

# HD 1200 AVIO

Versione 2.0 del 12/95

Italiano

Manuale d'uso

English

Operator's manual

**I**l diritti di traduzione, di memorizzazione elettronica, di riproduzione e di adattamento totale o parziale con qualsiasi mezzo (compresi microfilm e copie fotostatiche) sono riservati.  
Le informazioni contenute in questo manuale sono soggette a variazioni senza preavviso.

Italiano

**A**ll rights reserved. No part of this publication may be translated, stored in an electronic retrieval system, reproduced, or partially or totally adapted by any means (including microfilm and photostats) without prior permission.  
The information contained herein may be subject to modifications without prior notice.

English

**L**es droits de traduction, de mémorisation électronique, de reproduction et d'adaptation complète ou partielle par tout type de moyen (y compris microfilms et copies photostatiques) sont réservés.  
Les informations fournies dans ce manuel peuvent être modifiées à tout moment et sans préavis.

Français

**A**lle Rechte der Übersetzung, der Speicherung, Reproduktion sowie der gesamten oder teilweisen Anpassung durch ein beliebiges Mittel (einschließlich Mikrofilm und Fotokopien) sind vorbehalten.  
Die in diesem Handbuch enthaltenen Informationen können ohne Vorbescheid geändert werden.

Deutsch

**R**eservados los derechos de traducción, grabación electrónica, reproducción y adaptación total o parcial con cualquier medio (incluidos microfilms y copias fotostáticas). Las informaciones contenidas en el presente manual pueden sufrir variaciones sin aviso previo.

Español

Elaborazione grafica e impaginazione

**U**fficio **P**ubblicazioni **T**ecniche

# HD 1200 AVIO

## Operator's manual

### CONTENTS

INTRODUCTION .....	26
TRANSPORT AND STORAGE .....	27
Handling .....	27
INSTALLATION .....	28
Installation clearance .....	28
Work ambient conditions .....	28
Anchoring .....	28
Cylinder guard assembly .....	29
ELECTRICAL HOOK-UP .....	29
SAFETY REGULATIONS .....	29
DESCRIPTION OF THE MACHINE .....	31
TECHNICAL BRIEF .....	31
OPTIONAL ACCESSORIES .....	31
SPECIFIED CONDITIONS OF USE .....	32
MAIN OPERATING PARTS OF THE MACHINE .....	32
Key to hazard warning decals .....	34
CONTROL MODULE COMMANDS .....	35
WHEEL CLAMP OPERATION .....	36
BEAD BREAKING .....	37
STOPPING THE MACHINE .....	37
TROUBLESHOOTING .....	37
MAINTENANCE .....	39
DEMOLITION .....	40
HYDRAULIC FLUID - INDICATIONS AND RECOMMENDATIONS .....	40
RECOMMENDED FIRE EXTINGUISHING EQUIPMENT .....	41
GLOSSARY .....	42
ELECTRICAL SYSTEM DIAGRAM .....	43
HYDRAULIC SYSTEM DIAGRAM .....	44

**GB**

# INTRODUCTION

The purpose of this manual is to furnish the owner and operator of this Corghi machine with a set of practical and safe instructions for the use and maintenance of HD 1200 AVIO tyre changer.

Follow all the instructions carefully and your machine will assist you in your work and give lasting and efficient service, in keeping with CORGHI traditions.

The following paragraphs define the levels of danger regarding the machine associated with the warning captions found in this manual:

## **DANGER**

**Refers to immediate danger with the risk of serious injury or death.**

## **WARNING**

**Dangers or unsafe procedures that can cause serious injury or death.**

## **ATTENTION**

**Dangers or unsafe procedures that can cause minor injuries or damage to property.**

Read these instructions carefully before powering up the machine.

Conserve this manual and all illustrative material supplied with the machine in a folder near the tyre changer where it is readily accessible for consultation by the machine operator.



## **WARNING**

**Adhere to the contents of this manual: Corghi declines all liability in the case of actions not specifically described and authorised in this manual.**

## **NOTE**

Some of the illustrations in this manual have been taken from photographs of prototypes; the standard production model may differ slightly in certain respects.

These instructions are for the attention of persons with basic mechanical skills. The descriptions of each operation have therefore been condensed by omitting detailed instructions regarding, for example, how to loosen or tighten the fixing devices on the machine. Do not attempt to perform operations unless properly qualified and with suitable experience. In case of need, contact our nearest authorised Service Centre for assistance.

# TRANSPORT AND STORAGE

The packed machines must be stored in a dry and suitably ventilated place. Set down each pack with sufficient clearance to read the indications on the sides of the packaging material.



## WARNING

**Do not stack other goods on top of the packing or damage may result.**

- Packing dimensions (fig.1)
  - Depth 2200 mm
  - Width 1800 mm
  - Height 1050 mm
- Weight:
  - HD 1200 AVIO 1180 Kg
  - HD 1200 AVIO with packing 1300 Kg
- Machine barycentre (fig.2)
  - Width: 1107 mm
  - Depth: 900 mm
- Ambient temperature in the place of storage: from  $-25^{\circ}$  ÷  $+55^{\circ}$ C

## Handling



## WARNING

**Perform all assembly and handling operations carefully.**

**Failure to observe these recommendations could result in damage to the machine and jeopardise the personal safety of the operator.**



## WARNING

**Before moving the machine, check its barycentre and weight to make sure they are compatible with the lifting equipment used.**

To move the packed machine, insert the forks of a pallet truck in the channels in the base of the pallet (fig.2).



## WARNING

**Do not use a crane or hoist to move the packed machine (fig.3).**

When moving the machine without its packing use lifting brackets (A fig.4).



## WARNING

**Never attempt to use makeshift lifting points on mechanical parts that project from the machine structure.**

When moving the machine after installation, position it as shown in fig. 5 in order to achieve correct load balancing. Disconnect the hydraulic power pack as necessary.

## NOTE

The electronic power pack can be disconnected from the machine by detaching the electrical and hydraulic lines. The connections are specifically designed with a fail-safe system to avoid the risk of inverting them (O, fig. 11).

# INSTALLATION



## WARNING

**Take the utmost care when assembling and setting up the machine as described in this heading.**

**Failure to observe these instructions can lead to damage to the machine and injury to the operator or other persons.**

**IMPORTANT** Keep the packing material intact for possible future transport of the machine.

## Installation clearances



## WARNING

**Choose the place of installation in strict observance of local regulations regarding safety in the workplace.**

The machine must be placed on a stable and rigid floor to avoid the risk of structural deformation.

Position the machine so that it can be easily be accessed from all sides. In particular, make sure that the minimum operating clearances around the machine are as specified in fig. 6:

- at the front, to permit unimpeded wheel loading and unloading;
- at the rear, to provide good visibility of the work area.



## ATTENTION

**If the machine is to be installed outdoors, it must be properly protected from adverse weather conditions by a roof.**

## Work ambient conditions

- Relative humidity: 30÷95% (without condensation)
- Temperature: 0°÷+55°C



## WARNING

**The machine must not be operated in explosive atmosphere.**

## Anchoring

If required, anchor the machine to the ground using the M10 anchor bolts in the places shown in fig. 7.

### Cylinder guard assembly (fig. 8)

Fit the guard G on the cylinder fulcrum pin as shown in the illustration, using bolt D and washers C and A.

When fitting the guard, insert threaded pin B in the hole in the guard and complete the assembly by fitting washer E and nut F.

## ELECTRICAL HOOK-UP



### WARNING

**The electrical hook-up must be carried out only by a qualified electrician.**

The HD 1200 AVIO must be fed with three phase current plus neutral. Specify the supply voltage at the time of order.

- The electrical supply line must be suitably sized in relation to the machine power draw, as specified on the machine data plate.
- The power cord must be fitted with a plug that is in conformity with relevant electrical safety standards.
- The machine must be equipped with a dedicated power connection (set to 30mA) with its own circuit breaker and ground circuit.
- In the standard versions, the primary power supply system is three phase plus earth (380 volt).



### WARNING

**For correct and safe operation of the machine, it must be connected to an efficient grounding circuit.**

**NEVER connect the ground wire to a gas pipe, water pipe, telephone line or other makeshift system.**

## SAFETY REGULATIONS



### WARNING

**Failure to observe these instructions and the relative danger warnings can cause serious injury to the operator and others. Do not power up the machine before you have read and understood all the danger/warning/attention notices in this manual.**

This machine must be used only by qualified and authorised personnel. A qualified operator is construed as a person who has read and understood the manufacturer's instructions, is suitably trained, and is conversant with safety and adjustment procedures to be adhered to during operations. Operators are expressly forbidden from using the machine under the influence of alcohol or drugs capable of affecting physical and mental capacity. However, in the case of drugs prescribed by a qualified physician without contraindications, the operator may be allowed to use the machine. The following conditions are essential:

- You must read and understand all instructions on how to use the machine.
- Make sure you have a thorough knowledge of the capabilities and characteristics of this machine.



## WARNING

### **Keep unauthorised persons well clear of the area of operations (fig. 9).**

- Make sure that the machine has been installed in compliance with established legislation and standards.
- Make sure that all machine operators are suitably trained, that they are capable of using the machine correctly and that they are adequately supervised during their work.
- Never leave nuts, bolts, tools or other equipment on the machine to avoid the risk of them being entrapped between moving parts or gears on the machine, or being flung from the machine violently when it is started up.
- Do not touch power lines or the inside of electric motors or other electrical equipment until the power has been disconnected and locked out.
- Read this manual carefully and learn how to use the machine correctly and safely.
- Always keep this user manual in a place where it can be readily consulted when working with the machine and consult it whenever in need of confirmation or explanations.



## WARNING

### **Do not remove or deface the safety Danger, Warning or Instruction decals. Replace any missing or illegible Danger, Warning or Instruction decals. Missing or damaged decals can be obtained at your nearest Corghi dealer.**

- When using and carrying out maintenance on the machine, observe the unified industrial accident prevention regulations for high voltage industrial equipment.
- Any unauthorised alterations made to the machine will automatically relieve the manufacturer of all liability in the event of damage or incidents attributable to such alterations. Specifically, tampering with or removing the machine safety devices is a breach of the regulations for industrial accident prevention.



## WARNING

**When operating or servicing Corghi equipment do not wear ties, loose fitting clothes, necklaces or wristwatches and any other articles that could become entrapped by moving parts. Tie back long hair or cover with a scarf or cap.**



## WARNING

**Before performing maintenance work on the hydraulic plant, set the machine to its rest position (fig. 5) with the spindle arm lowered and the spindle completely closed.**

## DESCRIPTION OF THE MACHINE

The HD 1200 AVIO is an electro-hydraulic type tyre changer, designed using technology patented exclusively by CORGHI S.p.A..

The machine is designed to handle all types of aeroplane wheels within the weight and dimensional limits specified in the heading TECHNICAL BRIEF.

The machine is solidly constructed and offers particularly compact dimensions in consideration of its operational capacity. The machine operates with the wheel held vertically; operator commands are transmitted from a remote control module.

## TECHNICAL BRIEF

- Maximum width: 2150 mm (fig. 10)
- Maximum length: 2350 mm
- Maximum height: 1570 mm
- Hydraulic gear motor
- Hydraulic pump motor: 4 kW
- Machine weight: 1160 kg
- Maximum wheel diameter: 2500 mm
- Maximum wheel weight: 1200 kg
- Maximum wheel width: 1220 mm
- Noise level when running: < 70 dB(A)

## OPTIONAL ACCESSORIES

### Cone kit

Wheel locking cone kits can be supplied on request, by specifying vehicle type and rim model.

## SPECIFIED CONDITIONS OF USE

The HD 1200 AVIO tyre changer is designed exclusively for demounting aeroplane type tyres.



### WARNING

**Any other operations carried out on the machine are considered improper use and shall be construed as negligence.**



### ATTENTION

**Do not clean or wash wheels mounted on the machine with compressed air or water jets.**



### WARNING

**When working with the machine, avoid using equipment or tools not manufactured by CORGHI.**

Figure 11 shows the safety distances and the positions assumed by the operator during the various stages of work with the machine.

A Positioning the wheel on the spindle

B Inside bead breaking

C Outside bead breaking, tyre mounting and demounting

## MAIN OPERATING PARTS OF THE MACHINE



### WARNING

**Get to know your machine: the best way to prevent accidents and obtain top performance from the machine is to ensure that all operators know how the machine works.**

**Learn the function and location of all commands.**

**Carefully check that all the commands on the machine are working properly.**

**To avoid accidents and injury, the machine must be installed properly, operated correctly and serviced regularly.**

Fig.12

- A Master switch
- B Control module
- C Pressure gauge
- D Lifting bracket
- E Hydraulic power pack
- F Spindle
- G Bead breaker disk
- M Tool arm
- N Tool head

Start the machine by setting the master switch (A fig.12) to the ON position and make sure that the hydraulic power pack motor is turning in the direction shown by the arrow (A fig.13) on the motor casing.

If the motor is turning in the wrong direction, stop the machine immediately and set up the motor for the correct direction of rotation to avoid damaging the pump assembly. The entire machine uses low voltage power (24V), except the hydraulic power pack and the spindle motor which are both fed with mains voltage.



**WARNING**

**Make sure that all components of the hydraulic circuit are properly tightened.**

**Caution: oil sprayed from leaking connections at high pressure can cause serious injury.**



**WARNING**

**Do not activate the tool arm (M fig.12) lift command if the tool head (N fig.12) is not installed.**

The machine is fitted with a series of devices that ensure the safety of the operator.

- 1 The spindle arm is fitted with a microswitch that blocks the arm during its descent travel if it encounters an obstacle.
- 2 A guard on the rear of the spindle arm prevents the risk of crushing between the fixed arm and the moving arm.
- 3 A guard at the side of the spindle arm prevents the risk of crushing between the gear unit casing and the lifting cylinder, and between the fixed arm and the lifting cylinder.
- 4 The spindle is fitted with four plates that prevent crushing between the spindle flanges.
- 5 The machine base is fitted with a rubber strip that prevents crushing between the base and the half-shells on the traverse cylinder.
6. The HD 1200 tool carriage also mounts several devices to prevent the risk of crushing between the tool arm and the sliding carriage.

**NOTE**

To work on small diameter wheels, slide off the tool head and position it in the second engagement hole (fig.14). This will optimise the position of the tool head with respect to the centre of the spindle.



**WARNING**

**To prevent accidents when using standard or optional accessories, make sure that all mechanical parts are correctly mounted and tightened.**

**Hold manual accessories firmly when operating.**

## Key to hazard warning decals.



NEVER place hands, arms or any other part of the body inside the spindle while it is closing.



During descent of the self-centring device, whether with the wheel fitted or with the device open, keep at a safe distance to avoid the risk of crushing.



NEVER get between the tool head and the rim or wheel secured on the spindle.



During adjustment of the tool head (weight 27 kg), keep hands away from the point where the tool head rod strikes the casing.



Keep at a safe distance during tilting of the tool head in order to avoid crushing.



Before carrying out any operation with the tools, make certain that the arm locking hooks are completely fastened.



For safety reasons, do not leave the wheel fixed on the spindle during work breaks.

# CONTROL MODULE COMMANDS

- 4 position joystick (A fig. 15) with the following functions:
  - horizontal movement: simultaneously controls spindle carriage traverse and tool head carrier traverse;
  - vertical movement: controls the raising and lowering of the spindle carrier arm.
- 3 position joystick (central zero) (B fig. 15) which, if pushed fully to either side during the spindle carriage and tool arm traverse, doubles the traverse speed.  
Il comando di doppia velocità deve essere utilizzato solo per i movimenti di avvicinamento. Durante la fase di avvicinamento ad alta velocità viene escluso per ragioni di sicurezza il comando di rotazione mandrino.
- 2 position button (B fig. 16) with the following functions:
  - press the upper part to lift up the tool carrier arm up from the work position;
  - press the lower part to lower the tool carrier arm down to the work position.**WARNING: keep the button pressed until the two arm locking detents are fully coupled.**
- 2 position button (B fig. 16): press on either side to rotate the tool head.
- 3 position joystick (central zero) (A fig. 17) controlling the opening and closing of the spindle.
- 3 position joystick (central zero) (A fig. 18) controlling the spindle rotation speed setting. Speed is shown on the three-coloured plate on the solenoid valve casing (B fig. 18).
  - green zone: normal working conditions, with various rpm values at constant torque;
  - white zone: no work permitted;
  - yellow zone: minimum rpm and low torque. If the rotation speed is still too high, turn the knob (C fig. 18) to further reduce the rpm and set the correct speed.**WARNING: the knob reduces the number of revs only when turned clockwise. After retreading, always unscrew the knob to its limit and reset to normal working conditions (green zone) with the correct control (A fig. 18).**
- Pedals (A fig. 19) for the rotation of the spindle clockwise or counter clockwise.



## WARNING

When clamping a wheel on the machine, keep the button pressed to make sure that the maximum pressure is reached (70 BAR). Check the pressure reading on the pressure gauge (C fig. 20).



## WARNING

Clamping test of the distributor/spindle must be carried out with the wheel fitted.



## WARNING

During work, keep a check on the pressure of the spindle.



## WARNING

Do not position the control module in a place where water can collect.

# WHEEL CLAMP OPERATION



## WARNING

Should the machine behave strangely, move to a safe distance and set the machine main switch (A fig. 12) to the 0 position.



## WARNING

Make sure that the clamping of the wheel is carried out correctly at each point of the spindle and that clamping is secure.



## WARNING

**It is expressly forbidden to attempt or alter operating pressures of the relief valves. The manufacturer declines all liability for damage resulting from tampering with these valves.**

- Set the machine for wheel clamping by operating the control module. Tilt the arm back. (The arm is tilted back automatically at the end of stroke.)
- Fit the fixed cone for the wheel. All cones are marked (on the rim) according to wheel type (A fig. 21).  
N.B. Some wheels will require the insertion of a spacer between the cone and the support.
- Load the wheel on the platform in vertical position.
- Operate the control module to insert the spindle shaft in the wheel hub to reach the clamping position (fig. 22).
- Fit the mobile cone (fig. 23).
- Press the switch until the wheel has been clamped.  
N.B. Maximum pressure value on the pressure gauge will indicate that the wheel has been clamped correctly.
- Lift the wheel from the platform by operating the control module to prevent streaking during bead breaking.



## DANGER

**Given size and weights of and to guarantee safe working conditions, the machine operator must be assisted by a second operator to keep the wheel vertical. When handling wheels weighing more than 500 kg, use a fork lift truck or a crane. Never leave the tyre clamped on the spindle except during the normal pauses in the sequence of operating procedures.**

## BEAD BREAKING

- Translate the wheel and bring the bead breaking tool to the front.
- Position the roller 5-6 mm from the edge of the wheel rim.
- Set the spindle in rotation, then start the pressing operation on the side of the tyre (fig. 24).  
Pressing must be carried out gradually so that the bead is completely detached from the edge of the rim.
- Lift the tool back completely, move the roller to the rear of the wheel, then repeat bead breaking (fig. 25).
- At the end of the entire operation, unclamp the wheel at the switch, then remove the mobile cone.

## STOPPING THE MACHINE

To disconnect the electricity supply to the machine, turn the master switch (A fig. 12) on the electrical box to the 0 position.

All commands on the control module are deactivated as soon as they are released (deadman commands).

## TROUBLE SHOOTING

### The machine does not start.

**No electrical power.**

- ➔ Connect the power.

**Motor defenders have tripped.**

- ➔ Reset the defenders.

**Blown transformer fuse.**

- ➔ Change the fuse.

### Leaking oil

**Loose fitting.**

- ➔ Tighten.

**Cracked pipe.**

- ➔ Renew pipe.

### Machine fails to exit from a command

**Switch faulty.**

- ➔ Clean or renew switch.

**Solenoid valve jammed.**

- ➔ Clean or renew solenoid valve.

## **Pressure drop on spindle actuator cylinder**

**Directional control valve is leaking.**

- ➔ Renew directional control valve.

**Worn seals.**

- ➔ Renew seals.

## **Motors stop during operation**

**Motor defender has tripped.**

- ➔ Open the electrical cabinet by loosening the screws securing the catches; reset the defender that has tripped by raising the grey bar (A fig. 26); close the cabinet.

## **Tool carrier arm disengages**

**Arm locking detent is incorrectly adjusted.**

- ➔ Call the service centre.

## **The machine fails to perform a manoeuvre**

**Solenoid valve not receiving power.**

- ➔ Check electrical connections to the solenoid.

**Solenoid valve is jammed.**

- ➔ Clean or renew as necessary.

**Transformer fuse is blown.**

- ➔ Change the fuse.

**Control module incorrectly adjusted.**

- ➔ Call the service centre.

**Batteries run down (red LED on) (only in radio versions).**

- ➔ Charge the batteries
- ➔ Call the service centre.

## **No hydraulic oil pressure**

**Pump is broken.**

- ➔ Renew pump.

## **Hydraulic power pack is running noisily**

**Pump/motor coupling is worn.**

- ➔ Renew the coupling.

## **Machine moves jerkily**

**Hydraulic oil level is low.**

- ➔ Top up the oil.

**Faulty switch.**

- ➔ Renew the switch.



**WARNING**

The “Spare parts” booklet does not authorise the user to make adjustments to the machine (with the exception of those specified in the user’s manual), but is intended to allow the user to give precise information to the service centre, thereby reducing machine down time.

## MAINTENANCE



**WARNING**

Corgi declines all liability for claims deriving from the use of non-original spares or accessories.



**WARNING**

Before making any adjustments or carrying out maintenance, disconnect the electrical supply from the machine and make sure that all moving parts are suitable immobilised.



**WARNING**

Do not remove or modify any parts of this machine except in the case of service interventions.



**WARNING**

Before loosening hydraulic fittings or pipes, make sure that the fluid is not pressurised. Caution: oil sprayed from leaking connections at high pressure can cause serious injury.



**ATTENTION**

Keep the work area clean.

Do not clean the machine with compressed air or jets of water.

When cleaning the area, avoid raising dust as far as possible.

To ensure that your machine provides lasting duty and high efficiency:

- clean the spindle and the guide pins once a week with naphtha;
- grease all moving parts on the machine at least once a month;
- clean the filter cartridge approximately every 1,500 hours of duty;
- check the oil level in the hydraulic power pack tank and top up with AGIP ARNICA 68 or equivalent oil (check the oil level with the cylinders in the retracted position): effect a complete oil change every 1,500 hours of operation or once a year.



**ATTENTION**

Top-ups or oil changes with oils other than the recommended type can adversely affect machine durability and performance.

**GB**



## WARNING

It is expressly forbidden to attempt to alter operating pressure of the relief valves or the pressure limiter.

The manufacturer declines all liability for damage resulting from tampering with these components.

## DEMOLITION

If the machine is to be scrapped, remove all electrical, electronic and plastic components and dispose of remaining parts of the machine as scrap iron.

Electrical material (cables) can be disposed of as scrap copper.

## HYDRAULIC FLUID - INDICATIONS AND RECOMMENDATIONS

### Disposal of used oil

Do not dispose of used oil in the sewage system, storm drains or rivers and streams. Collect and store the oil and contact a specialist disposal company to remove it.

### Oil spills and leaks

Contain oil spills with earth, sand or similar absorbent material. When the oil has been removed, degrease the area with solvents. Take steps to disperse solvent fumes.

### Precautions when using oil.

- Avoid prolonged contact with the skin.
- Avoid the formation and diffusion of oil mist.
- Apply the following hygiene measures:
  - protect personnel and equipment from oil splashes (suitable clothing, install screens on the machine);
  - wash frequently with soap and water; do not use cleaning products or solvents that will irritate the skin or remove its natural protective oil;
  - do not dry hands with dirty or greasy rags;
  - change clothing if impregnated with oil - always change clothes at the end of the working shift;
  - do not smoke or eat when hands are greasy.
- Apply the following preventive and protective measures:
  - wear industrial gloves designed to resist mineral oil;
  - use safety glasses to protect the eyes;
  - use aprons that resist mineral oil;
  - use protective screens to protect from oil splashes;
  - use exhaust fans to remove oil mist.

### **Oil: first aid procedures**

- Ingestion: in general no special treatment is needed. Do not induce vomiting to prevent liquids from entering respiratory passages.
- Inhalation of liquid: if spontaneous vomiting suggests that liquid has been inhaled, transport the affected person to a hospital immediately.
- Inhalation: for exposure to high concentrations of fumes or oil mist, move the affected person to the open air.
- Eyes: rinse with abundant running water.
- Skin: wash with soap and water.

## **RECOMMENDED FIRE-EXTINGUISHING DEVICES**

Consult the following table when choosing a fire extinguisher:

#### Dry material

Water	YES
Foam	YES
Powder	YES*
CO <sub>2</sub>	YES*

YES\* *Can be used in the absence of more appropriate methods or to control small fire outbreaks.*

#### Inflammable liquid

Water	NO
Foam	YES
Powder	YES
CO <sub>2</sub>	YES

#### Electrical equipment

Water	NO
Foam	NO
Powder	YES
CO <sub>2</sub>	YES



**WARNING**

**The indications in this table are of a general nature and are indicative only. The applications of each type of extinguisher will be illustrated fully by the respective manufacturers on request.**

**GB**

# GLOSSARY

**Barycentre**

The centre of the mass of a body at which the weight force is concentrated - the centre of gravity.

**Wheel with drop centre**

A one-piece wheel, without moveable or detachable parts, on which a tyre is mounted.

**Wheel with rim ring**

Wheel with one side open to receive the tyre.

**Inside/outside bead breaking**

Lifting the tyre bead from the edge of the rim.

**Control module**

Remote control unit with joystick to command all machine manoeuvres required for tyre mounting/demounting.

**Spindle**

Spindle equipped with jaws to centre the wheel and support its weight.

**Bead breaker disk**

Tool that effectively breaks the tyre bead off the rim.

**Tool**

Specially shaped tool for mounting and demounting tyres.

**Arm locking hook**

Specially shaped part with a fulcrum and a detent designed to engage with a corresponding element.

**Tool carrier arm**

The tool carrier arm holds the tool head.

**Tool head**

Tool assembly for bead breaking and demounting of the tyre.

**Pump unit**

Unit comprising the hydraulic pump and an electric motor.

**Retreading**

Operation that restores the tread pattern on a worn tyre.

**Jaw**

Mechanical part with a hooked nose to restrain or pull the wheel.

**Bead**

The two edges of the tyre, thicker than the side walls, designed to seat on the edge of the rim.

**Tubeless tyre**

A tyre designed for use without an inner tube.

**Supersingle**

A wide section tyre used in alternative to twin wheels.

**Lock ring**

A half ring made of steel with the function of blocking the rim ring in position.

**Rim ring**

External ring restraining the bead when the tyre is mounted on the rim.

**Seal ring**

Rubber seal that prevents air escaping from the inflated tyre.

## **ELECTRICAL SYSTEM DIAGRAM**

**Electrical cabinet diagram**

A1	Relay card
A2	B.F. receiver card
A3	A.F. receiver card
H1	Warning light
Y1	2nd speed solenoid valve
Y2	Spindle anti-clockwise rotation solenoid valve
Y3	Spindle clockwise rotation solenoid valve
Y4	1st speed solenoid valve
Y5	Spindle opening solenoid valve
Y6	Spindle closing solenoid valve
Y7	Tool arm up solenoid valve
Y8	Tool arm down solenoid valve
Y9	Rh carriage solenoid valve
Y10	Lh carriage solenoid valve
Y11	Tool head up solenoid valve
Y12	Tool head down solenoid valve
Y13	Rh tool head rotation solenoid valve
Y14	Lh tool head rotation solenoid valve
M1	Three-phase motor
M2	DC motor
Q1	General three-pole switch
Q2	Defender 25/32 A
T1	Power supply transformer
X1	Power supply socket
X2	23 way connector for solenoid valves cable
X3	23 way connector from solenoid valves cable
X4	19 way connector for pedals cable
X5	Terminal board
X10	19 way connector from pedals cable
W1	Receiver antenna

**Control module**

A4	L.F. transmitter card
A5	H.F. transmitter card
G1	Battery 7.2 V
S1	2nd speed pedal control
S2/3	Spindle rotation pedals control
S4	Spindle open/close (central 0)
S5	Tool arm up control module

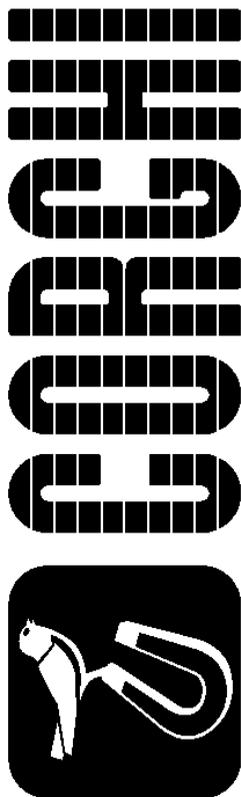


S6	Tool arm down control module
S7	Rh carriage control module
S8	Lh carriage control module
S9	Tool head lift switch (central 0)
S10	Tool head rotation switch (central 0)
S11	DC motor rotation direction switch (central 0)
X6	16 way connector for pedals cable
X7	16 way connector from L.F. transmitter card
X8	3 pole connector for battery charger
X9	3 pole connector from battery charger
W2	Transmitter antenna

## **HYDRAULIC SYSTEM DIAGRAM**

1	Motor 6.5 HP 50-60 Hz
2	Pump 50-60 Hz
3	Oil filter
4	Oil tank 50 litres
5	Pressure relief valve (setting 165 bar)
6	Pressure relief valve (setting 80-140 bar)
7	Solenoid valve (Spring X)
8	Nipple 3/8-3/8" reduced Ø3.25
9	Valve
10	Check valve (3/8" GAS)
11	Valve
12	Solenoid valve with dowel Ø0.8
13	Solenoid valve
14	Solenoid valve
15	Motor speed regulation valve
16	Spindle cylinder
17	Hydraulic motor
18	Filler plug complete with filter and air vent
19	Tool rotation cylinder
20	Tool head lift cylinder
21	Carriage traverse cylinder
22	Tool arm lift cylinder
23	Distributor
24	Pressure gauge Ø63 0 -250 bar-psi 1/4"
25	Solenoid valve (Spring X9)
26	Piloted double stop valve
27	Nipple 1/4-1/8" reduced Ø1.1
28	Tank drainage plug
29	Nipple 1/4-1/4" reduced Ø1.5
30	Tool arm lift hose
31	Carriage lh traverse hose
32	Carriage rh traverse hose
33	Tool head lower hose

- 34 Tool arm lower hose
- 35 Rigid pipe Ø8x1 L633.5
- 36 Spindle open hose
- 37 Tool head lift hose
- 38 Tools rh rotation hose
- 39 Tool lh rotation hose
- 40 Small pump delivery hose
- 41 Large pump delivery hose
- 42 Spindle clockwise rotation hose
- 43 Spindle close hose
- 44 Carriage traverse hose
- 45 Spindle anti-clockwise rotation hose
- 46 Oil drainage hose
- 47 Valve



# HD 1200 AVIO

Versione 2.0 del 12/95

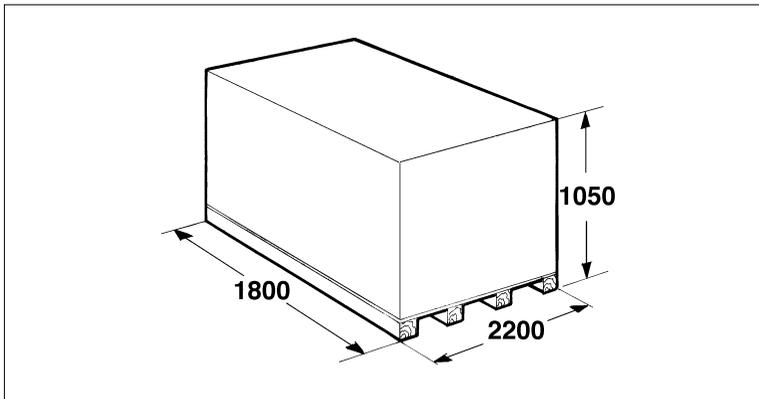
Italiano

Illustrazioni e schemi

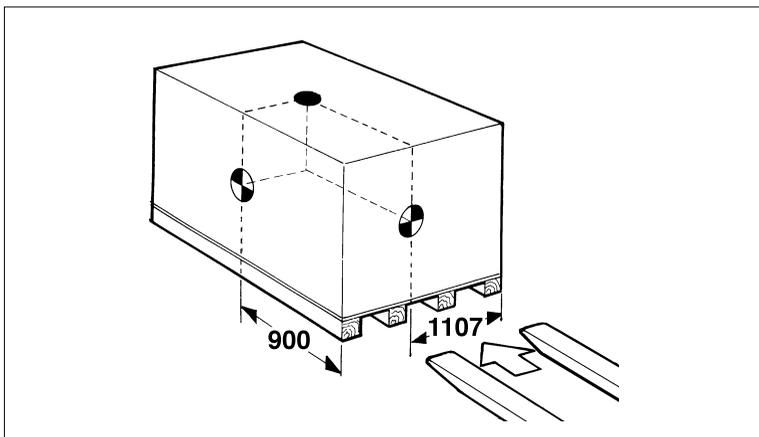
English

Illustrations and diagrams

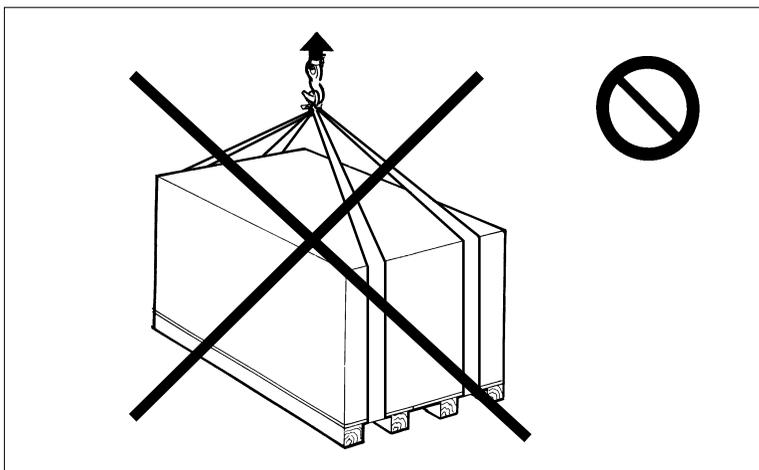
1

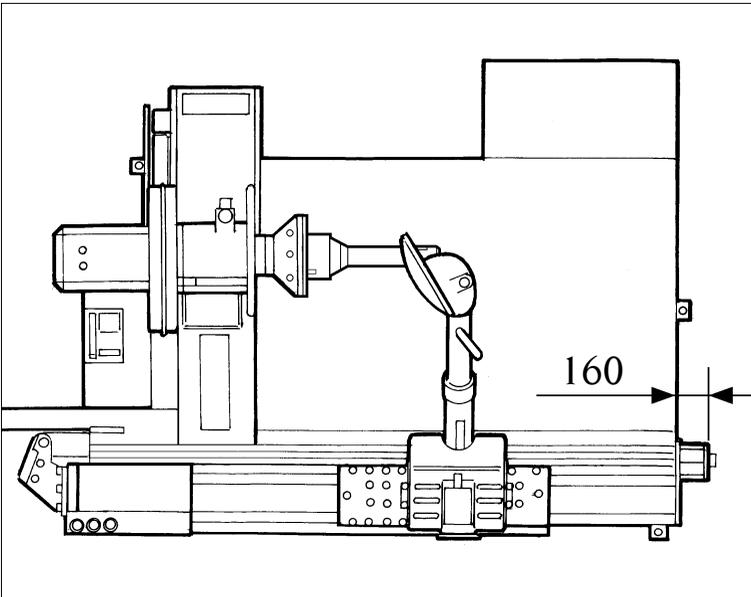
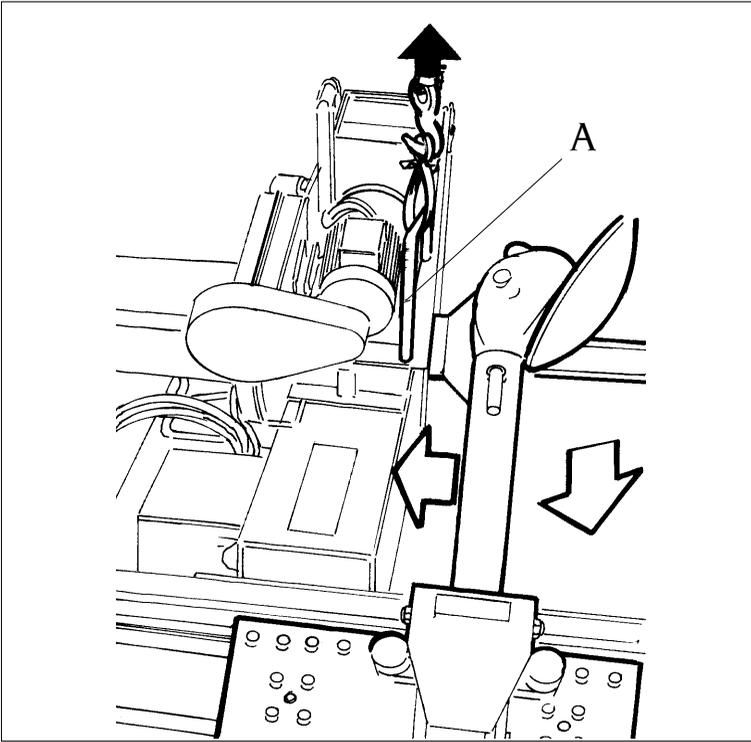


2

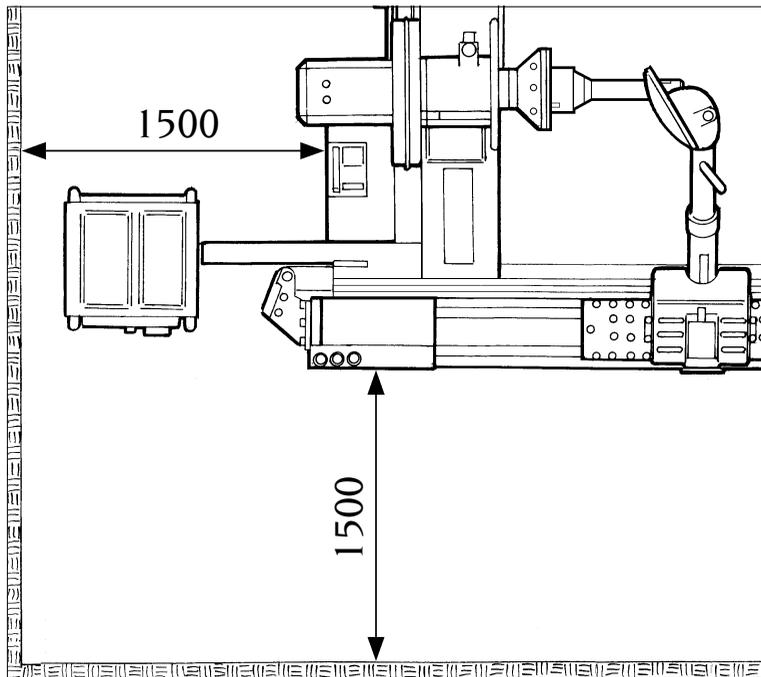


3

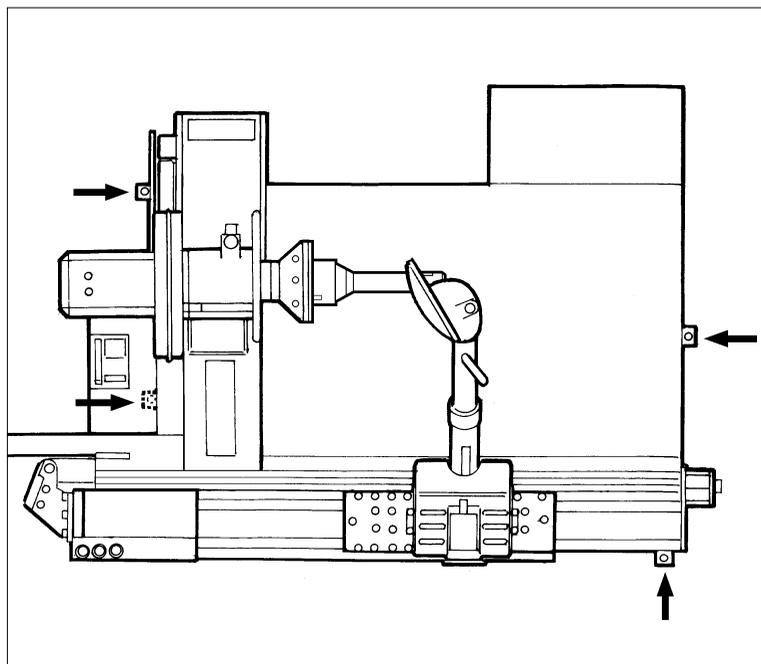


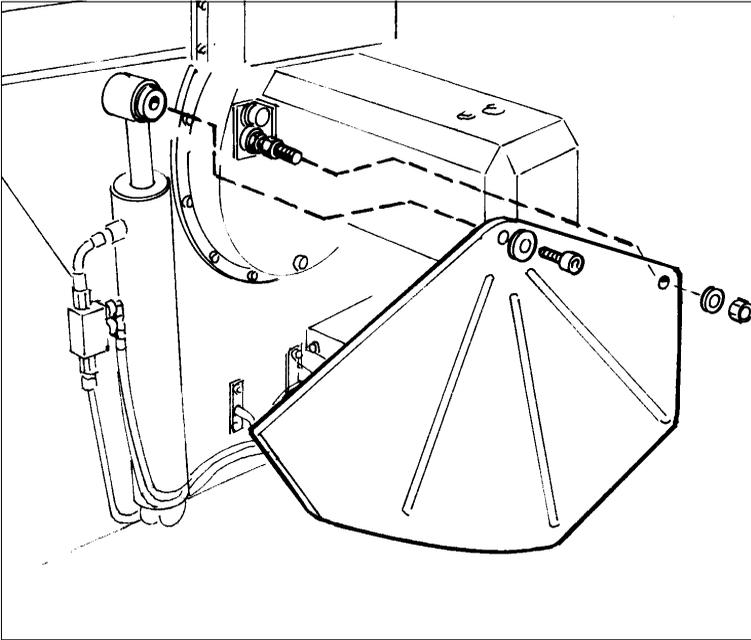


6

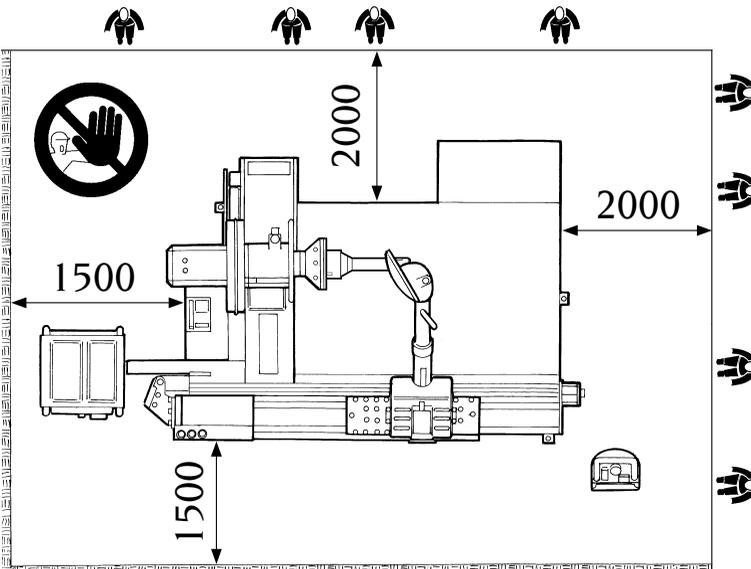


7



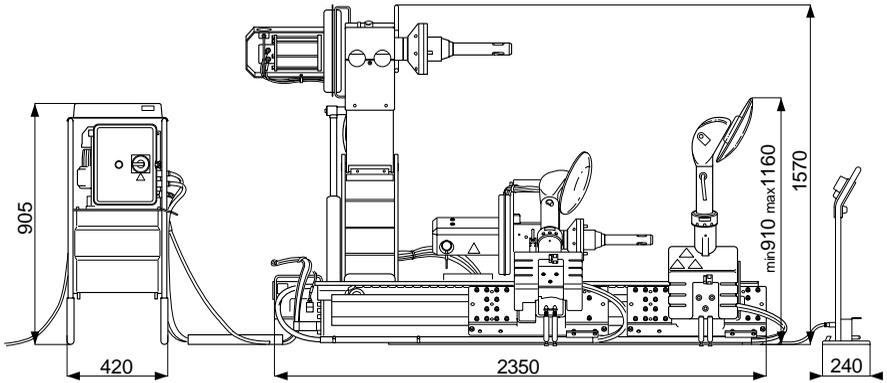
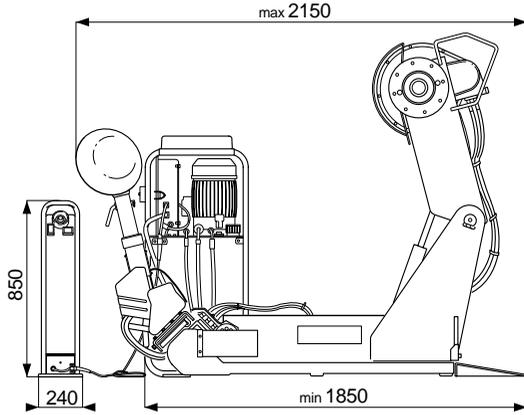


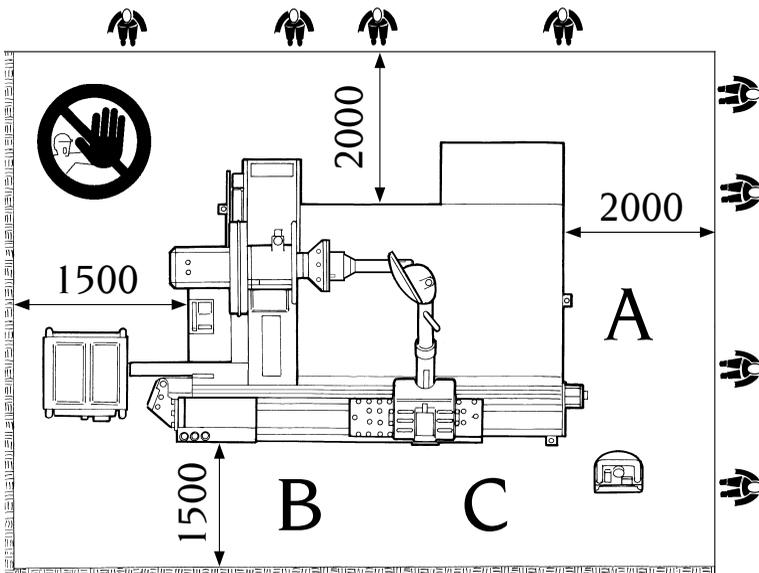
8



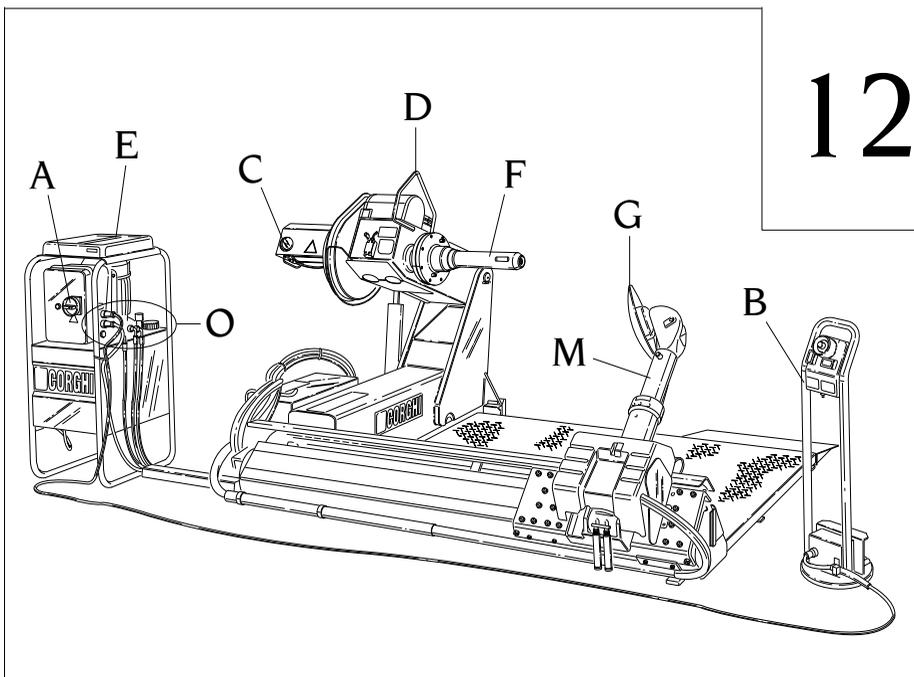
9

# 10



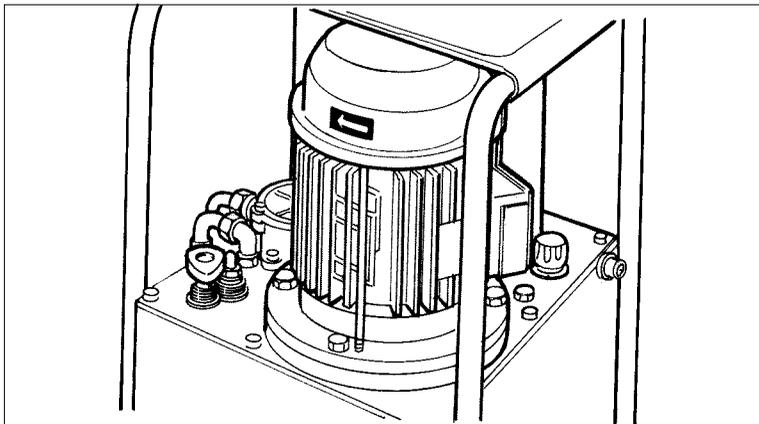


11

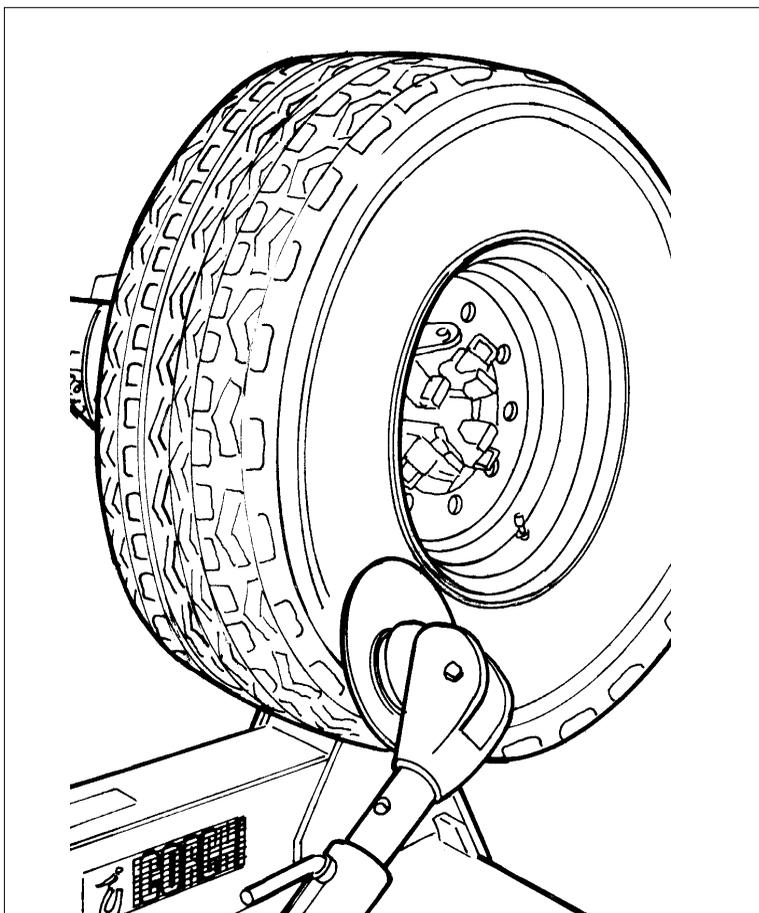


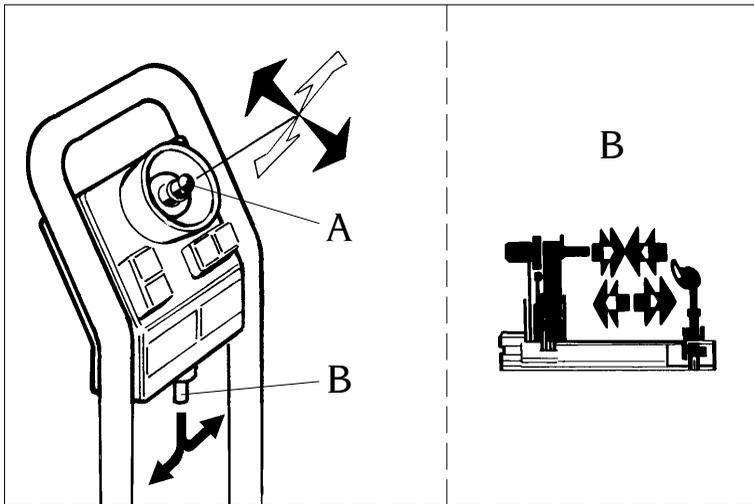
12

13

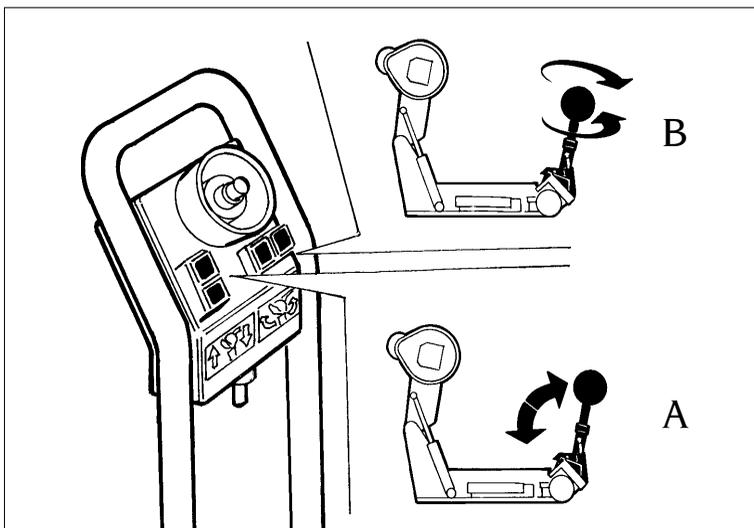
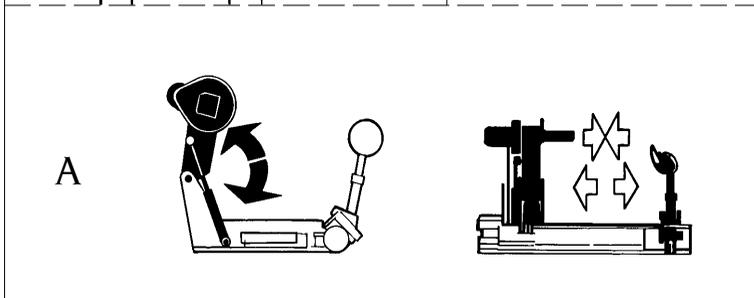


14



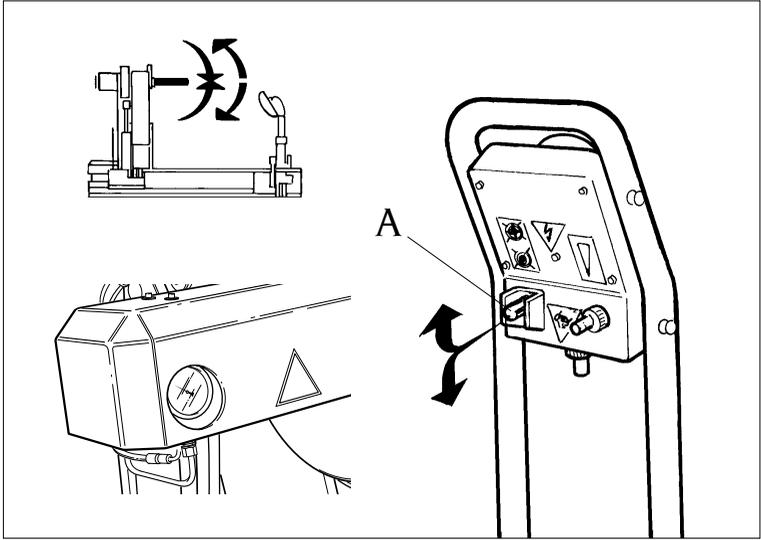


15

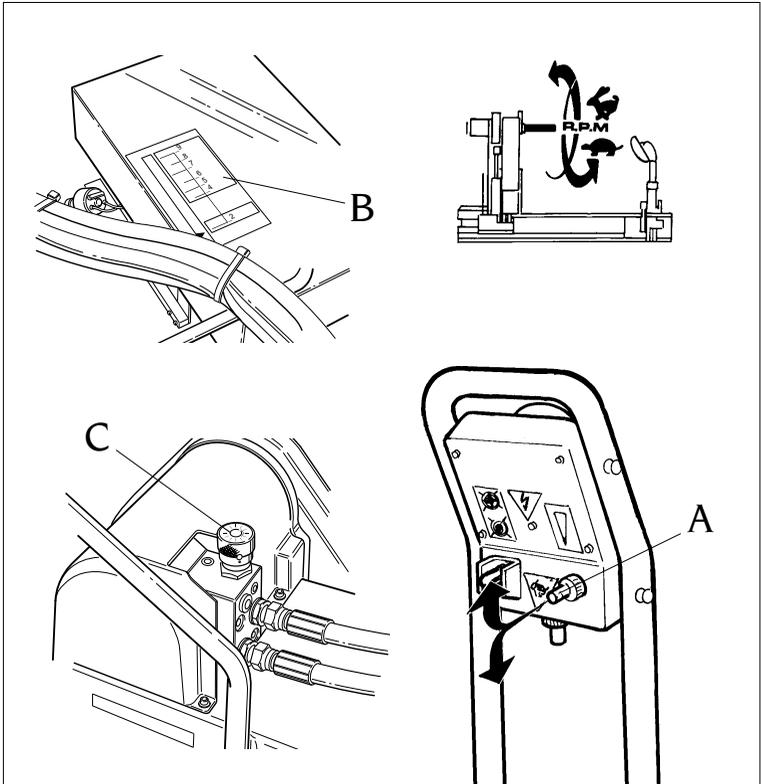


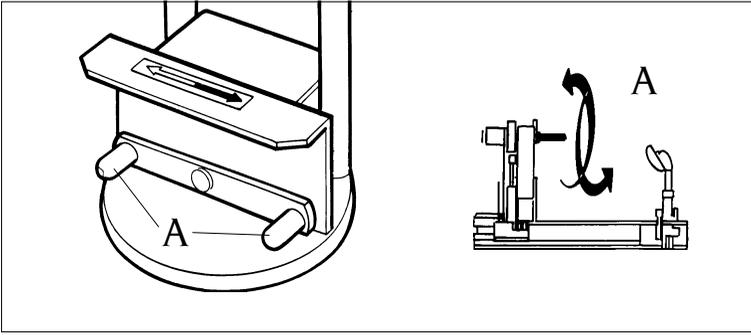
16

# 17

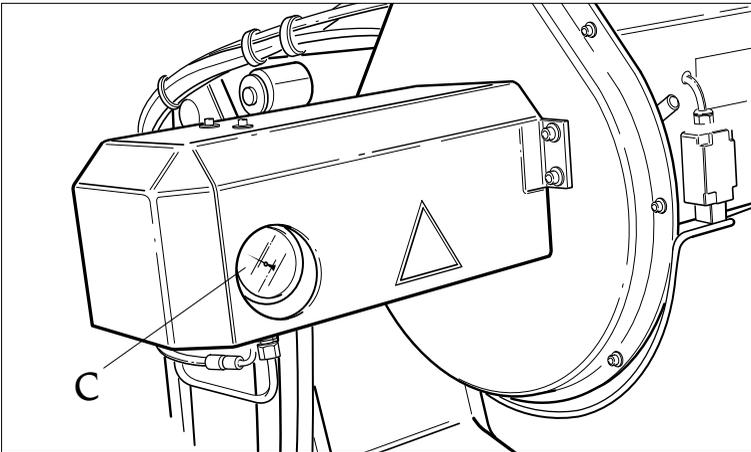


# 18

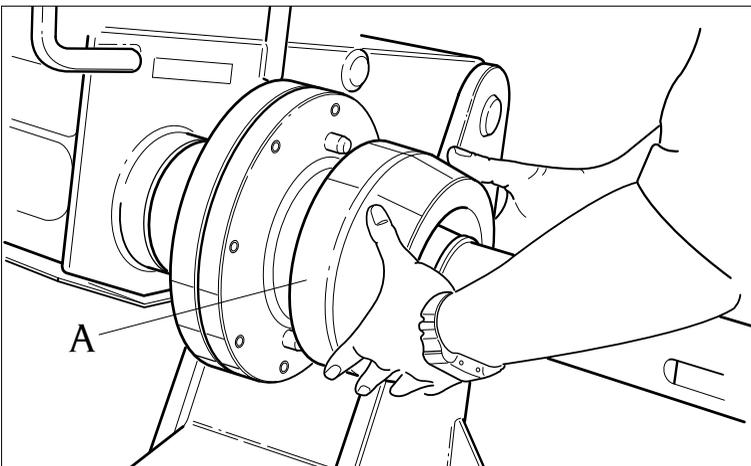




19

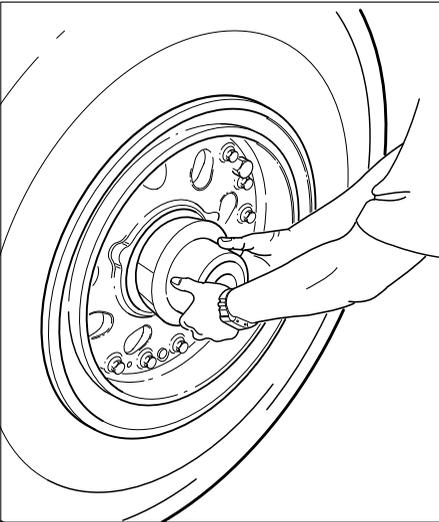
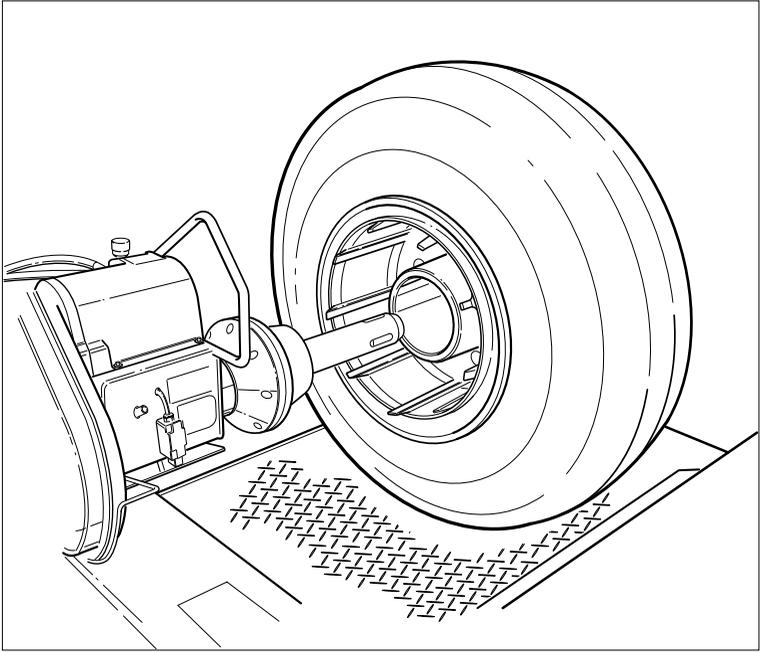


20

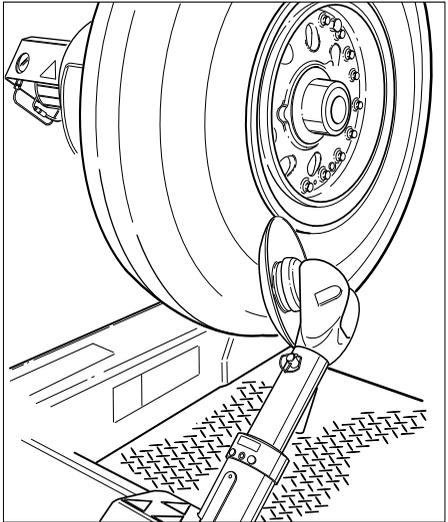


21

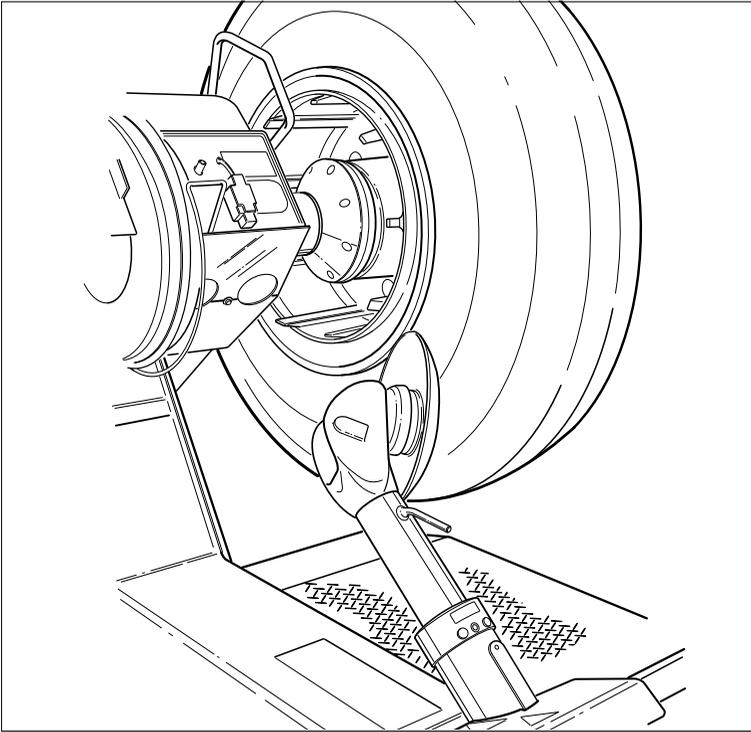
22



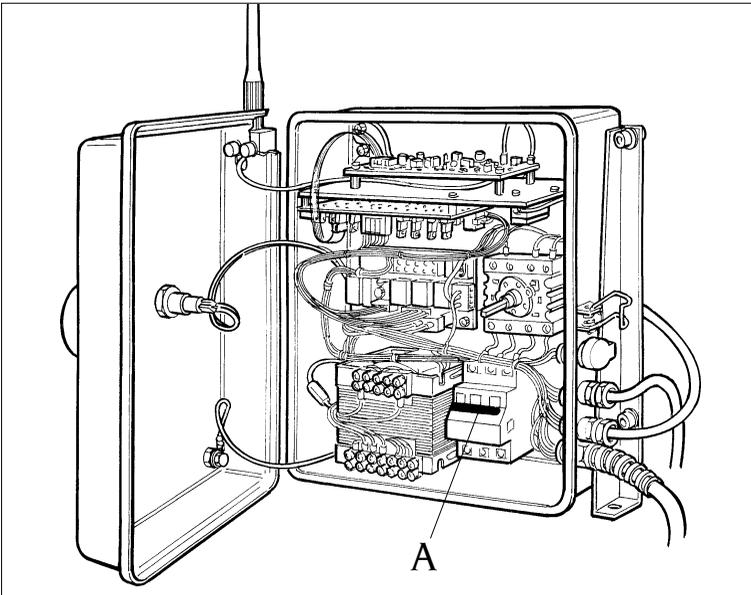
23



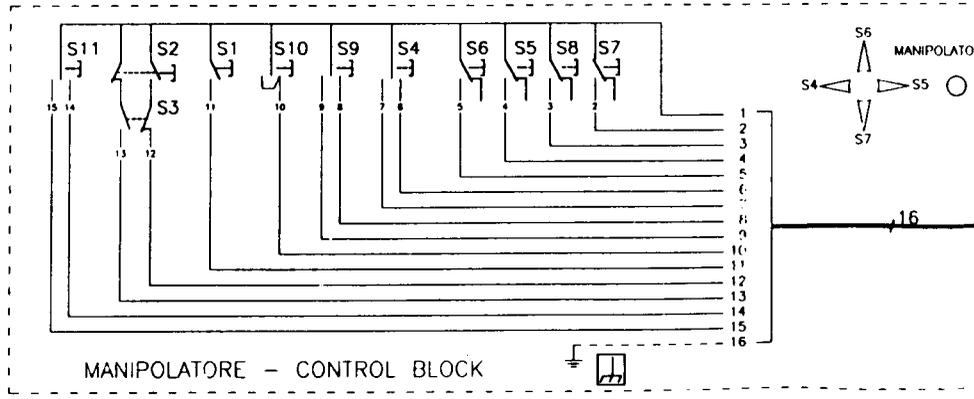
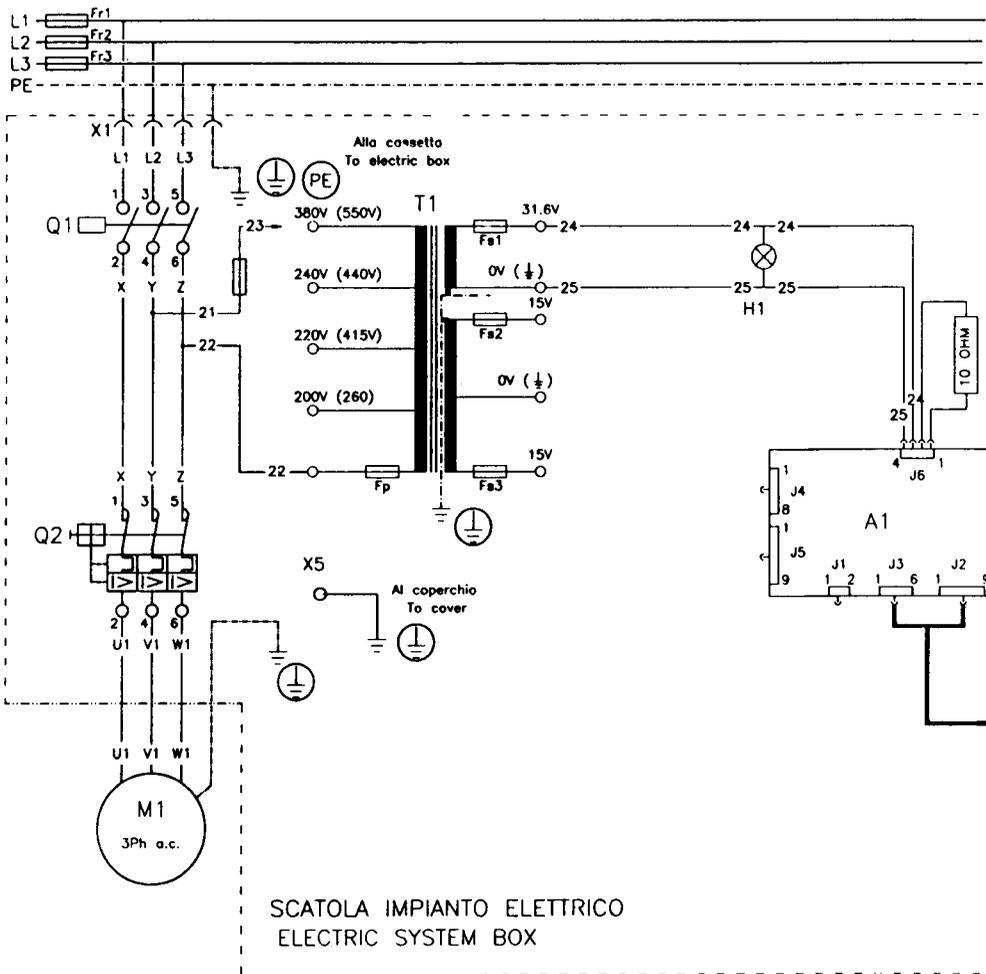
24

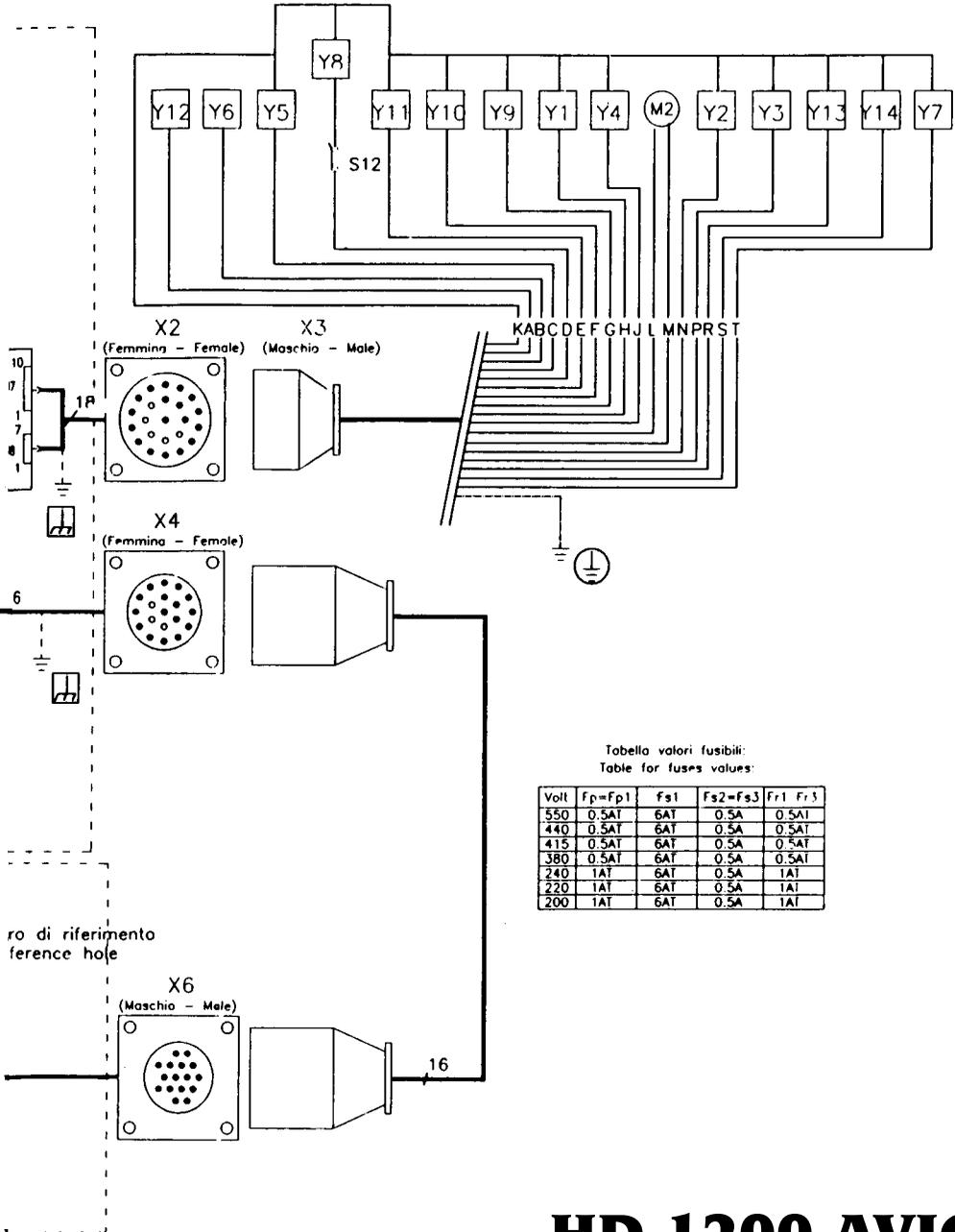


25

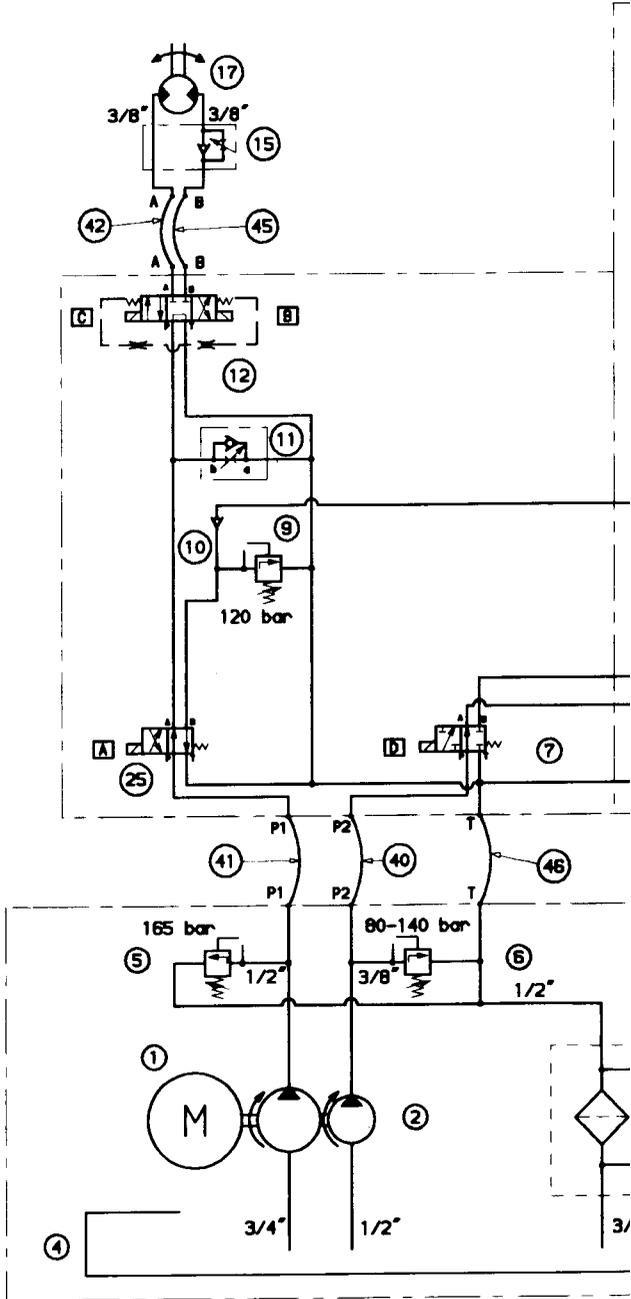


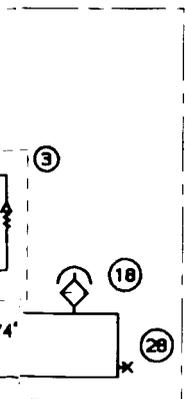
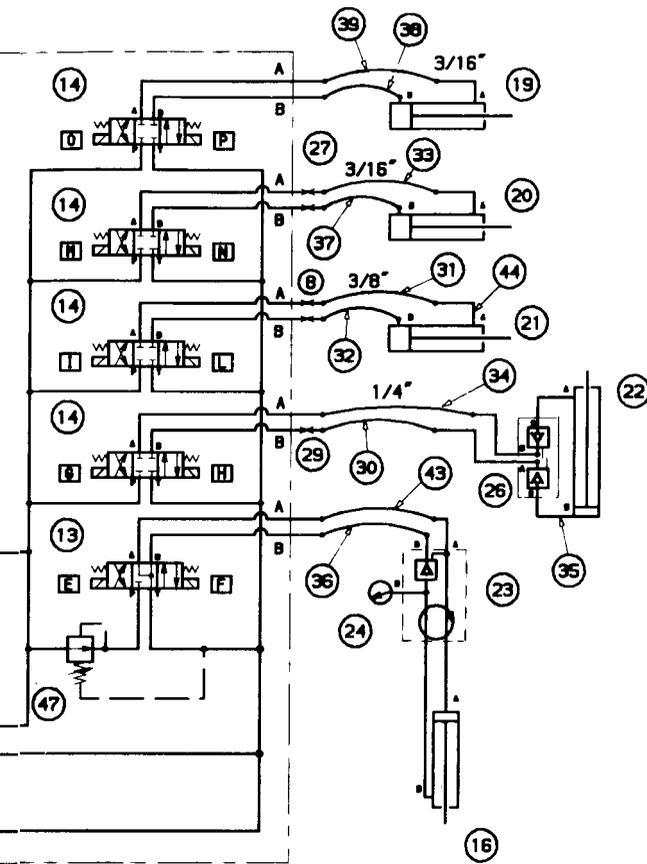
26





# HD 1200 AVIO





# HD 1200 AVIO

## Dichiarazione CE di conformità

Noi CORGHI SPA, Strada Statale 468 n°9, Correggio (RE), ITALY, dichiariamo che il prodotto

### smontagomme HD 1200 AVIO

al quale questa dichiarazione si riferisce è conforme alle seguenti norme o ad altri documenti normativi:

EN 292 del 09/91

in base a quanto previsto dalle direttive 89/392/CEE modificata con le direttive 91/368/CEE, 93/44/CEE e 93/68/CEE.

Correggio, 01 / 10 / 94

  
.....

CORGHI S.p.A.

E. Santoro

**IMPORTANTE:** La dichiarazione CE di conformità decade nel caso in cui la macchina non venga utilizzata unicamente con accessori originali CORGHI e/o comunque in osservanza delle indicazioni contenute nel Manuale d'uso.

Il modello della presente dichiarazione è conforme a quanto previsto nella EN 45014.

## EC statement of conformity

We, CORGHI SPA, Strada Statale n°9, Correggio (RE), ITALY, do hereby declare, that the product

### HD 1200 AVIO tyre changer

to which this statement refers, conforms to the following standards or to other regulatory documents:

EN 292, 09/91

with reference to directives 89/392/EEC amended with directives 91/368/EEC, 93/44/EEC and 93/68/EEC.

Correggio, 01 / 10 / 94

  
.....

CORGHI S.p.A.

E. Santoro

**IMPORTANT:** The EC Conformity Declaration is cancelled if the machine is not used exclusively with CORGHI original accessories and/or in observance of the instructions contained in the user's manual.

The form of this statement conforms to EN 45014 specifications.