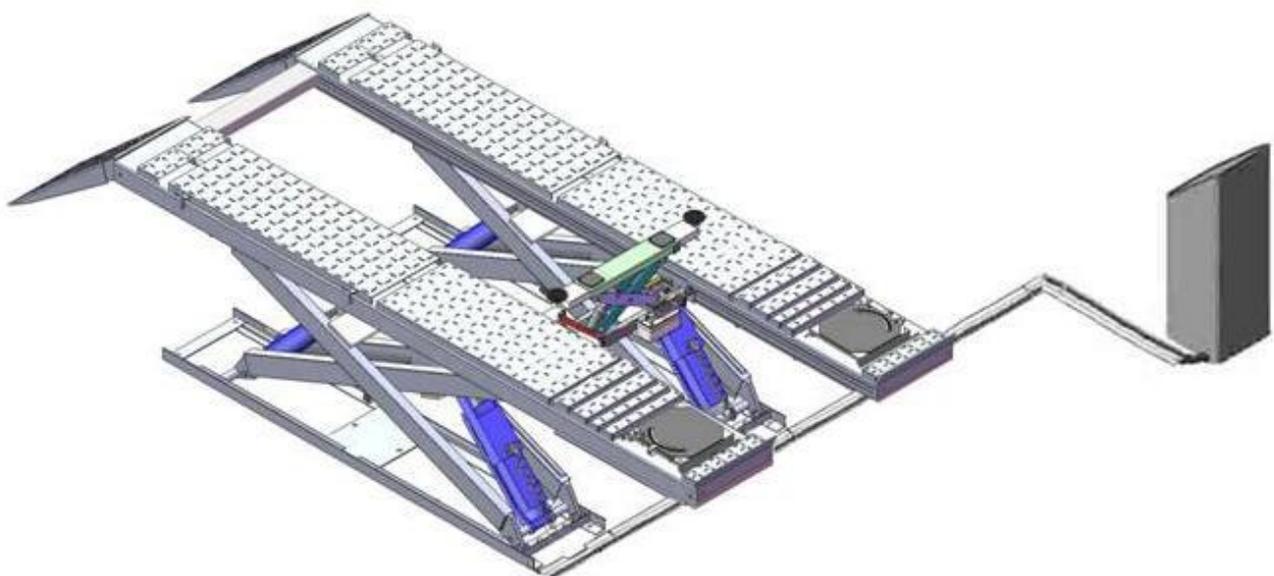


**AMGO**  <sup>®</sup> **Hydraulics**

Original

# Installation And Service Manual



## **SCISSORS LIFT**

**Model: AX-12A, AX-12**

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# I. PRODUCT FEATURUES AND SPECIFICATIONS

## Professional Alignment Scissors Lift

### Model AX-12A

- Electric- air control system, safety self-lock mechanism
- 2-Dual synchronous cylinders are applied to assure the lifting level on both platforms
- Non-skid diamond runway
- Integrated rear slip-plates
- Heavy duty design, fit for a wide range of vehicle car to van and light truck.
- Optional Jack (with hand pump/air-operated hydraulic pump)
- Optional Turnplate

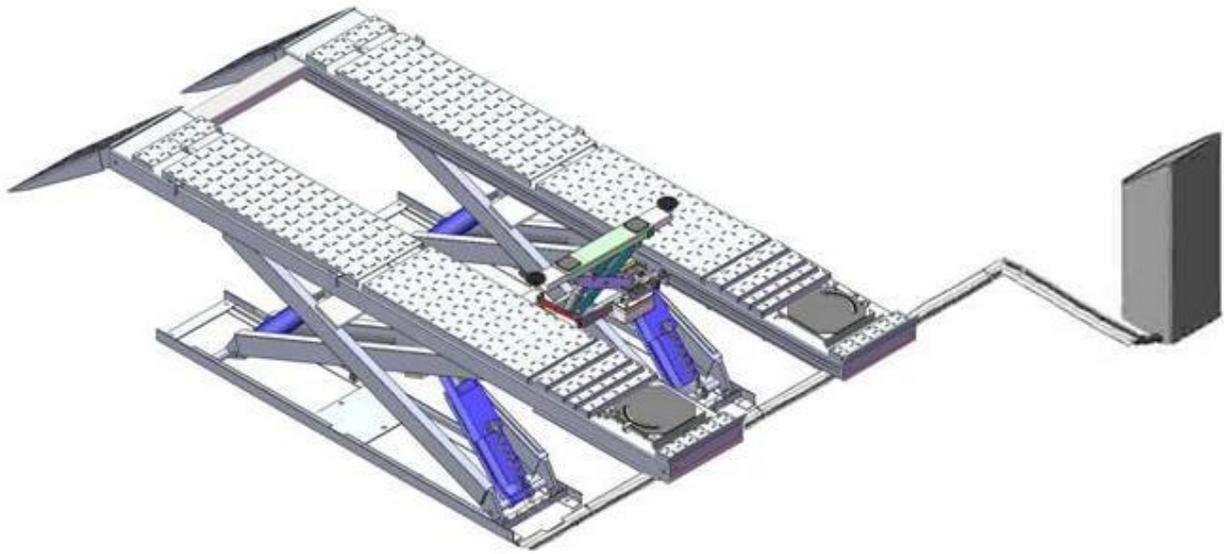


Fig. 1

## MODEL AX-12A SPECIFICATIONS

Model	Lifting Capacity	Lifting Height	Min. Height	Lifting Time	Overall Length (Inc. Ramps)	Overall Width	Runway Width	Distance Between Runway	Motor
AX-12A	12000lbs	73 5/8"	11-3/4"	74S	258"	90-1/8"	24-5/8"	37-5/8"	2.0HP

## Professional non-alignment Scissors Lift

### Model AX-12

- Electric- air control system, safety self-lock mechanism
- Dual synchronous cylinders are applied to assure the lifting level on both platforms
- Non-skid diamond runway; supper wide platform
- Heavy duty design, fit for a wide range of vehicle car to van and truck
- Optional Jack (with hand pump/air-operated hydraulic pump)

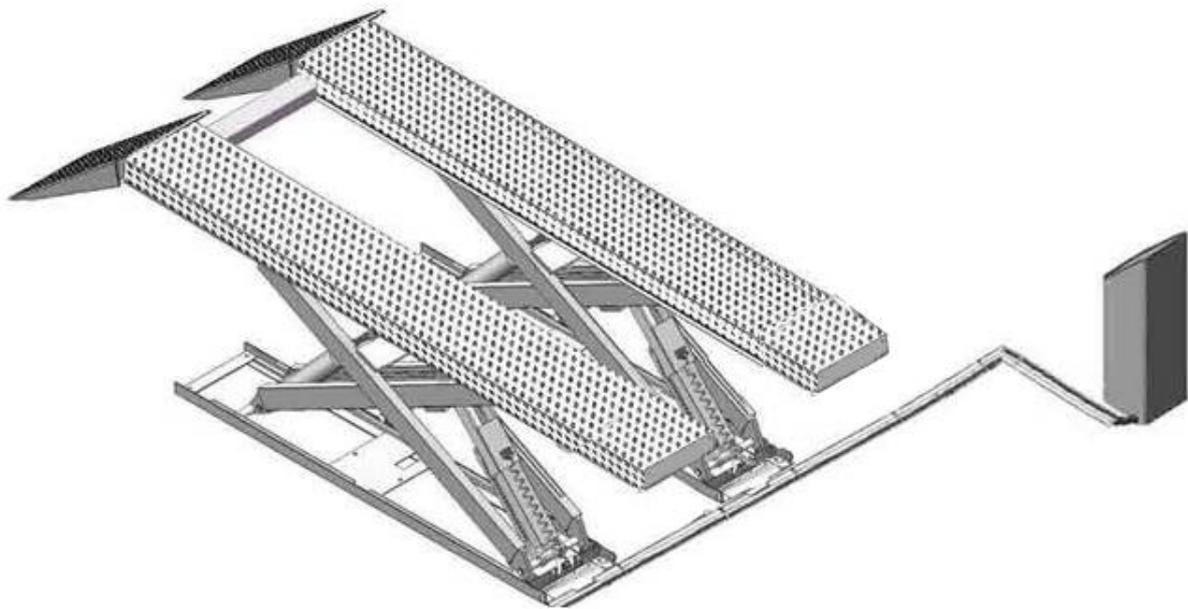


Fig. 2

### MODEL AX-12 SPECIFICATIONS

Model	Lifting Capacity	Lifting Height	Min. Height	Lifting Time	Overall Length (Inc. Ramps)	Overall Width	Runway Width	Distance Between Runway	Motor
AX-12	12000 lbs	73-5/8"	11-3/4"	74S	267"	90-1/8"	24-5/8"	37-5/8"	2.0HP

## II. INSTALLATION REQUIREMENT

### A. TOOLS REQUIRED

- ✓ Rotary Hammer Drill ( $\Phi 19$ ,  $\Phi 10$ ,  $\Phi 4$ ,)



- ✓ Hammer



- ✓ Level Bar



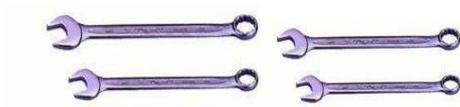
- ✓ English Spanner (12")



- ✓ Ratchet Spanner With Socket (28#)



- ✓ Wrench Set (8#, 14#, 15#, 17#, 19#)



- ✓ Carpenter's Chalk



- ✓ Screw Sets



- ✓ Tape Measure (7.5m)



- ✓ Pliers



- ✓ Lock Wrench



- ✓ Grease gun



Fig. 3

**B. Equipment storage and installation requirements.**

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

**C. SPECIFICATIONS OF CONCRETE**

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 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/cm<sup>2</sup>) minimum.
3. Floors must be level and no cracks.

**D. POWER SUPPLY**

The electrical source must be 2.0HP minimum. The source cable size must be 2.5mm<sup>2</sup> and in good condition of contacting with floor.

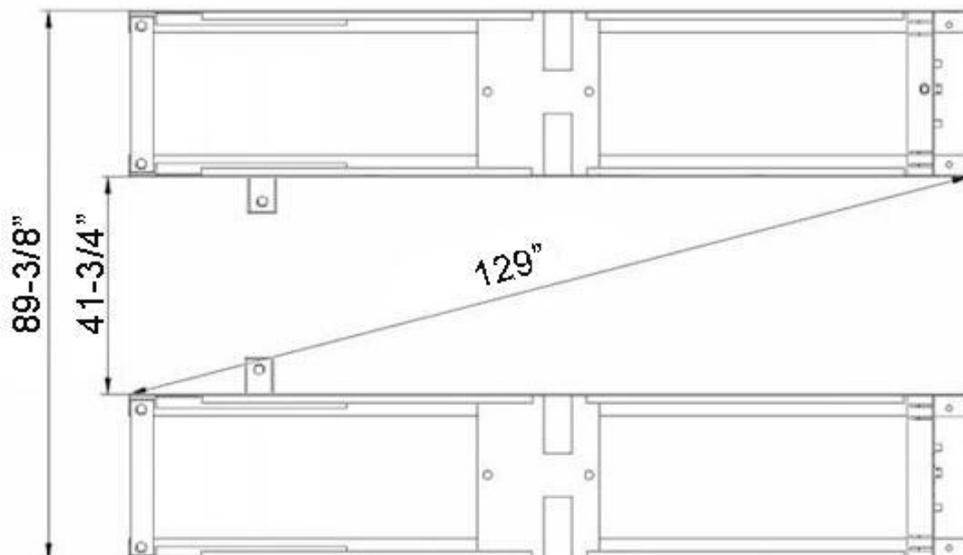
**III. STEPS OF INSTALLATION**

**A. Location of Installation**

Check and insure the installation location (concrete, layout, space size etc.) is suitable for lift installation.

**1. For Standard Installation: On surface installation**

- 1.1 AX-12/AX-12A On surface installation foundation (See Fig. 4)



**Fig. 4**

1.2 Illustration of scissors lift AX-12 on surface installation (See Fig.5).

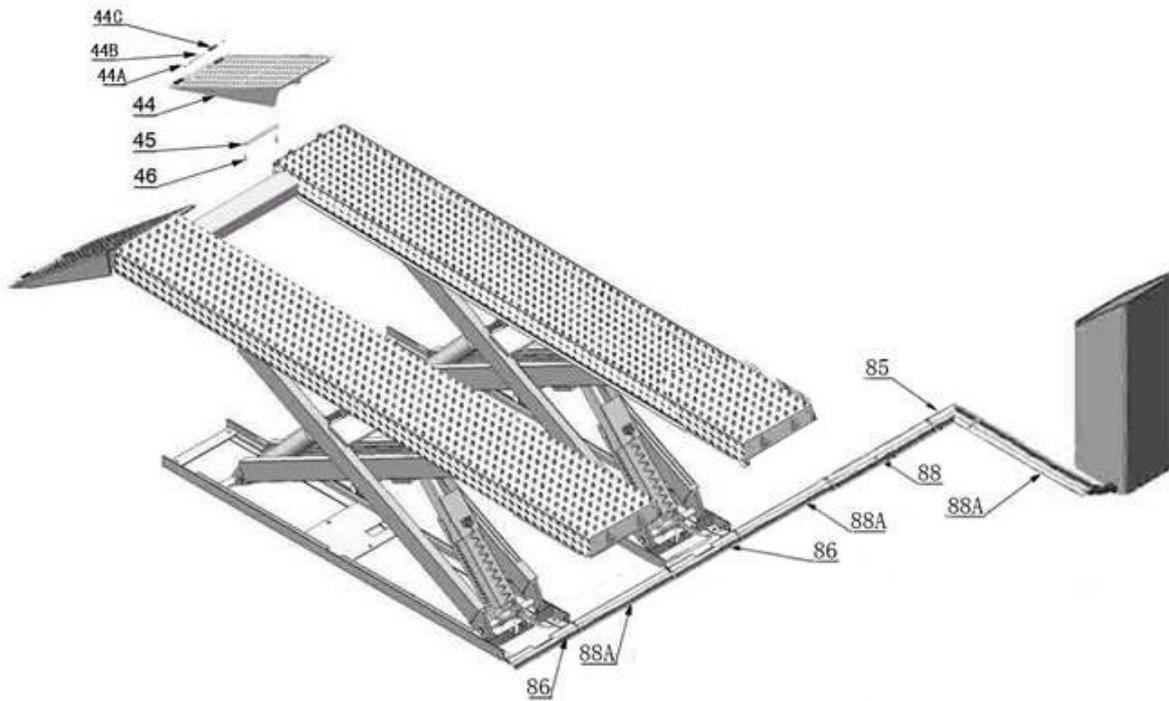


Fig. 5

1.3 Illustration of scissors lift AX-12A on surface installation (See Fig.6).

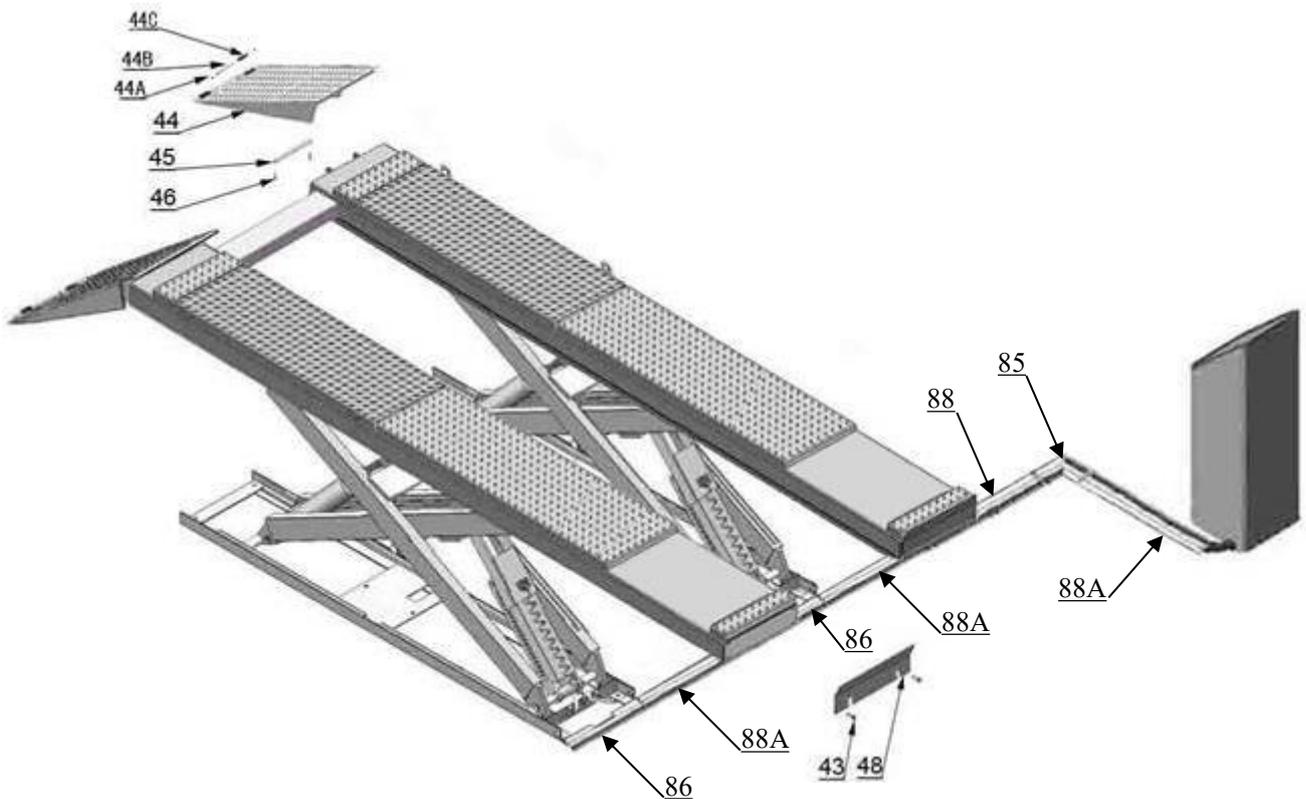
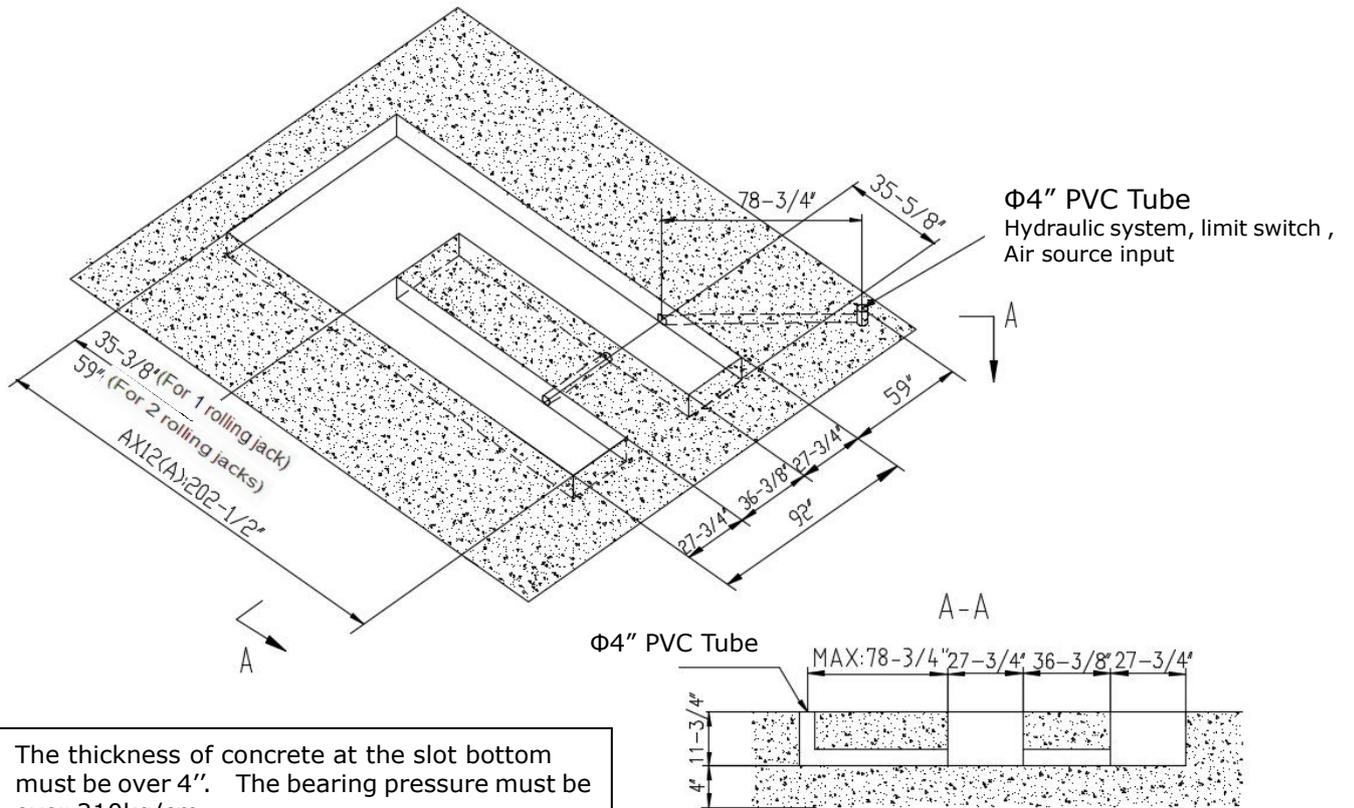


Fig. 6

## 2. For Optional Installation: Flush mount installation

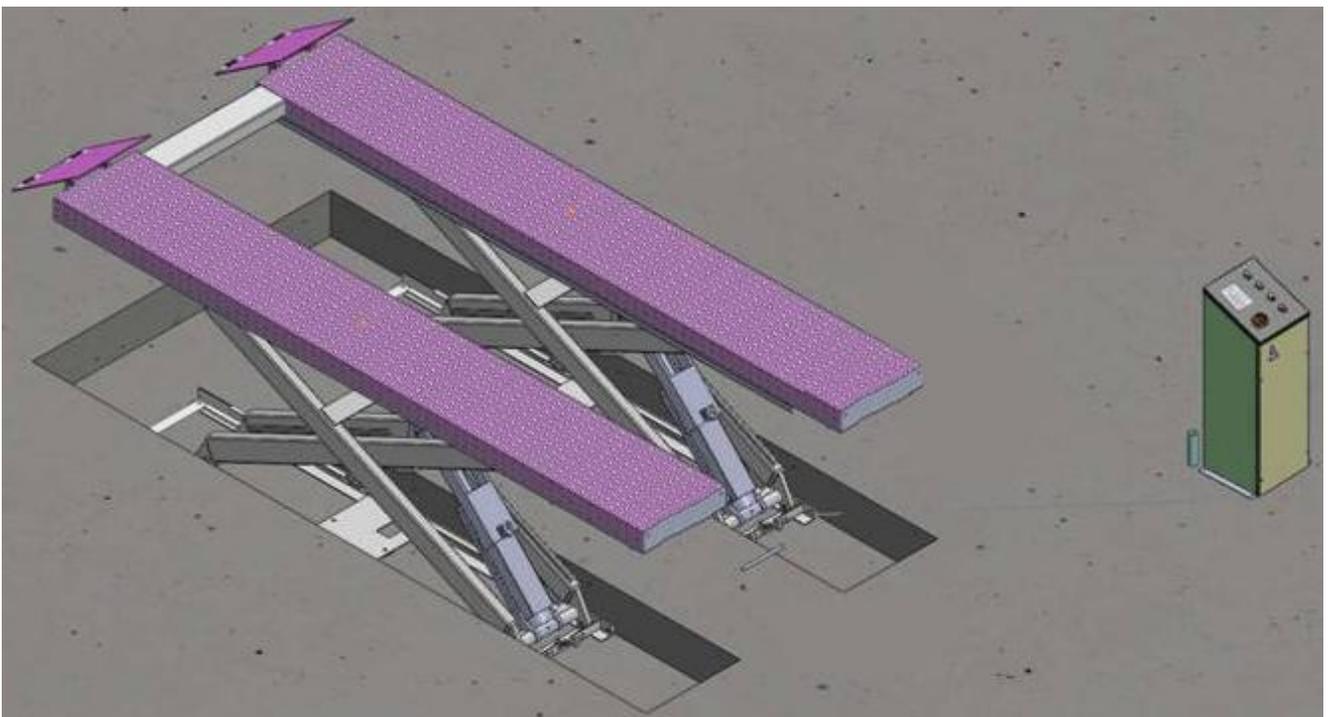
### 2.1 Flush mount installation foundation (Fig.7).



1. The thickness of concrete at the slot bottom must be over 4". The bearing pressure must be over 210kg/cm.
2. All pipe must be PVC with diameter 4".

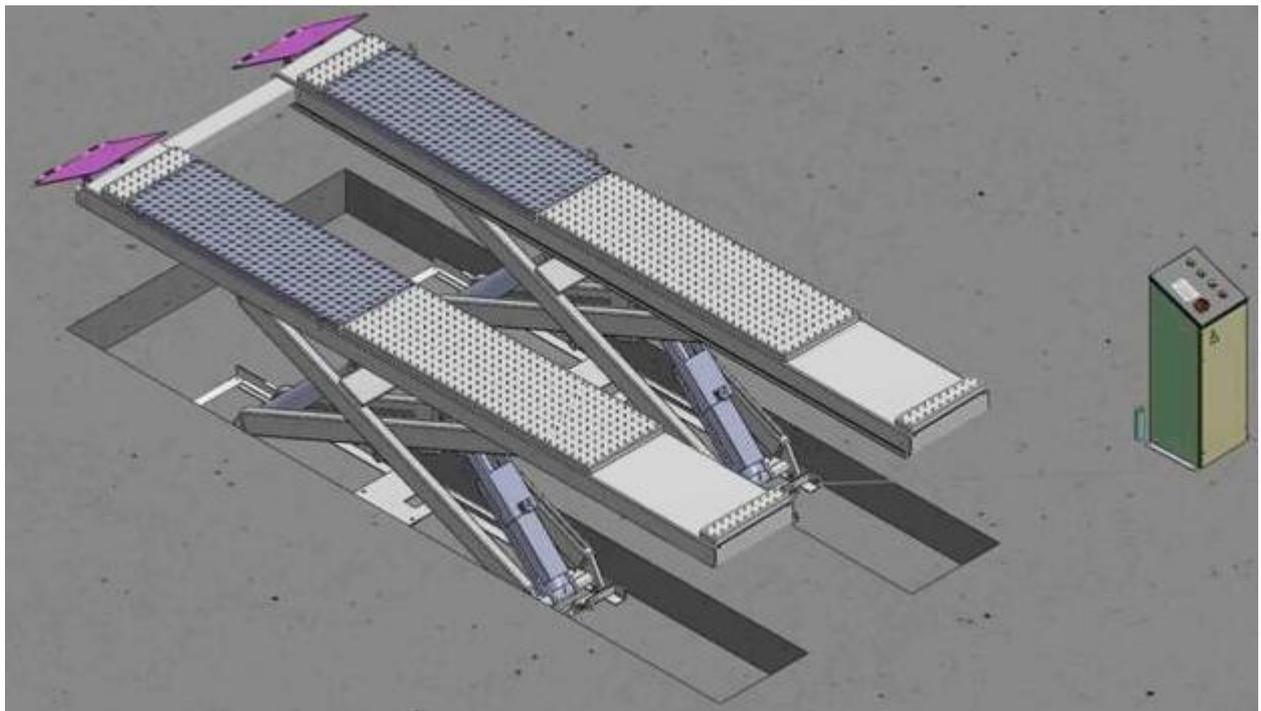
**Fig. 7**

### 2.2 Illustration of scissors lift AX-12 with flush mount installation (Fig.8).



**Fig. 8**

2.3 Illustration of scissors lift **AX-12A** with flush mount installation (**Fig.9**).



**Fig. 9**

**B. Check the parts before assembly.**

1. Received Packaged lift, Parts box, Control cabinet, Guide ramp .etc. (**See Fig. 10**).

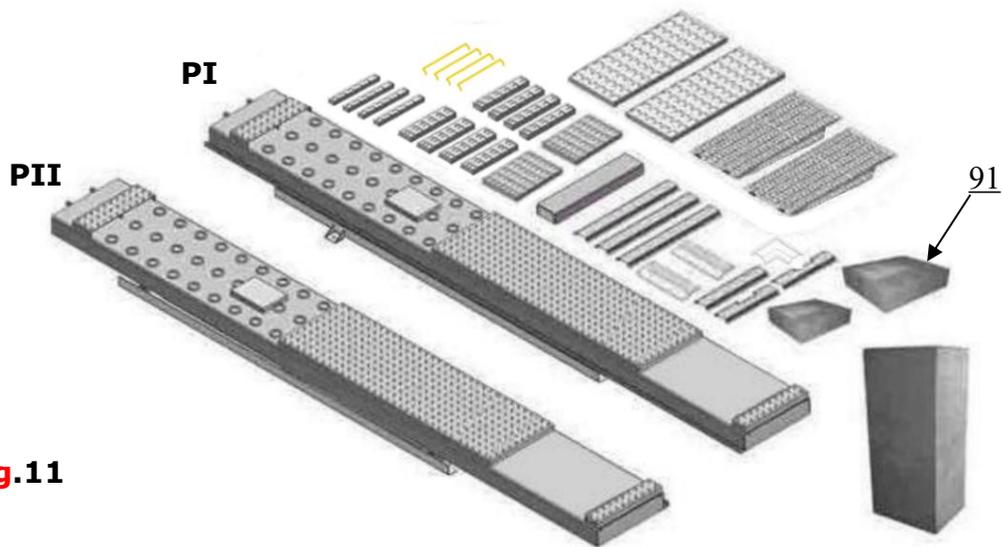


**Fig. 10**

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

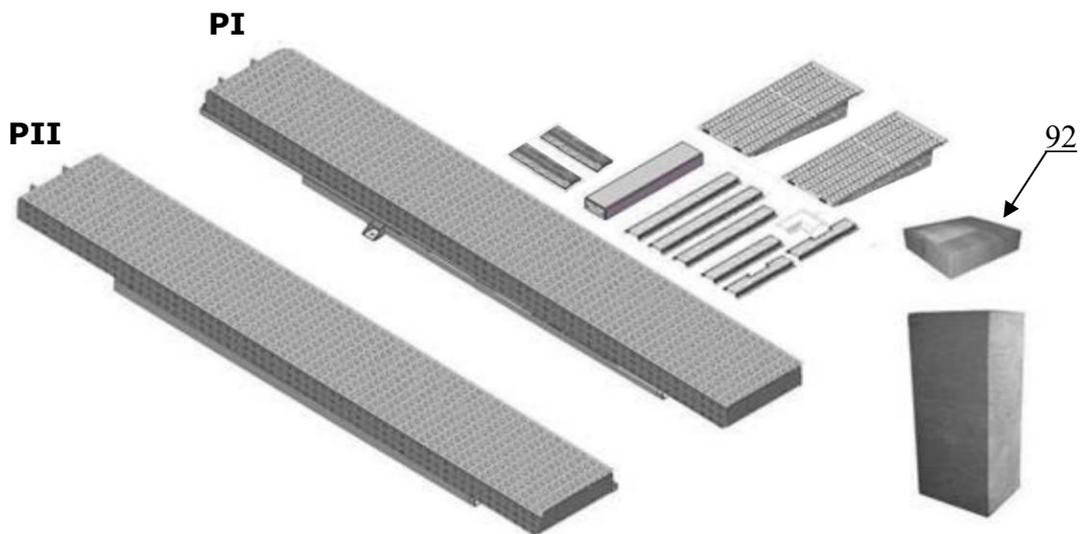
2.1 Parts for on surface installation (See Fig.11, Fig.12)

**For Model AX-12A**



**Fig.11**

**For Model AX-12**

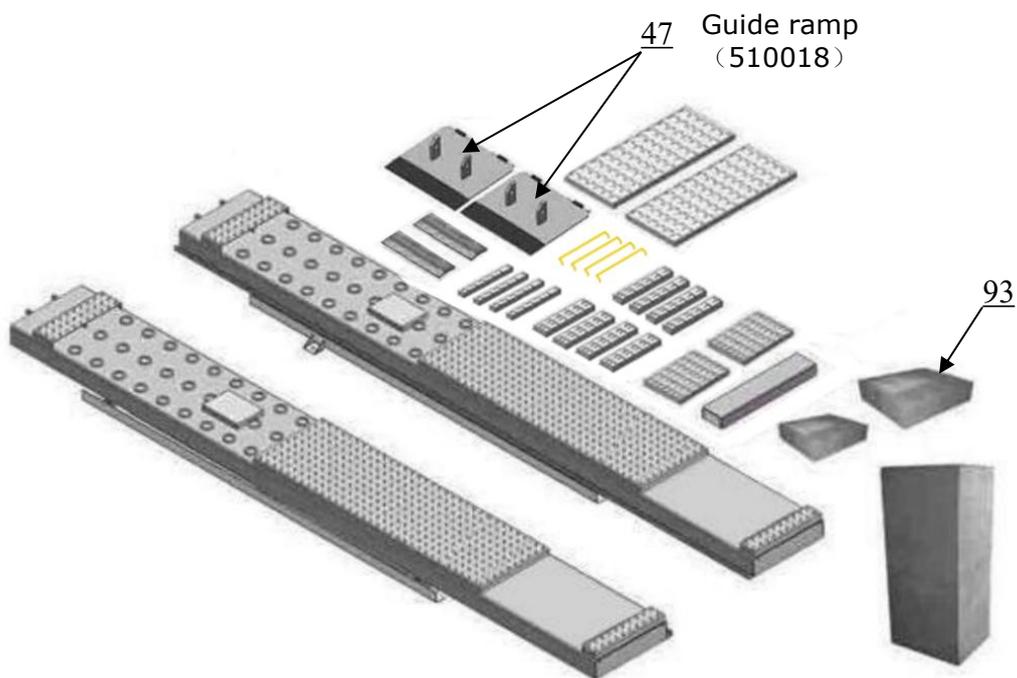


**Fig.12**

## 2.2 Parts for flush mount installation (See Fig.13, Fig.14)

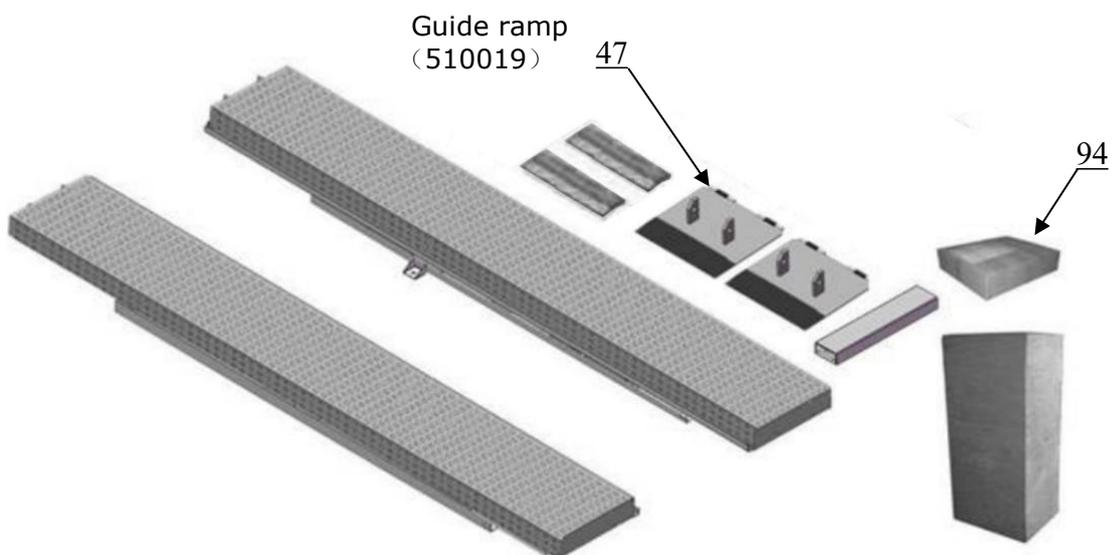
Noted: Need guide ramp for flush mount installation

### For Model AX-12A



**Fig.13**

### For Model AX-12



**Fig.14**



4.2 Parts bag for flush mount installation (See Fig.19, Fig.20)

**For AX-12A**



**Fig. 19**

**For AX-12**

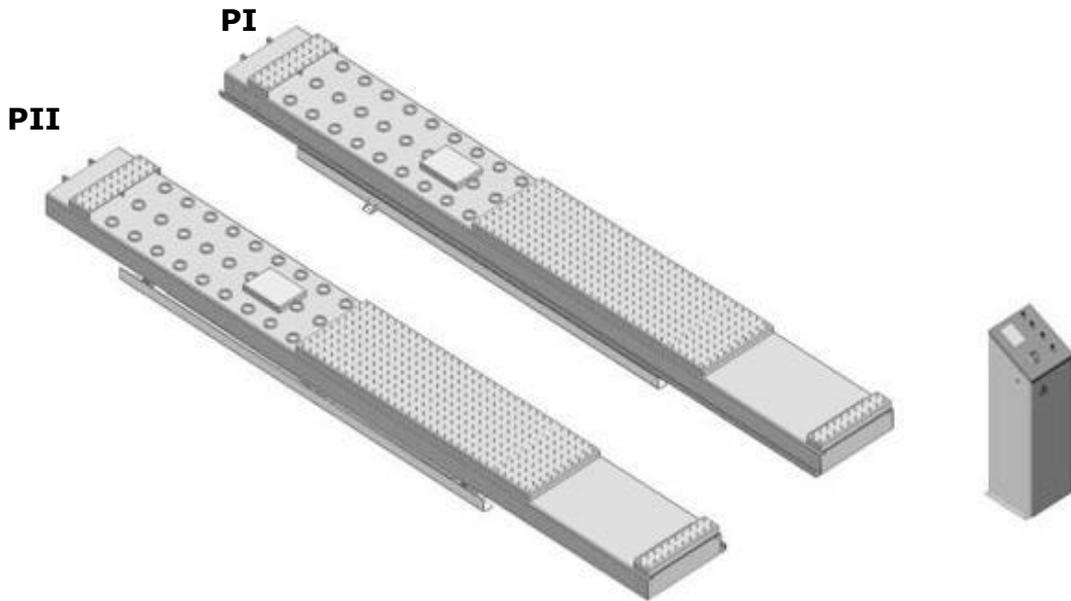


**Fig. 20**

**C. Layout the machine and install oil system and air line system.**

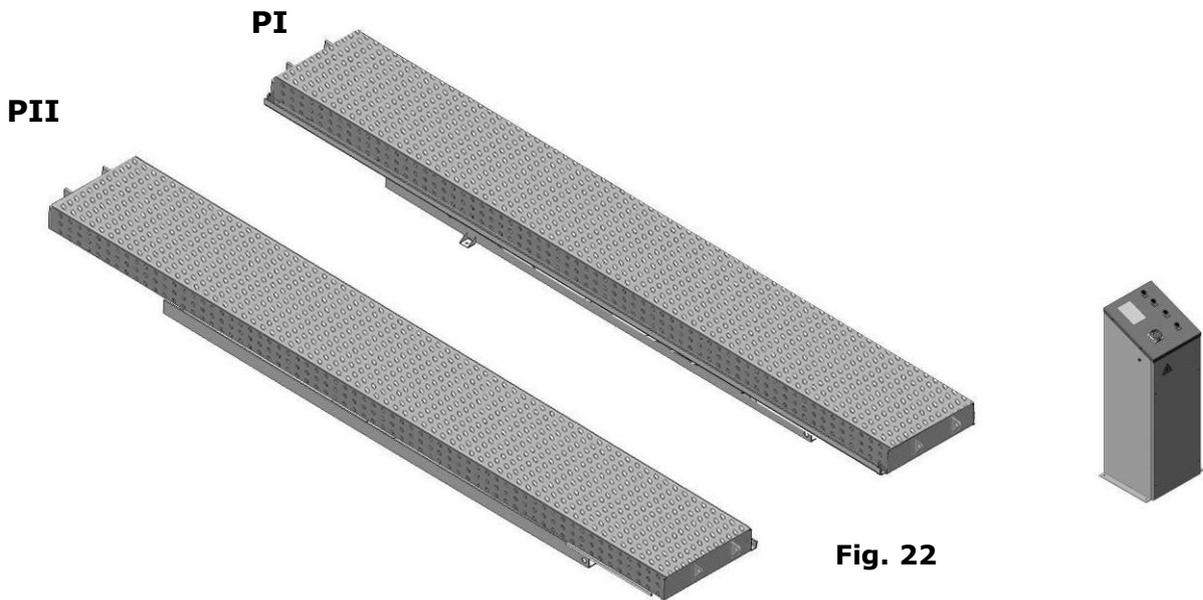
1. Select a location and layout the equipment according to steps **A** (See Fig. 21-22).  
The control cabinet can be installed on the left or right according to the site.

**For Model AX-12A**



**Fig. 21**

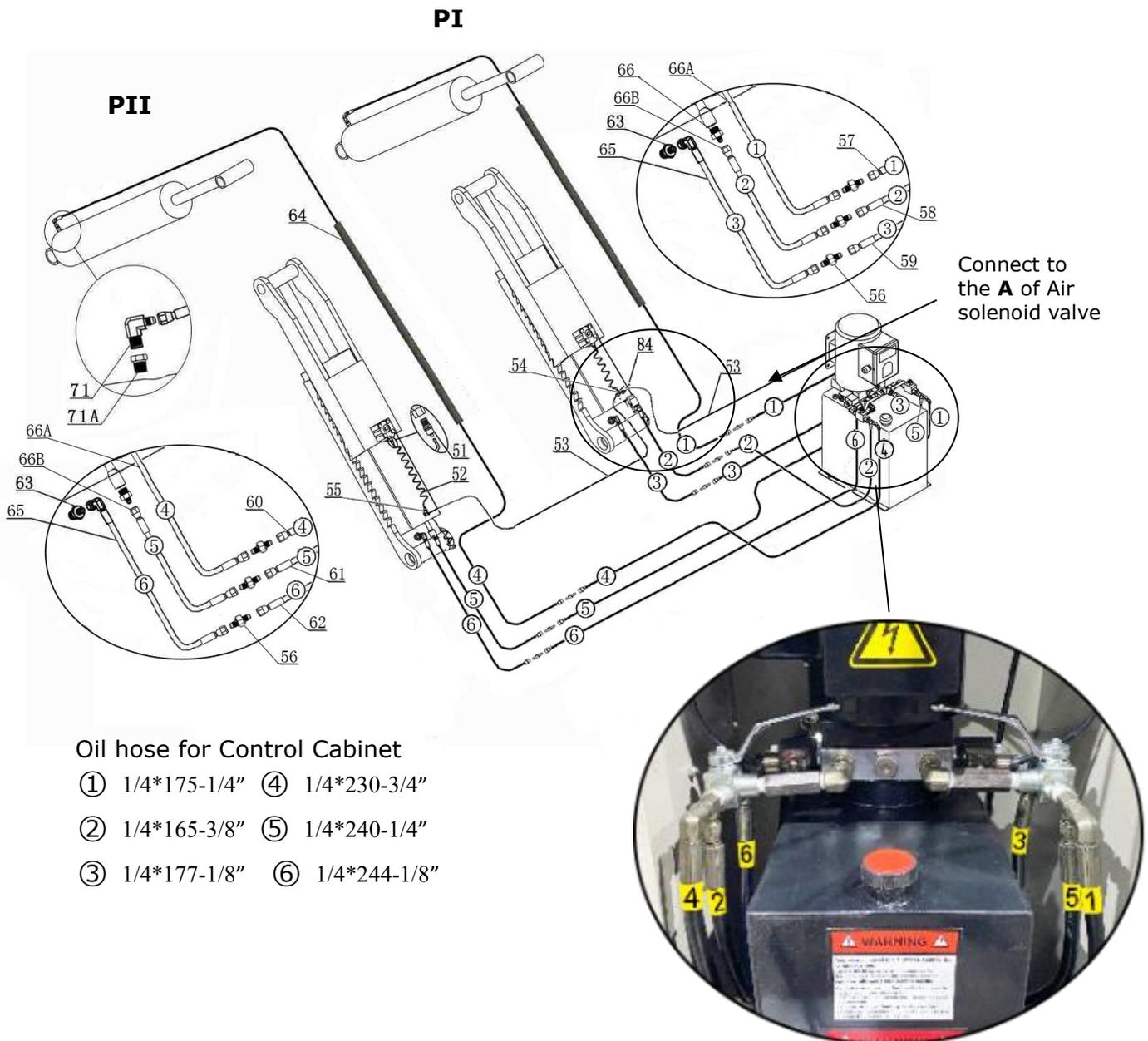
**For Model AX-12**



**Fig. 22**

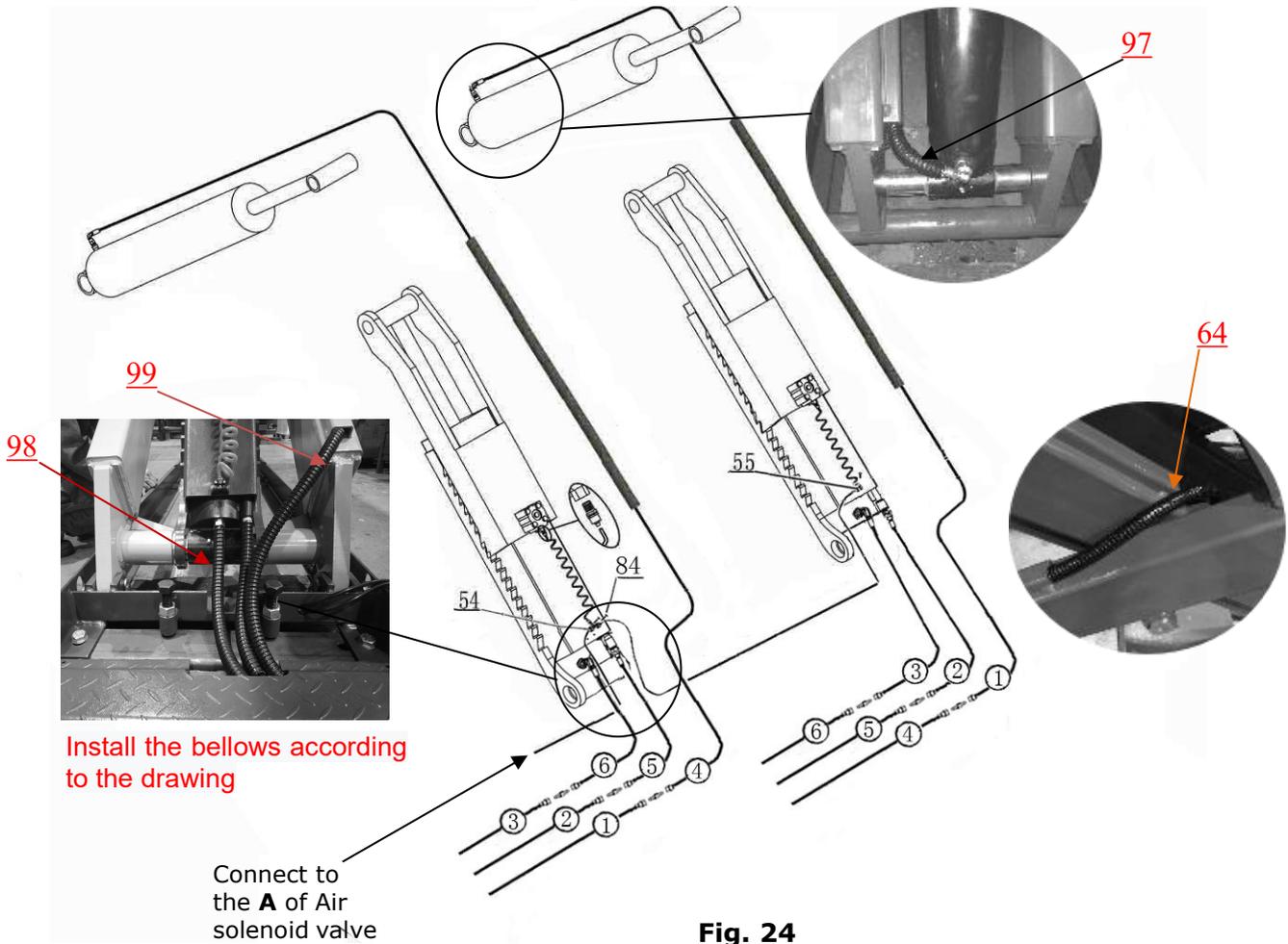
2. Connecting the oil hose and air line.

2.1 Control cabinet installed in the left of the car in direction (See Fig. 23).



**Fig. 23**

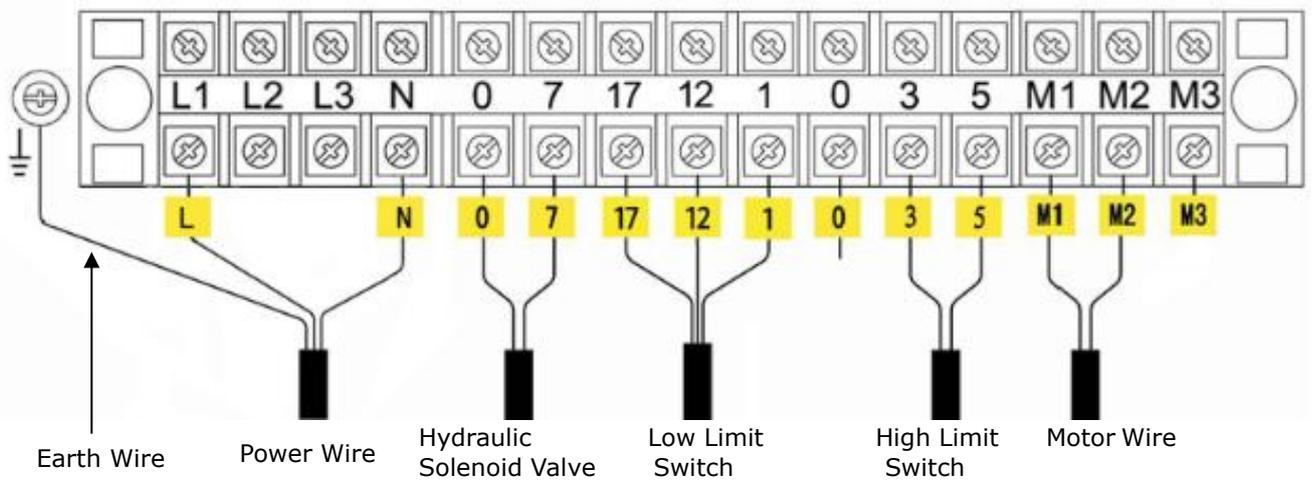
2.2 Control cabinet installed in the right of the car in direction (See Fig. 24).



#### D. Install electric system

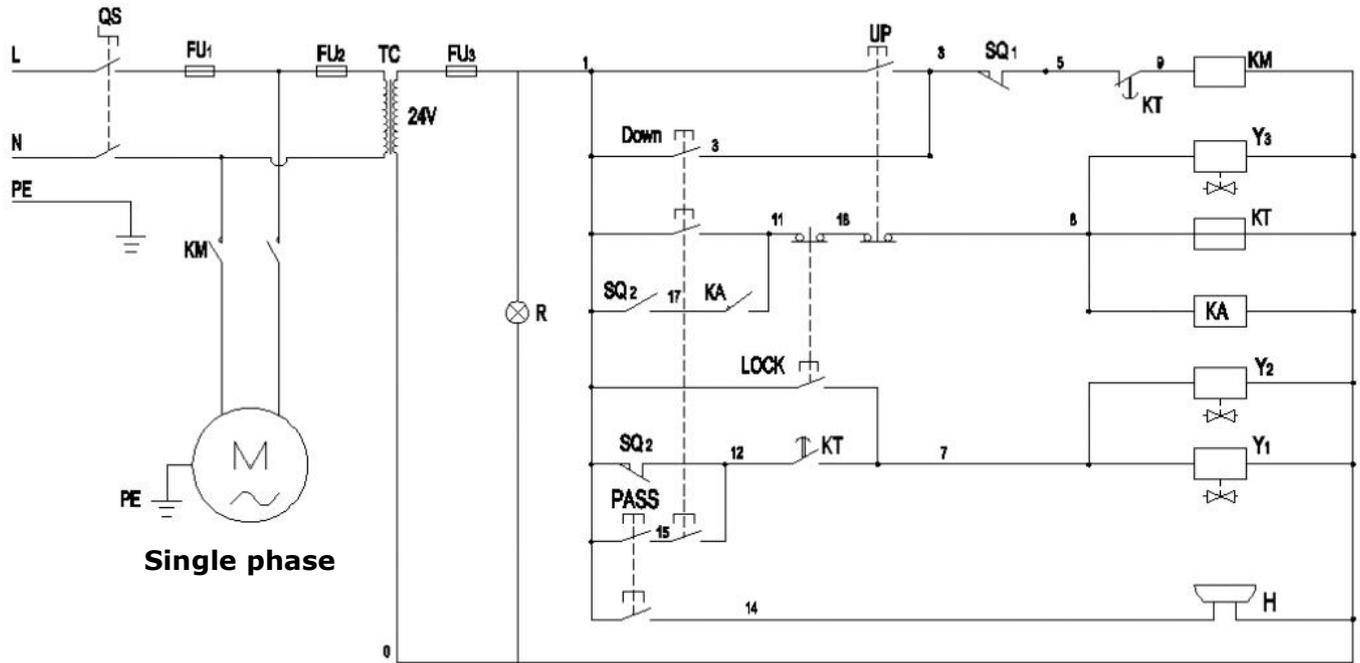
1. Wire connection for hydraulic power unit (220V)

1.1 Connect the power wire and limit switch wire according to the Wiring diagram (See Fig. 27)



**When the input power supply are two fire wires, these two fire wires connect terminal L1 and N in separate.**

### 1.2 Circuit Diagram (See Fig. 28).



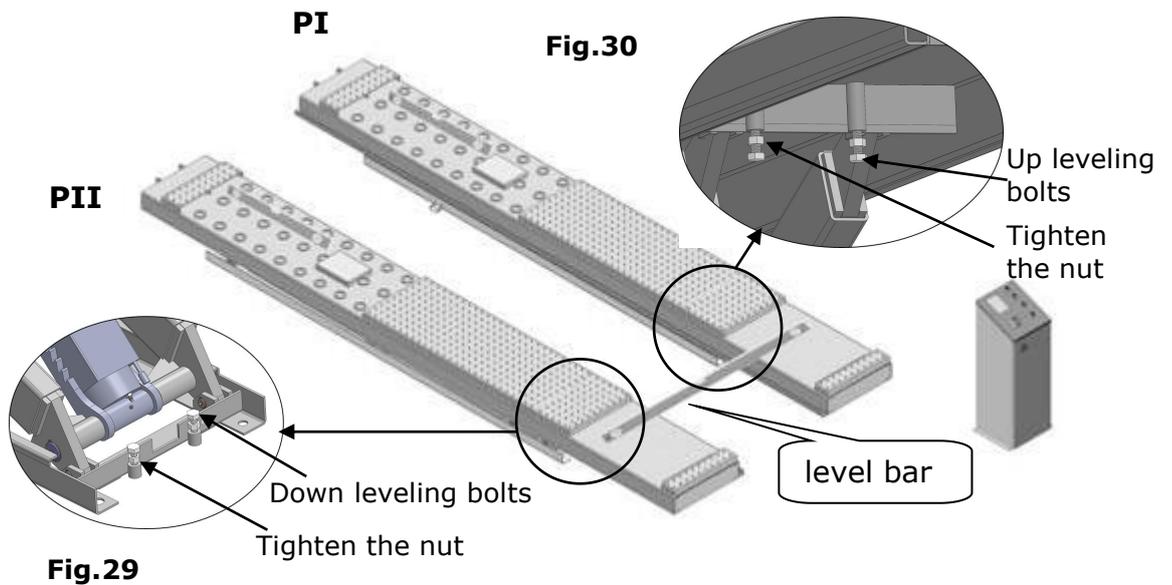
**Fig. 28**

### Electric Component

Item	Name	Code	Specification	Item	Name	Code	Specification
1	Power switch	QS	220V AC	11	Push button	UP	Duplex
2	Breaker	FU <sub>1</sub>	2P	12	Push button	LOCK	Duplex
3	Breaker	FU <sub>2</sub>	1P	13	Push button	Down	Triple
4	Breaker	FU <sub>3</sub>	1P	14	Lower alarm button	Pass	Duplex
5	AC contactor	KM	24V AC	16	Buzzer	H	24VAC
6	Time relay	KT	24V AC	17	Transformer	TC	24VAC
7	Lower Limit Switch	SQ <sub>1</sub>	10A	18	Intermediate relay	KA	24VAC
8	Higher Limit Switch	SQ <sub>2</sub>	10A	19	Power indicator	R	24VAC
9	Hydraulic solenoid valve	Y <sub>1</sub> , Y <sub>2</sub>	24V AC				
10	Air solenoid valve	Y <sub>3</sub>	AC 24V				

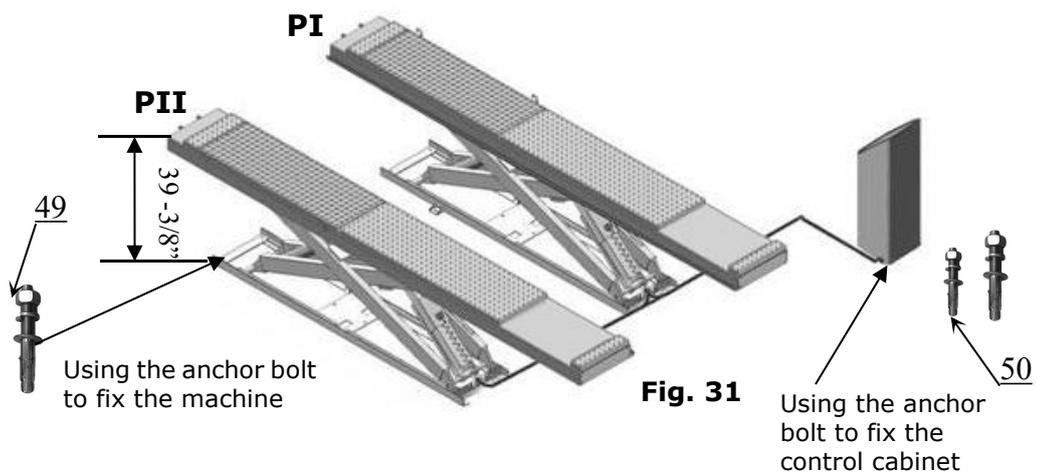
## E. Level two platforms and install anchor bolts.

1. Check by level bar, adjust the down leveling bolts(see **fig.29**) and add the shim until two platforms are in the same level, lowering the lift to the lowest position and adjust the up leveling bolts (see **fig.30**) until contacting the down leveling bolts, tighten the nut with wrench.



2. Install anchor bolts.

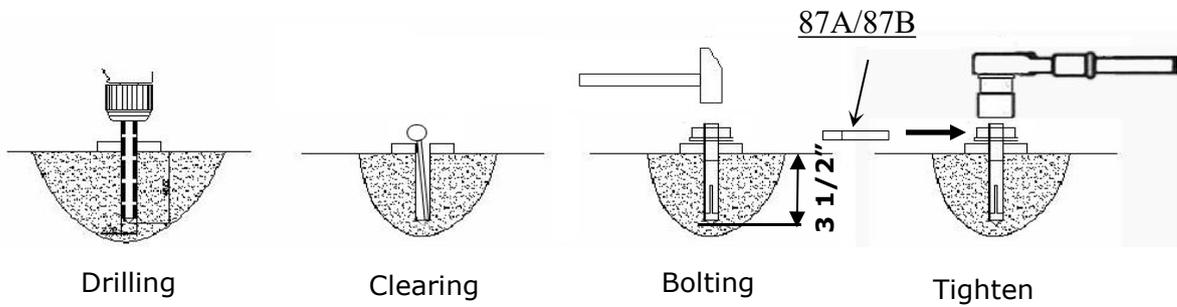
- 2.1 Raise the lift to 39-3/8" then drill holes to install the anchor bolts (See **Fig.31**).



## 2.2 Fix the anchor bolts.

Drilling the hole for the anchor bolt with the rotary hammer drill, type the anchor bolt into the ground, use shim to adjust it to level and then fasten it with ratchet spanner (See Fig. 32).

**Note: The twisting force of anchor bolt is 150N.m, the length inside ground of anchor bolt must be over 3-1/2".**

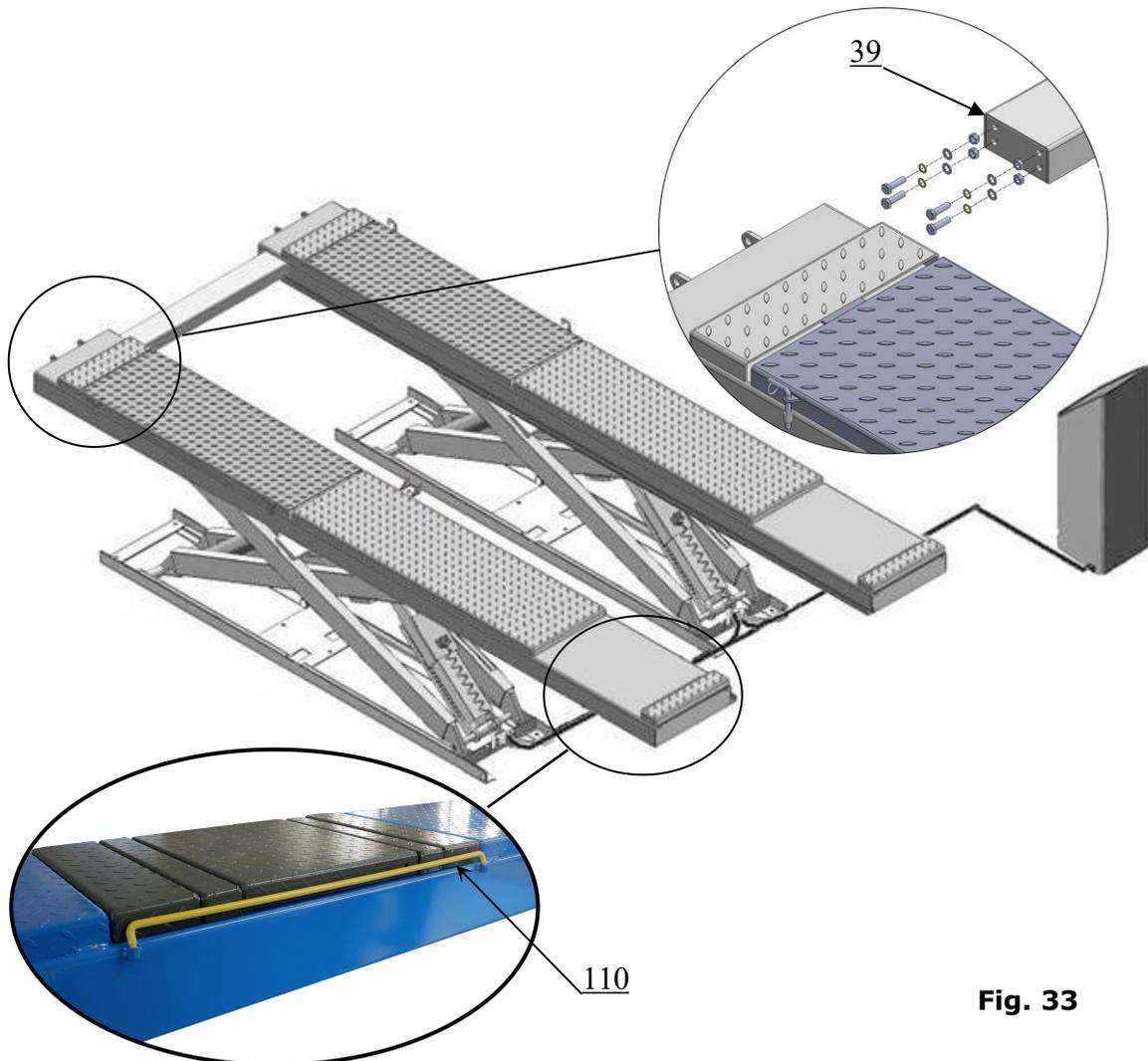


For the lifts: use  $\Phi 3/4$ " driller to drill hole

For the control cabinet: use  $\Phi 3/8$ " driller to drill hole

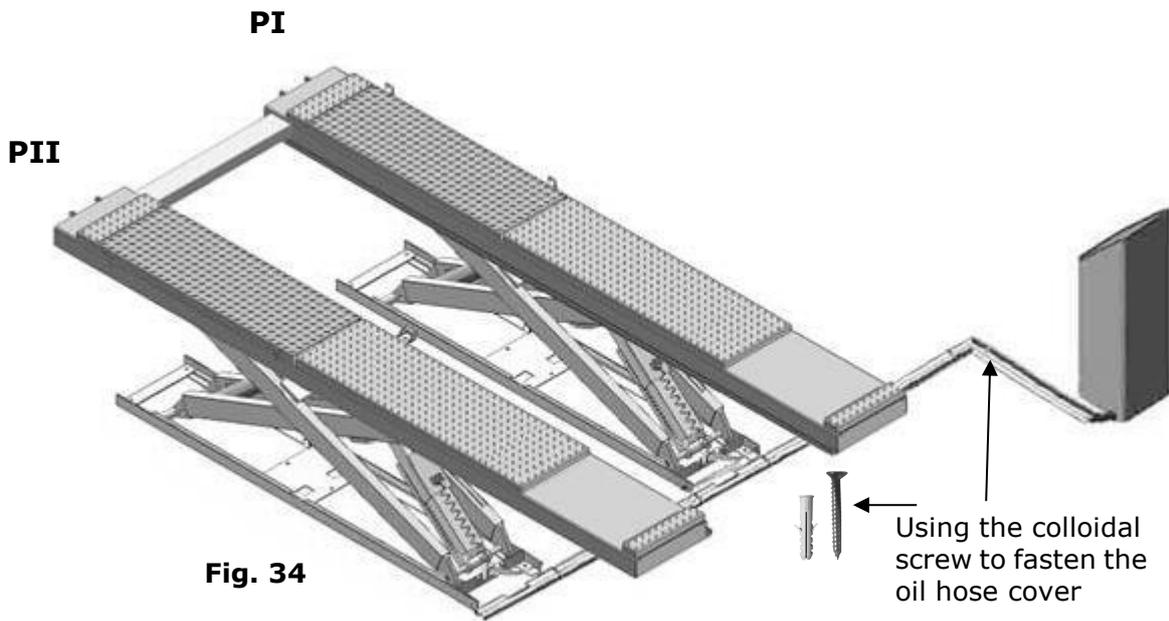
**Fig. 32**

## F. Install runway connecting bar, Install Limit rod. (See Fig. 33).

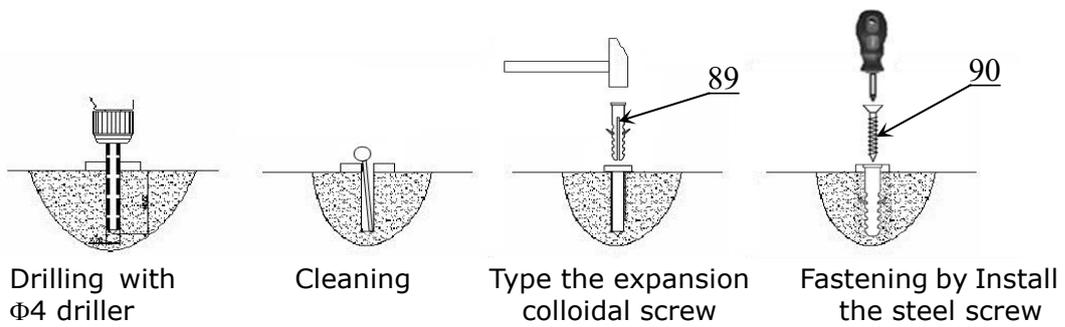


**G. Install oil hose cover for on surface installation.**

1. Tidy up the oil hose and air line, cover the oil hose cover (See Fig. 34).

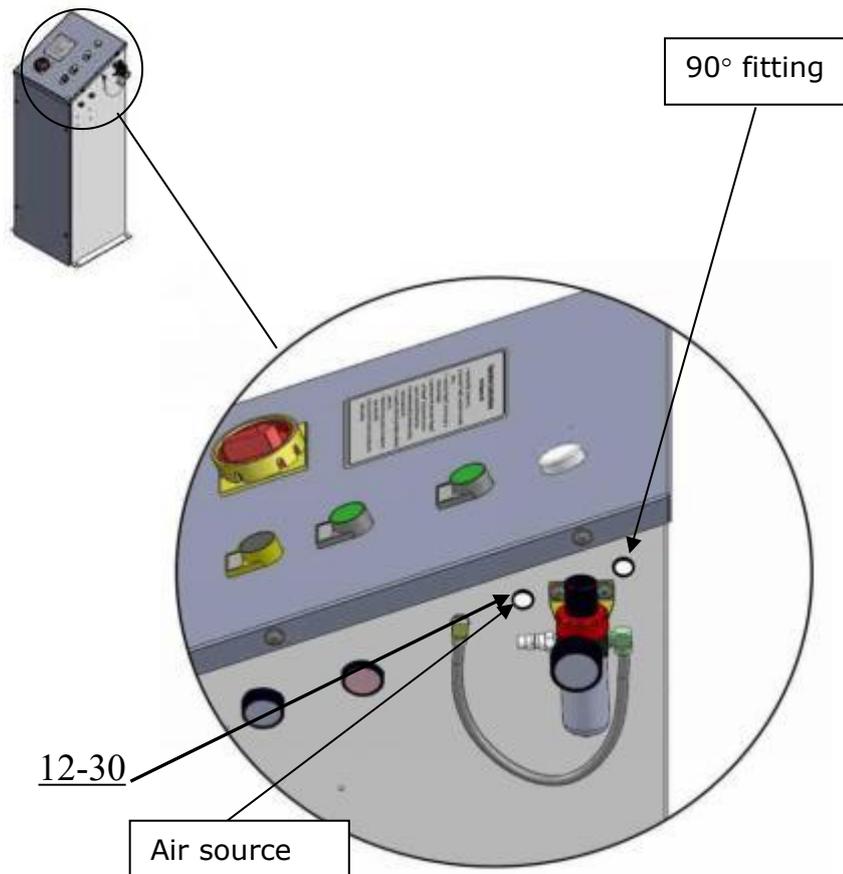
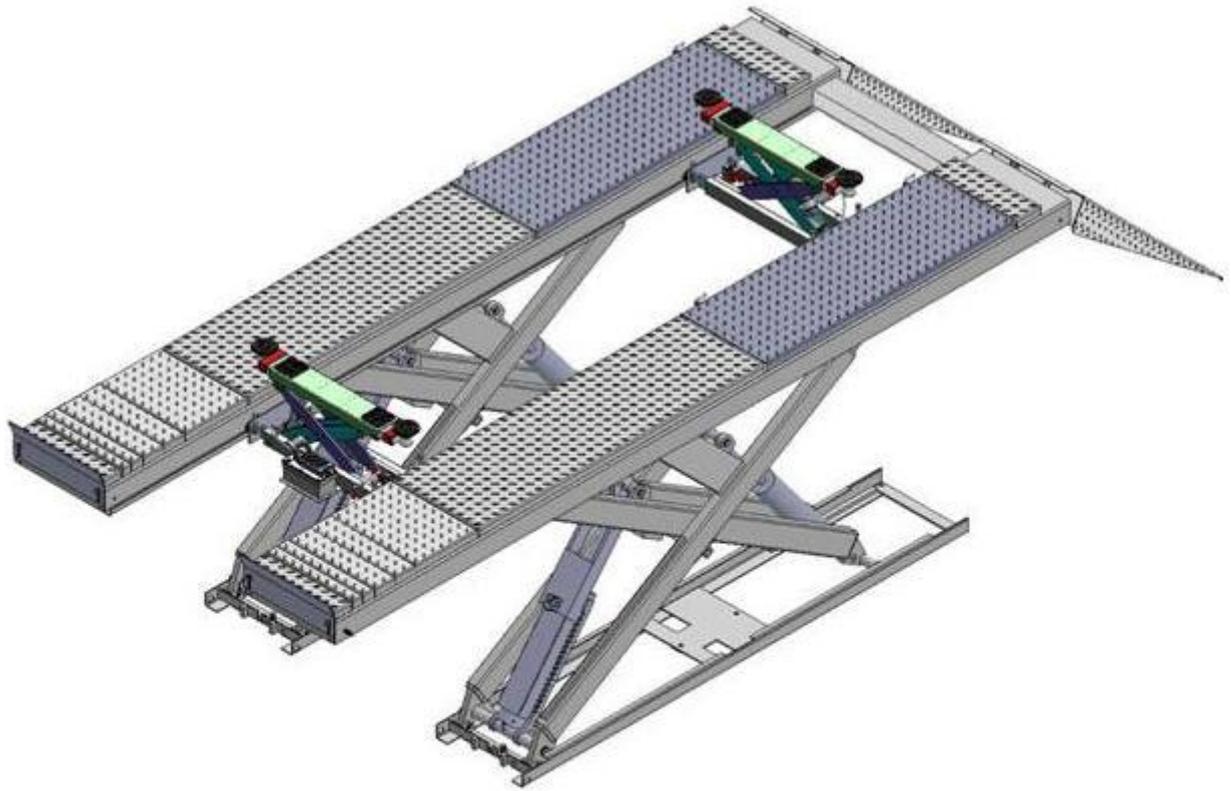


2. Install the oil hose cover (See Fig. 35).



**Fig. 35**

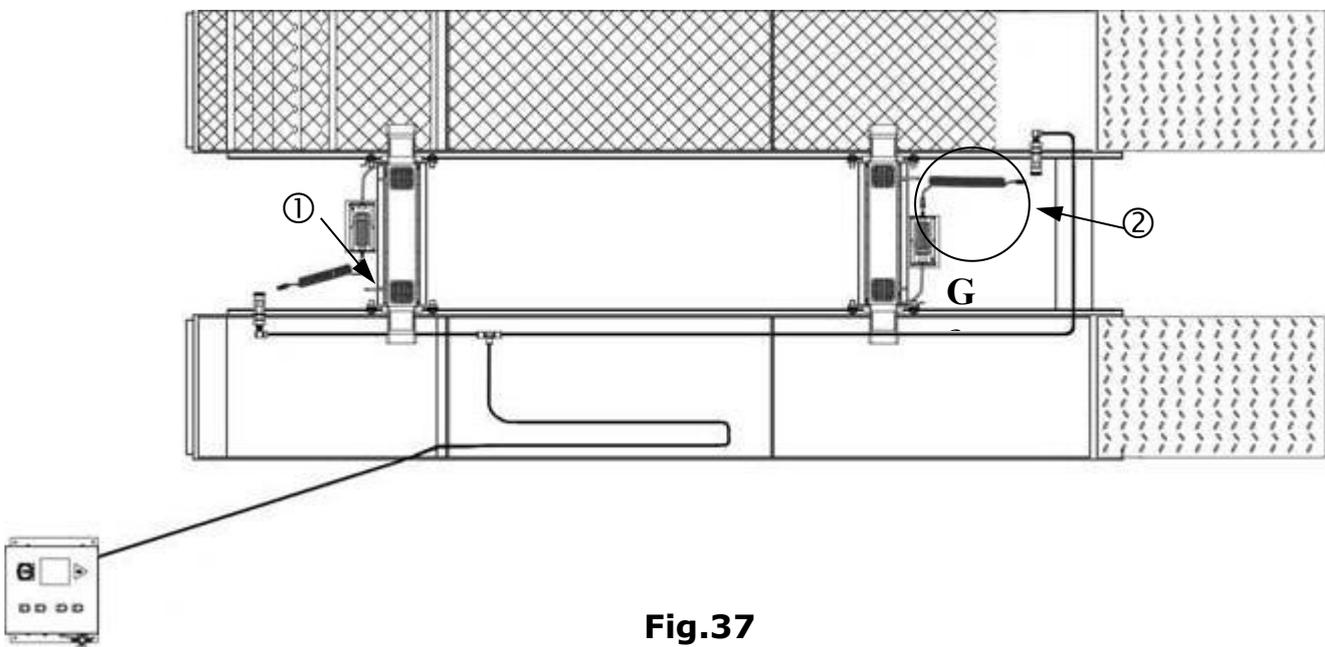
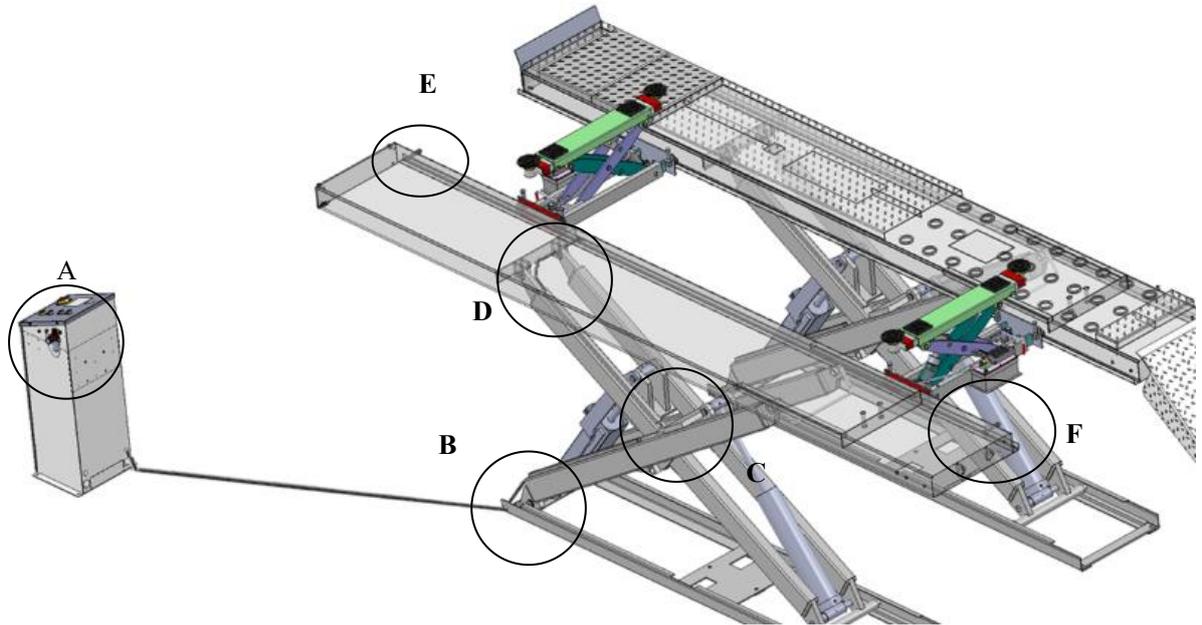
**H. Illustration of installing the AX-12/AX-12A optional air line kits(Fig.36)**



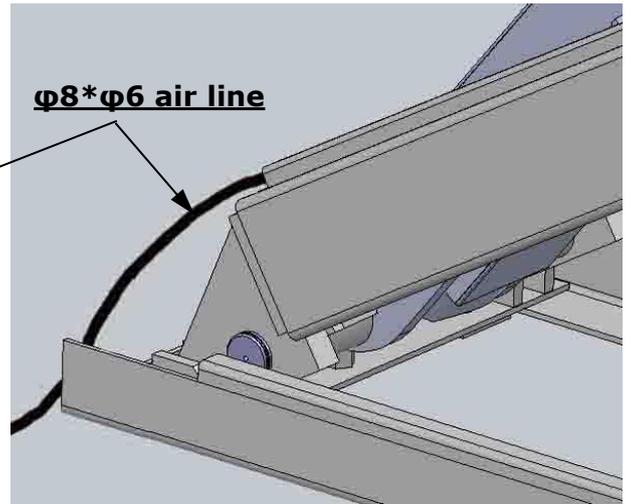
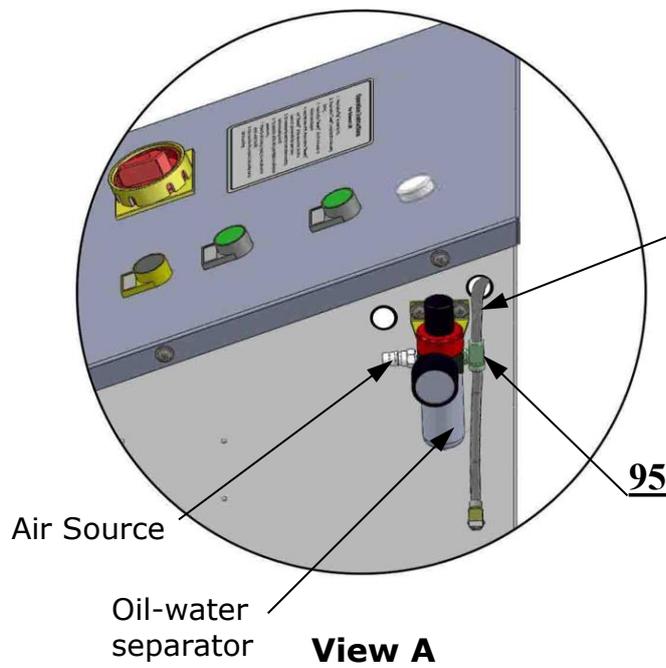
**Fig. 36**

## 1. Install air line kit

1.1 Connect the air line fittings with  $\phi 8 * \phi 6$  black air line as following fig. The length of air line can be cut accordingly. **(See Fig.37)**

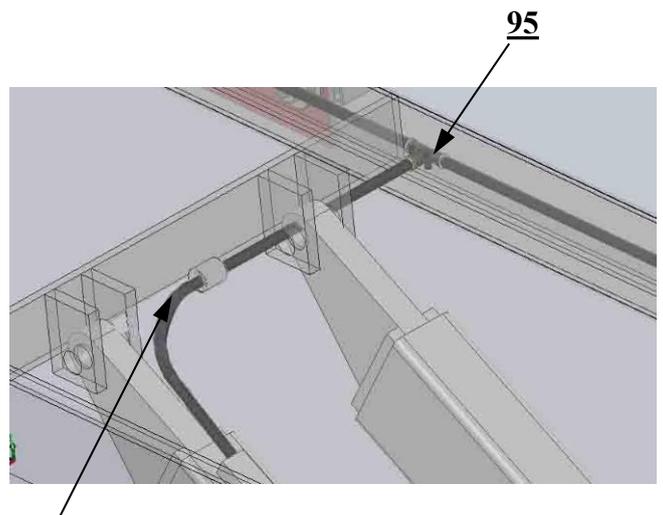
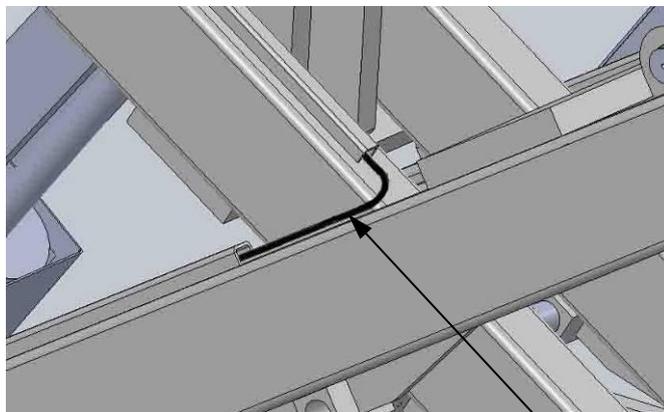


**Fig.37**



1.2 Replace 90° air hose fitting to three ways fitting from oil-water separator, then through black air hose(ø8\*ø6) to control cabinet and connect with screw fitting.

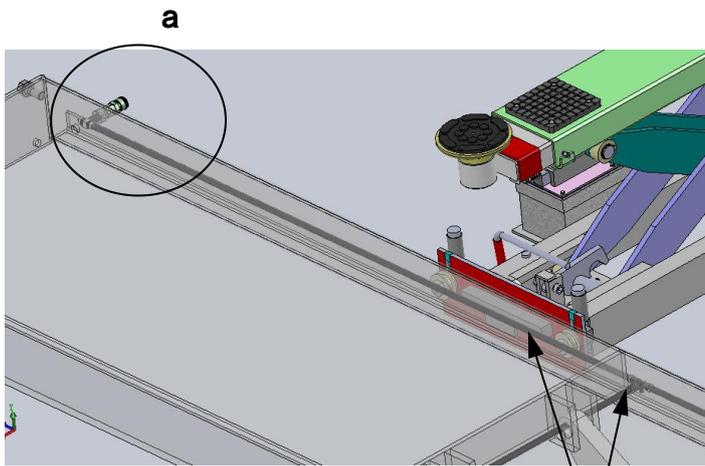
1.3 Through black air hose(ø8\*ø6) to the hole of the base and fixing slot of outer scissor



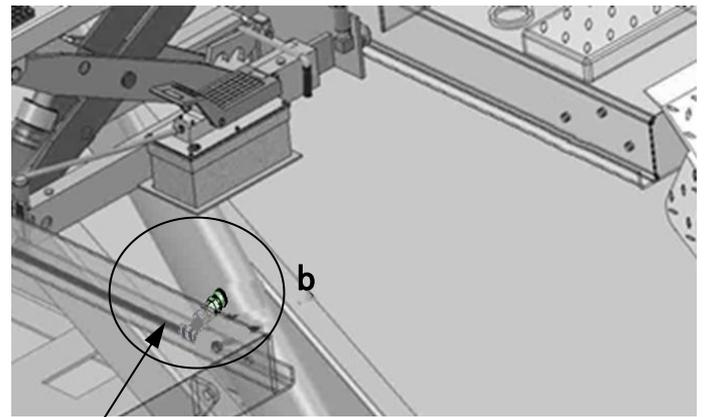
**View C**

ø8\*ø6 Air line

**View D**



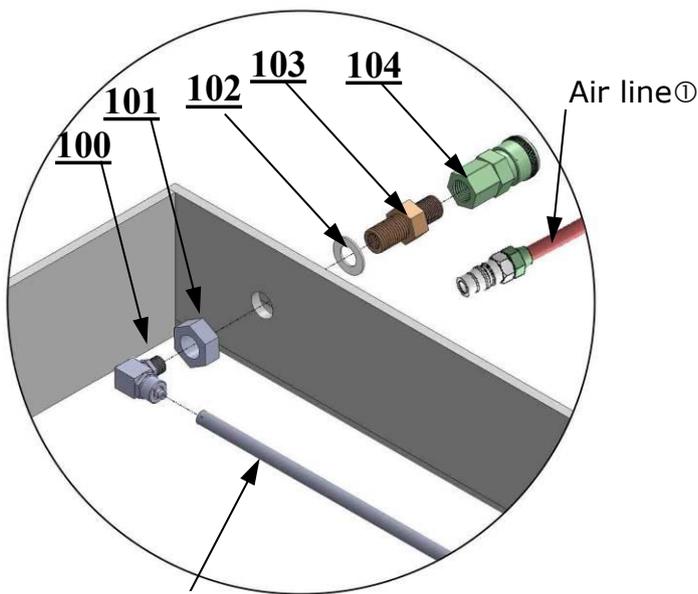
**View E**



**View F**

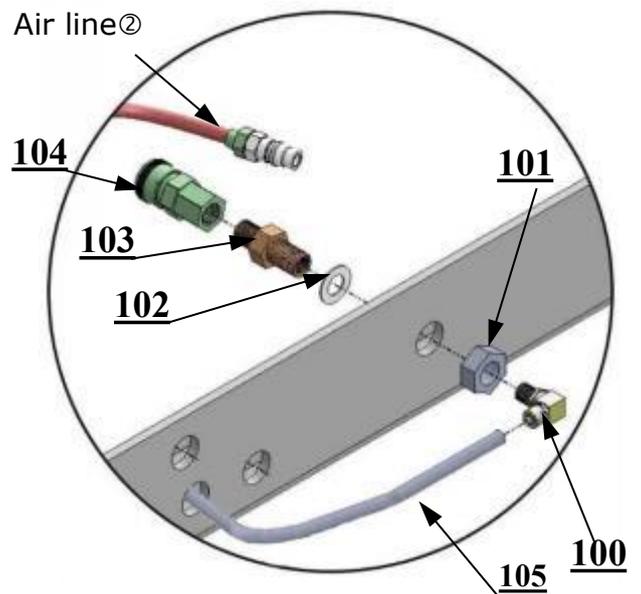
Ø8\*Ø6Air line

1.4 Air source divide into two ways by passing three ways fitting and connect with rolling jack separately.



Ø8\*Ø6Air line

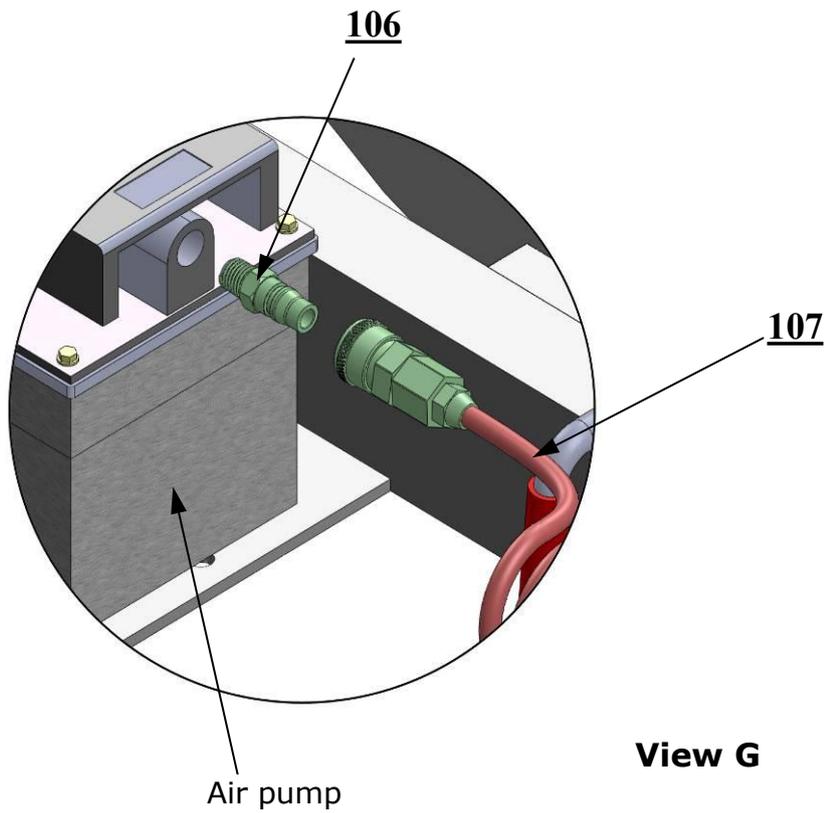
**View a**



**View b**

1.5 Install quick female fitting, then connect it with male air line ①

1.6 Install quick female fitting, then connect it with male air line ②



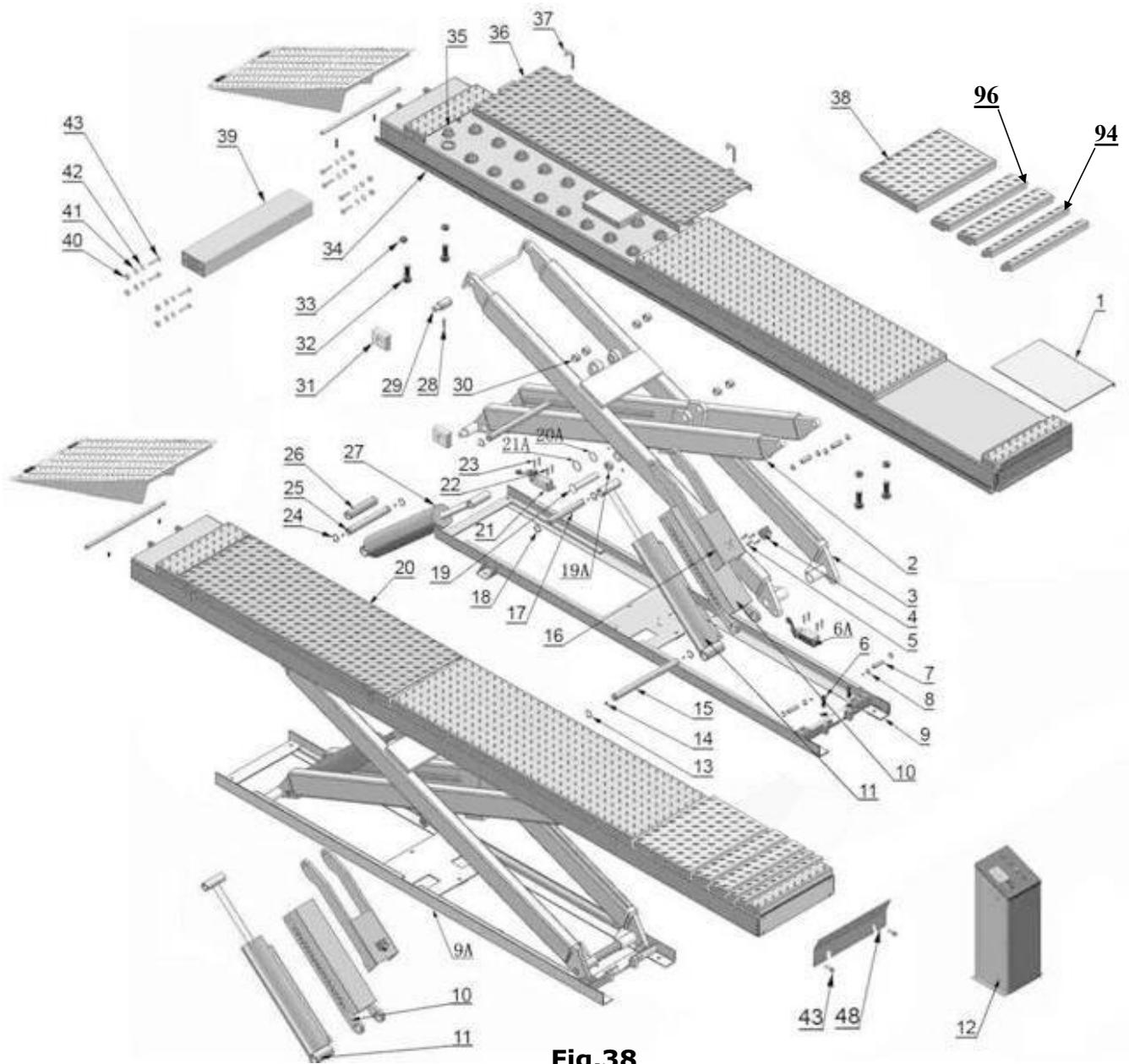
1.7 Connect female airlines of ① and ② to quick male fitting on two operate jack

Part list for Optional Airline Kits:

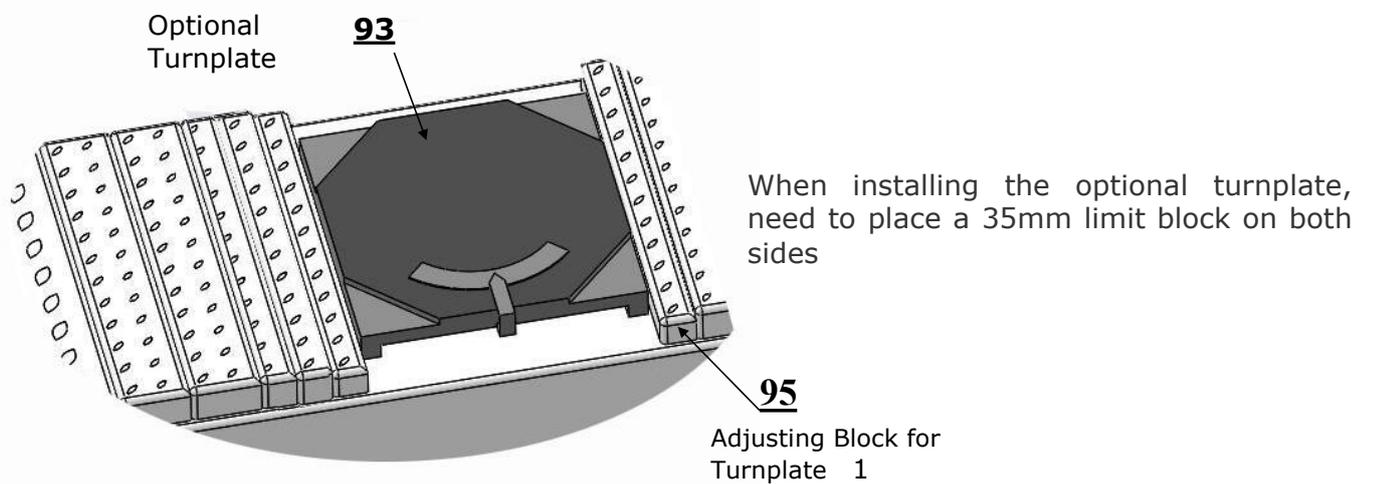
Item	Part#	Description	QTY
98	10420213	Two-way fitting	1
99	10540007	T fitting	1
100	1061K094	90°bend fitting	2
101	1061K092	Hex nut M14	2
102	10430010	Washer φ14	2
103	1061K091	Air line fitting	2
104	1061K090	C shape Quick female fitting	2
105	10800025	φ8*φ6*12200mm Air line	1
106	10420146	Quick Male fitting	2
107	10520065A	Spring air line(Include male and female fitting)	2

# IV. EXPLODED VIEW

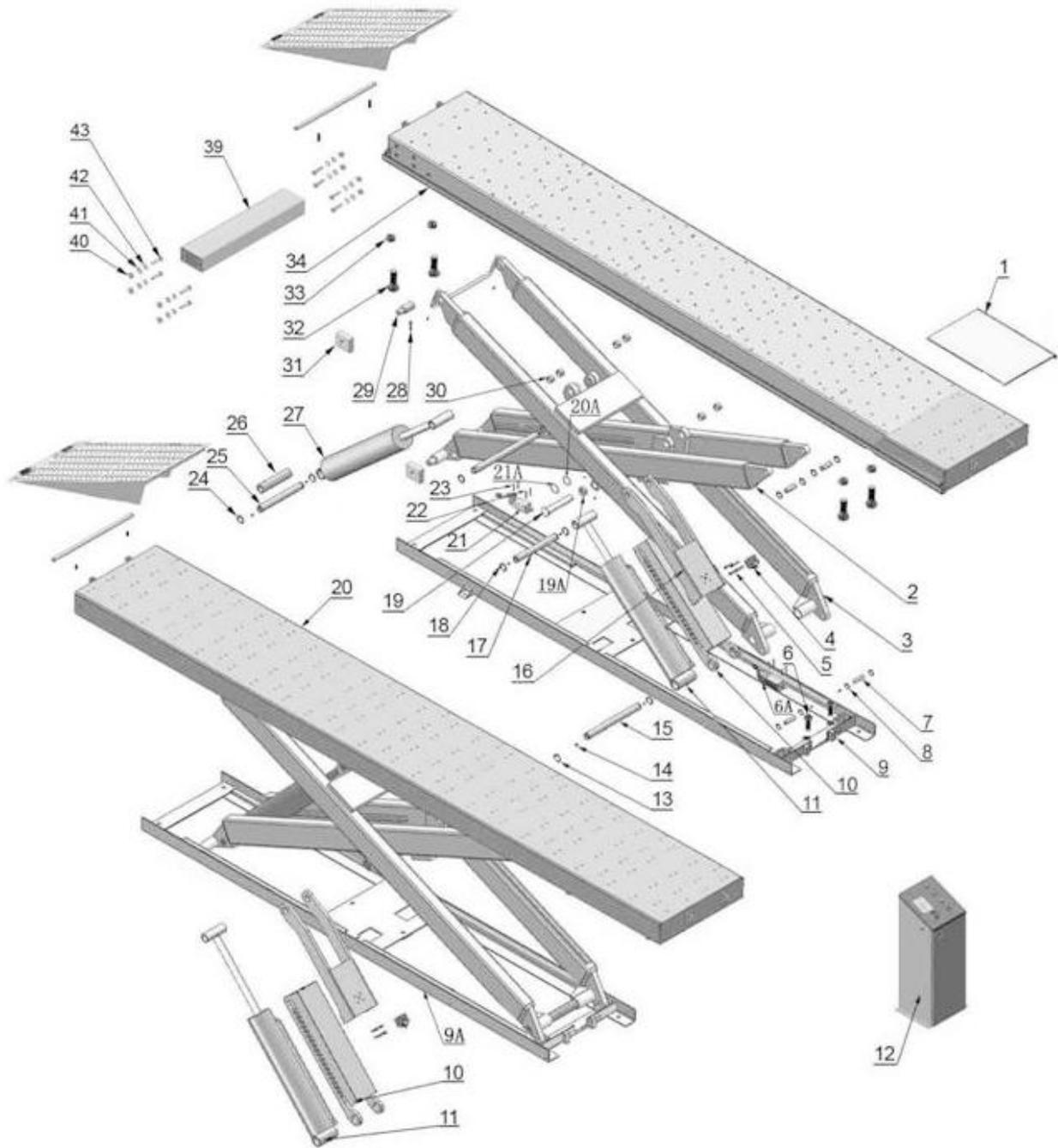
## MODEL AX-12A



**Fig.38**



# MODEL AX-12



**Fig.39**

**PARTS LIST For Model AX-12A, AX-12**

Item	Part#	Description	QTY		Note
			AX-12A	AX-12	
1	11520003	Shelf assy.	2	2	
2	11530002A	Inner Scissors	2	2	
3	11530003A	Outer Scissors	2	2	
4	10520011	Air Cylinder	2	2	
5	10420153	Cap Head Bolt	8	8	
6	10510034	Hex Bolt	4	4	
6A	10510040	Limit switch assy.	1	1	
7	11520013A	Connecting Pin	8	8	
8	10206032	Snap Ring	16	16	
9	11520015C	Base frame	1	1	
9A	11520015D	Base frame	1	1	
10	11520016A	Main Safety Lock Tube	2	2	
11	10530029	Main Cylinder	2	2	
12	10530054	Control Cabinet (Single phase)	1	1	
13	10520020	Snap Ring	4	4	
14	10620064	Grease Fitting	32	32	
15	11520018A	Connecting Shaft For Main Cylinder	2	2	
16	11520021A	Safety Lock	2	2	
17	11610005A	Connecting pin for Main Cylinder	4	4	
18	10610098	Snap Ring	8	8	
19	11520024A	Connecting Pin For Scissors	4	4	
19A	10610019	Self locking nut	4	4	
20	11540004D	Offside Platform	1	0	
	11530041		0	1	
20A	10610108	Washer	4	4	
21	10510041	Limit Switch Assy.	1	1	
21A	10530023	Washer Ø44*Ø35.5*2	4	4	
22	10620109	Cap Head Bolt M4*18	4	4	
23	10420164	Cap Head Bolt M4*30	4	4	
24	10520023	Snap Ring φ38	4	4	
25	11560026A	Connecting Shaft For Secondly Cylinder	2	2	
26	11560027	Piston Connecting Tube	2	2	
27	10530030	Secondly Cylinder	2	2	
28	10520108	Socket Set- screw M8*10	4	4	
29	11520024A	Pin For Pulley	4	4	
30	10530042	Bronze Bush φ41.3*φ35.1*28	8	8	
31	10530012	Slider	8	8	
32	10520103	Hex Bolt M20*90	8	0	
	10510016	Hex Bolt M20*140	0	8	
33	10420175A	Hex Nut M20	12	12	
34	11540005D	Power-side Platform	1	0	
	11530040		0	1	

Item	Part#	Description	Qty.		Note
			AX-12A	AX-12	
35	10420157	Steel Ball	58	0	
36	11570003	Rear Slip Plate	2	0	
37	11520037	Pin for Rear Slip Plate	4	0	
38	11560003	Plate for Adjustable Turnplate	2	0	
39	11530001B	Runway Connecting Bar	1	1	
40	10206023B	Hex Nut M12	8	8	
41	10420026	Lock Washer $\Phi$ 12	8	8	
42	10206006	Washer $\Phi$ 12	8	8	
43	10420136	Hex Bolt M12*45	12	8	
44	11520005A	Drive-in Ramp(On surface/Flush mount)	2/0	0	
	11510004A		0	2/0	
44A	10209010	Snap Ring $\Phi$ 10	8	12	
44B	11620043	Pin for Drive-in Ramp roller	4	4	
44C	11610667	Drive-in Ramp roller	4	4	
45	11510006	Pin For Drive-in Ramp	2	2	
46	10201005	Split Pin	4	4	
47	11510018	Guild Ramp (On surface/Flush mount)	0/2	0	
	11510019		0	2/4	
48	11520004A	Tire Stop Plate	2	0	
49	10209059	Anchor Bolt 3/4*5-1/2	14	14	
50	10620071	Anchor Bolt M10*100	4	4	
51	10420047	Quick Fitting for Air Cylinder	2	2	
52	10520065	Spring Air Line	2	2	
53	10510036	Air Line (Black)	1	1	
54	10420124	T-fitting	1	1	
55	10520069	90° Quick fitting for air line	1	1	
56	10620079	Straight Fitting 1/4JIC(M) *1/4JIC(M)	6	6	
57	10203119-01	Oil Hose No.① 1/4*4450mm	1	1	
58	10540020-01	Oil Hose No.② 1/4*4200mm	1	1	
59	10540019-01	Oil Hose No.③ 1/4*4500mm	1	1	
60	10540022-01	Oil Hose No④ 1/4*5860mm	1	1	
61	10540018-01	Oil Hose No.⑤ 1/4*6000mm	1	1	
62	10540017-01	Oil Hose No.⑥ 1/4*6200mm	1	1	
63	10510023	Straight Fitting G3/8-19(M)*1/4JIC(M)	2	2	
64	1003245004	Metal bellows	2	2	
65	10540023-01	Oil hose	2	2	
66	10420119	Straight Fitting for cylinder 3/8NPT(M)*1/4JIC(M)	2	2	
66A	10540021-01	Oil hose	2	2	
66B	10540030-01	Oil hose	2	2	
67	10420076	90° Fitting For Air Line	1	1	
68	10420145	Oil-water Separator	1	1	

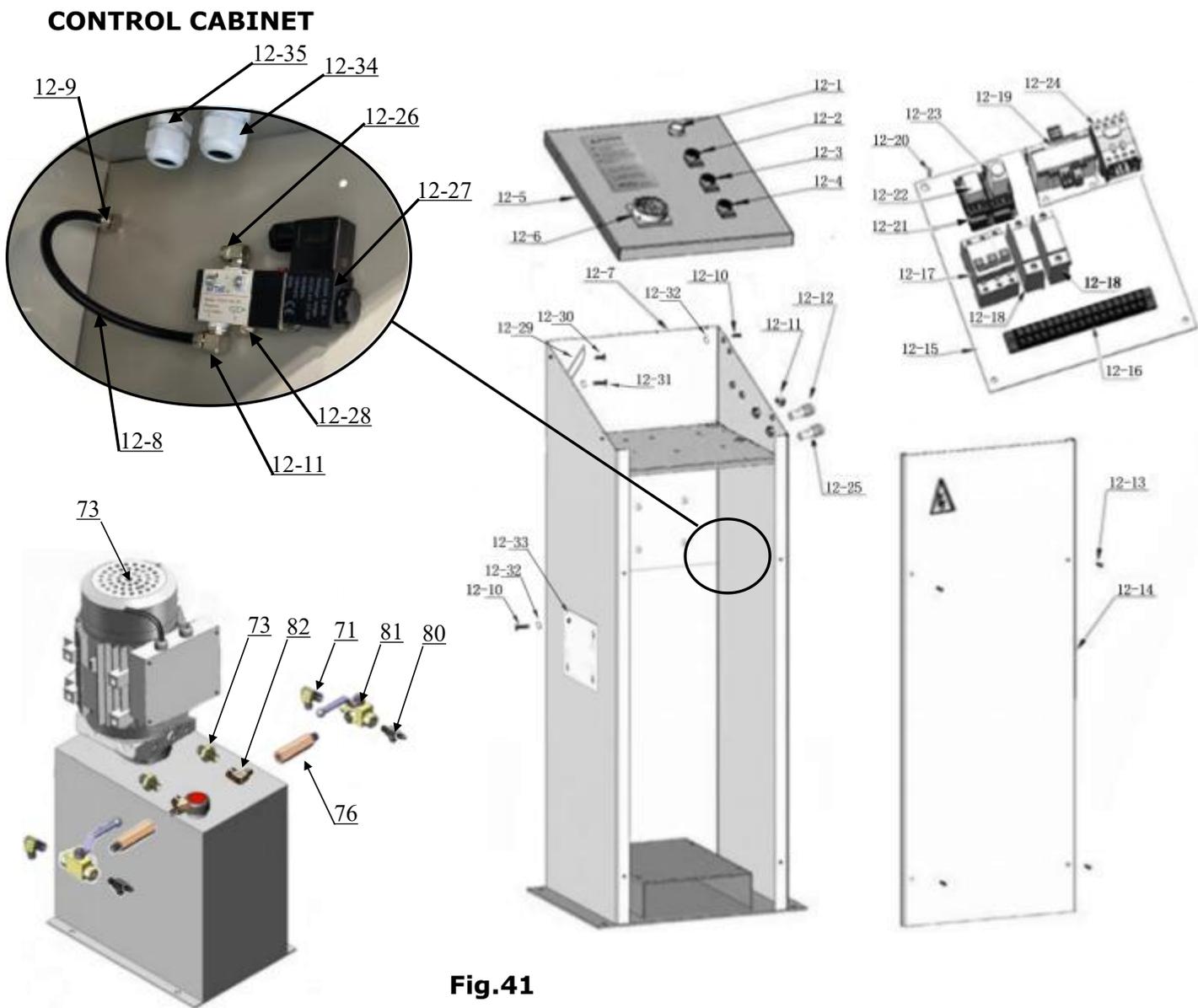
T- Fitting

Item	Part#	Description	Qty.		NOTE
			AX-12A	AX-12	
69	10420146	Straight Fitting for air line	1	1	
70	10680005	Cap Head Bolt M6*10	4	4	
71	10420097	90° Fitting 1/4NPT(M)*1/4JIC(M)	4	4	
71A	10510024	Fitting G3/8-19(M)*1/4NPT(F)	2	2	
72	071204	Power Unit	1	1	
73	10440009	Straight Fitting for power unit 3/8SEA <sup>O/R</sup> (M)*1/4NPT(M)	1	1	
74	10540500A	Parts box (On surface installation)	1	0	
75	10530500A	Parts box (On surface installation)	0	1	
76	11217235	Fitting J0067:1/4NPT(M)*1/4NPT(F) L=65	2	2	
77	1061K050	Hex Nut M8*30	4	4	
78	10209033	Washer φ8	8	8	
79	10209005	Self locking Nut M8	4	4	
80	10209062	T-Fitting 1/4NPT(M)*1/4JIC(M)*1/4JIC(M)	2	2	
81	10680065	T- Fitting	2	2	
82	1052K027	90° Fitting 1/4NPT(M)*1/4NPT(M)	2	2	
83	10420018	Self locking Nut M6	2	2	
84	10510039	Cap Head Bolt M3*16	3	3	
85	11540029	Oil hose cover	1	1	
86	11570618	Oil hose cover(L=605m)	2	2	
87A	10620065	Shim(2mm)	20	20	
87B	10201090	Shim(1mm)	20	20	
88	11540025	Oil Hose Cover (L=750)	1	1	
88A	11540027	Oil Hose Cover(L=1060mm)	3	3	
89	10620070	Colloidal screw	36	36	
90	10620069	Wood Screw M4*30	36	36	
91	10540503	Parts box (Flush mount installation)	1	0	
92	10530503	Parts box (Flush mount installation)	0	1	
93	11420158	Turplate (optional)	2	0	
94	11580090	Adjusting Block for Turnplate	4	0	
95	11580097	Adjusting Block for Turnplate 1	4	0	
96	11520116	Adjusting Block for Turnplate 2	4	0	
107	1003245001	Metal bellows φ25.5φ20*140	2	2	
108	1003245002	Metal bellows φ25.5φ20*400	4	4	
109	1003245003	Metal bellows φ25.5φ20*400	4	4	
110	11440090	Limit rod	4	0	



### Parts list for Cylinder

Item	Part#	Description	QTY	Note
11-1	11530032	Main Cylinder	1	
11-2	10530025	O- Ring (φ98*5.3)	1	
11-3	11530033	Head Cap (Main)	1	
11-4	10530028	Support Ring φ60*φ66*15	1	
11-5	10530024	Y- Ring φ60*φ70*6	1	
11-6	10530026	Dust Ring φ60*φ68	1	
11-7	11530034	Piston Rod (Main)	1	
11-8	10520054	O- Ring	1	
11-9	10530027	Support Ring φ94*φ100*15	1	
11-10	10520063	Y- Ring φ85*φ100*9	2	
11-11	11530035	Piston (Main)	1	
11-12	10520049	Set Screw M8*10	1	
11-13	10520047	Hex Nut M36 (main)	1	
11-14	10530009	Burst valve G3/8	2	
27-1	11530036	Secondly Cylinder	1	
27-2	10420062	O- Ring φ82.5*3.5	1	
27-3	11530037	Head Cap (Secondly)	1	
27-4	10201034	Bleeding Plug	2	
27-5	10520058	O- Ring φ45*3.55	1	
27-6	10217078	Dust Ring	1	
27-7	11510011B	Piston Rod (Secondly)	1	
27-8	10520061	O- Ring φ45*3.55	1	
27-9	10420066	Support Ring φ74*φ80*15	1	
27-10	10420067	Y- Ring φ70*φ80*6	1	
27-11	11530039	Piston (Secondly)	1	
27-12	10520049	Set Screw M8*10	1	
27-13	10420014	Hex Nut M27 (Secondly)	1	



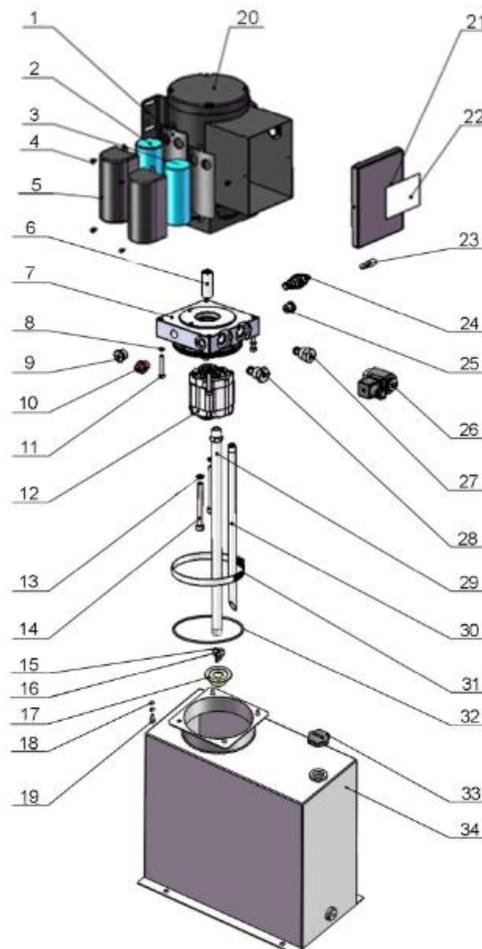
**Fig.41**

**Parts list for Control Cabinet**

Item	Part#	Description	QTY
12-1	10201094	Power indicator	1
12-2	10420071	Button <b>UP</b>	1
12-3	10420071	Button <b>LOCK</b>	1
12-4	10420072	Button <b>DOWN</b>	1
12-5	11510724	Control Panel	1
12-6	41010217	Power Switch (QS)	1
12-7	11510701	Cabinet Body	1
12-8	10420167C	Air line	2
12-9	1061K110	Straight Fitting	1
12-10	10420153	Cap Head Bolt M6*20	2
12-11	10420076	90° Fitting	2
12-12	10420143	Buzzer	1
12-13	10720038	Cap Head Bolt M6*30	4
12-14	11510693	Cabinet Door	1
12-15	11510754	Install panel	1

Item	Part#	Description	QTY
12-16	10620082	Terminal	1
12-17	10202046	Breaker 2P only for Single phase	1
	10202047	Breaker 3P only for Three phase	1
12-18	10202049	Breaker 1P	2
12-19	10580114	Transformer (TC)	1
12-20	1061K052	Cap head bolt	17
12-21	10420135	Timer Relay Base	2
12-22	10420141	Intermediate Relay(KA)	1
12-23	10420083	Timer Relay(KT)	1
12-24	10420084A	AC Contactor (KM)	1
12-25	10420142	Lowering Alarm Button (k)	1
12-26	10420166	90° Fitting	1
12-27	10420077	Air Solenoid Valve(Y2)	1
12-28	10201034	Bleeding plug	1
12-29	11510691	Support plate for electrical components	1
12-30	1061K108	Hex Bolt M6*12	1
12-31	10217066	Hex Bolt M6*15	1
12-32	10420018	Hex Nut M6	6
12-33	11510757	Cabinet cover	1
12-34	10720095	Cable connector M24*1.5	2
12-35	10420088	Cable connector M20*1.5	1

## POWER UNIT



**Single Phase 220V/60Hz/  
Electric Power Unit**

**Fig. 42**

**Parts list for Electric Power Unit 220V/60Hz/1 Phase**

<b>Item</b>	<b>Part#</b>	<b>Description</b>	<b>QTY</b>
1	81400180	Rubber pad	2
2	81400250	Start capacitor	1
3	81400200	Run capacitor	1
4	10420148	Cap head bolt	6
5	81400066	Capacitor cap	2
6	81400363	Motor Connecting Shaft	1
7	80101027	Manifold block	1
8	81400333	Hex plug	4
9	81400266	Relief valve	1
10	81400566	Check Valve	1
11	81400420	Solenoid valve winding	2
12	81400423	Electric release valve	2
13	10209149	Flip $\phi$ 6	4
14	85090142	Hex Bolt M6*35	4
15	81400292	wheel pump	1
16	10209034	Flip $\phi$ 8	2
17	81400295	Hex Bol M8*80	1
18	10420152	Washer	4
19	81400438	Hex Bolt M5*10	4
20	81400590	Motor	1
21	81400287	Cover of Motor Terminal Box	1
22	71111230	Sticker for AMGO Power unit	1
23	81400560	Throttle valve	1
24	81400259	Red rubber plug	2
25	81400380	Oil suction pipe	1
26	81400376	Oil Return Pipe	1
27	81400365	O-ring	1
28	10209152	Ribbon	1
29	85090167	Magnet	1
30	81400290	Filter net	1
31	81400263	Cover of the tank	1
32	81400327	Tank	1

## V. TEST RUN

### 1. Preparation before Synchronous adjustment

- a. Fill the reservoir with hydraulic oil. In consideration of power unit's durability and keep the equipment running in the perfect condition, **please use Hydraulic Oil 46#** .
- b. Turn the power on, push button **UP** to check if the rotated direction of motor is correct. If the rotated direction is wrong, shut off the power, exchange the phase connection of the motor, then fill oil and air exhaust adjustment.
- c. Lowering down both platforms to lowest level.

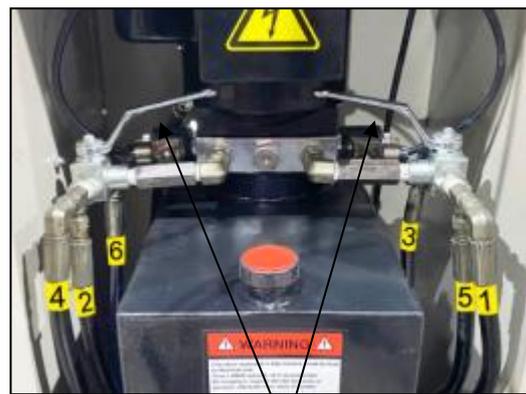
### 2. Synchronous adjustment

- a. Turn the handles of the Tee valves to the position as **Fig. 43** (Oil filling position), push **UP** button to start filling oil in the cylinder, until the platform starts to rise. And then push **Down** and **Pass** button about 5 seconds while hearing the buzzer sound and the sounds of inside air exhaust from oil tank . Repeat this steps 2-3 times until the inside air are all exhaust.
- b. Tap **UP** button, until the platform just be lifted up.
- c. Turn the handle of Tee valves to the position as **Fig.44(Normal working position)**. push **UP** button, if P1 ,P2 platform rise at the same time means the machine is synchronization. If still not, repeat steps a & b until both side of platforms are synchronization.
- d. After P1,P2 platform are synchronization, operating the lift up and down without load.



Oil Filling Position

**Fig. 43**



Normal Working Position

**Fig. 44**

### 3. Test run

Check and adjust the limit switch, the hose and fitting connection, and do test run. The lift must be tested run and checked carefully before in use.

## VI. OPERATION INSTRUCTIONS

### To lift vehicle

1. Keep clear of site near the lift, and down the lift to the lowest position.
2. Drive vehicle on the platforms and pull the brake.
3. Turn on the power and push the button "**Up**", raise the lift to the working position.

**Note:** make sure the vehicle is steady when the lift is rising

4. Push the button "**Lock**", lock the lift in the safety device. Make sure the safety device is locked in the same height.

### To lower vehicle

1. Be sure clear of around and under the lift, only leaving operator in lift area.
2. Push the button "**Down**", the lift is lowered continually and stopped at the height 23-5/8" from ground. Keep feet clear off lift, push button "**DOWN**" while push the **Lowering Alarm Button(black)** at the side of control cabinet, the lift is lowered to ground with alarm tone;
3. Drive away the vehicle when the lift is lowered to the lowest position.
4. Turn off the power.

### Lowering Alarm Button

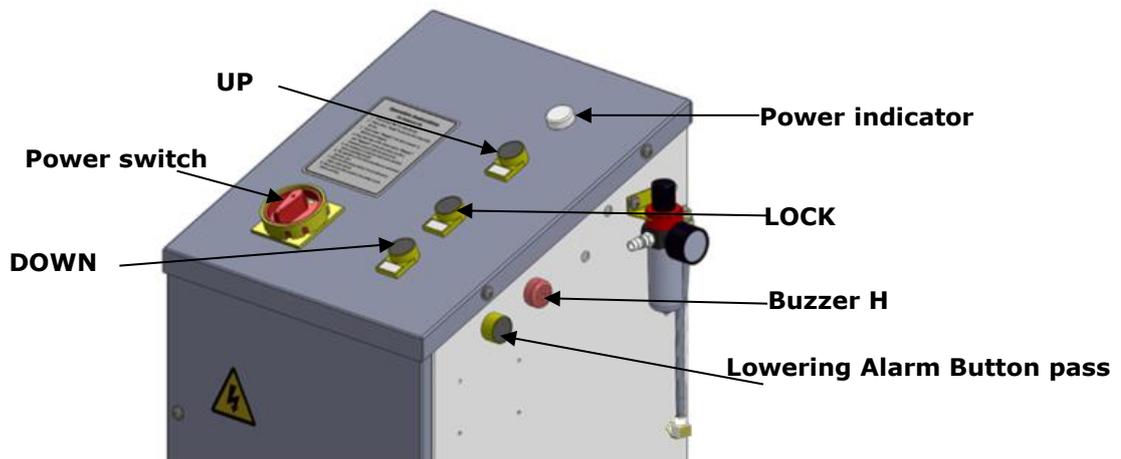


Fig. 45

## VII. MAINTENANCE SCHEDULE

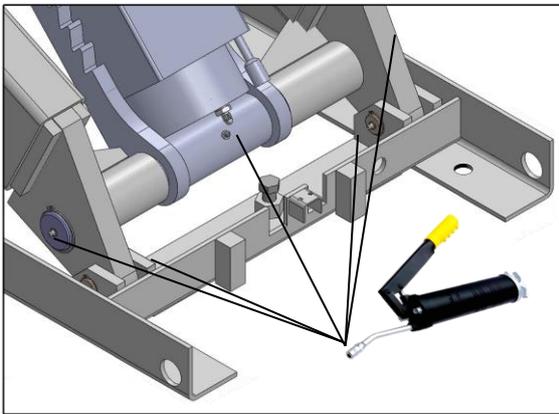
### Monthly:

1. Re-torque the anchor bolts to 150 Nm.
2. Check all fittings, bolts and pins to insure proper mounting.

**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.

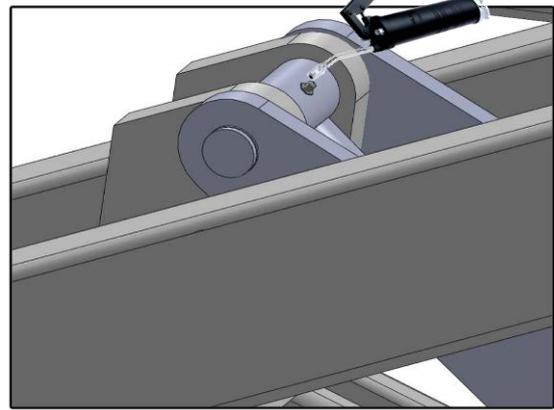
3. Make a visual inspection of all hydraulic hoses/lines for possible wear or leakage.
4. Adjusting the lifting level on both platforms.
5. Lubricate all moving parts with lubricant (**See Fig. 46-51**).

there are 16 moving parts for each scissors, total 32 moving parts.



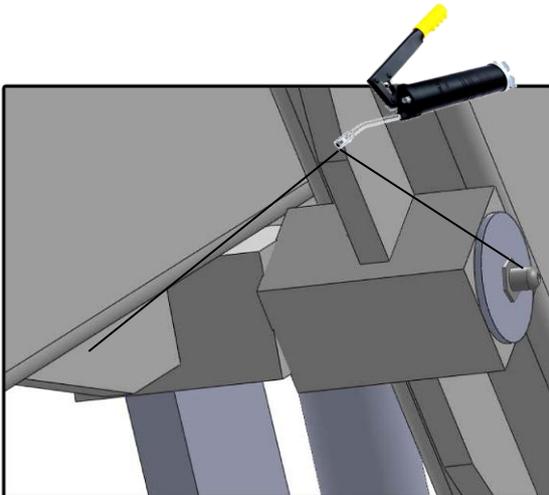
**For Main Cylinder  
(5 moving parts)**

**Fig.46**



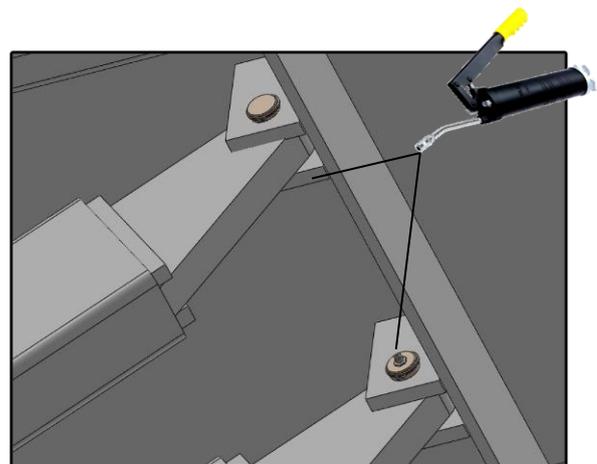
**For shaft of piston rod of Main  
cylinder(1 moving parts)**

**Fig.47**



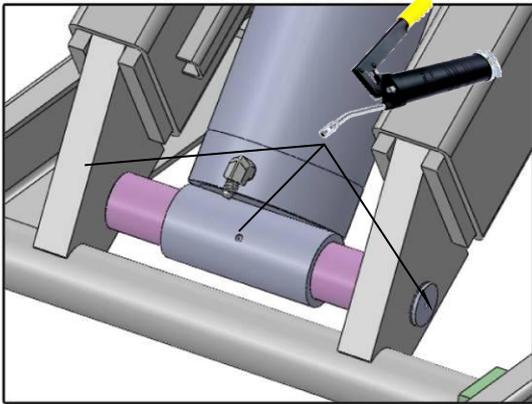
**For pins of connecting  
platforms and scissors (4 moving parts)**

**Fig. 48**

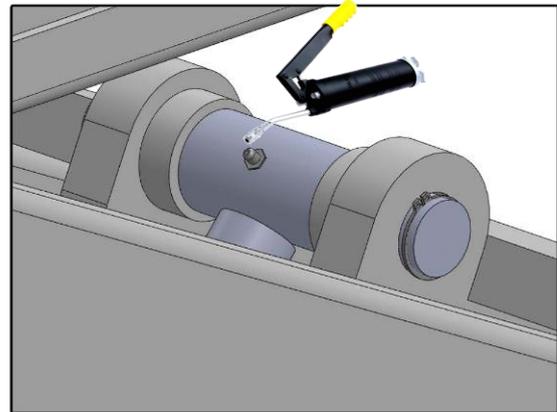


**For pins of connecting  
platforms and scissors  
(2 moving parts)**

**Fig. 49**



**For Secondly Cylinder  
(3 moving parts)  
Fig.50**



**For shaft of piston rod of  
Secondly cylinder  
(1 moving parts)  
Fig.51**

**Every six months:**

1. Make a visual inspection of all moving parts for possible wear, interference or damage.
2. Check and adjust the platform as necessary to insure level lifting.
3. Check all fastener and re-torque.

**Oil cylinder maintenance:**

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

1. Recommend to use N46 anti-wear hydraulic oil.
2. The hydraulic oil of the lifts 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.
4. Protect the outer surface of the oil cylinder's piston rod from bumping and scratching, and timely clean up the debris on the oil cylinder dust-ring and the piston rod.

## VIII. TROUBLE SHOOTING

TROUBLE	CAUSE	REMEDY
Motor does not run	<ol style="list-style-type: none"> <li>1. Start Button does not work</li> <li>2. Wiring connections are not in good condition</li> <li>3. AC contactor burned out</li> <li>4. Motor burned out</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace start button</li> <li>2. Repair all wiring connection</li> <li>3. Replace AC contactor</li> <li>4. Repair or replace motor</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. Low oil level</li> <li>3. The Gear Pump out of operation</li> <li>4. Relief valve or check valve in damage</li> <li>5. Hydraulic Solenoid valve out of operation</li> </ol>	<ol style="list-style-type: none"> <li>1. Reverse two power wire</li> <li>2. Fill tank</li> <li>3. Repair or replace</li> <li>4. Repair or replace</li> <li>5. Repair or Replace</li> </ol>
Lift does not stay up	<ol style="list-style-type: none"> <li>1. Hydraulic Solenoid valve out of operation</li> <li>2. Relief valve or check valve leakage</li> <li>3. Cylinder or fittings leaks</li> </ol>	Repair or replace
Lift raised slowly	<ol style="list-style-type: none"> <li>1. Oil line is jammed</li> <li>2. Gear Pump leaks</li> <li>3. Overload lifting</li> <li>4. Power Voltage low</li> <li>5. Oil mixed with air</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean the oil line</li> <li>2. Repair or Replace</li> <li>3. Check load</li> <li>4. Check electrical system</li> <li>5. Fill tank and bleeding air</li> </ol>
Lift cannot lower	<ol style="list-style-type: none"> <li>1. Hydraulic Solenoid valve out of operation</li> <li>2. Air Solenoid Valve out of operation</li> <li>3. Air cylinder in damage</li> <li>4. Low Air pressure</li> </ol>	<ol style="list-style-type: none"> <li>1. Repair or replace the Valve</li> <li>2. Repair or replace the Valve</li> <li>3. Repair or replace</li> <li>4. Check the air line</li> </ol>

## IX. LIFT DISPOSAL:

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



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