



7300-M058-00

**TYRE-CHANGER SERIES
G8945 - T2220 - GA2945**

INSTRUCTION MANUAL
Applicable to the following models

RAV.G8945.206107

RAV.G8945.206077

RAV.G8945.200839

RAV.G8945.206091

SPA.G8945.206015

SPA.G8945.206008

EN

ORIGINAL INSTRUCTIONS

For spare parts drawings refer to the document "LIST OF COMPONENTS" to be requested from the manufacturer.

- For any further information please contact your local dealer or call:

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7300-M058-00 - Rev. n. 00 (11/2023)

SUMMARY

GENERAL DESCRIPTION _____	4	12.4 Bead breaking with side shovel _____	26
SYMBOLS USED IN THE MANUAL _____	5	12.5 Use of the lifting device _____	26
PLATES LOCATION DRAWING _____	6	12.6 Wheel clamping _____	27
1.0 GENERAL INTRODUCTION _____	8	12.6.1 Chuck height adjustment _____	29
1.1 Introduction _____	8	12.6.2 Reverse wheel pan protection _____	29
2.0 INTENDED USE _____	8	12.7 Bead breaking through bead breaker	
2.1 Training of personnel _____	8	roller _____	30
3.0 SAFETY DEVICES _____	9	12.8 Demounting the tyre _____	32
3.1 Residual risks _____	9	12.9 Mounting the tyre _____	35
4.0 IMPORTANT SAFETY		12.9.1 Fitting the tyre upper bead	
INSTRUCTIONS _____	10	using beadpusher with puller _____	35
4.1 General safety rules _____	10	12.10 Tyre inflation _____	36
5.0 PACKING AND MOBILIZATION FOR		12.10.1 Tyre inflation on equipment	
TRANSPORT _____	11	without using tubeless inflation	
6.0 UNPACKING _____	12	assembly _____	37
7.0 MOBILIZATION _____	12	12.10.2 Tyre inflation using tubeless	
8.0 WORKING ENVIRONMENT		inflation unit (applies to model	
CONDITIONS _____	13	with tubeless inflation system	
8.1 Work position _____	13	or column with integrated	
8.2 Working area _____	13	pressure vessel assembly) _____	37
8.3 Lighting _____	13	13.0 ROUTINE MAINTENANCE _____	38
9.0 ASSEMBLY AND PREPARATION		13.1 Lubricants _____	39
FOR USE _____	14	13.2 Neck adjustment _____	39
9.1 Anchoring system _____	14	14.0 TROUBLESHOOTING TABLE _____	42
9.2 Assembly procedures _____	15	15.0 TECHNICAL DATA _____	44
9.3 Connection to the compressed air		15.1 Technical electrical data _____	44
supply _____	18	15.2 Technical mechanical data _____	44
10.0 ELECTRICAL CONNECTIONS _____	19	15.3 Dimensions _____	45
10.1 Electrical checks _____	20	16.0 STORING _____	46
11.0 CONTROLS _____	20	17.0 SCRAPPING _____	46
11.1 Bead press arm control unit _____	20	18.0 REGISTRATION PLATE DATA _____	46
11.2 Tool head control unit _____	21	19.0 FUNCTIONAL DIAGRAMS _____	46
11.3 Bead-breaking arm control unit _____	21	Drawing A - Wiring diagram _____	47
11.4 Pedalboard _____	22	Drawing B - Pneumatic diagram (applies to	
12.0 USE OF THE EQUIPMENT _____	23	models without tubeless inflation) _____	50
12.1 Precaution measures during tyre		Drawing C - Pneumatic diagram (applies	
removal and fitting _____	23	to models with tubeless inflation	
12.2 Preliminary operations - Preparing		system and column with integrated	
the wheel _____	25	pressure vessel assembly) _____	53
12.3 Adjustment of bead breaker shovel		CONTENT OF THE EC DECLARATION	
with adjustable inclination (applies		OF CONFORMITY _____	56
to models with bead breaker arm		CONTENT OF THE UK DECLARATION	
with joint) _____	25	OF CONFORMITY _____	57

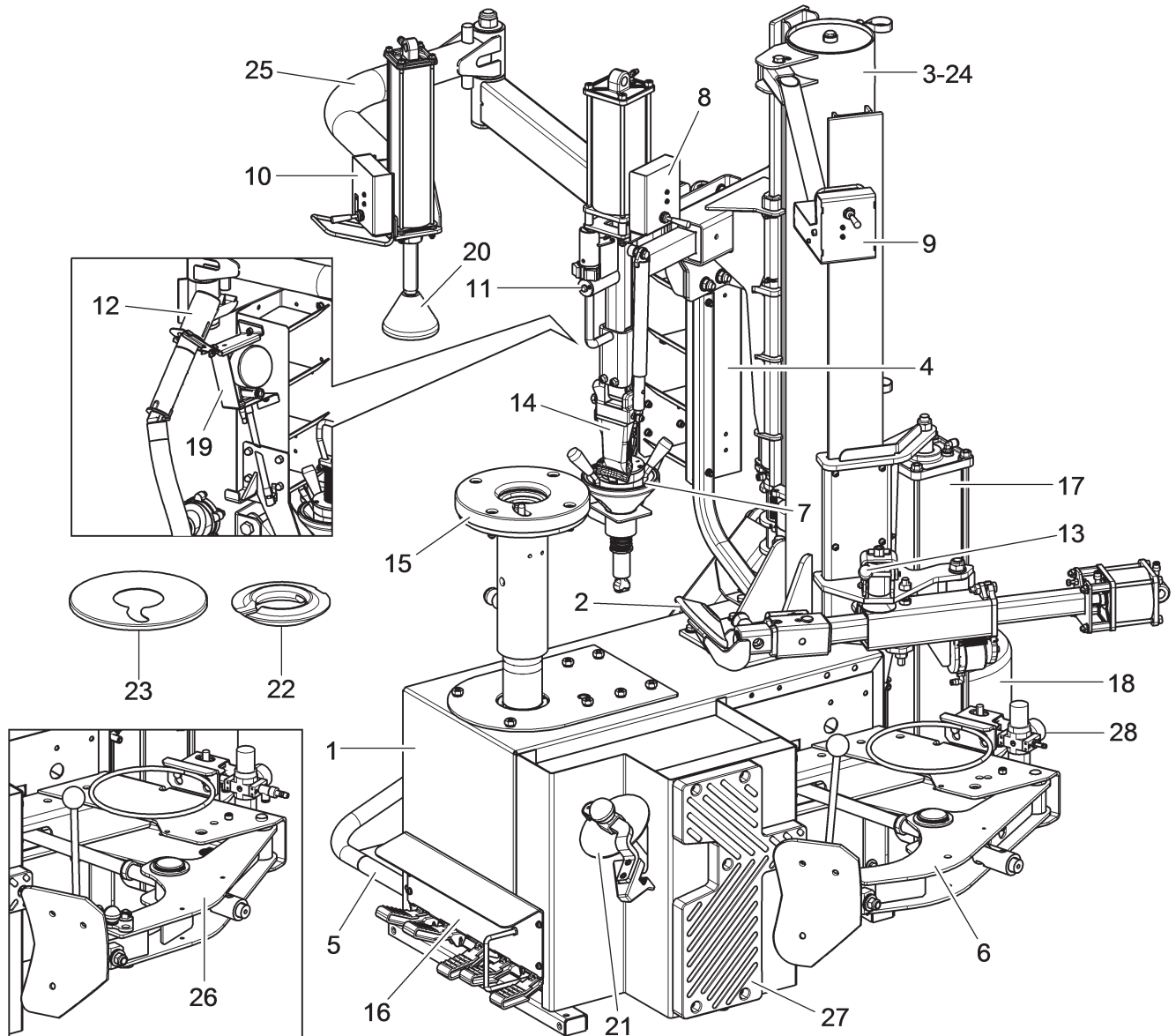


Features / Accessories Model	RAV.G8945.206107	RAV.G8945.206077	RAV.G8945.200839	RAV.G8945.206091	SPA.G8945.206015	SPA.G8945.206008
Column assembly	●	●		●	●	●
Column with integrated pressure vessel assembly			●			
Tubeless inflation unit system		●				●
Bead breaker arm assembly	●	●		●	●	●
Bead breaker arm with joint assembly			●			

● = standard

GENERAL DESCRIPTION







Fig. 1








KEY

- | | |
|--|---|
| 1 - Equipment base | 15 - Chuck |
| 2 - Bead breaker roller | 16 - Pedalboard |
| 3 - Column assembly (standard on some models) | 17 - Bead breaker roller movement cylinder |
| 4 - Tool box | 18 - Tubeless inflation vessel (applies to models with tubeless inflation system) |
| 5 - Lateral lifting device | 19 - Inflation pressure gauge |
| 6 - Bead breaker arm (standard on some models) | 20 - Bead press tool |
| 7 - Locking shaft assembly | 21 - Beadpusher with puller |
| 8 - Toolhead control unit | 22 - Two-faced cone |
| 9 - Bead breaker roller control unit | 23 - Reverse wheels protection |
| 10 - Bead press device control unit | 24 - Column with integrated pressure vessel assembly (standard on some models) |
| 11 - Tool arm unlock push button | 25 - Bead press device |
| 12 - Inflator (applies to models with tubeless inflation system) | 26 - Bead breaker arm with joint (standard on some models) |
| 13 - Lever for bead breaker roller lateral opening release | 27 - Pad |
| 14 - Toolhead | 28 - Filter assembly |

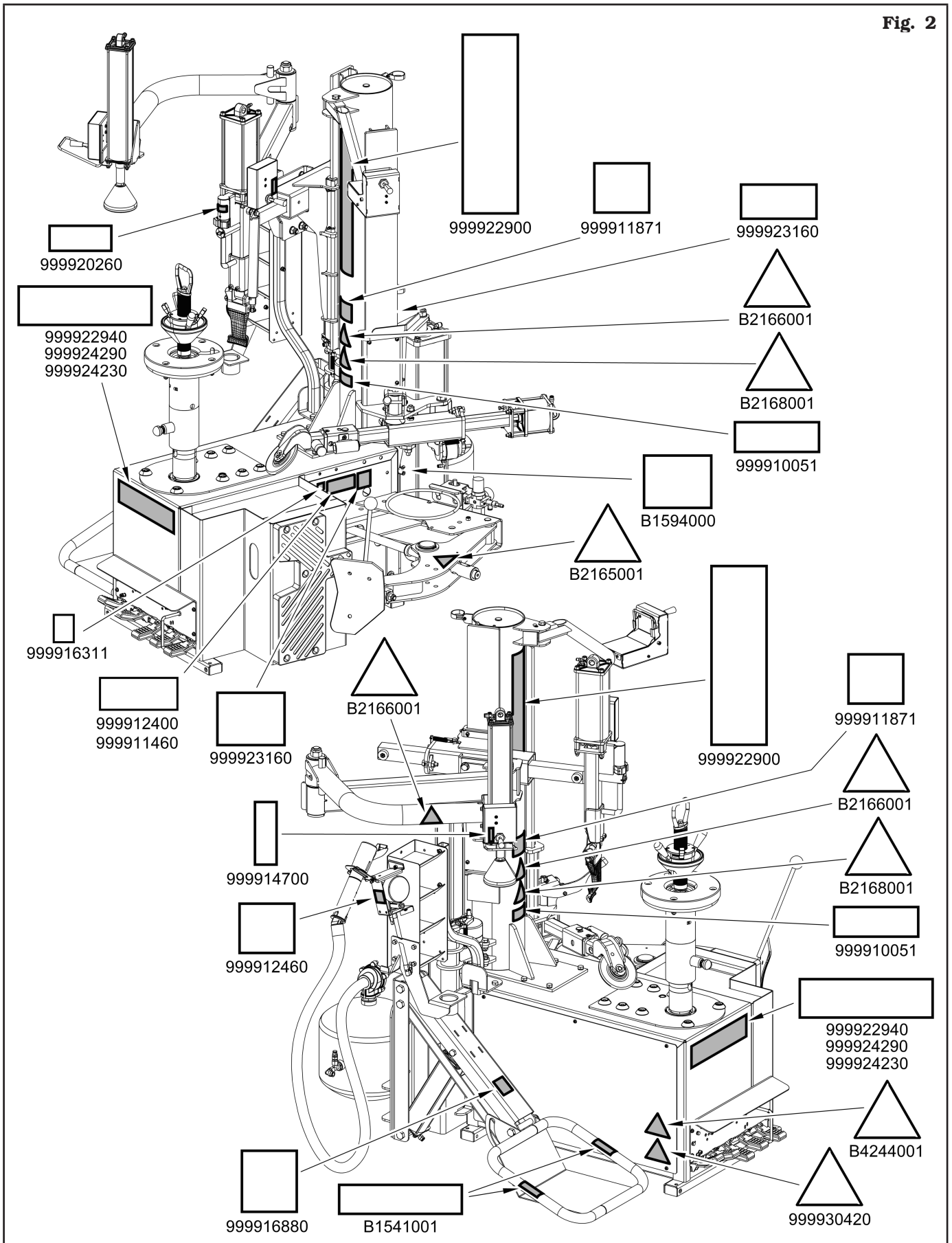
SYMBOLS USED IN THE MANUAL

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.
	Note. Indication and/or useful information.
	Move with fork lift truck or pallet truck.
	Lift from above.
	Technical assistance necessary. Do not perform any maintenance.

PLATES LOCATION DRAWING

Fig. 2



Code numbers of nameplates

B1541001	<i>Danger nameplate</i>
B1594000	<i>Date indicating nameplate</i>
B2165001	<i>Lateral bead breaker danger nameplate</i>
B2166001	<i>Bead breaker danger nameplate</i>
B2168001	<i>Tyre burst danger indicating nameplate</i>
B4244001	<i>Rotating parts danger nameplate</i>
999910051	<i>Protection device use nameplate</i>
999911460	<i>Serial number nameplate (applies to SPA.G8945.206015 - SPA.G8945.206008 models)</i>
999911871	<i>Headset nameplate</i>
999912400	<i>Serial number nameplate (applies to RAV.G8945.206107 - RAV.G8945.206077 - RAV.G8945.200839 models)</i>
999912460	<i>Supply pressure indicating nameplate</i>
999914700	<i>Bead press device control nameplate</i>
999916311	<i>Rubbish skip nameplate</i>
999916880	<i>Max. capacity load 80 kg (176 lbs) nameplate</i>
999920260	<i>Tool control nameplate</i>
999922900	<i>RAV 600x125 vertical nameplate (applies to RAV.G8945.206107 - RAV.G8945.206077 - RAV.G8945.200839 models)</i>
999922940	<i>Ravaglioli horizontal nameplate (applies to RAV.G8945.206107 - RAV.G8945.206077 - RAV.G8945.200839 models)</i>
999923160	<i>Prop 65 warning nameplate (applies to RAV.G8945.200839 model)</i>
999924230	<i>TECHNIQUE nameplate (applies to RAV.G8945.206091 model)</i>
999924290	<i>Space logo nameplate (applies to SPA.G8945.206015 - SPA.G8945.206008 models)</i>
999930420	<i>Electric shock danger nameplate</i>



IF ONE OR MORE NAMEPLATES ARE MISSING FROM THE EQUIPMENT OR BECOMES DIFFICULT TO READ. REPLACE IT AND QUOTE ITS/THEIR PART NUMBER/S WHEN REORDERING.



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

1.0 GENERAL INTRODUCTION

This manual is an integral part of the equipment and must be retained for the whole operating life of the equipment itself.

Carefully study this manual. It contains important instructions regarding **FUNCTIONING, SAFE USE and MAINTENANCE.**



KEEP THE MANUAL IN A KNOWN EASILY ACCESSIBLE PLACE FOR ALL SERVICE TECHNICIAN TO CONSULT IT WHENEVER IN DOUBT.



THE MANUFACTURER CAN NOT BE HELD RESPONSIBLE FOR ANY DAMAGE TO THE SHOP, EQUIPMENT OR CUSTOMER WHEEL/TYRE THAT MAY OCCUR WHEN THE INSTRUCTIONS GIVEN IN THIS MANUAL ARE NOT FOLLOWED. DISREGARDING THESE INSTRUCTIONS MAY CAUSE INJURY OR DEATH.

1.1 Introduction

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

2.0 INTENDED USE

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

- an electric motor coupled to a reduction gearbox to handle the tyre rotation, and
- a compressed air system to manage the movement of the pneumatic cylinders with several assembly/disassembly tools.

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



THIS EQUIPMENT MUST ONLY BE USED FOR THE PURPOSE FOR WHICH IT IS SPECIFICALLY DESIGNED. ANY OTHER USES ARE TO BE CONSIDERED IMPROPER AND THEREFORE UNACCEPTABLE.



THE MANUFACTURER CANNOT BE HELD RESPONSIBLE FOR ANY DAMAGES 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 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 machine as intended by the manufacturer.



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

3.0 SAFETY DEVICES



DAILY CHECK THE INTEGRITY AND THE FUNCTIONALITY OF THE SAFETY AND PROTECTION DEVICES ON THE EQUIPMENT.

The product is equipped with:


- **hold-to-run controls** (immediate stop of operation when the control is released) for all drives;
- chuck rotation;
- toolhead movement;
- bead breaker roller movement;
- side bead breaking;
- lifting device.

• **Fixed protections and guards**

This equipment has permanent guards installed to avoid potential risks of getting crushed, cut or squeezed.

These protections have been realized after risks evaluation and after all equipment operative situations have been considered.

All protections, specially the rubber ones, have to be periodically checked in order to evaluate their wear state.



PERIODICALLY CARRY OUT THE MAINTENANCE OF THE PROTECTIONS, SHIELDS AND SAFETY DEVICES IN GENERAL, AS INDICATED IN CHAPTER 13. ROUTINE MAINTENANCE.

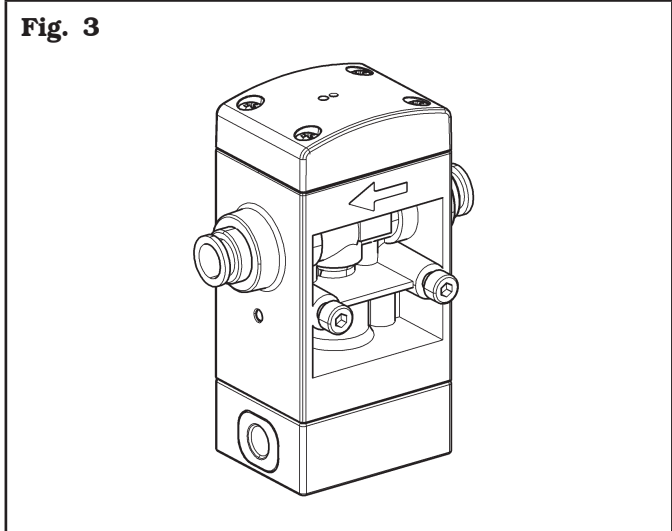
• **Motor protection devices**

The motor with Invemotor is equipped with electronic protection devices. They stop the motor to avoid damaging the motor and compromising the operator safety (overvoltage, overload, overtemperature). For other details, see the chapt. 14 "Fault-Finding".

• **Non-adjustable (balancing valve) pressure relief device.**

This allows inflation of tyres in reasonable safety. In fact, this limiter does not allow inflation of tyres to over 4.2 ± 0.2 bar (60 ± 3 psi) (see **Fig. 3**).

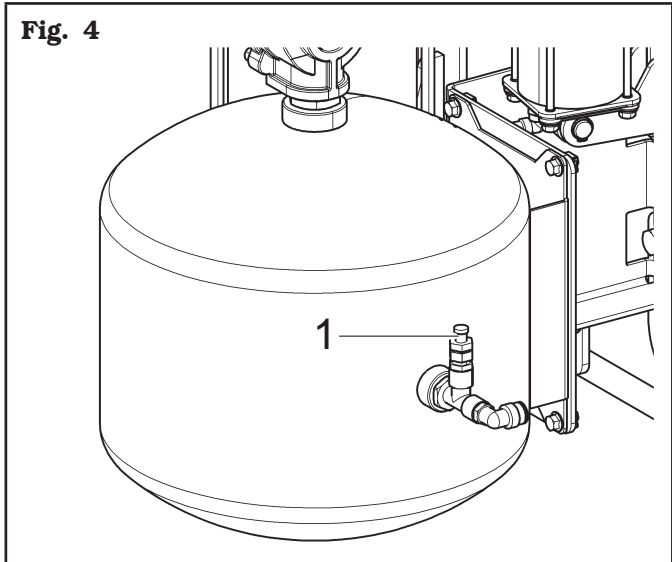
Fig. 3



• **12 bar safety valve on tank (applies to models with tubeless inflation system).**

The safety valve (**Fig. 4 ref. 1**) avoids that the tubeless inflation system vessel is under a pressure above 12 bar (174 psi).

Fig. 4



3.1 Residual risks

The equipment was subjected to a complete analysis of risks according to reference standard EN ISO 12100. Risks are as reduced as possible in relation with technology and equipment functionality.

Any residual risks have been highlighted in this manual through pictograms and adhesive warning signals placed on the equipment: their location is represented in "PLATE 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 if 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



- 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 equipment leads to serious dangers and represents a transgression of European safety standards.
- The equipment 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 equipment is designed to function only with original accessories.
- 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 machine 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, isolate the equipment from energy sources by disconnecting the electrical and/or pneumatic power supply 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 tyre. Oil on the floor is also a slipping hazard 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 equipment handles and operating grips must be kept clean and free from oil.
- The workshop must be kept clean and dry and not in an out doors location. Make sure that the working premises are properly lit.
The equipment can be operated by a single operator at a time. Unauthorized personnel must remain outside the working area, as shown in **Fig. 7**. Avoid any hazardous situations. Do not use this equipment when the shop is damp or the floor slippery and do not use this equipment out doors.
- During inflation do not lean on the tyre or stand on it; when beading in the tyre, keep hands away from tyre and rim edge.
- During inflation always stay to the side of the equipment and never in front of it.
- When operating and servicing this equipment, carefully follow all in force safety and accident-prevention precautions.
The equipment must not be operated by untrained personnel.
- Never activate the inflation device (on model with tubeless inflation system) if the tyre has not been correctly locked.



ALWAYS KEEP THE CONTROLS IN THE NEUTRAL POSITION.

5.0 PACKING AND MOBILIZATION FOR TRANSPORT

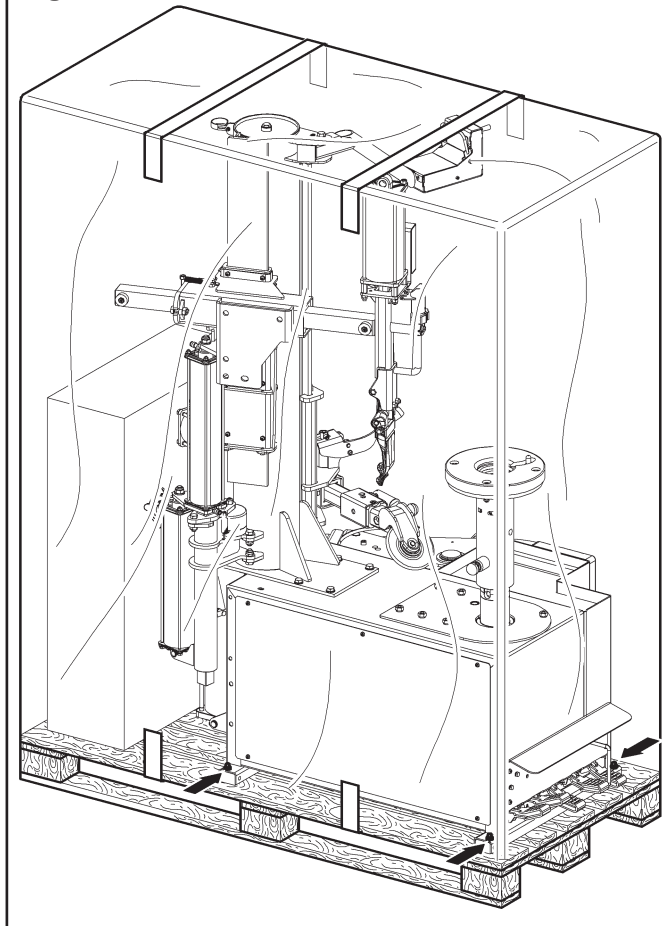


HAVE THE EQUIPMENT HANDLED BY SKILLED PERSONNEL ONLY.

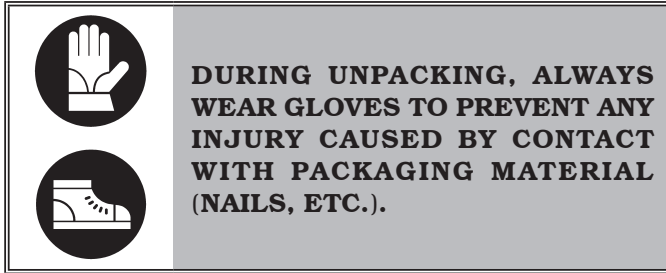
THE LIFTING EQUIPMENT MUST WITHSTAND A MINIMUM RATED LOAD EQUAL TO THE WEIGHT OF THE PACKED EQUIPMENT (see paragraph "TECHNICAL SPECIFICATIONS").

The equipment is packed partially assembled. Handling must be by pallet-lift or fork-lift trolley. The fork lifting points are indicated on the packing, **Fig. 5**.

Fig. 5



6.0 UNPACKING

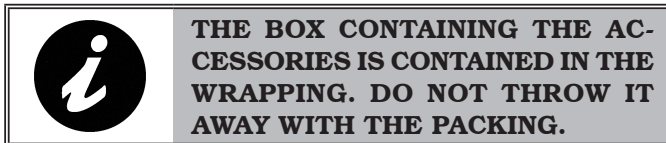


The cardboard box is supported with plastic strapping. Cut the strapping with suitable scissors. Use a small knife to cut along the lateral axis of the box and open it like a fan.

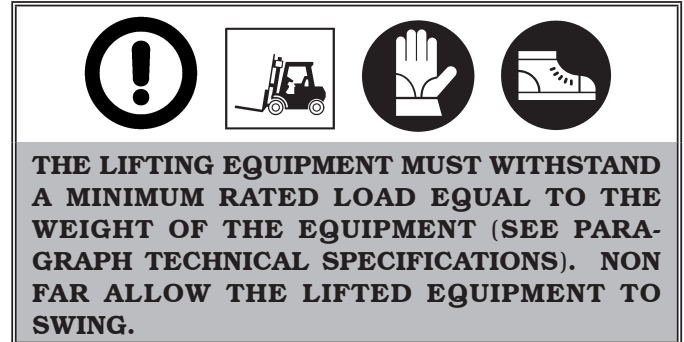
It is also possible to unnailed the cardboard box from the pallet it is fixed to. After removing the packing, and in the case of the equipment packed fully assembled, check that the machine is complete and that there is no visible damage.

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.



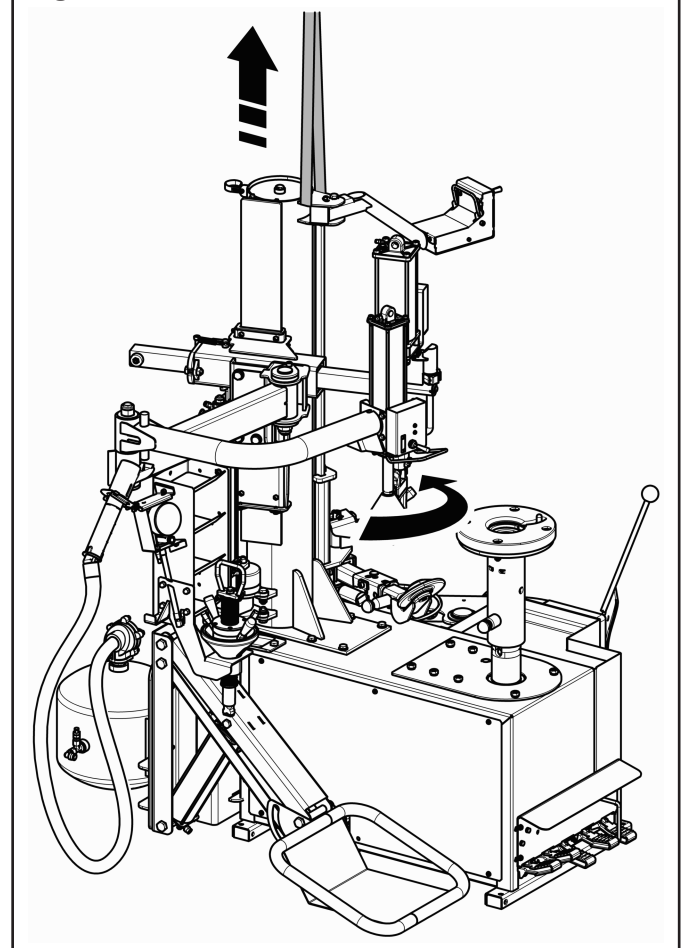
7.0 MOBILIZATION



During the equipment handling from the unpacking position to the installation one, follow the instructions listed below.

- Protect the exposed corners with suitable material (bubble wrap/cardboard).
- Do not use metallic cables for lifting.
- Make sure the power and pneumatic supply of the equipment is disconnected.
- Lift and transport with suitable device with adequate dimensions as indicated in **Fig. 6**.
- Sling with belts long at least 100 cm (39.37") and with a capacity load greater than 1000 kg (2205 lbs). Proceed the with the lifting (see **Fig. 6**)

Fig. 6



8.0 WORKING ENVIRONMENT CONDITIONS

The equipment must be operated under proper conditions as follows:

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

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

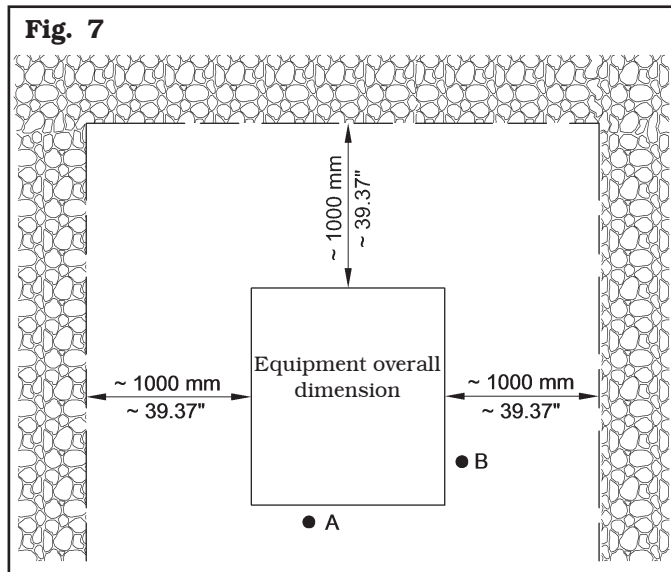
8.1 Work position

In **Fig. 7** it is possible to identify work positions **A** and **B**.

Position **A** is the main position for wheel fitting and removal with the chuck, while position **B** is ideal to follow wheel bead breaking operations.

Working in these positions allows better precision and speed during operating phases as well as greater safety for the operator.

8.2 Working area



The location of the equipment requires a usable space as indicated in **Fig. 7**. The positioning of the equipment must be executed according to the distances shown. From the control position the operator is able to observe all the equipment and surrounding area. Operator must prevent unauthorized personnel or objects that could be dangerous from entering the area. The equipment must be secured to a flat floor surface, preferably of cement or tiled. Avoid yielding or irregular surfaces.

The equipment 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 (100 lb/ft²). The depth of the solid floor must guarantee the tightness of the anchor plugs.

8.3 Lighting

The equipment must be placed in a sufficiently lit environment in compliance with current regulations.

USE THE EQUIPMENT IN A DRY AND SUFFICIENTLY ILLUMINATED PLACE, CLOSED, PROTECTED FROM ALL WEATHER CONDITIONS AND COMPLYING WITH THE REGULATIONS IN FORCE REGARDING WORK SAFETY.

9.0 ASSEMBLY AND PREPARATION FOR USE



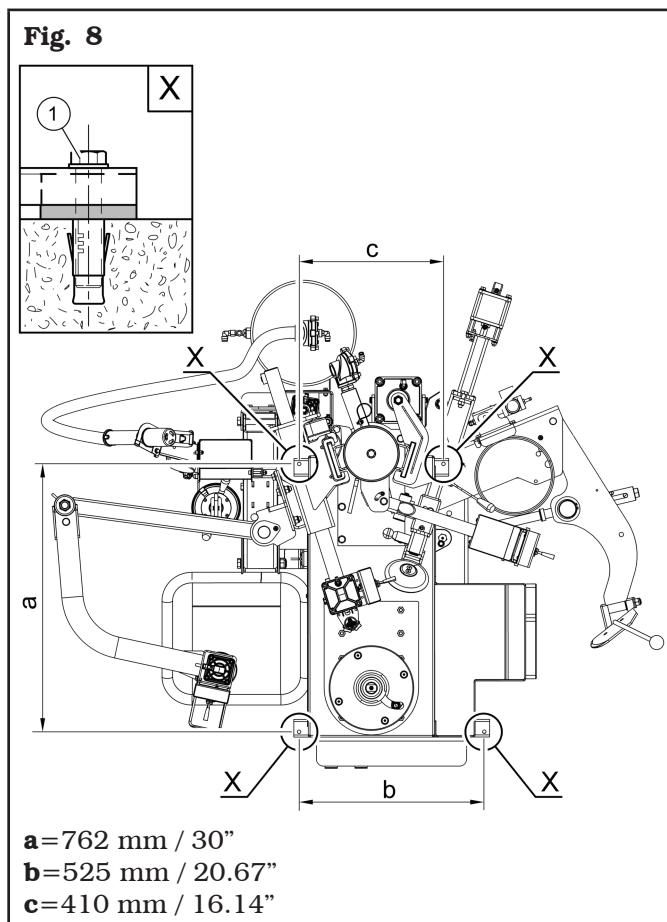
ALL EQUIPMENT ASSEMBLY OR ADJUSTMENTS MUST BE CARRIED OUT BY PROFESSIONALLY QUALIFIED STAFF.

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 Anchoring system

The packed equipment is secured to the support pallet through the holes on the frame and indicated in the figure below. These holes can be used to secure the equipment to the floor, using suitable concrete anchors (not included). Before concrete anchoring to floor, check that all the anchor points are flat, or level in contact with the floor. If not, shim between the equipment and the floor, as indicated in **Fig. 8**.

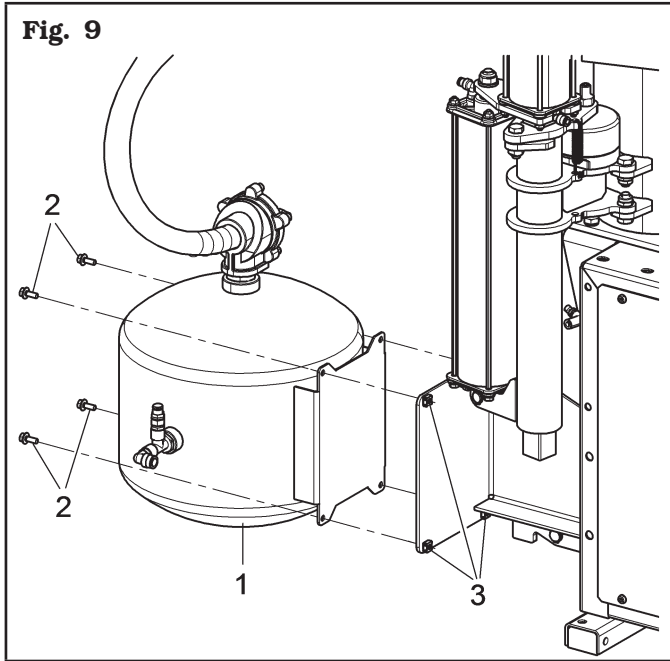
- To secure the equipment to the floor, use anchoring bolts/studs (**Fig. 8 ref. 1**) with a threaded shank M8 (UNC 5/16) suitable for the floor on which the tyre changer will be secured and in a number equal to the number of mounting holes on the bottom frame;
- drill holes in the floor, suitable for 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.



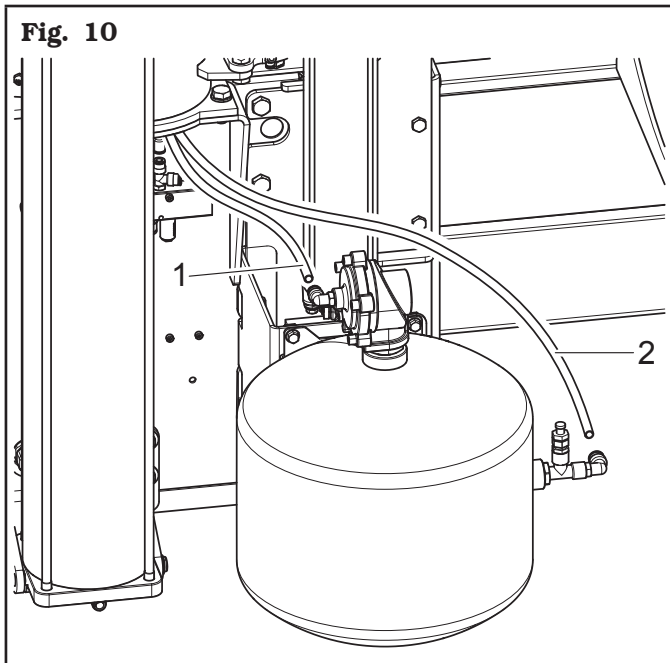
9.2 Assembly procedures

On models with tubeless inflation system

1. Fit the vessel (**Fig. 9 ref. 1**) of the Tubeless inflation system by tightening the supplied bolts (**Fig. 9 ref. 2**) to the crated nuts on the equipment (**Fig. 9 ref. 3**), as shown in **Fig. 9**;

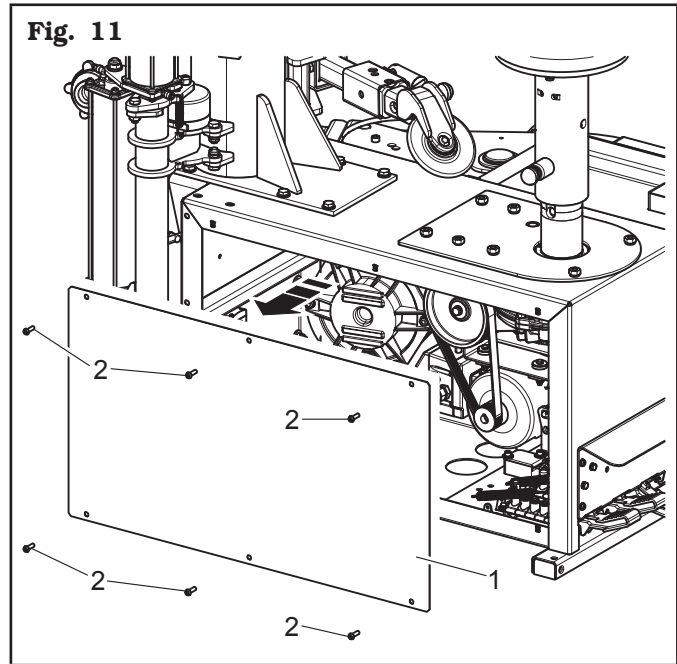


2. connect the black hose (**Fig. 10 ref. 1**) and the blue hose (**Fig. 10 ref. 2**) on the provided quick couplings as shown in figure **Fig. 10**;

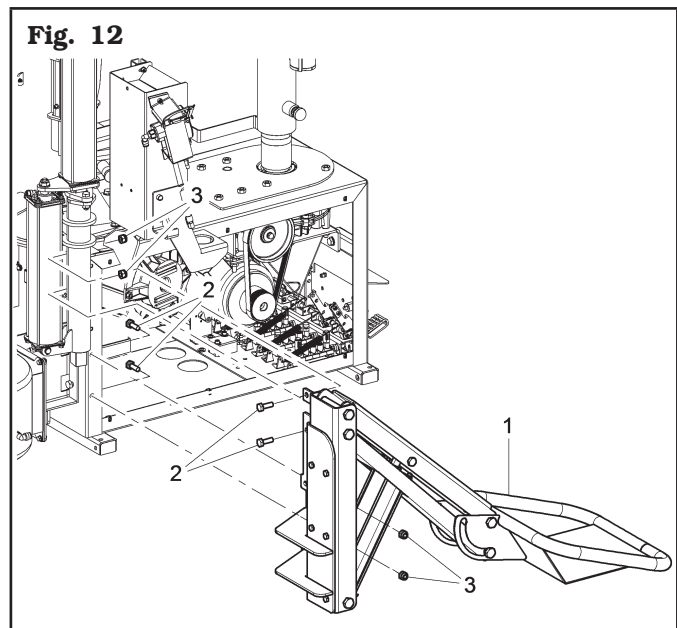


For all models

3. after placing the tyre-changer in the working place and after making sure it is insulated from its power supply sources, proceed with the fastening of the lifting device;
4. extract the lateral guard (**Fig. 11 ref. 1**) by removing the corresponding bolts (**Fig. 11 ref. 2**);



5. place the lifting device that is assembled next to the equipment on which it will be installed;
6. prepare and arrange near the bolts and the accessories, which are necessary for securing the lifting device to the tyre-changer;
7. secure the lifting device (**Fig. 12 ref. 1**) to the tyre changer using bolts (**Fig. 12 ref. 2**) and nuts (**Fig. 12 ref. 3**), supplied;



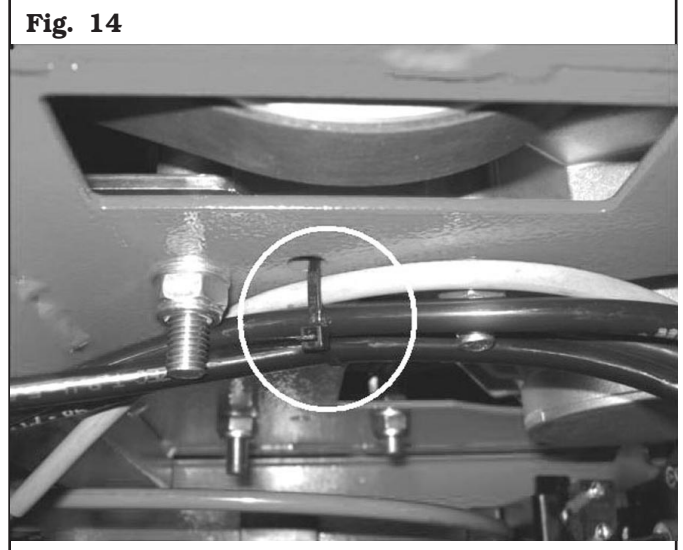
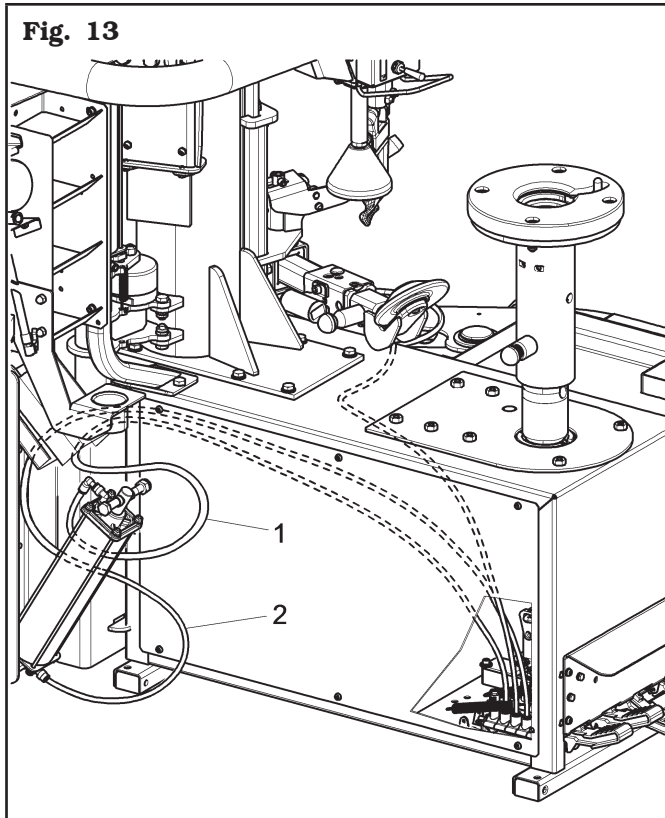
8. connect the pneumatic hoses (**Fig. 13 ref. 1-2**) coming from the lifting device pedalboard to the lifting cylinder, as shown in **Fig. 13**;



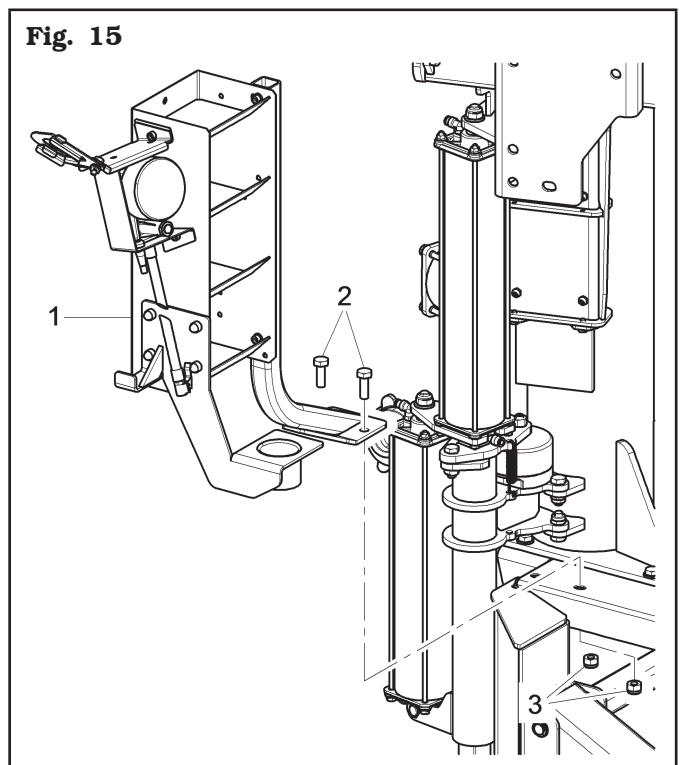
BEFORE CONNECTING THE HOSES (FIG. 13S REF. 1-2), MAKE SURE THEY PASS THROUGH THE RUBBER FAIRLEAD PLACED ON THE EQUIPMENT BASE.



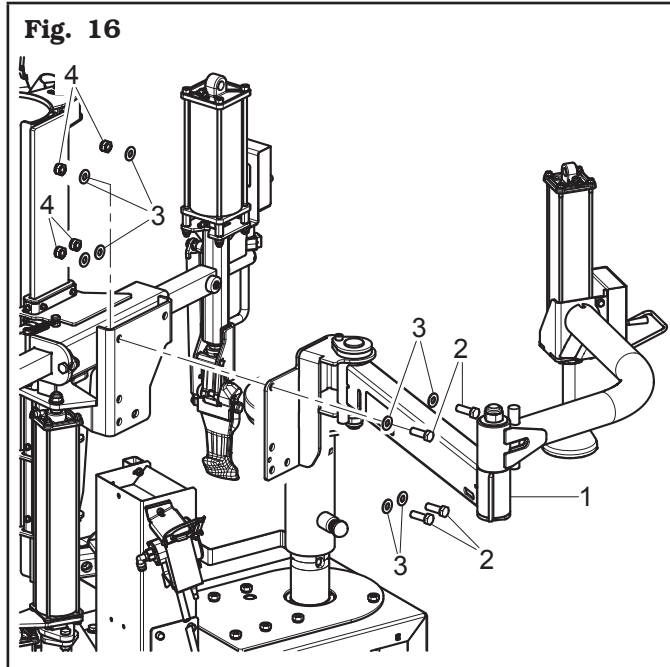
FASTEN THE HOSES AS SHOWN IN FIG. 14 IN ORDER TO AVOID THAT THEY INTERFERE WITH THE BELT.



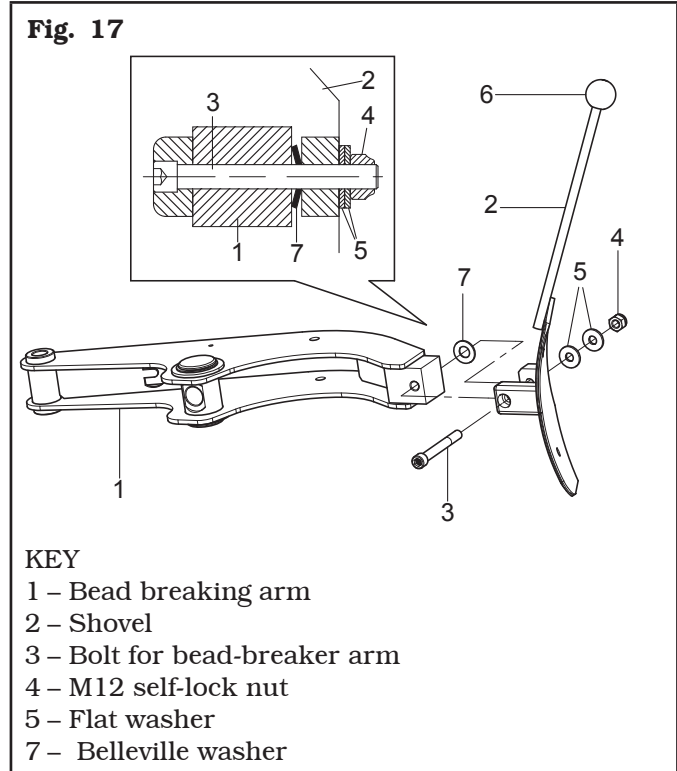
9. fit the tool box (**Fig. 15 ref. 1**) using the bolts (**Fig. 15 ref. 2**) and the nuts (**Fig. 15 ref. 3**);





10. reassemble the lateral guard (**Fig. 11 ref. 1**) previously removed;
11. mount the Bead press arm (**Fig. 16 ref. 1**) with the bolts (**Fig. 16 ref. 2**), the washers (**Fig. 16 ref. 3**) and the nuts (**Fig. 16 ref. 4**) supplied;



12. secure the shovel (**Fig. 17 ref. 2**) to the bead-breaking arm using the accessories already in place on the above-mentioned toolhead. The Belleville washer must be positioned inside the tool head tongue (see **Fig. 17**).



 **ONCE THE ASSEMBLY OPERATIONS HAVE BEEN COMPLETED, CHECK ALL EQUIPMENT FUNCTIONS.**

 **CARRY OUT A DAILY CHECK OF THE HOLD-TO-RUN CONTROL CONTROLS FOR PROPER FUNCTIONING, BEFORE STARTING EQUIPMENT OPERATION.**

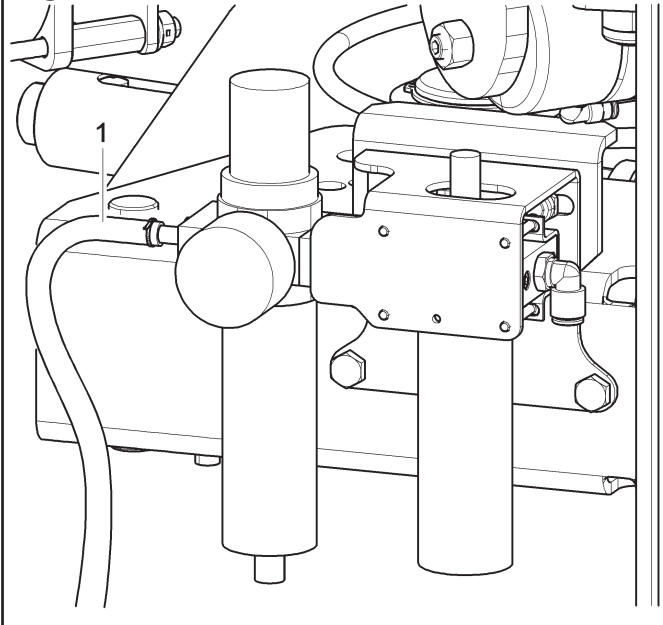
9.3 Connection to the compressed air supply



**ANY PNEUMATIC ATTACHMENTS
MUST BE CARRIED OUT BY QUALI-
FIED STAFF.**

Connect the mains pneumatic supply through the fitting (**Fig. 18 ref. 1**) placed on equipment filter assembly. The pressurized hose (**Fig. 18 ref. 2**) coming from the mains must have a minimum inner diameter of 10 mm (3/8") and a minimum outer diameter of 19 mm (3/4") (see **Fig. 18**) to have sufficient flow (see **Fig. 18**).

Fig. 18



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



**USE A SUITABLE PNEUMATIC
THREADED CONNECTION SEAL-
ING TAPE FOR ALL PNEUMATIC
CONNECTIONS.**



**IF OTHER PNEUMATIC CONNEC-
TIONS SHOULD BE EXECUTED,
REFER TO THE PNEUMATIC DIA-
GRAMS ILLUSTRATED IN CHAP-
TER 19.**




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


10.0 ELECTRICAL CONNECTIONS


The equipment is supplied with a cable. A plug corresponding to the following requirements must be connected to the cable:


 **ALL ELECTRICAL CONNECTIONS ARE TO BE DONE BY QUALIFIED PERSONNEL ONLY.**

 **BEFORE CONNECTING THE EQUIPMENT MAKE SURE THAT:**

- **POWER LINE SPECIFICATIONS CORRESPOND TO EQUIPMENT REQUIREMENTS AS SHOWN ON THE MACHINE NAMEPLATE;**
- **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 PADLOCKABLE MAIN SWITCH AND A CUTOUT WITH DIFFERENTIAL PROTECTION SET AT 30 mA.**

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

 **MAKE SURE THAT THE ELECTRICAL SYSTEM IS COMPATIBLE WITH THE RATED POWER REQUIREMENTS 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 AND MAY DAMAGE THE EQUIPMENT.**

As envisaged by the regulations in force, the product is not equipped with a master circuit breaker, but simply has a plug-socket connection to the electrical mains.

Motor power supply	Conformity standard	Voltage	Amperage	Poles	Minimum IP rating
Power supply 1 Ph, inverter motor	IEC 309	200/240V	32A	2 Poles + Ground	IP 44

10.1 Electrical checks



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 THE HOLD-TO-RUN CONTROL CONTROLS FOR PROPER FUNCTIONING, BEFORE STARTING EQUIPMENT OPERATION.

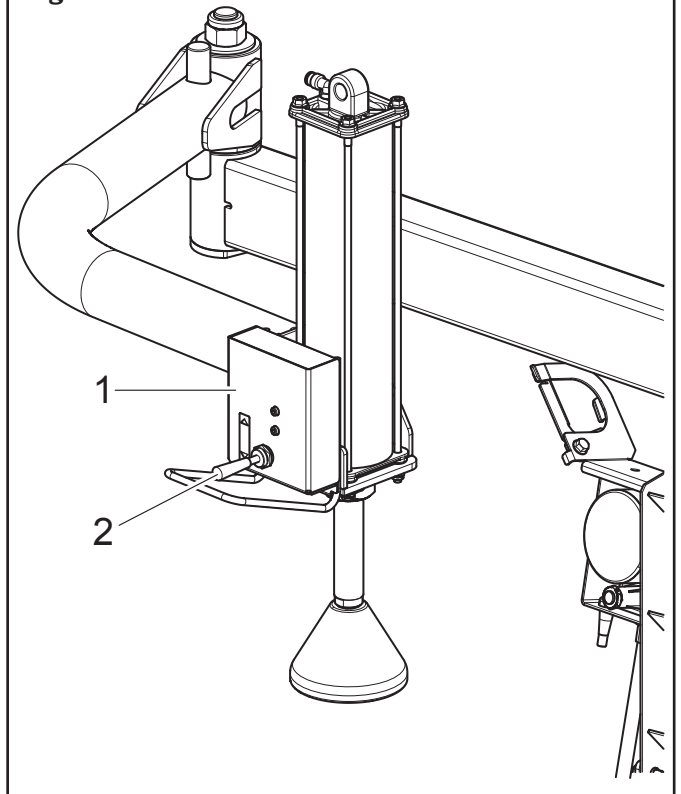
11.0 CONTROLS

11.1 Bead press arm control unit

It is made up of an handle control (**Fig. 19 ref. 1**), positioned on the device. This handle control allows to operate the vertical movement of the pusher roller. Lift the lever (**Fig. 19 ref. 2**) to operate the upwards movement, and lower the lever (**Fig. 19 ref. 2**) to perform the downwards movement.

The device positioning next to the tyre is a completely manual operation.


Fig. 19



11.2 Tool head control unit

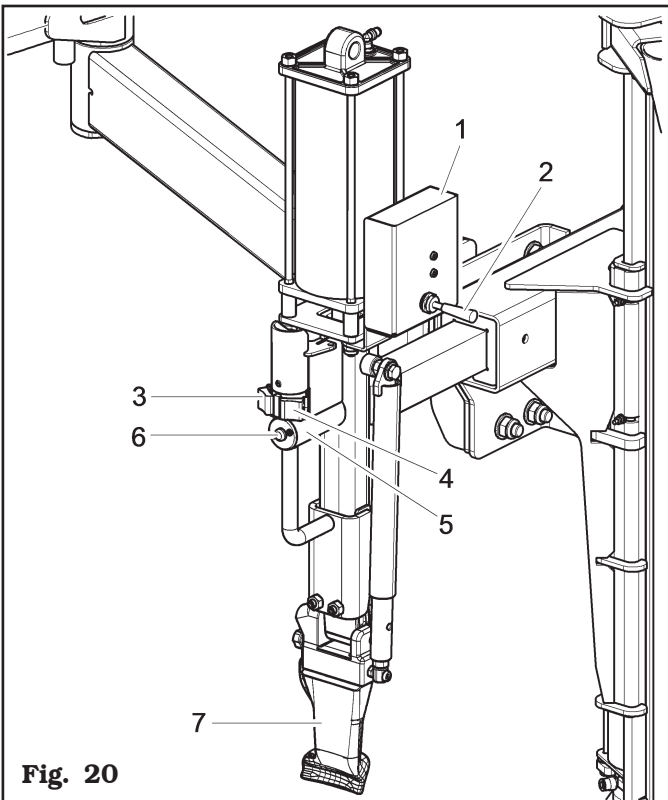
It is made up of:

- a handle control (**Fig. 20 ref. 1**), placed on the tool arm. Through this handle control you can control the vertical movement for the tool head introduction and bead coupling. Lift the lever (**Fig. 20 ref. 2**) to operate the upwards movement, and lower the lever (**Fig. 20 ref. 2**) to perform the downwards movement;
- a control with two push buttons: press the button (**Fig. 20 ref. 3**) to unlock the horizontal movement and to move upwards the tool arm, by pressing the push button (**Fig. 20 ref. 4**) you can unlock the horizontal movement and move downwards the tool arm;



CONTROLS (FIG. 20 REF. 3-4) (IN ORDER TO PREVENT THE WRONG USE OF THE TYRE CHANGER) ARE OPERATIVE ONLY IF THE TOOL HEAD (FIG. 20 REF. 7) IS IN COMPLETELY LIFTED POSITION. OPERATE LEVER (FIG. 20 REF. 2), BY SHIFTING IT UPWARDS, IN ORDER TO MOVE THE TOOL HEAD TO SUCH POSITION.

- a handle control (**Fig. 20 ref. 5**), which through a pulling and pushing movement, in combination with the release button (**Fig. 20 ref. 6**), allows the adjustment of the tool head on the wheel diameter (only horizontally).




11.3 Bead-breaking arm control unit

It is made up of an handle control (**Fig. 21 ref. 1**), positioned on the device. This handle control allows to operate the vertical movement of the bead breaker arm. Lift the lever (**Fig. 21 ref. 2**) to operate the upwards movement, and lower the lever (**Fig. 21 ref. 2**) to perform the downwards movement.

Pull the rear lever (**Fig. 21 ref. 3**) to operate the bead breaker roller progress. This is a hold-to-run control. When the lever is released the bead breaker roller returns to rest position.

The bead breaker arm is equipped with an unlocking push button (**Fig. 21 ref. 4**) that must be pressed before gripping the handle (**Fig. 21 ref. 5**) to place the bead breaker roller on the rim edge. Releasing the push button, the roller locks itself into the set position.



THE PUSH BUTTON (FIG. 21 REF. 4) MUST BE PRESSED BEFORE ACTIVATING THE HANDLE (FIG. 21 REF. 5) OTHERWISE THE HANDLE DOES NOT ALLOW ANY MOVEMENT.

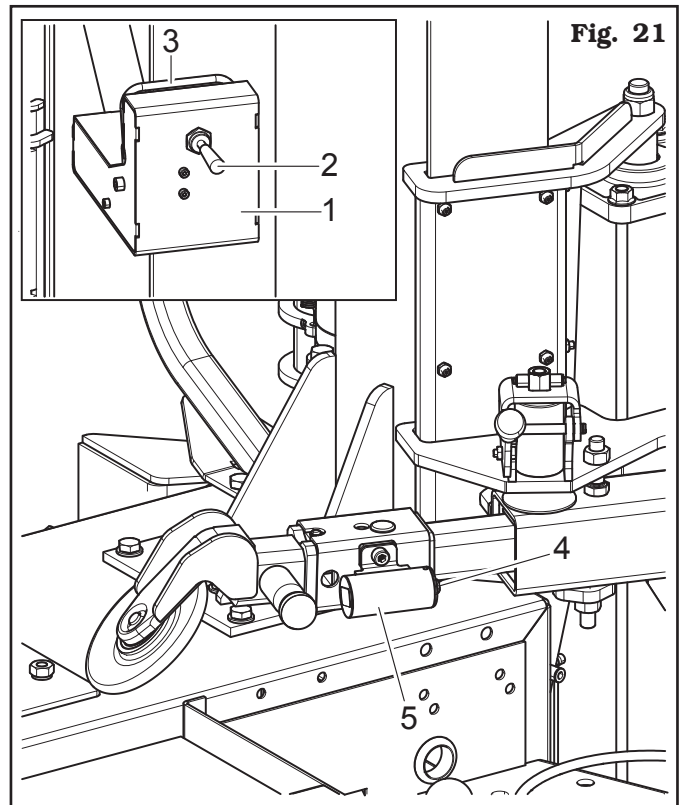


Fig. 20

11.4 Pedalboard

- The hold-to-run control pedal (**Fig. 22 ref. 1**) operates the handling of the wheel lifting device. Pulling the pedal downwards the lifting device starts its rise while, on the contrary, pulling the pedal upwards the lifting device starts descending. By releasing the pedal at any time, the lifting device stops.
- The pedal (**Fig. 22 ref. 2**) operates the vertical movement of the tool arm (disengagement). Pulling the pedal downwards the tool arm to work position starts its descent. Press it again to obtain the tool arm rise in disengagement position.
- The pedal (**Fig. 22 ref. 3**) has two hold-to-run control operative positions. When it is pushed downwards it controls chuck motor clockwise rotary movement. When the pedal is lifted upwards it operates the opposite movement.
- The pedal (**Fig. 22 ref. 4**) has a hold-to-run control operative position. When pressed down, it operates the bead breaker arm closing. Releasing the pedal, the arm returns to rest position.
- The inflation pedal (**Fig. 22 ref. 5**) has a different function according to the version present on the equipment.

Version with inflation with pressure gauge

The inflation pedal in this version has only one function. A continuous pressure supplies air at a controlled pressure (max 4.2 ± 0.2 bar / 60 ± 3 psi).

Version with Tubeless inflation vessel or column with integrated pressure vessel assembly

The inflation pedal has two functions. The supply of air at max. controlled pressure as in the previous version, and a second function of a jet of air from the inflation nozzle to assist the beading in of the tyre.

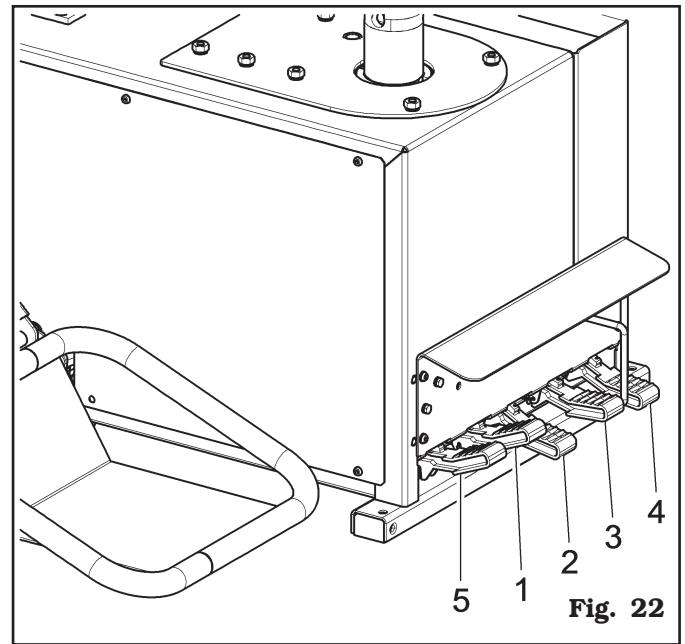


Fig. 22



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

12.0 USE OF THE EQUIPMENT

12.1 Precaution measures during tyre removal and fitting



Before fitting a tyre, observe the following safety rules:

- rim and tyre must always be clean, dry and in good condition; if necessary, clean the rims and check that:
 - neither the beads, the sidewalls nor the tread of the tyre 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 tyre beads, using specific tyre lubricants only;
- replace the rim valve with a new valve. if the tyre pipe has a metal valve, replace the grommet.
- always make sure that tyre and rim sizes are correct for their coupling; never fit a tyre unless you are sure it is of the right size (the rated size of rim and tyre is usually printed directly on them);
- do not use compressed air or water jets to clean the wheels on the equipment.



FITTING A TYRE WITH A DAMAGED BEAD, TREAD AND/OR SIDEWALL ON A WHEEL RIM REDUCES THE SAFETY OF A VEHICLE AND CAN LEAD TO TRAFFIC ACCIDENTS, SERIOUS INJURY OR EVEN DEATH.

IF A TYRE BEAD, TREAD OR SIDEWALL IS DAMAGED DURING REMOVAL, NEVER REFIT THE TYRE ONTO A WHEEL.

IF YOU SUSPECT THAT A BEAD, TREAD OR SIDEWALL OF A TYRE MAY HAVE BEEN DAMAGED DURING FITTING, REMOVE THE TYRE AND INSPECT IT CAREFULLY. NEVER REFIT IT TO A WHEEL IF A BEAD, TREAD OR SIDEWALL IS DAMAGED.



INADEQUATE LUBRICATION OF THE TYRE, THE RIM, THE TOOL-HEAD AND/OR THE LEVER CAN CAUSE AN ABNORMAL FRICTION BETWEEN THE TYRE AND THESE ELEMENTS DURING THE DISASSEMBLY AND/OR ASSEMBLY OF THE TYRE AND CAUSE DAMAGE TO THE TYRE ITSELF, REDUCING THE SAFETY OF A VEHICLE EQUIPPED WITH THE TYRE. ALWAYS LUBRICATE THESE ELEMENTS THOROUGHLY USING A SPECIFIC LUBRICANT FOR TYRES, FOLLOWING THE INDICATIONS CONTAINED IN THIS MANUAL.



THE USE OF AN INADEQUATE, WORN OR OTHERWISE DAMAGED LEVER TO REMOVE TYRE BEADS MAY LEAD TO DAMAGE TO A BEAD AND/OR A TYRE SIDEWALL, REDUCING THE SAFETY OF A VEHICLE EQUIPPED WITH THE TYRE ITSELF.

ONLY USE THE LEVER SUPPLIED WITH THE EQUIPMENT AND CHECK ITS CONDITION BEFORE EACH DISASSEMBLY.

IF IT IS WORN OR OTHERWISE DAMAGED, DO NOT USE IT TO REMOVE THE TYRE, BUT REPLACE IT WITH A LEVER SUPPLIED BY THE EQUIPMENT MANUFACTURER OR ONE OF ITS AUTHORIZED DISTRIBUTORS.



AN INCORRECT POSITIONING OF THE VALVE AT THE BEGINNING OF THE DISASSEMBLY AND/OR ASSEMBLY OPERATIONS OF EACH TYRE BEAD CAN CAUSE THE VALVE TO BE, DURING THESE OPERATIONS, IN OR NEAR AN AREA WHERE THE BEAD HAS FITTED INTO THE RIM DROP CENTRE.

THE BEAD COULD PRESS ON THE PRESSURE SENSOR, LOCATED UNDER THE VALVE INSIDE THE DROP CENTRE, CAUSING IT TO BREAK.

ALWAYS RESPECT THE POSITIONING OF THE VALVE AT THE BEGINNING OF EACH BEAD DISASSEMBLY AND/OR ASSEMBLY OPERATION INDICATED IN THIS MANUAL.



FAILURE TO INSERT A SUITABLE SECTION OF A BEAD INSIDE THE RIM DROP CENTRE, AS INDICATED IN THIS MANUAL DURING THE FITTING OR REMOVAL OF THE BEAD, RESULTS IN AN ABNORMAL TENSION ON THE BEAD.

THIS CAN CAUSE DAMAGE TO THE BEAD AND/OR THE SIDEWALL OF THE TYRE TO WHICH THE BEAD IS CONNECTED, REDUCING THE SAFETY OF A VEHICLE EQUIPPED WITH THE TYRE.

ALWAYS FOLLOW THE DIRECTIONS IN THE MANUAL REGARDING ALIGNMENT OF A SECTION OF A BEAD TO THE RIM DROP CENTRE.

DO NOT PROCEED WITH THE REMOVAL OR INSTALLATION OF A BEAD IF YOU ARE NOT ABLE TO ALIGN A SECTION OF A BEAD WITH THE RIM DROP CENTRE AS INDICATED IN THIS MANUAL.

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 de-mounted, checking the position of the drop centre.
- Find the rim locking point.
- Try to establish the special types of wheels, such as “TD” and “AH”, in order to improve locking, bead breaking, assembly and disassembly performances.



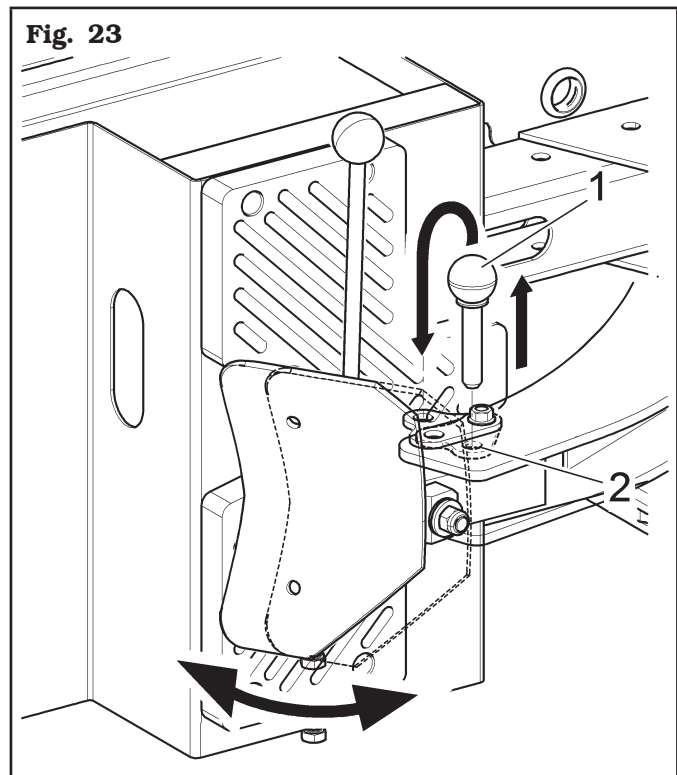
WHEN HANDLING WHEELS WEIGHING MORE THAN 10 kg (22 lbs) AND/OR WITH A FREQUENCY OF MORE THAN 20/30 WHEELS PER HOUR, THE LIFTING DEVICE SHOULD BE USED.

12.3 Adjustment of bead breaker shovel with adjustable inclination (applies to models with bead breaker arm with joint)

The bead breaker is equipped with a double articulation (**Fig. 23**) that allows the optimization of the position between the shovel and the tyre bead during bead breaking phase, through its introduction in between the bead and the rim edge.

While operating with rims with protected edge or with lowered tyres and/or thick tyres, You should place the shovel articulation in order to use the hole (**Fig. 23 ref. 2**).

To change the shovel position on the articulation, take off the pin (**Fig. 23 ref. 1**) from the hole, turn the vane until the desired hole is placed in correspondence with the articulation hole, then insert the pin again (**Fig. 23 ref. 1**) into the new seat.

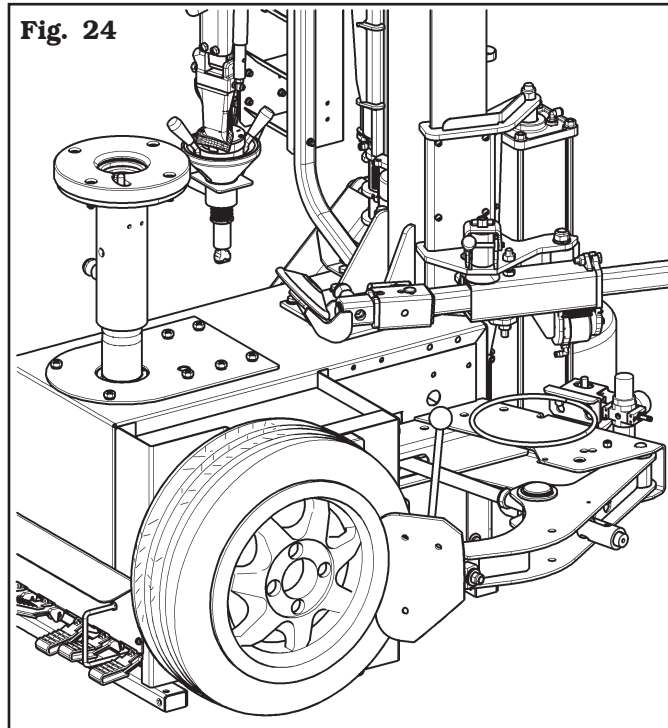


12.4 Bead breaking with side shovel



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

1. Position the wheel as indicated in **Fig. 24** and move the bead breaker tool toward the edge of the rim;



2. press the pedal (**Fig. 22 ref. 4**) and activate the bead breaker tool to remove the bead. If the bead does not detach the first time, repeat the operation, on different points of the wheel, until it has come away completely;
3. reverse the position of the wheel and repeat the operation on the other side;
4. lubricate the tyre carefully along the entire circumference of the bead on both sides.



FAILURE TO LUBRICATE MIGHT CAUSE FRICTION BETWEEN THE TOOLHEAD AND THE TYRE, AND WOULD CAUSE DAMAGE TO THE TYRE AND/OR THE BEAD.

12.5 Use of the lifting device

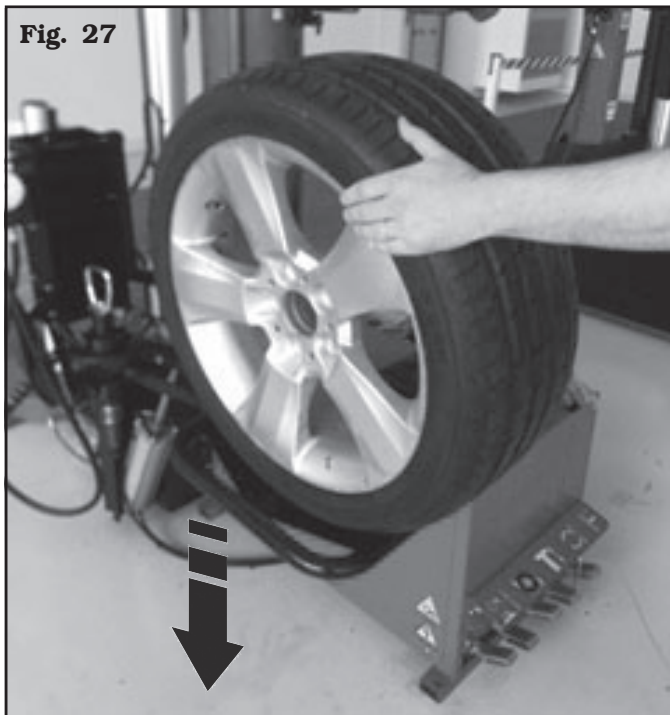


CARRY OUT A DAILY CHECK OF THE HOLD-TO-RUN CONTROL CONTROLS FOR PROPER FUNCTIONING, BEFORE STARTING EQUIPMENT OPERATION.

1. After placing the wheel on the lifting plate (see **Fig. 25**), press the lifting device drive pedal (**Fig. 22 ref. 1**) downwards and bring the wheel to a level where it can be shifted to the chuck by hand (see **Fig. 26**);



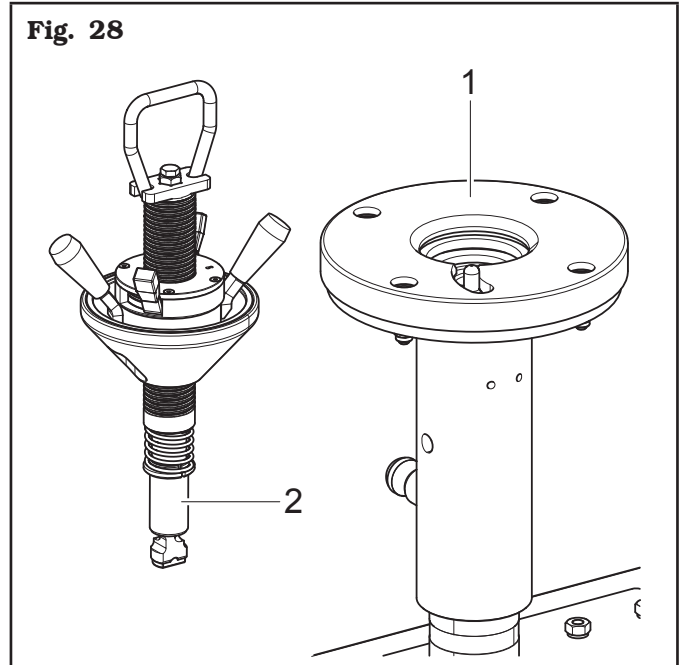
2. place the wheel on the chuck;
3. lift the pedal (**Fig. 22 ref. 1**) upwards in order to lower the lifting plate;
4. perform all the tyre fitting and removal operations (described here as follows) and unlock the wheel from the chuck;
5. Lift the lifting plate by pressing again the pedal downwards (**Fig. 22 ref. 1**);
6. place the wheel on the lifting plate (see **Fig. 26**);
7. move again the pedal upwards to make the plate lower and bring back the wheel to the ground keeping a hand on it (see **Fig. 27**).



12.6 Wheel clamping

All wheels must be locked on the rubber plate (**Fig. 28 ref. 1**) through the central hole using the proper locking device (**Fig. 28 ref. 2**).

Fig. 28

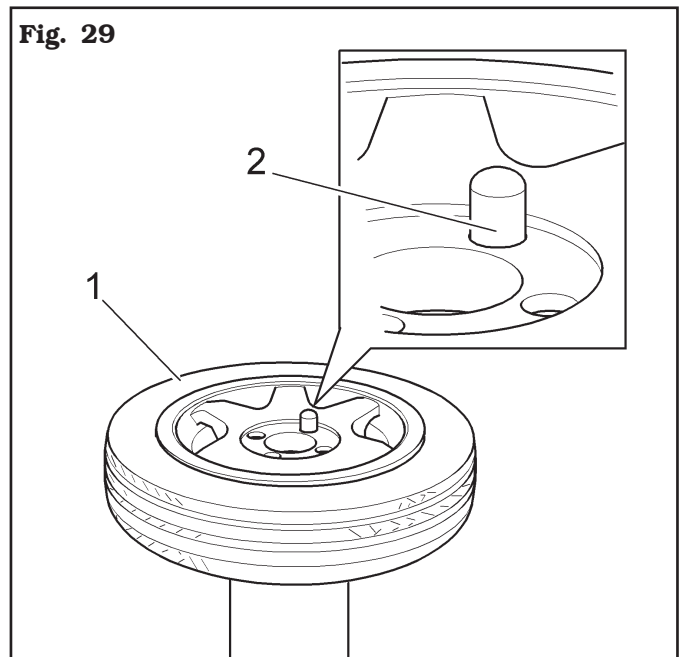


IN CASE OF USE OF RIMS WITHOUT CENTRAL HOLE, IT'S NECESSARY TO USE THE PROPER ACCESSORY (AVAILABLE ON DEMAND).

To lock a rim proceed as follows:

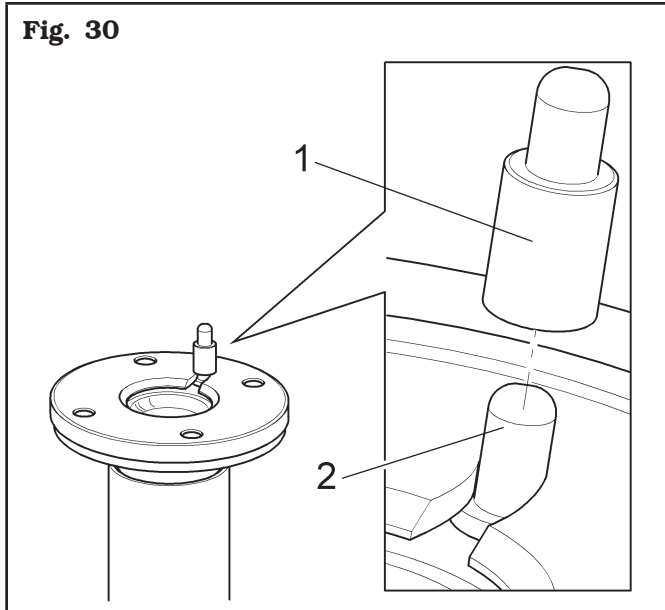
1. Dowel the wheel (**Fig. 29 ref. 1**) on the locking platform and check that the puller pin (**Fig. 29 ref. 2**) enters a hole on the rim hub;

Fig. 29

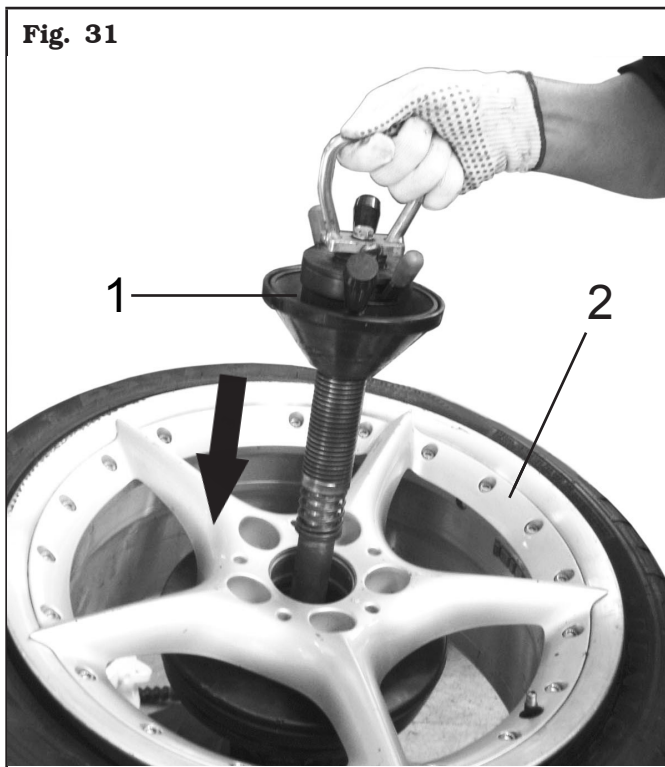


KEEP A HAND ON THE WHEEL THROUGHOUT LIFTING DEVICE RISING AND DESCENT PHASES, TO PREVENT THE WHEEL FROM FALLING FROM THE LIFTER BECAUSE OF IMBALANCES.

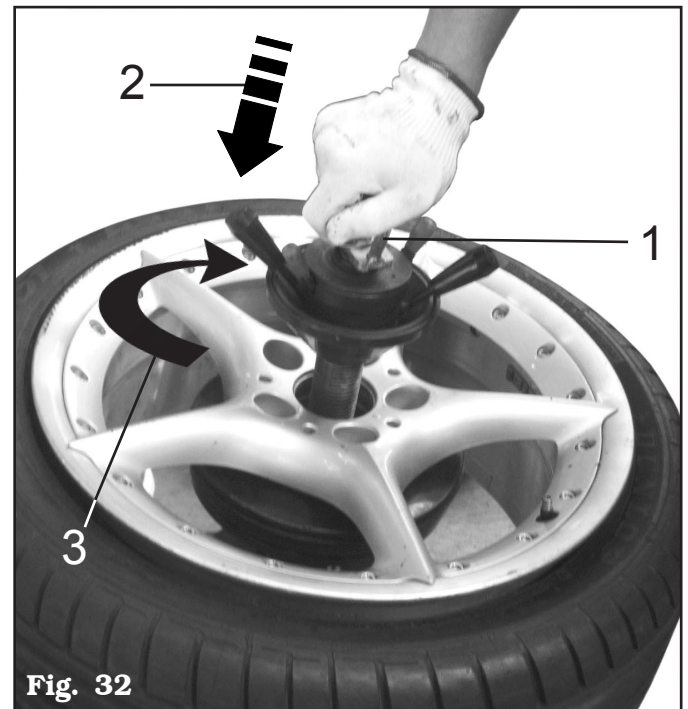
2. if the wheel hub is higher than the puller (**Fig. 30 ref. 2**), use the extension (**Fig. 30 ref. 1**) supplied;



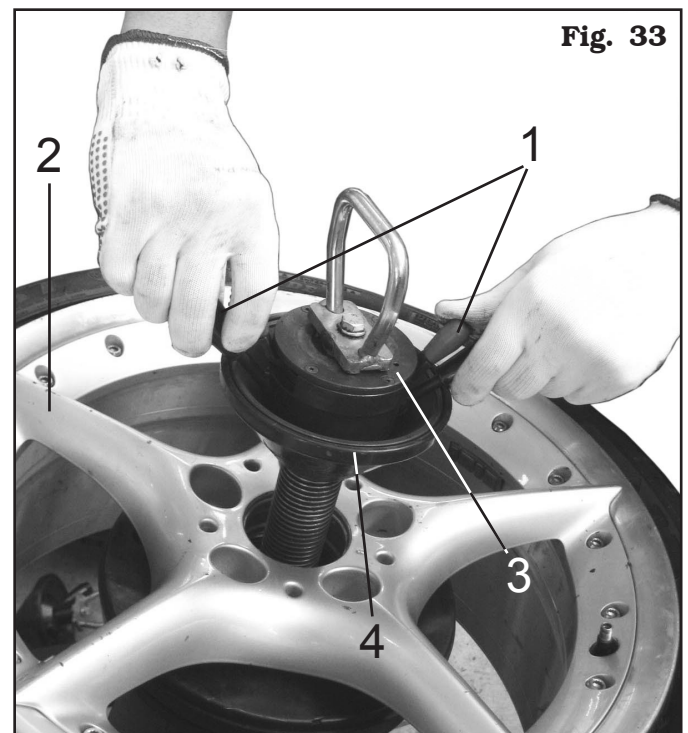
3. insert the shaft complete with cone (**Fig. 31 ref. 1**) on the rim (**Fig. 31 ref. 2**);



4. using the handle shown (**Fig. 32 ref. 1**), push downwards (**Fig. 32 ref. 2**), turn it through 90° (**Fig. 32 ref. 3**);



5. using the small inside levers (**Fig. 33 ref. 1**), loose the ring nut and push ring nut (**Fig. 33 ref. 3**) and cone (**Fig. 33 ref. 4**) to the rim (**Fig. 33 ref. 2**);



6. then, turn the ring nut (**Fig. 34 ref. 1**) using the outside levers (**Fig. 34 ref. 2**) until the cone completely clamps (**Fig. 34 ref. 3**) the wheel (**Fig. 34 ref. 4**);

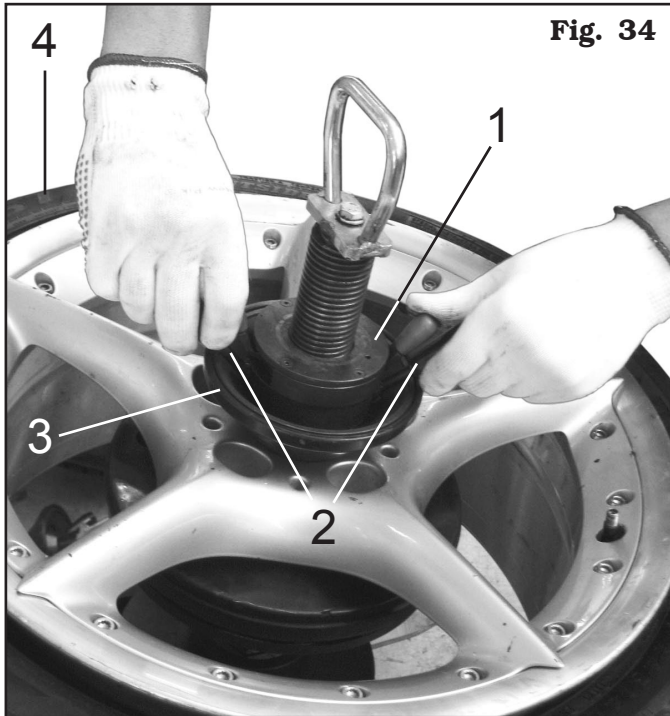


Fig. 34

7. for wheels with alloy rims, use the proper plastic guard (**Fig. 35 ref. 1**);

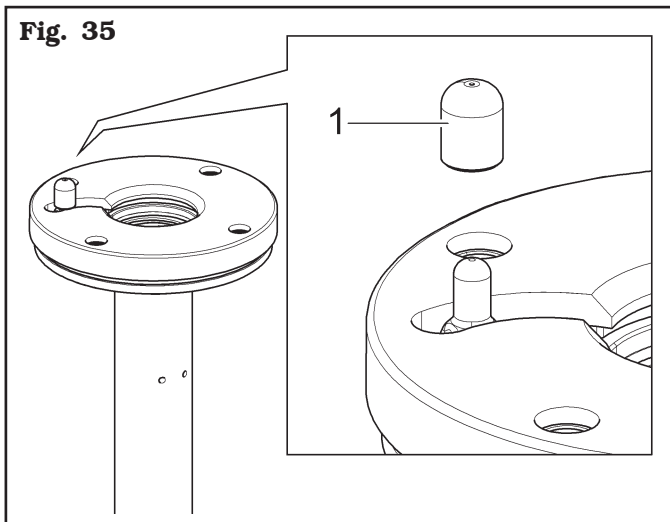


Fig. 35

8. at the end of the operations, loosen the locking shaft releasing first the cone using the outside levers and then moving the ring nut and the cone away from the rim with the small levers;

9. lower the locking shaft to release it from its seat, turn it 90° counter-clockwise and extract it from the hole using the handle.

12.6.1 Chuck height adjustment

The chuck with central locking has 2 different height mode. A “quick release” system allows to remove the chuck mobile part and to dowel the support plate at the desired height. Adjust the sliding shaft by pulling the locking knob (**Fig. 36 ref. 1**) and by lifting/lowering the wheel support (**Fig. 36 ref. 2**). Now it's possible to place the tyre in the right way with the working tools.

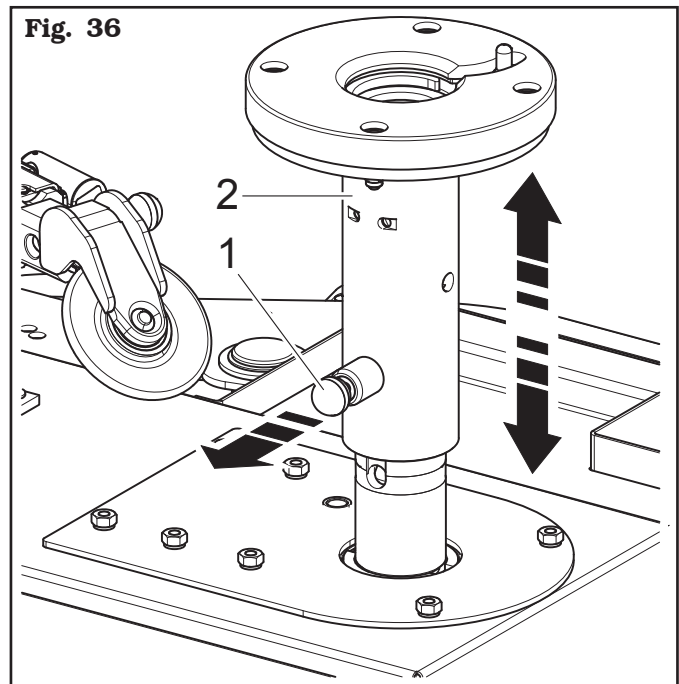


Fig. 36

12.6.2 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. 37 ref. 1**). We suggest replacing it if there are visible damages (see **Fig. 37**).

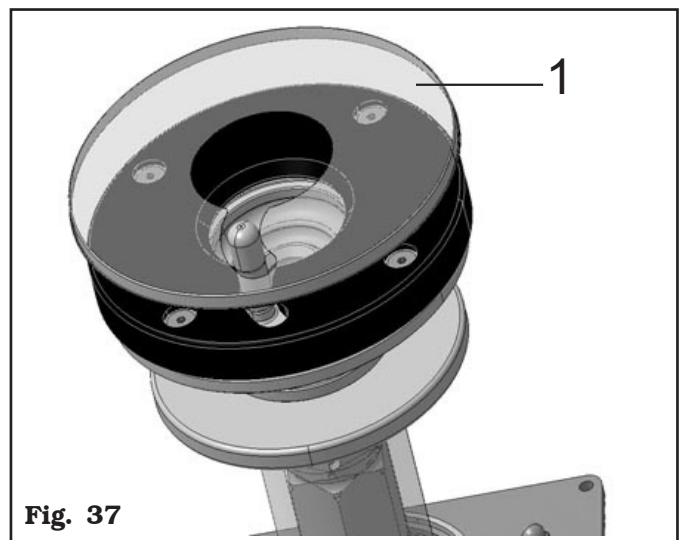


Fig. 37



NEVER LEAVE THE WHEEL FITTED ON THE EQUIPMENT FOR A PERIOD LONGER THAN NECESSARY FOR DOING THE WORK AND NEVER LEAVE IT UNATTENDED.

12.7 Bead breaking through bead breaker roller

1. After locking the wheel on the chuck, set the vertical bead breaker roller to work position, making sure that it is locked;



VERY CAREFULLY MOVE THE VERTICAL BEAD BREAKER ARM TO WORK POSITION, IN ORDER TO AVOID POSSIBLE HAND CRUSHING INJURY.



ALWAYS CHECK THAT THE ARM IS CORRECTLY HOOKED.

2. determine the roller 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. Lower the lever (**Fig. 38 ref. 3**) to bring the bead breaker roller only just below the rim width. Pull the rear lever (**Fig. 38 ref. 4**) until the bead breaker roller is introduced into the rim;

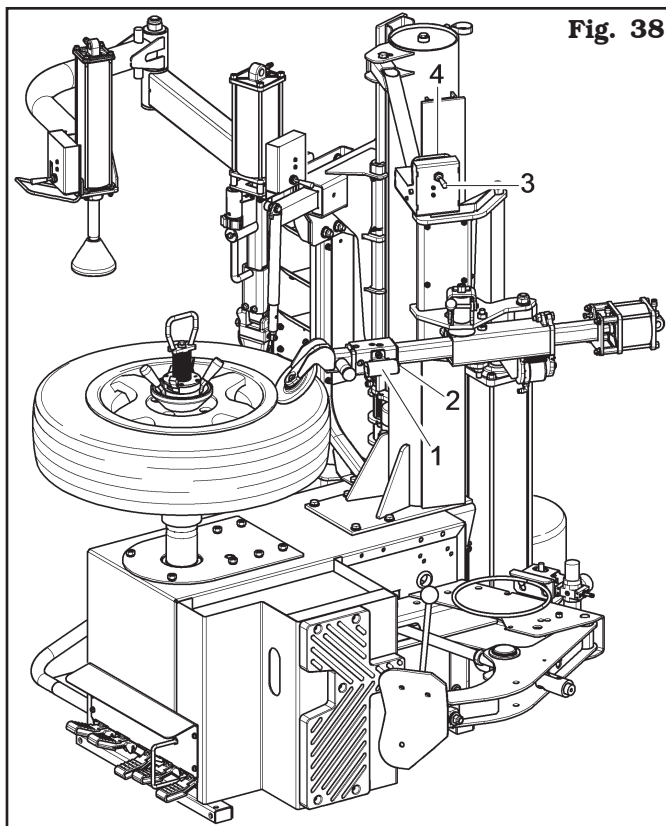


Fig. 38



THE BEAD BREAKER ROLLER MUST EXERT PRESSURE ON THE TYRE BEAD BUT NEVER ON THE RIM.



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

3. activate the clockwise rotation by pressing the pedal (**Fig. 22 ref. 3**). Keep on rotating the wheel until the operation is completed (see **Fig. 39**);

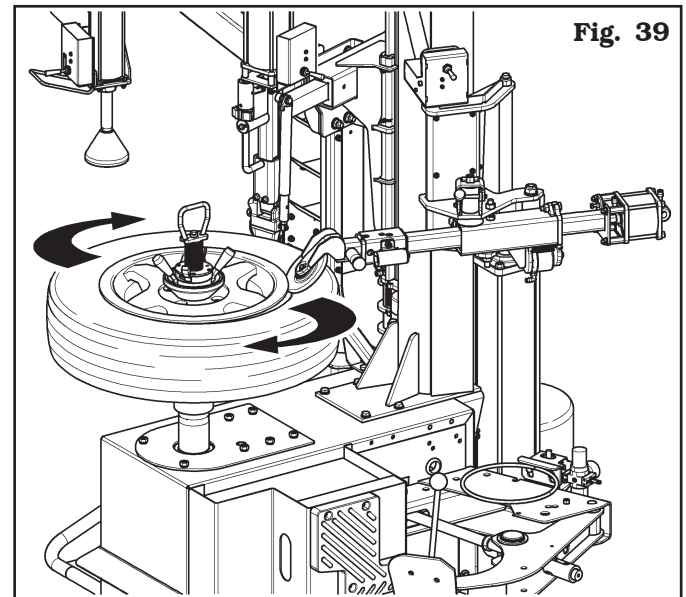


Fig. 39

4. once bead breaking has been completed in the upper part, disengage the bead breaker roller from the rim moving the lever (**Fig. 40 ref. 1**) upwards. Press the lever (**Fig. 40 ref. 2**) to allow the bead breaker arm roller (**Fig. 40 ref. 3**) to open outwards and get out of the wheel way. Use the lever again (**Fig. 40 ref. 1**) to bring the bead breaker arm roller downwards to a lower height than the one of the tyre;

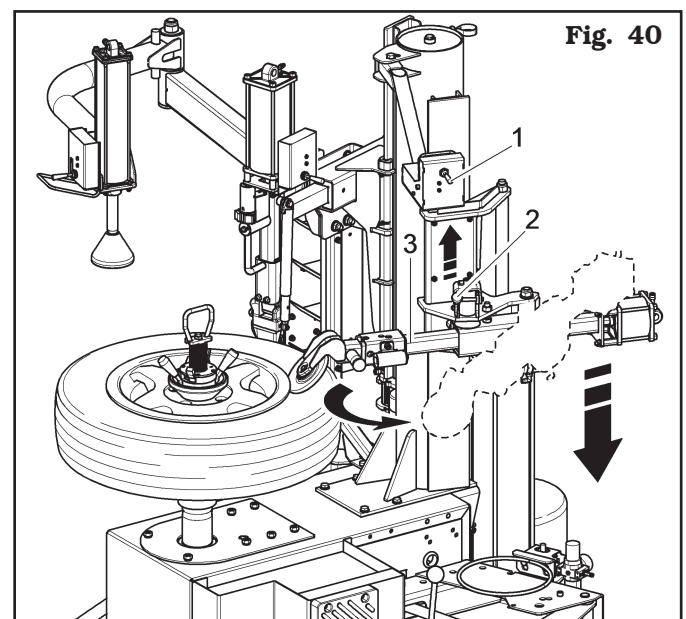
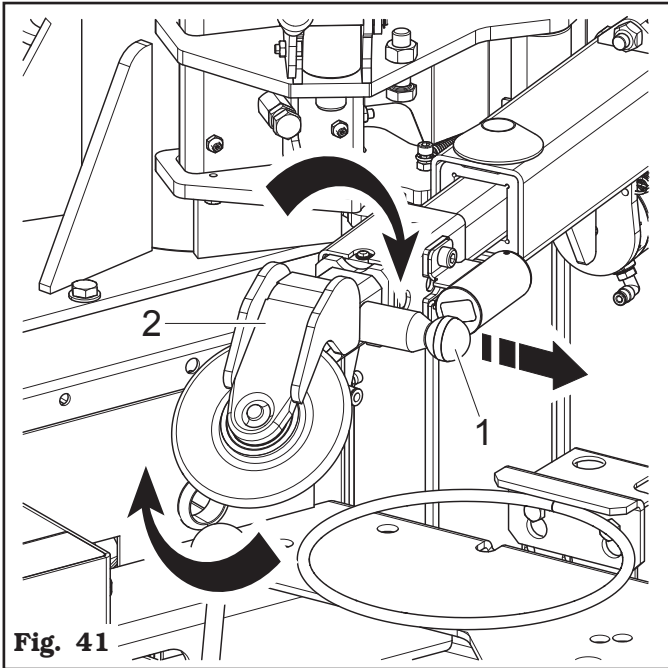


Fig. 40

5. pull the knob (Fig. 41 ref. 1) and turn of 180° the bead breaker roller (Fig. 41 ref. 2);



THE BEAD BREAKER ROLLER MUST EXERT PRESSURE ON THE TYRE BEAD BUT NEVER ON THE RIM.



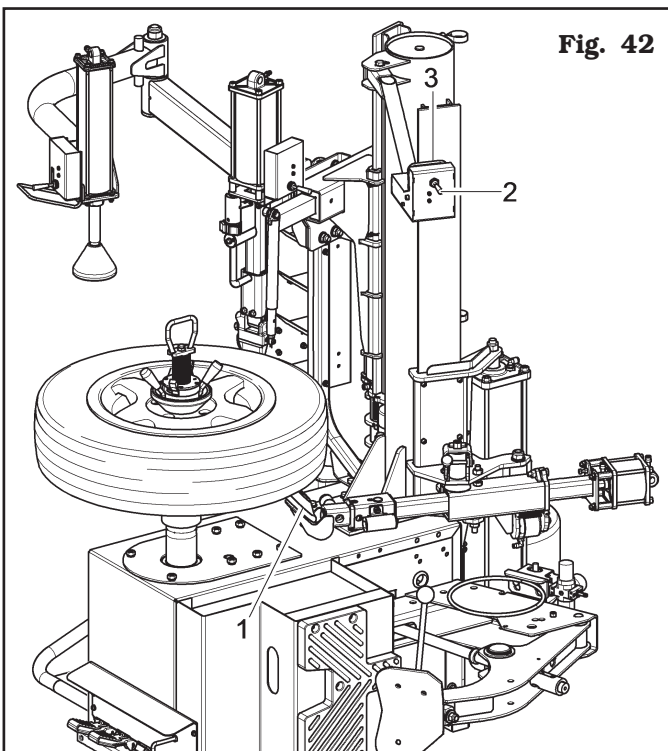
WHILE THIS OPERATION IS BEING CARRIED OUT PAY ATTENTION NOT TO DEFORM THE TYRE SIDEWALL. GREASE THE BEAD BEFORE THE ROLLER RE-ENTERS.

6. close manually the bead breaker arm roller to work position and make sure that it is locked.

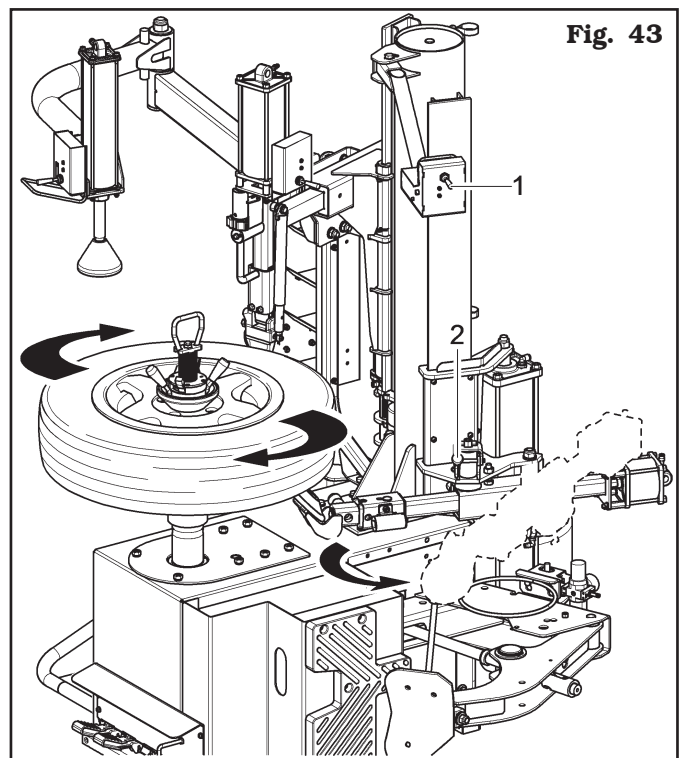


ALWAYS CHECK THAT THE ARM IS CORRECTLY HOOKED.

Lift the lever (Fig. 42 ref. 2) to bring the bead breaker roller only just above the rim lower edge. Pull the rear lever (Fig. 42 ref. 3) until the bead breaker roller (Fig. 42 ref. 1) is introduced into the rim;



7. only at this point rotate the wheel clockwise pressing the pedal (Fig. 22 ref. 3). Keep on rotating the wheel until the operation is completed (see Fig. 43):



8. once bead breaking on the lower part has been completed, move the roller to rest position lowering the lever (Fig. 43 ref. 1) and pressing the lever (Fig. 43 ref. 2).

12.8 Demounting the tyre

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

1. Press the pedal (**Fig. 22 ref. 3**) to rotate the wheel clockwise until the valve stem reaches "1 o'clock" position;
2. define tool head vertical position on the rim edge by pressing the push button (**Fig. 44 ref. 1**). Position the tool head correctly on the rim diameter (see **Fig. 45**) through the handle (**Fig. 44 ref. 2**). If necessary perform a horizontal adjustment of the tool arm after unlocking it through the button (**Fig. 44 ref. 3**), placed on the handle itself. While this phase is being carried out, stay just next to a zone in the tyre where bead breaking has been performed;



CONTROL (FIG. 44 REF. 1) (IN ORDER TO PREVENT THE WRONG USE OF THE TYRE CHANGER) IS OPERATIVE ONLY IF THE TOOL HEAD (FIG. 44 REF. 6) IS IN COMPLETELY LIFTED POSITION. OPERATE LEVER (FIG. 40 REF. 7), BY SHIFTING IT UPWARDS, IN ORDER TO MOVE THE TOOL HEAD TO SUCH POSITION.

3. place the bead press tool (**Fig. 44 ref. 4**) (if present) in "4 o'clock" position from the equipment-head axis and press on the tyre operating the lever of the control unit (**Fig. 44 ref. 5**) downwards, until the tyre bead is placed next to the rim drop centre;



VERY CAREFULLY MOVE THE TOOLS HOLDER ARM TO WORK, IN ORDER TO AVOID POSSIBLE HAND CRUSHING INJURY.



THE TOOL ASSEMBLY IS EQUIPPED WITH A MECHANIC AUTOMATIC MEMORY DEVICE THAT ALLOWS TO STORE THE TOOL HEAD WORK POSITION. IN THIS WAY YOU CAN WORK ON WHEELS HAVING THE SAME RIM WITHOUT HAVING TO PLACE EACH TIME THE TOOL HEAD ON THE RIM EDGE.

Fig. 44

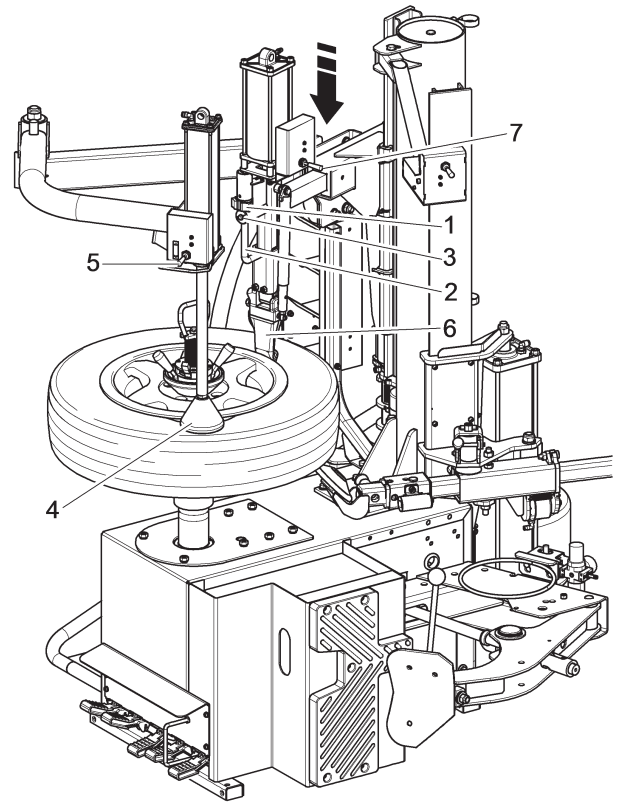
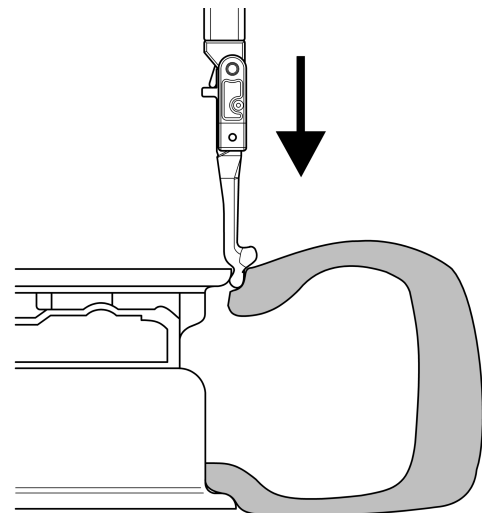


Fig. 45



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



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

5. lower the lever (**Fig. 44 ref. 6**) so that the toolhead penetrates between rim and tyre (see **Fig. 46**). While this operation is being performed, the toolhead rotates around the rim edge until it hooks the tyre bead (see **Fig. 47**).

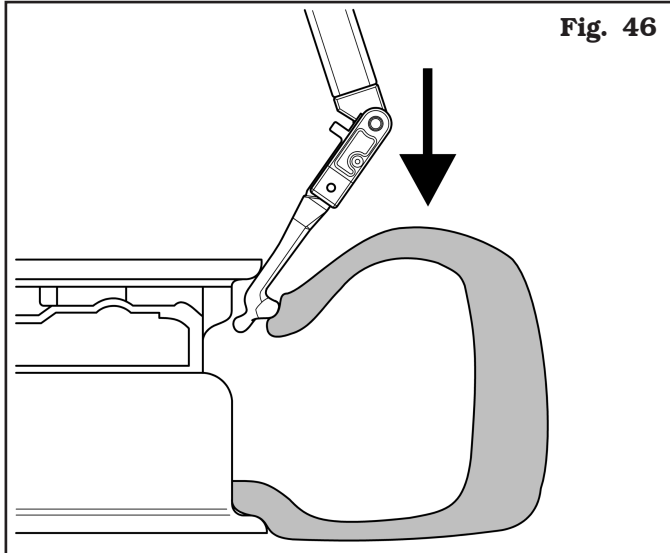


Fig. 46

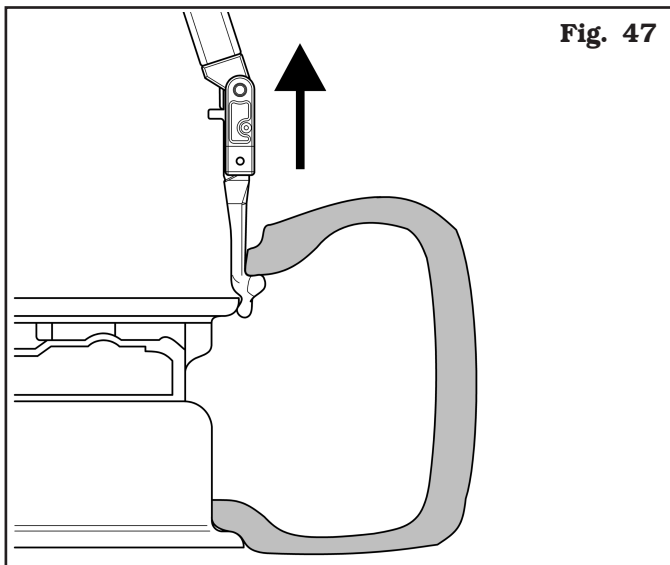


Fig. 47

5. lift the tool head using the lever (**Fig. 44 ref. 6**). When the toolhead reaches a vertical position with respect to the rim (**Fig. 48 ref. 1**), rotate the chuck so that the tyre enters the rim drop centre. Keep on raising the toolhead until the bead is on the rim edge (see **Fig. 47**).

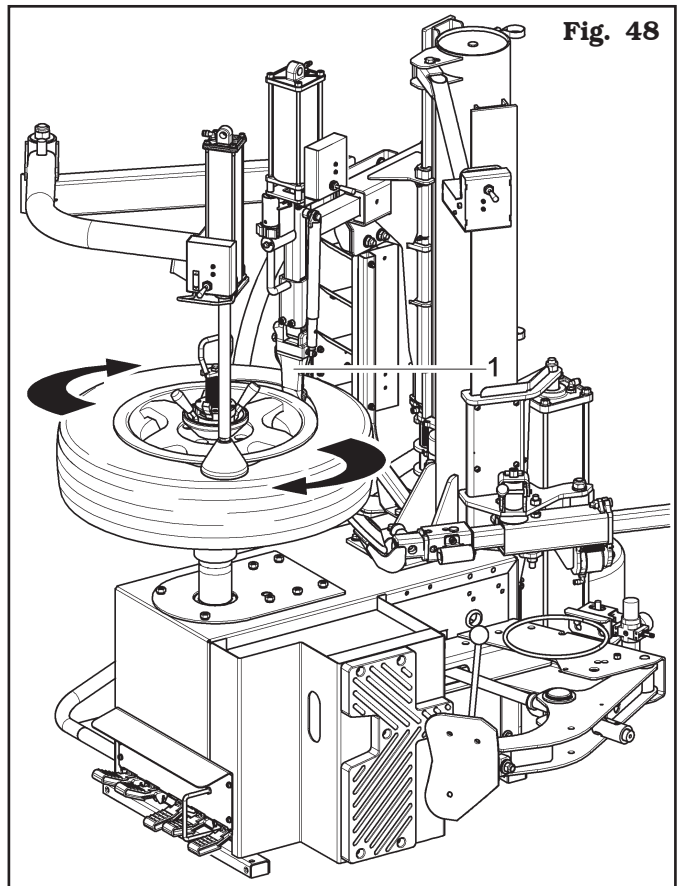


Fig. 48

6. lift the toolhead (see **Fig. 49 ref. 1**) keeping it coupled to the upper bead of the tyre with the bead breaker roller in lower position;

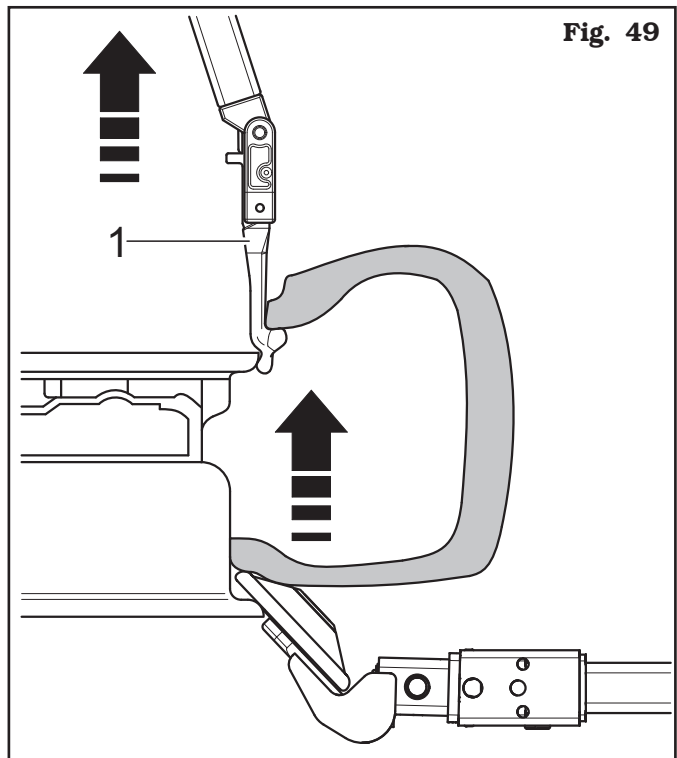


Fig. 49

MAKE SURE THAT THE TOOL HEAD IS ON DEMOUNTING POSITION (Fig. 47) BEFORE STARTING CHUCK ROTATION.

Rotate clockwise until the upper bead is completely disassembled (see **Fig. 48**);

7. position the toolhead (see **Fig. 50 ref. 1**) just next to the rim edge. Using the lower bead breaker roller, load the lower bead on the tool head in demounting position.

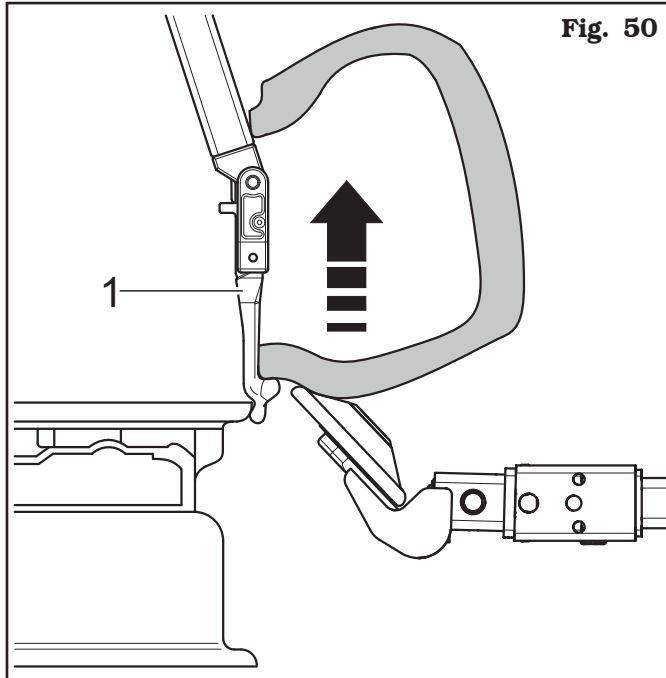


Fig. 50

8. rotate the chuck clockwise until the tyre is completely disassembled;
9. lift the bead press tool and close again the bead press arm into rest position.

Dismounting the lower bead with the bead breaker roller

For disassembly of the lower bead only the bead breaker roller can be used as an alternative. Lift the toolhead and go away from the working area, through pressing the pedal (**Fig. 22 ref. 2**).

1. Lift the roller and the tyre just next to the rim edge (see **Fig. 51**);

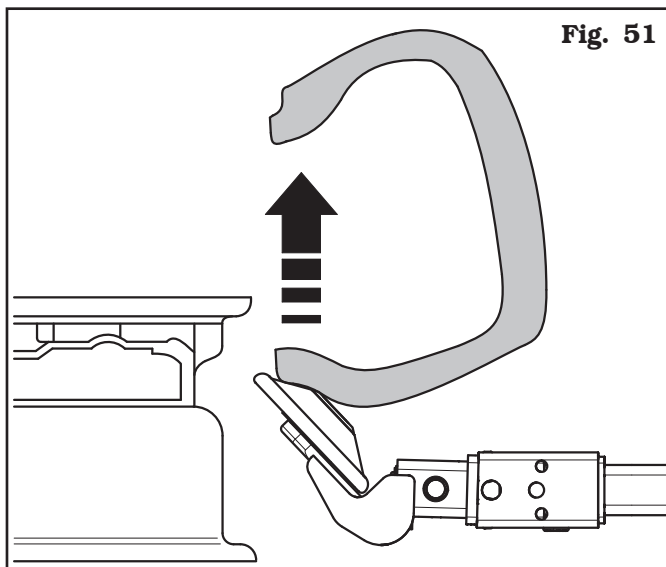


Fig. 51

2. then, let the bead breaker roller enter through the provided lever (see **Fig. 21 ref. 3**) so that it is inserted between the rim edge and the lower bead (see **Fig. 52**);



THE BEAD BREAKER ROLLER MUST EXERT PRESSURE ON THE TYRE BEAD BUT NEVER ON THE RIM.



VERY CAREFULLY USE THE BEAD BREAKER ROLLER IN ORDER TO AVOID POSSIBLE HAND CRUSHING INJURY.



Fig. 52

3. then, rotate and complete bead disassembly (see **Fig. 53**).



Fig. 53




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

12.9 Mounting the tyre

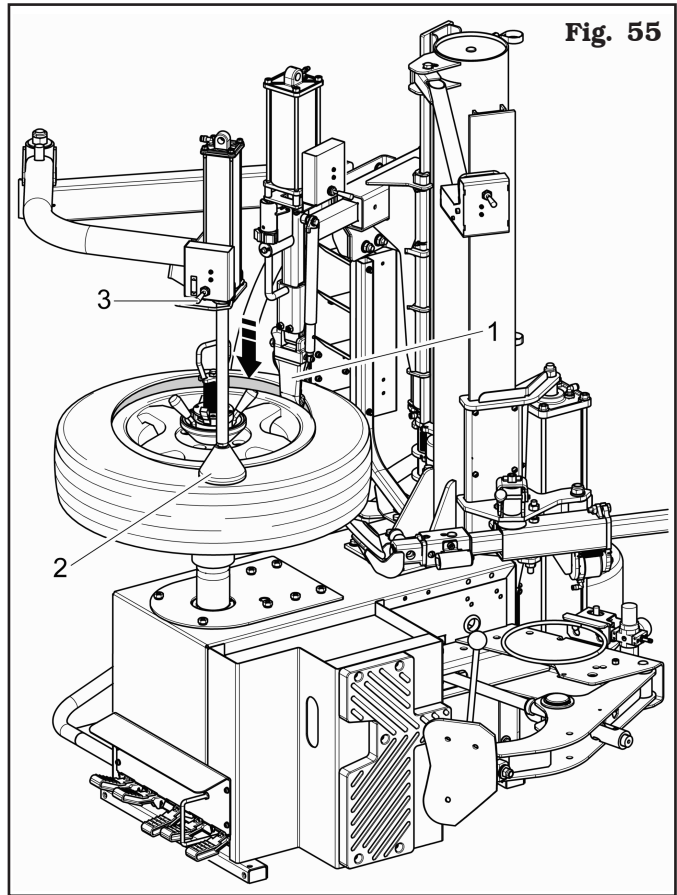
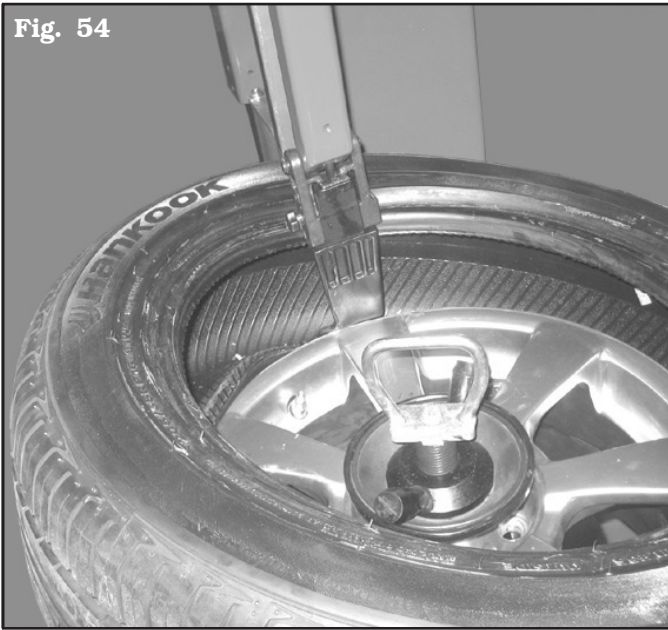
To mount the tyre, proceed as follows:

1. Lubricate tyre beads;



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

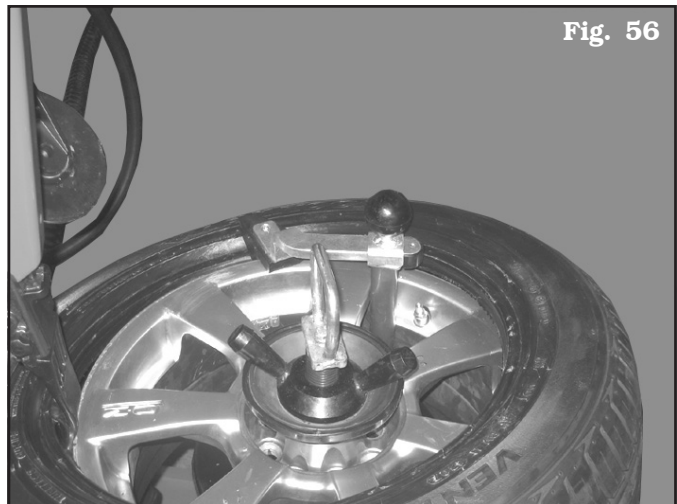
2. position the toolhead (**Fig. 54 ref. 1**) onto the rim edge;



12.9.1 Fitting the tyre upper bead using beadpusher with puller

3. hook the lower bead on the toolhead then rotate clockwise until the complete assembly;
4. then, position the upper bead on the toolhead assembly area (**Fig. 55 ref. 1**);
5. place the bead press tool (**Fig. 55 ref. 2**) (if present) in "4 o'clock" position from the equipment-head axis and press on the tyre operating the lever of the control unit (**Fig. 55 ref. 3**) downwards;
6. rotate clockwise up to tyre complete mounting;
7. when these operations are over move the toolhead and the bead press tool (if present) into rest position.

1. Assemble the beadpusher with puller next to the rim edge (see **Fig. 56**);



2. place the bead breaker roller so that the tyre bead is kept at the same height of the rim drop centre (see **Fig. 57**);



THE BEAD BREAKER ROLLER MUST EXERT PRESSURE ON THE TYRE BEAD BUT NEVER ON THE RIM.



VERY CAREFULLY USE THE BEAD BREAKER ROLLER IN ORDER TO AVOID POSSIBLE HAND CRUSHING INJURY.



Fig. 57

3. rotate clockwise up to tyre complete assembly (see **Fig. 58**):



FOR THE MOUNTING OF VERY DIFFICULT WHEELS, USE THE EXTENSION OF THE BEADPUSHER (OPTIONAL) (FIG. 58 REF. 1).

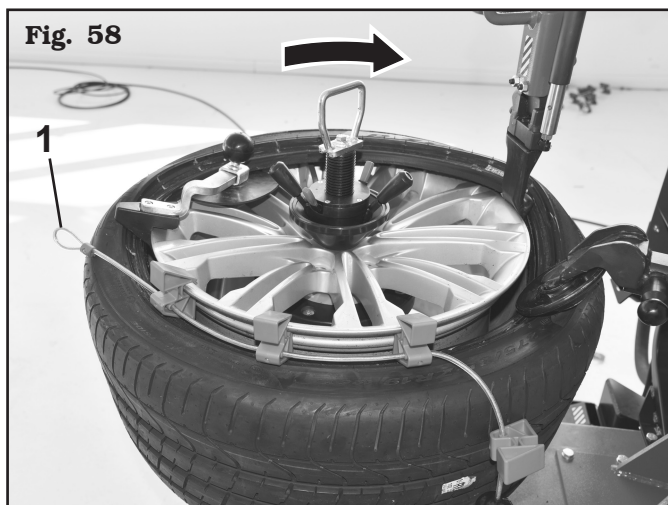


Fig. 58

4. when these operations are over move the toolhead and the bead breaker roller into rest position.

12.10 Tyre inflation



TYRE INFLATING OPERATIONS ARE HAZARDOUS FOR THE OPERATOR; MOREOVER, IF NOT PROPERLY EXECUTED, THEY CAN CAUSE DAMAGE TO THE USERS OF THE VEHICLE WHERE THE TYRES ARE FITTED.



STANDARD OR OPTIONAL INFLATING UNITS FITTED ON TYRE CHANGERS ARE ALWAYS EQUIPPED WITH A PRESSURE LIMITING DEVICE WHICH ELIMINATES ANY RISK OF TYRE EXPLOSION DURING TYRE INFLATION. HOWEVER, A RESIDUAL RISK OF EXPLOSION STILL EXISTS. THE FOLLOWING PRECAUTIONS MUST BE TAKEN:

- **OPERATORS SHOULD WEAR SUITABLE PROTECTIVE CLOTHING LIKE: GLOVES, SAFETY EYEWEAR AND EARPLUGS.**
- **BEFORE FITTING A TYRE, CHECK TYRE AND RIM CONDITIONS AS WELL AS THEIR PROPER COUPLING.**
- **CORRECT WORK POSITION: DURING TYRE BEADING AND INFLATING THE OPERATOR MUST KEEP HIS 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 (60 PSI), it means that the pressure limiting valve and/or pressure gauge is not working properly. In this case, deflate the tyre on the spot and contact an authorized service centre to verify equipment operation. Make sure of proper operation before using any inflating equipment.

12.10.1 Tyre inflation on equipment without using tubeless inflation assembly

Connect the inflation device to the tyre valve and inflate the same tyre using the pedal provided (**Fig. 22** ref. B).



A SAFETY DEVICE IS PRESENT FOR THE ADJUSTMENT OF THE MAXIMUM PRESSURE OF THE SUPPLIED AIR (4.2 ± 0.2 bar / 60 ± 3 psi).

Well lubricated beads and rims make the beading in and inflation much safer and easier.

In case the beads are not seated at 4.2 ± 0.2 bar (60 ± 3 psi), 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.

12.10.2 Tyre inflation using tubeless inflation unit (applies to model with tubeless inflation system or column with integrated pressure vessel assembly)

Some types of tyre can be difficultly inflated if the beads are not in contact with the rim. The tubeless inflation device supplies 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:

1. remove the valve stem core.
Removing the valve stem core will allow the tyre to inflate faster and the bead to seat easier;
2. connect the inflation terminal to the valve of the tyre;



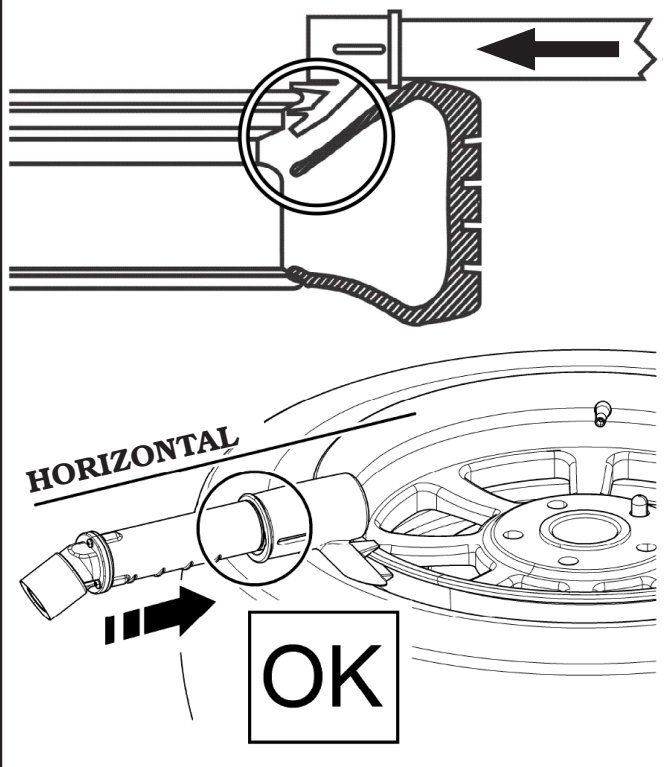
TO IMPROVE THE TUBELESS INFLATION SYSTEM, ALWAYS LUBRICATE THE TYRE BEADS.

3. press the bead blaster hose on the wheel rim as shown in **Fig. 59**. Ensure the hose head is pressed in to activate the additional air jet;



THE NOZZLE SHOULD BE HORIZONTAL FOR OPTIMAL PERFORMANCE (FIG. 59).

Fig. 59



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

4. press completely downwards the inflating pedal, in order to release a high pressure air jet through the tubeless inflation nozzle;
5. keep the inflating pedal partially pressed downwards to inflate the tyre and place the beads in their seats;



DO NOT EXCEED THE PRE-SET PRESSURE VALUES WHILE INSERTING BEAD INTO THE TYRE.

6. 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 TOO MUCH, IT IS POSSIBLE TO GET THE AIR OUT OF THE TYRE, BY PUSHING THE MANUAL DEFLATING PUSH BUTTON LOCATED UNDER THE PRESSURE GAUGE.

7. disconnect the inflation terminal from the valve.

13.0 ROUTINE MAINTENANCE



BEFORE CARRYING OUT ANY ROUTINE MAINTENANCE OR ADJUSTMENT PROCEDURE, DISCONNECT THE EQUIPMENT FROM THE ELECTRICITY SUPPLY USING THE SOCKET/PLUG COMBINATION AND CHECK THAT ALL MOBILE PARTS ARE AT A STANDSTILL.



BEFORE EXECUTING ANY MAINTENANCE OPERATION, MAKE SURE THERE ARE NO WHEELS LOCKED ONTO THE SELF-CENTRING CHUCK.

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.

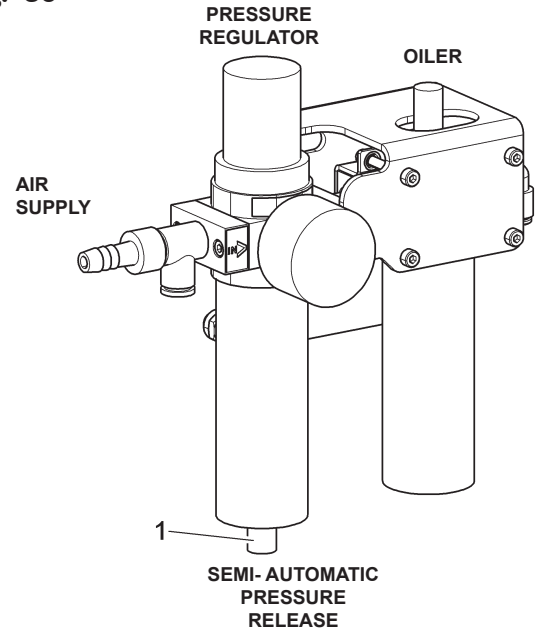
Cleaning and routine maintenance must be conducted by authorized personnel and according to the instructions given below.

- Disconnect the equipment from the electrical and pneumatic power supplies before carrying out any cleaning operations.
- Remove deposits of tyre powder and other waste materials with a vacuum.

DO NOT BLOW IT WITH COMPRESSED AIR.

- Do not use solvents to clean the pressure regulator.
- The conditioning assembly is equipped with an automatic vacuum-operated drain therefore it requires no manual intervention by the operator (see **Fig. 60**).
- Periodically check the calibration of lubricator of pressure/oiler gauge assembly:

Fig. 60



IN ORDER TO ENSURE A GOOD FUNCTIONING AND TO AVOID THE PRESENCE OF CONDENSATION IN THE AIR TREATMENT ASSEMBLIES WITH SEMI-AUTOMATIC DRAIN, IT'S NECESSARY TO MAKE SURE ABOUT THE CORRECT POSITION OF THE VALVE (FIG. 103 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.

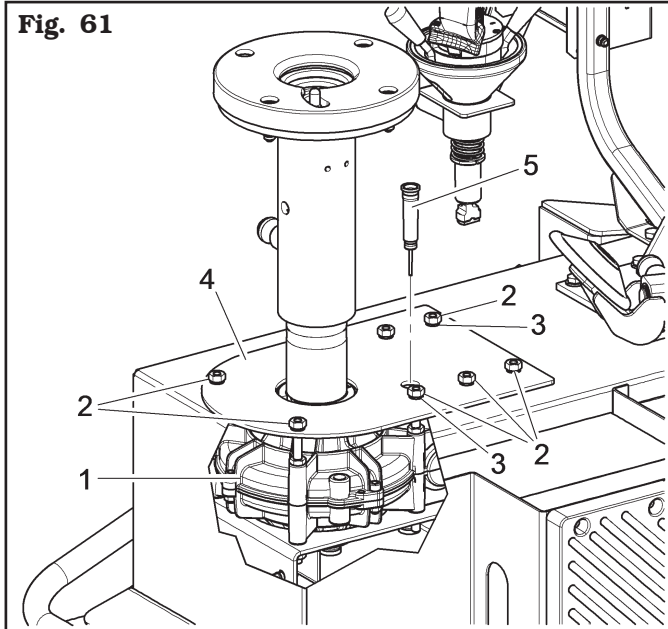
- Every **week** and/or when necessary, top up the oil tank using the filler hole provided, closed by a cap or bolt, on the lubricator filter.



THIS OPERATION SHOULD NOT BE CARRIED OUT BY REMOVING THE CUP OF THE LUBRICATOR FILTER.

- The use of synthetic oil might damage the pressure regulator filter.
- Periodically, at least monthly, lubricate the horizontal sliding arms of the bead breaker roller and the toolhead.

- Periodically (at least every 100 working hours) check reduction gear lubricating oil level (**Fig. 61 ref. 1**). Such operation must be performed removing the nuts (**Fig. 61 ref. 2**) and the washers (**Fig. 61 ref. 3**), removing the flange (**Fig. 61 ref. 4**) and the plug (**Fig. 61 ref. 5**) on the reduction gear.



! 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

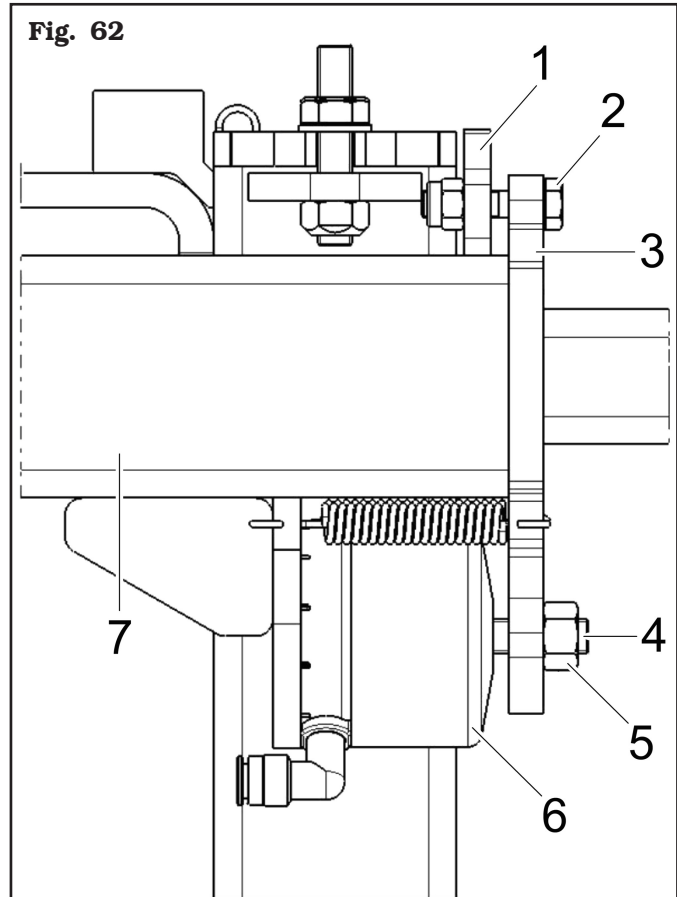
To grease the chuck movement control reduction gear, use **ESSO GEAR OIL GX140**.

Lubricate slides and bolts/nut bolts or racks and pinion with a soft brush using lubricant of **ESSO GP**.

! ANY DAMAGE TO THE EQUIPMENT 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

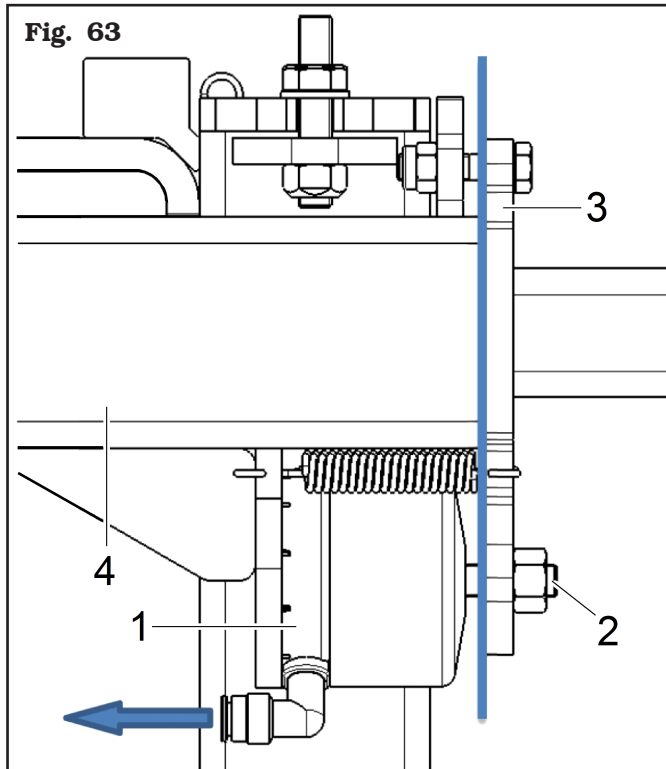
In case of fulcrum-type bolts (**Fig. 62 ref. 2**) with neck (**Fig. 62 ref. 3**) fully beating onto bead breaker arm's guide (**Fig. 62 ref. 7**) (not on the adjusting plate (**Fig. 62 ref. 1**)), carry out neck adjustment procedure as described below.



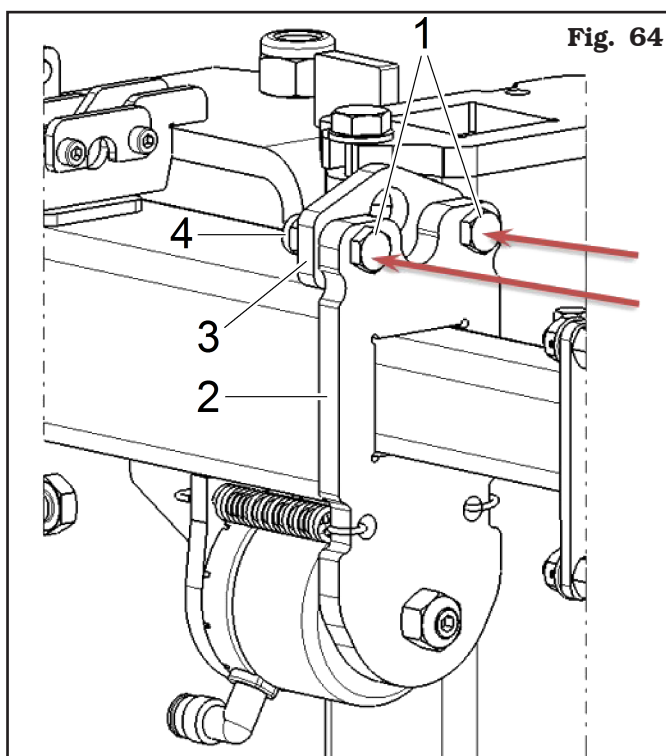
KEY

- 1 – Adjusting plate
- 2 – Fulcrum bolts
- 3 – Neck
- 4 – Adjusting grub screw
- 5 – Locking nut
- 6 – Neck operating cylinder
- 7 – Bead breaking arm guide

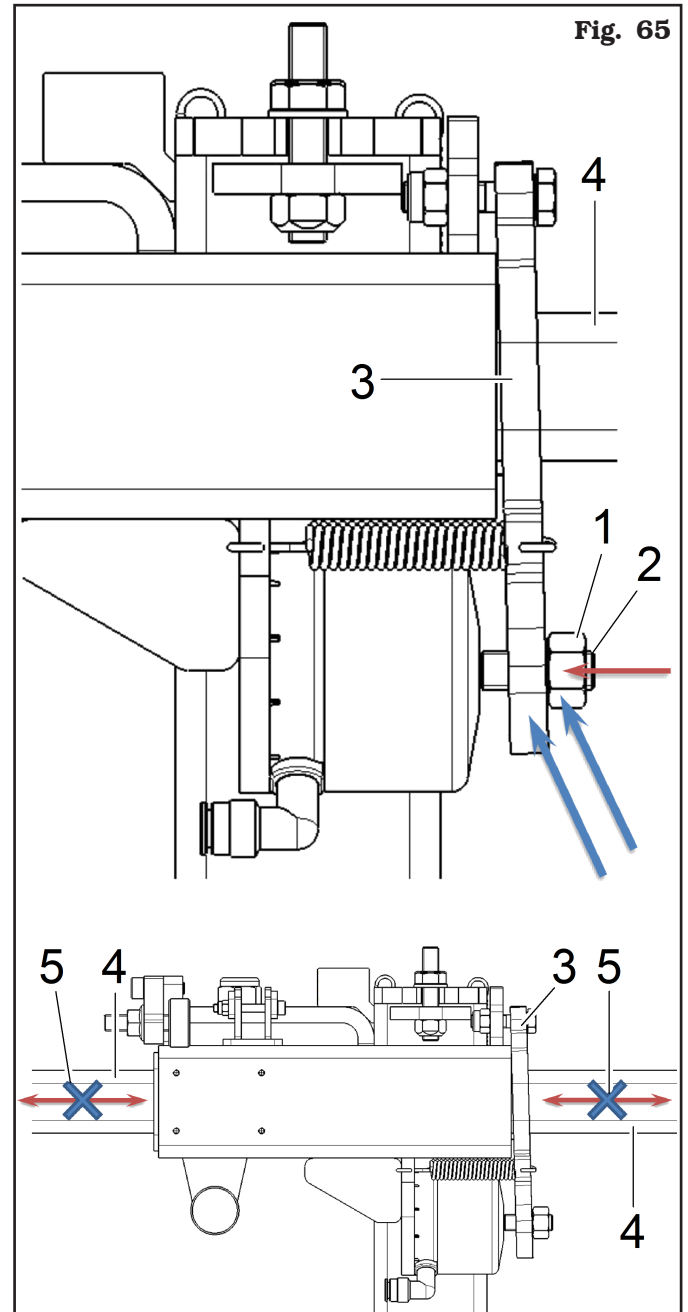
1. Blow off the compressed air from neck cylinder (Fig. 63 ref. 1). Make neck (Fig. 63 ref. 3) reach beat position again on the guide support surface (Fig. 63 ref. 4), by turning the adjusting grub screw (Fig. 63 ref. 2);



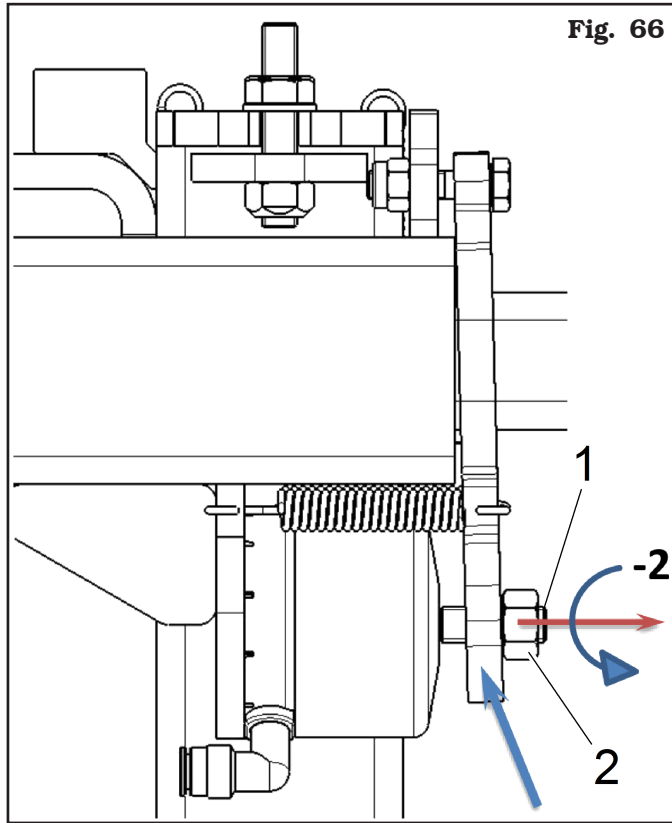
2. completely screw fulcrum-type bolt (or bolts) (Fig. 64 ref. 1) but without locking them, just making them approach, setting a 0.1 - 0.2 mm play (0,005" - 0.01") between neck (Fig. 64 ref. 2) and adjusting plate (Fig. 64 ref. 3), positioning nut (Fig. 64 ref. 4) and letting it rest completely onto adjusting plate;



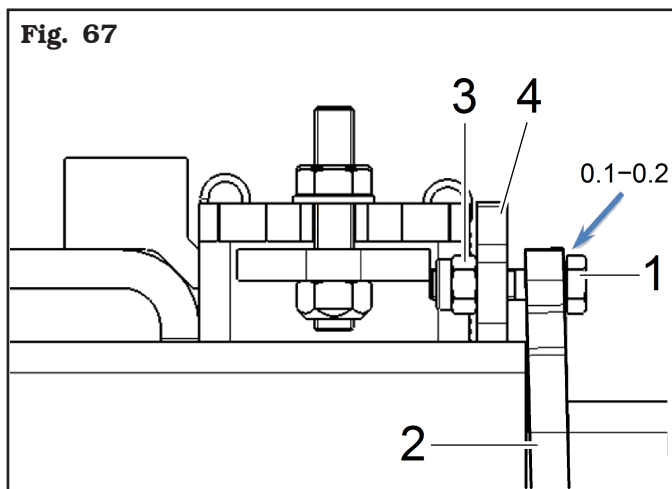
3. slacken lock nut (Fig. 65 ref. 1) of adjusting grub screw (Fig. 65 ref. 2). Then, screw the grub screw (Fig. 65 ref. 2) until neck (Fig. 65 ref. 3) strikes onto arm (Fig. 65 ref. 4), that as a consequence results clamped (Fig. 65 ref. 5);



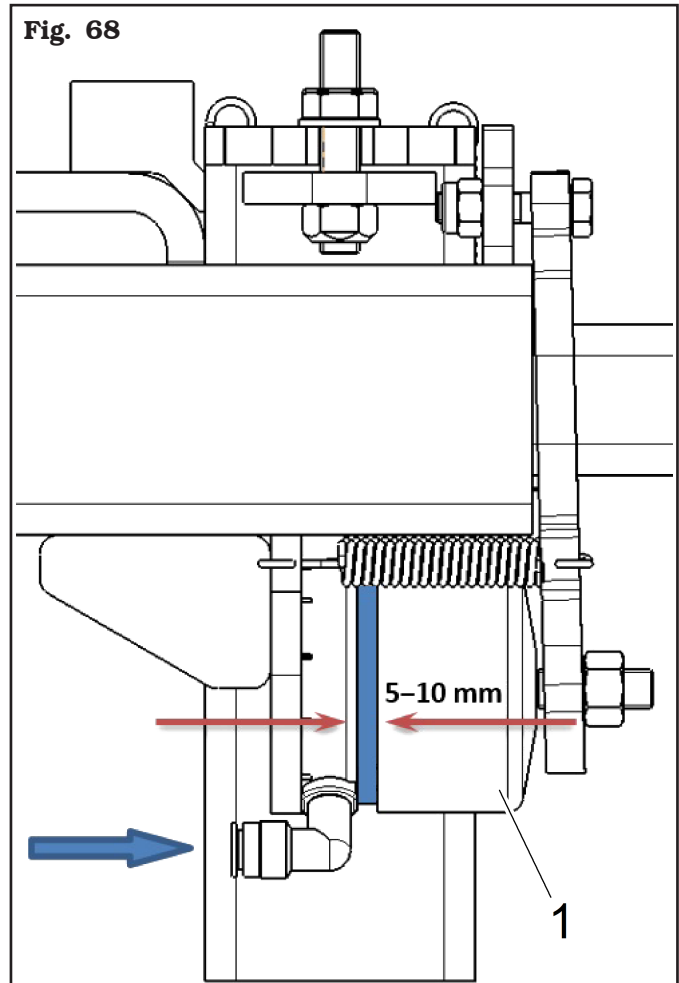
4. the position reached at point (c), remove neck adjusting grub screw counter-clockwise by 2 complete turns (**Fig. 66 ref. 1**) and lock the relevant counter nut (**Fig. 66 ref. 2**);



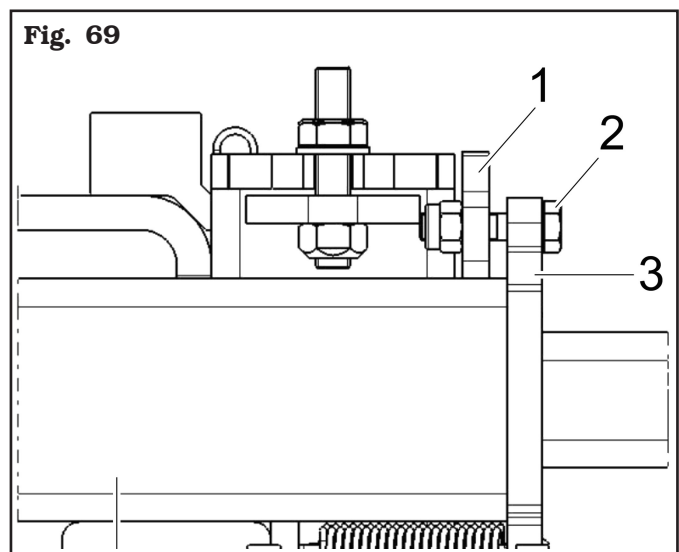
5. turn fulcrum-type bolt (or bolts) (**Fig. 67 ref. 1**) in order to reset 0.1 - 0.2 mm play (0.005" - 0.01") between neck (**Fig. 67 ref. 2**) and fulcrum-type screw head (**Fig. 67 ref. 1**), letting nut (**Fig. 67 ref. 3**) rest completely onto adjusting plate (**Fig. 67 ref. 4**);



6. operate cylinder (**Fig. 68 ref. 1**), supplying it with compressed air, and make sure its stroke is included between 5 - 10 mm (0.20" - 0.39");



7. blow off cylinder and make sure the arm (**Fig. 69 ref. 1**) can slide freely in its guide (**Fig. 69 ref. 2**).



8. 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 roller is not immediately activated.	<ol style="list-style-type: none"> 1. Power supply missed. 2. The control push button is broken. 	<ol style="list-style-type: none"> 1. Connect the power supply. 2. Call for technical assistance. 
The bead-breaker hydraulic pump jams.	The bead-breaker lubricator is empty.	Top up the reservoir with suitable oil having first disconnected the power supply. Call for technical assistance. 
The nozzle doesn't supply air when the inflation pedal is pressed (model with tubeless inflation or column with integrated pressure vessel assembly).	The inflation pedal is badly adjusted.	Call for technical assistance. 
During bead-breaking the bead breaker roller does not engage.	<ol style="list-style-type: none"> 1. The arm valve is not activated. 2. The arm valve is badly adjusted. 3. The connection cylinder is broken. 	<ol style="list-style-type: none"> 1. Move the bead-breaker roller out. 2. Call for technical assistance. 3. Call for technical assistance. 
The tool arm's vertical movement control does not work	Wrong position of the upper mechanical stop of tool head rod.	Act on the toolhead control lever by moving it upwards, bringing the toolhead completely packed onto the relative upper limit switch. If the problem persists, call for technical assistance. 
No movements take place when the pedals are pressed.	<ol style="list-style-type: none"> 1. Power supply missed. 2. Inflation pedal unit not set correctly. 	<ol style="list-style-type: none"> 1. Check power supply. 2. Call for technical assistance. 
The chuck does not reach the maximum rotation speed.	The mechanical resistance of the gearmotor system has increased.	Turn the chuck without wheel for a few minutes so that the system heats, thus reducing frictions. If in the end the chuck does not accelerate again, call for technical assistance. 
The chuck does not turn in the clockwise or counter clockwise direction in one of the allowed speed.	Pedalboard microswitch breakage.	Check cables <i>or</i> replace microswitch <i>or</i> call for technical assistance.
The chuck doesn't rotate, but it attempts rotation when the equipment is switched on again.	Pedalboard irreversible de-calibration.	Call for technical assistance. 

Problem	Possible cause	Remedy
The chuck rotates slowly but it does not operate on the motor pedal.	Pedalboard irreversible de-calibration.	<ol style="list-style-type: none"> 1. Keep the pedal to rest position. 2. Keep the equipment connected to the net. 3. Wait for 30 seconds that the pedal-board recalibration automatic attempt ends.
The chuck doesn't rotate.	<ol style="list-style-type: none"> 1. Inverter overload alarm. <i>or</i> inverter undervoltage alarm. <i>or</i> inverter overvoltage alarm. 2. Overtemperature alarm. 	<ol style="list-style-type: none"> 1. Shorten the length of a possible equipment extension cable or increase the conductors section (disconnect and connect again). Lift the motor pedal and wait for the automatic reset. 2. Wait until the motor system cools (the equipment does not restart if the temperature level does not go below the set safety threshold).
LATERAL LIFTING DEVICE		
No movement is produced when the control pedal is operated.	<ol style="list-style-type: none"> 1. Supply missing or insufficient. 2. The supply hoses have not been correctly assembled. 3. The control valve is not working. 	<ol style="list-style-type: none"> 1. Check power supply. 2. Check hoses fitting. 3. Call for technical assistance. 
When the equipment is aired, the lifting device tends to move, with no consent by the operator.	Possible valve de-calibration.	Call for technical assistance.
BEAD PRESS DEVICE		
No movement is generated when the control lever is operated.		<ol style="list-style-type: none"> 1. Check power supply. 2. Check hoses fitting. 3. Call for technical assistance. 
When the control lever is operated movement arises in one direction only.	The control valve is not working.	Call for technical assistance.

15.0 TECHNICAL DATA

15.1 Technical electrical data

Motor power (kW)	0.75 (1 Hp)	
Inverter motor power (kW)	1.5 (2 Hp)	
Power supply	Voltage (V)	200-240
	Phases	1
	Frequency (Hz)	50/60
Typical current draw (A)	5	
Chuck rotation speed (rev/min)	0 - 15	

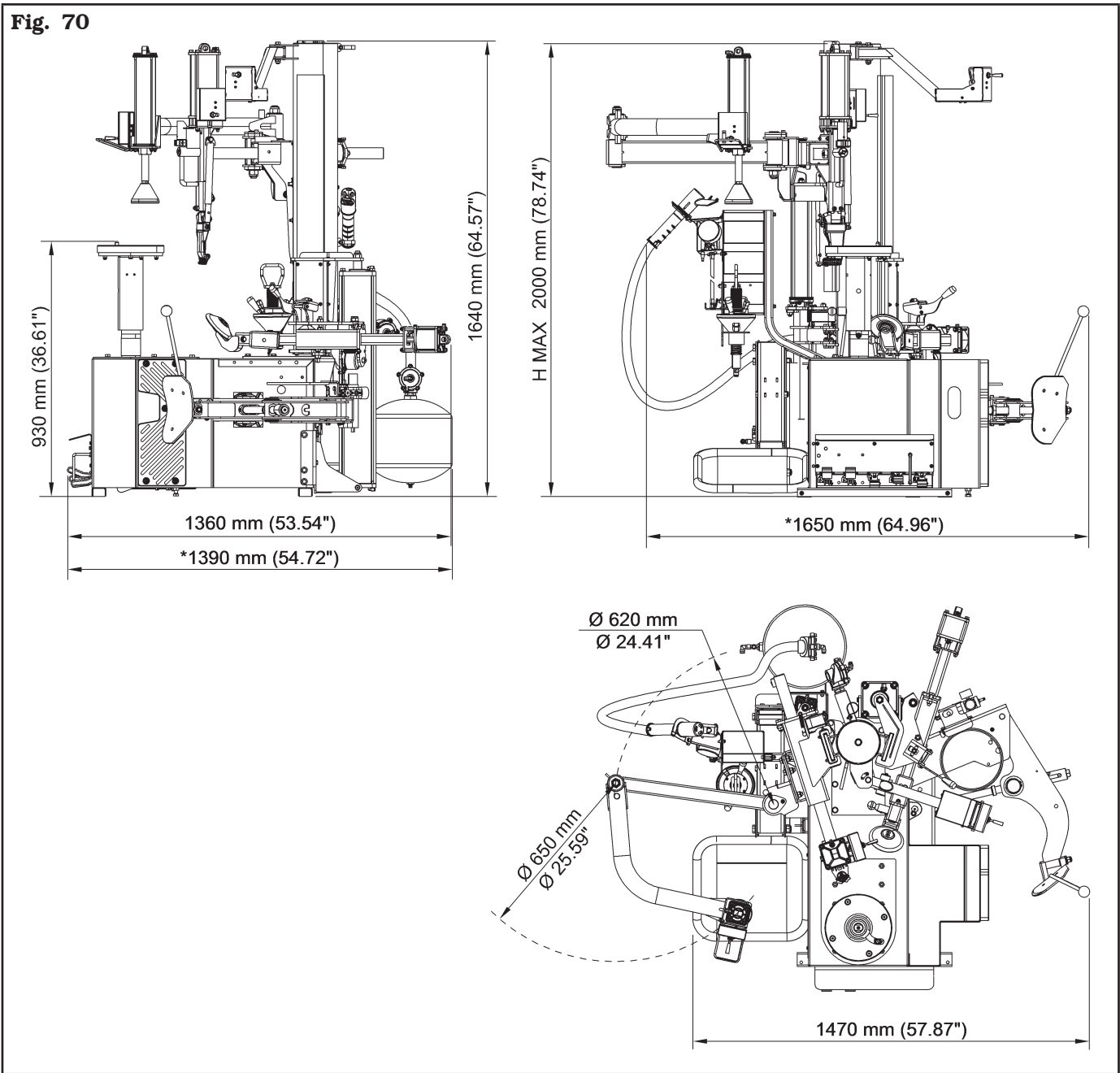
15.2 Technical mechanical data

Tyre max. diameter (mm)	1143 (45")
Rim locking diameter (inches)	10 - 26
Wheel max. weight (kg)	80 (176 lbs)
Wheel max. width (mm)	381 (15")
Side shovel bead breaking max. opening (mm)	432 (17")
Bead breaking force (roller) (kg)	1200 (2645 lbs)
Bead breaking force (shovel) (kg)	3600 (7900 lbs)
Operating pressure (bar)	8 - 10 (116 - 145 psi)
Gear noise (dB) (A)	< 80

	RAV.G8945.206107	RAV.G8945.206077	RAV.G8945.200839	RAV.G8945.206091	SPA.G8945.206015	SPA.G8945.206008
Weight (kg)	360 (794 lbs)	370 (816 lbs)	375 (827 lbs)	360 (794 lbs)	360 (794 lbs)	370 (816 lbs)

15.3 Dimensions

Fig. 70



* Applies to models with tubeless inflation system

16.0 STORING

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

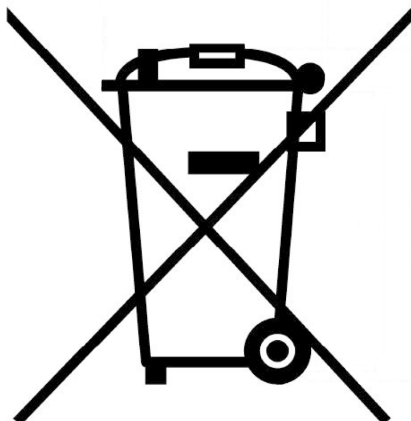
17.0 SCRAPPING

When the decision is taken not to make further use of the equipment, it is advisable to make it inoperative by removing the connection pressure hoses. The equipment 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 equipment (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. 71



18.0 REGISTRATION PLATE DATA

TYRE CHANGER MODEL	SERIAL N°	MONTH-YEAR
AMPERAGE	BAR	POWER SUPPLY

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



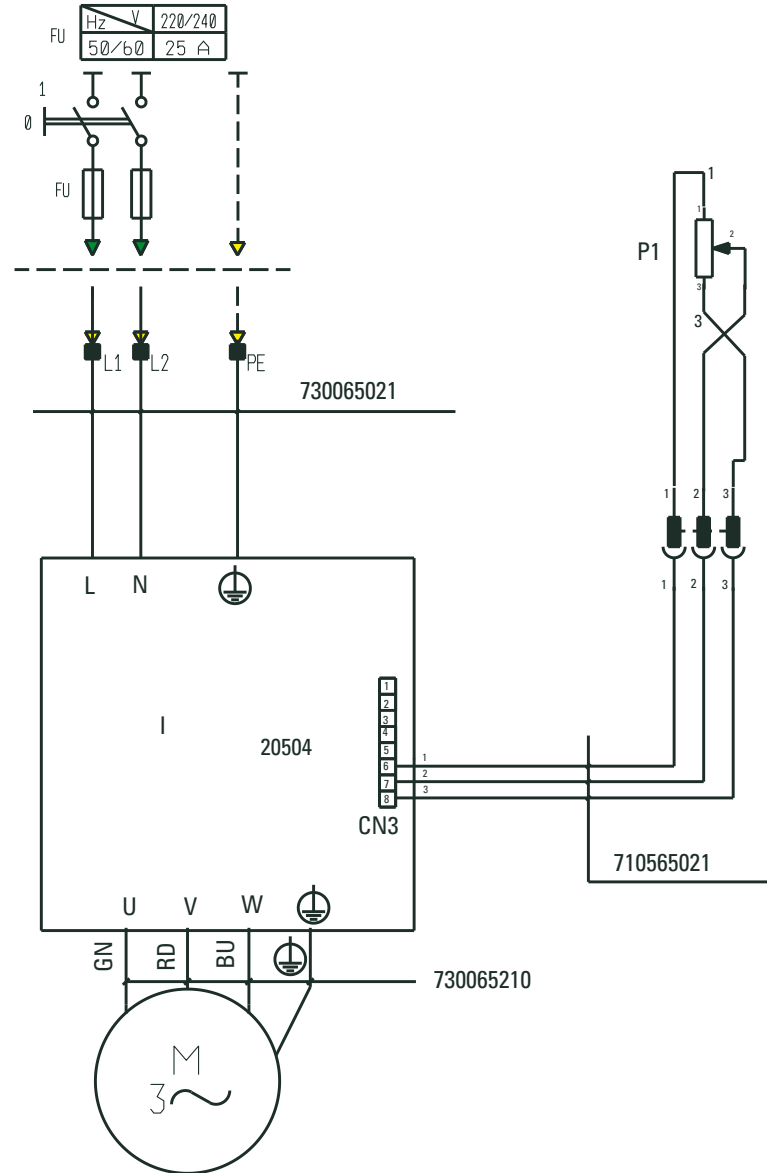
ATTENTION: TAMPERING WITH, CARVING, CHANGING ANYHOW OR EVEN REMOVING EQUIPMENT IDENTIFICATION PLATE IS ABSOLUTELY FORBIDDEN; DO NOT COVER IT WITH TEMPORARY PANELS, ETC., SINCE IT MUST ALWAYS BE VISIBLE.

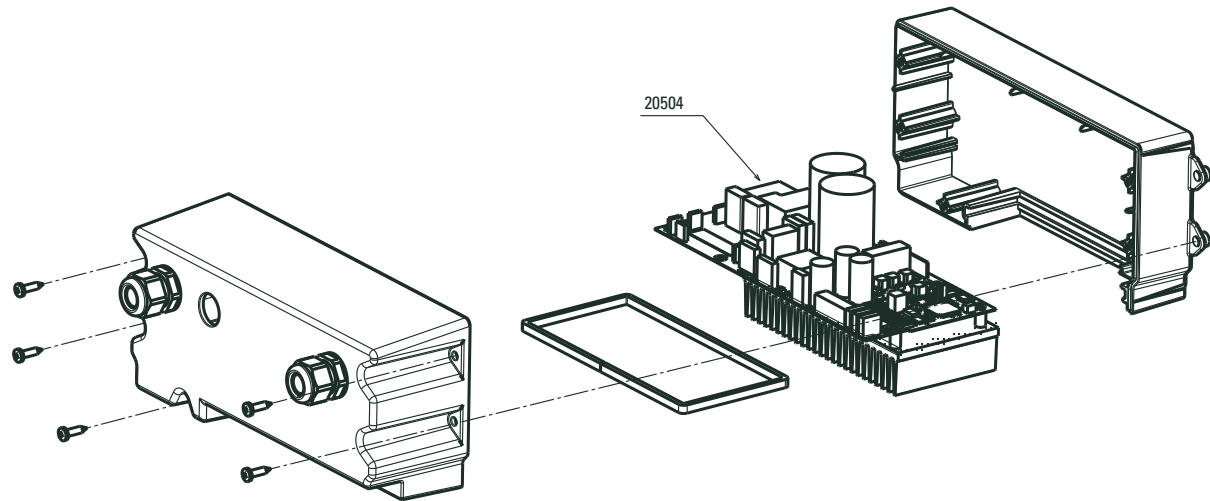
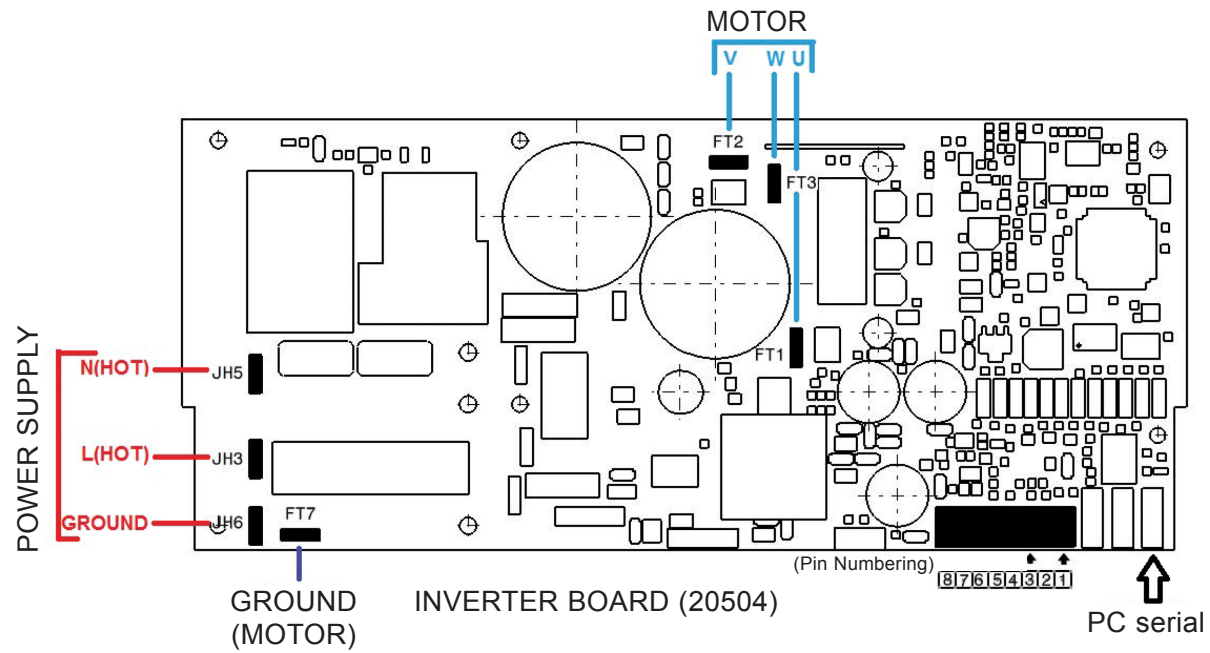
WARNING: Should the plate be accidentally damaged (removed from the equipment, damaged or even partially illegible) inform immediately the manufacturer.

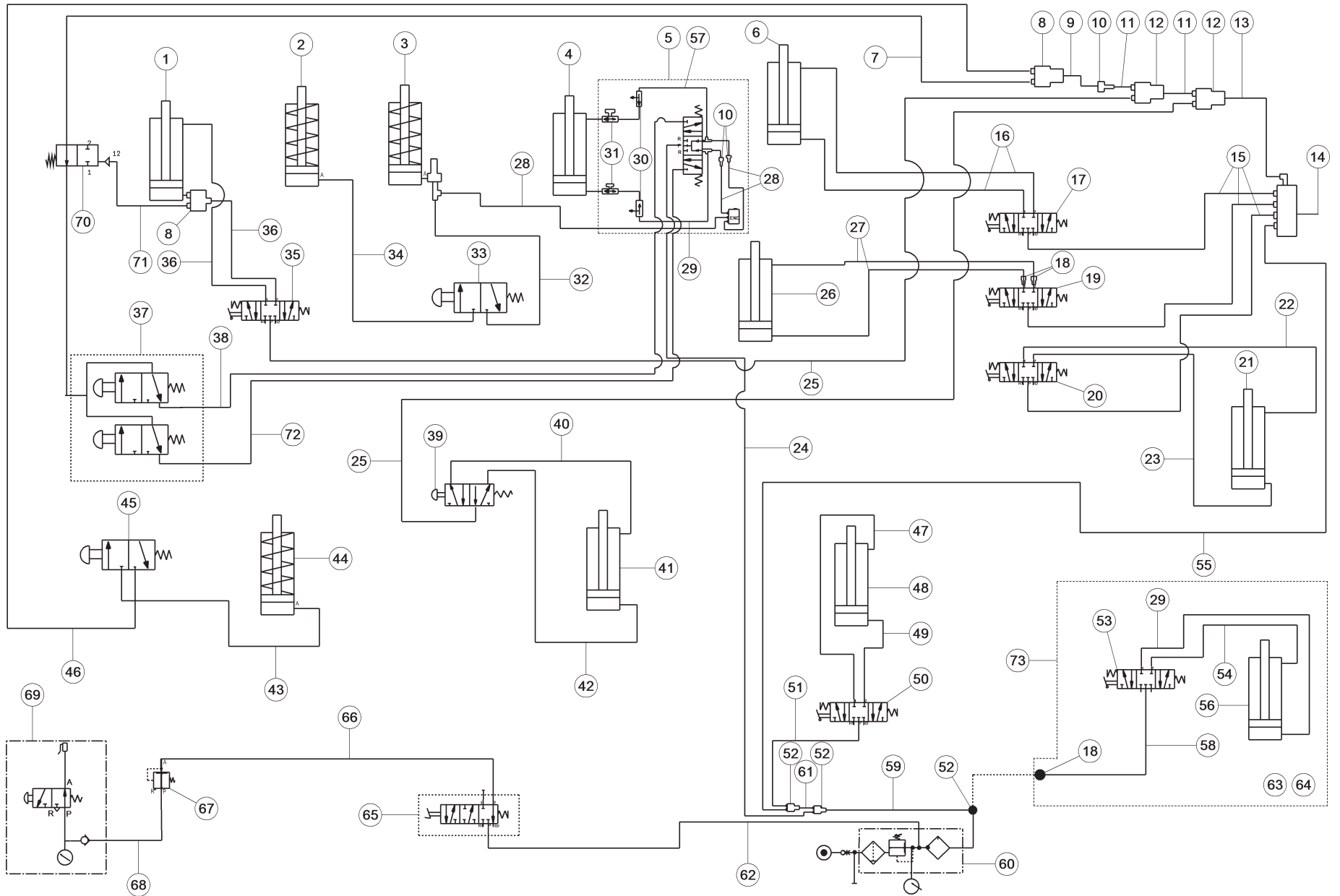
19.0 FUNCTIONAL DIAGRAMS

Here follows a list of the equipment functional diagrams.

1PH POWER SUPPLY CABLE 2P+GROUND x 6 mmq









LIST OF COMPONENTS

PNEUMATIC DIAGRAM
(APPLIES TO MODELS WITHOUT TUBELESS INFLATION)

Drawing N°B - Rev. 0

730005020

**TYRE-CHANGER SERIES
G8945 - T2220 - GA2945**

No.	Cod.	Description
1	730093780	Pneumatic cylinder 90x173x25
2	710690520	Neck cylinder
3	730093850	Neck cylinder D.80
4	730093600	Pneumatic cylinder 70x310x20
5	730093860	Tool control pneumatic assembly
6		Bead breaker cylinder
7	317029	4x2.7 white rilsan hose L=3300
8	B5815000	V D.4 fitting
9	317026	4x2.7 black rilsan hose L=60
10	325086	Intermediate reduction D.6 - D.4
11	317006	6x4 black rilsan hose L=60
12	325191	Y-fitting 6
13	317006	6x4 black rilsan hose L=1000
14	B2850001	5-way block
15	317007	8x6 black rilsan hose L=200
16	317010	10x8 black rilsan hose L=950
17		Bead breaker cylinder valve
18	325054	6-8 reduction
19		Post lifting valve
20		Lifting device valve assembly
21		Lifting device cylinder
22	317022	Black Elastollan hose 8x6 L=1200
23	317022	Black Elastollan hose 8x6 L=1000
24	317007	8x6 black rilsan hose L=250
25	317006	6x4 black rilsan hose L=2900
26		Post lifting cylinder
27	317006	6x4 black rilsan hose L=3000
28	317026	4x2.7 black rilsan hose L=500
29	317006	6x4 black rilsan hose L=370
30	B4077600	VSR quick exhaust valve
31	399275	Flow regulator
32	BMP90000	4x2.7 yellow rilsan hose L=3240
33	710590800	NA valve
34	317026	4x2.7 black rilsan hose L=1915
35		Tool cylinder control valve
36	317026	4x2.7 black rilsan hose L=400
37	B2358000	Control valve "C"
38	317027	4x2.7 red rilsan hose L=2700
39		Cam control valve
40	317006	6x4 black rilsan hose L=3560



LIST OF COMPONENTS

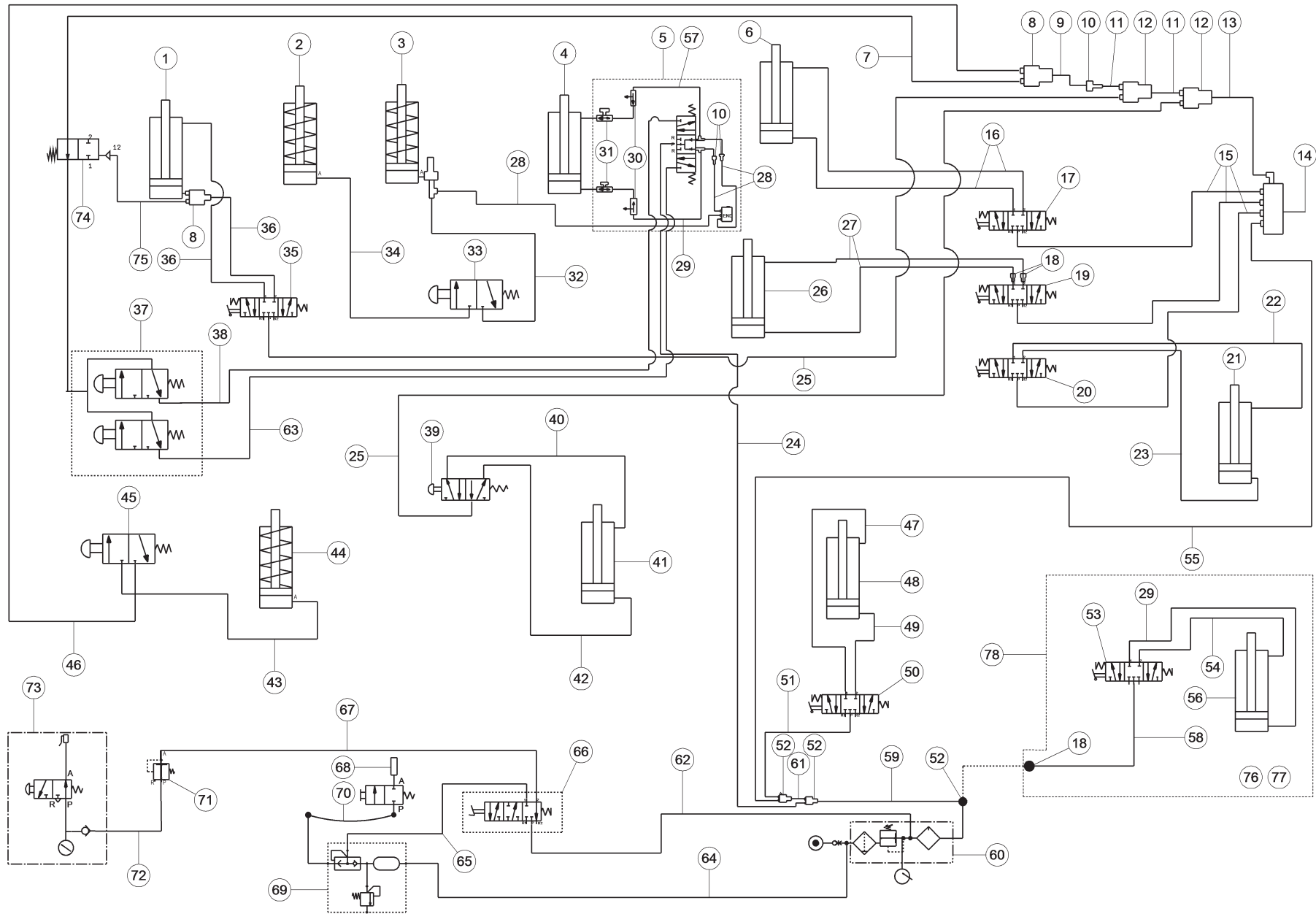
PNEUMATIC DIAGRAM
(APPLIES TO MODELS WITHOUT TUBELESS INFLATION)

Drawing N°B - Rev. 0

730005020

TYRE-CHANGER SERIES
G8945 - T2220 - GA2945

No.	Cod.	Description
41	710491140	Pneumatic cylinder assembly
42	317013	6x4 blue rilsan hose L=3450
43	317026	4x2.7 black rilsan hose L=1150
44	710690520	Neck cylinder
45	710590800	NA valve
46	317026	4x2.7 black rilsan hose L=3400
47	317007	8x6 black rilsan hose L=2800
48	730093650	Pneumatic cylinder 125x700x30
49	BMP34000	8x6 green rilsan hose L=2500
50		Bead-breaker up/down control valve
51	317007	8x6 black rilsan hose L=2860
52	325181	Y8-fitting
53		Plus cylinder valve
54	317006	6x4 black rilsan hose L=200
55	317007	8x6 black rilsan hose L=750
56		Plus cylinder
57	317006	6x4 black rilsan hose L=800
58	317006	6x4 black rilsan hose L=4000
59	317007	8x6 black rilsan hose L=300
60		Reduction gear filter + Lubricator assembly
61	317007	8x6 black rilsan hose L=850
62	317009	8x6 blue rilsan hose L=1000
63	599563	Sheath L=2200
64	599561	Sheath L=1680
65		Inflation pedal valve
66	317009	8x6 blue rilsan hose L=750
67		Balancing valve
68	317008	8x6 red rilsan hose L=1000
69		Inflation assembly with pressure gauge
70	309141	Valve 2-2
71	317026	4x2.7 black rilsan hose L=200
72	317028	4x2.7 green rilsan hose L=2700
73		Rotating bead press device



LIST OF COMPONENTS	
Drawing N°C - Rev. 0	730005010

PNEUMATIC DIAGRAM
 (APPLIES TO MODELS WITH TUBELESS INFLATION SYSTEM
 AND COLUMN WITH INTEGRATED PRESSURE VESSEL
 ASSEMBLY)



LIST OF COMPONENTS

PNEUMATIC DIAGRAM
(APPLIES TO MODELS WITH TUBELESS INFLATION SYSTEM
AND COLUMN WITH INTEGRATED PRESSURE VESSEL
ASSEMBLY)

Drawing N°C - Rev. 0

730005010

**TYRE-CHANGER SERIES
G8945 - T2220 - GA2945**

Abbreviation		Description (Position)
1	730093780	Pneumatic cylinder 90x173x25
2	710690520	Neck cylinder
3	730093850	Neck cylinder D.80
4	730093600	Pneumatic cylinder 70x310x20
5	730093860	Tool control pneumatic assembly
6		Bead breaker cylinder
7	317029	4x2.7 white rilsan hose L=3300
8	B5815000	V D.4 fitting
9	317026	4x2.7 black rilsan hose L=60
10	325086	Intermediate reduction D.6 - D.4
11	317006	6x4 black rilsan hose L=60
12	325191	Pneumatic fitting Y-6
13	317006	6x4 black rilsan hose L=1000
14	B2850001	5-way block
15	317007	8x6 black rilsan hose L=200
16	317010	10x8 black rilsan hose L=950
17		Bead breaker cylinder valve
18	325054	6-8 reduction
19		Post lifting valve
20		Lifting device valve assembly
21		Lifting device cylinder
22	317022	Black Elastollan hose 8x6 L=1200
23	317022	Black Elastollan hose 8x6 L=1000
24	317007	8x6 black rilsan hose L=250
25	317006	6x4 black rilsan hose L=2900
26		Post lifting cylinder
27	317006	6x4 black rilsan hose L=3000
28	317026	4x2.7 black rilsan hose L=500
29	317006	6x4 black rilsan hose L=370
30	B4077600	VSR quick exhaust valve
31	399275	Flow regulator
32	BMP90000	4x2.7 yellow rilsan hose L=3240
33	710590800	NA valve
34	317026	4x2.7 black rilsan hose L=1915
35		Tool cylinder control valve
36	317026	4x2.7 black rilsan hose L=400
37	B2358000	Control valve "C"
38	317027	4x2.7 red rilsan hose L=2700
39		Cam control valve
40	317006	6x4 black rilsan hose L=3560



LIST OF COMPONENTS

Drawing N°C - Rev. 0

730005010

PNEUMATIC DIAGRAM
(APPLIES TO MODELS WITH TUBELESS INFLATION SYSTEM
AND COLUMN WITH INTEGRATED PRESSURE VESSEL
ASSEMBLY)

TYRE-CHANGER SERIES
G8945 - T2220 - GA2945

Abbreviation	Description (Position)	
41	710491140	Pneumatic cylinder assembly
42	317013	6x4 blue rilsan hose L=3450
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44	710690520	Neck cylinder
45	710590800	NA valve
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47	317007	8x6 black rilsan hose L=2800
48	730093650	Pneumatic cylinder 125x700x30
49	BMP34000	8x6 green rilsan hose L=2500
50		Bead-breaker up/down control valve
51	317007	8x6 black rilsan hose L=2860
52	325181	Y8-fitting
53		Plus cylinder valve
54	317006	6x4 black rilsan hose L=200
55	317007	8x6 black rilsan hose L=750
56		Plus cylinder
57	317006	6x4 black rilsan hose L=800
58	317006	6x4 black rilsan hose L=4000
59	317007	8x6 black rilsan hose L=300
60		Reduction gear filter + Lubricator assembly
61	317007	8x6 black rilsan hose L=850
62	317009	8x6 blue rilsan hose L=1000
63	317028	4x2.7 green rilsan hose L=2700
64		10x8 Rilsan hose
65	317007	8x6 black rilsan hose L=1750
66		Inflation pedal valve
67	317009	8x6 blue rilsan hose L=750
68		Inflation nozzle.
69		Tank assembly
70	790090060	Caulked pipe
71		Balancing valve
72	317008	8x6 red rilsan hose L=1000
73		Inflation assembly with pressure gauge
74	309141	Valve 2-2
75	317026	4x2.7 black rilsan hose L=200
76	599563	Sheath L=2200
77	599561	Sheath L=1680
78		Rotating bead press device

Content of the EC declaration of conformity (with reference to point 1.7.4.2, letter c) of directive 2006/42/EC)

With reference to annex II, part 1, section A of directive 2006/42/EC, the declaration of conformity accompanying the machinery contains:

1. the business name and full address of the manufacturer and, where applicable, its authorised representative;
See the first page of the manual
2. name and address of the person authorised to compile the technical file, who must be established in the Community;
It coincides with the manufacturer, see the first page of the manual
3. description and identification of the machine, including generic name, function, model, type, serial number, trade name;
See the first page of the manual
4. a statement explicitly declaring that the machinery is in conformity with all the relevant provisions of this directive and, where appropriate, a similar statement declaring conformity with other community directives and/or relevant provisions with which the machinery complies. These references must be those of the texts published in the Official Journal of the European Union;
The machinery must comply with the following applicable Directives:

2006/42/CE	Machinery Directive
2014/30/EU	Electromagnetic Compatibility Directive
5. where appropriate, the name, address and identification number of the notified body which carried out the EC type-examination referred to in annex IX and the number of the EC type-examination certificate;
N/A
6. where appropriate, the name, address and identification number of the notified body which approved the full quality assurance system referred to in annex X;
N/A
7. where appropriate, reference to the harmonised standards referred to in article 7, paragraph 2, which have been applied;

UNI EN ISO 12100:2010	Safety of machinery - General principles for design - Risk assessment and risk reduction;
CEI EN 60204-1:2018	Safety of machinery - Electrical equipment of machines - Part 1: General requirements
8. where appropriate, reference to other standards and technical specifications applied;

UNI EN 17347:2001	Road vehicles – Machines for mounting and demounting vehicle tyres – Safety requirements
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9. place and date of declaration;
Ostellato, / /
10. identification and signature of the person authorised to draw up the declaration on behalf of the manufacturer or its authorised representative.
SIMONE FERRARI VP VSG Europe Managing Director

Content of the declaration of conformity (with reference to Schedule 2, Part 1, Annex I, point 1.7.4.2, letter c) of UK Statutory Instrument 2008 No. 1597)

With reference to schedule 2 annex I, part1, section A of UK Statutory Instrument 2008 No. 1597, the declaration of conformity accompanying the machinery contains:

1. the business name and full address of the manufacturer and, where applicable, its authorised representative;
Manufacturer: see the first page of the manual.
 Authorised representative:
VEHICLE SERVICE GROUP UK LTD
3 Fourth Avenue - Bluebridge Industrial Estate - Halstead
Essex CO9 2SY - United Kingdom
2. name and address of the person authorised to compile the technical file;
It coincides with the authorized representative, see point 1
3. description and identification of the machine, including generic name, function, model, type, serial number, trade name;
See the first page of the manual
4. a sentence expressly declaring that the machinery fulfils all the relevant provisions of these Regulations and where appropriate, a similar sentence declaring the conformity with other enactments or relevant provisions with which the machinery complies;
The machinery complies with the following applicable UK Statutory Instruments:
The Supply of Machinery (Safety) Regulations 2008
The Electrical Equipment (Safety) Regulations 2016
The Electromagnetic Compatibility Regulations 2016
5. where appropriate, the name, address and identification number of the approved body which approved the full quality assurance system referred to in Annex X (Part 10 of this Schedule);
N/A
6. where appropriate, the name, address and identification number of the approved body which approved the full quality assurance system referred to in Annex X (Part 10 of this Schedule);
N/A
7. where appropriate, a reference to the designated standards used;

BS EN ISO 12100:2010	Safety of machinery - General principles for design - Risk assessment and risk reduction;
BS EN 60204-1:2018	Safety of machinery - Electrical equipment of machines. General requirements.
BS EN 61000-6-3:2007 +A1:2011 +AC:2012	Electromagnetic compatibility (EMC) - Part 6-3. Generic standards - Emission standard for residential, commercial and light-industrial environments.
BS EN 61000-6-2:2005 +AC:2005	Electromagnetic compatibility (EMC) - Part 6-2. Generic standards - Immunity for industrial environments.
8. where appropriate, reference to other standards and technical specifications applied;
N/A
9. place and date of declaration;
Ostellato, / /
10. identification and signature of the person authorised to draw up the declaration on behalf of the manufacturer or its authorised representative.
SIMONE FERRARI VP VSG Europe Managing Director