

ECONOMICAL TYRE CHANGER

FT-3301D



INSTRUCTION

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WARNING

The present instructions booklet is an important part of the product; please carefully study the warnings and instructions. This information is important for safely using and maintenance. Conserve this booklet carefully for further consultation.

1、 The Product Description:

Use: This is a semiautomatic tyre changer designed and constructed to be used for mounting and dismounting tyres on the wheel rims of motor vehicles and motorcycles.

WARNING: This machine is limited to design a clear purpose, not for other purposes. For beyond the scope of the damage and the machine caused by improper use, the manufacturer shall not be responsible.

Safety Rules: The machine must be operated by the trained person, who has read the instructions and has machine operating experience, without permission or do not as the require of the instruction, change any machine parts or beyond the machine use range may malfunction or damage the machine, these situations is not covered by the warranty. If the machine parts are damaged for some reason, please replaced the part as the part numbers from the factory. (Warranty is one year)

2、 Warning Signs And Paste Parts Description:

Safety Warning Label:

01 Do not put your hand into the bottom of the removable head;

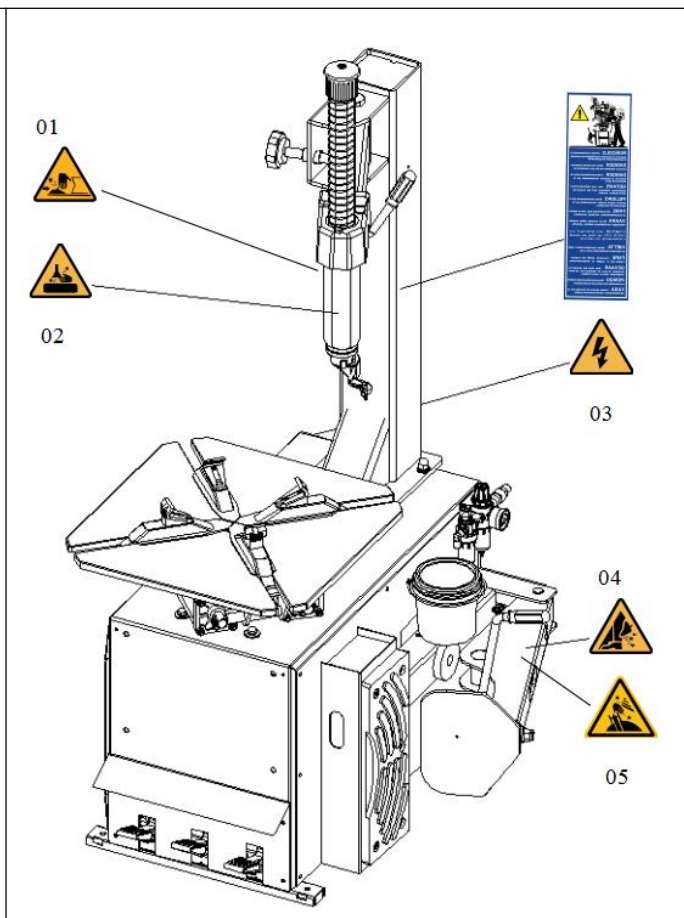
02 Do not put your hand over the operation inside claws;

03 Charging equipment, mainly security, check the grounding;

04 Do not put your feet on the internal pressure of the tire shovel;

05 Removing the bead, do not put your hand into the bead interior;

- Please update the warning signs once they are missing or stained.
- Do not use this equipment when the warning signs missing.
- Make sure the operator always saw the warning signs clearly.



WARNING: When the security warning stickers defaced or off, please timely recovery! Machine operation is not allowed when the security stickers imperfect. Not allowed to set any object to make safety warning labels were obscured.

3、 Technical Data:

Rim diameter (external locking)	10~19"	Max. height	1765mm
Rim diameter (internal locking)	12~22"	Length	875mm
Max wheel diameter	41"	Width	800mm
Wheel width	14"	Working speed	6~8 n / min
Working pressure	8-10Bar	Noise Level	72dB
Gross Weight	250KG		
Net Weight	223KG		
Voltage	110V 1PH /60HZ		
Motor power	1.5HP		
Packing size	970X770X940mm		

4、 Transportation:

The machine must be originally packed and shipped as the logo information on the packaging, the machines must be packaged with the forklift ,according to the position shown in Fig. 1

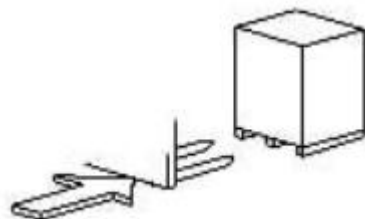


Fig. 1

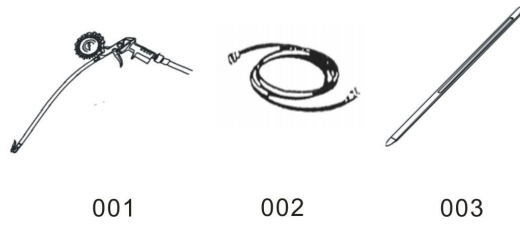
5、 Box Inspection:

Pull the small clip which is under the Package with a sharp forceps, removing the box and the plastic bag and checking equipment is OK, verify if all parts are damaged or missing, if in doubt, do not use the machine and Contact sales promptly.

The packing materials(nails, plastic bags, pluriball, polythene ,staples, timber, etc.) should not be left within reach of children since they are potentially dangerous.

Deposit the above mentioned materials in the relevant collection areas if they represent a source of pollution or are non-biodegradable。

6、 Accessories On Request:



Random provided accessories as on Fig.2
 001-Inflation gun
 002-Inflator hose
 003-Crowbar

Fig 2

7、 Structure:

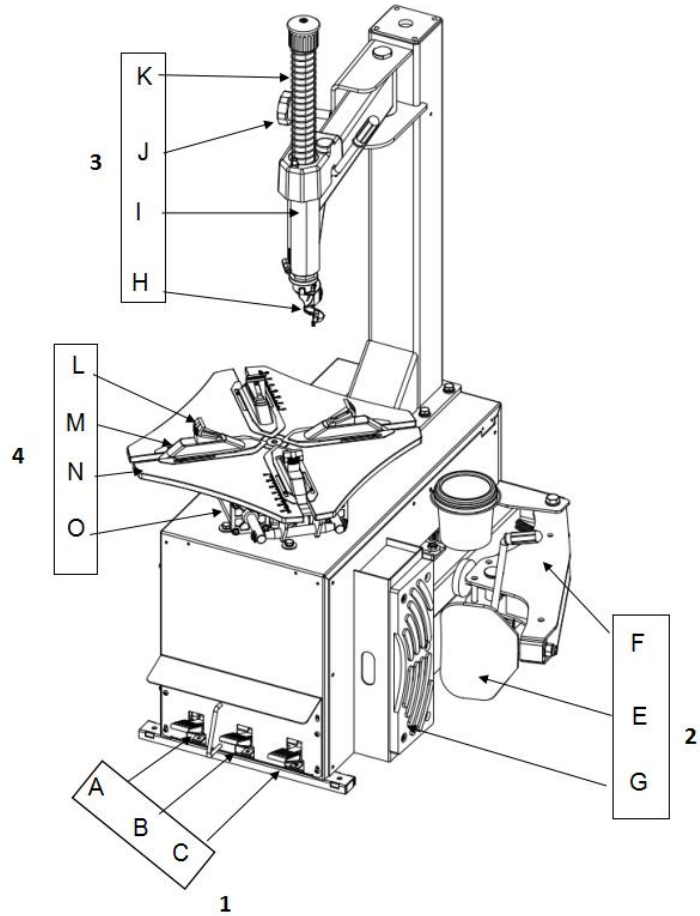


Fig.3

Product structure as on Fig.3

1	Name	2	Name	3	Name	4	Name
A	Invertor control pedal	E	Plate	H	Mounting head	L	Locking wedges
B	Jaw control pedal	F	Bead breaking arm	I	Rocker arm	M	Slide tracks
C	Bead breaking control pedal	G	Anti-abrasion supports	J	Rocker arm handle	N	Self-centring plates
				K	Lock rod	O	Clamping Cylinder

8、 Installation:

SAFE DISTANCE

For safe and ergonomic use of the machine it is advisable to locate the machine a minimum of 500 mm from the surrounding walls. Select the installation location which must comply with safety regulations. The machine must follow the instructions requirements, connecting the power and compressed air systems. Machine installation environment should be well ventilated. If the machine is installed outdoors, it must have protective shed, rain and sun.

WARNING: Tyre Changer with motor are not used in place of flammable gases

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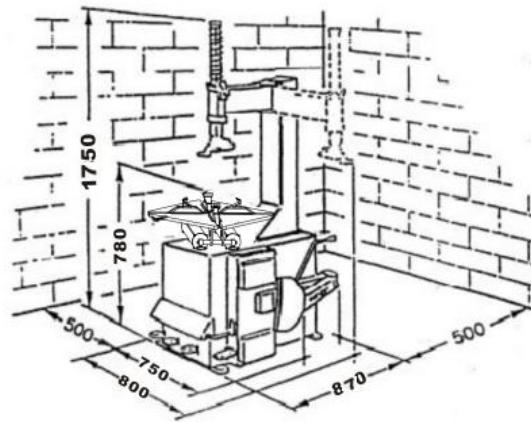


Fig. 4

① Make use of a 1m hoisting strap. Wrap the strap around the movable arm. (Fig.5-1)

② Open the bead breaking arm as shown in Fig.5-2(1) and raise the column with a hoist (2).

③ Rest the column on the machine body. Fix the column to the machine body (Fig.5-3) using the screws in the machine.

Please recheck and fasten all the screws after running for a period time to avoid any tyre damage.

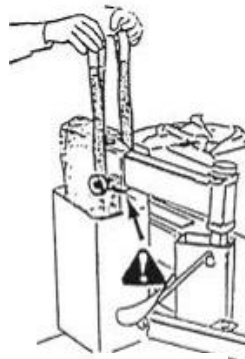


Fig. 5-1

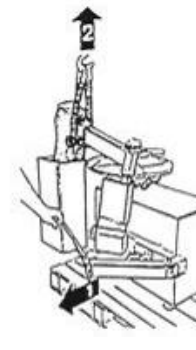


Fig.5-2

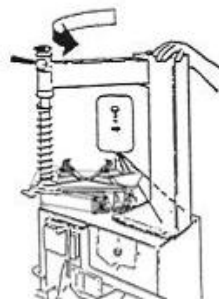

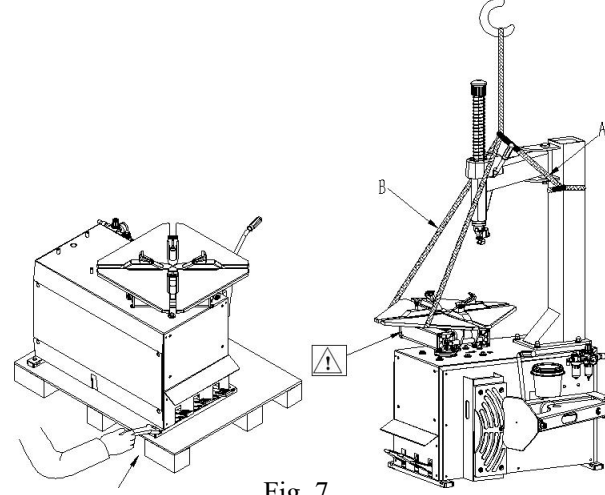


Fig. 5-3



Attention:

Make sure the column stay vertical when installation. Be careful hurting!

<p>①Release the vertical rod, lift it up 10cm.and lock it again as shown in Fig.6-1(1).Unscrew the cap at top of the rod with a 6 mm hex key (Fig.6-1)(2).</p> <p>②Warning when unscrewing the rod take the precaution of keeping one hand underneath it (Fig.6-2)(1)and(2).</p> <p>③Remove the rod. Slide the spring off and re-insert the rod(Fig.6-3)(1)in its original seating, locking it at the end of its travel(Fig.6-3)(2).Insert the spring on the top of the rod(Fig.6-3)(3)and refit the cap with a 6mm hex key.</p>	 <p>Fig. 6-1 Fig. 6-2 Fig. 6-3</p>
<p>Loosen the fixing screws on the bottom, placing the machine in the chosen location on the standard scale calibration level, marking expansion screw, securing smooth installation to prevent leakage, ensure ground connection. Operating range of the ground should be non-slip. (See Fig. 7)</p>	 <p>Fig. 7</p>

9、 The Connection Of Electricity And Gas Supply:

<p>The adjustment of Atomized lubricator or air service unit (optional) :</p> <p>*As in Fig. 8: 1-Atomized lubricator; 2-Oil water separator; 4-Gas-pressure meter.</p> <p>*Air pressure adjustment: Counter clockwise rotation the button 3 is reduced pressure, clockwise rotation the button is increase pressure. Press the button to lock it once the pressure is enough.</p>	
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* Oil water separator 2 was to filter out the water and impurities in the air. Unscrew the button 5 to outlet it when the water and impurities exceed the red line.

* Atomized lubricator 1 was in the purpose to add quantitative lubr to the air in order to lubricate the cylinder and components in the valve. One drop of oil will drop in the glass cup after Press the pedal B 3--5 time; if can not, adjust the screw 6 to make it.

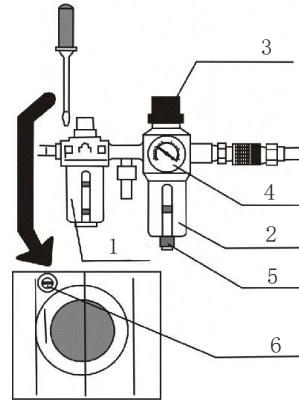


Fig. 8

- Before installing the connections, check the power supply and compressed air system with the machine technical parameters coincide. All electrical installation must be carried out by a qualified electrician
- Power connection socket should be located in the control of the operator, suggested height between 0.6-1.7 meter.
- The machine must be good grounded.
- Gas circuit system: Please connect the inflate gun A to the upper connector of the three direct links on the Atomized lubricator, then hang on the hook on the column.(Fig.9). Connect the external air source to the parallel direction connector of the Atomized lubricator S(as the arrow show on Fig. 9)

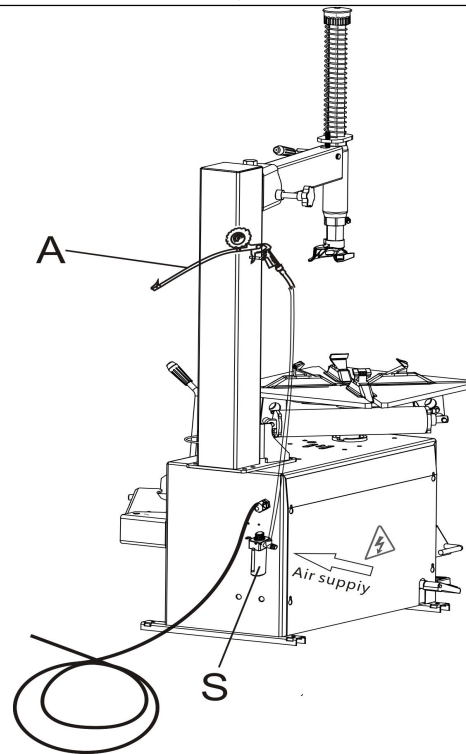

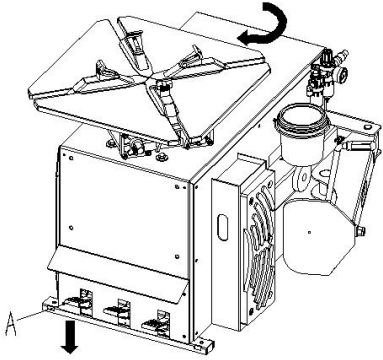


Fig. 9

 Attention:

The motor of the machine do not have phase-sensitive protector. Please connect the power supply according to the circuit diagram in this manual, or the manufacturer will not responsible for any accident.

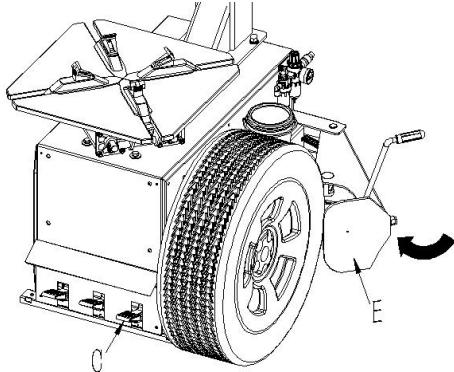
<p> OPERATIONAL CHECKS:</p> <p>It is extremely important, for the correct functioning of the machine, that when the inverter pedal(A) is pressed the chuck rotates in a clockwise direction(see Fig.10).</p>	 <p style="text-align: center;">Fig. 10</p>
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10、 Setup and Operation:


Operation of the Tyre Changer has three steps: apart the bead, remove the tyre, fit on the tyre.

WARNING: Before any operation, the operator should be dressed work clothes of tight sleeves and putted on non-slip shoes.


Completely deflate the tyre. Then remove wheel balancing weights to avoid any risks that could result from their presence.

<p>APART THE BEAD:</p> <ul style="list-style-type: none"> * Place the wheel on the ground near the bead breaker, move the plate (E) to the bead and press the bead breaking control pedal(C). * This operation is repeated at various points on the wheel until the bead is completely detached. * Repeat the operation on the opposite side of the wheel. 	 <p style="text-align: center;">Fig. 11</p>
<p>REMOVE THE TYRE:</p> <ul style="list-style-type: none"> * Lower the locking lever to unlock the vertical rod . * Press down the open control pedal(B) to prepare the chuck jaws(N)to lock the rim externally (in the case of internal locking, this operation is not carried out). 	

- * Place the wheel on the self-centering chuck, pressing lightly on the wheel. Press up the close control pedal(B) to lock it.
- * Lubricate the bead with grease using the brush specially provided.
- * Turn down the lever(K) until the mounting head(H) touch the edge of the rim and locked it. Make sure the mounting head around 2-3mm apart from the rim, insert the crowbar into the tyre edge(Fig. 13) and let the tyre on the mounting head (I) .
- * Rotate the chuck pressing the pedal(A) until the bead is completely out of the rim.
- * Repeat the same operation to remove the second bead (Fig12-1).

 **Warning:** Make sure the rim been locked tightly before next operation.

FIT ON THE TYRE:

 **Warning :** Check that the rim and tire matching; Check that the rim and the tire are well lubricate.

Place the tyre on the rim; move the head to the working position.

* Place the bead on the edge of the head(H) and under the tongue (Fig.14).

* Rotate the chuck by pressing pedal(A) taking care to make the bead move into the central groove

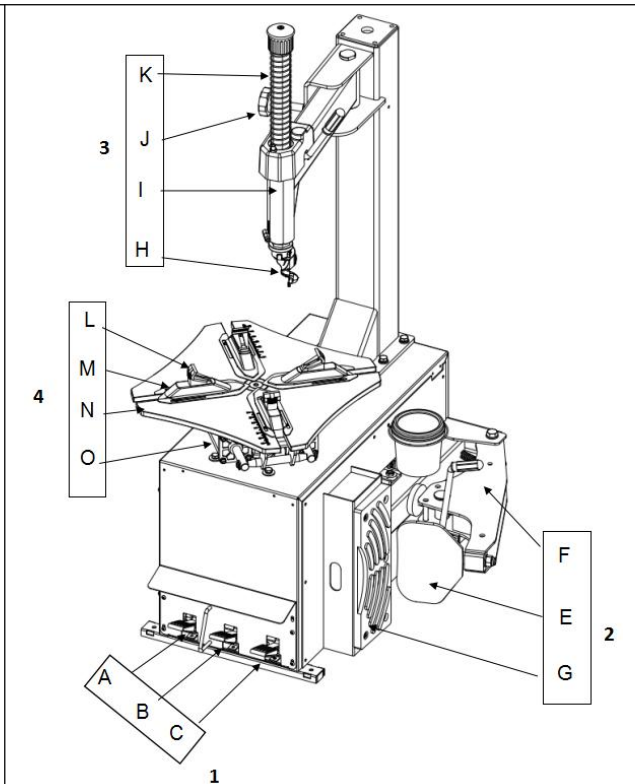



Fig. 12

 Be careful not to insert fingers between the tyre and rim while rotating the chuck.

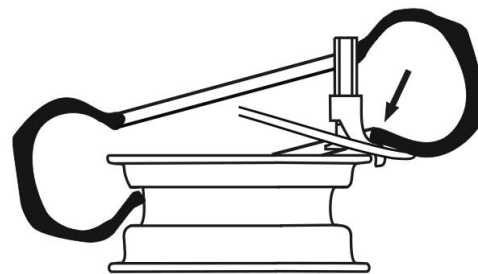


Fig. 12-1

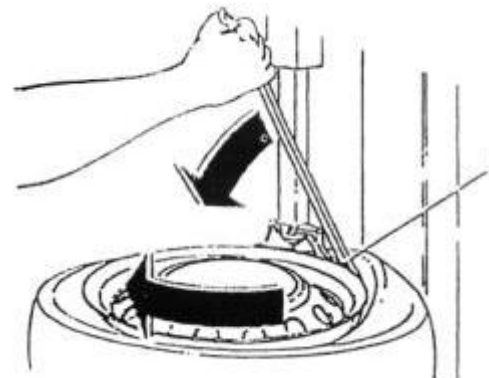


Fig. 13

of the rim so as to eliminate weakening the bead.(To help this action it is advisable to press down on the tyre with the hands).

* Move the adjustable arm (TO FREE THE WORK AREA)

* Place the rim with the inner tube valve at about 90° to the head, then insert the inner tube.

* Repeat the initial operation(see above) to locate the second bead.

In the case that the bead has difficulty descending from the head, it is necessary descending from the head, it is necessary to “raise”(move upwards) the inverter pedal(A)making the chuck rotate in an anti-clockwise direction.

* Move the arm and press the open pedal(B)to unlock the rim

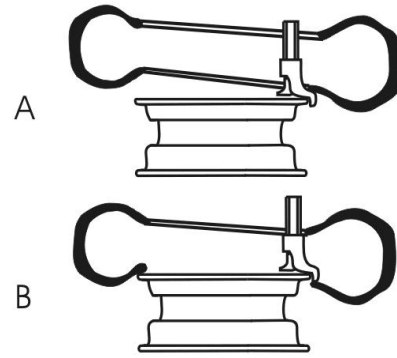


Fig. 14

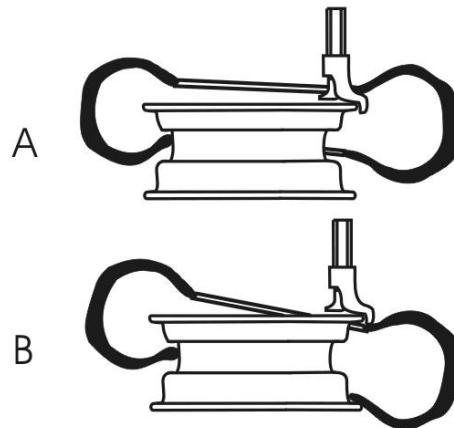


Fig. 15

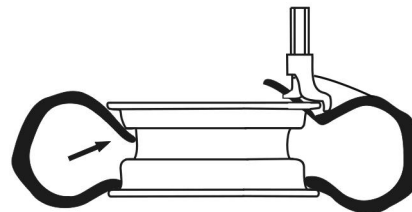


Fig. 15-1

11、 To Inflate The Tyre:

WARNING: Inflating tyre is very dangerous, please carefully and Strictly abide by the operation procedures. The accident of tyres or rim is extremely dangerous when inflating, Explosion can make large power so that the tyres rush to the up or outward, causing the operator or the people around hurt or death.

Follow these steps:

- 1) Remove the valve core;
- 2) Clamp valve firmly with the pneumatic chuck;
- 3) Check that the rim and tire matching;
- 4) Check that the rim and the tire are well lubricated, then add some appropriate lubricant if necessary;
- 5) Inflating the tyre intermittently, check the pressure of gas meter, and check the wheel rim is positioning, if not positioning, continue the process above, it needs to take special steps when inflating the convex rim; (Fig. 16)
- 6) Go on to inflate the tyre intermittently to the pressure as need, within check the pressure of gas meter.

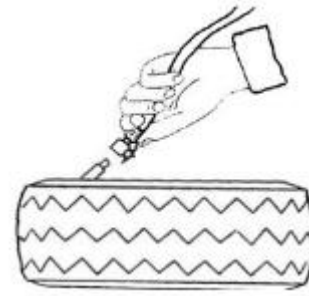


Fig. 16

12、 Move The Machine:

You need a forklift to move the machine. Cut off the gas and power , pry up the base a little, and insert the prongs of forklift underneath, assemble the tyre changer in the new position and form it.

13、 Routine Maintenance:

WARNING: Before proceeding to any cleaning or maintenance operation, remove the plug from the electrical socket!

Keep the moving parts clean, washing them periodically with naphtha or kerosene and lubricating them with oil or grease .

In particular: Lubricator check and maintain the level of oil in the lubricator. The level must not go outside the min/max indicated. If necessary add liquid oil.

Air filter: periodically remove the water condensation that forms in the air filter.

Roller: check that the roller always turns freely. Periodically clean with naphtha and if necessary lubricate with oil.

Motor drive belt: check that the motor belt is at the correct tension and that it does not slip.

Inflation manometer: periodically check the figures on the pump manometer scale.

Set screw: using machine after 20 days, retighten the set screw on the jaw.

14、 Malfunctions:Causes And Possible Remedies:

Malfunction	causes	Possible remedies
The chuck does not rotate in any direction	<ol style="list-style-type: none"> 1.Power plug not inserted. 2.Incorrect connection in the plug. 3.Electrical supply not suitable. 	<ol style="list-style-type: none"> 1.Check correct plugging and its connection.
Pressing the inverter pedal down causes the chuck to turn in an anti-clockwise direction.	<ol style="list-style-type: none"> 1. Polarity inverted. 	<ol style="list-style-type: none"> 1.Invert the connections in the power plug.
The chuck turns with insufficient power.	<ol style="list-style-type: none"> 1.Supply voltage wrong. 2.Slack drive belt. 	<ol style="list-style-type: none"> 1.Check the correspondence between the supply voltage and that on the maker's plate. 2.Adjust the belt tightener.
The chuck does not lock the rim correctly	<ol style="list-style-type: none"> 1.The pneumatic supply is not connected to the machine. 2.Insufficient pressure in the pneumatic system. 3.Pressure reducer is closed or badly adjusted (for versions with this device). 	<ol style="list-style-type: none"> 1.Connect the pneumatic supply. 2.Correct the supply pressure. 3.Open or correctly adjust the pressure reducer.
The bead breaker does not have sufficient power to break the tyre bead.	<ol style="list-style-type: none"> 1.The pneumatic supply is not connected to the machine. 2.Insufficient pressure in the pneumatic system. 3.Pressure reducer is closed or badly adjusted (for versions with this device). 	<ol style="list-style-type: none"> 1.Connect the pneumatic supply. 2.Correct the supply pressure. 3.Open or correctly adjust the pressure reducer.

15、 Spare Parts List:

This detailed statement is only to provide the reference for repair and maintenance personal. If the equipment parts damaged, please purchase them according to code in this statement from the dealer or manufacturer.

No.	Description	Qty.	No.	Description	Qty.
101	Rocker Arm Shaft	1	207	Pin	4
102	Rocker Shaft Gasket	1	208	Connecting Rod	4
103	Spring Washer Φ14	1	209	Rod Knot	4
104	Screw M14×45	1	210	Washer Φ12	8
105	Vertical Column	1	211	Spring Washer Φ12	4
106	Screw M12x50	6	212	Screw M12x85	4
107	Spring Washer Φ12	6	213	Screw M6×12	4
108	Washer Φ12	7	214	Complete Clamping Cylinder	2
109	Handle Cover	1	215	Retainer Ring Φ12	4
110	Locking Block Handle	1	216	Claw Seat Body Welding Assembly	2
111	Cotter Pin 4x20	1	217	Retainer Ring Φ65	1
112	Screw M8×20	1	218	Thin Nut M6	4
113	Screw M10×30	1	219	Control Plate	2
114	Washer	1	220	Sleeve	1
115	Washer Φ10	1	221	Cap	1
116	Complete Mounting Head	1	222	Screw M16×30	1
117	Rubber Washer	1	214-1	Piston Rod	1
118	Rocker Arm	1	214-2	L-union (8-R1/8")	2
119	Washer Φ15	1	214-3	Locking Nut M8	8
120	Locking Nut M10	1	214-4	Front Flange	1
121	Vertical Rod	1	214-5	O-seal Φ20×2.65	1
122	Spring	1	214-6	Y-seal Ring 35x20x8	1
123	Cap	1	214-7	Washer	1
124	Thin Nut M10	1	214-8	Tightener	4
125	Knob	1	214-9	Cylinder Casing	1
126	Screw M8×45	1	214-10	Piston	1
127	Locking plate	1	214-11	Washer Φ12	1
128	Thin Nut M12	1	214-12	Locking Nut M12	1
129	Screw M12×30	1	214-13	O-seal Φ 67×3.5	2
130	Adjust Handle	1	214-14	Rear Flange	1
131	Pothook	1	301	Chassis	1
132	Thin Nut M8	1	302	Filter And Pressure Reducer +Lubr	1
201	Jaw	4	303	Screw M16x110	1
202	Slide	4	304	Washer φ16	3
203	Elastic cylindrical pin 5x16	8	305	Pull Pin	1
204	Wear Plate	4	306	Locking Nut M16	2
205	Turn Table	1	307	Tension Spring	1
206	Claw Seat Plate	2	308	Big Washer	1

309	Screw M10x25	1		415	Connecting Screw(Pedal)	1
310	Taper Knob	1		416	Plastic Casing-2	1
311	Breaker Arm	1		417	Torsional Spring	1
312	Bead Breaking Plate	1		418	Screw M8x50	1
313	Pad	1		419	Washer φ8	1
314	Box Support	1		420	Screw M8x16	2
315	Screw M10×25	5		421	Connecting Screw(Switch)	1
316	Washer φ10	5		422	Pitman	1
317	Rubber Buffer-1	1		423	Screw M3.5x16	1
318	Rubber Foot	4		424	Screw M6x20	1
319	Screw M6x16	4		425	Picks	1
320	Side Cover	1		426	Locking Nut M6	1
321	Box Lid	1		427	Screw M4x10	2
322	Box	1		428	Spring washer φ4	2
323	Water Joint PG13.5	1		429	Washer φ4	2
324	Screw M4	5		430	Cam Cover	1
325	Screw M4x10	5		431	Screw M3.5x10	2
326	Connector 600V 45A 4P	1		432	Flat Spring	1
327	Screw M4x20	2		433	Reverse Switch	1
328	Waterproof Box	1		434	Screw M6x25	3
329	Water Joint PG11	2		435	Switch Cover	1
302-1	L-union(R1/4-8)	1		436	Pedal Cover	1
302-2	Air Lubricator	1		437	Screw M6x16	4
302-3	T-union(R1/4-8)	1		438	Lock nut M6	2
302-4	Screw ST6.3x13	2		439	Pedal handle	1
302-5	Reducing Valve	1		402-1	Rod	2
302-6	Quick Union PM20	1		402-2	Spacer B	4
302-7	Quick Union SP20	1		402-3	O-seal φ9.75x4	24
302-8	AFR Support	1		402-4	Spacer A	10
401	Cam	1		402-5	Complete 5-way Valve	2
402	Complete 5-way Valve A	2		402-6	Screw M4x10	8
403	Screw M6x16	8		402-7	Connector	2
404	Washer φ6	12		402-8	Latch	2
405	Nut M6	3		402-9	Lock Nut M8	2
406	Tension Spring	2		402-10	Pad	4
407	Pedal Bracket	1		402-11	Silencer	4
408	Cam Connecting Rod	1		402-12	Union R1/8-8	6
409	Retainer Ring Φ14	2		402-13	Cotter Pin 4x20	2
410	Washer φ14	2		501	Complete Gear Box	1
411	Rod	1		502	Screw M10x55	6
412	Pedal	3		503	Spring washer φ10x2	12
413	Plastic Casing-1	1		504	Washer φ10x2.5	6
414	Locking Nut M8	2		505	Rubber Washer	6

506	Washer ϕ 10x2	10		702	Cylinder Block	1
507	Screw M10x30	2		703	Lock nutM6	12
508	Screw M10x35	4		704	Ring 165x170x7	2
509	Lock nut M10	4		705	Y-seal 158x182x11	2
510	Screw M8x75	2		706	Piston	1
511	Nut M8	4		707	Flange	1
512	Washer ϕ 8x1.6	4		708	Screw M6x25	12
513	Waher ϕ 8x2	4		709	Nut M12	2
514	Lock nut M8	2		710	Set Screw M12x40	2
515	Motor Support	1		711	Piston Rod	1
516	Motor 0.75KW 220V/50HZ	1		712	Lock nut M18	1
517	Key 6x28	1		713	T-union	1
518	Motor Pulley	1		714	Seal Belt	1
519	Set Screw M8x12	1		715	Lock nut M16	1
520	Belt A	1				
501-1	Plug Screw BM16x1.5	1				
501-2	O-seal 16x2.65	1				
501-3	Pin 8x20	2				
501-4	Screw M8x35	10				
501-5	Upper Cover	1				
501-6	Bearing 6010	1				
501-7	Worm Gear	1				
501-8	Key 14x50	1				
501-9	Roller Bearing 30205	2				
501-10	Plastic Cap	1				
501-11	Bearing 6208	1				
501-12	Bottom Cover	1				
501-13	Worm Gear Shaft	1				
501-14	Screw M8x20	1				
501-15	Washer ϕ 8x2	1				
501-16	Gear Box Pulley	1				
501-17	Seal25x40x7	1				
501-18	Worm screw	1				
501-19	Spring Washer ϕ 8x1.6	1				
501-20	Key 6x22	1				
601	Valve Core	1				
602	Union RC1/8-8	3				
603	O-seal ϕ 65x2.65	5				
604	Valve Pocket	1				
605	Screw M6x10	2				
606	T-union RC1/8-8	1				
607	Set Screw M3x8	4				
701	Quick Exhaust Valve	2				

16. Breakdown Drawing:

16.1 Column Assembly

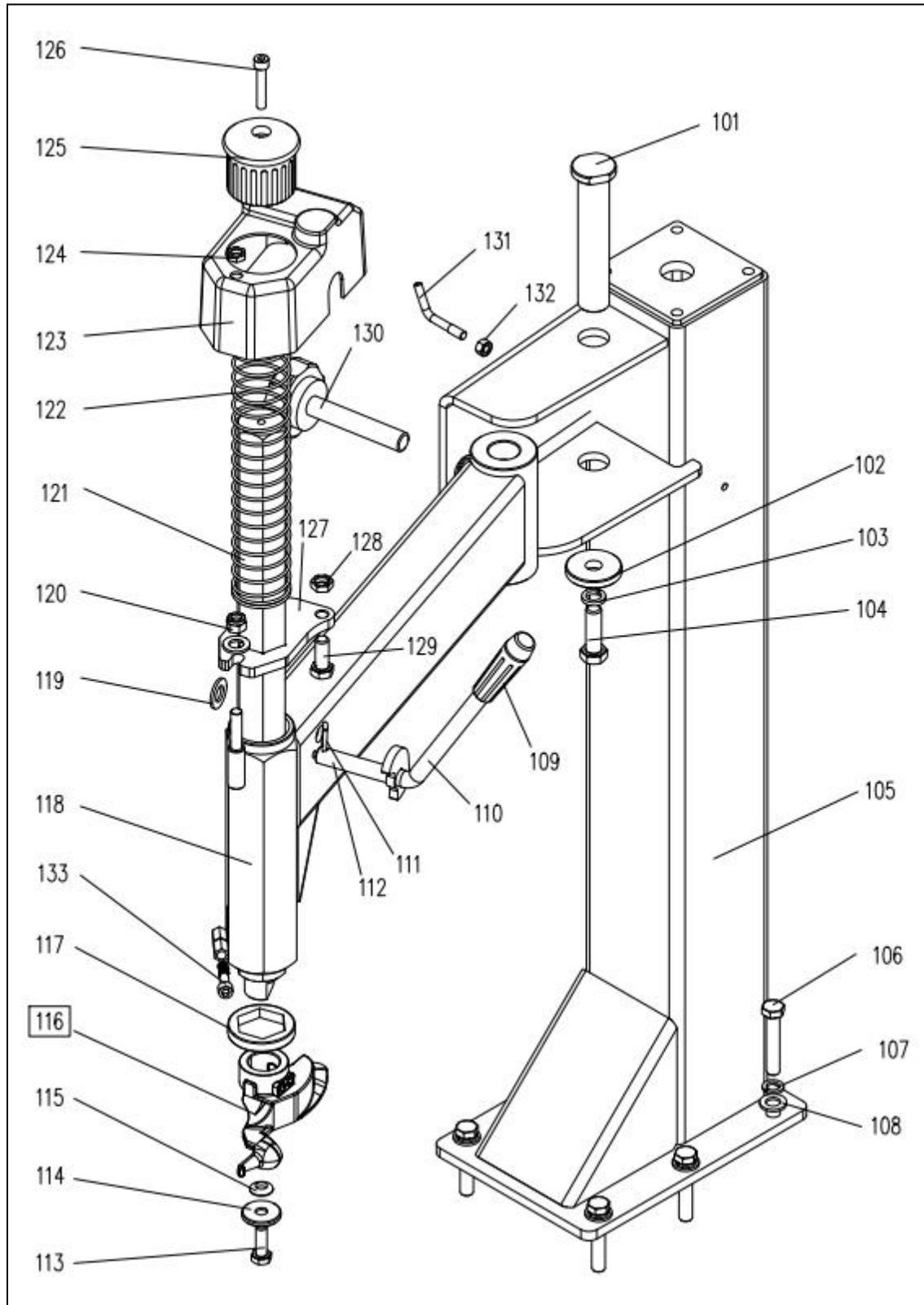


Fig. 17

16.2 Working Plate Assembly

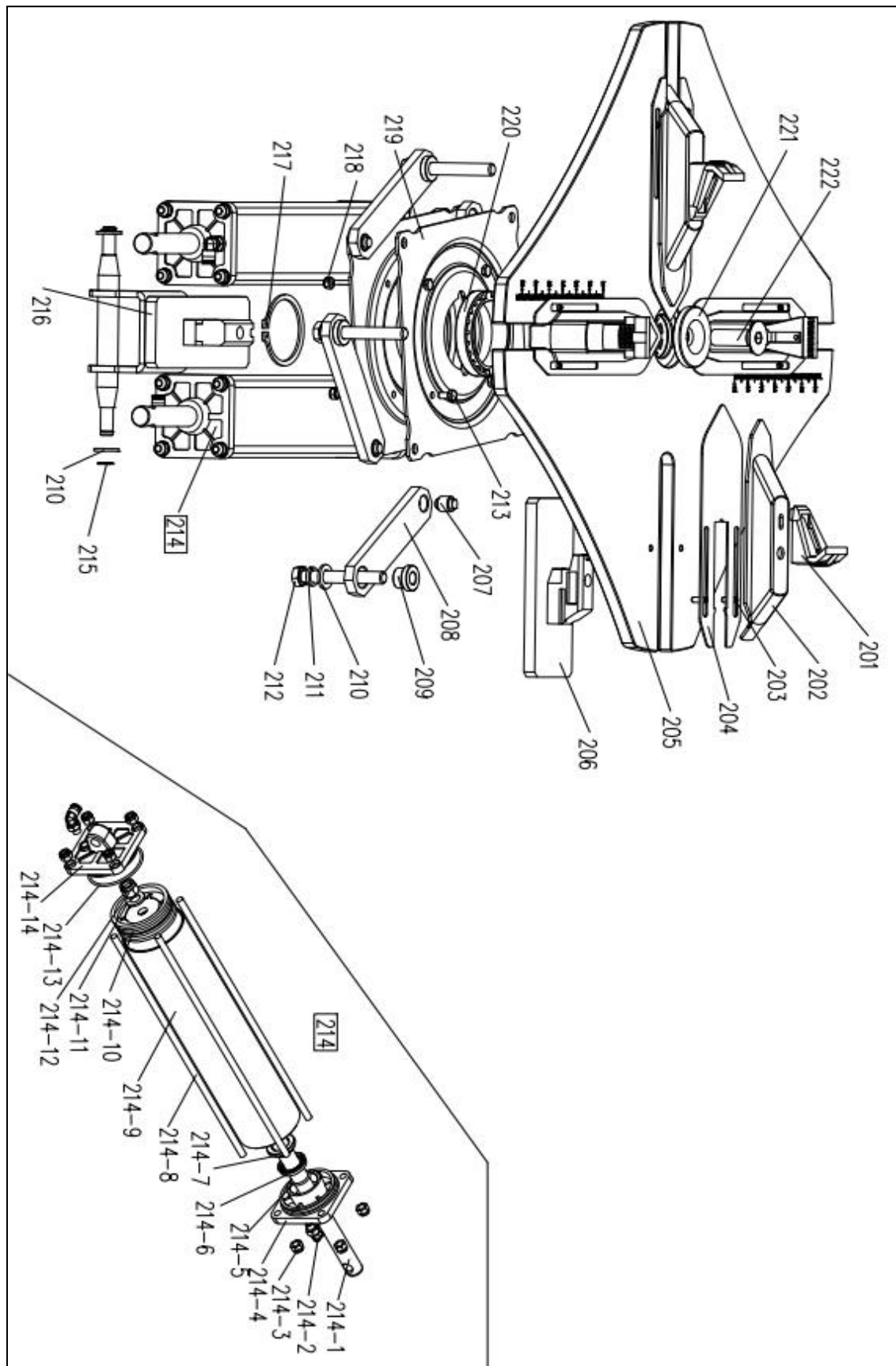


Fig. 18

16.3 Case Assembly

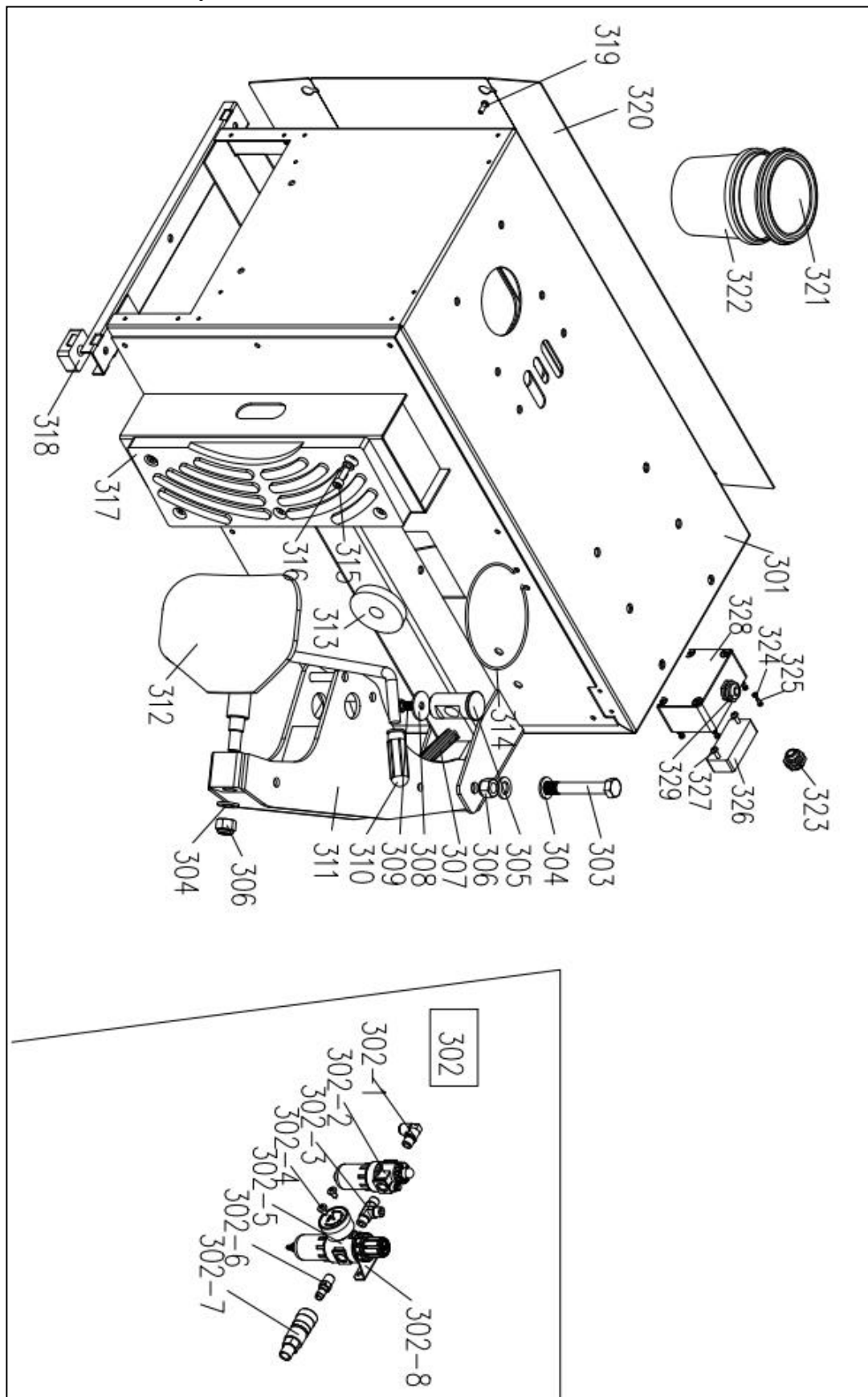


Fig. 19

16.4 Pedal Assembly

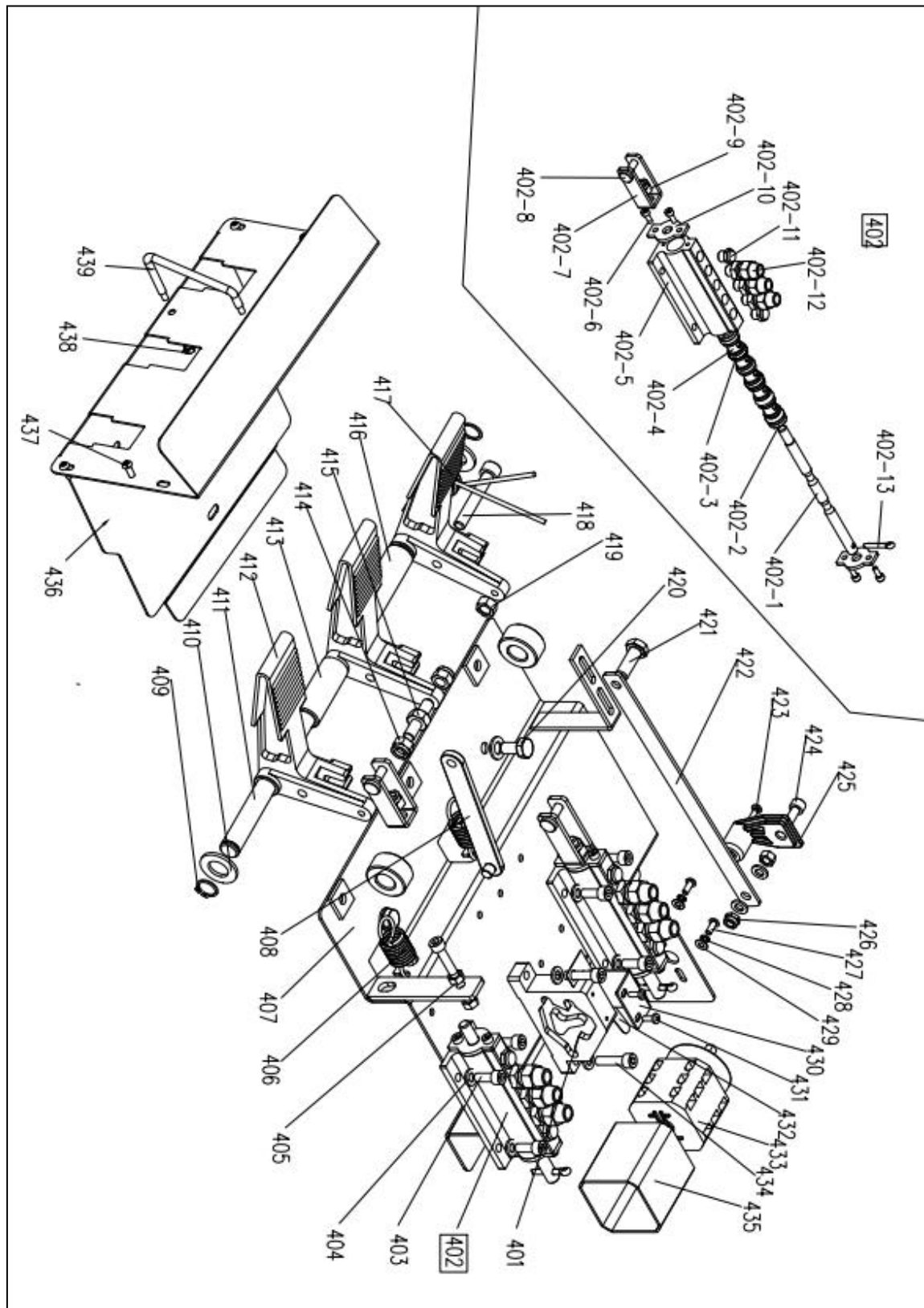


Fig. 20

16.5 Worm gear case and motor components

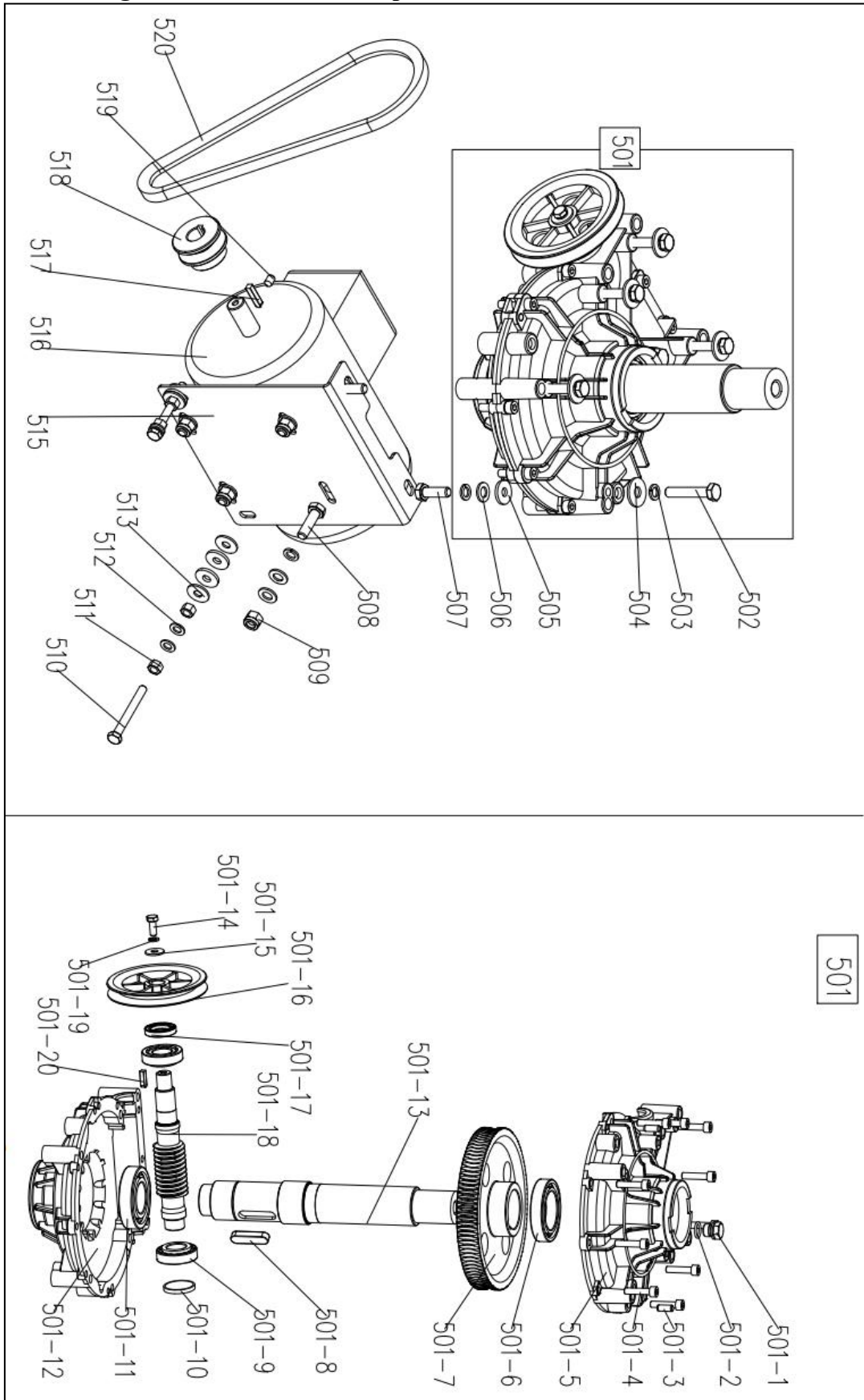


Fig. 21

16.6 Cylinder Assembly

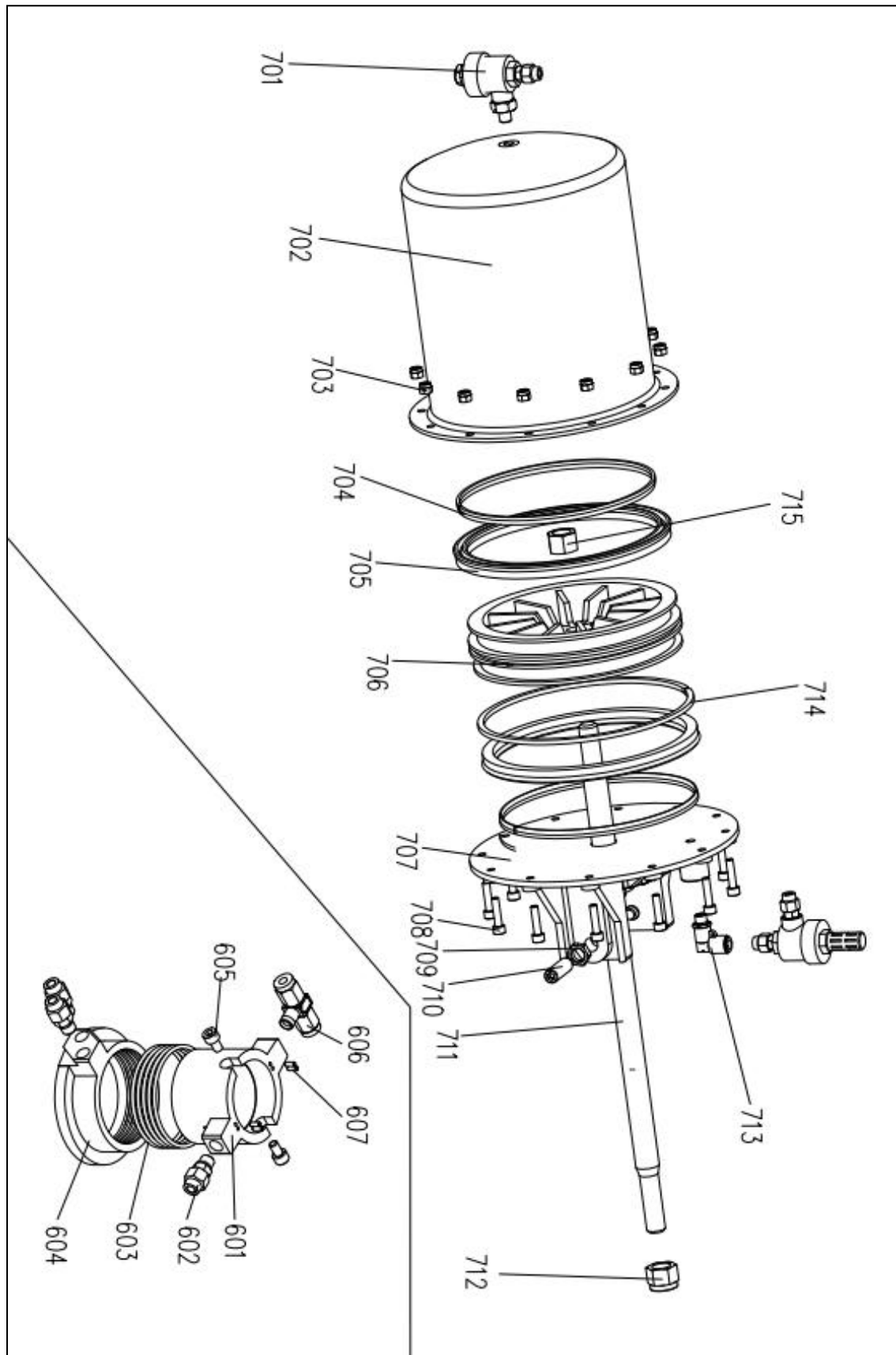


Fig. 22

Accessories 1

Schematic circuit diagram

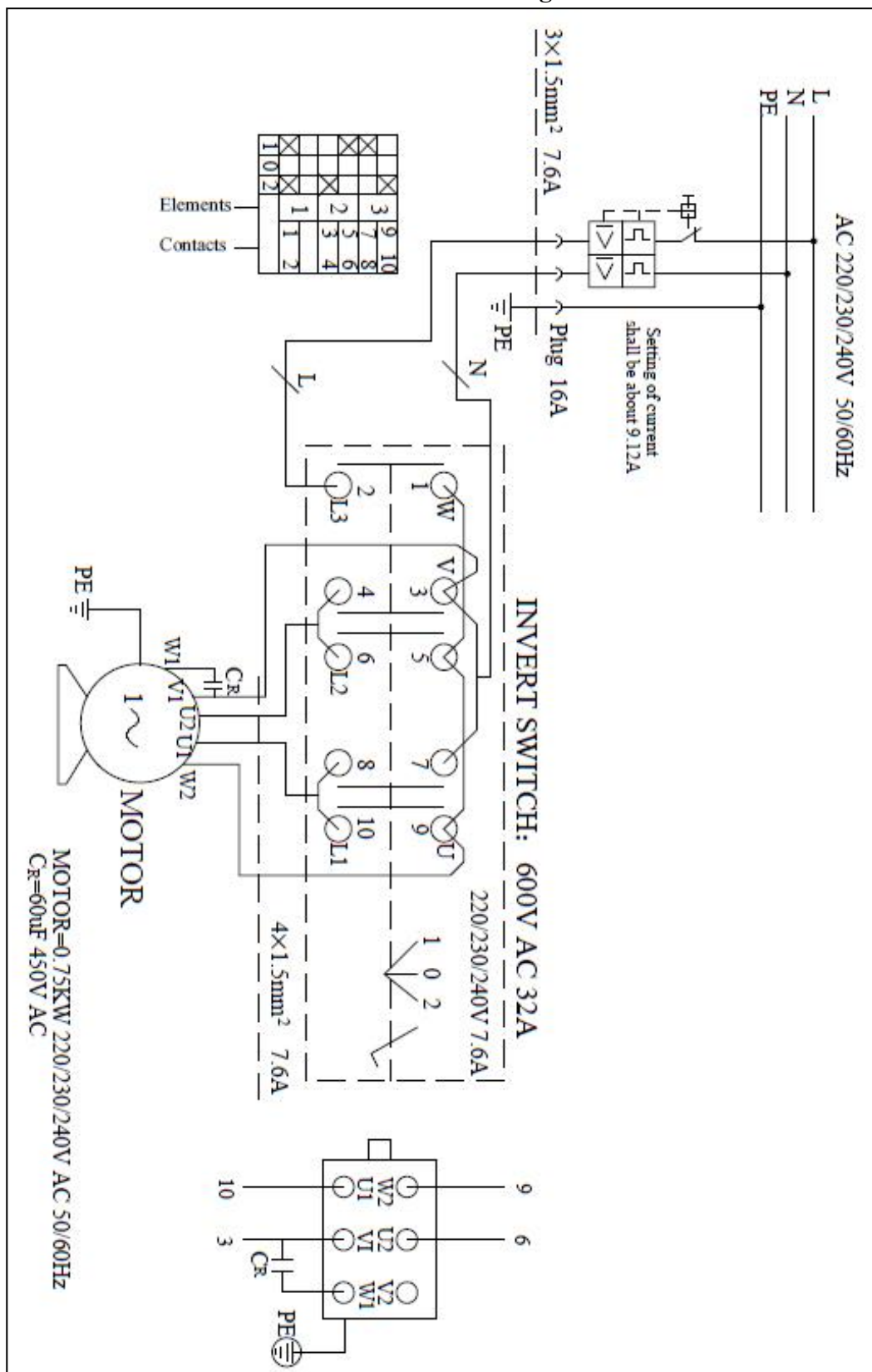


Fig. 23

Gas circuit principle diagram

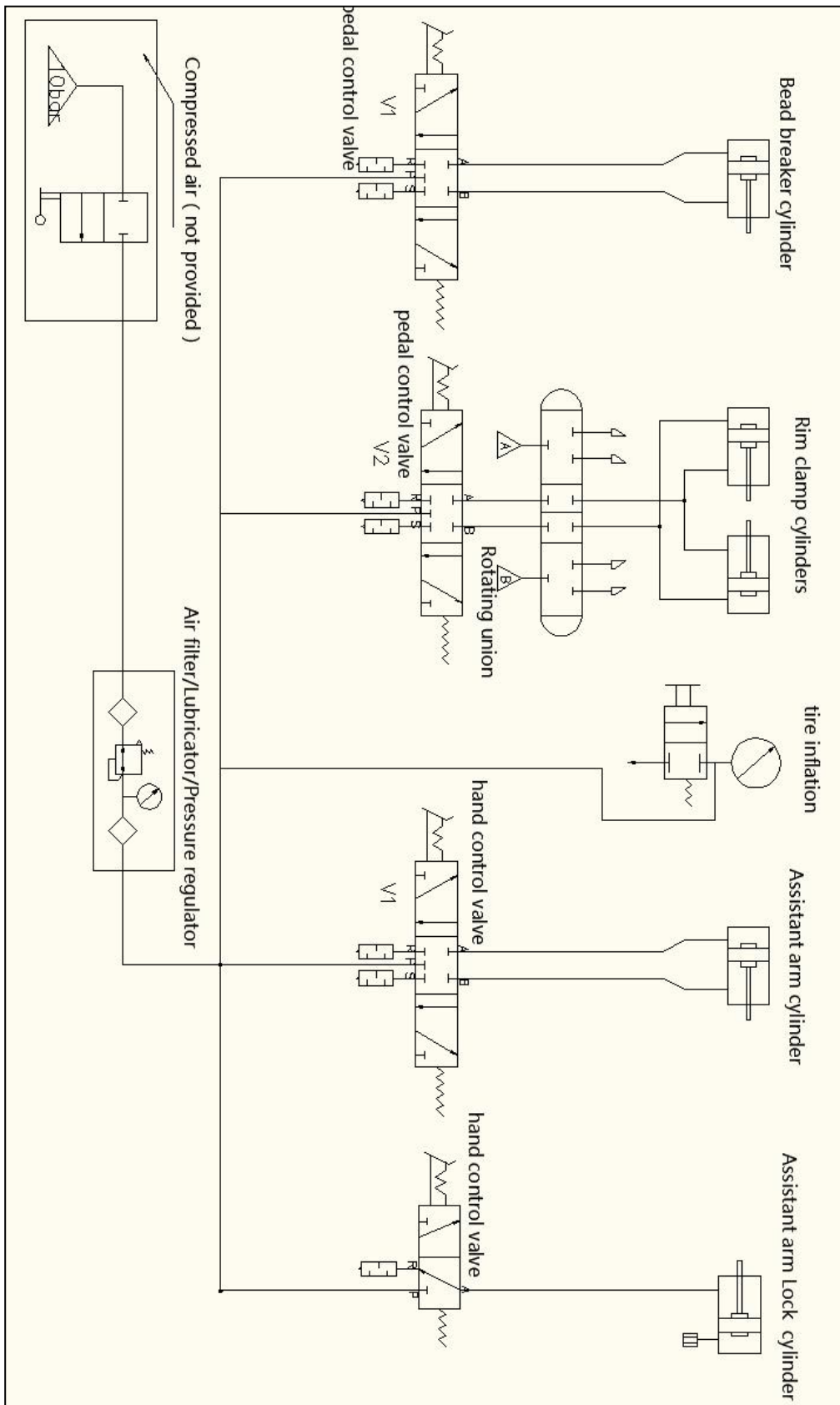


Fig. 24