7107-M003-7

RWC1150.30IB
RWC1150.30IAB

INSTRUCTION MANUAL

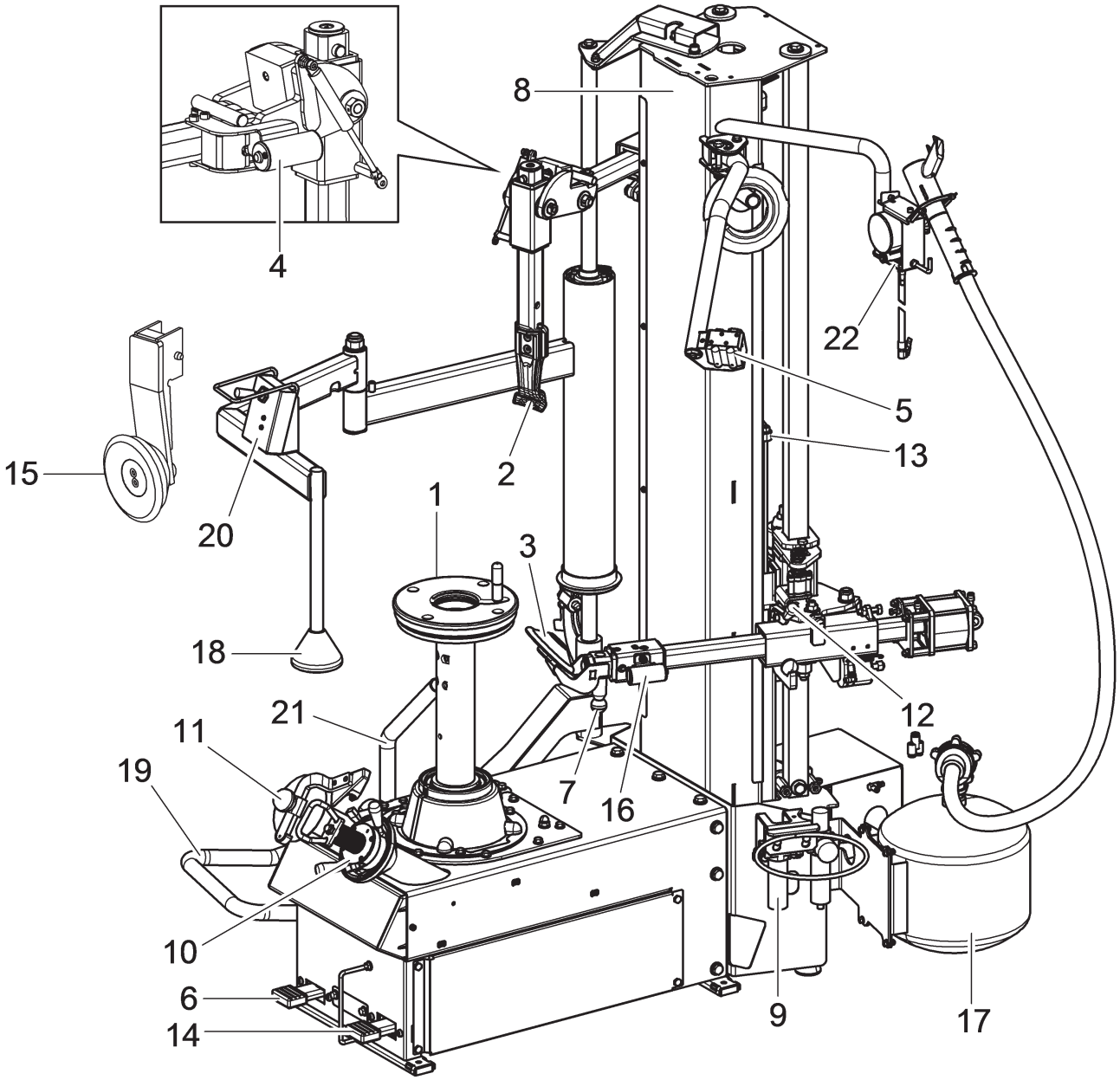
GB TRANSLATION FROM THE ORIGINAL INSTRUCTIONS

For spare parts drawings refer to "LIST OF COMPONENTS" section.

• For any further information please contact your local dealer.

SUMMARY

FIG. 1



KEY

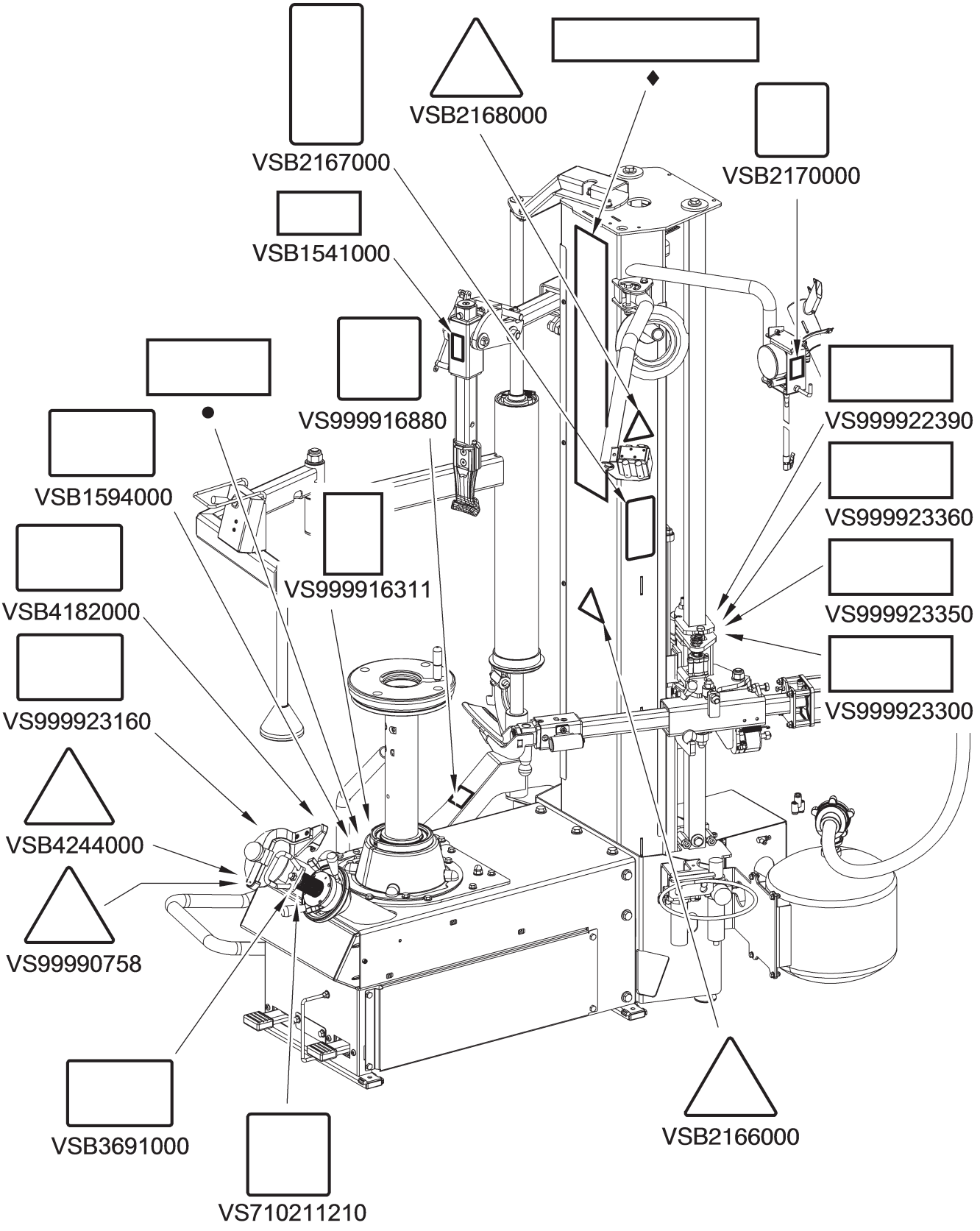
1 – Mandrel
2 – Tool
3 – Bead breaker roll
4 – Handle with tool adjustment release
5 – Control push-button panel
6 – Inflation push-button panel
7 – Pin for lock/unlock of bead breaker roll rotation
8 – Column
9 – Filter unit - pressure reducer
10 – Locking device
11 – Entrainer
12 – Lever for bead breaker lateral opening release
13 – Arms movement cylinder
14 – Mandrel rotation pedalboard
15 – Roll for matching (optional)
16 – Handle with release of bead breaker adjustment
17 – Tubeless inflation unit
18 – PLUS93 - Rotating bead pressor arm
19 – VSG1000A127 - Wheel lifting device
20 – Rotating bead pressor arm and wheel lifting device control unit
21 – Guide tube
22 – Pedal inflation device with pressure gauge

SYMBOLS USED IN THE MANUAL

Symbols	Description
	Read instruction manual.
	Wear work gloves.
	Wear work shoes.
	Wear safety goggles.
	Mandatory. Operations or jobs to be performed compulsorily.
	Warning. Be particularly careful (possible material damages).

Symbols	Description
	Danger! Be particularly careful.
	Move with fork lift truck or pallet truck.
	Lift from above.
	Technical assistance necessary. Do not perform any intervention.
	Caution: hanging loads.
	Note. Indication and/or useful information.

PLATES LOCATION ON MACHINE INFORMATION TABLE



Code numbers of plates	
VSB1541000	*Danger plate*
VSB1594000	*Date indicating plate*
VSB2166000	*Hand crushing danger plate*
VSB2167000	*Obligation to wear protective clothing plate*
VSB2168000	*Tyre burst plate*
VSB2170000	*Max inflation pressure rating plate*
VSB3691000	*Inflation pedal plate*
VSB4182000	*Electric motor specifications plate (only for RWC1150.30IB models)*
VSB4244000	*Rotating parts danger plate*
VS99990758	*Electricity danger plate (only for RWC1150.30IB model)*
VS999916880	*Max. capacity load 80 Kg plate*
VS710211210	*Rotation direction plate*
VS999916311	*Rubbish skip label*
VS999923160	*Prop 65 Attention plate*
VS999922390	*Overload protection plate (only for RWC1150.30IB model)*
VS999923360	*Supply interruption plate (only for RWC1150.30IB model)*
VS999923350	*Plate for inner use only (only for RWC1150.30IB model)*
VS999923300	*1 Ph 220V 20A 60Hz plate (only for RWC1150.30IB model)*
•	*Serial number plate*
♦	*Manufacturer name plate*

IF ONE OR MORE PLATES DISAPPEAR FROM THE MACHINE OR BECOMES DIFFICULT TO READ. REPLACE IT AND QUOTE ITS/THEIR CODE NUMBER/S WHEN REORDERING.

SOME OF THE PICTURES PRESENT IN THIS MANUAL HAVE BEEN OBTAINED FROM PICTURES OF PROTOTYPES, THEREFORE THE STANDARD PRODUCTION MACHINES AND ACCESSORIES CAN BE DIFFERENT IN SOME COMPONENTS.

1.0 GENERAL INTRODUCTION

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

KEEP THE MANUAL IN A KNOWN, EASILY ACCESSIBLE PLACE FOR ALL ACCESSORY OPERATORS TO CONSULT IT WHENEVER IN DOUBT.

THE MANUFACTURER DISCLAIMS ALL RESPONSIBILITY FOR ANY DAMAGE OCCURRED WHEN THE INDICATIONS GIVEN IN THIS MANUAL ARE NOT RESPECTED: AS A MATTER OF FACT, THE NON-COMPLIANCE WITH SUCH INDICATIONS MIGHT LEAD TO EVEN SERIOUS DANGERS.

1.1 Introduction

Thank you for preferring this tyre-changer. We feel sure you will not regret your decision.
The machine has been designed for use in professional workshops and in particular it stands out for its reliability, safe and rapid operation: with just a small degree of maintenance and care, this will give you many years of trouble-free service and lots of satisfaction.
This manual contains all operating instructions and details on how to service and use the machine correctly.

2.0 INTENDED USE

The machine described in this manual is a tyre-changer for car tyres projected to be used exclusively for the demounting, mounting and inflation of pneumatics with maximum diameter of 45" and maximum width of 15".

THIS ACCESSORY MUST ONLY BE USED FOR THE PURPOSE FOR WHICH IT IS SPECIFICALLY DESIGNED.
ANY OTHER USE IS CONSIDERED IMPROPER AND THEREFORE UNACCEPTABLE.

THE MANUFACTURER CANNOT BE HELD RESPONSIBLE FOR ANY DAMAGE CAUSED BY IMPROPER, ERRONEOUS, OR UNACCEPTABLE USE.

2.1 Training of personnel

The machine may be operated only by suitably trained and authorized personnel.

Given the complexity of the operations necessary to manage the machine and to 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 machine as intended by the manufacturer.

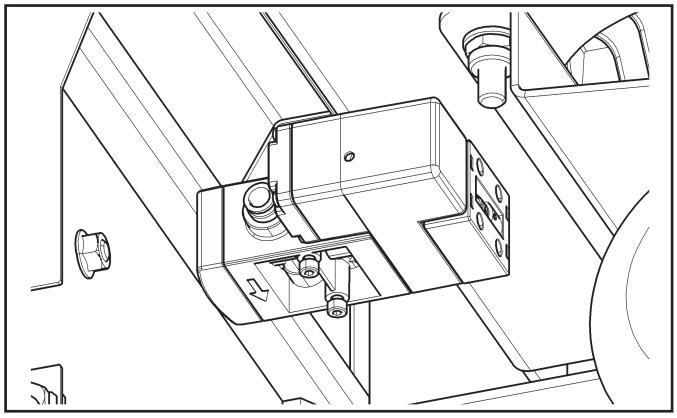
A CAREFUL READING OF THIS INSTRUCTION MANUAL FOR USE AND MAINTENANCE AND A SHORT PERIOD OF TRAINING WITH SKILLED PERSONNEL CAN BE AN ENOUGH PREVENTIVE PREPARATION.

3.0 SAFETY DEVICES

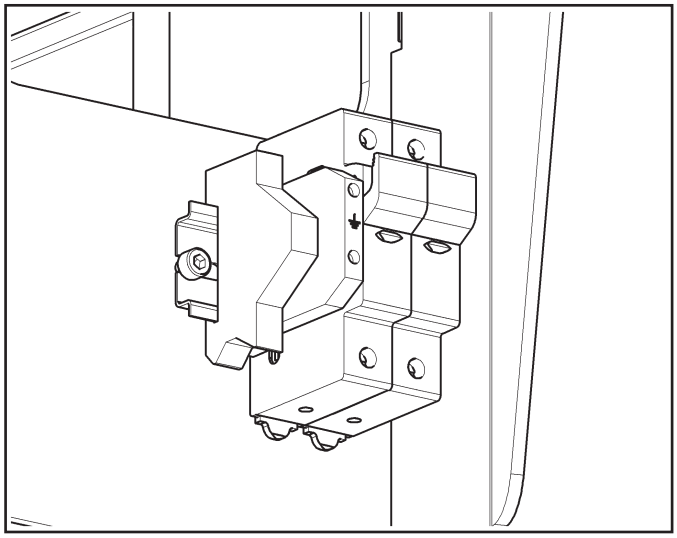
PERIODICALLY, AT LEAST MONTHLY, CHECK THE INTEGRITY AND THE FUNCTIONALITY OF THE SAFETY AND PROTECTION DEVICES ON THE MACHINE.

All the machines are equipped with:

- man-operated controls (immediate stop of operation when the control is released) for all operating devices;
- mandrel rotation;
- tool translation;
- bead breaking roller translation.
- **Non-adjustable (balancing valve) pressure limiter (see figure below).**
  This allows inflation of tyres in reasonable safety. Inflation of tyres to over 4,2 ± 0,2 bar (60 PSI) is not allowed.



- **Controls logic disposition**
  Its function is to prevent the operator from dangerous mistakes.
- **Additional safety device for protection against fuse excess current (see figure below) (only for RWC1150.30IB model).**



- **Motor protection devices (only for RWC1150.30IB model)**
  The new "Invemotor" motor is equipped with electronic protection devices. They stop the motor if working defected conditions appear to avoid that the motor itself can be damaged and that the operator safety can be compromised (overvoltage, overload, overtemperature). For other details, see the chapt. 14 "Fault-Finding".

3.1 Residual risks

The machine was subjected to a complete analysis of risks according to reference standard EN ISO 12100. Risks are as reduced as possible in relation with technology and product functionality.
This manual stresses possible residual risks, also highlighted in pictograms on the present manual and adhesive warning signals placed on the machine: their location is represented in "PLATE LOCATION ON MACHINE INFORMATION TABLE" on page 5.

4.0 GENERAL SAFETY RULES

- Any tampering with or modification to the machine not previously authorized by the manufacturer exempts the latter from all responsibility for damage caused by or derived from said actions.
- Removing of or tampering with the safety devices or with the warning signals placed on the machine leads to serious dangers and represents a transgression of European safety rules.
- The machine may be used only in areas free from the danger of explosion or fire.
- The use of only original accessories and spare parts is advised. Our machine is designed to function only with original accessories.
- Installation must be conducted only by qualified personnel exactly according to the instructions that are given below.
- Ensure that there are no dangerous situations during the machine operating manoeuvres. Immediately stop the machine if it miss-functions and contact the assistance service of an authorized dealer.
- In emergency situations and before carrying out any maintenance or repairs, disconnect all supplies to the machine, cutting electrical (only for RWC1150.30IB model) and/or pneumatic power supply off by using the main switch.
- Ensure that the work area around the machine is free of potentially dangerous objects and that there is no oil since this could damage the tyre. Oil on the floor is also a potential danger for the operator.

THE MANUFACTURER DENIES ANY RESPONSIBILITY IN CASE OF DAMAGES CAUSED BY UNAUTHORIZED MODIFICATIONS OR BY THE USE OF NON ORIGINAL COMPONENTS OR EQUIPMENT.

OPERATORS MUST WEAR SUITABLE WORK CLOTHES, PROTECTIVE GLASSES AND GLOVES, AGAINST THE DANGER FROM THE SPRAYING OF DANGEROUS DUST, AND POSSIBLY LOWER BACK SUPPORTS FOR THE LIFTING OF HEAVY PARTS. DANGLING OBJECTS LIKE BRACELETS MUST NOT BE WORN, AND LONG HAIR MUST BE TIED UP. FOOTWEAR SHOULD BE ADEQUATE FOR THE TYPE OF OPERATIONS TO BE CARRIED OUT.

- The machine handles and operating grips must be kept clean and free from oil.
- The workshop must be kept clean, dry and not exposed to atmospheric agents. Make sure that the working premises are properly lit.
  The machine can be operated by a single operator. Unauthorised personnel must remain outside the working area, as shown in **Figure 4.**
  Avoid any hazardous situations. Do not use air-operated or electrical equipment when the shop is damp or the floor slippery and do not expose such tools to atmospheric agents.
- During inflation do not lean on the tyre or remain above it. When beading in the tyre, keep hands away from tyre and the rim edge.
- During inflation always stay to the side of the machine and never in front of it.
- When operating and servicing this machine, carefully follow all applicable safety and accident-prevention precautions. The machine must not be operated by untrained personnel.

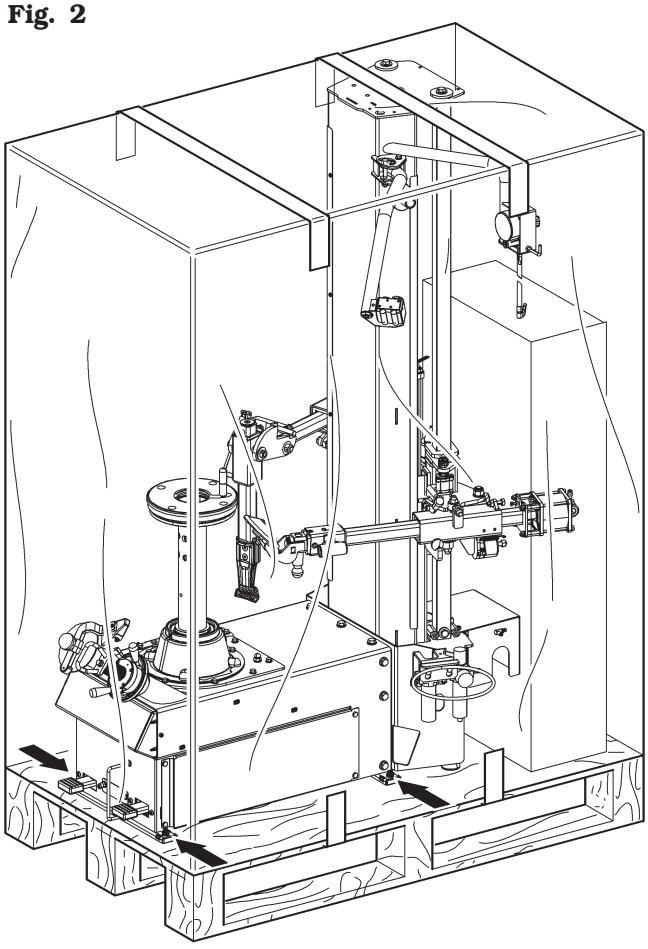
IN CASE OF A CHANCE SUPPLY FAILURE (WHETHER ELECTRICITY OR COMPRESSED AIR), MOVE THE PEDALS TO THE NEUTRAL POSITION.

5.0 PACKING AND MOBILIZATION FOR TRANSPORT

HAVE THE MACHINE HANDLED BY SKILLED PERSONNEL ONLY.
THE LIFTING EQUIPMENT MUST WITHSTAND A MINIMUM RATED LOAD EQUAL TO THE WEIGHT OF THE PACKED MACHINE (see paragraph "TECHNICAL SPECIFICATIONS").

The machine is supplied packed and partially assembled, in a cardboard box.
Movement must be by pallet-lift or fork-lift trolley.
The fork lifting points are indicated on the packing.

Fig. 2



6.0 UNPACKING

DURING UNPACKING, ALWAYS WEAR GLOVES TO PREVENT ANY INJURY CAUSED BY CONTACT WITH PACKAGING MATERIAL (NAILS, ETC.).

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 machine packed fully assembled, check that the machine is complete and that there is no visible damage.

If in doubt **do not use the machine** and refer to professionally qualified personnel (to the seller).
The packing (plastic bags, expanded polystyrene, nails, screws, 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.

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

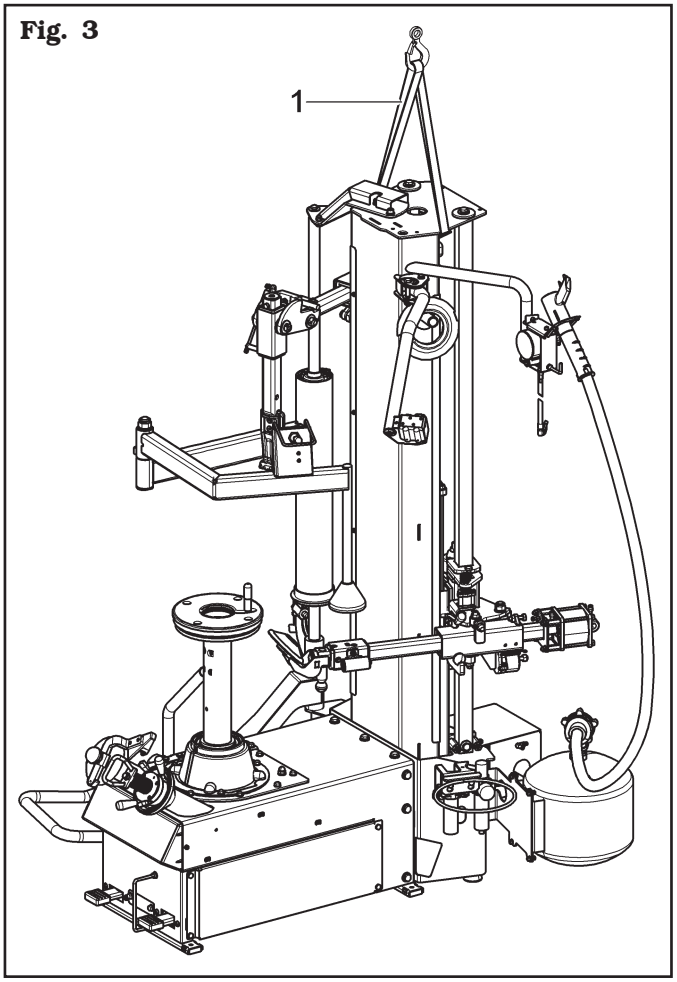
7.0 MOBILIZATION

THE LIFTING EQUIPMENT MUST WITHSTAND A MINIMUM RATED LOAD EQUAL TO THE WEIGHT OF THE MACHINE (SEE PARAGRAPH TECHNICAL SPECIFICATIONS). DO NOT ALLOW THE LIFTED MACHINE TO SWING.

If the machine has to be moved from its normal work post, the movement must be conducted following the instructions listed below.

- Protect the exposed corners with suitable material (Pluribol/cardboard).
- Do not use metallic cables for lifting.
- Sling with belts long at least 450 cm and with a capacity load greater than 2500 kg.
  Then carry out the lifting using the rope (**Fig. 3 ref. 1**).

Fig. 3



8.0 WORKING ENVIRONMENT CONDITIONS

The machine must be operated under proper conditions as follows:

- temperature: 0° + 55° C
- relative humidity: 30 - 95% (dew-free)
- atmospheric pressure: 860 - 1060 hPa (mbar).

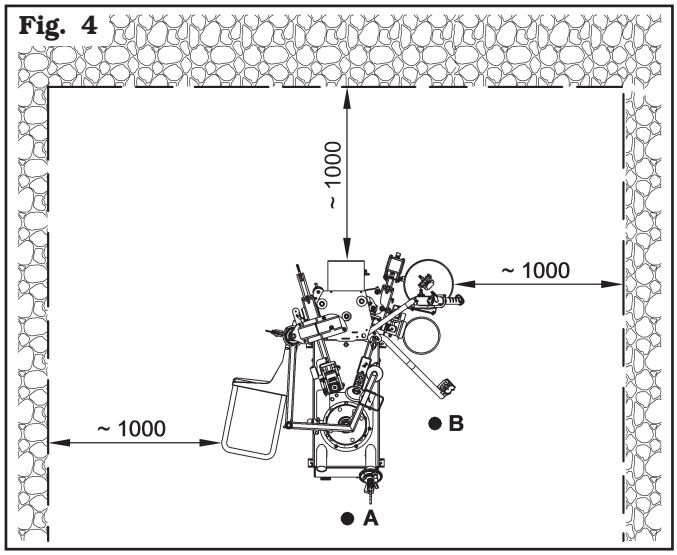
The use of the machine in ambient conditions other than those specified above is only allowed after prior agreement with and approval of the manufacturer.

8.1 Working position

In **Figure 4** it is possible to identify working positions **A** and **B**.
Position **A** is the main position for wheel fitting and removal with the mandrel, while position **B** is ideal to follow tyre inflation operations.
Working in these positions allows better precision and speed during operating phases as well as greater safety for the operator.

8.2 Installation space

Fig. 4



USE THE MACHINE IN A DRY AND ADEQUATELY LIT PLACE, POSSIBLY INDOORS OR ANYWAY IN A ROOFED AREA, THIS PLACE MUST BE IN COMPLIANCE WITH APPLICABLE SAFETY REGULATIONS.

The location of the machine requires a usable space as indicated in **Figure 4**. The positioning of the machine must be according to the distances shown. From the control position the operator is able to observe all the machine and surrounding area.

He must prevent unauthorized personnel or objects that could be dangerous from entering the area.
The machine must be fixed 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/m².
The depth of the solid floor must be sufficient to guarantee that the anchoring bolts hold.

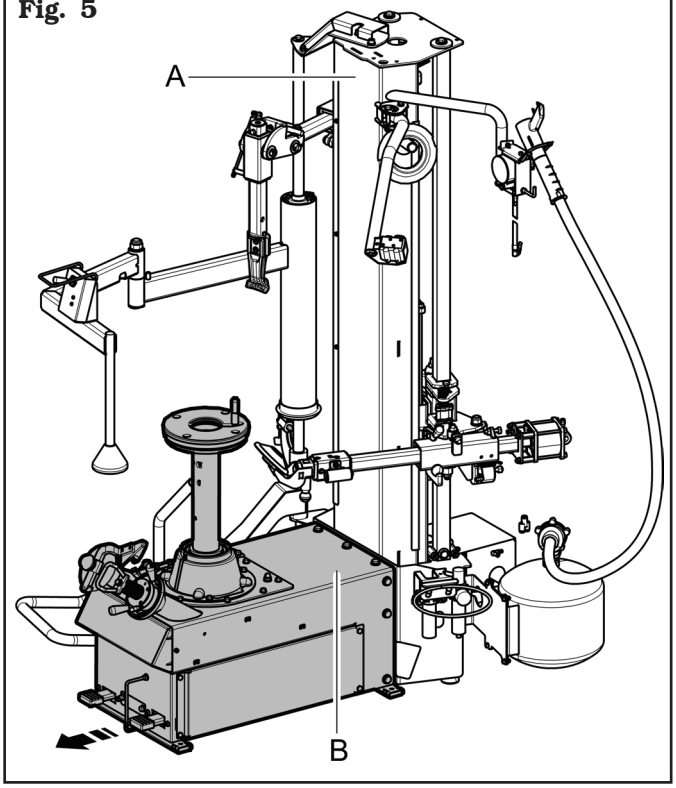
8.3 Lighting

The machine does not require its own lighting for normal working operations.
However, it must be placed in an adequately lit environment.
For correct lighting, use lamps having total power 800/1200 Watt as envisaged by UNI 10380.

8.4 Working area modification

After the delivery, the machine is prearranged to operate on wheel of 41" maximum diameter and a rim diameter (10" - 26"). It's also possible to move the base in relation to the tools column to enlarge the working area from 43" (with rim diameter of 12" - 28") and up to 45" (with rim diameter of 14" - 30") (see **Fig. 5**).

Fig. 5



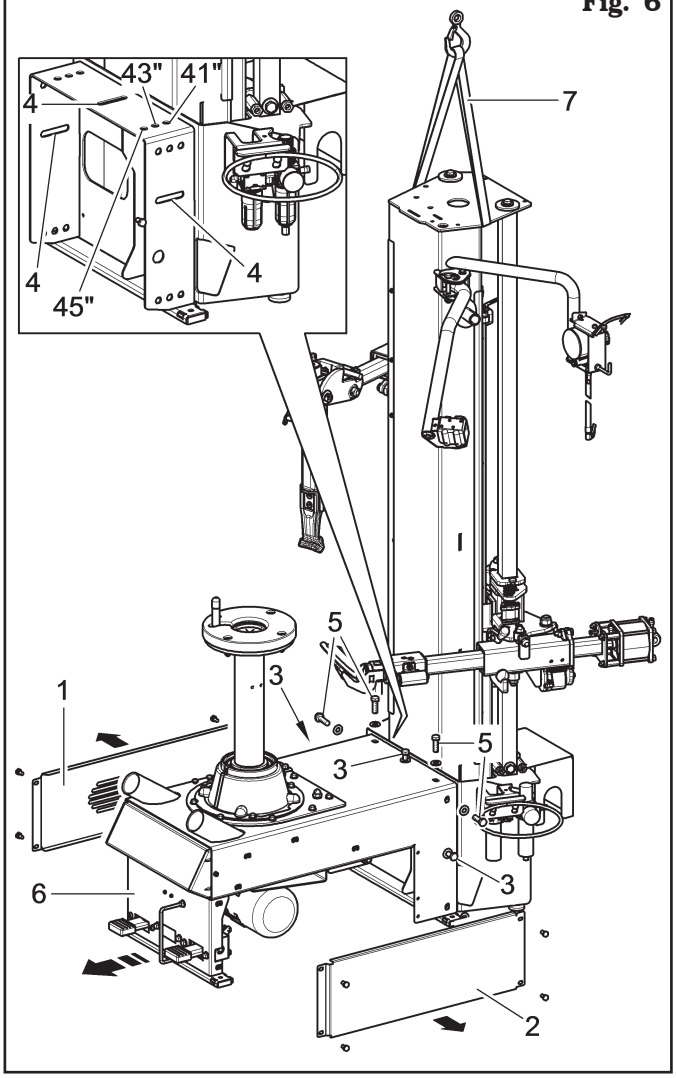
The movement of the base related to the column (**Fig. 5 ref. A**) occurs with the loosening of screws fixing the base (**Fig. 5 ref. B**) to the column and with the sliding of the same base in the slots provided up to the required measurement.

MAKE SURE THAT THE TYRE-CHANGER COLUMN IS STABLE: USE A CABLE HELD BY A HOIST AND HOOK THE CABLE TO THE COLUMN ITSELF (FIG. 6 REF. 7).

1. Remove the lateral guards (**Fig. 6 ref. 1-2**) of the machine.
2. Unscrew the screws (**Fig. 6 ref. 3**) and the nuts near the central slots (**Fig. 6 ref. 4**) paying attention not to remove the nuts from the proper screws.
3. Remove the six remaining screws (**Fig. 6 ref. 5**).
4. Move the base (**Fig. 6 ref. 6**) into the required position (to 43" or 45") and if necessary, use a lifting device (**Fig. 6 ref. 7**).
5. Lock the base three screws (**Fig. 6 ref. 3**) with a couple of 80 Nm.
6. Place six screws (**Fig. 6 ref. 5**) previously removed and lock them on the bases side with a couple of 80 Nm.
7. Assemble again the lateral guards (**Fig. 6 ref. 1-2**) of the machine.

AFTER THE ASSEMBLY, CHECK THE CORRECT POSITION OF THE TOOLS. LOCK THE RIM ON THE MANDREL CENTRE. WITH THE BEAD BREAKER ARM, CHECK THAT THE DISTANCE BETWEEN THE ROLL AND THE RIM EDGES (UPPER AND LOWER) IS ALMOST THE SAME. REPEAT ALL THE PROCEDURES STARTING FROM POINT 1 IF THE DISTANCE IS NOT THE SAME.

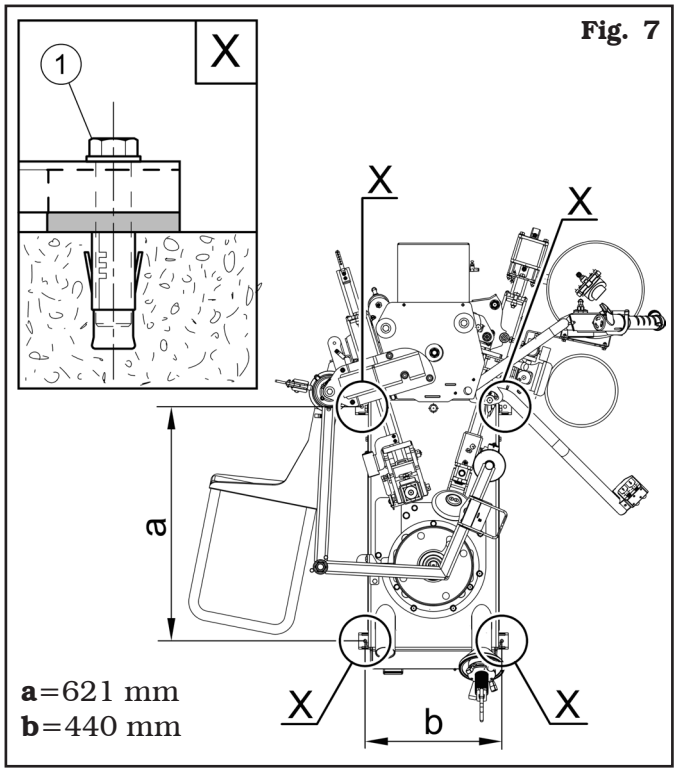
Fig. 6



9.0 ANCHORING SYSTEM

The packed machine is fixed to the support pallet through the holes prearranged on the frame. Such holes can be used also to fix the machine to the ground, through floor anchor small blocks (excluded from supply). Before carrying out the definitive fixing, check that all the anchor points are laid down flat and correctly in contact with the fixing surface itself. If not so, insert shimming profiles between the machine and the fixing lower surface, as indicated in **Fig. 7**.

Fig. 7



- Execute 4 holes with 12 mm diameter on the floor by the holes on the bottom floor;
- insert the small blocks (excluded from supply) into the holes;
- fix the machine to the ground with 4 M12x120 mm screws (excluded from supply) (**Fig. 7 ref. 1**) (or with 4 12x80 mm stud bolts (excluded from supply)). Tighten the screws with an approximate tightening torque of 70 Nm.

10.0 MACHINE ASSEMBLY

After having freed the various components from the packing check that they are complete, and that there are no anomalies, then comply with the following instructions for the assembly of the components making use of the attached series of illustrations.

10.1 Fixtures contained in the packing

The packing case contains also the fixtures box. Check that all the parts listed are there.

Code	Description	N.
VSB1157000	*Two-faced burnished cone*	**1**
VS710013421	*Reverse wheels protection*	**1**
VS710090730	*Entrainer*	**1**
VS790011620	*Bead sliding foil*	**1**
VSG1000A138	*Locking device with quick nut*	**1**
VSB0223000	*Grease holding ring*	**1**
VS520169	*Nema plug L6-20P (only for RWC1150.30IB model)*	**1**
VSG800A37	*Mounting grease*	**1**
VSG800A38	*Brush*	**1**
VSG1000A127	*Wheel lifting device*	**1**
PLUS93	*Rotating bead pressing arm*	**1**

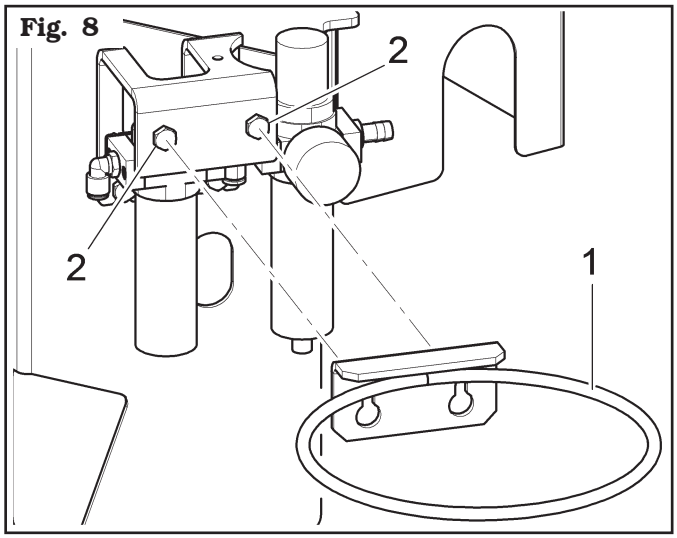
10.2 Assembly procedures

Remove the packaging and free the machine from the wrapping. Lift the machine and position it on the floor.

10.3 Grease holding ring mounting

Mount the grease bucket holder ring (**Fig. 8 ref. 1**), in the accessory box, using the 2 provided screws already present on machine body (**Fig. 8 ref. 2**).

Fig. 8

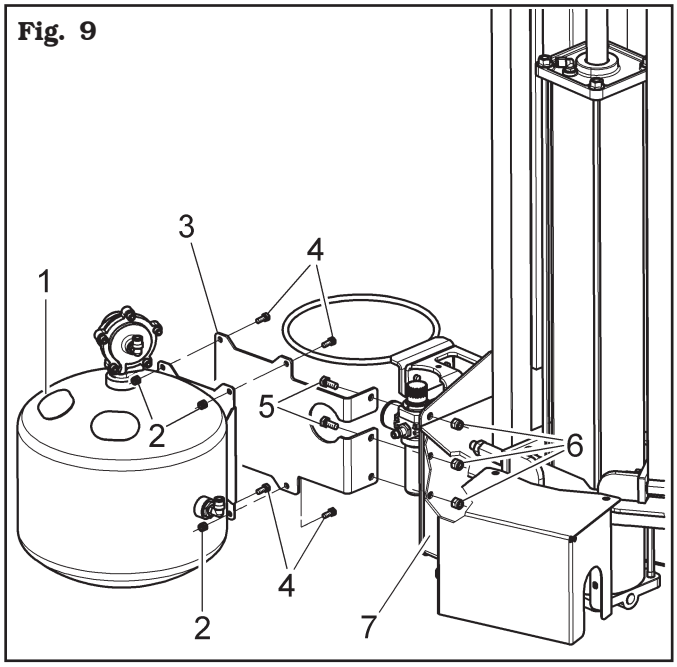


10.4 Tubeless inflation unit mounting

Assemble "Tubeless inflation" unit to the machine keeping to the following instructions:

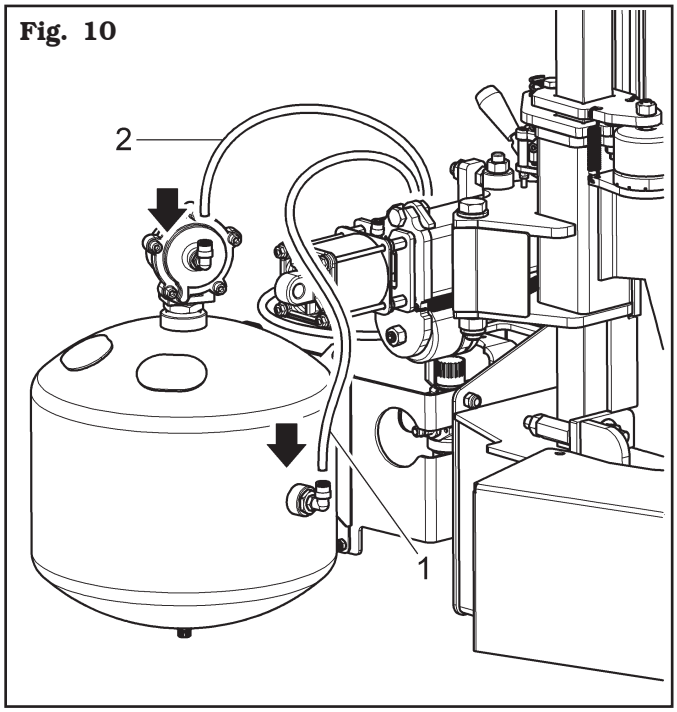
- fix the tank (**Fig. 9 ref. 1**) to the support flange (**Fig. 9 ref. 3**) using the screws (**Fig. 9 ref. 4**) and nuts (**Fig. 9 ref. 2**) equipped on issue;
- fix the flange (**Fig. 9 ref. 3**) to the machine (**Fig. 9 ref. 7**) using the screws (**Fig. 9 ref. 5**) and nuts (**Fig. 9 ref. 6**).

Fig. 9



Connect the black pipe (**Fig. 10 ref. 1**) and the blue pipe (**Fig. 10 ref. 2**) on the provided quick couplings as shown in figure **Fig. 10**.

Fig. 10

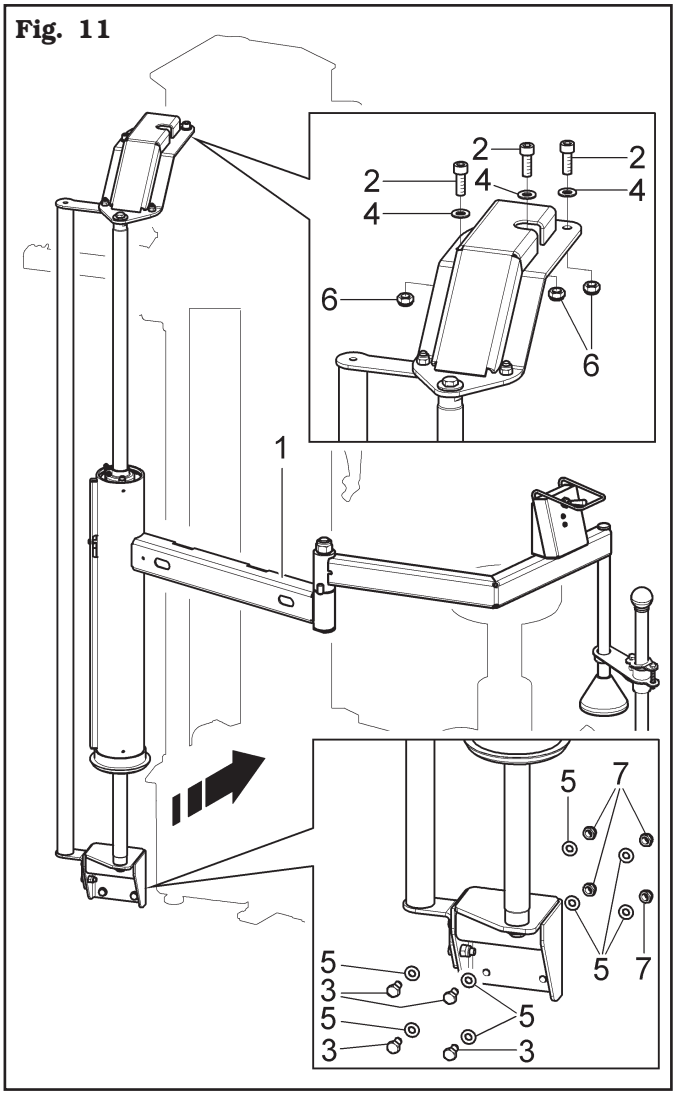


10.5 Installation of PLUS93 Device

BEFORE PERFORMING ANY OPERATION, THE POWER SUPPLY OF THE TYRE-CHANGING MACHINE MUST BE DISCONNECTED.

Fix the Device (**Fig. 11 ref. 1**) to the machine, as indicated in the figure, with screws (**Fig. 11 ref. 2 and 3**), washers (**Fig. 11 ref. 4 and 5**) and nuts (**Fig. 11 ref. 6 and 7**), supplied.

Fig. 11

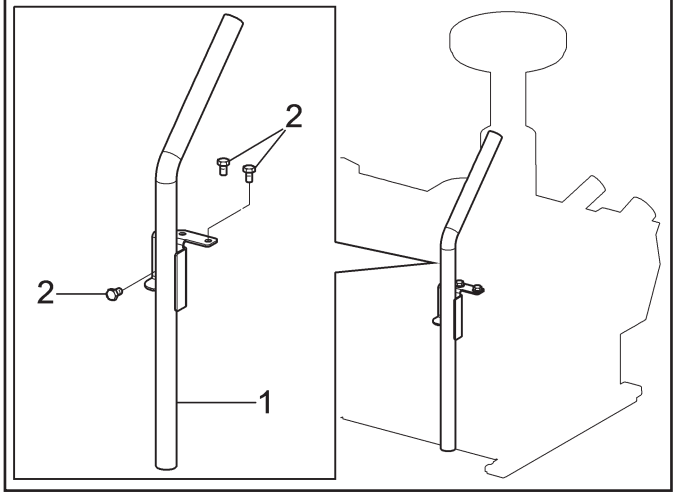


10.6 Installation of VSG1000A127 Device

BEFORE PERFORMING ANY OPERATION, THE POWER SUPPLY OF THE TYRE-CHANGING MACHINE MUST BE DISCONNECTED.

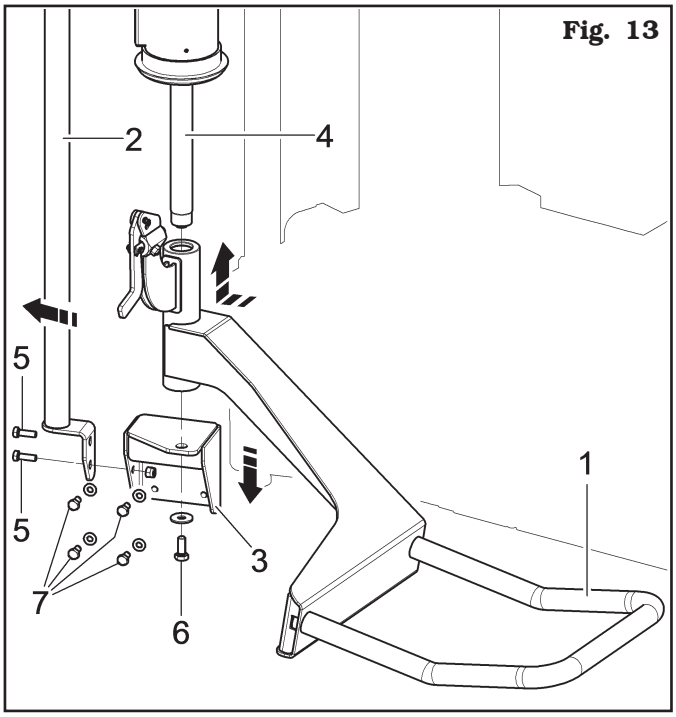
Fix the guide tube (**Fig. 12 ref. 1**) to the tyre changing machine, using the supplied screws (**Fig. 12 ref. 2**).

Fig. 12



Unscrew the lower screws (**Fig. 13 ref. 5**) of the retainer pipe (**Fig. 13 ref. 2**) and the cylinder fastening screw (**Fig. 13 ref. 6**). Unscrew the screws (**Fig. 13 ref. 7**) fixing the lower bracket (**Fig. 13 ref. 3**) to the machine. Extract the bracket downwards (**Fig. 13 ref. 3**) from the shaft (**Fig. 13 ref. 4**). Mount the lifting device unit (**Fig. 13 ref. 1**) to the device as indicated in the figure. At the end fix the retainer pipe again following the operations described above in reverse order.

Fig. 13



10.7 Electrical connections (only for RWC1150.30IB model)

EVEN THE TINIEST PROCEDURE OF AN ELECTRICAL NATURE MUST BE CARRIED OUT BY PROFESSIONALLY QUALIFIED STAFF.

BEFORE CONNECTING THE MACHINE MAKE SURE THAT:
- **THE MAIN POWER RATING CORRESPONDS TO THE MACHINE RATING AS SHOWN ON THE MACHINE PLATE;**
- **ALL MAIN POWER COMPONENTS ARE IN GOOD CONDITION;**
- **THE ELECTRICAL SYSTEM IS PROPERLY GROUNDED (GROUND WIRE MUST BE THE SAME CROSS-SECTION AREA AS THE LARGEST POWER SUPPLY CABLES OR GREATER);**
- **MAKE SURE THAT THE ELECTRICAL SYSTEM FEATURES A CUTOUT WITH DIFFERENTIAL PROTECTION SET AT 30 MA.**

As envisaged by the regulations in force, the machine is not equipped with a master circuit breaker, but simply has a plug-socket connection to the electrical mains. The machine is supplied with a cable. A plug corresponding to the following requirements must be connected to the cable:

VOLTAGE	PHASE	FREQUENCY	AMP	PLUG
220V	1Ph	60Hz	20A	NEMA L6-20

On delivery, the machines are pre-set to operate at a single-phase voltage.

FIT A TYPE-APPROVED (AS REPORTED BEFORE) PLUG TO THE MACHINE CABLE (THE GROUND WIRE IS YELLOW/GREEN AND MUST NEVER BE CONNECTED TO ONE OF THE TWO PHASE LEADS).

MAKE SURE THAT THE ELECTRICAL SYSTEM IS COMPATIBLE WITH THE RATED POWER ABSORPTION SPECIFIED IN THIS MANUAL AND APT TO ENSURE THAT VOLTAGE DROP UNDER FULL LOAD WILL NOT EXCEED 4% OF RATED VOLTAGE (10% UPON START-UP).

FAILURE TO OBSERVE THE ABOVE INSTRUCTIONS WILL IMMEDIATELY INVALIDATE THE WARRANTY.

10.8 Air connection

Connect the tyre changer to the workshop compressed air system by means of plug (**Fig. 14 ref. 1**).

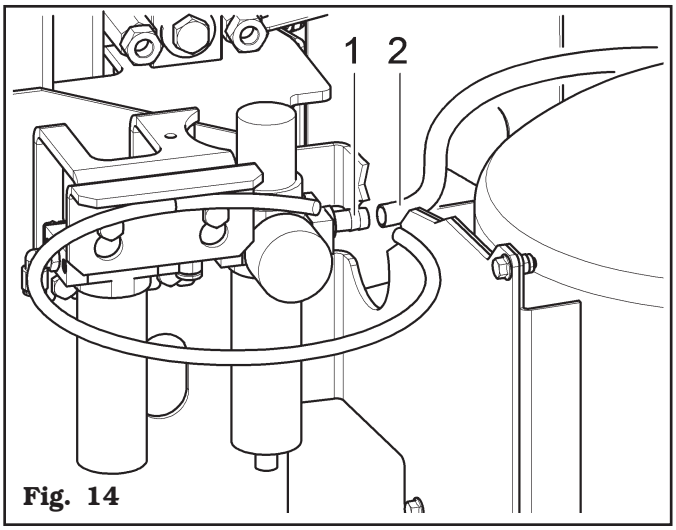


Fig. 14

The pressurized pipe coming from the mains must have a section of 1/4x10 (**Fig. 14 ref. 2**).
The filter unit is already mounted on the machine.

10.9 Controls

BEFORE STARTING UP THE TYRE-CHANGER, BE SURE TO BECOME FAMILIAR WITH THE LOCATION AND OPERATION OF ALL CONTROLS AND CHECK THEIR PROPER OPERATION (SEE PAR. "CONTROLS").

CARRY OUT A DAILY CHECK OF MAINTAINED-TYPE CONTROLS CORRECT FUNCTIONING, BEFORE STARTING MACHINE OPERATION.

11.0 CONTROLS

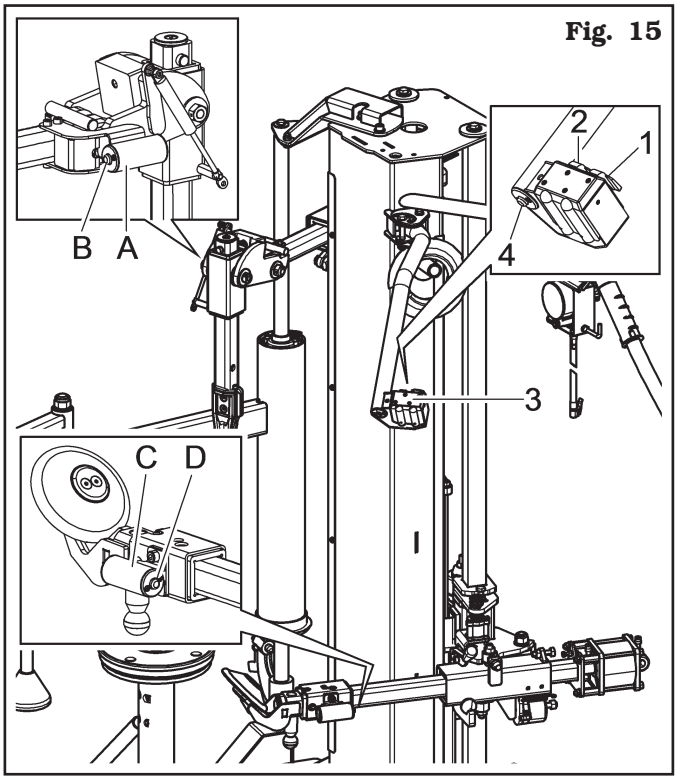
11.1 Control device

It consists of two push buttons with a different function, inserted on a single control block (**Fig. 15 ref. 3**).
The two pneumatic push buttons present in the control drive the vertical movement of the bead breaker roll arm (**Fig. 15 ref. 1**) and of the tool arm (**Fig. 15 ref. 2**).
The vertical control unit is also equipped with a push button for the forward drive of the bead breaking roll (**Fig. 15 ref. 4**).

- • Handle "**A**" : through a thrust and return movement and together with "**B**" unlocking push button it enables the tool setting on the wheel diameter.
- • Handle "**C**" : through a thrust and return movement and together with "**D**" unlocking push button it enables the bead breaker rolls setting on the wheel diameter.
- Unlocking push button "**B**" pushed before handle "**A**" for tool positioning. Releasing the push button, the tool locks itself into the set position.
- Unlocking push button "**D**" pushed before handle "**C**" for bead breaker roll positioning. Releasing the push button, the roll locks itself into the set position.

"B" AND "D" PUSH BUTTONS MUST BE PRESSED BEFORE OPERATING THE CORRESPONDING "A" AND "C" HANDLES; OTHERWISE, THE HANDLES DO NOT ALLOW ANY MOVEMENT.

Fig. 15



11.2 Pedalboard

Inflation **"pedal A"**, with "hands-on" operation, delivers air at controlled pressure (max 4,2 ± 0,2 bar).
The pedal has three positions:

1. released position: it closes air outlets.
2. middle stroke position, with "hands-on" operation: it lets air out from inflation pipe connected to the gauge;
3. pressed all the way in position: jet of air from the inflation nozzle to assist the beading in of the tyre, and, at the same time, the concurrent air leak from inflation pipe.

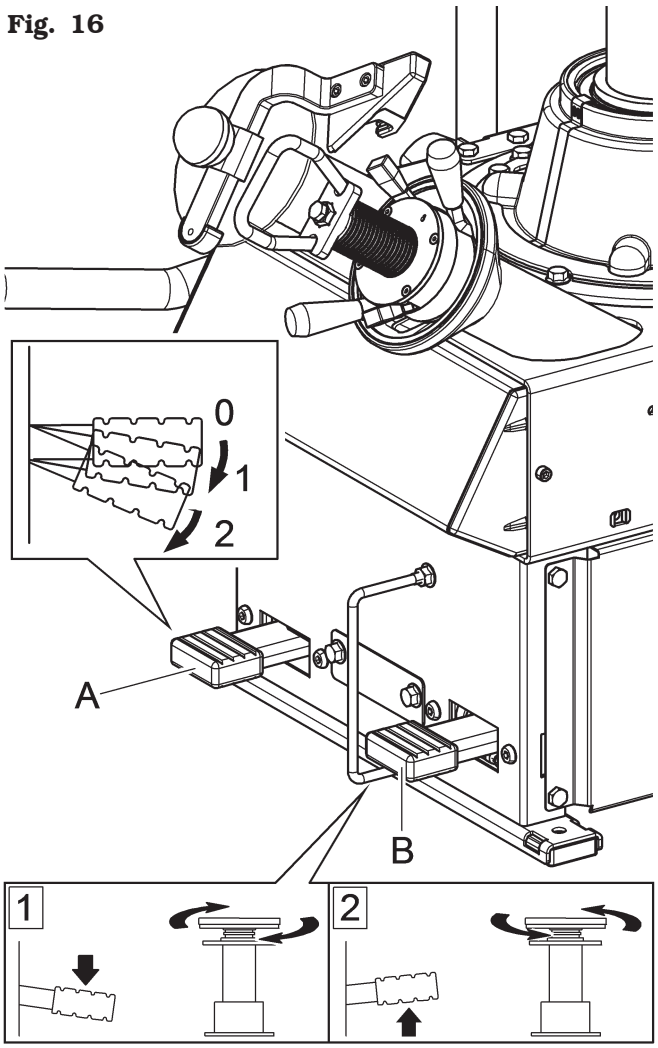
DO NOT CHANGE THE SET OPERATING PRESSURE VALUE BY MEANS OF THE MAXIMUM PRESSURE VALVES. THE MANUFACTURER SHALL NOT BE RESPONSIBLE FOR INJURY OR DAMAGE ARISING FROM UNAUTHORISED CHANGES.

"Pedal B" has two maintained control operative positions. When it is pushed downwards it controls mandrel motor clockwise rotary movement. When the pedal is lifted upwards it operates the opposite movement.

Only for RWC1150.30IB model

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

Fig. 16

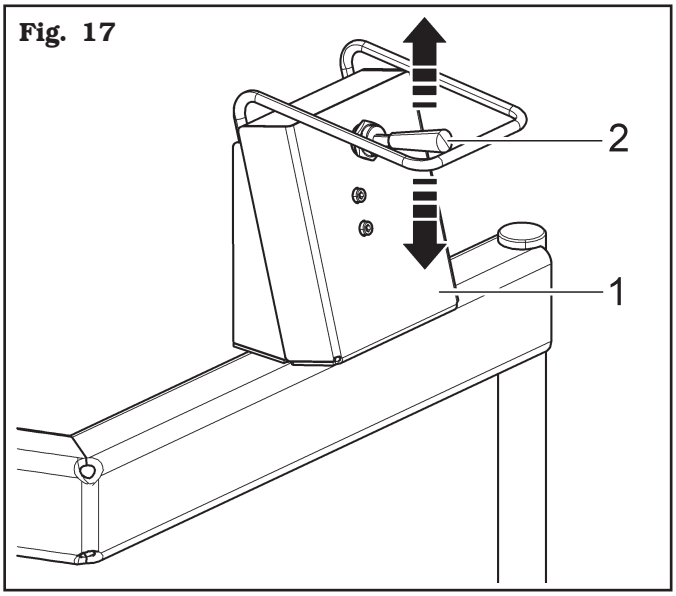


KEY (pedal **ref. A**)
ref. 1- Tyre inflation with pressure gauge
ref. 2- Tyre inflation with pressure gauge + inflation nozzle

11.3 Rotating bead pressor arm and wheel lifting device control unit

It is made up of an handle control (**Fig. 17 ref. 1**), positioned on the device. Using this handle control it's possible to control the vertical shifting of the rotary bead depressing unit (**Fig. 1 ref. 18**) with lifting device (**Fig. 1 ref. 19**). Lift the lever (**Fig. 17 ref. 2**) to operate the upwards translation, and lower the lever (**Fig. 17 ref. 2**) to perform the downwards translation. The device arms positioning next to the tyre is a completely manual operation.

Fig. 17



12.0 USING THE MACHINE

12.1 Precaution measures during tyre removal and fitting

Before fitting a tyre, observe the following safety rules:

- rim and tyre must be clean, dry and in good condition; if necessary, remove the balancing weights and clean the rim. Check that:
  - neither the bead nor the tread of the tyre are damaged;
  - the rim does not produce dents and/or deformation (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 tyre bead, using specific tyre lubricants only;
- replace the inner tube valve with a new valve, if the tyre tube has a metal valve, replace the grommet;
- make sure that the tyre is the right size for the rim; on the contrary, never fit a tyre unless you are sure it is of the right size (the rated size of the rim and tyre is usually printed directly on each of them);
- do not use compressed air or water jets to clean the wheels on the machine.

12.2 Preliminary operations - Preparing the wheel

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

REMOVE THE VALVE STEM AND ALLOW THE TYRE TO COMPLETELY DEFLATE.

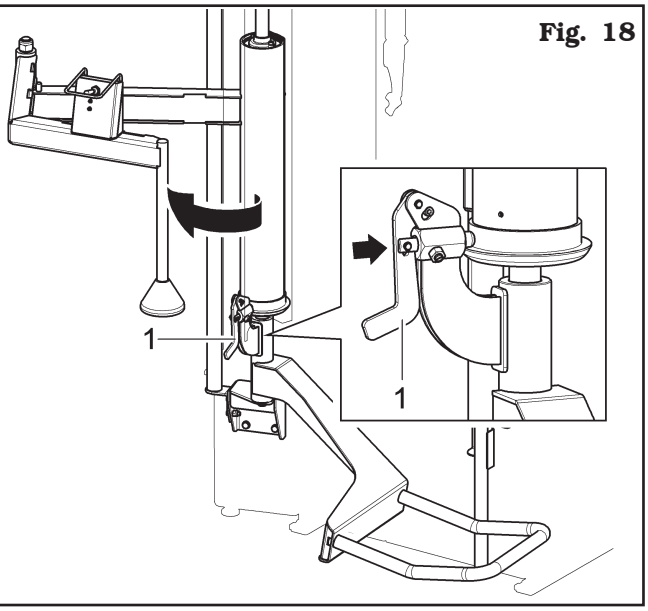
- Establish from which side the tyre should be demounted, checking the position of the groove.
- Find the rim locking type.
- Try to establish the special types of wheels, such as “TD” and “AH”, in order to improve locking, bead breaking, assembly and disassembly performances.

WHEN HANDLING WHEELS WEIGHING MORE THAN 10 KG AND/OR WITH A FREQUENCY OF MORE THAN 20/30 WHEELS PER HOUR, THE LIFTING DEVICE SHOULD BE USED.

12.3 Use of the lifting device

MAKE SURE THE CLAMPING HOOK (FIG. 18 REF. 1) IS POSITIONED AS INDICATED IN FIG. 18 AND CLOSE PLUS93 DEVICE IN REST POSITION.

Fig. 18



1. After having placed the wheel on the lifting device (**Fig. 19 ref. 1**), lift the control unit's lever (**Fig. 19 ref. 2**) and bring the wheel to a level where it can be shifted to the mandrel by hand (**see Fig. 20**).

Fig. 19

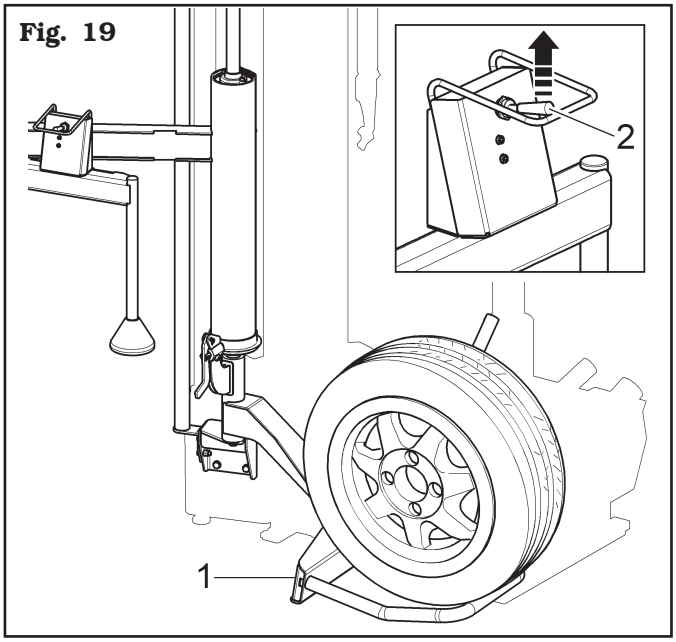
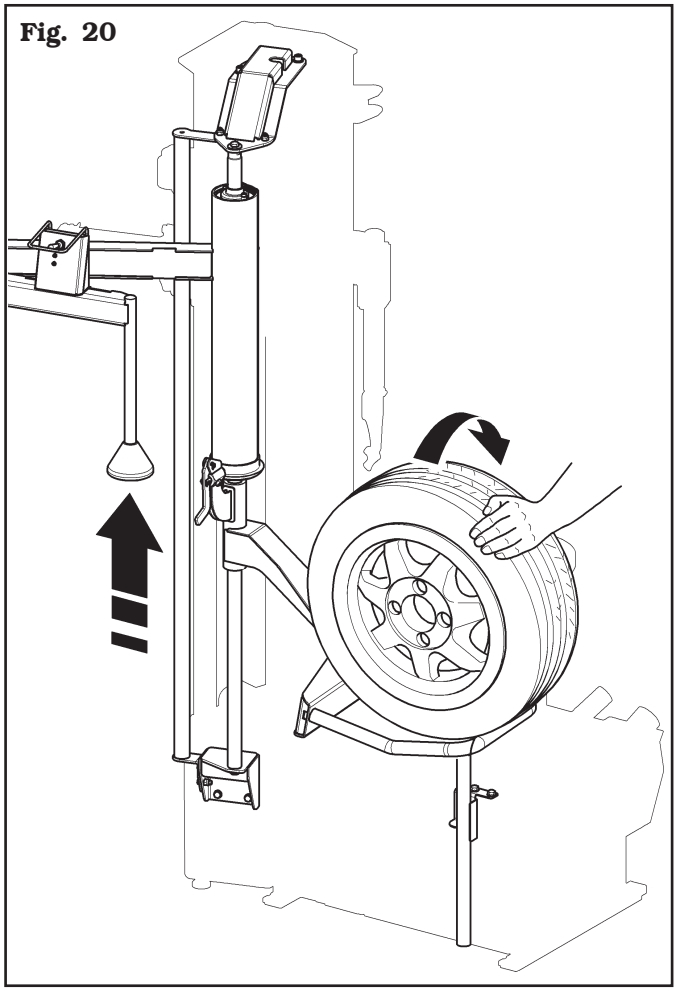


Fig. 20



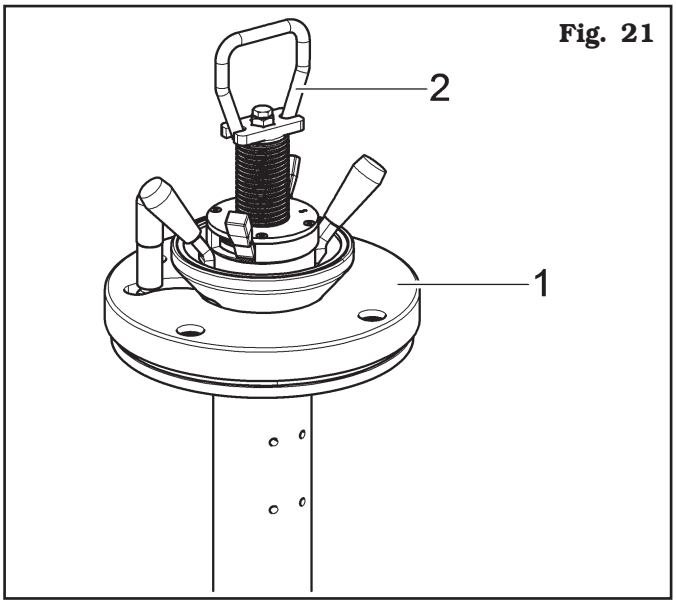
2. Place the wheel on the mandrel.
3. Lower the control unit's lever to lower the lifting device.

12.4 Wheel clamping

12.4.1 Locking of car wheels

All wheels must be locked on the rubber plate (**Fig. 21 ref. 1**) through the central hole using the proper locking device (**Fig. 21 ref. 2**).

Fig. 21

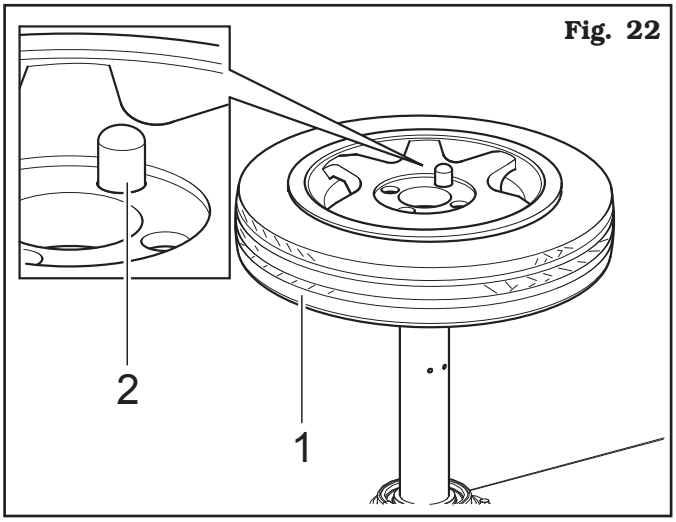


IN CASE OF USE OF RIMS WITHOUT CENTRAL HOLE, IT'S NECESSARY TO USE THE PROPER FIXTURE (AVAILABLE ON DEMAND).

To lock a rim proceed as follows:

1. Dowel the wheel (**Fig. 22 ref. 1**) on the locking platform and check that the dragging pin (**Fig. 22 ref. 2**) enter in a hole placed on the rim hub.

Fig. 22



2. If the wheel hub is higher then the dragger (**Fig. 23 ref. 2**), use the extension (**Fig. 23 ref. 1**) supplied on issue.

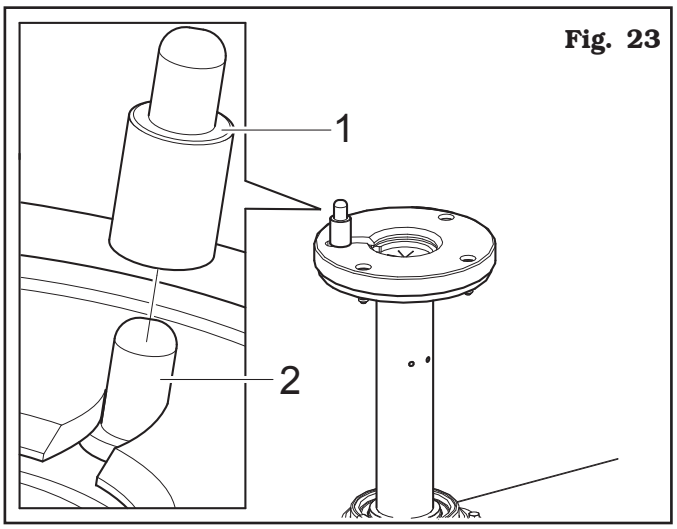


Fig. 23

3. Insert the shaft complete with cone (**Fig. 24 ref. 1**) on the rim (**Fig. 24 ref. 2**).

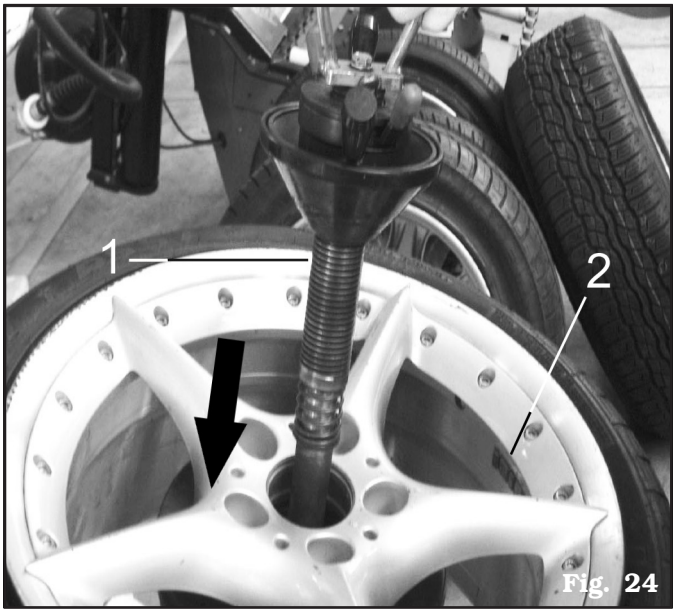


Fig. 24

4. Through the proper handle (**Fig. 25 ref. 1**), push downwards (**Fig. 25 ref. 2**), turn it through 90° (**Fig. 25 ref. 3**) and lift the shaft (**Fig. 25 ref. 4**) to hook it into the hole.

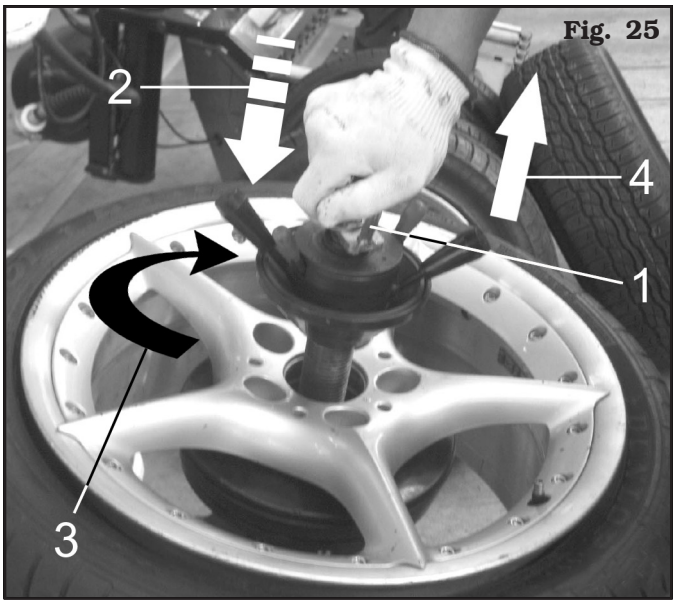


Fig. 25

5. Trough the internal little levers (**Fig. 26 ref. 1**), loose the ring nut and approach ring nut (**Fig. 26 ref. 3**) and cone (**Fig. 26 ref. 4**) to the rim (**Fig. 26 ref. 2**).

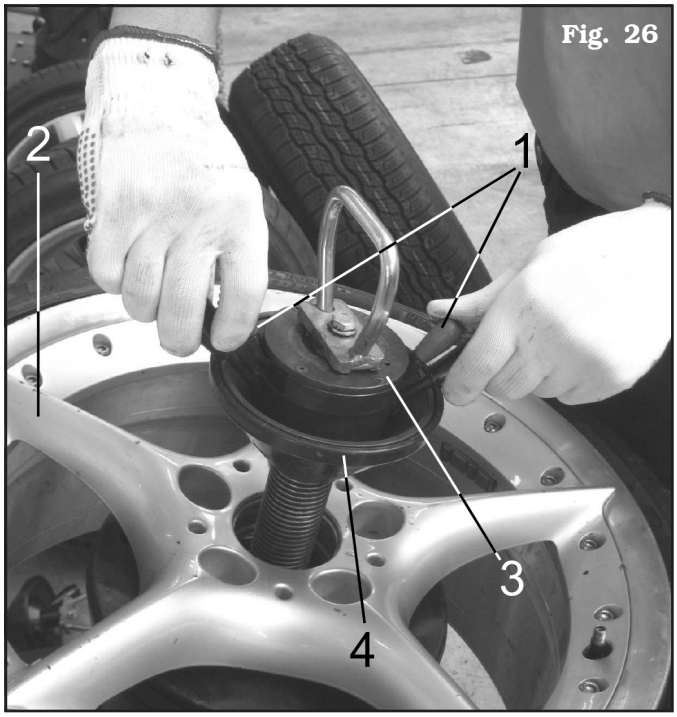


Fig. 26

6. Then, turn the ring nut (**Fig. 27 ref. 1**) through the external levers (**Fig. 27 ref. 2**) until the cone complete clamping (**Fig. 27 ref. 3**) on the wheel (**Fig. 27 ref. 4**).

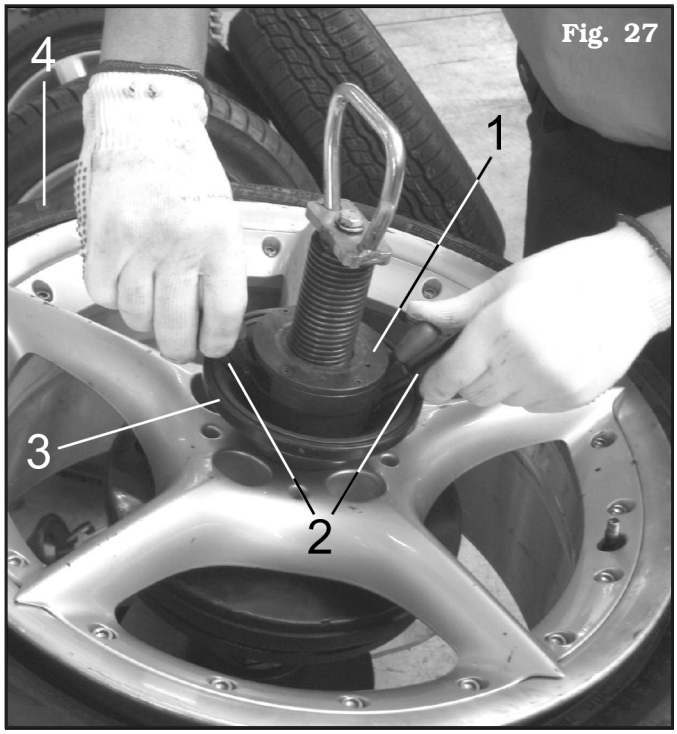
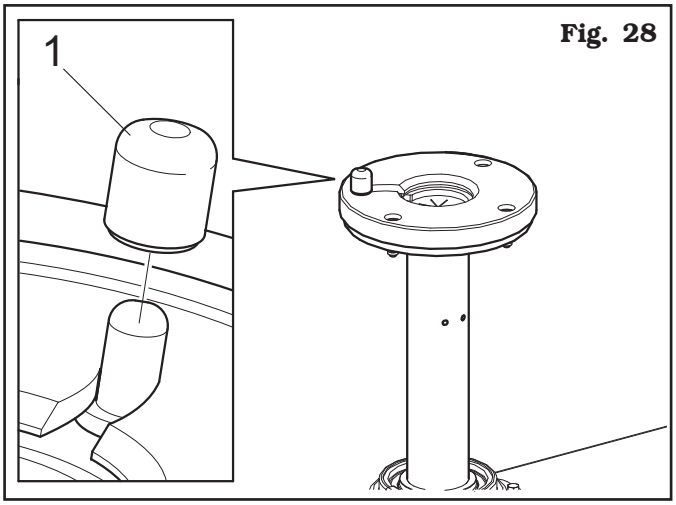


Fig. 27

7. At the end of the operations, loosen the device releasing first the cone with the external levers and then moving the ring nut and the cone away from the rim with the small levers.
8. Lower the shaft to release it from its seat, turn it of 90° on counter-clockwise and extract it from the hole through the proper handle.

9. For wheels with alloy rims, use the proper plastic guard (**Fig. 28 ref. 1**).

Fig. 28

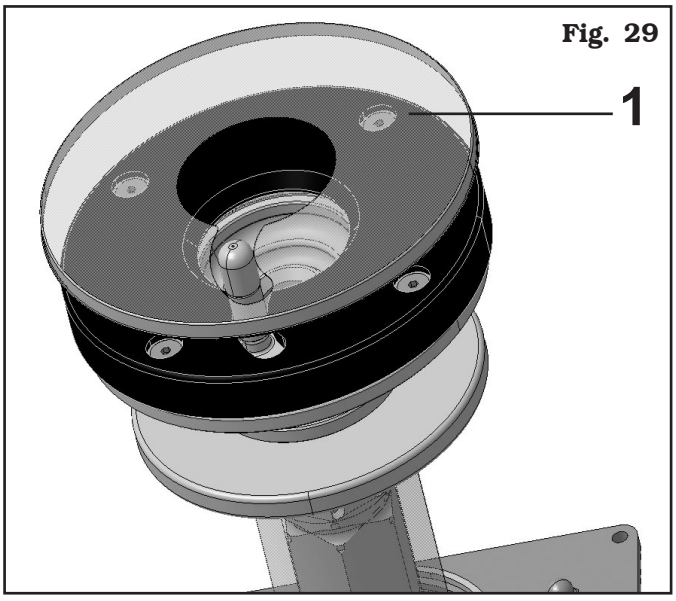


NEVER LEAVE THE WHEEL FITTED ON THE MACHINE FOR A PERIOD LONGER THAN NECESSARY FOR CARRYING WORK AND IN ANY CASE NEVER LEAVE IT UNATTENDED.

12.4.2 Reverse wheel pan protection

In case of use of reverse wheels, to protect the rim, apply on the rubber platform a protection made of a transparent plastic material available on demand (**Fig. 29 ref. 1**). We suggest a constant replacement of it and in any case if there are visible damages (see **Fig. 29**).

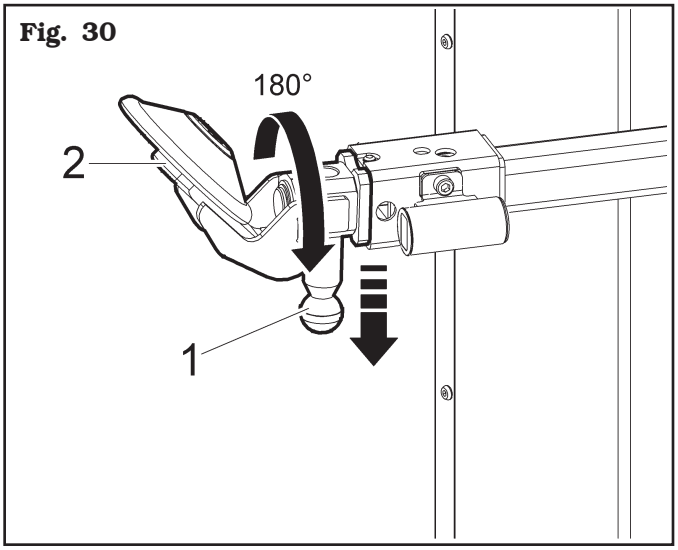
Fig. 29



12.5 Bead breaking through vertical roll

1. After having locked the wheel on the mandrel, move the vertical bead breaker roll (**Fig. 30 ref. 2**) in working position, unlocking the special lever (**Fig. 30 ref. 1**) and turning it at 180°.

Fig. 30



MOVE VERY CAREFULLY THE VERTICAL BEAD BREAKING ARM TO WORKING POSITION, IN ORDER TO AVOID POSSIBLE HANDS CRUSHING.

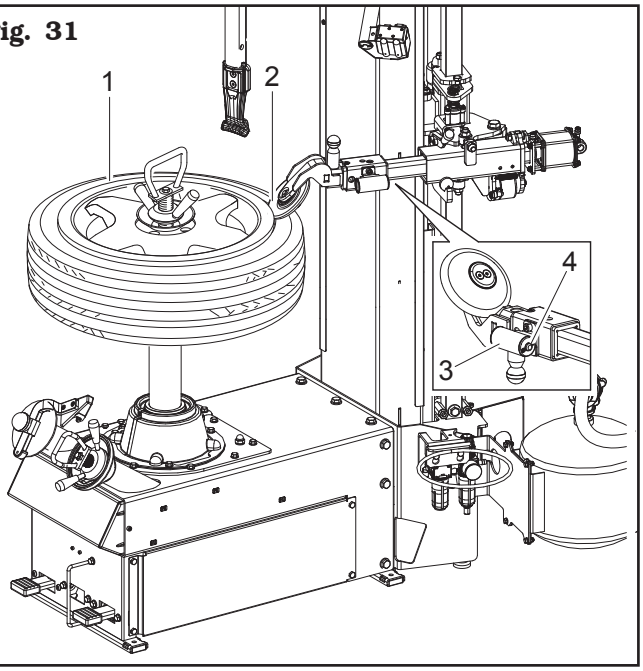
ALWAYS CHECK THAT THE ARM IS CORRECTLY HOOKED.

Move the bead breaker roll close (**Fig. 31 ref. 2**) to the rim edge (**Fig. 31 ref. 1**), pressing the push button (**Fig. 15 ref. 1**).

USE VERY CAREFULLY THE VERTICAL BEAD BREAKING ROLLER IN ORDER TO AVOID POSSIBLE HANDS CRUSHING.

2. Define roll position on rim diameter through the handle (**Fig. 31 ref. 3**) after the arm has been unlocked with the push button (**Fig. 31 ref. 4**) positioned on the same handle.

Fig. 31

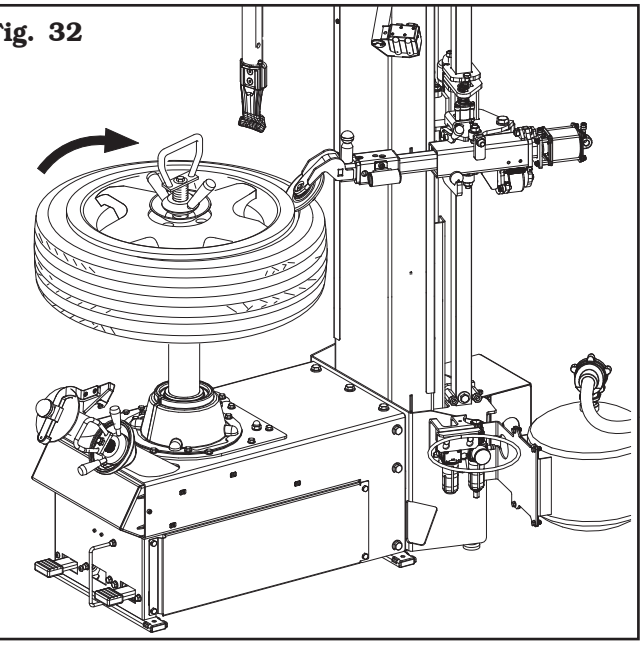


3. Only at this point rotate the wheel clockwise (see **Fig. 32**) pressing the pedal (**Fig. 16 ref. B**) and activating the push button at the same time (**Fig. 15 ref. 4**), keeping it pressed until the bead breaker roll is not inserted in the wheel. Keep on rotating the wheel until the operation is completed (see **Fig. 33**).

THE BEADING DISC MUST EXERT PRESSURE ON THE TYRE BEAD BUT NEVER ON THE RIM.

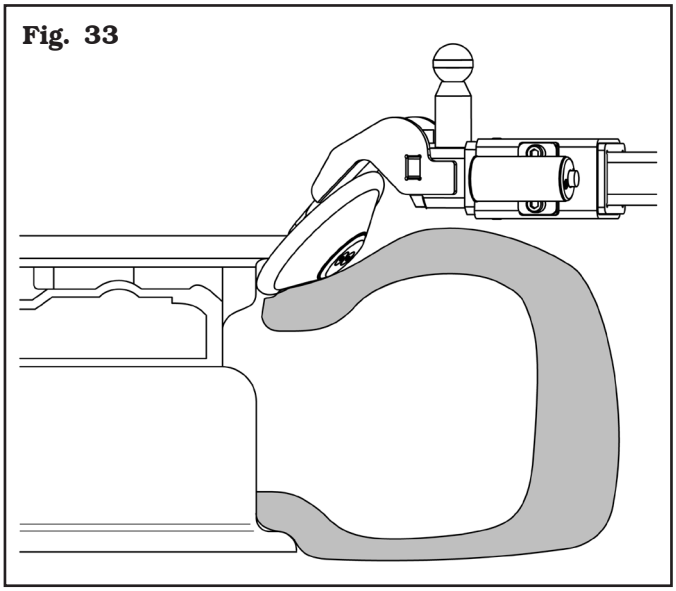
USE VERY CAREFULLY THE VERTICAL BEAD BREAKING ROLLER IN ORDER TO AVOID POSSIBLE HANDS CRUSHING.

Fig. 32



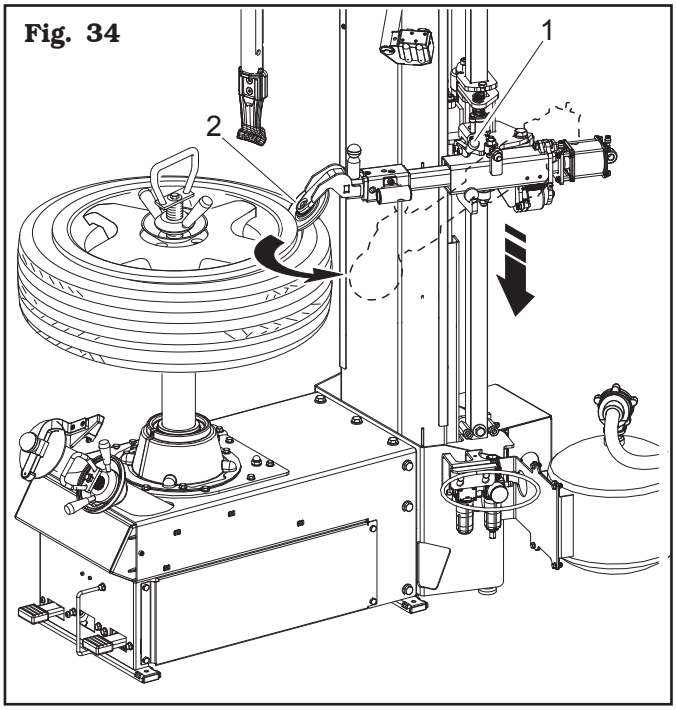
4. Once bead breaking on the upper part has been terminated, disengage the roll from the rim releasing the push button (**Fig. 15 ref. 4**) and activating the push button (**Fig. 15 ref. 1**).

Fig. 33



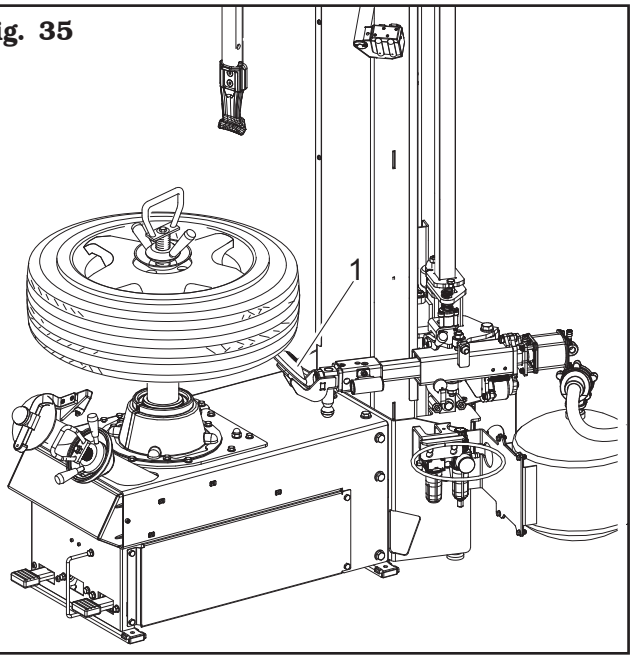
5. Operate lever (**Fig. 34 ref. 1**) to allow the bead breaker arm roll (**Fig. 34 ref. 2**) to open and go below the rim without modifying its previously adjusted position.

Fig. 34



6. Manually close the bead breaker roll arm into working position. Turn the bead breaker roll again at 180° as indicated in **Fig. 30**. Then move the roll closer (**Fig. 35 ref. 1**) pressing the push button (**Fig. 15 ref. 1**).

Fig. 35



7. Only at this point rotate the wheel clockwise (see **Fig. 36**) pressing the pedal (**Fig. 16 ref. B**) and activating the push button at the same time (**Fig. 15 ref. 4**), keeping it pressed until the bead breaker roll is not inserted in the wheel. Keep on rotating the wheel until the operation is completed (see **Fig. 37**).

THE BEADING DISC MUST EXERT PRESSURE ON THE TYRE BEAD BUT NEVER ON THE RIM.

USE VERY CAREFULLY THE VERTICAL BEAD BREAKING ROLLER IN ORDER TO AVOID POSSIBLE HANDS CRUSHING.

Fig. 36

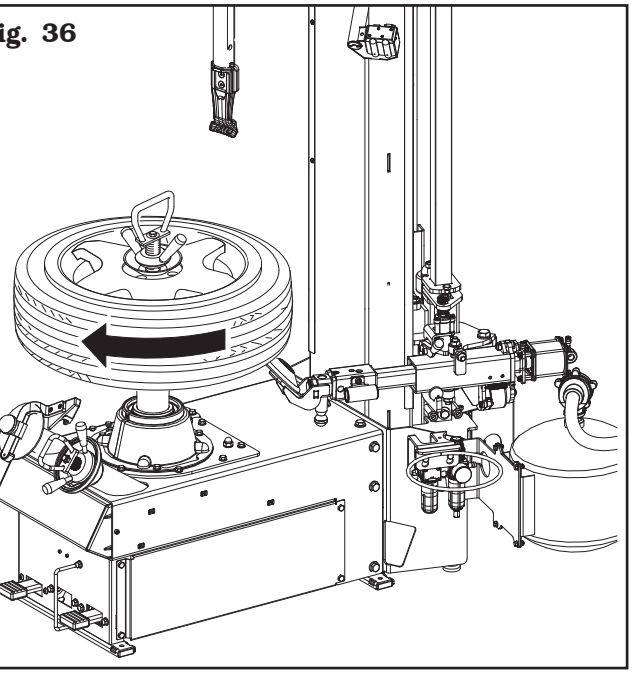
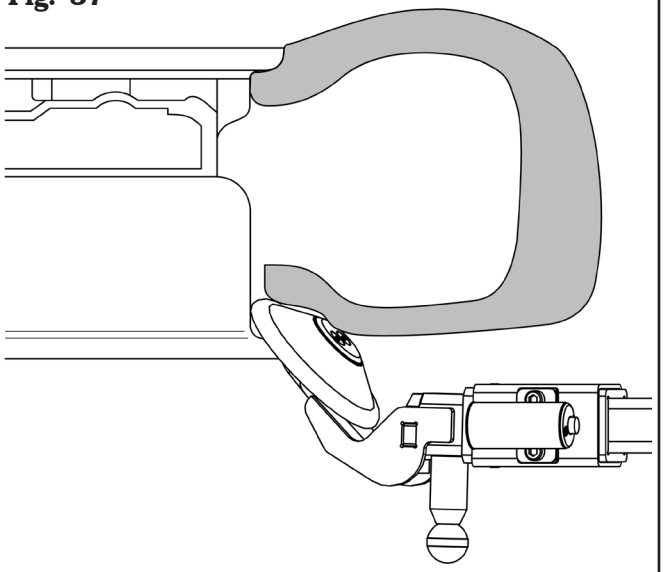


Fig. 37



WHILE THIS OPERATION IS BEING CARRIED OUT PAY ATTENTION NOT TO DEFORM THE TYRE SIDE. GREASE THE BEAD BEFORE THE ROLL RE-ENTERS.

USE ONLY TYRE LUBRICANTS. SUITABLE LUBRICANTS CONTAIN NO WATER, HYDROCARBONS, OR SILICON.

8. Once bead breaking on the lower part has been terminated, move the roll to rest position releasing the push button (**Fig. 15 ref. 4**) and activating the push button (**Fig. 15 ref. 1**).

12.6 Demounting the tyre

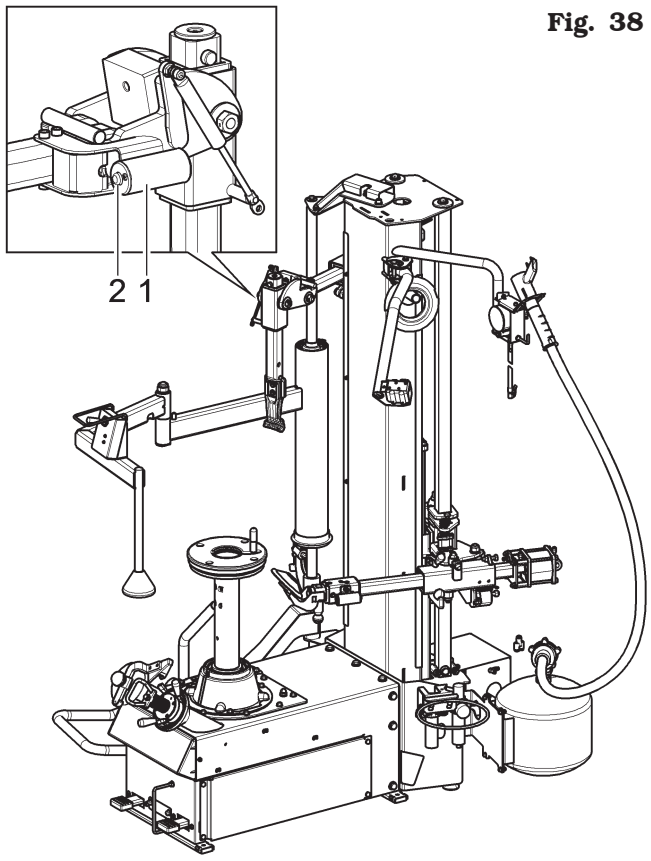
When both beads are broken, the tyre can be demounted.

1. Move the tool unit to assembly position.
2. Define the tool position on the rim diameter through the handle (**Fig. 38 ref. 1**) after the arm has been unlocked with the push button (**Fig. 38 ref. 2**) positioned on the handle itself.

MOVE VERY CAREFULLY THE TOOLS HOLDER ARM TO WORKING POSITION, IN ORDER TO AVOID POSSIBLE HANDS CRUSHING.

ALWAYS CHECK THAT THE ARM IS CORRECTLY HOOKED.

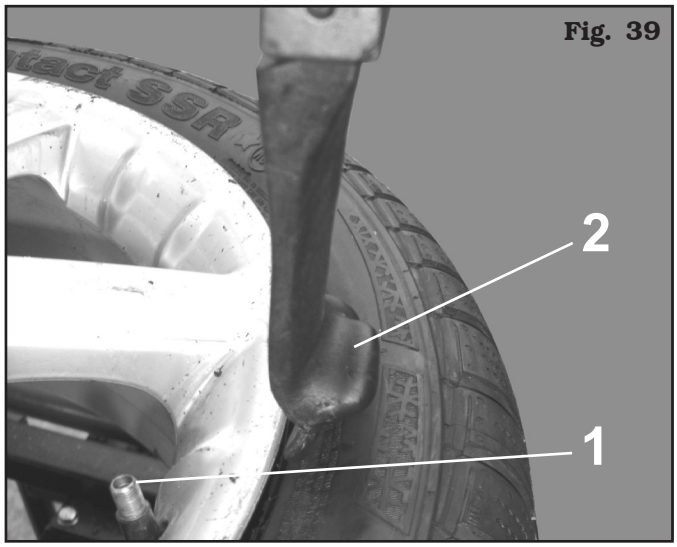
Fig. 38



3. Press pedal (**Fig. 16 ref. A**) to rotate the wheel clockwise until the valve stem reaches “hour 1” position (**Fig. 39 ref. 1**).
4. Position the tool (**Fig. 39 ref. 2**) just next the rim edge using the provided push button (**Fig. 15 ref. 2**) (see **Fig. 40**). While this phase is being carried out, stay just next to a zone in the tyre where bead breaking has been effectuated.

USE VERY CAREFULLY THE TOOL HOLDER ARM IN ORDER TO AVOID POSSIBLE HANDS CRUSHING.

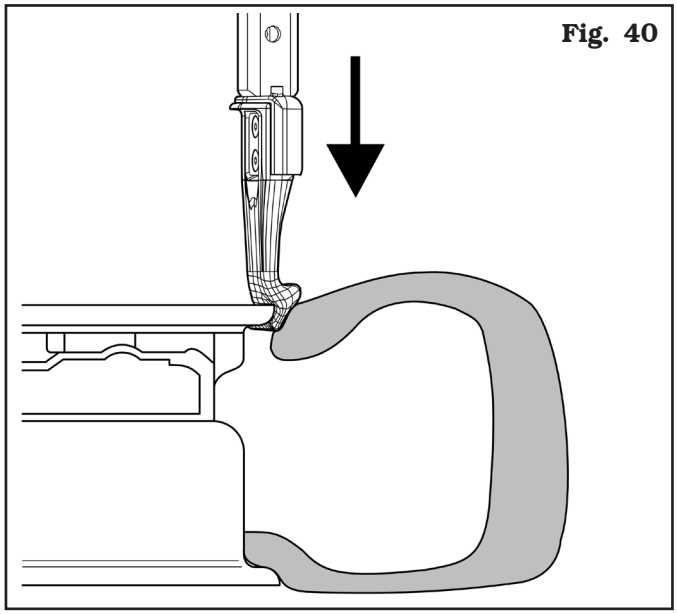
Fig. 39



WHILE THIS OPERATION IS BEING CARRIED OUT PAY ATTENTION NOT TO DEFORM THE TYRE SIDE. GREASE THE BEAD BEFORE THE ROLL RE-ENTERS.

USE ONLY TYRE LUBRICANTS. SUITABLE LUBRICANTS CONTAIN NO WATER, HYDROCARBONS, OR SILICON.

Fig. 40



5. Move the tool forward so that it penetrates between rim and tyre (see **Fig. 41**). While this operation is being effectuated, the tool rotates around the rim edge until it hooks the tyre bead (see **Fig. 42**).

Fig. 41

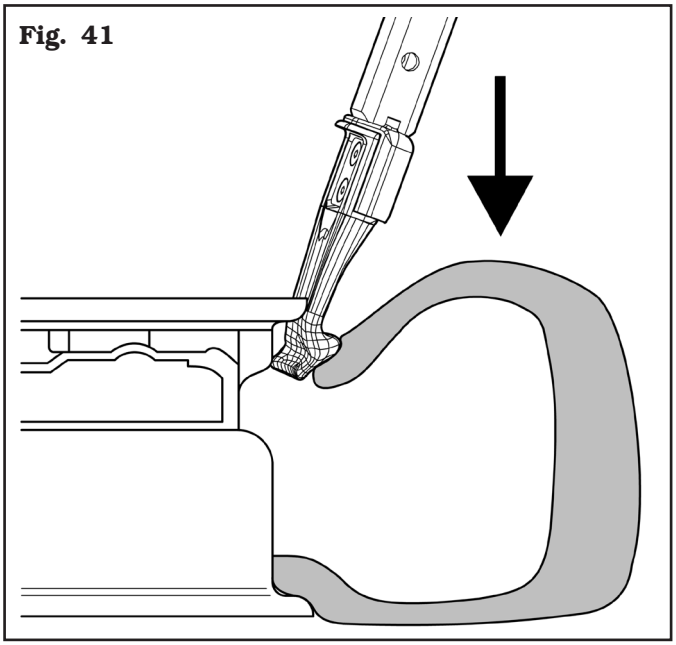
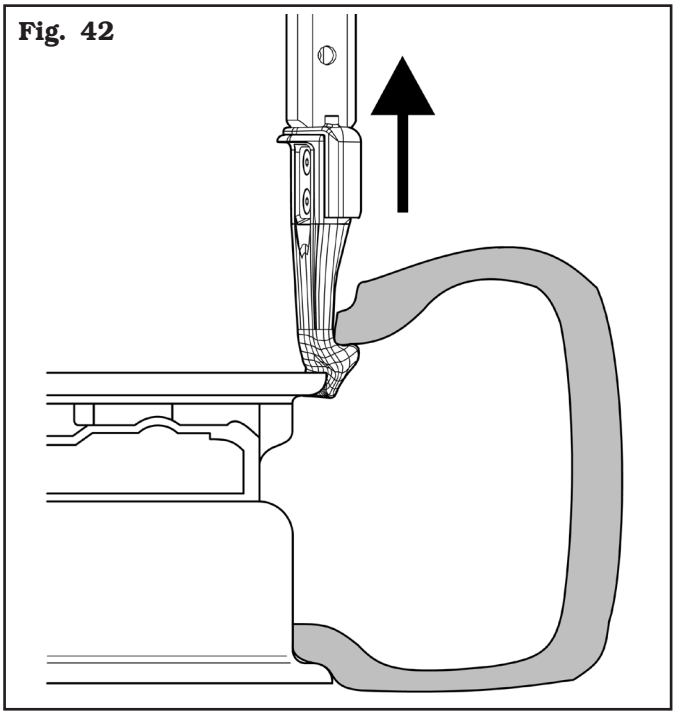


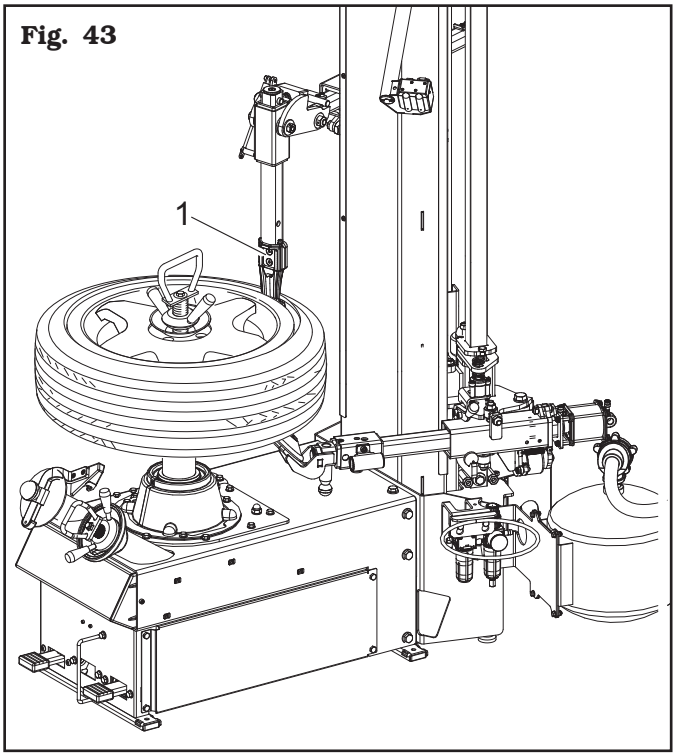
Fig. 42



6. Lift the tool through the provided control (**Fig. 15 ref. 2**). When the tool reaches a vertical position related to the rim (**Fig. 43 ref. 1**), rotate the mandrel so that the tyre enters the rim groove. Keep on raising the tool until the bead is on the rim edge (see **Fig. 42**).

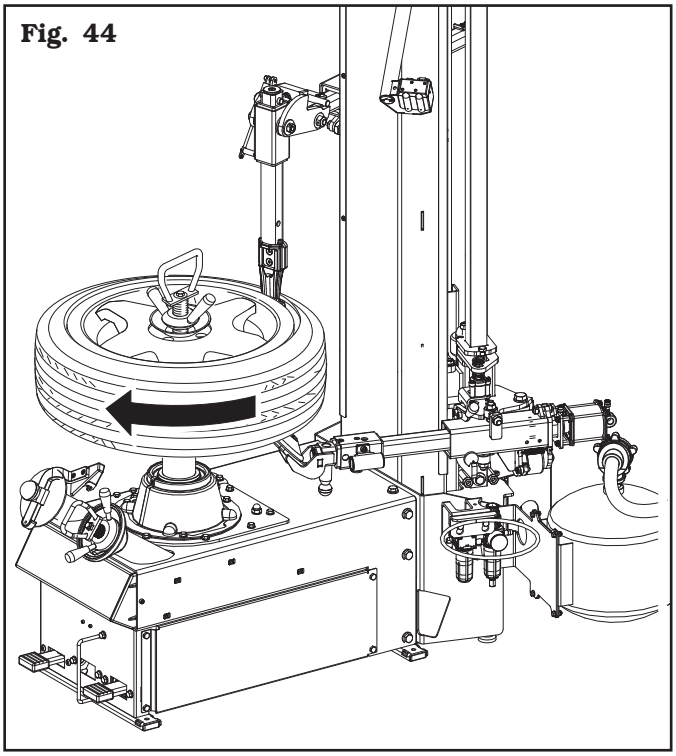
MAKE SURE THE TOOL IS IN DEMOUNTING POSITION (FIG. 42) BEFORE STARTING MANDREL ROTATION.

Fig. 43



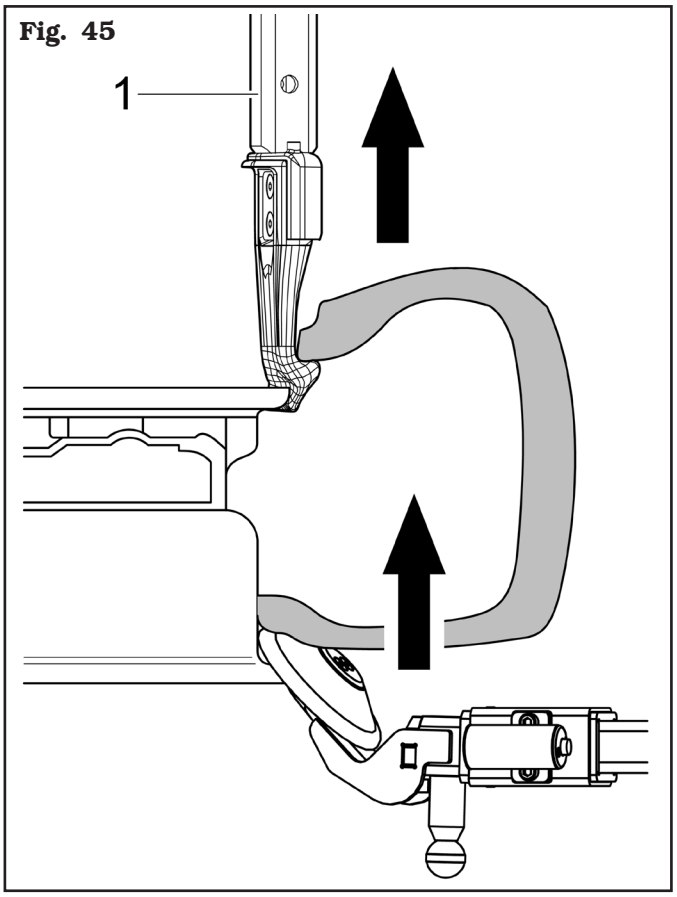
7. Rotate the mandrel clockwise until the upper bead is completely disassembled (see **Fig. 44**).

Fig. 44



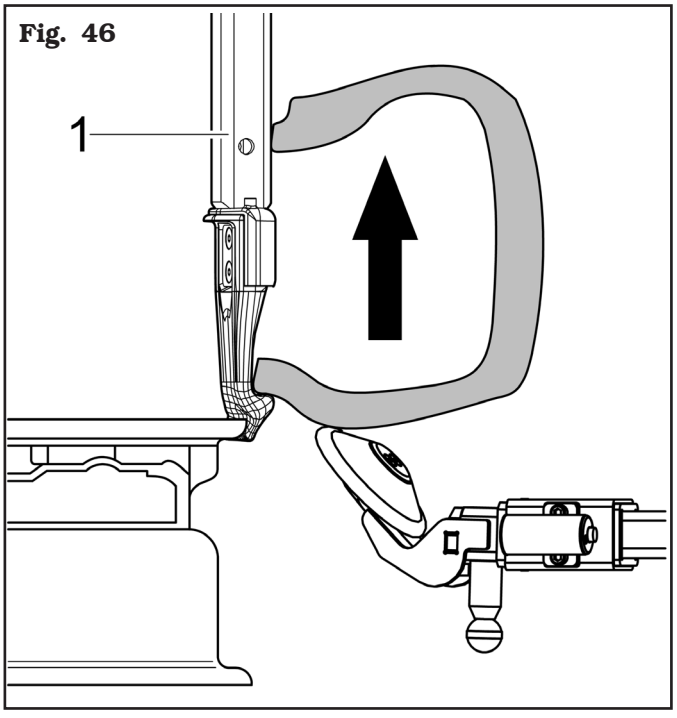
8. Lift the tool (see **Fig. 45 ref. 1**) keeping it coupled to the upper bead of the tyre with the help of the bead breaking roll.

Fig. 45



9. Reposition the tool (see **Fig. 46 ref. 1**) just next to the rim edge. Using the bead breaking roll, load the bead on the tool in demounting position.

Fig. 46



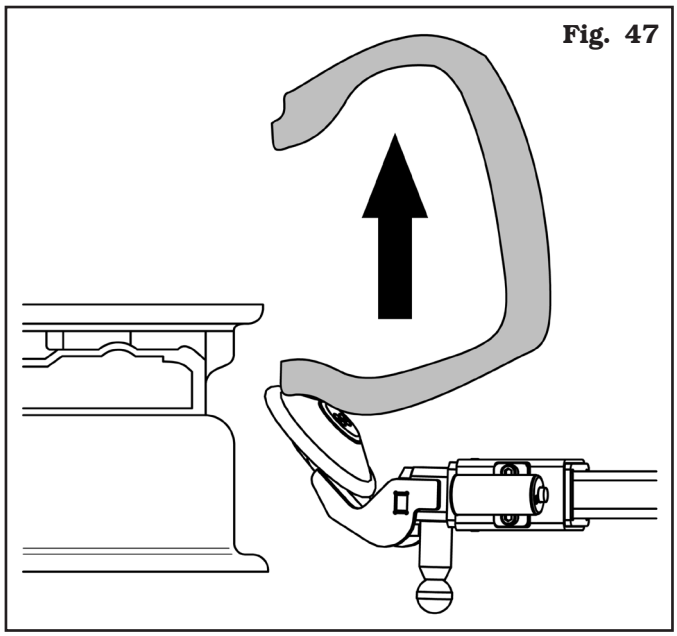
10. Rotate the mandrel clockwise until the tyre is completely disassembled.

Demounting the lower bead

For disassembly of the lower bead the bead breaker roller can be used as an alternative. Lift the tool and go away from the working area.

1. Lift the roll and the tyre just next to the rim edge (see **Fig. 47**).

Fig. 47

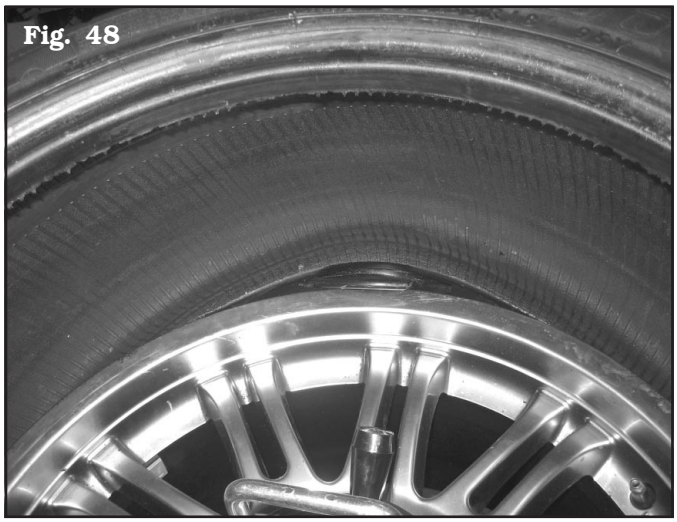


2. Then, let the roll enter through the provided push button (**Fig. 15 ref. 4**) so that it is inserted between the rim edge and the lower bead (see**Fig. 48**).

THE BEADING DISC MUST EXERT PRESSURE ON THE TYRE BEAD BUT NEVER ON THE RIM.

USE VERY CAREFULLY THE VERTICAL BEAD BREAKING ROLLER IN ORDER TO AVOID POSSIBLE HANDS CRUSHING.

Fig. 48



3. Then, rotate clockwise and complete bead disassembly (see **Fig. 49**).

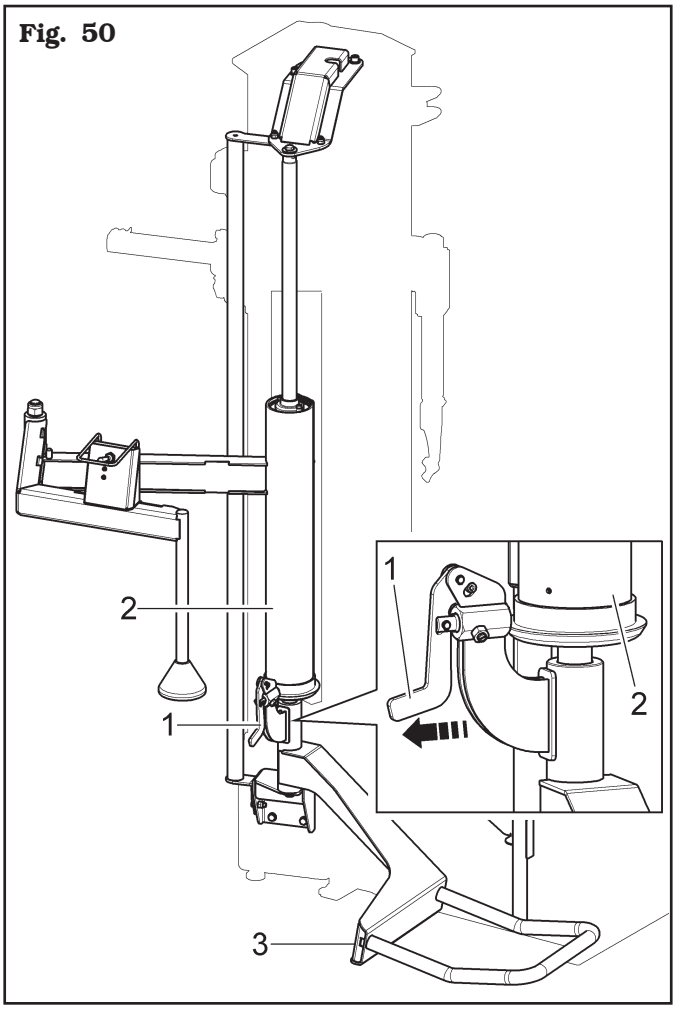
Fig. 49

WHEN THE BEADS COME OUT OF THE RIM THE TYRE MIGHT FALL. CARRY OUT VERY CAREFULLY THESE OPERATIONS.

12.7 Demounting the tyre with PLUS93 device

MAKE SURE THE CLAMPING HOOK (FIG. 50 REF. 1) IS POSITIONED AS INDICATED IN FIG. 50 TO RELEASE THE CYLINDER (FIG. 50 REF. 2) FROM THE LIFTING DEVICE (FIG. 50 REF. 3).

Fig. 50

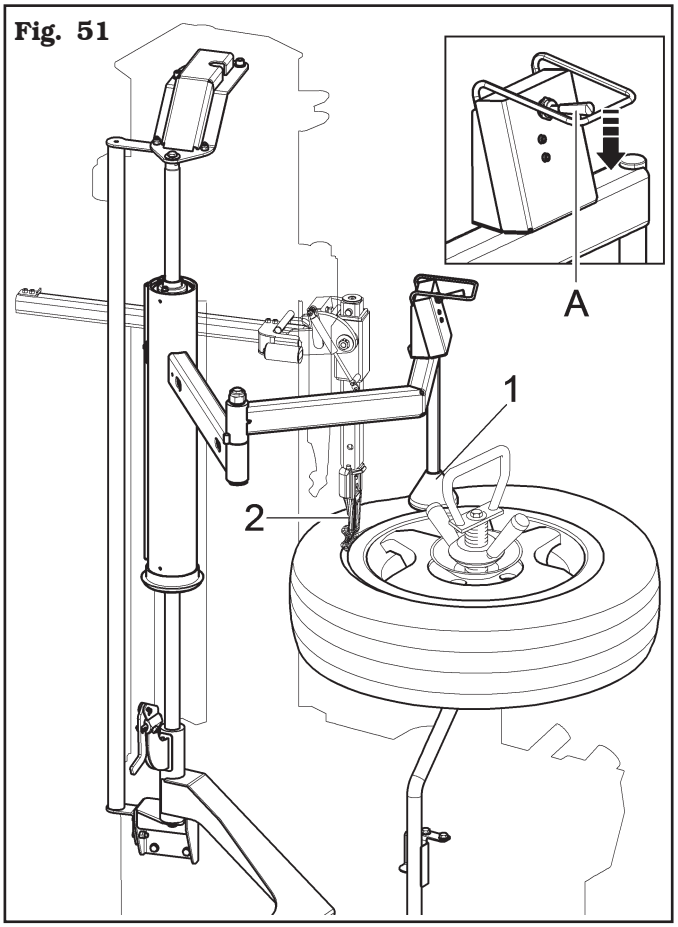


Clamp the rim onto the chuck using the special locking device.

Extraction of the first bead

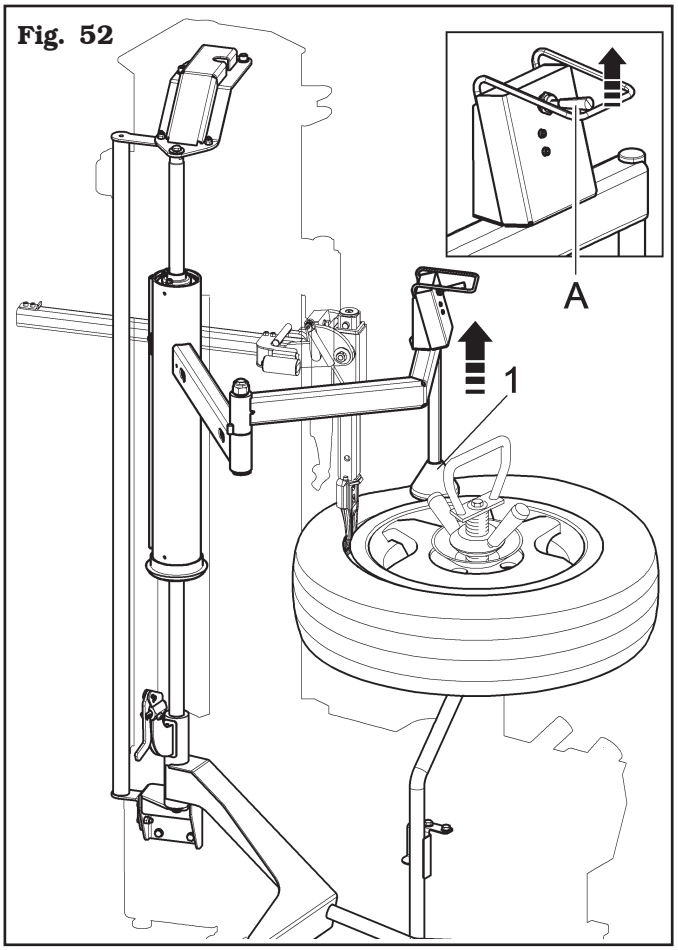
1. Place the roll of the rotating bead depressing roll unit (**Fig. 51 ref. 1**) as shown in the figure (not far from the tool (**Fig. 51 ref. 2**)). Lower the tyre using the roll of the rotating bead depressing unit (**Fig. 51 ref. 1**) (by lowering the control unit lever (**Fig. 51 ref. A**)), until allowing an easy introduction of the tool (**Fig. 51 ref. 2**) between the tyre bead and the rim.

Fig. 51



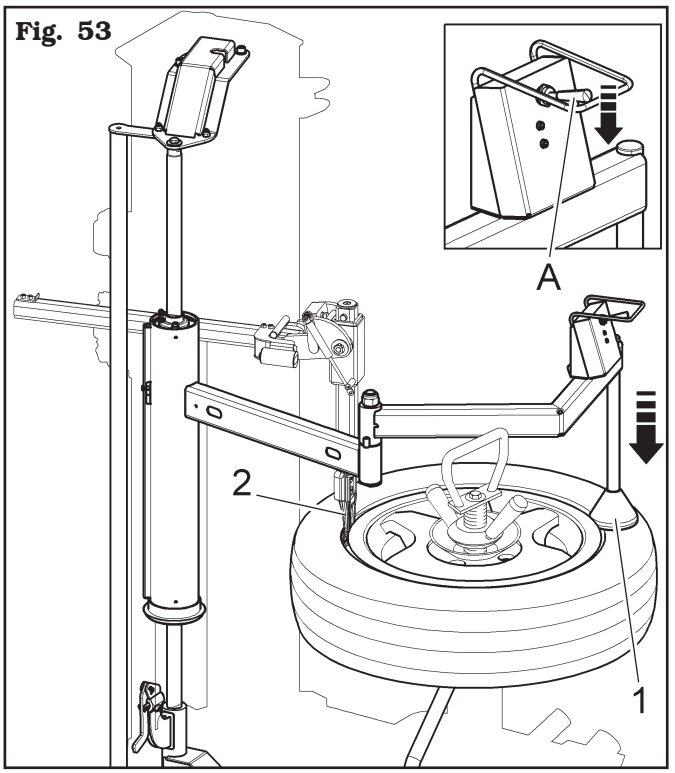
2. Lift the roll of rotating bead depressing unit (**Fig. 52 ref. 1**) by lifting the lever (**Fig. 52 ref. A**).

Fig. 52



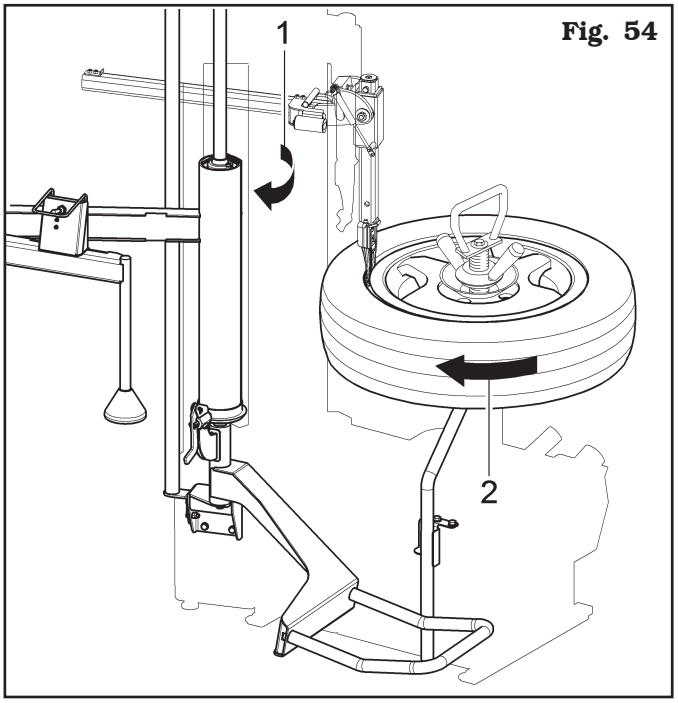
3. Place the roll of the rotary bead depressing unit (**Fig. 53 ref. 1**) again at about 120° from the machine-tool axis (as in figure) and lower the tyre by pressing the lever of the control unit downwards (**Fig. 53 ref. A**) until the tyre bead is placed in correspondence of rim groove.
4. Lift the tool (**Fig. 53 ref. 2**) in order to let the bead come out of the rim.

Fig. 53



5. Lift Plus Device and close it again in rest position as indicated in figure (**Fig. 54 ref. 1**).
6. Carry out first bead's extraction by turning the mandrel clockwise (**Fig. 54 ref. 2**).

Fig. 54



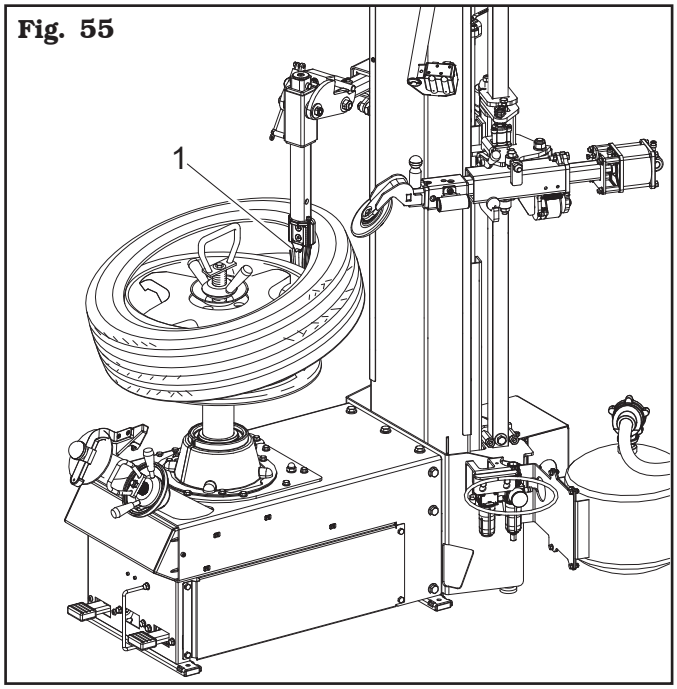
12.8 Mounting the tyre

1. Lubricate the tyre's beads.

USE ONLY TYRE LUBRICANTS. SUITABLE LUBRICANTS CONTAIN NO WATER, HYDROCARBONS, OR SILICON.

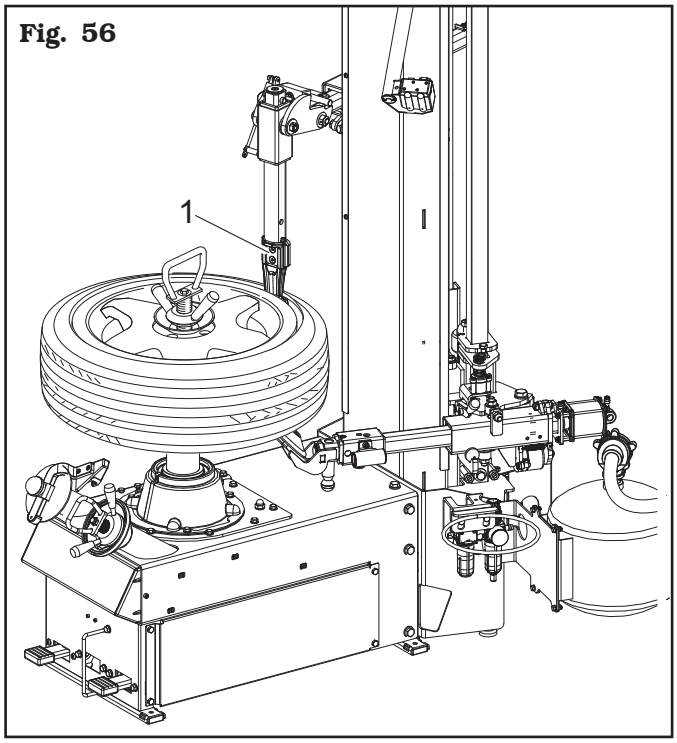
2. Position the tool (**Fig. 55 ref. 1**) onto the rim edge.

Fig. 55



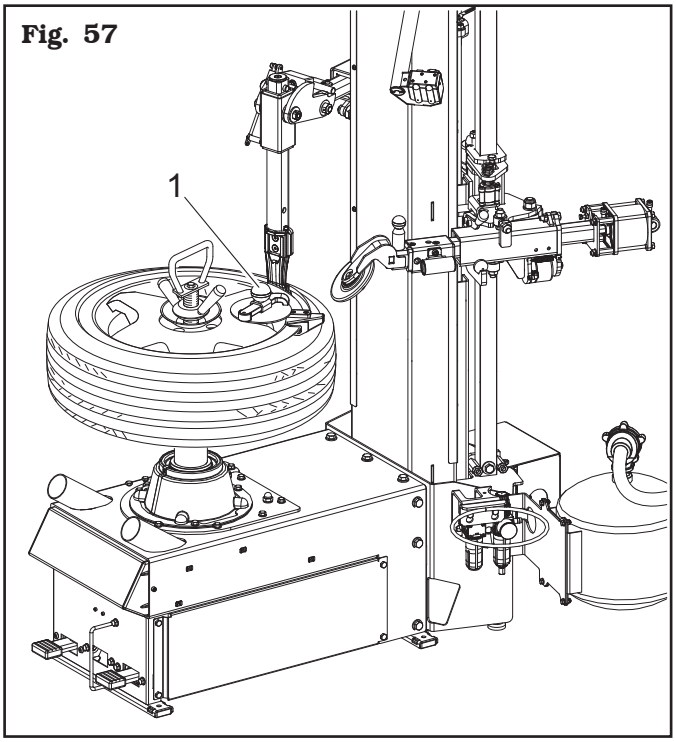
3. Hook the lower bead on the tool then rotate clockwise until the complete assembly.
4. Then, position the upper bead on the tool assembly area (**Fig. 56 ref. 1**).

Fig. 56



5. Assemble the extension with entrainer near the edge rim (**Fig. 57 ref. 1**).

Fig. 57

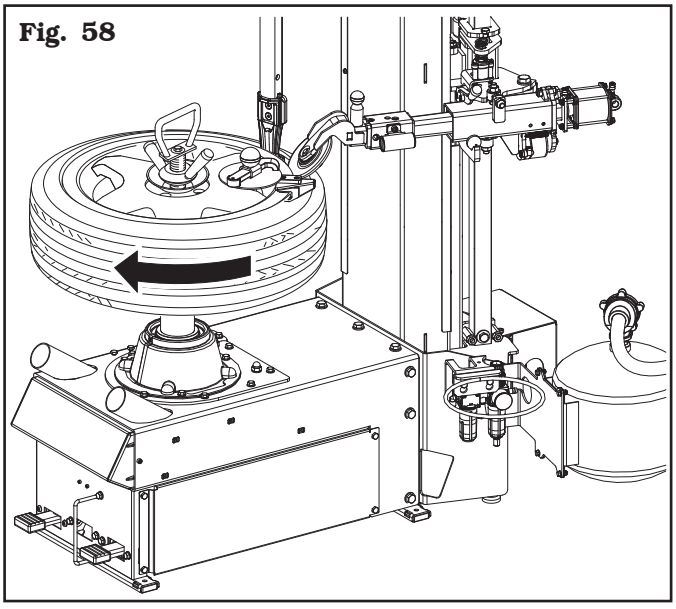


6. Lower the bead breaker roll so that the tyre bead is kept at the same height of the rim groove (see **Fig. 58**).

THE BEADING DISC MUST EXERT PRESSURE ON THE TYRE BEAD BUT NEVER ON THE RIM.

USE VERY CAREFULLY THE VERTICAL BEAD BREAKING ROLLER IN ORDER TO AVOID POSSIBLE HANDS CRUSHING.

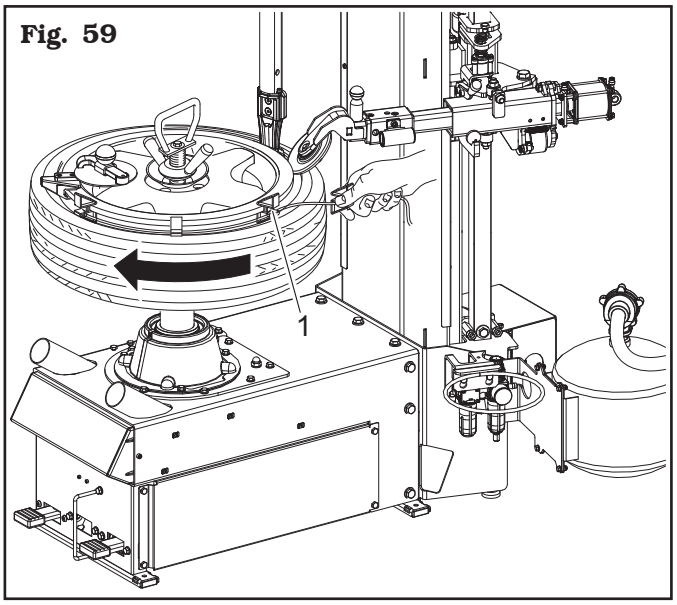
Fig. 58



7. Rotate clockwise until tyre complete assembly (see **Fig. 59**).

FOR THE MOUNTING OF VERY DIFFICULT WHEELS, USE THE EXTENSION OF THE BEAD DEPRESSOR (FIG. 59 REF. 1) (OPTIONAL).

Fig. 59

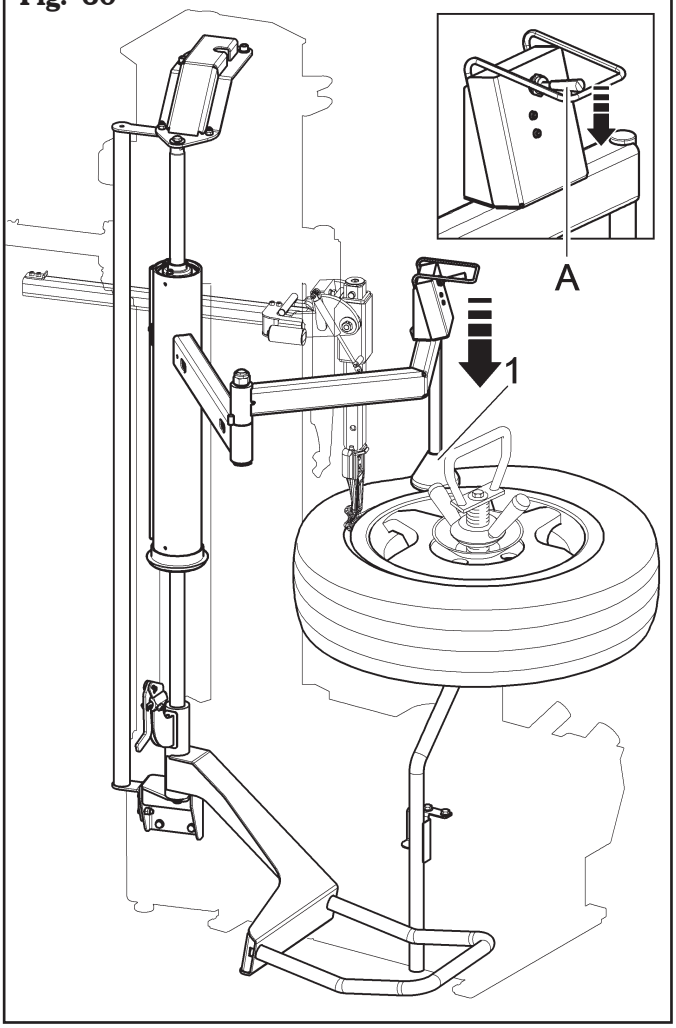


8. When these operations are over move the tool and the bead breaker roll into rest position.

12.9 Mounting the tyre with PLUS93 device

1. Mount the first bead on the rim. The Device is not necessary to complete this operation.
2. Place the bead depressing roll (**Fig. 60 ref. 1**) as indicated in the figure.
3. Lower the bead depressing roll (**Fig. 60 ref. 1**) operating the control provided (**Fig. 60 ref. A**) until the tyre bead is placed next to the rim groove.

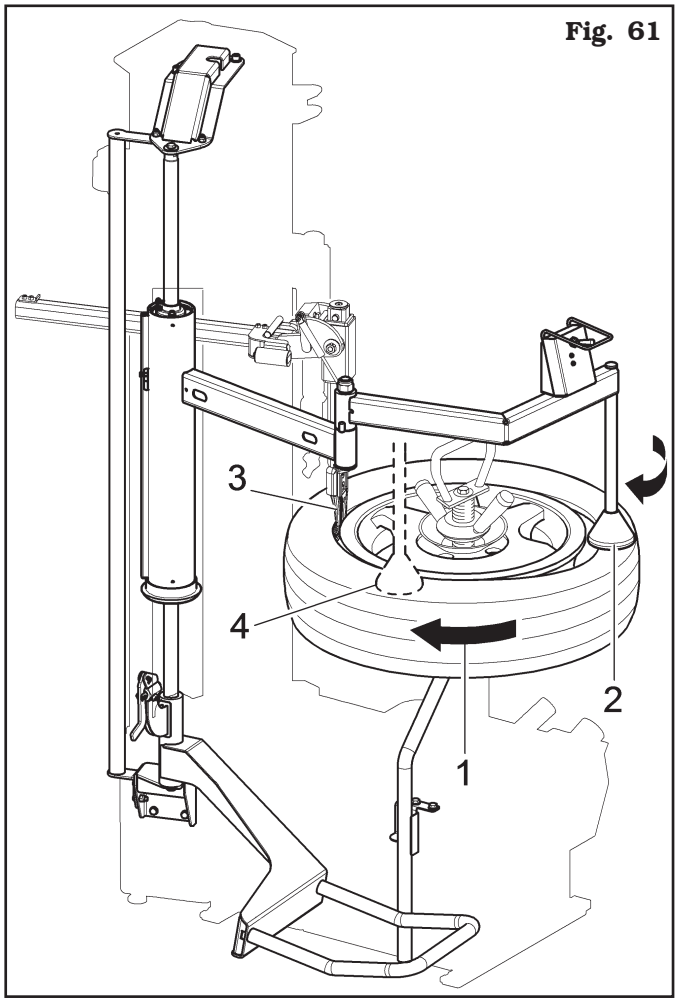
Fig. 60



MAKE SURE THAT THE ENTRAINER IS COMPLETELY FITTED BETWEEN THE RIM SPOKES IN LOWERED POSITION.

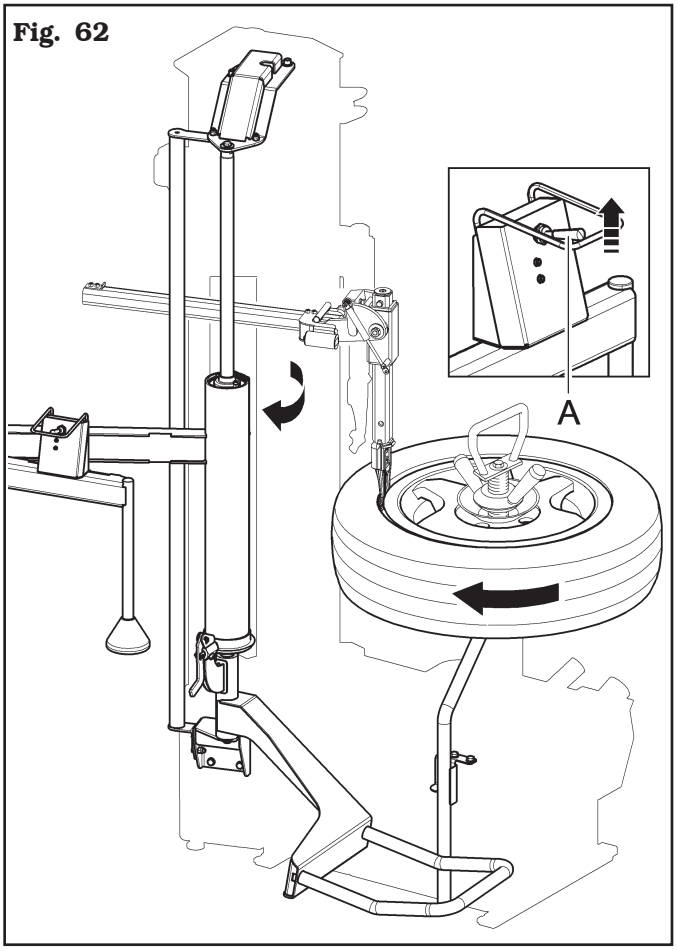
4. Start mandrel clockwise rotation(**Fig. 61 ref. 1**) by means of the proper pedal control: while performing this operation keep a hand on the bead depressing roll (**Fig. 61 ref. 2**). Such operation, that does not require any physical effort, helps keeping bead depressing roll correct position on the tyre.
5. Stop mandrel rotation when the bead depressing roll (**Fig. 61 ref. 2**) is at 9 o'clock (**Fig. 61 ref. 4**) compared to the mounting tool (**Fig. 61 ref. 3**).

Fig. 61



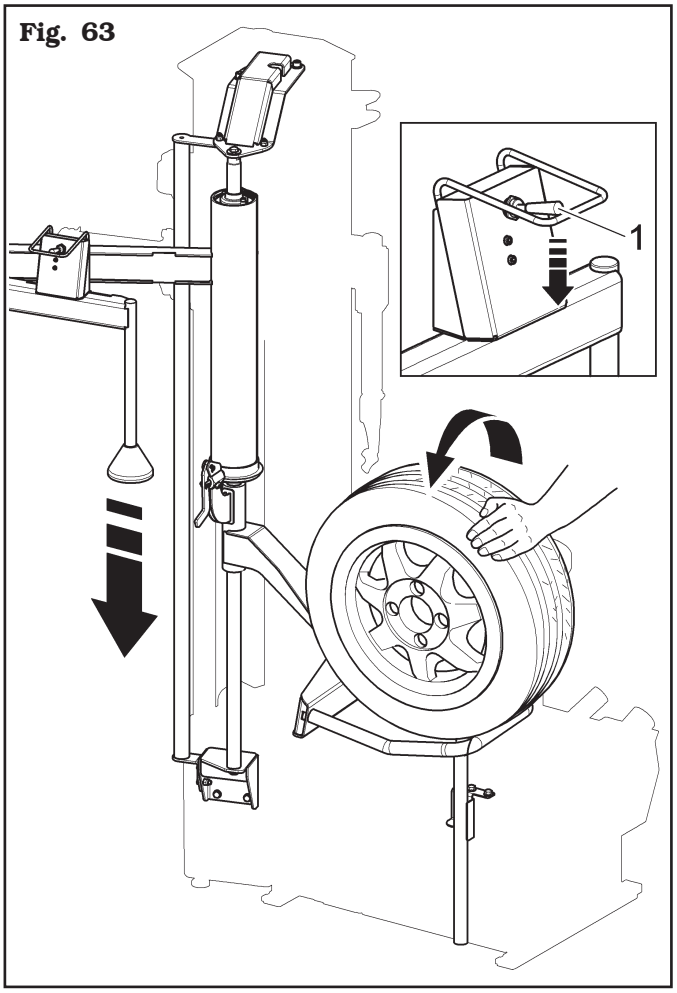
6. End the second bead's introduction by turning the mandrel clockwise (see **Fig. 62**).
7. Lift Plus Device with the relevant control (**Fig. 62 ref. A**) and close it again in rest position (see **Fig. 62**).

Fig. 62



8. Perform all the tyre fitting and removal operations and unlock the wheel from the mandrel.
9. Lower Plus device with the relevant control (**Fig. 63 ref. 1**) until hooking the lifting device.
10. Raise the lifting device by lifting the control unit's lever again.
11. Place the wheel on the lifting device.
12. Lower the control unit's lever again (**Fig. 63 ref. 1**) in order to make the lifting device lower and to bring the wheel to the floor keeping a hand on it (**see Fig. 63**).

Fig. 63



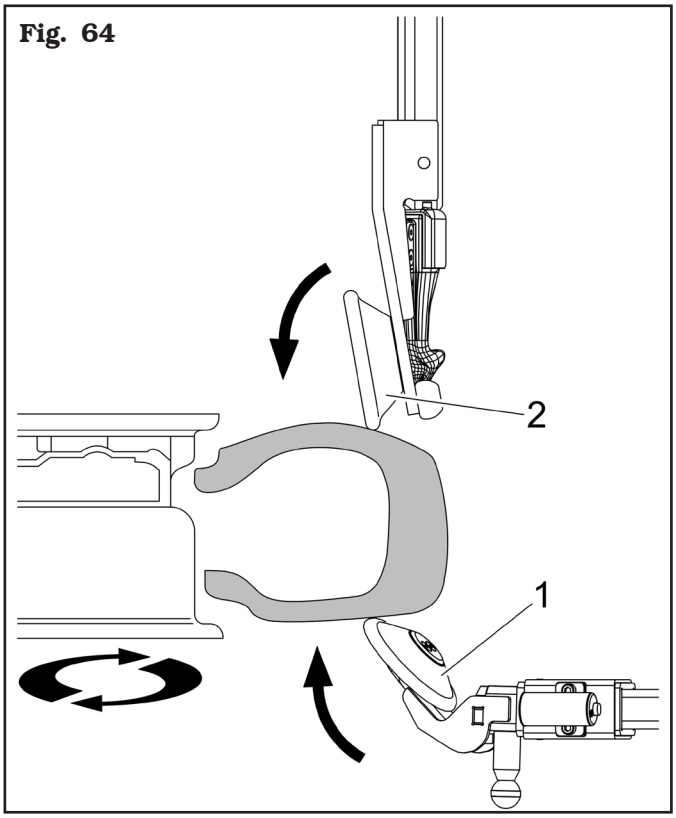
KEEP A HAND ON THE WHEEL DURING ALL LIFTING DEVICE'S RISING AND DESCENT PHASES, TO PREVENT THE WHEEL FROM FALLING FROM THE LIFTER BECAUSE OF IMBALANCES.

12.10 Special use of bead breaker (with VSG1000A118 optional fixture)

Besides being used as an aid during the disassembly and assembly, the bead breaker roller, together with the upper additional roll (**Fig. 64 ref. 2**), can also be used for the optimization (matching) of the tire with the rim. To conduct this operation carry out the following instructions.

- Fit the additional upper roll (**Fig. 64 ref. 2**) on the tool as indicated in **Fig. 64**.
- Lock the tire between the bead breaker tool roll (**Fig. 64 ref. 1**) and the upper additional roll (**Fig. 64 ref. 2**).
- Turn the motor counterclockwise until the reference point on the tyre coincides with the reference point on the rim (usually the valve) (see **Fig. 64**).

Fig. 64



12.11 Tyre inflation

TYRE INFLATING OPERATIONS ARE HAZARDOUS FOR THE OPERATOR. IF NOT PROPERLY EXECUTED THEY CAN CAUSE DAMAGE FOR USERS OF VEHICLES WHERE TYRES ARE FITTED.

STANDARD OR OPTIONAL INFLATING UNITS FITTED ON TYRE CHANGERS ARE EQUIPPED WITH A PRESSURE LIMITING DEVICE WHICH ALMOST ELIMINATES ANY RISK OF TYRE EXPLOSION DURING TYRE INFLATING. AN OUTSTANDING RISK OF EXPLOSION STILL EXISTS. THEN THE FOLLOWING PRECAUTIONS MUST BE RESPECTED:

- **OPERATORS SHOULD WEAR SUITABLE PROTECTIVE CLOTHING LIKE: GLOVES, SAFETY EYEWEAR AND EARCAPS.**
- **BEFORE FITTING A TYRE, CHECK TYRE AND RIM CONDITIONS AS WELL AS PROPER COUPLING.**
- **MAKE SURE THAT TYRE IS PROPERLY POSITIONED ON THE MACHINE: THE WHEEL OUTER PART MUST NOT BE SECURED ON THE JAWS.**
- **CORRECT WORKING POSITION: DURING TYRE BEADING AND INFLATING THE OPERATOR MUST KEEP BODY AS FAR AS POSSIBLE FROM THE TYRE.**
- **COMPLIANCE WITH TYRE MANUFACTURER'S SPECIFICATIONS FOR TYRE INFLATION PRESSURE.**

IF MEASURED PRESSURE EXCEEDS 4,2 BAR, IT MEANS THAT THE PRESSURE LIMITING VALVE AND/OR PRESSURE GAUGE IS NOT WORKING PROPERLY. IN THIS CASE, DEFLATE THE TIRE ON THE SPOT AND CONTACT AN AUTHORIZED SERVICE CENTRE TO VERIFY EQUIPMENT OPERATION. MAKE SURE OF PROPER OPERATION BEFORE USING ANY INFLATING EQUIPMENT.

12.11.1 Tyre inflation with pressure gauge

Connect the inflation device to the tyre valve and inflate the same tyre using the pedal provided (**Fig. 16 ref. A**).
Well lubricated beads and rims make the beading in and inflation much safer and easier.

A LIMITATION DEVICE IS PRESENT IN THE AIR SUPPLY LINE FOR THE TIRE INFLATION (4,2 ± 0,2 BAR/60 PSI).

In case the beads are not seated at 4.2 ± 0.2 bar, release all the air from the wheel, remove it from the tyre changer and put it in a safety cage to complete the inflation procedure.

12.11.2 Tyre inflation device with Tubeless inflation unit

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

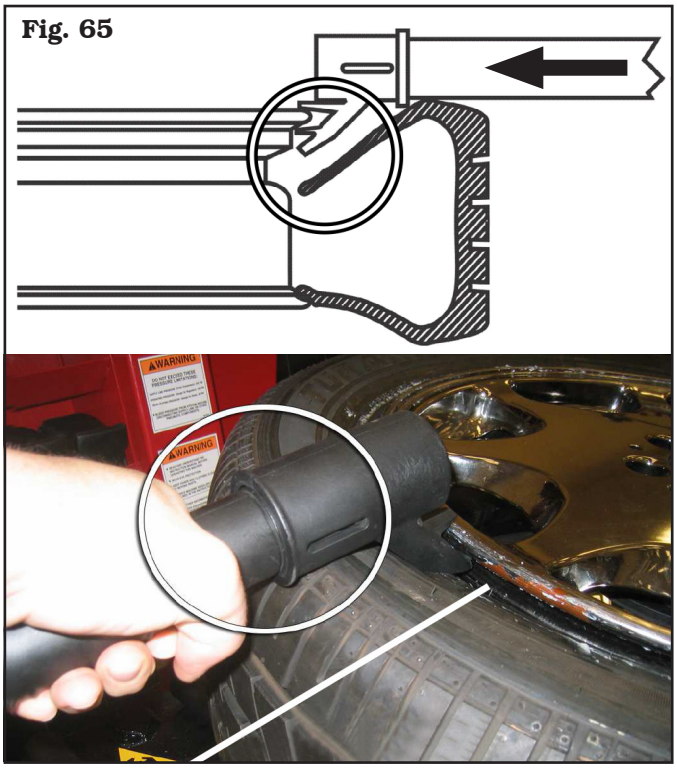
- Remove the valve stem core.
  Removing the valve stem core will allow the tyre to inflate faster and the bead to seat easier.
- Connect the inflation terminal to the valve of the tyre.

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

- Press the bead blaster hose on the wheel rim as shown in **Fig. 65**. Ensure the hose head is pressed in to activate the additional air jet.

THE NOZZLE SHOULD BE HORIZONTAL FOR OPTIMAL PERFORMANCE (FIG. 65).

Fig. 65



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

- Press completely downwards the inflating pedal, in order to release a high pressure air jet through the tubeless inflation nozzle.
- Keep partially pressed downwards the inflating pedal to inflate the tyre and place the beads in their seats.

DO NOT EXCEED THE PRE-ARRANGED PRESSURE VALUES WHILE SEALING THE BEAD.

- After the beads take place in their own seat, disconnect the inflating terminal and install again the valve gear, that was removed previously.
  Then connect the inflating terminal and inflate the tyre with the required pressure.

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

- Disconnect the inflation terminal from the valve.

13.0 ROUTINE MAINTENANCE

BEFORE CARRYING OUT ANY ROUTINE MAINTENANCE PROCEDURE, DISCONNECT THE MACHINE FROM ITS POWER SUPPLY SOURCES, TAKING SPECIAL CARE OF THE ELECTRICAL PLUG/SOCKET (ONLY FOR RWC1150.30IB MODEL) AND/OR PNEUMATIC CONNECTION.

BEFORE CARRYING OUT ANY MAINTENANCE OPERATIONS, MAKE SURE THERE ARE NO WHEELS CLAMPED ON THE MANDREL AND THAT ALL SUPPLIES TO THE MACHINE HAVE BEEN DISCONNECTED.

To guarantee the efficiency and correct functioning of the machine, 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.

- Disconnect the mains power supply before starting any cleaning or routine maintenance operations.
- Remove deposits of tyre powder and other waste materials with a vacuum cleaner.
- Periodically check the calibration of the lubricator of the pressure regulator/oiler unit: 1 oil drop every four complete strokes of mandrel jaws.

DO NOT BLOW IT WITH COMPRESSED AIR.

- Do not use solvents to clean the pressure regulator.
- The conditioning unit is equipped with an automatic vacuum-operated drain therefore it requires no manual intervention by the operator (see **Fig. 66**).

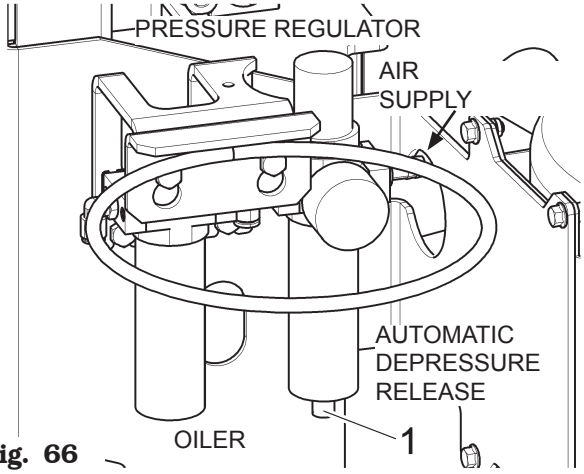


Fig. 66

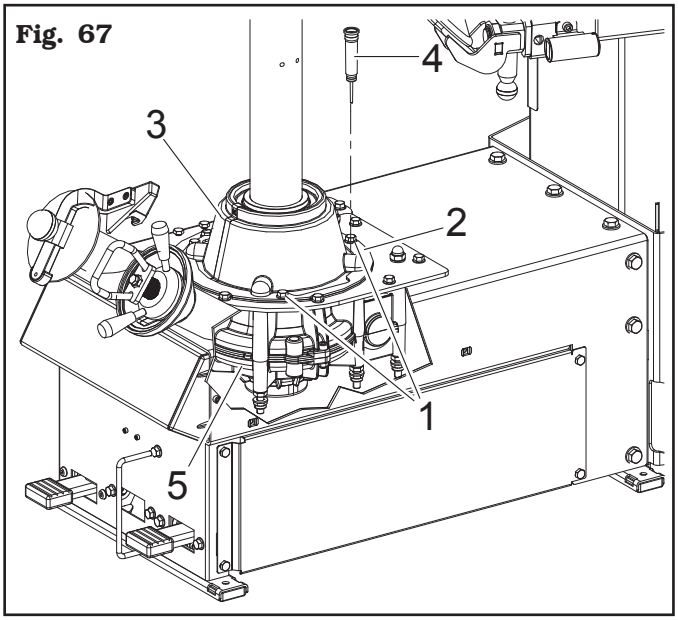
IN ORDER TO ENSURE A GOOD FUNCTIONING AND TO AVOID THE PRESENCE OF CONDENSATION IN THE AIR TREATMENT UNITS WITH SEMI-AUTOMATIC DRAIN, IT'S NECESSARY TO MAKE SURE ABOUT THE CORRECT POSITION OF THE VALVE (FIG. 66 REF. 1), PLACED UNDER THE CAP. TO ACTIVATE A CORRECT DRAIN FUNCTION, THE CAP MUST BE ROTATED IN THE RIGHT WAY.

IN ORDER TO ALLOW A LONGER LIFE OF THE FILTER AND OF ALL MOVING PNEUMATIC DEVICES, YOU HAVE TO MAKE SURE THAT THE SUPPLIED AIR IS:
- **EXEMPT FROM THE LUBRICATING OIL OF THE COMPRESSOR;**
- **EXEMPT FROM HUMIDITY;**
- **EXEMPT FROM IMPURITY.**

- Every **week** and/or when necessary, top up the oil tank using the filler hole provided closed by a cap or screw on the lubricator filter.

  NOTE: This operation should not be carried out by unscrewing the cup of the lubricator filter.
- The use of synthetic oil might damage the pressure regulator filter.
- Clean and periodically oil the roller horizontal rod.
- Grease every month the joints of the roll holding arm and the lower disc and the sliding guides of the mobile guide.
- Periodically, at least monthly, lubricate the arm of the bead breaker roller and of the tool.
- Periodically, at least monthly, lubricate the arm of the bead breaker roller and of the tool.
- Immediately replace worn parts, bead breaking roller, assembly tool.
- Periodically (at least every 100 working hours) check reduction gear lubricating oil level (**Fig. 67 ref. 5**). Such operation must be effectuated unscrewing the screws (**Fig. 67 ref. 1**), removing the flange (**Fig. 67 ref. 2**), the guard (**Fig. 67 ref. 3**) and the plug (**Fig. 67 ref. 4**) on the reduction gear.

Fig. 67



ANY DAMAGE TO THE MACHINE DEVICES RESULTING FROM THE USE OF LUBRICANTS OTHER THAN THOSE RECOMMENDED IN THIS MANUAL WILL RELEASE THE MANUFACTURER FROM ANY LIABILITY!!

13.1 Lubricants

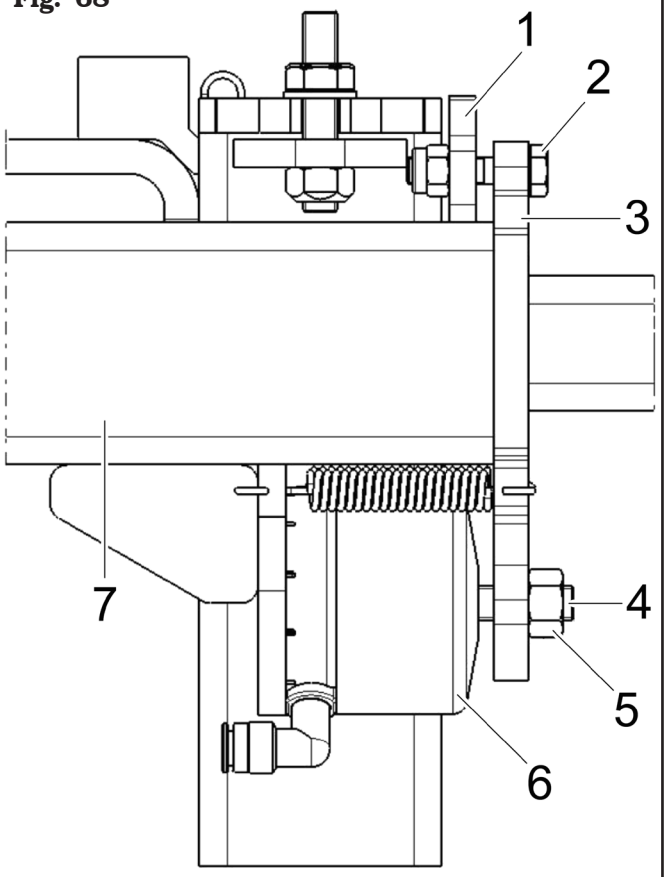
To grease the mandrel movement control gearbox, use **ESSO GEAR OIL GX140**.
Lubricate slides and screws/nut screws or racks and pinion with a soft brush using lubricant of **ESSO GP**.

ANY DAMAGE TO THE MACHINE DEVICES RESULTING FROM THE USE OF LUBRICANTS OTHER THAN THOSE RECOMMENDED IN THIS MANUAL WILL RELEASE THE MANUFACTURER FROM ANY LIABILITY.

13.2 Neck adjustment

In case of fulcrum-type screws (**Fig. 68 ref. 2**) with neck (**Fig. 68 ref. 3**) fully beating onto bead breaking arm's guide (**Fig. 68 ref. 7**) (not on the adjusting plate (**Fig. 68 ref. 1**)), carry out neck adjustment procedure as described below.

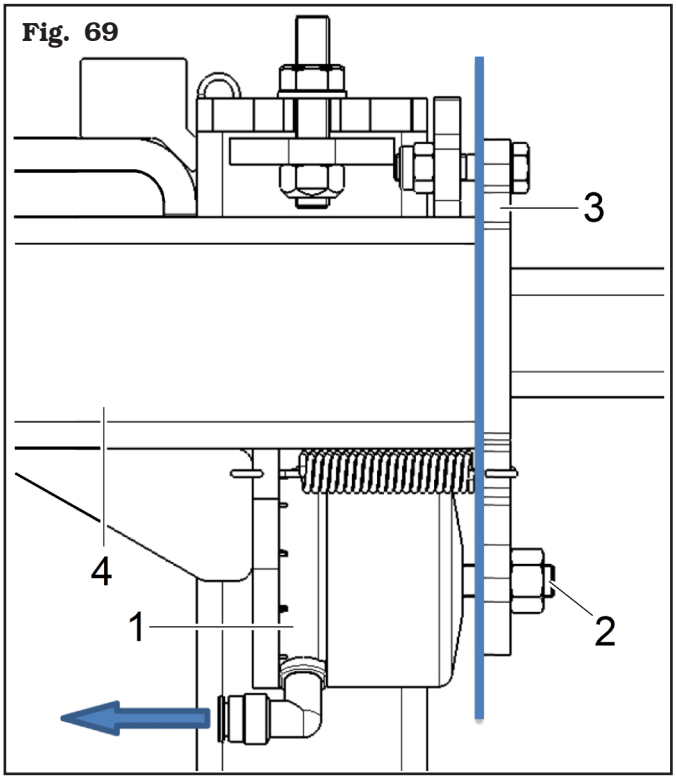
Fig. 68



KEY
1 – Adjusting plate
2 – Fulcrum screws
3 – Neck
4 – Adjusting dowel
5 – Locking nut
6 – Neck operating cylinder
7 – Bead breaking arm guide

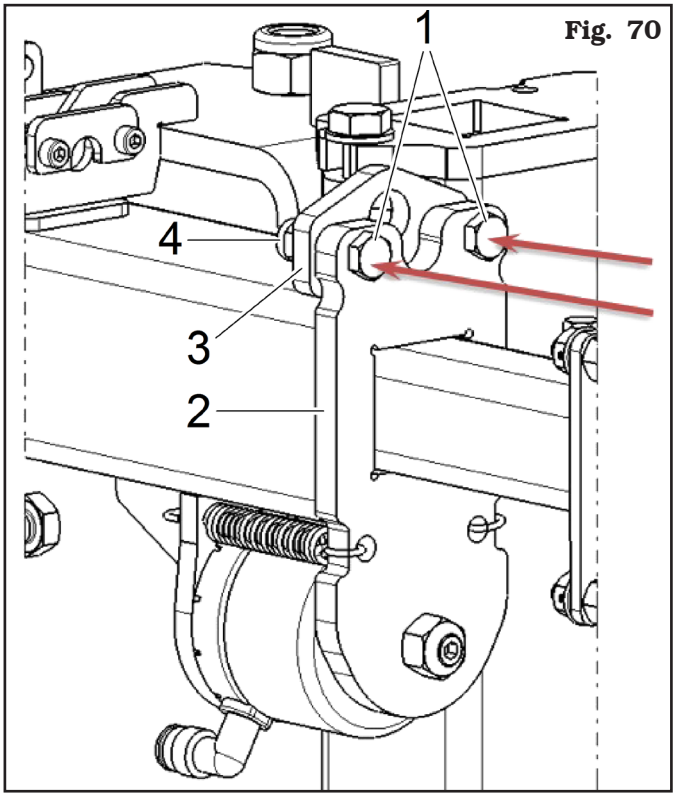
a. Blow off the compressed air from neck's cylinder (**Fig. 69 ref. 1**). Make neck (**Fig. 69 ref. 3**) reach beat position again on the guide support surface (**Fig. 69 ref. 4**), by turning the adjusting dowel (**Fig. 69 ref. 2**).

Fig. 69



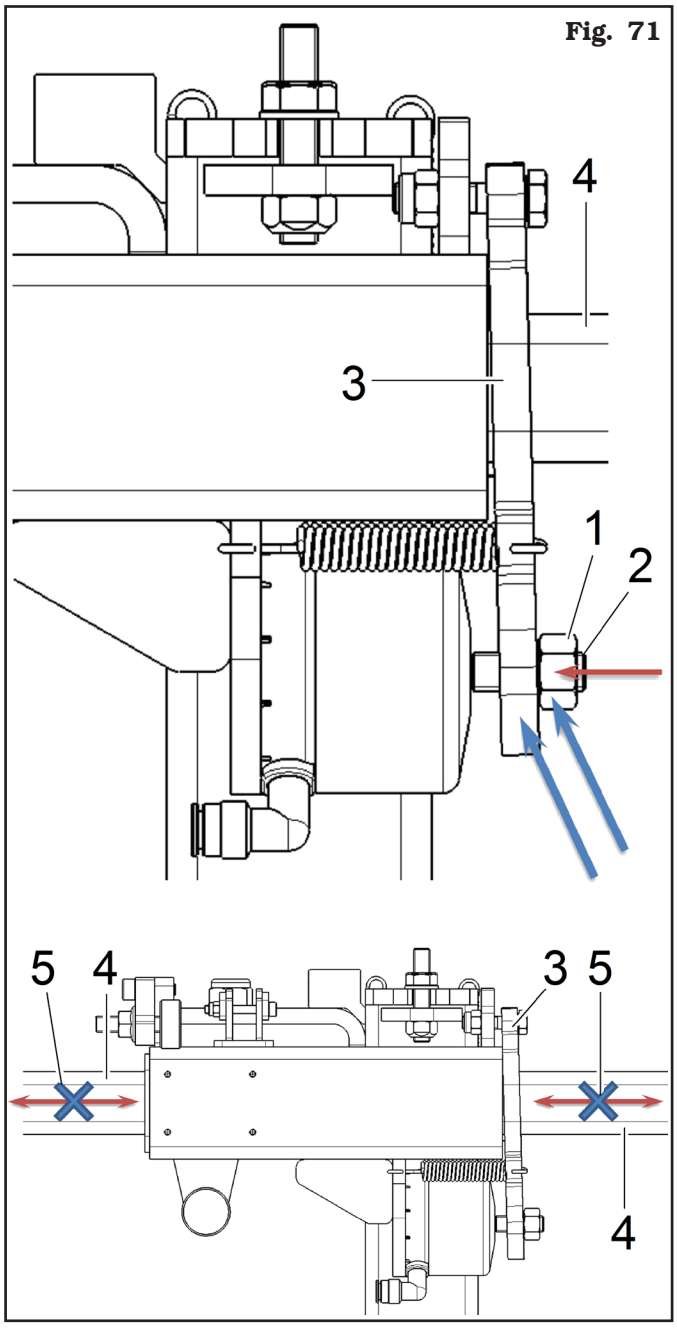
b. Completely screw fulcrum-type screw (or screws) (**Fig. 70 ref. 1**) but without locking them, just making them approach, setting a 0.1 ÷ 0.2 mm play between neck (**Fig. 70 ref. 2**) and adjusting plate (**Fig. 70 ref. 3**), positioning nut (**Fig. 70 ref. 4**) and letting it rest completely onto adjusting plate.

Fig. 70



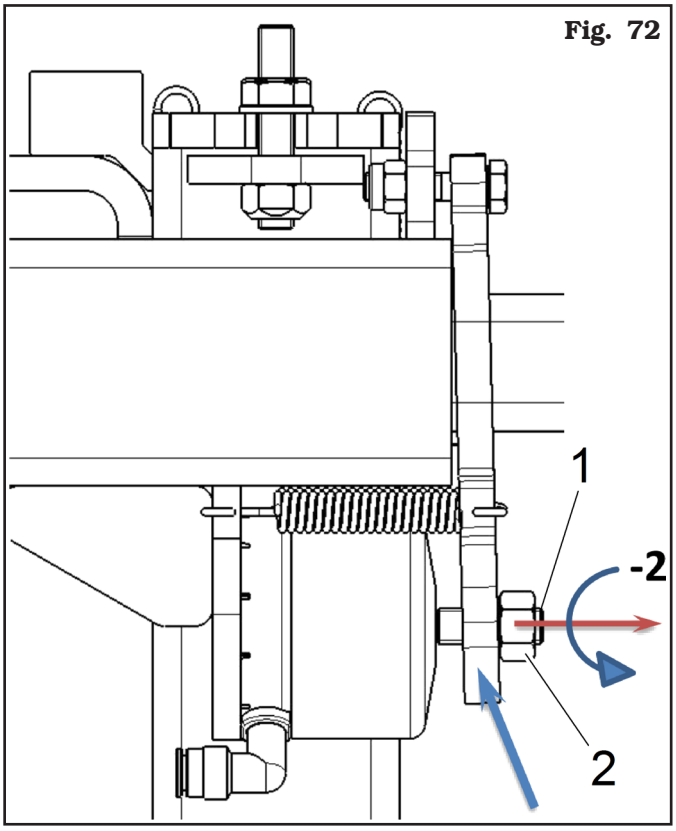
c. Slacken lock nut (**Fig. 71 ref. 1**) of adjusting dowel (**Fig. 71 ref. 2**). Then, screw the dowel (**Fig. 71 ref. 2**) until neck (**Fig. 71 ref. 3**) strikes onto arm (**Fig. 71 ref. 4**), that as a consequence results clamped (**Fig. 71 ref. 5**).

Fig. 71



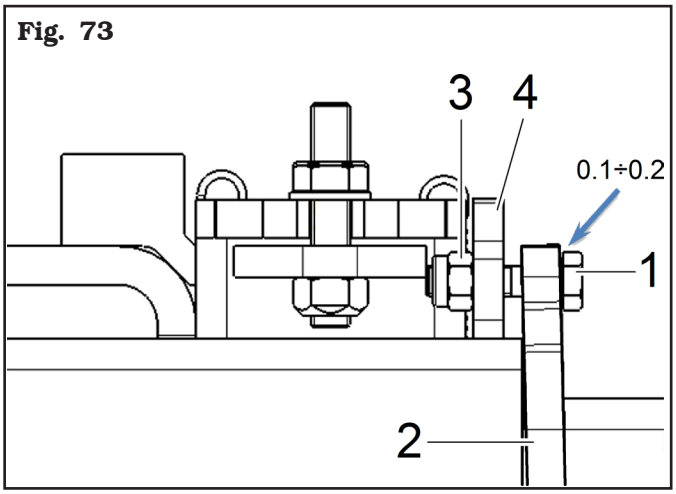
d. Starting from the position reached at point (c), unscrew neck's adjusting dowel counter-clockwise by 2 complete turns (**Fig. 72 ref. 1**) and lock the relevant counter nut (**Fig. 72 ref. 2**).

Fig. 72



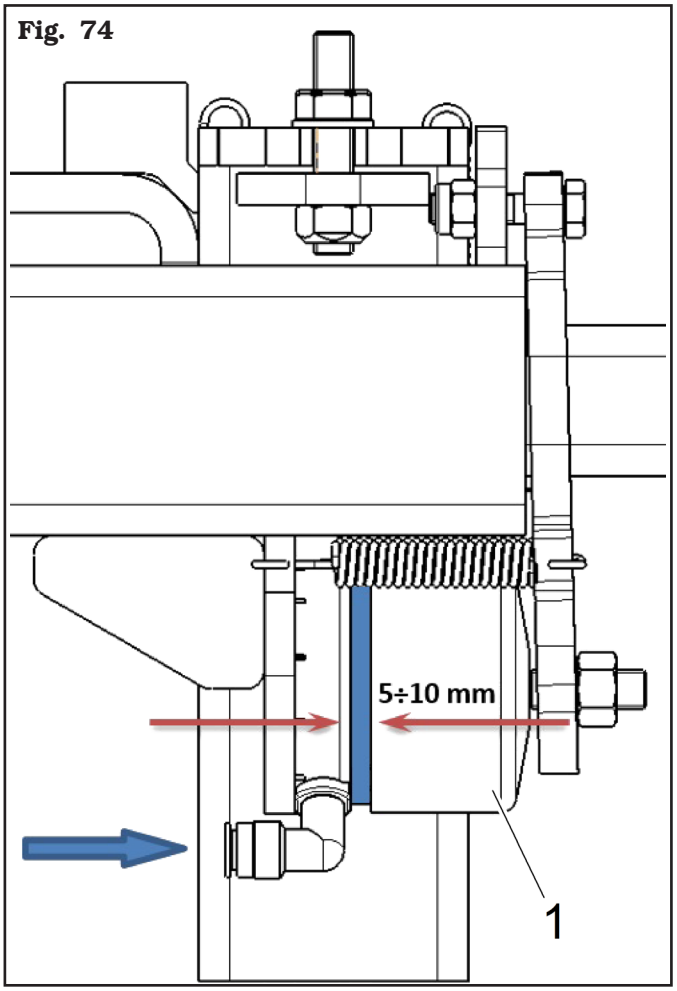
e. Turn fulcrum-type screw (or screws) (**Fig. 73 ref. 1**) in order to reset 0.1 ÷ 0.2 mm play between neck (**Fig. 73 ref. 2**) and fulcrum-type screws' head (**Fig. 73 ref. 1**), letting nut (**Fig. 73 ref. 3**) rest completely onto adjusting plate (**Fig. 73 ref. 4**).

Fig. 73



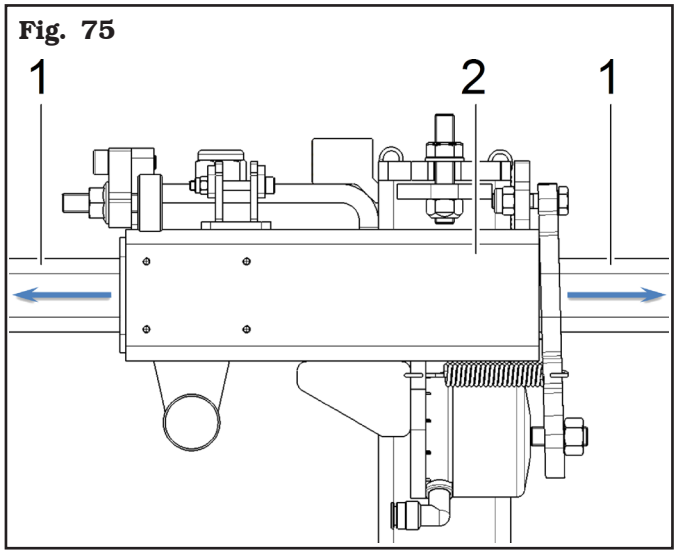
f. Operate cylinder (**Fig. 74 ref. 1**), supplying it with compressed air, and make sure its stroke is included between 5 ÷ 10 mm.

Fig. 74



g. Blow off cylinder and make sure the arm (**Fig. 75 ref. 1**) can slide freely in its guide (**Fig. 75 ref. 2**).

Fig. 75



h. Repeat points (f) and (g) 3 times at least.

14.0 TROUBLESHOOTING TABLE

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

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

CONTACT AUTHORIZED TECHNICAL SERVICE

do not try and service alone

Problem	Possible cause	Remedy
The bead breaker roll is not immediately activated.	1. Supply missed. 2. The control push button is broken.	1. Connect the supply. 2. Call for technical assistance. 
Nozzle does not deliver air when the inflation pedal is pressed.	The inflation pedal is badly adjusted.	Call for technical assistance. 
The mandrel does not turn (only for RWC1150.30IB model).	Inverter overload alarm *Or* Inverter undervoltage alarm *Or* Inverter overvoltage alarm	Shorten the length of a possible machine extension cable or increase the conductors section (disconnect and connect again). Lift the motor pedal and wait for the automatic reset.
	Overtemperature alarm.	Wait until the motor system cools (the machine does not restart if the temperature level does not go below the set safety threshold).
The mandrel does not reach the maximum rotation speed.	The mechanical resistance of the gearmotor system has increased.	Turn the mandrel without wheel for a few minutes so that the system heats, thus reducing frictions. If in the end the mandrel does not accelerate again, call for technical assistance. 
The mandrel does not turn in the counter clockwise direction (only for RWC1150.30IB model).	Pedalboard microswitch breakage.	Replace microswitch. 
The mandrel doesn't rotate, but it attempts rotation when the machine is switched on again.	Pedalboard irreversible de-calibration.	Call for technical assistance. 
The mandrel turns slowly even though the motor pedal is not being pressed (only for RWC1150.30IB model).	Pedalboard reversible de-calibration.	1. Keep the pedal in rest position. 2. Keep the machine connected to the net. 3. Wait for 30 seconds that the pedalboard recalibration automatic attempt ends.
The mandrel does not turn (only for RWC1150.30IAB models).	1. Supply missed. 2. The operation pedalboard is broken.	1. Connect the supply. 2. Call for technical assistance. 

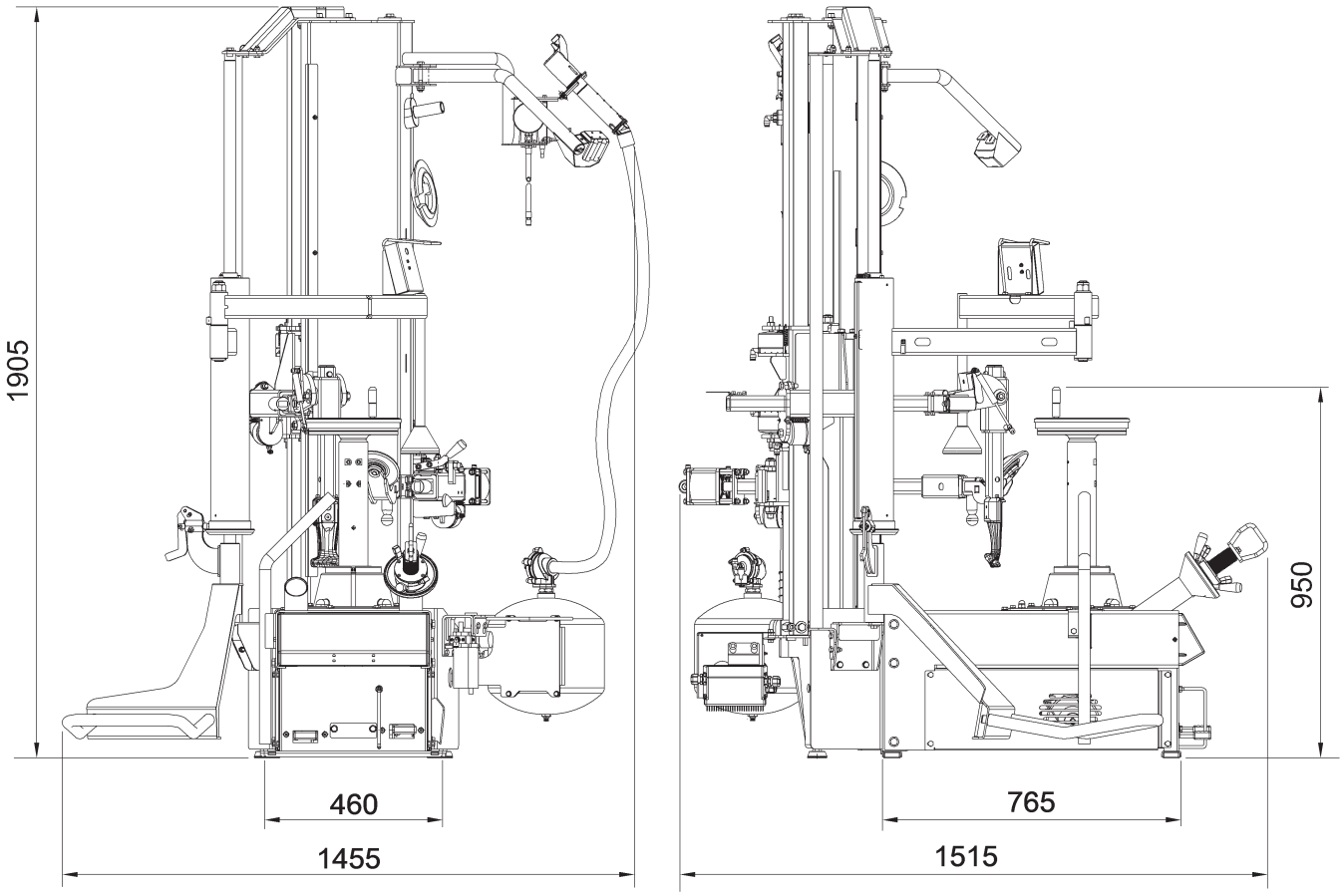
Problem	Possible cause	Remedy
The mandrel does not reach maximum rotation speed (only for RWC1150.30IAB models).	Wrong pneumatic supply pressure	Adjust supply pressure.
The mandrel does not turn in the counter clockwise direction (only for RWC1150.30IAB models).	The operation pedalboard is broken.	Call for technical assistance. 
No movement is generated when the control lever of the rotating bead pressor arm is operated.	1. Supply missing. 2. The supply pipes have not been correctly assembled. 3. The control valve is not working.	1. Check supply. 2. Check pipes fitting. 3. Call for technical assistance. 
When rotating bead pressor arm's control lever is operated movement arises in one direction only.	The control valve is not working.	Call for technical assistance. 

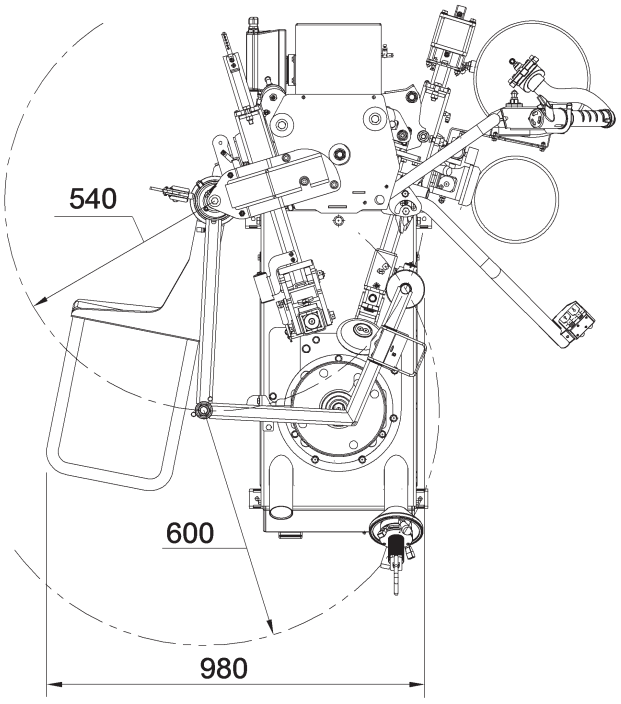
15.0 TECHNICAL DATA

	RWC1150.30IB	RWC1150.30IAB
Recommended electric supply	8 - 10 bar	
Maximum recommended air supply for Airmotor	-	7 bar
Invemotor speed	15 rpm	-
Airmotor speed	-	5-6 rpm
Invemotor power	1,5 kW	-
Recommended electric supply	Single-phase 220V- 60 Hz	-
Wheel maximum diameter	41”/43”/45”	
Wheel maximum width	15”	
Rim locking diameter	10”-26”÷12”-28”÷14”-30”	
Bead-breaker power per roller (10 bar)	1200 kg	
Gear noise	dBA 76	
Force on PLUS93 device roll	4000 N (8 bar)	
Weight	302 kg	305 kg

15.2 Dimensions

Fig. 76





16.0 STORING

If storing for long periods disconnect the main power supply and take measures to protect the machine from dust build-up. Lubricate parts that could be damaged from drying out. When putting the machine back into operation replace the rubber pads and the mounting tool.

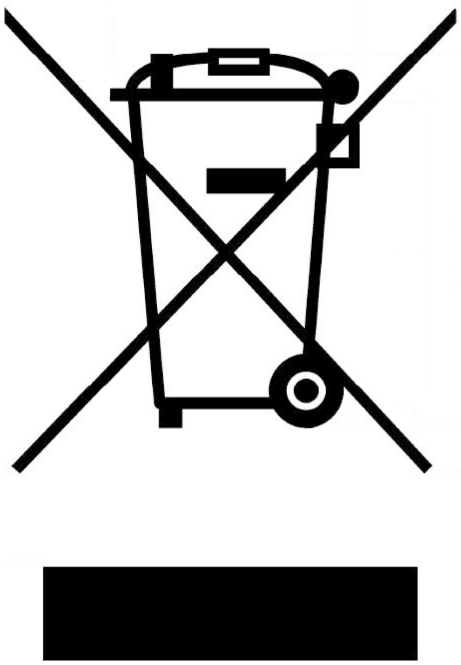
17.0 SCRAPPING

When the decision is taken not to make further use of the machine, it is advisable to make it inoperative by removing the connection pressure hoses. The machine is to be considered as special waste and should be dismantled into homogeneous parts. Dispose of it in accordance with current legislation.

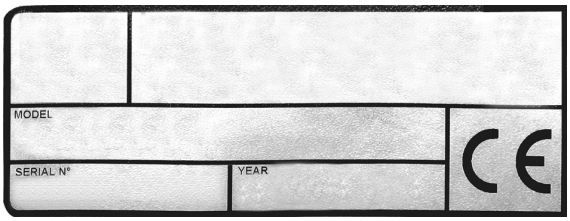
Instructions for the correct management of waste from electric and electronic equipment (WEEE) according to the Italian legislative decree 49/14 and subsequent amendments.

In order to inform the users on the correct way to dispose the product (as required by the article 26, paragraph 1 of the Italian legislative decree 49/14 and subsequent amendments), we communicate what follows: the meaning of the crossed dustbin symbol reported on the equipment indicates that the product must not be thrown among the undifferentiated rubbish (that is to say together with the "mixed urban waste"), but it has to be managed separately, to let the WEEE go through special operations for their reuse or treatment, in order to remove and dispose safely the waste that could be dangerous for the environment and to extract and recycle the raw materials to be reused.

Fig. 77



18.0 REGISTRATION PLATE DATA



The validity of the Conformity Declaration enclosed to this manual is also extended to products and/or devices the machine model object of the Conformity Declaration can be equipped with.
Said plate must always be kept clean from grease residues or filth generally.

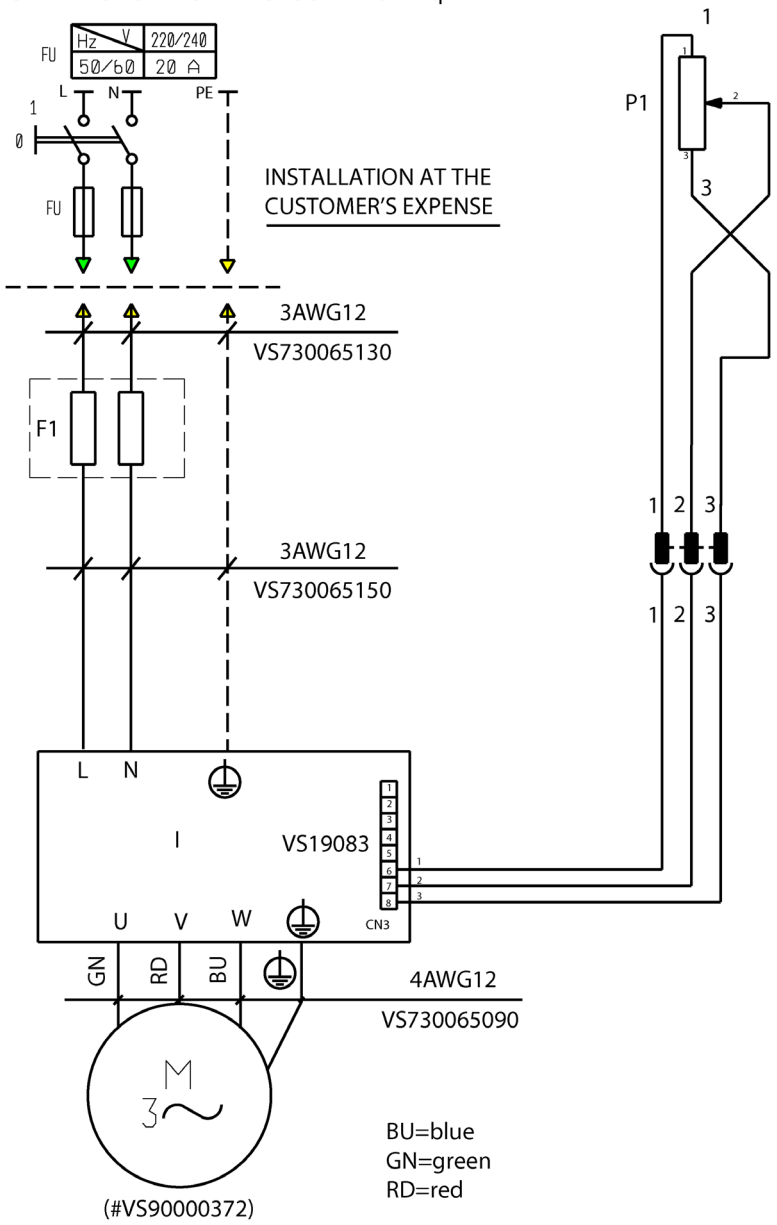
ATTENTION: TAMPERING WITH, CARVING, CHANGING ANYHOW OR EVEN REMOVING MACHINE IDENTIFICATION PLATE IS ABSOLUTELY FORBIDDEN; DO NOT COVER IT WITH TEMPORARY PANELS, ETC., SINCE IT MUST ALWAYS BE VISIBLE.

WARNING: Should the plate be accidentally damaged (removed from the machine, damaged or even partially illegible) inform immediately the manufacturer.

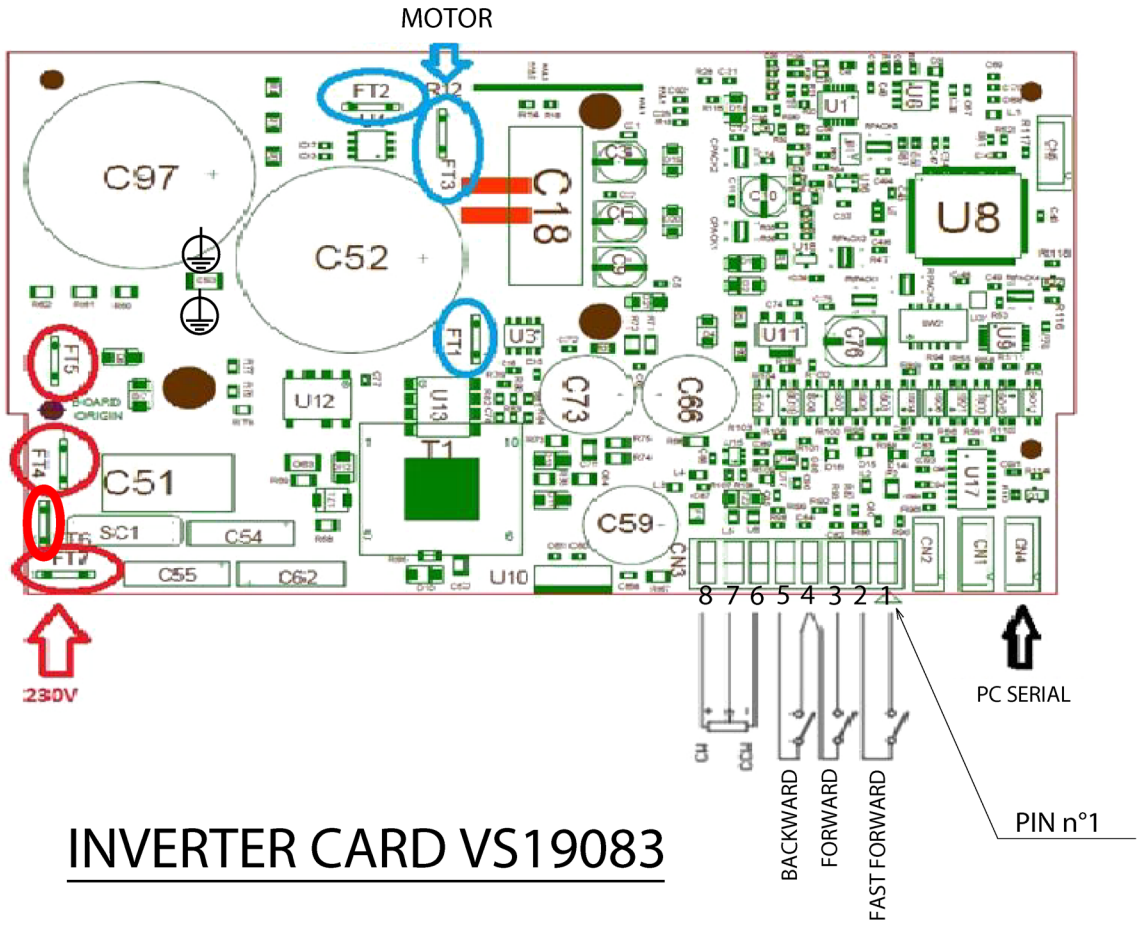
19.0 FUNCTIONAL DIAGRAMS

Here follows a list of the machine functional diagrams.

SUPPLY CABLE MONOPHASE 2P+GROUND x bmmq

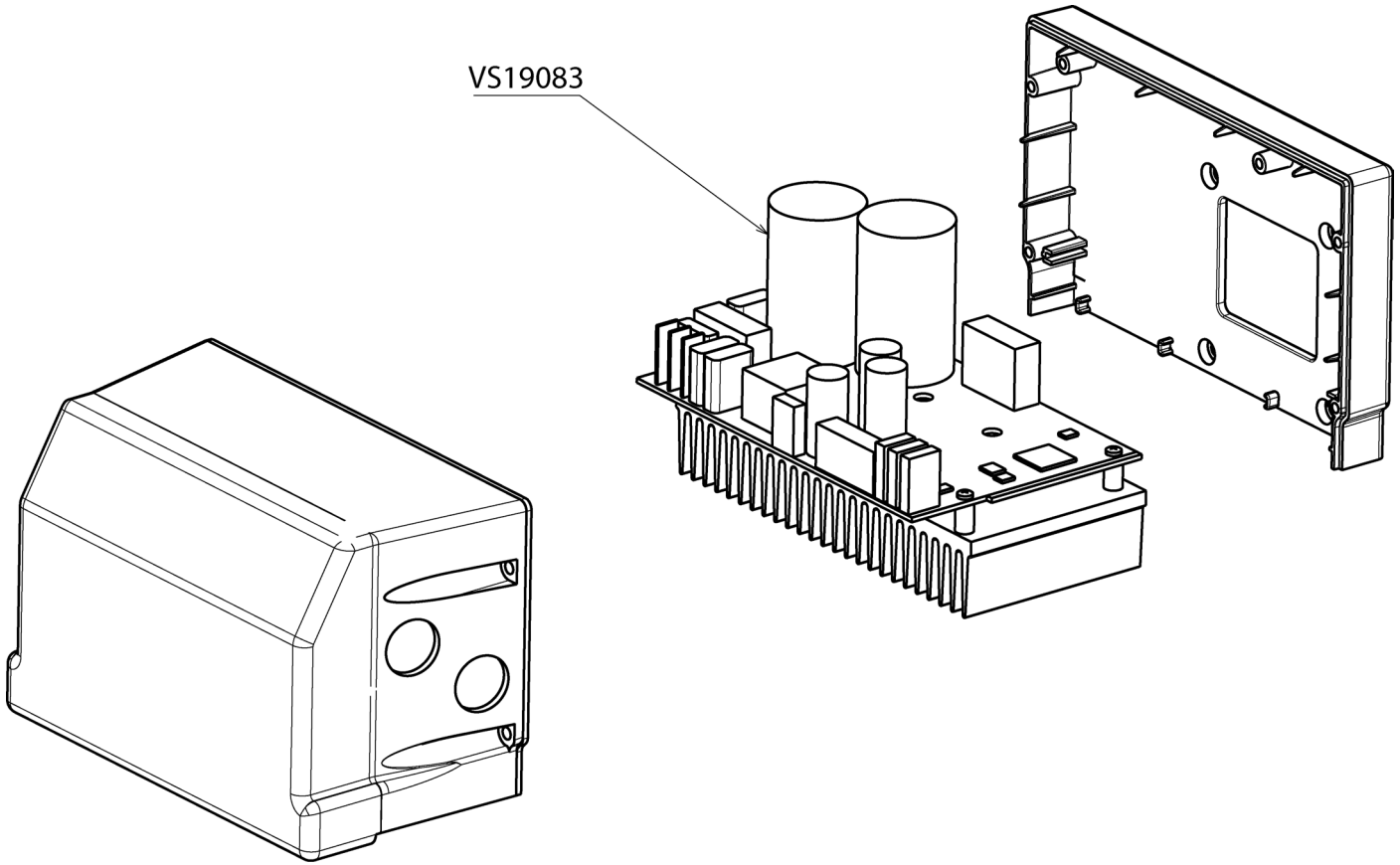


N°2 Fuse holder	1Ph	690V	32A	CH10	VS515045
N°2 Fuse	600V	20A	aM	CH10	VS507142



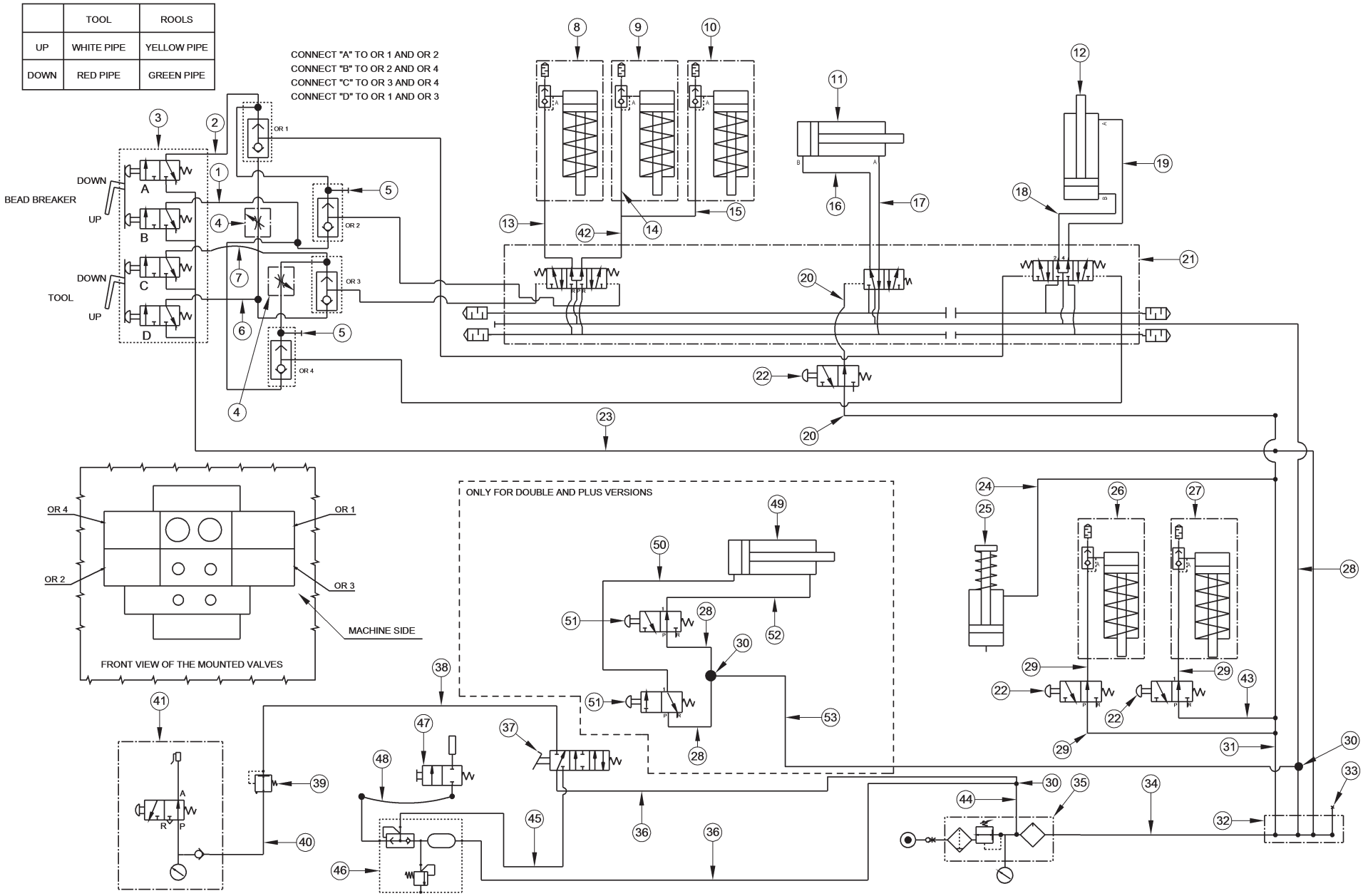
INVERTER CARD VS19083

	LIST OF COMPONENTS LISTE DES PIECES DETACHEES - LISTA DE PIEZAS		*ELECTRIC WIRING DIAGRAM 2/4* *SCHEMA ÉLECTRIQUE 2/4* *ESQUEMA ELECTRICO 2/4* *(RWC1150.30IB)*	***Page 46 of 54***
	Table N°A - Rev. 2	**VS730005140**		



	LIST OF COMPONENTS **LISTE DES PIECES DETACHEES - LISTA DE PIEZAS**		*ELECTRIC WIRING DIAGRAM 3/4* *SCHEMA ÉLECTRIQUE 3/4* *ESQUEMA ELECTRICO 3/4* *(RWC1150.30IB)*	***Page 47 of 54***
	Table N°A - Rev. 2	**VS730005140**		

N°	Cod.	Descrizione	Description	Beschreibung	Description	Descripción
	I		*Motor control inverter*		*Variateur commande moteur*	*Inversor mando motor*
	M		*Threephase asynchronous motor*		*Moteur asynchrone triphasé*	*Motor asincrónico trifásico*
	FC1		*Ccw rotation control microswitch*		*Micro-interrupteur rotation anti-horaire*	*Micro regulador rotación izquierda*
	FC2		*Cw rotation control microswitch (fast gear)*		*Micro interrupteur rotation horaire (marche rapide)*	*Micro interruptor rotación a derecha (marcha veloz)*
	FC3		*Cw rotation control microswitch (slow gear)*		*Micro interrupteur rotation horaire (marche lente)*	*Micro interruptor rotación a derecha (marcha lenta)*
	CN3		*Pedalboard micro inverter connector*		*Connecteur variateur micro pédale de direction*	*Conector inversor micro pedalera*

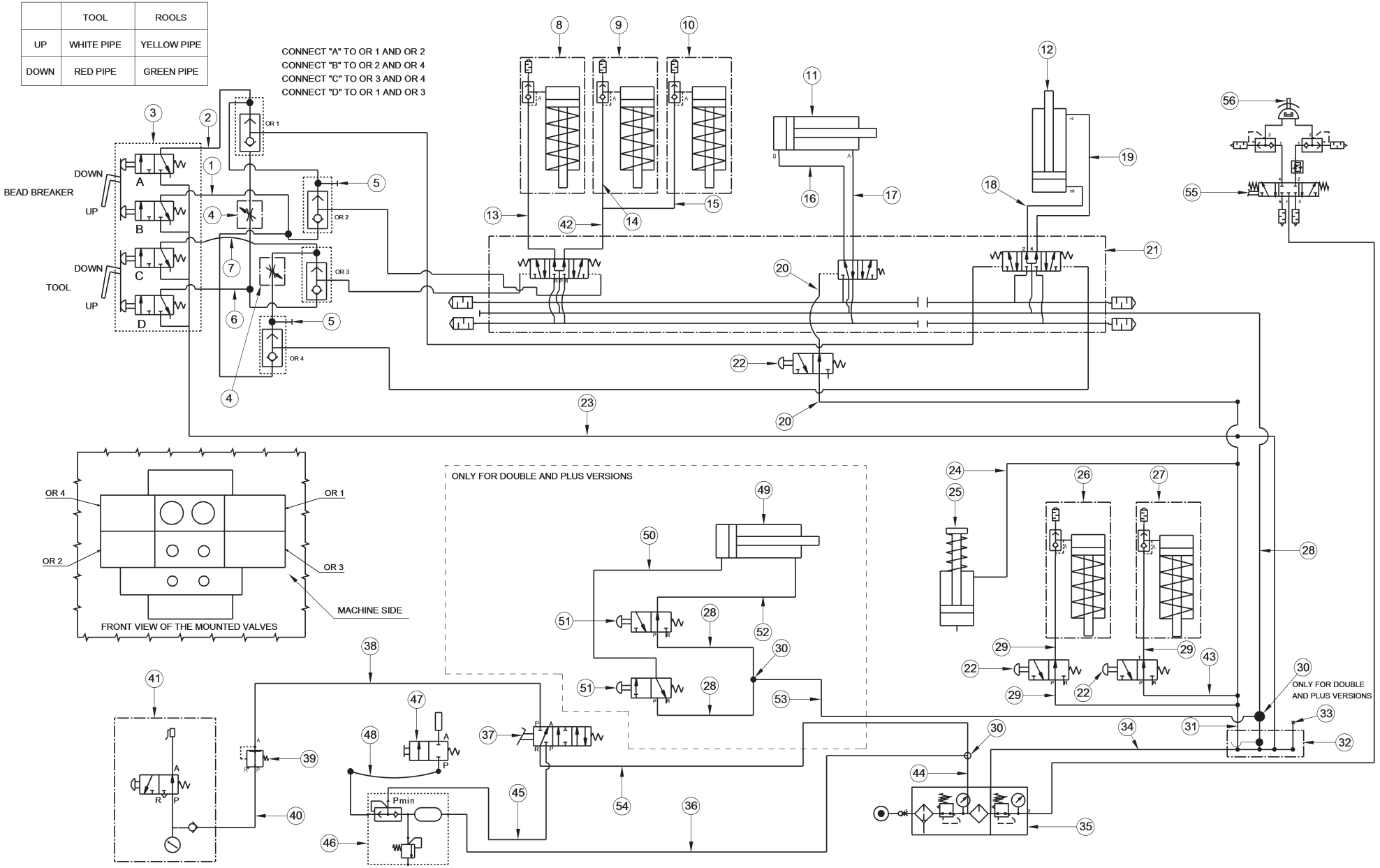


	LIST OF COMPONENTS LISTE DES PIECES DETACHEES - LISTA DE PIEZAS		*PNEUMATIC DIAGRAM* *SCHEMA PNEUMATIQUE* *ESQUEMA NEUMÁTICO* *(RWC1150.30IB)*	***Page 49 of 54***
	Table N°B - Rev. 1	**VS710705010**		

N°	Cod.	Descrizione	Description	Beschreibung	Description	Descripción
1			4x2,7 yellow rilsan pipe L=3300		Tuyau rilsan 4x2,7 jaune L= 3300	Tubo rilsan 4x2,7 amarillo L= 3300
2			4x2,7 green rilsan pipe L= 3300		Tuyau rilsan 4x2,7 vert L= 3300	Tubo rilsan 4x2,7 verde L= 3300
3			Control valve		Vanne de commande	Válvula de mando
4	VS399286		Flow regulator		Regulateur de débit	Regulación de flujo
5			Cap		Bouchon	Tapa
6			4x2,7 white rilsan pipe L= 3300		Tuyau rilsan 4x2,7 blanc L= 3300	Tubo rilsan 4x2,7 blanco L= 3300
7			4x2,7 red rilsan pipe L= 3300		Tuyau rilsan 4x2,7 rouge L= 3300	Tubo rilsan 4x2,7 rojo L= 3300
8			Bead breaker vertical neck cylinder (cyl. Ø60)		Cylindre étranglement vertical décolle-talons (cyl. Ø60)	Cilindro estrangulación vertical destalo-nador (cil. Ø60)
9			Upper tool vertical neck cylinder (cyl. Ø60)		Cylindre étranglement vertical outil supérieur (cyl. Ø60)	Cilindro estrangulación vertical herra-mienta superior (cil. Ø60
10			Lower tool vertical neck cylinder (cyl. Ø60)		Cylindre étranglement vertical outil inférieur (cyl. Ø60)	Cilindro estrangulación vertical herra-mienta inferior (cil. Ø60)
11			Bead breaker cam cylinder (cyl. Ø70)		Cylindre came décolle-talons (cyl. Ø70)	Cilindro leva destalonador (cil. Ø70)
12			Arms vertical movement cylinder (cyl. Ø125)		Cylindre mouvement vertical bras (cyl. Ø125)	Cilindro movimiento vertical brazos (cil. Ø125)
13			6x4 black rilsan pipe L=1900		Tuyau rilsan 6x4 noir L= 1900	Tubo rilsan 6x4 negro L= 1900
14			6x4 black rilsan pipe L=300		Tuyau rilsan 6x4 noir L= 300	Tubo rilsan 6x4 negro L= 300
15			6x4 black rilsan pipe L=150		Tuyau rilsan 6x4 noir L= 150	Tubo rilsan 6x4 negro L= 150
16			6x4 black rilsan pipe L=2120		Tuyau rilsan 6x4 noir L= 2120	Tubo rilsan 6x4 negro L= 2120
17			6x4 black rilsan pipe L=2240		Tuyau rilsan 6x4 noir L= 2240	Tubo rilsan 6x4 negro L= 2240
18			8x6 black rilsan pipe L=2370		Tuyau rilsan 8x6 noir L= 2370	Tubo rilsan 8x6 negro L= 2370
19			8x6 black rilsan pipe L=2300		Tuyau rilsan 8x6 noir L= 2300	Tubo rilsan 8x6 negro L= 2300
20			4x2,7 black rilsan pipe L=3300		Tuyau rilsan 4x2,7 noir L= 3300	Tubo rilsan 4x2,7 negro L= 3300
21	VS710611050		Base + valves		Embase + vannes	Base + válvulas
22	VS710590800		NA valve		Vanne NA	Válvula NA
23			6x4 black rilsan pipe L=3300		Tuyau rilsan 6x4 noir L= 3300	Tubo rilsan 6x4 negro L= 3300
24			4x2,7 black rilsan pipe L=300		Tuyau rilsan 4x2,7 noir L= 300	Tubo rilsan 4x2,7 negro L= 300
25			Parachute cylinder (cyl. Ø30)		Cylindre parachute (cyl. Ø30)	Cilindro paracaída (cil. Ø30)
26			Bead breaker arm neck cylinder (cyl. Ø60)		Cylindre étranglement bras décolle-talons (cyl. Ø60)	Cilindro estrangulación brazo destalo-nador (cil. Ø60)
27			Tool arm neck cylinder (cyl. Ø60)		Cylindre étranglement bras outil (cyl. Ø60)	Cilindro estrangulación herramienta (cil. Ø60)
28			8x6 black rilsan pipe L= 300		Tuyau rilsan 8x6 noir L= 300	Tubo rilsan 8x6 negro L= 300
29			4x2,7 black rilsan pipe L=1100		Tuyau rilsan 4x2,7 noir L= 1100	Tubo rilsan 4x2,7 negro L= 1100
30	VS325181		V8 union		Raccord à V8	Enlace a V8
31			4x2,7 black rilsan pipe L=1800		Tuyau rilsan 4x2,7 noir L= 1800	Tubo rilsan 4x2,7 negro L= 1800
32			5-ways air distribution frame		Répartiteur air à 5 voies	Tablero distribución aire de 5 vías
33			Optional PLUS92		Option PLUS92	PLUS92 opcional
34			8x6 black rilsan pipe L=430		Tuyau rilsan 8x6 noir L= 430	Tubo rilsan 8x6 negro L= 430
35			Lubricator		Graisseur	Lubrificador
36			8x6 blue rilsan pipe L=430		Tuyau rilsan 8x6 bleu L= 430	Tubo rilsan 8x6 azul L= 430
37	VSB7304000		Inflation pedal valve		Vanne pédales de direction de gonflage	Válvula pedal de inflado

N°	Cod.	Descrizione	Description	Beschreibung	Description	Descripción
38	VS317009		*8x6 blue rilsan pipe L= 400*		*Tuyau rilsan 8x6 blue L=400*	*Tubo rilsan 8x6 azul L=400*
39			*60 PSI balancing valve*		*Vanne balancement 60 PSI*	*Válvula balanceo 60 PSI*
40			*8x6 red rilsan pipe L=3800*		*Tuyau rilsan 8x6 rouge L=3800*	*Tubo rilsan 8x6 rojo L=3800*
41			*Inflation unit with pressure gauge*		*Groupe gonflage avec manomètre*	*Grupo inflado con manómetro*
42			*6x4 black rilsan pipe L=1540*		*Tuyau rilsan 6x4 noir L= 1540*	*Tubo rilsan 6x4 negro L= 1540*
43			*4x2,7 black rilsan pipe L=2600*		*Tuyau rilsan 4x2,7 noir L= 2600*	*Tubo rilsan 4x2,7 negro L= 2600*
44	VS317009		*8x6 blue rilsan pipe L= 650*		*Tuyau rilsan 8x6 blue L=650*	*Tubo rilsan 8x6 azul L=650*
45			*8x6 black rilsan pipe L=2350*		*Tuyau rilsan 8x6 noir L= 2350*	*Tubo rilsan 8x6 negro L= 2350*
46			*Tank unit*		*Groupe réservoir*	*Grupo tanque*
47			*Inflation nozzle*		*Gicleur de gonflage*	*Boquilla de inflado*
48	VS318011		*Screened pipe L= 700*		*Tuyau retiné L= 700*	*Tubo retinado L= 700*
49	VS710290370		*Bead breaking fulcrum-type cylinder*		*Cylindre décolle-talon point d'appui*	*Cilindro destalonador fulcro*
50			*10x8 black rilsan pipe L=630*		*Tuyau rilsan 10x8 noir L= 630*	*Tubo rilsan 10x8 negro L= 630*
51	VS710690280		*Bead breaking pedal valves unit*		*Groupe vannes pédal décolle talon*	*Grupo válvulas pedal destalonador*
52			*10x8 black rilsan pipe L=540*		*Tuyau rilsan 10x8 noir L=540*	*Tubo rilsan 10x8 negro L=540*
53			*8x6 black rilsan pipe L=1100*		*Tuyau rilsan 8x6 noir L=1100*	*Tubo rilsan 8x6 negro L=1100*

	TOOL	ROOLS
UP	WHITE PIPE	YELLOW PIPE
DOWN	RED PIPE	GREEN PIPE



	LIST OF COMPONENTS LISTE DES PIECES DETACHEES - LISTA DE PIEZAS		*PNEUMATIC DIAGRAM* *SCHEMA PNEUMATIQUE* *ESQUEMA NEUMÁTICO* *(RWC1150.30IAB)*	***Page 52 of 54***
	Table N°C - Rev. 0	**VS710705030**		

N°	Cod.	Descrizione	Description	Beschreibung	Description	Descripción
1			4x2,7 yellow rilsan pipe L=3300		Tuyau rilsan 4x2,7 jaune L= 3300	Tubo rilsan 4x2,7 amarillo L= 3300
2			4x2,7 green rilsan pipe L= 3300		Tuyau rilsan 4x2,7 vert L= 3300	Tubo rilsan 4x2,7 verde L= 3300
3			Control valve		Vanne de commande	Válvula de mando
4	VS399286		Flow regulator		Regulateur de débit	Regulación de flujo
5			Cap		Bouchon	Tapa
6			4x2,7 white rilsan pipe L= 3300		Tuyau rilsan 4x2,7 blanc L= 3300	Tubo rilsan 4x2,7 blanco L= 3300
7			4x2,7 red rilsan pipe L= 3300		Tuyau rilsan 4x2,7 rouge L= 3300	Tubo rilsan 4x2,7 rojo L= 3300
8			Bead breaker vertical neck cylinder (cyl. Ø60)		Cylindre étranglement vertical décolle-talons (cyl. Ø60)	Cilindro estrangulación vertical destalo-nador (cil. Ø60)
9			Upper tool vertical neck cylinder (cyl. Ø60)		Cylindre étranglement vertical outil supérieur (cyl. Ø60)	Cilindro estrangulación vertical herra-mienta superior (cil. Ø60
10			Lower tool vertical neck cylinder (cyl. Ø60)		Cylindre étranglement vertical outil inférieur (cyl. Ø60)	Cilindro estrangulación vertical herra-mienta inferior (cil. Ø60)
11			Bead breaker cam cylinder (cyl. Ø70)		Cylindre came décolle-talons (cyl. Ø70)	Cilindro leva destalonador (cil. Ø70)
12			Arms vertical movement cylinder (cyl. Ø125)		Cylindre mouvement vertical bras (cyl. Ø125)	Cilindro movimiento vertical brazos (cil. Ø125)
13			6x4 black rilsan pipe L=1900		Tuyau rilsan 6x4 noir L= 1900	Tubo rilsan 6x4 negro L= 1900
14			6x4 black rilsan pipe L=300		Tuyau rilsan 6x4 noir L= 300	Tubo rilsan 6x4 negro L= 300
15			6x4 black rilsan pipe L=150		Tuyau rilsan 6x4 noir L= 150	Tubo rilsan 6x4 negro L= 150
16			6x4 black rilsan pipe L=2120		Tuyau rilsan 6x4 noir L= 2120	Tubo rilsan 6x4 negro L= 2120
17			6x4 black rilsan pipe L=2240		Tuyau rilsan 6x4 noir L= 2240	Tubo rilsan 6x4 negro L= 2240
18			8x6 black rilsan pipe L=2370		Tuyau rilsan 8x6 noir L= 2370	Tubo rilsan 8x6 negro L= 2370
19			8x6 black rilsan pipe L=2300		Tuyau rilsan 8x6 noir L= 2300	Tubo rilsan 8x6 negro L= 2300
20			4x2,7 black rilsan pipe L=3300		Tuyau rilsan 4x2,7 noir L= 3300	Tubo rilsan 4x2,7 negro L= 3300
21	VS710611050		Base + valves		Embase + vannes	Base + válvulas
22	VS710590800		NA valve		Vanne NA	Válvula NA
23			6x4 black rilsan pipe L=3300		Tuyau rilsan 6x4 noir L= 3300	Tubo rilsan 6x4 negro L= 3300
24			4x2,7 black rilsan pipe L=300		Tuyau rilsan 4x2,7 noir L= 300	Tubo rilsan 4x2,7 negro L= 300
25			Parachute cylinder (cyl. Ø30)		Cylindre parachute (cyl. Ø30)	Cilindro paracaída (cil. Ø30)
26			Bead breaker arm neck cylinder (cyl. Ø60)		Cylindre étranglement bras décolle-talons (cyl. Ø60)	Cilindro estrangulación brazo destalo-nador (cil. Ø60)
27			Tool arm neck cylinder (cyl. Ø60)		Cylindre étranglement bras outil (cyl. Ø60)	Cilindro estrangulación herramienta (cil. Ø60)
28			8x6 black rilsan pipe L= 300		Tuyau rilsan 8x6 noir L= 300	Tubo rilsan 8x6 negro L= 300
29			4x2,7 black rilsan pipe L=1100		Tuyau rilsan 4x2,7 noir L= 1100	Tubo rilsan 4x2,7 negro L= 1100
30	VS325181		V8 union		Raccord à V8	Enlace a V8
31			4x2,7 black rilsan pipe L=1800		Tuyau rilsan 4x2,7 noir L= 1800	Tubo rilsan 4x2,7 negro L= 1800
32			5-ways air distribution frame		Répartiteur air à 5 voies	Tablero distribución aire de 5 vías
33			Optional PLUS92		Option PLUS92	PLUS92 opcional
34			8x6 black rilsan pipe L=430		Tuyau rilsan 8x6 noir L= 430	Tubo rilsan 8x6 negro L= 430
35			Airmotor air treatment unit		Groupe traitement air Airmotor	Grupo tratamiento aire Airmotor
36			8x6 blue rilsan pipe L=1400		Tuyau rilsan 8x6 bleu L= 1400	Tubo rilsan 8x6 azul L= 1400
37	VSB7304000		Inflation pedal valve		Vanne pédales de direction de gonflage	Válvula pedal de inflado

N°	Cod.	Descrizione	Description	Beschreibung	Description	Descripción
38	VS317009		*8x6 blue rilsan pipe L= 400*		*Tuyau rilsan 8x6 blue L=400*	*Tubo rilsan 8x6 azul L=400*
39			*60 PSI balancing valve*		*Vanne balancement 60 PSI*	*Válvula balanceo 60 PSI*
40			*8x6 red rilsan pipe L=3800*		*Tuyau rilsan 8x6 rouge L=3800*	*Tubo rilsan 8x6 rojo L=3800*
41			*Inflation unit with pressure gauge*		*Groupe gonflage avec manomètre*	*Grupo inflado con manómetro*
42			*6x4 black rilsan pipe L=1540*		*Tuyau rilsan 6x4 noir L= 1540*	*Tubo rilsan 6x4 negro L= 1540*
43			*4x2,7 black rilsan pipe L=2600*		*Tuyau rilsan 4x2,7 noir L= 2600*	*Tubo rilsan 4x2,7 negro L= 2600*
44	VS317009		*8x6 blue rilsan pipe L= 650*		*Tuyau rilsan 8x6 blue L=650*	*Tubo rilsan 8x6 azul L=650*
45			*8x6 black rilsan pipe L=2350*		*Tuyau rilsan 8x6 noir L= 2350*	*Tubo rilsan 8x6 negro L= 2350*
46			*Tank unit*		*Groupe réservoir*	*Grupo tanque*
47			*Inflation nozzle*		*Gicleur de gonflage*	*Boquilla de inflado*
48	VS318011		*Screened pipe L= 700*		*Tuyau retiné L= 700*	*Tubo retinado L= 700*
49	VS710290370		*Bead breaking fulcrum-type cylinder*		*Cylindre décolle-talon point d'appui*	*Cilindro destalonador fulcro*
50			*10x8 black rilsan pipe L=630*		*Tuyau rilsan 10x8 noir L= 630*	*Tubo rilsan 10x8 negro L= 630*
51	VS710690280		*Bead breaking pedal valves unit*		*Groupe vannes pédal décolle talon*	*Grupo válvulas pedal destalonador*
52			*10x8 black rilsan pipe L=540*		*Tuyau rilsan 10x8 noir L=540*	*Tubo rilsan 10x8 negro L=540*
53			*8x6 black rilsan pipe L=1100*		*Tuyau rilsan 8x6 noir L=1100*	*Tubo rilsan 8x6 negro L=1100*
54	VS317009		*8x6 blue rilsan pipe L= 1800*		*Tuyau rilsan 8x6 blue L=1800*	*Tubo rilsan 8x6 azul L=1800*
55			*Pedal*		*Pédale*	*Pedal*
56			*Airmotor*		*Airmotor*	*Airmotor*