

**TYRE CHANGER****INSTRUCTION & MAINTENANCE MANUAL**

**We follow the way the wheel is moving!**



Read this entire manual carefully and completely  
before installation or operation of the tire changer

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Tyre Changer

## Warning:

**This instruction manual is important for the machine, please read carefully before installation and use; also it is important for safe use and machine maintenance of machine. Please keep this manual properly in order to further maintenance of the machine.**

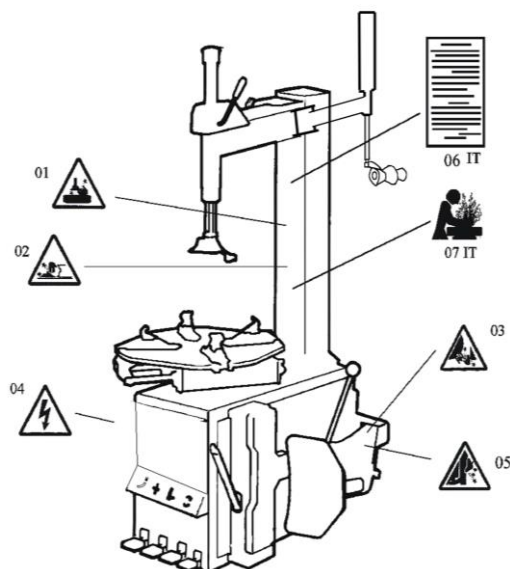
### 1. Introduction:

Application Range: The semi-automatic tyre changer is especially designed for demounting / mounting tyres from wheel rims.

**Caution:** Please use the machine only for purpose for which it is designed, don't use it for other purposes.

Manufacturer shall not be liable for any damage or injury caused by failure to comply with these regulations.

**Safety regulation:** Use of this machine is especially reserved to trained and qualified professional persons, those who already read the introduction manual carefully, or someone have the experience for operating similar machinery. Any changes and beyond the scope of use on this machine without manufacturer's permission or do not according to the manual, may cause the malfunction and damage to machine, manufacturer can cancel warranty coverage for above. If some parts are damaged due to some reason, please replace them according to the spare parts list. (Attention: warranty is one year after manufactures' delivery date; warranty excludes the easy-broken parts).



### 2. Safety Warnings:

- 01 Don't put hands under the Mounting/demounting head during operation;
- 02 Don't put hands between the jaws during operation;
- 03 Don't put hands inside the tyre bead when demounting the tyre;
- 04 Make sure and to check the system is equipped with a good grounding circuit;
- 05 Don't put feet between the Bead Breaker shovel and the body during operation;
- 06 Warning instructions;
- 07 Pay attention to safety because it is an equipment with strong compressed air device ;

Caution:

When the security warning labels are defaced or off, please recovery them in time!

**Do not allow to operate when the security warning labels are missed or imperfect. Do not allow to set any objects to obscure the security warning labels.**

Clients can self-set the warning labels (as right picture show) at any necessary positions.



### 3. Technical data:

External locking rim dimensions	12~23 "
Internal locking rim dimensions	14~26 "
Max. Wheel diameter	1143mm (45 " )
Max. Wheel width	406mm (16 " )
Working Pressure	8-10bar
Power supply	110V (1ph)/ 220V (1ph)/ 380V (3ph)

Optional Motor power	0.75/1.1 kw
Max. Rotating Torque (Turntable)	1078 Nm
Overall Dimension	1130X900X1030mm
Noise Level	<75 dB

**Rim dimensions defined at above table are based on the iron wheel rims. Aluminum rims are thicker than the iron wheel rims, so here above rim dimensions are just for the reference.**

Here **above machine versions can be equipped with Rapid Tire Inflation Device** (client optional device), IT-suffix version, accessory **details** can be found at **the IT-suffix version exploded drawing**.

#### 4. Transport:

When transporting, the machine should be with original package and placed according to the mark on the package. For the already packaged machine should be handled with a corresponding tonnage forklift for loading and unloading. The location to insert the fork feet shown as **Fig 1**

#### 5. Unpacking & Inspection:

Pull out the nail which is nailed on the plate with tip jaw, unpack the carton and plastic cover. Check to make sure all parts shown on the spare parts list are included. If any parts are missing or broken, please contact the manufacturer or dealer ASAP.

#### 6. Workplace requirements:

Choose workplace in compliance with safety regulations. Connect power supply and air source according to manual and workplace must have good air condition; in order to make the machine run well, its workplace requires at least clear space from each wall shown as Fig 2. If installing it outdoor, it must be protected by roof against rain and sunshine.

Warning: the machine with motor must not be operated in explosive atmosphere.

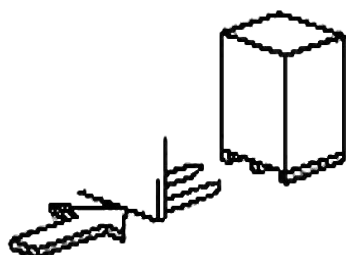


Fig 1

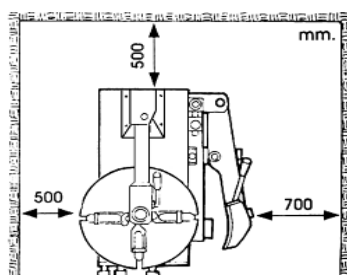


Fig 2

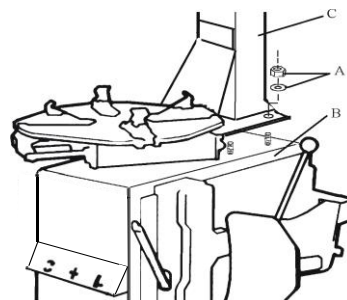


Fig 3

#### 7. Position and installation:

1. Unscrew the nuts at the bottom, position the machine and calibrate it with the horizontal rule. Mount the machine with all the screws and to ensure the machine is stable. Make sure the system is equipped with a good grounding circuit for prevent electric leakage. And have operation range of ground for skid prevention.

2. Unscrew the nut A on the machine body B as shown in Fig 3.

Lift the column C; mount it on the machine body B by using the nut A through the bolt located on the machine body B. If the column becomes loose after a period of using, tight them immediately. Otherwise the result of damage to the tyre may happen.

#### 8. Electric and Pneumatic connections:

Caution: Before installation and connection, check to be sure that the electricity power supply corresponds to the machine technical data. All the installation of electric and pneumatic devices must be operated by a professional electrician.

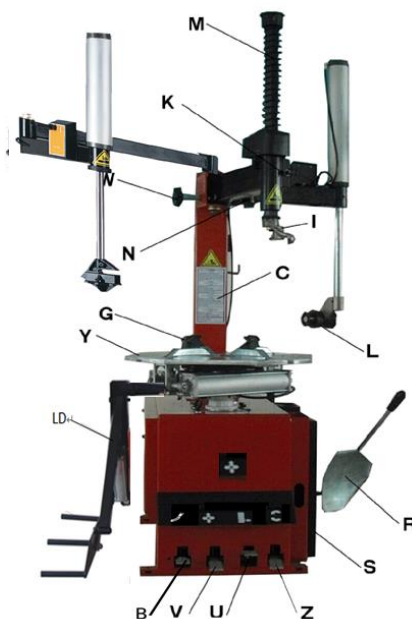





Fig 4

Connect the compressed air connector which is on the machine right side with compressed air system. The electric grid that the machine connects to must have fuses protection device and good outer cover grounding protection. Install the leakage automatic air switch on the main power supply, leakage current is set at 30A

**Caution: No power plug for this machine, the user should self-connect one power plug no less than 16A as well as in line with the machine voltage. Or directly connect with the power supply according to the above requirements.**

#### 9. Adjusting operation:

	
Turntable Rotation Pedal (Z)	Bead Breaker Pedal (U)
	
Jaws open and close Pedal (V)	

- 1) Tread Turntable Rotation Pedal (Z), turntable(Y) rotates in a clockwise direction; Lift Turntable Rotation Pedal (Y), turntable (Y) rotates in an anticlockwise direction
- 2) Tread bead breaker pedal (U), bead breaker shovel (R) closing toward inside; Loose bead breaking pedal (U), bead breaking shovel (R) returns to original position.
- 3) Completely tread Jaws open and close Pedal (V), four jaws on turntable(G) open. Tread again, jaws (G) close. When clamping pedal is at middle level, jaws stop Moving. Shown as Fig 4

Operation of tyre changer consists of three parts:

- 1) Breaking the tyre bead
- 2) Demounting the tyre
- 3) Mounting the tyre

Caution: Before any operations, don't wear loose clothing and wear protective hat, gloves, and skid-proof shoes. Ensure to exhaust the air in the tyre completely, and remove all the wheel weights from the rim.

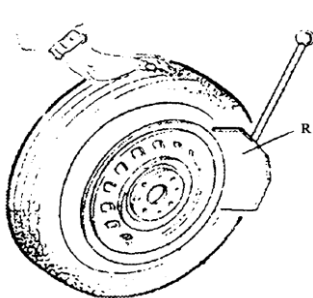


Fig 5

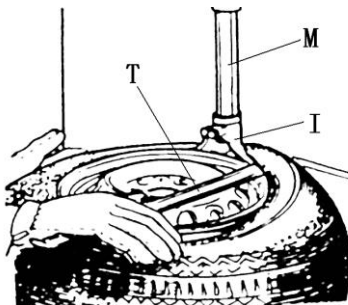


Fig 6

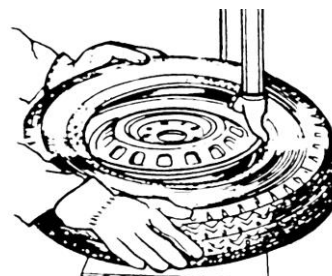


Fig 7

#### 9.1 Breaking the tyre bead:

Ensure to exhaust the air in the tyre completely, place the tyre against the rubber buffer (S). Bring the paddle (R) against the bead about 10mm from the edge of the rim shown as Fig 5. Tread Bead breaker Pedal (U) to push paddle into tyre. Repeat the above operations on different positions around the tyre and both sides of tyre until tyre bead is released completely.

#### 9.2 Demounting tyre:

Caution: Ensure to remove all the weights on the wheel rim and to exhaust the air in the tyre completely before this operation. Apply lubricating grease (or similar lubricant) around the tyre bead.

Caution: Without the lubricant may lead to badly wear and tear on tyre.

Clamp the wheel methods shown as below regarded to the ruled dimension:

a- to clamp the wheel from outside::

Tread Jaws open and close Pedal (V) to halfway down to middle, position positioning for the four clamps (G) by reference scale on the Turntable (Y); put the tyre on turntable, hold the rim, and tread the Jaws open and close Pedal (V) until the wheel is secured by the jaws.

b- to clamp the wheel from inside:

Positioning for the four clamps (G) and let them all closed. Put the tyre on the turntable and tread the Jaws open and close Pedal (V) to open the clamps thereby lock the wheel in place.

Caution: Check to make sure the wheel firmly secured by the four clamps before next step.

Lower the Vertical Arm (M) until the Mounting/demounting head (I) rests next to the edge of the rim, flip the Locking Handle (K) to lock the Vertical Arm and Swing Arm in position, and also adjust the Rocker Arm make Mounting/demounting head can raise 2-3mm automatically from the edge of the wheel rim. Insert the Lifting Lever (T) between the tyre bead and the front section of the mounting/demounting head (I), and move the tyre above the mounting/demounting head as shown as **Fig 6**.

With the Lifting Lever held in position, tread the Turntable Rotation Pedal (U), rotate the Turntable (Y) in a clockwise direction until the tyre is completely separated from the wheel rim.

For the other side tyre demounting, keep using the lifting lever to lift the tyre, make the other side tyre separated from the wheel rim.

Caution: Chains, bracelets, loose clothes and anything else close to the rotating parts will bring danger to the operator.

### 9.3 Mounting tyre :

Caution: To avoid any damage on type, lubricate the tyre bead and the wheel rim with the lubrication recommended by manufacturer. Put on the tyre and check the situation.

Caution: When clamp the wheel rim, don't put your hands on the wheel rim to avoid injury during this operation.

If rim diameter and width are same as that of tyre, it is not necessary to loosen and lock vertical arm. Only put tyre on rim, move swing arm to position when demounting tyre, put one side of tyre bottom bead upon rear of demounting / mounting head, and the other side of tyre bottom bead below front of demounting / mounting head. Press tyre manually or by pressing roller of helping arm, rotate turntable and tyre bottom bead can be mounted. Repeat above operation to mount tyre top bead. (Fig 7)

### 10. 098 Helping arm application:

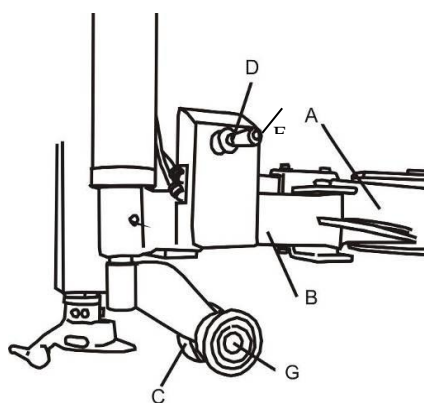


Fig 8

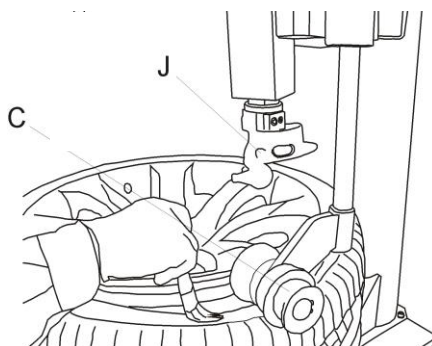


Fig 9

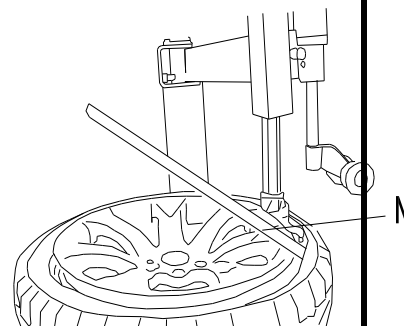


Fig 10

Helping arm at right side is auxiliary device of tyre changer for helping operator to demount and mount tyre.

### 10.1 098 help arm Components

Each components of helping arm device are introduced as follows:

- A- Swing arm                      B- Small helping arm  
C- Roller C                        D- Raise-fall roller handle  
F- Locking switch for helping arm      G- Roller G

The function of helping arm's control handle is as follows:

Roller lifting handle (D, Fig 8) is for lifting and lowering roller C、G so as to adjust tyre demounting / mounting vertical height. Operate handle (D, Fig 8 ) up, then roller C、G goes up; Operate handle (D, Fig 8 )down, then roller C、G goes down.

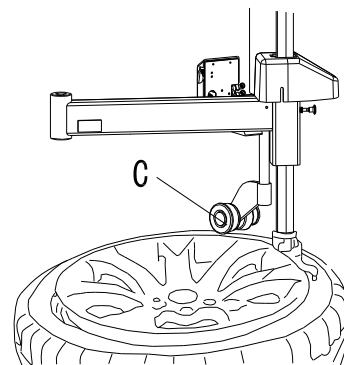


Fig 11

### 10.2 098 Operation

It is difficult to demount and mount big low profile tyre. If operation is proper, it is very easy to use helping arm device to demount and mount tyre from rim. The helping arm device may also be used when demounting and mounting normal tyre with resistance.

#### a. Clamp rim

Firstly, press both side tyre loose as per operation instruction in user's manual. Force of demounting and mounting is big when helping arm device is used. And rim may be damaged easily. It is recommended that to clamp rim from outside ( jaw protector may be installed on jaws ). Tread relevant pedal to make jaws open to clamp edge of rim, move helping arm's rotary arm to far-end. Put on tyre, tread relevant pedal to make jaws close and to approach rim

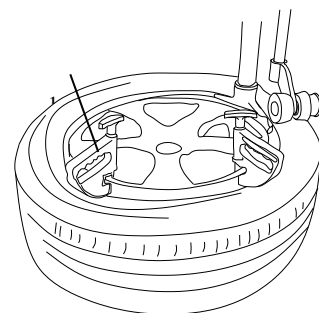


Fig 12

#### b. Demount tyre

1. Press tyre with right pressing roller C,G to a position 3cm lower than rim edge, lubricate tyre bead, rotate turntable, lift roller C,G ( Fig 9 )
2. Move demounting/mounting head close to edge of rim, keep a 2-3mm gap between demounting/mounting head and rim plane , operate locking handle (K, Fig 4 ) to lock vertical arm, adjust screw bolt in column to position swing arm, make sure 2-3mm gap between demounting/mounting head and rim edge side
3. Nearby demounting/mounting head, insert lift lever **N** into tyre, use lift lever to lift bead upon knob of demounting / mounting head. Manually rotate roller C to inner side, pull handle D down, make roller C to press rim, keep 3-5mm gap between demounting/mounting head and rim, make sure demounting/mounting head not damage rim, rotate turntable, demount tyre upper bead ( Fig 11)
4. Push handle D up, lift roller C,G, press switch F, loosen right pressing arm, Lift tyre up, insert lifting level into bottom tyre bead nearby demounting/mounting head, lift bead upon knob of demounting / mounting head and rotate turntable to demount down tyre bead

#### c. Mount tyre

1. Lubricate tyre and rim edge with lubricant to avoid damage of tyre. Adjust height of demounting/mounting head and make tyre bottom bead upon rear of demounting/mounting head and below front of emounting/mounting head. Rotate turntable to mount bottom bead.
2. Make tyre top bead upon rear of demounting/mounting head and below front of emounting/mounting head, move right pressing arm and make sure it is locked, pull handle D down to make roller C,G to press top bead to position below demounting/mounting head. Lock pressing block 1 on rim edge, rotate turntable, finish tyre mounting . Fig 12

## 11. 009 Help Arm

009 help arm is auxiliary device of tyre changer for helping operator to demount / mount tyre much easier.

**Warning: Before install this help arm to the tyre changer, please make sure which is matched with the tyre changer. This help arm device must be used together with our tire changers, we are not sure it can work with other supplier tyre changers.**

**Warning: Before any operation of this machine, the operator is requested to read the manual carefully. Do not attempt any operations that are not stated in it. Manufacturer will not be responsible for any injury or damage caused by improper operation. Please keep the manual handy for consulting.**

### 11.1 Technical data

Work Pressure	8~10 bar
Weight	20kg
Package dimension	820*300*260mm
Noise Level	LpA<75dB

### 11.2 Transport:

Moving the machine with help arm device by using the proper forklift shown as **Fig 14**

Check and make sure all parts shown on the spare parts list are included. If any parts are missing or broken, please do not use the machine and contact the manufacturer or dealer ASAP.

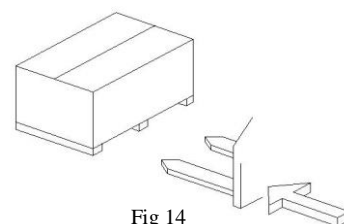


Fig 14

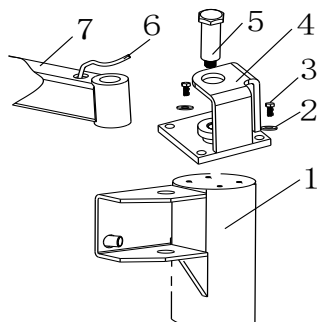


Fig 15

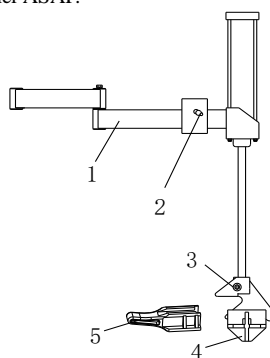


Fig 16



Fig 17

### 11.3 Installation

NOTE: the help arm device should be assembly by the professional person. Before install this device, please make sure to disconnect the tyre changer from the electricity power supply and pneumatic power supply.

The help arm is auxiliary device of tyre changer, please make sure the working space has been reserved as manual required.

Please install the help arm on the tyre changer(Fig 15):

Disconnect the electricity & pneumatic power supply;

Move the left cover on the tyre changer machine body;

Install the fixing plate (4) of the help arm on the top of tyre changer column (1) with 4 bolts (3)

Inserting bolt M20(5) in to the fixing plate (4) of help arm;

Take 6mm air hose (6) through the hole of tyre changer right side, and connect with the T-union of air source supply.

### 11.4 components

All the functional parts of the this auxiliary device shown as Fig 16

- 1, rotating arm
- 2, rise-fall switch handle
- 3, tire pressing head (upper)
- 4, tire pressing head (bottom)
- 5, tire lifting roller head

The specifications for switch handle of help arm 009: (shown as in Fig 16)

The rise-fall switch handle (2, Fig 16) is to control the tyre pressing devices for adjusting the height of tyre dismantled or mounted.

### 11.5 009 Help Arm operation:

Demount and mounting a wide flat tyre is never that easy, with the proper operation of Auxiliary arm system to demount and mounting tyre from wheel rim makes the job simpler. Auxiliary arm system can be used with normal tyres as well. First of all, follow the instruction manual to fix the tyre in position. During the demounting & mounting process, the advice provides the following miscellaneous function:

#### 11.5.1 Fixing the tire

Lower the tyre pressing devices (3, 4 Fig 18) next to the rim canter, press the rim down to firmly fix the tyre in place, this method can fix the tyre more stable.

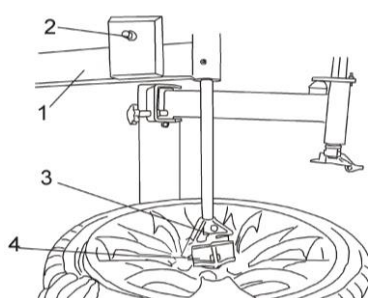


Fig.18

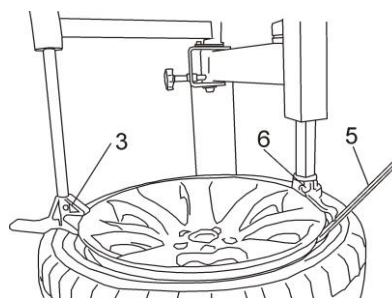


Fig19

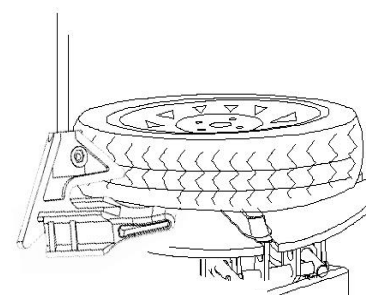


Fig.20



### 11.5.2 Demounting the tire

#### 1) Breaking upper tyre bead

Remove tyre pressing device (down) (4 Fig 18), rotate arm (up) (1, Fig 18) to set tyre pressing device (up) above the tyre, lower tyre pressing device (up) by rise-fall switch handle (2 Fig 18) to fit the arc between tyre and pressing device (up), press down the tyre bead (do not to press the rim). Rotate the turntable; pressing device (up) will follow in synchrony. This will loosen the upper tyre bead, repeat this process if necessary to achieve the best result. (Fig.18)

Attention: Lubricate the tire pressing device and the bead to prevent scratching the tyre.

#### 2) Demounting upper tire.

Move the pressing device (up) close the mounting/demounting head, press the pressing device on the tyre bead by rise-fall switch handle, lubricate the rim edge, insert bead lifting tool (5, Fig 19) to detach tyre and rim. Raise pressing device (up) to the opposite, press down the rise-fall switch handle to enable pressing head (up) to depress tyre about 4-6cm from the rim which make enough space for the opposite site. Use lift lever to lift the bead out then hang the bead on the mounting/demounting head, lubricate the tire. Rotate the turntable, dismount the upper tyre bead. Fig.19

#### 3) Detach tyre

Use the end of pressing head (up) with tyre pressing device to lift up the tyre from rim; Use bead lifting tool flip up the bottom tyre edge and hang it on the mounting/demounting head. Remove pressing head (up), depress the power supply pedal to rotate the turntable and completely detach the tyre out from tyre rim. Fig.20

### 11.5.3 Mounting the tire

While mounting the tyre, move the auxiliary tire pressing head (up) near the mounting/demounting head (distance 3-4cm), lower "tire pressing head (up)" to press down the tyre 3-5cm below mounting/demounting head, rotate turntable, tire pressing head (up) will follow in synchrony as to rotate and press the tyre down in tyre rim, no intervention is needed during this process. ( Fig 21)

#### Attention:

- 1) To prevent collision of help arm and mounting/demounting head, do not excessive rotate turntable while using help arm;
- 2) Make sure the tire pressing head (up) never press on the tyre rim, the friction between them will damage the tyre rim! Keep your hands away from the tire pressing head (up)!

**NOTE: It should be specially noted for below operation.**

- 1) Smear lubricant on tyre bead to protect tyre
- 2) make hands far away from roller C,G

### 12. Inflating the tyre:

**WARNING: all operations in this chapter refer to manual of machine equipped with inflating gun.**

It is very dangerous during inflating operation, take carefully and comply with instruction. When inflating, it will turn to be extremely dangerous if problems happen to tyre or rim. The possible burst force tire goes upward and outward, the big power may cause injury or death of the operator or the people around.

Tyre may burst caused by following:

- 1) The wheel rim and the tyre are not of the same size;
- 2) The tyre or the wheel rim is damaged;
- 3) The pressure of tyre inflation is over the max. pressure recommended by manufacturer;
- 4) The operator fail to comply with the safety regulation;

Please operate as follows:



Fig 21

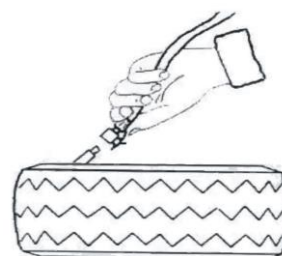


Fig 22

- 1) Remove the valve cap from the valve stem;
- 2) Check to make sure the air nozzle is pressed down completely over the threads of the valve stem.
- 3) Check to make sure that the tyre and the wheel rim are of the same size;
- 4) Lubricating both the tyre bead and the wheel rim, additional lubrication is required if needed;
- 5) Inflate the tyre with break, while inflating, check the pressure listed on the pressure gauge, also check whether the bead is fixed or not. Repeat operation above until the bead is secured; you need take special steps when inflating convex rim or double convex rim; shown as Fig 13
- 6) Continue inflating and check the air pressure frequently until to reach the required pressure..

**NOTE:**

- 1) **If not observe following warning and instruction, it may cause serious injury or death to operators or people beside . When inflating tyre or locking rim, air pressure must not exceed 3.5bar (50psi) .**
- 2) **If higher air pressure is required to inflate tyre, take tyre off from tyre changer, and put it into inflating cage, then start inflating. It is strictly forbidden that inflating tyre with pressure higher than that recommended by tyre manufacturer**
- 3) **Only operator who has been specially trained can operate. All other people are not allowed to operate or approach the tyre changer.**

**13. Moving machine:**

A forklift is required to move the tyre changer. Cut off air supply and electricity supply, lift base a little bit, insert lift fork into bottom base, move tyre changer to new position, then fix tightly

**NOTE: installation position of tyre changer must comply with safety regulation.**

**14. Maintenance :**

Caution: only the professional persons can do the maintenance. To prolong the machine's life, maintain the machine timely according to the manual. Otherwise, it will impact the reliability of the machine or even cause injury to operator and others nearby.

Caution: before performing any maintenance, disconnect the tyre changer from the electric power supply and pneumatic power supply, and tread the Jaws open and close Pedal or Turntable Rotation Pedal for 3~4 times to evacuate all compressed air from the machine. Damaged parts must be replaced by professional persons with the spare parts provided by manufacturer.

Clean the machine once every day after work. Clean the dirt on the turntable with diesel oil once per week and lubricate the slides and clamps.

- Following maintenance must be done at least once per month:

Check oil level in Oil Fog Maker, please be filled with SAE30# oil if need.

Unscrew with hex wrench (E). Based on connection of compressed air, first to tread Jaws open and close Pedal or Turntable Rotation Pedal 5-6 times, and then check whether oil in Oil Fog Maker drops down a drip of oil. For continuous operation, tread twice every time, drop down a drip of oil, otherwise adjust the screw (D) that controlled oil enters with minus screwdriver. (Fig 23)

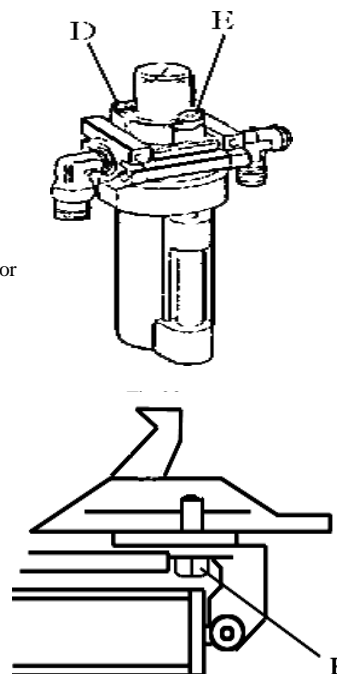


Fig 24

Note: After the first 20 days of use, retighten the jaws with tightening screws (B) on the Turntable (Fig 24)

Note: in the event of turntable lose power, check to see if the belt is tight as follow steps:

Remove the left side cover by unscrewing the screws; adjust two screws located on the motor support, keep a suitable distance between motor support and motor base; tight the screws for the belt tension.(Fig 25)

Note: If Vertical Arm not be locked or not meet the requirement that 2-3mm from the bottom of Mounting head/demounting head to rim, please adjust Hexagonal Locking Plate, refer to Fig 26 and adjust the (X).

Caution: please disconnect the machine from electric power supply and pneumatic power supply.

Note: In order to achieve the reliability of jaws and Bead Breaker shovel, operate as follows to keep their valves clean:

1. Remove the left side cover of the machine body by unscrewing the two screws;
2. Loosen the valve mufflers (A) which belong to Jaws open and close Pedal and Bead Breaker Pedal;
3. Clean the mufflers with compressed air; please replace it referring to the spare parts list if it is damaged. (Fig 27)

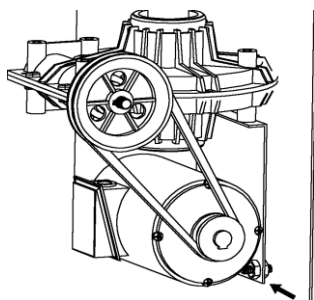


Fig 25

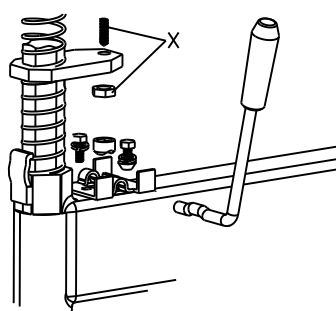


Fig 26

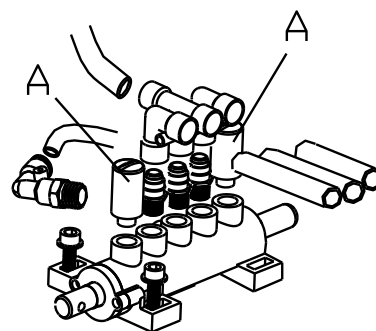
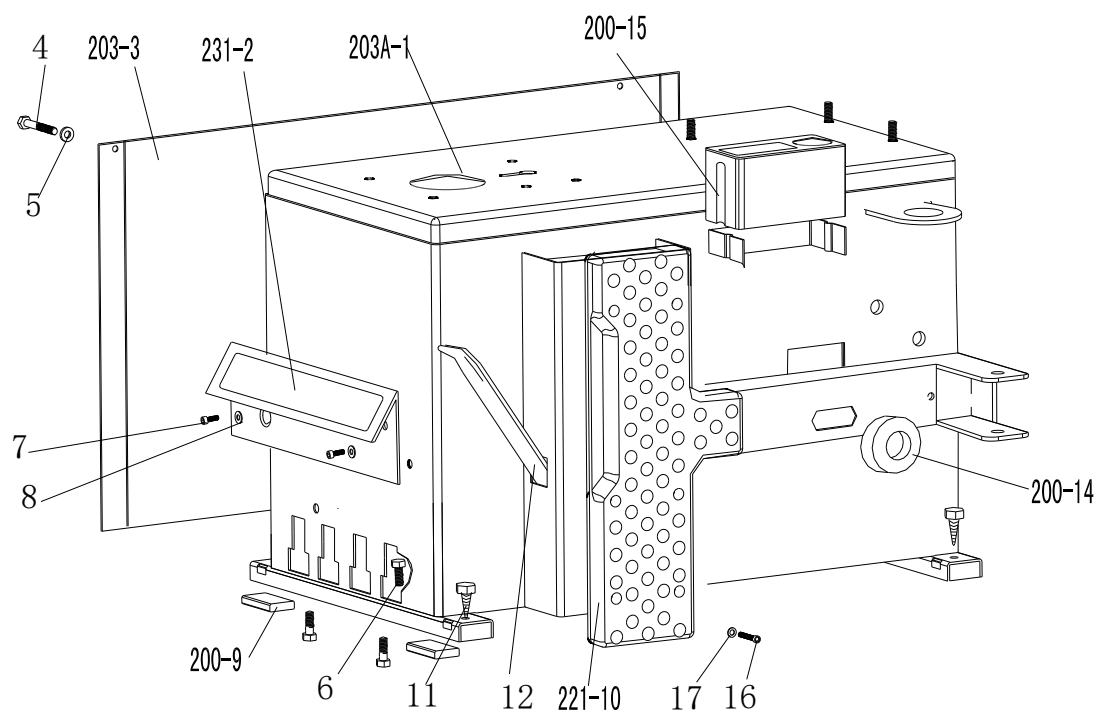


Fig 27

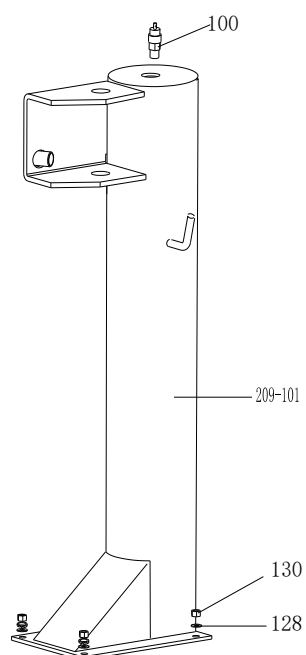
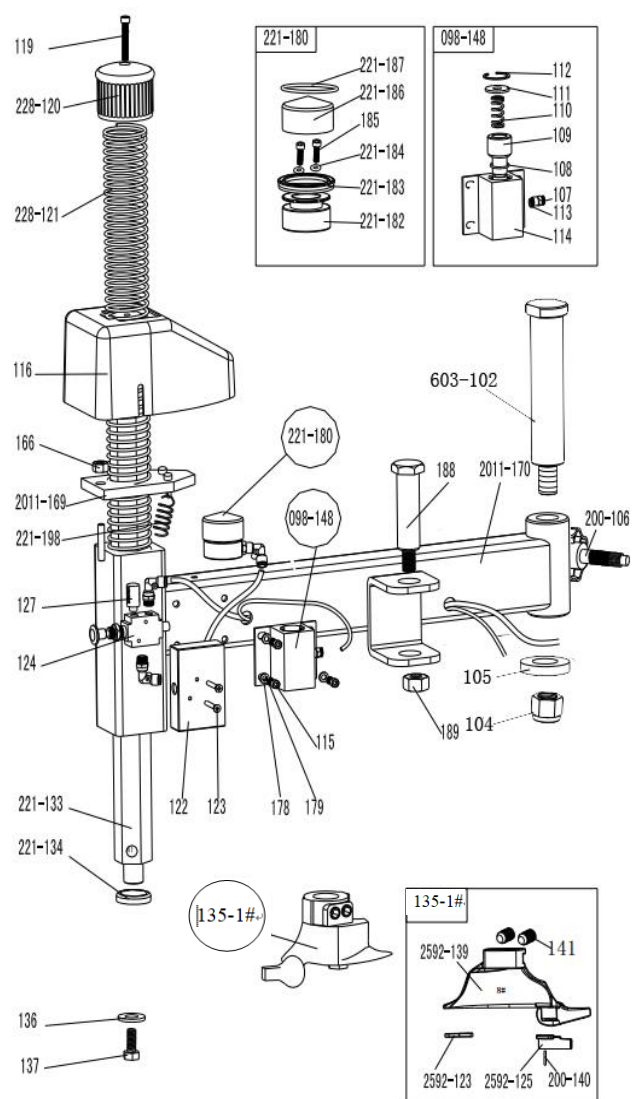
#### 14. Trouble shooting table:

Problem	Reason	Solution
The turntable rotate just in one direction or can't rotate.	Reverse Switch broken	Replace the Reverse Switch
	Belt broken	Replace the belt
	The Motor's malfunction	Check the motor cable or terminal block wire; Replace the motor if it was broken.
Demount or fix the wheel, the turntable can't lock (spin with wheel); The jaws delay to open/close; The turntable locks the rim incorrectly.	Leakage of Air network	Check all the parts on the air network.
	The clamping cylinder can't work.	Replace the cylinder piston.
	Worn jaws	Replace the jaws.
	Broken washers of the chuck cylinder	Replace it.
The mounting/demounting head always touch the rim during operation.	The locking plate incorrectly adjust or unqualified.	Replace or adjust it.
	Screws on the chuck loose; the Hexagonal Vertical Arm can't be locked by Locking Plate	Tighten the screws; replace the Locking Plate.
The Bead Breaker Pedal and Jaw open and close Pedal can't turn back to the original position.	pedal spring broken	Replace it.
The Bead Breaker shovel operates difficultly.	Jammed silencer	Clean it or replace it.
	The washer on the Bead Breaker cylinder is broken.	Replace it.

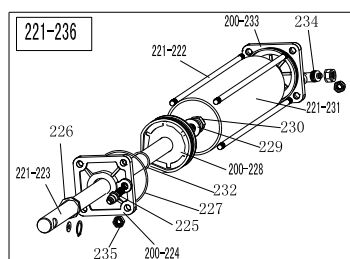
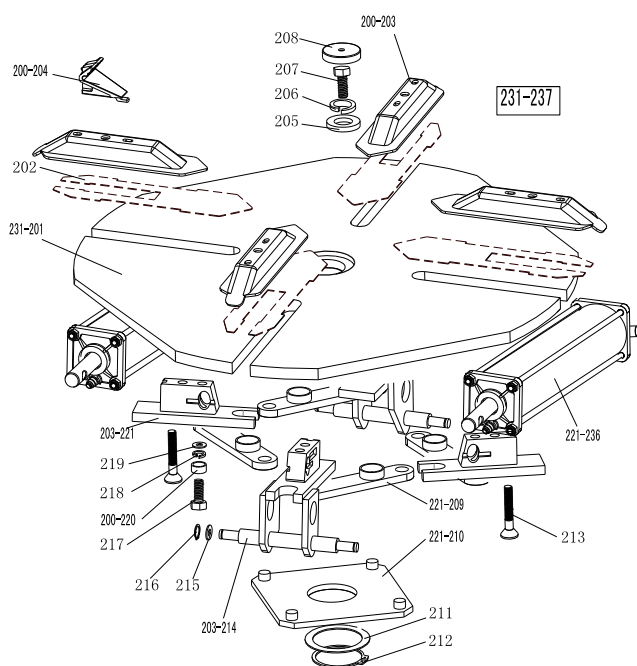
## 16. Exploded drawing



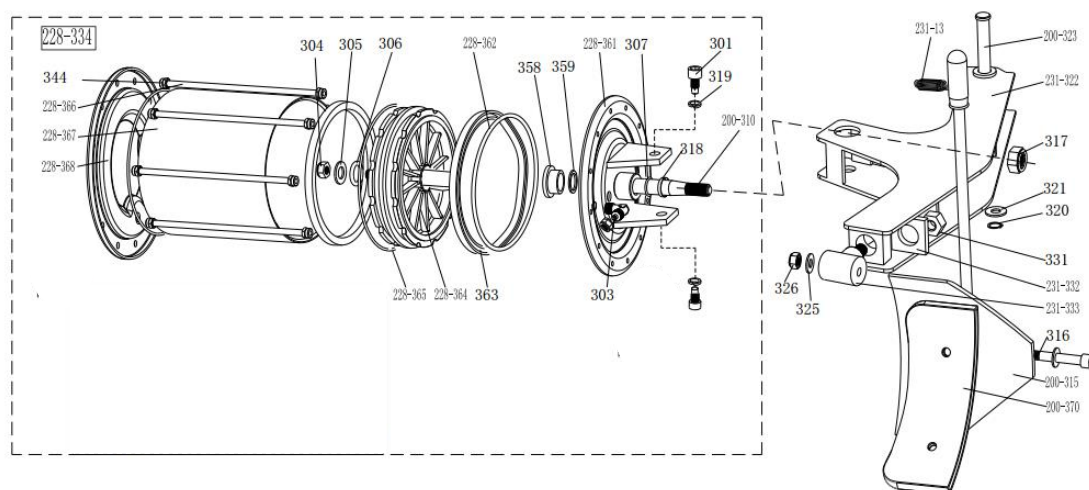
203A-1	JZ08001021110	Machine body
231-2	JZ08001021048	Pedal front cover
203-3	JZ08001021148	Left cover
4	FJ04009004668	Hex socket head bolt M6×10
5	FJ04002003892	Flat washer Ø6*14*1.2
6	FJ04009004879	Outer hex bolt M8x25
7	FJ04009004706	Hex socket head bolt M8×20
8	FJ04002003892	Flat washer Ø 6*14*1.2
200-9	JZ09001023159	Rubber foot buffer
221-10	JZ09001023181	Bead breaker buffer
11	FJ04006004049	Grounding screw M6x40
12	JZ09001023041	Lifting lever
200-14	JZ09001022719	Bead breaker arm rubber
200-15	JZ07001020929	Oil-water box
16	FJ04009004706	Hex socket head bolt M8x20
17	FJ04002003904	Flat washer Ø 8*17*1.5



209-101	JZ08001021063	Round column
603-102	JZ03001015822	Swing arm pin
104	FJ04008004448	Self-locking nut M16
105	JZ03001015476	Big washer
200-106	JZ07001020882	Column adjust handle
107	EQ10005003302	Quick Straight union M5- Ø 4
108	FJ08001005221	O-seal 30X3.55
109	JZ03001015506	098 Swing arm spring plate
110	JZ09001022811	098 Swing arm spring
111	FJ04002003915	Flat washer
112	FJ04001003723	Snap ring Ø30(hole)
113	FJ08001005285	O-seal Ø 6*3
114	JZ03001015681	098 Pneumatic lock barrel
115	FJ04009004680	Hex socket head bolt M6×20
116	JZ07001020910	Locking plate cap
119	FJ04009004581	Hex socket head bolt M10×30
228-120	JZ07001020884	Vertical arm cap
228-121	JZ09001022980	Vertical arm spring
122	JZ07001020905	Locking switch box
123	FJ04006004200	Cross head screw M4*30
124	EQ02012002889	Hand valve
127	EQ04002002955	Muffler 1/8"
221-133	JZ03001015899	Vertical arm
221-134	JZ09001022968	Vertical arm washer
136	JZ03001015342	3# Mount/demount head protection washer
137	FJ04009004770	Outer hex bolt M10×25
098-148	JZ03001015681	098 Pneumatic lock
166	FJ04008004444	Self-locking nut M10
2011-169	JZ03001015648	Hex locking board 2011
2011-170	JZ08001021125	Swing arm 2011
178	FJ04002003890	Flat washer Ø6
179	FJ04002003790	Spring washer Ø6
221-180	JZ06001020239	Complete locking cylinder
221-182	JZ09001023098	Complete locking cylinder piston
221-183	FJ08003005389	V seal Ø60*50*6.5
221-184	FJ08001005285	O- seal Ø 6*3
185	FJ04009004689	Hex socket head bolt M6×55
221-186	JZ03001015728	Locking cylinder cover Ø 60
221-187	FJ08001005293	O-Seal Ø52*2
188	JZ03001015837	Pressing arm pin (right)
189	FJ04008004447	Self-locking nut M16*1.5
221-198	JZ09001022969	Hex locking board spring
135-1#	JZ06001048884	Complete Mount/demount head 1#
2592-139	JZ09001022699	Mount/demount head 1#
141	FJ04006004059	Hex socket head bolt M12*16
2592-123	JZ07001048476	Mount/demount head flat protector 1#
200-124	JZ09001022993	hex round pin
2592-125	JZ07001048477	Protector Mount/demount head 1#

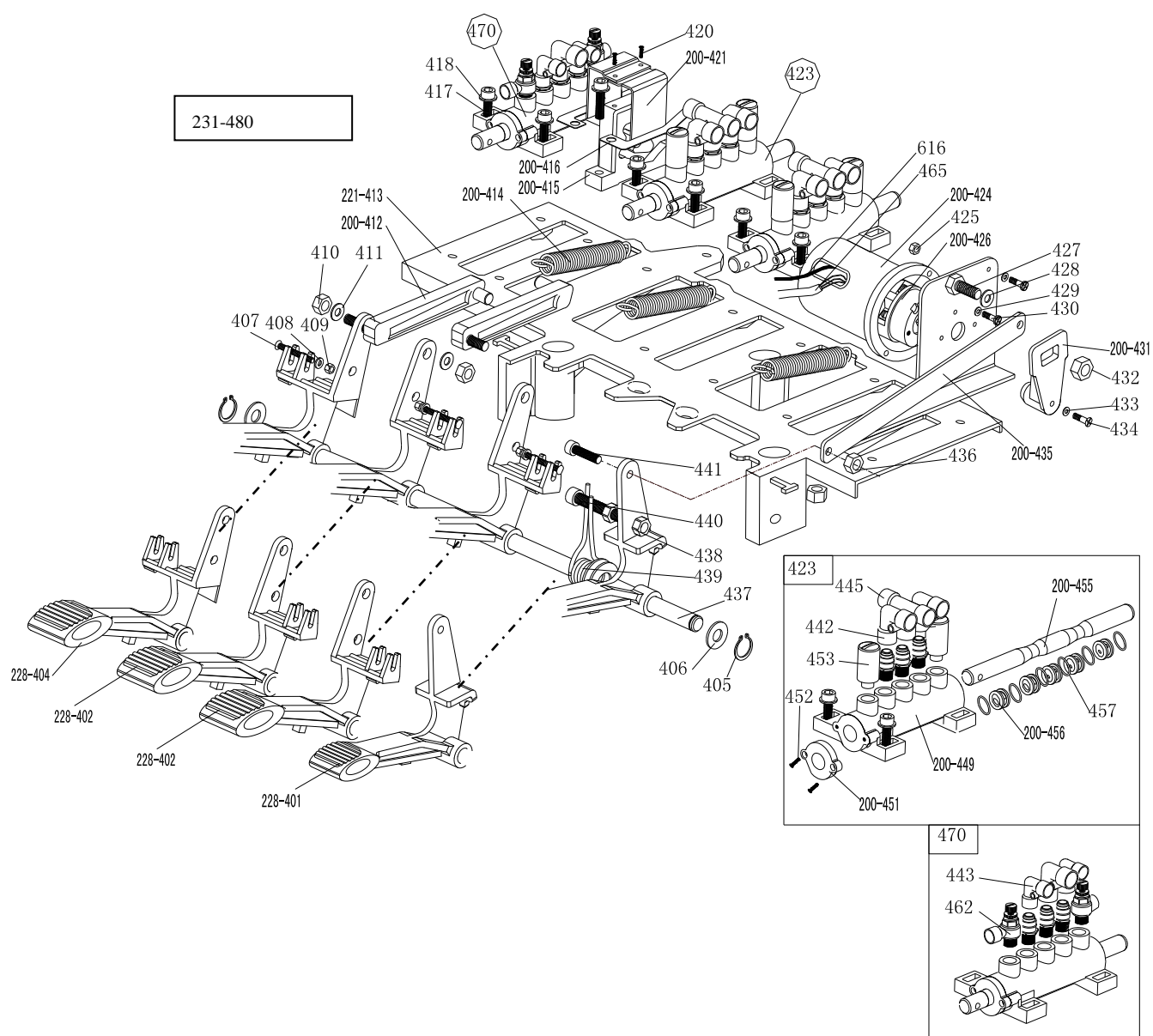


231-201	JZ03001015480	Turntable assembly 650
202	JZ03001015581	Jaw sliding plate(optional)
200-203	JZ03001015584	Jaw cap assembly
204	JZ09001022893	Jaw
205	JZ03001015476	Big washer
206	FJ04002003779	Spring washer Ø16
207	FJ04009004828	Outer hex bolt M16×40x1.5
208	JZ07001020860	Turntable cap
221-209	JZ03001015611	Connection rod assembly 615
221-210	JZ03001015454	Square turntable 615
211	JZ03001015457	Square turntable washer
212	FJ04001003757	Snap ring Ø65(shaft)
	JZ03001015830	Jaw slide guide with pin double holes
203-214		
215	FJ04002003813	Flat washer Ø12X25X2
216	FJ04001003737	Snap ring Ø12(shaft)
217	FJ04009004809	Outer hex bolt M12×40
218	FJ04002003917	Teeth locking washer Ø12x20.5x1
231-237	JZ06001020217	Complete square turntable 650
219	FJ04002003814	Flat washer Ø12X30X3
200-220	JZ09001015609	Connection rod nut
	JZ03001015762	Jaw slide guide without pin double holes
203-221		
221-222	JZ09001022937	Threaded connection rod 393
221-223	JZ09001022843	Clamping cylinder piston rod 400
	JZ09001022837	Clamping cylinder cover without handle
200-224		
225	EQ11006003389	Straight union 1/8"-Ø8
226	FJ08003005391	V- seal 20*28*7.5
227	FJ08001005312	O-seal 63*2.65
200-228	JZ09001022841	Clamping cylinder piston φ70
229	FJ04002003813	Flat washer Ø12X25X2
230	FJ04008004495	Nut M12X7X1.75
221-231	JZ09001022852	Clamping cylinder barrel 360
232	FJ08001005151	O-seal 19.6X2.62
	JZ09001022839	Clamping cylinder cover with handle
200-233		
234	EQ11005003366	Union 1/8-Ø8
235	FJ04008004459	Self-locking nut M8
221-236	JZ06001020236	Complete clamping cylinder



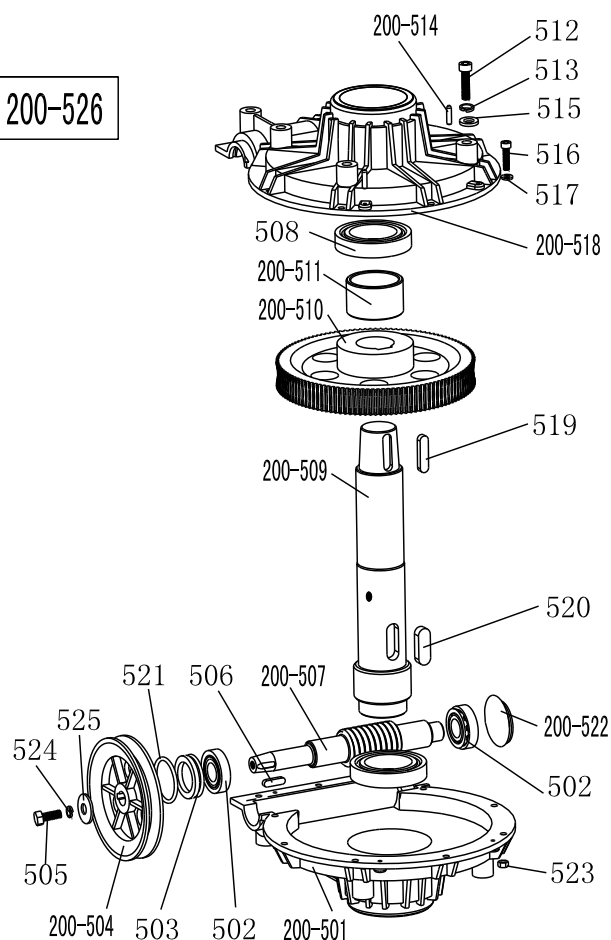
231-13	JZ09001022723	Bead breaker arm spring	231-332	JZ03001015351	Enlarge bead breaker arm rotating washer
301	JZ09001011179	Hex socket head boltM14×30	231-333	JZ03001015350	Enlarge bead breaker arm rotating shaft
303	EQ11005003350	Union (90° ) 1/4-Ø8	228-334	JZ06001020266	Complete bead breaker cylinder D200
304	FJ04008004517	Nut M16*1.5	344	FJ04008004459	Self-locking nut
305	FJ04002003833	Flat washer Ø16*28*2	358	JZ02007011606	Nylon sleeve
306	FJ08001005120	O-seal Ø 16*2.65	359	FJ08003005391	seal ring 20*28*7.5
307	FJ08001005151	O- seal Ø20X2.65	228-361	JZ03001015383	Bead breaker cylinder cover assembly
200-310	JZ09001022746	Bead breaker cylinder piston rod	228-362	FJ08001005153	O-seal Ø198*3.1
200-315	JZ03001015791	Bead breaker shovel assembly	363	FJ08005005395	Y-seal D200*184*12
316	FJ04009004613	Hex socket head bolt M12×90	228-364	JZ09001022745	Bead breaker cylinder piston D200
317	FJ04008004517	Self-locking nut M16*1.5	228-365	FJ08001005147	O-seal Ø180*5
318	CF03003001068	Guide belt	228-366	JZ09001022935	Threaded connection rod
319	FJ04002003777	Spring washer Ø14	228-367	JZ09001022753	Bead breaker cylinder barrel D200
320	FJ04001003741	Snap ring Ø16	228-368	JZ09001022742	Bead breaker cylinder rear cover
321	FJ04002003833	Flat washer	200-370	JZ07001020829	Bead breaker shovel protection cover(optional)
231-322	JZ08001021036	Enlarge bead breaker arm 231	358	JZ02007011606	Nylon sleeve
200-323	JZ03001015349	Bead breaker pin	359	FJ08003005391	seal ring 20*28*7.5
325	FJ04002003813	Flat washer Ø12*24*2	228-361	JZ03001015383	Bead breaker cylinder cover assembly
326	FJ04008004445	Self-locking M12			
331	FJ04008004448	Self-locking nut M16*1.75			



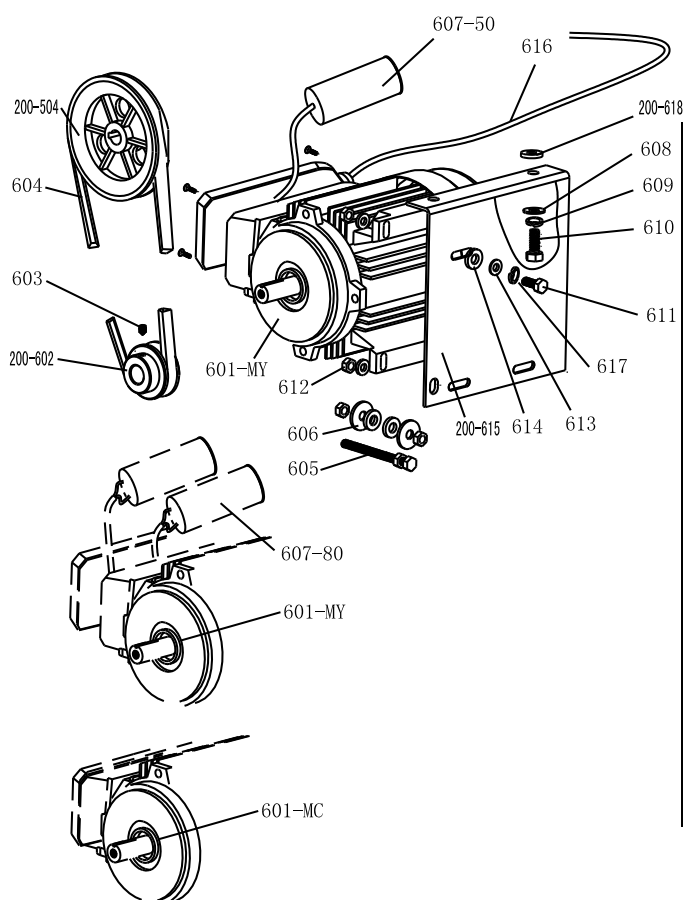


228-401	JZ03001021184	Reverse switch pedal	430	FJ04006004323	Cross head screw M4*16
228-402	JZ03001021300	5-way valve pedal(right)	200-431	JZ07001020856	Reverse switch handle
228-404	JZ03001021301	5-way valve pedal(left)	432	FJ04008004458	Self-locking nut M6
405	FJ04001003737	Snap ring Ø12	433	FJ04002003859	Flat washer Ø3
406	FJ04002003813	Flat washer Ø12*24*2	434	FJ04006004306	Cross head screw M3X16
407	FJ04006004326	Cross head screw M4X30	200-435	JZ03001015560	Pedal connection rod
408	FJ04002003874	Flat washer Ø 4	436	FJ04008004459	Self-locking nut M8
409	FJ04008004455	Self-locking nut M4	437	JZ03001015571	Pedal front shaft
410	FJ04008004459	Self-locking nut M8	438	FJ04008004515	Nut M8
411	FJ04002003904	Flat washer Ø8*17*1.5	439	JZ09001022873	Pedal twist spring
200-412	JZ07001020913	Cam connection rod	440	FJ04009004715	Hex socket head bolt M8×50
221-413	JZ09001022883	Pedal support board	441	FJ04009004706	Hex socket head bolt M8×20
200-414	JZ09001022872	Pedal Spring	442	EQ10004003264	Quick union1/8- Ø 8
200-415	JZ07001020914	Cam	443	EQ10004003262	Quick union1/8- Ø 6
200-416	JZ09001023109	Cam washer	445	EQ10001003242	Quick T-union1/8-2* Ø 8
417	FJ04009004680	Hex socket head bolt M6×20	200-449	JZ09001022986	5-way valve barrel (right)
418	FJ04002003890	Flat washer Ø6	200-451	JZ07001020918	5-way valve cover
420	FJ04006004228	Cross head self tapping screw 2.9*12	452	FJ04006004372	Cross head ST2.9*14
200-421	JZ03001015747	Cam cover	453	EQ04002002955	Muffler 1/8"
423	JZ06001066665	5-way valve (T-union,without rod) (Aluminum alloy)	200-455	JZ09001015771	5-way valve rod
200-424	JZ07001020853	Reverse switch cover	200-456	JZ07001020919	5-way valve rod spacer
425	FJ04008004510	Nut M4	457	FJ08001005087	O seal 12*20*4
200-426	DD03009001577	Reverse switch	462	EQ02005002809	Throttle valve
427	FJ04009004680	Hex socket head bolt M6×20	470	JZ06001020287	Complete tilting 5-way valve
428	FJ04002003890	Flat washer Ø 6X12X1	231-480	JZ06001020274	Complete 4-pedals assembly 231

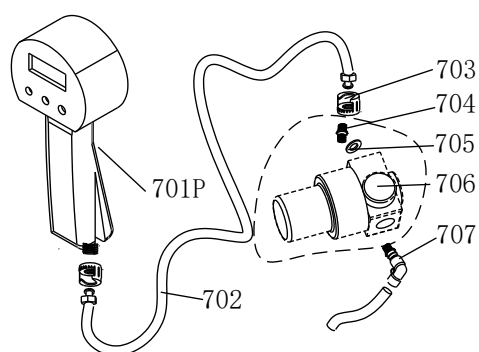
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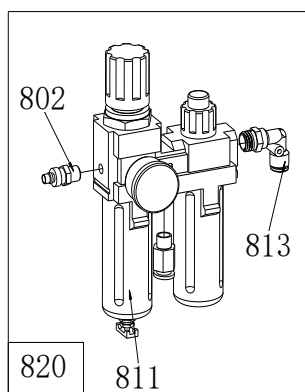
200-501	JZ09001022681	Gear box lower cover
502	FJ02010003613	Bearing 30204
503	FJ08007005413	Gear box seal $\phi 20 \times 35 \times 8$
200-504	JZ09001023119	Gear Belt pulley
505	FJ04009004879	Outer hex bolt M8 $\times$ 25
506	FJ06001004964	Key washer 6 $\times$ 20
200-507	JZ09001023118	Worm rod
508	FJ02010003623	Bearing 6010
200-509	JZ09001023126	Worm gear shaft
200-510	JZ09001023250	Worm gear
200-511	JZ02007011727	Worm gear shaft spacer
512	FJ04009004779	Outer hex bolt M10 $\times$ 55
513	FJ04002003773	Spring washer $\phi 10$
200-514	FJ06002005000	Pin 6X20
515	FJ04002003800	Flat washer $\phi 10 \times 20 \times 2$
516	FJ04009004680	Hex socket head bolt M6 $\times$ 20
517	FJ04002003892	Flat washer $\phi 6 \times 14 \times 1.2$
200-518	JZ09001022679	Gear box upper cover
519	FJ06001004962	Key washer 10 $\times$ 40
520	FJ06001004963	Key washer 14 $\times$ 40
521	FJ08001005221	O-seal $\phi 30 \times 3.55$
200-522	JZ09001022990	Oil resistant seal
523	FJ04008004458	Self-locking nut M6
524	FJ04002003792	Spring washer $\phi 8$
525	FJ04002003915	Flat washer $\phi 8 \times 30 \times 3$
200-526	JZ06001020255	Complete gear box



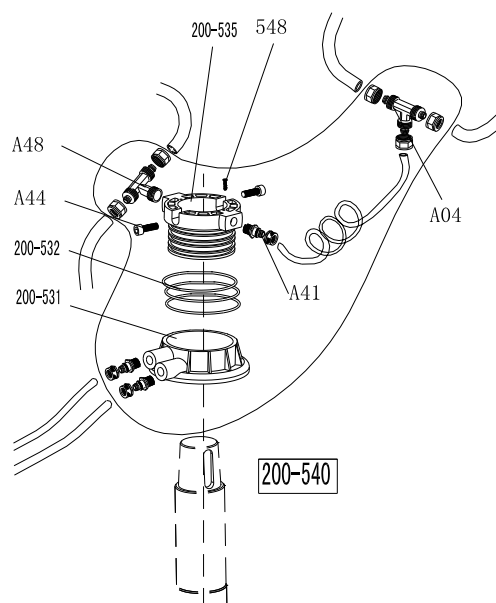
200-504	JZ09001023119	Gear Belt pulley
601-MC	DD01001001180	Motor 220V/50HZ
200-602	JZ09001015421	Motor Belt pulley
603	FJ04006004178	Hex socket head bolt M8 $\times$ 12
604	FJ02003003545	Tyre changer belt A-28
605	FJ04009004889	Outer hex bolt M8X65
606	FJ04002003915	Flat washer $\phi 8 \times 30 \times 3$
607-80	DD04009001964	Capacitor 80 $\mu$ f,110V
607-50	DD04009001883	Capacitor 50 $\mu$ f,220V
608	FJ04002003800	Flat washer $\phi 10 \times 20 \times 2$
609	FJ04002003773	Spring washer $\phi 10$
610	FJ04009004770	Outer hex bolt M10X25
611	FJ04009004883	Outer hex bolt M8X35
612	FJ04008004515	Nut M8
613	FJ04002003910	Flat washer $\phi 8 \times 22 \times 2$
614	JZ09001022782	Motor rubber washer
200-615	JZ03001015423	Motor support
616	JZ12001026447	Motor cable 5 $\times$ 1.0
617	FJ04002003792	Spring washer $\phi 8$
200-618	JZ09001022782	Motor rubber buffer



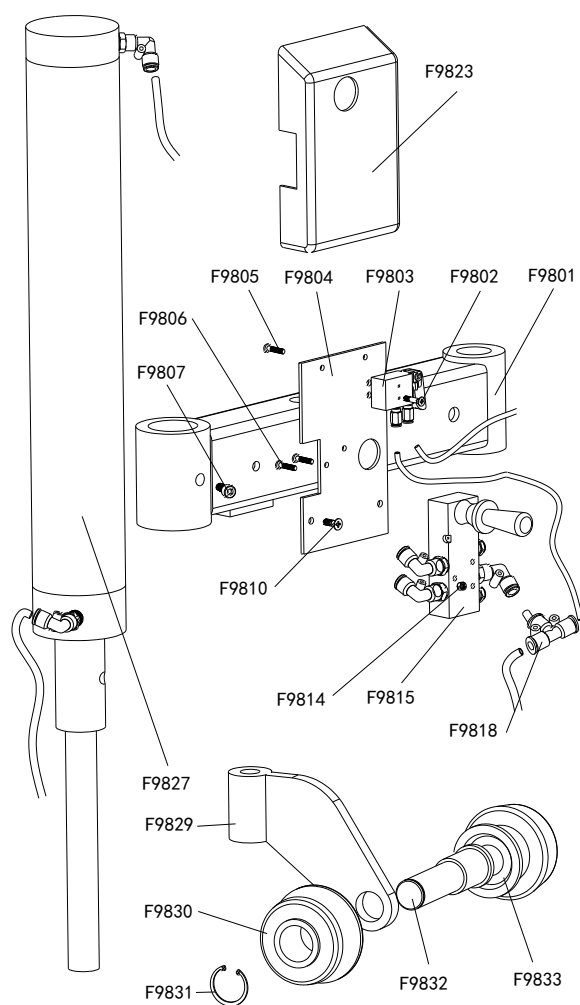
701P	EQ05001048326	Digital Inflating gun
702	JZ09001022984	Rubber connection hose
703	EQ14003003478	Notch nut
704	EQ07005003072	Straight union 1/4-1/4
705	FJ04002003822	Flat washer Ø13
706	EQ03003002911	Pressure adjust valve
707	EQ10004003257	Quick union 1/4-Ø8



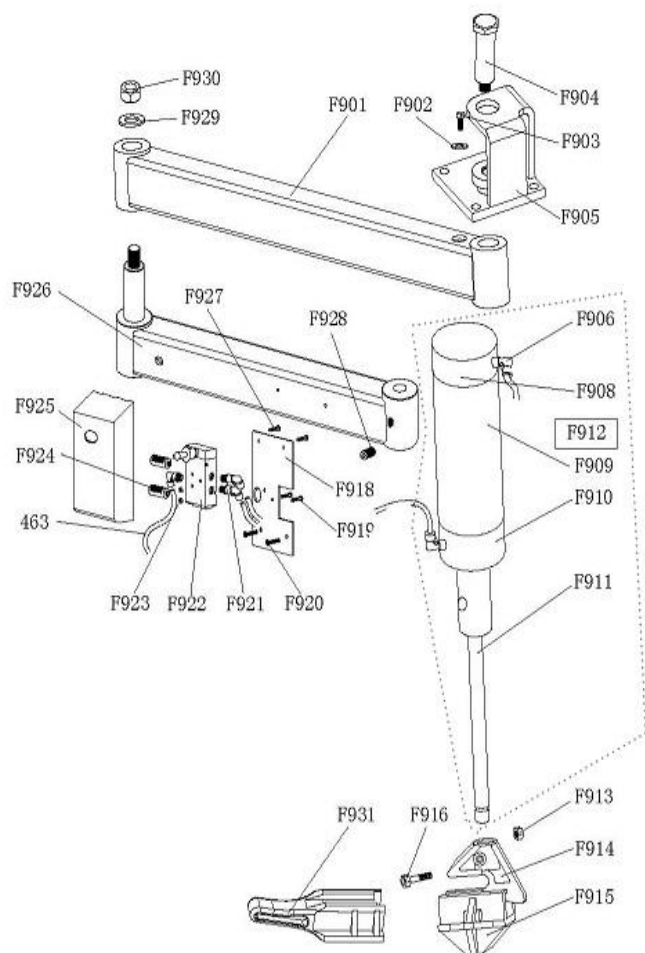
811	EQ03001002902	oil fog maker 3300
813	EQ11005003350	Union (90°)1/4- Ø8
820	JZ06001020326	Complete oil fog maker 3300
802	EQ12001003412	Quick nozzle PM20



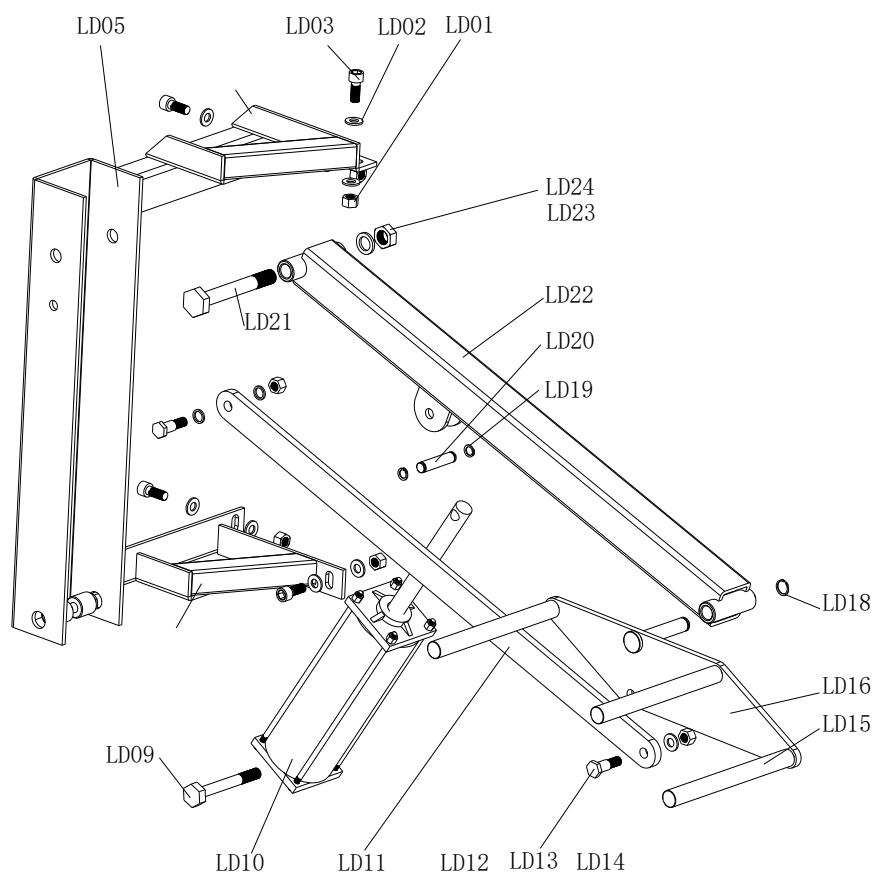
A04	EQ11002003333	T-union 3* Ø 8
A44	FJ04009004676	Hex socket head bolt M6×16
A48	EQ11002003340	Quick T-union
200-531	JZ02007015872	Rotating valve casing
200-532	FJ08001005300	O-seal 59.9X2.62
200-535	JZ02007015676	Rotating valve mandrel
537	JZ02007061597	Hose 5.5* Ø 8
A41	EQ11006003389	Straight union 1/8-Ø8
548	FJ04006004060	Hex socket head bolt M4X6
200-540	JZ06001020249	Complete Rotating valve



F9801	JZ08001021131	098 Pressing arm(right)
F9802	FJ04006004254	Cross head Screw M5X10
F9803	JZ06001045182	Pneumatic valve
F9804	JZ08001021026	Raise-fall switch base plate
F9805	FJ04006004197	Cross flat head screw M4*16
F9806	FJ04006004200	Cross flat head screw M4*30
F9807	FJ04006004053	Hex socket head bolt M10*12
F9810	FJ04009004651	Hex socket head bolt M5*16
F9813	EQ10004003254	Quick union 1/4-Ø6
F9814	FJ04008004510	Nut (white) M4
F9815	JZ06001048533	Complete Raise-fall control valve 098
F9818	EQ10001003219	T-union 2XØ6-Ø4
F9820	EQ11002003339	T-union 1/8-2*Ø6
F9823	JZ07001020877	Control valve protect cover (right)
F9827	JZ06001020247	Complete 098 cylinder
F9828	EQ10004003254	Quick Union 1/4-Ø6
F9829	JZ03001015809	Pressing roller bracket support
F9830	JZ07001020925	Tyre pressing roller 1
F9831	FJ04001003723	Snap ring Ø30(hole)
F9832	JZ03001015811	Tyre pressing roller shaft
F9833	JZ07001011985	Tyre pressing roller 2

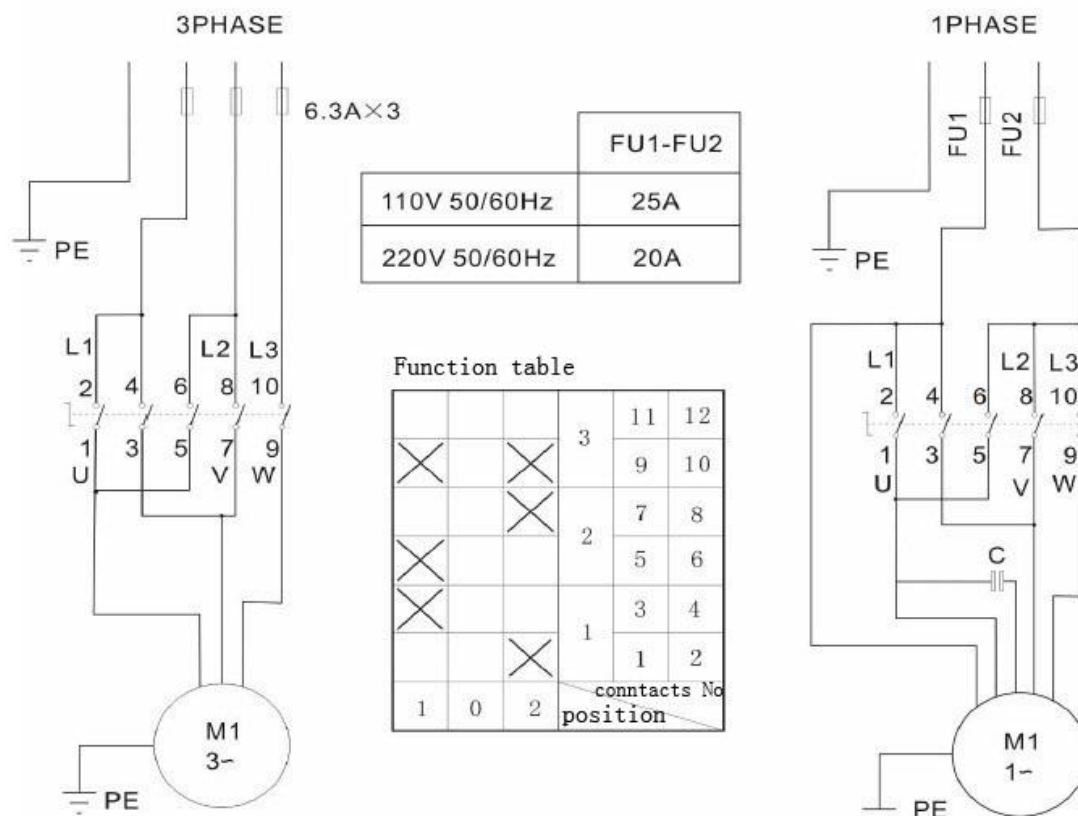


F901	JZ02007011877	009 Pressing arm
F902	FJ04002003773	Spring washer φ10
F903	FJ04009004581	Hex socket head bolt M10*30
F904	JZ03001015784	009 Pressing arm pin
F905	JZ08001021121	009 Pressing plate
F906	EQ10004003262	Quick union 1/8-φ6
F908	JZ09001023043	009 cylinder upper cover
F909	JZ09001023051	009 cylinder barrel Ø76*460
F910	JZ09001023049	009 cylinder down cover
F911	JZ09001023057	009 cylinder piston rod φ25*750
F912	JZ06001020235	Complete 009 help arm cylinder(209)
F913	FJ04008004458	Self-locking nut M6
F914	JZ07001020926	Tire pressing head (upper)
F915	JZ07001020927	Tire pressing head(bottom)
F916	FJ04009004685	Hex socket head bolt M6*30
F918	JZ08001021026	Rise-fall switch base board
F919	FJ04006004200	Cross head screw M4*30
F920	FJ04006004255	Cross round head screw 5*16
F921	EQ10004003254	Quick Union 1/4-Ø6
F922	EQ02011002888	Raise-fall control valve 4H230L-08
F923	FJ04008004510	Nut(silver) M4
F924	EQ04002002955	Muffler 1/8
F925	JZ07001020877	Control valve protect cover
F926	JZ08001021012	009 Auxiliary pressing arm
F927	FJ04006004197	Cross head screw M4*16
F928	FJ04006004059	Hex socket head bolt M10*12
F929	JZ03001015476	Big washer
F930	FJ04008004448	Self-locking nut M16
F931	JZ07001020930	Tire lifting roller head



LD01	FJ04008004494	Nut M10
LD02	FJ04002003800	Flat washer Ø10
LD03	FJ04009004579	Hex socket head bolt M10×25
LD05	JZ08001021093	Complete tire lifting suport
LD09	FJ04009004788	Outer hex bolt M12×110
LD10	JZ06001020232	Complete rise-fall cylinder
LD11	JZ03001015843	Suport rod
LD12	JZ09001022959	connection bolt
LD13	FJ04002003800	Flat washer Ø10
LD14	FJ04008004494	Nut M10
LD15	JZ01001006422	Tire lifting rod
LD16	JZ01001006431	Tire lifting suport board
LD18	FJ04001003741	Snap ring Ø16
LD20	JZ03001015703	Rise-fall pin
LD21	FJ04009004754	Outer hex bolt M16×120
LD22	JZ08001021049	Lifting arm
LD23	FJ04008004448	Self-locking nut M16
LD24	FJ04002003833	Flat washer Ø16

## 16. Circuit diagram



## 17. Pneumatic draw

