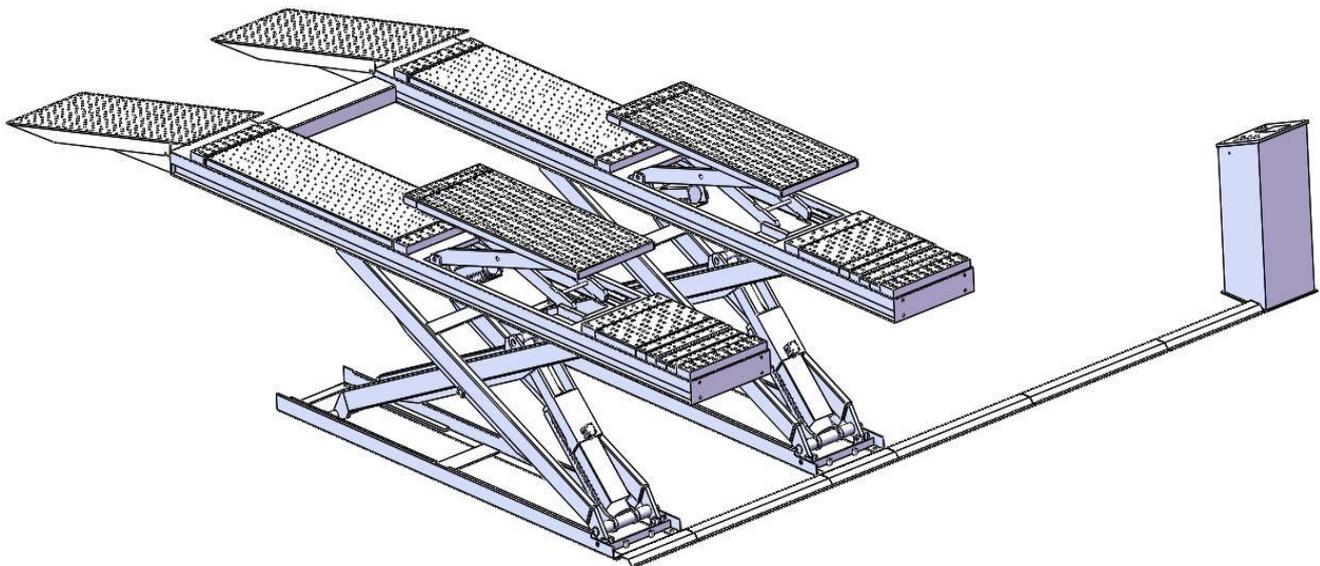


**AMGO**  **Hydraulics**

Original

# Installation And Service Manual



**SCISSORS LIFT**  
**Model: DX-12A**

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# I. PRODUCT FEATURUES AND SPECIFICATIONS

## Double Scissors Lift

### Model DX-12A

- Electric- air control system, mechanical safety locks
- Dual synchronous cylinders are applied to assure the lifting level on both platforms
- Photo cell device protection, avoid vehicle collapse
- Non-skid diamond platforms.
- Double scissors structure, fit for a wide range vehicle of car to van and light truck
- Optional Turnplate.

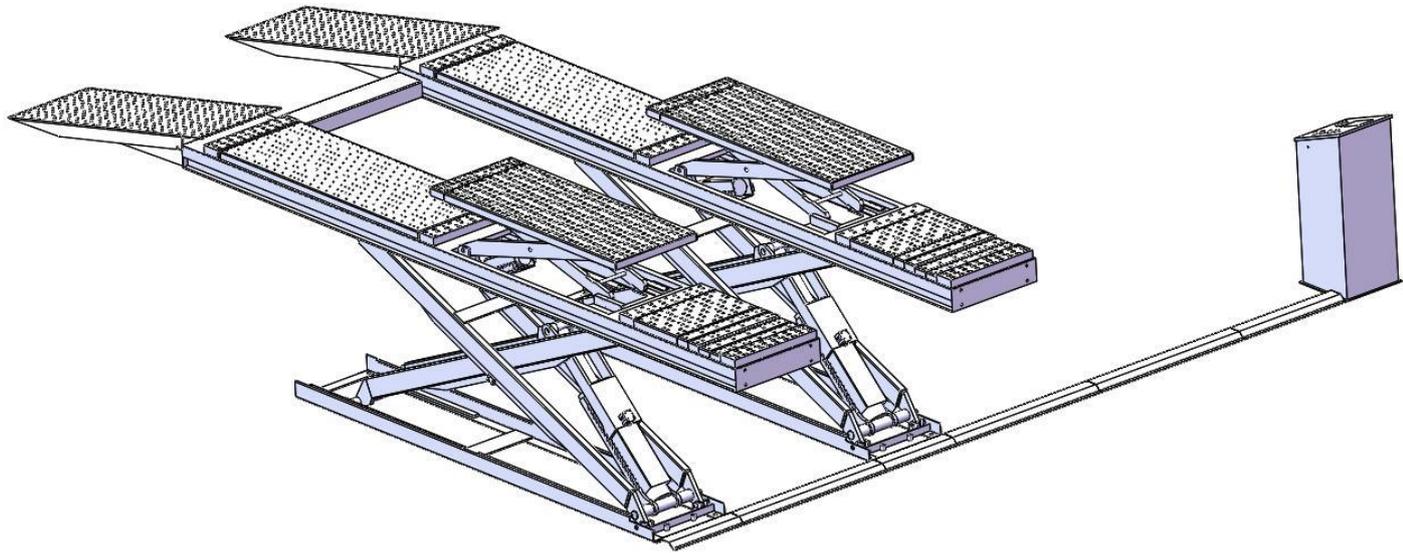


Fig. 1

### Model DX-12A SPECIFICATIONS

Model	Lifting Capacity	Lifting Height	Min. Height	Lifting Time	Overall Length (Inc. Ramps)	Overall Width	Runway Width	Distance Between Platform	Gross Weight	Motor
DX-12A	12000 lbs	73 5/8"	12 3/8"	64S	257 "	86 1/4"	24 5/8"	37"	4,263 lbs	2.0HP

## II. INSTALLATION REQUIREMENT

### A. TOOLS REQUIRED

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



- ✓ Hammer



- ✓ Level Bar



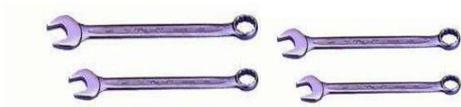
- ✓ English Spanner (12")



- ✓ 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. 2

## B. 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.

## C. POWER SUPPLY

The electrical source must be 3.0KW minimum. The source cable size must be 0.003875sq.in 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 Installation dimension for DX-12A (See Fig. 3).

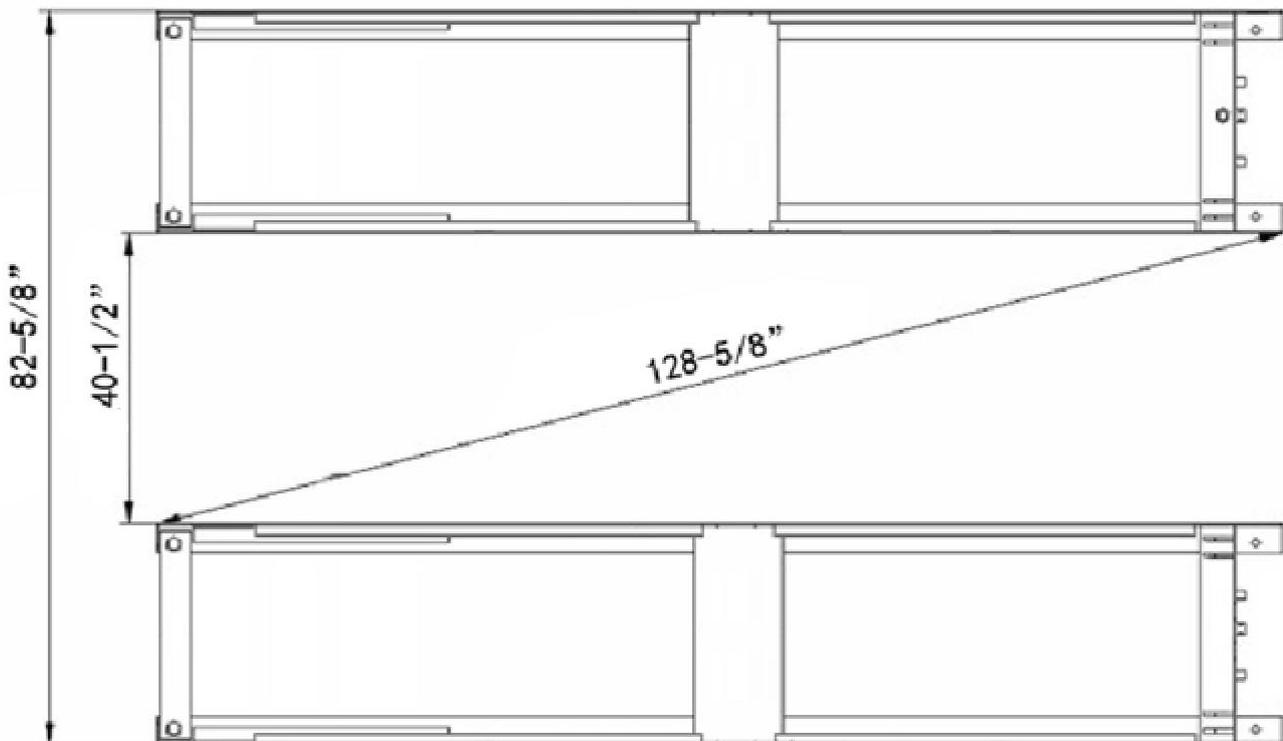


Fig. 3

1.2 Illustration of DX-12A on surface installation (See Fig.4).

Noted:  
Control cabinet can be installed at the left side or the right side of drive in direction. Below figure show the control cabinet installed at the left side of drive in direction.

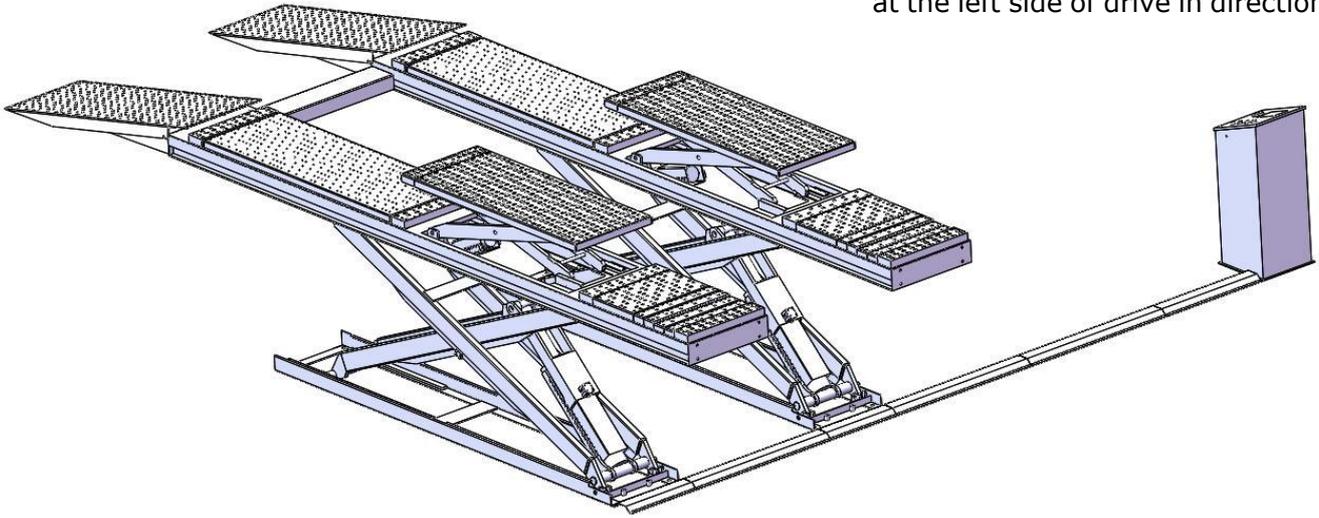
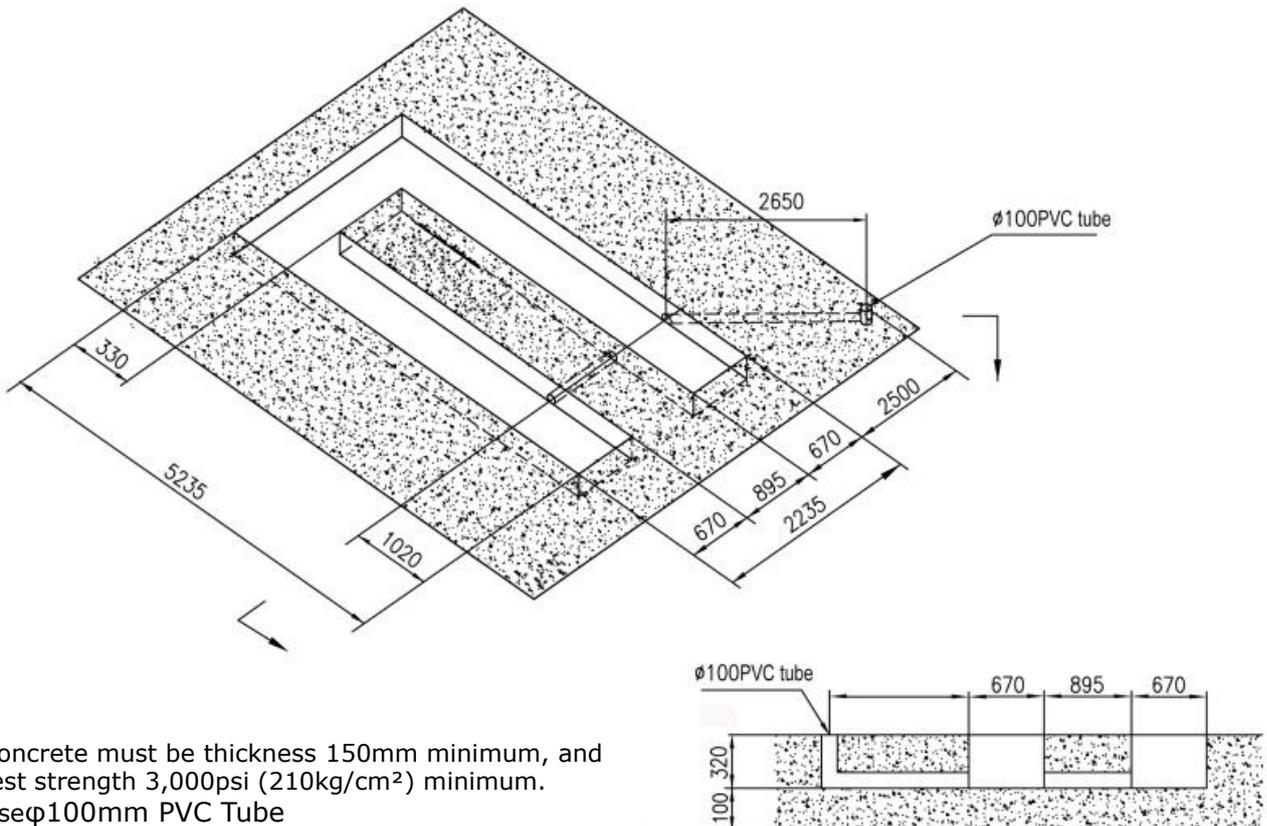


Fig. 4

2. For Optional Installation: Flush mount installation

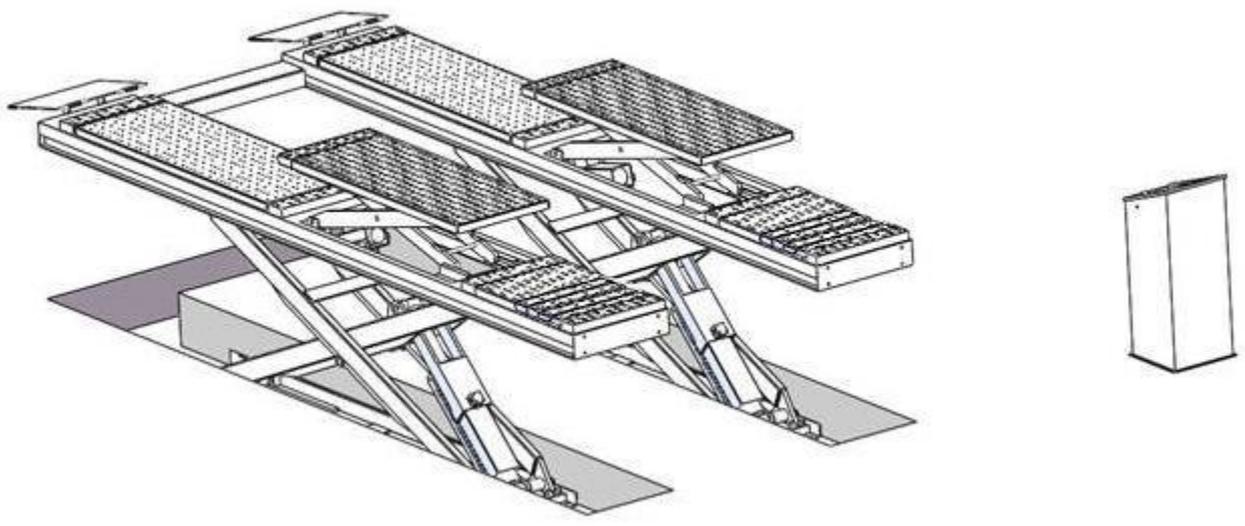
2.1 Flush Mount Installation Foundation (Fig.5).



1. Concrete must be thickness 150mm minimum, and test strength 3,000psi (210kg/cm<sup>2</sup>) minimum.
2. Use  $\phi 100$ mm PVC Tube

Fig. 5

2.2 Illustration of DX-12A flush mount installation (**Fig.6**).



**Fig. 6**

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

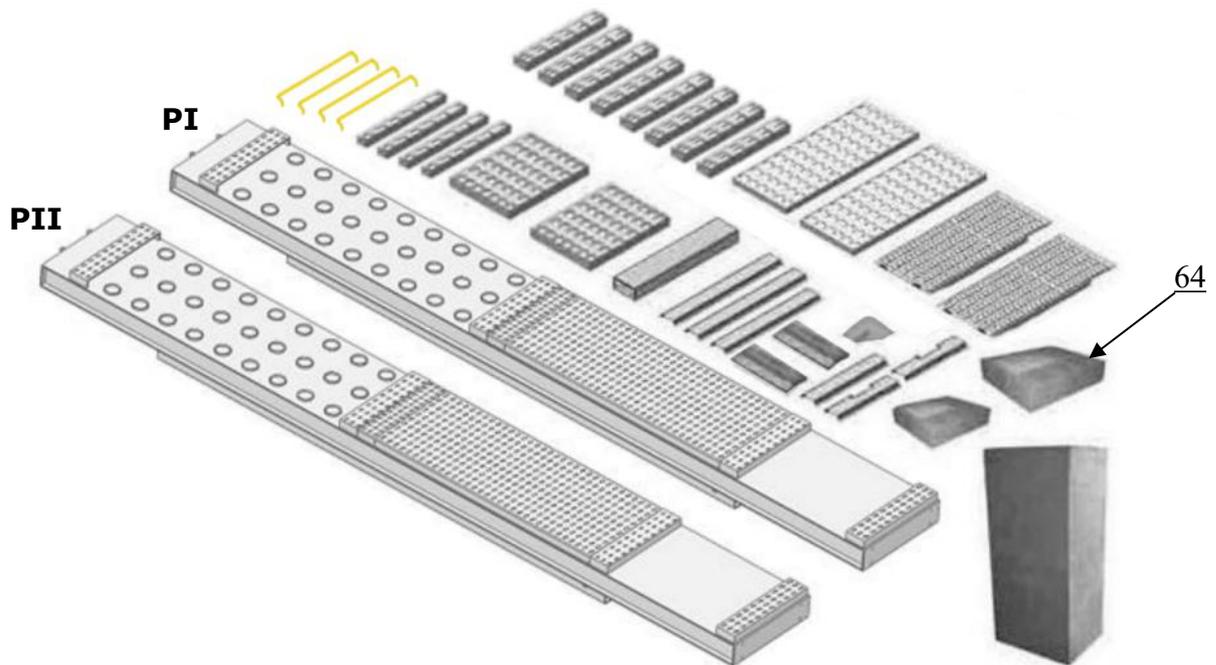
1. Packaged lift and control cabinet (**See Fig. 7**).



**Fig. 7**

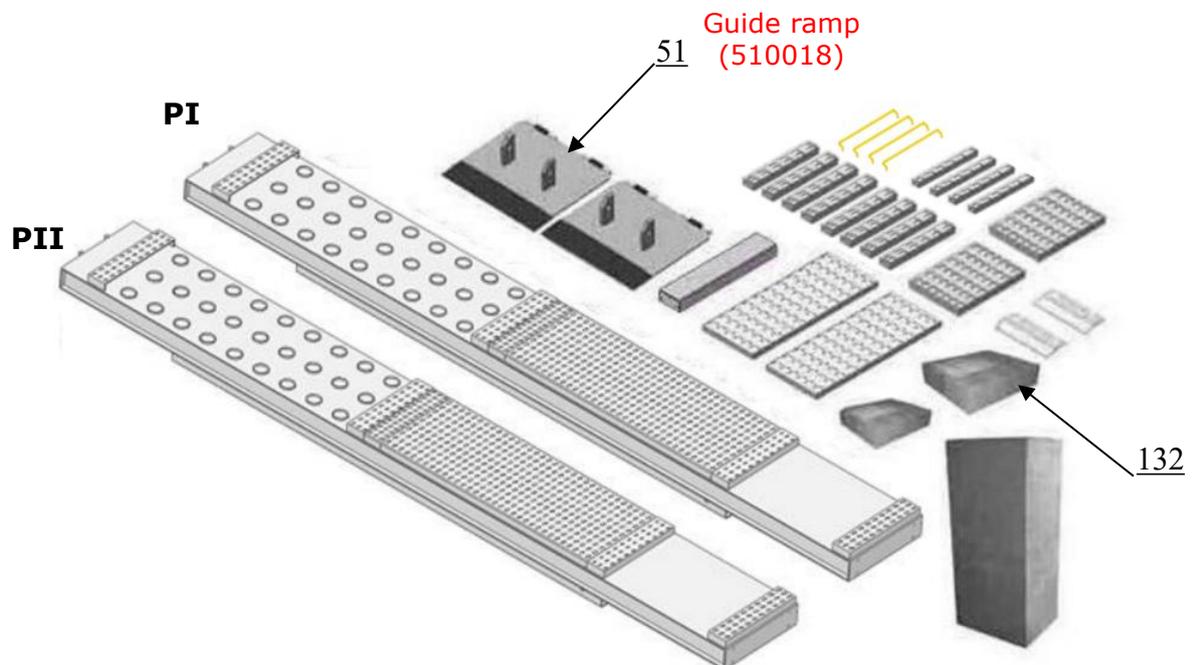
2. Move aside the lift with fork lift or hoist, and open the outer packing carefully

2.1 Parts for lift on surface installation (See Fig.8)



**Fig. 8**

2.2 Parts for lift of flush mount installation (See Fig.9)



**Fig. 9**

3. Open the parts box, check the parts according to the part list (See Fig. 10).



**Fig.10**

4. Check the parts of the parts bag according to the parts bag list.

4.1 Parts bag for lift on surface installation (See Fig.11)



**Fig. 11**

4.2 Parts bag for lift of flush mount installation (See Fig.12)



Fig. 12

C. Layout and installation of oil system and air line system.

1. Select a location and lay out the lift according to step A (See Fig. 13).

Noted: The control cabinet can be installed on the left or right of the model according to the site.

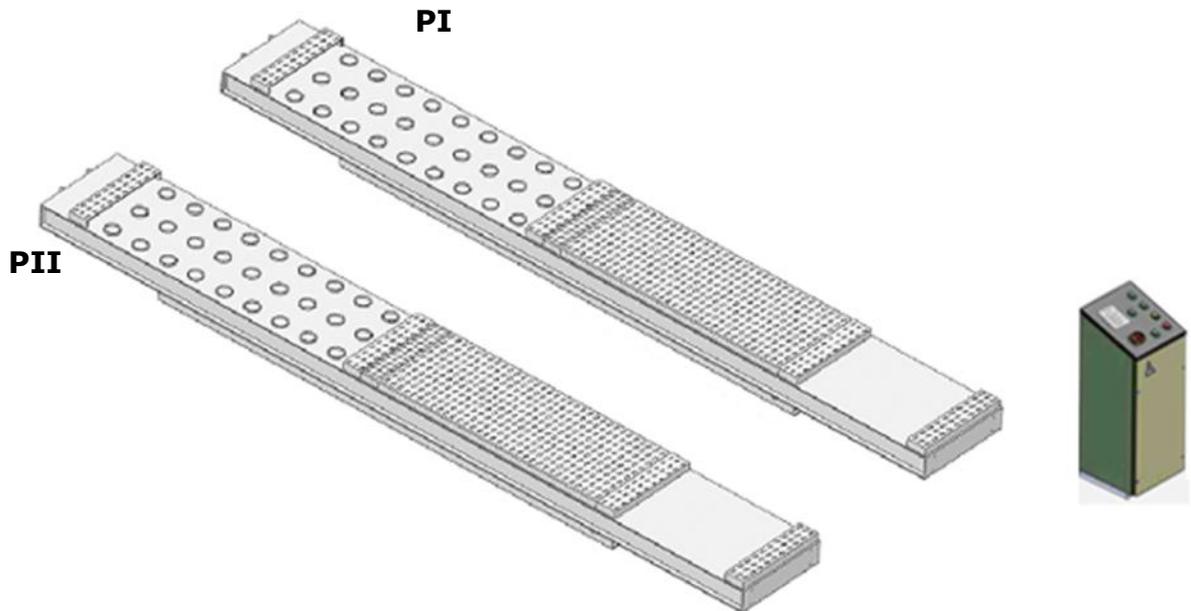
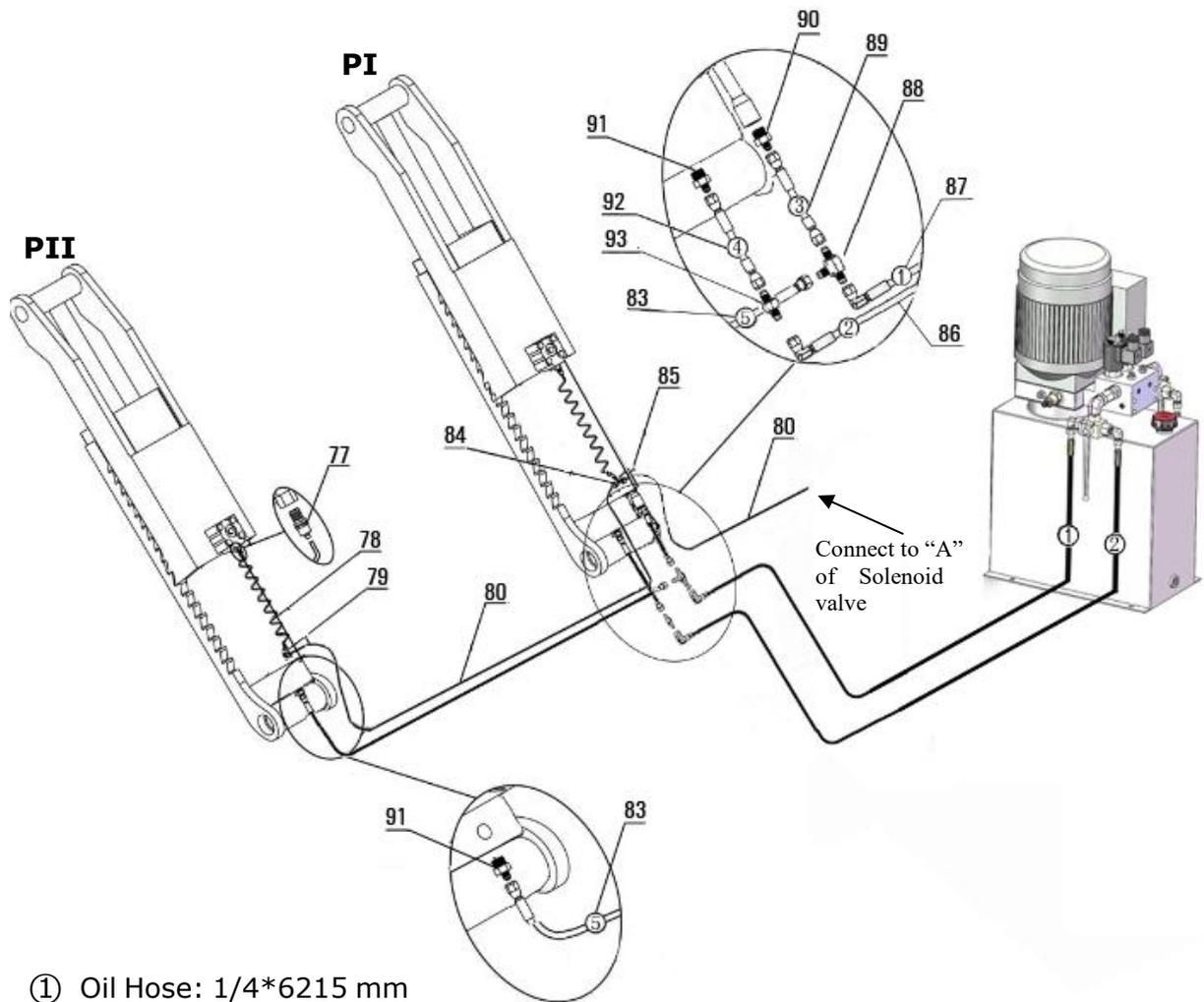


Fig. 13

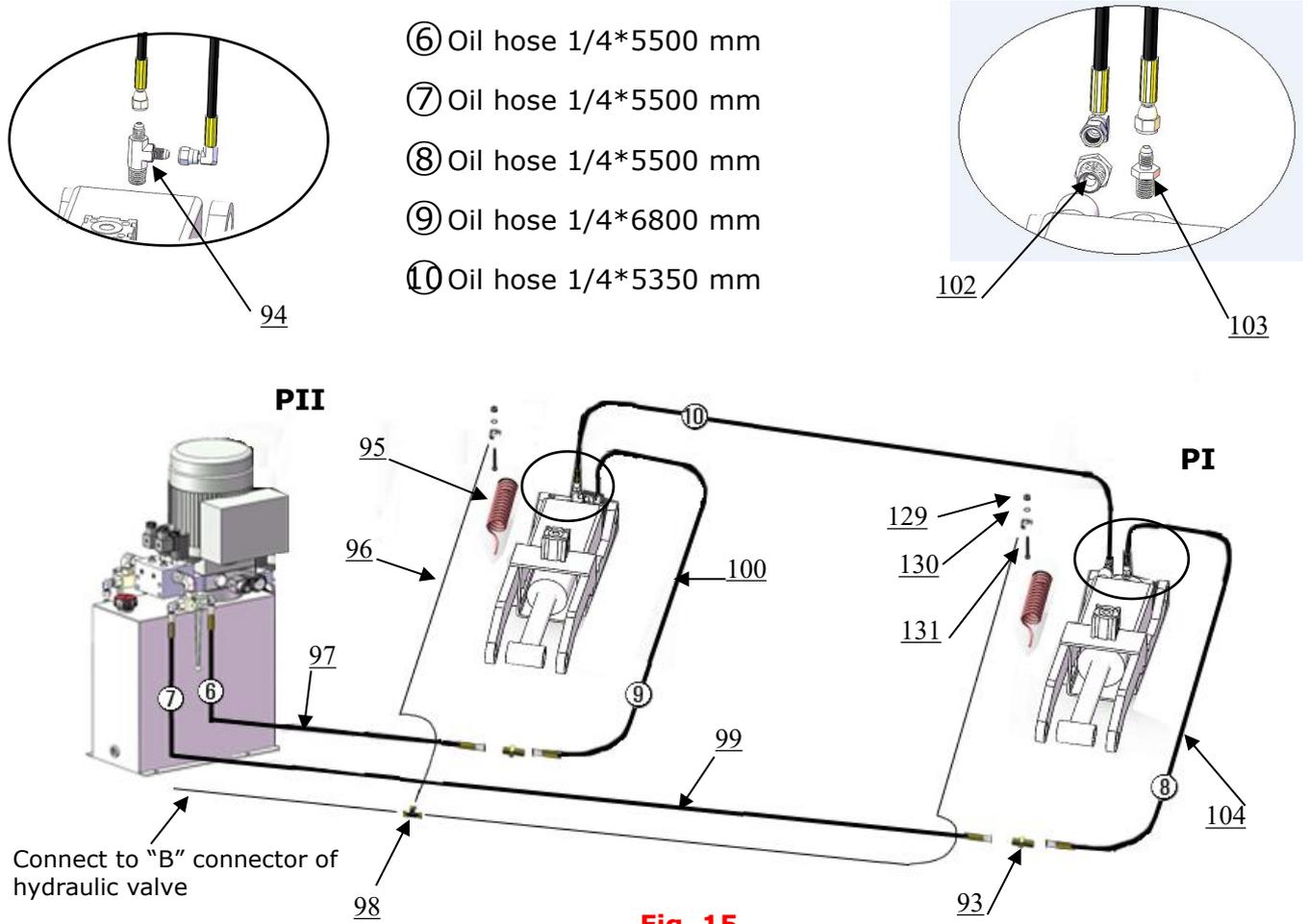
2. Connecting the cylinders' oil hose and air line of the main scissors. (See Fig. 14)



- ① Oil Hose: 1/4\*6215 mm
- ② Oil Hose: 1/4\*6135 mm
- ③ Oil Hose: 1/4\*285 mm
- ④ Oil Hose: 1/4\*285 mm
- ⑤ Oil Hose: 1/4\*1870 mm

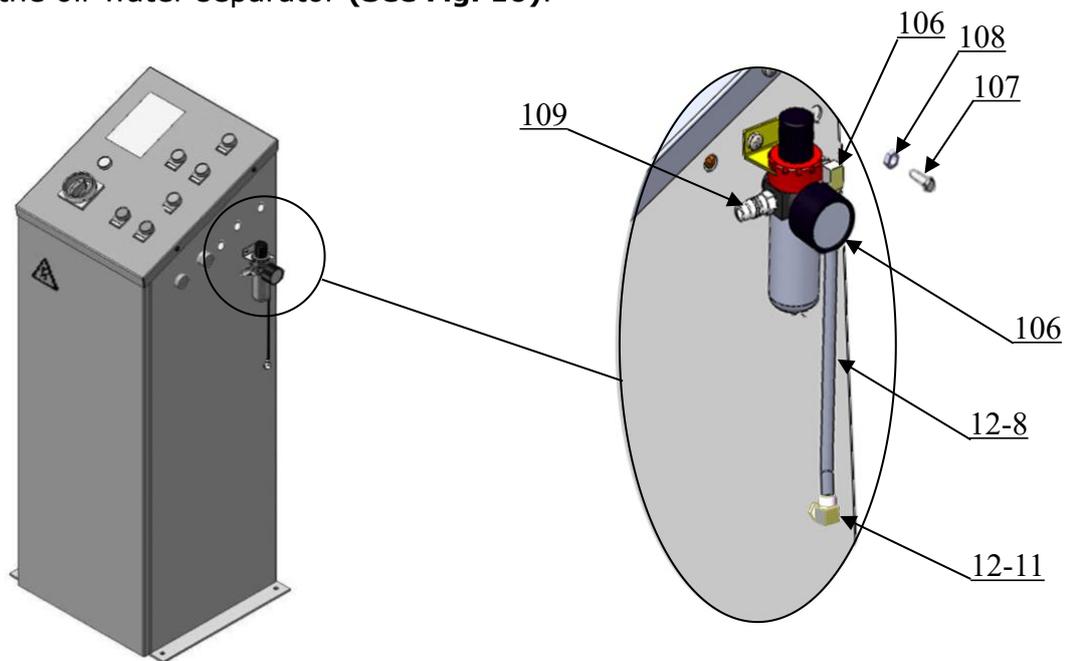
**Fig. 14**

3. Connect the cylinders' oil hose and air line of the secondly scissors. **(See Fig. 15)**



**Fig. 15**

4. Install the oil-water separator **(See Fig. 16)**.



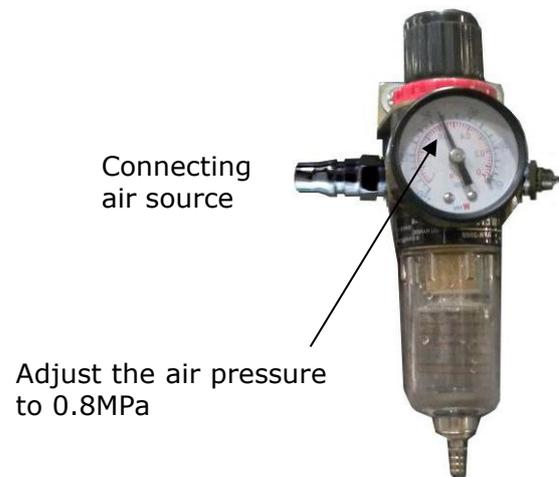
**Fig. 16**

Connect the air source by the oil-water separator

5. Connecting the air source (air pressure 5kg/cm<sup>2</sup>- 8kg/cm<sup>2</sup> ), adjust the air pressure to 0.8MPa (See Fig. 17).



Clockwise to increase the air pressure  
Counter-clockwise to reduce the air pressure  
Adjust the air pressure to **0.8 MPa**



**Fig. 17**

## D. Install electric system

### 1. Wire connection of hydraulic power unit

2.1 Connect the power wire and limit switch wire according to the wiring diagram (See Fig. 18).

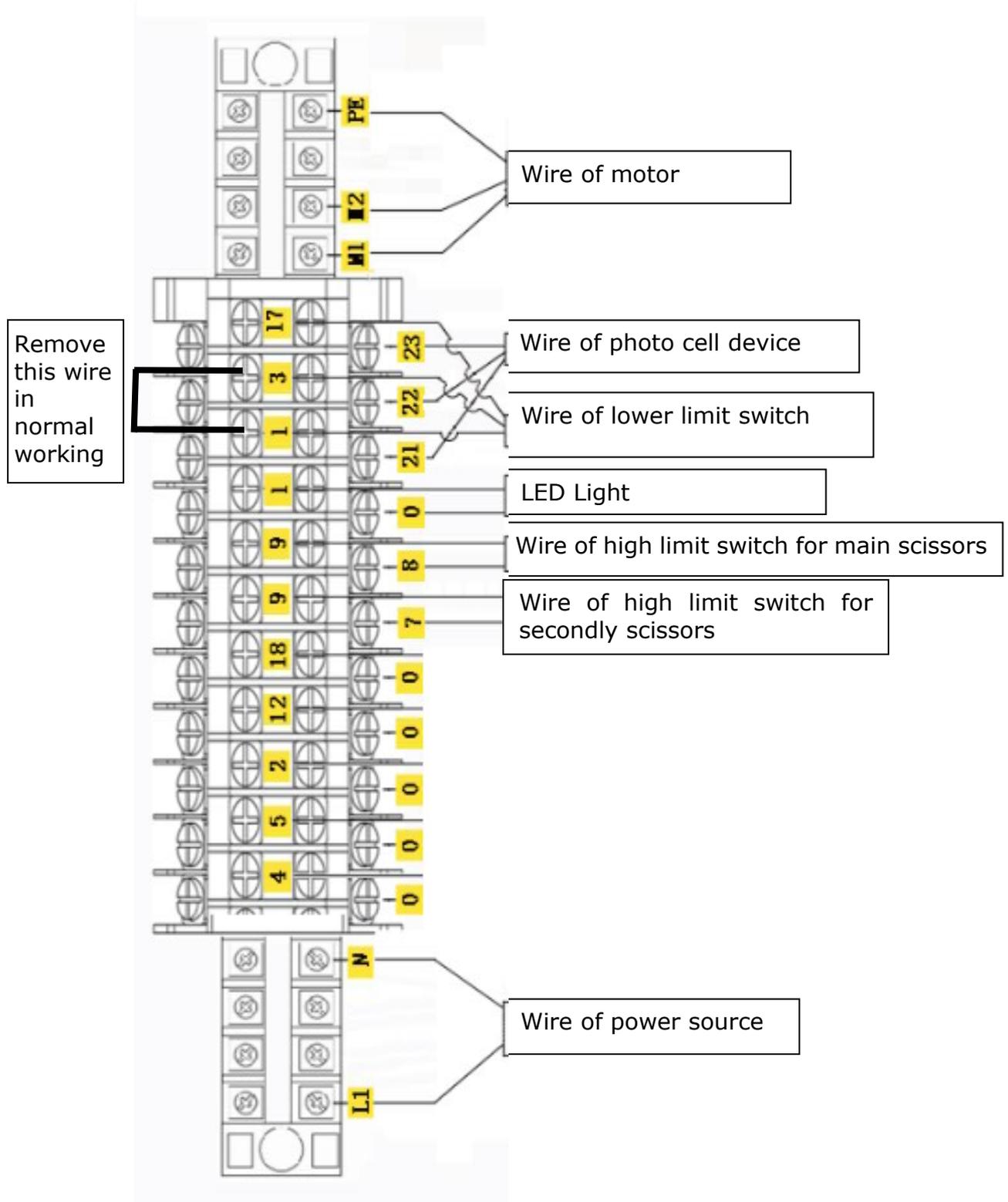


Fig. 18

### 380V Electric Component

Item	Name	Code	Specification	Item	Name	Code	Specification
1	Power switch	QS	25A	15	Time relay	KT	AC24V
2	Breaker	FU1	3P	16	Dual way check solenoid valve(main scissor)	YA	AC24V
3	Breaker	FU2	1P	17	Dual way check solenoid valve(secondly scissor)	YB	AC24V
4	Breaker	FU3	1P	18	Air solenoid valve	A1 A2	AC24V
5	AC contactor	KM	16A/AC24V	19	Solenoid release valve	Y	AC24V
6	Buzzer	H	AC24V	20	Push button	UP1	Triple
7	Transformer	TC	24VAC	21	Push button	UP2	Duplex
8	Indicator light	R	24V White	22	Push button	Lock1	Triple
9	Lower Alarm button	Pass	Duplex	23	Push button	Lock2	Duplex
10	Motor	M	Single Phase	24	Push button	Down1	Triple
11	Rectifier bridge	UR	KBPC10-10	25	Push button	Down2	Duplex
12	Photo cell device	SP	DC24V	26	High limit switch for main scissor	SQ1	8108 (10A)
13	Intermediate relay	KA3	DC24V	27	Low limit switch for main scissor	SQ2	8108 (10A)
14	Intermediate relay	KA1 KA2	AC24V	28	Low limit switch	SQ3	8104 (10A)



### E. Adjust Photo cell device and level two platforms

1. Remove the cover of photo cell device on off-side platform firstly. **(See Fig.20)**
2. Check by level bar and adjust the lower leveling bolts(**See Fig.21**), use the shims to adjust the platforms until the front and rear of two platforms are in the same level. Adjust the Upper leveling bolts(**See Fig.22**) after it touch the Lower leveling bolts when lower to the lowest position. Then Tighten nut by wrench.

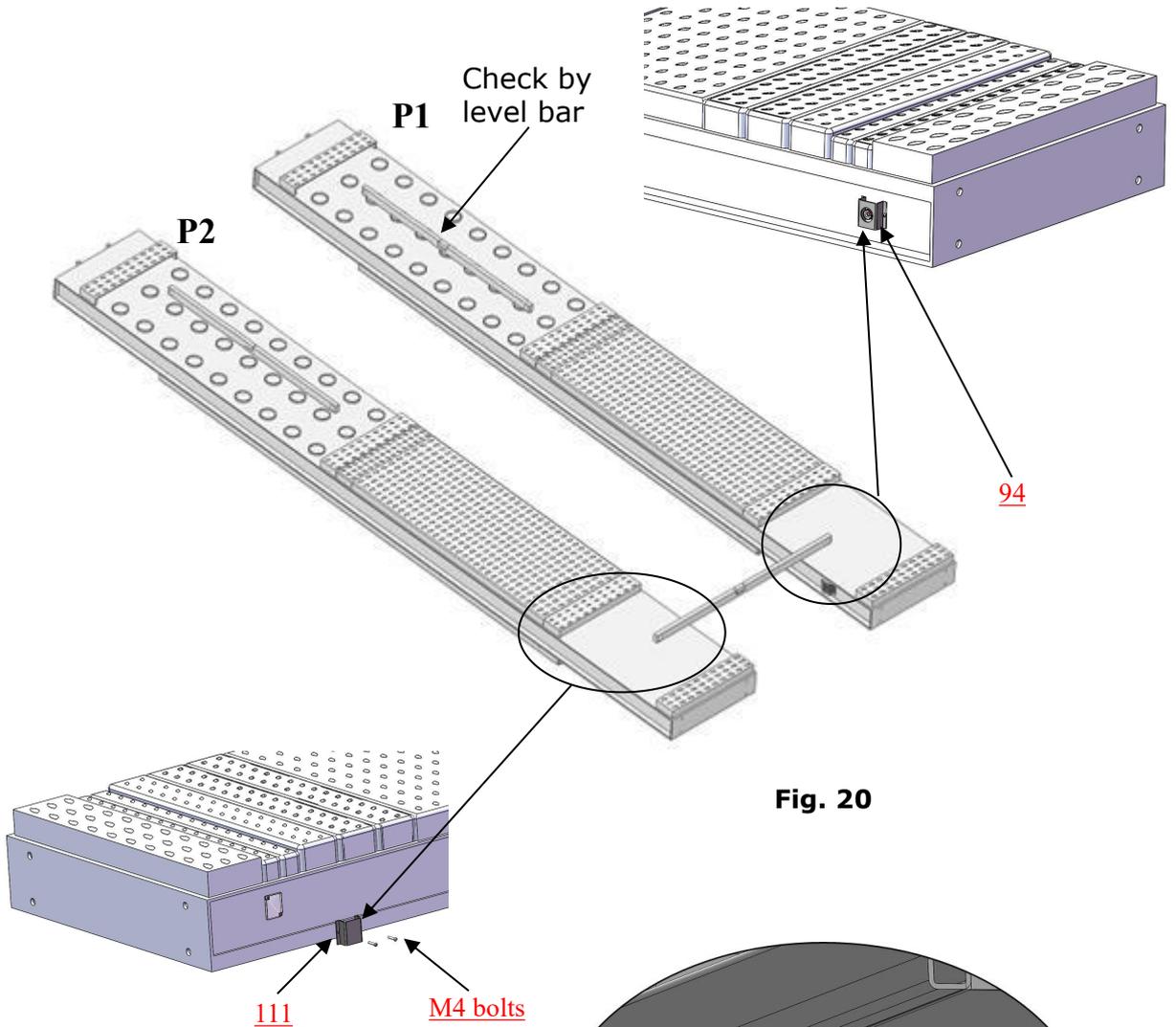


Fig. 20

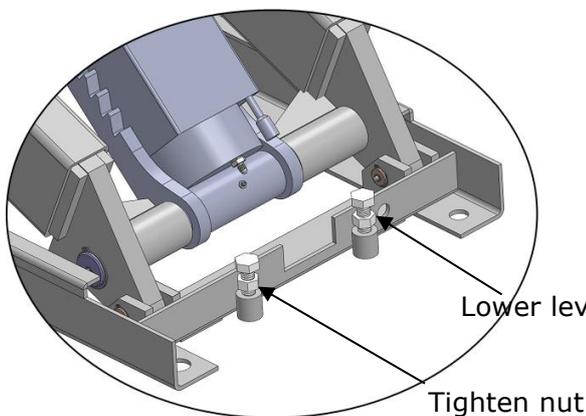


Fig. 21

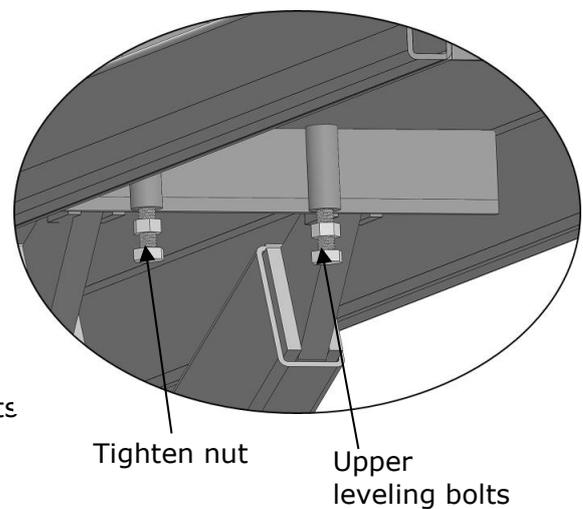
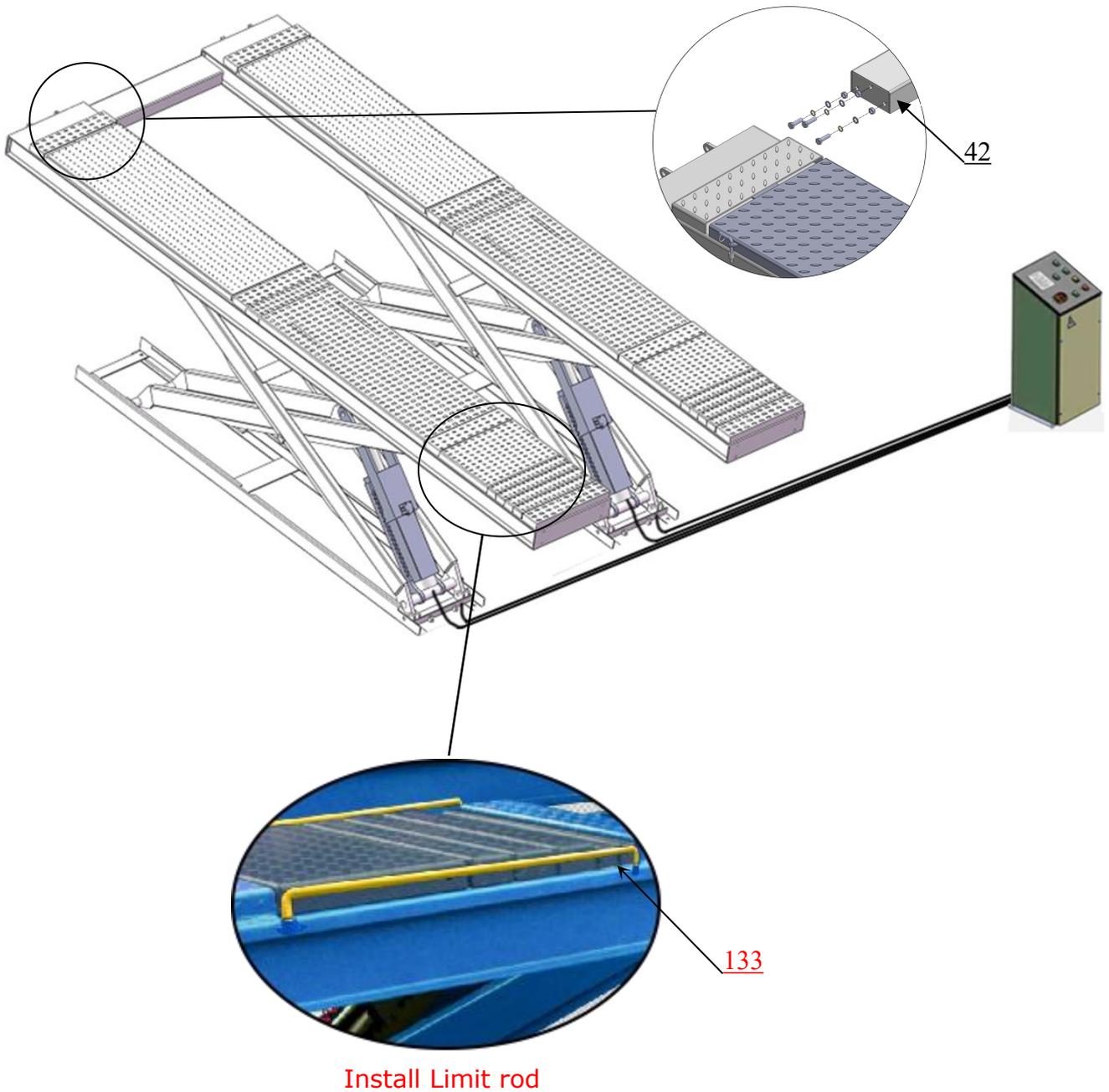


Fig. 22

**F. Install runway connecting bar, Limit rod.**

1. Install runway connecting bar, (See Fig.23)



**Fig.23**

2. Install anchor bolts.

2.1 Raise the lift to 1000mm then drill holes to install the anchor bolts (See Fig.26)

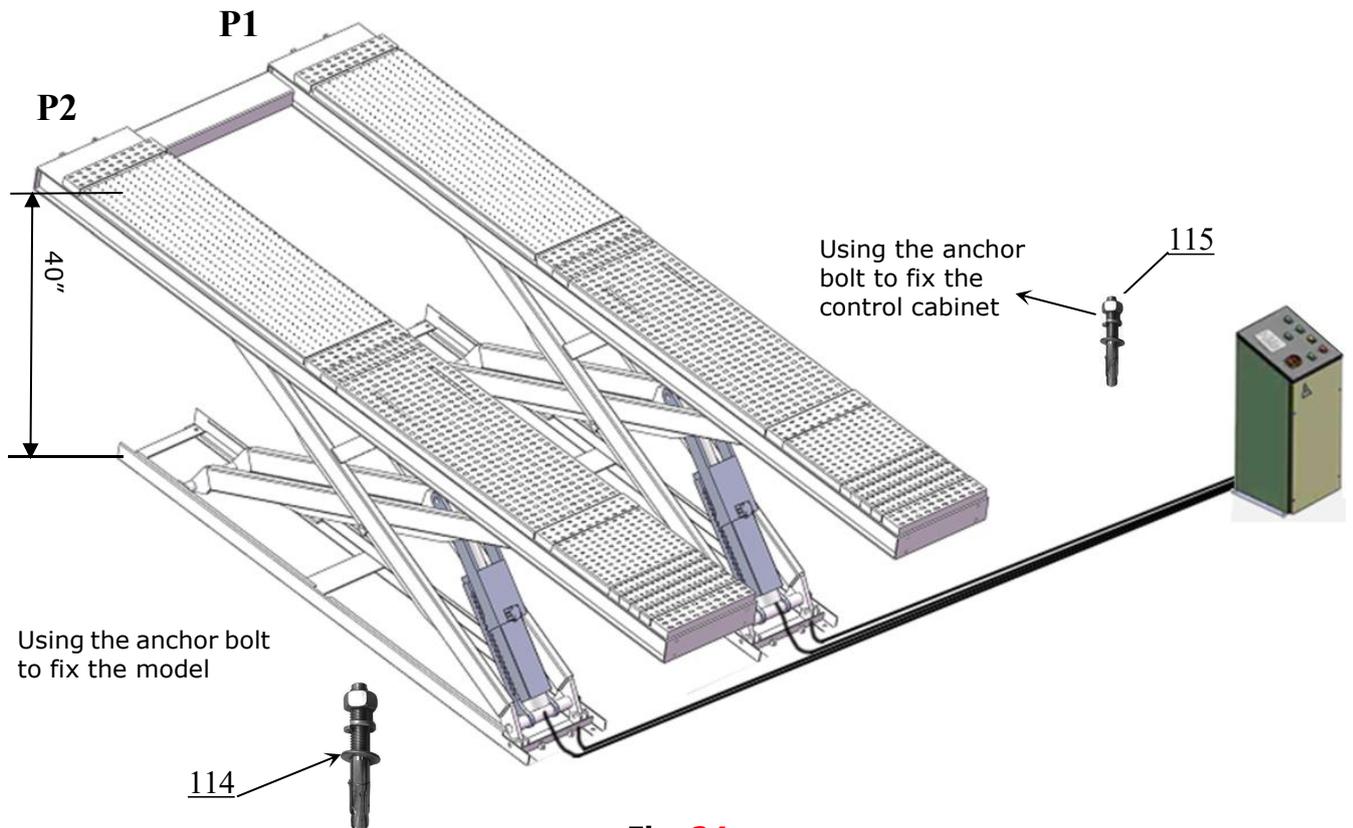


Fig. 24

3.1 Fix the anchor bolts.

Drilling the hole for the anchor bolt with the rotary hammer drill, type the anchor bolt into the ground, and then fasten it with ratchet spanner (See Fig. 27).

**Note: The tightening torque for the anchor bolt is 492lbs.ft. Tap anchor bolts into the ground at least 3 1/2" deep.**

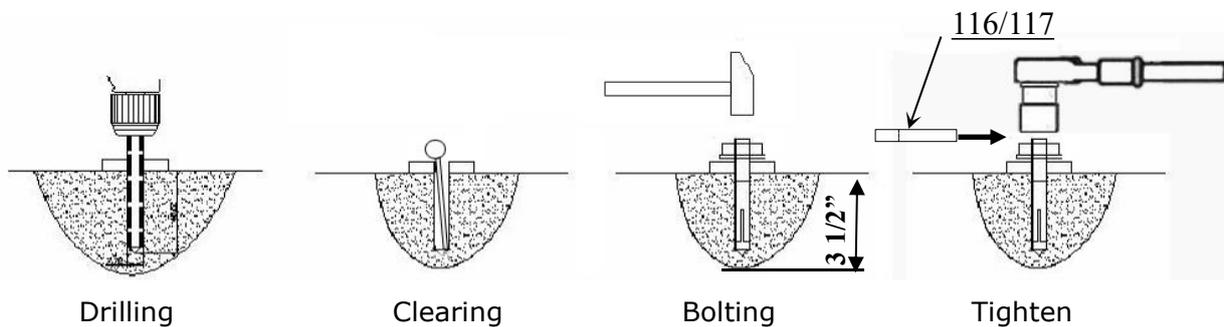


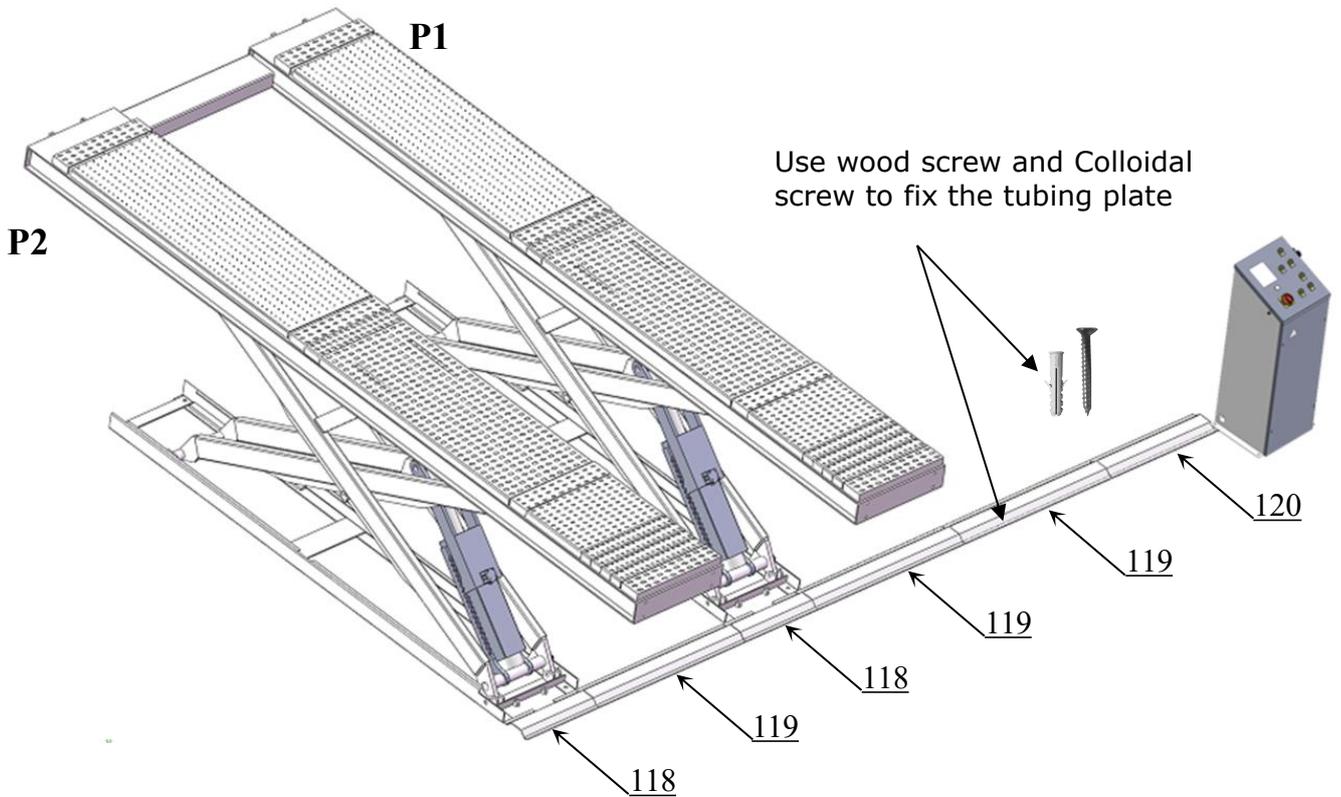
Fig. 25

**Anchor bolts for the model: Use  $\Phi 3/4$  driller to drill hole.**

**Anchor bolts for the control cabinet: Use  $\Phi 3/8$  driller to drill hole.**

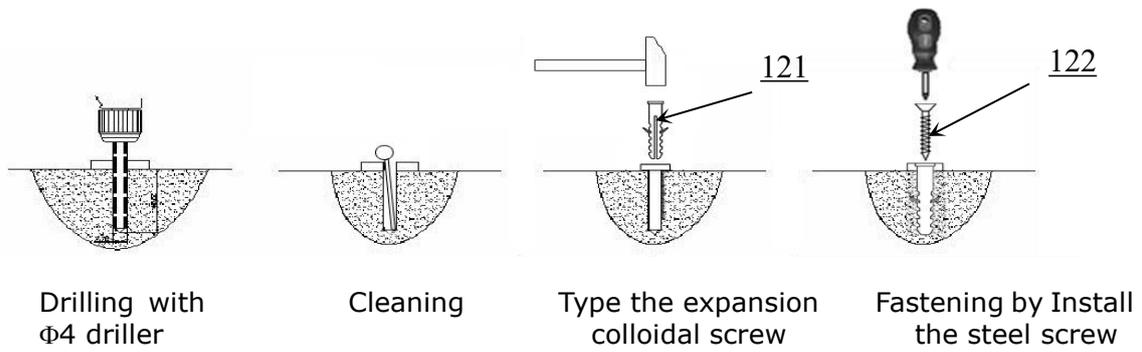
**G. Install oil hose cover for lift on surface installation.**

1. Tidy up the oil hose and air line, cover the oil hose cover (See Fig. 26).



**Fig. 26**

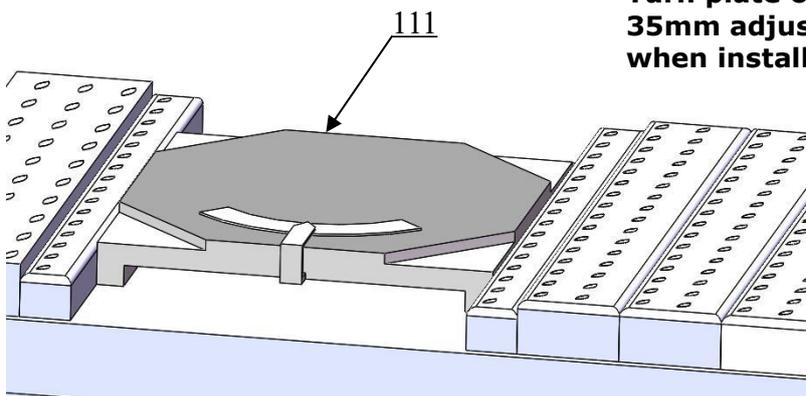
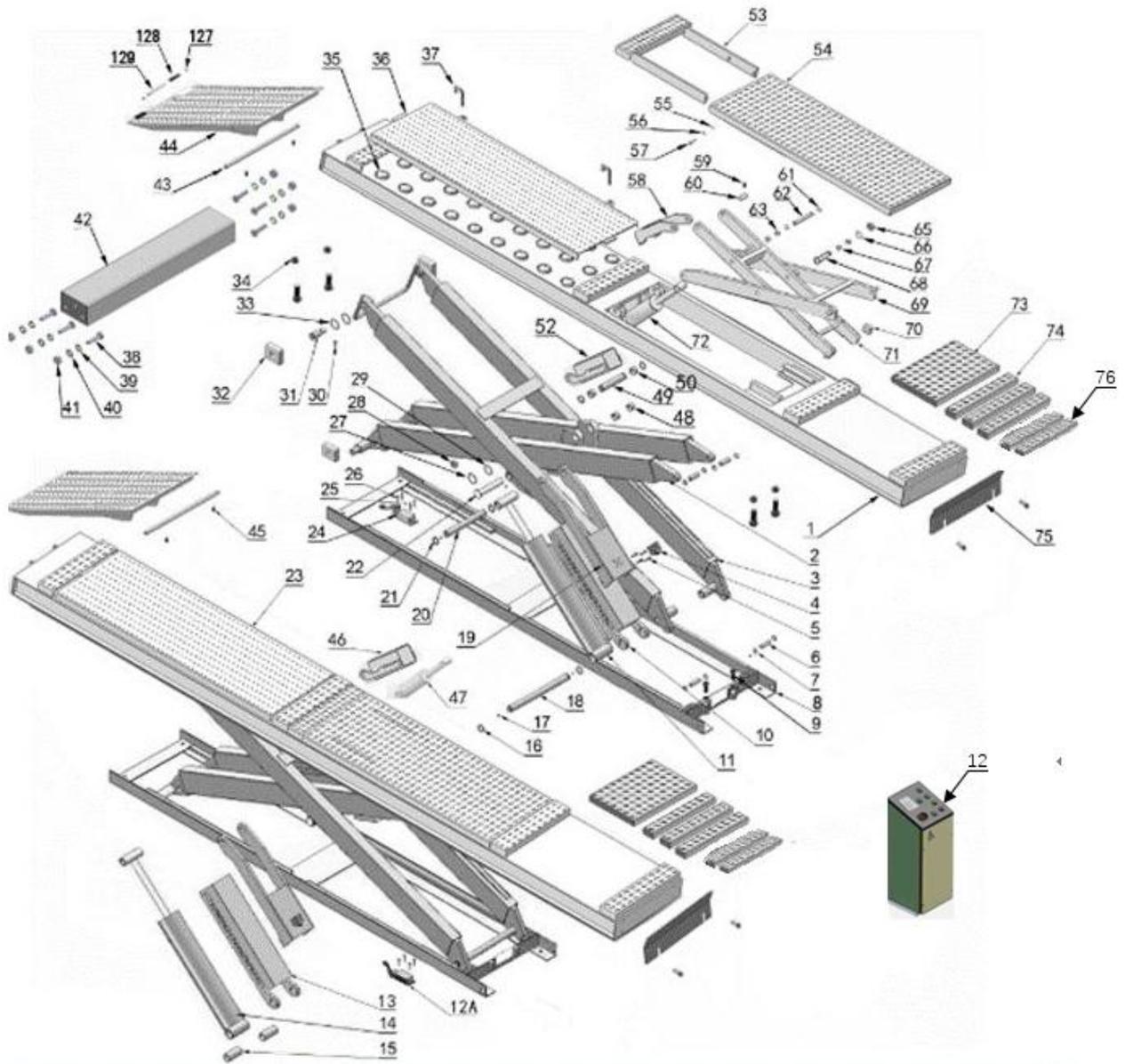
2. Install bolt of oil hose cover (See Fig. 27).



**Fig.27**

#### IV. EXPLODED VIEW

### Model: DX-12A



**Turn plate optional parts (need one piece 35mm adjustment block on both sides when install the turn plate)**

**Fig. 28**

## Parts list for DX-12A

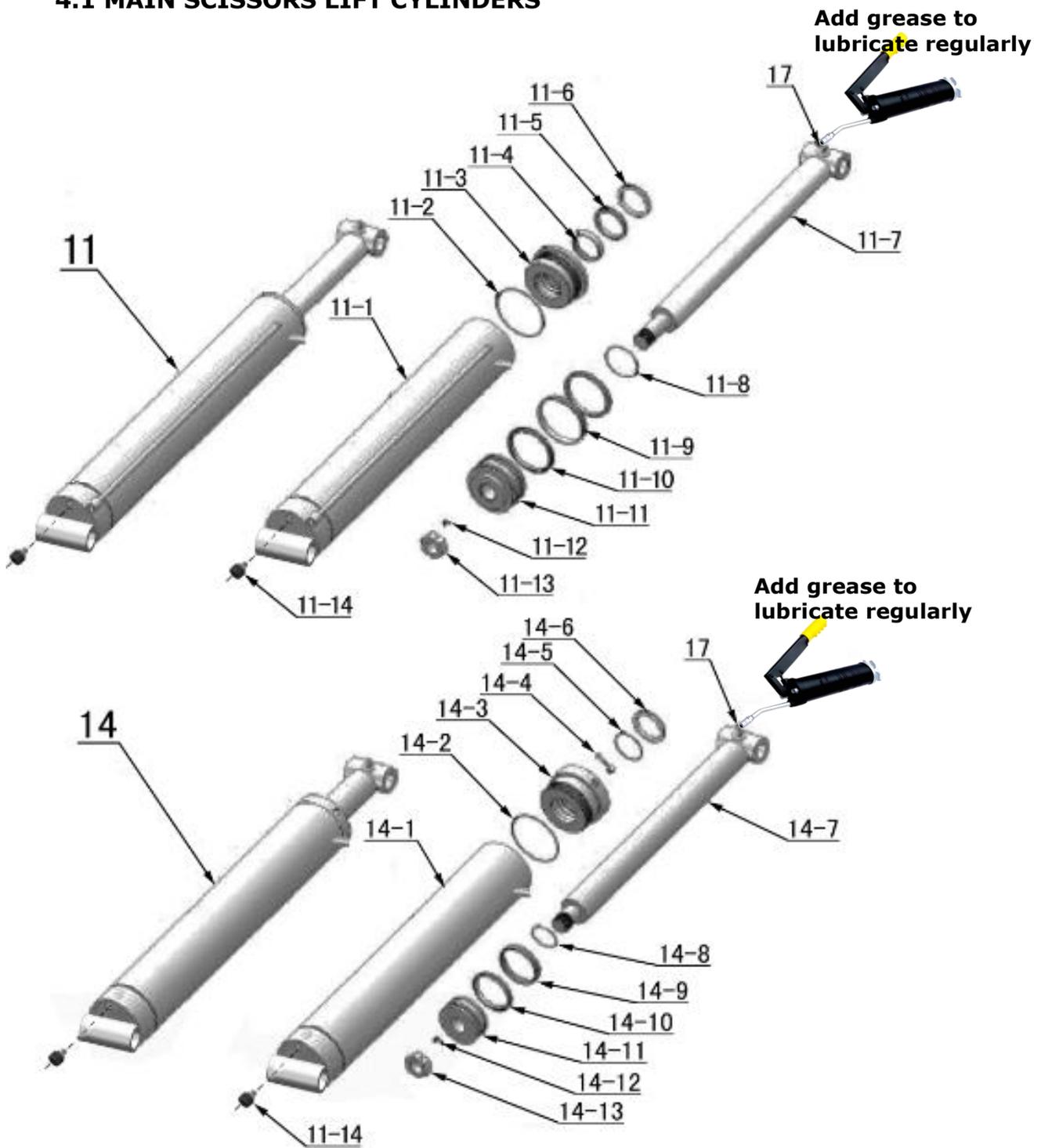
Item	Part#	Description	QTY	Note
1	11580705	Power-side platform	1	
2	11580091	Inner Scissors(Main)	2	
3	11580092	Outer Scissors(Main)	2	
4	10520011	Air Cylinder	4	
5	10420153	Cap Head Bolt M6*20	16	
6	11580010	Pin for scissor	8	
7	10206032	Snap ring $\phi$ 25	16	
8	11580034	Base frame	2	
9	10510012	Hex bolt M20*75	12	
10	11580703	Main Safety Lock Tube	4	
11	10580061	Main Cylinder	1	
12	10580121	Control Cabinet	1	
13	10580109	Lower Limit Switch Assy.	1	
14	10580062	Secondly Cylinder	1	
15	11510022	Spacer bush for cylinder	4	
15A	11580071	Spacer for safety lock tube	2	
16	10520020	Snap Ring $\phi$ 50	4	
17	10620064	Grease Fitting	32	
18	11580009	Connecting Shaft For Main Cylinder	2	
19	11580708	Safety Lock support plate	2	
20	11610005A	Connecting Pins for Cylinder	2	
21	10610098	Snap Ring $\phi$ 35	8	
22	11580011	Connecting pin for inner and outer scissors	4	
23	11580709	Off-side Platform	1	
24	10580108	High Limit Switch Assy.	1	
25	10620109	Cap Head Bolt M4*18	4	
26	10420164	Cap Head Bolt M4*30	4	
27	10530023	Washer $\phi$ 44* $\phi$ 35.5*2	4	
28	10610019	Self-locking nut	4	
29	10610108	Washer $\phi$ 44* $\phi$ 30.5*2	4	
30	10520108	Socket head cap bolt M8*10	8	
31	11580012	Connecting pin	4	
32	10530012	Slider	8	
33	10420023A	Washer $\phi$ 36* $\phi$ 65*2.8	8	
34	10420175A	Hex nut M20	12	
35	10420157	Steel Ball Set	60	
36	11570003	Slip Plate	2	
37	11520037	Pin for Slip Plate	4	
38	10420136	Hex bolt M12*45	10	

Item	Part#	Description	QTY	Note
39	10206006	Washer $\phi$ 12	6	
40	10420026	Lock washer $\phi$ 12	6	
41	10206023B	Hex Nut M12	6	
42	11580031	Runway Connecting Bar	1	
43	11510006	Pin for connecting plate	2	
44	11520005A	Drive-in Ramp	2	
45	10201005	Split pin 4*50	4	
46	11580029	Safety device(secondly)	1	
47	10510064	Secondly cylinder for secondly scissors	1	
48	10530042	Bronze bush $\phi$ 41.3* $\phi$ 35.1*28	4	
49	11580016	Connecting pin for cylinder bottom cap	2	
50	10420132A	Bronze bush $\phi$ 41.2* $\phi$ 35.2*20	4	
51	11510018	Guild Ramp (Flush mount)	2	
52	11580028	Safety device (Main)	1	
53	11580030	Extend platform	2	
54	11580024	Platform for secondly scissors	2	
55	10209033	Washer $\phi$ 8	2	
56	10209034	Lock washer $\phi$ 8	2	
57	10201002	Hex bolt M8*16	2	
58	11580027	Safety support plate for secondly scissors	2	
59	10580005	Socket bolt M6*10	8	
60	11580015	Connecting pin	8	
61	10610008	Snap Ring $\phi$ 30	4	
62	11580013	Connecting pin for piston rod	2	
63	10620141	Bronze bush $\phi$ 36* $\phi$ 30.1*24	4	
64	10580503	Parts box(on surface)	1	
65	10620022	Slotted self-locking nut M24*2.5	4	
66	10640109	Washer $\phi$ 44* $\phi$ 25.5*2	4	
67	10203004A	Bronze bush $\phi$ 31* $\phi$ 25.1*21	16	
68	11580014	Main connecting pin	4	
69	11580707	Outer scissors for secondly scissors	2	
70	10580103	Slider HK-015 (75*53*30)	8	
71	11580706	Inner scissors for secondly scissors	2	
72	10510063	Main cylinder for secondly scissors	1	
73	11580089	Turnplate cover	2	
74	11580090	Adjustable plate for Turnplate	6	
75	11520004A	Tire stop plate	2	
76	11580097	Adjustable plate 1 for Turnplate	4	
77	10580048	90° Fitting	4	
78	10520065	Spring air line 2000mm	2	

Item	Part#	Description	QTY	Note
79	10520069	90° air fitting	3	
80	10580001	Black air line $\Phi 6^* \Phi 4^* 13800\text{mm}$	1	
81	10610097	Hex nut M3	5	
82	10610101	Washer $\Phi 3$	5	
83	10510051	⑤ Oil hose assy. 1/4*1870 double straight	1	
84	10420124	T fitting	2	
85	10610099	Cap Head Bolt M3*20	5	
86	10510050	② Oil hose assy. 1/4*6135 straight+90°	1	
87	10510049	① Oil hose assy. 1/4*6215 straight+90°	1	
88	10211016	T fitting 1/4JIC(M)*1/4JIC(M) *1/4JIC(M)	2	
89	10510052	③ Oil hose assy. 1/4*285 double straight	1	
90	10420119	Straight fitting for cylinder 3/8NPT(M)*1/4JIC(M)	1	
91	10510023	Straight fitting G3/8-19(M)*1/4JIC(M)	2	
92	10510052	④ Oil hose assy. 1/4*285	1	
93	10620079	Straight fitting 1/4JIC(M) *1/4JIC(M)	2	
95	10580007	Spring air line (500mm)	2	
96	10580006	Black air line $\Phi 6^* \Phi 4^* 12150\text{mm}$	1	
97	10580003	⑥ Oil hose assy. 1/4*5500 double straight	1	
98	10420124	T Fitting	1	
99	10580003	⑦ Oil hose assy. 1/4*5500 double straight	1	
100	10580123	⑨ Oil hose assy. 1/4*6800 straight+90°	1	
101	10580124	⑩ Oil hose assy. 1/4*5350 straight+90°	1	
102	10420119	Straight fitting 3/8NPT(M)*1/4JIC(M)	1	
103	10209064	Straight fitting 1/4NPT(M)*1/4JIC(M)	2	
104	10580003	⑧ Oil hose assy. 1/4*5500 double straight	1	
105	10420145	Oil-water separator AFR-2000	1	
106	10420076	90° Fitting for air line	2	
107	10680005	Cap Head Bolt M6*10	6	
108	10420018	Self-locking nut M6	2	
109	10420146	Straight fitting for air line (1/4 external thread)	1	
111	10420158	Turnplate (Optional)	2	
114	10209059	Anchor bolt 3/4*5-1/2	8	
115	10620071	Anchor bolt M10*100	4	
116	10201090	Shim (1mm) (1mm)	20	
117	10620065	Shim (2mm) (2mm)	20	
118	11580040	Oil hose cover (L=520mm)	2	
119	11540027	Oil hose cover (L=520mm)	3	
120	11540025	Oil hose cover (L=520mm)	1	
121	10620070	Rubber Screw $\phi 6$ (On Surface)	36	

122	10620069	Wood bolt M4*30 (On Surface)	36	
123	11540029	Oil hose cover	1	
124	10610070	Rubber pad	4	
125	10620034	Rubber pad	4	
126	10580502	Parts box (Flush mount)	1	
127	10209010	Snap ring Ø10	8	
128	10610667	Roller for Drive-in ramp	4	
129	11620043	Roller Pin for Drive-in ramp	4	
130	11580741	Cover of Photo cell device	2	
131	10580107	Photo cell device assy.	1	
132	10580106	High Limit Switch Assy.(Secondly Lift)	1	
200	071205	Power unit	1	
133	11440090	Limit rod for adjustment block	4	

#### 4.1 MAIN SCISSORS LIFT CYLINDERS



**Fig. 30**

<b>Parts for Cylinder of main scissors</b>				
<b>Item</b>	<b>Part#</b>	<b>Description</b>	<b>QTY</b>	<b>Note</b>
11-1	11580078	Main Cylinder tube	1	
11-2	10580066	O- Ring (φ128*5.3)	1	
11-3	11580079	Head Cap (Main)	1	
11-4	10580069	Support Ring (φ50*φ56*15)	1	
11-5	10580065	Y- Ring ISI(φ50*φ60*6)	1	
11-6	10580067	Dust Ring (φ50*φ58)	1	
11-7	11580080	Piston Rod (Main)	1	
11-8	10520054	O- Ring (φ38*3.55)	1	
11-9	10580068	Support Ring (φ124*φ130*12.5)	1	
11-10	10580064	Y- Ring OSI(φ115*φ130*9)	2	
11-11	11580081	Piston (Main)	1	
11-12	10520049	Set Screw	1	
11-13	10520047	Hex Nut (Main)	1	
11-14	10530009	Burst valve	2	
14-1	11580082	Secondly Cylinder tube	1	
14-2	10520053	O- Ring (φ118*3.55)	1	
14-3	11580083	Head Cap (Secondly)	1	
14-4	10201034	Bleeding Plug	2	
14-5	10580070	O- Ring (φ50*3.55)	1	
14-6	10580067	Dust Ring (φ50*φ58)	1	
14-7	11580080	Piston Rod (Secondly)	1	
14-8	10520054	O- Ring (φ38*3.55)	1	
14-9	10520056	Support Ring (φ114*φ120*15)	1	
14-10	10520055	Y- Ring OSI(φ105*φ120*9)	1	
14-11	11580084	Piston (Secondly)	1	
14-12	10520049	Set Screw	1	
14-13	10520047	Hex Nut (Secondly)	1	
14-14	10530009	Burst valve	1	

## 4.2 SECONDLY LIFT CYLINDER

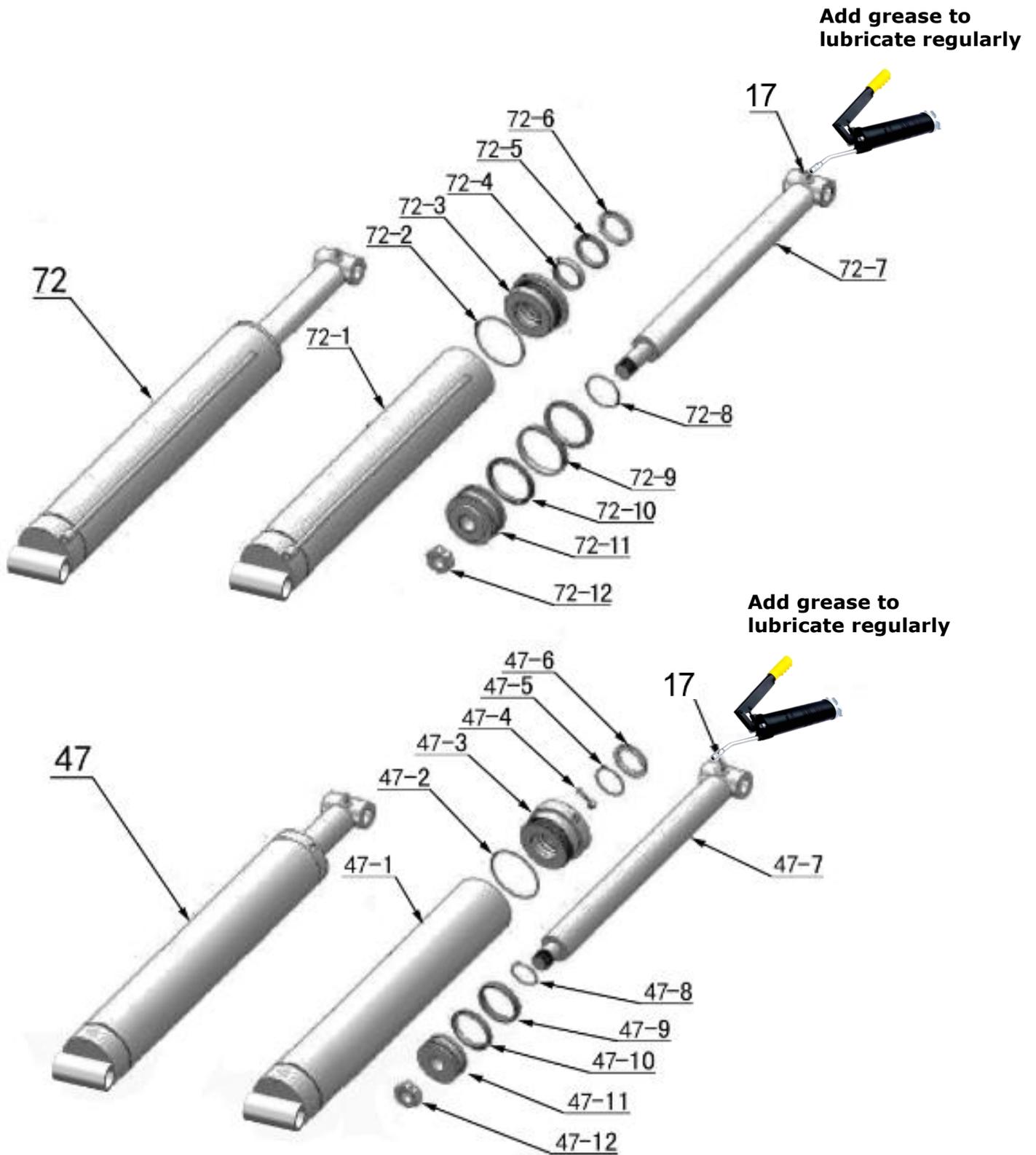
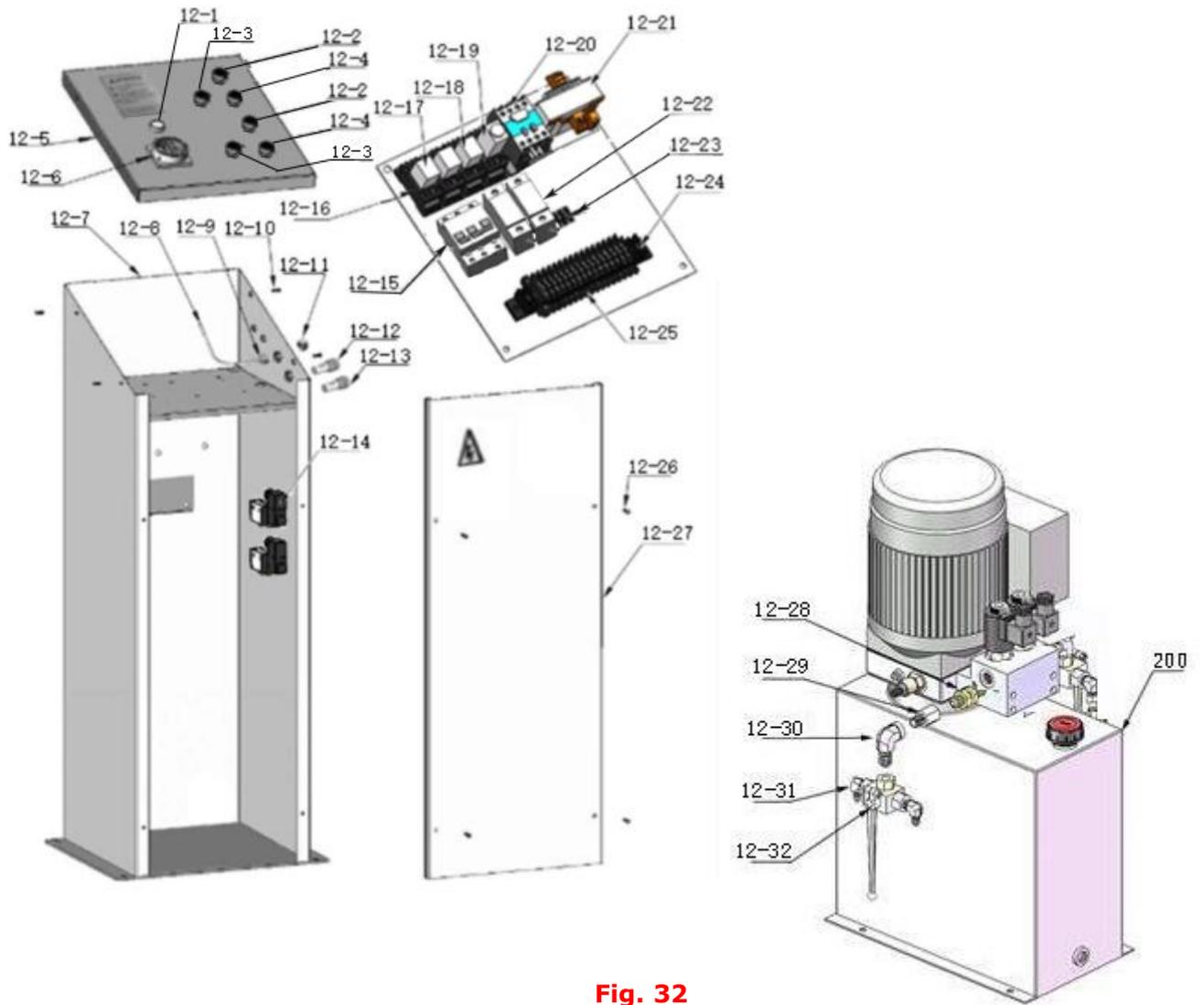


Fig. 31

<b>Parts for Cylinder of secondly scissors</b>				
<b>Item</b>	<b>Part#</b>	<b>Description</b>	<b>QTY</b>	<b>Note</b>
72-1	11580049	Main Cylinder	1	
72-2	10510059	O- Ring (φ84*5.3)	1	
72-3	11580050	Head Cap (Main)	1	
72-4	10620047	Support Ring (φ40*φ46*12.5)	1	
72-5	10620046	Y- Ring ISI(φ40*φ50*6)	1	
72-6	10209078A	Dust Ring (φ40*φ48)	1	
72-7	11580051	Piston Rod	1	
72-8	10206069	O- Ring (φ21*3.1)	1	
72-9	10510058	Support Ring (φ79*φ85*12.5)	1	
72-10	10510057	Y- Ring OSI(φ75*φ85*6)	2	
72-11	11580052	Piston (Main)	1	
72-12	10206071	Hex bolt	1	
47-1	11580053	Secondly Cylinder	1	
47-2	10630027	O- Ring (φ68*3.55)	1	
47-3	11630030	Head Cap (Secondly)	1	
47-4	10201034	Bleeding Plug	1	
47-5	10620058	O- Ring (φ40*3.55)	1	
47-6	10209078A	Dust Ring (φ40*φ48)	1	
47-7	11580051	Piston Rod	1	
47-8	10206069	O- Ring (φ21*3.1)	1	
47-9	10620053	Support Ring (φ69*φ75*12.5)	1	
47-10	10620054	Y- Ring OSI(φ65*φ75*6)	1	
47-11	11580054	Piston (Secondly)	1	
47-12	10206071	Hex bolt	1	

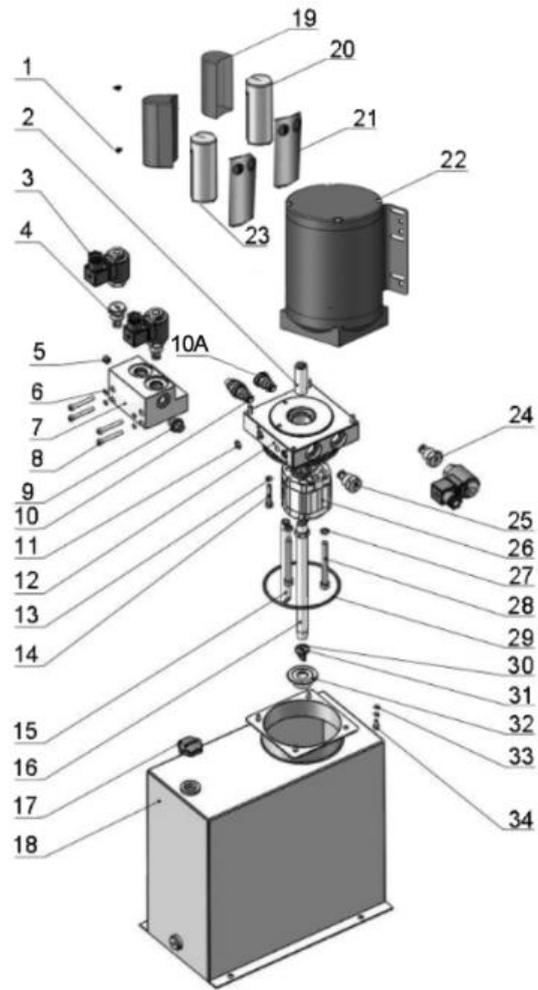
### 4.3 CONTROL CABINET 10580125 Single phase



**Fig. 32**

<b>Parts for control Cabinet</b>				
<b>Item</b>	<b>Part#</b>	<b>Description</b>	<b>QTY</b>	<b>Note</b>
12-1	10201094	Power indicator <b>R</b>	1	
12-2	10420071	Button <b>UP</b>	2	
12-3	10420071	Button <b>LOCK</b>	2	
12-4	10420072	Button <b>DOWN</b>	2	
12-5	52K001C	Control Panel	1	
12-6	41010217	Power Switch ( <b>QS</b> )	1	
12-7	52K007D	Cabinet Body	1	
12-8	10420167C	Air Line $\Phi 6 * \Phi 8 * 200\text{mm}$	2	
12-9	1061K110	Straight Fitting For Air Line 1/4 inner thread 6*8	1	
12-10	10209145A	Cap Head Bolt M6*12 with washer	4	
12-11	10420076	90° Fitting For Air Line 1/4 inner thread 6*8	3	
12-12	10420143	Buzzes <b>H</b>	1	
12-13	10420142	Lower alarm button <b>K</b>	1	
12-14	10420077	Air solenoid valve (Y2)	2	
12-15	10202046	Breaker 2P 25A (Single phase)	1	
	10202047	Breaker 3P 16A (3 phase)	1	
12-16	10420135	Base for time relay	4	
12-17	10420141	Intermediate Relay(KA1,2)	2	
12-18	41010492	Intermediate Relay(KA3)	1	
12-19	10420083	Time relay(KT)	1	
12-20	10420084A	AC contactor(KM)	1	
12-21	10580114	Transformer(TC)	1	
12-22	10202049	Breaker 1P	2	
12-23	10580101	Rectifier bridge	1	
12-24	10580112	Terminal strip	2	
12-25	10580113	Double terminal	1	
12-26	1052K056	Cap head bolt M6*30	4	
12-27	52K022	Front door	1	
12-28	10440009	Straight Fitting 3/8SAEO/R(M)*1/4NPT(M)	2	
12-29	10630103	Transition fitting 1/4NPT(F)*1/4NPT(M)	1	
12-30	1052K027	90° Fitting 1/4NPT(F)*1/4NPT(M)	2	
12-31	10420097	90° Fitting 1/4NPT(M)*1/4JIC(M)	4	
12-32	10680065	Two-way valve	2	

#### 4.4 POWER UNIT (Part No.: 071205)



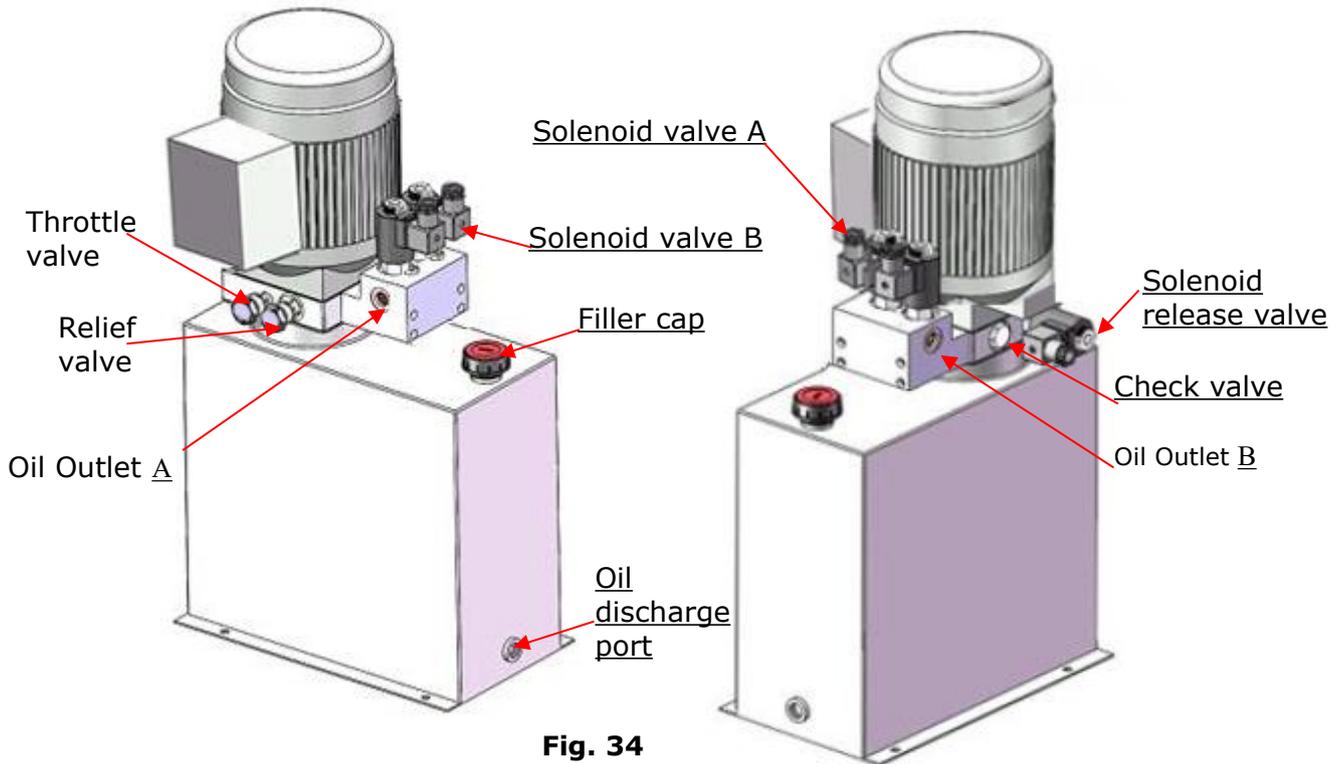
**220V/60HZ/1 PHASE**

**Fig.33**

## 220V/60HZ /1Phase Electric Power Unit Parts list

Item	Part#	Description	Qty.	Note
1	10420148	Cap head bolt with washer	4	
2	81400363	Motor connecting shaft	1	
3	81400420	Hydraulic Solenoid Valve Coil	3	
4	81400487	Dual way check solenoid valve	2	
5	81400333	Inner Hex Iron Plug	4	
6	10209143	Lock washer $\phi 5$	8	
7	81400495	Secondly manifold block	1	
8	81400509	Socket bolt	4	
9	81400259	Red plug	2	
10	81400266	Relief valve	1	
10A	81400560	Throttle valve	1	
11	81400344	O ring	2	
12	80101016	Main manifold block	1	
13	10209149	Lock washer $\phi 6$	4	
14	85090142	Socket bolt	4	
15	81400376	Oil return pipe	1	
16	81400381	Oil inlet pipe	1	
17	81400263	Filter cap	1	
18	81400343	Oil tank	1	
19	81400066	Protective cover for capacitor	2	
20	81400250	Start capacitor	1	
21	81400180	Rubber pad	2	
22	81400413	Motor	1	
23	81400200	Run capacitor	1	
24	81400423	Solenoid release valve	1	
25	81400566	Check valve	1	
26	81400292	Gear bump	1	
27	10209034	Lock washer $\phi 8$	2	
28	81400295	Socket bolt	2	
29	81400365	O ring	1	
30	10209152	Ties	1	
31	85090167	Magnet	1	
32	81400290	Filter	1	
33	10420152	Washer	4	
34	81400438	Hex bolt	4	

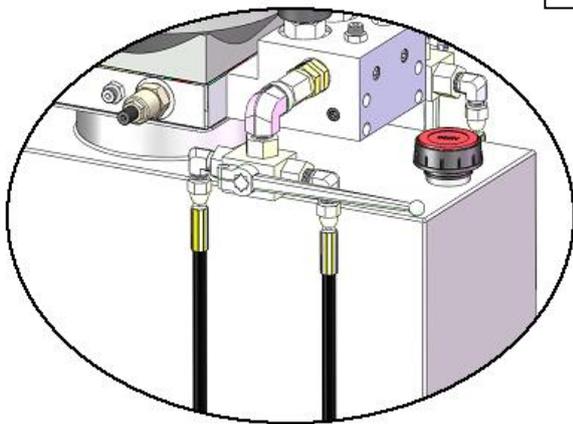
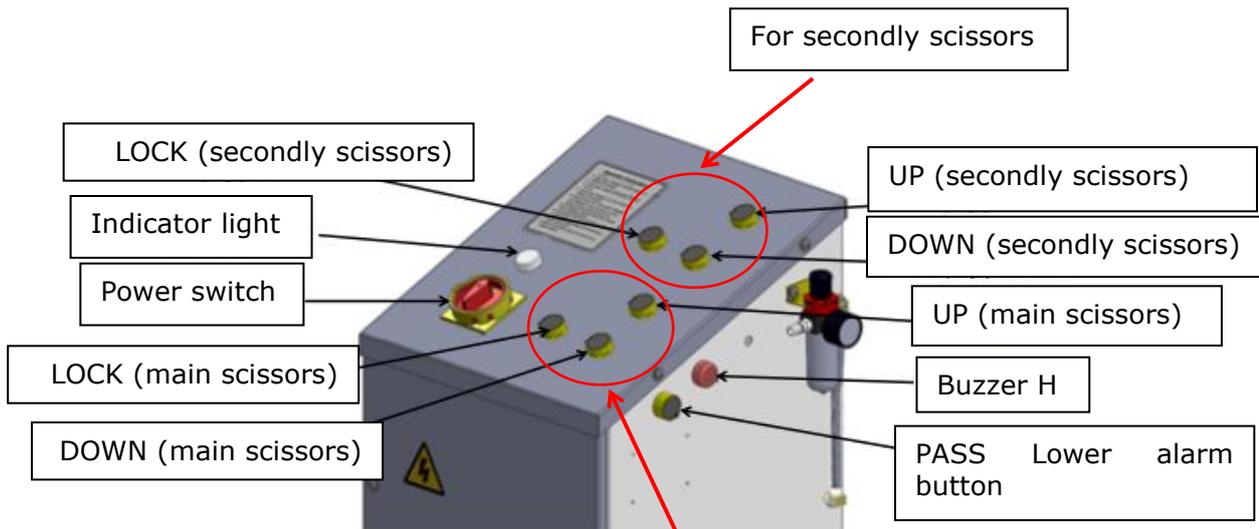
## Illustration of hydraulic valve for power unit (220V/50HZ and 380V/50HZ)



### V. TEST RUN

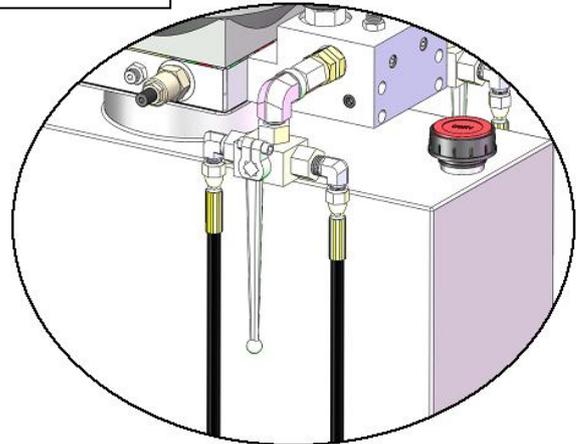
#### A. Fill oil to cylinder and Synchronous adjustment

1. Fill reservoir with Hydraulic Oil (**Note: In consideration of power unit's durability, please use Hydraulic Oil 46#**).
2. 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.
3. **Synchronization of main scissors:** Lower both platforms to the lowest position.
  - a. Turn the tee valve to oil filling position (**See Fig.35**), push button **UP** of **main scissors** and fill oil to the secondly cylinder until it's full. At this time push **Down** and **Pass** button about 5 seconds while hearing the buzzer sound and the sounds of inside air coming out from oil tank . Repeat the above steps 2-3 times until the inside air are all come out.
  - b. Tap **UP** button, until the platform just be lifted up.
  - c. Turn the Tee valve to normal working position (**See 36**), push button **UP** of **main scissors** to rise the lift. Check if both platforms are at the same height, if not, repeat steps a & b till the two safety devices can be locked or released at the same time.



Oil Filling Position

**Fig. 35**

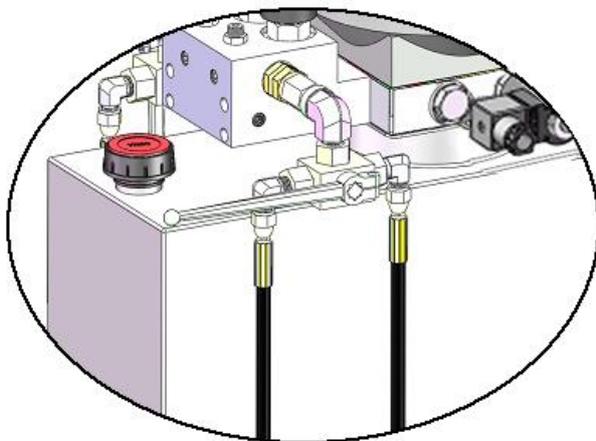
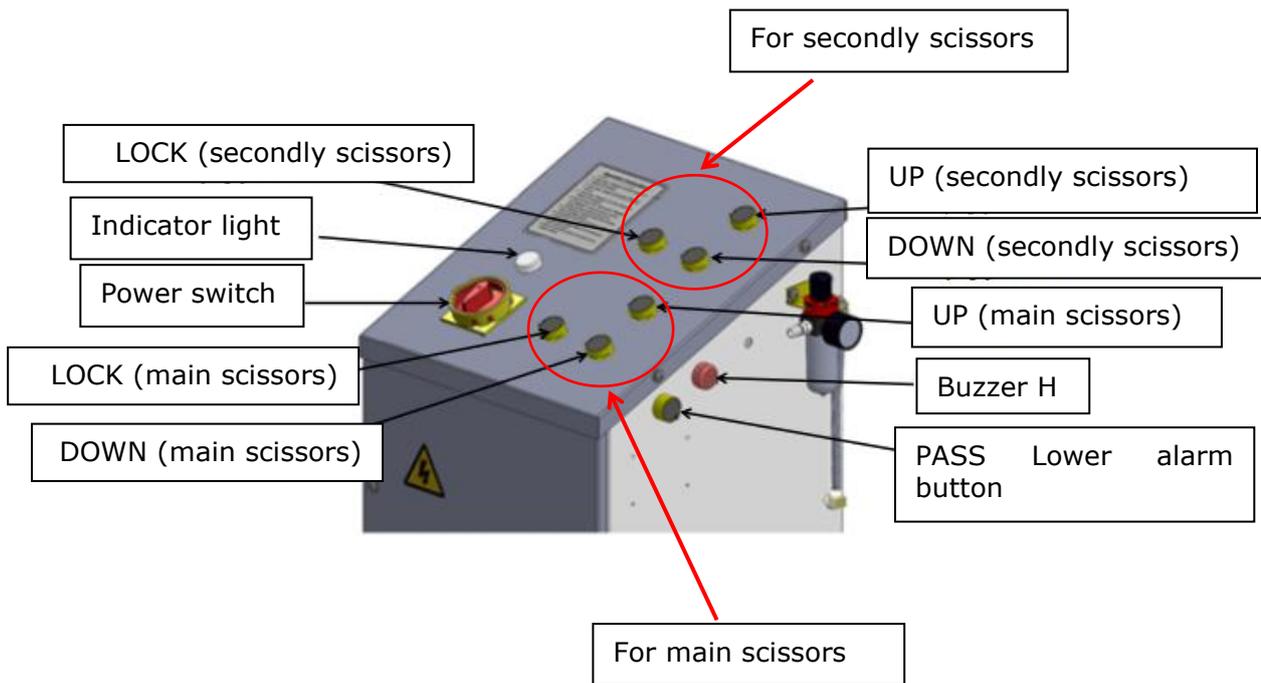


Normal Working Position

**Fig. 36**

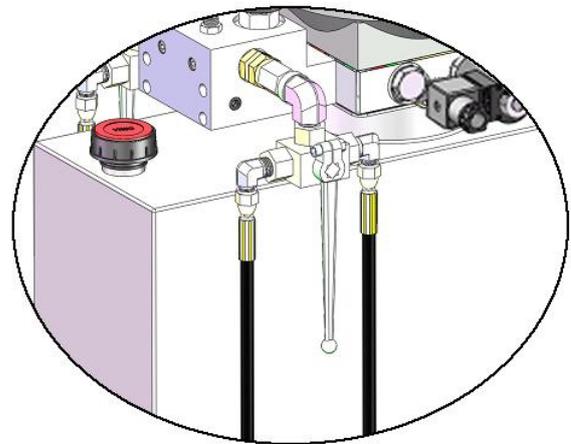
4. **Synchronization of secondly scissors:** Lower both platforms of the secondly scissors to the lowest position.

- a. Turn the Tee way valve to oil filling position (**See Fig. 37**), push button **UP of secondly scissors** and fill oil to the secondly cylinder until full. At this time push **Down** and **Pass** button about 5 seconds while hearing the buzzer sound and the sounds of inside air coming out from oil tank . Repeat the above steps 2-3 times until the inside air are all come out.
- b. Tap **UP** button, until the platform just be lifted up.
- c. Turn the Tee way valve to normal working position (**See.38**), push button **UP of secondly scissors** to rise the lift, check if both platforms are at the same height, if not, repeat the step a & b till the two safety devices can be locked or released at the same time.



Oil Filling Position

**Fig. 37**



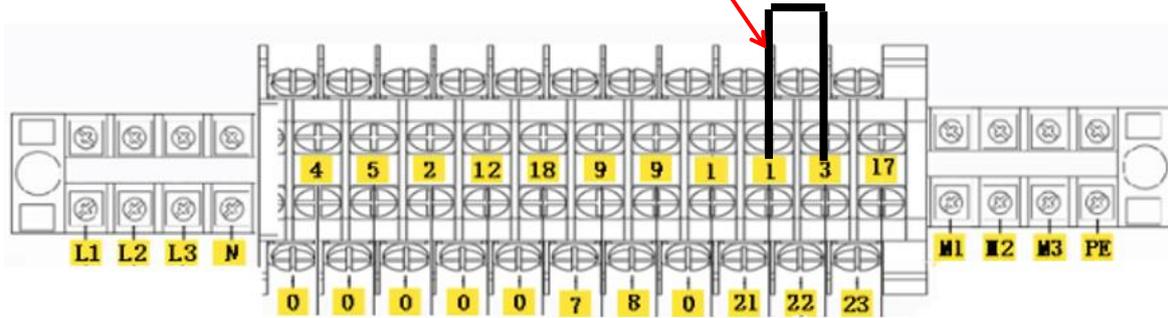
Normal Working Position

**Fig. 38**

5. After finished the synchronous adjustment and get back to normal operation, remove the wire of photo cell device which connect terminal 2# and 3#.

**Remarks: When the lift in normal working and platform P1 and P2 not leveling, the photo cell device out of detection range, power will be offed. Open the panel of the control cabinet, connect the terminal 2# and 3#(See Fig.44), power on. Then adjust the platform to leveling again, remove the wire on terminal 2# and 3#, and get back to normal working.**

The wire of photo cell device  
This wire must be removed  
durina normal working.



**Fig.39**

## B. Test run

Check the height limit switch, the hose and fitting connection, if everything is no problem then do test run. The lift must be tested and checked carefully before in use.

## VI. OPERATION INSTRUCTIONS

### To lift vehicle

1. Keep clean 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

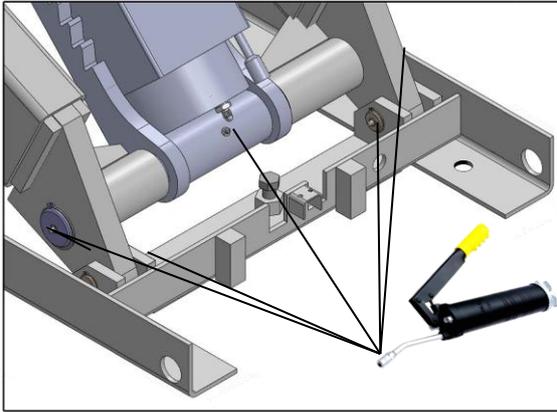
1. Be sure clear of around and under the lift, only leaving operator in lift area.
2. Push the button "**Down**", the lift is lowered continually and stopped at the height 600mm from ground. Keep feet clear off lift, push button "**DOWN**" while push the **Lowering Alarm Button(PASS)** at the side of 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.

## VII. MAINTENANCE SCHEDULE

### Monthly:

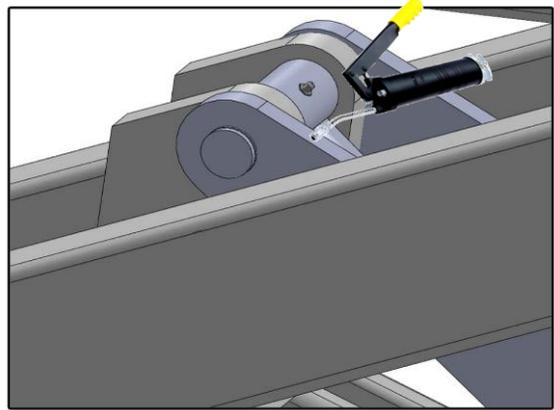
1. Re-torque the anchor bolts to 150 Nm.
2. Lubricate all moving parts with lubricant (See. Fig.41-44)

**Each main scissor 12 positions, total 24; Each secondly scissor lift 4 positions, total 8.**



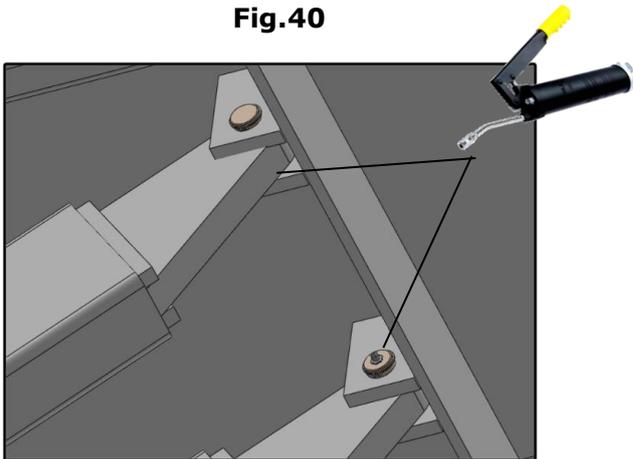
**For main cylinder connecting pin**

**Fig.40**



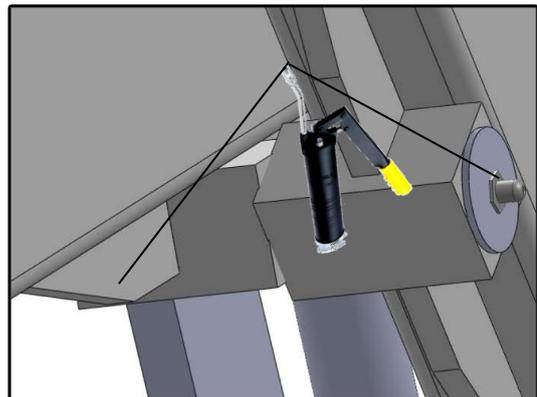
**For pin of piston rod**

**Fig.41**



**For pins of connecting platforms and scissors**

**Fig. 42**



**For connecting pins of scissors**

**Fig.43**

3. Check all fittings, bolts and pins to insure proper mounting.
4. Make a visual inspection of all hydraulic hoses/lines for possible wear or leakage.
5. Adjusting the lifting level on both platforms.

**Note:** All anchor bolts should take full torque. If any of the bolts do not function for any reason, **DO NOT** use the lift until the bolts have been replaced.

**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. Star 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 button</li> <li>2. Repair all wiring connection</li> <li>3. Repair or replace 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 pump</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. Air line leaking</li> </ol>	<ol style="list-style-type: none"> <li>1. Repair or replace</li> <li>2. Repair or replace</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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Revision Date: 2022/05