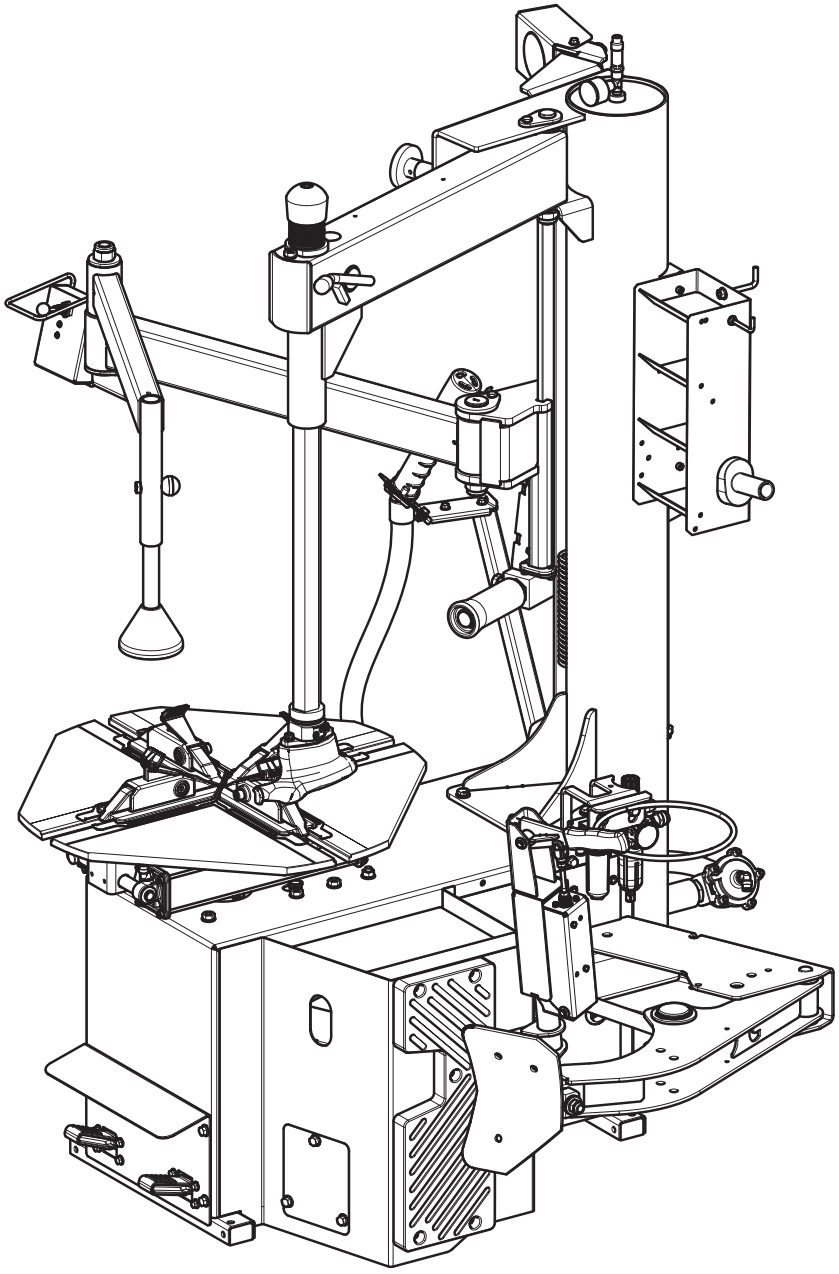
R200 Series Tire Changer



ROT.CR200D0.202055 - ROT.CR200R0.202109

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

CO12877

7301-M001-00

Rev. n. 00 (04/2025)

OPERATION & MAINTENANCE MANUAL

SUMMARY

FEATURE / Model	ROT.CR200D0.202055	ROT.CR200R0.202109
220V power supply with inverter	●	
110V power supply		●

● = standard

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

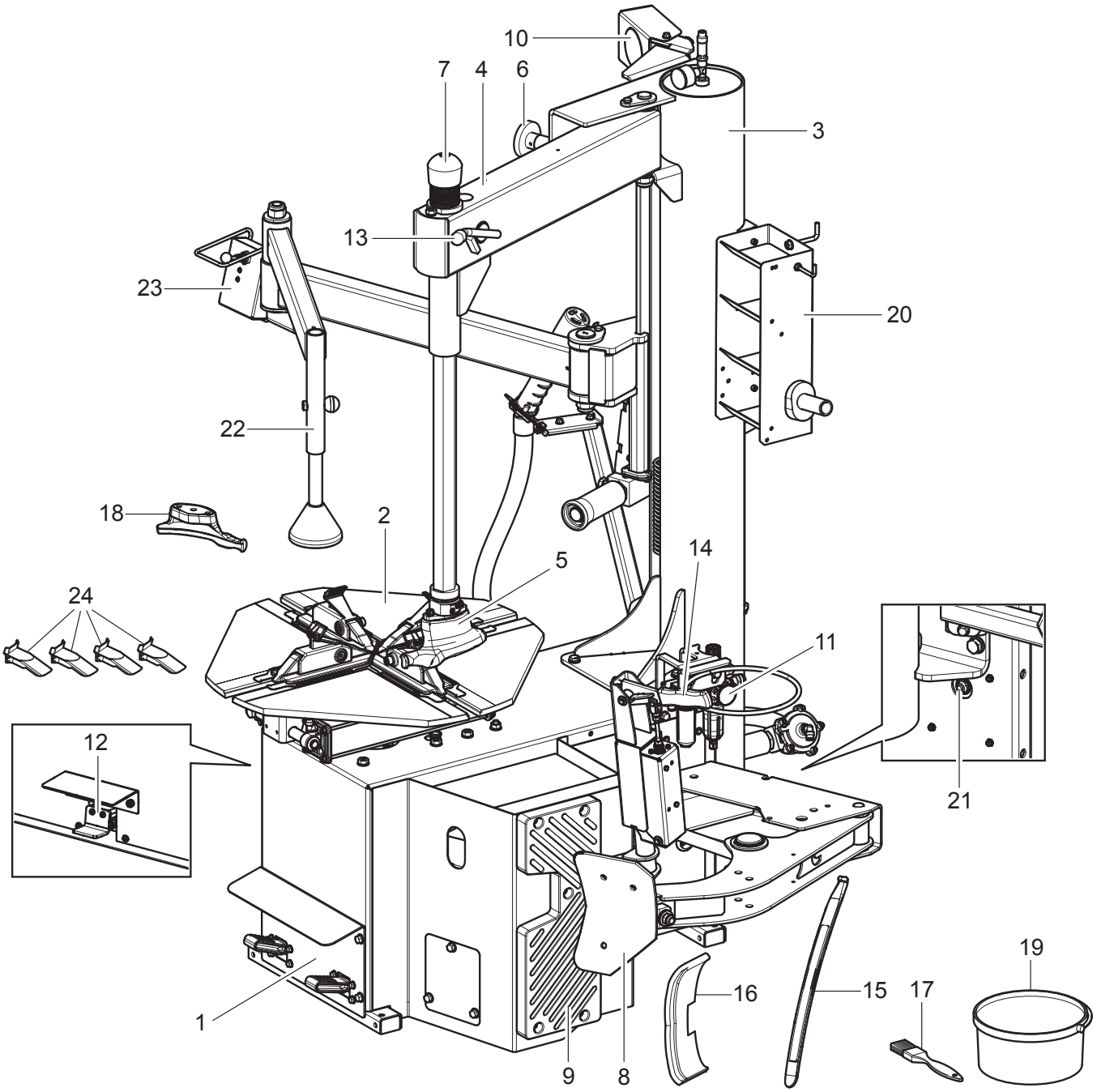
RISK OF EXPLOSION.

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

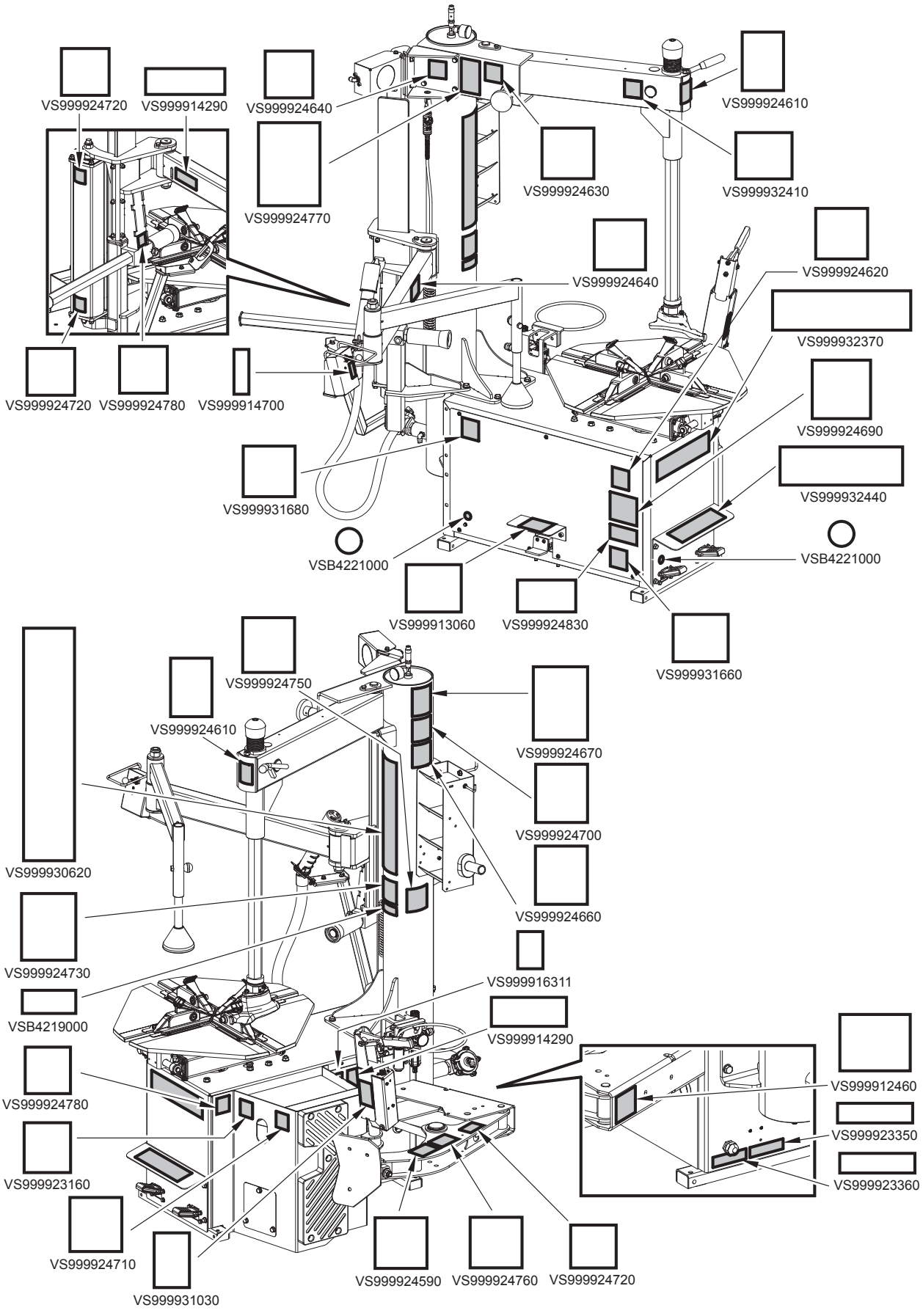


KEY

1 – Pedalboard
2 – Spindle
3 – Post with integrated pressure vessel
4 – Horizontal beam
5 – Toolhead
6 – Adjustment knob
7 – Handgrip
8 – Bead breaker shovel
9 – Pad
10 – Inflation pressure gage
11 – Air treatment assembly
12 – Inflation pedal
13 – Locking system control lever
14 – Bead breaker control handle
15 – Bead lifting lever
16 – Bead breaker shovel guard
17 - Brush
18 – Toolhead
19 – Mounting grease
20 – Tool box
21 – Thermal overcurrent circuit breaker
22 – Bead press device
23 – Bead press device control unit
24 – Standard clamp adapters for alloy rims

NAMEPLATES LOCATION DRAWING

Fig. 2



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
VS999924610	Crush hazard head nameplate
VS999924620	Open machinery nameplate
VS999924630	Possible fly debris nameplate
VS999924640	Crush hazard bead break 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
VS999931030	Bead breaker control nameplate
VS999931660	Duty cycle nameplate
VS999931680	Electrical shock nameplate
VS999932370	Equipment nameplate
VS999932410	QR code nameplate
VS999932440	2-pedals 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 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 R200 tire changer! The R200 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, the 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, demounting and inflation 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 SPINDLE ROTATION MAY LEAD TO CRUSHING OPERATOR’S HAND BETWEEN THE SPINDLE AND THE WHEEL.

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.

- Hold-to-run control devices (immediate stop by releasing control) for: spindle rotation, bead breaker shovel motion, inflating; other drives such as rim clamping on spindle, 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 PRESSURIZED VESSEL OR PRESSURIZED AIR EJECTION, AND RESULT IN SERIOUS INJURIES OR DEATH.

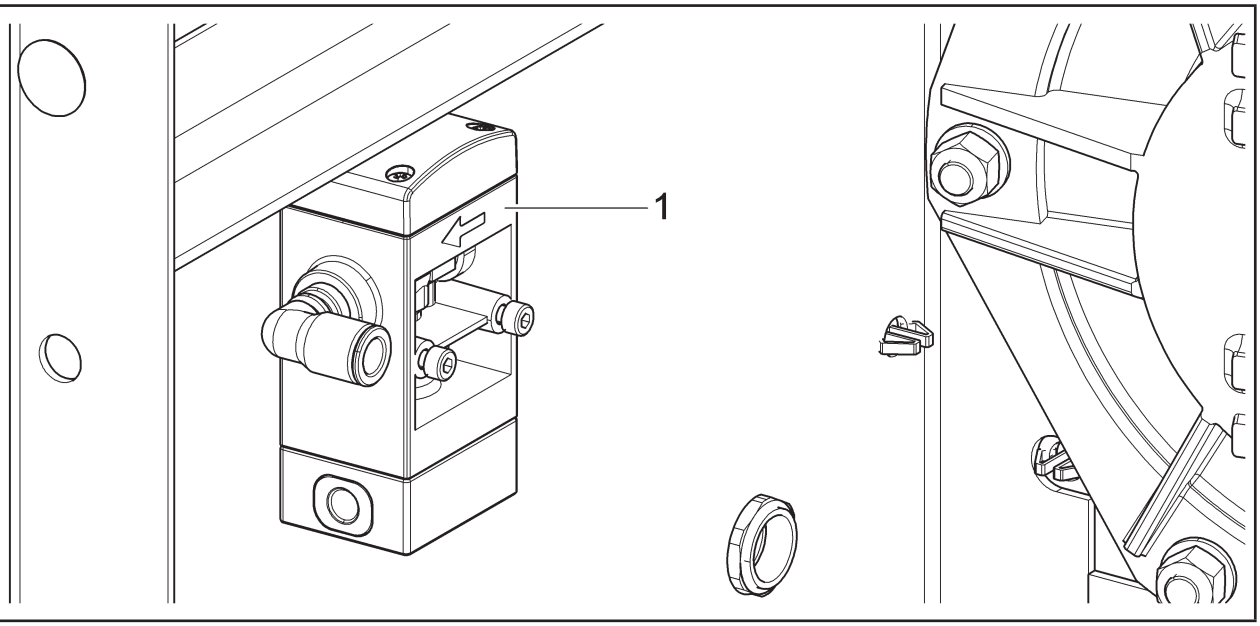
DO NOT TAMPER WITH OR OTHERWISE MODIFY THE PRESSURE VESSEL OR THE PRESSURE RELIEF.

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. 3).

Fig. 3



⚠ 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.

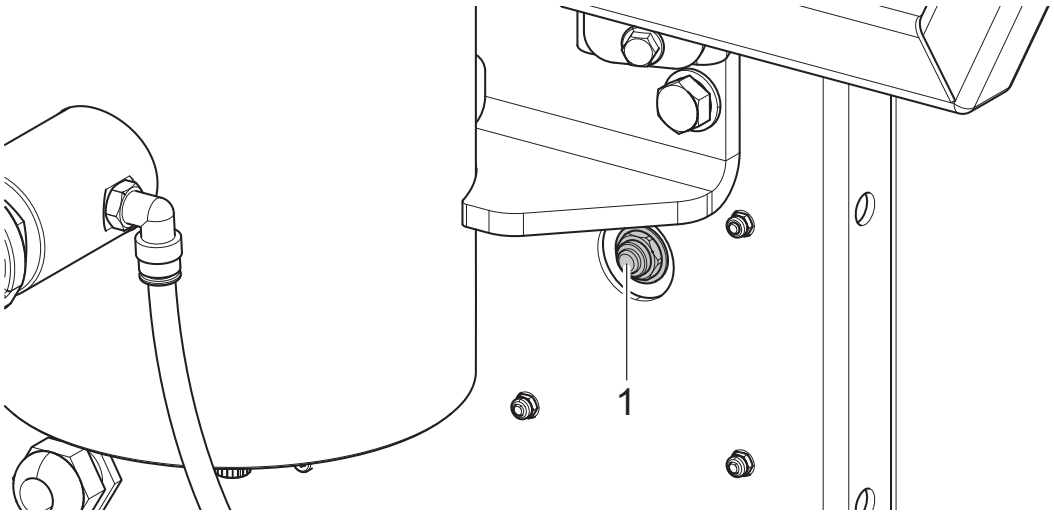
DO NOT REPLACE THE TIRE INFLATION PRESSURE LIMITING DEVICE WITH ANY OTHER TYPE OF PRESSURE LIMITING DEVICE.

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. 4 ref. 1) placed on the rear of the tire changer.

Fig. 4



⚠ 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.

3.1 Residual risks

The equipment was subjected to a complete analysis of risks according to reference standard ISO 12100 & UL201.
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 “NAMEPLATES LOCATION 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 (applies to 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. 7.
  Avoid any hazardous situations. Do not use this equipment when the shop is damp or the floor slippery and do not use this equipment outdoors.
- 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.

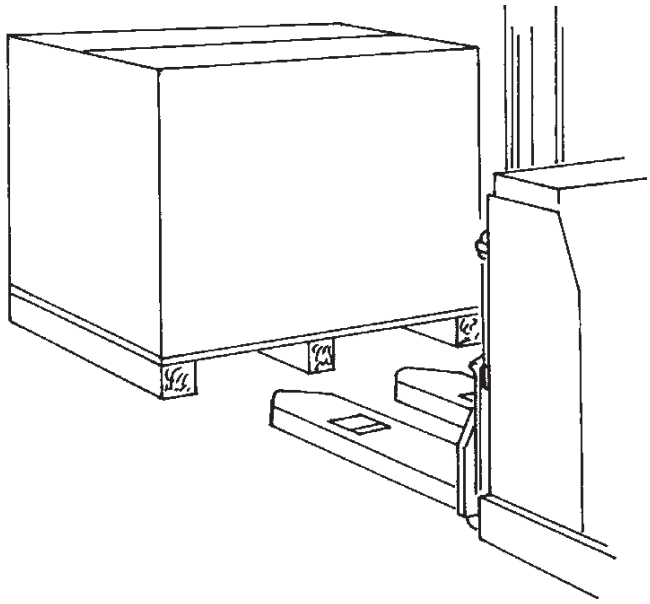
HANDS AND FEET MAY GET CRUSHED BELOW THIS EQUIPMENT PACKAGING.

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.
Handling must be by pallet-lift or fork-lift trolley, Fig. 5.
The fork lifting points are indicated on the packing.

Fig. 5



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.

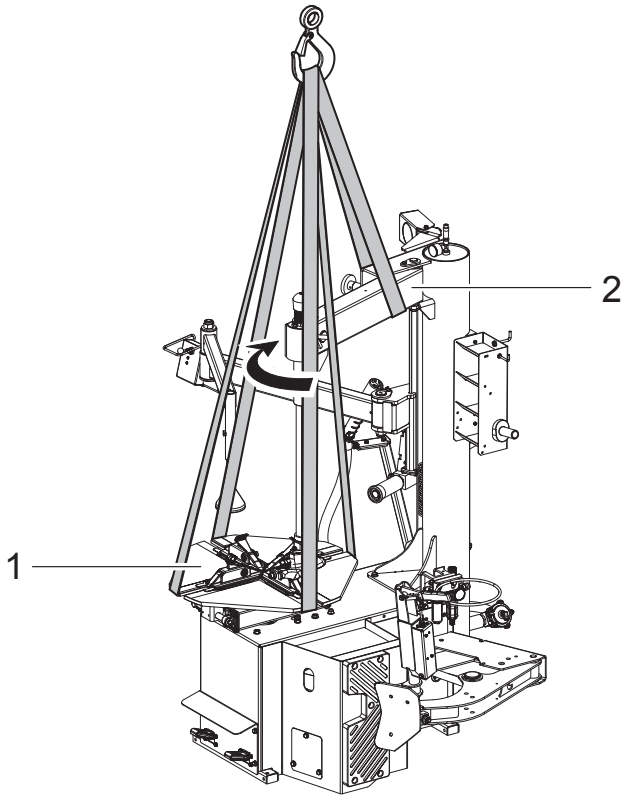
HANDS AND FEET MAY GET CRUSHED BELOW THIS EQUIPMENT.

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. 6):

- close completely spindle jaws;
- turn the spindle until its straight sides are aligned with equipment sides;
- disconnect all equipment power supply sources;
- move to central position the arm (Fig. 6 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 spindle plate (Fig. 6 ref. 1);
- pass the third belt between the two rear openings of spindle plate (Fig. 6 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. 6



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).

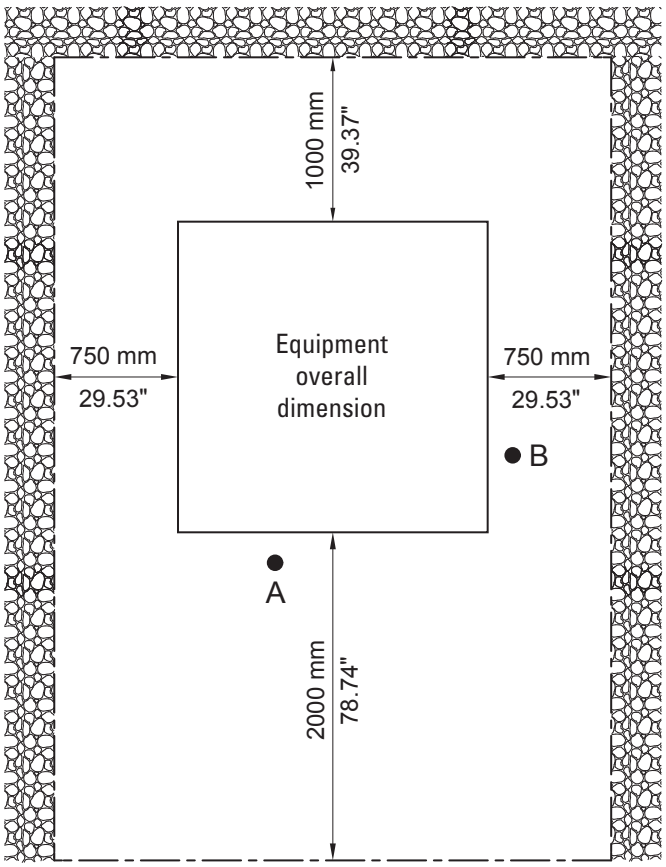
The use of the equipment in ambient conditions other than those specified above is only allowed after prior agreement with and approval of the manufacturer.

8.1 Work position

In Fig. 7 it is possible to identify work positions A and B.
Position A is the main position for wheel fitting and removal with the spindle, 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. 7



The location of the equipment requires a usable space as indicated in Fig. 7. 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.

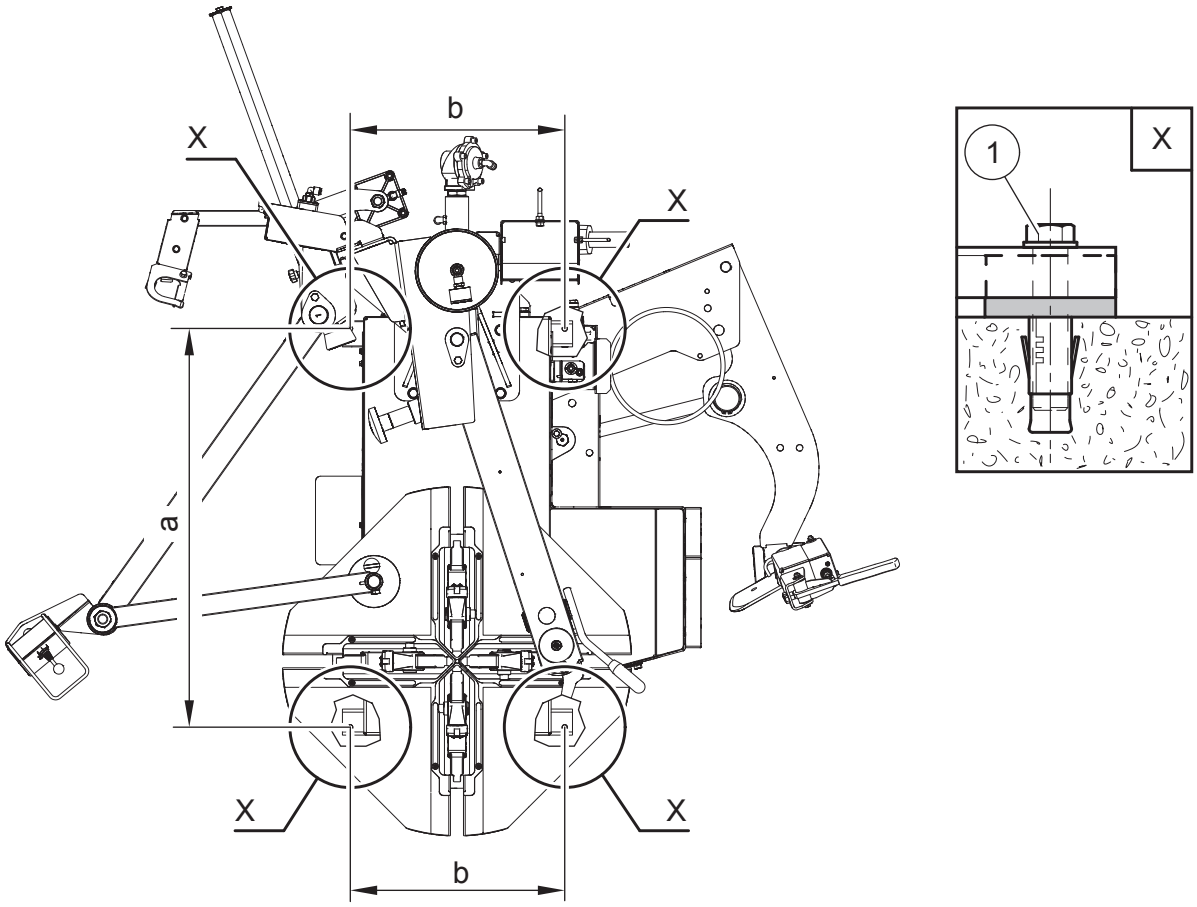
8.3 Lighting

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. 8.

Fig. 8



a = 762 mm / 30”
b = 410 mm / 16.14”

- To secure the equipment to the floor, use anchoring bolts/studs (Fig. 8 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 PREPARATION FOR USE

After the various components have been unpacked, check their integrity and the absence of any anomalies, then follow the instructions below to proceed with putting the equipment into service.

10.1 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.

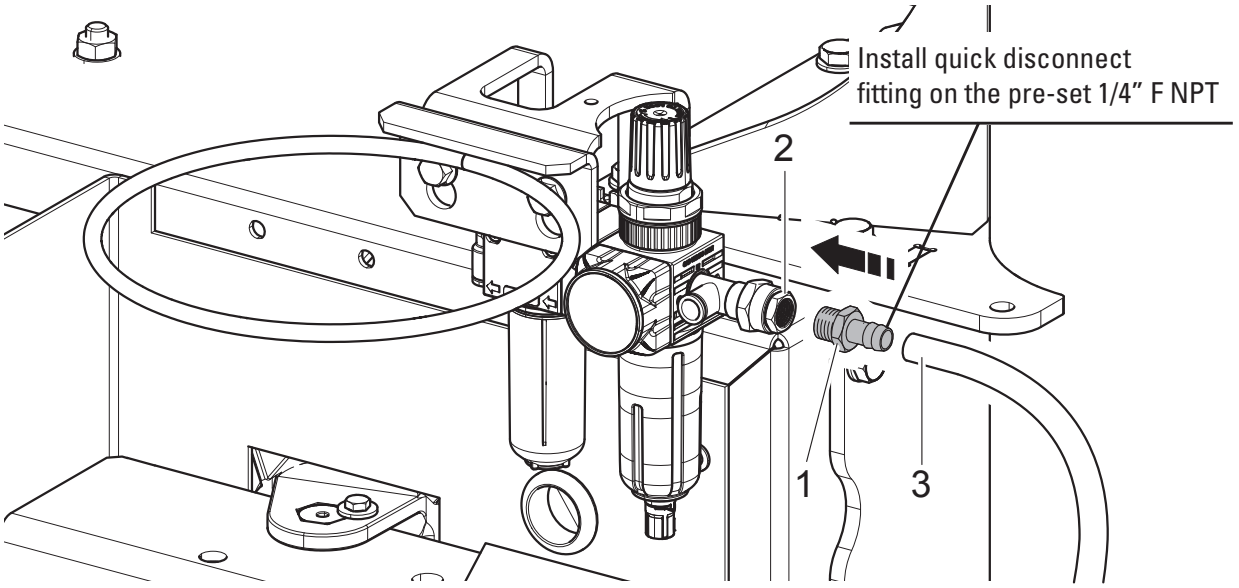
MAKE SURE COMPRESSED AIR SUPPLY TO THIS EQUIPMENT IS:

- 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 PROVISION ABOVE IS NOT COMPLIED WITH.

Install on the equipment a quick disconnect fitting (Fig. 9 ref. 1) that matches the air fittings already in use in the workshop. This fitting (Fig. 9 ref. 1) is not included in the package. The FRL has a 1/4" female NPT fitting factory installed (Fig. 9 ref. 2). Connect the pneumatic supply (Fig. 9 ref. 3) to the item 1 fitting installed above. The air line (Fig. 9 ref. 3) suppling the FRL must have a minimum section of 3/8" ID x 3/4" OD for flow (see Fig. 9).

Fig. 9



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.

10.2 Connection to 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 POSITION, 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 connection to the electrical mains.
This equipment is intended for connection to 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
R200D - with inverter	NEMA L6-20P	220-230 V	20 A	2 Poles + Ground	IP 54
R200R	NEMA 5-15P	110 V	15 A		

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. 10 ref. 1) opens and closes spindle locking jaws. It has three stable positions: open – close – approach jaws.

"Pedal 2" (Fig. 10 ref. 2) controls spindle'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.

● On model with 220V power supply with inverter

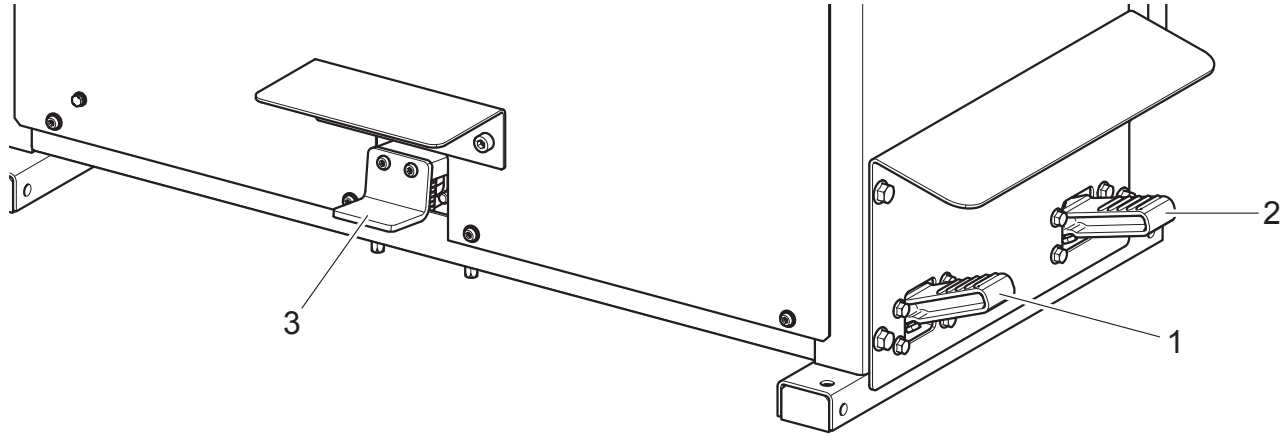
NOTICE

THE SPINDLE ASSEMBLY SPEED CAN BE CONTINUOUSLY ADJUSTED UP TO THE MAXIMUM SPEED THROUGH A PROGRESSIVE PRESSURE ON THE PEDAL, ONLY IN CLOCKWISE DIRECTION.

The inflation "pedal 3" (Fig. 10 ref. 3) with "hold-to-run" control, delivers air at controlled pressure (max 4.2 ± 0.2 bar/ 60± 3).
The pedal has three positions:

1. completely lowered "unstable": to cause air (contained in the 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. 10

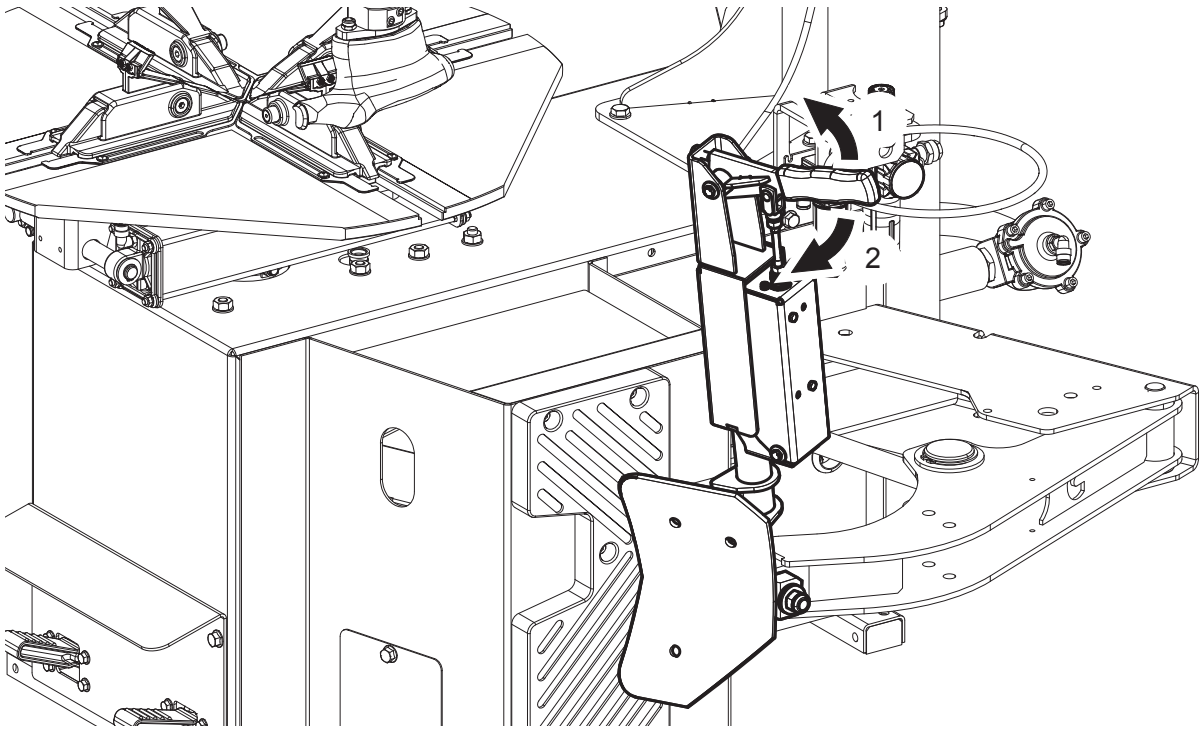


11.2 Bead breaker control handle

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. 11 ref. 1), it operates shovel progress towards the tire;
- when pressed and held downwards (Fig. 11 ref. 2), it operates shovel opening outwards.

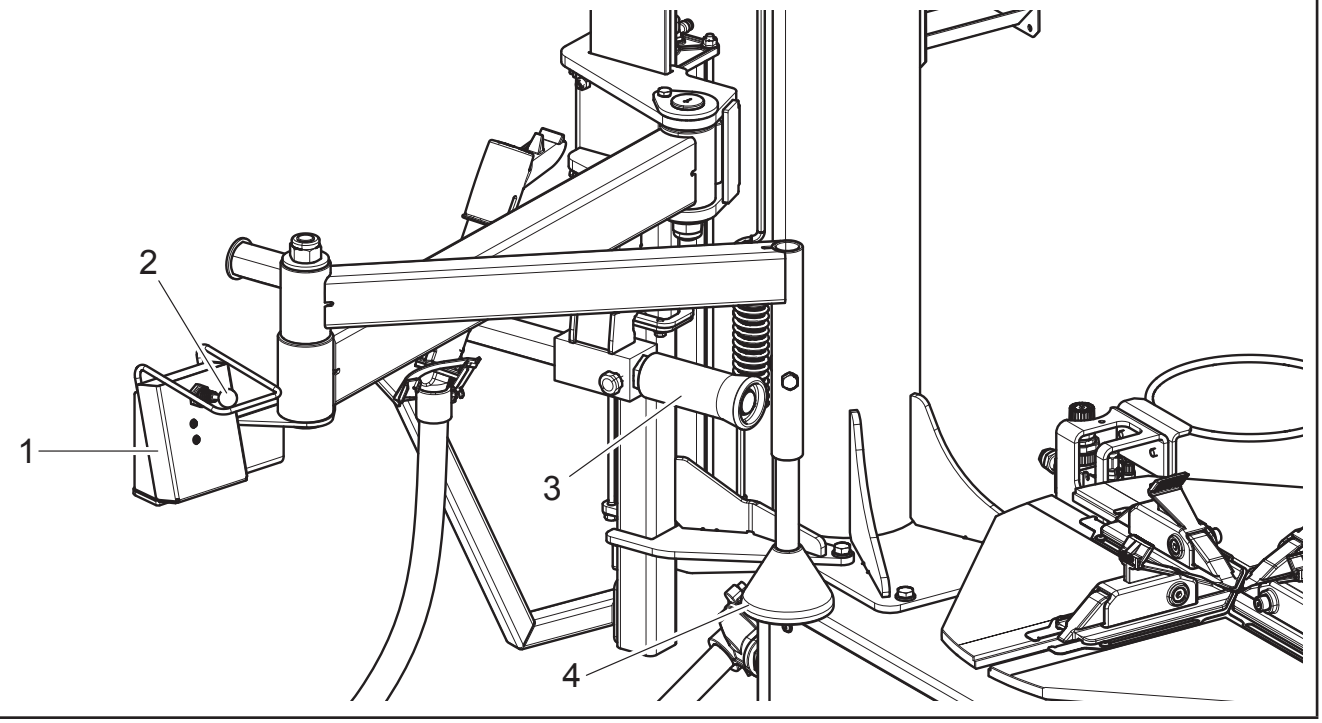
Fig. 11



11.3 Bead press device control unit

It is made up of a handle control (Fig. 12 ref. 1), positioned on the device. This handle control allows to operate the vertical movement of the bead lifting roller (Fig. 12 ref. 3) and of the rotating bead press roller assembly (Fig. 12 ref. 4). Lift the lever (Fig. 12 ref. 2) to operate the upwards movement, and lower the lever (Fig. 12 ref. 2) to perform the downwards movement. The device arms positioning next to the tire is a completely manual operation.

Fig. 12



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 OR OTHER LIQUIDS 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 AUTHORIZED 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 fitting and removal

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 SPINDLE MAY LEAD TO CRUSHING THE HANDS BETWEEN THE SPINDLE AND THE WHEEL, AND RESULT IN INJURIES.
DO NOT TO OPERATE SPINDLE 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. 13 and move the bead breaker shovel toward the edge of the rim. Place the shovel so that it can operate on tire side and not on the rim flange;

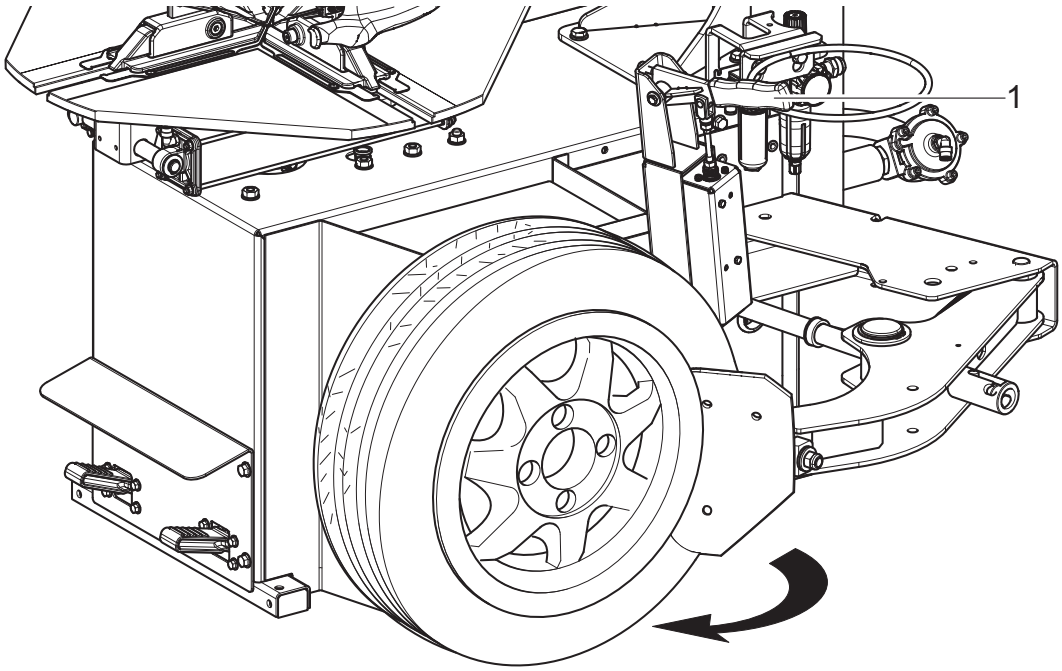
⚠ CAUTION

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. 13



2. move the bead breaker shovel close by lifting the handle upwards (Fig. 13 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 Wheel clamping on the spindle

⚠ CAUTION

RISK OF FEET CRUSHING.

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

⚠ CAUTION

RISK OF UPPER LIMBS CRUSHING.

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

In order to carry out the clamping of the wheel:

1. release the hexagon shaft (Fig. 14 ref. 1) through the locking system control lever (Fig. 14 ref. 2) and take it upwards and rotate towards the right the horizontal arm.
2. the wheel can be secured to the spindle (Fig. 14 ref. 3) by placing jaws either inside or outside the rim (see Chapter 15 "Technical specifications" for required rim size).

Make sure the wheel is placed at the center of spindle's plate (Fig. 14 ref. 3). Make sure the wheel is secured through jaws (Fig. 14 ref. 4) 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. 14 ref. 6) to match the required clamping range.
Make sure each push button locks the position of the corresponding jaw once;

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. by pressing pedal (Fig. 14 ref. 5) in intermediate position, place the 4 fixing jaws (Fig. 14 ref. 4), so that the reference notch, printed on the spindle, is at about the same level of the tire diameter, printed on the sliding element;
3. place the wheel on the spindle, press the rim downward and completely lower pedal (Fig. 14 ref. 5)to secure the wheel.

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

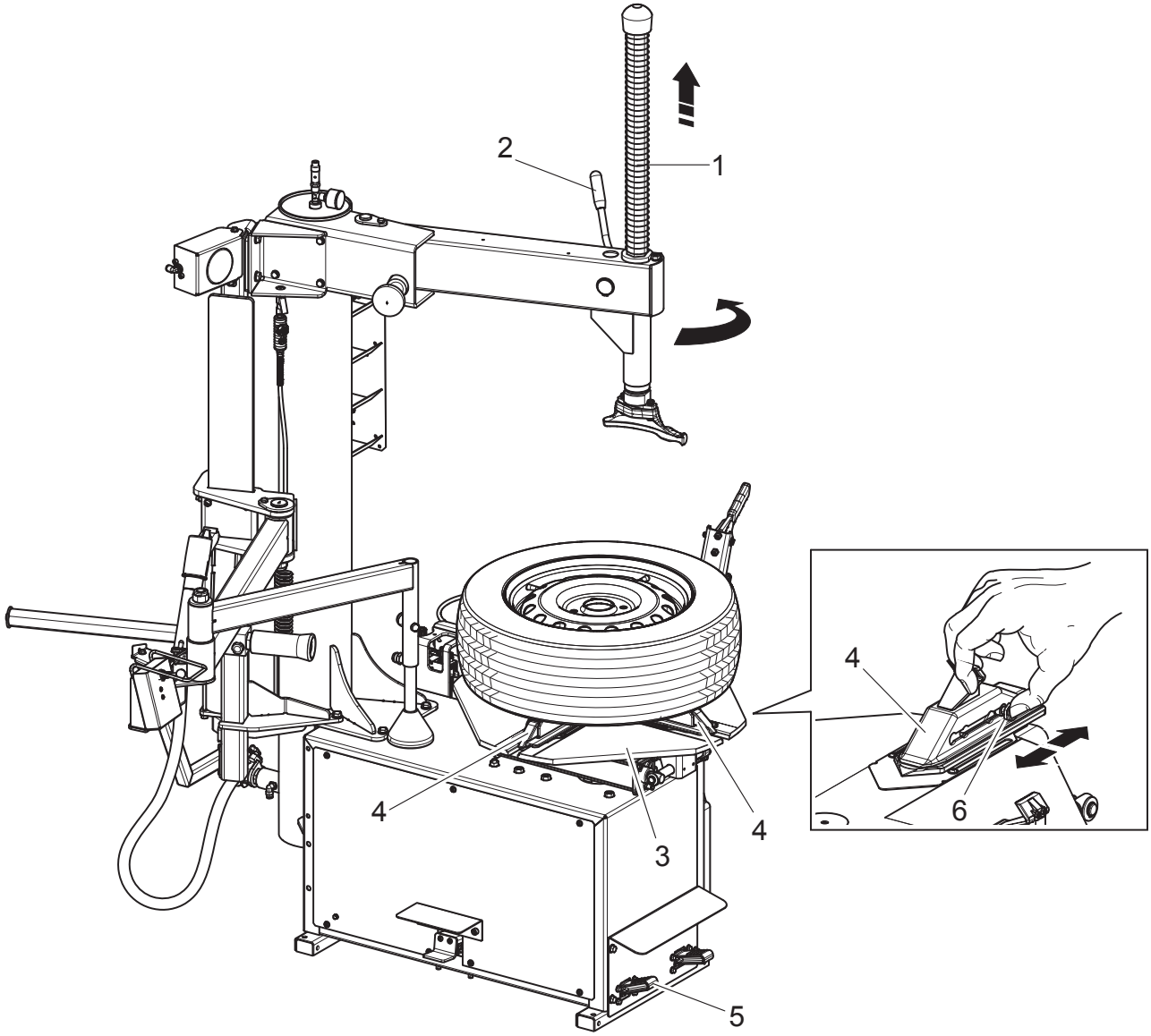
1. adjust all of the 4 jaws by using the appropriate push button (Fig. 14 ref. 6) to match the required clamping range. Make sure each push button locks the position of the corresponding jaw once;

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. preventively fixing jaws (Fig. 14 ref. 4), using the pedal (Fig. 14 ref. 5).
3. place the wheel on the spindle. Push down the rim while completing lowering the pedal and releasing it. The jaws will engage the rim and secure it.

Fig. 14



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

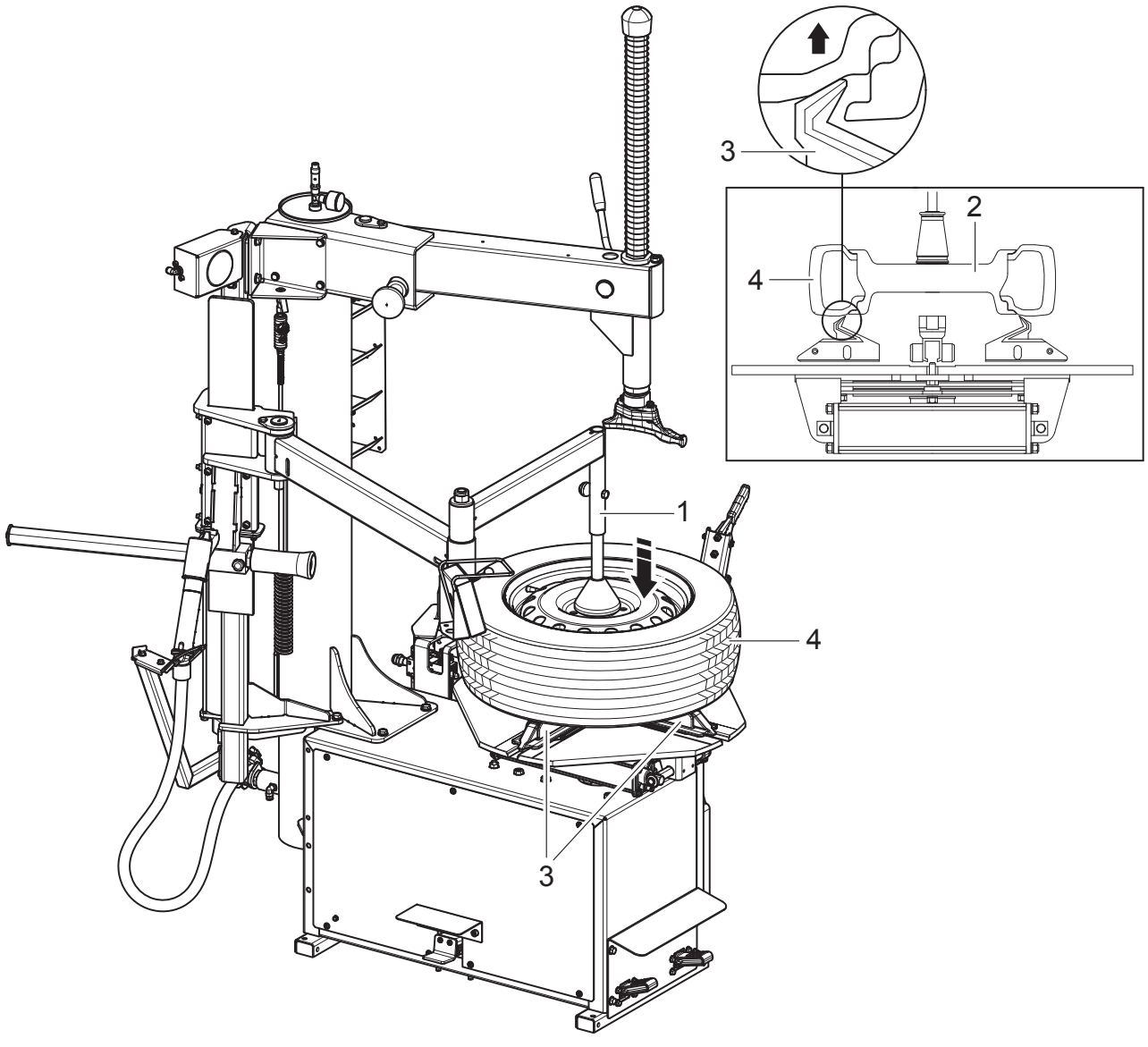
⚠ CAUTION

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. 15 ref. 3) between the tire sidewall (Fig. 15 ref. 4) and the rim (Fig. 15 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. 15 ref. 1).
The bead press tool shall act on the center of the wheel as shown in Fig. 15.

Fig. 15



12.6 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 SPINDLE IS ROTATED.
KEEP HANDS AND ANY PART OF THE OPERATORS BODY OFF THE TOOLHEAD WORK AREA WHEN THE SPINDLE IS ROTATED.

WHEN ROTATING THE SPINDLE, HANDS MAY GET ENTANGLED BY THE WHEEL OR THE SPINDLE, RESULTING IN INJURIES.
KEEP HANDS OFF THE WHEEL AND THE SPINDLE 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

SPINDLE SHALL ALWAYS BE TURNED CLOCKWISE FOR TIRE DEMOUNTING OPERATIONS.
BRIEFLY TURN THE SPINDLE 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. 16:

1. push the rotation pedal (Fig. 16 ref. 1) to rotate the wheel clockwise until the valve stem reaches “3 o'clock”;
2. adjust the toolhead (Fig. 16 ref. 2) position vertically and radially so that the toolhead rests on the rim edge both vertically and radially;
3. operate the locking system control lever (Fig. 16 ref. 4) to lock the toolhead vertical adjustment;
4. adjust the radial distance of the head to the rim through the setting knob (Fig. 16 ref. 3) so that the head is set radially at about 1 mm (0.04”) from the outer profile of the rim flange;
5. use the lever (Fig. 16 ref. 5) to lift the bead onto the right end of the toolhead and position it parallel with the rim plate at the same time pressing on the side of the tire;
6. press the rotation (Fig. 16 ref. 1) pedal to turn the wheel clockwise until the whole bead has been removed from the rim. During the rotation of the wheel, the bead lifting tool slides away from the toolhead moving onto the rim edge;
7. remove the inner tube (if fitted);
8. lift the tire and repeat the operation on the other bead (Fig. 17);

Fig. 16

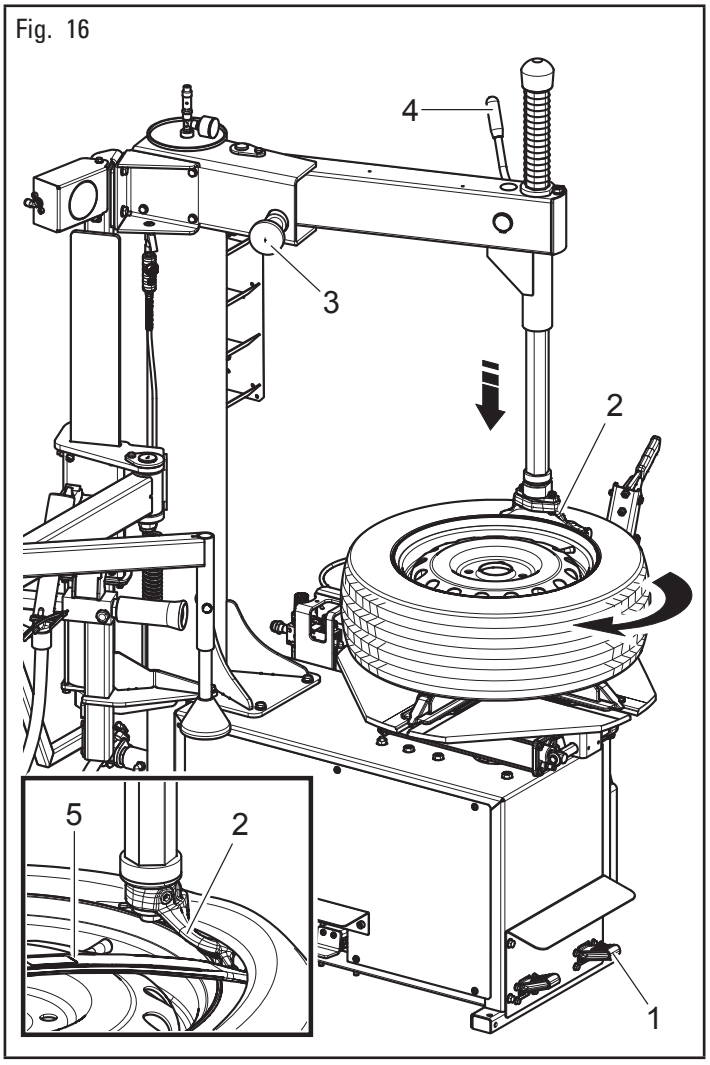
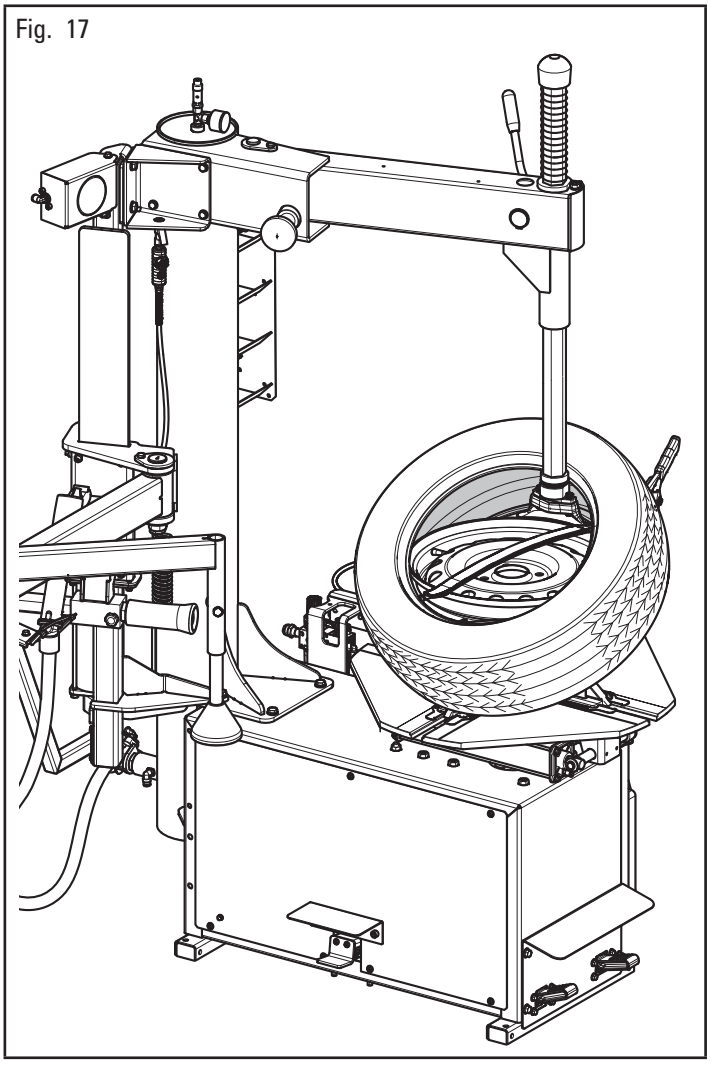
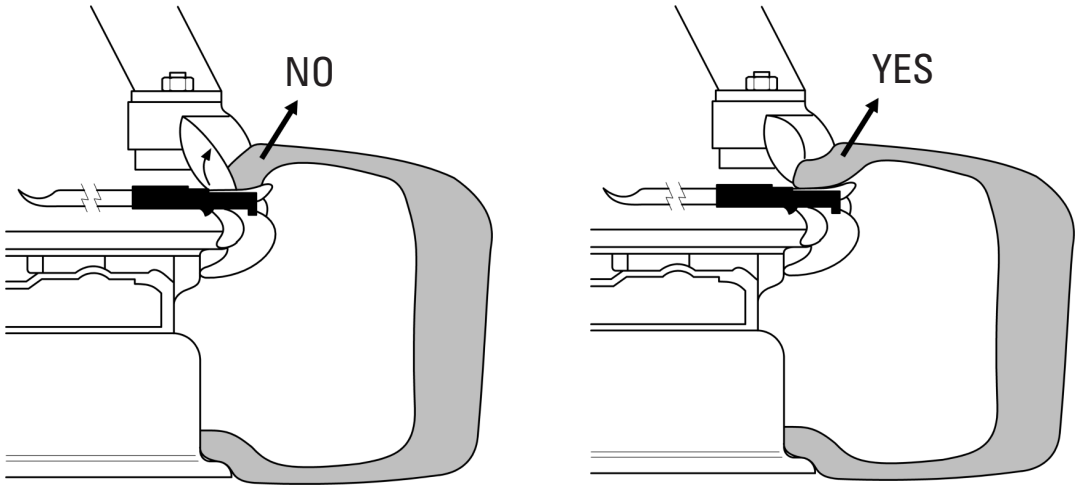


Fig. 17



9. 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. 18).

Fig. 18



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.

12.7 Using the bead press device to make tire demounting easier

⚠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 SPINDLE IS ROTATED.
KEEP HANDS OFF THE TOOLHEAD WORK AREA WHEN THE SPINDLE IS ROTATED.

WHEN ROTATING THE SPINDLE, HANDS MAY GET ENTANGLED BY THE WHEEL OR THE SPINDLE, RESULTING IN INJURIES.
KEEP HANDS OFF THE WHEEL AND THE SPINDLE 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 spindle 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 tool of the bead press device (Fig. 19 ref. 1) as shown in the figure (not far from the head nail)(Fig. 19 ref. 2). Lower the tire sidewall using the bead press tool (Fig. 19 ref. 1) by lowering the control unit joystick (Fig. 19 ref. A), until an easy positioning of the head is possible (Fig. 19 ref. 2). Then lock the head vertical position using the locking system control lever (Fig. 19 ref. 3);
2. insert the bead lifting lever (Fig. 20 ref. 2) between the tire (Fig. 20 ref. 4) and the toolhead (Fig. 20 ref. 3);
3. lift the bead press tool (Fig. 20 ref. 1) of the bead press device by lifting the lever (Fig. 20 ref. A);

Fig. 19

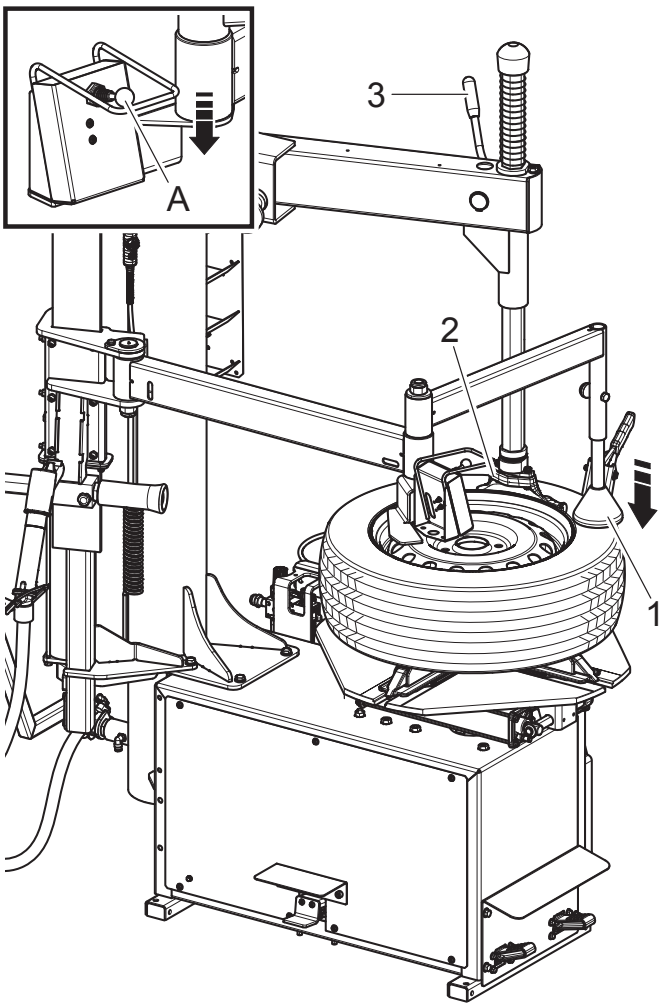
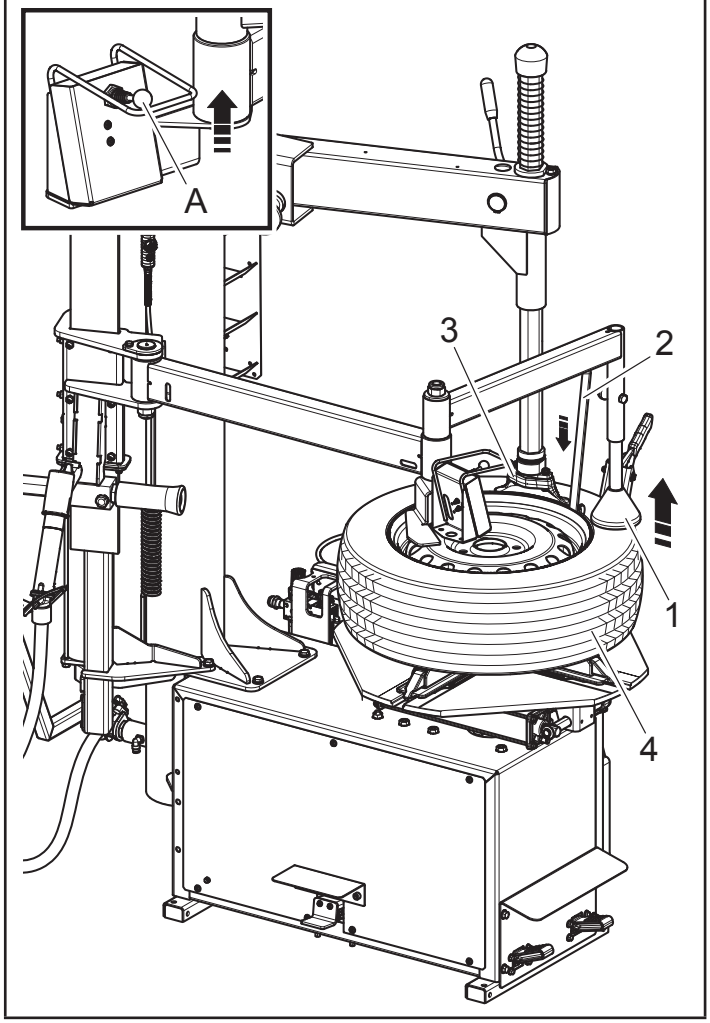
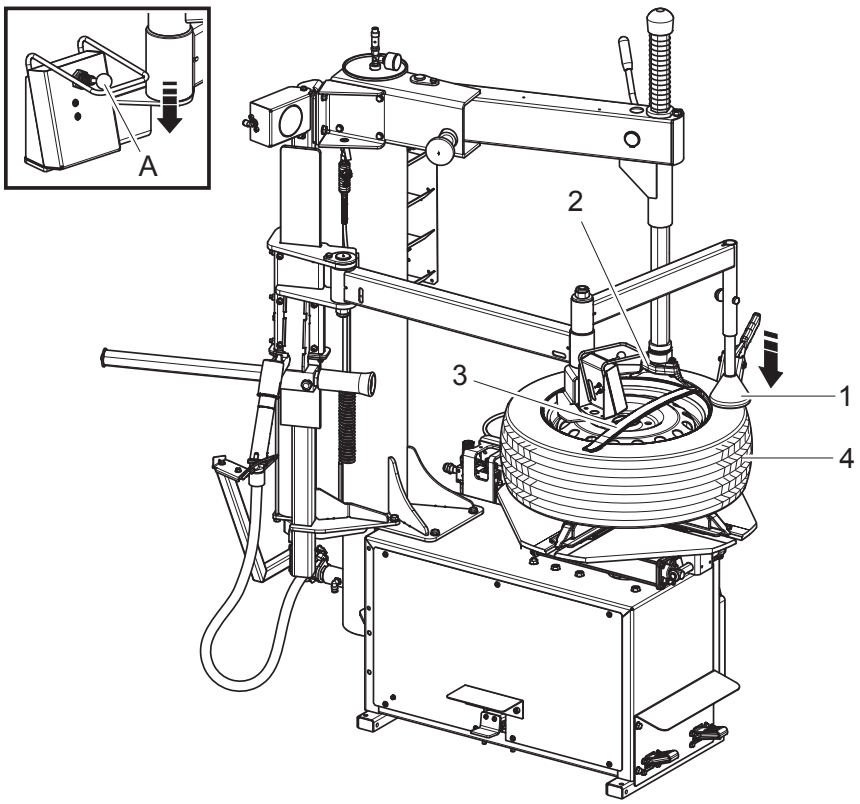


Fig. 20



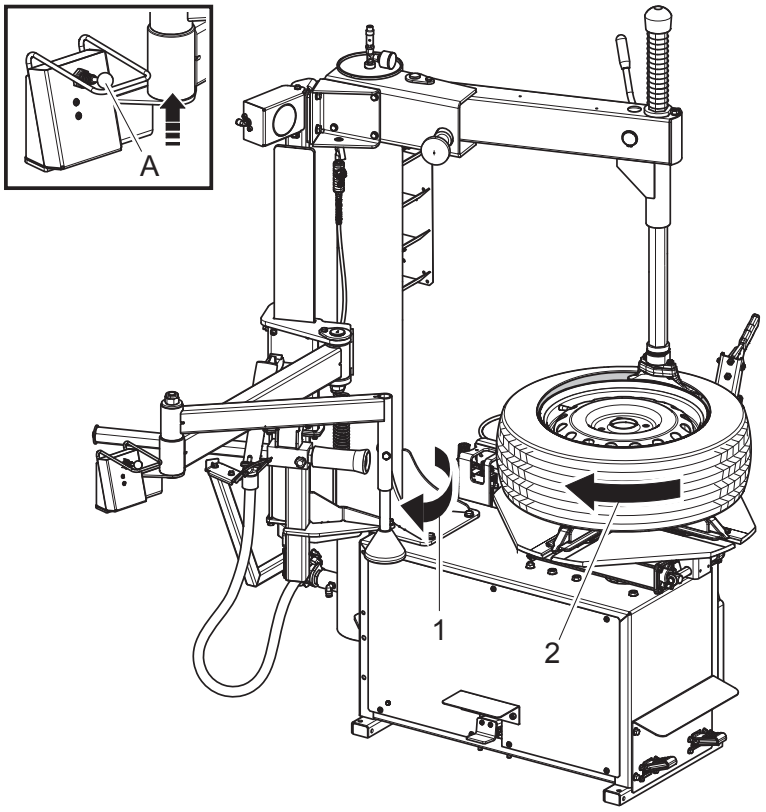
4. place the bead press tool (Fig. 21 ref. 1) on the tire upper sidewall at approximately 4 o'clock and push the tire sidewall downwards (Fig. 21 ref. 4) operating the control unit joystick downwards (Fig. 21 ref. A), until the tire bead is placed next to the rim drop center;
5. load the tire bead on the toolhead (Fig. 21 ref. 2) using the bead lifting lever (Fig. 21 ref. 3);

Fig. 21



6. raise the bead press tool from the tire sidewall operating the control unit joystick (Fig. 22 ref. A) upwards, then remove the bead pressing tool from the work area above the wheel, folding the carrying arm (Fig. 22 ref. 1);
7. remove the first bead by rotating the spindle clockwise (Fig. 22 ref. 2);

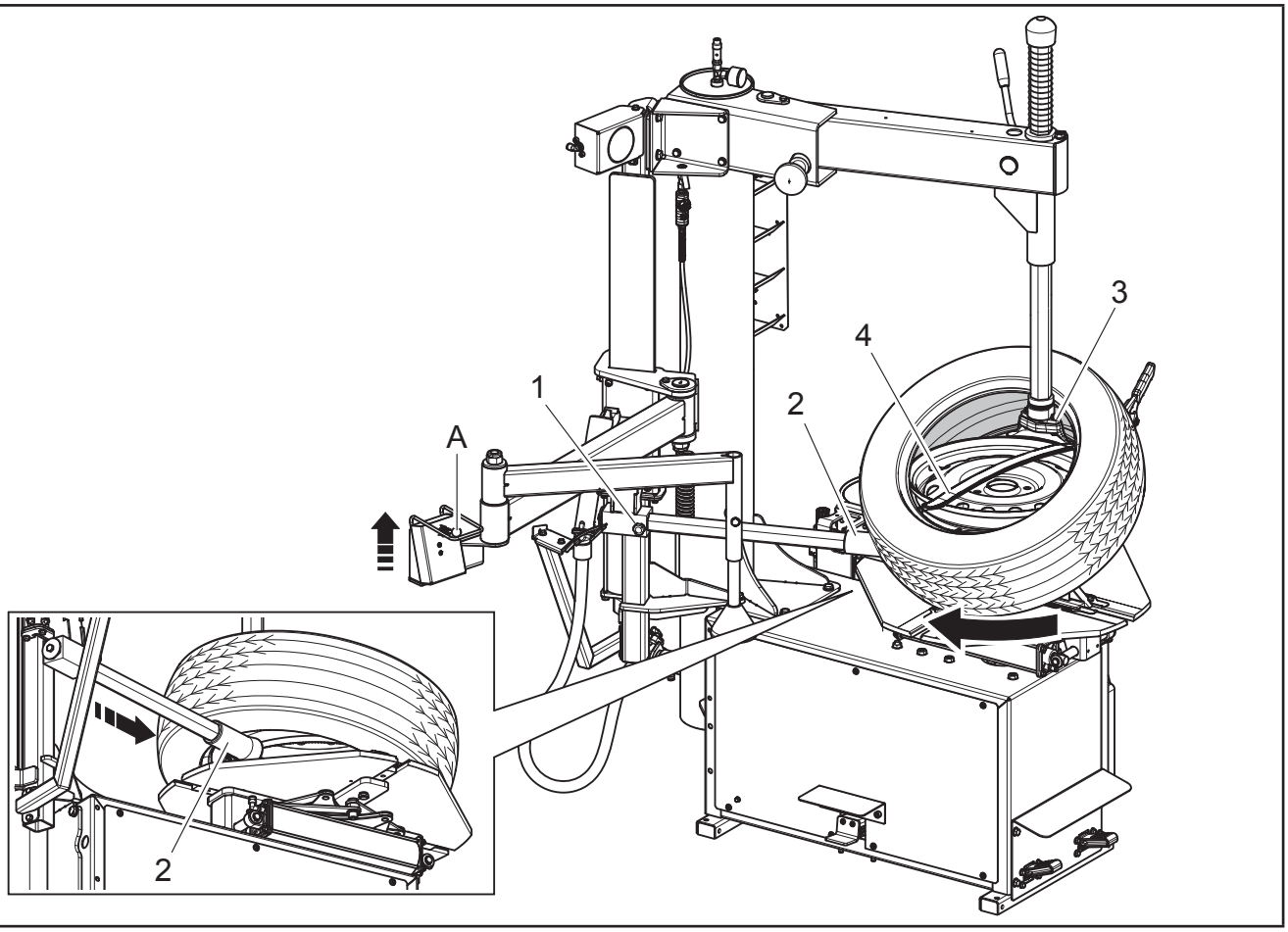
Fig. 22



Removal of the second bead

8. slacken handwheel (Fig. 23 ref. 1) and manually position the bead lifting roller (Fig. 23 ref. 2) between spindle plate and the tire, at approximately 1 cm (0.4”) from rim lower edge. Once the position is reached, lock the handwheel (Fig. 23 ref. 1);
9. lift the tire with the bead lifting roller (Fig. 23 ref. 2) moving the control unit joystick upwards (Fig. 23 ref. A);
10. load the lower bead onto the toolhead (Fig. 23 ref. 3) using the bead lifting lever (Fig. 23 ref. 4);
11. turn the spindle clockwise and remove the tire from the rim.

Fig. 23



12.7.1 Demounting the lower bead through the bead lifting roller of 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 SPINDLE IS ROTATED.
KEEP HANDS OFF THE TOOLHEAD WORK AREA WHEN THE SPINDLE IS ROTATED.

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

For disassembly of the lower bead the bead lifting roller can be used as an alternative. Remove the toolhead from the working area above the wheel:

1. lift the roller and the tire just next to the rim edge moving the control unit joystick upwards;
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.

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

WHEN ROTATING THE SPINDLE, HANDS MAY GET ENTANGLED BY THE WHEEL OR THE SPINDLE, RESULTING IN INJURIES.
KEEP HANDS OFF THE WHEEL AND THE SPINDLE 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 SPINDLE, THE WHEEL MAY FALL TO THE GROUND AND CRUSH THE OPERATOR'S FEET.
NEVER LEAVE UNCLAMPED WHEELS ON THE SPINDLE UNATTENDED.

NOTICE

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

To mount the tire, proceed as follows:

1. lubricate the tire beads (Fig. 24);

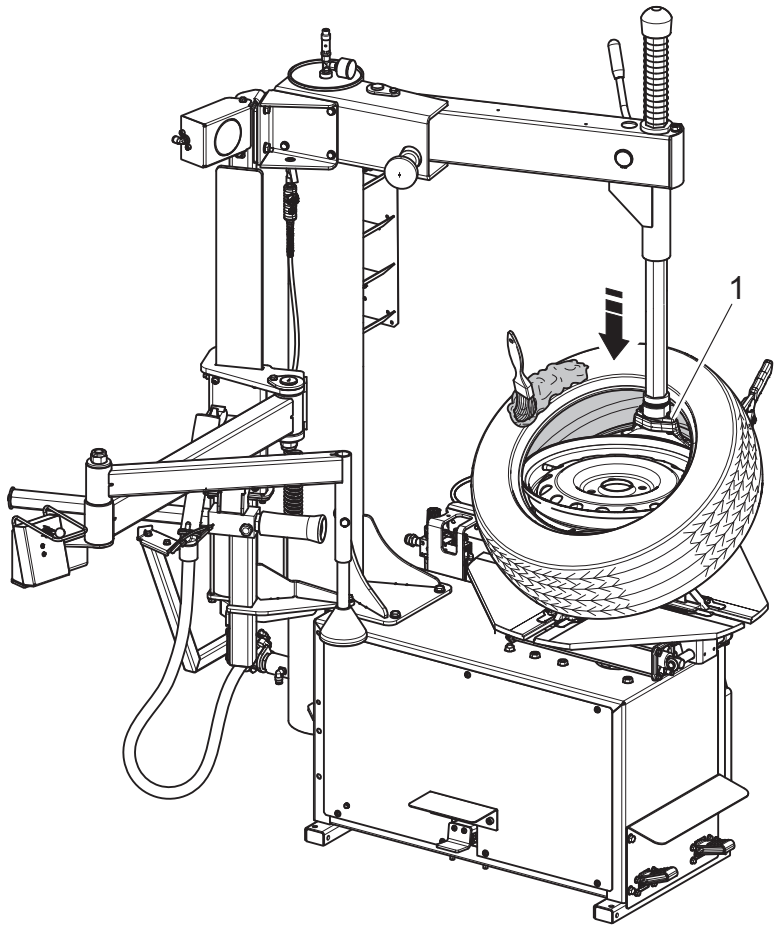
⚠ DANGER

RISK OF ROAD ACCIDENTS.

FAILURE TO LUBRICATE TIRE BEADS BEFORE MOUNTING THE TIRE TO THE RIM MAY LEAD TO ABNORMAL FRICTION BETWEEN THE TIRE AND THE TOOLHEAD DURING MOUNTING OPERATIONS, AND RESULT IN TIRE DAMAGES, REDUCED ROAD SAFETY, SEVERE INJURIES OR DEATH.
NEVER PERFORM ANY TIRE MOUNTING OPERATION WITHOUT LUBRICATING THE BEADS OF THE TIRE TO BE MOUNTED BEFORE.

2. adjust the toolhead (Fig. 24 ref. 1) position vertically and radially so that the toolhead rests on the rim edge both vertically and radially;
3. place the edge of the lower bead on the left-hand part of the toolhead as in Fig. 24 and turn spindle clockwise until the lower bead is completely on the rim;

Fig. 24

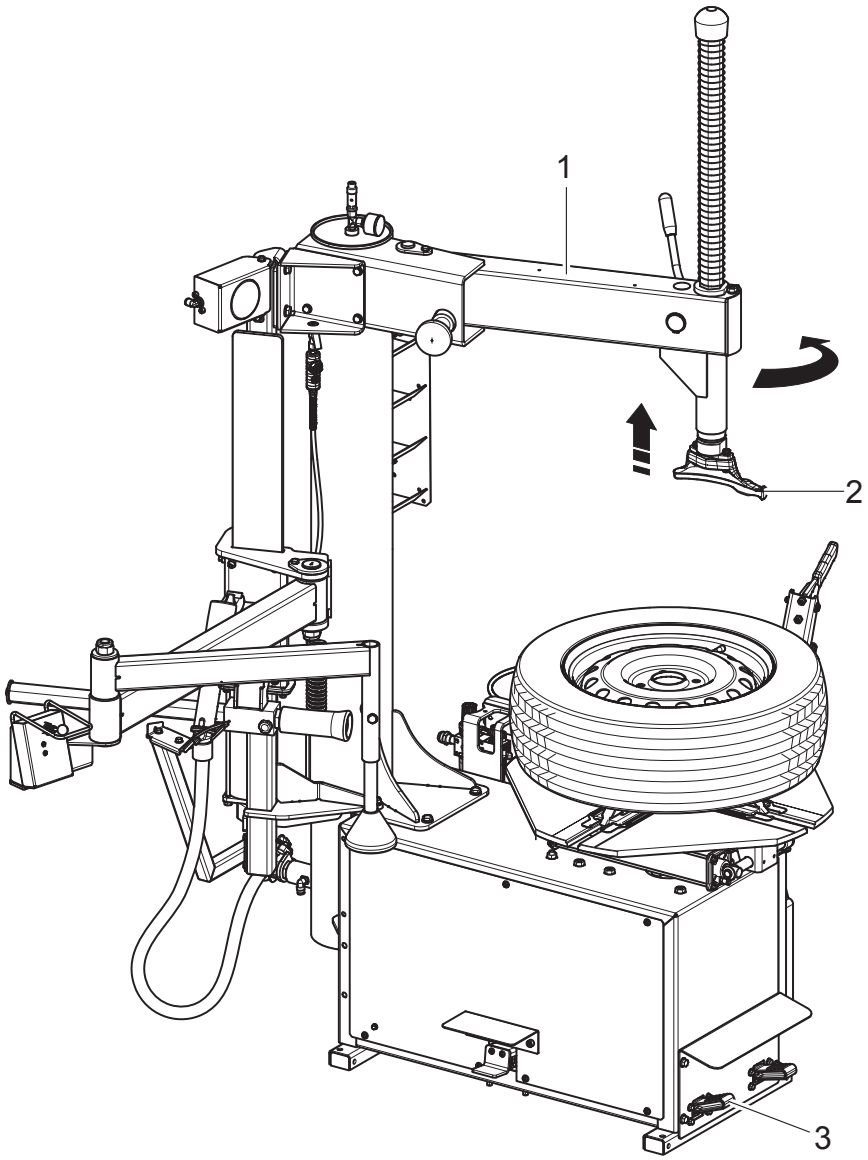


NOTICE

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

4. if an inner tube tire must be fitted, insert the inner tube;
5. repeat the operation on the upper bead, taking care first to position the valve insert at "5-6 o'clock";
6. once mounting is completed, manually rotate the horizontal beam (Fig. 25 ref. 1) to remove the toolhead (Fig. 25 ref. 2) from the working area above the wheel;
7. press the pedal (Fig. 25 ref. 3) to release the rim from the spindle.

Fig. 25



12.9 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 SPINDLE IS ROTATED.
KEEP HANDS AND ANY PART OF THE OPERATORS BODY OFF THE HEAD WORK AREA WHEN THE SPINDLE IS ROTATED.

WHEN ROTATING THE SPINDLE, HANDS MAY GET ENTANGLED BY THE WHEEL OR THE SPINDLE, RESULTING IN INJURIES.
KEEP HANDS OFF THE WHEEL AND THE SPINDLE 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.

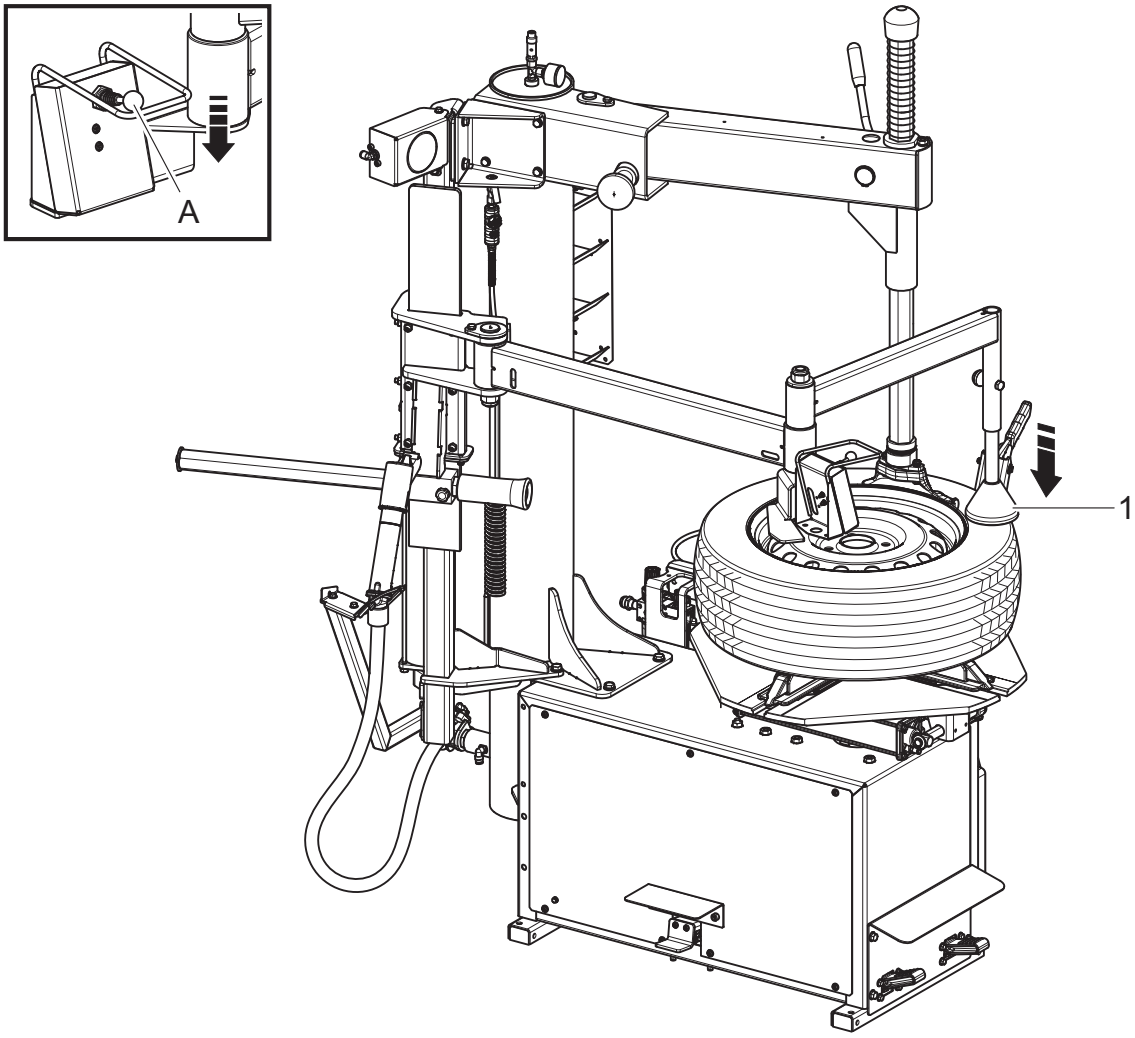
WHEN RELEASING AND UNLOADING THE WHEEL FROM THE SPINDLE, THE WHEEL MAY FALL TO THE GROUND AND CRUSH THE OPERATOR'S FEET.
NEVER LEAVE UNCLAMPED WHEELS ON THE SPINDLE UNATTENDED.

NOTICE

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

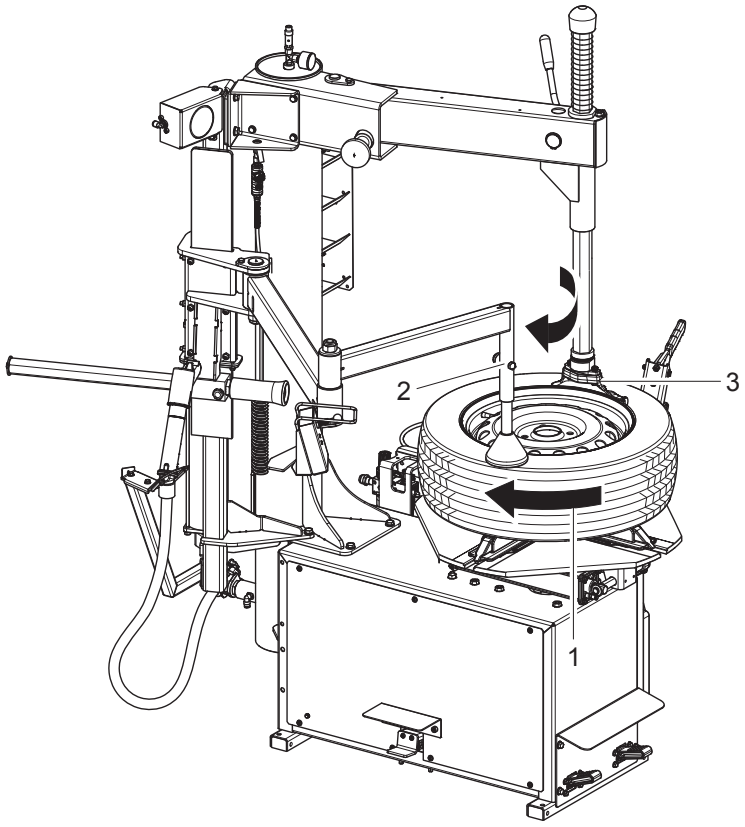
1. Mount the lower bead on the rim. The bead press device is not necessary to complete this operation;
2. place the bead press tool (Fig. 26 ref. 1) as indicated in the figure;
3. lower the bead press tool (Fig. 26 ref. 1) operating the control provided (Fig. 26 ref. A) until the tire bead is placed next to the rim drop center;

Fig. 26



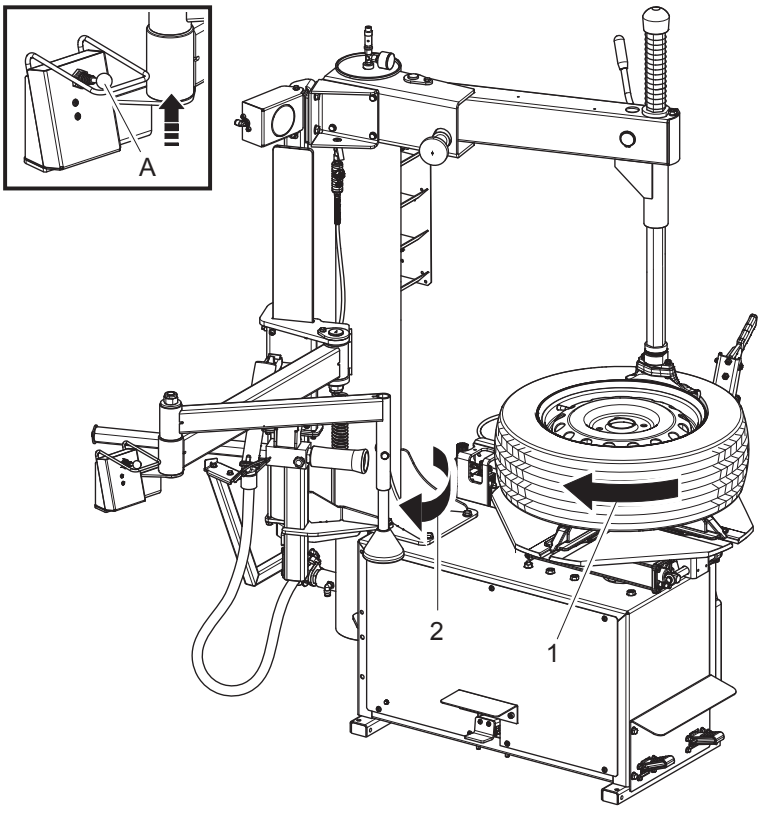
4. start spindle clockwise rotation (Fig. 27 ref. 1) using the proper pedal control: hold the shaft of the bead press tool shaft (Fig. 27 ref. 2) firmly with one hand to prevent the tool from being thrown off the tire;
5. stop spindle rotation when the bead press tool is at 9 o'clock compared to the toolhead (Fig. 27 ref. 3);

Fig. 27



6. complete the introduction of the second bead by turning the spindle clockwise (see Fig. 28);
7. lift the bead press device with the relevant control (Fig. 28 ref. A) and close it again to rest position (see Fig. 28).

Fig. 28



12.10 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.

12.10.1 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.

12.10.2 Tire inflation with Tubeless inflation assembly

⚠ DANGER

RISK OF EXPLOSION OR ROAD ACCIDENTS.

EXCEEDING MAXIMUM TIRE INFLATION PRESSURE AS 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 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.

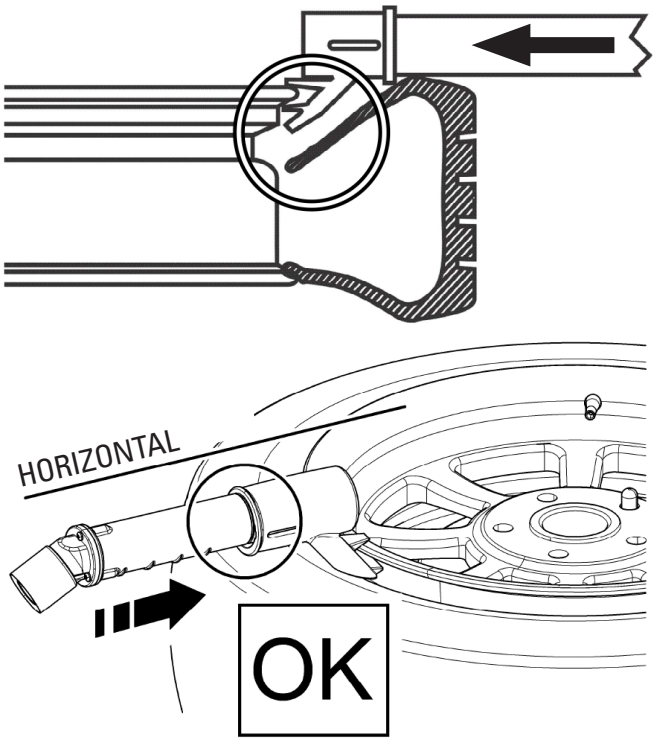
NOTICE

TO IMPROVE THE EFFECTIVENESS OF TUBELESS INFLATION SYSTEM, ALWAYS LUBRICATE TIRE BEADS.

Some types of tires can be difficultly inflated if the beads are not in contact with the rim. The tubeless inflation device supplies a jet of high-pressure air from the nozzle, which encourages the correct positioning of the bead against the rim, and therefore normal inflation. In order to carry out the inflation of the tire follow these indications:

1. remove the valve stem core.
   Removing the valve stem core will allow the tire to inflate faster and the bead to seat easier;
2. connect the inflation device to the valve of the tire;
3. press the tubeless inflation device on the wheel rim. The device should be horizontal for optimal performance, as shown in Fig. 29. Make sure that the device is pressed to activate the additional air jet;

Fig. 29



NOTICE

IN ORDER TO ALLOW THE AIR JET TO BREAK BOTH BEADS, DO NOT KEEP THE BEAD LIFTED FORCING IT.

4. press completely downwards the inflating pedal, in order to release a high pressure air jet through the tubeless inflation device;
5. keep the inflating pedal partially pressed downwards to inflate the tire and place the beads in their seats;
6. after the beads take place in their own seat, disconnect the inflating device and install again the valve gear, that was removed previously.
   Then connect the inflating device and inflate the tire with the required pressure;
7. disconnect the inflation device from the valve.

NOTICE

IF THE TIRE GETS INFLATED TO MUCH, IT IS POSSIBLE TO EXHAUST THE AIR FROM THE TIRE, BY PUSHING THE MANUAL DEFLATING PUSH BUTTON LOCATED UNDER THE PRESSURE GAGE.

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 SPINDLE 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 cleaner.
   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.

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 PROVISION ABOVE IS 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. 30).
   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. 30).
   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

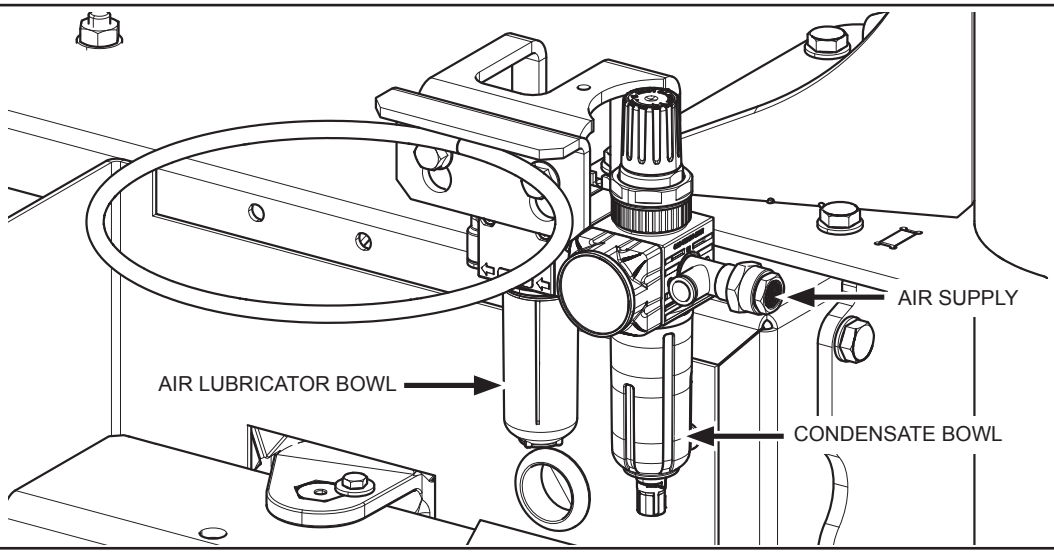
OPERATING THIS EQUIPMENT WITH AN EMPTY AIR LUBRICATOR BOWL MAY AFFECT DURATION AND SMOOTH OPERATION OF THIS EQUIPMENT ADVERSELY.
DO NOT OPERATE THIS EQUIPMENT WITH AN EMPTY AIR LUBRICATION BOWL.

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 PROVISION ABOVE IS NOT COMPLIED WITH.

Fig. 30



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 spindle 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 PROVISION ABOVE IS NOT COMPLIED WITH.

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 SPINDLE OR THE ELECTRIC MOTOR TRANSMISSION IN CASE OF INDAVERTENT ROTATIONS OF THE SPINDLE WHILE PERFORMING MAINTENANCE.

THE TECHNICIAN’S HEAD AND BODY MAY GET BUMPED BY THE SPINDLE IN CASE OF INADVERTENT ROTATION OF THE SPINDLE 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 SPINDLE 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 SPINDLE PRIOR TO PERFORMING ANY OF THE MAINTENANCE DESCRIBED BELOW.

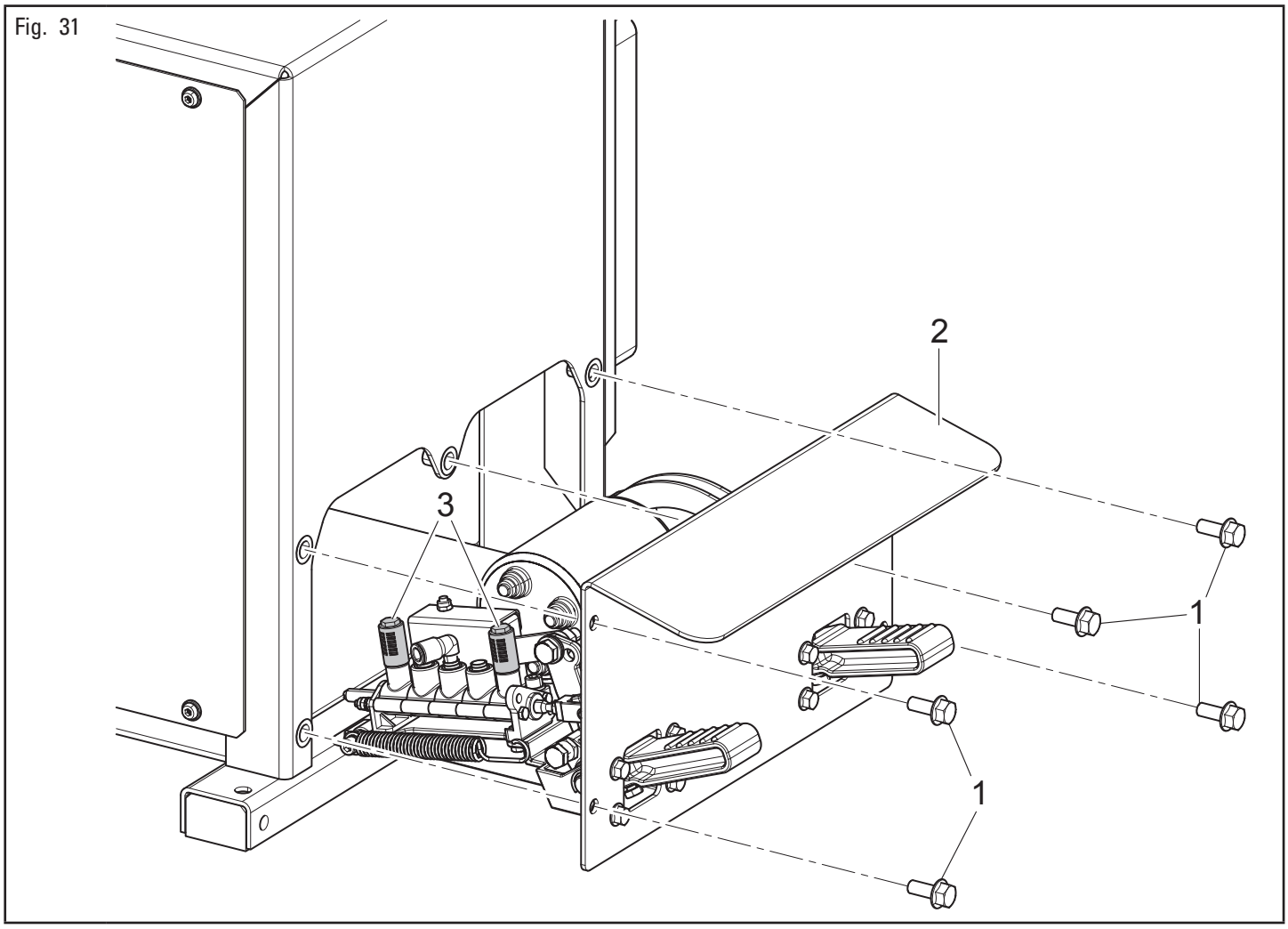
INADVERTENT MOVEMENTS OF PARTS OF THIS EQUIPMENT WHILE PERFORMING MAINTENANCE MAY LEAD TO CRUSHING, SHEARING OR ENTANGLING THE TECHNICIAN LIMBS OR BUMP HIS HEAD AND BODY, AND RESULT IN INJURIES.

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

At least once every 1000 working hours:

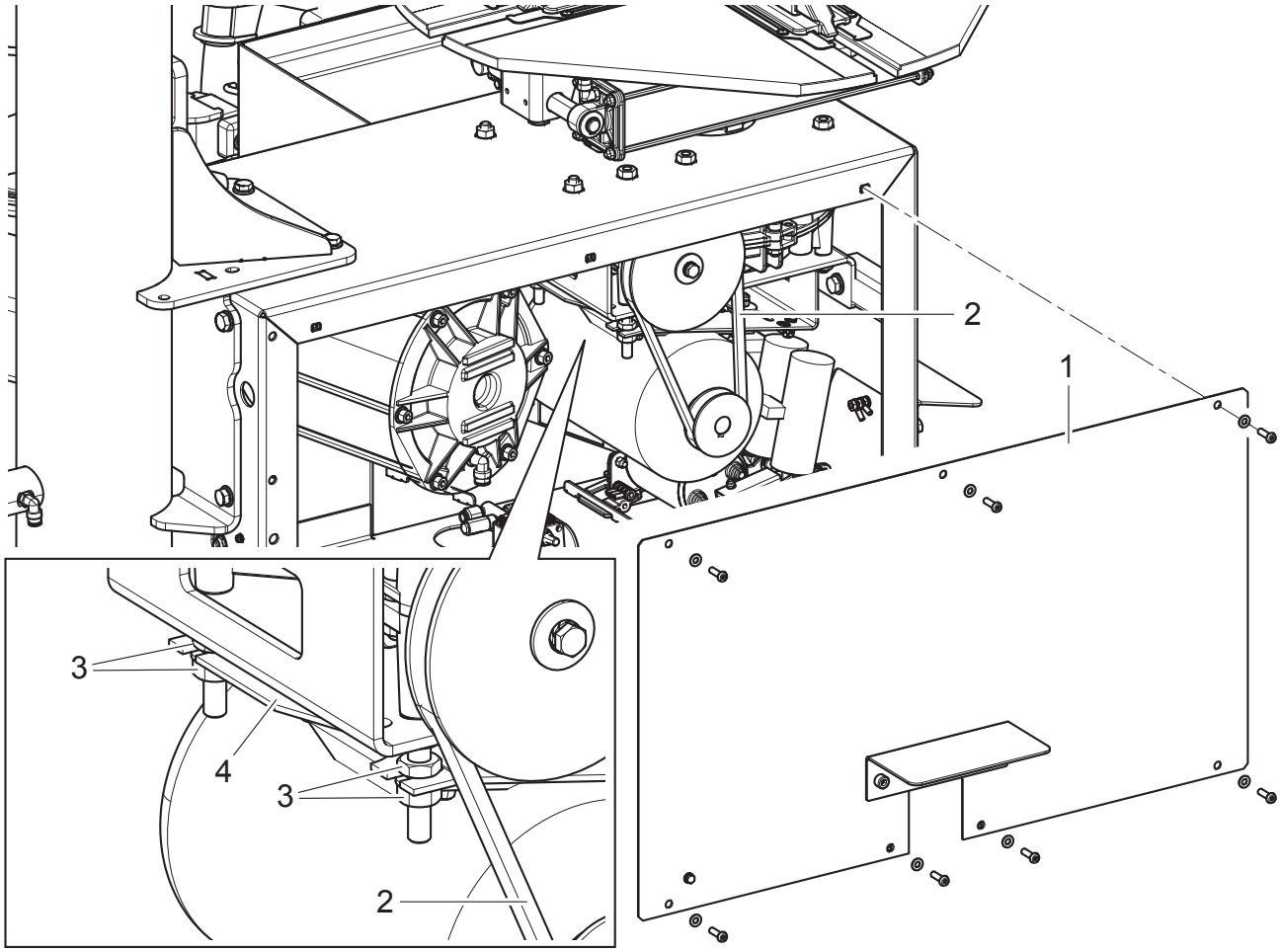
1. clean or replace pneumatic mufflers on the pedalboard:
   - unscrew the 5 bolts (Fig. 31 ref. 1) securing the front cover (Fig. 31 ref. 2) of the pedal unit of the equipment;
   - remove the mufflers (Fig. 31 ref. 3) from the pedalboard pneumatic valve;
   - blow the mufflers with compressed air to clean them or replace them in case of damages.
     Use only spare parts from the manufacturer or its authorized distributor to replace the mufflers.
     Reassemble the mufflers (Fig. 31 ref. 3) on the pneumatic valve.
   - Reassemble the front cover (Fig. 31 ref. 2) of the pedal unit of the equipment and secure it with the bolts (Fig. 31 ref. 1) previously removed.

Fig. 31



2. Check the transmission belt for wear and proper tensioning:
   - remove the side cover (Fig. 32 ref. 1) of the equipment frame by unscrewing the relevant bolts;
   - to tighten or loosen the belt (Fig. 32 ref. 2) use the four nuts (Fig. 32 ref. 3) mounted to the motor support (Fig. 32 ref. 4);
   - replace the belt (Fig. 32 ref. 2) if worn out.
     Use only spare parts from the manufacturer or its authorized distributor to replace the mufflers.
   - Reassemble the side cover (Fig. 32 ref. 1) of this equipment frame and secure it with the bolts removed before.

Fig. 32



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 PROVISION ABOVE IS NOT COMPLIED WITH.

1. Open and close the spindle 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 spindle 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 spindle 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.

To adjust the locking system vertical travel and the tool mount clamp a tireless car wheel rim in good conditions and with a flit profile of the upper flange, having a reference diameter as specified here below: fit a wheel rim with a 16” to 18” diameter to the spindle.

Adjusting toolhead vertical travel

⚠ CAUTION

RISK OF FINGER CRUSHING.

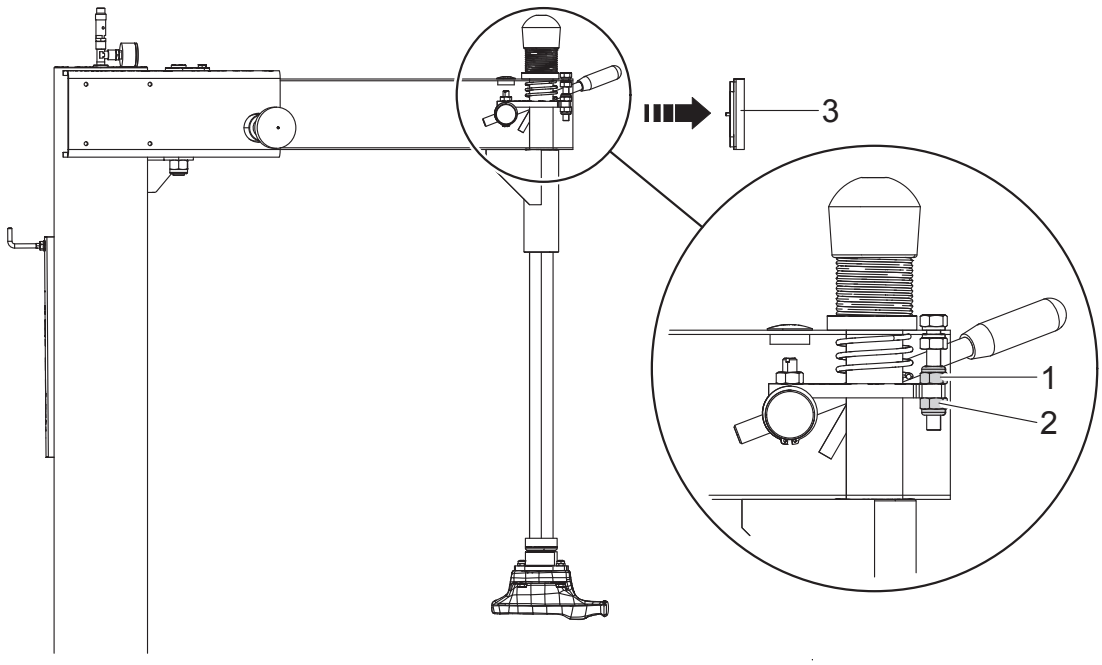
THE MAINTENANCE DESCRIBED BELOW REQUIRES REMOVING A GUARD AT THE END OF THE HORIZONTAL BEAM AND EXPOSING TO THE RISK OF THE MECHINSM BEHIND THE COVER CRUSHING THE TECHNICIAN'S FINGERS WHEN THE LOCKING SYSTEM CONTROL LEVER IS OPERATED.
KEEP HANDS OFF THE END OF THE HORIZONTAL BEAM WHILE OPERATING THE LOCKING SYSTEM CONTROL LEVER.
DO NOT OPERATE THIS EQUIPMENT WITH HORIZONTAL BEAM END COVER REMOVED.
RE-ASSEMBLE THE COVER TO THE HORIZONTAL BEAM ONCE ADJUSTING THE TOOLHEAD VERTICAL TRAVEL IS COMPLETE.

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.

The toolhead locking system vertical travel is set by 2 nuts placed within the horizontal beam:

1. make sure the toolhead is firmly secured to the hexagon shaft;
2. remove the cover (Fig. 33 ref. 3) at the end of the horizontal beam to gain access to the adjustment nuts;
3. set the toolhead in contact with the rim vertically and radially;
4. check what part of the toolhead contacts the rim vertically;
5. use the locking system control lever to engage the locking system;
6. check that the toolhead has moved 2 to 2.5 mm (0.08" to 0.10") upwards from the rim flange. Use of a thickness gage is recommended to assess the distance the toolhead moved vertically;
7. release the locking system and adjust the stroke of the toolhead by adjusting the vertical position of the nut (Fig. 33 ref. 1) and the lock nut (Fig. 33 ref. 2);
8. repeat the procedure from 3 to 7 until the toolhead vertical travel falls within the range specified in 6;
9. secure the adjustment nuts to 40 Nm (30 lbs·ft);
10. re-assemble the cover (Fig. 33 ref. 3) at the end of the horizontal beam.

Fig. 33



Checking and adjusting the toolhead mount to the hexagon shaft

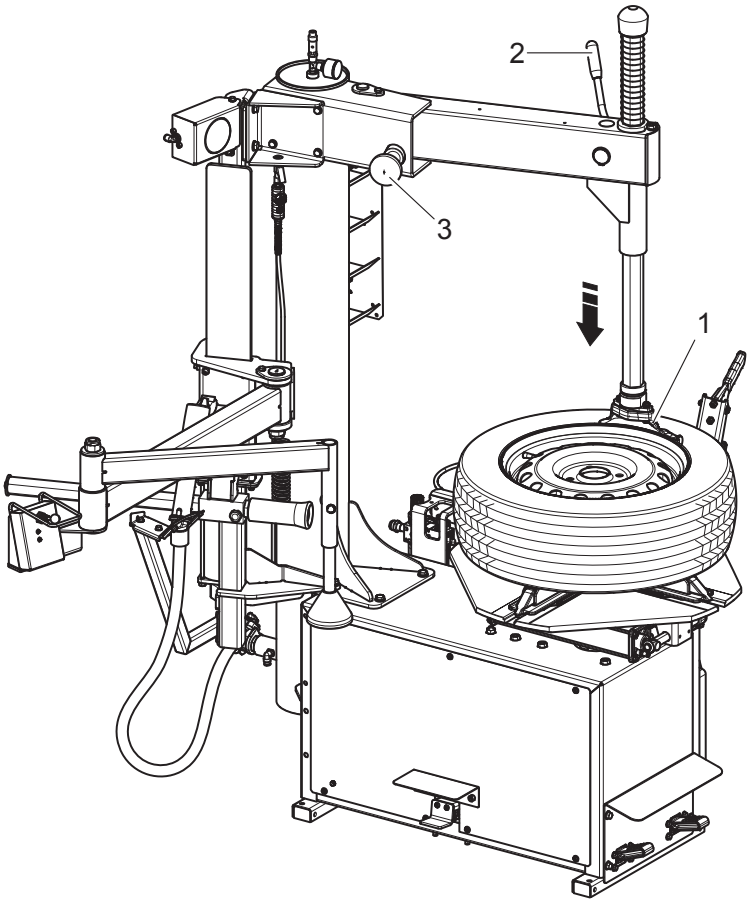
NOTICE

TOOLHEAD MOUNT TO THE HEXAGON SHAFT SHALL BE CHECKED AND ADJUSTED ONLY ONCE THE TOOLHEAD VERTICAL TRAVEL IS CHECKED AND ADJUSTED.
PERFORMING TOOLHEAD MOUNT CHECK AND AJUSTMENT BEFORE TOOLHEAD VERTICAL TRAVEL IS ADJUSTED MAY END UP WITH AN UNAPPROPRIATE ADJUSTMENT OF THE TOOLHEAD MOUNT.

The toolhead assembly on the hexagon shaft is set by 2 horizontal set bolts and 2 vertical locking bolts positioned under the toolhead.

1. Set the toolhead (Fig. 34 ref. 1) in contact with the rim vertically and radially;
2. operate the locking system control lever (Fig. 34 ref. 2) to lock the toolhead vertical position;
3. adjust the radial distance of the head to the rim through the setting knob (Fig. 34 ref. 3) so that the head is set radially at about 1 mm (0.04") from the outer profile of the rim flange;

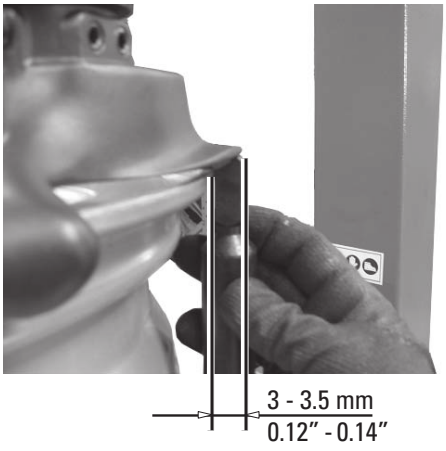
Fig. 34



4. keep the horizontal beam in contact with the knob shaft and check mount of the toolhead as shown in Fig. 35 (for standard metal toolhead) or Fig. 36 (for protruding spoke toolhead, sold separately.
5. 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;
6. slightly tighten the set screws to cancel backlash of the toolhead to the hexagon shaft;
7. repeat steps 1 through 6 to check and adjust mount of the toolhead until meeting the specs set forth in Fig. 35 or Fig. 36;
8. tighten the set screws to 40 Nm (30 lbs·ft);
9. tighten the screw under the toolhead to 70 Nm (52 lbs·ft).

Fig. 35

Car rim



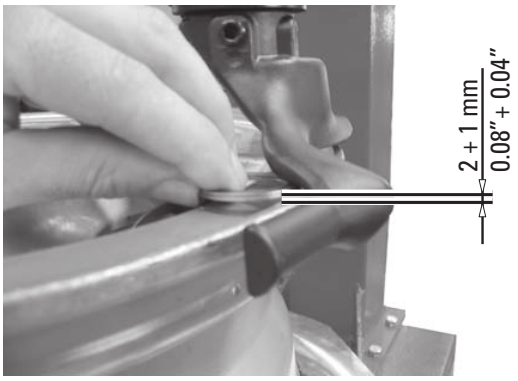
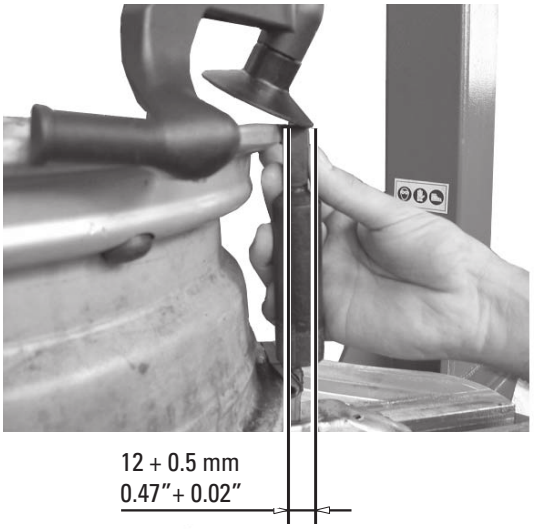
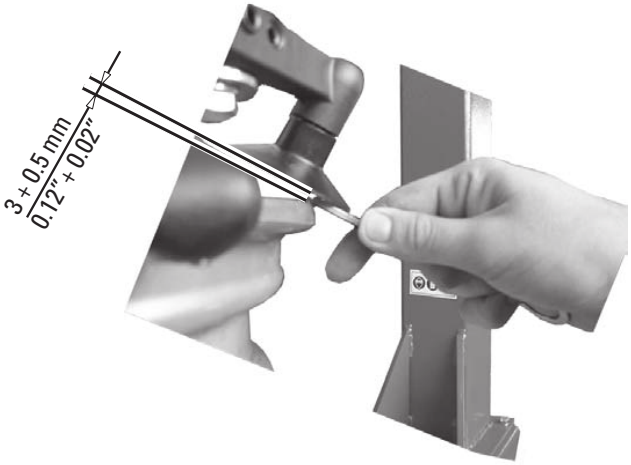


Fig. 36

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-unauthorized 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 spindle does not rotate in counter-clockwise direction.	Pedalboard microswitch breakage.	Replace microswitch.
The spindle 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 spindle does not clamp the rim properly.	1. Jaws worn out. 2. One or more pneumatic cylinders faulty.	1. Replace jaws. 2. Replace pneumatic cylinder gaskets.
The toolhead gets in contact with the rim during assembly/disassembly.	1. Clamping plate not adjusted or faulty. 2. Spindle locking bolt loose.	1. Adjust or replace the clamping plate. 2. Tighten the bolt.
One or more pedals do not return to their original position.	1. Return spring released. 2. Return spring broken.	1. Fasten the spring. 2. Replace the spring.
Bead breaker pneumatic controls do not work.	1. Equipment pneumatic system not connected. 2. Air lines clogged.	1. Check pneumatic connections and supply. 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 spindle rotates slowly but it does not operate on the motor pedal.	Pedalboard reversible de-calibration.	1. Keep the pedal in rest position. 2. Keep the equipment connected to the net. 3. Wait for 30 seconds that the pedalboard recalibration automatic attempt ends.
The spindle doesn't rotate, but it attempts rotation when the equipment is switched on again.	Pedalboard irreversible de-calibration.	Call for technical assistance. 
The spindle does not reach the maximum rotation speed.	The mechanical resistance of the gear-motor system has increased.	Turn the spindle without wheel for a few minutes so that the system heats, thus reducing frictions. If in the end the spindle does not accelerate again, call for technical assistance. 

Problem	Possible cause	Remedy
BEAD PRESS DEVICE		
No movement is generated when the control lever is operated.	1. Supply missing. 2. The supply hoses have not been correctly assembled. 3. The control valve is not working.	1. Check supply. 2. Check hoses fitting. 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

		ROT.CR200D0.202055	ROT.CR200R0.202109
Motor power (Hp)		1 (0.75 kW)	
Power supply	Voltage (V)	220-230	110
	Phases	1	
	Frequency (Hz)	50-60	60
Typical current draw (A)		10	12
Self-centering chuck rotation speed (rev/min)		0-16	7.3

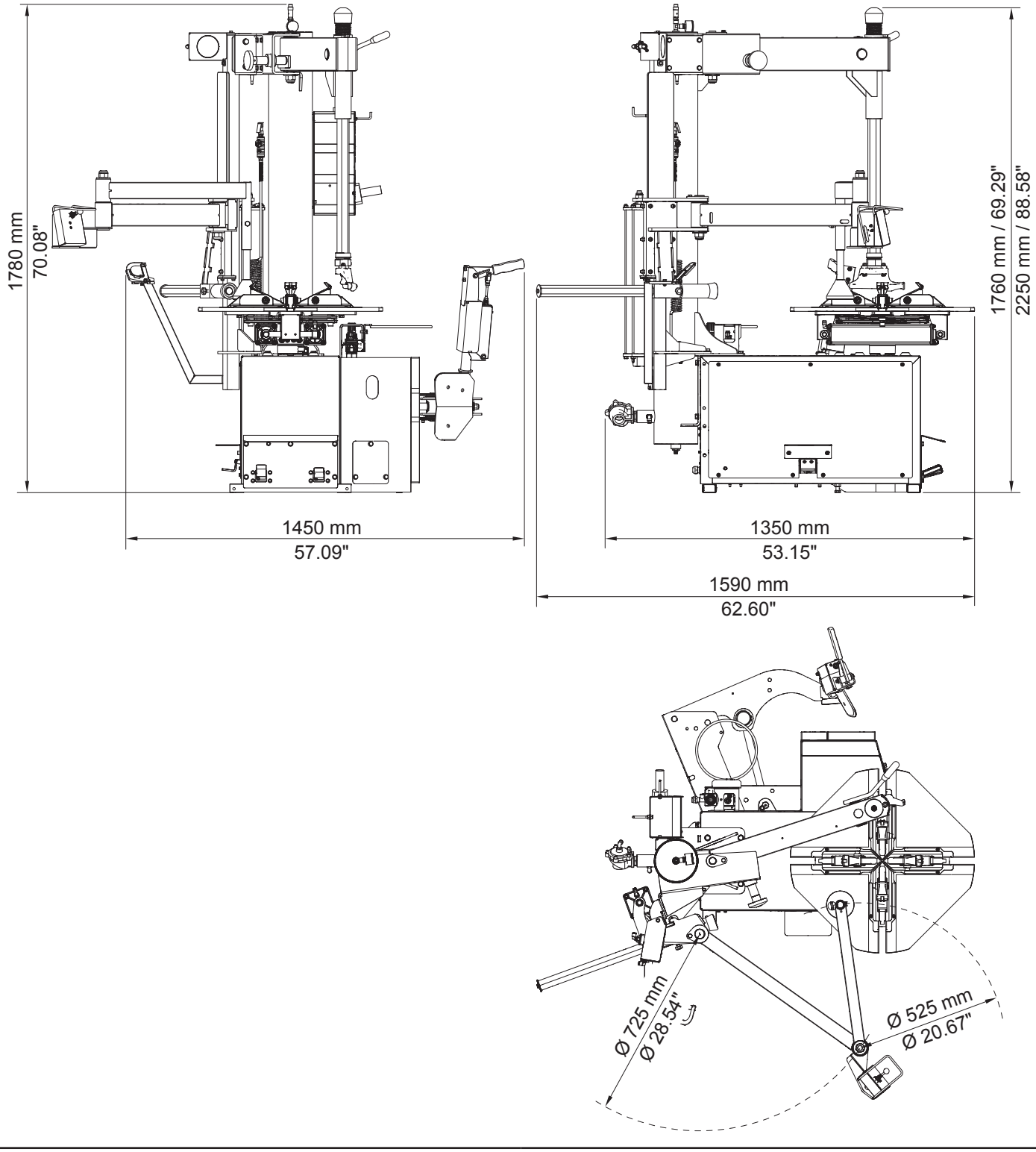
15.2 Mechanical technical data

Tire max. diameter (mm)	1170 (46”)
Wheel max. width (inches)	15
Spindle max. torque (Nm)	1200 (885 ft·lbs)
Bead breaker arm force at 10 bar (N)	11900 (2450 lbf)
Self-centering lock: external (inches)	10 - 26
Self-centering lock: internal (inches)	12 - 28.5
Operating pressure (bar)	8 - 10 (116 - 145 psi)

Weight (kg)	370 (816 lbs)

15.3 Dimensions

Fig. 37



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 SPINDLE 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

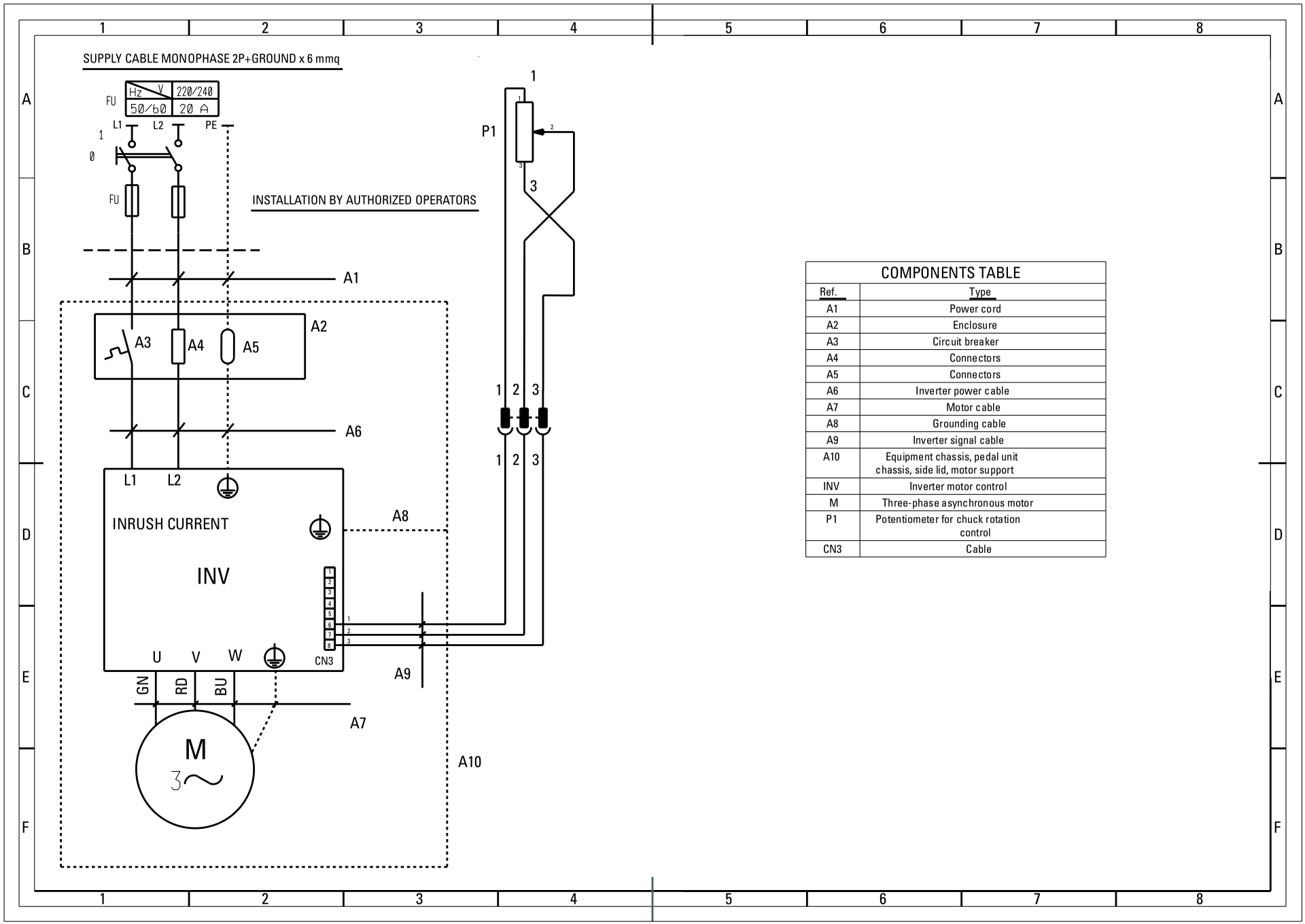
DO NOT TAMPER WITH OR OTHERWISE MODIFY THIS EQUIPMENT NAMEPLATE.

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.

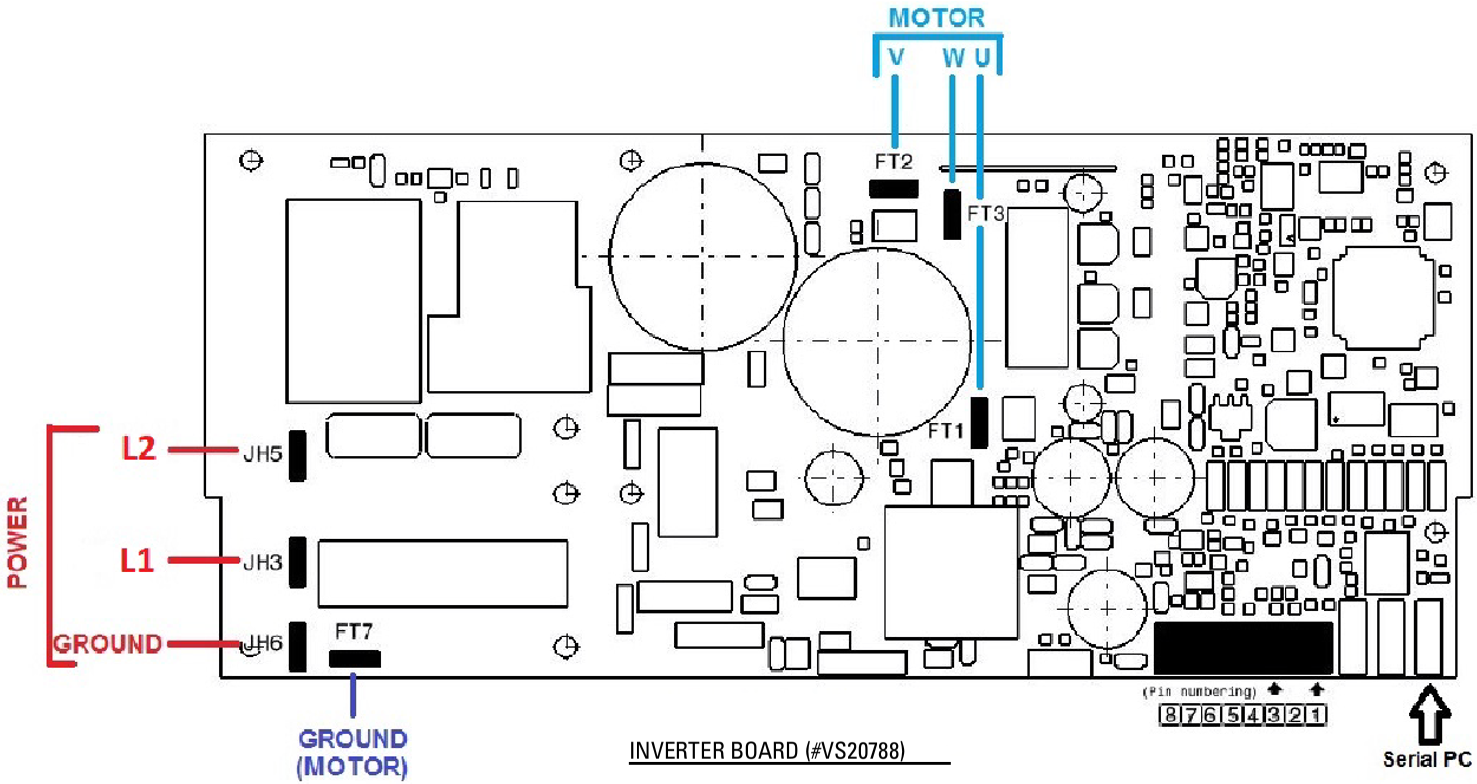
THE MANUFACTURER DECLINES ANY LIABILITY IN CASE THE PROVISION ABOVE IS NOT COMPLIED WITH.

19.0 FUNCTIONAL DIAGRAMS

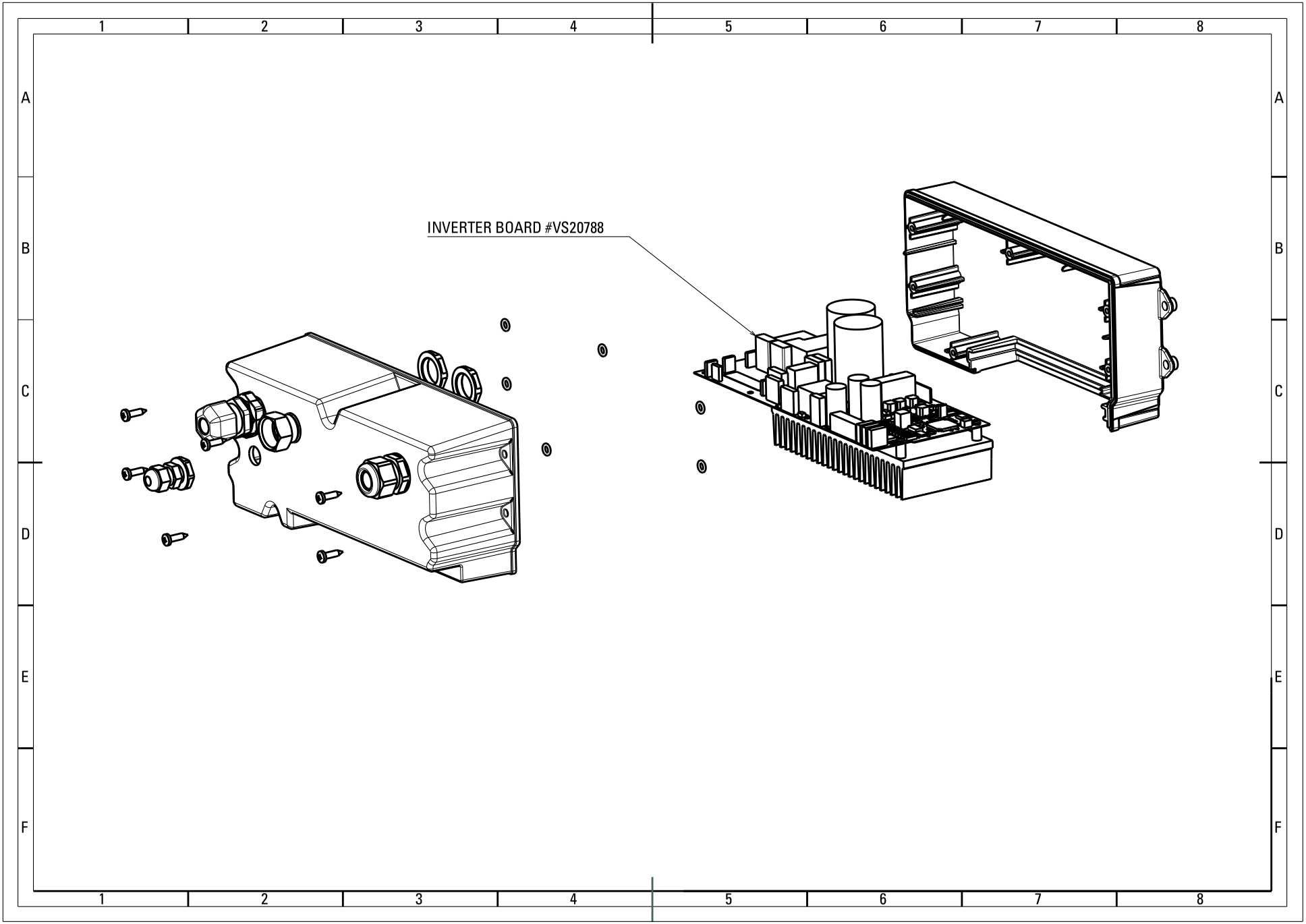
Here follows a list of the equipment functional diagrams.



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



INVERTER BOARD (#VS20788)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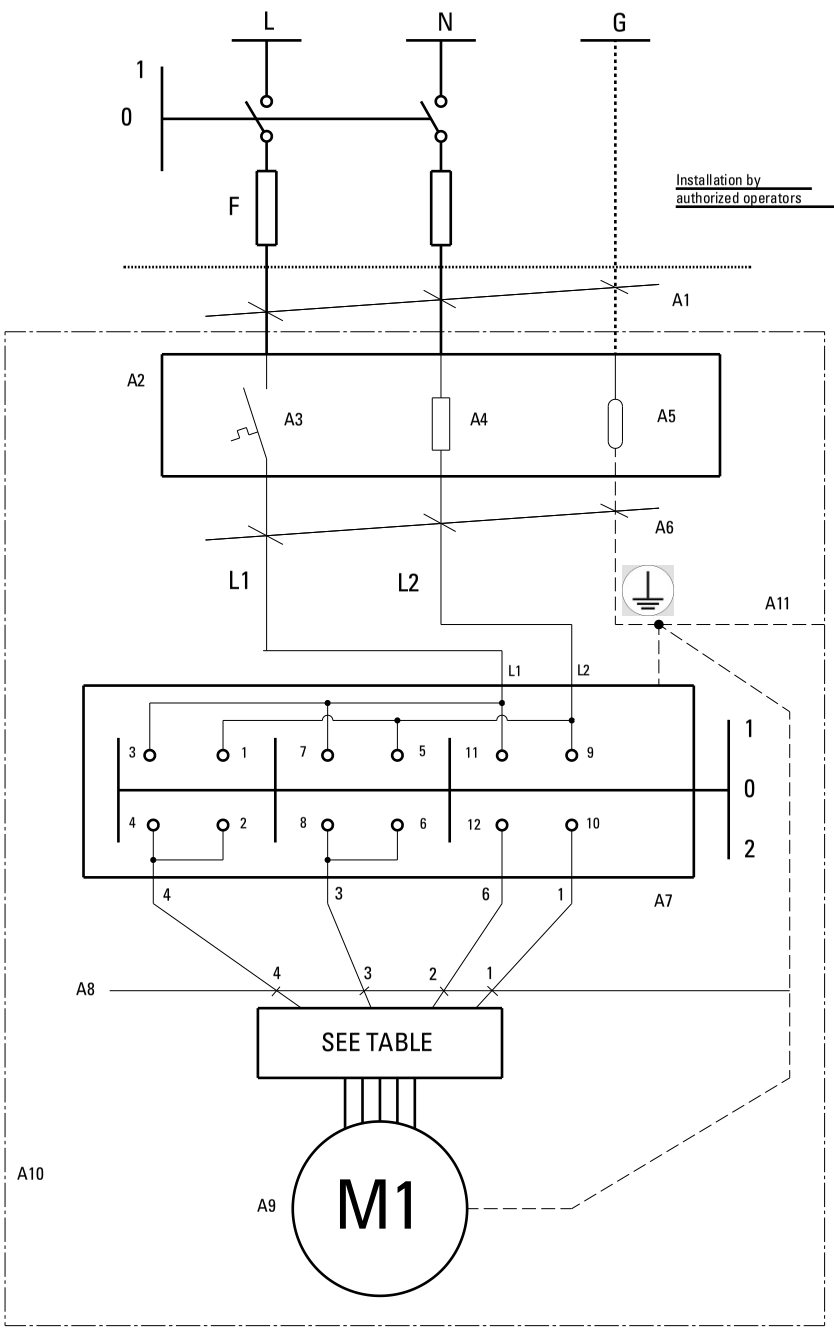
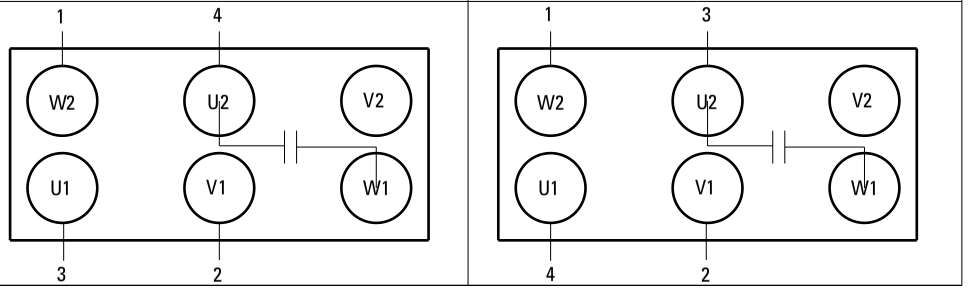
INVERTER BOARD #VS20788

Drawing number A - Rev. 0		VS730005430		Wiring diagram 4/4 (on model with 220V power supply with inverter)
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 hor- aire antihoraire)	Potenciómetro comando rotación mandril (a izquierda o derecha)
	CN3	Pedalboard micro inverter connector	Connecteur conexion inverseur micro pédalier	Conector conexión inversor micro pedalera

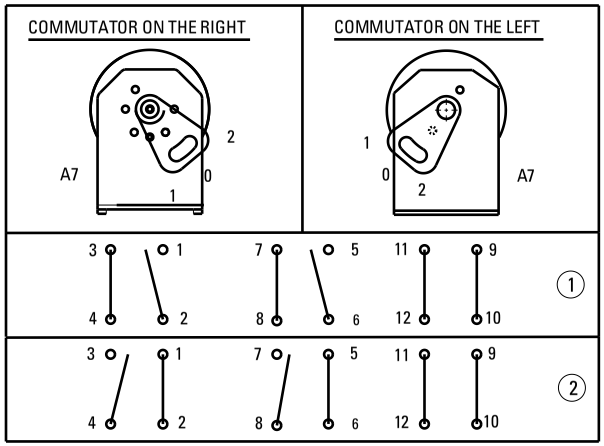


CONNECTION TO MOTOR

SWITCH TO THE RIGHT	SWITCH TO THE LEFT
When the pedal is down, the commutator reaches position 2, where motor rotation is counter-clockwise and plate rotation is clockwise	When the pedal is down, the commutator reaches position 1, where motor rotation is counter-clockwise and plate rotation is clockwise



VIEW OF MACHINE FRONT AREA



COMPONENTS TABLE	
Ref.	Type
A1	Cable
A2	Enclosure
A3	Circuit breaker
A4	Connectors
A5	Connectors
A6	Cable
A7	Switch
A8	Cable
A9	Electric Motor
A10	Equipment chassis, side lid, pedal unit chassis, motor support
A11	Bonding cables

COLOR OF THE POWER CABLE WIRES		
Wire	Wire function	Color
L	Phase	Black
N	Neutral	White
G	Ground	Green or Yellow/Green

Drawing number C - Rev. 0		VS730005470		Pneumatic diagram
N°	Code	Description	Description	Descripción
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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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