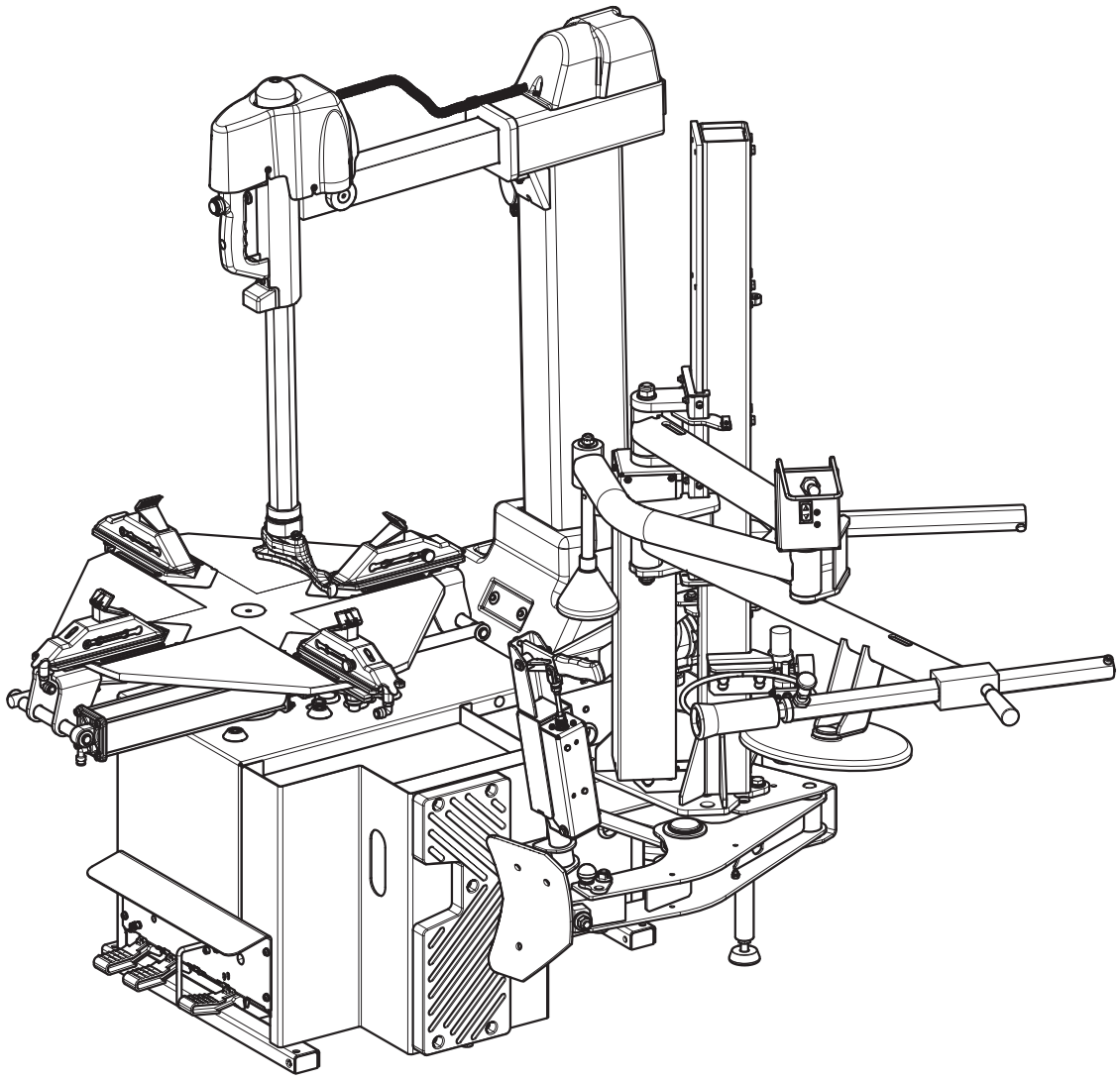
# RWC645D.26IHRB (R145DR) Tire Changer



OPERATION & MAINTENANCE MANUAL

**IMPORTANT** **Any damage caused by failure to follow the instructions in this manual or improper machine use shall relieve the manufacturer of all liability.**

 C012415

7300-M064-00
**Rev. n. 00 (06/2023)**

SUMMARY

## HAZARD LEVELS

Throughout this manual hazard levels are identified by the following signal words:

| | |
|---|---|
| ⚠ DANGER | INDICATES AN IMMEDIATE HAZARD THAT WILL LEAD TO SERIOUS INJURY OR DEATH IF NOT AVOIDED. |
| ⚠ WARNING | INDICATES A SERIOUS HAZARD THAT MAY LEAD TO SERIOUS INJURY OR DEATH. |
| ⚠ CAUTION | INDICATES AN HAZARD THAT MAY LEAD TO MINOR OR MODERATE INJURY. |
| NOTICE | INDICATES RELEVANT INFORMATION ARE CONVEYED, BUT NO HAZARD. |

**NOTICE**

READ THIS INSTRUCTION MANUAL COMPLETELY BEFORE ASSEMBLING, INSTALLING, OPERATING OR SERVICING THIS PRODUCT. KEEP THIS MANUAL IN A KNOWN, EASILY ACCESSIBLE LOCATION FOR ALL OPERATORS AND SERVICE TECHNICIANS TO CONSULT IT IN CASE OF DOUBTS.

**⚠ DANGER**

RISK OF FIRE, ELECTROCUTION, EXPLOSION, ENTAGLEMENT, CRUSHING, BUMPING, HEARING DAMAGE OR EYE INJURY.

DEFECT OF COMPLYING WITH THE DIRECTIONS PROVIDED IN THIS MANUAL MAY LEAD TO INJURIES, EVEN SERIOUS ONES, OR DEATH.

**⚠ DANGER**

RISK OF FIRE OR ELECTROCUTION.

THIS PRODUCT IS INTENDED FOR INDOOR INSTALLATION AND USE.
OUTDOOR INSTALLATION OR USE MAY LEAD TO SHORT CIRCUITS, ELECTROCUTION OR FIRE, AND RESULT IN MATERIAL DAMAGES, SERIOUS INJURIES OR DEATH.

**NOTICE**

THE MANUFACTURER DECLINES ALL RESPONISIBILITIES FOR ANY INJURY OR DAMAGE OCCURRING IN CASE DIRECTIONS PROVIDED WITHIN THIS MANUAL ARE NOT COMPLIED WITH.

**⚠ DANGER**

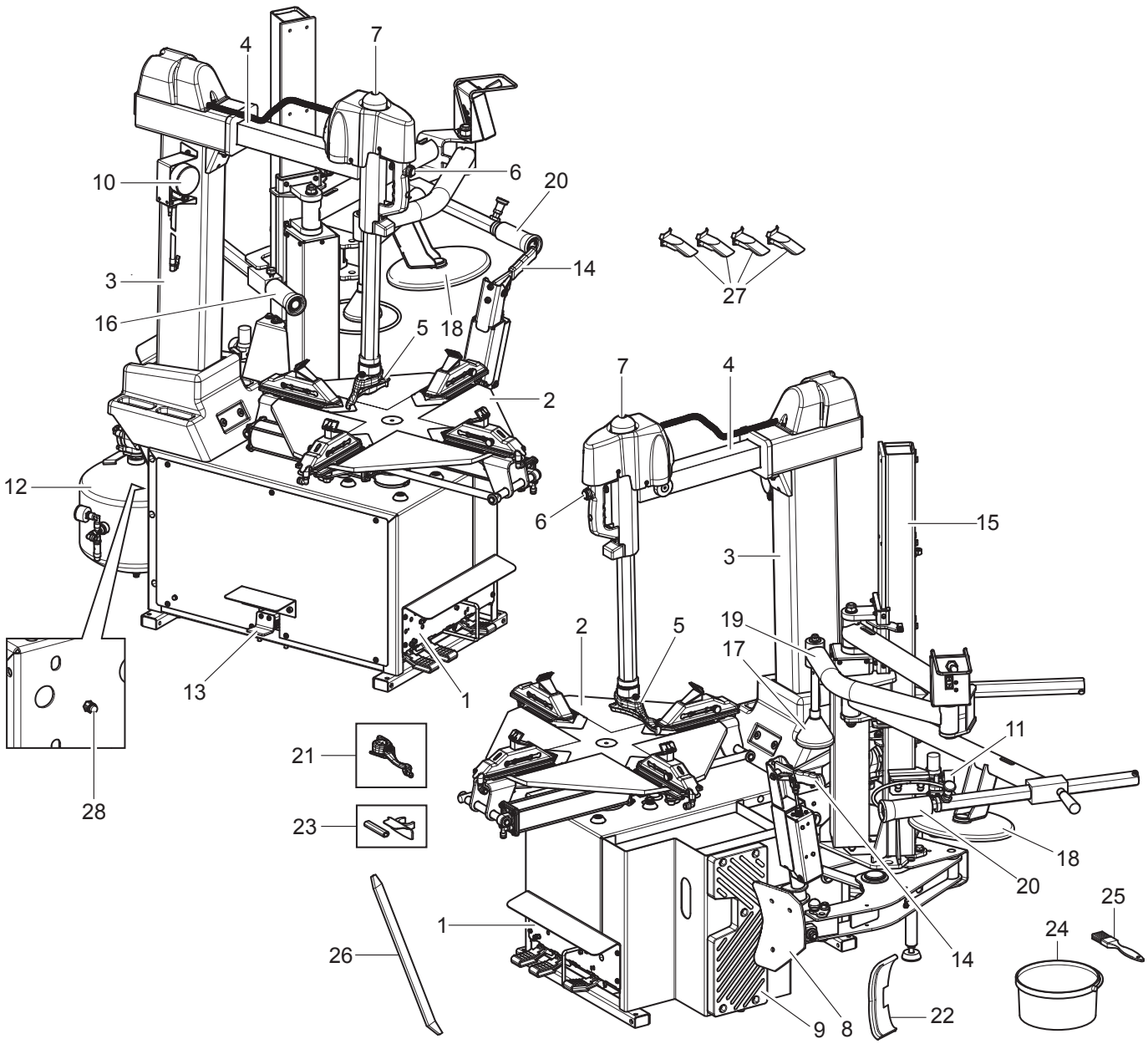
RISK OF EXPLOSION.

THIS PRODUCT HAS INTERNAL ARCING OR SPARKING PARTS WHICH SHOULD NOT BE EXPOSED TO FLAMMABLE VAPORS.
THIS PRODUCT IS INTENDED FOR INSTALLATION AND USE ONLY WITHIN UNCLASSIFIED LOCATIONS OR MINOR REPAIR GARAGES AS DEFINED BY NFPA 70:2020, TABLE 511.3 (C).
INSTALLATION AND USE OF THIS EQUIPMENT ARE PROHIBITED WITHIN:

- MAJOR REPAIR GARAGES AS DEFINED BY NFPA 70:2020, TABLES 511.3 (C) AND 511.3 (D);
- CLASSIFIED LOCATIONS OF MINOR REPAIR GARAGES AS DEFINED BY NFPA 70:2020, TABLE 511.3 (C), AND ANY PIT, BELOWGRADE WORK AREA, OR SUBFLOOR WORK AREA.

## GENERAL DESCRIPTION

FIG. 1

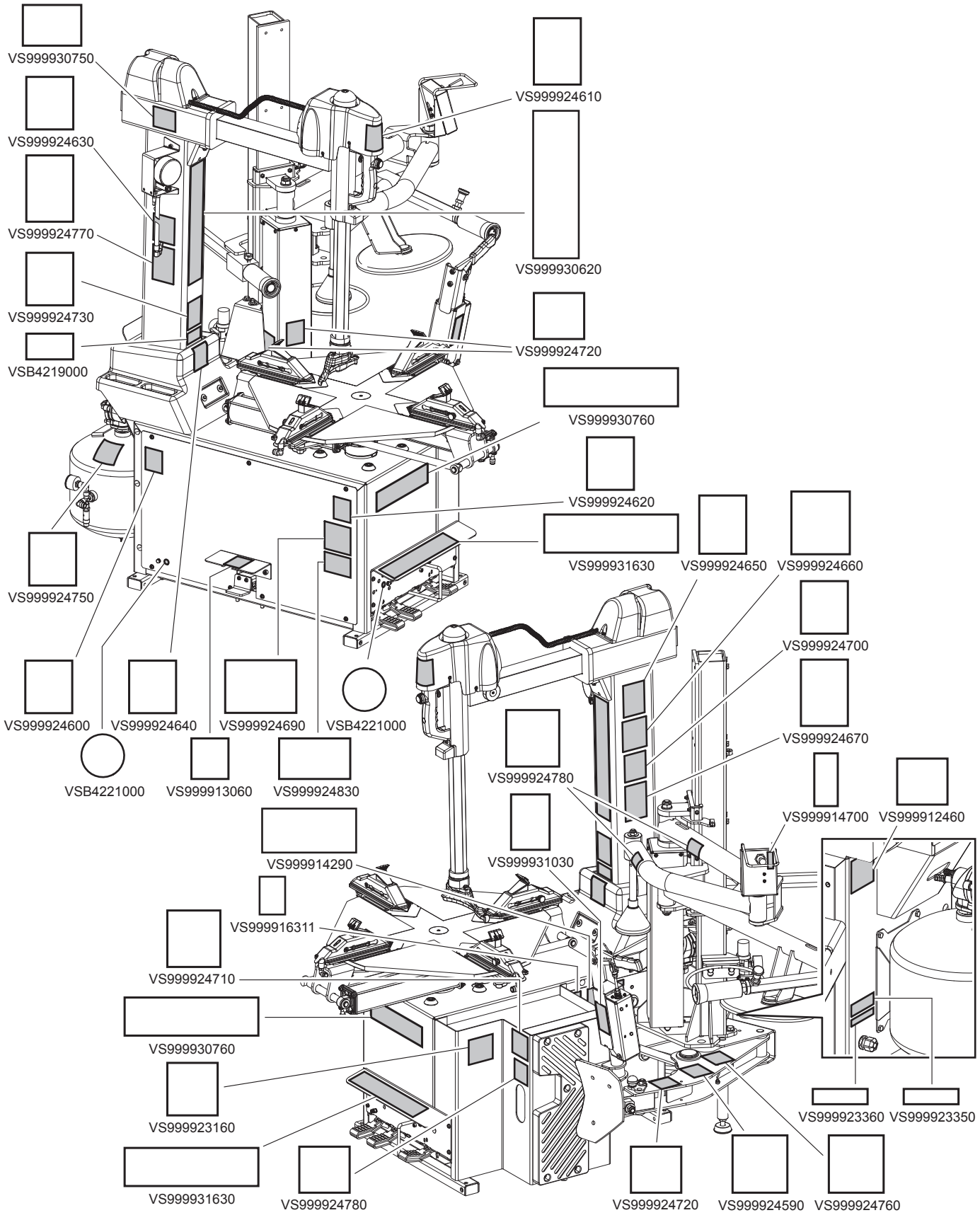



KEY

1 – Pedalboard
2 – Chuck
3 – Post
4 – Horizontal beam
5 – Toolhead
6 – Handgrip push button clamping/releasing the toolhead shaft and horizontal beam
7 – Handgrip
8 – Bead breaker shovel
9 – Pad
10 – Inflation pressure gage
11 – Air treatment assembly
12 – Pressure vessel
13 – Inflation pedal
14 – Bead breaker control handle
15 – Bead press device with rotating arm
16 – Pusher roller
17 – Bead press tool
18 – Bead lifting disc
19 – Pusher arm
20 – Pusher roller
21 – Toolhead assembly kit
22 – Bead breaker shovel guard
23 – Tools protection set
24 – Mounting grease
25 - Brush
26 – Bead lifting lever
27 – Standard clamp adapters for alloy rims
28 – Thermal overcurrent circuit breaker

## PLATES LOCATION DRAWING

FIG. 2



| Code numbers of plates | |
|---|---|
| VSB4219000 | Rotation indicating nameplate |
| VSB4221000 | Grounding nameplate |
| VS999912460 | Supply pressure indicating nameplate |
| VS999913060 | Tubeless inflation pedal nameplate |
| VS999914290 | Serial number nameplate |
| VS999914700 | Bead press roller controls nameplate |
| VS999916311 | Rubbish skip nameplate |
| VS999923160 | Prop 65 Attention nameplate |
| VS999923350 | For indoor use only nameplate |
| VS999923360 | Disconnect power supply nameplate |
| VS999924590 | Crush hazard Bead breaker nameplate |
| VS999924600 | Electrical shock nameplate |
| VS999924610 | Crush hazard head nameplate |
| VS999924620 | Open machinery nameplate |
| VS999924630 | Possible fly debris nameplate |
| VS999924640 | Crush hazard bead break nameplate |
| VS999924650 | Be aware of tilt back nameplate |
| VS999924660 | Personal protection equipment nameplate |
| VS999924670 | “Deflate tire before” nameplate |
| VS999924690 | Danger risk of explosion nameplate |
| VS999924700 | Only one operator nameplate |
| VS999924710 | Crush hazard nameplate |
| VS999924720 | Pinch point nameplate |
| VS999924730 | Crush hazard nameplate |
| VS999924750 | Pressurized vessel nameplate |
| VS999924760 | Crush hazard nameplate |
| VS999924770 | ”Never exceed max. pressure” nameplate |
| VS999924780 | Crush hazard bead break nameplate |
| VS999924830 | “Don’t use below garage” nameplate |
| VS999930620 | Rotary logo nameplate |
| VS999930750 | QR code nameplate |
| VS999930760 | Equipment nameplate |
| VS999931030 | Bead breaker control nameplate |
| VS999931630 | 3 pedal symbol nameplate |

**NOTICE**

REPLACE ANY INFORMATION NAMEPLATE WHENEVER IT IS MISSING OR DIFFICULT TO READ.
QUOTE NAMEPLATE PART NUMBERS WHEN ORDERING.

**NOTICE**

SOME OF THE PICTURES IN THIS MANUAL HAVE BEEN OBTAINED FROM PICTURES OF PROTOTYPES, THEREFORE THE STANDARD PRODUCTION EQUIPMENT AND ACCESSORIES CAN BE DIFFERENT THAN PICTURED.

## 1.0 GENERAL INTRODUCTION

This manual is an integral part of the equipment and must be retained for the whole operating life of the equipment.
Carefully study this manual. It contains important instructions regarding FUNCTIONING, SAFE USE and MAINTENANCE.

### *1.1 Introduction*

Thanks for purchasing the R145D tire changer! The R145D is designed and built for professional garages. The tire changer is easy to use with safety in mind. Following the care and maintenance outlined in this tire changer manual your tire changer will provide years of service.

## 2.0 INTENDED USE

The equipment described in this manual is a tire changer that uses two systems:

- an electric motor coupled to a gearbox to handle the tire rotation, and
- a compressed air system to manage the movement of the pneumatic cylinder of the lateral bead breaker.

The equipment is to be used only for the mounting and demounting of any type of wheel with the whole rim (drop center and with bead) with diameters and width values mentioned in “Technical specifications” chapter.

**NOTICE**

THE MANUFACTURER DECLINES ANY LIBILITY FOR ANY INJURY OR DAMAGE OCCURRING CAUSED BY:

- IMPROPER OR ERRONEOUS USE OF THIS EQUIPMENT;
- ANY USE OF THIS EQUIPMENT NOT EXPLICITLY APPROVED WITHIN THIS MANUAL;
- REPAIRING OR MAINTENANCE OF THIS EQUIPMENT BY UNQUALIFIED PERSONNEL IF NOT EXPLICITLY AUTHORIZED WITHIN THIS MANUAL;
- USE OF ACCESSORIES NOT APPROVED BY THE MANUFACTURER WITH THIS EQUIPMENT;
- USE OF SPARE PARTS NOT APPROVED BY THE MANUFACTURER TO REPAIR THIS EQUIPMENT.

**⚠ CAUTION**

RISK OF LIMBS CRUSHING, PINCHING OR ENTANGLEMENT.
RISK OF BUMPING.
RISK OF EYE INJURIES.

THIS EQUIPMENT IS INTENDED FOR USE BY ONLY ONE OPERATOR AT A TIME.

USE OF THIS EQUIPMENT BY MORE THAN ONE OPERATOR CONCURRENTLY OR THE PRESENCE OF BYSTANDERS IN THE SERVICE AREA WHEN THIS EQUIPMENT IS USED OR SERVICED MAY LEAD TO INADVERTENT MOVING OF PARTS OF THIS EQUIPMENT AND CAUSE UPPER OR LOWER LIMBS BEING CRUSHED, PINCH OR ENTANGLED, OR BUMPING BODING, RESULTING IN INJURIES.

USE OF THIS EQUIPMENT BY MORE THAN ONE OPERATOR CONCURRENTLY OR THE PRESENCE OF BYSTANDERS IN THE SERVICE AREA WHEN THIS EQUIPMENT IS USED OR SERVICED MAY LEAD TO INADVERTENT ACTIVATION OF THE TIRE INFLATION SYSTEM AND CAUSE FLY DEBRIS RESULTING IN EYE INJURIES.

DO NOT HAVE THIS EQUIPMENT OPERATED OR OTHERWISE SERVED FOR BY MORE THAN ONE OPERATOR AT ANY GIVEN TIME.

KEEP BYSTANDERS OUT OF THE SERVICE AREA WHENEVER THIS EQUIPMENT IS USED OR SERVICED.

## *2.1 Training of personnel*

The equipment to be operated only by suitably trained and authorized personnel.

Given the complexity of the operations necessary to manage the equipment and carry out the operations safely and efficiently, the personnel must be trained in such a way that they learn all the information necessary to operate the equipment as intended by the manufacturer.

**NOTICE**

CAREFULLY READING THIS INSTRUCTION MANUAL AND A SHORT PERIOD OF TRAINING BY SKILLED PERSONNEL REPRESENT A SATISFACTORY FORM OF TRAINING.

## 3.0 SAFETY DEVICES

This equipment is equipped with:

- a number of fixed guards intended to prevent potential crushing, cutting, compression and electrical shock hazards.

**⚠ DANGER**

RISK OF ELECTROCUTION.

OPERATING OR SERVICING THIS EQUIPMENT WITHOUT PROPERLY INSTALLED FIXED GUARDS MAY EXPOSE TO ELECTRICAL SHOCK HAZARD AND MAY RESULT IN SERIOUS INJURIES OR DEATH.

NO USER-SERVICEABLE PARTS ARE FOUND BEHIND FIXED GUARDS.

DO NOT TAMPER WITH OR OTHERWISE MODIFY FIXED GUARDS.

DO NOT OPERATE THIS EQUIPMENT WITHOUT PROPERLY INSTALLED FIXED GUARDS.

DISCONNECT THIS EQUIPMENT FROM ALL POWER SOURCES BEFORE SERVICING.

IN CASE FIXED GUARDS ARE DAMAGED OR OTHERWISE DEFECTIVE:

- DO NOT USE THIS EQUIPMENT;
- DISCONNECT THIS EQUIPMENT FROM ALL POWER SOURCES IMMEDIATELY;
- HAVE DEFECTIVE GUARDS REPLACED BY A QUALIFIED TECHNICIAN.

**⚠ CAUTION**

RISK OF CRUSHING OR ENTAGLEMENT.

OPERATING OR SERVICING THIS EQUIPMENT WITHOUT PROPERLY INSTALLED FIXED GUARDS MAY EXPOSE TO OPEN MACHINERY HAZARD AND MAY RESULT IN INJURIES.

NO USER-SERVICEABLE PARTS ARE FOUND BEHIND FIXED GUARDS.

DO NOT TAMPER WITH OR OTHERWISE MODIFY FIXED GUARDS.

DO NOT OPERATE THIS EQUIPMENT WITHOUT PROPERLY INSTALLED FIXED GUARDS.

DISCONNECT THIS EQUIPMENT FROM ALL POWER SOURCES BEFORE SERVICING.

IN CASE FIXED GUARDS ARE DAMAGED OR OTHERWISE DEFECTIVE:

- DO NOT USE THIS EQUIPMENT;
- DISCONNECT THIS EQUIPMENT FROM ALL POWER SOURCES IMMEDIATELY;
- HAVE DEFECTIVE GUARDS REPLACED BY A QUALIFIED TECHNICIAN.

**⚠CAUTION**

RISK OF UPPER LIMBS CRUSHING.

WHEN BREAKING BEADS (SEE PAR. “BEAD BREAKING”) INADVERTENT OPERATION OF THE PEDAL CONTROLLING CHUCK ROTATION MAY LEAD TO CRUSHING OPERATOR’S HAND BETWEEN THE CHUCK AND THE WHEEL.

A FIXED GUARD (“PEDAL GUARD) (Fig. 3 ref. 1) IS SET BY THE PEDAL CONTROLLING CHUCK ROTATION (SEE PAR. “CONTROLS” AND FIGURE BELOW) TO PREVENT INADVERTENT OPERATION OF THE PEDAL CONTROLLING CHUCK ROTATION.

DO NOT TAMPER WITH OR OTHERWISE MODIFY THE PEDAL GUARD.

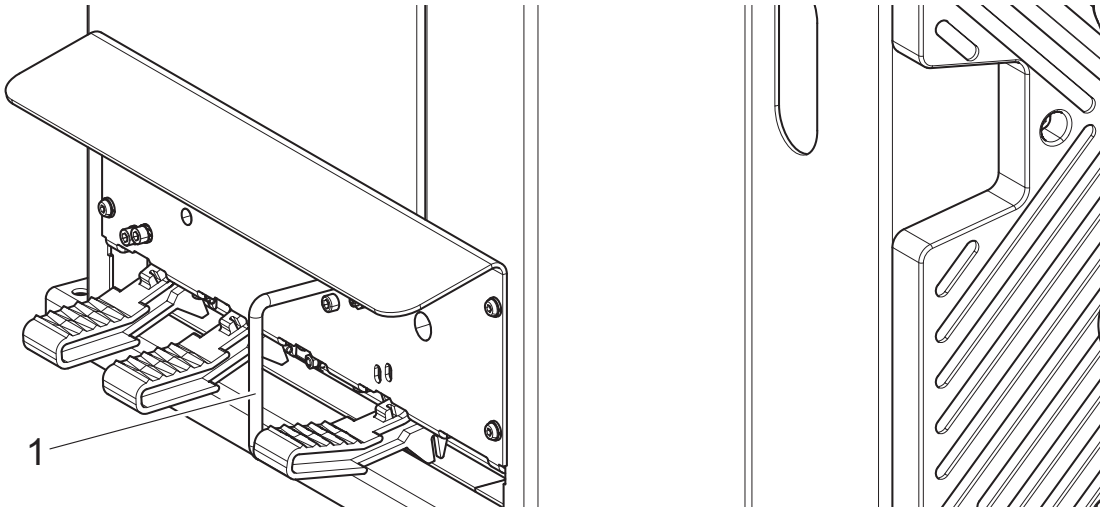
DO NOT OPERATE THIS EQUIPMENT WITHOUT PROPERLY INSTALLED PEDAL GUARDS.

DISCONNECT THIS EQUIPMENT FROM ALL POWER SOURCES BEFORE SERVICING.

IN CASE FIXED GUARDS ARE DAMAGED OR OTHERWISE DEFECTIVE:

- DO NOT USE THIS EQUIPMENT;
- DISCONNECT THIS EQUIPMENT FROM ALL POWER SOURCES IMMEDIATELY;
- HAVE THE DEFECTIVE GUARD REPLACED BY A QUALIFIED TECHNICIAN.

Fig. 3




- Hold-to-run control devices (immediate stop by releasing control) for: chuck rotation, bead breaker shovel motion, inflating; other drives such as rim clamping on chuck, disassembly/assembly toolhead clamping cannot be of the hold-to-run type, seen their function. In these cases safety is guaranteed by compliance with indications or precautions on equipment residual risks (warning nameplates) also mentioned in the user’s guide.

**⚠CAUTION**

RISK OF UPPER AND LOWER LIMBS CRUSHING, OR ENTAGLEMENT.

OPERATING THE TIRE CHANGER IN CASE HOLD-TO-RUN CONTROL DEVICES DO NOT AUTONOMOUSLY RETURN TO THEIR REST POSITION ONCE REALEASED MAY LEAD TO INJURIES.

DO NOT OPERATE THIS EQUIPMENT IN CASE HOLD-TO-RUN CONTROL DEVICES DO NOT AUTONOMOUSLY RETURN TO THEIR REST POSITION.

IN CASE HOLD-TO-RUN CONTROL DEVICES DO NOT AUTONOMOUSLY RETURN TO THEIR REST POSITION:

- DO NOT USE THIS EQUIPMENT;
- DISCONNECT THIS EQUIPMENT FROM ALL POWER SOURCES IMMEDIATELY;
- HAVE DEFECTIVE CONTROLS REPAIRED BY A QUALIFIED TECHNICIAN.

- pressure gage for tire inflation pressure reading.

**⚠ DANGER**

RISK OF TIRE EXPLOSION.

EXCEEDING MAXIMUM TIRE INFLATION PRESSURE AS DICTATED BY THE TIRE MANUFACTURER MAY LEAD TO TIRE EXPLOSION AND RESULT IN SEVERE INJURIES OR DEATH.

DO NOT TAMPER WITH OR OTHERWISE MODIFY THE PRESSURE GAGE FOR READING TIRE INFLATION PRESSURE.

IN CASE THE PRESSURE GAGE IS DAMAGED OR OTHERWISE DEFECTIVE:

- DO NOT INFLATE TIRES USING THE TIRE INFLATION SYSTEM THIS EQUIPMENT IS PROVIDED WITH;
- HAVE THE PRESSURE GAGE REPLACED BY A QUALIFIED TECHNICIAN.

- Pressure relief fitted on compressed air reservoir.

**⚠ DANGER**

RISK OF EXPLOSION.

TAMPERING WITH OR OTHERWISE MODIFYING THE PRESSURE VESSEL OR THE PRESSURE RELIEF MAY LEAD TO EXPLOSION OF THE PRESSURISED VESSEL OR PRESSURISED AIR EJECTION, AND RESULT IN SERIOUS INJURIES OR DEATH.

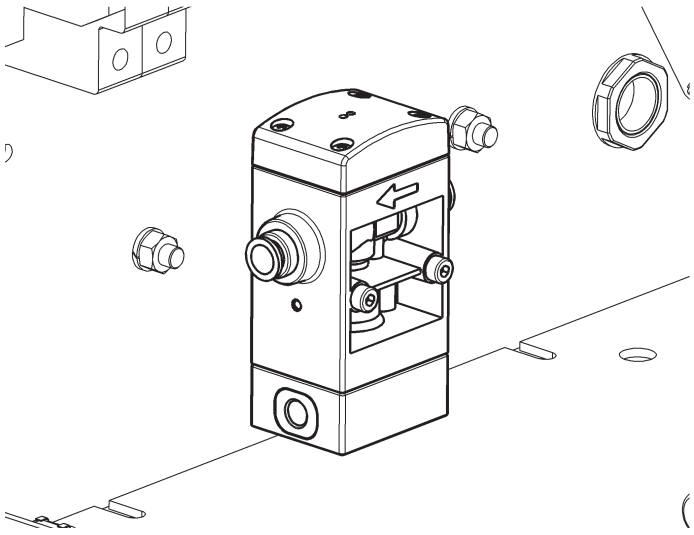
DO NOT TAMPER WITH OR OTHERWISE MODIFY THE PRESSURE VESSEL OR THE PRESSURE RELIEF.

IN CASE THE PRESSURE VESSEL OR THE PRESSURE RELIEF ARE DAMAGED OR OTHERWISE DEFECTIVE:

- DO NOT USE THIS EQUIPMENT;
- DISCONNECT THIS EQUIPMENT FROM ALL POWER SUPPLIES;
- HAVE DEFECTIVE PARTS REPLACED BY A QUALIFIED TECHNICIAN.

- non-adjustable (balancing valve) pressure limiter.
  This allows tire beads to be set without overpressure. Inflation of tires to over 4.2 ± 0.2 bar (60 ± 3 psi) is not allowed (see Fig. 4).

Fig. 4



**⚠ DANGER**

RISK OF TIRE EXPLOSION.

TAMPERING WITH OR OTHERWISE MODIFYING THE TIRE INFLATION PRESSURE LIMITING DEVICE MAY LEAD TO TIRE EXPLOSION, AND RESULT IN SERIOUS INJURIES OR DEATH.

DO NOT TAMPER WITH OR OTHERWISE TIRE INFLATION PRESSURE LIMITING DEVICE.

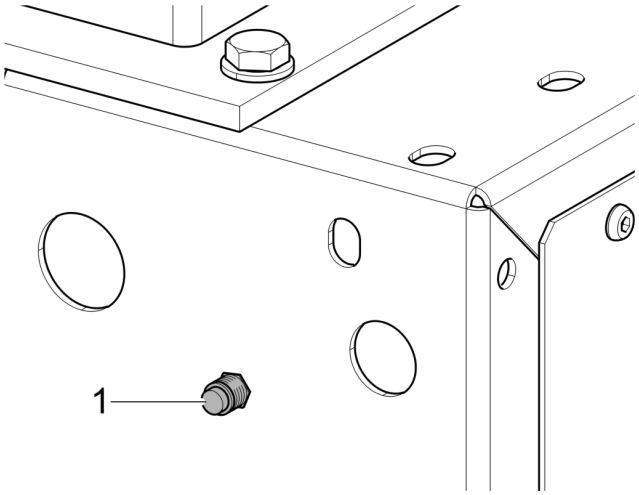
DO NOT REPLACE THE TIRE INFLATION PRESSURE LIMITING DEVICE WITH ANY OTHER TYPE OF PRESSURE LIMITING DEVICE.

IN CASE THE TIRE INFLATION PRESSURE LIMITING DEVICE IS DAMAGED OR OTHERWISE DEFECTIVE:

- DO NOT INFLATE TIRES USING THE TIRE INFLATION SYSTEM THIS EQUIPMENT IS PROVIDED WITH;
- HAVE THE TIRE INFLATION PRESSURE LIMITING DEVICE REPLACED BY A QUALIFIED TECHNICIAN.

- Manually resettable circuit breaker against motor overloads. The circuit breaker is provided with a push-button to reset it. The circuit breaker can be reset in case it trips by depressing a push-button (Fig. 5 ref. 1) placed on the rear of the tire changer.

Fig. 5




**⚠ DANGER**

RISK OF FIRE OR ELECTROCUTION.

TAMPERING WITH OR OTHERWISE MODIFYING THE CIRCUIT BREAKER MAY LEAD TO FIRES OR ELECTRICAL SHOCK, AND RESULT IN SERIOUS INJURIES.

DO NOT TAMPER OR OTHERWISE MODIFY THE CIRCUIT BREAKER OR ITS WIRING.

DO NOT KEEP THE CIRCUIT BREAKER RESET BUTTON DEPRESSED WHILE OPERATING THE TIRE CHANGER.

IN CASE THE CIRCUIT BREAKER IS DAMAGED OR OTHERWISE DEFECTIVE:

- DO NOT USE THIS EQUIPMENT;
- DISCONNECT THIS EQUIPMENT FROM ALL POWER SUPPLIES;
- HAVE THE CIRCUIT BREAKER REPLACED BY A QUALIFIED TECHNICIAN.

- Motor protection devices.
  The “Invemotor” is equipped with electronic protection devices. They stop the motor to avoid damaging the motor and compromising the operator safety (overvoltage, overload, overtemperature).

**⚠ DANGER**

RISK OF FIRE OR ELECTROCUTION.

TAMPERING WITH OR OTHERWISE MODIFYING THE PROTECTION DEVICES MAY LEAD TO FIRES OR ELECTRICAL SHOCK, AND RESULT IN SERIOUS INJURIES.

DO NOT TAMPER OR OTHERWISE MODIFY THE INVEMOTOR OR ITS WIRING.

IN CASE THE CIRCUIT BREAKER IS DAMAGED OR OTHERWISE DEFECTIVE:

- DO NOT USE THIS EQUIPMENT;
- DISCONNECT THIS EQUIPMENT FROM ALL POWER SUPPLIES;
- HAVE THE CIRCUIT BREAKER REPLACED BY A QUALIFIED TECHNICIAN.

### *3.1 Residual risks*

The equipment was subjected to a complete analysis of risks according to reference standard EN ISO 12100.
Risks are as reduced as possible in relation with technology and equipment functionality.
This manual stresses possible residual risks, also highlighted in pictograms on the present manual and adhesive warning signals placed on the equipment: their location is represented in “PLATE DRAWING” (see Fig. 2).

## 4.0 IMPORTANT SAFETY INSTRUCTIONS

When using your garage equipment, basic safety precautions should always be followed, including the following:

1. read all instructions;
2. care must be taken as burns can occur from touching hot parts;
3. do not operate equipment with a damaged cord or in case the equipment has been dropped or damaged, until it has been examined by a qualified service person;
4. do not let a cord hang over the edge of the table, bench, or counter or come in contact with hot manifolds or moving fan blades;
5. if an extension cord is necessary, a cord with a current rating equal to or more than that of the equipment should be used. Cords rated for less current than the equipment may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled;
6. always unplug equipment from electrical outlet when not in use. Never use the cord to pull the plug from the outlet. Grasp plug and pull to disconnect;
7. let equipment cool completely before putting away. Loop cord loosely around equipment when storing;
8. to reduce the risk of fire, do not operate equipment in the vicinity of open containers of flammable liquids (gasoline);
9. adequate ventilation should be provided when working on operating internal combustion engines;
10. keep hair, loose clothing, fingers, and all parts of body away from moving parts.
11. to reduce the risk of electric shock, do not use on wet surfaces or expose to rain;
12. use only as described in this manual. Use only manufacturer's recommended attachments.
13. ALWAYS WEAR SAFETY GLASSES. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses.

**SAVE THESE INSTRUCTIONS**

### *4.1 General safety rules*

- The manufacturer declines any responsibility for damages or injuries caused by this equipment in case this equipment is tampered with or otherwise modified without authorization by the manufacturer.
- Removing of or tampering with the safety devices, the fixed repair or the warning signals placed on this equipment may lead to serious hazards and represents a transgression of safety regulations.
- Operators may only perform maintenance indicated in paragraph “Maintenance that can be performed by operators”.
  Any other form of servicing of this equipment shall be performed by qualified service technicians.
- This equipment is intended for indoor use only. Do not install or use this equipment outdoors.
- The equipment shall be used only in areas free from the danger of explosion or fire.
- The use of original accessories and spare parts only is advised. This equipment is designed to operate with original accessories only.
- The installation must be performed by qualified personnel in full compliance with the instructions given below.
- Ensure that there are no dangerous situations during the equipment operating maneuvers. Immediately stop the equipment if it malfunctions and contact the customer service of the authorized dealer.
- In emergency situations and before carrying out any maintenance or repairs, disconnect all supplies to the equipment, cutting electrical and/or pneumatic power supply off by using the main switch (on models with electric drive unit only).
- Ensure that the area around the equipment is free of potentially dangerous objects and that the area is oil free since this could damage the tire. Oil on the floor is also a slipping hazard for the operator.

**NOTICE**

THE MANUFACTURER DECLINES ALL RESPONISIBILITIES FOR ANY INJURY OR DAMAGE OCCURRING IN CASE OF UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT OR USE OF SPARE PARTS OR ACCESSORIES NOT PROVIDED BY THE MANUFACTURER OR ITS AUTHORIZED DISTRIBUTORS.

**⚠WARNING**

RISK OF ENTAGLEMENT, CRUSHING, EYE INJURY AND HEARING DAMAGE.

OPERATORS MUST WEAR SUITABLE WORK CLOTHES, PROTECTIVE GOGGLES, PROTECTIVE GLOVES, PROTECTIVE SHOES, AND POSSIBLY LOWER BACK SUPPORTS FOR THE LIFTING OF HEAVY PARTS WHENEVER THIS EQUIPMENT IS USED, SERVICED, MOBILIZED OR SERVICED.

DANGLING OBJECTS LIKE BRACELETS MUST NOT BE WORN, AND LONG HAIR MUST BE TIED UP.

FAILURE TO COMPLY WITH THE PRESCRIPTIONS ABOVE MAY LEAD TO INJURIES, EVEN SERIOUS ONES, TO THE OPERATOR’S SIGHT, HEARING, OR UPPER AND LOWER LIMBS.

WHEN USING THIS EQUIPMENT SUDDEN NOISE LEVEL PEAKS MAY BE EXPERIENCED BY THE OPERATOR, LEADING TO HEARING DAMAGE.

WEAR HEARING PROTECTORS.

- The equipment handles and operating grips must be kept clean and free from oil.
- The workshop must be kept clean and dry and not in an out doors location. Make sure that the working premises are properly lit.
  The equipment can be operated by a single operator at a time. Unauthorized personnel must remain outside the working area, as shown in Fig. 8.
  Avoid any hazardous situations. Do not use this equipment when the shop is damp or the floor slippery and do not use this equipment out of doors.
- During inflation do not lean on the tire or stand on it; when beading in the tire, keep hands away from tire and rim edge.
- During inflation always stay to the side of the equipment and never in front of it.
- When operating and servicing this equipment, carefully follow all applicable safety and accident-prevention precautions. The equipment must not be operated by untrained personnel.

## 5.0 PACKING AND MOBILIZATION FOR TRANSPORT

**NOTICE**

HAVE THIS EQUIPMENT HANDLED BY QUALIFIED PERSONNEL ONLY.

THE LIFTING EQUIPMENT RATED LOAD MUST BE EQUAL TO OR HIGHER THAN THE GROSS WEIGHT OF THIS EQUIPMENT (SEE "TECHNICAL SPECIFICATIONS" PARAGRAPH).

**⚠ CAUTION**

RISK OF UPPER AND LOWER LIMBS CRUSHING.

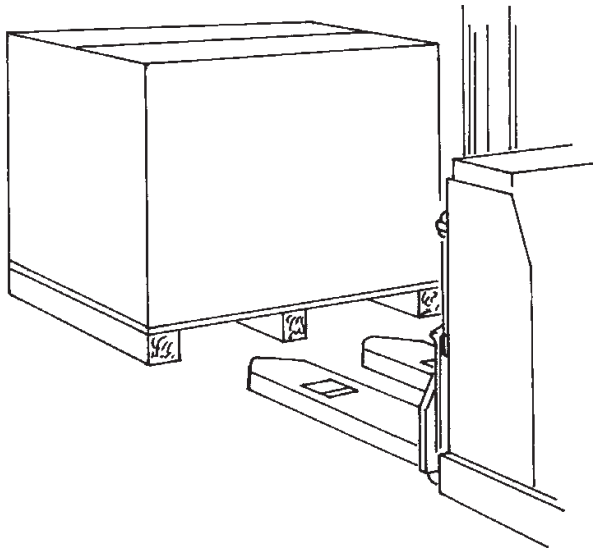
HANDS AND FEET MAY GET CRUSHED BELOW THIS EQUIPMENT PACKAGING.

STAND CLEAR OF THIS EQUIPMENT PACKAGING WHENEVER IT IS MOBILIZED.

WEAR SAFETY GLOVES AND SHOES WHEN MOBILIZING THIS EQUIPMENT PACKAGING.

The equipment is supplied packed in a cardboard box.
Movement must be by pallet-lift or fork-lift trolley.
The fork lifting points are indicated on the packing (see Fig. 6).

Fig. 6



## 6.0 UNPACKING

**⚠ CAUTION**

RISK OF LIMBS PUNCTURE, CUT OR CRUSHING.

WHILE UNPACKING THIS EQUIPMENT, REMOVED PACKAGING MATERIAL MAY PUNCTURE OR CUT THE OPERATOR HANDS AND FEET AND MAY CRUSH THE OPERATOR'S FEET.

ALWAYS WEAR PROTECTIVE GLOVES AND SHOES WHEN UNPACKING THIS EQUIPMENT.

The cardboard box is supported with plastic strapping. Cut the strapping with suitable scissors. Use a small knife to cut along the lateral axis of the box and open it like a fan. It is also possible to unnail the cardboard box from the pallet it is fixed to. After removing the packing, and in the case of the equipment packed fully assembled, check that the equipment is complete and that there is no visible damage. If in doubt do not use the equipment and refer to professionally qualified personnel (to the seller).
The packing (plastic bags, expanded polystyrene, nails, bolts, timber, etc.) should not be left within reach of children since it is potentially dangerous. These materials should be deposited in the relevant collection points if they are pollutants or non biodegradable.

***NOTICE***

THE BOX CONTAINING THE ACCESSORIES IS CONTAINED IN THE WRAPPING. DO NOT THROW IT AWAY WITH THE PACKING.

## 7.0 MOBILIZATION

**NOTICE**

HAVE THIS EQUIPMENT HANDLED BY QUALIFIED PERSONNEL ONLY.

THE LIFTING EQUIPMENT RATED LOAD MUST BE EQUAL TO OR HIGHER THAN THE NET WEIGHT OF PRODUCT (SEE "TECHNICAL SPECIFICATIONS" PARAGRAPH).

**⚠ CAUTION**

RISK OF LIMBS CRUSHING.

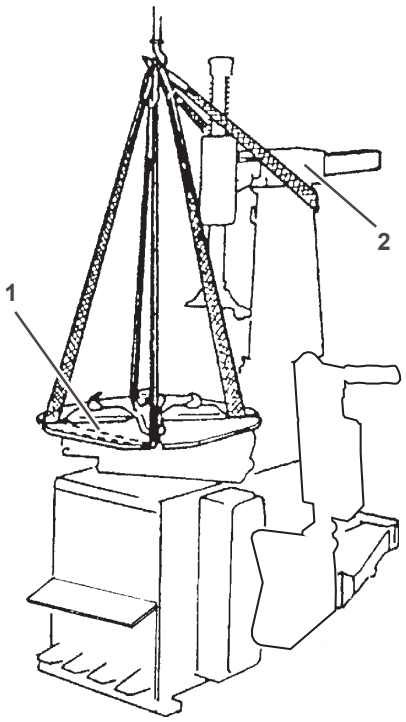
HANDS AND FEET MAY GET CRUSHED BELOW THIS EQUIPMENT.

STAND CLEAR OF THIS EQUIPMENT WHENEVER IT IS MOBILIZED.

To place this equipment in its desired work position or if this equipment has to be moved from its normal working position, the movement must be conducted following the instructions listed below (see Fig. 7):

- close completely chuck jaws;
- turn the chuck until its straight sides are aligned with equipment sides;
- disconnect all equipment power supply sources;
- move to central position the arm (Fig. 7 ref. 2);
- remove horizontal arm guard by removing the provided fixing bolts;
- sling the equipment using belts with a minimum width of 60 mm (2.36");
- pass the first belt behind the horizontal arm as shown in the figure;
- pass the second belt between the two front openings of chuck plate (Fig. 7 ref. 1);
- pass the third belt between the two rear openings of chuck plate (Fig. 7 ref. 1);
- tie up support belt ends above the equipment using a suitable belt ring;
- lift and transport with suitable device with adequate dimensions.

Fig. 7



## 8.0 WORKING ENVIRONMENT CONDITIONS

**NOTICE**

INSTALL THIS EQUIPMENT INDOORS.

PLACE OF INSTALLATION MUST BE DRY, ADEQUATELY LIT AND IN COMPLIANCE WITH APPLICABLE SAFETY REGULATIONS.

The equipment must be operated under proper conditions as follows:

- temperature: +5 °C - +40 °C (+41 °F - +104 °F);
- relative humidity: 30 - 95% (dew-free);
- atmospheric pressure: 860 - 1060 hPa (mbar) (12.5 - 15.4 psi).

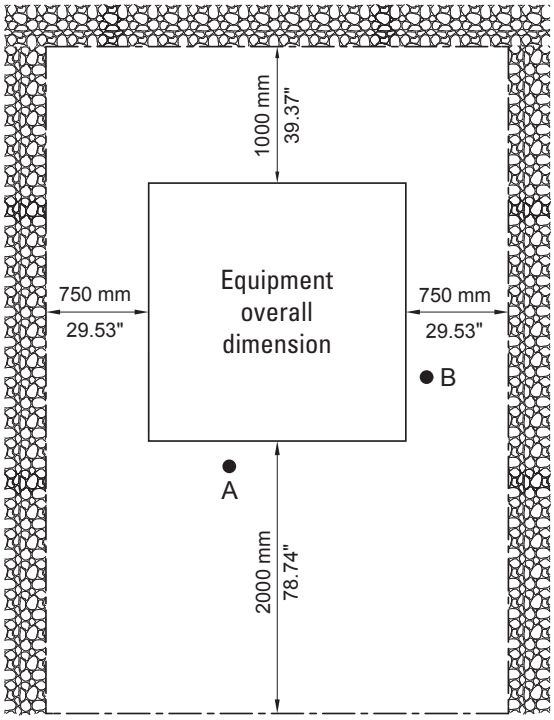
The use of the equipment in ambient conditions other than those specified above is only allowed after prior agreement with and approval of the manufacturer.

## *8.1 Work position*

In Fig. 8 it is possible to identify work positions A and B.
Position A is the main position for wheel fitting and removal with the chuck, while position B is ideal to follow wheel bead breaking operations.
Working in these positions allows better precision and speed during operating phases as well as greater safety for the operator.

## *8.2 Installation space*

Fig. 8




The location of the equipment requires a usable space as indicated in Fig. 8. The positioning of the equipment must be executed according to the distances shown. From the control position the operator is able to observe all the equipment and surrounding area. Operator must prevent unauthorized personnel or objects that could be dangerous from entering the area.
The equipment must be secured on a flat floor surface, preferably of cement or tiled. Avoid yielding or irregular surfaces.
The base floor must be able to support the loads transmitted during operation. This surface must have a capacity load of at least 500 kg/$m^2$ (100 lb/$ft^2$).
The depth of the solid floor must be sufficient to guarantee that the anchors hold.

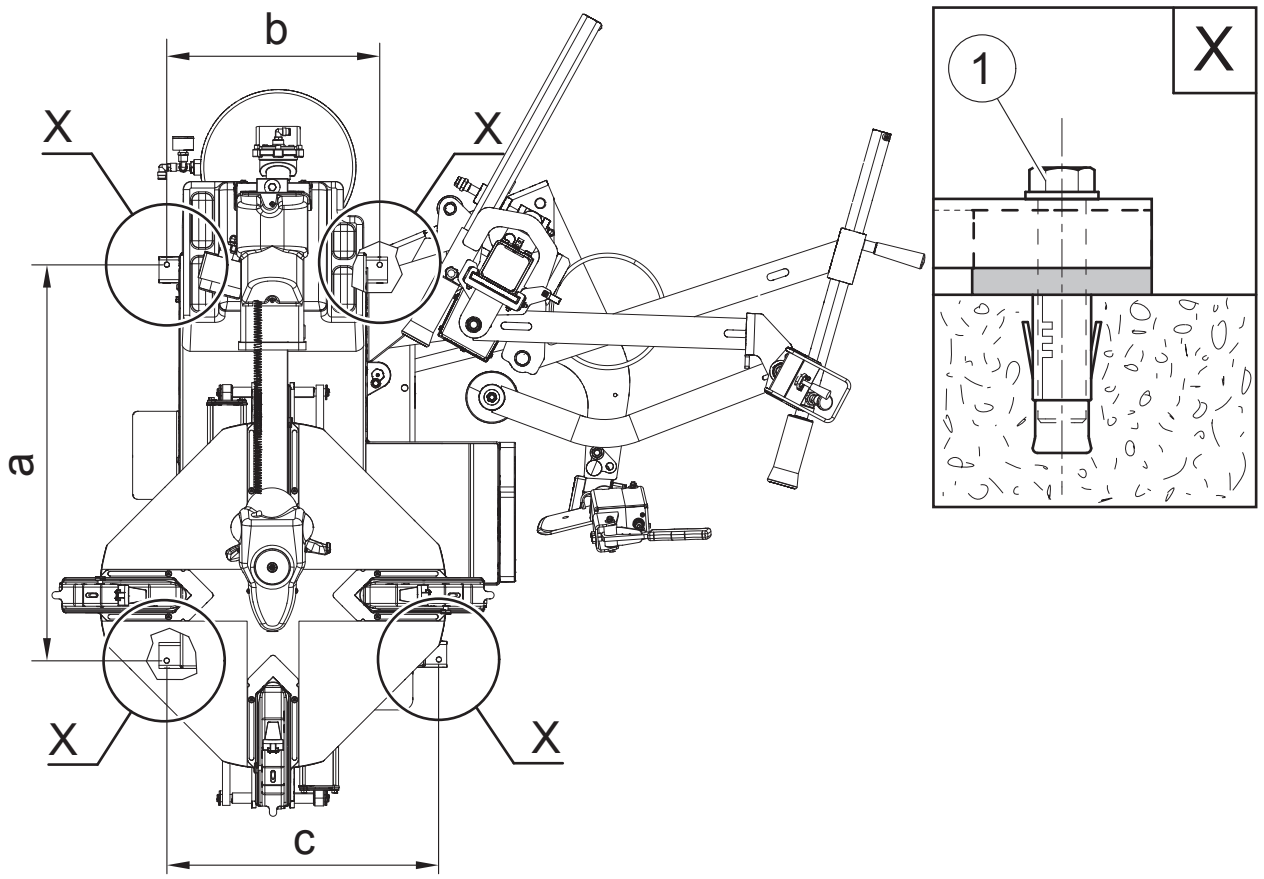
## *8.3 Lighting*

The environment the equipment is installed in must be provided with lighting meeting applicable regulations for working environments.

## 9.0 ANCHORING SYSTEM

The packed equipment is secured to the support pallet through the holes on the frame and indicated in the figure below. These holes can be used to secure the equipment to the floor, using suitable concrete anchors (not included). Before concrete anchoring to floor, check that all the anchor points are flat, or level in contact with the floor. If not, shim between the equipment and the floor, as indicated in Fig. 9.

Fig. 9




a= 762 mm / 30”
b= 410 mm / 16.14”
c= 525 mm / 20.67”

- To secure the equipment to the floor, use anchoring bolts/studs (Fig. 9 ref. 1) with a threaded shank M8 (UNC 5/16) suitable for the floor on which the tire changer will be secured and in a number equal to the number of mounting holes on the bottom frame;
- drill holes in the floor, suitable for inserting the chosen anchors, in correspondence with the holes on the bottom frame;
- insert the anchors into the holes drilled in the floor through the holes on the bottom frame and tighten the anchors;
- tighten the anchors on the base frame and torque as indicated by the manufacturer of the anchors.

## 10.0 ASSEMBLY AND PREPARATION FOR USE

**⚠ DANGER**

RISK OF ELECTROCUTION, FIRE, BUMPING, CRUSHING, ENTANGLEMENT, SHEARING OR EYE INJURIES.

DO NOT CONNECT THIS EQUIPMENT TO EITHER ELECTRICAL OR PNEUMATIC POWER SUPPLY BEFORE COMPLETING ASSEMBLING.

ASSEMBLING THIS EQUIPMENT WHILE IT IS CONNECTED TO EITHER ELECTRICAL OR PNEUMATIC POWER SUPPLY MAY LEAD TO INADVERTENT MOVEMENTS, COMPRESSED AIR EJECTION OR ELECTROCUTION, RESULTING IN MATERIAL DAMAGES, SERIOUS INJURIES OR DEATH.

ASSEMBLING AND PREPARATION FOR USE OF THIS EQUIPMENT MUST BE CARRIED OUT BY PROFESSIONALLY QUALIFIED TECHNICIANS.

ASSEMBLING AND PREPARATION FOR USE OF THIS EQUIPMENT BY UNQUALIFIED PERSONNEL MAY RESULT IN MATERIAL DAMAGES OR SERIOUS INJURIES, OR DEATH.

**⚠ CAUTION**

RISK OF UPPER LIMBS CRUSHING.

HANDS MAY GET CRUSHED WHEN ASSEMBLYING PARTS TO PREPARE THIS EQUIPMENT FOR USE.

KEEP HANDS OFF MATING SURFACES AT ALL TIMES.

**⚠ CAUTION**

RISK OF LOWER LIMBS CRUSHING.

FEET MAY GET CRUSHED WHEN ASSEMBLING PARTS TO PREPARE THIS EQUIPMENT FOR USE, IN CASE PARTS FALL TO THE GROUND.

ENSURE PARTS ARE PROPERLY SECURED.

After having removed the various components from the packing, check that they are complete, there is no damage to anything, then use the following instructions for the assembly of the components making use of the attached series of illustrations.

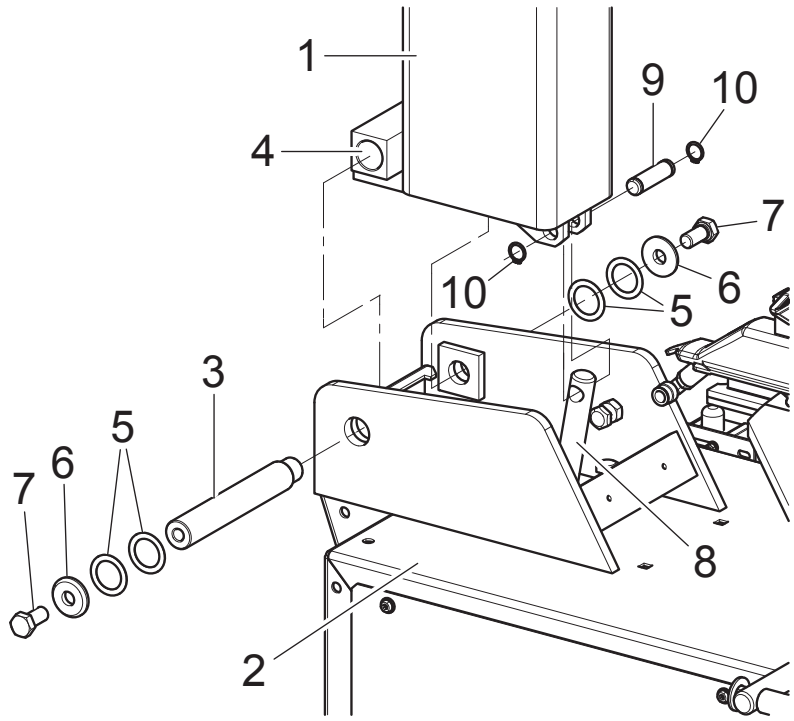
## *10.1 Assembly procedures*

## *10.2 Post assembly*

In case the post is supplied demounted, proceed following the instructions below:

1. remove the fixing elements needed to secure equipment to the pallet;
2. unpack the vertical post (Fig. 10 ref. 1) and put it vertically onto the base;
3. put the post (Fig. 10 ref. 1) onto the base (Fig. 10 ref. 2) and fit the pin (Fig. 10 ref. 3) into the special hole (Fig. 10 ref. 4) and block it through the washers (Fig. 10 ref. 5), the spacers (Fig. 10 ref. 6) and the bolts (Fig. 10 ref. 7). Secure the rod of post turnover control (Fig. 10 ref. 8) cylinder using the pin (Fig. 10 ref. 9) and the seegers (Fig. 10 ref. 10).

Fig. 10

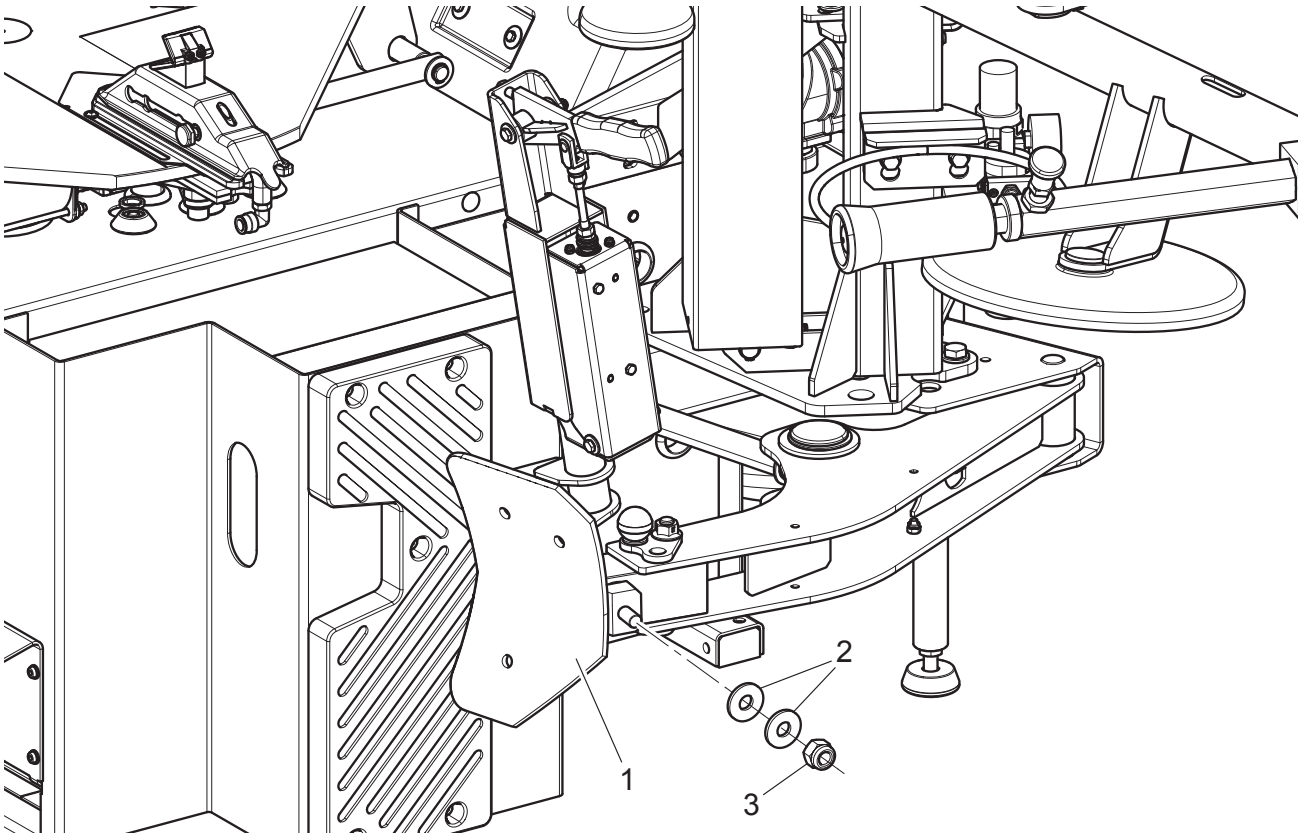



4. at the end mount the post covering using the supplied bolts and washers.

### *10.3 Bead breaking shovel assembly*

Secure the beading arm vane (Fig. 11 ref. 1) using the washers (Fig. 11 ref. 2) and the nut (Fig. 11 ref. 3), supplied (nut and washers are clamped on the bead breaker vane).

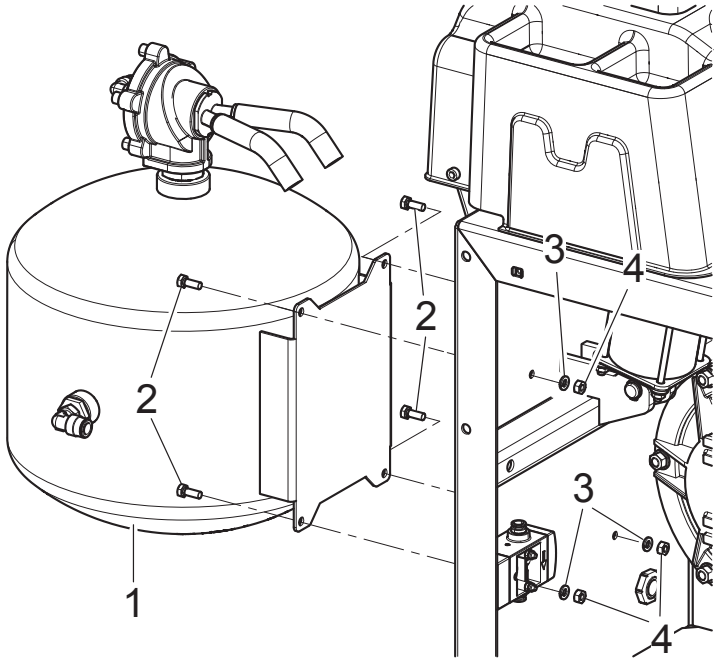
Fig. 11




### *10.4 Mounting pressure vessel*

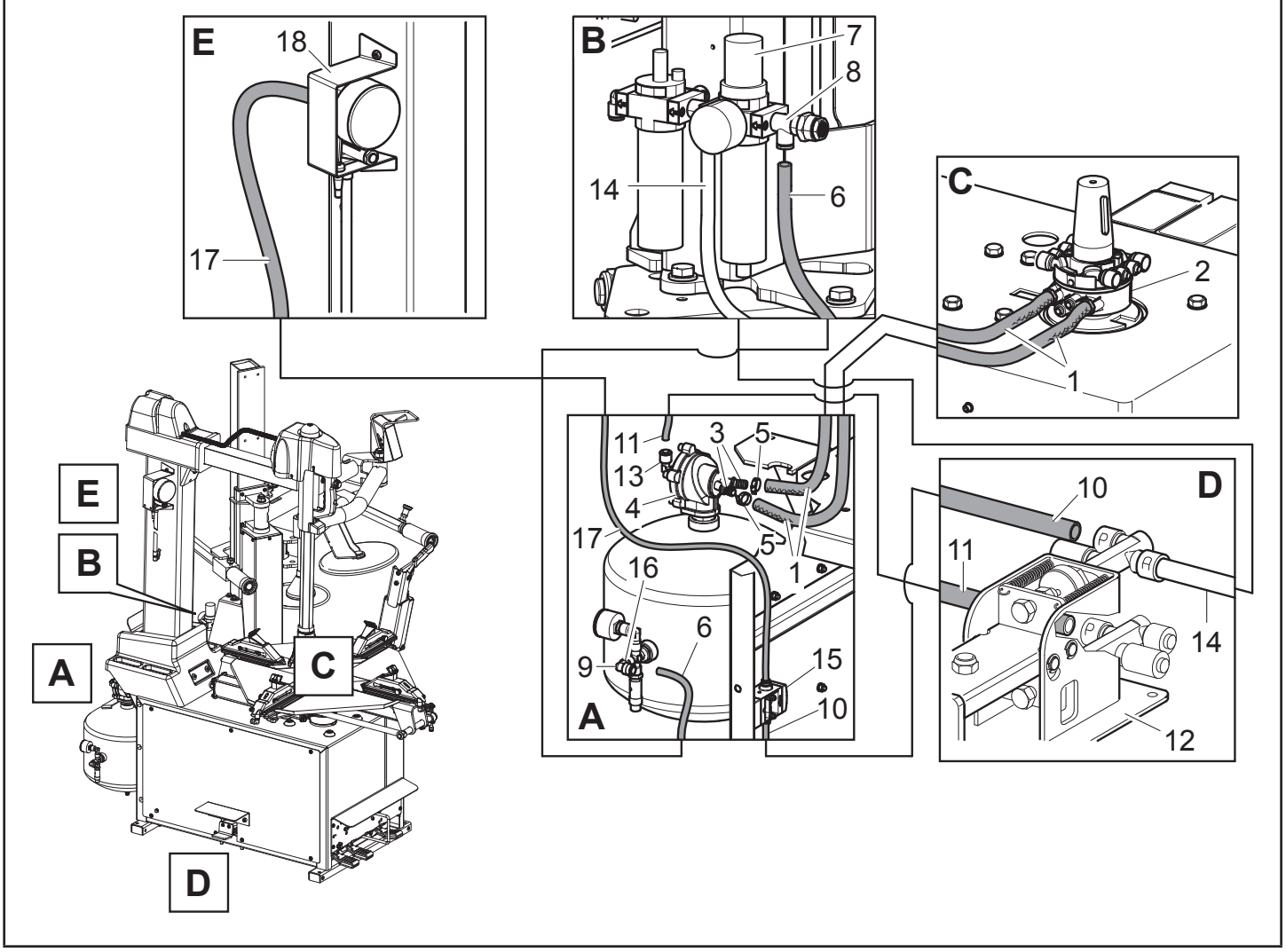
1. Mount the pressure vessel (Fig. 12 rif. 1) on the base rear part, as shown in Fig. 12, using the bolts (Fig. 12 ref. 2) (tightening torque approx. 8 Nm - 6 ft·lbs), the washers (Fig. 12 ref. 3) and the nuts (Fig. 12 ref. 4);

Fig. 12



2. connect the flexible hoses (Fig. 13 ref. 1) preassembled on the chuck rotating distributor (Fig. 13 ref. 2) on the valve (Fig. 13 ref. 3) hose nipple (Fig. 13 ref. 4). Fasten the hoses (Fig. 13 ref. 1) with the prepared clamps (Fig. 13 ref. 5).
3. connect the hose (Fig. 13 ref. 14) from the grease reduction gear filter (Fig. 13 ref. 7) (air not lubricated) to the pedalboard (Fig. 13 ref. 12);
4. connect the hose (Fig. 13 ref. 11) from the pedalboard lower valve (Fig. 13 ref. 12) to the blow valve (Fig. 13 ref. 13) fitting (Fig. 13 ref. 4);
5. connect the hose (Fig. 13 ref. 6) to the T-fitting (Fig. 13 ref. 8) and the fitting (Fig. 13 ref. 16) placed on the pressure vessel (Fig. 13 ref. 9);
6. connect the hose (Fig. 13 ref. 10) from the valve (Fig. 13 ref. 15) to the pedalboard (Fig. 13 ref. 12);
7. connect the hose (Fig. 13 ref. 17) from the valve (Fig. 13 ref. 15) to the inflation assembly (Fig. 13 ref. 18).

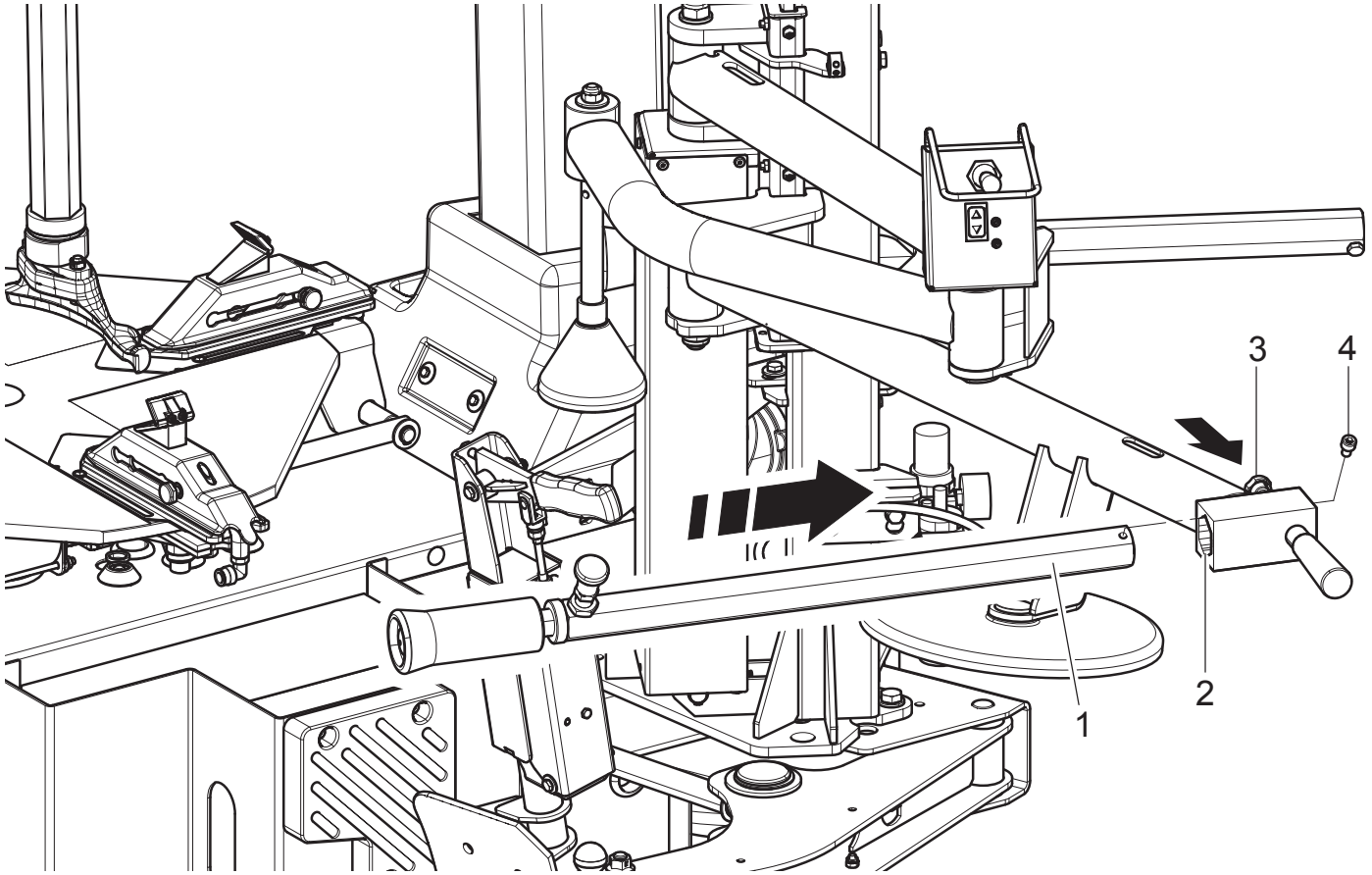
Fig. 13



### *10.5 Hexagonal shaft with roller assembly*

Fit the hexagonal shaft with roller (Fig. 14 ref. 1) into the proper seat (Fig. 14 ref. 2) locking it with the knob (Fig. 14 ref. 3). Finally, screw the bolt (Fig. 14 ref. 4) to the hexagonal shaft with roller (Fig. 14 ref. 1).

Fig. 14



## *10.6 Connection to the compressed air supply*

**⚠WARNING**

RISK OF COMPRESSED AIR EJECTION.

CONNECTION OF THIS EQUIPMENT TO THE COMPRESSED AIR SUPPLY MUST BE CARRIED OUT BY PROFESSIONALLY QUALIFIED TECHNICIANS.

CONNECTION OF THIS EQUIPMENT TO THE COMPRESSED AIR SUPPLY BY UNQUALIFIED PERSONNEL MAY RESULT IN MATERIAL DAMAGES OR SERIOUS INJURIES.

**⚠CAUTION**

RISK OF LIMBS CRUSHING.
RISK OF BUMPING.

INDAVERTENT MOVEMENTS OF PARTS OF THIS EQUIPMENT UPON PROVIDING COMPRESSED AIR SUPPLY TO THIS EQUIPMENT MAY RSULT IN UPEER AND LOWER LIMBS OF BYSTANDERS BEING CRUSHED OR BYSTANDRED BEING BUMPED, AND RESULT IN INJURIES.

BEFORE CONNECTING THIS EQUIPMENT TO THE COMPRESSED AIR SUPPLY:

- MAKE SURE ALL HOLD-TO-RUN TYPE CONTROLS ARE IN THEIR REST POSITION, SEE CHAPTER “CONTROLS”;
- MAKE SURE THERE ARE NO BYSTANDERS IN THE WORK AREA.

**NOTICE**

POOR QUALITY OF THE COMPRESSED AIR SUPPLY TO THIS EQUIPMENT MAY IMPACT THIS EQUIPMENT PERFORMANCE AND DURATION ADVERSELY.

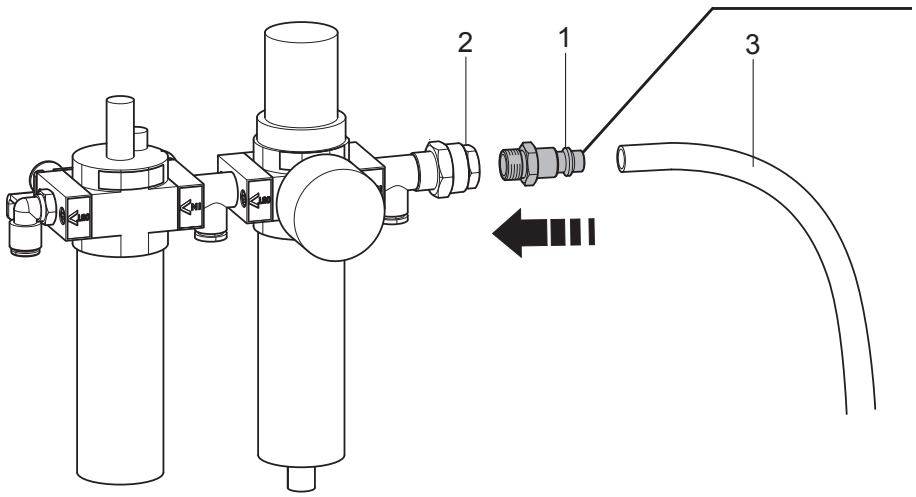
MAKE SURE COMPRESSED AIR SUPPLY TO THIS EQUIPMENT IS:

- FREE FROM TRACES OF LUBRICANT FROM THE COMPRESSOR;
- FREE FROM IMPURITIES;
- DEW POINT LESS OR EQUAL TO 3°C (38°F).

THE MANUFACTURER DECLINES ANY LIABILITY IN CASE THE PROVISIONS ABOVE ARE NOT COMPLIED WITH.

Install on the equipment a quick disconnect fitting (Fig. 15 ref. 1) that matches the air fittings already in use in the workshop. This fitting (Fig. 15 ref. 1) is not included in the package. The FRL has a 1/4" female NPT fitting factory installed (Fig. 15 ref. 2). Connect the pneumatic supply (Fig. 15 ref. 3) to the item 1 fitting installed above. The air line (Fig. 15 ref. 3) suppling the FRL must have a minimum section of 3/8" ID x 3/4" OD for flow (see Fig. 15).

Fig. 15




The filter assembly is already mounted on the equipment.

**⚠WARNING**

RISK OF COMPRESSED AIR EJECTION.

THE MINIMUM OPERATING PRESSURE OF THE SUPPLY HOSE AND INSTALLED FITTINGS MUST BE AT LEAST 300 psi. THE MAXIMUM BURST PRESSURE OF THE SAME MUST BE AT LEAST 900 psi.

***NOTICE***

USE PIPE TAPE ON ALL JOINTS.

**⚠WARNING**

RISK OF COMPRESSED AIR EJECTION.

IF OTHER PNEUMATIC CONNECTIONS SHOULD BE EXECUTED, REFER TO THE PNEUMATIC DIAGRAMS ILLUSTRATED IN CHAPTER 19.

**⚠ DANGER**

RISK OF CRUSHING, BUMPING OR ENTAGLEMENT.

IN CASE OF A CHANCE SUPPLY FAILURE, AND/OR BEFORE ANY PNEUMATIC CONNECTIONS, MOVE THE CONTROLS TO THE NEUTRAL POSITION.

## *10.7 Connection to the electrical power supply*

**⚠ DANGER**

RISK OF FIRE OR ELECTROCUTION.

CONNECTION OF THIS EQUIPMENT TO THE ELECTRICAL POWER SUPPLY MUST BE CARRIED OUT BY PROFESSIONALLY QUALIFIED TECHNICIANS.

CONNECTION OF THIS EQUIPMENT TO THE ELECTRICAL POWER SUPPLY BY UNQUALIFIED PERSONNEL MAY RESULT IN MATERIAL DAMAGES, SERIOUS INJURIES OR DEATH.

BEFORE CONNECTING THIS EQUIPMENT MAKE SURE THAT:

- ELECTRICAL POWER SUPPLY POWERLINE SPECIFATIONS MATCH PRODUCT ELECTRICAL RATINGS AS INIDICATED ON THE NAME-PLATE;
- ALL COMPONENTES OF THIS EQUIPMENT ELECTRICAL EQUIPMENT ARE IN GOOD CONDITION;
- ELECTRICAL POWER SUPPLY IS PROPERLY GROUNDED AS PER APPLICABLE REGULATIONS;
- RECEPTACLE THE POWER CORD IS CONNECTED TO IS SERVED BY A BRANCH CIRCUIT SERVING ONLY THIS RECEPTACLE.
- ELECTRICAL POWER SUPPLY VOLTAGE DOES NOT DROP BY MORE THAN 4% UNDER FULL-LOAD CONDITIONS AND BY NO MORE THAN 10% AT MOTOR START-UP.

**⚠ CAUTION**

RISK OF BUMPING OR CRUSHING.

BEFORE CONNECTING THIS EQUIPMENT TO THE ELECTRICAL POWER SUPPLY MAKE SURE ALL CONTROLS ARE IN THEIR REST PO-SITION, SEE CHAPTER “CONTROLS”.

FAILURE TO COMPLY WITH THIS PRESCRIPTION MAY LEAD TO UNDAVERTENT MOVEMENTS OF PARTS OF THIS EQUIPMENT UPON PROVIDING ELECTRICAL POWER SUPPLY TO THIS EQUIPMENT AND MAY RESULT IN MATERIAL DAMAGES OR INJURIES.

As envisaged by the regulations in force, the equipment is not equipped with a master circuit breaker, but simply has a plug-socket con-nection to the electrical mains.
This equipment is intended for connection to the electrical power supply through a plug-outlet combination and is provided standard with a non-detachable flexible power cord and a suitable plug.
In case the plug is missing or damaged, install a plug matching the requirements listed in the table on the next pagee.

**⚠ DANGER**

RISK OF FIRE OR ELECTROCUTION.

ONLY FIT A PLUG MATCHING THE REQUIREMENTS SET IN THE TABLE BELOW TO THE FLEXIBLE POWER CORD.

FITTING A PLUG NOT MATCHING THE REQUIREMENTS SET IN THE TABLE BELOW MAY LEAD TO MATERIAL DAMAGES, SERIOUS INJURIES, OR DEATH.

IF FITTING A PLUG TO THE FLEXIBLE POWER CORD:

- DO NOT CONNECT THE GROUNDING WIRE (INSULATION COLOR IS EITHER GREEN OR GREEN WITH A YELLOW STRIPE) TO THE LIVE OR NEUTRAL POLES OF THE PLUG;
- DO NOT CONNECT THE LIVE WIRE (INSULATION COLOR IS BLACK) TO THE NEUTRAL OR GROUNDING POLE OF THE PLUG;
- DO NOT CONNECT THE NEUTRAL WIRE (INSULATION CONTROL IS WHITE) TO THE GROUNDING OR LIVE POLES OF THE PLUG.

FAILURE TO COMPLY WITH THE PRESCRIPTIONS ABOVE MAY LEAD TO MATERIAL DAMAGES, SERIOUS INJURIES OR DEATH.

| Models | Type | Voltage | Amperage | Poles | Minimum IP rating |
|---|---|---|---|---|---|
| Inverter | NEMA L6-20P | 220 V | 20 A | 2 Poles + Ground | IP 54 |

## 11.0 CONTROLS

**⚠ CAUTION**

RISK OF CRUSHING, BUMPING OR ENTAGLEMENT.

BEFORE STARTING UP THIS EQUIPMENT, BE SURE TO BECOME FAMILIAR WITH THE LOCATION AND OPERATION OF ALL CONTROLS AND CHECK THEIR INTENDED OPERATION.

PERFORM A DAILY CHECK OF HOLD-TO-RUN TYPE CONTROL DEVICES AND MAKE SURE EACH OF THEM AUTONOMOUSLY RETURNS TO ITS REST POSITION ONCE RELEASED.

OPERATING THIS EQUIPMENT IN CASE HOLD-TO-RUN CONTROL DEVICES DO NOT AUTONOMOUSLY RETURN TO THEIR REST POSITION ONCE REALEASED MAY LEAD TO INJURIES.

AT ANY TIME ONE OR MORE HOLD-TO-RUN CONTROL DEVICES DO NOT AUTONOMOUSLY RETURN TO THEIR REST POSITION:

- DO NOT USE THIS EQUIPMENT.
  DISCONNECT THIS EQUIPMENT FROM ELECTRICAL POWER SUPPLY AND COMPRESSED AIR SUPPLY.
- HAVE THE DEFECTIVE CONTROL(S) INSPECTED AND REPAIRED BY A QUALIFIED SERVICE TECHNICIAN.

### *11.1 Pedalboard*

"Pedal 1" (Fig. 16 ref. 1) activates the automatic post and has two fixed operative functions: the first one (with pedal up) overturns the post from the operator's opposite side; the second one (with pedal down) sets back the post to work position.

"Pedal 2" (Fig. 16 ref. 2) opens and closes chuck locking jaws.
It has three stable positions: open – close – approach jaws.

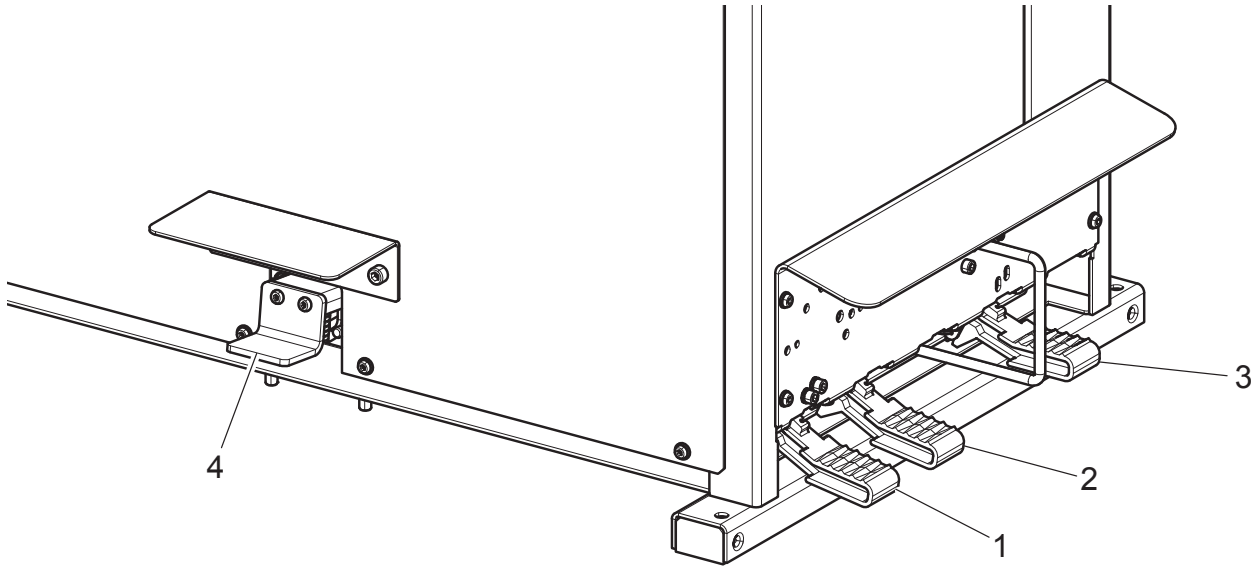
"Pedal 3" (Fig. 16 ref. 3) controls chuck's plate rotation and has 3 stable positions:

1. 0 position, turntable stopped;
2. pressed down, the turntable is rotated clockwise;
3. Raised, the turntable is rotated anti-clockwise.

The inflation "pedal 4" (Fig. 16 ref. 4) with "hold-to-run" control, delivers air at controlled pressure (max. 4.2 ± 0.2 bar - 60 ± 3 psi).
The pedal has three positions:

1. completely lowered "unstable": to cause air (contained in the pressure vessel) to be jetted out through air lances;
2. middle stroke "unstable" position: it lets air out from inflation hose connected to the gage;
3. released "stable" position: it closes air outlets.

Fig. 16

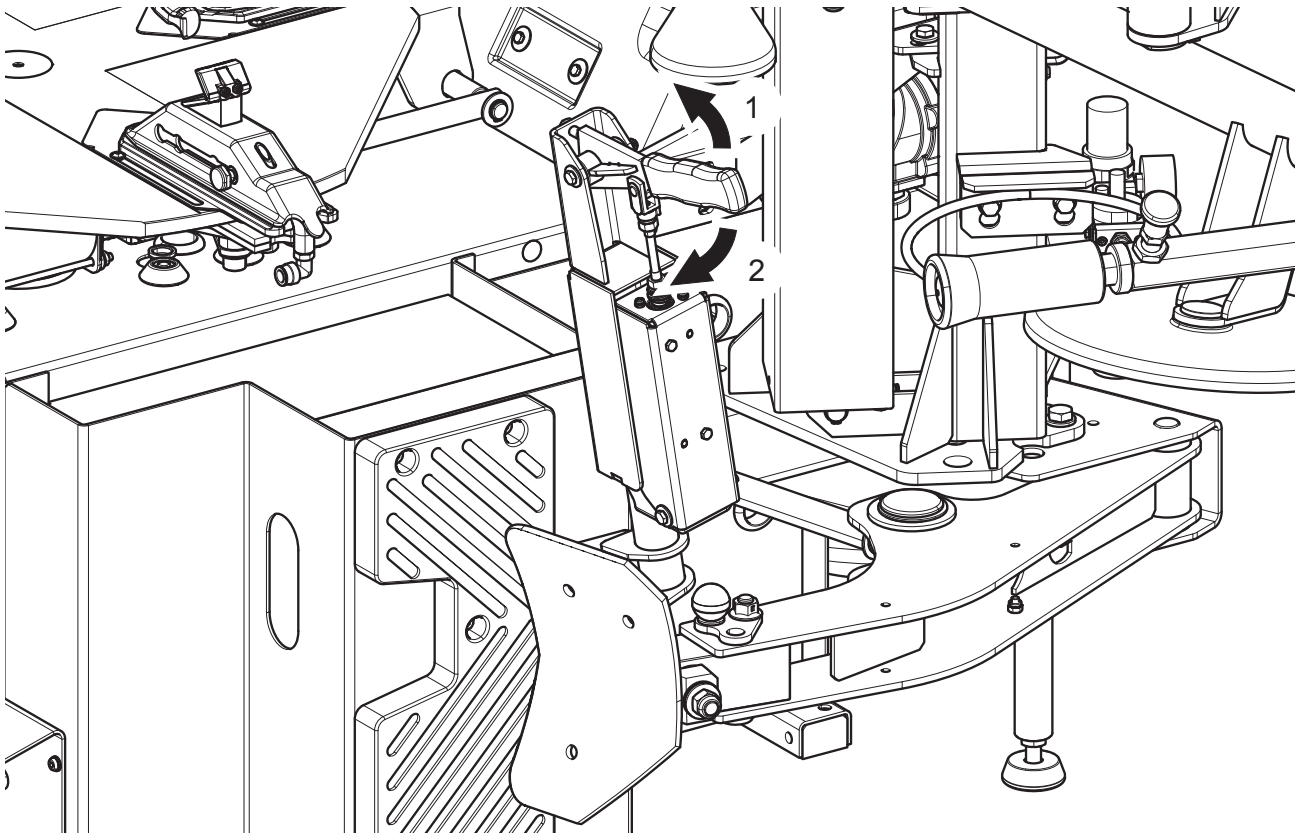


### *11.2 Bead breaker control handle (standard on some models)*

The side bead switch control device consists of a handle positioned on the switch itself.
This handle allows two movements:

- when raised and held upwards (Fig. 17 ref. 1), it operates shovel progress towards the tire;
- when pressed and held downwards (Fig. 17 ref. 2), it operates shovel opening outwards.

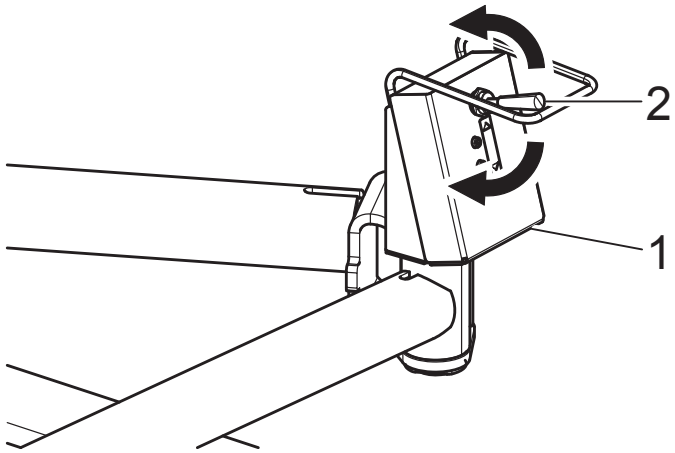
Fig. 17




### *11.3 Bead press device with rotating arm control unit*

It is made up of an handle control (Fig. 18 ref. 1), positioned on the device (Fig. 1 ref. 15). With this handle control, it is possible to operate the vertical movement of the pusher roller (Fig. 1 ref. 16), of the bead press tool (Fig. 1 ref. 17), of the bead lifting disc (Fig. 1 ref. 18) and the pusher arm (Fig. 1 ref. 19). Lift the lever (Fig. 18 ref. 2) to operate the upwards movement, and lower the lever (Fig. 18 ref. 2) to perform the downwards movement.
The device arms positioning next to the tire is a completely manual operation.

Fig. 18



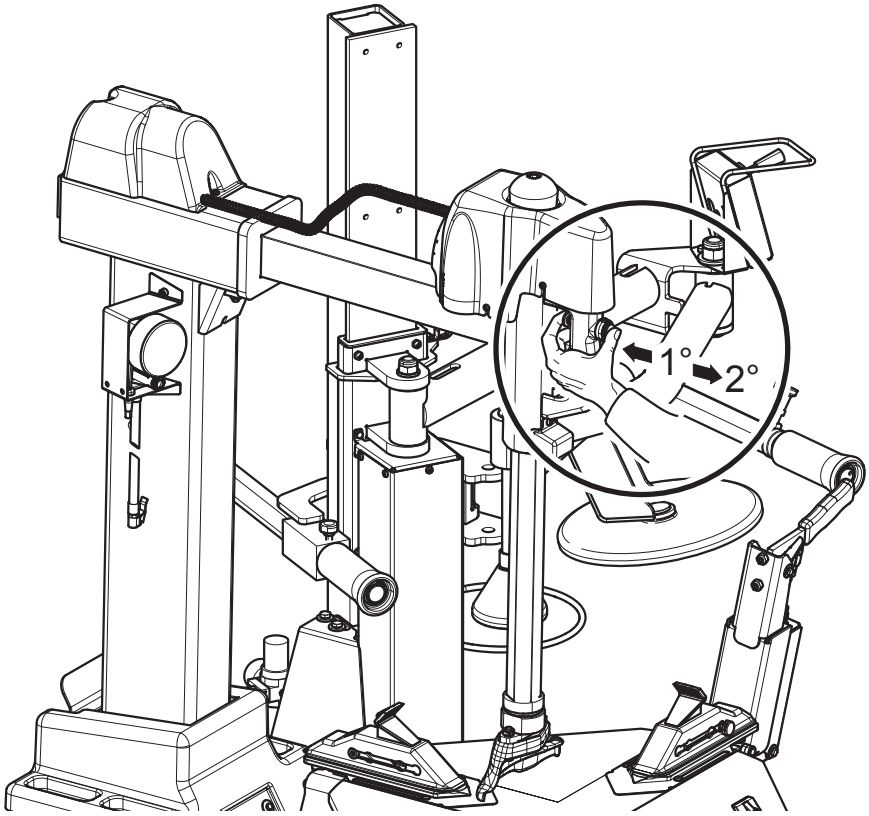
### *11.4 Post handle manual adjustment*

On the post is placed a pneumatically controlled handle that allows the locking and unlocking of the vertical and horizontal arm. Pushing the push button located on this handle (Fig. 19) the following operations can be carried out:

1st tripping: locking of the vertical and horizontal arm to work position;

2nd tripping: unlocking of vertical and horizontal arm and manual rise of vertical arm in rest position (all upward).

Fig. 19



## 12.0 USING THIS EQUIPMENT

**⚠ DANGER**

RISK OF FIRE OR ELECTROCUTION.

DO NOT USE WATER OR OTHER LIQUIDS TO CLEAN WHEELS ON THIS EQUIPMENT.

CLEANING WHEELS WITH WATER OR THER LIQUIDS ON THIS EQUIPMENT MAY LEAD TO SHORT CIRCUITS AND ELECTRICAL SHOCK, AND RESULT IN MATERIAL DAMAGES, SERIOUS INJURIES OR DEATH.

**⚠ WARNING**

RISK OF EYE INJURIES.

DO NOT USE COMPRESSED AIR TO CLEAN WHEELS ON THIS EQUIPMENT.

CLEANING WHEELS WITH COMPRESSED AIR ON THIS EQUIPMENT MAY LEAD TO FLYING DEBRIS, AND RESULT IN EYE INJURIES.

ALWAYS WEAR PROTECTIVE GOGGLES WHEN BLOWING WITH COMPRESSED AIR NEAR THIS EQUIPMENT.

**⚠ CAUTION**

RISK OF BUMPING, CRUSHING OR ENTANGLEMENT.

THIS EQUIPMENT IS INTENDED FOR USE BY ONLY ONE OPERATOR AT A TIME.

KEEP BYSTANDERS OUT OF THE SERVICE AREA.

USE OF THIS EQUIPMENT BY MORE THAN ONE OPERATOR OR THE PRESENCE OF BYSTANDERS IN THE SERVICE AREA AT ANY GIVEN TIME MAY LEAD TO INJURIES.

BEFORE STARTING UP THIS EQUIPMENT, BE SURE TO BECOME FAMILIAR WITH THE LOCATION AND OPERATION OF ALL CONTROLS AND CHECK THEIR INTENDED OPERATION.

PERFORM A DAILY CHECK OF HOLD-TO-RUN TYPE CONTROL DEVICES AND MAKE SURE EACH OF THEM AUTONOMOUSLY RETURNS TO ITS REST POSITION ONCE RELEASED.

OPERATING THIS EQUIPMENT IN CASE HOLD-TO-RUN CONTROL DEVICES DO NOT AUTONOMOUSLY RETURN TO THEIR REST POSITION ONCE REALEASED MAY LEAD TO INJURIES.

AT ANY TIME ONE OR MORE HOLD-TO-RUN CONTROL DEVICES DO NOT AUTONOMOUSLY RETURN TO THEIR REST POSITION:

- DO NOT USE THIS EQUIPMENT.
  DISCONNECT THIS EQUIPMENT FROM ELECTRICAL POWER SUPPLY AND COMPRESSED AIR SUPPLY.
- HAVE THE DEFECTIVE CONTROL(S) INSPECTED AND REPAIRED BY A QUALIFIED SERVICE TECHNICIAN.

DEFECTIVE PARTS SHALL BE REPLACED ONLY BY ORIGINAL SPARE PARTS PROVIDED BY THE MANUFACTURER OR ITS AUTHORISED DISTRIBUTORS.

IN CASE ELECTRICAL POWER SUPPLY OR COMPRESSED AIR SUPPLY TO THIS EQUIPMENT ARE INTERRUPTED, MAKE SURE ALL CONTROLS ARE IN THEIR REST POSITION.

FAILURE TO DO SO MAY LEAD TO UNDAVERTENT MOVEMENTS UPON RESTORING ELECTRICAL POWER SUPPLY OR COMPRESSED AIR SUPPLY TO THIS EQUIPMENT AND RESULT IN MATERIAL DAMAGES OR INJURIES.

## *12.1 Precaution measures during tire removal and fitting*

Before fitting a tire, observe the following safety rules:

- rim and tire must always be clean, dry and in good condition; if necessary, clean the rims and check that:
  - neither the bead nor the tread of the tire are damaged;
  - the rim does not have any dents and/or deformations (especially for alloy rims, dents can cause internal micro-fractures, that pass unobserved at visual inspection, and can compromise the solidity of the rim and constitute danger even during inflation);
- adequately lubricate the contact surface of rim and the tire beads, using specific tire lubricants only;
- replace the inner tube valve with a new valve, if the tire tube has a metal valve, replace the grommet;
- always make sure that tire and rim sizes are correct for their coupling; never fit a tire unless you are sure it is of the right size (the rated size of rim and tire is usually printed directly on them);
- do not use compressed air or water jets to clean the wheels on the equipment.

## *12.2 Preliminary operations - Preparing the wheel*

- Remove the wheel balancing weights from both sides of the wheel.

**⚠ DANGER**

RISK OF EYE INJURY OR ROAD ACCIDENTS.

CHANGING TIRE WITHOUT REMOVING BALANCING WHEELS MAY LEAD TO FLY DEBRIS, TIRE DAMAGE AND REDUCED ROAD SAFETY, RESULTING IN EYE INJURY, SEVERE INJURIES OR DEATH.

NEVER CHANGE TIRE WITHOUT REMOVING BALANCING WEIGHTS BEFORE.

**⚠ WARNING**

RISK OF EYE INJURY AND HEARING DAMAGE.

PERFORMING TIRE-REMOVAL OPERATIONS WHEN THE TIRE IS NOT COMPLETELY DEFLATED MAY LEAD TO FLY DEBRIS AND INCREASED NOISE LEVEL.

DO NOT PERFORM ANY TIRE-REMOVAL OPERATOR UNTIL THE TIRE HAS COMPLETELY DEFLATED.

**⚠ WARNING**

RISK OF MUSKOSKELETAL DISORDER.

FREQUENT MANUAL HANDLING OF WHEELS OR MANUAL HANDLING OF HEAVY WHEELS MAY LEAD TO MUSKOSKELETAL INJURIES.

WHEN HANDLING WHEELS WEIGHING MORE THAN 10 kg (22 lbs) AND/OR WITH A FREQUENCY OF MORE THAN 20/30 WHEELS PER HOUR, A LIFTING DEVICE SHALL BE USED.

- Remove the valve stem and allow the tire to completely deflate.
- Establish from which side the tire should be demounted, checking the position of the drop center.
- Find the rim locking type.
- Establish if the wheel is of special type, such as “TD” or “AH”, as this enables to improve wheel locking, bead breaking, tire demounting and tire mounting.

### *12.3 Bead breaking*

**⚠ CAUTION**

RISK OF UPPER AND LOWER LIMBS CRUSHING.

WHEN BREAKING BEADS, THE BEAD BREAKER ARM SHOVEL APPLIES A RELEVANT THRUST TO THE WHEEL, THUS REPRESENTING A CRUSH HAZARD TO OPERATORS'S HANDS AND LOWER LIMBS, WHICH MAY RESULT IN INJURIES.

DO NOT LEAN HANDS ON TIRE SIDEWALLS.

KEEP LOWER LIMBS AND ANY PART OF THE OPERATOR'S BODY OFF THE BEAD BREAKER WORKING AREA.

**⚠ CAUTION**

RISK OF UPPER LIMBS CRUSHING OR SHEARING.

WHEN BREAKING BEADS, INADVERTENT ROTATION OF THE CHUCK MAY LEAD TO CRUSHING THE HANDS BETWEEN THE CHUCK AND THE WHEEL, AND RESULT IN INJURIES.
DO NOT TO OPERATE CHUCK ROTATION PEDAL WHILE BREAKING BEADS.

WHEN BREAKING BEADS, THE OPERATOR'S HANDS MAY GET PINCHED BETWEEN THE BEAD BREAKER ARM AND THE FRAME.
KEEP HANDS OFF THE BEAD BREAKER ARM AND THE FRAME WHEN BREAKING BEADS.

HOLD THE BEAD BREAKER THROUGH THE HANDLE ATTACHED TO THE BEAD BREAKER SHOVEL ONLY.

After preparing the wheel as described in the previous point, follow the instructions given below to carry out the bead breaking procedure:

1. position the wheel as indicated in Fig. 20 and move the bead breaker shovel toward the edge the rim;

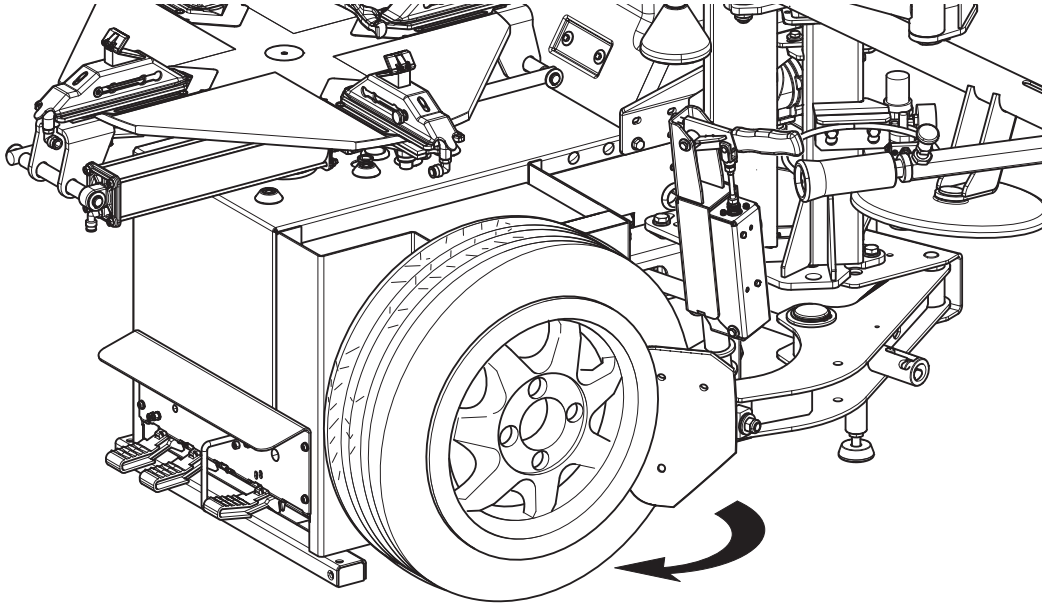
**⚠ CAUTION**

RISK OF EYE INJURIES.

OPERATING THE BEAD BREAKER SHOVEL ON THE RIM FLANGES MAY LEAD TO RIM DAMAGES AND FLYING DEBRIS; RESULTING IN EYE INJURIES.

NEVER OPERATE THE BEAD BREAKER SHOVEL ON THE RIM FLANGES.

Fig. 20



2. move the bead breaker shovel closer by pushing the push button (Fig. 20 ref. 1) until the bead has detached. If the bead does not detach the first time, repeat the operation, on different points of the wheel, until it has come away completely;
3. reverse the position of the wheel and repeat the operation on the other side;
4. lubricate the tire carefully along the entire circumference of the bead on both sides.

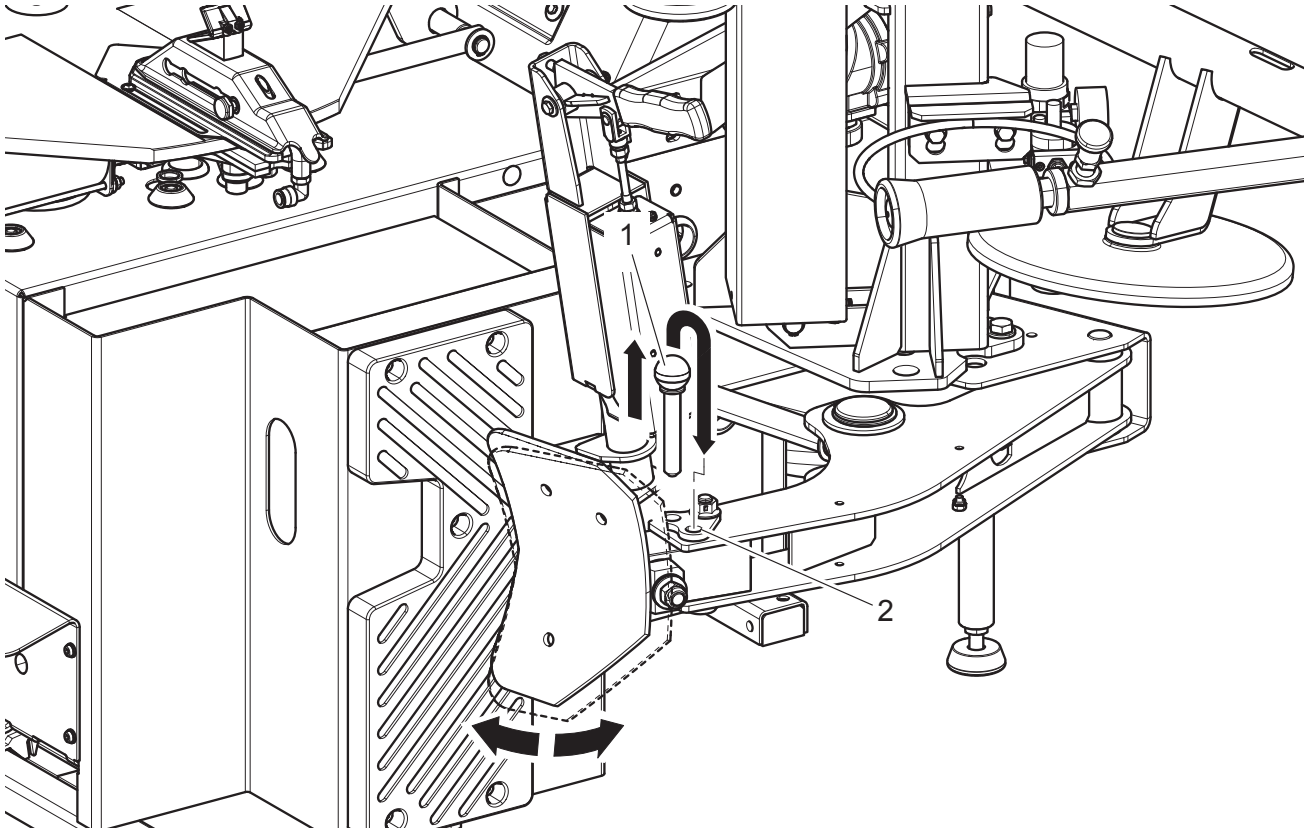
**NOTICE**

FAILURE TO LUBRICATE THE TIRE MAY LEAD TO ABNORMAL FRICTION BETWEEN THE TOOLHEAD AND THE TIRE DURING TIRE DE-MOUNTING, AND MAY RESULT IN DAMAGES TO THE TIRE.

### *12.4 Double-articulation bead breaker*

The bead-breaker is equipped with a double articulation (Fig. 21) that allows the position optimization between the shovel and the tire bead during the bead breaking phase, through its introduction in between the bead and the rim edge.
While operating with rims with protected edge or with lowered tires and/or thick tires, place the shovel articulation in order to use the hole (Fig. 21 ref. 2).
To change the shovel position on the articulation, take off the pin (Fig. 21 ref. 1) from the hole, turn the shovel until the desired hole is placed in correspondence with the articulation hole, then insert the pin again (Fig. 21 ref. 1) into the new seat.

Fig. 21



## *12.5 Wheel clamping on the chuck*

**⚠ CAUTION**

RISK OF FEET CRUSHING.

WHEN LOADING AND CLAMPING THE WHEEL TO THE CHUCK, THE WHEEL MAY FALL TO THE GROUND AND CRUSH THE OPERATOR'S FEET.
NEVER LEAVE UNCLAMPED WHEELS ON THE CHUCK UNATTENDED.

**⚠ CAUTION**

RISK OF UPPER LIMBS CRUSHING.

WHEN CLAMPING THE WHEEL ON THE CHUCK, CHUCK JAWS APPLY A RELEVANT THRUST ON THE LOWER PART OF THE WHEEL, THUS REPRESENTING A CRUSH HAZARD TO OPERATORS'S HANDS, WHICH MAY RESULT IN INJURIES.
KEEP HANDS OFF THE LOWER PART OF THE WHEEL.

WHEN CLAMPING WHEELS ON THE CHUCK, HANDS MAY GET CRUSHED BY THE MECHANISM UNDER THE CHUCK PLATE.
KEEP HANDS OFF THE AREA BELOW THE CHUCK PLATE.

To block the wheel from inside:

1. grease tire edges with the grease contained in the appropriate cup (see operating figure Fig. 22);
2. release the hexagon shaft (Fig. 22 ref. 2) through the relevant push button on handle (Fig. 22 ref. 1) and take it up, fully home. Control the overturning of the horizontal arm (Fig. 22 ref. 3) using the pedal;
3. the wheel can be secured to the chuck by placing jaws either inside or outside the rim (see Chapter 14 "Technical specifications" for required rim size).

Make sure the wheel is placed at the center of chuck's plate (Fig. 22 ref. 6). Make sure the wheel is clamped by jaws (Fig. 22 ref. 7) symmetrically.

A) CLAMPING THE RIM FROM OUTSIDE (for allowed rim size see Chapter 15. Technical specifications).
In order to carry out the clamping of the wheel from the outside:

1. adjust all of the 4 jaws by using the appropriate push button (Fig. 22 ref. 8) to match the required clamping range;

**NOTICE**

FAILURE TO ADJUST POSITION OF ALL OF THE 4 JAWS TO THE SAME CLAMPING RANGE OR TO ENSURE POSITION OF EACH JAW IS LOCKED WILL LEAD TO INAPPROPRIATE LOCKING OF THE WHEEL, AND MAY RESULT IN DAMAGES TO THE RIM, THE TIRE OR THIS EQUIPMENT DURING SUBSEQUENT OPERATIONS.

2. pressing pedal (Fig. 22 ref. 9) in intermediate position, place the 4 securing jaws (Fig. 22 ref. 7), so that the reference notch on the chuck is at about the same level of the tire diameter notched on the sliding element;
3. place the wheel on the chuck, press the rim downward and completely lower pedal (Fig. 22 ref. 9) to secure the wheel.

B) CLAMPING THE RIM FROM INSIDE (for allowed rim size, see Chapter 15). Technical specifications).
To block the wheel from inside:

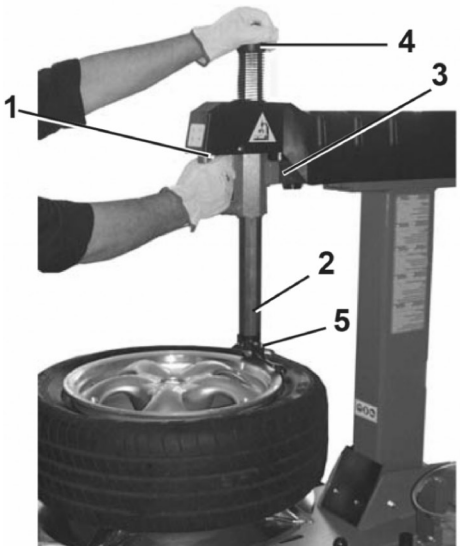
1. adjust all of the 4 jaws by using the appropriate push button (Fig. 22 ref. 8) to match the required clamping range;

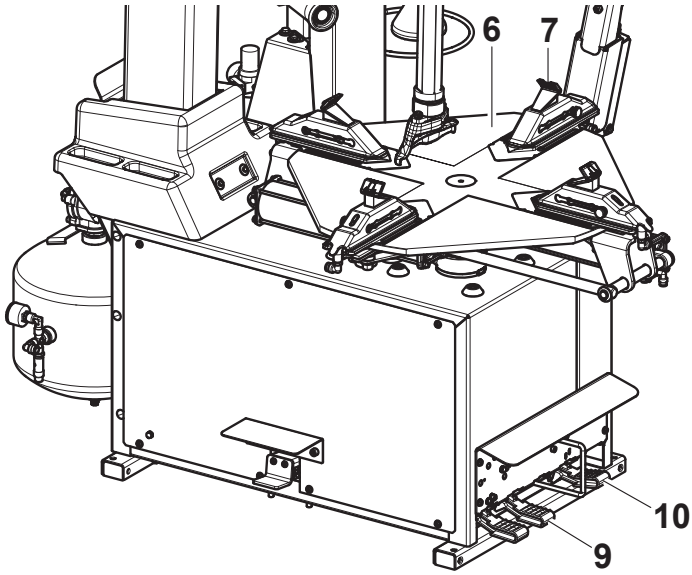
**NOTICE**

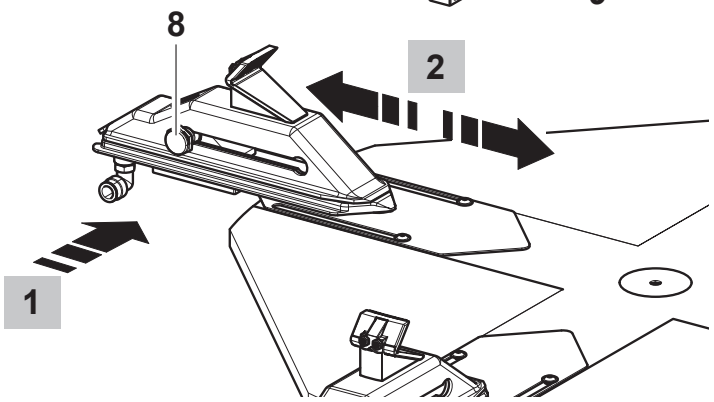
FAILURE TO ADJUST POSITION OF ALL OF THE 4 JAWS TO THE SAME CLAMPING RANGE OR TO ENSURE POSITION OF EACH JAW IS LOCKED WILL LEAD TO INAPPROPRIATE LOCKING OF THE WHEEL, AND MAY RESULT IN DAMAGES TO THE RIM, THE TIRE OR THIS EQUIPMENT DURING SUBSEQUENT OPERATIONS.

2. close preventively securing jaws (Fig. 22 ref. 7), using pedal (Fig. 22 ref. 9). Place the wheel on the chuck. Push down the rim while completing lowering the pedal and releasing it. The jaws release, thus securing the rim.

Fig. 22



## *12.6 Using the bead press device to make clamping of wheels with a low-profile tire easier*

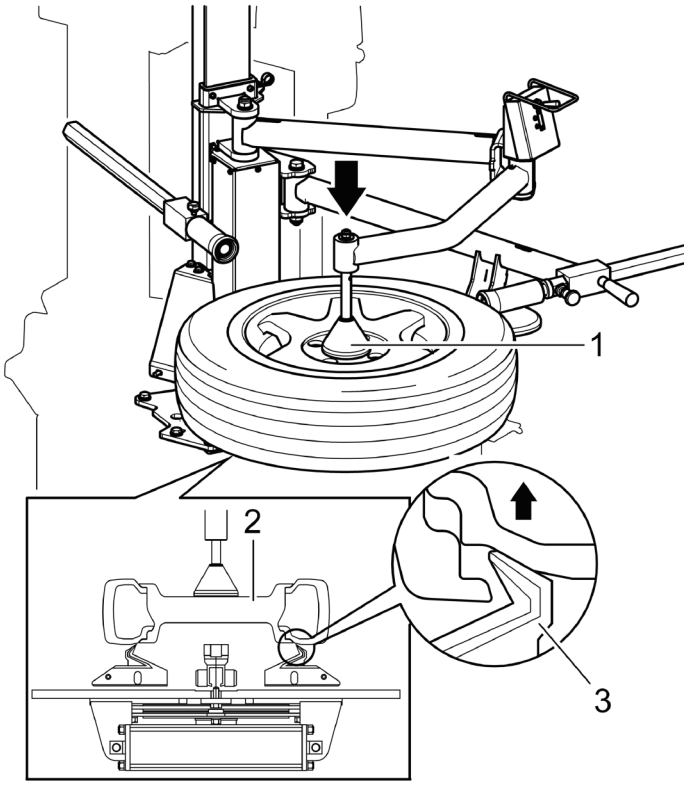
**⚠ CAUTION**

RISK OF UPPER LIMBS CRUSHING.

WHEN PUSHING THE WHEEL DOWNWARDS WITH THE BEAD PRESS DEVICE, THE BEAD PRESS DEVICE TOOL APPLIES A RELEVANT THRUST ON THE UPPER PART OF THE WHEEL, THUS REPRESENTING A CRUSH HAZARD TO OPERATORS'S HANDS, WHICH MAY RESULT IN INJURIES.
KEEP HANDS OFF THE UPPER PART OF THE WHEEL WHILE PLACING THE BEAD PRESS TOOL ON THE WHEEL.

In case the wheel is fitted with a low-profile or run-flat tire, inserting the jaws (Fig. 23 ref. 3) between the tire sidewall and the rim (Fig. 23 ref. 2) to clamp the latter may be difficult.
To make this operation easier, downwards vertical thrust may be applied on the wheel using the bead press device bead press tool (Fig. 23 ref. 1).
The bead press tool shall act on the center of the wheel as shown in Fig. 23.

Fig. 23



### *12.7 Demounting the tire*

**⚠ CAUTION**

RISK OF UPPER LIMBS CRUSHING OR ENTANGLEMENT.

WHEN ADJUSTING THE TOOLHEAD POSITION HANDS MAY GET CRUSHED BETWEEN THE TOOLHEAD AND THE WHEEL.
KEEP HANDS AND ANY PART OF THE OPERATOR BODY OFF THE WHEEL WHEN ADJUSTING THE TOOLHEAD POSITION.

WHEN DEMOUNTING TIRES, THE AREA CLOSE TO THE TOOLHEAD POSES AN HAZARD OF CRUSHING OPERATOR'S HANDS WHEN THE CHUCK IS ROTATED.
KEEP HANDS AND ANY PART OF THE OPERATORS BODY OFF THE TOOLHEAD WORK AREA WHEN THE CHUCK IS ROTATED.

WHEN ROTATING THE CHUCK, HANDS MAY GET ENTANGLED BY THE WHEEL OR THE CHUCK, RESULTING IN INJURIES.
KEEP HANDS OFF THE WHEEL AND THE CHUCK WHEN THEY ARE ROTATED.

WHEN RELEASING THE LOCKING SYSTEM THE TOOLHEAD SUDDENLY MOVES UPWARDS UP TO SHOULDERING AGAINST THE HORIZONTAL BEAM, AND MAY CRUSH THE OPERATOR'S FINGERS.
KEEP HANDS OFF THE HEXAGON VERTICAL SHAFT WHEN RELEASING THE LOCKING SYSTEM.

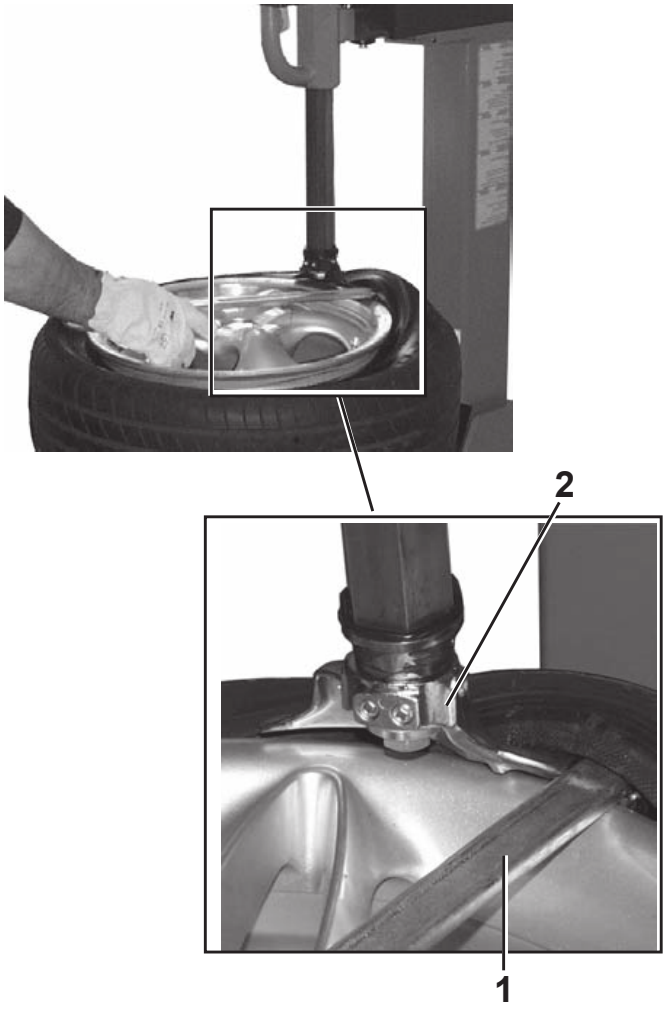
**NOTICE**

CHUCK SHALL ALWAYS BE TURNED CLOCKWISE FOR TIRE DEMOUNTING OPERATIONS.
BRIEFLY TURN THE CHUCK COUNTER-CLOCKWISE ONLY IN CASE SMALL ADJUSTMENTS OF THE WHEEL POSITION ARE NEEDED.

After clamping the wheel, the tire is demounted following the instructions given below, with reference to Fig. 24:

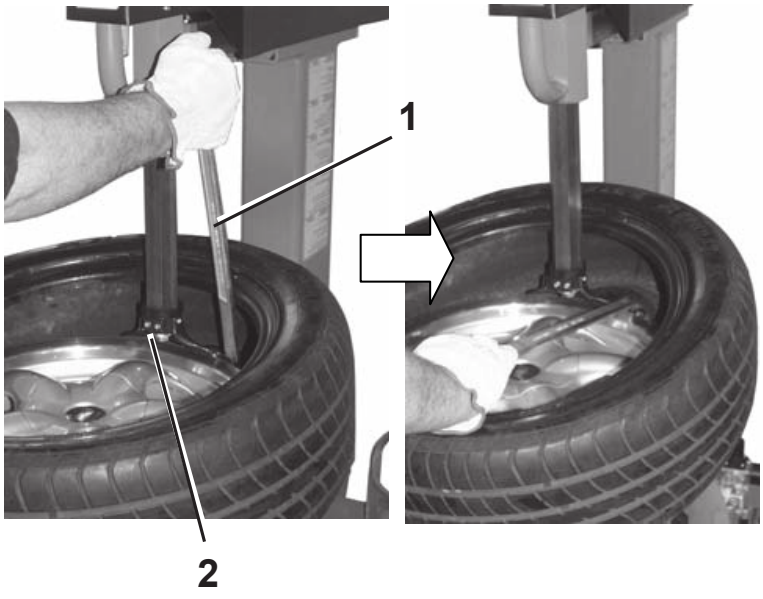
1. press the rotation pedal to rotate the wheel clockwise until the valve stem reaches "1 o'clock" position;
2. set the operating arm (Fig. 22 ref. 3) to work position;
3. release the hexagon shaft (Fig. 22 ref. 2) and set toolhead (Fig. 22 ref. 5) radially and vertically on rim and lock it in place using the push button on handle (Fig. 22 ref. 1);
4. operate lever (Fig. 24 ref. 1) to push the tire bead, laying it on the toolhead nail (Fig. 24 ref. 2);
5. while keeping the lever in this position, turn the chuck clockwise using the pedal (Fig. 22 ref. 10), until the bead is out of the rim. Operate the pedal by quickly pressing and releasing it;

Fig. 24



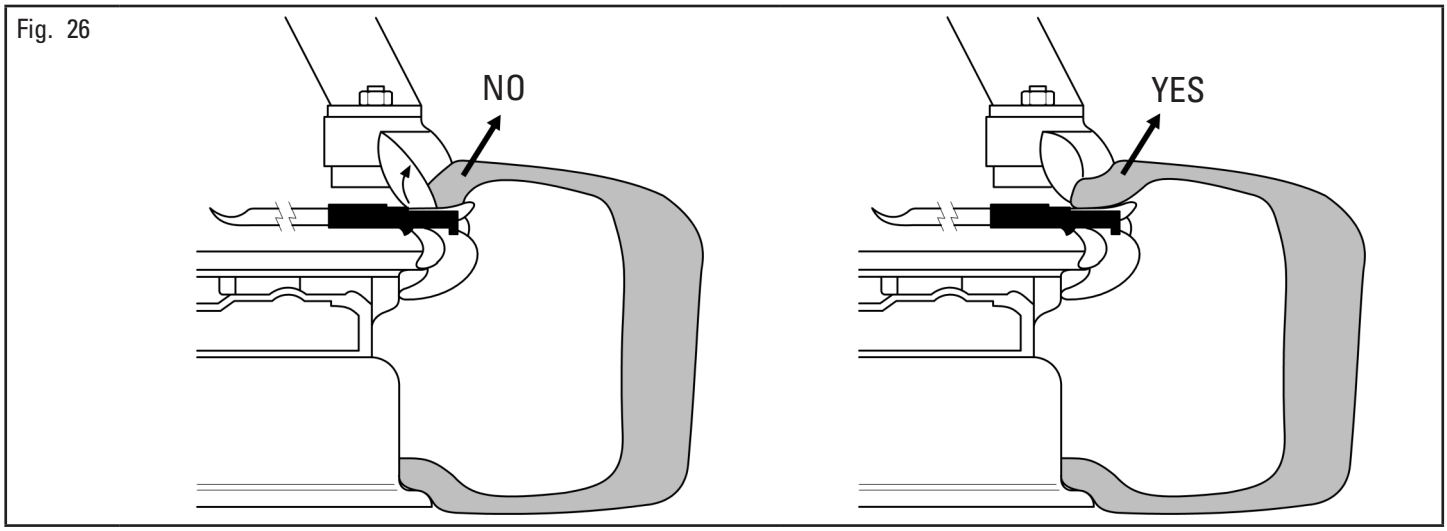

6. remove the inner tube (if fitted);
7. place the toolhead as indicated in point 3; then using lever (Fig. 25 ref. 1) place the second tire bead on the toolhead nail (Fig. 25 ref. 2);
8. while keeping the lever (Fig. 25 ref. 1) in this position, turn the chuck clockwise until the tire is completely out of the rim;
9. place the arm in idle position and remove the tire from the rim.

Fig. 25



10. when demounting hard tires, the bead may come onto , the toolhead, with the lip turned. This causes the bead to slide from the lever when clockwise rotation begins. To avoid this problem rotate the wheel slightly anti-clockwise until the bead flattens. Now the clockwise demounting cycle can begin (see Fig. 26).

Fig. 26




If the motor slows down or stops during tire demounting and mounting, make the following checks:

- check that the bead has been lubricated;
- check that the bead has been pushed into the drop center;
- check that the right side of the rim has been chosen for demounting or mounting the tire;
- check that the rim drop center is not off-center.

## *12.8 Using the bead press device to make tire demounting easier (optional)*

**⚠WARNING**

RISK OF UPPER LIMBS CRUSHING, PINCHING OR ENTANGLEMENT.

WHEN ADJUSTING THE TOOLHEAD POSITION HANDS MAY GET CRUSHED BETWEEN THE TOOLHEAD AND THE WHEEL.
KEEP HANDS OFF THE WHEEL WHEN ADJUSTING THE TOOLHEAD POSITION.

WHEN THE BEAD PRESS DEVICE MOVES, HANDS MAY GET CRUSHED BETWEEN THE BEAD PRESS DEVICE ACTUATOR CYLINDER AND MOUNTING BRACKETS, OR PINCHED BETWEEN THE CYLINDER AND THIS EQUIPMENT FRAME.
KEEP HANDS OFF THE BEAD PRESS DEVICE MOUNTING BRACKETS AND THIS EQUIPMENT FRAME.

WHEN PUSHING THE TIRE UPPER SIDEWALL DOWNWARDS WITH THE BEAD PRESS TOOL, THE BEAD PRESS TOOL APPLIES A RELEVANT THRUST ON THE WHEEL UPPER FACE, THUS REPRESENTING A CRUSH HAZARD TO OPERATORS'S HANDS, WHICH MAY RESULT IN INJURIES.
KEEP HANDS OFF THE UPPER PART OF THE WHEEL WHILE PLACING THE BEAD PRESS TOOL ON THE WHEEL.

WHEN DEMOUNTING TIRES, THE AREA CLOSE TO THE TOOLHEAD POSES AN HAZARD OF CRUSHING OPERATOR'S HANDS WHEN THE CHUCK IS ROTATED.
KEEP HANDS OFF THE TOOLHEAD WORK AREA WHEN THE CHUCK IS ROTATED.

WHEN ROTATING THE CHUCK, HANDS MAY GET ENTANGLED BY THE WHEEL OR THE CHUCK, RESULTING IN INJURIES.
KEEP HANDS OFF THE WHEEL AND THE CHUCK WHEN THEY ARE ROTATED.

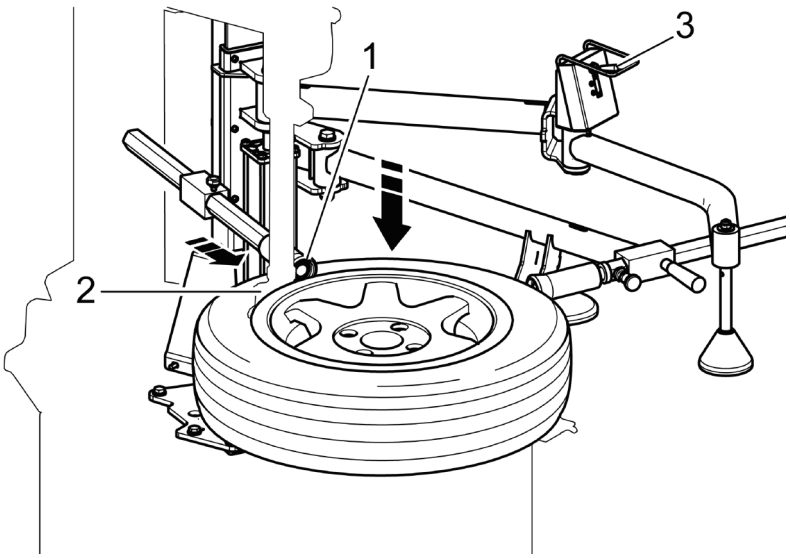
WHEN LIFTING THE TIRE LOWER SIDEWALL WITH THE BEAD LIFTING ROLLER, THE BEAD LIFTING ROLLER MAY APPLY A RELEVANT THRUST ON THE WHEEL LOWER FACE, THUS REPRESENTING A CRUSH HAZARD TO OPERATORS'S HANDS, WHICH MAY RESULT IN INJURIES.
KEEP HANDS OFF THE UPPER PART OF THE WHEEL WHILE PLACING THE BEAD LIFTING ROLLER ON THE WHEEL.

Tighten the chuck on the rim using the appropriate pedal control.
In case the wheel is fitted with a low-profile or run-flat tire, correctly placing the mounting/demounting and inserting the bead lifting lever between the head and the tire may be difficult.
To make this operations easier, downwards vertical thrust may be applied on the tire upper sidewall using the bead press tool mounted to the bead press device.
In case the wheel width is large or the tire mounted to the wheel is heavy, lifting the lower tire sidewall to insert the lever between the tire and the rim may be difficult. To make this operation easier, the bead lifting roller may be used to lift the lower tire sidewall.

Removal of the first bead:

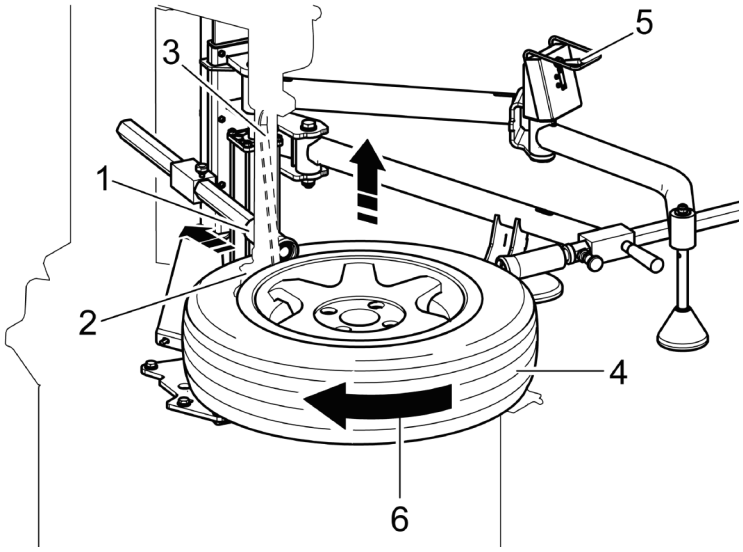
1. place the bead press roller (Fig. 27 ref. 1), as shown in figure, near the toolhead (Fig. 27 ref. 2). Lower the tire using the bead press roller (Fig. 27 ref. 1) (lowering the relevant lever of the control unit (Fig. 27 ref. 3)), to allow an easy positioning of the toolhead on the rim edge (Fig. 27 ref. 2). Then lock the toolhead;

Fig. 27




2. insert the bead lifting lever (Fig. 28 ref. 3) between the tire (Fig. 28 ref. 4) and toolhead (Fig. 28 ref. 2);
3. lift the device by moving the lever upwards (Fig. 28 ref. 5); then move the roller backward (Fig. 28 ref. 1) to avoid interferences with the tire;
4. load the second bead on the toolhead using the proper lever (Fig. 28 ref. 3);
5. dismount the first bead, by turning the chuck clockwise (Fig. 28 ref. 6).

Fig. 28

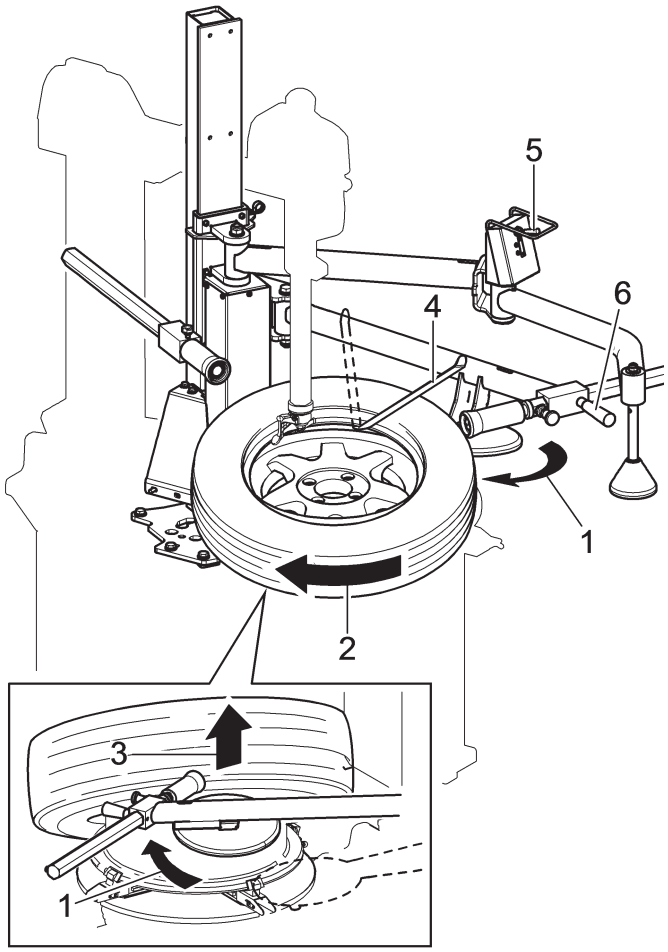


In order to facilitate the bead lifting on the toolhead, move the pusher arm (Fig. 1 ref. 17) to 120° position compared to the toolhead, and press until the bead enters the drop center; in this way the stress on the tire during the loading on the toolhead is reduced.

Removal of the second bead:

6. rotate the bead lifting disc (Fig. 29 ref. 1) from its own seat until placing it between the chuck plate and the tire, at about 1 cm (0.39") from the outer lower edge of the rim. In this phase the handle controls can be of great help (Fig. 29 ref. 6).
7. lift the tire through the bead lifting disc (Fig. 29 ref. 3) by pressing the lever upwards (Fig. 29 ref. 5). In this phase maintain firmly the disc handgrip (Fig. 29 ref. 6) or the lever (Fig. 29 ref. 4).
8. load the second bead on the toolhead using the proper lever (Fig. 29 ref. 4).
9. turn the chuck clockwise (Fig. 29 ref. 2) and remove the tire from the rim.

Fig. 29



### *12.8.1 Demounting the lower bead through the bead lifting roller of the the bead press device*

**⚠WARNING**

RISK OF UPPER LIMBS CRUSHING, PINCHING OR ENTANGLEMENT.

WHEN ADJUSTING THE TOOLHEAD POSITION HANDS MAY GET CRUSHED BETWEEN THE TOOLHEAD AND THE WHEEL.
KEEP HANDS OFF THE WHEEL WHEN ADJUSTING THE TOOLHEAD POSITION.

WHEN THE BEAD PRESS DEVICE MOVES, HANDS MAY GET CRUSHED BETWEEN THE BEAD PRESS DEVICE ACTUATOR CYLINDER AND MOUNTING BRACKETS, OR PINCHED BETWEEN THE CYLINDER AND THIS EQUIPMENT FRAME.
KEEP HANDS OFF THE BEAD PRESS DEVICE MOUNTING BRACKETS AND THIS EQUIPMENT FRAME.

WHEN LIFTING THE TIRE LOWER SIDEWALL WITH THE BEAD LIFTING ROLLER, THE BEAD LIFTING ROLLER MAY APPLY A RELEVANT THRUST ON THE WHEEL LOWER FACE, THUS REPRESENTING A CRUSH HAZARD TO OPERATORS'S HANDS, WHICH MAY RESULT IN INJURIES.
KEEP HANDS OFF THE UPPER PART OF THE WHEEL WHILE PLACING THE BEAD LIFTING ROLLER ON THE WHEEL.

WHEN DEMOUNTING TIRES, THE AREA CLOSE TO THE TOOLHEAD POSES RISK OF CRUSHING OPERATOR'S HANDS WHEN THE CHUCK IS ROTATED.
KEEP HANDS OFF THE TOOLHEAD WORK AREA WHEN THE CHUCK IS ROTATED.

WHEN ROTATING THE CHUCK, HANDS MAY GET ENTANGLED BY THE WHEEL OR THE CHUCK, RESULTING IN INJURIES.
KEEP HANDS OFF THE WHEEL AND THE CHUCK WHEN THEY ARE ROTATED.

For disassembly of the lower bead the bead lifting roller can be used as an alternative. Move the toolhead and go away from the work area:

1. lift roller and tire just next to the upper rim edge using the control;
2. therefore, move the roller forward with the provided control so that it is inserted between the rim edge and lower bead;
3. then, rotate and complete bead disassembly.

## 12.9 Mounting the tire

**⚠ DANGER**

RISK OF EXPLOSION OR ROAD ACCIDENTS.

MOUNTING A MISMATCHED TIRE AND WHEEL MAY LEAD TO TIRE EXPLOSION WHEN SEATING BEADS OR REDUCED ROAD SAFETY, AND MAY RESULT IN MATERIAL DAMAGES, SERIOUS INJURIES OR DEATH.
CHECK TIRE AND WHEEL CAREFULLY BEFORE MOUNTING AND MAKE SURE THE TIRE AND RIM BEAD MOUNTING DIAMETERS MATCH.
CONSULT THE TIRE MANUFACTURER'S RECOMMENDATION.

MOUTING A DAMAGED TIRE MAY LEAD TO TIRE EXPLOSION WHEN SEATING BEADS OR REDUCED ROAD SAFETY, AND MAY RESULT IN MATERIAL DAMAGES, SERIOUS INJURIES OR DEATH.
INSPECT THE TIRE CLOSELY FOR DAMAGE.
NEVER MOUNT A DAMAGED TIRE.

MOUNTING A TIRE TO A DAMAGED OR CORRODED RIM MAY LEAD TO TIRE EXPLOSION WHEN SEATING BEADS OR REDUCED ROAD SAFETY, AND MAY RESULT IN MATERIAL DAMAGES, SERIOUS INJURIES OR DEATH.
INSPECT THE RIM CLOSELY FOR DAMAGE OR CORROSION.
NEVER MOUNT A TIRE TO A DAMAGED OR CORRODED RIM.

**⚠ CAUTION**

RISK OF UPPER LIMBS CRUSHING OR ENTANGLEMENT.

WHEN PLACING ARM TO WORKING POSITION AND ADJUSTING THE TOOLHEAD POSITION, KEEP HANDS AND ANY PART OF THE OPERATOR BODY OFF THE WHEEL. HANDS MAY GET CRUSHED BETWEEN THE TOOLHEAD AND THE WHEEL.

WHEN MOUNTING TIRES, THE AREA CLOSE TO THE TOOLHEAD POSES RISK OF CRUSHING OPERATOR'S HANDS WHEN THE CHUCK IS ROTATED.
KEEP HANDS OFF THE TOOLHEAD WORK AREA WHEN THE CHUCK IS ROTATED.

WHEN ROTATING THE CHUCK, HANDS MAY GET ENTANGLED BY THE WHEEL OR THE CHUCK, RESULTING IN INJURIES.
KEEP HANDS OFF THE WHEEL AND THE CHUCK WHEN THEY ARE ROTATED.

WHEN RELEASING THE LOCKING SYSTEM THE TOOLHEAD SUDDENLY MOVES UPWARDS UP TO SHOULDERING AGAINST THE HORIZONTAL BEAM, AND MAY CRUSH THE OPERATOR'S FINGERS.
KEEP HANDS OFF THE HEXAGON VERTICAL SHAFT WHEN RELEASING THE LOCKING SYSTEM.

**⚠ CAUTION**

RISK OF FEET CRUSHING.

WHEN RELEASING AND UNLOADING THE WHEEL FROM THE CHUCK, THE WHEEL MAY FALL TO THE GROUND AND CRUSH THE OPERATOR'S FEET.
NEVER LEAVE UNCLAMPED WHEELS ON THE CHUCK UNATTENDED.

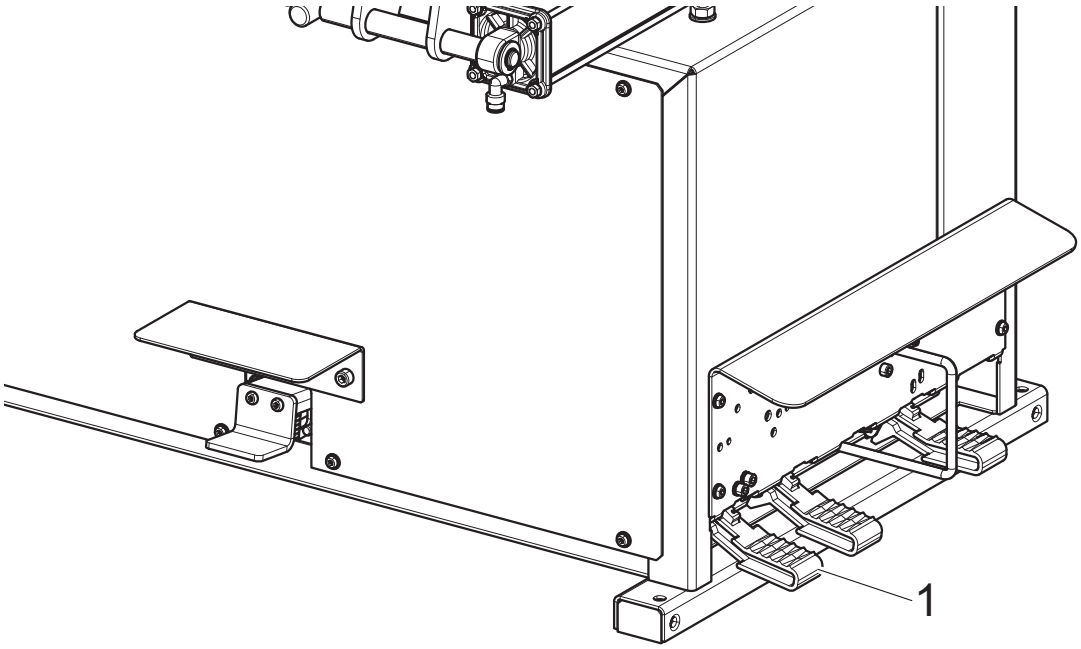
**NOTICE**

CHUCK SHALL ALWAYS BE TURNED CLOCKWISE FOR TIRE MOUNTING OPERATIONS.
BRIEFLY TURN THE CHUCK COUNTER-CLOCKWISE ONLY IN CASE SMALL ADJUSTMENTS OF THE WHEEL POSITION ARE NEEDED.

To mount the tire, proceed as follows:

1. position the operating arm to work position by acting on the pedal (Fig. 30 ref. 1);

Fig. 30




1. place toolhead (Fig. 31 ref. 1) against the rim edge and lock arm (Fig. 31 ref. 2);

**NOTICE**

IF TIRE IS FITTED ON THE WHEEL PREVIOUSLY REMOVED OR WHEEL SIZE CORRESPONDS TO RIM SIZE, IT IS NOT NECESSARY TO OPERATE HANDLE (FIG. 31 REF. 3) TO SECURE AND RELEASE THE HEAD, ONLY ARM (FIG. 31 REF. 2) NEEDS TO BE REPOSITIONED.

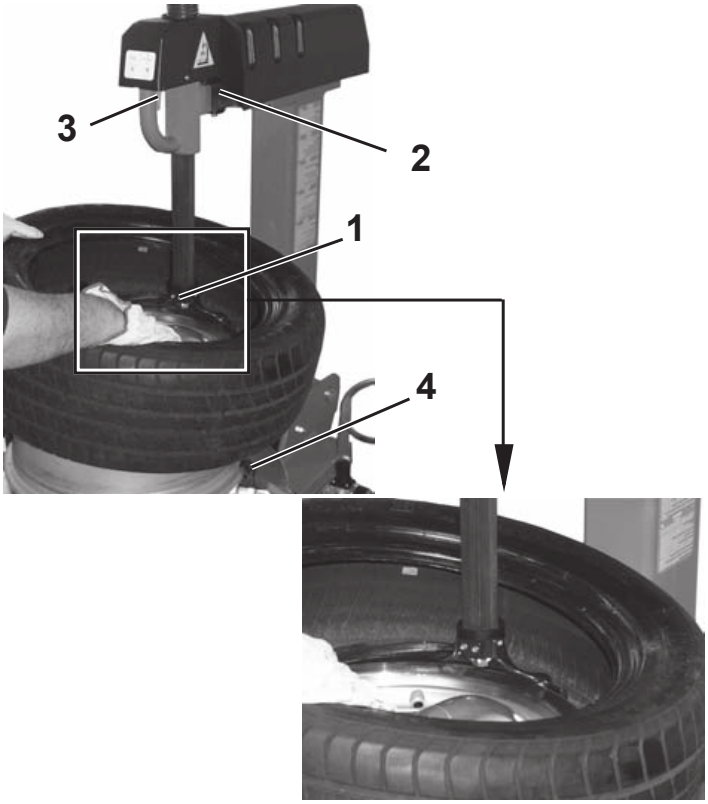
3. place the tire so that the bead passes under toolhead nail (Fig. 31 ref. 1) and outside head support (see Fig. 31 for lower bead);

**NOTICE**

WHEN TIRE IS TUBELESS-TYPE, START MOUNTING PROCEDURE WITH TIRE VALVE SET OPPOSITE TO THE TOOLHEAD (BETWEEN 5 AND 6 O'CLOCK).

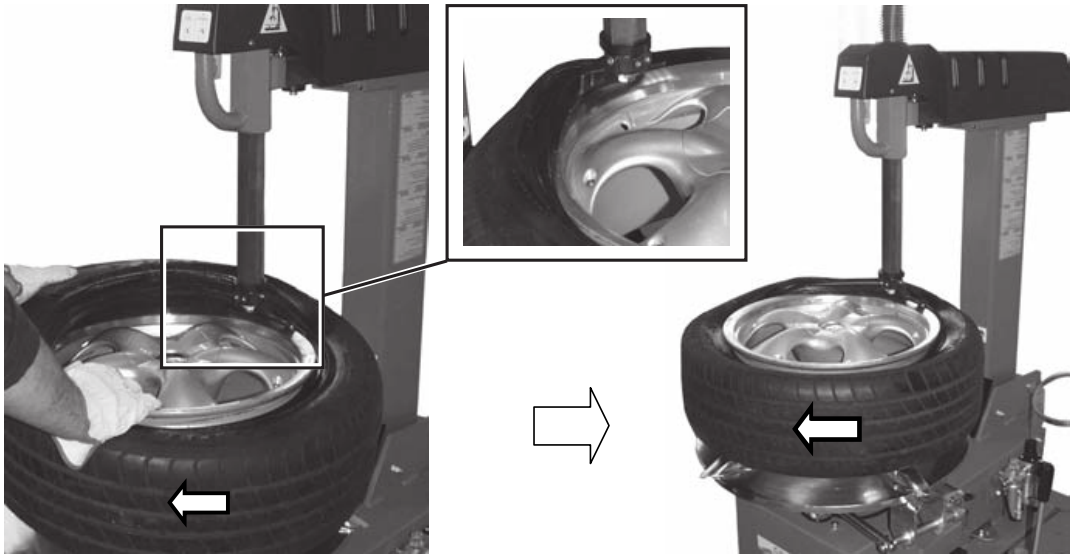
4. turn chuck (Fig. 31 ref. 4) clockwise. Keep the correspondent lowered and the tire bead in the inner rim drop center;

Fig. 31




5. if an inner tube tire must be fitted, insert the inner tube after the first bead is completely inside the rim;
6. repeat the same operations for the upper tire bead, as shown in Fig. 32;
7. once assembly is completed, remove arm and take it to rest position by depressing pedal (Fig. 30 ref. 1);
8 push the pedal to release the wheel from the chuck.

Fig. 32



## *12.10 Using the bead press device to make tire mounting easier*

**⚠ DANGER**

RISK OF EXPLOSION OR ROAD ACCIDENTS.

MOUNTING A MISMATCHED TIRE AND WHEEL MAY LEAD TO TIRE EXPLOSION WHEN SEATING BEADS OR REDUCED ROAD SAFETY, AND MAY RESULT IN MATERIAL DAMAGES, SERIOUS INJURIES OR DEATH.
CHECK TIRE AND WHEEL CAREFULLY BEFORE MOUNTING AND MAKE SURE THE TIRE AND RIM BEAD MOUNTING DIAMETERS MATCH.
CONSULT THE TIRE MANUFACTURER'S RECOMMENDATION.

MOUTING A DAMAGED TIRE MAY LEAD TO TIRE EXPLOSION WHEN SEATING BEADS OR REDUCED ROAD SAFETY, AND MAY RESULT IN MATERIAL DAMAGES, SERIOUS INJURIES OR DEATH.
INSPECT THE TIRE CLOSELY FOR DAMAGE.
NEVER MOUNT A DAMAGED TIRE.

MOUNTING A TIRE TO A DAMAGED OR CORRODED RIM MAY LEAD TO TIRE EXPLOSION WHEN SEATING BEADS OR REDUCED ROAD SAFETY, AND MAY RESULT IN MATERIAL DAMAGES, SERIOUS INJURIES OR DEATH.
INSPECT THE RIM CLOSELY FOR DAMAGE OR CORROSION.
NEVER MOUNT A TIRE TO A DAMAGED OR CORRODED RIM.

**⚠ CAUTION**

RISK OF BUMPING.

THE BEAD PRESS TOOL MAY EXPERIENCE RESISTANCE FROM THE TIRE LEADING TO THE BEAD PRESS TOOL BEING THROWN, WHCH MAY RESULT IN INJURIES.
ALWAYS HOLD THE SHAFT OF THE BEAD PRESS TOOL WHEN USING THE BEAD PRESS DEVICE FOR MOUNTING THE TIRE.

**⚠ CAUTION**

RISK OF UPPER LIMBS CRUSHING, PINCHING OR ENTANGLEMENT.

WHEN MOUNTING TIRES, THE AREA CLOSE TO THE TOOLHEAD POSES RISK OF CRUSHING OPERATOR'S HANDS WHEN THE CHUCK IS ROTATED.
KEEP HANDS AND ANY PART OF THE OPERATORS BODY OFF THE HEAD WORK AREA WHEN THE CHUCK IS ROTATED.

WHEN ROTATING THE CHUCK, HANDS MAY GET ENTANGLED BY THE WHEEL OR THE CHUCK, RESULTING IN INJURIES.
KEEP HANDS OFF THE WHEEL AND THE CHUCK WHEN THEY ARE ROTATED.

WHEN USING THE BEAD PRESS DEVICE TO MOUNT THE TIRE, THE BEAD PRESS TOOL MAY CONTACT THE RIM, THUS REPRESENTS A CRUSH HAZARD TO THE OPERATOR'S HANDS.
DO NOT HOLD THE BEAD PRESS TOOL WHILE MOUNTING TIRES.
HOLD THE BEAD PRESS TOOL SHAFT TO PREVENT THE TOOL FROM BEING THROWN.

WHEN THE BEAD PRESS DEVICE MOVES, HANDS MAY GET CRUSHED BETWEEN THE BEAD PRESS DEVICE ACTUATOR CYLINDER AND MOUNTING BRACKETS, OR PINCHED BETWEEN THE CYLINDER AND THIS EQUIPMENT FRAME.
KEEP HANDS OFF THE BEAD PRESS DEVICE MOUNTING BRACKETS AND THIS EQUIPMENT FRAME.

WHEN RELEASING THE LOCKING SYSTEM THE TOOLHEAD SUDDENLY MOVES UPWARDS UP TO SHOULDERING AGAINST THE HORIZONTAL BEAM, AND MAY CRUSH THE OPERATOR'S FINGERS.
KEEP HANDS OFF THE HEXAGON VERTICAL SHAFT WHEN RELEASING THE LOCKING SYSTEM.

**⚠ CAUTION**

RISK OF FEET CRUSHING.

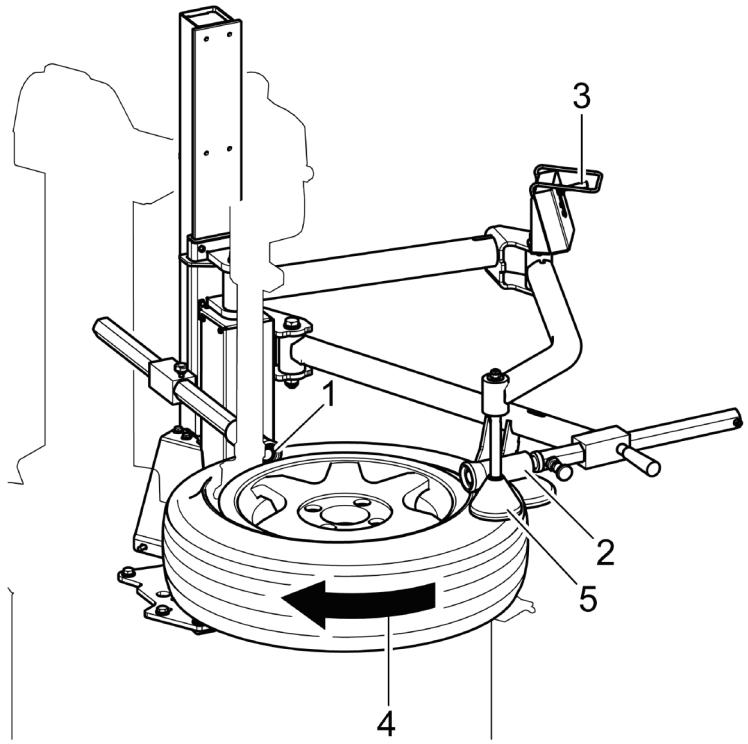
WHEN RELEASING AND UNLOADING THE WHEEL FROM THE CHUCK, THE WHEEL MAY FALL TO THE GROUND AND CRUSH THE OPERATOR'S FEET.
NEVER LEAVE UNCLAMPED WHEELS ON THE CHUCK UNATTENDED.

**NOTICE**

CHUCK SHALL ALWAYS BE TURNED CLOCKWISE FOR TIRE MOUNTING OPERATIONS.
BRIEFLY TURN THE CHUCK COUNTER-CLOCKWISE ONLY IN CASE SMALL ADJUSTMENTS OF THE WHEEL POSITION ARE NEEDED.

1. Place the pusher roller (Fig. 33 ref. 1) radially compared to the rim at the same time place the bead bead roller (Fig. 33 ref. 2), as shown in the figure. Then place the pusher cone (Fig. 33 ref. 5) on the bead in order to keep it into the rim drop center during the following phases;
2. lower the pusher roller (Fig. 33 ref. 1) and the bead bead roller (Fig. 33 ref. 2), by lowering the relevant lever of the control unit (Fig. 33 ref. 3), until the tire bead is placed next to the rim drop center;

Fig. 33




3. start the chuck clockwise rotation (Fig. 33 ref. 4) using the proper pedal control and complete bead mounting;
4. lift the device by lifting the relevant lever of the control unit (Fig. 33 ref. 3) and bring the rollers to rest position.

## 12.11 Tire inflation

**⚠ DANGER**

RISK OF EXPLOSION OR ROAD ACCIDENTS.

EXCEEDING MAXIMUM TIRE INFLATION PRESSURE CENTERING DICTATED BY THE TIRE MANUFACTURER MAY LEAD TO TIRE EXPLOSION OR REDUCED ROAD SAFETY AND RESULT IN ROAD ACCIDENTS, SEVERE INJURIES OR DEATH.
IN CASE A TIRE EXPLODES, DEBRIS ARE MOSTLY THROWN UPWARDS: NEVER EXCEED MAXIMUM TIRE INFLATION PRESSURE AS DICTATED BT THE TIRE MANUFACTURER.
DO NOT LEAN ON THE WHEEL WHILE INFLATING THE TIRE.

THIS EQUIPMENT IS EQUIPPED WITH A TIRE INFLATION PRESSURE LIMITING DEVICE WHICH LIMITS TIRE INFLATION PRESSURE FROM 4.0 TO 4.4 bar (FROM 58 TO 64 psi).
IF INFLATION PRESSURE IN EXCESS OF 4.4 bar (64 psi) ARE READ, THE DEVICE IS DEFECTIVE.
IN THIS CASE:

- DEFLATE AND SCRAP THE TIRE IMMEDIATELY;
- DO NOT INFLATE TIRES WITH THIS EQUIPMENT;
- HAVE THE TIRE INFLATION PRESSURE LIMITING DEVICE REPLACED BY A QUALIFIED TECHNICIAN.

DO NOT REPLACE THE TIRE INFLATION PRESSURE LIMITING DEVICE BY ANY OTHER TYPE OF PRESSURE LIMITING DEVICE.

**⚠ WARNING**

RISK OF EYE INJURY OR HEARING DAMAGE.

WHEN TIRE BEADS ARE SEATED AGAINST RIM FLANGES DEBRIS MAY BE THROWN AND NOISE LEVEL PEAKS MAY BE EXPERIENCED, LEADING TO EYE INJURIES OR HEARING DAMAGE.
WEAR PROTECTIVE GOGGLES AND HEARING PROTECTORS.

**⚠ CAUTION**

RISK OF UPPER LIMBS CRUSHING.

WHEN TIRE BEADS ARE SEATED AGAINST RIM FLANGES OPERATOR'S HANDS MAY BE CRUSHED BETWEEN THE TIRE BEADS AND THE RIM FLANGES.
KEEP OPERATOR'S HANDS OFF THE WHEEL WHILE INFLATING THE TIRE.

### *12.11.1 Tire inflation with pressure gage*

1. Connect the terminal at the end of the tire inflation device hose to the tire valve;
2. press the inflation pedal until a first stop is felt to let compressed air flow to the tire;
3. tire inflation pressure can be read only when the pedal is released;
4. release the pedal regularly to read tire inflation pressure and make sure maximum tire inflation pressure as dictated by the tire manufacturer is not exceeded;
5. proceed with short inflation intervals until both tire beads are seated, or the tire inflation pressure limiting device prevents the tire from being inflated any further;
6. in case tire beads are not seated, release all the air from the wheel using the tire deflation button, remove the wheel from this equipment and put it in a safety cage to complete the inflation procedure;
7. once beads are seated, release the pedal and read tire inflation pressure:
   - if tire inflation pressure is lower than the desired one, continue performing short inflation intervals as described above until the desired tire inflation pressure is achieved;
   - if tire inflation pressure is higher than the desired one, release air from the wheel using the tire deflation button until the desired tire inflation pressure is achieved;
8. disconnect the terminal at the end of the tire inflation hose from the tire valve.

### *12.11.2 Tire inflation with Tubeless inflation assembly*

**⚠ DANGER**

RISK OF EXPLOSION OR ROAD ACCIDENTS.

EXCEEDING MAXIMUM TIRE INFLATION PRESSURE CENTERING DICTATED BY THE TIRE MANUFACTURER MAY LEAD TO TIRE EXPLOSION OR REDUCED ROAD SAFETY AND RESULT IN ROAD ACCIDENTS, SEVERE INJURIES OR DEATH.
IN CASE A TIRE EXPLODES, DEBRIS ARE MOSTLY THROWN UPWARDS: NEVER EXCEED MAXIMUM TIRE INFLATION PRESSURE AS DICTATED BT THE TIRE MANUFACTURER.
DO NOT LEAN ON THE WHEEL WHILE INFLATING THE TIRE.

THIS EQUIPMENT IS EQUIPPED WITH A TIRE INFLATION PRESSURE LIMITING DEVICE WHICH LIMITS TIRE INFLATION PRESSURE FROM 4.0 TO 4.4 bar (FROM 58 TO 64 psi).
IF INFLATION PRESSURE IN EXCESS OF 4.4 bar (64 psi) ARE READ, THE DEVICE IS DEFECTIVE.
IN THIS CASE:

- DEFLATE AND SCRAP THE TIRE IMMEDIATELY;
- DO NOT INFLATE TIRES WITH THIS EQUIPMENT;
- HAVE THE TIRE INFLATION PRESSURE LIMITING DEVICE REPLACED BY A QUALIFIED TECHNICIAN.

DO NOT REPLACE THE TIRE INFLATION PRESSURE LIMITING DEVICE BY ANY OTHER TYPE OF PRESSURE LIMITING DEVICE.

**⚠ WARNING**

RISK OF EYE INJURIES.

WHEN THE TUBELESS INFLATION ASSEMBLY IS ACTIVATED INTENSE COMPRESSED AIR JETS ARE REALEASED UPWARDS FROM THE CHUCK WHICH MAY IMPINGE THE OPERATOR FACE IF NO WHEEL IS PLACED ON THE CHUCK.
DO NOT ACTIVATE THE TUBELESS INFLATION ASSEMBLY IF NOT WHEEL IS CLAMPED ON THIS EQUIPMENT CHUCK.
DO NOT LEAN ON THE WHEEL WHEN THE TUBELESS INFLATION ASSEMBLY IS ACTIVATED.

**⚠ WARNING**

RISK OF EYE INJURY OR HEARING DAMAGE.

WHEN TIRE BEADS ARE SEATED AGAINST RIM FLANGES DEBRIS MAY BE THROWN AND NOISE LEVEL PEAKS MAY BE EXPERIENCED, LEADING TO EYE INJURIES OR HEARING DAMAGE.
WEAR PROTECTIVE GOGGLES AND HEARING PROTECTORS.

**⚠ CAUTION**

RISK OF UPPER LIMBS CRUSHING.

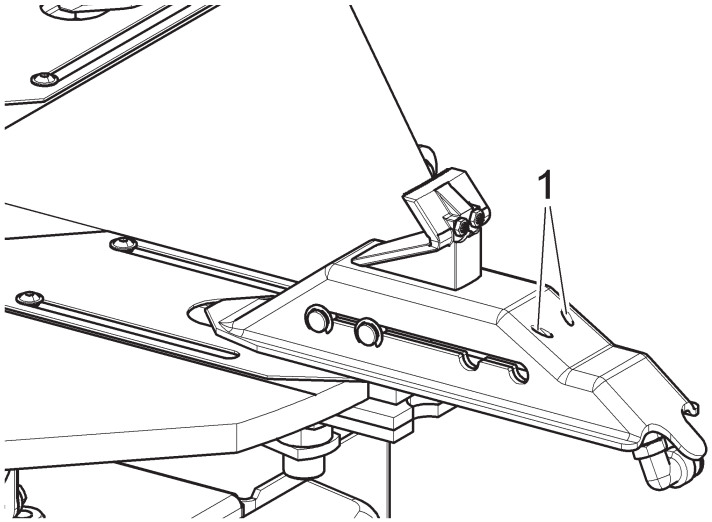
WHEN TIRE BEADS ARE SEATED AGAINST RIM FLANGES OPERATOR'S HANDS MAY BE CRUSHED BETWEEN THE LOWER TIRE BEAD AND THE LOWER RIM FLANGE.
WHEN LIFTING THE TIRE TO LET THE UPPER TIRE BEAD RESTING AGAINST THE UPPER RIM FLANGE, PLACE HANDS ON THE LOWER TIRE SIDEWALL CLOSE TO THE TIRE TREAD.

**NOTICE**

TO ALLOW THE AIR JETS TO SEAT BOTH BEADS, DO NOT FORCE THE LOWER BEAD UPWARDS WITH THE OPERATOR'S HANDS, AS DOING SO MAY PREVENT THE LOWER BEAD TO MAKE CONTACT WITH THE RIM AND SEAL THE TIRE.

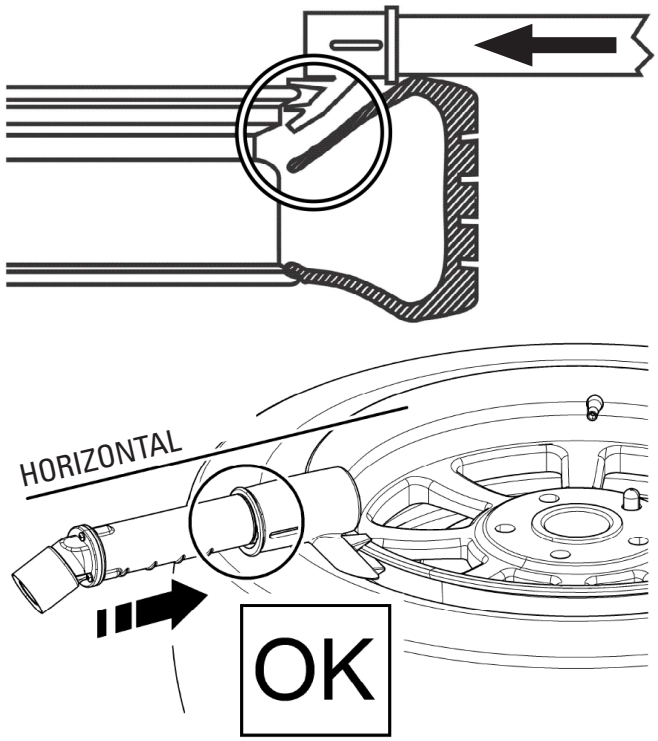
1. Connect the terminal at the end of the tire inflation device hose to the tire valve;
2. Lift the tire lower sidewall gently with the hands until the upper bead rests against the upper rim flange;
3. press the inflation pedal until a stop is felt to let compressed air flow to the tire;
4. further press the inflation pedal until air is blasted from the chuck nozzles (Fig. 34 ref. 1) ;

Fig. 34




5. as soon as the tire is sealed, remove the hands form the lower tire sidewall;
6. reduce pressure on the inflation pedal to stop air from exiting through the chuck nozzles, while continuing to deliver compressed air to the tire through the tire inflation device hose;

Fig. 35




7. tire inflation pressure can be read only when the pedal is released;
8. release the pedal regularly to read tire inflation pressure and make sure maximum tire inflation pressure as dictated by the tire manufacturer is not exceeded;
9. proceed with short inflation intervals until both tire beads are seated, or the tire inflation pressure limiting device prevents the tire from being inflated any further;
10. in case tire beads are not seated, release all the air from the wheel using the tire deflation button, remove the wheel from this equipment and put it in a safety cage to complete the inflation procedure;
11. once beads are seated, release the pedal and read tire inflation pressure:

- if tire inflation pressure is lower than the desired one, continue performing short inflation intervals as described above until the desired tire inflation pressure is achieved;
- if tire inflation pressure is higher than the desired one, release air from the wheel using the tire deflation button until the desired tire inflation pressure is achieved;

12. disconnect the terminal at the end of the tire inflation hose from the tire valve.

## 13.0 MAINTENANCE

### *13.1.1 Purpose*

This procedure establishes the minimum requirements for the lockout of energy that could cause injury to personnel by the operation of equipment in need of repair, being serviced or being decommissioned altogether, as well as for restoring it to service.
All employees shall comply with this procedure.

### *13.1.2 Rules for Using Lockout/Tagout and Restoring to Service Procedures*

Use the Lockout/Tagout procedure whenever the equipment is being repaired or serviced, waiting for repair or decommissioned when current operation could cause possible injury to personnel, or for any other situation when unintentional operation could injure personnel.

No attempt shall be made to operate the equipment when the energy isolating device is locked out.

Use the Restoring to Service procedure whenever repair or service work on the equipment is complete and the equipment can be restored to service.

### *13.1.3 Responsibility*

The responsibility for assuring that this procedures are followed is binding upon all employees and service personnel from outside service companies (i.e., Authorized Manufacturer Installers, contractors, etc.).

All employees shall be instructed in the safety significance of the Lockout/Tagout and Restoring to Service procedures by the facility owner/manager.

Each new or transferred employee along with visiting outside service personnel shall be instructed by the owner/manager (or assigned designee) in the purpose and use of the Lockout/Tagout and Restoring to Service procedures.

### *13.1.4 Preparation*

Employees authorized to perform lockout shall ensure that the appropriate energy isolating device (i.e., circuit breaker, fuse, disconnect, etc.) is identified for the lift being locked out.

Other these devices for other equipment may be located in close proximity of the appropriate energy isolating device.

If the identity of the device is in question, see the shop supervisor for resolution.

Assure that proper authorization is received prior to performing the lockout procedure.

### *13.1.5 Sequence of Lockout Procedure*

1) Notify all affected employees that a lockout is being performed and the reason for it.
2) Unload the subject equipment. Shut it down and assure the disconnect switch is "OFF" if one is provided on the equipment.
3) The authorized lockout person operates the main energy isolation device removing power to the subject equipment.
   - If this is a lockable device, the authorized lockout person places the assigned padlock on the device to prevent its unintentional re-activation. An appropriate tag is applied stating the person's name, at least 3" x 6" in size, an easily noticeably color, and states not to operate device or remove tag.
   - If this device is a non-lockable circuit breaker or fuse, replace with a "dummy" device and tag it appropriately as mentioned above.
4) Attempt to operate subject equipment to assure the lockout is working. Be sure to return any switches to the "OFF" position.
5) The equipment is now locked out and ready for the required maintenance or service, or to be decommissioned.

### *13.1.6 Sequence of Restoring Equipment to Service*

1) Assure the work on the equipment is complete and the area is clear of tools, vehicles, and personnel.
2) At this point, the authorized person can remove the lock (or dummy circuit breaker or fuse) & tag and activate the energy isolating device so that the equipment may again be placed into operation.

## *13.2 Maintenance that can be performed by operators*

**⚠ DANGER**

RISK OF FIRE OR ELECTROCUTION.

DO NOT USE RUNNING WATER OR OTHER LIQUIDS TO CLEAN THIS EQUIPMENT.
CLEANING THIS EQUIPMENT WITH WATER OR OTHER LIQUIDS LEAD TO SHORT CIRCUITS AND ELECTRICAL SHOCK ONCE ELECTRICAL POWER SUPPLY IS RESTORED TO THIS EQUIPMENT, AND RESULT IN MATERIAL DAMAGES, SERIOUS INJURIES OR DEATH.

**⚠ WARNING**

RISK OF EYE INJURIES.

THIS EQUIPMENT IS OFTEN COVERED WITH DUST AND DEBRIS RESULTING FROM CHANGING TIRES.
CLEANING WHEELS WITH COMPRESSED AIR ON THIS EQUIPMENT MAY LEAD TO FLYING DEBIRS, AND RESULT IN EYE INJURIES.
DO NOT USE COMPRESSED AIR TO CLEAN THIS EQUIPMENT.

**⚠ CAUTION**

RISK OF UPPER AND LOWER LIMBS CRUSHING, OR ENTAGLEMENT.

UPPER AND LOWER LIMBS MAY GET CRUSHED OR ENTAGLED IN CASE OF INDAVERTENT MOVEMENTS OF PARTS OF THIS EQUIPMENT OR A WHEEL PLACED ON THE CHUCK DURING MAINTENANCE OPERATIONS.

BEFORE PERFORMING ANY MAINTENANCE ON THE EQUIPMENT, READ AND STRICTLY FOLLOW THE LOCKOUT/TAGOUT PROCEDURE DESCRIBED IN SECTION “EQUIPMENT LOCKOUT/TAGOUT AND RESTORING TO SERVICE PROCEDURES” OF THIS MANUAL.

**⚠ CAUTION**

RISK OF UPPER AND LOWER LIMBS CRUSHING, OR ENTAGLEMENT.

UPPER AND LOWER LIMBS MAY GET CRUSHED OR ENTAGLED IN CASE OF INDAVERTENT MOVEMENTS OF PARTS OF THIS EQUIPMENT ONCE EITHER ELECTRICAL POWER SUPPLY OR COMPRESSED AIR SUPPLY ARE RESTORED TO THIS EQUIPMENT, AFTER MAINTENANCE OPERATIONS ARE PERFORMED.

BEFORE RESTORING ANY POWER SUPPLY TO THE EQUIPMENT:

- MAKE SURE HOLD-TO-RUN TYPE CONTROLS ARE IN THEIR NEUTRAL OR OFF POSITION.
- READ AND STRICTLY FOLLOW THE RESTORING TO SERVICE PROCEDURE DESCRIBED IN SECTION “EQUIPMENT LOCKOUT/TAGOUT AND RESTORING TO SERVICE PROCEDURES” OF THIS MANUAL.

All maintenance described below must be performed by authorized personnel.

1. Cleaning and lubrication.
   To guarantee the efficiency and correct functioning of this equipment, clean and lubricate this equipment as specified below at least once a month.
   Remove deposits of tire powder and other waste materials with a vacuum.
   Clean the hexagon vertical shaft the toolhead is attached to with a clean, dry soft cloth and lubricate it with a mineral lubricant grade for vertical slideways, ISO VG grade 150 to 220.
   Clean the bead press device vertical slideway with a clean, dry soft cloth and lubricate it with a mineral lubricant for vertical slideways, ISO VG grade 150 to 220.
   Clean the bead lifting roller hexagon shaft with a clean, dry soft cloth and lubricate it with a mineral lubricant for horizontal or vertical slideways, ISO VG grade 68 to 220.
   Grease the joints of the roller holder arms and the lower disc and the vertical sliding column of the device.

**NOTICE**

CLEANING THE HEXAGON SHAFTS, OR THE SLIDEWAY WITH A WATER- OR OTHER DETERGENT-DAMP CLOTH MAY PROMOTE OXIDIZING, CORROSION OR SOAP DEPOSIT FORMATION, AND AFFECT DURATION AND SMOOTH OPERATION OF THIS EQUIPMENT ADVERSELY.

FAILURE TO CLEAN AND LUBRICATE HEAXGON SHAFTS AND THE SLIDEWAY REGULARLY MAY AFFECT DURATION AND SMOOTH OPERATON OF THIS EQUIPMENT ADVERSELY.

USING LUBRICANT GRADES NOT MEETING INDICATED SPECS TO LUBRICATE THE HEXAGON SHAFTS AND THE SLIDEWAY MAY AFFECT DURATION AND SMOOTH OPERATION OF THIS EQUIPMENT ADVERSELY.

THE MANUFACTURER DECLINES ANY LIABILITY IN CASE THE PROVISIONS ABOVE ARE NOT COMPLIED WITH.

2. Check condensate drain working.
   The air-conditioning unit is equipped with an automatic vacuum-operated drain, placed below the condensate bowl, which releases condensate in the bowl when compressed air supply pressure drops (see Fig. 36).
   It requires no manual intervention by the operator.
   At least once a week check that the condensate bowl drained once the unit was disconnect from compressed air supply.
   If a relevant quantity of condensate water is present in the drain bowl, the air-conditioning unit is defective and needs be replaced by a qualified technician.

3. Check oil level within the compressed air lubricator.
   The air-conditioning unit is equipped with an automatic air lubricator (see Fig. 36).
   At least once week unscrew the bowl beneath the air lubricator to remove it, top up oil level within the bowl and re-assemble the bowl back to the air-lubricator.
   Use an ISO VG 32 mineral oil grade for hydraulic circuits only for topping up oil level within the air lubricator.

**NOTICE**

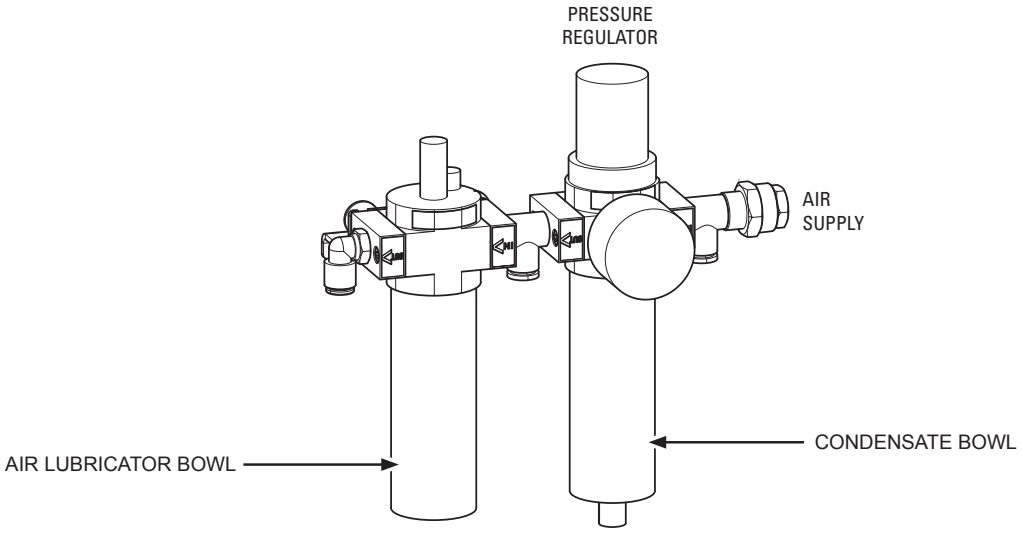
OPERATING THIS EQUIPMENT WITH AN EMPTY AIR LUBRICATOR BOWL MAY AFFECT DURATION AND SMOOTH OPERATION OF THIS EQUIPMENT ADVERSELY.
DO NOT OPERATE THIS EQUIPMENT WITH AN EMPTY AIR LUBRICATION BOWL.

USE OF SYNTHETIC OIL GRADES FOR TOPPING OIL LEVEL WITHIN THE AIR LUBRICATOR BOWL MAY AFFECT DURATION AND SMOOTH OPERATION OF THIS EQUIPMENT ADVERSELY.

USE OF MINERAL OIL GRADES WITH A VISCOSITY GRADE OTHER THAN THE ONE SPECIFIED MAY AFFECT DURATION AND SMOOTH OPERATION OF THIS EQUIPMENT ADVERSELY

THE MANUFACTURER DECLINES ANY LIABILITY IN CASE THE PROVISIONS ABOVE ARE NOT COMPLIED WITH.

Fig. 36



4. Replace worn rim guards.
   At least once a day check rim protection guards (toolhead plastic guards, bead breaker shovel guard, bead breaker rubber pad, and chuck jaw plastic guards) for wear.
   Replace worn guards as needed.
   Replace guards with spare parts provided by the manufacturer or its authorized distributors only.

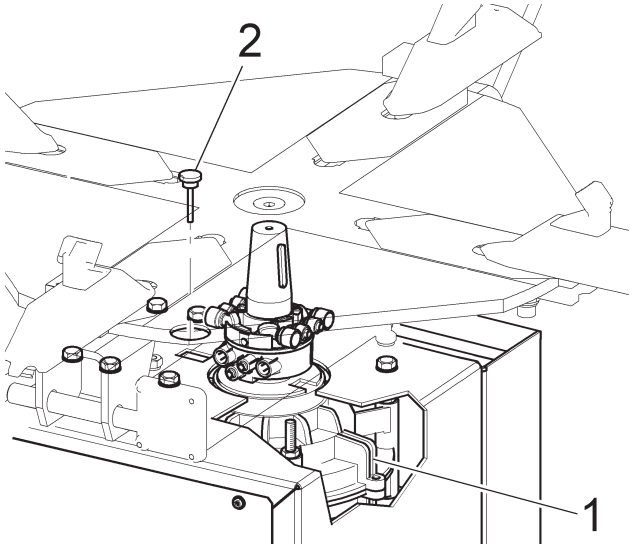
**NOTICE**

OPERATING THIS EQUIPMENT WITH WORN RIM PROTECTION GUARDS MAY LEAD TO SCRATCHING WHEEL RIMS.
DO NOT OPERATE THIS EQUIPMENT WITH WORN RIM PROTECTION GUARDS.

THE MANUFACTURER DECLINES ANY LIABILITY IN CASE THE PROVISIONS ABOVE ARE NOT COMPLIED WITH.

5. Check oil level within reduction gear.
   At least each 100 working hours check the lubricant level into the reduction gear (Fig. 37 ref. 1) removing the plug (Fig. 37 ref. 2) through the spy hole prearranged on the chassis.

Fig. 37



### *13.3 Maintenance that must be performed by qualified technicians only*

**⚠ DANGER**

RISK OF ELECTROCUTION.
RISK OF LIMBS CRUSHING OR ENTANGLEMENT.
RISK OF BUMPING.

PERFORMING OF ANY OF THE MAINTENANCE DESCRIBED BELOW BY UNQUALIFIED PERSONNEL MAY LEAD TO ELECTRICAL SHOCK, LIMBS CRUSHING OR PINCHING, BUMPING, OR ENTANGLEMENT.
HAVE MAINTEANANCE DESCRIBED BELOW PERFORMED BY QUALIFIED TECHNICIANS ONLY.

**⚠ WARNING**

RISK OF EYE INJURIES.

INADVERTENT ACTIVATION OF TIRE INFLATION SYSTEM MAY LEAD TO FLY DEBRIS AND RESULT IN EYE INJURIES.
BEFORE PERFORMING ANY MAINTENANCE ON THE EQUIPMENT, READ AND STRICTLY FOLLOW THE LOCKOUT/TAGOUT PROCEDURE DESCRIBED IN SECTION “EQUIPMENT LOCKOUT/TAGOUT AND RESTORING TO SERVICE PROCEDURES” OF THIS MANUAL.

**⚠ CAUTION**

RISK OF UPPER LIMBS CRUSHING OR ENTANGLEMENT.
RISK OF BUMPING.

THE TECHNICIAN’S UPPER LIMBS MAY GET CRUSHED OR ENTANGLED BY THE CHUCK OR THE ELECTRIC MOTOR TRANSMISSION IN CASE OF INDAVERTENT ROTATIONS OF THE CHUCK WHILE PERFORMING MAINTENANCE.

THE TECHNICIAN’S HEAD AND BODY MAY GET BUMPED BY THE CHUCK IN CASE OF INADVERTENT ROTATION OF THE CHUCK WHILE PERFORMING MAINTENANCE.

BEFORE PERFORMING ANY MAINTENANCE ON THE EQUIPMENT, READ AND STRICTLY FOLLOW THE LOCKOUT/TAGOUT PROCEDURE DESCRIBED IN SECTION “EQUIPMENT LOCKOUT/TAGOUT AND RESTORING TO SERVICE PROCEDURES” OF THIS MANUAL.

**⚠ CAUTION**

RISK OF LIMBS CRUSHING OR ENTANGLEMENT.
RISK OF BUMPING.

LIMBS MAY GET CRUSHED, PINCHED OR ENTAGLED AND PEOPLE MAY GET BUMPED IN CASE OF INDAVERTENT MOVEMENTS OF PARTS OF THIS EQUIPMENT ONCE EITHER ELECTRICAL POWER SUPPLY OR COMPRESSED AIR SUPPLY ARE RESTORED TO THIS EQUIPMENT, AFTER MAINTENANCE OPERATIONS ARE PERFORMED.

BEFORE RESTORING ANY POWER SUPPLY TO THE EQUIPMENT:

- MAKE SURE HOLD-TO-RUN TYPE CONTROLS ARE IN THEIR NEUTRAL OR OFF POSITION.
- READ AND STRICTLY FOLLOW THE RESTORING TO SERVICE PROCEDURE DESCRIBED IN SECTION “EQUIPMENT LOCKOUT/TAGOUT AND RESTORING TO SERVICE PROCEDURES” OF THIS MANUAL.

### *13.3.1 Transmission and pneumatic mufflers maintenance*

**⚠ DANGER**

RISK OF ELECTROCUTION.

MAINTENANCE DESCRIBED BELOW REQUIRES REMOVING A FIXED GUARD AND MAY EXPOSE TECHNICIANS TO LIVE PARTS, WHICH MAY LEAD TO ELECTRICAL SHOCK, RESULTING IN SEVERE INJURIES OR DEATH.

BEFORE PERFORMING ANY MAINTENANCE ON THE EQUIPMENT, READ AND STRICTLY FOLLOW THE LOCKOUT/TAGOUT PROCEDURE DESCRIBED IN SECTION "EQUIPMENT LOCKOUT/TAGOUT AND RESTORING TO SERVICE PROCEDURES" OF THIS MANUAL.

DO NOT RECONNECT THE EQUIPMENT TO THE ELECTRICAL POWER SUPPLY UNTIL THE FIXED GUARD IS PROPERLY MOUNTED BACK TO THIS EQUIPMENT.

**⚠ CAUTION**

RISK OF SCALDING.

MAINTENANCE DESCRIBED BELOW REQUIRES REMOVING A FIXED GUARD AND MAY EXPOSE TECHNICIANS TO CONTACT WITH THE ELECTRIC MOTOR, WHICH MAY BE HOT AND EXPOSE THE TECHNICAN TO SCALDING.
STOP OPERATING THIS EQUIPMENT AT LEAST 10 MINUTES BEFORE REMOVING THE FIXED GUARD TO ALLOW FOR THE ELCTRIC MOTOR TO COOL DOWN.

**⚠ CAUTION**

RISK OF LIMBS CRUSHING, PINCHING OR ENTANGLEMENT.
RISK OF BUMPING.

A WHEEL PLACED ON THIS EQUIPMENT CHUCK MAY FALL TO THE FLOOR AND CRUSH THE TECHNICIAN'S LIMBS OR BUMP HIS HEAD AND BODY, AND RESULT IN INJURIES.
REMOVE ANY WHEEL FROM THE CHUCK PRIOR TO PERFORMING ANY OF THE MAINTENANCE DESCRIBED BELOW.

INADVERTENT MOVEMENTS OF PARTS OF THIS EQUIPMENT WHILE PERFORMING MAINTENANCE MAY LEAD TO CRUSHING, SHEARING OR ENTANGLING THE TECHNICIAN LIMBS OR BUMP HIS HEAD AND BODY, AND RESULT IN INJURIES.

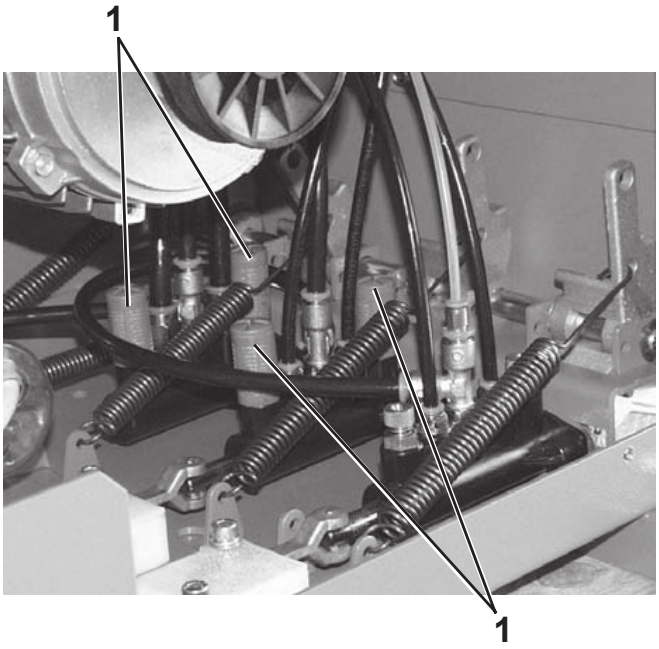
DISCONNECT THIS EQUIPMENT FROM THE COMPRESSED AIR SUPPLY BEFORE PERFORMING ANY OF THE MAINTENANCE DESCRIBED BELOW.

At least once every 1000 working hours:

1. undo the four bolts securing the lid on the left side of this equipment frame an remove the lid;

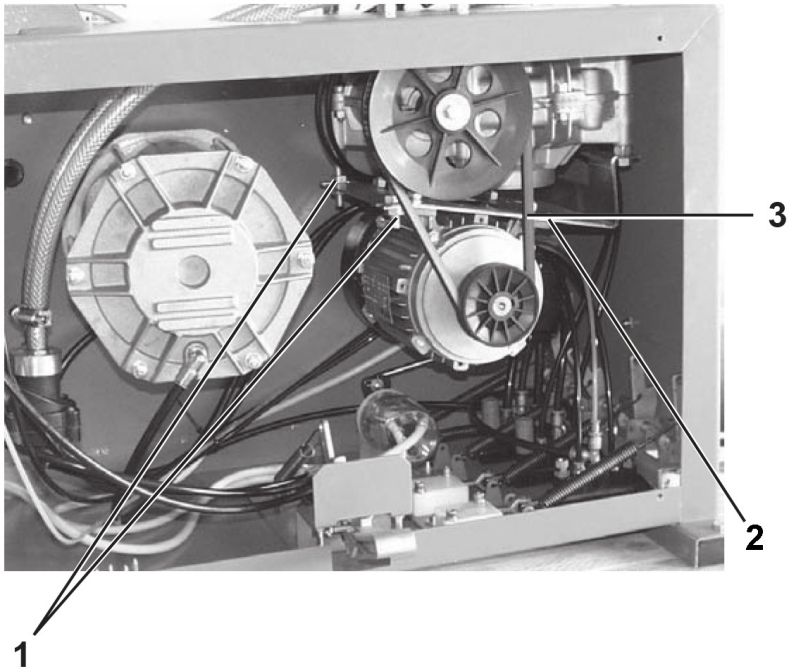
2. clean or replace pneumatic mufflers on the pedalboard (Fig. 38 ref. 1):
   - undo the 4 bolts securing the pedalboard to the front side of this equipment frame and extract the pedalboard;
   - remove the mufflers from the pedal-operated pneumatic valves of the pedalboard;
   - blow the mufflers with compressed air to clean them or replace them in case of damages.
     Use only spare parts from the manufacturer or its authorized distributor to replace the mufflers.
     Fit the mufflers back to the pneumatic valves.
   - Fit the pedal board back to the front side of this equipment frame and secure it with the bolts removed before;
   - fit the lid back to the left side of this equipment frame and secure it with the bolts removed before.

Fig. 38




3. Check the transmission belt (Fig. 39 ref. 3) for wear and proper tensioning:
   - to increase or decrease the belt use the four nuts (Fig. 39 ref. 1) mounted to the motor support (Fig. 39 ref. 2);
   - replace the belt (Fig. 39 ref. 3) if worn out.
     Use only spare parts from the manufacturer or its authorized distributor to replace the mufflers.

Fig. 39




4. Fit the lid back to the left side of this equipment frame and secure it with the bolts removed before.

### *13.3.2 Checking and adjusting the air lubricator setting*

**⚠WARNING**

RISK OF EYE INJURIES.

THE MAINTENANCE DESCRIBED BELOW MUST BE PERFORMED WHILE THIS EQUIPMENT IS CONNECTED TO THE COMPRESSED AIR SUPPLY.
INADVERTENT ACTIVATION OF TIRE INFLATION SYSTEM MAY LEAD TO FLY DEBRIS AND RESULT IN EYE INJURIES.
BEFORE PERFORMING ANY MAINTENANCE ON THE EQUIPMENT, READ AND STRICTLY FOLLOW THE LOCKOUT/TAGOUT PROCEDURE DESCRIBED IN SECTION "EQUIPMENT LOCKOUT/TAGOUT AND RESTORING TO SERVICE PROCEDURES" OF THIS MANUAL.

**⚠CAUTION**

RISK OF LIMBS CRUSHING, PINCHING OR ENTANGLEMENT.
RISK OF BUMPING.

THE MAINTENANCE DESCRIBED BELOW MUST BE PERFORMED WHILE THIS EQUIPMENT IS CONNECTED TO THE COMPRESSED AIR SUPPLY.
INADVERTENT MOVEMENTS OF PARTS OF THIS EQUIPMENT WHILE PERFORMING MAINTENANCE MAY LEAD TO CRUSHING OR PINCHING LIMBS, OR BODY BUMPING, AND RESULT IN INJURIES.

BEFORE PERFORMING ANY MAINTENANCE ON THE EQUIPMENT, READ AND STRICTLY FOLLOW THE LOCKOUT/TAGOUT PROCEDURE DESCRIBED IN SECTION "EQUIPMENT LOCKOUT/TAGOUT AND RESTORING TO SERVICE PROCEDURES" OF THIS MANUAL.

A correct setting of air lubricator ensures a suitable quantity of lubricating oil is released to the compressed air supply.
The air lubricator is provided with a knob on top of it, which can be turned with aid of a slot-type screwdriver to adjust the air lubricator setting.
At least once every 6 months check the air lubricator setting and adjust if necessary.

**NOTICE**

INSUFFICIENT OR EXCESSIVE OIL RELEASE TO THE COMPRESSED AIR SUPPLY TO THIS EQUIPMENT MAY AFFECT THIS EQUIPMENT DURATION; SMOOTH OPERATION AND PERFORMANCE ADVERSELY.

THE MANUFACTURER DECLINES ANY LIABILITY IN CASE THE PROVISIONS ABOVE ARE NOT COMPLIED WITH.

1. Open and close the chuck jaws completely several times while checking the air lubricator until a first oil drop is released by the air;
2. continue opening and closing the chuck jaws completely until a second oil drop is released by the air lubricator.
   The second oil drop shall be released to the compressed air supply after 4 to 5 complete stroked of the chuck jaws.
3. If the oil release rate does not meet the specification above, adjust setting of the air lubricator and test oil release rate again;
4. repeat the procedure above until the oil release rate meets the specification above.

### *13.3.3 Checking and adjusting toolhead setting*

**⚠WARNING**

RISK OF EYE INJURIES.

THE MAINTENANCE DESCRIBED BELOW MUST BE PERFORMED WHILE THIS EQUIPMENT IS CONNECTED TO THE COMPRESSED AIR SUPPLY.
INADVERTENT ACTIVATION OF TIRE INFLATION SYSTEM MAY LEAD TO FLY DEBRIS AND RESULT IN EYE INJURIES.
BEFORE PERFORMING ANY MAINTENANCE ON THE EQUIPMENT, READ AND STRICTLY FOLLOW THE LOCKOUT/TAGOUT PROCEDURE DESCRIBED IN SECTION “EQUIPMENT LOCKOUT/TAGOUT AND RESTORING TO SERVICE PROCEDURES” OF THIS MANUAL.

**⚠CAUTION**

RISK OF LIMBS CRUSHING OR PINCHING.
RISK OF BUMPING.

THE MAINTENANCE DESCRIBED BELOW MUST BE PERFORMED WHILE THIS EQUIPMENT IS CONNECTED TO THE COMPRESSED AIR SUPPLY.
INADVERTENT MOVEMENTS OF PARTS OF THIS EQUIPMENT WHILE PERFORMING MAINTENANCE MAY LEAD TO CRUSHING OR PINCHING LIMBS, OR BODY BUMPING, AND RESULT IN INJURIES.

BEFORE PERFORMING ANY MAINTENANCE ON THE EQUIPMENT, READ AND STRICTLY FOLLOW THE LOCKOUT/TAGOUT PROCEDURE DESCRIBED IN SECTION “EQUIPMENT LOCKOUT/TAGOUT AND RESTORING TO SERVICE PROCEDURES” OF THIS MANUAL.

**⚠CAUTION**

RISK OF UPPER LIMBS CRUSHING.

WHEN ADJUSTING THE TOOLHEAD POSITION HANDS MAY GET CRUSHED BETWEEN THE TOOLHEAD AND THE WHEEL.
KEEP HANDS , AND ANY PART OF THE OPERATOR BODY OFF THE WHEEL WHEN ADJUSTING THE , TOOLHEAD POSITION.

The travel of the system for locking the toolhead vertical position and toolhead mount to the hexagon vertical shaft and can be adjusted to ensure proper stretching of the tire is obtained during mounting and demounting operations.
At least once every 6 months check travel of the system for locking the toolhead vertical position and the toolhead setting, and adjust if necessary.

**NOTICE**

OPERATING THIS EQUIPMENT WITH AN UNAPPROPRIATE SETTING OF THE TOOLHEAD VERTICAL TRAVEL OR OF THE TOOLHEAD MOUNT TO THE HEXAGON SHAFT MAY IMPACT SMOOTH OPERATION OF THIS EQUIPMENT ADVERSELY OR LEAD TO TIRE DAMAGES.

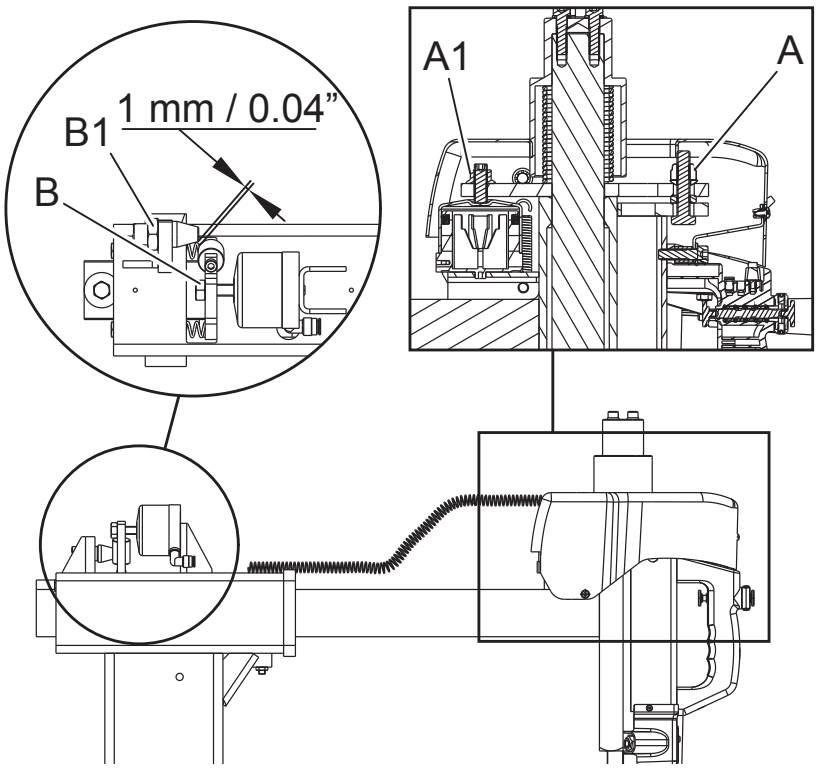
The toolhead is locked in position to an hexagonal post through 4 upper horizontal-axis dowels and a lower vertical-axis bolt. The adjusting clamps lock the tool in its working position. Adjusting clamps also set head distance from the wheel rim. Toolhead top is concave for smoother positioning. For toolhead setting a 14” rim with good concentricity degree and standard profile, better if with flat upper edge and proper right angle to its spin axis, is required.

Setting the travel (Fig. 40).

Tire changers equipped with collapsible post and telescopic arm, tire changers, have both horizontal and vertical adjusting clamps for horizontal and vertical distance of the toolhead from the rim, respectively. Depressurize the air-operated cylinder (remove upper guard and tighten the nut A1 first so to keep the adjusting clamp horizontally, that is it should be perpendicular to the hex. shaft) and then turn the nut A to adjust:

1. turn the nut A clockwise for shorter travel of the toolhead;
2. turn the nut A anti-clockwise for longer travel of the toolhead.
   Adjust the vertical clamp by turning nut B, with the pneumatic cylinder depressurized (after the upper guard has been removed and after nut B1 has been tightened), in order to lock the cone in fixed position compared to the roller – see Fig. 40);
3. turn the nut B clockwise for shorter travel of the toolhead;
4. turn the nut B anti-clockwise for longer travel of the toolhead.
   Adjust the radial distance of the head to the rim through the setting knob so that the head is set radially at about 1 mm (0.04") from the outer profile of the rim flange.

Fig. 40



Setting the toolhead for tire fitting and removal.

When finished with clamp adjustment, set toolhead position along its three orthogonal axes using the 14" diameter sample rim. Tighten the dowels and the lower bolt firmly to lock the head in position.

1. Keep the horizontal beam in contact with the knob shaft and check mount of the toolhead as shown in Fig. 41 or Fig. 42 (for protruding spoke toolhead, sold separately);
2. if adjustment is needed, slightly release the adjustment set screws and the bolt below the toolhead and operate the adjustment set screws to adjust the mount of the toolhead;
3. slightly tighten the set screws to cancel backlash of the toolhead to the hexagon shaft;
4. repeat previous steps to check and adjust mount of the toolhead until meeting the specs set forth in Fig. 41 or Fig. 42;
5. tighten the set screws to 40 Nm (30 lbs.ft);
6. tighten the screw under the toolhead to 70 Nm (52 lbs.ft).

Fig. 41

Car rim

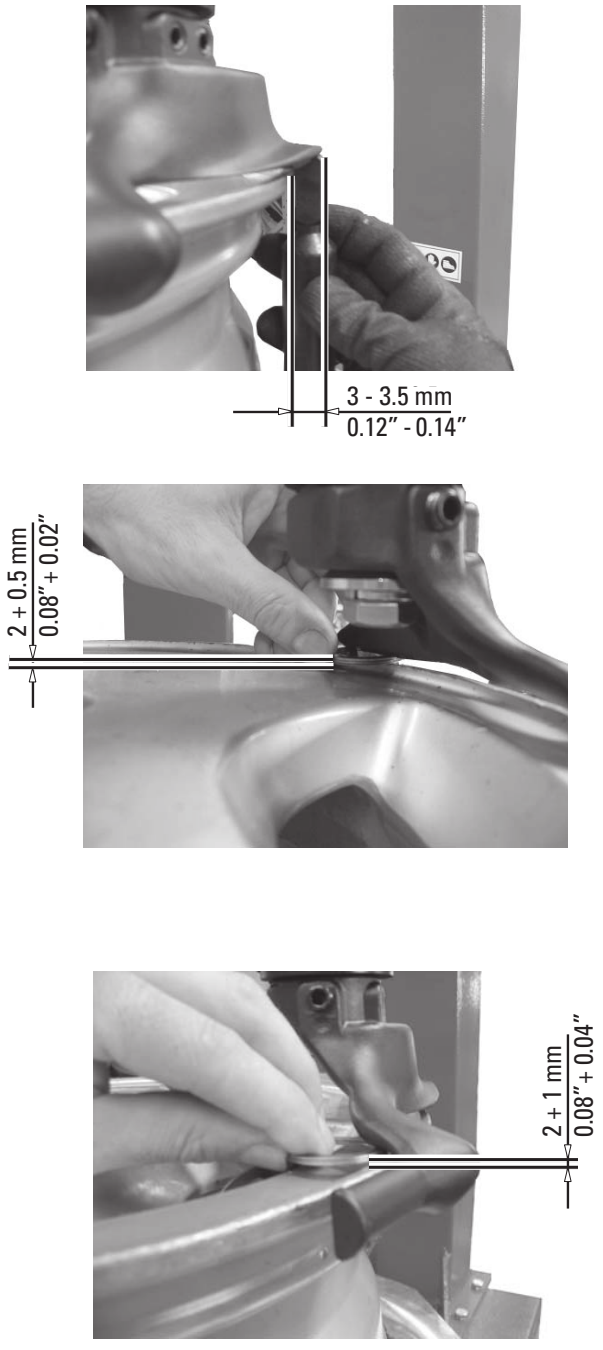
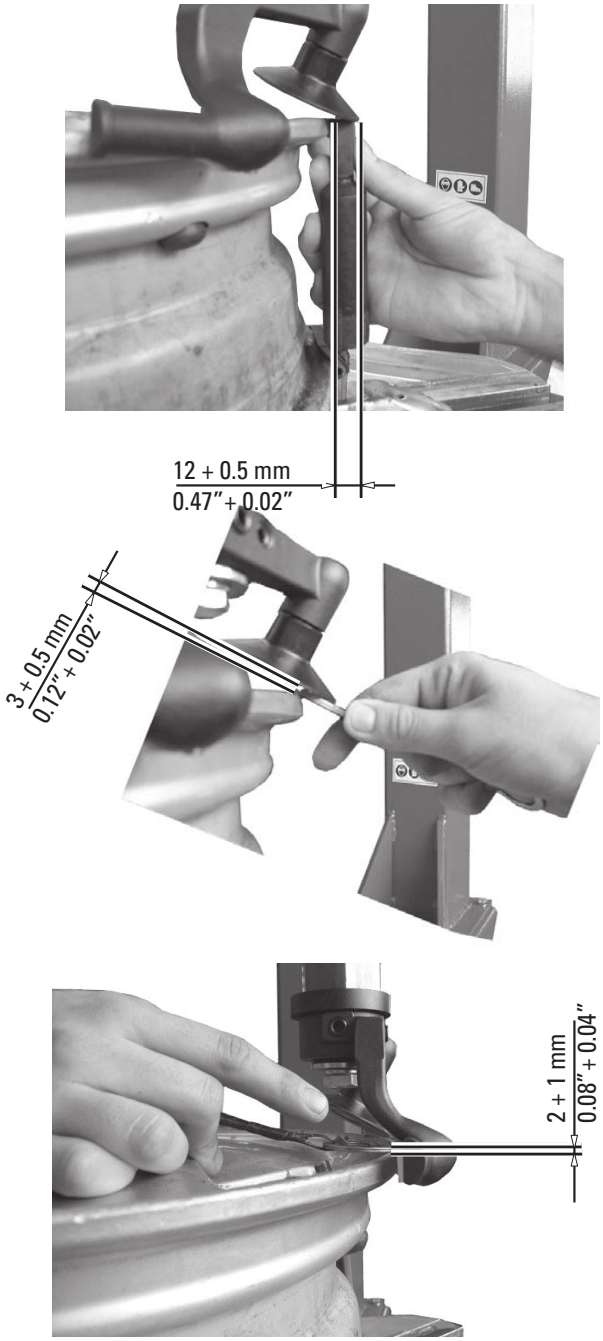



Fig. 42

Rims with projecting spokes



## 14.0 TROUBLESHOOTING TABLE

Possible troubles which might occur to the tire-changer are listed below. The manufacturer disclaims all responsibility for damages to people, animals or objects due to improper operation by non-unauthorised personnel. In case of trouble, call Technical Service Department for instructions on how to service and/or adjust the equipment in full safety to avoid any risk of damage to people, animals or objects.

In an emergency and before maintenance on tire-changer, set the main switch to "0" and lock it in this position.

CONTACT AUTHORIZED TECHNICAL SERVICE

do not try and service alone

| Problem | Possible cause | Remedy |
|---|---|---|
| The chuck does not work if pedal is pressed. | 1. No voltage available.<br>2. Motor faulty.<br>3. Safety fuses for equipment system blown. | 1. Check that the plug is properly connected and power supply is working.<br>2. Check for correspondence of electric data of the equipment with the mains.<br>3. Check for proper work conditions. Check connections and parts (motors and switches). |
| The chuck stops during tire assembly/ disassembly. | Transmission belt loose or worn out. | Check for proper working conditions of the transmission belt. Tension up and/or replace, if necessary. |
| The chuck does not clamp the rim properly. | 1. Jaws worn out.<br>2. One or more pneumatic cylinders faulty. | 1. Replace jaws.<br>2. Replace pneumatic cylinder gaskets. |
| The toolhead gets in contact with the rim during assembly/disassembly. | 1. Clamping plate not adjusted or faulty.<br>2. Chuck locking bolt loose. | 1. Adjust or replace the clamping plate.<br>2. Tighten the bolt. |
| One or more pedals do not return to their original position. | 1. Return spring released.<br>2. Return spring broken. | 1. Fasten the spring.<br>2. Replace the spring. |
| Bead breaker pneumatic controls do not work. | 1. Equipment pneumatic system not connected.<br>2. Air lines clogged. | 1. Check pneumatic connections and supply.<br>2. Ensure that the air filter is clean and undamaged, if fitted. If no air filter is fitted, remove all dirt into the pneumatic system and then fit a suitable filter. Clean and/or replace the silencers. |
| Some single pneumatic devices do not work. | Ensure that device and/or distributor seals are not damaged. | Call for technical assistance.  |
| The chuck does not rotate in counter-clockwise direction. | Pedalboard microswitch breakage. | Replace microswitch. |
| The chuck rotates slowly but it does not operate on the motor pedal. | Pedalboard reversible de-calibration. | 1. Keep the pedal in rest position.<br>2. Keep the equipment connected to the net.<br>3. Wait for 30 seconds that the pedalboard recalibration automatic attempt ends. |
| The chuck doesn't rotate, but it attempts rotation when the equipment is switched on again. | Pedalboard irreversible de-calibration. | Call for technical assistance.  |

| Problem | Possible cause | Remedy |
|---|---|---|
| The chuck doesn't rotate. | Inverter overload alarm<br>or<br>inverter undervoltage alarm<br>or<br>inverter overvoltage alarm | Shorten the length of a possible equipment extension cable or increase the conductors section (disconnect and connect again). Lift the motor pedal and wait for the automatic reset. |
| | Overtemperature alarm | Wait until the motor system cools (the equipment does not restart if the temperature level does not go below the set safety threshold). |
| The chuck does not reach the maximum rotation speed. | The mechanical resistance of the gear-motor system has increased. | Turn the chuck without wheel for a few minutes so that the system heats, thus reducing frictions. If in the end the chuck does not accelerate again, call for technical assistance.  |
| No movement is generated when the control lever is operated. | 1. Supply missing.<br>2. The supply hoses have not been correctly assembled.<br>3. The control valve is not working. | 1. Check supply.<br>2. Check hoses fitting.<br>3. Call for technical assistance.  |
| When the control lever is operated movement arises in one direction only. | The control valve is not working. | Call for technical assistance.  |

## 15.0 TECHNICAL DATA

### *15.1 Technical electrical data*

| | | |
|---|---|---|
| Invemotor power (Hp) | | 1 (0.75 kW) |
| Power supply | Voltage (V) | 220 |
| | Phases | 1 |
| | Frequency (Hz) | 60 |
| Typical current draw (A) | | 10 |
| Self-centering chuck rotation speed (rev/min) | | 0 - 16 |

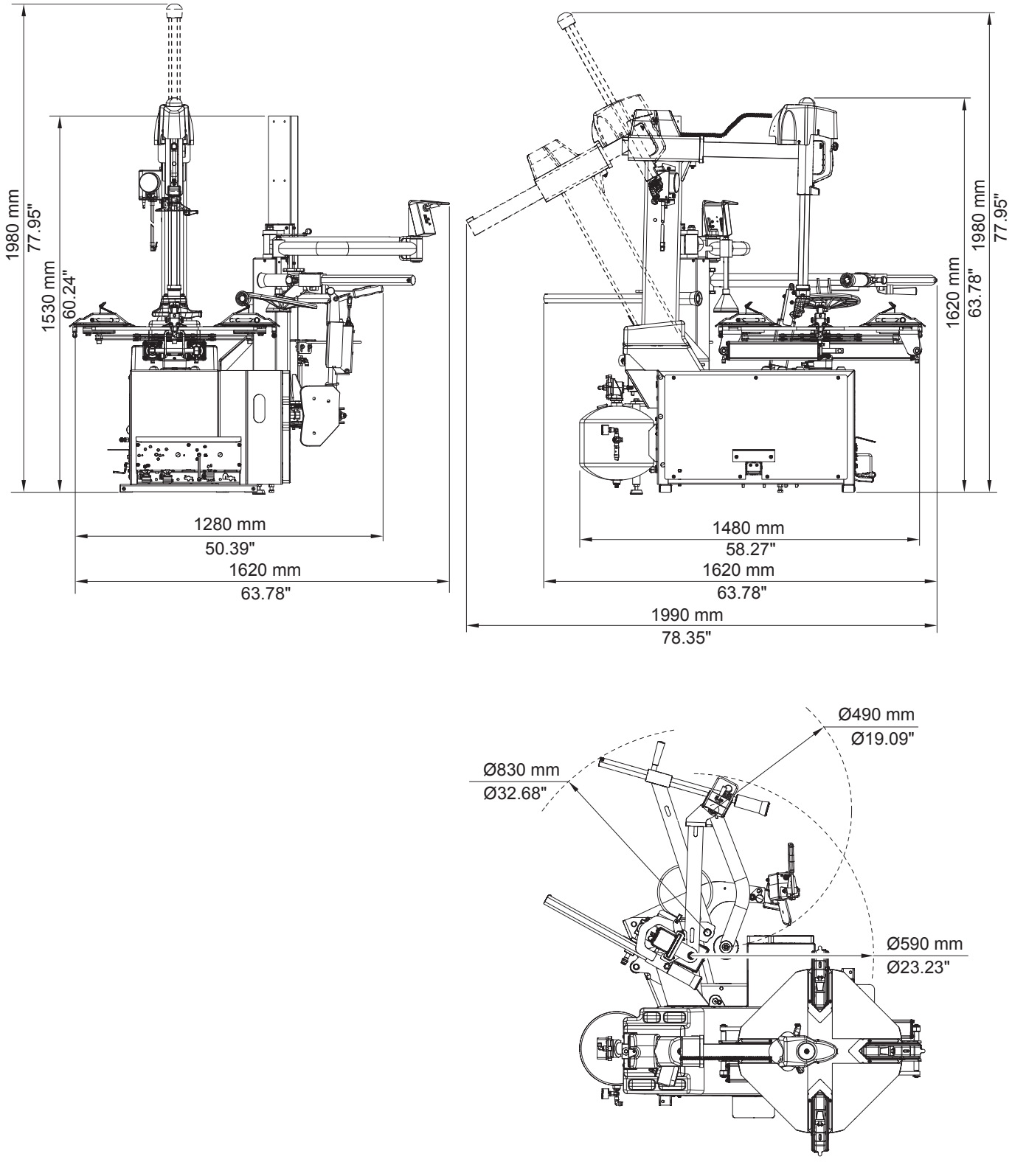
### *15.2 Mechanical technical data*

| | |
|---|---|
| Tire max. diameter (mm) | 1143 (45”) |
| Tool working span (inches) | 10 - 26 |
| Self-centering lock: external (inches) | 10 - 26 |
| Self-centering lock: internal (inches) | 12 - 28.5 |
| Rim max. width (inches) | 14 |
| Bead breaking cylinder force (N) | 36000 (8093 lbf) |
| Operating pressure (bar) | 8 - 10 (116 - 145 psi) |
| Chuck max. torque (Nm) | 1200 (885 ft·lbs) |

| | |
|---|---|
| Weight (kg) | 370 (816 lbs) |

## *14.3 Dimensions*

Fig. 43



## 16.0 SETTING OUT OF SERVICE

If the equipment is temporarily of indefinitely set out of service, read and strictly follow the Lockout/Tagout procedure described in section "Lockout/Tagout and Restoring to Service procedures" of this manual.

**⚠ DANGER**

RISK OF FIRE OR ELECTROCUTION.

DECOMMISIONED EQUIPMENT MAY BE EXPOSED TO MOISTURE; LEADING TO ELECTROCUTION OR FIRE IN CASE IT IS CONNECTED TO THE ELECTRICAL POWER SUPPLY.
IN CASE THE EQUIPMENT IS TEMPORARILY OR INDEFINTELY SET OUT OF SERVICE, READ AND STRICTLY FOLLOW THE LOCKOUT/TAGOUT PROCEDURE DESCRIBED IN SECTION "EQUIPMENT LOCKOUT/TAGOUT AND RESTORING TO SERVICE PROCEDURES" OF THIS MANUAL.

**⚠ CAUTION**

RISK OF EYE INJURIES.

INADVERTENT ACTIVATION OF TIRE INFLATION SYSTEM AFTER THE EQUIPMENT IS SET OUT OF SERVICE MAY LEAD TO FLY DEBRIS AND RESULT IN EYE INJURIES.

BEFORE SETTING THE EQUIPMENT OUT OF SERVICE, READ AND STRICTLY FOLLOW THE LOCKOUT/TAGOUT PROCEDURE DESCRIBED IN SECTION "EQUIPMENT LOCKOUT/TAGOUT AND RESTORING TO SERVICE PROCEDURES" OF THIS MANUAL.

**⚠ WARNING**

RISK OF UPPER AND LOWER LIMBS CRUSHING, OR ENTAGLEMENT.

UPPER AND LOWER LIMBS MAY GET CRUSHED OR ENTAGLED IN CASE OF INADVERTENT MOVEMENTS OF PARTS OF THIS EQUIPMENT OR A WHEEL PLACED ON THE CHUCK AFTER THE EQUIPMENT IS SET OUT OF SERVICE.

BEFORE SETTING THE EQUIPMENT OUT OF SERVICE, READ AND STRICTLY FOLLOW THE LOCKOUT/TAGOUT PROCEDURE DESCRIBED IN SECTION "EQUIPMENT LOCKOUT/TAGOUT AND RESTORING TO SERVICE PROCEDURES" OF THIS MANUAL.

## 17.0 SCRAPPING

This equipment is to be disposed of in accordance with applicable regulations.

## 18.0 EQUIPMENT NAMEPLATE

This equipment nameplate shall be kept clean and easily accessible.
Do not cover this equipment nameplate from view.

**NOTICE**

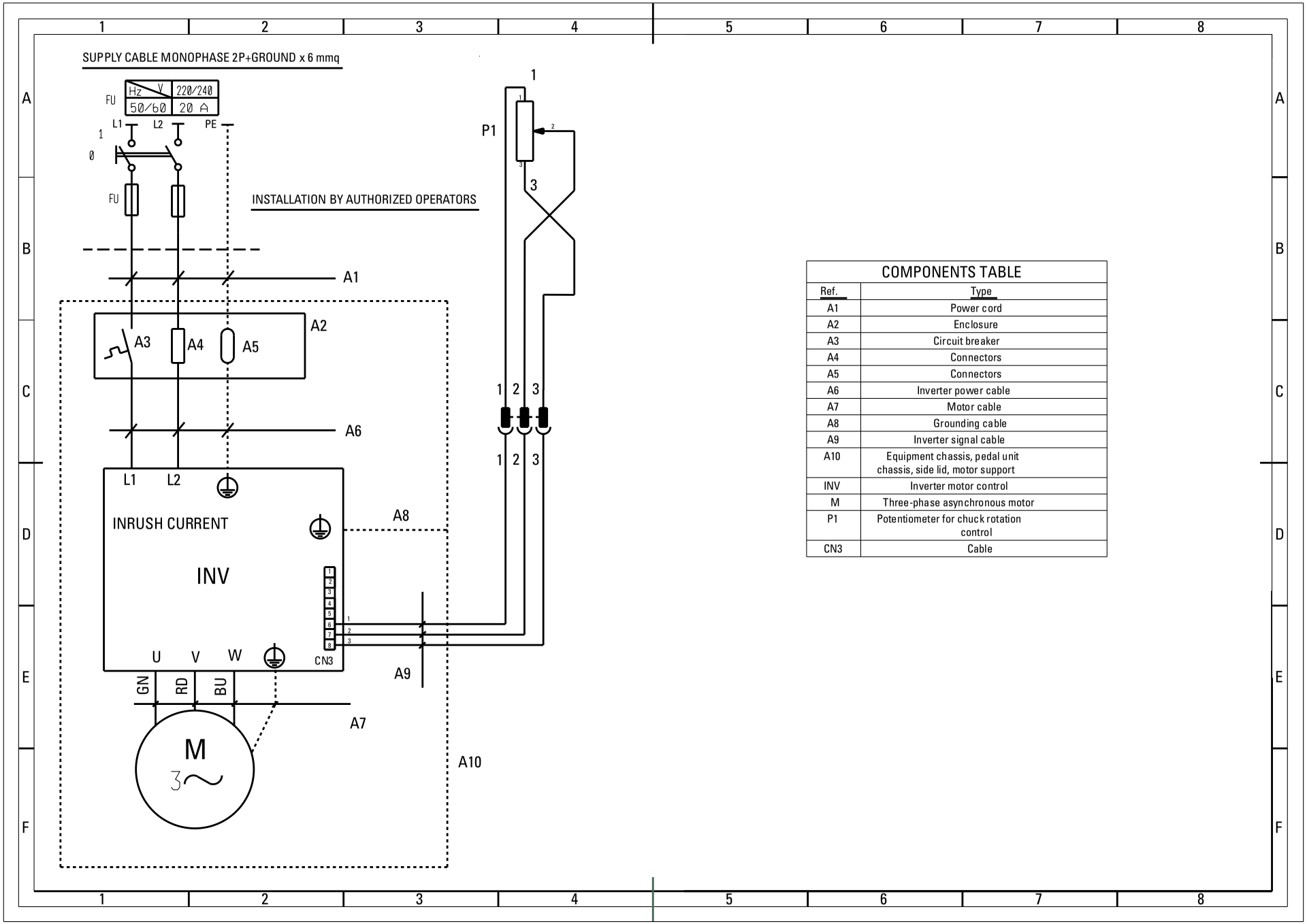
DO NOT TAMPER WITH OR OTHERWISE MODIFY THIS EQUIPMENT NAMEPLATE.

SHOULD THIS EQUIPMENT NAMEPLATE BE ACCIDENTALLY DAMAGED, REMOVED FROM THIS EQUIPMENT, OR BECOME PARTLY OR COMPLETELY UNREADABLE, CONSULT WITH THE MANUFACTURER OR ITS AUTHORIZED DISTRIBUTORS IMMEDIATELY.

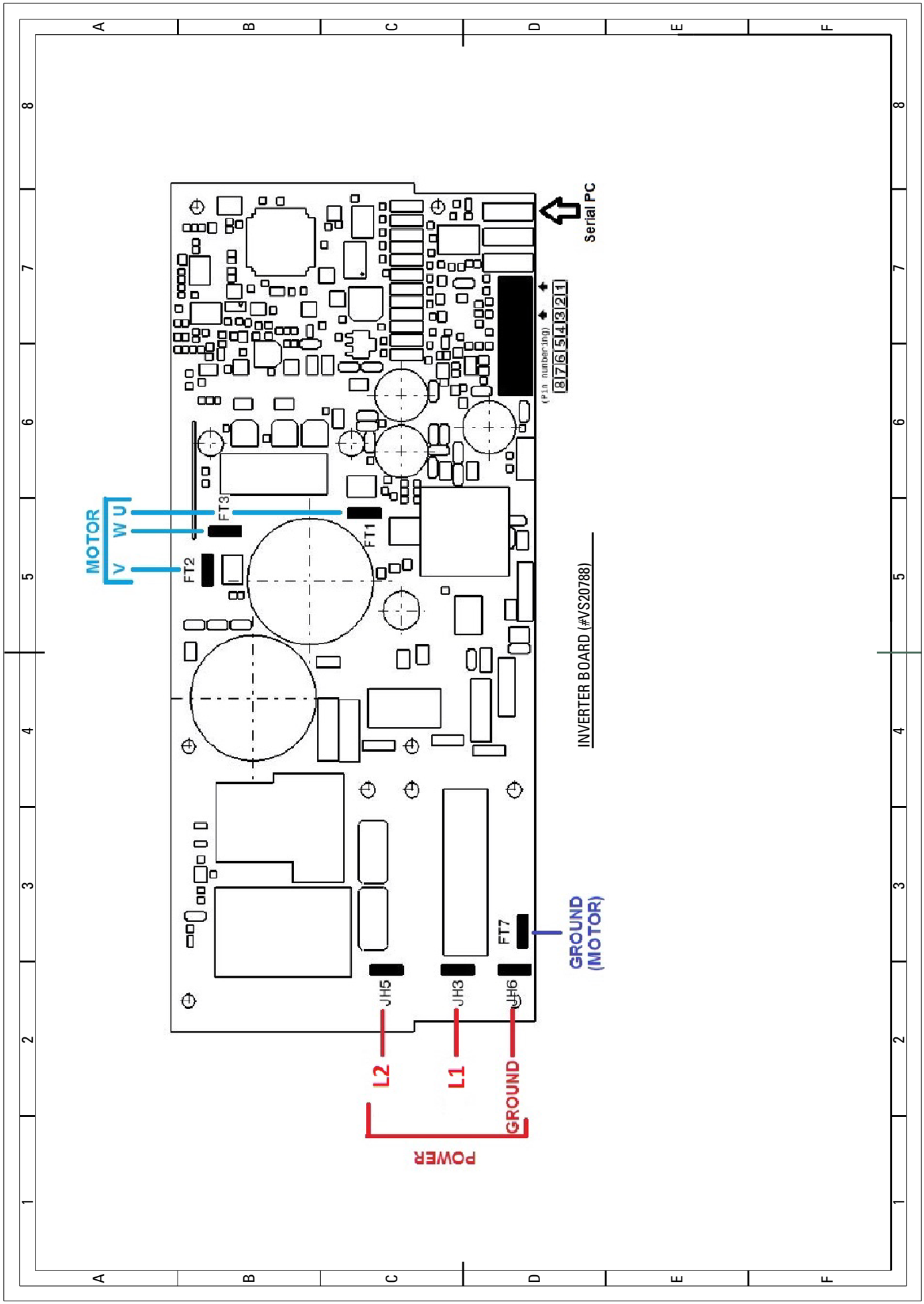
THE MANUFACTURER DECLINES ANY LIABILITY IN CASE THE PROVISIONS ABOVE ARE NOT COMPLIED WITH.

## 19.0 FUNCTIONAL DIAGRAMS

Here follows a list of the equipment functional diagrams.

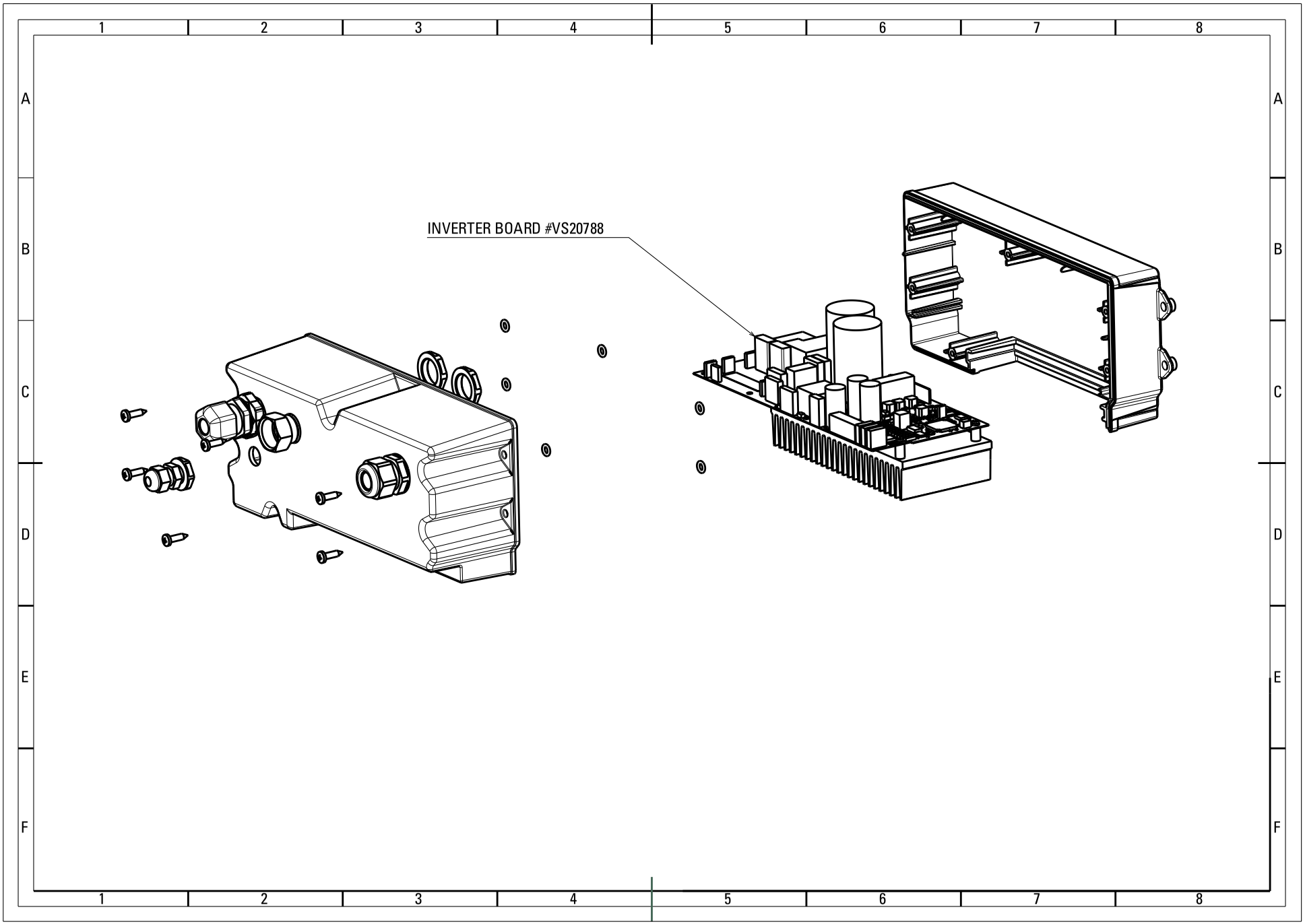



| COMPONENTS TABLE | |
|---|---|
| Ref. | Type |
| A1 | Power cord |
| A2 | Enclosure |
| A3 | Circuit breaker |
| A4 | Connectors |
| A5 | Connectors |
| A6 | Inverter power cable |
| A7 | Motor cable |
| A8 | Grounding cable |
| A9 | Inverter signal cable |
| A10 | Equipment chassis, pedal unit chassis, side lid, motor support |
| INV | Inverter motor control |
| M | Three-phase asynchronous motor |
| P1 | Potentiometer for chuck rotation control |
| CN3 | Cable |


A
B
C
D
E
F
1
2
3
4
5
6
7
8
Serial PC
(Pin numbering)
8 7 6 5 4 3 2 1
MOTOR
V W U
FT1
FT2
FT3
FT7
JH5
JH3
JH6
GROUND
(MOTOR)
L2
L1
GROUND
POWER
INVERTER BOARD (#VS20788)

**Drawing number A - Rev. 0**

**VS730005430**



| Drawing number A - Rev. 0 | | VS730005430 | | Wiring diagram 4/4 |
|---|---|---|---|---|
| **N°** | **Code** | **Description** | **Description** | **Descripción** |
| | I | Motor control inverter | Inverseur commande moteur | Inversor mando motor |
| | M | 3-Ph asynchronous motor | Moteur asynchrone 3-Ph | Motor asincrónico 3-Ph |
| | P1 | Chuck rotation control potentiometer (clockwise/ counter-clockwise) | Potentiomètre commande rotation mandrin (sens horaire antihoraire) | Potenciómetro comando rotación mandril (a izquierda o derecha) |
| | CN3 | Pedalboard micro inverter connector | Connecteur conexion inverseur micro pédalier | Conector conexión inversor micro pedalera |
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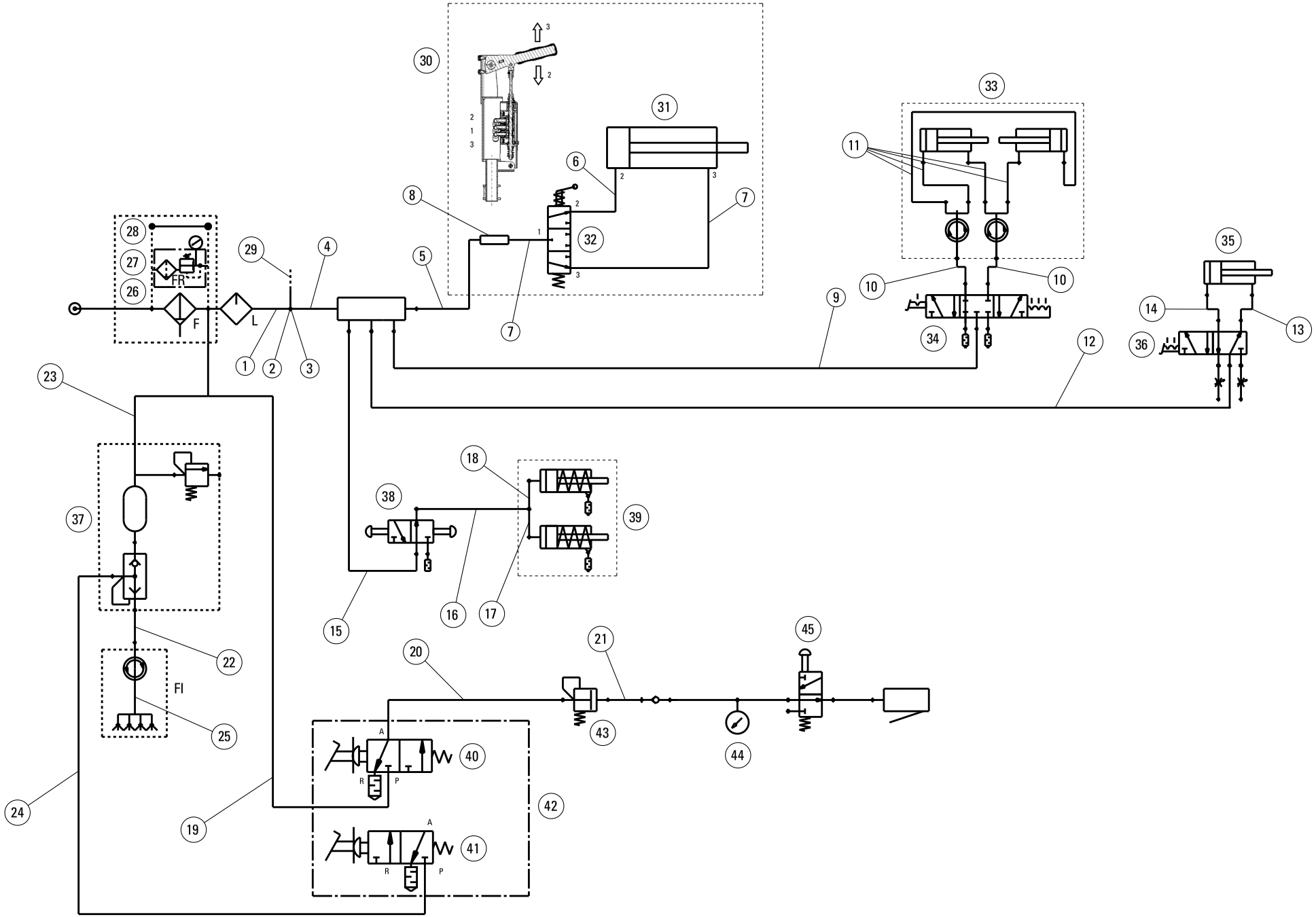
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FI
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21
45
43
44
24
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41
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A
R
P
A
R
P

| Drawing number B - Rev. 0 | | VS730005440 | | Pneumatic diagram |
|---|---|---|---|---|
| **N°** | **Part number** | **Description** | **Description** | **Descripción** |
| 1 | VS317007 | 8x6 black rilsan hose L=420 | Tuyau rilsan 8x6 noir L=420 | Tubo rilsan 8x6 negro L=420 |
| 2 | VS325181 | Y8 fitting | Raccord à V8 | Empalme en V8 |
| 3 | VS325054 | 8-6 reduction | Réduction 8-6 | Reducción 8-6 |
| 4 | VS317007 | 8x6 black rilsan hose L=1600 | Tuyau rilsan 8x6 noir L=1600 | Tubo rilsan 8x6 negro L=1600 |
| 5 | VS317007 | 8x6 black rilsan hose L=300 | Tuyau rilsan 8x6 noir L=300 | Tubo rilsan 8x6 negro L=300 |
| 6 | VS317036 | 10x6.5 black Elastolan hose L=2000 | Tuyau Elastolan 10x6,5 noir L=2000 | Tubo Elastolan 10x6,5 negro L=2000 |
| 7 | VS317036 | 10x6.5 black Elastolan hose L=1700 | Tuyau Elastolan 10x6,5 noir L=1700 | Tubo Elastolan 10x6,5 negro L=1700 |
| 8 | VS325208 | 8-10 straight fitting | Raccord droit 8-10 | Empalme recto 8-10 |
| 9 | VS317007 | 8x6 black rilsan hose L=200 | Tuyau rilsan 8x6 noir L=200 | Tubo rilsan 8x6 negro L=200 |
| 10 | VS317007 | 8x6 black rilsan hose L=1000 | Tuyau rilsan 8x6 noir L=1000 | Tubo rilsan 8x6 negro L=1000 |
| 11 | VS317038 | 8x5.5 black Elastolan hose L=1880 | Tuyau Elastolan 8x5,5 noir L=1880 | Tubo Elastolan 8x5,5 negro L=1880 |
| 12 | VS317007 | 8x6 black rilsan hose L=200 | Tuyau rilsan 8x6 noir L=200 | Tubo rilsan 8x6 negro L=200 |
| 13 | VS317007 | 8x6 black rilsan hose L=1800 | Tuyau rilsan 8x6 noir L=1800 | Tubo rilsan 8x6 negro L=1800 |
| 14 | VS317007 | 8x6 black rilsan hose L=1600 | Tuyau rilsan 8x6 noir L=1600 | Tubo rilsan 8x6 negro L=1600 |
| 15 | VS317006 | 6x4 black rilsan hose L=3300 | Tuyau rilsan 6x4 noir L=3300 | Tubo rilsan 6x4 negro L=3300 |
| 16 | VS317006 | 6x4 black rilsan hose L=170 | Tuyau rilsan 6x4 noir L=170 | Tubo rilsan 6x4 negro L=170 |
| 17 | VS317006 | 6x4 black rilsan hose L=650 | Tuyau rilsan 6x4 noir L=650 | Tubo rilsan 6x4 negro L=650 |
| 18 | VS317006 | 6x4 black rilsan hose L=70 | Tuyau rilsan 6x4 noir L=70 | Tubo rilsan 6x4 negro L=70 |
| 19 | VS317007 | 8x6 black rilsan hose L=1280 | Tuyau rilsan 8x6 noir L=1280 | Tubo rilsan 8x6 negro L=1280 |
| 20 | VS317007 | 8x6 black rilsan hose L=820 | Tuyau rilsan 8x6 noir L=820 | Tubo rilsan 8x6 negro L=820 |
| 21 | VS317007 | 8x6 black rilsan hose L=1100 | Tuyau rilsan 8x6 noir L=1100 | Tubo rilsan 8x6 negro L=1100 |
| 22 | VS318011 | Screened hose L=2000 | Tuyau retiné L=2000 | Tubo retinado L=2000 |
| 23 | VS317007 | 8x6 black rilsan hose L=1000 | Tuyau rilsan 8x6 noir L=1000 | Tubo rilsan 8x6 negro L=1000 |
| 24 | VS317007 | 8x6 black rilsan hose L=1100 | Tuyau rilsan 8x6 noir L=1100 | Tubo rilsan 8x6 negro L=1100 |
| 25 | VS317021 | 10x8 black Elastolan hose L=1900 | Tuyau Elastolan 10x8 noir L=1900 | Tubo Elastolan 10x8 negro L=1900 |
| 26 | | Version with filter assembly + lubricator | Version avec ensemble filtre + lubrificateur | Versión con conjunto filtro + lubricador |

| Drawing number B - Rev. 0 | | VS730005440 | | Pneumatic diagram |
|---|---|---|---|---|
| **N°** | **Part number** | **Description** | **Description** | **Descripción** |
| 27 | | Version with regulator filter assembly + lubricator | Version avec ensemble filtre régulateur + lubrifi-cateur | Versión con conjunto filtro regulador + lubricador |
| 28 | | Version with lubricator | Version avec lubrificateur | Versión con lubricador |
| 29 | | Connection to PLUS83H pneumatic circuit | Branchement au circuit pneumatique PLUS83H | Conexión al circuito neumático PLUS83H |
| 30 | | Bead breaker on ground level with manual control | Décolle-pneus au sol avec commande manuelle | Destalonador a tierra con mando manual |
| 31 | | Lateral bead breaker cylinder | Cylindre décolle-pneus latéral | Cilindro destalonador lateral |
| 32 | | Lateral bead breaker control valve | Soupape commande décolle-pneus latèral | Válvula mando destalonador lateral |
| 33 | | Plate | Plateau | Plaque |
| 34 | | Pedal | Pédale | Pedal |
| 35 | | Tilting | Basculant | Abatible |
| 36 | | Pedal | Pédale | Pedal |
| 37 | | Tank assembly | Ensemble réservoir | Conjunto tanque |
| 38 | | Handle | Poignée | Manija |
| 39 | | Necks | Étranglements | Dispositivos de bloqueo |
| 40 | | N.O. black valve | Soupape noir N.O | Válvula negra N.A. |
| 41 | | N.C. white valve | Soupape blanche N.F. | Válvula blanca N.C. |
| 42 | | Balanc.valve | Soupape balanc | Válvula balanceo |
| 43 | | Inflation pedal valves | Soupapes pédale de gonflage | Válvulas pedal de inflado |
| 44 | | Pressure gage | Manomètre | Manómetro |
| 45 | | Deflation | Dégonflage | Desinflado |
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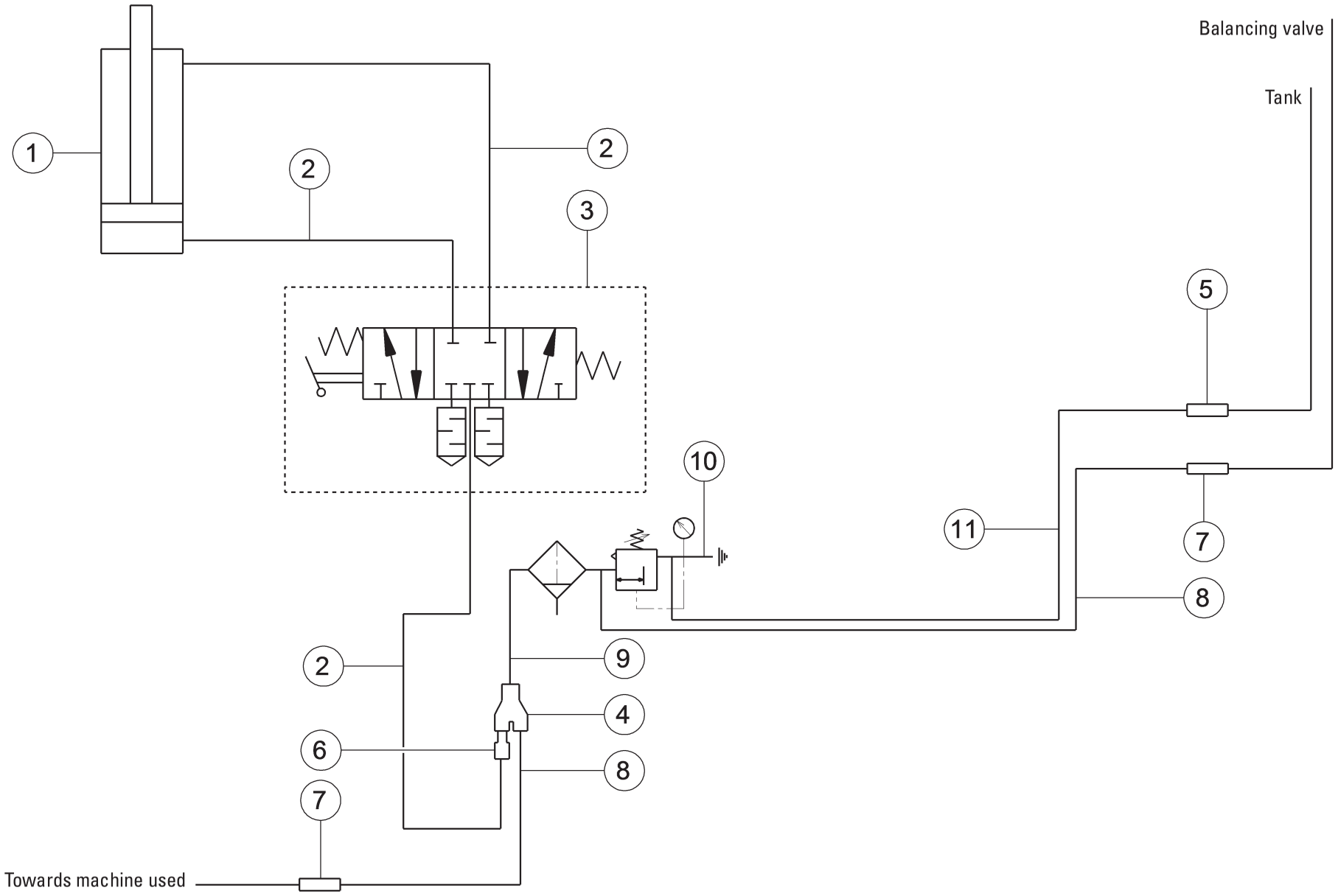
Balancing valve
Tank
1
2
2
3
5
10
11
7
8
2
9
4
6
8
7
Towards machine used

| Drawing number C - Rev. 0 | | VS770705010 | Pneumatic diagram of bead press device with rotating arm | |
|---|---|---|---|---|
| **N°** | **Part number** | **Description** | **Description** | **Descripción** |
| **1** | VS770790672 | D. 80 cylinder | Cylindre D. 80 | Cilindro D. 80 |
| **2** | VS317006 | 6x4 black rilsan hose L=2130 | Tuyau rilsan 6x4 noir L=2130 | Tubo rilsan 6x4 negro L=2130 |
| **3** | VS770790421 | Cylinders control valve | Soupape commande cylindres | Válvula mando cilindros |
| **4** | VS325181 | Y8 fitting | Raccord à V8 | Empalme en V8 |
| **5** | VS325219 | D.10 middle fitting | Raccord intérmediaire D.10 | Empalme intermedio D.10 |
| **6** | VS325054 | 8-6 reduction | Réduction 8-6 | Reducción 8-6 |
| **7** | VS325051 | D.8 plug | Bouchon D.8 | Tapón D.8 |
| **8** | VS317007 | 8x6 black rilsan hose L=500 | Tuyau rilsan 8x6 noir L=500 | Tubo rilsan 8x6 negro L=500 |
| **9** | VS317007 | 8x6 black rilsan hose L=70 | Tuyau rilsan 8x6 noir L=70 | Tubo rilsan 8x6 negro L=70 |
| **10** | VS730090320 | Air treatment assembly+hose nipple | Ensemble traitement air+porte-tuyau | Conjunto tratamiento aire + porta-goma |
| **11** | VS317010 | 10x8 black rilsan hose L=500 | Tuyau rilsan 10x8 noir L=500 | Tubo rilsan 10x8 negro L=500 |
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Installer: please return this booklet to literature package, and give it to the owner/ operator.

***Thank You***

Trained Operators and Regular Maintenance Ensures Satisfactory Performance of Your Wheel Service Equipment.

Contact Your Nearest Authorized Rotary Wheel Service Equipment Parts Distributor for Genuine Replacement Parts. See Literature Package for Parts Breakdown.

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