

USE AND  
MAINTENANCE  
MANUAL

# LEVER LESS DEVICE

(CAR TIRE CHANGER)



REVIEW 00  
B12-106



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# **1. INTRODUCTION**

## **1.1. INTRODUCTION**

Thank you for purchasing a product from the line of tire changers. The machine has been manufactured in accordance with the very best quality principles. Follow the simple instructions provided in this manual to ensure the correct operation and long life of the machine. Read the entire manual thoroughly and make sure you understand it.

## **1.2. MANUAL KEEPING**

For a proper use of this manual, the following is recommended:

- Keep the manual near the lift, in an easily accessible place.
- Keep the manual in an area protected from the damp.
- Use this manual properly without damaging it.
- Any use of the machine made by operators who are not familiar with the instructions and procedures contained herein shall be forbidden.

This manual is an integral part of the manual: it shall be given to the new owner if and when the machine is resold.

### **TO THE READER**

Every effort has been made to ensure that the information contained in this manual is correct, complete and up-to-date. The manufacturer is not liable for any mistakes made when drawing up this manual and reserves the right to make any changes due the development of the product, at any time.

## 2. GENERAL INFORMATION

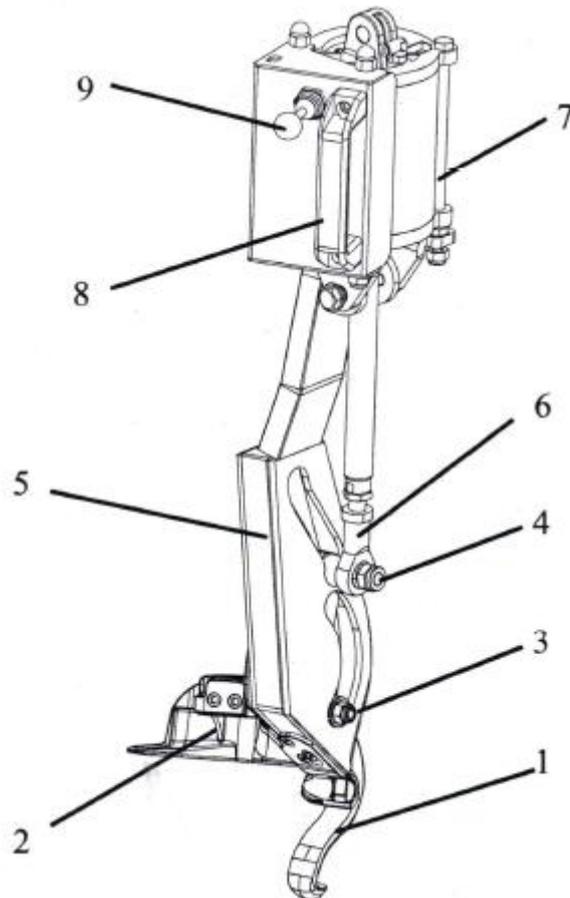
### 2.1. TYRE CHANGER IDENTIFICATION

Serial number plate attached to the equipment must not be removed. It will facilitate the identification of it when technical assistance is required.



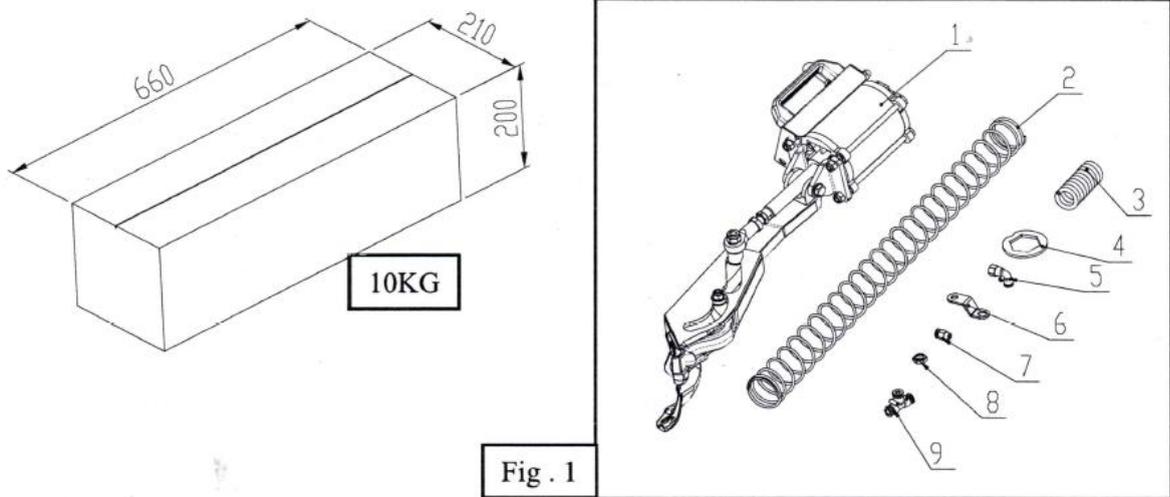
### 2.2. DESCRIPTION

1. Mounting/demounting hook
2. Mounting/demounting head
3. Guiding pin 1
4. Guiding pin 2
5. Device frame
6. Joint
7. Pneumatic cylinder
8. Handle
9. Control Valve



## 2.3. PACKING

- The leverless device is packed in a cardboard box and must be transported in its original packaging and kept in the position shown on the package itself.
- To unpack, remove the protective cardboard
- Check that the device is in perfect condition, making sure that no parts are damaged or missing.



Item	Description	Qty
1	Leverless Device	1
2	Spring	1
3	Rilsan spiral hose 6x4 L=1500	1
4	Washer	1
5	90 degree union 6-1/8	1
6	L-plate	1
7	Union 6-1/8	1
8	Nut M12	1
9	Tee union 8-6	1

### 3. INSTALLATION

#### 3.1. INSTALLATION OF DEVICE TO ARM

- Remove the original spring out of the hexagonal arm;
- Referring to the figure 4, install the spring (2/fig.1) onto the hexagonal arm. Make sure to put the washer (4/fig.1) on the spring;
- Remove the original mounting/demounting head out of the hexagonal arm by means of an Allen wrench;
- Install the lever less device onto the hexagonal arm and fit back the washers (1/fig.4 and 2/fig.4) and screw (3/fig.4) as shown in the figure 4. Do not tighten the screws at this moment;
- Fit the screws (4/fig.4 and 5/fig.4) onto the mounting head as shown in the figure 4. Do not tighten the screws at this moment.

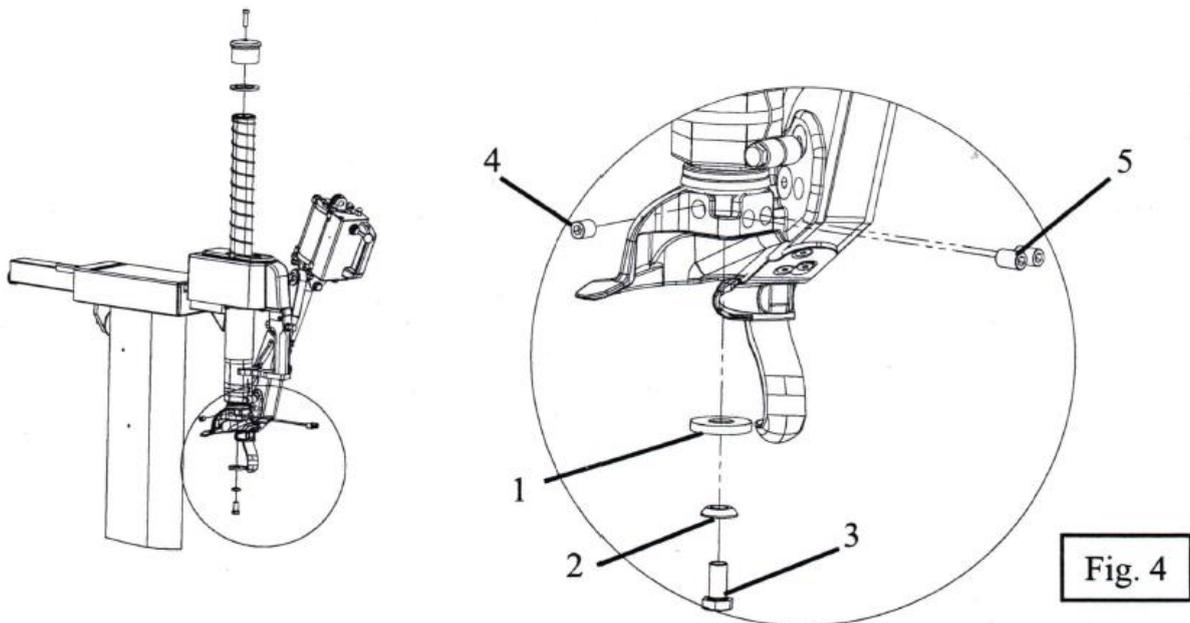


Fig. 4

### 3.2. CONNECTION TO AIR SOURCE

- Referring to the figure 5 fit the L-plate (6/fig.1) with the unions (5/fig.1 and 7/fig.1) onto the screw located on the back of horizontal arm.
- Fit the nut M12 (8/fig.1) as shown in the figure 5;
- Set the L-plate into a proper angle as shown in the figure 5 and then tighten the nut.

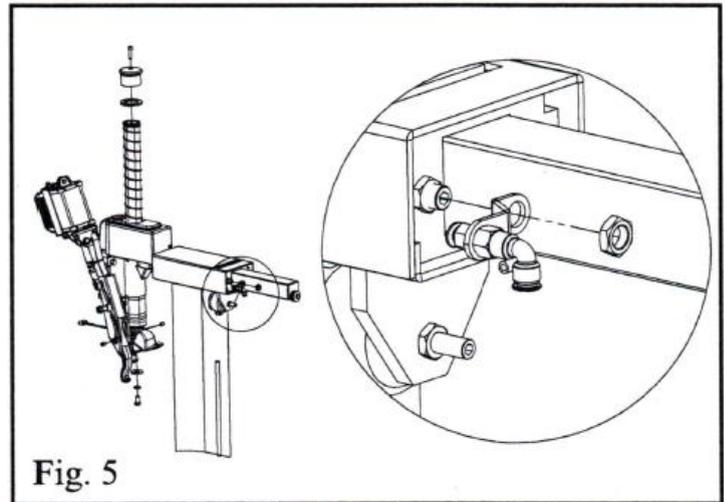


Fig. 5

- Remove the original rilsan hose out of the lubricator and cut it into two pieces with the length 30mm and 1000mm separately;
- Connect the 30mm hoses to the T union (9/fig.1) in the position (1) as shown in the figure 6;
- Connect the 1000mm hose to the T union in the position (2) as shown in the figure 6;
- Connect the spiral hose (3/fig.1) to the T union in the position (3) as shown in the figure 6;
- Connect the 30mm hose to the lubricator as shown in the figure 6;
- Connect the spiral hose to the union fixes in the L-plate as shown in the figure 5.

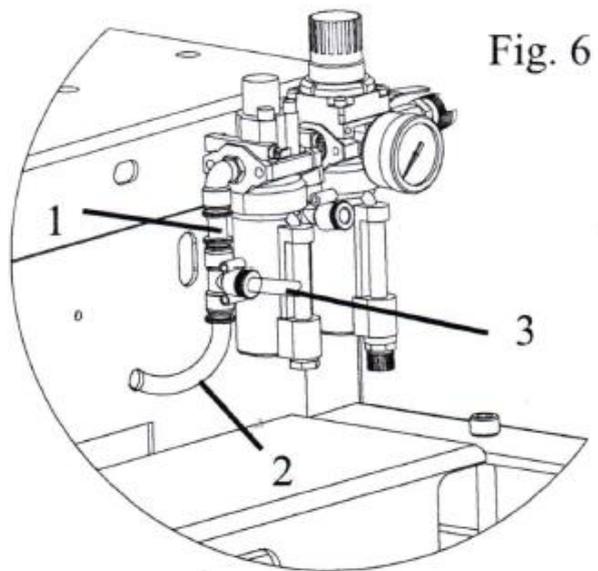


Fig. 6

### 3.3. COMMISSIONING

- Place a rim on the turntable of a tire changer and clamp the rim following the manual of tire changer being used;
- Referring to the operation manual of tire changer, lower the mounting bar so that the mounting head is positioned above the rim and lock it;
- Unscrew the screw (4/fig.4) and adjust the mounting head horizontal to the rim;
- Tighten the screw by means of the Allen wrench after adjustment;
- Unscrew two screws (5/fig.4) and adjust the mounting head to make the front section of the mounting head rest the edge of rim and the rear section is 3 mm from the rim;
- Tighten the screws by means of the Allen wrench after adjustment.
- Move the locking plate (1/fig.7) vertically by screwing or unscrewing the nut (2/fig.7) to make the front section of the mounting head is 2-5mm from the rim as shown in the figure 8 and the rear section is 3-5mm from the rim as shown is the figure 8A.

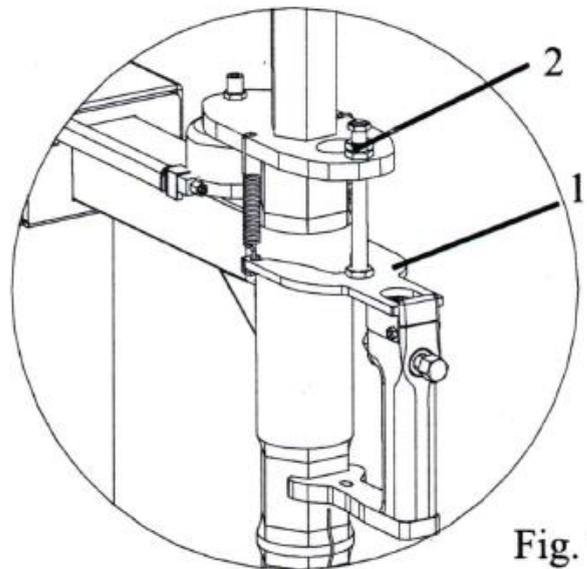
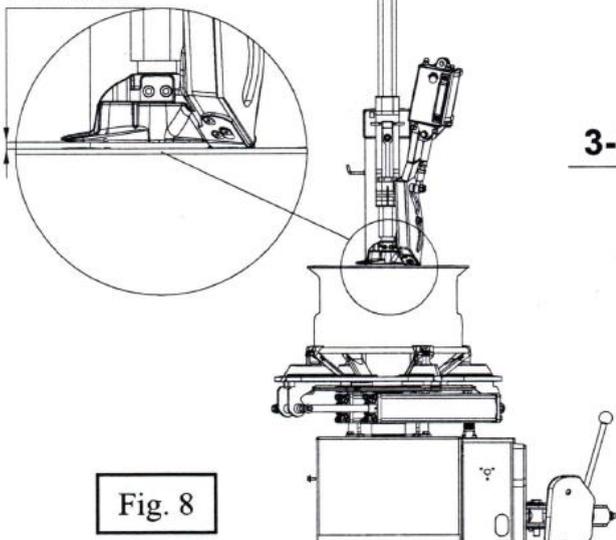
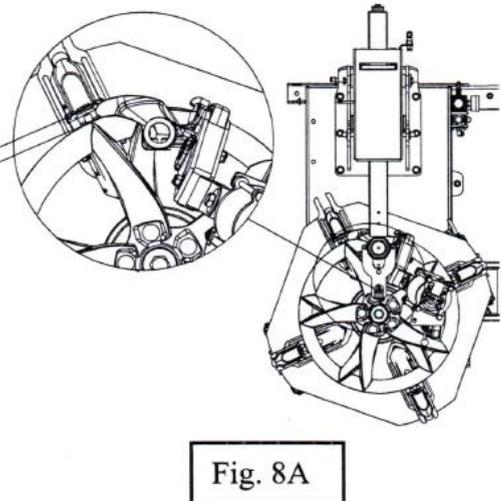


Fig. 7

**2-5mm**



**3-5mm**



### **3.4. OPERATING TESTS**

- When the control valve lever (9/fig.2) is pulled up, the mounting hook should be retracted; When the control valve lever is pressed, the mounting hook should be stretched.

## **4. SAFETY**

### **4.1. GENERAL SAFETY PRECAUTIONS**

**The device may only be used by specially trained and authorized expert personnel.**

- Any tampering or modification to the equipment carried out without the manufacturer's prior authorization will free him from all responsibility for damage caused directly or indirectly by the above actions.
- Removing or tampering with safety devices immediately invalidates the guarantee.
- The lever less device changer comes complete with instruction and warning transfers which are designed to be long-lasting. If they should for any reason be damaged or destroyed, please ask immediately for replacements from the manufacturer.
- Do not use the machine until you have read and understood the entire manual and the warning provided.
- Before carrying out any operation, deflate the tire and take off all the wheel balancing weights.
- During arm tilting make sure that nobody stands behind the tire changer.
- Never keep your hands onto the wheel: the arm recovery to "working position" could set the operator at risk of hand crushing between rim and mounting head.
- To prevent industrial accidents, keep hands and other parts of the body as far as possible from the tool arm when the table top is turning.
- Chains, bracelets, loose clothing or foreign objects in the vicinity of the moving parts can represent a danger for the operator.
- In particular the Manufacturer shall not be held responsible for complaints deriving from the use of spare parts made by other manufacturers or for damage caused by tampering or removal of safety systems.

## 5. INTENDED USE

- This lever less device has been designed and manufactured exclusively to be equipped with tire changers for removing and mounting passenger tires without having to use the lever.
- In particular THE MANUFACTURER cannot be held responsible for any damage caused through the use of this device for purposes other than those specified in this manual, and therefore inappropriate, incorrect and unreasonable.

## 6. OPERATION

The operation of the tire changer is divided into three parts:

a) BREAKING THE BEAD                      b) REMOVING THE TIRE                      c) MOUNTING THE TIRE

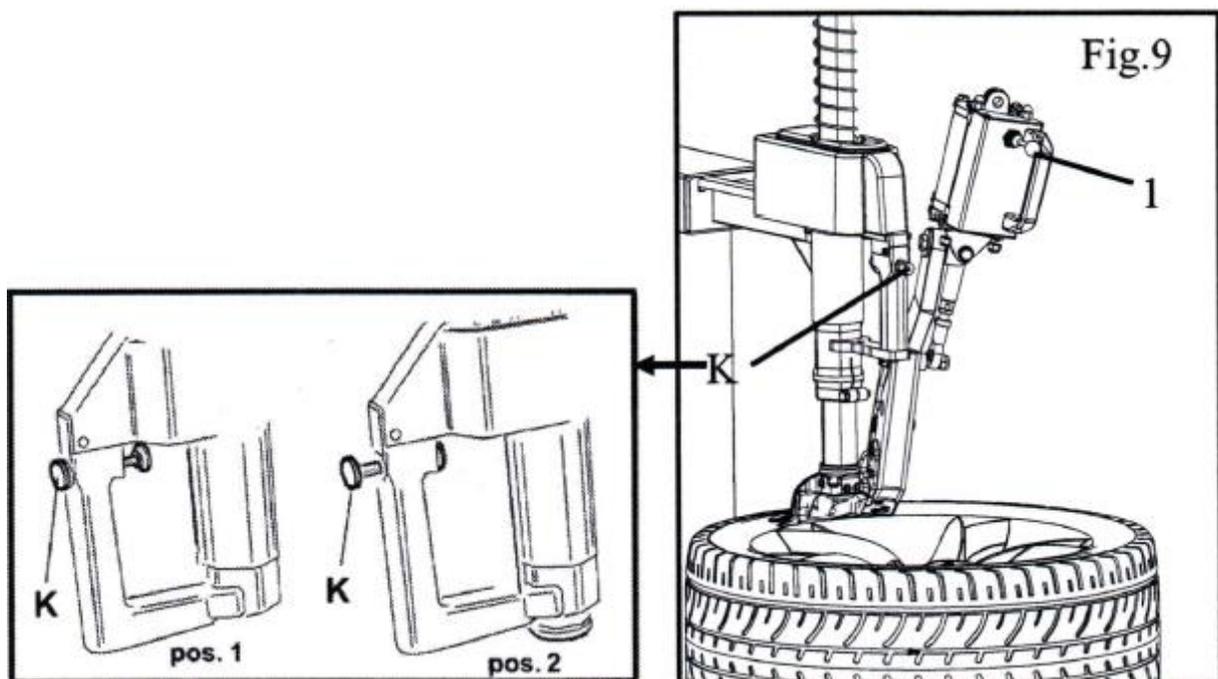
### 6.1. BREAKING THE BEAD

- Bead breaking must be carried out according to the procedure described in the manual of tire changer.

### 6.2. REMOVING THE TIRE

- Lubricate the tire beads with the special grease in order to avoid damaging them and to facilitate the removing operations;
- Unlocking the mounting bar by placing the locking button (K) in the position “2” by the left hand.
- Lowering the device by the right hand till the mounting head over the rim;
- Lock the mounting bar by placing the locking button (K) in the position “1”. This will lock the arm in both vertical and horizontal direction and automatically move the mounting head about 2 mm from the rim;
- Pressing the control valve lever (1/fig.9) to insert the mounting hook between the bead and the rim. Position it on the top parts without forcing the side of tire excessively.

- With the mounting hook inserted between the bead and the rim, lift the tire bead by pulling up the control valve lever (1/fig.9). *If it is difficult to attach the end of the hook to the tire bead, it is advisable to turn the turntable until the end of the hook attach the tire bead correctly;*
- Rotate the turntable in a clockwise direction until the tire is completely separated from the wheel rim. *In order to avoid damaging the tire, it is advisable to stop the rotation for a few seconds when the tire bead is lifted up about 10-15mm and then continue the rotation of turntable.*



### 6.3. MOUNTING THE TIRE

- Raise the mounting hook to the original position by pulling up the control valve lever (1/fig.9);
- Lubricate the tire beads with the special grease in order to avoid damaging them and to facilitate the mounting operations;
- Move the tire so that the bead passes below the front section of the mounting head and is brought up against the edge of the rear section of the mounting head itself.

- Keeping the tire bead pressed down into the wheel rim channel with your hands, rotate the turntable clockwise. Continue until you have covered the entire circumference of the wheel rim.
- Insert the inner tube if there is one and repeat the same operations to mount the upper side of the tire.

**Demounting and mounting are always done with the clockwise turntable rotation. Anticlockwise rotation is used only to correct operator's errors or if the turntable stalls.**