

GRAND PRIX IMPORT

Installation, Operation & Maintenance Manual

TWO POST LIFT

*The specifications stated on this brochure are not binding.
We reserve the right to change the specification without notice*



SL-12L 12,000 LBS.

IMPORTANT:
**Read this manual completely before
installing or operating lift**

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I. PRODUCT FEATURES AND SPECIFICATIONS

FLOORPLATE CHAIN-DRIVE MODEL FEATURES

Model SL-12L (See Fig. 1)

- Dual hydraulic direct-driven cylinders, designed and made on ANSI standards, utilizing NOK oil seal in cylinder
- Self-lubricating UHMW Polyethylene sliders and bronze bush
- Single-point safety release, and dual safety design
- Symmetric arms design with 3-stages front and rear arms
- Convenient width adjustment: Distance between columns 3137mm (123 1/2") and 3000mm (118 1/8")
- Stackable rubber pad with 1.5" , 2.5" and 5" extension adaptors

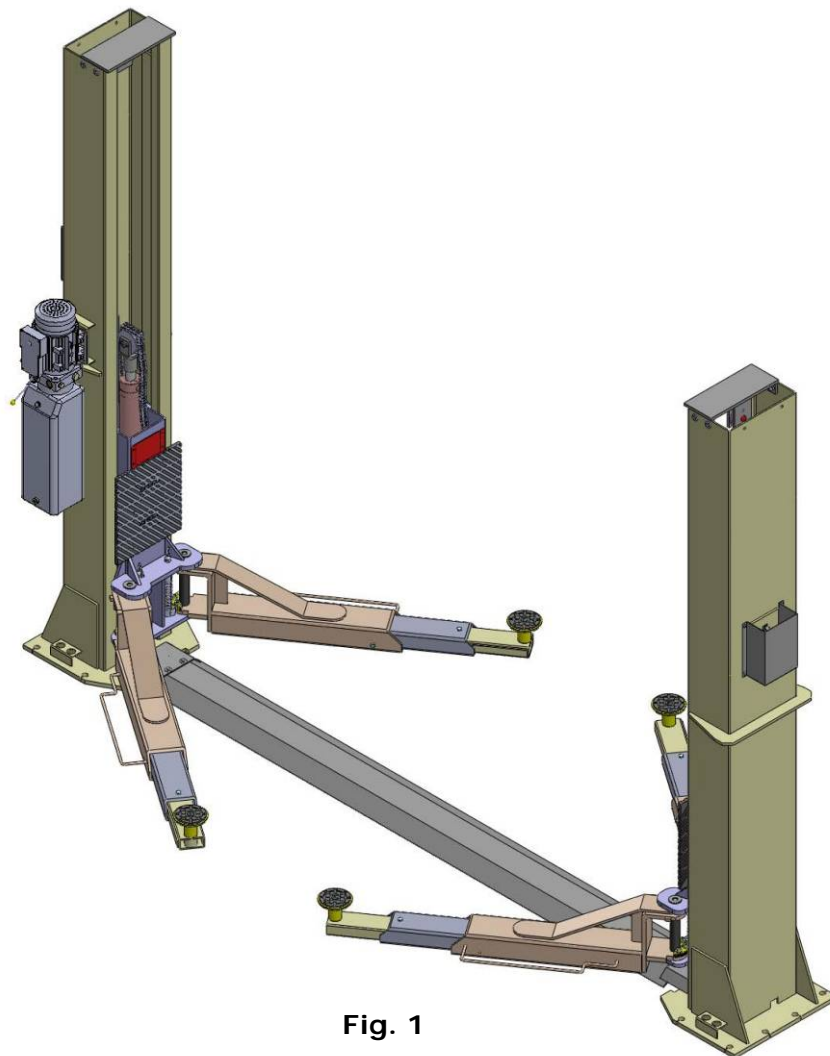


Fig. 1

MODEL SL-12L SPECIFICATION

Model	Style	Lifting Capacity	Lifting Time	Lifting Height	Overall Height	Overall Width	Width Between Columns	Minimum Pad Height	Gross Weight	Motor
SL-12L	Floorplate Chain-driven	5.5T 12,000lbs	55S	1860mm - 2089mm 73 1/4" – 82 1/4"	3110mm 122 1/2"	3692/3829mm 145 3/8"-150 3/4"	3000/3137mm 118 1/8"-123 1/2"	120mm 4 3/4"	980Kg 2,156lbs	4.0 HP

Arm Swings & Drive Thru View
For Model SL-12L

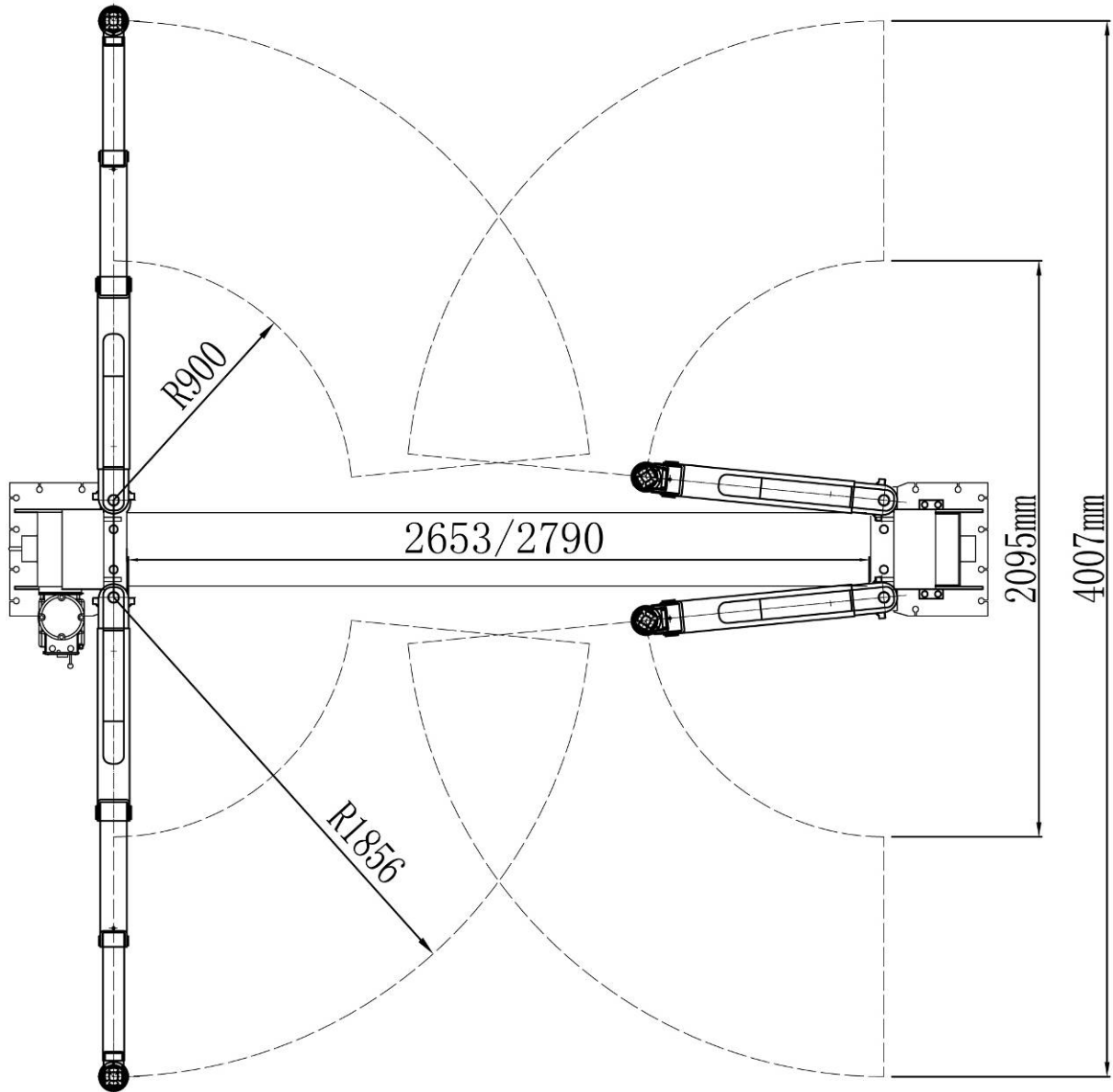


Fig. 2

II. INSTALLATION REQUIREMENT

A. TOOLS REQUIRED

- ✓ Rotary Hammer Drill ($\Phi 19$)



- ✓ Hammer



- ✓ Level Bar



- ✓ English Spanner (12")



- ✓ Ratchet Spanner With Socket (28#)



- ✓ Wrench set

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



- ✓ Carpenter's Chalk



- ✓ Screw Sets



- ✓ Tape Measure (7.5m)



- ✓ Pliers



- ✓ Socket Head Wrench (6#)



- ✓ 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 200mm minimum and without reinforcing steel bars, and must be dried totally before the installation.
2. Concrete must be in good condition and must be of test strength 3,500psi (250kg/cm²) minimum.
3. Floors must be level and no cracks.

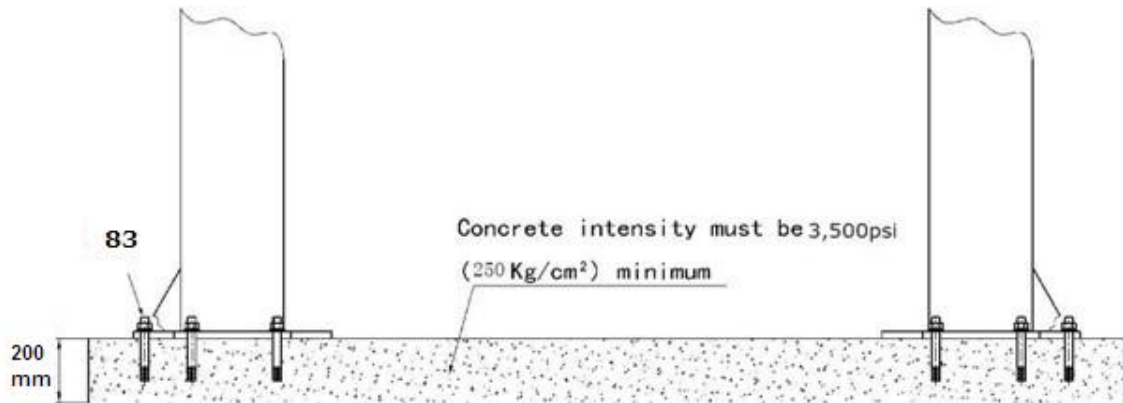


Fig. 4

C. POWER SUPPLY

The electrical source must be 3Kw 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. Use a carpenter's chalk line to establish installation layout of baseplate (See Fig. 5).

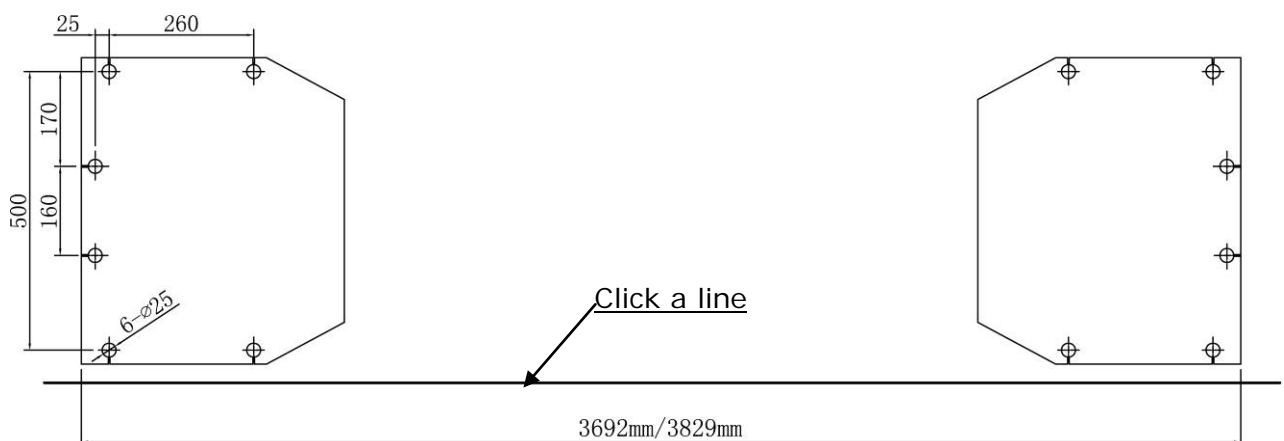


Fig. 5

C. Check the parts before assembly.

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

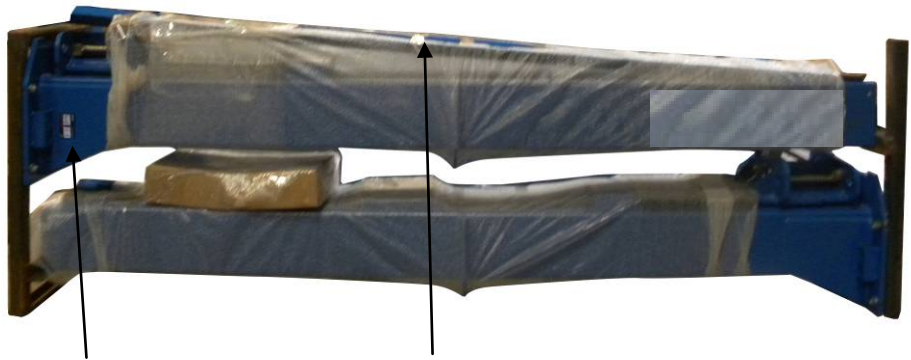


Fig. 6

2. Move the lift aside with fork lift or hoist, and open the outer packing carefully (See Fig. 7).



Shipment Parts list



Serial No.

Floor cover

Fig. 7

3. Take off the parts from upper and inside the column, then take out the parts box, and check the parts according to the shipment parts list (See Fig. 8).

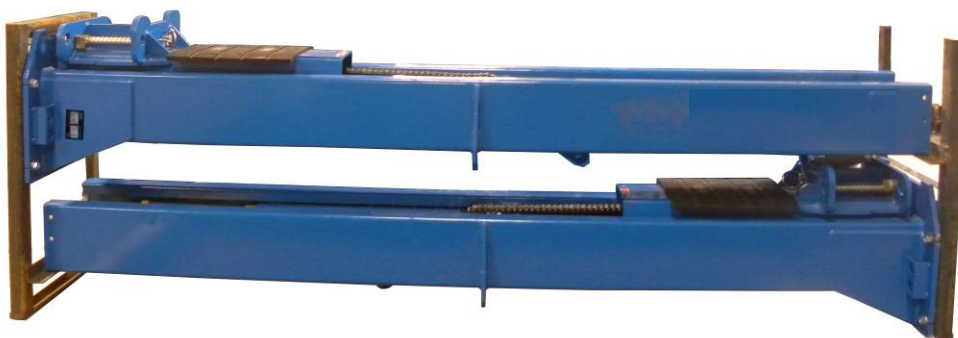


Fig. 8

4. Loose the bolts of the upper package stand, take off the upper column and remove the package stand.

5. Move aside the parts and check the parts according to the shipment parts list (See Fig. 9).



Fig. 9

6. Open the carton of parts and check the parts according to parts box list (See Fig. 10).



Fig. 10

7. Check the parts of the parts bag according to parts bag list (See Fig. 11).

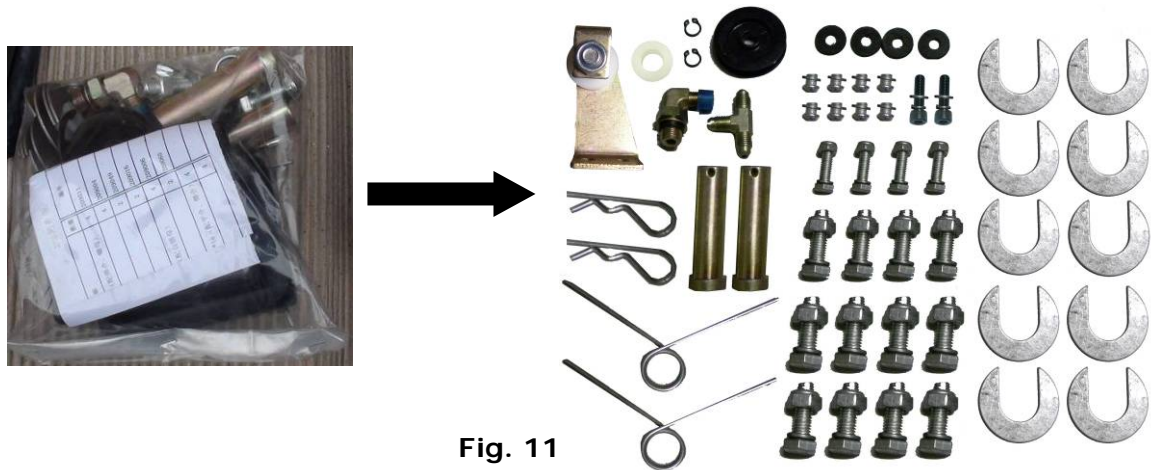


Fig. 11

D. Position powerside columns

Lay down two columns on the installation site parallelly, position the powerside column according to the actual installation site. Usually, it is suggested to install powerside column on the front-right side from which vehicles are driven to the lift, then install the top plate (See Fig.12).

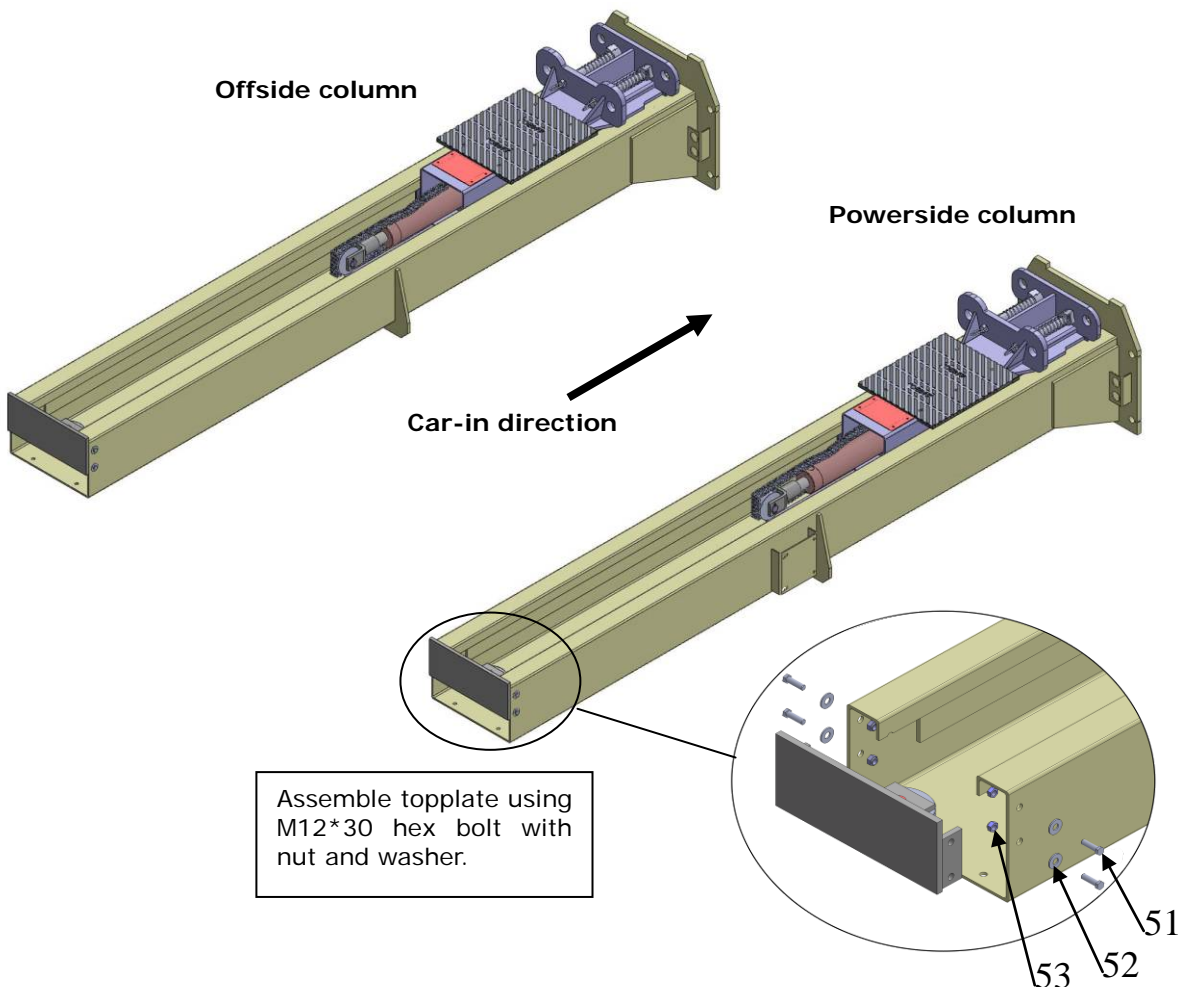
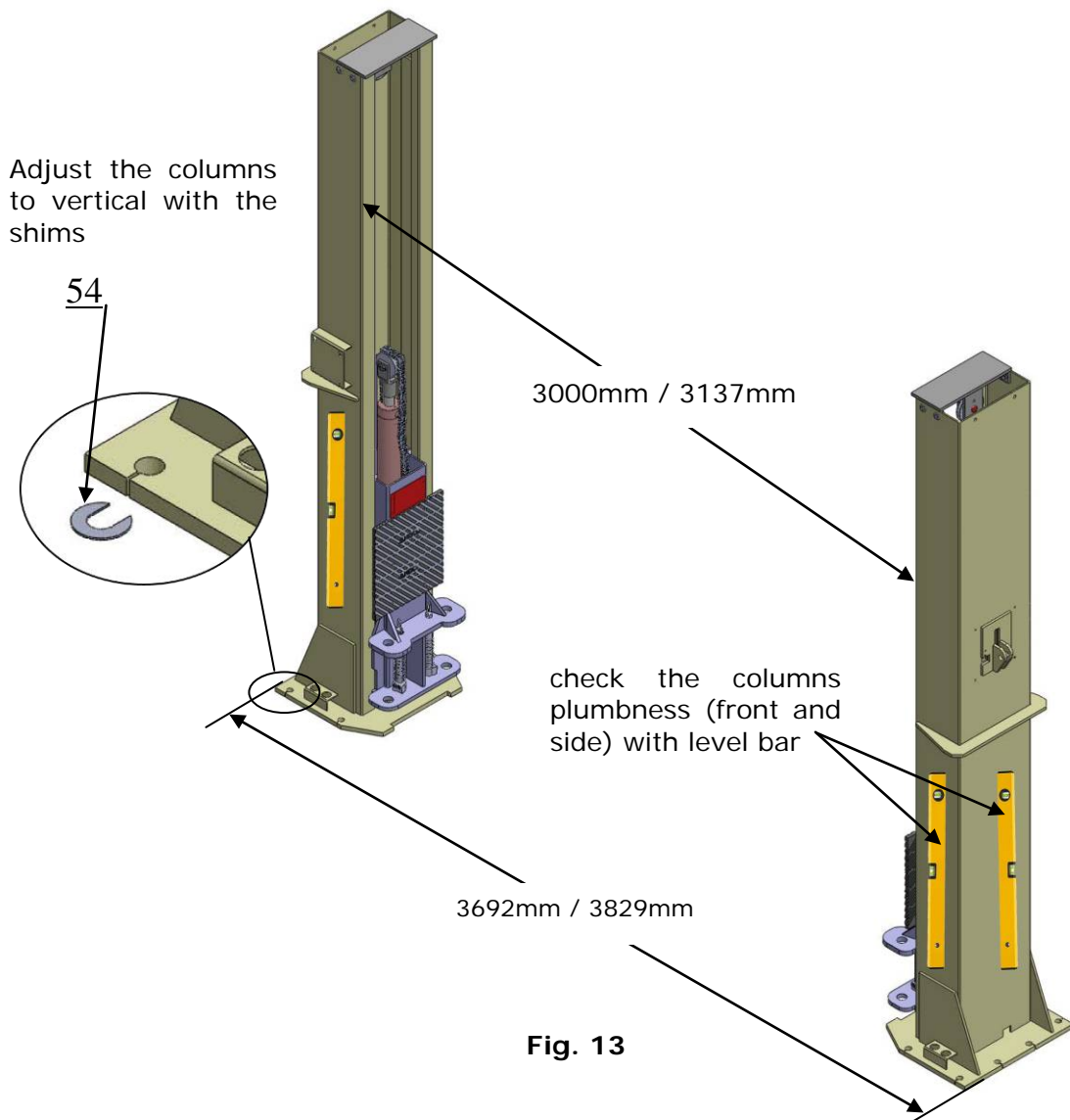


Fig. 12

E. Position columns, install anchor bolts, check the columns plumbness with level bar, and adjusting with the shims if the columns are not vertical, Don't tighten the anchor bolts at this time (See Fig. 13).

Note: Width adjustment design, pls set the width according to your need.



F. Fix anchor bolts

1. Prepare anchor bolts (See Fig. 14).

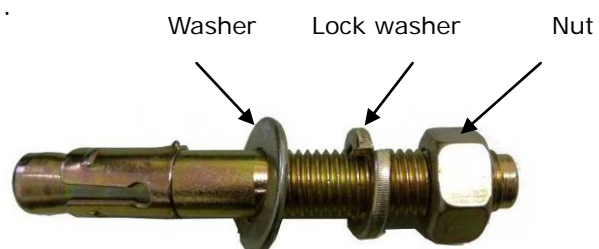


Fig. 14

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. 15).

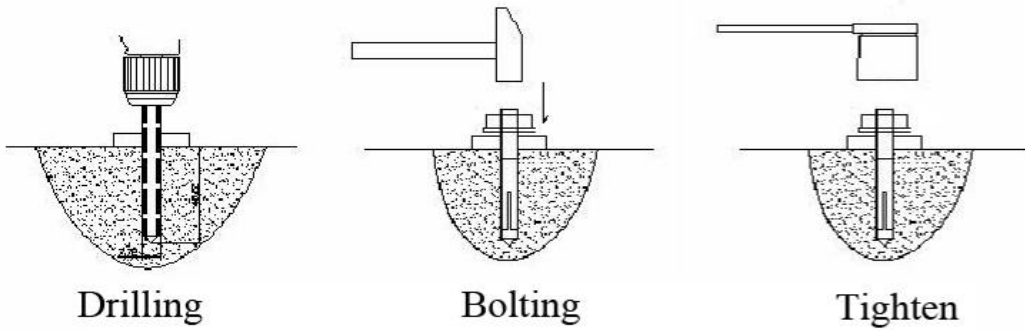
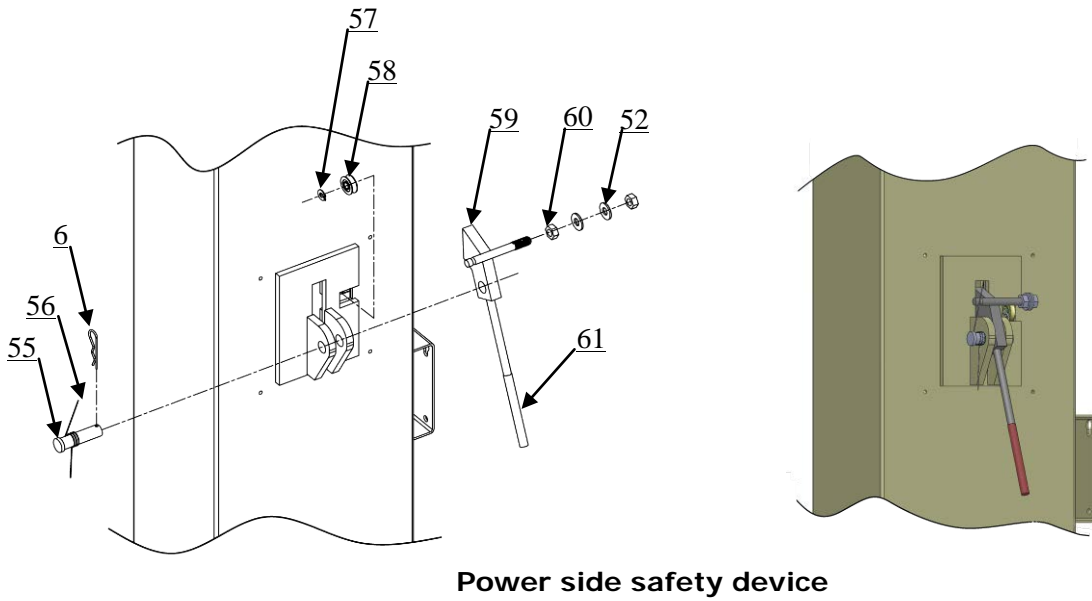


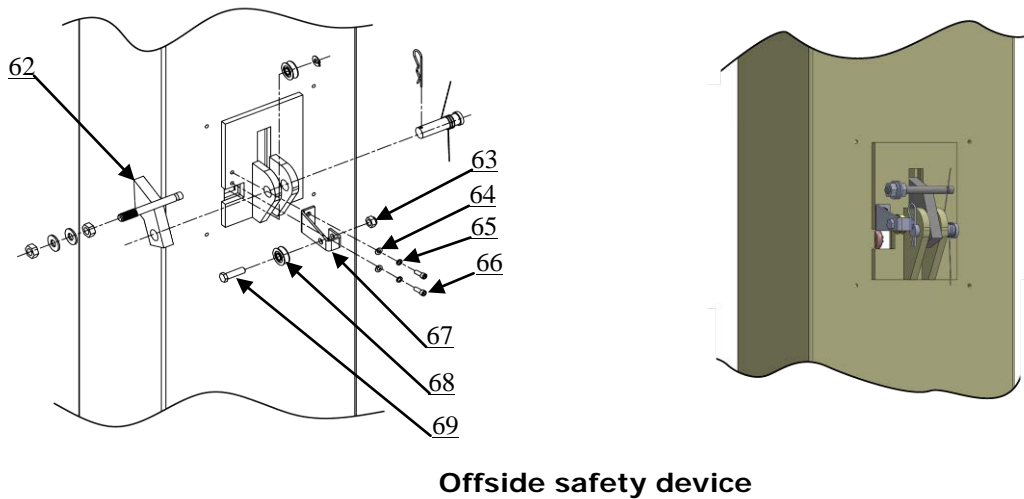
Fig. 15

G. Install safety device (See Fig. 16&17).



Power side safety device

Fig. 16



Offside safety device

Fig. 17

H. Lift the carriages up by hand and make them be locked at the same level
(See Fig. 18).

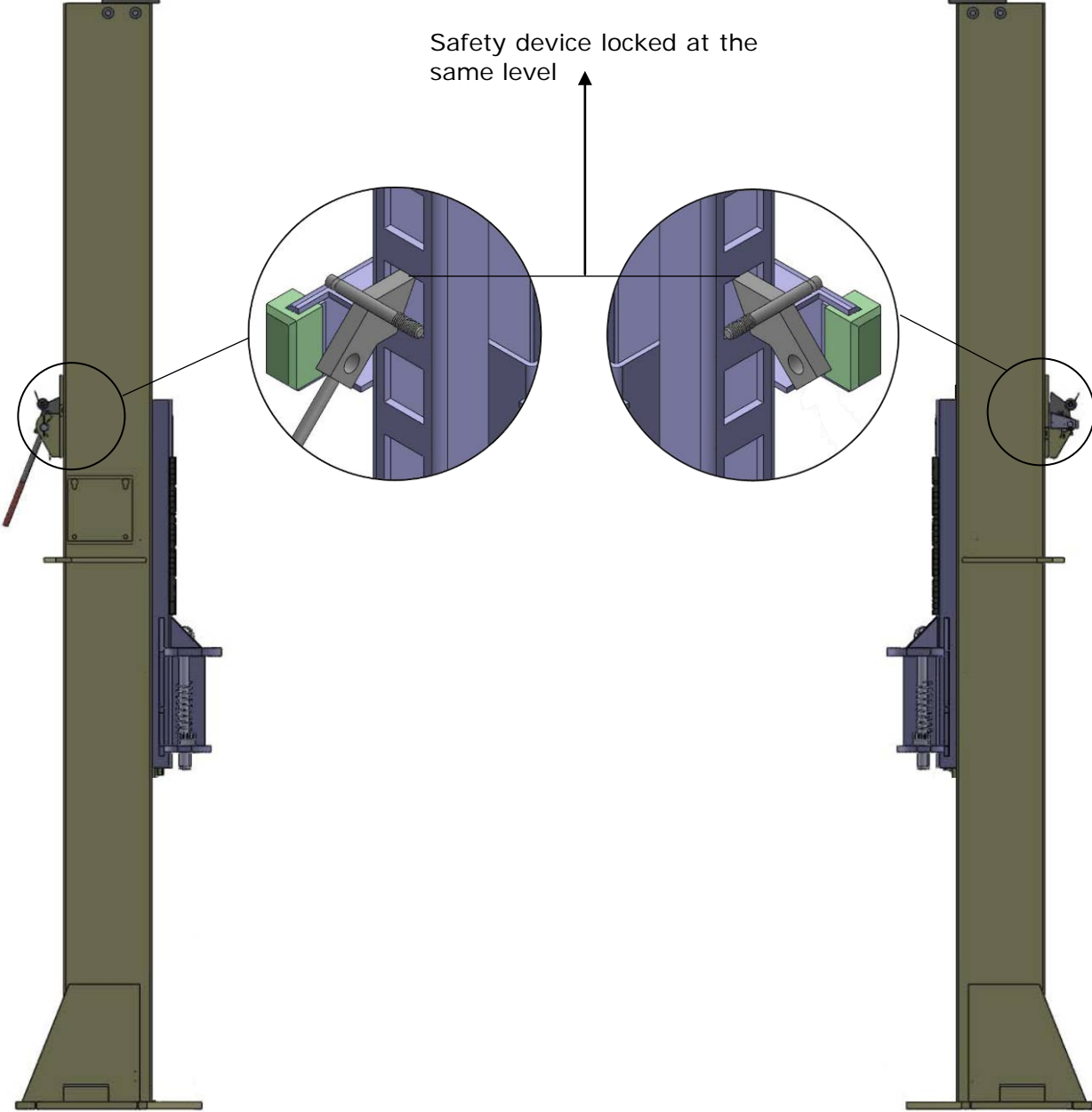


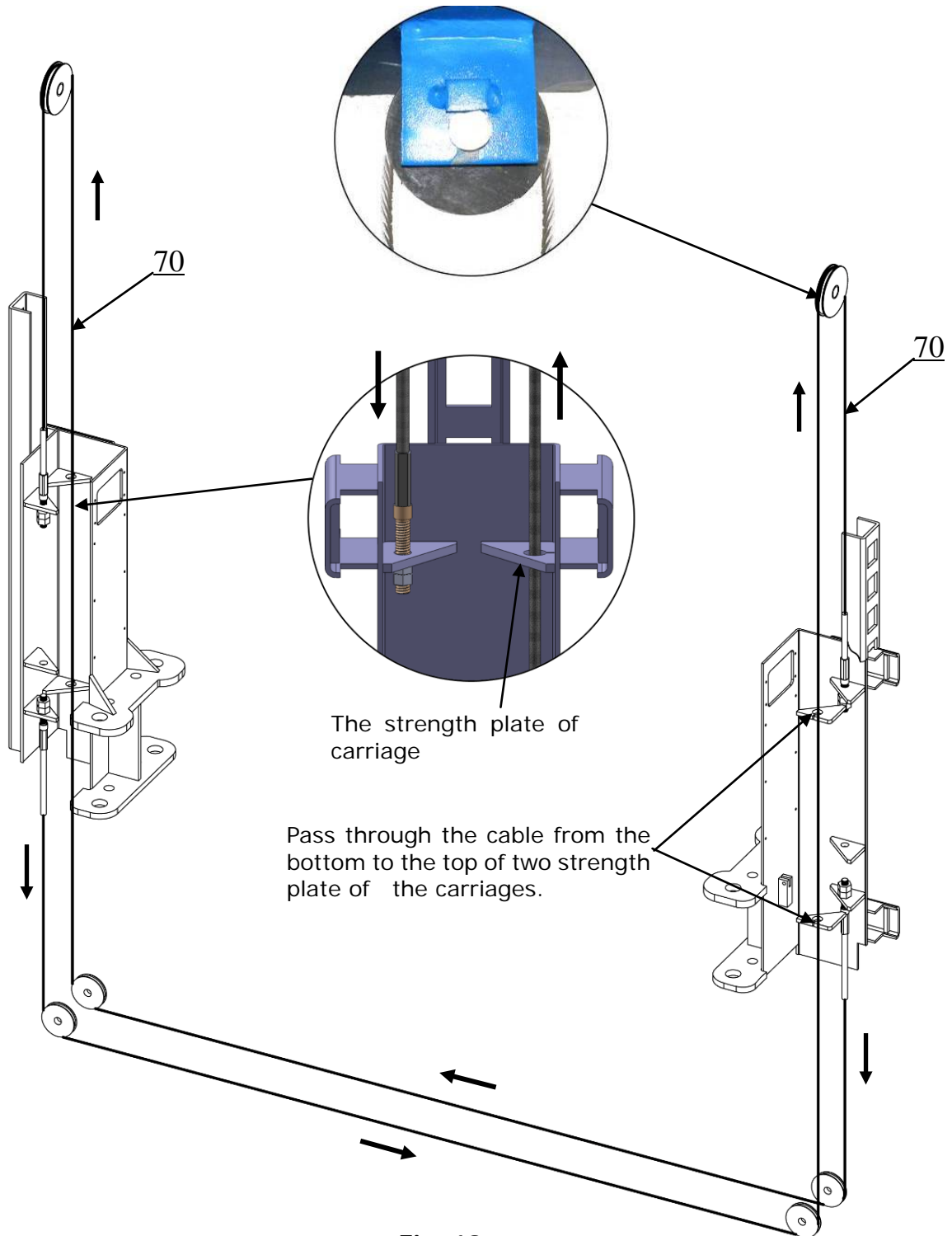
Fig. 18

I. Install cable

According to step **E** to choose the width distance of your lift (See Fig.13).

Note: Pass through the cable from the hole of the strength plate of one carriage to another carriage.

1. For width distance with 3829mm (See Fig.19).



2. For width distance with 3692mm

2.1. Pass through the cable from the bottom to the top of the carriage, The fitting of cable pass through the hole of the carriages and be screwed with two cable nuts. (See Fig. 20).

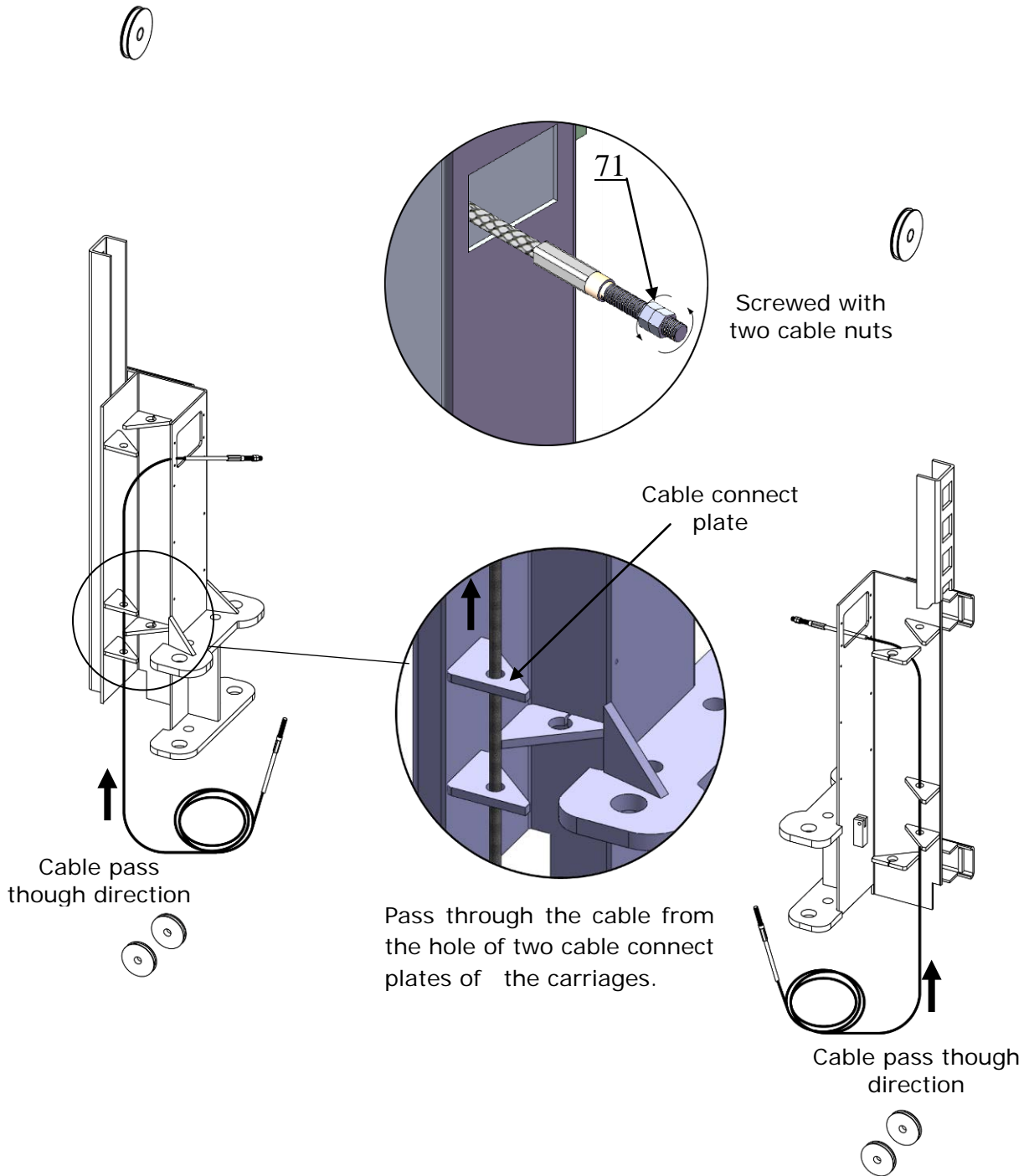


Fig. 20

2.2. Pass through the cable as arrow direction(See Fig. 21).

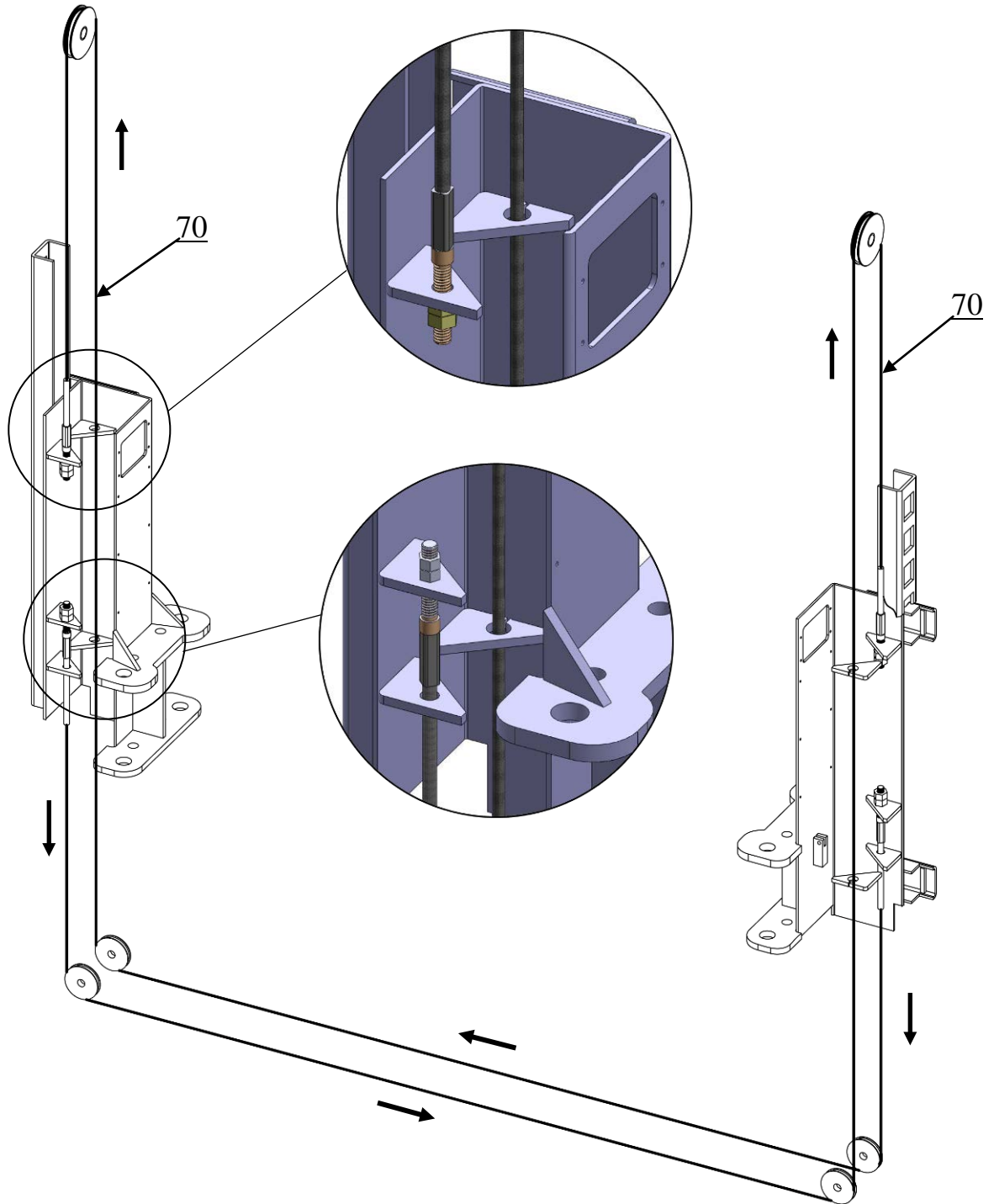


Fig. 21

J. Install cable of safety device (See Fig. 22).

Note: Install the safety cable from the offside safety device, pay attention to the pass through direction.

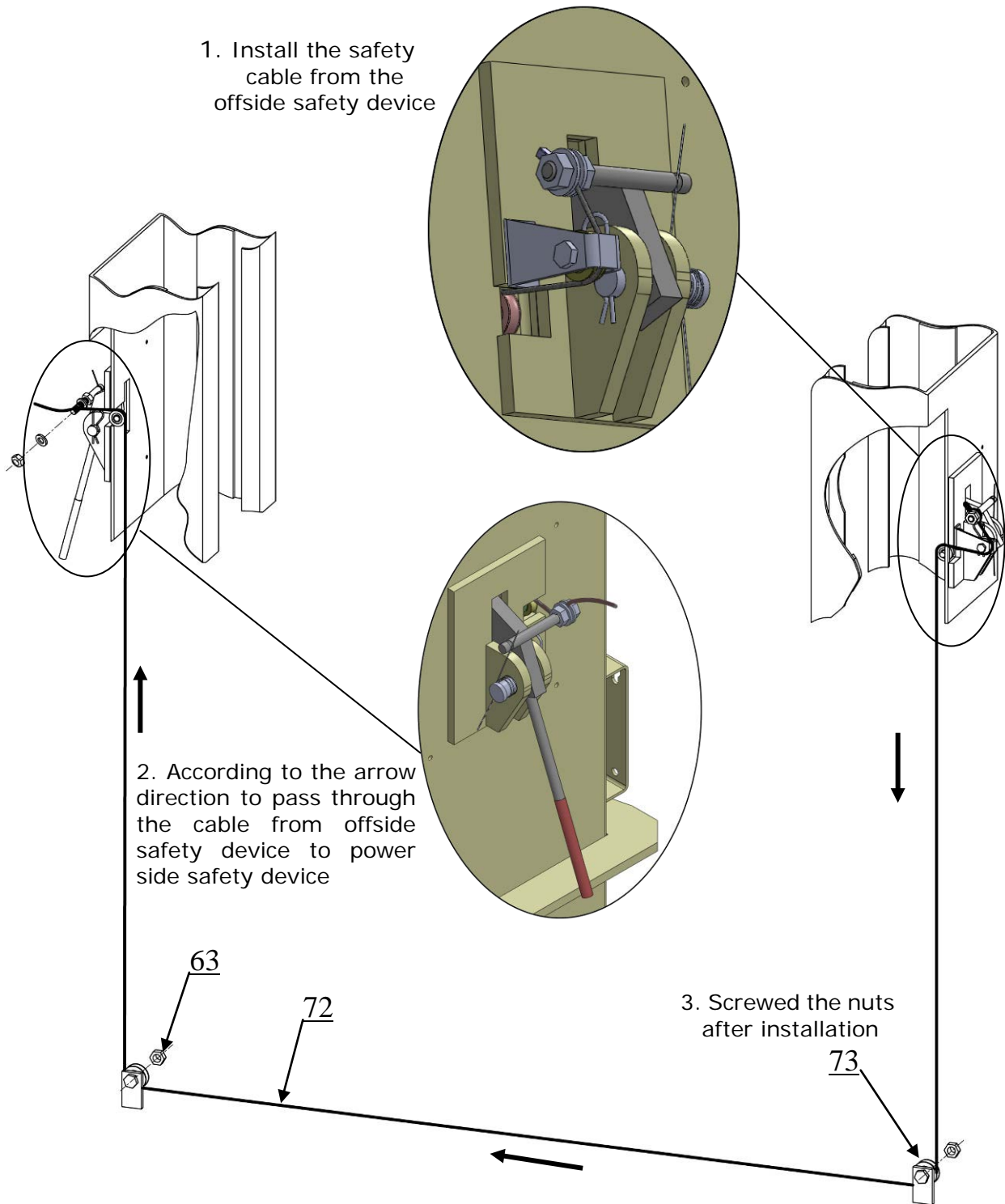


Fig. 22

K. Install hydraulic power unit and oil hose assy. (See Fig. 23).

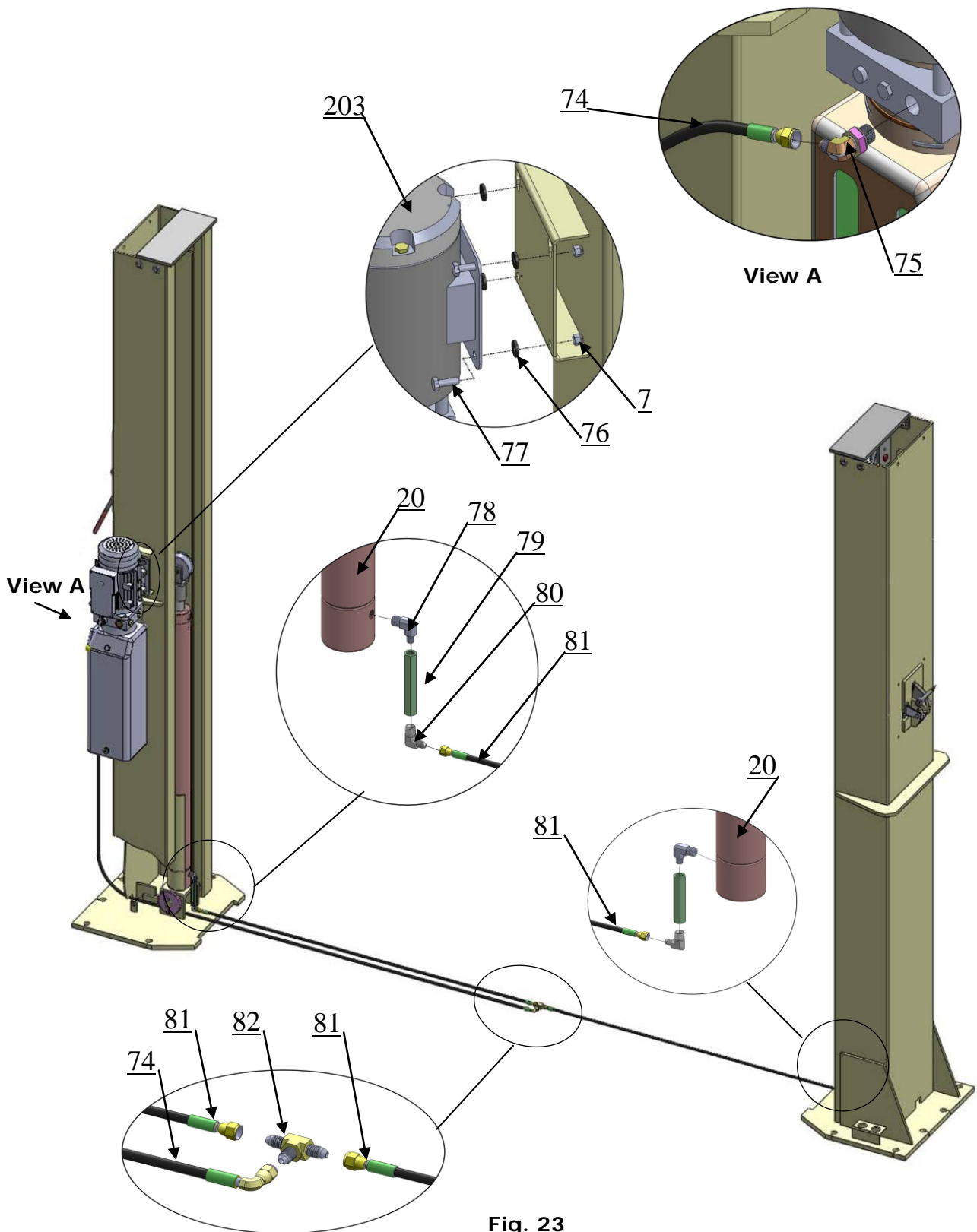


Fig. 23

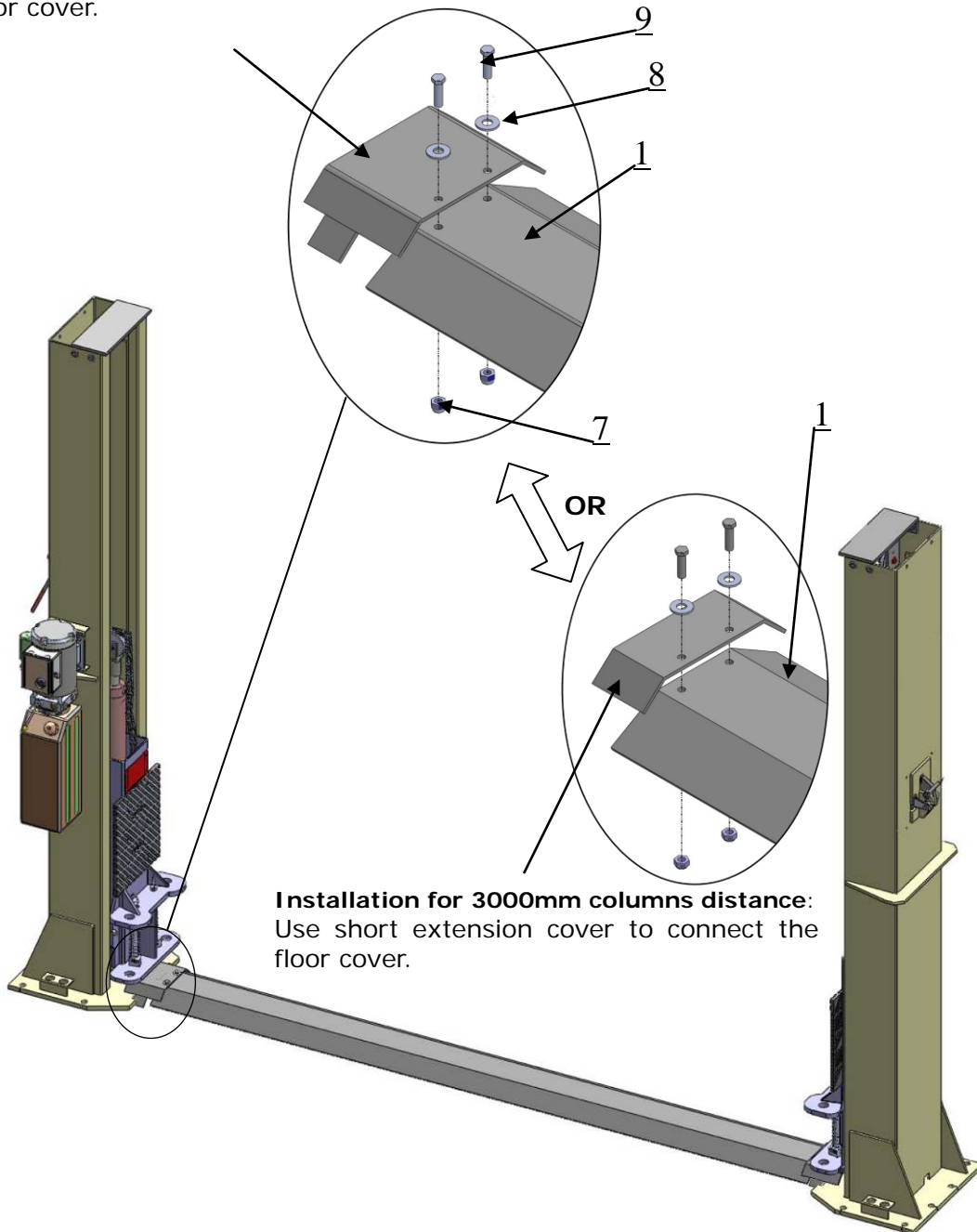
Tighten all the hydraulic fittings, and fill the reservoir with hydraulic oil.

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

L. Install floor cover (See Fig. 24).

NOTE: Choose different extension cover according to the columns distance.

Installation for 3137mm columns distance:
Use long extension cover to connect the floor cover.



Installation for 3000mm columns distance:
Use short extension cover to connect the floor cover.

Fig. 24

M. Install lifting arms and adjust the arm locks

1. Install the lifting arms (See Fig. 25).
2. Lowering the carriages down to the lowest position, then use the 8# ratchet spanner to loose the nut of arm lock (See Fig. 26).

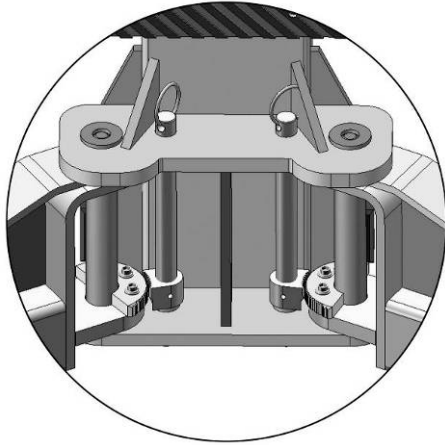
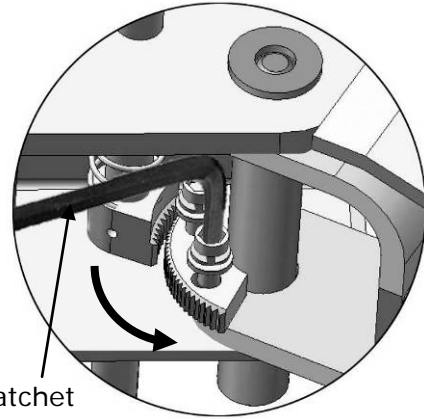


Fig. 25



Use the ratchet spanner to loose the nut

Fig. 26

3. Adjust the arm lock as arrow direction (See Fig. 27).
4. Adjust the moon gear and arm lock to make it to be meshed, then tighten bolts of arm lock (See Fig. 28).

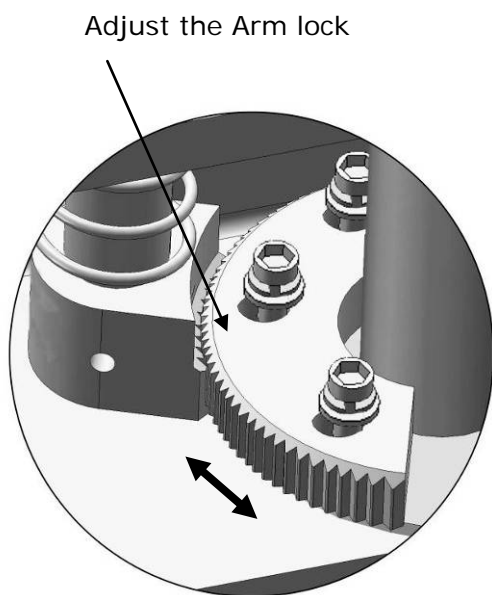


Fig. 27

Locking the nuts after the moon gear and arm lock engaged well

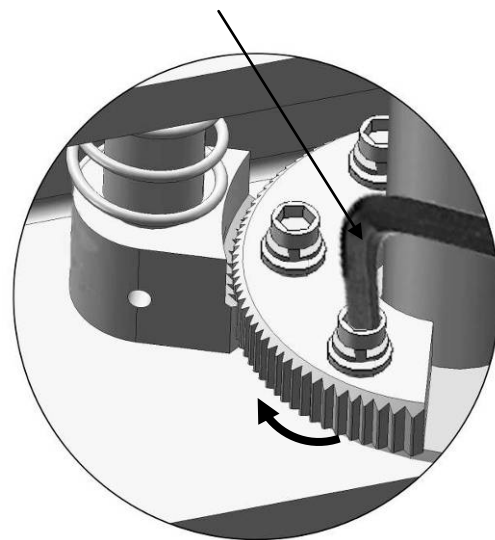


Fig. 28

N. 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 380V, three phase motors.

1. 220V single phase motor

1.1. Circuit diagram (See Fig. 29).

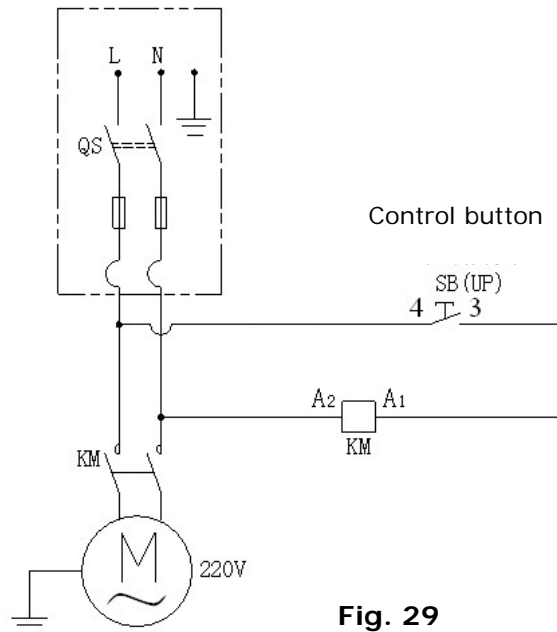


Fig. 29

1.2. Connection step (See Fig. 30)

- Connecting the two power supply lines (fire wire **L** and zero wire **N**) to terminals of AC contactor marked **L1**, **L2** respectively.
- Terminal **4#** of control button connected with terminals **L1** of AC contactor; Terminal **3#** of control button connected with terminals **A1** of AC contactor.

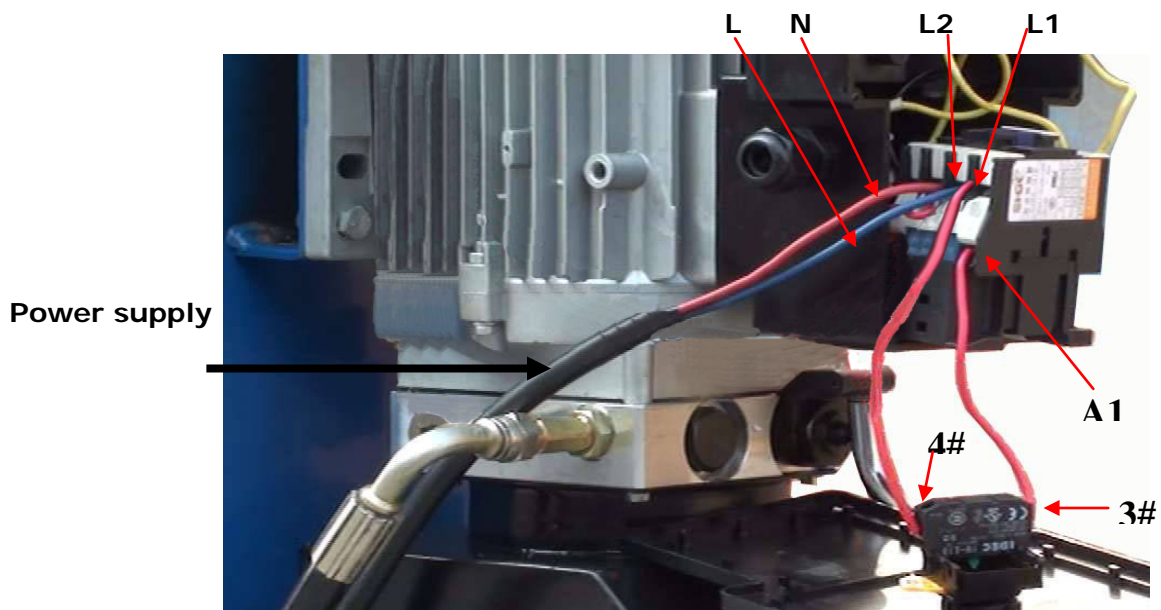


Fig. 30

1.3. Connection diagram (See Fig. 31).

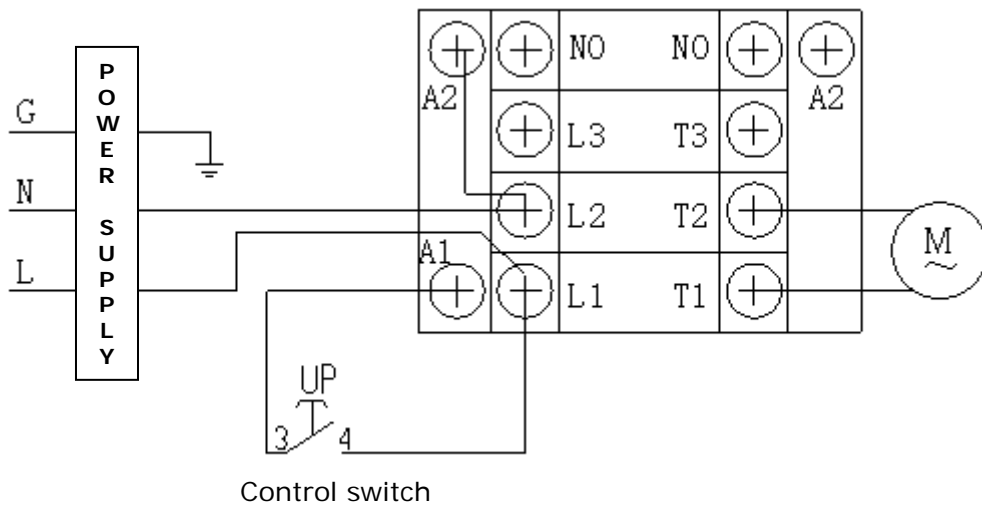


Fig. 31

2. 380V, three phase motor.

2.1. Circuit diagram (See Fig. 32).

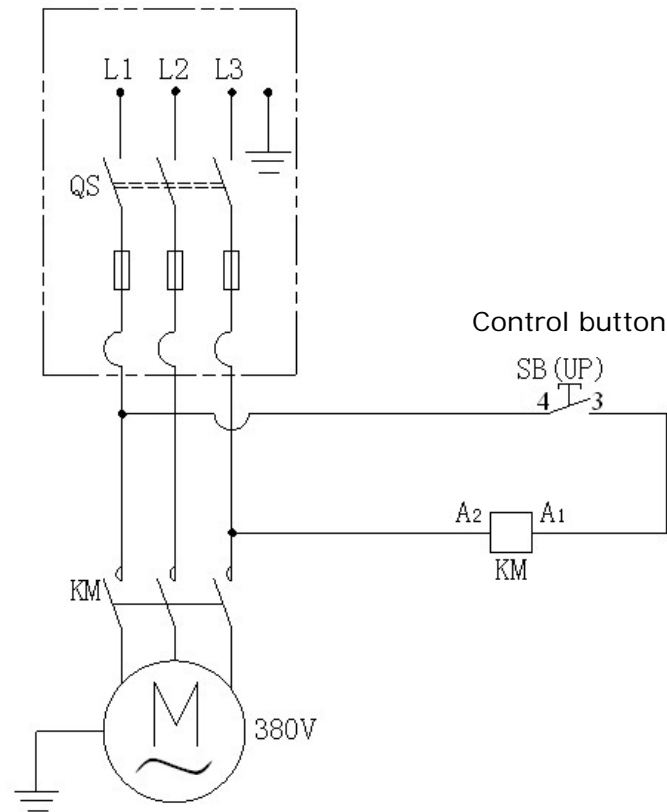


Fig. 32

2.2. Connection step (See Fig. 33)

- a. Power supply line (L1、L2、L3) connect with the terminals of AC contactor marked L1, L2, L3 respectively.
- b. Terminal 4# of control button connected with terminals L1 of AC contactor; Terminal 3# of control button connected with terminals A1 of AC contactor.

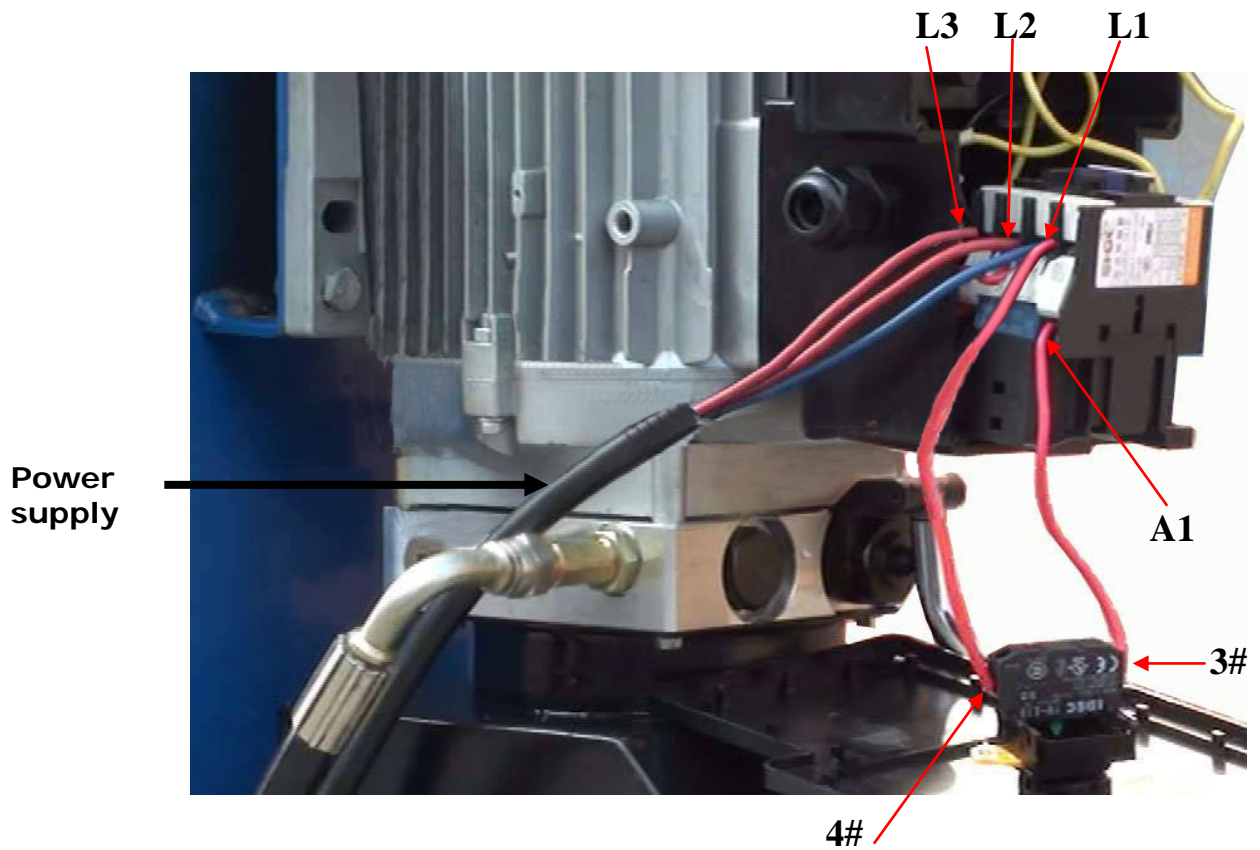


Fig. 33

2.3. Connection diagram (See Fig. 34).

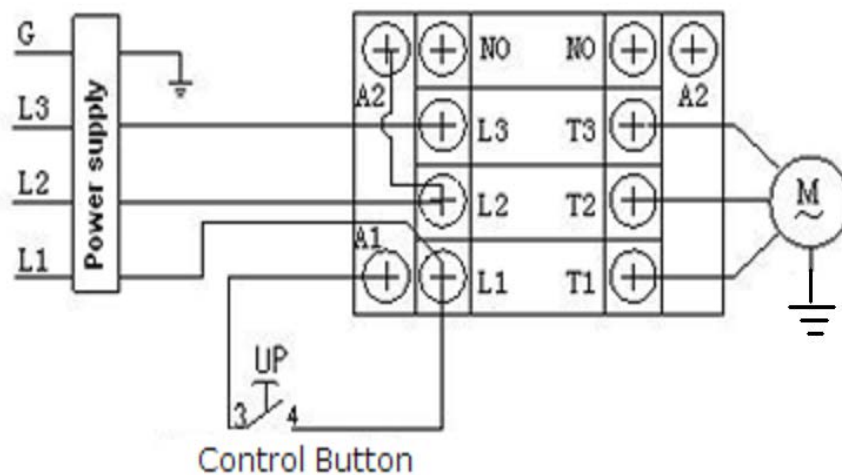


Fig. 34

IV. EXPLODED VIEW

Model SL-12L

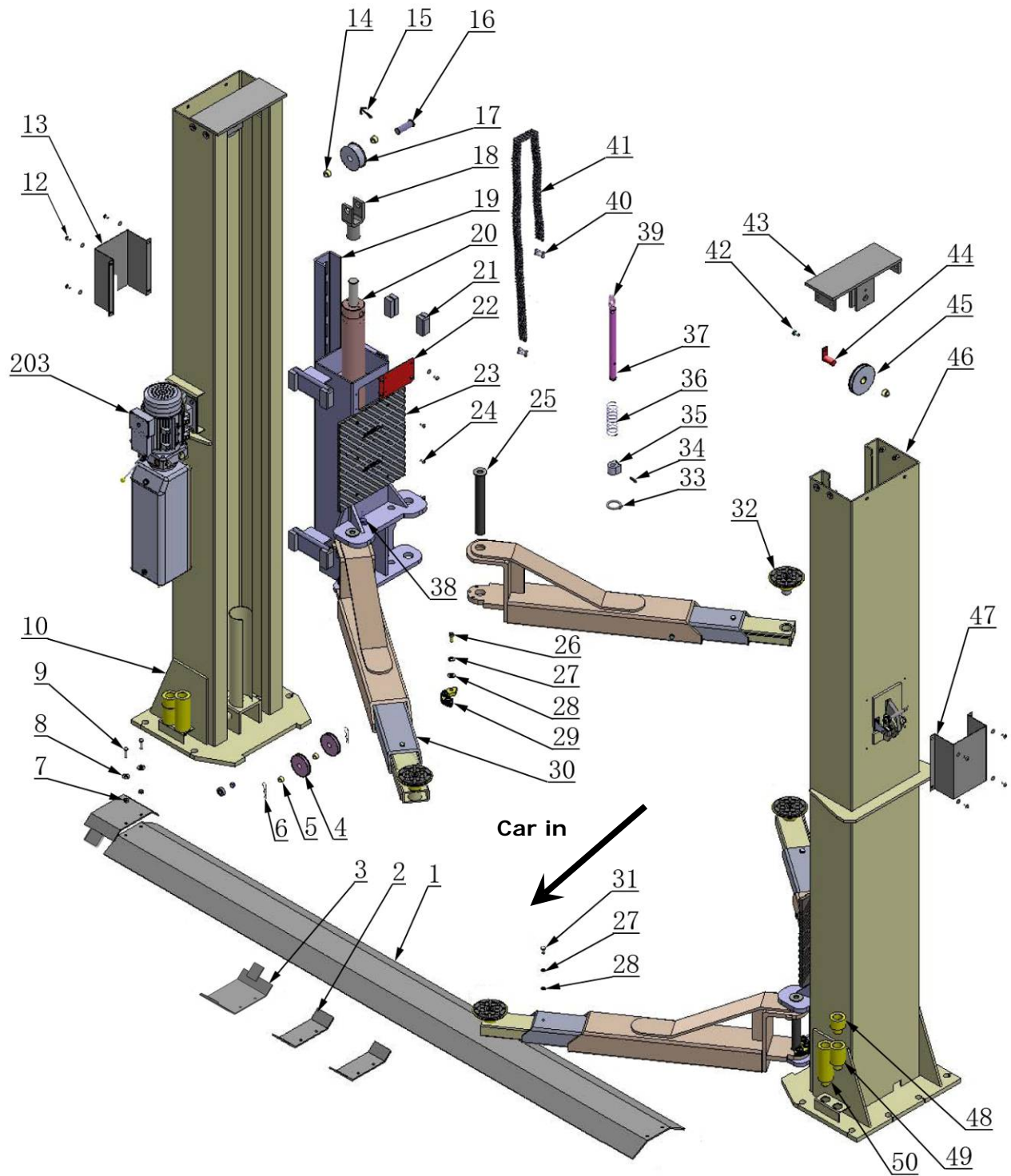


Fig. 35

Cylinder

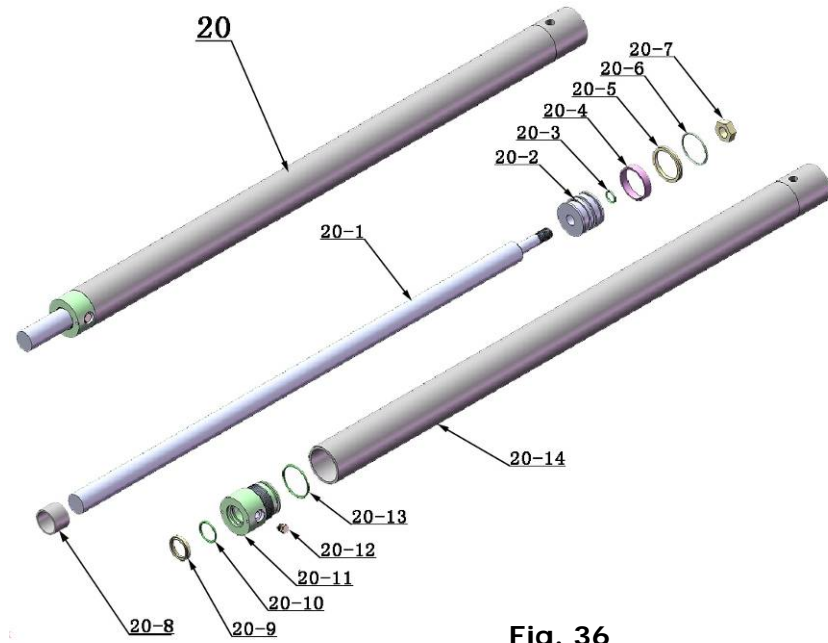
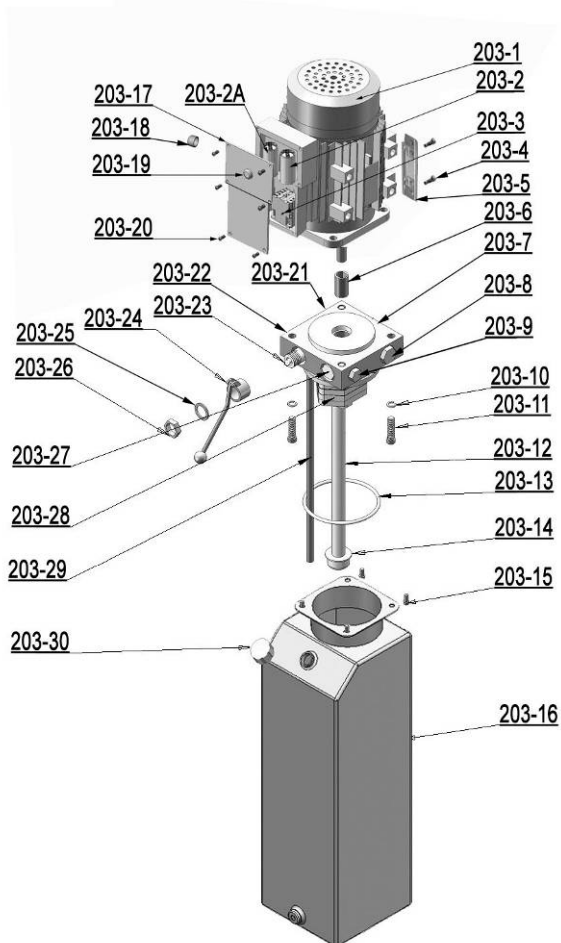


Fig. 36

Manual Power Unit

220V/50HZ/1Phase



380V/50HZ/3Phase

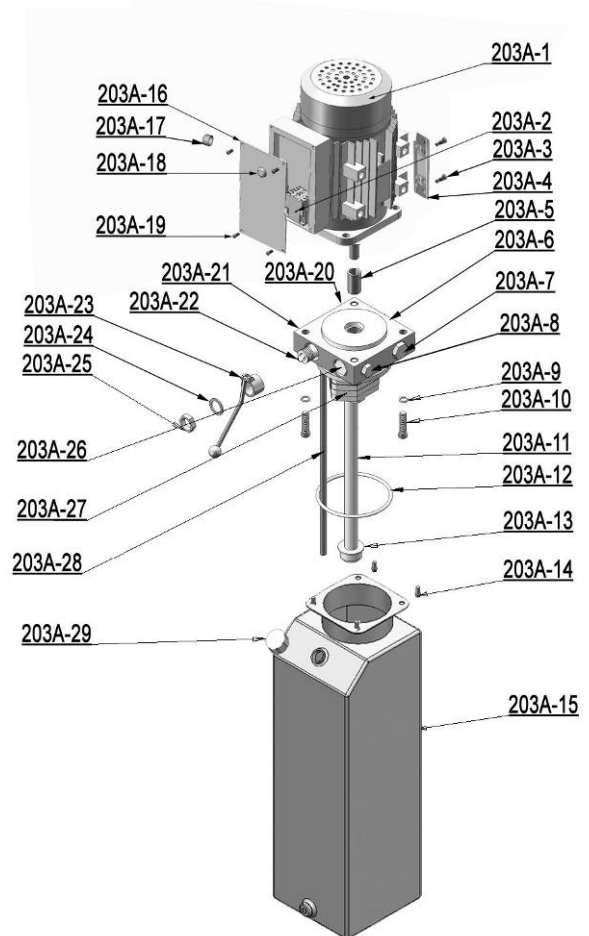


Fig. 37

Illustration of hydraulic valve for hydraulic power unit & manual power unit, 220V/50HZ, Single phase (See Fig. 38)

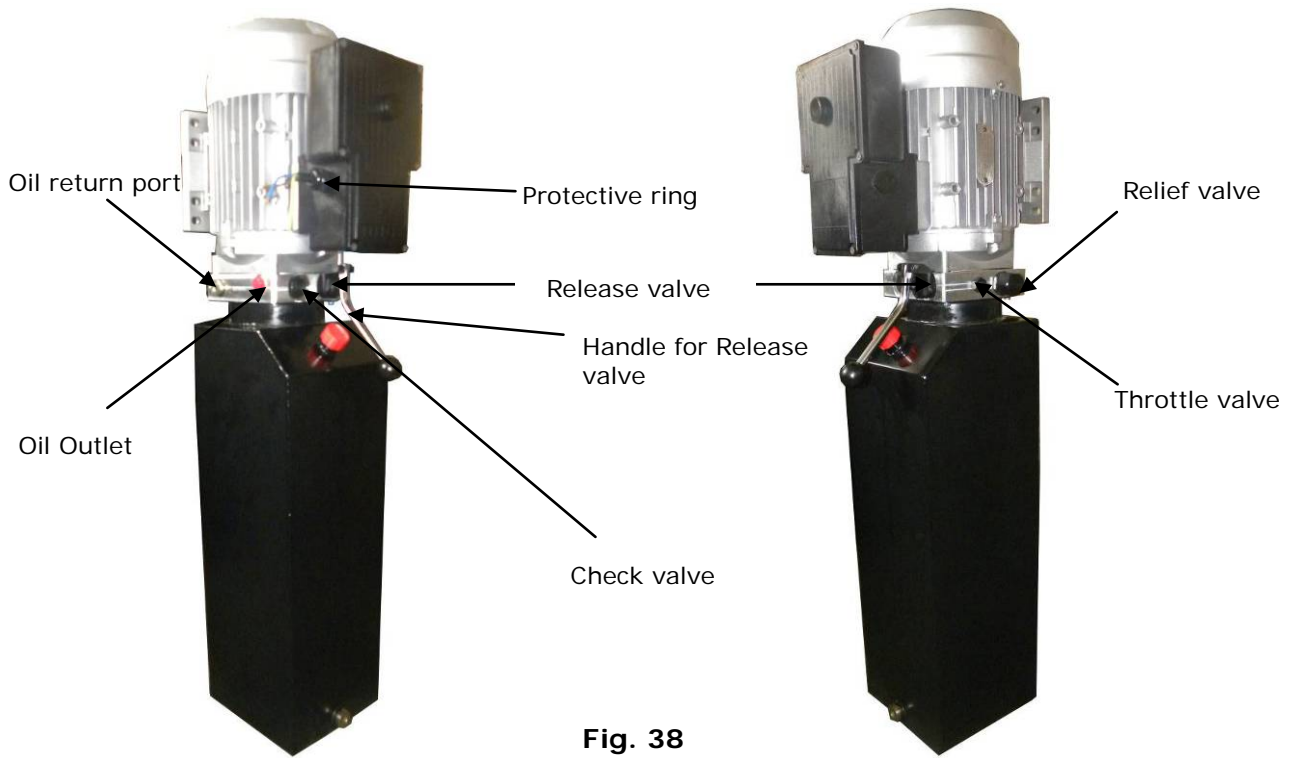


Fig. 38

Manual power unit, 380V/50HZ, 3 phase (See Fig. 39)

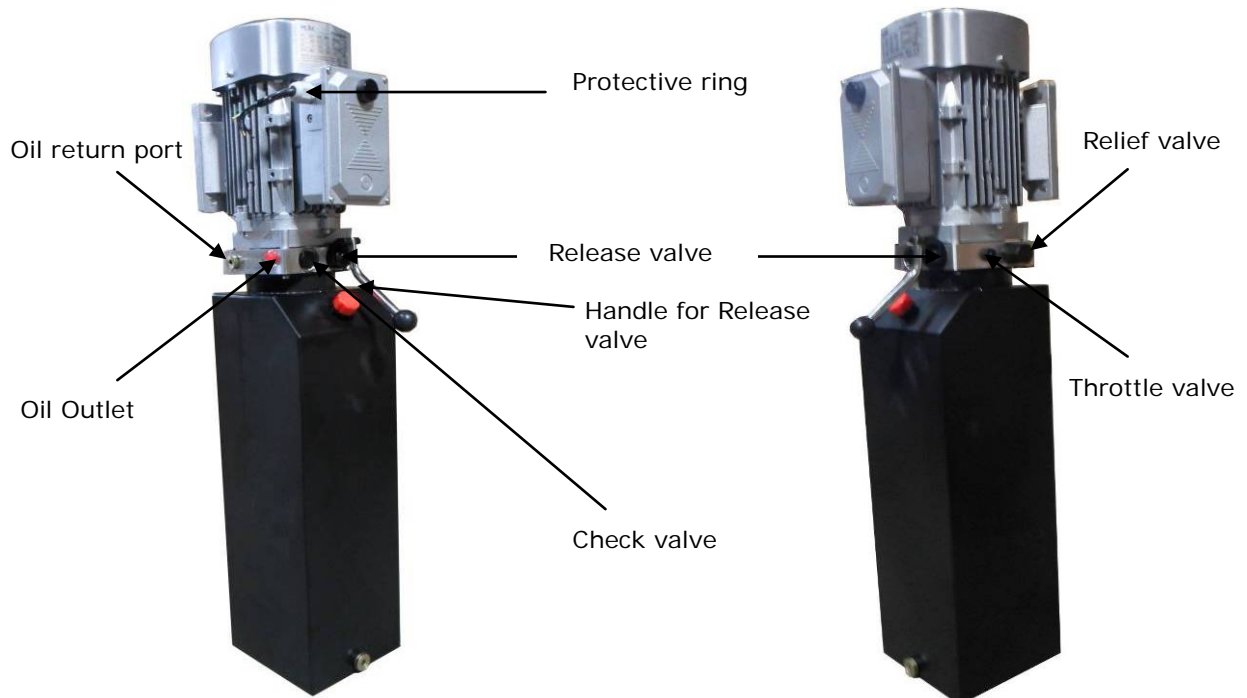


Fig. 39

V. TEST RUN

1. Adjust synchronous cable

Use wrench to hold the cable fitting, meanwhile use ratchet spanner to tighten the cable nut. Make sure two cables are with the same tension.

If the carriage does not Synchronize when lifting, please tighten the cable nut of lower side carriage. (See Fig. 40)

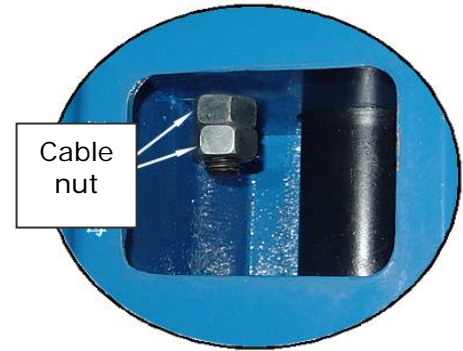


Fig. 40

2. Adjust safety cable

Lifting the carriage 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.

3. Adjust the lower speed (Only for power unit)

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.

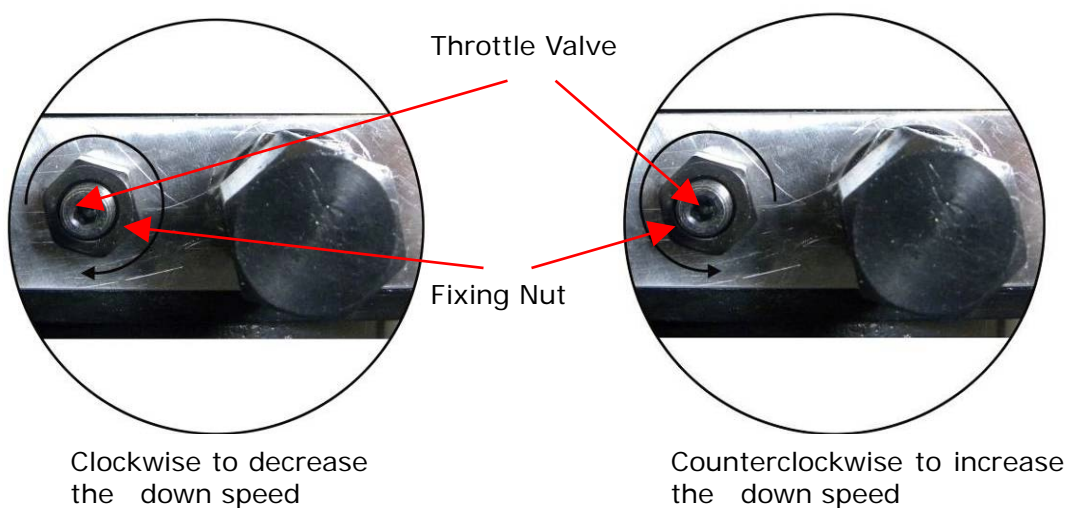


Fig. 41

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 are anything improper, repeat the above adjustment.

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

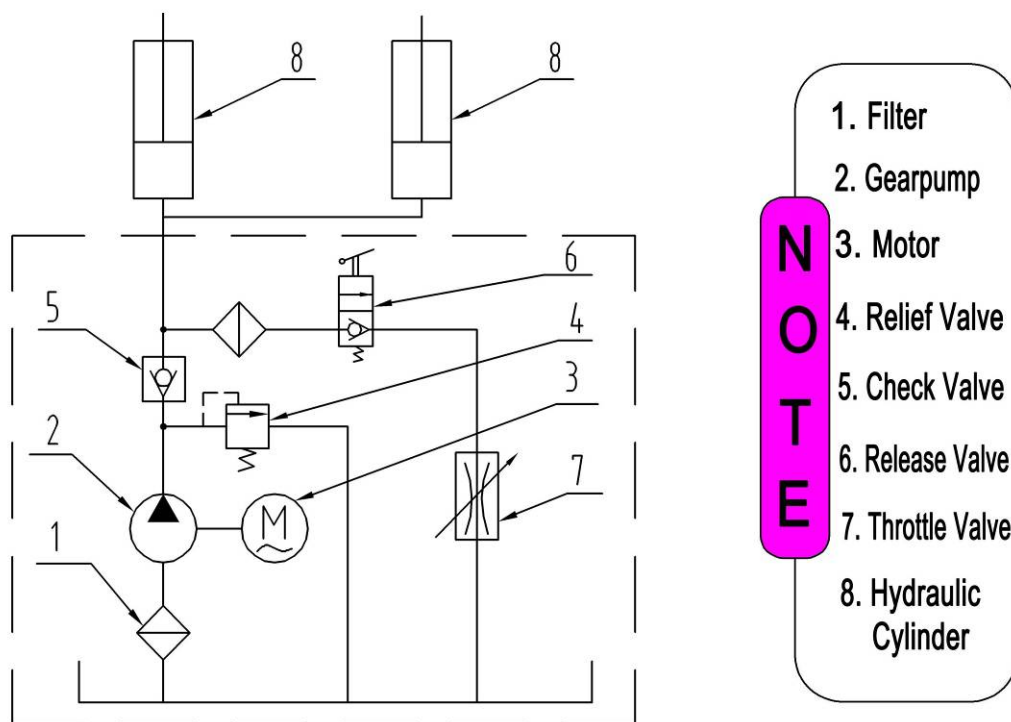


Fig. 42 Hydraulic System

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. Press the **UP** button 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. Press the button of **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 80-117 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.

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. Motor burned out 4. AC contactor in damage 	<ol style="list-style-type: none"> 1. Replace button 2.Repair all wiring connections 3. Repair or replace motor 4. Repair or replace
Motor runs but the lift is not raised	<ol style="list-style-type: none"> 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 	<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 slowly	<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. Repair or replace 5. Check load
Lift can not 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 	<ol style="list-style-type: none"> 1. Release the safeties 2. Repair or replace 3. Replace 4. Clean the oil system

IX. PARTS LIST FOR MODEL SL-12L

Item	Part#	Description	Qty.	Note
(See Fig. 35, Fig.12-13, Fig.16-17, 19-23)				
1	207001	Floor cover	1	
2	207002	Short extension cover	2	
3	207003	Long extension cover	2	
4	217019	Top pulley	4	
5	217020	Bronze bush for pulley	6	
6	209012	Hair pin	6	
7	209005	Self locking nut	8	
8	209033	Washer	8	
9	209043	Hex bolt	4	
10	207004	Power side column	1	
203	440035	Power unit	1	
12	209009	Cup head bolt	12	
13	207005	Powerside lock cover	1	
14	420132A	Bronze bush for chain pulley	4	
15	201005	Split Pin	2	
16	207006	Pin for Chain pulley	2	
17	207007	Chain pulley	2	
18	207008	Chain pulley bracket assy.	2	
19	207009	Carriage	2	
20	207010	Cylinder	2	
21	209015	Slider block	16	
22	201038	Carriage plastic cover	2	
23	217053	Protective Rubber	2	
24	209019	Bolt	12	
25	217047A	Arm pin	4	
26	206048	Socket bolt	12	
27	209039	Lock washer	22	
28	209022	Washer	22	
29	206049	Moon gear	4	
30	207011	Lifting arm	4	
30A	207012	Outer lifting arm	4	
30B	207013	Medium lifting arm	4	
30C	207014	Inner lifting arm	4	
31	206017	Hex bolt	8	
32	201046	Rubber pad assy.	4	
32A	420138	Socket bolt	4	
32B	209134	Rubber Pad	4	
32C	680030A	Rubber Pad frame	4	
33	206032	Snap Ring	4	
34	206036	Hair Pin	4	
35	217044	Arm lock	4	
36	217045A	Spring	4	
37	217046B	Left arm lock bar	2	
38	217046C	Right arm lock bar	2	

Item	Part#	Description	Qty.	Note
39	209153	Arm lock bar ring	4	
40	201010A	Chain connector	4	
41	207015	Chain	2	
42	209038	Hex bolt	2	
43	207016	Top plate assy.	2	
44	217037	Pin for bottom pulley	2	
45	217036	Big Pulley	2	
46	207017	Offside column	1	
47	207018	Offside safety cover	1	
48	209051A	Adapter 1.5"	4	
49	209052A	Adapter 2.5"	4	
50	209053A	Adapter 5"	4	
51	217069	Hex bolt	8	
52	206006	Washer	12	
53	206023	Self locking nut	8	
54	620065	Shim	10	
55	206002	Pin for safety lock	2	
56	209007A	Safety Spring	2	
57	209010	Snap ring	2	
58	209011	Plastic small pulley	2	
59	207019	Power side safety lock	1	
60	206023A	Hex nut	4	
61	206003	Handle Protective Plastic cushion	2	
62	207020	Offside safety lock	1	
63	209056	Self locking nut	3	
64	420045	washer	14	
65	209149	Lock washer	2	
66	207021	Socket bolt	1	
67	217029	Pulley bracket	1	
68	206009	Plastic small pulley	1	
69	209046	Hex bolt	1	
70	207022	Cable	2	
71	209066	Cable nut	8	
72	206065	Safety cable	1	
73	209049	Plastic small pulley	2	
74	207023	Oil hose	1	
75	209060	90° Fitting for power unit	1	
76	209004	Rubber ring	4	
77	209003	Hex bolt	4	
78	207024	90° fitting	2	
79	207025	Extend straight fitting	2	
80	420097	90° fitting	2	
81	207026	Oil hose	2	
82	211016	T fitting	1	
83	209059A	Anchor Bolt	12	
84	207500	Parts box	1	

Parts For Hydraulic Cylinder (See Fig. 36)				
Item	Part#	Description	Qty.	Note
20-1	207027	Piston rod	2	
20-2	207028	Piston	2	
20-3	206069	O-Ring	2	
20-4	620053	Support Ring	2	
20-5	620054	Y-Ring	2	
20-6	630027	O-Ring	2	
20-7	206071	Hex nut	2	
20-8	207029	Adjustment tube	2	
20-9	217078	Dust ring	2	
20-10	520058	O-Ring	2	
20-11	207030	Head cap	2	
20-12	201034	Bleeding Plug	2	
20-13	207031	O-Ring	2	
20-14	207032	Bore weldment	2	
Parts For Manual Power Unit, 220V/50Hz, Single phase (See Fig. 37)				
203-1	440014	Motor	1	
203-2	440015	Start capacitor	1	
203-2A	440016	Run capacitor	1	
203-3	209112	AC contactor	1	
203-4	440017	Allen bolt	4	
203-5	440018	Motor fix frame	2	
203-6	209083A	Motor connecting shaft	1	
203-7	440019	Valve body	1	
203-8	209085A	Relief valve	1	
203-9	209113	Throttle valve	1	
203-10	209086A	Lock washer	4	
203-11	209087A	Allen bolt	4	
203-12	440020	Inlet pipe	1	
203-13	209089A	O-Ring	1	
203-14	209090A	Filter	1	
203-15	440021	bolt	4	
203-16	440022	Reservoir	1	
203-17	440023	Cover of motor terminal box	1	
203-18	209109	Protective ring	1	
203-19	209099A	Push button	1	
203-20	440024	Screw	6	
203-21	209110A	Oil return port	1	
203-22	209100A	Oil outlet	1	
203-23	209101A	Release valve	1	

Item	Part#	Description	Qty.	Note
203-24	209102A	Handle for release valve	1	
203-25	209103A	Washer	1	
203-26	209104A	Nut	1	
203-27	209105A	Check valve	1	
203-28	440025	Gear pump	1	
203-29	440026	Oil return pipe	1	
203-30	440027	Filler cap	1	
Parts For Manual Power Unit 380V/50Hz, Three phase (See Fig. 37)				
203A-1	440028	Motor	1	
203A-2	209112	AC contactor	1	
203A-3	440017	Allen bolt	4	
203A-4	440018	Motor fix frame	2	
203A-5	209083A	Motor connecting shaft	1	
203A-6	440019	Valve body	1	
203A-7	209085A	Relief valve	1	
203A-8	209113	Throttle valve	1	
203A-9	209086A	Lock washer	4	
203A-10	209087A	Allen bolt	4	
203A-11	440020	Inlet pipe	1	
203A-12	209089A	O-Ring	1	
203A-13	209090A	Filter	1	
203A-14	440021	Bolt	4	
203A-15	440022	Reservoir	1	
203A-16	440029	Cover of motor terminal box	1	
203A-17	209109	Protective ring	1	
203A-18	209099A	Push button	1	
203A-19	440024	Screw	2	
203A-20	209110A	Oil return port	1	
203A-21	209100A	Oil outlet	1	
203A-22	209101A	Release Valve	1	
203A-23	209102A	Handle for release valve	1	
203A-24	209103A	Washer	1	
203A-25	209104A	Nut	1	
203A-26	209105A	Check valve	1	
203A-27	440025	Gear pump	1	
203A-28	440026	Oil return pipe	1	
203A-29	440027	Filler cap	1	

Order original parts when required from
GRAND PRIX IMPORT at 1-800-361-4095

GRAND PRIX IMPORT

Installation, Operation & Maintenance Manual

TWO POST LIFT

*The specifications stated on this brochure are not binding.
We reserve the right to change the specification without notice*



SL-12L 12,000 LBS.

IMPORTANT:
**Read this manual completely before
installing or operating lift**

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