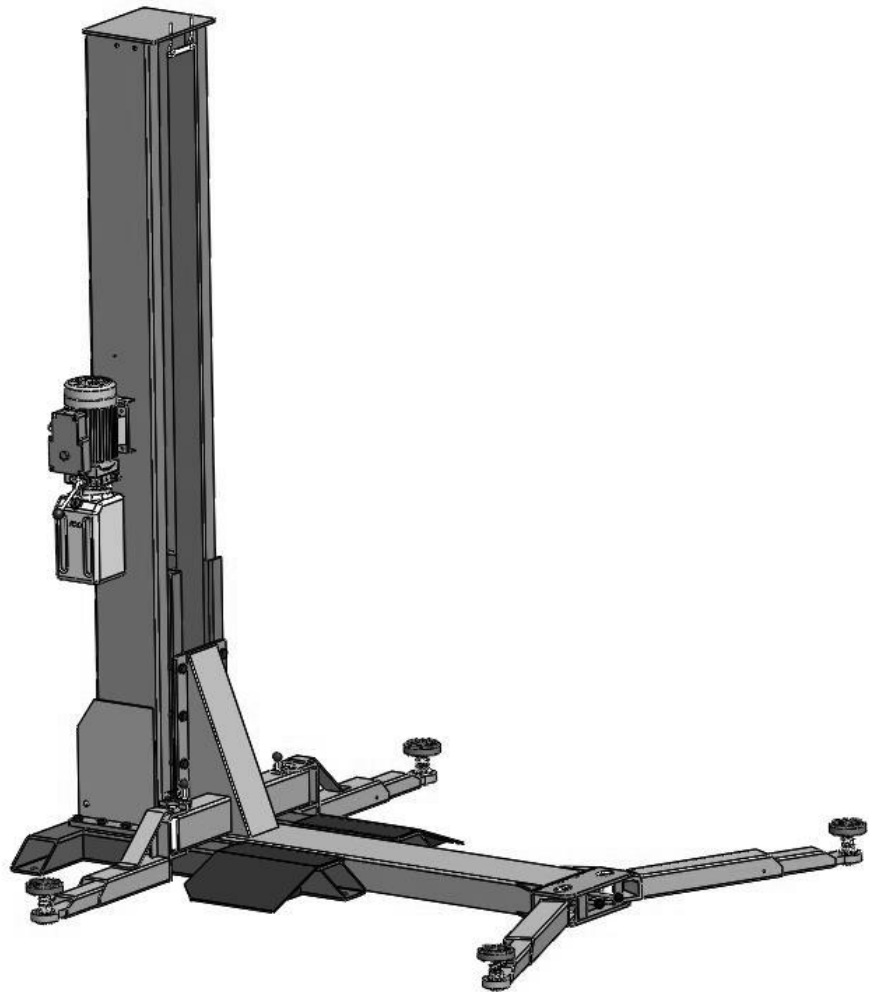




Installation And Service Manual

**B
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**SINGLE POST LIFT
Model:30-SP60**

CONTENTS

I. PRODUCT FEATURES AND SPECIFICATIONS.....	1
II. INSTALLATION REQUIREMENT.....	3
III. STEPS OF INSTALLATION.....	5
IV. EXPLODED VIEW.....	13
V. TEST RUN.....	21
VI. OPERATION INSTRUCTIONS.....	22
VII. MAINTENANCE SCHEDULE.....	23
VIII. TROUBLE SHOOTING.....	24
IX. LIFT DISPOSAL	24

I. PRODUCT FEATURES AND SPECIFICATIONS

CHAIN-DRIVE SINGLE POST MODEL SL-6 FEATURES

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

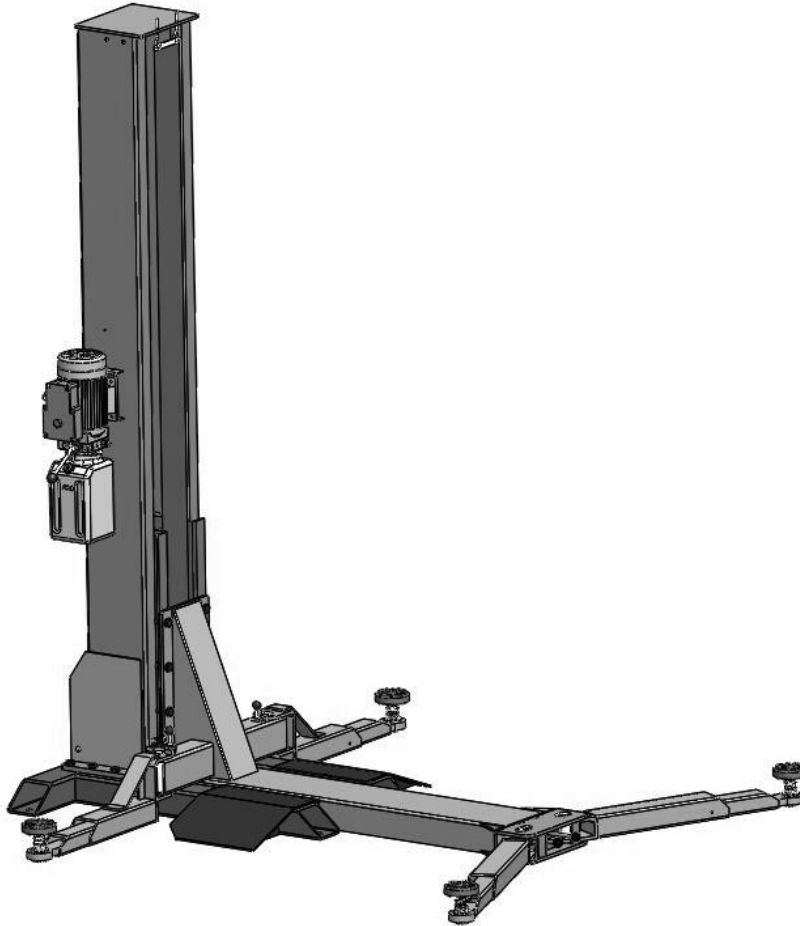


Fig.1

MODEL SL-6 SPECIFICATIONS

Model	Style	Lifting Capacity	Lifting Time	Lifting Height	Overall Height	Overall Width	Minimum Pad Height	Motor
30-SP60	Chain-driven	6,000 lbs	84S/32S	71 7/8"-77 1/8"	108 7/8"	80"	4 1/8"-9 1/4"	1.5HP/ 2.0HP

Arm Swings View

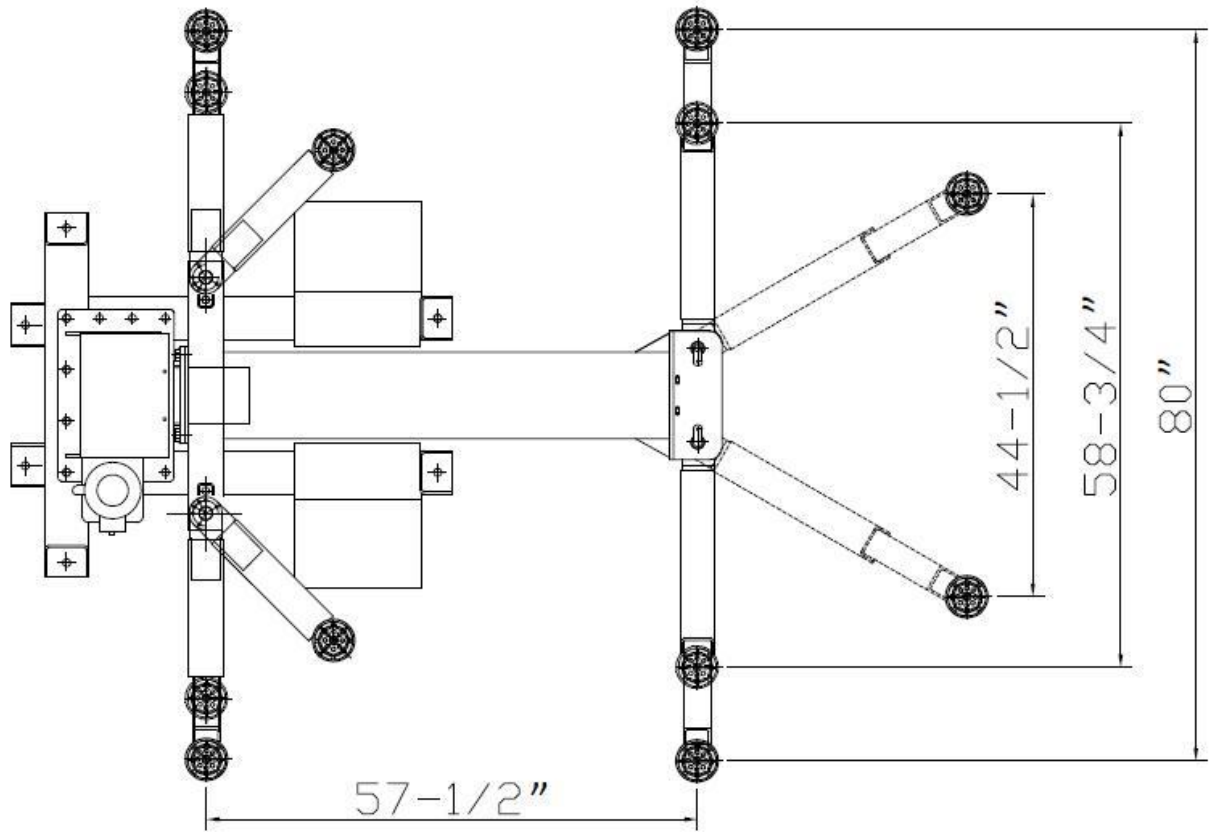


Fig.2

II. INSTALLATION REQUIREMENT

A. TOOLS REQUIRED

↳ Rotary Hammer Drill($\Phi 19$)



↳ Hammer



↳ Level Bar



↳ English Spanner(12")



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



↳ Carpenter's Chalk



↳ Screw sets



↳ Tape Measure(7.5mm)



↳ Pliers



↳ Socket Head Wrench: (4", 5", 6")



Fig.3

B. Equipment storage and installation requirements.

The equipment should be stored or installed in a shady, normal temperature, ventilated and dry place.

C. 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 6" 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.

D. POWER SUPPLY

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

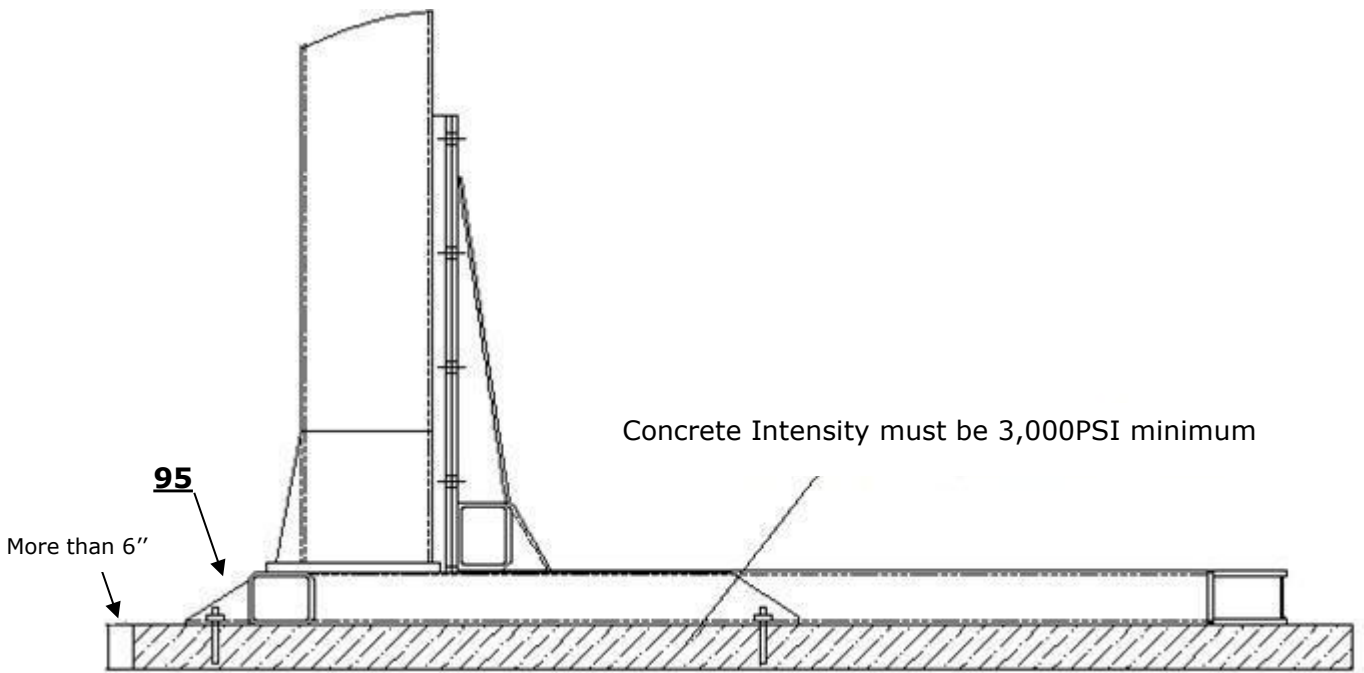


Fig.4

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. Check the parts before assembly

1. Packaged lift and hydraulic power unit (See Fig. 5)

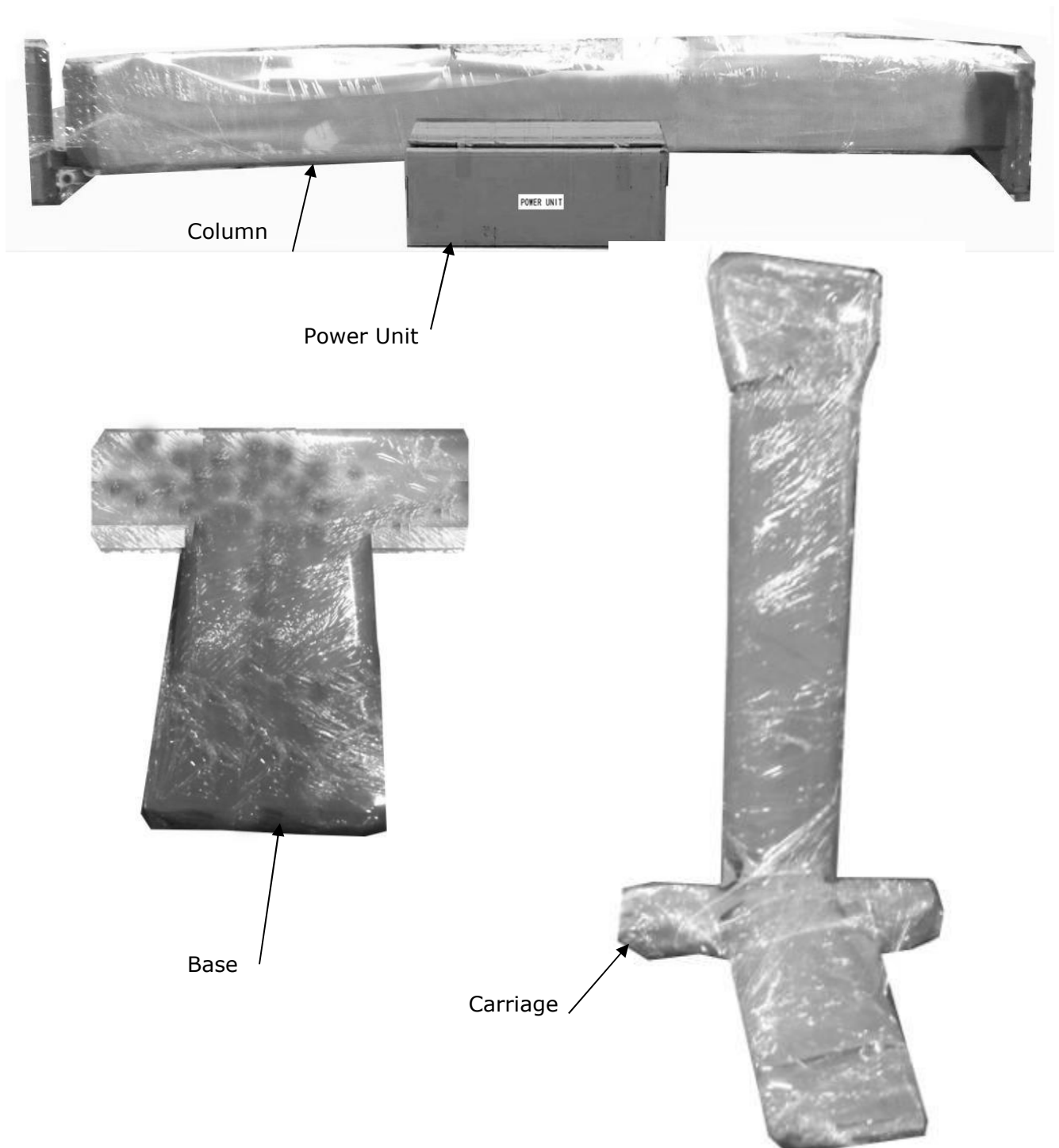


Fig.5

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.6 & 7)

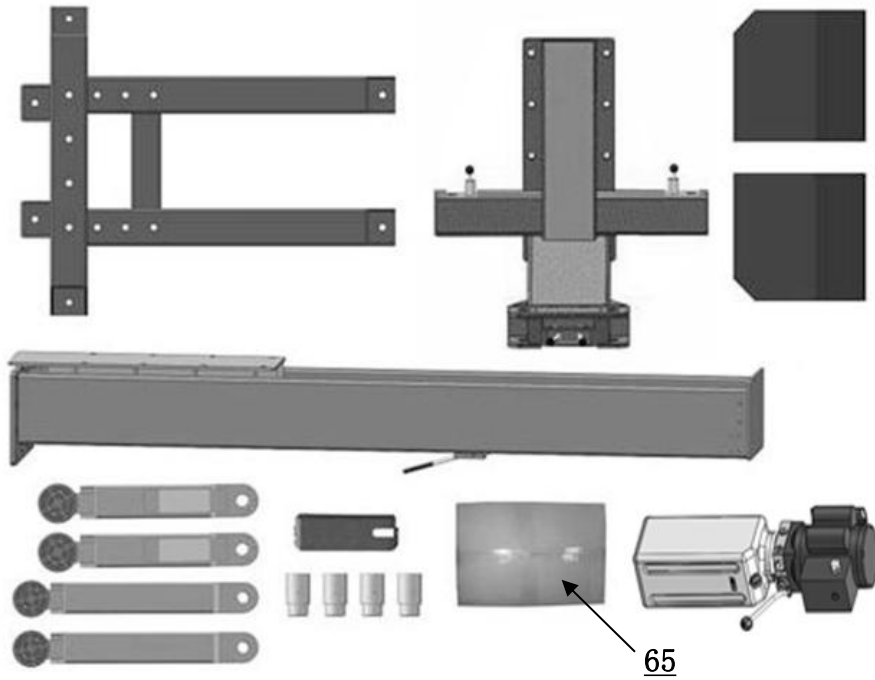


Fig.6



**Part box (65)
Fig.7**

4. Check the parts of the parts bag according to the parts bag list (See Fig.8)



Fig.8

C. Lay the base on the ground, confirm installation place according to the ground state, the main purpose is to save space. (See Fig.9)

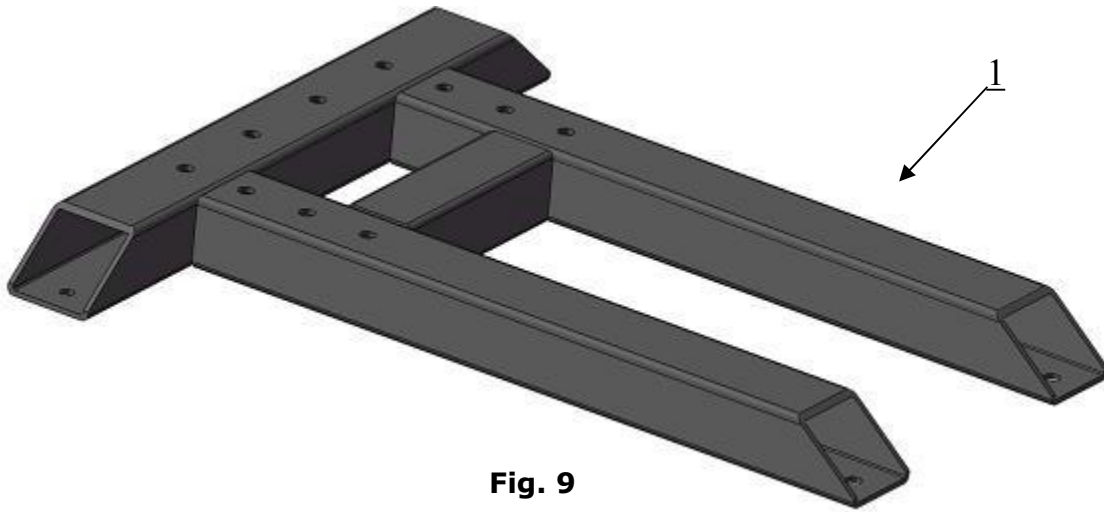


Fig. 9

D. Install column and lift platform

1. Lay the column on the ground. (See Fig.10)

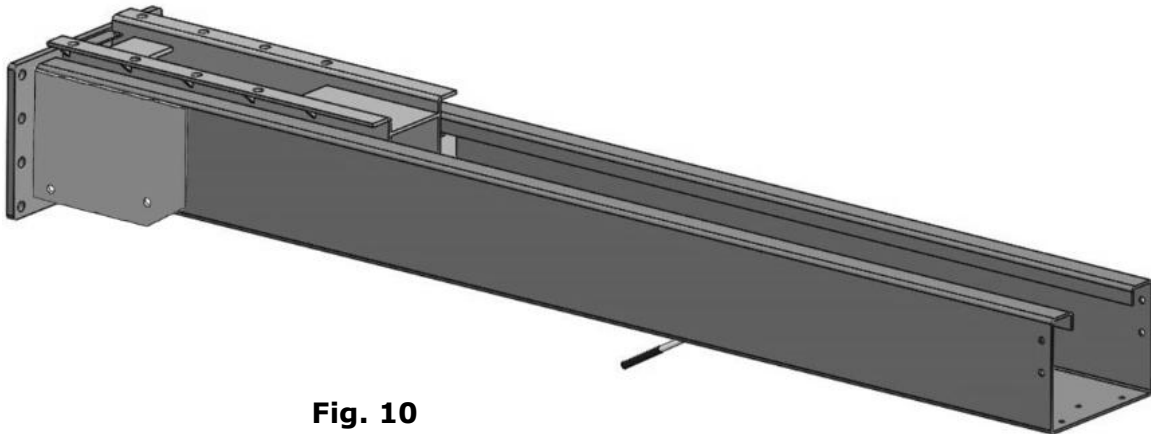
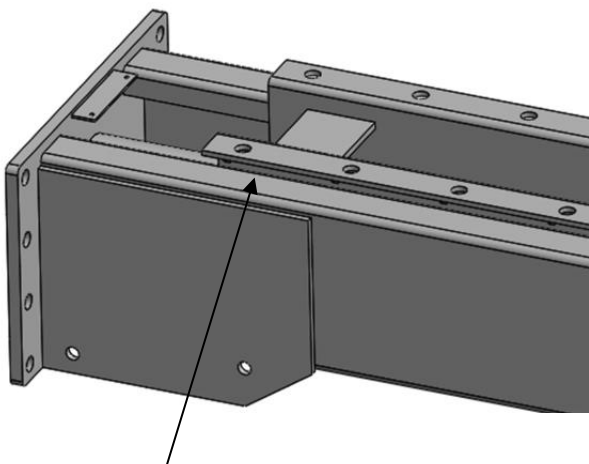
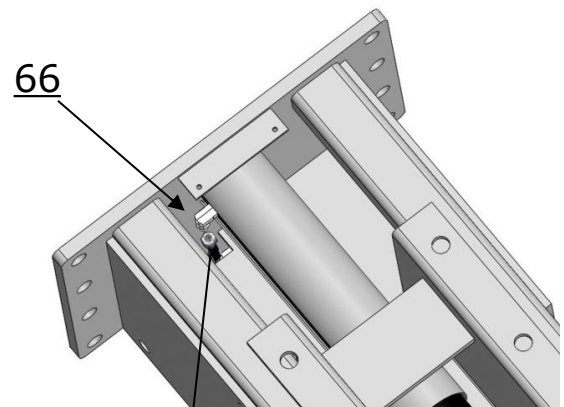


Fig. 10

2. Connecting oil hose of cylinder (See Fig. 11)



Pull out the carriage about 200mm



Connect oil hose to cylinder connector

Fig. 11

3. Fix column to the base plate. (See Fig.12)
4. Fix lifting platform to carriage. (See Fig.13)

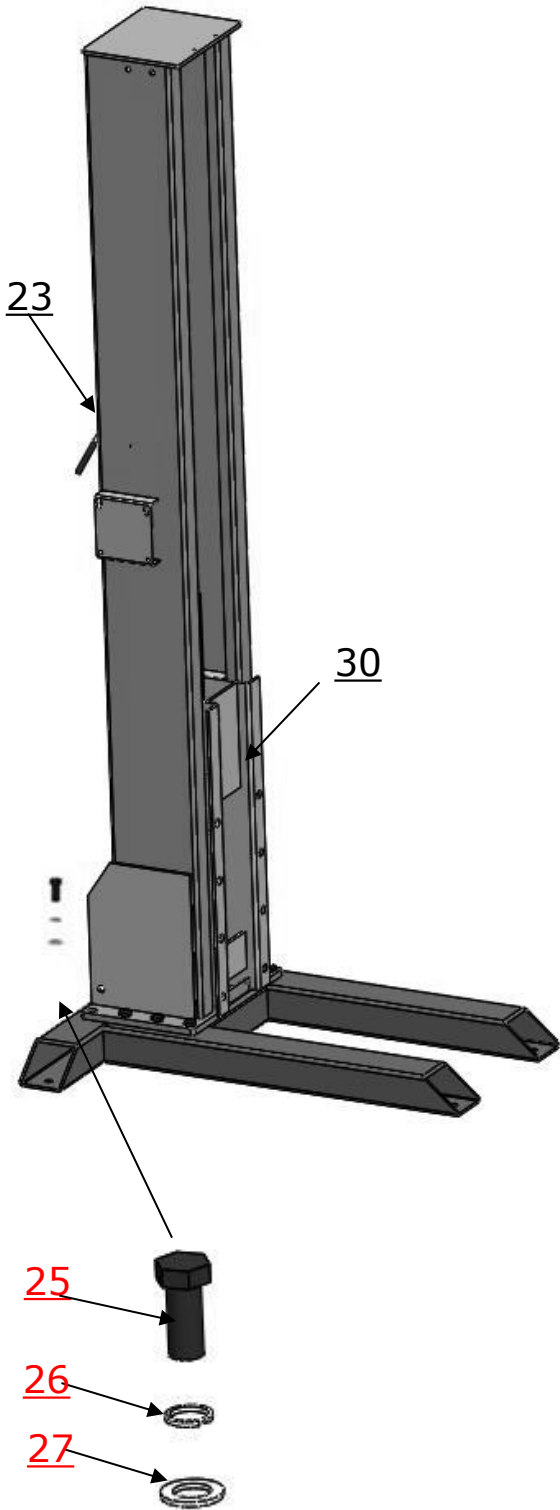


Fig. 12

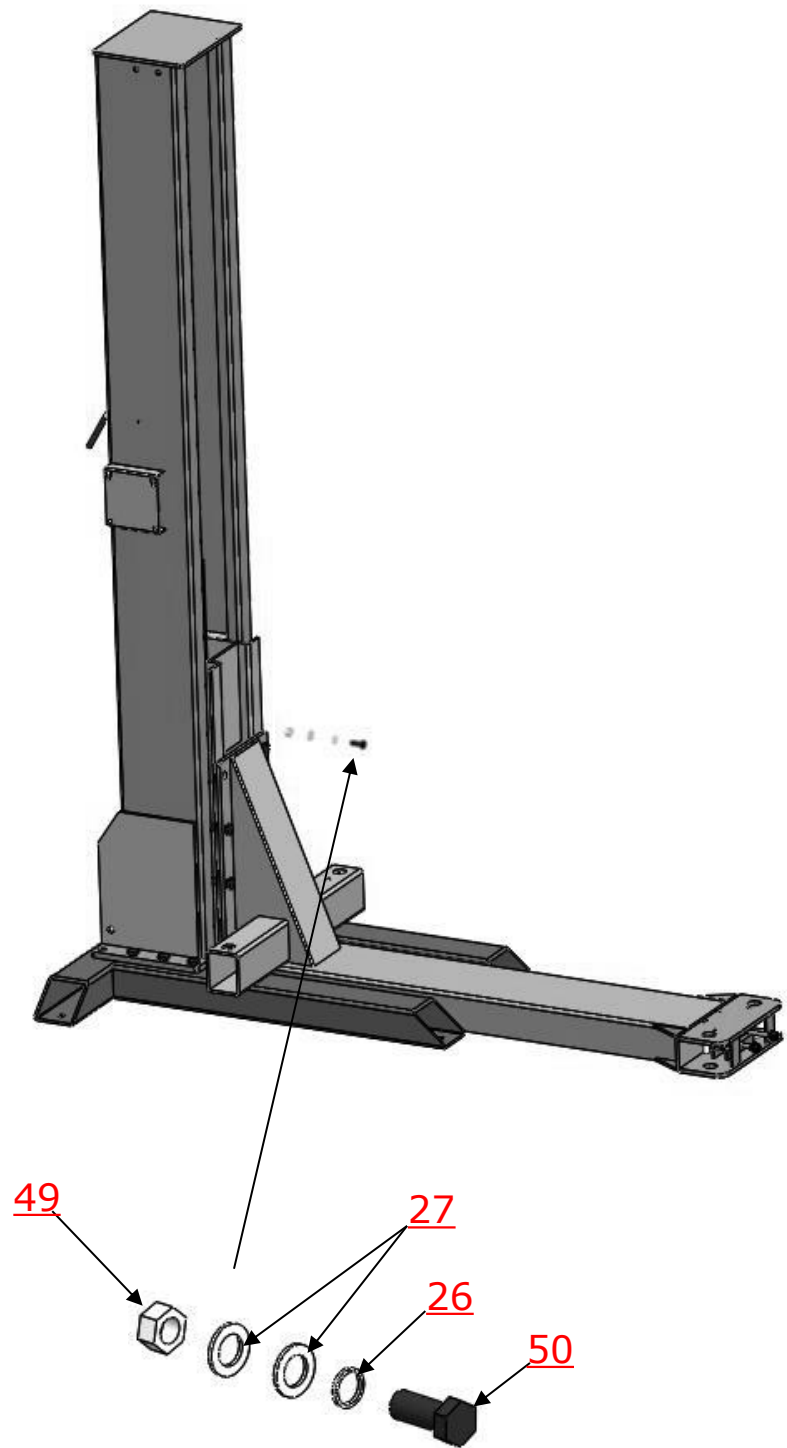


Fig. 13

E. Install safety device, power unit, oil hose and wire holder (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.

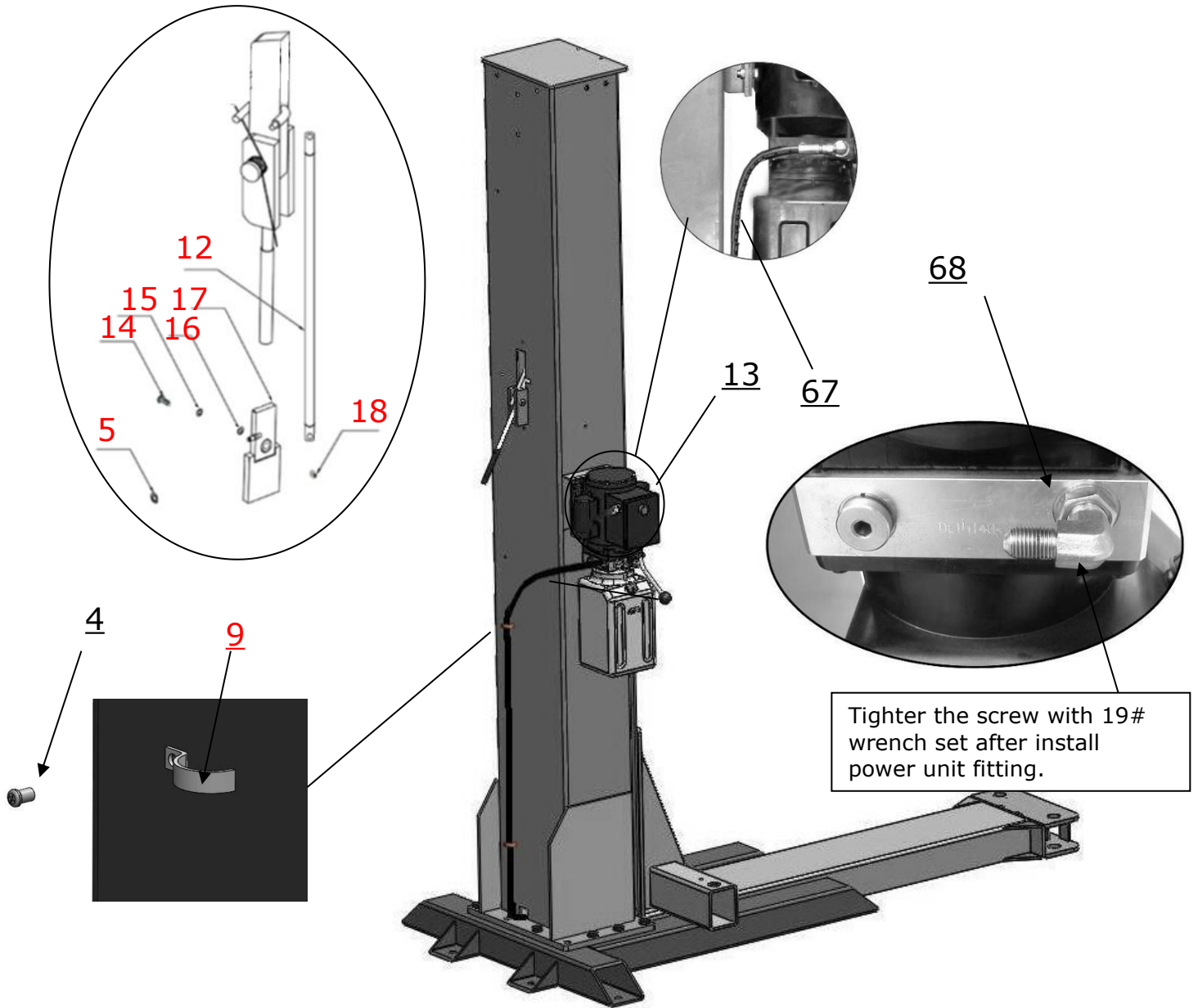


Fig.14

F. Install plastic barrier (See Fig.15)

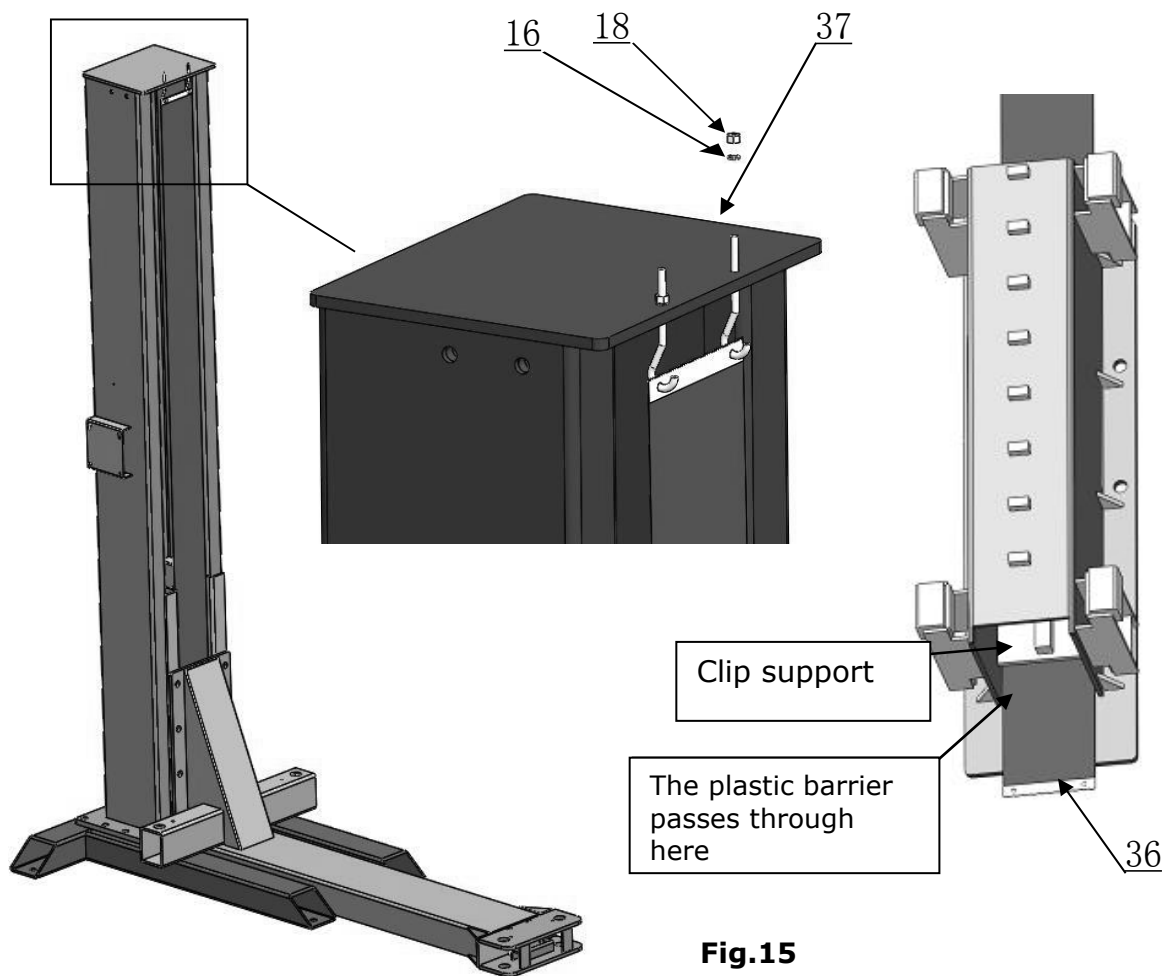


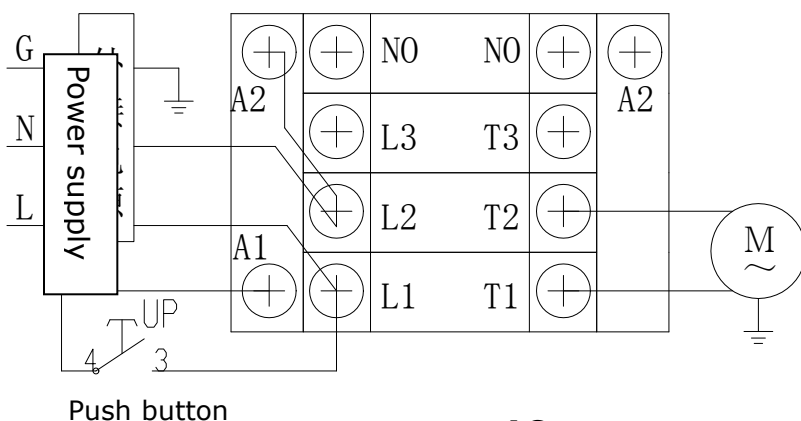
Fig.15

G. Connect the power source according to the data on plate of power unit

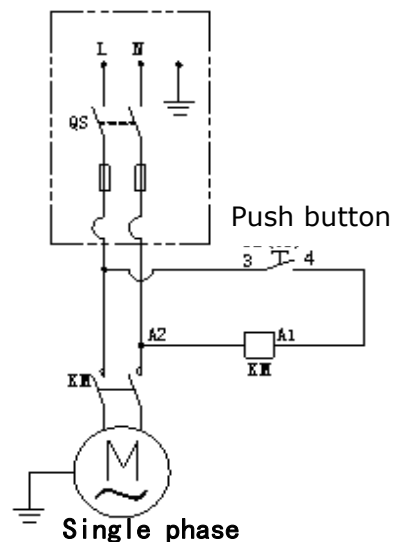
Note: For the safety of operators, the power wiring must contact the floor well

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. Connecting terminal A1 of AC connector to terminal 4# of push button;
Connecting terminal L1 of AC connector to terminal 3# of push button;



**AC contactor
Fig.16**



Single phase

H. Install lifting arms (**see Fig.17**); Lowering the carriages down to the lowest position, then use the 6# wrench to loosen the nut (**See Fig. 18**) Adjust the arm lock as arrow direction (**See Fig. 19**). Adjust moon gear and arm lock to make it to be good engagement, then tighten the nut of arm lock (**See Fig. 20**).

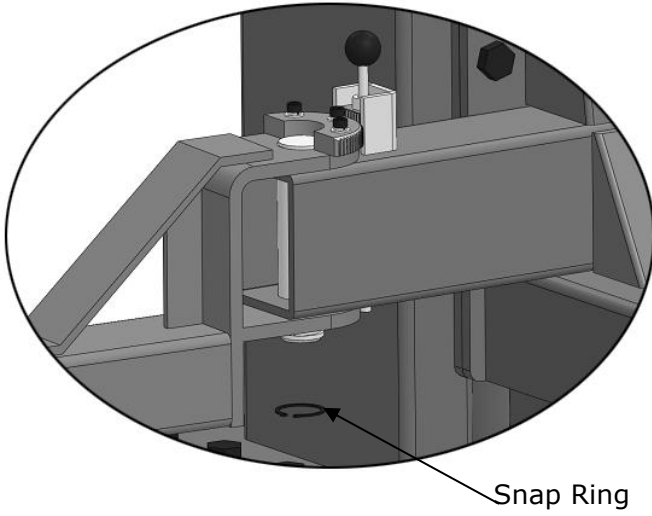
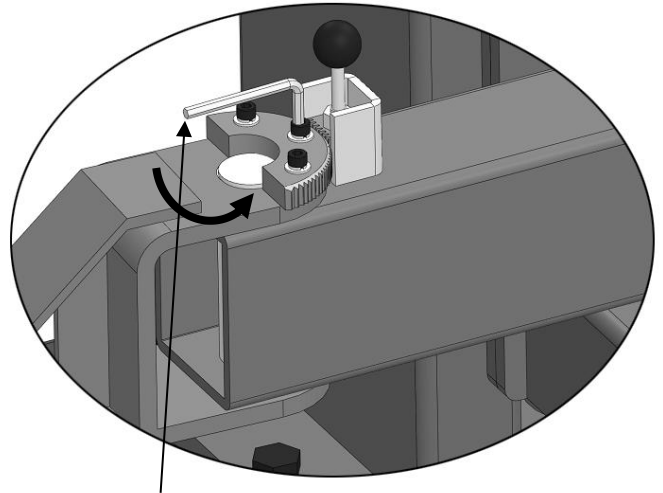
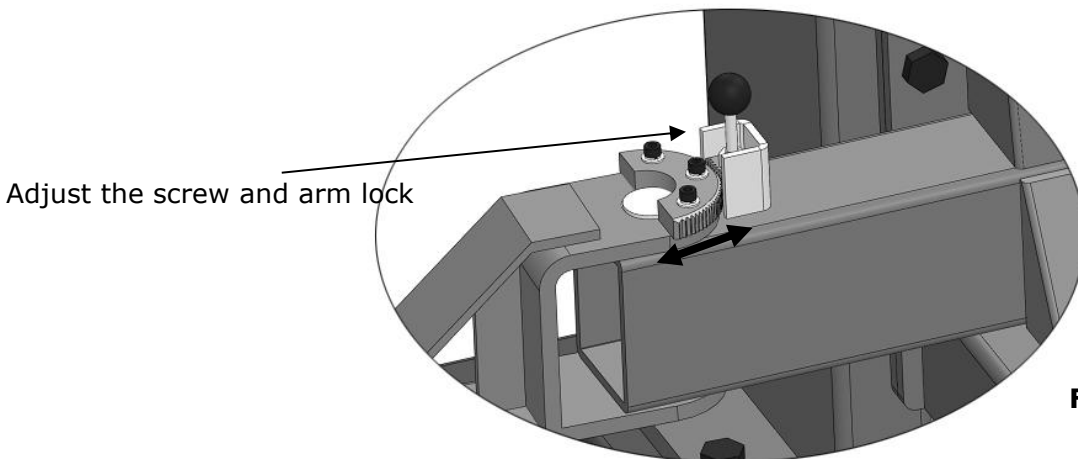


Fig.17



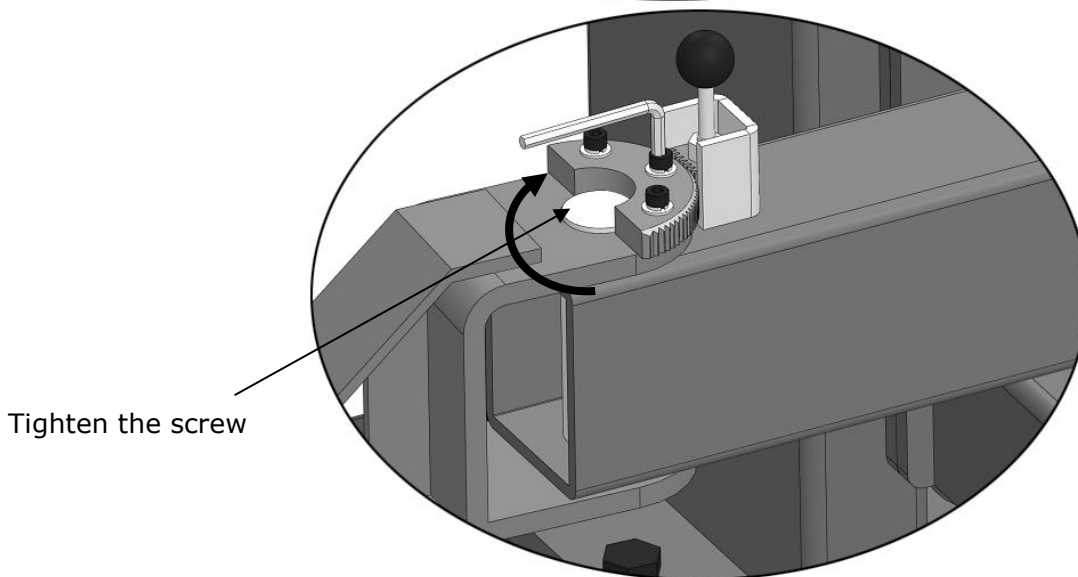
Loosen the screw

Fig.18



Adjust the screw and arm lock

Fig.19



Tighten the screw

Fig.20

I. 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#.

J. Using level to measure and adjust the column to be vertical.

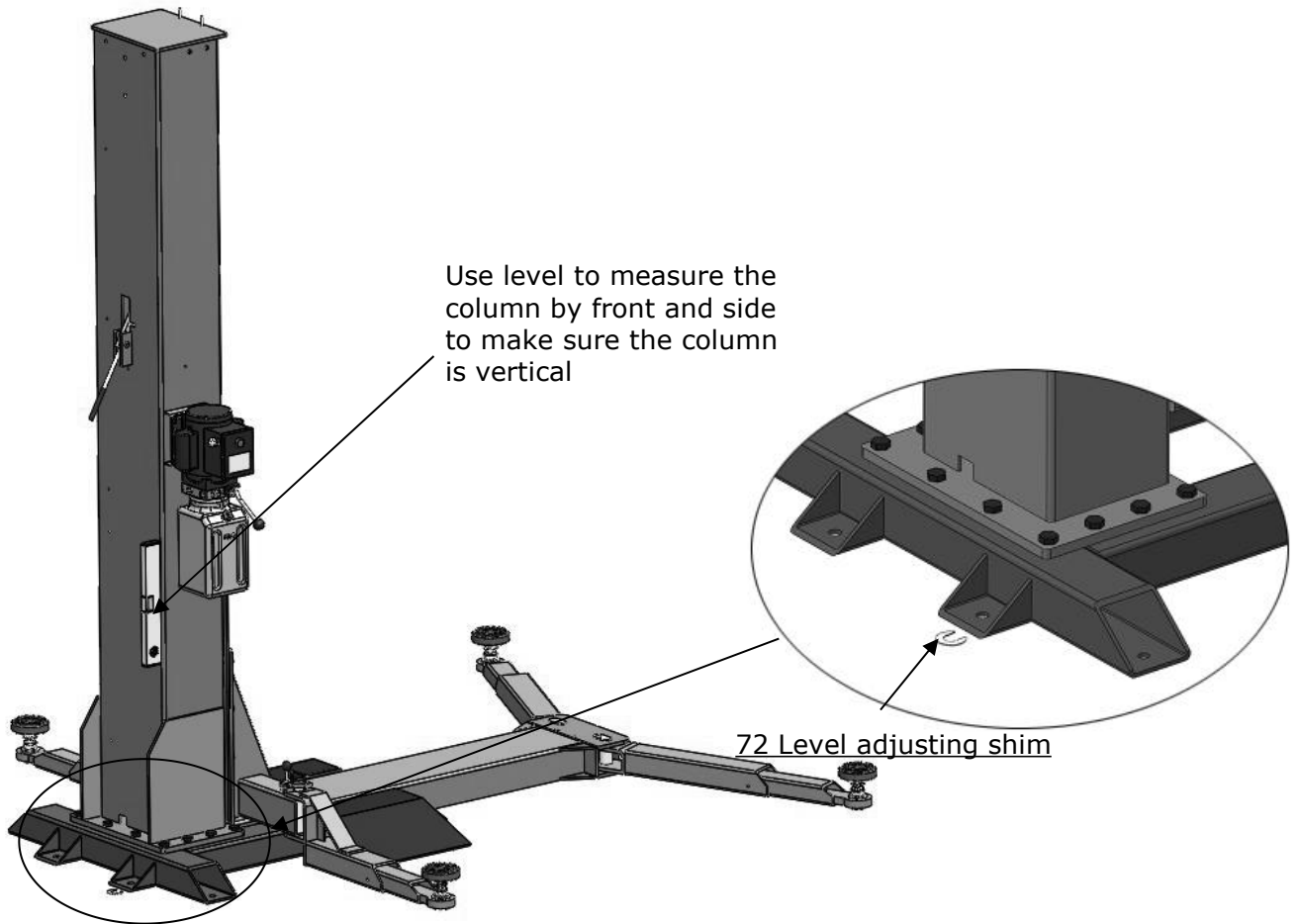


Fig.21

K. Fix the anchor bolts

Fig.22



1. Prepare the anchor bolts (**See Fig. 22**).
2. Using the prescribed rotary hammer drill, and drill all the anchor holes and install the anchor bolts. Make the columns plumpness, and adjusting with the shims if not, then tighten the anchor bolts (**See Fig. 23**).

Note: Torque of Anchors is 150N.m. Minimum embedment of Anchors is 3-1/2"

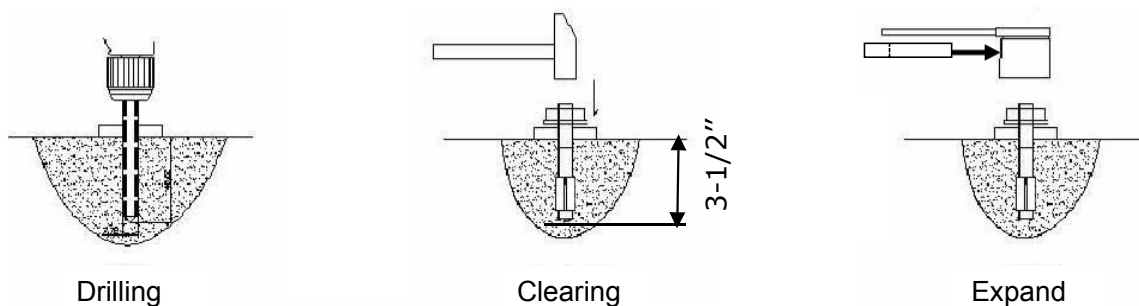


Fig.23

IV. Exploded View

Model: SL-6

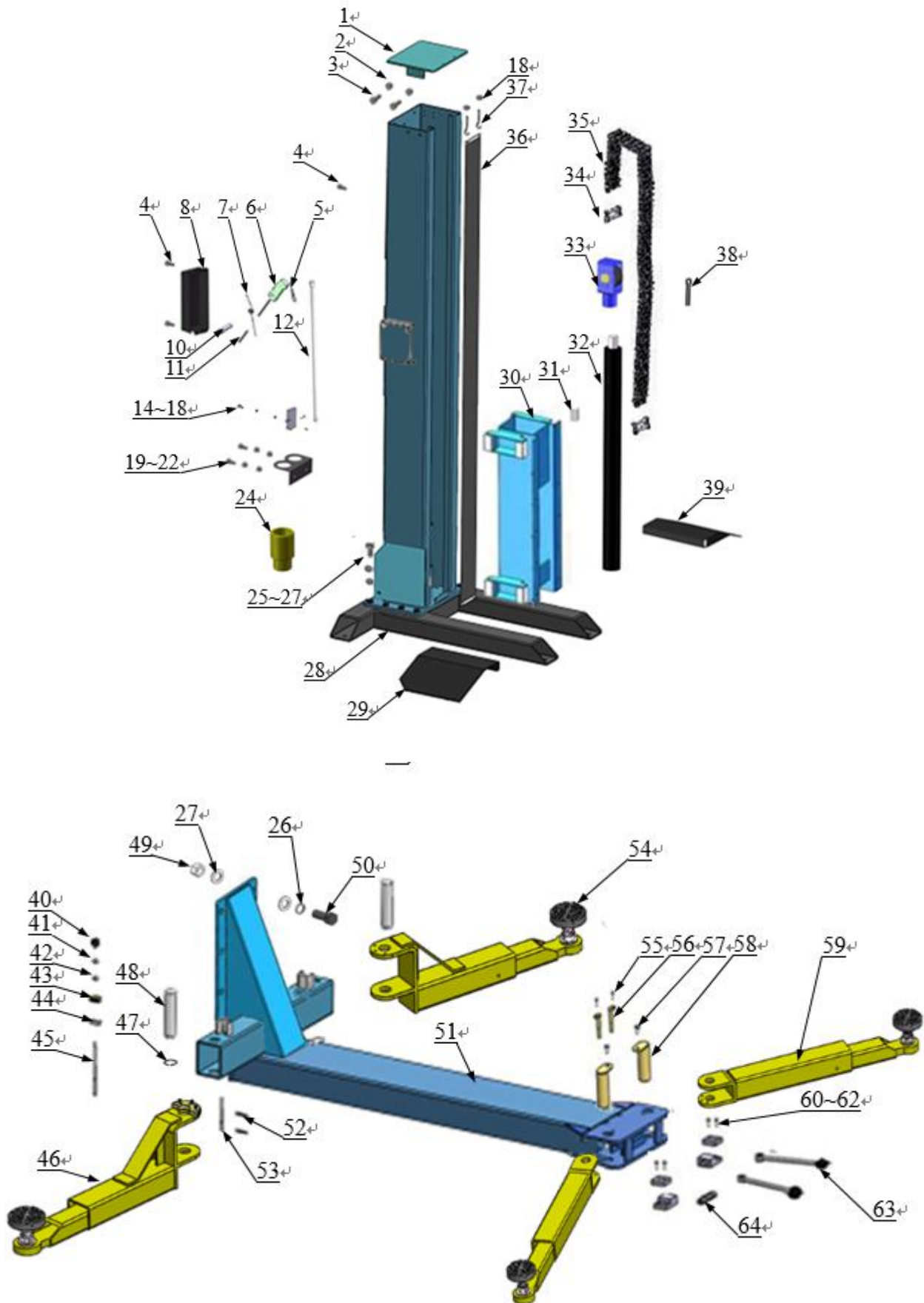


Fig.24

PARTS LIST FOR SL-6

Item	Part#	Description	QTY.	Note
1	11101013	Top Plate assembly	1	
2	10206023	Self-Locking Nut M12	4	
3	10217069	Hex Bolt	4	
4	10209009	Cap Head Bolt	6	
5	10209012	(φ3.2) Spring Pin	1	
6	11203002	Power Side Safety Device	1	
7	10209007	Safety Spring	1	
8	11209008	Safety Cover	1	
9	11217048	wire clip	2	
10	11206002	Safety stop pin	1	
11	10206003A	Rubber handle sleeve	1	
12	11203013	Coupling	1	
13	81513019	Power unit	1	
14	10217013	Hex Bolt	1	
15	10209149	Washer φ6	1	
16	10420045	Washer φ6	9	
17	11203015	Power-side Safety Block assembly	1	
18	10420018	M6 Self Locking Nut	3	
19	10680003	Hex Bolt	2	
20	10209034	Washer φ8	4	
21	10209033	Washer φ8	4	
22	11203035	Stackable Adapter Set	1	
23	11101040	Column assembly	1	
24	11203034	Support extension sleeve	4	
25	10101002	M20*50 Hex Bolt	10	
26	10201114	Washer φ20	18	
27	10209128	Washer φ20	18	
28	11101023	Base assembly	1	
29	11101024	ramp assembly	1	
30	11102608	carriage assembly	1	
31	10217188	Slider Block (46*46*76)	8	
32	10207010	cylinder	1	
33	10207008	Chain pulley bearing assembly	1	
34	10201010A	Chain header	2	
35	10101007	Chain	1	
36	10101004	Curtain L=2570mm	1	
37	10203117	Adjusting screw with hook M6×95	2	
38	10201005	Split pin(φ4*50)	1	
39	11101025	Drive-in Ramps assembly	1	
40	10209020	Plastic ball	4	
41	10209021	Hex nut M10	2	
42	10209039	Washer φ10	2	
43	10209023A	Arm lock	2	
44	11201041	Limit Shim	2	
45	11101010	Arm Lock Bar	2	

Item	Part#	Description	QTY.	Note
46	10101034	Outside arm assembly	2	
47	10520023	Spring for shaft ϕ 38	2	
48	11209030A	Lifting arm latch assembly	2	
49	10420175A	M20 Hex nut	8	
50	10101001	M20*45 Hex Bolt	8	
51	11101016	Lifting platform assembly	1	
52	10209025	ϕ 4*25 Elastic pin	4	
53	10209026	Compression spring ϕ 1.4	2	
54	10203054	Rubber pad assembly	4	
55	10101006	Screw M6*12	2	
56	11101012	Coupling pin assembly	2	
57	10420043	M8*20 Socket screw	8	
58	11101005	Lifting arm latch assembly	2	
59	10101033	Outer Arm Assembly	2	
60	10420043	Socket screw M8*20	4	
61	10101008	Arm lock	2	
62	11101009	Arm lock fixing plate	2	
63	11101011	Control stick assembly	2	
64	10720003	Compression spring (ϕ 2*75)	1	
65	10102500	Parts box	1	
66	10201020	Cylinder 900 3/8NPT(M)*1/4JIC(M) fitting	1	
67	10101027	Oil hose assembly (both straight) 1/4" *1660	1	
68	10209060	Power unit 90-degree fitting	1	
69	10209003	Hex bolt M8x25	4	
70	10209004	Rubber ring(ϕ 8* ϕ 20*3)	4	
71	10209005	Self-locking nut M8	4	
72	10620065	Leveling pad (2mm)	10	
	10201090	Leveling pad (1mm)	10	
73	10201140	Anchor bolt 3/4*6-1/2	6	

4.1. Rubber Pad Assembly (10203054) exploded view :

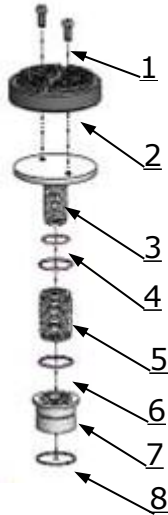


Fig.25

Item	Part#	Description	QTY
1	10420043	M8*20 Hex Bolt	8
2	10203043	Rubber pad	4
3	11203026	Support pad assy.	4
4	10201060	O-ring (70°)	8
5	11203025	Adjusting screw	4
6	10203041	Retaining ring	4
7	11203024	Adjustment Screw	4
8	10203042	Retaining ring	8

4.2 Outside Arm Assembly (10101033) exploded view :

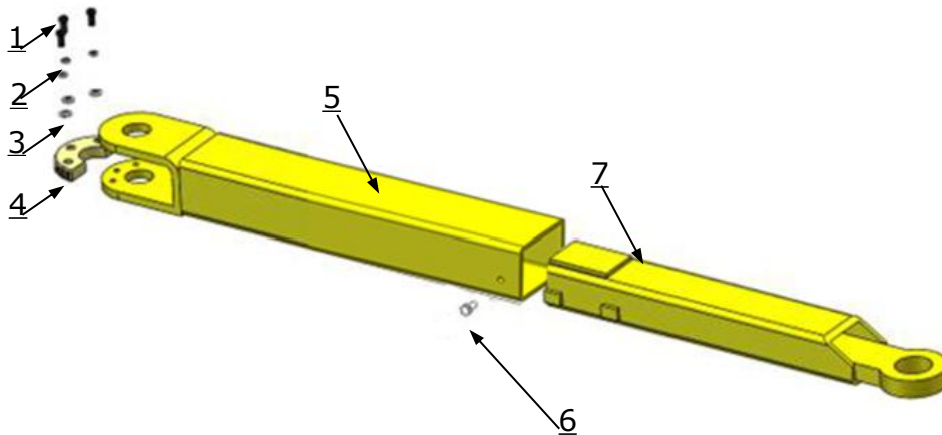
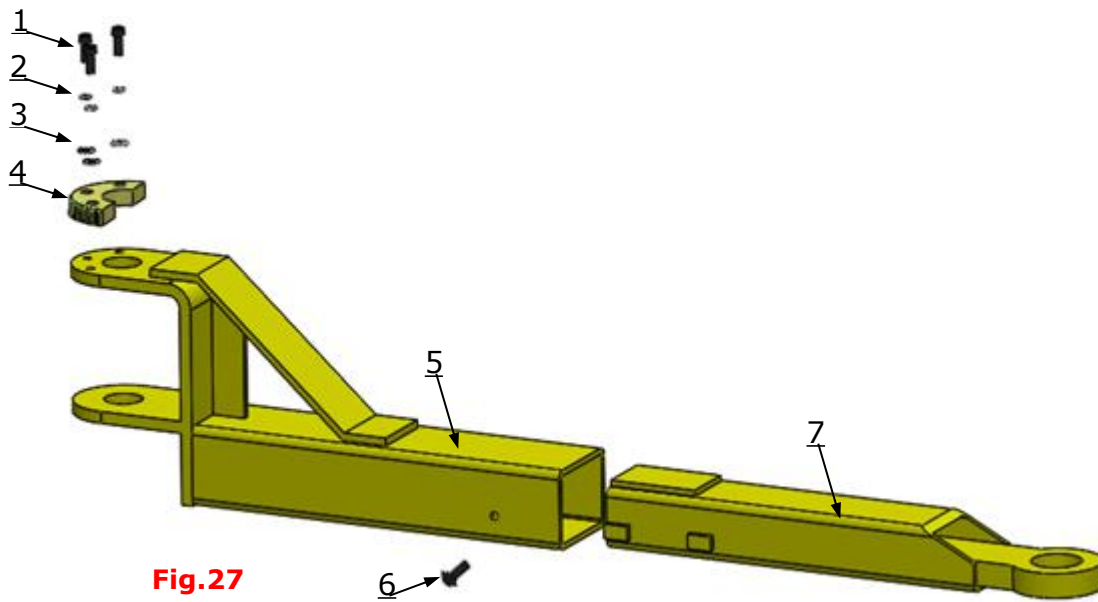


Fig.26

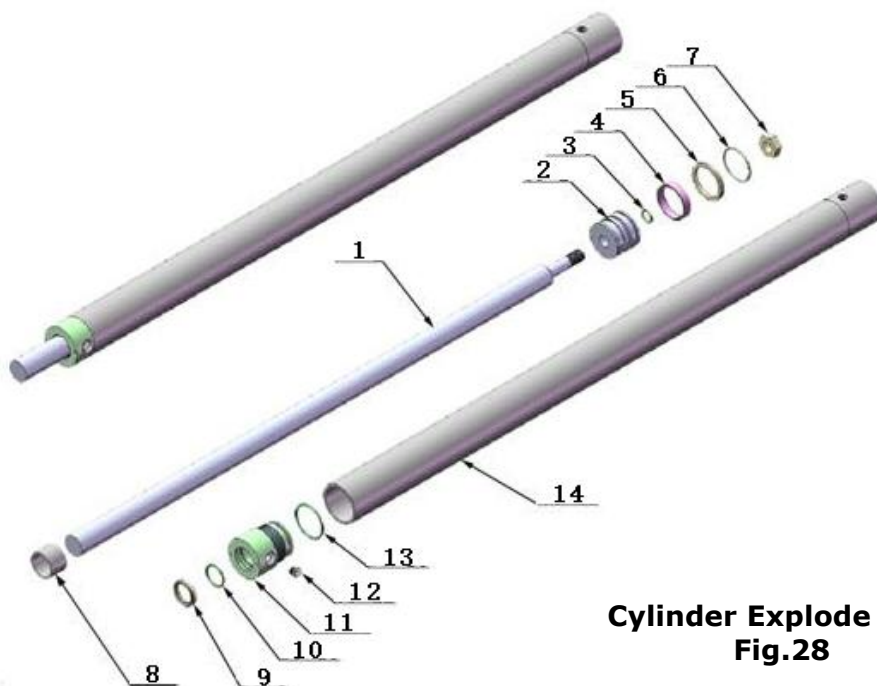
Item	Part#	Description	QTY
1	10209032	Hex bolt M8*25	6
2	10209034	washerφ8	6
3	10209033	washerφ8	6
4	10209035	Moon gear	2
5	11101019	Outside Outer arm assy.	2
6	10201149	M8*12 Screw	2
7	11203101	Inner arm assy.	2

4.3 Inside Arm Assembly (10101034) exploded view :



Item	Part#	Description	QTY
1	10209032	M8*25 Hex bolt M8*25	6
2	10209034	washerφ8	6
3	10209033	washerφ8	6
4	10209035	Moon gear	2
5	11203101	Inside Outer arm assy.	2
6	10201149	M8*12 Screw	2
7	11102006	Inside Inner arm assy.	2

4.4 Cylinder Assy. (10207010) exploded view :



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

4.5 Chain Pulley Support Assy. (11207681) exploded view :

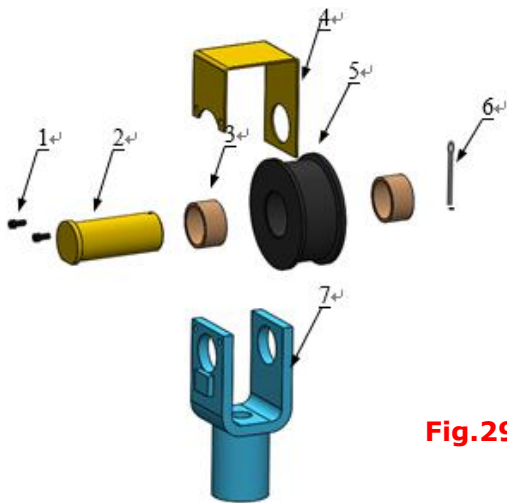
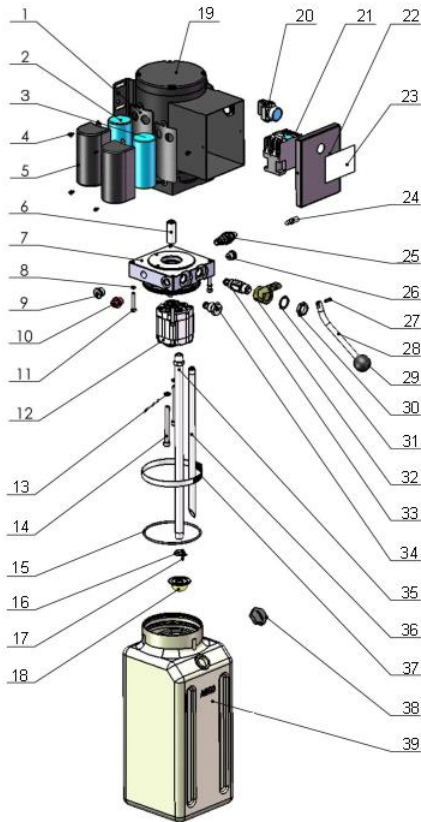


Fig.29

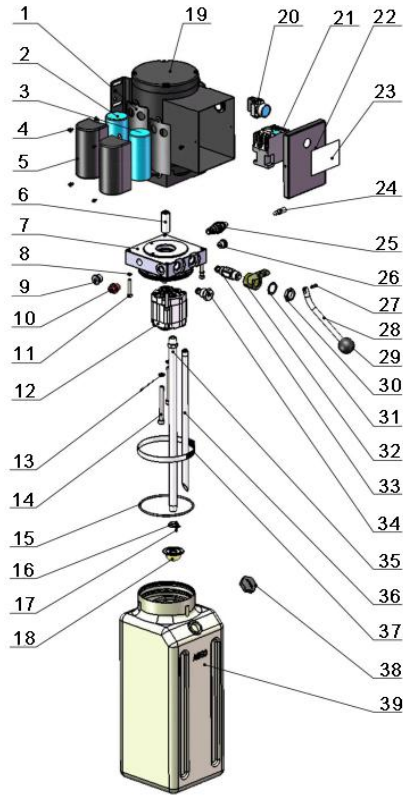
Item	Part#	Description	QTY
1	81400335	Hex bolt M5*10	2
2	11207006	Chain Pulley Pin	1
3	10420132A	Chain Pulley bush $\phi 41.2 * \phi 35.2 * 20$	2
4	11207693	Chain retainer	1
5	11207007	Chain Pulley	1
6	10201005	Split pin($\phi 4 * 50$)	1
7	11207008	Chain Pulley Bracket	1

4.6 Exploded view of manual power unit



110V/60Hz/1 phase

**Fig.30
071103**



220V/60Hz/1 phase

**Fig.31
071104**

Manual Power Unit 110V/60Hz/1 Phase

Item	Part#	Description	QTY
1	81400180	Rubber pad	2
2	81400130	Start capacitor	1
3	81400088	Running	1
4	10420148	Screw, Washer	4
5	81400066	Cover of	2
6	81400363	Motor	1
7	81400362	Manifold block	1
8	10209149	Washφ6	4
9	81400276	End plug	1
10	81400259	Red plastic plug	1
11	85090142	Hex Bolt	4
12	81400312	Gear pump	1
13	10209034	Washφ8	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

Item	Part#	Description	QTY
21	41030055	AC connector	1
22	81400287	Cover of Motor	1
23	71111182	AMGO Sticker	1
24	81400560	Throttle valve	1
25	81400266	Relief valve	1
26	81400284	Plug	1
27	81400452	Pin	1
28	81400451	Handle for	1
29	10209020	Plastic ball	1
30	81400421	Nut for release	1
31	81400422	Shim for release	1
32	81400449	Valve seat	1
33	81400567	Release valve	1
34	81400566	Check valve	1
35	81400375	Oil suction pipe	1
36	81400376	Oil return pipe	1
37	81400364	Clamps	1
38	81400263	Oil tank cap	1
39	81400320	Oil tank	1

220V 60Hz manual power unit breakdown list

Item	Part#	Description	QTY	Item	Part#	Description	QTY
1	81400180	Rubber pad	2	21	41030055	AC connector	1
2	81400130	Start capacitor	1	22	81400287	Cover of Motor	1
3	81400088	Running	1	23	71111104	AMGO Sticker	1
4	10420148	Screw, Washer	4	24	81400560	Throttle valve	1
5	81400066	Cover of	2	25	81400266	Relief valve	1
6	81400363	Motor	1	26	81400284	Plug	1
7	090101	Manifold block	1	27	10720118	Pin	1
8	10209149	Wash	4	28	81400451	Handle for	1
9	81400276	End plug	1	29	10209020	Plastic ball	1
10	81400259	Red plastic plug	1	30	81400421	Nut for release	1
11	85090142	Hex Bolt	4	31	81400422	Shim for release	1
12	81400280	Gear pump	1	32	81400449	Valve seat	1
13	10209034	Wash ϕ 8	2	33	81400567	Release valve	1
14	81400295	Socket bolt	2	34	81400566	Check valve	1
15	81400365	O ring	1	35	81400375	Oil suction pipe	1
16	10209152	Tie	1	36	81400376	Oil return pipe	1
17	85090167	Magnet	1	37	81400364	Clamps	1
18	81400290	Filter	1	38	81400263	Oil tank cap	1
19	81400413	Motor	1	39	81400320	Oil tank	1
20	10420070	Push button	1				

Illustration of hydraulic valve

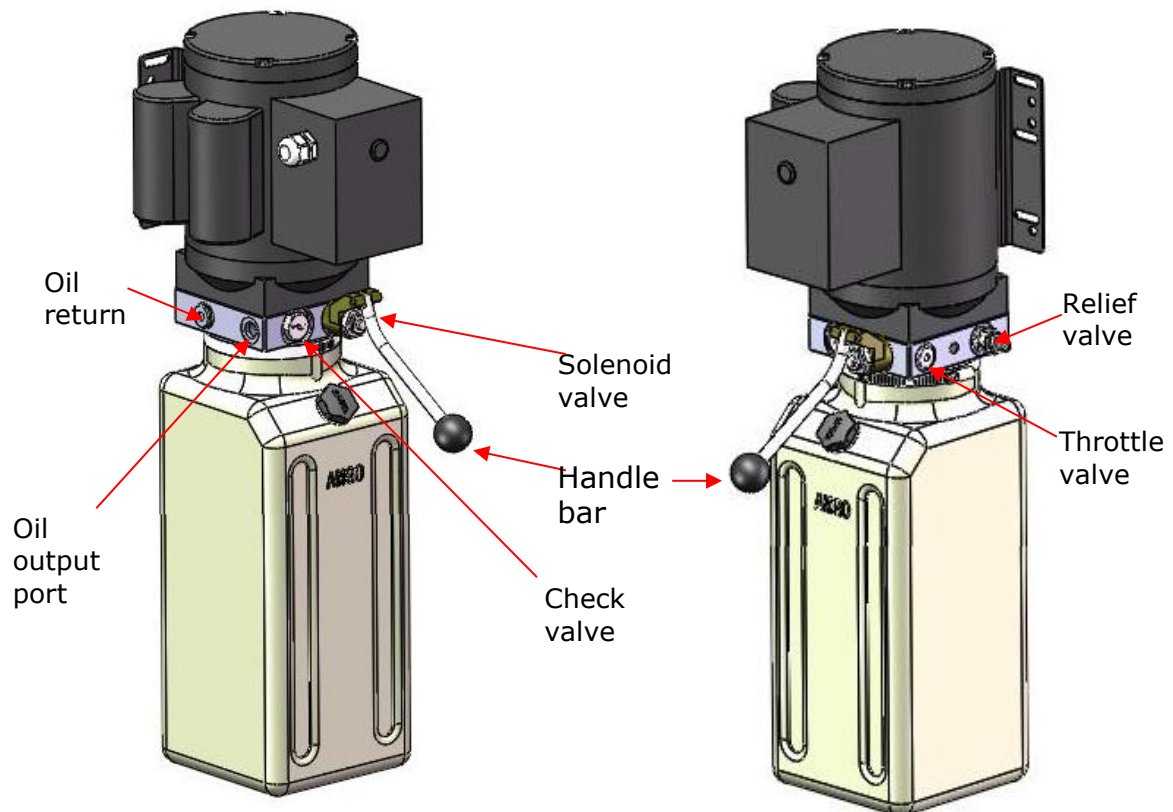


Fig.32

V. TEST RUN

1. Adjust the lower speed (See Fig.33)

Users can adjust the descending speed according to their needs. Adjust the throttle valve core clockwise. At this time, the descending speed becomes slower, and vice versa.

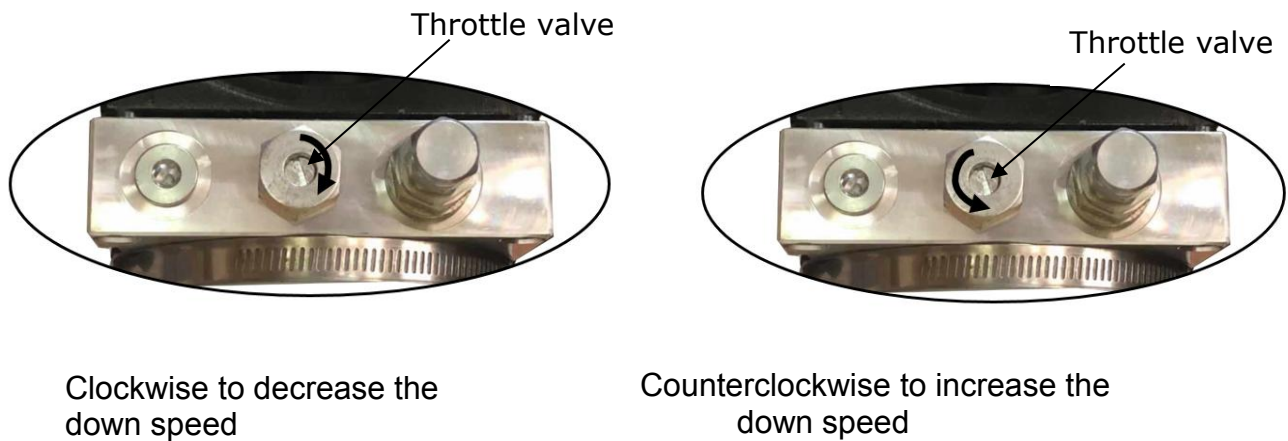


Fig.33

2. Test with loading

After finishing the above adjustment, test running the lift with loading. Run the lift in low position for several times firstly, make sure the lift can rise and lower without abnormal phenomena. 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

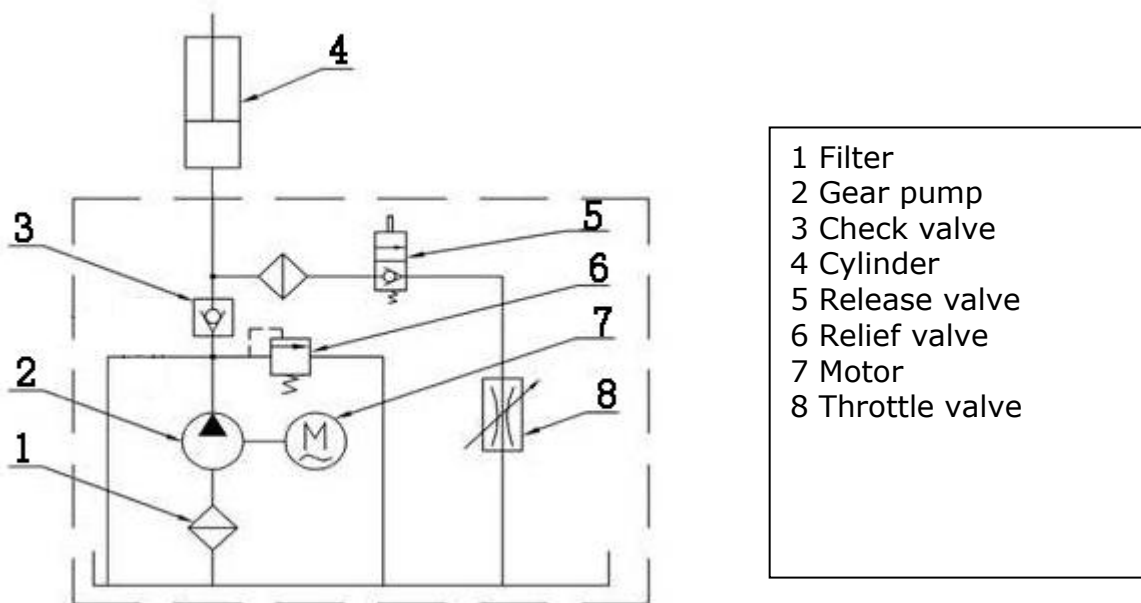


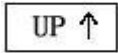
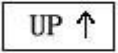
Fig. 34

VI. OPERATION INSTRUCTIONS

To lift vehicle

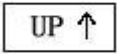
2. Keep clean of site near the lift;
3. Position lift arms to the lowest position;
4. To shortest lift arms;
5. Open lift arms;
6. Position vehicle beside of the lifting arm, cab should at the other side of the column;
7. Move arms to the vehicle's lifting point;

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

8. Turn on the power and push the button , raise the lift until the rubber pad full contact the car and ensure it's safe.
9. Continue raise the vehicle to the desired height and make sure the vehicle is steady when the lift is rising, then release the  button.
10. Press the pressure relief handle of the hydraulic station and lower the lift to the safety lock position. Only after confirming that the safety device is in a normal working state before car maintaining.

Note: In order to extend the service life of the cylinder and seals, raise the carriage to highest position at least once a day.

To lower vehicle

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

VI. MAINTENANCE SCHEDULE

Monthly:

1. Re-torque the anchor bolts to 150 N.M;
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 plumpness.
4. Check Rubber Pads and replace as necessary.
5. Check Safety device and make sure proper condition.

VII. 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.



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