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Safety Precautions

Attention

- I This manual is a necessary part of the product. Please read carefully.
- I Keep the manual for later use when maintaining the machine.
- I This machine can only be used for the designated purposes. Never use it for any other purpose.
- I The manufacturer is not held responsible for the damage incurred by improper use or use other than the intended purpose.

Precautions

- I The equipment can only be operated by qualified personnel with special training. Modification to any components or parts, or use the machine for other purpose without either obtaining the agreement from the producer, or observing the requirement of the instructions may lead to direct or indirect damage to the equipment.
- I The machine should be installed on the stable ground.
- I Keep the back panel 0.75M away from the wall for good ventilation. Enough room should be left on both sides of the machine for convenient operation.
- I Do not put the machine in a place with high temperature or moisture, or near the heating system, water tap, air-humidifier or chimney.
- I Do not put the machine near the window with sunlight. Protect the unit with a curtain or shield if necessary.
- I Avoid lots of dust, ammonia, alcohol, thinner or spraying binder.
- I People who are not operating the machines should be kept away when it is used.
- I Use appropriate equipment and tools, protective and safety equipment, including eyeglasses, earplugs and working boots.
- I Pay special attention to the marks on the machine.
- I Do not touch or approach the moving parts by hand during operating.
- I Do not remove the safety device or keep it from working properly.
- I Use #2 lithium lubricants (grease) only within the safety range. Refer the appendix for the safety data.
- I Before moving the tyre changer, contact maintenance personnel.

Description of Safety Signs



2 Caution should be taken when separating the tyre bead from rim. The bead breaker shoe will move rapidly and forcefully when the pedal is depressed. Keep hands and other parts of body away from moving parts.



2 To prevent accidents from occurring, make sure to keep hands and other parts of the body away from moving parts when fastening the mounting head or when the turntable is running.



2 If the clamping cylinder is working when bead breaking, to avoid squeezing hands, remember to keep hands away from the sidewalk of tyre.



2 Be careful when connecting and disconnecting air source. Exhaust the air in the cylinder completely when maintaining the air pipes to prevent accidents from occurring.



2 High voltage power! Danger!



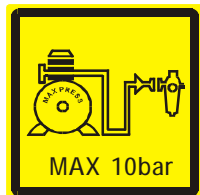
2 Don't keep hands or other body parts between the clamping jaw and clamping rim.



2 This is where the compressed air gun is connected with the air pipe. Connect the compressed air gun with the air connector.



2 Pay attention to the safety regulations in the swinging area of the tilting post to avoid accidents from happening.



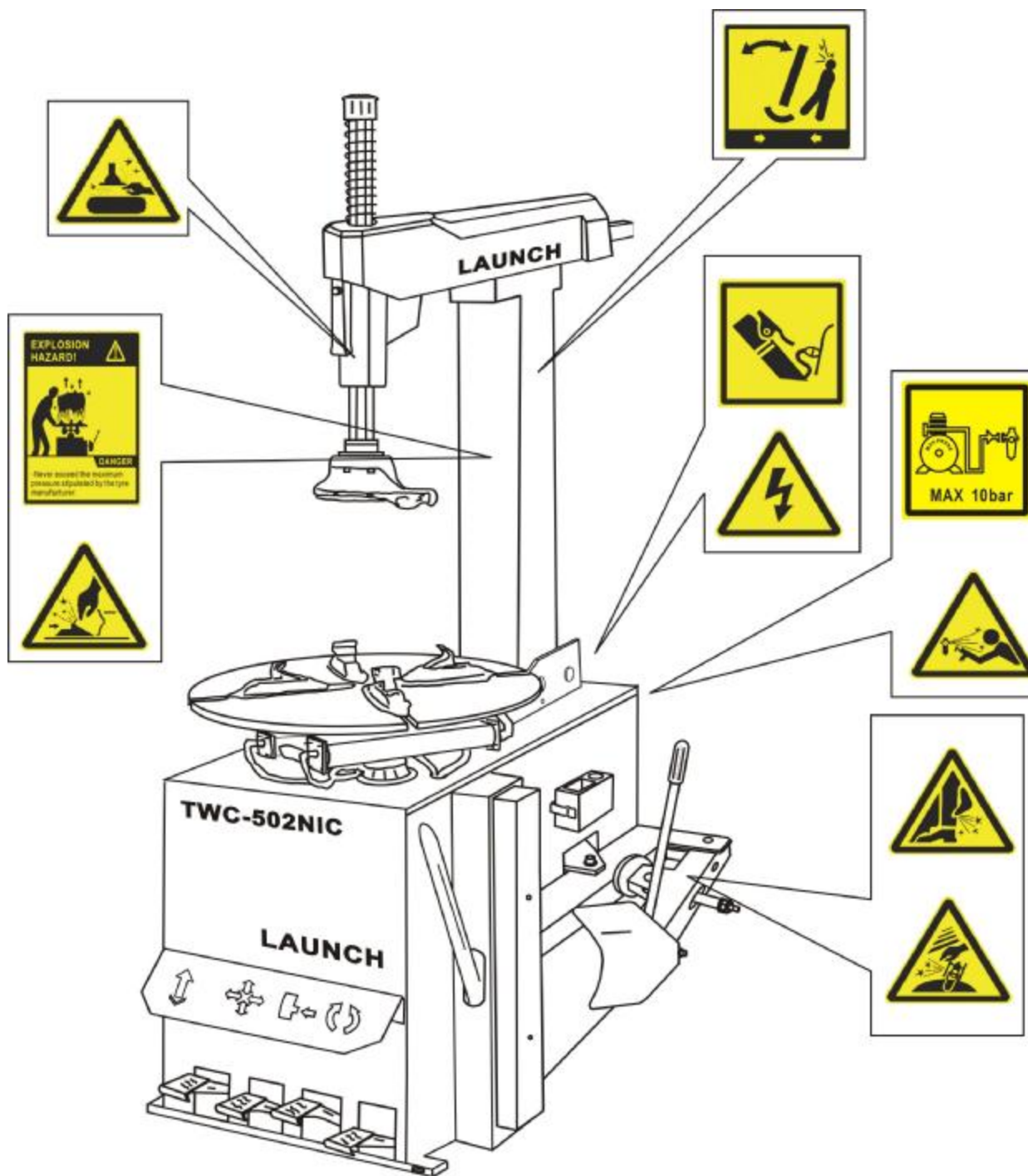
2 The pressure of the compressed air should not exceed 10 bar.



2 Before inflating check if the clamping rim and the tyre match each other, and if they are in good condition. Any negligence may result in fatal explosion. Similar accident may occur if the inflating air exceeds the allowed tire pressure.

The Position of Safety Signs

Take TWC-502NIC as example:



- u Please replace the safety signs if it gets blurred or lost.
- u When one or more safety signs get lost, don't operate the machine.
- u The safety signs must be kept within the sight of the operator.

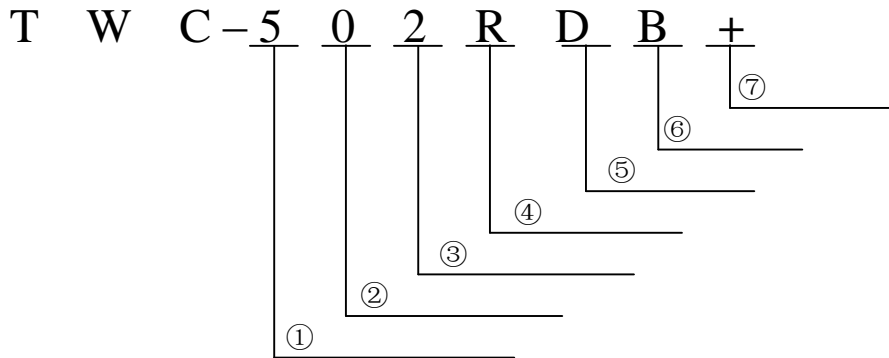
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General Information

Rules to name TWC series

TWC- means tyre changer



Meaning of code:

- ①- for rim clamping diameter: 4 stands for 10" ~ 19"(20");
5 stands for 10" ~ 23"(24");
6 stands for 10" ~ 26";
- ②- for shape of turntable: 0 stands for round turntable;
1 stands for square turntable;
2 stands for cross turntable;
3 stands for asymmetric turntable;
- ③- post working mode: 1 stands for swing arm (semi-automatic);
2 stands for tilting arm(automatic);
3 stands for swivel arm (automatic)
- ④- for supplementary arm information: R stands for right supplementary arm;
L stands for left supplementary arm;
D stands for double supplementary arm;
N stands for none supplementary arm;
- ⑤- for inflating device: I stands for inflating gun;
M stands for meter inflating box;
D stands for digital inflating gauge (LED display);
- ⑥- for inflating mode: B stands for quick inflator;
C stands for normal inflating;
- ⑦- for roller set: + stands for roller set;

For example:

TWC-502RDB+----- the tyre changer's rim clamping diameter is 10"-23"(24"). It is equipped with round turntable, tilting post(automatic), right supplementary arm, digital inflating box(LED display), quick inflator and roller set.

Usage

TWC series are used for demounting, mounting and inflating tyres of small and medium vehicles. Mount/demount help device and quick-inflating device features simple operation and high reliability. In addition, it can also be a great help in car repair garage and tyre dealers.

Features

- I Integrate demounting, mounting and inflating, wide rim diameter capacity
- I The steel mount/demount is cast from excellent alloy material with special shape and durable performance. The supplied plastic mount/demount head with the equipment is made from special engineering plastic that has enough intensity and will not damage the tyre or the rim.
- I The two clamping cylinder ensures accurate central alignment, so that the rim can be held tightly.
- I Pedal set designed for ergonomical use
- I With adjustable opening, bead breaker is suitable for tyres of different sizes
- I Tyre lever and lubricant box within the reach of operator technical specifications

Technical data

| Model | Height | Length | Width | Weight |
|----------|--------|--------|-------|--------|
| TWC4*1** | 1705mm | 1020mm | 810mm | 204kg |
| TWC4*2** | 1725mm | 1020mm | 810mm | 218kg |
| TWC5*1** | 1820mm | 1015mm | 870mm | 228kg |
| TWC5*2** | 1880mm | 1350mm | 950mm | 320kg |
| TWC6*2** | 1880mm | 1350mm | 950mm | 340kg |

Electric specifications

Voltage alternatives:

A C110V(±5%) 60Hz (±1Hz)

AC220V(±5%) 50Hz (±1Hz)

AC230V(±5%) 60Hz (±1Hz)

Power: 1.1Kw

Phase: Single

RPM of turntable: 6—8r/min

Air supply

Working pressure: 8-10bar

Bead breaker force: 14075N

Noise

Working noise: <70dB(A)

Applicable Range

| Model | Max wheel diameter | Max rim width |
|----------|--------------------|---------------|
| 4 series | 960mm(38") | 360mm(14") |
| 5 series | 960mm(38") | 380mm(15") |
| 6 series | 1050mm(41") | 380mm(15") |

Working conditions

Working temperature: -40°C — 45°C

Transport/store temperature: -40°C — 55°C

Humidity: 30—95%

Altitude: less than 1000m

Main Structure

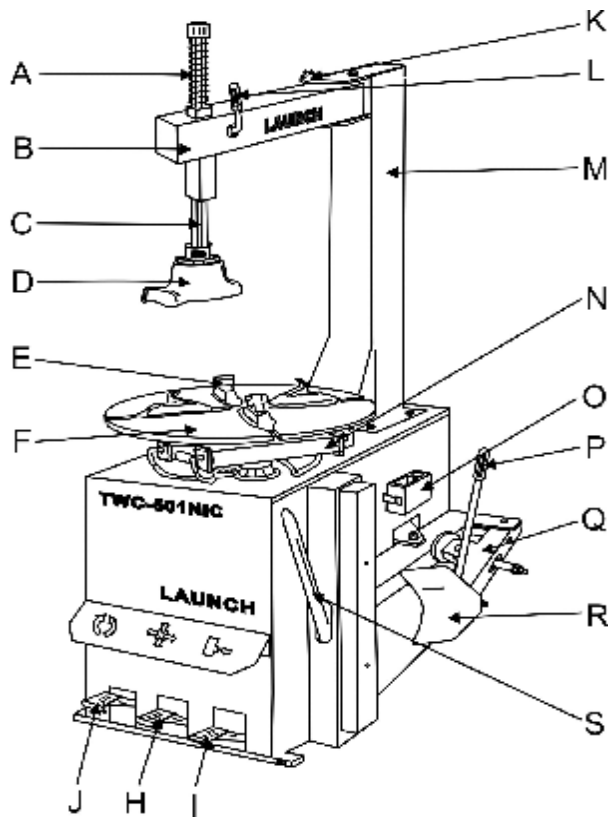


Fig.01-1

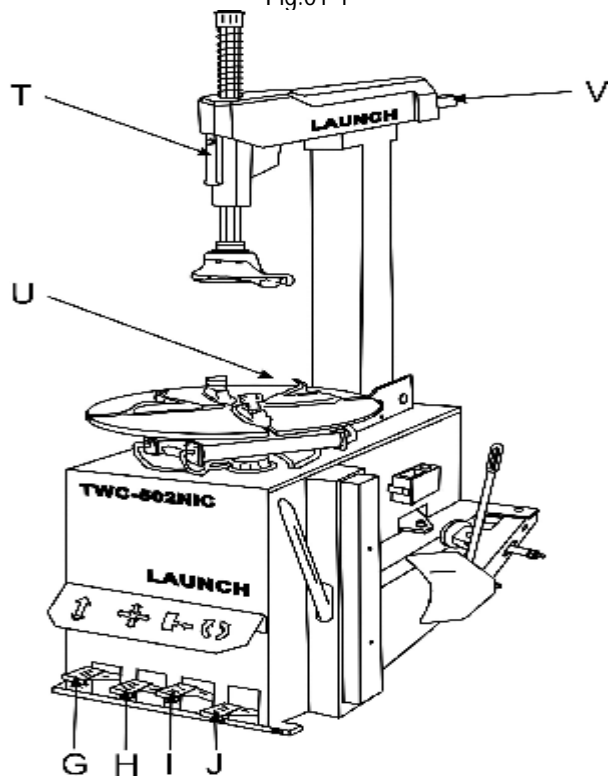


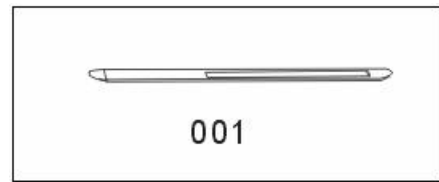
Fig.01-2

The main structure is shown in Fig. 01.

- A. Return spring
- B. Swing arm
- C. Hexagonal column
- D. Mount/demount head
- E. Clamping jaw
- F. Turntable
- G. Tilting post control pedal
- H. Clamping cylinder control pedal
- I. Bead breaker control pedal
- J. Turntable control pedal
- K. Knob
- L. Locking lever
- M. Post
- N. Clamping cylinder
- O. Lubricant box
- P. Bead breaker handle
- Q. Bead breaker arm
- R. Bead breaker shoe
- S. Tyre lever
- T. Locking handle
- U. Air pressure regulator, gauge and lubricator assembly
- V. Horizontal arm.

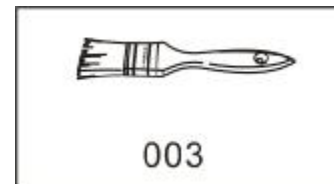
Accessories provided are shown in Fig.02

- 001-Tyre lever
- 002-Brush



001

Fig.02-a



003

Fig.02-b

Operation



Attention:

The machine is only to be operated by specially trained and authorized personnel. Use appropriate equipment, tools and personal protective equipment, such as eye-glasses, ear-plugs and working boots, when operating the tyre changer. Make sure that the power, air sources and the oil level in the oil cup are in accordance with the requirements.

General Regulations

- I To avoid damage when mounting and demounting tyre, especially the alloy ones, use the tyre lever offered by manufacturer.
- I For easier demounting and better protection of the tyre and rim, lubricate the area between the rim and tyre bead, where the bead breaker shoe goes in, with industrial lubricant or thick soap solution.
- I Pay special attention to rotary direction marked on some flanges or tyres.
- I Fit the tyre on the rim of matched size.
- I Check for damages (distortions, surface damages, excessive runout, erosion or overall wear) before demounting.
- I Never ignore the mounting and demounting requirements of the special wheel.
- I When inflating the tyre, make sure the pressure increases in an even way. Pay attention to status of the tyre bead.

Demounting Tyre

Preparing

- I Deflate the tyre thoroughly.
- I Remove all the foreign substance and weights from the rim (Fig. 03).

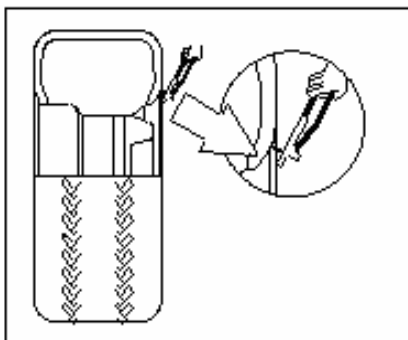


Fig.03

Demounting



Attention:

Lubricate the bead with a brush dipped in soap solution before bead breaking in order to protect

tyre bead from wear. (Fig. 04).

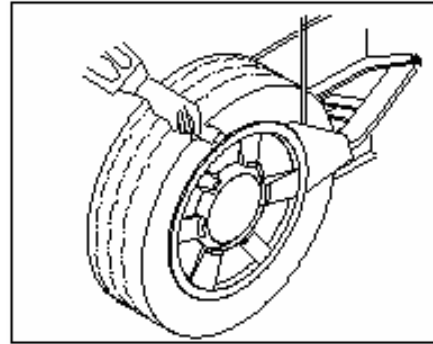


Fig.04

- I Place the tyre between the bead breaker shoe and rubber pad and position the bead breaker shoe max 1 cm away from the rim flange (Fig. 05). Depress pedal "↳" to unseat bead from rim.
 - I Repeat the above steps to unseat bead thoroughly from the rim.
 - I Place the wheel on the turntable. For the asymmetric deep groove rim, keep the narrow rim upward.
 - I Depress pedal "⊕" to the end to clamp the rim.
- Attention: Different types of clamping can be chosen in accordance with different rims.**
- Ø In case of inward clamping, shrink the jaws together, place the wheel on the turntable and depress pedal ⊕ to clamp.
 - Ø In case of outward clamping, enlarge the jaws outward (2-3cm away from periphery of the rim) and place the wheel on the turntable and depress pedal ⊕ to clamp it (Fig. 06).

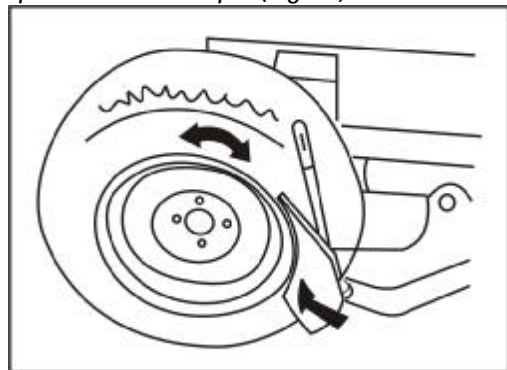


Fig.05

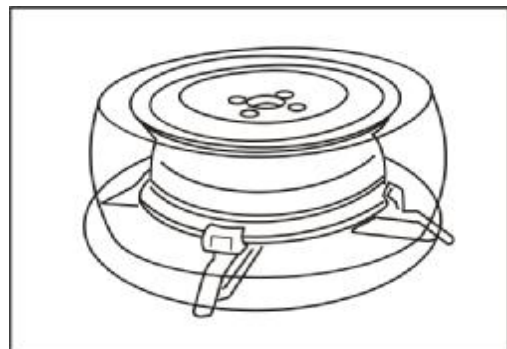


Fig.06

Tyre changer with swing arm:

- I Pull back the swing arm(3, fig.07) to working position, adjust hexagonal column(4) up and down to make mount/demount head 1-2 mm away from rim flange to protect rim(fig.09), turn knob (12)to lock swing arm, and turn locking handle(2) clockwise to lock hexagonal column.

Tyre changer with tilting post:

- I Depress pedal “⬇” to restore the tilting post to its working position (Fig.08).
- I Press the hexagonal column and adjust hexagonal column and horizontal arm to make mount/demount head 1-2 mm away from rim flange to avoid scratching rim(fig.09). Press button (a) (fig.08) on the locking handle to lock the hexagonal column.

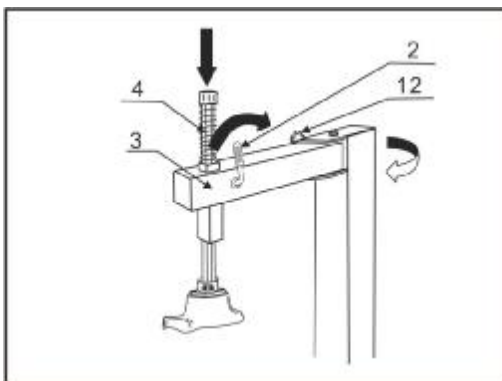


Fig.07

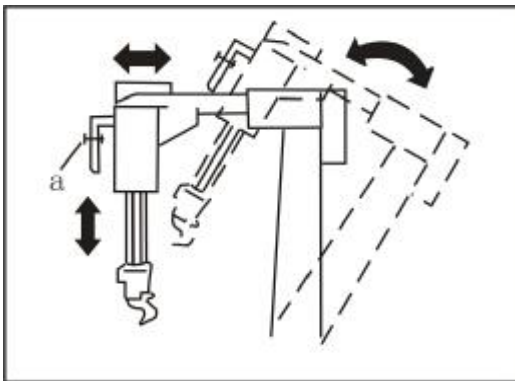


Fig.08

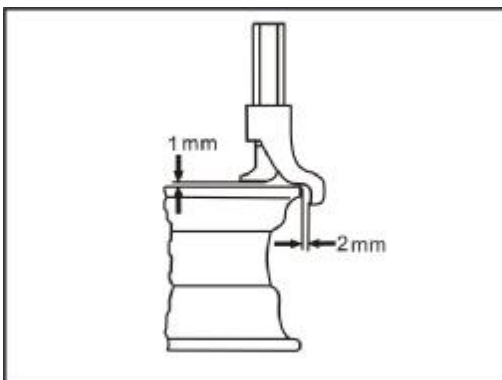


Fig.09

⚠ Attention:

The angle of the mount/demount head has been adjusted by manufacturer according to standard rim (15"). Re-adjustment may be necessary to prevent scratching the tyre when the rim is extremely large or small.

Lift the tyre bead onto the demount/mount head with tyre lever (to make it easy, press down the tyre opposite to the mount/demount head)(fig.10) Depress pedal “⬇” to turn the turntable clockwise until bead is unseated. To avoid damage to the tube when where is one, it is advisable to place the air inflating valve about 10 mm (fig.11) away from the mount/demount head.

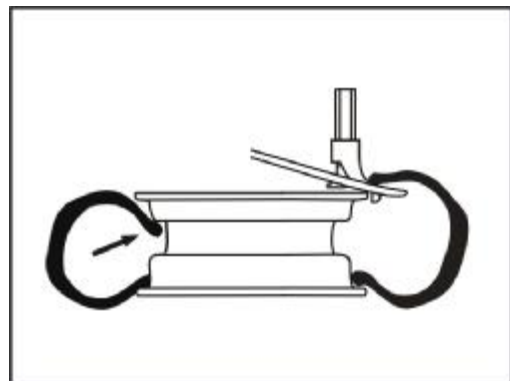


Fig.10

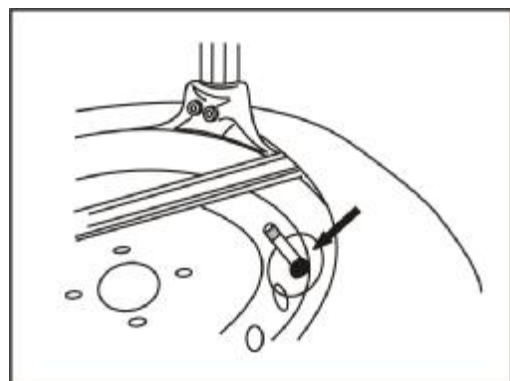


Fig.11

⚠ Caution:

In case the demounting is hindered, stop the machine immediately. Lift up the pedal “⬆” to turn the turntable counter-clockwise to clear away the hindrance.

- I If there is tube in the tyre, remove it first.
- I Lift the lower tyre bead so that the rim at the relative side enters the groove (fig.12), use tyre lever to lift the lower bead onto the mount/demount head.
- I Depress pedal “⬇” to separate the lower bead from rim.
- I Depress pedal “⊕” to loose the jaw to take the rim off.

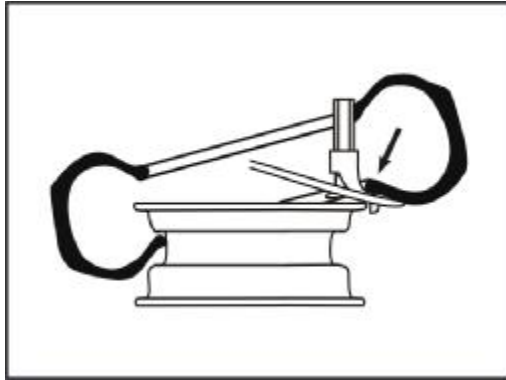


Fig.12



Caution:

Keep hands and the rest of human body away from the moving parts of the machine. Never wear necklace, bracelet or loose clothes when operating the machine as it may cause danger!

Mounting tyre



Attention:


Check the size of tyre and rim to see if they match each other.

- I Clamp the rim tightly in the same way as demounting tyre.
- I Use lubricant such as thick soap solution on the tyre and the rim.

Tyre changer with swing arm:

- I Place the tyre onto the rim at an angle to the turntable, left side higher, pull back the swing arm in working position.

Tyre changer with tilting post:

- I Place the tyre onto the rim at an angle to the turntable, front side higher(fig.13), depress down pedal “  ” to restore the post (fig.13), adjust the mount/demount head to right position, finally, press locking button.

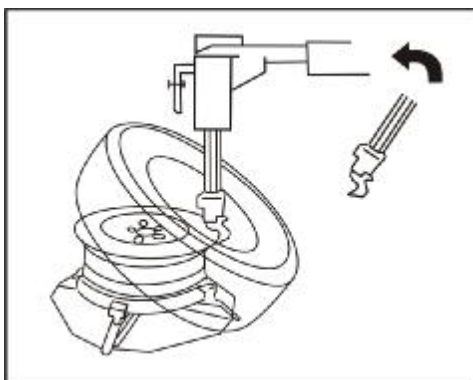


Fig.13

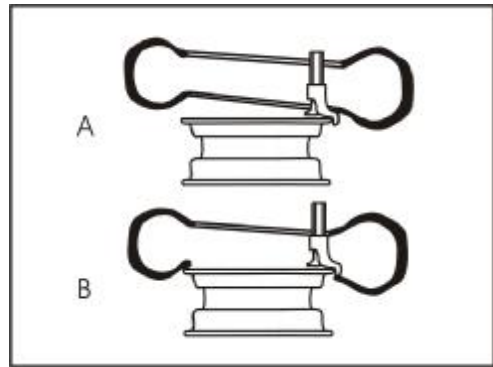


Fig.14

- I Adjust relative position between the tyre and the mount/demount head to position the tyre bead above the left lip of the head (fig.15A) and below the right lip(fig.15B).

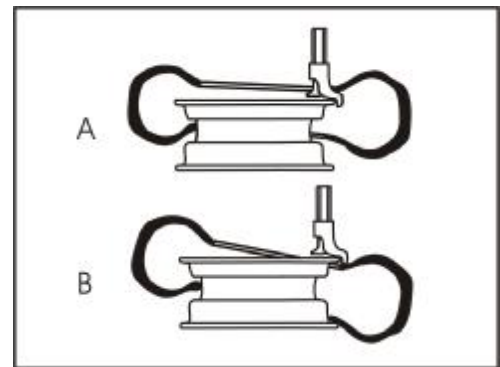



Fig.15

- I Press down the sidewall of the tyre. Depress the pedal “  ” to turn the turntable clockwise, making the lower tyre bead fall into the rim groove completely.
- I If a tube needs to be installed in the tyre, check first for the possible damages. Round it onto the rim. Make sure to keep the tube in the right position throughout the mounting process.
- I To install the upper tyre bead and adjust position of the tyre bead (same as mount of the lower tyre bead in Fig. 15). Draw out the roller and keep its side surface 1—2cm away from margin of the rim. Place the press block on the upper bead 20cm clockwise away from the mount/demount head. Press the control lever to make the press block go down 5—7cm to press the sidewall by hands to seat tyre bead into the rim groove (Fig. 16).

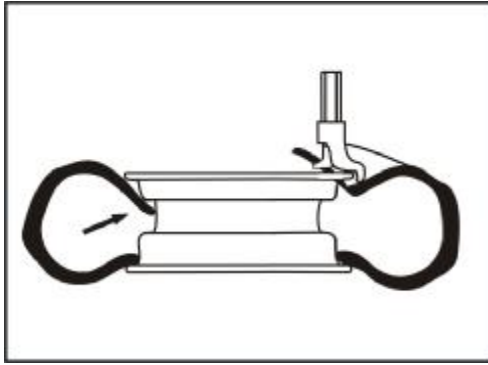




Fig.16

- I Depress the pedal “” to turn the turntable while keeping pressing on the tyre. When only 10—15cm is left, slow down to avoid damage of the tyre bead. Stop the motor if there is any indication for damage. Lift the pedal “” by foot to turn the turntable counter-clockwise. Try again after making the tyre back to the original shape.

**Attention:**

- u If the rim size does not change, it is not necessary to loose the locking handle after finishing the mount and demount of the tyre and adjust the mount/demount head before mount and demount of tyre. The operation will be continued by depressing the column tilting control pedal to make the titling column let go and restore automatically.
- u Make sure nobody is behind the tilting post when depressing pedal (G).
- u In the process of clamping, keep head and hands away from the area between the tyre and the horizontal arm in case injury would be incurred.

Inflating tyre**Danger!!**



Inflating can be highly dangerous. Take precautions and pay close attention to the procedures. Check pressure gauge and air circuit are in good condition before inflating.

The machine is equipped with a gauge to read the pressure in the tyre.

- I Loose the wheel on the turntable.
- I Connect the outlet of the inflating device to the air inflation valve as shown in Fig.17.
- I Slowly and repeatedly depress the inflation pedal (to avoid over-high pressure) to make sure that the reading on pressure gauge within the

manufacturer's requirements. The pressure should not exceed 3.5 bar. The user may adjust the reducing valve in the machine to get different pressures according to requirements.

Quick-inflation:

- I If the tyre is tubeless or the tyre does not match the rim hermetically, inflation method above-mentioned will has no effect. In this case, the quick-inflation should be adopted. The quick-inflation method is to depress pedal “” to lock the rim, then depress the inflation pedal  on right-hand of the cabinet to its end quickly and loose the pedal immediately. The quick-inflation is finished with a rat-tat.

**Attention:**

Make sure that the tyre is clamped tightly, otherwise it has danger of death.

**Warning: Danger of explosion!**

The safety procedures should be closely followed. Review and abide by the following instructions. Otherwise serious injury or death can be resulted. The manufacturer shall not be held responsible for any possible accident when the safety procedures are not followed.

- u Carefully check the dimensions of rim and tyre to see if they match each other. Check and make sure that the tyre is not worn or damaged before inflation.
- u When a high pressure is required, remove the tyre from the tyre changer and resume the inflation in a special protective hood.
- u Be careful when inflating the tyre. Keep hands and other parts of human body away from tyre.

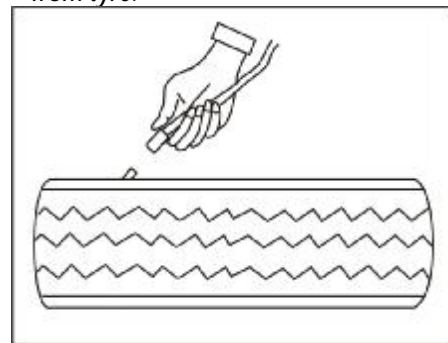


Fig.17

Right Supplementary Arm

Structure (Fig.18)

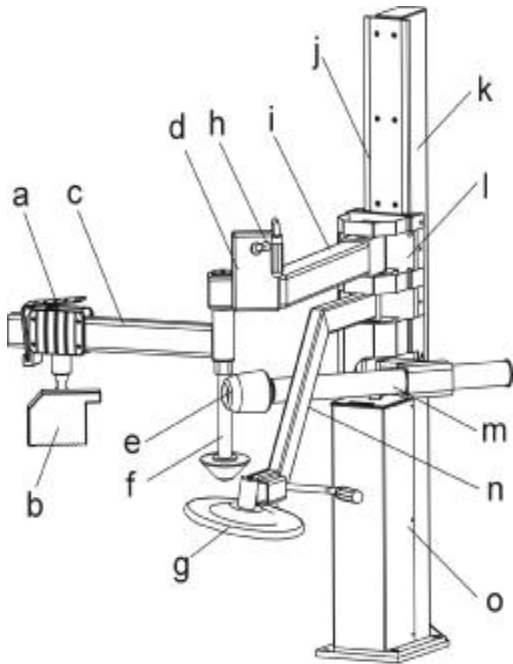


Fig.18

- a- Slider
- b- Press block
- c- Fore swivel arm
- d- Control box
- e- Roller
- f- Cone
- g- Disk
- h- Control lever
- i- Back swivel arm
- j- Sliding guide
- k- Post weldment
- l- Slide board
- m- Roller arm
- n- Disk arm
- o- Lifting cylinder

Operation



Attention:

- ∅ The supplementary arm is specially designed for TWC series pneumatic tyre changer of LAUNCH. Never mount it on other machines, otherwise, LAUNCH shall not liable for any accidents.
- ∅ The supplementary arm unit has function of automatic self-centering. The back swivel arm moves to center of turntable, it will lock automatically. Lift the control lever to unlock.

Demounting Tyre

- I After breaking bead from the rim completely following procedures described in last chapter, use the supplementary arm to simple operation.
- I Use the cone to simple operation of outward clamping. Open the jaws outward (2-3cm away from periphery of the rim) and place the wheel on the turntable. Draw out the back swivel arm, fit and aim the cone at the central hole of the wheel (fig.19), press down the control lever to keep the rim close to the jaws, and depress pedal "⊕" to clamp it (fig.20), remove the cone.

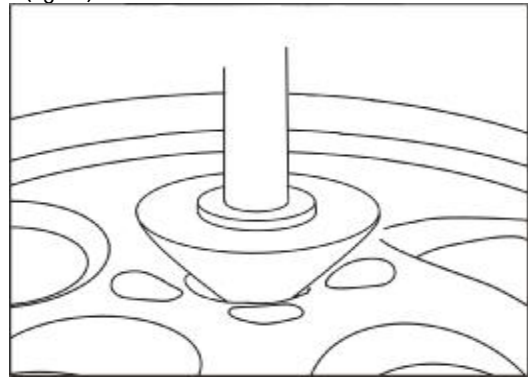


Fig.19

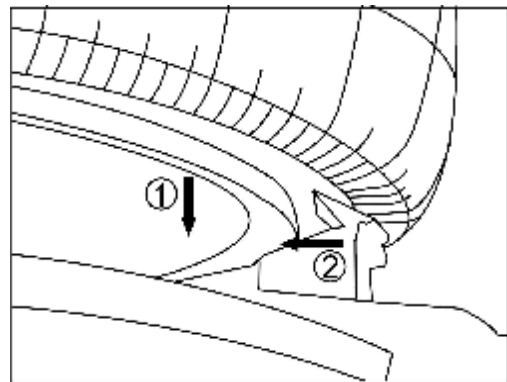


Fig.20

- I Draw out the roller and make it close to the tyre bead. Press down the control lever to move the roller downward 3-5cm, depress the pedal "⊕" to turn the turntable clockwise lubricating the tyre bead by a brush (fig.21).

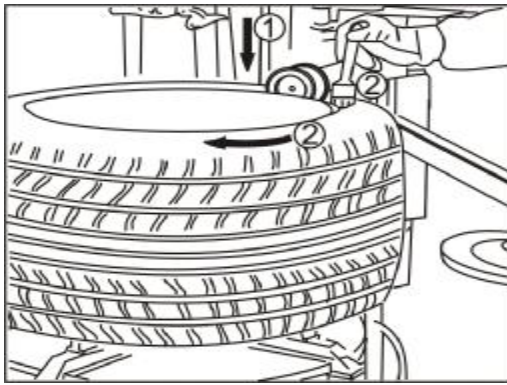


Fig.21

- I Adjust the mount/demount head to right position and lock it following the procedures in last chapter.
- I Insert the tyre lever into between the mount/demount head and the tyre bead. Lift the control lever to move the roller to its none working position (fig.22).

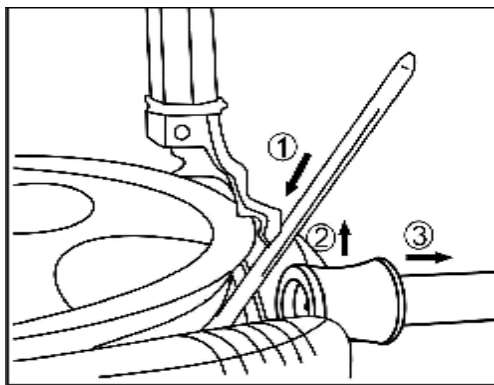


Fig.22

Turn the swivel arm, and place the press block on the tyre opposite to the mount/demount head. Lower down the control lever to press down the block 5-6cm, then prize the tyre bead onto the mount/demount head(fig.23). (The positions of the mount/demount head and tyre bead are described in last chapter.)

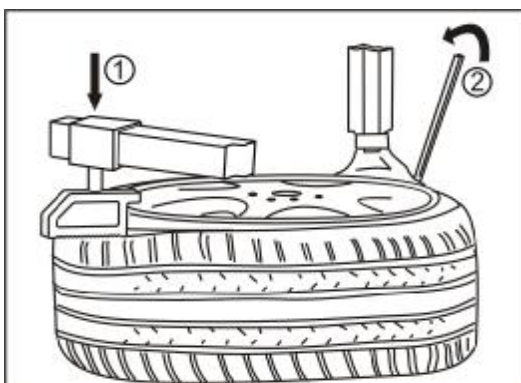


Fig.23

- I Move the press block to its none working position, depress the pedal “⌚” to turn the turntable clockwise until the rim is separated. In case of a

tubed tyre, it is advisable to keep the air inflation valve to the right of the mount/demount head about 10 cm away to avoid damaging.

- I If there is tube in the tyre, remove it first.
- I Draw out the disk, and make the disk under the lower bead, but not under rim. Insert the tyre lever between the head and bead and press it down. Lift the control lever up to break the bead from rim groove. Make the lower tyre bead opposite to mount/demount head enter into the rim groove, and prize the lower tyre bead onto the ball protuberance (fig.24).

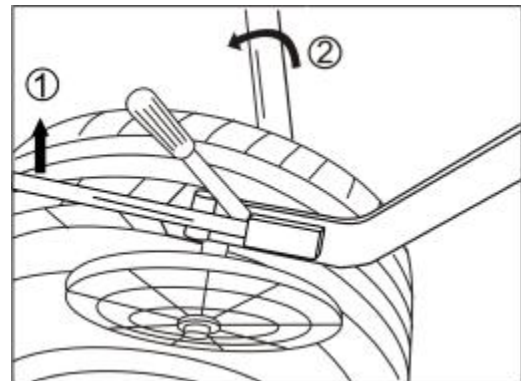


Fig.24

- I Restore the disk and depress pedal “⌚” until the lower tyre bead is separated from the rim. Depress the pedal “+” to lose jaws, finally remove the tyre and rim.

⚠ Attention:

Keep hands and other body parts away from the moving parts of the machine. Never wear necklace, bracelet or loose clothes when operating the machine as it may cause danger!

Mounting tyre

⚠ Attention:

Check the size of tyre and rim to see if they match each other.

- I Seat the lower bead following procedures in last chapter.
- I If it is a tubed tyre, check first for the possible damages. Round it onto the rim. Make sure to keep the tube in the right position throughout the mounting process.
- I To seat the upper tyre bead, place the tyre well and readjust position of the tyre bead (same as mount of the lower tyre bead). Draw out the roller and make its side surface 1—2cm away from margin of the rim. Place the press block on the upper bead 20cm clockwise away from the mount/demount head. Press the control lever to make the press block go down 5—7cm to seat tyre bead into the rim groove

(Fig. 25).

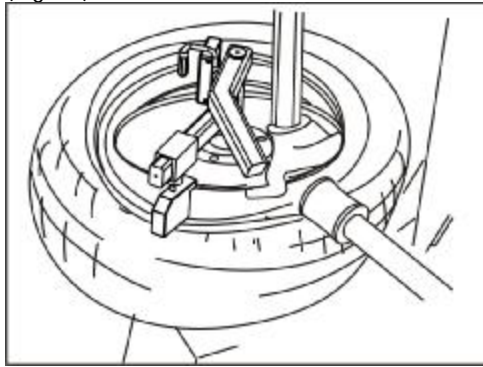


Fig.25

- I Depress the pedal “(C)” to turn the turntable clockwise. When only 10—15cm(Fig.26) is left, slow down to avoid damage of the tyre bead. Stop the motor once there is any indication for damage. Lift the pedal to turn the turntable counter-clockwise. Try again when the tyre is back to the original shape.

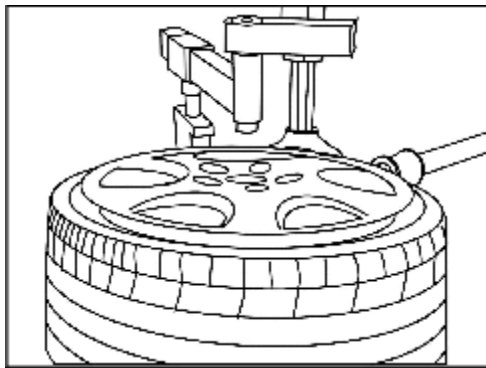
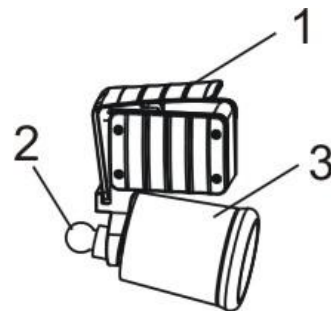
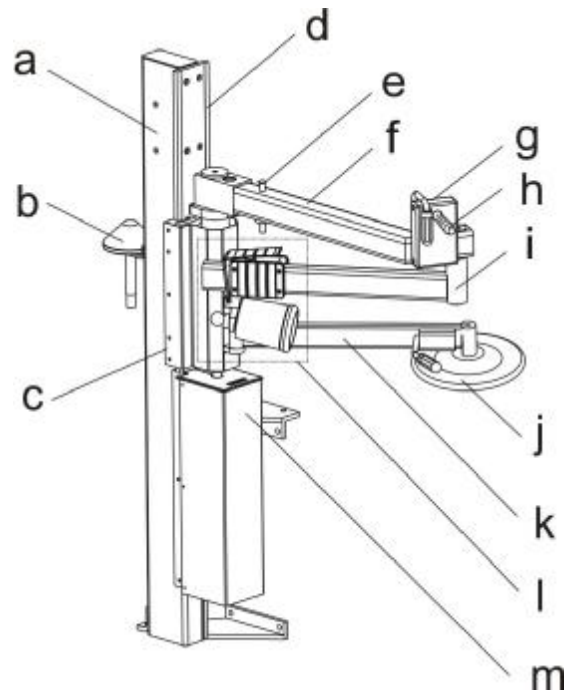


Fig.26

Left Supplementary Arm

Structure (fig.27)



- a- Post
- b- Cone
- c- Hood
- d- Sliding guide
- e- Spacer pin
- f- Back swivel arm
- g- Control box
- h- Control lever
- i- Fore swivel arm
- j- Disk
- k- Disk arm
- l- Roller
- m- Cylinder
- 1- Locking clip
- 2- Knob
- 3- Roller

Fig.27

Operation



Attention:

- ∅ The supplementary arm is specially designed for TWC series pneumatic tyre changer of LAUNCH. Never mount it on other machines, otherwise, LAUNCH shall not liable for any accidents.
- ∅ The supplementary arm unit has function of automatic self-centering. The back swivel arm moves to center of turntable, it will lock automatically. Lift the control lever to unlock.

Demounting Tyre

- I After breaking bead from the rim completely following procedures described in chapter operation, use the supplementary arm to simple operation.
- I Use the cone to simple operation of outward clamping. Open the jaws outward(2-3cm away from periphery of the rim) and place the wheel on the turntable. Draw out the back swivel arm., fit and aim the cone at the central hole of the wheel (fig.28), press down the control lever to keep the rim close to the jaws, and depress pedal “+” to clamp it (fig.29), remove the cone.

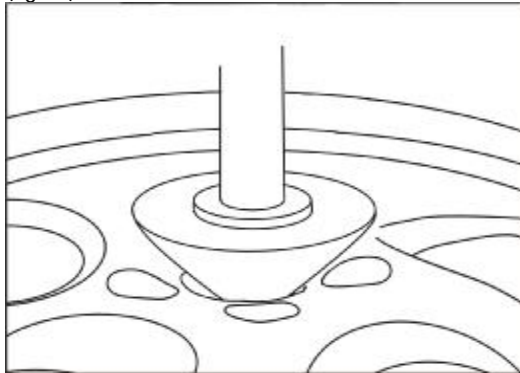


Fig.28

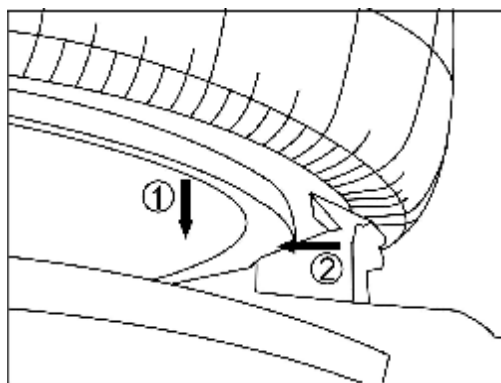


Fig.29

- I Draw out the swivel arm and position it as in figure 30, press down the spacer pin (①,fig.30) to lock the fore swivel arm under back swivel arm. Following

②,③, press down locking clip and move the roller to the position 2-3cm away from rim. Lower down control lever to depress down tyre 3-5cm as ④, finally, pull out the knob as ⑤.

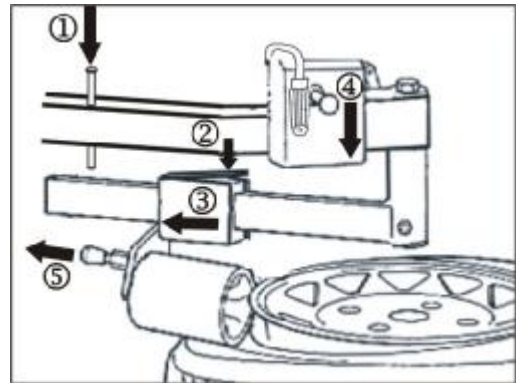


Fig.30

- I Depress the pedal “Ⓢ” to turn the turntable clockwise, lubricating the bead with brush.(fig.31)

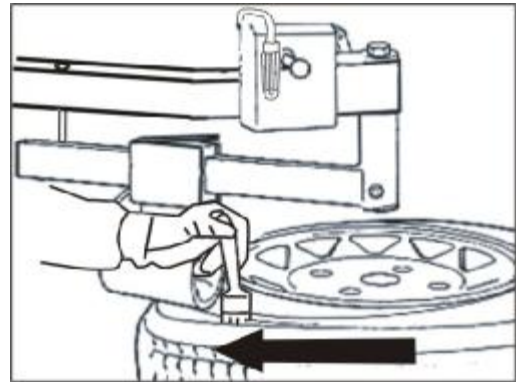


Fig.31

- I Adjust the mount/demount head to right position and lock it following the procedures in chapter operation.
- I Move the front swivel arm to the position as in figure 32, pull out spacer pin as ①, press down the knob as ②, lower down control lever as ③ to press down tyre 3-5cm, insert tyre lever between the head and the bead as ④, finally lift the lever to restore the roller.

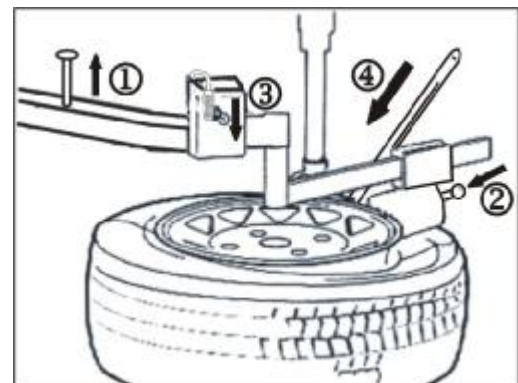


Fig.32

Turn the fore swivel arm, and place the press block on the tyre opposite to the mount/demount head. Lower down the control lever to press down the block 5-6cm, then prize the tyre bead onto the mount/demount head with tyre lever(fig.33). (The positions of the mount/demount head and tyre bead are described in chapter operation.)

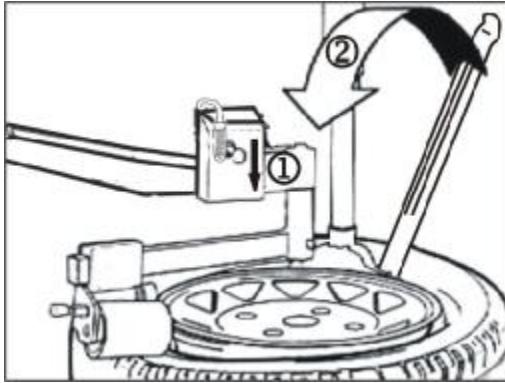


Fig.33

- I Move the press block to its none working position, depress the pedal “Ⓢ” to turn the turntable clockwise until the rim is separated. In case of a tubed tyre, it is advisable to keep the air inflation valve to the right of the mount/demount head about 10 cm away to avoid damaging.
- I If there is tube in the tyre, remove it first.
- I Draw out the disk, and make the disk under the lower bead, but not under rim. Insert the tyre lever between the head and bead and press it down. Lift the control lever up to break the bead from rim groove. Make the lower tyre bead opposite to mount/demount head enter into the rim groove, and prize the lower tyre bead onto the ball protuberance (fig.34).

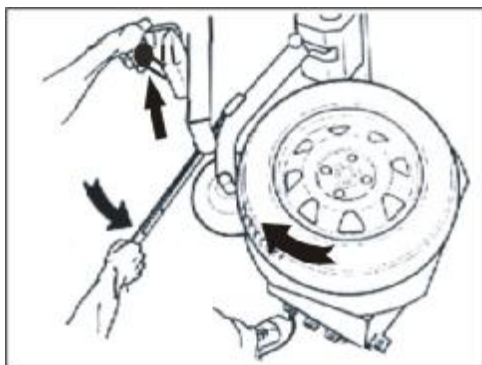


Fig.34

- I Restore the disk and depress pedal “Ⓢ” until the lower tyre bead is separated from the rim. Depress the pedal “Ⓡ” to lose jaws, finally remove the tyre and rim.

Mounting tyre



Attention:

Check the size of tyre and rim to see if they match each other.

- I Seat the lower bead following procedures in chapter operation.
- I If it is a tubed tyre, check first for the possible damages. Round it onto the rim. Make sure to keep the tube in the right position throughout the mounting process.
- I To seat the upper tyre bead, place the tyre well and readjust position of the tyre bead (same as mount of the lower tyre bead). Draw out the roller and make its side surface 1—2cm away from margin of the rim. Place the press block on the upper bead 20cm clockwise away from the mount/demount head. Press the control lever to make the press block go down 5—7cm to seat tyre bead into the rim groove (Fig. 35).

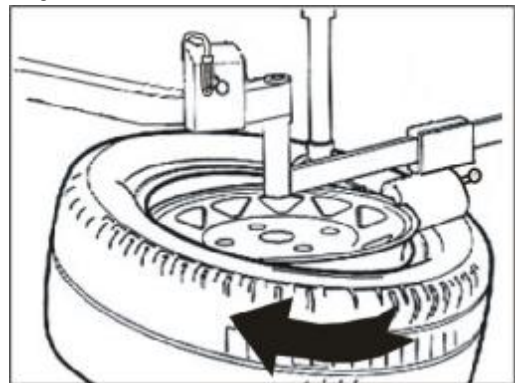


Fig.35

- I Depress the pedal “Ⓢ” to turn the turntable clockwise. When only 10—15cm is left, slow down to avoid damage of the tyre bead. Stop the motor once there is any indication for damage. Lift the pedal to turn the turntable counter-clockwise. Try again when the tyre is back to the original shape.

Trouble Shooting

| Symptom | Cause | Solution |
|---|---|--|
| Turntable can turn only in one direction. | <ul style="list-style-type: none"> ☐ Power switch is damaged. | <ul style="list-style-type: none"> ☐ Replace the power switch. |
| Turntable doesn't turn. | <ul style="list-style-type: none"> ☐ Belt is damaged. ☐ Power switch is damaged. ☐ There is problem with motor. ☐ Belt is loose. | <ul style="list-style-type: none"> ☐ Replace the belt. ☐ Replace the power switch. ☐ Check power wire of motor. If the motor is damaged, replace it. ☐ Tension the belt. |
| Turntable can not lock the rim tightly. | <ul style="list-style-type: none"> ☐ Jaws are worn. ☐ Air leakage in clamping cylinder. | <ul style="list-style-type: none"> ☐ Replace the jaws. ☐ Replace the cylinder seal. |
| Horizontal arm and hexagonal column can't be locked. | <ul style="list-style-type: none"> ☐ The locking square board in wrong position. ☐ The locking hexagonal board in wrong position. | <ul style="list-style-type: none"> ☐ Adjust them to right position according to this manual. |
| Horizontal arm doesn't move after pushing or pulling. Vertical shaft can not move upwards or downwards. | <ul style="list-style-type: none"> ☐ Square locking board is not in correct position. ☐ Hexagonal locking board is not in correct position. | <ul style="list-style-type: none"> ☐ Refer to the chapter "Maintenance". |
| Tilting post tilting is too fast or too slow. | <ul style="list-style-type: none"> ☐ The pushing cylinder expels too much or too little air. ☐ Pressure of compressed air has not reached 8bar. | <ul style="list-style-type: none"> ☐ Open the side cover of the cabinet, slightly adjust two air inflation regulators by hand to smooth the movement, and then tighten the cap. |
| The locking valve is clogged after the lever is pressed. | <ul style="list-style-type: none"> ☐ O-ring of the valve is damaged. ☐ There is problem with airflow regulating valve. | <ul style="list-style-type: none"> ☐ Replace the valve or O-ring. ☐ Adjust or replace the pressure regulating valve. ☐ Replace the airflow regulating valve. |
| Pedal can not be restored to its original position. | <ul style="list-style-type: none"> ☐ Return spring is damaged. | <ul style="list-style-type: none"> ☐ Replace the return spring. |
| There is abnormal noise at the moving part. | <ul style="list-style-type: none"> ☐ The fixing screw is loose. ☐ There is foreign matter inside. | <ul style="list-style-type: none"> ☐ Tighten the fixing screw. ☐ Get rid of the foreign matter. |
| The motor does not turn or the output torque is not enough. | <ul style="list-style-type: none"> ☐ The moving part is stuck. ☐ The capacitor is failed. ☐ The voltage is too low. ☐ The circuit is open. | <ul style="list-style-type: none"> ☐ Get rid of the stuck point. ☐ Replace the capacitor. ☐ Pause and wait for the device to be restored. ☐ Repair. |
| Cylinder is weak in output. | <ul style="list-style-type: none"> ☐ There is air leakage. ☐ Mechanical hindrance is causing the problem. ☐ The pressure of the compressed air is not high enough. | <ul style="list-style-type: none"> ☐ Strengthen the seal. ☐ Fix the mechanical problem. ☐ Change the air source. |
| Air leakage is found. | <ul style="list-style-type: none"> ☐ Air hose is damaged. ☐ The outlet of the air valve is damaged. ☐ The gasket cement is gone. | <ul style="list-style-type: none"> ☐ Replace the related part. ☐ Add gasket cement. ☐ Add gasket cement. |

Maintenance



Attention:

Only the specialized technician can perform the maintenance. Before any maintenance, disconnect the power and keep the plug within the sight of the maintenance personnel. Shut off power and compressed air, push the air valve switch to "Off" position and depress pedal (H) for 3 or 4 times to bleed the residual compressed air in the machine.

To keep the tyre changer in good condition and to prolong the work life, it is necessary to do regular maintenance according to the instructions on the user's manual. Otherwise, the normal operation and reliability of the machine will be affected, or personal injury would be caused.

- l Keep the machine and working area clean, prevent dust or foreign matter from entering the moving parts.
- l Keep the hexagonal column clean and dry (clean with diesel as in Fig. 36).
- l Keep the horizontal arm and horizontal pole clean and lubricate them periodically so that it can move expectably.
- l Weekly clean the turntable, jaws, guideways (Fig. 37).
- l Weekly clean and lubricate base pin.
- l Weekly lubricate the faying surface between moving parts and rubbing surface with lithium lubricant (grease).
- l Check the oil level in the oil cup regularly. If the oil level does not reach the second line, fill SAE#20 (Fig.38).
- l Regularly drain the condensed material in the air cleaner.
- l Regularly check and adjust the tension of the belt.
- l Check all connecting parts and bolts regularly and tighten them if necessary.

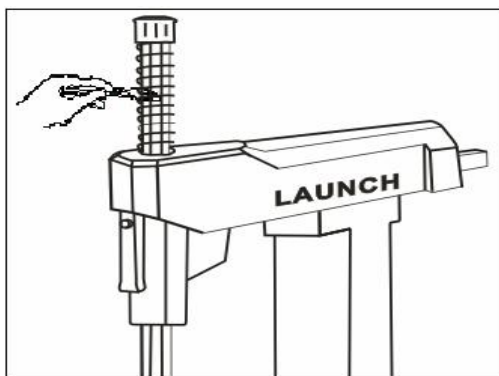


Fig.36

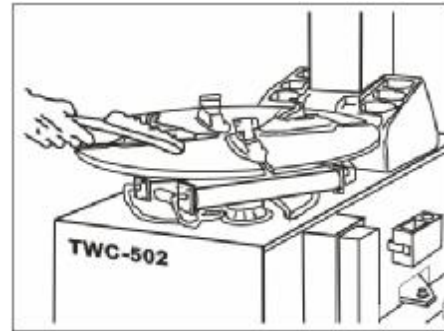


Fig.37

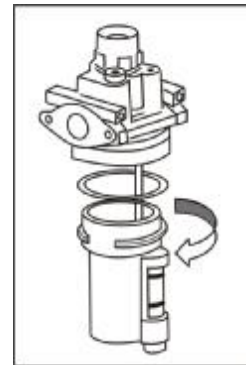


Fig.38

- l Check and adjust the locking mechanism of hexagonal column periodically to insure the distance between hexagonal column and rim (regularly 2-3 mm approximately) after the hexagonal column is locked.



Attention:

Tighten the fixing screws (shown in Fig.39 as part A) on the turntable after every 15 days of operation.

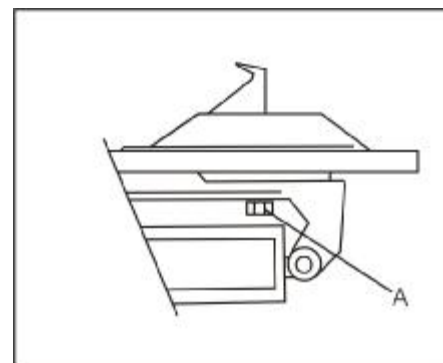


Fig.39

If the vertical clearance of the hexagonal column is too much, adjust it according to the following steps:

- l Shut off compressed air.
- l Remove the protective hood of the hexagonal column.
- l Adjust the retaining nut of lead screw or the pushing screw at the front of locking board by wrench.
- l Turn on the compressed air and then check the position after locking.

If the horizontal arm can not be moved smoothly or

the clearance is too much after locking, do the adjustment according to the following procedures:

- I Open the protective cover of the tilting post.
- I Adjust the M6 screws at both ends by wrench and push the arm at the same time until it can be moved smoothly. Then tighten the nut.
- I Adjust the screw at middle by wrench and lock the horizontal arm to see the change until the clearance is satisfactory. Then tighten the nut.

Periodically clean the control valves for clamping jaws and bead breaker to insure their normal operation.

- I Remove the side cover of the cabinet.
- I Loosen the control valve muffler and air bleed valve muffler, and clean them with compressed air. (Fig.40)

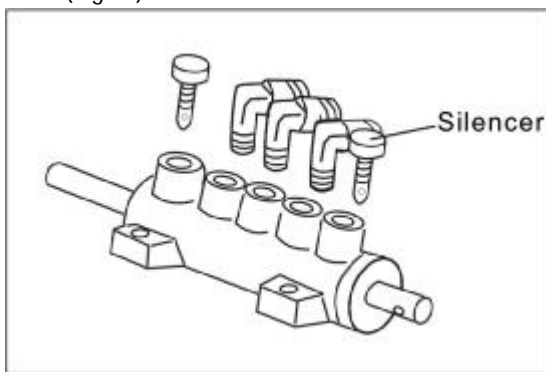


Fig.40

Optional Device – Digital Inflator

Performances:

- I Accurate measure make reading right and inflation time short
- I LED display clear, particular suitable for night and outdoor reading
- I Finish measuring air pressure and inflation at the same time, making operation quick and convenient.
- I May preset values of inflation and deflation. When the inflation gun is inserted into the tyre (non-empty tyre), the device will automatically test and decide inflation or deflation. When pressure of the tyre reaches the set value, it automatically stop and warn by the buzzer. When the tyre is empty and the "RUN/STOP" key is pressed, the tyre is automatically inflated to preset value.
- I It can pause when the tyre is inflated or deflated.
- I The device has swift function of air pressure unit and can show both Bar and Psi values.
- I Beautiful appearance and convenient installation.

Specifications:

- I Working Range: 0~8Bar (0~116Psi)
- I Precision: 0.1Bar(1.45Psi)
- I Air Source: Pressure 6~9Bar(87~130Psi)
Flow>0.2M³/min
- I Inflation Speed: 0.15 M³/min
- I AC Supply: According to local power supply
- I Working Temperature Range: -10°C—+50°C
- I Humidity: <95%
- I Power: 20W
- I Net Weight: 5Kg
- I Dimensions :120×195×100mm

Use Precautions:

- I Power supply must be connected with the ground wire.
- I See Figures 23 and 24 for pipeline connections of the inflator.
- I There are no air supplies for these serial products. Air pressure of additive air supply must be under 9.5Bar. If not so, a reducing valve must be fixed at input air pipe to ensure that the air pressure of entering the inflator is under 9.5Bar.
- I Compressed air must be passed the oil and water separator (air pressure regulator, gauge and lubricator assembly) at first, and then is connected into the inflator to avoid eroding internal parts of the device.

- I An inflation pipe that is 9 meters in length is supplied with the device. If extension of the pipe is necessary, total length must not exceed 20 meters. Otherwise, working precision will decrease, or even the device can not work normally.
- I When the device starts to work, the inflation gun should be deflated and not connected with the tyre. Thus, the zero air pressure is got correctly to ensure precision.
- I Connection between the inflation gun and the tyre must be reliable and no leakage.
- I When the device is used, its power supply must be far from the large power electrical applications. Starting and stopping of these applications can interfere the device accidentally. When interfere caused by the momentary failure of the power supply appears, sometimes abnormal errors will happen in the computer of the device. The case can be recovered to normal situation by that the inflation gun head is moved and the power supply is off and then on.
- I Unit conversion:

1Mpa=10Bar
1Bar=14.5Psi
1Bar≈1Kg/cm²

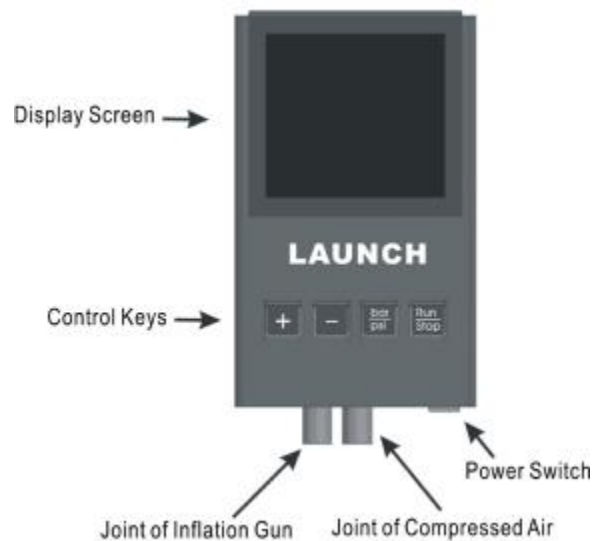


Fig.41

Operations:

- I Air pressure unit is showed in "bar (b)" in this device. It can be changed to "psi (p)" unit by that "bar/psi" key is pressed.
- I Choose right pressure according to specifications of the tyre. Press "+" or "-" key to set right pressure values that satisfy requirements of specifications of the tyre.
- I After the pressure value is set, connect the clamping head of the inflation gun with the tyre. If the tyre own

pressure, the device will starts automatically. If the tyre is empty, "RUN/STOP" key must be pressed one time to start the device.

- I When the device is working, it can be stopped if the "RUN/STOP" key is pressed one time. If the "RUN/STOP" key is pressed one time again, the device starts again.
- I When pressure of the tyre reaches to the preset value, the buzzer works and the device stops.

Part Coding:

If necessary, please order parts from LAUNCH or dealers according to part coding (16AG600AX).

Circuit Diagram:

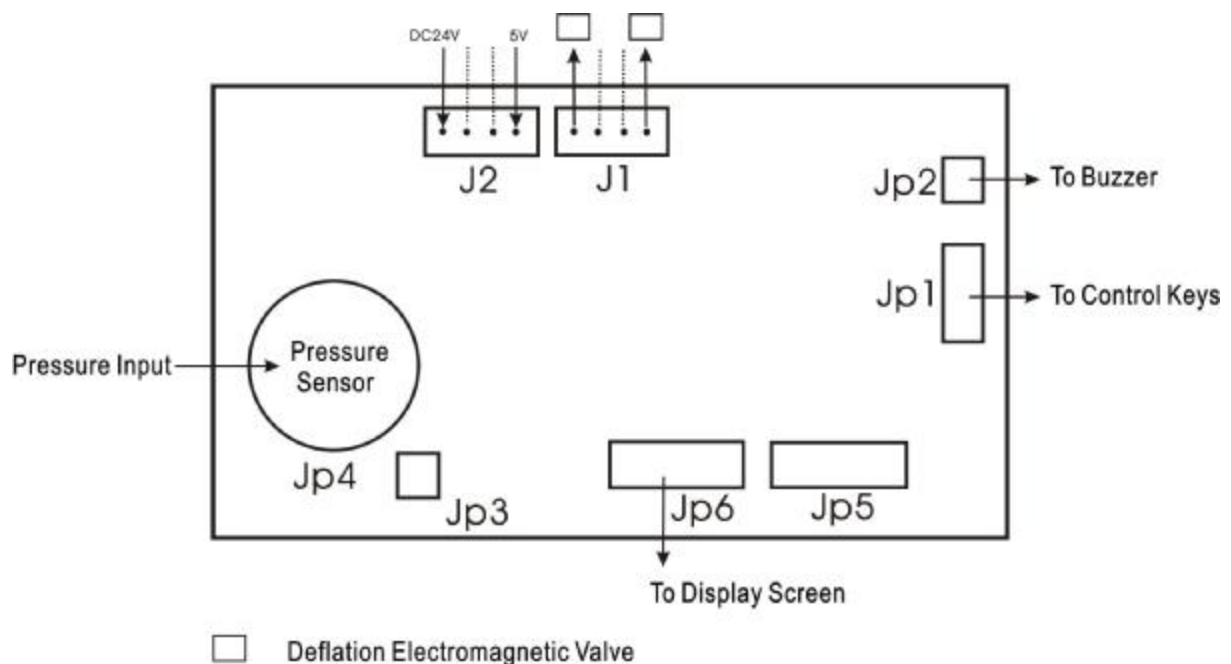


Fig.42

Storing and Scrapping

Storing

When the equipment needs to be stored for a long time:

- I Disconnect the power and compressed air.
- I Lubricate all the parts: slide block and groove.
- I Empty all the oil/liquid cups.
- I Cover the equipment with plastic shield.

Scrapping

When the equipment can no longer be used, disconnect the power and compressed air and dispose in accordance with the local regulations.

TWC Series Oil Safety Data

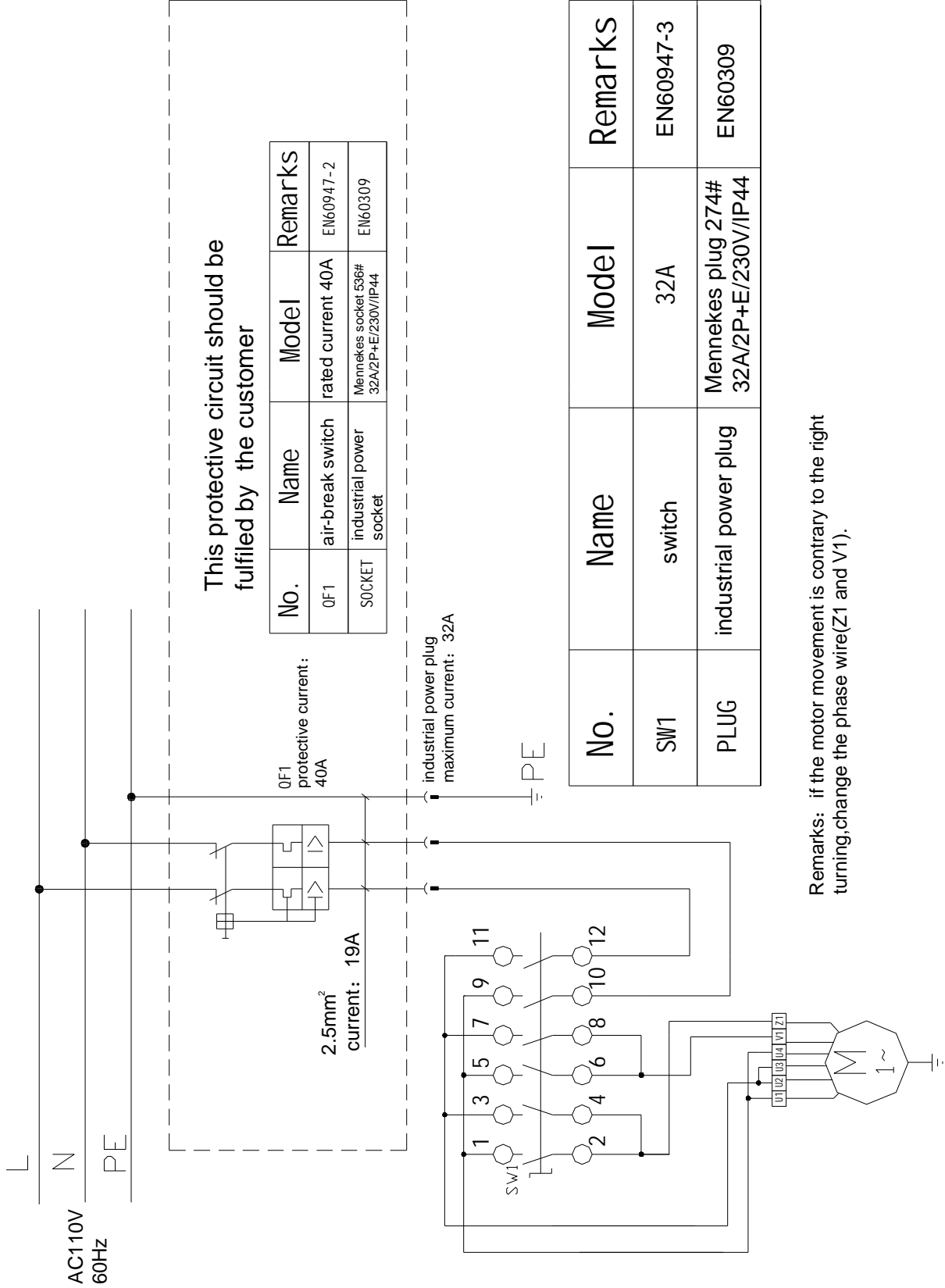
No. 2 lithium lubricant

| Item | Quality Index |
|--|-------------------------|
| Cone penetration (1/10mm) | 278 |
| Drop point °C | 185 |
| Corrosion (T2 Copper, 100°C, 24h) | No change in the copper |
| Wire separator (100°C, 22h)% | 4 |
| Evaporation (100°C, 22h)% | 2 |
| Oxidation stability (99°C, 100h) | 0.2 |
| Anti-erosion | Grade I |
| Foreign substance (microscopic method) | |
| Above 10 µm | Lower than 5000 |
| Above 25 µm | Lower than 3000 |
| Above 75 µm | Lower than 500 |
| Above 125 µm | Lower than 0 |
| Relative viscosity (-15°C, 10s ⁻¹), /Pa·s) | Lower than 800 |
| Drip loss | Lower than 8 |

SAE20 Lubricant

| Item | Quality Index |
|-------------------|---------------|
| Density (15°C) | 0.880 |
| Flash point °C | 213 |
| Freezing point °C | -21 |
| Viscosity 40°C | 66.2 |
| Viscosity 100°C | 8.2 |
| Viscosity index | 95 |

TWC Series Circuit Diagram

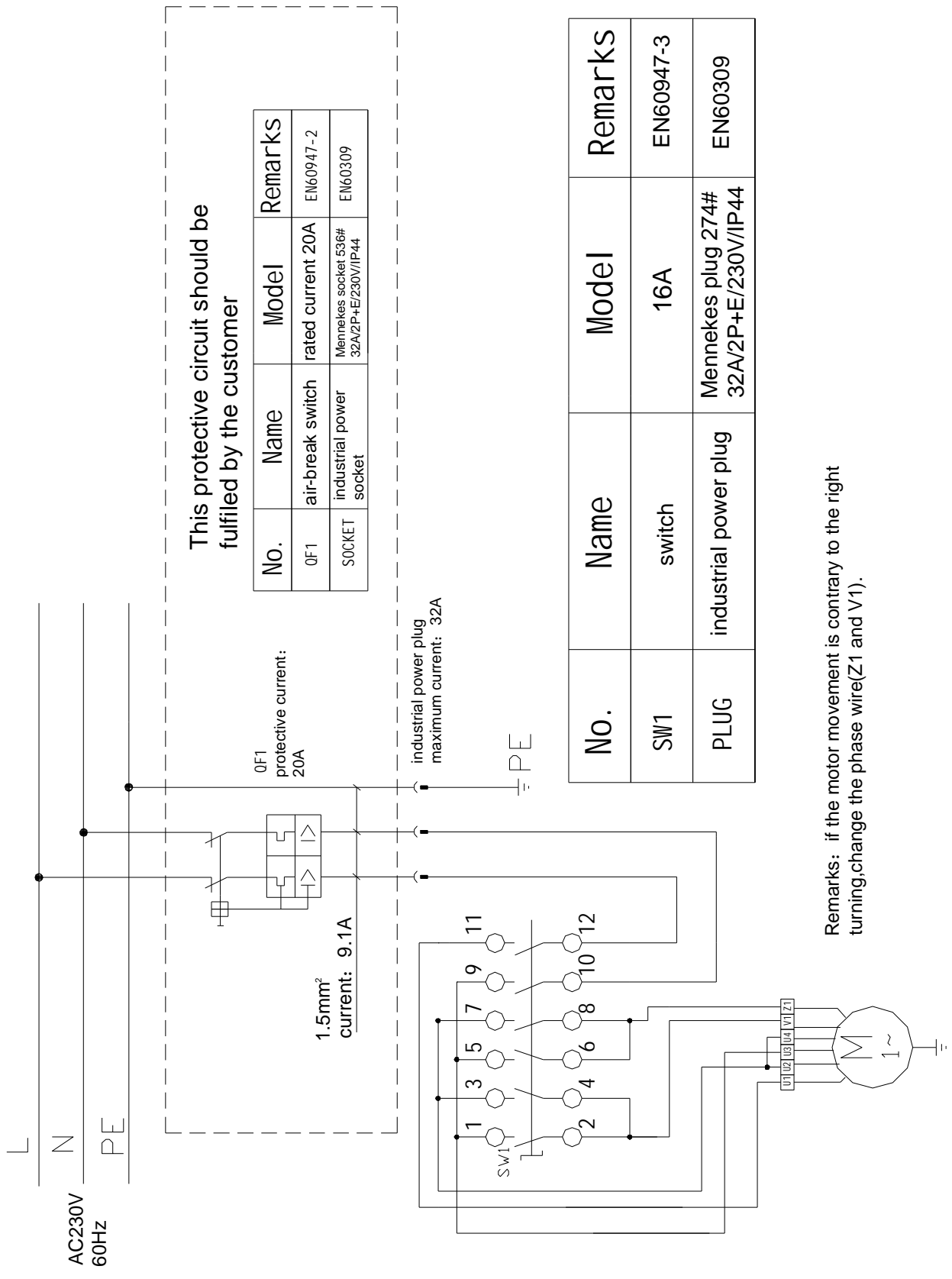


This protective circuit should be fulfilled by the customer

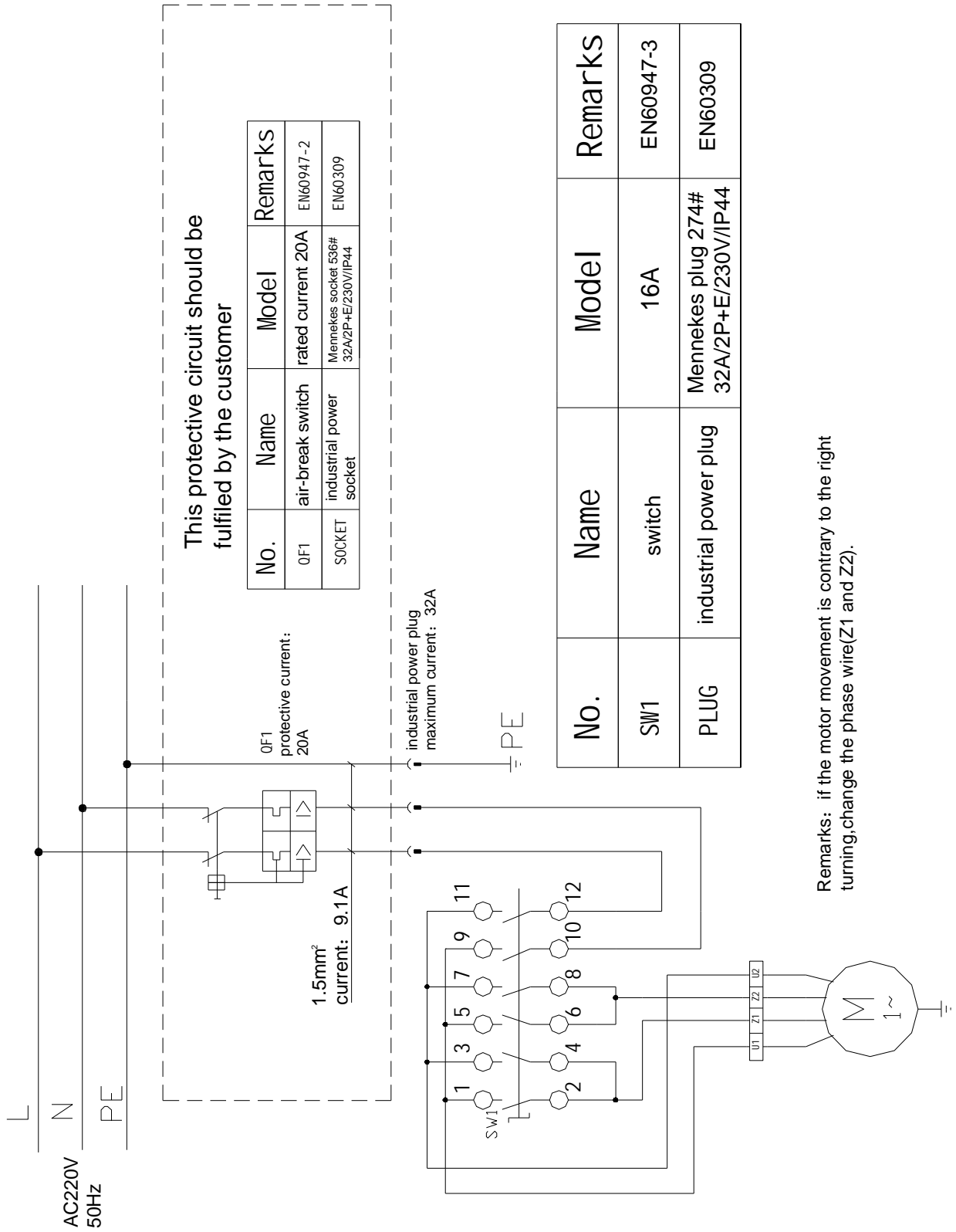
| No. | Name | Model | Remarks |
|--------|-------------------------|---|-----------|
| 0F1 | air-break switch | rated current 40A | EN60947-2 |
| SOCKET | industrial power socket | Mennekes socket 536# 32A/2P+E/230V/IP44 | EN60309 |

| No. | Name | Model | Remarks |
|------|-----------------------|---------------------------------------|-----------|
| SW1 | switch | 32A | EN60947-3 |
| PLUG | industrial power plug | Mennekes plug 274# 32A/2P+E/230V/IP44 | EN60309 |

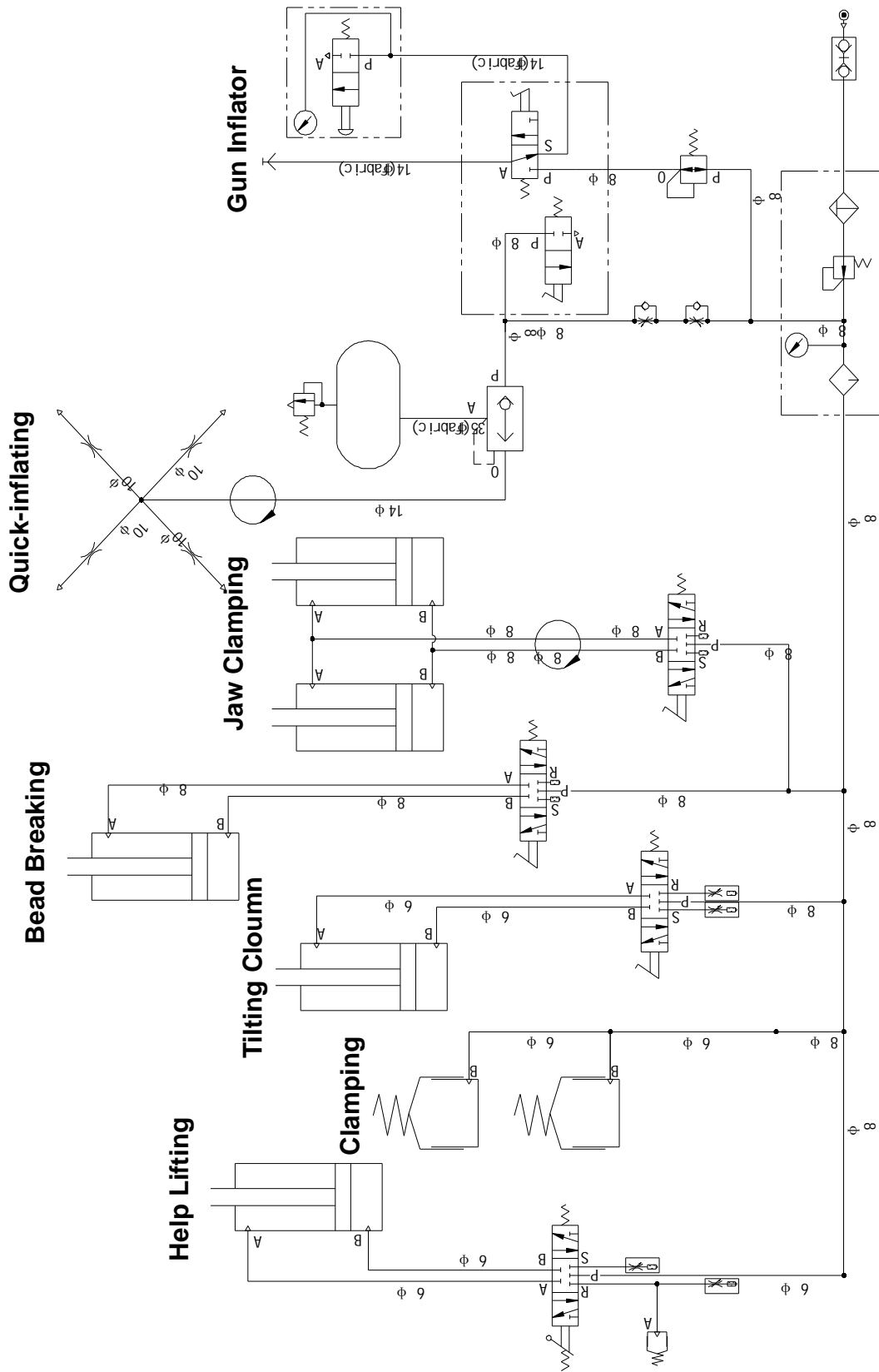
Remarks: if the motor movement is contrary to the right turning, change the phase wire(Z1 and V1).



Remarks: if the motor movement is contrary to the right turning, change the phase wire(Z1 and V1).



TWC Series Pneumatic Diagram



Warranty

THIS WARRANTY IS EXPRESSLY LIMITED TO PERSONS WHO PURCHASE LAUNCH PRODUCTS FOR PURPOSES OF RESALE OR USE IN THE ORDINARY COURSE OF THE BUYER'S BUSINESS.

LAUNCH electronic product is warranted against defects in materials and workmanship for one year (12 months) from date of delivery to the user. This warranty does not cover any part that has been abused, altered, used for a purpose other than for which it was intended, or used in a manner inconsistent with instructions regarding use. The exclusive remedy for any automotive meter found to be defective is repair or replacement, and LAUNCH shall not be liable for any consequential or incidental damages. Final determination of defects shall be made by LAUNCH in accordance with procedures established by LAUNCH. No agent, employee, or representative of LAUNCH has any authority to bind LAUNCH to any affirmation, representation, or warranty concerning LAUNCH automotive meters, except as stated herein.

Disclaimer

THE ABOVE WARRANTY IS IN LIEU OF ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Order Information

Replaceable and optional parts can be ordered directly from your LAUNCH authorized tool supplier. Your order should include the following information:

1. Quantity
2. Part number
3. Item description

Customer Service

If you have any questions on the operation of the unit, please contact us:

Tel: 86-755-82269474,
Fax: 86-755-82264570,
E-mail: overseasales@cnlaunch.com.

If your unit requires repair service, return it to the manufacturer with a copy of the sales receipt and a note describing the problem. If the unit is determined to be in warranty, it will be repaired or replaced at no charge. If the unit is determined to be out of warranty, it will be repaired for a nominal service charge plus return freight. Send the unit pre-paid to:

Attn: Overseas Department
LAUNCH TECH. CO., LTD.
Xinyang Building,
Bagua 4th Road,
Shenzhen, Guangdong Province,
China