# OPERATION MANUAL 8 INSTALLATION

# Atlas OH-10X 10,000 lb. Capacity Two-Post Overhead Lift



Atlas Automotive Equipment www.atlasautoequipment.com (866) 898-2604

Model: OHX10000X

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#### I. PRODUCT FEATURES AND SPECIFICATIONS

#### **CLEARFLOOR DIRECT-DRIVE MODEL FEATURES**

#### MODEL OHX10000X (See Fig.1)

- · Direct-drive design minimizes the lift wear parts and breakdown ratio.
- · Dual hydraulic cylinders, designed and made to high standards, with high quality seals.
- · Self-lubricating UHMW Polyethylene sliders and bronze bushings.
- · Single-point safety release, and dual safety design.
- · Clear-floor design, provides unobstructed floor space.
- · Overhead safety shut-off device.
- · With 4 three stages arms, make lifts easily find the lift point of the car.

#### **MODEL OHX10000X SPECIFICATIONS**

Model	Style	Lifting Capacity	Lifting Time	Lifting Height	Overall Height	Overall Width	Minimum Pad Height	Motor
OHX10X	Clear-floor Direct-drive	10,000	60s	76 3/8" - 85 3/8"	151 ¾"	144 3/8"	3 ½" – 12 ½"	3.0HP

#### **Arms swing view**

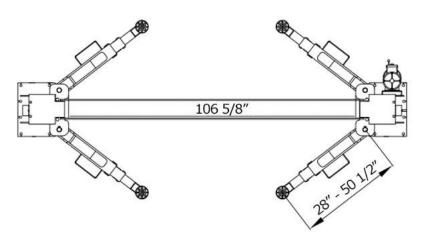


Fig. 2

#### II. INSTALLATION REQUIREMENT

#### **A. TOOLS REQUIRED**

✓ Rotary Hammer Drill (Ф19)



✓ 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 (3<sup>#</sup>, 6<sup>#</sup>)



✓ Lock Wrench



#### B. Equipment storage and installation requirements.

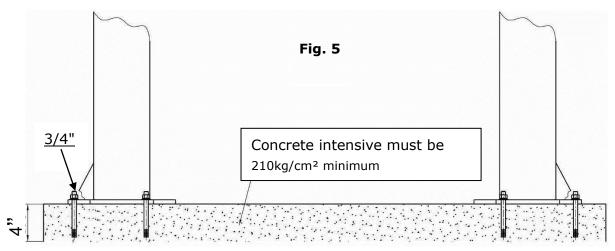
The equipment should be stored or installed in a shady, normal temperature, ventilated and dry place.

#### B. The equipment should be unloaded and transferred by forklift.



# D. SPECIFICATIONS OF CONCRETE (See Fig. 10) Concrete must adhere to the specifications listed below, failure to do so may result in lift and/or vehicle falling.

- 1. Concrete must be thickness 4" 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 without cracks.



#### **E. POWER SUPPLY**

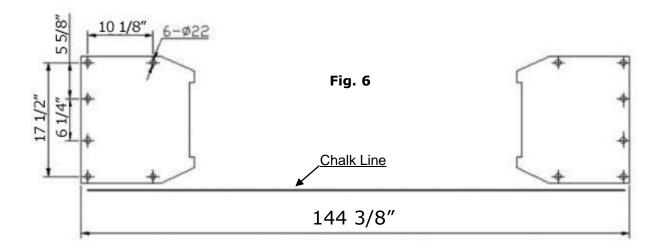
220volt single phase source on a 30amp breaker with minimum of 10 gauge wire running to the power unit. Operating voltage range is 208v-230v.

#### III. STEPS OF INSTALLATION

#### A. Location of Installation

Check and ensure 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 columns (See Fig. 6).



#### C. Check the parts before assembly

1. Packaged lift and hydraulic power unit (see Fig. 7)



2. Move the lift aside with a forklift or hoist, and open the outer packing carefully , take off the parts from upper and inside the column, take out the parts box, check the parts according to the shipment parts list (See Fig. 8).

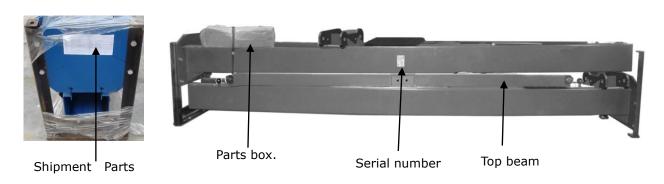


Fig. 8

- 3. Loosen the screws of the upper package stand, take off the upper column and remove the package stand.
- 4. Move aside the parts and check the parts according to the shipment parts list (See Fig. 9,10).

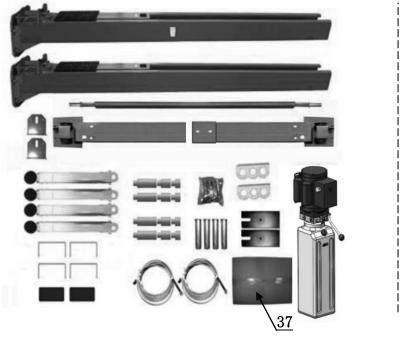
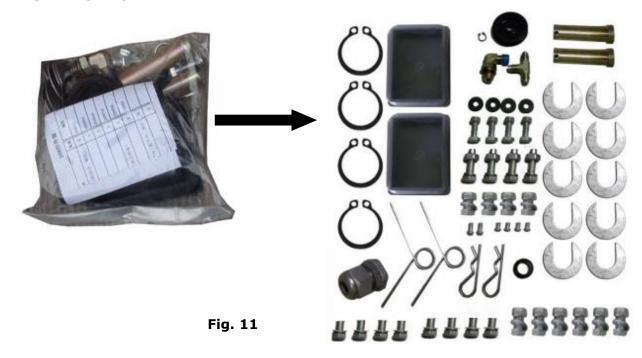


Fig. 10

**Fig. 9** Parts in the shipment parts list

Parts in the parts box (37)

5. Open the bag of parts and check the parts of the parts bag according to parts bag list (See Fig. 11).

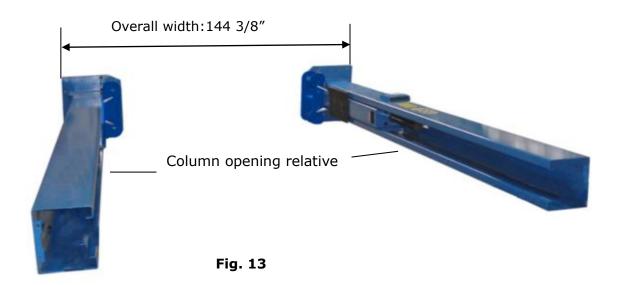


#### D. Position power side column

Lay columns parallel at installation site, position the power-side column according to the actual installation site. It is suggested to install the power-side column on the front-right side from which vehicles are driven onto the lift however the power-side column can be on either side. (See Fig. 12).



#### E. Place the columns so the openings face each other. (Fig.13)



#### F. Position columns

Place the columns on the installation layout of base plate. Install the anchor bolts. Do not tighten the anchor bolts (See Fig.14).

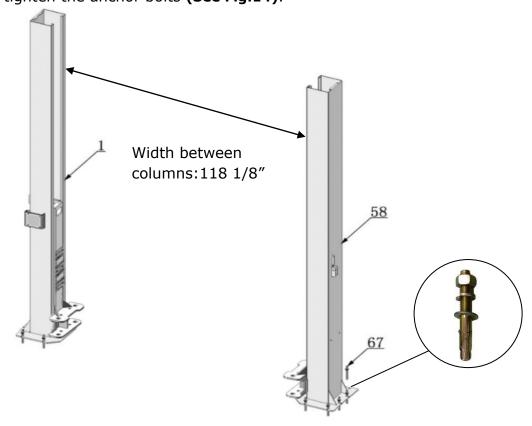


Fig.14

Note: Minimum embedment of anchors is 4".



# G. Install the top beam on the lift. (Fig.16)

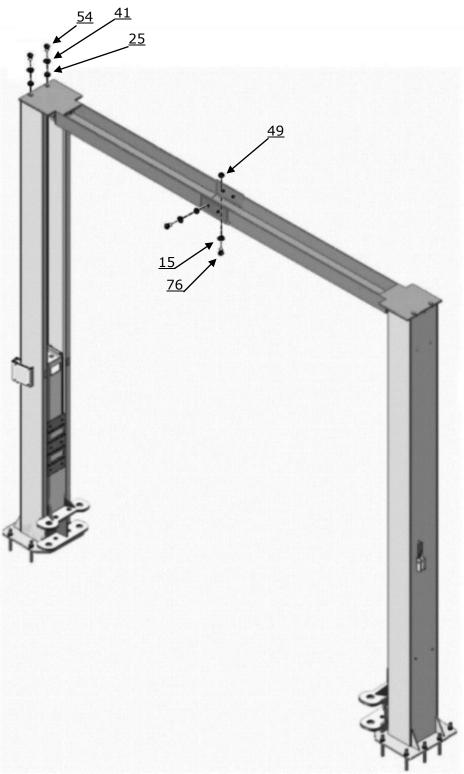
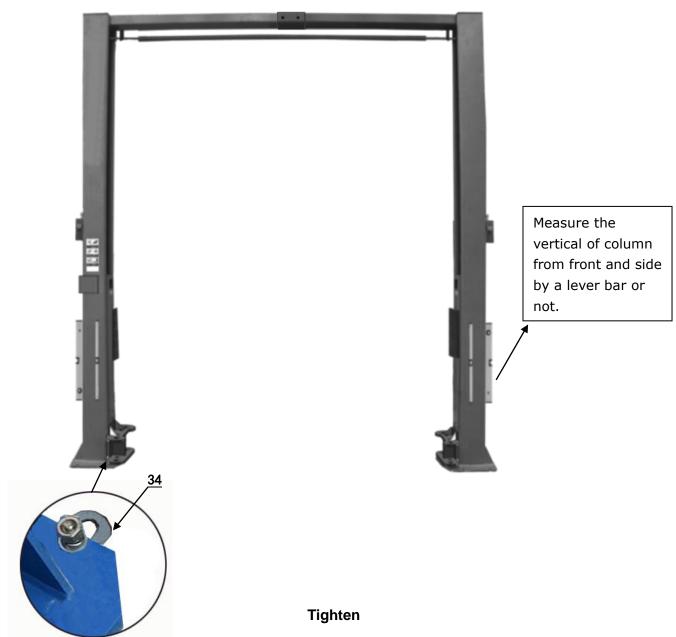


Fig. 16

**H.** Check the vertical plumbness of the columns with a level and adjust with the shims if the columns are not vertical. Tighten the anchor bolts (See Fig.17).



Adjust level with the shims

Note: Torque of Anchors is 150 Nm or 110 Ft Lbs.

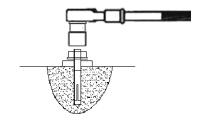
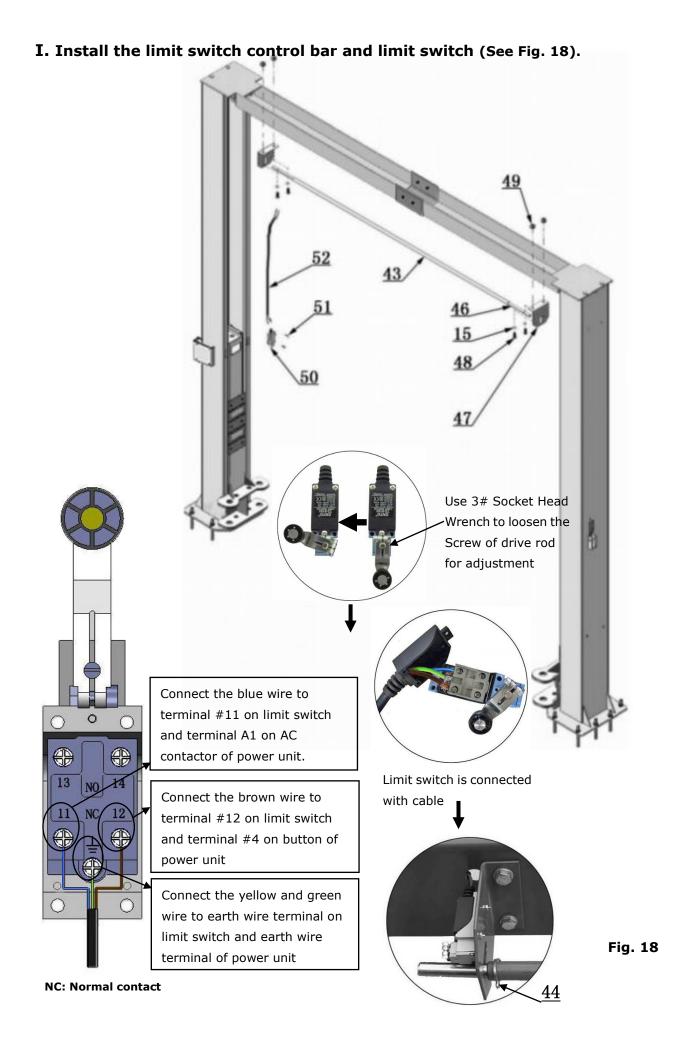
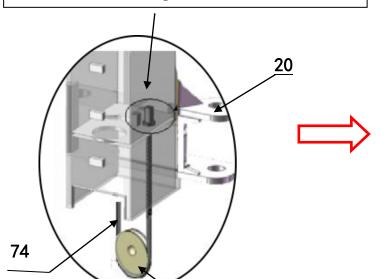


Fig. 17



#### J. Install safety cable (See Fig. 19).

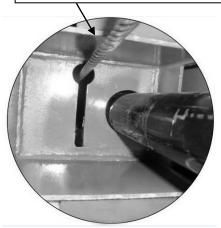
1. Pass one end of the cable through the bottom of the carriage.

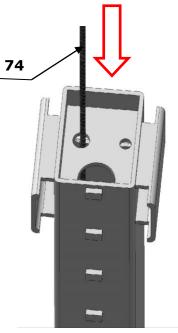


66

Cable through the bottom of the carriage

2. Pass the other end of the cable up from the bottom of the other lift carriage.





Cables pass through the top plate of the carriages



After installation



Fig. 19



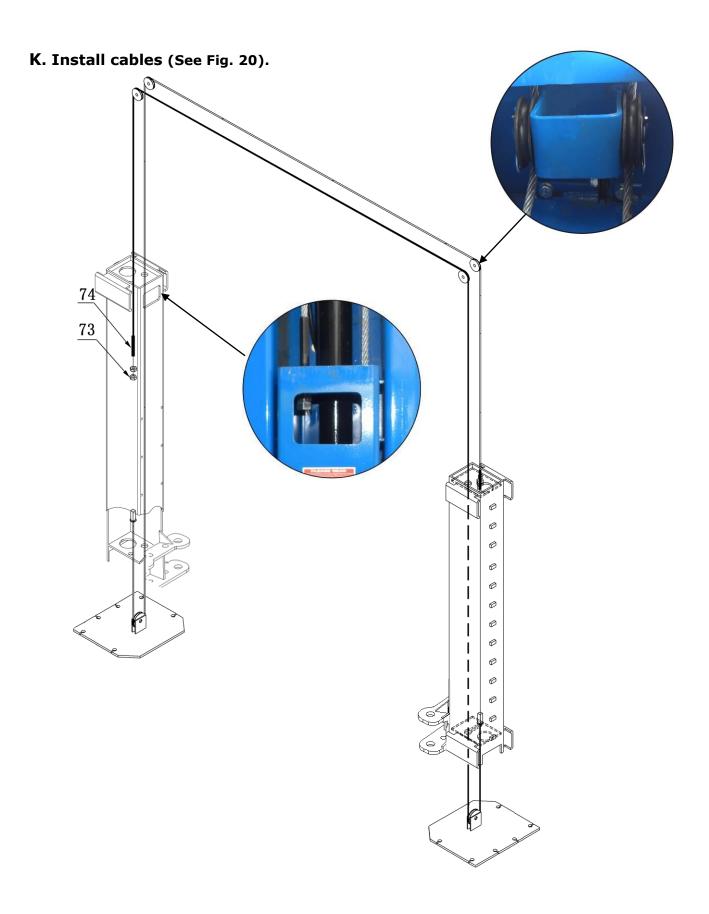


Fig. 20

# L. Install oil hoses and tighten all the oil hose connections, using thread tape where possible (See Fig. 21).

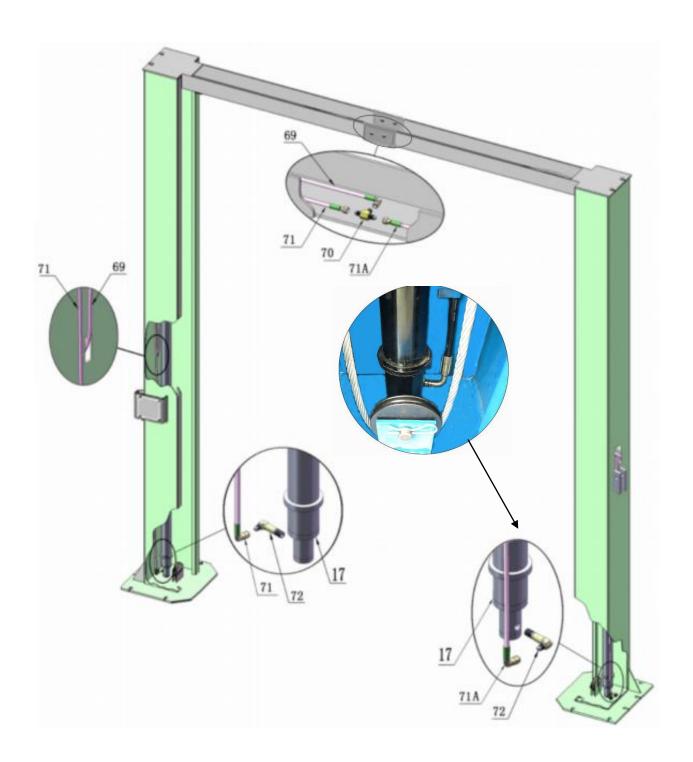


Fig. 21

#### M. Install power unit and connect oil hose (See Fig. 22)

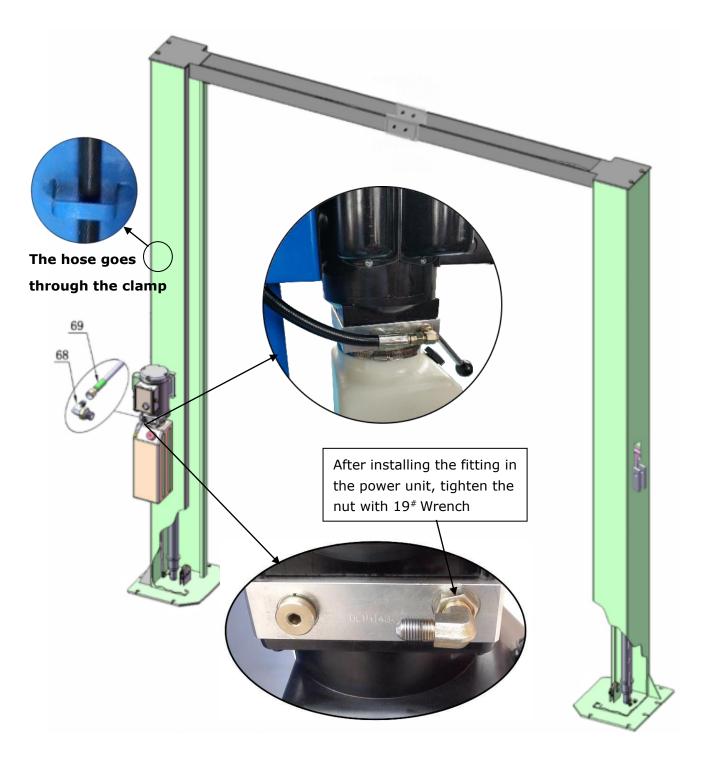
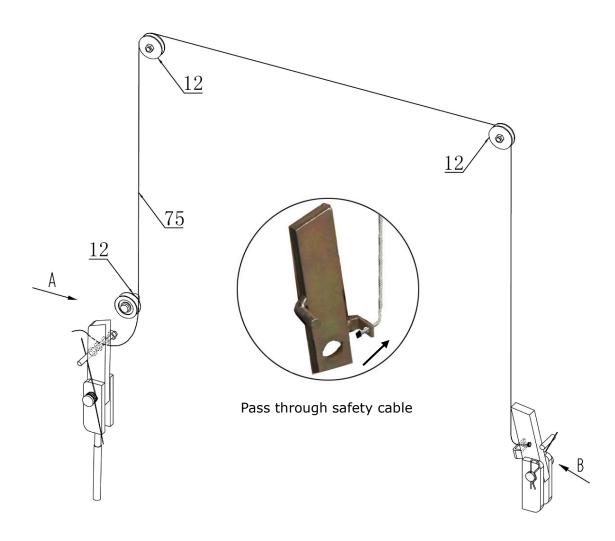


Fig. 22

# N. Install safety cable (See Fig. 23).



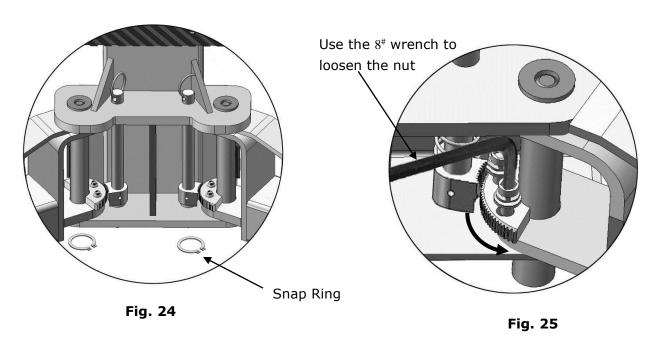
View A

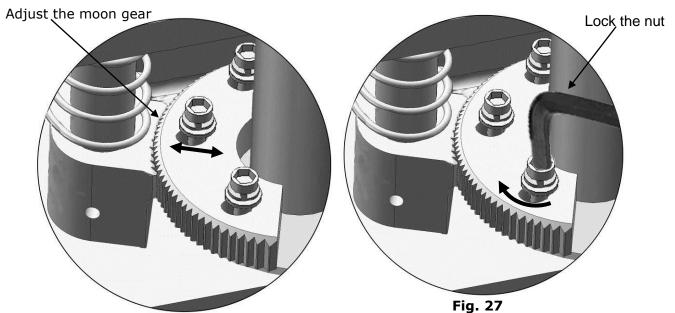


Fig. 23

#### O. Install lifting arms and adjust the arm locks

- 1. Install the lifting arms (See Fig. 24).
- 2. Lower the carriages to the lowest position, then use the 8<sup>#</sup> wrench to loosen the nut of gear (See Fig. 25).
- 3. Adjust the arm lock as direction of arrow (See Fig. 26)
- 4. Adjust the moon gear and arm lock to make it to be meshed, then tighten the nut of arm lock (See Fig. 27).





P. Tighten all the hose joint and fill the power unit with hydraulic oil (To prolong the life of all hydraulic parts AW32 or AW46 anti-wear hydraulic oil is recommended).

Fig. 26

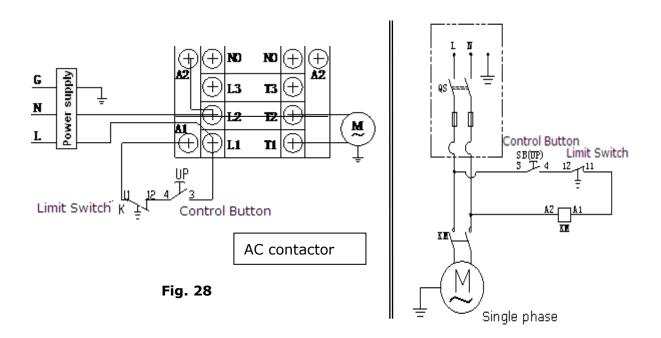
#### Q. Install electrical system

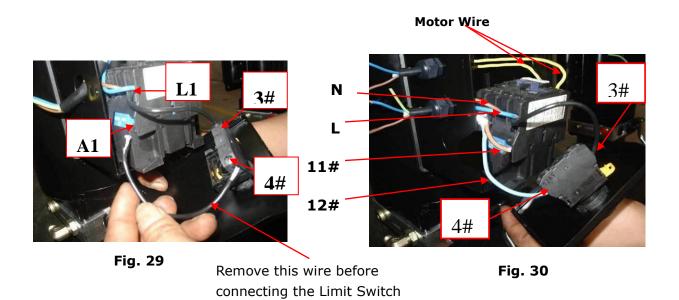
Connect the power source according to the requirements on the power unit.

Note: 1. For operator safety the power unit must be properly grounded.

#### Single phase motor (See Fig. 28).

- 1. Connecting the two power supply lines (Active **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 the Limit Switch: Removing the wire of connecting terminal **4#** on control button and terminal **A1** on AC contactor firstly (See Fig. 29), then connecting wire **12#** (brown color) of the limit switch with terminal **4#** of the control button and connecting wire **11#** (blue color) with terminal **A1** on AC contactor respectively. Connecting the earth wire (green and yellow color) of the limit switch with earth wire terminal on power unit. (See Fig. 30).
- 5. Connecting terminal **3#** on control button with terminal **L1** of AC contactor.





# Three phase motor

#### 1. Circuit diagram (See Fig. 31)

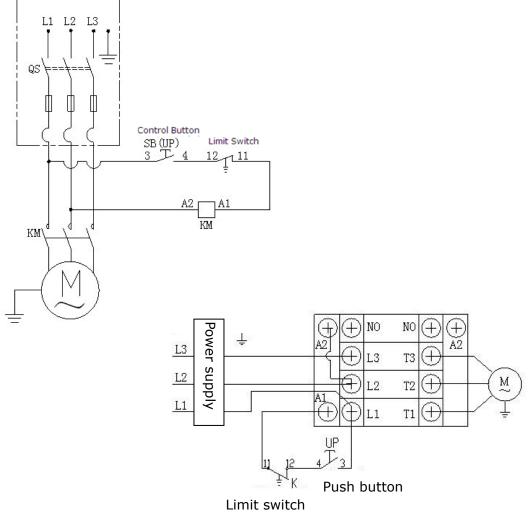


Fig. 31

#### 2. Connection step (See Fig. 32)

- a. The source wires (L1, L2, L3) connected with terminals of AC contactor markedL1, L2, L3 respectively.
- b. Terminals 4# of control button connected with wire 12# (brown wire) of limit switch; wire 11# (blue wire) connected with A1 terminals of AC contactor, Earth wire (yellow and green wire) of limit switch is connected with terminal earth wire of the motor.
- C. Terminals **3#** of control button connected with **L1** terminals of AC contactor.

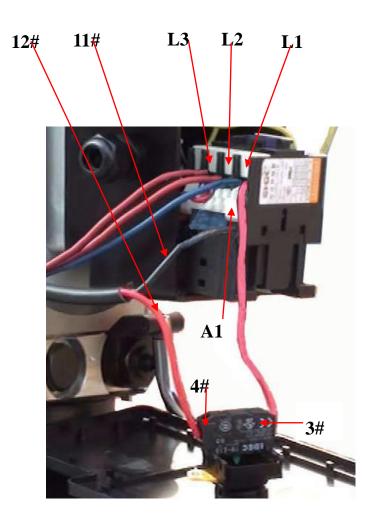


Fig. 32

#### **IV. EXPLODED VIEW**

#### Model 210CX

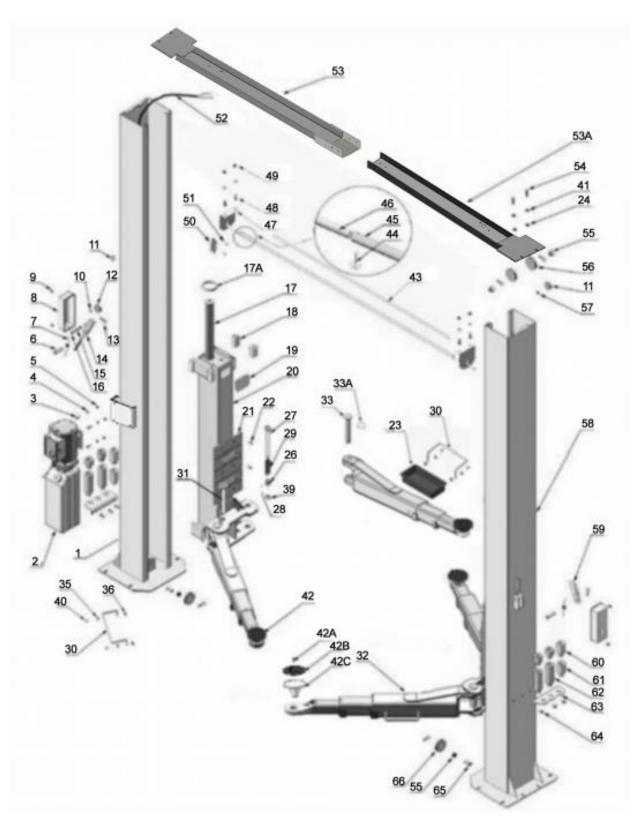


Fig. 33

#### **PARTS LIST FOR MODEL 210CX**

Item	Part#	Description	Qty.
1	11209206	Power side Column	1
2	81513001	Power Unit	1
3	10209003	Hex Bolt	4
4	10209004	Rubber Ring	4
5	10209005	MS Self-locking Nut	4
6	11206002	Safety block Pin	2
7	10209007	Safety Spring	2
8	10209008	Safety Cover	2
9	10209009	Cup Head Bolt M6*8	4
10	10209010	φ10 Snap Ring	1
11	10620059	Protective ringφ12	1
12	10209049	Plastic small pulley(BLACK)	3
13	10209012	φ3.2Hair Pin	8
14	11209013	Power side Safety Lock	1
15	10206006	φ12Washer	12
16	10206023A	Hex Nut M12	2
17	11209014-01	Cylinder	2
17A	11209111	Protective ring for cylinder	2
18	10209015	Slider Block	16
19	10209016	Carriage Plastic Cover	2
20	11209208	Carriage	2
21	10209018	Protective Rubber	2
22	10209019	Screw M6*16	12
23	10206190	Tool tray	2
24	10209021	Hex Nut M10	4
25	10209022	Washer φ10	12
26	10217044	Arm lock	4
27	11217046A	Arm lock bar (left)	2
28	10206036	Hair Pin φ6*40	4
29	10217045	Spring φ26*φ31*φ2.5	4
30	11206191	Toe guard bar	4
31	11217046	Arm lock bar (right)	2
32	10203156	Front arm assy.	4
33	11217168	Arm Pin	4
33A	10520023	Snap Ring	4
24	10201090	Shim 1mm	10
34	10620065	Shim 2mm	10
35	10209034	Lock Washer φ8	8
36	10209033	Washer φ8	8
37	10209502B	Part box	1
38	10209153	Pull tab for arm lock bar	4
39	10206032	Snap ring φ25	4

Item	Part#	Description	Qty.
40	10201002	Hex Bolt M8*16	8
41	10209039	φ10 Lock Washer	12
42	11217114A	Rubber Pad Assy.	4
42A	10420138	M6*16 Socket bolt	4
42B	10209134	Rubber Pad	4
42C	11680030B	Rubber Pad Support Frame	4
43	10206025A	Foam Cushion for control bar	1
44	10201005	Split pin	2
45	11206025C	Connecting Pin for Control Bar	2
46	11202011	Control Bar	1
47	11206042	Control Bar Bracket	2
48	10206041	Hex Bolt	4
49	10206023	Self-locking Nut	10
50	10206013	Limit Switch	1
51	10206011	Cup Head Bolt	2
52	10209184	Wire Cable	1
53	1102572001A	Power-side Top Beam	1
53A	1102572002A	Offside Top Beam	1
54	10209046	Hex Bolt M10*35	4
55	10209057A	Bronze Bush	6
56	11206020	Small Pulley	4
57	10209056	Self-locking Nut M10	2
58	11209207	Offside Column	1
59	11211013	Offside Safety Lock	1
60	11209051B	Stackable Adapter (1.5")	4
61	11209052B	Stackable Adapter (2.5")	4
62	11209053B	Stackable Adapter (5")	4
63	11209054A	Stackable Adapter Bracket	2
64	10680003	Hex Bolt M8*12	4
65	11209044	Pin for Pulley	2
66	11209045	Big Pulley	2
67	10209059	Anchor Bolt	12
68	10209060	90° Fitting for power unit	1
69	10211014-01	Oil hose (1straight 1 curved)	1
70	10211016	T- fitting	1
71	10211015A-02	Oil hose	1
71A	10211020-02	Oil hose	1
72	10211017	Extend 90° fitting for Cylinder	2
73	10209066	Hex Nut	4
74	10211018A-01	Cable Φ9.52×9552mm	2
75	10211019A	Safety Cable	1
76	10217069	Hex Bolt M12*30	6

# 4.1 Lifting arm assy. (10203156) exploded view

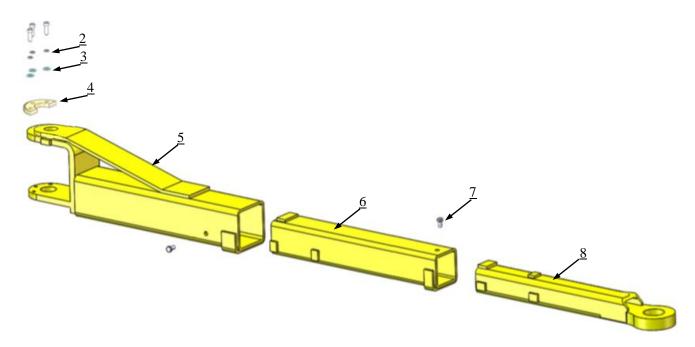
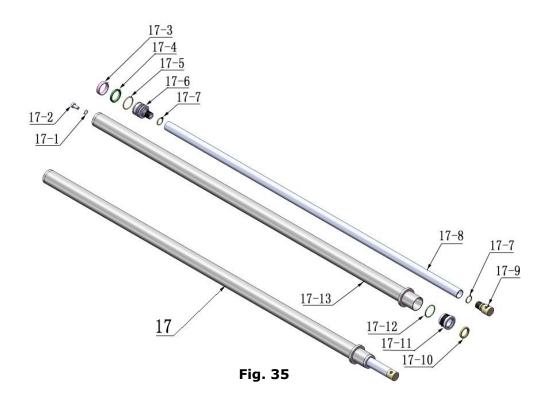


Fig.34

No	Part no	Name	QTY
1	10206048	Hex nut	12
2	10209039	washer	12
3	10209022	washer	12
4	11206049	Moon gear	4
5	11203146	Outer arm	4
6	11203147	Middle arm	4
7	10201149	Cup head bolt	8
8	11203148	Inner arm	4

# 4.5 Cylinders (10209014-01) exploded view



# Part list for cylinder

No	Part no	Name	QTY
17-1	10209069	O-ring	2
17-2	10209070	Bleeding Plug	2
17-3	10209071	Support Ring	2
17-4	10209072	Y-ring	2
17-5	10209073	O-ring	2
17-6	11209074	Piston	2
17-7	10209075	O-Ring	4
17-8	11217076	Piston rod	2
17-9	11209077	Piston Rod Fitting	2
17-10	10209078	Dust wing	2
17-11	11209079	cover	2
17-12	10209080	O ring	2
17-13	11209081	Bore Weldment	2

#### **4.6 POWER UNIT**

#### 220V/60HZ/1Phase

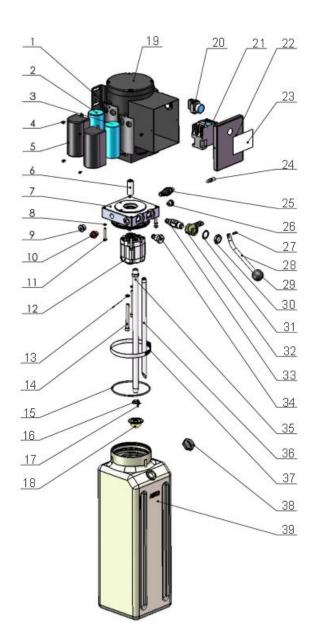


Fig. 36

### PARTS LIST FOR MANUAL POWER UNIT

Parts for Manual Power Unit, 220V/60Hz/1 phase				
Item	Part#	Description	Qty.	Note
1	81400180	Rubber pad	2	
2	81400130	Starting capacitor	1	
3	81400088	Running capacitor	1	
4	10420148	Screw with washer	6	
5	81400066	Capacitor cover	2	
6	81400363	Motor connector	1	
7	80101013	Manifold block	1	
8	10209149	Washer	4	
9	81400276	Plug	1	
10	81400259	Red plug	1	
11	85090142	Hex bolt	4	
12	81400280	Gear pump	1	
13	10209034	washer	2	
14	81400295	Hex nut	2	
5	81400365	O-ring	1	
16	10209152	Tape	1	
17	85090167	Magnet	1	
18	81400290	Filter	1	
19	81400413	Motor	1	
20	10420070	Button switch	1	
21	41030055	AC contractor	1	
22	81400287	Motor box cover	1	
23	71111170	AMGO lable	1	
24	81400560	Throttle valve	1	
25	81400266	Relief valve	1	
26	81400284	Plug	1	
27	10720118	Elastic pin	1	
28	81400451	Release handle	1	
29	10209020	Plastic ball	1	
30	81400421	Release valve nut	1	
31	81400422	Release handle	1	
32	81400449	valve seat(short)	1	
33	81400567	Release valve	1	
34	81400566	Check washer	1	
35	81400288	Oil suction hose	1	
36	81400289	Oil return hose	1	
37	81400364	Hose clamp	1	
38	81400263	Oil tank cap	1	
39	81400275	Oil tank	1	

#### Illustration of hydraulic valve for hydraulic power unit

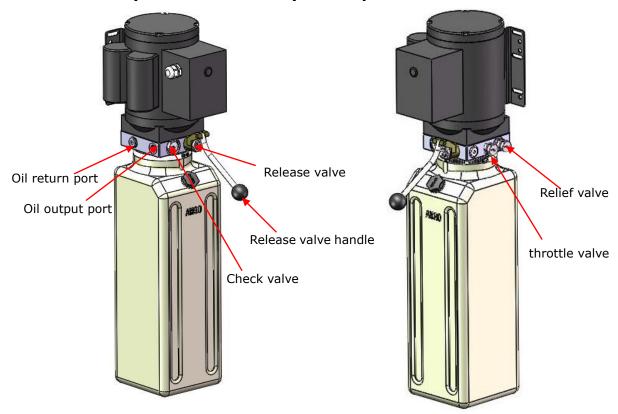


Fig 48

#### V. TEST RUN

#### 1. Adjustment of synchronous cables (See Fig. 49)

Use wrench to hold the cable end, meanwhile using ratchet spanner tighten the cable nut until the two cables are in the same tension.

If the two vehicle carriages do not synchronize when lifting and lowering, please screw and tighten the cable nut on the lower side carriage.

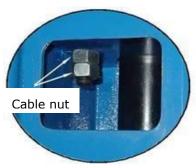


Fig. 49

#### 2. Adjust safety cable

Raise the vehicle carriages and lock them at the same height, strain the safety cable and then release a little, and then tighten the safety cable nuts. Make sure the safety device can always lock the carriages properly.

Finally, install the plastic cover of the safety device.

#### 3. Bleeding air from oil cylinder (See Fig. 50)

This hydraulic system is designed to bleed air by loosening the bleeding screw. Lift the carriages to about 12 inches and loosen the bleeding plug on the cylinder. Then lower the lift until fluid comes out. Tighten the screw after bleeding.



Fig. 50

#### 4. Adjust the lowering speed

You can adjust the lowering speed of the lift if need: screw the throttle valve clockwise to decrease the lowering speed, or counterclockwise to increase the lowering speed.







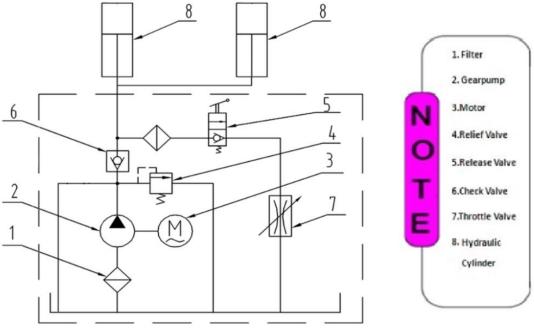
Counterclockwise, increase lowering speed

Fig. 51

#### 5. Test with load

After finishing the above adjustments, test run the lift with a load. Run the lift in low position for several times first, raising and lowering, make sure the lift can raise and lower synchronously and the safety device can lock and release synchronously. Then test run the lift to full rise. If there is anything improper, repeat the above adjustment and re-test operation.

NOTE: Lift may vibrate when first used, after lifting it with a load several times the air will bleed and the vibration should disappear automatically.



#### Fig. 52 Hydraulic System

#### **VI. OPERATION INSTRUCTIONS**

#### Please read the safety tips carefully before operating the lift

#### To lift vehicle

- 1. Keep work site near the lift clean and clear at all times;
- 2. Position carriages and lift arms to the lowest position;
- 3. Move shortest lift arms toward rear of lift;
- 4. Position vehicle between columns;
- Move arms to the vehicle's lifting point;

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

- 6. Push "**UP"** button until the lift pads fully contact underside of vehicle. 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 lock position. The vehicle is ready to repair.

#### To lower vehicle

- 1. Be sure clear of around and under the lift;
- 2. Push "**UP"** button to raise the vehicle slightly, and then release the safety device, lower vehicle by pushing lowering handle and safety release handle continuously until the vehicle is at ground level.

- 3. Open the arms and position them to the shortest length;
- 4. Drive away the vehicle.

Note: In order to extend the service life of the cylinder and seals, raise the machine to top at least once a day

#### VII. MAINTENANCE SCHEDULE

#### Monthly:

- 1. Re-torque the anchor bolts to 150 Nm or 110 Ft Lbs.;
- 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:**

- Make a visual inspection of all moving parts for possible wear, interference or damage.
- 2. Check and adjust as necessary, equalizer tension of the cables to insure level lifting.
- 3. Check the vertical of columns.
- 4. Check rubber pads and replace as necessary.
- 5. Check safety device and make sure proper condition.

#### Oil cylinder maintenance:

In order to extend the service life of the oil cylinder, please operate according to the following requirements.

- 1. Use the recommended AW32 or AW46 anti-wear hydraulic oil.
- 2. The hydraulic oil in the lift should be replaced regularly during using. Replace the hydraulic oil 3 months after the first installation, Replace the hydraulic oil once a year afterwards.
- 3. Make at least one full trip raising and lowering per day. For exhausting the air from the system, which could effectively avoid the corrosion of the cylinder and damage to the seals caused by presence of air or water in the system.

Always protect the outer surface of the oil cylinder's piston rod from damage, make sure to immediately clean up any debris on the oil cylinder dust-ring and the piston rod.

#### **VIII.TROUBLE SHOOTING**

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

#### IX. Lift disposal.

When the car lift cannot meet the requirements for normal use and needs to be disposed, follow local laws and regulations.

#### X. WARRANTY:



**This item** is warranted for five (5) years on structural components, two (2) years on hydraulic cylinders, and one (1) year on electric or air / hydraulic power units from invoice date. Wear items are covered by a 90 day warranty.

This LIMITED warranty policy does **not include a labor** warranty.

# NOTE: ALL WARRANTY CLAIMS MUST BE PRE-APPROVED BY THE MANUFACTURER TO BE VALID.

The Manufacturer shall repair or replace at their option for this period those parts returned to the factory freight prepaid, which prove after inspection to be defective. This warranty will not apply unless the product is installed, used and maintained in accordance with the Manufacturers installation, operation and maintenance instructions.

This warranty applies to the ORIGINAL purchaser only, and is non-transferable. The warranty covers the products to be free of defects in material and workmanship but, does not cover normal maintenance or adjustments, damage or malfunction caused by: improper handling, installation, abuse, misuse, negligence, carelessness of operation or normal wear and tear. In addition, this warranty does not cover equipment when repairs or alterations have been made or attempted to the Manufacturer's products.

THIS WARRANTY IS EXCLUSIVE AND IS LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING ANY IMPLIED WARRANTY OR MERCHANTABILITY OR ANY IMPLIED WARRANTY OF FITNESS FROM A PARTICULAR PURPOSE, AND ALL SUCH IMPLIED WARRANTIES ARE EXPRESSLY EXCLUDED.

THE REMEDIES DESCRIBED ARE EXCLUSIVE AND IN NO EVENT SHALL THE MANUFACTURER, NOR ANY SALES AGENT OR OTHER COMPANY AFFILIATED WITH IT OR THEM, BE LIABLE FOR SPECIAL CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR THE BREACH OF OR DELAY IN PERFORMANCE OF THIS WARRANTY. THIS INCLUDES, BUT IS NOT LIMITED TO, LOSS OF PROFIT, RENTAL OR SUBSTITUTE EQUIPMENT OR OTHER COMMERCIAL LOSS.

**PRICES:** Prices and specifications are subject to change without notice. All orders will be invoiced

at prices prevailing at time of shipment. Prices do not include any local, state or federal taxes.

**RETURNS:** Products may not be returned without prior written approval from the

Manufacturer DUE TO THE COMPETITIVENESS OF THE SELLING PRICE OF THESE LIFTS, THIS

WARRANTY POLICY

WILL BE STRICTLY ADMINISTERED AND ADHERED TO.

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