

CLASSIC LIFT

Installation And Service Manual



SINGLE POST LIFT

Model: CL1P-ML

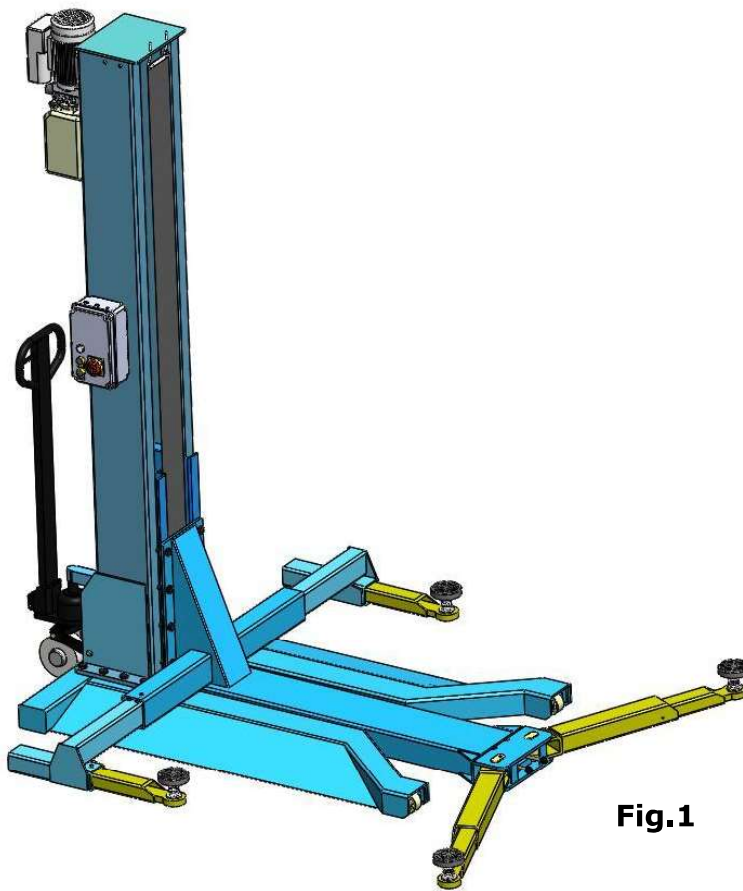
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I. PRODUCT FEATURES AND SPECIFICATIONS

MOBILE CHAIN-DRIVE SINGLE POST MODEL CL1P-ML FEATURES

- Hydraulic cylinders, designed and made on ANSI standard, utilizing NOK oil seal in cylinder.
- Self-lubricating UHMW Polyethylene sliders and bronze bush.
- Single-point safety release, and dual safety design.
- Super-symmetric arms design with 3-stages front arms and 2-stages rear arms.
- Stackable and screwed type rubber pad.



MODEL CL1P-ML SPECIFICATIONS

Model	Style	Lifting Capacity	Lifting Time	Lifting Height	Overall Height	Overall Width	Minimum Pad Height	Motor
CL1P-ML	Chain-driven	2500kgs 6,000 lbs	39S	1825-1960 mm	2766mm	2032mm	105~234mm	3.0HP

Arm Swings View

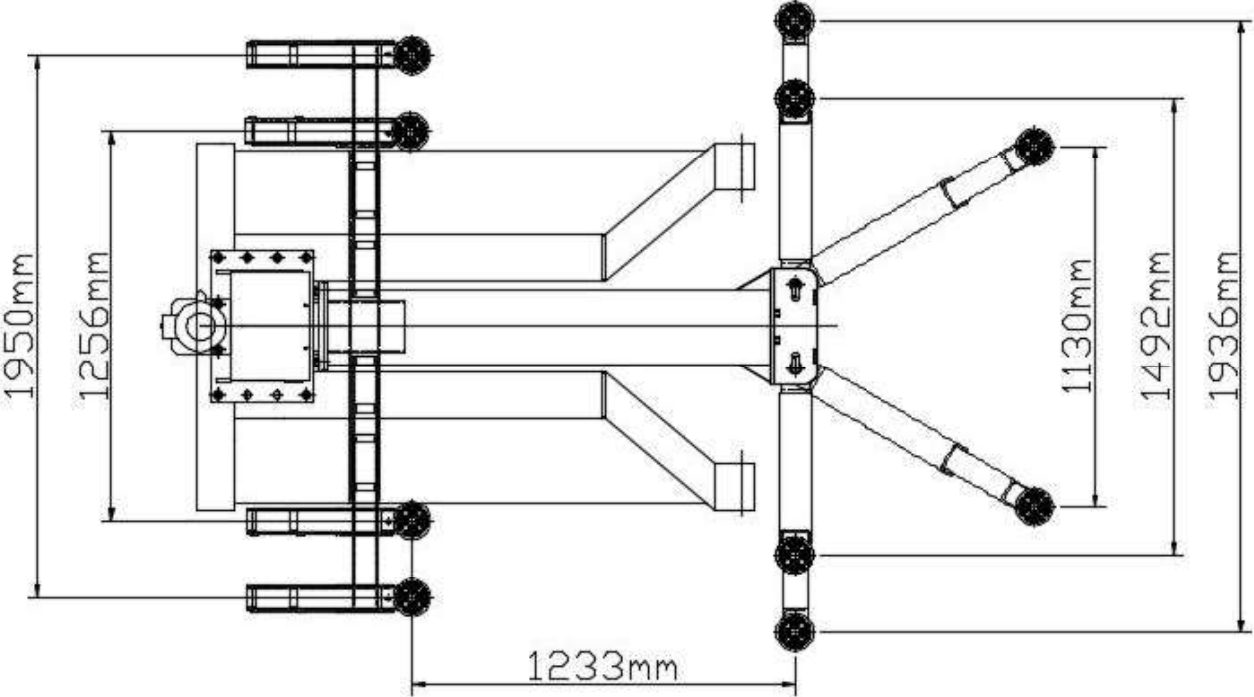


Fig.2

II. INSTALLATION REQUIREMENT

A. TOOLS REQUIRED

✓ Level Bar



✓ English Spanner(12")



✓ Wrench set: (10", 13", 14", 12", 17", 19", 24", 30")



✓Pliers



✓ Screw sets



✓ Tape Measure(7.5mm)



✓ Socket Head Wrench: (4", 5", 6")



Fig.3

B. Special requirement

- 1, It must only be used on a hard solid concrete surface
- 2, It must only be used on a LEVEL surface
- 3, It must only be used by trained personal

C. POWER SUPPLY

The electrical source must be 2.2KW minimum. The source cable size must be 2.5mm² and in good condition of contacting with floor.

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. Check the parts before assembly

1. Packaged lift and hydraulic power unit (See Fig. 4)

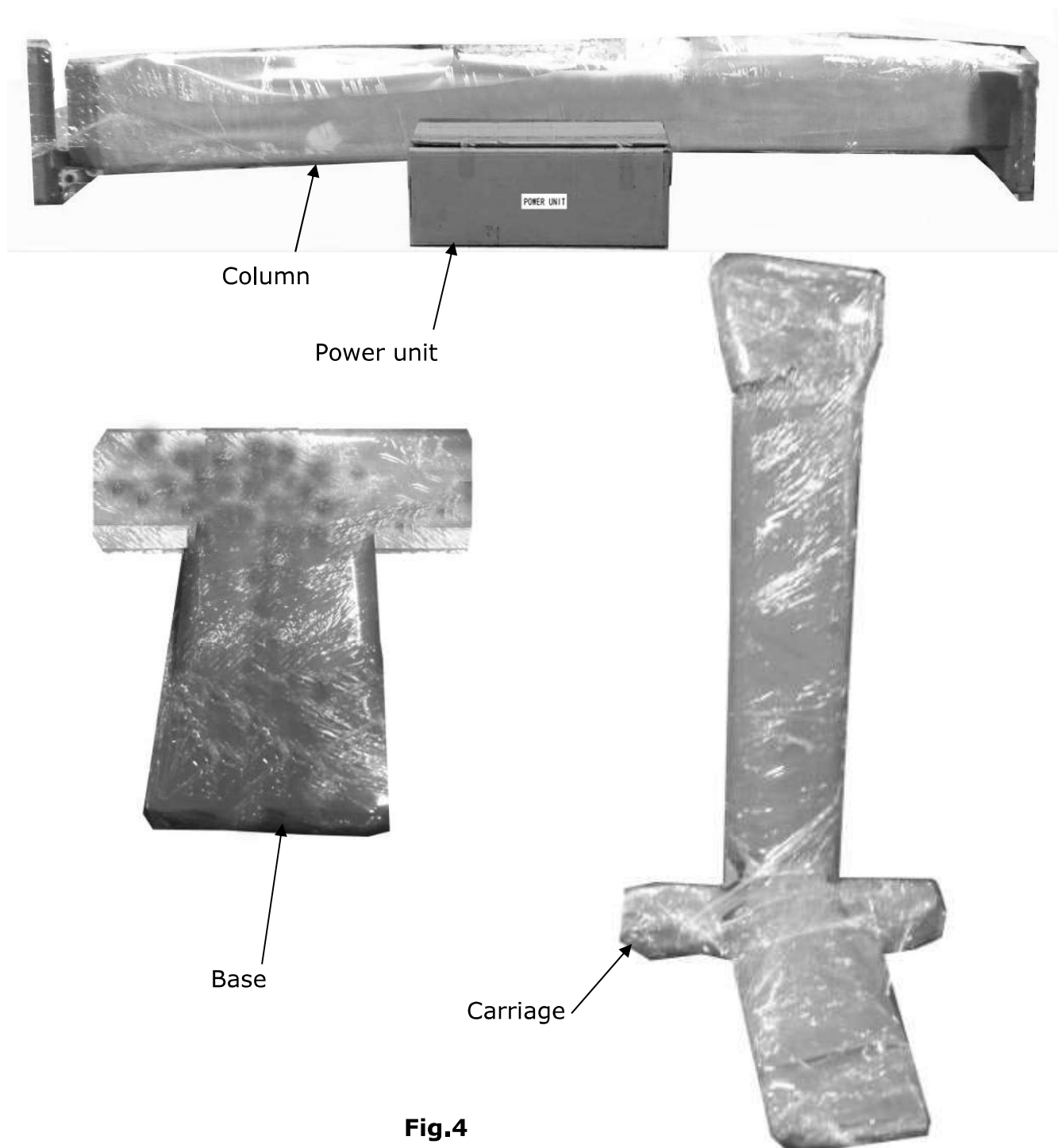


Fig.4

2. Take off the packaging on the machine ⇒ Take off the packing rack.
3. Move aside the parts and check the parts according to the shipment parts list (See Fig.5 & 6)

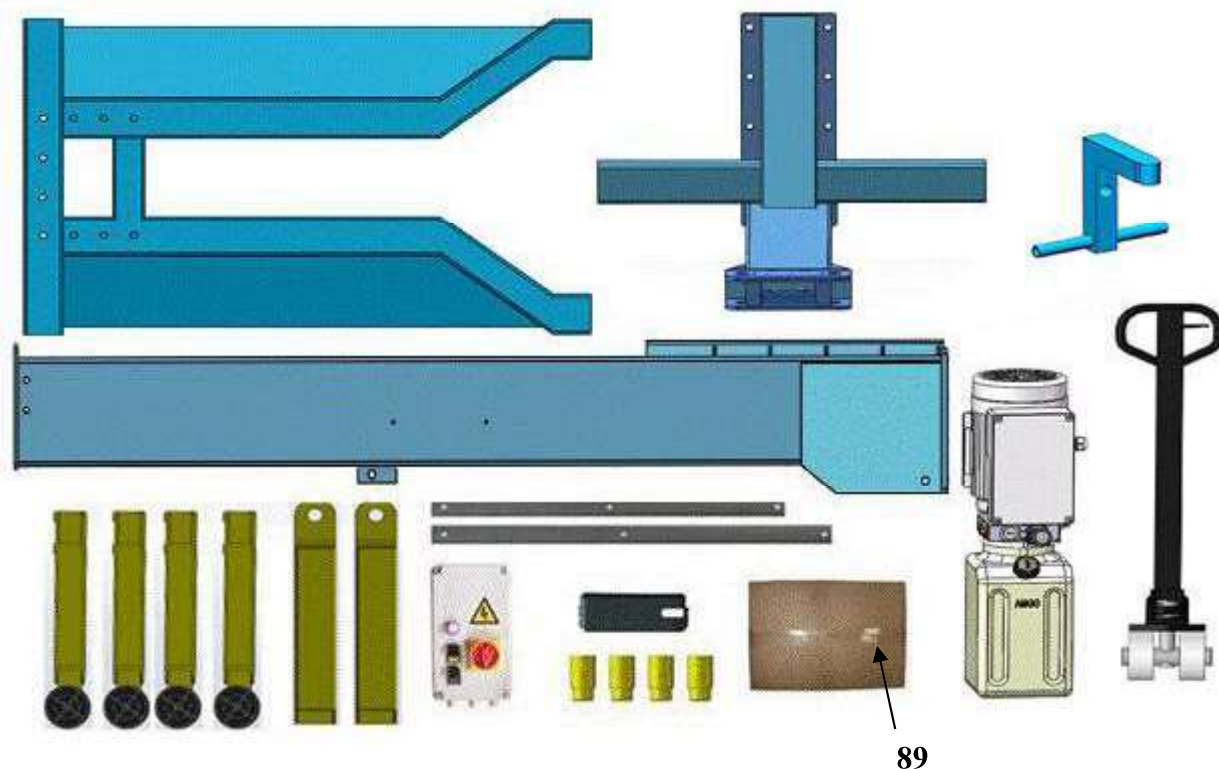


Fig.5



Fig.6

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



Fig.7

C. Lay the base flat to the ground, confirm installation place according to the ground

state, the main purpose is to save space. (See Fig.8)

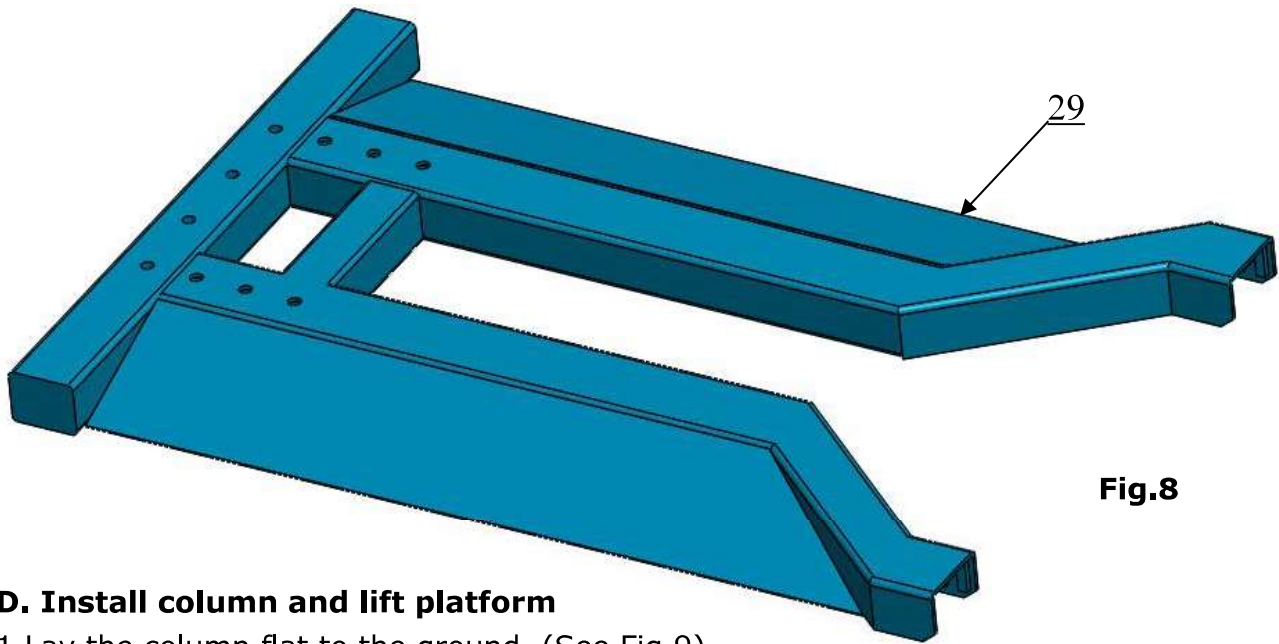


Fig.8

D. Install column and lift platform

1.Lay the column flat to the ground. (See Fig.9)

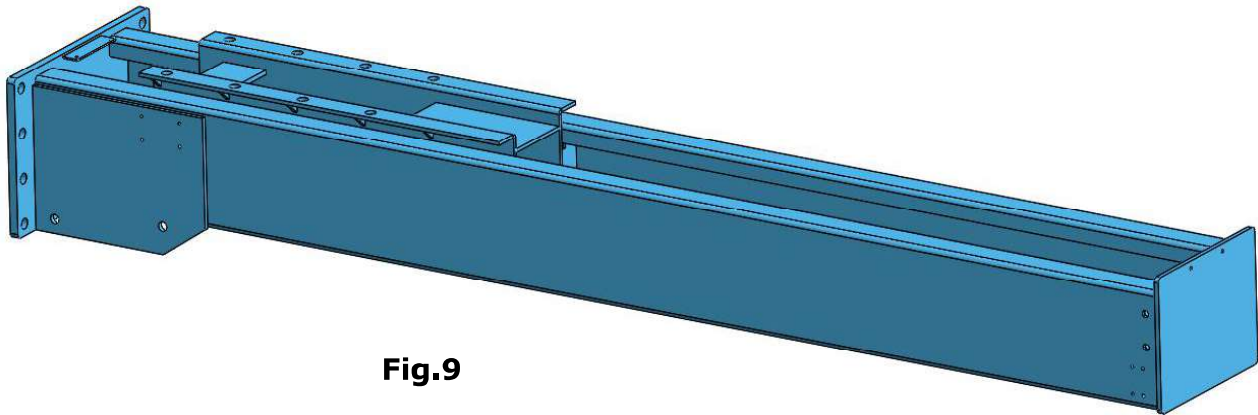


Fig.9

2.Connecting oil hose of cylinder. (See Fig.10)

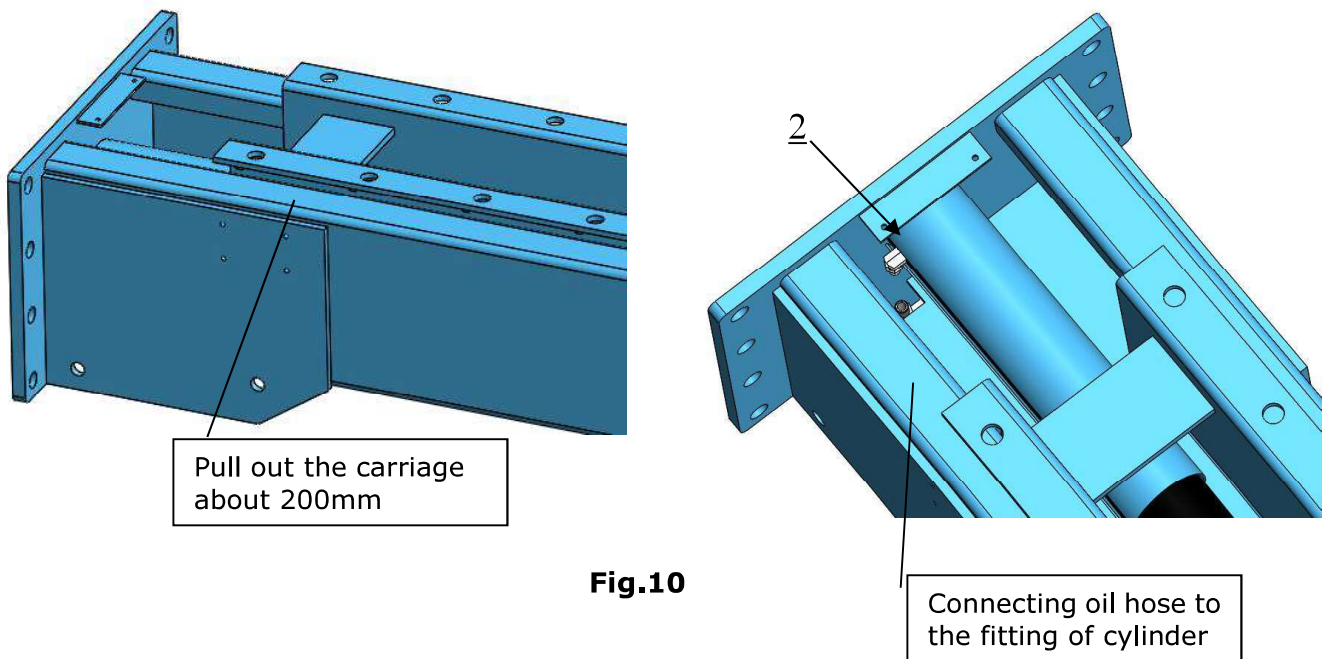


Fig.10

3.Fix column to the base plate. (See Fig.11)

4. Fix lifting platform to carriage. (See Fig.12)

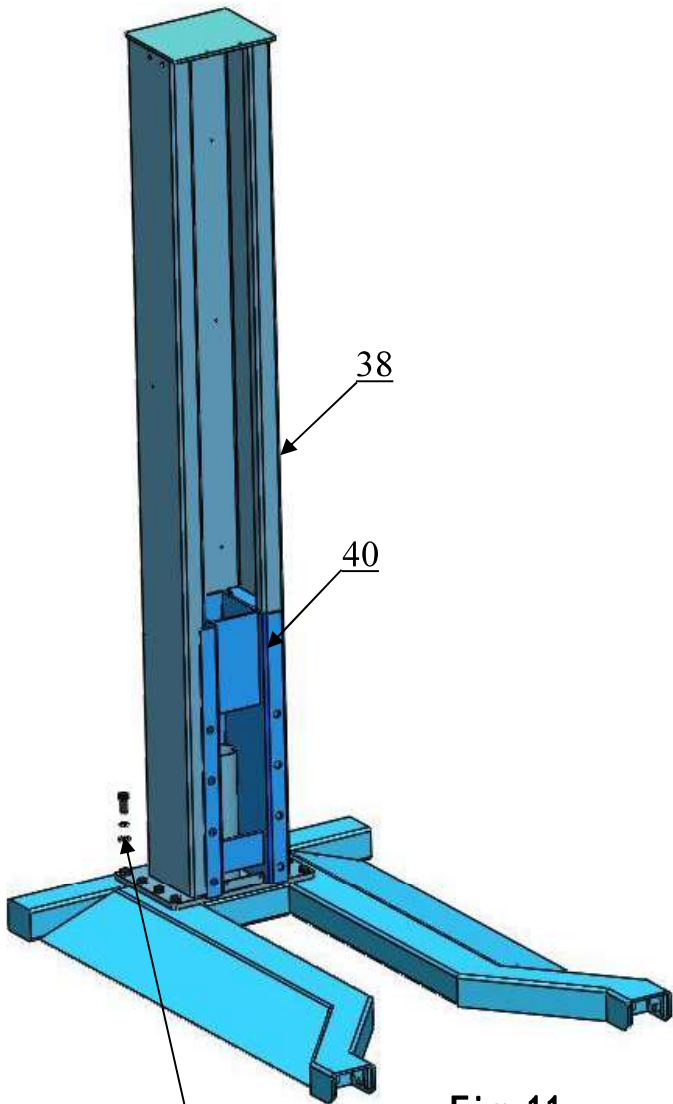


Fig. 11

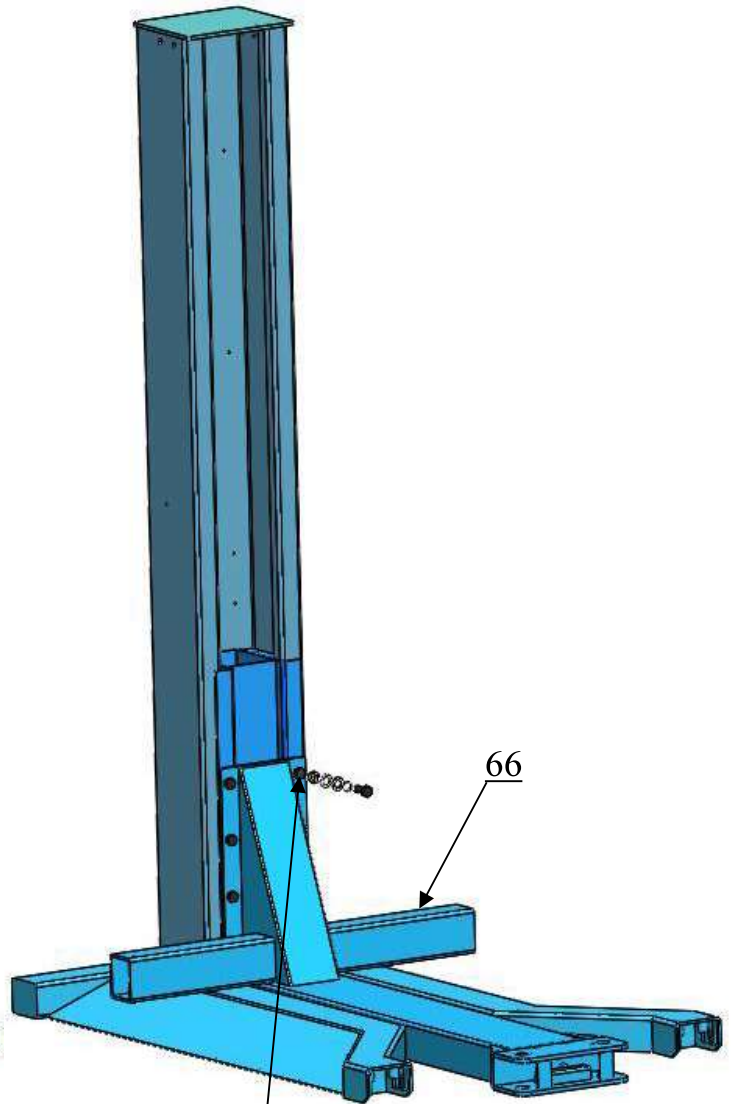
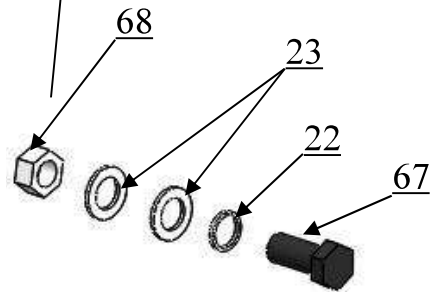
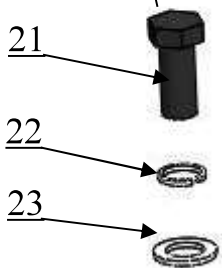


Fig. 12



E. Install motor fixed plate, power unit and oil hose (See Fig.13)

Note: Tighten the oil hose fitting and power unit fitting to avoid oil leakage; Pay attention to the direction of power unit fitting.

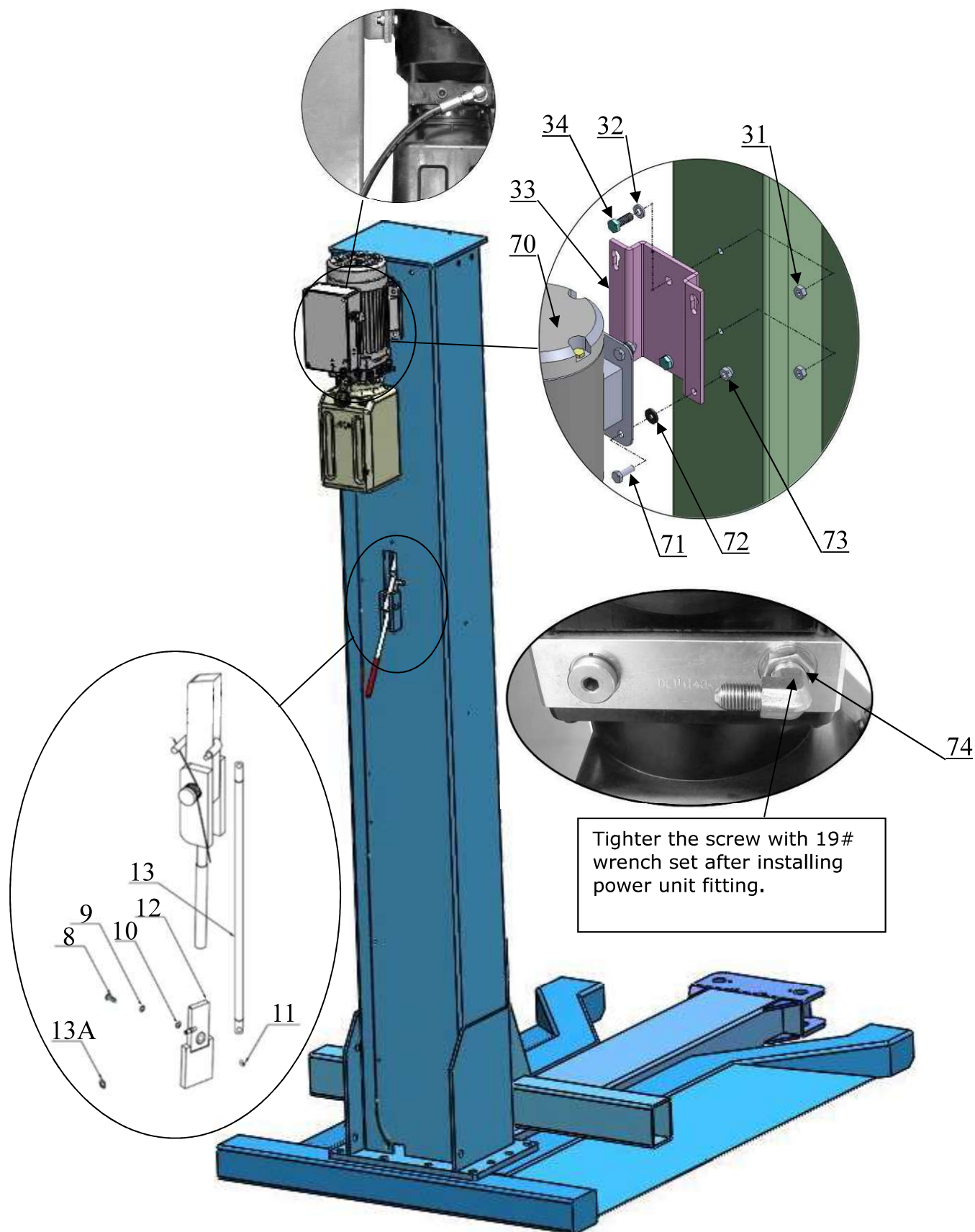


Fig.13

F. Install control box and limit switch. (See Fig.14)

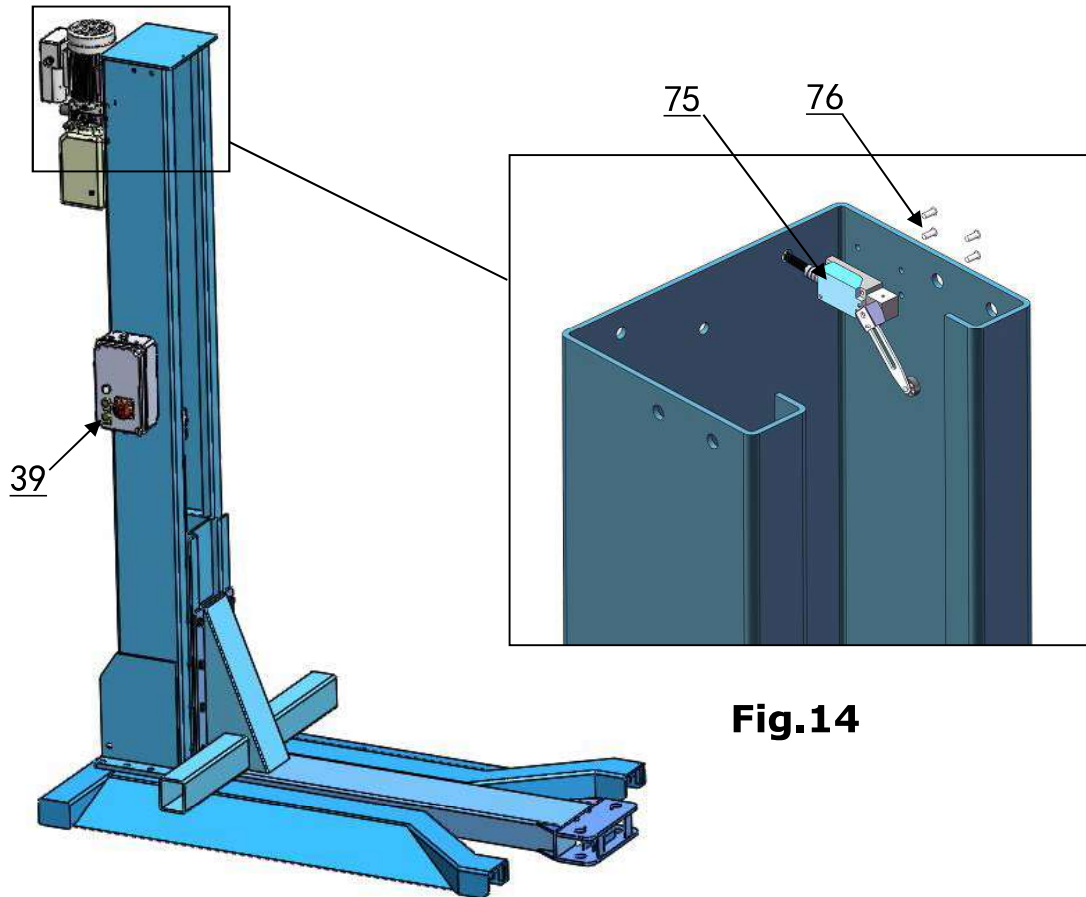


Fig.14

G. Install photoelectric switch

Photoelectric switch installed on the photoelectric switch protection cover and tighten cup head bolt M4*24 with nut M4 (**Fig.15**), then install the protection cover on the reinforcing plate by cup head bolt M6*8 (**Fig.16**).

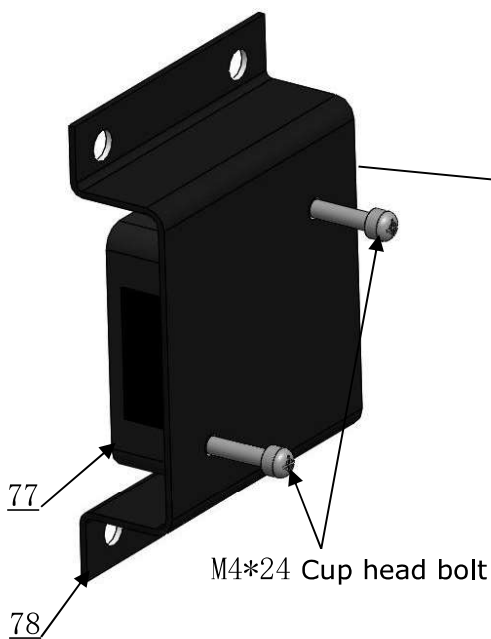


Fig. 15

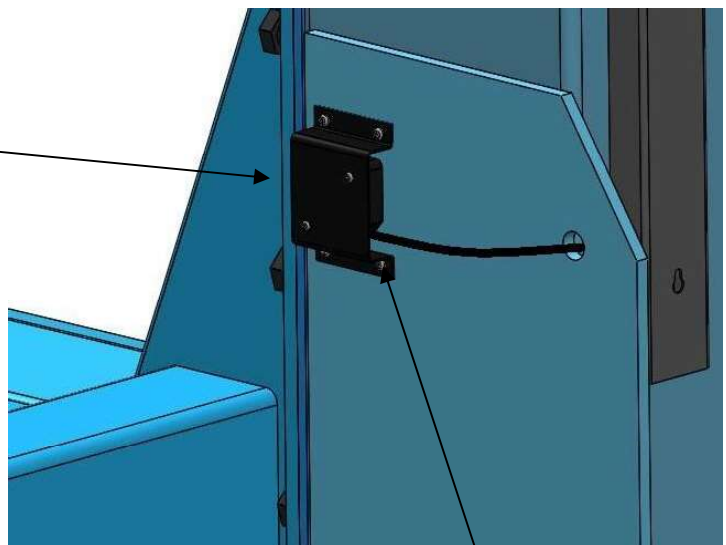


Fig. 16

H. Install electric system

1. Connecting wire with control box (See Fig.17)

- Note:(1) Specification of wire of limit switch and Air solenoid valve is 2×1^2 Wire cable for power source and motor are 4×2.5^2
 (2) Using white tape to wind around wire.

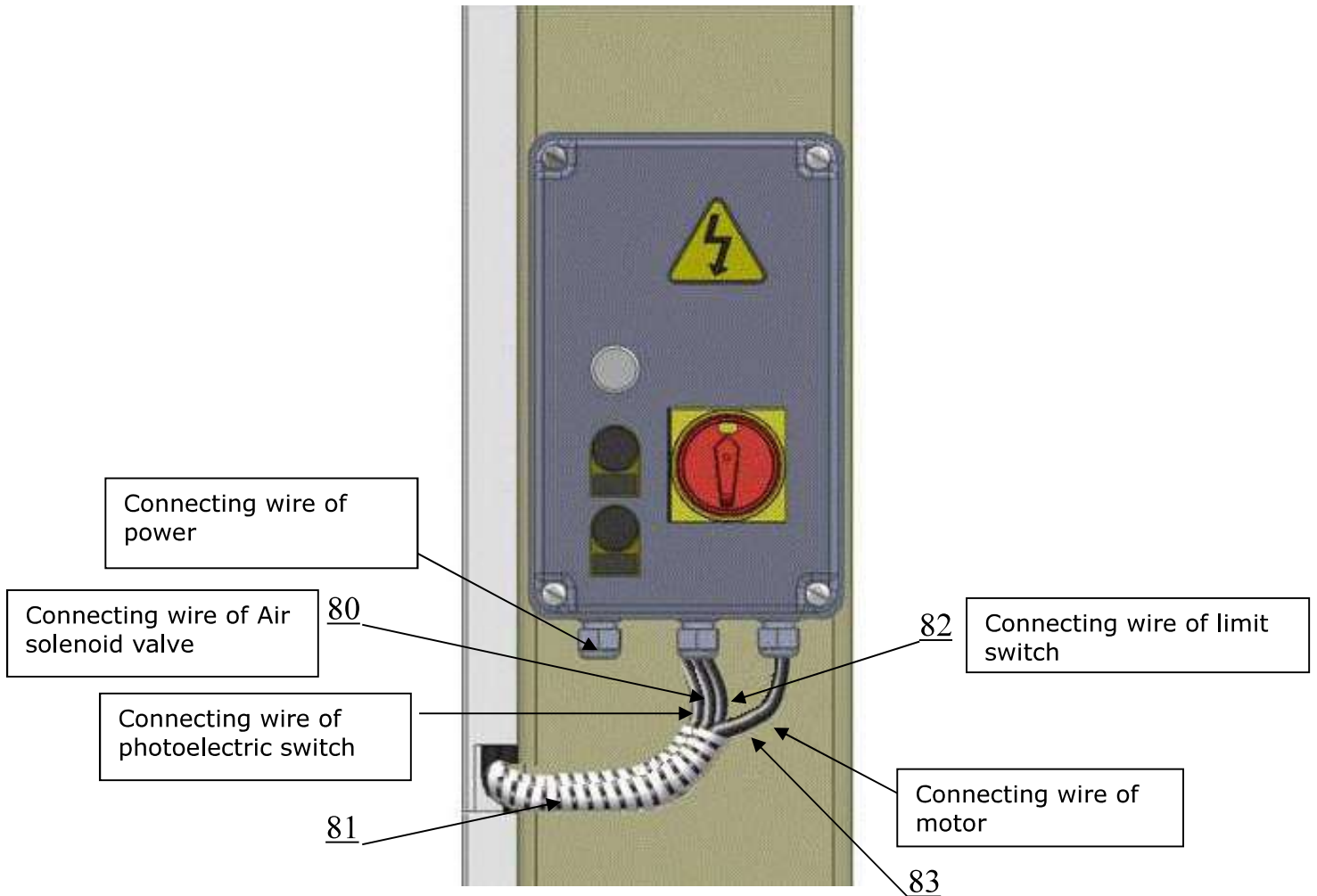


Fig. 17

2. 220V Wire connection and circuit diagram

2.1 Wire connection diagram in the control box (See Fig.18)

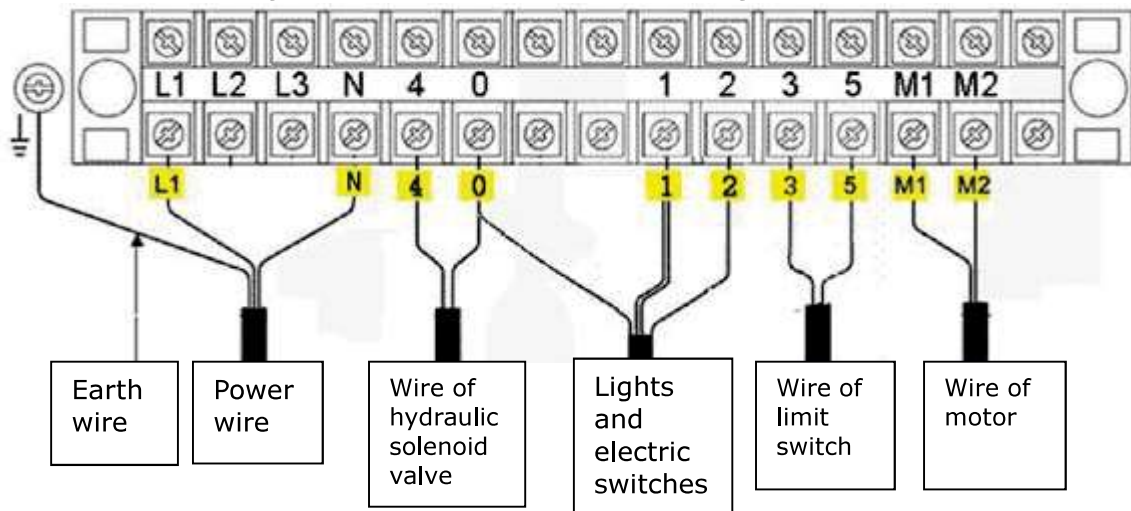


Fig.18

2.2 220V power unit motor wires connection diagram (see Fig.19)

Motor wire (M1, M2) separately connected to the corresponding terminals in the control box.

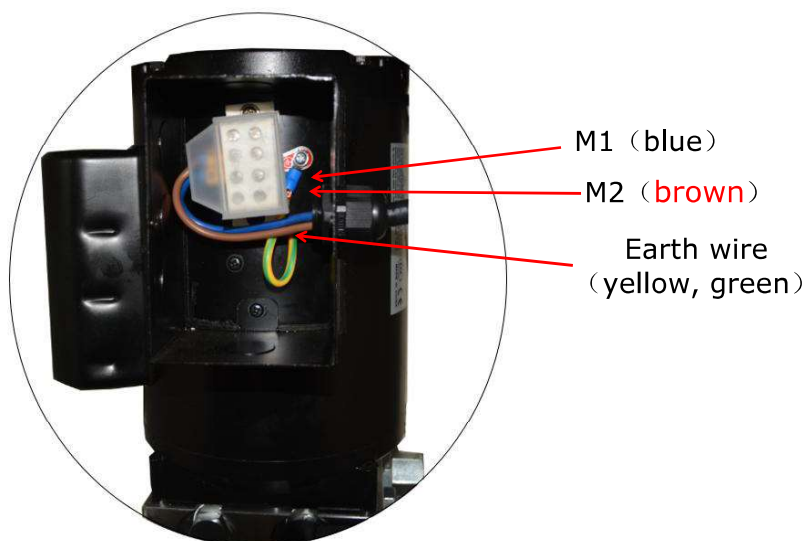


Fig.19

2.3.220V circuit diagram (see Fig.20)

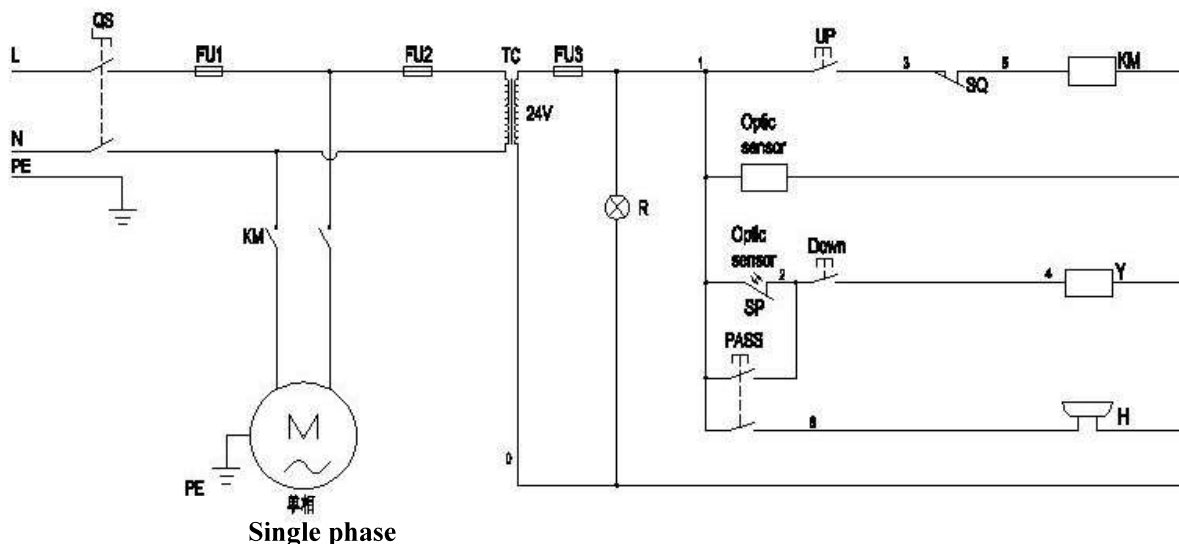


Fig.20

220V Circuit component

Item	Name	Code	Specification	Item	Name	Code	Specification
1	Power switch	QS	25A AC	9	Push button	UP	Single
2	Fuse	FU1	2P	10	Push button	Down	Single
3	Fuse	FU2	1P	11	Lower alarm button	K	Double
4	Fuse	FU3	1P	12	Transformer	TC	24V AC
5	AC contactor	KM	24V AC	13	Alarm	H	24V AC
6	Limited switch	SQ	8108 10A	14	Motor	M	Single phase
7	Photoelectric switch	SP	BEN300-DFR	15	Indicator light	R	White (24V)
8	Hydraulic solenoid valve	Y	24V AC				

I. Install protection slot and safety device cover (see Fig.21)

Using the winding tape around the spare wires after the installation of protection slot.

Installation steps of protection slot:

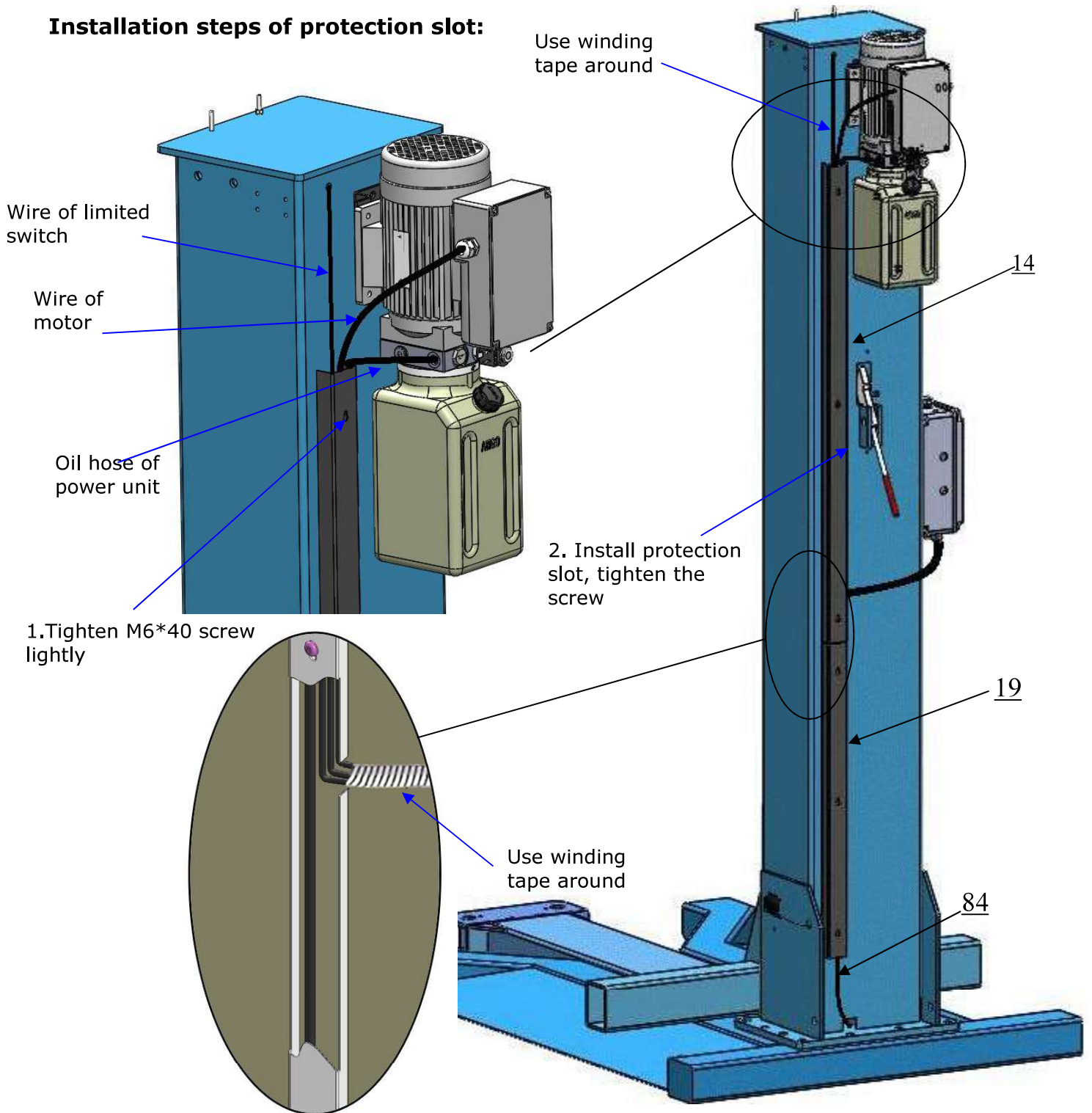


Fig.21

J. Install lifting arms (see Fig.22)

Lowering the carriage to the lowest position, fix screw M8*16 (see Fig.22) and tighten (See Fig. 23).

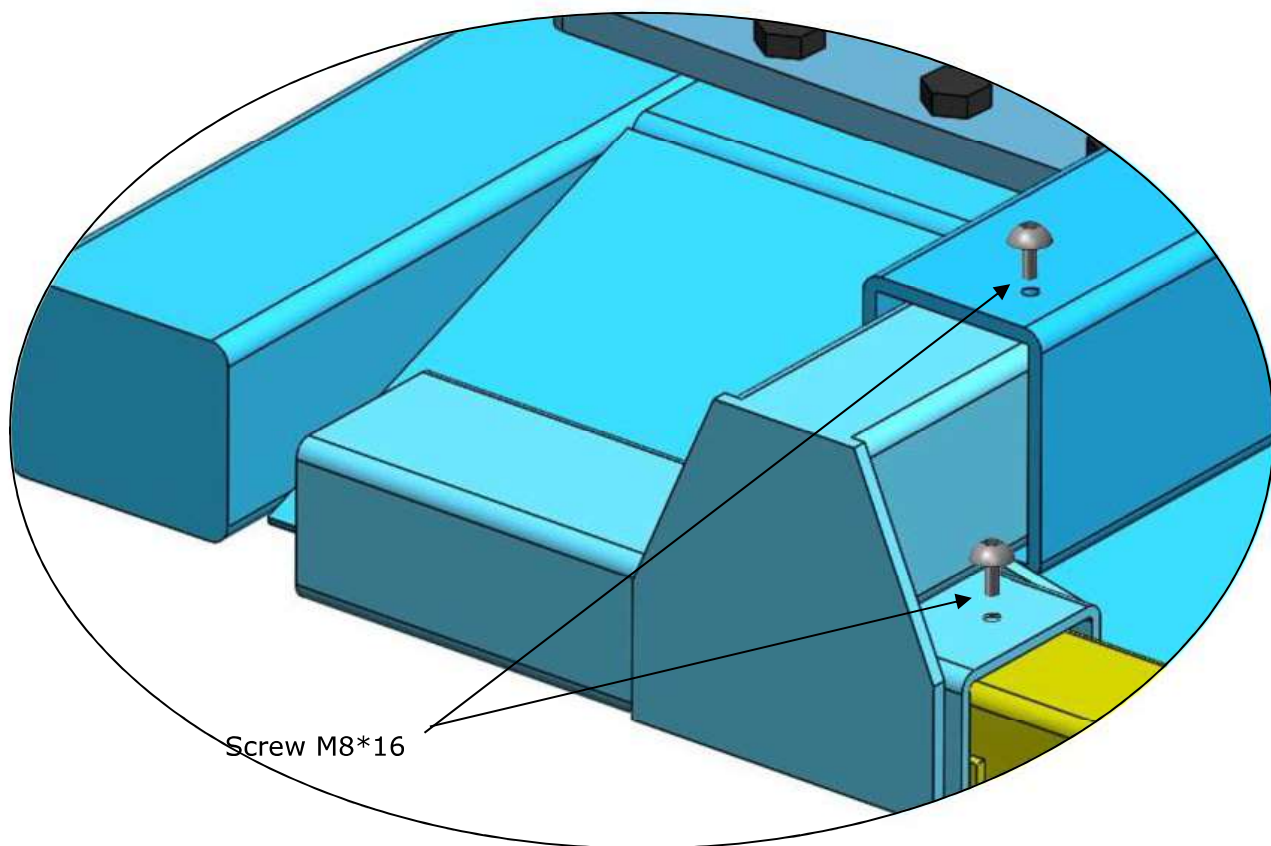


Fig. 22

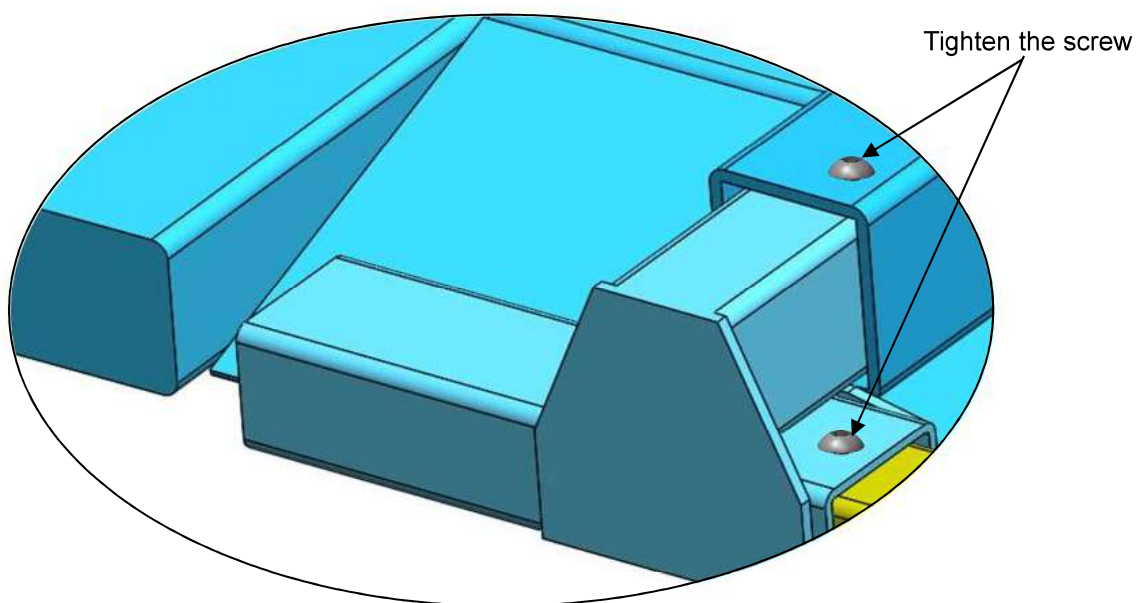


Fig.23

K. Install protective cover. (see Fig.24)

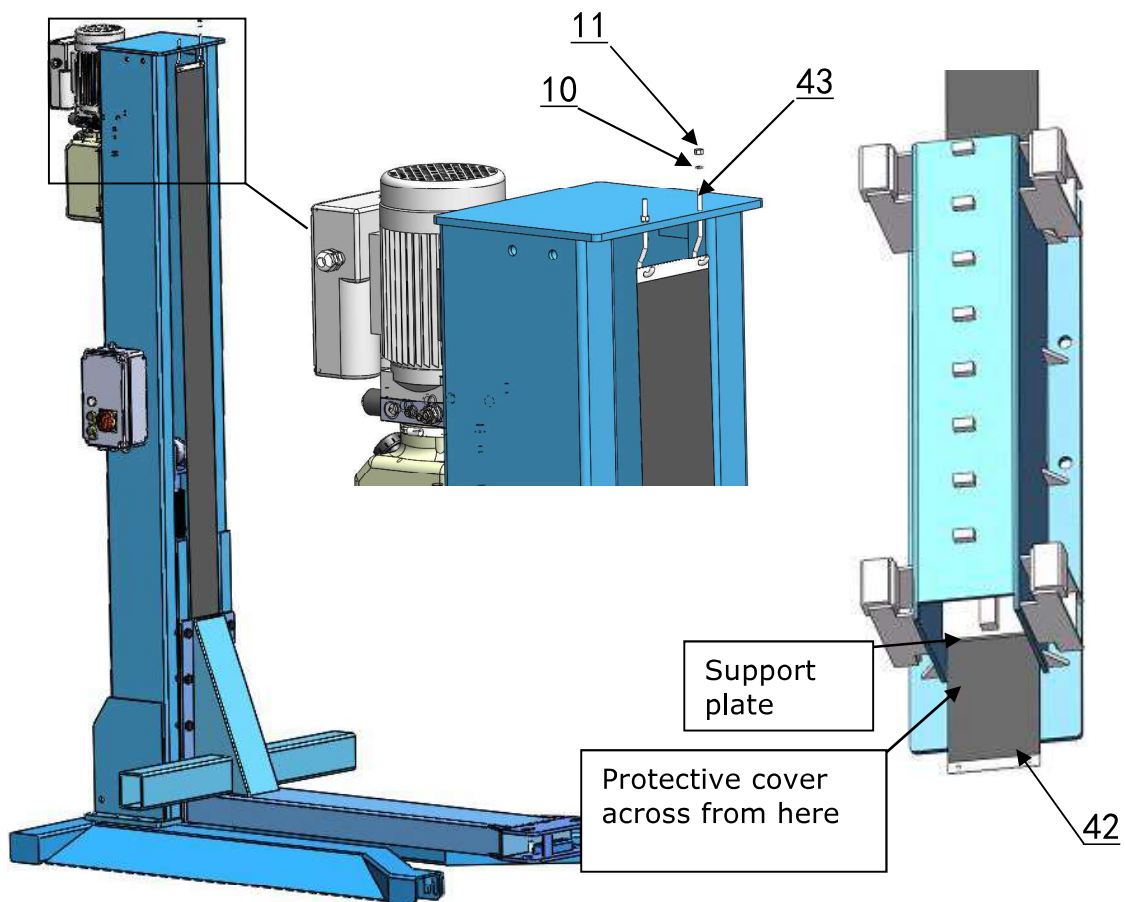


Fig. 24

L. Install wheel assembly

First tighten the wheel assembly fixed square pipe by inner hex screw with spring washer $\phi 12$ and washer (**Fig.25**). Put the wheel assembly into the fixed square pipe (**Fig.26**), insert the wheel assembly connecting board and fixed by elastic latch (**Fig.27**). Finally, wheel assembly pin goes through the fixed square pipe, and buckle the spring. (**Fig.28**)

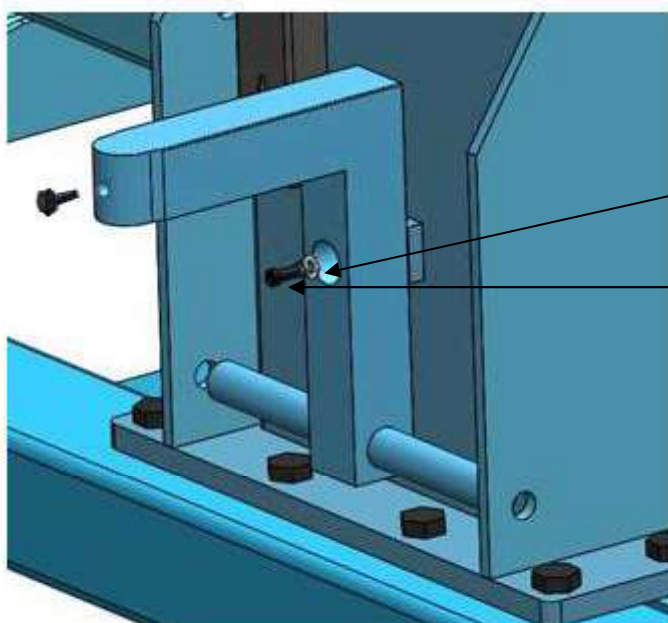


Fig. 25

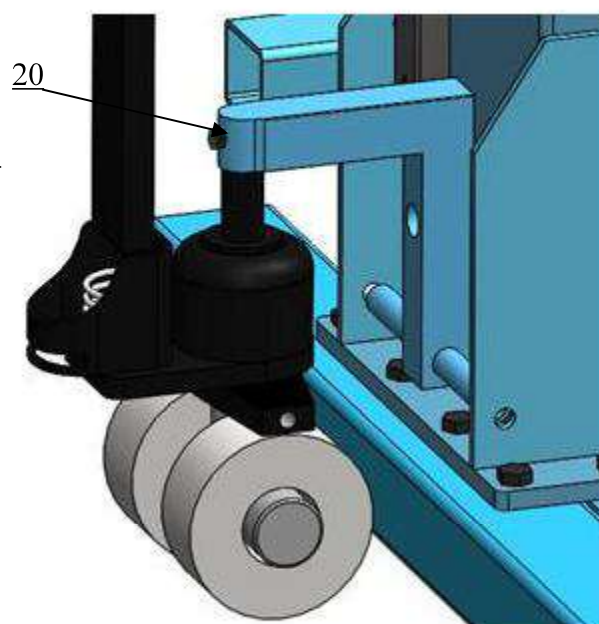


Fig. 26

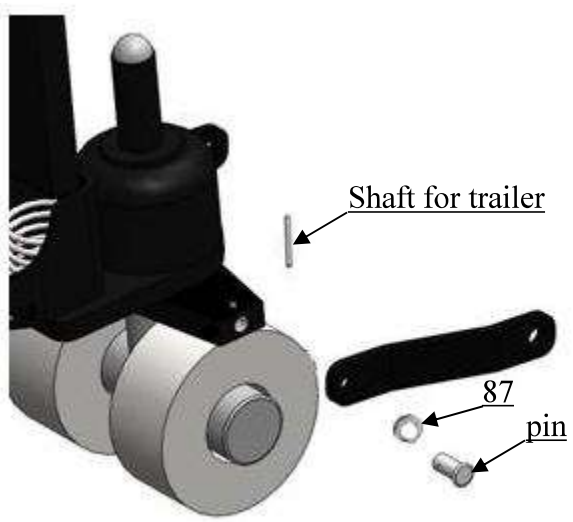


Fig. 27

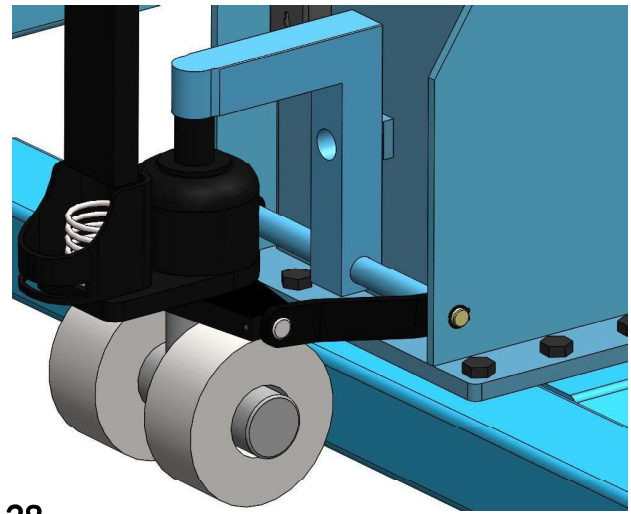
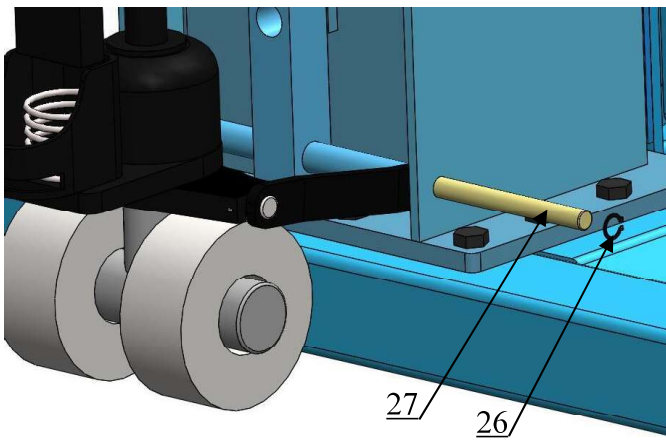


Fig. 28

M. Tighten all the hydraulic fittings, and fill the reservoir with hydraulic oil.

Note: In consideration of Hydraulic Power Unit's durability and keep the equipment running in the perfect condition, please use Hydraulic Oil 46#.

N. Using level to measure and adjust the column to be vertical. (see Fig.29)

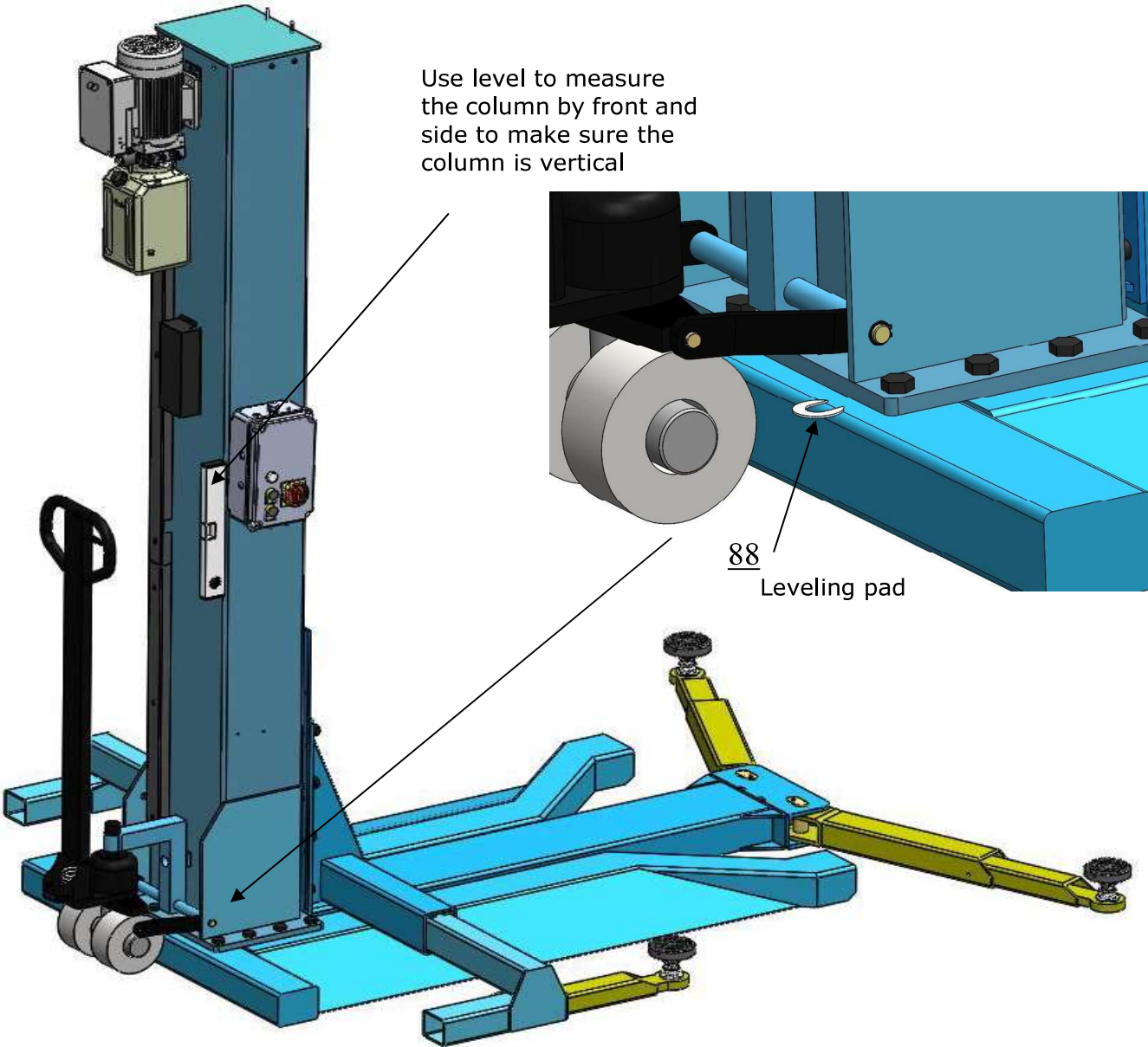


Fig.29

IV EXPLODED VIEW

Model: CL1P-ML

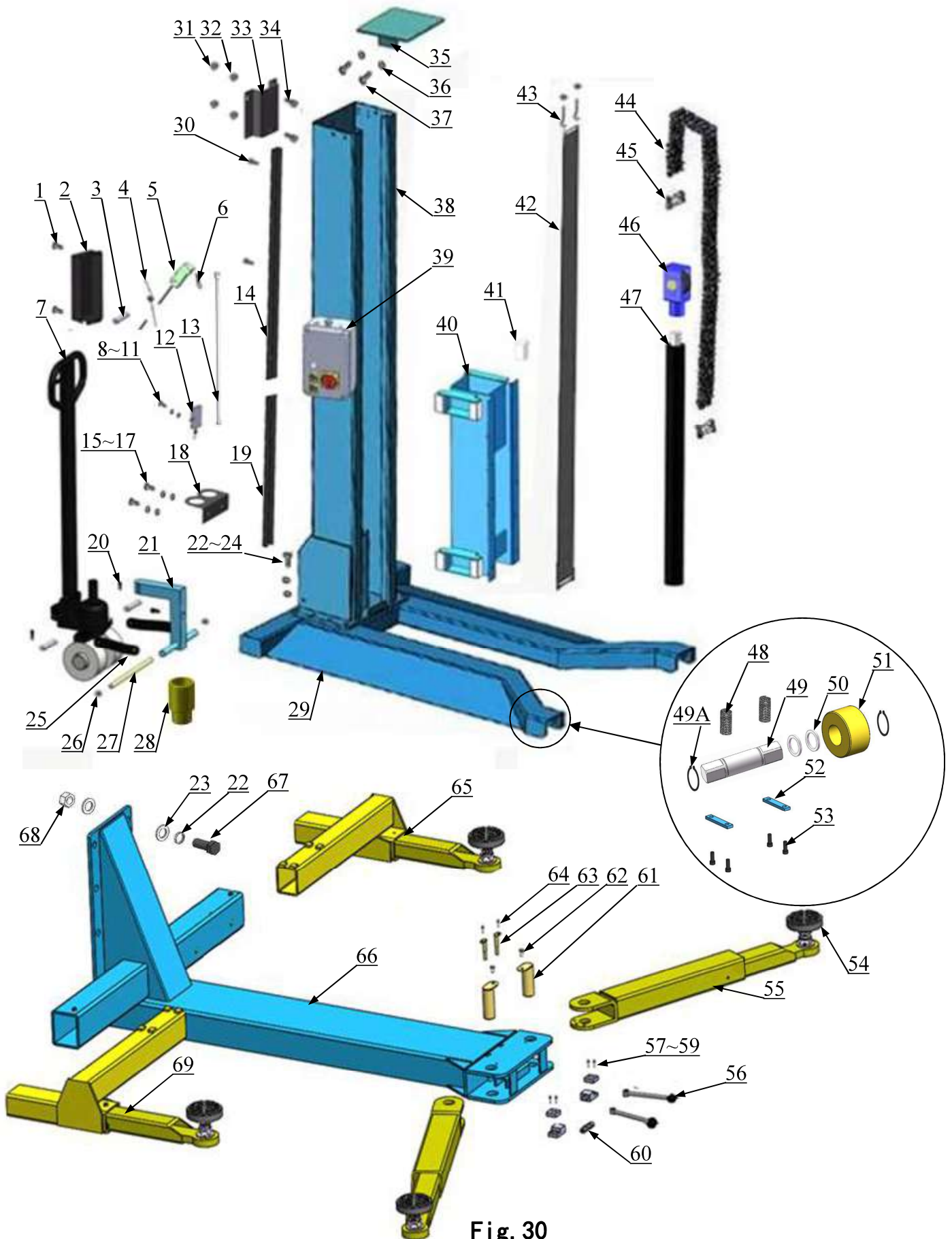


Fig. 30

PARTS LIST FOR CL1P-ML

Item	Part#	Description	QTY.	Note
1	10209009	Cup Head Bolt M6*8	8	
2	10209008	Safety Cover	1	
3	11206002	Safety Pin	1	
4	10209007	Safety Spring	1	
5	11203002	Power Side Safety Device	1	
6	10209012	Elastic Pin	1	
7	10101028	Cylinder	1	
8	10217013	Hex Bolt M6*20	1	
9	10209149	Lock Washer φ6	1	
10	10420045	Washer φ6	9	
11	10420018	Self-Locking Nut M6	3	
12	11203015	Power-side safety block	1	
13	11203013	Coupling	1	
13A	10420049	Split Pin	2	
14	11102007	Protective cover	1	
15	10680003	Socket bolt	2	
16	10209034	Washer	4	
17	10209033	Washer	4	
18	11203035	Extension bracket	1	
19	11201073	Protective cover	1	
20	10201002	Socket bolt	1	
21	11102607	Wheel fixing square pipe Assy.	1	
22	10101002	Hex Bolt M20*50	10	
23	10201114	Lock Washer φ20	18	
24	10209128	Washer φ20	18	
25	11101030	Wheel connecting plate	2	
26	10206019	Snap Ring φ19	2	
27	11102010	Wheel assembly pinφ19*376	1	
28	11203034	Stackable Adapter	4	
29	11102611	Base	1	
30	10206079	Screw	6	
31	10209056	Self-locking nut	2	
32	10209022	Washer	2	
33	11203032	Motor fixing plate	1	
34	10209126	Socket bolt	2	
35	11101013	Top plate	1	
36	10206023	Self-locking nut	4	
37	10217069	Socket bolt	4	
38	11102033	Column	1	
39	10206220	Control box	1	
40	11102608	Carriage	1	
41	10217188	Slider block	8	
42	11101042	Plastic bezel	1	
43	10203117	Adjusting screw with hook M6 × 95	2	
44	10101007	Chain	1	
45	10201010A	connector	2	
46	11207681	Chain Pulley bracket assy.	1	

Item	Part#	Description	QTY.	Note
47	10207010	Cylinder	1	
48	10683018	Compression spring	4	
49	11101039	Roller shaft	2	
49A	10610008	Spring for shaft	4	
50	41080221	Bearing	4	
51	11101038	Wheel	2	
52	11101675	Roller shaft limit block	4	
53	10207021	Hex Socket Bolt	8	
54	10203054	Rubber pad assy.	4	
55	10101033	Outer Arm assy.	2	
56	11101011	Control stick	2	
57	10420043	Socket Bolt	4	
58	10101008	Arm lock	2	
59	11101009	Arm lock plate	2	
60	10720003	Compression spring	1	
61	11101005	Arm pin	2	
62	10420043	socket bolt	8	
63	11101012	Coupling pin	2	
64	10101006	Screw	2	
65	10102028	Inside Arm assy.# 1	1	
66	11102609	Platform	1	
67	10101001	Socket bolt	8	
68	10420175A	Socket bolt	8	
69	10102029	Inside Arm assy.# 2	1	
70	81523021	Power unit	1	
71	10209003	Socket bolt	4	
72	10209004	Rubber ring	4	
73	10209005	Self-locking nut	4	
74	10209060	90-degree fitting	1	
75	10206013A	Limit switch	1	
76	10206011	Screw	4	
77	10102014	Light electric switch assy.	1	
78	11102018	Switch cover	1	
79	10209009	Screw	8	
80	10203090	Cable	1	
81	10420168	White tape	2	
82	10800030	Cable	1	
83	10102001	Motor cable	1	
84	10102016	Oil hose	1	
85	10101029	Hex bolt	1	
86	10206006	Washer	1	
87	10420029	Washer	2	
88	10620065	Shim 2mm	10	
	10201090	Shim 1mm	10	
89	10102501	Part box	1	

4.1. Rubber Pad Assembly (10203054) exploded view :

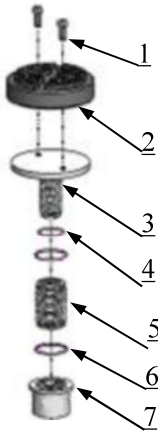


Fig. 31

Item	Part#	Description	QTY
1	10420043	M8*20 Hex Bolt	8
2	10203043	Rubber pad	4
3	11203026	Support pad assy.	4
4	10203041	Retaining ring	4
5	10203042	Retaining ring	8
6	11203025	Adjusting screw	4
7	11203024	Adjustment Screw	4

4.2. Outside Arm Assembly (10101033) exploded view :

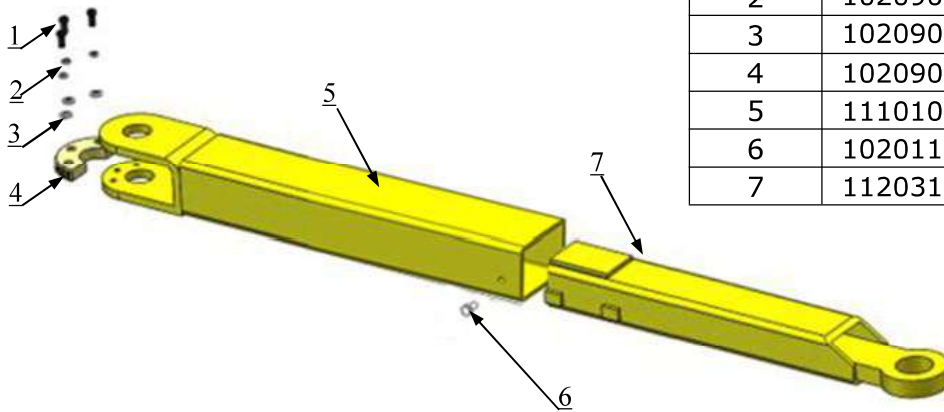


Fig. 32

Item	Part#	Description	QTY
1	10209032	Hex bolt M8*25	6
2	10209034	washerφ8	10
3	10209033	washerφ8	10
4	10209035	Moon gear	2
5	11101019	Outside Outer arm	2
6	10201149	M8*12 Screw	2
7	11203101	Inner arm assy.	4

4.3. Lifting Arm (Inner Left) (10102029) Exploded View:

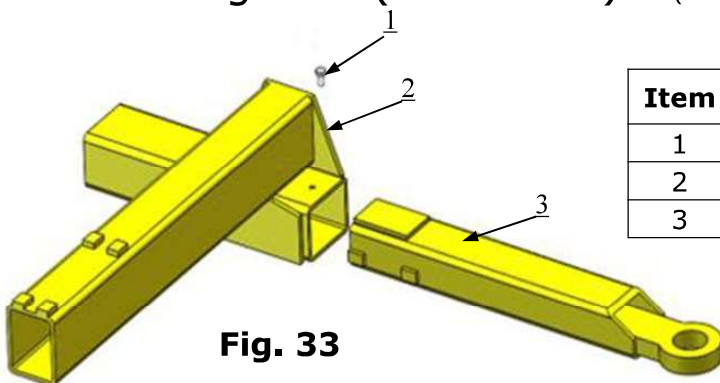


Fig. 33

Item	Part#	Description	QTY.
1	1021149	Cup Head Bolt M8*12	1
2	11102610	Outer Arm (Inner-left)	1
3	11203101	Lifting Arm (inner)	1

4.4. Lifting Arm (Inner Right) (10102028) Exploded View:

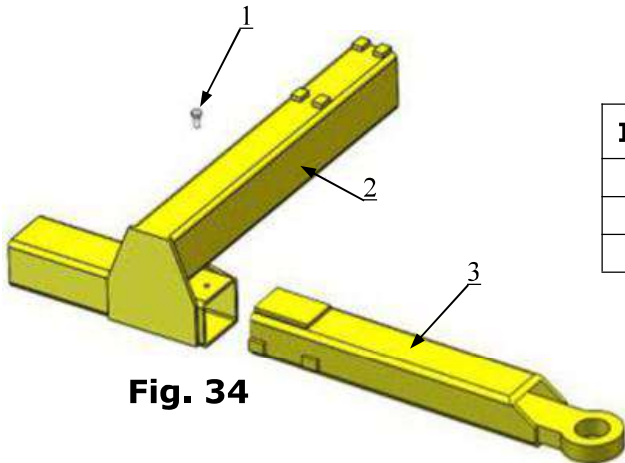


Fig. 34

Item	Part#	Description	QTY.
1	1021149	Cup Head Bolt M8*12	1
2	11102612	Outer Arm (Inner-right)	1
3	11203101	Lifting Arm (inner)	1

4.5. Chain Pulley Seat assy. (11207681) Exploded View:

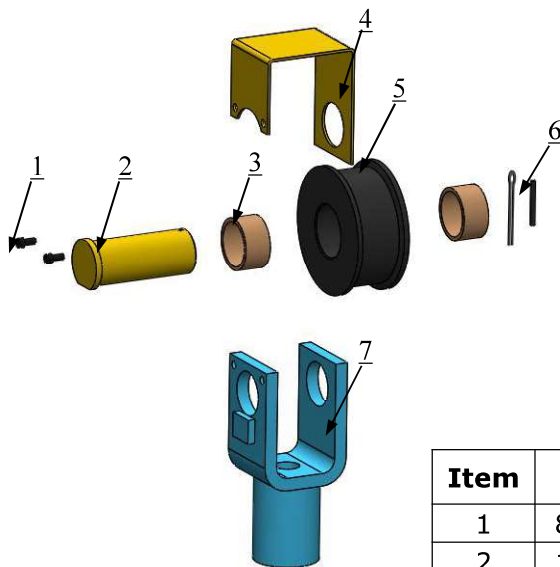


Fig.35

Item	Part#	Description	QTY.
1	81400335	Socket Bolt M5*10	2
2	11207006	Pin for Chain Pulley	1
3	10420132	Bronze Bush	2
4	11207693	Chain limit block	1
5	11207007	Chain Pulley	1
6	10201005	Split pin $\phi 4*50$	1
7	11207008	Chain Pulley Seat	1

4.6. Cylinder (10207010) Exploded View:

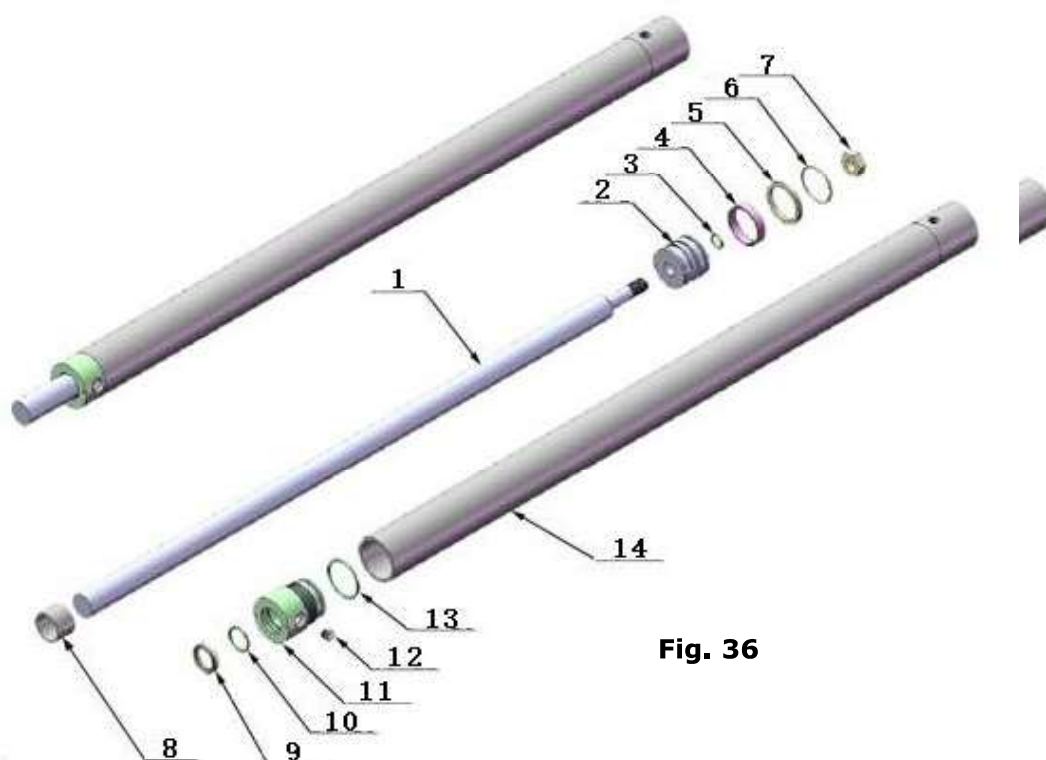


Fig. 36

Item	Part#	Description	QTY.	Note
1	11207027	Piston Rod	1	
2	11207028	Piston	1	
3	10206069	O-Ring	1	
4	10620053	Support Ring	1	
5	10620054	Y-Ring	1	
6	10630027	O-ring	1	
7	10206071	Hex Nut	1	
8	11207029	Piston rod adjusting sleeve	1	
9	10217078	Dust Ring	1	
10	10520058	O-Ring	1	
11	11207030	Head Cap	1	
12	10201034	Bleeding Plug	1	
13	10207031	O-Ring	1	
14	11207032	Cylinder Tube	1	

4.7. Control box (10206220) exploded view

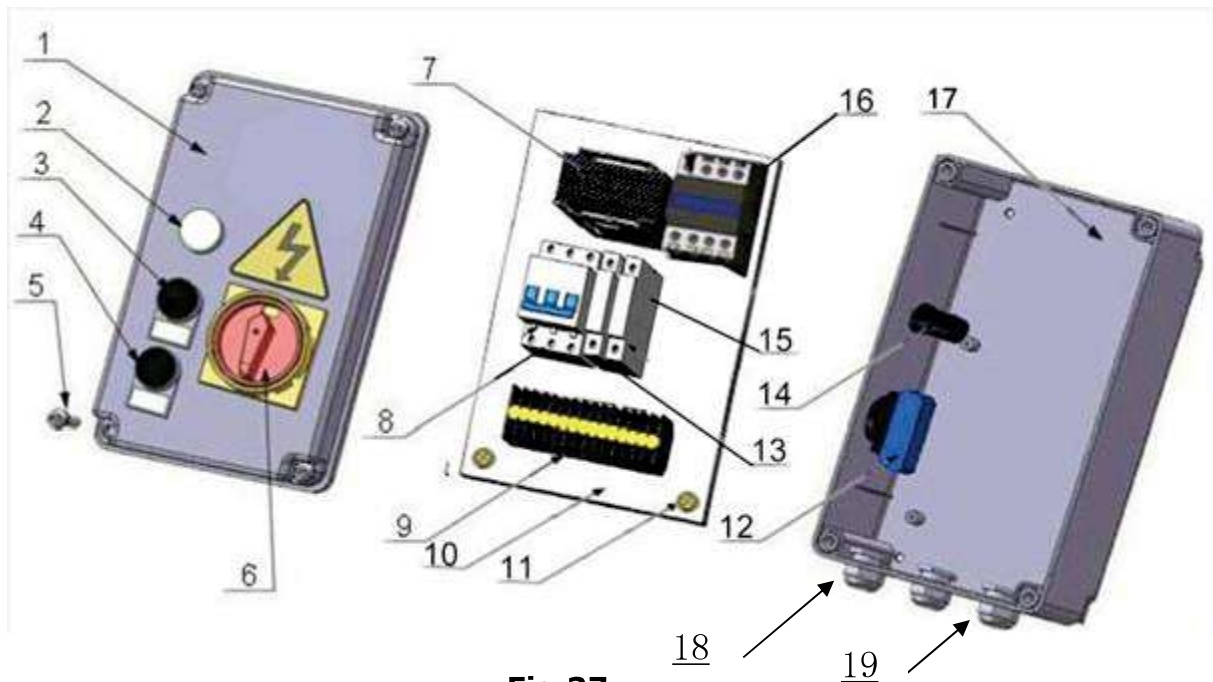
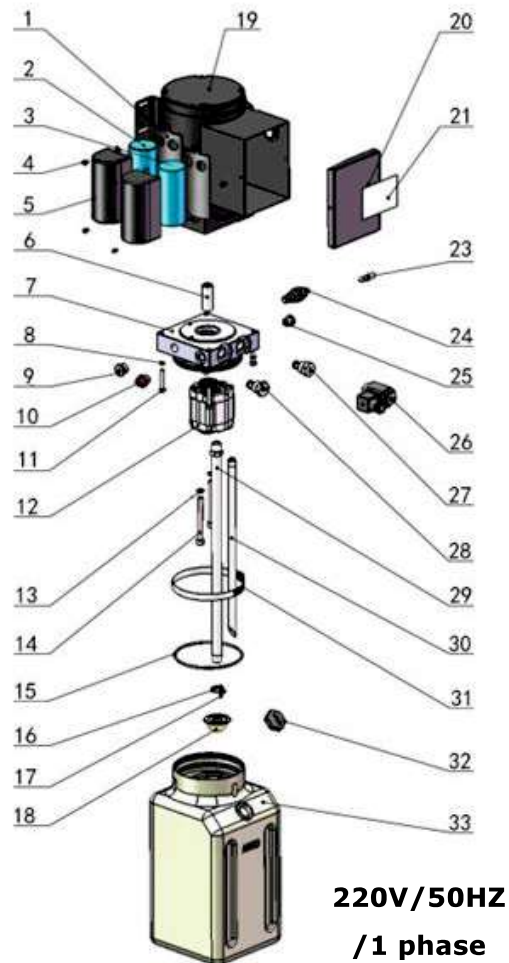


Fig.37

Item	Part#	Description	QTY.	Item	Part#	Description	QTY.
1	10420069A	Cover of Control Box	1	11	10420073	Screw	4
2	10201094	Working indicator (white)	1	12	10420142	Switch	1
3	10420071	Button UP	1	13	10202049	Fuse 1P	1
4	10420072	Button DOWN	1	14	10420143	Buzzer	1
5	10420139	Screw	4	15	10202051	Fuse 1P	1
6	10420074	Power Switch (QS1)	1	16	10420084A	24V AC Contactor (KM)	1
7	10420134	Transformer (TC)	1	17	1061K079	Box	1
8	10202046	Fuse 2P	1	18	10420088	White cable connector	2
9	1061K100	15-position terminal block	1	19	10720095	White cable connector	1
10	10420133A	Panel for Installing Components	1				

4.8 Electric Power Unit (81523021)



ITEM	Part#	Description	QTY.	Note
1	81400180	Rubber pad	2	
2	81400250	Start capacitor	1	
3	81400200	Run capacitor	1	
4	10420148	Cup Head Bolt with Washer	6	
5	81400066	Cover of capacitor	2	
6	81400363	Motor connecting shaft	1	
7	81400362	Manifold block	1	
8	10209149	Lock Wash	4	
9	81400276	Iron Plug	1	
10	81400259	Red plastic plug	1	
11	85090142	Socket Bolt	4	
12	81400292	Gear pump	1	
13	10209034	Lock Washer	2	
14	81400295	Socket bolt	2	
15	81400365	O ring	1	
16	10209152	Tape	1	
17	85090167	Magnet	1	
18	81400290	Filter	1	
19	81400287	Motor	1	
20	81400287	Cover of Motor Terminal Box	1	
21	71111108	AMGO label	1	

22	81400560	Throttle valve	1	
23	81400266	Relief valve	1	
24	81400284	Iron Plug	1	
25	81400420	Solenoid valve coil	1	
26	81400423	release valve	1	
27	81400566	Check valve	1	
28	81400288	Inlet pipe	1	
29	81400289	Oil return pipe	1	
30	81400364	Hose clamp	1	
31	81400263	Oil tank cap	1	
32	81400320	Oil tank	1	

Illustration of hydraulic valve for power unit

a. Electric power unit, 220V/50HZ, 1 phase (See Fig. 38)

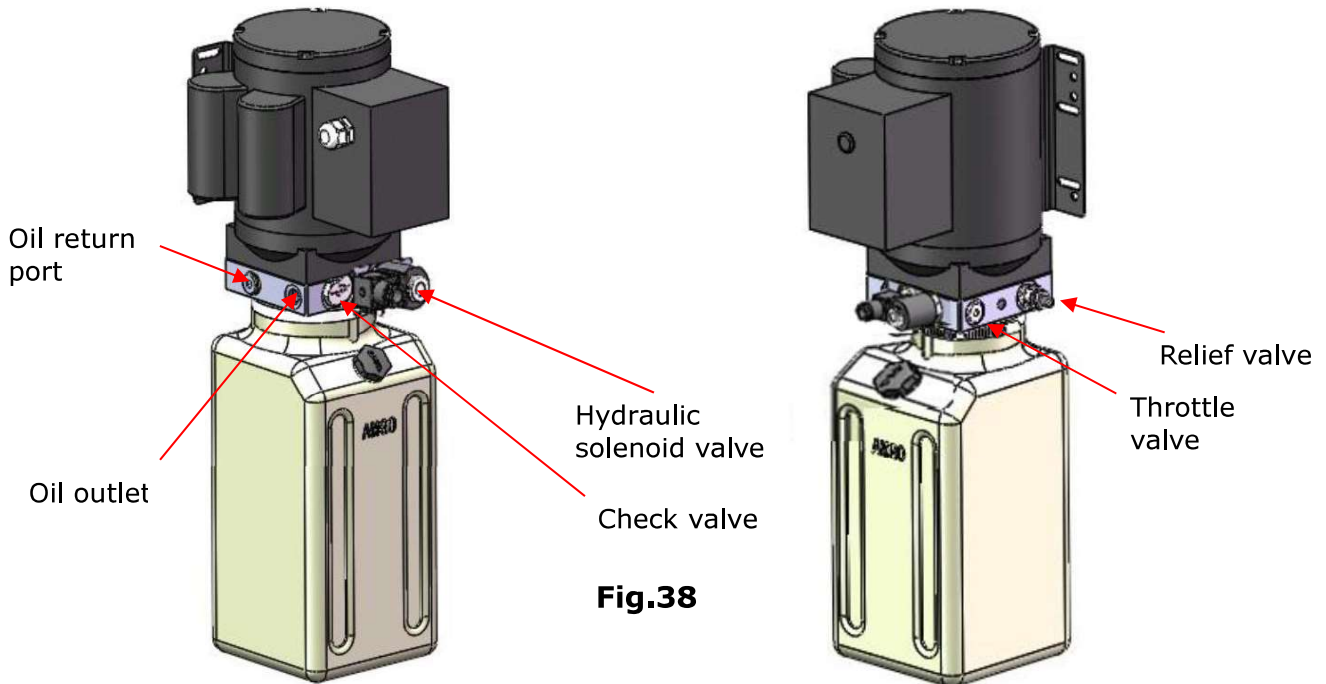


Fig.38

V. TEST RUN

1. Adjust the lower speed (Fig.40)

You can adjust the lower speed of the lift if needing: Turn the Throttle Valve in clockwise direction to decrease the lower speed, or increase the speed in counterclockwise direction.

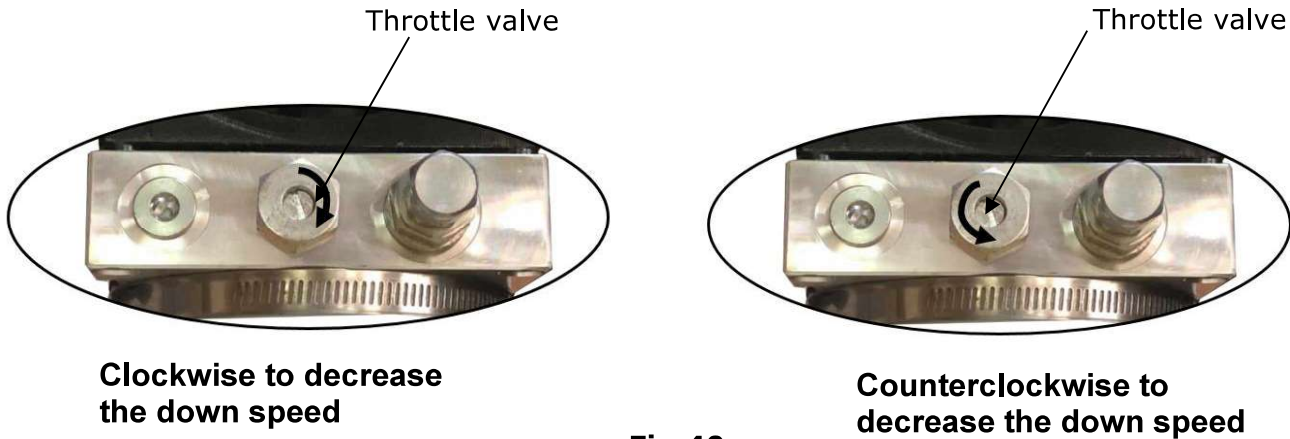


Fig.40

2. 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 are anything improper, repeat the above adjustment.

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

Circuit Diagram of Hydraulic System

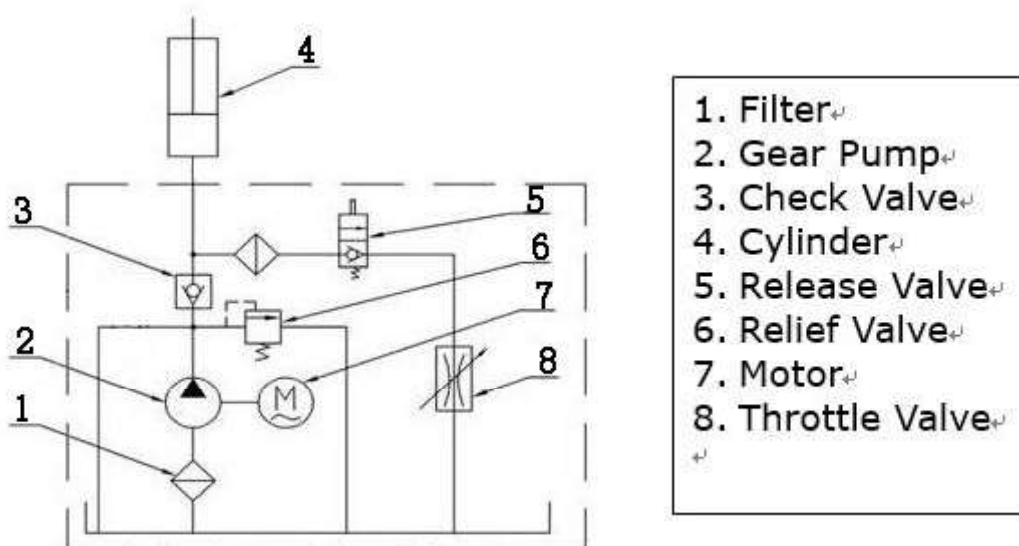


Fig. 41

VI. OPERATION INSTRUCTIONS

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 beside of the lifting arm, cab should at the other side of the column;
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. Turn on the power QS1 and push the **UP** button, raise the lift until the rubber pad full contact the car and ensure it's safe.
8. Continue raise the vehicle to the desired height and make sure the vehicle is steady when the lift is rising, then release the **Up** button.
9. Press the **Down** button to low down the lift onto the safety lock. Confirm the safety device at normal working condition, then the vehicle is ready to repair.

To lower vehicle

1. Be sure the clearance of around and under the lift, only leaving operator in lift area;
2. Push **UP** button to raise the vehicle slightly, and then release the safety device, lower vehicle by pushing the down button; stop lowering when above ground 350mm, at this moment should push button "K" at side, then buzzer will ring and lift lower to ground.
3. Open the arms and position them to the shortest length;
4. Drive away the vehicle.

VII.MAINTENANCE SCHEDULE

Monthly:

1. Re-torque the anchor bolts to 117 Nm;
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.

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.Button does not work 2.Wiring connections are not in good condition 3. AC contractor burned out 4. Motor burned out 	<ol style="list-style-type: none"> 1. Replace button 2. Repair all wiring connection 3. Repair or replace contractor 4. Repair or replace motor
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. Gear Pump leaks 5. Overload lifting 	<ol style="list-style-type: none"> 1. Clean the oil line 2. Check Electrical System 3. Fill tank 4. Replace Pump 5. Check load
Lift cannot lower	<ol style="list-style-type: none"> 1. Safety device are locking 2. Release valve in damage 3. Safety cable broken 4. Oil system is jammed 5.Hydraulic solenoid valve out of work 	<ol style="list-style-type: none"> 1. Release the safeties 2. Repair or replace 3. Replace 4. Clean the oil system 5. Replace the solenoid valve

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.