	1	
18	217114A	Rubber Pad Assy.	4	
18A	420138	Socket bolt	4	
18B	209134	Rubber Pad	4	
18C	680030B	Rubber Pad Frame	4	
19	209039	Lock Washer	12	
20	201002	Hex Bolt	14	
21	209057	Small Pulley	4	
22	209056	Self locking nut	2	
23	201010A	Chain Connector	4	
24	203005	Chain	2	
25	203078	Hydraulic Cylinder	2	
26	203040	Pin For Chain Pulley	2	
27	203004A	Bronze Bush For Chain Pulley	4	
28	203004	Chain Pulley	2	
29	201005	Split Pin	2	
30	201004	Chain Pulley Assy.	2	
31	203143	Power-side Carriage	1	
32	209015	Slider Block	16	
33	201038	Carriage Plastic Cover	2	

34	206045	Protective Rubber	2	
Item	**Part#**	**Description**	**Qty.**	**Note**
35	206046	Self-tapping Screw	4	
36	206156	Tool tray	2	
37	206032	Snap Ring	4	
38	209022	Washer	12	
39	217044	Arm Lock	4	
40	206154	Rear Toe Guard	2	
41	217046A	Arm Lock Bar(Left)	2	
42	206036	Hair Pin	4	
43	217045	Spring	4	
44	206155	Front Toe Guard	2	
45	203131	Rear arm(drop-in)	2	
45A	203149	Rear Outer Arm	2	
45B	203150	Rear Inner Arm	2	
46	203130	Front Arm (drop-in)	2	
46A	203136	Front outer arm	2	
46B	203137	Front middle arm	2	
46C	203138	Front Arm (drop-in)	2	
48	203145	Power-side Carriage	1	
49	209153	Pull tab for arm lock bar	4	
50	206049	Moon Gear	4	
51	209033	Washer	14	
52	209034	Lock Washer	14	
53	206048	Socket Bolt	12	
54	217168	Arm Pin	4	
54A	520023	Snap Ring	4	
55	217069	Hex Bolt	8	
56	206023	Self locking Nut	8	
57	209128	Washer	6	
58	203077A	Top Plate	2	
59	209045	Big Pulley	2	
60	209057A	Bronze Bush For Pulley	6	
61	203142	Offside column	1	
62	209049	Plastic Pulley	3	
63	203012	Offside Safety Lock	1	
64	203013	Connecting rod	2	
65	203014	Safety Block（Offside）	1	
66	205026	Socket Bolt	2	
66A	610026	Self locking Nut	2	

67	420049	Split Pin	4	
Item	**Part#**	**Description**	**Qty.**	**Note**
68	209051B	Stackable Adapter(1.5 ")	4	
69	209052B	Stackable Adapter(2.5 ")	4	
70	209053B	Stackable Adapter(5 ")	4	
71	209059B	Anchor Bolt	12	
72	620065	Shim（2mm)	10	
72A	201090	Shim（1mm)	10	
73	203069	Cable	2	
74	209066	Cable nut	4	
75	207024	900 fitting	2	
75A	201082	Extend straight fitting L=98mm	2	
76	420097	900fitting	2	
77	203107	Oil hose	2	
77A	211016	T fitting	1	
78	203106	Oil hose	1	
79	209060	900 Fitting for Manual Power Unit	1	
80	203071	Safety Cable	1	
81	420045	Washer	2	
82	217048	Retainer	2	
83	203502A	Parts Box	1	
84	217046	Arm Lock Bar(right)	2	
Parts For Hydraulic Cylinder (See Fig. 31)				
25-1	201027	Piston Rod	2	
25-2	203079	Piston	2	
25-3	206069	O-Ring	2	
25-4	203080	Support Ring	2	
25-5	410087	Y-Ring	2	
25-6	203082	O-Ring	2	
25-7	206071	Hex Nut	2	
25-8	201037	Adjustment Tube	2	
25-9	209078	Dust Ring	2	
25-10	201032	O-Ring	2	
25-11	203083	Head Cap	2	
25-12	201034	Bleeding Plug	2	
25-13	203084	O-Ring	2	
25-14	203085	Bore Weldment	2	

Parts for AMGO manual power unit 220V/50HZ/1Phase (See Fig. 32)				
Item	**Part#**	**Description**	**Qty.**	**Note**
201-1	81400287	Motor	1	
201-2	81400363	Motor Connecting Shaft	1	
201-3	81400362	Manifold Block	1	
201-4	81400266	Relief Valve	1	
201-5	81400268	Throttle Valve	1	
201-6	209149	Lock Washer	4	
201-7	85090142	Socket Bolt	4	
201-8	81400288	Oil Suction Pipe	1	
201-9	81400365	O-Ring	1	
201-10	81400290	Filter	1	
201-11	203018	Socket Bolt	4	
201-12	81400275	Reservoir	1	
201-13	81400263	Filler Cap	1	
201-14	81400289	Oil Return Pipe	1	
201-15	81400294	Buffer Valve	1	
201-16	81400265	Release Valve	1	
201-17	81400280	Gear Pump	1	
201-18	81400267	Check Valve	1	

AMGO HYDRAULIC CORPORA

**1931 Jo Rogers Blvd, Manning, South Carolina,
Zip:29102**

Tel: (803) 505-6410

fax: (803) 505-6410