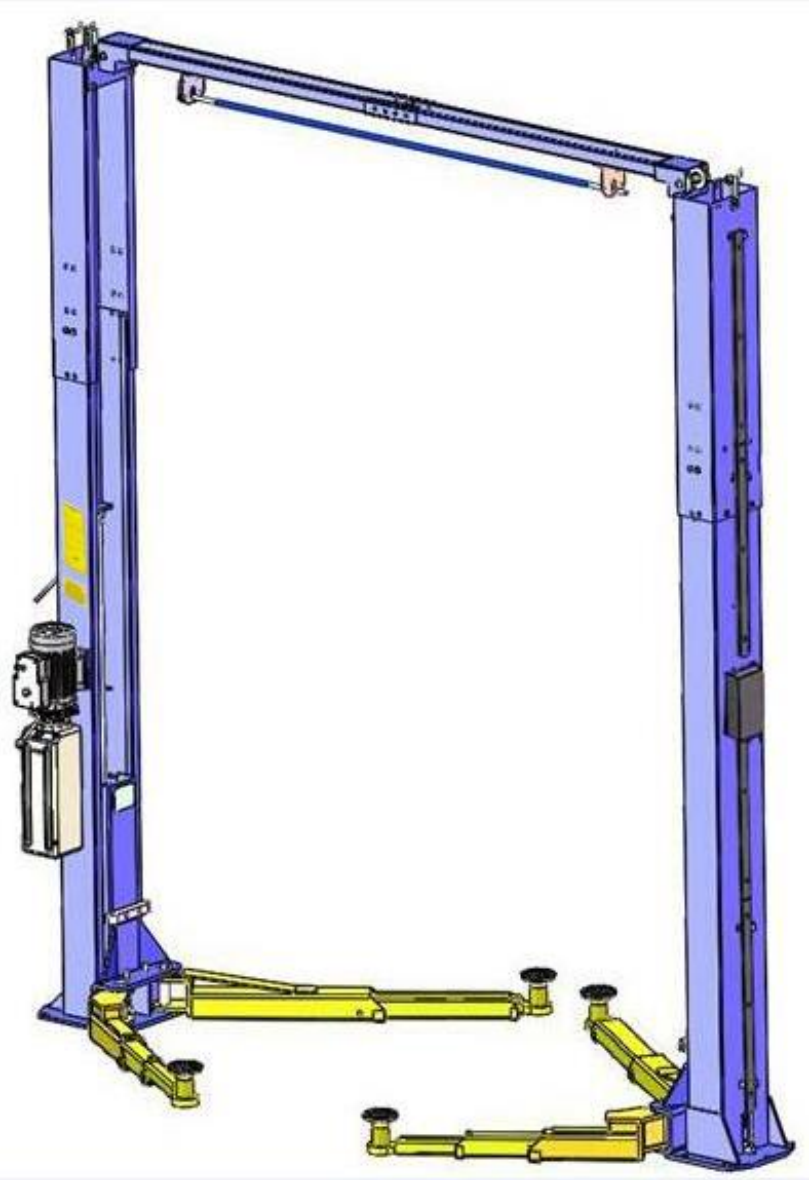
AMGO® Hydraulics

Installation And Service Manual



TWO POST LIFT
Model:OH-10/OH-10H

CONTENTS

I. PRODUCT FEATURES AND SPECIFICATIONS

CLEAR-FLOOR DIRECT-DRIVED MODEL FEATURES

Model OH-10(H) (See Fig. 1)

· Direct-drived design, minimize the lift wear parts and breakdown ratio

· Dual hydraulic cylinders, designed and made as standards, utilizing oil seal in cylinder

· Self- lubricating UHMW Polyethylene sliders and bronze bush

· Single-point safety release, and dual safety design

. Clear-floor design, provide unobstructed floor use

. Overhead safety shut-off device prevents vehicle damage

· Super-asymmetric arms design can fit extremely wide vehicles, stackable rubber pads

. Standard adjustable heights accommodates varying ceiling heights

Fig. 1

OH-10, OH-10H SPECIFICATIONS

Model	Style	Lifting Capacity	Lifting Time	Lifting Height	Overall Height	Overall Width	Width Between Columns	Minimum Pad Height	Motor
OH-10	Clear-floor Direct-drived	4.5T 10,000 lbs	29S	1815-2133mm 71 1/2"–84-1/2"	3621/3821mm 142 1/2"-150 1/2"	3428mm 135"	2850mm 112 1/4"	90-319mm 3 1/2"-12 1/2"	2.0 HP
OH-10H	Clear-floor Direct-drived	4.5T 10,000 lbs	29S	1815-2133mm 71 1/2"–84 1/2"	4232/4431 mm	3428mm 135"	2850mm 112 1/4"	90-319mm 3 1/2"-12 1/2"	2.0 HP

					166 5/8" -174 1/2"				

Arm Swings View
For Model OH-10 OH-10H

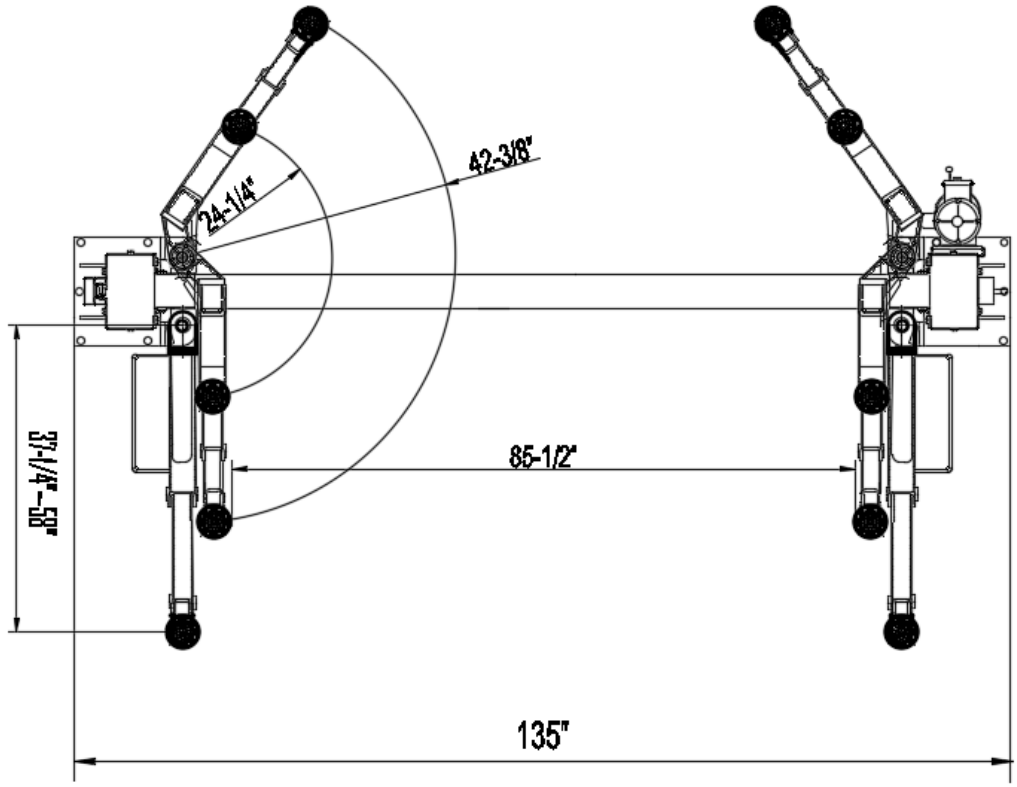


Fig. 2

Attention! Please make sure to place the arms in correct position before car drive in !

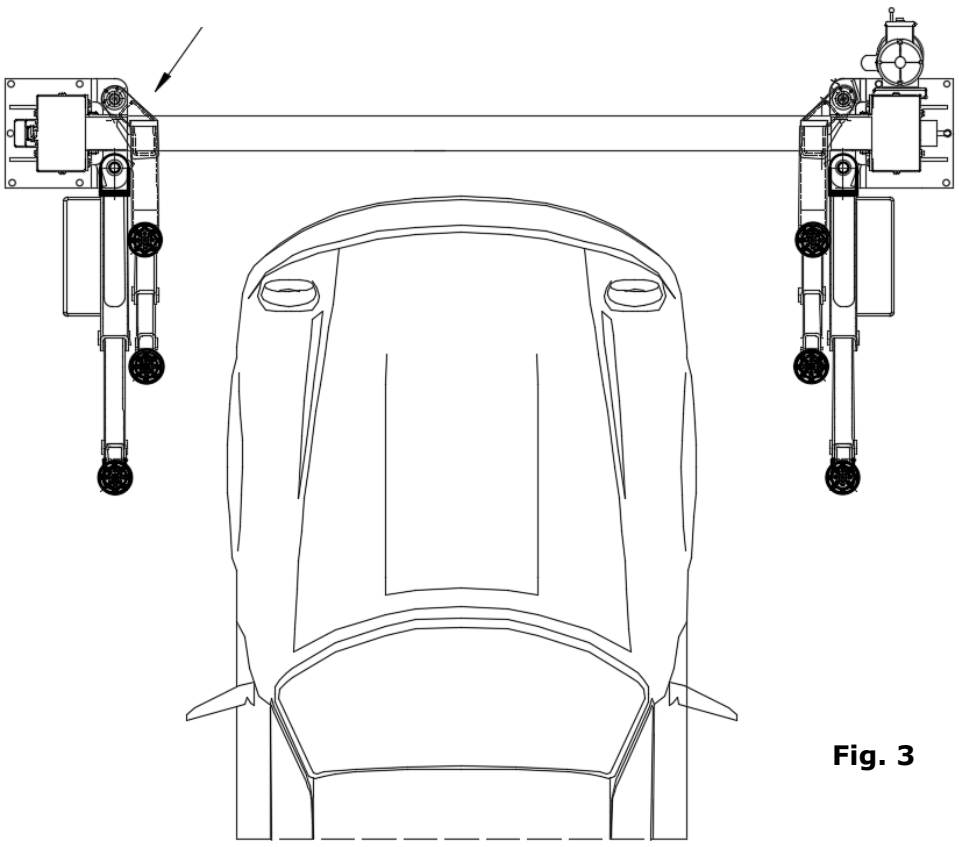


Fig. 3

Swing and extending the arms to the lifting point of vehicle

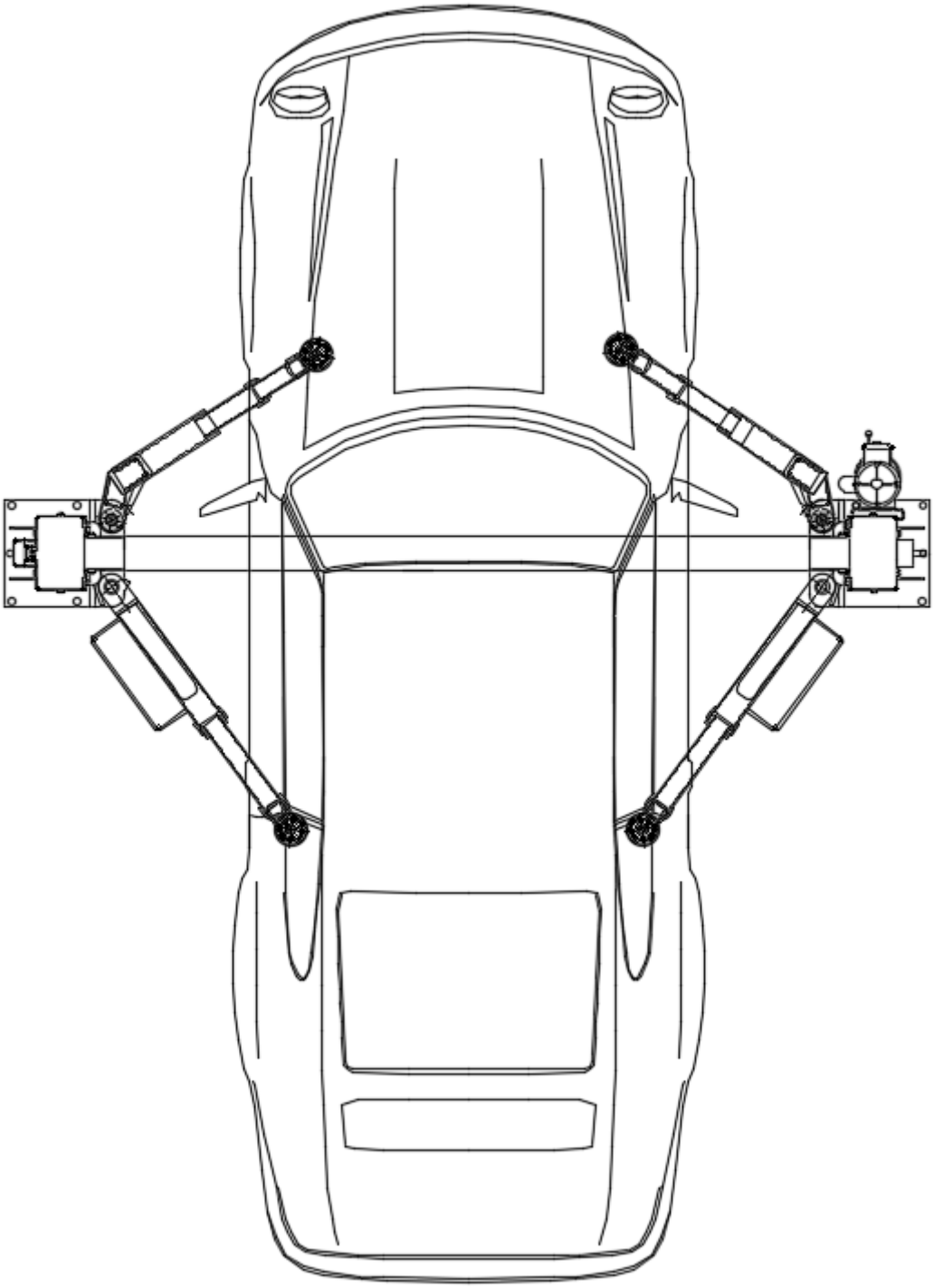


Fig.4

II. INSTALLATION REQUIREMENT

A. TOOLS REQUIRED

✓ Rotary Hammer Drill (Φ19)

✓ Carpenter's Chalk

✓ Hammer

✓ Screw Sets

✓ Level Bar

✓ Tape Measure (7.5m)

✓ English Spanner (12")

✓ Pliers

✓ Ratchet Spanner With Socket (28#)

✓ Socket Head Wrench (3#, 5#, 8#)

✓ Wrench set

(8#, 10#, 13#, 14#, 17#, 19#, 24#)

✓ Lock Wrench

Fig. 5

B. SPECIFICATIONS OF CONCRETE (See Fig. 6)

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 100mm 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 (210kg/cm²) minimum.
3. Floors must be level and no cracks.

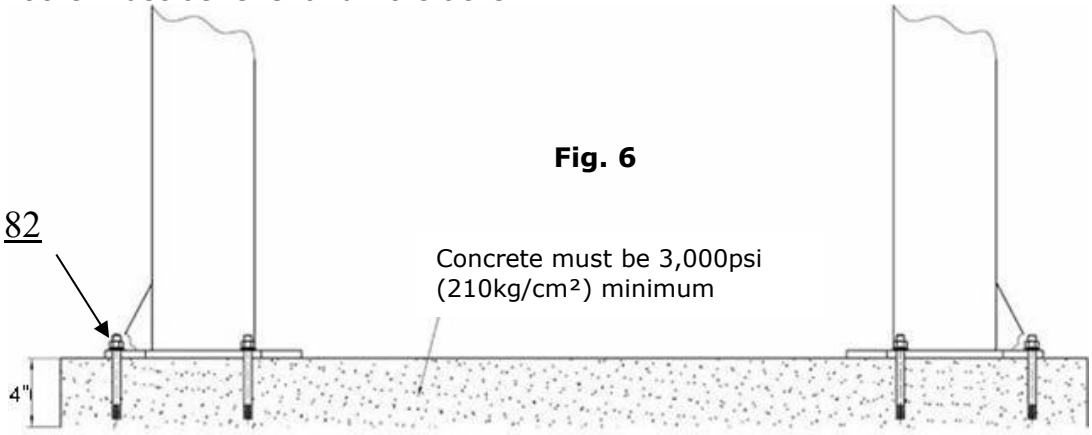


Fig. 6

C. 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.

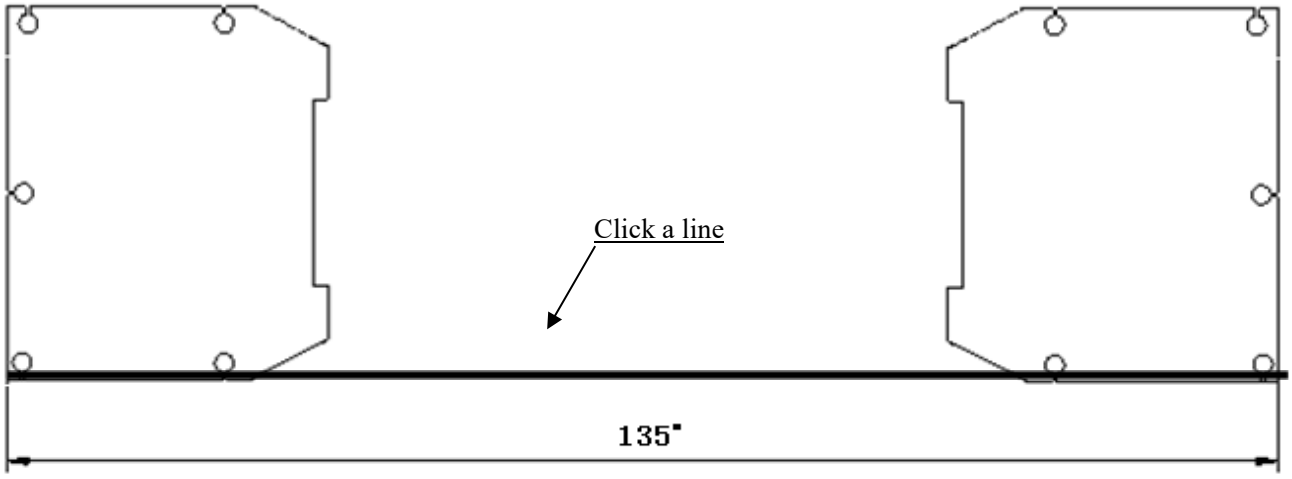
III. STEPS OF INSTALLATION

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 base-plate **(See Fig.7)**.

Model OH-10 OH-10H



C. Check the parts before assembly. **Fig. 7**

1. Packaged lift and hydraulic power unit **(See Fig. 8).**

Fig. 8

2. Move aside the lift with fork lift or hoist, and open the extension packing carefully , take off the lifting arms and parts box from upper and inside the column, then move them to location nearby installation site, check the parts according to the shipment parts list **(See Fig.9).**

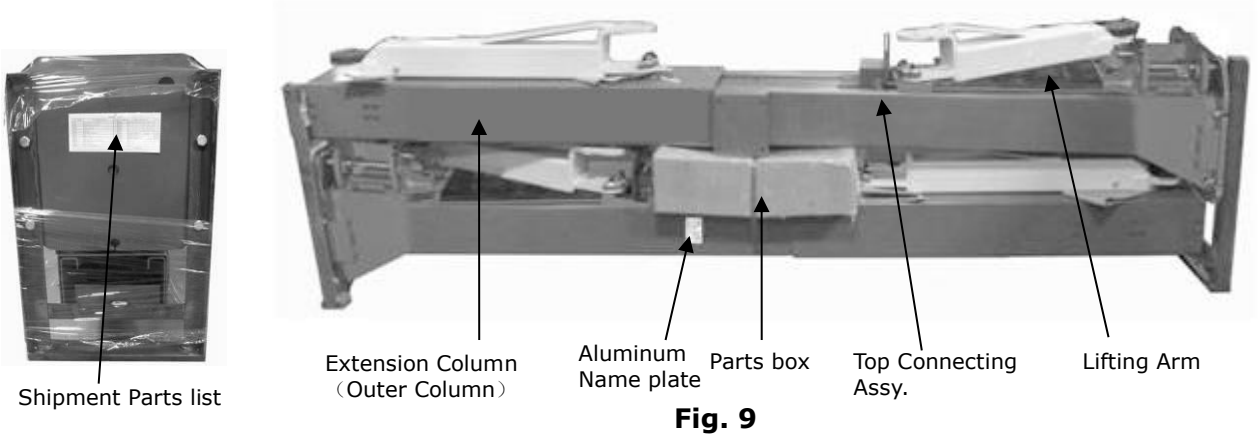


Fig. 9

3. Loosen the screws of the upper package stand, take off the upper extension columns, take out the parts in the inner column and remove the package stand

4. Move aside the parts and check the parts according to the shipment parts list **(See Fig.10, 11).**

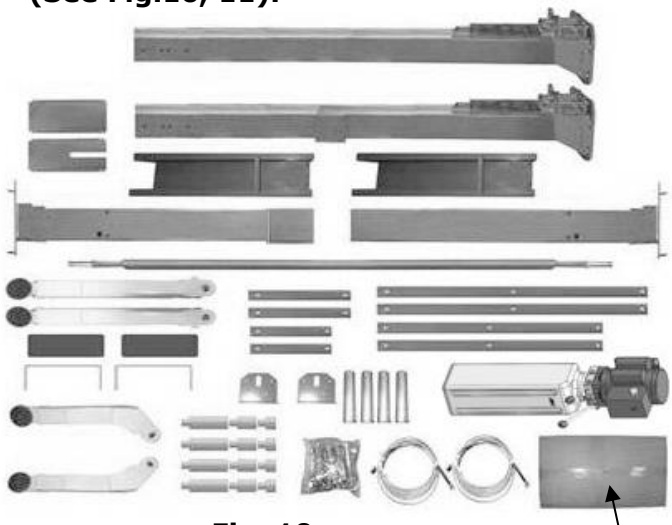


Fig. 10
Parts in the shipment parts list

Fig. 11
Parts in the parts box (95)

5. Open the bag 1 of parts and check the parts according to parts box list **(See Fig. 12).**

Fig. 12

6. Open the bag 2 of parts and check the parts according to parts bag list **(See Fig. 13).**

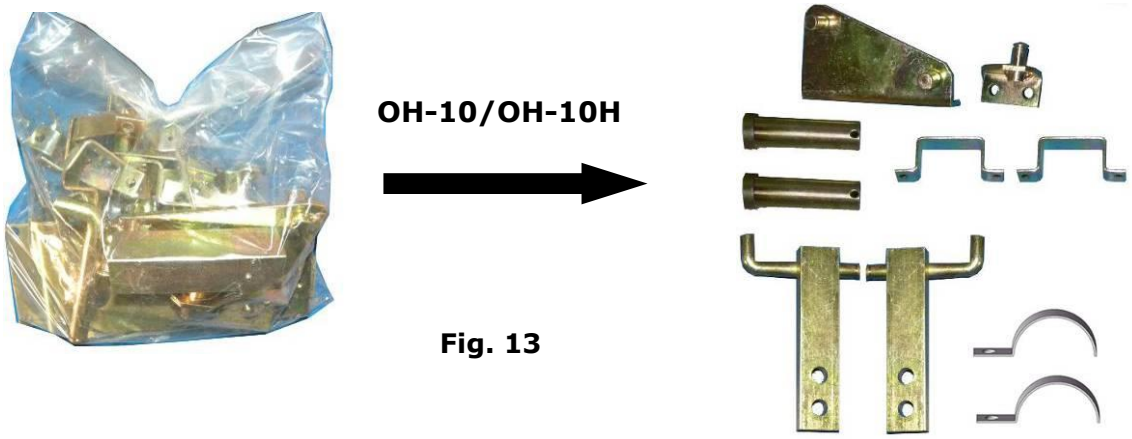


Fig. 13

D. Install parts of extension columns (See Fig. 14).

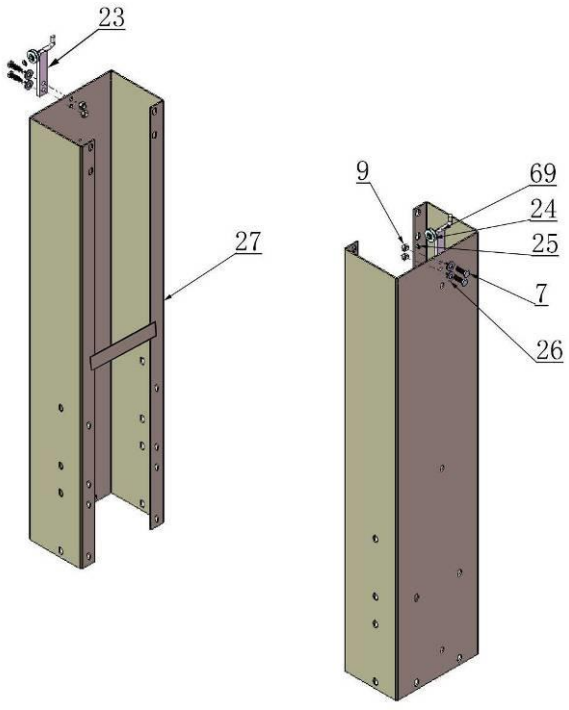


Fig. 14

E. Position powerside column

Lay down two columns on the installation site paralleled, position the power-side column according to the actual installation site. Usually, it is suggested to install power-side column on the front-right side from which vehicles are driven to the lift. This lift is designed with 2-Section columns. Adjustable height according to the ceiling height and connecting the inner and extension columns.

1. When the ceiling height is less than 151 1/2”for OH-10, 175 5/8”for OH-10H, connecting the extension columns with the upper hole **(See Fig.15)**.
2. When the ceiling height is over 151 5/8”) for OH-10, 175 5/8” for OH-10H, connecting the extension columns with the lower hole **(See Fig.16).**

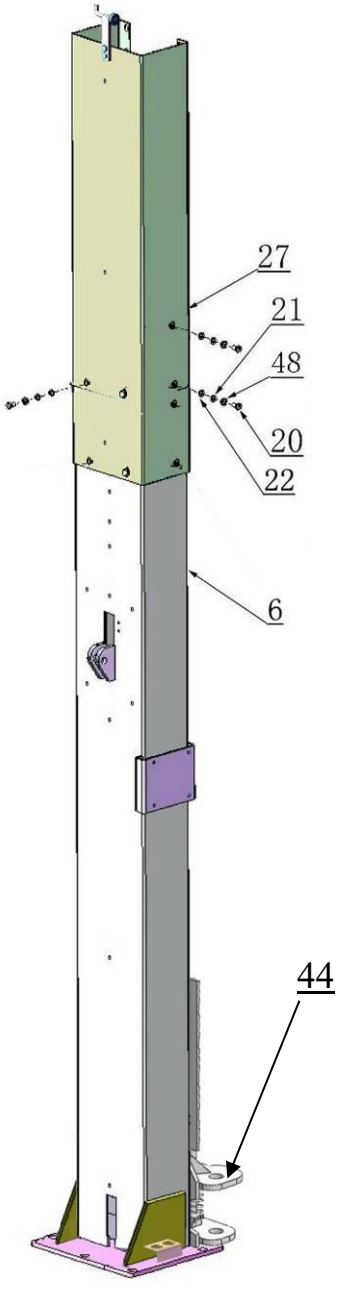


Fig. 15 Low Setting

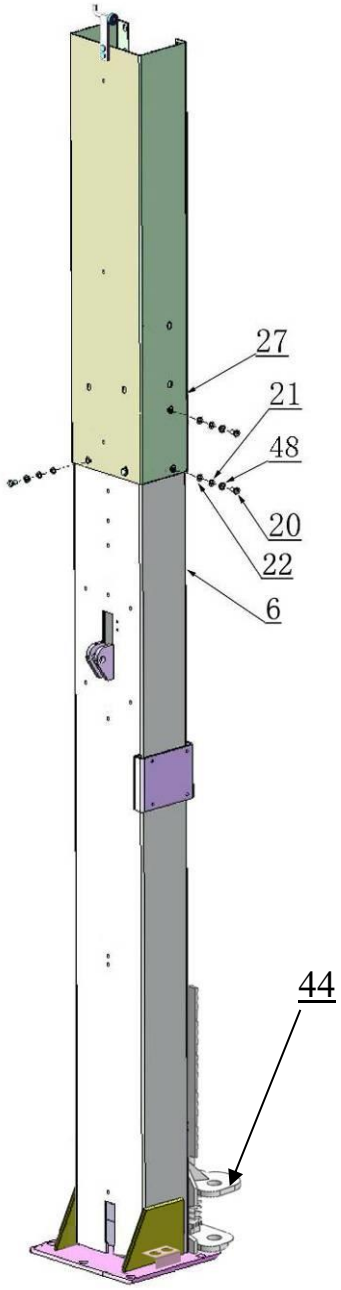
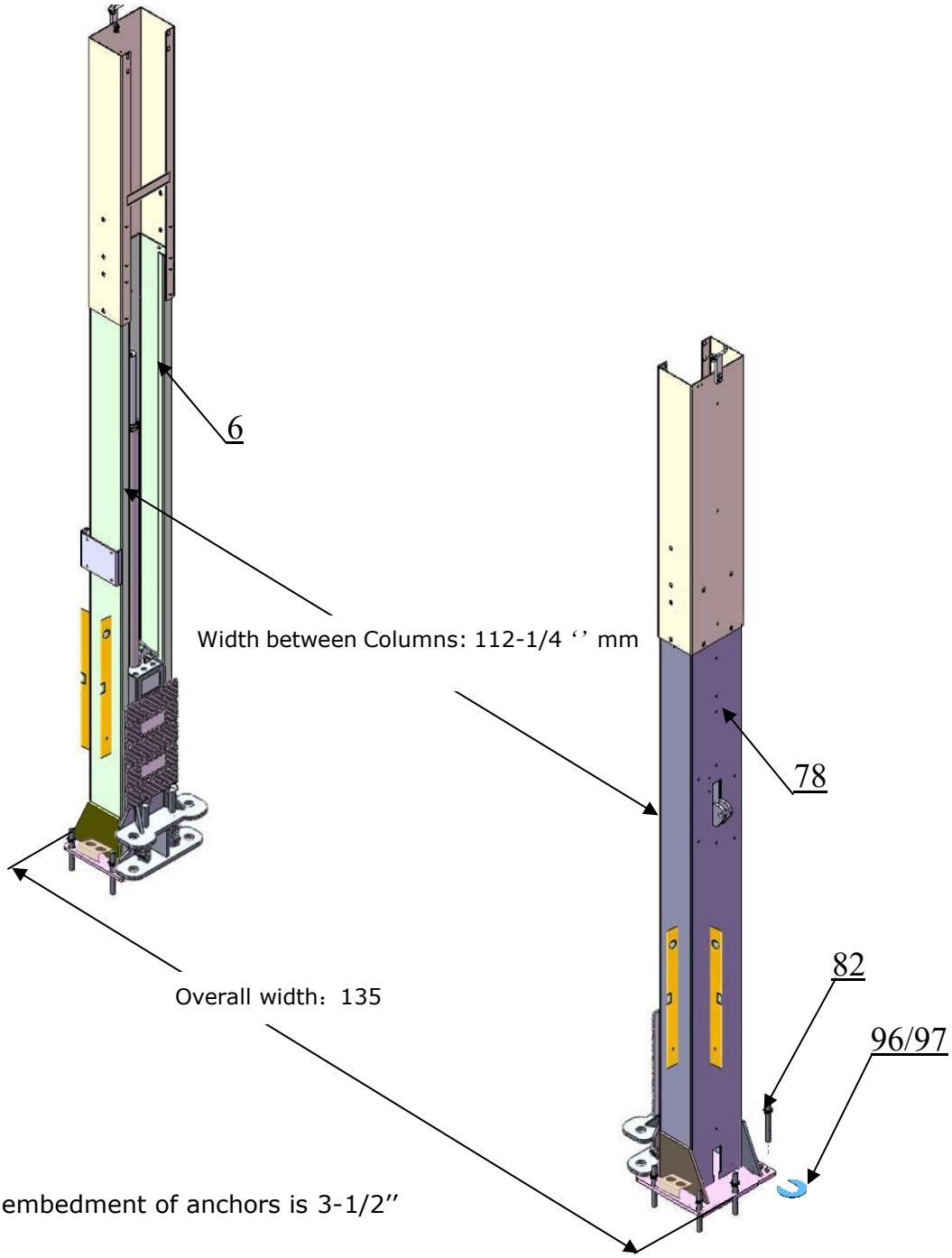


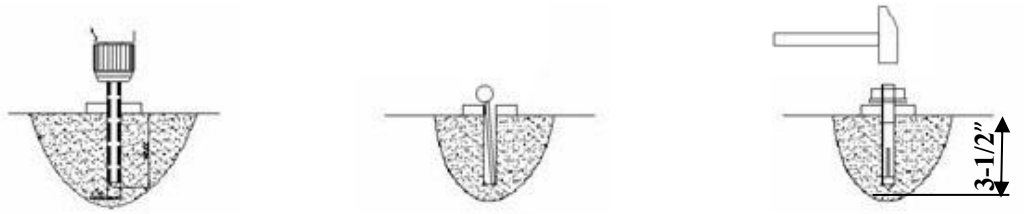
Fig. 16 High Setting

F. Position columns (See Fig. 17)

Position the columns on the installation layout of base-plate, Install the anchor bolts. Check the Columns plumpness with level bar, and adjusting with the shims if the columns are not vertical. Do not tighten the Anchor Bolts.



Note: Minimum embedment of anchors is 3-1/2”



Drilling **Cleaning** **Bolting**

Fig. 17

G. Install overhead top beam

1. With help of the hook of top beam, put one side of top beam on top of the extension column and connecting the top beam to extension column by bolts, tighten the bolts. Then assemble the connecting bracket **(See Fig. 18)**.

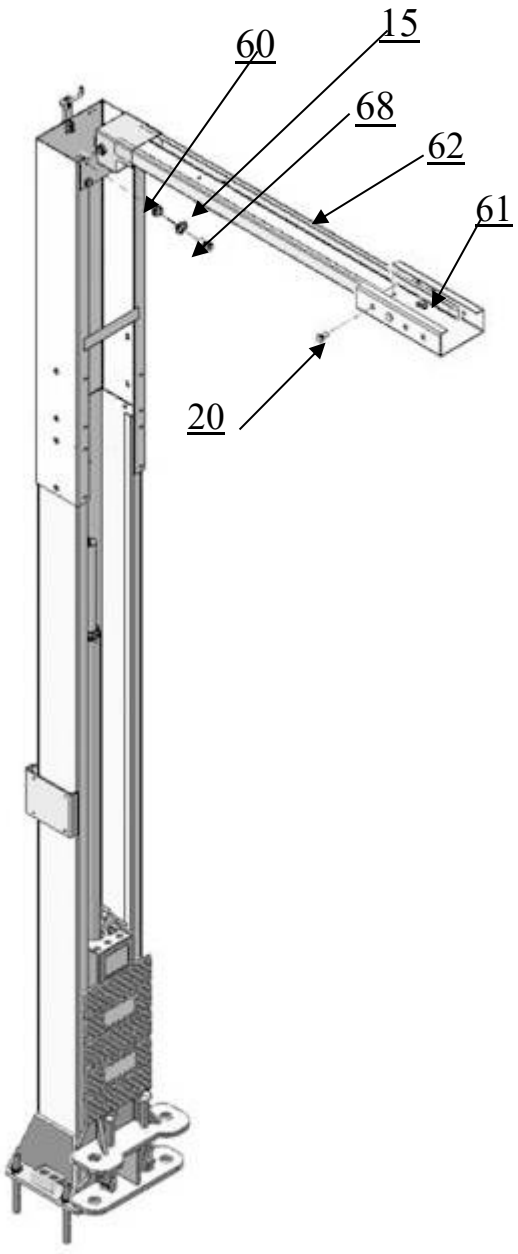
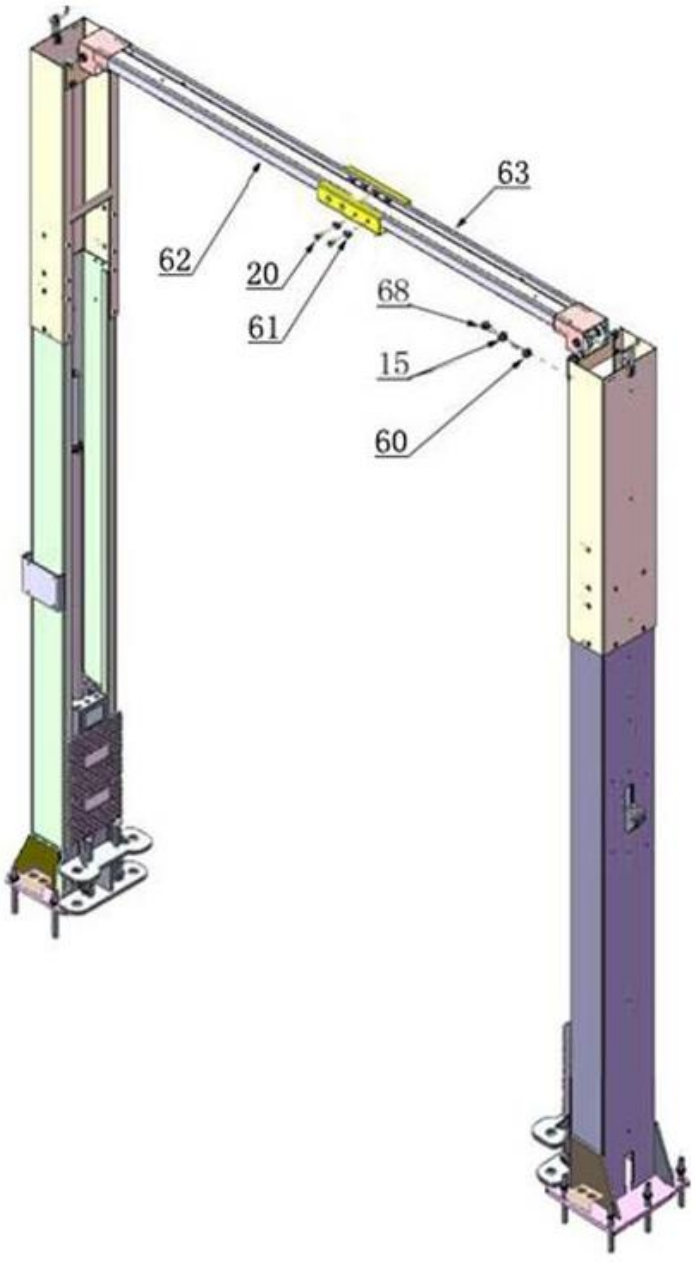
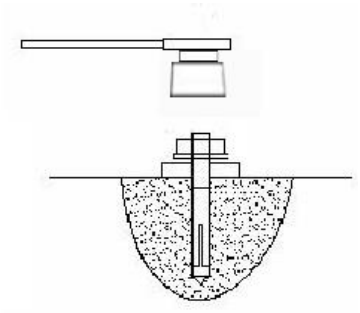


Fig. 18

2. Assemble overhead top beam, tighten the columns anchor bolts **(See Fig. 19)**.



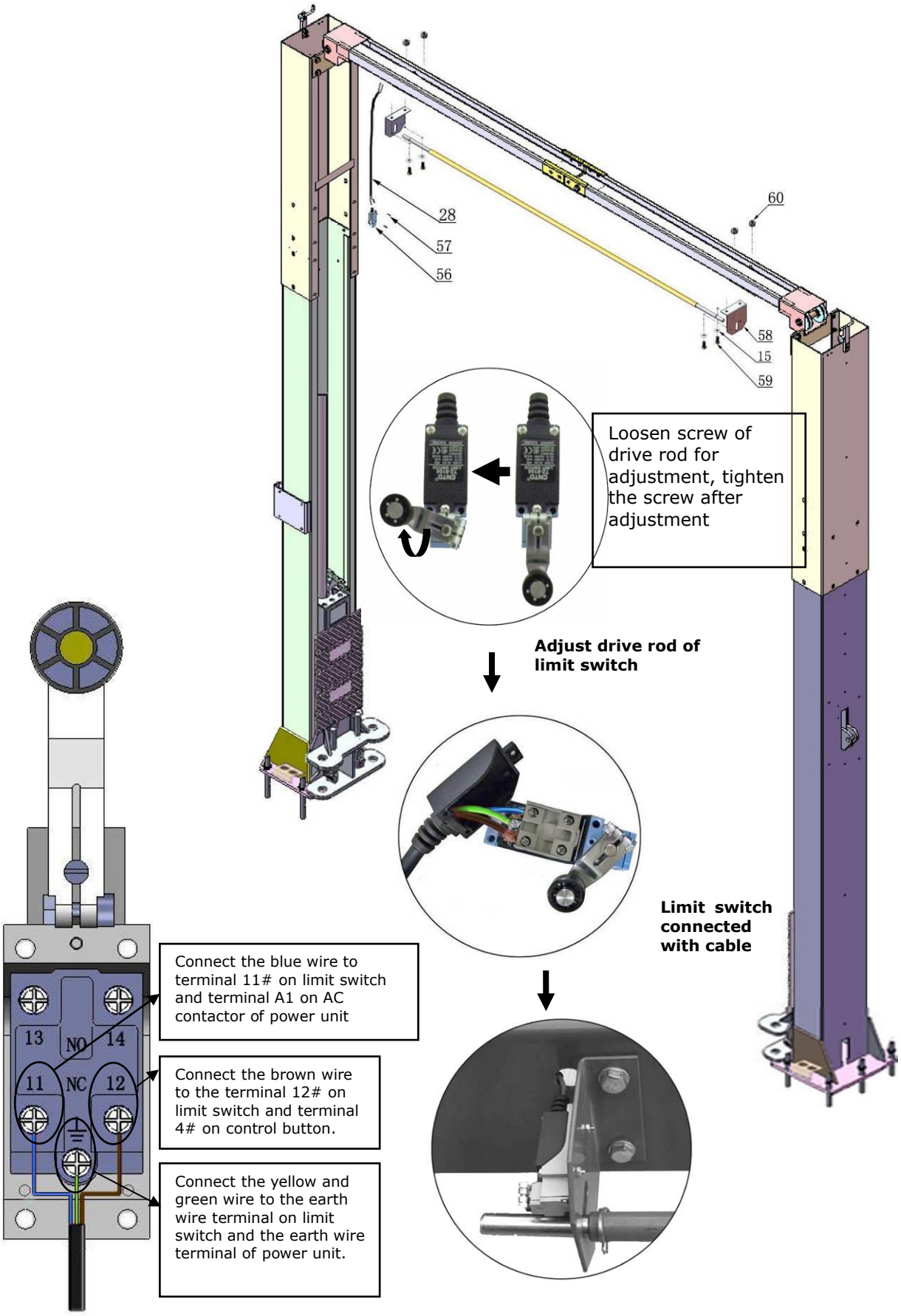


Tighten the anchor bolts with ratchet spanner with socket

Note: Torque of Anchors is 150N.m.

Fig. 19

H. Installing the limit switch control bar and limit switch (See Fig. 20).



NC: Normal contact

Fig. 20

I. Install safety device (See Fig. 21 & Fig. 22).

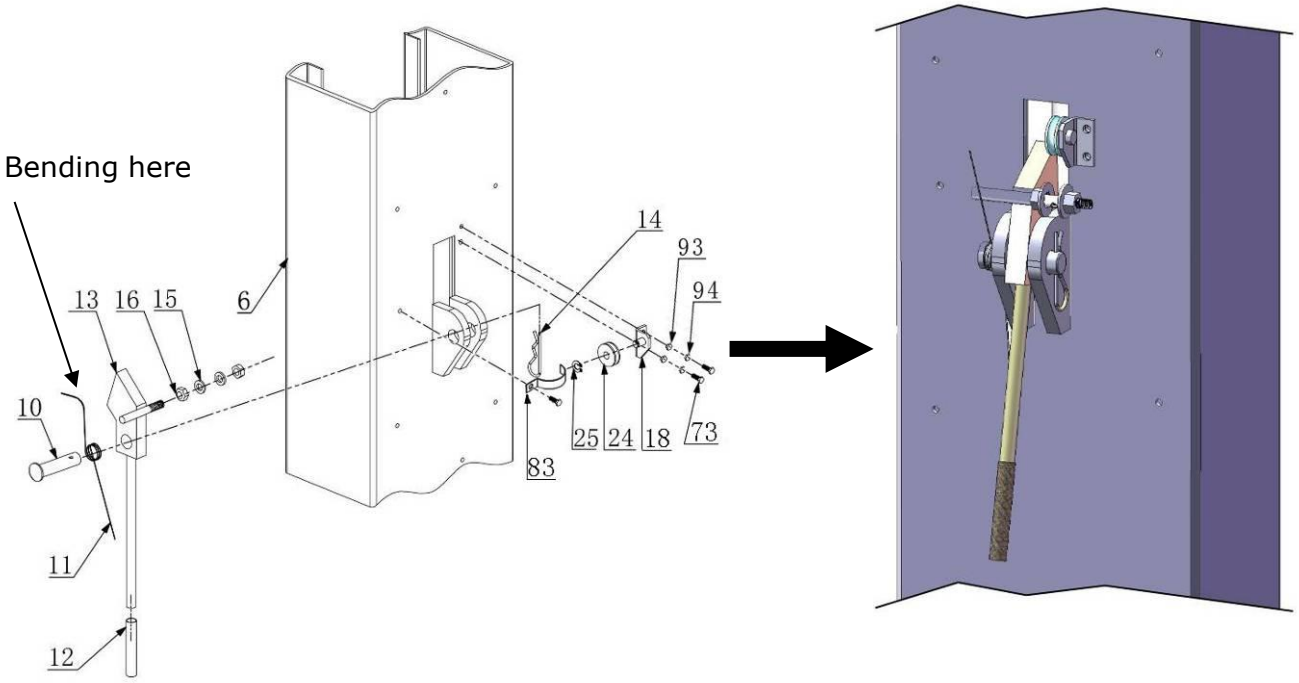


Fig. 21 Powerside Safety Device

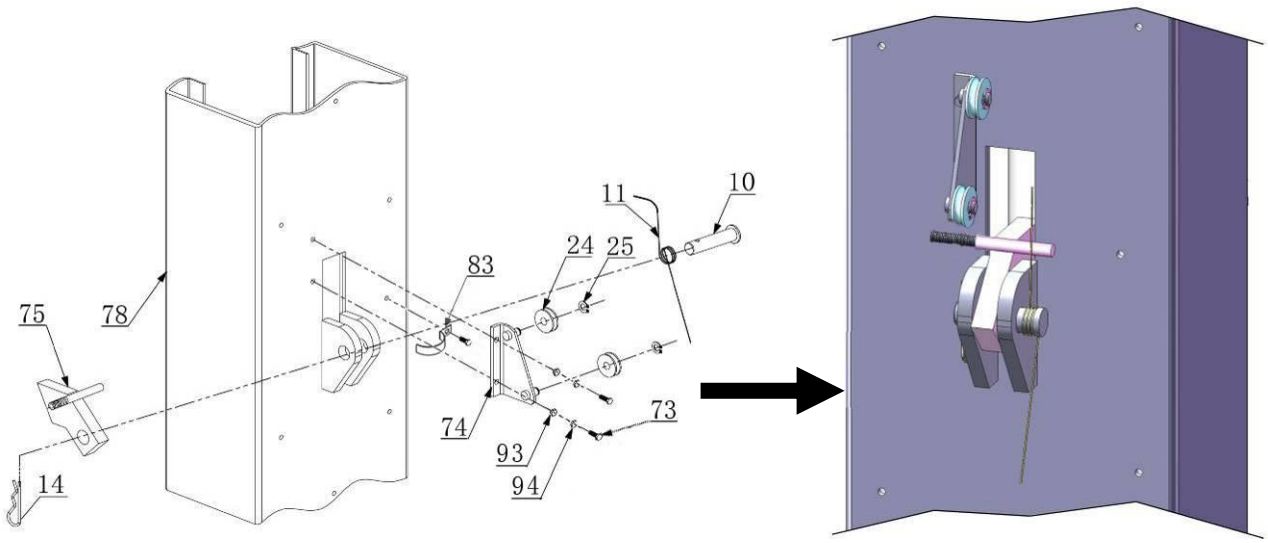


Fig. 22 Offside Safety Device

J. Lift the carriages up to about one meter high by hand and make them be locked at the same level **(See Fig. 23).**

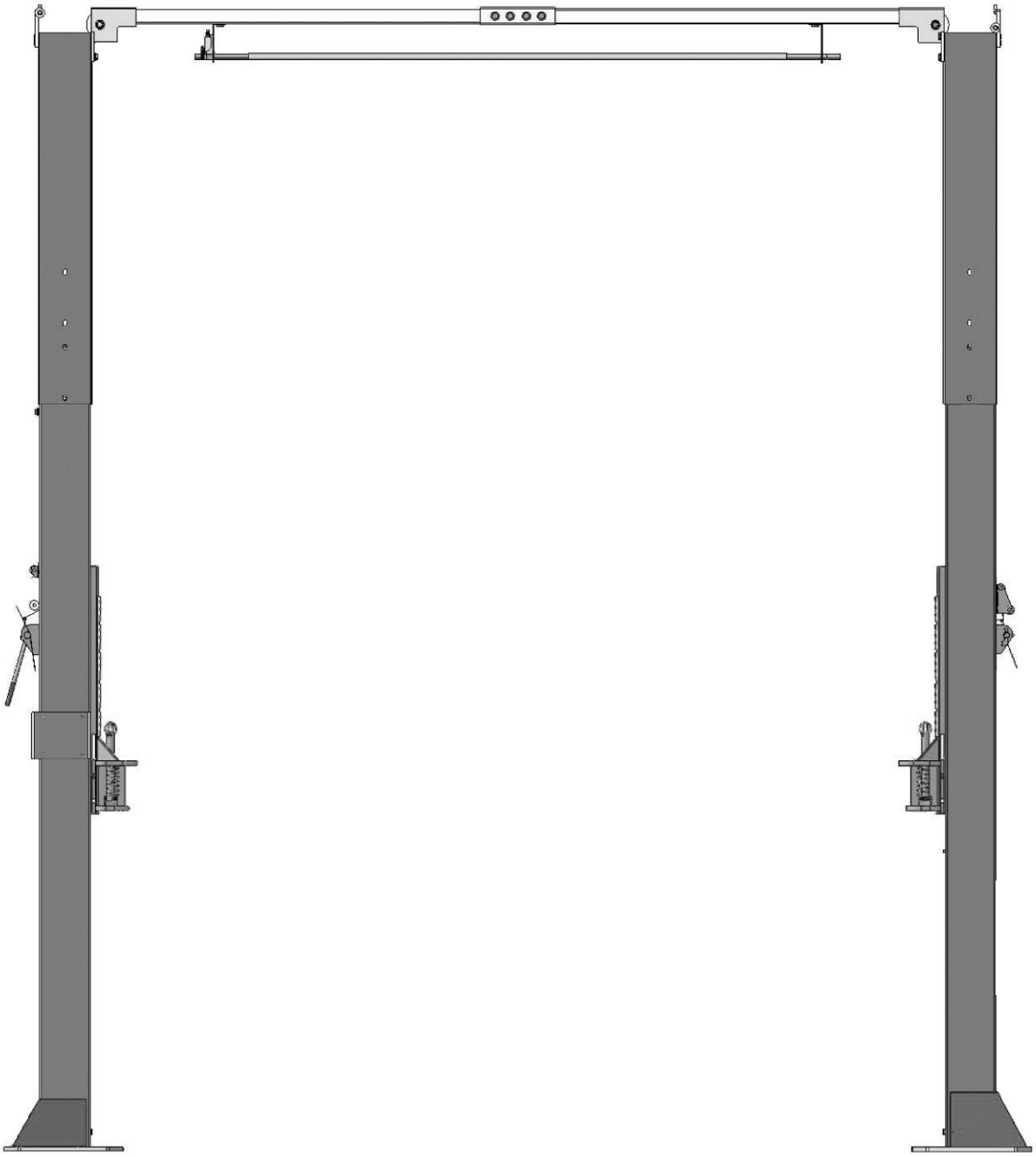


Fig. 23

K. Install cables

1. Low setting cable connection **(See Fig. 24).**

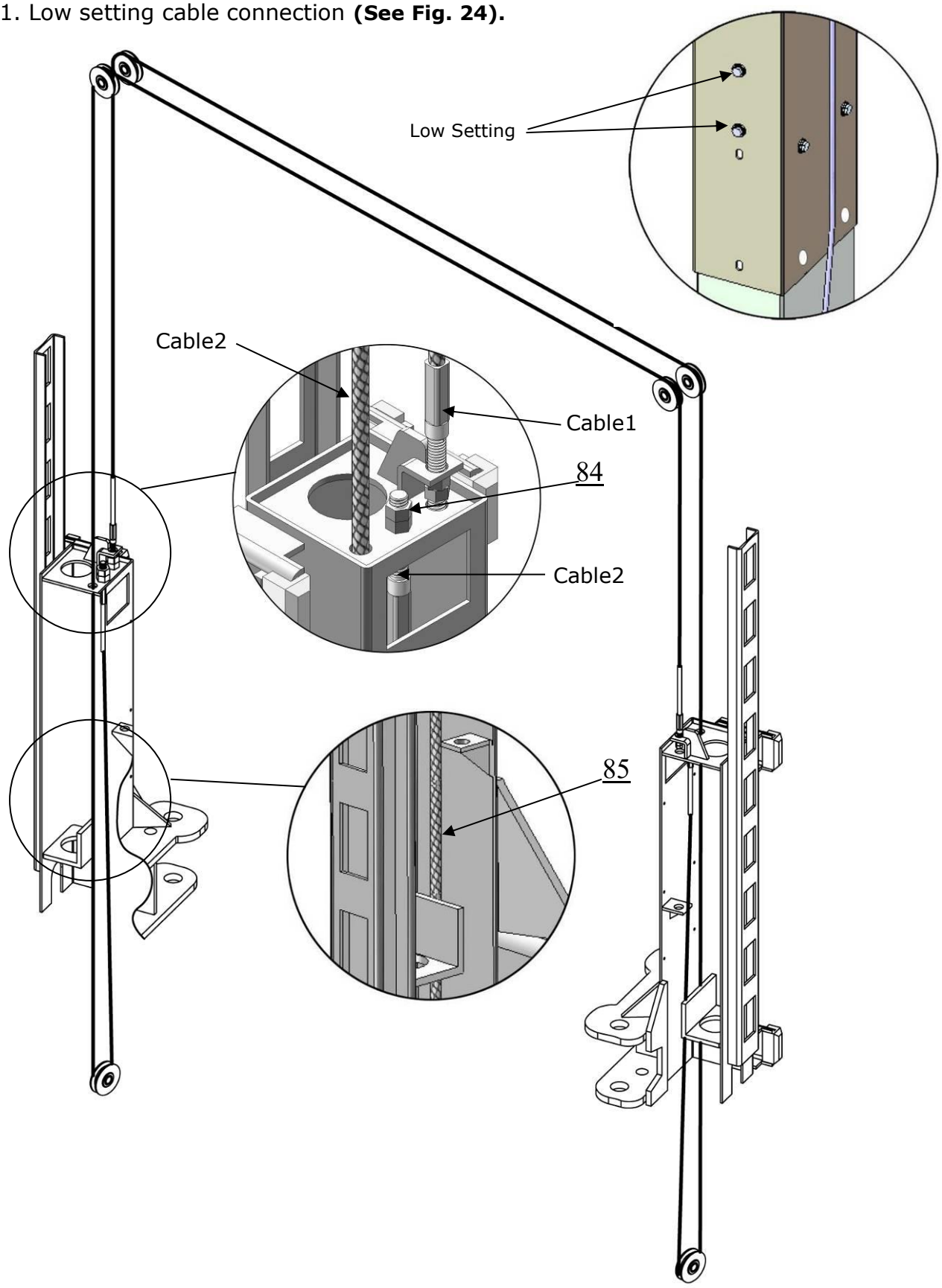


Fig. 24

2. **High setting cable connection**

2.1. Cable pass through from the bottom of the carriages and be pulled out from the open of carriages, then screw the two cable nuts **(See Fig. 25).**

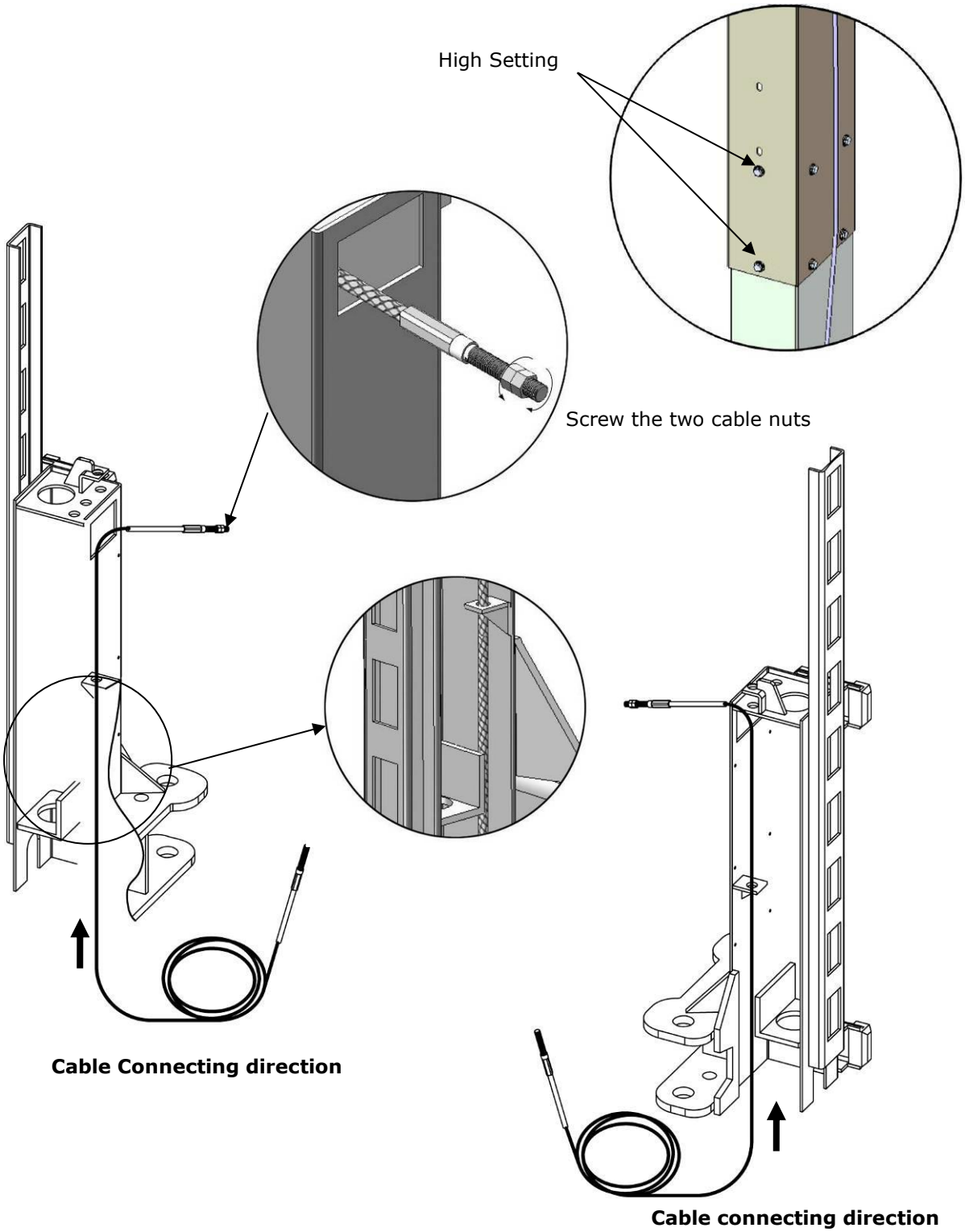


Fig. 25

2.2 Connecting cable for high setting **(See Fig. 26).**

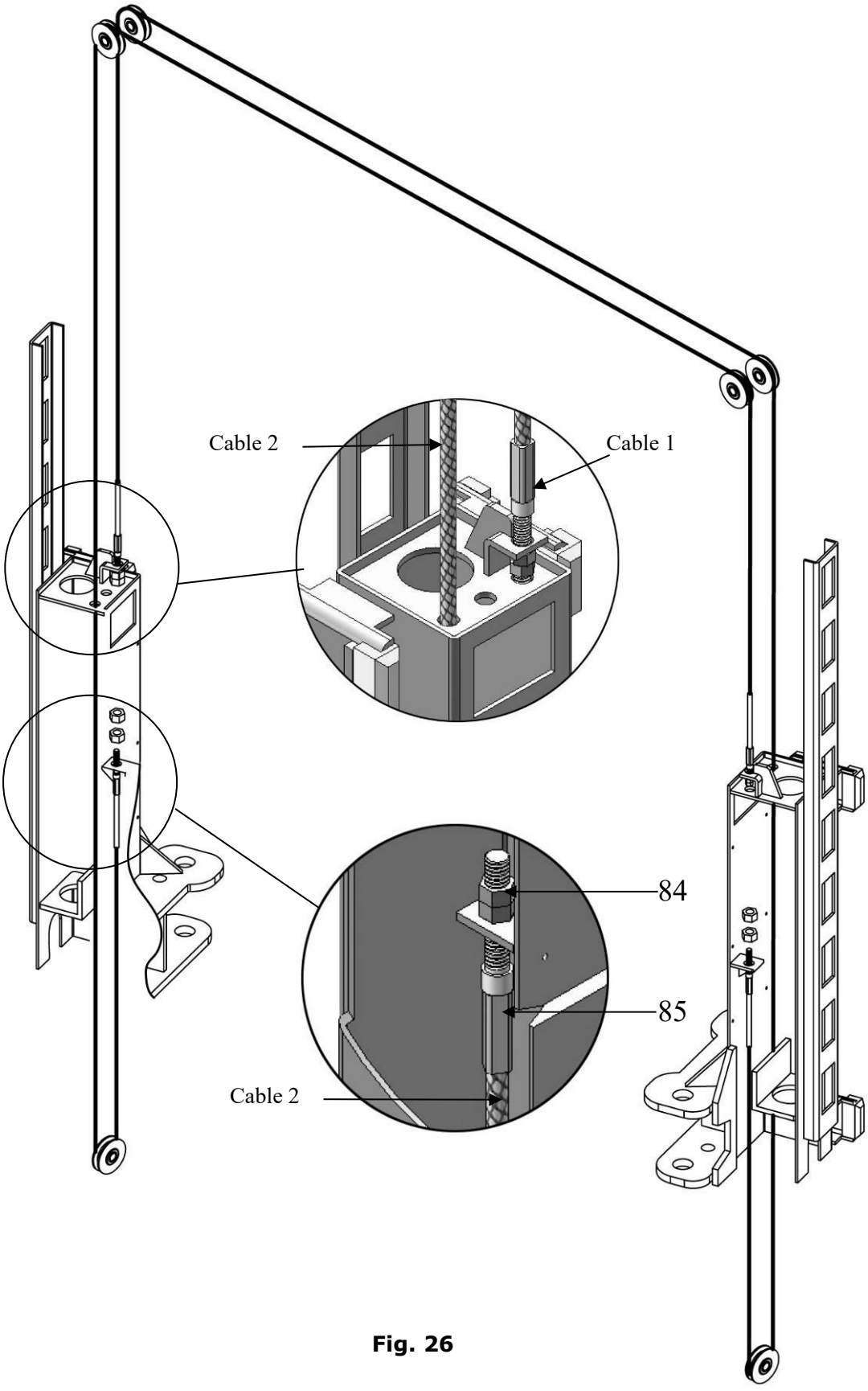


Fig. 26

L. Install hydraulic power unit and oil hose assy. (See Fig. 27).

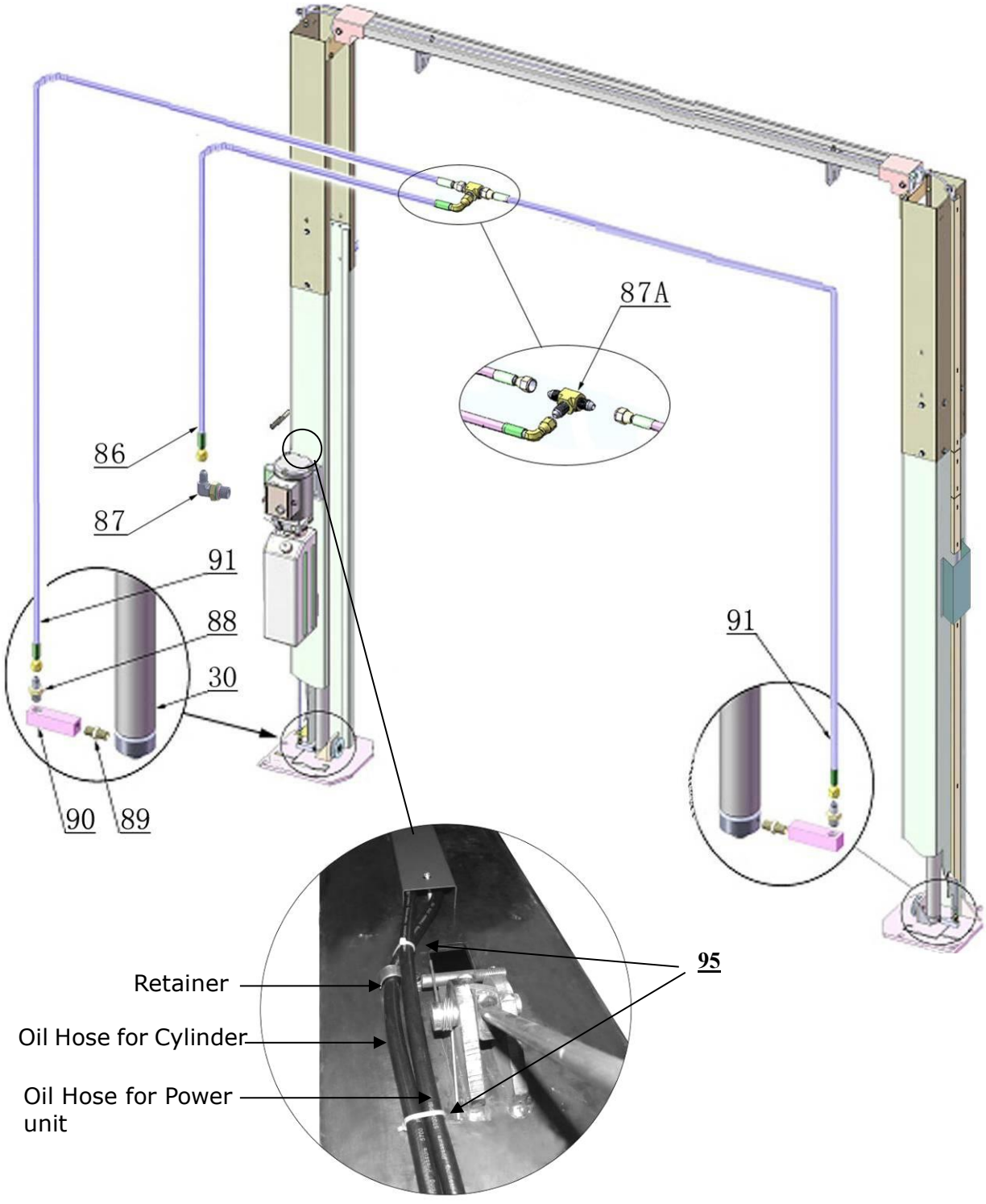


Fig. 27

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

M. Install safety cable (See Fig. 28)

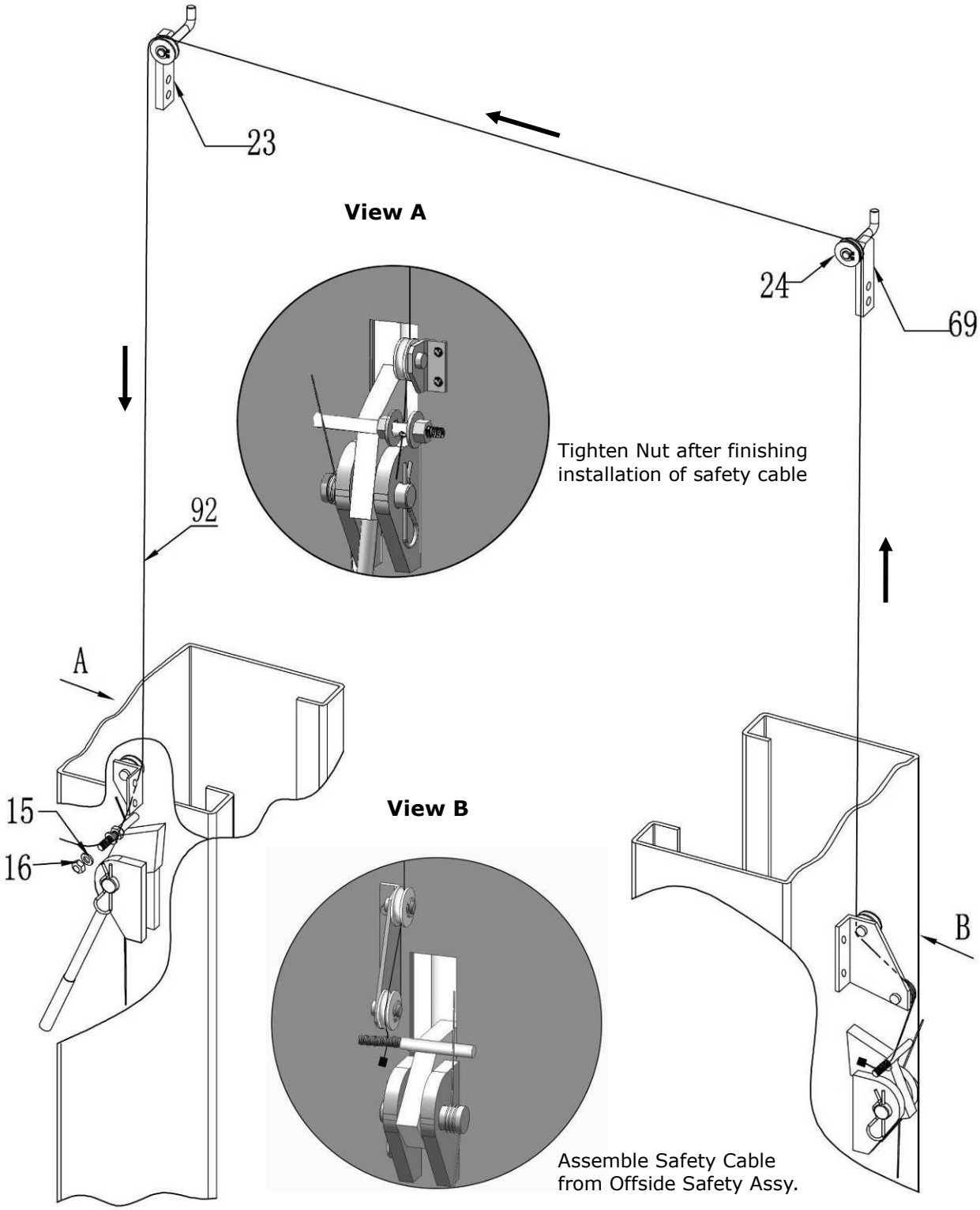
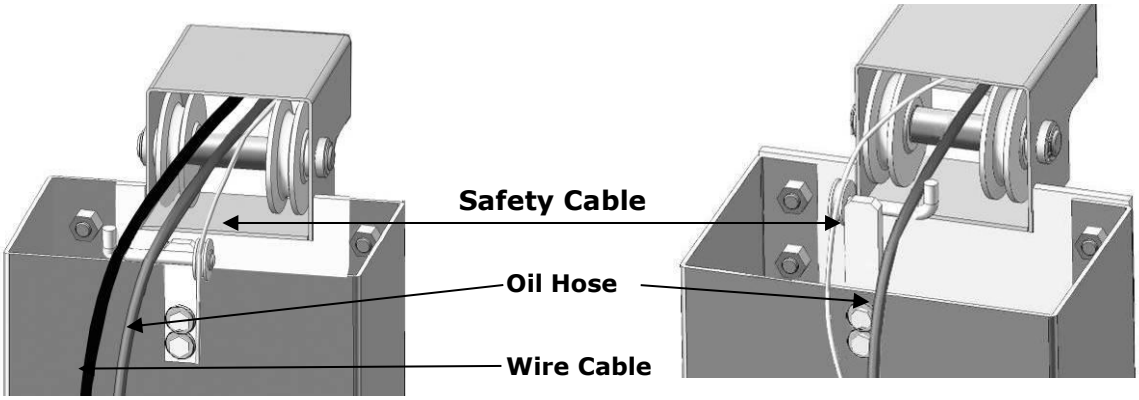


Fig. 28

N. Oil Hose & Protective Covers

1. Install Oil Hose.

Note: Don't cross the oil hose and safety cable together **(See Fig. 29 & Fig. 30).**

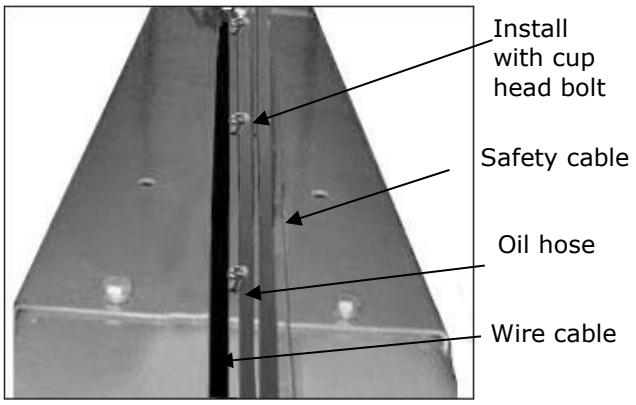


Powerside Safety Device
Fig. 29

Offside Safety Device
Fig. 30

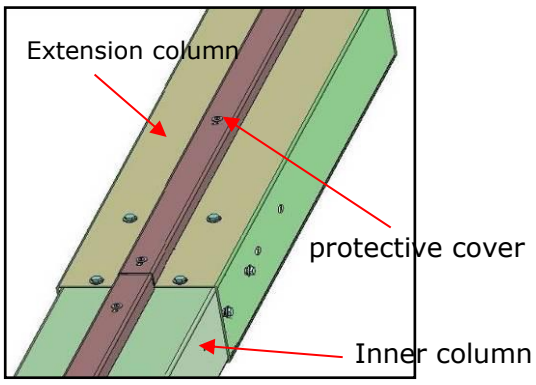
2. Install safety cable, oil hose and protective cover **(See Fig. 31 & Fig. 32 & Fig. 33)**.

Note: Install the protective cover on the extension column with M6*35 cup head bolt, Install the protective cover on the inner column with M6*40 cup head bolt.



Before install the wire protective cover

Fig. 31



After install the wire protective cover

Fig. 32

The safety cable cannot put inside cable clamp on top of overhead beam

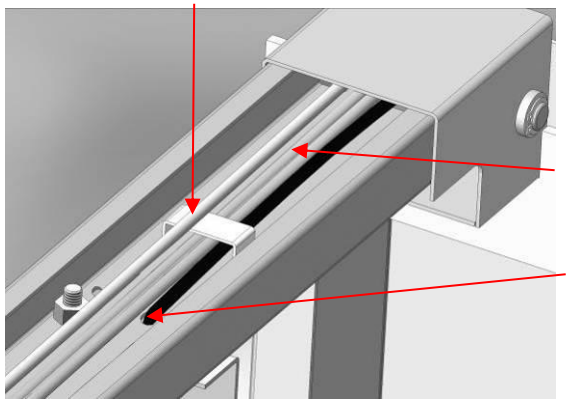


Fig. 33

O. Install lifting arms and adjust the arm locks.

1. Install the lifting arms **(See Fig. 34).**
2. Lowing the carriages down to the lowest position, then use the 8# socket head wrench to loosen the socket bolt **(See Fig. 35).**

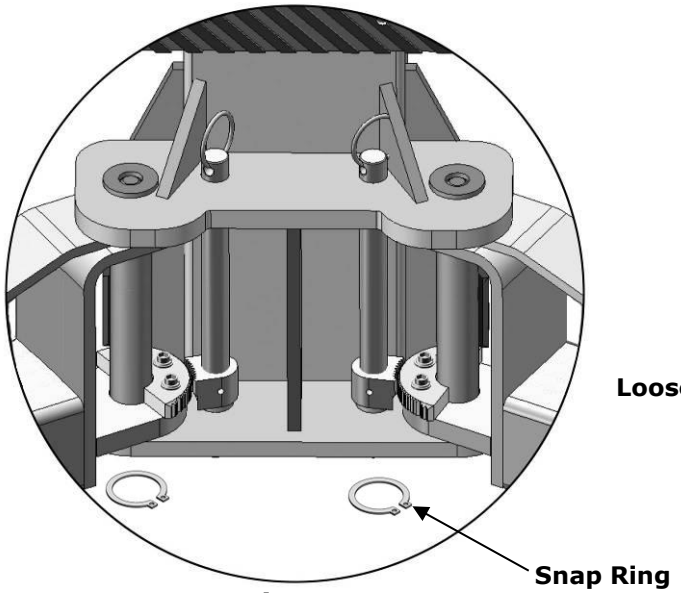
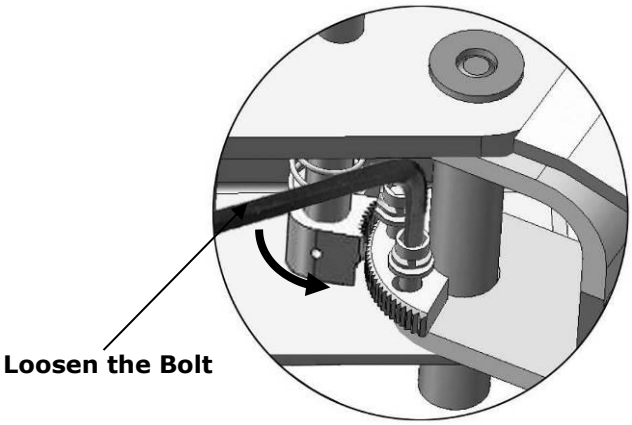


Fig. 34



Use the 8# Socket Head Wrench to loosen the Socket Bolt

Fig. 35

3. Adjust the arm lock as direction of arrow **(See Fig. 36)**

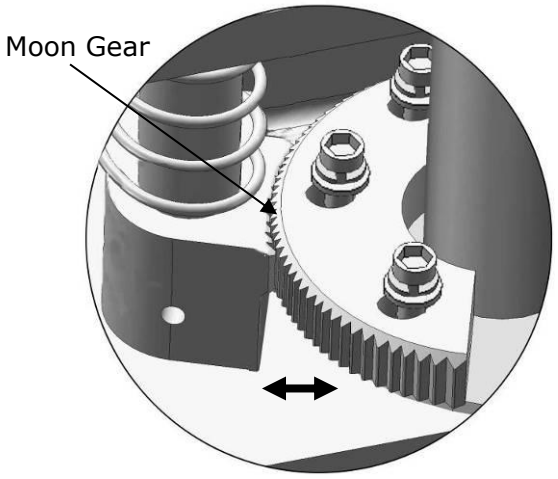


Fig. 36

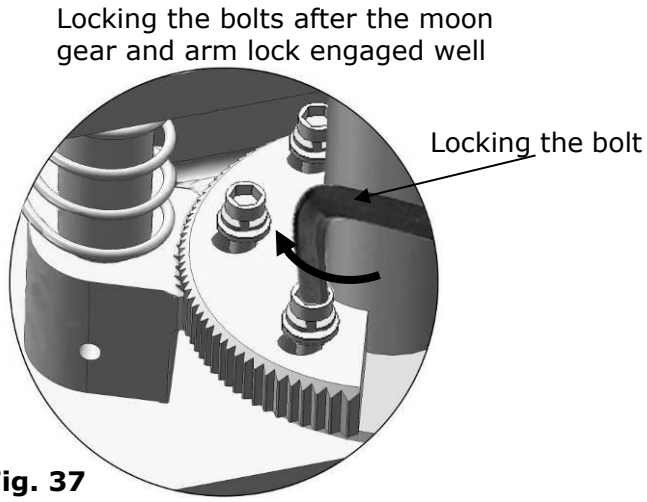


Fig. 37

4. Adjust moon gear and arm lock to make it to be meshed, then tighten the socket bolts of arm lock **(See Fig. 37).**

P. 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#.

Q. Install electrical system

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

Note: 1. Install well the limit switch.

2. For the safety of operators, the power wiring must contact the floor well.

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

Single phase motor (See Fig. 38).

1. Connecting the two power supply wires (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. Terminal **4#** of control button is connected with terminals **A1**of AC contactor; Terminal **3#** of control button is connected with terminals **L1**of AC contactor.

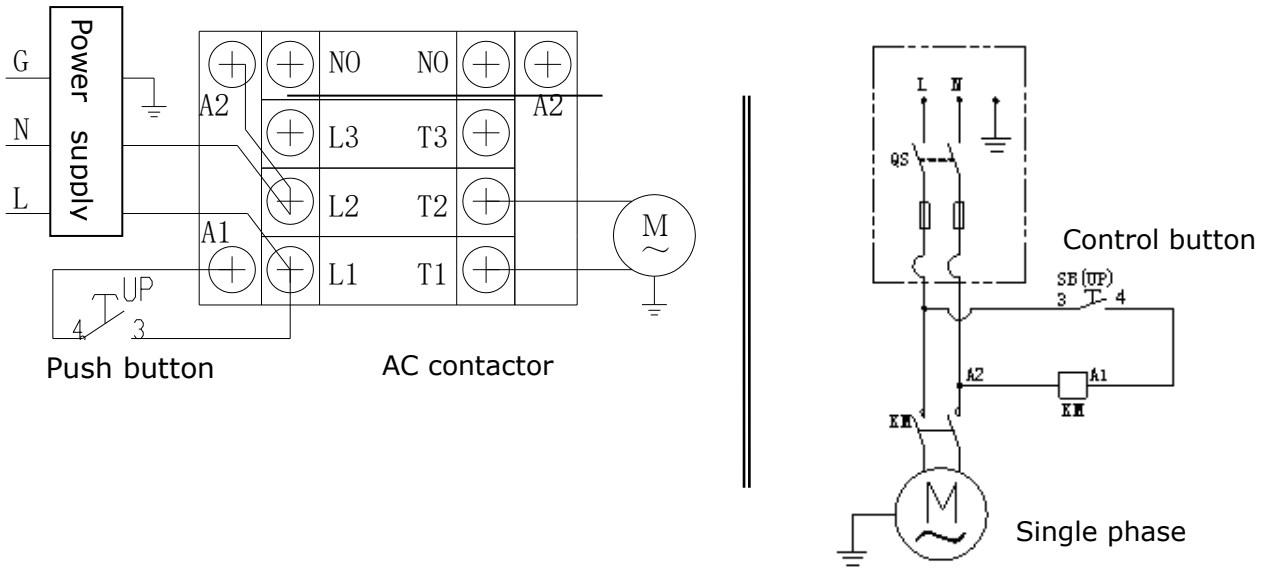


Fig. 38

IV. EXPLODED VIEW

Model OH-10/OH-10H

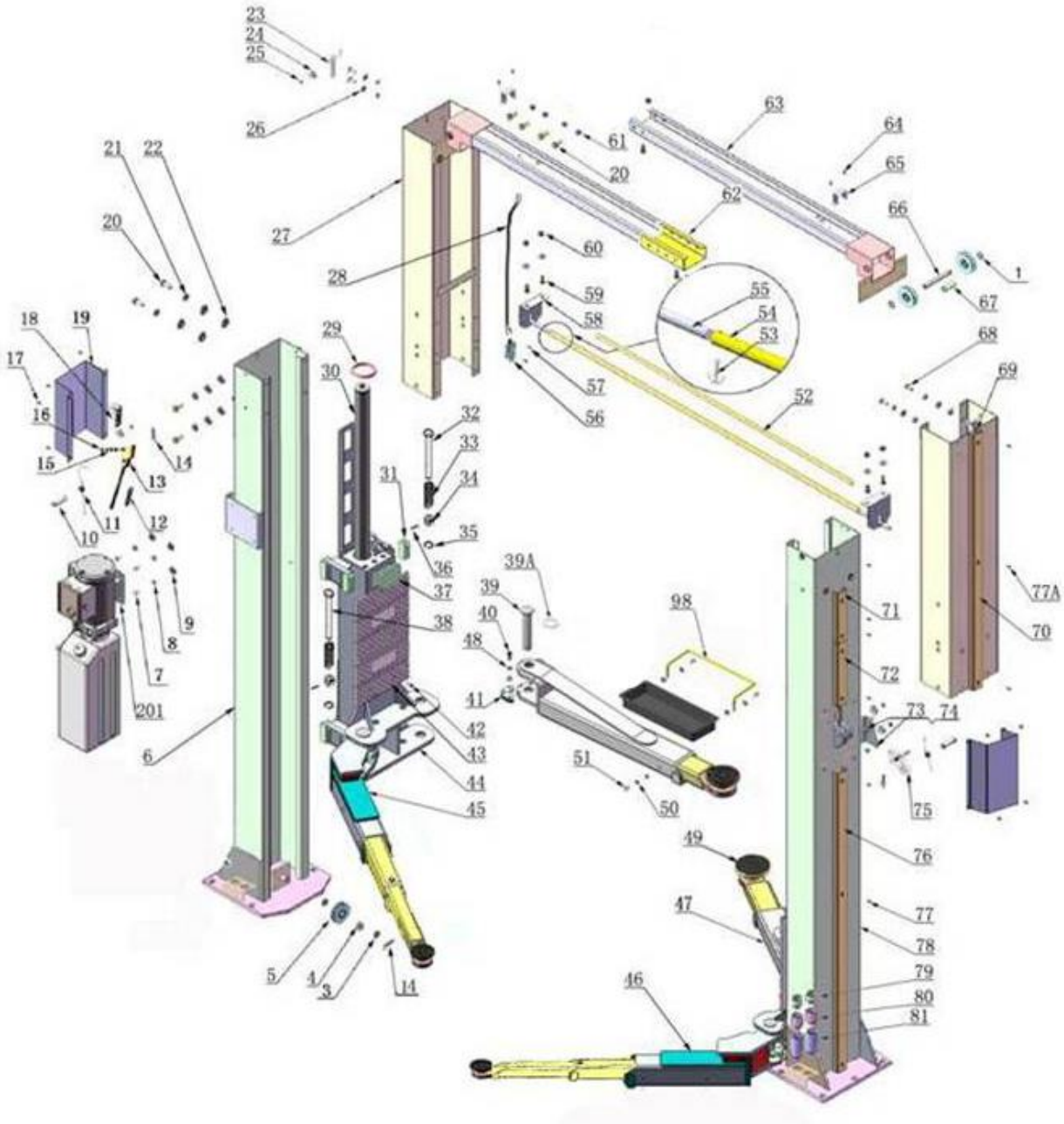


Fig. 39

Cylinders

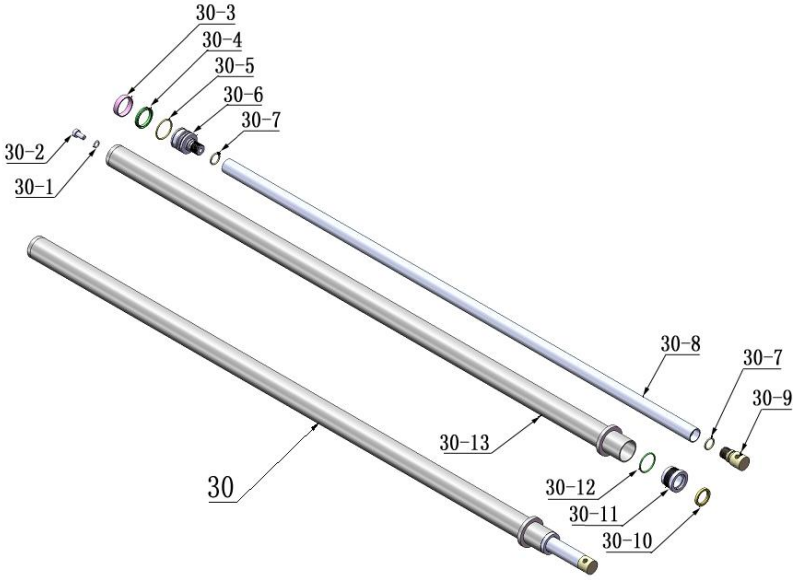
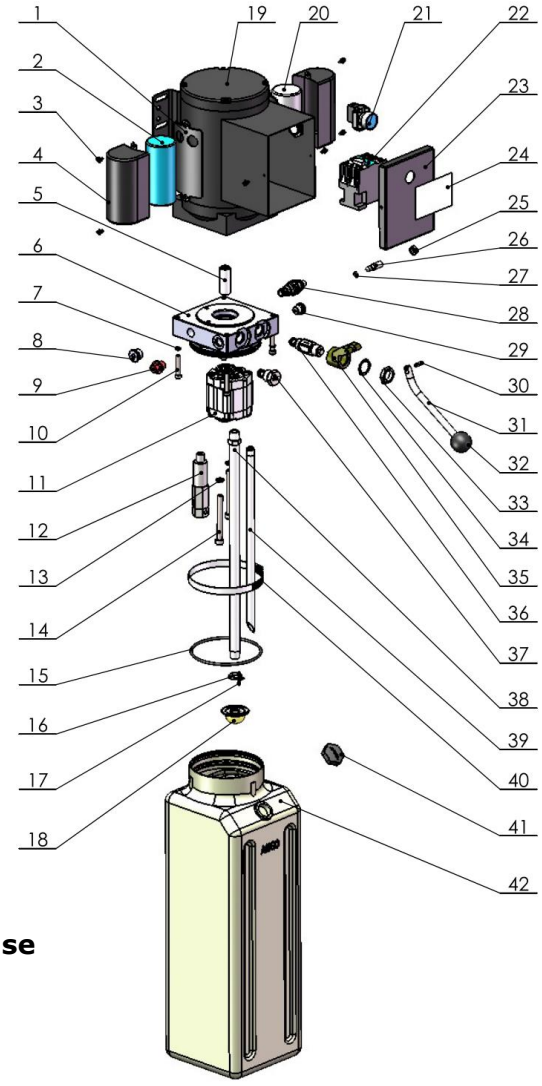


Fig. 40

Manual power unit



220V/6Hz/1 phase

Fig. 41

Illustration of hydraulic valve for hydraulic power unit 220v 60Hz Single phase(See Fig. 42)

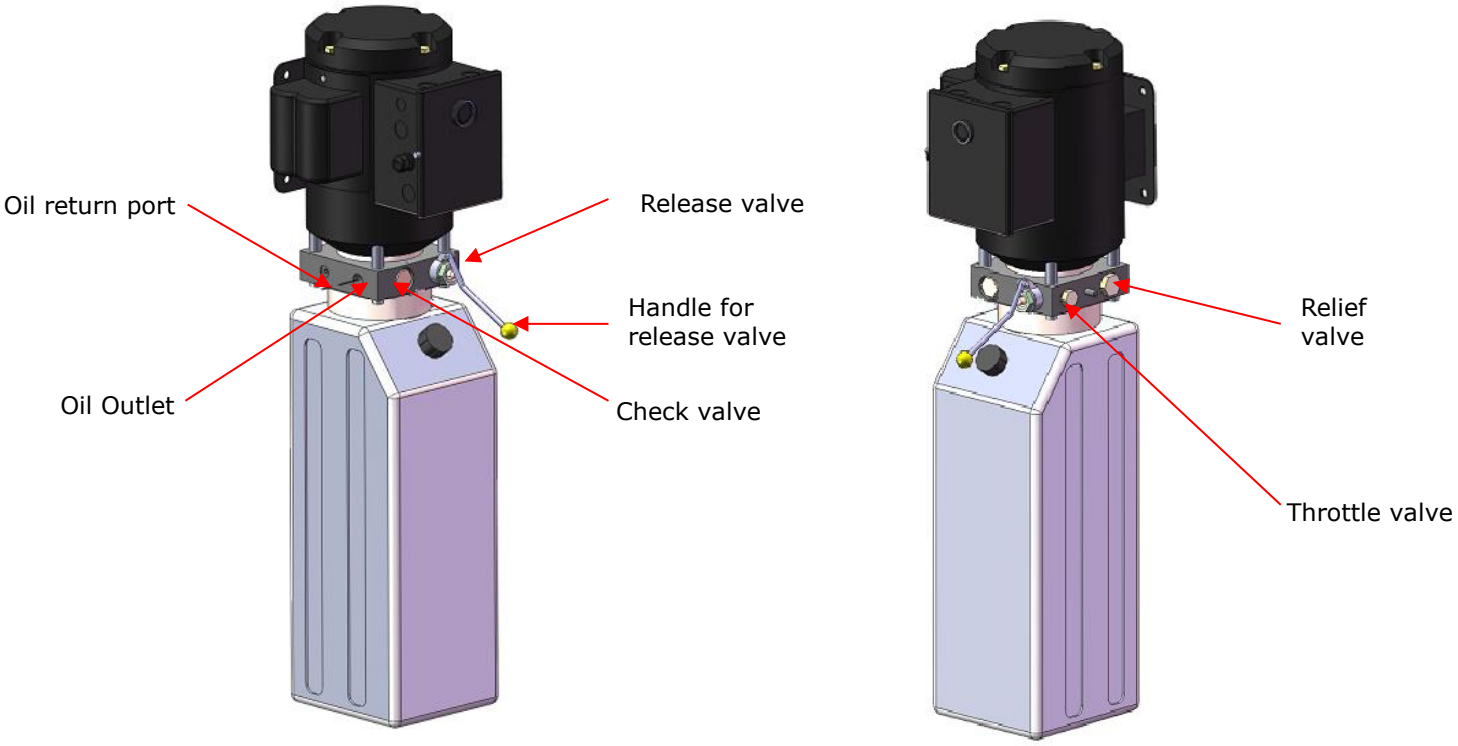


Fig 42

V. TEST RUN

1. Adjust synchronous cable (See Fig. 43)

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 so that two carriage can work synchronously. Fit the plastic hole cover on the lifting head.

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

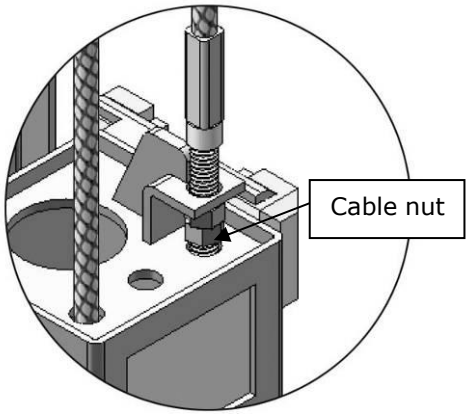


Fig. 43

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. Bleeding air

This hydraulic system is designed to bleeding air by loosing the bleeding plug. Lifting the carriages to about 1 meter height, and loose the bleeding plug, the air would be bled automatically, then tighten the plug after bleeding, the lift would work stably and smoothly, otherwise repeat bleeding **(See Fig. 44)**

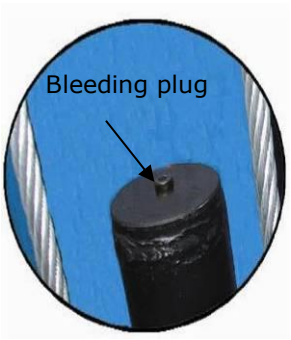
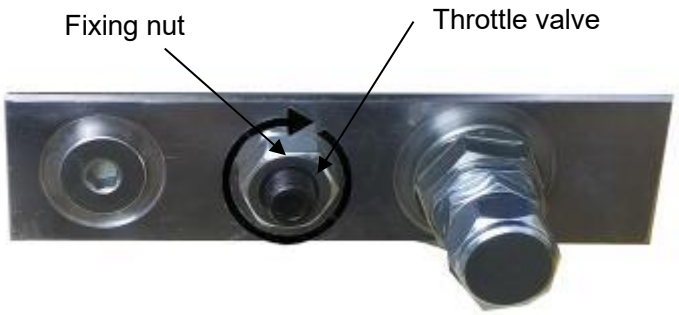


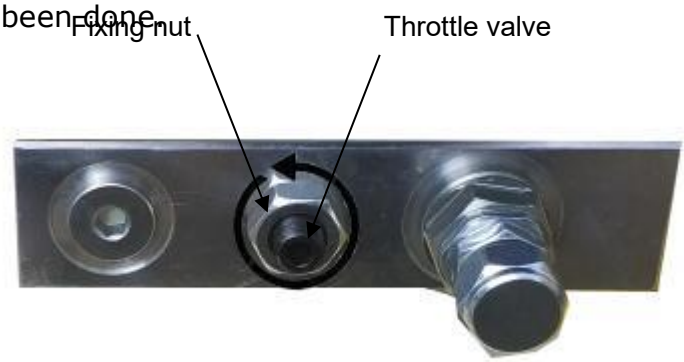
Fig. 44

4. Adjust the lower speed

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



Clockwise to decrease the lower speed



Counterclockwise to decrease the lower speed

Fig. 45

5. 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.

Hydraulic System

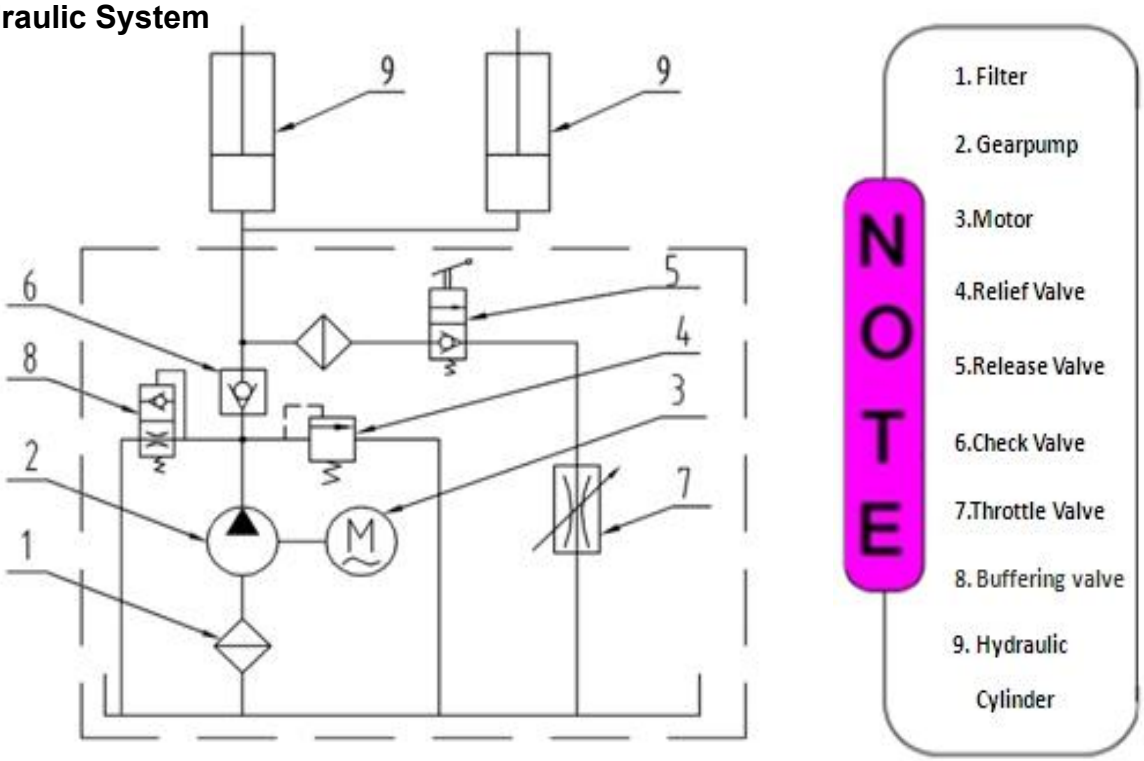


Fig.46

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 contact the vehicle's lifting point at the same time where manufacturers recommended
7. Push button **UP** until the lift pads contact underside of vehicle totally. Recheck to make sure vehicle is secure;
8. Continue to raise the lift slowly to the desired working height, ensuring the balance of vehicle;
9. Push lowering handle to lower lift onto the nearest safety. The vehicle is ready to repair.

To lower vehicle

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

VII.MAINTENANCE SCHEDULE

Monthly:

1. Re-torque the anchor bolts to 150 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	1. Button does not work 2. Wiring connections are not in good condition 3. Motor burned out 4. Height Limit Switch is damaged 5. AC contactor burned out	1. Replace button 2.Repair all wiring connections 3. Repair or replace motor 4.Replace the Limit Switch 5. Replace AC Contactor
Motor runs but the lift is not raised	1. Motor runs in reverse rotation 2. Gear Pump out of operation 3. Release Valve in damage 4. Relief Valve or Check Valve in damage 5. Low oil level	1.Reverse two power wire 2.Repair or replace 3. Repair or replace 4.Repair or replace 5.Fill tank
Lift does not stay up	1. Release Valve out of work 2. Relief Valve or Check Valve leakage 3. Cylinder or Fittings leaks	Repair or replace
Lift raises slowly	1. Oil line is jammed 2. Motor running on low voltage 3. Oil mixed with air 4. Gear Pump leaks 5. Overload lifting	1. Clean the oil line 2. Check Electrical System 3. Fill tank 4. Replace Pump 5. Check load
Lift cannot lower	1. Safety device are in activated 2. Release Valve in damage 3. Safety cable broken 4. Oil system is jammed	1. Release the safeties 2. Repair or replace 3. Replace 4. Clean the oil system

IX. PARTS LIST FOR OH-10nd OH-10H

Item	Part#	Description	Qty.		Note
			OH-9	OH-9H	
1	10206019	Snap Ring	4	4	
2	10206156	Tool tray	2	2	
3	10209128	Washer φ19	4	4	
4	10209057B	Bronze Bush For Pulley	6	6	
5	11206020	Pulley	6	6	
6	11279001	Power-side Inner Column assembly	1	1	
201	071101	Manual Power Unit	1	1	
7	10209003	Hex Bolt	8	8	
8	10209004	Rubber Ring	4	4	
9	10209005	Self locking Nut	8	8	
10	11206002	Safety Pin	2	2	
11	10209007A	Safety Spring	2	2	
12	10206003A	Handle Protective Plastic cushion	1	1	
13	11206004	Power-side Safety Lock assembly	1	1	
14	10209012	Hair Pinφ3.2	4	4	
15	10206006	Washer	22	22	
16	10206023A	Hex Nut	2	2	
17	10209009	Cup Head Bolt	10	10	
18	11206004A	Safety Pulley Bracket with 2 assembly	1	1	
19	10206081	Safety Cover assembly	2	2	
20	10209126	Hex Bolt	24	24	
21	10209022	Washer	52	52	
22	10209021	Hex Nut	20	20	
23	11206010	Safety Pulley Bracket assembly	1	1	
24	10206009	Plastic Pulley	5	5	
25	10209010	Snap Ring	5	5	
26	10209033	Washer	16	16	
27	11279003	Extension Column	2	0	
	11279008		0	2	
28	10206137	Wire Cable	1	0	
	10206138		0	1	
29	10209111	Protective Ring For Cylinder	2	2	
30	11217056	Hydraulic Cylinder	2	2	
31	10209015	Slider Block	16	16	
32	11206046A	Arm Lock Bar (left)	2	2	
33	10206050A	Spring	4	4	

34	10217044	Arm Lock	4	4	
35	10206032	Snap Ring φ25	4	4	

Item	Part#	Description	Qty.		Note
			OH-9	OH-9H	
36	10206036	Hair Pin φ6*40	4	4	
37	10209016	Carriage Plastic Cover	2	2	
38	11206046B	Arm Lock Bar (right)	2	2	
39	11217168	Arm Pin assembly	4	4	
39A	10520023	Snap Ring	4	4	
40	10206048	Socket Bolt	12	12	
41	11206049	Moon Gear	4	4	
42	10209019	Screw	12	12	
43	10209018	Protective Rubber	2	2	
44	11279004	Carriage	2	2	
45	10279010	Outer Arm - Front right (drop-in)	1	1	
45A	11206183	Middle Arm – Front	2	2	
46	10279009	Outer Arm - Front left	1	1	
46A	11206182	Outer Arm - Front left(drop-in)	1	1	
46B	11206189	Middle Arm – Front	2	2	
46C	11201049A	Outer Arm - Front left	2	2	
47	10279011	Rear arms	2	2	
47A	11206192	Outer Arm - Rear	2	2	
47B	11206193	Inner Arm - Rear	2	2	
48	10209039	Lock washer	32	32	
49	10201046A	Rubber Pad Assy.	4	4	
49A	10420138	Socket bolt	4	4	
49B	10209134	Rubber Pad	4	4	
49C	11680030C	Rubber Pad Frame	4	4	
50	10209034	Lock washer	12	12	
51	10201002	Hex Bolt	8	8	
52	10206025A	Foam Cushion with handle	1	1	
53	10201005	Split Pin	2	2	
54	11206129	Control Bar	1	1	
55	11206025C	Connecting Pin for Control Bar	2	2	
56	10206013	Limit Switch	1	1	
57	10206011	Cup Head Bolt	2	2	
58	11206042	Control Bar Support Bracket	2	2	
59	10206041	Hex Bolt	4	4	
60	10206023	Self locking Nut	12	12	
61	10209056	Self locking Nut	10	10	
62	11206195	Connecting Bracket	1	1	

63	11206196	Top Beam assembly	2	2	
64	10206028	Cup Head Bolt	4	4	
65	11206029	Retainer	2	2	
Item	**Part#**	**Description**	**Qty.**		**Note**
			OH-9	**OH-9H**	
66	11206021	Pin For Pulley	2	2	
67	11206022	Top Pulley Tube	2	2	
68	10206024	Hex Bolt	8	8	
69	11206010A	Safety Pulley Bracket assembly	1	1	
70	11206085	Protective Cover(L=1240mm)	2	0	
	11206086	Protective Cover(L=1850mm)	0	2	
71	11206084	Protective Cover(L=200mm)	2	2	
72	11206083	Protective Cover(L=385mm)	2	2	
73	10640050	Socket bolt	4	4	
74	11206008C	Safety Pulley Bracket assembly	1	1	
75	11206026A	Offside Safety Lock assembly	1	1	
76	11206080	Protective Cover(L=1565mm)	2	2	
77	10206079	Cup Head Bolt	14	14	
77A	10206110	Cup Head Bolt	6	6	
78	11279002	Offside Inner column assembly	1	1	
79	11209051B	Stackable Adapter (1.5”)	4	4	
80	11209052B	Stackable Adapter (2.5”)	4	4	
81	11209053B	Stackable Adapter assembly(5”)	4	4	
82	10209059	Anchor Bolt	10	10	
83	11217048	Retainer	2	2	
84	10209066	Hex Nut	8	8	
85	10206064A	Cable l=10030mm	2	0	
	10206064B	Cable L=11250mm	0	2	
86	10206073	T fitting for power unit	1	1	
87	10206074A	Oil hose	1	1	
88	10209064	Straight Fitting	2	2	
89	10206062	Straight Fitting	2	2	
90	10233009	Pipe Fitting	2	2	
91	10206061C	Oil Hose	1	0	
	10206061D	Oil Hose	0	1	
92	10260149	Safety cable L=7450mm	1	0	
	10206065A	Safety cable L=8670mm	0	1	
93	10420045	Washer φ6	14	14	
94	10209149	Lock washer φ6	4	4	
95	10279500	Parts box	1	0	
	10279501		0	1	

96	10620065	Shim（2mm)	10	10	
97	10201090	Shim（1mm)	10	10	
98	11206154	Toe guard- Rear	2	2	

Item	Part#	Description	Qty.		Note
			OH-9	OH-9H	
Parts for hydraulic cylinder					
30-1	10209069	O-Ring	2	2	
30-2	10209070	Bleeding Plug	2	2	
30-3	10209071	Support Ring	2	2	
30-4	10209072	Y-Ring	2	2	
30-5	10209073	O-Ring	2	2	
30-6	11209074	Piston	2	2	
30-7	10209075	O-Ring	2	2	
30-8	11217076	Piston Rod	2	2	
30-9	11209077	Piston Rod Fitting	2	2	
30-10	10209078	Dust Ring	2	2	
30-11	11209079	Head Cap	2	2	
30-12	10209080	O-Ring	2	2	
30-13	11209081A	Bore Weldment	2	2	
Parts For Manual Power Unit, 220V/60Hz/1Phase					
1	81400180	Rubber pad	2	2	
2	81400130	Start capacitor	1	1	
3	81400088	Run capacitor	1	1	
4	10420148	Cup head bolt with washer	6	6	
5	81400066	Capacitor cover	2	2	
6	81400363	Motor connecting shaft	1	1	
7	81400362	Manifold block	1	1	
8	10209149	Lock Washer	4	4	
9	81400276	Iron plug	1	1	
10	81400259	Red rubber plug	1	1	
11	85090142	Lock washer	4	4	
12	81400280	Gear pump	1	1	
13	81400294	Buffer valve	1	1	
14	10209034	Lock washer	2	2	
15	81400295	Socket bolt	2	2	
16	81400365	O ring	1	1	
17	10209152	Tie	1	1	
18	85090167	Magnet	1	1	
19	81400290	Filter	1	1	
20	81400413	Motor	1	1	
21	10420070	Push button	1	1	
22	41030055	AC connector	1	1	
23	81400287	Cover of Motor Terminal Box	1	1	
24	71111105	Name plate	1	1	
25	81400296	Nut	1	1	
26	81400459	Throttle valve body	1	1	
27	10209069	O ring	1	1	

28	81400266	Relief valve	1	1	
29	81400284	Iron plug	1	1	
30	10720118	Spring pin	1	1	
31	10720121	Handle for release valve	1	1	
32	10209020	Plastic ball	1	1	
33	81400125	Nut for release valve	1	1	
34	81400124	Shim for release valve	1	1	
35	81400449	Valve seat(Low)	1	1	
36	070001	Release valve	1	1	
37	070002	Check valve	1	1	
38	81400288	Oil inlet pipe	1	1	
39	81400289	Oil return pipe	1	1	
40	81400364	Hose clamp	1	1	
41	81400263	Filter cap	1	1	
42	81400319	Reservoir	1	1	

AMGO® Hydraulics

AMGO HYDRAULIC CORPORATION

1931 Joe Rogers Blvd, Manning, South Carolina, USA

Zip: 29102

Tel: (803) 505-6410

Fax: (803) 505-6410