



CE

# Kit Pax System Artiglio 50

Cod. 4-105370 - 10/06

Italiano

Manuale d'uso

English

Operator's manual

Français

Manuel d'utilisation

Deutsch

Betriebsanleitung

Español

Manual de uso

I diritti di traduzione, di memorizzazione elettronica, di riproduzione e di adattamento totale o parziale con qualsiasi mezzo (compresi microfilm e copie fotostatiche) sono riservati. Le informazioni contenute in questo manuale sono soggette a variazioni senza preavviso.

Italiano

All rights reserved. No part of this publication may be translated, stored in an electronic retrieval system, reproduced, or partially or totally adapted by any means (including microfilm and photostats) without prior permission. The information contained herein may be subject to modifications without prior notice.

English

Les droits de traduction, de mémorisation électronique, de reproduction et d'adaptation complète ou partielle par tout type de moyen (y compris microfilms et copies photostatiques) sont réservés. Les informations fournies dans ce manuel peuvent être modifiées à tout moment et sans préavis.

Français

Alle Rechte der Übersetzung, der Speicherung, Reproduktion sowie der gesamten oder teilweisen Anpassung durch ein beliebiges Mittel (einschließlich Mikrofilm und Fotokopien) sind vorbehalten. Die in diesem Handbuch enthaltenen Informationen können ohne Vorbescheid geändert werden.

Deutsch

Reservados los derechos de traducción, grabación electrónica, reproducción y adaptación total o parcial con cualquier medio (incluidos microfilms y copias fotostáticas). Las informaciones contenidas en el presente manual pueden sufrir variaciones sin aviso previo.

Español

Elaborazione grafica e impaginazione

**U**fficio **P**ubblicazioni **T**ecniche

## CONTENTS

INTRODUCTION .....	28
TRANSPORTATION, STORAGE AND HANDLING .....	29
SAFETY REGULATIONS .....	29
UNPACKING / ASSEMBLY .....	30
TECHNICAL DATA .....	31
INSTALLATION .....	31
EXPECTED USAGE CONDITIONS.....	32
MAIN OPERATINGELEMENTS .....	32
SET-UP.....	33
TYRE REMOVAL .....	34
TYRE ASSEMBLY .....	40
INFLATION.....	45
GLOSSARY .....	48

## INTRODUCTION

The aim of this booklet is to supply the owner and the operator with effective, safe instructions for the installation, use and maintenance of the Pax kit for Artiglio 50.

If these instructions are carefully followed, the machine will offer you all the efficiency and life-span guaranteed by the CORGHI tradition, helping considerably to facilitate your work.

Below you will find the definitions to identify the level of danger, with the respective words used in this manual:

### DANGER

**Immediate danger that could lead to serious injury, or death.**

### ATTENTION

**Danger or unsafe procedure that could cause serious injury, or death.**

### WARNING

**Danger or unsafe procedure that could cause minor injury, or material damage.**

Read these instructions carefully before starting up the equipment. Keep this manual, together with all the illustrative material supplied with the equipment, in a file near the machine, so that it can easily be consulted by the operators.

The technical documentation supplied is an integral part of the machine, so if the machine is sold, all the documentation must be passed on to the purchaser.

The manual should be considered valid only for the model and machine serial number shown on the label fixed on the manual itself.



### ATTENTION

**Follow the procedures described in this manual: any use of the equipment not expressly described herein must be considered the sole responsibility of the operator.**

## NOTE

Some illustrations contained in this booklet have been developed from photos of prototypes: the standard production machines may differ in some details.

These instructions are aimed at people with a certain level of mechanical knowledge. For this reason, we have avoided describing each single operation, such as how to loosen or tighten the fixing devices. Do not carry out operations that go beyond your own abilities, or of which you have no experience. If you require assistance, contact an authorised assistance centre.

## **TRANSPORTATION, STORAGE AND HANDLING**

### **Transportation conditions**

The Pax kit must be transported in its original packaging, and kept in the position indicated on the packaging itself.

### **Conditions of the transportation and machine storage environment**

Temperature: -25° - +55°C.



#### **WARNING**

**Keep the original packaging, in case it is needed for any future transportation.**

## **SAFETY REGULATIONS**

The equipment is designed exclusively for professional use.



#### **ATTENTION**

**Only one operator at a time should work on the equipment.**



#### **ATTENTION**

**Failure to observe the instructions and the danger warnings may lead to serious injuries for the operators and any other people present. Do not start up the machine before reading and understanding all the signals of danger, attention and warning explained in this manual.**

To operate this machine correctly, the operator must be qualified and authorised, able to understand the written instructions supplied by the manufacturer, trained, and familiar with the safety regulations. An operator must not assume drugs or alcohol, which could affect his work ability.

It is essential:

- to be able to read and understand what is described;
- to know the capabilities and character-

istics of this machine;

- to keep unauthorised people away from the work area;
- to check that the installation of the machine has been carried out in compliance with all the standards and regulations currently in force in this field;
- to check that all the operators are suitably trained, that they know how to use the equipment correctly and safely, and that there is adequate supervision;
- not to touch lines or the inside of electrical equipment without first ensuring that the power supply has been removed;
- to carefully read this booklet and learn to use the machine correctly and safely;
- to keep this use and maintenance manual always easily available, and to consult it when necessary.

## UNPACKING / ASSEMBLY

### ATTENTION

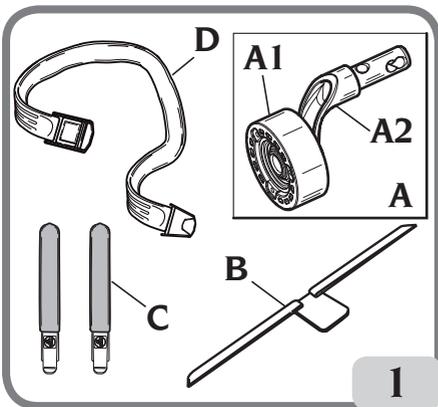
Carry out carefully the unpacking, assembly and installation operations described below.

Failure to observe these recommendations may cause damage to the elements of the PAX System wheels Kit, and jeopardise the safety of the operator.

- Free the PAX System wheels Kit from any packaging it has. Check it has not suffered any damage during the transportation. Place the elements that make up the PAX System wheels Kit so that they cannot fall and be damaged.

- The PAX System wheels Kit contains the following six elements (fig.1):

- A) tool with reversible roller. Characterised by an A1 roller, and an A2 support (specially shaped for fixing to the bead breaker arm via the appropriate holes)
- B) Kit 10 Reglette. A special element in plastic, to protect the rim. Equipped with a central tang with a notch, it allows the insertion of the upper bead breaking lever, thereby keeping the rim intact
- C) upper bead breaking lever
- D) tyre bead-holding belt.



## DESCRIPTION

### ARTIGLIO 50 in configuration for PAX System wheels

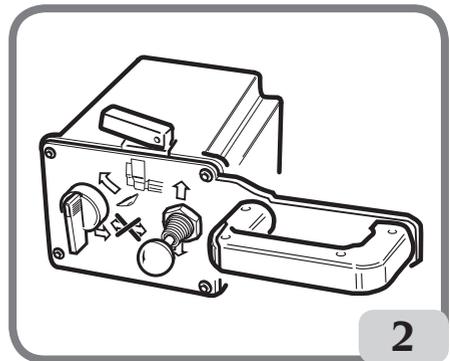
ARTIGLIO 50 in configuration for PAX System wheels allows you to easily break the beads, disassemble and assemble any type of the above-mentioned tyres with a rim diameter from 360 to 560 mm. In any phase during which the machine works with the horizontal wheel blocked and perfectly centred on the turntable device.

The drive commands are on the bead removal command push-button panel - fig.2.

The configuration assumed allows the operator to work in complete safety, without having to move from his work position.

ARTIGLIO 50, in configuration for PAX System wheels, maintains the objectives reached in the traditional version:

- reducing the physical effort applied by the operator;
- guaranteeing the total safety for the rim, insert and tyre cover.



## TECHNICAL DATA

### ARTIGLIO 50 in configuration for PAX System wheels

#### PAX System tyre types processed

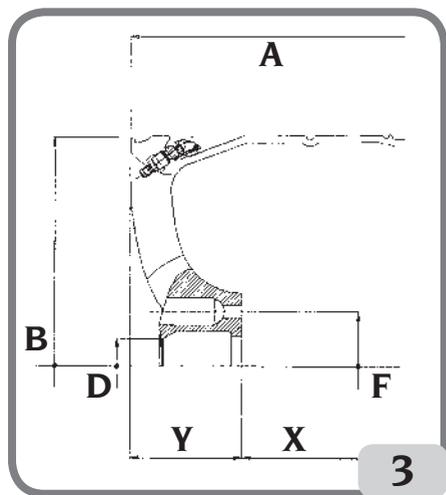
- maximum dimension of the PAX tyre..... cover 920 mm
- minimum diameter of the rim hole .40 mm
- minimum operating pressure.....7 bar
- maximum operating pressure ..... 10 bar
- force of the pneumatic cylinder (at 7 bar) .6500 N

**Weight of PAX System wheels kit ... 10 kg**

ARTIGLIO 50, equipped for PAX wheels, can operate on PAX System wheels (with a full-width, clipped support) with the following technical characteristics (for symbols A, B, D, F, X and Y, see the design below).

#### PAX System wheels with full-width, clipped support (fig.3)

- diameter (B) ..... from 360 to 560 mm
- width (A) ..... from 155 to 335
- inner offset (X) ..... max 260 mm
- outer offset (Y) max ..... 330 mm
- hole diameter (D)..... from 40 to 105 mm
- diameter circumference fixing holes (F). from 98 to 170



## INSTALLATION

**N.B.:** the PAX wheels Kit can only be installed on the ARTIGLIO 50 tyre changer.

The installation of the Kit for PAX wheels must only be carried out by qualified personnel, authorised by Corghi S.p.A. The installation by unqualified personnel will lead to the loss of the guarantees concerning the performance of the device.

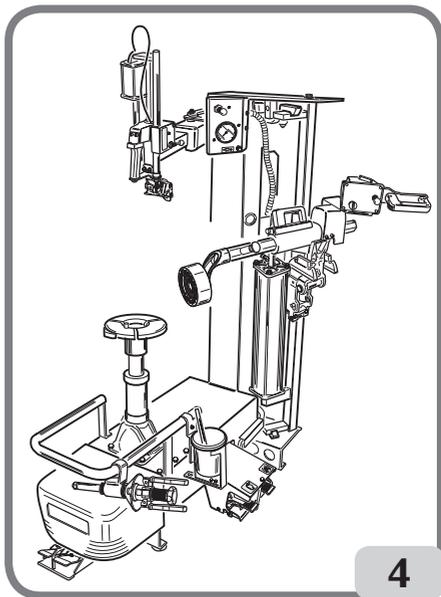
### ARTIGLIO 50 in configuration for PAX System wheels

#### Tooling procedure

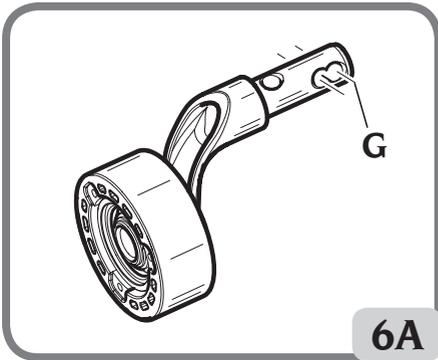
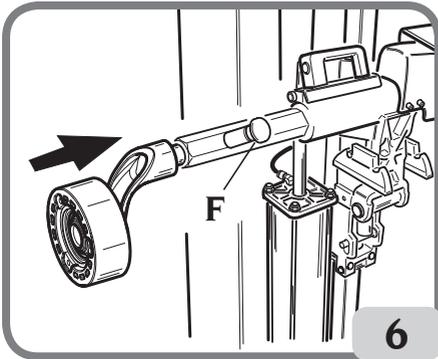
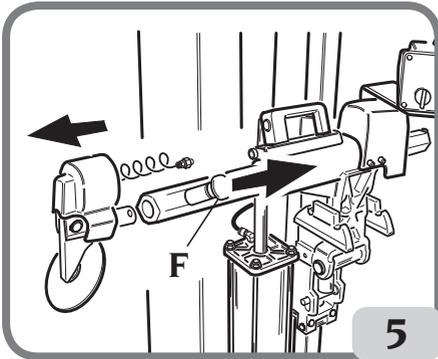
Fig.4 shows the ARTIGLIO 50 tyre changer fitted for PAX System wheels.

The pre-setting of ARTIGLIO 50 in configuration for PAX System wheels is obtained via the tooling procedure described below:

- Disconnect the bead breaker disc from the pneumatic system - fig.5.
- Remove the bead breaker disc by means of the block formed by the blocking pin F - fig.5.
- Assemble the tool with the reversible roller for PAX System wheels, and fix it so that the blocking pin F enters the outer hole G - fig.6-6a.



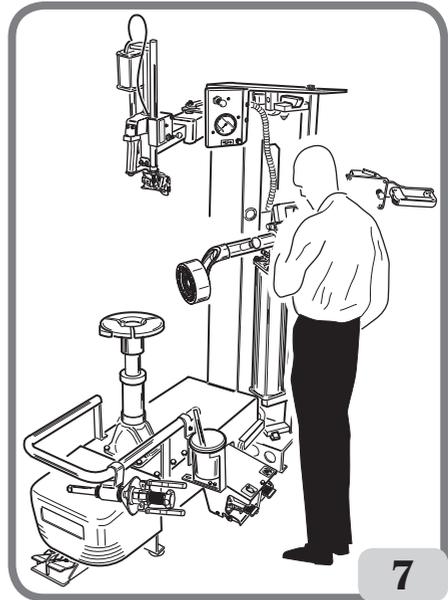
GB



## EXPECTED USAGE CONDITIONS

### Position of the operator

Fig.7 shows the position of the operator during the various work phases.



## MAIN OPERATING ELEMENTS

### ATTENTION

Learn to know your machine: knowing exactly how it works is the best guarantee of safety and performance. Learn the function and position of all the commands. Carefully check that each machine command works correctly. To avoid accidents and injury, the equipment must be properly installed, correctly operated and subjected to regular maintenance interventions.

## SET-UP

### Preliminary checks

Check, on the gauge of the regulator filter + lubricator unit, the presence of a minimum pressure of 7 bar.

Check that the machine has been correctly connected to the electrical power supply.

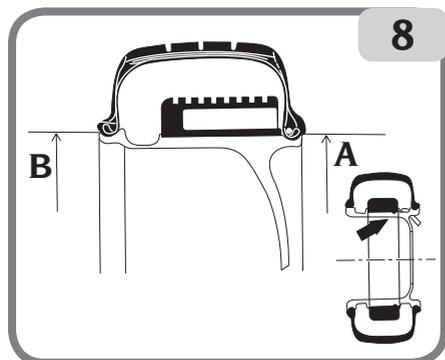
### Special instructions

#### PAX System wheels with clipped insert

Some PAX System wheels are fitted with a clipped insert (fig.8). In particular, they have a groove around the circumference of the outer edge of the rim. In this groove, there is the clip of the insert. During the assembly of the insert, it is therefore necessary to ensure the correct coupling of the parts.

#### How to establish from which side of the wheel the tyre should be removed

See fig.8. On the PAX wheel, identify the side with the diameter of the smaller rim A and the diameter of the larger rim B. The removal or assembly of the tyre must be carried out by positioning the PAX wheel on the turntable, with the side with the diameter of the smaller rim A facing upwards.

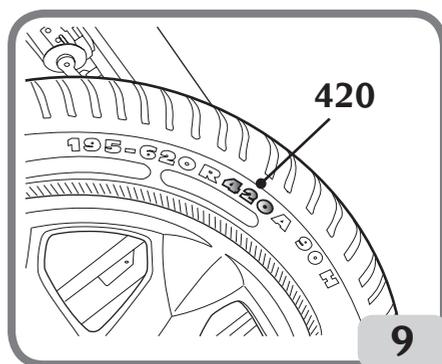


## Instructions for choosing the substitute tyre

To take the greatest advantage of the characteristics offered by a tyre, and to obtain the necessary guarantees of safety during the use, it is important to follow a series of precautions when choosing it, and when setting it up.

The dimensional and construction characteristics, as well as the service characteristics, can be identified via the words visible on the side of the tyre cover.

Breaking down the designation of the measurement of the tyre cover (e.g. 195/620 R 420 A - see fig.9) into its various elements, you obtain the information required to set up the machine correctly. In particular, the value in millimetres of the outer diameter of the rim of the PAX wheel being worked (from the example above: 420).



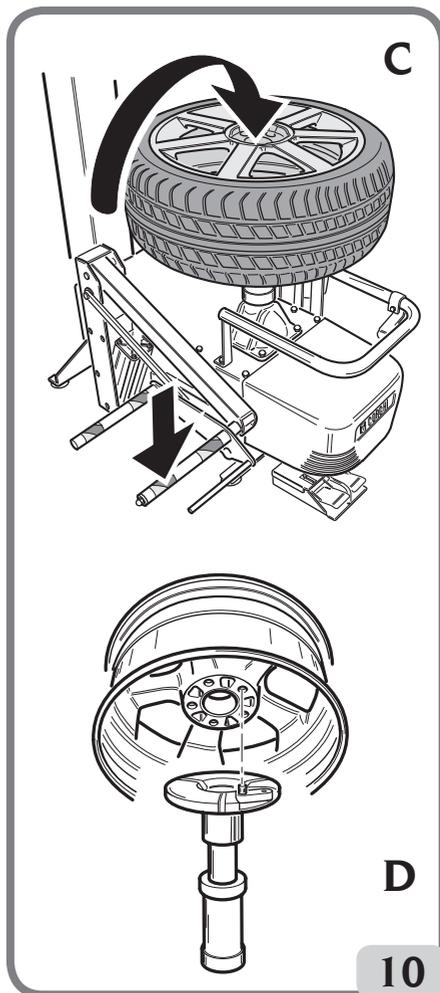
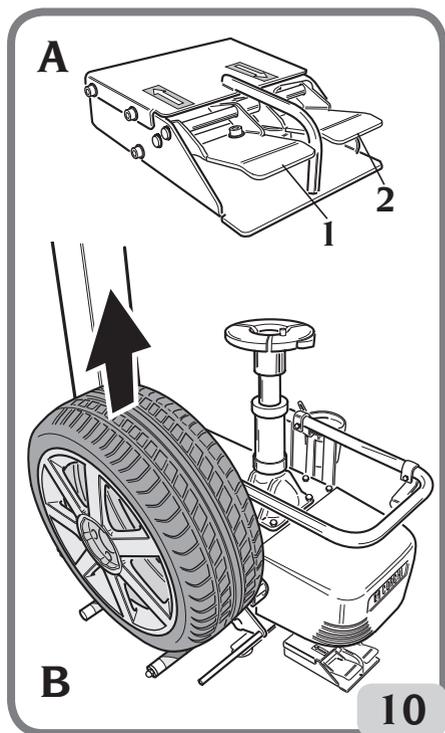
GB

## TYRE REMOVAL

### Procedure for standard PAX tyres

#### Loading the wheel Fig. 10

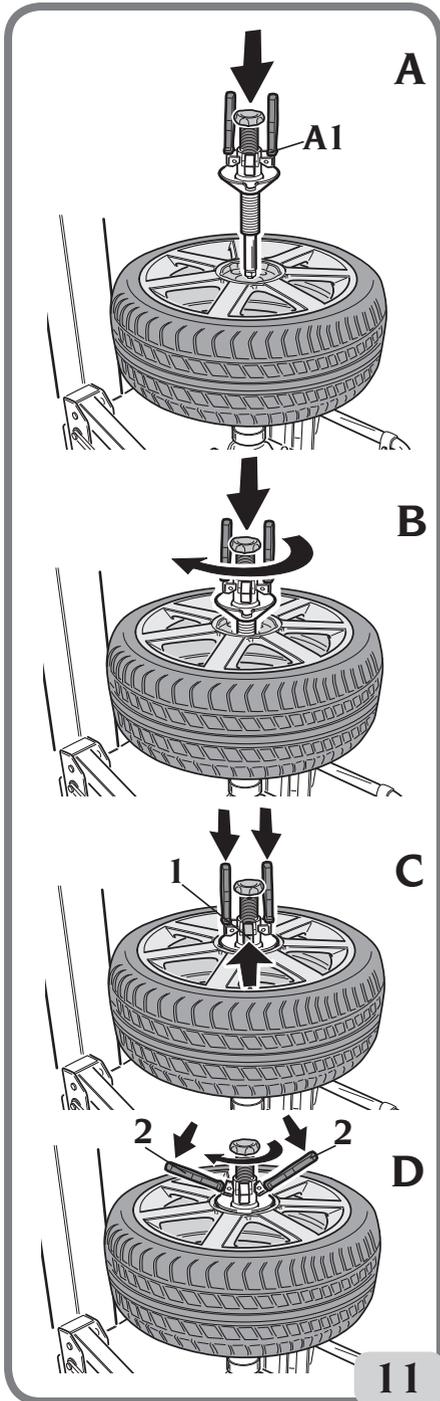
- A) Position the wheel on the lift.
- B) Lift the wheel by means of the pedal 1.
- C) Load the wheel manually on the turntable.
- D) Insert the anti-rotation dowel in one of the fixing holes of the rim.



### Blocking the wheel on the turntable

#### Fig. 11

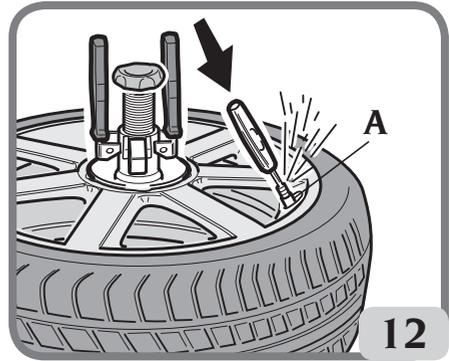
- A) Insert the A1 blocking device in the central hole of the wheel.
- B) Rotate the device, to allow the correct hooking up with the turntable.
- C) Bring the centring cone near the rim manually, by means of the blocks 1.
- D) Tighten the blocking device, rotating the handles 2 clockwise.



## Deflating the tyre

Fig. 12

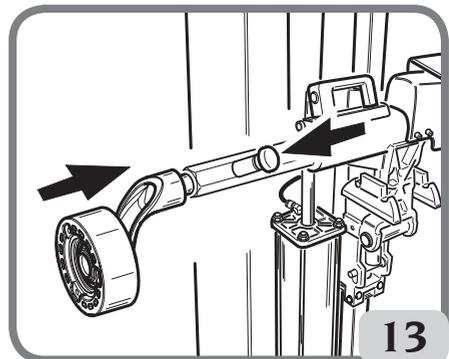
- Deflate the tyre completely, by means of the valve A



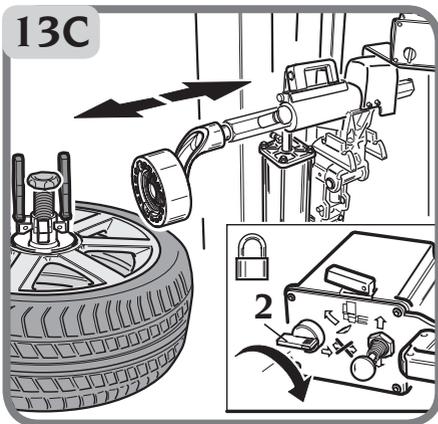
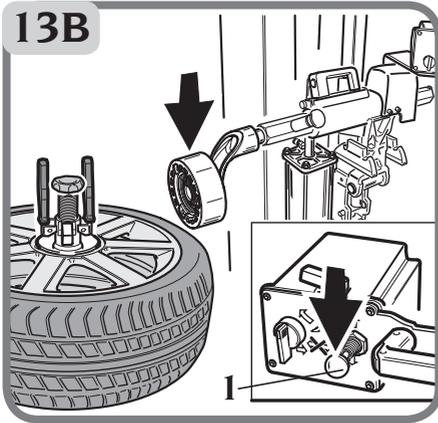
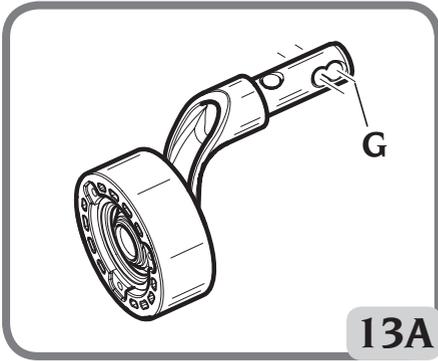
## Positioning the tool

Fig. 13 - (disassembly of upper part)

- Position the disassembly tool as shown in figure 13, so that you can work on the upper part of the tyre cover. Fix the tool to the arm, using the outer hole G - fig 13a.
- By means of the pneumatic command device 1, lower the arm with the cylindrical roller (fig.13b) until it is near the upper bead.
- Position the roller manually on the outer edge of the rim, and block the arm in place by means of selector 2 (fig.13c).
- Bring the roller into contact with the upper bead.



GB



## Extracting the upper bead

**Fig. 14 - (common procedure for Pax System with full-width or clipped support)**

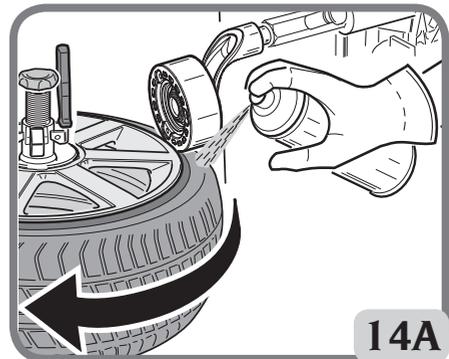
- Press the turntable rotation pedal and, using the pneumatic command, gradually begin the bead removal. At the same time, lubricate the bead with a lubricating spray (of the type recommended by the tyre manufacturer) or, if no liquid lubricant is available, with the special spray - fig. 14a.
- With the roller pressing against the bead, you are advised to make the wheel complete at least a couple of turns, in order to soften the tension of the bead.
- In the space thus obtained between the bead and the rim edge, the reglette will be inserted - fig. 14b.
- Insert the reglette as shown in fig.14c.

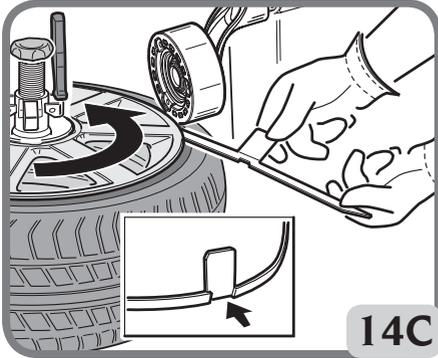
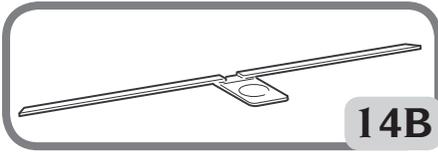
### N.B.:

The reglette is inserted between the rim edge and the bead (fig.15a). It is equipped with a notch that allows you to insert the end of the bead breaker lever.

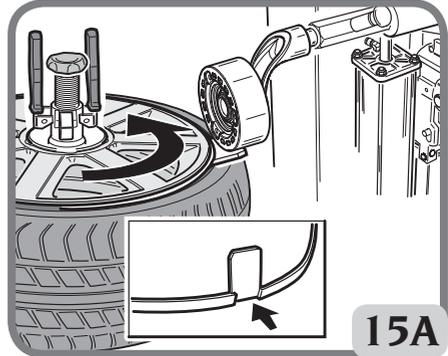
### ATTENTION

A reglette can be used for more than one disassembly. It is necessary to check its condition first, however. If the tang of the reglette shows signs of wear and tear, you are advised to replace it with a new one.





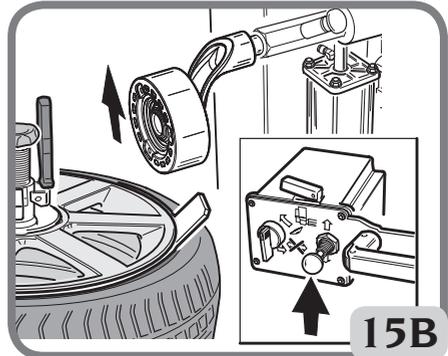
tween the bead of the tyre and the pressure transducer, or between this and the disassembly/assembly tools. Contact, with abnormal stress, can damage the sensors or create defects in the seal between the valve and the rim.



### Inserting the reglette

**Fig.15** - The reglette has a precise insertion direction. The part with the seat for the lever should be kept towards the outside of the wheel. During the rotation movement to insert the reglette, the tang of the reglette must pass below the cylindrical roller - fig.15a.

- Raise the roller, using the pneumatic command lever fig.15b
- Insert the lever in the seat of the reglette fig.15c
- Raise the bead, levering towards the centre of the wheel fig.15d



### ATTENTION

**Before raising the bead, it is important to check that the lever is well inserted under it.**

Once the bead has been removed, extract the reglette from the tyre immediately fig.16

### ATTENTION

**Take care not to drop the reglette inside the tyre. There is the risk that it will be left inside during the subsequent assembly.**

### ATTENTION

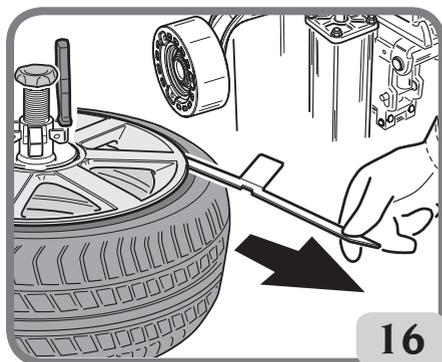
**Be very careful to avoid any contact be-**



**GB**



15D

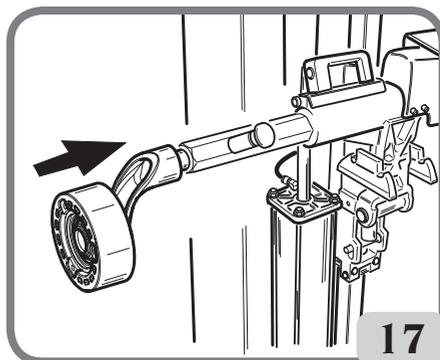


16

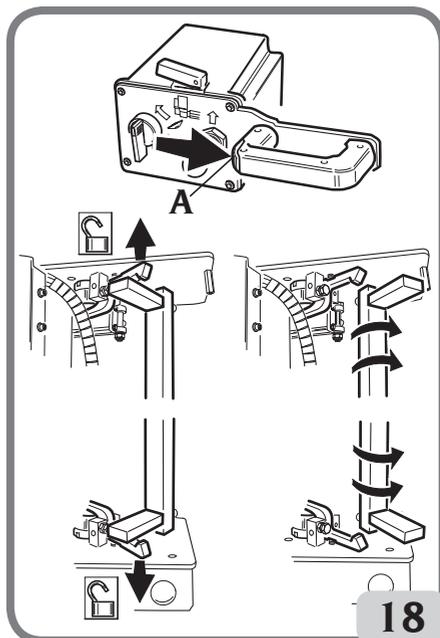
### Positioning the tool

**Fig. 17 - (disassembly of lower part)**

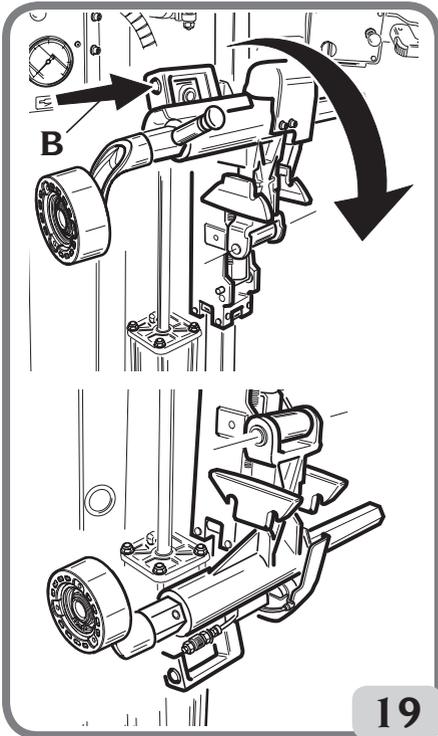
- Position the disassembly tool as shown in figure 17, so that you can work on the lower part of the tyre cover. Fix the tool to the arm, using the inner hole H - fig 17a
- Using button A, release the bead breaker unit - fig.18
- Using button B, overturn the bead breaker unit, as shown in fig.19
- Replace the bead breaker unit in the working position - fig.20.



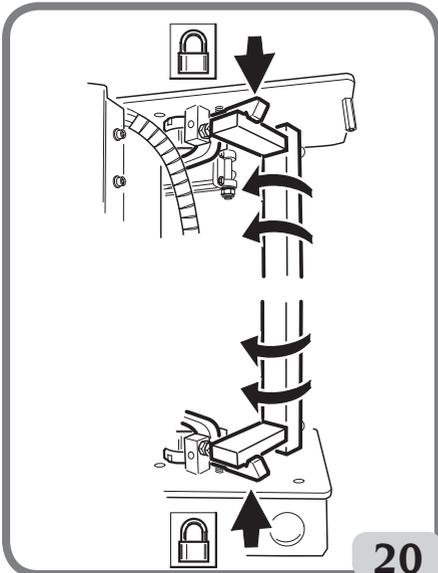
17



18



19

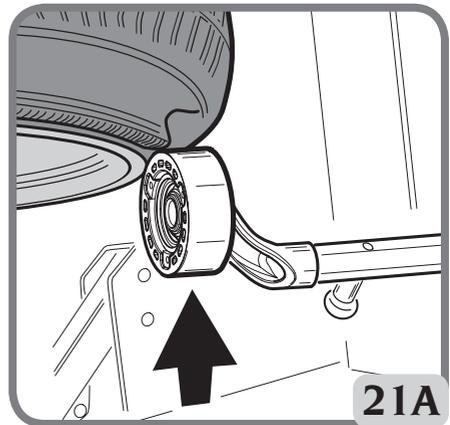


20

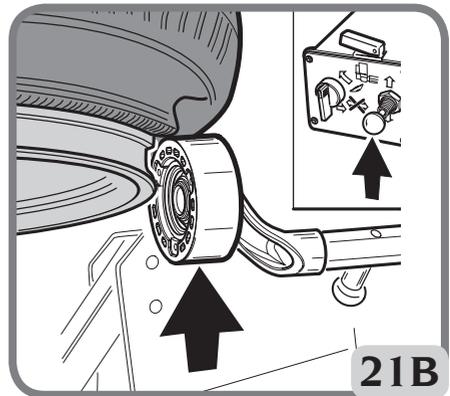
## Disassembling the support

**Fig. 21 - (common procedure for Pax System with full-width or clipped support)**

- Bring the arm with the cylindrical roller to the lower part of the wheel.
- Rest the roller on the lower bead - fig.21a
- Press the turntable rotation pedal
- While it is rotating, work on the pneumatic command lever. The tyre will gradually unthread from the rim, bringing with it the support fig.21b
- Manually unthread the tyre and support from the rim - fig.21c
- Extract the support from the tyre fig.22.

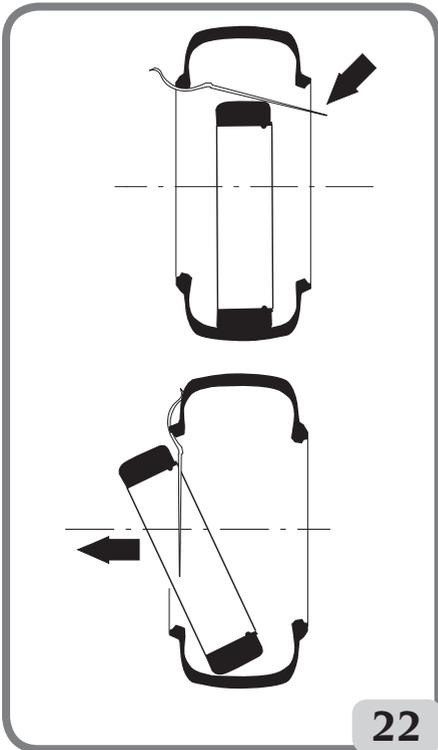
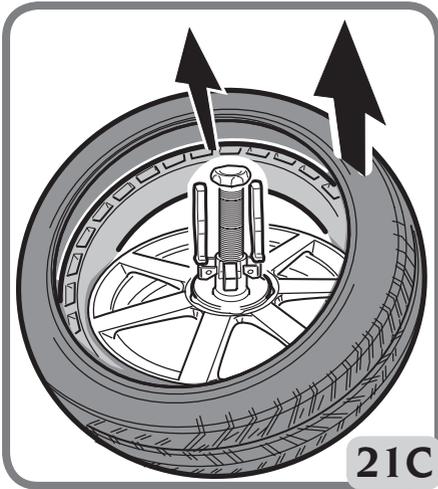


21A



21B

GB



## TYRE ASSEMBLY

The PAX System contains (fig.23 ):

1. A special profile PAX System rim (T) (for full-width or clipped support).
2. Support (S) (for full-width or clipped support).
3. PAX tyre cover (R).
4. Pressure control sensor.

### Assembling the support in the tyre

- Spread the special PAX System gel of the mechanical support on the inner part of the tyre cover fig.24.
- Lubricate the beads of the PAX tyre cover (R) and the surface of the support (S) that will be in contact with the rim, using a standard lubricant for vehicle wheels assembly fig.25.

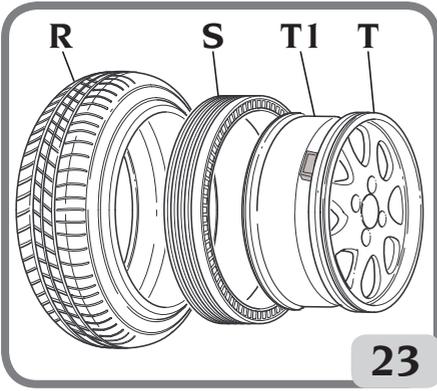
### IMPORTANT

When lubricating the inside of the tyre with the special PAX System gel of the mechanical support, take care not to dirty the beads (on which a standard lubricant for tyres will be used).

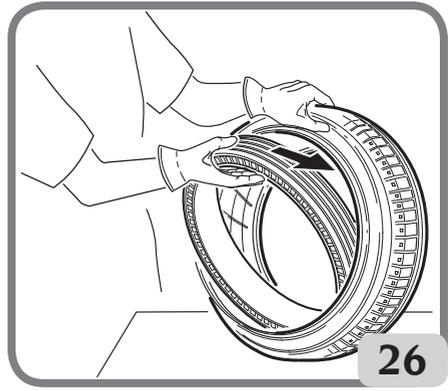
- Insert the Support (S) in the tyre cover (R) fig.26.

### ATTENTION

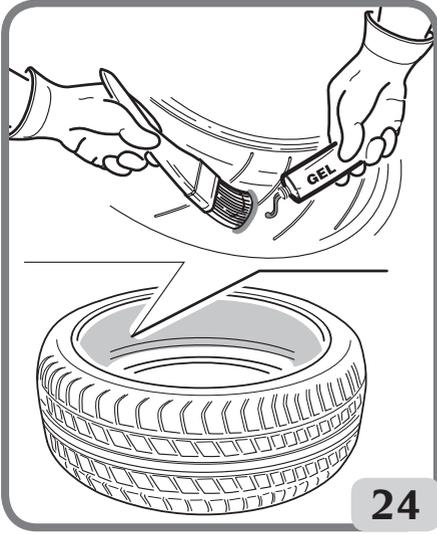
The support (S) must be introduced in the tyre in the correct direction, as shown in Fig.27a (for standard) and fig.27b (for clipped).



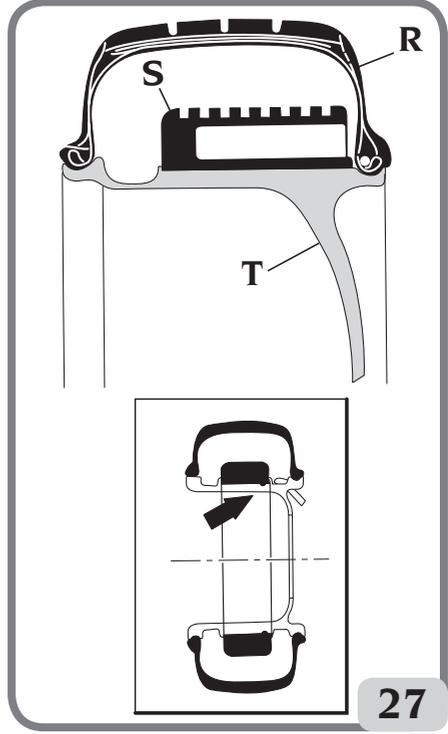
23



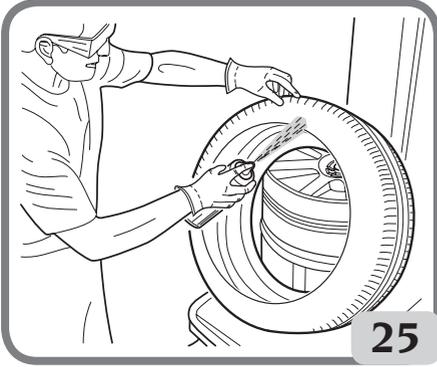
26



24



27



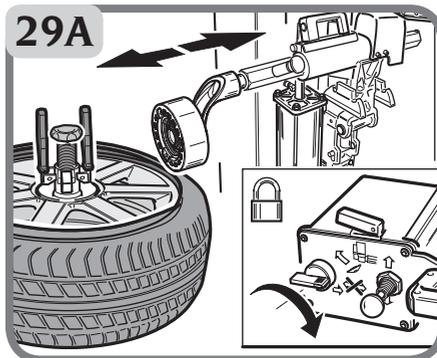
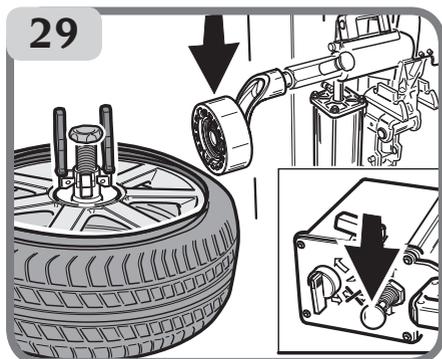
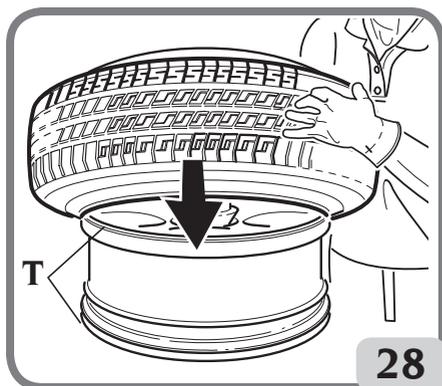
25

GB

## Positioning the tool

Fig. 28 - (assembly of upper part)

- Lubricate the seats of the beads of the rim (areas indicated by the "T" in fig.28).
- Insert the tyre cover/support assembly on the rim fig.28.
- Position the assembly tool as shown in figure 29, so that you can work on the upper part of the tyre cover. Fix the tool to the arm, using the outer hole - fig 6a.
- By means of the pneumatic command device, lower the arm with the cylindrical roller (fig. 29) until it is near the edge of the upper rim.
- Position the roller manually on the outer edge of the rim, and block the arm in place by means of the selector - fig. 29A.



## Assembling the support on the rim

(Procedure for Pax System with full-width support)

- Press the roller against the bead of the tyre and, at the same time, rotate the turntable until the support (S) is completely inserted in the rim (T) - fig.27a.
- Once the operation is completed, raise the roller from the tyre.

## Assembling the support on the rim

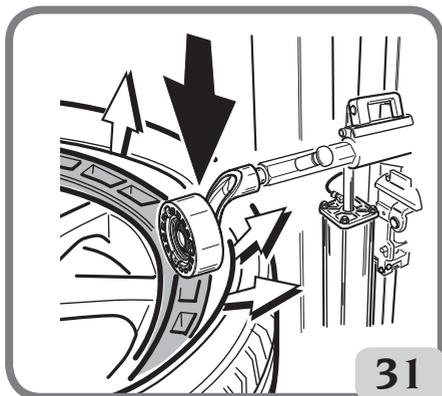
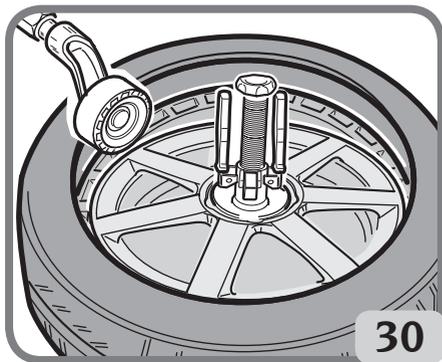
(Procedure for Pax System with clipped support)

- Move the arm along the axis, using the pneumatic lever, until the roller is in line with the rim - fig 30.
- Move the bead of the tyre away, and bring the roller down to the surface of the support - fig. 31.
- Rotate the turntable until the support (S) is completely inserted in the rim (T) fig.27. At the end of this operation, lift the roller from the tyre.

**N.B.:**  
the support is completely inserted when you hear the resonant signal caused by the fixing in the appropriate seat.

**ATTENTION**

During the insertion of the support, ensure that the upper bead does not enter the seat of the rim where the inflation pressure sensor is assembled, as it would be damaged.



### Assembling the lower bead

(Common procedure for Pax System with full-width or clipped support)

- Using the special lever contained in the Pax System kit, extract the lower bead from the lower edge of the rim - fig.32.
- Using button A, release the bead breaker unit - fig.18.
- Using button B, overturn the bead breaker unit, as shown in fig.19.
- Bring the cylindrical roller onto the lower part of the tyre.

- Replace the bead breaker unit in the working position - fig.20.

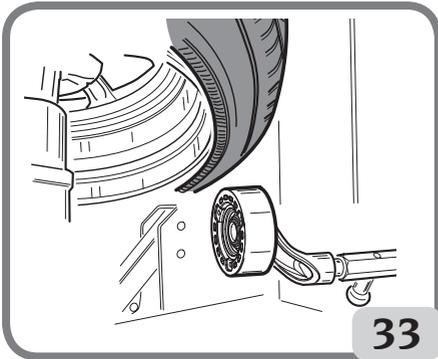
**N.B.:**

For this operation, the fixing position of the assembly tool is not modified, so it is pivoted on the bead breaker arm in the outer hole. Fig. 33

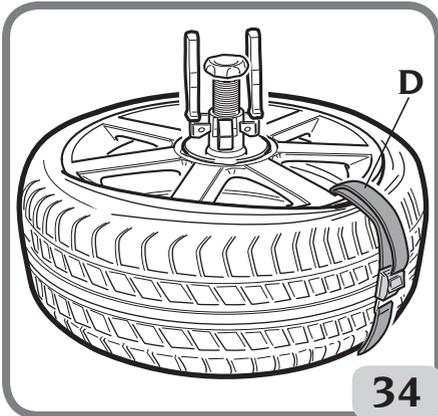
- Hook up the beading belt D to the wheel, as shown in fig.34.
- Press the roller against the edge of the rim. Fig.35
- Insert the lower bead in its seat, rotate the wheel at the minimum speed and, proceeding gradually, stop before the belt interferes with the roller.



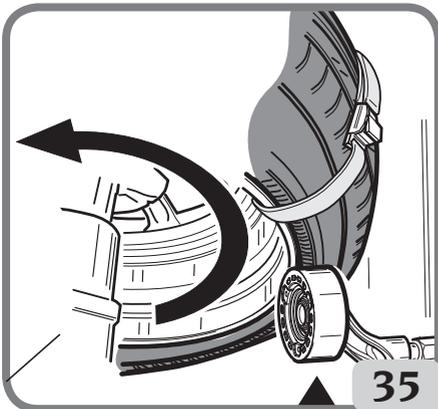
**GB**



33



34



35

## Assembling the upper bead

(Common procedure for Pax System with full-width or clipped support)

- Using button A, release the bead breaker unit - fig.18.
- Using button B, overturn the bead breaker unit, as shown in fig.19.
- Bring the cylindrical roller onto the upper part of the tyre.
- Replace the bead breaker unit in the working position - fig.20.
- Unblock the bead breaker unit, using the selector (fig.36a), then position the roller of the assembly tool in contact with the upper part of the edge of the rim, as shown in fig.37a.
- Block the assembly tool in place, using the selector A - fig.36b.
- Using the pneumatic command lever, press the roller against the edge of the rim - fig.37b.
- Insert the upper bead in its seat, rotate the wheel at the minimum speed and, proceeding gradually, stop before the belt interferes with the roller.
- Once the assembly is complete, unhook the beading belt from the wheel.
- Move the assembly tool away from the wheel.
- Inflate the tyre (fig.38), using the special air pistol connected to the tyre changer machine.
- Check that the beads are correctly inserted in their seat.

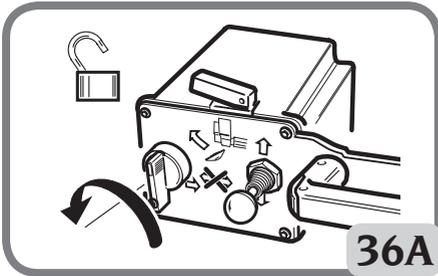
### ATTENTION

**Under no circumstances must you exceed the maximum inflation pressure specified by the manufacturer – RISK OF DAMAGING THE TYRE.**

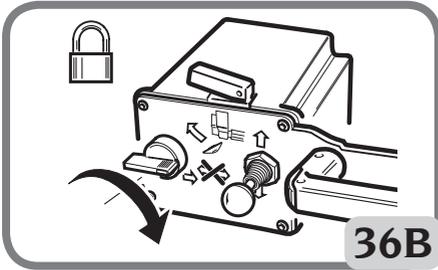
### ATTENTION

**After assembling the support, always use a dry cloth to clean the following elements:**

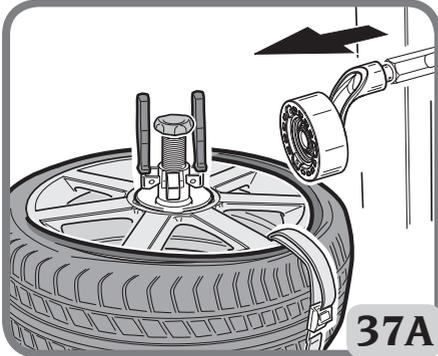
- the beads of the tyre;
- the grooves where the wheel is housed;
- the support positioning roller.



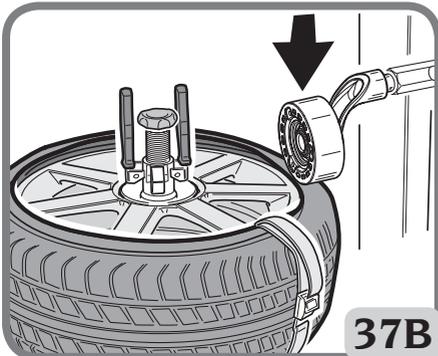
36A



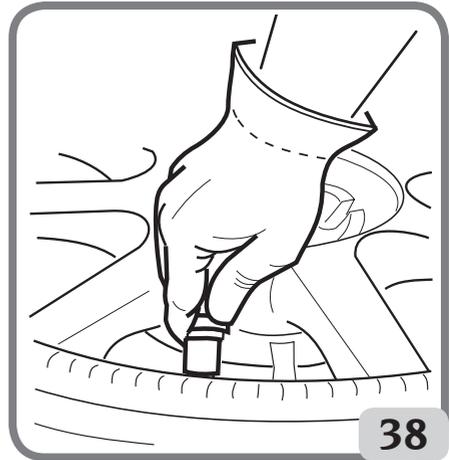
36B



37A



37B



38

## INFLATION

### ATTENTION

The inflation operation is a notoriously dangerous one. This operation must be carried out following the indications given below. The use of neutral safety goggles and safety footwear is recommended.

### DANGER

Even if the machine limits the pressure, it cannot guarantee sufficient protection if the tyre explodes during the inflation phase.

Failure to observe the following instructions makes the tyre inflation operation dangerous.

### DANGER

**AVOID, AT ALL COSTS, exceeding the pressure recommended by the tyre manufacturer. The tyres can explode if inflated beyond these limits, or their structure can become seriously damaged in a way that is not immediately visible. KEEP HANDS AND THE REST OF THE BODY AWAY FROM THE TYRE WHILE IT IS BEING INFLATED. Do not be distracted during this operation, and check the pressure of the tyre continuously to avoid excessive inflation. The explosion of the tyre can lead to seri-**

GB

ous injury, or even death.

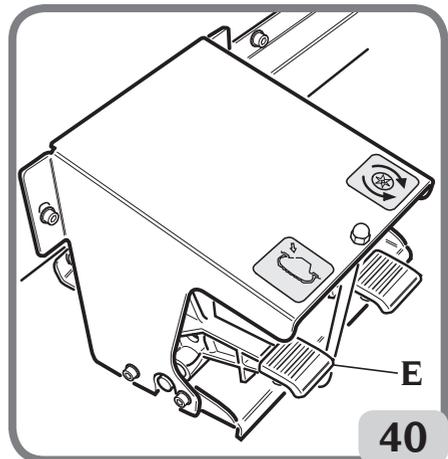
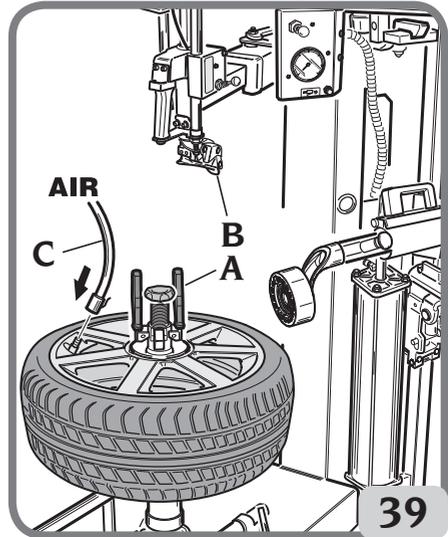
## Inflation of tyres for PAX System wheels

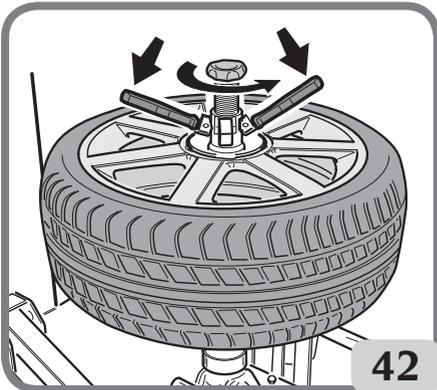
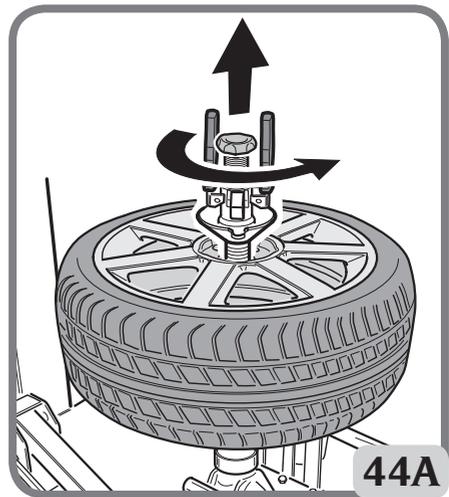
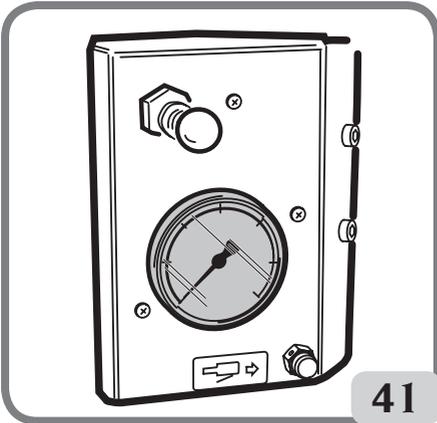
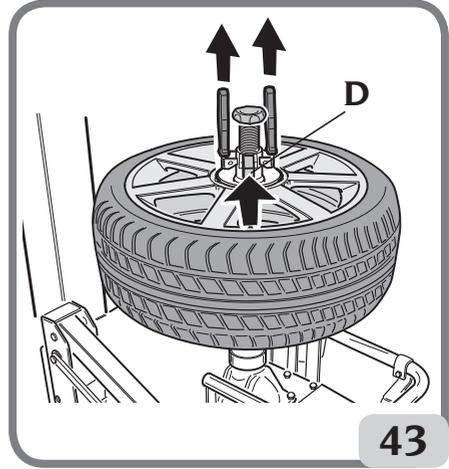
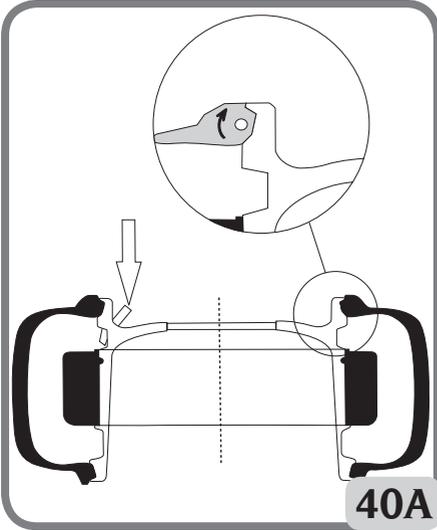
### PAX System wheels with full-width and clipped support

- Ensure that the wheel on which the tyre cover has been assembled is firmly blocked on the turntable by means of the centring handle A - fig.39. Ensure also that the head unit B (fig.39) is far from the working area and, if possible, in the resting position.
- Connect the Doyfe connector to the inflation tube C (fig.39) on the valve-stem. Inflate the tyre, pressing pedal E - fig.40. The tyre cover expands slightly, bringing the bead to the maximum hook and perfect seal condition - fig.40a.
- Continue inflating, up to the value recommended by the tyre manufacturer. Do not be distracted during this operation, and check the pressure of the tyre continuously on the air pressure visualisation gauge (fig.41), to avoid excessive inflation.
- Apply the cap to the valve, to protect the inner mechanism from dust and to guarantee the air seal.
- Loosen the wheel blocking device, rotating the handles anti-clockwise - fig.42.
- Press the stops D and manually move the centring cone away from the rim - fig.43.
- Rotate the blocking device anti-clockwise, to release it from the turntable - 44a.
- Unthread the device from the rim - 44b.
- Raise the lift and manually position the wheels on it - fig.45a.
- Lower the lift - fig.45b.
- Remove the wheel from the lift - fig.45c.

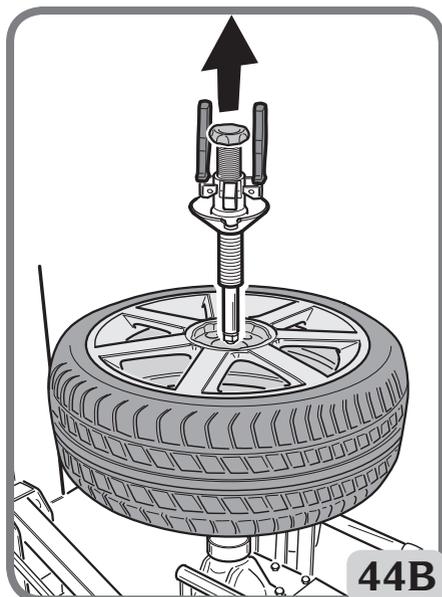
### ATTENTION

Under no circumstances must you exceed the maximum inflation pressure specified by the tyre manufacturer - risk of damaging the tyre.

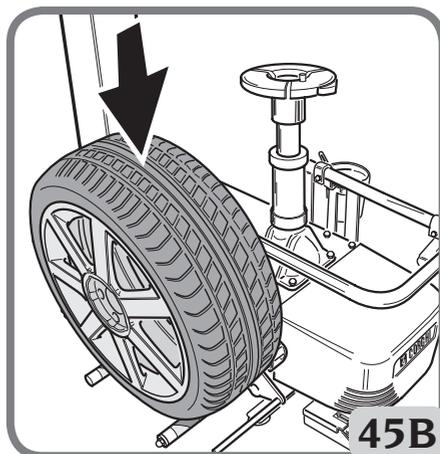




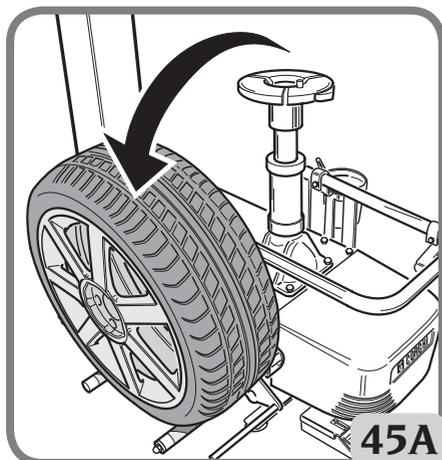
**GB**



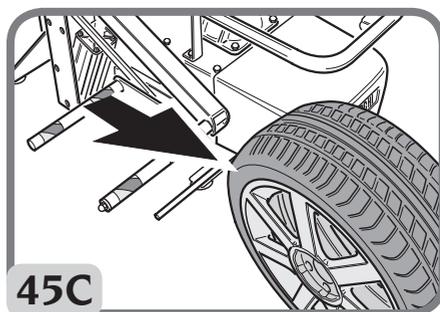
44B



45B



45A



45C

## GLOSSARY

### Pneumatic PAX System

#### Mechanical hook-up.

With PAX System, the tyre is mechanically hooked to the rim. It is no longer the air pressure, but the tension of the framework that permits the tyre to be hooked up. In the event of a puncture therefore, PAX System cannot break the beads.

#### Insert.

This is a ring inserted in the wheel. It is assembled on the outer edge of the rim, and is a support for the tyre in the event of a puncture. It also allows the vehicle to continue running in good safety conditions.

During the assembly, a gel is applied between the inside of the tyre and the insert, for zero pressure driving. In this way, in the event of zero pressure driving, the tyre is not subject to wear and tear caused by the friction.

**Sensors.**

Inserted in the wheel, they measure the air pressure and temperature inside the tyre, and pass this information (via radio) to a computer which, thanks to an advanced software package, identifies any anomalies in the pressure and informs the driver.







CORGHI S.p.A. - Via per Carpi n. 9  
42015 CORREGGIO - R.E. - ITALY  
Tel. ++39 0522 639.111 - Fax ++39 0522 639.150  
[www.corghi.com](http://www.corghi.com) - [info@corghi.com](mailto:info@corghi.com)