

# TYRE CHANGER

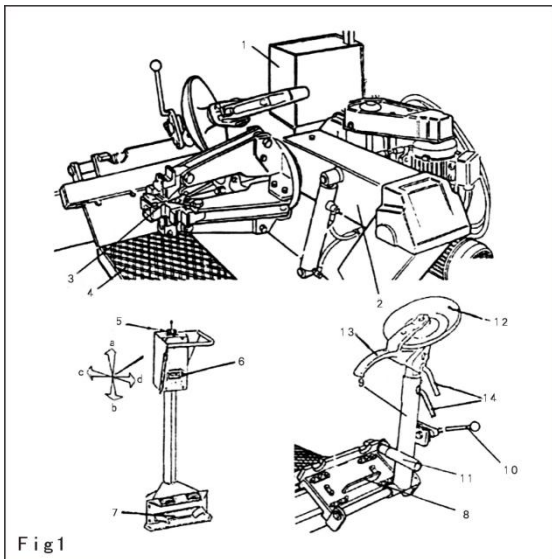
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# USER MANUAL

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! Pls read this manual before operation

ao Key Operation Part (As shown in Fig 1 )



1. Main Switch ( see Fig 4 )
2. Vertical Movement Arm
3. Hydraulic Adaptor
4. Tire Support Platform
5. Console Switch
6. Clamp Force Switch
7. Tire Rotation Control(clockwise/counter clockwise )
8. Carriage
9. Tool Bracket
10. Tool Bracket Lock Rod
11. Spring
12. Circular Disk
13. Sharp-nose Tool
14. Positioning Handle ( control No12 and No 13 )

Technical Parameter

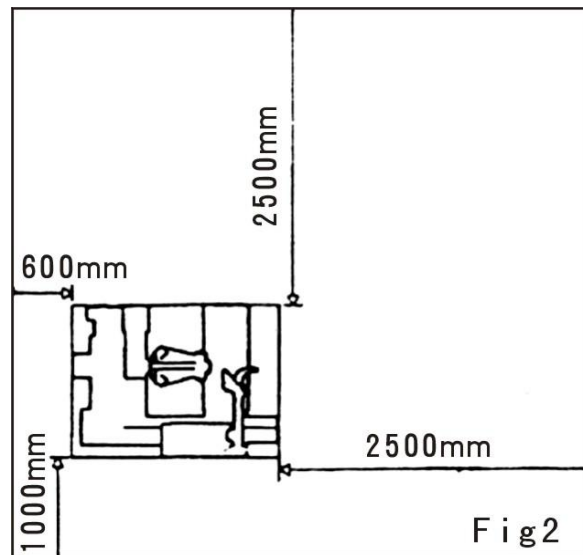
Tire applied	14'-26"
Max. wheel weight	1500Kg
Max. wheel thickness	760 mm
Max. wheel diameter	1500 mm
Hydraulic pump motor	1.1KW-380V-3phase
Gearbox motor	1.8KW-380V-3phase
Operation pressure	150bar
Tear force	1500Kg
Noise	<75db
NW	561Kg

Installation

- Installation site : Choose the installation site in accordance with the labor safety regulation. The tire changer is needed to be connected with the grid. You

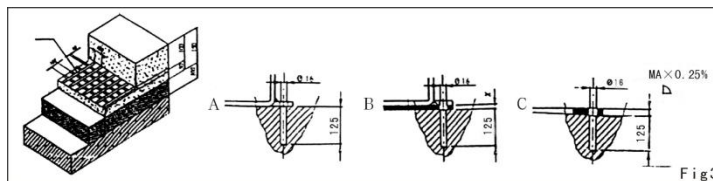
should select the place convenient for connection with the power. And the installation space should be convenient for the operator to operate. You will see the dimension in Fig2. If it is installed outdoors, the machine should be equipped with the shed to keep from the rain.

**! It is forbidden to use the machine outdoors.**



The installation foundation is shown in Fig 3. The floor must be even and the chassis of the machine should be fixed by the anchor bolt.

If the gradient in reference to floor is larger than 2.5‰, you should level up to compensate.



**! When the weight of the tire to be mounted is more than 1000kilogram, the machine must be fixed with anchor bolt.**

Electrical Connection;

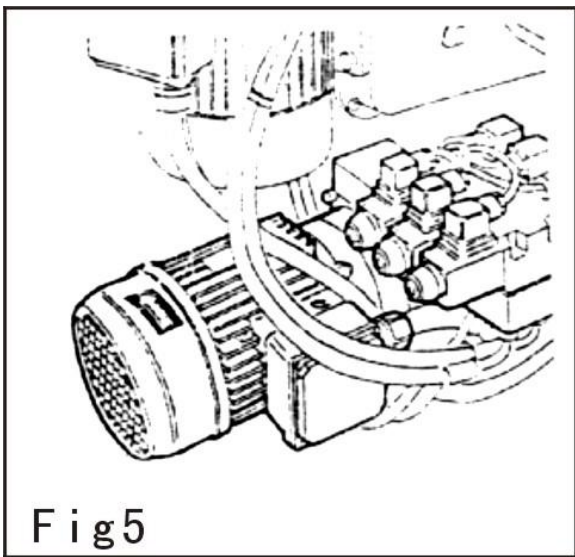
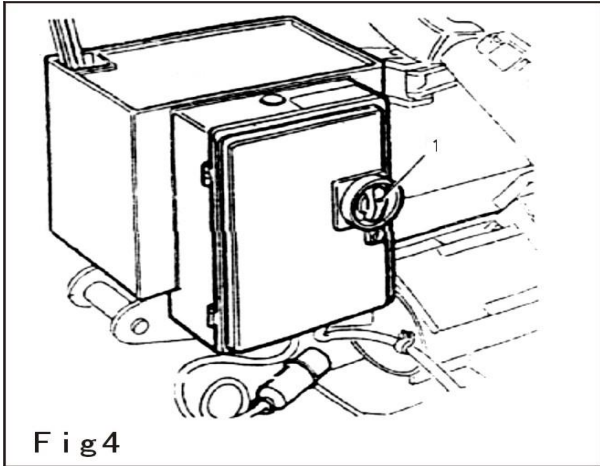
**! All of the electrical must he done by the professional technicians.**

Note:

- ◆ Installation site should be equipped with the ground loop and connect in accordance with the ground

indication of the machine.

- ◆ The power system should be equipped with the automatic fuse of 30A.
- ◆ Connect the power of the tire changer, switch on and check the generator.
- ◆ The direction of running should be corresponding with the arrow(see Fig 5). If the direction is opposite, the professional personnel should change the phase.



**! If the generator rotate reversal, it may be burned down.**

Note: Both the generator and hydraulic pump motor have the overload protective device,(see Fig 4).

●Running Test

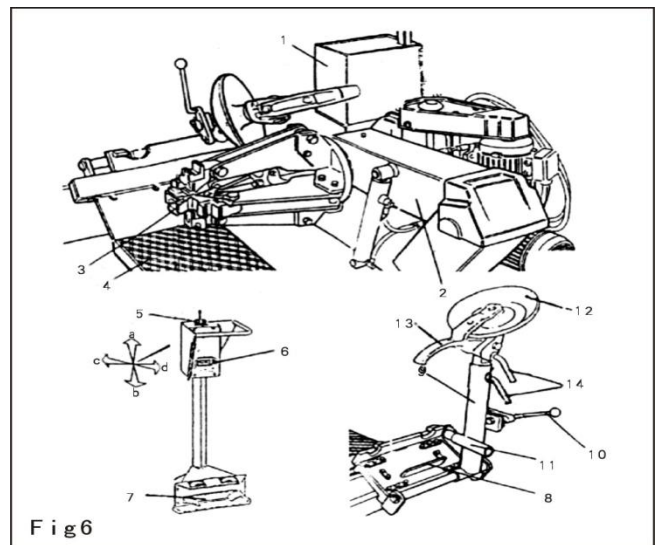
Before use the tire changer, you must do the running test to check if the installation is correct and the operation is normal..

**! During the following operations , you must setup the tool bracket ( 9 ) to be the situation of “non-operation”,**

When do the running test, place the tool bracket ( 9 ) to the non-operation position. Push the tool bracket lock rod ( 1 0 )to unlock the tool bracket( 9 ) and pull out it and set in the non-operation position.

Connect the power supply of the main switch of the electrical cabinet ( 1 ) . The hydraulic pump motor starts up. Step down the pedals ( 7 ) . Step the left pedal, the hydraulic adaptor will rotate counter clockwise and step the right pedal, the hydraulic adaptor will rotate clockwise .

Operate the switch ( 5 ): Push in the direction a or b, the vertical movement arm ( 2 ) will rise up or drop down. If push in the direction of c or d, the carriage will move leftward or rightward.. If we push the clamp control switch ( 6 ) upwards, the hydraulic adaptor will automatic open and if push the clamp control switch ( 6 ) downwards, the hydraulic adaptor will automatic close



**! The vertical movement of the vertical movement arm and the open of the hydraulic adaptor can cause the damage, therefore you should operate out of range of its movement.**

☞Use

●Use Instruction

**! Overlook the guide and warning, it will cause the serious damages to the operators or the third party. So do not start up the machine before read the manual.**

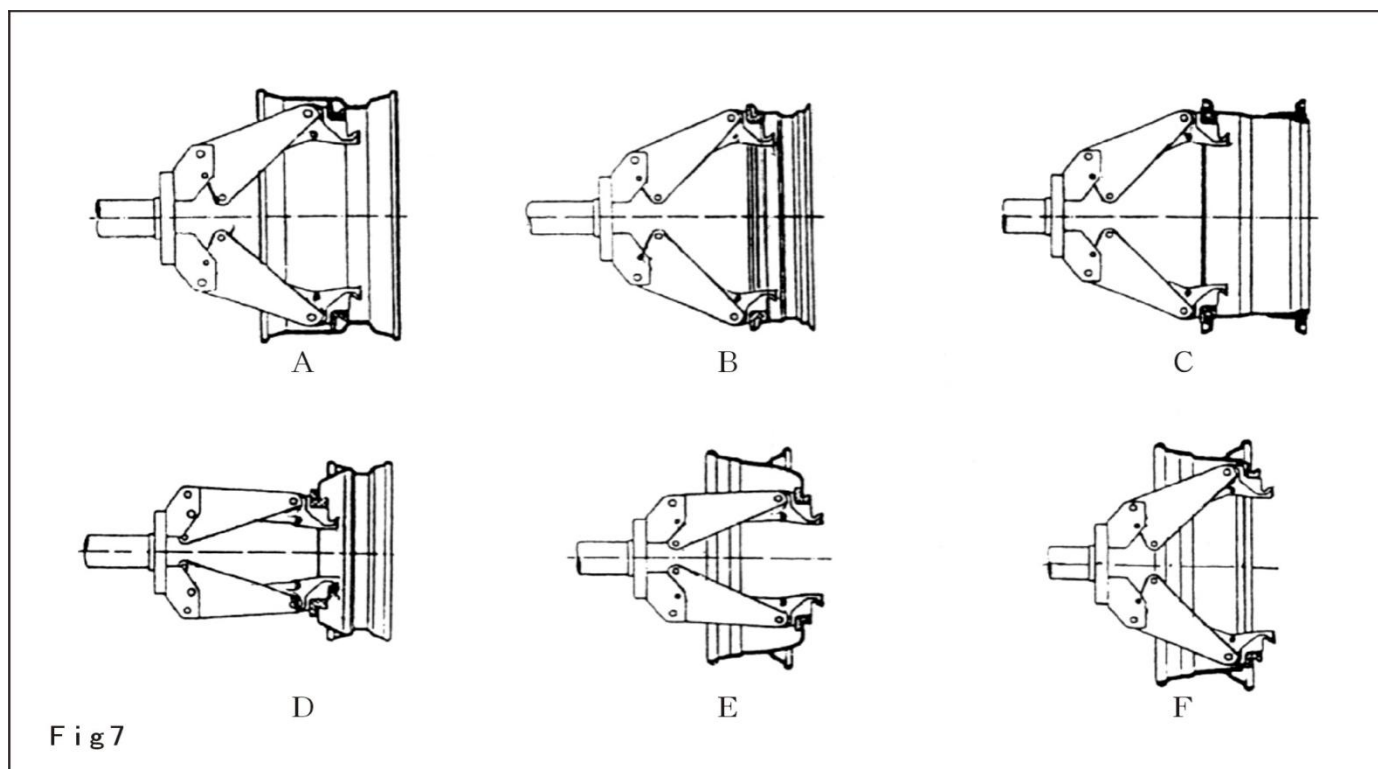
All the operators must undertake the proper training before use the machine and the other persons are not permitted to enter the working site. Do not place the objects on the tire changer to avoid the danger when operate. Without the permission of the factory, it is forbidden to modify or change the tire changer. When operation, the safety should be paid attention. You should tie up the long hair. Do not wear the loosen clothing, neck tie, necklace, ring or watch. It is very easy to hook up all these objects.

- **Emergency stop:** Turn the main switch to the 0 position or power off.
- **Lock the rim of the wheel.**

**This machine is only suitable to the rim, the center hole diameter of which is in the range of 120 mm-700 mm ( 1 4 " – 2 6 " ). The method and position of the lock ate different for the different types of the rim ( see Fig 7 ) .**

**Place the tire upright on the tire support platform. Move the control handle to rise up the tire a little and push the clamp switch to clamp the tire and rim and to lift them to the height easy to handle.**

**! To the heavy tire of the tire with big dimension, you must equip with the proper lift device to avoid the injury or damage to the human body.**

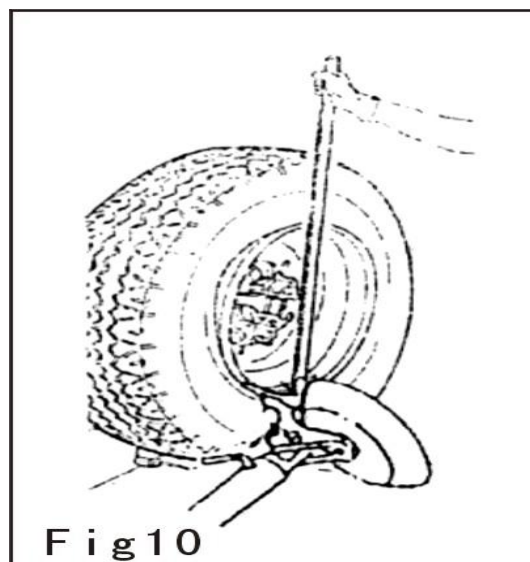
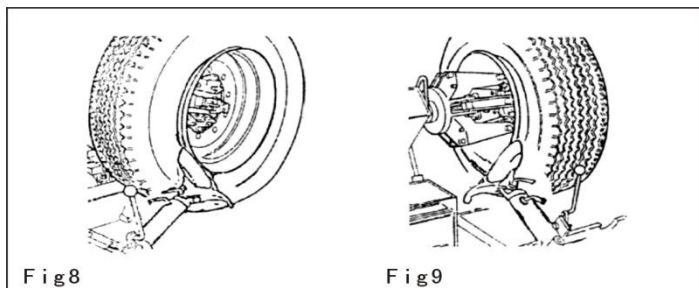


● Dismount the tubeless tire

Use the circular disk to break the bead of the tire.

1. Secure the tire are fixed and has been deflated up.

2. When operate, adjust the tool bracket( 9 ). Use the suitable tool and make the tool bracket lock rod ( 1 0 ) just hook the carriage..

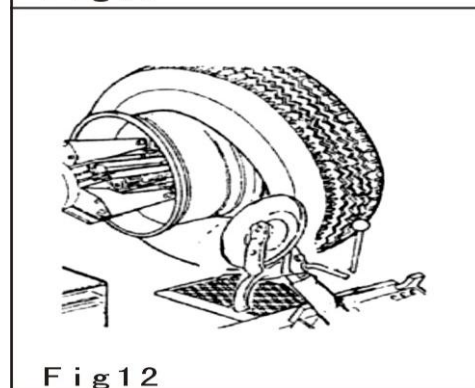
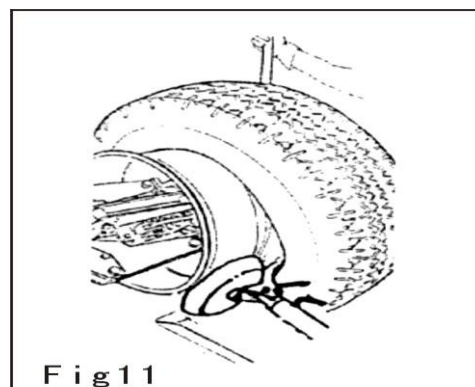


**! Forever check if the tool bracket lock rod ( 1 0 ) is correctly hook the carriage ( 8 )**

1. Use the control switch ( 5 ) to make the circular disk ( 12 ) lean firmly against the rim of the wheel ( as shown in Fig 8 )

2. Rotate the tire and meanwhile move the circular disk ( 12 ) forward.

3. Continue the forward movement until the rim of the tire separate from the tire. For convenient operation, you should spread the grease on the rim of the tire to avoid the damage to the rim and tire.



**! Pay special attention ! Do not grip the fingers between the tire and the tool to avoid the danger. When operate outside rim , rotate the clockwise and for the inside rim, rotate counter-clockwise.**

4. Move the circular disk ( 12 ) away from the rim of the wheel, loose the tool bracket lock rod ( 1 0 ), lift the support arm upwards away from the working position. Move the circular disk ( 12 ) to the inside.

5. Repeat the above operations until the other side of the rim of tire completely come off. ( as Fig 9 ) .

**Dismount tire:**

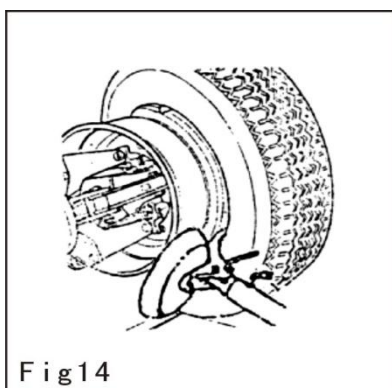
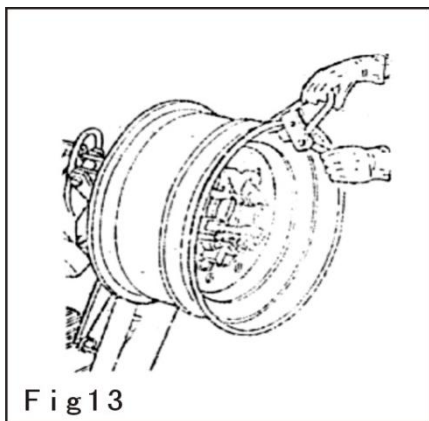
1) Push the tool bracket( 9 ) to the non-operation position to move it to the outside of the wheel. Secure the sharp nose tool just point to the tire. Or take off the position handle ( 1 4 ) . Rotate the tool head by 180° and then drop down and hook the carriage.

2) Control the operation switch to adjust the sharp nose tool ( 13 ) to locate it between the tire and rim and insert to hook the tire.

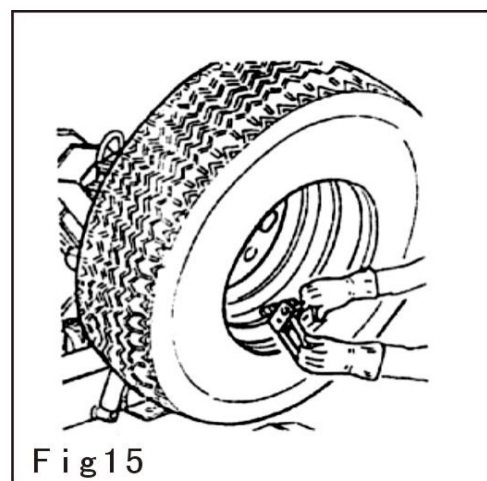
- 3) Move downwards the rim of the wheel to avoid the tool separating from the rim of the tire.
- 4) Move the sharp nose tool outwards until reach the external of the rim of the wheel.
- 5) Insert the crowbar between the rim of the wheel and tire at the bottom of the sharp nose tool.
- 6) Press down the crowbar and lower the wheel until the distance from the rim of wheel to sharp nose tool is 5 mm (as shown in Fig10) .
- 7) Rotate the wheel counter clockwise until the rim of the tire is completely separated from the rim of the wheel.(as shown in Fig11)
- 8) Place the tool support arm to the inside of the tire and use the circular disk to lean against the rim of the tire. And rotate the wheel counter clockwise to make the inside rim of the tire completely separate from the wheel until the entire tire is dismounted. (as shown in Fig12)

Mount the tire:

- 1) Secure the rim is firmly fixed by the hydraulic adaptor.
- 2) Spread the grease on the rim of the wheel and the two sides of the tire.
- 3) Fix the pliers to at the highest position of the external side of the rim of the wheel (as shown in Fig13)



- 4) Place the tire on the carriage, lower the vertical movable arm to adjust the distance between the tire support platform and the vertical movable arm.
- 5) Rise up the rim of the tire and tire and rotate clockwise by 15—20mm, Lean the tire and rim together.
- 6) Check if the sharp nose tool points towards the tire. If no. Take off the position rod and rotate by 180degree and lock.
- 7) Use the control switch to make the distance between the sharp nose tool and the external rim of the wheel be 5mm.
- 8) Rotate clockwise until the pliers at the lowest position.
- 9) Remove the pliers from the rim of the wheel and make the tool separate from the tire.
- 10) Move the tool bracket to the external side of the tire and lock the position.
- 11) Clamp the pliers at the external rim of the wheel and rotate until reaching the position over the sharp nose tool.
- 12) Rotate the tire counter clockwise until the pliers at the lowest position
- 13) Take off the pliers
- 14) Place the tire support under the wheel and lower the bracket arm of the hydraulic adaptor to position the wheel on it.
- 15) Release the hydraulic adaptor and take off the tire carefully. Avoid the rolling down of the tire. Pay attention to the safety.



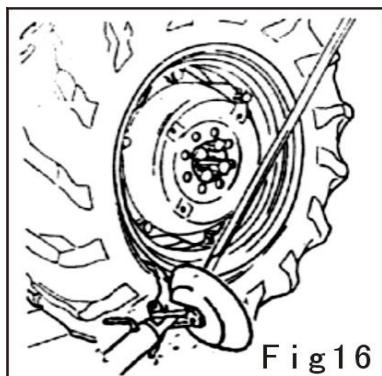


Fig 16

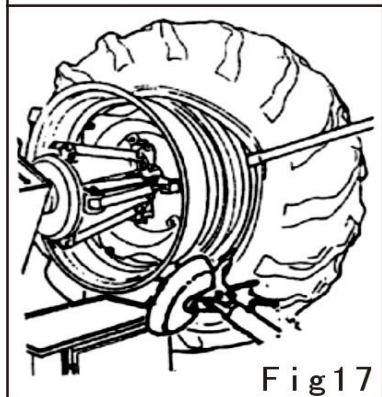


Fig 17

**Pay much attention! Do not grip the finger between the tire and tool.**

- Dismount the tire with tube.

**! When deflate the tire, open the bushing fixing the valve to make the valve inside the rim of the wheel to ensure no barrier when brake the bead.**

Continue each step of the process to break the bead of the tubeless tire. To the tire with the tube, when the rim of the tire is released, you should stop the movement of the circular disk to avoid the damage the inflation valve of the tube.

- 1) Move the tool bracket<sup>⑨</sup> to the non-operation position and position it outside of the wheel. And hook the tire at this position.
- 2) Rotate the shaft and move the sharp nose tool to make it insert in between the rim of the wheel and the rim of the tire until the wheel is hooked.
- 3) Move the rim of the wheel by 4—5cm to prevent the rim of the wheel separate from the tool.
- 4) Move outward the sharp nose tool until it at the position of the rim of the wheel.
- 5) Insert the crowbar in between the rim of the wheel and

the rim of the tire at the right bottom of the tool.

- 6) Press downward the crowbar and lower the wheel until the distance from the rim of the wheel to the sharp nose tool is 5mm.

- 7) Rotate the wheel counter clockwise until the rim at the one side of the tire completely detached.

- 8) Move the tool bracket to the non-operation position and lower the shaft. The tire will contact with the support plane<sup>④</sup>. Move the wheel support platform outwards a little for leaving the space to take out the tube.

- 9) Take out the tube and lift the tire again.

- 10) Move the tool bracket to the inside of the tire and turn the sharp nose tool by 180 degree and lower the support arm to the non-operation position. Insert it in between the rim of the wheel and the rim of the tire. Move to the position in front of the external rim of the wheel. Rotate the wheel.

- 11) Move the rim of the wheel by 4—5cm to prevent the rim of the wheel separate from the tool.

- 12) Move the sharp nose tool to make at the position 3cm from the inside of the tire.

- 13) At the right side of the sharp nose tool, insert the rod in between the rim of the wheel and the rim of the tire. (see Fig17)

- 14) Press downward the crowbar and lower down the wheel until the distance between the rim of the wheel and the sharp nose tool is 5mm. Rotate counter clockwise the wheel until the tire is completely detached from the rim of the wheel.

Mount the tire:

1) If the rim of the wheel is taken off from the shaft, lock it

**! When the tire is detached from the rim, the wheel will come off. All the unauthorized personnel will be kept from the working site.**

as per "Rim of wheel clamp installation"

2) Spread the grease on the rim of the tire and the rim of the wheel.

3) Clamp the pliers at the highest position of the external of the rim of the wheel (see Fig18)

**Secure the pliers is firmly contacted with the rim of the wheel.**

4) Place the tire on the tire support platform and lower the shaft.

5) Keep the pliers at the highest position to hook the side 1 of the rim of the tire.

6) Lift the rim of the wheel with the rim and rotate counter clockwise by 15—20cm and the tire will tilt automatically.

7) Move the tool support arm to the non-operation position and move it to the inside of the tire and hook again at this position.

9) If not in this position, rotate 180 degree.

10) Move forward the sharp nose tool and make it 5mm from the external rim of the rim.

11) Visual check from the outside of the wheel if the position is right or not. If not, please adjust and then rotate the shaft counter clockwise until the pliers at the lowest position and the rim of the tire of Side 1 is mounted. Take out the pliers(see Fig 19)and take out the

tool from the tire.

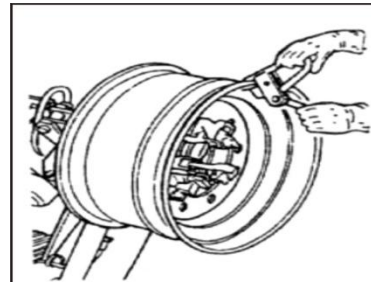


Fig 18

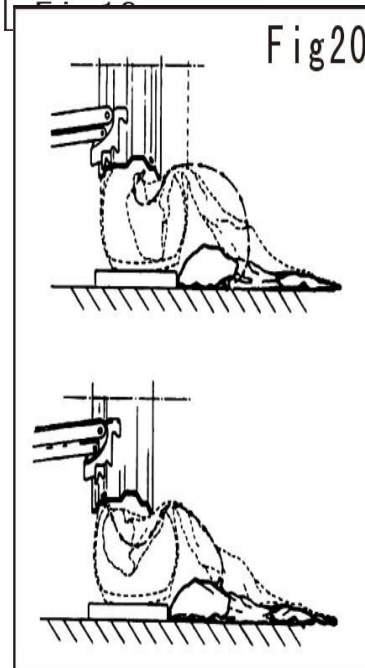
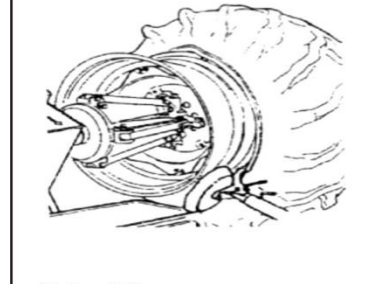


Fig 20

12) Move the tool support arm to the non-operation position and move it to the outside of the rim of the tire.

13) Rotate the tool by 180 degree.

14) Rotate the shaft to the bottom of the rim where you will see the core.

15) Position the tire support platform (10) under the wheel and lower the shaft to make the tire contact with the tire support platform and move the tire support platform



outward a little to leave the clearance for mounting the tube.

Note: The core is possible not symmetrical to the center of the rim of the wheel, mount the tube as per Fig 20.

Insert the core into the hole and lock by the locknut.

16) Place the tube in the groove of the rim of the wheel.

Note: For easy operation, we suggest to rotate the shaft clockwise at the same time.

17) Inflate small amount of air into the tube until there is not too much folding to avoid the rim of the wheel will not be folded when mount.

18) Mount the extension pipe on the core and take out the lock ring.

Note: The object of this operation is to permit the core loose to avoid the other side being torn away when mount.

19) Lift the tire and clamp the pliers at the external side of the other side and 20cm to the right side of the core.

20) Rotate the shaft clockwise until the pliers at the 9o'clock.

21) Move the tool bracket to the operation position.

22) Move the sharp nose tool forward to the position 5mm from the external rim of the wheel.

23) Rotate the shaft clockwise until the tire is completely mounted on the rim of the wheel.

24) Take off the pliers and rotate counter clockwise to remove the tool and move outwards.

25) Move the tool bracket to the non-operation position.

26) Position the tire support platform under the tire and lower the shaft until the wheel contact with tire support platform.

27) Lean the wheel against the tire support platform and check if the core is just towards the hole. If not, slightly turn the shaft to adjust the position and use the locknut to lock the core and take off the extension tube.

28) Carefully release the hydraulic adaptor and support the wheel to avoid the falling down.

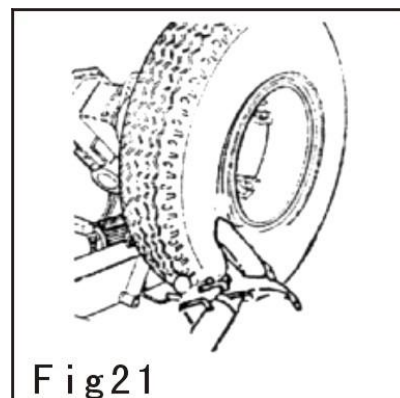
29) Move the tire support platform to release the tire and take off the tire once again. .

#### ●Dismount the tire with ring

1) As mentioned before, grip the tire on the shaft and ensure the tire is deflated.

2) Lower the tool bracket to the operation position and use the tool bracket lock rod to lock,

3) Insert the circular disk into the rim of the wheel.(as shown in Fig21)



4) Rotate the shaft and meanwhile move the circular disk

forward along the outline of the rim of the wheel until the ring is completely detached from the rim of the wheel.

You should note the spread of the grease.

You should take care is there is ring. Once the rim of the tire is torn, you should stop at once to avoid damaging the core and tube.

5) As shown in Fig 22, use the crowbar to place the open of the ring to the rim of the rim of the wheel and then rotate the shaft.

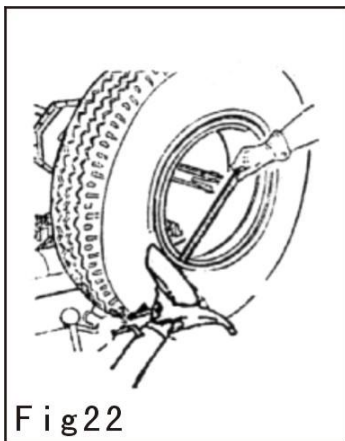


Fig 22

6) Insert the core into the external rim of the wheel to prevent the tear of the tube. Move the tool bracket (9) to the non-operation position and move the tool bracket to the outside of the wheel.

7) Lower the support arm to the operation position.

8) Move the circular disk towards the tire until half of the tires has come off.

9) Move the tool bracket to the non-operation position.

10) Lower the shaft until the wheel is placed on the tire support platform and make the tire is completely

detached from the rim. Pay attention to the core.

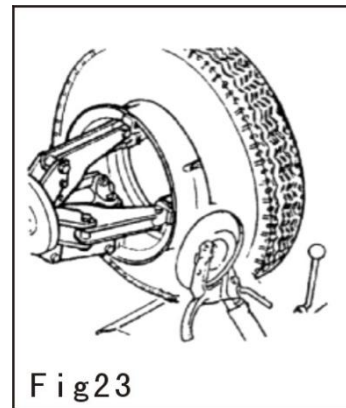


Fig 23

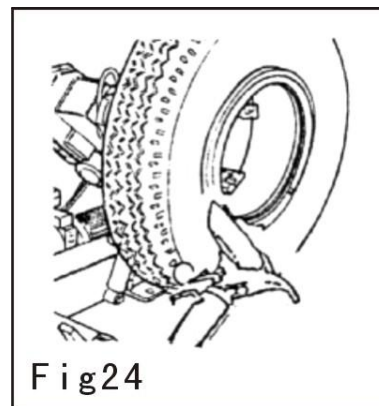


Fig 24

Mount the tire

1) Lock the rim and place the core at the bottom and spread the grease.

2) Move the tire support platform outwards and place the tire and core to the bottom position.

3) Move the tire support platform until the rim of the wheel is completely placed into the tire.

4) Move the tool bracket to the outside and make the circular disk towards the wheel and lean against the rim.

Rotate the shaft and meanwhile push the circular disk to

make the rim completely into the tire.

5) Place the open ring on the rim and mount the open ring with the circular disk as shown in Fig 24.

6) Place the tool bracket to the non-operation position and release the clamp. Move the tire support platform to take off the wheel safely.

**! The personnel not being trained can not handle maintenance.**

#### ☞ Maintenance

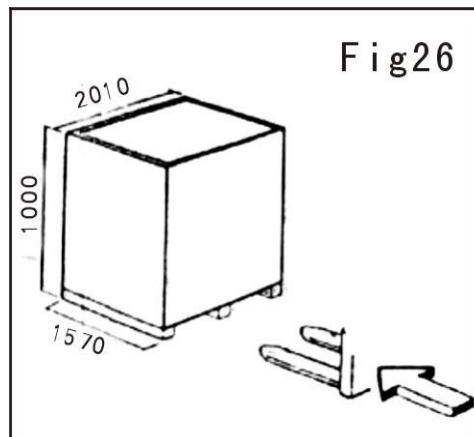
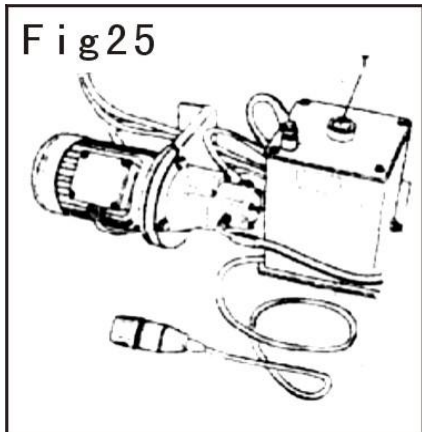
Maintenance in accordance with the instruction manual is the base to operate the tire changer correctly and can prolong the work life of the machine. Without the maintenance, the reliability of the machine will be reduced and can cause the dangerous to the operators, vehicles and the third party. Before repair or maintenance, you should pull out the power plug and use the original parts and change the parts with problems by the professional personnel. Periodically use the kerosene to clean the following parts and spread the grease.

①slide rail of carriage ; ②horizontal shaft of the tool bracket; ③vertical oil tank of the support arm. Support arm rotation shaft should be added with the oil. Grease in summer and gear oil in winter. ④ Use the oil scale to check the hydraulic oil in the hydraulic tank periodically

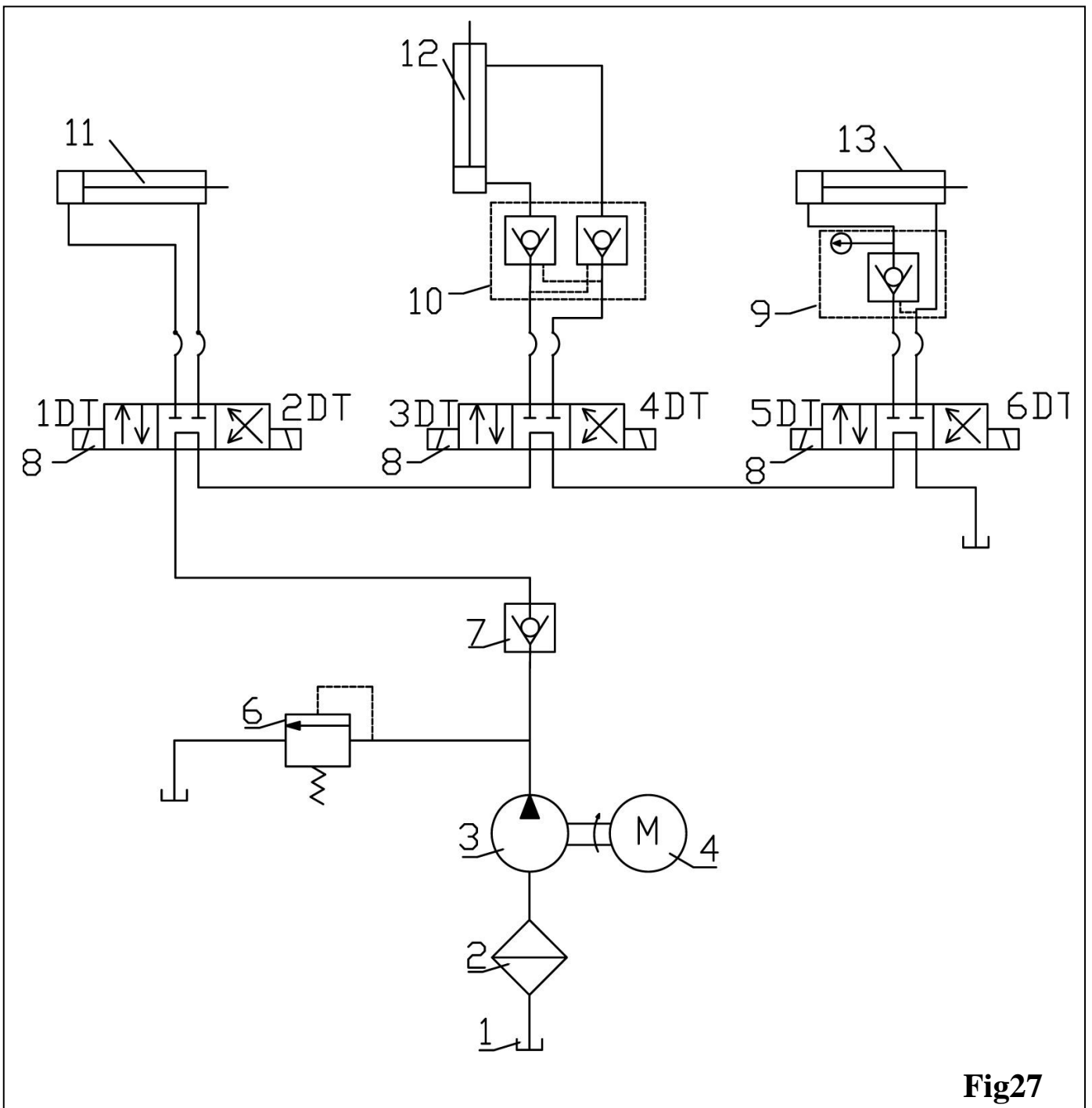
(as shown in Fig 25) and also the quality of the oil. If the quantity of oil is not enough, please add 30# hydraulic oil. Add the 320# gear oil on the gearbox periodically(quarterly) and the oil level should be higher than half of the oil window. ⑤Check the tension of the motor belt. If need adjustment, take off the plastic guard and use the adjust screw to adjust the belt. If long time(3-4months) of no use, keep well. ①Lower down the support arm. ②Do not make the support arm bear the load. ③Take out the power supply. ④Spread the grease on the slide rail. ⑤Drain the oil tank. ⑥Spread the grease on the horizontal shaft of the tool bracket.

#### ☞ Transportation, Package and Storage

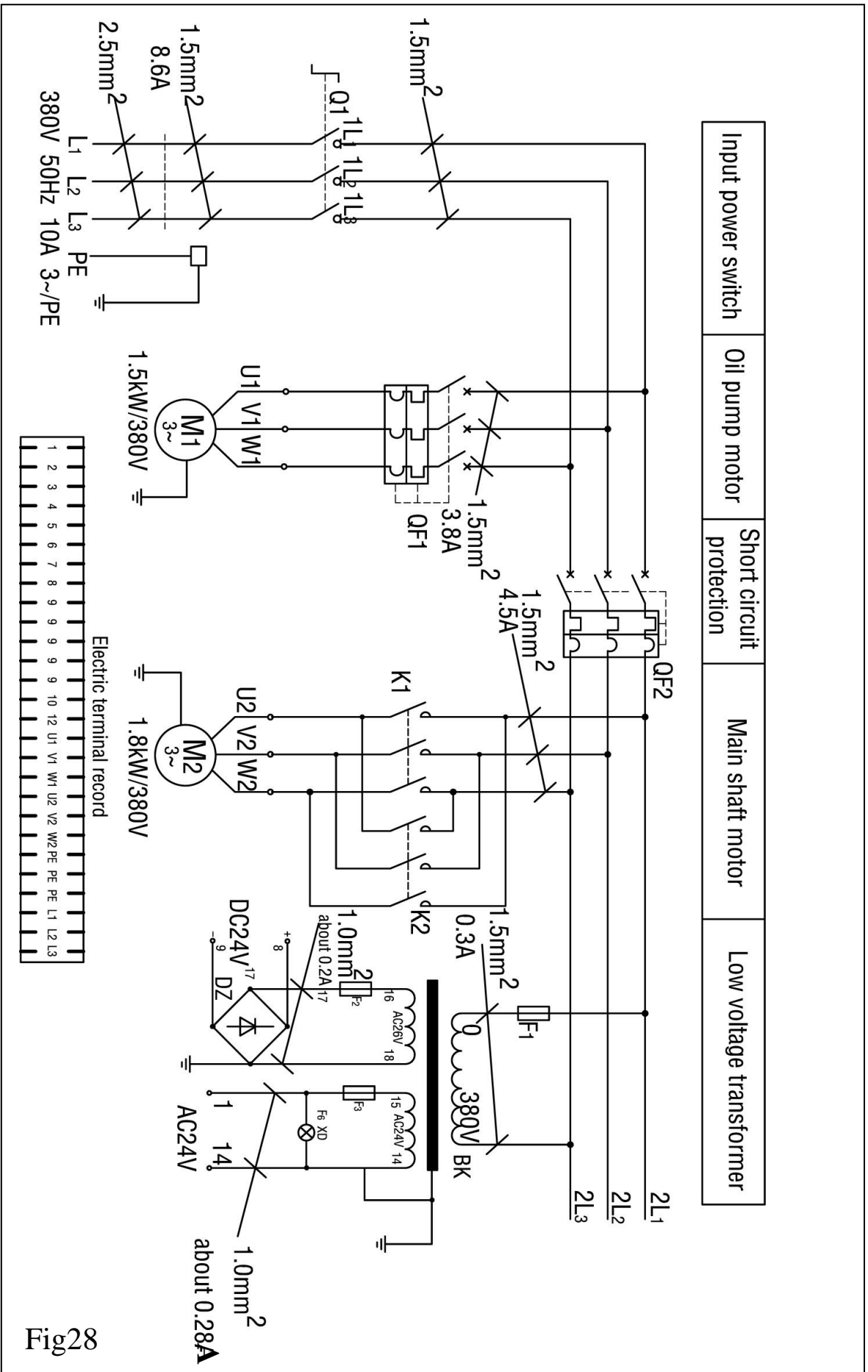
The machine must be transported in the original package and be placed in accordance with the location indicated on the package container. The forklift should be capable of carrying the machine. The position of the fork is shown in Fig26. Open and detach the package to confirm the tire changers are intact during transportation. Take out the standard accessories and treat the package material properly. Pay attention not to damage the control devices fixed in this process. If the machine needs the temporary storage, you should secure the following storage environment: Max. RH is 95% and the range of temperature is -5°C~+60°C.



Hydraulic drawing (Fig 27)	Electrical drawing (Fig 28 and Fig 29)
01 oil tank	M1 pump motor
02 filter	M2 main shaft motor
03 oil pump	BK transformer
04 motor	QF1 circuit breaker
05 solenoid valve	QF2 circuit breaker
06 overflow valve	K1 AC contactor
07 One-way valve	K2 AC contactor
08 solenoid valve	SA toggle switch
09 valve	ST cross switch
10 oil guide	SF-1 main switch
11 hydraulic oil tank	SF-2 main switch
12 hydraulic lock	Y1、Y2、Y3 solenoid valve coil
13 hydraulic oil tank	Q1 power switch
14 hydraulic oil tank	
15 hydraulic oil tank	



**Fig27**



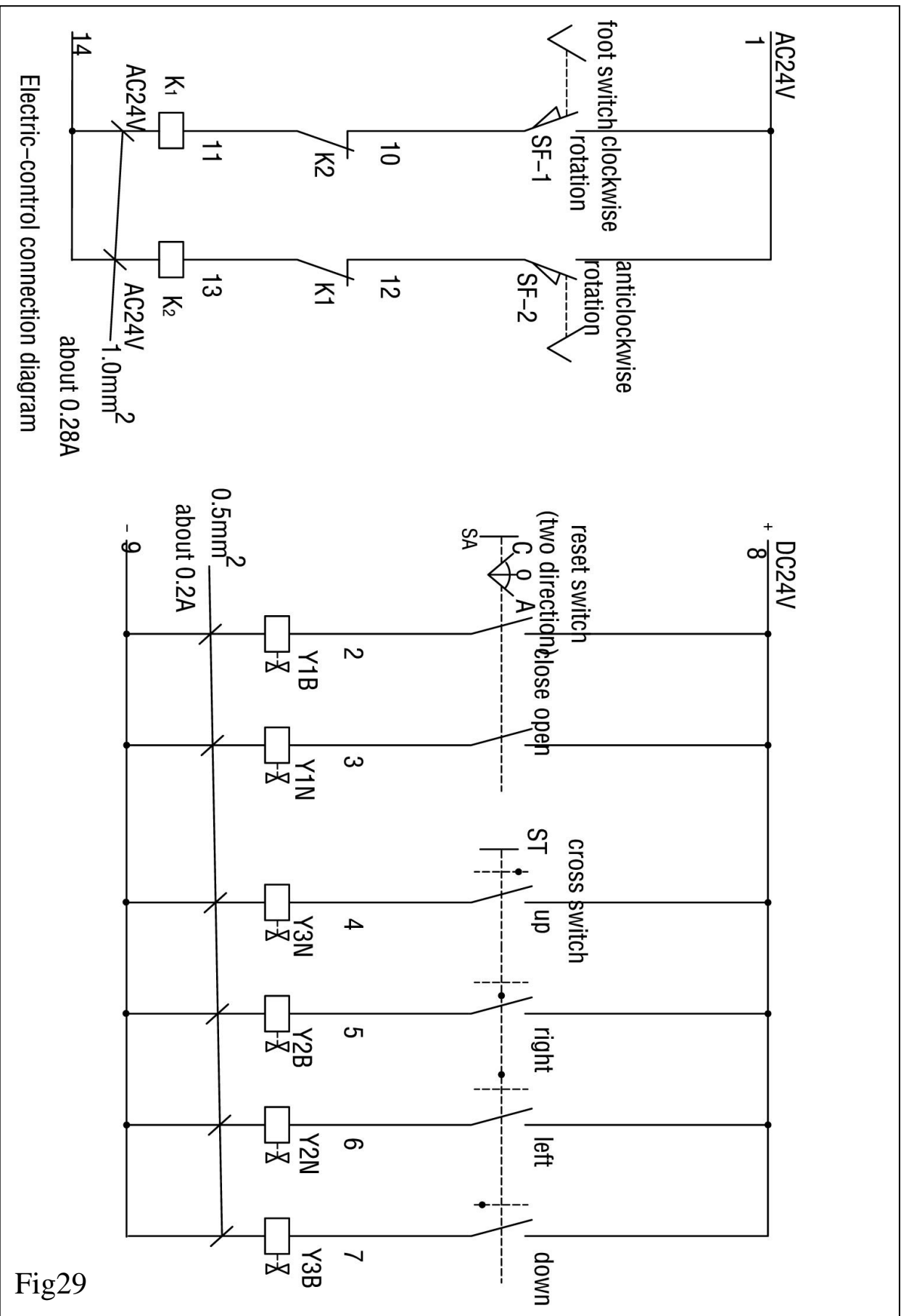


Fig29