ATLAS PTC700

Use and maintenance instruction manual

Original Instructions

English

Ed.11/18 Cod. 3044302

PTC700

CONTENTS

1.0 INTRODUCTION

Thanks for choosing this tyre changer. This superautomatic touchless leverless tyre changer is designed for top professional tyre specialists, servicing run flat and UHP tyres with no tool/rim contact.
In order to ensure correct, efficient and safe operation, and to prolong the work life of the machine, please read this manual carefully and follow the instructions.

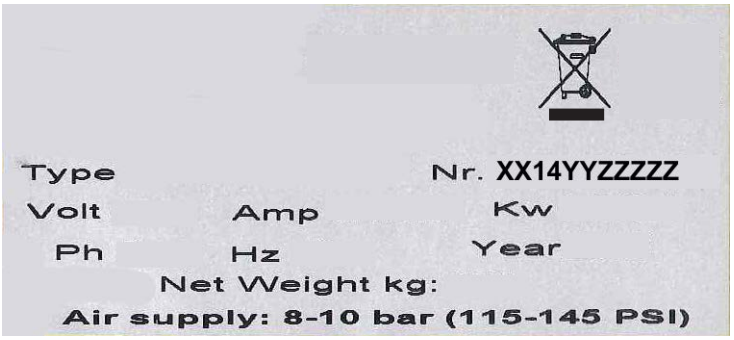
1.1 Tyre-Changer data:

Please refer to "Tyre-Changer Model" and "Serial Number" data on the Data-Plate to provide our Technical Service Dept. with the necessary details for prompt assistance and spare-parts tracking.
These data are found on adhesive labels applied on the machine. For clarity and convenience, we have inserted FAC-SIMILE in the box below.

1.2 Manufacturer data:

Please check the "Declarations of Conformity" at page 2 of this Manual and Tyre-Changer Data-Plate.

1.3 Data plate:



2.0 GENERAL DESCRIPTION

The tyre changer is designed to demount and mount tyres of cars and light commercial vehicles with rims from 12" to 28" and maximum diameter of 1200 (47") mm.

The tyre changer is designed to demount and mount conventional tyres of passenger cars, light commercial vehicles, next generation "self-supporting" RUN-FLAT tyres and low profile tyres (UHP) on steel and/or alloy rims, even big-size tyres.

The Tyre-Changer is NOT intended for demounting completely- or partially-inflated tyres, dirty tyres, nor for rim bending or for demounting industrial wheels with split ring rims. All these operations are **FORBIDDEN.**

This manual is an integral part of the product.
Before using the tyre changer, read carefully the warnings and instructions contained in this manual since they provide important information on operating safety and maintenance.

Keep this Manual in good conditions for further references.

NOTE: Some parts or components of standard production may differ from the illustrations contained in this manual.

3.0 SPECIFICATIONS

Connections:

-Power supply: 230V - 1Ph - 50/60 Hz
For more detailed information, see chapter 9.4, "**Connection to the electric network**" on page 11.
-Operating pressure: 8÷10 bar (116÷145 psi)
-Supply pressure: 8÷14 bar (116÷203 psi)
-Air-feeding pressure regulator set at 10 bar (145 psi) standard included
-Inflating air-pressure regulator set at 3,5 bar (50 psi) standard included

Working capacity:

-Rim clamping range: 12" to 28"
-Maximum rim width: 16" (406 mm)
-Max. tyre diameter: 47" (1200 mm)

Motoinverter clamping chuck details:

-Motors power: 0,75 kW - 2 speed
-Maximum torque: 1200 Nm
-Clockwise rotation speed: 7÷16 rpm
-Working noise level: < 70 dB

Bead-Breaking units:

-Bead breaker cylinders force at 10 Bar: 12037 N (1227 Kg)
-Maximum bead breaking range: 670 mm (26'')
-Bead-pressing tool cylinder power at 10 Bar: 3055 N (312 kg)

Other Details:

-Minimum overall dimensions mm: 1800 x 1650 x 1650 H
-Net weight (optional accessories excluded): 561 kg
-Operating temperature range: min +5° C max +50° C (+41°÷+122° F)
-Storage temperature range: -5° ÷ +60° C (23°÷140° F)

Standard accessories (ref. page 29):

-Lube paste bucket and brush
-Plastic tyre lever
-Kit of nylon protectors for mounting tool
-Plastic protections for Smart Lock centering cone
-Rubber protections for clamping chuck faceplate
-Plastic protections for clamping chuck driving pin
-Plastic cone Ø 70 mm for clamping special alloy rims
-Reducing ring for clamping chuck faceplate
-Adjustment knob for Smart Lock
-Cleaning brush for clamping chuck and Smart Lock
-Spare O rings for Smart Lock
-Bead pressing clamp
-Set of rubber protectors
-Air lubricator, air filter/water trap
-Calibration jig and magnet

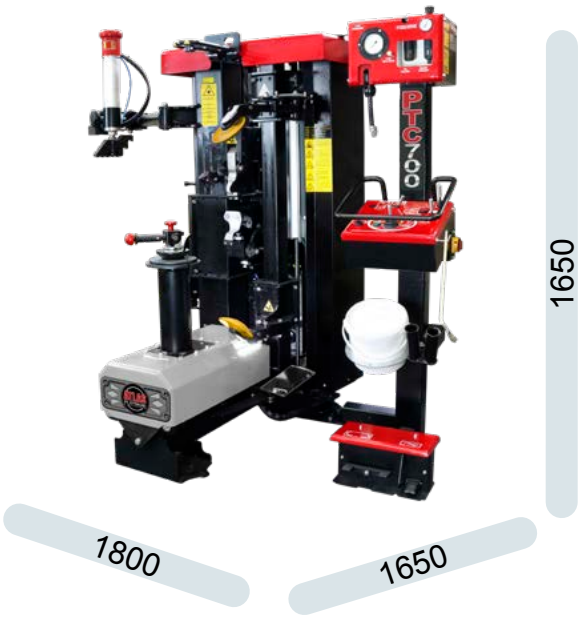
Main optional accessories (ref. page 31):

-WL Wheel Lifter (Max wheel weight 80 kg)
-Wheel clamping adaptor for reverse mounted and plastic clad wheels
-Cones for clamping light truck and LCVs wheels
-Tubeless inflation external kit (Gun)
-Nylon cones for special Lamborghini, Porsche, BMW wheels
-WDK Kit

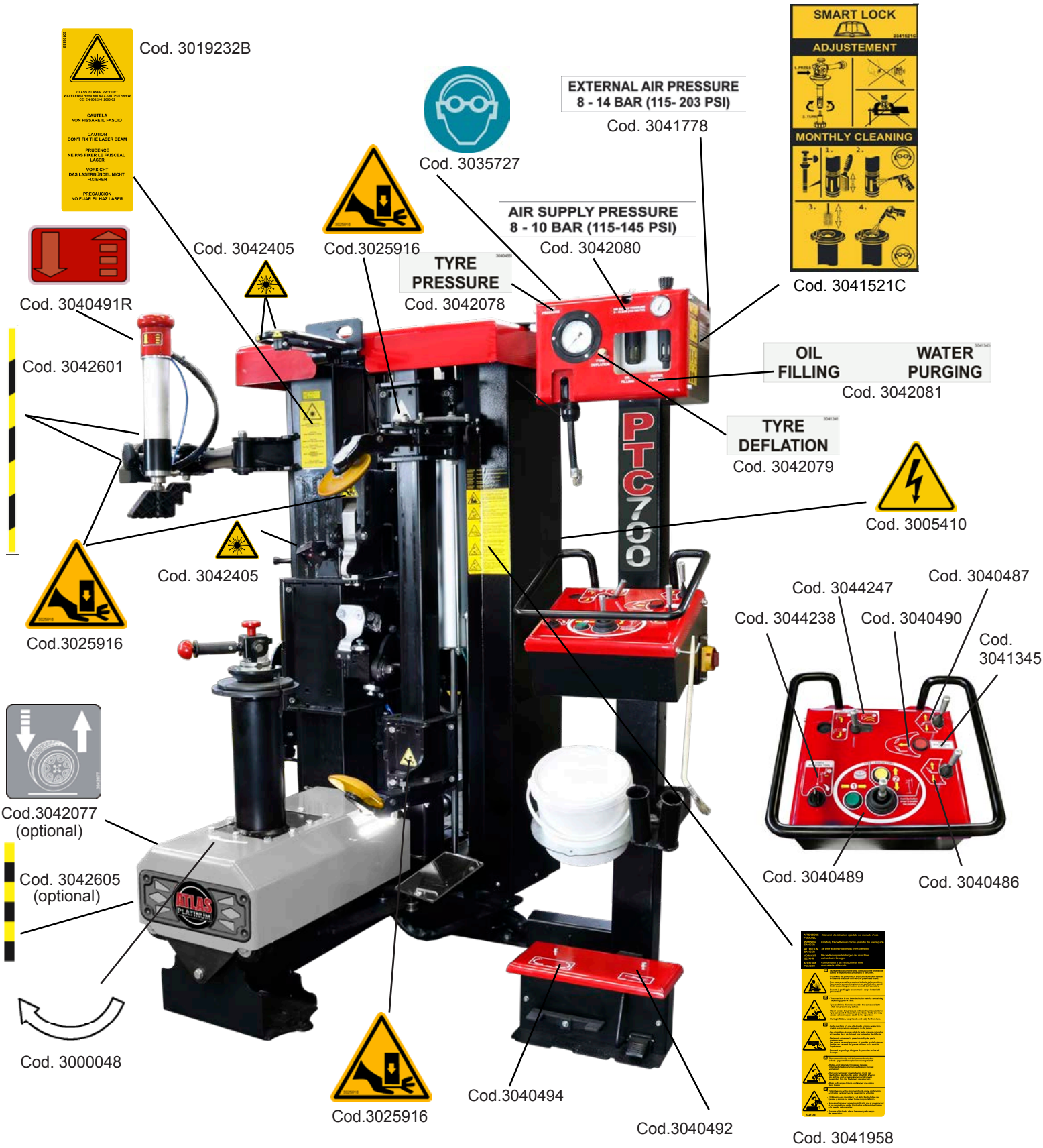
Packing details (mm)

Gross weight 611 Kg.
(without optional
accessories)

Dimensions (mm)



4.0 WARNING LABEL PLACEMENT



WARNING:
Replace any warning label immediately in case of damage or loss.
Do not operate the Tyre Changer in case of missing warning labels.
Do not hide any warning label by any means. Do not interpose objects that can obstruct or reduce the visual capacity of the operator. Refer to the above mentioned codes for warning labels ordering.

5.0 GENERAL SAFETY RULES

The Tyre-Changer is to be operated only by qualified and authorised personnel.

A qualified operator is someone who has fully understood the instructions described in this operation and maintenance manual, has been specifically trained and is aware of safety standards at his work place.

The operators using the machine shall not be under the influence of drugs, alcohol or other intoxicating Substances, as this may interfere with their ability to work safely.

For greater security against on-the-job injuries, the operators shall wear safety footwear, gloves, protection goggles and shall NOT wear any form of loose clothing that could get caught up or restrict the operator's movements.

The operator must be able to:

- read and understand all instructions in the user and maintenance manual so as to be able to use the machine correctly and safely.
- read and understand the danger warnings.
- understand the characteristics of the machine.
- keep unauthorized people away from the working area.
- make sure that the setting in motion of the machine has been carried out in compliance with all applicable rules and regulations.
- make sure all operators are familiar with the machine and know how to use it safely and correctly.
- avoid touching moving parts or pressurised parts without first disconnecting the machine from the electrical and air power supply.
- keep the operation instruction manual with care in an easily accessible place, so that it can be consulted whenever needed.

The Tyre-Changer may only be used by specially trained and authorized expert personnel.

- The use of the machine is forbidden to disabled operators if their disabilities may affect the safety of the working operations.
- Any tampering or modification to the equipment without the manufacturer's express prior authorization will relieve the manufacturer from all responsibility for damage deriving from or referable to such actions.
- Removing or tampering with safety devices immediately invalidate the guarantee and represents a violation of European Safety Legislation.
- The Tyre-Changer is equipped with informative and warning labels, which are designed and produced to last in time. If they should deteriorate, user shall request replacement decals.

IN CASE OF FIRE, USE ONLY DRY CHEMICHAL OR CO_2 EXTINGUISHERS TO PUT THE FIRE OUT

	WATER extinguisher	FOAM extinguisher	POWDER extinguisher	CO_2 extinguisher
DRY materials	**OK**	**OK**	**OK**	**OK**
FLAMMABLE liquids	**NO**	**OK**	**OK**	**OK**
ELECTRICAL equipment	**NO**	**NO**	**OK**	**OK**

6.0 SAFETY DEVICES

The tyre changer is equipped with safety devices that are designed to guarantee the safety of the machine operator:
- Main power switch with emergency stop function: cuts off power supplied to the machine.
- Pressure limiting valve, installed inside the machine prevents the pressure from exceeding 3,5 bar (50 psi) during inflation.
- Pressure regulator with air supply pressure gauge limited to maximum working pressure (10 bar (145 psi)).

On Tyre-Changers equipped with "Tubeless tyre bead seating system":
-Maximum pressure valve, installed onto the air tank prevents the pressure from exceeding 11 bar (160 psi).

Removing or tampering with safety devices immediately invalidates the guarantee and represents a breach of the European Safety Legislation.

7.0 TRANSPORT

- The Tyre-Changer must be transported in its original packaging and kept in the position indicated on the actual packaging.

- The packaged machine has to be moved by means of a fork lift of suitable capacity. Please, insert the forks as shown in the following picture (Fig. 1).

8.0 UNPACKING

Remove the protective cardboard, remove all fixing screw and free the Tyre-Changer from its original pallet.
Check the perfect condition of the machine, making sure that no part is damaged or missing, by referring to the picture at page 12.
If in doubt, please do not use the machine and get in touch with your Distributor for further steps.

Keep packing elements away from children.
All packing elements must be stored in the proper stocking areas.

Note: All the most delicate surfaces of the Tyre-Changer are coated with a special rust-proof oil.
Some oil traces may leak after coating procedure: please, remove them accordingly.

Gross weigth 611 Kg.

fig. 1

fig. 2

Use lifting equipment of suitable load-bearing capacity that is able to take the weight of the tyre changer (at least 700 Kg.); to lift the machine, use a transport strap with minimum load-bearing capacity of at least 700 kg. (Fig. 2)
After tyre-changer positioning, take off the lifting belt.

9.0 INSTALLATION

9.1 Space required for positioning

When choosing the place of installation be sure that it complies with current safety-at-work regulations.
The Tyre-Changer must be connected to the main electric power supply and the compressed air system. It is therefore advisable to install the machine near these power sources.
The installation area must leave at least the room shown in picture “Fig. 1”, so as to allow all parts of the machine to operate correctly and without any restriction.
Lighting should be adequate to perform safe operations and comply with the current regulations for safety at work.

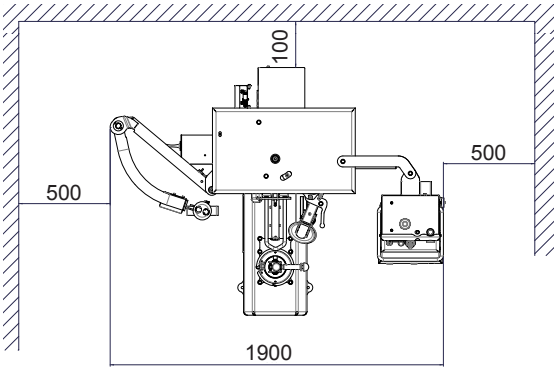


Fig. 1

9.2 Tyre-Changer placement and connections

Place Tyre-Changer onto a flat, smooth and not slippery floor with a suitable load capacity.
The machine need not necessarily be anchored to the ground, but if you prefer to do so, drill holes 100 mm deep on the ground in correspondence of holes at the machine rear base by using a 10 mm drill bit of suitable length. Insert suitable metal anchor dowels in the holes drilled and secure firmly.
If the machine is installed outside it must be protected by a appropriate lean-to shed.
The installation site should be equipped with an electrical system with an adequate grounding circuit equipped with an appropriate ground fault circuit – breaker set for 16 A placed in a visible and accessible place by the operator and equipped with power indicator light.

NOTE: If the machine is supplied without the electrical plug, the user shall fit one -at least 16A- that is suitable for the voltage of the machine and complies with current regulations.

Before connecting the machine, please check that the characteristics of your networks correspond to those indicated by machine’s data plate.

Even small jobs done on the electrical system must be carried out by professionally qualified personnel.

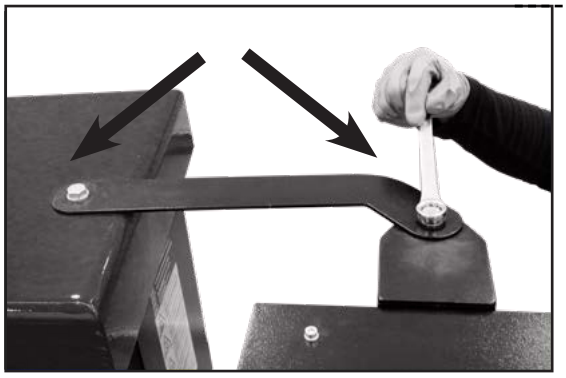
The Manufacturer is not responsible for damages caused by electrical connection different from the original indications on the data plate.

Unplug the machine from electrical power source and compressed air supply before moving and servicing it.

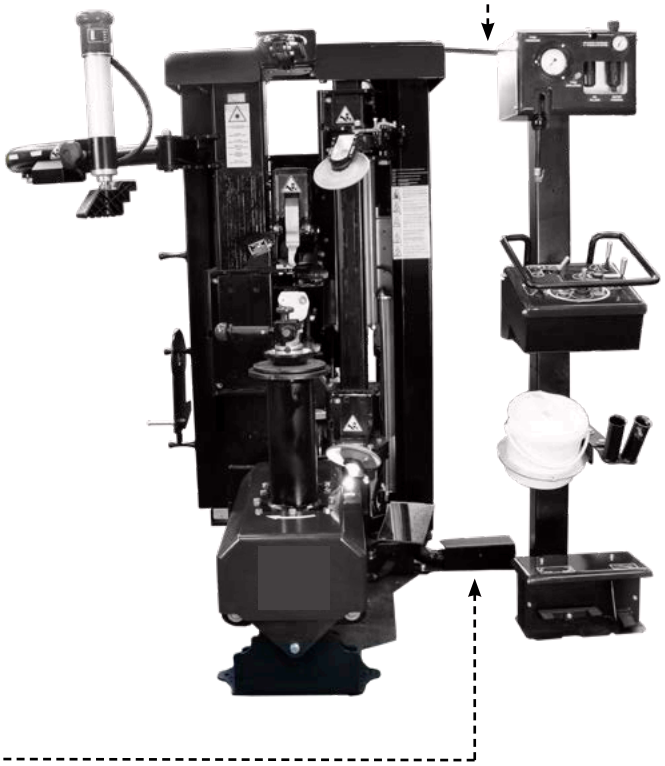
During the first connection to the compressed air, attention must be paid to the movement of certain parts of the machine, which may be sudden and unexpected, creating potential hazards in the action area.

9.3 Installation and assembly

1



Loosen 4 fixing bolts on control console column.



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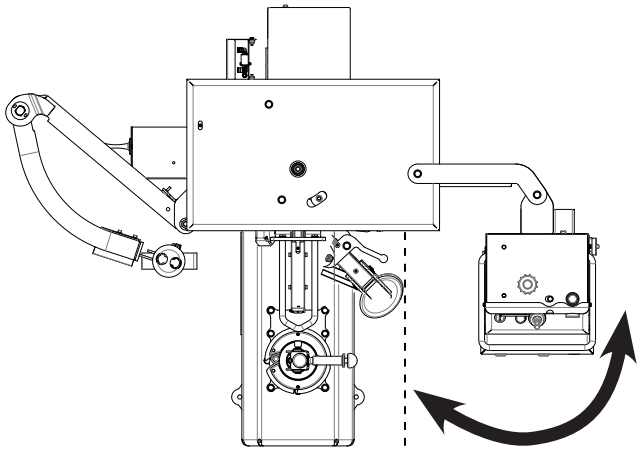


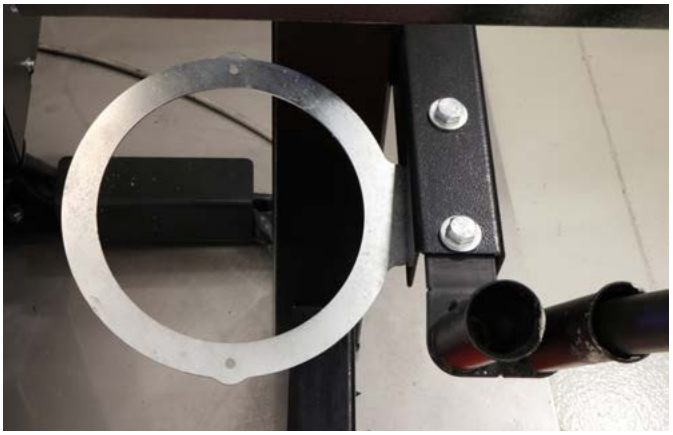
Turn the control console column around so as to place it in the most convenient position for the operator leaving enough space so that the column doesn't touch the upper bead breaker disk arm when it is in resting position.

Tighten the 4 fixing bolts on control console column.

3

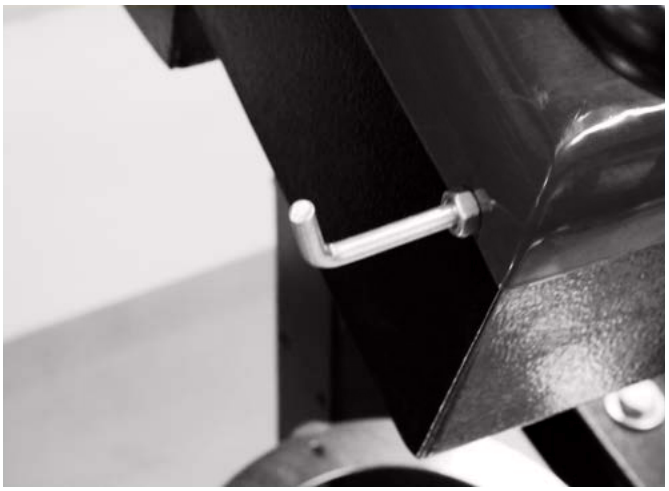
Remove the mirror white protective film.

4



Place tyre paste lube bucket bracket on Smart Lock support, as shown in the photo.

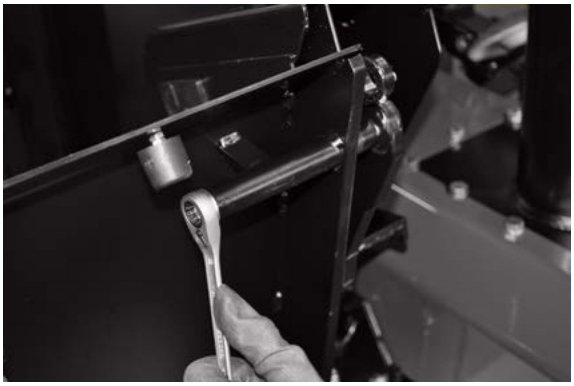
⑤



Mount the hook for the brush on the inner side of the control console column.

⑥

⑦



⑧

Position the lifter platform (optional) so as to align its hole with the pin. Tighten the screws firmly, as shown in the photos.

9.4 Connection to the electrical network

The installation site should be equipped with an electrical system with adequate grounding circuit.
Connect the machine to an electrical power socket 230V / 1Ph / 50-60Hz protected by safety circuit breaker with the following features:

- Intervention rated current In = 20A, **C curve** according to IEC/ EN 60898 standard
- Differential current Id= 30mA

NOTE: If the machine is supplied without the electrical plug, the user shall fit one that is suitable for the voltage of the machine and complies with current regulations.

9.5 Connection to the compressed air network

Fig. 2

The pneumatic network of the installation area must be provided with min. 8 bar working pressure outlet.

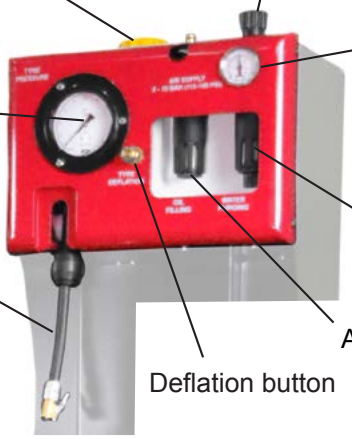
- Connect the machine to the compressed air network by means of the air connection unit located at the rear side of the machine (Fig. 2).

9.6 Laser pointers calibration

Before starting demounting/mounting a tyre, please check positioning of laser pointers using a special calibration jig supplied with the standard accessories of the machine. Follow the instructions in chapter 32.2 on pag. 35.

10.0 EQUIPMENT COMPONENTS

Pneumatic unit



BP 1 Plus (Patented)
Bead pressing arm, complete with self-storage function

XTool (Patented)
Touchless leverless tyre demount device.

Kit Gun
Tubeless inflation external kit (optional)

Smart lock
(Patented)
Ultra-quick wheel clamping system

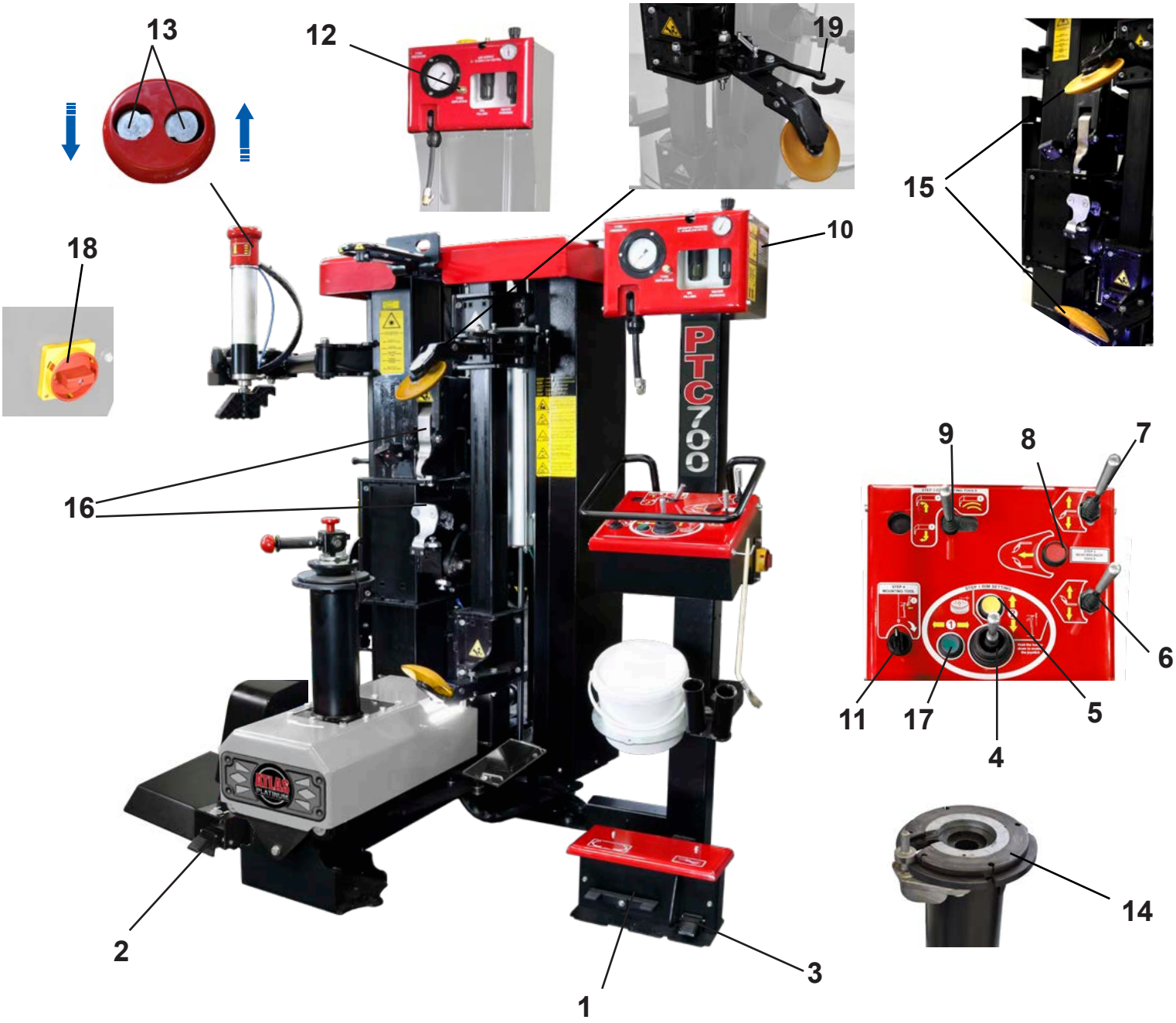
Upper bead breaker arm opening control lever

Wheel lifter (optional)

Pedal Unit

Control console

11.0 CONTROLS DESCRIPTION AND FUNCTION CONTROL



1-Clockwise and counterclockwise clamping chuck (ref. 14) rotation control pedal
2-Wheel lifter control pedal (up/down), optional
3-Inflation pedal
4-**STEP 1**: Rim diameter and width setting joystick
5-**STEP1**: Laser vertical movement enabling button
6-**STEP 2**: Lower bead breaker disk control lever (up/down)
7-**STEP 2**: Upper bead breaker disk control lever (up/down)
8-**STEP 2**: Bead breaker disks radial "over-run" button
9-**STEP 3**: Demounting tool control lever
10 - Air supply
11-**STEP 4**: Mounting tool selector switch
12-Deflation button
13-Bead pressing arm control buttons (up/down)
14-Clamping chuck
15-Bead breaker disks
16-Mounting/demounting tools
17-**STEP 1 :** Laser horizontal movement enabling button
18-Main Power Switch
19-Upper bead breaker arm opening control lever

Any testing must be carried out without any tyre on the machine.
Watch out for any component which could interfere with machine testing operations.

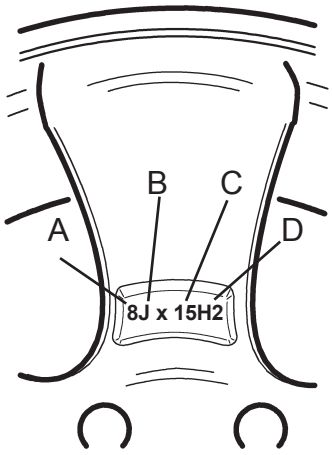
12.0 RIM AND TYRE IDENTIFICATION

Before starting demounting a tyre, it is of CRUCIAL IMPORTANCE to identify the measurements of the rim and of the tyre, as well as to make sure that neither the rim nor the tyre are damaged.

WARNING: these very important procedures have to be performed correctly to reduce any risks of tyre bursting while re-mounting and inflating the tyre on the rim.

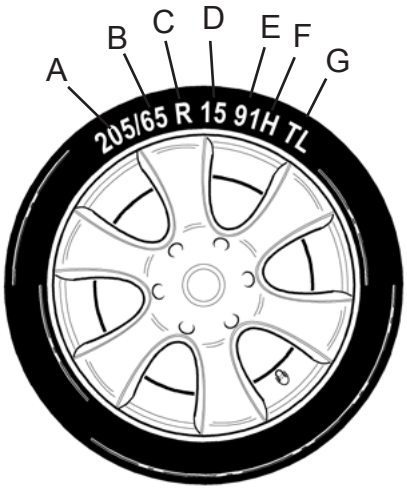
Each rim bears an indication of their diameter, width, number of humps etc.
Example: 8Jx15H2

A= 8 Nominal width of the rim in inches (1 inch= 25.4 mm)
B = J Size of the flange
C = 15 Nominal diameter of the rim in inches
D = H2 Double hump (bead retention system)



Each tyre bears a considerable amount of details, among which are the dimensions, type and maximum speed.

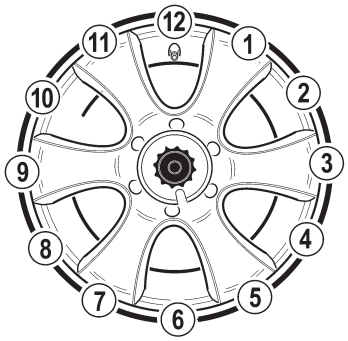
Example: 205/65 R 15 91H TL



A = 205 Width of the tyre (the distance between tyre sides, expressed in millimetres).
B = 65 Ratio percentage between the width of the section and its width.
C = R Type of tyre (R= radial).
D = 15 Indicates the keying diameter in inches (diameter of wheel), which must be the same as the rim.
E = 91 Index of the maximum load born by each wheel.
F = H Maximum admitted speed of the tyre (H= 210 Km/h)
G = TL Type of tyre (TL= Tubeless)

13.0 VALVE POSITION

The picture on the right side represents a rim as a clock face (view from the top). The valve or the tool position described by the following working steps ALWAYS refer to the represented clock-face hours-marks.



WARNING :
To avoid damaging the valve or the pressure sensor, where installed, you must always set the valve into the position indicated, following the instructions during bead breaking, mounting and demounting operations.

WARNING:
It is strictly forbidden to mount tyres on rims with mismatching parameters (diameter and width). It is also forbidden to mount tyres with dimensions which are different from the ones stated in the car logbook.

14.0 WHEELS AND TYRES CLASSIFICATION

14.1 Standard wheels

A “standard wheel” is a car wheel with steel or alloy rim, with center hole, drop centre close to the external border of the rim and a standard tyre (neither RUN-FLAT nor LowProfile).

14.2 Low-profiled tyres (UHP) wheels

Low profile tyres (UHP) are those in which the height (H) and the width (C) have a ratio lower than 0.5 (i.e. low profile series 45 stands for a aspect ratio of H/C = 0.45).
For tyres to be considered as low profile (UHP), they must also have a maximum speed code equal to/or higher than V.

Maximum speed codes

Q= to 160 km/h
R= to 170 km/h
S= to 180 km/h
T= to 190 km/h
U= to 200 km/h
H= to 210 km/h
V= to 240 km/h
W= to 270 km/h
ZR= > 240 km/h
ZR(Y)= > 300 km/h

14.3 RUN-FLAT tyres wheels

RUN-FLAT tyres are those which allow to continue to drive the vehicle for a preset number of miles and at a preset speed, even if they have no internal pressure. These parameters change from one manufacturer to another.
The market currently offers 2 different types of RUN-FLAT tyres:
- Those with reinforced sidewall (self-supporting) where, thanks to a different mix and a reinforced structure, the shoulder of the tyre can bear the weight of the vehicle even when the internal pressure of the tyre is zero.
- Those with internal support which have a ring inside the rim that bears the sidewall of the tyre when there is no pressure inside it. The internal support may be made of plastic (Pax-Sistem) or of metal (Support-Ring).

All the tyres which do not correspond to the above mentioned descriptions have to be considered as “standard tyres”.

This Tyre-Changer is able to handle all types of wheels with “standard” tyres, LowProfile (UHP) and RUN-FLAT tyres with reinforced side.
RUN-FLAT tyres with internal support (PAX System or Support-Ring type) mounting/demounting procedures need special accessories to be used according to precise dedicated instructions.

It is compulsory to follow the demounting/mounting instructions carefully, in order to avoid tyre damages and the consequent risks for the vehicle and the passengers safety.

15.0 WDK RULES

WDK is a German certified body charged with the evaluation of tyre-changers functioning and their capability to perform good and safe operations on RUN-FLAT and UHP tyres correctly, to avoid permanent and potentially dangerous damages to tyres.
In order to perform a correct demounting and mounting process, the following premises are strictly compulsory:

1. Guidelines knowledge - WDK literature provides all necessary guidelines for all tyre brands and models, including all theoretical and practical instructions to avoid any possible damage to tyre, rim and pressure sensor.
2. Certified tyre-changer - This Tyre-Changer can be delivered with WDK accessories to fulfil all WDK requirements.
3. To meet the requirements of the WDK procedure, the pneumatic bead pressing arm must be used with the specific bead pressing tool (shown in the picture beside).
4. Qualified operator – The specific technical courses provide the operators with the necessary WDK guidelines and service instructions. Dedicated WDK official courses are available to get the WDK diploma, when necessary.

WDK Bead pressing tool (optional)

fig. 1

16.0 WHEEL POSITIONING AND CENTERING ONTO CLAMPING CHUCK (OPTIONAL)

Before lifting and positioning the wheel onto the clamping chuck, remove all the counterweights from the rim using an appropriate tool, being careful not to damage the rim itself. Remove any object or tool which could interfere with the wheel lifter (available as optional).
-Put the wheel vertically onto the wheel lifter (optional), so that inside of rim faces tyre changer (Fig.1).
-Press the control pedal ref. **3** to lift the wheel and position it onto clamping chuck. Once the wheel is over the clamping chuck, align the central hole of the rim with the rotation axle of the clamping chuck. Rotate the wheel in order to match one of the lug holes with the driving pin of the clamping chuck (Fig. 2).
-Lower the lift by releasing pedal ref. **3**.
- Reverse mounted wheels should always be positioned and clamped on the clamping chuck up side down. When clamping, use FRR Quick wheel clamping adaptor for reverse mounted and plastic clad wheels (available as optional, see page 31). Follow the instructions given in FRR Quick manual.

Fig. 1

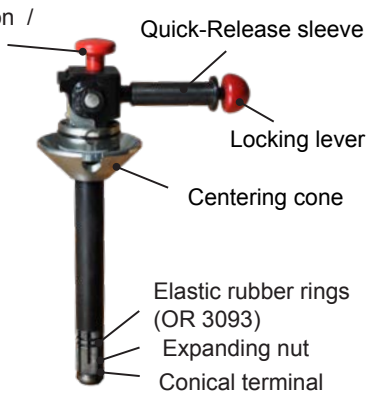
Fig. 2

17.0 WHEEL CLAMPING OPERATION WITH SMART LOCK (PATENTED)

- Patented ultra-quick wheel clamping system makes it easier for operators to perform a tough and steady wheel clamping by simply turning a lever.

- The clamping is performed by an expanding nut. Both strength and grip can be easily calibrated by acting on its adjustment button and by means of an appropriate adjustment knob.

- SMART LOCK weighs just: 4,5 Kg.



Wheel clamping operation with Smart Lock

1. Check the correct wheel positioning onto the clamping chuck.
   Insert SMART LOCK making the centering cone fit the rim hole correctly, leaving no space among SMART LOCK nut, the rim and the tyre-changer clamping chuck.
2. Keeping the handle pressed down (to avoid eventual residual plays), tilt the locking lever vertically.
3. During wheel clamping operation the quick-release system moves automatically to hooking position (click).
   Check the perfect wheel locking onto the clamping chuck before performing any bead breaking, demounting or mounting operation.

Plastic protection to avoid any damage to alloy rim

Wheel unlocking

4. Once the operations onto the wheel are completed, lift up the Quick-Release sleeve.
5. Tilt down the locking lever to unlock SMART LOCK, in order to pull out the locking nut and remove the wheel from the clamping chuck.

17.1 Tightening adjustment

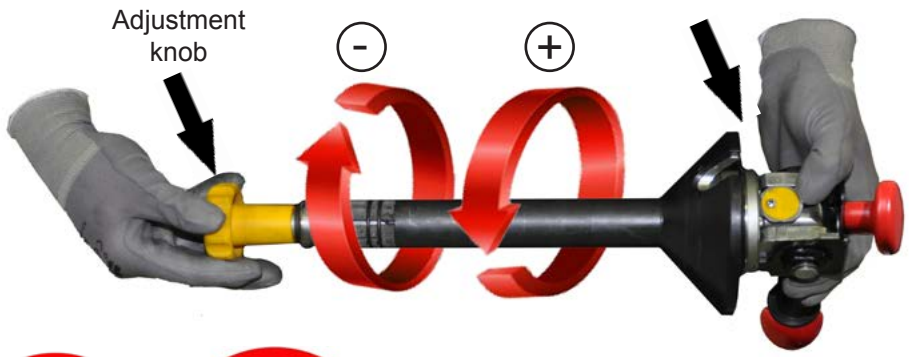
The clamping force of SMART LOCK could be loosened after a long time use by a progressive wearing of some components, this revealed by a progressive slack of the locking lever.

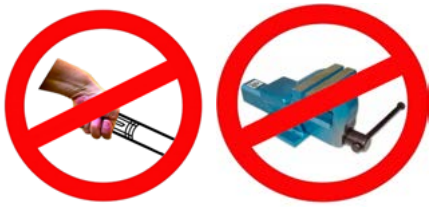
To restore / increase / decrease the SMART LOCK tightening: press the yellow adjustment button and, by means of the adjustment knob (standard supplied), start turning manually the conical terminal thus acting on the expanding nut. Then, release the button and keep on turning the conical terminal until the button pops up again.

(+) Rotate clockwise to **increase** the clamping force

(-) Rotate counterclockwise to **decrease** the clamping force

Tightening strength adjustment button (yellow).





17.2 Maintenance

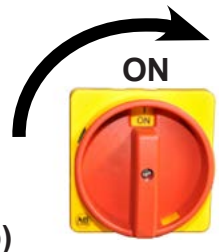
- The regular cleaning and lubrication of the SMART LOCK components grant a long-lasting correct functioning of the tool.

1- Clean the expanding nut with the metallic brush or use the standard supplied cleaning brush for Smart Lock.
2- Blow compressed air to remove dirt.
3- Clean the clamping chuck inner surface using the standard supplied cleaning brush.
4- Blow compressed air to remove dirt.
-Periodically lubricate all moving mechanical parts with CRC or similar.
- The replacement of 2 rubber rings (OR 3093) is recommended every 12 ÷ 18 months use of SMART LOCK.

18.0 SWITCHING ON/OFF

18.1 Machine start up

- Turn the yellow/red main power switch clockwise (ref. 18, page 13).



18.2 Switching off the machine (an emergency stop)

- Turn the yellow/red main power switch counterclockwise (ref. 18, page 13).

19.0 RIM SETTING - STEP 1

STEP 1: rim diameter setting

- Keeping button **A** pressed down, while simultaneously acting on the joystick (4) with horizontal movement (ref. 1, Fig.1) and bring the LASER pointer onto the edge of the rim to place it according to its diameter.

STEP 1: rim width setting

- Press and hold down button **B**, while simultaneously acting on the joystick (4) with vertical movements (ref. 2, Fig.1) and bring the LASER pointer onto the edge of the rim to position it according to the correct height of the upper rim edge.

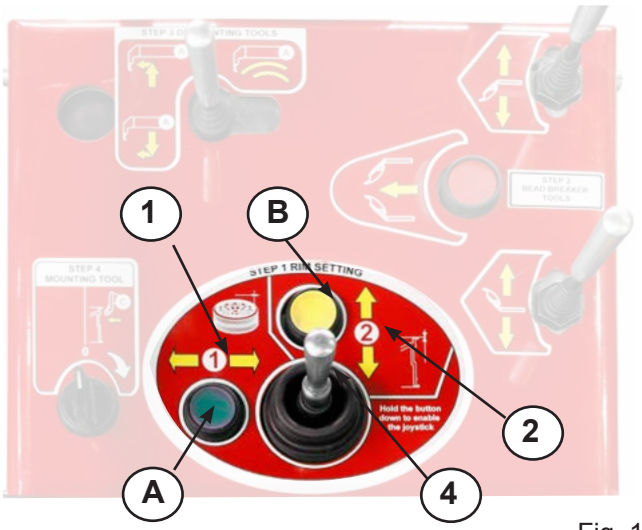


Fig. 1

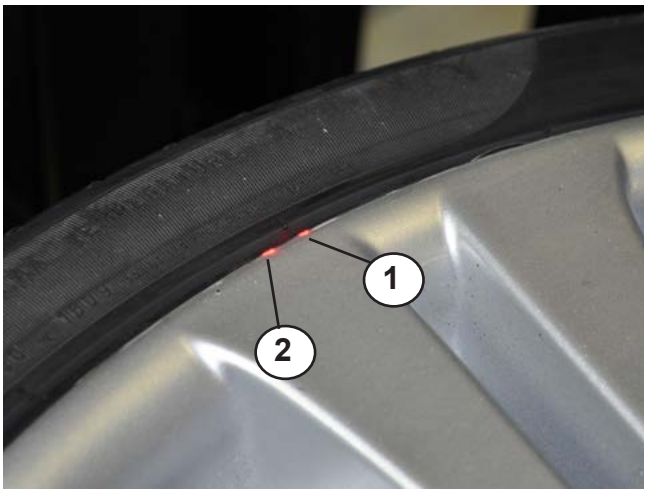


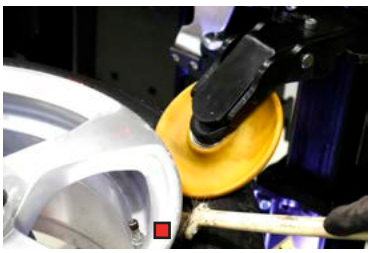
Fig. 2

WARNING:
Before carrying out any operation on the wheel make sure that pointers are correctly positioned as shown in picture 2 to avoid any damage to the rim or tyre.

20.0 Tyre Pressure Monitoring System (TPMS)

TPMS, Tyre Pressure Monitoring System is an electronic system designed to monitor the air pressure inside the tyres through special sensors mounted inside the wheels, which provide real-time tyre-pressure information and inside temperature data to the vehicle's electronic control unit. Tyre pressure system alerts the driver when the tyre pressure falls 20% below the recommended pressure, thus increasing your safety on the road.
This chapter describes the correct positioning of TPMS valve during the different working stages, in order to avoid any damage.

Bead breaking:
Place TPMS valve at "2:00 o'clock" position. Start pushing on the tyre bead using the upper bead breaker disk.



Demounting tool positioning:
Place TPMS valve at "2:00 o'clock" position. Bring the demounting tool into working position. While spinning the wheel, insert the demounting tool into the drop centre level. Stop tyre rotation when the valve reaches 11 o'clock position.

Upper bead demounting:
Spin the clamping chuck (clockwise) by pressing the pedal **1** until the valve reaches "**1** o'clock" position (at about 10 cm from the demounting tool) so as to avoid possible damages to the TPMS valve.

Warning: rim and tyre must spin together as one during bead demounting operations, to avoid displacement of TPMS sensor.

Lower bead demounting, with demounting tool:
Place TPMS valve below the demounting tool at "12:00 o'clock" position.

Lower bead demounting, with bead breaker disk:
Place TPMS valve towards the bead breaker disk.

Lower bead mounting:
Place TPMS valve at "5:00 o'clock" position, in any case at about 10 cm from traction point.

Upper bead mounting:
Place TPMS valve at "5:00 o'clock" position, in any case at about 10 cm from traction point.

TPMS valve

Traction point

21.0 BEAD BREAKING - STEP 2-

Make sure the tyre is completely **DEFLATED** before starting any operation on the wheel.

-Before starting any operation, check the correct centering and locking of the wheel onto the clamping chuck.
-Before starting any operation, please check eventual presence of a TPMS pressure sensor. If so, check its efficiency using an appropriate tool.
-It is possible to unlock the disk support and enable a spring loaded movement, changing the angle of the disk, increasing its penetration inside the rim. Particularly effective with soft tyres.

21.1 Upper bead breaking

Check for correct centering and locking of the wheel onto the clamping chuck.

- Spin the clamping chuck until the valve reaches "**2 o'clock**" position.

- Bring the upper bead breaker disk down until it touches the tyre using control lever **7** for lifting and lowering (up/down).

- Start spinning clockwise by pressing pedal **1** (page 13).

Note: the clamping chuck can spin at 2 different speeds, according to operator's preferences.

- While spinning the wheel, push the upper bead breaker disk down below the edge of the rim, then press and hold down the "over-run" function button **8** (Fig. 2) while gradually lowering the bead breaker disk until the bead is removed from the rim, then release the button **8** (Fig. 2).
- As soon as enough space is available, a proper tyre lubricating paste should be carefully applied to both the inner surface of the rim and the tyre bead (Fig. 1). Use only specific tyre lubricants.

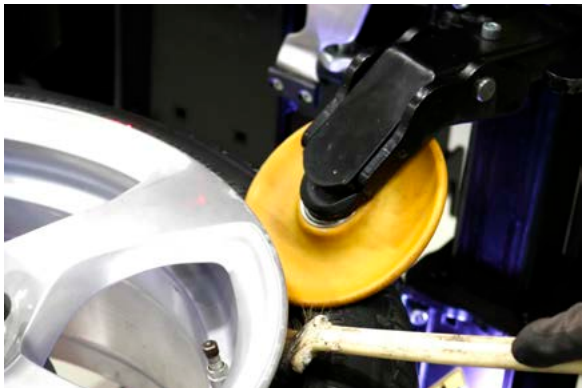


fig. 1

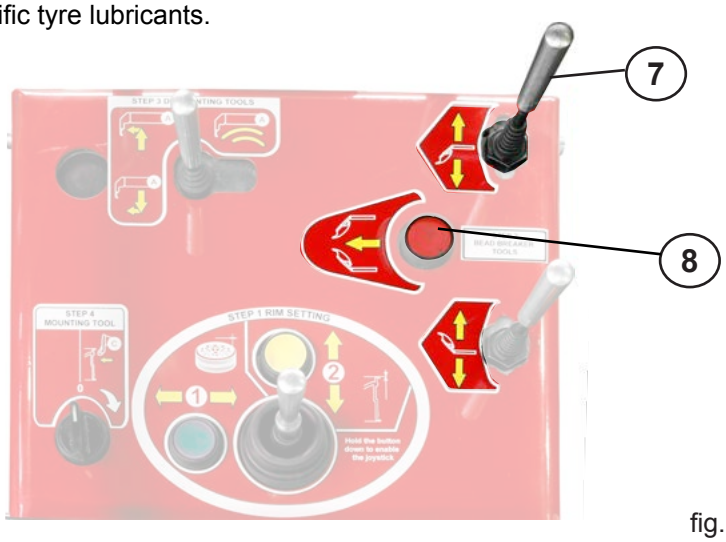
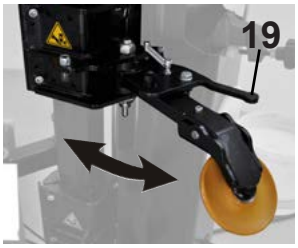


fig. 2

During bead breaking operations, check the correct positioning of TPMS pressure sensor (if any), usually inserted into the valve of the rim.
Wrong movements of the bead breaker disks could damage the sensor.
Avoid any contact between the lubricating paste and TPMS pressure sensor, if any.

- Once the bead gets loosened, raise and move away the upper bead breaker disk by acting on lever **7** (Fig. 2).

-Once the bead breaker disk is out of the rim, it is possible to move the bead breaker disk arm away from the working position by acting on lever **19** (fig.3).



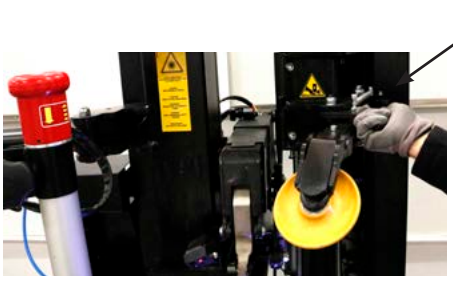


fig.3

21.2 Lower bead breaking

Lift the lower bead breaker disk until it touches the lower tyre bead using control lever **6** (Fig. 1) for lifting and lowering. Start spinning **clockwise**, by pressing pedal **1**.

- While spinning the wheel, push the lower bead breaker disk up above the edge of the rim, then press and hold down the “over-run” function button **8** (Fig. 1) while gradually lifting the bead breaker disk until the bead is removed from the rim, then release button **8** (Fig. 1).

- As soon as enough space is available, a proper tyre lubricating paste should be carefully applied to both the inner surface of the rim and the tyre bead (Fig. 2). Use only specific tyre lubricants.

NOTE: for a better control of the lower bead breaking you can use the dedicated mirror fitted onto the tyre changer main frame.

fig. 1

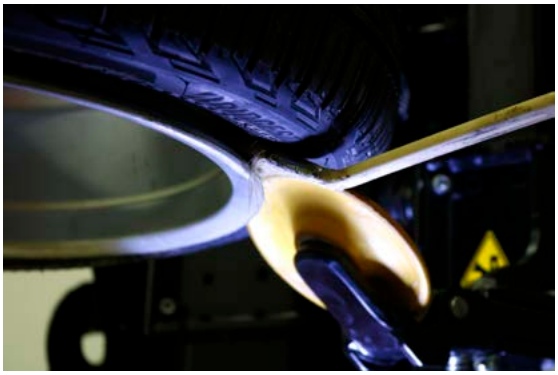


fig. 2

WARNING:
While breaking the bead, just press on the bead and never on the side of the tyre.

22.0 MATCH-MOUNTING

Driving could be affected by vibrations caused by deformations of the rim and/or of the tyre. To optimize the wheel-balancing, it is necessary to position the wheel onto the tyre changer again to bead-break and lubricate the rim and the tyre, spinning the tyre around the rim to a proper position.
Both upper and lower disks make this process easier (Fig. 3), by gently holding the tyre steady while the clamping chuck spins the rim until the correct matching position is reached.

fig. 3

23.0 TYRE DEMOUNTING - STEP 3

-Once the bead breaking process is completed, and the wheel is already positioned onto the clamping chuck, check and ensure its locking and centering.

23.1 Upper bead demounting

- Spin the clamping chuck by pressing the pedal **1** (page 13) until the valve reaches "**1** o'clock" position (at about 10 cm to the right from the demounting tool) so as to avoid possible damages to the valve and the sensor - if any (Fig.2).

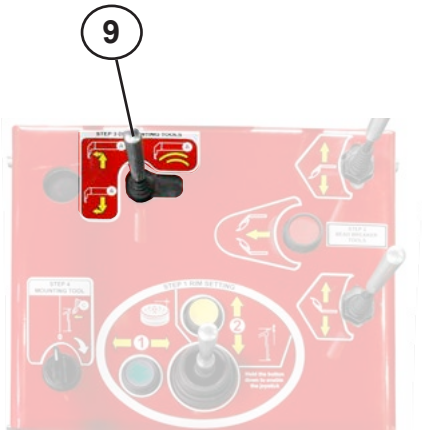


Fig. 1

Fig. 2

Fig. 3

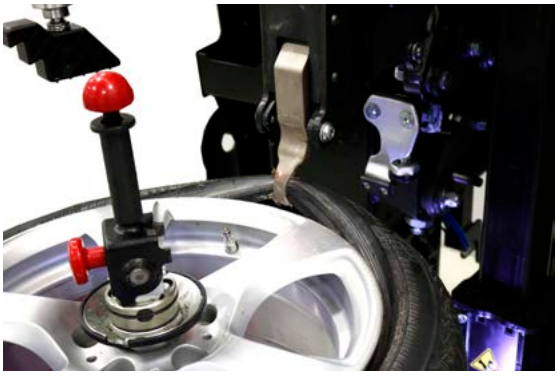


Fig. 4

- Move the control lever **9** (Fig. 1) to the left to position the demounting tool in the working area.
- Start inserting the tool between the tyre bead and the rim edge by gradually pressing control lever **9** down to bring the tool to the end of the stroke (Fig. 3). If necessary, use the upper bead breaker disk in order to reduce stress on the tyre sidewall, until the bead is perfectly hooked.
- If using bead breaker disk, bring it back upwards, and start rotating clockwise until the tool hooks the bead.
- If the tool fails to hook the tyre bead, rotate clockwise until the desired result is achieved.

NOTE: STOP TYRE ROTATION WHEN THE VALVE REACHES 11 O'CLOCK POSITION

- Move the control lever **9** upwards (gradually) and pull out the tyre bead, bringing the tool at the end of the stroke (Fig. 4).
- Make sure the bead is loose all the way around the tyre and the bead is at drop centre level. If not, use **BP1 PLUS** pneumatic bead pressing arm positioned at 180° from the tool for easier tyre demounting.
- Start spinning the wheel clockwise and continue until the upper bead has completely come off the wheel rim.

- Manually release the tyre bead from the demounting tool. Move the demounting tool away to the resting position, by moving control lever **9** all the way to the right.
- By gently pushing up the lower bead breaker disk against the tyre lower sidewall for a maximum of about 20-30 mm (1") it will be easier to demount the upper bead.

Before inserting the tool at drop-centre position by operating the control lever 9, spin the clamping chuck until the valve reaches "3 o'clock" position so as to avoid possible damages to the valve and the sensor - if any.

23.2 Lower bead demounting

- Before pulling out the lower bead, spin the clamping chuck until the valve reaches “3 o’clock” position so as to avoid possible damages to the valve and the sensor - if any.

- Bring the lower bead breaker disk up by operating the control lever **6** (Fig. 1) to lift the tyre until the lower bead is about 10mm over the upper rim edge (Fig. 2). Press and hold down button **8** (Fig. 1) to activate the “over-run” function and bring the disk close to the rim.

- Spin the wheel clockwise until the tyre comes off completely.

- Check the status of the pressure sensor - if any - and replace it if necessary.

- Once the operations are completed, move the lower bead breaker disk away from the working position.

NOTE: rim and tyre must spin together as one.
- In order to help the lower bead coming out and to reduce the stress to the tyre: insert the plastic lever and spin the wheel clockwise.

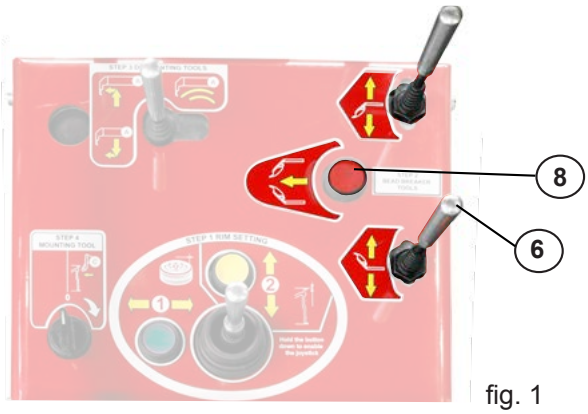


fig. 1


fig. 2

23.3 UHP and RUN-FLAT tyres demounting

- Some precise and careful operations are necessary to demount UHP and RUNFLAT tyres. It is compulsory to follow WDK rules to avoid permanent damages to these tyres.
- Upper bead demounting of UHP or Run flat tyres can be performed by inserting the demounting tool (Chapter 23.1) inside the tyre and reaching the drop centre level. At this stage, place **BP1 PLUS** pneumatic bead pressing arm on the opposite side of the demounting tool and press the sidewall to facilitate the fitting of the bead inside the drop-centre.
- Gradually press the control lever **9** (Fig. 4) all the way up, and pull out the tyre bead, bringing the tool upwards at the end of the stroke.
-By gently pushing up the lower bead breaker disk against the tyre lower sidewall for a maximum of about 20-30 mm (1”) it will be easier to demount the upper bead.
- Insert the red plastic tyre lever (Fig.3)
- Start spinning the wheel clockwise and continue until the upper bead has completely come off the wheel rim.
- Manually release the tyre bead from the demounting tool. Move the demounting tool away from the working position, by moving the control lever **9** (Fig. 4) all the way to the right.
- The demounting procedure of the second bead is similar to “standard” tyre (Chapter 23.1).


fig. 3

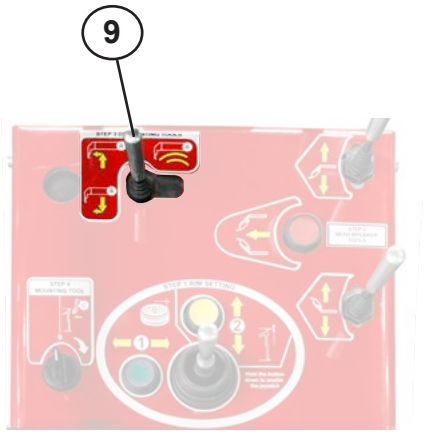


fig. 4

24.0 TYRE MOUNTING - STEP 4

- Check the rim and the tyre carefully, as per instructions in the relevant paragraph of this manual.

- If the rim has been removed, clamp it again onto the clamping chuck as per instructions in paragraph “Wheel clamping operation with Smart Lock” of this manual. Make sure the two lasers are correctly positioned on the rim edge.

- Carefully lubricate the whole inner surface of the rim and the beads of the tyre, both externally and internally right around the circumference, for a width of at least 3 cm (Fig. 1).

fig. 1

Avoid any contact between lubricating paste and pressure sensor, if any.

24.1 Lower bead mounting

- Place the tyre onto the rim, tilting the tyre to “3 o’clock” position in order to make the bead go under the upper rim edge, taking care of positioning the valve at “5 o’clock” position (Fig. 3).
- Bring the upper bead breaker disk down until it touches the tyre using control lever **7** (Fig. 2) for lifting and lowering (up/down).
- Rotate the wheel clockwise by pressing pedal **1** (page 13), while manually pressing the tyre in “5 o’clock” position until the lower bead reaches the drop centre level. Keep the tyre pressed while rotating to complete the lower bead mounting.

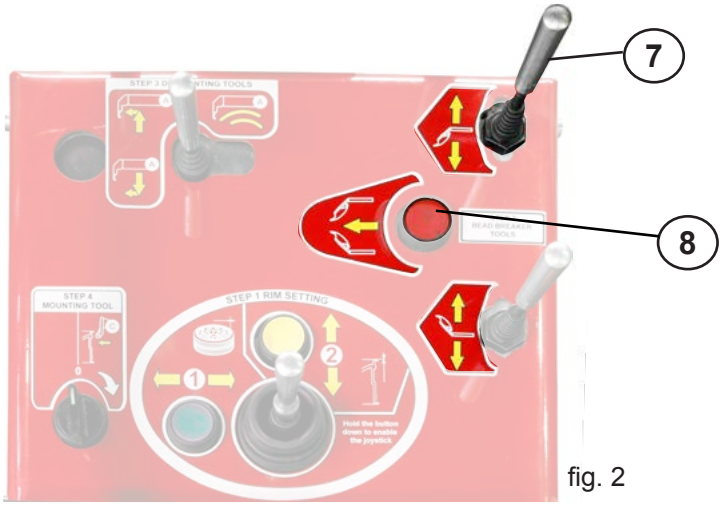


fig. 2

fig. 3

WARNING:
Rim and tyre must spin together as one.

24.2 Upper bead mounting

- Press pedal ref. **1** (page 13) to rotate the wheel clockwise until the valve reaches “5 o’clock” position.
- Move selector switch **11** (Fig. 1) to the left (**position 1**) to bring the upper mounting tool in working position (Fig.2).
- Using the appropriate control lever bring the upper bead breaker disk down below the edge of the rim (Fig. 3). This operation will allow inclination of tyre to “3 o’clock” position.
- Press the pedal ref. **1** (page 13) to rotate the wheel clockwise, contemporarily press the tyre manually from “5 o’clock” position to force the upper bead at drop-centre position. Keep it pressed while rotating to complete the upper bead mounting (Fig. 4).

fig. 1

fig. 2

fig. 3

fig. 4

- Use **BP1 PLUS** pneumatic bead pressing arm to handle particularly difficult standard tyres (Fig.5).

- Press down the descent button (Fig. 5) and push with bead pressing tool against the tyre sidewall at “5 o’clock” position. Press the pedal **1** (page 13) to rotate the wheel clockwise until tyre is completely mounted. At the end of mounting procedure, the bead pressing tool lifts and stores itself automatically in rest position.

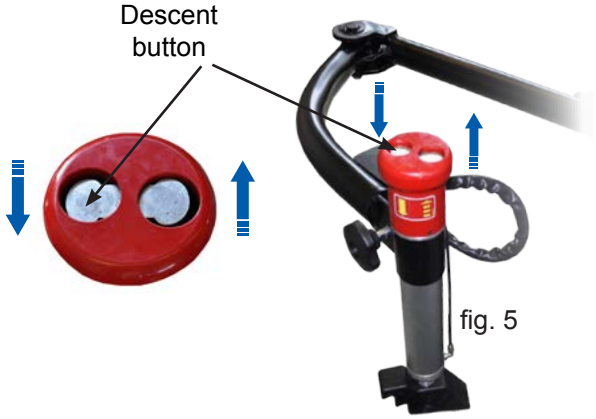


fig. 5

fig. 6

- Bring selector switch **11** back to central position (**0**) in order to place the tool in rest position.
- Bring the upper bead breaker disk in rest position using the appropriate control lever.

24.3 UHP and RUN-FLAT tyres mounting

- Lower bead mounting of UHP or Run flat tyres can be performed by using the upper bead breaker disk only (page 24). Rotate the rim clockwise until the valve reaches “5 o’clock” position. Put the tyre on the rim tilted down to “3 o’clock” position. Lower the upper bead breaker disk on the shoulder of the tyre, rotate the wheel clockwise and simultaneously push down the bead breaker disk to complete the mounting.
- Once the lower bead is mounted, rotate the rim until the valve reaches “5 o’clock” position. Press the tyre by the upper bead breaker disk until the bead reaches drop-centre level. Move the selector switch **11** (Fig. 3) to the left (**position 1**) and insert the mounting tool into the tyre.
- Use the bead pressing clamp (standard supplied) together with the proper rubber protection (• steel rim, •• aluminium rims, ••• aluminium rims with arched spokes) (Fig. 1). Lock it onto the rim edge with the valve at “5 o’clock” position. Press the tyre bead with the upper bead breaker disk to facilitate positioning and locking of the clamp.
- Spin slightly and fit **BP1 PLUS** bead pressing tool between the disk and the clamp. Press the tyre until the upper bead reaches drop-centre level (Fig. 4).
- In accordance with the WDK procedure, the pneumatic bead pressing arm must be used with the WDK bead pressing tool (Fig. 2, optional accessory).
- Start spinning the wheel making sure that the whole tyre bead is right inside the drop-centre.
- If this necessary condition for a correct mounting is not accomplished, use the pneumatic bead pressing arm and push the tyre sidewall to fit the upper bead into the drop-centre (Fig. 5).

WARNING:
In these last phases, work very carefully to avoid straining the side of the tyre excessively.

- Go on spinning the wheel until the upper bead is completely mounted.
- Remove the clamp and the rubber protection with the help of bead pressing arm or bead breaker disk.
Remove the bead pressing arm and move the tool in rest position by rotating the selector switch **11** to the center position (**0**). Lift the bead breaker disk up and bring it to rest position using the control lever **7**.
- Keep the wheel locked onto the clamping chuck during the inflating operations. Read the inflating instructions carefully.
- Once the tyre inflation is completed, unlock the wheel and bring it down onto the floor, taking advantage of the wheel positioning device.

Rubber protectors

Fig. 1

WDK Bead pressing tool (optional)

Fig. 2

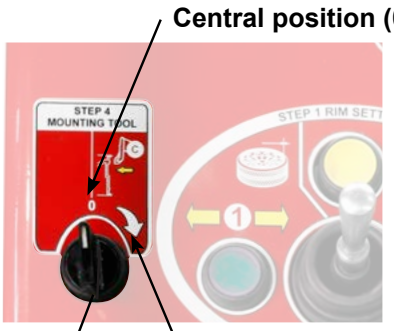


Fig. 3

Fig. 4

Fig. 5

25.0 INFLATION

Tyres must be inflated with the utmost caution. The instructions below have to be read and followed strictly.
This Tyre-Changer is NOT designed to protect operators and objects from accidental tyres explosions.

ATTENTION: If tyre bead fails to fit in place at 3.5 bar pressure, it is necessary to repeat the bead loosening and lubricating procedures before trying again to inflate the tyre.

DANGER

If tyre had to burst or rim had to break under pressure, operators could be seriously injured or even killed.

During inflation use personal protective equipment to protect hearing and sight.

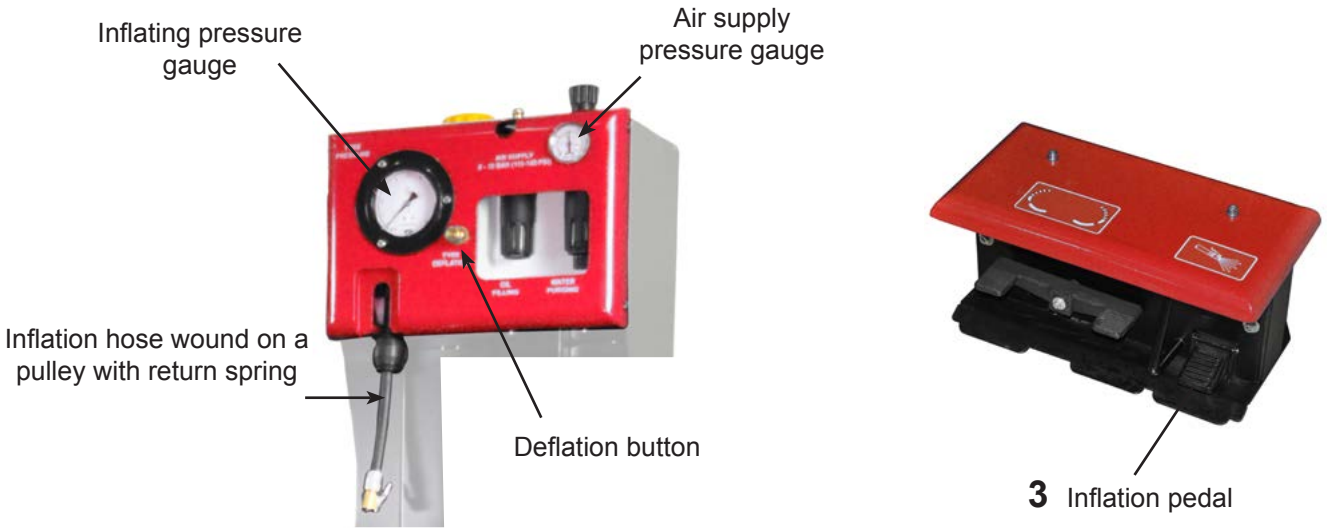
Make sure the rim and tyre are the same size.

Also check the conditions of the tyre and rim to make sure there are no defects before starting to inflate.

Inflate the tyre with brief jets of air checking the pressure on the gauge frequently.

This Tyre-Changer is automatically limited to an inflation pressure of 3,5 bar (50 psi). NEVER EXCEED THE PRESSURE RECOMMENDED BY THE TYRE MANUFACTURER.

Keep hands and body as far away as possible from the tyre during inflation.



- Connect the inflation hose to the valve of the tyre.
- Make sure the rim and the tyre have the same diameter.
- Make sure the rim and tyre are sufficiently lubricated; lubricate if necessary.
- Press and release the inflation pedal (**3**) frequently, checking the pressure on the pressure gauge until the tyre bead fits completely onto the rim.
- Continue inflating to reach the pressure recommended by the tyre manufacturer. Always inflate in short blasts and constantly check the pressure in the process.

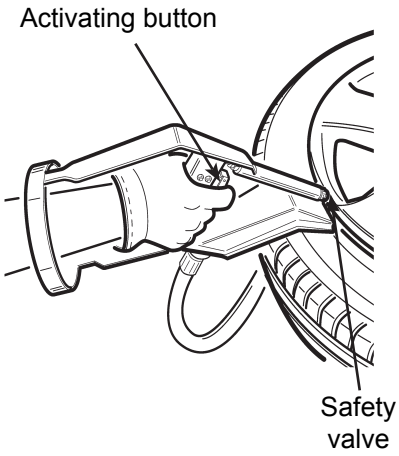
NOTE: Sometimes, regular inflation may not be enough to seat the bead of tubeless tyres. This problem may be solved by using the optional accessory TUBELESS TYRE BEAD SEATING SYSTEM (GUN, ref. page 32).

- Press the deflation button to deflate the tyre in case the pressure exceeds the value recommended by the tyre manufacturer.

25.1 Tubeless tyre inflation (optional)

Tubeless inflation external kit helps seating the bead properly during inflation operations, when servicing low profiled tyres.
In order to properly use the optional Tubeless tyre bead seating system :

• Press the safety valve against the rim edge, push the activating button onto the handle to blast air, while simultaneously pressing the inflation pedal (**3**) in order to feed the wheel valve.



During the inflation stages (and especially during the bead seating operation), it is recommended to wear an appropriate personal protective equipment to protect the auditory apparatus from possible blast injuries and from noise levels that sometimes exceed the permitted threshold.

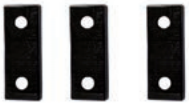
Use also appropriate eye protections equipment to shade your eyes from any possible debris that might fly due to the high pressure involved in tyre bead seating.

The jet of air that comes out when the inflating device is on has a very high pressure: hold the handle firmly with your hand to avoid any sort of backlash.

26.0 STANDARD ACCESSORIES (STANDARD SUPPLIED)

-Lube paste bucket
-Brush

- Plastic tyre lever.
To be used during tyre demounting in accordance with WDK procedure.



- Kit of nylon protectors for mounting tool

X 2

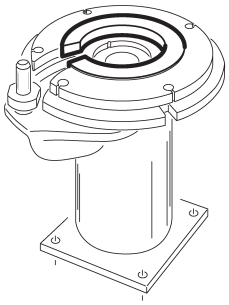
- Plastic protections for Smart Lock centering cone

X 2

- Rubber protections for clamping chuck faceplate

- Plastic cone Ø 70 mm for clamping special alloy rims

- Reducing ring for clamping chuck faceplate.
To be used to fit particular alloy rims.



X 2

-Plastic protections for clamping chuck driving pin

- Adjustment knob for Smart Lock

- Cleaning brush for Smart Lock and clamping chuck inner surface

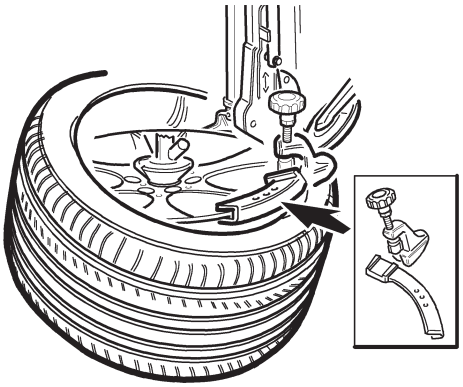
- Spare O rings for Smart Lock

- Plastic bead pressing clamp with extra insert for rim edge with special inclination. To be used together with rubber protections for mounting UHP and RUNFLAT tyre according to WDK procedure.

- Rubber protector for steel rims. (marked with •)

- Rubber protector for aluminium rims (marked with • •)

- Rubber protector for aluminium rims with arched spokes. (marked with • • •)



- Air lubricator, air filter/water trap

- Calibration jig and magnet (see details in chapter 32.2)

27.0 OPTIONAL ACCESSORIES

Art. FRR QUICK
Wheel clamping adaptor for reverse mounted and plastic clad wheels on center post tyre changer. Standard supplied with measuring caliper and two kits of pins (6 pins 70mm length; 6 pins 100mm length).
You can handle rims with 3, 4, 5 or 6 lug holes (and their multiples) in different shapes and design.

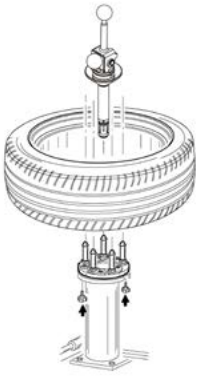
3 lug holes

4 lug holes

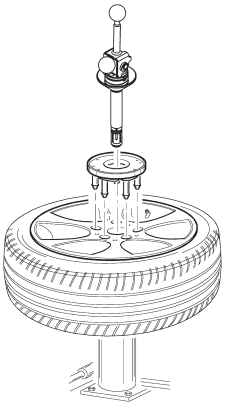
5 lug holes

6 lug holes

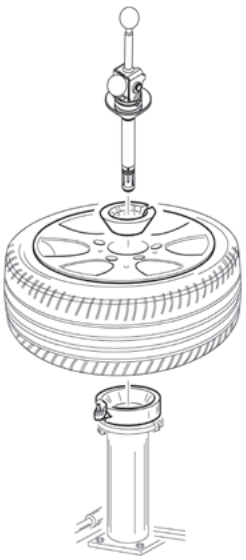
Reverse mounted wheels



Special rims



LTK3
Centering cones adaptor kit for light-truck rims locking (centre hole: Ø**120** to Ø**190** mm).



LTK4
Centering cones adaptor kit for light-truck rims locking (centre hole: Ø**140** to Ø**220** mm).

LTK5
Two-sides centering conical adaptor for steel rims locking (centre hole: Ø**75** to Ø**145** mm).

LTK6
Centering conical adaptor for steel rims locking (centre hole: Ø**75** to Ø**120** mm).

GUN
Tubeless inflation external kit

Art. UHP
WDK Kit for JBOSS

WL6
Wheel lifter for wheel positioning and centering onto clamping chuck.
Lifting capacity Kg. 80

SPK 1 (LAMBORGHINI)
NYLON CONE FOR SPECIAL LAMBORGHINI WHEELS, allows clamping wheels with center hole diameter from 55 to 85 mm.

SPK 2 (PORSCHE)
NYLON CONE FOR SPECIAL PORSCHE WHEELS, allows clamping wheels with center hole diameter from 60 to 85 mm.

SPK 3 (BMW)
NYLON CONE FOR SPECIAL BMW WHEELS, allows clamping wheels with center hole diameter from 55 to 70 mm.

28.0 RE-POSITIONING

To re-position the Tyre-Changer in a new workplace: secure the moving parts (i.e. the bead pressing arms, etc.) disconnect all the power sources and install it again following all the instruction per chapter 9.0 (INSTALLATION) of this manual.
Connections to power sources and connection & inspections of the safety systems must be carried out by trained personnel.

29.0 STORAGE

If the tyre changer has to be stored away for extended periods of time:
- Disconnect the power sources.
- Empty the tanks containing operational fluids.
- Protect parts that could be damaged if dust should settle on them.
- Grease parts that could damage if they should dry up.

When re-commissioning the tyre changer:
- Follow the instructions given in chapter 9.0 of this manual.
- Replace any damaged parts, referring to the spare parts list - this to be carried out by skilled personnel.

30.0 SCRAPPING AND DISPOSAL

If you decide that the tyre changer can no longer be used, you are recommended to make it unusable by removing the power supply connections, emptying the tanks and disposing of the fluids according to current state and National regulation. The tyre changer is considered as heterogeneous waste and must consequently be split-up into parts made of similar material (electrical parts, plastic parts and ferrous parts), which must be disposed of properly, according to current National regulation.

WARNING: follow RAEE and ROHS Conformity Declaration rules for a correct disposal (where applicable).

31.0 OIL TREATMENT

OIL IS POLLUTANT! DO NOT THROW AWAY OUTDOORS OR POUR ON THE GROUND.
Clean up the oil and send to special disposal centres according to current national laws.

General precautions
- Avoid direct and prolonged contact with skin.
- Avoid the formation of oil mists in the air.
- Avoid splashing.
- Wear appropriate clothing, gloves and goggles to protect against oil splashes.
- Do not use greasy rags.
- Do not eat or smoke if your hands are soiled with oil.

First Aid instructions
- If oil is swallowed, do NOT induce vomiting but go immediately to the nearest medical centre with information on the type of oil swallowed.
- If oil gets in eyes, rinse abundantly with water until irritation ceases, then go to the nearest medical centre.
- If oil comes into contact with skin, rinse abundantly with neutral soap and water. do not use solvents or irritant products.

Disposing of used oil
Do not throw used oil away outdoors or pour it on the ground.
Drain into a suitable container and forward to specialised oil disposal centres, or hand it over to authorised collection companies.

Oil spillages or leakages
Eliminate the cause of the leakage and stop the oil spillage from spreading using absorbent material. Clean the area where the oil has spilled using degreasing detergents to prevent slipping and dispose of the waste according to current state and national regulations. Clean up the oil and send to special disposal centres according to current National regulations.

32.0 MAINTENANCE

32.1 Standard Maintenance

Routine maintenance according to the following instructions is of crucial importance to ensure the correct operation and lasting life of the Tyre-Changer.

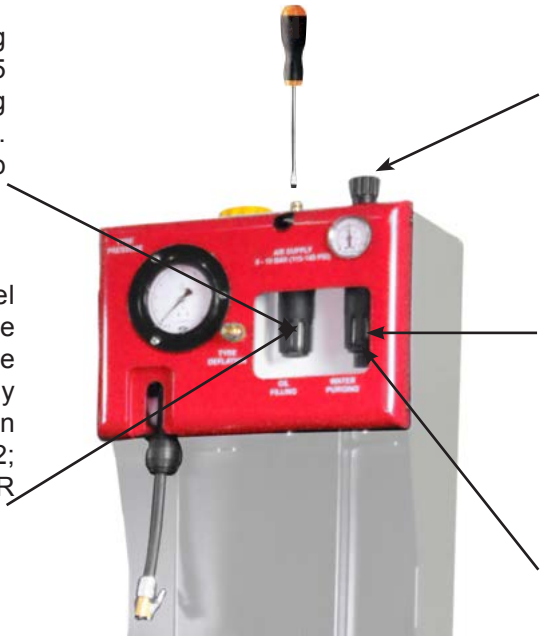
Always disconnect the electrical power and air supply from the machine before servicing and removing any parts.
Release all compressed air from the circuit by pressing the inflation pedal (ref. 3, page 13) for a few seconds.

- On daily basis, keep the machine clean eliminating any mould and dirt to ensure the perfect movement of slides, carriages and tools and to grant the correct functioning of clamping chuck and locking systems.

- On daily basis, check for worn or damaged nylon protectors for mounting tool, as well as plastic and rubber protectors to avoid any damage to the rim or tyre. In case of wear or damage, replace them with new protectors.

- Every 7 days, check the oil dropping into the cup (1 drop every 4/5 activations of the bead pressing arm or of the bead breaker system). Otherwise turn the screw on the top of the cup by a screwdriver.

- Periodically check the oil level which should always keep above the container trasparent part. Otherwise unscrew the cup and top-up by adding oil for pneumatic systems in class ISO HG (i.e. ESSO Febis K32; MOBIL Vacouline Oil 1405; KLUBER Airpress 32).



- For a long lasting correct functioning of the 10 bar pressure limit device, check on regular basis and discharge the condensation when needed.

- If necessary, drain the condensation by turning clockwise the drain tap (keep the pneumatic feeding on to perform this adjustment).

- On monthly basis, unplug the machine from pneumatic feeding and remove the filter cup to clean it from possible solid impurities.

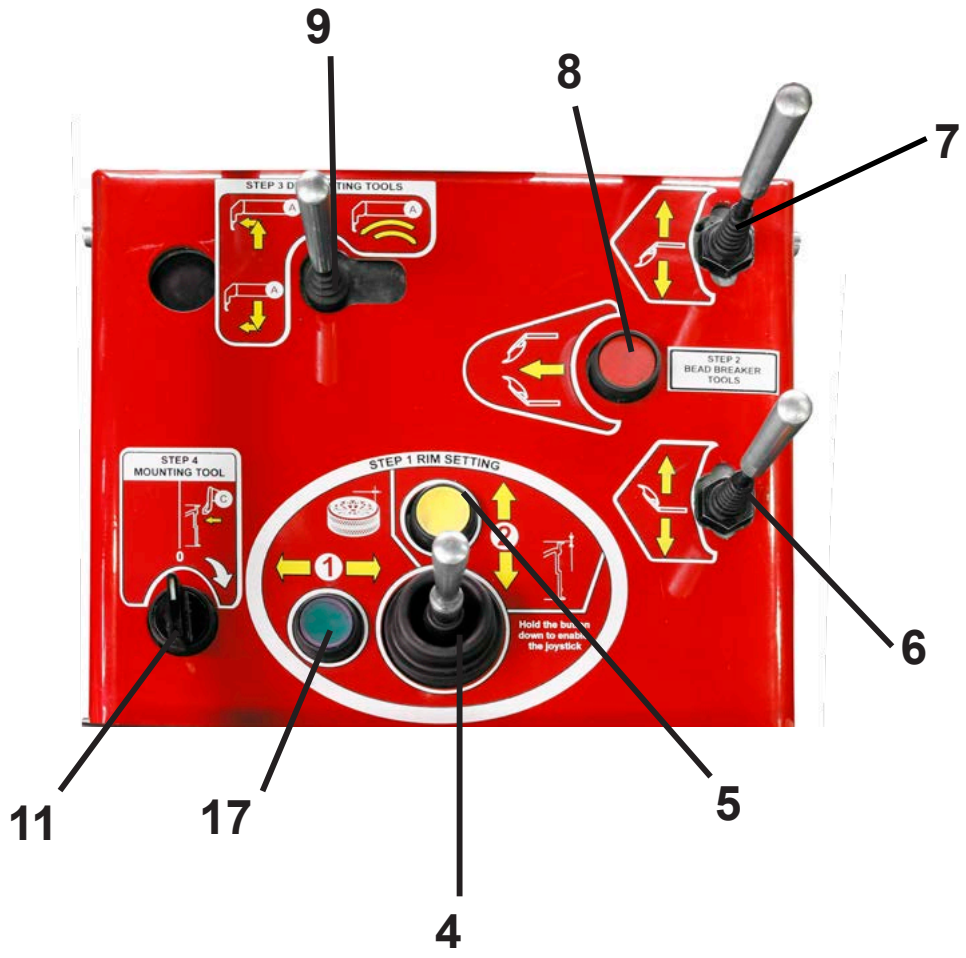
- On periodical basis, clean the sliding guides of the bead breaker carriage by naphtha and lube them by oil or proper grease. Perform the same cleaning and lubricating actions on every junction and mechanical sliding.

- On periodical basis, check the tensioning of clamping chuck rotation driving belt. If necessary, use a 13mm wrench to loosen the fixing bolts of the motor support plate, then adjust the belt tension by acting on the tensioning screw and tight the fixing bolts.

32.2 Laser pointers calibration

32.2.1 Rim diameter laser pointer calibration (vertical laser pointer)

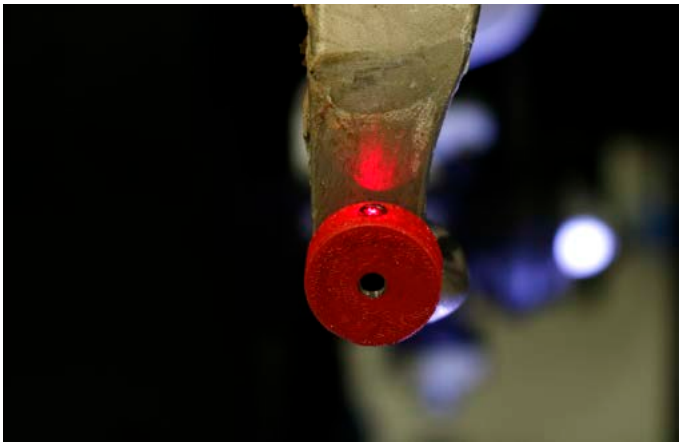
- Switch on the machine by turning the main power switch, located on the side of the machine, to the ON position.



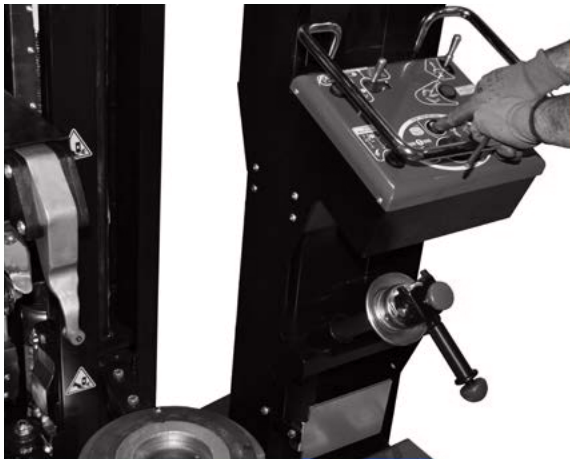
Press and hold down laser horizontal movement button (17), while simultaneously moving rim diameter and width setting joystick lever (4) to the left until the clamping chuck carriage stops.

- Move the demounting tool control lever **9** to the left, to position the demounting tool in the working area.

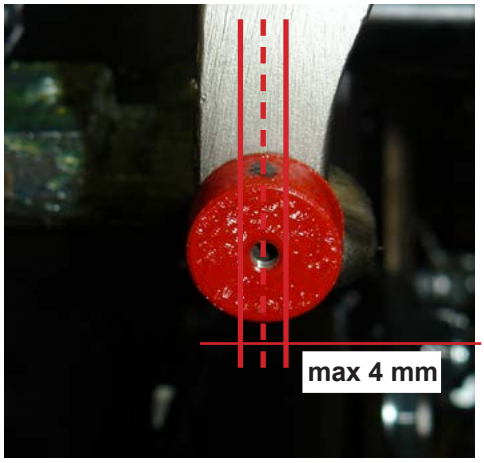
-Press and hold down laser vertical movements enabling button (**5**), while simultaneously moving rim diameter and width setting joystick lever (**4**) upwards to lift the demounting tool to the end of the stroke to the highest position.



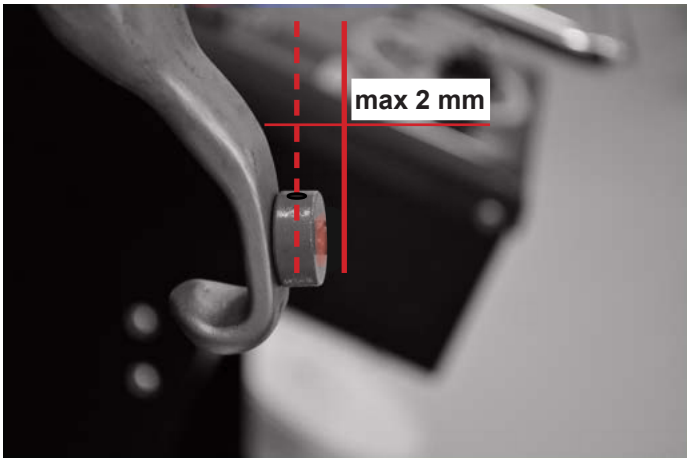
Place the calibration magnet on the outmost part of the demounting tool (as shown in the photo). Align the laser beam with the reference dot on the magnet.



Bring the demounting tool down to the end of the stroke limit, acting on commands **4** and **5**. Check if the laser beam keeps aligned with the reference dot on the magnet.
Otherwise adjust the screws of the laser pointer support (see next page).



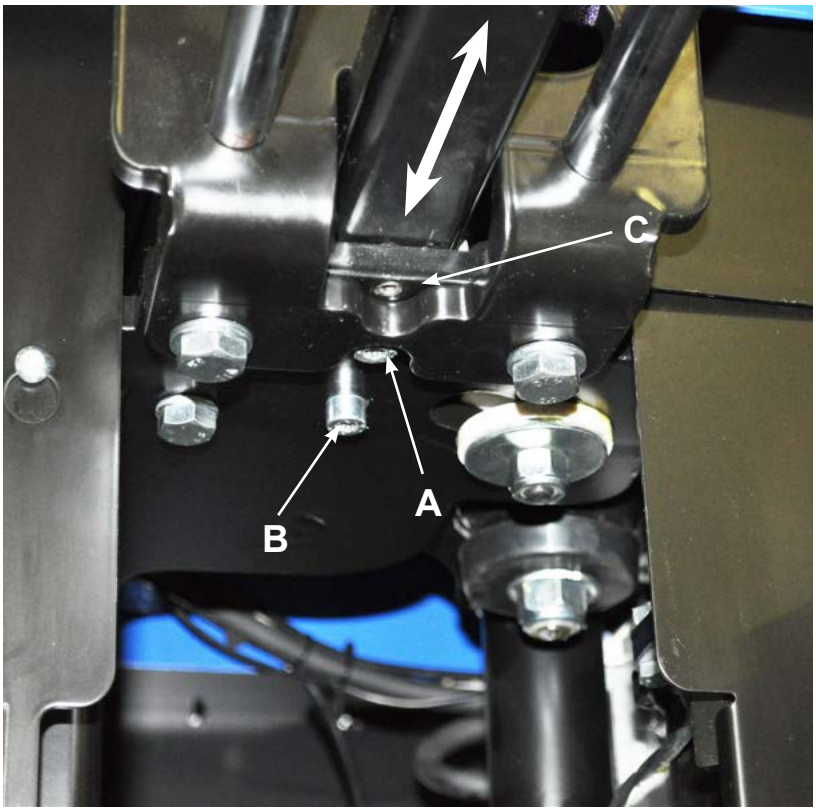
Maximum tolerance of lateral displacement is 4 mm.



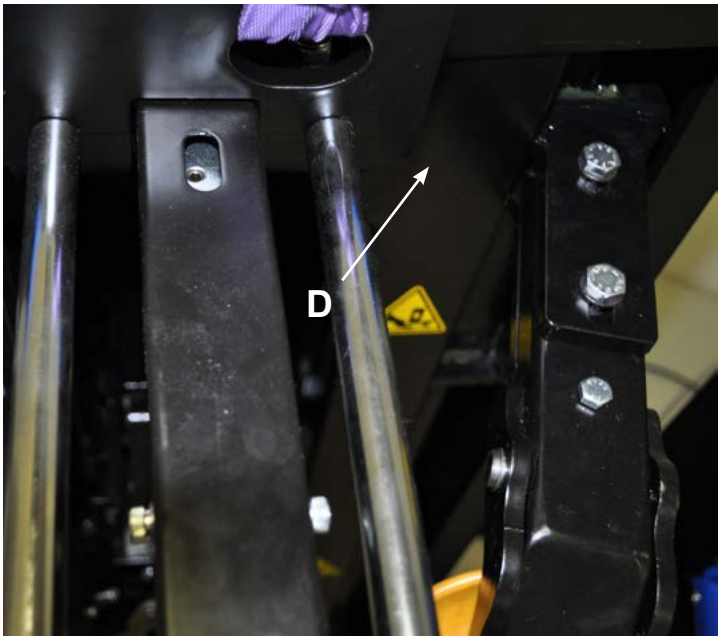
Maximum tolerance of radial displacement is 2 mm.

Otherwise adjust the screws of the laser pointer support, see the following paragraph:
“**Adjustment procedure**”

Adjustment procedure



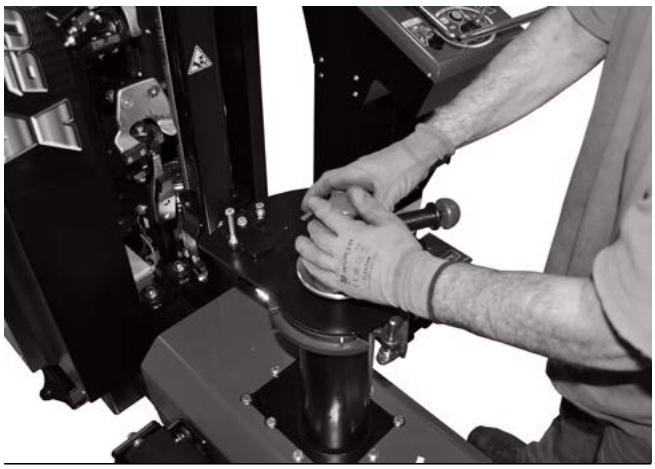
If necessary, slightly loosen screws **A** and **B** to adjust the laser. Act on screws **C** and **D** to adjust the laser in radial direction from clamping chuck. Tighten the screws **A** and **B**.



After the adjustment procedure is finished, recheck the correct alignment of laser pointer with the reference dot on the magnet located on the demounting tool both at the highest and at the lowest position.

32.2.2 Rim width laser pointer calibration (horizontal laser pointer)

Remove the magnet from the tool.
Bring the demounting tool to the highest position, using commands **4** and **5**.



Install the calibration jig on clamping chuck

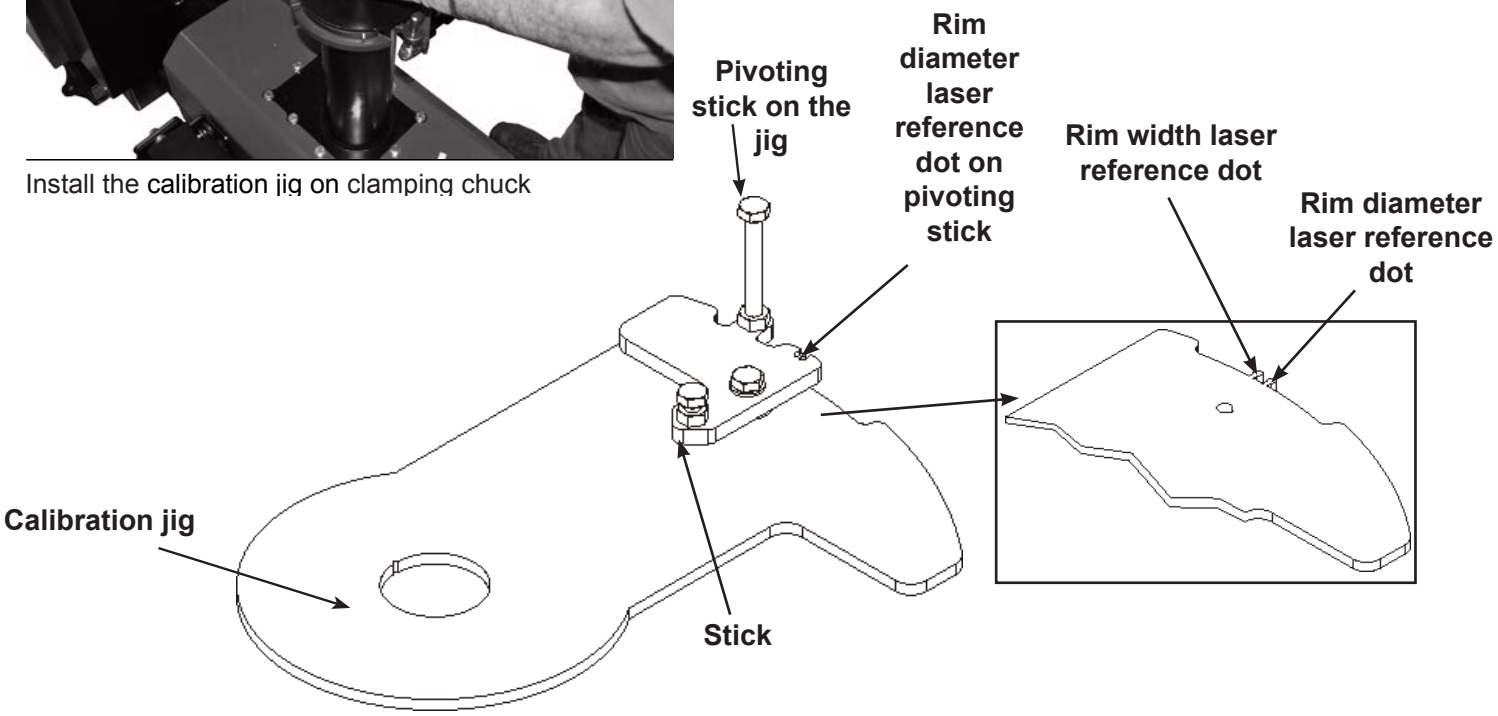
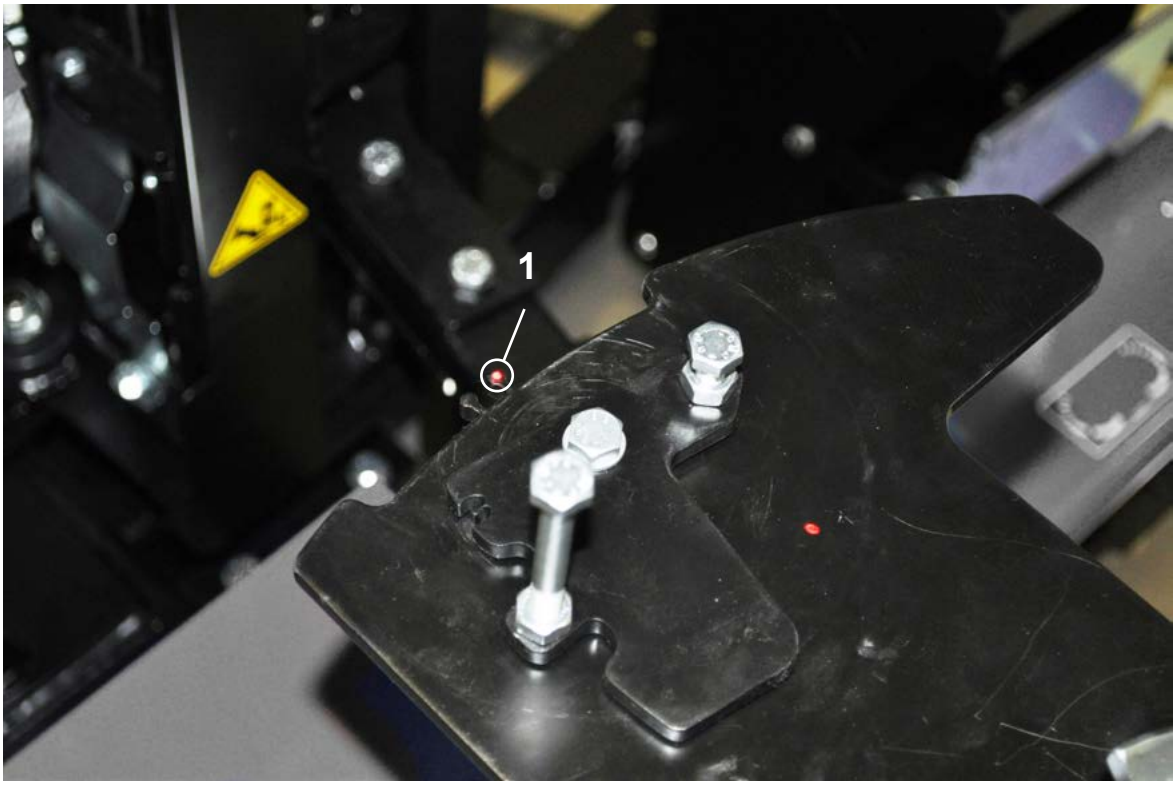


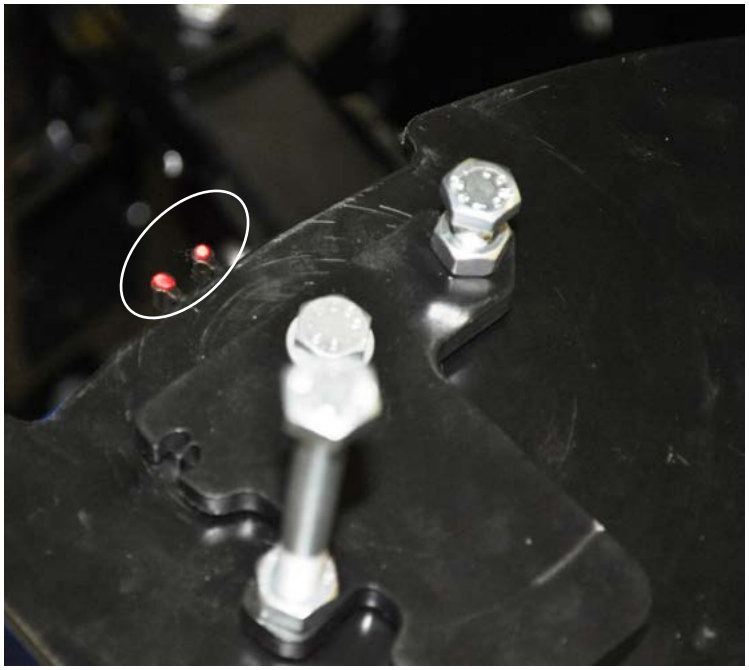
Fig. 1



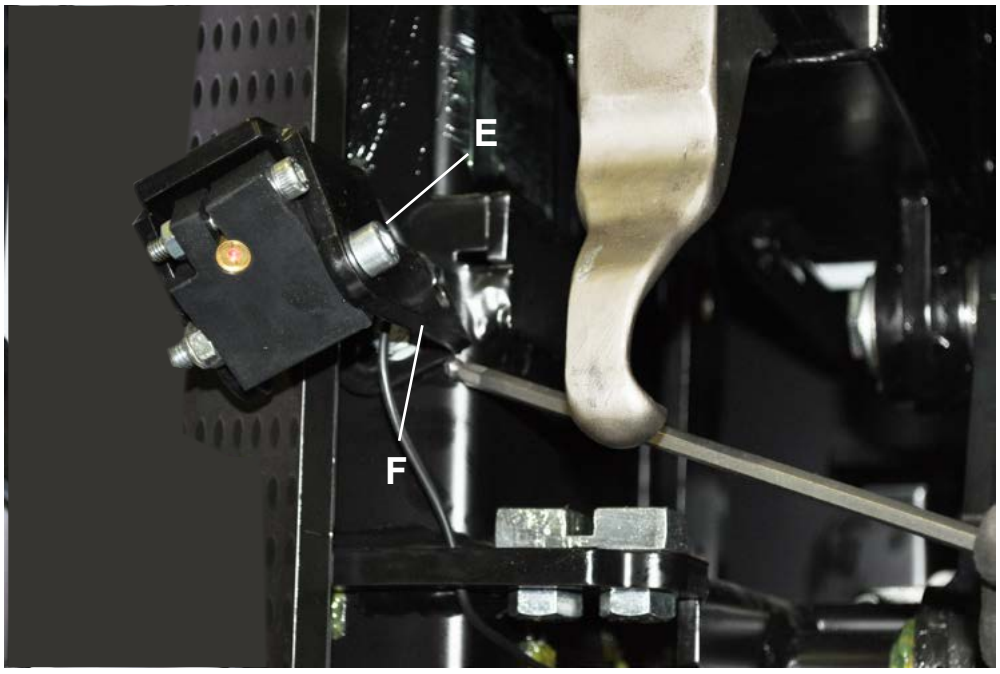
Align the laser beam with the reference dot **1** by means of commands **17** and **4**. Check the correct positioning of the calibration jig. Use the clamping chuck rotation control pedal (ref. 1 page 13) to find the correct position.

Turn the calibration jig so that the wide right side is under the demounting tool.

Bring the demounting tool down to about 1 mm from calibration jig), acting on commands **4** and **5.**



Turn the calibration jig so that it returns to **position 1** (Fig. 1, page 38).
In this position, both the two lasers must be aligned with the reference dots.



Otherwise adjust laser support by acting on the screws **E** and **F**.

NB: At the end of these operations, you will have the correct calibration of lasers for the demounting tool. All other tools and disks adjustment procedures must be performed without moving clamping chuck and tools carriages (Do not act on commands 4, 5, 17).

32.3 Extraordinary maintenance

- Extraordinary maintenance must be carried out by factory authorized personnel ONLY.

- Defective parts should be exclusively replaced with genuine spare parts by factory authorized service personnel.

- After 5 years from installation date, the Tyre-Changer must be serviced in all its main components to grant its correct functioning and the operators safety.

The Manufacturer is not responsible for claims due to non-original spare parts or for damages caused by removal and tampering to the safety devices.
Removal or tampering with the safety devices (max. pressure valve – pressure regulator) represents a breach of European Regulations for Workplace Safety.

33.0 TROUBLESHOOTING CHART

Always disconnect the electrical power and air supply from the machine before servicing and removing any parts.

PROBLEM	CAUSE	SOLUTION
The clamping chuck does not rotate	1) The power supply is missing; 2) Machine has not plugged correctly; 3) The fuses have blown; 4) The belt is loosened or broken; 5) The motor pulley is unscrewed; 6) The motor drive is not working properly; 7) The motor is defective or damaged.	1) Check the wall socket; 2) Check the machine plug is connect properly or if the plug wires are well connected. 3) Replace the fuses; 4) Tension or replace the belt; 5) Tighten the pulley screw; 6) Re-connect the foot control; 7) Replace the motor.
Motor runs but clamping chuck does not rotate forward or reverse.	1) Loose or broken drive belt. 2) Pulleys failed. 3) Loose or broken fixing bolts 4) Transmission damaged or defective.	1) Tighten or replace 2) Replace pulleys. 3) Tighten bolts or replace them 4) Replace transmission.
After the foot-control releasing, the clamping chuck motor rotates at one speed only or just in one direction	1) The foot-control has not been set up or adjusted correctly; 2) The micro-switches screws are unscrewed or missing; 3) The micro-switch is damaged or defective; 4) The foot-control spring is damaged or loosened;	1) Adjust the clamping chuck rotation control pedal; 2) Tighten the screws where necessary or replace the missing ones; 3) Replace the micro switch; 4) Replace the spring.
The clamping chuck motor rotates at one speed only or just in one direction	1) The micro switch is damaged or defective; 2) The micro switched is not connected properly; 3) The motor is damaged; 4) The motor wires are not connected.	1) Replace the micro switch; 2) Check the inverter wire and connect it if necessary; 3) Replace the motor; 4) Check and connect the motor wire.
Clamping chuck rotates, but will not mount or demount tyres.	1) Mounting/demounting tool or operating arm needs adjustment. Operator using incorrect procedures: 2) Failure to use rubber lubricant. 3) Attempting to mount badly bent or rusted wheels. 4) Mismatch size of tyre and wheel	1) Adjust as required 2) Lubricate 3) Clean or repair 4) Check that the rim and tyre have the same diameter
The clamping chuck rotates but the wheel stays still	1) Smart Lock system is not clamping 2) Anti-rotation pin is not holding.	1) Check the system is clamping correctly; 2) Position the pin properly.
Motoinverter does not work	1) Motor Overload	1) Disconnect the machine from the power supply for 5 minutes
The bead breaker disk does not move vertically or it moves slowly	1) The air supply is missing; 2) The control valve is damaged; 3) The silencers are blocked; 4) The cylinder seal is damaged; 5) The valve is damaged or defective.	1) Check the net pressure; 2) Replace the valve; 3) Clean up the silencers or replace them; 4) Replace the seals; 5) Replace the valve.
The bead breaker disk positions itself correctly but does not perform the “over run”	1) The air supply is missing; 2) The control valve is damaged or defective; 3) The cylinders seals are damaged; 4) Movement is not activated; 5) The over run switch is damaged;	1) Check net pressure; 2) Replace the control valve; 3) Replace the seals; 4) Rotate the switch; 5) Replace the switch;

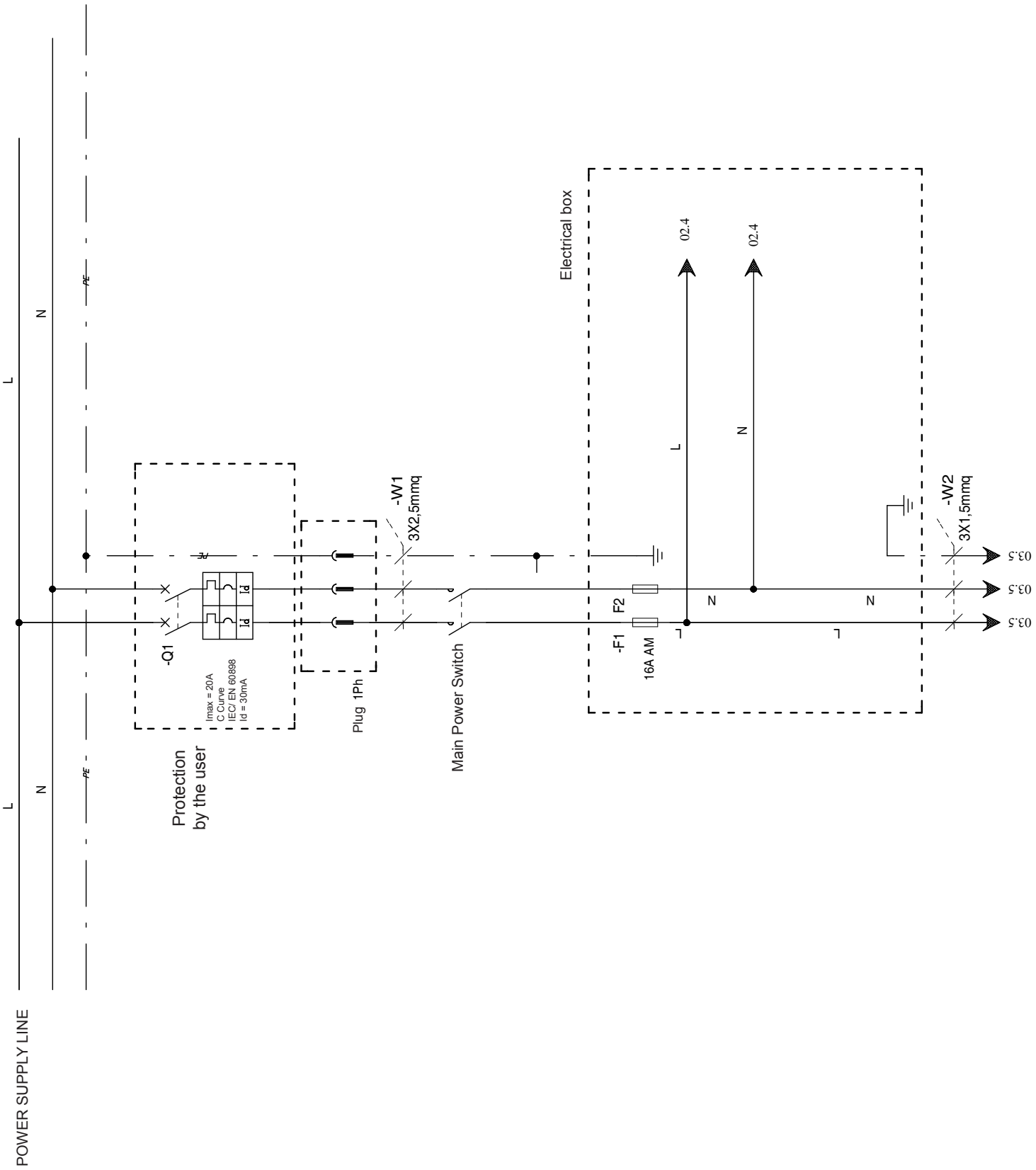
Always disconnect the electrical power and air supply from the machine before servicing and removing any parts.

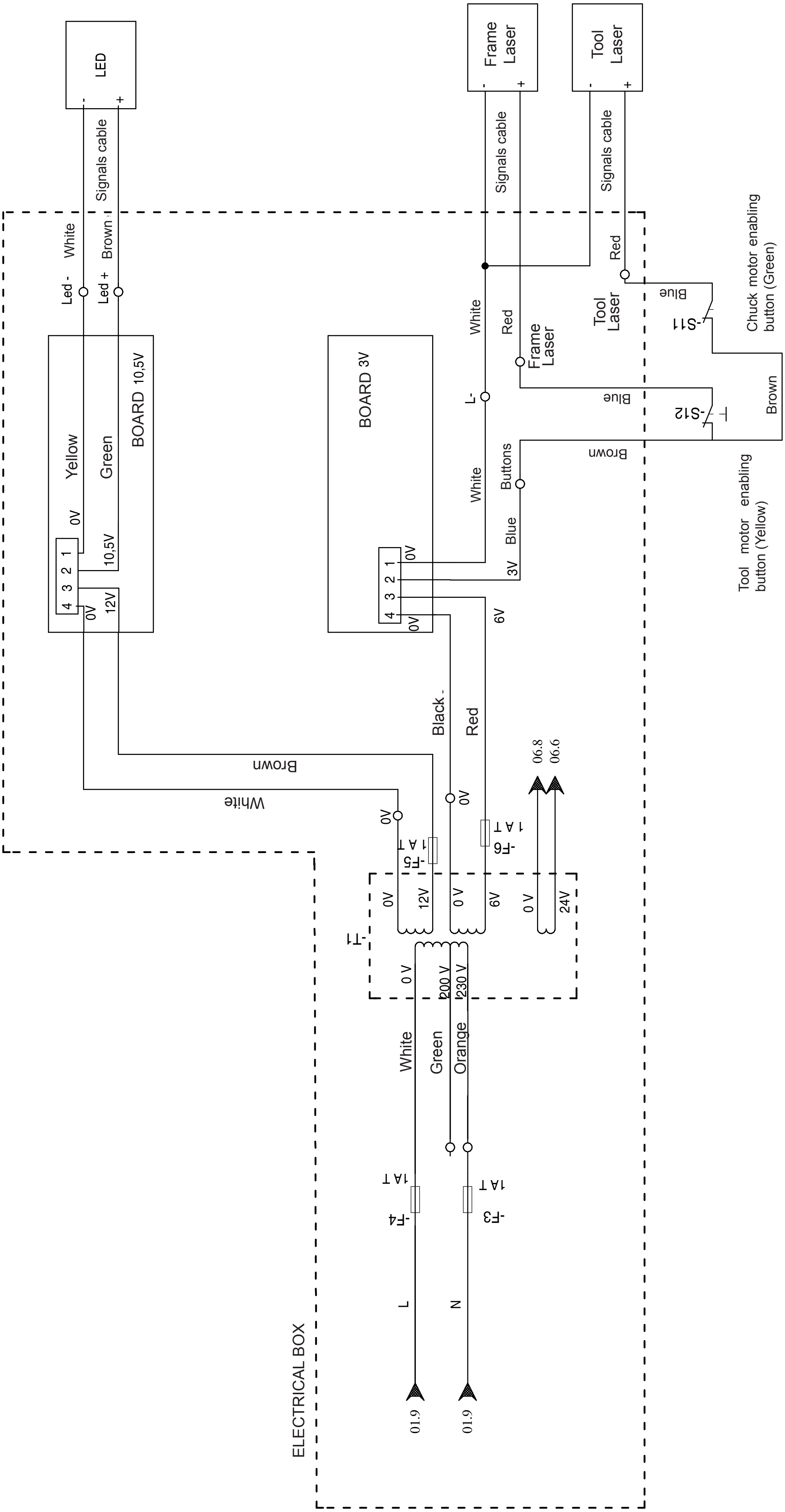
PROBLEM	CAUSE	SOLUTION
Bead breaker operates, but will not break beads.	1) Inadequate air supply. 2) Operator using incorrect procedure. 3) Bead breaker disk binding or damaged. 4) Valve/valves obstructed or damaged.	1) Verify minimum 10BAR (150PSI). Check air lines for leaks, blockage, or kinks. 2) Refer to operating instructions. 3) Check for binding, replace as needed. 4) Check operating & control valves. Repair or replace as needed.
The tool does not move vertically	1) The air supply is missing; 2) The supply union is not connected; 3) The feeding hoses are damaged or squeezed; 4) Control valve is damaged; 5) The silencers are blocked; 6) The cylinder seal is damaged.	1) Check net pressure; 2) Plug the union carefully or check the air hoses passage; 3) Replace the feeding hoses; 4) Replace the valve; 5) Clean up the silencers or replace them; 6) Replace the seals.
Finger tool does not move up/down	1) No pneumatic supply 2) The supply fitting is not connected correctly 3) Supply tubes broken or squashed 4) Control valve broken 5) Muffler obstructed 6) Finger tool activating cylinder damaged	1) Check the line pressure 2) Insert the fitting correctly in the supply socket or check the pipe route 3) Replace the supply tubes 4) Replace the valve 5) Clean the muffler or replace it 6) Check cylinder, repair or replace
The tool hit the rim during mounting operations	1) The locking plate has not been adjusted properly or is defective 2) The unlocking plate springs are damaged 3) Smart Lock is loosened	1) Adjust or replace the locking plate 2) Replace the unlocking plate springs 3) Tighten Smart Lock
The inflating device does not work	1) The air supply is missing; 2) The control valve is damaged; 3) The pressure valve is damaged.	1) Check the net pressure; 2) Replace the valve; 3) Replace the valve.
Gauge not accurate.	1) Air line kinked or obstructed. 2) Needle stuck or broken. 3) Inlet side or snubber of gauge blocked. 4) Gauge out of calibration.	1) Remove and clean debris, straighten hose. 2) Replace gauge. 3) Replace gauge. 4) Replace gauge.
Pedals do not actuate or return properly.	1) Misaligned, damaged or worn pedal linkage. 2) Obstruction in air valves. 3) Objects under foot pedals. 4) Return spring broken or misaligned. 5) Inadequate lubrication	1) Repair or replace. 2) Remove, clean valves, & reinstall. 3) Remove foreign objects from under machine. 4) Repair, replace or realign. 5) Lubricate

Always disconnect the electrical power and air supply from the machine before servicing and removing any parts.

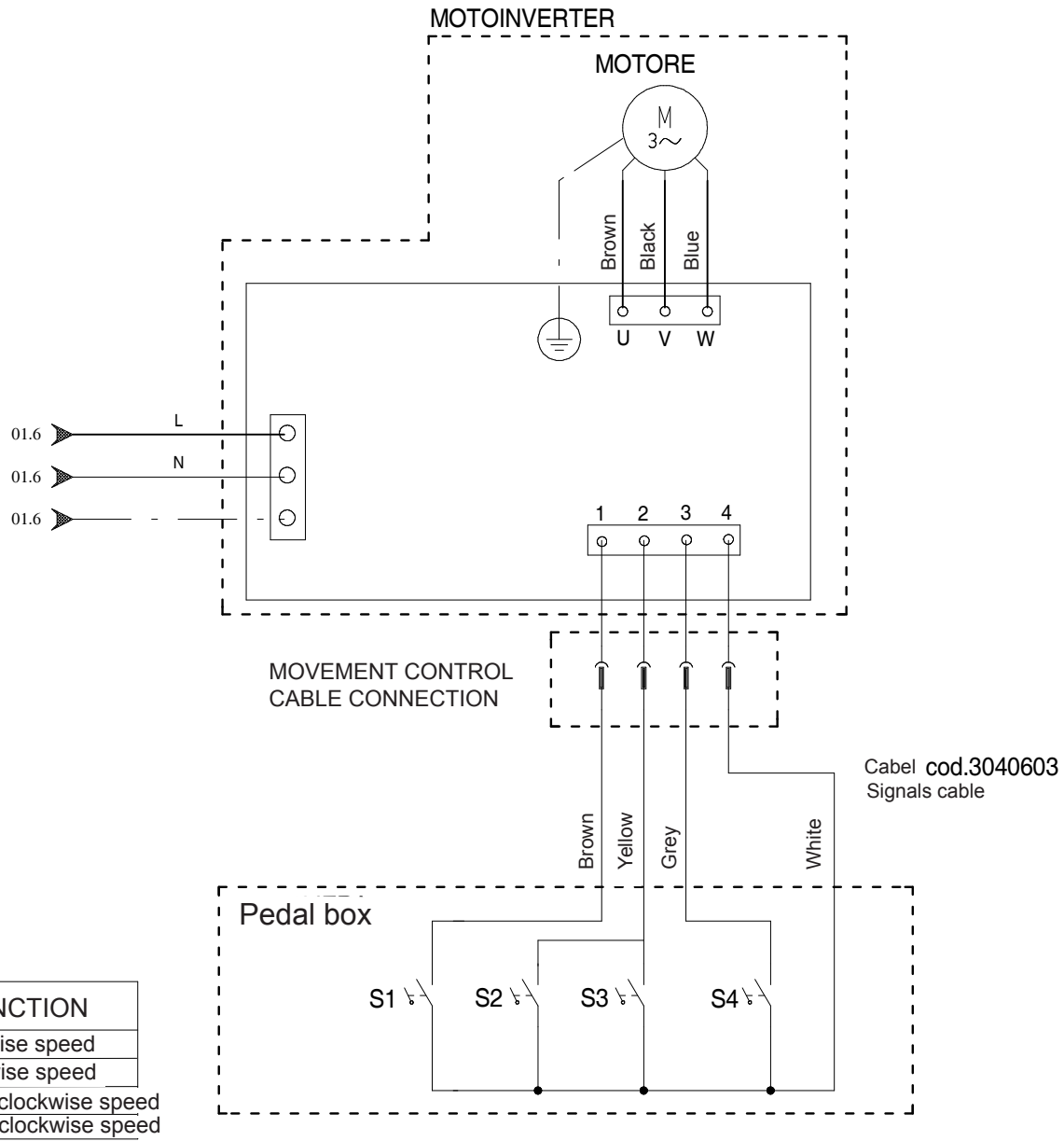
PROBLEM	CAUSE	SOLUTION
Bead pressing arm will not raise/ lower	1. Leaking air lines or fittings or valve. 2. Defective valve. 3. Defective cylinder. 4. Slide bar binding. 5. Inadequate lubrication.	1. Check for kinks, leaks or debris in air lines or valves. 2. Replace 3. Repair or replace. 4. Adjust tension nut fixing the slide bar 5. Lubricate
Bead pressing arm bleeding down	1. Leaking air lines or fittings or valve. 2. Defective cylinder. 3. Check valve leaking or defective.	1. Check for kinks, leaks or debris in air line or valve. 2. Repair or replace. 3. Repair or replace.
The clamping chuck carriage does not move horizontally	1) The locking plate has not been adjusted properly or is defective 2) The unlocking plate springs are damaged 3) The air supply is missing 4) The control valve is damaged 5) The silencers are blocked 6) The cylinder seal is damaged. 7) Insufficient lubrication of moving parts	1) Adjust or replace the locking plate 2) Replace the unlocking plate springs 3) Check the net pressure 4) Replace the valve 5) Clean up the silencers or replace them 6) Replace the seals. 7) Lubricate moving parts
The tools carriage does not move vertically	1) The locking plate has not been adjusted properly or is defective 2) The unlocking plate springs are damaged 3) The air supply is missing 4) The control valve is damaged 5) The silencers are blocked 6) The cylinder seal is damaged. 7) Insufficient lubrication of moving parts	1) Adjust or replace the locking plate 2) Replace the unlocking plate springs 3) Check the net pressure 4) Replace the valve 5) Clean up the silencers or replace them 6) Replace the seals. 7) Lubricate moving parts
The demounting tool does not perform preset movements into drop centre level	1) The air supply is missing; 2) The control valve is damaged or defective; 3) The cylinders seals are damaged; 4) Movement is not activated; 5) The over run button is damaged; 6) The pilot valve damaged or defective.	1) Check net pressure; 2) Replace the control valve; 3) Replace the seals; 4) Press the over run button; 5) Replace the button; 6) Replace the valve.
The tools do not move into working area	1) The air supply is missing; 2) The supply union is not connected; 3) The feeding hoses are damaged or squeezed; 4) Control valve is damaged; 5) The silencers are blocked; 6) The cylinder seal is damaged.	1) Check net pressure; 2) Plug the union carefully or check the air hoses passage; 3) Replace the feeding hoses; 4) Replace the valve; 5) Clean up the silencers or replace them; 6) Replace the seals.
Mounting/demounting tools hit the rim during operations	1) Laser pointers are in wrong position 2) Smart Lock is loosened	1) Calibrate laser pointers using the calibration jig 2) Tighten Smart Lock
The wheel lifter does not move or move slowly (optional)	1) The air supply is missing; 2) The control valve is damaged; 3) The silencers are blocked; 4) The cylinder seals are damaged.	1) Check net pressure; 2) Replace the valve; 3) Clean up the silencers or replace them; 4) Replace the seals.
The wheel lifter does not stop (optional)	1) The control valve is damaged; 2) The foot control spring is damaged	1) Replace the valve; 2) Replace the spring.

34.0 WIRING DIAGRAM 230V 1Ph



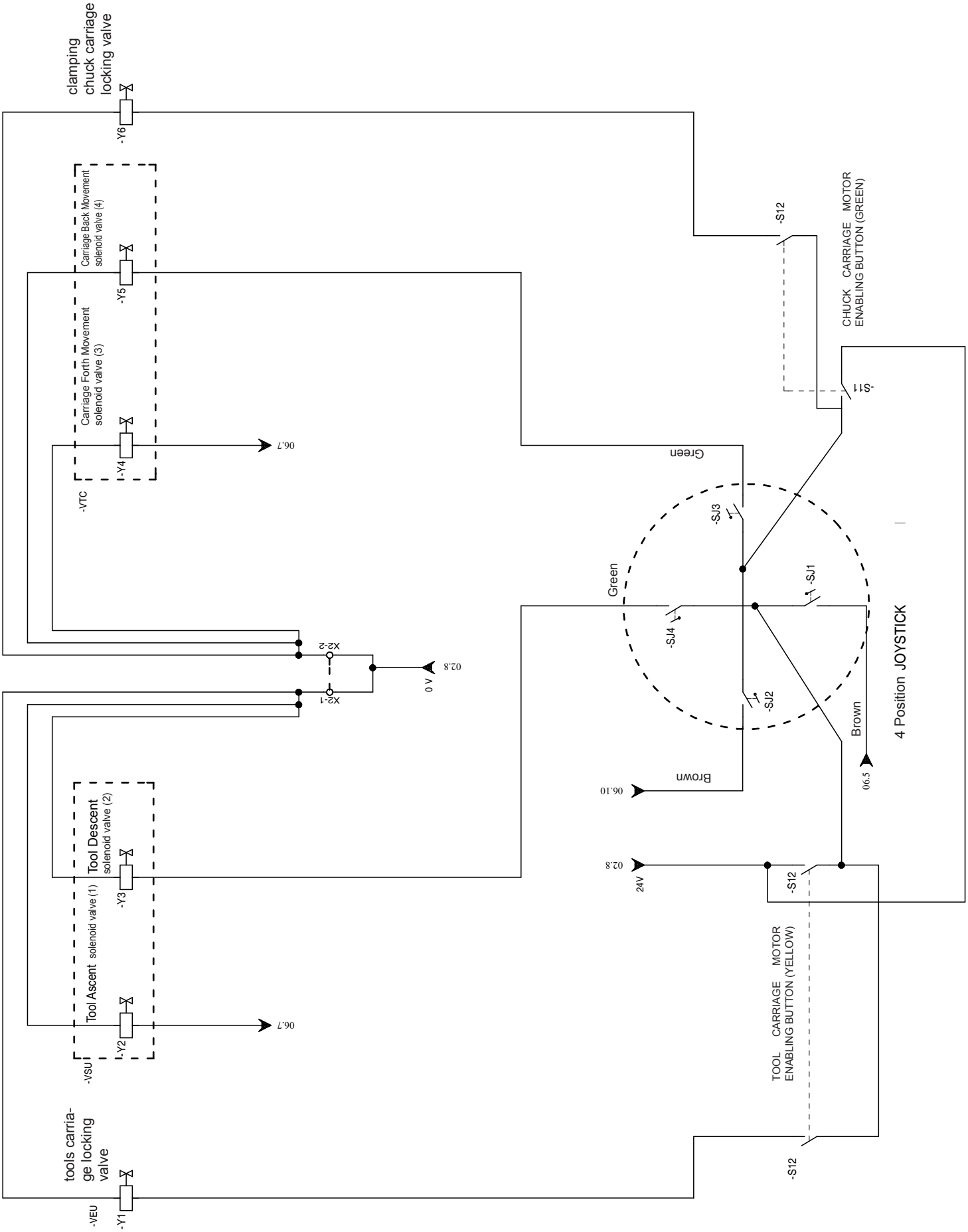

LED
Signals cable
Frame Laser
Tool Laser
Led -
White
Led +
Brown
Yellow
Green
BOARD 10,5V
0V
10,5V
12V
BOARD 3V
White
Red
L-
Buttons
Blue
3V
6V
Black
Red
Brown
Blue
-S11
-S12
Chuck motor enabling button (Green)
Tool motor enabling button (Yellow)
White
Brown
0V
1 A T
-F5
-F6
06.8
06.6
12V
24V
-T1
200 V
230 V
Green
Orange
1A T
-F4
-F3
L
N
01.9
ELECTRICAL BOX

35.0 CLAMPING CHUCK MOTOR WIRING DIAGRAM

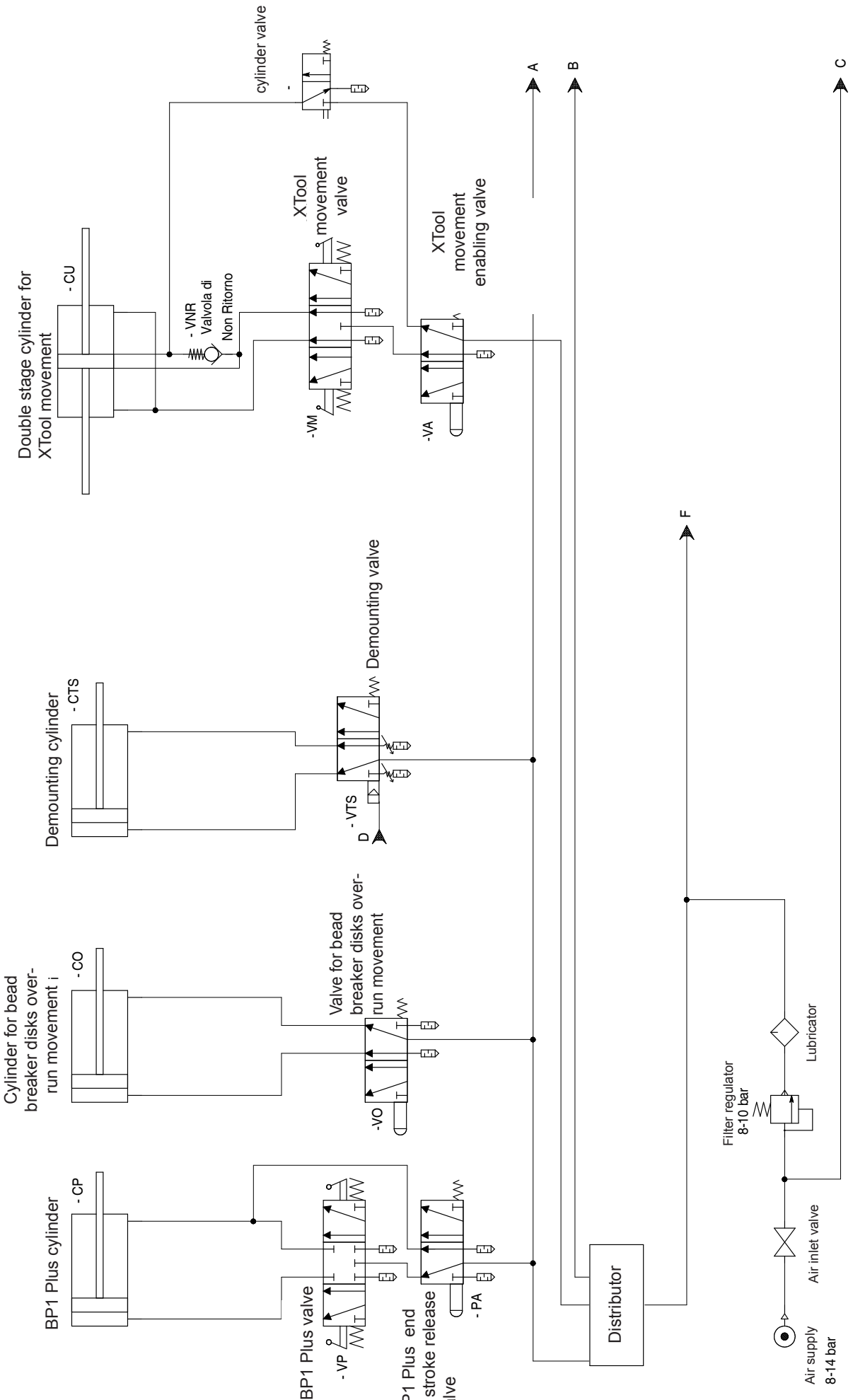


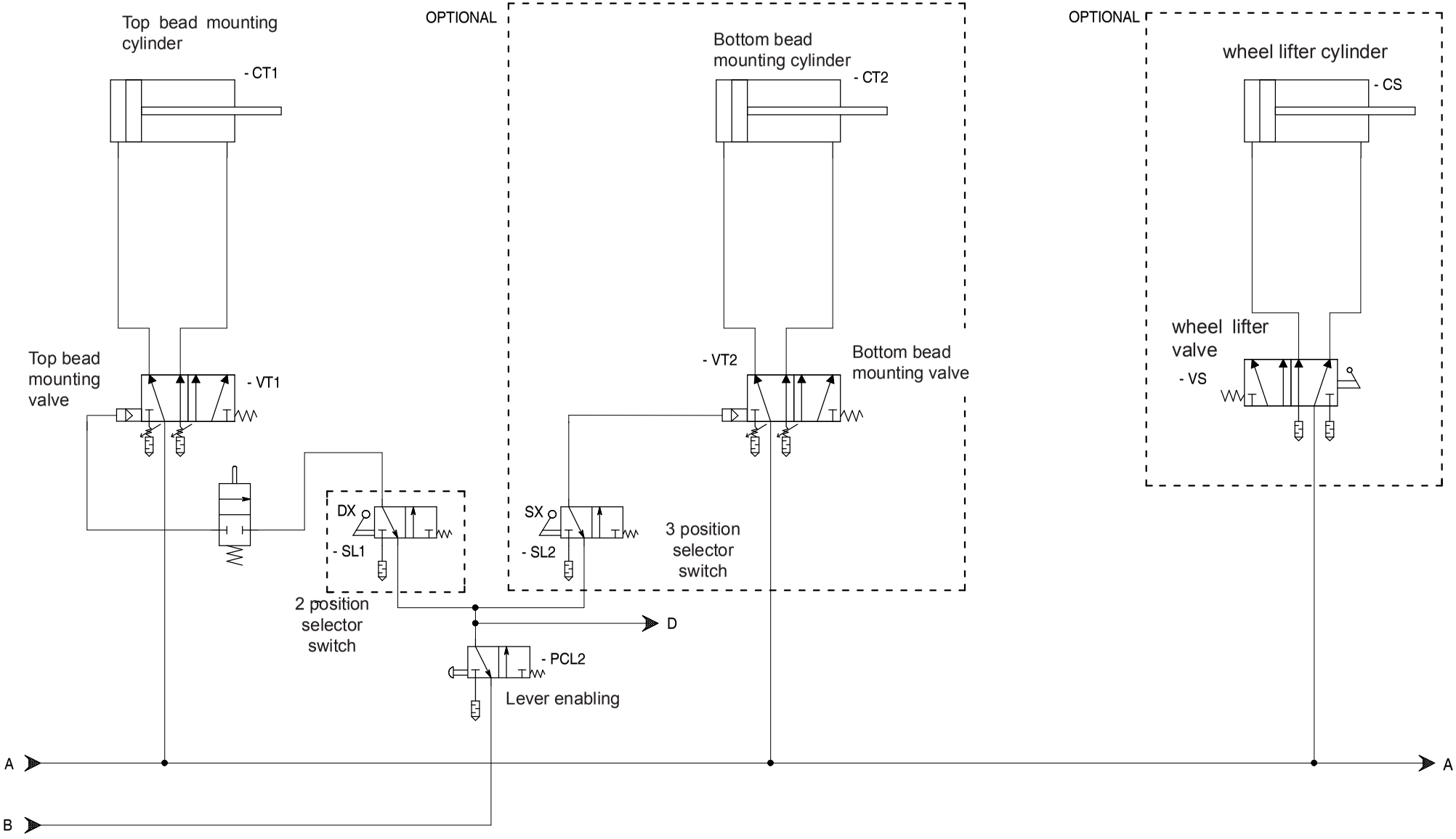
SWITCH	FUNCTION
S1	1° clockwise speed
S2	2° clockwise speed
S4	1° counterclockwise speed
S3 + S4	2° counterclockwise speed

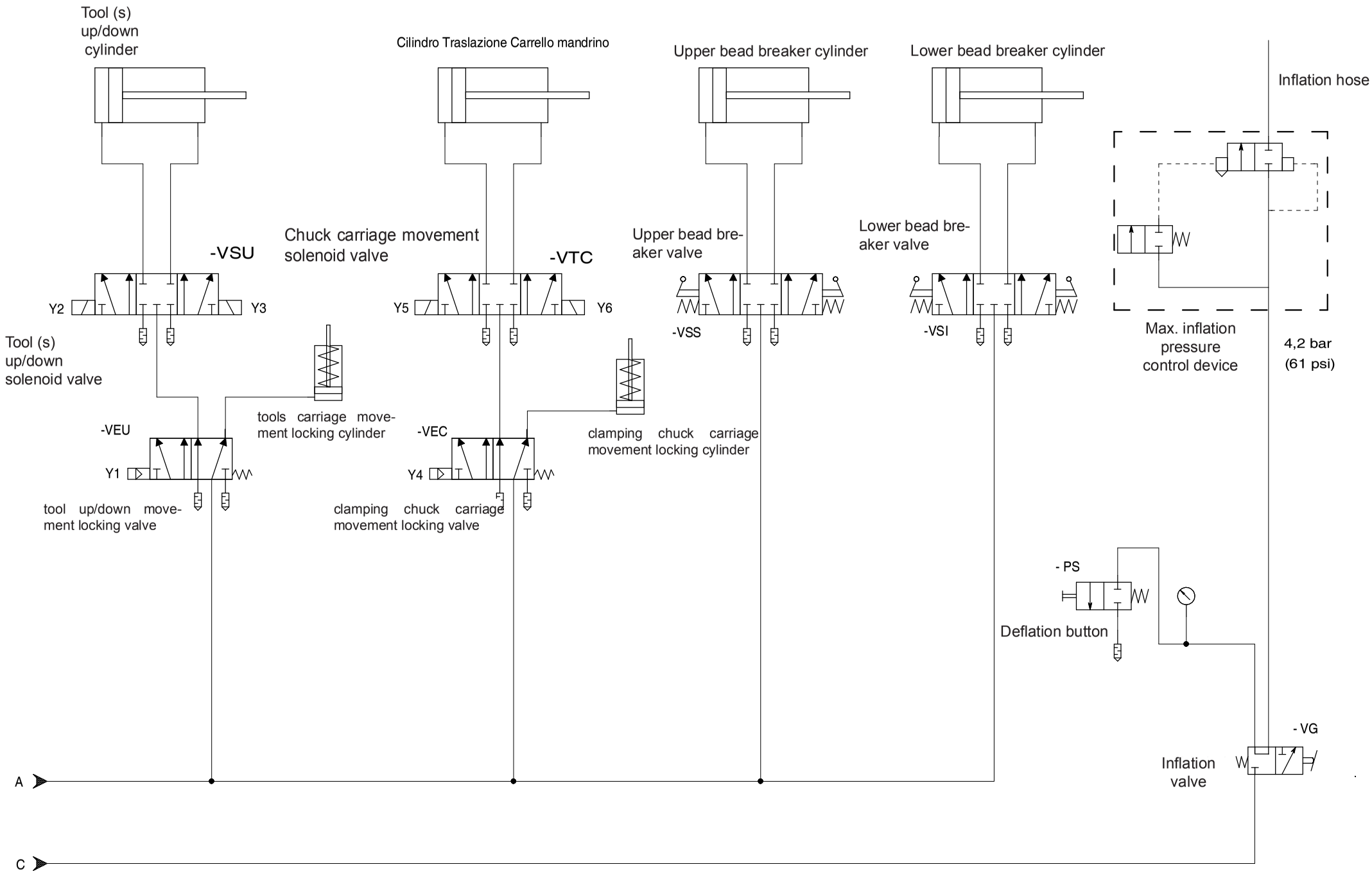
36.0 CLAMPING CHUCK CARRIAGE AND TOOLS CARRIAGE MOVEMENT DIAGRAM



37.0 PNEUMATIC DIAGRAMS




Top bead mounting cylinder
- CT1
Top bead mounting valve
- VT1
DX
- SL1
2 position selector switch
OPTIONAL
Bottom bead mounting cylinder
- CT2
- VT2
Bottom bead mounting valve
SX
- SL2
3 position selector switch
D
- PCL2
Lever enabling
OPTIONAL
wheel lifter cylinder
- CS
wheel lifter valve
- VS
A
B
A


Tool (s) up/down cylinder
Cilindro Traslazione Carrello mandrino
Upper bead breaker cylinder
Lower bead breaker cylinder
Inflation hose
-VSU
Chuck carriage movement solenoid valve
-VTC
Upper bead breaker valve
Lower bead breaker valve
Y2
Y3
Y5
Y6
-VSS
-VSI
Max. inflation pressure control device
4,2 bar (61 psi)
Tool (s) up/down solenoid valve
-VEU
tools carriage movement locking cylinder
-VEC
clamping chuck carriage movement locking cylinder
Y1
Y4
tool up/down movement locking valve
clamping chuck carriage movement locking valve
- PS
Deflation button
- VG
Inflation valve
A
C

38.0 SERVICE REPORTS

All the operations made on the machine in the course of time must be reported herebelow so as to have an updated situation of the efficiency of the machine.
The user must carry out both cleaning and greasing operations according to the instructions given in this manual.
Any operation concerning the replacement of parts is strictly reserved to authorized and trained staff.

Date	Signature
Intervention	
Replacements	
Notes	

Date	Signature
Intervention	
Replacements	
Notes	

Date	Signature
Intervention	
Replacements	
Notes	

Date	Signature
Intervention	
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Date	Signature
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Replacements	
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Date	Signature
Intervention	
Replacements	
Notes	

WARRANTY

Atlas Automotive Equipment offers a two (2) year LIMITED warranty on all Atlas® Platinum tire changers. Atlas Automotive Equipment warrants the equipment to the original purchaser against defects in material or workmanship under normal use for a period of two years from the date of purchase. This limited warranty shall be limited to the repair or replacement of materials or parts found defective, at the discretion of Atlas Automotive Equipment. This limited two (2) year warranty DOES NOT apply to normal wear items. (Turntable jaws...belts...gauges...plastic jaw protectors)

It is the customer's responsibility to make sure that all air operated components are properly maintained. These components are designed to be "powered" by well lubricated and "moisture-free" compressed air. "Dirty air" with no lubrication will cause problems with any air powered piece of equipment. If we examine a part and feel that it is a manufacturer's defect; that part will be covered under warranty. If a suspected "defective part" has not been properly lubricated (and fails as a result of no lubrication), then that part will not be covered under warranty. However, we will sell you the "out of warranty" part at a substantial discount if you promise to maintain your equipment properly in the future. We have almost no warranty issues with our tire changers that are the result of a manufacturer's defect. 95% of all warranty claims are a result of the customer not providing proper care for the machine.

We believe that your Atlas® tire changer will provide years of trouble-free service, but you must provide periodic maintenance to ensure the longevity of your machine. We stock a complete parts inventory and employ several full-time technical advisors that can "walk you through" most issues that may arise with your Atlas® Platinum tire changer.

Our limited warranty policy (two year structural only) does not include a labor warranty. Our products are sold at such a competitive price that Atlas Automotive Equipment cannot afford to send technicians into the field to repair the Atlas® Platinum tire changers. We assume that the buyer of our tire changer is mechanically inclined or has employees that are mechanically inclined.

Our tire changers are built with “plug and play” parts that make repairs very easy. This is the same philosophy that the Personal Computer Industry has used for many years. Most parts can be changed in a manner of minutes.

We offer a toll-free number (800-917-8944) for service and parts information. This toll-free number is directed to our Buford, GA location. The service and parts department are open from 8 am to 5 pm EST from Monday to Friday. There are certain parts that are considered “wear items” and are NOT included in the two-year limited warranty. These parts include plastic jaw protectors, plastic mount/demount head inserts, airline fittings, hoses, and clamping jaws. Parts that have been subjected to abuse or misuse will NOT be considered for warranty.

REPEAT: IF YOU ABUSE A PRODUCT (LIKE NOT USING THE PROPER LUBRICATION, PLUGGING THE 110 VOLT ELECTRICAL CORD INTO A 220 VOLT OUTLET, OR EXPECTING THE BEAD BREAKER TO CRUSH OLD RIMS), THEN YOUR WARRANTY IS VOID.

We will honor warranties that result from manufacturing defects. Warranties do not apply to items that have been abused or misused. Many times, the lack of proper lubrication or a loose nut/bolt combination are the reason for tire changer parts to break or malfunction. It is the customer's responsibility to perform maintenance required by the manufacturer.

Electric motors for Atlas® tire changers carry a 6-month warranty. A low amp service will shorten the life of any electric motor. All 110-volt tire changers should be "plugged into" at least a 20-amp service. All 220-volt tire changers should be "plugged into" at least a 30-amp Single Phase service. Do not use extension cords with either a tire changer or wheel balancer.

NOTE: ALL WARRANTY CLAIMS MUST BE PRE-APPROVED BY THE MANUFACTURER TO BE VALID.

All warranty repairs/replacements must be approved in writing by Atlas Automotive Equipment, Inc. Atlas Automotive Equipment is not responsible for the cost of "outside parts or labor" unless specifically approved in writing. We want your piece of equipment to be as perfect as possible and we will honor our warranty pledge to you. However, the customer MUST notify Atlas Automotive Equipment and receive written permission for "outside" warranty parts/labor (not performed/supplied by Atlas Automotive Equipment) supplied/to be performed if customer expects to be reimbursed.

Our limited warranty policy (2 year parts) requires the alleged defective part to be returned to Atlas Automotive Equipment (freight pre-paid.) BEFORE the replacement part can be sent. This means the customer is responsible to pay the freight back to Atlas Automotive Equipment. Atlas Automotive Equipment may waive the necessity for the "broken" part to be returned, if the customer sends (via Email) digital photos. If the "broken" part is an integral part of the machine, and the loss of this part will not allow the machine to work properly during the evaluation period, Atlas Automotive Equipment can waive the "normal" return policy in certain situations so there is minimal down time for the operator. If there is a question as to the whether the part is covered by our limited warranty, Atlas Automotive Equipment can charge the customer's credit card for the replacement part (when the part is shipped) and then credit the amount of the part (not the freight) if the returned "broken" part is covered under warranty.

Atlas Automotive Equipment has been in business for over 32 years and has a service department with an excellent reputation. The old adage that compares the attitude of the customer to the type of service received rings true for Atlas Automotive Equipment.

We sell quality products with very few warranty issues. When there is a warranty issue, (or an out of warranty issue) we want to get the customer back in business as quickly as possible. A good attitude from the Atlas Automotive Equipment service technician coupled with a positive attitude from the customer will produce a satisfactory outcome for both parties.

Please have your owner's manual with you when you call. If you have lost your manual, the best way to describe a part is with a digital photo. A digital photo leaves NO ROOM to the imagination. If our service technicians have your digital photos in front of them, then the process of replacing parts is much easier. Please help us to help you. Good information with pictures helps to speed the process.

Returned goods must be authorized to be returned (in writing) by Atlas Automotive Equipment and must be prepaid to a designated location. All returns are subject to a 15% handling/restocking charge. Returned goods must be in like-new condition complete with warranty and original shipping papers.

THIS WARRANTY IS EXCLUSIVE AND IS LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING ANY IMPLIED WARRANTY OR MERCHANTABILITY OR ANY IMPLIED WARRANTY OF FITNESS FROM A PARTICULAR PURPOSE, AND ALL SUCH IMPLIED WARRANTIES ARE EXPRESSLY EXCLUDED.

THE REMEDIES DESCRIBED ARE EXCLUSIVE AND IN NO EVENT SHALL THE MANUFACTURER, NOR ANY SALES AGENT OR OTHER COMPANY AFFILIATED WITH IT OR THEM, BE LIABLE FOR SPECIAL CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR THE BREACH OF OR DELAY IN PERFORMANCE OF THIS WARRANTY. THIS INCLUDES, BUT IS NOT LIMITED TO, LOSS OF PROFIT, RENTAL OR SUBSTITUTE EQUIPMENT OR OTHER COMMERCIAL LOSS.

If you have any questions about our products or warranties, please ask your sales representative.

The warranty shall be governed under the laws of Indiana and shall be subject to the exclusive jurisdiction of the Court in the State of Indiana in the county of Marion.

PRICES: Prices and specifications are subject to change without notice. All orders will be invoiced at prices prevailing at time of shipment. Prices do not include any local, state or federal taxes.

RETURNS: Products may not be returned without prior written approval from the Manufacturer.

DUE TO THE COMPETITIVENESS OF THE SELLING PRICE OF THESE LIFTS, THIS WARRANTY POLICY WILL BE STRICTLY ADMINISTERED AND ADHERED TO.


ATLAS
PLATINUM