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# I. PRODUCT FEATURES AND SPECIFICATIONS

## FLOOR PLATE CHAIN-ASSIST MODEL FEATURES

### Model NT-15 (See Fig. 1)

- Dual hydraulic chain-assist cylinders, designed and made on ANSI standards, utilizing NOK oil seal in the cylinders
  - Self-lubricating UHMW Polyethylene sliders and bronze bushings
  - Single point safety release and dual safety design
  - Symmetric arms design
- . Stackable rubber pads with 1.5, 3 and 6" inch extension adaptors

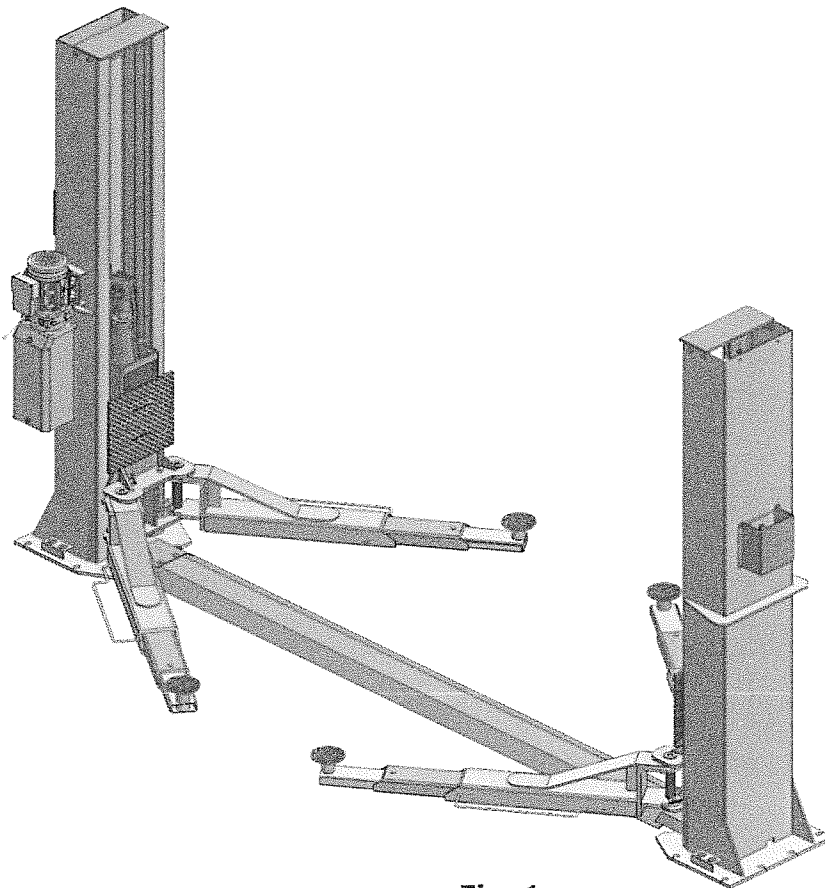


Fig. 1

### MODEL BP12000 SPECIFICATIONS

Model	Style	Lifting Capacity	Lifting Time	Lifting Height	Overall Height	Overall Width	Width Between Columns	Minimum Pad Height	Gross Weight	Motor
NT-15	Base Plate Chain-Drive	15,000 lbs	55 Seconds	1860mm - 2130mm 73 1/4" - 83 7/8"	3110mm 122 1/2"	142"	115"	115 mm 4 1/2"	980Kg 2,156lbs	3 HP

# Arm Dimensions For Model NT-15

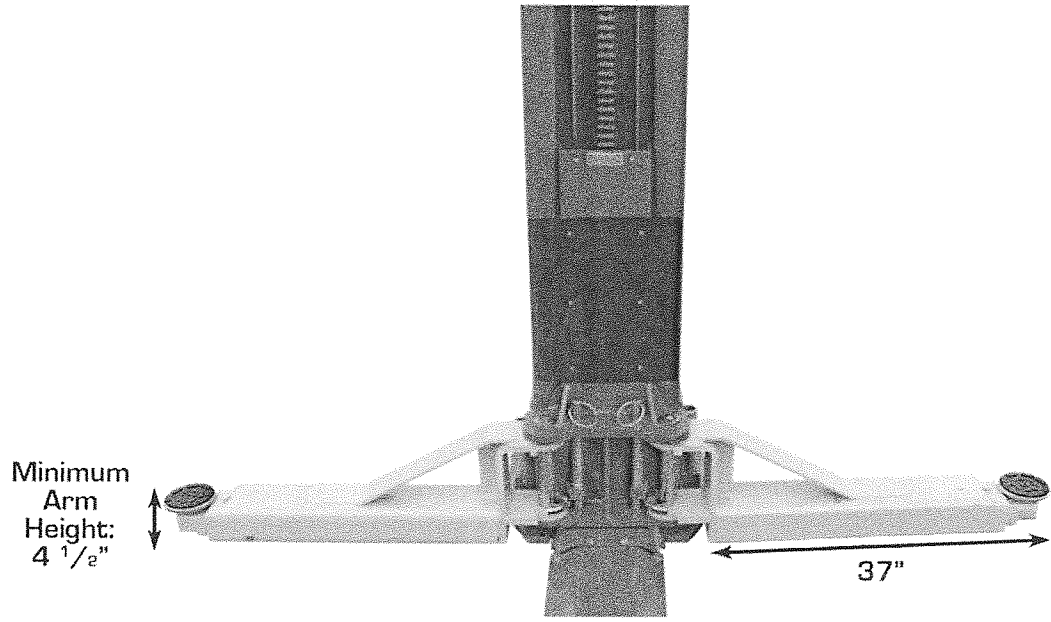
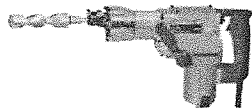


Fig. 2

## II. INSTALLATION REQUIREMENTS

### A. TOOLS REQUIRED

- ✓ Rotary Hammer Drill (3/4" Bit)



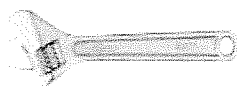
- ✓ Hammer



- ✓ 4 Foot Level Bar



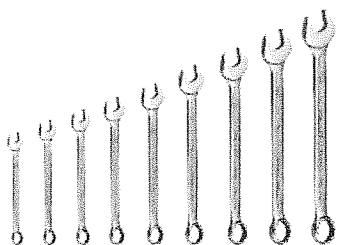
- ✓ Crescent Wrench (12inch)



- ✓ Ratchet Spanner With Socket (28mm)



- ✓ Wrench set (mm)  
(10#, 13#, 14#, 15#, 17#, 19#, 24#, 27#)



- ✓ Carpenter's Chalk



- ✓ Screw Driver Sets



- ✓ Tape Measure (25')



- ✓ Pliers



- ✓ Allen Head Wrench (6#)



- ✓ Vise Grips

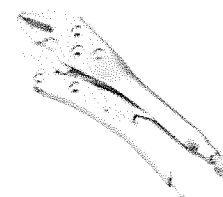


Fig. 3

## B. CONCRETE SPECIFICATIONS (See Fig. 4).

Concrete specifications must be adhered to.

Failure to do so may result in personal injury; lift and/or vehicle falling.

1. Concrete must have a minimum thickness of 6 inches. Concrete must be cured 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.

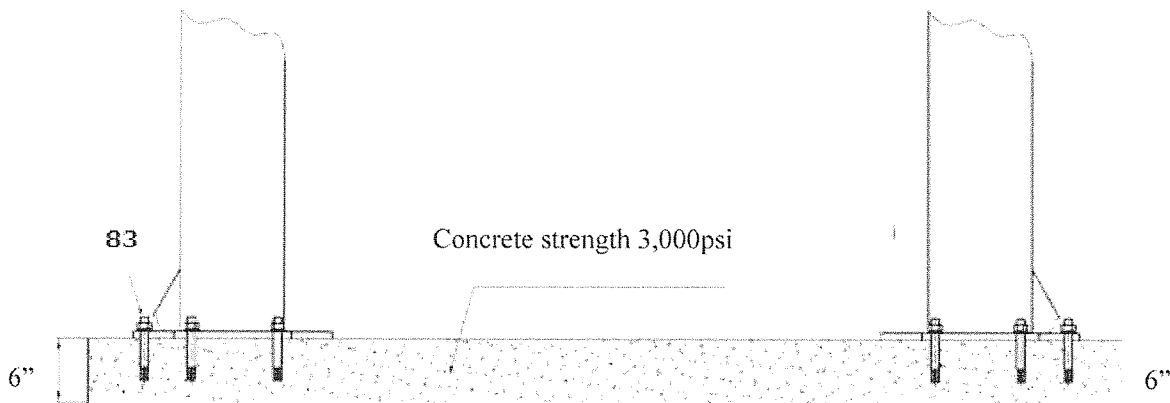


Fig. 4

## C. POWER SUPPLY

The power unit source must be 3Kw minimum. The electrical wire size must be a minimum of 10 gauge with a sufficient ground source. Minimum of a 30 amp breaker is required.

## III. STEPS OF INSTALLATION

### A. Location of Installation

Make sure the location of the lift (concrete, layout, space size etc.) is suitable for installation.

B. Use a carpenter's chalk line to establish installation layout of the base plate (See Fig. 5).

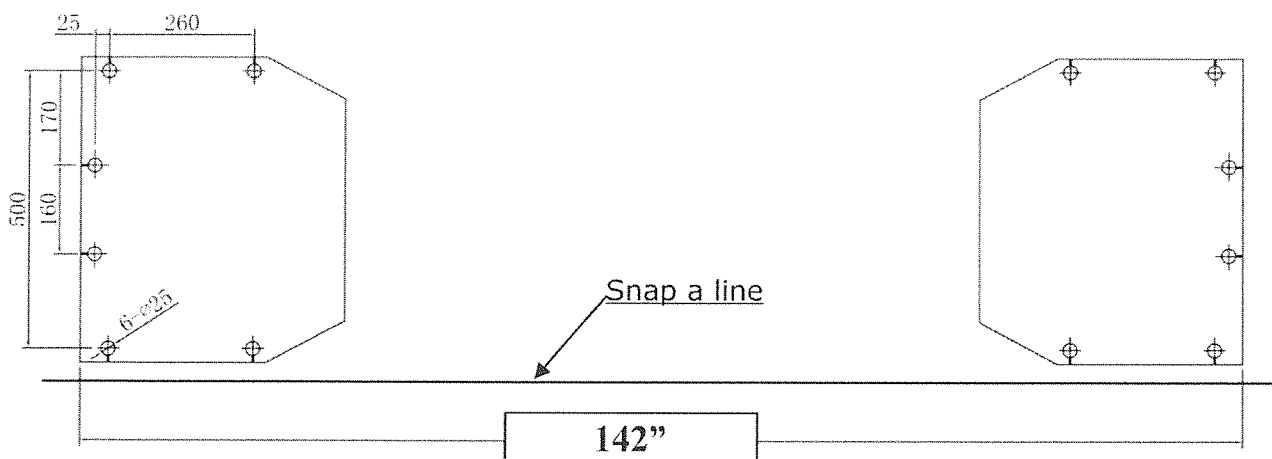
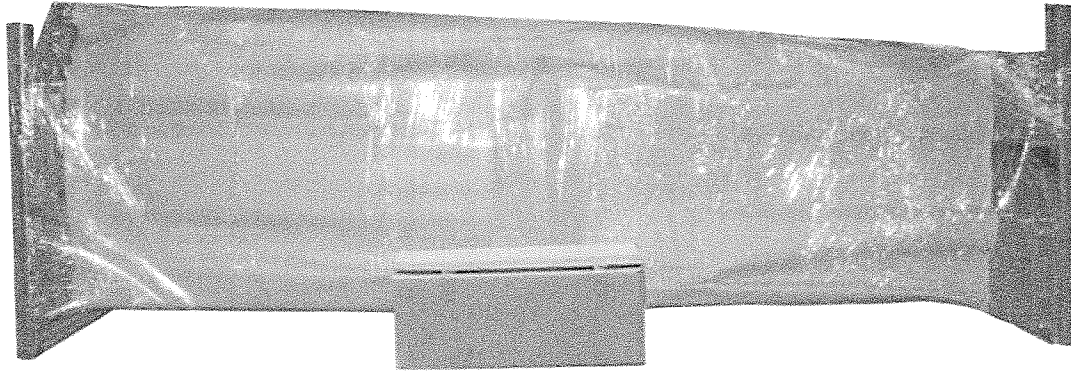


Fig. 5

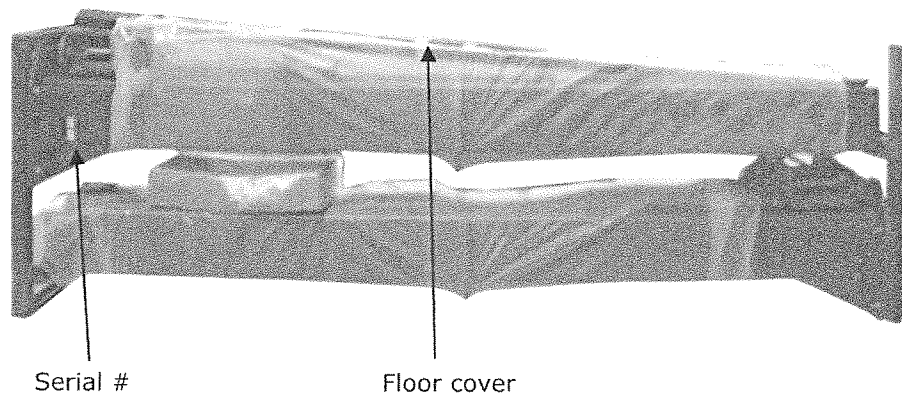
**C. Check the parts before assembly.**

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



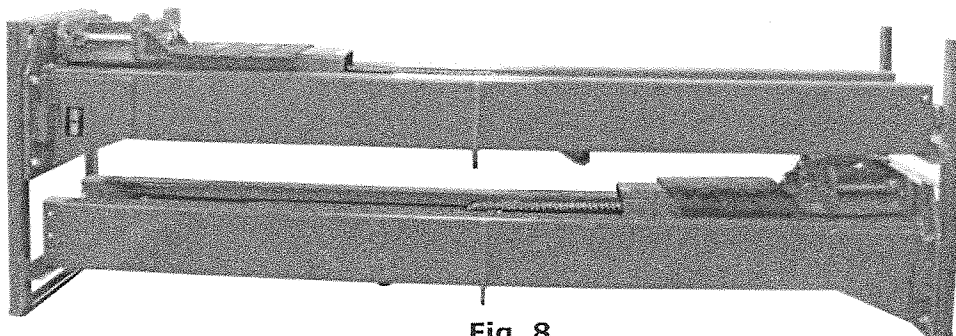
**Fig. 6**

2. Move the lift aside with fork lift or hoist, and open the outer packing carefully



**Fig. 7**

3. Remove the parts from the upper and inside of the column. Remove the parts box, and check the parts according to the shipment parts list (See Fig. 8).



**Fig. 8**

4. Loosen the bolts on the upper package stand, take off the upper column and remove the package stand.

5. Major parts - Some will already be installed

(See Fig. 9).

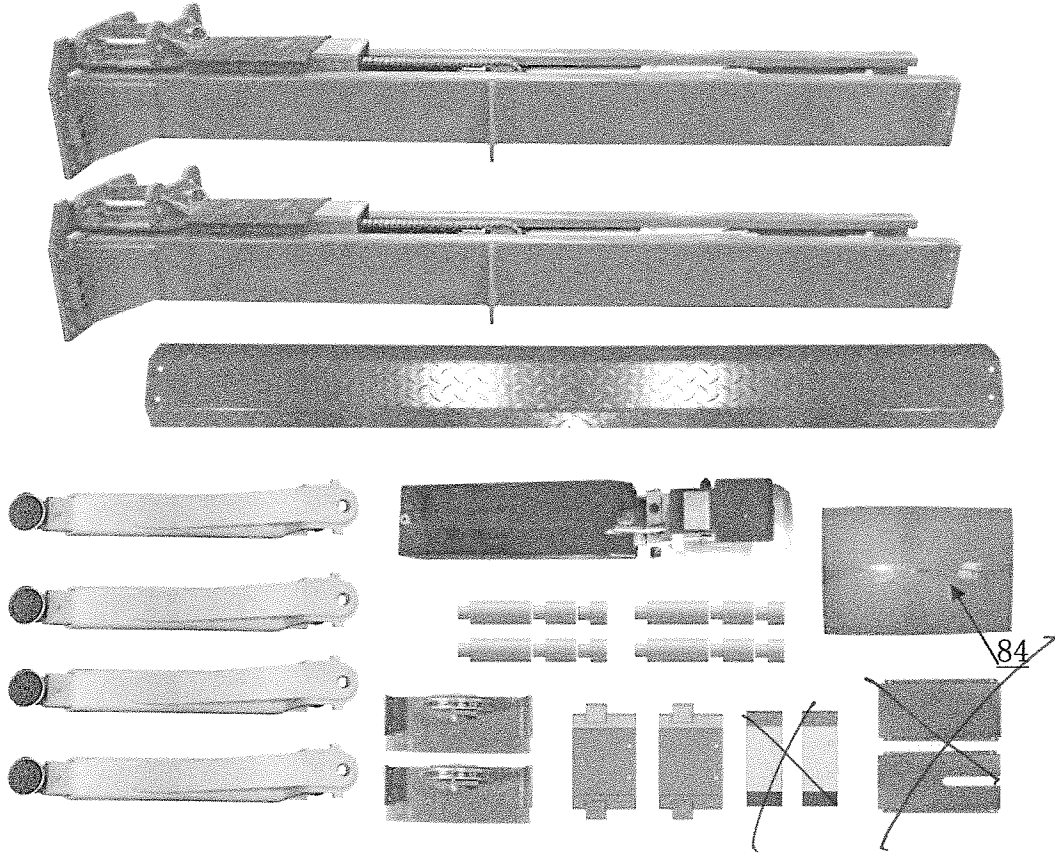
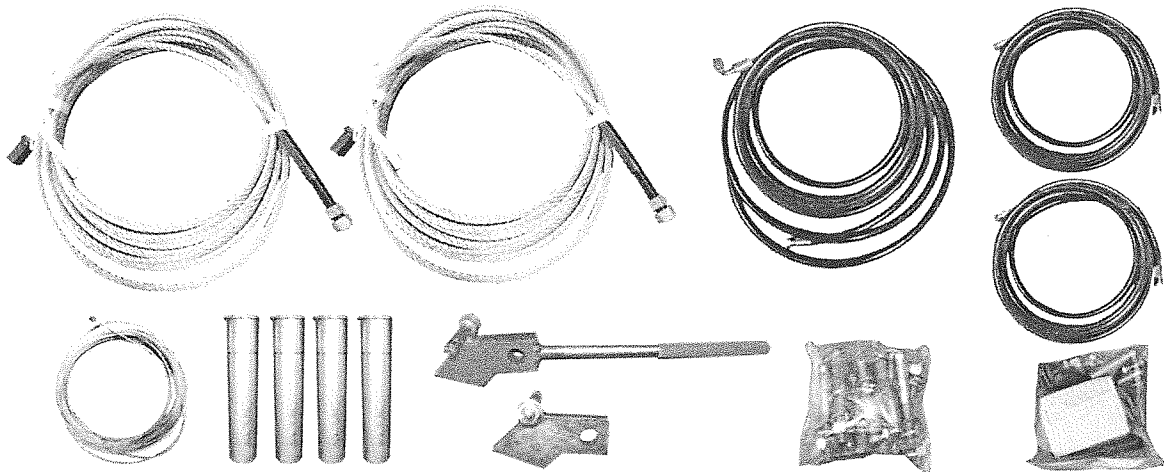


Fig. 9



7. Minor parts - Some will already be included

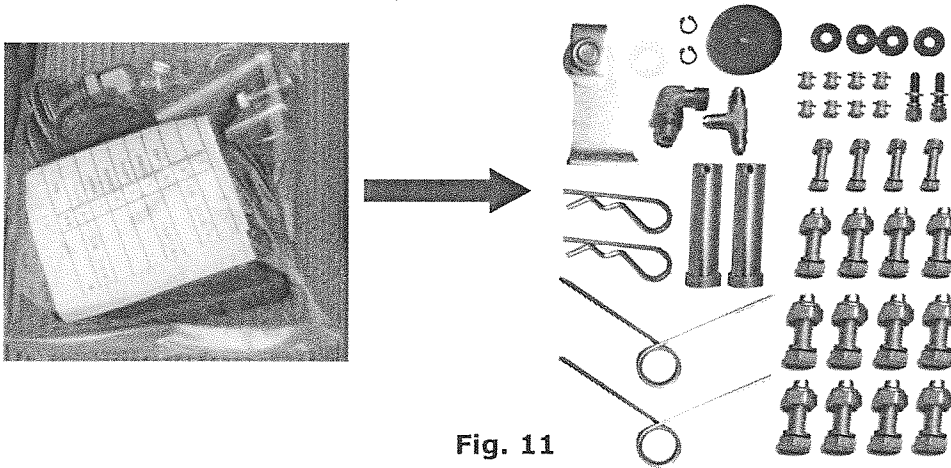


Fig. 11

**D. Position power side columns**

Lay down two columns on the installation site parallel, position the power side column according to the actual installation site. Usually, it is suggested to install power side column on the right side. Install the top plates (See Fig.12).

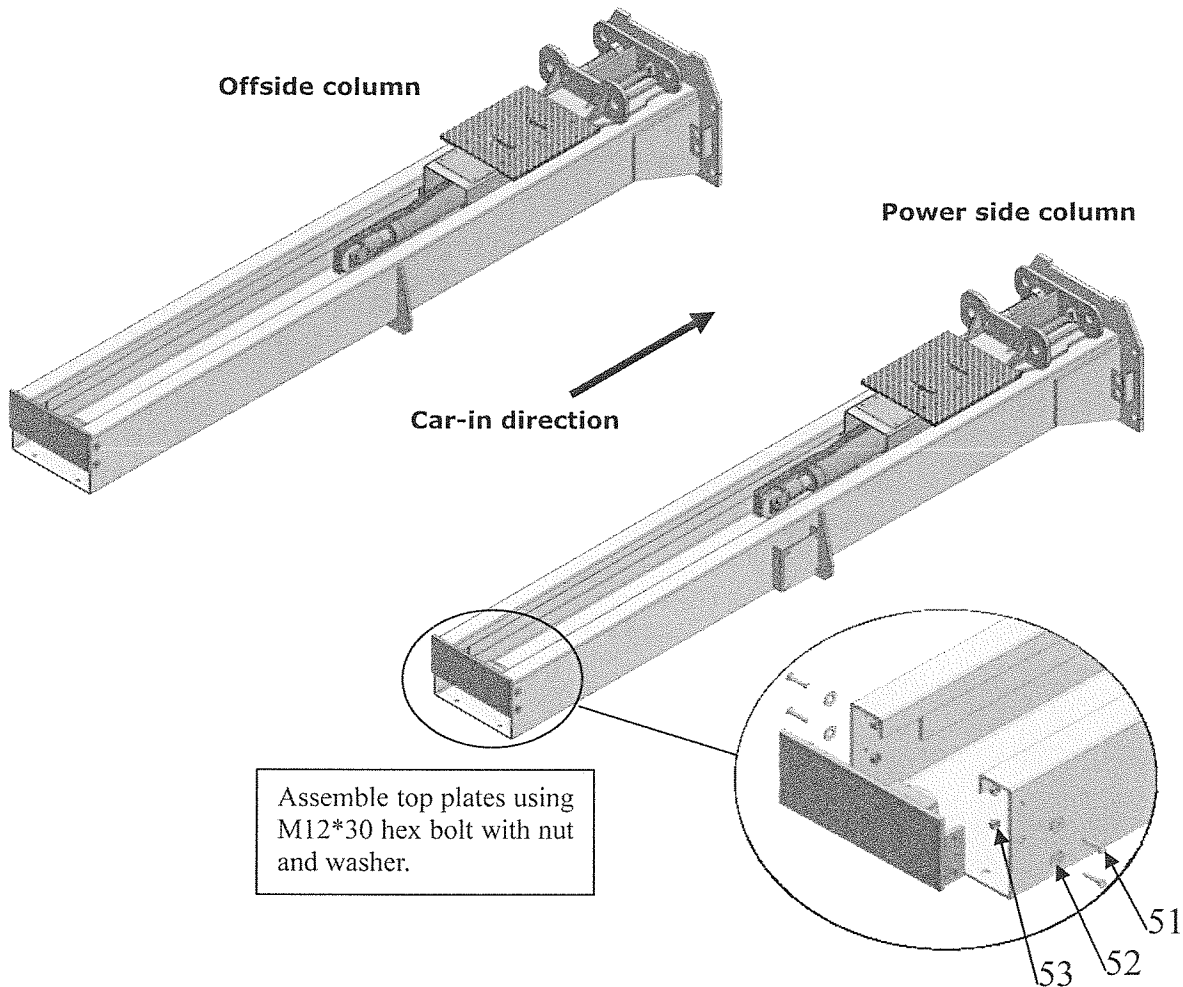
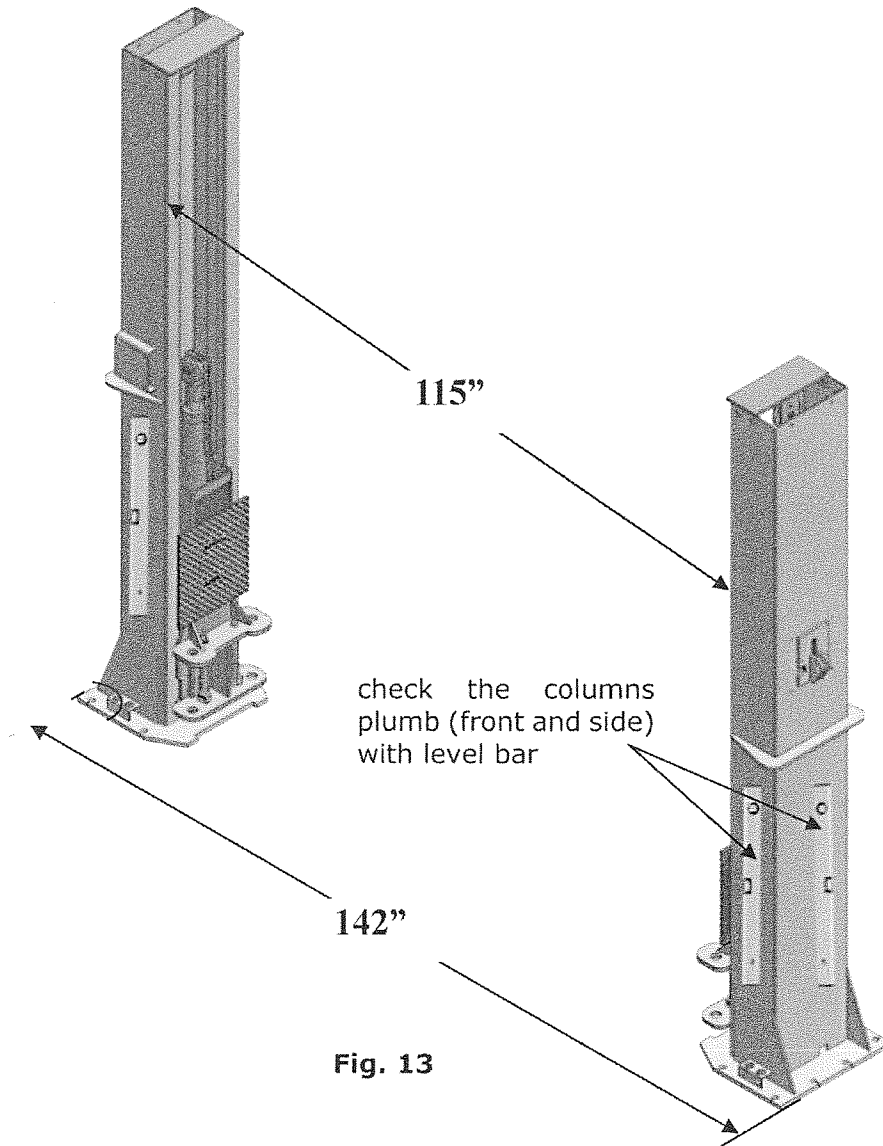


Fig. 12



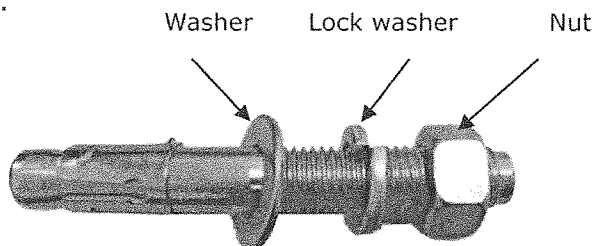
**E. Position the columns check the columns for plumb with a level bar, and adjust with the shims if the columns are not true. (See Fig. 13).**

**Note:** Set the width to 142"



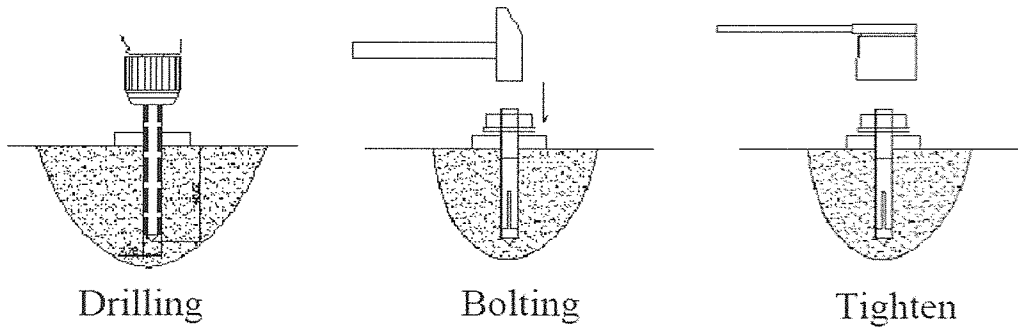
**F. Fix anchor bolts**

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



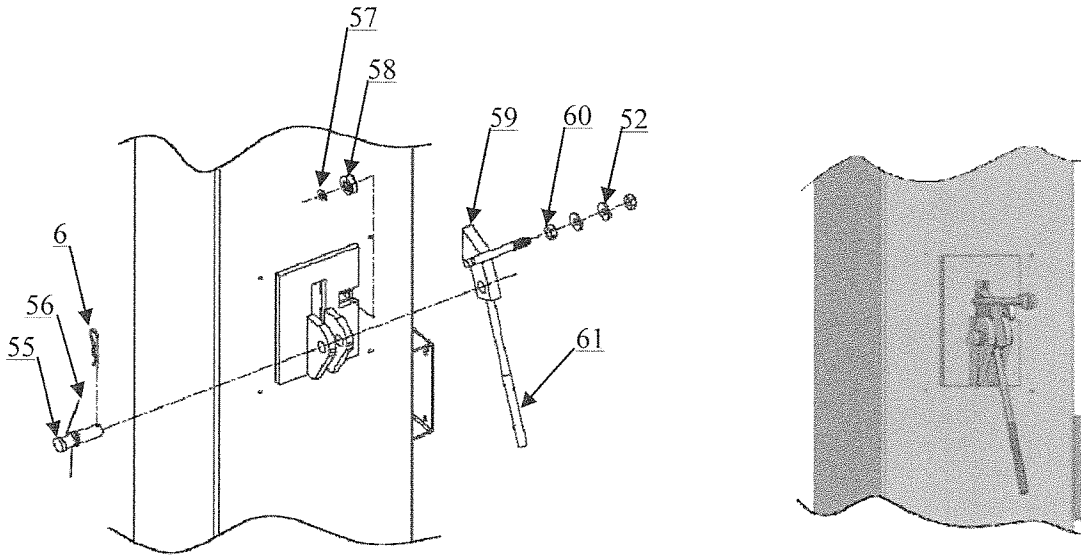
**Fig. 14**

2. Use a rotary hammer drill and 3/4" masonry bit. Drill all the anchor holes for the powerside leg and install the anchor bolts. Tighten the anchor bolts (See Fig. 15). Anchor offside leg after installation is complete.



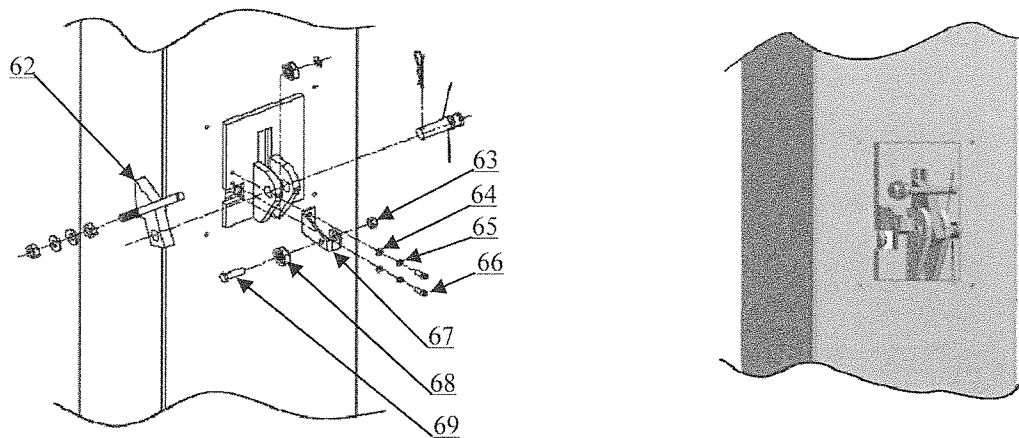
**Fig. 15**

**G. Install safety locks (See Fig. 16&17). (Normal installed)**



**Power side safety lock**

**Fig. 16**



**Offside safety lock**

**Fig. 17**

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

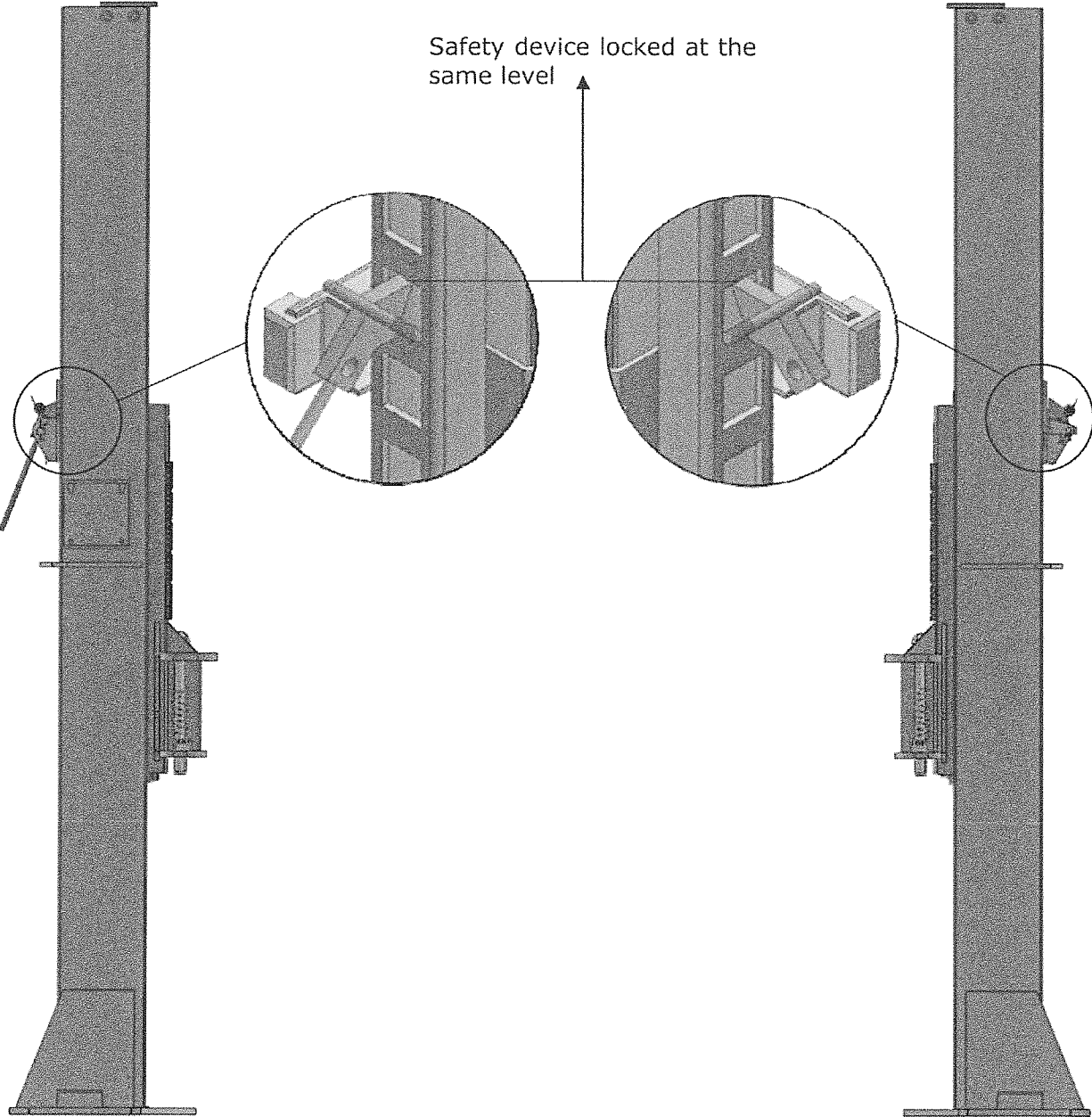


Fig. 18

# I. Install cable

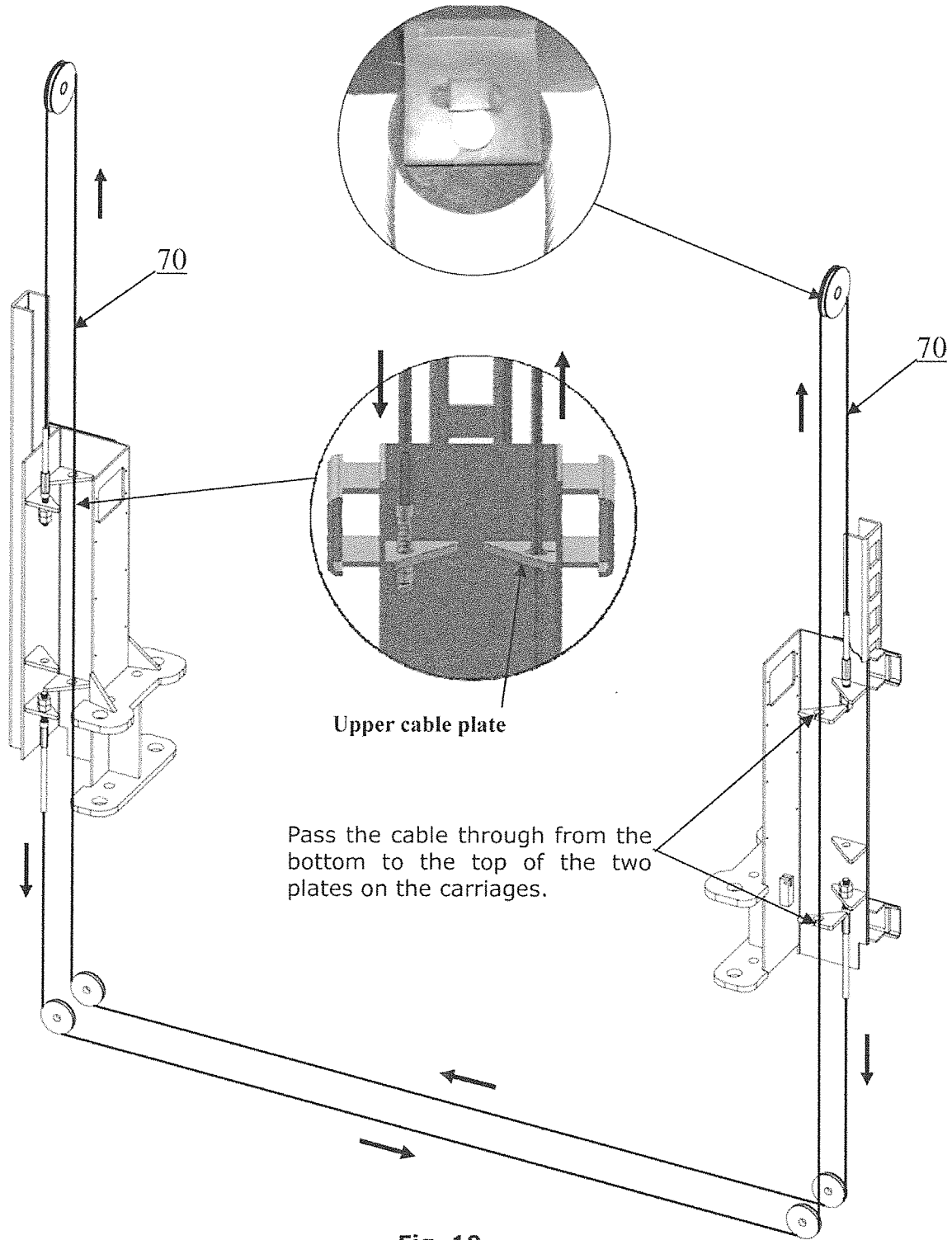


Fig. 19

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).

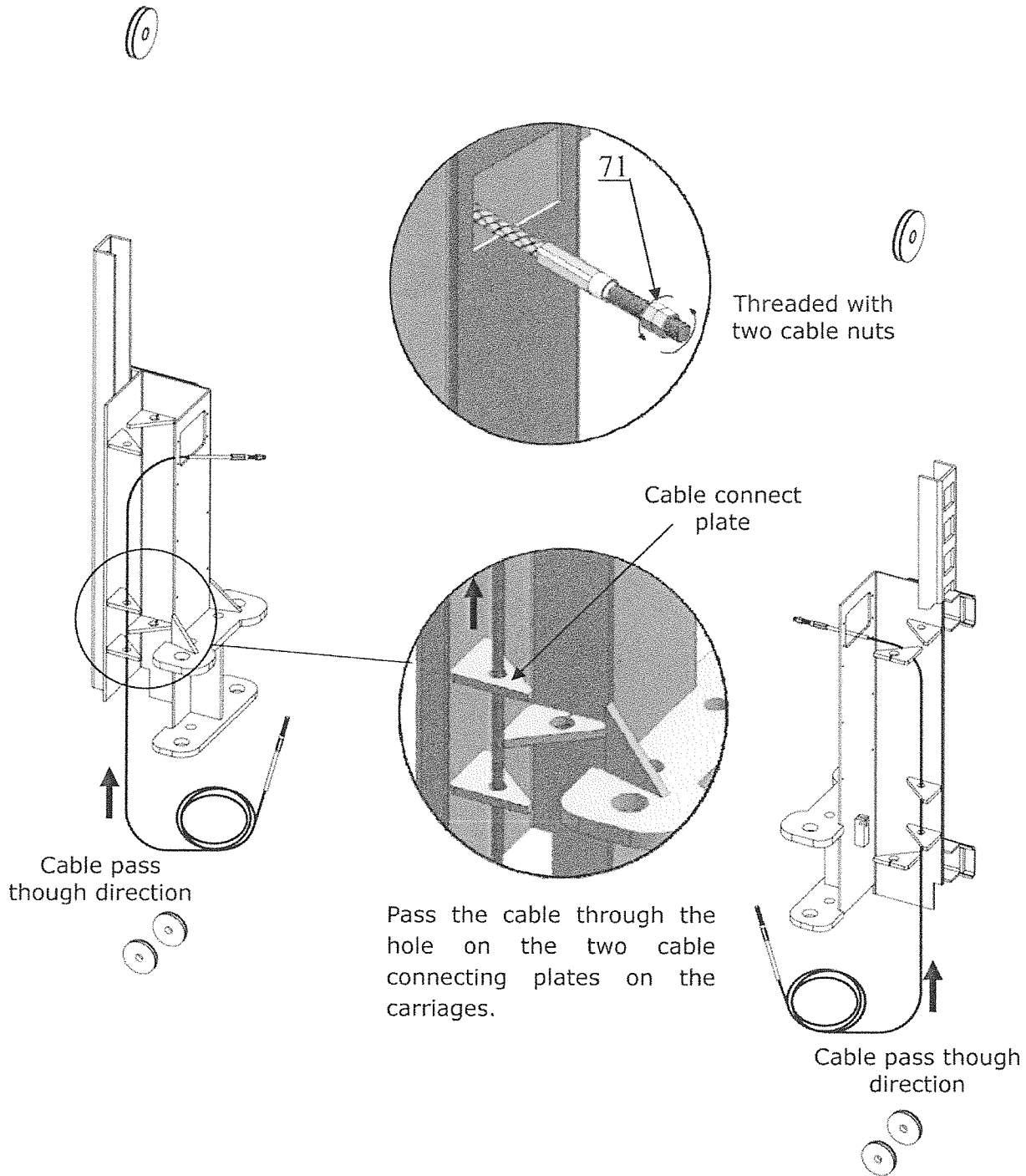


Fig. 20

2.2. Pass the cable through as shown below(See Fig. 21).

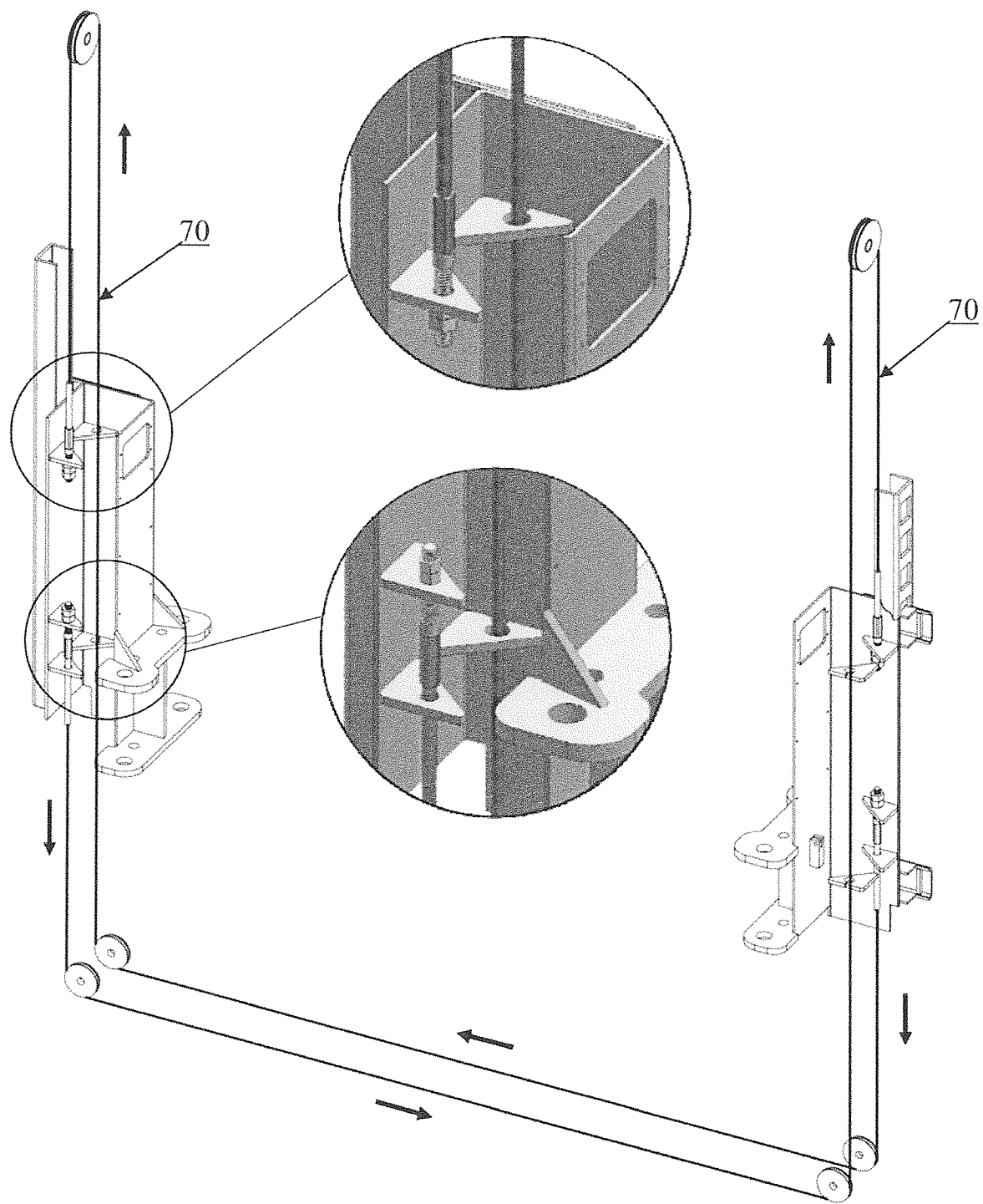
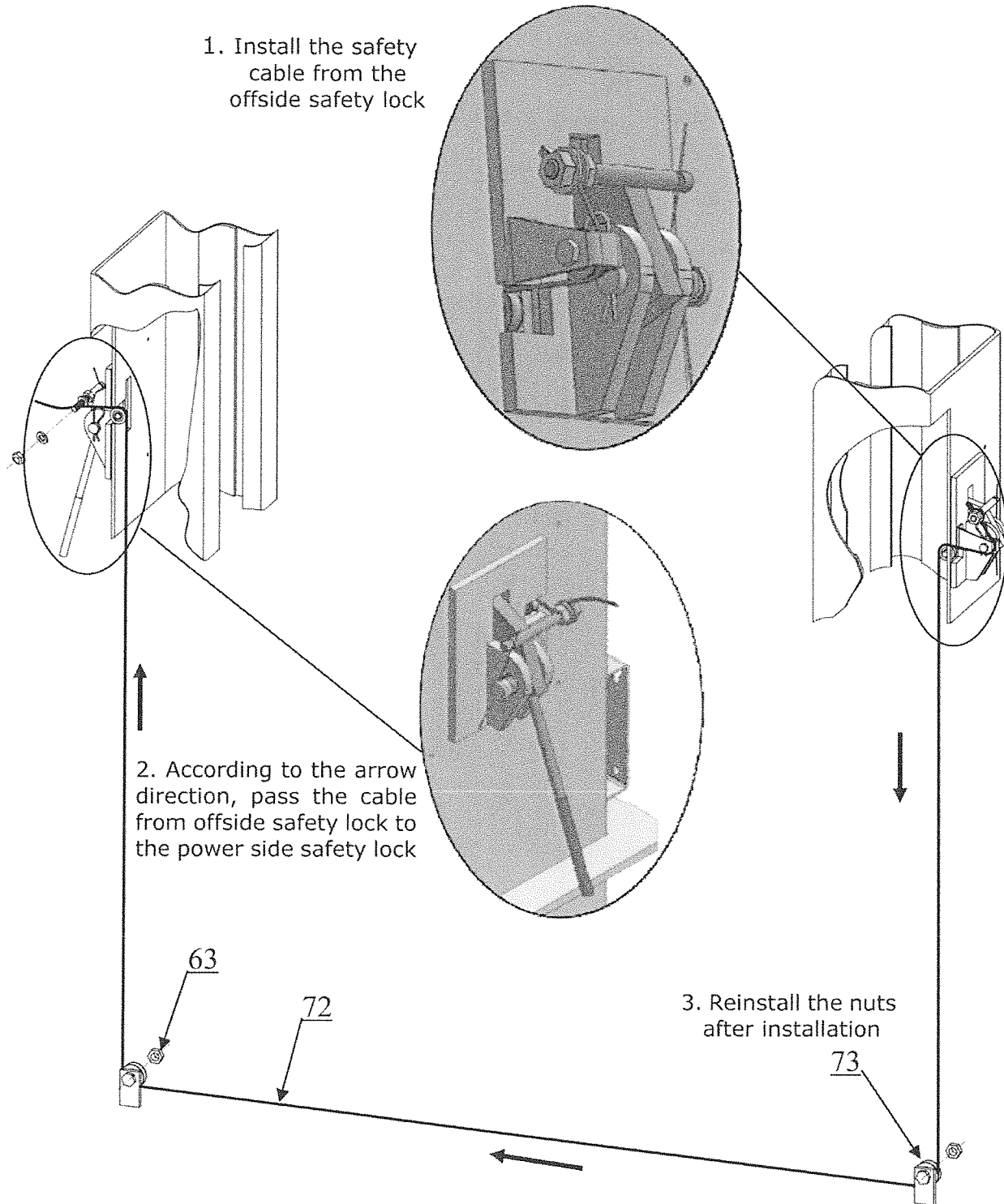


Fig. 21

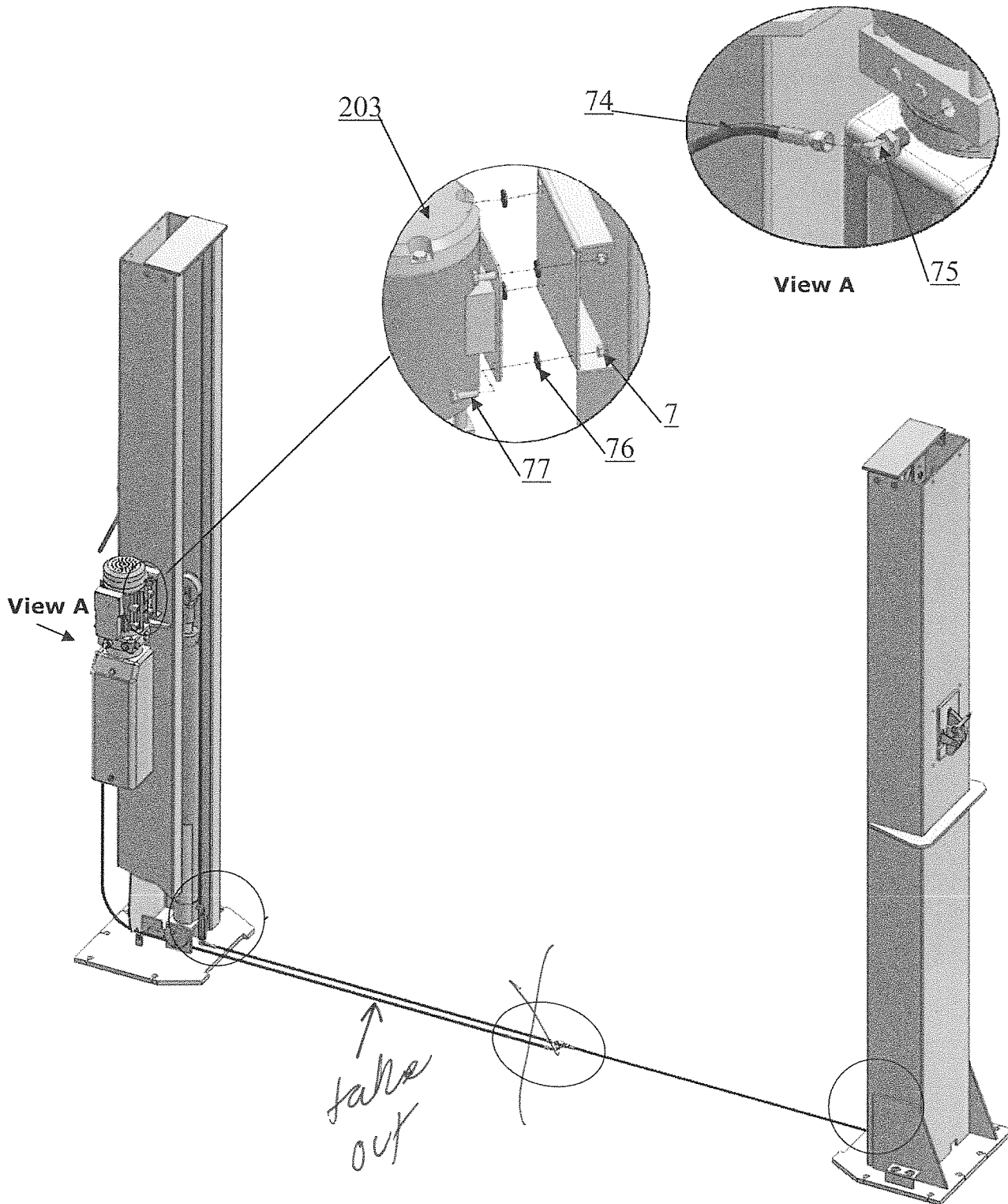
**J. Install the cable on the safety locks (See Fig. 22).**

Note: Install the safety cable from the offside safety first. Pay attention to the pass through direction.



**Fig. 22**

**K. Install the hydraulic power unit and oil hose assembly. (See Fig. 23).**



**Fig. 23**

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

**Note: Use hydraulic oil AW46.**



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

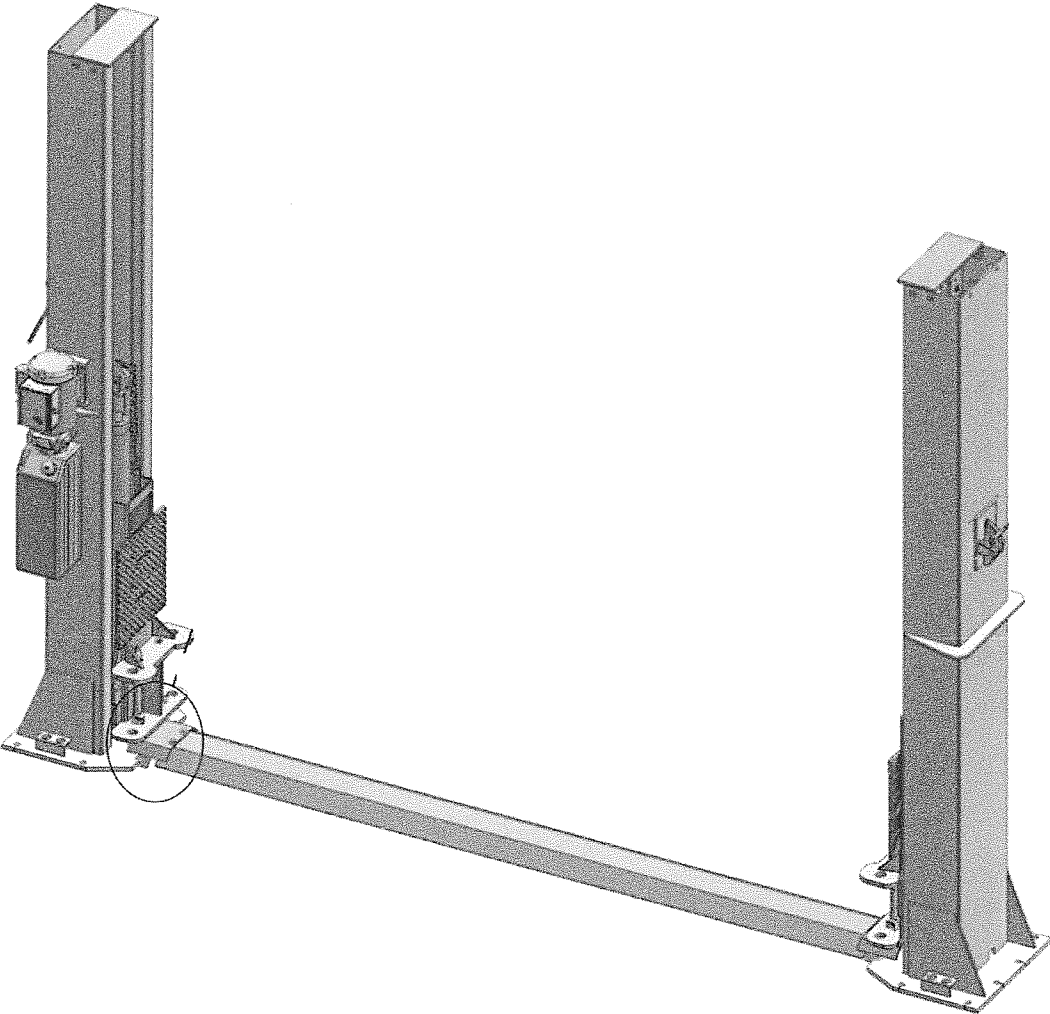


Fig. 24



1.3. Connection diagram (See Fig. 31).

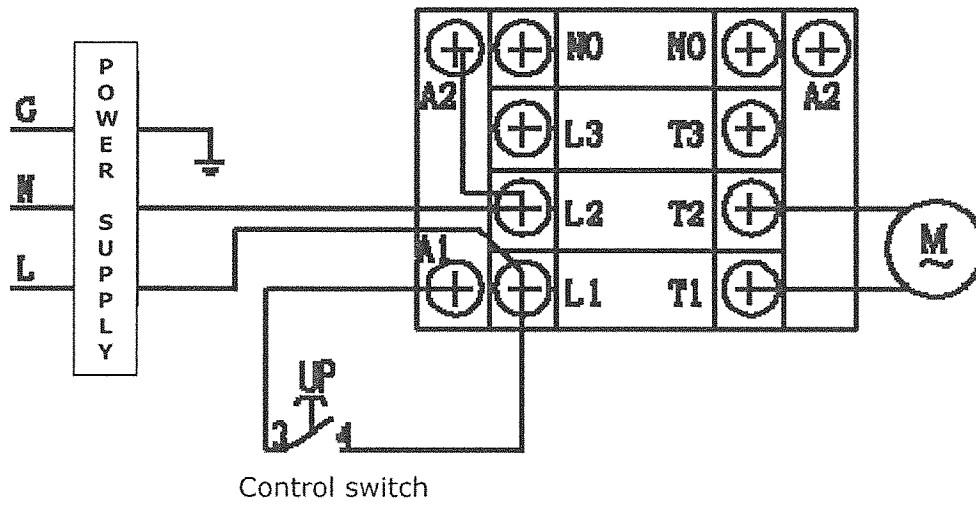


Fig. 31

# IV. EXPLODED VIEW

## Model NT-15

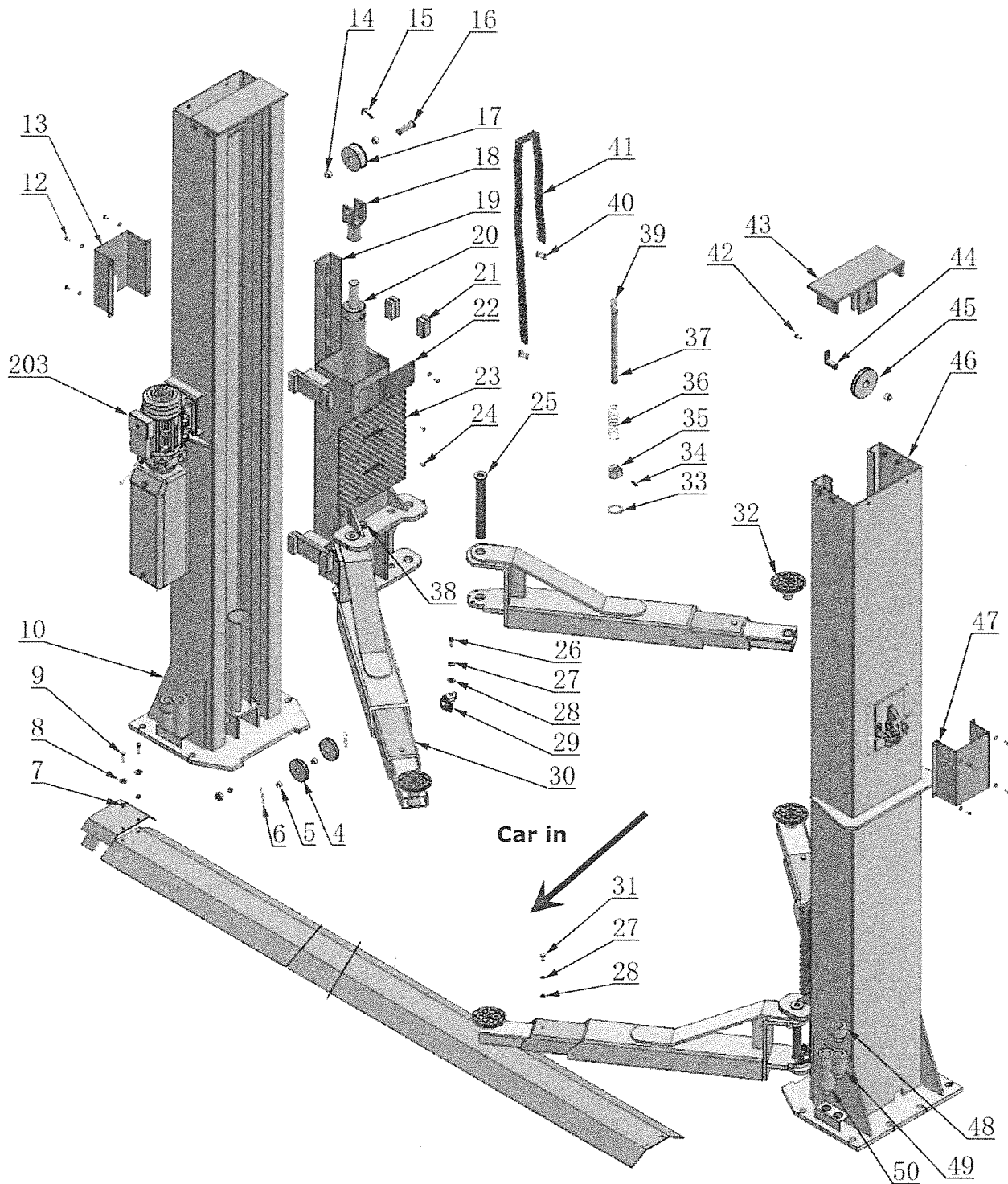


Fig. 32

# Cylinder

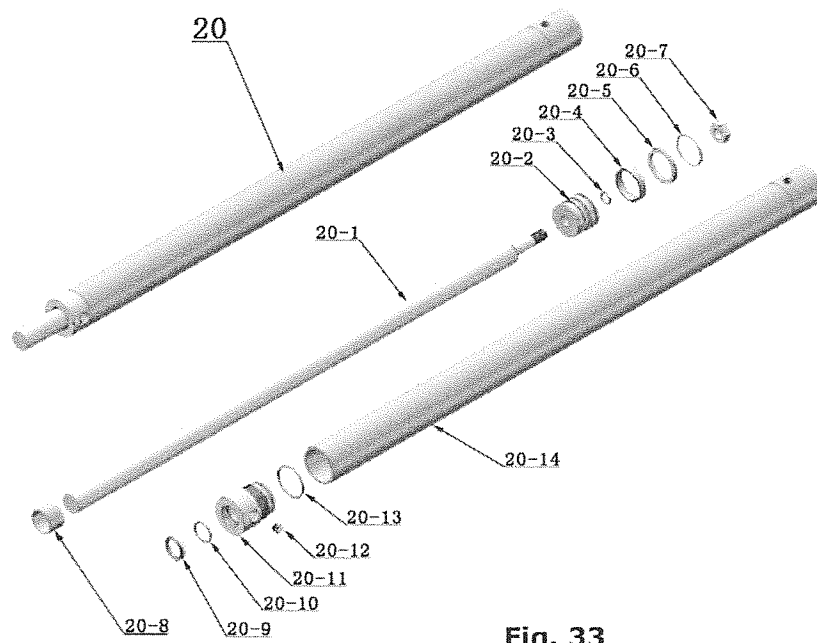


Fig. 33

220V/60HZ/1Phase

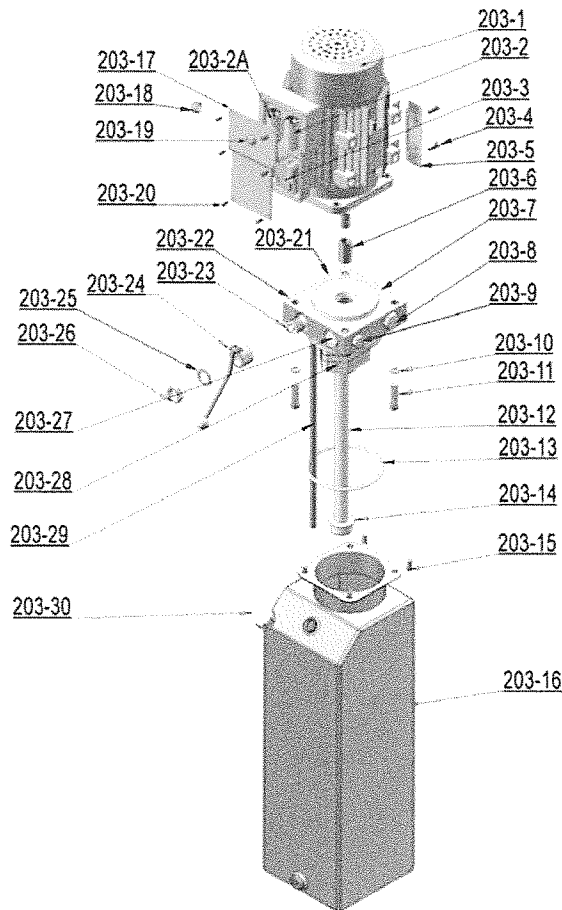
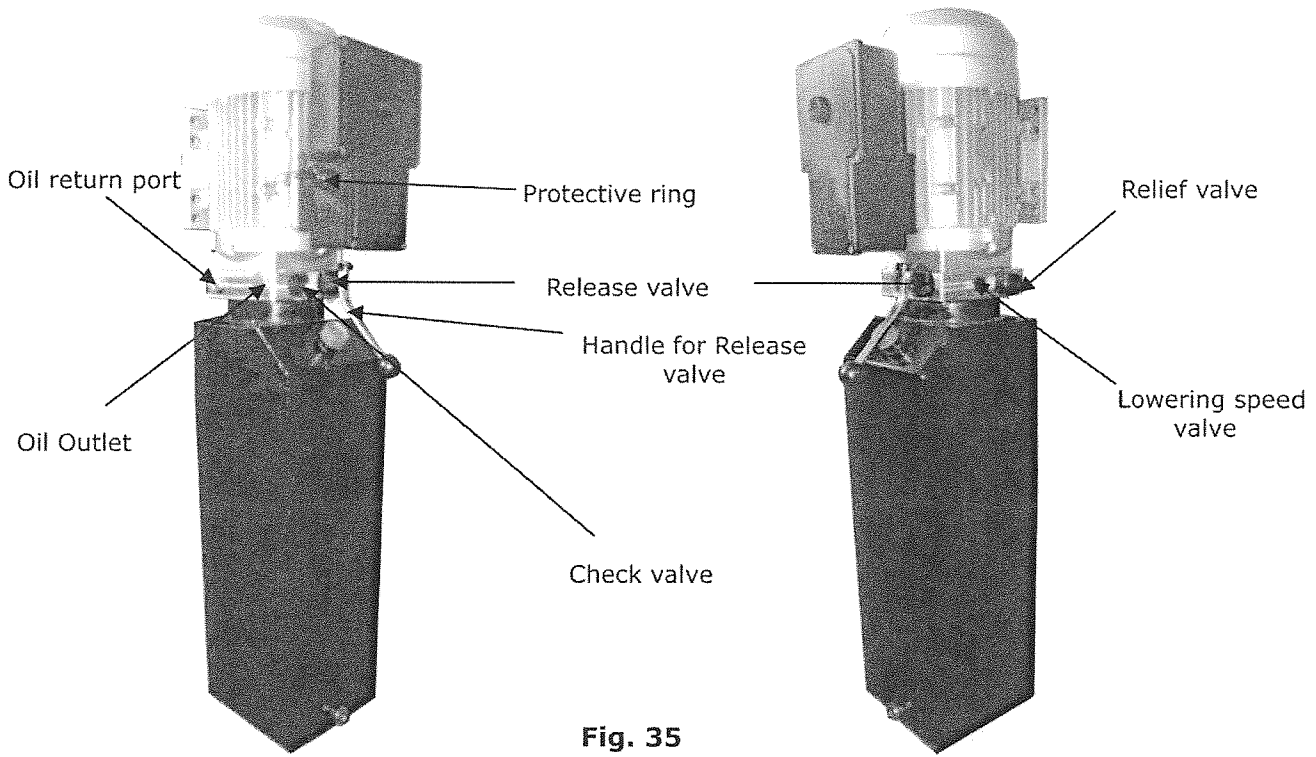


Fig. 34



**Fig. 35**

## V. TEST RUN

### 1. Adjust synchronizing cable

Use wrench to hold the cable fitting. Use a wrench to tighten the cable nut.  
Make sure two cables have the same tension.

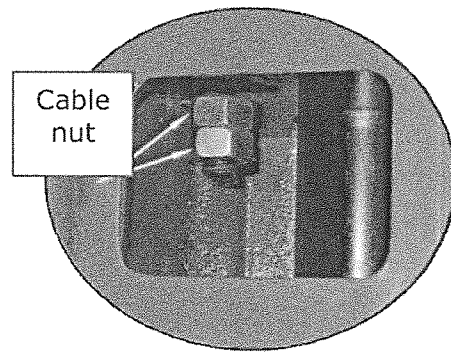


Fig. 40

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

(See 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

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.

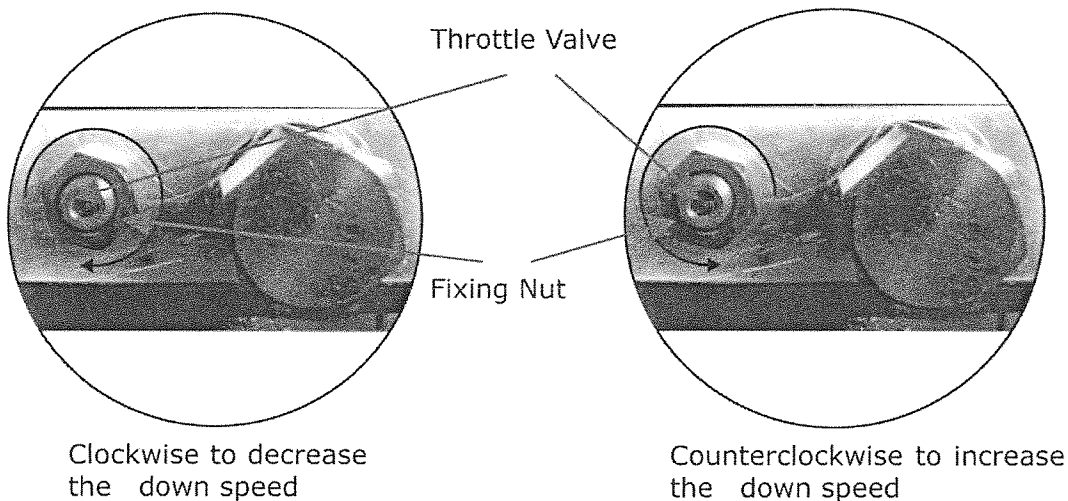


Fig. 41

#### 4. Test with load

After finishing the above adjustment, test run the lift with a load. Run the lift in low position several times first, make sure the lift can rise and lower at the same time, the safety device can lock and release at the same time. Test run the lift to the top completely. If there is anything improper, repeat the above adjustment.

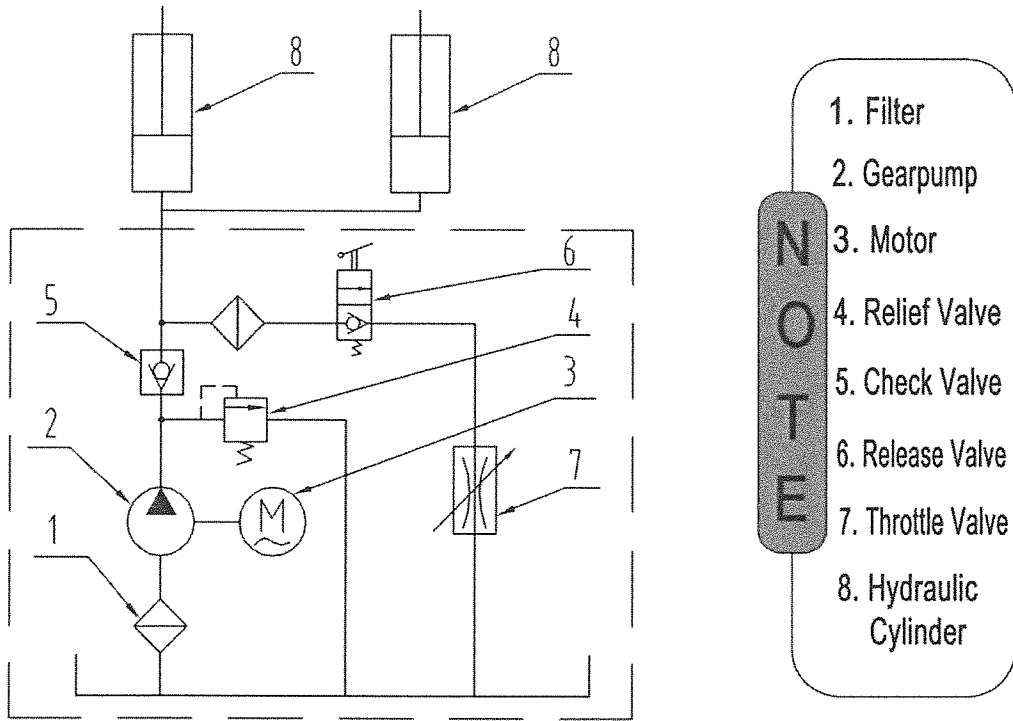


Fig. 42 Hydraulic System

## VI. OPERATION INSTRUCTIONS

Please read the safety tips carefully before operating the lift

### To lift vehicle

1. Keep work area free of clutter;
2. Position lift arms to the lowest position;
3. Open lift arms;
4. Position vehicle between columns;
5. Move arms to the vehicle's lifting point;

**Note: The four lift arms must contact at the same time. Use the vehicle's lifting point where manufacturer recommend.**

6. Press the **UP** button until the lift pads contact underside of vehicle totally. Recheck to make sure vehicle is secure;



7. Continue to raise the lift slowly to the desired working height, ensuring the balance of vehicle;
8. Push lowering handle to lower lift onto the nearest safety. The vehicle is ready to repair.

### **To lower vehicle**

1. Keep work area free of clutter;
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.

## **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 ensure level lifting.
3. Check columns for plumb.
4. Check Rubber Pads and replace as necessary.
5. Check Safety device and make sure it functions properly.

## VIII.TROUBLE SHOOTING

TROUBLE	CAUSE	REMEDY
Motor does not run	<ol style="list-style-type: none"> <li>1. Button does not work</li> <li>2. Wiring connections are not in good condition</li> <li>3. Motor burned out</li> <li>4. AC contactor in damage</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace button</li> <li>2.Repair all wiring connections</li> <li>3. Repair or replace motor</li> <li>4. Repair or replace</li> </ol>
Motor runs but the lift is not raised	<ol style="list-style-type: none"> <li>1. Motor runs in reverse rotation</li> <li>2. Gear pump out of operation</li> <li>3. Release valve in damage</li> <li>4. Relief valve or check valve in damage</li> <li>5. Low oil level</li> </ol>	<ol style="list-style-type: none"> <li>1.Reverse two power wire</li> <li>2.Repair or replace</li> <li>3. Repair or replace</li> <li>4.Repair or replace</li> <li>5.Fill tank</li> </ol>
Lift does not stay up	<ol style="list-style-type: none"> <li>1. Release valve out of work</li> <li>2. Relief valve or check valve leakage</li> <li>3. Cylinder or fittings leaks</li> </ol>	Repair or replace
Lift raises slowly	<ol style="list-style-type: none"> <li>1. Oil line is jammed</li> <li>2. Motor running on low voltage</li> <li>3. Oil mixed with air</li> <li>4. Gear Pump leaks</li> <li>5. Overload lifting</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean the oil line</li> <li>2. Check electrical system</li> <li>3. Fill tank</li> <li>4. Repair or replace</li> <li>5. Check load</li> </ol>
Lift can not lower	<ol style="list-style-type: none"> <li>1. Safety device are locking.</li> <li>2. Release valve in damage</li> <li>3. Safety cable broken</li> <li>4. Oil system is jammed</li> </ol>	<ol style="list-style-type: none"> <li>1. Release the safeties</li> <li>2. Repair or replace</li> <li>3. Replace</li> <li>4. Clean the oil system</li> </ol>

## IX. PARTS LIST FOR MODEL NT-15

Item	Part#	Description	Qty.	Note
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	Power side 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	209051	Adapter 1.5"	4	
49	209052	Adapter 3"	4	
50	209053	Adapter 6"	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	

<b>Parts For Hydraulic Cylinder</b>				
<b>Item</b>	<b>Part#</b>	<b>Description</b>	<b>Qty.</b>	<b>Note</b>
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	
<b>Parts For ATLAS Manual Power Unit, 220V/60Hz, Single phase )</b>				
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	

