

## Installation And Service Manual

### MID-RISED SCISSORS LIFT

#### Model:MRL09

#### **Cargo Claims**

If there is any missing or damaged product during transportation, the buyer must not sign on the shipping paperwork or refuse the shipment. NOTATE ALL DAMAGE OR REFUSE DAMAGED SHIPMENT!




#### DANGER

Read the entire contents of this manual before using this product. Failure to follow instructions and safety precautions could result in serious injury or even death. Make sure all other operators also read this manual. Keep this manual near the machine so that it can be seen by all users. By proceeding with installation and operation, you agree that you are fully understand the contents of this manual and take full responsibility for the use of the product.

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## Explanation of the safety warning symbols used in this manual

-  DANGER Risk of death or injury
-  WARNING Dangerous or unsafe practices that may result in death or injury
-  CAUTION Dangerous or unsafe practices that may result in personal injury, product damage or property damage
- ATTENTION Conditions that may result in damage to products or property

## **PROFILE**

This instruction manual is specially prepared for you. Your new lift is the product of over a decade of continuous research, testing and development and is the most technologically advanced lift on the market today.

**Please make sure to read through this manual before operating the lift.**

Record the information on the nameplate label here:

Model No.: \_\_\_\_\_

Serial No.: \_\_\_\_\_

Manufacturer date: \_\_\_\_\_

## **WARRANTY**

The warranty period for the steel structure part of new car lift is 5 years, hydraulic components, bronze bushings, sliders and plastic parts are under warranty for 3 years, and electrical components and sync cable, lock release cable warranty for 2 years.

Rubber pads are without warranty. During the warranty period, the manufacturer will repair or replace the defective parts free of charge including shipping costs.

This warranty does not cover damage caused by normal wear and tear, improper use, damage in transit, or damage caused by lack of maintenance.

This warranty is unique and supersedes what is expressed and implied in all other warranties. The manufacturer shall not be liable for any particular, indirect or accidental damage resulting in breach of or delay in the execution of the warranty. The manufacturer reserves the right to design and improve the product and has no obligation to make notice of the changes in advance.

The product warranty based on the above clause is based on the model number and serial number of the equipment. This information must be provided in conjunction with all warranty information at the time of service and warranty.

# SAFETY WARNING LABEL

## ⚠ WARNING ⚠

	
<p>Please read the user manual before operation.</p>	<p>Please lock the safety device before repairing the vehicle.</p>
	
<p>Always wear protective shoes and mind your feet during lowering.</p>	<p>Please keep hands and feet away from "X" or connection points during operation.</p>
	
<p>Do not rock or shake raised vehicles</p>	<p>Unbalance lifting of vehicle is strictly forbidden.</p>
	
<p>The vehicle should be parallel with lift platforms.</p>	<p>Please run away quickly from any falling objects.</p>

**PLEASE READ THE PRECAUTIONS CAREFULLY**

No.71030134

**Fig.1**

## **IMPORTANT SAFETY INSTRUCTIONS**

In order to properly maintain your product and ensure operator safety, it is the responsibility of the product owner to read and follow these instructions!

1. Ensure product installation complies with all applicable local regulations and rules, such as Occupational Safety and Health Administration regulations and electrical codes.
2. Ensure that all operators are properly trained, know how to operate the unit safely, and are properly supervised.
3. Do not operate the lift until you are sure all parts are in place and operating correctly.
4. Keep your hands and feet away from the machine. Keep hands and feet away from any moving parts. Keep your feet away from the lift as it descends to avoid pressing on pointed objects.
5. Keep the work area clean. A cluttered workspace can lead to injuries.
6. The machine is only approved for indoor installation and use. Outdoor installation is prohibited.
7. Only trained operators are allowed to handle the lift machine. All untrained persons must stay away from the workplace. Never allow untrained persons to handle or operate the machine.
8. Use the lift properly. Use the lift in the correct way.
9. Warning! Keep persons and objects from the lift when lifting the a vehicle.
10. If the vehicle is at risk of falling, make sure no one is around the lift.
11. Before preparing to approach or service the vehicle, ensure that the safety device is in effect.
12. Dress appropriately when operating machines, and consider wearing non-slip steel-toe shoes for added safety..
13. Beware of electric shock. In order to protect the operator from electric shock, the lift in use must be grounded. Do not connect the green wire to the terminal. This is the ground wire.
14. Danger! The power supply used in this type of lift has high voltage. Please disconnect the power supply before any circuit repair. Unplug in case the power supply is accidentally switched on during maintenance.
15. Warning! There is a risk of explosion. There are parts in the equipment that produce arc light and spark. Do not operate near flammable gas. This machine should not be placed in the lounge or basement.
16. Maintain with care. Keep the machine clean for better and safer operation. Perform


proper lubrication and maintenance procedures according to the manual. Keep handles or buttons clean, dry, and free of oil.

17. Stay alert. Use common sense to observe what you are doing and stay alert.

18. Check for damaged parts. Check for adjustments to moving parts, damage to parts, or anything that may affect their operation. Do not use the machine if the parts are damaged.

19. Do not remove relevant safety parts from the machine. Do not use a lift if it is damaged or missing.

20. Only operate the lift at temperature between 5°C to 40°C(41°F to 104°F).

 **DANGER** Be very careful when installing, operating, maintaining or repairing this equipment. Failure to comply may result in property damage, product damage, injury or (in very rare cases) death. Ensure that only authorized personnel operate the equipment. All repairs must be carried out by an authorized technician. Do not modify the machine, this voids the warranty and increases the probability of personal injury or property damage. Ensure to read and follow this instructions on the label.

# I. PRODUCT FEATURES AND SPECIFICATIONS (See Fig.2)

## MID-RISED SCISSORS LIFT: MODEL MRL09

- 9,000lbs lifting capacity;
- Mid-rised scissor lift, 24V safety voltage control;
- Dual hydraulic synchronization & hydraulic locking system;
- Lifting scissors made of thickened steel which are more strong;
- Adjustable lift platform length, applicable to vehicles with different wheelbases;
- Two-stage drive in ramps, suitable for lifting ultra-low chassis vehicles;
- Flexible structure design, users can choose either flush mount or surface mount;
- Low Level Alarm, alarm tone device when coming down from 300mm to ground.;
- Standard with 2 type square rubber pads;

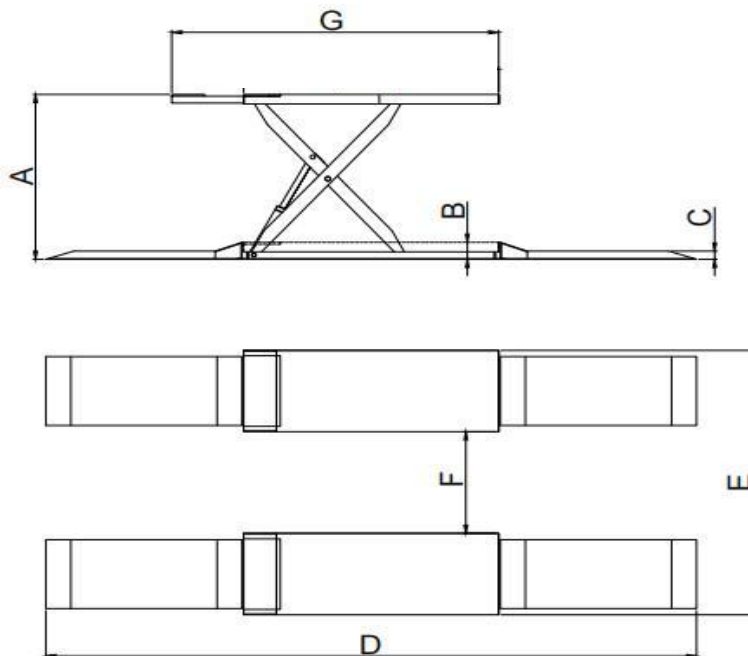


Fig.2

## MODEL MRL09 SPECIFICATIONS

Model	Lifting Capacity	Lifting Time	A	B	C	D	E	F	G	Motor
			Max Lifting Height	Min. Height	Rams Height	Overall Length	Overall Width	Width Between Runways	Runway Length	
MRL09	9000lbs	30s	47 1/4"	5 5/16"	2 3/8"	156 11/16"	76 3/4"	29 1/2"	61 7/16"-77 3/16"	2.0HP

**⚠ CAUTION** When driving the vehicle, stay in the middle between the platforms. If you hit any part of the lift, you could damage the car or lift.

## II. INSTALLATION REQUIREMENT

### A. Tools requirement

↳ Screw Set



↳ Socket Head Wrench (8")



↳ Wrench sets: (13#, 15#, 17#, 19# )



↳ Claw Wrench ( for 40-42mm)



↳ Pliers



Fig.3

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

- 1 . Store the equipment in a dry, non-moldy, non-flammable environment.
- 2 . The lift is only approved for indoor installation and use, and outdoor installation is prohibited.
- 3 . When installing the device, take safety precautions according to the instructions to avoid device damage.
- 4 . During installation, all parts should be fastened to ensure the stability and smooth operation of the machine.
- 5 . After installation, the whole machine should be checked to make sure that every component is working properly.

## **C.The equipment should be unload and transfer by forklift.**



**Fig.4**

## **D.Power requirement**

1. Position of the lift: Design with a professional architect if possible. Check the required layout dimensions to ensure sufficient space.
2. Overhead obstruction: There should be no obstacles above the position of the lift, such as heat sources, building support columns and wires.
3. Concrete: floors must be level and contain no cracks or holes. Concrete must be of test strength 3,000psi minimum, thickness 4" minimum. Failure to comply with this requirement may cause injury.

## **E. POWER SUPPLY**

1. You are required to use a licensed and qualified electrician for the installation process.
2. The power supply capacity must be more than 3.0HP, with a cord larger than 12AWG, and must be properly grounded.

**⚠ DANGER** All electrical wiring must be performed by a licensed and certified electrician. Attempting to connect the circuit without proper certification may result in damage to the lift or electrocution, resulting in serious injury or death.

### III. STEPS OF INSTALLATION

#### A. Check the parts before assembly, make sure all the parts are completed.

1. Packaged lift, part box, control cabinet (See Fig. 5).

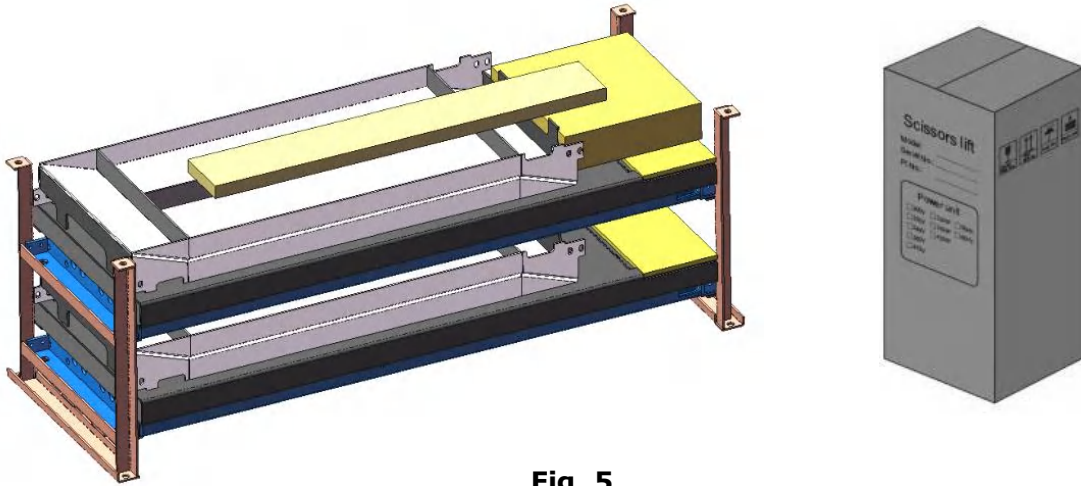


Fig. 5

1.1 Move aside the parts, open the outer packing and check the parts according to the shipment parts list

(See Fig.6).

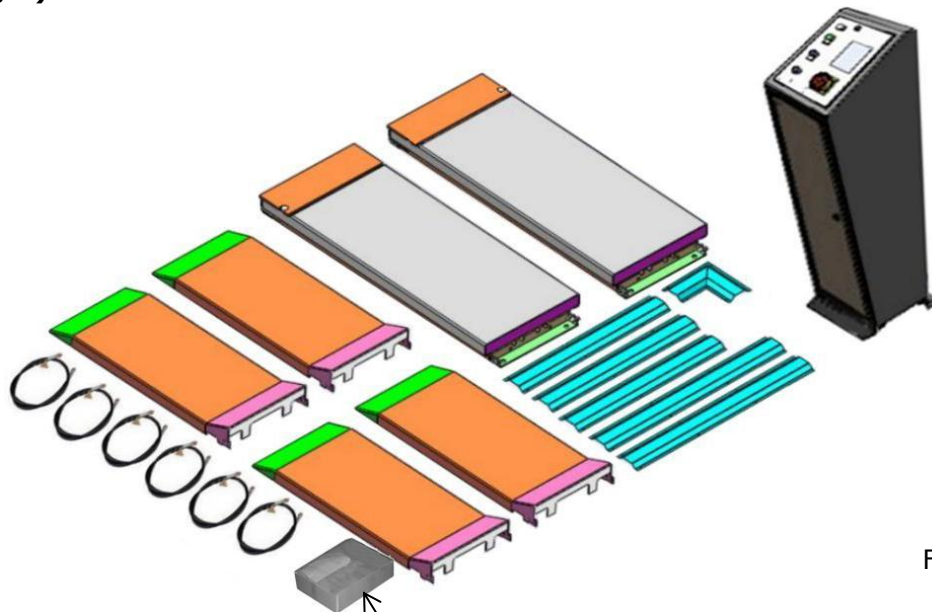


Fig. 6

1.2 Open the part box, check the parts according to the part list (See Fig.7).

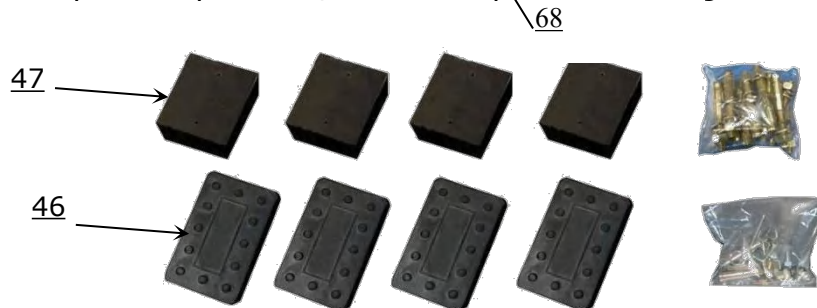
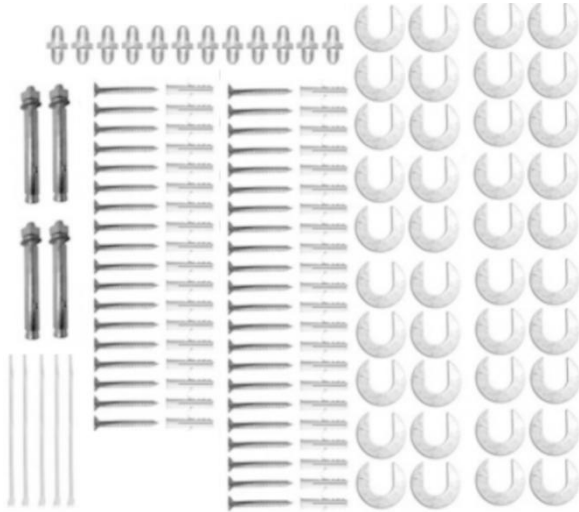


Fig. 7

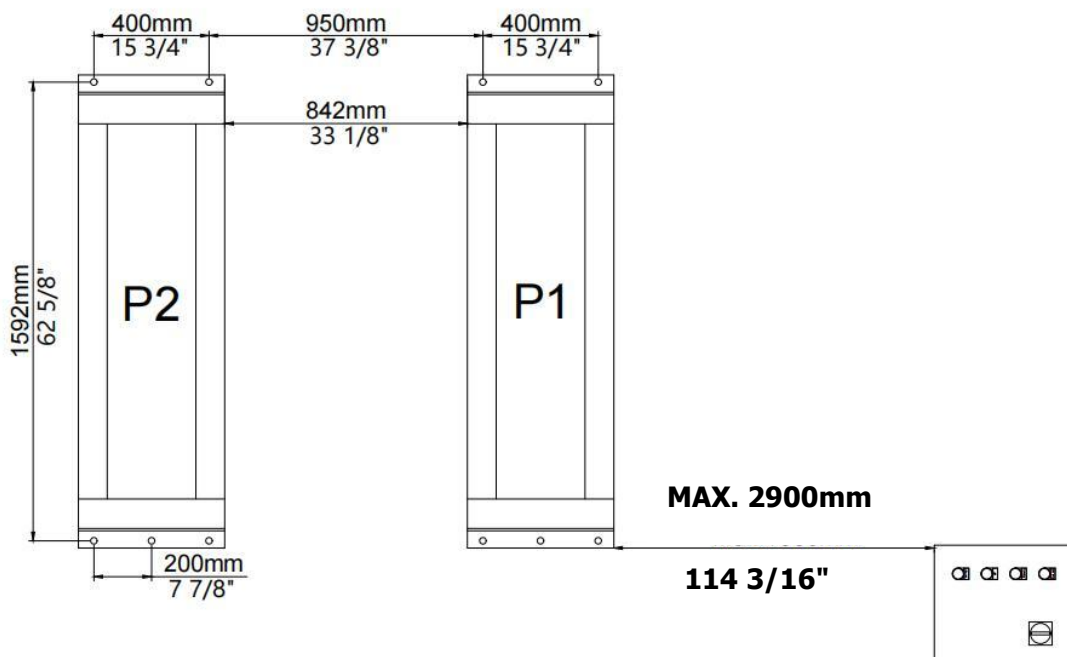
1.3 Open the parts bag, check the parts according to the part list (See Fig.8).



**Fig. 8**

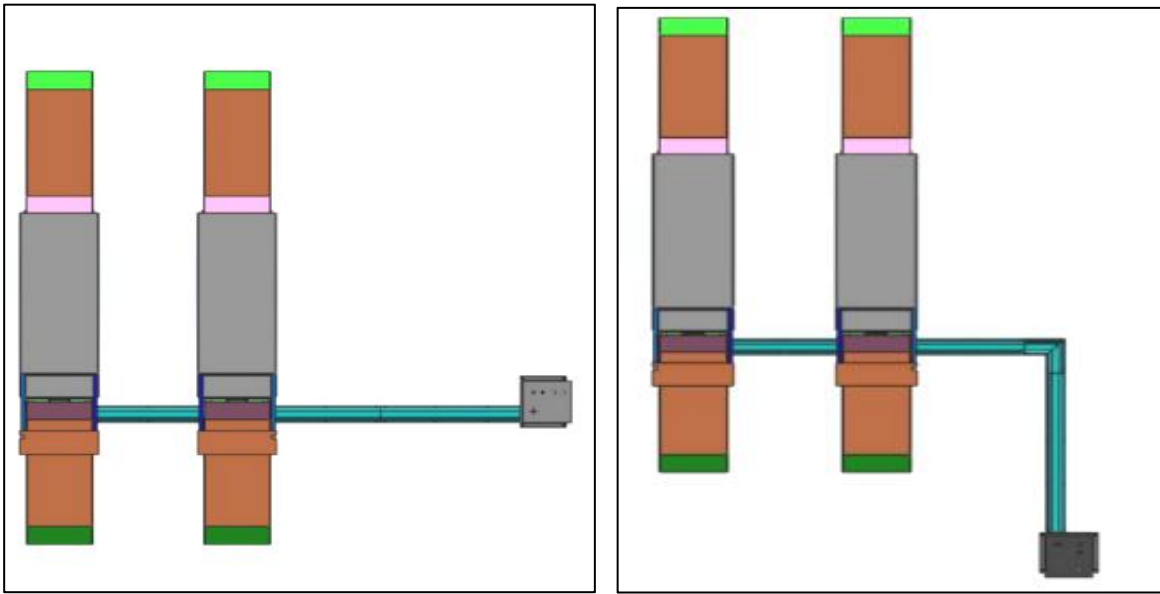
**B. SPECIFICATIONS OF CONCRETE**

1. Concrete must be thickness 4" minimum and test strength 3,000psimimum; floors must be in good condition and no cracks.
2. Install diagram



**Fig. 9**

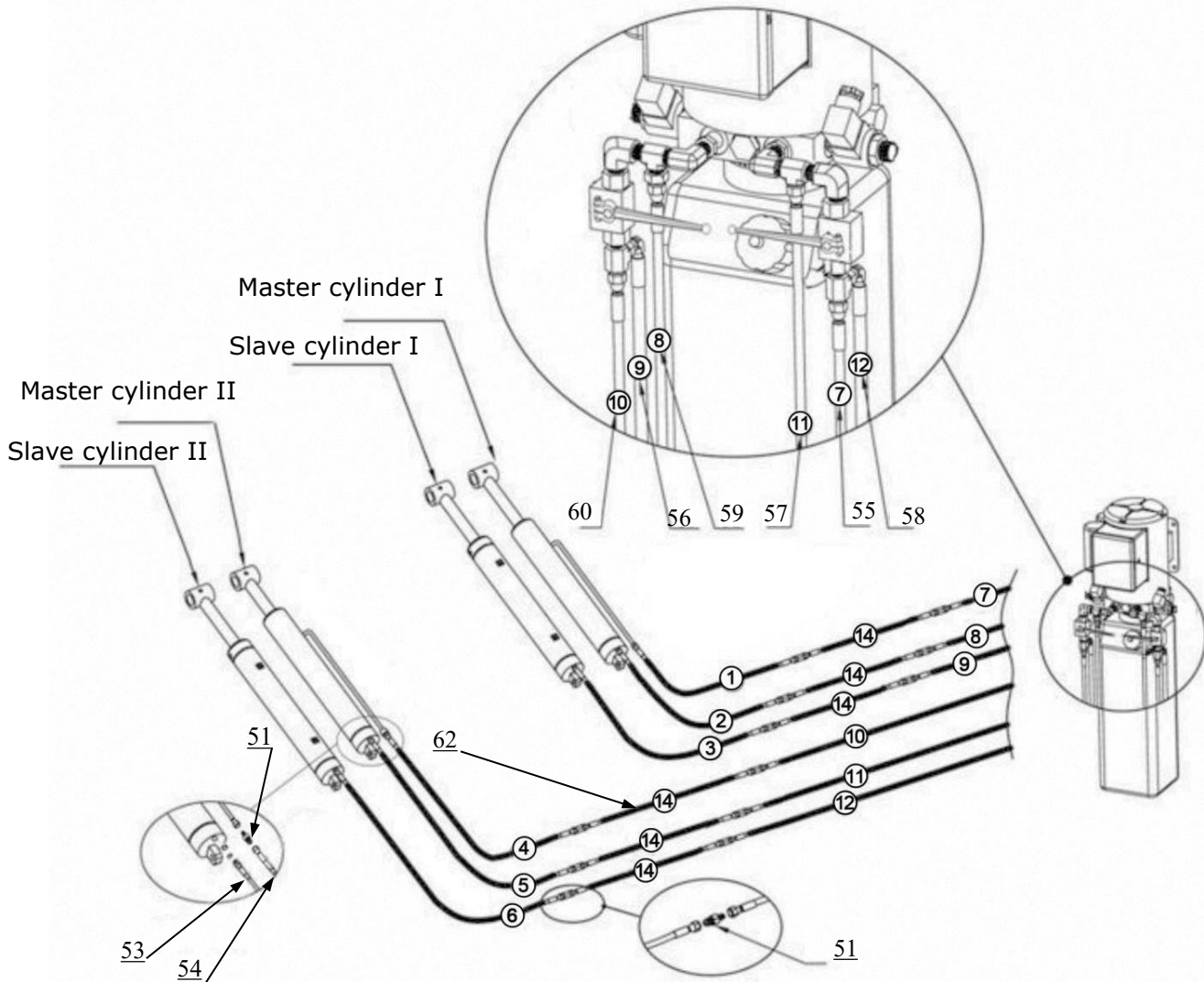
3. Install the lift according to the actual installation site.



**Fig.10**

**C. Install Oil hose**

Connect oil hoses of control cabinet and lifts according to the numbers marked



**Fig. 11**

No.	Part No.	Specification
53	10620072	No. ②③⑤⑥ 1/4*25 9/16"
54	1003285007	No. ①④ 1/4*26 5/16"
55	1003285008	No. ⑨ 1/4*99 5/8"
56	1003285009	No. ⑦ 1/4*109 1/16"
57	1003285010	No. ⑩ 1/4*148 13/16"
58	1003285011	No. ⑫ 1/4*158 11/16"
59	1003285012	No. ⑧ 1/4*103 1/8"
60	1003285013	No. ⑪ 1/4*156 5/16"
62	1003105007	No. ⑭ 1/4* 37 3/8"

Note:

1. Extended No. ⑭ oil hose is only used for 114 3/16" maximum installation distance.

2. Without utilizing no. ⑭ oil hose, the maximum installation distance between the control cabinet and the lift is 74 13/16 .

## D. Install electrical system

### Single phase circuit connection

1. Connecting the power supply wires and limit switch wires. (Fig.12)

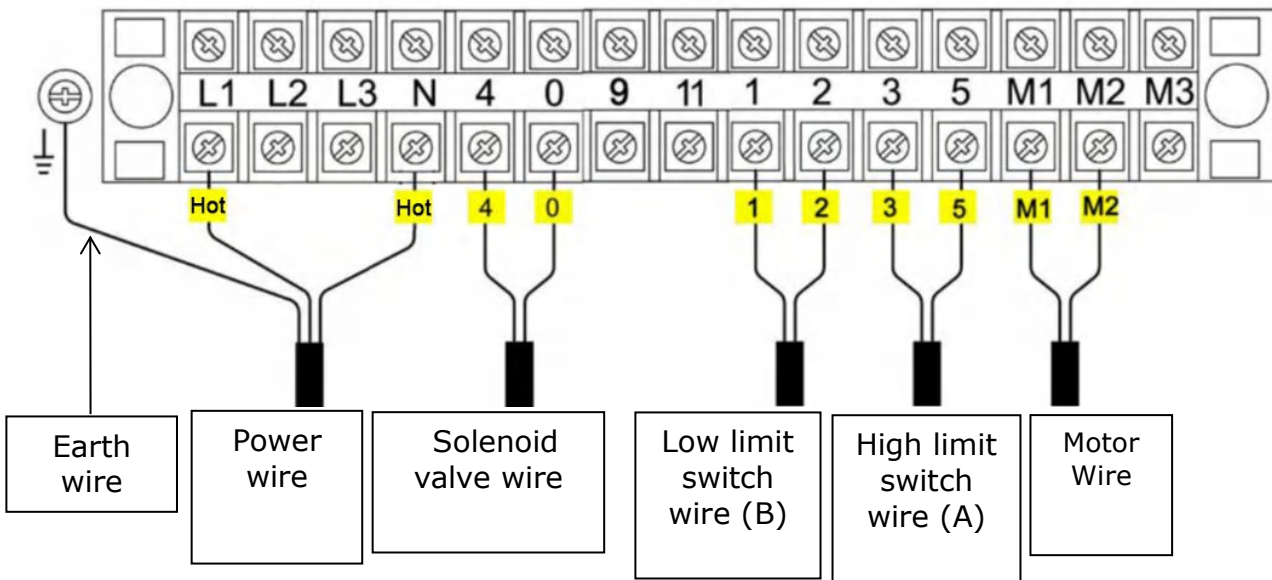
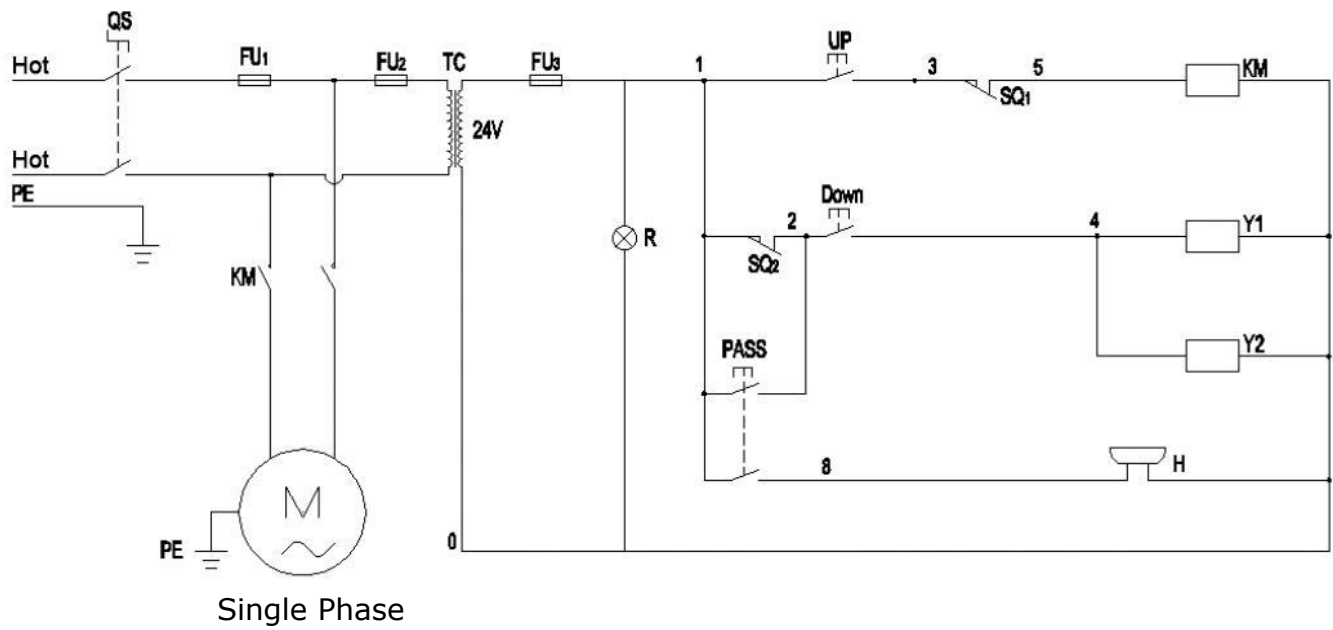


Fig.12

## 2. Circuit diagram (Fig.13)



**Fig.13**

## 3. Part list

No.	Description	Code	Specification
1	Power Switch	QS	220V AC
2	Breaker	FU <sub>1</sub>	2P
3	Breaker	FU <sub>2</sub>	1P
4	Breaker	FU <sub>3</sub>	1P
5	AC Contactor	KM	24V AC
6	High Limit Switch	SQ <sub>1</sub>	10A
7	Low Limit Switch	SQ <sub>2</sub>	10A
8	Hydraulic Solenoid Valve	Y	AC 24V
9	Push Button	UP	Single
10	Push Button	Down	Single
11	Push Button	Pass	Double
12	Motor	M	Single Phase
13	Control Transformer	TC	24V AC
14	Indicator	R	24V AC

## E. Limit Device Illustration

### 1. High Limit Device

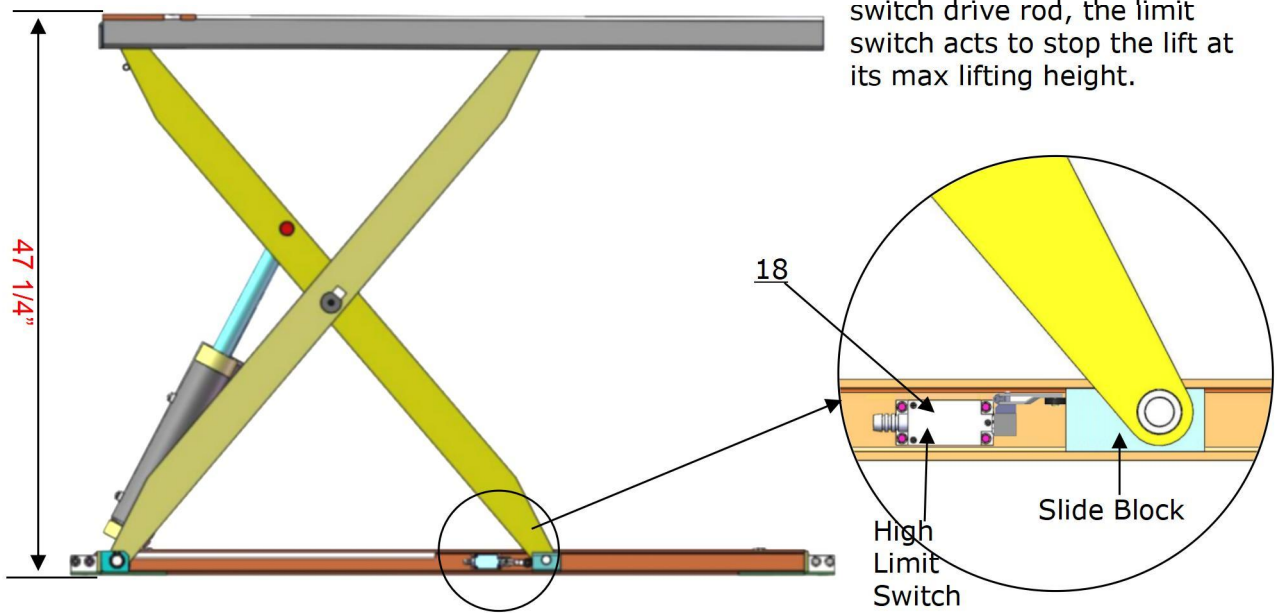


Fig. 14

### 2. Low Limit Device

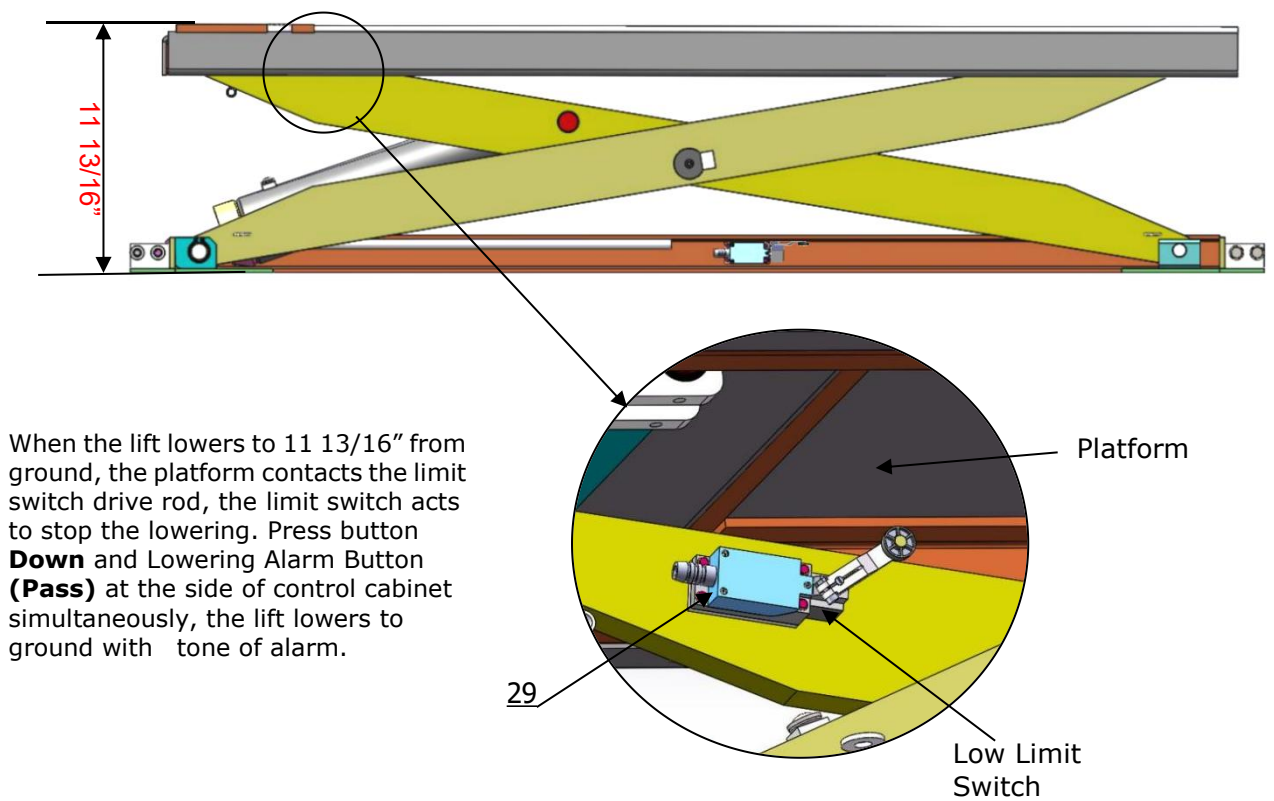
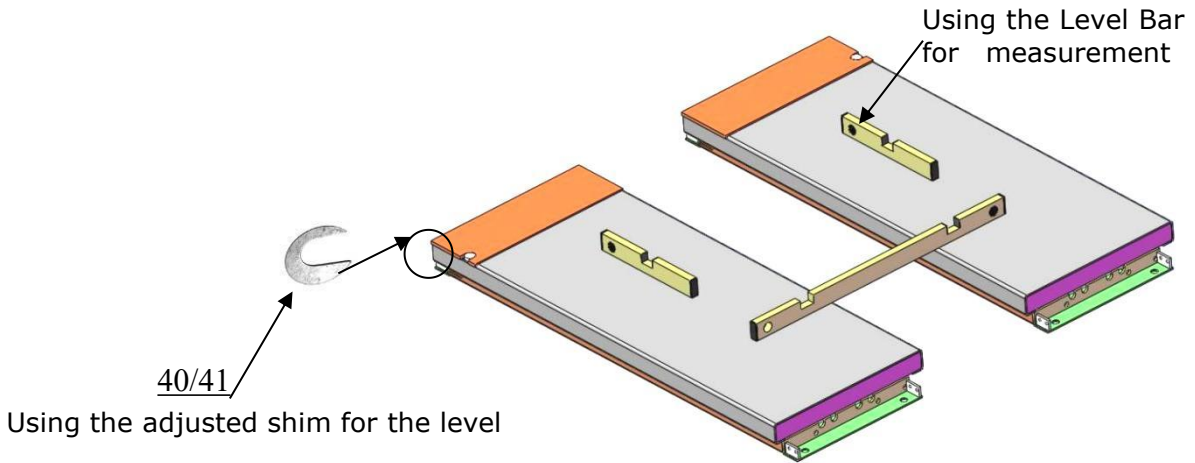


Fig.15

## F. Level two platforms and install anchor bolts

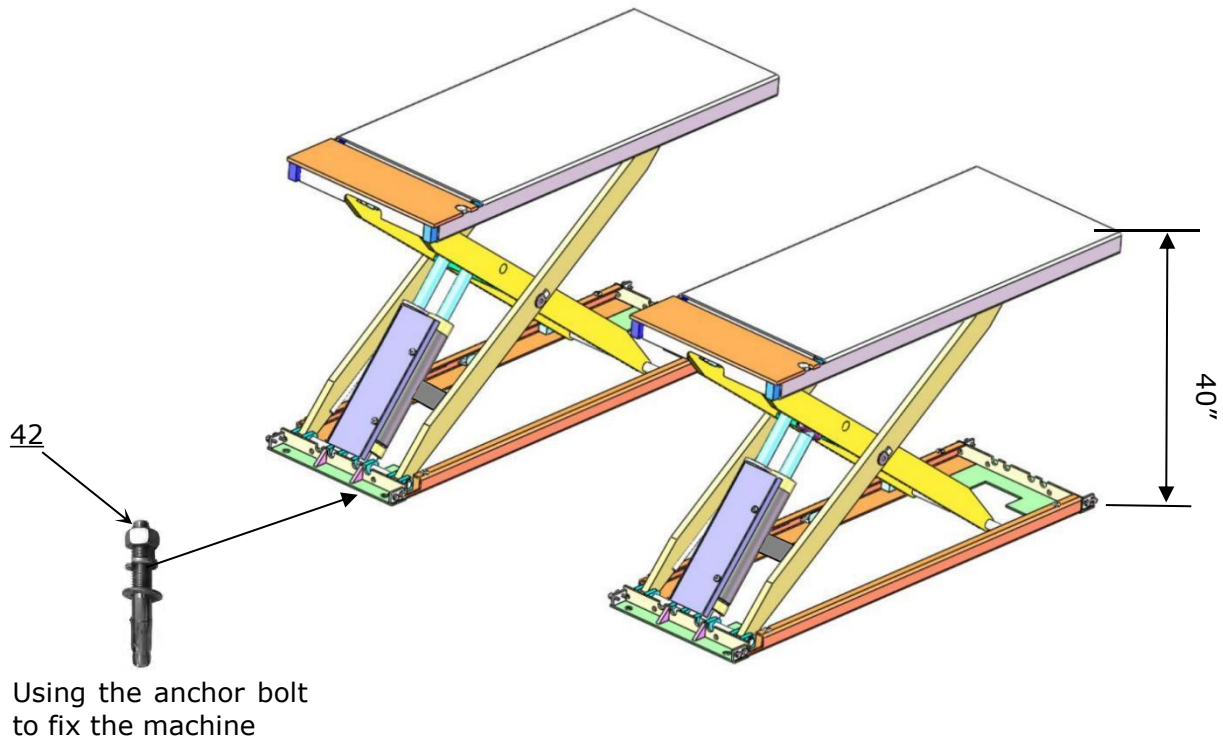
1. Check by level bar and use the shim to adjust the platforms until two platforms are in the same level.



**Fig.16**

2. Anchor bolts installation

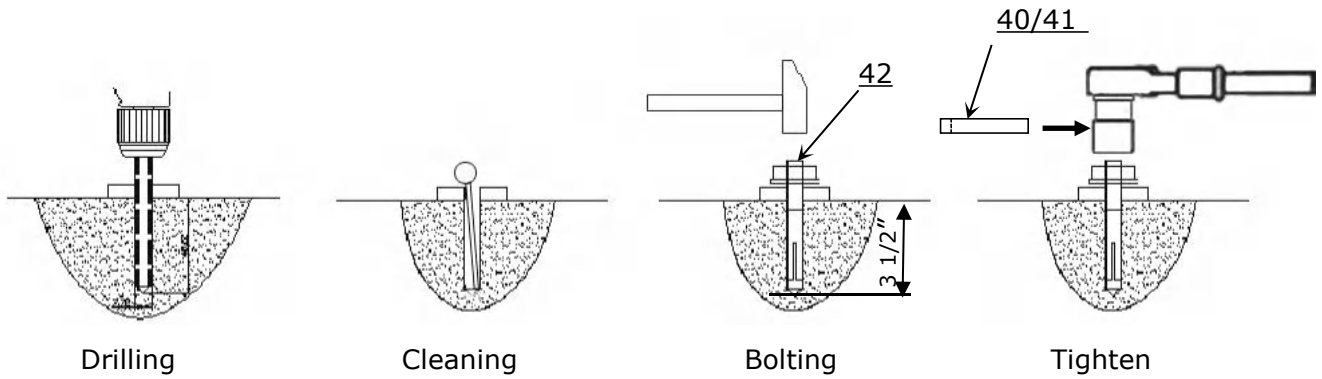
- 2.1 Lift the machine to 40" for the anchor bolt installation.



**Fig. 17**

2.2 Drill 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.

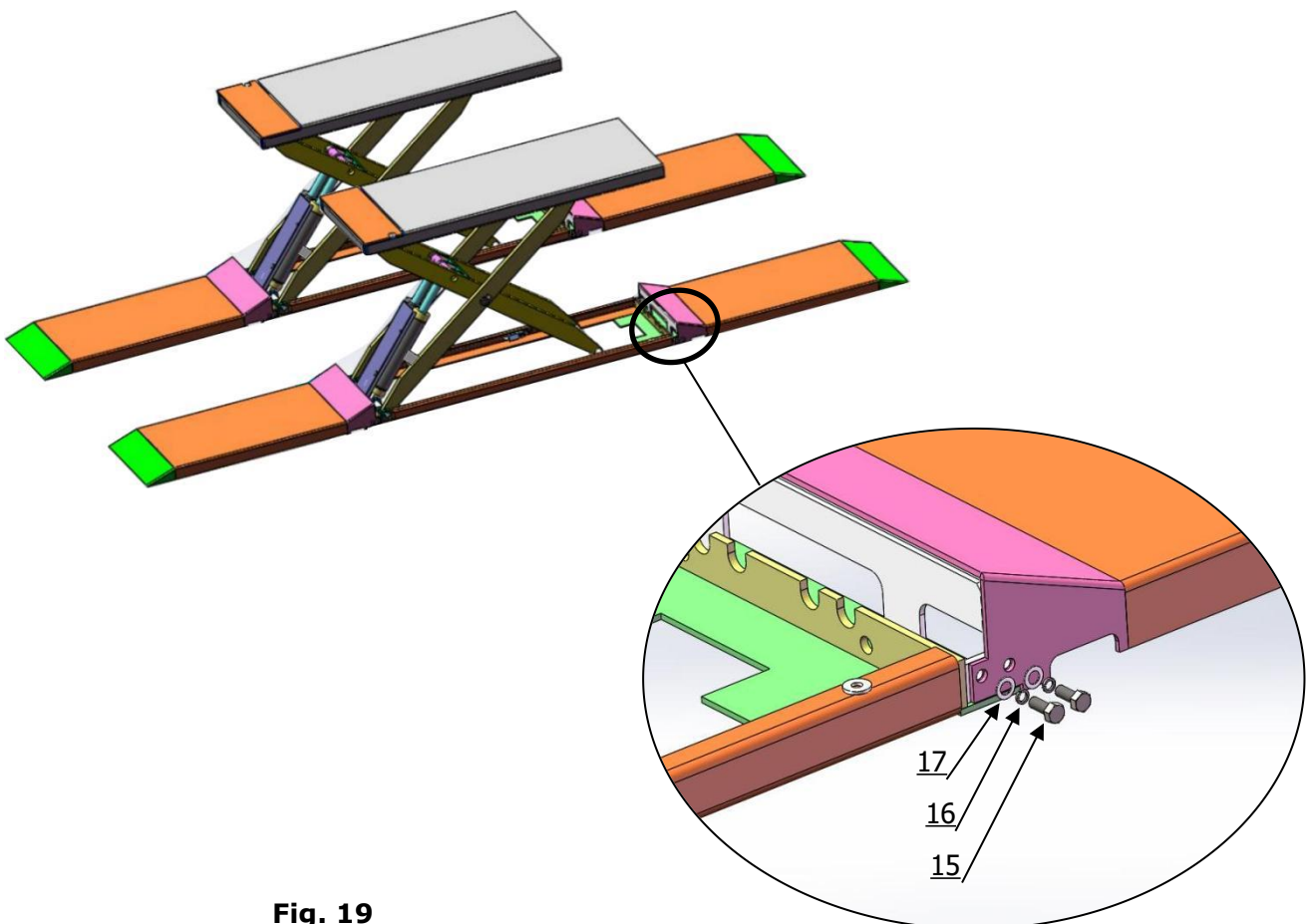
**Note: The Torque of anchor bolt is 1328lbf.in, the length inside ground of anchor bolt must be over 3 1/2"(90mm).**



**Fig. 18**

**G. Install drive-in ramps.**

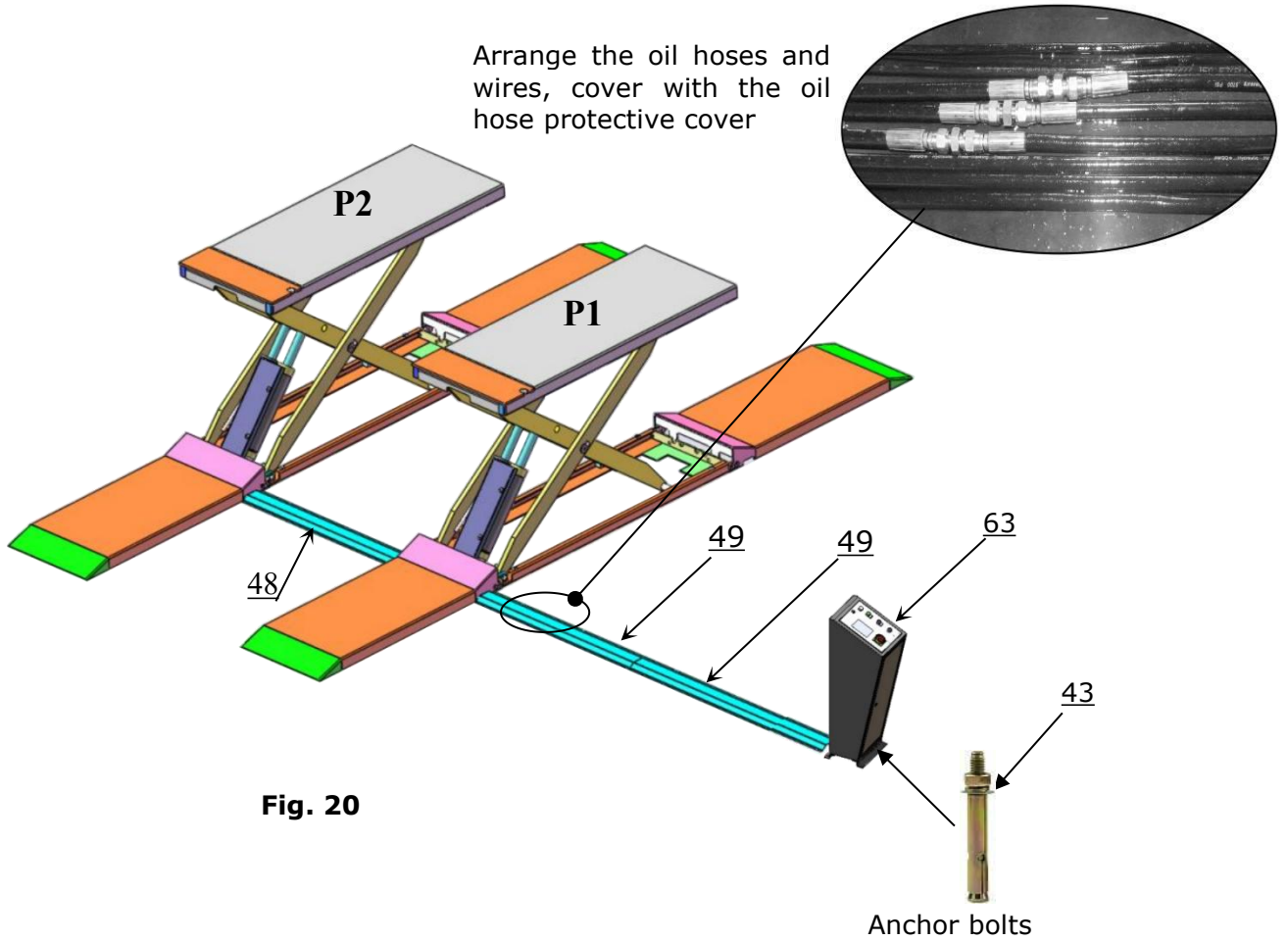
Install the 4 drive-in ramps to base with bolts.



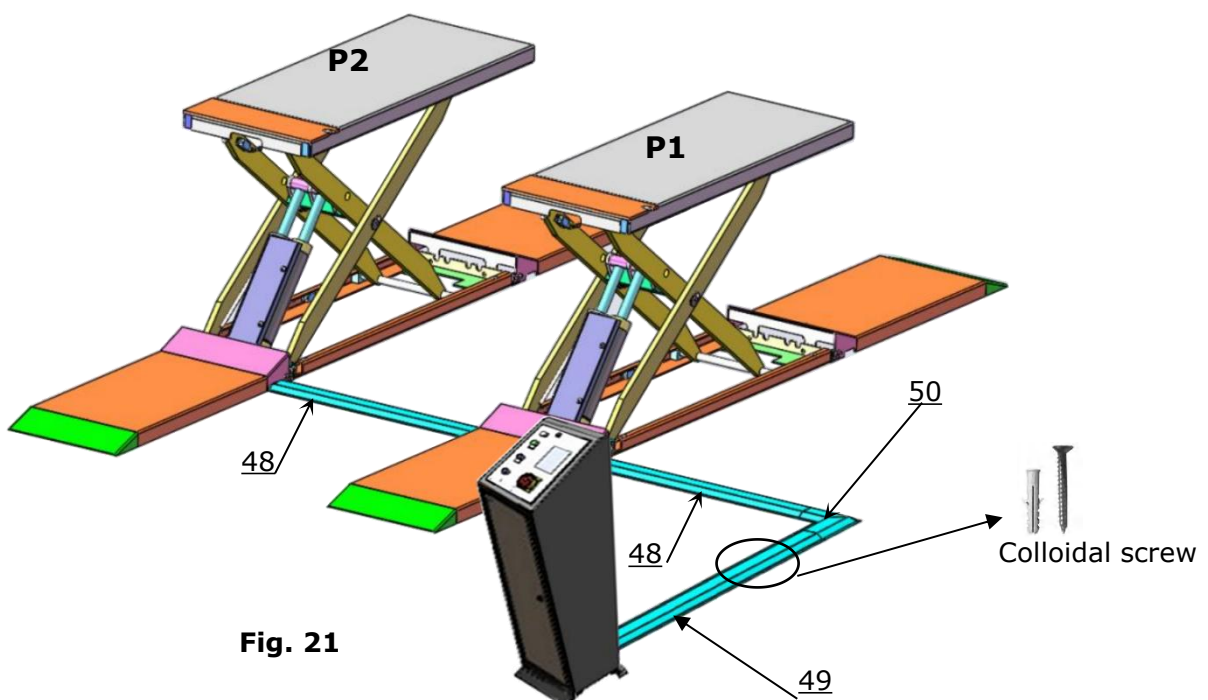
**Fig. 19**

## H. Install oil hose protective cover and anchor the control cabinet.

1. Arrange the oil hoses and wires, cover with the oil hose protective cover and set up the control cabinet.



### View B Installation



2. Install the colloidal screw of oil hose cover

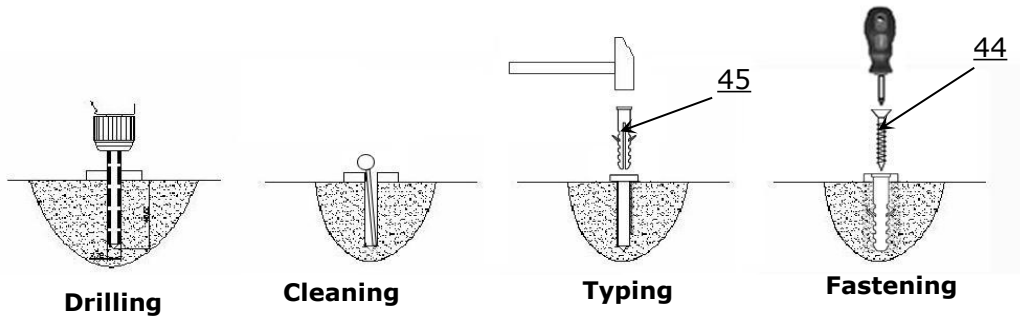


Fig. 22

3. Install the control cabinet anchor bolt

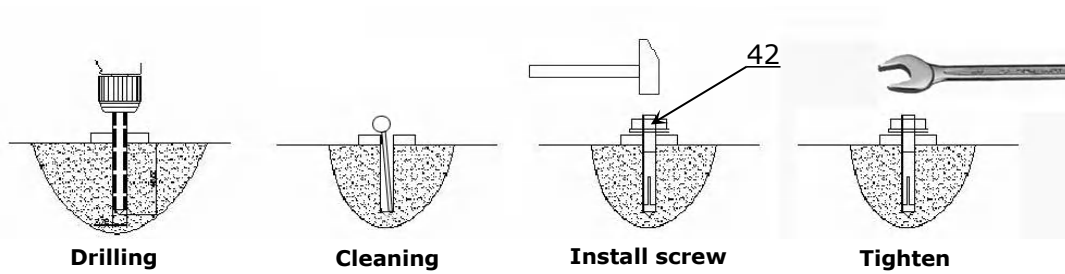


Fig. 23

# IV. EXPLODED VIEW

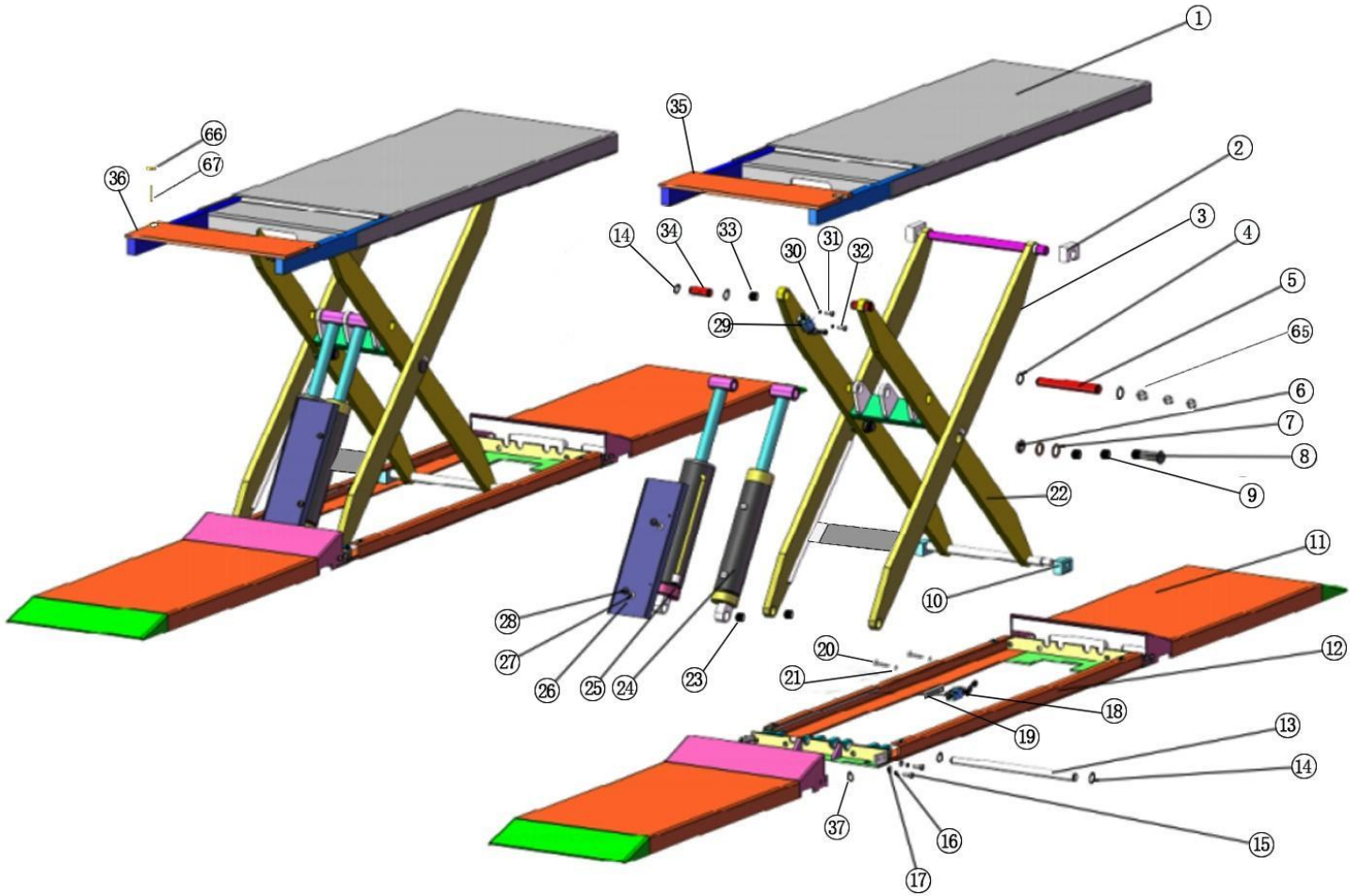


Fig.24

## PARTS LIST FOR MODEL MRL09

Item	Part No.	Description	QTY.
1	1103283001A-02	Platform	2
2	1003105013	Upper Slide Block HK023 60*42*33	4
3	1103282001A-02	Outer Scissors	2
4	10610008	Clip Ring Φ30	4
5	1103282008-01	Piston Rod Connecting shaft φ30*230	2
6	10610123	Self Locking Nut M30*3.5	4
7	10610108	Flat washer Φ44*Φ30.5*2	8
8	1103282013A	Connecting Pin for inner scissors φ30*101	4
9	10620141	Bronze Bush Φ36*Φ30.1*24	8
10	1003105012	Lower Slide Block 80*42*33	4
11	1103283007A-01	Drive-in Ramps	4
12	1103281000A-01	Base	2
13	1103282007	Connecting shaft of cylinder end cap φ25*461	12
14	10206032	Clip Ring Φ25	12
15	10209126	Hex Bolt M10*25	16
16	10209039	Lock Washer Φ10	16
17	10209022	Flat washerΦ10	16
18	1003285014	High Limit Switch assy. (Include wire 6300mm)	1
19	11620060	Limit switch support plate 3.5*15*70	1
20	10203018	Socket Bolt M5*15	2
21	10420152	Flat washer Φ5	2
22	1103282003A-01	Inner Scissors	2
23	1003105010	Bush Φ28*Φ25*30	4
24	C804306	Secondly Cylinder Φ75*φ85*270	2
25	C804305	Main Cylinder Φ85*φ100*270	2
26	1103282009	Cylinder Cover L=480mm	2
27	10420045	Flat washer Φ6	4
28	10209009	Round head bolt M6*8	4
29	1003285006	Low Limit Switch assy.(Include wire 6900mm)	1
30	10620095	Hex Nut M4	4
31	10420149	Round Head Bolt M4*25	2
32	10420164	Round Head Bolt M4*30	2
33	10203004A	Bush Φ31*Φ25.1*21	8
34	11620028A	Pin Φ25*72	4
35	1103283006A-L	Support Plate 1	1
36	1103283006A-R	Support Plate 2	1
37	1003105008	Wire protection ring Φ16	2
40	10201090	Shim (1mm)	20
41	10620065	Shim (2mm)	20
42	10209059	Anchor Bolts 3/4*5-1/2	8
43	10620071	Anchor Bolts M10*100	4

Item	Part No.	Description	QTY.
44	10620069	Wood Screw M4*30	22
45	10620070	Colloidal $\Phi 6$	22
46	10620034	Rubber Pads (120*100*38)	4
47	10610070	Rubber Pads (100*70*120)	4
48	1103281006	Oil Hose Cover L=840mm	2
49	11620036A	Oil Hose Cover L=1060mm	2
50	11620161	Oil Hose Cover	1
51	10620079	Fitting 1/4JIC(M)*1/4JIC(M)	8
52	11620035A	Oil Hose Cover (748mm)	1
53	10620072	No.②③⑤⑥ Oil Hose 1/4*25 9/16"	4
54	1003285007	No.①④ Oil Hose 1/4*26 5/16"	2
55	1003285008	No.⑨ Oil Hose 1/4*99 5/8"	1
56	1003285009	No.⑦ Oil Hose 1/4*109 1/16"	1
57	1003285010	No.⑩ Oil Hose 1/4*148 13/16"	1
58	1003285011	No.⑫ Oil Hose 1/4* 158 11/16"	1
59	1003285012	No.⑧ Oil Hose 1/4*103 1/8"	1
60	1003285013	No.⑪ Oil Hose 1/4*156 5/16"	1
61	10209138	Tie 5*350	4
63		Control Cabinet	1
64		Manual Power Unit	1
65	1004542002	Bush $\phi 36 * \phi 30.1 * 16$	6
66	1103283013-01	Connecting Handle	2
67	1003283002	Socket Bolt M8*60	2
68	86010876	Parts box	1

## 2. Control Cabinet

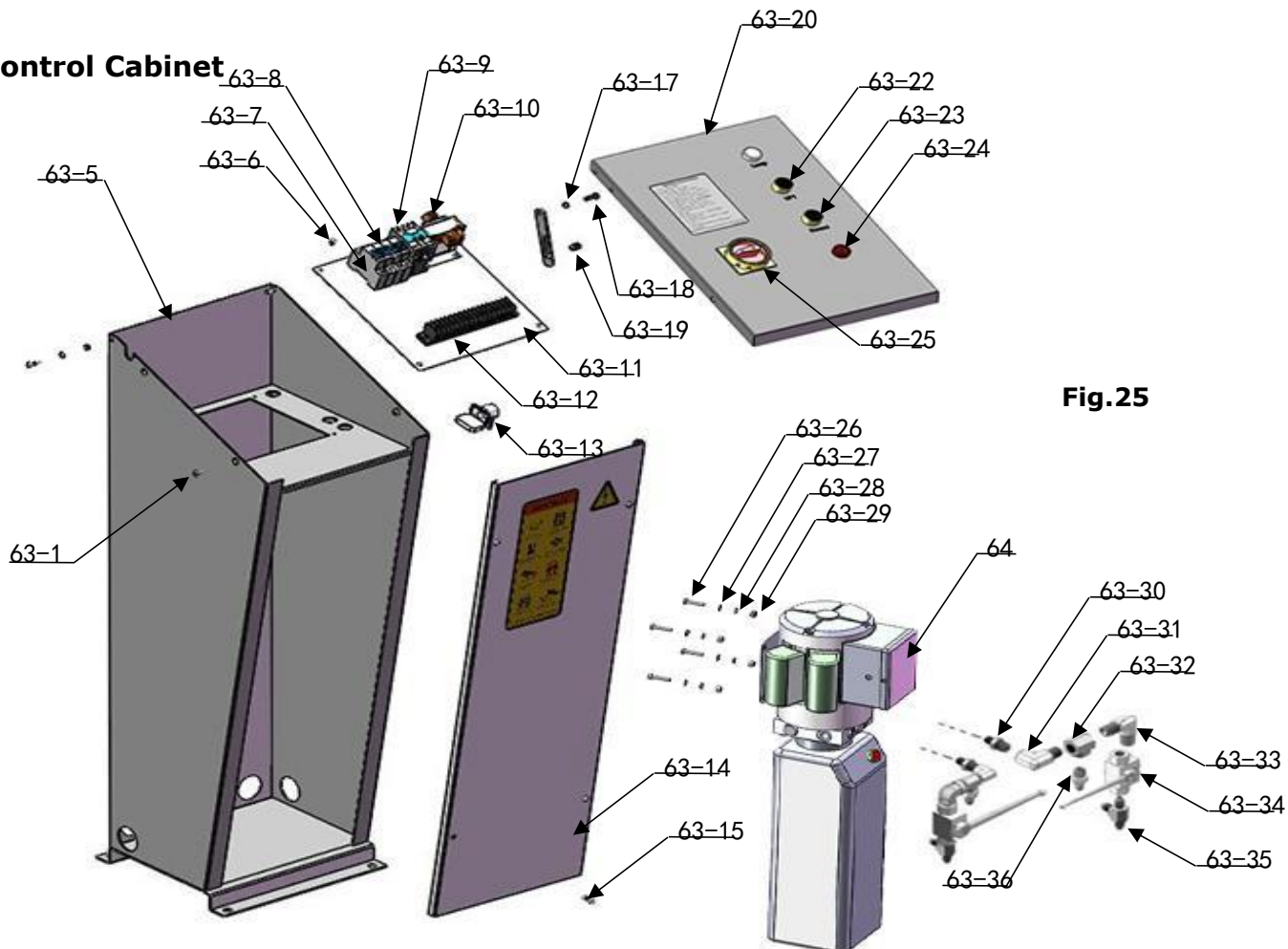
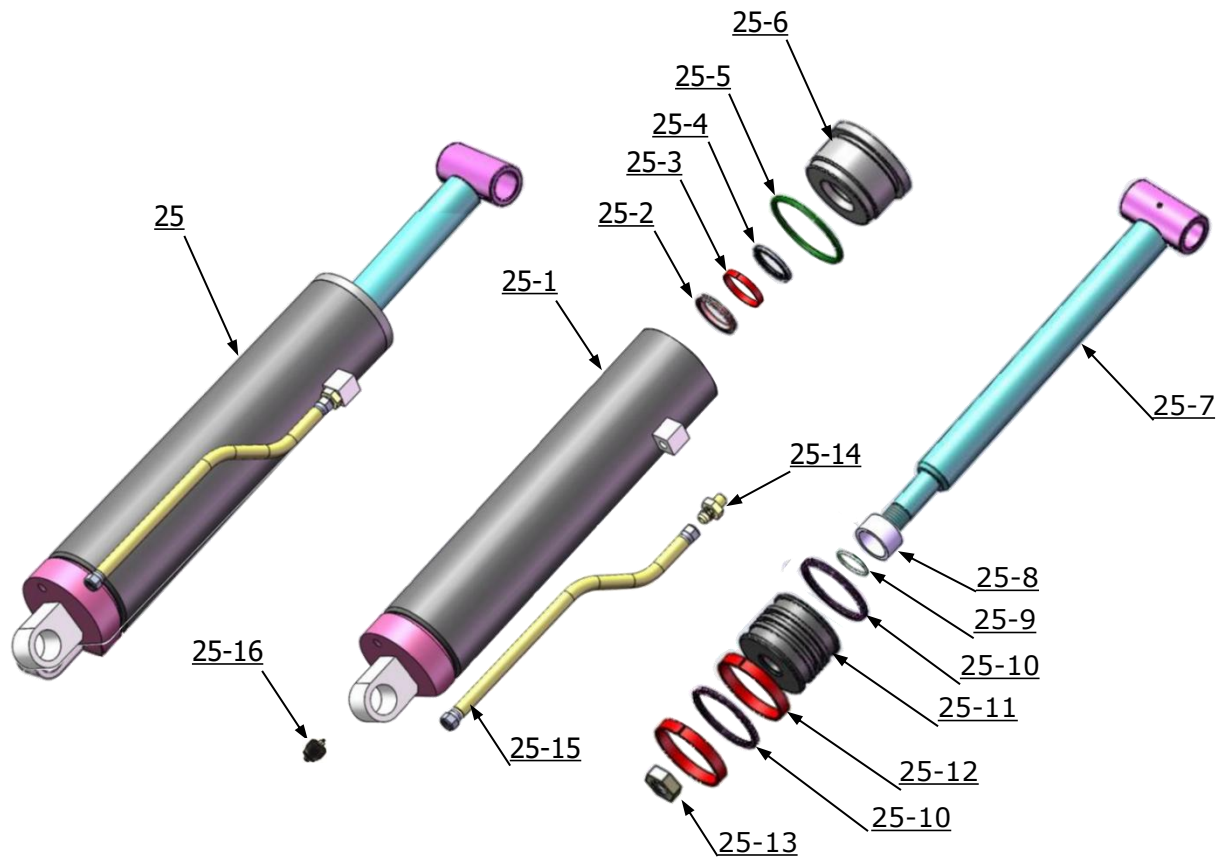


Fig.25

## Parts list for control cabinet

Item	Part No.	Description	QTY.
63-1	1162K001A	Cabinet	1
63-2	10620150	Breaker DZ47-60/3P 25A	1
	10202046	Breaker 2P 220V	1
63-3	10202049	Breaker TGB1V-63/1P 6A	1
63-4	10420084A	24V AC Contactor (KM)	1
63-5	10420134	24V Transformer (TC)	1
63-6	10202049	Breaker 1P 6A	1
63-7	1061K052	Cup Head Bolt	4
63-8	10201094	Indicator	1
63-9	10420070	Up Button	1
63-10	10420070	Down Button	1
63-11	10420142	Pass Button	1
63-12	1004187002	Power Switch (For single phase)	1
63-13	1162K007	Control Panel	1
63-14	10620082	15-bit connection terminal	1
63-15	10620099	Connection board	1
63-16	10420143	Buzzer (H)	1
63-17	1162K012	Cabinet Door	1
63-18	10720038	Cup Head Bolt M6*30	4
63-19	10209145	Cup Head Bolt M6*12	4
63-20	10201122	Hex Bolt M8*35	4
63-21	10209033	Washer $\Phi 8$	4
63-22	10209004	Rubber Ring 8*20*3	4
63-23	10217002	Hex Nut M8	4
63-24	10440009	Straight Fitting 3/8SAEO/R(M)*1/4NPT(M)	2
63-25	1052K027	90 <sup>0</sup> fitting 1/4NPT(M)*1/4NPT(F)	2
63-26	1061K107	T Fitting 1/4NPT(F)*1/4NPT(F)*1/4NPT(F)	2
63-27	10680072	90 <sup>0</sup> fitting 1/4NPT(M)*1/4NPT(M)	2
63-28	1003105005	Two way valve KHB-1/4NPT(F)	2
63-29	10209062	T Fitting 1/4NPT(M)*1/4JIC(M)*1/4JIC(M)	2
63-30	10209064	Straight Fitting 1/4NPT(M)*1/4JIC(M)	2

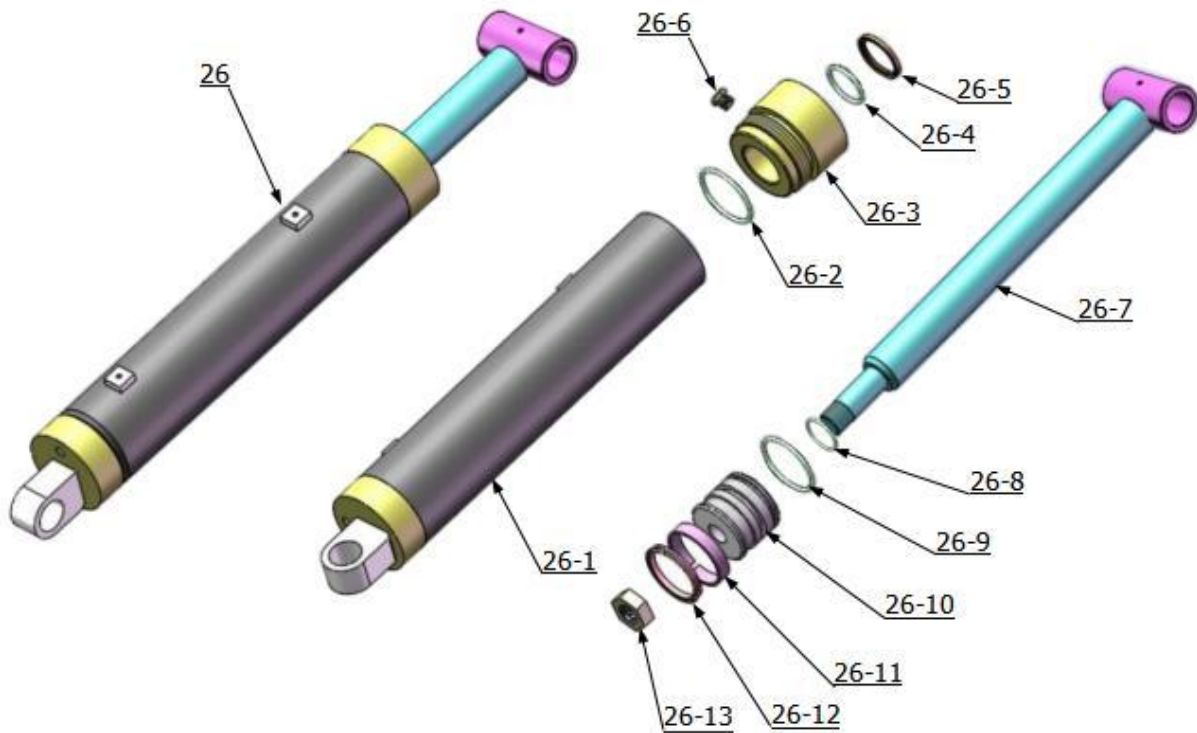
### 3 Master Cylinder **C804305**(Old code 1003286001)



**Fig.26**

Item	Part No.	Description	QTY.
25-1	1103286003-01	Bore Weldment	1
25-2	10620046	Y Ring OSI $\Phi 40*\Phi 50*6$	1
25-3	10620047	Support Ring $\Phi 40*\Phi 46*12.5*3$	1
25-4	10209078A	Dust Ring $\Phi 40*\Phi 48*(5\sim 6.5)$	1
25-5	10510059	O Ring $\Phi 84*5.3$	1
25-6	1103286014	End Cap	1
25-7	1103286004	Piston Rod	1
25-8	11620193	Adjusting Ring $\Phi 60*10.5*16$	1
25-9	10620197	O Ring $\Phi 25*3.1$	1
25-10	10510057	Y Ring OSI $\Phi 75*\Phi 85*6$	2
25-11	1103286013	Piston	1
25-12	10510058	Support Ring $\Phi 40*\Phi 46*3*12.5$	2
25-13	85090239	Nut M24*3	1
25-14	10209064	Straight Fitting 1/4NPT(M)*1/4JIC(M)	1
25-15	1103286009A	Oil Hose Assy.	1
25-16	<b>C802006</b>	G1/4Anti-explosion valve	1

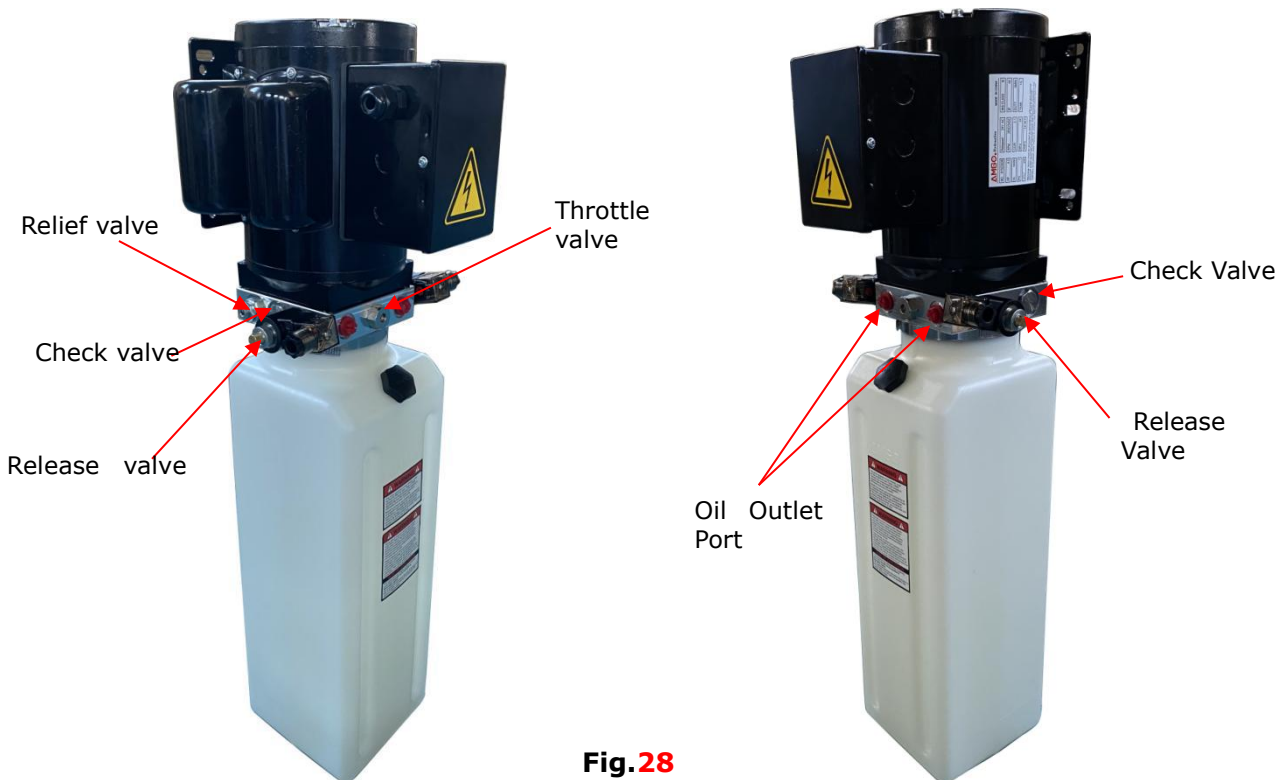
#### 4 Slave Cylinder **C804306**(Old code 1003286002)



**Fig.27**

Item	Part No.	Description	QTY.
26-1	1103286005-01	Bore Weldment	1
26-2	10620049	O ring $\Phi 69 \times 5.3$	1
26-3	1103286016	End Cap	1
26-4	10620058	O Ring $\Phi 40 \times 3.55$	1
26-5	10209078A	Dust Ring $\Phi 40 \times \Phi 48 \times (5 \sim 6.5)$	1
26-6	10201034	Buzzer	1
26-7	1103286004	Piston Rod	1
26-8	10620197	O Ring $\Phi 25 \times 3.1 (70^\circ)$	1
26-9	10630027	O Ring $\Phi 68 \times 3.55 (90^\circ)$	1
26-10	1103286017	Piston	1
26-11	10620053	Support Ring $\Phi 69 \times \Phi 75 \times 12.5 \times 3$	1
26-12	10620054	Y Ring $\Phi 65 \times \Phi 75 \times 6$	1
26-13	85090239	Hex Bolt M24*3	1

## 5. Illustration of hydraulic valve for power unit



**Fig.28**

## V. TEST RUN

1. Turn on the power after connecting oil system correctly. Push the **UP** button, and check the rotated direction of the Motor (This is right if lift is upward, otherwise, it is wrong direction of the Motor). Shut off power and exchange the phase connection if the direction is wrong.
2. Fill the reservoir with hydraulic oil. In consideration of hydraulic power unit's durability and keep the equipment running in the perfect condition, **please use Hydraulic Oil 46#**.
3. Synchronous adjustment (**Low down the lift at the lowest position**)
  - a. Turning the handles of shutoff valves to the position as **Fig.29**. Push the button **UP** fill oil to the cylinders until both platforms just start to lift up, simultaneously push button **DOWN** and **PASS** for 5 seconds with buzzer sounds, the buzzer rings and the sound of bubbles can be heard. This operation is to exhaust the air from cylinders. Repeat this operation for 2-3 times until no sound of bubbles are heard.

- b. Quickly click the button **UP** until the platforms just to be lifted up.
- c. Turn the handles of shut off valves to the positions as **Fig.30**. Push the button **UP** to check if the platform P1 and P2 can lift up synchronously. If not, repeat the step **a and b** until the platform P1 and P2 can lift up synchronously.



Oil Filling Position  
**Fig. 29**



Normal Working Position  
**Fig.30**

- d. After the platform P1 and P2 were confirmed of acting synchronously, idling test should be done for a complete route of lifting and lowering, and then test with car.
- e. Once the lift cannot be lowered from the highest position while press **DOWN** during idling test , turn the 2pcs shutoff valves quickly into oil filling position (Fig.29), then quickly to normal working position (Fig.30).

Note: This operation of turning the handles should be finished quickly, non-stop.



**Fig.31**

## 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 to the platform and put on 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 raised**
4. Make sure the platforms are in the same level before working then turn off the power switch

### To lower vehicle

1. Clearing the obstacles around or under the lift, and make sure no people around under the lift.
2. Turn on the power switch, push the down button **Down** to lower the lift, the lift is lowered continually and stopped at the height 300mm 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 will be lowered to ground with alarm tone;
3. Driving away the car.
4. Turn off the power switch.

## **VII. MAINTENANCE SCHEDULE**

### **Monthly:**

1. Re-torque the anchor bolts to 150Nm.
2. Check all fittings, bolts and pins to insure proper mounting.
3. Make a visual inspection of all hydraulic hoses for possible wear or leakage.  
Adjusting the lifting level on both platforms.
4. Adjust the lifting level on both platforms.

### **Every six months:**

1. Make a visual inspection of all moving parts for possible wear, interference or damage.
2. Checking the lifting level on both platforms
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. AC contactor burned out</li> <li>3. Motor burned out</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace start button</li> <li>2. Replace AC Contactor</li> <li>3. Repair or replace motor</li> </ol>
Motor sound but not working	<ol style="list-style-type: none"> <li>1. Wiring connections of 3 phase are not in good condition.</li> <li>1. 2. AC contactor main contacts in poor contact</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the 3 phase wiring connections, and repair it if not in good condition.</li> <li>2. Replace AC contactor.</li> </ol>
Motor runs but the lift is not raised	<ol style="list-style-type: none"> <li>1. Low oil level</li> <li>2. The Gear Pump out of operation</li> <li>3. Relief valve or check valve in damage</li> <li>4. Shaft Coupling in damage</li> </ol>	<ol style="list-style-type: none"> <li>1. Fill tank</li> <li>2. Repair or replace</li> <li>3. Repair or replace</li> <li>4. Replace Shaft Coupling</li> </ol>
Lift raises 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. Replace Pump</li> <li>3. Check load</li> <li>4. Check electrical system</li> <li>5. Fill tank and bleeding air</li> </ol>
Lift can not lower	<ol style="list-style-type: none"> <li>1. Solenoid valve not working</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the solenoid valve</li> </ol>

## IX. CAR LIFT SAFETY TIPS

Put this safety tips in a place where you can always alert the operator. Please reference to the lift manufacturer's manual for specific information about the lift.

1. Check the lift daily. If the machine breaks down or has damaged parts, do not operate, and use original equipment parts to repair.
2. **Do not** overload . The rated weight of the manufacturer design is indicated on the label of the lift.
3. Position control of the vehicle and operation of the lift can only be done by a trained and authorized person.
4. **Do not** lift a car with occupants inside. Keep the customers or bystanders away from the lift.
5. Keep the area around the lift free of obstacles, lubricating oil, grease, garbage and other debris for a long time.
6. Carefully drive the vehicle onto the lift and lifting up to the required height for operation. **Noted:** lift it high enough if you are working underneath, and make sure the safety devices are locked.
7. **Noted:** removing( install) parts from(to) a vehicle would cause a sudden shift of gravity which may result in instability of the vehicle. Please refer to the vehicle manufacturer's service manual as a recommended procedure if you need remove/install parts from(to) the vehicle
8. Before lowering the lift , make sure all obstacles underneath, include tool tray, tool rack etc., are all removed.

## X. 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.



**Address:**

SC Division: 1931 Joe Rogers Jr Blvd, Manning, SC 29102, USA

TX Division: 4310 Adler Dr., Suite #200, Dallas, TX 75211, USA

<http://www.amgohyd.com>

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