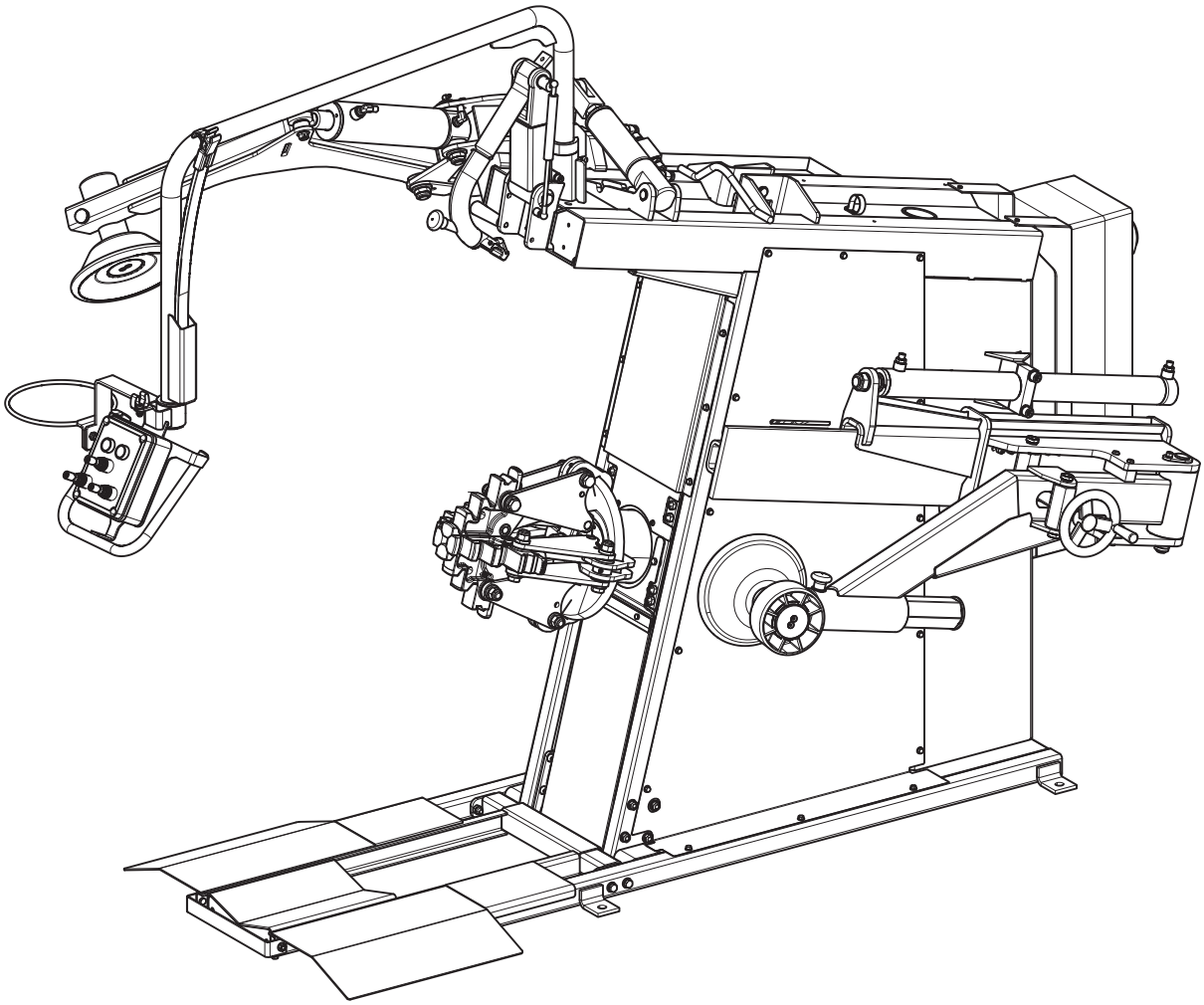
RWC101 (R501Plus) Tire Changer



OPERATION & MAINTENANCE MANUAL

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

 C012210.1

7504-M003-03
Rev. n. 03 (01/2023)

SUMMARY

HAZARD LEVELS

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

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

NOTICE

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

⚠ DANGER

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

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

⚠ DANGER

RISK OF FIRE OR ELECTROCUTION.

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

NOTICE

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

⚠ DANGER

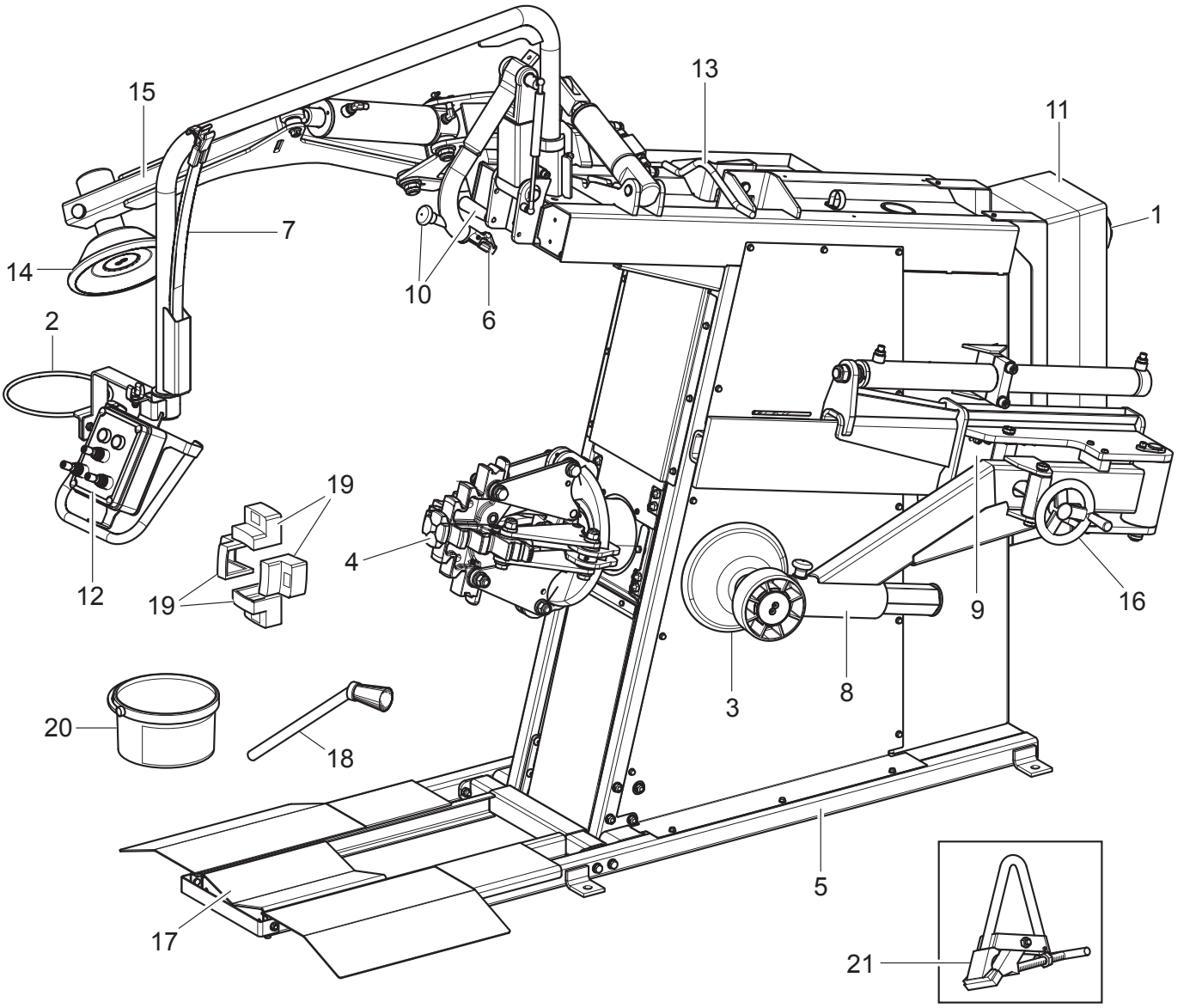
RISK OF EXPLOSION.

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

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

GENERAL DESCRIPTION

FIG. 1

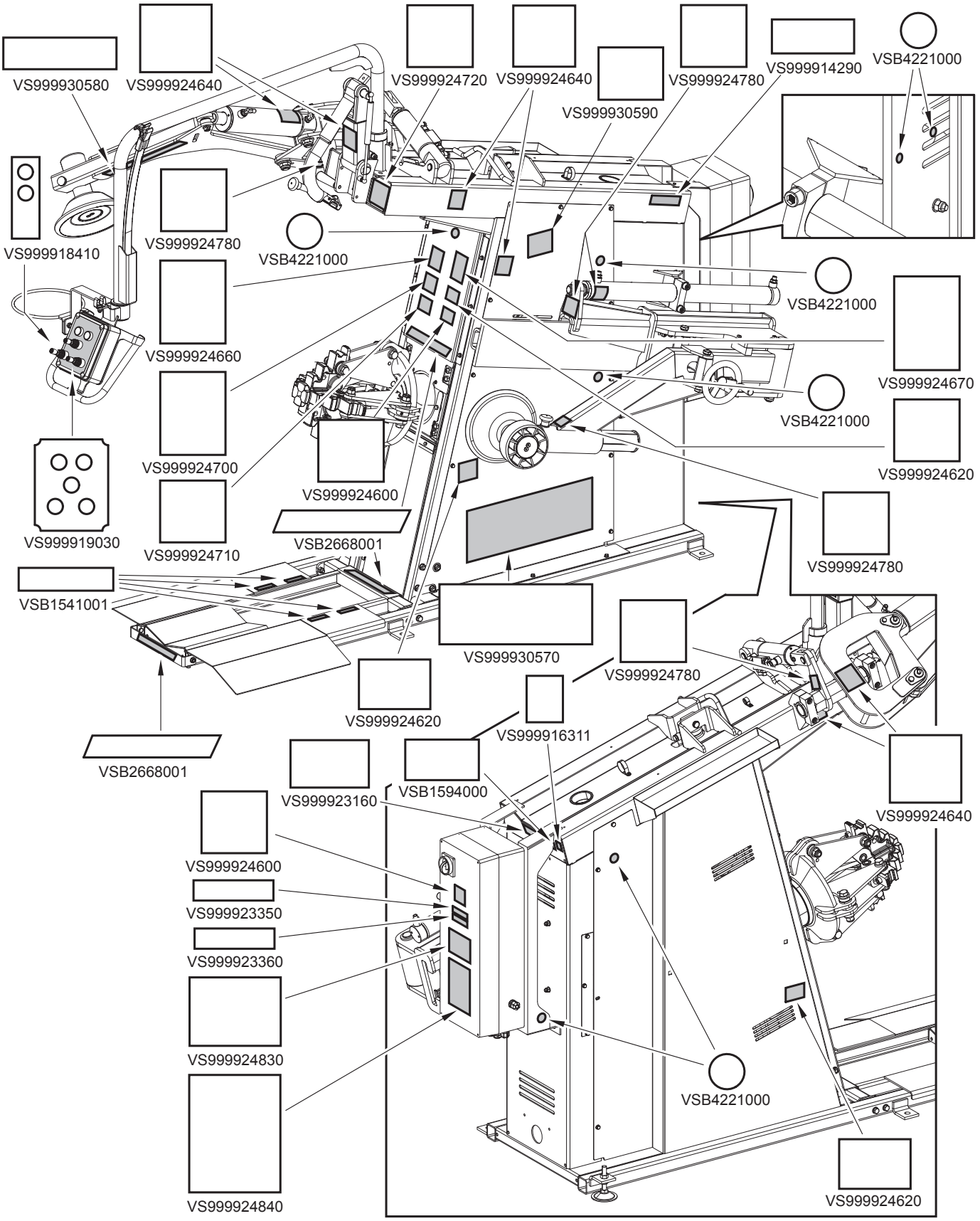


KEY

1 - Main switch
2 - Mounting paste bin support
3 - Rear bead breaker roller
4 - Self-centering chuck
5 - Frame
6 - Toolhead
7 - Bead lever
8 - Rear bead breaker roller holder arm
9 - Rear bead breaker roller movement carriage
10 - Tool positioning handgrip
11 - Control panel
12 - Control unit
13 - Lifting hook
14 - Front bead breaker roller
15 - Front bead breaker roller holder arm
16 - Handwheel for adjustment of rear bead breaker roller working position
17 - Tire loading platform
18 - Brush
19 - Jaw guards for alloy rims
20 - Mounting paste bin
21 - Mounting clamp

NAMEPLATES LOCATION DRAWING

FIG. 2



Part numbers of nameplates	
VSB1541001	Danger nameplate
VSB1594000	Date indicating nameplate
VSB2668001	Wheel lifting device danger nameplate
VSB4221000	Grounding nameplate
VS999914290	Serial number nameplate
VS999916311	Rubbish skip nameplate
VS999918410	Self-centering chuck nameplate
VS999919030	Joysticks nameplate
VS999923160	Prop 65 Attention nameplate
VS999923350	For indoor use only nameplate
VS999923360	Disconnect power supply nameplate
VS999924600	Electrical shock nameplate
VS999924620	Open machinery nameplate
VS999924640	Crush hazard bead break nameplate
VS999924660	Personal protection equipment nameplate
VS999924670	“Deflate tire before” nameplate
VS999924700	Only one operator nameplate
VS999924710	Crush hazard nameplate
VS999924720	Pinch point nameplate
VS999924780	Crush hazard bead break nameplate
VS999924830	“Don’t use below garage” nameplate
VS999930570	Equipment nameplate
VS999930580	Rotary logo nameplate
VS999930590	QR code nameplate

NOTICE

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

NOTICE

SOME OF THE PICTURES IN THIS MANUAL HAVE BEEN OBTAINED FROM PICTURES OF PROTOTYPES, THEREFORE THE STANDARD PRODUCTION EQUIPMENTS 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 R501Plus tire changer! The R501Plus is designed and built for professional garages. The tire changer is easy to use with safety in mind. Following the care and maintenance outlined in this tire changer manual your tire changer will provide years of service.

2.0 INTENDED USE

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

- an electric motor coupled to a gearbox to handle the tire rotation, and
- a hydraulic pump system to handle clamping and movement of hydraulic cylinders to more mounting/dismounting tools.

The equipment is to be used only for the mounting and demounting of any type of wheel with the whole rim (drop center and with bead) with diameters and width values mentioned in “Technical specifications” chapter.
The equipment is NOT intended to be used for tire inflation.

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:

- hold-to-run controls (immediate stop of operation when the control is released) for the control of all servo-actuated parts.

⚠ 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.

- A suspended control unit supporting control actuators in a position which prevents them from being inadvertently operated by object falling from the equipment or a wheel secured to its chuck, or the control unit being dropped to the ground.

⚠ CAUTION

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

OPERATING THIS EQUIPMENT WITH A DEFECTIVE OR MODIFIED SUPPORT OF THE CONTROL UNIT MAY LEAD TO INADVERTENT OPERATION OF THE CONTROL ACTUATORS, INADVERTENT MOVEMENTS OF THE SELF-CENTERING CHUCK, THE JAWS OR THE FRONT BEAD BREAKER ROLLER HOLDER ARM AND TO THE WHEEL BEING SUDDENLY REALEASED FROM THE CHUCK, AND MAY EXPOSE THE OPERATOR TO UPPER OR LOWER LIMBS CRUSHING, OR BODY BUMPING, LEADING TO PERSONAL INJURIES.

DO NOT TAMPER WITH OR OTHERWISE MODIFY THE SUPPORT OF THE CONTROL UNIT.

DO NOT OPERATE THE EQUIPMENT WITH A DAMAGED SUPPORT OF THE CONTROL UNIT.

IN CASE THE SUPPORT OF THE CONTROL UNIT IS DAMAGED OR OTHERWISE DEFECTIVE:

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

- Circuit breaker on the power supply line of the power unit motor: avoids the motor overheating in case of intensive use.

⚠ DANGER

RISK OF ELECTROCUTION OR FIRE.

OPERATING THIS EQUIPMENT WITH DEFECTIVE OR OVERSET CIRCUIT BREAKER ON THE POWER SUPPLY LINE OF THE POWER UNIT MOTOR MAY LEAD TO MOTOR AND POWER SUPPLY LINE WIRINGS AND CABLE OVERHEATING, EXPOSING TO TO ELECTRICAL SHOCK OR FIRE HAZARD, AND MAY RESULT IN SERIOUS INJURIES OR DEATH.

DO NOT TAMPER WITH OR OTHERWISE MODIFY THE CIRCUIT BREAKER ON THE POWER UNIT MOTOR POWER SUPPLY LINE OR ITS SETTING.

DO NOT OPERATE THE EQUIPMENT WITHOUT PROPERLY WORKING CIRCUIT BREAKER.

IN CASE THE CIRCUIT BREAKER ON THE POWER SUPPY LINE OF THE POWER UNIT MOTOR IS DAMAGED OR OTHERWISE DEFECTIVE:

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

- pilot check valves on:

  - opening of self-centering chuck jaws,
  - lifting of self; centering chuck;
  - lifting of front bead breaker roller holder arm.

  These valves will prevent unintended movements of the jaws, the wheel clamping self-centering unit and the front bead breaker roller holder arm in case of bursting or puncture of the associated hydraulic hoses.

⚠ CAUTION

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

OPERATING THIS EQUIPMENT WITH DEFECTIVE PILOT-OPERATED CHECK VALVES MAY LEAD TO UNDAVERTENT MOVEMENTS OF THE SELF-CENTERING CHUCK, THE JAWS OR THE FRONT BEAD BREAKER ROLLER HOLDER ARM AND TO THE WHEEL BEING SUDDENLY REALEASED FROM THE CHUCK, AND MAY EXPOSE THE OPERATOR TO UPPER OR LOWER LIMBS CRUSHING; OR BODY BUMPING, LEADING TO PERSONAL INJURIES.

DO NOT TAMPER WITH OR OTHERWISE MODIFY PILOT-OPERATED CHECK VALVES OT THEIR CONNECTIONS TO HYDRAULIC PIPES AND HOSES.

DO NOT OPERATE THE EQUIPMENT WITHOUT PROPERLY WORKING PILOT-OPERATED CHECK VALVES.

IN CASE PILOT-OPERATED CHECK VALVES ARE DAMAGED OR OTHERWISE DEFECTIVE, OR UNITENDED MOVEMENTS OF THE SELF-CENTERING CHUCK, THE CHUCK JAWS OR THE FRONT BEAD BREAKER ROLLER HOLDER ARM ARE NOTICED:

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

- Fuses on the power supply line of self-centering chuck motor.

⚠ DANGER

RISK OF ELECTROCUTION OR FIRE.

OPERATING THIS EQUIPMENT WITH DEFECTIVE OR UNAPPROPRIATE FUSES ON THE POWER SUPPLY LINE OF THE SELF-CENTERING CHUCK MOTOR MAY LEAD TO MOTOR AND POWER SUPPLY LINE WIRINGS AND CABLE OVERHEATING, EXPOSING TO ELECTRICAL SHOCK OR FIRE HAZARD, AND MAY RESULT IN SERIOUS INJURIES OR DEATH.

DO NOT TAMPER WITH OR OTHERWISE MODIFY THE FUSES ON THE SELF-CENTERING CHUCK MOTOR POWER SUPPLY LINE OR HAVE THEM REPLACED BY UNQUALIFIED PERSONNEL.

DO NOT OPERATE THE EQUIPMENT WITHOUT PROPERLY WORKING FUSES.

IN CASE THE FUSES ON THE POWER SUPPY LINE OF THE SELF-CENTERING CHUCK MOTOR ARE DAMAGED OR OTHERWISE DEFECTIVE:

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

- Hydraulic pressure relief valve on on the power unit to prevent damages to the hydraulic equipment due to overpressure.

⚠ WARNING

RISK OF PRESSURIZED HYDRAULIC OIL EJECTION.

OPERATING THIS EQUIPMENT WITH DEFECTIVE OR OVERSET HYDRAULIC PRESSURE RELIEF VALVE MAY LEAD TO BURSTING OF HYDRAULIC PIPES, RESULTING IN PRESSURIZED HYDRAULIC OIL EJECTION.

POWER UNT CHOKING MAY INDICATE THE HYDRAULIC PRESSURE RELIEF VALVE IS DAMAGED OR OVERSET.

DO NOT TAMPER WITH OR OTHERWISE MODIFY HYDRAULIC PRESSURE RELIEF VALVE OR ITS SETTING.

IN CASE HYDRAULIC PRESSURE RELIEF VALVE IS DAMAGED OR OTHERWISE DEFECTIVE, OR POWER UNT MOTOR CHOKES WHEN HYDRAULIC-OPERATED MOVEMENTS ARE PERFORMED:

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

- Control panel opening interlocked with main switch.

⚠ DANGER

RISK OF ELECTROCUTION OR FIRE.

OPERATING THIS EQUIPMENT WITH OPEN CONTROL PANEL MAY LEAD TO CONTACT WITH LIVE PARTS OR DAMAGES TO LIVE PARTS OR THEIR INSULATION, AND EXPOSE TO ELECTROCUTION OR FIRE HAZARDS; RESULTING IN SERIOUS INJURIES OR DEATH.

DO NOT TAMPER WITH, DEFEAT OR OTHERWISE MODIFY THE INTERLOCK PREVENTING OPENING OF THE CONTROL PANEL WHEN THE MAINS SWITCH IS NOT SET TO ITS POWER DISCONNECT POSITION.

DO NOT OPERATE THE EQUIPMENT WITHOUT PROPERLY WORKING INTERLOCK.

DISCONNECT THIS EQUIPMENT FROM ALL POWER SOURCES BEFORE SERVICING.

IN CASE THE INTERLOCK ON THE MAIN SWITCH, THE MAIN SWITCH CONTROL HANDLE OR THE MAIN SWITCH ARE DAMAGED OR OTHERWISE DEFECTIVE:

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

- 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.

3.1 Residual risks

The equipment was subjected to a complete analysis of risks according to reference standard EN ISO 12100 & UL 201.
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 “PLATES 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 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 manoeuvres. 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 power supply off using the main switch.
- 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.
- The use of original accessories and spare parts only is advised. This equipment is designed to operate with original accessories only.

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. 6.
- 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.
- This equipment is not intended for inflating tires while clamped by the equipment chuck. Do not inflate tires while clamped by the equipment chuck.
- When operating and servicing this equipment, carefully follow all applicable safety and accident-prevention precautions. The equipment must not be operated by untrained personnel.

⚠WARNING

RISK OF PRESSURIZED HYDRAULIC OIL EJECTION.

THE EQUIPMENT OPERATES WITH PRESSURIZED HYDRAULIC FLUID.

ANY PRESSURIZED LEAKS MAY CAUSE SERIOUS INJURIES.

MAKE SURE ALL FITTINGS AND HOSES ARE LEAK FREE AND IN GOOD CONDITION. IN CASE HOSES OR FITTINGS ARE DAMAGED, LEAKING OR VISIBLY WORN:

- DO NOT USE THIS EQUIPMENT;
- DISCONNECT THIS EQUIPMENT FROM ALL POWER SOURCES IMMEDIATELY;
- HAVE DEFECTIVE, LEAKING OR WORN PARTS REPLACED BY A QUALIFIED TECHNICIAN.

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.

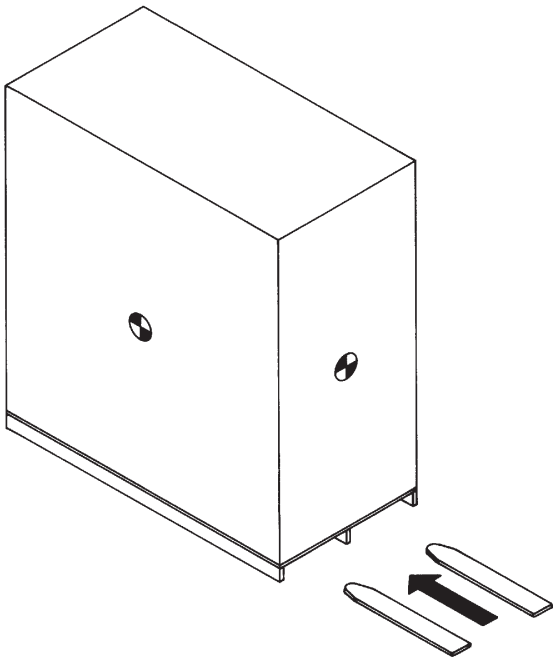
HANDS AND FEET MAY GET CRUSHED BELOW THIS EQUIPMENT PACKAGING.

STAND CLEAR OF THIS EQUIPMENT PACKAGING WHENEVER IT IS MOBILIZED.

WEAR SAFETY GLOVES AND SHOES WHEN MOBILIZING THIS EQUIPMENT PACKAGING.

The equipment is supplied completely assembled, packed in a cardboard box.
Handling must be by pallet-lift or fork-lift trolley, Fig. 3.
The fork lifting points are indicated on the packing.

Fig. 3



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.

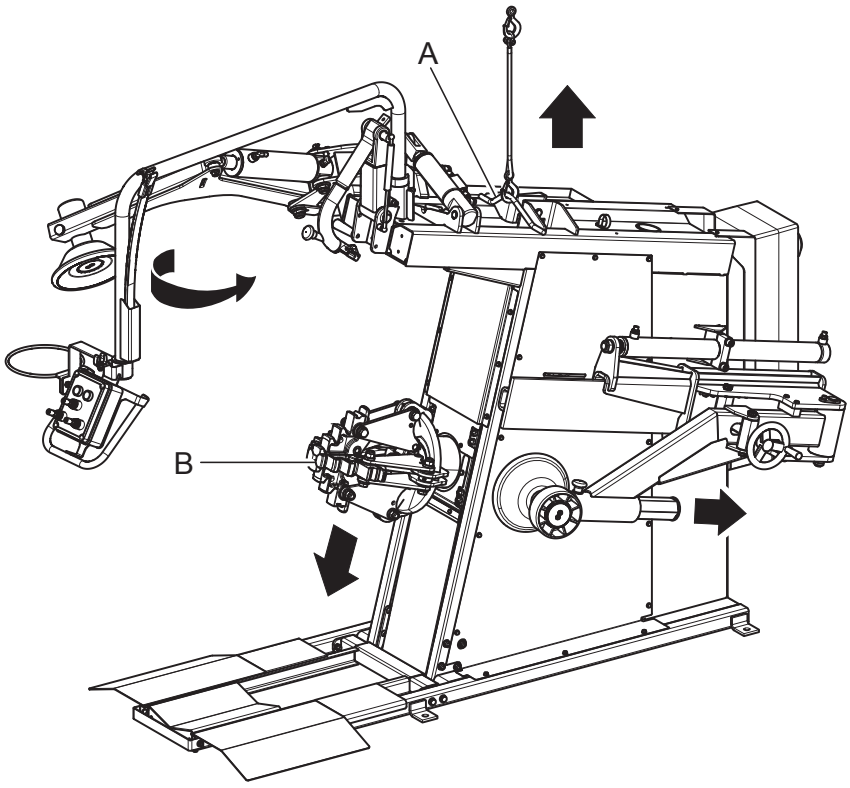
HANDS AND FEET MAY GET CRUSHED BELOW THIS EQUIPMENT.

STAND CLEAR OF THIS EQUIPMENT WHENEVER IT IS MOBILIZED.

If the equipment has to be moved from its normal work post the transport must be conducted by following the instructions listed below:

- protect the exposed corners with suitable material (Pluribol/cardboard);
- do not use metallic cables for lifting;
- make sure that the power supply of the equipment is not connected;
- to perform lifting, use the bracket "A", pictured in Fig. 4, place the bead breaking arms as close as possible to the equipment, and the self-centering chuck (Fig. 4 ref. B) as low as possible to ensure a correct load balancing.

Fig. 4



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).

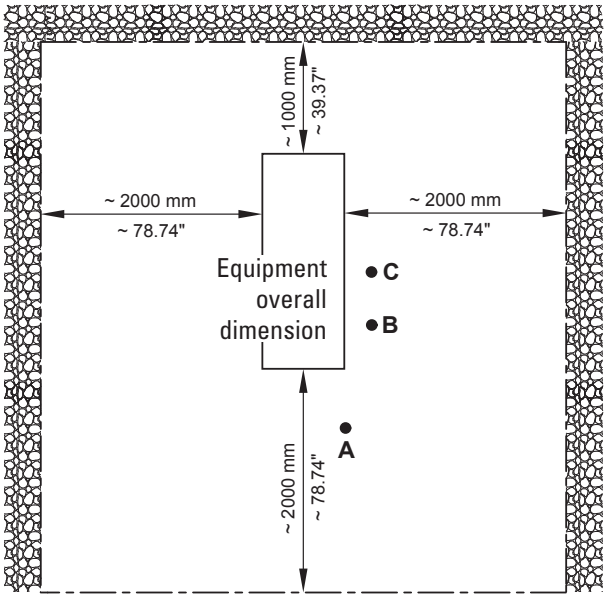
The use of the equipment in ambient conditions other than those specified above is only allowed after prior agreement with and approval of the manufacturer.

8.1 Work position

In Fig. 5 it's possible to define work positions A, B, C which will be referred to in the description of equipment operative phases.
Positions A and B must be considered as the main positions for tire mounting and demounting and for wheel clamping on self-centering chuck, while positions A and C are the best positions to follow tire bead breaking and demounting operations.
Working in these positions allows better precision and speed during operating phases as well as greater safety for the operator.

8.2 Working area

Fig. 5



The location of the equipment requires a usable space as indicated in Fig. 5. 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 equipment must be located in an adequately lit environment.

9.0 ASSEMBLY AND PREPARATION FOR USE

⚠ DANGER

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

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

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

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

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

⚠ CAUTION

RISK OF UPPER LIMBS CRUSHING.

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

KEEP HANDS OFF MATING SURFACES AT ALL TIMES.

⚠ CAUTION

RISK OF LOWER LIMBS CRUSHING.

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

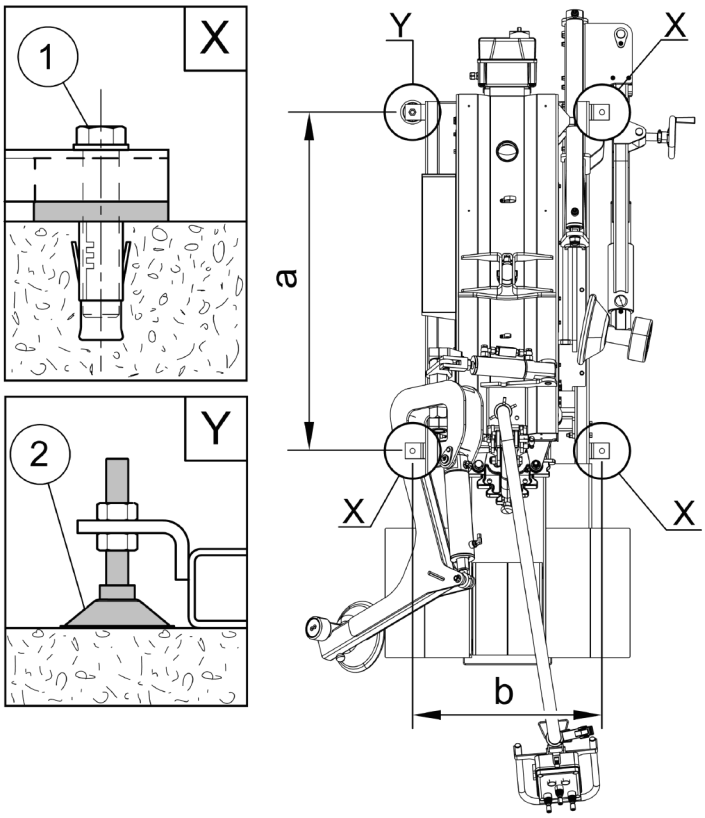
ENSURE PARTS ARE PROPERLY SECURED.

After removing the various components from the packing, check that they are complete, and that there are no missing or damaged parts, then use the following instructions for the assembly of the components making use of the following series of illustrations.

9.1 Levelling the equipment feet

The equipment is provided with an adjustable-height foot on the rear-left corner (Fig. 6 ref. Y and 2). Once the equipment has been placed in its work position, release the two nuts securing the foot to the chassis of the equipment until the foot rests on the floor. Then secure the foot to the chassis tightening the two nuts against the chassis again, paying attention not to raise the foot from the floor, or forcing the foot against the floor.

Fig. 6



a = 1180 mm / 46.46”
b = 660 mm / 25.98”

⚠CAUTION

RISK OF BUMPING.

FAILURE TO PROPERLY LEVEL THE EQUIPMENT FEET MAY LEAD TO REDUCE EQUIPMENT STABILITY, RESULTING IN INADVERTENT MOVEMENTS OF THE EQUIPMENT CHASSIS AND BUMPING OF THE OPERATOR’S BODY,RESULTING IN PERSONAL INJURIES.
DO NOT OPERATE THE EQUIPMENT WITHOUT HAVING PROPERLY LEVELED THE EQUIPMENT FEET.
IN CASE INADVERTENT MOVEMENTS OF THE QUIPMENT CHASSIS ARE NOTICED:

- DO NOT USE THIS EQUIPMENT;
- DISCONNECT THIS EQUIPMENT FROM ALL POWER SOURCES IMMEDIATELY;
- HAVE EQUIPMENT FEET LEVELLING CHECKED BY A QUALIFIED TECHNICIAN.

9.2 Anchoring system

The packed equipment is secured to the support pallet through the holes on the frame and indicated in the figure below. Such holes can be used also 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. 6.

- To secure the equipment to the floor, use anchoring bolts/studs (Fig. 6 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.

NOTICE

BEFORE SECURING THE EQUIPMENT TO THE FLOOR, LEVEL EQUIPMENT FEET AS DESCRIBED ABOVE.

9.3 Assembly procedures

Assemble the equipment as per the illustrations represented and described hereafter:

1. remove the packaging and the equipment from the wrapping, lift it and place it on the floor.
   The articulated end (Fig. 7 ref. 1) appears as illustrated in Fig. 7;
2. hook the articulated end (Fig. 8 ref. 1) onto the cylinder A to pin B, as shown by detail B.
   Turn the control unit C, as shown by Fig. 8. In order to perform such operation, lift the control unit along axis "A" at approximately 50 mm (1.97") up to position "2", rotate through 90° towards equipment front side and lower it always along axis "A" up to working position "3" (see Fig. 11);

Fig. 7

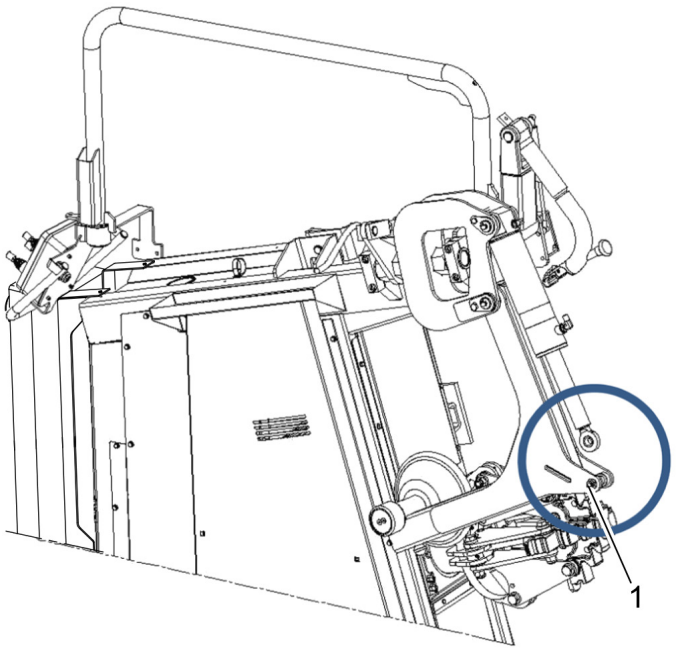
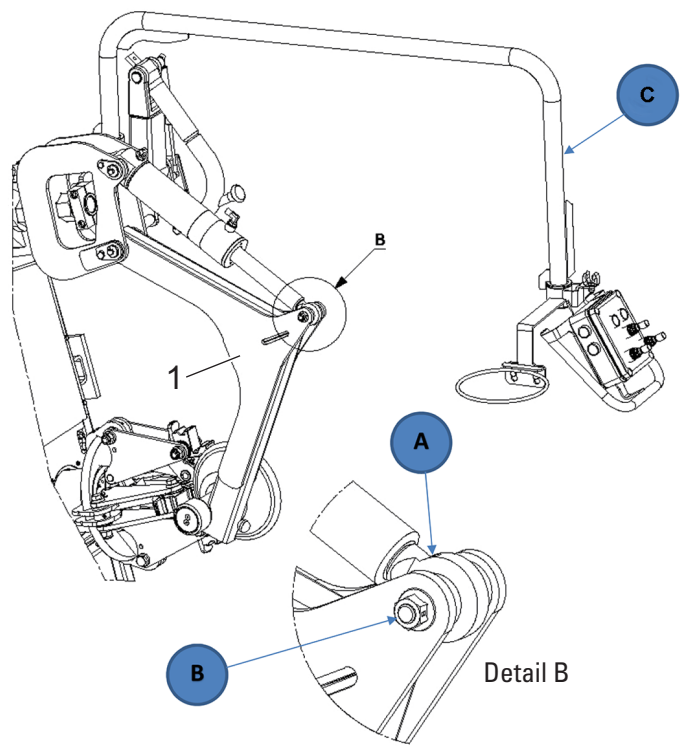
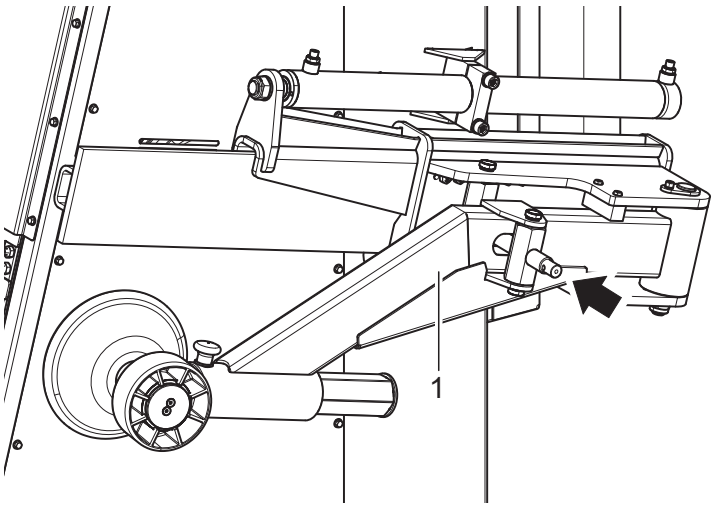


Fig. 8



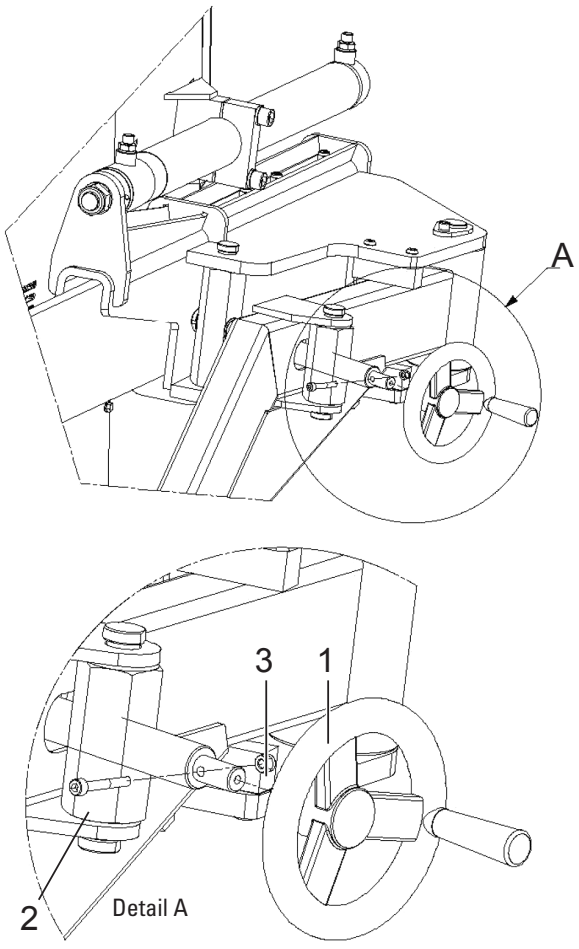
3. during the installation, the lower bead breaker arm (Fig. 9 ref. 1) appears without handwheel.

Fig. 9



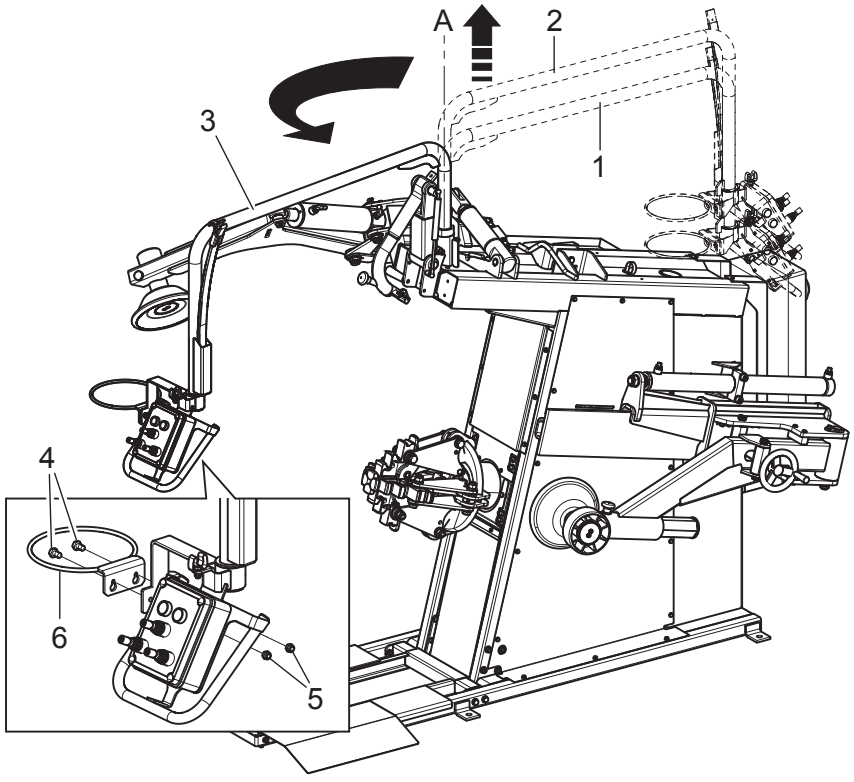
4. mount the handwheel (Fig. 10 ref. 1) using the supplied bolt (Fig. 10 ref. 2) and nut (Fig. 10 ref. 3), (see detail A);

Fig. 10



5. mount the grease-holder ring (Fig. 11 ref. 6) on the control unit, through bolts (Fig. 11 ref. 4) and nuts (Fig. 11 ref. 5), as shown in Fig. 11.

Fig. 11



9.4 Oil check on oil-pressure power unit

NOTICE

THE EQUIPMENT IS DELIVERED WITH AN EMPTY HYDRAULIC POWER UNIT OIL RESERVOIR, AND WON'T WORK UNTIL THE RESERVOIR IS FILLED WITH THE APPROPRIATE HYDRAULIC OIL TYPE AND QUANTITY.

Have a qualified technician fill the hydraulic unit reservoir with approximately 0.7 gallons (2.5 litres) hydraulic oil meeting the the specified viscosity rating.

- ISO VG32 in case the typical environmental temperature ranges from +41°F e +86°F (+5°C e +30°C)
- ISO VG46 in case the typical environmental temperature exceeds +86°F (+30°C).

To access the hydraulic reservoir, remove the lid on the left side of the equipment.
Once done, secure the lid back to its position before proceeding any further.

9.5 Connection to the electrical power supply

This equipment is supplied with a flexible cord for connection to the electrical power supply.
Connection to the power supply requires either one of the following is performed:

- Fitting a suitable plug to the cord and connecting this equipment to the power supply through a plug/socket combination.
- Connecting the cord to a suitable branch circuit.

⚠ 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 NAMEPLATE;
- ALL COMPONENTES OF THIS EQUIPMENT ELECTRICAL EQUIPMENT ARE IN GOOD CONDITION;
- ELECTRICAL POWER SUPPLY IS PROPERLY GROUNDED AS PER APPLICABLE REGULATIONS;
- THE RECEPTACLE THE POWER CORD IS CONNECTED TO IS SERVED BY A BRANCH CIRCUIT SERVING ONLY THIS RECEPTACLE, IF THIS EQUIPMENT IS CONNECTED TO THE POWER SUPPLY THROUGH A PLUG-SOCKET COMBINATION.
- THE BRANCH CIRCUIT THIS EQUIPMENT IS CONNECTED TO SERVES ONLY THIS EQUIPMENT, IF THIS EQUIPMENT IS DIRECTLY CONNECTED TO A BRANCH CIRCUIT.
- 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.

⚠ DANGER

RISK OF ELECTROCUTION.

AS THE LID IS REMOVED, OPERATORS AND TECHNICIAN MAY BE EXPOSED TO ELECTROCUTION HAZARD, IF THE EQUIPMENT IS CONNECTED TO THE ELECTRICAL POWER SUPPLY AND THE MAIN SWITCH IS SET TO ITS ON POSITION, LEADING TO SEVERE INJURIES OR DEATH.

BEFORE CONNECTING THE EQUIPMENT TO THE ELECTRICAL POWER SUPPLY:

- ASSURE THE MAIN SWITCH IS SET TO ITS OFF POSITION
- ASSURE THE MAIN SWITCH IS PREVENTED FROM BEING INADVERTENTLY SET TO ITS ON POSITION BY PLACING AN APPROPRIATE PADLOCK ON THE MAIN SWITCH.

⚠ CAUTION

RISK OF BUMPING OR CRUSHING.

BEFORE CONNECTING THIS EQUIPMENT TO THE ELECTRICAL POWER SUPPLY MAKE SURE THE MAIN SWITCH IS SET TO ITS OFF POSITION AND ALL CONTROLS ARE IN EQUIPMENT REST POSITION, SEE CHAPTER “CONTROLS”.

FAILURE TO COMPLY WITH SUCH 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.

⚠ CAUTION

RISK OF UPPER LIMBS CRUSHING OR ENTANGLEMENT.

AS THE LID IS REMOVED, OPERATORS AND TECHNICIAN MAY BE EXPOSED TO CRUSHING OR ENTANGLEMENTS HAZARDS BY THE BELTED TRANSMISSION PLACED WITHIN THE CHASSIS, IF THE EQUIPMENT IS CONNECTED TO THE ELECTRICAL POWER SUPPLY AND THE MAIN SWITCH IS SET TO ITS ON POSITION, LEADING TO INJURIES.

BEFORE CONNECTING THE EQUIPMENT TO THE ELECTRICAL POWER SUPPLY:

- ASSURE THE MAIN SWITCH IS SET TO ITS OFF POSITION
- ASSURE THE MAIN SWITCH IS PREVENTED FROM BEING INADVERTENTLY SET TO ITS ON POSITION BY PLACING AN APPROPRIATE PADLOCK ON THE MAIN SWITCH.

9.5.1 Connection to the electrical power supply through a plug/socket combination

Have a certified electrician fit an approved plug matching the specs of the table below to the flexible cord and connect it to a suitable receptacle downstream of a ground branch circuit protection branch fitted with time delay fuse or circuit breaker, rated 20 A.

⚠ 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 POLES OF THE PLUG;
- DO NOT CONNECT ANY OF THE LIVE WIRES (INSULATION COLOR IS BLACK, WHITE, OR RED) TO THE GROUNDING POLE 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
RWC101B	NEMA L15-20P	220 V	20 A	3 Poles + Ground	IP 54

9.5.2 Connection to the electrical power supply through direct connection to a branch circuit

Have a certified electrician wire the flexible it to a suitable 220 VAC grounded 3-phase supply circuit downstream of a branch circuit protection fitted with time delay fuse or circuit breaker, rated 20 A.

⚠ 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 CONDUCTORS OF THE SUPPLY CIRCUIT;
- DO NOT CONNECT ANY OF THE LIVE WIRES (INSULATION COLOR IS BLACK, WHITE, OR RED) TO GROUNDING CONDUCTORS OF THE SUPPLY CIRCUIT;

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

9.6 Check of motor rotation direction

⚠ DANGER

RISK OF ELECTROCUTION.

AS THE LID IS REMOVED, OPERATORS AND TECHNICIAN MAY BE EXPOSED TO ELECTROCUTION HAZARD, WHEN THE MAIN SWITCH IS SET TO ITS ON POSITION FOR CHECKIN POWER UNIT MOTOR ROTATION DIRECTION, LEADING TO SEVERE INJURIES OR DEATH.

BEFORE REMOVING THE PADLOCK FROM THE MAIN SWITCH, ASSURE THE AREA IS CLEAR OF PERSONNEL.

AFTER HAVING CHECKED POWER UNIT MOTOR ROTATION DIRECTION, IMMEDATELY SET THE MAIN SWITCH BACK TO ITS OFF POSITION AND PLACE THE PADLOCK ON IT AGAIN

DO NOT REMOVE THE PADLOCK FROM THE MAIN SWITCH UNTIL THE LID HAS BEEN INSTALLED AND SECURED BACK TO ITS ORIGINAL POSITION.

⚠ DANGER

RISK OF ELECTROCUTION.

OPENING A PLUG ENCLOSURE TO SWITCH CONNECTION OF WIRES ON THE PLUG WHILE THE PLUG IS CONNECTED TO THE ELECTRICAL POWER SUPPLY MAY EXPOSE TO ELECTROCUTION HAZARD, LEADING TO SEVERE INJURIES OR DEATH.

BEFORE OPENING THE PLUG ENCLOSURE, DISCONNECT THE PLUG FROM THE ELECTRICAL POWER SUPPLY.

BEFORE RECONNECTING THE PLUG TO THE ELECTRICAL POWER SUPPLY, ASSURE THE PLUG ENCLOSURE HAS BEEN PROPERLY RE-INSTALLED.

DO NOT LEAVE A PLUG WITH AN OPEN ENCLOSURE UNATTENDED.

⚠ DANGER

RISK OF ELECTROCUTION.

ACCESSING A WIRING COMPARTMENT TO SWITCH WIRING OF A POWER CORD WHILE IT IS CONNECTED TO THE ELECTRICAL POWER SUPPLY MAY EXPOSE TO ELECTROCUTION HAZARD, LEADING TO SEVERE INJURIES OR DEATH.

BEFORE OPENING THE COMPARTMENT ENCLOSURE, DISCONNECT ELECTRICAL POWER SUPPLY TO THE COMPARTMENT SETTING THE RELEVANT DISCONNECT SWITCH TO OFF.

ASSURE THE DISCONNECT SWITCH IS NOT INADVERTENTLY SET TO ON PLACING A LOCKPAD ON IT, OR REPLACING A NON-LOCKABLE CIRCUIT BREAKER OR FUSE WITH A “DUMMY” DEVICE.

BEFORE RESETTING THE RELEVANT DISCONNECT SWITCH TO ON OR, REINSTALLING THE ORIGINAL CIRCUIT BREAKER OR FUSE, ASSURE THE COMPARTMENT ENCLOSURE HAS BEEN PROPERLY RE-INSTALLED.

DO NOT LEAVE A WIRING COMPARTMENT WITH AN OPEN ENCLOSURE UNATTENDED.

⚠ CAUTION

RISK OF UPPER LIMBS CRUSHING OR ENTANGLEMENT.

AS THE THE LID IS REMOVED, OPERATORS AND TECHNICIAN MAY BE EXPOSED TO CRUSHING OR ENTANGLEMENTS HAZARDS BY THE BELTED TRANSMISSION PLACED WITHIN THE CHASSIS, WHEN THE MAIN SWITCH IS SET TO ITS ON POSITION FOR CHECKING POWER UNIT MOTOR ROTATION DIRECTION, LEADING TO INJURIES.

BEFORE REMOVING THE PADLOCK FROM THE MAIN SWITCH, ASSURE THE AREA IS CLEAR OF PERSONNEL.

AFTER HAVING CHECKED POWER UNIT MOTOR ROTATION DIRECTION, IMMEDATELY SET THE MAIN SWITCH BACK TO ITS OFF POSITION AND PLACE THE PADLOCK ON IT AGAIN

DO NOT REMOVE THE PADLOCK FROM THE MAIN SWITCH UNTIL THE LID HAS BEEN INSTALLED AND SECURED BACK TO ITS ORIGINAL POSITION.

⚠ CAUTION

RISK OF CRUSHING, BUMPING OR ENTAGLEMENT.

OPERATING THIS EQUIPMENT WITH THE MOTORS ROTATION DIRECTION BEING REVERSED LEADS TO CHUCK ROTATION CONTROLS COMMANDING CHUCK ROTATION TO OCCUR IN AN UNEXPECTED DIRECTION, WHICH MAY LEAD TO OPERATOR'S UPPER LIMBS BEING ENTANGLED, CRUSHED OR BUMPED, RESULTING IN PERSONAL INJURIES.

DO NOT OPERATE THIS EQUIPMENT UNTIL PROPER MOTOR ROTATION DIRECTION HAS BEEN ESTABLISHED AND CHECKED.

NOTICE

OPERATING THIS EQUIPMENT WITH THE MOTORS ROTATION DIRECTION BEING REVERSED THAN SPECIFIED VOIDS MANUFACTURER'S WARRANTY.

Once connection of the equipment to the electrical power supply is complete, remove the padlock from the main switch and turn on the equipment.
Check if the motor of the power unit rotates in the direction indicated by the arrow (Fig. 12 ref. B) visible on the electric motor cap.
Turn the equipment off and place the padlock on the main switch again.

If rotation occurs in the wrong direction:

1. turn the equipment off using the main switch;
2. place the padlock on the main switch again;
3. disconnect power supply to the power cord using branch circuit disconnect switch.
4. Either:

- disconnect the plug from the receptacle is is connected to, in case a plug was installed to the power cord, or
- assure branch circuit disconnect switch is not turned inadvertently on, by placing a lockpad on it, or replacing a non-lockable circuit-breaker or fuse with a "dummy" one, in case the power cord is wired to a branch circuit;

5. switch wiring of two live conductors to the plug or to the branch circuit, depending on the power supply connection type adopted;
6. assure enclosure of the swicth or branch circuit wiring compartment is properly re-installed, depending on the power supply connection type adopted.
7. Either:

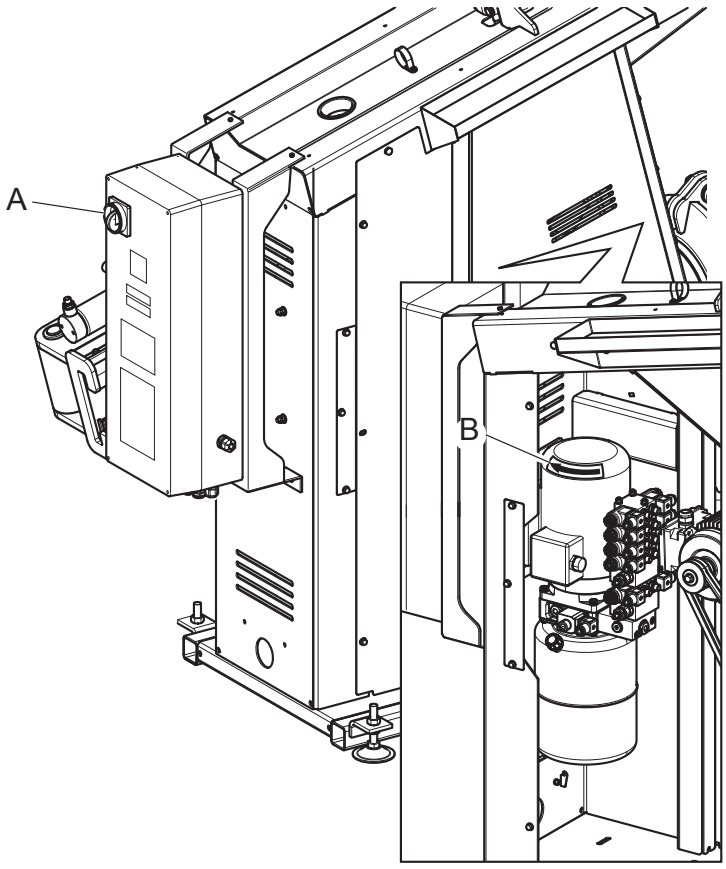
- reconnect the plug to the receptacle it was connected to, in case a plug was installed to the power cord, or
- remove the padlock from the disconnect switch, or replace the "dummy" device with the original circuit-breaker or fuse, in case the power cord is wired to a branch circuit.

8. reconnect power supply to the power cord using branch circuit disconnect switch;
9. perform the rotation direction check described above again.

If rotation occurs in the correct direction:

1. reinstall and secure the lid to its original position;
2. assure the area is clear from personnel;
3. remove the padlock from the main switch.

Fig. 12



KEY
A – Main switch
B – Direction rotation of oil-pressure power unit motor

10.0 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 ALL POWER SUPPLIES;
- HAVE THE DEFECTIVE CONTROL(S) INSPECTED AND REPAIRED BY A QUALIFIED SERVICE TECHNICIAN.

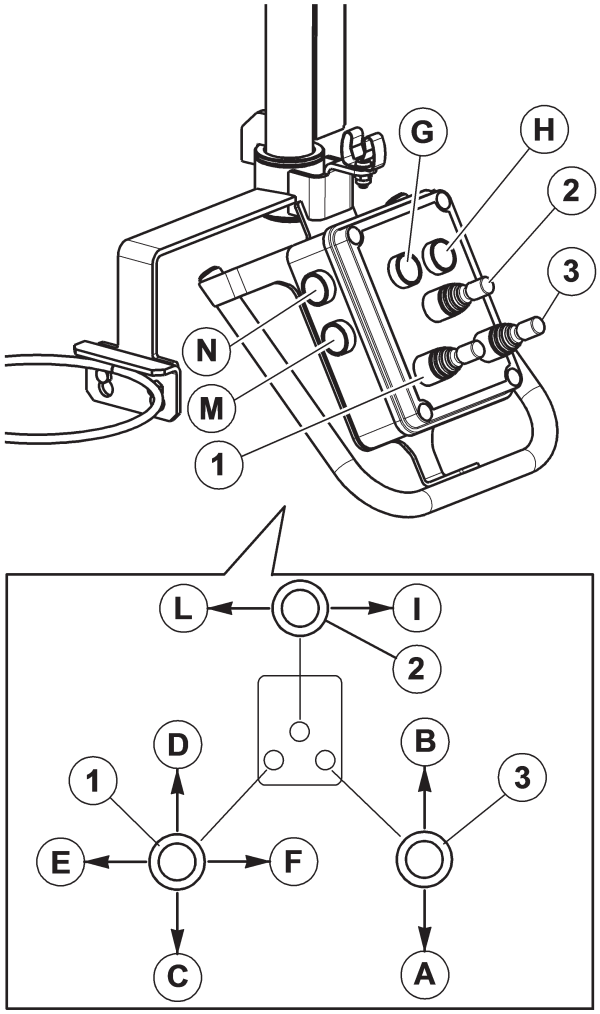
10.1 Control unit

The control unit can be moved to suit the operator needs and is provided with a handle to let the operator easily move it.

All controls on the control unit are hold-to-run type.

- Moving the lever (Fig. 13 ref. 3) to position A, operates the bead breaking of rear bead breaker roller.
- Moving the lever (Fig. 13 ref. 3) to position B, operates the return action of rear bead breaker roller.
- Moving the lever (Fig. 13 ref. 1) to position C, operates the return action of front bead breaker roller.
- Moving the lever (Fig. 13 ref. 1) to position D, operates the bead breaking of rear bead breaker roller.
- Moving the lever (Fig. 13 ref. 1) to position F, brings the front bead breaker arm to work position.
- Moving the lever (Fig. 13 ref. 1) to position E, operates the opening of the front bead breaker arm.
- Push button “G” has a hold-to-run control position, and when pressed, it operates self-centering chuck raising.
- Push button “H” has a hold-to-run control position, and when pressed, it operates self-centering chuck lowering.
- Moving the lever (Fig. 13 ref. 2) to position L, operates the self-centering chuck clockwise rotation.
- Moving the lever (Fig. 13 ref. 2) to position I, operates the self-centering chuck counterclockwise rotation.
- Push button “M” has one hold-to-run control position, and when pressed, it opens the self-centering chuck.
- Push button “N” has one hold-to-run control position, and when pressed, it closes the self-centering chuck.

Fig. 13



11.0 USING THE 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.

⚠ CAUTION

RISK OF EYE INJURIES.

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

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

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

⚠ CAUTION

RISK OF BUMPING, CRUSHING OR ENTANGLEMENT.

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

KEEP BYSTANDERS OUT OF THE SERVICE AREA.

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

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

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

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

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

- DO NOT USE THIS EQUIPMENT.
  DISCONNECT THIS EQUIPMENT FROM ALL POWER SUPPLIES;
- HAVE THE DEFECTIVE CONTROL(S) INSPECTED AND REPAIRED BY A QUALIFIED SERVICE TECHNICIAN.

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

IN CASE ANY POWER SUPPLY TO THIS EQUIPMENT IS INTERRUPTED, MAKE SURE ALL CONTROLS ARE IN THEIR REST POSITION.

FAILURE TO DO SO MAY LEAD TO INADVERTENT MOVEMENTS UPON RESTORING ANY POWER SUPPLY TO THIS EQUIPMENT AND RESULT IN MATERIAL DAMAGES OR INJURIES.

11.1 Precaution measures during tire removal and fitting

Before fitting a tire, observe the following safety rules:

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

11.2 Preliminary operations

In view of the tire changer structure and of its intended use, the operator must work with large diameter and heavy wheels/tires.
The utmost care while moving the wheels is recommended.

11.3 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.

- Remove the valve stem and allow the tire to completely deflate.

⚠ CAUTION
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.

- In case the wheel features a tube inside the tire, remove the locknut securing the tube valve to the rim.

NOTICE

FAILURE TO REMOVE THE NUT SECURING THE INNER TUBE VALVE AS DESCRIBED MAY LEAD TO TUBE DAMAGES WHEN THE TIRE IS CHANGED.

- Establish from which side the tire should be demounted, checking the position of the drop center.
- Find the rim locking type.

⚠ CAUTION

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.

11.4 Wheel clamping

⚠ CAUTION

RISK OF FEET CRUSHING.

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

⚠ CAUTION

RISK OF UPPER LIMBS CRUSHING.

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

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

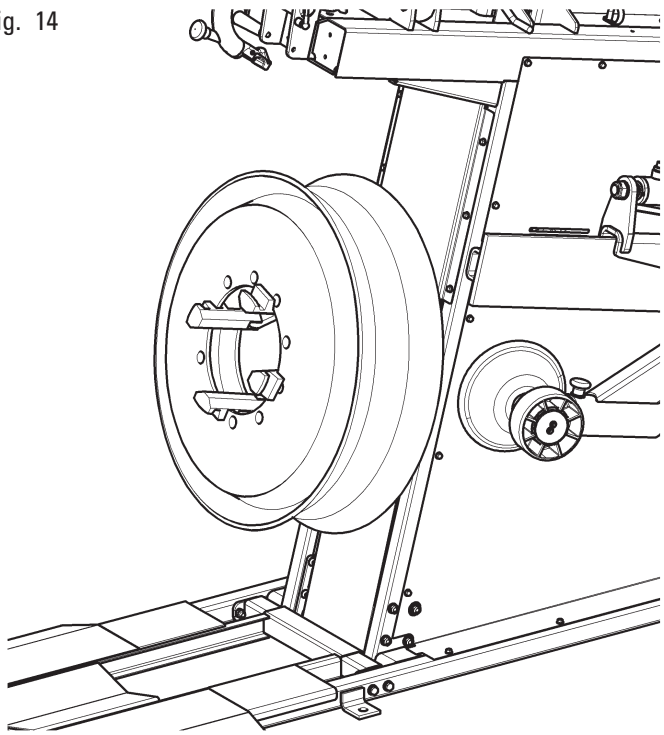
⚠ CAUTION

RISK OF LOWER LIMBS CRUSHING.

WHEN LOWERING THE CHUCK, THE CHUCK MAY CRUSH OPERATOR'S FEET, LEADING TO INJURIES.
STAY CLEAR OF THE AREA CLOSE THE WHEEL WHILE LOWERING THE CHUCK.

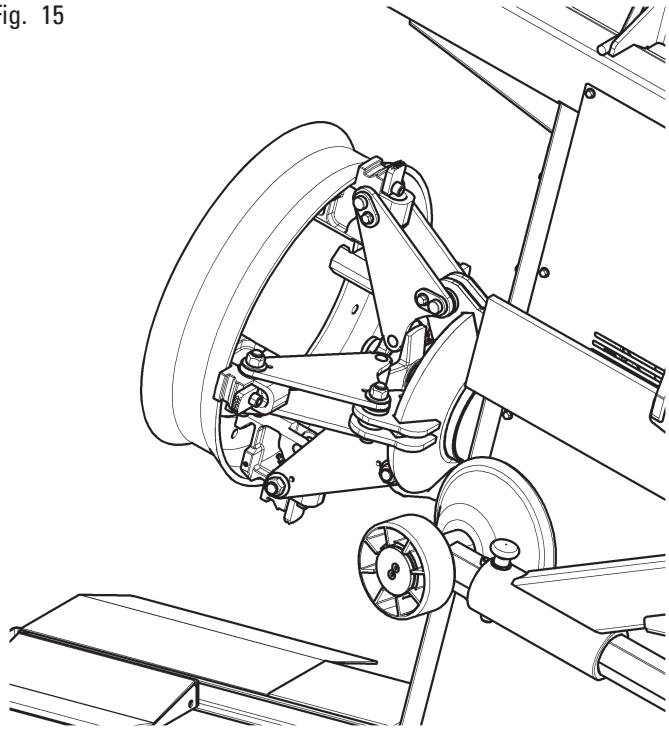
The equipment chuck is designed to clamp wheels internally, either by the flange central hole (Fig. 14) or by the bead seat (Fig. 15).

Fig. 14



Clamping on the central hole

Fig. 15



Clamping on bead seat

NOTICE

CLAMPING THE WHEEL BY THE FLANGE CENTRAL HOLE IS ALWAYS RECOMMENDED.

NOTICE

TO AVOID SCRATCHING ALLOY RIMS WHEN CLAMPING THEM ON THE EQUIPMENT CHUCK, USE JAW PROTECTORS DELIVERED WITH THE EQUIPMENT OR AVAILABLE FROM THE MANUFACTURER OF THIS EQUIPMENT, WHICH CAN BE MOUNTED TO THE CHUCK JAWS.

NOTICE

WHEN WHEELS WITH DROP-CENTER RIM ARE CLAMPED, THE RIM EDGE CLOSER TO THE DROP-CENTER SHALL FACE OPPOSITE TO THE EQUIPMENT CHUCK.
FAILURE TO COMPLY WITH THIS REQUIREMENT MAY MAKE TIRE CHANGING IMPOSSIBILE, OR DAMAGE TIRES REMOVED FROM AND/OR MOUNTED TO THE RIM.

To clamp the wheel proceed as described below:

1. make sure the front bead breaker arm is in open position (Fig. 16 ref. 2);
2. place the wheel in vertical position onto the platform;
3. move the wheel close, by keeping it in vertical position, until grazing self; centering chuck jaws;
4. use the chuck vertical movement controls to position the coaxial self-centering chuck with the wheel center, in order to make jaws edges skim wheel edge;
5. adjust the opening of the self-centering chuck through the corresponding controls according to the type of rim to be locked;
6. tilt the wheel at approximately 15° towards the self-centering unit;
7. operate the chuck opening control until the wheel is completely clamped and the tone emitted by the power unit sensibly shifts;
8. check both that the rim is clamped and centered correctly, and that the wheel has been raised above from the floor, so that it does not rub on the floor during subsequent operations;
9. deflate the tire or inner tube removing the tire/inner tube valve cap and core;
10. in case the tire is provided with an inner tube, remove the locknut locating the tube valve stem on the rim.

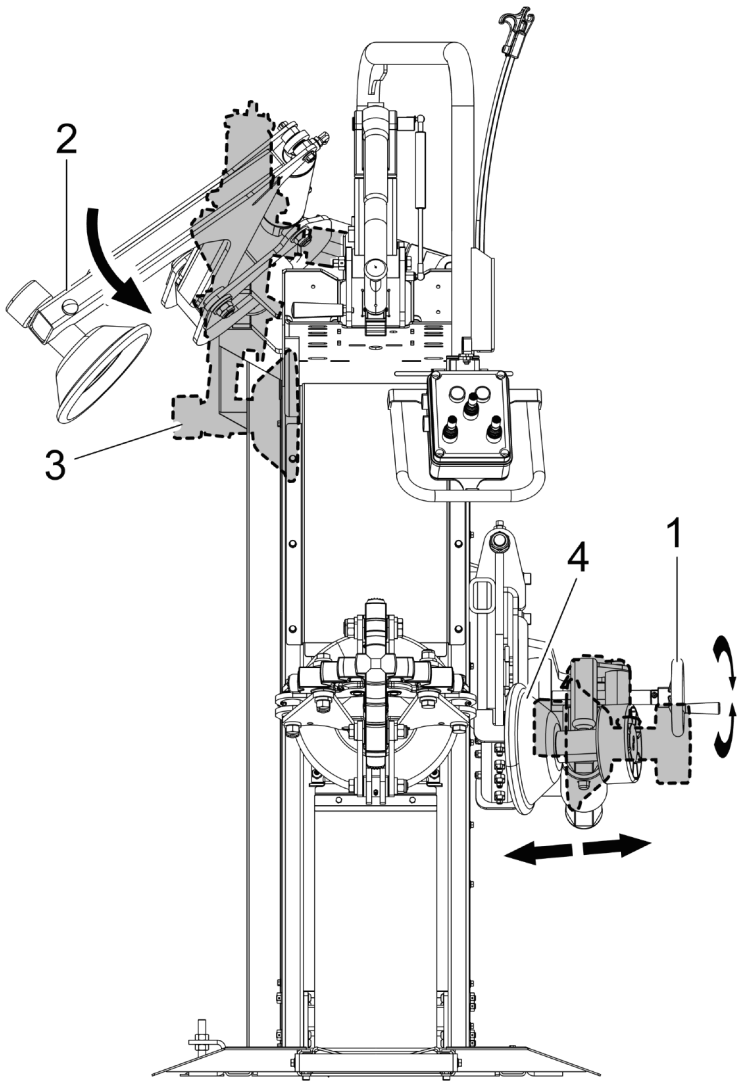
11.5 Bead breaker arms adjustment

During the working phases, the the front bead breaker arm (Fig. 16 ref. 2) can maintain two positions, that is:

1. “work” position (wheel front side) (Fig. 16 ref. 3);
2. “out of work” position (Fig. 16 ref. 2).

In “work” position” (Fig. 16 ref. 3) the front bead breaker arm is in front of the tire, just next the rim. From this position it can perform the different tire bead breaking and mounting-demounting operations.
The adjustment of the correct “work” position of the rear bead breaker arm (Fig. 16 ref. 4) is performed through handwheel rotation (Fig. 16 ref. 1).

Fig. 16



11.6 Replacing tubeless tires

NOTICE

THROUGHOUT BEAD BREAKING AND TIRE DEMOUNTING/MOUNTING OPERATIONS, CHECK THAT THE WHEEL IS FIRMLY CLAMPED BY THE EQUIPMENT CHUCK.

PERFORMING BEAD BREAKING AND TIRE DEMOUNTING/MOUNTING OPERATIONS WHILE THE WHEEL IS NOT FIRMLY SECURED MAY LEAD TO DAMAGING THE RIM, THE TIRE AND/OR THE EQUIPMENT.

11.6.1 Bead breaking

⚠WARNING

RISK OF EYE INJURIES.

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

NEVER OPERATE THE BEAD BREAKER ROLLERS ON THE RIM FLANGES.

⚠WARNING

RISK OF UPPER LIMBS CRUSHING.

WHEN PRESSING THE TIRE SIDEWALLS WITH THE BEAD BREAKER ROLLERS, OPERATOR'S HANDS MAY GET CRUSHED BETWEEN THE BEAD BREAKER ROLLERS AND THE WHEEL.

WHEN ROTATING THE WHEEL WHILE BEAD BREAKER ROLLERS ARE PRESSED AGAINST THE TIRE SIDEWALLS, OPERATOR'S HANDS MAY GET CRUSHED BETWEEN THE ROLLERS AND THE WHEEL.

KEEP HANDS OFF THE BEAD BREAKER ROLLERS AND THE WHEEL WHILE APPROACHING THE ROLLERS TO THE WHEEL OR ROTATING THE CHUCK.

NOTICE

CHUCK SHALL ALWAYS BE ROTATED COUNTER-CLOCKWISE FOR BEAD BREAKING OPERATIONS.

BRIEFLY TURN THE CHUCK CLOCKWISE ONLY IN CASE SMALL ADJUSTMENTS OF THE WHEEL POSITION ARE NEEDED.

1. Clamp the wheel on the self-centering chuck as described in "WHEEL CLAMPING" section;
2. move the self-centering chuck to its topmost position;
3. set rear bead breaker arm (Fig. 17 ref. 1) to a work position radially such the roller is set at approximately 5 mm (0.2") from rim's edge, using the handwheel (Fig. 17 ref. 2);
4. set front bead breaker arm (Fig. 17 ref. 3) position radially, using lever (Fig. 13 ref. 1-F);
5. start rotating the self-centering chuck COUNTER-CLOCKWISE (Fig. 17 ref. 4);
6. while the chuck rotates, start pressing on the tire front sidewall;
7. lubricate tire sidewall and bead liberally.

NOTICE

FAILURE TO LUBRICATE THE TIRE AND/OR RIM AS DESCRIBED MAY LEAD TO ABNORMAL FRICTION AND TIRE DAMAGES.

NOTICE

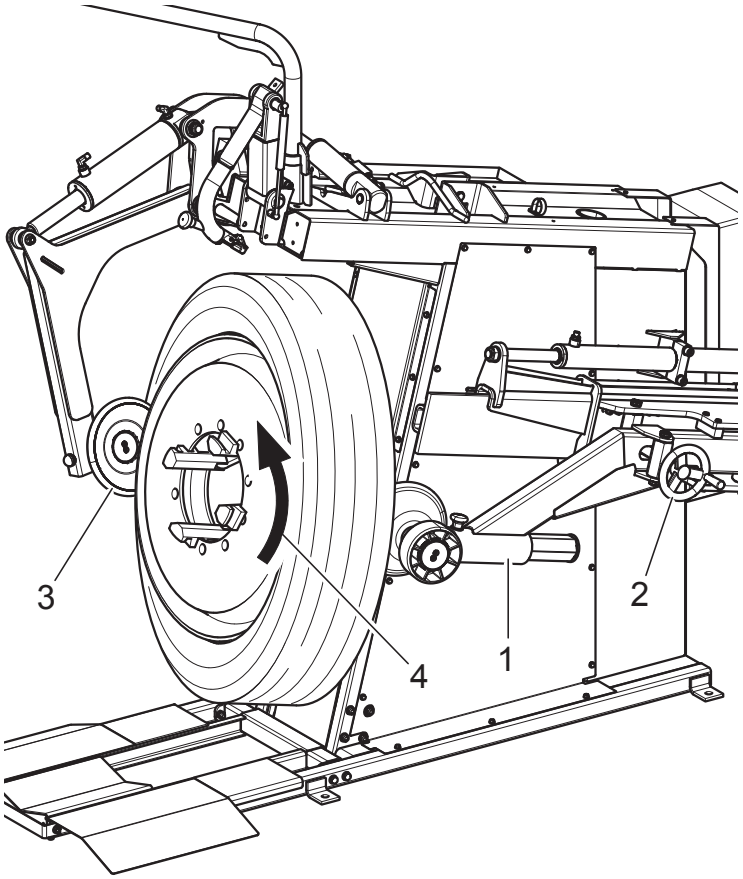
USE ONLY LUBRICANTS SPECIFIED BY THE LUBRICANT MANUFACTURER AS SUITABLE FOR TIRE LUBRICATION.

USE OF UNSUITABLE LUBRICANTS MAY CAUSE TIRE DAMAGES.

8. Move the front bead breaker roller progressively deeper into the wheel until the tire front bead is completely dislodged from the rim front flange; stop chuck rotation. Keep the front bead breaking roller in the position it reached once the tire front bead was broken, to prevent the front bead from re-attaching to the rim flange;

9. repeat the process with the rear bead breaker roller Fig. 17 ref. 1) to break the tire rear bead.

Fig. 17



11.6.2 Demounting

⚠WARNING

RISK OF EYE INJURIES.

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

NEVER OPERATE THE BEAD BREAKER ROLLERS ON THE RIM FLANGES.

⚠CAUTION

RISK OF UPPER LIMBS CRUSHING.

WHEN PRESSING THE TIRE SIDEWALLS WITH THE BEAD BREAKER ROLLERS, OPERATOR'S HANDS MAY GET CRUSHED BETWEEN THE ROLLERS AND THE WHEEL.

WHEN ROTATING THE WHEEL WHILE BEAD BREAKER ROLLERS ARE PRESSED AGAINST THE TIRE SIDEWALLS, OPERATOR'S HANDS MAY GET CRUSHED BETWEEN THE ROLLERS AND THE WHEEL.

WHEN ROTATING THE WHEEL WHILE THE TOOLHEAD AND THE TIRE LEVER ARE APPLIED TO THE WHEEL, OPERATOR'S HANDS MAY GET GET CRUSHED BETWEEN THE TOOLHEAD OR THE LEVER AND THE TIRE OR THE RIM.

KEEP HANDS OFF THE BEAD BREAKER ROLLERS, THE WHEEL, THE TOOLHEAD AND THE LEVER END APPLIED TO THE RIM WHILE APPROACHING THE ROLLERS TO THE WHEEL OR ROTATING THE CHUCK.

⚠CAUTION

RISK OF LOWER LIMBS CRUSHING OR BODY BUMPING.

ONCE TIRE BEADS ARE REMOVED FROM THE RIM; THE TIRE WILL MAY FALL TO THE GROUND, AND CRUSH OPERATOR'S FEET OR BUMP OPERATOR'S BODY, LEADING TO INJURIES.

STAY CLEAR OF THE AREA CLOSE THE WHEEL BEFORE COMPLETING TIRE DEMOUNTING.

ASSURE NO ONE IS IN THE AREA CLOSE TO THE WHEEL BEFORE COMPLETING TIRE DEMOUNTING.

Tubeless tires can be removed in two ways: using bead breaking rollers only, or using the toolhead and a tire lever.
The toolhead and lever method is to be used typically either with very hard and low-profile tire (supersingle) or with very wide tires.

A. Tire demounting using using only the bead breaker rollers.

1. Lubricate both the external rim flange and the tire sidewalls and beads.

NOTICE

FAILURE TO LUBRICATE THE TIRE AND/OR RIM AS DESCRIBED MAY LEAD TO ABNORMAL FRICTION AND TIRE DAMAGES.

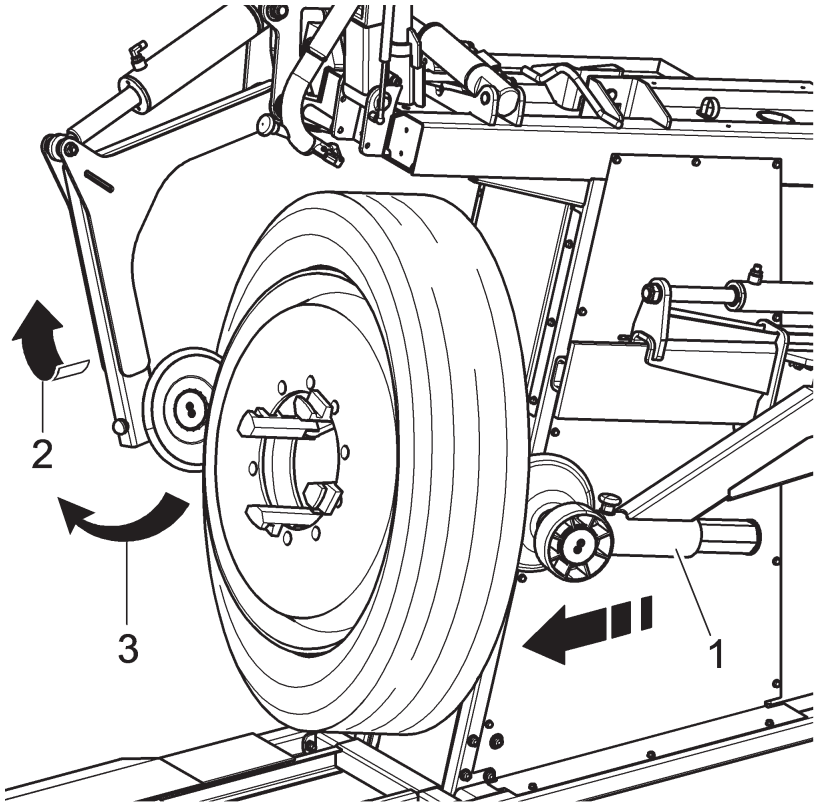
NOTICE

USE ONLY LUBRICANTS SPECIFIED BY THE LUBRICANT MANUFACTURER AS SUITABLE FOR TIRE LUBRICATION.

USE OF UNSUITABLE LUBRICANTS MAY CAUSE TIRE AND/OR TUBE DAMAGES.

2. Start rotating the chuck CLOCKWISE;
3. move the rear bead breaking roller towards the front rim flange (Fig. 18 ref. 1), pushing on the rear tire sidewall until the tire is tilted sideways relative to the rim; stop chuck rotation;
4. move the front bead breaking roller away from the tire (Fig. 18 ref. 2) until spaced about 5 cm (2”) from the external rim flange;
5. start rotating the chuck CLOCKWISE.
6. move the rear bead breaking roller towards the front rim flange (Fig. 18 ref. 1), until one portion or the rear tire sidewall is demounted from the rim;
7. continue rotating the chuck until the tire is completely dismounted; stop chuck rotation;
8. move the front bead breaking roller away from the rim to be able the remove the dismounted tire from the working area.

Fig. 18



A. Tire demounting the toolhead and the tire lever.

1. Lubricate both the external rim flange and the tire sidewalls and beads.

NOTICE

FAILURE TO LUBRICATE THE TIRE AND/OR RIM AS DESCRIBED MAY LEAD TO ABNORMAL FRICTION AND TIRE DAMAGES.

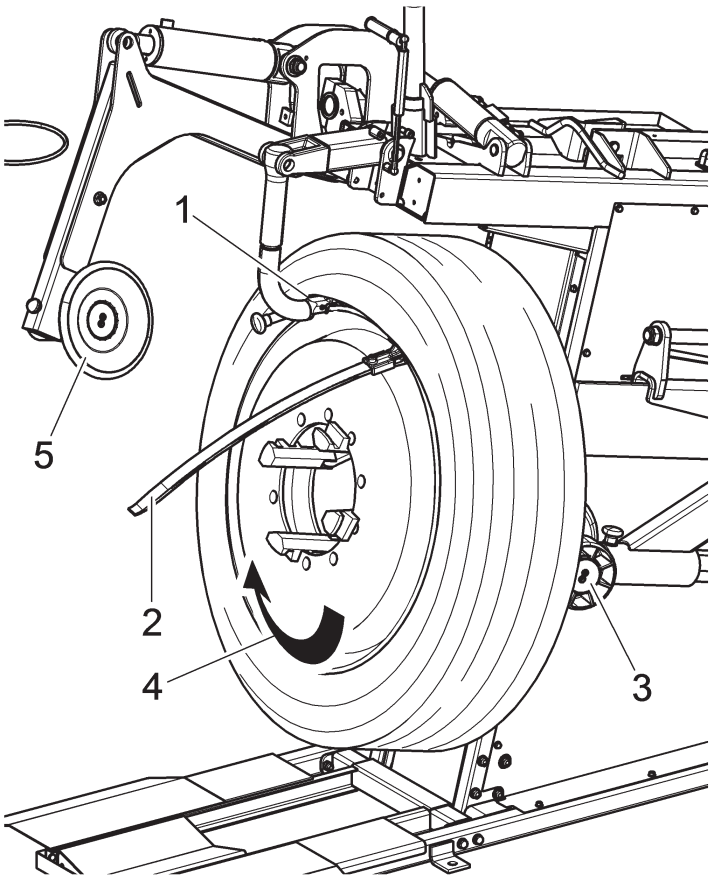
NOTICE

USE ONLY LUBRICANTS SPECIFIED BY THE LUBRICANT MANUFACTURER AS SUITABLE FOR TIRE LUBRICATION.

USE OF UNSUITABLE LUBRICANTS MAY CAUSE TIRE AND/OR TUBE DAMAGES.

2. Set the toolhead (Fig. 19 ref. 1) onto the front rim edge;
3. insert the tire lever (Fig. 19 ref. 2) between the front tire bead and the front rim edge by the right side of the tool. Insert the the lever end which is not provided with a hook;
4. load the tire front bead onto the toolhead using the lever. Do not remove the lever;
5. rotate the chuck CLOCKWISE (Fig. 19 ref. 4) until the tire front bead is demounted;
6. remove the toolhead and the lever from the wheel and set them aside;
7. start rotating the chuck CLOCKWISE;
8. move the rear bead breaker roller (Fig. 19 ref. 3) towards the front rim flange (Fig. 19 ref. 3), until one portion or the rear tire sidewall is demounted from the rim;
9. continue rotating the chuck until the tire is completely dismounted; stop chuck rotation;
10. move the front bead breaker roller (Fig. 19 ref. 5) away from the rim to be able the remove the dismounted tire from the working area;
11. move the rear bead breaker roller all the way backwards.

Fig. 19



11.6.3 Mounting

⚠ 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 LOWER LIMBS CRUSHING.

WHEN LOWERING THE CHUCK, THE RIM MAY CRUSH OPERATOR'S FEET, LEADING TO INJURIES.

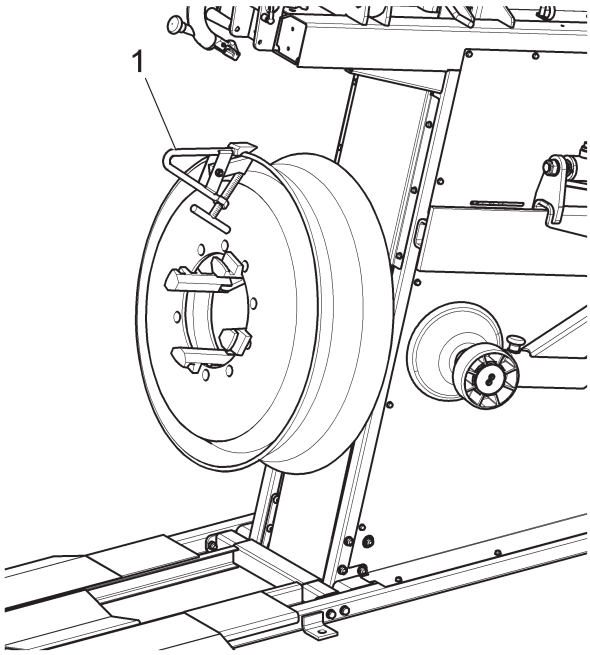
STAY CLEAR OF THE AREA CLOSE THE WHEEL WHILE LOWERING THE CHUCK.

Tubeless tires can be mounted in two ways: without using the toolhead or using the toolhead.
The method using the toolhead is to be used typically either with very hard and low-profile tires (e.g. supersingle tires)".

A.Tire mounting without using the toolhead

1. Lubricate tire beads, rim front flange and rim bead seats liberally;
2. mount clamp (Fig. 20 ref. 1) on the external edge of the rim at the topmost point as shown in Fig. 20.

Fig. 20

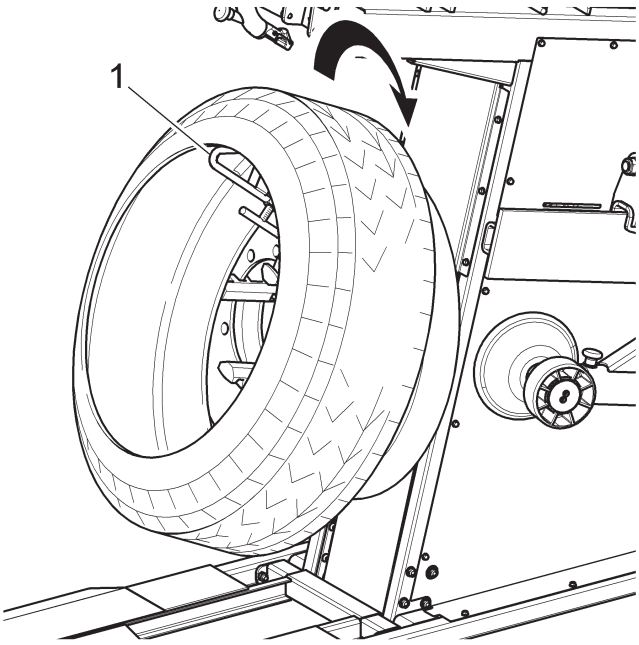


NOTICE

THE CLAMP MUST BE FIRMLY SECURED TO THE RIM.
FAILURE TO APPROPRIATELY SECURE THE CLAMP TO THE RIM MAY LEAD TO DAMAGES TO THE TIRE, THE RIM AND/OR THIS EQUIPMENT.

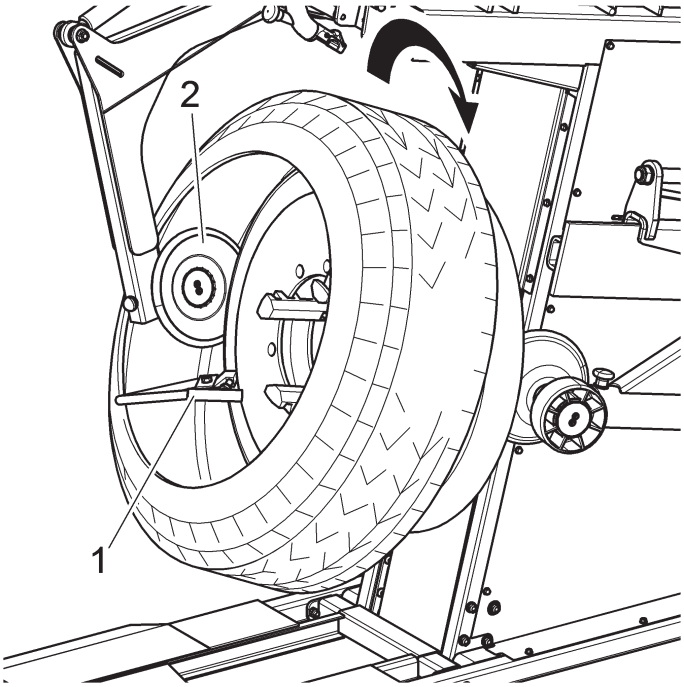
3. Move to work position B (Fig. 5);
4. lower the equipment chuck completely;
5. roll the tire on the platform, hang it to the rim front fllange by the upper portion of the rear sidewall, and hook it to clamp (Fig. 21 ref. 1);
6. lift the equipment chuck with the tire hooked until reaching the topmost position;
7. rotate the chuck until the clamp has offset by 15-20 cm (6”-8”) CLOCKWISE; the tire will position itself sideways in relation to the rim (see Fig. 21); stop chuck rotation.

Fig. 21



8. Move the front bead breaker roller to work position (Fig. 16 ref. 3);
9. position the front bead breaker roller (Fig. 22 ref. 2) so that it is at approximately 1.5 cm (0.6”) from the edge of the rim;
10. rotate equipment chuck CLOCKWISE until bringing the clamp as close as possible to the front bead breaker roller (“8 o’clock”) (Fig. 22 ref. 1); stop chuck rotation.

Fig. 22



11. Move bead breaker roller away from the wheel;
12. remove the clamp and fit it to the front rim edge, opposite to the front bread breaker roller, so that one portion of the front tire bead is pushed past the front rim flange;
13. rotate the chuck counterclockwise until the clamp reaches the topmost position; stop chuck rotation;
14. move the bead breaker roller forward until it insert inside the edge of the rim by about 1-2 cm (0.4”-0.8”), making sure it is approximately 5 mm (0.2”) from rim edge;
15. start CLOCKWISE rotation of the chuck making sure that, after a 90° turn, the front bead begins sliding into the rim drop center;
16. continue rotating the chuck until the tire is completely mounted, stop chuck rotation;
17. once mounting is completed, move the roller away from the wheel, to its resting position and remove the clamp.

B.Tire mounting using the front bead breaker roller, the toolhead and a tire lever

1. Lubricate tire beads, rim front flange and rim bead seats liberally.

NOTICE

FAILURE TO LUBRICATE THE TIRE AND/OR RIM AS DESCRIBED MAY LEAD TO ABNORMAL FRICTION AND TIRE DAMAGES.

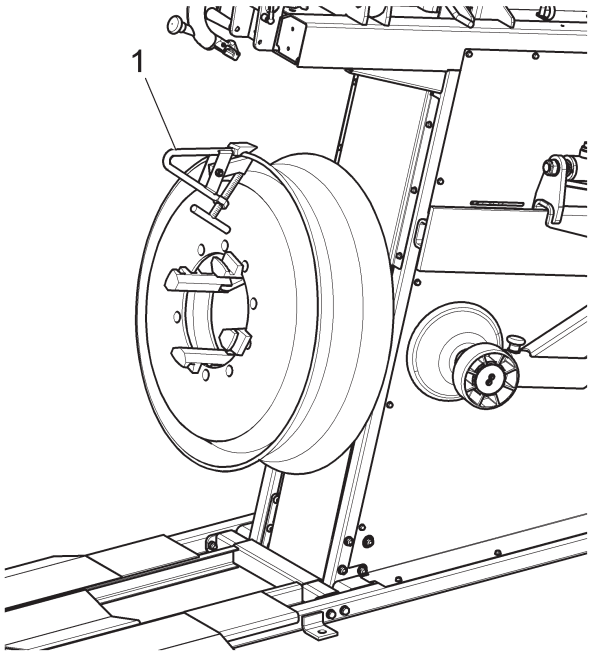
NOTICE

USE ONLY LUBRICANTS SPECIFIED BY THE LUBRICANT MANUFACTURER AS SUITABLE FOR TIRE LUBRICATION.

USE OF UNSUITABLE LUBRICANTS MAY CAUSE TIRE AND/OR TUBE DAMAGES.

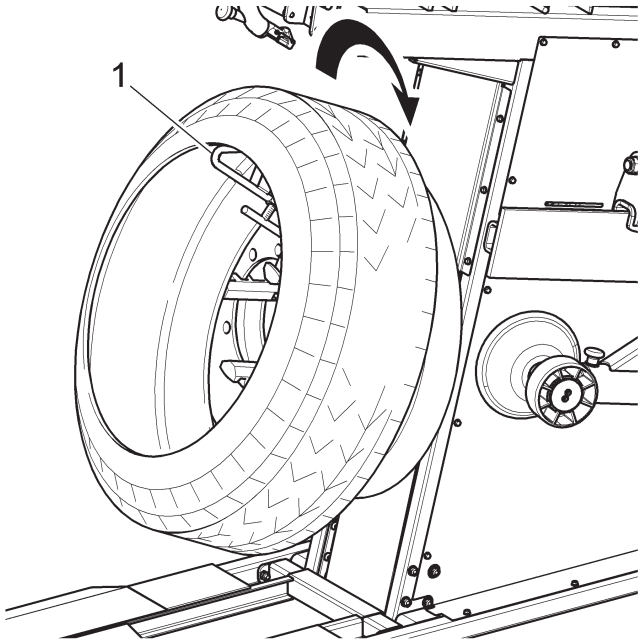
2. Mount clamp (Fig. 23 ref. 1) on the external edge of the rim at the topmost point as shown in Fig. 23.

Fig. 23



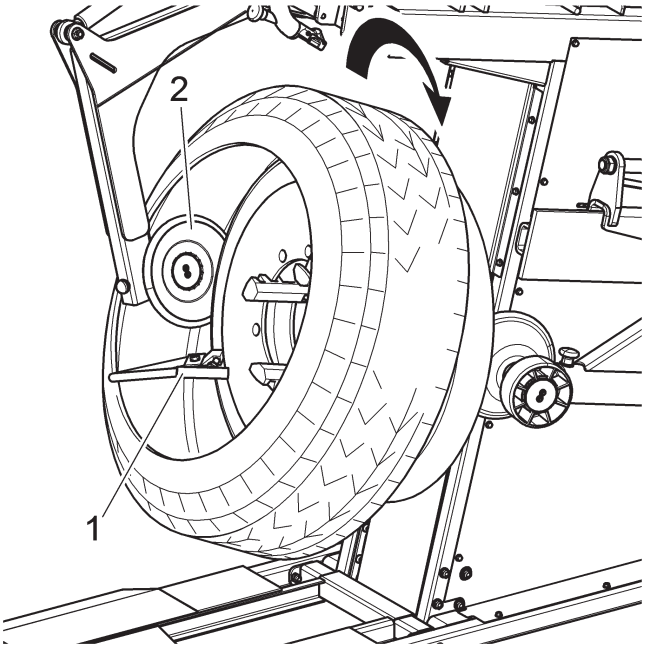
3. Move to work position B;
4. lower the equipment chuck completely;
5. roll the tire on the platform, hang it to the rim front fllange by the upper portion or the rear sidewall, and hook it to clamp (Fig. 24 ref. 1);
6. lift the equipment chuck with the tire hooked to it and rotate the chuck 15-20 cm (6”-8”) CLOCKWISE; the tire will position itself sideways relative to the rim (Fig. 24).

Fig. 24



7. Move front bead breaker roller to work position;
8. position the front bead breaker roller (Fig. 25 ref. 2) so that it is radially spaced about 1.5 cm (0.6”) from the edge of the rim;
9. rotate the chuck clockwise until bringing the clamp to the closest point to the front bead breaker roller (Fig. 25 ref. 1); stop chuck rotation.

Fig. 25



10. Remove the clamp;
11. move the front bead breaker roller (Fig. 26 ref. 1) until its edge is aligned to the rim drop-center;
12. engage the tire lever hooked end with the front rim edge or mount the clamp right below the bead breaker roller (Fig. 26 ref. 1);
13. rotate the chuck CLOCKWISE until the lever or clamp are set shortly after the rim edge topmost portion (Fig. 26 ref. 2);
14. position the toolhead (Fig. 26 ref. 3) onto the rim front edge;
15. Engage the tire lever hooked end with the front rim edge or mount the clamp right below the bead breaker roller (Fig. 27 ref. 2);
16. rotate the chuck COUNTER-CLOCKWISE until the second bead is mounted; stop chuck rotation;
17. move the front bead breaker arm to its resting position;

Fig. 26

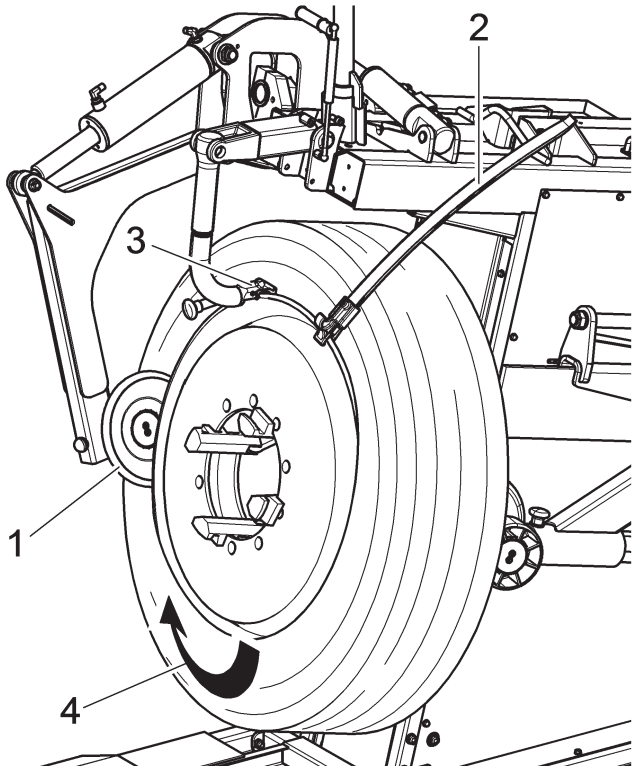
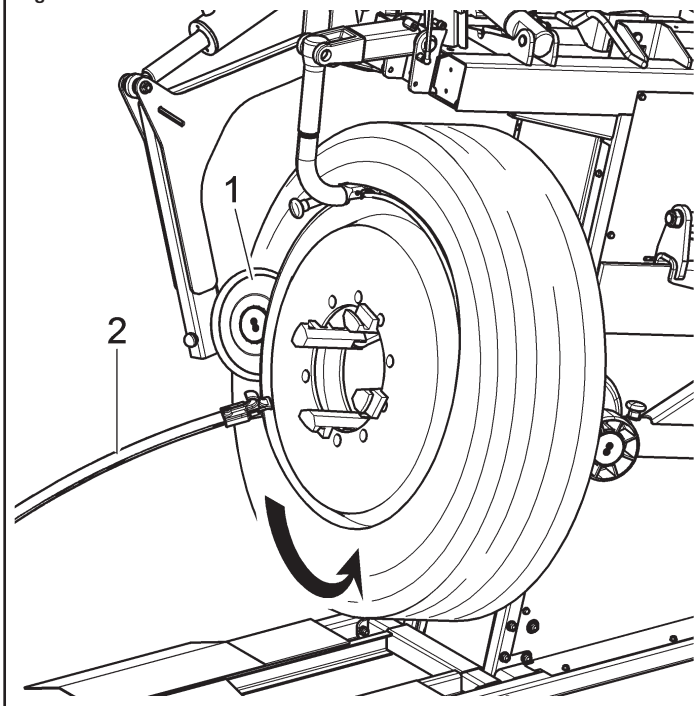


Fig. 27



11.7 Replacing tires with inner tube

NOTICE

THROUGHOUT BEAD BREAKING AND TIRE DEMOUNTING/MOUNTING OPERATIONS, CHECK THAT THE WHEEL IS FIRMLY CLAMPED BY THE EQUIPMENT CHUCK.

PERFORMING BEAD BREAKING AND TIRE DEMOUNTING/MOUNTING OPERATIONS WHILE THE WHEEL IS NOT FIRMLY SECURED MAY LEAD TO DAMAGING THE RIM, THE TIRE AND/OR THE EQUIPMENT.

11.7.1 Bead breaking

⚠WARNING

RISK OF EYE INJURIES.

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

NEVER OPERATE THE BEAD BREAKER ROLLERS ON THE RIM FLANGES.

⚠WARNING

RISK OF UPPER LIMBS CRUSHING.

WHEN PRESSING THE TIRE SIDEWALLS WITH THE BEAD BREAKER ROLLERS, OPERATOR'S HANDS MAY GET CRUSHED BETWEEN THE BEAD BREAKER ROLLERS AND THE WHEEL.

WHEN ROTATING THE WHEEL WHILE BEAD BREAKER ROLLERS ARE PRESSED AGAINST THE TIRE SIDEWALLS, OPERATOR'S HANDS MAY GET CRUSHED BETWEEN THE ROLLERS AND THE WHEEL.

KEEP HANDS OFF THE BEAD BREAKER ROLLERS AND THE WHEEL WHILE APPROACHING THE ROLLERS TO THE WHEEL OR ROTATING THE CHUCK.

WEAR SAFETY GLOVES.

NOTICE

CHUCK SHALL ALWAYS BE ROTATED COUNTER-CLOCKWISE FOR BEAD BREAKING OPERATIONS.

BRIEFLY TURN THE CHUCK CLOCKWISE ONLY IN CASE SMALL ADJUSTMENTS OF THE WHEEL POSITION ARE NEEDED.

1. Clamp the wheel on the self-centering chuck as described in "WHEEL CLAMPING" section;
2. move the self-centering chuck to its topmost position;
3. set rear bead breaker arm (Fig. 28 ref. 1) to a work position radially such the roller is set at approximately 5 mm (0.2") from rim's edge, using the handwheel (Fig. 28 ref. 2);
4. set front bead breaker arm (Fig. 28 ref. 3) to work position radially, using lever (Fig. 13 ref. 1-F);
5. start rotating the self-centering chuck COUNTER-CLOCKWISE (Fig. 28 ref. 4);
6. while the chuck rotates, start pressing on the tire front sidewall;
7. lubricate tire sidewall and bead liberally.

NOTICE

FAILURE TO LUBRICATE THE TIRE AND/OR RIM AS DESCRIBED MAY LEAD TO ABNORMAL FRICTION AND TIRE DAMAGES.

NOTICE

USE ONLY LUBRICANTS SPECIFIED BY THE LUBRICANT MANUFACTURER AS SUITABLE FOR TIRE LUBRICATION.

USE OF UNSUITABLE LUBRICANTS MAY CAUSE TIRE DAMAGES.

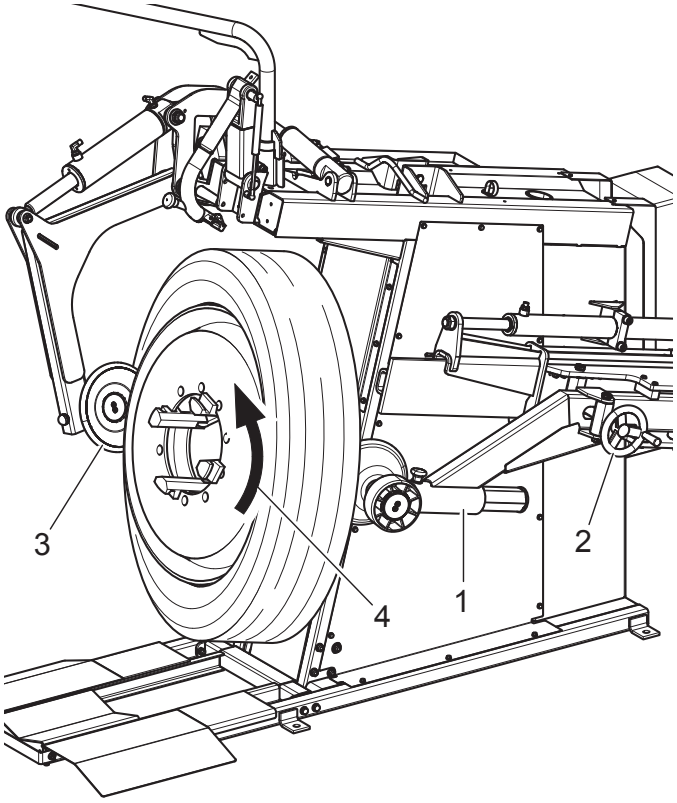
8. Move the front bead breaker roller progressively deeper into the wheel until the tire front bead is completely dislodged from the rim front flange; stop chuck rotation. Keep the front bead breaking roller in the position it reached once the tire front bead was broken, to prevent the front bead from re-attaching to the rim flange;

9. repeat the process with the rear bead breaker roller Fig. 28 ref. 1) to break the tire rear bead.

NOTICE

INSISTING IN PUSHING ON THE TIRE SIDEWALLS ONCE TIRE BEADS HAVE BENN BROKEN MAY LEAD TO TUBE DAMAGES.

Fig. 28



11.7.2 Demounting

⚠WARNING

RISK OF EYE INJURIES.

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

NEVER OPERATE THE BEAD BREAKER ROLLERS ON THE RIM FLANGES.

⚠CAUTION

RISK OF UPPER LIMBS CRUSHING.

WHEN PRESSING THE TIRE SIDEWALLS WITH THE BEAD BREAKER ROLLERS, OPERATOR'S HANDS MAY GET CRUSHED BETWEEN THE ROLLERS AND THE WHEEL.

WHEN ROTATING THE WHEEL WHILE BEAD BREAKER ROLLERS ARE PRESSED AGAINST THE TIRE SIDEWALLS, OPERATOR'S HANDS MAY GET CRUSHED BETWEEN THE ROLLERS AND THE WHEEL.

WHEN ROTATING THE WHEEL WHILE THE TOOLHEAD AND THE TIRE LEVER ARE APPLIED TO THE WHEEL, OPERATOR'S HANDS MAY GET GET CRUSHED BETWEEN THE TOOLHEAD OR THE LEVER AND THE TIRE OR THE RIM.

KEEP HANDS OFF THE BEAD BREAKER ROLLERS, THE WHEEL, THE TOOLHEAD AND THE LEVER END APPLIED TO THE RIM WHILE APPROACHING THE ROLLERS TO THE WHEEL OR ROTATING THE CHUCK.

⚠CAUTION

RISK OF LOWER LIMBS CRUSHING OR BODY BUMPING.

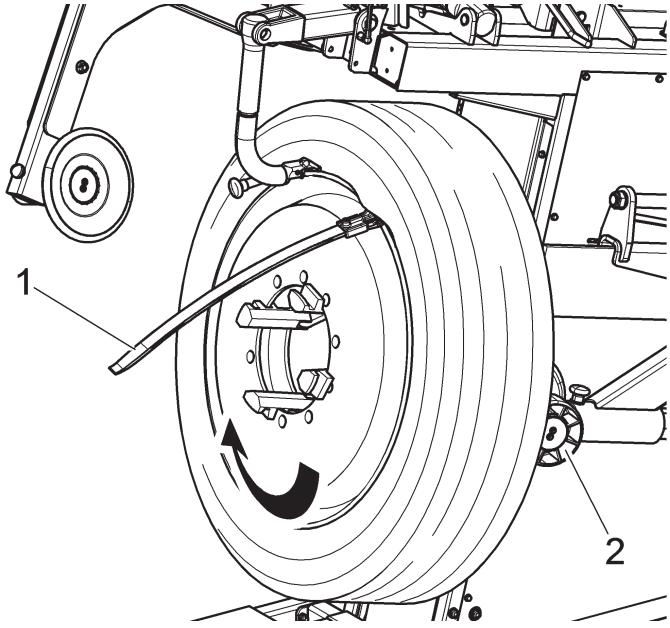
ONCE TIRE BEADS ARE REMOVED FROM THE RIM; THE TIRE WILL MAY FALL TO THE GROUND, AND CRUSH OPERATOR'S FEET OR BUMP OPERATOR'S BODY, LEADING TO INJURIES.

STAY CLEAR OF THE AREA CLOSE THE WHEEL BEFORE COMPLETING TIRE DEMOUNTING.

ASSURE NO ONE IS IN THE AREA CLOSE TO THE WHEEL BEFORE COMPLETING TIRE DEMOUNTING.

1. Introduce the toolhead between rim edge and tire bead;
2. move to work position A;
3. engage the hooked end of the tire lever (Fig. 29 ref. 1) with the rim edge by the right-hand side of the too and load tire front bead on the tool;
4. keep the lever pressed toward the rime centerline and rotate the chuck CLOCKWISE until the bead has been completely removed;
6. stop chuck rotation;
7. Lower the chuck until the tire rests on the floor; exert a certain pressure on it; this will create enough space to extract the inner tube;
8. extract the inner tube and lift the wheel again;
9. start rotating the chuck CLOCKWISE;
10. move the rear bead breaking roller towards the front rim flange (Fig. 18 ref. 1), until one portion or the rear tire sidewall is demounted from the rim;
11. continue rotating the chuck until the tire is completely dismounted; stop chuck rotation;
12. move the front bead breaking roller away from the rim to be able the remove the dismounted tire from the working area.

Fig. 29



11.7.3 Mounting

⚠ 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 LOWER LIMBS CRUSHING.

WHEN LOWERING THE CHUCK, THE RIM MAY CRUSH OPERATOR'S FEET, LEADING TO INJURIES.

STAY CLEAR OF THE AREA CLOSE THE WHEEL WHILE LOWERING THE CHUCK.

1. Lubricate tire beads, rim front flange and rim bead seats liberally.

NOTICE

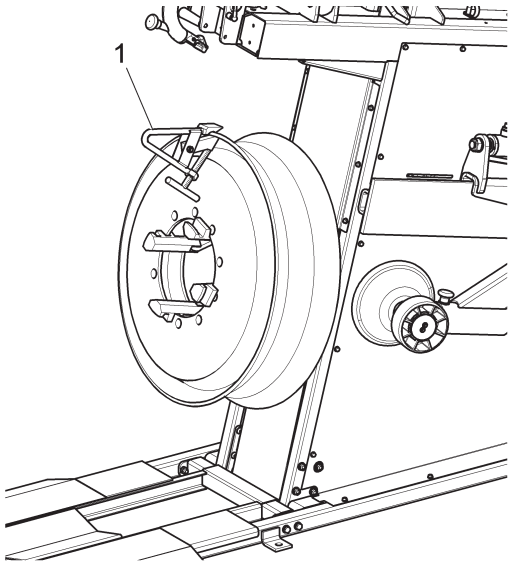
FAILURE TO LUBRICATE THE TIRE, THE TUBE AND/OR RIM AS DESCRIBED MAY LEAD TO ABNORMAL FRICTION AND TIRE AND/OR TUBE DAMAGES.

NOTICE

USE ONLY LUBRICANTS SPECIFIED BY THE LUBRICANT MANUFACTURER AS SUITABLE FOR TIRE LUBRICATION.
USE OF UNSUITABLE LUBRICANTS MAY CAUSE TIRE AND/OR TUBE DAMAGES.

2. Mount clamp (Fig. 30 ref. 1) on the external edge of the rim at the topmost point as shown in Fig. 30;

Fig. 30

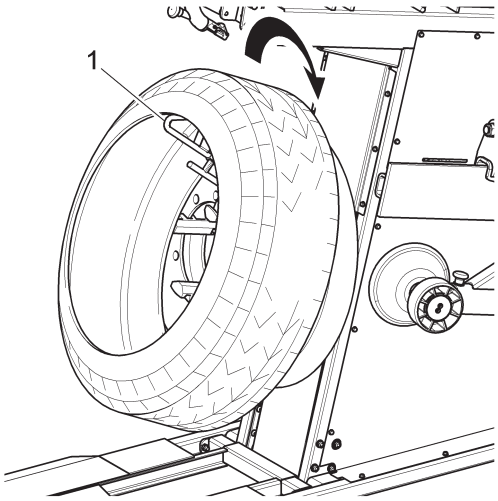


NOTICE

THE CLAMP MUST BE FIRMLY SECURED TO THE RIM.
FAILURE TO APPROPRIATELY SECURE THE CLAMP TO THE RIM MAY LEAD TO DAMAGES TO THE TIRE, THE RIM AND/OR THIS EQUIPMENT.

3. move to work position B;
4. lower the equipment chuck completely;
5. roll the tire on the platform, hang it to the rim front fllange by the upper portion or the rear sidewall, and hook it to clamp (Fig. 31 ref. 1);
6. lift the equipment chuck with the tire hooked to it and rotate the chuccuk 15-20 cm (6”-8”) CLOCKWISE; the tire will position itself sideways relative to the rim (see Fig. 31).

Fig. 31

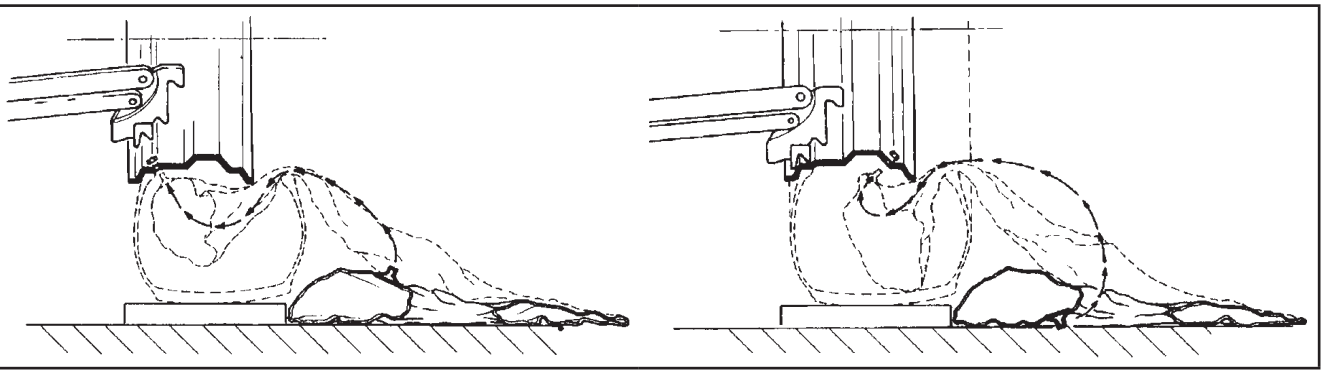


8. Move the front bead breaker roller away from the wheel.
9. remove clamp;
10. rotate the chuck until the hole for valve introduction faces downwards; stop chuck rotation.
11. lower the chuck and press the tire on the ground until an opening is created between tire edge and rim for the inner tube introduction;
12. install the valve in the hole and secure it with the provided ring nut. Install the inner tube in the drop center of the rim (to make this operation easier, it is advisable to simultaneously turn self-centering chuck CLOCKWISE.

NOTICE

THE VALVE HOLE COULD BE IN AN ASYMMETRIC POSITION WITH RESPECT TO THE CENTER OF THE RIM. IN THIS CASE IT IS NECESSARY TO POSITION AND INSTALL THE INNER TUBE AS SHOWN IN FIG. 32.

Fig. 32



13. Rotate the chuck until the valve faces downwards.
14. slightly inflate the inner tube to avoid damaging it when installing the second bead;
15. remove the securing ring from the valve nut and mount an extension on the same valve, to avoid damaging the valve when installing the second bead;
16. move to work position B;
17. raise the chuck all the way up and fit the clamp (Fig. 33 ref. 1) on the front rim edge engaging the second bead at about 20 cm (7.87”) to the right of the inflating valve;
18. rotate the chuck COUNTER-CLOCKWISE until the clamp is at the topmost position; stop chuck rotation;
19. set the toolhead onto the front rim edge;
20. Rotate the chuck CLOCKWISE until room is created between the rim edg and the tire such that lever hooked end (Fig. 34 ref. 1) can be engaged with the rim edge; stop chuck rotation;
21. engage lever hooked end (Fig. 34 ref. 1) with the rim edge;
22. rotate the chuck clockwise keeping lever (Fig. 34 ref. 1) hooked to the rim until complete insertion of the tire front bead; stop chuck rotation;
23. remove lever (Fig. 34 ref. 1) and clamp (Fig. 34 ref. 2) from the rim and set them aside;
24. remove the toolhead from the rim while turning the chuck COUNTER-CLOCKWISE.

Fig. 33

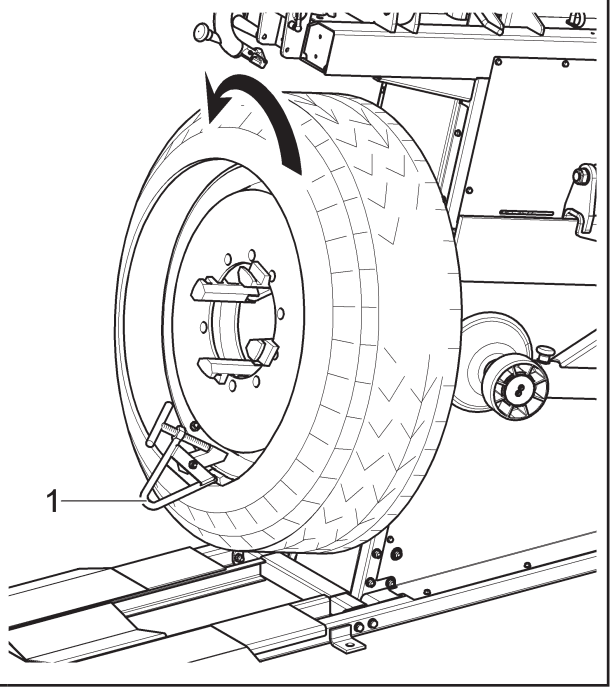
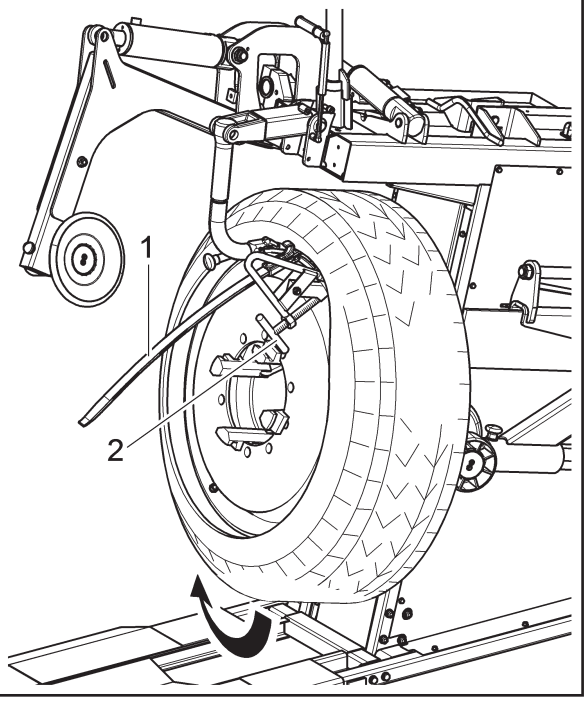


Fig. 34



11.8 Wheel unloading

⚠ CAUTION

RISK OF LOWER LIMBS CRUSHING.

WHEN LOWERING THE CHUCK, THE RIM MAY CRUSH OPERATOR'S FEET, LEADING TO INJURIES.

STAY CLEAR OF THE AREA CLOSE THE WHEEL WHILE LOWERING THE CHUCK.

⚠ CAUTION

RISK OF LOWER LIMBS CRUSHING OR BODY BUMPING.

WHEN THE WHEEL IS REALEASED FROM THE CHUCK, IT MAY ROLL AWAY OR TUMBLE TO THE GROUND, AND MAY CRUSH OPERATOR'S FEET OR BUMP OPERATOR'S BODY, LEADING TO INJURIES.

DO NOT LEAVE THE WHEEL UNATTENDED AFTER RELEASING IT FROM THE CHUCK.

SECURE THE WHEEL FROM ROLLING AWAY OR TUMBLING BEFORE RELEASING IT FROM THE CHUCK.

NOTICE

SECURING HEAVY OR VERY LARGE WHEELS REQUIRES USING A SUITABLE LIFTING DEVICE.

1. Lower self-centering chuck until the wheel rests on the floor;
2. move to work position A;
3. check the position of the tire valve and center it, if necessary, in the rim hole by slightly rotating the chuck;
4. secure the valve with the supplied ring nut after removing the protective extension (if one was installed);
5. close chuck jaws completely, making sure the wheel is secured from rolling away or tumbling;
6. remove the wheel from the equipment.

12.0 MAINTENANCE

12.1 Equipment lockout/tagout and restoring to service procedures

12.1.1 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.

12.1.2 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.

12.1.3 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.

12.1.4 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 such 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.

12.1.5 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 reactivation. 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.

12.1.6 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.

12.2 Maintenance that can be performed by operators

⚠ DANGER

RISK OF FIRE OR ELECTROCUTION.

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

⚠ WARNING

RISK OF EYE INJURIES.

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

⚠ CAUTION

RISK OF UPPER AND LOWER LIMBS CRUSHING, OR ENTAGLEMENT.

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

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

⚠ CAUTION

RISK OF UPPER AND LOWER LIMBS CRUSHING, OR ENTAGLEMENT.

UPPER AND LOWER LIMBS MAY GET CRUSHED OR ENTAGLED IN CASE OF INDAVERTENT MOVEMENTS OF PARTS OF THIS EQUIPMENT ONCE ANY POWER SUPPLY IS 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.
To guarantee the efficiency and correct functioning of the equipment, it is essential to carry out daily or weekly cleaning and weekly routine maintenance, as described below.
Cleaning and routine maintenance must be conducted by authorized personnel and according to the instructions given below:

- At least once every week check the status of the toolhead plastic guard and replace it if worn.

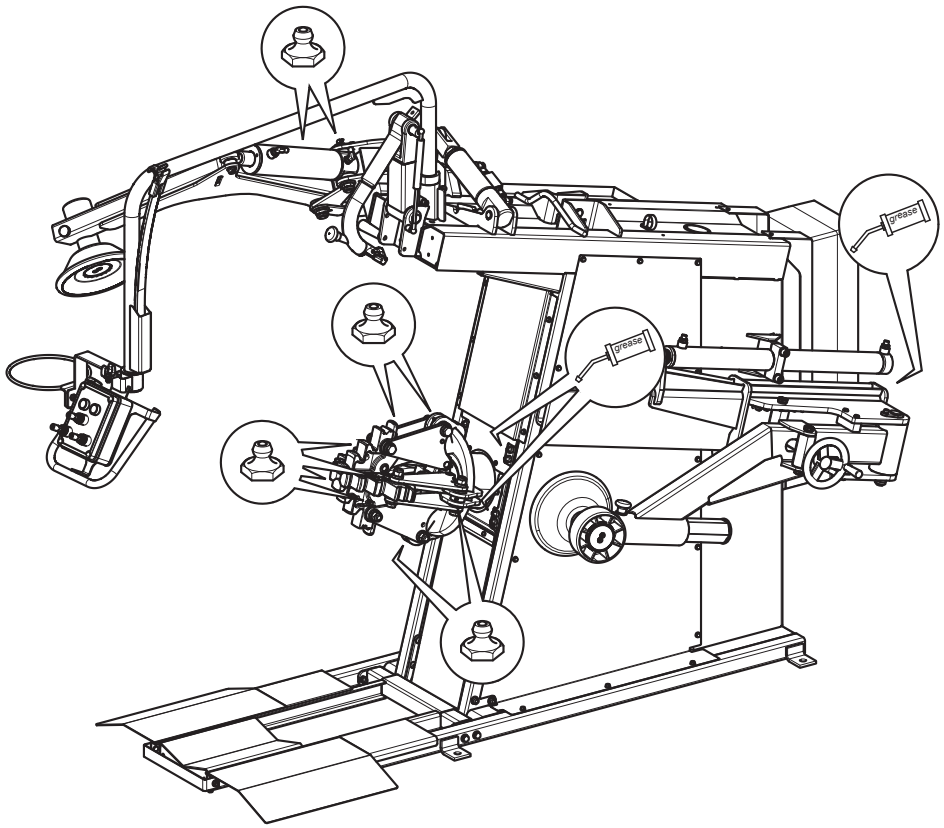
NOTICE

OPERATING THIS EQUIPMENT WITH A WORN TOOLHEAD GUARD MAY LEAD TO SCRATCHING WHEEL RIMS.
DO NOT OPERATE THIS EQUIPMENT WITH A WORN TOOLHEAD GUARD.

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

- At least once every week remove deposits of tire powder and other waste materials with a vacuum.
- At least once every week check the status of the toolhead plastic guard and replace it if worn.
- At least once every month check all controls, ensuring they provide the specified actions.
- At least once every month grease all rotating joints of the equipment (see Fig. 35 for geasing points identification) with a suitable rotating joints lubricant grease.
- At least once every 50 working hours clean and lubricate the sliding guides of the chuck vertical movement and the rear bead breaker arm with a suitable slides grease grade.

Fig. 35



12.2.1 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.

⚠ 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.

BEFORE RESTORING ANY POWER SUPPLY TO THE EQUIPMENT:

- MAKE SURE THE FIXED GUARD IS PROPERLY MOUNTED BACK TO THE EQUIPMENT.
- READ AND STRICTLY FOLLOW THE RESTORING TO SERVICE PROCEDURE DESCRIBED IN SECTION “EQUIPMENT LOCKOUT/TAGOUT AND RESTORING TO SERVICE PROCEDURES” OF THIS MANUAL.

⚠ CAUTION

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

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

THE TECHNICIANS UPPER OR LOWER LIMBS MAY GET CRUSHED IN CASE OF INADVERTENT MOVEMENTS OF THE EQUIPMENT ARMS OR CHUCK WHILE PERFORMING MAINTENANCE.

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

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

⚠ CAUTION

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

UPPER AND LOWER LIMBS MAY GET CRUSHED OR ENTAGLED IN CASE OF INDAVERTENT MOVEMENTS OF PARTS OF THIS EQUIPMENT ONCE ANY POWER SUPPLY IS 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.

⚠ 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.

- At least once every month check the oil level within the power unit reservoir.

If needed, top-up the oil reservoir with mineral hydraulic oil having a viscosity grade suitable for the average temperatures of the country where the equipment is installed and in particular:

- ISO VG 32 (for countries with room temperature from 0 °C - +30 °C (+32 °F - +86 °F);
- ISO VG 46 (for countries with room temperature above +30 °C (+86 °F).

- At least once a year replace the hydraulic oil inside the power unit reservoir.

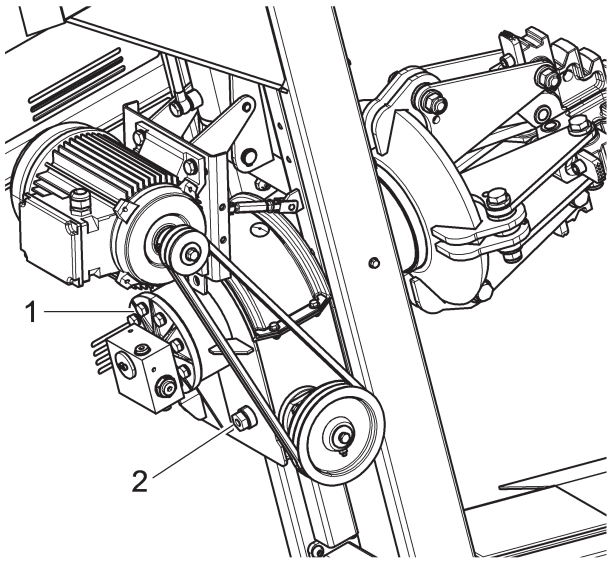
NOTICE

OIL-LEVEL CHECK AND OIL REPLACEMENT MUST BE PERFORMED WITH ALL HYDRAULIC CYLINDERS BEING FULLY RETRACTED.

REFILLING OR REPLACING HYDRAULIC OIL TO THE POWER UNIT RESERVOIR MUST BE PERFORMED WHILE CYLINDERS ARE NOT FULLY REATRCED MAY LEAD TO AN EXCESSIVE QUANTITY OF HYDRAULIC OIL BEING FILLED TO THE RESERVOIR, CAUSING HYDRAULIC OIL TO BE SPILLED FROM THE RESERVOIR TO THE FLOOR WHEN THE EQUIPMENT IS RESTORED TO SERVICE.

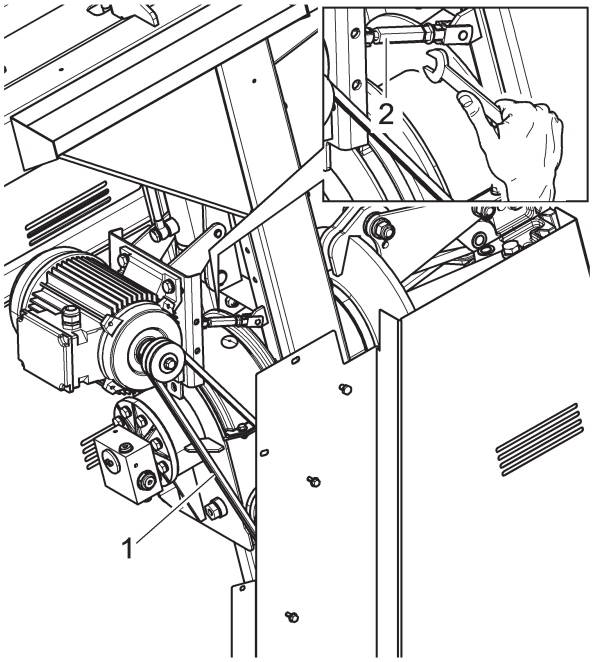
- At least once every 100 working hours check the oil level of the reduction gear (Fig. 36 ref. 1).
  The level indicator window (Fig. 36 ref. 2)must be covered with lubricant.
  If needed, remove the plug provided and top up using appropriate mineral gear oil until the correct oil level is restored.

Fig. 36



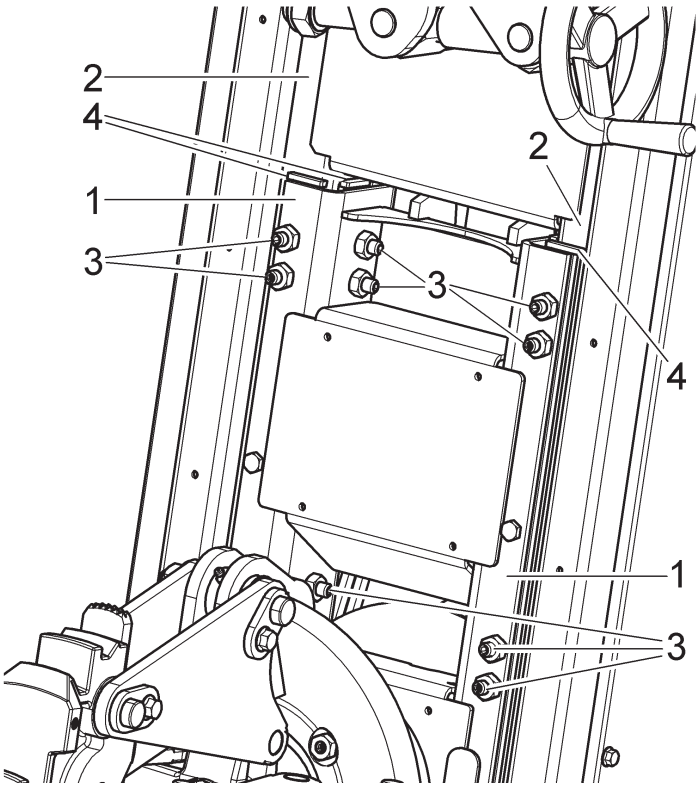
- At least once every 100 working hours check tensioning of the belt (Fig. 37 ref. 1) transmission set between the chuck motor and the chuck gearbox.
  If needed, adjust bent tension using the screw coupler (Fig. 37 ref. 2) set between the gearbox and the motor support plate.

Fig. 37



- In case chuck vertical movement or rear bead breaker arm horizontal movement are jerky, adjust the play of slides (Fig. 38 ref. 1) on guide plates (Fig. 38 ref. 2) by means of the adjustment bolts (Fig. 38 ref. 3) mounted to sliding blocks (Fig. 38 ref. 4).

Fig. 38



15.0 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 UPPER AND LOWER LIMBS CRUSHING, OR ENTAGLEMENT.

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

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

16.0 SCRAPPING

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

17.0 EQUIPMENT NAMEPLATE

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

NOTICE

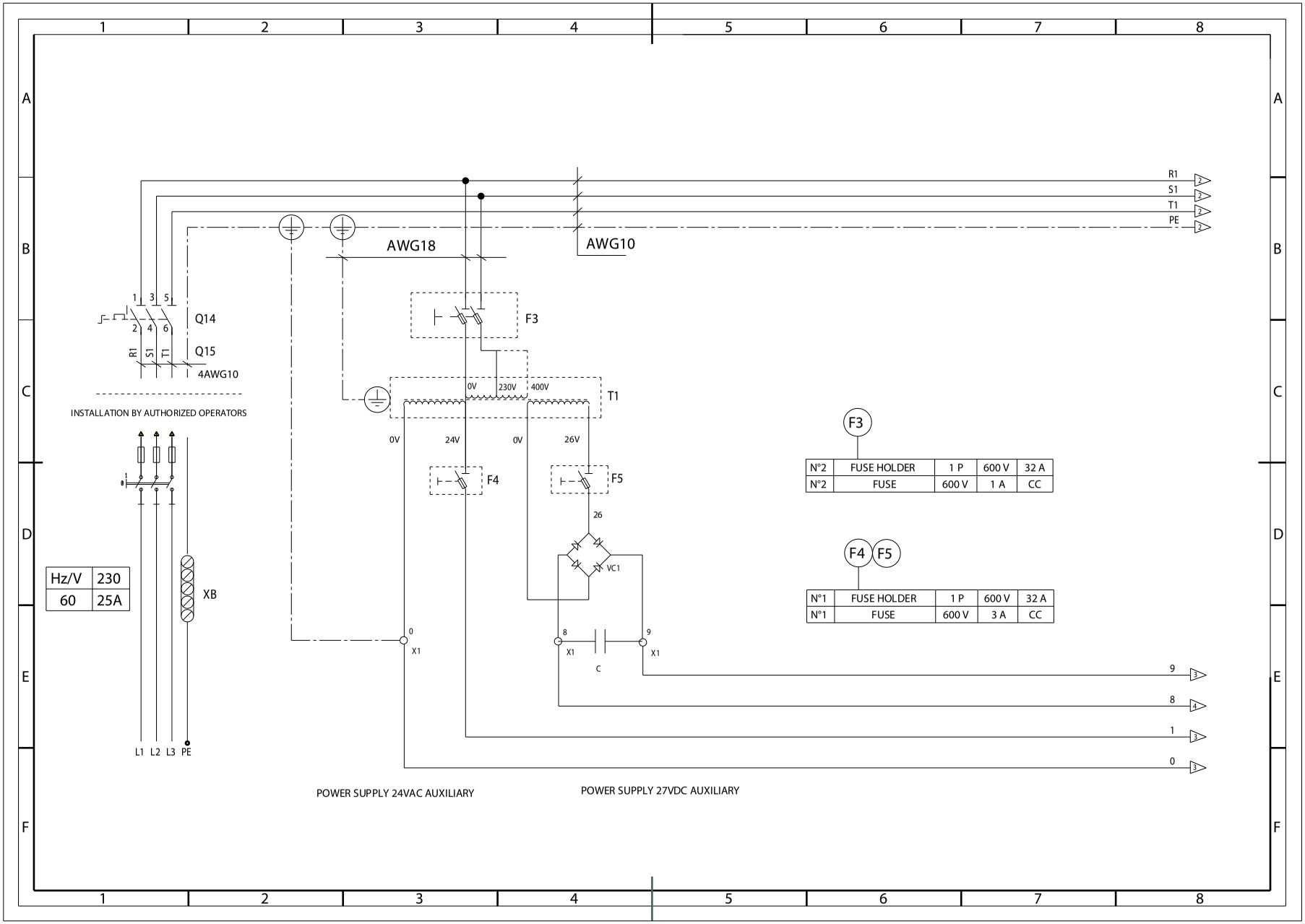
DO NOT TAMPER WITH OR OTHERWISE MODIFY THIS EQUIPMENT NAMEPLATE.

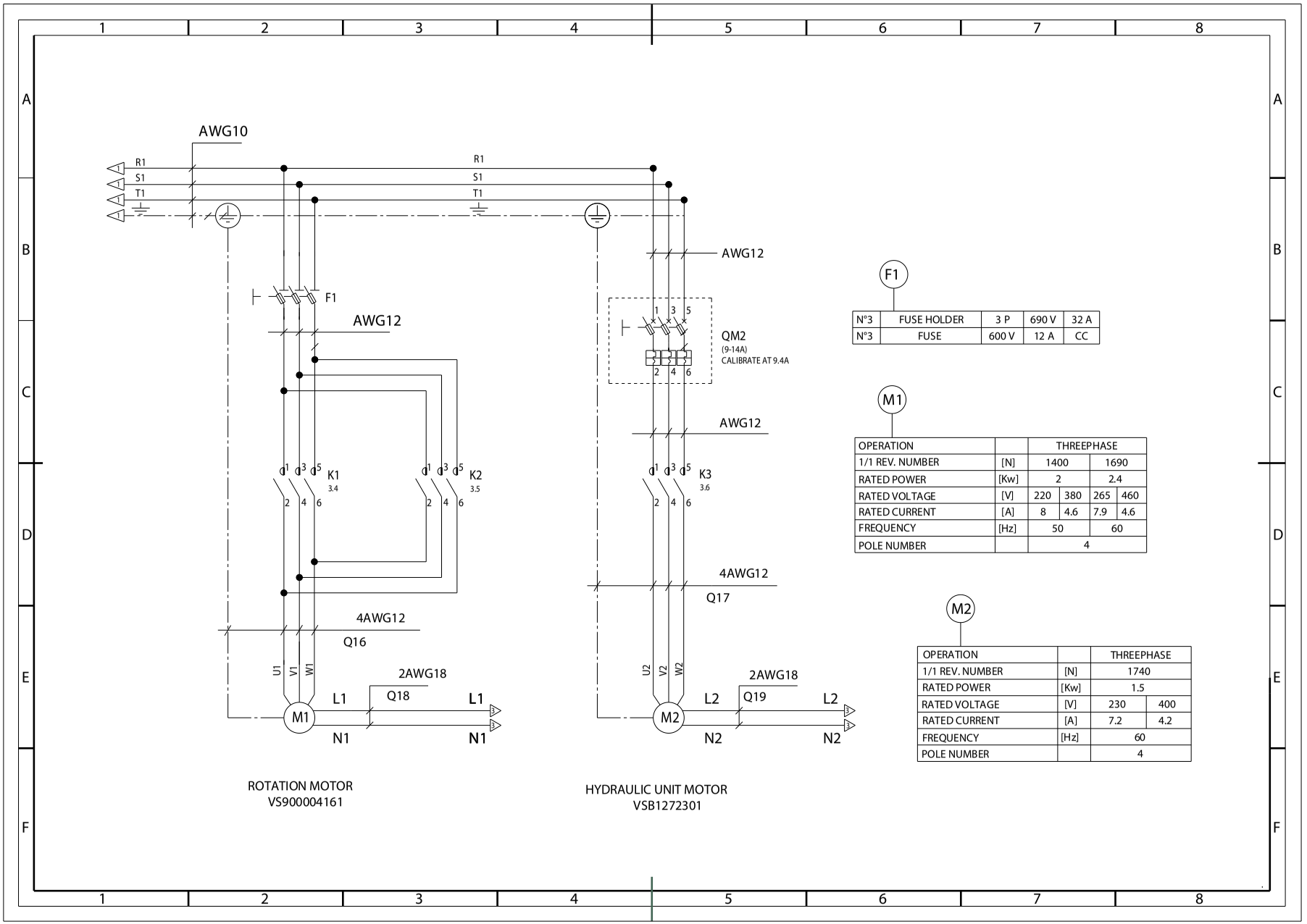
SHOULD THIS EQUIPMENT NAMEPLATE BE ACCIDENTALLY DAMAGED, REMOVED FROM THIS EQUIPMENT, OR BECOME PARTLY OR COMPLETELY UNREADABLE, CONSULT WITH THE MANUFACTURER OR ITS AUTHORIZED DISTRIBUTORS IMMEDIATELY.

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

18.0 FUNCTIONAL DIAGRAMS

Here follows a list of the equipment functional diagrams.


R1
S1
T1
PE
AWG18
AWG10
Q14
Q15
4AWG10
INSTALLATION BY AUTHORIZED OPERATORS
F3
T1
0V
230V
400V
0V
24V
0V
26V
F4
F5
26
VC1
XB
Hz/V 230
60 25A
L1 L2 L3 PE
X1
C
9
8
1
0
POWER SUPPLY 24VAC AUXILIARY
POWER SUPPLY 27VDC AUXILIARY
F3
N°2 FUSE HOLDER 1 P 600 V 32 A
N°2 FUSE 600 V 1 A CC
F4 F5
N°1 FUSE HOLDER 1 P 600 V 32 A
N°1 FUSE 600 V 3 A CC



F1

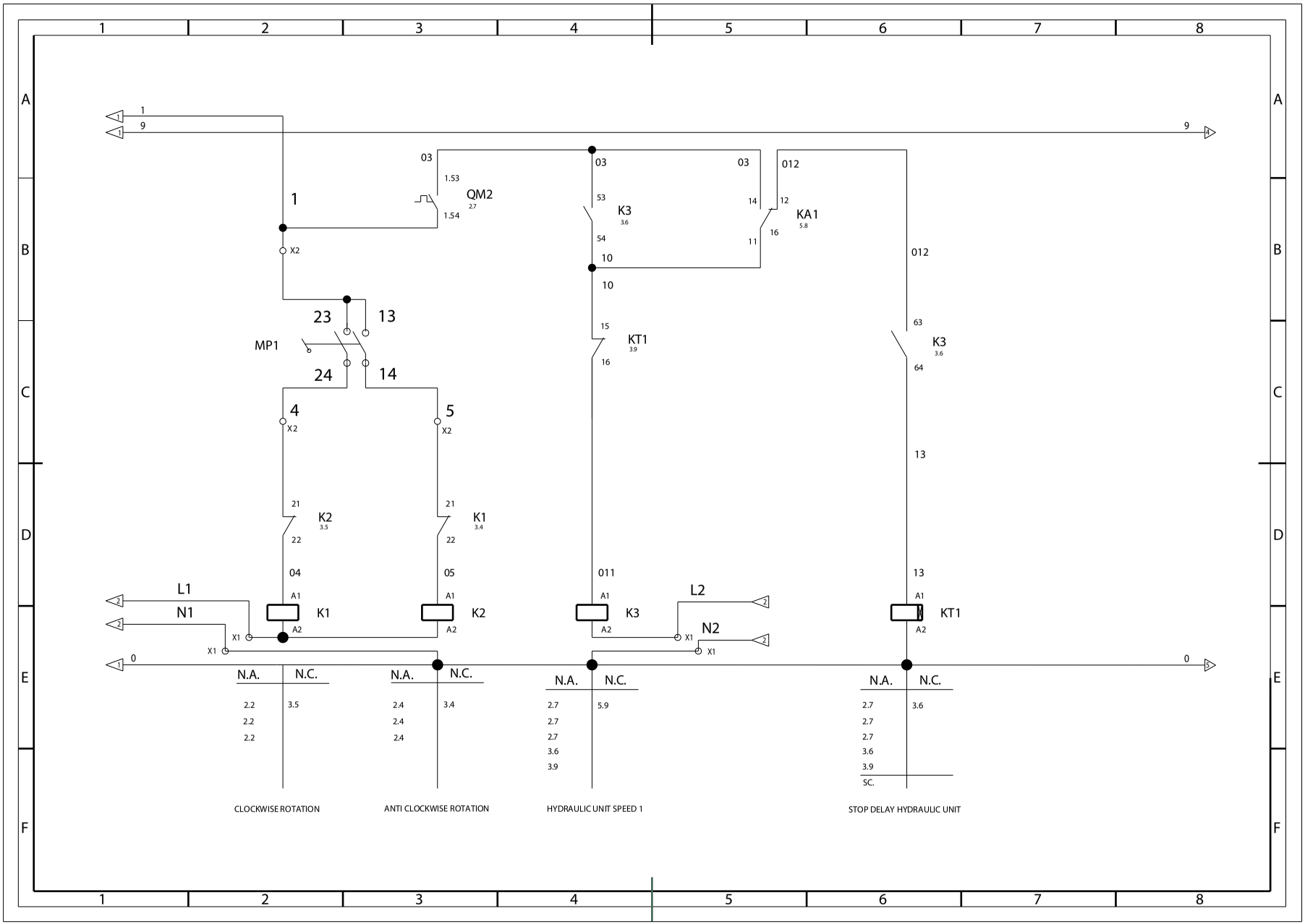
N°3	FUSE HOLDER	3 P	690 V	32 A
N°3	FUSE	600 V	12 A	CC

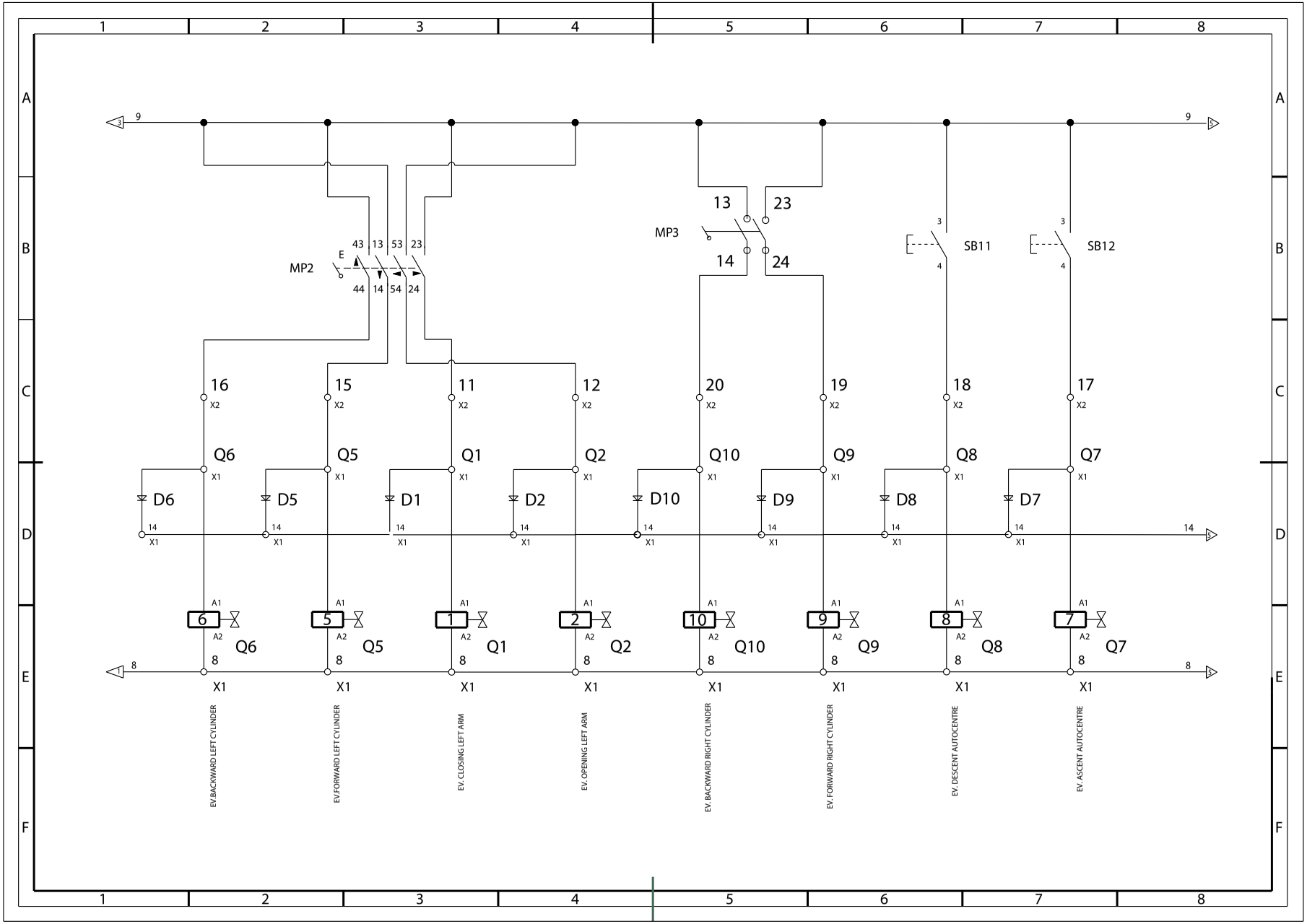
M1

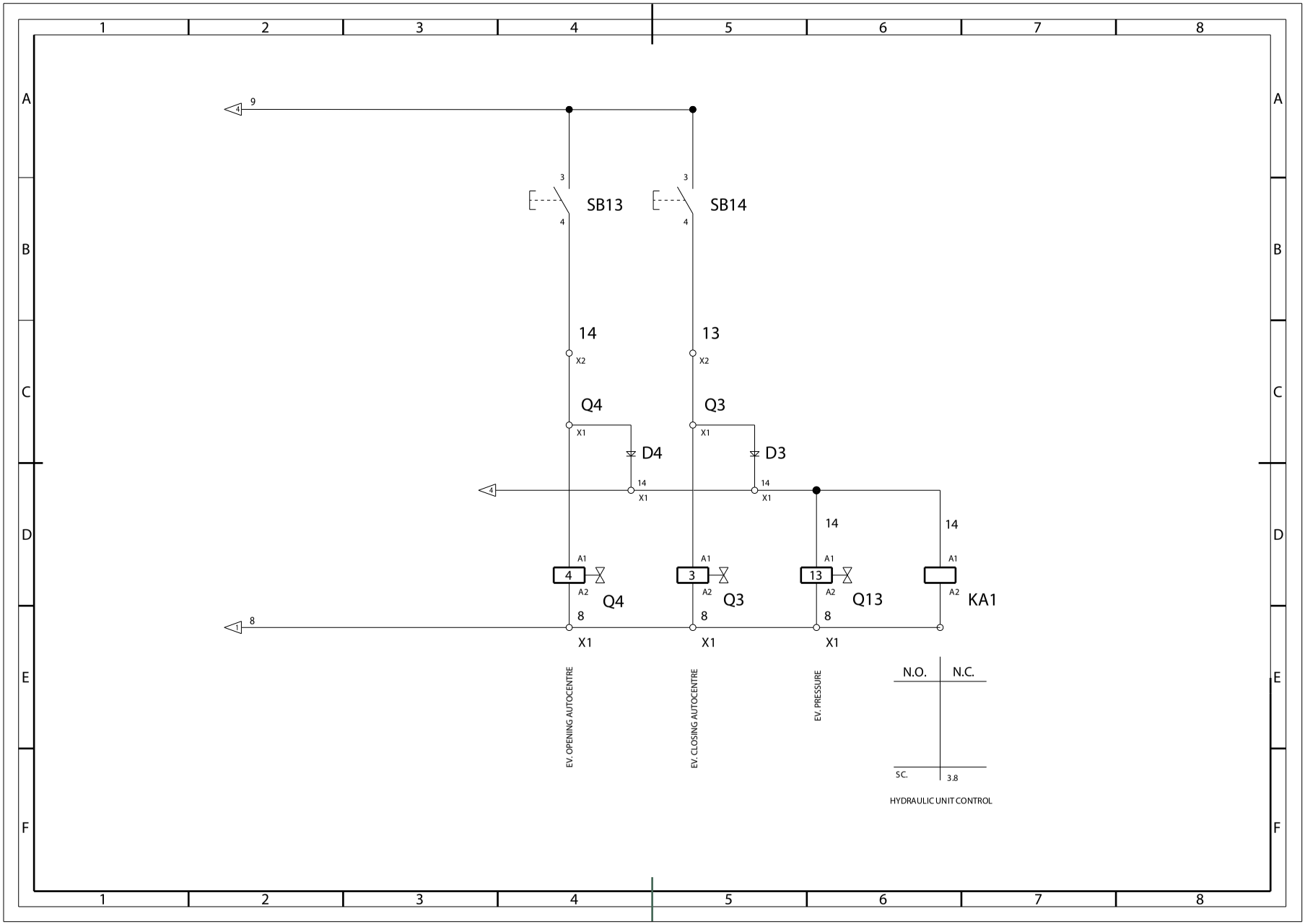
OPERATION		THREEPHASE			
1/1 REV. NUMBER	[N]	1400		1690	
RATED POWER	[Kw]	2		2.4	
RATED VOLTAGE	[V]	220	380	265	460
RATED CURRENT	[A]	8	4.6	7.9	4.6
FREQUENCY	[Hz]	50		60	
POLE NUMBER		4			

M2

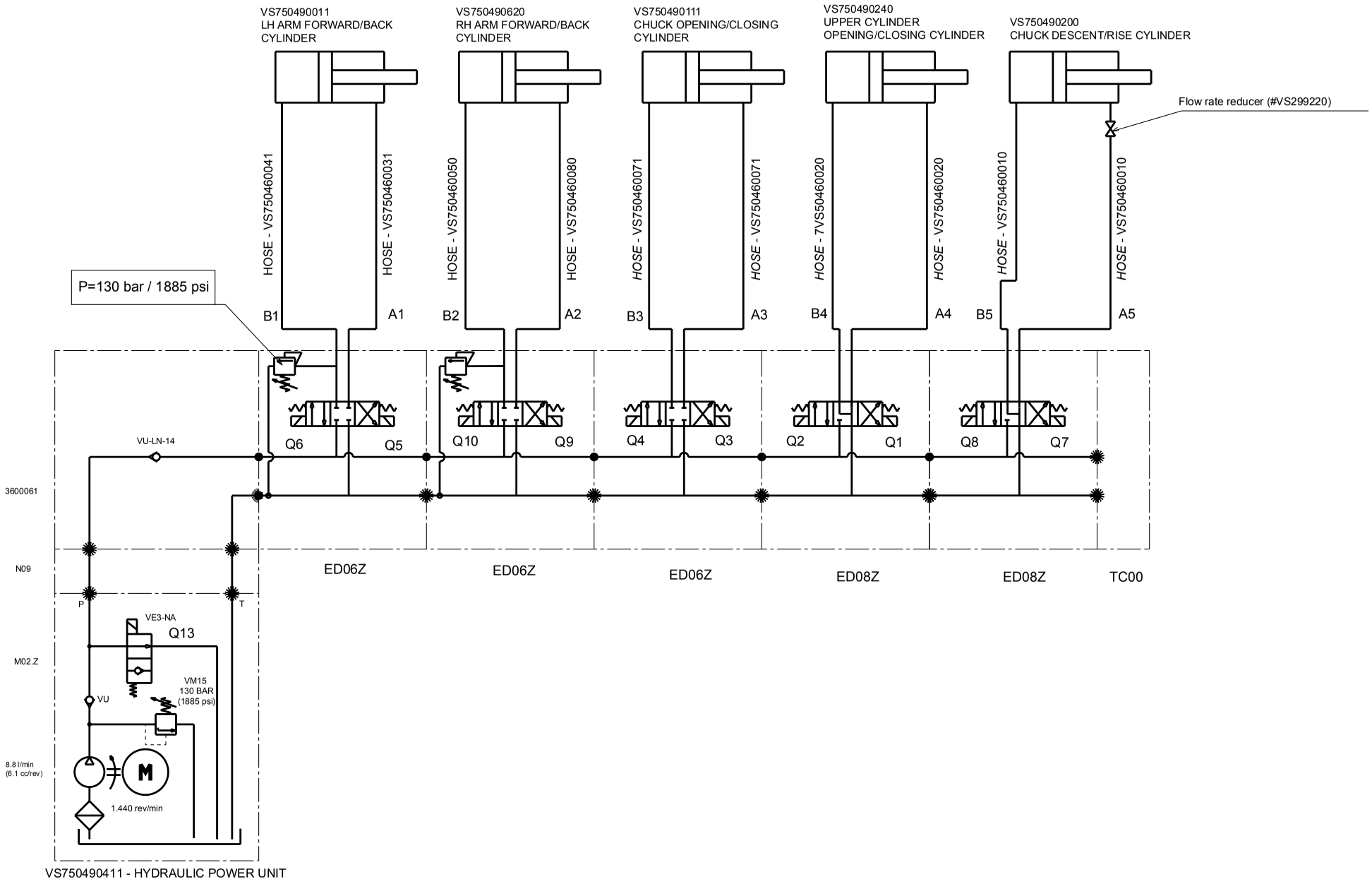
OPERATION		THREEPHASE	
1/1 REV. NUMBER	[N]	1740	
RATED POWER	[Kw]	1.5	
RATED VOLTAGE	[V]	230	400
RATED CURRENT	[A]	7.2	4.2
FREQUENCY	[Hz]	60	
POLE NUMBER		4	


1
9
03
1.53
QM2
2.7
1.54
1
X2
23
13
MP1
24
14
4
X2
5
X2
21
K2
3.5
22
21
K1
3.4
22
04
05
L1
N1
A1
K1
A2
A1
K2
A2
X1
X1
0
N.A.
N.C.
2.2
3.5
2.2
2.2
N.A.
N.C.
2.4
3.4
2.4
2.4
03
53
K3
3.6
54
10
10
15
KT1
3.9
16
011
A1
K3
A2
L2
N2
X1
X1
N.A.
N.C.
2.7
5.9
2.7
2.7
3.6
3.9
03
14
12
KA1
5.8
16
11
012
012
63
K3
3.6
64
13
13
A1
KT1
A2
9
0
N.A.
N.C.
2.7
3.6
2.7
2.7
3.6
3.9
SC.
CLOCKWISE ROTATION
ANTI CLOCKWISE ROTATION
HYDRAULIC UNIT SPEED 1
STOP DELAY HYDRAULIC UNIT


MP2
MP3
SB11
SB12
Q6
Q5
Q1
Q2
Q10
Q9
Q8
Q7
D6
D5
D1
D2
D10
D9
D8
D7
EV.BACKWARD LEFT CYLINDER
EV.FORWARD LEFT CYLINDER
EV. CLOSING LEFT ARM
EV. OPENING LEFT ARM
EV. BACKWARD RIGHT CYLINDER
EV. FORWARD RIGHT CYLINDER
EV. DESCENT AUTOCENTRE
EV. ASCENT AUTOCENTRE


1
2
3
4
5
6
7
8
A
B
C
D
E
F
9
3
SB13
4
3
SB14
4
14
X2
13
X2
Q4
X1
Q3
X1
D4
D3
14
X1
14
X1
4
14
14
A1
A1
A1
A1
4
A2
3
A2
13
A2
A2
Q4
Q3
Q13
KA1
8
8
8
8
X1
X1
X1
EV. OPENING AUTOCENTRE
EV. CLOSING AUTOCENTRE
EV. PRESSURE
N.O.
N.C.
SC.
3.8
HYDRAULIC UNIT CONTROL

Abbreviation	Description	Position
Q14		Electric cabinet
F1	Chuck rotation motor line protection	Electric cabinet
QM2	Hydraulic power unit motor thermomagnetic circuit breaker	Electric cabinet
K1	Chuck motor cw rotation contactor	Electric cabinet
K2	Chuck motor ccw rotation contactor	Electric cabinet
K3	Hydraulic power unit motor contactor	Electric cabinet
T1	Transformer	Electric cabinet
VC1	VAC/VDC current rectifier	Electric cabinet
F3	Transformer input protection fuses	Electric cabinet
F4	24 VAC line guard fuse	Electric cabinet
F5	26 VDC line guard fuse	Electric cabinet
KA1	Hydraulic power unit control relay	Electric cabinet
KT1	Hydraulic power unit stop delay timer	Electric cabinet
SB11	Self-centring chuck down push-button	Control assembly
SB12	Self-centering chuck up push-button	Control assembly
SB13	Self-centering chuck opening push-button	Control assembly
SB14	Self-centering chuck closing push-button	Control assembly
M1	Self-centering chuck rotation motor	Outside the electric cabinet
M2	Hydraulic power unit motor	Outside the electric cabinet
MP1	Cw/ccw rotation joystick	Control assembly
MP2	Lh arm shifting joystick	Control assembly
MP3	Rh arm shifting joystick	Control assembly
Q15	Supply cable	Outside the electric cabinet
Q16	Chuck motor cable	Outside the electric cabinet
Q17	Hydraulic power unit motor cable	Outside the electric cabinet
Q18	Chuck motor heat probe cable	Outside the electric cabinet
Q19	Hydraulic power unit motor heat probe cable	Outside the electric cabinet
Q1	Solenoid valve	Hydraulic power unit
Q2	Solenoid valve	Hydraulic power unit
Q3	Solenoid valve	Hydraulic power unit
Q4	Solenoid valve	Hydraulic power unit
Q5	Solenoid valve	Hydraulic power unit
Q6	Solenoid valve	Hydraulic power unit
Q7	Solenoid valve	Hydraulic power unit
Q8	Solenoid valve	Hydraulic power unit
Q9	Solenoid valve	Hydraulic power unit
Q10	Solenoid valve	Hydraulic power unit
Q13	Solenoid valve	Hydraulic power unit


VS750490011
LH ARM FORWARD/BACK
CYLINDER
VS750490620
RH ARM FORWARD/BACK
CYLINDER
VS750490111
CHUCK OPENING/CLOSING
CYLINDER
VS750490240
UPPER CYLINDER
OPENING/CLOSING CYLINDER
VS750490200
CHUCK DESCENT/RISE CYLINDER
Flow rate reducer (#VS299220)
HOSE - VS750460041
HOSE - VS750460031
HOSE - VS750460050
HOSE - VS750460080
HOSE - VS750460071
HOSE - VS750460071
HOSE - 7VS50460020
HOSE - VS750460020
HOSE - VS750460010
HOSE - VS750460010
P=130 bar / 1885 psi
B1
A1
B2
A2
B3
A3
B4
A4
B5
A5
Q6
Q5
Q10
Q9
Q4
Q3
Q2
Q1
Q8
Q7
VU-LN-14
3600061
N09
ED06Z
ED06Z
ED06Z
ED08Z
ED08Z
TC00
P
T
VE3-NA
Q13
M02.Z
VM15
130 BAR
(1885 psi)
VU
8.8 l/min
(6.1 cc/rev)
M
1.440 rev/min
VS750490411 - HYDRAULIC POWER UNIT

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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