

TYRE CHANGER

INSTRUCTION & MAINTENANCE MANUAL

We follow the way that wheel moving!



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

TYRE CHANGER INSTRUCTION MANUAL

INDEX

PAGE

1. Introduction:	2
2. Safety Warning Label:	2
3. Technical data:	3
4. Transport.....	3
5. Unpacking & Inspection:	3
6. Workplace requirement:	3
7. Position and installation:	4
8. Electric and Pneumatic connections	4
9. Adjusting operation:	4
9.1. Demounting the tyre bead:	5
9.2. Demounting the tyre	5
9.3 Mounting the tyre :	5
10. 098L Help arm application:	6
10.1 Components.....	6
10.2 Operation	6
10. 3.009 Help Arm	7
10.4 009 Help Arm operation:	7
a. Fixing the tire.....	7
b. Demounting the tire	7
11. Rapid tyre inflation system:	8
11.1 Rapid tyre inflation system device	8
11.2 Wheel rim locking and Tyre inflation.....	8
11.3 Inflation the tyre with inner tube	9
11.4 Inflation for the tubeless tyre.....	9
12. Moving machine:.....	9
13. Maintenance:	9
14. Trouble shooting table:	11
15. Guide for ordering spare parts	11
16. Wearing spare parts list.....	12
17. Exploding drawing	13
18. Circuit diagram.....	25
19. Pneumatic drawing	25

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. Please keep this manual properly for further maintenance of the machine.

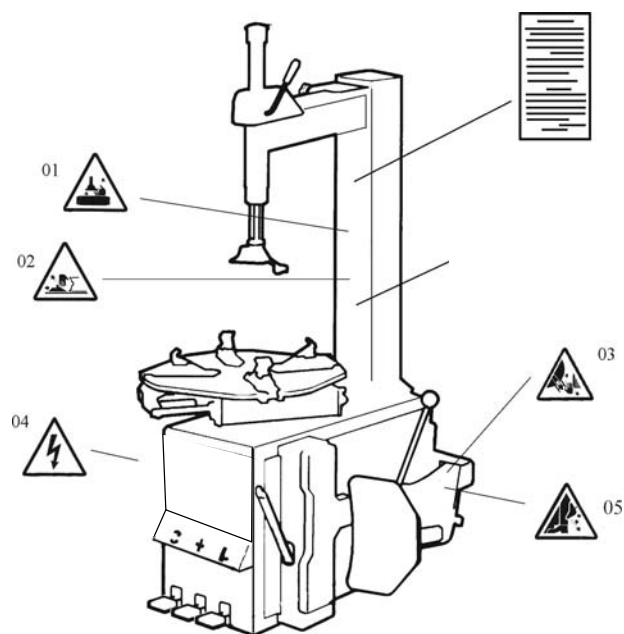
1. Introduction:

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

Caution: The machine is only for designed application. DO NOT use it for other purpose. , don't use it for other purposes. Manufacturer shall not be liable for any damage or injury caused by improper use or application out of design.

Safety regulation: Machine operation is especially reserved to trained and qualified professions or experienced operator who has already read this manual carefully. Any changes of machine components and application out of design without manufacturer's permission or discordance 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 manufacturer's delivery date; warranty excludes the wearing parts)



2. Safety Warning Label:

- 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 to the tyre bead when demounting the tyre;
- 04 Make sure and check the system is equipped with a good grounding circuit;
- 05 Don't put foot between the bead breaker shovel and the machine body during operation;
- 06 Warning instructions;
- 07 Pay attention to safety because it is an equipment with strong compressed air device;

3. Technical data:

Outside clamping	12~23 "
Inside clamping	14~28 "
Max.wheel.diameter	1143mm (45 ")
Max.wheel width	406mm (16 ")
Air supply	8-10Bar
Power supply	110V-1PH/220V-1PH/ 380V-3PH
Motor power	0.37kw
Max. Rotating Torque (Turntable)	1078Nm
Package size	1130X900X1030mm
Noise level	75dB

Remark: 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.

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 requirement:

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 atmosph

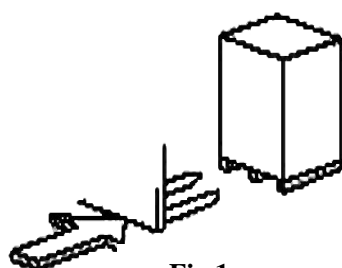


Fig 1

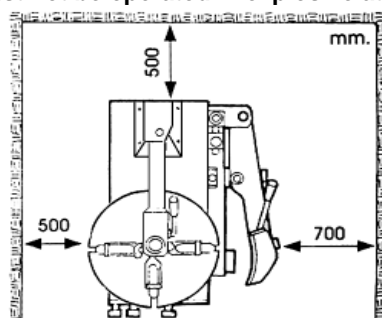


Fig 2

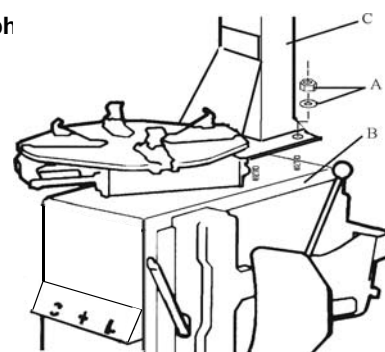


Fig 3

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 ensure the machine is stable. Make sure the system is equipped with a good grounding circuit for preventing 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, tighten them immediately. Otherwise the damage to the tyre may happen.



Fig 4

8. Electric and Pneumatic connections

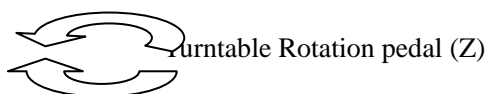
Caution: Before installation and connection, check to be sure that the electricity power supply.

Caution: All the installation of electric and pneumatic devices must be operated by a professional electrician.

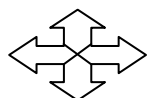
Connect the compressed air connector which is on the machine right side to compressed air system. The electric grid which the machine connects to must have fuses protection device and good outer cover grounding protection. Install the leakage automatic air switch on the main power supply, leakage current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

Caution: No power plug for this machine, user should self-connect one power plug not less than 16A as well as in line with the machine voltage. Or directly connect with the power supply according to the above requirements.

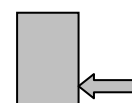
9. Adjusting operation:



Turntable Rotation pedal (Z)



Jaws clamping pedal (V)



Bead breaking pedal (U)



Rapid Tire Inflation Pedal (B)

1) Tread Turntable Rotation Pedal (Z), turntable(Y) rotates in clockwise direction; Lift Turntable Rotation Pedal (Y), turntable (Y) rotates in anticlockwise direction

2) Tread bead breaker pedal (U), bead breaker shovel (R) presses inwards; Loose bead breaking pedal (U), bead breaking shovel (R) returns to original position

3) Completely tread Jaws clamping Pedal (V), four jaws on turntable(G) open. Tread again, jaws (G) close. Fig 4

Tyre changer operation consists of three parts:

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

Caution: Before any operations, do wear uniform with tight sleeve and wear protective hat, gloves, and skid-proof shoes. Ensure to exhaust air in tyre completely, and remove all the wheel weights from the rim.

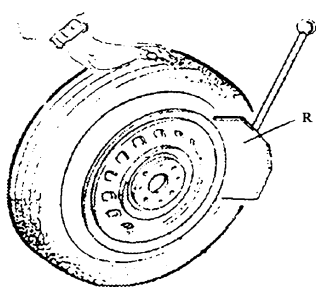


Fig 5

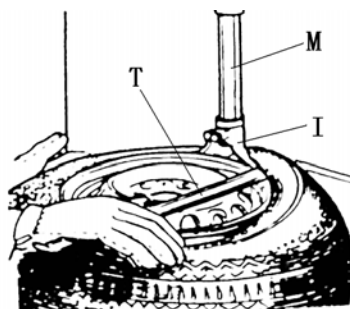


Fig 6



Fig 7

9.1. Demounting the tyre bead :

Ensure to exhaust air in the tyre completely, place the tyre against the rubber buffer (S). Bring the shovel (R) against the bead about 10mm from the edge of the rim shown as **Fig 5**. Tread Bead breaker Pedal (U) to press shovel 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 the tyre

Ensure to remove all the weights on the wheel rim and to exhaust air in the tyre completely before this operation. Smear tyre lubricant (or similar lubricant) around the tyre bead. Without lubricant, tyre may be badly worn or damaged.

With rated dimension, clamp the wheel as per following methods:

a- Method of clamping wheel from outside:

Tread the Jaws clamping Pedal (V) to middle level, positioning for the four clamps (G) by reference scale on the Turntable (Y); put the wheel on jaws, hold the rim, and tread the Jaws clamping Pedal (V) until the wheel is clamped by the jaws firmly.

b- Method of clamping wheel from inside:

Positioning for the four jaws (G) and let them be closed. Put the wheel on the turntable and tread the Jaws clamping Pedal (V) to open the jaws until wheel is clamped firmly.

Caution: Check to make sure the wheel is firmly clamped by the four jaws before next step.

Lower the Vertical Arm (M) until the Mounting /demounting head (I) reaches the edge of the rim, depress pneumatic locking button (K) to lock the Vertical Arm (M) and Horizontal arm in position, and make sure the gap between Mounting /demounting head and the edge of rim is 2-3 mm. Insert the Lifting Lever (T) between the tyre bead and front of the mounting /demounting head (I), and lift the tyre bead upon front knob of mounting/demounting head (**Fig 6**)

Hold lifting Lever in position, tread the Turntable Rotation Pedal (Z), rotate the Turntable (Y) in clockwise direction until the tyre is completely separated from the wheel rim. Lifting the tyre upon, Let the other side of tyre separated from the wheel rim.

Caution: Approach of chains, bracelets, loose clothes and irrelevant things to rotating parts will bring danger to the operator

9.3 Mounting the tyre :

Caution: Check to make sure that the tyre and the wheel rim are of same size before mounting the tyre . To avoid any damage on tyre, smear lubricant recommended by manufacturer, on the tyre bead and the wheel rim so as to make operation smooth . Put the tyre on turntable and check its condition.

Caution: When clamp the wheel rim, don't put hands between the wheel rim and jaws to avoid injury.

If rim diameter and width are same as the tyre, it is not necessary to loosen and lock the Hexagonal Vertical Mounting Arm, put the tyre on the rim tiltingly, make the tilting column back to place for demounting the tyre. Put the bottom tyre bead upon rear of Mounting/demounting head and below front of Mounting/demounting head. Press tyre with hands or helper arm, and then rotate the turntable for mounting the tyre bottom bead. Repeat the above operation for mounting the tyre top bead. (Fig 7)

10.098L Help arm application:

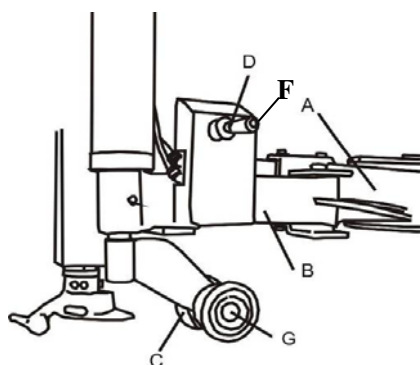


Fig 8

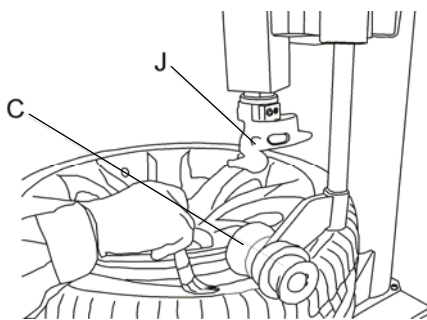


Fig 9

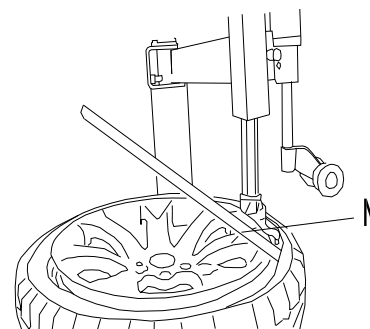


Fig 10

The right help arm is an auxiliary device for tyre changer, it is used to help to demount and mount tyres.

10.1 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.

10.2 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 tyre

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

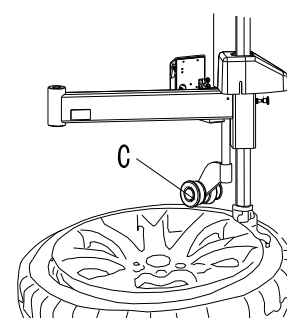


Fig 11

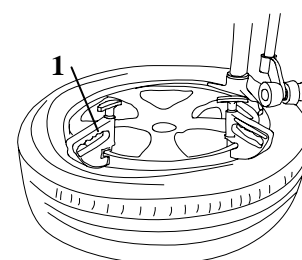


Fig12

b.Demount the 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 front 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 front knob of demounting / mounting head and rotate turntable to demount down tyre bead

c. Mount the 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 demounting/mounting head. Rotate turntable to mount bottom bead.

2. Make tyre top bead upon rear of demounting/mounting head and below front of demounting/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)

10. 3.009 Help Arm

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 13)

The rise-fall switch handle (2, Fig 13) is to control the tyre pressing devices for adjusting the height of tyre dismounted or mounted.

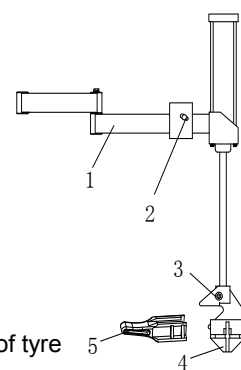


Fig 13

10.4 009 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:

a. Fixing the tire

Lower the tyre pressing devices (3, 4 Fig 14) next to the rim center, press the rim down to firmly fix the tyre in place, this method can fix the tyre more stable.

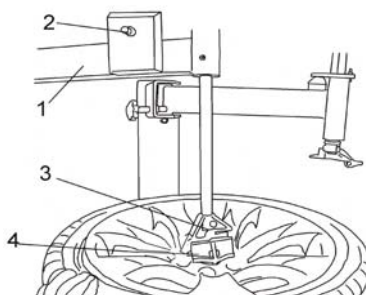


Fig.14

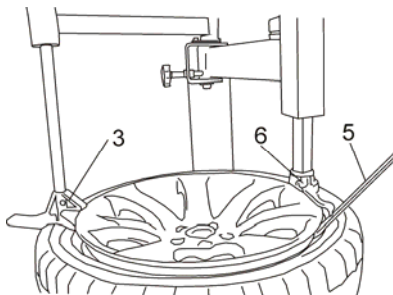


Fig15

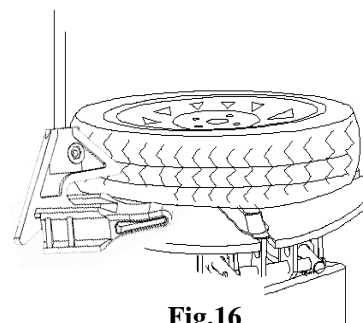


Fig.16

b. Demounting the tire

- 1) Breaking upper tyre bead

Remove tyre pressing device (down)(4 Fig 14), rotate arm (up) (1, Fig 14) to set tyre pressing device(up) above the tyre, lower tyre pressing device(up) by rise-fall switch handle (2 Fig 14) 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.14)

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 15) 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.15

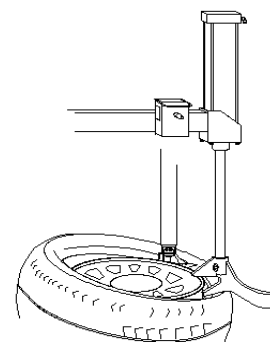


Fig 17

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 16

c. 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 17)

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)!

11. Rapid tyre inflation system:

11.1 Rapid tyre inflation system device

Note: before inflating operation, please make sure the pneumatic power supply connect well.

Before operation, must check the devices perform well as follow:

a.Thread the rapid tyre inflation pedal to middlel position (Fig 21,position 1), the inflating head should give air.

b.Thread Rapid Tyre Inflation Pedal all the way down (Fig 21, position 2), a strong air blast should come from the holes in the four jaw s' locking sliders. (Fig 22)

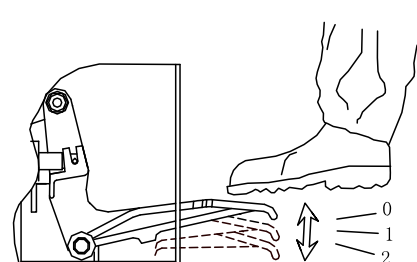


Fig 21

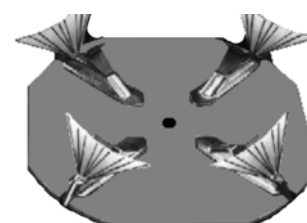


Fig 22

11.2 Wheel rim locking and Tyre inflation

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 fails to comply with the safety regulation;

11.3 Inflation the tyre with inner tube

- 1). Remove the valve stem.
- 2). Check to be certain that tyre and rim diameter correspond.
- 3). Check to be certain that rim and beads are sufficiently lubricated.
- 4). Press the pedal down to the middle position to start inflation.
- 5). Release frequently the inflating pedal to check pressure on the manometer. If the air pressure is too high, press the button under the manometer for release the rest air until the correct pressure is reached.

11.4 Inflation for the tubeless tyre.

Note: When inflating tubeless tyre using a strong jet of air, the wheel must be clamped from the inside of the rim.

- 1). Remove the valve stem.
- 2). Check to be certain that tyre and rim diameter correspond.
- 3). Check to be certain that rim and beads are sufficiently lubricated.
- 4). Press the pedal down to the middle position to start inflation.
- 5). If the bead of the tyre is not well seated, due to a strong bead, lift tyre manually until the upper bead seals against the rim, then press the pedal all the way down. A strong jet of air will be released through the nozzles in the slides and this will help the bead seal.
- 6). Release the tyre, set the pedal back to the middle position and continue to inflate the tyre to the required pressure. If the air pressure is too high, press the button under the manometer for release the rest air until the correct pressure is reached.

Note:

- 1). Failure to follow all warnings and instructions may lead to serious personal injury or death to operator or bystander. NEVER exceed 3.5 bar (50 psi) when seating beads or inflating tyres.
- 2). If a higher tyre inflation pressure is required, remove the wheel from the tyre changer and continue the inflation procedure with the wheel inside a special protection cage. NEVER exceed the maximum inflation pressure given by the tyre manufacturer.
- 3). Only specially trained persons are allowed to perform these operations. Do not allow others to operate or be near to the tyre changer.

12. Moving machine:

Please use forklift to move the machine. Disconnect the tyre changer from the electricity power supply and pneumatic power supply, lift the base board and insert the feet of forklift. Then mount the tyre changer machine to a new position and fix it tightly.

Note: the place chosen for fixing the tyre changer must meet the safety regulation.

13. 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 depress 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

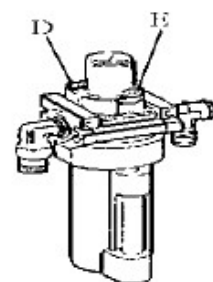
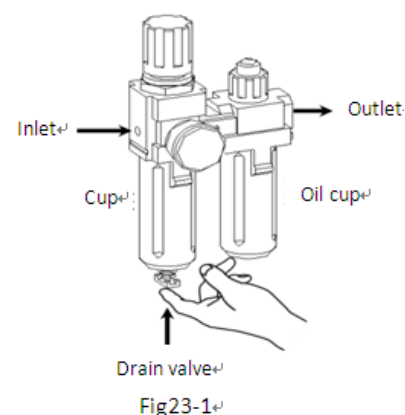


Fig 23

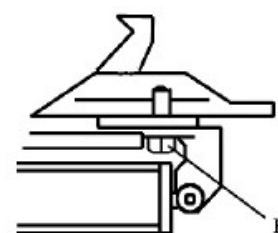
manufacturer.

- 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 depress 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, depress twice every time, drop down a drip of oil, otherwise adjust the screw (D) that controlled oil enter with minus screwdriver. (Fig 23)



- As shown in Figure 23-1, when you found there are some water in the cup, push up the drain valve to drain away water with your fingers; loosen your fingers after drained water, drain valve can be automatic closed under the action of the spring.

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



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

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 25 and adjust the (X).

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 26)

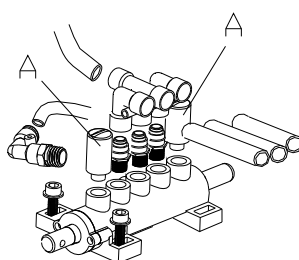


Fig 25

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
	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 head/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 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.

15. Guide for ordering spare parts

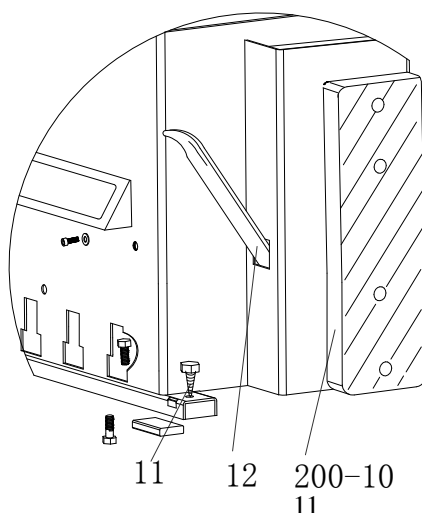
15.1. Firstly, the damaged or ordered sample should be gained and confirmed the quantity of spare parts

15.2. Confirm the replaced parts specification, avoid wrong order.

The confirmed method showed as following:

According to the use range and place position of parts, find out the codes of parts in the exploded drawing (section 17) from the manual.

For example, if lifting level is needed to be ordered, resulting from the fact that lifting level always placed in the sleeve, and its exploded drawing position is showed as below:



We can see the code “12” from the picture, then find out all the information of code “12” and record them.

11	B-027-060401-0	Grounding screw M6x40
12	C-200-580000-0	Lifting level
200-14	C-200-510000-0	Bead breaker arm rubber

The recorded information:

12	C-200-580000-0	Lifting level
----	----------------	---------------

15. 3. Gather the detailed information of parts

Code .	Order code	Name	Qty	Purchase time of machine
12	C-200-580000-0	Lifting level	2	2009.6.25

15.4. Please contact the spare parts department and confirm the order.

15.5. After confirming the order with any problem, the spare parts department will deliver the goods for you according to the order.

Special statement

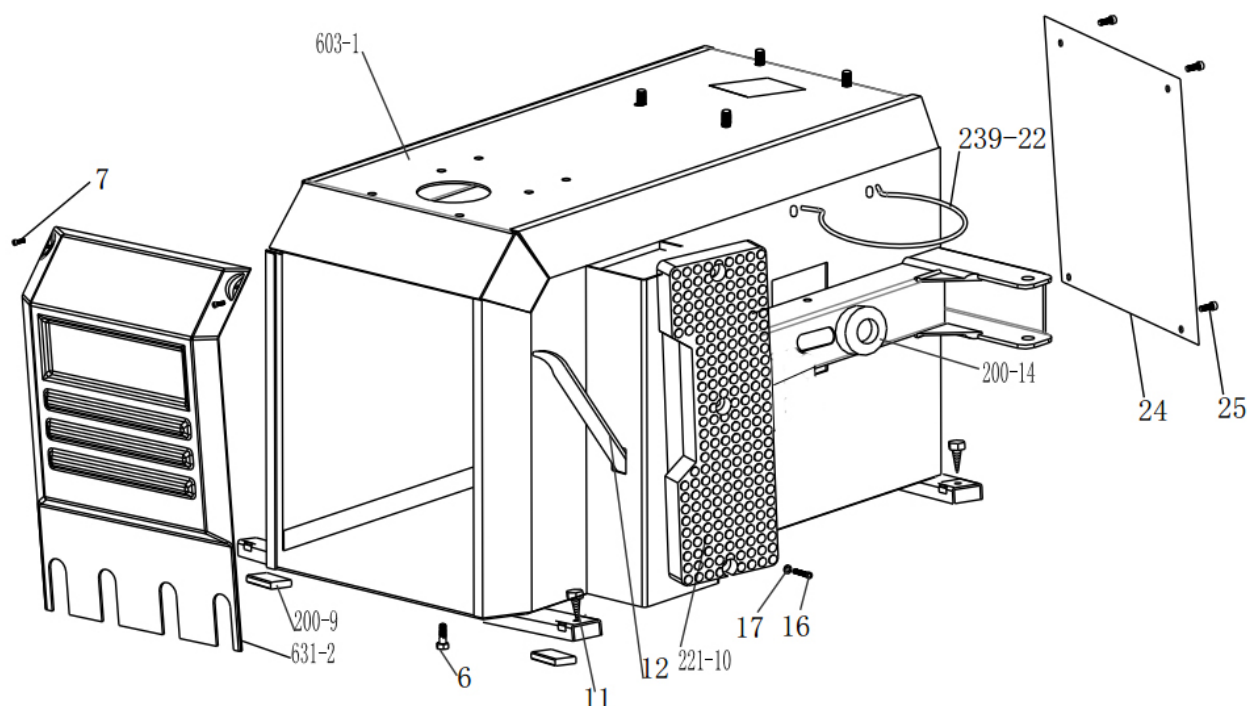
- ◆Manufacturer reserves the rights to change the parts specification without beforehand notice for the users.
- ◆Manufacturer do not liable for the modification and improvement of the products which have been sale

16. Wearing spare parts list

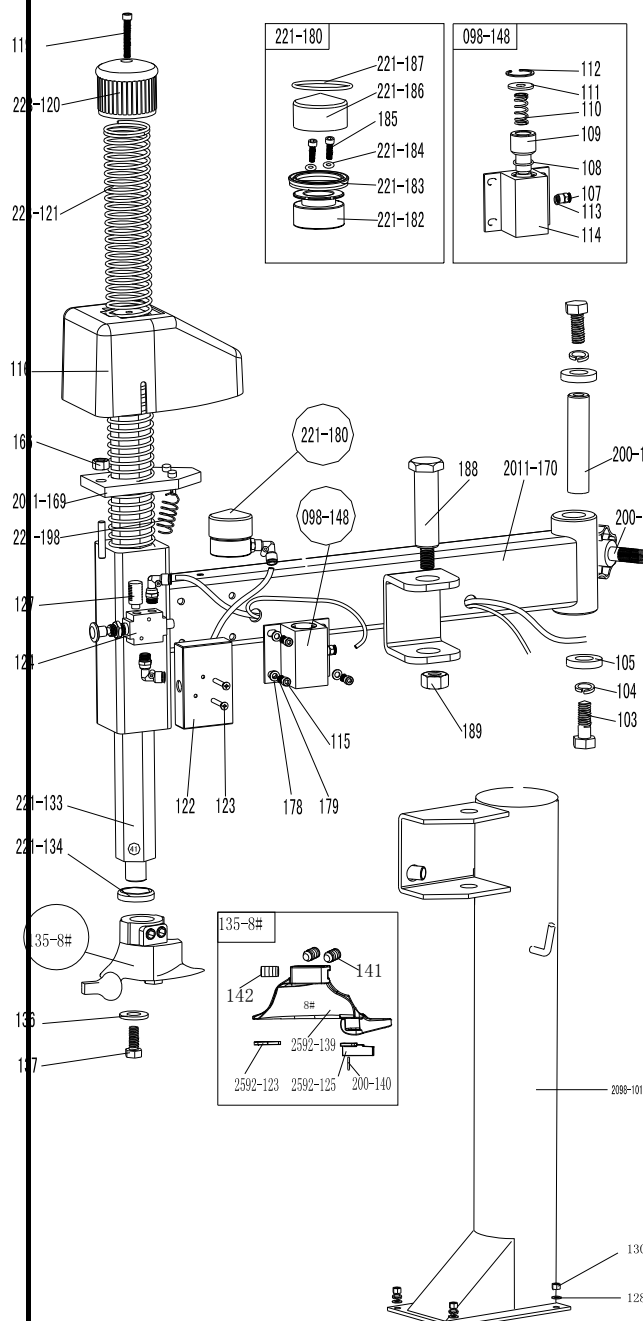
Code	Order code	Name	Code	Order code	Name
221-10	C-221-500000-0	Bead breaker buffer	228-362	S-000-195265-0	O-seal Ø198*3.1
226	S-005-020075-0	V-seal 20*28*7.5	363	S-005-200184-0	Y-seal D200*184*12
227	S-000-063265-0	O-seal 63*2.65	228-365	S-000-180500-0	O-seal Ø180*5
200-228	C-200-540000-0	Clamping cylinder piston Ø70	603-426	S-060-030000-0	Reverse switch
232	S-000-019262-0	O-seal Ø19.6×2.62	521	S-000-030355-0	O-seal Ø 30*3.55
306	S-000-016265-0	O-seal Ø 16*2.65	200-532	S-000-059262-0	O-seal 59.9*2.62
307	S-000-020265-0	O-seal Ø 20*2.65	811	S-033-330000-0	Oil fog maker 3300

Remark: The parts in the list are easy broken parts, if other parts needed to be ordered, please check the manual.

17.Exploding drawing



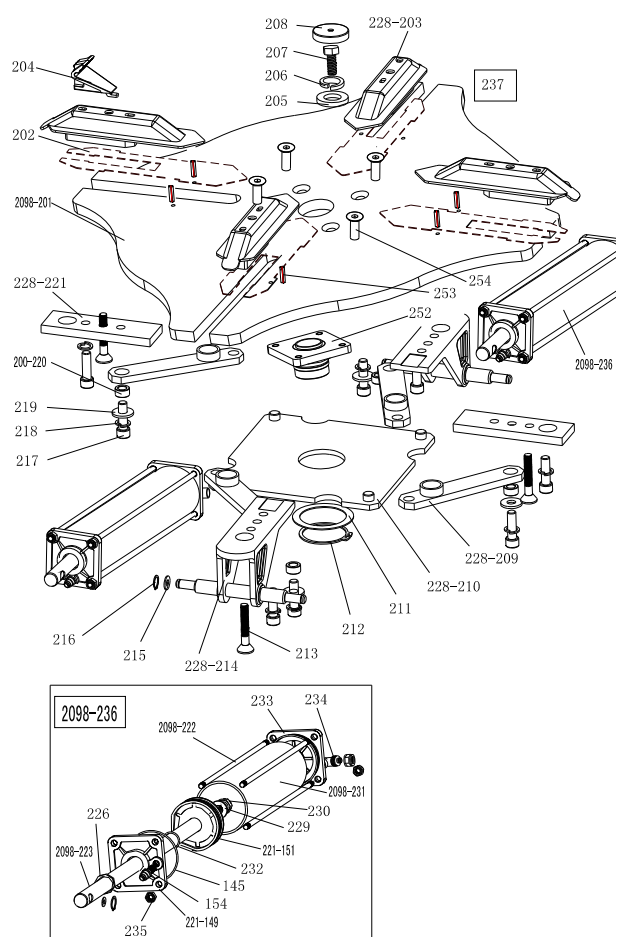
603-1	CX-6603-010000-0	Machine body
631-2	C-6631-080100-0	Pedal front cover
6	B-014-080251-0	Outer hex bolt M8x25
7	B-024-050101-0	Cross round head screw M5*10
200-9	C-000-001020-0	Rubber foot buffer
221-10	C-221-500000-0	Bead breaker buffer
11	B-027-060401-0	Grounding bolt M6x40
12	C-200-580000-0	Lifting level
221-14	C-221-510000-0	Bead breaker arm buffer
16	B-010-080201-0	Hex socket head bolt M8x20
17	B-040-081715-1	Flat washer Ø 8*17*1.5
221-20	CX-221-010106-0	Tilting seat U221
221-21	C-221-820000-0	Tilting protect cover
239-22	C-239-333700-0	Oil box support
23	B-014-100251-0	Outer hex bolt M10x25
24	CX-6631-020000-A	Rear block plate
25	B-010-060201-0	Hex socket head bolt M6x20



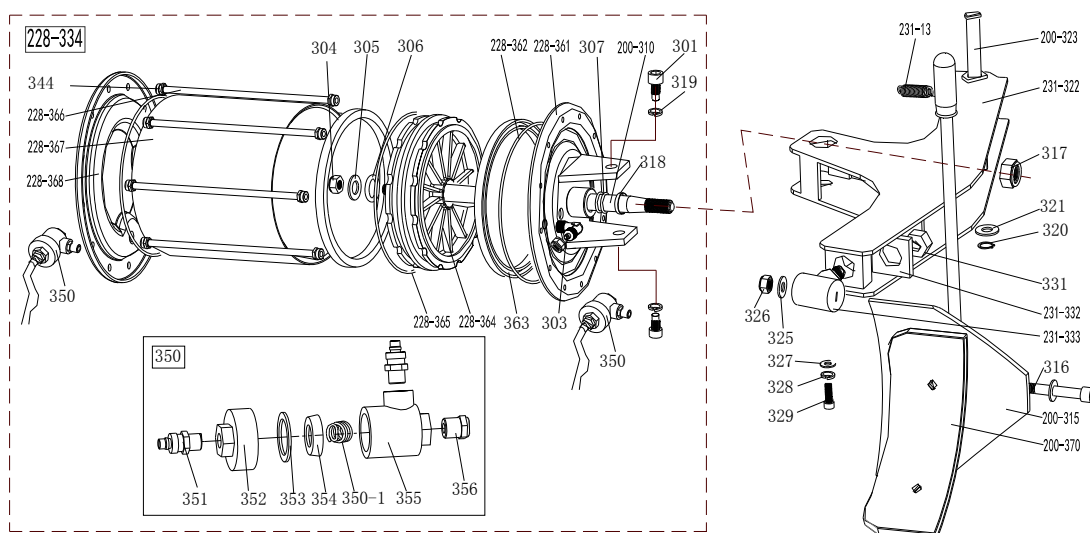
603-101	CX-6603-250000-0	Round column
603-102	CX-6603-190000-0	Swing arm pin
104	B-001-160001-0	Self-locking nut M16
105	CX-200-140000-0	Big washer
200-106	C-200-350000-0	Column adjust handle
107	S-010-050004-0	Quick straight union M5- Ø 4
108	S-000-030355-0	O-seal 30X3.55
109	CX-007-180600-0	Swing arm spring plate
110	C-007-180700-0	Swing arm spring
111	CX-007-180800-0	Swing arm plate washer
112	B-055-300002-0	Snap ring Ø30(hole)
113	S-000-005200-0	O-seal Ø 5.6X2
114	CX-098-080000-0	Pneumatic lock barrel
115	B-010-060201-0	Hex socket head bolt M6X20
116	C-298-480000-0	Locking plate cap
119	B-010-100301-0	Hex socket head bolt M10 × 30
228-120	C-228-490000-0	Vertical arm cap 228
228-121	C-228-390000-0	Vertical arm spring
122	C-098-090000-0	Locking switch box
123	B-017-040301-0	cross head screw M4*30
124	S-030-010414-2	Hand valve
127	S-023-010801-0	Muffler 1/8"
128	B-040-102020-1	Flat washer Ø10×2
130	B-001-100001-0	Self-locking nut M10
221-133	CX-221-160000-0	Vertical arm
221-134	C-228-520000-0	Vertical arm washer
136	CX-200-170000-0	Mount/demount head flat washer
137	B-014-100251-0	Outer hex bolt M10 × 25
098-148	CX-098-080000-0	Pneumatic lock barrel
166	B-001-100001-0	Self-locking nut M10
2011-169	CX-298-22000-0	Hex locking board 2011
2011-170	CX-211-180000-0	Swing arm 2011
178	B-040-061210-1	Flat washer Ø6
179	B-050-060000-0	Spring washer Ø6

221-180		Complete locking cylinder	221-198	C-221-400000-0	Hex locking board spring
221-182	C-221-090100-0	Locking cylinder piston	135-8#	CW-113-259200-0	Complete mount/demount head 8#
221-183	S-005-050065-1	V-seal 50*60*6.5	2592-139	C-2592-150000-0	Mount/demount head 8#
221-184	S-000-005200-0	O-seal Ø 5.6*2	141	B-007-120121-0	Hex locking bolt M12 × 12
185	B-010-060551-0	Hex socket head bolt M6 × 55	142	B-007-100121-0	Hex locking bolt M10 × 12
221-186	CX-221-090200-0	clamping cylinder piston cover Ø 60	2592-123	C-2592-150500-0	Mount/demount head protector
221-187	S-000-052200-0	O-seal Ø52*2	200-140	C-200-150400-0	Hex pin
188	CX-098-030000-0	Pressing arm pin (right)	2592-125	C-2592-150300-0	Mount/demount head protector
189	B-001-160001-1	Self-locking nut M16*1.5			

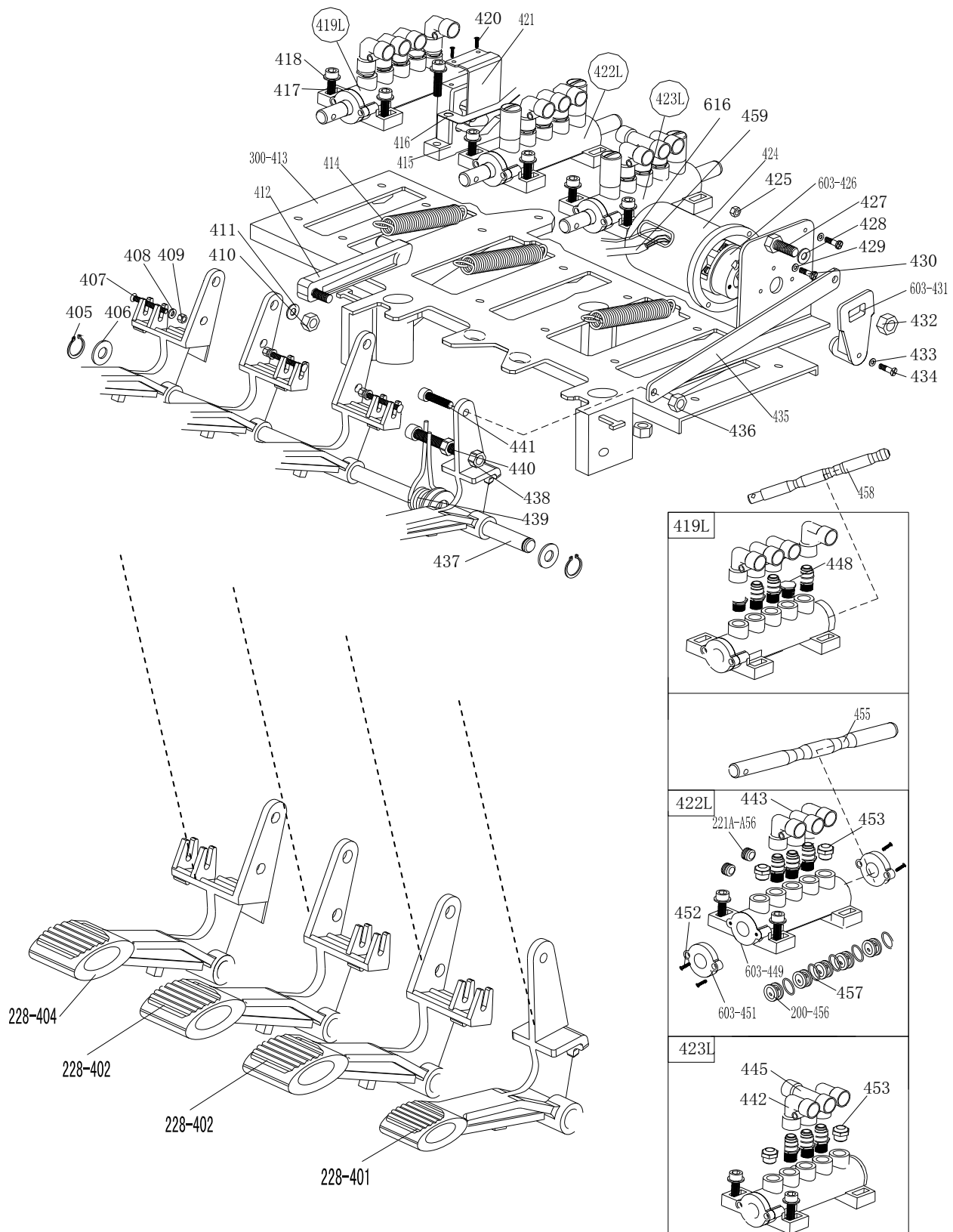
C



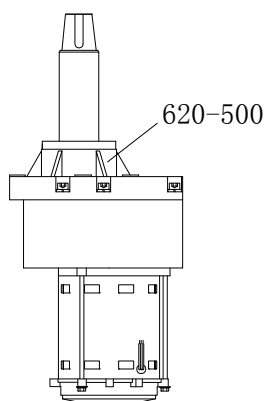
2098-201	CX-298-130100-0	Turntable assembly 720
202	CX-298-120300-0	Jaw sliding plate(optional)
228-203	CX-228-120000-0	Jaw cap assembly
204	C-200-570000-0	Jaw
205	CX-200-140000-0	Big washer
206	B-050-160000-0	Spring washer Ø16
207	B-014-160401-0	Outer hex bolt M16×40x1.5
208	C-200-440000-0	Turntable cap
228-209	CX-298-310000-0	Connection rod assembly 615
228-210	CX-298-280000-0	Square turntable 615
211	CX-200-290000-0	Square turntable washer
212	B-055-650001-0	Snap ring Ø65(shaft)
213	B-012-120631-0	Hex sunk head screw
228-214	CX-228-110200-0	Jaw slide guide with pin
215	B-040-122520-1	Flat washer Ø12X25X2
216	B-055-120001-0	Snap ring Ø12(shaft)
217	B-014-120801-0	Outer hex bolt M12×40
218	B-046-122050-1	Teeth locking washer Ø12×20.5x1
219	B-040-123030-1	Flat washer Ø12X30X3
200-220	CX-200-300000-0	Connection rod nut
228-221	CX-228-110100-0	Jaw slide guide without pin double holes
2098-222	C-298-100400-0	Threaded connection rod
2098-223	C-298-100200-0	Clamping cylinder piston rod
221-149	C-221-350100-0	Clamping cylinder cover without handle
154	S-011-010808-0	Straight union 1/8"-Ø8
226	S-005-020075-0	V- seal 20*28*7.5
145	S-000-068353-0	O-seal 68.26*3.53
221-151	C-221-550000-0	Clamping cylinder piston
229	B-040-122520-1	Flat washer Ø12X25X2
230	B-004-120071-1	Nut M12X7X1.75
2098-231	C-298-100500-0	Clamping cylinder barrel 406
232	S-000-019262-0	O-seal 19.6X2.62
233	C-221-350300-0	Clamping cylinder cover with handle
234	S-018-010808-0	Union 1/8-Ø8
235	B-001-080001-0	Self-locking nut M8
2098-236	CW-105-209800-5	Complete clamping cylinder
237	CW-104-209800-0	Complete special-shape turntable 720
252	CX-298-130200-0	Turntable spacer
253	B-070-050016-0	Elastic round pin M5*16
254	B-012-120301-0	Hex socket head bolt M12*30



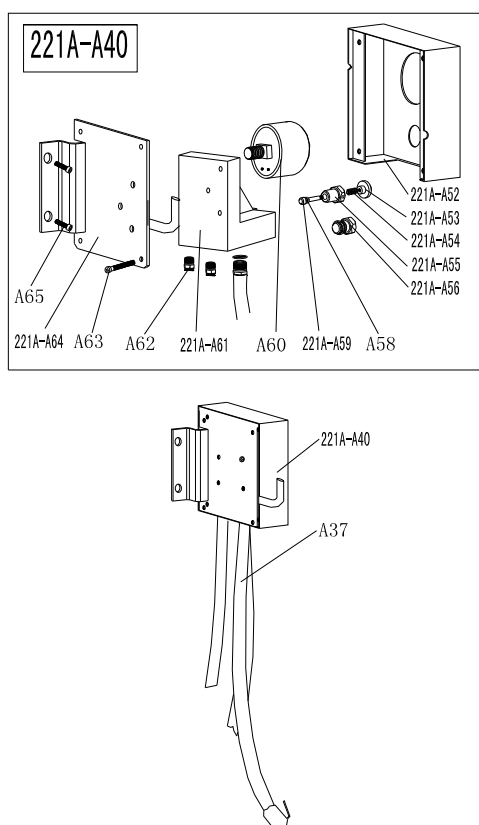
231-13	C-231-360000-0	Bead breaker spring	231-332	CX-231-030900-0	Enlarge bead breaker arm rotating washer ϕ 16.5*40*8
301	B-010-140301-0	Hex socket head bolt M14*30	231-333	CX-231-030800-0	Enlarge bead breaker arm rotating shaft
303	S-018-010408-0	2-way Union (90°) 1/4-Ø8	228-334	CW-108-209800-0	Complete bead breaker cylinder
304	B-001-160001-1	Self-locking nut M16X1.5	344	B-001-080001-0	Self-locking nut M8
305	B-040-162820-1	Flat washer ϕ 16*28*2	350	CW-112-209800-0	Bead breaker cylinder exhaust valve
306	S-000-016265-0	O- seal ϕ 16*2.65	351	S-012-010808-0	Quick union 1/8- Ø 8
307	S-000-019262-0	O- seal ϕ 19.6*2.62	352	C-098-600200-0	Bead breaker cylinder exhaust valve cover
200-310	C-200-050100-0	Bead breaker cylinder piston rod	353	C-098-600400-0	Seal Washer
200-315	CX-200-070000-0	Bead breaker shovel assembly	354	C-098-600300-0	Bidirectional Seal
316	B-010-120901-0	Hex socket head bolt M12*90	355	C-098-600100-0	Bead breaker cylinder exhaust valve barrel
317	B-001-160001-1	Self-locking nut M16X1.5	356	S-023-010401-6	Muffler 1/4
318	U-006-000001-1	Bronze stripes	357	S-010-010408-0	Quick straight union 1/4- Ø8
319	B-050-140000-0	Spring washer Ø14	358	CZ-298-050900-0	Nylon cover
320	B-055-160001-0	Snap Ring Ø 16	359	S-005-0200075-0	V-seal 20*28*7.5
321		Flat washer	228-361	CX-298-050500-0	Bead breaker cylinder cover assembly
231-322	CX-231-030000-0	Enlarge bead breaker arm 231	228-362	S-000-195265-0	O-seal Ø195*3.1
200-323	CX-200-040000-0	Bead breaker arm pin	363	S-005-200184-0	Y-seal D200*184*12
325	B-040-122520-1	Flat washer ϕ 12*24*2	228-364	C-298-050200-0	Bead breaker cylinder piston
326	B-001-120001-0	Self-locking nut M12	228-365	S-000-180500-0	O-seal ϕ 180*5
331	B-001-160001-0	Self-locking nut M16	228-366	C-298-051000-0	Threaded connection rod
228-368	C-298-051100-0	Bead breaker cylinder rear cover	228-367	C-298-050300-0	Bead breaker cylinder barrel D200
358-1	C-2098-600500-0	Spring	200-370	C-200-070600-0	Bead breaker shovel protection cover(optional)



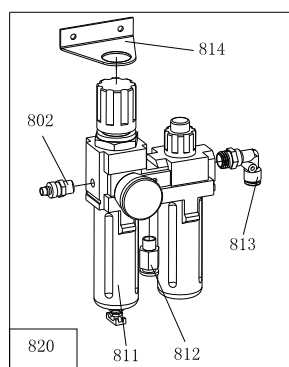
228-401	CX-228-060400-0	Reverse switch pedal	429	B-040-040000-1	Flat washer Ø 4
228-402	CX-228-060300-0	5-way valve pedal(right)	430	B-024-040161-0	Cross-round head screw M4*16
228-404	CX-228-060200-0	5-way valve pedal(left)	603-431	C-200-530000-1	Reverse switch handle
405	B-055-120001-0	Snap ring Ø12	432	B-001-060001-0	Self-locking nut M6
406	B-040-122520-1	Flat washer Ø12*24*2	433	B-040-030000-1	Flat washer Ø3
407	B-024-040301-0	Cross head screw M4X30	434	B-024-030161-0	Cross head screw M3X16
408	B-040-040000-1	Flat washer Ø 4	200-435	CX-200-060600-0	Pedal connection rod
409	B-001-040001-0	Self-locking nut M4	436	B-001-080001-0	Self-locking nut M8
410	B-001-080001-0	Self-locking nut M8	437	CX-221-060700-0	Pedal front shaft
411	B-040-081715-1	Flat washer Ø8*17*1.5	438	B-004-080001-0	Nut M8
200-412	C-200-060100-0	Cam connection rod	439	C-200-370000-0	Pedal twist spring
300-413	C-300-060100-0	Pedal support board	440	B-010-080501-0	Hex socket head bolt M8×50
200-414	C-200-380000-0	Pedal Spring	441	B-010-080201-0	Hex socket head bolt M8×20
200-415	C-200-061500-0	Cam	442	S-012-010808-0	Quick union 1/8- Ø 8
200-416	C-200-810000-0	Cam washer	445	S-016-010808-2	T-union1/8-2* Ø 8
417	B-010-060201-0	Hex socket head bolt M6×20	448	B-007-180081-R	Hex socket head bolt1/8*8
419L	CW-110-660300-A	5-way valve(inflating, without rod) (Aluminum alloy)	603-449	C-200-060901-1	5-way valve (left)(Aluminum alloy)
420	B-019-290121-0	Cross head self tapping screw2.9×12	200-451	C-200-061100-0	5-way valve cover(Aluminum alloy)
200-421	CX-200-060500-0	Cam cover	452	B-024-290121-0	Cross head screw ST2.9*14
422	CW-110-660300-0	5-way valve (L-union,without rod) (Aluminum alloy)	453	S-023-010801-0	Muffler 1/8"
423L	CW-110-660301-0	5-way valve (T-union,without rod) (Aluminum alloy)	200-455	CX-200-061200-0	5-way valve rod
200-424	C-200-061400-0	Reverse switch cover	200-456	C-200-061000-0	5-way valve rod spacer
425	B-004-040001-1	Nut M4	457	S-000-012400-0	O-seal 12*20*4
603-426	S-060-030000-0	Reverse switch	221A-458	CX-221-650000-A	Inflating 5-way valve rod
427	B-010-060201-0	Hex socket head bolt M6×20	459		Power supply cable
428	B-040-061210-1	Flat washer Ø 6×12×1	616		Motor cable
221A-A56	B-007-180081-R	Hex socket head bolt1/8*8	603A-480		Complete 4-pedals assembly 6603A



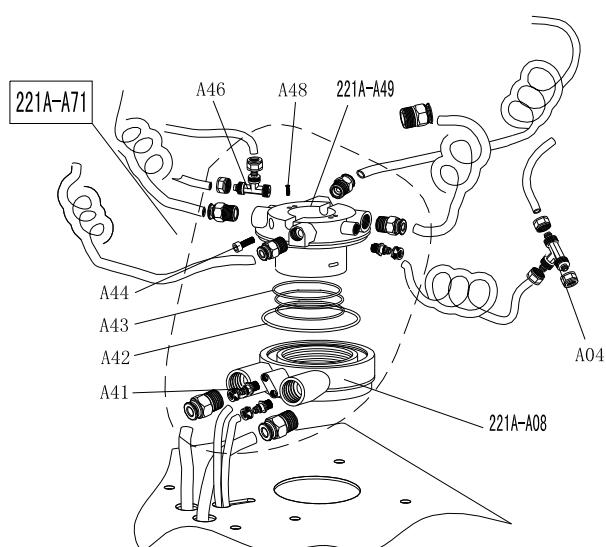
620-500		Combined gear box
---------	--	-------------------



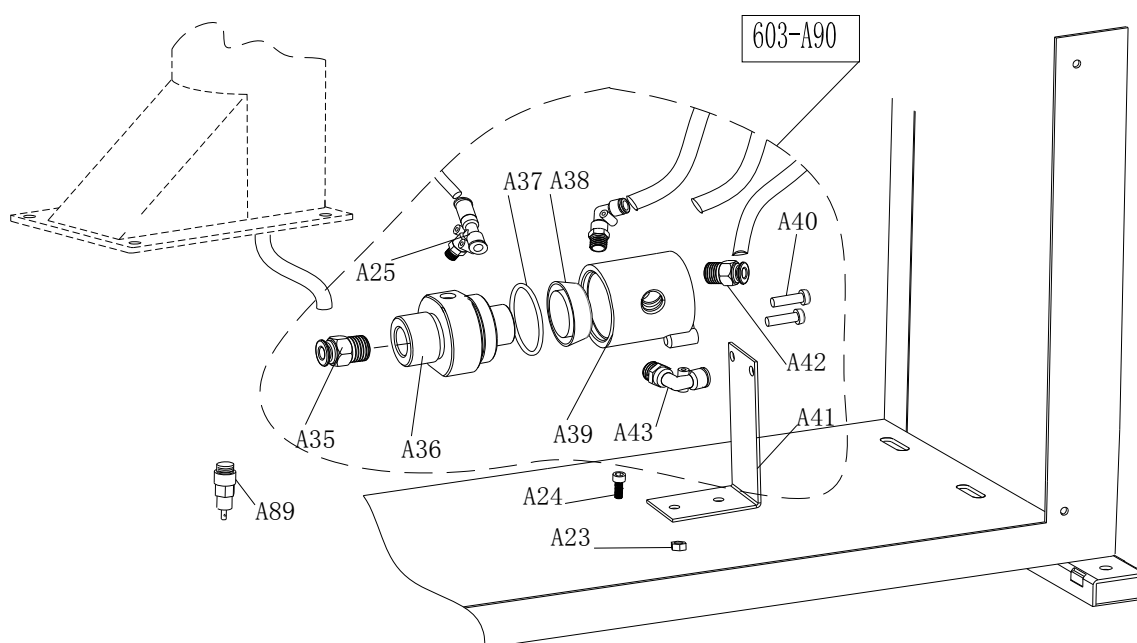
221A-A52	C-221-700000-A	Pressure gauge box Φ60
221A-A53	C-221-690300-A	Button
221A-A54	C-221-690400-A	Button spring
221A-A55	C-221-690100-A	Button valve
221A-A56	B-007-180081-R	Hex socket head bolt 1/8*8
A58	S-000-004200-0	O-seal 4*2
221A-A59	C-221-690200-A	Button rod
A60	S-038-000020-0	Pressure gauge 10kg
221A-A61	C-221-680000-A	Seat with holes
A62	S-010-010808-0	Quick straight union 1/8-Ø8
A63	B-017-040301-0	cross head screw M4*30
221A-A64	CX-221-710000-A	Pressure gauge box support
A65	B-010-060161-0	Hex socket head bolt M6*16
A37	S-035-014150-0	Rubber hose 1.5 with clip
A38		Air hose 12X8
A39		Air hose 12X8
221A-A40	CW-118-022100-0	Complete pressure gauge box



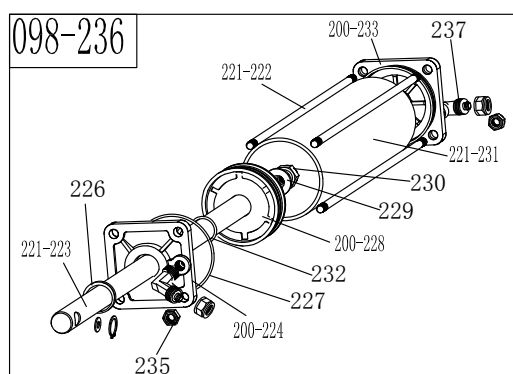
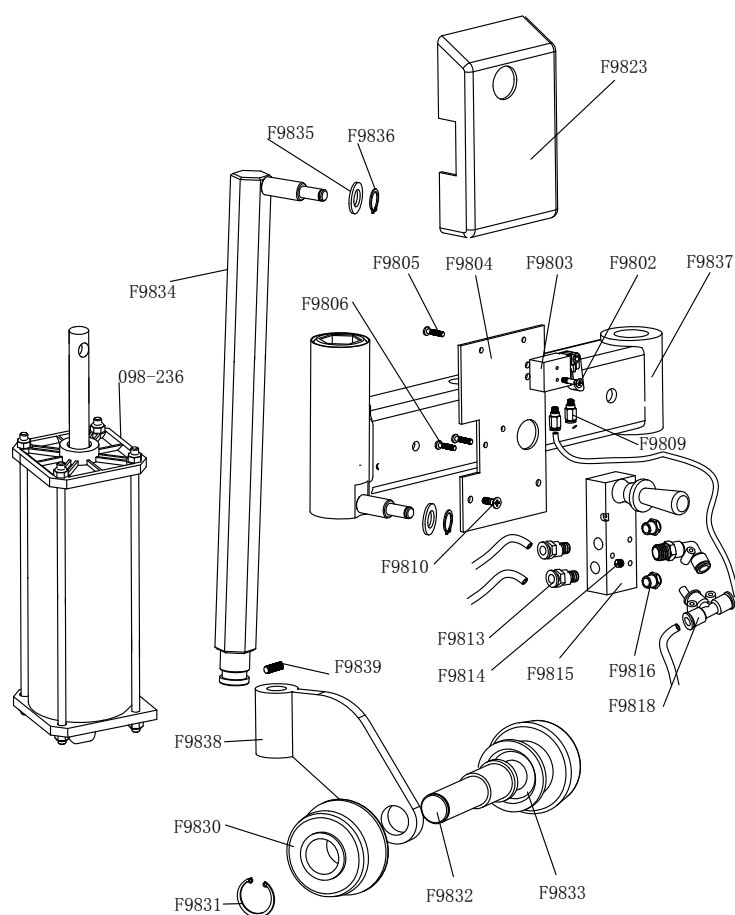
802	S-025-000050-0	Quick nozzle PM20
811	S-033-330000-0	Oil fog maker 3300
813	S-018-010408-0	L-union 1/4- Ø8
820	CW-114-033000-0	Complete oil fog maker 3300



221A-A08	CX-221-430100-A	Rotating valve casing (A)
A04	S-015-000008-3	T-union 3* Ø 8
A41	S-011-010808-0	Straight union 1/8-Ø8
A42	S-000-089200-0	O-seal Ø89*2
A43	S-000-062280-2	O-seal Ø62*2.8
A44	B-010-060201-0	Hex socket head bolt M6X20
A46	S-015-010808-2	T-union 1/8-2*Ø8
A48	B-007-040061-0	Hex socket head bolt M4*6
221A-A49	CX-221-430200-A	Rotating valve mandrel (A)
221A-A71	CW-106-022102-A	Complete Rotating valve (A)

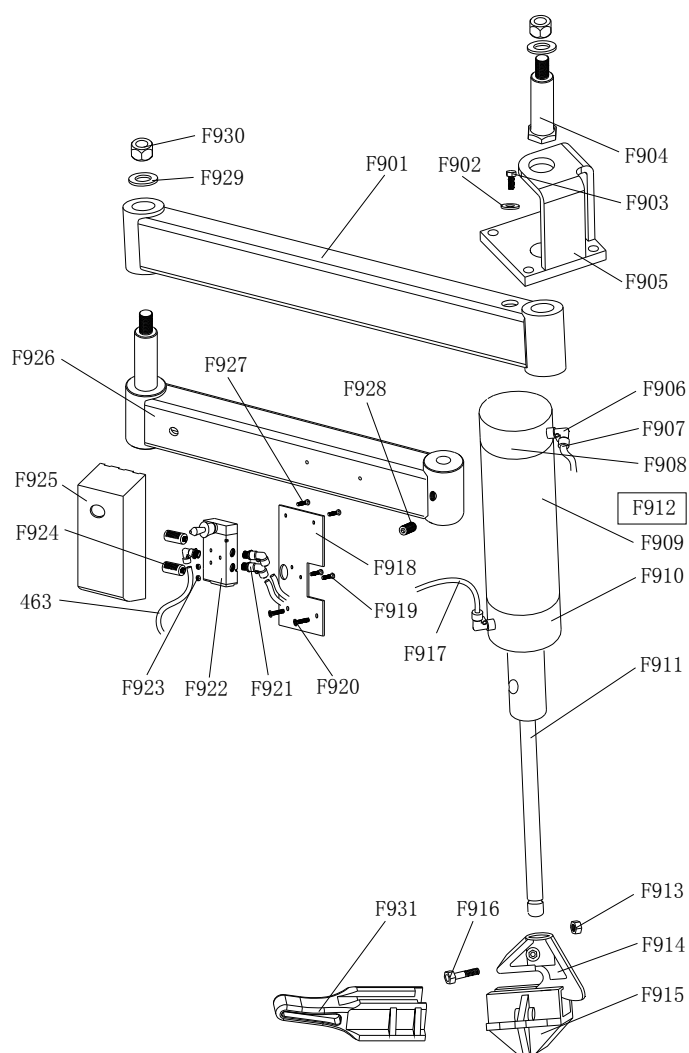


A23	B-001-060001-0	Self-locking nut M6
A24	B-010-060161-0	Hex socket head bolt M6*16
A25	S-016-010808-2	One way valve 1/8-2* Ø8
A28	S-012-010212-0	Quick union 1/2-Ø12
A35	S-010-010212-0	Quick straight union 1/2- Ø12
A36	C-6631-600100-A	Exhaust valve upper cover
A37	S-000-040262-0	O-sealØ40*2.65
A38	S-005-043000-0	V-seal
A39	C-6631-600200-A	Exhaust valve down cover
A40	B-010-060201-0	Hex socket round bolt M6*20
A41	CX-6631-600400-A	Exhaust valve support
A42	S-010-010408-0	Quick straight union 1/4- Ø8
A43	S-012-010212-0	Quick union 1/2- Ø12
A86	S-030-010400-0	Water drain valve
603-A90	CW-112-660301-0	Complete exhaust valve

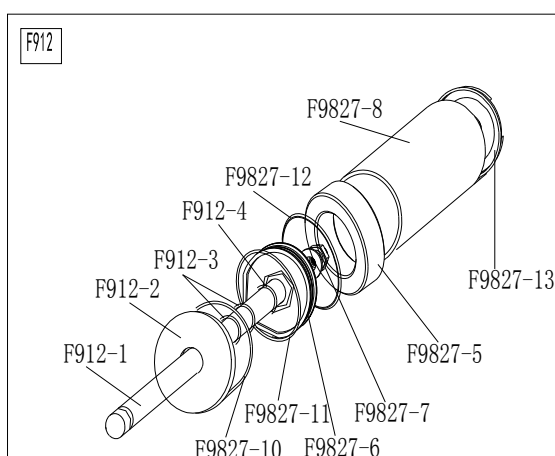


F9802	B-024-050101-1	Cross head Screw M5X10
F9803	S-030-010414-0	Pneumatic valve
F9804	CX-007-200000-0	Raise-fall switch base plate
F9805	B-017-040161-0	Cross flat head screw M4*16
F9806	B-017-040301-0	Cross flat head screw M4*30
F9807	B-007-100121-0	Hex socket head bolt M10*12
F9809	S-010-050004-0	Quick straight union M5-Ø4
F9810	B-010-050161-0	Hex socket head bolt M5*16
F9813	S-012-010406-0	Quick union 1/4-Ø6
F9814	B-004-040001-1	Nut (silver) M4
F9815	S-030-010818-0	Raise-fall control valve
F9816	S-023-010801-6	Muffler (cooper)
F9817	S-012-010406-0	Quick union 1/4-Ø6
F9818	S-013-104206-0	T-union 2XØ6-Ø4
F9820	S-017-010806-2	T-union 1/8-2*Ø6
F9823	C-007-181000-0	Control valve protect cover
F9827	CA-005-209800-2	Complete 098 cylinder
F9828	S-012-010406-0	Quick union 1/4-Ø6
F9830	C-098-060100-0	Tyre pressing roller 1
F9831	B-055-300002-0	Snap ring Ø30(hole)
F9832	CX-098-050000-0	Tyre pressing roller shaft
F9833	C-098-060200-0	Tyre pressing roller 2
F9834	CX-098-090000-L	Tyre pressing hex rod assembly L
F9835	B-055-120001-0	Snap ring Ø12
F9836	B-040-122520-1	Flat washerØ12*24*2
F9837	CX-098-020000-L	Right tyre pressing arm
F9838	CX-098-040000-L	Tyre pressing roller support
F9839	B-007-080121-0	Hex socket head bolt M8*12

221-222	C-221-100400-0	Screw bolt of pull rod 393	230	B-004-120071-1	Nut M12X7X1.75
221-223	C-221-100200-0	Piston rod of clamping cylinder 400	221-231	C-221-100500-0	Clamping cylinder 360
200-224	C-200-100100-0	Clamping cylinder cover(without handle)	232	S-000-019262-0	O-seal Ø19.6X2.62
225	S-011-010808-0	Straight union 1/8"-Ø8	200-233	C-200-100300-0	Clamping cylinder cover(with handle)
226	S-005-020075-0	V-seal 20*28*7.5	234	S-018-010808-0	Quick union 1/8-Ø8
227	S-000-063265-0	O-seal 63*2.65	235	B-001-080001-0	Self-locking nut M8
200-228	C-200-540000-0	Clamping cylinder piston Ø70	098-236		098L Complete cylinder assembly
229	B-040-122520-1	Flat washerØ12*24*2	237	S-018-010806-0	L-union 1/8-Ø6

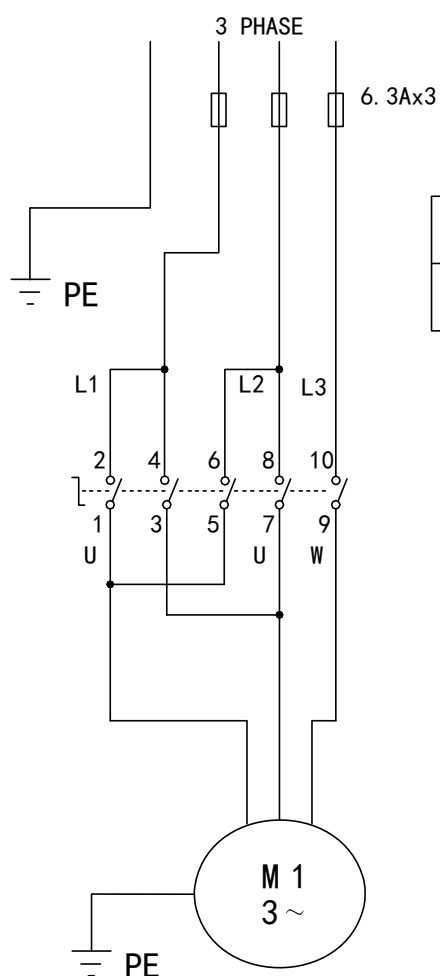


F901	CX-009-020000-0	009 Pressing arm
F902	B-050-100000-0	Spring washer ϕ 10
F903	B-010-100301-0	Hex socket head bolt M10*30
F904	CX-009-050000-0	009 Pressing arm pin
F905	CX-009-010000-0	009 Pressing plate
F906	S-012-010806-0	Quick union 1/8- ϕ 6
F907		Air hose(PU)6*4
F908	CW-105-020900-0	Complete 009 help arm cylinder
F909		
F910	B-001-060001-0	Self-locking nut M6
F911	C-008-090100-0	Tire pressing head (upper)
F912	C-008-090200-0	Tire pressing head(bottom)
F913	B-010-060301-0	Hex socket head bolt M6*30
F914	CX-007-200000-0	Rise-fall switch base board
F915	B-017-040301-0	Cross head screw M4*30
F916	B-024-050161-1	Cross round head screw 5*16
F917	S-012-010406-0	Quick Union 1/4- ϕ 6
F918	S-030-010818-0	Raise-fall control valve
F919	B-004-040001-1	Nut(silver) M4
F920	S-023-010801-0	Muffler 1/8
F921	C-007-181000-0	Control valve protect cover
F922	CX-009-030000-0	009 Auxiliary pressing arm
F923	B-017-040161-0	Cross head screw M4*16
F924	B-007-100121-0	Hex socket head bolt M10*12
F925	CX-200-140000-0	Big washer
F926	B-001-160001-0	Self-locking nut M16
F927	C-009-110000-0	Tire lifting roller head



F912	CW-105-020900-0	Complete 009 help arm cylinder
F912-1	C-009-070400-2	009 help arm cylinder piston rod
F912-2	C-009-070100-2	009 help arm cylinder front cover
F912-3	S-000-025265-0	O-seal ϕ 25*2.65
F912-4	S-000-011180-0	O-seal ϕ 11*1.8
F9827-8	CX-009-070300-0	009 help arm cylinder barrel
F9827-10	S-000-063265-0	O-seal ϕ 63*2.65
F9827-6	C-098-075400-0	Help arm cylinder piston ϕ 70
F9827-7	B-001-120001-0	Self-locking nut M12
F9827-13	CX-098-070200-0	009 help arm cylinder back cover
F9827-12	U-006-000001-0	Guide belt 4*2
F9827-11	S-000-063355-0	O-Seal ϕ 63*3.55
F9827-5	C-098-070600-0	Right arm cylinder washer U098 Φ 31*50*15

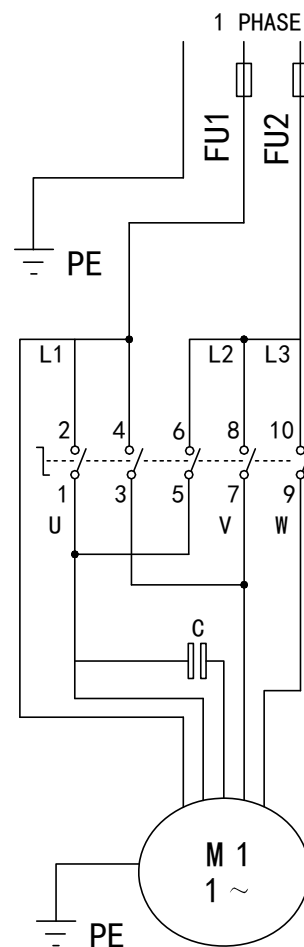
18. Circuit diagram



FU1-FU2	
110V 50/60HZ	25A
220V 50/60HZ	20A

Function table

			3	11	12
X		X		9	10
		X		7	8
X			2	5	6
X				3	4
			1	1	2
1	0	2		contacts NO. position	



19. Pneumatic drawing

