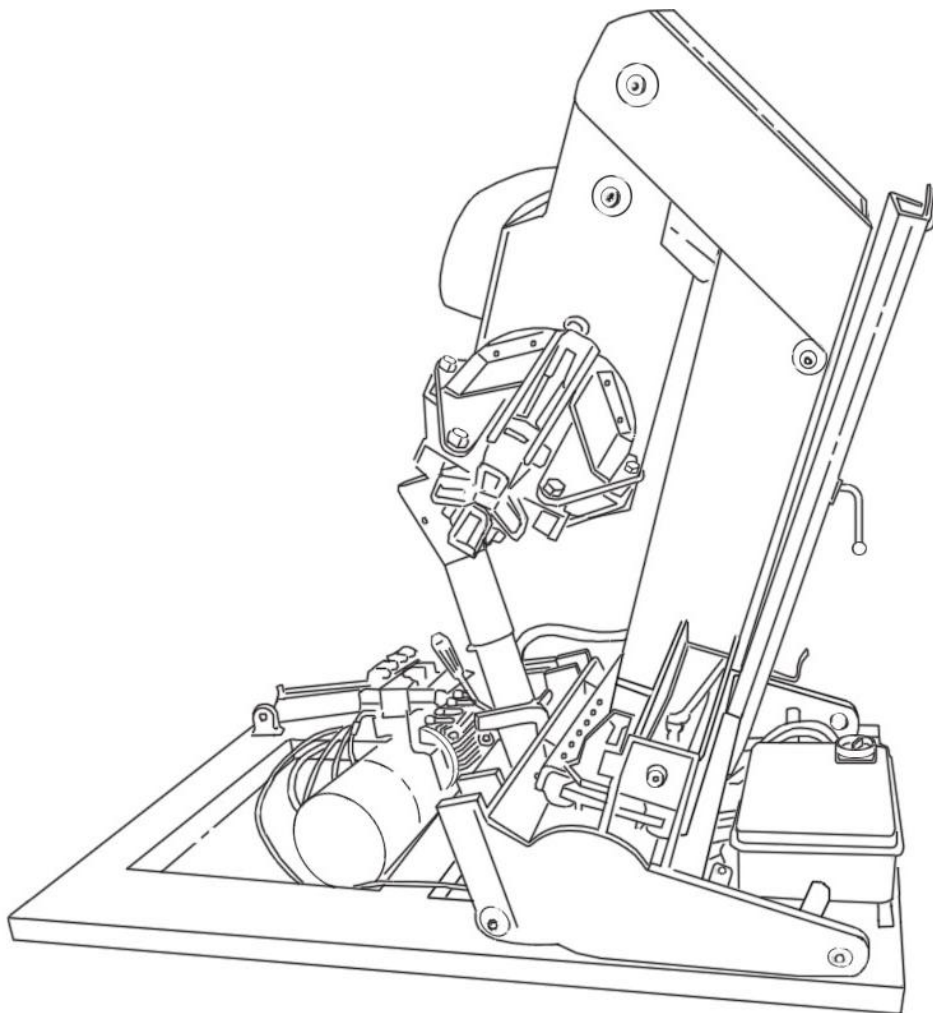


INSTRUCTION

Tyre Changer S-TY008



1. GENERAL INFORMATION

1.1 Product description

The TY008 tyre changer has been specifically designed to demount and mount truck, bus tyres, with rims from 13"-26" maximum diameter is 1300mm.

Warning!

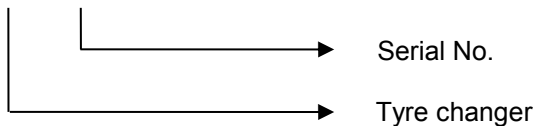


Any other use is improper and therefore not authorized. Before beginning any kind of work on or with this machine, carefully read and understand the contents of these operation instructions.

Keep this manual near the machine and consult it as needed during operations.

we shall not liable for any injury to persons or damage to things caused by improper use of this machine.

1.2 Product identification



1.3 Nameplate

	Technical Data	
Model	Power Supply	380V/3ph
S-TY008	Frequency	50Hz
	Power	1.5+1.5Kw
Year 2019	Rim Diameter Capacity	13"-26"
	Max Wheel Weight	500kgs
	Max Wheel Diameter	1300mm
	Max Wheel Width	600mm
	Total Weight Approx.	580kgs

2. Technical data

2.1 Main technical parameter

- a. Rim Diameter: 13" ~26"
- b. Max. Diameter of Tyre: Φ 1300mm
- c. Max. Breadth of Tyre: 600mm
- d. Max. Weight of Tyre: 500kg
- e. Main shaft Motor Power: 1.5kW/400V/50Hz
- f. Hydraulic Station Motor Power: 1.58kW/400V/50Hz
- g. Noise : \leq 70dB
- h. Weight: 580 kg
- i. Outfit Dimension (L*W*H): 1150mmx1000mmx1550mm

2.2 Operation environment condition

- a. Temperature: +5°C~+40°C.
- b. Humidity: 50% @ 40°C, (90% at 20°C)
- c. Altitude: \leq 1000m
- d. Power supply voltage: 400V voltage fluctuation \leq ±10%
- e. Power supply frequency: 50Hz frequency fluctuation \leq ±1%
- f. Power input: 3.0kW

It is also required that the dust content in the air \leq 10mg/m³. And it must not in the air with the corrosive and toxic gas and keep away from the area of flammable and explosive.

3. Transport and storage

3.1 Transport

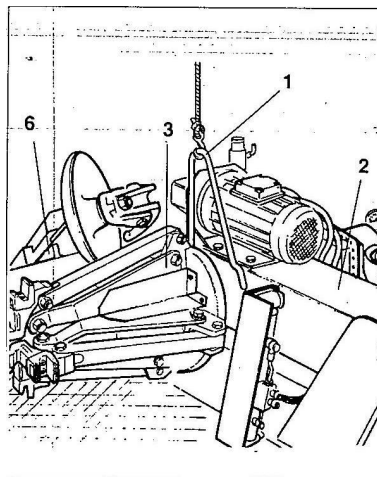


Fig. A

And then the product should be packaged in a wooden crate with pallet. And the machine protected by a plastic covering.

Before moving the machine check its barycentre and weight to make sure they are compatible with the lifting equipment you are about to use.

To move the packed machine insert the forks of a pallet truck in the channels in the base of the pallet (**Fig. A/1**). If you are moving the machine with a crane or hoist (**Fig. A/2**), use approved web slings or cables.

The shipping weight for the machine is nearly 600kg.

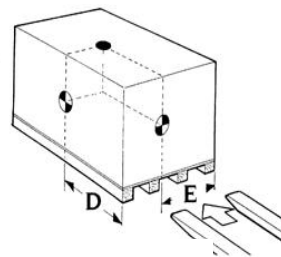


Fig. A/1

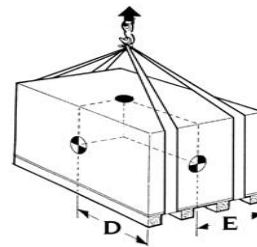


Fig. A/2

3.2 Storage

Temperature of the machine storage premises: $-25 \sim +55^{\circ}\text{C}$

If the machine is to be stored for a long time (**3~4 month or more**) you have to:

- 1) Close the jaws of the chuck, low the chuckholding arm down, in working position.
- 2) Disconnect the machine from all power sources.
- 3) Grease all the parts that could be damaged if they dry out:
 - The chuck
 - The slot of the tool holding arm
 - The slides of the carriage (**10, Fig. C/1**)
 - The tool

Empty oil/ hydraulic fluid reservoirs and wrap the machine in a sheet of protective plastic to prevent dust from reaching the internal working parts.

If the machine is to be working again after a long storing period, it is necessary to:

- Put the oil into the reservoirs again.
- With a turn screw press the pin on the middle of the electro-valves (**See Fig. X**) in order to manually unlock the electro-valves which could be locked after a long period of inactivity.
- Restore the electric connection.

4. Unpacking

Once the packing material has been removed, check the machine visually for any signs of damage.



ATTENTION!

Keep the packing material out of the reach of children as they can be a source of danger.

5. Installation

5.1 Installation place

Choose the place the machine is to be installed in compliance with current work place safety regulations. The floor should be solid so that the machine will be stable.

The tyre changer must be fixed on cement ground by anchor bolts fastened through its 4 base frame holes. The tyre-changer must be fixed to the ground by means of suitable anchoring bolts. The requirement of the ground and the anchor is as below .

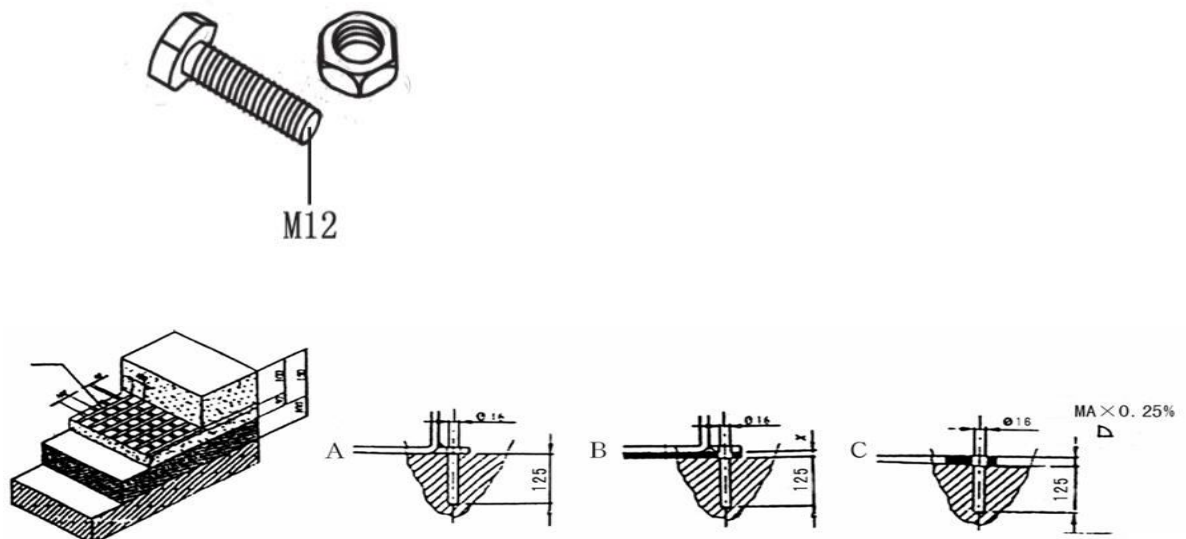


Fig. A/5



ATTENTION!

The machine must not be operated in explosive atmospheres.

5.2 Workplace requirement

Maximum machine space requirements are 2442mm x 2030mm with a minimum distance from walls as shown in the **Fig. B/2**. Make sure that the installation place is at least 3 meters high.

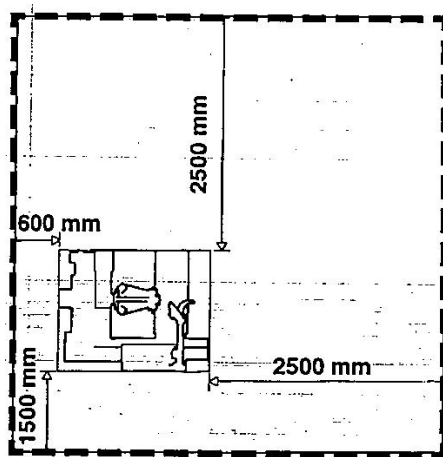


Fig. B/2

5.3 Electric connection

Before making any electric connection, check to be certain that the mains voltage corresponds to that stamped on the nameplate.

It is absolutely essential that:

- the system is equipped with a good grounding circuit
- The machine is connected to a power supply line circuit breaker. The power supply cable should be at least $3 \times 1.5 \text{ mm}^2 + 1.5 \text{ mm}^2$. And the power supply cable should be marked L1, L2, L3 and PE.
- The current intake is adequately protected against overcurrent with fuses or automatic magneto-thermic switch with rated values 25A.

WARNING: Make sure the feeder can move freely once it has been connected to the electric mains and that it can follow the tool-holding arm without being damaged.



Work on the electric system, even if minor, must be done exclusively by professionally qualified personnel.

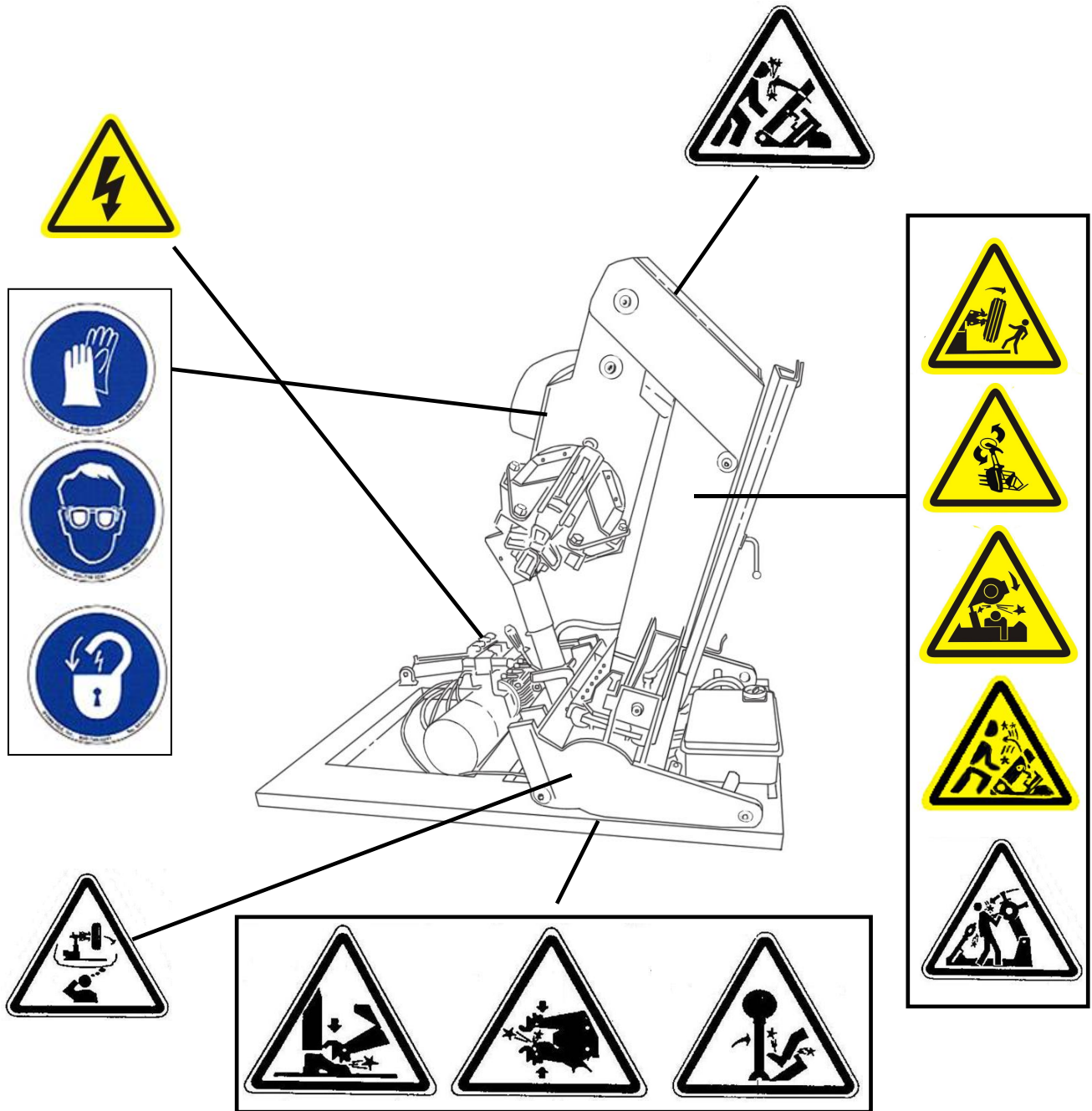
Manufacturer shall not be liable for any injury to persons or damage to things caused by failure to comply with these regulations and can cancel warranty coverage.

Sense of rotation checks

Connect the machine to the mains, switch "ON" (**5, Fig. A/1**) and check that the gearbox motor rotation corresponds to the indicating arrow (**6, Fig. B/6**). If not, switch two wires of the phase conductors. (**please check the sticker on the motor**)

6. Preparation and Identifying controls

6.1 The warning label instruction



Hand-crushing hazard between turntable jaws.



Mind to the tool-holding arm during tilting or operating.



Feet-crushing hazard during turntable turning or operating



Do not leave working place if the wheel is still mounted on the turntable.



Take care to crushed hazard between turntable arm and tyre changer body.



Take care to crushed hazard between turntable and tool.



Take care to crushed hazard during tool holding arm re-hoking.



**When the beads come off the rim, the wheel will fall.
Check to make sure there are no by-standers-in the work area.**



Take care to the rotation of the tool tool to harm the operator



The accidental fall down of the tool head for out of control can cause the injury!



Always check to be certain that the arm is corrected hooked to the carriage.



Danger: electric voltage presence.



The operator must wear the safety glove, when operating the machine.



The operator must wear the eye protection, when operating the machine.



Please lockout electrical power before performing maintenance work and set the machine to its rest position (Fig.5) with the spindle arm lowered and the spindle completely closed.

5.2 Layout of functional parts

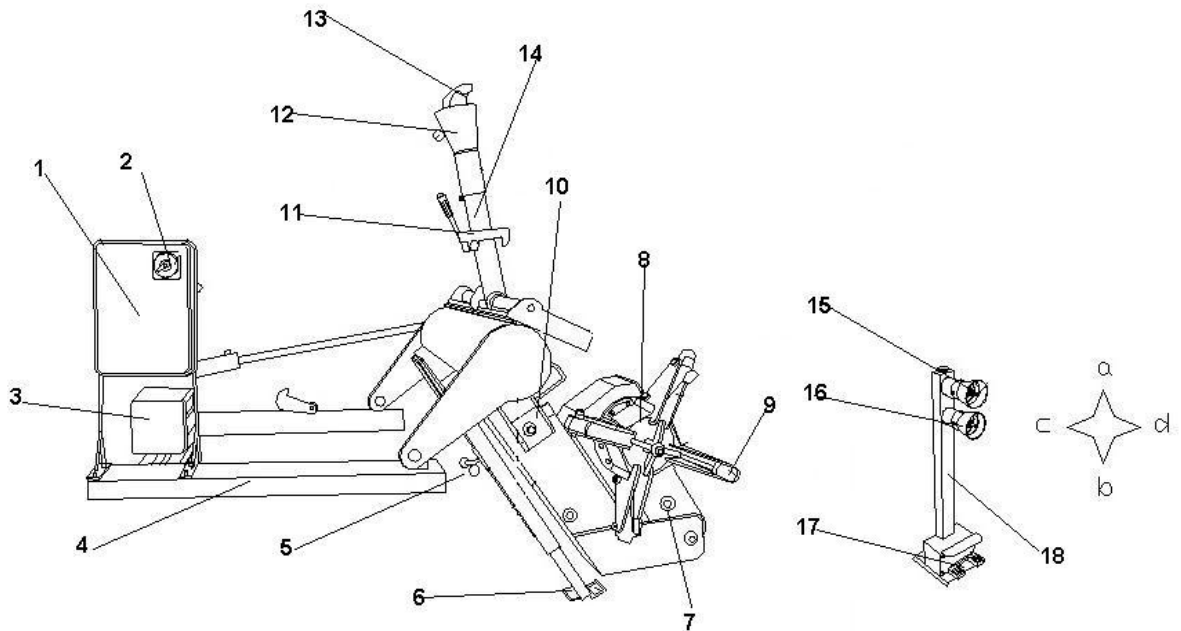


Fig. C/1

- | | |
|---------------------------------|-------------------------------------|
| 1. Electrical box | 10. Carriage |
| 2. Main switch | 11. Tool holding arm locking |
| 3. Hydraulic station | 12. Tool |
| 4. Main base | 13. Hook tool |
| 5. Foothold locking | 14. Tool carrier arm |
| 6. Foothold | 15. Top joystick |
| 7. Turntable holding arm | 16. Bottom joystick |
| 8. Turning table | 17. Pedal |
| 9. Jaw | 18. Mobile control station |

5.3 Identifying controls

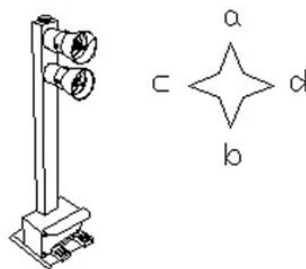


Fig. C/2

The mobile control centre (**18, Fig. C/2**) enables the operator to work at any position around the machine. On this mobile control centre the following control are located:

- ***The top joystick (15, Fig. C/1) :***

Position a: raise the turntable holding arm (**7, Fig. C/1**)

Position b: lower the turntable holding arm (**7, Fig. C/1**)

Position c: move the carriage (**10, Fig. C/1**) leftward

Position d: move the carriage (**10, Fig. C/1**) rightward

Note: On the level protection, a hole corresponding to ***position c*** has been made, in order to recognize each different operation.

- ***The bottom joystick (16, Fig. C/1):***

Position a: make the machine to the working position

Position b: back the machine to the non-working position

Position c: move the Jaw (**9, Fig. C/1**) to open position to hold the rim of the wheel

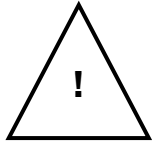
Position d: move the Jaw (**9, Fig. C/1**) to close position to release the rim of the wheel

- ***The pedal (17, Fig C)*** when pressed on the left or right side rotates the self-centering chuck in the same direction as shown by the arrows placed on the foot pedal.

NOTE: all the controls are very sensitive and small movements of the machine can be done with precision.

5.4 Preparation

Before using the tyre changer, a number of checks should be made to ensure it works correctly.



CAUTION!

The operations described here should be done with the tool carrier arm (14, Fig. C/1) in its non-working position.

- 1) Turn on the main switch (2, Fig. C/1). Turn it to position “1” and make sure that the power indication is “ON”.
- 2) Manual move the tool carrier arm (14, Fig. C/1) upwards to the “non-working” position.



CAUTION!

Do not move your face close to the tool carrier arm when you release it to tip it as needed.



CAUTION!

The tool-holding arm hooding creates a potential crushing hazard.

- 3) Push the bottom *joystick* to Position a: Lower the machine and make the machine to the working position,
- 4) And then push the bottom *joystick* to Position a: Lower the machine and make the machine to the working position again,

Push the top joystick (15, Fig. C/1) to Position b to lower the turntable holding arm (7, Fig. C/1) until the lowest position and then push the top joystick (15, Fig. C/1) to Position c to move the carriage (10, Fig. C/1) leftward,

- 5) Operate the pedal to the left rotation to make the turning table (7, Fig. C/1) turning clockwise 180°,
After that press the press the pedal to the right rotation to make the turning table anticlockwise 180°,
- 6) And then push the top joystick (15, Fig. C/1) to Position d to move the carriage(10, Fig. C/1) rightward, move the carriage back to the initial position when testing the machine,

- 7) Push the bottom joystick to Position b: Raise the machine and make the machine to the non-working position,
- 8) Manual move the tool carrier arm (14, Fig. C/1) downwards to the initial position before testing the machine.

If the all motions of the machine moved intended when operation, the moving position, the moving range and the moving speed are normal according to the operator's inspection and experience, the operator could start to operate the machine following.

If not, please check the machine configuration according to the user manual or contact the machine or franchiser of the product before using.

2. Operation

2.1.Locking the wheel

WARNING!



Handling of wheels

- ***Up to 35kg, handling must reasonable for one person, no special handling aid required.***
- ***Up to 70kg (max. 80kg), handling must reasonable for two persons (check also for space requirements and instructions) or handling/lifting aids provided.***
- ***Above 70kg, handling or lifting system required.***

1. Take the mobile control unit to work position B.
2. Pull the tool-holder arm into the upright position.
3. Move the top joystick (15, Fig. C/1) and move the turntable leftwards thus creating enough space for the wheel to be mounted on the platform. Keep the wheel in vertical position.

4. Continuing to operate from the mobile control station, lift or lower the arm in order centre the self-centering chuck (7, Fig. C/1) relative to the rim.
5. With the jaws (9, Fig. C/1) in the closed position, move the wheel on the carriage (10, Fig. C/1) to the self-centering chuck. Operate the bottom joystick to position C (12, fig. C/1) to open the self-centering chuck and lock onto the inside wheel rim.

The most convenient locking position on the rim may be selected according to Figs E/1, E/2 - E/3 - E/4 - E/5 and E/6.

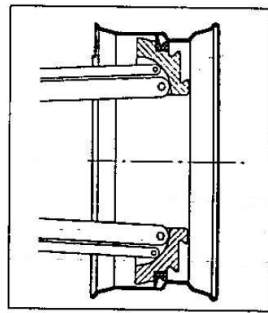


Fig. E/1

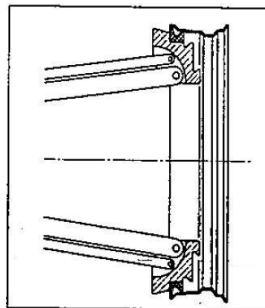


Fig. E/2

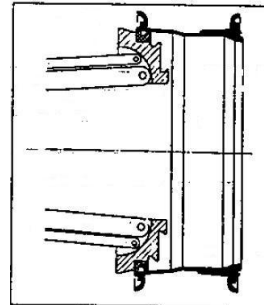


Fig. E/3

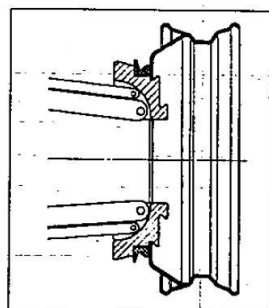


Fig. E/4

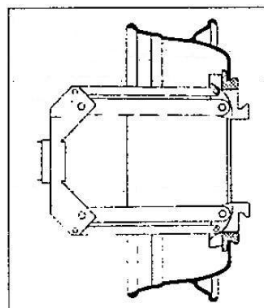


Fig. E/5

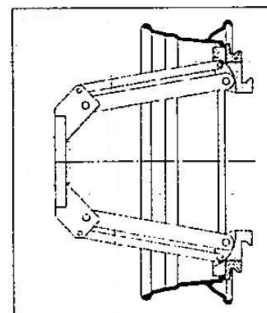


Fig. E/6

Always remember that the safest locking is on the central flange.

N.B. for rims with channel, clamp the wheel so that the channel is near the outside of the rim

(Fig. E/1).

2.2. Tubeless and super-single wheels

2.2.1. Bead breaking

- 1) Lock the wheel on the self-centering chuck, as previously described, and ensure that the tyre is deflated.
- 2) Manual to lower the tool-holder arm (4, Fig. C/1) into its working position and allows it to lock.
- 3) Operating from the mobile control centre, adjust the wheel until the outside of the rim skims the tool (12, Fig. C/1).



DANGER!

Always check to be certain that the arm is corrected hooked to the carriage



DANGER!

The tool (12, Fig. C/1) must NOT be pressed against the rim but against the tyre bead.

- 5) Rotate the wheel and at the same time, advance the tool (12, Fig. C/1) with small forward movements following the profile of the rim, with the plate.
- 6) Continue until the one side bead is fully detached.

To facilitate this operation, lubricate the bead and the edge of the rim with tyre lubricant whilst the wheel is rotated.



DANGER!

To avoid all risk, lubricated the beads turning the wheel **CLOCKWISE**, if you are working on the outside plane. And turning the wheel **ANTICLOCKWISE**, if working on the inside plane.

- 7) Manual to move the tool carrier arm (14, Fig. C/1) to the other side of the wheel and lock it.



DANGER!

Do not hold your hands on the tool when you bring it back to its work position. Your hand(s) could be trapped between the tool and the wheel.

8) By using the top joystick (15, Fig. C/1) move the spindle and the tool-holding arm until the arm is brought near the inner side of the wheel.

9) Repeat the operation previously described until the second bead is completely broken.

2.2.2. Demounting

Tubeless tyres can be demounted in two ways:

1) If the tyre is not difficult to demount, once the beads have been loosened, use the tool to push against the inside plane of the tyre until both beads come off the rim.

2) With super single or very hard tyres the procedure described above cannot be used. The hook tool will have to be used as follows:

- A. Transfer the tool carrier arm to the outside plane of the tyre.
- B. Rotate the wheel and at the same time move the hook tool (13, Fig. C/1) forward inserting it between rim and bead until it is anchored to the bead (See Fig. I).
- C. Move the rim 4-5 cm from the tool taking care that it does not unhook from the bead.
- D. Move the hook tool towards the outside until the red reference dot is by the outside edge of the rim.
- E. Insert Bead lifting lever (**17, Fig, I**) between rim and bead at the right of the tool.
- F. Press down on the lever and lower the wheel to bring the edge of the rim about 5 mm from the hook tool.
- G. Turn the wheel anticlockwise pressing down on bead lifting lever (**17, Fig, I**) until the bead is completely off.
- H. Move the tool carrier arm to its non-working position and then move it to the inside plane of the wheel.
- I. Turn the hook tool 180° and insert it between rim and bead. Move it until the bead is by the edge of the rim (best to do this with the wheel turning).
- J. Move the rim about 4-5 cm from the tool making sure the hook does not detach from the rim.
- K. Move the hook tool so that the hook tool is about 3 cm inside the rim.
- L. Insert Bead lifting lever (**17, Fig, I**), between rim and bead at the right of the tool.
- M. Press down on the lever and tower the wheel to bring the edge of the rim about 5 mm from the hook tool.
- N. Turn the wheel anticlockwise pressing down on lever until the tyre comes completely off the rim.



DANGER!

When the beads come off the rim, the tyre will fail.

Check to make sure there are no by-standers in the work area.

2.2.3. Mounting

Tubeless tyres can be mounted using either the tool (12, Fig. C/1) or the hook tool (13, Fig. C/1).

If the tyre is not problematic, use the bead loosener tool.

If the tyre is very rigid, the hook tool must be used.

2.2.3.1. Tyre mounting with the tool

Follow these steps:

- 1) If the rim has been removed from the spindle, put it back on the spindle as described in the section on "Locking the wheel".
- 2) Lubricate both beads and the rim with tyre manufacturer recommended lubricant.
- 3) Attach the bead locking clip (**Fig. XX**) to the outside edge of the rim at the highest (**See Fig. M**)

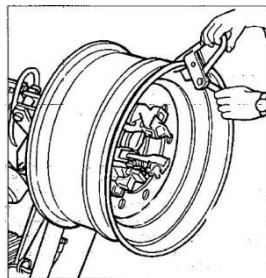


Fig. XXX

- 4) Put the tyre on the platform and lower the spindle (make sure the clip is at the high point).
- 5) Lift the rim with the tyre hook to it and turn it anticlockwise about 15-20 cm. The tyre will be positioned tilted across the rim.
- 6) Position the tool against the second bead of the tyre and turn the spindle until the clip is at the low point (at 6 o'clock).
- 7) Move the tool (See Fig. C/1) away from the wheel.

- 8) Remove the clip and replace it at 6 o'clock outside the second bead (See Fig. N).
- 9) Turn the spindle clockwise 90° to bring the clip to 9 o'clock.
- 10) Move the tool forward until it is about 1-2 cm inside the edge of the rim. Begin to turn the spindle clockwise checking to make sure that, with a 90° turn, the second bead begins to slip into the centre well.
- 11) When the bead is fully mounted, move the tool away from the wheel, tip it to its non-working position and remove the clip.
- 12) Lower the spindle until the wheel rests on the platform.
- 13) Close the arms of the spindle completely. Support the wheel to prevent it falling off.



DANGER!

This operation can be extremely dangerous. Do it manually only if you are certain you can keep the wheel balanced.

--For large and heavy tyres an adequate lifting device must be used.

- 14) Move the spindle as to set the wheel free.
 - 15) Remove the wheel.
- NB: If the tyre permits it, the operation described above can be speeded up by mounting both beads at the same time:
- Follow the steps described under points 1,2,3,4 described above but instead of attaching the clip to just the first bead (refer to point 4) clip it to both.
 - Lift the rim with the tyre hooked to it and turn it anticlockwise 15-20 cm (clip at 10 o'clock).
 - Follow the steps described in points 10, 11, 12, 13, 14, 15 above.

2.2.3.2. Mounting with the hooked tool

- 1) Follow the steps described in points 1, 2, 3, 4, 5 for mounting with the tool.
 - 2) Move the tool carrier arm to its non-working position. Move it to the inside plane of the tyre and rehook it at this position.
 - 3) Check to make sure the hook tool is positioned on the wheel side.
 - 4) Move the tool forward until the red reference dot is lined up with the outside edge of the rim and about 5 mm from it.
 - 5) Move to the outside of the wheel and check the exact position of the tool visually and adjust it as needed.
- Then turn the spindle clockwise until the clip is at the bottom (6 o'clock).

The first bead will be on the rim.

- 6) Remove the clip.
- 7) Remove the tool from the tyre.
- 8) Move the tool-carrier arm to its non-working position.
Move it to the outside of the tyre and rehook it in this position.
- 9) Turn the tool 180°.
- 10) Attach the clip at the bottom (6 o'clock) outside the second bead (See Fig. N).

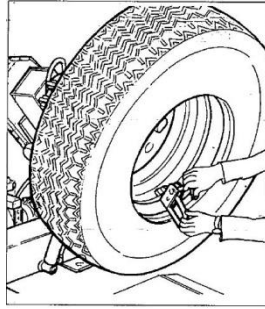


Fig. ***

- 11) Turn the spindle clockwise to about 90° (clip at 9 o'clock).
- 12) Bring the tool forward until the red reference dot is lined up with the outside edge of the rim and about 5 mm from it.
Begin to turn the spindle clockwise and check if, after about 90° of rotation the second bead has started to slip into the centre well.
Continue turning until the clip is at the bottom (6 o'clock).
The second bead will now be mounted on the rim.
- 13) Follow the steps described in points 11, 12, 13, 14, 15 for mounting with the tool since this will ensure that the wheel is removed correctly from the machine.

2.3. Tubed wheels

2.3.1. Bead breaking

WARNING: Unscrew the bush which fixes the valve when deflating the tyre so that the valve, coming in the inside of the rim, is not an obstacle during bead breaking.

Follow all the steps described previously for bead breaking tubeless tyres.

With tubed tyre, however, stop tool movement as soon as the bead has loosened to avoid damaging the tube inflation valve.

2.3.2. Demounting

- 1) Tip the tool carrier arm (14, Fig. C/1) to its non-working position. Move it to the outside plane of the wheel and rehook it in this position.
- 2) Rotate the wheel and at the same time move, the hook tool (13, Fig. C/1) forward

inserting it between rim and bead until it is anchored to the tool.

- 3) Move the rim 4-5 cm from the tool taking care that it does not unhook from the bead.
- 4) Move the hook tool towards the outside until the red reference dot is by the outside edge of the rim.
- 5) Insert Bead lifting lever between rim and bead at the right of the tool.
- 6) Press down on the lever and tower the wheel to bring the edge of the rim about 5 mm from the hooked tool.
- 7) Turn the wheel anticlockwise pressing down on lever LA until the bead is completely off.
- 8) Move the tool carrier arm to its non-working position. Lower the spindle until the tyre is pressed down against the platform. Move the spindle leftwards to provide sufficient space to remove the inner tube.
- 9) Remove the inner tube and lift the wheel back up.
- 10) Move the tool carrier arm to the inside plane of the tyre, turn the hook tool 180° and tower the arm to its work position. Insert it between rim and bead and move it until the bead is by the edge of the rim (best to do this with the wheel turning).
- 11) Move the rim about 4-5 cm from the tool making sure the hook does not detach from the rim.
- 12) Move the hook tool so that its red reference dot is about 3 cm inside the rim.
- 13) Insert lever LA between rim and bead, at the right of the tool (See Fig. Q).
- 14) Press down on the lever and lower the wheel to bring the edge of the rim about 5 mm from the hooked tool. Turn the wheel anticlockwise pressing down on lever LA until the tyre comes completely off the rim.



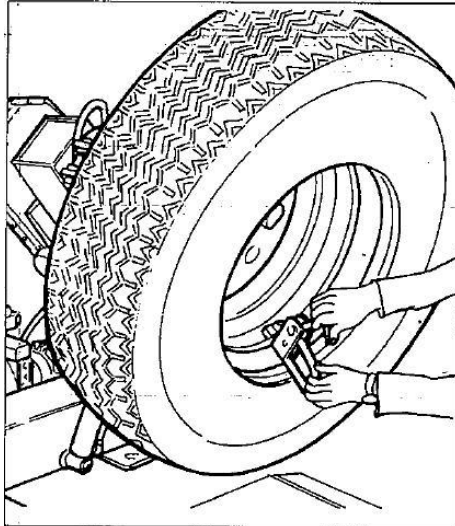
DANGER!

When the beads come off the rim, the wheel will fall.

Check to make sure there are no by-standers-in the work area.

2.3.3. Mounting

- 1) If the rim has been removed from the spindle, put it back on the spindle as described in the section on "CLAMPING THE WHEEL".
- 2) Lubricate both beads and the rim with tyre manufacturer recommended lubricant.
- 3) Attach the clip to the outside edge of the rim at the highest point.



Fig**



CAUTION!

Make sure the clip is firmly attached to the rim.

- 4) Put the tyre on the platform and lower the spindle (make sure the clip is at the high point) to hook the first bead on the clip.
- 5) Lift the rim with the tyre hook to it and turn it anticlockwise about 15-20 cm. The tyre will be positioned tilted across the rim.
- 6) Move the tool carrier arm to its non-working position. Move it to the inside plane of the tyre and rehook it in this position.
- 7) Check to make sure the hook tool is positioned on the wheel side.
- 8) Move the tool forward until the red reference dot is lined up with the outside edge of the rim and about 5 mm from it.

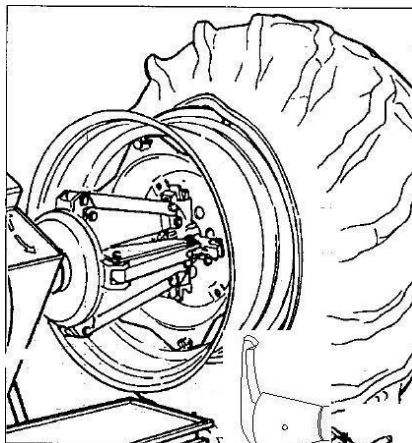


Fig. XXX

- 9) Move to the outside of the wheel and check the exact position of the hook visually and adjust it as needed. Then turn the spindle **clockwise** until the clip is at the bottom (6 o'clock).

The first bead will be on the rim. Remove the clip.

- 10) Remove the tool from the tyre.
- 11) Move the tool carrier arm to its non-working position. Move it to the outside plane of the tyre.
- 12) Turn the tool 180°
- 13) Turn the spindle until the valve hole is at the bottom (6 o'clock).
- 14) Lower the spindle until the tyre is pressed down against the platform. Move the spindle leftwards to provide sufficient space to insert the inner tube.
NB: The valve hole may be asymmetrical to the centre of the rim. In this case position and insert the inner tube as **shown in Fig. T**.
Insert the valve through the hole and fix it with its locking ring.
- 15) Place the inner tube in the centre welt of the rim
(NB: to facilitate this, turn the spindle clockwise).
- 16) Turn the spindle until the valve is at the bottom (6 o'clock).
- 17) Inflate the inner tube a little (until it has no folds) so as not to pinch it while mounting the second bead.
- 18) Attach an extension to the valve and then remove the locking ring.
NB: The purpose of this operation is to allow the valve to be loose so that it is not ripped out during second bead mounting.
- 19) Lift the wheel again and attach the PC clip outside the second bead about 20 cm to the right of the valve. (See Fig. U)

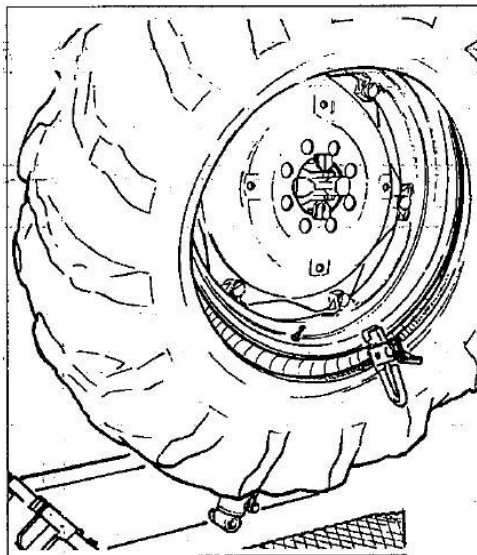


Fig. ****

- 20) Turn the spindle clockwise until the clip is at 9 o'clock.
- 21) Move the tool carrier arm (14, Fig. C/1) to its working position.
- 22) Bring the tool forward until the red reference dot is lined up with the outside edge of the rim and about 5 mm from it.

- 23) Pull back on this lever which will guide the bead into centre well. Continue to turn the spindle until the tyre is completely mounted on the rim.
- 24) Remove the clip.
- 25) Tip the tool carrier arm to its non-working position.
- 26) Lower the spindle until the wheel rests on the platform.
- 27) When the wheel is resting on the platform, check to make sure the valve is perfectly centered with its hole. If it is not, turn the spindle slightly to adjust the position. Fix the valve with its locking ring and remove the extension.
- 28) Close the arms of the spindle completely. Support the wheel to prevent it falling off.



DANGER!

This operation can be extremely dangerous, Do it manually only if you can keep the wheel balanced.

For large and heavy tyres an adequate lifting device must be used.

- 29) Move the spindle leftwards as to set the wheel free.
- 30) Remove the wheel.

3. ORDINARY MAINTENANCE



WARNING!

Each maintenance operation must be effected only after the disconnection of the plug from electric network.

To ensure that the tyre changer works perfectly over the years, carry out the routine-maintenance schedule described.

- 1) Lubricate the following parts from time to time, after a thorough cleaning with naphtha:
 - The various swivels on the spindle
 - The tool bracket slide runner
 - The carriage guide plate
- 2) Grease the spindle bracket lift cylinder from time to time and also its swivel. Add the grease through the grease nipples (See Fig. J) using ordinary lubricating grease.
In the same way, grease the tool holder arm cylinder.
- 3) From time to time, with the help of maximum and minimum warning lights on the tank of

the hydraulic power pack, check the oil level in the pack.

If necessary top up with Esso Nuto H46 or similar hydraulic oil (eg. Agip Oso46, Shell Tellus Oil 46, Mobil DTE25, Castrol Hyspin AWS 46, Chevron RPM EP Hydraulic Oil 46, BP Energol HLP).

Unscrew the cap of oil tank, put oil in.

And screw the cap back and lock it again.



WARNING!

The Oil tank cap should not be opened by un-trained person.

The operator must lock the cap, after the screw the cap.

- 4) From time to time check the oil level in the gear unit which, when the tool carrier bracket is completely lowered at end travel, should not show the sight glass on the gear casing as completely empty. If necessary top up with Esso Spartan EP 320 or similar oil (eg, Agip F1 REP 237, BP GRX P 320, Chevron Gear Compound 320, Mobil Gear 632, Shell Omaia Oil 320, Castrol Alpha SP 320). Remove the cap (31, Fig. J/3), put in oil and lock the cap again.

NB: If the oil in the gear unit or the hydraulic power pack has to be changed, note that the gear unit casing and the power pack reservoir have specific drain plugs.

- 5) Check the horizontal arm periodically.

N.B.: There may be some mechanical play at the tool-holder arm, or while moving it, during the assembly and disassembly operations. For longer component working life, it is advisable to adjust the slide shoes as described below.

Material Safety Data Sheet

Hydraulic Oil 46:

Physical State	Liquid.	Color	Light amber to amber	Odor	Mild petroleum odor
Specific Gravity	0.87 (Water = 1)	pH	Not Applicable.	Vapor Density	>1 (Air = 1)
Boiling Range	Not available.			Melting/Freezing Point	Not available.
Vapor Pressure	<0.001 kPa (<0.01 mm Hg) (at 20°C)			Volatility	Negligible volatility.
Solubility in Water	Negligible solubility in cold water.			Viscosity (cSt @ 40°C)	33
Flash Point	Open cup: 212°C (414°F) (Cleveland.).				
Additional Properties	Gravity, °API (ASTM D287) = 31.3 @ 60° F Density = 7.42 Lbs/gal. Viscosity (ASTM D2161) = 170 SUS @ 100° F				

Hydraulic Oil 32:

Physical State	Liquid.	Color	Light amber to amber	Odor	Mild petroleum odor
Specific Gravity	0.87 (Water = 1)	pH	Not Applicable.	Vapor Density	>1 (Air = 1)
Boiling Range	Not available.			Melting/Freezing Point	Not available.
Vapor Pressure	<0.001 kPa (<0.01 mm Hg) (at 20°C)			Volatility	Negligible volatility.
Solubility in Water	Negligible solubility in cold water.			Viscosity (cSt @ 40°C)	33
Flash Point	Open cup: 212°C (414°F) (Cleveland.).				
Additional Properties	Gravity, °API (ASTM D287) = 31.3 @ 60° F Density = 7.42 Lbs/gal. Viscosity (ASTM D2161) = 170 SUS @ 100° F				

TOOL-HOLDER CARRIAGE SLIDE SHOE ADJUSTMENT

- a) Disconnect the machine from the mains.
- b) Lift the tool-holder arm to the outside working position
- c) Loosen the guard fixing screws (1 Fig. J/4), remove the chain guard (2 Fig. J/4).
- d) Loosen the nuts (3 Fig. J/4) for each upper slide shoe of the carriage (10, Fig. C/1).
- e) Loosen the four register locking nuts (1 Fig. J/5).
- f) Screw each of the six slide shoe register screws (2 Fig. J/5) a quarter turn.
- g) Tighten the four locking nuts of the upper slide shoes (3 Fig. J/4)
- h) Tighten the four register locking nuts (1 Fig. J/5)
- i) Refit the guard on the chain (2 Fig. J/4).

H. B.: If the adjustment is insufficient, and there is still play, adjust the screws further, repeating the procedure described above until all mechanical play has been eliminated.



WARNING!

Dispose of the used oil following the present legislation on the matter.



WARNING!

If this machine catches fire, use dust or CO² extinguisher only.

Trouble shot

PROBLEM

After having switched the general button on the electric pack, the general warning light does not light on and no control can function.

CAUSES

- 1) The power supply cable loses and disconnects the electric supply.
- 2) No power from the mains electric supply.

REMEDIES

- 1) Reconnect the power supply cable to the electric supply.
- 2) Reset the mains electric supply.

PROBLEM

After having switched the general button on the general warning light also switches on but the

motor on the hydraulic power pack does not function.

CAUSES

The magneto-thermic switch for motor protection is working.

REMEDIES

Call for technical aid to see what the problem is and restore the machine.

PROBLEM

The manometer (21, Fig. A/1) reads a pressure value below 130 bar \pm 5%

CAUSES

The handle (20, Fig. A/1) is not properly adjusted.

The oil in the power pack is below minimum level.

REMEDIES

Turn the handle (20, Fig. A/1) clockwise until you get the pressure value required.

Read the paragraph "MAINTENANCE" to add oil.