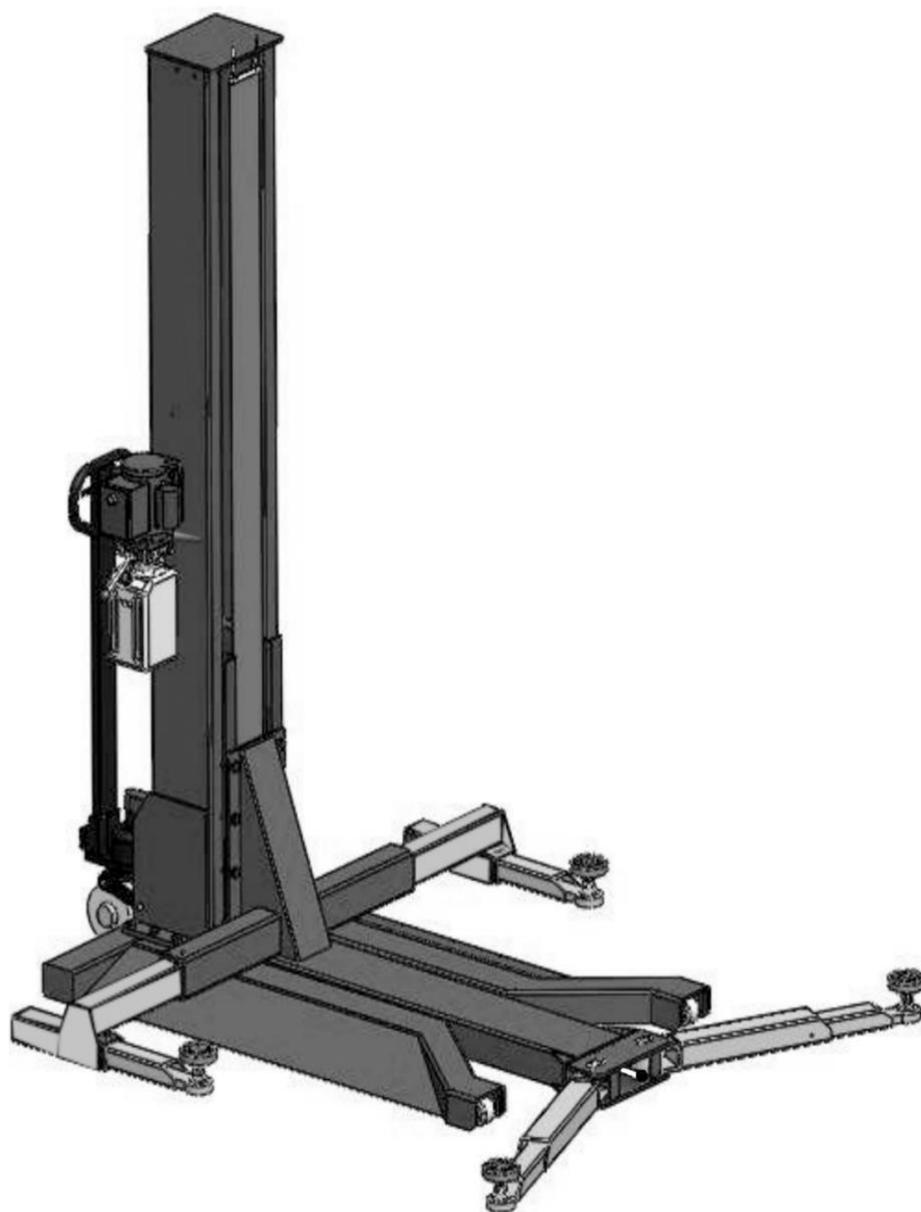


AMGO  [®] **Hydraulics**

Original

Installation And Service Manual



SINGLE POST LIFT
Model: SML-7

CONTENTS

Product Features and Specifications	1
Installation Requirement	3
Steps of Installation	4
Exploded View	15
Test Run	25
Operation Instruction	26
Maintenance	27
Trouble Shooting	28
LIFT DISPOSAL	28

I. PRODUCT FEATURES AND SPECIFICATIONS

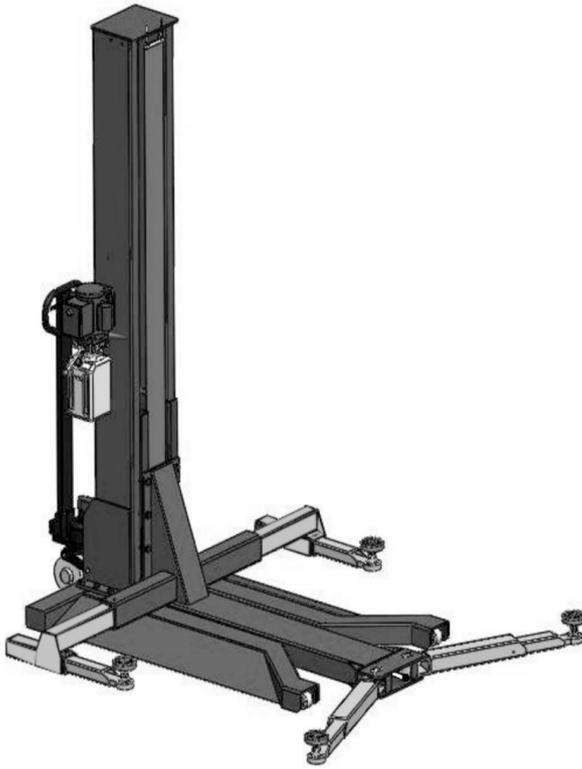


Fig.1

MOBILE CHAIN-DRIVE SINGLE POST MODEL SML-7

- Compact design.
- High quality cylinders and power units are manufactured to high standards.
- Self-lubricating UHMW Polyethylene sliders and bronze bush.
- Single-point safety release, and dual safety design.
- Adjustable lifting arms, with drop in screwed type rubber pads.

MODEL SML-7 SPECIFICATIONS

Model	Lifting Capacity	Lifting Height	Lifting Time	Overall Height	Overall Width	Minimum Pad Height	Motor
SML-7	7,000 lbs	71-7/8"~77-5/8"	84S/32S	108-7/8"	90-1/8"	4-3/8"	1.0HP/2.0HP

Arm Swings View

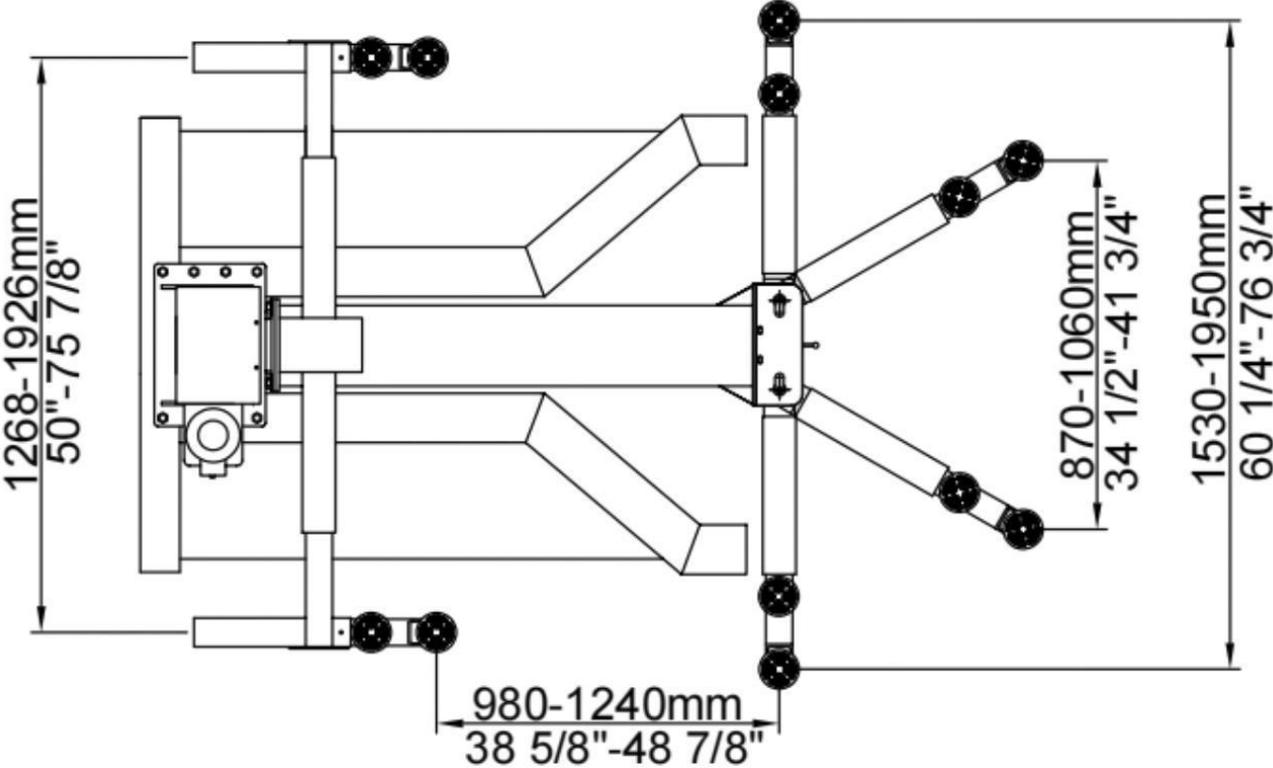


Fig.2

II. INSTALLATION REQUIREMENT

A. TOOLS REQUIRED

↳ Level Bar



↳ English Spanner(12")



↳ Pliers



↳ Wrench set: (10#, 13#, 14#, 12#, 17#, 19#, 24#, 30#)



↳ Screw sets



↳ Tape Measure(7.5mm)



↳ Socket Head Wrench



Fig.3

B. STORAGE AND INSTALLATION REQUIRMENT

Keep or install the equipment in shaded, normal temperature, dry and ventilated environment.

C. POWER SUPPLY

The electrical source must be 2HP minimum. The source cable size must be 2.5mm².

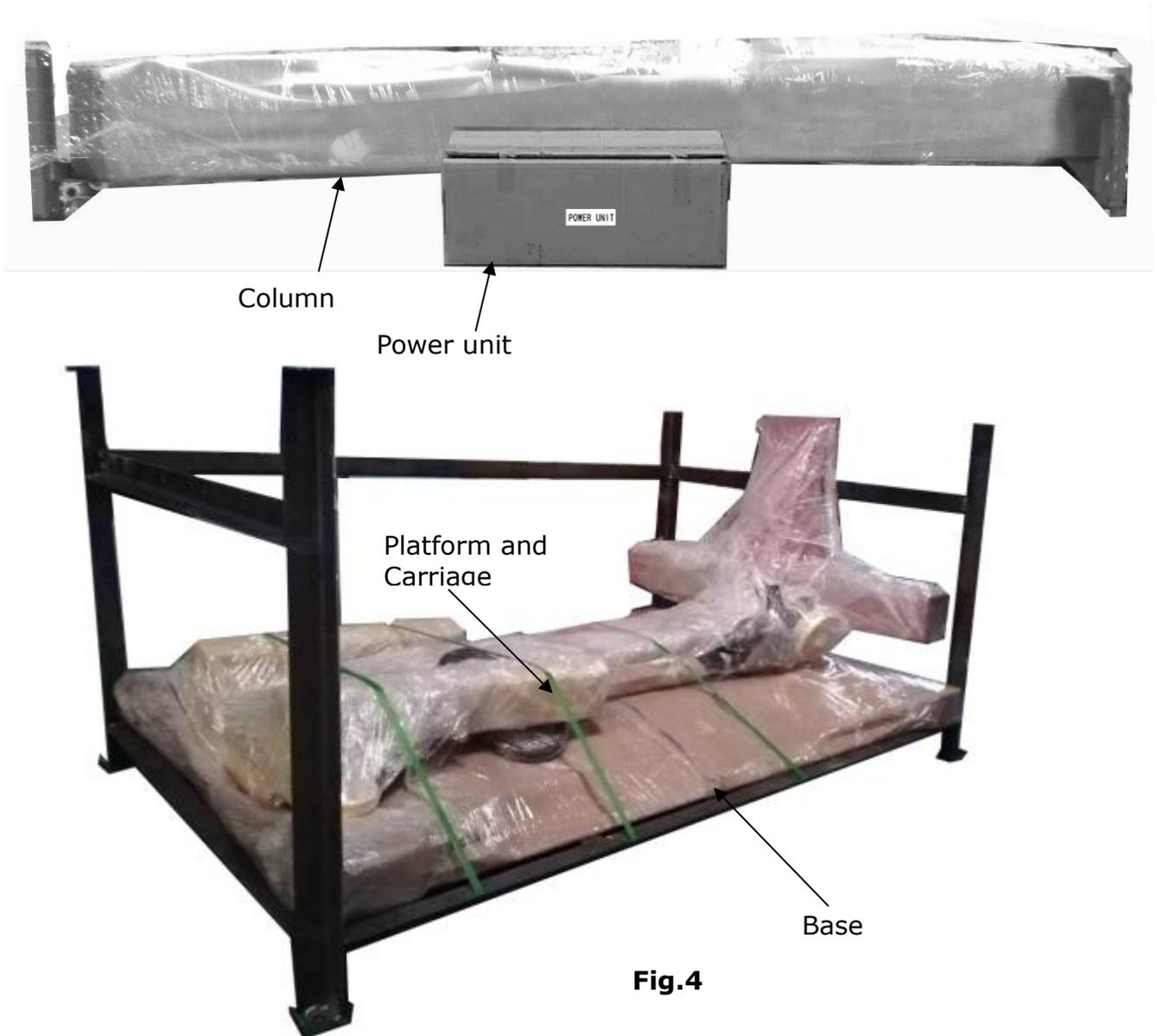
III. STEPS OF INSTALLATION

A. Location of installation

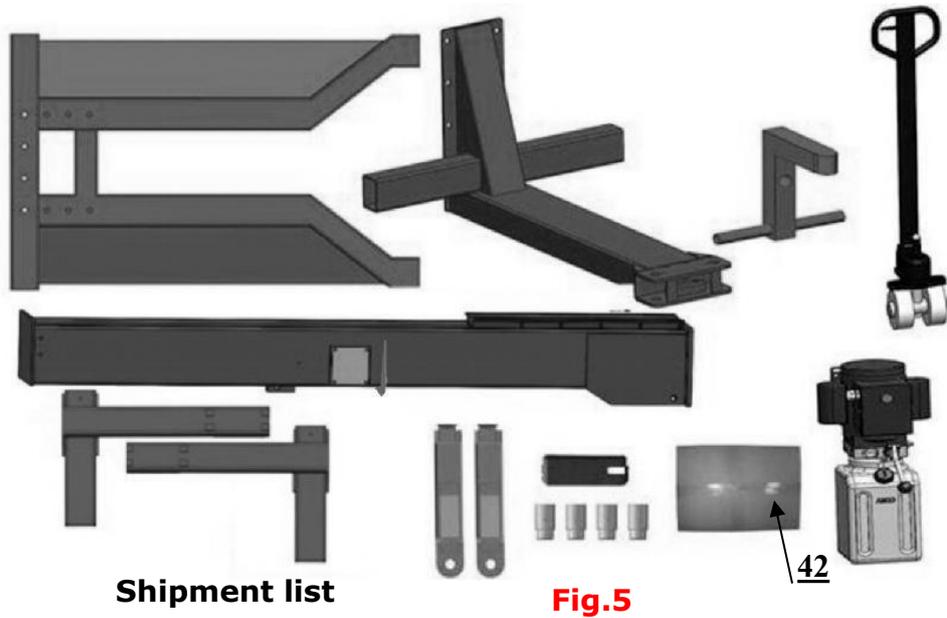
Check and insure the installation location (concrete, layout, space size etc.) is suitable for lift installation.

B. Check the parts before assembly

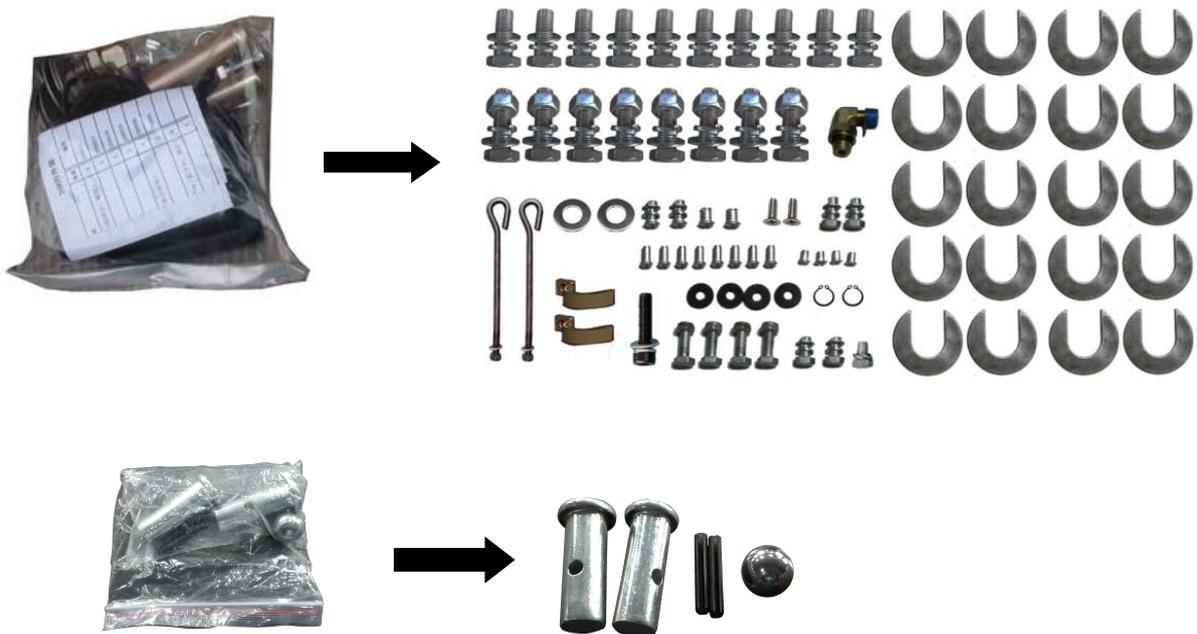
1. Packaged lift and hydraulic power unit (See Fig. 4)



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**)



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

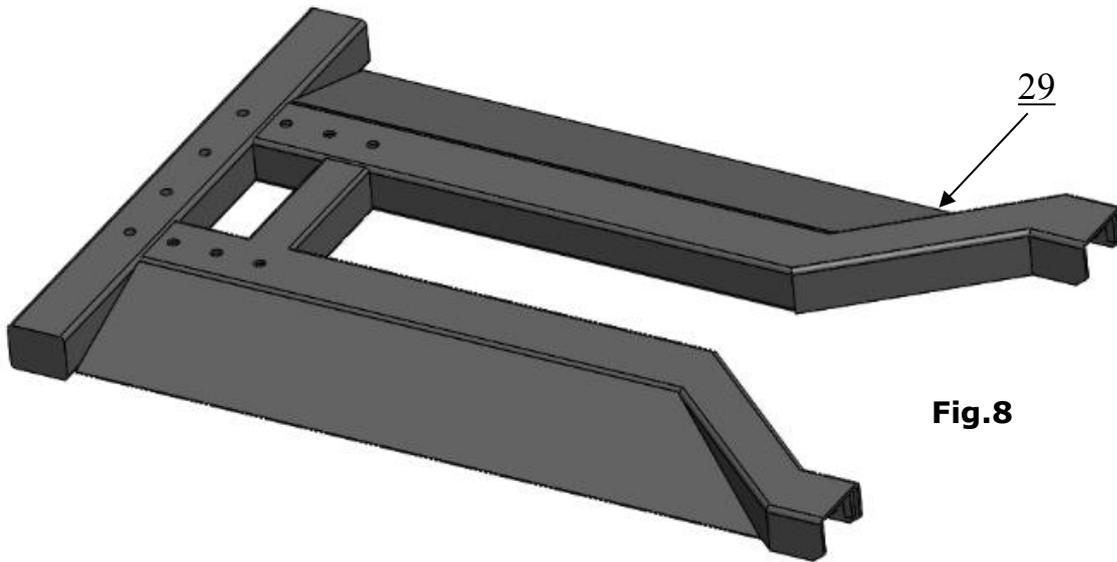


Fig.8

D. Install column and lift platform

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

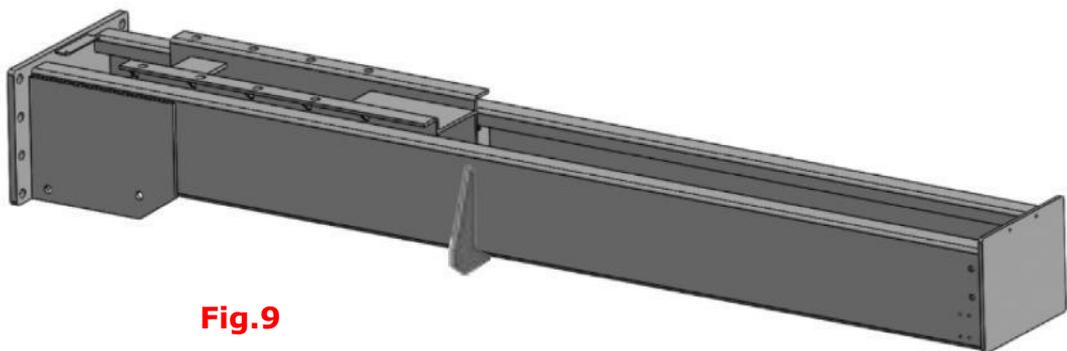


Fig.9

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

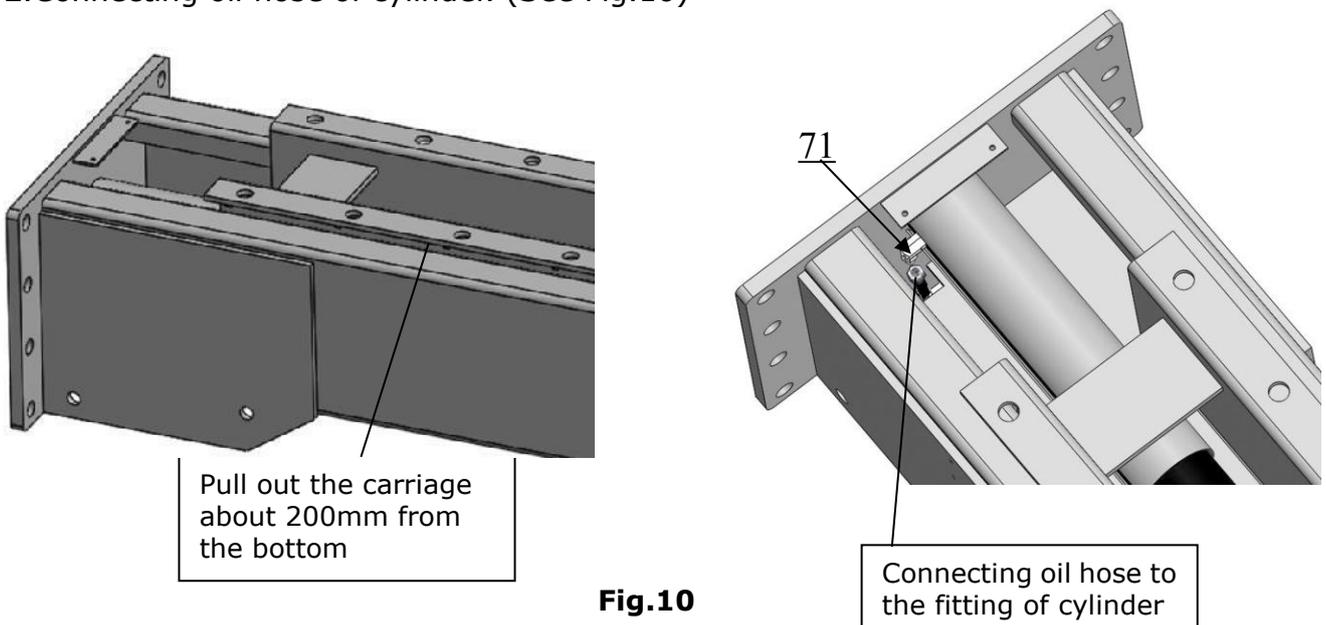


Fig.10

3. Fix column to the base plate. (See Fig.11)
4. Fix lifting platform to carriage. (See Fig.12)

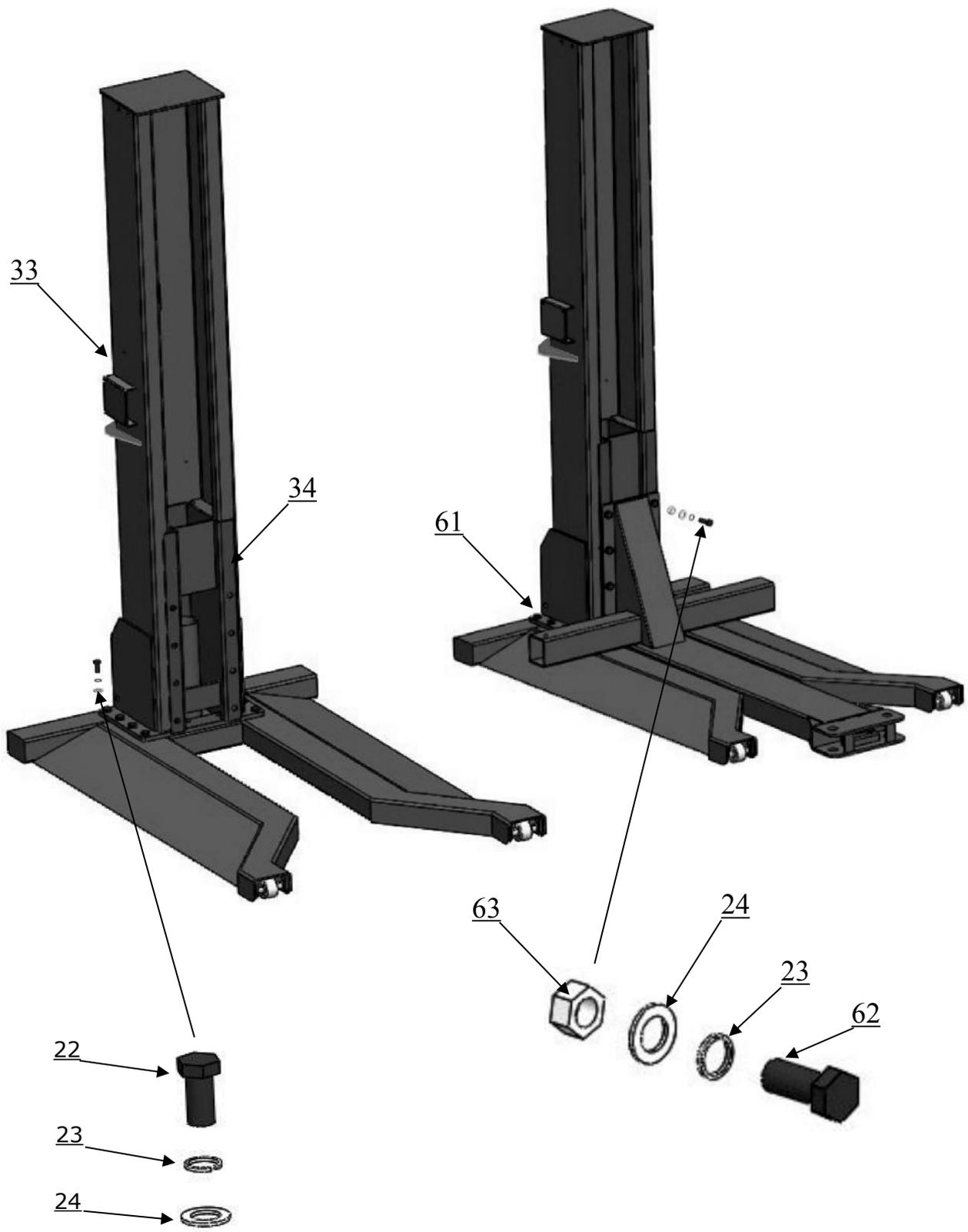


Fig.11

Fig.12

**D. Install cover of the safety device, retainer and protective cover (See Fig.13)
After install the retainer, tighten slightly with M6*8 cup-head bolt.**

Install safety device as below

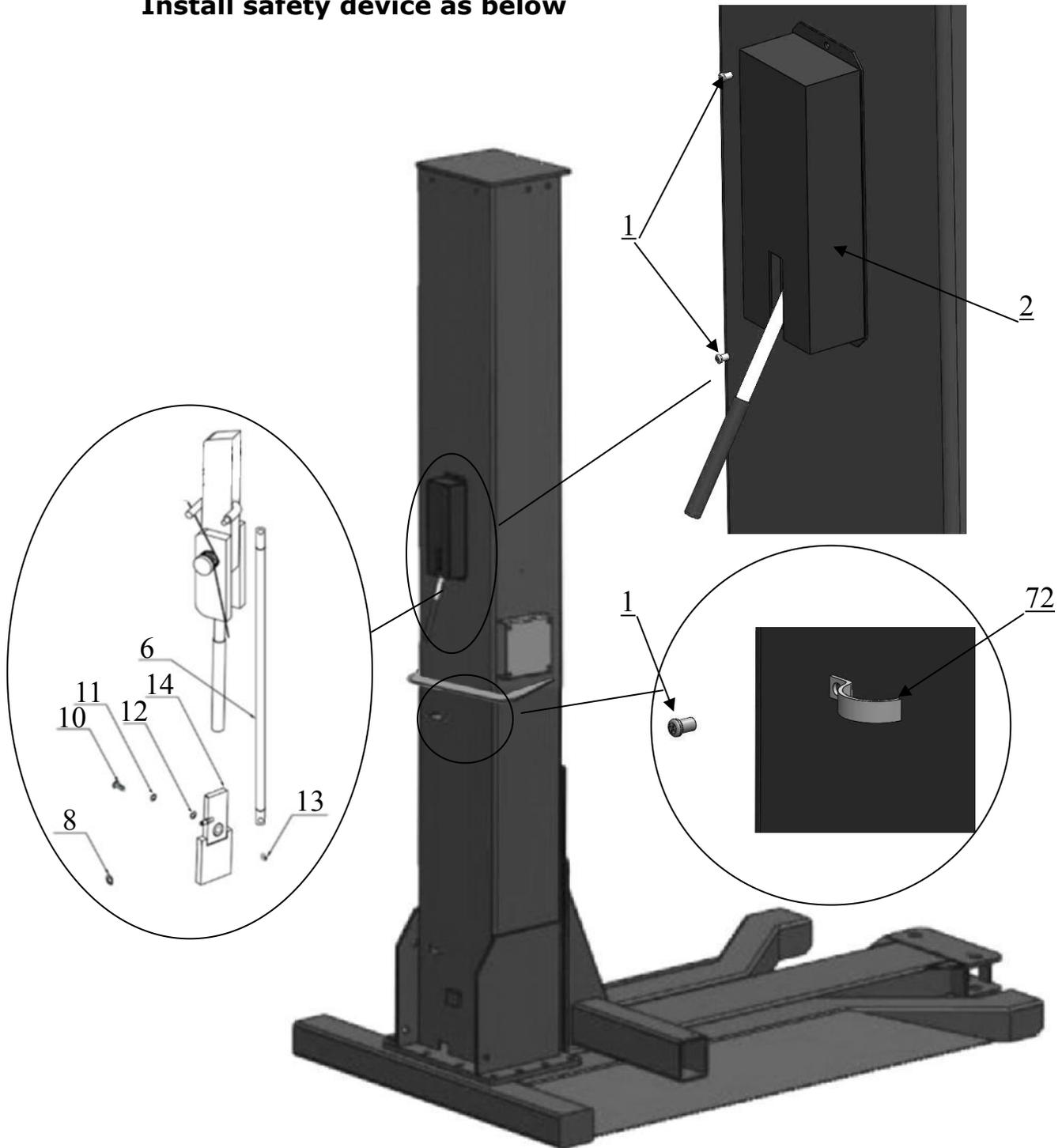


Fig.13

E. Install power unit and oil hoses (See Fig.14)

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

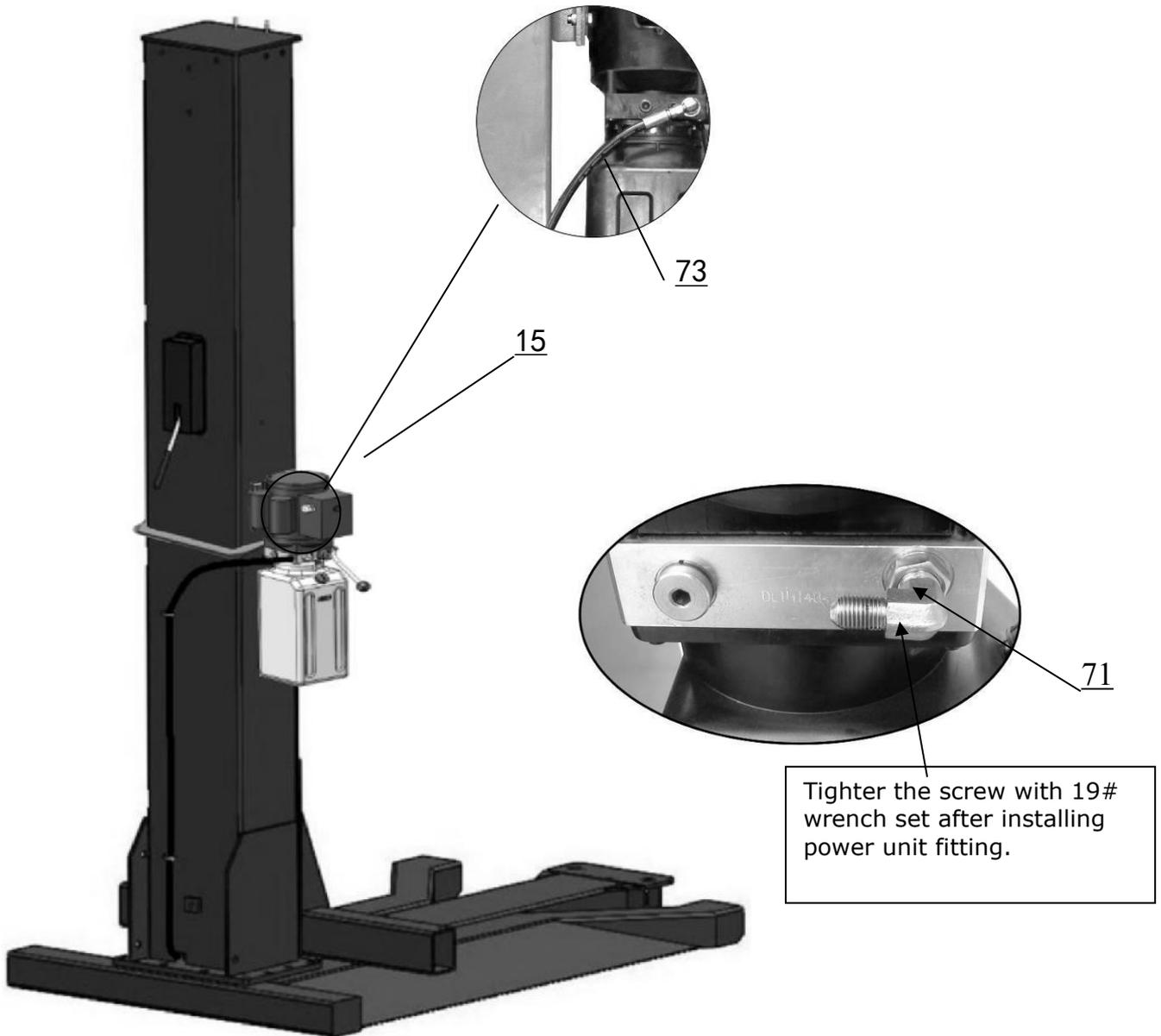


Fig.14

F. Install plastic cover (See Fig.15)

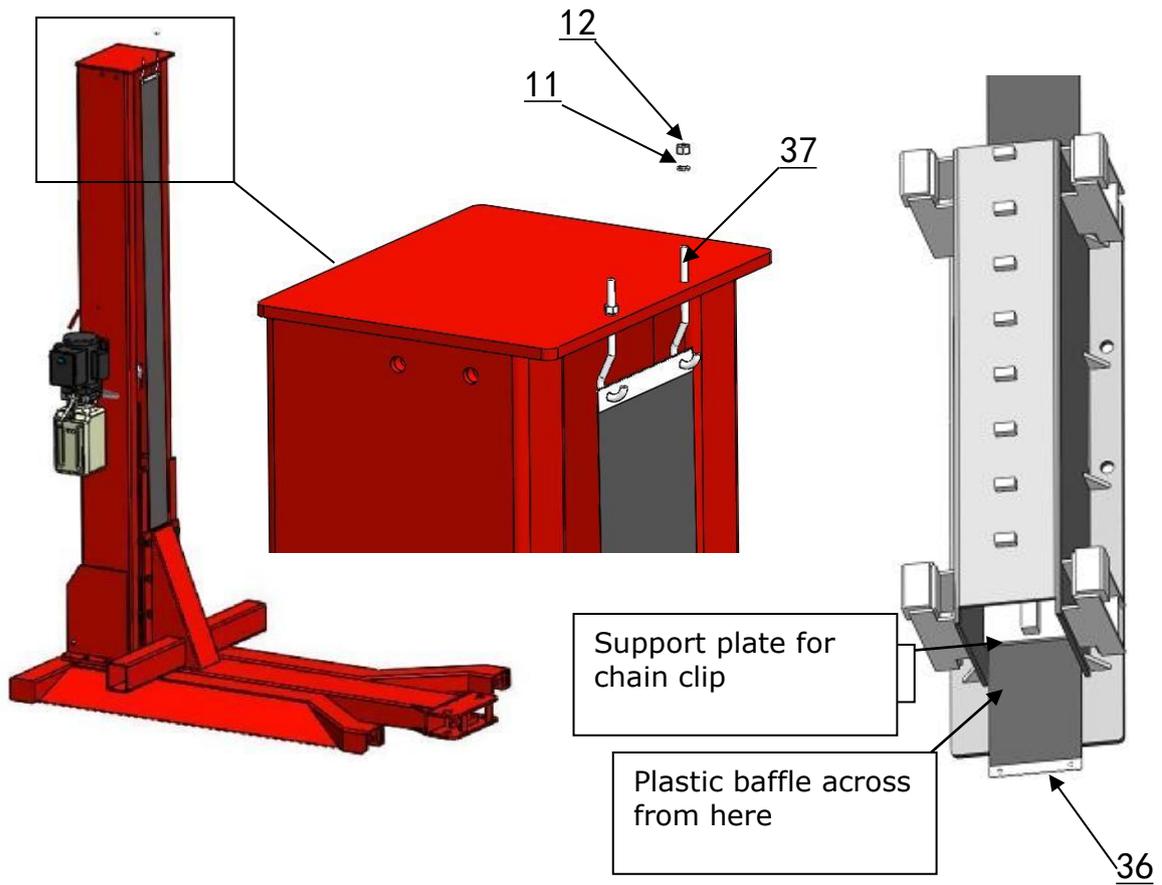


Fig.15

G. 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. Power supply wires (active wire **L** and neutral wire **N**) to terminals of AC contactor marked L1, L3 respectively. Circuit diagram (See Fig. 16)

2. Connecting the earth wire terminal of the motor.

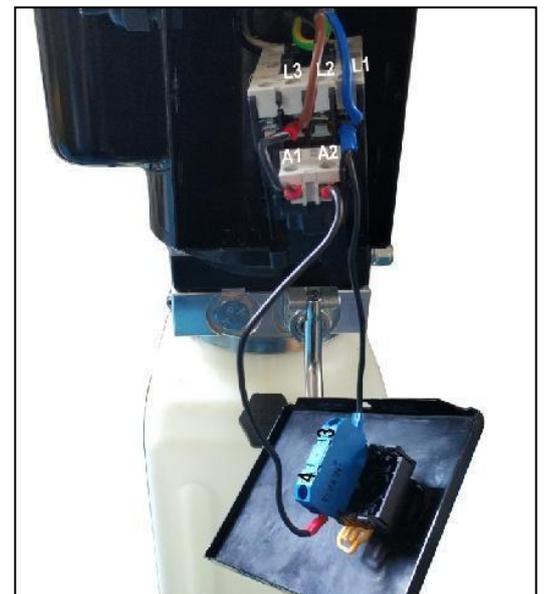
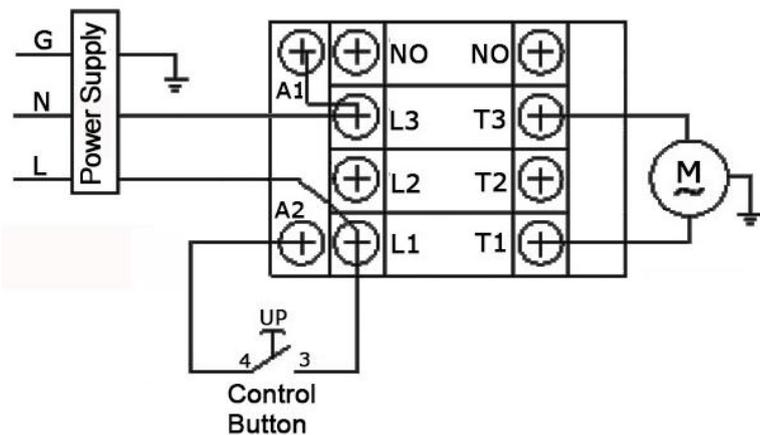


Fig. 16

H. Install lifting arms

Lowering the carriages down to the lowest position, fix cup head bolt M8*12 (see Fig.17) then tighten the screw (See Fig. 18).

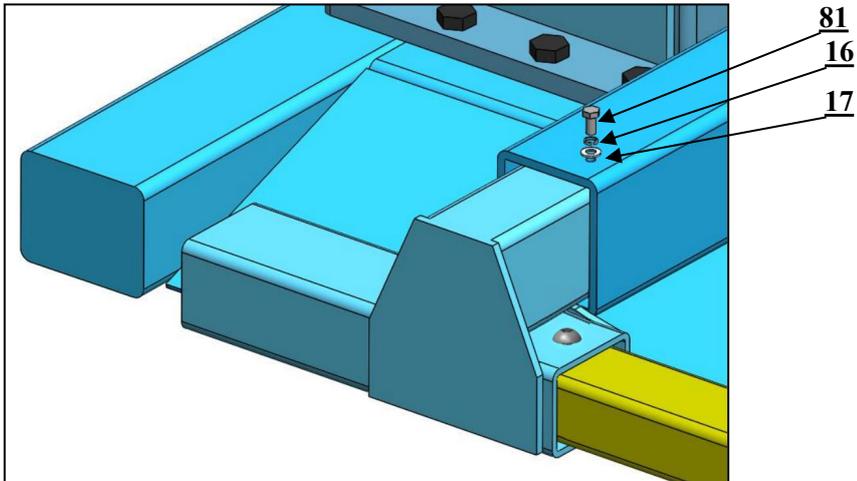


Fig.17

Operation of Arm Lock Handle



- ① Pull out the control handle.
- ② Move Left or right to release the both arm locks.

Fig.18

I. Install wheel assembly

1. First tighten the wheel assembly fixed square pipe by socket bolt with lock washer $\phi 12$ (**Fig.19**). Put the wheel assembly into the fixed square pipe then tighten it. (**Fig.20**),

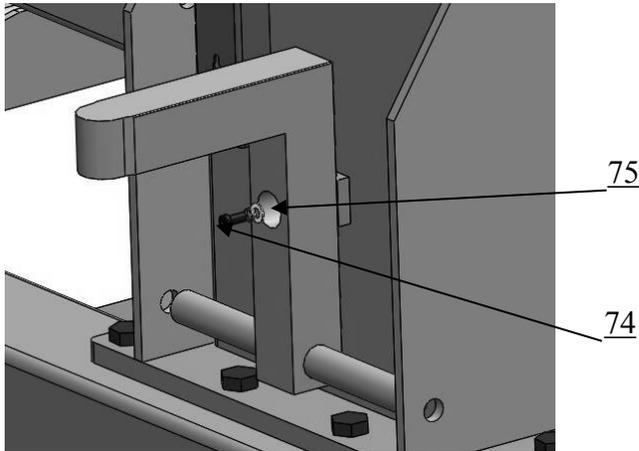


Fig.19

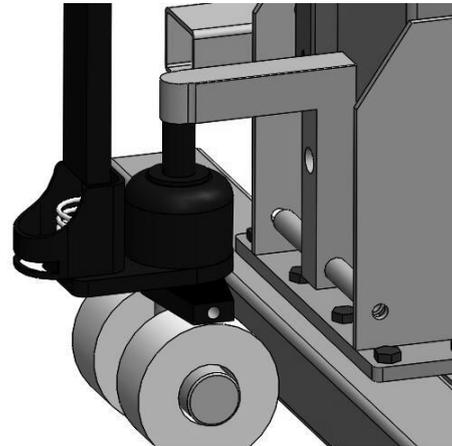


Fig.20

2. Insert the wheel assembly connecting board and fixed by elastic latch (**Fig.21**).

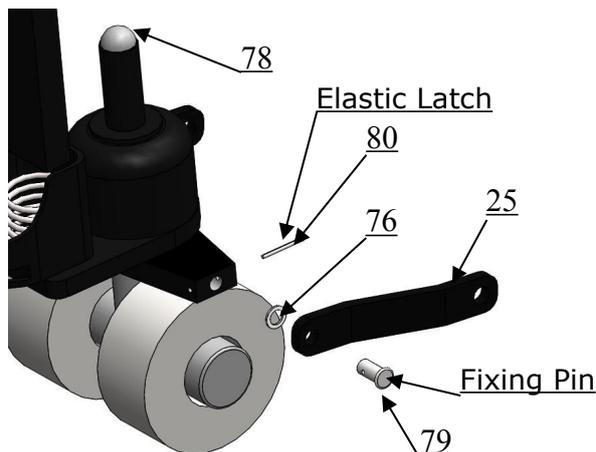
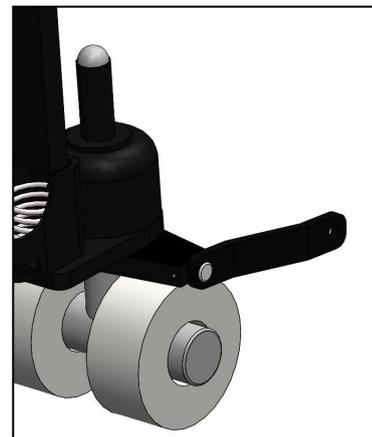


Fig.21



3. Use wheel assembly pin go through the fixed square pipe, then buckle with spring. (**Fig.22**)

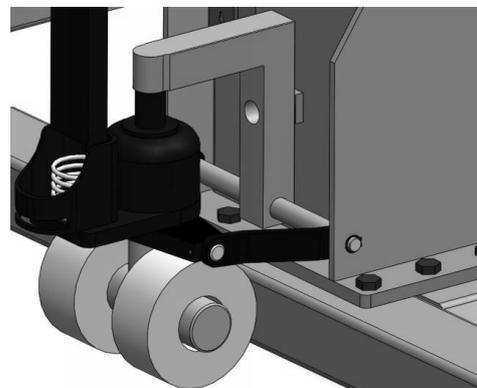
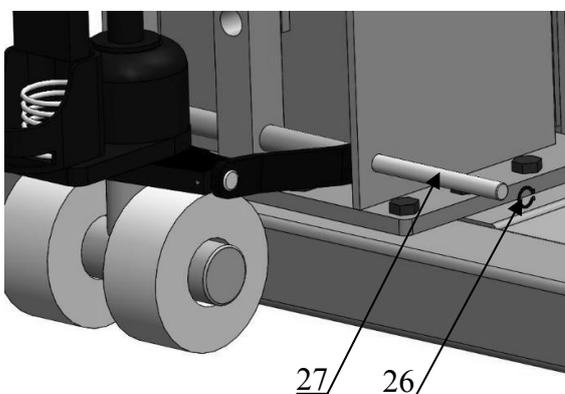


Fig.22

J. 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#.

K. Using level to measure and adjust the column to be vertical (Fig.23).

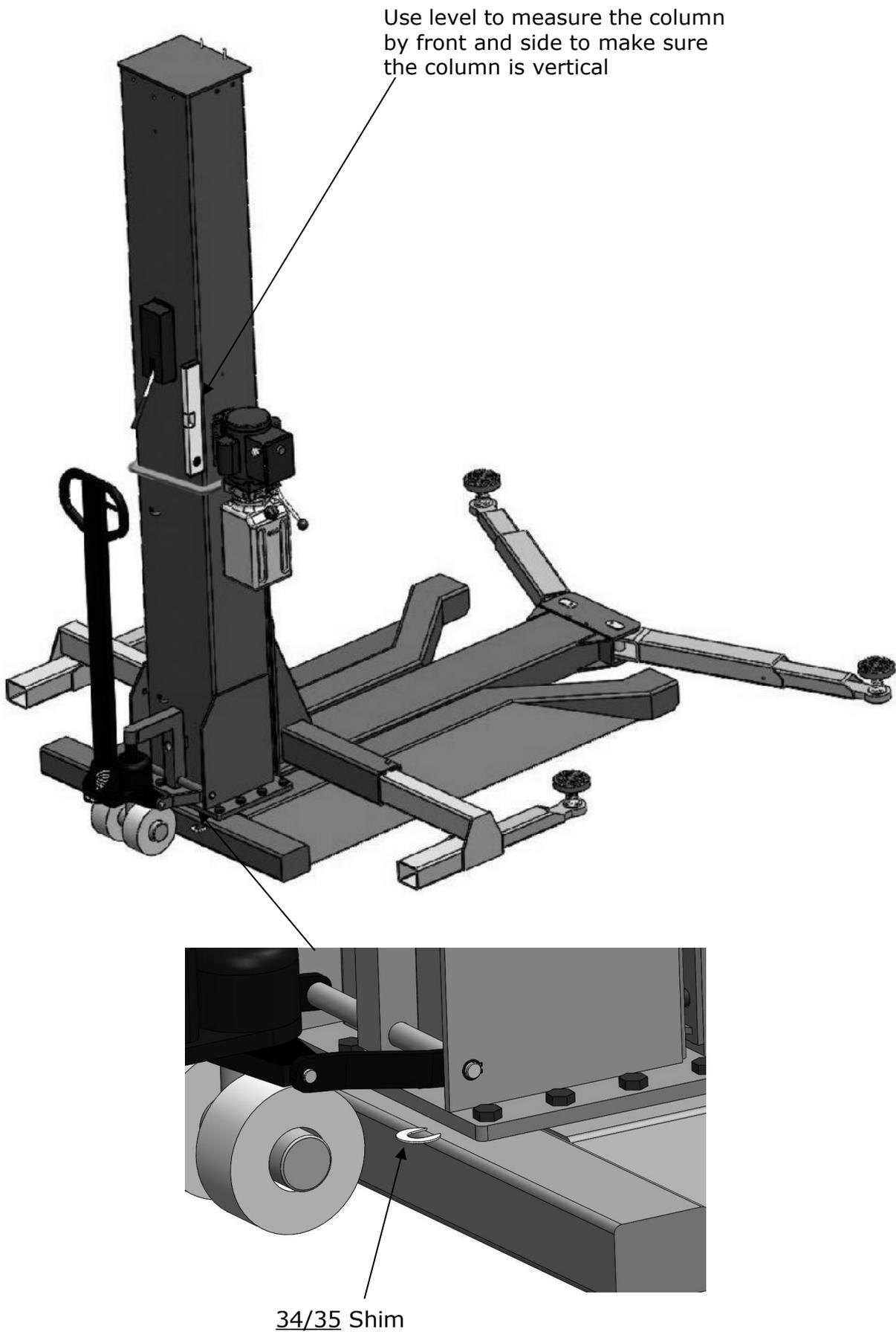


Fig.23

IV. EXPLODED VIEW

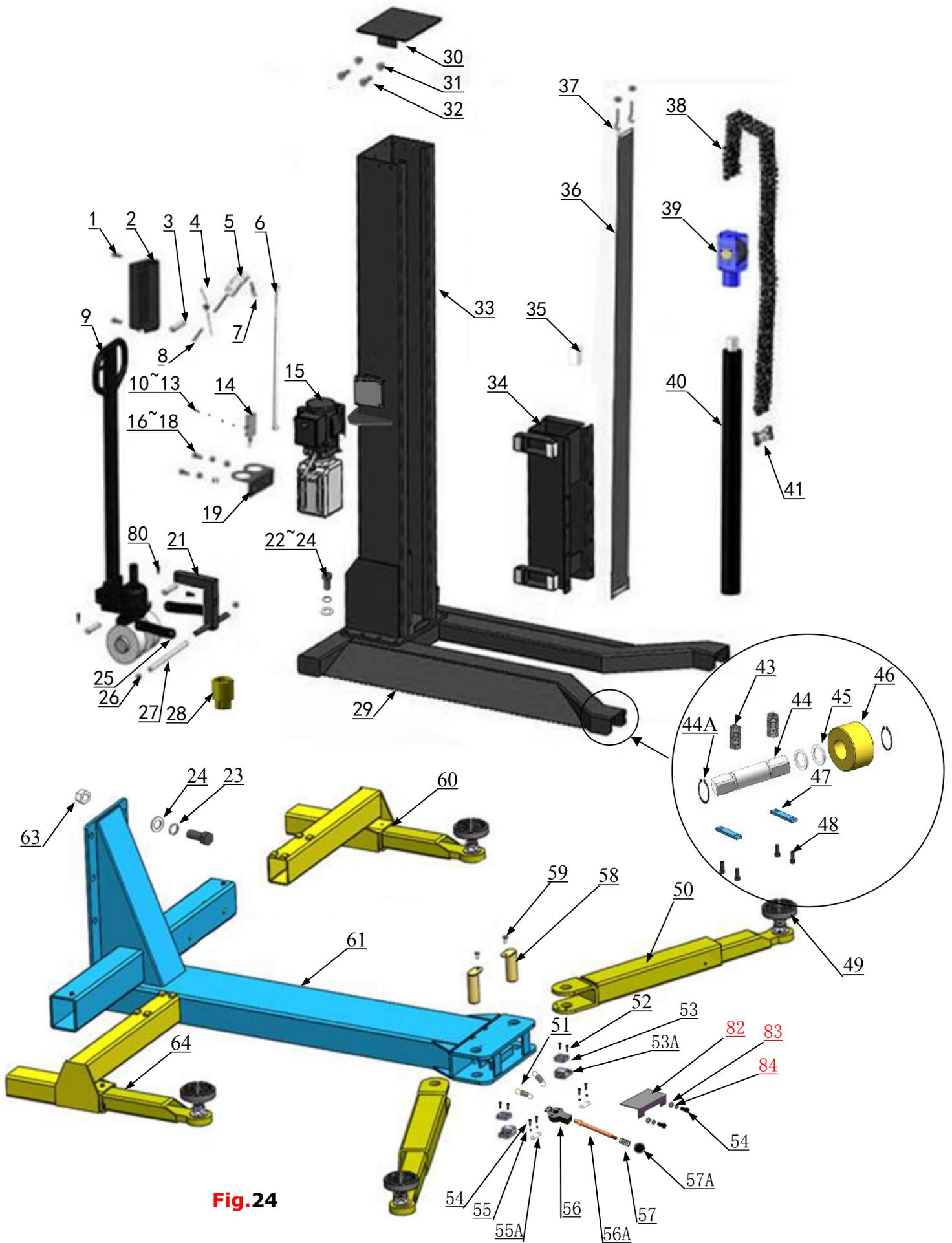


Fig.24

PARTS LIST FOR SML-7

Item	Part#	Description	QTY.	Note
1	10209009	Cup Head Bolt M6*8	6	
2	10209008	Safety Cover	2	
3	11206002	Safety Pin	1	
4	10209007	Safety Spring	1	
5	11203263	Power Side Safety Device	1	
6	11203013	Coupling	1	
7	10209012	Elastic Pin (φ3.2)	1	
8	10420049	Split Pin φ2*16	2	
9	10101028	Wheel Assy.	1	
10	10217013	Hex Bolt M6*20	1	
11	10209149	Lock Washer φ6	5	
12	10420045	Washer φ6	13	
13	10420018	Self-Locking Nut M6	3	
14	11203261	Power-side safety block	1	
15	81513019	Manual Power Unit	1	
16	10680003	Hex Bolt M8*12	2	
17	10209034	Lock Washer φ8	9	
18	10209033	Washer φ8	8	
19	11203035	Stackable Adapter Set	1	
20	10201002	Hex Bolt M8*16	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 pin φ19*376	1	
28	11203034	Stackable Adapter	4	
29	11102611	Base	1	
30	11101013	Top plate	1	
31	10206023	Self-Locking Nut M12	4	
32	10217069	Hex Bolt M12*30	4	
33	11101041	Column	1	
34	11102608	Carriage	1	
35	10217188	Slide Block (46*46*76)	8	
36	11101042	Plastic baffle L=2570	1	
37	10203117	Hook with adjustment Screw M6×95	2	
38	10101007	Chain	1	
39	10207008	Chain Pulley seat assy.	1	
40	10207010	Cylinder	1	
41	10201010A	Chain Connector	2	
42	10101501	Parts Box	1	
43	10683018	Spring φ18*φ11*70	4	
44	11101039	Roller shaft	2	
44A	10610008	Snap ring φ30	4	
45	41080221	Bearing	4	
46	11101038	Roller	2	
47	11101675	Roller shaft limit block	4	
48	10207021	Socket Bolt M6*12	8	

Item	Part#	Description	QTY.	Note
49	10203054	Rubber Pad Assy.	4	
50	10101033	Outside Lifting Arm Assy.	2	
51	1101015001	Snap ring $\Phi 13*\Phi 10*\Phi 1.5*32$	2	
52	85090128	Socket Bolt M8*20	4	
53	10101008	Arm lock	2	
53A	11101009-01	Arm lock fixed plate	2	
54	85090245	Socket bolt M5*12	6	
55	1101012008	Limit sleeve $\phi 10*6.2$	4	
55A	1101012002	Connecting block	2	
56	1101012004A	Arresting Stop	1	
56A	1101015001	Snap ring $\Phi 12.6*\Phi 1.2*21$	1	
57	1101012009	Control handle	1	
57A	10209020	Plastic ball M8	1	
58	11101005	Arm Pin	2	
59	10101003	Countersunk Screw M8*12	2	
60	10102028	Inside Arm Assy. ①	1	
61	11102609-01	Lifting Platform	1	
62	10101001	Hex Bolt M20*45	8	
63	10420175A	Hex Nut M20	8	
64	10102029	Inside Arm Assy.②	1	
65	10209003	Hex Bolt M8x25	4	
66	10209004	Rubber Ring $\phi 8*\phi 20*3$	4	
67	10209005	Self-Locking Nut M8	4	
68	10209060	90° Fitting for Power Unit	1	
69	10206013A	Limit Switch	1	
70	10206011	Cup Head Bolt M5*12	4	
71	10201020	90° Fitting for Cylinder	1	
72	11217048	Retainer	2	
73	10102016	Oil Hose 1/4" *2735mm	1	
74	10101029	Socket Bolt M12*20	1	
75	10206006	Washer $\phi 12$	1	
76	10420029	Washer $\phi 16$	2	
77	10620065	Shim (2mm)	10	
	10201090	Shim (1mm)	10	
78	10101037	Steel ball S19	1	
79	10101039	Shaft for trailer	2	
80	10101038	Elastic cylindrical pin	2	
81	10209043	Socket bolt M8*20	2	
82	1101012010	Limit cover plate	1	
83	10420152	Washer $\Phi 5$	6	
84	10209143	Lock Washer $\Phi 5$	6	

1. Rubber Pad Assy. (10203054) Exploded View:

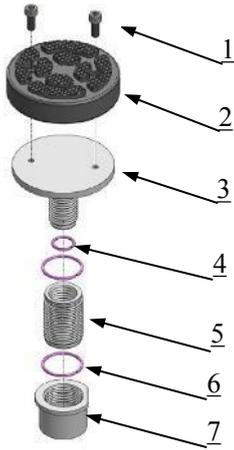


Fig. 25

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

2. Outside Lifting Arm (10101033) Exploded View:

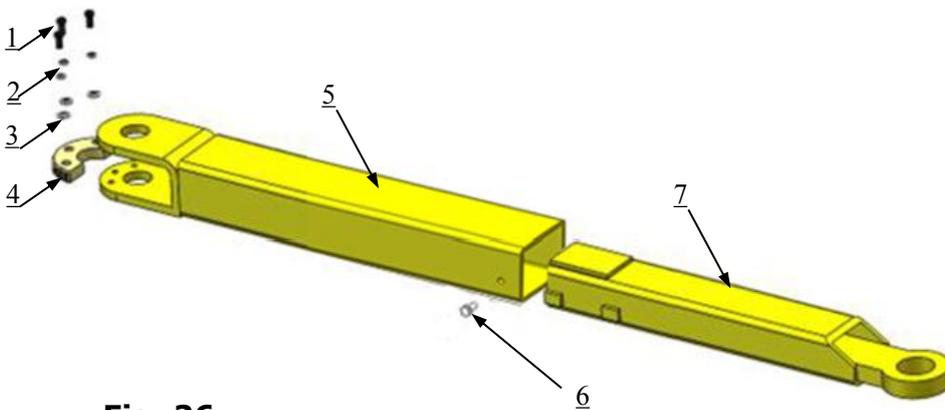
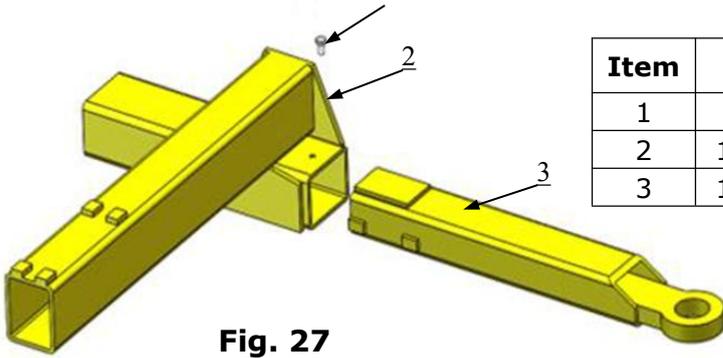


Fig. 26

Item	Part#	Description	QTY.
1	10209032	Socket Bolt M8*20	6
2	10209034	Lock Washer φ8	6
3	10209033	Washer φ8	6
4	10209035	Moon Gear	2
5	11101019	Lifting Arm (outer)	2
6	10201149	Cup Head Bolt M8*12	2
7	11203101	Inner Arm	2

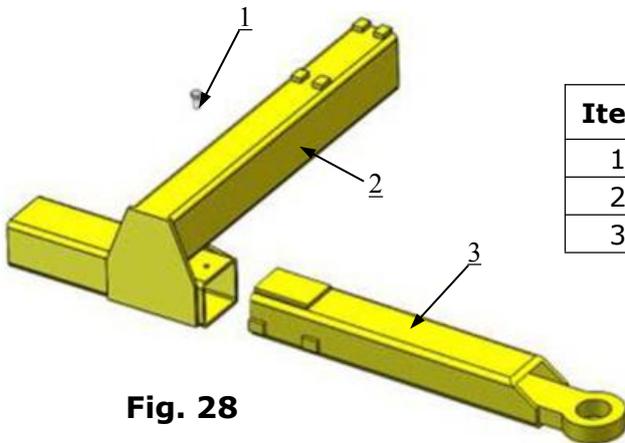
3. Inside Lifting Arm-Left (10102029) Exploded View:



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

Fig. 27

4. Inside Lifting Arm-Right (10102028) Exploded View:



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

Fig. 28

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

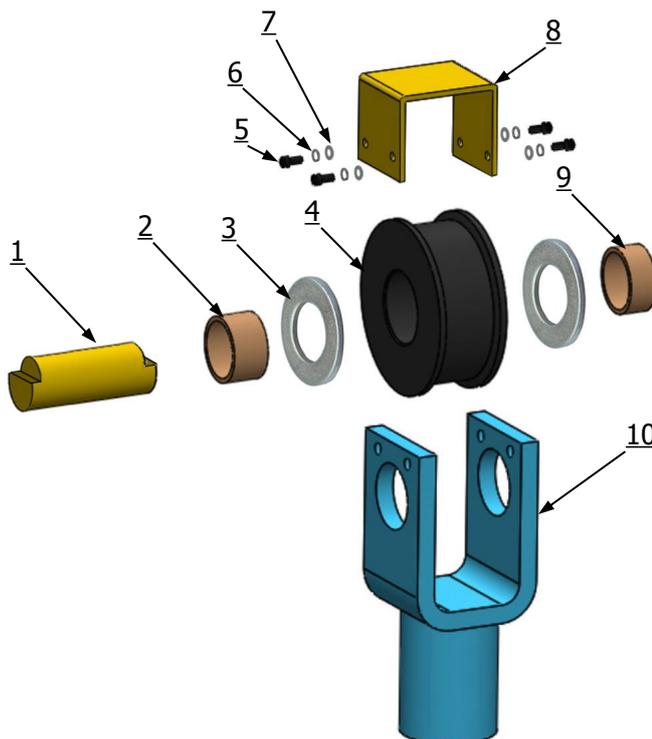


Fig.29

Item	Part#	Description	QTY.
1	11207006	Pin for Chain Pulley $\Phi 35 \times 93$	1
2	10420132A	Bronze Bush $\Phi 41.2 \times \Phi 35.1 \times 20$	1
3	11530023	Washer $\Phi 44 \times \Phi 35.5 \times 2$	2
4	11207007	Chain Pulley $\Phi 105 \times 50$	1
5	10430138	Socket Bolt M6*16	4
6	10209149	Lock washer $\Phi 6$	4
7	10420045	Washer $\Phi 6$	4
8	11207693	Chain limit block	1
9	10530042	Bronze Bush $\Phi 41.2 \times \Phi 35.1 \times 28$	1
10	11207008	Chain Pulley Seat	1

6. Cylinder (10207010) Exploded View:

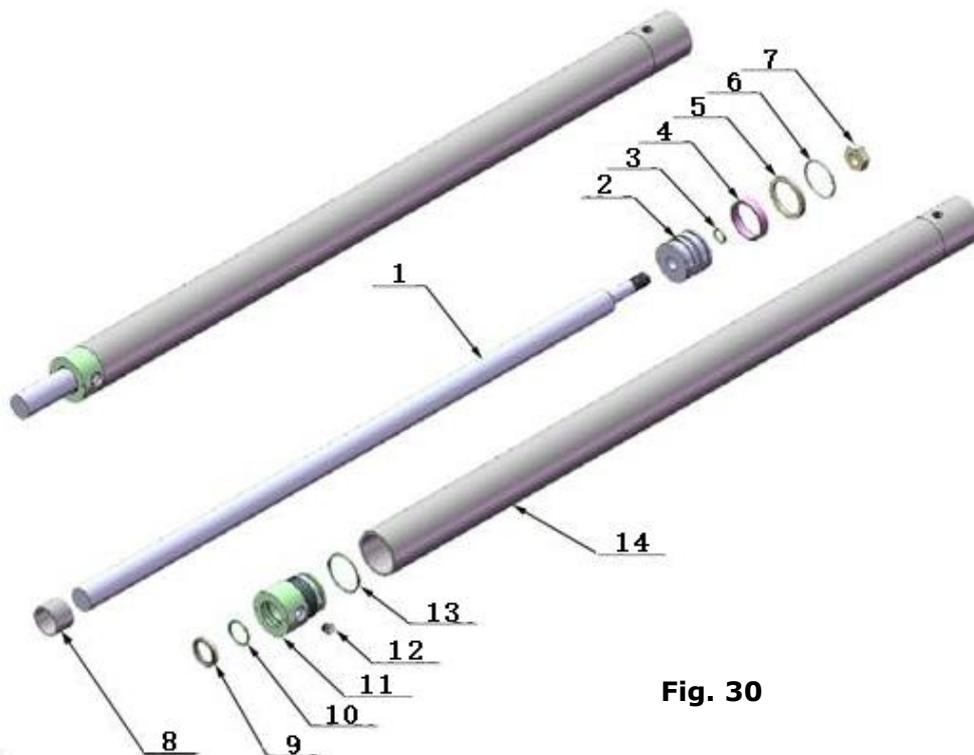
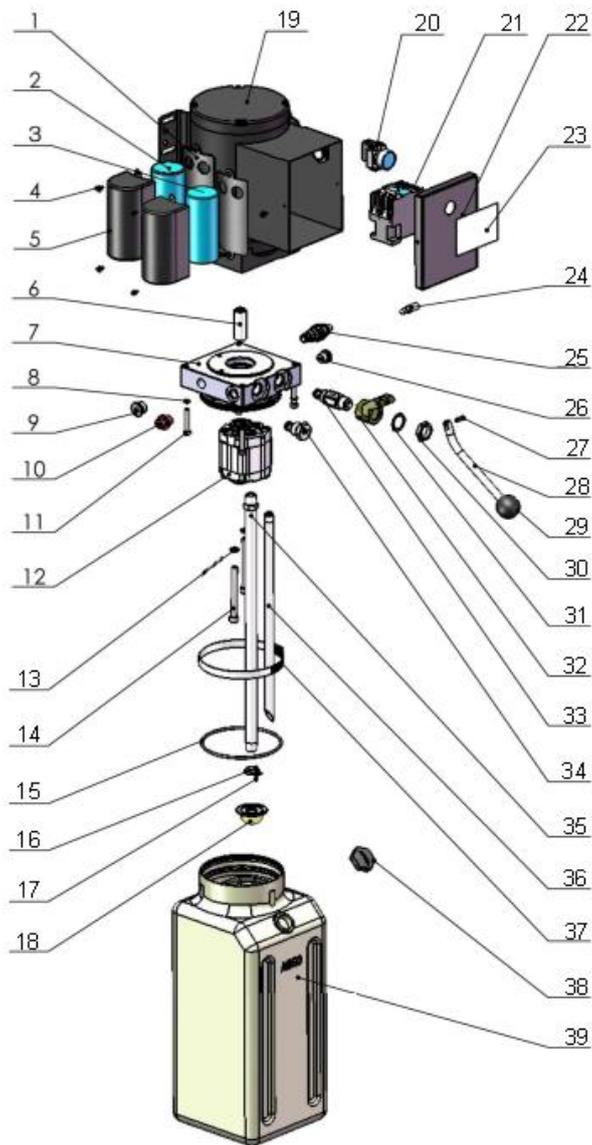


Fig. 30

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	

7. Manual Power Unit (071103) Exploded View:



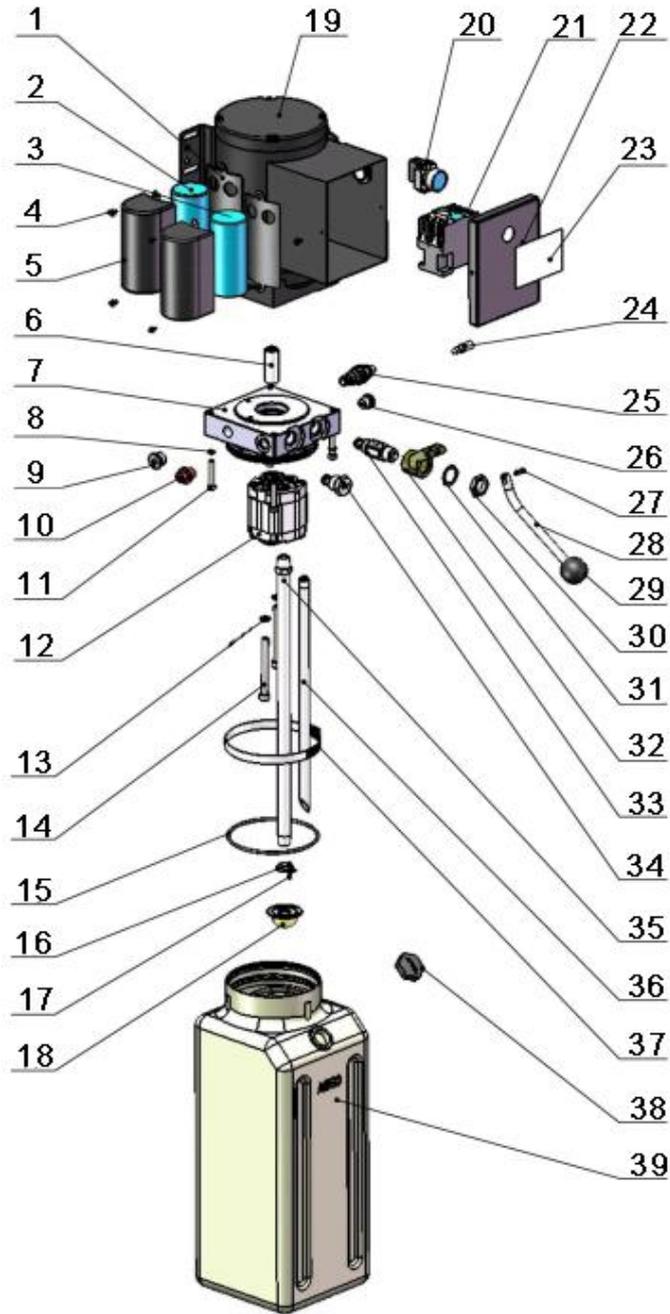
110V/60HZ/1 Phase Manual

Fig. 31

PARTS LIST FOR MANUAL POWER UNIT (071103)

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	4	
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	81400312	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	81400412	Motor	1	
20	10420070	Push button	1	
21	81400559	AC connector	1	
22	81400287	Cover of Motor Terminal Box	1	
23	71111211	AMGO lable	1	
24	81400560	Throttle valve	1	
25	81400266	Relief valve	1	
26	81400284	Iron Plug	1	
27	81400452	Pin	1	
28	81400451	Handle for release valve	1	
29	10209020	Plastic ball	1	
30	81400421	Nut for release valve	1	
31	81400422	Self-Locking Washer	1	
32	81400449	Valve seat(Low)	1	
33	81400567	Release valve	1	
34	81400566	Check valve	1	
35	81400375	Inlet pipe	1	
36	81400376	Oil return pipe	1	
37	81400364	Hose clamp	1	
38	81400263	Oil tank cap	1	
39	81400320	Oil tank	1	

8. Manual Power Unit (071104) Exploded View:



220V/60HZ/1 Phase Manual

Fig. 32

PARTS LIST FOR MANUAL POWER UNIT (071104)

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	4	
5	81400066	Cover of capacitor	2	
6	81400363	Motor connecting shaft	1	
7	090101	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	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	Push button	1	
21	41030055	AC connector	1	
22	81400287	Cover of Motor Terminal Box	1	
23	71111104	Name plate	1	
24	81400560	Throttle valve	1	
25	81400266	Relief valve	1	
26	81400284	Iron Plug	1	
27	10720118	Pin	1	
28	81400451	Handle for release valve	1	
29	10209020	Plastic ball	1	
30	81400421	Nut for release valve	1	
31	81400422	Self-Locking Washer	1	
32	81400449	Valve seat(Low)	1	
33	81400567	Release valve	1	
34	81400566	Check valve	1	
35	81400375	Oil Inlet pipe	1	
36	81400376	Oil return pipe	1	
37	81400364	Hose clamp	1	
38	81400263	Oil tank cap	1	
39	81400320	Oil tank	1	

Illustration of hydraulic

Valve for hydraulic power unit

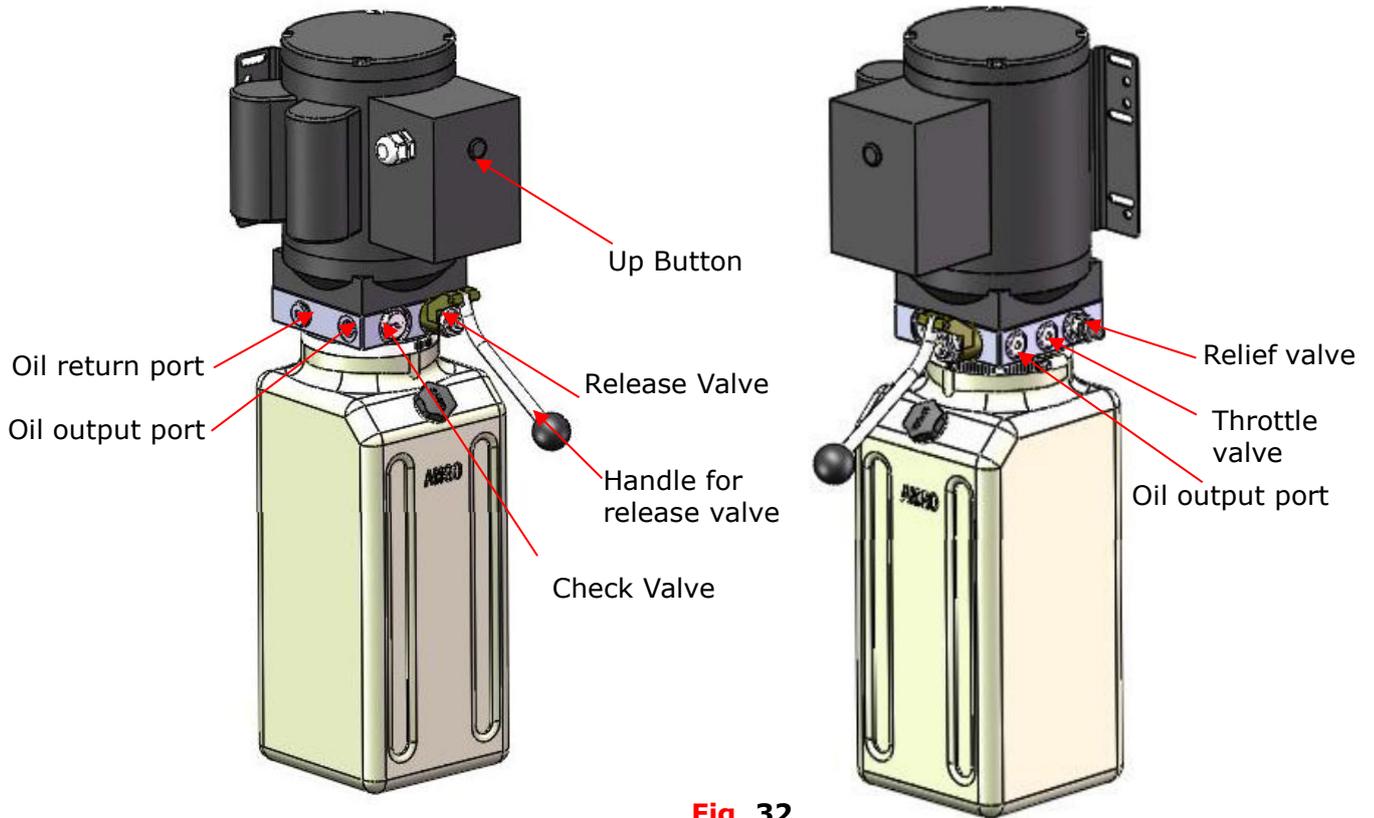


Fig. 32

V. TEST RUN

1. Adjust the lower speed (Fig.33)

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.

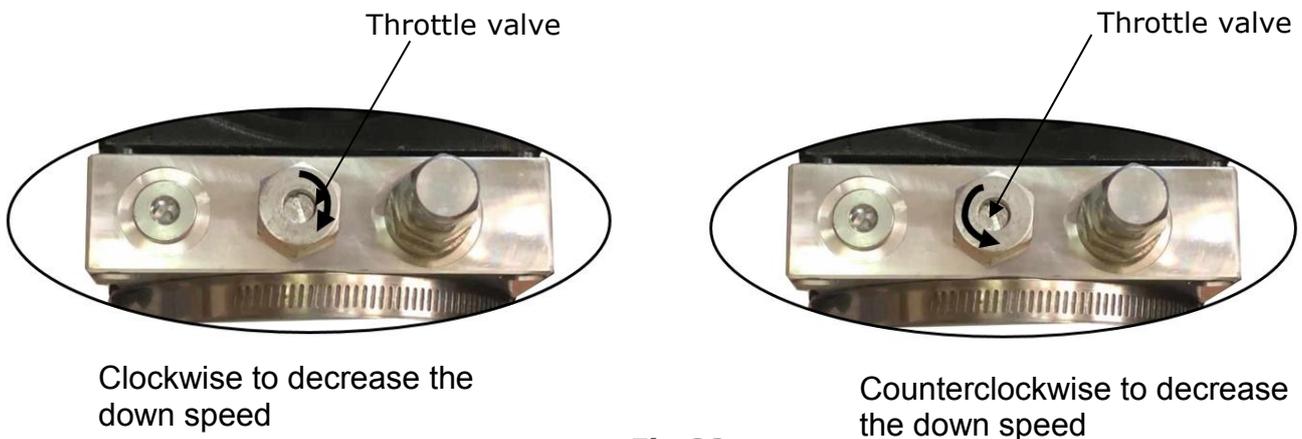


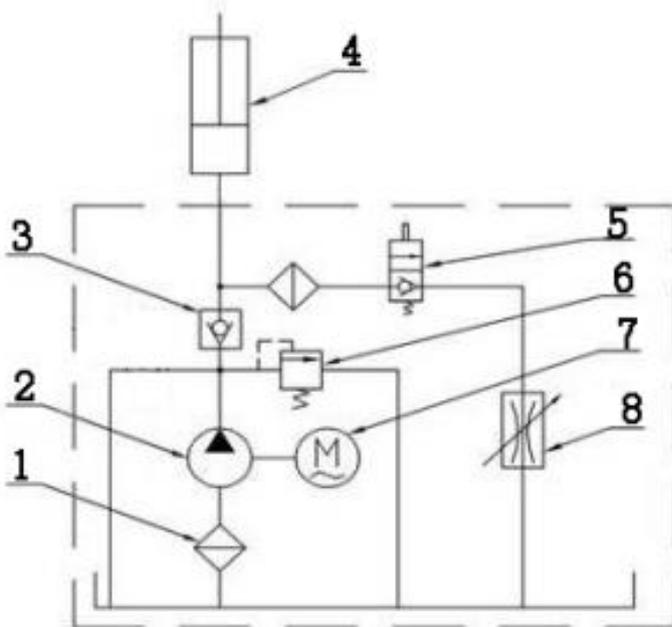
Fig.33

2. Test with load

After finishing the above adjustment, test running the lift with load. Lift the lift in low position for several times first, make sure the lift can rise and lower without improper. And then test run the lift to top position 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



1. Filter
2. Gear Pump
3. Check Valve
4. Cylinder
5. Release Valve
6. Relief Valve
7. Motor
8. Throttle Valve

Fig.34

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, car 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 of the power unit and press **up** button until the rubber pads fully contact the car, making sure it is safe;
8. Slowly lift the lift. Make sure that the car is in a balanced state, then lift the car to the required height and release the **UP** button
9. Press the release handle of the power unit and lower the lift to the safety lock position. Only after confirming that the safety device is in a normal working state then the car can be maintained.

To lower vehicle

1. Be sure the clearance of around and under the lift, only leaving operator in lift area;
2. Press the start button of the power unit to raise the vehicle slightly, and then open the safety device, then lower the vehicle by pressing the release handle of the power unit;
3. Open the arms and position them to the shortest length;
4. Drive away the vehicle.

VII.MAINTENANCE SCHEDULE

Monthly:

1. Check all connectors, bolts and pins to insure proper mounting;
2. Lubricate cable with lubricant;
3. Make a visual inspection of all hydraulic hoses/lines for possible wear or leakage;
4. Check Safety device and make sure proper condition;
5. Lubricate all Rollers and Pins 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 of the cables to insure level lifting.
3. Check the vertical of columns.
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 contactor burned out 4. Motor burned out 	<ol style="list-style-type: none"> 1. Replace button 2. Repair all wiring connection 3. Repair or replace contactor 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.



Address: 1931 Jo Rogers Blvd, Manning, South Carolina, USA

No: 72215208

Date: 2022/08