

DRAPER[®]

INSTRUCTIONS FOR Semi-Automatic Tyre Changer

Stock No.81645

Part No.TC100

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY TO ENSURE THE SAFE AND EFFECTIVE USE OF THIS PRODUCT.



CE

DRAPER[®]

GENERAL INFORMATION

These instructions accompanying the product are the original instructions. This document is part of the product, keep it for the life of the product passing it on to any subsequent holder of the product. Read all these instructions before assembling, operating or maintaining this product.

This manual has been compiled by Draper Tools describing the purpose for which the product has been designed, and contains all the necessary information to ensure its correct and safe use. By following all the general safety instructions contained in this manual, it will ensure both product and operator safety, together with longer life of the product itself.

All photographs and drawings in this manual are supplied by Draper Tools to help illustrate the operation of the product.

Whilst every effort has been made to ensure the accuracy of information contained in this manual, the Draper Tools policy of continuous improvement determines the right to make modifications without prior warning.

1. TITLE PAGE

1.1 INTRODUCTION:

USER MANUAL FOR:

SEMI-AUTOMATIC TYRE CHANGER

Stock no. 81645

Part no. TC100

1.2 REVISIONS:

Date first published July 2015

As our user manuals are continually updated, users should make sure that they use the very latest version.

Manuals are available to download under products on: www.drapertools.com.

DRAPER TOOLS LIMITED

HURSLEY ROAD

CHANDLER'S FORD

EASTLEIGH

HAMPSHIRE

SO53 1YF

UK

WEBSITE: www.drapertools.com

PRODUCT HELPLINE: +44 (0) 23 8049 4344

GENERAL FAX: +44 (0) 23 8026 0784

1.3 UNDERSTANDING THIS MANUALS SAFETY CONTENT:

WARNING! Information that draws attention to the risk of injury or death.

CAUTION! Information that draws attention to the risk of damage to the product or surroundings.

NOTE! Important information.

1.4 COPYRIGHT © NOTICE:

Copyright © Draper Tools Limited.

Permission is granted to reproduce this publication for personal & educational use only.

Commercial copying, redistribution, hiring or lending is prohibited.

No part of this publication may be stored in a retrieval system or transmitted in any other form or means without written permission from Draper Tools Limited.

In all cases this copyright notice must remain intact.

2. CONTENTS

2.1 CONTENTS

<i>Page content</i>	<i>Page No.</i>
1. TITLE PAGE	
1.1 INTRODUCTION	2
1.2 REVISION HISTORY	2
1.3 UNDERSTANDING THIS MANUAL	2
1.4 COPYRIGHT NOTICE.....	2
2. CONTENTS	
2.1 CONTENTS.....	3
3. GUARANTEE	
3.1 GUARANTEE.....	4
4. INTRODUCTION	
4.1 SCOPE	5
4.2 SPECIFICATION	5
4.3 HANDLING & STORAGE.....	5
5. HEALTH & SAFETY INFORMATION	
5.1 GENERAL SAFETY INSTRUCTIONS.....	6
5.2 SPECIFIC SAFETY INSTRUCTIONS FOR TYRE CHANGER USE	8
6. GETTING TO KNOW YOUR TYRE CHANGER	
6.1 IDENTIFICATION.....	9
7. UNPACKING & CHECKING	
7.1 PACKAGING	10
8. INSTALLATION AND ASSEMBLY	
8.1 DETERMINE THE PROPER LOCATION FOR THE TYRE CHANGER.....	11
8.2 MOUNT THE TYRE CHANGER ON A FLOOR SURFACE	11
8.3 ATTACHING THE COLUMN.....	12
8.4 SETTING THE SPRING ON THE VERTICAL ROD	12
8.5 PNEUMATIC CONNECTION.....	13
8.6 ELECTRICAL CONNECTION	13
9. OPERATION AND USE	
9.1 PRELIMINARY OPERATIONS.....	14
9.2 BEAD BREAKING	14
9.3 UNMOUNTING	14
9.4 MOUNTING OPERATIONS.....	15
9.5 INFLATING OPERATIONS	16
10. TROUBLESHOOTING	
10.1 TROUBLESHOOTING GUIDE	17
11. MAINTENANCE	
11.1 INSPECTION, MAINTENANCE AND CLEANING	18
12. EXPLANATION OF SYMBOLS/PICTOGRAMS.....	19
13. DISPOSAL	19

3. GUARANTEE

3.1 GUARANTEE

Draper tools have been carefully tested and inspected before shipment and are guaranteed to be free from defective materials and workmanship.

Should the tool develop a fault, please return the complete tool to your nearest distributor or contact Draper Tools Limited, Chandler's Ford, Eastleigh, Hampshire, SO53 1YF. England.

Telephone Sales Desk: (023) 8049 4333 or Product Helpline (023) 8049 4344.

A proof of purchase must be provided with the tool.

If upon inspection it is found that the fault occurring is due to defective materials or workmanship, repairs will be carried out free of charge. This guarantee period covering parts/labour is 12 months from the date of purchase except where tools are hired out when the guarantee period is ninety days from the date of purchase. This guarantee does not apply to normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accidents, or repairs attempted or made by any personnel other than the authorised Draper warranty repair agent.

Note: If the tool is found not to be within the terms of warranty, repairs and carriage charges will be quoted and made accordingly.

This guarantee applies in lieu of any other guarantee expressed or implied and variations of its terms are not authorised.

Your Draper guarantee is not effective unless you can produce upon request a dated receipt or invoice to verify your proof of purchase within the guarantee period.

Please note that this guarantee is an additional benefit and does not affect your statutory rights.

Draper Tools Limited.

4. INTRODUCTION

4.1 SCOPE

This semi-automatic tyre changer is designed and constructed for mounting and un-mounting tyres from wheel rims of motor vehicles and motor cycles.

4.2 SPECIFICATION

Stock no	81645
Part no	TC100
Rated voltage	230V~
Rated frequency	50Hz
Motor.....	1.1kW
Phase	1/3PH
Bead breaker force.....	2100kg
Noise level.....	70db
Pneumatic supply working pressure	80 – 115psi (6 – 8bar)
Minimum wheel width	3"
Maximum wheel width	14"
Minimum rim diameter (internal locking).....	13"
Maximum rim diameter (internal locking)	23"
Minimum rim diameter (external locking)	11"
Maximum rim diameter (external locking).....	21"
Maximum wheel diameter	355mm
Overall dimensions	760mmW x 950mmD x 1740mmH
Net weight.....	180kg
Gross weight.....	212kg

4.3 HANDLING & STORAGE

To maintain machine and user safety, the responsibility of the owner is to read and follow these instructions:

- Follow all installation instructions.
- Make sure installation conforms to all applicable local environmental/health and safety rules and regulations.
- Carefully check the unit for correct initial function.
- Read and follow the safety instructions. Keep them readily available for machine operators.
- Make certain all operators are properly trained, know how to safely and correctly operate the unit, and are properly supervised.
- Allow unit operation only with all parts in place and operating safely.
- Carefully inspect the unit on a regular basis and perform all maintenance as required.
- Service and maintain the unit only with authorized or approved replacement parts.
- Keep all instructions permanently with the unit and all decals/labels/notices on the unit clean and visible.
- Do not override safety features.

5. HEALTH & SAFETY INFORMATION

5.1 GENERAL SAFETY INSTRUCTIONS

When using any type of power tool there are steps that should be taken to make sure that you, as the user, remain safe.

Common sense and a respect for the tool will help reduce the risk of injury.

Read the instruction manual fully. Do not attempt any operation until you have read and understood this manual.

Most important you must know how to safely start and stop this machine, especially in an emergency.

Keep the work area tidy and clean. Attempting to clear clutter from around the machine during use will reduce your concentration. Mess on the floor creates a trip hazard. Any liquid spilt on the floor could result in you slipping.

Find a suitable location. If the machine is bench mounted; the location should provide good natural light or artificial lighting as a replacement. Avoid damp and dust locations as it will have a negative effect on the machine's performance.

If the machine is portable; do not expose the tool to rain. In all cases do not operate power tools near any flammable materials.

Beware of electric shock. Avoid contact with earthed surfaces; because they can conduct electricity if there is an electrical fault with the power tool. Always protect the power cable and route it away from danger.

Keep bystanders away. Children, onlookers and passers by must be restricted from entering the work area for their own protection. The barrier must extend a suitable distance from the tool user.

Do not overload or misuse the tool. All tools are designed for a purpose and are limited to what they are capable of doing. Do not attempt to use a power tool (or adapt it in any way) for an application it is not designed for. Select a tool appropriate for the size of the job. Overloading a tool will result in tool failure and user injury: This covers the use of accessories.

Dress properly. Loose clothing, long hair and jewellery are all dangerous because they can become entangled in moving machinery: This can also result in parts of body being pulled into the machine.

Clothing should be close fitted, with any long hair tied back and jewellery and neck ties removed. Footwear must be fully enclosed and have a nonslip sole.

5. HEALTH & SAFETY INFORMATION

Wear personal protective equipment (PPE). Dust, noise, vibration and **swarf** can all be dangerous if not suitably protected against. If the work involving the power tool creates dust or fumes; wear a dust mask. Vibration to the hand, caused by operating some tools for longer periods must be protected against. Wear vibration reducing gloves and allow long breaks between uses. Protect against dust and **swarf** by wearing approved safety goggles or a face shield. These are some of the more common hazards and preventions; however, always find out what hazards are associated with the machine/work process and wear the most suitable protective equipment available.

Do not breathe contaminated air. If the work creates dust or fumes; connect the machine (if possible) to an extraction system either locally or remotely.

Move the machine as instructed. If the machine is hand held, do not carry it by the power supply cable. If the product is heavy; employ a second or third person to help move it safely or use a mechanical device. Always refer to the instructions for the correct method.

Do not overreach. Extending your body too far can result in a loss of balance and you falling. This could be from a height or onto a machine and will result in injury.

Maintain your tools correctly. A well maintained tool will do the job safely. Replace any damaged or missing parts immediately with original parts from the manufacturer. As applicable; keep blades sharp; moving parts clean, oiled or greased; handles clean; and emergency devices working.

Wait for the machine to stop. Unless the machine is fitted with a safety brake; some parts may continue to move due to momentum. Wait for all parts to stop; then unplug it from the power supply before making any adjustments, carrying out maintenance operations or just finishing using the tool.

Remove and check setting tools. Some machinery requires the use of additional tools or keys to set, load or adjust the power tool. Before starting the power tool always check to make certain they have been removed and are safely away from the machine.

Prevent unintentional starting. Before plugging any machine in to the power supply, make sure the switch is in the OFF position. If the machine is portable; do not hold the machine near the switch and take care when putting the machine down; that nothing can operate the switch.

This machine is not suitable for use with an extension lead.

Concentrate and stay alert. Distractions are likely to cause an accident. Never operate a power tool if you are under the influence of drugs (prescription or otherwise), including alcohol or if you are feeling tired. Being disorientated will result in an accident.

5. HEALTH & SAFETY INFORMATION

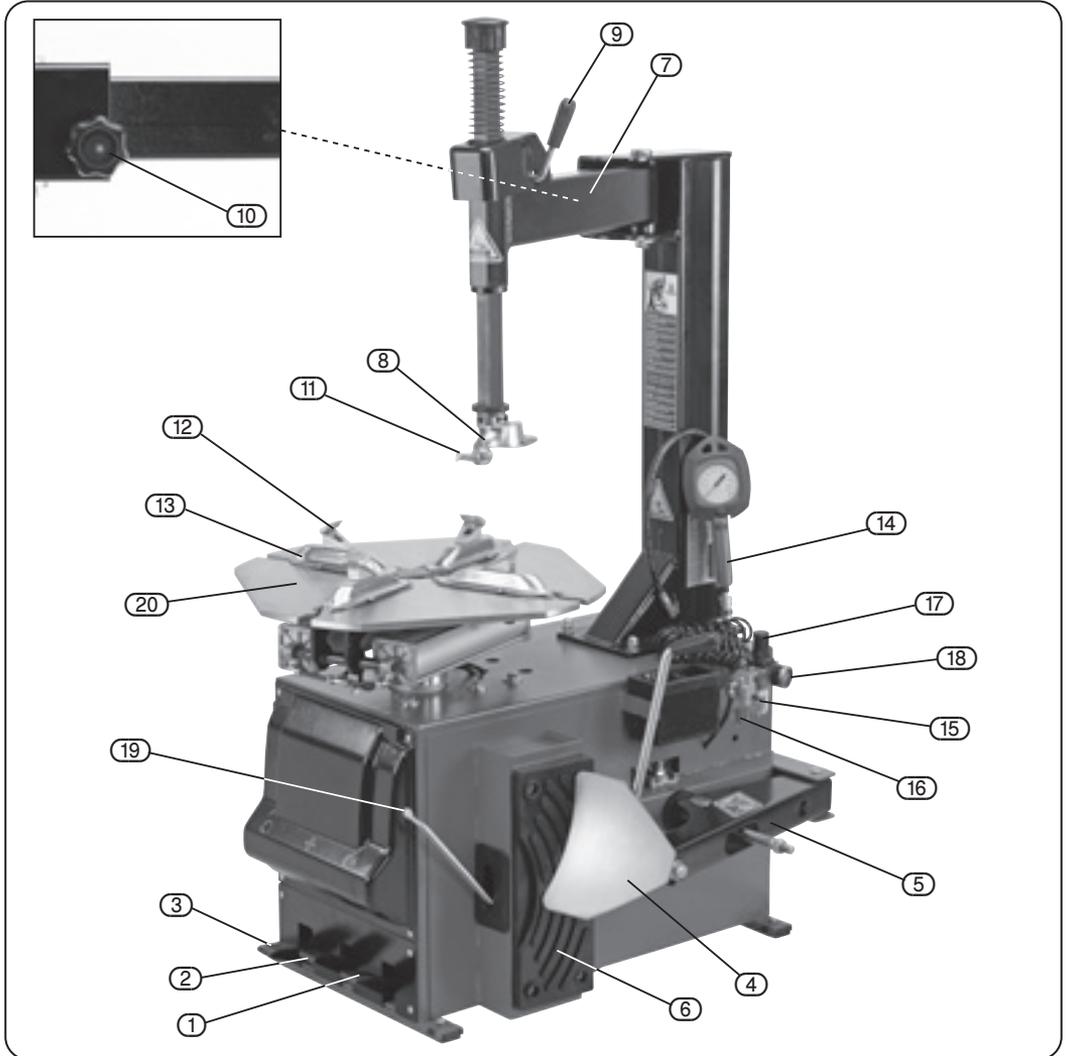
Have this tool repaired by a qualified person. This tool is designed to conform to the relevant international and local standards and as such should be maintained and repaired by someone qualified; using only original parts supplied by the manufacturer: This will ensure the tool remains safe to use.

5.2 SPECIFIC SAFETY INSTRUCTIONS FOR TYRE CHANGER USE

- Make sure this machine is used on a dry, flat, level, oil/grease free, concrete surface capable of supporting the weight of the tyre changer and any additional tools and equipment.
- Before each use, always examine the tyre changer for structural cracks and bends, damage to the safety guard, electrical wiring, and any other condition that may affect the safe operation of the machine. Do not use the tyre changer even if minor damage is apparent.
- Maintain a safe working environment. Keep the work area well lit. Make sure there is adequate surrounding workspace. Always keep the work area free of obstructions, grease, oil, and other debris. Do not use the tyre changer in a damp or wet location. Do not use the tyre changer in areas near flammable chemicals, dusts, and vapours.
- This tyre changer is designed for use with most passenger car and light commercial vehicle wheels. Do not attempt to exceed this machine's maximum wheel diameter capacity.
- Always keep hands, fingers, and feet away from the moving parts of the tyre changer while the machine is in use.
- Never leave the tyre changer unattended when it is running. After completing a tyre changer job, always turn the Power Switch to its "OFF" position, and wait until the machine comes to a complete stop before leaving.
- Make sure you read and understand all instructions and safety precautions as outlined in the manufacturer's manual for the wheel you are balancing, and the vehicle the wheel is to be used on.
- Always unplug the tyre changer from its electrical supply source before performing any inspection, maintenance, or cleaning procedures.
- **WARNING:** People with pacemakers should consult their physician(s) before using this product. Operation of electrical equipment in close proximity to a heart pacemaker could cause interference or failure of the pacemaker.

6. GETTING TO KNOW YOUR TYRE CHANGER

6.1 IDENTIFICATION



- | | | | | | |
|---|----------------------|---|----------------------------------|---|---------------------|
| ① | Bead breaker pedal. | ⑩ | Handwheel. | ⑱ | Air pressure gauge. |
| ② | Open/close pedal. | ⑪ | Sliding roller. | ⑲ | Tyre lever. |
| ③ | Rotation pedal. | ⑫ | Locking wedges. | ⑳ | Turntable. |
| ④ | Bead breaking plate. | ⑬ | Slide tracks. | | |
| ⑤ | Bead braking arm. | ⑭ | Air inflation gun. | | |
| ⑥ | Anti-abrasion supp. | ⑮ | Air/moisture filter . | | |
| ⑦ | Swinging arm. | ⑯ | Oil lubrication level/reservoir. | | |
| ⑧ | Head. | ⑰ | Air pressure regulator. | | |
| ⑨ | Locking lever. | | | | |

7. UNPACKING & CHECKING

7.1 PACKAGING

Carefully remove the tyre changer from the packaging and examine it for any sign of damage that may have happened during shipping.

The packaging material should be retained at least during the guarantee period: in case the machine needs to be returned for repair.

Warning! Some of the packaging materials used may be harmful to children. Do not leave any of these materials in the reach of children.

If any of the packaging is to be thrown away, make sure they are disposed of correctly; according to local regulations.

8. INSTALLATION AND ASSEMBLY

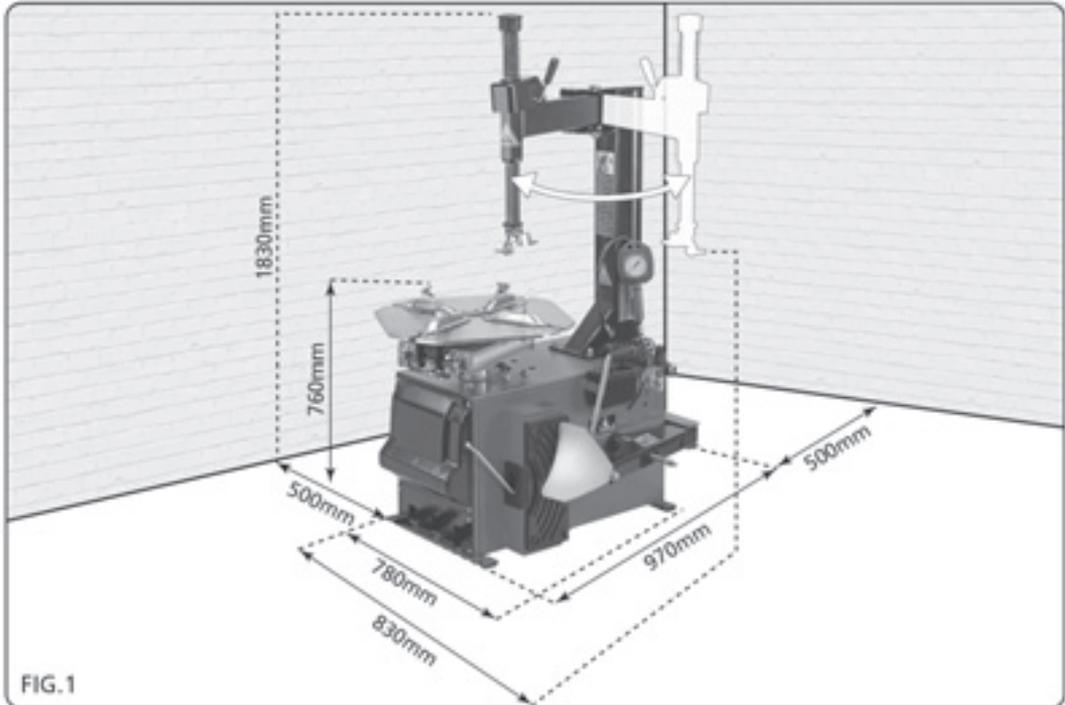


FIG.1

8.1 DETERMINE THE PROPER LOCATION FOR THE TYRE CHANGER (FIG.1).

WARNING: Make sure this machine is used on a dry, oil/grease free, flat, level **CONCRETE** surface capable of supporting the weight of the tyre changer and any additional tools and equipment.

For safe and ergonomic use of the machine it is advisable to locate the machine a minimum of 500 mm from the surrounding walls.

- The tyre changer is designed for indoors use only. Do not install or use outdoors, or in damp or wet locations.
- Make sure to check the desired location for possible obstructions such as a low ceiling, overhead lines, adequate working area, access ways, exits, etc.
- The tyre changer **MUST** be located in an area free of flammable materials and liquids.

8.2 MOUNT THE TYRE CHANGER ON A FLOOR SURFACE (FIG.2).

The machine is fitted with special rubber feet for the dampening of possible vibrations. In order to inflate tyres on the turntable it is essential to fix the machine to the ground. For this operation use the holes that were used to fix the machine to the pallet (A).

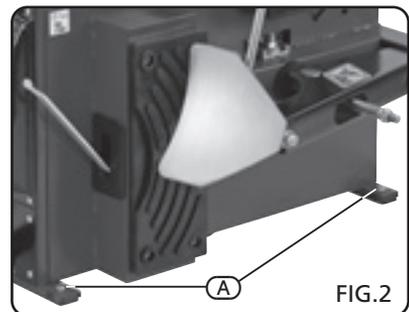


FIG.2

8. INSTALLATION AND ASSEMBLY

8.3 ATTACHING THE COLUMN (FIG.3).

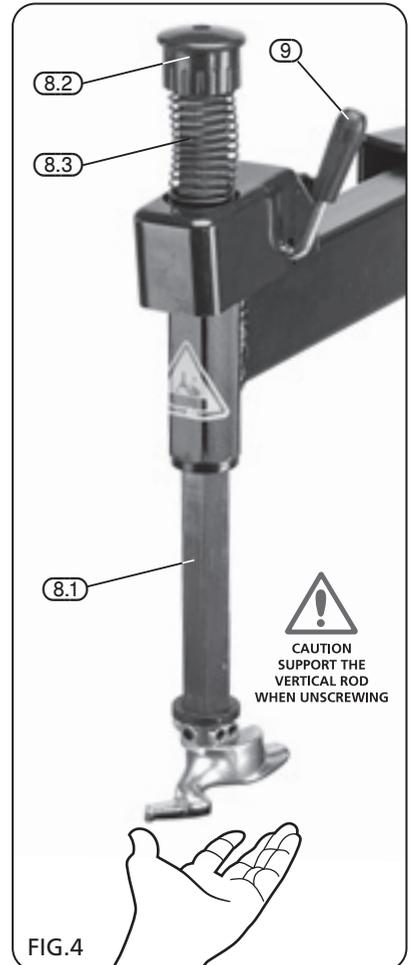
Fix the column to the machine body using the bolts (B) in the machine.

CAUTION: The column is very heavy and will require two people to attach safely.



8.4 SETTING THE SPRING ON THE VERTICAL ROD (FIG.4).

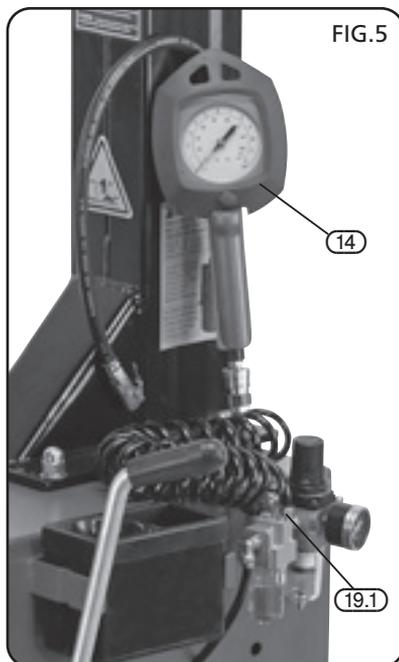
- After attaching the column, turn the locking lever (9) to release the vertical rod (8.1). Lift up the vertical rod 10cm and lock again. Unscrew the cap (8.2) at top of the rod with a 6mm hex key.
- **Warning:** when unscrewing the rod take the precaution of keeping one hand underneath it.
- Remove the rod. Slide the spring (8.3) off and re-insert the rod in its original seating, locking it at the end of its travel.
- Insert the spring on the top of the rod and refit the cap.



8. INSTALLATION AND ASSEMBLY

8.5 PNEUMATIC CONNECTION (FIG.5).

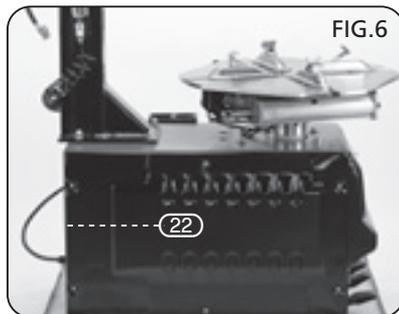
- Connect the inflation gun (14) to the coupling located to the left of the air filter (fig.11).
- Connect the compressed air supply to the coupling located between the lubricator and the air filter (19.1).



8.6 ELECTRICAL CONNECTION (FIG.6).

WARNING: All work on the electrical system, including minor operations must be carried out by professionally qualified personnel!

- Check that the electrical supply voltage is the same as that indicated on the rating label (22) situated at the back of the machine.



9. OPERATION AND USE

9.1 PRELIMINARY OPERATIONS

- Completely deflate the tyre.

WARNING: If tyre pressure monitoring sensors (TPMS) are fitted to the tyre, the pressure must be released slowly. Sudden loss of pressure may damage the sensors. Always check with the vehicle manufacturer before deflating tyre.

- Remove wheel balancing weights to avoid any interference with the clamping mechanism.

9.2 BEAD BREAKING (FIG.7).

WARNING: Tyre **MUST** be deflated before bead breaking.

- Place the wheel on the ground near the bead breaker, move the plate (5) to the bead and press the bead breaking control pedal (1).
- This operation is repeated at various points on the wheel until the bead is completely detached.
- Repeat the operation on the opposite side of the wheel.

WARNING: When using the bead breaking arm, take care not trap limbs between the tyre and the bead breaker.

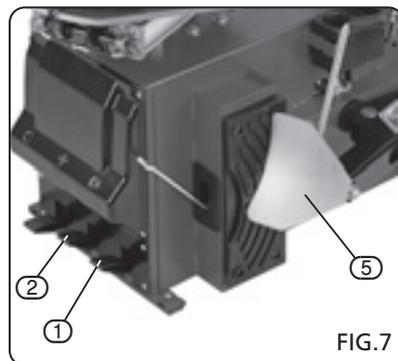


FIG.7

9.3 UNMOUNTING (FIGS.7, 8 – 9).

- Lower the locking lever (9) to unlock the vertical rod (8.1).
- Press the open/close control pedal (2) to prepare the locking wedges (12) to lock the rim externally (in the case of internal locking, this operation is not carried out).
- Place the wheel on the self-centring turntable (12.1), pressing lightly on the wheel. Press the open/close control pedal (2) to lock it.
- Lubricate the bead with specialist tyre lubricant.
- Move the head (8) close to the rim so that the roller (11) and the rim edge surface touch.
- Raise locking lever (9): in this way the vertical spacing of the head and locking of the vertical rod; the spacing of the head and locking of the arm; the spacing of the tongue is adjusted by acting on the handwheel (10) (3 mm ideal distance:).
- Raise the bead with the tyre lever and hook it onto the tongue of the head (8).

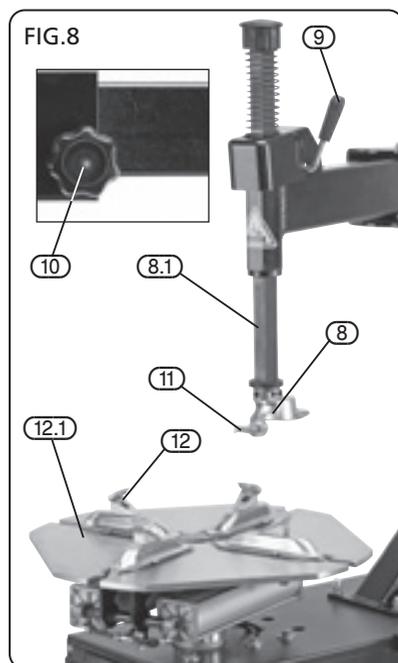


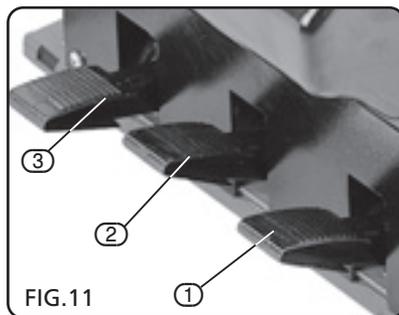
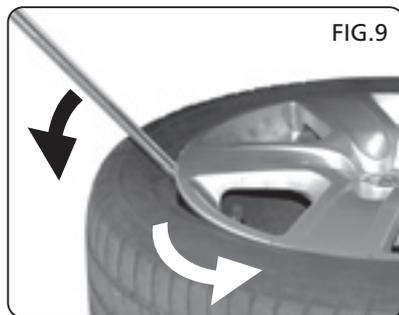
FIG.8

9. OPERATION AND USE

- Rotate the turntable by pressing the pedal (3) until the bead is completely out of the rim.
Be careful not to insert fingers between the tyre and rim while rotating the chuck.
- Push the arm (7) aside and extract an inner tube (if fitted).
- Repeat the same operation to remove the second bead.

9.4 MOUNTING OPERATIONS (FIGS.10 – 11).

- Lubricate the tyre bead and place it on the rim; move the head to the working position.
- Place the bead on the edge of the head (8) and under the tongue.
- Rotate the turntable by pressing the rotation pedal (3) taking care to make the bead move into the central groove of the rim so as to eliminate weakening the bead.
(To help this action it is advisable to press down on the tyre with the hands).
- Move the adjustable arm (TO FREE THE WORK AREA)
- Repeat the initial operation (see above) to locate the second bead.
- In the case that the bead has difficulty descending from the head, it will be necessary to "raise" (move upwards) the rotation pedal (3) making the turntable rotate in an anticlockwise direction.
- Move the arm and press the open/close pedal (2) to unlock the rim.

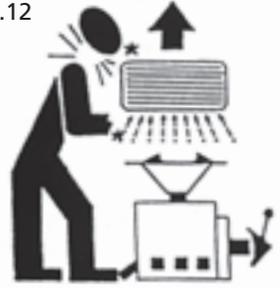


9. OPERATION AND USE

9.5 INFLATING OPERATIONS (FIG.12).

- **WARNING:** THE INFLATION PROCESSES IS POTENTIALLY DANGEROUS.
- THE OPERATOR MUST ADOPT ALL THE MEASURES NECESSARY IN ORDER TO GUARANTEE SAFE CONDITIONS.

FIG.12



10. TROUBLESHOOTING

10.1 TROUBLESHOOTING GUIDE

Problem	Causes	Remedies
The turntable does not rotate in any direction.	<ol style="list-style-type: none">1. Power plug not inserted.2. Incorrect connection in the plug.3. Electrical supply not suitable.	<ol style="list-style-type: none">1. Check plug and connection.
Pressing the inverter pedal down causes the turntable to turn in an anti-clockwise direction.	<ol style="list-style-type: none">1. Polarity inverted.	<ol style="list-style-type: none">1. Check connections in the power plug.
The turntable turns with insufficient power.	<ol style="list-style-type: none">1. Supply voltage wrong.2. Slack drive belt.	<ol style="list-style-type: none">1. Check the compatibility with the supply voltage and that on the maker's plate.2. Adjust the belt tightener.
The turntable does not lock the rim correctly.	<ol style="list-style-type: none">1. The pneumatic supply is not connected to the machine.2. Insufficient pressure in the pneumatic system.3. Pressure regulator is closed or badly adjusted.	<ol style="list-style-type: none">1. Connect the pneumatic supply.2. Correct the supply pressure.3. Open or correctly adjust the pressure reducer.
The bead breaker does not have sufficient power to break the tyre bead.	<ol style="list-style-type: none">1. The pneumatic supply is not connected to the machine.2. Insufficient pressure in the pneumatic system.3. Pressure regulator is closed or badly adjusted (for versions with this device).	<ol style="list-style-type: none">1. Connect the pneumatic supply.2. Correct the supply pressure.3. Open or correctly adjust the pressure regulator.

Other problems or malfunctions with the tyre changer could be highly technical and require professional attention from qualified personnel. If in any doubt contact the Draper Tools Telephone Sales Desk or Product Helpline (contact details can be found on the back cover page).

11. MAINTENANCE

11.1 INSPECTION, MAINTENANCE, AND CLEANING

To guarantee the efficiency and correct functioning of the machine (for all versions) it is essential to clean it and to conduct periodic routine maintenance. The operations of routine maintenance must be carried out by the user according to the maker's instructions given below. Before proceeding to any cleaning or maintenance operation, remove the plug from the electrical socket!

Mechanical parts: Keep the moving parts clean and lubricating them with oil or grease. In particular:

- **Lubricator:** Check and maintain the level of oil in the lubricator. The level must not go outside the min/max indicated. If necessary add air tool oil.
- **Air filter:** Periodically remove the water condensation that forms in the air filter.
- **Roller:** Check that the roller always turns freely. Periodically clean and if necessary lubricate with oil.
- **Motor drive belt:** Check that the motor belt is at the correct tension and that it does not slip.

12. EXPLANATION OF SYMBOLS/PICTOGRAMS



Warning!



Single value noise marking. (maximum declared A-Weighted sound power level in decibels).



Risk of electric shock.



Do not dispose of WEEE* as unsorted municipal waste.

* Waste Electrical & Electronic Equipment.



Read instructions before use.

13. DISPOSAL

Whenever it is decided to temporarily store the machine and during periods in which the machine is not in use remove the plug from the electrical supply.

If it is decided that this machine is no longer to be used, it is advisable to make it inoperative by removing the electrical cable after having disconnected the plug from the supply.

- At the end of the machine's working life, or when it can no longer be repaired, ensure that it is disposed of according to national regulations.
- Contact your local authority for details of collection schemes in your area.

In all circumstances:

- Do not dispose of power tools with domestic waste.
- Do not incinerate.
- Do not abandon in the environment.
- Do not dispose of WEEE* as unsorted municipal waste.



* Waste Electrical & Electronic Equipment.

- **DRAPER TOOLS LIMITED,**
Hursley Road, Chandler's Ford,
Eastleigh, Hampshire. SO53 1YF. U.K.

- **Helpline:** (023) 8049 4344
- **Sales Desk:** (023) 8049 4333
- **Website:** www.drapertools.com
- **E-mail:** sales@drapertools.com
- **Sales Fax:** (023) 8049 4209
- **General Enquiries:** (023) 8026 6355

- **Service/Warranty Repair Agent**
For aftersales servicing or warranty repairs, please contact the Draper Tools Helpline for details of an agent in your local area.

YOUR DRAPER STOCKIST