Pegasus
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macchine edili ed agricole S.r.l.
dDIECI

OPERATION AND MAINTENANCE MANUAL



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42027 Montecchio Emilia (RE) ITALY
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CE

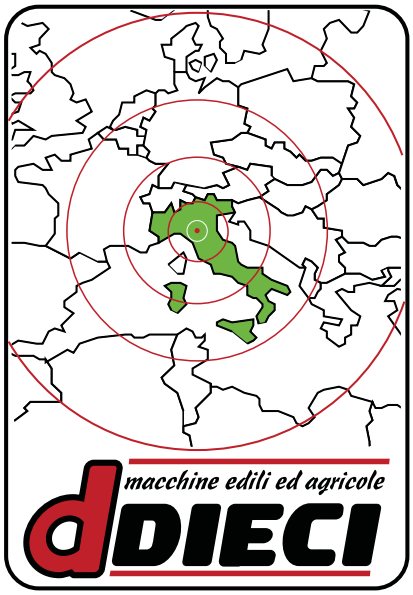
ATTENTION - ALWAYS KEEP A COPY OF THIS MANUAL

H1154/UK

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EVERY TELEHANDLER COMES WITH A COPY OF THIS MANUAL, A COPY OF THE USER AND MAINTENANCE MANUAL FOR THE ENGINE (WRITTEN BY THE MANUFACTURER). IT ALSO COMES WITH A COPY OF THE USE AND MAINTENANCE MANUAL FOR EACH DEVICE OR ATTACHMENT WITH WHICH THIS MACHINE IS RIGGED-OUT.

THE LATTER MANUALS ARE WRITTEN BY THE RESPECTIVE SUPPLIERS OR ARE REPRODUCED IN FULL AND EXACTLY BY *DIECI* WITH THE SPECIFIC AUTHORISATION OF THE SUPPLIERS: SAID MANUALS MAY BE FURTHER COMPLETED WITH OTHER SPECIFICATIONS WRITTEN BY *DIECI*.



www.dieci.com

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DIECI S.r.l. **shall not be held liable for damage caused by the use of non-original spare parts**

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USE AND MAINTENANCE MANUAL ***Issue 1 - 02/2011*** ***Translation of the Original Instructions*** ***Traduzione delle istruzioni originali***	**Pegasus 38.16 (400°)** **Pegasus 38.16 - Pegasus 40.17** **Pegasus 40.25 - Pegasus 45.19** **Pegasus 45.21 - Pegasus 50.21** **Pegasus 60.16 - Pegasus 70.11**
Cod.: AXH1154/UK	

WARNING:

All the documentation supplied is an integral and essential part of the product and must be kept where it can be easily accessed by every user. Users must carefully read the aforesaid documentation before starting to use the product.

Improper, incorrect or irrational use of the machine or its accessories is forbidden.
It is also forbidden to carry out any modifications that could alter the structure or function of the machine.

IT IS FORBIDDEN TO REPRODUCE ENTIRELY OR IN PART THE CONTENTS OF THIS MANUAL AND RELATIVE MULTIMEDIA PRODUCT: *Dieci S.r.l.* SHALL SAFEGUARD THESE RIGHTS.

1 Dieci **2** Dieci **3** Uff.Tec **4** Devid **5** MTKeR **7** Digigraph **9** 02/2011 **10** AXH1154/UK

CAUTION: A COPY OF THIS MANUAL MUST BE KEPT ON THE MACHINE WHERE IT CAN BE CONSULTED BY THE OPERATOR

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Dear customer,

Congratulations and thank-you for choosing a macchine edili ed agricole DIECI *machine.*

This handbook has been written so that you can appreciate the qualities of this machine to the full.

It is advisable to read this handbook in its entirety before using the machine for the first time.

It contains information, advice and important warnings for use, which will help you to exploit the technical advantages of your DIECI *machine fully.*

You will discover its specifications and special features, as well as find essential information regarding maintenance and care to ensure safe use and an extended lifetime of your DIECI *machine.*

The personnel, who will be at your assistance, wish you ALL THE BEST, certain that this handbook will prove an invaluable aid to fully appreciating your new machine.

Best regards,

The Sales Management

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INTRODUCTION
WARRANTY
IDENTIFYING YOUR MACHINE






BEFORE STARTING THE MACHINE FOR THE FIRST TIME, THE OPERATOR MUST CAREFULLY READ THIS MANUAL TO ENSURE HE OR SHE FULLY UNDERSTANDS HOW THE TELEHANDLER WORKS AND TO ENSURE HE OR SHE IS ADEQUATELY PREPARED FOR ITS USE.

ANY USE OTHER THAN THE USE DESCRIBED IN THIS MANUAL IS STRICTLY FORBIDDEN AND DIECI SHALL NOT BE HELD LIABLE FOR ANY DAMAGE TO PEOPLE, OBJECTS OR ANIMALS.

WHILE USING THE MACHINE, STRICTLY OBSERVE THE RESPECTIVE DIAGRAMS OF THE ASSEMBLED ATTACHMENT.




INTRODUCTION

The aim of this manual is to provide the operator with instructions for efficient and safe use and maintenance of the telehandler.

Following these instructions carefully will allow you to obtain full efficiency and a long working life from your machine, and will help to make your work considerably easier.

Furthermore, this Use and Maintenance manual is supplied to you directly by the Dealer upon delivery of the machine, to ensure you understand all the instructions correctly. However, should you have trouble understanding any part of this manual, do not hesitate to contact your nearest Dealer for clarification, as it is of utmost importance that the operation and maintenance guidelines are fully understood and carefully observed. Routine maintenance should be carried out regularly. Keep a record of machine working hours.

When spare parts are required, always use original spare parts. These can be supplied by your local Dealer who can also provide advice and instructions for their installation and use. The use of non-original spare parts may cause damage to other parts of the machine; we therefore advise our customers to purchase any spare parts required only from an authorised Agent or Dealer.

Should the machine be destined for use in particularly severe conditions (for example in very dusty environments or sites, or on very clayey or muddy terrain), we advise consulting your nearest dealer for specific instructions. Failure to observe these instructions may void the machine warranty.

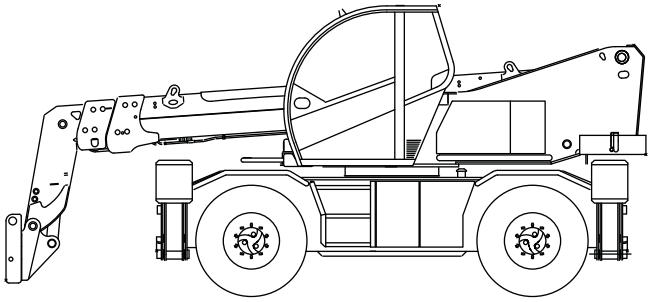
This manual has been published for worldwide distribution and the availability of certain equipment referred to from time to time as being essential or available on request may vary according to where the machine is being used. You can obtain all necessary details about the equipment available in your area from your nearest Distributor or Dealer.

Due to manufacturing demands, machines from the standard production range may differ slightly from those mentioned in this manual. The company reserves the right to make modifications without notice.

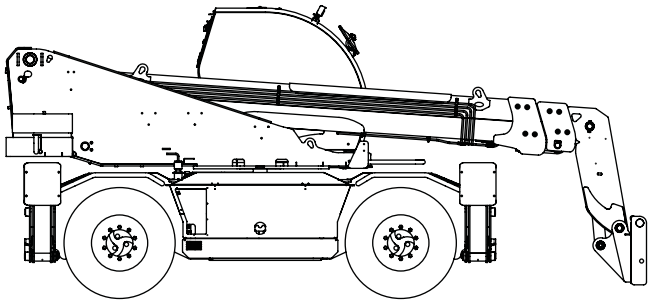
Because we continually introduce technical improvements and bearing in mind updating and publication times, the data in this manual may be changed at any time and therefore should not be considered binding.

In some of the illustrations, panels or guards have been removed in order to provide a clearer view. Never use the machine without these panels or guards.

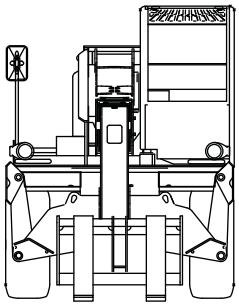
The left and right sides of the machine as referred to in this manual are to be considered looking at the truck from the back towards the front, or from the position of the operator in the driver's seat.



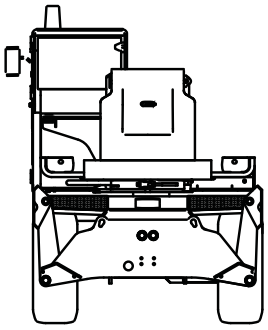
LEFT SIDE



RIGHT SIDE



FRONT VIEW



REAR VIEW

GUARANTEE

GUARANTEE: DURATION, VALIDITY AND ACTIVATION

Warranty: duration

DIECI s.r.l. (hereinafter referred to as ***DIECI***), guarantees its products for 12 months from the date of delivery to the Client.

Warranty: entry into force

The guarantee is valid from the date of the vehicle's shipment from manufacturer's factory (in sales to distributors or dealers). When delivery is handled by the distributor or dealer, ***DIECI*** reserves the right to verify that the warranty start date corresponds to the shipping or delivery date on the transport document for the product being guaranteed, and/or to the invoice date and reserves the right to request original copies of these documents.

Warranty: activation

The guarantee is automatically valid from the date the vehicle leaves the manufacturer's factory (in sales to distributors or dealers).

GUARANTEE: VALIDITY

Guarantee in countries with assistance centres

- The guarantee covers the replacement or repair of faulty parts proven defective as a result of the material used, its manufacturing or assembly.
- ***DIECI*** reserves the sole right to authorise the repair or replacement of defective parts.
- ***DIECI*** shall respond to claims using the means and methods it deems most appropriate.

DIECI is responsible for:
- The materials used
- Labour
- Travel expenses.

The customer is responsible for:
- Packing and shipping costs for spare parts.
- All other expenses not listed under those for which ***DIECI*** is liable.

Warranty in countries without assistance centres

- Refers exclusively to the free supply, paid for by ***DIECI***, of parts no longer usable due to faulty material, manufacturing and/or assembly.

Examining replaced faulty parts

- Before honouring the guarantee, ***DIECI*** may ask that the faulty parts replaced during repair work, be returned at ***DIECI***'s expense.

Additional guarantee for repairs and replacement parts

- Repairs made under guarantee or not, and parts replaced during repair work, are guaranteed for 3 months from the date of repair or installation, even if the original guarantee has expired.

Intervention campaigns for faulty products

- The replacement procedures of parts recognised as faulty will be agreed between ***DIECI*** and its distributors/dealers/authorised workshops.
  These intervention campaigns can be followed directly by ***DIECI*** suppliers, responsible for supplying the components to be replaced (interventions authorised by ***DIECI***).
  The above interventions will be preceded by written communication by ***DIECI*** to its purchasers.
  Only ***DIECI*** can decide the interventions methods (repair, replacement, modification).

WARRANTY:
REQUEST FOR REPAIR UNDER GUARANTEE

Warranty: making a claim

- The claim of the defective part must be made by the Customer, dealer, distributor or authorised repair shop and must be sent directly to ***DIECI's*** customer assistance office within 8 days of the first manifestation of the defect. The claim must include a clear description of the defect and precise references to the vehicle (type, model and serial number). This information can be found on the vehicle in the places indicated in the USE AND MAINTENANCE MANUAL.

Obligation to immobilise vehicle

- If there is a risk that the defect may jeopardise safety and accident prevention or may cause further damage, the vehicle must not be used until it has been repaired and tested.

Warranty: exclusions from the warranty

The following conditions and parts are excluded from the guarantee:

- Components subject to wear and tear or deterioration due to prolonged use: clutch, belts, brake pads, sliding blocks, rollers, oils and liquids, filters etc.
- Electrical circuits and components,
- Damage caused by climatic factors, natural disasters, acts of vandalism, etc.
- Any other malfunction not due to a defect resulting from original fault or which does not fall under ***DIECI*** liability.

The following parts are also excluded from this guarantee but are covered by the guarantee of the Relevant Manufacturers:

- Diesel engines
- Axles and reduction gears
- Hydraulic pumps and engines
- Tyres

DIECI shall handle the application of the aforementioned guarantees.

Every modification made to the vehicle leads to a new verification of conformity with the 2006/42/EC Machinery Directive" This procedure is also valid in the case of repairs with non-original spare parts.

In the event of dispute, DIECI acknowledges the Court of Reggio Emilia - ITALY as the ultimate authority.

CAUSES OF:
NON-ACTIVATION, FAILURE TO HONOUR, TERMINATION

Warranty: failure to honour

The guarantee is not honoured:

- If the defect is not reported following the prescribed methods and within the established time limit.
- If the customer does not comply with ***DIECI's*** request to return the defective parts substituted during the repair intervention.
- If the customer has not complied with the obligation to stop using the machine after making a claim, limited to damages caused by non-compliance.

Warranty: termination

The guarantee is terminated:

- If the buyer does not fulfil contractual payment obligations.
- If damage has been caused by carelessness, negligence, or by use of the vehicle for purposes not in compliance with specifications provided in the use and maintenance manual (incorrect manoeuvres, overloading, use of incorrect fuel, poor maintenance*, disregard for warning indicator instruments etc.)
- If the defect is a result of applications, attachments, modifications or repair work not authorised by ***DIECI*** or carried out using poor quality parts. (For this reason, we recommend always using original spare parts).

* For "recommended regular routine maintenance" refer to the USE AND MAINTENANCE MANUAL.

Final terms

- In cases of the non-activation of the guarantee of if it is not honoured or is terminated, the buyer shall not be granted annulment of the contract, payment of damages, or an extension of the guarantee.

- ***DIECI*** does not make payments for any type of debit which replacement machines or for rental, labour and lost profits, caused by machine stop. Unless otherwise previously agreed in writing by both parties.

- Conditions subject to guarantee different than those listed above must be agreed upon in writing and signed by both parties.

Spare parts supply

- ***DIECI*** guarantees the supply of original spare parts or alternatives for 10 years starting from the date the last model of the series of interest is manufactured.

IDENTIFYING YOUR MACHINE

MACHINE MODELS

- The Manufacturer offers a range of similar machines with different technical specifications and performances.
- When consulting any table or diagram in this manual or on the machine itself, always refer to the model code number for your machine.

PEGASUS TELEHANDLERS

LIABILITY

- The machines are manufactured in compliance with the EEC regulations in effect when the machine was made available for purchase.
- Failure to observe the use and safety regulations or using the machine in less than perfect working condition may cause an accident punishable by law.
- The Manufacturer shall not be held liable for any damage to persons, things or animals caused by improper use of this machine or by any unauthorised structural modification, application or transformation.
- The Manufacturer reserves the right to carry out any possible modifications to the machine for technical or commercial reasons without notice.

IDENTIFYING THE TELEHANDLER

The machine can be identified by the serial number punch marked on the front of the chassis and inside the cab. In addition to this, the engine has its own serial number punch marked on its block.

To ensure prompt and efficient service when ordering spare parts or when requesting information or technical explanations, always give the engine and chassis serial number.

Chassis serial number .....

Engine serial number.....

Cab serial number .....

Type of machine .....

Owner/ Operator.....

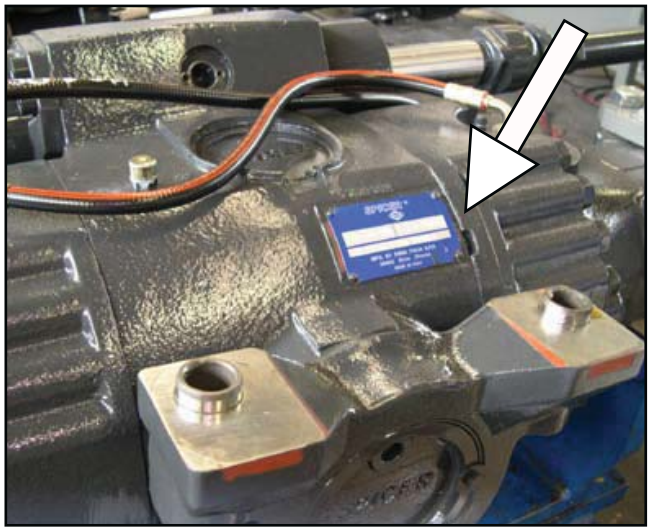
Dealer or agent's address .....

.....

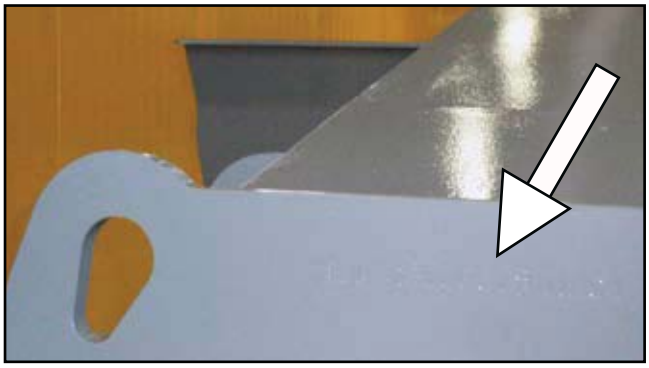
Delivery date.....

Warranty expiry date .....

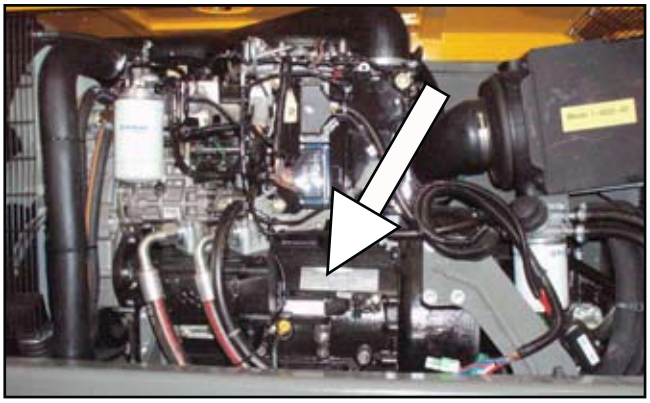
NOTE:
The telehandlers commercially known as Pegasus are stamped with a type-approval code (see the first four numbers stamped on the chassis)



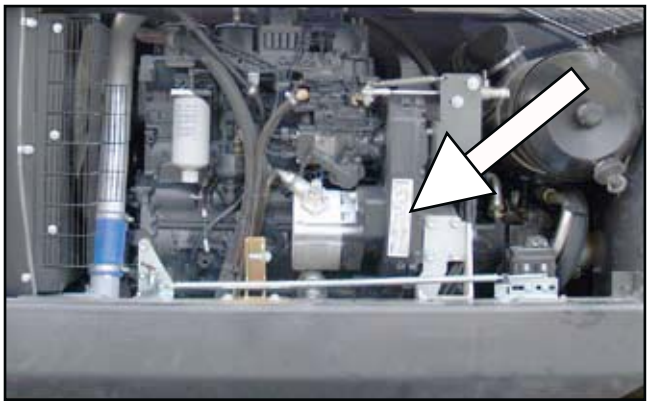
Axle serial number



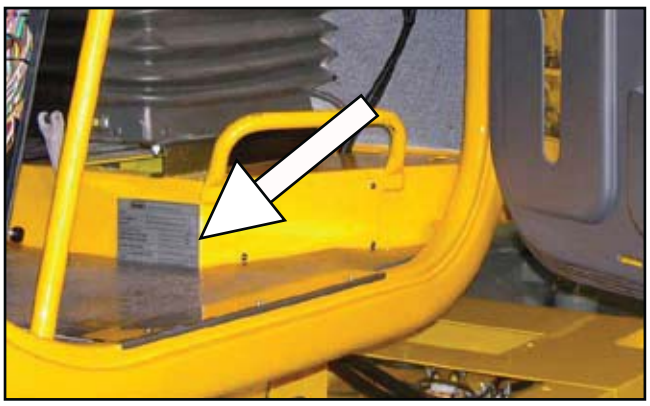
Chassis type and serial number.



Engine serial number



Iveco NEF Pegasus 38.16 engine serial N°



Specifications

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DECLARATION OF CONFORMITY

CE

(Machinery Directive 2006/42/EC, Annex II, part A)

Manufacturer : DIECI SRL
Address : Via E. Majorana, 2-4- 42027 Montecchio Emilia (RE), Italy

Name and address of the person authorised to compile the technical file: Mr. ENNIO MANGHI
DIECI SRL- Via E. Majorana, 2-4 - 42027 Montecchio Emilia (RE), Italy

Declares that:

The HVL155-type Telescopic Lift (PEGASUS **.21) Serial No. **HVL155******

- complies with the conditions stipulated in the Machinery Directive (Directive 2006/42/EC) and subsequent amendments

- complies with the conditions stipulated in the following EC directives:

2004/108/EC - Electromagnetic compatibility
2000/14/EC - Noise
Assessment of conformity Ia referred to in Annex VI carried out by the following Notified Body:
n°1232, CESMA S.c.a r.l. - Via Gorizia 42100 Reggio Emilia
Net power installed: 106 kW
Measured sound power level: LWA m = 102 dB(A)
Guaranteed sound power level: LWA = 104 dB(A).

FAC-SIMILE

With the following harmonised European Standards:

EN12100-1 and EN12100-2	- Safety of Machinery
EN 982	- Hydraulic Systems
EN 60204-1	- Electrical equipment of machines
EN 13510 : 2002	- Rops
EN 3449 : 2005	- Fops (Level II)
EN 13309	- Electromagnetic compatibility

The machine is equipped with the following accessories:
BUD10** - Pair of forks
****

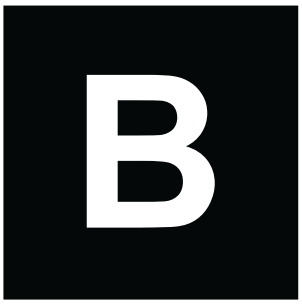
A plate bearing the CE marking is applied to the machine.

Montecchio Emilia, **/**/2010

DIECI SRL
Via E. Majorana, 2-4
Montecchio Emilia (RE)
An Administrator
MANGHI ENNIO

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SAFETY STANDARDS



RECOGNISING SAFETY STANDARDS

This is the **SYMBOL FOR A "POTENTIAL HAZARD WARNING"**



Wherever this symbol " ⚠ " appears on the machine or in this manual, there is a potential risk of injury and/or damage to people and things as well as to the machine. Take all recommended precautions and observe the use and maintenance regulations in conditions of safety.

UNDERSTANDING WARNING SIGNS

Several words are used in this manual to warn about various degrees of risk, such as:

- DANGER -

Warnings that specifically indicate potential risks for the operator or other people directly involved.

- CAUTION -

Warnings aimed at avoiding potential damage to the machine, which may involve the safety of the operator, or other people directly involved.

- IMPORTANT -

This warning indicates a situation of imminent danger, which, if not averted, may cause damage to the machine.

- PROHIBITION -

This warning indicates that it is absolutely forbidden to accomplish actions or things that are dangerous for personnel

The above words are always accompanied by the potential hazard warning symbol.

- NOTE -

Additional explanations for an item of information.

Carefully read the safety standards and comply with the recommended precautions to avoid potential dangers and to safeguard your health and safety.

The "warning: possible risk" symbols and the "warning words" have been included to highlight situations that ***DIECI*** has wanted to underline. This manual must anyway be read and learned in its entirety.

In case of doubt, please consult your agent or dealer.

GENERAL WARNINGS

This machine has been designed and constructed to be used as a self-propelled machine, with the operator in the driving seat, with tyres, designed for use on asphalt or natural surfaces and on rough ground. The machine consists of a main support structure suitable to support and rotate the telescopic boom through 360°. Forks or other attachments approved by DIECI can be assembled on the boom head. In normal use, the machine can lift, rotate and position loads by extending, retracting, raising and lowering the boom.

Any other use shall be considered in contrast to the use for which it was intended by *DIECI* who, consequently, shall not be held liable for any damage to things or the machine, nor for any injury to people caused by such use.

Any use of the machine other than the use described in this manual is strictly forbidden. Any function or procedure regarding the use and fitting of machine attachments not described in this manual are strictly forbidden.

The use manual and spare parts catalogue are an integral part of the machine and must stay with the machine when it changes owner. The manual must always be stored carefully and must always be kept onboard the machine (in the language spoken by the operator) for rapid consultation. If the manual becomes worn and/or becomes even partially damaged or illegible, replace it immediately.

The instructions for use, maintenance and repair in this manual must be implemented to comply with the prescribed use foreseen by the manufacturer.

This machine must only be used, assisted or repaired by people who have received prior instruction regarding the machine and safety regulations, as well as being authorised to use the machine.

Any procedures or maintenance operations not described in this manual are strictly forbidden and must be carried out at an authorised repair centre.

The user must always observe general safety and accident prevention regulations (such as the Highway Code if the machine is used on public roads).

DIECI shall not be held liable for any damage or injury caused by any arbitrary modification to the machine.

Everything has been done during the design and construction of this machine to make your job as safe as possible. Due caution, however, is indispensable and there is no better rule to prevent accidents.

DIECI shall not be held liable for any damage if the machine is used negligently, even if unintentional.

DIECI shall not be held liable for any damage caused by manoeuvres carried out instinctively, by reflex, in a state of panic, in case of malfunction, accident, fault, etc., while the machine is in use.

DIECI shall not be held liable for the predictable conduct of certain categories of people, such as apprentices, adolescents, the disabled, trainees.

DIECI machines may not be used for bets, competitions or for personal experience.

Read all the safety warnings on the machine and comply with their contents before starting, running, refuelling or carrying out maintenance work. Clean said warnings if covered in mud, cement or other deposits. Do not remove for any reason. If damaged, lost or illegible, replace immediately.

For you own and others' safety, do not modify the structure or settings of the various machine components (hydraulic pressure, limiting device calibration, engine speed, assembly of supplementary equipment, etc.) The same applies to disabling or modifying safety systems. In these cases, the manufacturer shall be released of any liability.

To maintain the machine in a “state of conformity”, it is compulsory to carry out scheduled inspections and controls.

DIECI **cannot predict every possible circumstance that implies a potential risk during machine use or maintenance. Subsequently, the safety warnings in the manual and on the machine cannot include every possible safety precaution. Every necessary safety precaution to avoid potential risks must be taken when carrying out any operations or procedures not expressly recommended or allowed by this manual.**

Never carry out any operations or actions expressly forbidden by this manual.

In case of doubt, please consult your agent or dealer.

PROTECTIVE CLOTHING

- Always wear garments that are appropriate for the job you have to accomplish. Do not wear loose clothing, ties, chains, belts or other accessories that may become tangled in the control levers or other parts of the machine.
- Do not wear jewellery or metallic accessories that could cause injury if they become entangled or if the wearer is subjected to electric current.
- Tie back any long hair protruding from your safety helmet to ensure it does not become tangled in the machinery.
- The operator must wear suitable protective clothing to provide adequate accident prevention depending on the type of work or site.

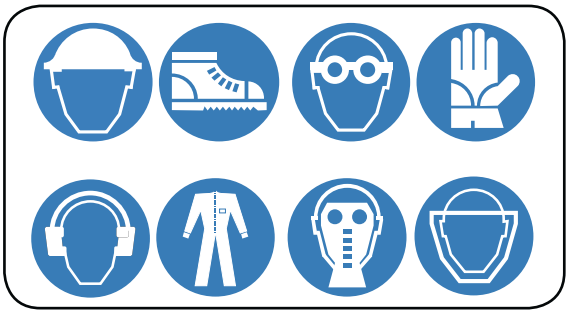
- DANGER -

Before starting to use the machine, the operator must ask the safety or site manager about possible risks and the type of protective clothing to wear.

- CAUTION -

The operator must always have the following:

- **Safety helmet;**
- **Safety shoes;**
- **Safety goggles or face shield;**
- **Safety gloves;**
- **Ear defenders;**
- **Reflective clothing;**
- **Waterproof clothing;**
- **Respirator or respiratory filter;**



- There are various types of safety garments of all sizes available on the market. Always use the most appropriate model for the type of application and ensure the garments fit properly.
- Safety clothing must be considered personal; do not wear other people's safety clothing.
- Safety clothing must always be complete and in good condition. A ruined garment no longer guarantees adequate protection. Do not wear garments that are worn; replace with new garments before you start working.
- Prolonged exposure to loud noise can damage your hearing or may cause loss of hearing. Always protect your hearing by wearing ear defenders or earplugs to protect yourself from excessive and tiresome noise.
- Do not listen to the radio or music through headphones to while using the machine. The operator must always pay the utmost attention.

INSPECTING THE MACHINE



- CAUTION -

Inspect the machine every day or every shift.
Carefully check the machine before resuming work.

- Ensure the tyres are suitable for the type of terrain. There are tyres for working on sand, earth, farmland, snow, etc. Consult your agent or dealer for more information.

- CAUTION -

If you discover any malfunctions (abnormal noise, vibrations, odour, instrument errors, smoke, oil leaks, etc.) or if the machine does not comply with safety regulations, stop using the machine and immediately report your concern to the person in charge.

- **IT IS FORBIDDEN** for the driver to carry out any repairs or adjustments unless he or she has been specifically trained to do so. The driver must keep the machine in perfect working condition if entrusted to do so.

- CAUTION -

Before starting work, ensure the machine is fully efficient to guarantee maximum efficiency and compliance with all safety regulations.

- To carry out the checks listed below, consult the chapter about maintenance in this manual.
- Carry out the functional checks and inspections listed below.
  - Parking brake efficiency.
  - Engine oil level (check and top up if necessary).
  - Hydraulic oil level (check and top up if necessary).
  - Clogged air filter indicator (check and clean if necessary).
  - Tyre condition and pressure (check).
  - Fuel level.
  - Signalling and warning devices (check).
  - Steering efficiency.
  - Service brake efficiency.
  - Nuts and bolt torque.
  - Lights.
  - Direction indicators.
  - Hazard warning lights.
  - Switches.
  - Pilot lamps.
  - Windshield wipers.
  - Reversing alarm.

If the machine is not used for a long time, it must be checked more thoroughly than usual.

Check the machine is clean

- Clean all windows, lights and rear-view mirrors. Remove any mud or waste.
- Remove any rubbish or dirt from inside the cab, especially around the pedals and controls.
- Clean the engine, articulated joints and the radiator.
- Remove any excess grease.
- Ensure the footboard and the handle are clean and dry.
- Clean all safety stickers and manoeuvring indications. Replace them if they are illegible or missing.

Check for damage

- Ensure there are no damaged or missing parts.
- Ensure all articulated pins are fastened properly.
- Ensure there are no cracks or other damage to the windows.
- Ensure there are no oil, fuel or coolant leaks underneath the machine.
- Ensure the wheel bolts are properly tightened.
- Check every safety device.
- Ensure the ROPS/FOPS structure is not damaged.
- Ensure the seat belt and relevant attachments are not damaged or excessively worn.

- CAUTION -

If there are any malfunctions, contact one of the Manufacturer's Authorised Repair Centres.

- PROHIBITION -

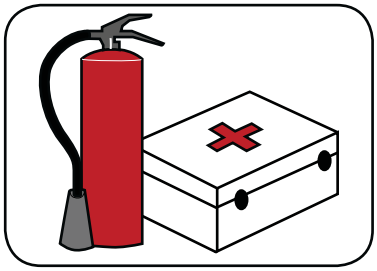
IT IS FORBIDDEN TO START OPERATING THE MACHINE UNLESS IT IS IN PERFECT CONDITION.

Adjustments

- Check the steering wheel and driver's seat adjustment to ensure it is possible to reach all driving controls comfortably. Adjust the rear-view mirrors so that it is possible to see the rear of the machine properly when sitting correctly.

PREPARING FOR EMERGENCIES

- You must always be prepared in case of a fire or accident.



- CAUTION -

Always keep a first aid kit and fire extinguisher on hand (not supplied by the manufacturer).

- Carry out regular inspections to ensure the first aid kit is complete and if necessary, replace any missing items.
- Carefully read the instructions on the extinguisher to ensure it is used properly.
- Carry out regular inspections and maintenance to ensure the extinguisher is always ready for use.
- Establish a list of priorities with the safety or works manager to be able to cope with fires and accidents.
- If there is an accident, seek medical attention immediately.
- Ensure all emergency telephone numbers for doctors, ambulances, hospitals and the fire brigade are clearly visible near the telephone.

THE DRIVER'S CAB

- Use appropriate handles and steps to reach the driver's seat.



- Always face the machine when getting in or out, keeping a tight hold of the machine using the steps and handles.
- Never use the controls for any other uses other than the uses they are designed for (e.g. to get on or off the forklift, hang clothing, etc.)
- Never jump off the machine.
- Never get on or off a moving machine. Never jump in or out of the machine.
- If the machine starts moving while no one is in the driver's seat, do not jump on the machine in an attempt to stop it.
- Never get on or off the machine while holding tools.
- Always keep footboards, steps and handles clean to ensure they are not slippery.
- Do not stick suction cups on the windows. Suction cups act like magnifying glasses and can cause fires.
- Do not use mobile phones in the cab while driving or operating the machine.
- Never put dangerous items such as inflammable or explosive objects inside the cab.



- When working in places where there is a risk that objects may fall on, bounce off or penetrate the cab and hit the operator, assemble appropriate guards to shield the operator. Always close the windows. Always ensure that any bystanders are at a safe distance and that they cannot be hit by bouncing or falling objects.
- Take the utmost care when adjusting the windows because any unintentional contact with any of the control levers could suddenly move the machine with the risk of serious injury.
- If the cabin window on the side of the boom breaks, there is a danger of contact between the operator and the boom. Stop work immediately and replace the glass.

- PROHIBITION -

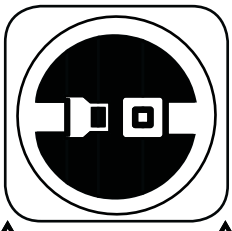
IT IS FORBIDDEN to expose arms, legs or any part of the body in general out of the driver's seat.



- CAUTION -

Only use the machine if the seat is adjusted properly. An incorrect seat adjustment can quickly tire the operator and force him or her to accomplish incorrect manoeuvres; it can alter the driver's perception of the controls and external objects; it can compromise sensitivity when carrying out manoeuvres.

- The seat must be adjusted according to the height and weight of the driver.
- The driver should be able to press the pedals down completely and operate the control levers correctly while keeping his/her back leaning well up against the back of the seat.



- DANGER -

Always fasten your seatbelt correctly before operating the machine.

- The belt is correctly adjusted when it fits snugly around your waist.

- DANGER -

The machine cab is strong enough to support the weight of the machine should it tip over (ROPS); therefore, it is essential that the driver remains firmly fastened in the seat thanks to the seat-belt to prevent him/her from falling out and possibly getting crushed.

- Before starting the machine, carefully check the belt, buckle and fastenings. If any parts are damaged or worn, replace the seat belt or the component before using the machine.
- Always remain seated with the seat belt correctly fastened while using the machine to reduce the risk of injury if you have an accident.
- After a serious accident, replace the seat belts even if they do not appear damaged.

- DANGER -

Do not carry passengers on the machine.

- DANGER -

The operator must always remain seated in the normal driving position.

AUTHORISATION TO DRIVE THE MACHINE

- CAUTION -

Comply with the legislation in effect in the country where the machine is used.

- CAUTION -

Only qualified and specifically trained staff may use the machine.

The machine may only be driven by people authorised to do so by the plant/site manager in charge of the premises where the machine is used.

- The user must always be able to produce the authorisation while using the machine.
- The driver may not allow any another person to drive the machine.
- Any use of the machine must also comply with good working standards.

STARTING THE MACHINE

- Regardless of the driver's experience, before starting the machine, take time to become familiar with the location and function of every control and instrument.
- Never drive the machine with wet or greasy hands or shoes.

- DANGER -

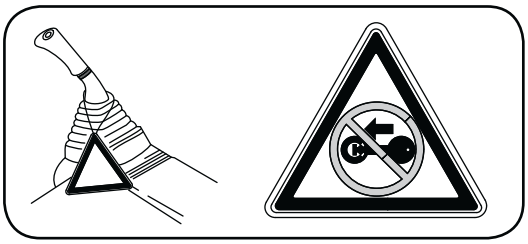
Before starting the engine, ensure all the control levers are in neutral, the parking brake is engaged, the engine bonnet is closed and that no one is standing near the machine.

- DANGER -

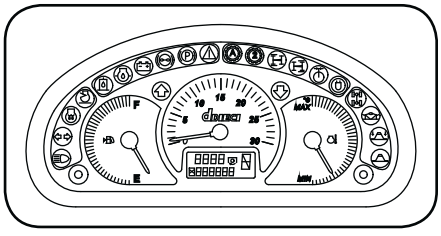
The machine may only be started or manoeuvred if the driver is sitting in the driver's seat with the seat belt properly adjusted and fastened.

The operator must always be in control of the machine.

- Use the audible alarm or other signals to warn anyone in attendance before starting the vehicle.
- The vehicle could move and cause unwanted damage if it is started up without following the correct procedure.



- Never start the engine or touch the levers if a danger sign is displayed inside the cab.
- Never start the engine by short-circuiting the terminals on the starting motor.
- If you use auxiliary batteries, beware because the gas in the auxiliary batteries could explode causing serious damage.
- When starting with auxiliary batteries, follow the instructions in the paragraph "STARTING WITH AUXILIARY BATTERIES". Any errors while carrying out the procedure can cause serious damage to the electrical/electronic systems, sudden machine movements, battery explosion, as well as damage to things and injury to people.



- Observe the control instruments immediately after starting the engine, after the engine has warmed up and at regular intervals during use to rapidly identify and solve any malfunctions.

WORKING IN CONDITIONS OF SAFETY

- DANGER -

DO NOT USE THE MACHINE IF YOU ARE UNDER THE EFFECT OF ALCOHOL, DRUGS OR IF YOU HAVE TAKEN ANY MEDICATION THAT MAY MAKE YOU DROWSY OR ALTER YOUR PROMPT REACTIONS.

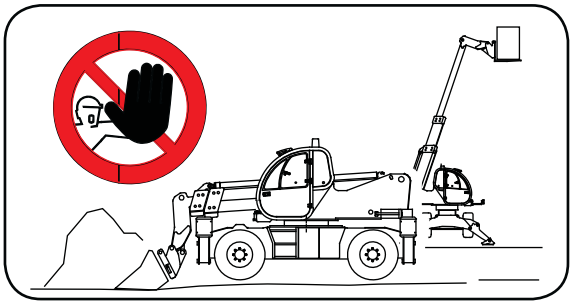
- DANGER -

DO NOT TRANSPORT PASSENGERS ON THE MACHINE OR INSIDE THE CAB NOR ON ANY OTHER PART OF THE TELEHANDLER OR ON ANY ASSEMBLED ATTACHMENTS (EXCEPT FOR THE MAN BASKET).

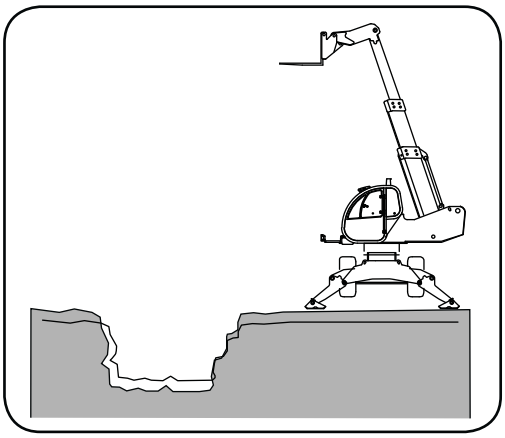
- DANGER -

ENSURE THE REAR-VIEW MIRRORS ARE IN THE CORRECT POSITION. BEWARE: YOUR PERCEPTION CAN BE DISTORTED BY THE REAR-VIEW MIRRORS; OBJECTS MAY BE CLOSER THAN THEY APPEAR. IN SPITE OF THE REAR-VIEW MIRRORS, THERE MAY BE SOME BLIND SPOTS THE OPERATOR CANNOT SEE. ALWAYS USE THE UTMOST CAUTION.

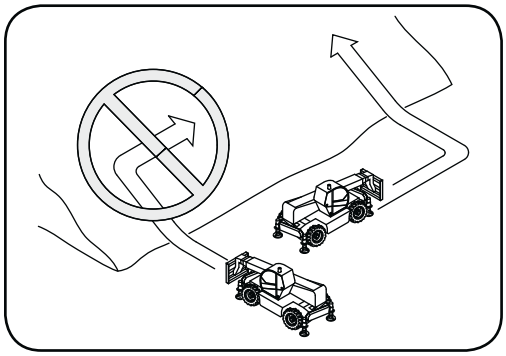
- While the machine is running, always keep the light signals on to warn others that the machine is in use.
- Inspect the work area before starting to operate the machine.
- Inspect the terrain and the ground conditions on the site and establish the safest conditions in which to work. Do not work where there is a risk of landslides or rock falls.
- Always take the due precautions to ensure unauthorised people cannot approach the work area.
- When moving or operating in deep water or on soft ground, before starting work check the conformation and conditions of the machine base, the depth and speed of the water.
- Always drive forwards and always keep a clear view of the road.
- Do not drive with your foot on the brake or while the parking brake is engaged.
- Continually estimate your braking distance.
- Do not drive too fast.
- Always look in the direction you are travelling and always keep a clear view of your route. Use the side rear-view mirrors frequently and ensure they are in good condition, clean and properly adjusted.
- Keep windows, mirrors and lights clean and in good condition.
- Check that the bonnets and the door are closed properly before starting to operate the machine.



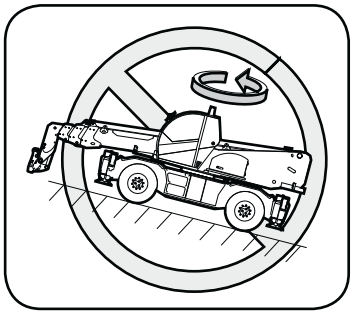
- When working in congested areas, use the due signals; when carrying out work that involves several machines, use signals that will be recognised by everyone in attendance. Appoint one person to signal and coordinate the work zone. Ensure that everyone follows the directions given by the person in charge of signalling.
- When work conditions require a person on the ground, he or she must use hand signals that comply with local regulations.



- Beware when working on the edge of an excavation or a road, or on unstable ground. Keep at a safe distance, the machine could roll-over. Use a person on the ground for signalling. Do not forget that after heavy rain, the use of explosives or earthquakes, the ground will be more fragile.
- The machine can roll-over or slide on sloping ground. Adopt the due precautions.



- Always travel in a straight line when ascending or descending slopes. Travelling crossways or along the slope is extremely dangerous.

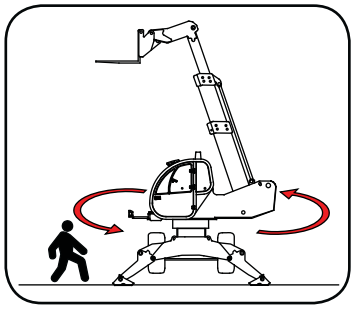


- When working on slopes there is a danger that the machine can lose balance and roll-over while rotating or activating the work attachments. Always maintain a stable position, do not turn the turret or use the attachments.
- Drive slowly on grass, leaves and wet steel plates. The machine can slide or become unbalanced with a risk of overturning even on gentle slopes.
- When working on the upper part of buildings or on the floors of buildings or other structures, check stability before starting operations. The buildings could collapse causing serious injury and damage.
- Do not use the impact force of the machine to carry out work. These machines are not designed for this type of use; this type of use could overturn the machine, damage or break components and attachments and cause serious personal injury.

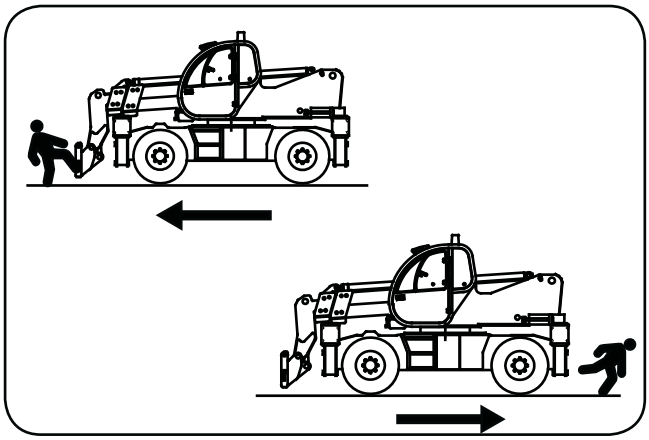
- CAUTION -

Snow hides obstacles and dangers, it buries objects, fills in holes and ditches. If there is snow on the ground, proceed with the utmost caution. IT IS STRICTLY FORBIDDEN to work if there is so much snow that it is not possible to identify any obstacles or dangers along your route clearly.

- When clearing away snow, be careful not to leave the edge of the road, objects buried below the snow on the edge of the road could make the machine roll-over or damage its components.
- Surfaces covered in snow or ice are extremely hazardous; operate with the utmost care and drive the machine as slowly as possible and operate the levers slowly.
- Operate with the utmost care, if the machine plunges into the snow there is a risk of overturning or being buried. Take the utmost care to ensure you do not leave the edge of the road and to avoid becoming trapped in snowdrifts.
- Take the utmost care on frozen ground; when the temperature rises, the terrain melts and becomes slippery.
- Look out for electricity cables, ditches, excavated ground or recently filled excavations.



- Ensure there is no one at risk while reversing the machine or rotating the turret.
- Check the space around the machine before carrying out any manoeuvres.



- Ensure that no one is within the range of the machine or in the work area.
- If the operator's view is obstructed, use a person on the ground to supervise manoeuvres. Always maintain visual contact with the person on the ground.

- CAUTION -

Do not attempt operations that exceed the capacity of the machine.

- CAUTION -

Do not raise loads that are heavier than the capacity of the machine or the attachment and do not increase the counterweight, whatever strategy employed.

- Drive around obstacles.
- When raising loads ensure that nothing or no one can hinder machine movements and avoid incorrect manoeuvres.
- Never leave the engine running if the driver is not in his or her seat.
- Never leave the key in the machine if the operator is not present.

- CAUTION -

Never park the machine with a raised load.

- Dust, rain, fog, etc. can reduce visibility. If visibility is reduced, reduce your speed accordingly and use appropriate lighting.

- The machines are only equipped with road lights. If the machine is used at night or in tunnels, suitable external lighting should be arranged.
- Never raise a load using just one fork.
- Do not lift, move or rotate the attachment above people. Spillages from the attachment or knocking the attachment against something can cause damage.
- Never authorise anyone to approach or pass below a load.
- In certain conditions, fragments of material may be expelled while you are working. In this case, wear protective goggles and keep anyone not equipped with goggles at a distance.
- Beware of collapsing walls, landslides, materials or objects falling from the attachment that could break the cab window and injure the operator.
- Never carry out any operations of any type below an overhang; it could collapse and fall on the machine.
- Never attempt to overfill attachments or carry loads that could spill or turn over.
- Using two machines at the same time to handle heavy or voluminous loads is dangerous and requires special precautions. Only carry out this type of manoeuvre in exceptional cases and when the person in charge of handling the load is in attendance.
- Do not carry out manoeuvres near combustible materials.

- CAUTION -

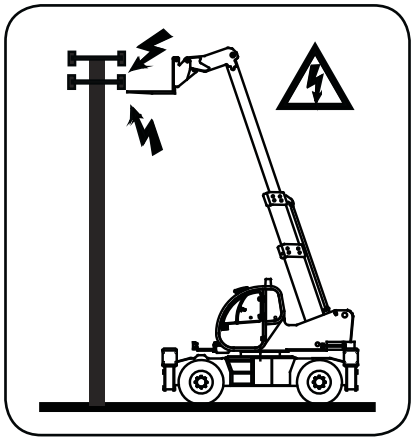
While driving or manoeuvring the machine, keep the height of the various parts of the machine in mind. Remember certain parts protrude beyond the dimensions of the cab.

- The machine is equipped with a safety cab that offers protection from falling objects (FOPS). It is compulsory to wear a helmet if there is a risk of objects falling from above.
- Do not use the attachment at night, in dark or poorly lit environments unless the machine is equipped with work spotlights (optional). For more information, please contact your dealer.

- CAUTION -

Before driving the machine onto a loading bridge, ensure that the bridge is properly positioned and anchored, that the vehicle to which it is connected (trailer, lorry, etc.) cannot move, that the bridge can support the total weight of the machine and its load and that the bridge is wide enough for the machine.

- Beware of loading bays, trenches, scaffolding and excavations that have been recently excavated or filled.
- When driving the machine on the road and/or on slopes, pay the utmost attention to the engine speed. High engine speeds can cause mechanical malfunctions. Always keep an eye on the engine rpm and speed. **When the engine reaches 2350 rpm, the control panel will trigger a continuous acoustic alarm to warn that the engine is over revved and the "general alarm" pilot lamp will light up on the central control panel.**



- CAUTION -

When working near overhead electricity lines, ensure the safety distance between the machine and the electricity line is sufficient.

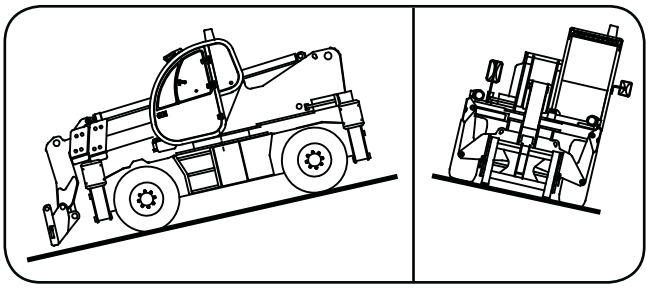
Ask your local electrical company for information. Never work less than 5 metres from electric cables. Damp ground increases the danger area affected by electric discharges.

- CAUTION -

Do not work or park the machine near electricity cables; you could be electrocuted or seriously injured.

***DIECI* strongly recommends that the safety regulations employed onsite comply with the local regulations in effect for any type of work carried out near electricity lines.**

- Use a person on the ground to signal when the machine is too close to electricity cables.
- When working near electricity cables ensure that no one approaches the machine. Always wear rubber shoes and gloves to ensure you are prepared for any emergency. Cover the seat with a rubber sheet and ensure you do not touch the chassis with unprotected parts of the body.
- If the machine crashes into an electricity cable, to avoid being electrocuted, the operator must not abandon the cab until it has been confirmed that the electricity supply has been disconnected.



- Driving sideways along slopes can cause the machine to roll-over or slide. Adopt the due precautions.
- Do not leave a loaded machine on a slope with a gradient over 15%, even if the parking brake is engaged.

- When changing an attachment, to avoid damaging the hydraulic fittings switch off the engine and wait a minute to discharge the pressure from the circuit. Always clean the fittings before fitting another attachment.
- Check the quick-fit connections on the attachment circuits daily to ensure they are clean, protected and in good condition.

- CAUTION -

Anyone using the machine who realises it is not functioning properly or that it does not comply with safety regulations, must immediately report this to the person in charge.

- PROHIBITION -

IT IS FORBIDDEN for the driver to carry out any repairs or adjustments unless he or she has been specifically trained to do so. The driver must keep the machine in perfect working condition if entrusted to do so.

- PROHIBITION -

IT IS STRICTLY FORBIDDEN to attempt to start the machine by pushing or towing it. These operations can cause serious damage to people and the gears.

- If the machine is used in low temperatures (-10°C), drain the tanks and refill using lubricants, fuel and coolants suitable for cold temperatures.

- CAUTION -

IT IS FORBIDDEN to use the machine in protected environments such as refineries or explosive atmospheres.

Specific equipment exists for use in these types of environments. Consult you dealer or agent.

- Ensure the service brakes and horn work properly.
- Slow down before making a turn.
- Always ensure you are in control of the machine and its respective speed.
- Do not reverse over long distances.
- Brake gradually, do not brake sharply.
- Always remember that hydraulic steering is very sensitive to steering wheel movements, steer gradually and smoothly.
- When the machine is loaded, never exceed 10 Km/h.
- It is forbidden to transport loads on roads. Any accessories assembled on the machine must either feature standard equipment or be disassembled.

- PROHIBITION -

IT IS STRICTLY FORBIDDEN to transport or lift people with the machine, unless the machine is equipped to do so and is certified to lift people.

- Comply with the indications regarding load programs.

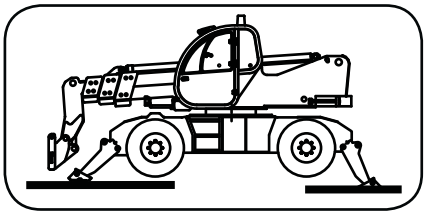
- CAUTION -

Every time the machine is used, ensure any attachments are correctly assembled and fastened onto their supports.

- CAUTION -

Before using the machine, always ensure the safety system settings in the cab comply with the assembled accessory.

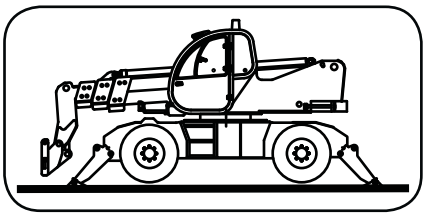
- The indications provided by the anti roll-over system must be considered valid for machines in standard work conditions, on level and solid ground with a functioning and properly calibrated attachment. In any case, never exceed the limit values in the load diagram.
- Never approach naked flames with the attachments.
- Never hoist loads harnessed with a single fork or with a plank.
- When rotating the turret, ensure it does not crash into obstacles.



- When using on sloping ground, before raising the boom, ensure the machine is perfectly levelled.
- When moving along longitudinal slopes:
  - Move forward and brake gently.
  - When moving without a load: ensure the forks or at tachment are facing downhill.
  - When moving with a load: ensure the forks or attachment are facing uphill.
- Ensure the rotation locking pin is not inserted before rotating the turret.

- CAUTION -

THE MACHINE IS TYPE-APPROVED TO WORK ON 4 COMPLETELY OR PARTIALLY EXTENDED STABILISERS.
DO NOT USE THE MACHINE WITH ONLY 1, 2 OR 3 STABILISERS.



- CAUTION -

THE MACHINE IS INTENDED AS STABILISED WHEN ALL 4 TYRES ARE COMPLETELY RAISED OFF THE GROUND.

HANDLING LOADS

- CAUTION -

Always comply with safety regulations; always carry balanced and correctly positioned loads to avoid any risk of overturning.

- Always insert the forks completely under the load and raise to the handling position (forks 300 mm off the ground and tilted backwards, boom completely retracted).
- Always ensure pallets, boxes, etc. are in good condition and suitable for the load to be raised.
- Only manoeuvre the machine while the boom is raised in exceptional cases. In such cases, operate with the utmost prudence, moderate your speed as much as possible and brake gently. Ensure you always have sufficient visibility and use a person on the ground to guide you during operations.
- During handling operations limit your speed as much as possible and brake gently.
- Do not manoeuvre the load while the machine is moving.

- CAUTION -

Loads can only be handled when in "I" creep speed gear.

- Before turning, moderate your speed as much as possible and keep an eye on the load.
- Handle loads with care, drive slowly without making any abrupt or jolted manoeuvres, especially if the loads are raised at great heights.
- Do not change direction abruptly at high speed.

- CAUTION -

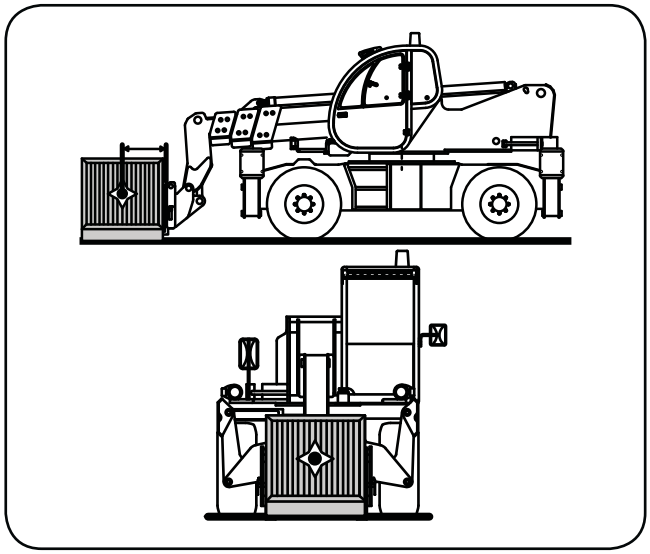
IF THE MACHINE ROLLS OVER, DO NOT ATTEMPT TO GET OUT DURING THE ACCIDENT. ALWAYS FASTEN YOUR SEATBELTS WHILE DRIVING THE MACHINE. YOU ARE BEST PROTECTED WHEN YOU ARE INSIDE THE CAB WITH THE SEATBELT FASTENED.

- Always use the parking brake to put down or raise a load on a slope.
- Always ensure you have a clear view of the work area (both directly and through the rear-view mirrors) to check for any bystanders, animals, obstacles, holes, changes in gradient, etc.
- Visibility is reduced on the right while the boom is being manoeuvred, therefore before lifting anything, ensure the work area is clear, take note of the position of any possible obstacles and irregularities on the ground.
- If visibility is compromised by the overall dimensions of the circular load while reversing, only carry out this type of manoeuvre in exceptional circumstances and over short distances and on condition there is a man on the ground able to monitor manoeuvres.
- Always ensure visibility is good (clean windows, rear-view mirrors, headlamps clean and functioning properly, etc.)

- CAUTION -

The standard lighting on the telehandler is not suitable for use in environments where there is scant visibility or at night. There are various options available to improve visibility in poor light conditions. Please contact your *DIECI* dealer.

- **IT IS FORBIDDEN** to lift or handle loads over the rated capacity of the machine or attachment.

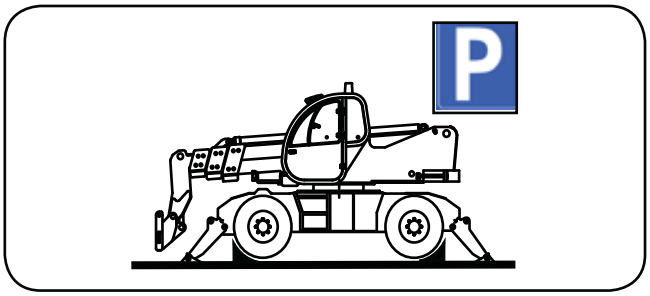


- CAUTION -

BEFORE RAISING A LOAD IT IS COMPULSORY TO KNOW THE WEIGHT OF THE LOAD AND ITS CENTRE OF GRAVITY.

- The load diagrams are valid for centres of gravity at 500 mm from the heel of the forks. For centres of gravity at greater distances, contact your dealer.
- Take the **UTMOST CARE** when handling loads with a variable centre of gravity (e.g. liquids). Operate with particular care to limit any variations as far as possible; danger of rolling the machine over.
- **BEWARE** of the risk of crushing your limbs while manually adjusting the forks.

PARKING THE MACHINE



- Always park on flat, solid and level ground, where there is no risk of rock falls, landslides or flooding.
- Lower the stabilizers on the ground (if the machine has stabilisers).
- Completely retract the boom and lower to ground level.
- Engage the parking brake.
- Place the gear lever in "N".
- Allow the engine to idle for some 60 seconds before switching off to allow the engine to cool.
- Turn the ignition key to the engine off position.
- Remove the key from the ignition.
- Block the hydraulic controls using the appropriate devices (if present).
- Close the windows and lock using the handles.
- Close and lock the door of the cab.
- Place the wedges under the wheels.
- Ensure that the machine is parked so that it does not hinder circulation and is at least 3 metres from any railway tracks.

TEMPORARY HALT

- Slowly release the accelerator pedal.
- Stop the machine on a level surface.
- Engage the parking brake.
- Place the gear lever in "N".
- While the machine is being run in (50 h) do not allow the diesel engine to idle for long periods.

- CAUTION -

IF YOU HAVE TO ABANDON THE DRIVER'S SEAT, CARRY OUT THE PROCEDURE DESCRIBED IN THE PARAGRAPH "PARKING THE MACHINE".

ROAD USE

- CAUTION -

BEFORE DRIVING THE MACHINE ON THE ROAD, ENSURE YOU ARE COMPLYING WITH THE LEGISLATION AND STANDARDS IN EFFECT IN THE COUNTRY OF USE.

THE REGULATIONS FOR DRIVING ON PUBLIC ROADS ARE STATED IN THE REGISTRATION CERTIFICATE.

- Use dimmed headlamps even during daylight hours and on roads where there is no need to use visual signalling devices or lights.
- Check the headlamps, the indicator lights and the windscreen wipers are clean and working properly.

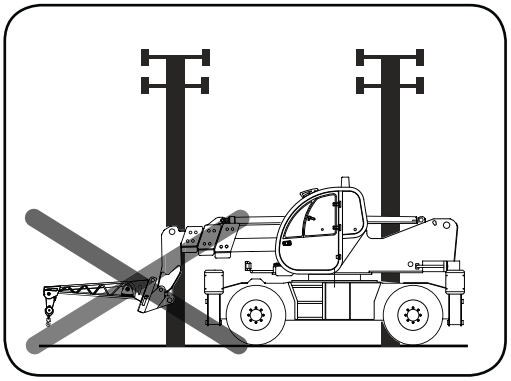
- CAUTION -

ENSURE THE REAR-VIEW MIRRORS ARE POSITIONED CORRECTLY.

BEWARE: YOUR PERCEPTION CAN BE DISTORTED BY THE REAR-VIEW MIRRORS; OBJECTS MAY BE CLOSER THAN THEY APPEAR.

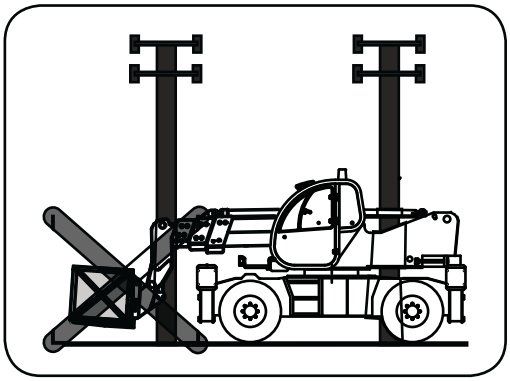
ROAD USE (INSTRUCTIONS)

- Realign the turret with the lower chassis.
- Act on the levelling control switch to level the machine chassis with the axles.
- Use the locking device to lock hydraulic rotation.
- Ensure all the stabilisers are perfectly retracted and raised.
- Close the telescopic boom completely.
  Lower the main boom completely and raise it slightly (300 mm off the ground).
- Ensure the lights are working correctly before going onto public roads. Ensure the slow vehicle revolving light signal is installed and working; keep the revolving light switched on day and night.
- Balance the wheels. **IT IS COMPULSORY** to set the steering as shown in the machine manual and to block the selection lever using the relevant device. In Italy, select 4 wheel steering mode; on public roads do not use crosswise or 2-wheel steering.
- Ensure there is enough fuel.
- Assemble the accessories required for road use, depending on the country where the machine is being used.
- Place an oversize load sign on the head of the boom before taking the machine on public roads.
- Always evaluate the itinerary to be covered, including overhead structures (such as bridges, underpasses, etc.) that could be damaged by the machine.
- In some countries, it is compulsory to have and use a wedge for the wheels when the vehicle is at a standstill.
- Ensure your machine complies with local legislation as regards the presence of a number plate when driving on roads during the day and at night.



- CAUTION -

IT IS FORBIDDEN TO DRIVE THE MACHINE WITH ATTACHMENTS FASTENED ON THE FORK HOLDER PLATE EXCEPT FOR THOSE PERMITTED BY THE STANDARDS IN EFFECT IN THE COUNTRY WHERE THE MACHINE IS BEING USED.

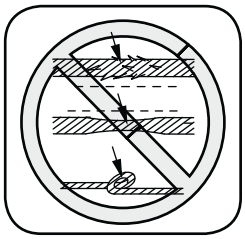


- CAUTION -

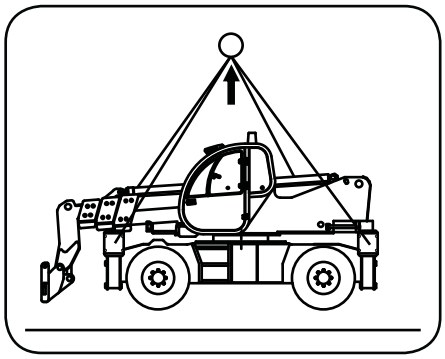
DO NOT USE THE MACHINE ON PUBLIC ROADS WHEN CARRYING A LOAD.

HOISTING THE MACHINE

- Disassemble any attachments from the machine.
- Completely retract and lower the boom.
- When the machine is in position, engage the parking brake and position the gear selector in neutral "N".
- Close the windows and lock the door of the cab.
- Ensure that the hoisting mechanism has a suitable capacity for the weight of the machine before attempting to hoist it. The weight of the machine is displayed on a plate.

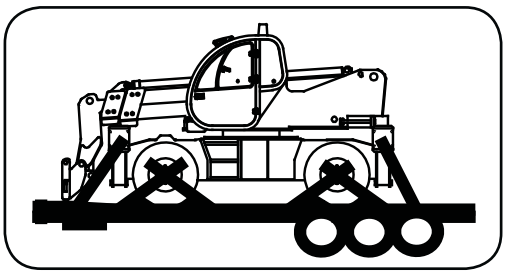


- Always ensure the devices used to anchor the machine (cables, chains, wedges, etc.) are in good condition; ensure they are not worn, broken or twisted.
- Check the capacity of the anchors before hoisting the machine.
- Check the overall dimensions of the machine.
- Use the hoisting points illustrated in the figure and marked on the machine with the appropriate symbols.
- Before hoisting the machine, ensure there are no unauthorised people in the surrounding area.
- Bear in mind the location of the centre of gravity of the telehandler.
- Slowly hoist the machine with the utmost care.



TRANSPORTING THE MACHINE

- Before transporting the machine, ensure that the rules and regulations of every area the machine will travel through are complied with.
- Disassemble any attachments from the machine.
- Completely retract and lower the boom.
- Before loading the machine onto the means of transport, ensure there is no grease, ice or other slippery substances on the machine or the ramp.
- Ensure the brake is engaged on the tractor and the trailer.
- Ensure the safety instructions regarding the transport platform have been applied correctly before loading the machine and that the driver of the means of transport is informed about the overall dimensions and weight of the telescopic handler.
- Load and unload the machine on solid and level ground.
- Check the overall dimensions for the maximum and minimum heights above ground and the permitted weight. Check the authorised soil contact pressure for the platform compared to the machine.
- Load the machine on the means of transport (ensure the ramps are correctly and safely positioned).
- Load the machine parallel to the platform.
- Manoeuvre the machine with caution onto the means of transport.
- When the machine is in a safe position, engage the parking brake and position the gear selector in neutral "N".
- Place wedges under the front and rear of the tyres on the machine. Anchor the machine to the means of transport with cables or chains. Tighten the cables and/or chains.
- Close the windows and lock the door of the cab.



- Use the anchor points illustrated in the figure and marked on the machine with the appropriate symbols.
- Always ensure the devices used to anchor the machine (cables, chains, wedges, etc.) are in good condition and that the capacity of the means of transport is suitable for the weight to handle.

- CAUTION -

Carefully comply with all the steps described above to ensure the machine is transported safely.

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ELECTROMAGNETIC INTERFERENCE

- Some machines can be equipped with electronic components whose function can be influenced by electromagnetic interferences from other appliances that are not part of the machine. These interferences can be considered a danger to people.
- If any auxiliary equipment is installed, the user must check whether the installation causes any interference at all with the instruments on the vehicle; if it does, the user must get rid of the interference.

It is of the utmost importance to pay particular attention to mobile equipment, such as radio equipment (telephones) which must be installed by specialised technicians and feature external antennas.

In general, bear in mind that any additional electrical equipment installed must comply with Directive EMC EEC/89/336 and feature the “CE” mark.

VIBRATIONS

Take into account the following recommendations to reduce the operator’s exposure to vibrations:

- Always use tools that are suitable for the type of job to carry out.
- The driver’s seat must be correctly adjusted according to individual requirements. Inspect and if necessary repair the seat suspensions and adjustment mechanisms.
- Ensure that the machine is kept efficient and carry out machine maintenance as prescribed by the manual.
- Steer, accelerate, brake, change gear and move attachments smoothly.
- When in transit, adjust the speed of the machine to minimise vibrations. Reduce speed to avoid jolts. Transport the machine if there is a considerable distance between work sites.
- Keep the workplace in good condition, remove stones and obstacles, fill depressions or holes, etc.
- To avoid back problems, only use the machine if you are in good health. Take breaks to reduce the amount of time spent sitting in the same position. Never jump out of the cab or off the machine. Avoid repeatedly handling and lifting loads.

CARRYING OUT MAINTENANCE WORK SAFELY

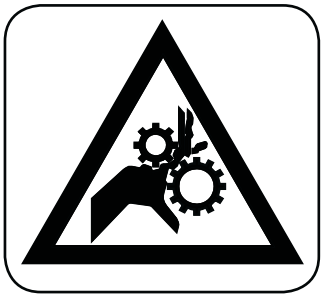
- Do not leave tools or other items lying around the workplace. Clean up any traces of grease, oil or other substances that could be slippery. Always keep the workplace clean and tidy so you can work safely.
- For the sake of safety, place rags soaked in grease and/or other inflammable materials in a safe container.
- Only use tools that are suitable for the tasks to carry out and ensure they are used properly. The use of damaged, poor quality, defective, random or unsuitable tools can cause serious injury.
- Never hit the machine or any part of the machine with hammers or other tools, splinters or rebounding tools can cause injury.
- It is possible to slip or fall on a machine covered in mud, oil etc. This will also make it more difficult to carry out a visual analysis of machine components during inspections or maintenance work. Carefully clean the machine before every intervention.

Do the following before carrying out any maintenance on the machine:

- Park the machine on flat and solid ground.
- Completely retract and lower the boom.
- Leave the boom raised and apply the safety rod if the maintenance work requires the boom to be raised.
- Allow the engine to idle for some 60 seconds to cool it down.
- Turn the ignition key to the engine off position.
- Remove the key from the ignition.
- Release any residual pressure in the hydraulic system by repeatedly acting on the hydraulic distribution levers while the engine is switched off.
- Apply a "Maintenance in Progress" notice on the door of the cab and inside the cab on the joysticks.
- Apply barriers and spacers to prevent unauthorised staff from approaching the machine.
- Disconnect the battery cut-off switch.
- Leave the engine to cool down.

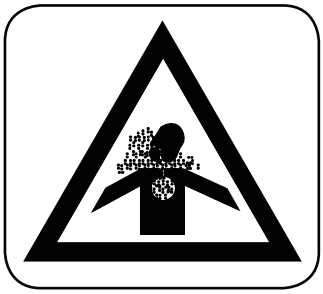
- Ensure you are familiar with the maintenance procedures before starting work.
- Keep the work area clean and dry.
- Do not lubricate parts or carry out any maintenance work when the machine is moving.

- Do not carry out any maintenance while the engine is running. If it is necessary to carry out maintenance work while the engine is running, seek the assistance of at least two workers and proceed as follows:
  - One person must remain seated in the driver's seat, ready to switch off the engine at any moment. All the workers must continually maintain contact with each other.
  - Take the utmost care to avoid being trapped by components while working near the fan, fan belt or other rotating parts.
  - Do not touch any levers or pedal controls. If it is necessary to act on any lever or pedal, always tell the others to keep at a safe distance.
  - Do not drop or insert any tools or other objects in rotating machine parts; the parts can break or fly into the air.
- If it is necessary to go underneath the attachment or the machine to carry out maintenance work or to service parts, firmly support the attachment and the machine with blocks and supports solid enough to support the weight.
- Place any attachments removed from the machine in a safe place, where they cannot fall. Adopt the due precautions to ensure that unauthorised people cannot enter the storage area.
- Do not place metallic parts on the battery.
- Any welding must be carried out by a qualified welder and in a place with adequate equipment. While carrying out any welding, there is a danger of gas leaks, fires and electric shock; therefore ensure such work is not carried out by unqualified personnel.
- Disconnect the wires from the battery before acting on the electrical system or before doing any arc welding on the machine.
- When carrying out electric welding, connect the ground terminal of the welding machine as near as possible to the area to be welded, to prevent the electric current from passing through ball bearings, articulated joints, hydraulic cylinders or reciprocal sliding parts. If welding is carried out near the oil or fuel tank, drain them beforehand.



- CAUTION -

ENTRAPMENT IN MOVING PARTS CAN CAUSE DAMAGE. TO PREVENT ACCIDENTS, ENSURE NO PARTS OF YOUR BODY, HAIR OR CLOTHING CAN BECOME TANGLED IN MOVING PARTS.



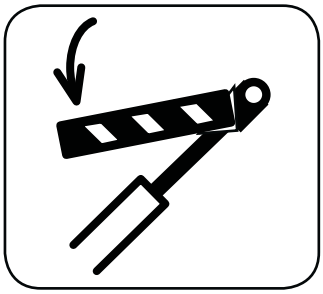
- DANGER -

ENGINE EXHAUST GASES ARE TOXIC AND CAN BE HAZARDOUS FOR YOUR HEALTH.

- DANGER -

THE MACHINE MUST BE PLACED OUTDOORS WHILE THE ENGINE IS RUNNING.

ONLY PLACE THE MACHINE INDOORS IF THE LOCATION IS ADEQUATELY VENTILATED AND THE MACHINE IS EQUIPPED WITH FILTERS.



- CAUTION -

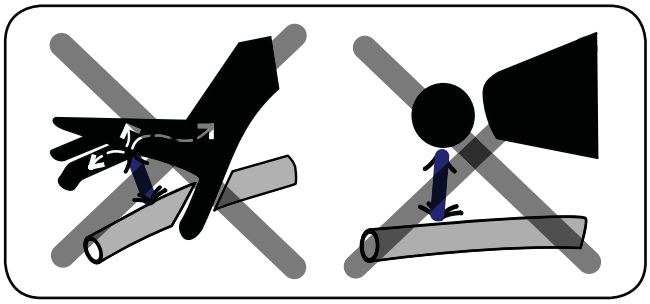
IF YOU NEED TO WORK UNDER ANY RAISED MOBILE PARTS, (BOOMS, SHOVELS, ETC.) BLOCK THE PARTS WITH SPACERS PLACED ON THE CYLINDER RODS OR PLACE THE PARTS ON ADEQUATELY SIZED SUPPORTS.

- Replace any worn or broken components.
- Eliminate any accumulations of grease, oil or deposits.
- After the machine has been used, the engine coolant will be hot and pressurised. Any contact with hot water and/ or steam may cause serious burns.
- Avoid any possible injury caused by hot water jets. Do not remove the radiator cap until the engine has cooled down. To open, unscrew the cap as far as possible. Before removing the cap, release any pressure.
- To prevent burns caused by oil or other red hot parts while checking or unloading, allow the oil to cool down (you should be able to touch the cap with your hand) before starting work. Even when the oil has cooled down, unscrew the cap very gently to release the inside pressure before removing.



- CAUTION -

BEWARE OF BURNS; THE ENGINE OIL OF THE REDUCTION GEARS AND THE HYDRAULIC SYSTEM, AS WELL AS THE PIPES, ENGINE AND OTHER COMPONENTS BECOME VERY HOT WHEN THE MACHINE IS IN USE. WAIT UNTIL ALL PARTS COOL DOWN BEFORE STARTING ANY MAINTENANCE OR REPAIR WORK.



- Fluids such as fuel or hydraulic oil under pressure can penetrate the skin and eyes causing serious injuries. Avoid these risks while carrying out repairs or maintenance on the machine.
- Discharge any pressure (using the hydraulic levers of the distributors) before disconnecting or repairing pipes or hydraulic parts.
- Do attempt to loosen fittings, hoses or hydraulic components while the circuit is pressurised.
- Before restarting the engine, ensure that all fittings have been properly tightened.
- Use a piece of cardboard to check for any leaks; ensure your hands and body are protected against pressurised fluids.
- Any fluids injected under the skin must be removed surgically. If there is an accident, seek medical attention immediately.
- Do attempt to loosen fittings, hoses or hydraulic components while the circuit is pressurised.
- Never touch the coolant in the air conditioner. If the coolant in the air conditioner squirts into the eyes, it can cause blindness; if it touches the skin, it can cause freezing phenomena.
- Cleaning with compressed air poses the risk of serious injury caused by flying particles. Always wear safety goggles, a dust mask, gloves and other safety equipment.

- CAUTION -

CHANGING THE ADJUSTMENT AND/OR DISASSEMBLING BALANCING VALVES AND SAFETY VALVES CAN BE DANGEROUS.

ONE OF THE AFOREMENTIONED VALVES CAN ONLY BE DISASSEMBLED IF THE RELATIVE JACK IS AT A STANDSTILL AND IF THERE IS NO PRESSURE IN THE HYDRAULIC CIRCUIT.

THIS OPERATION CAN ONLY BE CARRIED OUT BY AUTHORISED PERSONNEL.

- Only use the lubricants indicated by ***DIECI***, never use used lubricants.

STORING THE MACHINE/PROLONGED INACTIVITY

Before a long period of inactivity, observe a number of precautions, such as:

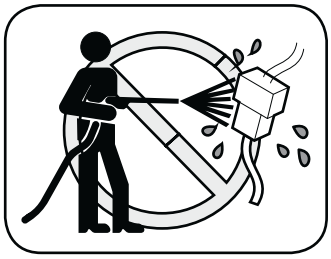
- Clean the machine.
- Touch up the paintwork where necessary to prevent rust.
- Lubricate all the lubricators.
- Check whether there are any worn or damaged parts on the machine and replace them as necessary.
- Drain the oil from the engine and replace with new oil.
- Clean the fuel system and change the filter cartridges.
- Empty the usual fuel from the tank and replace with ten litres of special fuel for long periods of inactivity. Allow the engine to run for ten minutes so the new solution is distributed evenly.
- Drain the coolant from the radiator and the cylinder block and refill with a solution of antifreeze and water.
- Store any equipment.
- Realign the turret.
- Completely lower the boom.
- Remove the battery and store in a warm, dry place. Recharge the battery regularly.
- Raise the machine onto stands to take the weight off the tyres.
- Cover the exhaust opening.
- Cover the exposed rods on the hydraulic cylinders with a light layer of grease.
- Close and lock all windows.
- Lock the door.

GETTING THE MACHINE READY AFTER A LONG PERIOD OF INACTIVITY

- Inflate the tyres to the correct pressure.
- Remove the stands from under the axles.
- Fill the fuel tank.
- Check the level of the coolant in the radiator.
- Check the various oil levels.
- Assemble a fully charged battery.
- Remove the cover from the exhaust pipe.
- Remove the layer of grease from the uncovered cylinder rods.
- Switch on the engine and ensure all controls are working properly.
- Leave the engine to idle without any load for a few minutes.
- Ensure the braking system is working properly.

CLEANING YOUR MACHINE

- Switch off the engine, remove the key from the ignition and wait for the various components to cool down.
- Wear appropriate protective clothing (gloves, mask, overalls, etc.)
- Do not use inflammable liquids, acids or products that may chemically corrode machine components.
- Do not clean moving or hot parts; allow the parts to cool because they could be damaged by abrupt changes in temperature.
- To clean the exterior of the machine and the engine compartment, use a power washer bearing in mind the following:
  - Ensure the filler caps are closed properly (radiator, oil tank, fuel tank, etc.)
  - Protect control units and connectors from water seepage.
  - Do not use water temperatures or pressures over 80°C and 100 bar respectively.
  - Do not hold the power washer nozzle less than 40 cm from the surface you are washing.
  - Do not concentrate the jet in just one place, wash using large strokes.
  - The interior of the machine is delicate and must never be cleaned with a power washer.



- If any water accidentally falls on the electrical system, the machine will not function correctly. Do not use water or steam to clean the electrical system, sensors or connectors.
- To repair any small defects on the bodywork, ask your ***DIECI*** dealer for tins of touch up paint. Ensure all the stickers are present; replace any stickers that are lost or removed while cleaning.

CLEANING THE WINDOWS

- The cab windows, headlamps and rear-view mirrors must be washed frequently with soapy water.
- After you have cleaned these components, dry carefully. Do not leave any stains or halos that may limit or distort the operator's view.

CLEANING THE CAB

- Clean the soft upholstery in the cab with a cloth that has been immerged in a solution of water and detergent and then tightly squeezed.
- Clean the driver's seat and the floor with a vacuum cleaner and/or a stiff brush. If necessary, use a damp cloth to remove any stubborn stains.

- CAUTION -

DO NOT USE JETS OF WATER INSIDE THE CAB.

- Clean the seat-belts with a sponge dipped in hot soapy water and simply leave them to dry.
- The fabric seats should be cleaned with a stiff brush or vacuum cleaner. Plastic seats should be cleaned with a damp cloth.

SAFETY STICKERS

- Consult the summary table in the chapter "MAINTENANCE" for the inspection schedule.
- Replace any Danger, Caution, Hazard or instruction stickers that are illegible or missing.
- Read all the safety warnings on the machine and comply with their contents before starting, running, refuelling or carrying out maintenance work. Clean said warnings if covered in mud, cement or other deposits. Do not remove for any reason. If damaged, lost or illegible, replace immediately. Orders must be placed using the same process as for spare parts (ensure you include the model and serial number of the machine when you place your order).
- The location and code numbers of the safety stickers are illustrated in chapter "***B – SAFETY STANDARDS***" in this manual.

FIRE PREVENTION

- CAUTION -

Stop the machine immediately if an alarm lights up in the cab. Contact your *DIECI* service centre and do not operate the machine until the fault has been repaired.

- Before every work cycle, ensure there are no leaks from the machine; fuel, oil, grease or lubricants in general can start fires and cause serious injury.

- Regularly check there are no loose or missing clamps, no twisted hoses or hoses that are rubbing together.

- Do not bend any pipes under pressure. Never install damaged pipes.

- Remove inflammable materials such as fuel, oil, grease, waste, deposits, accumulated dust or any other components that can start a fire.

- Avoid short circuits; they can cause fires.

- Regularly clean and secure all electrical connections. Before every work shift, ensure there are no twisted, hardened or damaged electricity cables. If there is a malfunction, do not start the machine and contact a ***DIECI*** service centre.

- Regularly check the ignition switch. A fault when stopping the engine will obstruct the work of the fire brigade.

- When cleaning parts with oil, use non-inflammable oil. Diesel and petrol fuel can catch fire. Do not use.

- Do not weld or use a cutting torch to cut pipes that contain inflammable liquids.

- When checking the level of fuel, oil, battery electrolyte, windscreen wiper liquid or coolant, always use an explosion proof light source. If other types of lighting are used, there is a risk of explosion.



- CAUTION -

IF A FIRE DEVELOPS, IMMEDIATELY ABANDON THE MACHINE AND FIND A SAFE PLACE; IF POSSIBLE TURN THE IGNITION TO "0" (ENGINE AND INSTRUMENTS OFF) BEFORE ABANDONING THE MACHINE.

- CAUTION -

ONLY ATTEMPT TO PUT OUT THE START OF A MODEST FIRE IF YOU HAVE AN EFFICIENT FIRE EXTINGUISHER AVAILABLE.

- CAUTION -

IF THE FIRE DIRECTLY INVOLVES THE OIL OR FUEL TANK, ABANDON THE MACHINE IMMEDIATELY; THE MACHINE COULD EXPLODE.

BATTERIES



- CAUTION -

TO AVOID BATTERY EXPLOSIONS, KEEP SPARKS, NAKED FLAMES AND CIGARETTES FAR FROM THE TOP OF BATTERIES BECAUSE THESE CAN PRODUCE HIGHLY INFLAMMABLE GASES.



- CAUTION -

THE BATTERY CONTAINS SULPHURIC ACID ELECTROLYTE, A CORROSIVE SUBSTANCE THAT MUST BE HANDLED WITH THE UTMOST CAUTION BECAUSE IT CAN CAUSE POISONING AND SERIOUS BURNS.

KEEP OUT OF REACH OF CHILDREN.

AVOID CONTACT WITH THE SKIN OR EYES.

- CAUTION -

WEAR PROTECTIVE CLOTHING AND SAFETY GLOVES AND GOGGLES. IN CASE OF CONTACT WITH THE EYES OR SKIN, RINSE IMMEDIATELY WITH ABUNDANT WATER AND CONSULT A DOCTOR. IF SWALLOWED, CONSULT A DOCTOR.

- Do not overturn or tilt the battery to avoid acid leakage.
- Charge the battery in a well-ventilated place and **ALWAYS** disconnect the power supply before disconnecting the terminals.
- Always use a voltmeter or a densimeter to check the battery charge. Use a torch to check the electrolyte level, never a naked flame. Never place anything metallic between the terminals to check the battery charge.
- **DO NOT** generate any sparks with the wire terminals while recharging the battery or while starting the engine with an auxiliary battery.
- Ensure the caps and air vents are correctly assembled and firmly tightened.
- Clean the upper part of the battery, ensure the clamps are firmly assembled and cover with a thin layer of Vaseline.
- If the battery freezes, put in a warm place to defrost. Do not use and do not charge; it could explode.
- In normal conditions, the battery is kept charged by the machine alternator. If the battery is completely flat through prolonged lack of use or because its lifetime is over, the alternator will no longer be able to keep it charged. The battery must be replaced and recharged using a battery charger.

Charging instructions

1. If possible remove the caps.
2. Check the electrolyte level.
3. Clean the poles.
4. Ensure the room is sufficiently ventilated.
5. Limit the charge current to a maximum 1/10 of the battery capacity (Ah).
6. Connect the battery to the charger.
7. Connect the charger to the power supply mains.
8. Switch on the charger.
9. The battery temperature must not exceed 55 °C.
10. When the battery has finished charging, disconnect the battery charger.
11. Disconnect the charger from the power supply mains.
12. Disconnect the battery from the charger.
13. Check the electrolyte level.
14. Reinstall the caps.

- Do not charge damaged batteries. Danger of explosion.
- Do not charge a hot battery. Danger of explosion.
- A battery is completely charged if at a constant temperature, the density of the electrolyte and the measured voltage at the poles does not increase within 2 hours.
- Every charge is as good as the general condition of the battery. This means that the charge of an old battery will not achieve the same lifetime and efficiency as a new battery.
- The most straightforward charge method is the constant power charge.
- When charging is over, the charger voltage increases and creates gasification. It is advisable to use straightforward chargers with minimum current control and a timer to switch the charger off.
- If the battery has a low electrolyte level, top up to the minimum level (just above the limit of the plates) and then charge. After ending the charge, fill to the maximum level (to avoid leaks).

Do not overcharge because:

a) It is a waste of energy that causes water disassociation.
b) It produces a loss of active mass due to the deterioration of the electrodes.
c) It creates a danger of explosion.

- If the sulphated batteries are charged without a voltage limit, they will reach boiling point and overheat.
- Charge old batteries with the utmost caution (they will probably be sulphated batteries). Even at 13.8 Volt, there is the risk of an increase in temperature.

- CAUTION -

All these procedures must be carried out by competent and trained staff.

- CAUTION -

Batteries contain substances that are particularly hazardous pollutants and must not be disposed of in the environment. Uncharged, old, damaged, etc. batteries must be disposed of appropriately.

Low maintenance batteries

Low maintenance batteries are designed to avoid maintenance during ordinary and normal battery use. If the battery is flat, check the electrolyte level and follow the instructions in the paragraph “BATTERY”. Please consult the supplier or manufacturer for technical specifications.

Maintenance-free batteries

These types of battery do not require any maintenance. When the battery is flat, it must be replaced. Please consult the supplier or manufacturer for technical specifications.

- CAUTION -

DO NOT CARRY OUT ANY MAINTENANCE OR ATTEMPT TO RECOVER MAINTENANCE-FREE BATTERIES.

STARTING UP WITH AUXILIARY BATTERIES

- CAUTION -

Two adequately trained and qualified people are required to start the engine using an auxiliary battery.

Any mistakes during this procedure can cause serious damage to the machine, things and people.

- When starting the engine from another machine, connect the batteries in parallel. When connecting the cables, avoid contact between the positive cable “+” and the negative cable “-“.
- Ensure you are wearing appropriate protective clothing before carrying out any procedures.
- Take care to avoid contact between the machine to be started up and the machine that has to supply the power, to avoid sparks and consequently explosions caused by the hydrogen produced by the batteries. If the battery explodes, it could cause serious damage and injury.
- Ensure you never accidentally switch the starting cables and connect first the ground lead (-) and lastly the positive voltage lead (+).
- Use great care when removing the starting cables; ensure that when the cables are disconnected from the battery they do not touch other parts of the machine to prevent hydrogen explosions.

- CAUTION -

THE CABLES AND THE CLIPS MUST BE SIZED ACCORDING TO THE POWER CHARGE TO BE TRANSFERRED.

THE CAPACITY OF THE BATTERY USED TO START THE MACHINE MUST BE GREATER OR AT LEAST EQUAL TO THE CAPACITY OF THE BATTERY ON THE MACHINE.

- CAUTION -

ENSURE THE CABLES AND CLIPS ARE NOT CORRODED OR DAMAGED.

ENSURE THE CLIPS GRIP THE TERMINALS FIRMLY.

- CAUTION -

TAKE THE UTMOST CARE DURING THE VARIOUS PROCEDURES, DIRECT OR INDIRECT CONTACT WITH LIVE PARTS CAN CAUSE INJURY AND SOMETIMES EVEN DEATH.

- CAUTION -

WHEN THE ENGINE IS STARTED, THE OPERATOR MUST BE SEATED IN THE DRIVER’S SEAT TO ENSURE THE MACHINE IS UNDER HIS OR HER CONTROL.

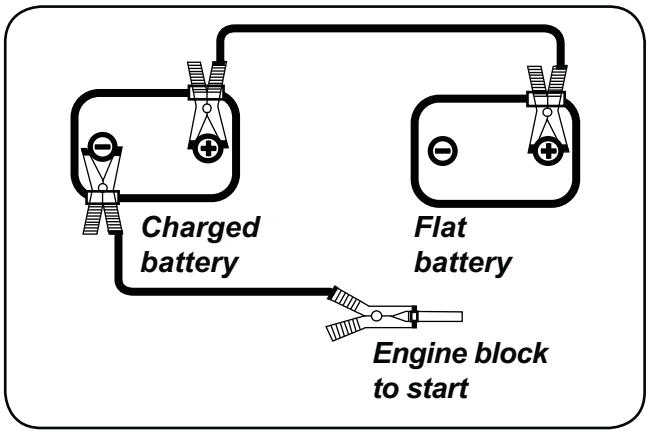
Connecting the cables and starting the engine

1. Ensure the ignition key is in position “O”.
2. Connect the positive poles “+” on the two batteries “A”.
3. Connect the cable on the negative terminal “-“ of the charged battery to the ground block on the machine to be started up “B”.
4. Start up the engine of the machine that is working properly and rev up the engine.
5. Start the engine of the machine that has broken down.

Removing the cables

With the engine running, remove the cables in the reverse order in which they were connected.

1. Disconnect the negative cable (-) from the ground block on the started engine and then from battery “B”.
2. Disconnect the positive cable “+” first from the battery used to start up and then from the battery of the machine with the flat battery. “A”.



- CAUTION -

ALL THESE PROCEDURES MUST BE CARRIED OUT BY COMPETENT AND TRAINED STAFF.

ELECTRICAL SYSTEM OVERLOAD PROTECTION

- CAUTION -

Burnt fuses must be replaced with another fuse of the same type.
Other types of repairs are forbidden, even if temporary.

- Do not connect or remove terminals, fuses or connectors while the machine is running or being electrically powered.

- CAUTION -

Any work on the electrical system must be carried out while the machine is disconnected from the power supply. Do not restore the power supply until the work has been completed and all covers and protection devices have been reassembled.

- Act on the battery cut-out to disconnect the power supply to the machine.
- Also disconnect the power supply by acting on the battery cut-out before replacing the battery.
- If a connector is damaged or no longer enters its housing, replace immediately to avoid short circuits, sparks, etc.

- CAUTION -

Damaged, pinched or burnt cables must be replaced immediately even if the damage only concerns the sheath or external insulation.

- Never connect or disconnect the charge circuit (including battery connections) while the engine is running.
- Never short circuit at the ground (earth) any charge components.
- Do not use an auxiliary battery with a rated voltage above 12 Volts.
- Always ensure the polarity is correct when installing batteries or using an auxiliary battery to start up using jump cables. Comply with the instructions in the use and maintenance manual when starting the machine with jump cables. Connect positive to positive and negative to negative.
- Always disconnect the negative cable from the batteries before carrying out any arc welding on the machine or any attachments connected to it.
- Position the welder ground terminal as close as possible to the area to weld.

- CAUTION -

If the welding needs to be carried out near an electrical module, the module must be removed from the machine. Ensure this procedure is carried out by qualified and authorised personnel.

- Ensure the welder cables are not above, near or cross any electrical cables or electronic components while welding is being carried out.

TIGHTENING THE WHEEL NUTS

- Tighten the wheel nuts as indicated in the maintenance table.
- The tightening torque of the wheel nuts is as follows:

18 diameter wheel stud bolt	50 kgm
22 diameter wheel stud bolt	60 kgm

- Always tighten opposite nuts, never tighten nuts consecutively.
- After reassembling the wheel, tighten the nuts between the wheel and axle. Then check the nuts every day until the tightening torque has stabilised.

- CAUTION -

THE NUMBER OF AXLE STUD BOLTS MUST CORRESPOND TO THE NUMBER OF TIGHTENED NUTS. THEREFORE, EVERY NUT ON EVERY WHEEL MUST BE ASSEMBLED; OTHERWISE THE MACHINE WILL NOT WORK.

- If a wheel on the machine is changed, the wheel or raised side of the machine may only be lowered on the ground after the wheels have been assembled and correctly tightened.

- CAUTION -

THE NUTS MUST BE TIGHTENED BEFOREHAND WHILE THE MACHINE (OR PART OF THE MACHINE) IS RAISED OFF THE GROUND AND THEN WHILE THE MACHINE IS STANDING ON THE GROUND.

- Only use original ***DIECI*** nuts to tighten the wheels. If you lose even just one nut, contact a ***DIECI*** service centre.

TYRES

- CAUTION -

WHEN YOU RECEIVE THE MACHINE, CHECK THE AIR PRESSURE OF THE TYRES.

- Check tyre pressure every 100 hours or every two weeks. Check the pressure when the tyres are cold.
- Every time the machine is used, ensure the sides of the tyres are not damaged.

- CAUTION -

TYRES WITH ANY CUTS OR THAT ARE EXCESSIVELY WORN MUST BE REPLACED IMMEDIATELY.

- Keep any oil, grease and corrosive liquids well away from the tyres to prevent damage to the rubber.
- The tyre pressure must be kept at the level indicated in the table below.The tyre pressures given correspond to the manufacturer's recommendations, and therefore must be complied with as far as possible.

Tyre pressure table

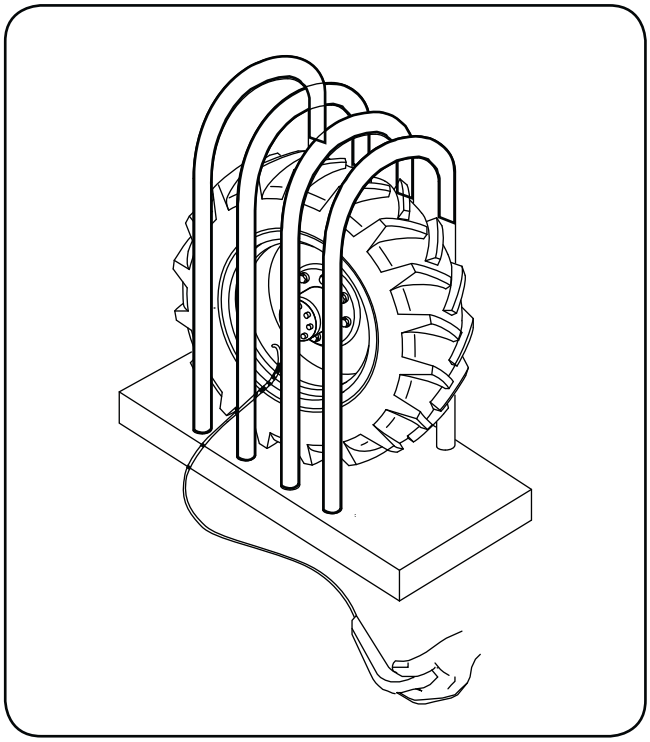
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10,5-18	10PR	3,75
12,5 -18	10PR	3,0
12,5-18	12PR	3,0
12,5-20	12PR	3,5
18-19,5	16PR	4,5
16/70-20	14PR	3,5
18-22,5	16PR	4,5
405/70-20 (16/70-20)	14PR	3,5
405/70R20 (16/70R20)	152J	6,0
405/70-24 (16/70-24)	14PR	4,0
405/70R24 (16/70R24)	152J	5,0
445/65-22,5 (18-22,5)	163A8 (16PR)	4,5
445/65R22,5	168A8	8,5
445/65R22,5	169F	8,0
14.00-24	16PR	3,75

- Check the size of the tyres installed and the ply number to ensure they are inflated to the correct pressure.
- To ensure maximum efficiency do not use tyres with more than 80% wear.

- CAUTION -

Inflating or working on the tyres can be dangerous. Whenever possible, specialised personnel must be employed to work on or install tyres. In any case, to avoid serious or fatal injuries, comply with the safety measures below.

- The wheels of the machine are very heavy. Handle with care and ensure that, once warehoused, they cannot fall and injure anyone.
- Never attempt to repair a tyre on a public road or motorway.
- Ensure the jack is positioned on a solid and flat surface.
- Ensure the load capacity of the jack is suitable for raising the machine.
- Use stands with jacks or other blocking devices to support the machine while the tyres are being repaired.
- Never place any part of your body below the machine.
- Never start the engine while the machine is supported by the jack.
- Never hit the tyres or rims with a hammer.
- Ensure the rim is clean, rust-free and undamaged. Do not weld, braze or repair in any way or use a damaged rim.
- Do not inflate tyres unless the rim is assembled on the machine or secured so that it cannot move if the tyre or rim suddenly breaks.



- CAUTION -

WHEN ASSEMBLING A NEW OR REPAIRED TYRE, USE AN ADAPTER FOR THE SPRING VALVE WITH A REMOTE GAUGE, WHICH ALLOWS THE OPERATOR TO STAY WELL CLEAR OF THE TYRE WHILE IT IS BEING INFLATED. USE A SAFETY CAGE.

- Do not inflate any tyres over the pressure indicated by ***DIECI***. If the bead does not settle on the rim when this pressure is reached, deflate the tyre and lubricate again with a solution of water and soap, then inflate again. Do not use oil or grease. Tyres inflated over the allowed pressure with incorrectly set beads can cause the bead or rim to break with an explosion strong enough to cause serious injury.

- PROHIBITION -

IT IS FORBIDDEN TO ASSEMBLE TYRES INFLATED WITH POLYURETHANE FOAM UNLESS AUTHORISED BY THE MANUFACTURER.

- Do not re-inflate a tyre which has turned completely or which is very flat until it has been inspected by a qualified technician.
- After reassembling the wheel, tighten the nuts between the wheel and axle. Then check the nuts every day until the torque has stabilised.

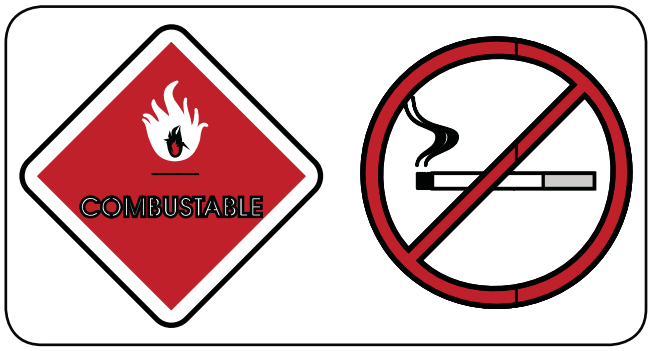
Replacing a wheel while on a public road

- If a wheel needs to be replaced on the edge of a road, proceed as follows:

- If possible, park the machine on flat and solid ground.
- Engage the parking brake.
- Stop the engine.
- Switch on the hazard warning lights
- Insert wedges under the wheels opposite the wheel to change to ensure the machine is blocked in both directions.
- Loosen the bolts on the wheel to change.
- Place the jack under the axle half-box, as close as possible to the wheel.
- Raise the wheel until it is off the ground; position the safety support under the axle.
- Completely unscrew the wheel bolts and remove.
- Push, pull and turn the wheel to extract it.
- Insert a new wheel on the hub.
- Tighten the bolts manually, lubricate with grease if necessary. Then tighten the bolts securely using a dynamometric spanner.
- Remove the safety support and lower the telehandler with the jack.
- Tighten the wheel bolts securely again using a dynamometric spanner.

STORING DANGEROUS FLUIDS

- Handle fuels carefully; they are highly inflammable. If fuel is ignited, there may be an explosion and/or fire.



- CAUTION -

All fuels, the majority of lubricants and some types of antifreeze are inflammable.

- All inflammable fluids must be stored in special containers and the contents clearly indicated. The containers must be airtight.

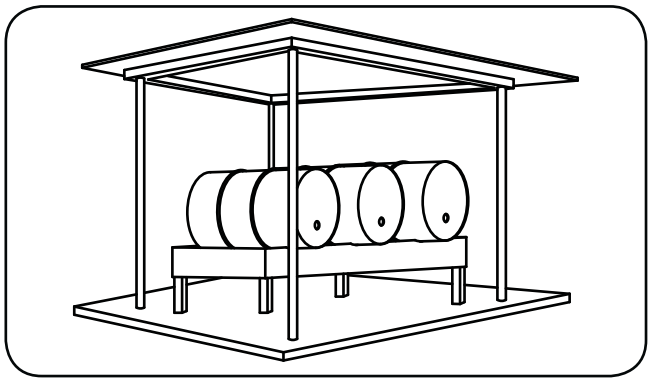
- CAUTION -

All fluids must be stored out of reach of children and unauthorised personnel.

- Different fluids must not be mixed together.

- CAUTION -

All chemical products are generally toxic; avoid contact with the skin and eyes by wearing suitable protective clothing. Do not swallow.



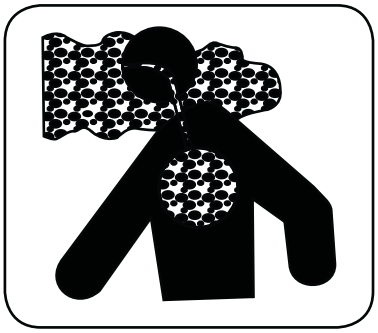
- CAUTION -

Store inflammable fluids in an especially reserved, well-ventilated storeroom, far from heat sources, sparks and flames.

Keep containers closed and indoors.

There must be no other substances inside the inflammable fluids storeroom (e.g. food).

- Always fill the tank in the open air.



- Beware of the fumes and vapours produced by chemical products. Do not inhale.
- Do not inhale combustion fumes.
- Ensure these chemical products are not dispersed in the soil, sewers or surface water. If necessary, inform the competent local authorities.
- In case of fire, use carbon dioxide, dry chemical powder, foam, water mist, sand or earth. Use jets of water to cool surfaces exposed to the fire.
- Ensure the storage containers do not leak inflammable fluids (fuel, oil, grease, lubricants in general).

CONTACT WITH DANGEROUS FLUIDS

- Avoid contact with the skin or eyes.
- Wear appropriate protective clothing.
- In case of contact with the eyes, rinse immediately with plenty of water for a few minutes holding the eyelids open and then consult a doctor.
- In case of contact with the skin, wash the area carefully with soap and water, remove any contaminated clothing, and if the skin tends to be dry, apply a moisturising cream.
- In case of inhalation, leave the contaminated area and reach a well-ventilated location. Consult a doctor in case of respiratory problems.
- If swallowed, consult a doctor. Show the doctor the label or the container. Do not provoke vomiting to avoid the risk of inhaling the product through the respiratory tract.

DIESEL

- Before handling fuel, filling the tank, etc., comply with the following rules:

- Never mix other types of fuel with diesel, such as petrol or alcohol.

- CAUTION -

IT IS FORBIDDEN TO REFUEL WITH THE ENGINE SWITCHED ON.

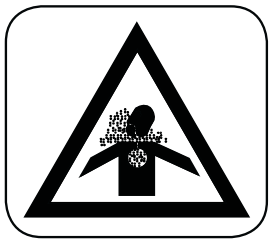
- Clean the area around the fuel cap. Fill the fuel tank at the end of every day to reduce condensation during the work break.
- Water and sediment must be removed before they reach the engine.
- Do not use antifreeze to remove water from the diesel fuel.
- Do not rely on the filter to remove water from the diesel fuel.
- Never leave the fuel cap off and always lock. If you lose the original cap, replace with an original spare part. Not just any cap will fit.
- Keep an eye on the fuel pump nozzle while filling the tank.



- CAUTION -

DO NOT SMOKE DURING THE AFORESAID OPERATIONS.

- Do not use a flame to inspect the fuel tank.
- Do not fill the tank completely. Leave room for the fuel to expand and immediately clean any spillage.
- Before carrying out any welds on the tank or any components in close contact with the tank, ensure there is no fuel inside.
- If there are any fuel leaks due to breakages, stop the leak as soon as possible and contact a ***DIECI*** service centre.



- CAUTION -

AVOID INHALING DIESEL VAPOURS; THEY ARE CARCINOGENIC AND A HEALTH HAZARD.

RECOMMENDED FUEL SPECIFICATIONS

To ensure good performance, use a high quality fuel. The recommended fuel specifications are given below.

Cetane number	45 minimum.
Viscosity	2/4.5 centistokes at 40°C.
Density	0.8201860 kg/litre at 15°C
Sulphur	Sulphur 0.20% in weight, maximum.
Distillation	85% at 350°C.

Cetane number

The cetane number indicates the ignition capacity.
Fuel with a lower cetane number may cause ignition problems when the engine is cold and could affect combustion.

Viscosity

The viscosity value indicates the flow resistance; engine performance can be affected if the viscosity value is not within the limits.

Density

A lower density reduces engine power, higher density increases engine power and the smokiness of the exhaust fumes.

Sulphur

A high sulphur level wears out the engine and creates pollution.

Distillation

Distillation indicates the mixture of different hydrocarbons in the fuel. A high proportion of light hydrocarbons might affect the combustion specifications.

Fuel for low temperatures

If the engine needs to be used at temperatures below 0°C, special winter fuels can be used. These fuels have a lower degree of viscosity and restrict the formation of paraffin in the fuel. The formation of paraffin prevents the fuel from passing through the filter.

CLEANING AND STORING DIESEL FUEL

It is essential the fuel is kept clean.

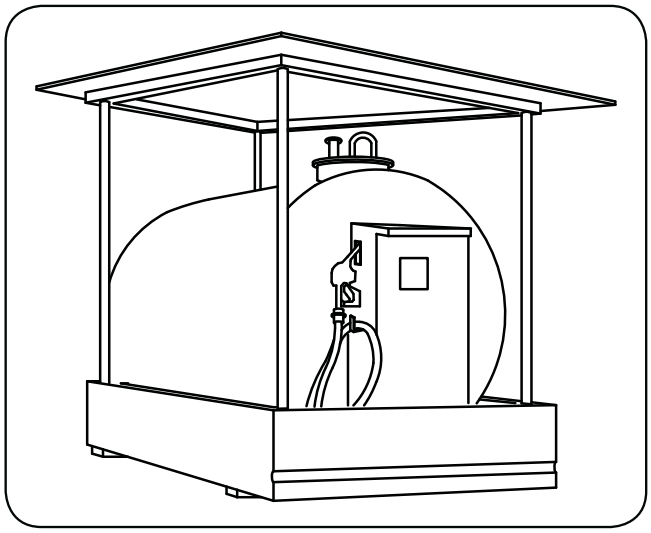
The advice given below will help to maintain the quality of the fuel.

1. Never use zinc containers.

2. Never clean the inside of fuel containers or fuel system components with cloths that may leave deposits.

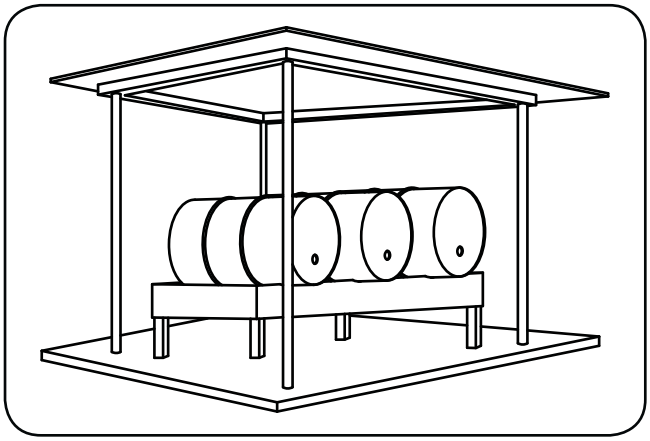
3. The capacity of the fuel storage tank must ensure that the intervals between one refuelling and the next are not too long. A capacity of 3,000 litres is sufficient for an average sized company.

4. The storage tank (see the figure below) must be covered and placed on a support high enough to exploit the force of gravity when refuelling the machine. A tank to collect any spillage must be located below. It should also be equipped with a manhole to allow access for cleaning.



5. The delivery tap must be larger at the bottom to trap any deposits; it should also be equipped with a removable filter. The tank must be tilted by 40 mm per metre towards the sediment drain plug.

6. Fuel barrels (see the figure below) must be stored under cover to prevent water seepage. The barrels should also be tilted slightly, to allow any water to drain off the upper rim. The fuel barrels must not be stored for too long before being used.



7. If the barrels are kept in the open, the cap must be tightly closed to prevent water seepage.

8. After refilling the fuel tank or barrels, it is advisable to leave the fuel to stand for at least two hours so that any water or impurities can deposit before the fuel is used.

ECOLOGICAL CONSIDERATIONS

- CAUTION -

A few helpful recommendations are listed below. Find out about the current standards and legislation in effect in your country.

Ask suppliers of lubricating oils, fuels, antifreeze products, detergents, etc. for information on the effects of these products on people and the environment and the regulations to be observed when using, storing and disposing of them.

- Do not refill tanks using unsuitable jerry cans or pressurised refuelling systems as they can cause leaks and loss of significant amounts of liquid.

- Modern lubricating oils contain additives.
  Do not burn contaminated fuel oils and/or oils used in conventional heating systems.

- Do not spill exhausted engine coolants, engine and transmission lubricating oils, hydraulic oil, brake oil etc. while pouring or draining them. Store safely until it is time to dispose of them in compliance with current legislation or local regulations.

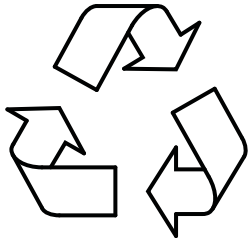
- Modern antifreeze fluids and their solutions (e.g. antifreeze and other additives) should be replaced every two years. Ensure they do not soak into the soil. They must be collected and disposed of appropriately.

- Do not work directly on the air conditioning system (optional). Do not open the air conditioning system. It contains gas that must not be released into the atmosphere. Contact your dealer or an expert who has the equipment required to refill the system.

- Immediately repair any leak or fault in the cooling or engine hydraulic systems.

- Do not increase the pressure in a pressurised system, the components may explode.

WASTE DISPOSAL



- Waste material should not be scattered in the environment but disposed of appropriately. Used lubricants, batteries, greasy rags, brake pads, etc. must be handed over to specialised companies authorised to dispose of pollutant waste.

- Improper waste disposal is a threat to the environment. Potentially hazardous waste includes lubricants, fuel, coolant, filters and batteries.

- Do not dispose of waste on the ground, in sewers or waterbeds.

- Contact your local authority or waste collection centre for information on how to recycle or dispose of waste properly.

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CHECKING THE WIND SPEED

- Variations in wind speed can cause several inconveniences such as loss of machine stability, load oscillation, and a reduction in visibility due to blowing dust, leaves, etc.

- Other unfavourable factors affecting machine use include:

- Site location; the aerodynamic effect of buildings, trees and other structures increase the wind speed.
- The height of the extended boom; the higher the boom, the higher the wind speed.
- Load dimensions; the larger the area occupied by the load, the more it is affected by the force of the wind.

- CAUTION -

***DIECI* telehandlers can be used in wind speeds up to 45 Km/h equal to 12.5 m/s (no. 6 of the Beaufort scale) measured at ground level.**

- CAUTION -

At a temperature of 10°C, in winds with a speed of 32 Km/h, the sensation of exposed body parts is a temperature of 0°C; the higher you are the higher the wind speed and the colder you will feel.

- CAUTION -

If there is a fresh breeze (fig. 1/B n. 5 in the Beaufort Scale), never raise loads with a surface area greater than one square metre.

Below is a graph of the Beaufort scale (fig.1/B) to give an indication of the wind speed at which you can work and when to suspend work if certain values are exceeded.

THE BEAUFORT WIND SCALE

No	DESCRIPTION	CONDITIONS	SPEED m/s
0	Calm	Smoke rises vertically	0 - 0,2
1	Light air	Direction of wind shown by smoke drift	0,3 - 1,5
2	Light breeze	Wind felt on face; leaves rustle; ordinary vanes moved by wind.	1,6 - 3
3	Gentle breeze	Leaves and small twigs in constant motion; wind extends light flag	3 - 5
4	Moderate breeze	Raises dust and loose paper; small branches are moved.	5 - 8
5	Fresh breeze	Small trees in leaf begin to sway; crested wavelets form on inland waters.	8 - 11
6	Strong breeze	Large branches in motion. Whistling heard in overhead wires. Umbrella use becomes difficult	11 - 14
7	Near gale	Whole trees in motion. Effort needed to walk against the wind	14 - 17
8	Gale	Breaks twigs off trees; generally impedes progress.	17 - 21
9	Severe gale	Slight structural damage occurs (chimney-pots and slates removed)	21 - 24

(fig.1/B)

EVALUATE THE CONSISTENCY OF THE GROUND

The ground on which the telehandler is positioned must be able to support the machine and its maximum load.

⚠ - CAUTION - ⚠

If the ground under the telehandler collapses, the machine may roll over.

- Comply with the following indications to avoid overturning the machine:

- Ask your employer (works manager, construction assistant) if there may be any hidden cavities below the stabilisers (pipelines, wells, old cisterns, basement ceilings, manure pits, etc.)

- The operator must evaluate the consistency of the ground, using the tables and graphs provided. In case of doubt, consult the civil engineer present on the site or seek the advice of an external engineer.

- Depending on the type of ground and its geomorphologic characteristics, the subsoil can only support a limited quantity of stress. The table in fig.3/B indicates the allowed surface pressure underneath the telehandler stabilisers.

- On the basis of the "*Maximum pressure exercised on the ground by the stabiliser feet*" Table (fig.2/B) and the data extracted from the table in fig.3/B, "*Allowed surface pressure on varying ground types*", it is possible to deduct the necessary support surface (increased support bases).

⚠ - CAUTION - ⚠

Always seek the advice of a civil engineer for the most reliable and exact evaluation possible of the ground where you intend to work and the dimensions of the support plates.

⚠ - CAUTION - ⚠

On request, *DIECI* can provide enlarged base supports.

EXTENSION (M)	PRESSURE (KG/CM)
13 mt	10 kg/cm²
16 mt	10 kg/cm²
17 mt	10 kg/cm²
19 mt	10 kg/cm²
21 mt	10 kg/cm²
25 mt	10 kg/cm²

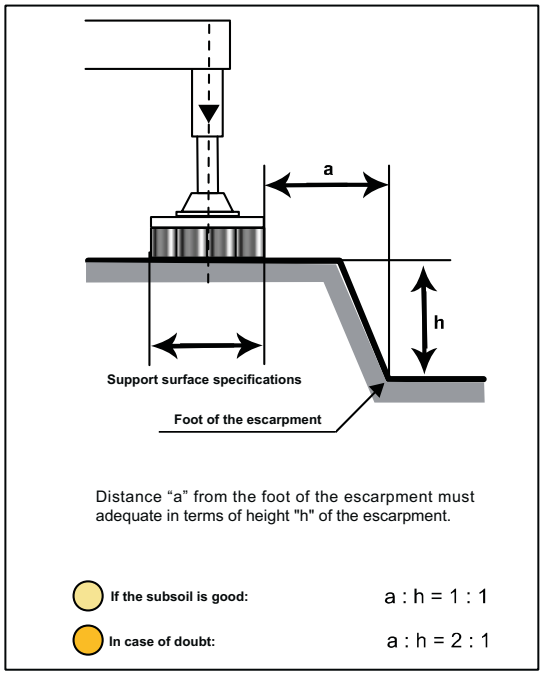
(fig. 2/B) "Maximum pressure exercised on the ground by the stabiliser feet" Table

Type of ground, geomorphologic specifications		Allowed surface pressure Kg/cm²	Allowed surface pressure N/mm²
Loose, non-compacted ground		Generally not solid, requires special measures	
Limey, peaty, pasty ground			
Coherent, soft ground			
Incoherent, well compacted ground, sand, gravel		2.0	0.2
Coherent ground	Solid	1.0	0.1
	Semi solid	2.0	0.2
	Hard	4.0	0.4
Rock, concrete, road surface suitable for the transit of heavy goods vehicles		Over 10.0	Over 1.0

(fig. 3/B) Allowed surface pressure on varying ground types

Maximum load bearing capacity	Allowed surface pressure		
	1 Kg/cm²	2 Kg/cm²	4 Kg/cm²
	Necessary support surface		
10t	1.0m x 1.0m	0.7m x 0.7m	0.5m x 0.5m
20t	1.4m x 1.4m	1.0m x 1.0m	0.7m x 0.7m
30t	1.7m x 1.7m	1.2m x 1.2m	0.9m x 0.9m
40t	2.0m x 2.0m	1.4m x 1.4m	1.0m x 1.0m
50t	2.2m x 2.2m	1.6m x 1.6m	1.1m x 1.1m
60t	2.4m x 2.4m	1.7m x 1.7m	1.2m x 1.2m

(fig. 4/B) Dimension of the support surface compared to the geomorphic characteristics of the ground

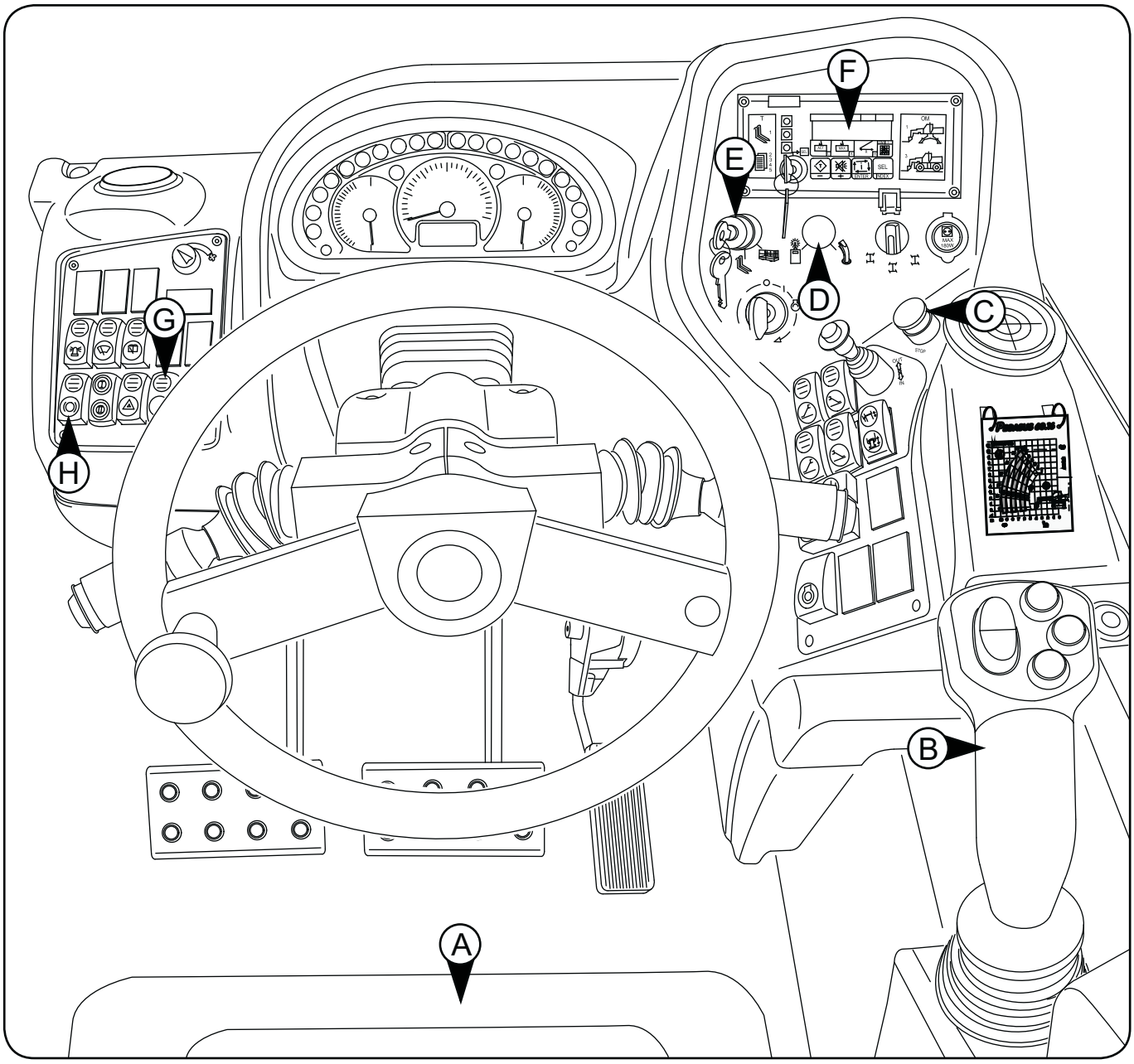


(fig. 5/B) Machine positioned on an escarpment

SAFETY DEVICES

The machine is equipped with a number of safety devices (proximity switches, micro-switches, and load monitoring devices) to safeguard against incorrect manoeuvres or carelessness.

The location of safety devices inside the cab



(fig.7/B)

(A) Seat microswitch (fig.7/B)

(B) Boom joystick grip microswitch (fig.7/B)

(C) Emergency push button (fig.7/B)

(D) Key to select machine functions controlled by radio control or from the driver's seat (fig.7/B)

(E) Key to select machine functions (fig.7/B)

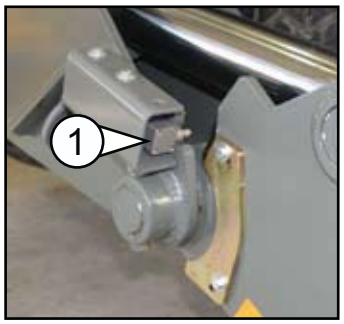
(F) Load monitoring system (fig.7/B)

(G) Anti roll-over switch (fig.7/B)

(H) Parking brake switch (fig.7/B)

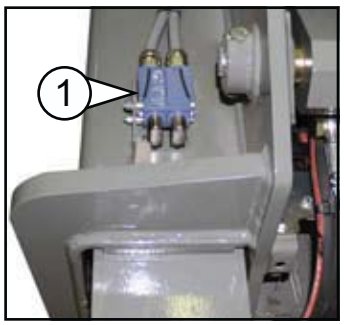
The location of machine safety devices

Lowered foot microswitch.
Machine with two movement stabilisers.
(fig.8/B - Pos.“1”)



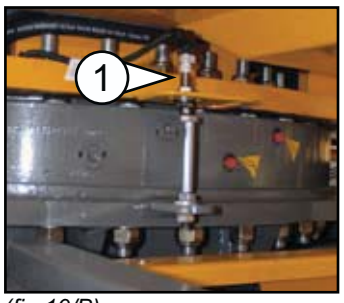
(fig.8/B)

Beam completely extended and foot lowered microswitch.
Machine with eight movement stabilisers
(fig.9/B - Pos.“1”)



(fig.9/B)

Turret aligned with chassis proximity switch
(fig.10/B - Pos.“1”)



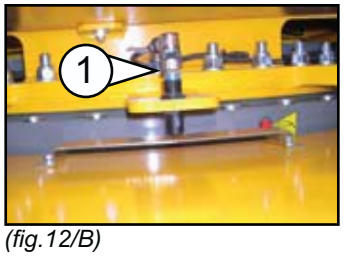
(fig.10/B)

Turret rotation locking pin enabled proximity switch.
(fig.11/B - Pos.“1”)



(fig.11/B)

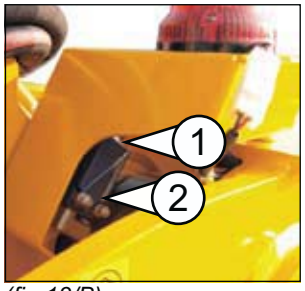
Axle oscillation lock enabled proximity switch.
(fig.12/B - Pos.“1”)



(fig.12/B)

Boom descent limit microswitch.
(fig.13/B - Pos.“1”)

Boom ascent limit microswitch.
(fig.13/B - Pos.“2”)

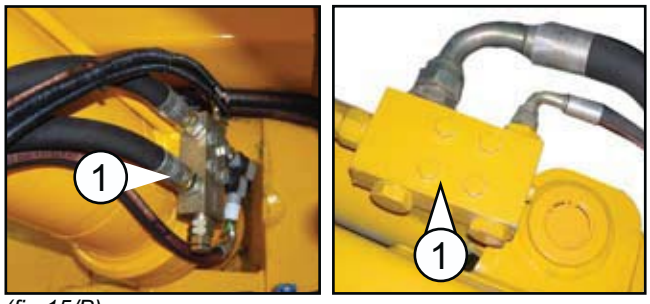


(fig.13/B)

Cab emergency exit (rear cab window).
(fig.14/B)

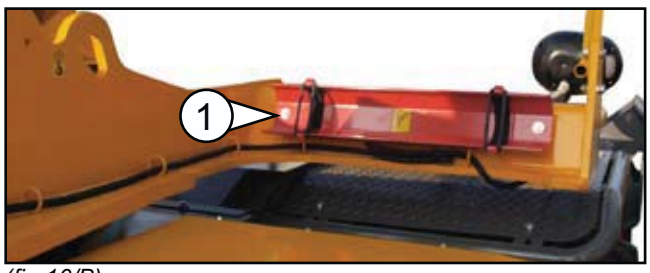

(fig.14/B)

Check valve on all hydraulic cylinders.
(fig.15/B - Pos.“1”)



(fig.15/B)

Safety rod for boom support.
(fig.16/B - Pos."1")



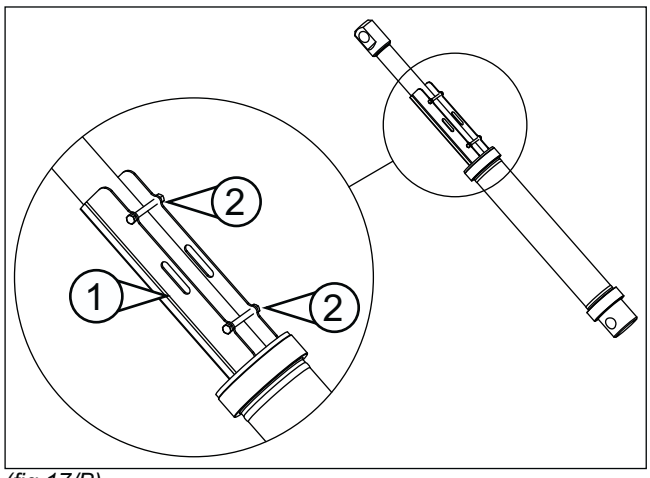
(fig.16/B)

⚠ - ***ATTENTION***:

The boom support spacer must only be used during routine maintenance operations.
When carrying out maintenance work on the boom raising cylinder or on the related block valve, the boom must be supported by a suitable raising mechanism (Minimum capacity 4 ton.)

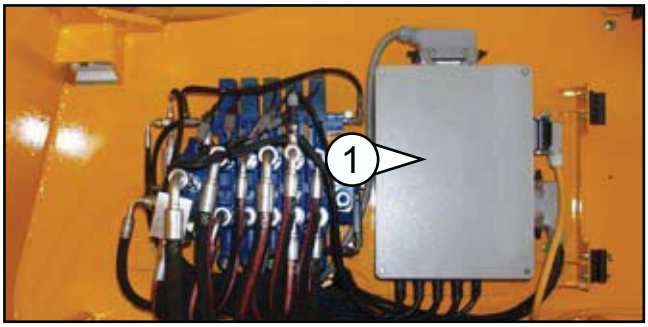
⚠ - ***ATTENTION***:

To insert the spacer, proceed as follows:
- Completely close the boom extensions
- Raise the boom the minimum height necessary to mount the spacer to the rod
- Lock the spacer (fig.17/B - Pos."1") with the relevant hooks (fig.17/B - Pos."2").



(fig.17/B)

Boom movement electronic control unit with aggravating movement blocking device.
(Fig. 18/B - Pos. “1”)



(fig.18/B)

THE DRIVER’S CAB

(fig.19/B Pos.“1”)

Every machine is equipped with a driver’s cab, which also acts as a safety cage for the operator.

- CAUTION -

THE CAB IS A SAFETY DEVICE, THUS IT MUST ALWAYS BE KEPT IN CORRECT CONDITIONS OF USE.

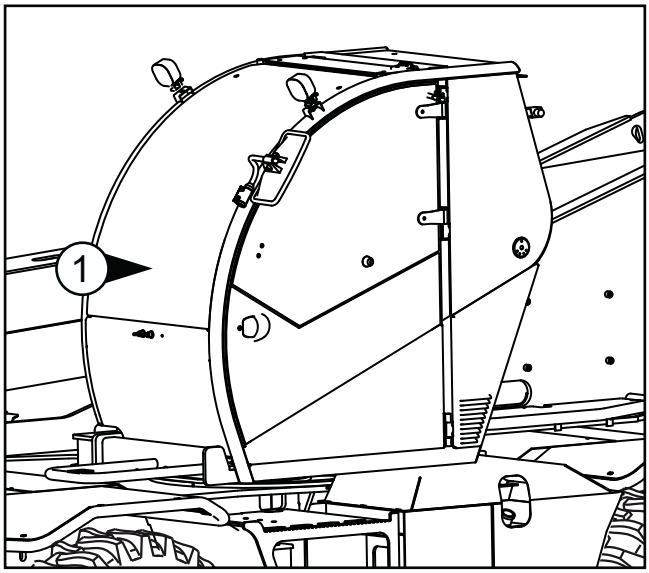
- PROHIBITION -

IT IS ABSOLUTELY FORBIDDEN to modify, perforate or change the structure of the cab in any way. The manufacturer shall not be held liable if the cab is tampered with.

- **IT IS FORBIDDEN** to weld or mechanically attach any parts to the cab chassis.
- If the fixing bolts are replaced, only use bolts with exactly the same strength index.
- Never connect chains, cables or rope to the cab when towing the machine.
- If the machine rolls over, do not attempt to get out of the cab during the accident.

- CAUTION -

IT IS SAFER TO STAY INSIDE THE CAB WITH YOUR SEATBELT FASTENED.



(fig.19/B)

ROPS-FOPS CAB

(fig.19/B Pos.“1”)

The machine is equipped with a type-approved ROPS and FOPS cab. The operator is therefore protected against rolling-over and falling objects from above, as prescribed for excavators. During use, the driver must fasten his or her seat belt to prevent bumping into the structures inside the cab. The rear windscreen can be used as an emergency exit. To open completely, remove the spring clip in the handle. **IT IS FORBIDDEN** to open the window completely while the machine is being used; there is a shearing hazard between the boom and chassis.

- CAUTION -

IF THE CAB HAS ANY VISIBLE DAMAGE, CONTACT AN AUTHORISED *DIECI* SERVICE CENTRE OR WORKSHOP TO REPLACE.

LOAD TABLES

- CAUTION -

CHECK THE LOAD TABLES OF YOUR MACHINE IN CHAPTER "H" - TECHNICAL INFORMATION SHEETS

The Safe Working Load -SWL of these machines depends on their extension range and boom angle.

This machine is equipped with anti roll-over devices.

For further information about **the safe load indicator, see** the relevant paragraph (chapter "C" - Getting to Know Your Machine - "anti roll-over device").

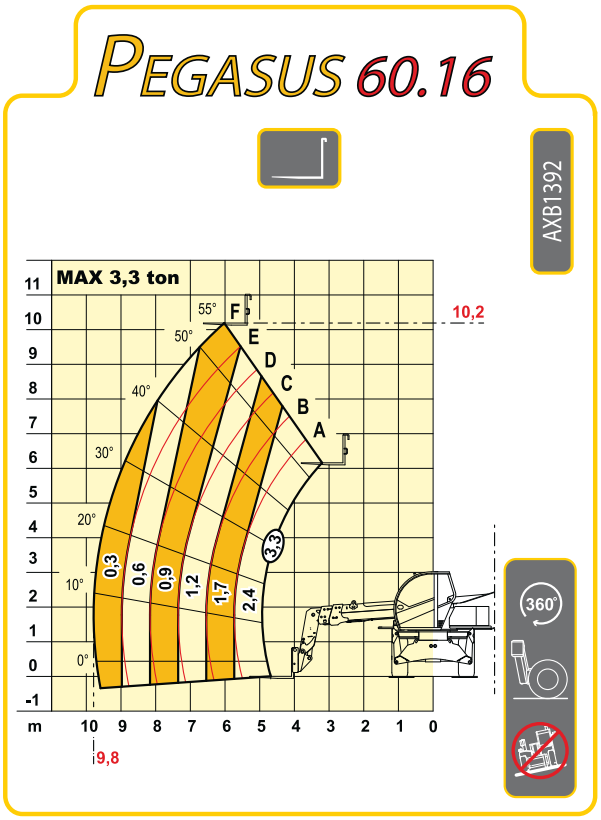
The load table inside the cab illustrates the safe working loads in relation to the various boom positions.
The extension of the boom is marked with the letters: "A" "B" "C" "D".

The load table illustrates the maximum height and extension achievable without exceeding the safe load. The telehandler is also equipped with its own load table. The load table is calculated using a telehandler with standard forks. There are also additional Load Tables, which apply to the different boom accessories.

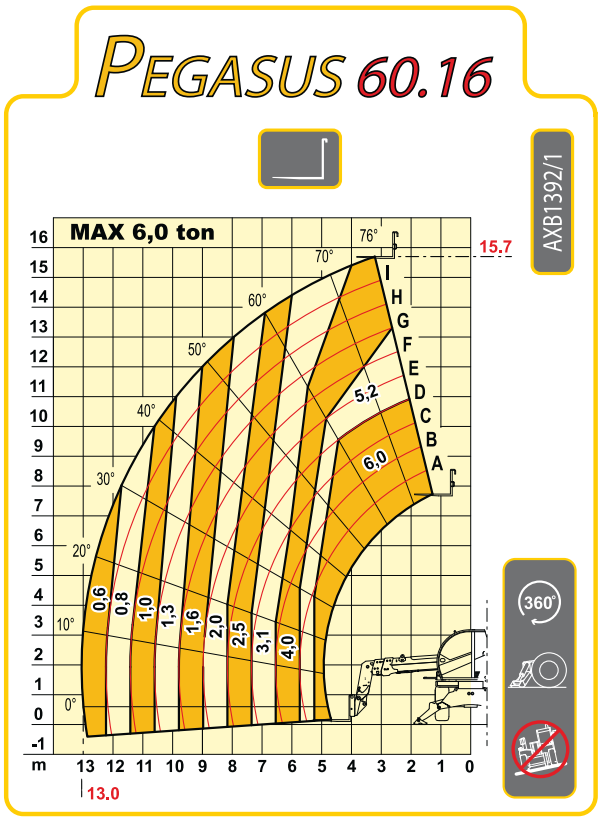
The load table indicated is only to be intended as an example.
Before lifting or positioning loads, consult the load tables in the handbook on the right of the instrument cluster or consult chapter "H" (machine technical information sheets) in this manual.

- CAUTION -

The limits given in the load Tables refer to the machine at a halt.
Do not lift or extend the boom when the machine is in motion.
Retract the boom completely and lower it as far as possible before moving with a load.
Check which boom attachment is assembled on the machine and then consult the relevant load table.



Example "A"
(Without stabiliser feet and rotating turret)



Example "B"
(With stabiliser feet and rotating turret)

USING THE LOAD TABLES AND BOOM INDICATORS

- CAUTION -

For your own safety and the integrity of the machine, comply with the information provided below.

The load tables regarding your machine are in the notebook in the cab.

- CAUTION -

The limits indicated in the load tables refer to the machine at a halt on wheels or stabilizers and on level ground.

Do not lift or extend the boom when the machine is in motion.

Retract the boom completely and lower it as far as possible before moving with a load.

Check which boom attachment is assembled on the machine and then consult the relevant load table in the cab.

Before raising or putting down a load, you must know how much it weighs.

Ensure the centre of gravity of the load does not exceed 500 mm measured from the heels of the forks.

- CAUTION -

The centre of gravity may not be at the centre of the load, therefore it is necessary to locate its position.

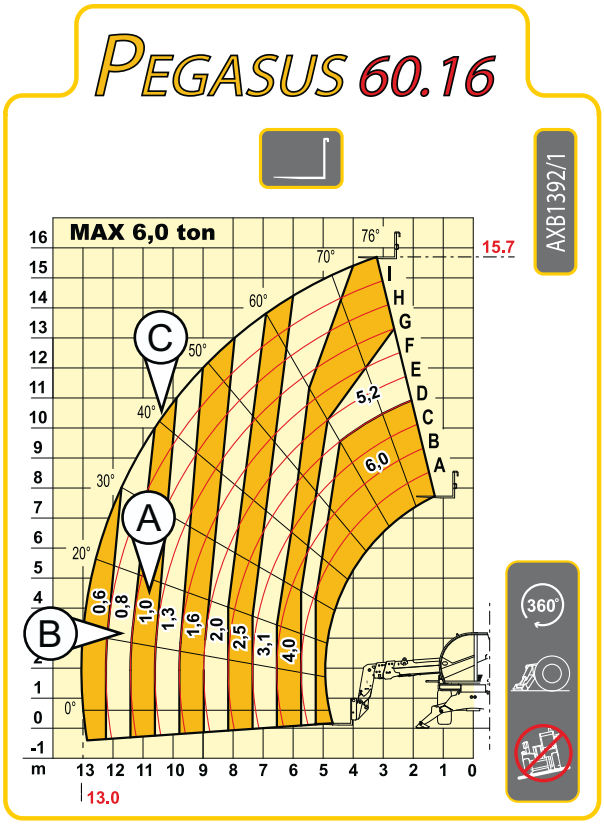
When you know the weight of the load, consult the load table (see the machine technical information sheets in chapter “H“) and find the section indicating the weight immediately above.

Example:
in the example load table (fig.20/C), the weight of the load is 0.9 tons, thus find the 1.0 ton section (fig.20/C Pos.”A”).

The left edge and the upper edge of this section indicate the stability limits of the machine for the load in question.
Do not tilt or extend the boom beyond the limits given. (fig.20/C Pos.“B-C“).

After inserting the forks under the load and before lifting the load, check the values on the boom angle and extension indicators.

Example
(With stabiliser feet and rotating turret)



(fig.20/B)

As illustrated in the table, the lines start from the graded boom angle and extension scales and go across the section of the table. Find where the lines regarding the values you are interested in cross. If the cross point is within or on the right of the maximum load section (known load weight), the load is within safety limits.

If the lines cross above or on the left of the section, do not attempt to lift the load. Retract the boom.
If when the boom is completely retracted, the boom angle and extension values cross outside the maximum load section, do not attempt to lift the load.

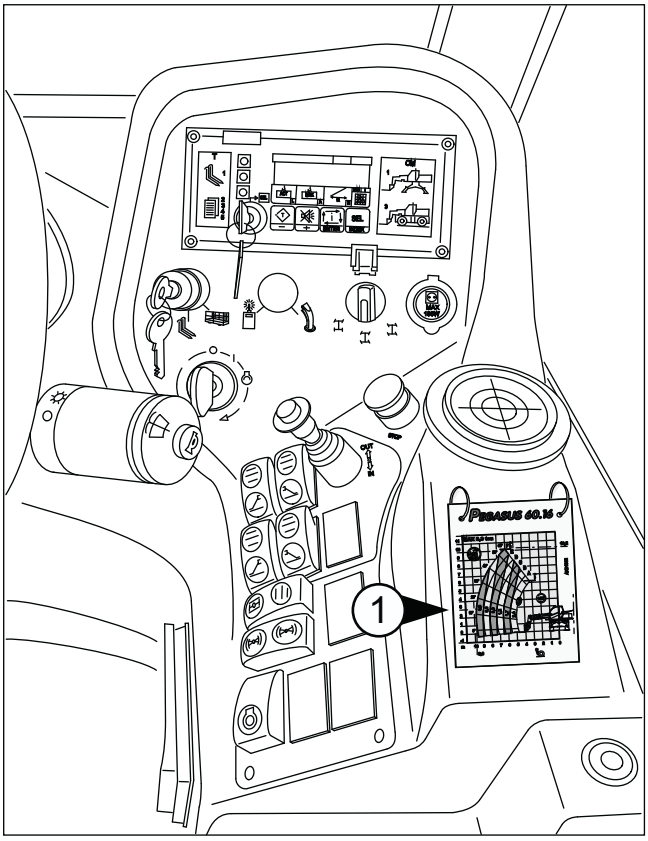
When the load is on the forks, retract the boom before lifting or lowering. This will reduce the risk of destabilising the machine.

Note that when the load is raised (for example on scaffolding) it should be released (raised) before retracting the boom completely.

Before putting down a load, consult the load table to determine the maximum distance of the machine from the unloading point.
It must be possible to set down the load without intersecting the limits indicated on the left of or above the maximum load section.

Notebook with essential data
(fig.21/B - Pos.“1”)

- A : cover page
- B : gear change page
- C : tyre inflation pressure page
- D : main safety standards page
- E : road circulation page
- F : key to symbols page (front)
- G : key to symbols page (back)
- H : load capacity diagrams



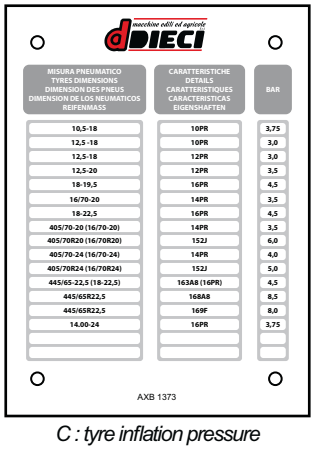
(fig.21/B)



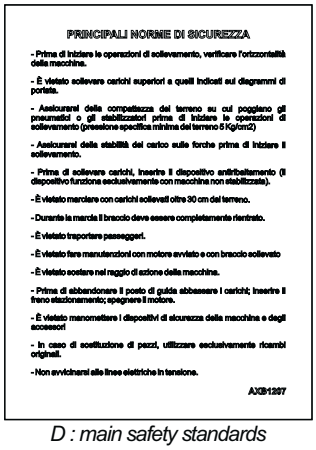
A : cover



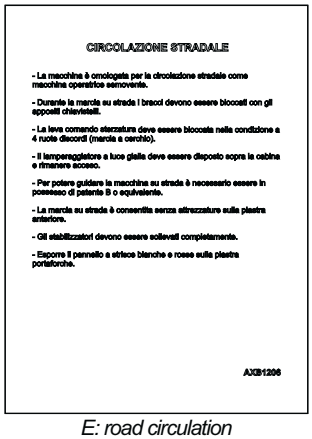
B : gear change



C : tyre inflation pressure



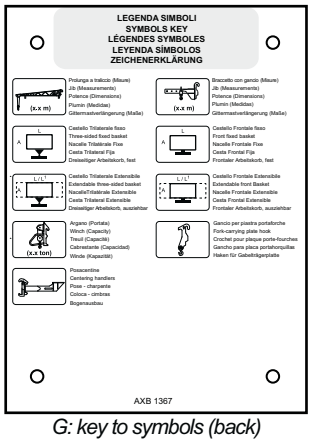
D : main safety standards



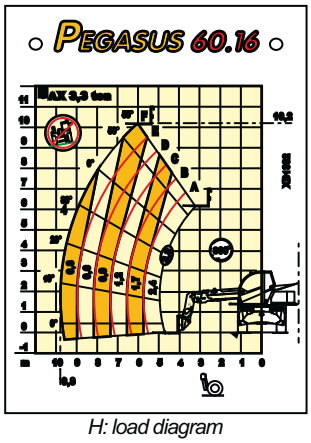
E: road circulation



F: key to symbols (front)



G: key to symbols (back)



H: load diagram

HANDLING LOADS

Lifting a load off the ground

1. Slowly approach the load to lift with the boom completely retracted and the forks in a horizontal position at the height of the lifting point.
   Keep the forks raised high enough to avoid contact with the ground.

2. Position the forks under the load to lift until contact is made with the fork holder plate. Engage the parking brake and shift the gear selector to neutral.

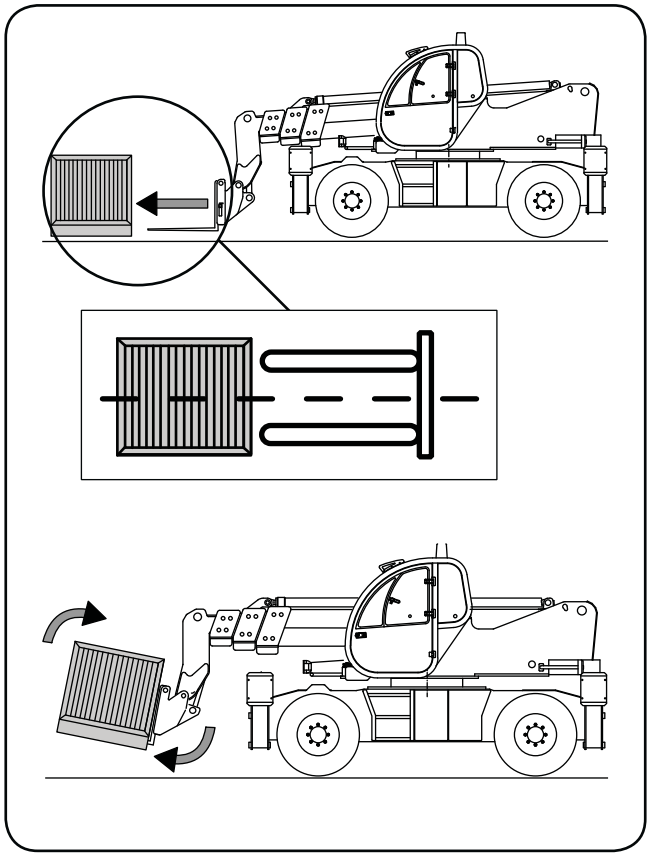
3. Raise the load slightly and tilt the fork holder plate backwards into the carrying position.

- CAUTION -

Always comply with the centre of gravity of the load, tilt the forks enough to ensure stability and to avoid dropping the load when braking.

- CAUTION -

Never carry loads while the boom is raised and/or extended.



Lifting loads from high up

1. Ensure the forks can be easily inserted under the load.
2. Slowly and cautiously drive the machine perpendicularly towards the load with horizontal forks.
3. Always remember to maintain the distance necessary to insert the forks under the load between the pile and the machine. Extend the boom over the shortest possible length.
4. After inserting the forks under the load so that contact is made with the fork holder plate, engage the parking brake and shift the gear selector to neutral.
5. Raise the load slightly and tilt the fork holder plate backwards into the carrying position.
6. If possible, lower the load without moving the machine. Raise the boom to distance the load, then retract the extensions and position the load in the carrying position.
7. If it is not possible to reverse the machine very slowly and with the utmost care, after adequately distancing the load, retract the extensions and lower the boom to position the load in the carrying position.

- CAUTION -

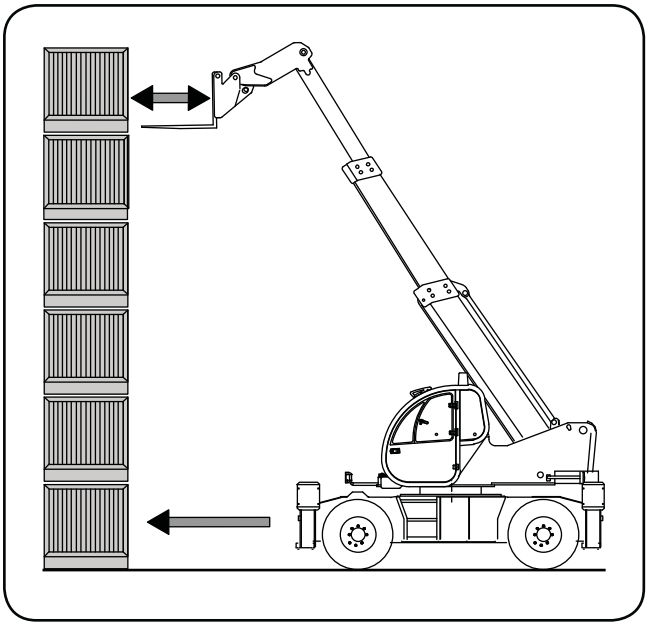
Always comply with the centre of gravity of the load, tilt the forks enough to ensure stability and to avoid dropping the load when braking.

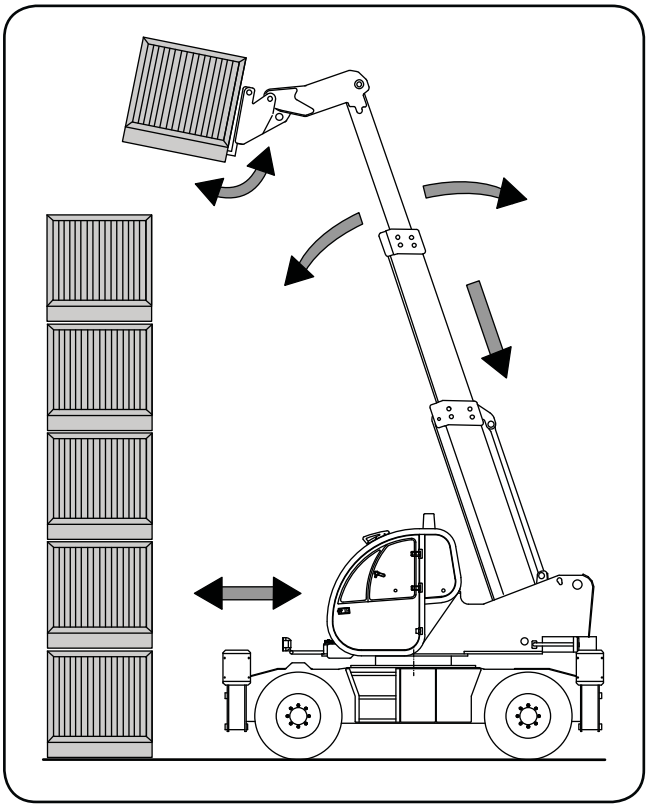
- PROHIBITION -

IT IS STRICTLY FORBIDDEN TO PICK UP A LOAD IF THE MACHINE IS NOT LEVEL.

- CAUTION -

Never carry loads while the boom is raised and/or extended.





Placing loads in high places

1. Place the load in the carrying position in front of the pile.
2. Raise and extend the boom until the load is above the pile. If necessary, advance the machine towards the pile very slowly and with the utmost care.
3. Engage the parking brake and shift the gear selector to neutral,
4. Position the load horizontally and place on top of the pile, lower and retract the extensions to position the load correctly.
5. Release the forks by alternately retracting the extensions and raising the boom; if possible reverse the machine very slowly and with the utmost care.

- CAUTION -

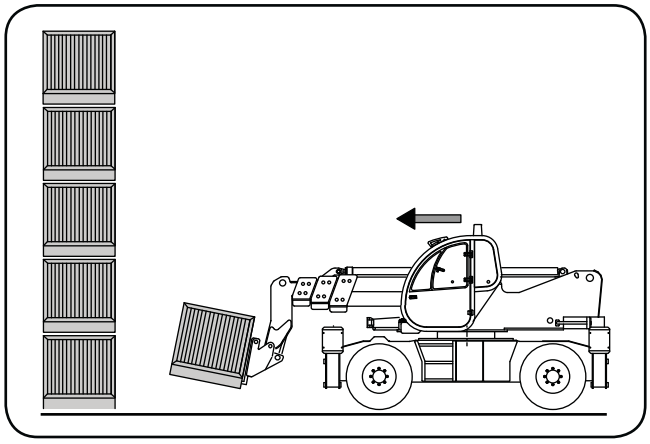
Always comply with the centre of gravity of the load, tilt the forks enough to ensure stability and to avoid dropping the load when braking.

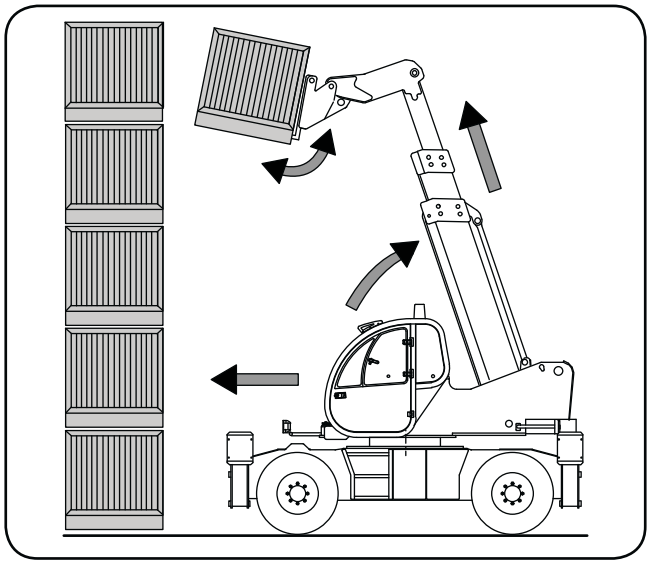
- PROHIBITION -

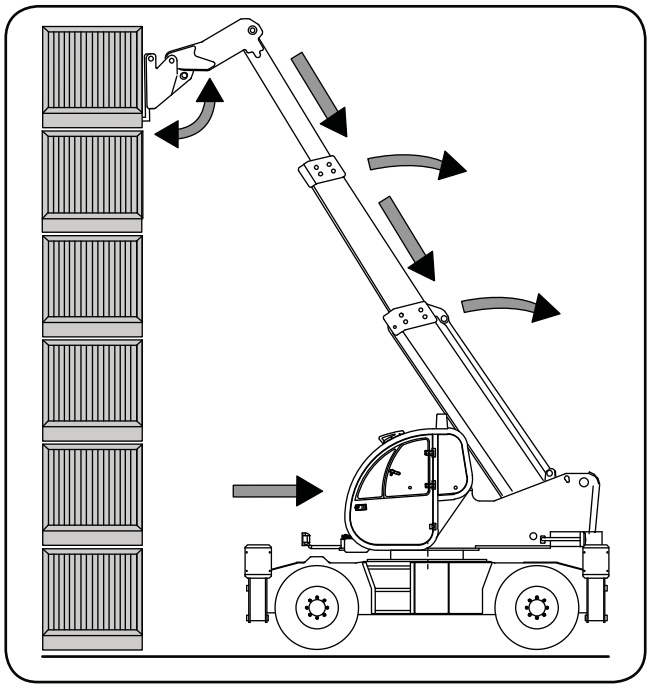
IT IS STRICTLY FORBIDDEN TO PICK UP A LOAD IF THE MACHINE IS NOT LEVEL.

- CAUTION -

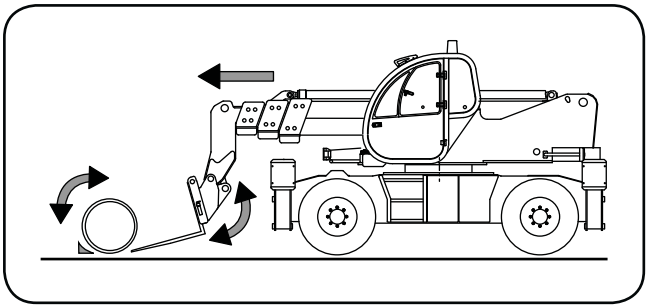
Never carry loads while the boom is raised and/or extended.







Picking up a round load



- Tilt the forks forwards and extend the telescopic boom. While inserting the forks under the load, turn the fork holder plate backwards to allow the load to slide. If necessary, secure the load with wedges.

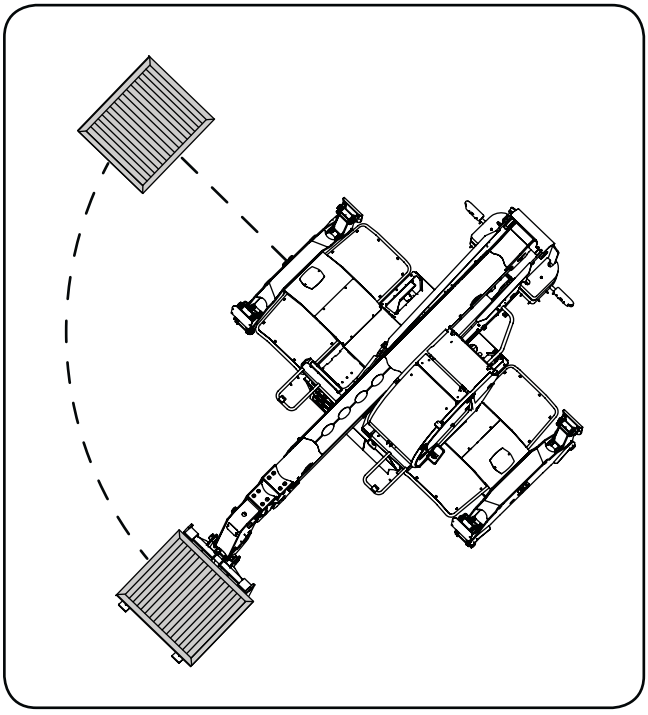
- CAUTION -

Always comply with the centre of gravity of the load, tilt the forks enough to ensure stability and to avoid dropping the load when braking.

- CAUTION -

Never carry loads while the boom is raised and/or extended.

Handling loads and rotating the turret



- The same procedures for raising loads while the machine is aligned apply when the machine is rotated.
- Rotation must always take place while the boom is in transport mode.
- Before rotating, enable the rear axle oscillation lock.

- PROHIBITION -

IT IS STRICTLY FORBIDDEN TO PICK UP A LOAD IF THE MACHINE IS NOT LEVEL.

- CAUTION -

Always comply with the centre of gravity of the load.

- PROHIBITION -

IT IS STRICTLY FORBIDDEN TO ROTATE THE TURRET WHILE THE BOOM IS RAISED AND/OR EXTENDED.

- CAUTION -

Never carry loads while the boom is raised and/or extended.

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SAFETY STICKERS

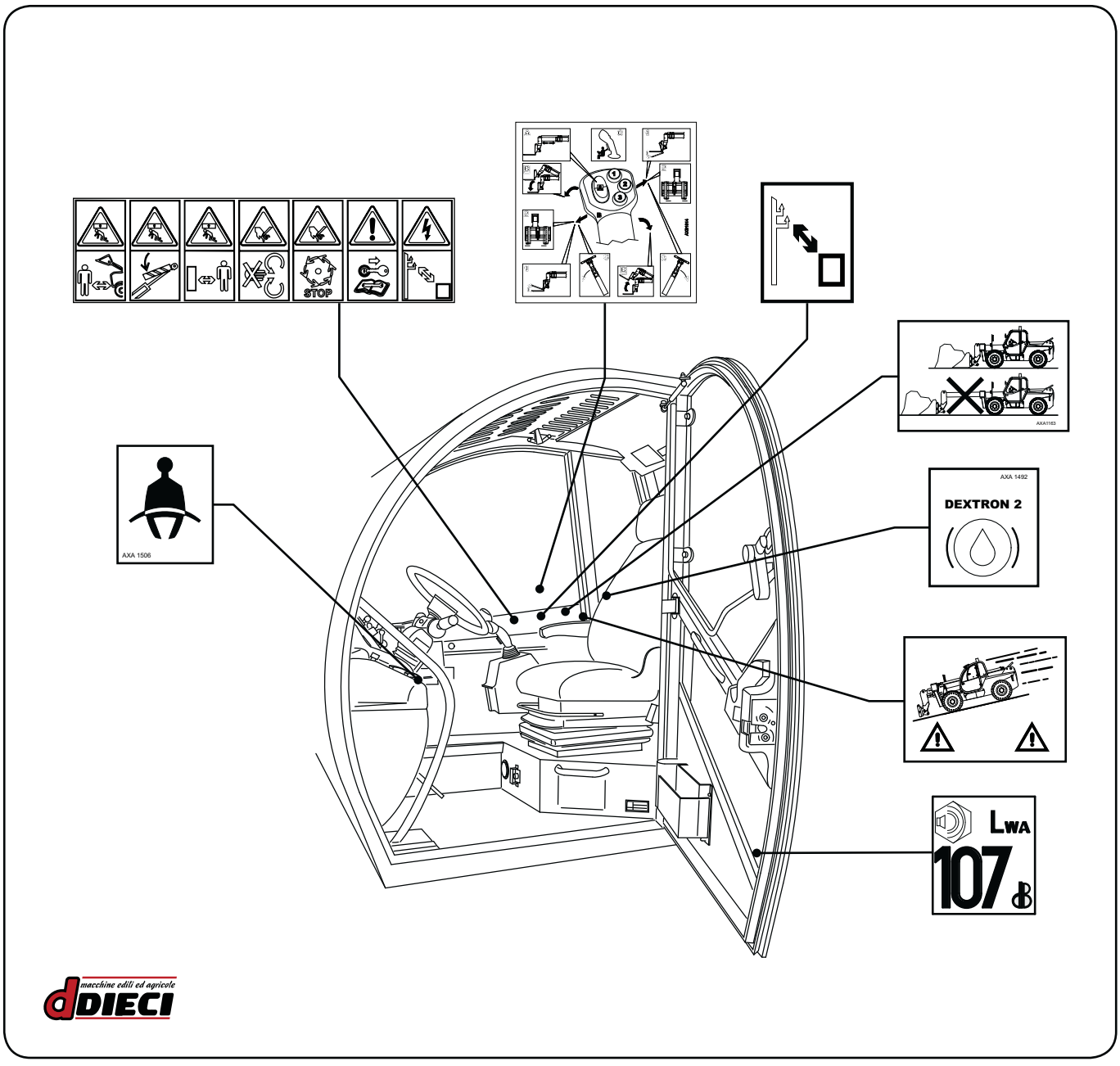
Safety stickers have been applied to the machine in the indicated positions. The aim of the safety stickers is to provide a guide for your and others' safety. Before using the machine, check the contents and position of the stickers by walking around the machine with this manual in your hands. Re-examine the stickers with every operator who is to use the machine.

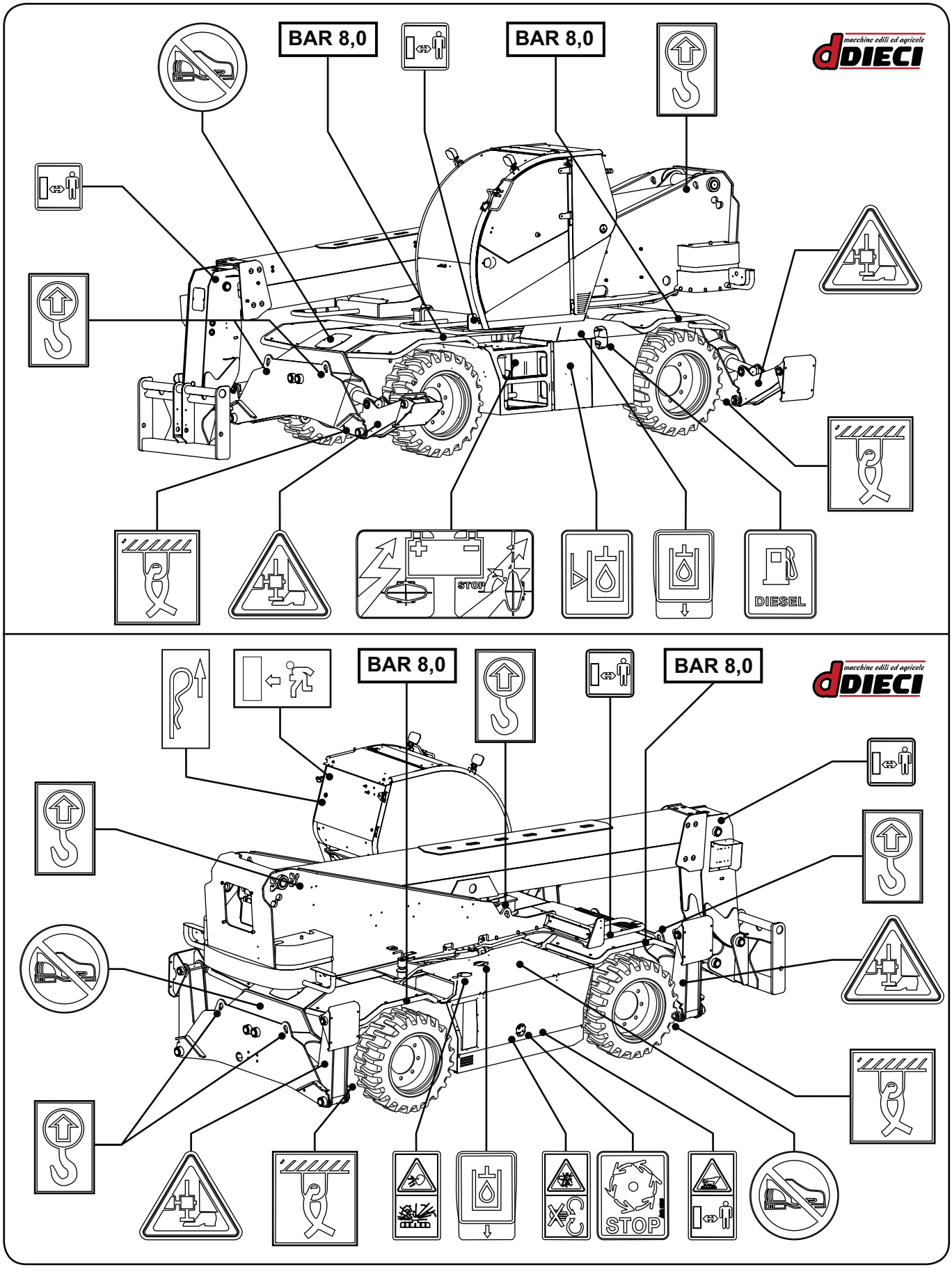
- Ensure you fully acknowledge where they are located and understand their contents.

- To ensure the stickers are easy to read and comprehend, check they are in the correct position and that they are always kept clean. **IT IS STRICTLY FORBIDDEN** to clean the signs on the machine with solvents or petrol; the stickers may become unstuck. Additional stickers to the warning and safety stickers must always be treated in the same way.

- If the stickers deteriorate, become damaged or are lost, replace them because they must be legible and understood correctly. Orders for stickers must be placed using the same process as for spare parts (ensure you include the model and serial number of the machine when you place your order).

- In case of doubt, please consult your agent or dealer.




BAR 8,0
BAR 8,0
STOP
DIESEL
BAR 8,0
BAR 8,0
STOP

Safety stickers and where they are located.

● **Located in the cab on the right side window** (fig.28/B)**:**

⚠ **- DANGER:**

Keep all persons at a safe distance from the machine before and during starting loading operations.

⚠ **- DANGER:**

When carrying out maintenance work, lock the hydraulic cylinders with safety locks.

⚠ **- DANGER:**

Keep all persons at a safe distance.

⚠ **- DANGER:**

Do not open or remove safety guards or devices while the engine is running.

⚠ **- DANGER:**

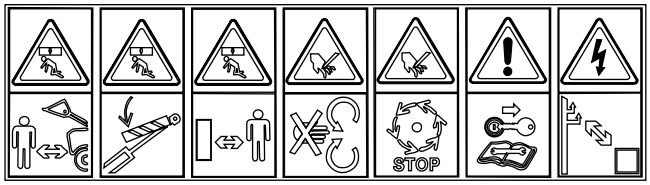
Wait until all moving parts have come to a halt.

⚠ **- DANGER:**

Switch off the engine and remove the key before starting maintenance work.

⚠ **- DANGER:**

Check the work zone and keep far away from power supply sources.



(fig.28/B)

● **On the radiator** (fig.29/B)

⚠ **- DANGER:**

Protect your face. Steam and hot water under high pressure. Remove the cap with due caution.


(fig.29/B)

● **On the engine bonnet** (fig.30/B)


(fig.30/B)

⚠ **- DANGER:**

Risk of burns.

⚠ **- DANGER:**

Keep all persons at a safe distance.

● **On the engine bonnet** (fig.31/B)

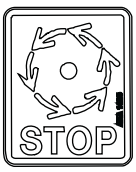

(fig.31B)

⚠ **- DANGER:**

Do not open or remove safety guards or devices while the engine is running.

⚠ **- DANGER:**

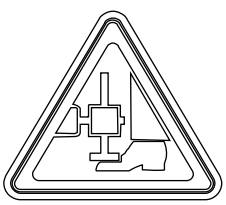
Wait until all moving parts have come to a halt.



(fig.32/B)

● **On the engine bonnet** (fig.32/B)

⚠ **- DANGER:**
Do not open; wait until all moving parts have come to a halt.


(fig.33/B)

● **On the stabiliser feet** (fig.33/B)

⚠ **- DANGER:** Risk of being crushed.

Use and maintenance stickers.

- **On the rear window** (fig.34/B)

Shows the direction in which to remove the locking pin that prevents the window from being opened completely

- **On the rear window** (fig.35/B)

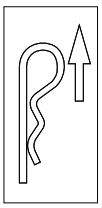
Indicates the emergency exit

- **On the left of the dashboard** (fig.36/B)

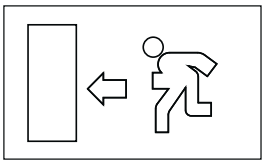
Indicates that the seat belts have to be fastened when using the machine.

- **On the side of the brake oil tank** (fig.37/B)

Indicates the type of oil used in the braking system.



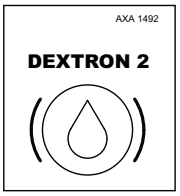
(fig.34/B)



(fig.35/B)



(fig.36/B)



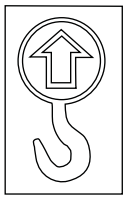
(fig.37/B)

- **On the chassis** (fig.38/B)

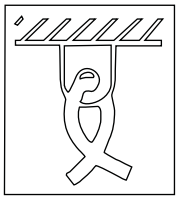
Shows the four places where the machine can be anchored if it needs to be lifted.

- **Below the chassis** (fig.39/B)

Shows the four places where the machine can be towed or anchored for transportation.



(fig.38/B)



(fig.39/B)

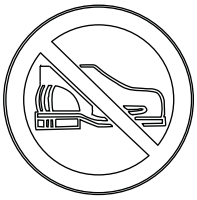
- On parts that must not be stepped on (fig.40/B)

⚠ **- DANGER:**

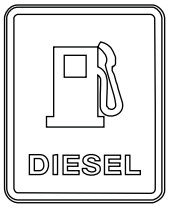
Keep off "danger of breakage".

- **On the diesel tank** (fig. 1/B)

Type of fuel to use.



(fig.40/B)



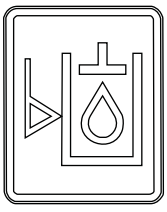
(fig.41/B)

- **On the side of the hydraulic oil tank** (fig.42/B)

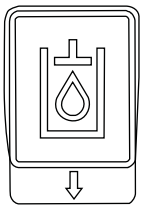
Hydraulic oil level indicator.

- **On the hydraulic oil tank** (fig.43/B)

Indicates the hydraulic oil top up cap.



(fig.42/B)



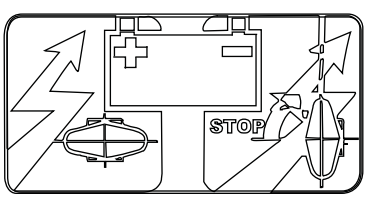
(fig.43/B)

- **Below the cab** (fig.44/B)

Indicates how to disconnect the machine electrical system. (It is compulsory to disconnect the machine electrical system using the battery cut-out during all maintenance operations where the engine must be switched off).

- **On the four mudguards** (fig.45/B)

BelowIndicates the recommended tyre pressure.



(fig.44/B)

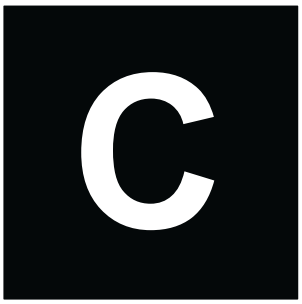


(fig.45/B)

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GETTING TO KNOW AND USING THE MACHINE






ANY MODIFICATION TO THE MACHINE REQUIRES A NEW TEST TO CHECK CONFORMITY WITH THE "CE" MACHINE DIRECTIVE 98/37. THIS ALSO APPLIES IN CASE OF REPAIRS WITH NON-ORIGINAL SPARE PARTS.

IT IS FORBIDDEN TO START USING THE MACHINE UNTIL THE CONTENTS OF THIS MANUAL HAVE BEEN CAREFULLY READ AND LEARNT.

REGARDLESS OF HOW MUCH EXPERIENCE THE OPERATOR MAY HAVE, IN THIS AREA, IT IS ESSENTIAL THAT HE OR SHE LEARNS THE EXACT LOCATION AND FUNCTION OF ALL INSTRUMENTS AND CONTROLS BEFORE USING THE MACHINE.

THE IMAGES, DESCRIPTIONS AND MEASUREMENTS IN THIS CHAPTER ALL REFER TO STANDARD MACHINES.

UPON REQUEST, YOUR MACHINE CAN BE FITTED OUT WITH OPTIONAL CONTROLS AND ACCESSORIES.

ANY FUNCTION OR PROCEDURE REGARDING THE USE AND FITTING OF MACHINE ATTACHMENTS NOT DESCRIBED IN THIS MANUAL ARE STRICTLY FORBIDDEN.

IT IS STRICTLY FORBIDDEN TO MAKE ANY USE OF THE MACHINE OTHER THAN THE USE DESCRIBED IN THIS MANUAL.

IT IS COMPULSORY TO READ AND LEARN CHAPTER "B" (SAFETY STANDARDS) BEFORE READING CHAPTER "C" AND BEFORE USING THE MACHINE.




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- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

GENERAL WARNINGS

- CAUTION:

The operator must use the machine and all its controls only when properly seated in the driver's seat.

- CAUTION:

The telehandler described in this manual cannot be used in closed environments or where there might be explosive gases. To work in this type of environment, contact the manufacturer so that the necessary modifications can be made to the machine.

- CAUTION:

Working on gradients can be dangerous. Ground conditions can vary according to weather conditions (e.g. rain, snow, ice). Therefore pay the utmost attention to the ground conditions you are working on and proceed slowly.

- CAUTION:

While transporting a load on a gradient, proceed with the load uphill of the machine to increase stability. Before ascending ramps or trailers, remove any mud, ice or oil, which could cause accidents.

- CAUTION:

Proceed with the utmost caution on uneven, wet or muddy surfaces.

- CAUTION:

Lack of efficient communication can cause serious accidents. If you are working with others, ensure any hand signals you intend to use are understood by everybody. Since work sites are often very noisy, do not rely on verbal communication.

- CAUTION:

It is forbidden to use moveable hydraulic machine parts to lift people, except for the uses described in this manual.

- CAUTION:

Before activating moveable hydraulic machine parts, ensure the surrounding area is free.

- CAUTION:

The machine may only be used by skilled and trained personnel who have read this manual. If the machine is driven on roads, the operator must have a valid driver's licence pursuant to the regulations in effect in the country where the machine is being used (type "B" licence in Italy).

- CAUTION:

Do not use the machine if you are under the effect of alcohol or drugs, or even if you have taken medication that may make you drowsy or alter your reflexes.

- CAUTION:

Before starting the machine or before carrying out any particularly complex or dangerous manoeuvres, it is essential that you practice in an empty, unobstructed part of the site.

- CAUTION:

Clear, basic symbols are situated near each of the controls to make them more practical and comprehensible to the operator.

- CAUTION:

When traverse steering is selected, always proceed slowly.

- CAUTION:

If any part malfunctions and causes a risk, stop the machine immediately. Do not use the machine again until the malfunction has been repaired.

- CAUTION:

Excessively inflated or overheated tyres can explode: follow the instructions in this manual to ensure the tyres are inflated correctly. Do not weld or cut the rims. Any repair work must be carried out by a tyre specialist.

- CAUTION:

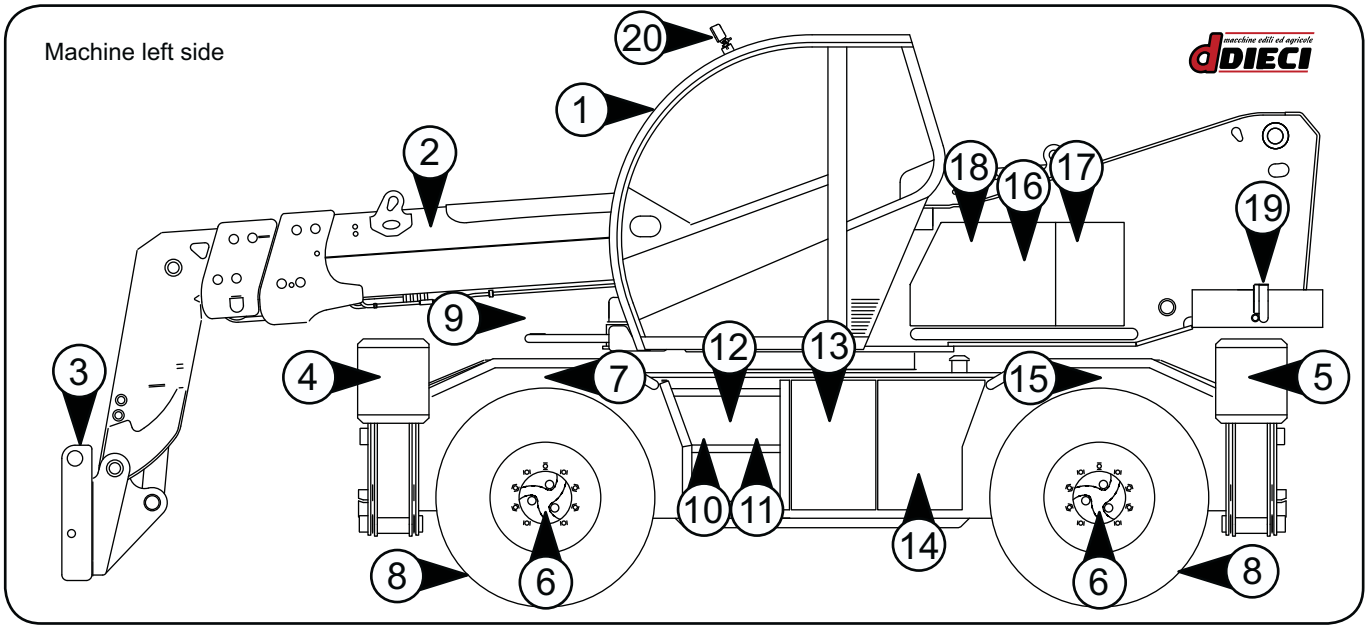
Do not leave the machine boom raised and extended for long periods, this could misalign the boom extensions. Retract the extensions at least once a day.

- CAUTION -

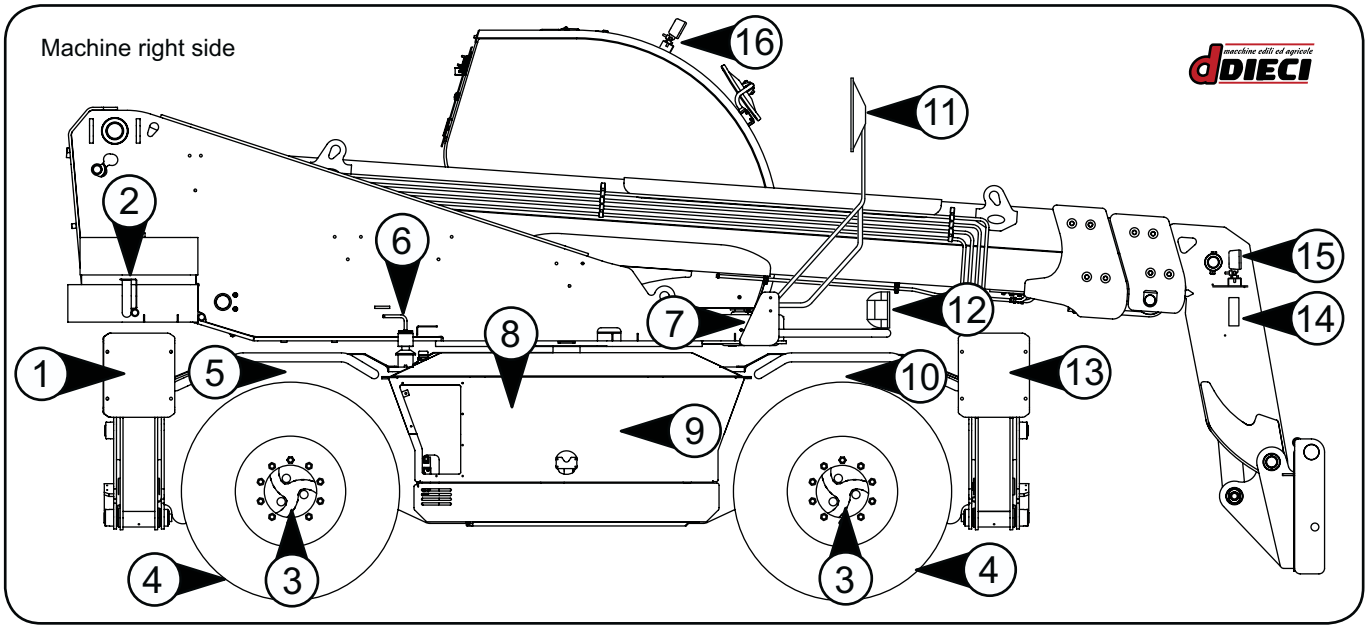
IT IS COMPULSORY TO READ AND LEARN CHAPTER "B" (SAFETY STANDARDS) BEFORE READING CHAPTER "C" AND BEFORE USING THE MACHINE.

IDENTIFYING MACHINE PARTS – Four movement stabilisers

(Pegasus 70.11, 60.16, 30.16, 40.17, 38.16)



1. Cab
2. Telescopic boom
3. Attachment holder plate
4. Front left stabiliser
5. Rear left stabiliser
6. Epicyclic reduction gear:
7. Machine levelling cylinder
8. Wheel
9. Front left light
10. Battery
11. Toolbox
12. Hydrostatic system oil filter
13. Hydraulic oil tank
14. Diesel fuel tank
15. Oscillation lock cylinder
16. Control unit and timing system bonnet
17. Control unit
18. Timing system
19. Rear left light
20. Front work spotlight on the cab

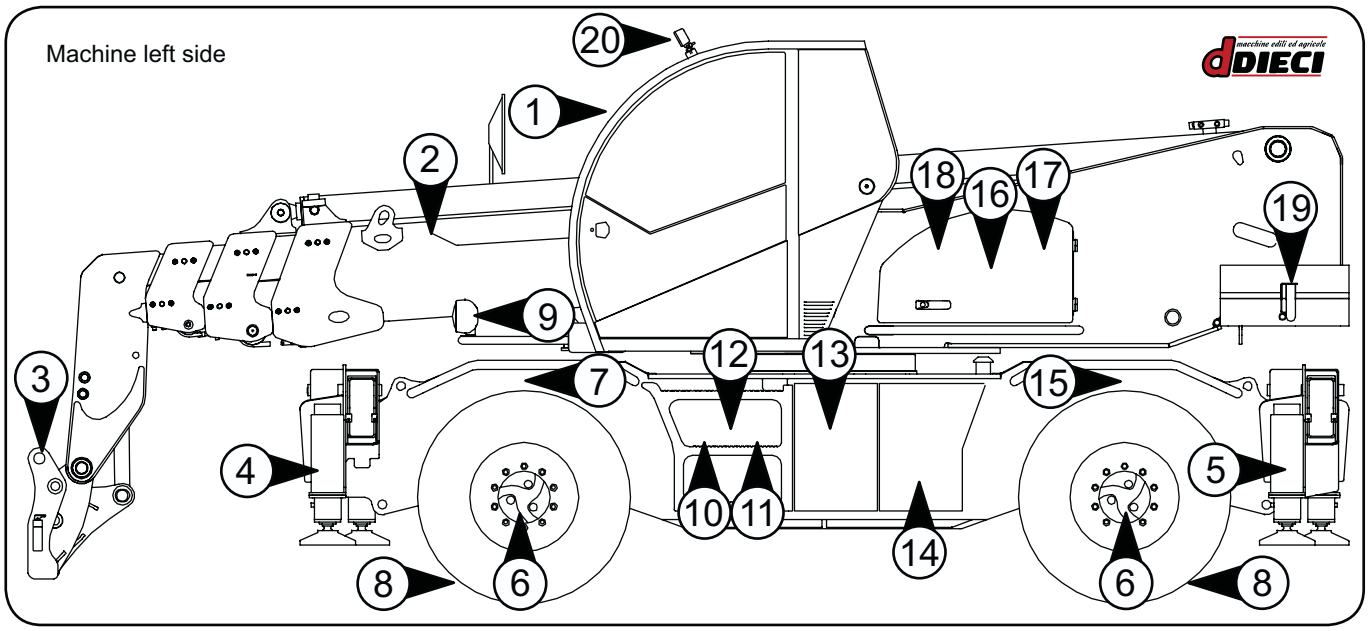


1. Rear right stabiliser
2. Rear right light
3. Epicyclic reduction gear:
4. Wheel
5. Oscillation lock cylinder
6. Turret rotation locking pin
7. Boom safety support rod
8. Engine bonnet
9. Diesel engine
10. Levelling cylinder
11. Right rear-view mirror
12. Front right light
13. Front right stabiliser
14. Boom head electrical connector
15. Boom head work spotlight
16. Front work spotlight on the cab

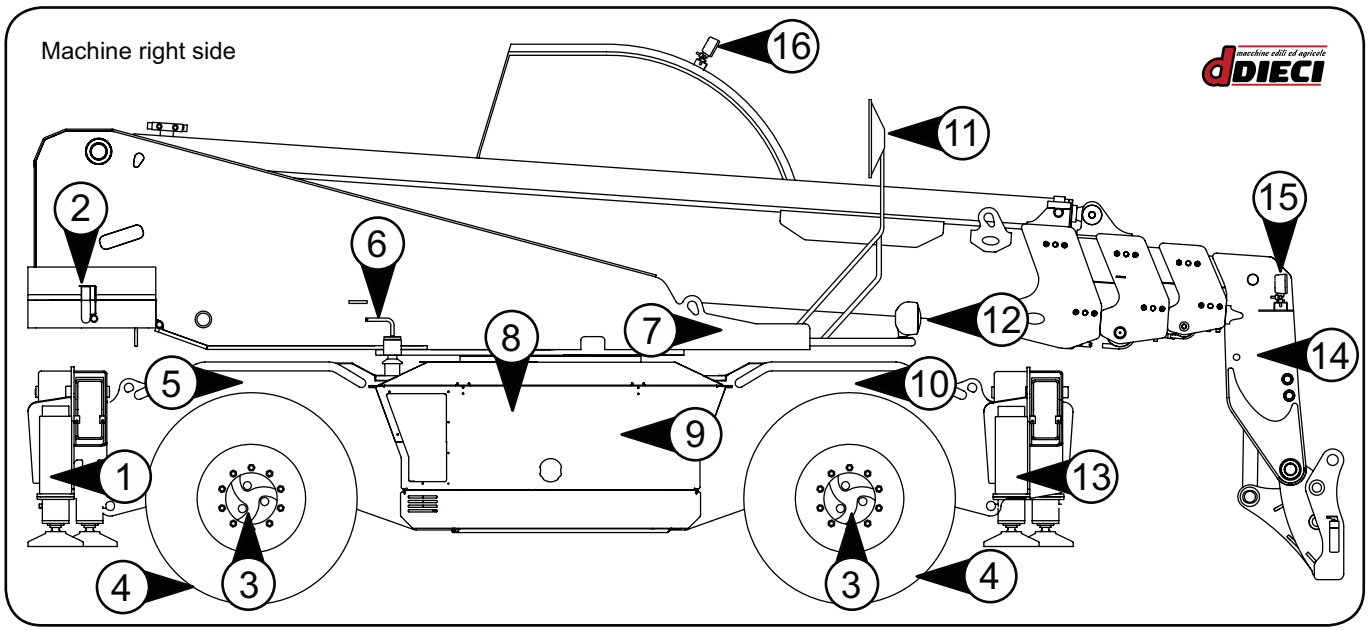
- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

IDENTIFYING MACHINE PARTS – Eight movement stabilisers

(Pegasus 45.19, 45.21, 50.21, 40.25)



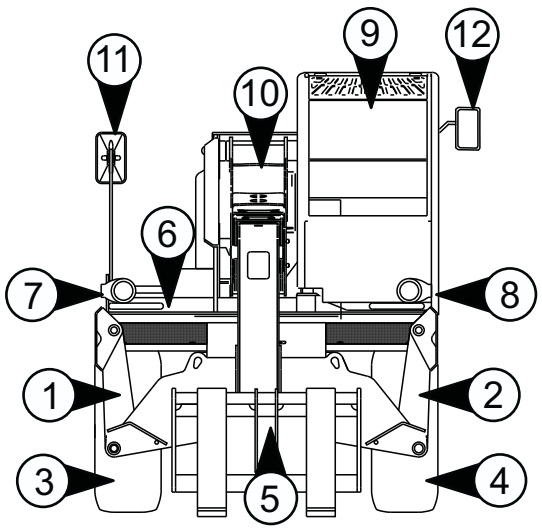
1. Cab
2. Telescopic boom
3. Attachment holder plate
4. Front left stabiliser
5. Rear left stabiliser
6. Epicyclic reduction gear:
7. Machine levelling cylinder
8. Wheel
9. Front left light
10. Battery
11. Toolbox
12. Hydrostatic system oil filter
13. Hydraulic oil tank
14. Diesel fuel tank
15. Oscillation lock cylinder
16. Control unit and timing system bonnet
17. Control unit
18. Timing system
19. Rear left light
20. Front work spotlight on the cab



1. Rear right stabiliser
2. Rear right light
3. Epicyclic reduction gear:
4. Wheel
5. Oscillation lock cylinder
6. Turret rotation locking pin
7. Boom safety support rod
8. Engine bonnet
9. Diesel engine
10. Levelling cylinder
11. Right rear-view mirror
12. Front right light
13. Front right stabiliser
14. Boom head electrical connector
15. Boom head work spotlight
16. Front work spotlight on the cab

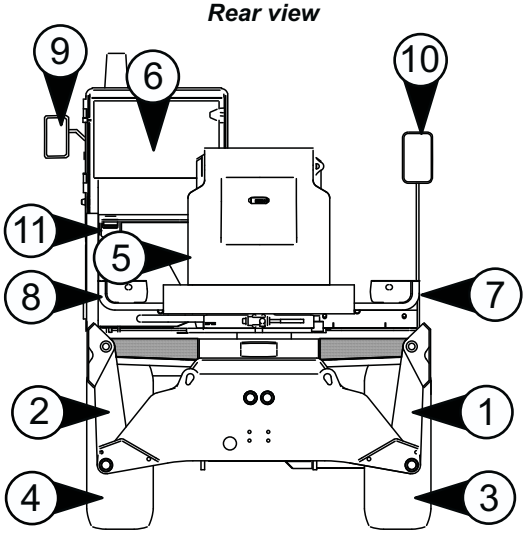
Machine with four movement stabilisers
(Pegasus 70.11, 60.16, 30.16, 40.17, 38.16)

Front view



1. Front right stabiliser
2. Front left stabiliser
3. Front right wheel
4. Front left wheel
5. Attachment holder plate
6. Boom safety support rod
7. Front right light
8. Front left light
9. Cab
10. Telescopic boom
11. Left rear-view mirror
12. Right rear-view mirror

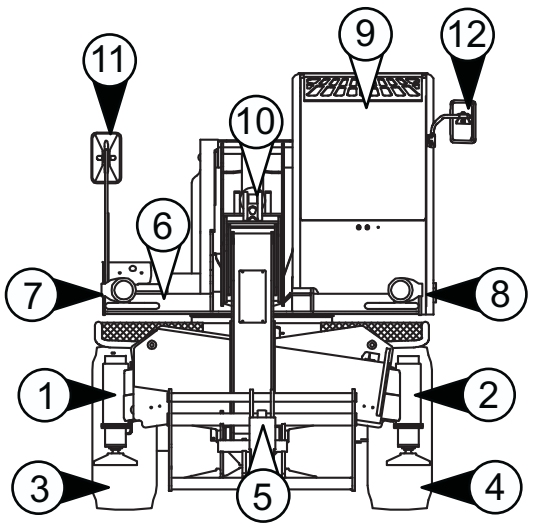
Rear view



1. Rear right stabiliser
2. Rear left stabiliser
3. Rear right wheel
4. Rear left wheel
5. Timing system and control unit
6. Rear window - Emergency exit
7. Rear right light
8. Rear left light
9. Left rear-view mirror
10. Right rear-view mirror
11. Revolving light power outlet

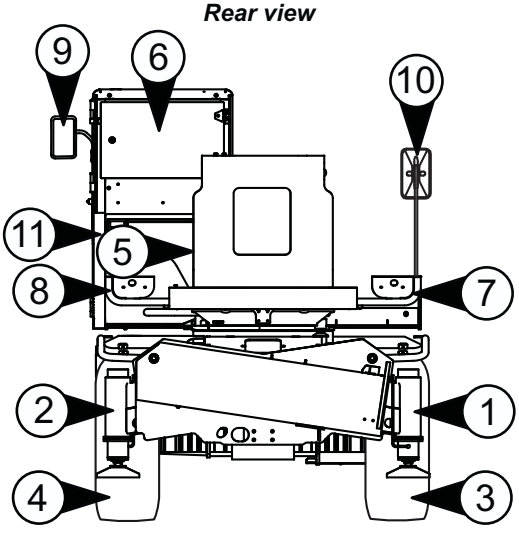
Machine with eight movement stabilisers
(Pegasus 45.19, 45.21, 50.21, 40.25)

Front view



1. Front right stabiliser
2. Front left stabiliser
3. Front right wheel
4. Front left wheel
5. Attachment holder plate
6. Boom safety support rod
7. Front right light
8. Front left light
9. Cab
10. Telescopic boom
11. Right rear-view mirror
12. Left rear-view mirror

Rear view



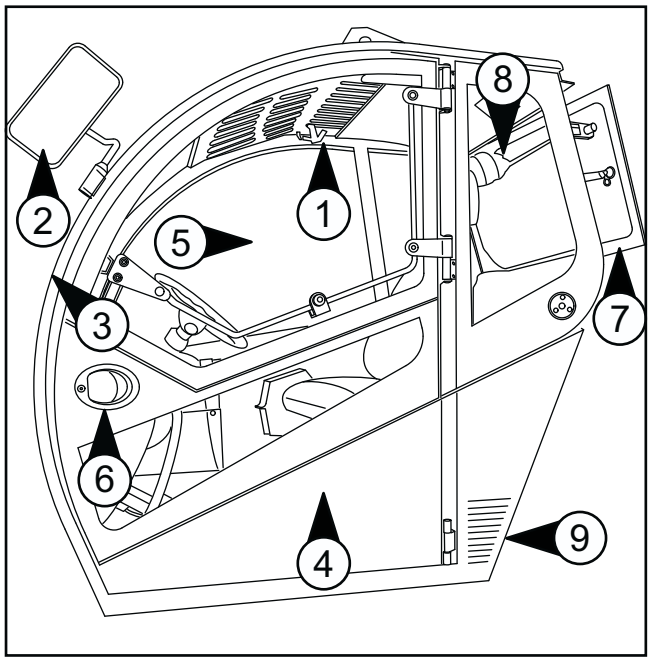
1. Rear right stabiliser
2. Rear left stabiliser
3. Rear right wheel
4. Rear left wheel
5. Timing system and control unit
6. Rear window - Emergency exit
7. Rear right light
8. Rear left light
9. Right rear-view mirror
10. Left rear-view mirror
11. Revolving light power outlet

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

CAB
(Pegasus four and eight movement stabilisers)

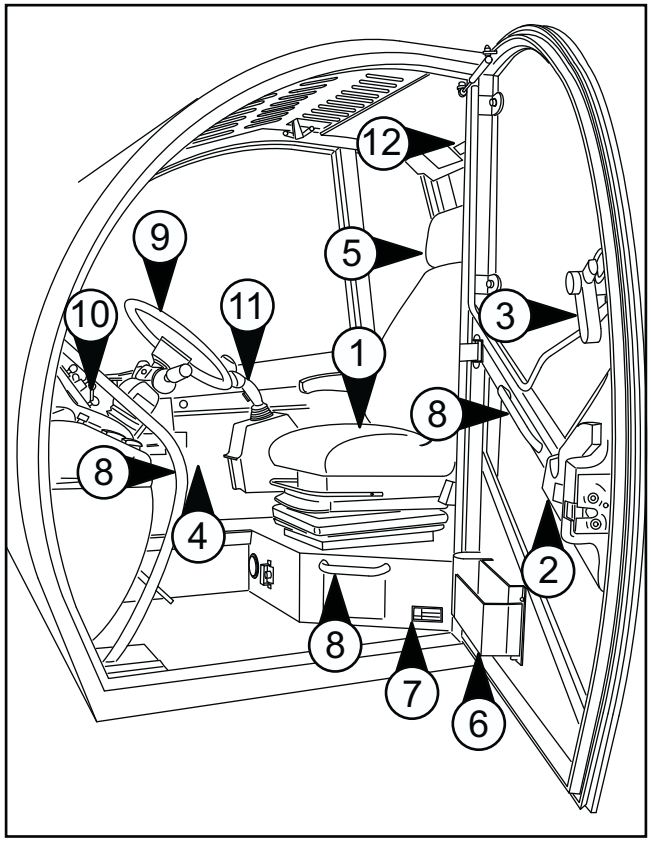
External components

1. Openable roof.
2. Left rear-view mirror
3. Front windscreen wiper
4. Cab door.
5. Door upper window.
6. Door handle.
7. Rear window / Emergency exit
8. Rear windshield wiper
9. Revolving light air inlet



Internal components

1. Seat.
2. Door handle.
3. Upper window handle.
4. Ashtray.
5. Courtesy compartment
6. Document compartment
7. Machine identification plate
8. Grip for climbing in/out of the cab.
9. Steering wheel.
10. Dashboard.
11. Joystick.
12. Indoor cab light



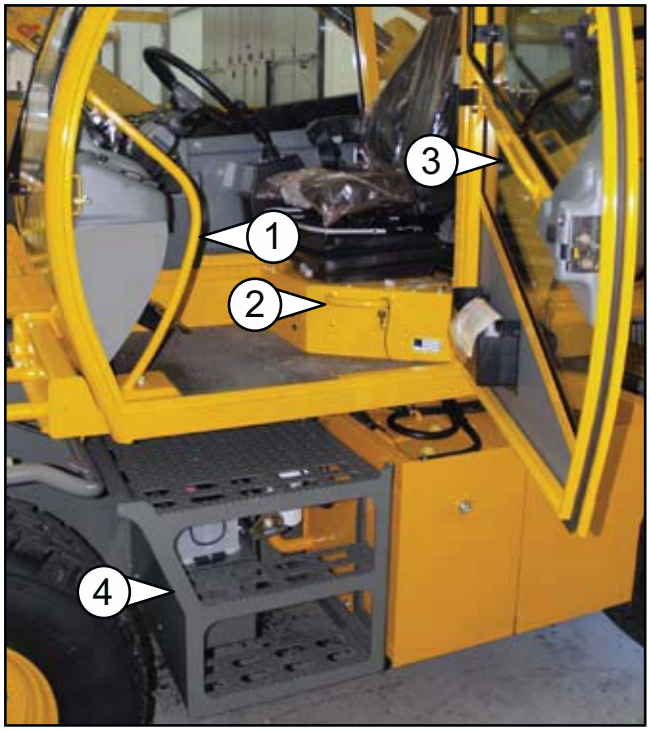
GETTING IN AND OUT OF THE CAB

Before getting in the cab, ensure your hands and shoes are clean and dry to avoid slipping and falling.
Only use the grips (fig.1/C Pos.“1”, “2” and “3”) to access the cab.
Do not use the controls or the steering wheel inside.
Always face the cab when getting in or out of your machine.

Before getting out of the machine, position the turret so that the cab is aligned with the access steps (fig.1/C Pos. “4”).

⚠ - CAUTION:

Only get out of the cab when it is aligned with the steps below.
Do not get out of or leave the machine when the turret is positioned otherwise. (See the turret alignment pilot lamp on Page C/15 - C/30)



(fig.1/C)

DOOR CONTROLS

The cab door is equipped with an external handle with lock (fig.2/C Pos. “1”).

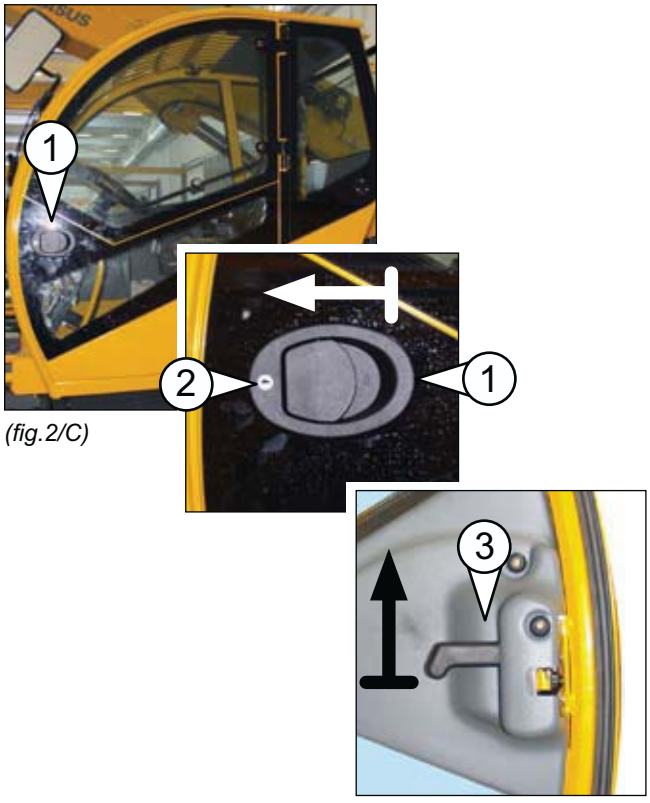
To open the door:

- Insert the key in the lock (fig.2/C Pos.“2”) and turn clockwise/anticlockwise to lock/unlock.
- Pull the handle towards you to release the unlocked door.

NOTE:
The door will not open if you attempt to open the handle when the door is locked.

⊘ - PROHIBITION - ⊘

IT IS STRICTLY FORBIDDEN to operate the machine while the cab door is open.



(fig.2/C)

INTERNAL DOOR HANDLE

- Move the handle upwards to release the door (fig.2/C Pos. “3”).
- Push the door outwards to completely open.

⚠ - CAUTION:

Before pushing the door open, check there are no obstacles in the way.

⚠ - CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

OPENING THE CAB DOOR WINDOW
(fig.3/C Pos.“1”)

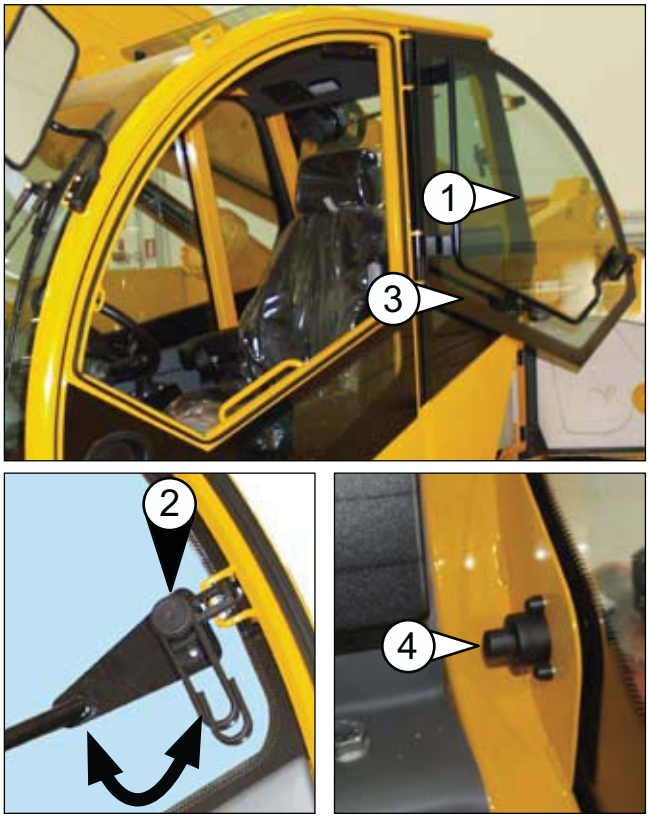
- To open, lower the grip turning it clockwise (fig.3/C Pos. “2”).
- To fasten the window so it stays open, press lightly to secure the window in the catch (fig.3/C Pos.“3”).
- Press the button inside the cab (fig.3/C Pos.“4”) to release the window and close it.
- To close the window, pull it towards you and return it to its original position.
- Turn the grip anticlockwise to lock the window in the closed position.

- CAUTION:

Before pushing the window outwards, check there are no obstacles in the way.

- CAUTION:

Before starting to operate the machine, ensure the door window is fastened, whether the window is open or closed.



(fig.3/C)

REAR WINDOW
(Fig. 4/C Pos. “1”)

- To open the rear window, pull the handle (fig.4/C Pos.“2”) and push the window outwards.

The window is kept open by the handle.

EMERGENCY EXIT
(Fig. 4/C)

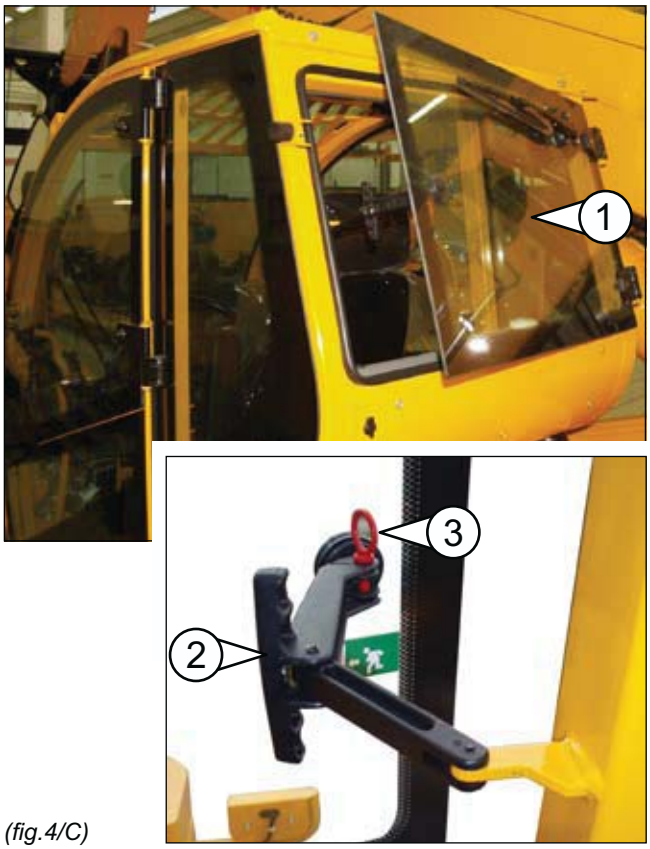
The emergency exit is identified and marked on the rear window.

- To open the window completely in case of need, remove the locking pin (fig.4/C Pos.“3”) and push the glass.

While using the machine normally, the pin must be positioned as shown in the figure.

- CAUTION:

The rear window is near the telescopic boom. RISK OF SHEARING.



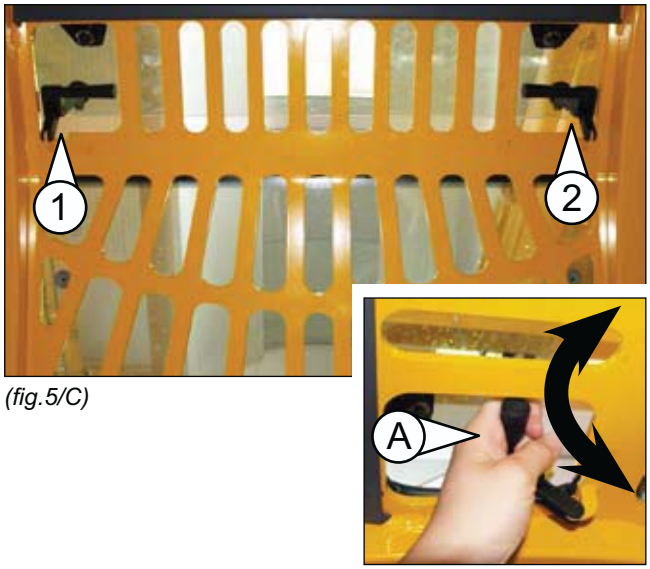
(fig.4/C)

ROOF
(fig.5/C)

To open the roof, grip the handles (fig.5/C Pos. “1” and “2”) and push upwards and rotate (fig.5/C Pos.“A”).
The completely turned handles will hold the roof in position.
Reverse the procedure to close.

⚠ ***- CAUTION:***

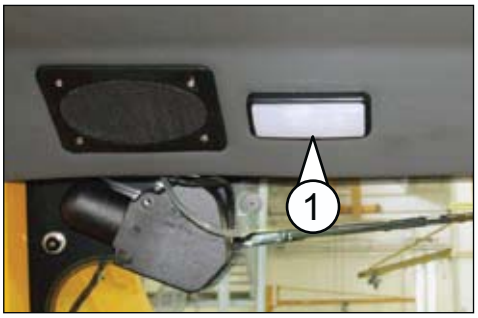
If the handles are no longer able to hold the roof in position, replace them as soon as possible. Risk of crushing.



(fig.5/C)

INTERNAL CAB LIGHT
(fig.6/C Pos.“1”)

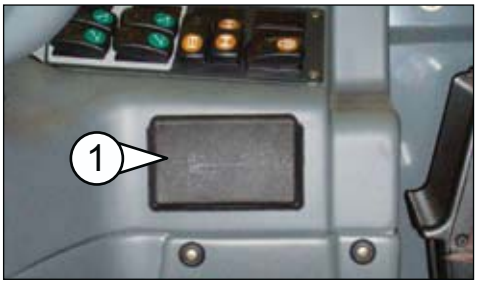
- Press the button on the edge of the light to switch it on.
- Press again to switch off.



(fig.6/C)

ASHTRAY.
(fig. 7/C Pos.“1”)

- Pull the upper part towards you to open.



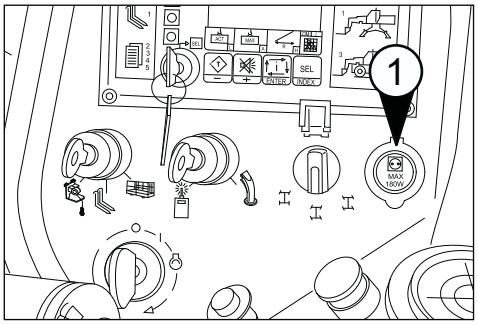
(fig.7/C)

MAX 180W POWER OUTLET
(fig.8/C Pos.“1”)

- 12v 180w power outlet for continuous current user devices (battery chargers, mobile phones, etc.)

⚠ ***- CAUTION:***

Do not connect user devices with a power rating above 12V and power input above 180W.
Danger of damage to the electrical system.

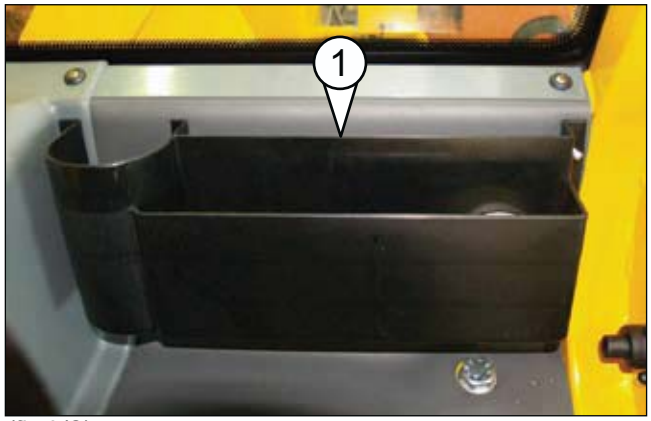


(fig.8/C)

⚠ - CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

COURTESY COMPARTMENT
(fig.9/C Pos.“1”)

- Located behind the seat.



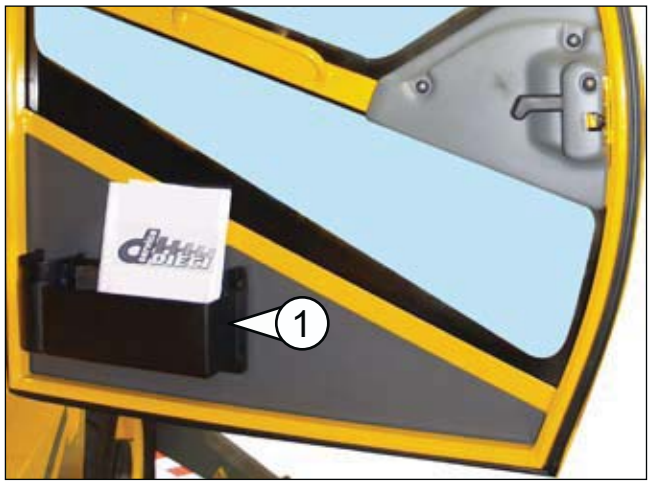
(fig.9/C)

TECHNICAL DOCUMENT COMPARTMENT
(fig.10/C Pos.“1”)

All technical documentation must be kept in its compartment inside the cab door (fig.10/C Pos.“1”).
The use and maintenance manual and the spare parts catalogue must always be available inside the machine in case they need to be consulted.

- CAUTION:

The operation manual and the spare parts catalogue are an integral part of the machine and must stay with the machine when it is sold on to a new owner. The manual must always be stored carefully and must always be kept onboard the machine (in the language spoken by the operator) for rapid consultation. If the manual becomes worn and/or even partially damaged or illegible, replace immediately.



(fig.10/C)

STEERING WHEEL (adjustment)
(fig.11/C)

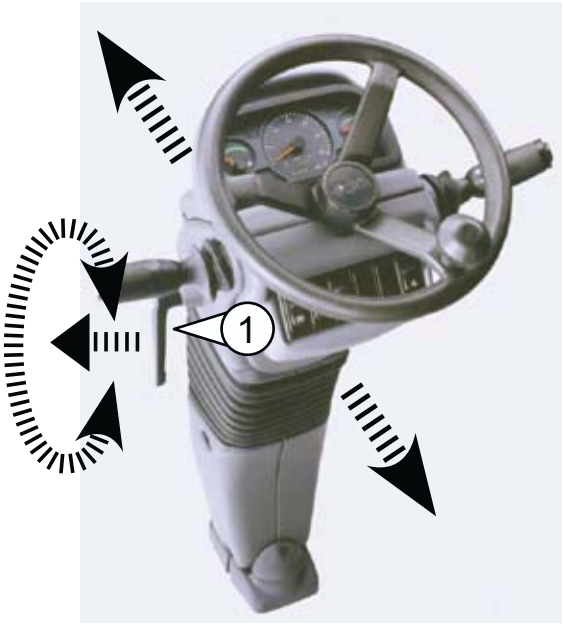
To adjust the steering wheel inclination:

- Turn lever “1” (fig.11/C) towards the front of the machine to release.
- Push or pull the steering wheel until you reach the desired position.
- Turn lever “1” (fig.11/C) towards yourself to lock the steering wheel in position. Screw firmly to lock securely.

If lever “1” (fig.11/C) is now locked in an inconvenient position, pull the lever towards the left and turn.

- CAUTION:

The steering wheel is adjusted correctly when the operator is able to grip the most distant part of the steering wheel while keeping elbows slightly bent and the back leaning firmly against the backrest.



(fig.11/C)

SEAT
(fig.12/C)

DIECI supplies various types of seat model depending on customer requirements. The machine is equipped with a "dead man" safety system, featuring an electric microswitch in the driver's seat. The microswitch is located inside the cushion where the driver is seated (fig.12/C Pos."A").

The engine can only be switched on if the forward drive/reverse lever is in the neutral position "N" and the operator is seated correctly in the driver's seat.



(fig.12/C)

Seat adjustment
(fig.13/C)

The seat allows various types of adjustment:

A - Lengthwise seat assembly adjustment (fig.13/C).

B - Lengthwise seat adjustment (fig.13/C).

C - Seat cushion inclination (fig.13/C).

D - Lengthwise seat cushion adjustment (fig.13/C).

E - Degree of suspension adjustment (fig.13/C).

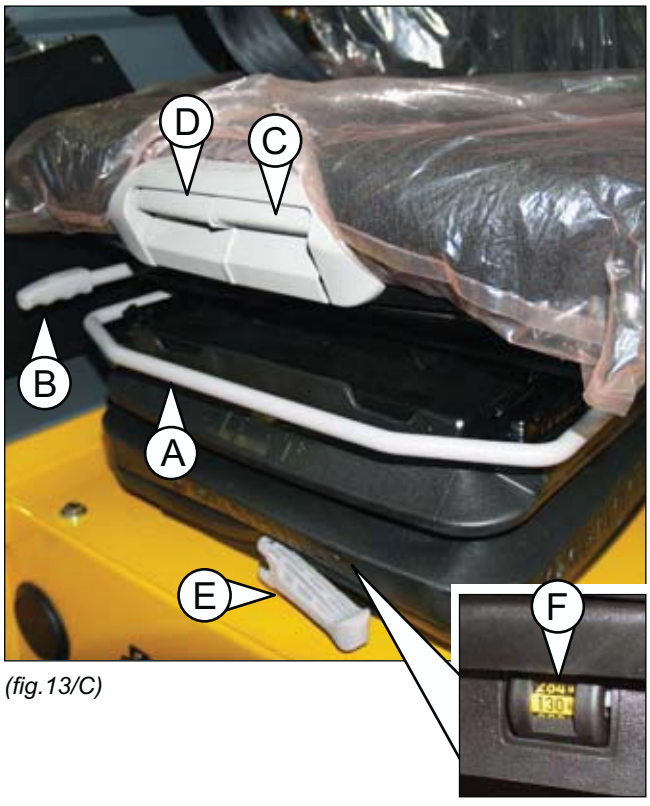
F - Backrest inclination adjustment (fig.14/C).

G - Lumbar cushion adjustment (fig.14/C).

H - Armrest adjustment (fig.14/C).

The seat is assembled on a lengthwise sliding assembly so it shifts forwards/backwards together with the boom control levers. The Operator can choose the best driving position according to his/her physical features.

- Act on lever "A" (fig.13/C) to adjust the control unit lengthwise by sliding the unit along the guides. When in the desired position, release the lever. Move the lever slightly to check the locking pin is secured in its housing.
- Act on lever "B" (fig.13/C) to adjust the seat lengthways by sliding the seat along the guides.
  When in the desired position, release the lever.
  Move the lever slightly to check the locking pin is secured in its housing.
- To tilt the seat cushion, act on handle "C" (fig.13/C) and force the front of the cushion.
- To change the seat cushion position, act on handle "D" (fig.13/C) and slide the cushion along the guides. When in the desired position, release the lever. Move the lever slightly to check the locking pin is secured in its housing.
- To adjust the degree of suspension turn lever "E" (fig.13/C). Check the adjustment through the transparent window "F" (fig.13/C).
  For optimum adjustment, the weight indicated in the transparent window should correspond to the operator's weight.



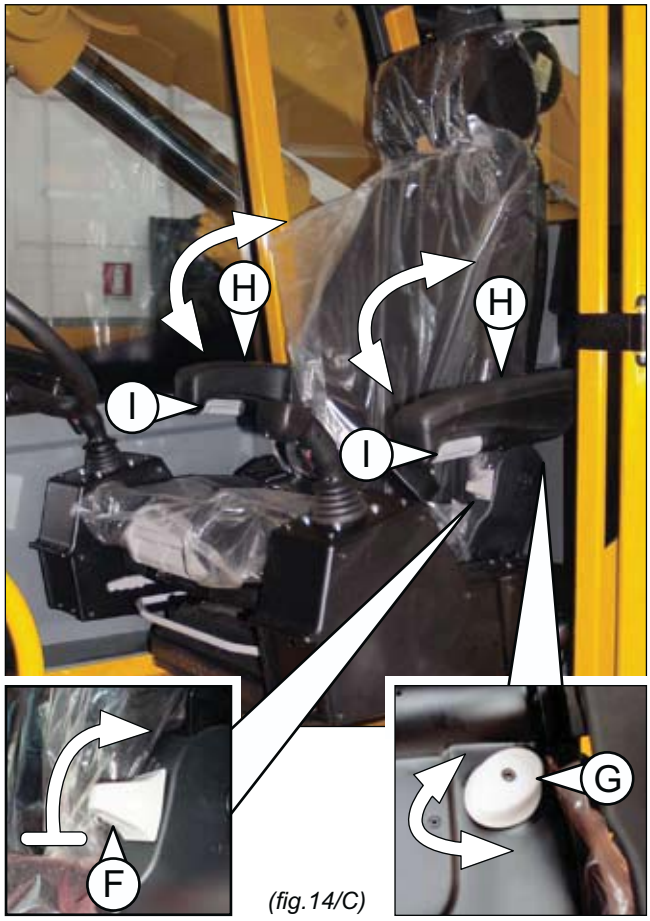
(fig.13/C)

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

- To adjust the inclination of the backrest, act on lever “F” (fig.14/C) and force the backrest with your back; it will automatically adapt to your anatomic features.
- To adjust the lumbar cushion act on knob “G” (fig.14/C) behind the backrest.
- To adjust the inclination of the armrests, turn knob “I” (fig.14/C). By swinging the entire armrest “H” (fig.14/C) upwards it is possible to raise the armrests completely so they are flush with the sides of the backrest.

- CAUTION:

The seat is correctly positioned when the operator is able to push the brake pedal to the end of its stroke while his or her back is firmly pressed against the backrest.



(fig.14/C)

SEAT BELTS
(fig.15/C)

To fasten your seat belts you must:

1. Slide the tab (1) into the buckle (2) (illustration “A”).
2. Ensure the tab has clicked in properly, and then adjust the fit of the belt around your body (illustration “B”).

- CAUTION:

The belt is adjusted correctly when it fits tightly around your pelvis.

To unfasten your seat belt (illustration “C”):

1. Press the red button (3) on the buckle (2).
2. Slide the tab out (1).

- CAUTION:

Only drive the machine if the seat belt is correctly worn, fastened and adjusted. Driving without wearing the seat belt increases the risk of accidents.

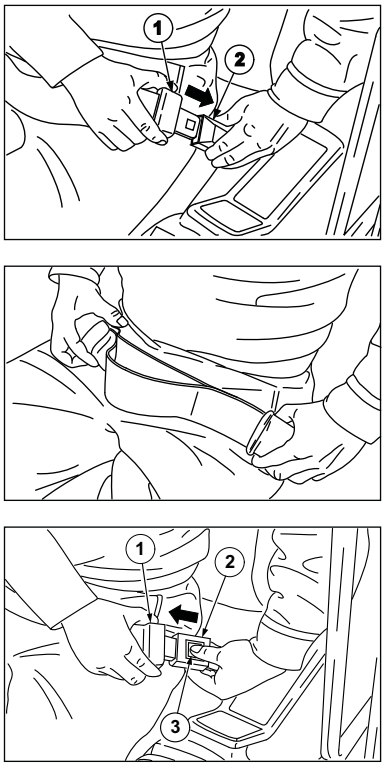
- CAUTION:

Do not use damaged or worn seat belts.
Do not use seat belts installed on machines that have had accidents. If worn, damaged or frayed the seat belts can break or collapse during a collision, seriously injuring the operator.

“A”

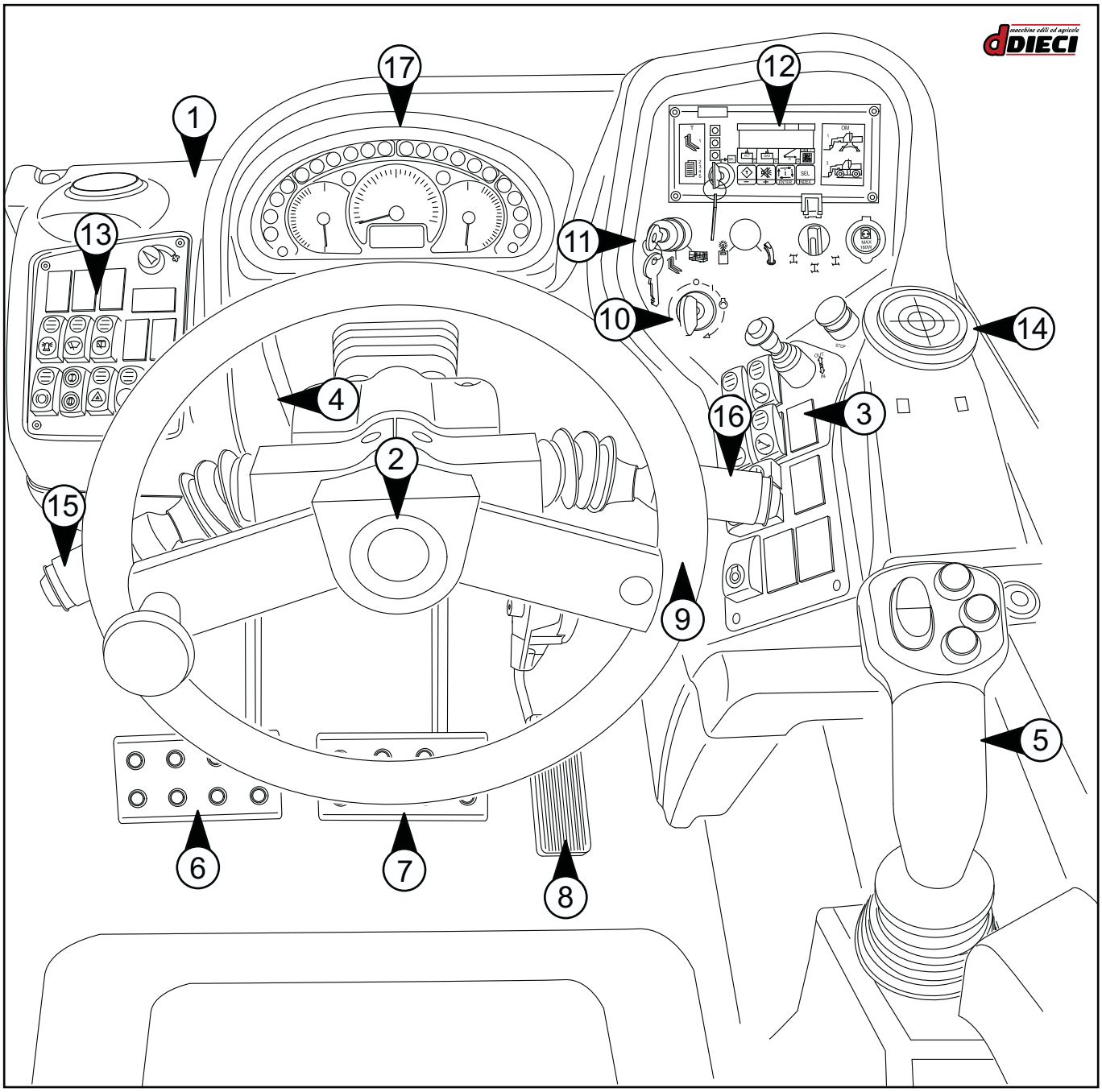
“B”

“C”



(fig.15/C)

INSTRUMENTS INSIDE THE CAB
(fig.16/C)



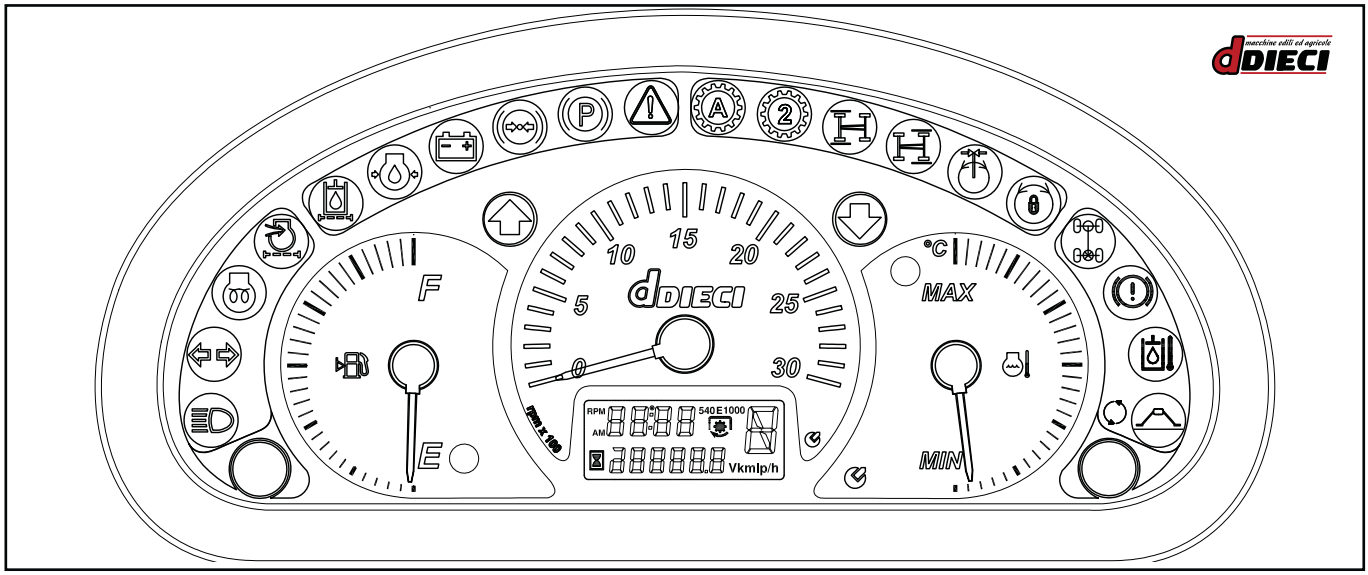
(fig.16/C)

1. Dashboard with air vents
2. Adjustable steering column.
3. Right-side dashboard
4. Steering wheel adjustment lever
5. Turret/boom movement joystick
6. “INCHING” pedal
7. Brake pedal
8. Accelerator pedal
9. Steering wheel
10. Ignition key
11. Machine function selector
12. Load monitoring display
13. Left-side dashboard
14. Spirit level
15. Gear lever
16. Multifunction lever
17. Instrument cluster

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

INSTRUMENT CLUSTER PILOT LIGHTS

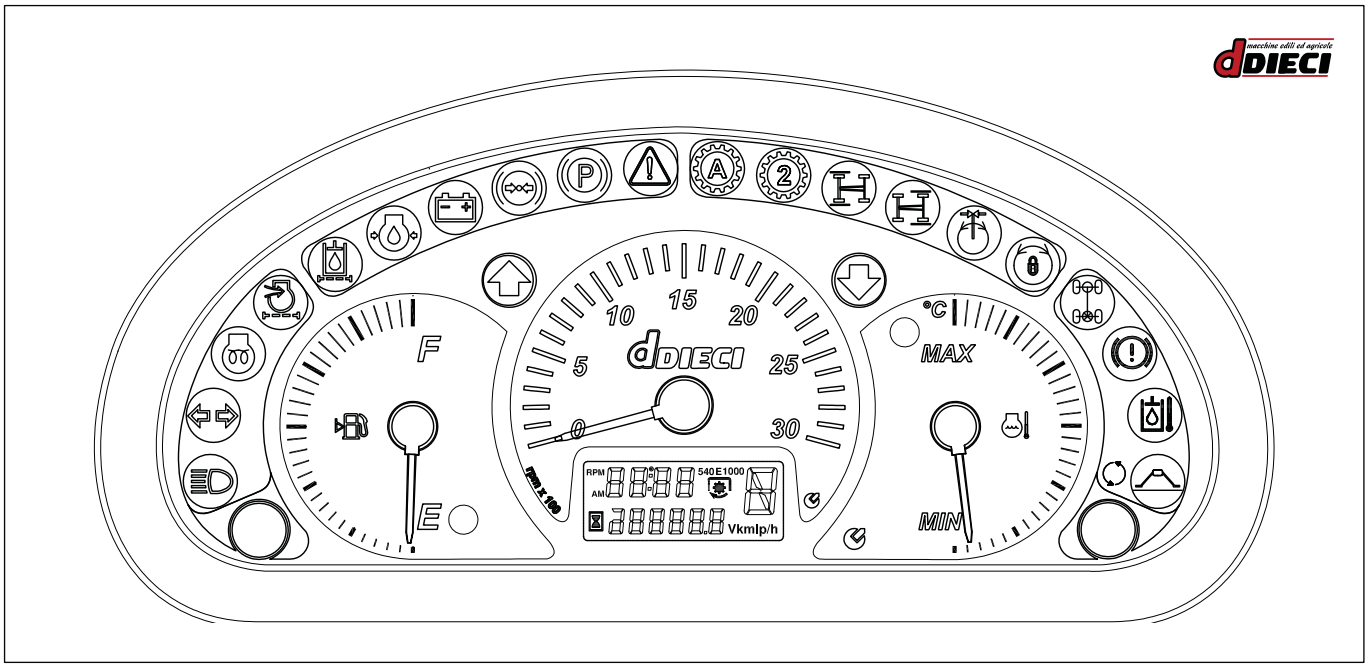
(fig.17/C)



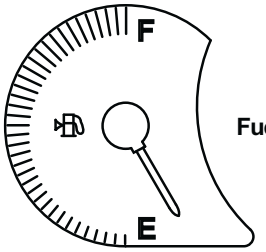
(fig.17/C)

- High beam headlights pilot light (blue)
- Direction indicator pilot light (green)
- Glow plug preheat pilot light (yellow)
- Blocked air filter pilot light (red)
- Hydrostatic oil filter pilot light (red)
- Engine oil pressure pilot light (red)
- Generator pilot light (red)
- Insufficient pressure in the parking brake accumulator pilot light. (red)
- Parking brake pilot light (red)
- General alarm pilot light (red)
- Mechanical gear engaged pilot light. (green)
- Speed gear engaged pilot light. (green)
- Front axle alignment pilot light (yellow)
- Rear axle alignment pilot light (yellow)
- Turret and chassis aligned exactly pilot light (green)
- Turret rotation locking pin inserted pilot light (red)
- Rear axle oscillation lock inserted pilot light (yellow)
- Not used
- Not used
- Stabilisers lowered correctly pilot light (green)
- Fuel level indicator
- Water temperature indicator
- Forward gear pilot light (green)
- Reverse gear pilot light (green)

INSTRUMENT CLUSTER – USING THE INSTRUMENTS
(fig.18/C)



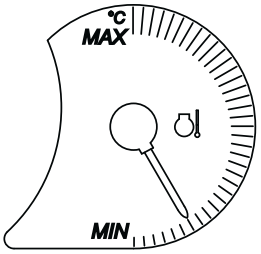
(fig.18/C)



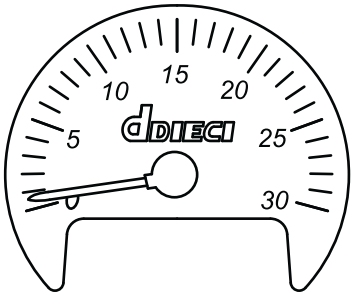
Fuel level indicator

The fuel level pointer indicates the amount of diesel in the fuel tank. When the fuel tank is full, the pointer is positioned on the letter “F”. The pointer gradually descends towards the red area, which indicates the minimum fuel level (reserve), also signalled by the yellow pilot light. When the pointer stops on the letter “E”, this indicates there is no more fuel left. To avoid damaging the engine, always keep the pointer above the minimum fuel level.

Engine water temperature indicator



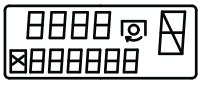
In normal use, the temperature pointer moves from the bottom of the instrument (Min) and stops when it reaches the first quarter of the scale; this is the optimum working condition for the engine. If the temperature rises excessively, approaching the maximum level (Max), stop the engine and check the cause. The red pilot light switches when the maximum temperature alarm is triggered. To avoid damaging the engine when it is cold, operate with a low number of revs (max 1500) until the water reaches the optimum temperature.



Engine speed indicator

The engine speed indicator shows the number of revolutions the engine is accomplishing at any given moment.

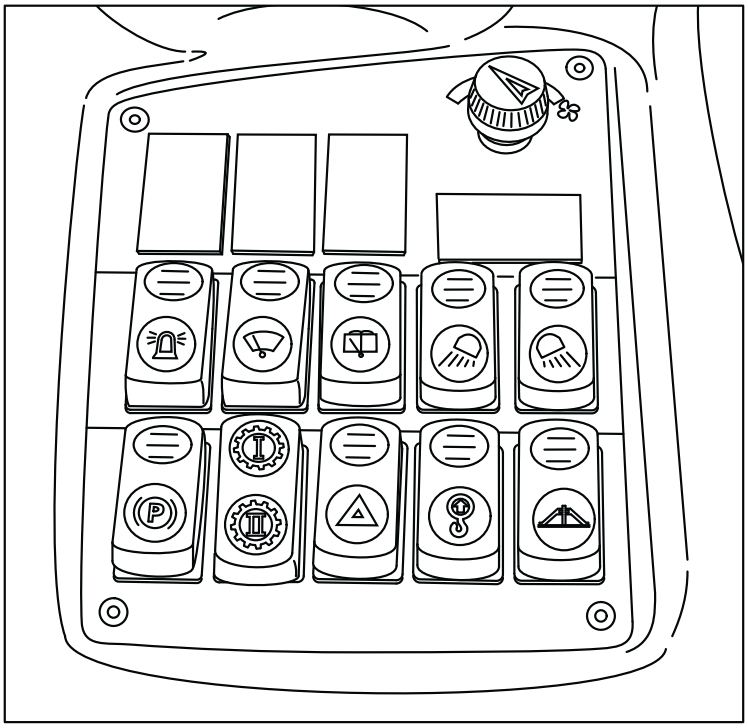
Liquid Crystal Display



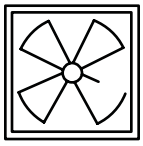
The LCD features the clock, hour counter (including display of the hours of machine use), the drive status (indicating the letter “N” if the machine is in neutral - gear lever in neutral), tachymeter (optional), odometer (optional), engine errors, service due.

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

RIGHT-SIDE DASHBOARD – SWITCHES AND FUNCTION SELECTORS
(fig.19/C)



(fig.19/C)



Internal cab fan selector



Revolving light switch
(yellow)



Front windscreen wiper switch
(green)



Rear windshield wiper with washer
spray switch
(green)



Front cab work spotlight switch
(green) Optional



Rear cab work spotlight switch
(green) Optional



Parking brake switch
(red)



“I” gear switch
(red)



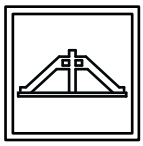
“II” gear switch
(red)



Emergency lights switch
(red)

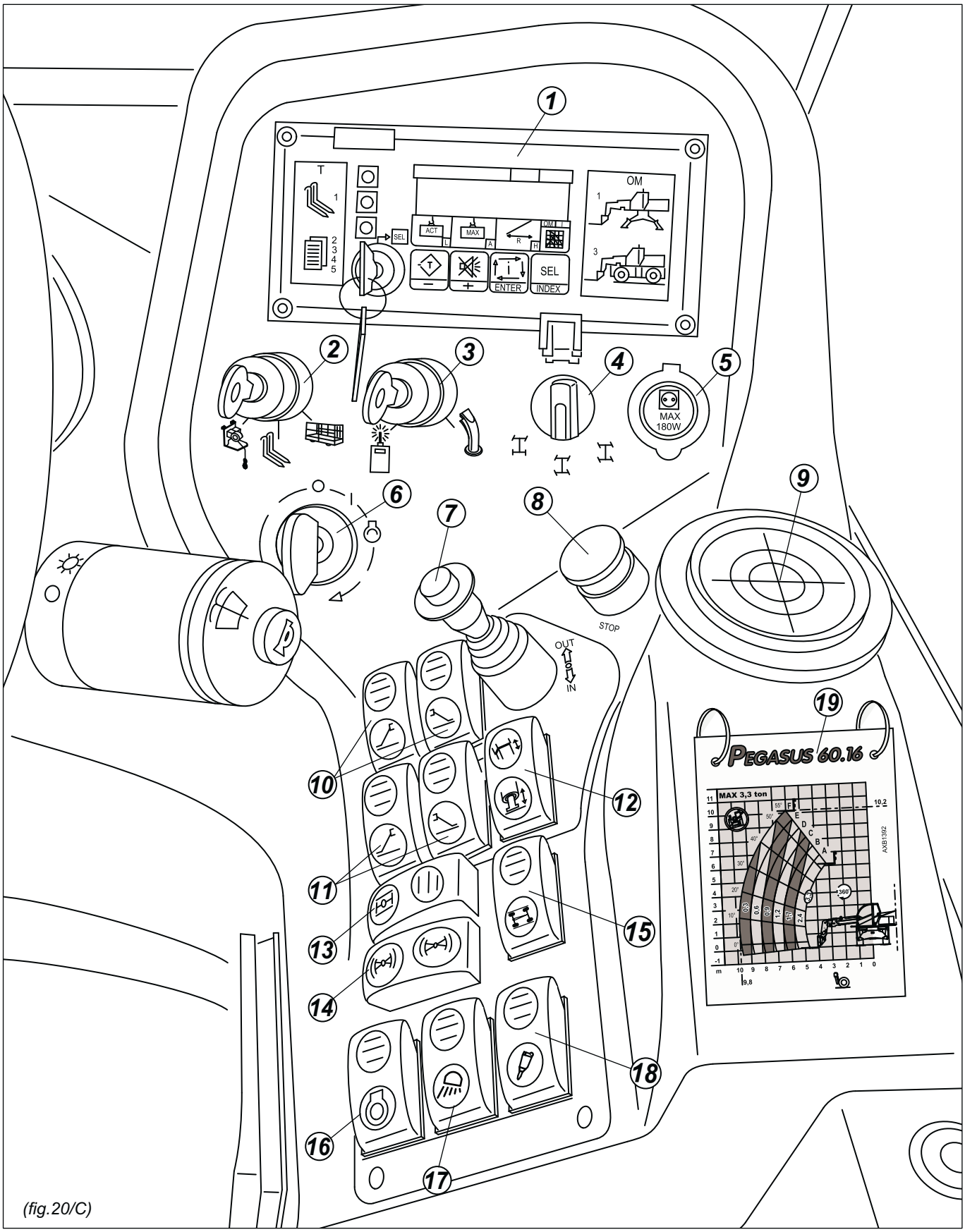


Anti roll-over device switch
(red)



Stabiliser device switch
(red)

RIGHT-SIDE DASHBOARD – SWITCHES AND FUNCTION SELECTORS
(fig.20/C)



(fig.20/C)

⚠ - CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

RIGHT-SIDE DASHBOARD – SWITCHES – SELECTORS - PUSHBUTTONS

1 

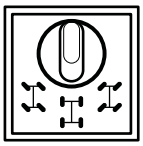
Anti roll-over device - 3B6

2 

Machine function selector
(forks/basket/winch)

3 

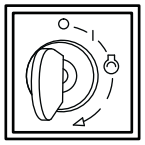
Selector to select machine functions controlled from onboard the machine or using radio control

4 

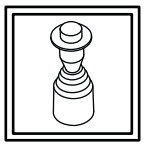
Steering type selector

5 

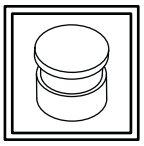
Auxiliary power outlet

6 

Ignition key

7 

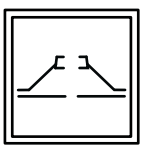
Stabiliser control selector

8 

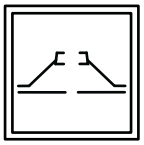
EMERGENCY BUTTON
hydraulic system and engine shutdown

9 

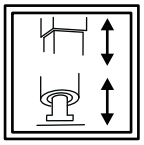
Spirit level

10 

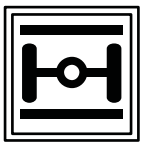
Stabiliser switch
FRONT right/left

11 

Stabiliser switch
REAR right/left

12 

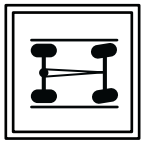
Beam/foot selector
Only with 8-movement stabilisers

13 

Rear axle oscillation lock switch

14 

Machine levelling switch

15 

Allineamento ruote
anteriori/posteriori

16 

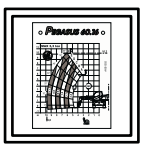
Manual electronic accelerator

17 

Boom head work spotlight switch
Optional

18 

Boom head solenoid valve switch
Optional

19 

Load capacity diagrams

IGNITION SWITCH

(fig.21/C Pos.“A”) (fig.22/C)

The ignition switch with key, allows you to:

- Switch on the diesel engine.
- Switch on the instruments.
- Automatically disengage the parking brake when the diesel engine is running (fig.22/C Pos.“1”).
- Automatically engage the parking brake when the diesel engine is switched off (fig.22/C Pos.“0”).

Compulsory starting conditions

The machine can only be switched on if:

- The operator is correctly seated in the driver’s seat.
- The gear selector is in the neutral position “N”.
- The left joystick holder armrest is correctly lowered and fastened (only if the cab features the double joystick option).

Switching the instruments on

Turn the ignition key to position “1” (fig.22/C) to supply power to the electric/electronic instruments.
When the dashboard is switched on, an instrument check-up is carried out and all the pilot lights switch on.

These pilot lights stay on until the engine is switched on:

- Battery pilot light
- Engine oil pressure pilot light

Other pilot lights could stay on depending on which functions are enabled.

If any malfunction alarm pilot lamps stay on, do not switch on the engine. Consult the “Maintenance” chapter in this manual or contact a ***DIECI*** service centre.

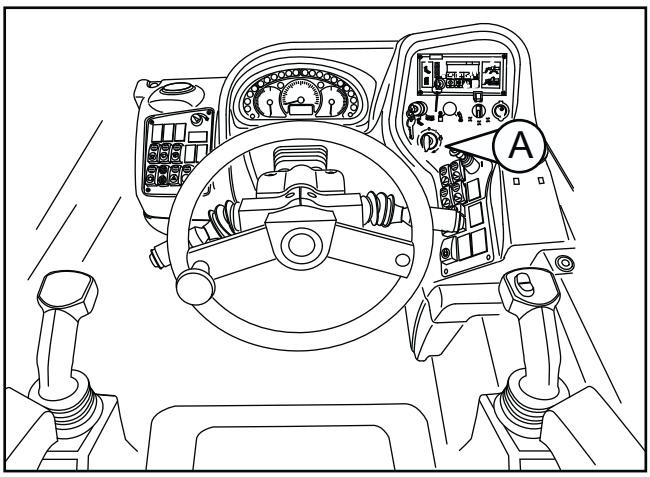
You will hear the first acoustic signal, which indicates that the dashboard has been switched on with the relative functional check-up; the second acoustic signal indicates that the load control panel has been switched on.
While the instruments are being powered, ensure the letter “N” for neutral is displayed in the LCD in the instrument cluster. Ensure the parking brake is engaged; if this is not the case, engage the parking gear before switching on the engine.

Starting up the engine

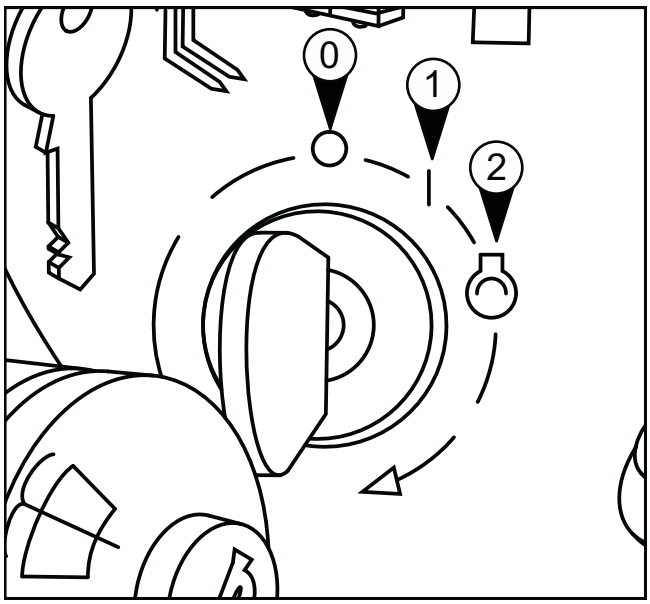
- Turn the ignition key to position “1” (fig.22/C) to supply power to the instruments.
- Turn the key to position “2” (fig.22/C) and hold the key in this position for a few seconds to start up the engine.
- Once the engine has started, release the key.

If the engine does not start within 5 seconds, retry at regular 15-second intervals to avoid overloading the starter motor.

If it is not possible to start the engine, consult the “Maintenance” chapter in this manual or contact a ***DIECI*** service centre.



(fig.21/C)



(fig.22/C)

⚠ - *CAUTION:*

When the engine is started, the automatic parking brake is disengaged. Before starting the engine, always ensure the parking brake has been manually engaged by acting on the relative switch.

⚠ - *CAUTION:*

To release the parking brake while the engine is not running, see paragraph “towing the machine”.

When the brake is engaged, the hydrostatic transmission remains locked and the machine cannot move.

Once the engine has been started, all the warning/malfunction pilot lights must switch off and only pilot lights regarding enabled functions must stay on. If this is not the case, consult the “Maintenance” chapter in this manual or contact a ***DIECI*** service centre.

During the first 10 minutes of use drive at low speed and lift loads slowly to allow the engine and the hydraulic oil to warm up. Before using the machine at full load, wait until the engine water reaches the optimum temperature.

⚠ - *CAUTION:*

Running the engine at high speeds before it has warmed up can cause severe damage to the engine and the hydraulic system.

DASHBOARD LEVERS

Forward/reverse gear selection lever

This lever “1” (fig.23/C) allows you to change gear and sound the horn. The pilot lights showing in which the direction the machine is travelling light up on the instrument panel (fig.24/C position “F-R”). If the pilot lights are off, the machine is in neutral. The letter “N” appears on the LCD (fig.24/C position “N”). If you keep the lever in the intermediate position, the gear is in neutral and the machine is partially braked.

The rotary lever function is not enabled in these models.

- CAUTION:

To engage the FORWARD/REVERSE gears, you have to first move the lever upwards. This movement protects the lever from accidental manoeuvres.

- Move the lever to position “F” (fig.23/C), to engage the FORWARD gears and the pilot light “F” (fig.24/C) switches on.
- Move the lever towards “R” (fig.23/C) to engage the REVERSE gear, and pilot light “R” (fig.24/C) switches on. When reverse gear is engaged, an acoustic or visible alarm is triggered.
- Press the end of the lever to sound the horn (fig.23/C position “2”)

CAUTION

The lever movements are not active when:

- The parking brake is engaged.
- The operator is not correctly seated in the driver’s seat.
- The basket is assembled on the machine, the electric basket connector is inserted in the boom head and the “machine function” selector is in the “basket” position.
- The basket is raised above ground and/or the boom is extended (even partially).
- Rear axle oscillation is locked.
- The stabilisers are lowered.
- The manual electronic accelerator is enabled.

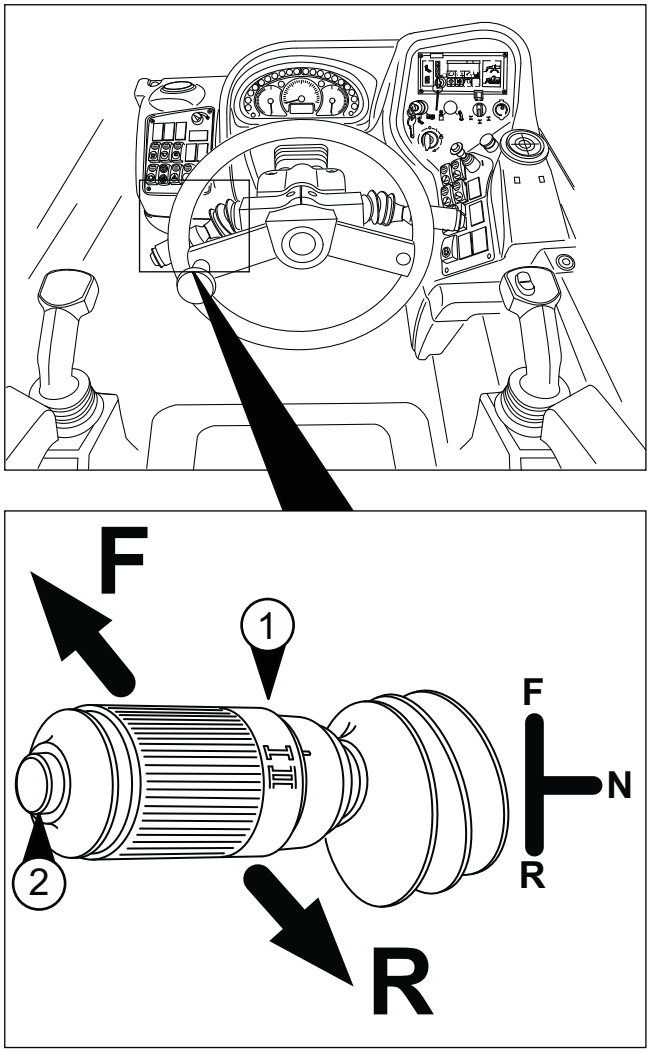
How to change gear

- Reduce engine speed to the minimum.
- Select the new direction.

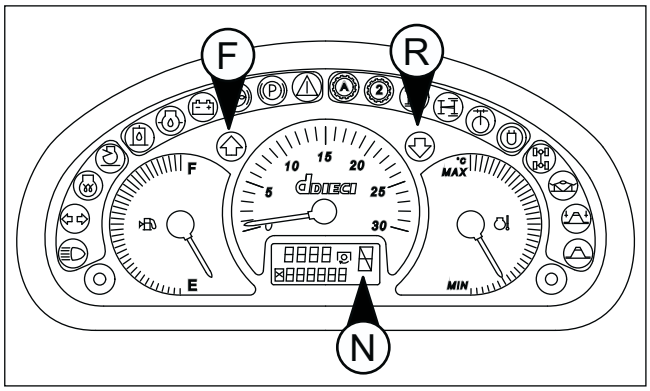
- CAUTION:

It is dangerous to use the forward/reverse gear lever when the engine is running at high speed because the direction is changed abruptly.

If the forward/reverse gear lever is moved to a position other than neutral while the parking brake is engaged, the hydrostatic transmission will not be enabled.



(fig.23/C)



(fig.24/C)

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

MULTIFUNCTION LEVER

Direction indicators

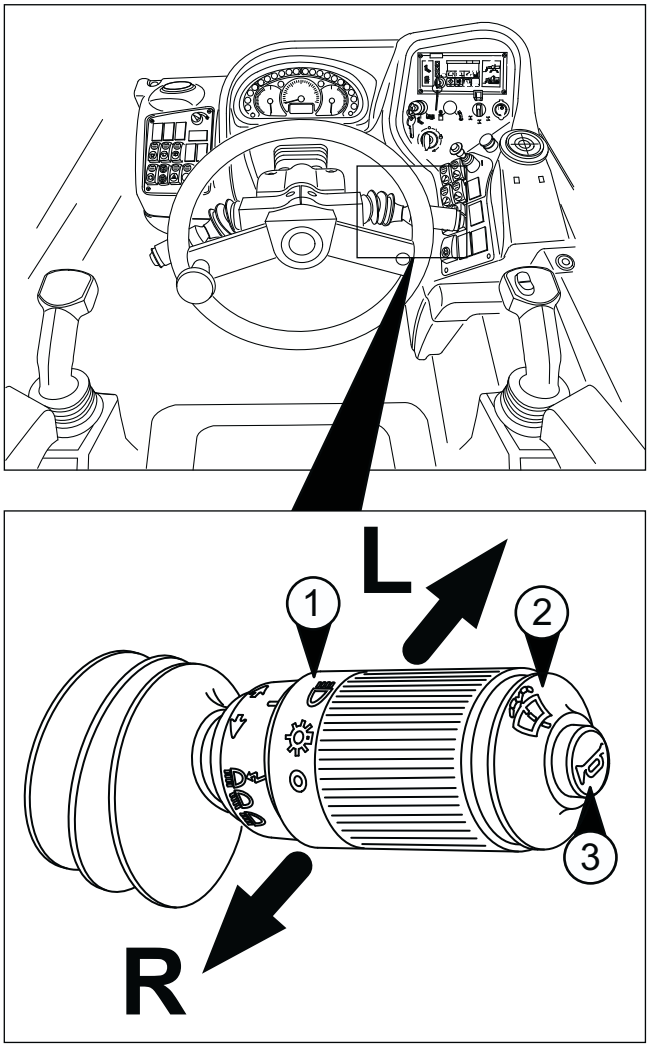
- Pull the lever towards you to indicate a right turn (fig.25/C Pos.“R”).
- Push forwards to indicate a left turn (fig.25/C Pos.“L”).

The indicators only function when the ignition switch is in the ‘instruments on’ position (fig.22/C Pos.“1”).

A pilot light in the instrument cluster signals that the indicators have been enabled.

Push button functions

- The intermediate push button on the knob enables the front windscreen wiper (fig.25/C Pos.“2”).
- The push button on the end of the knob activates the horn (fig.25/C Pos.“3”).



(fig.25/C)

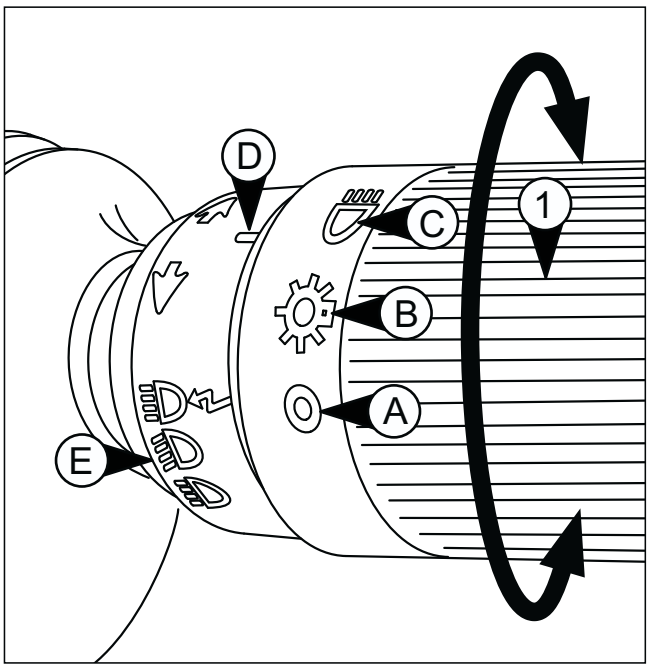
Switching the headlights on

Turn the knob “1” (fig.26/C) to switch on the headlights.

The symbols on the knob near the arrow (fig.26/C Pos.“D”) indicate that the lights are:

- Off (fig.26/C Pos.“A”).
- Side lights (fig.26/C Pos.“B”).
- Dipped headlights (fig.26/C Pos.“C”).

The high beam headlights (fig.26/C Pos.“E”) are enabled by shifting the lever upwards for individual flashes, and shifting downwards for continuous use.



(fig.26/C)

PEDALS

Accelerator pedal
(fig.27/C Pos.“1”)

Press the accelerator pedal to increase the engine revs, release to reduce. The pedal acts directly on the fuel injection pump. When the engine is running at minimum speed, the machine is partially braked.

Service brake pedal
(fig.27/C Pos.“2”)

Press the service brake pedal to slow down or stop the machine. The pedal acts directly on the service brakes inside the differential axles.

When the brake pedal is pushed, the stoplights in the rear lights switch on. The lights stay on until the pedal is released.

Check that both lights function on a regular basis.

- CAUTION:

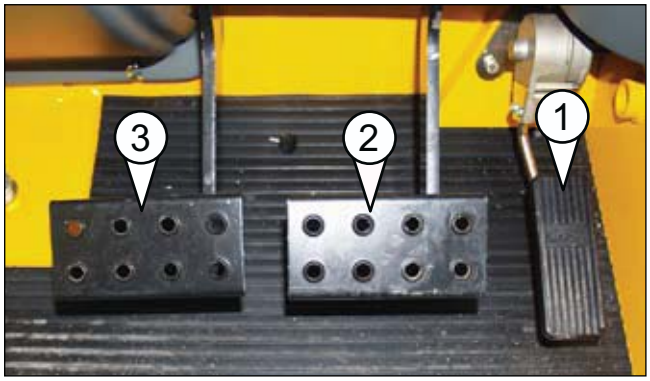
If the pedal is not used very often, check regularly that it functions properly. If there are any problems, contact a ***DIECI*** service centre.

“INCHING” pedal
(fig.27/C Pos.“3”)

This pedal allows the machine to advance with slow and precise movements even when the engine is running at high speed. It also acts directly on the hydrostatic pump reducing the flow rate. When the pedal is completely pressed down, the machine stops and stays partially braked.

- CAUTION:

Do not press the pedal when travelling at high speed, the machine will brake abruptly.



(fig.27/C)

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

PARKING BRAKE

The parking brake must be engaged every time you leave the machine (whether the engine is switched on or off), during temporary stops, every time the machine is used at a standstill (even when the stabilisers are lowered and the wheels are off the ground). The parking brake is engaged automatically when the engine is stopped.

Press switch “A” (fig.28/C) to engage the parking brake. The pilot lights on the switch and in the instrument cluster (fig.29/C Pos.“1”) light up to indicate that the brake is engaged. When the parking brake is engaged the machine cannot move, the hydrostatic transmission is disabled.

To check the efficiency of the parking brake, proceed as follows:

1. Get in the cab. Fasten your seat belt.
2. Start the engine.
3. Park the machine on flat and dry ground.
4. Engage the parking brake (fig.28/C Pos.“A”).
5. Raise the tools until they are in the correct transfer position.
6. Engage slow gear.
7. Engage the forward gear switch.
8. If the machine does not move, press the accelerator to gradually increase the engine speed to 1,500 r.p.m. The machine must not move.
9. The test should not last for more than 20 seconds.
10. If the machine moves during the test, the brake must be checked at a ***DIECI*** service centre.

- CAUTION:

If there is a parking brake malfunction, do not use the machine.

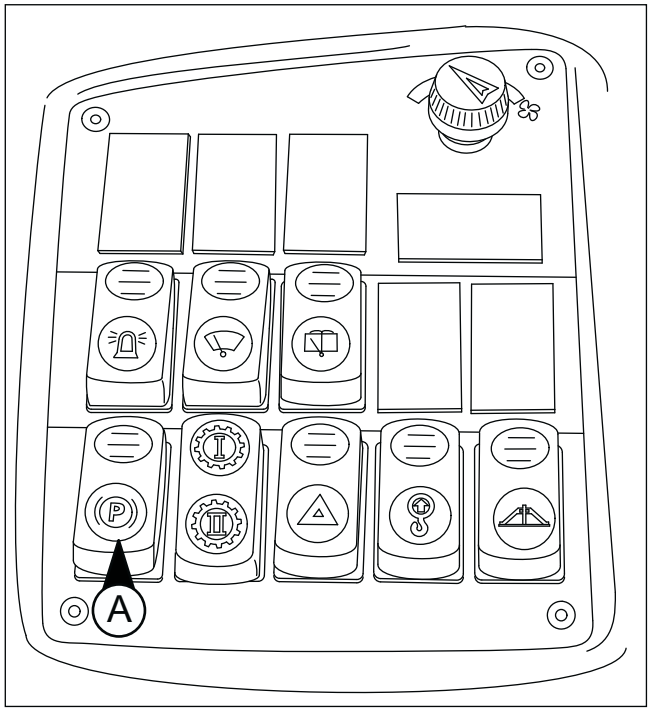
- CAUTION:

Unauthorised modifications to the rear axle ratio, to machine weight, that is wheel and tyre dimensions, may compromise parking brake efficiency.

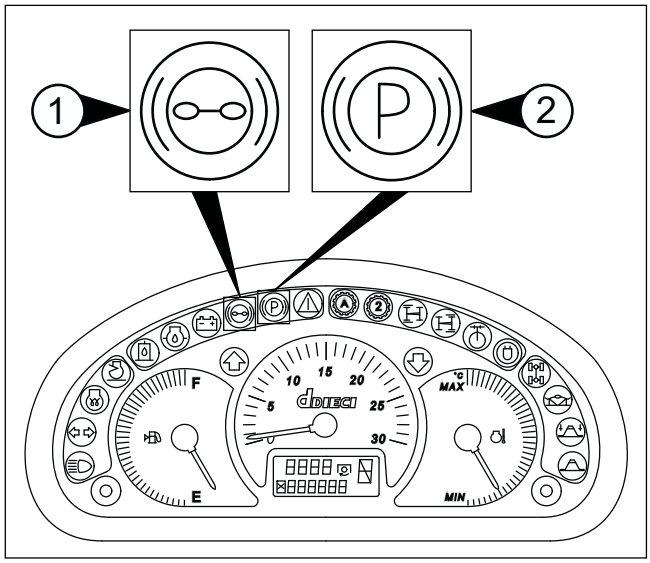
- CAUTION -

Before checking the efficiency of the parking brake, ensure nobody is anywhere near the machine.

If pilot light “2” (fig.29/C) lights up, consult the “Maintenance” chapter in this manual.



(fig.28/C)



(fig.29/C)

FAST/SLOW GEAR SWITCH

(fig.30/C Pos.“A” and “B”)

The machine features a two-speed mechanical gear (fast/slow gear) for site or road use.

To change gear:

- Slow down and bring the machine to a complete stop.
- Press the “inching” and brake pedals.
- Keep the switch pressed down in position “A” (fig.30/C) for a few seconds to engage slow gear “**I**”.
  The pilot light in the instrument cluster switches off indicating that the gear has been engaged (fig.31/C Pos.“2”).
- Hold the switch pressed down in position “B” (fig. 30/C) for a few seconds to engage fast gear “**II**“.
  The pilot light in the instrument cluster will indicate if the gear has been engaged (fig. 31/C Pos.“2”).

⚠ - CAUTION:

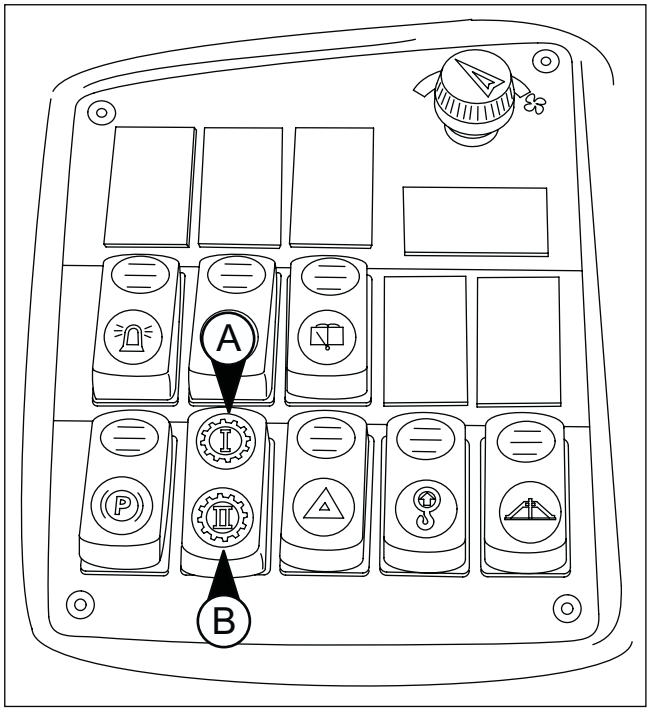
Pilot light “1” (fig.31/C) in the instrument cluster always remains lit when the mechanical gear is engaged.
The change from slow gear “**I**” to fast gear “**II**” is signalled by pilot light “2” switching on (fig.31/C).

⚠ - CAUTION:

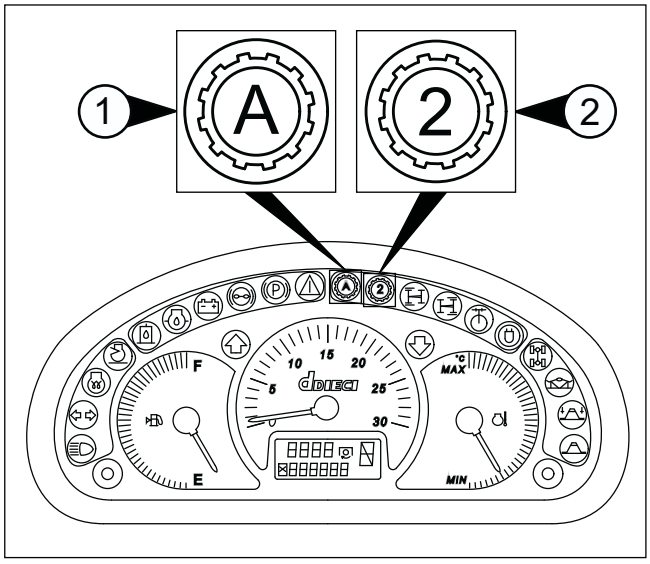
Fast gear “**II**” is only for road use. It must not be used on sites or for carrying out work operations.

⚠ - CAUTION - ⚠

Never attempt to change gear when the machine is moving.



(fig.30/C)



(fig.31/C)

⚠ - CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

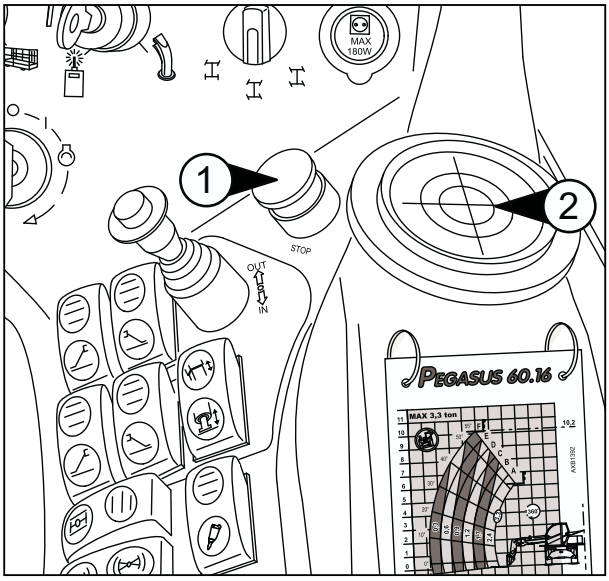
EMERGENCY BUTTON
(fig.32/C Pos.“1”)

The emergency button switches off the engine and blocks boom movements.

- Press the head of the mushroom shaped button to enable the emergency response.
- Turn in the direction of the arrow on the head of the button to disable the emergency response.

⚠ - *CAUTION:*

The button must be used when the boom operating systems become unmanageable or in any other emergency.



(fig.32/C)

SPIRIT LEVEL
(fig.32/C Pos.“2”)

Located to the right of the operator, the spirit level is used to ensure the machine is levelled correctly.

⚠ - *CAUTION:*

To ensure you are working in complete safety, the machine must be levelled. The maximum allowed tilt is 2°.

LEVELLING THE FRONT DIFFERENTIAL AXLE
(fig.33/C Pos.“1”)

The machine must always be levelled. Failure to level the machine can cause the load to drop or the machine to roll-over. Using the front differential axle levelling device, it is possible to align the machine with the horizontal work surface. Always ensure that the machine is levelled correctly by using the spirit level in the cab (fig.34/C Pos.“2”).

The correct levelling sequence is as follows:

1. Place any loads on the ground.
2. Completely retract and lower the telescopic boom.
3. Align the turret with the lower chassis.
4. Lock rotation with the locking pin.
5. Level the machine by acting on the relative switch.

- Press part “A” of the selector to level the machine towards the left (fig.34/C).
- Press part “B” of the selector to level the machine towards the right (fig.34/C).

- CAUTION:

To ensure you are working in complete safety, the machine must be levelled. The maximum allowed tilt is 2°.

Once the machine has been levelled correctly, continually ensure it stays levelled by checking the spirit level in the cab (fig.34/C Pos.“2”).

- CAUTION:

The levelling device can only be used when the turret is aligned with the lower chassis and when rotation is blocked.

When the rear differential axle lock is enabled, it is also possible to work without stabilisers.
Check the specifications in the load tables (fig.34/C Pos.“3”).

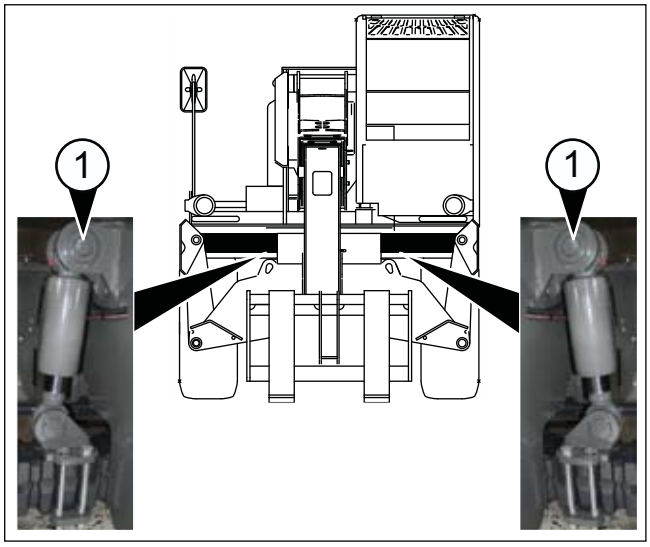
- CAUTION:

Before operating the machine, the operator must lock the rear axle by acting on the relative switch.

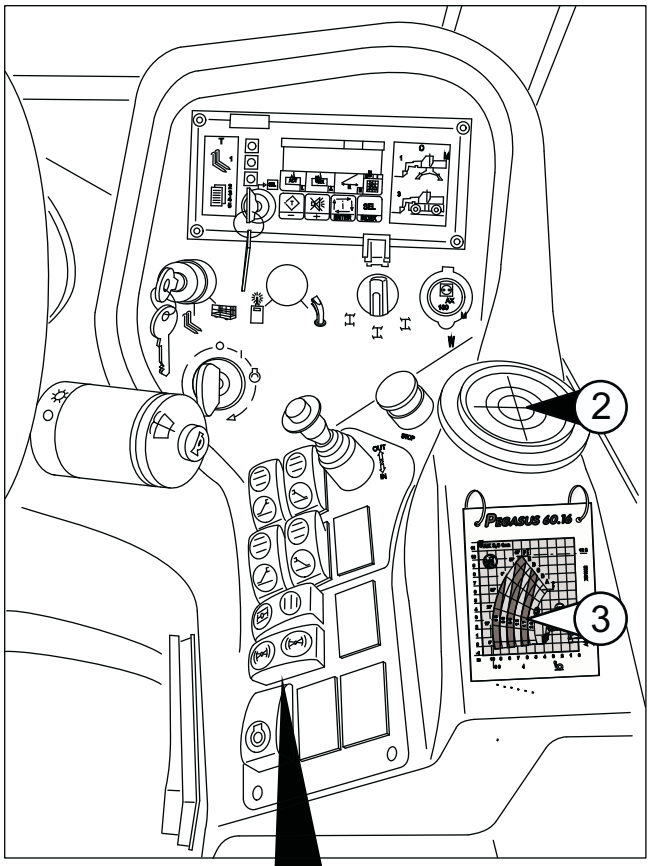
The rear axle oscillation lock must be enabled when the machine is used without stabilisers.

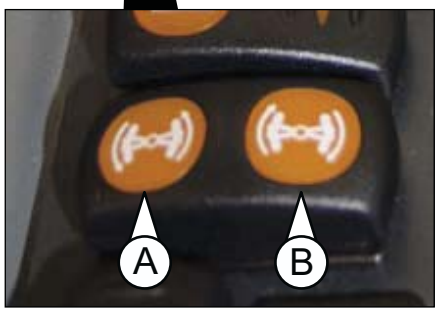
- ATTENTION -

THE LEVELLING OF THE FRONT DIFFERENTIAL AXLE IS NOT PRESENT ON THE PEGASUS 38.16



(fig.33/C)





(fig.34/C)

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

REAR DIFFERENTIAL AXLE OSCILLATION LOCK
(fig.35/C Pos.“1”)

When the rear axle is locked (fig.35/C Pos.“1”), this prevents the machine from oscillating during the rotation of the machine on two wheels function. Oscillations can cause the load to be dropped or the machine to roll-over.

⚠ - CAUTION:

Before engaging the oscillation lock, ensure the machine has been levelled correctly using the spirit level in the cab (fig.37/C Pos.“2”). When working in rotation conditions, the machine must be levelled according to the vertical over the entire 360°.

The lock can be enabled:

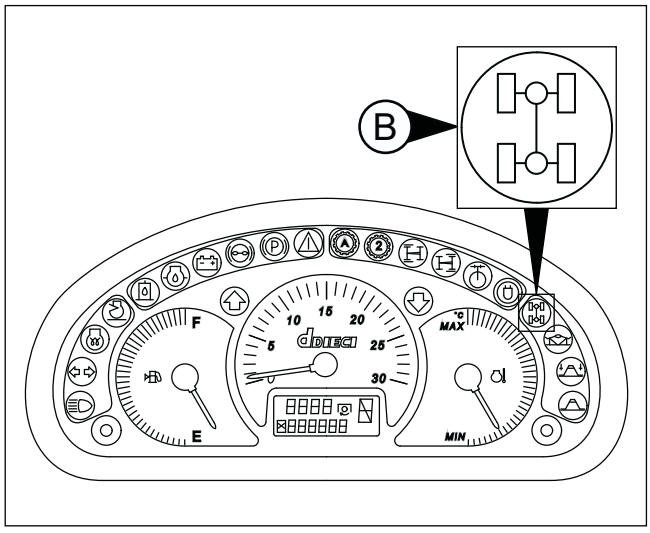
- Automatically if the turret (aligned with the lower chassis) turns more than 15° right or left, when using the machine on wheels. The pilot light in the instrument cluster (fig.38/C Pos.“B”) will indicate that the device has been triggered automatically (signalled by the proximity switch (fig.36/C Pos.“A”).
- Manually by using the oscillation locking switch on the right-side dashboard (fig.37/C Pos.“1”). When the switch is pressed, the pilot light on the switch lights up as well as the pilot light in the instrument cluster (fig.38/C Pos.“B”), indicating it has been enabled.

⚠ - CAUTION:

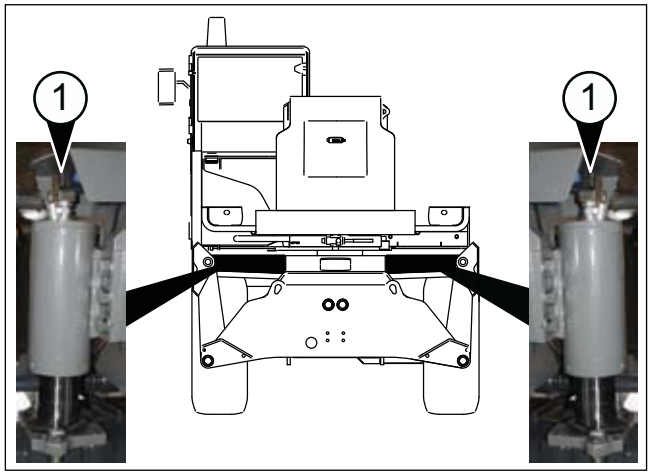
If the rear axle is locked, the machine cannot move in any direction. To move, it is necessary to align the turret with the machine and, if the differential axle lock has been manually engaged, disengage it with the appropriate switch.

⚠ - CAUTION - ⚠

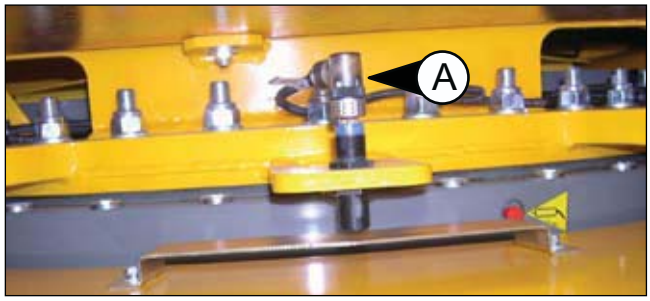
Lock the rear axle manually when the machine is being used without stabilisers.



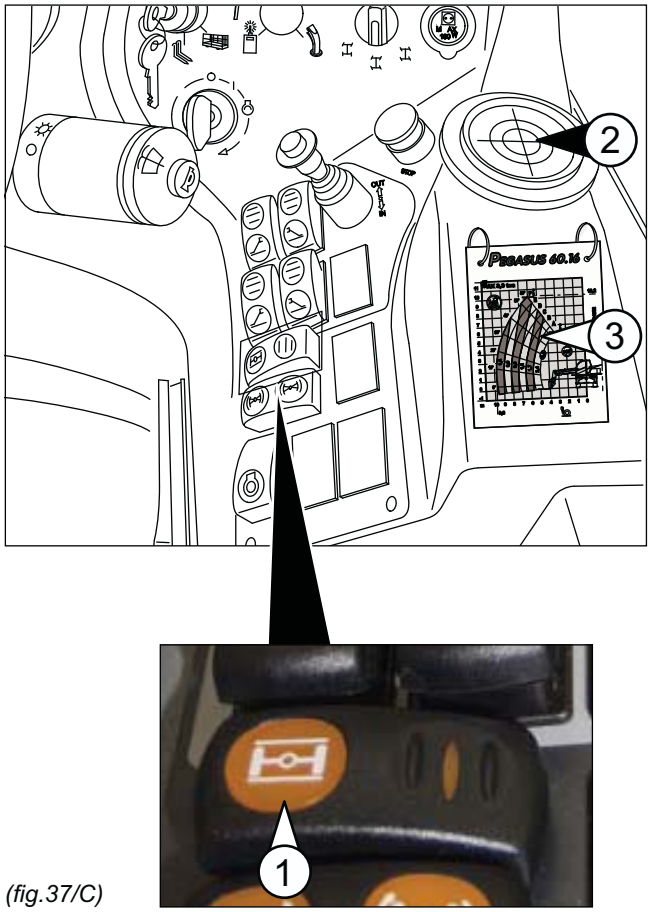
(fig.38/C)



(fig.35/C)



(fig.36/C)



(fig.37/C)

⚠ - CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

TURRET ROTATION LOCKING PIN
(fig.39/C)

The turret rotation locking pin is used to block the turret when it is aligned with the lower chassis. The pin is located on the right side of the machine (fig.39/C Pos “1”).

- CAUTION:

When the pin is not in use, it must be stored in its housing (fig.39/C Pos.“2”).

- CAUTION:

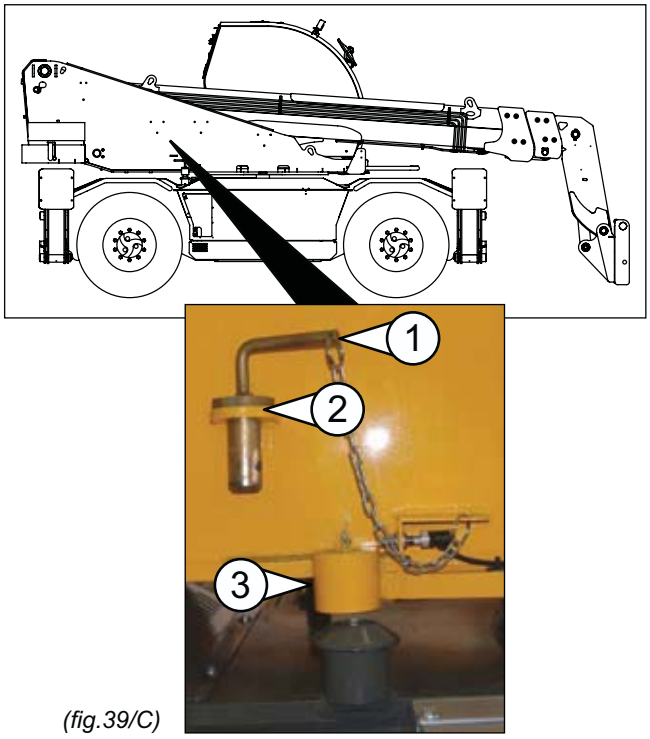
During road use the turret must be locked.

To insert the rotating lock:

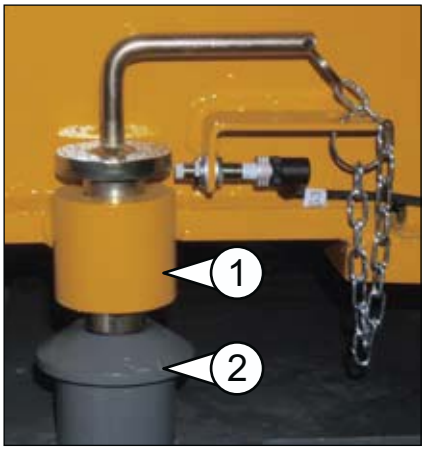
- Place any loads on the ground.
- Completely retract and lower the telescopic boom.
- Align the turret with the lower chassis. The pilot light in the instrument cluster (fig.41/C Pos “A”) will indicate whether the operation has been carried out correctly.
- Engage the parking brake.
- Switch off the machine and remove the ignition key.
- Get out of the cab and insert the locking pin in its housing (fig.39/C Pos.“3”).
- The locking pin is correctly positioned when it passes through the housing on the upper chassis (fig.40/C Pos.“1”) and is inserted in the housing on the lower chassis (fig.40/C Pos.“2”). The pilot light in the instrument cluster (fig.41/C Pos.“B”) will indicate that the pin has been inserted.
- If the pin does not enter correctly, place the pin in its housing (fig.40/C Pos.“1”), get back in the cab and turn the turret (using very small movements) until the pin falls into the housing (fig.40/C Pos.“2”).

- CAUTION -

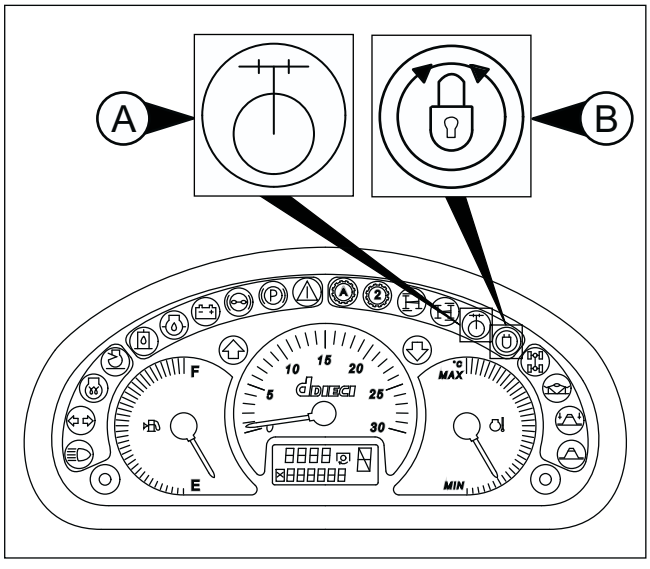
Do not attempt to rotate the machine when the locking device is inserted.



(fig.39/C)



(fig.40/C)



(fig.41/C)

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

STABILISERS

The use of stabilisers improves machine stability during lifting operations. When the machine is positioned on the stabilisers, refer to the load diagrams.
The load control panel is able to detect automatically whether the machine is operating on tyres or stabilisers.

⚠ - CAUTION:

The machine is type-approved to work on all four completely or partially extended stabilisers. Therefore, do not use the machine with only 1, 2 or 3 stabilisers.

⚠ - CAUTION:

The machine is intended as correctly stabilised when all four tyres are completely raised off the ground.

When the machine is correctly levelled on the stabilisers, this is indicated by a spirit level installed in the cab (fig.43/C Pos.“1”). Check the spirit level to ensure the machine is levelled before starting to operate the machine.

The machine is equipped with pilot lights indicating:

- Stabilisers up (fig.44/C Pos.“A”).
- Stabilisers down (fig.44/C Pos.“B”).
- Stabilisers extended and positioned. Machine weight supported properly (fig.44/C Pos.“C”).

If these pilot lights do not light up, do not use the machine until the malfunction has been found and cleared up.

A safety device prevents the stabilisers from being enabled when the boom is more than 1.5 m above the horizontal surface.

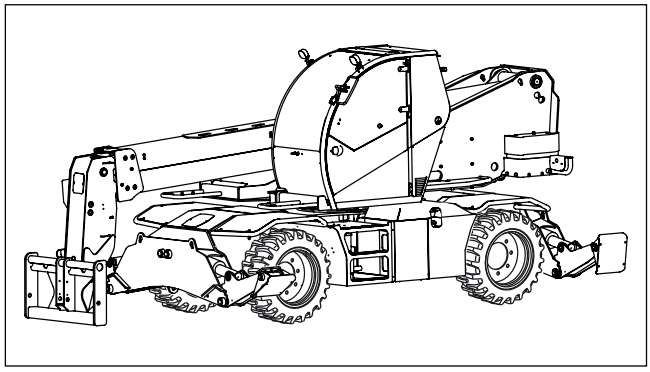
⚠ - CAUTION:

Before using the machine on roads, completely raise and retract all the stabilisers.

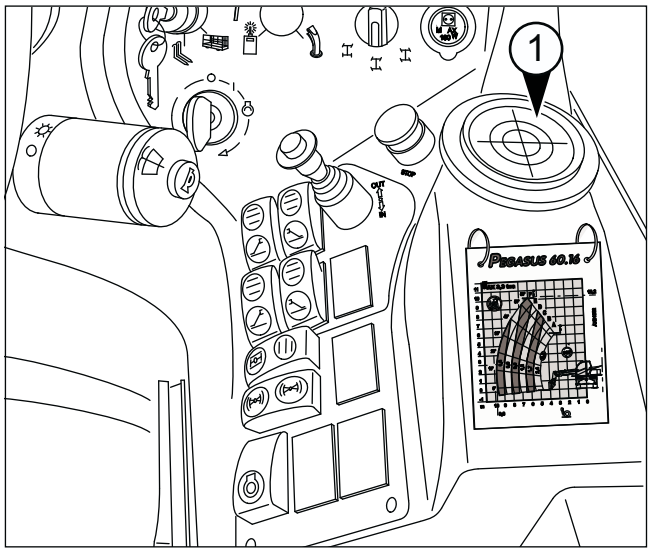
The correct sequence for the positioning the machine on the stabilisers is as follows:

1. Place any loads on the ground.
2. Completely retract and lower the telescopic boom.
3. Align the turret with the lower chassis.
4. Level the machine.
5. Block rear axle oscillation.
6. Lower the front stabilisers.
7. Lower the rear stabilisers.
8. Level the machine if necessary using the stabilisers.

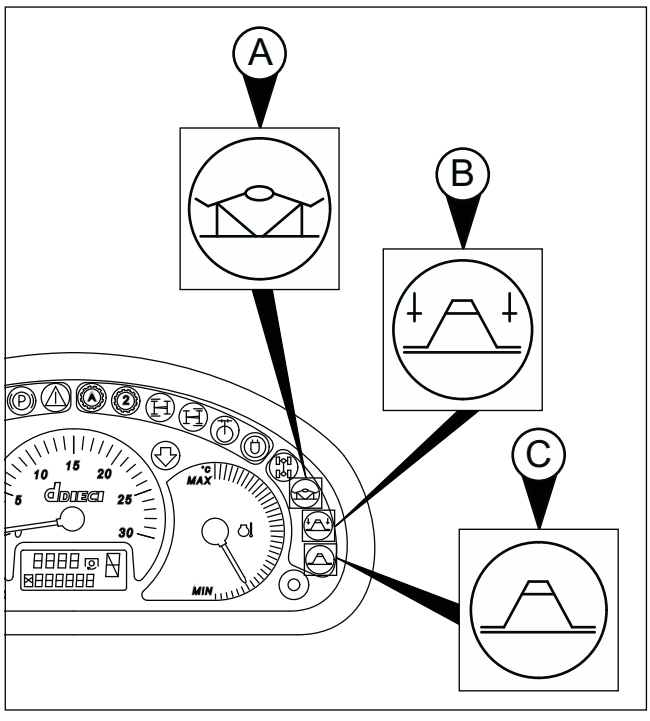
Reverse the procedure to retract the stabilisers.



(fig.42/C)



(fig.43/C)



(fig.44/C)

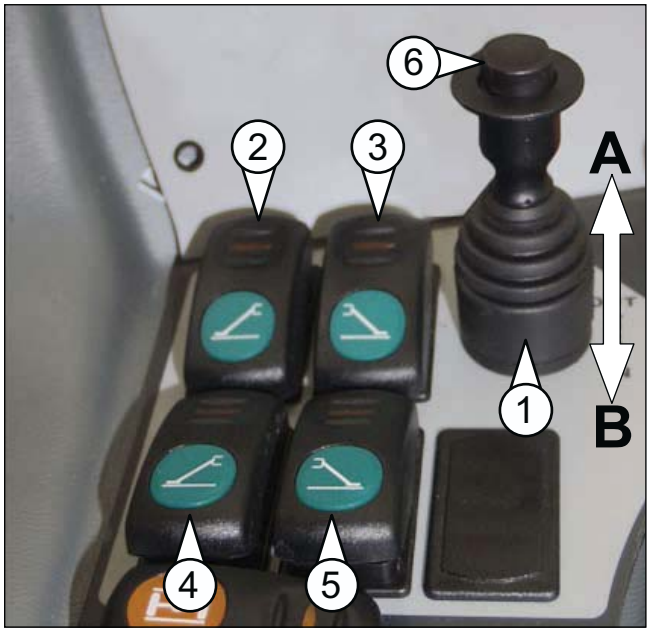
POSITIONING THE FOUR MOVEMENT STABILISERS
(Pegasus 70.11, 60.16, 30.16, 40.17, 38.16)

To enable the stabilisers act on the lever/selector (fig.45/C Pos.“1”), the desired stabiliser switch (fig.45/C Pos.“2”, “3”, “4” and “5”) and the stabiliser switch (fig.46/C Pos.“A”).

The switches light up when each stabiliser is selected.

The lever/selector features a locking mechanism to avoid accidental manoeuvres.
To enable, press the button on the top of the lever/selector (fig.45/C Pos.“6”) and at the same time, pull to the top of the lever/selector upwards. Then move the lever/selector towards the front of the machine (fig.47/C Pos.“A”) to lower the stabilisers or towards you (fig.47/C Pos.“B”) to raise them.

To ensure you have a perfect grip on the lever/selector, turn the palm of your hand upwards and insert the lever between your index and middle finger (fig.47/C). Then push the button on the top of the lever with your thumb while at the same time pulling the top of the lever upwards with your index and middle finger (fig.47/C).



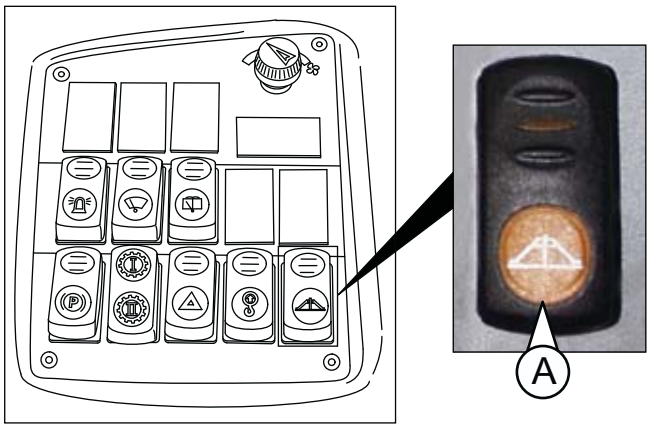
(fig.45/C)

How to operate the stabilisers

Select the stabilisers that you wish to operate:

- Front left stabiliser switch (fig.45/C Pos.“2”).
- Front right stabiliser switch (fig.45/C Pos.“3”).
- Rear left stabiliser switch (fig. 45/C Pos. “4”).
- Rear right stabiliser switch (fig. 45/C Pos. “5”).

- Press the “enable stabilisers” switch (fig.46/C Pos.“A”) and keep it pressed until you have completed the manoeuvre.
- Shift the lever/selector (fig.47/C Pos.“1”) towards the front of the machine (fig.47/C Pos.“A”) and hold in this position to lower the stabilisers.
- Shift the lever/selector (fig.47/C Pos.“1”) towards you (fig.47/C Pos.“B”) and hold in this position to raise the stabilisers.



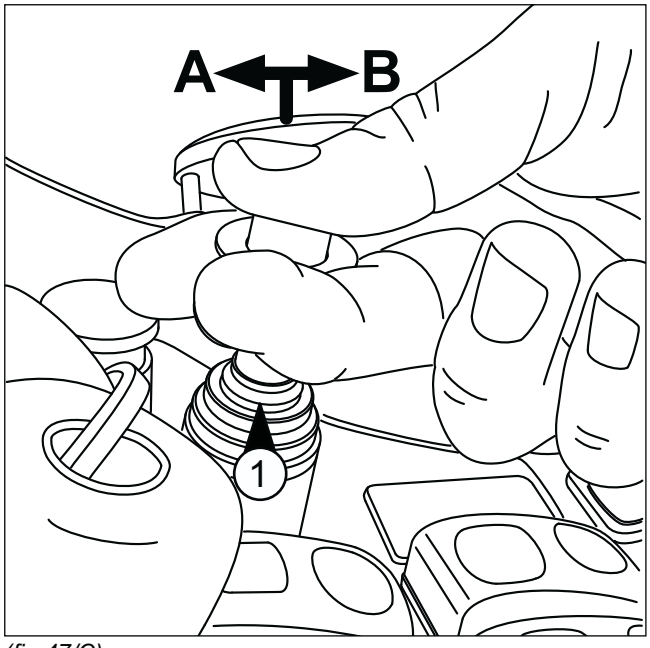
(fig.46/C)

It is possible to select more than one stabiliser at a time by acting on the relative switches. Then active them by shifting the lever/selector in the desired position and then pressing the manoeuvre switch.

- CAUTION:

To ensure you are working in complete safety, the machine must be levelled. The maximum allowed tilt is 2°.

Once the stabilisers have been positioned, always ensure the machine is levelled correctly by checking the spirit level in the cab.



(fig.47/C)

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

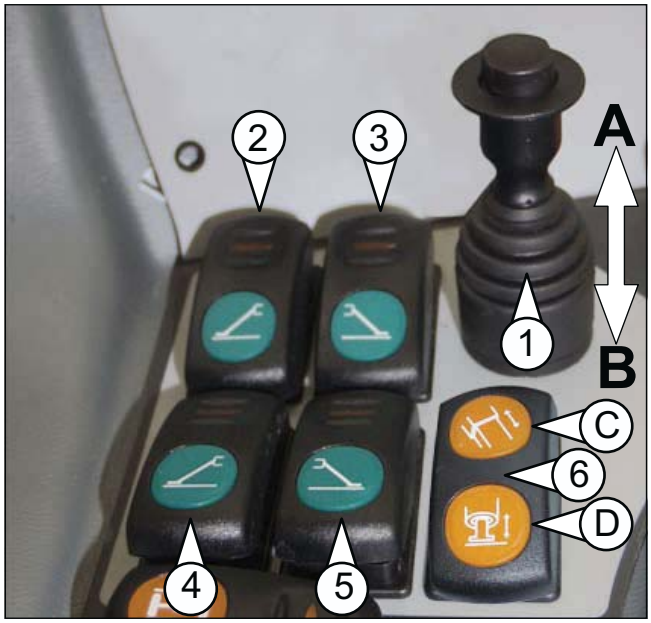
POSITIONING EIGHT MOVEMENT STABILISERS.
(Pegasus 45.19, 45.21, 50.21, 40.25)

To enable the stabilisers act on the lever/selector (fig.48/C Pos. “1”), the beam or stabiliser selector (fig.48/C Pos. “6”), the desired stabiliser switch (fig.48/C Pos. “2”, “3”, “4” and “5”) and the stabiliser switch (fig.49/C3 Pos.“A”).

The switches light up when each stabiliser is selected.

The lever/selector features a locking mechanism to avoid accidental manoeuvres. To enable, press the button on the top, and at the same time, pull the top of the lever/selector upwards. Then move the lever/selector forwards (fig.47/C Pos.“A”) to lower the stabilisers or backwards (towards you) (fig.47/C Pos.“B”) to raise them.

To ensure you have a perfect grip on the lever/selector, turn the palm of your hand upwards and insert the lever between your index and middle finger (fig.47/C). Then push the button on the top of the lever with your thumb while at the same time pulling the top of the lever upwards with your index and middle finger (fig.47/C).

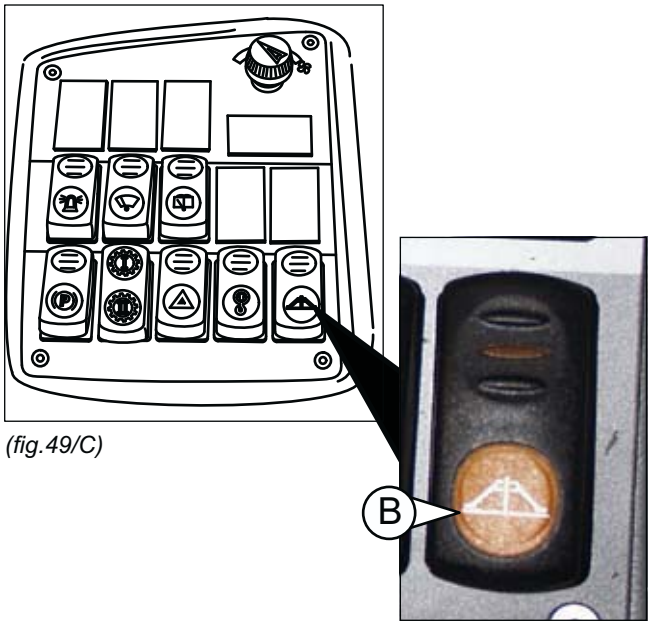


(fig.48/C)

How to operate the stabilisers

- Select the stabilisers that you wish to operate:
  - Switch “2”: front left stabiliser (fig.48/C).
  - Switch “3”: front right stabiliser (fig.48/C).
  - Switch “4”: rear left stabiliser (fig.48/C).
  - Switch “5”: rear right stabiliser (fig.48/C).
- Use the relative switch (fig.48/C Pos.“6”) to extend the stabiliser beam (fig.48/C Pos. “C”).
- Press the “enable stabilisers” switch (fig.49/C Pos.“B”) and keep it pressed until you have completed the manoeuvre.
- Shift the lever/selector (fig.47/C Pos.“1”) towards the front of the machine (fig.47/C Pos.“A”) and hold in this position to carry out the manoeuvre.
- Use the relative switch (fig.48/C Pos.“6”) to lower the stabilisers (fig.48/C Pos.“D”).
- Shift the lever/selector (fig.47/C Pos.“1”) towards the front of the machine (fig.47/C Pos.“A”) and hold in this position to lower.
- Shift the lever/selector (fig.47/C Pos.“1”) towards you (fig.47/C Pos.“B”) and hold in this position to raise the stabilisers.
- Use the relative switch (fig.48/C3 Pos.“6”) to select the stabiliser beam (fig.48/C Pos.“C”).
- Shift the lever/selector (fig.47/C Pos.“1”) towards you (fig.47/C Pos.“B”) and hold in this position to completely retract the stabiliser beams.

It is possible to select more than one stabiliser at the same time by acting on the relative switches and enable them by carrying out the procedure described above.



(fig.49/C)

⚠ - CAUTION - ⚠

The stabiliser beam can only be manoeuvred if the stabiliser is completely retracted.

⚠ - CAUTION:

To ensure you are working in complete safety, the machine must be levelled. The maximum allowed tilt is 2°.
Once the stabilisers have been positioned, always ensure the machine is levelled correctly by using the spirit level in the cab.

JOYSTICK (STANDARD)

Electro hydraulic proportional power control with joystick (fig.51/C Pos.“1”)

The telehandler is equipped with an electro hydraulic power control located to the right of the operator (fig.51/C Pos.“1”)

The power control activates the following operations:

- Raise/lower the boom
- Pivot and turn the forks.
- Extend/retract boom.
- Turn turret right/left.
- Additional movements.

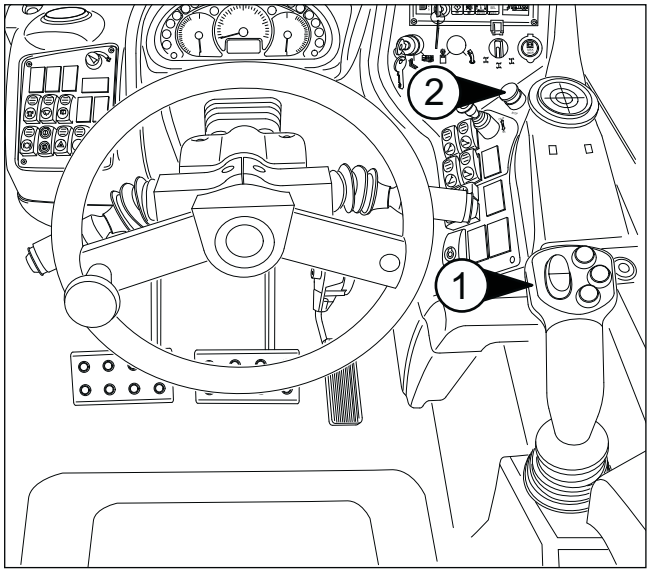
The joysticks are protected by a “dead man” safety system, which only allows the joystick to be moved if the button on the front grip of the joystick (fig.52/C Pos.“C”) is pressed before and during the entire manoeuvre. This ensures the operator cannot accidentally activate the joystick.

- To raise loads, pull the joystick backwards “**B**” (fig.52/C).
- To lower loads, push the joystick forwards “**B**” (fig.52/C).
- To tilt the fork downwards, press push button “**1**” and move the joystick to the right (fig.52/C).
- To tilt the fork upwards, press push button “**1**” and move the joystick to the left (fig.52/C).
- To extend the boom, press selector “**A**” towards the front of the machine (fig.52/C).
- To retract the boom, press selector “**A**” towards you (fig.52/C).
- Press button “**2**” and shift the joystick left or right to control the function of boom head auxiliary attachments (fig.52/C).
- To rotate the turret right, press button “**3**” and shift the joystick right (fig.52/C).
- To rotate the turret left, press button “**3**” and shift the joystick left (fig.52/C).

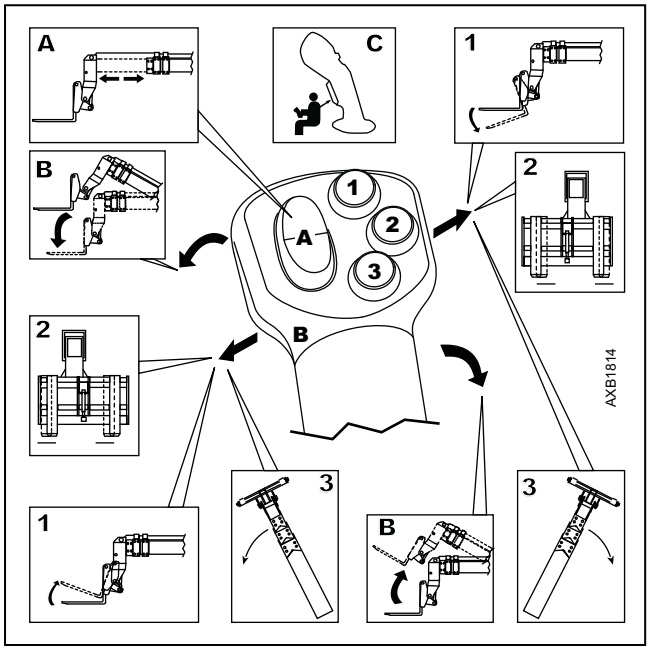
It is possible to carry out manoeuvres simultaneously by moving the joystick diagonally and activating selector “**A**” (fig.52/C).

⚠ - *CAUTION* - ⚠

In case of emergency, press the emergency push button (fig.51/C Pos.“2”) **to disable the joystick.**



(fig.51/C)



(fig.52/C)

⚠ - CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

DOUBLE JOYSTICK (OPTIONAL)

Electro hydraulic proportional power control with two joysticks (optional)

The telehandler can be equipped with 2 electro hydraulic power controls, one positioned on the left (fig.53/C Pos.“1”) and one on the right (fig.53/C Pos.“2”) of the operator.

In machines equipped with two joysticks the left joystick holder armrest is mobile, to ease getting in and out of the cab. If the armrest is not correctly fastened into its housing, the machine movements are disabled.

The joysticks are also protected by a “dead man” safety system, which only allows the joystick to be moved if the button on the front grip of the joystick (fig.54/C Pos.“2”, fig.55/C Pos. “2”) is pressed before and during the entire manoeuvre. This ensures the operator cannot accidentally activate the joystick.

The power control activates:

- Raise/lower boom.
- Pivot and turn the forks.
- Extend/retract boom.
- Turn turret right/left.
- Additional movements.

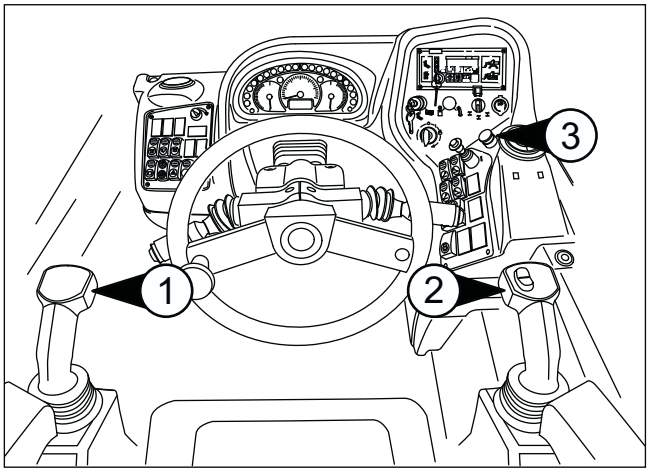
Left joystick movements
(fig.54/C)

- To extend the telescopic boom, push the joystick forwards (fig. 54/C Pos. “A”).
- To retract the telescopic boom, push the joystick backwards (fig. 54/C Pos. “B”).
- To rotate the turret right, shift the joystick right (fig.54/C Pos.”D”).
- To rotate the turret left, shift the joystick left (fig.54/C Pos.“C”).

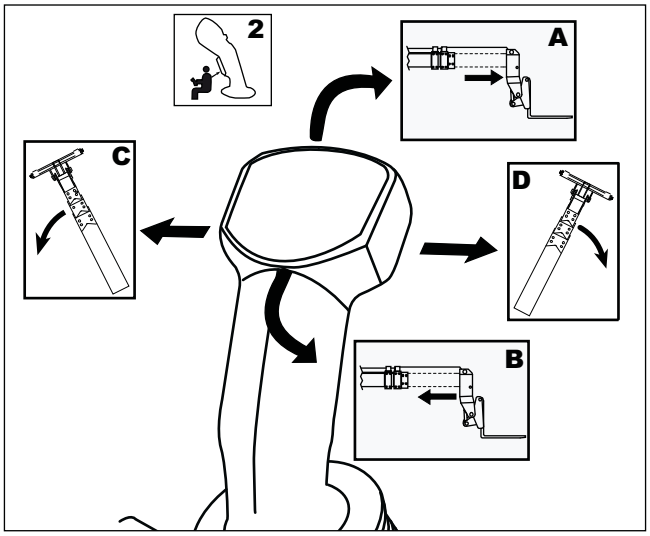
Right joystick movements:
(fig.55/C)

- To raise the boom, pull the joystick backwards (fig.55/C Pos.“B”).
- To lower the boom, pull the joystick forwards (fig.55/C Pos.“A”).
- To tilt the fork downwards, shift the joystick right (fig.55/C Pos.“D”).
- To tilt the fork upwards, shift the joystick left (fig.55/C Pos.“C”).
- Press selector “1” (fig.55/C) towards the front or rear of the machine to control the function of boom head auxiliary attachments.

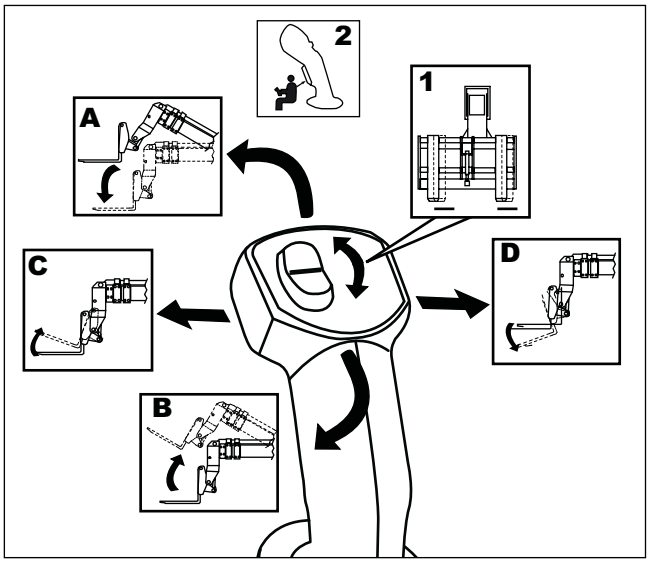
It is possible to carry out manoeuvres simultaneously by moving the joysticks together.



(fig.53/C)



(fig.54/C)



(fig.55/C)

⚠ - CAUTION - ⚠

In case of emergency, press the emergency push button (fig.53/C Pos.“3”) **to disable the joystick.**

MACHINE FUNCTION SELECTOR

The machine features a “machine function selector” (fig.56/C Pos.“1”) which, together with the control panel (fig.56/C Pos.“2”), must be set on the tool you wish to use.

There are three categories to choose from:

- **WINCH**
  for use with winches, crane extensions, crane extensions with winch, jibs, hook for fork carriage (fig.57/C Pos.“A”).
- **FORKS**
  for use with forks, buckets, mixing buckets, ladles, centering handler (fig.57/C Pos.“B”).
- **BASKETS**
  for use with every type of man basket which can be assembled on the machine (fig. 57/C Pos.“C”).

Select the desired tool by turning the key clockwise or anticlockwise. The selector features a key so that the site manager can remove the key once the type of tool has been selected and to ensure that no one else can tamper with the selector.

⚠ - CAUTION:

Before use, ensure the “machine function selector” and the control panel are programmed to work with the tool assembled on the boom head.

To find out which tools can be used with the machine, consult the ***DIECI*** price list or your dealer/reseller.

⚠ - CAUTION:

Do not assemble any attachments other than the attachments recommended by ***DIECI***.

⚠ - CAUTION:

Only use original ***DIECI*** attachments. ***DIECI*** shall not be held liable for any damage to the machine, things or people caused by the use of non-original attachments.

⚠ - CAUTION - ⚠

IT IS FORBIDDEN to use the machine with an attachment assembled that is different from the attachment selected with the “machine function selector” and the control panel.

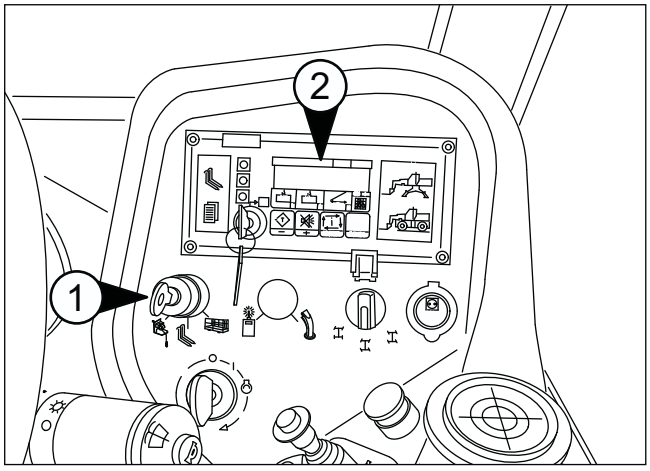
⚠ - CAUTION - ⚠

The attachment selected with the “machine function selector” must always correspond to the attachment programmed on the control panel display.
IT IS FORBIDDEN to operate with different selections.

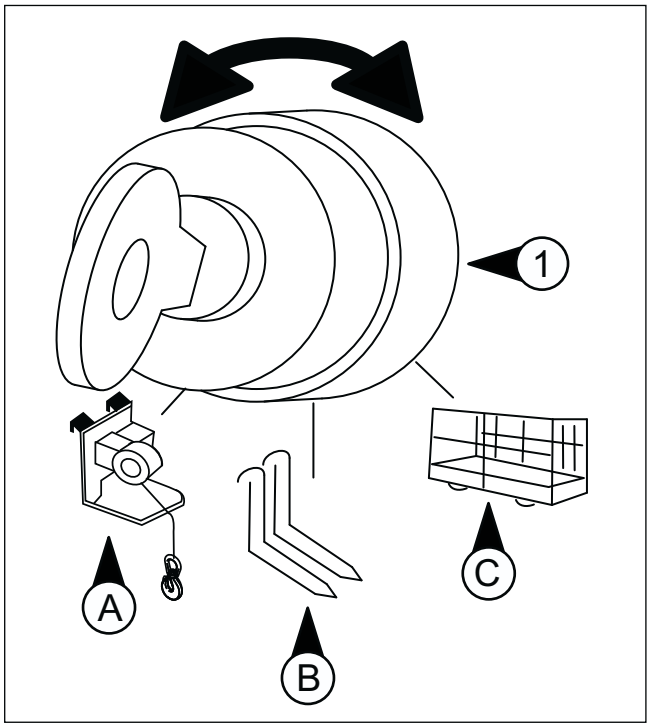
By selecting the man basket, it is not possible to select a steering mode other than the set mode.

⚠ - CAUTION - ⚠

THE BASKET CAN ONLY BE OPERATED FROM THE CAB WITH THE “MACHINE FUNCTION SELECTOR” ON “FORKS” (FIG.57/C POS.“B”) **AND ONLY TO LOWER THE BASKET TO THE GROUND IF THE PERSON ON THE BASKET IS UNWELL OR INJURED.**



(fig.56/C)



(fig.57/C)

⚠ - CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

ANTI ROLL-OVER DEVICE

The machine is equipped with an electronic anti roll-over device (fig.58/C Pos.“A”) which has the aim of helping the operator to use the machine safely by giving visual and acoustic warnings when approaching the danger zone, according to the load tables.

Before you start using the machine, the device must be programmed according to the attachment assembled on the boom.
The “operating mode” change from wheels/stabilisers, front/360° is automatic.
An acoustic signal and a visual signal on the display (fig.58/C Pos.“A”) warn that the device has started to function. Aggravating movements are automatically blocked (boom descent and extension). The alarm ceases when safety conditions are restored.

If an alarm is triggered while the hook or winch are being used, the only movements that remain active are the movements necessary to retract the boom and the additional movements on the cable descent side.

If an alarm is triggered while the forks are being used, the only movements that remain active are: retract boom, raise boom, additional movements, plate pivot and turn.

If an alarm is triggered while the basket is being used, the only movements that remain active are: retract boom, raise boom, additional movements.

The anti roll-over device is always enabled.

⚠ - CAUTION:

The anti roll-over device cannot replace an operator’s expertise in operating the machine safely. The responsibility for carrying out safe manoeuvres lies with the operator and compliance with every prescribed safety standard.

⚠ - CAUTION:

The operator must be able to understand if the data supplied by the instruments are correct and real. The data and the instruments must be used if the machine is to be operated safely. When checking the weight of a load, ensure the load is raised above ground.

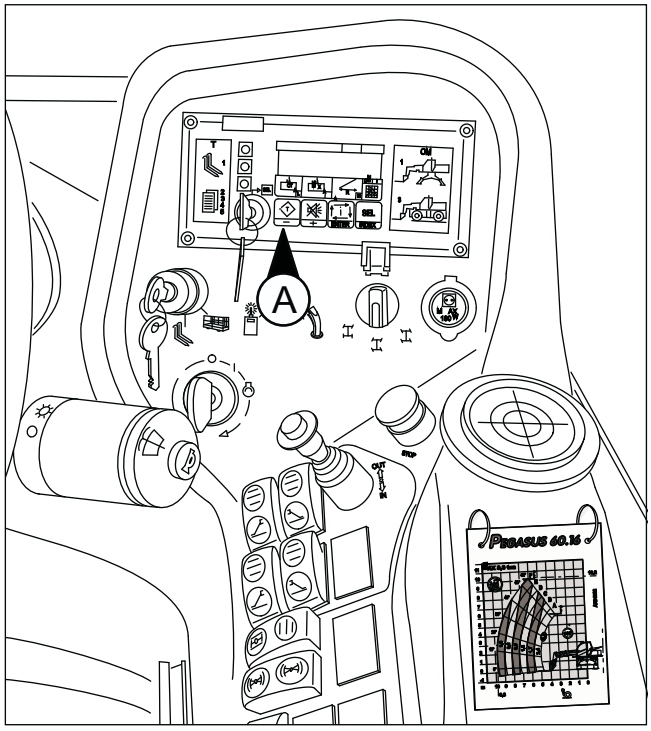
When it is switched on, the device starts up a self-diagnosis program to check if it and the transducers are functioning properly. If there is a malfunction, the device places itself in safety mode and blocks all manoeuvres.

Nevertheless, before starting to operate the machine, the operator must ensure that the instrument is functioning correctly:

- Check the dimensions indicated on the display.
- Check whether the panel is displaying any messages or alarms.
- Check that the manoeuvre blocking device is functioning properly.

⚠ - CAUTION:

Because the anti roll-over device is an electronic device with numerous sensors, it can be subject to malfunctions or defects. The operator must be able to identify malfunctions and put them right as soon as possible by contacting an authorised workshop or the ***DIECI*** service centre.



(fig.58/C)

⚠ - CAUTION - ⚠

The operator is responsible for manual selection of the load tables and therefore the limiting device. The last configuration used remains active when automatic start up is used.

⚠ - CAUTION - ⚠

If the accessory is not programmed properly the device may not function correctly and therefore create a dangerous operating situation.

⚠ - CAUTION - ⚠

The selected table remains active even after the machine has been switched off and on again. It remains active until the subsequent manual selection.

⚠ - CAUTION - ⚠

The anti roll-over device and the “machine function selector” are independent; therefore it is necessary to first manually program the “machine function selector” and then the anti roll-over device.

The attachment selected with the “machine function selector” must always correspond to the attachment programmed on the control panel display. It is forbidden to operate with different selections.

⚠ - CAUTION - ⚠

BEFORE STARTING TO OPERATE THE MACHINE, THE OPERATOR MUST READ AND LEARN THE ANTI ROLL-OVER DEVICE MANUAL WHICH HAS BEEN INTEGRATED INTO THIS MANUAL.

LIMITING DEVICE EXCLUSION

It is possible to exclude the safety devices by pressing and holding down button “A” (fig.59/C) while at the same time moving the joystick. An acoustic alarm in the cab will sound until the safety devices are restored.

⚠ - *CAUTION* - ⚠

When the safety devices are excluded, do not carry out any pejorative manoeuvres that could compromise the stability of the machine. Danger of rolling over.

⚠ - *CAUTION* - ⚠

***DIECI* shall not be held liable if the operator knowingly or unknowingly uses button “A” (fig.59/C) incorrectly to exclude the safety devices.**

⚠ - *CAUTION* - ⚠

IF BUTTON “A” (fig. 59/C) IS PRESSED AND ANY MANOEUVRES COMPROMISING MACHINE STABILITY ARE CARRIED OUT, THE MACHINE COULD ROLL-OVER.

⚠ - *CAUTION*

In normal conditions of machine use, the button must not be used. Its use is only allowed after the locking signal by the anti roll-over system.

⊘ - *PROHIBITION* - ⊘

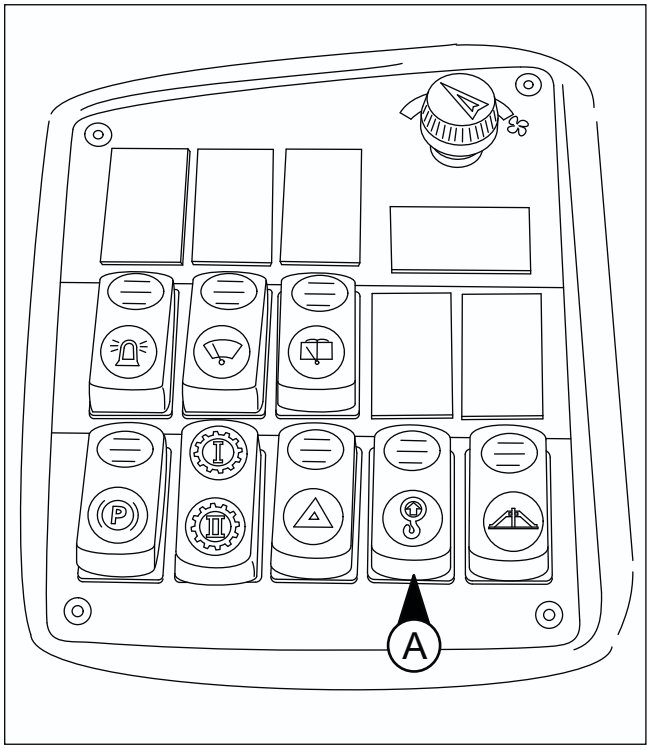
IT IS FORBIDDEN to use the release button to operate with loads that exceed the capacities established by the manufacturer.

The button may only be used in extreme cases, malfunctions or situations where its use is justified.

It may ONLY be used by authorised personnel who have been trained to do so.

⊘ - *PROHIBITION* - ⊘

IT IS STRICTLY FORBIDDEN TO USE THE ANTI ROLL-OVER EXCLUSION BUTTON WHEN A HOOK ATTACHMENT IS ASSEMBLED ON THE MACHINE (HOOK FOR THE FORK HOLDER PLATE OR THE WINCH).



(fig.59/C)

⚠ - CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

RADIO CONTROL (optional)

(fig.60/C Pos.“1”)

If assembled on the machine, the boom can be operated using the radio control. The radio control allows you to remote control every boom movement and turret rotation doubling the cab controls.

The following movements can be carried out using the radio control:

- Extend/retract boom.
- Boom up/down.
- Pivot and turn.
- Turret rotation
- Additional movements

To enable the radio control:

- Place any loads on the ground.
- Assemble the attachment on the boom head, if not yet assembled.
- Re-align the turret with the lower chassis.
- Level the machine and lock the rear axle.
- Position the machine on the stabilisers.
- Turn selector “1” (fig.61/C) anticlockwise to position “A” (fig.61/C) with the antenna symbol.

After selecting the radio control, the attachment you are using must always be selected.
The selector features a key so that the site manager can remove the key once the type of attachment has been selected and to ensure that no one else can tamper with the selector.

- CAUTION:

The use of the radio control is only allowed if the machine is positioned on stabilisers.

- CAUTION:

When the selector is in the “radio control” position (fig.61/C Pos.“A”), the cab controls are disabled.

- CAUTION:

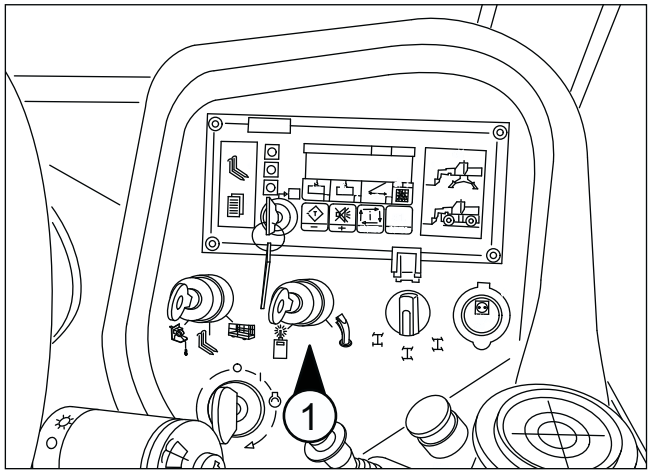
Always keep at a safe distance from the machine and the load. Always stay out of the area that would be occupied by the machine or load if the machine rolled over or the load fell.

Before using the machine with the radio control, carefully read and learn how to use the radio control by studying the manufacturer’s use and maintenance manual supplied with the machine use and maintenance manual.

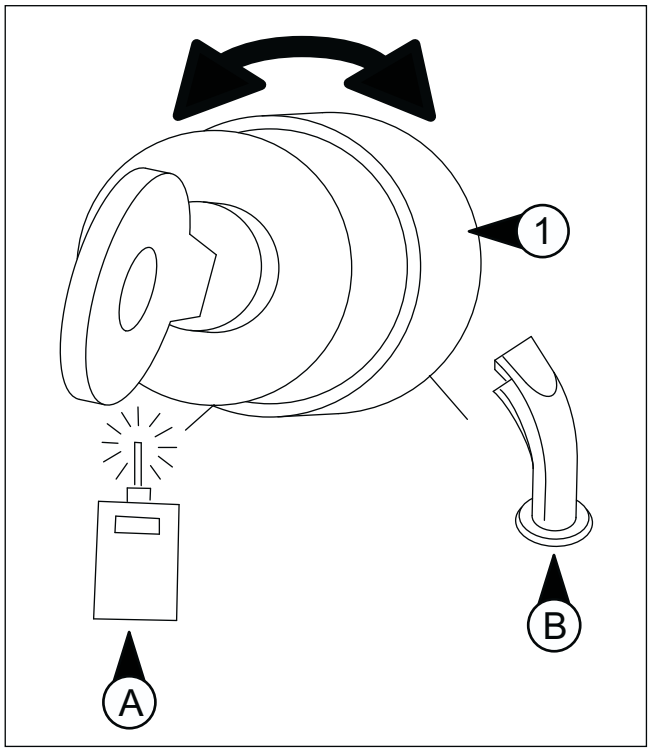
Radio control receiver

(fig.62/C Pos.“1”)

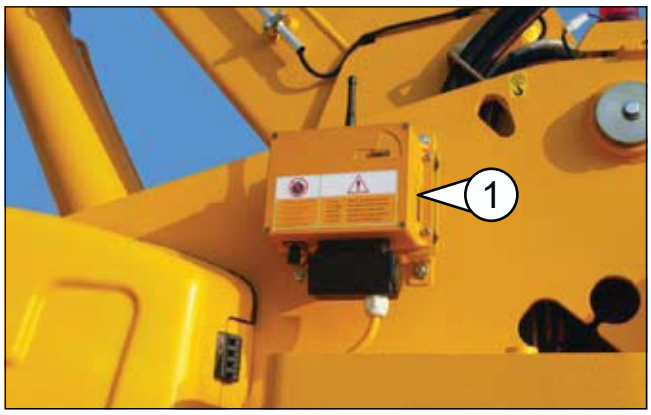
The radio control receiver is installed on the rear of the machine. When the radio control is selected in the cab, the receiver is enabled. Carefully read and learn the radio control manufacturer’s use and maintenance instructions to ensure you know how it functions.



(fig.60/C)



(fig.61/C)



(fig.62/C)

STEERING SELECTOR
(fig.63/C Pos “1”)

Turn the selector (fig.63/C Pos.“1”) to obtain 3 types of steering:

Normal steering - (fig.65/C Pos “A”)
This type of steering allows front steering only.
To enable front steering, turn selector “**1**” (fig.64/C) to position “**A**” (fig.64/C) indicated on the steering functions label.

Radial steering - (fig.65/C Pos.“B”)
This type of steering allows maximum steering left and right.
To enable radial steering, turn selector “**1**” (fig.64/C) to position “**B**” (fig.64/C) indicated on the steering functions label.

Crab steering - (fig.65/C Pos.“C”)
This type of steering allows crab steering with parallel front and rear wheels (sideways machine movement).
To enable crab steering, turn lever “**1**” (fig.64/C) to position “**C**” (fig.64/C) indicated on the steering functions label.

⚠ - CAUTION - ⚠

Select the steering type when the machine is at a standstill.

⚠ - CAUTION:

For road use, the steering control lever must be positioned in Pos.“B” (fig.64/C) and locked using the locking pin (fig.64/C Pos.“2”); (4-wheel steering mode).

⚠ - CAUTION:

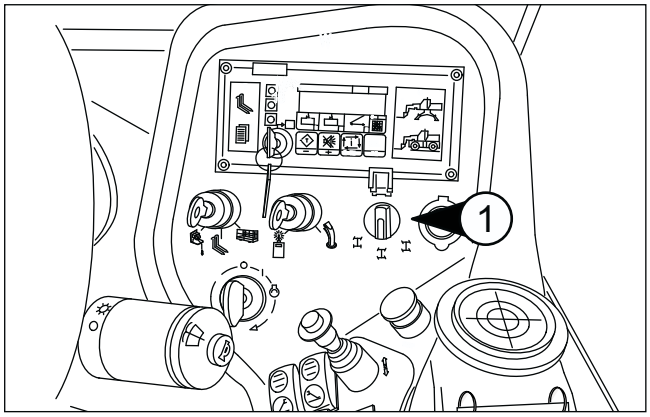
Before selecting a new type of steering mode, align the wheels by following the procedure described below. The wheels must also be aligned while the machine is at a standstill.

Alignment (standard)

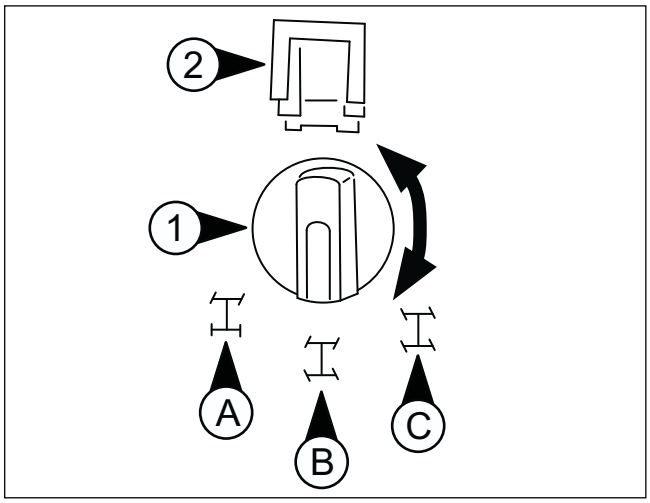
1. Position selector “1” (fig.64/C) in position “B” (fig.64/C) indicated on the steering functions label.
2. Turn the steering wheel observing just the rear wheels until they are completely straightened.
3. Position selector “1” (fig.64/C) in position “A” (fig.64/C) indicated on the steering functions label.
4. Turn the steering wheel observing just the front wheels until they are completely straightened.
5. At this point, the front and rear wheels are aligned and it is now possible to select the type of desired steering.

⚠ - CAUTION:

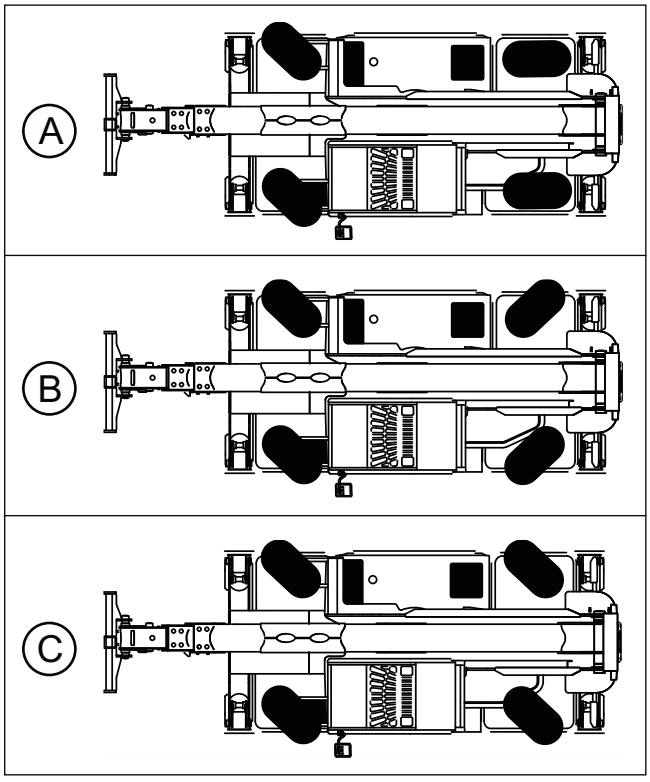
It is recommended to align the wheels regularly (every 8-10 hours) depending on the continued use of the machine.



(fig.63/C)



(fig.64/C)



(fig.65/C)

⚠ - CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

WHEELS ALIGNMENT SELECTOR

(fig.66/C Pos.”3”)

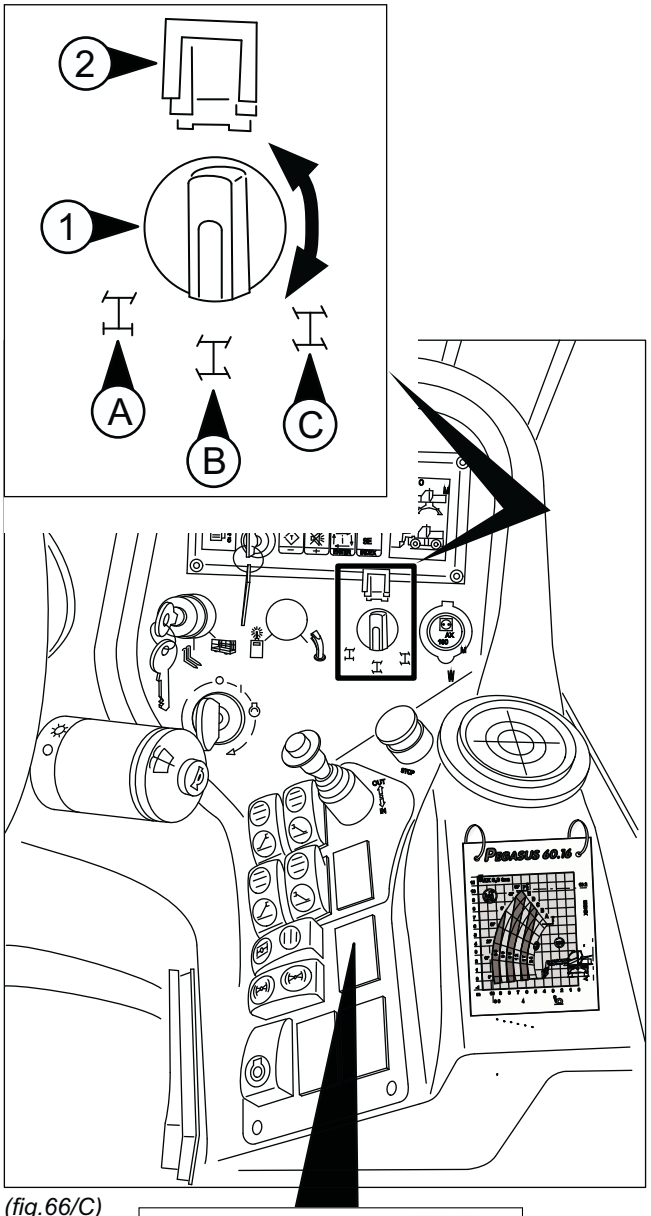
The selector (fig.66/C Pos.”3”) enables the front and rear wheels signal device aligned with the frame.
Te optical signal is given via two LEDs on the dashboard. the LED “1” (fig.67/C) signals the alignment of the front axle wheels, the LED “2” (fig.67/C) signals the alignment of the rear axle wheels.

For wheels alignment:

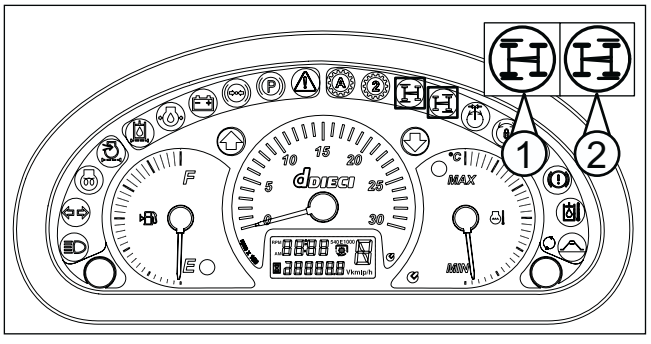
1. Go to a free area with solid and levelled land.
2. Press the wheels alignment button and hold it until alignment has been completed.
3. Position selector “1” (fig.66/C) in the position marked with “B” (fig.66/C) on the functions sticker.
4. Turn the steering wheel, observing the rear wheels alignment LED (fig.67/C Pos.”2”), until it switches on.
5. In these conditions, the rear axle wheels are aligned with the chassis.
6. Position selector “1” (fig.66/C) in the position marked with “A” (fig.67/C) on the functions sticker.
7. Turn the steering wheel, observing the front wheels alignment LED (fig.67/C Pos.”1”), until it switches on.
8. In these conditions, the front axle wheels are aligned with the chassis.

⚠ - *ATTENTION*:

Periodically it is advisable to align the wheels (8-10 hours) depending on the continued use of the vehicle.



(fig.66/C)

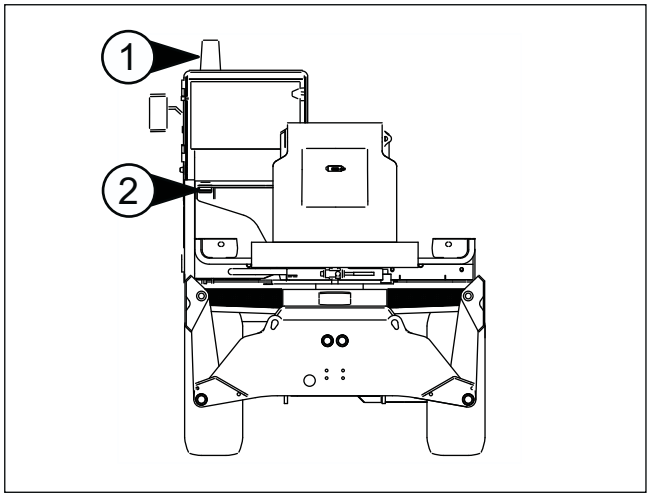


(fig.67/C)

REVOLVING LIGHT SWITCH

The revolving light must be positioned above the driver's cab (fig.69/C Pos."1") and must always be switched on during site and road use.

- Position the revolving light on the driver's cab (fig.69/C Pos."1").
- Insert the power supply connector in the outlet on the rear of the cab (fig.69/C Pos."2").
- Act on the switch "A" (fig.70/C) to switch the light on.
  A pilot light will light up on the switch to indicate the revolving light is switched on.



(fig.69/C)

FRONT CAB SPOTLIGHT SWITCH (OPTIONAL)

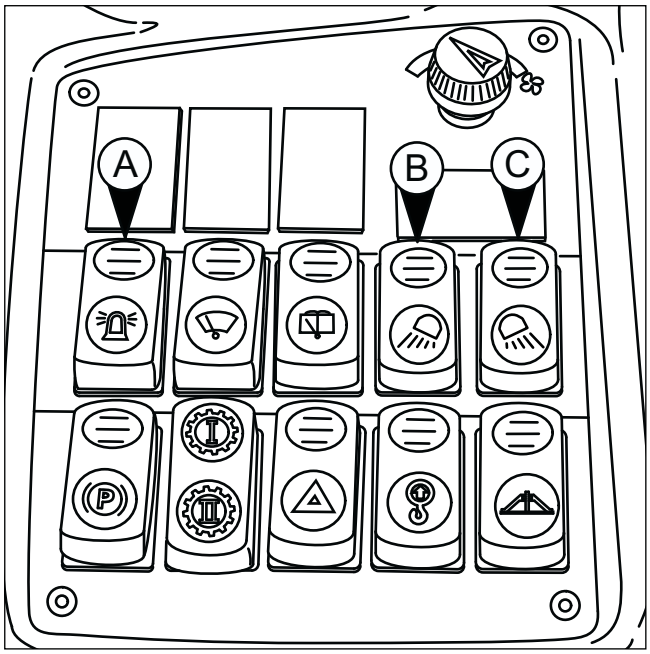
(fig.70/C Pos."B")

Act on the switch (fig.70/C Pos."B") to switch on the front work spotlights on the cab (fig.71/C Pos."1"). A pilot light will light up on the switch to indicate the device is switched on.

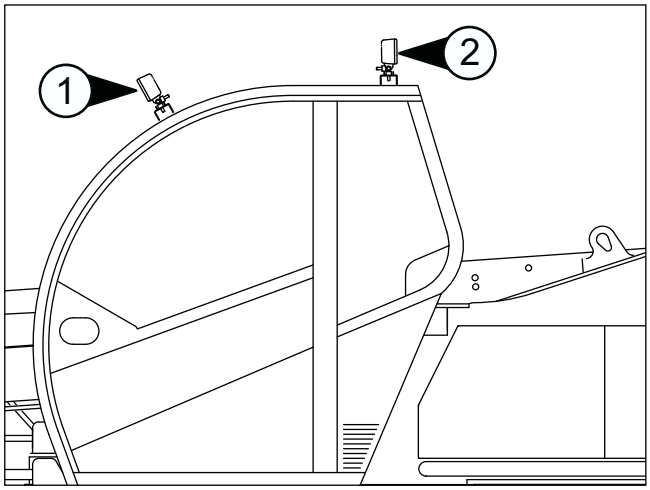
REAR CAB SPOTLIGHT SWITCH (OPTIONAL)

(fig.70/C Pos."C")

Act on the switch (fig.70/C Pos."C") to switch on the rear work spotlights on the cab (fig.71/C Pos."2"). A pilot light will light up on the switch to indicate the device is switched on.



(fig.70/C)



(fig.71/C)

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

FRONT WINDSCREEN WIPER CONTROL
(fig.72/C Pos.“1”)

- Act on the switch to enable the control (fig.72/C Pos.“1”).
- The first click enables the first speed (slow).
- The second click enables the second speed (fast).

A pilot light will light up on the selector to indicate the device is switched on.

- CAUTION:

Worn blades may obstruct vision and scratch the glass.

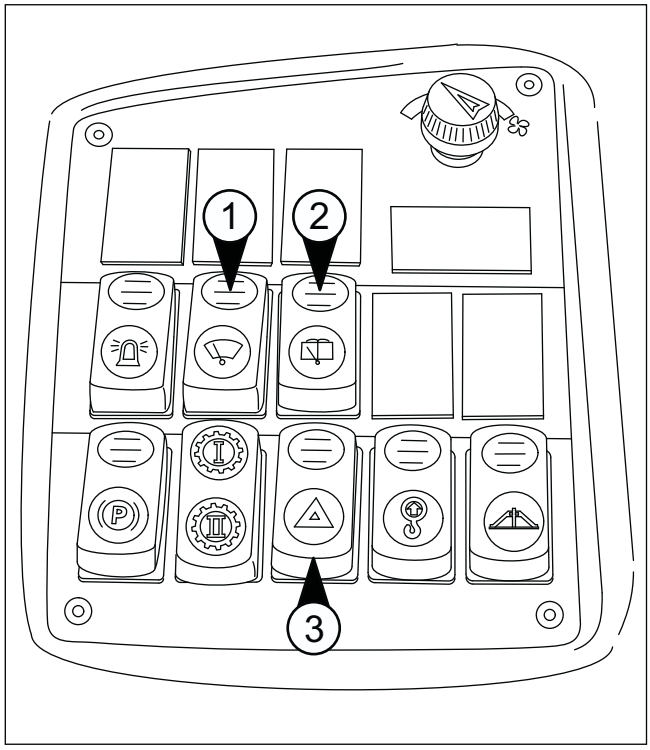
REAR WINDSHIELD WIPER CONTROL
(fig.72/C Pos.“2”)

- Act on the switch to enable (fig.72/C Pos.“2”).
- The first click enables the rear windshield wiper.
- Press continually and hold down to enable the rear windshield washer.

A pilot light will light up on the selector to indicate the device is switched on.

- CAUTION:

Worn blades may obstruct vision and scratch the glass.



(fig.72/C)

EMERGENCY LIGHTS SELECTOR
(fig.72/C Pos.“3”)

Act on the selector (fig.72/C Pos.“3”) to enable the emergency lights (all four indicator lights flash). A pilot light will light up on the selector to indicate the device is switched on.

MANUAL ELECTRONIC ACCELERATOR
(fig.73/C Pos.“1”)

Allows you to accelerate the engine revs and keep them running at a constant speed without pressing the accelerator pedal.

- To enable act on the selector (fig.73/C Pos.“1”).
- The first click takes the engine to 1400 rpm.
- The second click takes the engine to 1800 rpm.

A pilot light will light up on the selector to indicate the device is switched on.

- CAUTION:

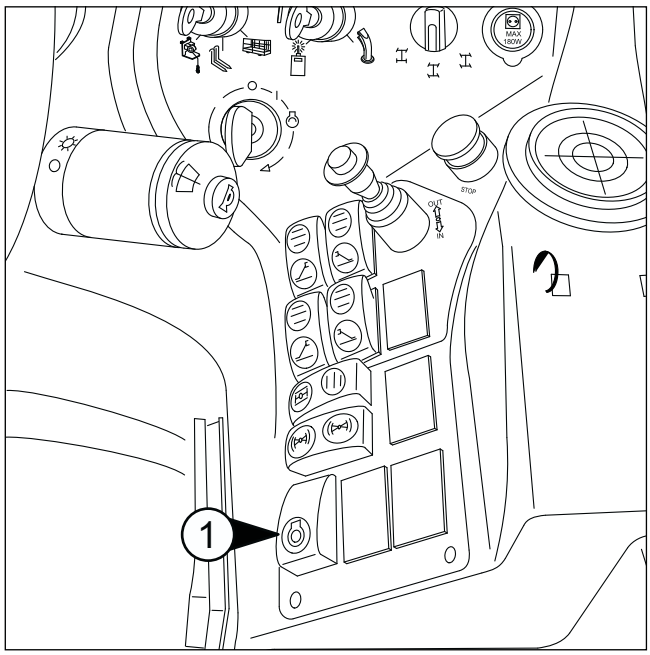
When the machine is switched off the engine must always be running at minimum speed.

- CAUTION:

Do not use the electronic accelerator in the cab when the basket and/or the radio control is in use.

- CAUTION:

When the electronic accelerator is enabled, the machine cannot move and the hydrostatic transmission is disabled.



(fig.73/C)

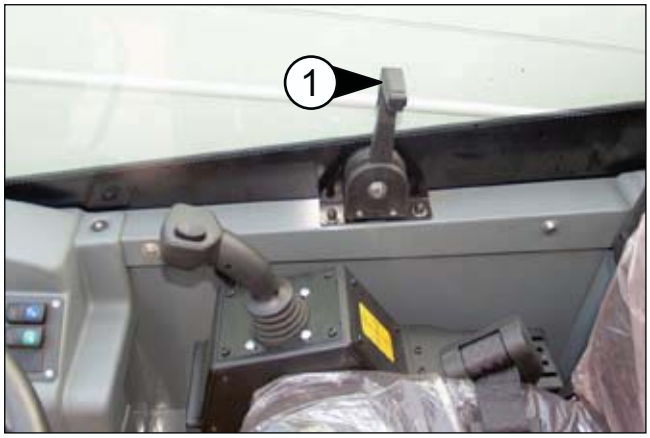
MANUAL MECHANICAL ACCELERATOR (PEGASUS 38.16)

(fig.74/C Pos."1")

Allows to accelerate the engine revs and keep them constant without pressing the accelerator pedal.

To activate the accelerator:

- Pull the lever towards yourself to increase the engine revs. At end run the engine will be at maximum revs.
- Push the lever towards the front of the cab to decrease the engine revs. At end run the engine will be at minimum revs.



(fig.74/C)

- *ATTENTION*:

Minimum engine revs is 900 rpm.
The maximum engine revs allowed with accelerator in manual mode is 2500rpm.

- *ATTENTION*:

On switch-off of the vehicle, the engine must always be taken to minimum revs.

- *ATTENTION*:

Do not use the manual accelerator in cab during use of the basket and/or of the radio control.

- *ATTENTION*:

With manual accelerator engaged, the vehicle does not run, the hydrostatic drive is disengaged.

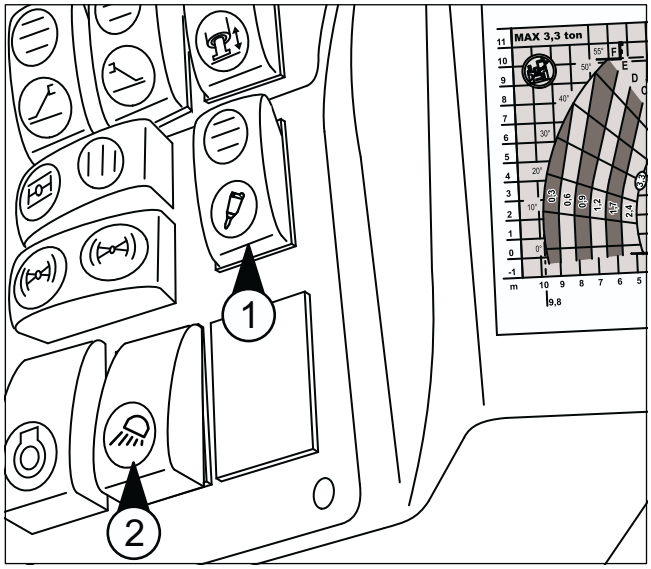
BOOM HEAD SOLENOID VALVE SWITCH (OPTIONAL)

(fig.75/C Pos.“1”)

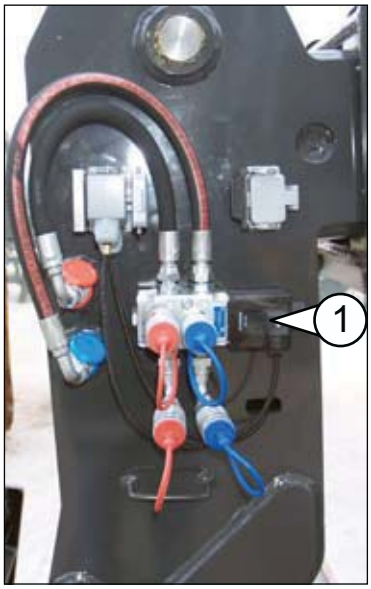
The switch is only installed if the solenoid valve is present on the boom head (fig.75/C Pos.“2”).
With the adoption of the solenoid valve, it is possible to have the hydraulic controls doubled on the boom head.

- Press the button (fig.75/C Pos.“1”) to supply current to the solenoid valve, which will divert the flow of oil.

The selector (fig.75/C Pos.“1”) is used in parallel with the normal service controls; first use the selector to choose where to divert the flow of oil and then carry out the manoeuvres with the usual service controls.



(fig.75/C)

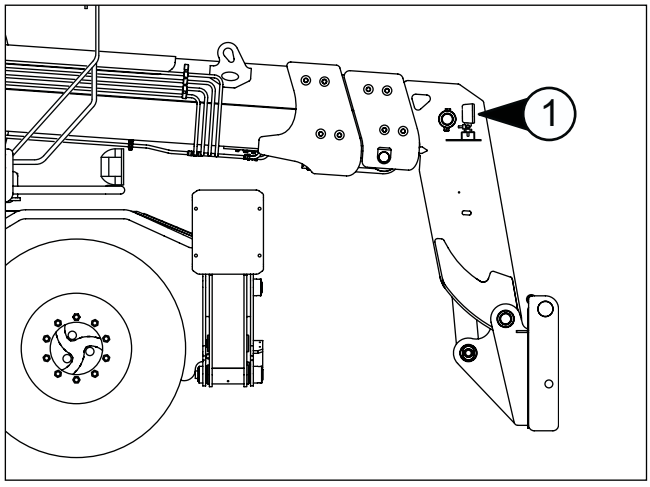


(fig.76/C)

BOOM HEAD WORK SPOTLIGHT SWITCH (OPTIONAL)

(fig.75/C Pos.“C”)

Act on the switch (fig.75/C Pos.“2”) to switch on the boom head work spotlight (fig.77/C Pos.“1”). A pilot light will light up on the switch to indicate the device is switched on. On request, two work spotlights can be installed, one on the right and one on the left of the boom.



(fig.77/C)

INTERNAL CAB VENTILATION

To enable the fan, turn the selector (fig.78/C Pos.“1”) clockwise.

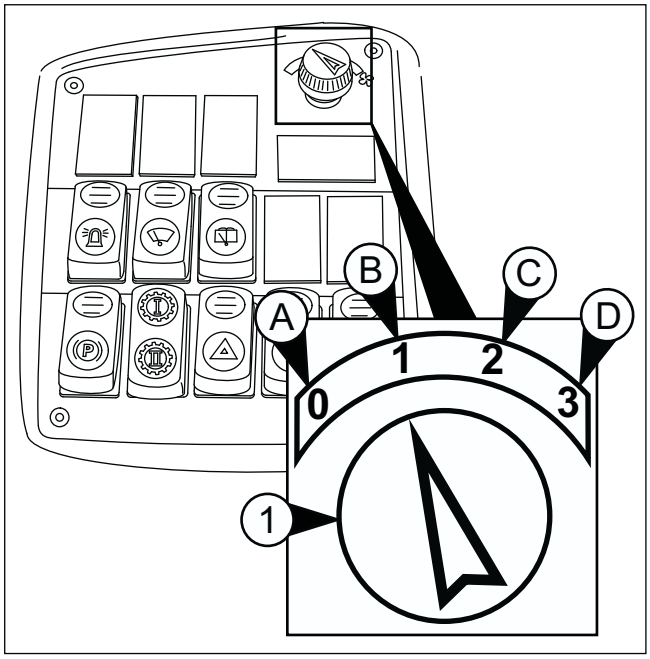
The clicks represent respectively:

- Off (fig.78/C Pos.“A”).
- First speed (fig.78/C Pos.“B”).
- Second speed (fig.78/C Pos.“C”).
- Third speed (fig.78/C Pos.“D”).

- Turn the selector (fig.78/C Pos.“1”) anticlockwise to reduce the airflow or switch off the fan.
- To open the air vents (fig.79/C Pos.“1-2-3-4-5”) press them on one side. To adjust the direction of the airflow, act on the louvers or turn the air vent itself.
- To close the air vents, push the louvers until they are horizontal and closed.

Air temperature adjustment

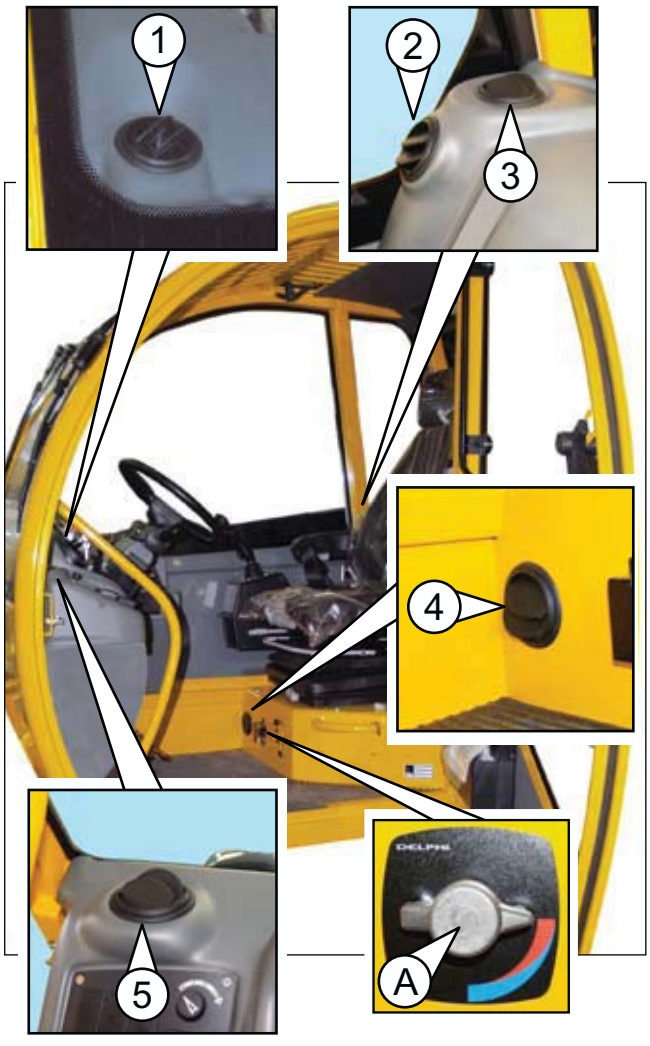
To adjust the temperature of the air issuing from the air vents, turn the knob (fig.79/C Pos.“A”).
Turn the knob towards the red part of the scale to increase the temperature. Turn the knob towards the blue part of the scale to decrease the temperature until it is almost the same at the outdoor temperature.



(fig.78/C)



(fig. 80/C) (Airflow diagram)



(fig.79/C)

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

AIR RECIRCULATION

While the fan in the cab is switched on, it is possible to enable the air recirculation function by acting on the relative vent (fig.81/C Pos.“1”).

- Turn lever “2” (fig.81/C) towards the right side of the machine to enable air recirculation; part of the air will be drawn from inside the cab, reducing the amount of air taken from outdoors.

- Turn the knob (fig.81/C Pos.“2”) on lever “2” (fig.81/C) to lock or release the lever.

- Reverse the procedure to disable air recirculation.

NOTE:
It is advisable to use air recirculation mode when working in very dusty environments.

⚠ - CAUTION:

Do not use the air recirculation control for long periods, the air could become stuffy and poor in oxygen with a risk of making the operator feel unwell. It is advisable to enable and disable air recirculation at ten-minute intervals.



(fig.81/C)



(fig.82/C)

RETRACTING THE BOOM

Retracting the boom manually.

⚠ - CAUTION - ⚠

These procedures must be carried out by two qualified and expert operators with the authorisation of the Safety Manager.

1. Extract the movement lever and insert in its housing on the distributor (fig.85 Pos. “A” – “B” – “C”).
2. Act on the lever of the distributor of the manoeuvre to carry out (fig.85), bearing in mind that:
   - LEVER A UPWARDS - raises the boom.
   - LEVER A DOWNWARDS - lowers the boom.
   - LEVER B UPWARDS - rotates the turret towards the right.
   - LEVER B DOWNWARDS - rotates the turret towards the left.
   - LEVER C UPWARDS - retracts the boom.
   - LEVER C DOWNWARDS - extends the boom.
   - LEVER D - Pivot and turn (**DO NOT USE**)
   - LEVER E- Additional movements (**DO NOT USE**)
3. The second operator on the ground must take out the rod from the toolbox and insert it in the emergency hand pump housing (fig.86 Pos. “1”).
4. To carry out movements, enable the emergency pump. The second operator must push the rod to its limit stop first from one side and then from the other to provide the system with pressure; this operation has to be carried out until the movement has been completed.
5. Carry out points “1” and “3” for every single manoeuvre.
6. When the boom has been completely retracted, restore the original conditions; close the distributor system door and return the rod to the toolbox.

⚠ - CAUTION - ⚠

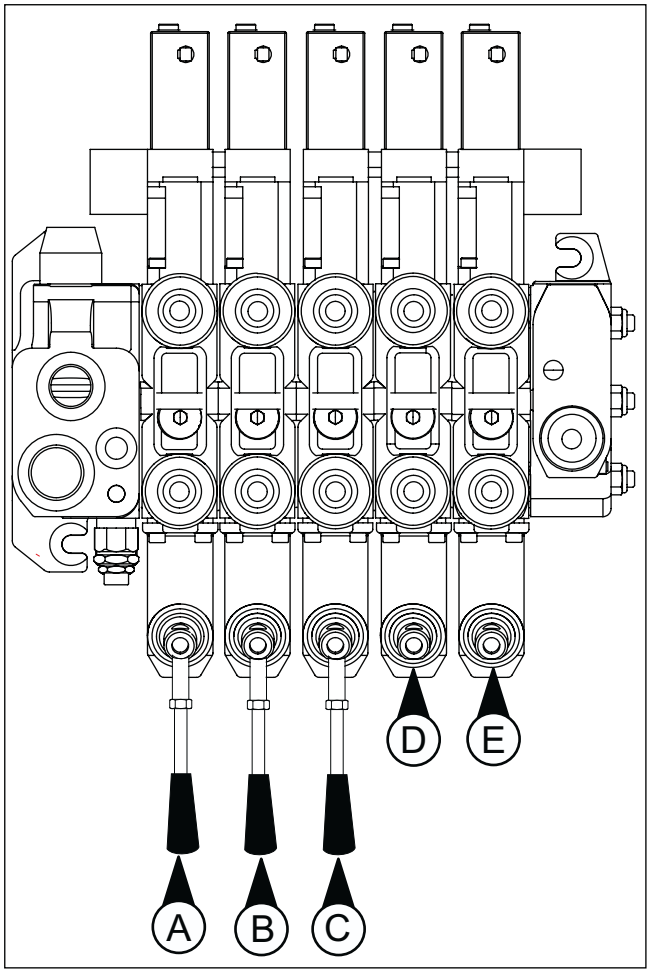
Before pumping, act on the distributor lever to carry out the desired manoeuvre. Pumping without shifting the lever discharges the oil from the distributor and thus more effort is required to carry out the manoeuvres.

⚠ - CAUTION - ⚠

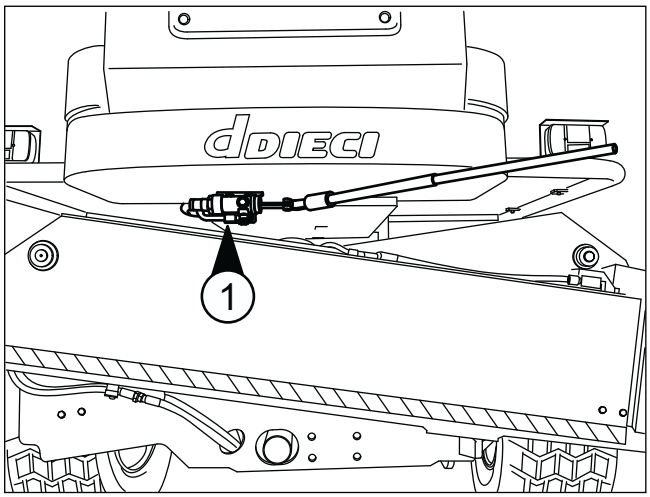
When the machine is in the emergency pump condition, the anti roll-over systems are disabled. You must consult the loaddiagram (in the handbook in the cab and in “Use and Maintenance”) before carrying out any manoeuvre with the distributor levers. In this way it is possible to know the exact position the basket is in and the work area within which it is possible to operate thanks to the inclinometer and the letters on the boom.
When retracting the basket, do not carry out any movements that could jeopardise machine stability; danger of rolling-over.

⚠ - CAUTION - ⚠

Only use levers “A”, “B” and “C” (fig.85) for recovery operations. The levers for pivot-turn and additional movements “D” and “E” (fig.85) must not be used because they can put people and things at risk.



(fig.85/C)



(fig.86/C)

⚠ - CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

TELESCOPIC BOOM RECOVERY
PEGASUS 38.16

Telescopic boom recovery with manual system

⚠ - ATTENTION - ⚠

These operations must be performed by two operators that are qualified, expert and authorised by the Safety Manager.

1. Extract the movements execution lever, insert it into its seat on the distributor (fig.87 Pos.”A”-”B”-”C”).
2. Act on the distributor lever of the manoeuvre to perform (fig.87), considering that:
   - LEVER UPWARDS - boom descent.
   - LEVER DOWNWARDS - boom ascent.
   - LEVER B UPWARDS - turret rotation to the right.
   - LEVER B DOWNWARDS - turret rotation to the left.
   - LEVER C UPWARDS - boom extension.
   - LEVER C DOWNWARDS - boom return.
   - LEVER D - Swivel (**DO NOT USE**)
   - LEVER E - Swivel (**DO NOT USE**)
3. The second operator must extract the rod positioned in the tool box and insert it into the housing of the emergency hand pump (fig.88 Pos.”1”).
4. To carry out the movements, start the emergency pump, the second operator must push the rod up to end run first from one side and then the other to give pressure to the system; the operation must be performed until the manoeuvre has been completed.
5. Perform points “1” and “3” of the instructions for each individual manoeuvre.
6. When recovery has be completed, take everything back to start conditions; close the distributor plant hatch, place the rod back in the tool box.

⚠ - ATTENTION - ⚠

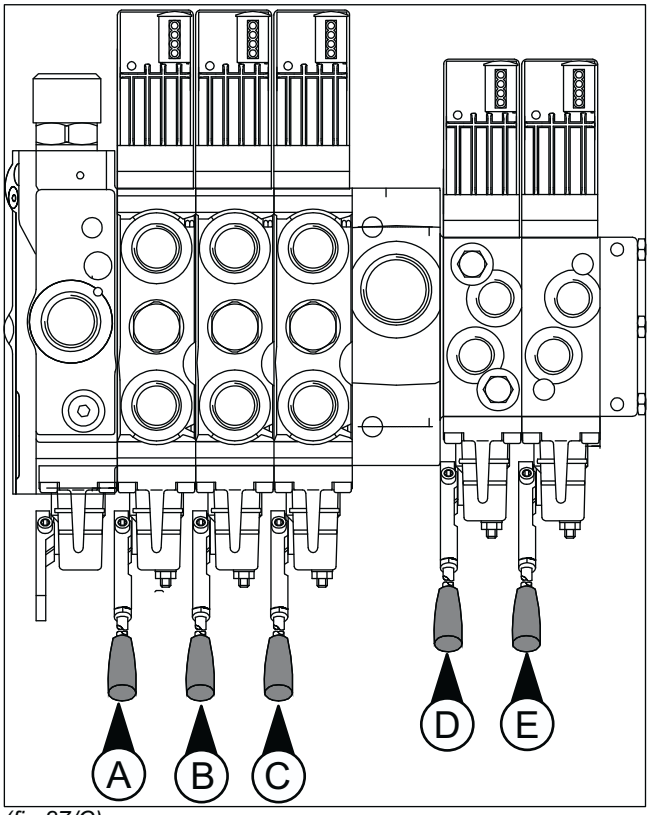
Before pumping, act on the distributor lever to perform the desired movement. Pumping without movement of the lever causes discharge of the distributor oil with consequent greater effort in order to perform the manoeuvres.

⚠ - ATTENTION - ⚠

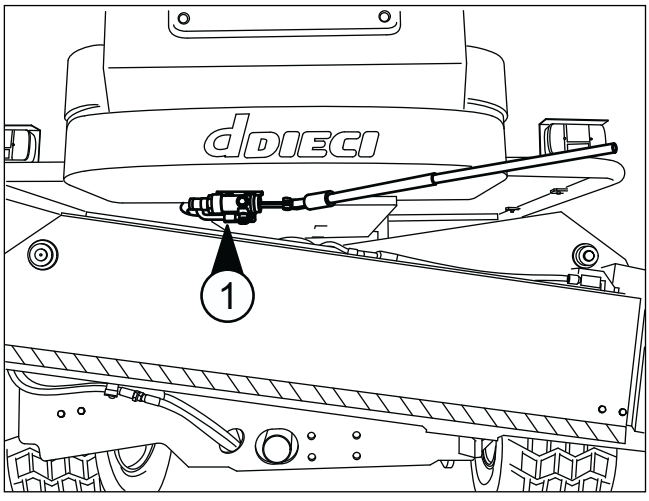
In conditions where the emergency pump is in use the anti-tipping systems are deactivated. It is mandatory to consult the load diagram (found in the cab regarding use and maintenance) before carrying out any manoeuvre via the distributor levers. This way, using the inclinometer and the letters on the boom, it is possible to know the exact position the basket position is in and the work area where it is allowed to operate.
During recovery of the basket, movements worsening the stability of the vehicle must not be performed, risk of tipping.

⚠ - ATTENTION - ⚠

Only use the following levers for recovery operations: “A”,”B”,“C” (fig.87). The levers “D” and ”E” (fig.87) for swivelling and services must not be used as they can put the health of persons at risk



(fig.87/C)



(fig.88/C)

TOWING THE MACHINE

The machine may only be towed in an emergency at low speed (max 4 km/hour) and over short distances (max 500 m).

The procedure is as follows:

- Place the gear in neutral.
- Disengage the negative parking brake.
- Connect the tow bar to the tow vehicle and the vehicle that has broken down.

⚠ - CAUTION - ⚠

Do not try to start the machine by towing or pushing it while the hydrostatic transmission is enabled.

When the engine is switched off the power steering does not work. If it is not possible to keep the engine running, while towing the machine bear in mind that considerably more effort is required to steer.

When the engine is switched off the parking brake is engaged. If it is not possible to keep the engine running while towing the machine, disengage the parking brake manually by following the instructions in the paragraph “disengaging the negative parking brake when the engine is switched off”.

⚠ - CAUTION:

When the engine is switched on while the machine is being towed, remain seated in the driver’s seat to prevent the parking brake engaging automatically.

The tow bar must be connected to the towing devices on the machine signalled by the relative symbol (fig.90/C)

⚠ - CAUTION:

The machine must be towed using a tow bar.
The tow bar must be sized for a towing force of 10.000 Kg.

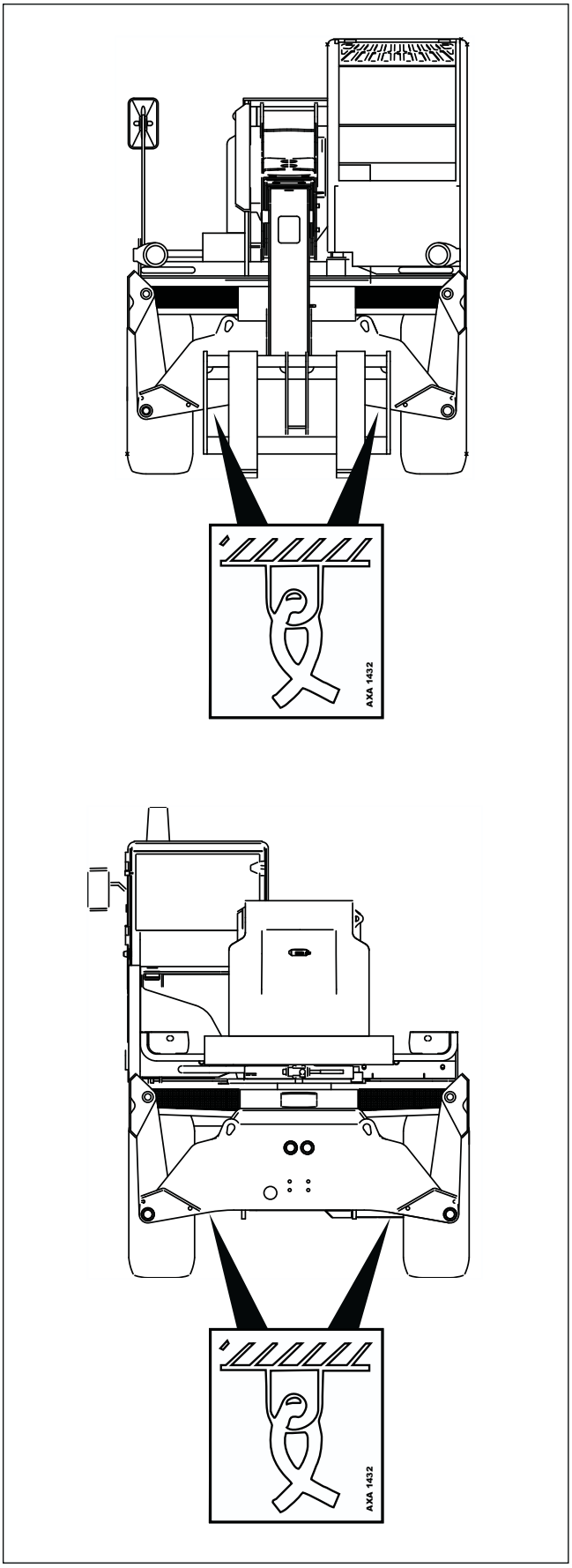
Do not tow the machine on public roads or over very long distances, if possible keep the yellow revolving light and the emergency lights on.
Do not tow the machine on slopes.

⚠ - CAUTION - ⚠

Never stop the towing vehicle and the machine being towed.

⚠ - CAUTION - ⚠

The operations described above must be carried out by specialised personnel.



(fig.90C)

⚠ - CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

Putting the gear in neutral

Instructions

- Switch off the engine.
- Turn the lever (fig.91/C Pos.“1”) on the hydraulic cock towards the centre of the machine until it is closed. The cock is under the machine in the centre near the reduction gear.
- Use a screwdriver to position the gear selector pin (fig.92/C Pos.“2”) in neutral (at half way).

⚠ - CAUTION:

Before towing the machine, switch on the dashboard and ensure that the “gear engaged” pilot lamp on the instrument cluster is switched off and that the letter “N” is displayed on the LCD. If this is not the case, repeat the procedure to place the gear in neutral.

⚠ - CAUTION:

When the operations to tow the machine have been completed, reopen the cock by returning it to its original position. To engage a gear, act on the switch as described in the paragraph “Fast/slow gear switch”.

Releasing the negative brake when the engine is switched off

Instructions

- Loosen the nuts located on both sides of the central part of the rear axle (fig.93/C Pos.“2”).
- Tighten the screws (fig.93/C Pos.“1”) until you meet some resistance; keep a check of how many turns you make to ensure you can return the screws to their original position once you have finished towing the machine.
- Tighten the screws a further 1.5 turns.

The brake will now be released. Once you have finished towing the machine, return everything to their initial conditions.

⚠ - CAUTION:

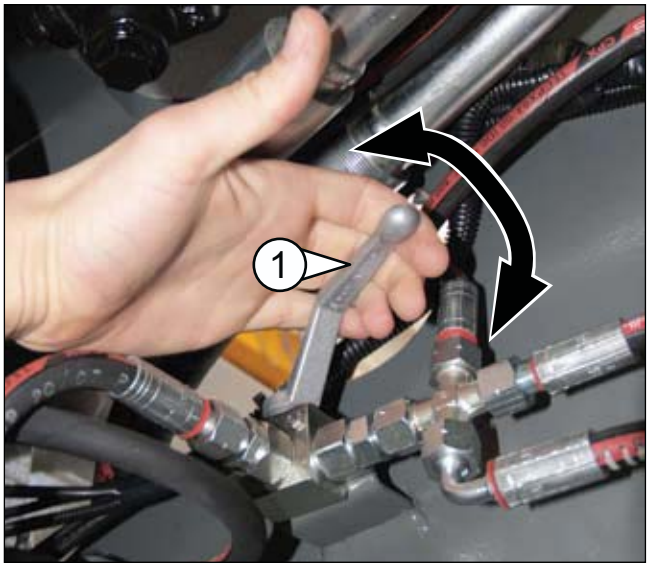
It is very IMPORTANT that the screws are retightened with the same number of turns used to loosen them.

⚠ - CAUTION -

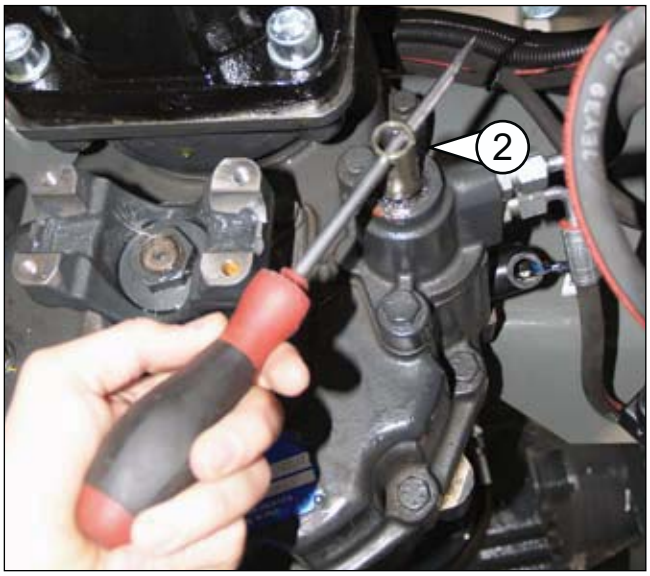
NEVER USE THE MACHINE WHILE THE HANDBRAKE IS DISCONNECTED ONCE YOU HAVE FINISHED TOWING THE MACHINE, RETURN EVERYTHING TO THEIR INITIAL CONDITIONS.

⚠ - CAUTION -

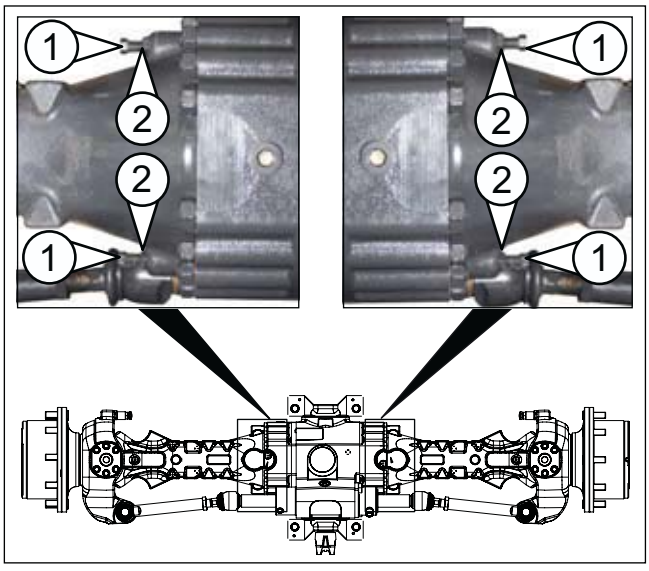
The operations described above must be carried out by expert personnel.



(fig.91/C)



(fig.92/C)



(fig.93/C)

Disengage the parking brake with the engine off negative (Pegasus 38.16)

1° Position a screwdriver as in the figure (fig.94/C).

2° Use a rubber mallet to strike the handle of the screwdriver.

3° Now the parking brake is disengaged and will re-engage automatically on engine start-up. In these conditions it is possible to tow the vehicle. To put the brake back into operational conditions, just start the engine.



(fig.94/C)



(fig.95/C) Parking brake engaged



(fig.96/C) Parking brake disengaged

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

CATALYTIC PURIFIER (optional)
(fig.97/C)



(fig.97/C)

DURATION

As the catalyst is not actively involved in the chemical reaction it provokes, its life is theoretically unlimited. However, due to certain conditions, such as engine not perfectly tuned, vehicle vibrations and the abrasive effect of fumes on the support, the life of the catalyst may be shortened. Indeed, the **life** of the catalytic purifier is about **10000 working hours**.

MAINTENANCE

The catalyst is activated by the high temperature of the fumes which also prevents any particles from depositing on the honeycomb; less maintenance is, consequently, needed. We recommend cleaning the catalyst **every 500 working hours**. Contact an authorised dieci service centre for catalytic purifier cleaning.

WATER DRIVEN PURIFIER (optional)
(fig.98/C)



(fig.98/C)

The water driven purifier is manufactured entirely in stainless steel with titanium and is resistant to high temperatures and to corrosive sulphurous compounds which are present in the exhaust fumes.

It consists of a horizontal cylindrical body (diameter varies according to engine size) which makes up the water tank, two fixing brackets and a cylindrical tower located in the upper part of the water tank equipped with a separator.

The fumes are conveyed through an entry tube to the interior part of the purifier and are passed through the water in fine bubbles. The carbonaceous particles become heavier upon contact with the water and fall to the bottom of the water tank. The fumes are then directed towards the separator which recovers the carbonaceous particles which have not fused with the water. The white smoke emitted from the exhaust is simply water vapour.

MAINTENANCE

Maintenance of the water driven purifier is **EXTREMELY IMPORTANT** and the water must absolutely be **changed** every **8 working hours**. The tank must be emptied through the spherical drain valve and clean water added through the loading and level cock.

You can see how effective the purifier is from the black sludge which comes out when changing the water. The purifier should be **cleaned** every **300 working hours**: drain off the water and clean the inside for a few minutes with a pressurised jet. ***DIECI*** also provides the additive TAM which, added to the water at every change, helps to keep the purifier clean. The additive TAM also improves the performance of the purifier by neutralising sulphuric and sulphurous acids.

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GETTING TO KNOW AND USING THE MACHINE

INTEGRATED DEVICES

“INSTRUMENT CLUSTER”




ANY MODIFICATION TO THE MACHINE REQUIRES A NEW TEST TO CHECK CONFORMITY WITH THE "CE" MACHINE DIRECTIVE 98/37. THIS ALSO APPLIES IN CASE OF REPAIRS WITH NON-ORIGINAL SPARE PARTS.

IT IS FORBIDDEN TO START USING THE MACHINE UNTIL THE CONTENTS OF THIS MANUAL HAVE BEEN CAREFULLY READ AND LEARNT.

REGARDLESS OF HOW MUCH EXPERIENCE THE OPERATOR MAY HAVE IN THIS AREA, IT IS ESSENTIAL THAT HE OR SHE LEARNS THE EXACT LOCATION AND FUNCTION OF ALL INSTRUMENTS AND CONTROLS BEFORE USING THE MACHINE.

THE IMAGES, DESCRIPTIONS AND MEASUREMENTS IN THIS CHAPTER ALL REFER TO STANDARD MACHINES.

UPON REQUEST, YOUR MACHINE CAN BE FITTED OUT WITH OPTIONAL CONTROLS AND ACCESSORIES.

ANY FUNCTION OR PROCEDURE REGARDING THE USE AND FITTING OF MACHINE ATTACHMENTS NOT DESCRIBED IN THIS MANUAL ARE STRICTLY FORBIDDEN.

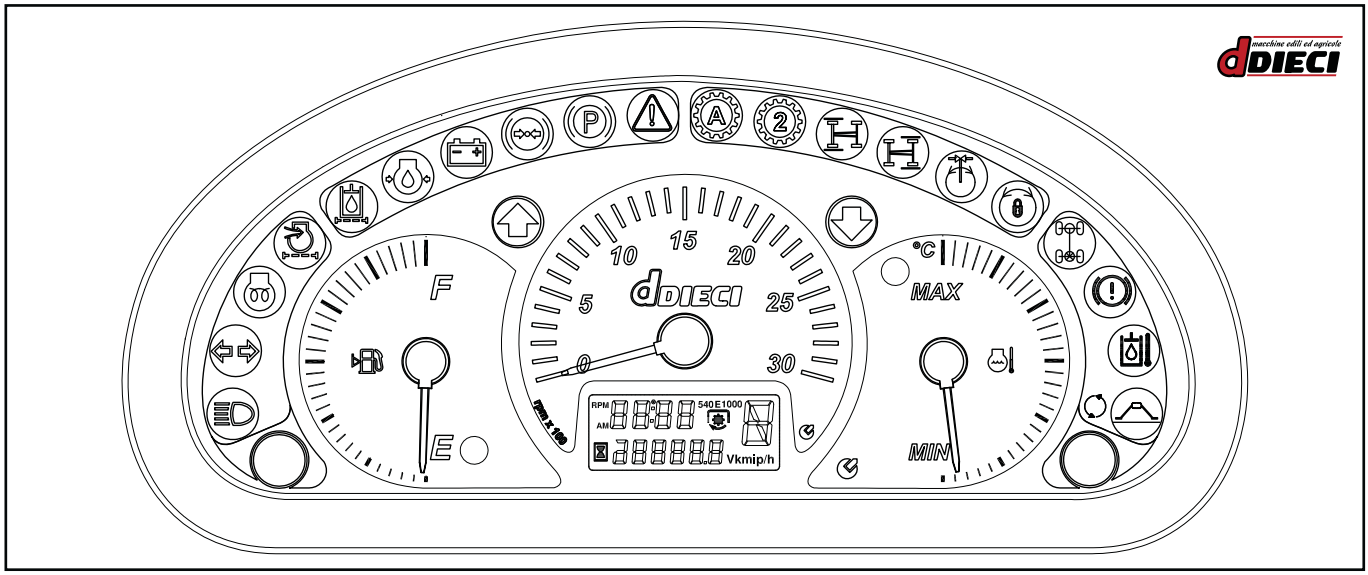
IT IS STRICTLY FORBIDDEN TO MAKE ANY USE OF THE MACHINE OTHER THAN THE USE DESCRIBED IN THIS MANUAL.

IT IS COMPULSORY TO READ AND LEARN CHAPTER "B" (SAFETY STANDARDS) BEFORE READING CHAPTER "C" AND BEFORE USING THE MACHINE.




INSTRUMENT CLUSTER

(fig.100/C)



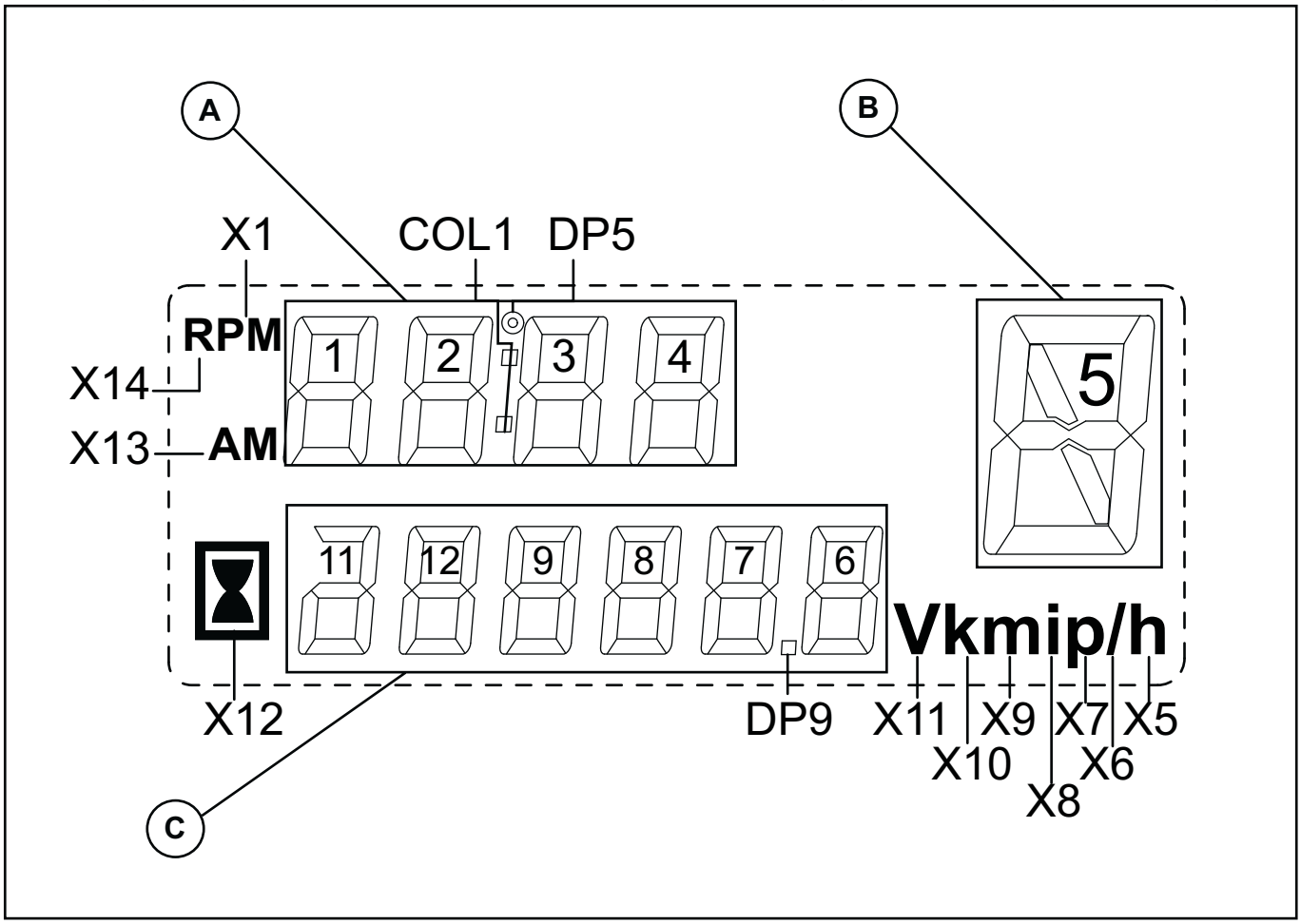
(fig.100/C)

- Main beam headlights pilot light (blue)
- Direction indicator pilot light (green)
- Glow plug preheat pilot light (yellow)
- Blocked air filter pilot light (red)
- Hydrostatic oil filter pilot light (red)
- Engine oil pressure pilot light (red)
- Generator pilot light (red)
- Insufficient pressure in the parking brake accumulator pilot light (red)
- Parking brake pilot light (red)
- General alarm pilot light (red)
- Mechanical gear engaged pilot light (green)
- Fast gear engaged pilot light (green)
- Front axle alignment pilot light (yellow)
- Rear axle alignment pilot light (yellow)
- Turret and chassis aligned exactly pilot light (green)
- Turret rotation locking pin inserted pilot light (red)
- Rear axle oscillation lock inserted pilot light (yellow)
- Not used
- Not used
- Stabilisers lowered correctly pilot light (green)
- Fuel level indicator
- Water temperature indicator
- Forward gear pilot light (green)
- Reverse gear pilot light (green)

LIQUID CRYSTAL DISPLAY

The following functions are displayed:

- Hour counter (6 figures including one decimal and an hourglass) (fig.101/C Pos.“C”).
- Clock (4 figures) (fig.101/C Pos.“A”).
- Tachymeter (3 figures including one decimal, plus km/h, m/h and mph) (fig. 101/C Pos.“C”).
- Odometer (6 figures including one decimal plus km and miles) (fig.101/C Pos.“C”).
- Neutral gear engaged (fig.101/C Pos.“B”).
- Engine errors (electronic engine only)
  (large flashing E + 3 figures above) (fig.101/C Pos. “A”, fig.101/C Pos.“B”, fig.101/C Pos.“C”)
- Service (large flashing S + number of hours to go before a service is required) (fig.101/C Pos.“A”, fig.101/C Pos.“B”)



(fig.101/C)

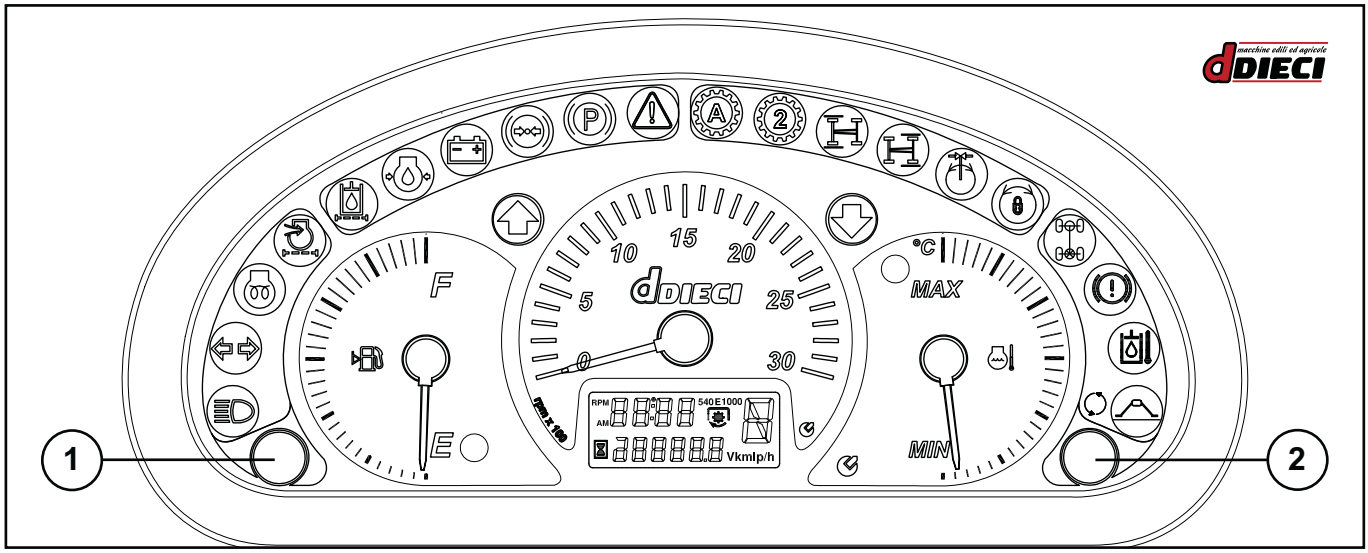
Tachymeter (optional)

The tachymeter allows you to display the speed of the machine in real time.

Odometer (optional)

The odometer allows you to view the kilometres travelled by the machine. This instrument is in conjunction with the tachymeter.

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.



(fig.102/C)

PUSH BUTTONS

There are two integrated push buttons on the panel. During normal use the two push buttons have the same function.

- Pushbutton “1” (fig.102/C) to change the information on the display.
- Pushbutton “2” (fig.102/C) to change the information on the display.

Changing the information on the display

Press button “1” (fig.102/C) or “2” (fig.102/C) to change the information displayed as follows:

1. Hour counter and Clock.
2. Speed and Clock.
3. Odometer and Clock.
4. Hour counter and Clock.

The information normally displayed is the Clock and Hour Counter, if the tachymeter is installed, the Clock and Speed will automatically be displayed.

Clock adjustment

To adjust the clock:

- Switch off the dashboard.
- Press and hold down button “2” (fig. 102/C).
- Switch on the dashboard.
- Press and hold down button “2” (fig.102/C) for 1.5 seconds during the “check up time”.
- You are now in “Adjustment” mode

When the minutes are flashing, press:

- Push button “1” (fig.102/C) to increase.
- Push button “2” (fig.102/C) to confirm.

When the hours are flashing, press:

- Push button “1” (fig.102/C) to increase.
- Push button “2” (fig.102/C) to confirm.

The adjustment phase will then finish and the instrument will start to work normally (the initial check up is excluded).

INSTRUMENT CLUSTER: INITIAL CHECK UP OF THE INSTRUMENTS

When the instrument cluster is switched on, several pilot lights, the buzzer and every display segment come on for 1.5 seconds. Tables (fig.103/C) describing every pilot light in the instrument cluster and their behaviour during the check up can be found below.

PILOT LIGHTS	INITIAL CHECK UP
	YES
	YES
	YES
	YES
	YES
	NO
	NO
	YES
	YES
	YES
	YES
	YES

PILOT LIGHTS	INITIAL CHECK UP
	YES
	YES
	YES
	YES
	YES
	NO
	NO
	YES
	YES
	YES
	YES
	YES

(fig.103/C)

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

GENERAL ALARM LED

The emergency indicator light/general alarm occur:

- in the event of engine error (electronic engine only)
- if one of the indicator lights indicated in the table below should switch on
- in the event of engine overrevving
- in the event of the anti-tipping system using By-Pass button.
  The LED switches on intermittently at the same time the buzzer rings (T=1” Duty Cycle 50%).
- in the event of low accelerator liquid level
  The LED switches on intermittently (T=5”; 3”on - 2”off). The buzzer will ring at the first alarm signal for T=1.5”.

Engine overrevving

(electronic engine only)

The overrevving condition is signalled by reaching 2600rpm on the rev. counter.
The condition is signalled by the switch-on of the general alarm light intermittently and the acoustic signal (buzzer) continuously.
The alarm will stop when the engine has dropped below 2570 rpm.

Instrument cluster pilot lights

Several pilot lights that are particularly important for the life of the machine and safe machine use are connected to the general alarm pilot light (fig.104/C) with an acoustic signal that lasts 1.5 seconds.

	Pilot light 1	Pilot light 2	Acoustic signal (buzzer)
Connection 1			**YES (1.5 seconds)**
Connection 2			**YES (1.5 seconds)**
Connection 3			**YES (1.5 seconds)**
Connection 4			**YES (1.5 seconds)**
Connection 5			**YES (1.5 seconds)**
Connection 6 (electronic engine only)			**YES (1.5 seconds)**

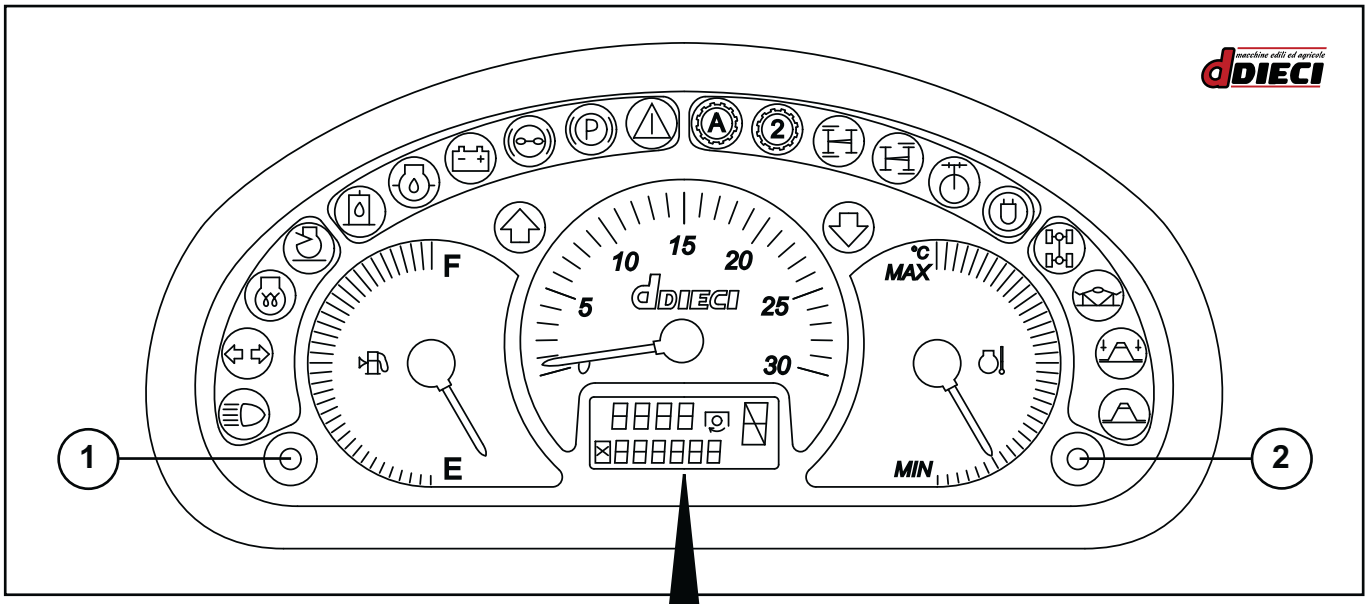
(fig.104/C)

Engine over-revs

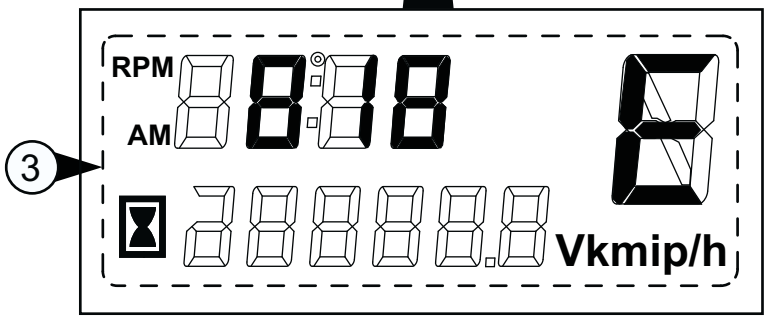
The over-rev condition is signalled when the engine speed indicator reaches 2600 rpm.
The condition is signalled by the general alarm pilot lamp flashing and a continuous acoustic alarm (buzzer).
The alarm stops when the engine falls below 2570 rpm.

Engine errors
(electronic engine only)

Engine errors are signalled by the general alarm pilot light accompanied by an acoustic alarm (buzzer) that lasts for 1.5 seconds and an error code is displayed on the LCD (fig.105/C Pos.“3”). The error is displayed until the operator presses button “1” (fig.105/C) or “2” (fig.105/C) for 3 seconds. The “general alarm” pilot light will stay on until the error has been removed. By pressing button “1” (fig.105/C) or “2” (fig.105/C) for 3 seconds, the error is no longer displayed but it is stored in the memory. One second will lapse before a second error is displayed, the error will be signalled by the buzzer for 1.5 seconds and the new error will be displayed. The same procedure will apply to every subsequent error.



(fig.105/C)



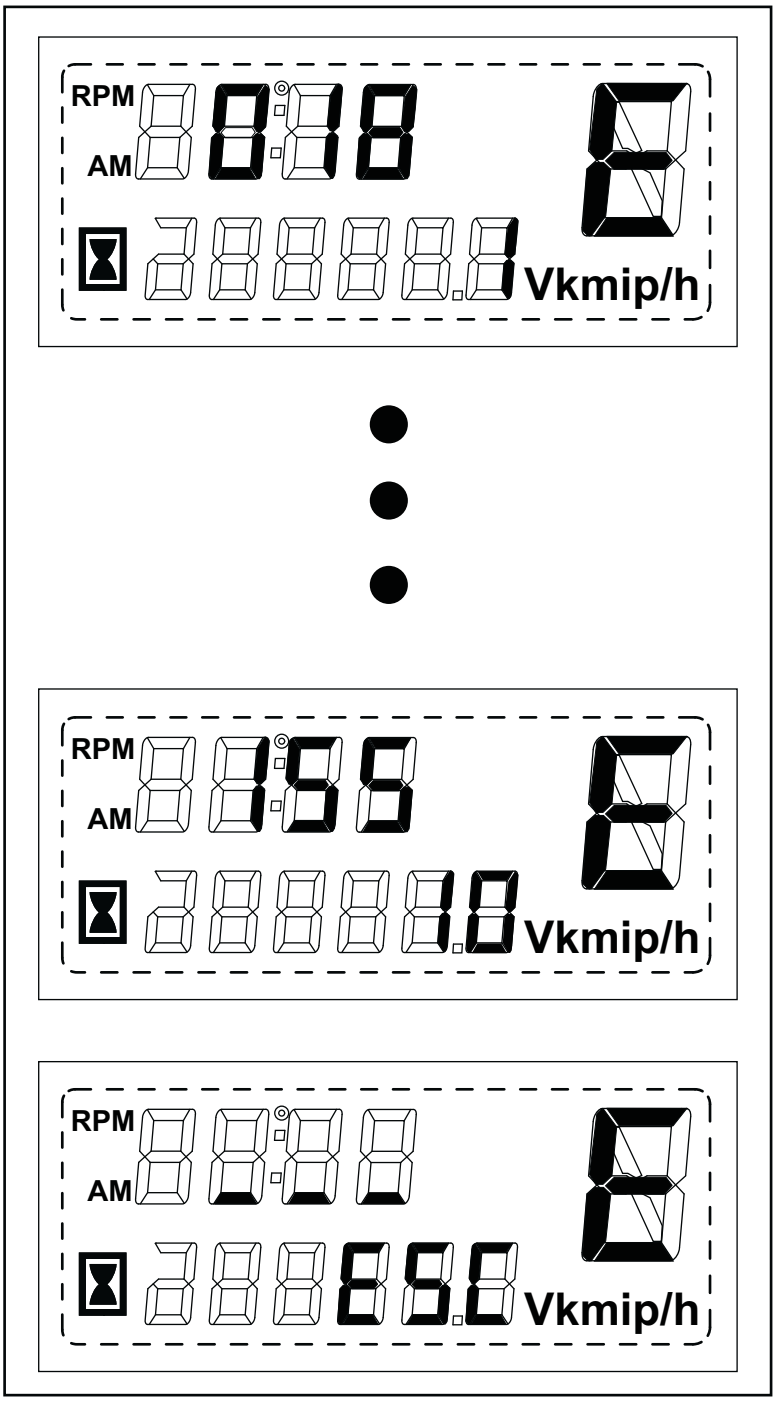
Error menu
(electronic engine only)

To enter the error menu, press and hold down buttons “1” (fig.105/C) and “2” (fig.105/C) at the same time for 3 seconds. Press the right button 2 quickly (for less than 3 seconds) to go on to the next error. When you reach the last error “ESC” will be displayed. To exit, press and hold down the left button “1” for 3 seconds.
Press button “2” (fig.105/C) again to start from the first error again. The panel stores up to ten errors.
If one of the errors is present when the machine is switched on, the panel will switch on the “general alarm pilot light”, sound the buzzer for 1.5 seconds and the error message will appear on the display. If the error disappears, it is still stored in the memory.

Error messages have priority over service messages.

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

Below is an example of scrolling error messages on the display.



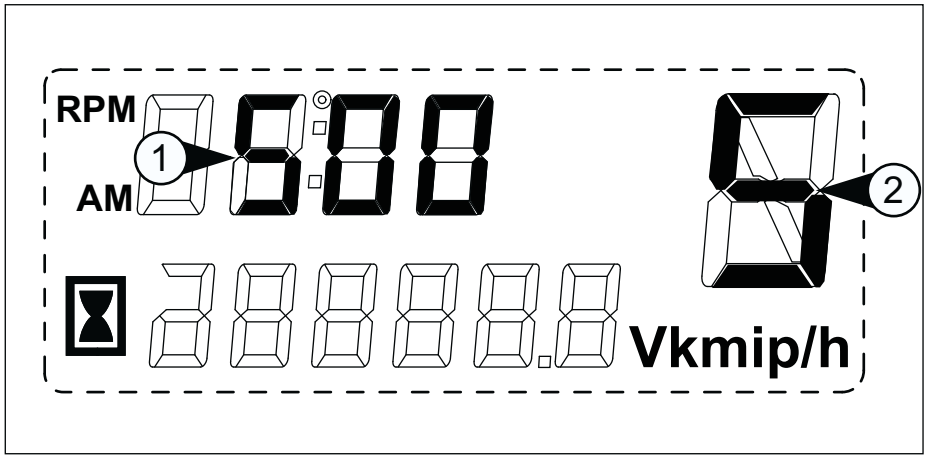
(fig.106/C)

(fig.107/C)

If there are any display errors, the last display appears with the word “ESC”.

SERVICE

When the machine needs to be serviced, the letter “S” is displayed on the LCD (fig.108/C Pos.“2”) with the corresponding service hours (fig.108/C Pos.“1”).
This will only be displayed for 10 seconds when the dashboard is switched on. The letter “S” will flash.



(fig.108/C)

The hour count is managed by the panel.

Every 250 hours, the flashing letter “S” and the service interval reached must be displayed every time the dashboard is switched on (e.g. 250, 500, 1000 ….) as shown in the table.

The service message is disabled automatically 20 hours after the servicing coupon is displayed

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

ERROR LIST
(electronic engine only)

Display CODE	Type	Component	Description
001	Diagnostic	Throttle Position Sensor	data erratic intermittent or incorrect
002	Diagnostic	Throttle Position Sensor	Voltage above normal or shorted high
	Diagnostic	Secondary throttle position sensor	Voltage above normal or shorted high
004	Diagnostic	Throttle Position Sensor	Voltage below normal or shorted low
	Diagnostic	Secondary throttle position sensor	Voltage below normal or shorted low
006	Diagnostic	Throttle Position Sensor	abnormal frequency, pulse width, or period
	Diagnostic	Secondary throttle position sensor	abnormal frequency, pulse width, or period
008	Diagnostic	Throttle Position Sensor	Bad Device or component
	Diagnostic	Secondary throttle position sensor	Bad Device or component
010	Diagnostic	Engine Oil pressure Sensor	Voltage above normal or shorted high
011	Diagnostic	Engine Oil pressure Sensor	Voltage below normal or shorted low
012	Diagnostic	Engine Oil pressure Sensor	Engine oil pressure sensor 5V supply connection open circuit
013	Event	Engine Oil pressure Sensor	Low oil pressure - WARNING
014	Event	Engine Oil pressure Sensor	Low oil Pressure - DERATE
015	Event	Engine Oil pressure Sensor	Low Oil Pressure - SHUTDOWN
016	Event	Inlet Manifold Air Temp Sensor	High Intake manifold temperature - WARNING
017	Event	Inlet Manifold Air Temp Sensor	High Intake manifold temperature - DERATE
018	Diagnostic	Inlet Manifold Air Temp Sensor	Voltage above normal or shorted high
019	Diagnostic	Inlet Manifold Air Temp Sensor	Voltage below normal or shorted low
020	Diagnostic	Inlet Manifold Pressure Sensor	Voltage above normal or shorted high
021	Diagnostic	Inlet Manifold Pressure Sensor	Voltage below normal or shorted low
022	Diagnostic	Inlet Manifold Pressure Sensor	Inlet Manifold Pressure Sensor 5V supply connection open circuit
023	Event	Engine Coolant Temp Sensor	High coolant temp - WARNING
024	Event	Engine Coolant Temp Sensor	High coolant temp - DERATE
025	Diagnostic	Engine Coolant Temp Sensor	voltage above normal or shorted high
026	Event	Engine Coolant Temp Sensor	High coolant temp SHUTDOWN
027	Diagnostic	Engine Coolant Temp Sensor	Voltage below normal or shorted low
028	Diagnostic	Fuel Rail pressure sensor	Voltage above normal or shorted high
029	Diagnostic	Fuel Rail pressure sensor	Voltage below normal or shorted low
030	Diagnostic	Keyswitch	data erratic, intermittent, or incorrect
031	Diagnostic	ECM battery power	Excessive battery power
032	Diagnostic	ECM battery power	Low battery power
033	Diagnostic	ECM battery power	intermittent
034	Diagnostic	Speed/Timing sensor	abnormal signal frequency
035	Event	Engine Speed	Engine Overspeed - WARNING
036	Diagnostic	Throttle Position Sensor	Idle validation switch
	Diagnostic	Secondary throttle position sensor	data erratic, intermittent, or incorrect
038	Diagnostic	Customer or system parameters	data incorrect

039	Diagnostic	Engine software	data incorrect
040	Diagnostic	SAE J1939 data link	Abnormal update
041	Diagnostic	Turbo Wastegate	Solenoid Current Low
042	Diagnostic	Turbo Wastegate	Solenoid Current High
043	Diagnostic	Turbo Wastegate	Turbo Wastegate not responding
044	Diagnostic	Cylinder #1 Injector	Injector Data Incorrect
045	Diagnostic	Cylinder #1 Injector	Injector Current Low
046	Diagnostic	Cylinder #1 Injector	Injector Current High
047	Diagnostic	Cylinder #1 Injector	Injector not reponding
048	Diagnostic	Cylinder #2 Injector	Injector Data Incorrect
049	Diagnostic	Cylinder #2 Injector	Injector Current Low
050	Diagnostic	Cylinder #2 Injector	Injector Current High
051	Diagnostic	Cylinder #2 Injector	Injector not reponding
052	Diagnostic	Cylinder #3 Injector	Injector Data Incorrect
053	Diagnostic	Cylinder #3 Injector	Injector Current Low
054	Diagnostic	Cylinder #3 Injector	Injector Current High
055	Diagnostic	Cylinder #3 Injector	Injector not reponding
056	Diagnostic	Cylinder #4 Injector	Injector Data Incorrect
057	Diagnostic	Cylinder #4 Injector	Injector Current Low
058	Diagnostic	Cylinder #4 Injector	Injector Current High
059	Diagnostic	Cylinder #4 Injector	Injector not reponding
060	Diagnostic	Cylinder #5 Injector	Injector Data Incorrect
061	Diagnostic	Cylinder #5 Injector	Injector Current Low
062	Diagnostic	Cylinder #5 Injector	Injector Current High
063	Diagnostic	Cylinder #5 Injector	Injector not reponding
064	Diagnostic	Cylinder #6 Injector	Injector Data Incorrect
065	Diagnostic	Cylinder #6 Injector	Injector Current Low
066	Diagnostic	Cylinder #6 Injector	Injector Current High
067	Diagnostic	Cylinder #6 Injector	Injector not reponding
068	Diagnostic	8V DC supply	ECM 8V DC supply – voltage above normal or shorted high
069	Diagnostic	8V DC supply	ECM 8V DC supply – voltage below normal or shorted low
070	Diagnostic	Primary Engine Speed Sensor	abnormal signal frequency
071	Diagnostic	Secondary Engine Speed Sensor	abnormal signal frequency
072	Diagnostic	5V sensor DC supply	voltage above normal or shorted high
073	Diagnostic	5V sensor DC supply	voltage below normal or shorted low
074	Diagnostic	Primary to secondary speed sig	calibration fault
075	Diagnostic	Primary to secondary speed sig	Calibration required
076	Diagnostic	Fuel Rail Pump	Output current low
077	Diagnostic	Fuel Rail Pump	Output current high
078	Diagnostic	Fuel Rail Pump	Not responding
079	Diagnostic	Glow Plug Start Aid relay	Current Low
080	Diagnostic	Glow Plug Start Aid relay	Current High

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

081	Event	Exhaust	High Temperature
082	Event	Fuel Rail pressure sensor	Low Fuel Rail Pressure
083	Event	Fuel Rail pressure sensor	High Fuel Rail Pressure
084	Event	Intake Manifold pressure sensor	Low Intake Manifold Pressure
085	Event	Intake Manifold pressure sensor	High Intake Manifold Pressure
086	Diagnostic	Intake Manifold pressure sensor	Pressure Abnormal Rate of Change
087	Diagnostic	Key Switch	Erratic

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“3B6 – LOAD LIMITING DEVICE”

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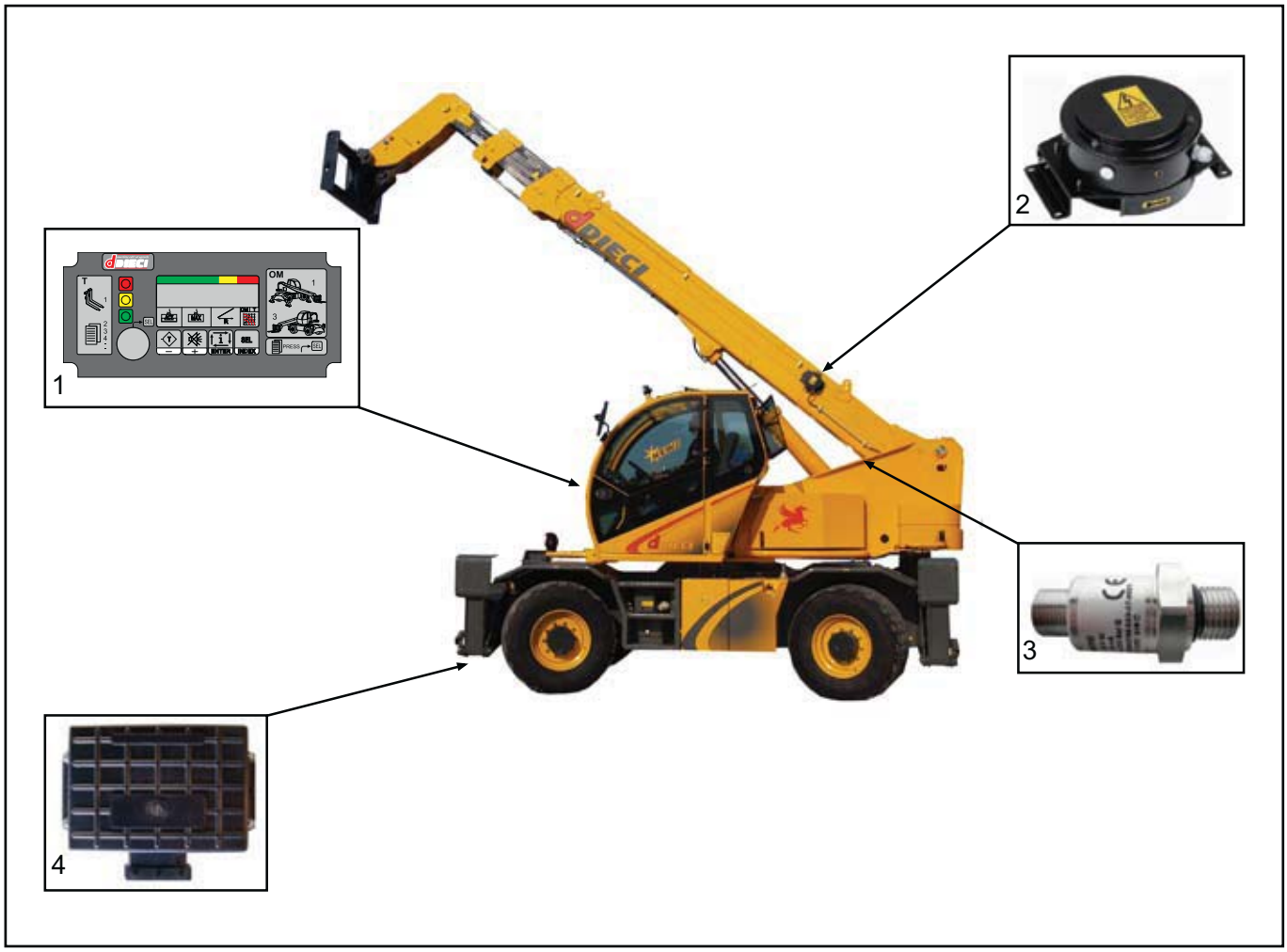
- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

GENERAL INFORMATION

The MidMac-ST02 system is a load limiting device for telehandlers in the Pegasus series. Its main specifications are:

- Limiting device manager pursuant to standards ISO13000 and EN280
- Black Box and alarm management with 500 storable events

LAYOUT

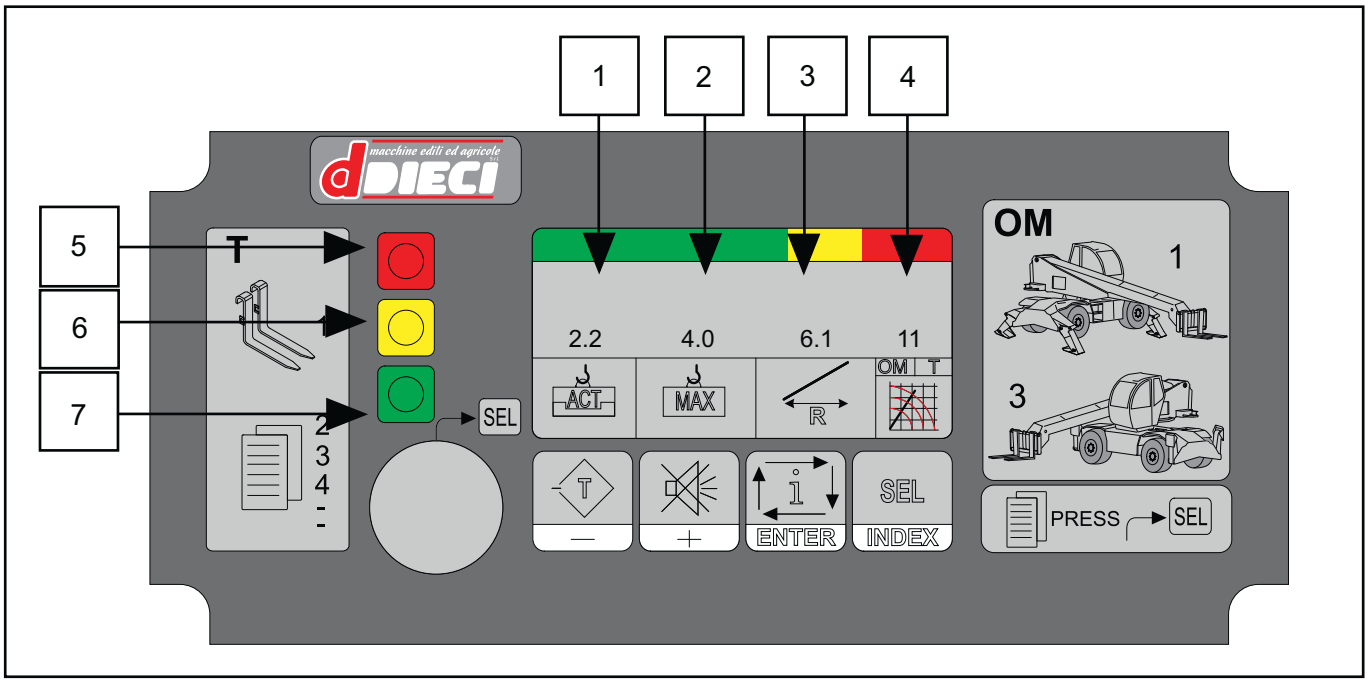


Ref.	Description	N°
1	Control Panel	1
2	Angle power winder/Extension with dual transducers	1
3	Pressure transducers	4
4	Limiting device unit	1

DISPLAY

Operator panel

Load condition % and alarms



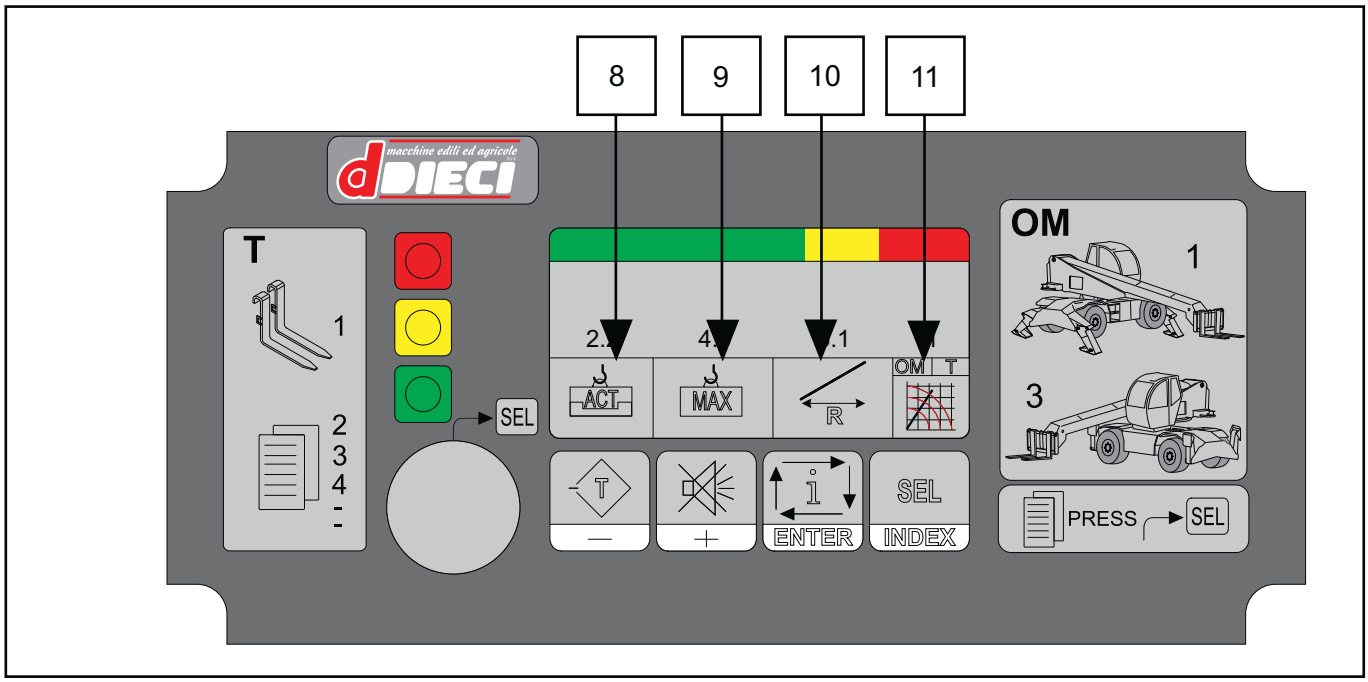
1. The LCD bar on the alphanumeric display indicates the percentage of the load that is being lifted compared to the maximum load allowed in the working conditions.
2. GREEN reference: Safety zone.
3. YELLOW reference: Warning zone (load lifted more than 90% of admitted load)
4. RED reference: Block zone (load lifted more than 100% of admitted load)
5. Green pilot light on: Safety
6. Yellow pilot light on: warning (external audible warning device enabled)
7. Red pilot light on: Movements blocked (external audible warning device enabled)

The data displayed give the operator an indication of the work conditions.
The indicated weights and measurements are subject to margins of error (10% on the maximum values).

E.g. 3.6 ton > 4.0 ton > 4.4 ton

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

MAIN WORK DATA



8. **WEIGHT OF THE RAISED LOAD**
   Graphic symbol below: (ACT) Reading in “Tons” with one decimal

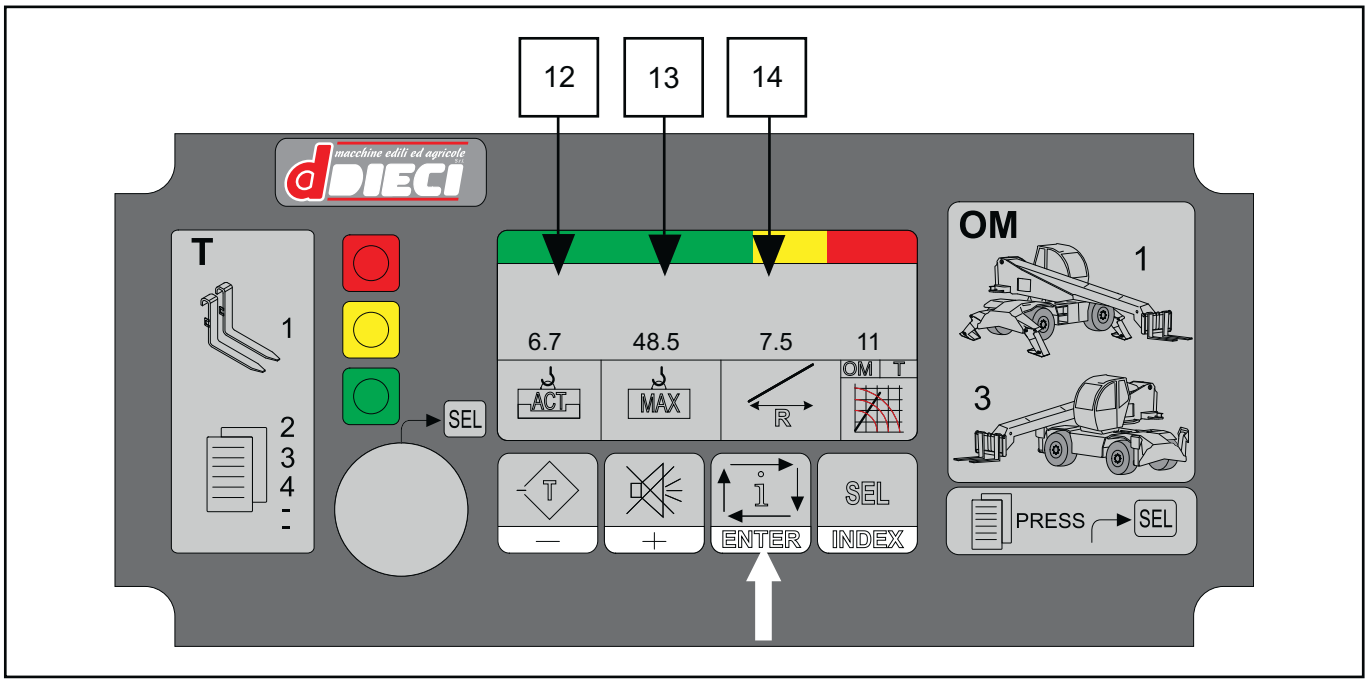
9. **MAXIMUM LOAD ALLOWED** in the present machine configuration.
   Graphic symbol below: (MAX) Reading in “Tons” with one decimal

10. **WORK RADIUS** (measurement of the distance from the centre of the swing gear to the projection of the load application point).
    Graphic symbol below: (R) Reading in “Metres” with one decimal

11. **WORK CONFIGURATION**

NOTE:
If the British Imperial system is selected, the loads are indicated in “Pounds/1000” and the geometric data is expressed in “feet”.

COMPLEMENTARY WORK DATA READINGS



Press “ENTER” once for a few seconds to display the values regarding complementary readings.
After this the display returns to the main ACT, MAX, and R readings.

12. BOOM LENGTH

Reading in “metres” with one decimal

13. BOOM ANGLE

Reading in “degrees”.

14. HEIGHT ABOVE GROUND

Reading in “metres” with one decimal

NOTE:
If the British Imperial system is selected, the loads are indicated in “Pounds/1000” and the geometric data is expressed in “feet”.

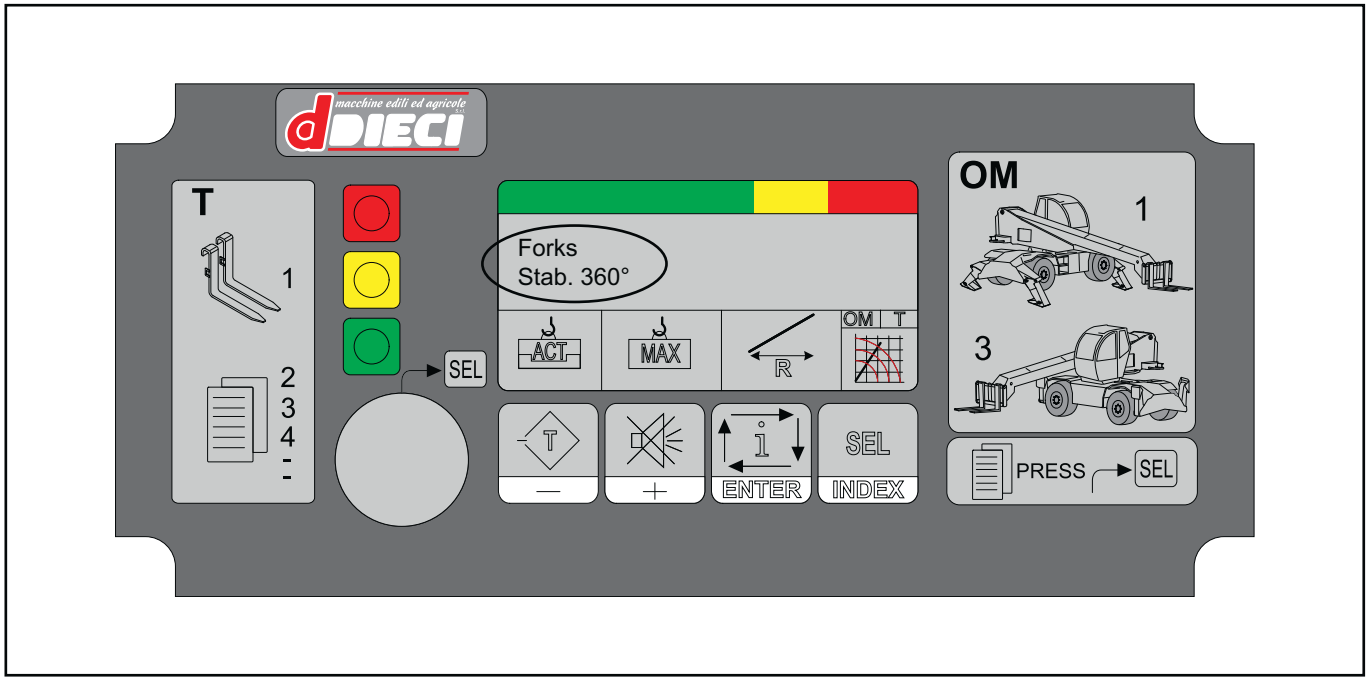
- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

ATTACHMENT AND OPERATING MODE DISPLAY

The operating mode setting (OM) is automatic because selected by external microswitches. On the normally displayed main page, the Selected Attachment Table (T) and the Operating Mode (OM) of the machine are displayed in the highlighted area in the form of numbers.

In the example in the figure, the indicating working condition is:

OM = 1
Stabilisers 360°
T = 1
Forks



With reference to the symbols on the panel, the possible selections are as follows:

Main (Automatic) **OM**:

1 = Stabilisers 360°
2 = Front Stabilisers
3 = Tyres 360°
4 = Front Tyres

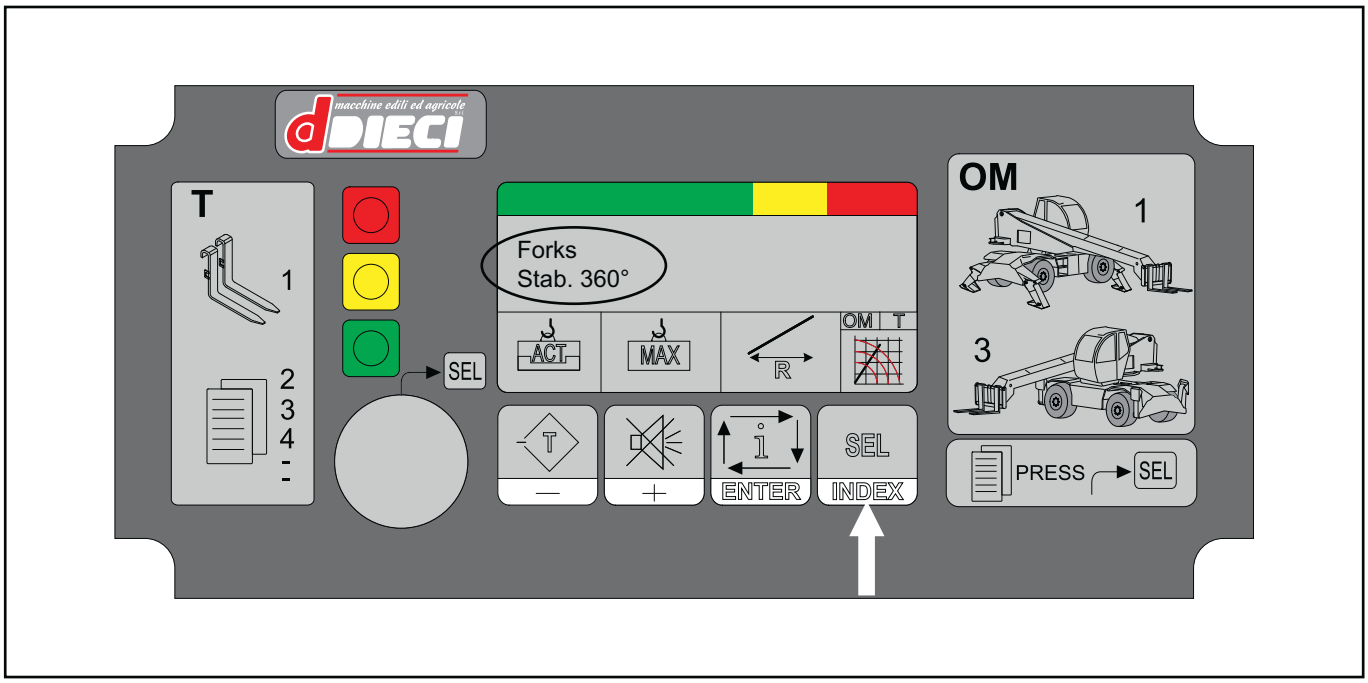
T (Manual) that can be selected on the panel:

1 = Forks	0 = Basket 800 Kg.	I = ...
2 = Jib 2500	A = Centring handler	L = ...
3 = Basket 300 Kg.	B = Basket 1000 Kg.	M= Bas_centring hand.
4 = Jib 4500	C = Jib 1300	N= Cest2002P
5 = Winch 3.8 T	D = ...	X= .....
6 = Winch 2.5 T	E = ...	
7 = Basket500_AFDM	F = ...	
8 = Jib 1000	G = Hook	
9 = POS-NEG boom	H = ...	

NOTE: Not every machine can assemble the complete range of attachments.

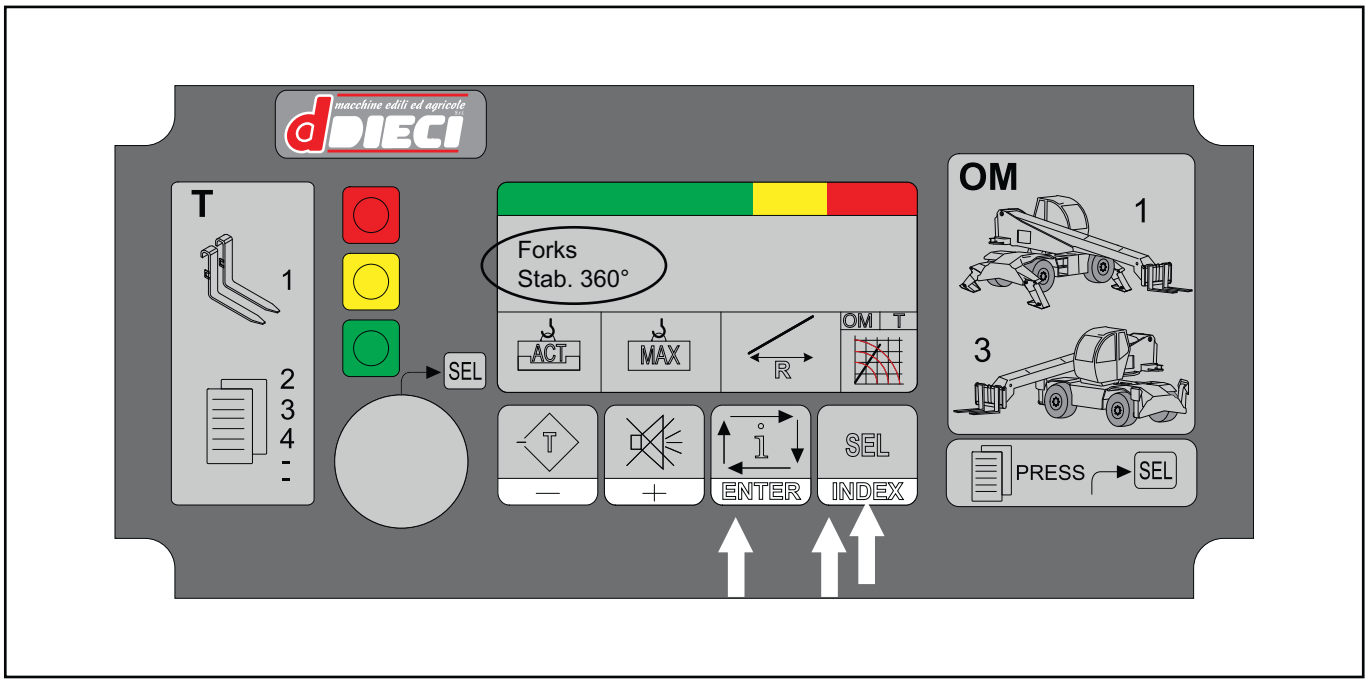
UNENCODED DISPLAY OF ATTACHMENTS AND OPERATING MODES

To better understand work conditions, or the operating mode (**OM**) and the attachment (Tool) (t), they can be displayed in text form: press INDEX. The display shows the unencoded text of the Operating Mode and the selected Attachment Table.
This display is maintained for 3 seconds. After this the panel returns to the main working display.



ATTACHMENT AND OPERATING MODE SELECTION

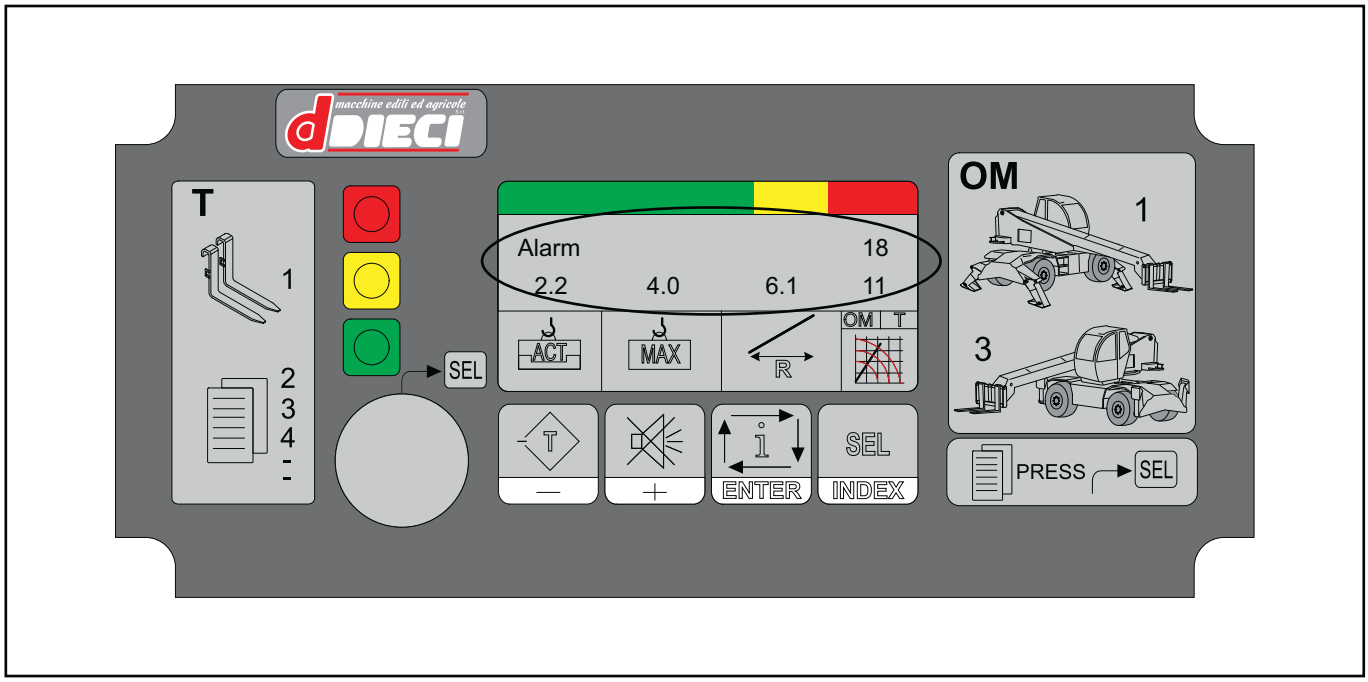
Starting from the basic display, keep the key turned and press INDEX to go to the page with the current Operating Mode (OM) text and the Table (T) regarding the attachment in use.
While in this condition, press INDEX repeatedly to select the appropriate Table: every time the button is pressed one of the available attachments is selected. During this phase the system is automatically blocked.
After selecting the correct Table, press ENTER to confirm your selection and make the control operative. Then release the key.



- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

SELF-DIAGNOSTICS AND ALARM MESSAGES

The limiting device is provided with a self-diagnosis system that detects transducer malfunctions, cable breakages and internal electronic malfunctions.
When a fault is detected, the limiting device goes into safety mode blocking any dangerous manoeuvres and at the same time the display panel shows the LCD bar at the bottom of the scale.



To display the alarm code signalled by the system, press “ENTER” three times until the following is displayed:
PØ3 ALARMS

It is possible to identify the malfunction from the alarm code.
The codes regarding any identified malfunctions are indicated in the “Alarm Code” appendix along with their cause and suggestions for restoring correct working conditions.

DIAGNOSTICS DISPLAYS

The diagnostics functions are always accessible without the need for a password.
From the main screen, press ENTER to enter diagnostics mode.
Then scroll forwards or backwards to select the desired page.
To ease the page search the page number and an identification text are displayed when the page changes.

P02	
P100 W 4.1 M5.0 A 45 L 8.5 R6.0	P = Lifting cylinder differential pressure W = Load read by the system (t) M = Maximum load allowed in the current position A = Boom angle L = Boom extension R = Radius from fork centre to swing gear centre
P03: Alarms	
Alarm xx Warning xx	Alarm: Present alarm code (0 = non alarm) Warning: Warning code (0 = Ok) (4 = Basket detected but corresponding table not selected)
P04: Pressures	
P100 L: xxx H: xxx P40 l: xxx h: xxx	Line above P = Lifting cylinder differential pressure L: Pressure base plate side H: Pressure rod side Line below p = Compensation cylinder differential pressure l: Pressure compensation base plate side h: Pressure compensation cylinder rod side

P05: Boom	
A 11.1 12.2 1.1 L 8.5 8.6 0.1	Main boom extension and angle readings from the winder. Line above: Angle 1, Angle 2 and difference between the 2 angles Line below: Extension 1, Extension 2 and the difference
P6: Act1A	
ACT1A A:aaaa ccc Eee L:ssss	Main boom winder: Left transducer See angle calibration
P7: Act1B	Right transducer See angle calibration
P08: AI0-3	
0 B111 2 B222 1 B333 3 xxxx	0-3 Analogue channel readings 0: Pressure transducer base plate side 1: Pressure transducer rod side 2: Pressure transducer on compensator base plate side 3: Pressure transducer on compensator rod side
P09: AI4-7	
4 B111 5 B222 6 B333 7 xxxx	4-7 Analogue channel readings

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

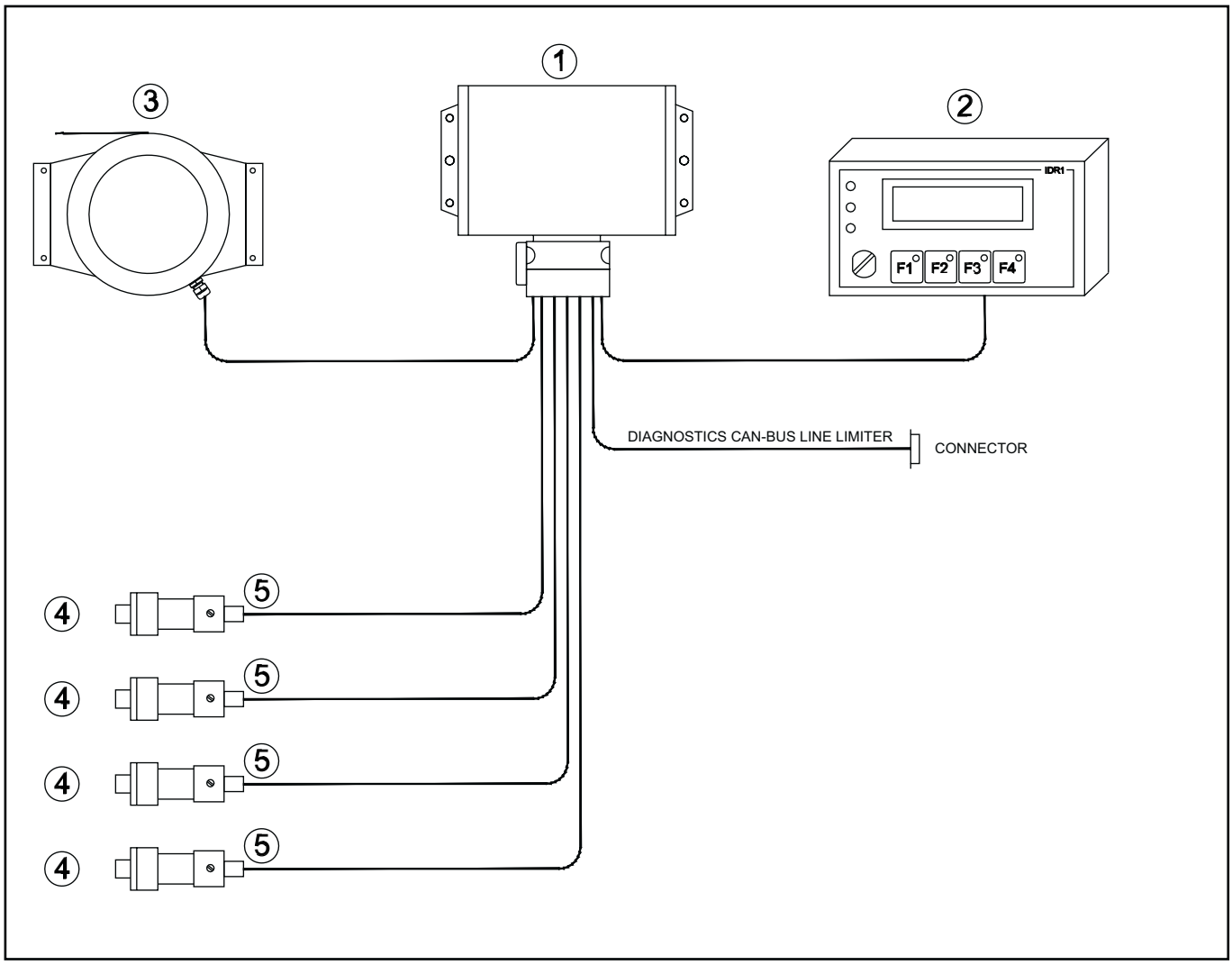
MIDAC ALARMS

Alarm code	Description
1	Non-congruent memory data
2	Angle transducer 1 reading less than the minimum value
3	Angle transducer 1 reading more than the maximum value
4	Extension transducer 1 reading less than the minimum value
5	Extension transducer 1 reading more than the maximum value
6	Extension 1 reading in metres less than the minimum value
7	Extension 1 reading in metres more than the maximum value
8	Pressure transducer reading in the main cylinder (base plate side) less than the minimum value.
9	Pressure transducer reading in the main cylinder (base plate side) more than the maximum value.
10	Pressure transducer reading in the main cylinder (rod side) less than the minimum value.
11	Pressure transducer reading in the main cylinder (rod side) more than the maximum value.
12	Angle transducer 2 reading less than the minimum value
13	Angle transducer 2 reading more than the maximum value
14	Extension transducer 2 reading less than the minimum value
15	Extension transducer 2 reading more than the maximum value
16	Extension 2 reading in metres less than the minimum value
17	Extension 1 reading in metres more than the maximum value
18	Pressure transducer reading in the compensator cylinder (base plate side) less than the minimum value.
19	Pressure transducer reading in the compensator cylinder (base plate side) more than the maximum value.

Alarm code	Description
20	Pressure transducer reading in the compensator cylinder (rod side) less than the minimum value.
21	Pressure transducer reading in the compensator cylinder (rod side) more than the maximum value.
22	Watchdog relay rereading error
23	No can bus ACT 1 reception
24	No can bus ACT 2 reception
44	System program CRC check error
45	System program CRC check error
46	System program CRC check error
90	Non-congruent extension transducer reading
91	Non-congruent angle transducer reading
92	The two signal readings from the stabilisers on the ground are not congruent
93	The two signal readings from the stabilisers on the ground are not congruent
94	The two signal readings from the stabilisers on the ground are not congruent
95	Out-block rereading error
96	Boom block rereading error
97	Minimum angle block rereading error

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

APPENDIX: WIRING DIAGRAMS



Ref.	Quantity	Title / Name
1	1	Main Unit Midac
2	1	Display indicator
3	1	Cable Reel
4	4	Pressure Transducer
5	4	Pressure Ansducer Connector

ALARMS

E2prom alarms

These alarms indicate that the system has detected that one or more data stored in the E2PROM parameter area is/are corrupt.

Possible causes:

• The system has not been programmed yet

• Ignition with flat battery

• A new accessory has been enabled but not yet programmed.

What to do:

• If the alarm was triggered after opening a new accessory, just calibrate the weight and save.

• Try to switch the system off and then switch it on again. This alarm is sometimes triggered after ignition with a flat battery.

• As a last resort, if there are no malfunctions, recalibrate the machine or load the original calibration file.

PRESSURE TRANSDUCER ALARM

The pressure transducers employed provide a variable current output in working conditions.
The system checks that the signal detected is within the working range.

Two alarms are normally generated:

• When the value is below the minimum value

• When the value is above the maximum value

In the case of the lifting cylinder, only the minimum value alarm is present because when lifting a large load, the pressure can reach the transducer limit.
The system is protected anyway because the limiting device overload is triggered.

Possible causes may include:

• The connection cable has broken

• The connection cable has short-circuited

• The pressure transducer has broken

• Board malfunction

What to do:

- If the alarm appears when the boom is moved, check the cable. A section subject to movement will almost certainly stop or short circuit.
- Try to unscrew the connector and ensure the contacts have not oxidised. Water can get into the connector if it has not been fastened correctly.
- Measure the power supply on the connector and check the continuity of the connections. Check the screen braiding, sometimes a small fray can short circuit a signal.
- Replace the transducer if necessary.
- Much less frequently, there may be a board fault. In any case, before replacing the board, check the input channel is functioning properly by inverting the transducers.

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

ANGLE AND EXTENSION TRANSDUCER ALARM

The typically potentiometric extension or angle transducers provide a useful signal in their function range between 0.25 and 4.75 V.

The program converts the incoming voltage and makes the size measured typically in:

• Centimetres for distances

• Tenths of degree for angles

• Kg * 10 for weights

There are four alarm levels:

1. Reading of the unconverted signal less than 0.15 v
2. Reading of the unconverted signal more than 4.75 v
3. Value of the converted signal less than the minimum
4. Value of the converted signal more than the maximum

In particular, alarms 1 and 2 highlight any calibration errors first.
Supposing a machine has a 5-m minimum extension and 15-m maximum extension; alarm 3 is triggered if the measured extension is less than 4.7 m, whereas alarm 4 is triggered if the extension is more than 15.3 m. The tolerances for these alarms are 0.3 m for extensions and 4 degrees for angles.
There is a delay of about 1 second before each alarm is triggered.

Alarm Level 1	No positive signal connection Cursor not connected Screen with cursor short circuit Transducer fault
Alarm Level 2	No transducer earth connection Transducer fault
Alarm Level 3	Calibration not carried out Transducer mechanically shifted, therefore out of calibration Transducer fault
Alarm Level 4	Calibration not carried out Transducer mechanically shifted, therefore out of calibration Transducer fault

LIMITING DEVICE TRANSDUCER CONGRUENCE ALARM

For reasons of safety, extensions and angles are read by two different transducers and the values are then compared.

An alarm is triggered if the difference between the values of the two transducers is more than:

• 0.3 metres in case of extension

• 4 degrees in case of angles

The alarm is triggered when the two signals are different for at least 1 second.

Causes:

• Transducer or connection malfunction,

• Transducers not aligned

What to do:

• If there are any malfunctions, carry out the same controls as for the transducers.

• If necessary, calibrate the transducers.

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MAINTENANCE AND ADJUSTMENT

D




ANY MODIFICATION TO THE MACHINE REQUIRES A NEW TEST TO CHECK CONFORMITY WITH THE "CE" MACHINE DIRECTIVE 98/37.
THIS ALSO APPLIES IN CASE OF REPAIRS WITH NON-ORIGINAL SPARE PARTS.

ANY PROCEDURES OR MAINTENANCE OPERATIONS NOT DESCRIBED IN THIS MANUAL ARE STRICTLY FORBIDDEN AND MUST BE CARRIED OUT AT AN AUTHORISED REPAIR CENTRE AND BY QUALIFIED PERSONNEL.

THE OPERATOR CAN CARRY OUT ONLY THE FOLLOWING CHECKS: FLUID LEVELS, AIR FILTER CLEANING, AND TYRE PRESSURE. THESE OPERATIONS MUST BE CARRIED OUT IN COMPLIANCE WITH THE SAFETY REGULATIONS CONTAINED IN THIS MANUAL.

THE CHEQUERED PLATES AND THE CAB FLOOR ARE THE ONLY PARTS OF THE MACHINE THAT CAN BE WALKED ON. USE A LADDER (WITH SUITABLE SPECIFICATIONS) TO CARRY OUT MAINTENANCE WORK ON PARTS THAT CANNOT BE REACHED FROM THE GROUND.

IT IS COMPULSORY TO READ AND LEARN CHAPTERS "B" AND "C" (SAFETY STANDARDS/GETTING TO KNOW AND USING THE MACHINE) BEFORE READING CHAPTER "D".

IT IS FORBIDDEN TO CARRY OUT ANY MAINTENANCE ON THE MACHINE UNLESS THE CONTENTS OF THIS CHAPTER HAVE BEEN CAREFULLY READ AND LEARNT.




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⚠ - CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

MAINTENANCE REGULATIONS

INTRODUCTION

This machine is designed and manufactured to provide the very best in terms of performance, economy and ease of use in a number of operating conditions. Before delivery, the machine undergoes tests and inspections at the Manufacturer's and Dealer's so that it is supplied in optimum condition. To preserve these conditions and prevent malfunctions, it is important to carry out the routine maintenance as specified in this Manual at a ***DIECI*** dealer and at the fixed terms.

Maintenance

This section of the manual provides every detail about the maintenance regulations necessary to ensure your ***DIECI*** machine is kept perfectly efficient.

This chapter also gives information about performing the various adjustments necessary to keep the machine tuned. The machine must receive regular routine maintenance in order to give the best results. The machine must be serviced as prescribed by the service schedule recommended by ***DIECI***. Remember that it is the owner's responsibility to keep the machine in safe working condition and suitable to be driven on public and private roads.

To preserve the performance of the machine, its first service must be carried out by a ***DIECI*** dealer within one month of the date of purchase or after the first 250 hours of operation. It is advisable to book your service in advance.

From the Maintenance Programme in the next pages it is clear that most of the main maintenance work must be carried out exclusively by trained and qualified ***DIECI*** personnel. In fact, only ***DIECI*** dealer maintenance technicians have been trained to specifically work on ***DIECI*** machines. They are also the only technicians provided with the specific tools and test equipment necessary to guarantee maximum safety, precision and efficiency.

At the end of this Manual, there is a maintenance record sheet where maintenance work can be scheduled and recorded in chronological order. After any maintenance work, the Dealer must record the date the work was carried out on the sheet, along with his or her signature and stamp.

It is worth pointing out that proper machine maintenance not only improves reliability, but also safeguards the value of your machine.

Owner/operator assistance service

DIECI and ***DIECI*** dealers wish to achieve complete customer satisfaction. Therefore, in case of problems, please contact your Dealer's service centre.

When the final details regarding your machine are defined, the dealer will provide the names of the people in charge of the post-sales service.

To ensure you receive good customer service from your dealer, please:

1 - Specify your name, address and telephone number.

2 - Specify the model and machine chassis number.

3 - Specify the purchase date and hours of operation.

4 - Provide a description of the problem.

Only ***DIECI*** dealers have access to ***DIECI*** customer service resources. Moreover, ***DIECI*** dealers are able to offer a variety of programmes in terms of the guarantee, fixed price maintenance, safety check ups, including weight tests, in compliance with legal and insurance regulations.

Preliminary service inspection

Once your new ***DIECI*** machine has completed 50 hours' work, carefully follow the instructions in the **GUARANTEE** chapter.

Routine maintenance

A badly maintained machine is a danger to the operator and anyone else nearby. Ensure the machine is maintained and lubricated at the intervals specified in the service procedure to keep the machine in efficient and safe working conditions.

Apart from daily maintenance, the service operations are based on machine working hours.
Check the hour counter to establish the service intervals.
Do not use the machine if it needs to be checked or maintained.
Ensure that any faults found during maintenance are corrected immediately.

Maintenance should be carried out at the intervals indicated in the table "page D5" using high quality lubricants.

Maintenance is best carried out indoors and at the end of the working day so that all oils are hot and can be easily drained off.

Before starting any maintenance work whatsoever, switch off the engine; remove the key from the ignition, position wedges under the wheels and appropriate locks on the hydraulic cylinders.

Before using a greasing gun, clean its fittings.

Before removing the drain and fuel caps, clean the surrounding areas.

Always use a clean container to collect used oil and diesel fuel.

- CAUTION -

IF THE MACHINE IS USED IN CRITICAL ENVIRONMENTS (WHERE THERE IS DUST, MUD OR SAND) THE MAINTENANCE PERIOD MUST BE REDUCED BY 50%.

Safety regulations during maintenance

When changing the oil, it is important to comply with certain basic rules for personal hygiene. Wear protective clothing, overalls, PVC gloves, etc. Once the oil has been changed, wash away any dirty oil you may have come into contact with using soap and water. Any clothing soiled by the oil must be removed and cleaned.
Prolonged contact with oil can have a toxic effect on your health.

Therefore, it is important to comply with the instructions provided above.

- Keep hands, tools and clothing well away from moving parts.
- Do not touch the pipe and exhaust manifold; they could be hot and cause burns.
- Do not allow inexperienced people to approach the machine.
- Do not work underneath the machine with a jack as your only means of support.
- Also use stands to support the machine as a safety measure.

Environment protection

It is illegal to pollute sewers, waterways or the soil. Use only authorised collection centres, including the areas designated by the local authorities or workshops equipped with the necessary tools for the disposal of used oils. If in doubt, contact your local authority for relevant instructions.

- CAUTION -

IT IS COMPULSORY TO READ AND LEARN CHAPTERS "*B*" AND "*C*" (SAFETY STANDARDS, GETTING TO KNOW AND USING THE MACHINE) BEFORE READING CHAPTER "D" AND BEFORE CARRYING OUT ANY MAINTENANCE ON THE MACHINE.

RUNNING THE MACHINE IN

The operations described below must be carried out once after the new machine has been put into service and after the indicated period has elapsed. After this, comply with the intervals specified in the general maintenance schedule.

After 10 hours of work:

- Check for leaks and eliminate.
- Check and tighten all hydraulic connections, nuts and bolts.

After 50 hours of work:

- Check for leaks and eliminate.
- Check and tighten all hydraulic connections, nuts and bolts.
- Replace the hydrostatic transmission filter.

After 250 hours of work:

- Replace the engine oil.
- Replace the engine oil cartridge.
- Replace the diesel cartridge.
- Replace the oil cartridge on the hydraulic system.

After 500 hours of work:

- Change the oil in the hydraulic system.

Tightening swing gear bolts

Ensure the bolts on the swing gear are tightened properly between:

- Swing gear and upper chassis
- Swing gear and lower chassis

Use a dynamometer calibrated at 20 kgm to check the bolts are tightened after the first 100 working hours and then every 500 hours.

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

VIBRATION EMISSION STATEMENT

- The stated vibration emission value complies with standard EN 12096

Pegasus

1) Vibration values on the seat

Vibration emission value measured at = 1.5 m/s2
Uncertainty factor K = 0.4 m/s2

Values determined in compliance with standard EN 13059

2) Vibration values on the steering wheel

Vibration emission value measured at = 4.5 m/s2
Uncertainty factor K = 2.2 m/s2

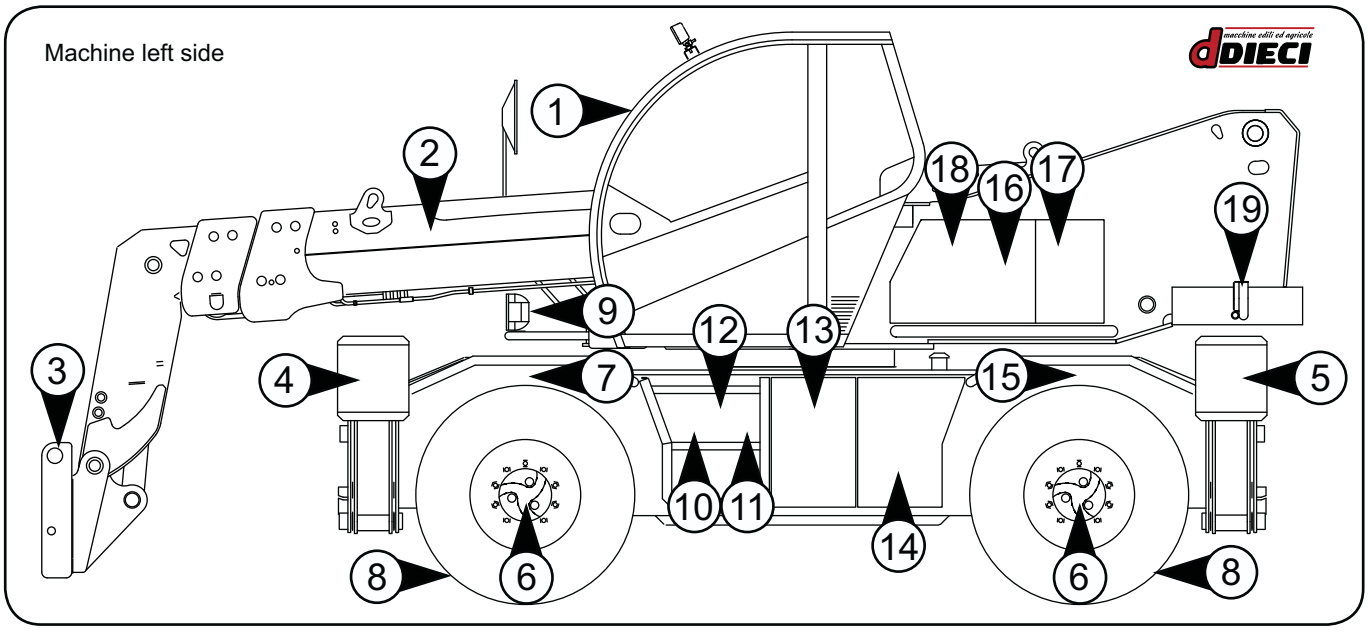
Values determined in compliance with standard EN 13059

MANUFACTURER'S FIRST TEST STATEMENT

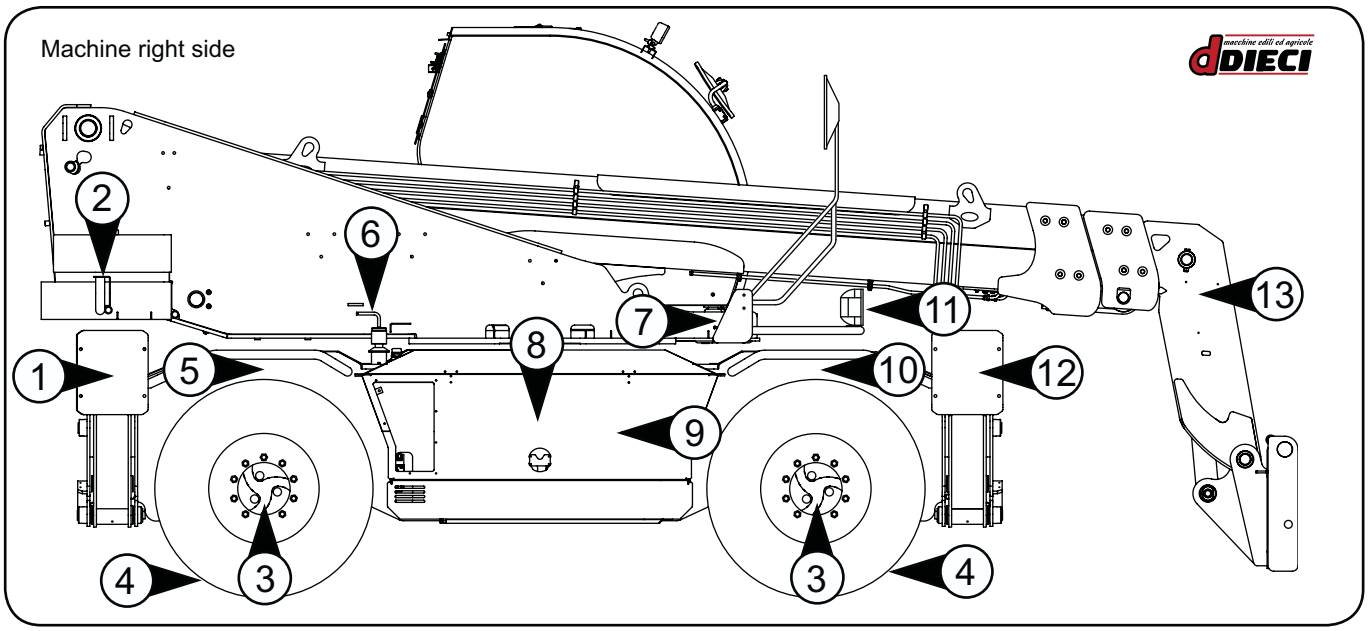
DIECI S.r.l. hereby states that before being issued on the market, every vehicle manufactured in its factory undergoes static and dynamic tests that have the aim of verifying the vehicle functions properly and complies with the EC directives it is subject to. At the end of the tests, CE certification is issued for the tested machine complete with any accessories supplied.

Every ***DIECI*** product with the CE mark is supplied with its respective certificate, which by law must be kept by the legitimate owner.

IDENTIFYING MACHINE PARTS - Four movement stabilisers.
(Pegasus 70.11, 60.16, 30.16, 40.17, 38.16)



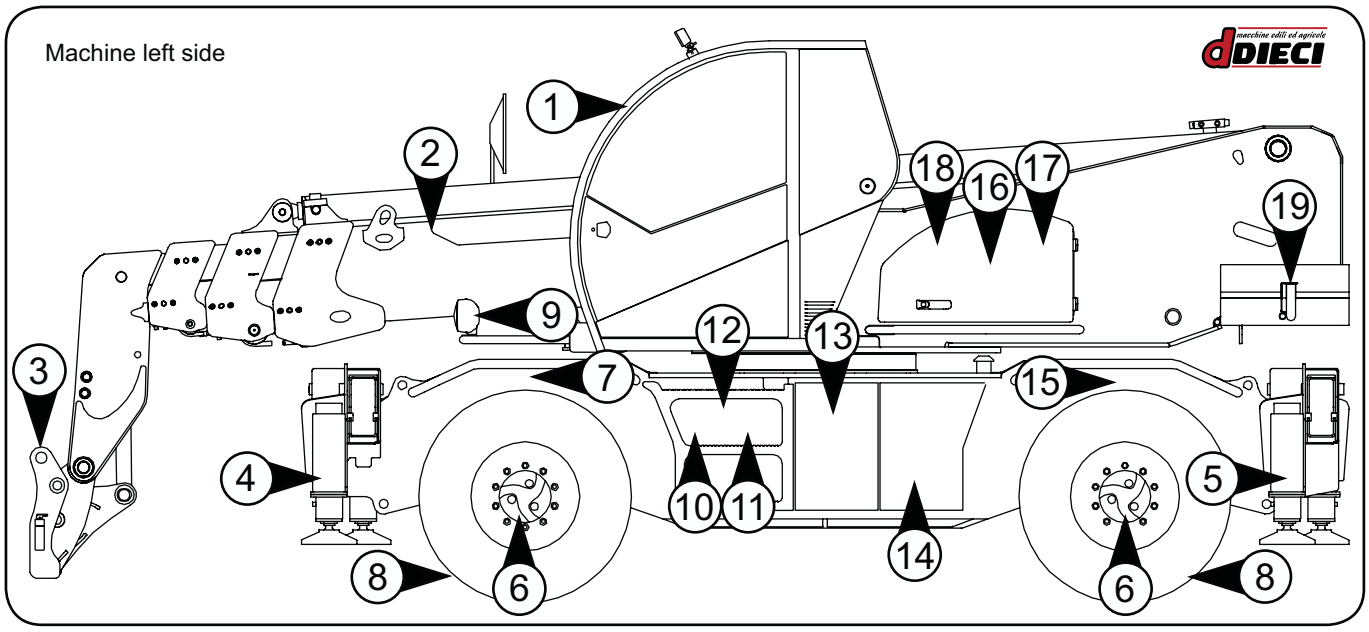
1. Cab
2. Telescopic boom
3. Attachment holder plate
4. Front left stabiliser
5. Rear left stabiliser
6. Epicyclic reduction gear
7. Machine levelling cylinder
8. Wheel
9. Front left light
10. Battery
11. Battery cut-off switch
12. Hydrostatic system oil filter
13. Hydraulic oil tank
14. Diesel fuel tank
15. Oscillation lock cylinder
16. Control unit and timing system bonnet
17. Control unit
18. Timing system
19. Rear left light



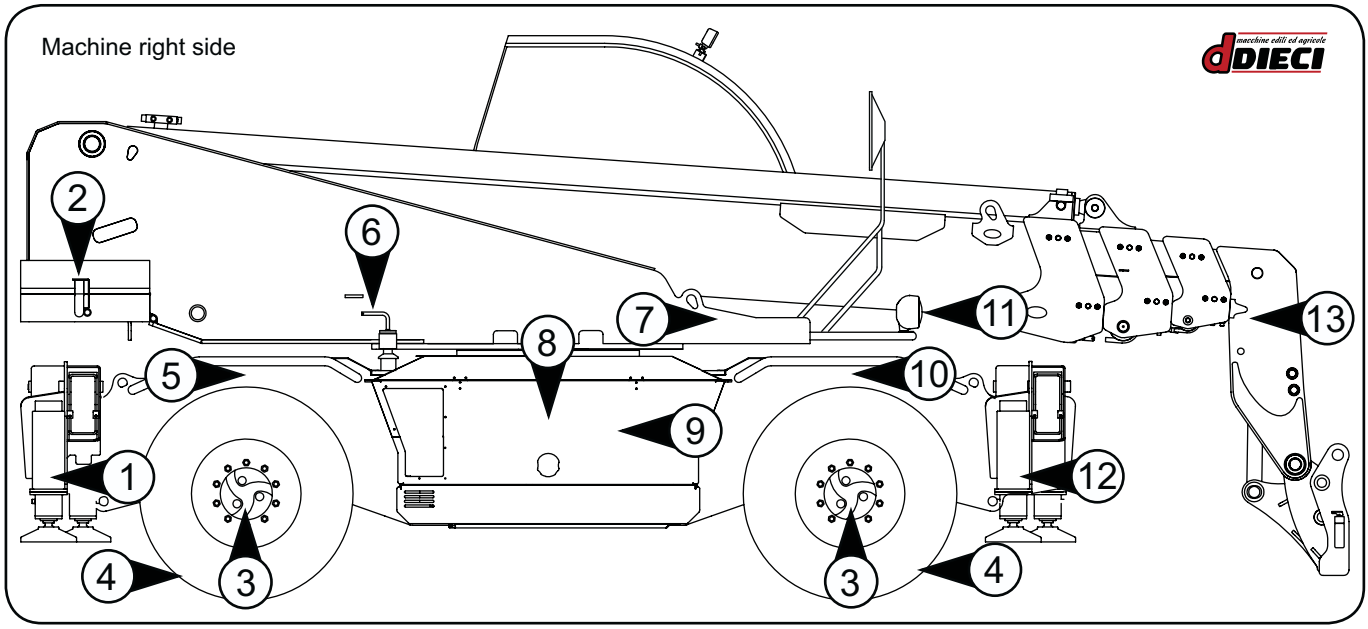
1. Rear right stabiliser
2. Rear right light
3. Epicyclic reduction gear
4. Wheel
5. Oscillation lock cylinder
6. Turret rotation locking pin
7. Boom safety support rod
8. Engine bonnet
9. Diesel engine
10. Levelling cylinder
11. Front right light
12. Front right stabiliser
13. Boom head electrical connector

⚠ - CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

IDENTIFYING MACHINE PARTS - Eight movement stabilisers.
(Pegasus 45.19, 45.21, 50.21, 40.25)

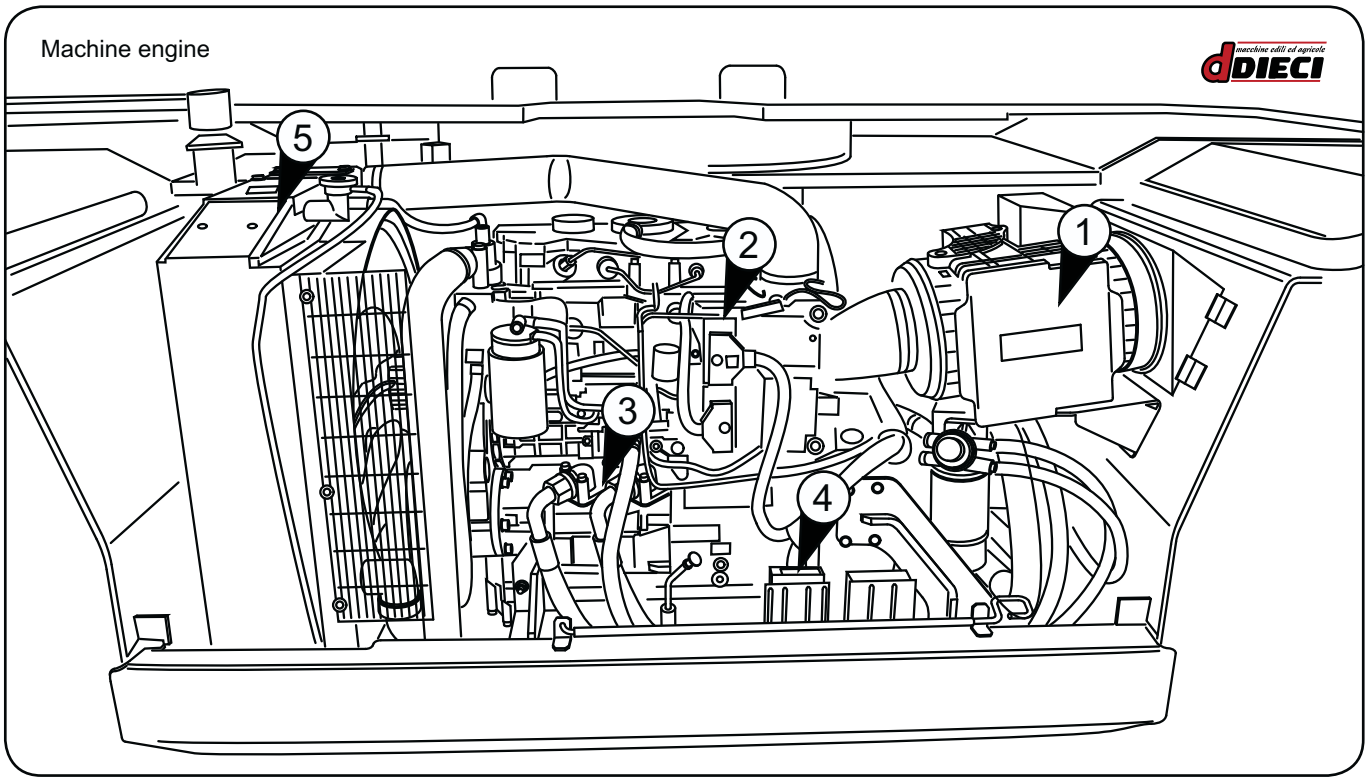


1. Cab
2. Telescopic boom
3. Attachment holder plate
4. Front left stabiliser
5. Rear left stabiliser
6. Epicyclic reduction gear
7. Machine levelling cylinder
8. Wheel
9. Front left light
10. Battery
11. Toolbox
12. Hydrostatic system oil filter
13. Hydraulic oil tank
14. Diesel fuel tank
15. Oscillation lock cylinder
16. Control unit and timing system bonnet
17. Control unit
18. Timing system
19. Rear left light

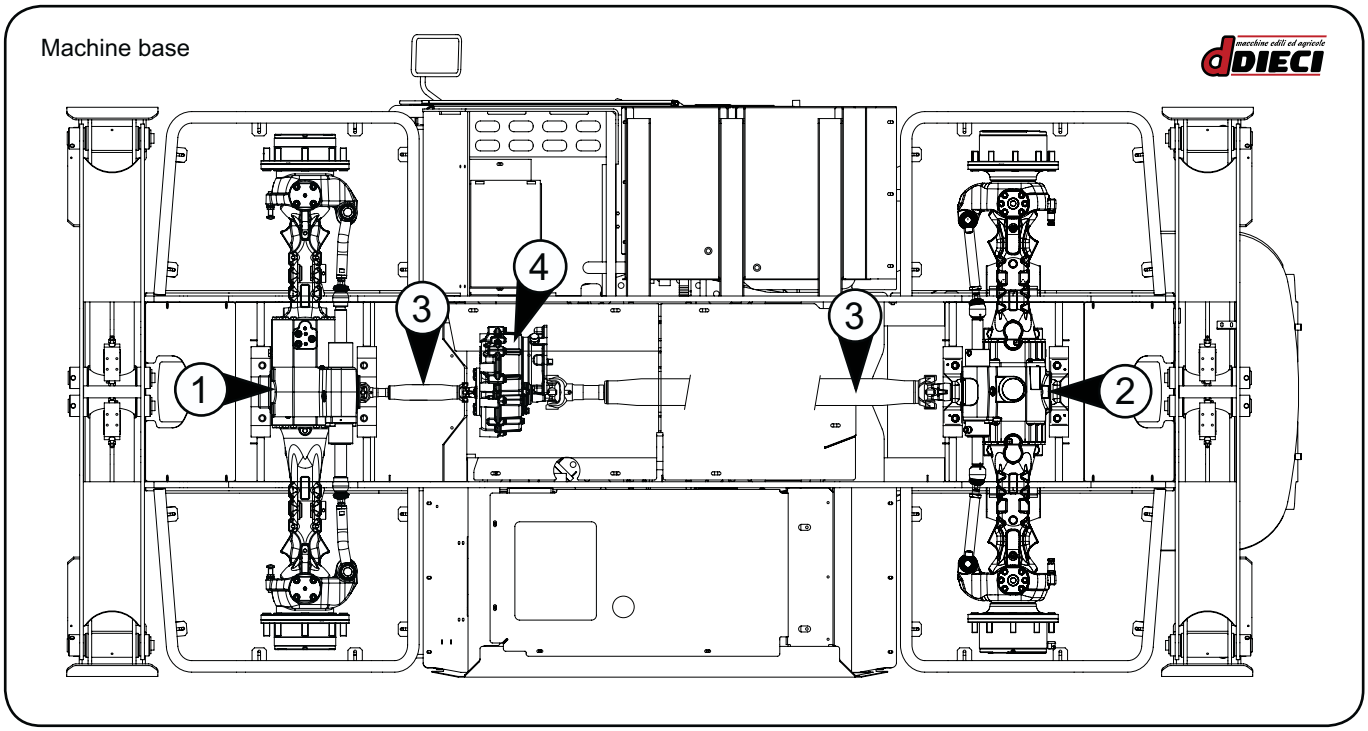


1. Rear right stabiliser
2. Rear right light
3. Epicyclic reduction gear
4. Wheel
5. Oscillation lock cylinder
6. Turret rotation locking pin
7. Boom safety support rod
8. Engine bonnet
9. Diesel engine
10. Levelling cylinder
11. Front right light
12. Front right stabiliser
13. Boom head electrical connector

IDENTIFYING MACHINE PARTS

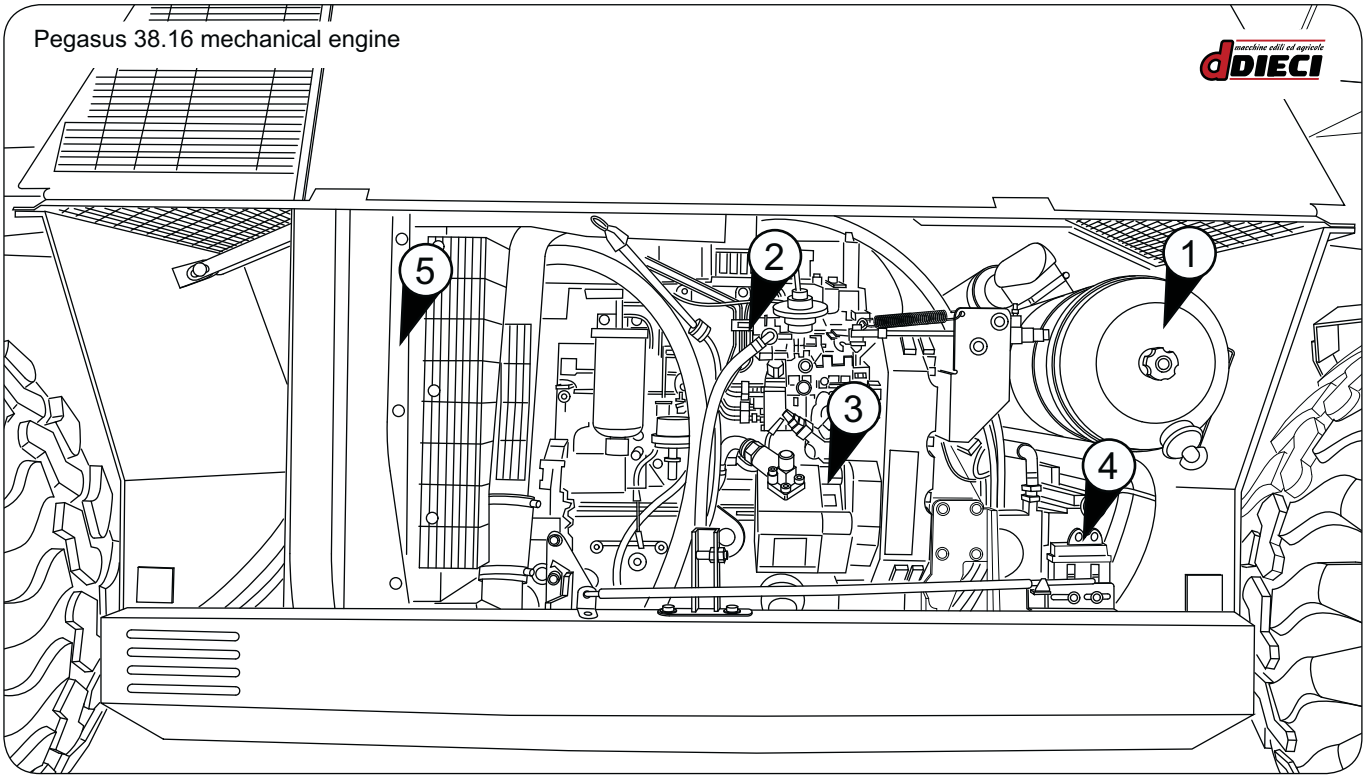


1. Air filter
2. Engine
3. Hydraulic pump
4. Fuse control unit
5. Radiator



1. Front axle
2. Rear axle
3. Drive shaft
4. Gear reduction unit

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

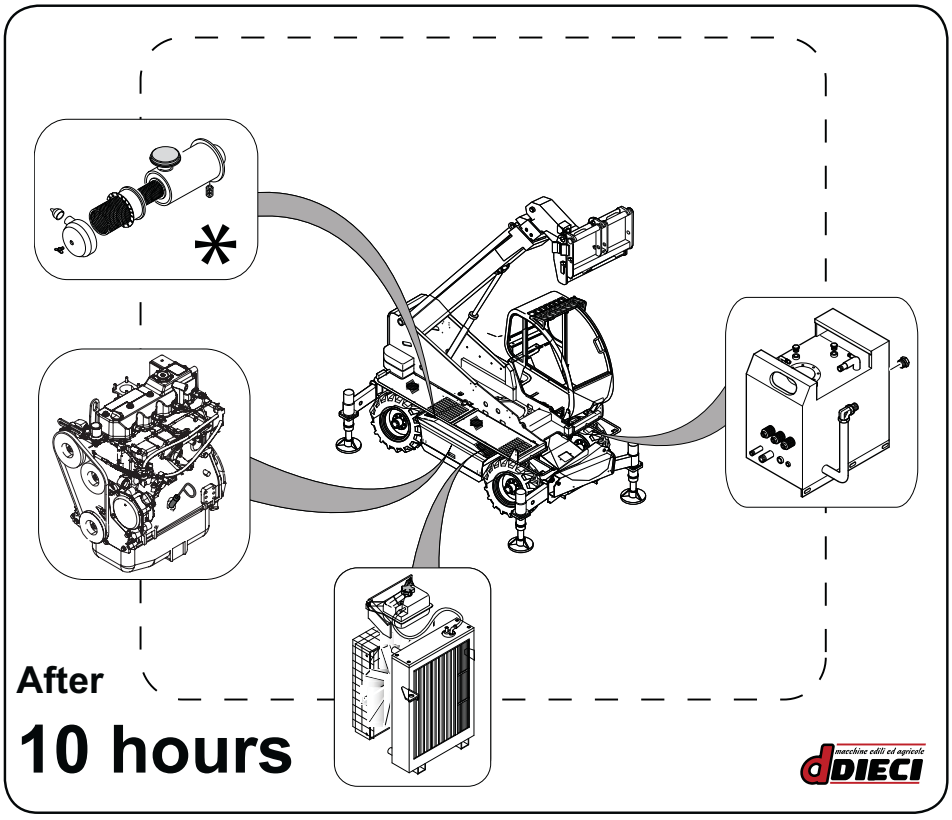


1. Air filter
2. Engine
3. Hydraulic pump
4. Fuses control unit
5. Radiator

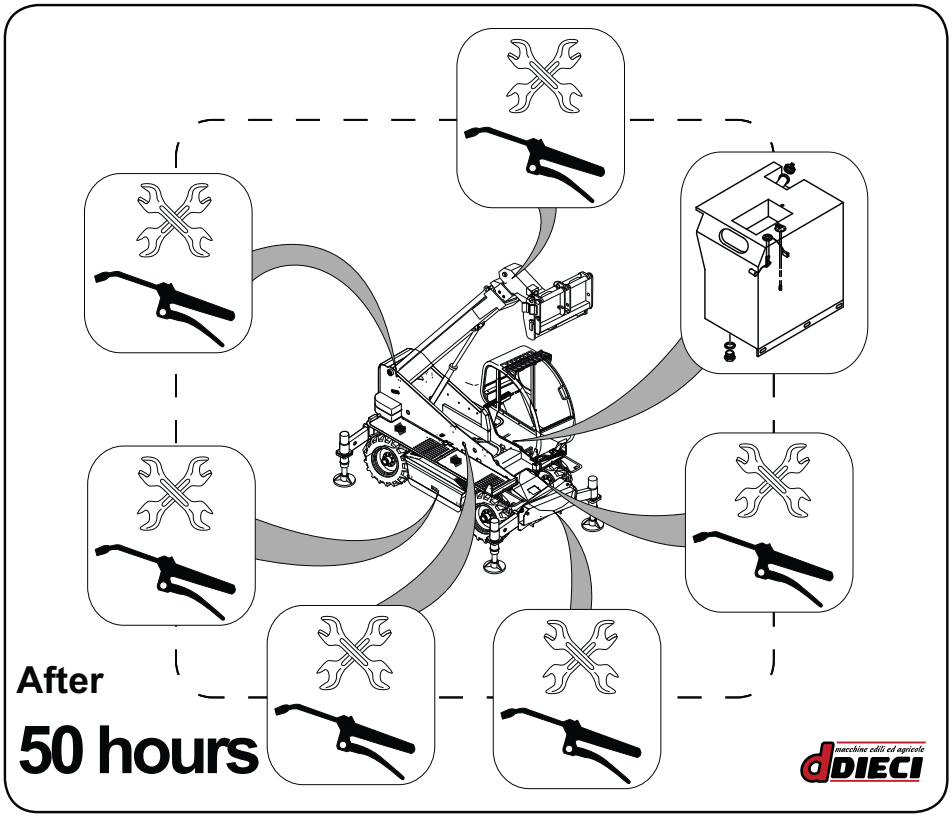
MAINTENANCE AND ADJUSTMENT SCHEDULE

On the left is a list of the maintenance procedures to carry out. The diagrams on the right indicate how often the maintenance has to be carried out and provide an idea of where the parts are located. The asterisk (*) indicates maintenance in case the machine is used in particular environments.

- Check engine oil level.
- Clean the air filter.
- Check water level in radiator.
- Check radiator is not clogged.
- Check hydraulic oil level.



- Drain fuel tank.
- Check for leaks on hydraulic circuit piping
- Lubricate boom joint pin.
- Lubricate pivot jack head and foot pins.
- Lubricate hoisting jack head and foot pins.
- Lubricate stabiliser jack foot and head pins.
- Lubricate levelling jack head and foot pins.
- Lubricate stabiliser assembly pins.
- Lubricate turret rotation fifth wheel.
- Lubricate front and rear wheel pivot pins.
- Rear axle oscillation bushings.
- Front axle oscillation bushings.
- Lubricate spiders and Cardan joints on drive shafts.
- Lubricate boom sliding blocks.

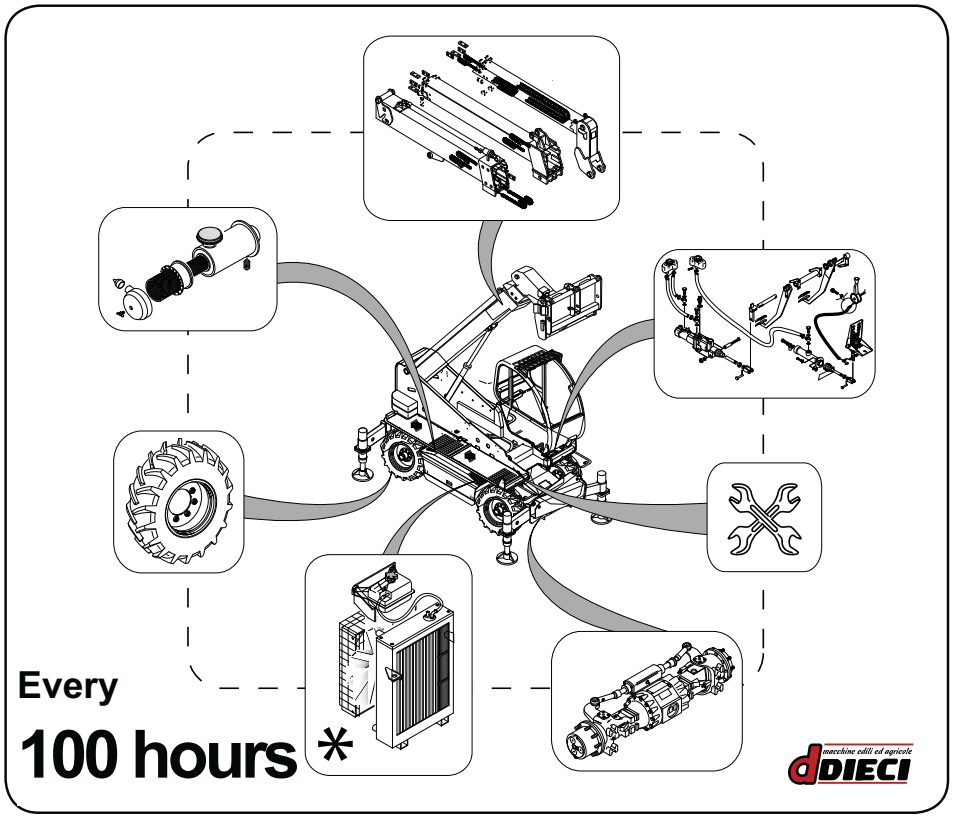


- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

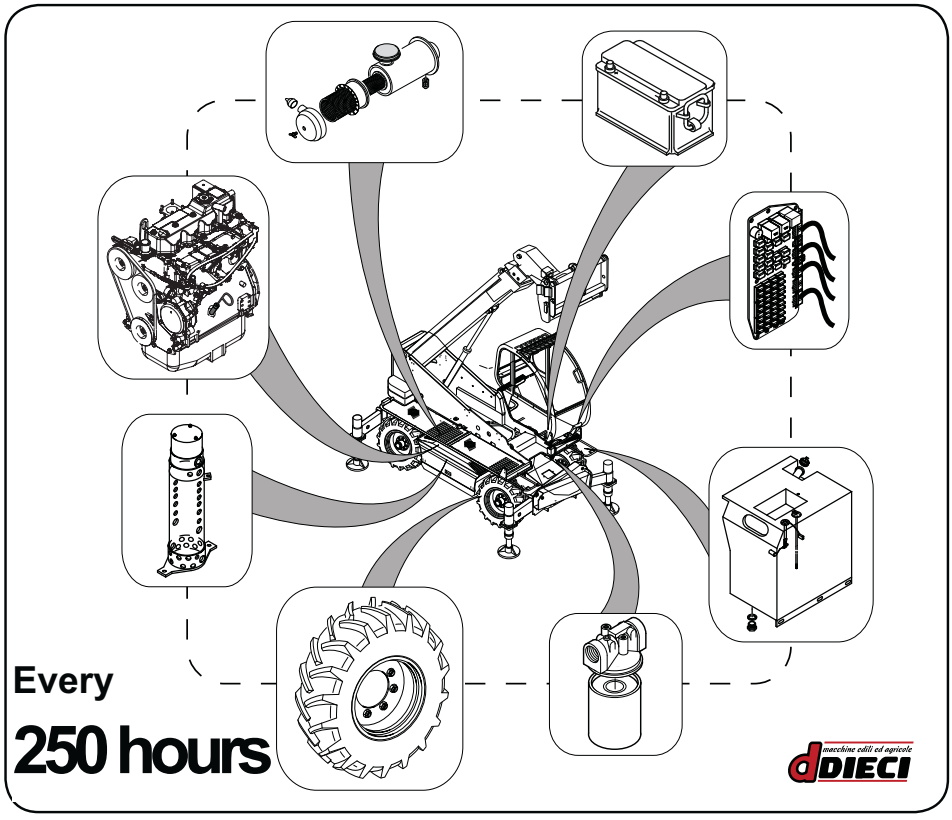
MAINTENANCE AND ADJUSTMENT SCHEDULE

On the left is a list of the maintenance procedures to carry out. The diagrams on the right indicate how often the maintenance has to be carried out and provide an idea of where the parts are located. The asterisk (*) indicates maintenance in case the machine is used in particular environments.

- Lubricate differential axles.
- Check tyre pressure.
- Check tightening torque of nuts and bolts in general.
- Check radiator is not clogged.
- Check brake oil level.
- Check accelerator oil level.
- Check boom chain elongation.
- Check stickers.



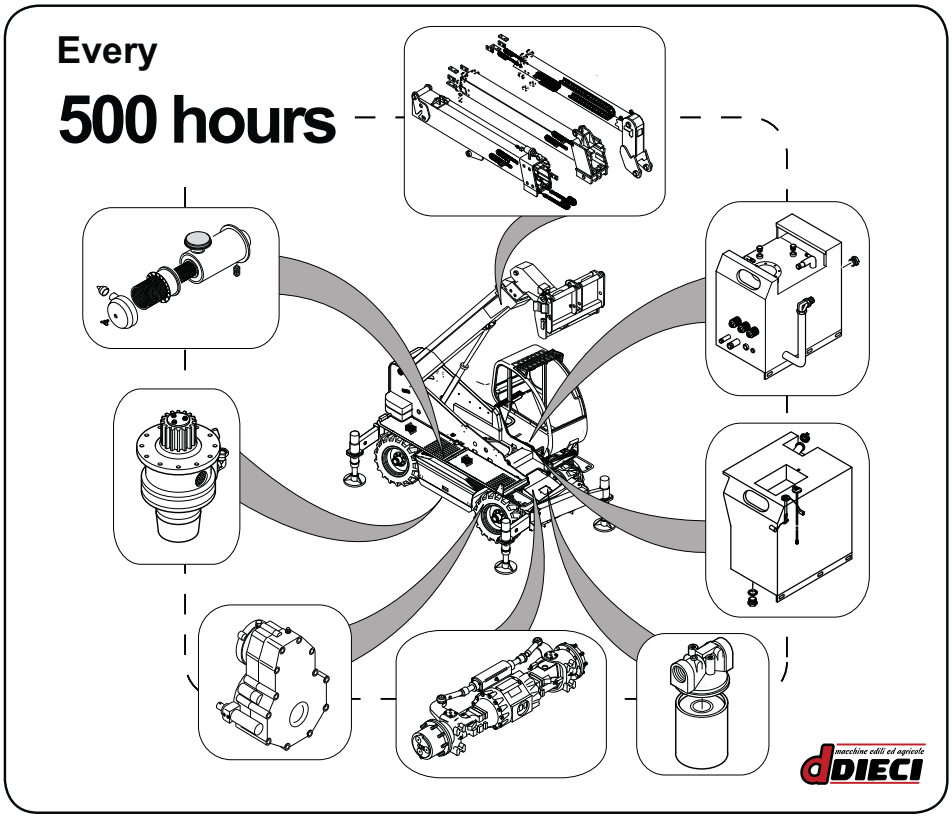
- Replace engine oil.
- Replace engine oil filter.
- Replace air filter.
- Check battery electrolyte level.
- Check electric system.
- Check alternator belt.
- Tighten wheel nuts.
- Replace anti humidity bag on rotation coupling manifold.
- Replace hydraulic oil filter



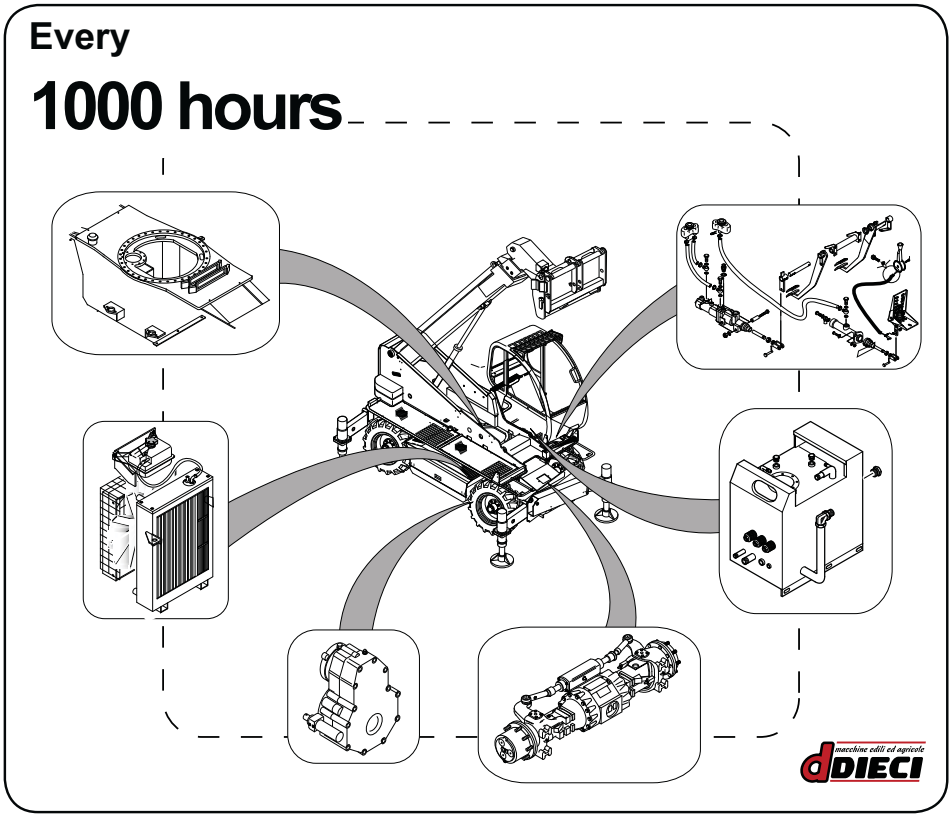
MAINTENANCE AND ADJUSTMENT SCHEDULE

On the left is a list of the maintenance procedures to carry out. The diagrams on the right indicate how often the maintenance has to be carried out and provide a rough idea of where the parts are located. The asterisk (*) indicates maintenance in case the machine is used in particular environments.

- Replace air filter.
- Replace fuel filter.
- Drain fuel tank.
- Clean pre-filter on diesel injection pump filter.
- Replace hydraulic system oil.
- Replace or clean hydraulic oil system filter.
- Replace external hydraulic oil filter.
- Check turret rotation reduction gear oil level
- Check epicyclic reduction gear oil level.
- Check gear oil level
- Check turret rotation reduction gear oil level
- Check tightening torque of boom sliding blocks.
- Check chain tension.
- Replace engine oil filter.



- Check tightening torque of upper and lower swing gear bolts.
- Replace coolant.
- Replace oil in differential sump.
- Replace oil in epicyclic reduction gears.
- Replace gear oil.
- Replace brake oil.
- Replace accelerator oil.
- Replace hydraulic system oil.



- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

CAPACITY OF THE PARTS TO LUBRICATE

ASSEMBLY DESCRIPTION	CAPACITY	CAPACITY 38.16
ENGINE OIL	9,00 lt	9,00 lt
FRONT WHEEL REDUCTION GEAR OIL	1,25 lt	1,25 lt
REAR WHEEL REDUCTION GEAR OIL	1,25 lt	1,25 lt
FRONT DIFFERENTIAL AXLE OIL	7,50 lt	7,50 lt
REAR DIFFERENTIAL AXLE OIL	7,75 lt	7,75 lt
GEARBOX OIL	1,50 lt	1,50 lt
HYDRAULIC SYSTEM OIL	170,00 lt	140,00 lt
BRAKE CIRCUIT OIL	3,00 lt	3,00 lt
SWING GEAR ROTATION REDUCTION GEAR OIL	1,80 lt	1,80 lt
COOLANT	14,00 lt	14,00 lt
DIESEL FOR TRACTION	180,00 lt	175,00 lt
GREASE	4,00 kg	4,00 kg

OIL COMPARISON TABLE

	ENGINE OIL	HYDRAULIC OIL	AXLES AND GEARBOX OIL	BRAKE FLUID	COOLING FLUID	GREASE
AGIP	SIGMA TURBO	ARNICA/46		DEXRON 2 EXTRA	PERMANENT	GR MU/EP2
CHEVRON	DELO 450 15W40	EP HYDRAULIC 46		DEXRON 2	ANTIFREEZER	DURALITH EP2
ESSO	ESSOLUBE XT 201	INVAROL EP46	TORQUE FLUID 62	ATF DEXRON 2	SIGIL GREEN	BEACON EP2
IP	TAURUS TURBO 15W40	HJDRUS		DEXRON FLUID 2	ANTIFREEZER	ATHESIA EP GREASE2
MOBIL	DELVAC SUPER 1300	HJDRO NV46	1 - MOBILFLUID 422 2 - MOBILFLUID 424 3 - MOBILUBE 85W/90 LS 4 - MOBILAND 20W/40	ATF 220	ANTIFREEZER	MOBILUX 2
Q8	T700 SAE 15W40	HAENDEL 46		AUTO 14	ANTIFREEZER	SUPER GREASE G2
SHELL	RIMULDA D	TELLUS T46	1 - DONAX TD 2 - LS 90 3 - SPIRAX HD	ATF DEXRON 2	ANTIFREEZER	SUPER GREASE G2
ROLOIL	DOLOMITI SUPER HD TURBO 15W40	LI/46		HIDROMATIC DEX	ROL FLUID	LITEX EP/2
TEXACO	URSA SUPER TD	RANDO HD Z 46		DEXRON 2	ANTIFREEZER	MULTIFAK EP2
TOTAL	RUBIA XT	EQUIVIS ZS/46	1 - DA 2 - JID	DEXRON 2	ANTIFREEZER	MULTIS EP2

FOR PRODUCT CONSUMPTION QUANTITIES, CONSULT THE CAPACITY OF PARTS FOR LUBRICATION IN CHAPTER "**H**" (TECHNICAL DATA AND MACHINE SPECIFICATIONS)

DO NOT USE
SYNTHETIC BASE OILS

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

OPENING THE ENGINE BONNET
(Fig.1/D)

The engine bonnet is equipped with an external handle with lock (fig. 1/D Pos. “1”).

To open:

- Insert the key in the lock (fig. 1/D Pos.“2”) and turn clockwise/anticlockwise to lock/unlock.
- Pull the handle towards you to release the unlocked engine bonnet.

NOTE:
The bonnet will not open if you attempt to open the handle when it is locked.

To insert the bonnet support rod (fig. 2/D Pos.“1”):

- Remove the rod from its housing.
- Place the hook shaped end against the slot inside the bonnet (fig. 2/D Pos.“2”).
- Slide the rod hook into the slot inside the bonnet.
- Reverse the procedure to close the bonnet.

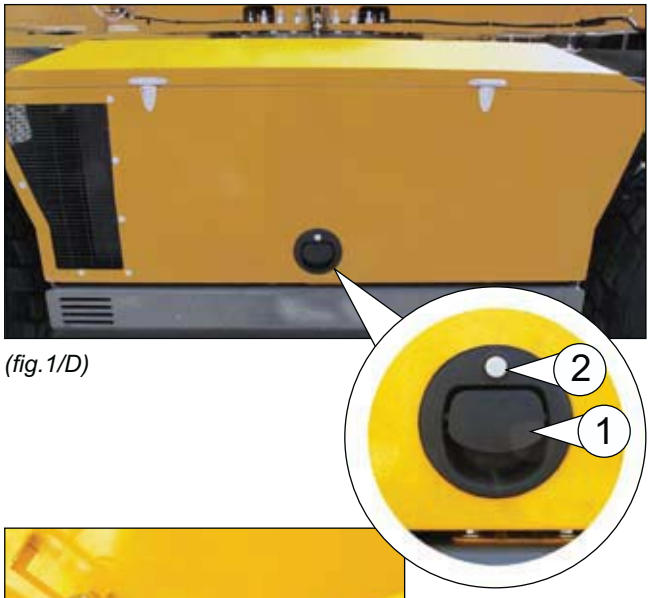
- CAUTION:

When not in use, the bonnet support rod must always be placed in its housing.

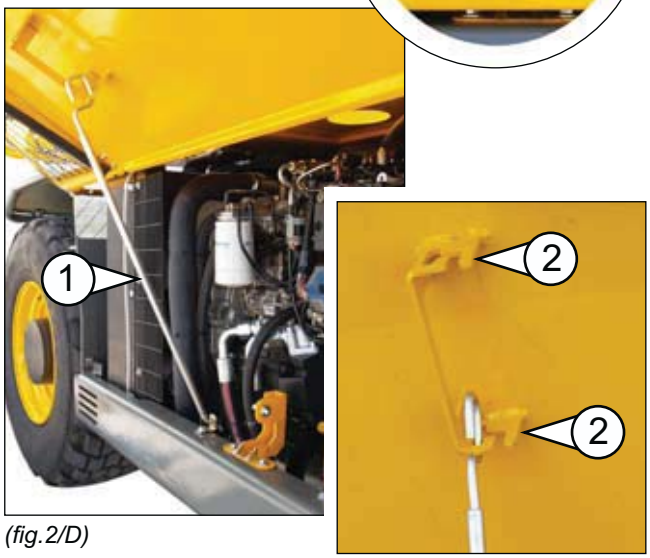
- PROHIBITION -

IT IS STRICTLY FORBIDDEN to use the machine while the bonnet is open.

When any maintenance work has been finished, the bonnet must always be re-closed and locked.



(fig.1/D)

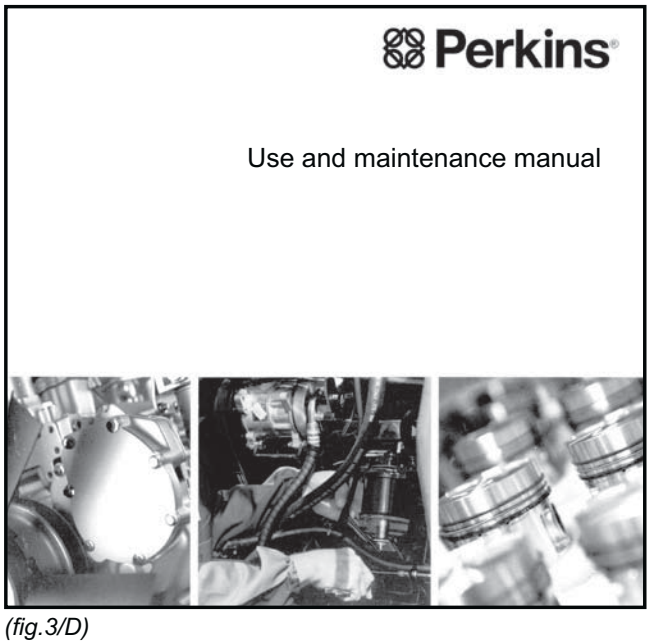


(fig.2/D)

ENGINE

STRICTLY OBSERVE THE MANUFACTURER’S INSTRUCTIONS IN THE ENCLOSED HANDBOOK IN TERMS OF ENGINE, DIESEL FILTER, ETC. MAINTENANCE.

THE ENGINE USE AND MAINTENANCE HANDBOOK IS AN INTEGRAL PART OF THE DOCUMENTATION SUPPLIED WITH THE MACHINE.



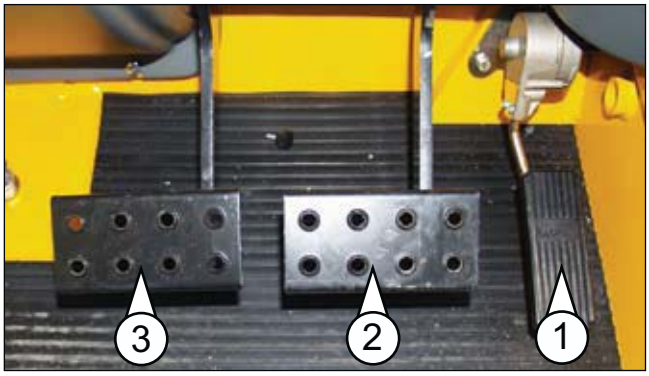
(fig.3/D)

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

PEDALS

Accelerator
(Fig.4/D Pos.“1”)

The accelerator is electronic and does not require routine maintenance.



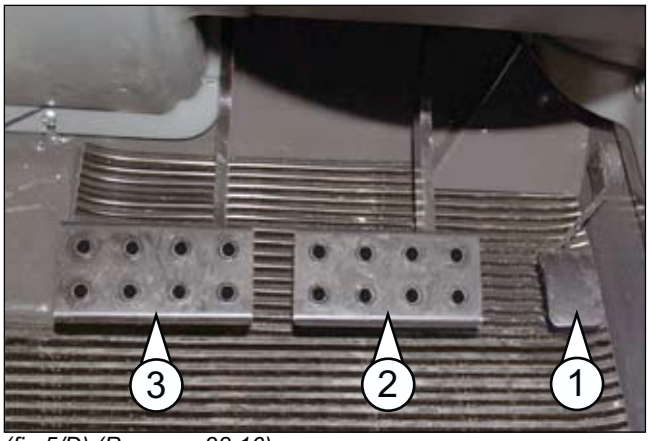
(fig.4/D)

Accelerator
Pegasus 38.16 (mechanical engine)
(fig.5/D Pos.”1”)

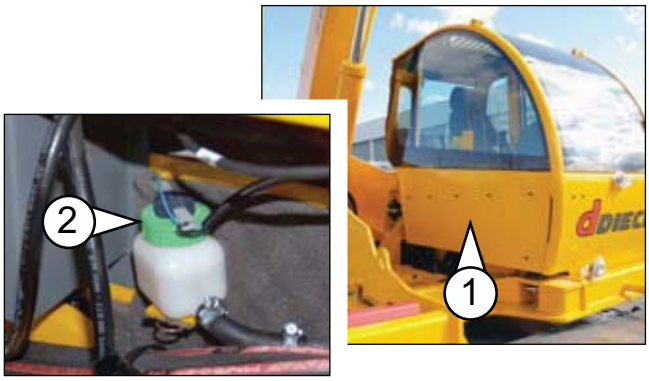
The accelerator mechanically controls the injection pump. The accelerator oil reservoir is located on the right side of the cab.
Te low accelerator oil level is signalled by the switch-on of the LED “1”(fig.7/D) on the dashboard. The LED switches on intermittently (T=5”; 3”on-2”off) and will be accompanied by the buzzer for T=1.5”.

When the LED switches on:

- Interrupt the work operations.
- Bring the vehicle to a halt on flat ground.
- Switch the vehicle off and remove the ignition key.
- Close and lock the cab door.
- Remove the external right lateral guard from the cab (fig.6/D Pos.”1”).
- Loosen the accelerator oil reservoir cap (fig.6/D Pos.”2”) and top-up, taking the oil to the correct level.
- Tighten the reservoir cap and re-mount the guard on the cab.
- Re-start the work operations.



(fig.5/D) (Pegasus 38.16)

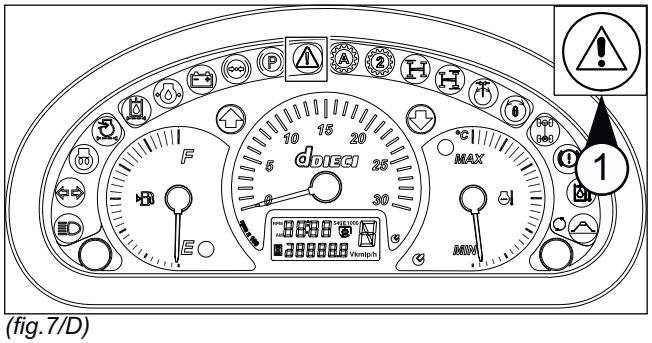


(fig.6/D)

- ATTENTION:
It is at the correct level when the oil is 1 cm below the top-up cap.

- ATTENTION:
Before re-starting regular work operations, check that the alarm LED is off.

- ATTENTION:
Periodically check the condition of all hoses and/or piping. of the brakes. If the level is drastically reduced there is a leak in the system. Contact the ***DIECI*** dealer for the replacement of any damaged, corroded or ruined piping.



(fig.7/D)

BRAKES

(fig.8/D Pos.”2”, fig.9/D Pos.”2”)

Hydraulic brakes do not require registration.

Periodically check the reservoir that is behind the seat (fig.10/D Pos.”1”), the oil must not be below the lower notch ”B” (MIN) (fig.11/D); for expiry see the summary table at the start of the chapter (page D/5).

To top up:

- Unscrew tank cap (fig.12/D Pos.”1”), turning it anti-clockwise.
- Check that oil is level. If it is not, fill the reservoir to level “A”(MAX) (fig.11/D).
- Tighten tank cap (fig.11/D Pos.”1”), turning it clockwise. Do not tighten it excessively.
- Clean any spillage.

A slight lowering of the level is due to normal consumption of the brake pads.

- ATTENTION:

If the brake pedal run is excessive or too elastic, inform the ***DIECI*** dealer in order to eliminate the defect.

- ATTENTION:

Periodically check the condition of all hoses and/or piping. of the brakes. If the level is drastically reduced there is a leak in the system. Contact the ***DIECI*** dealer for the replacement of any damaged, corroded or ruined piping.

- ATTENTION:

Always use the recommended type of oil, as indicated in the lubricants table (See page D/12 oils table).

- ATTENTION:

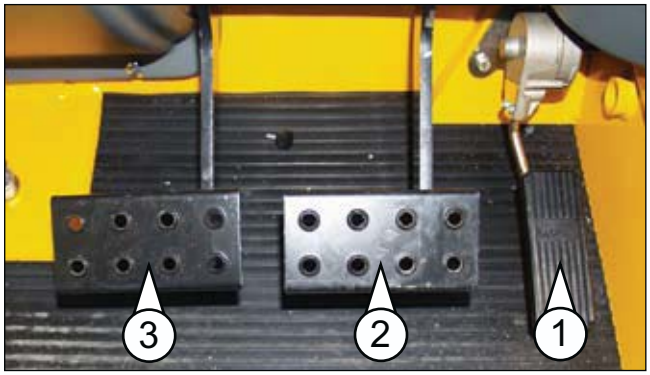
Brake oil is very dangerous. Consult chapter “B” for safety precautions.

- ATTENTION:

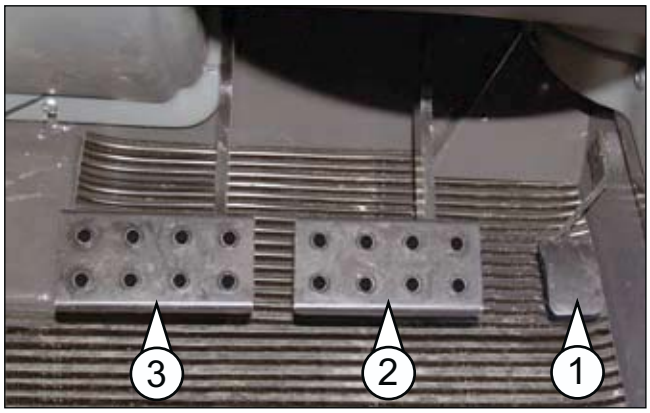
This type of oil can ruin the painted surfaces and the plastic parts of the dashboard.

- ATTENTION -

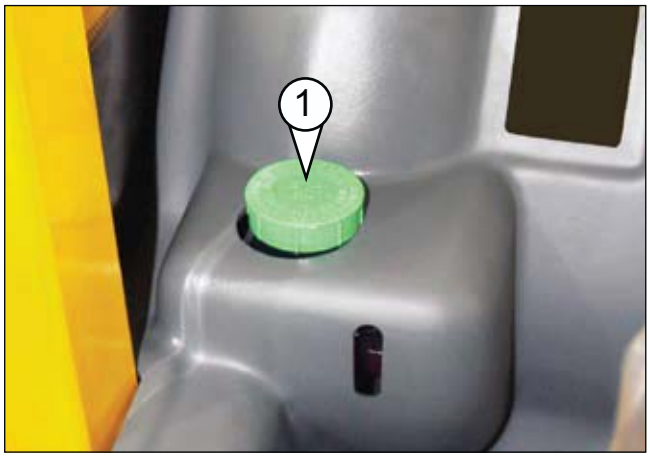
IT IS PROHIBITED to operate with brake oil level below minimum “B” (MIN) (fig.11/D). Brakes may not work properly creating a risk of accidents.



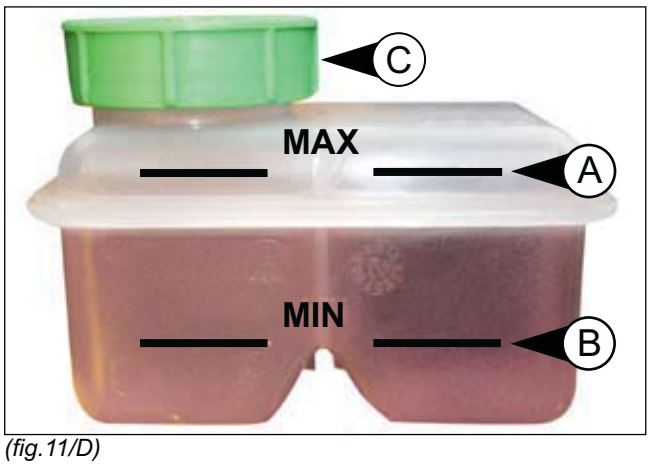
(fig.8/D)



(fig.9/D) (Pegasus 38.16)



(fig.10/D)

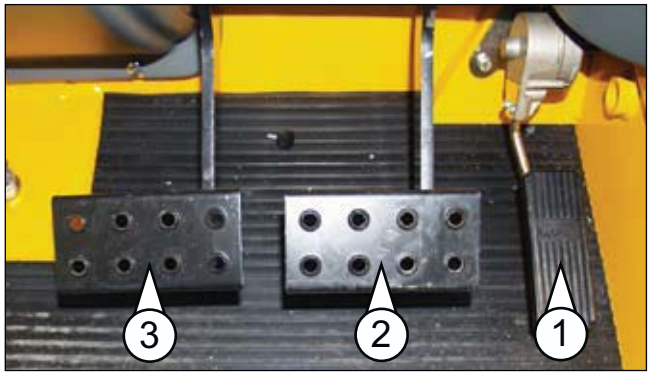


(fig.11/D)

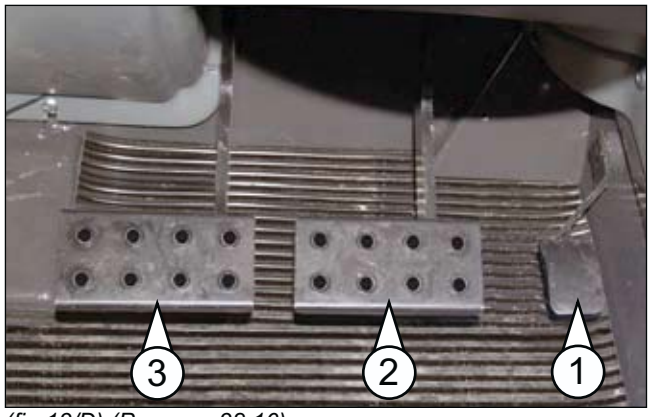
- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

Hydrostatic engine (inching) control
(fig.12/D pos.”1”, fig.13/D pos.”1”)

The pedal does not need adjusting, because it is connected directly to the inching valve, which hydraulically controls the hydrostatic pump functions.ne maintenance.



(fig.12/D)



(fig.13/D) (Pegasus 38.16)

PARKING BRAKE

(Fig. 14/D Pos. “1”).

The electrically controlled parking brake does not need any routine maintenance.

- CAUTION:

If the brake is not effective, contact your ***DIECI*** dealer to have the fault corrected.

When pilot light “A” (fig. 15/D) light ups, this indicates that the power brake pressure is low. In these conditions, the brake does not function correctly and risks compromising machine safety.

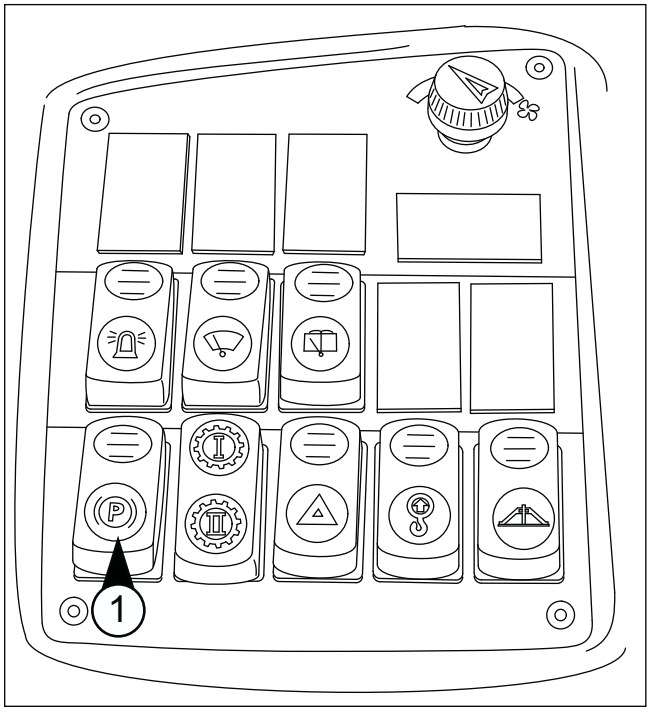
When the pilot light lights up:

- Interrupt any work you are doing.
- Place the machine on level ground.
- Switch the machine off and place wedges under the wheels.
- Check the cause of the fault.

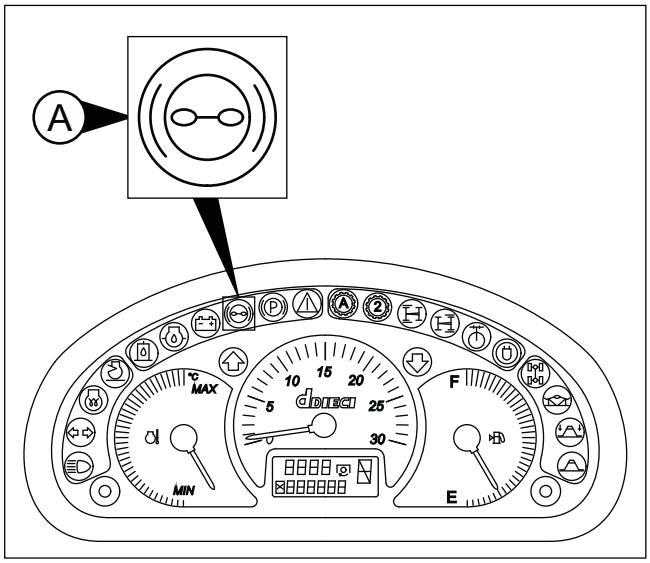
Consult an authorised ***DIECI*** repair centre to correct the problem.

- PROHIBITION -

IT IS STRICTLY FORBIDDEN to operate the machine with a faulty parking brake.



(fig.14/D)



(fig.15/D)

HYDRAULIC OIL LEVEL

(Fig. 16/D Pos. “1”)

The hydraulic oil tank is below the diver’s cab (fig. 16/D Pos. “1”). The level can be checked through the transparent cap on the side of the tank (fig. 16/D Pos. “2”).
The level is correct when the oil is visible through the cap while every machine cylinder is in the transportation position.

To check the level correctly:

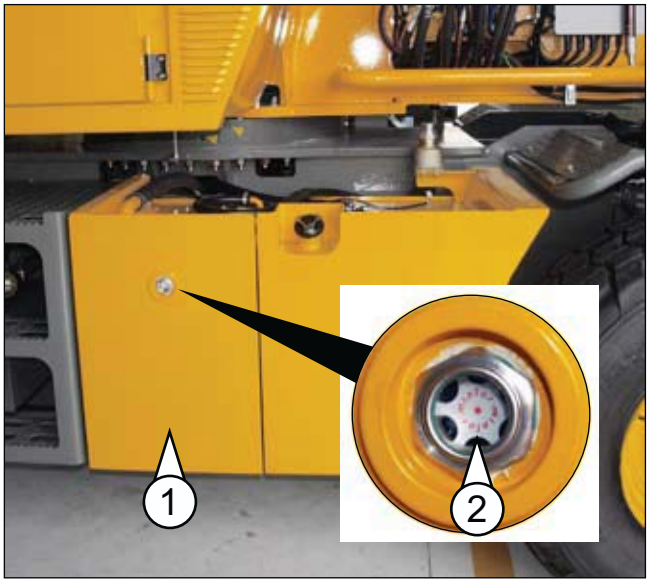
- Place the machine on level ground.
- Retract and lower the entire boom.
- Position the cylinders in transportation mode.
- Switch off the engine.
- Check the oil level through the transparent indicator (fig.16/D Pos. “2”).

If there is insufficient oil, remove the filler cap (fig.17/D Pos.“1”) and top up with oil of the type recommended by ***DIECI***.
Add the amount necessary to ensure the correct oil level is restored.

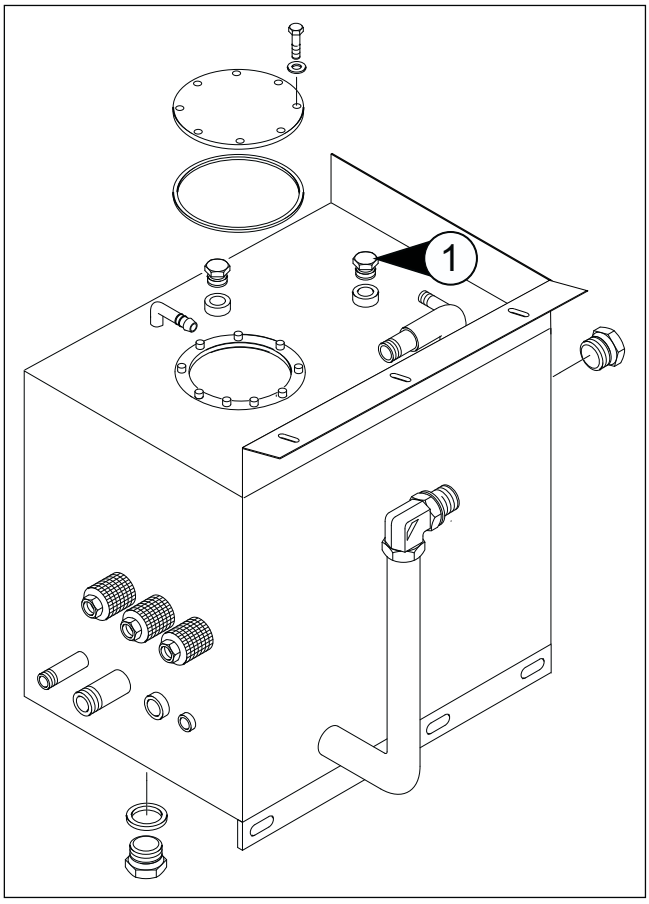
Routine maintenance must be carried out at the prescribed intervals (pages D/9-10-11).

- CAUTION:

When topping up the oil level do not exceed the indicated level and clean up any spillage immediately.



(fig.16/D)



(fig.17/D)

Changing the hydraulic oil and filters

Consult the summary Table at the start of this chapter to find out how often this must be done (pages D/9-10-11)

There are three mesh filters inside the tank (fig.18/D Pos.“1”) which avoid the issue of any dangerous particles in the hydraulic system.

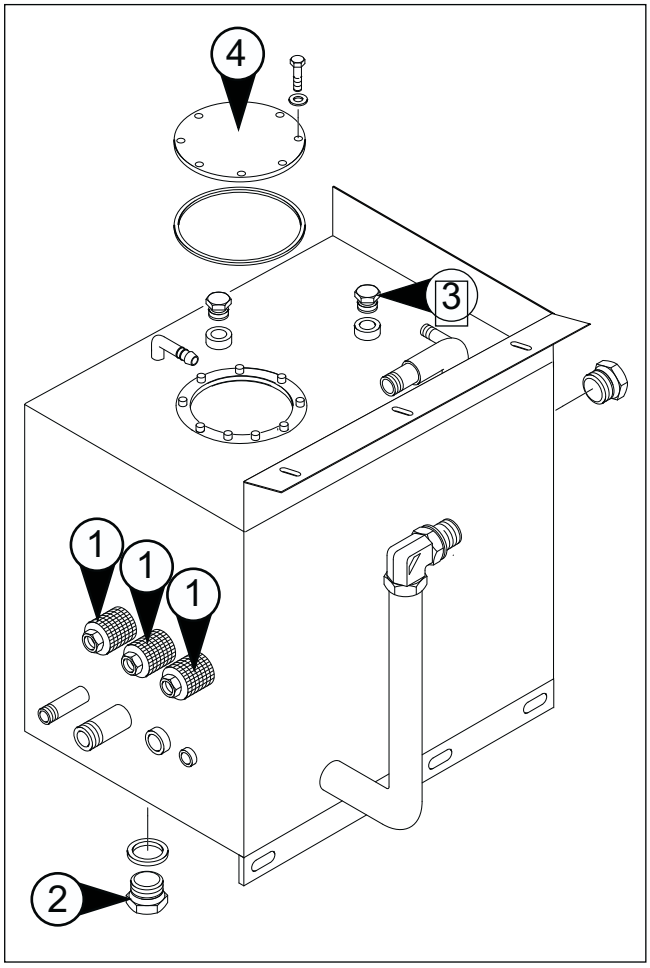
Replacement of the hydraulic oil, the filters inside the tank and the hydrostatic filter must always be carried out in succession. It is not possible to intervene on just one of the components.

To change the oil and filters correctly:

- Place the machine on level ground.
- Retract and lower the entire boom and position the cylinders in transportation mode.
- Switch off the engine and remove the ignition key. Place a “maintenance work in progress” sign in the cab.
- Place an adequately sized container below the drain plug.
- Remove the drain plug (fig.18/D Pos.“2”) to drain the oil. Remove the filler cap (fig.18/D Pos.“3”) to speed up the operation.
- When the tank is completely empty, remove the flange (fig.18/D Pos.“4”) by unscrewing the bolts and thus providing access inside.
- Unscrew the filters (fig.18/D Pos.“1”) inside the tank using a fork spanner.
- Insert the new filters and tighten with the fork spanner.
- Reposition the flange (fig.18/D Pos.“4”) in its housing and tighten the bolts.
- Reinsert the drain plug (fig.18/D Pos.“2”).
- Fill the tank to the correct level through the filler cap (fig.18/D Pos.“3”).
- Start the machine and move the hydraulic cylinders to release any air bubbles.
- Re-check the hydraulic oil level and top up if necessary.

- CAUTION:

Exhausted oil is a potential danger to the environment and must be disposed of appropriately.



(fig.18/D)

Hydrostatic system filter
(Fig.19/D Pos.“1”)

To replace correctly, proceed as follows:

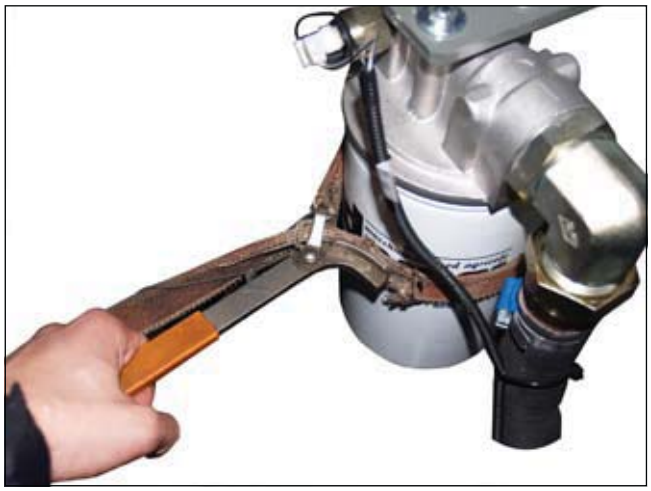
1. Park the machine on a level surface.
2. Retract and lower the entire boom and position the cylinders in transportation mode.
3. Switch off the engine and remove the ignition key.
   Place a “maintenance work in progress” sign in the cab.
4. Place a container below the filter to collect any oil that may leak during the replacement procedure.
5. Unscrew the filter cartridge with a band type spanner and remove (fig.20/D).
6. Clean the filter fitting with a clean cloth (ensure the cloth does not leave any fluff) and ensure the old O-ring is removed.
7. Take the new filter and fill it with one of the hydraulic oils approved by ***DIECI***. Lubricate the new O-ring with the same oil.
8. Screw up the filter using your hands. Ensure the O-ring lubricated previously is positioned correctly.
9. Start the machine and check there are not any leaks.

- CAUTION:

Exhausted oil is a potential danger to the environment and must be disposed of appropriately



(fig.19/D)



(fig.20/D)

FUEL TANK
(Fig.21/D Pos.“1”)

Cleaning

To clean correctly:

1. Place the machine on a flat and level surface.
2. Switch off the engine and remove the ignition key. Place a “maintenance work in progress” sign in the cab.
3. Place an adequately sized container below the drain plugs (fig.21/D Pos.“3”) to collect any fuel that may come out during cleaning.
4. Unscrew the tank filler plug (fig.21/D Pos.“2”).
5. Unscrew the tank drain plug (fig.21/D Pos.“3”).
6. Allow the fuel to flow out. Then refill with ten litres of clean fuel through the filler hole to eliminate any impurities or residues.
7. Reinsert the drain plug and tighten securely.
8. Fill the tank with clean fuel and reinsert the cap.

- CAUTION -

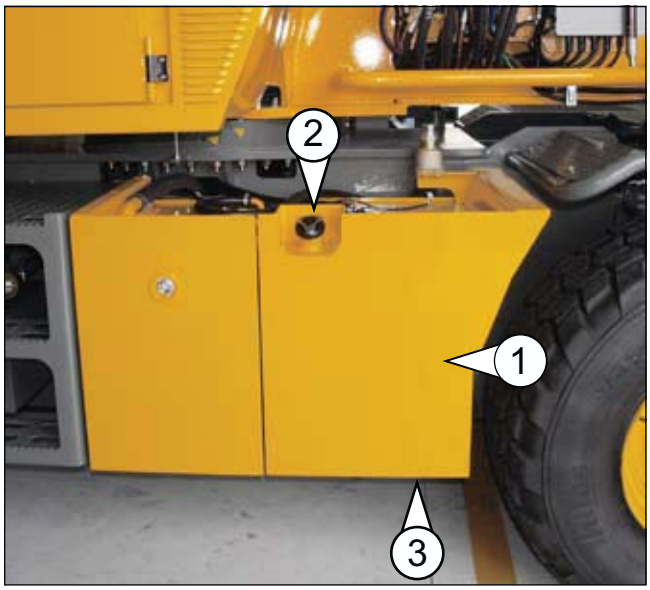
The fuel is highly inflammable.

Do not smoke and do not approach any flames during these operations.

Danger of fire or explosion.

- CAUTION -

Exhausted oil is a potential danger to the environment and must be disposed of appropriately.



(fig.21/D)

ENGINE RADIATOR

(Fig.22/D Pos.“1”)

- CAUTION -

These procedures must be carried out when the engine is cold.

Cleaning the radiator grille

The radiator grille (fig.22/D Pos.“2”) must be kept as clean as possible to allow the best heat exchange between the radiator and the air circulating around it. To remove impurities use a jet of low pressure air from outside in towards the radiator (that is from the air outlet towards the engine (fig.22/D). Then blow the jet of air over the parts inside the engine compartment that come in contact with dirt. Clean the gap between the radiator and the air intake (fig.22/D Pos.“3”) with a cloth. If the dirt has become particularly compact, it is advisable to loosen it with a jet of water at low pressure from inside the engine compartment outwards before using the air jet.

- CAUTION:

Before subjecting the engine to jets of air or water, consult the relative use and maintenance manual.

- CAUTION:

The heat exchanging fins are very delicate, do not clean with cloths or brushes. Water and air jets must be aimed horizontally.

Checking the coolant level.

During normal machine use, the water level must be kept 3 cm below the radiator cap (fig. 23/D Pos. “1”).

To ensure the coolant level is correct, proceed as follows:

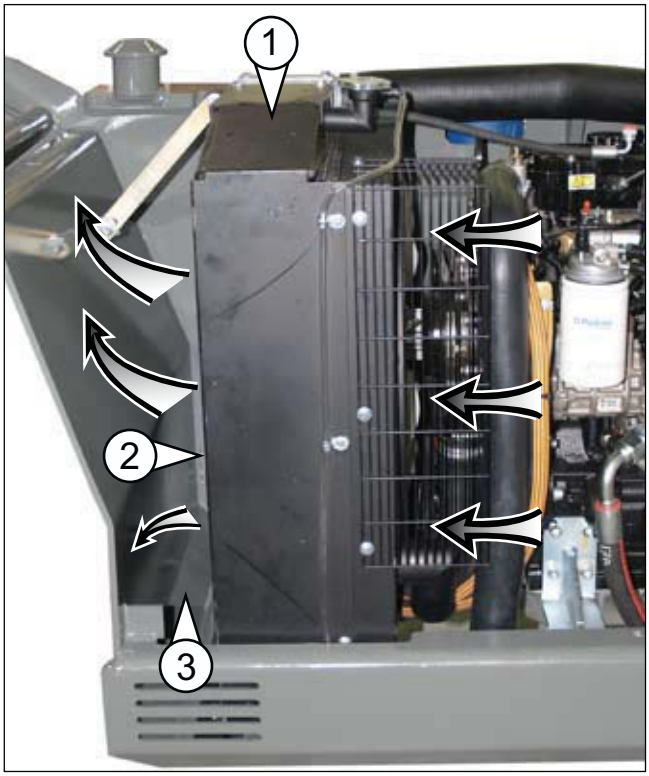
1. Place the machine on a flat surface.
2. Switch off the engine and remove the ignition key. Place a “maintenance work in progress” sign in the cab.
3. Remove the lid on the bonnet (fig.24/D Pos.“1”) by unscrewing the screws (fig.24/D Pos.“2”) and access the radiator cap (fig.24/D Pos. 3”).
4. Slowly unscrew the radiator cap (fig.24/D Pos.“3”) anticlockwise until you reach the safety limit stop.
5. Release the pressure and steam.
6. Remove the cap.
7. Check the coolant level. If necessary top up by introducing a mixture of water and antifreeze.
8. Reverse the procedure to reinstall the cap.

- CAUTION:

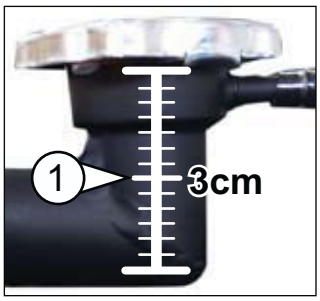
If it is necessary to top up the radiator frequently in normal working conditions, ensure there are no leaks in the cooling system. If there are any problems, contact a ***DIECI*** service centre.

- CAUTION:

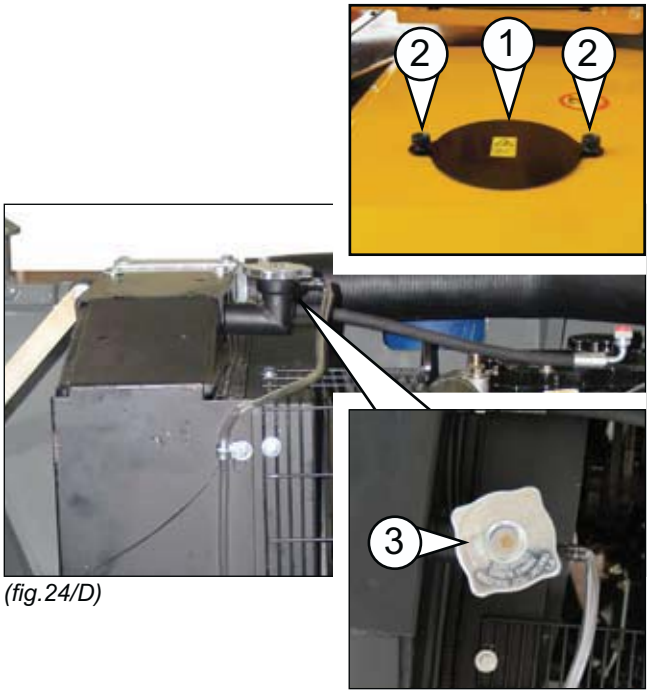
Use demineralised water to top up the cooling system.
Hard water causes scale and reduces the system life span.



(fig.22/D)



(fig.23/D)



(fig.24/D)

Replacing the coolant

To replace the coolant correctly:

1. Place the machine on a flat surface.
2. Switch off the engine and remove the ignition key. Place a “maintenance work in progress” sign in the cab.
3. Open and fasten the bonnet.
4. Unscrew the screws (fig.26/D) to remove the bottom part of the engine compartment (fig.26/D Pos.“1”).
5. Place a suitably sized container below the radiator to collect any coolant that may leak during the replacement procedure.
6. Remove the lid on the bonnet (fig.25/D Pos.“1”) by unscrewing the screws (fig.25/D Pos.“2”) and remove the filler cap (fig.25/D Pos.“4”) to speed up the operation.
7. Remove the radiator hose (fig.25/D Pos.“3”) to allow the radiator water to flow out.
8. Allow the cooling circuit to empty completely.
9. Check the condition of the radiator hoses and their fittings. Replace if necessary.
10. Clean the radiator by pouring clean water through the filler cap (fig.25/D Pos.“4”) and allow the water to drain out through the radiator hose hole (fig.25/D Pos “3”). If necessary, add a detergent to the clean water.
11. When clean, close the drain hole by reinserting the radiator sleeve (fig.25/D Pos.“3”).
12. Fill the cooling system through the filler cap (fig.25/D Pos.“4”) up to the level (3 cm below the radiator cap) using the coolant prepared beforehand.
13. Close the cap (fig.25/D Pos.“4”) and switch on the engine. Allow the engine to idle for a few minutes.
14. Check that there are no leaks, check the level and top up with more coolant if necessary.
15. When you have finished, re-close the lid (fig.25/D Pos.“1”) with the screws (fig.25/D Pos.“2”).

- CAUTION -

Use demineralised water to fill the cooling system. Hard water causes scale and reduces system lifetime.

- CAUTION:

Wear appropriate protective clothing during these procedures.

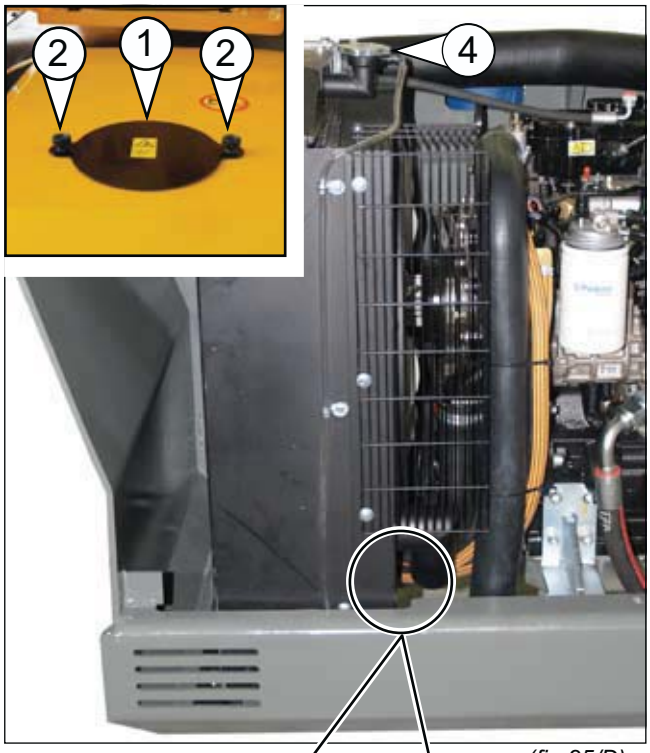
- CAUTION:

Exhausted coolant is a potential danger to the environment and must be disposed of appropriately.

- CAUTION -

The radiator must always be filled with a solution of distilled water and antifreeze to avoid corrosion and to prevent the water from freezing in the system.

The mixture percentages are indicated on the antifreeze container.

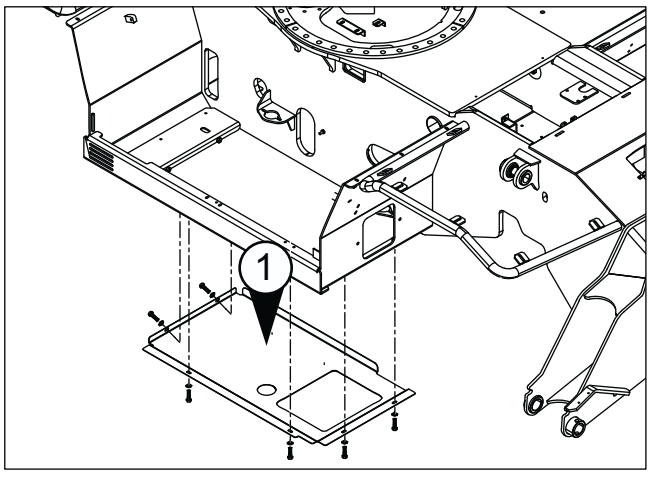


(fig.25/D)



(Radiator drain pipe 38.16)





(fig.26/D)

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

AIR FILTER

(fig.27/D Pos.”1”, fig.28/D Pos.”1”)

Cartridge Cleaning / Replacement

An air filter in bad conditions leads to a reduction of power, excessive fuel consumption and reduction of the engine lifespan.

In the electronic engine filter clogging (fig.27/D Pos.”1”) is signalled by the relevant LED located in the central dashboard; When clogging is signalled, it is possible to continue to operate for a time not exceeding 10 hours. Maintenance must however be carried out as often as described.

In the mechanical engine filter clogging (fig.28/D Pos.”1”) is signalled by an optical LED (fig.29/D Pos.”1”). This shows the exact moment when maintenance or replacement must be performed, because clogged. The LED remains blocked in the alarm position (red). After the due interventions have been performed, press the head of the same to take it into the rest position. At the time of the clogging signal, it is possible to operate for no longer than one hour.

The filter is cleaned using compressed air, maximum 3 Bar at a distance not shorter than 150mm paying great attention not to damage the filtering element.
Use a wet cloth that will not leave residues when cleaning the box and lid.

- ATTENTION:

Clean filters only when the indicator light signals clogging or at scheduled maintenance intervals. Unnecessary, frequent cleaning exposes components to handling damage which can allow dust and dirt to pass into the filtering phases, causing damage to the engine.

- ATTENTION:

If the filtering elements come into contact with liquids of of any type, they must be replaced.
Regularly check the suction sleeves and replace them immediately if worn or damaged.
Regularly check that bolts and clamps are properly tightened. Air must not be allowed to enter circulation in the engine without having first passed through the filter.

- ATTENTION:

Replace the gasket if it is ruined.

- ATTENTION:

Do not operate with an improperly assembled or damaged filter.

- ATTENTION:

To ensure maximum filter efficiency, we recommend operating only with complete filters.
All worn parts should be replaced as quickly as possible.

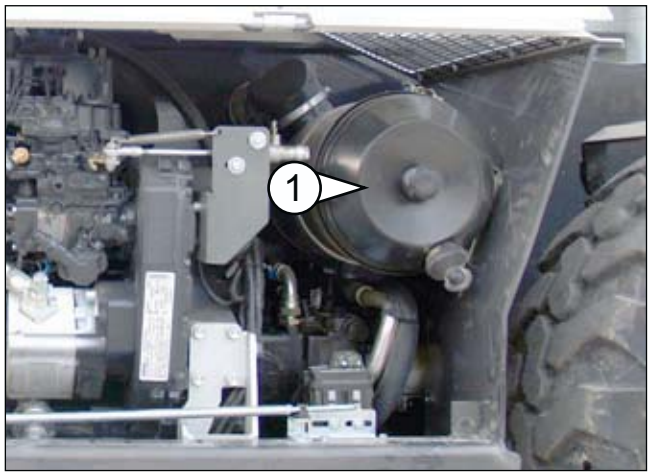
- PROHIBITED -

Operating the vehicle without the engine air filter IS STRICTLY PROHBITED.

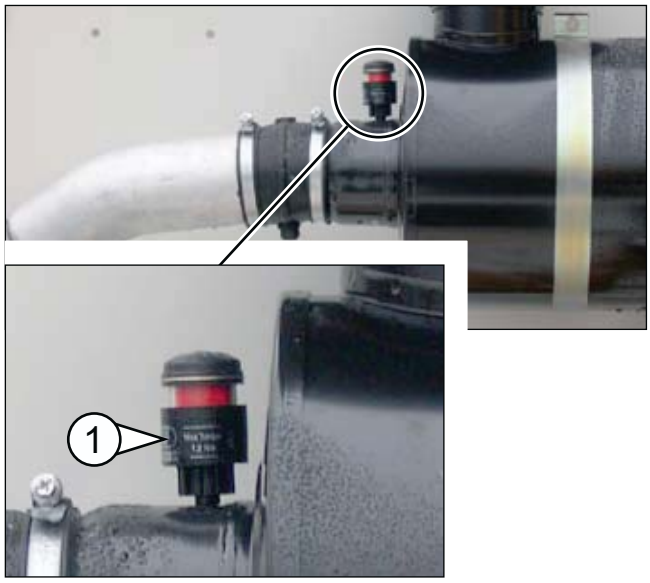
The engine takes in air constantly during use; Dust that enters into circulation can cause serious system damage.



(fig.27/D)



(fig.28/D) (Pegasus 38.16 air filter)



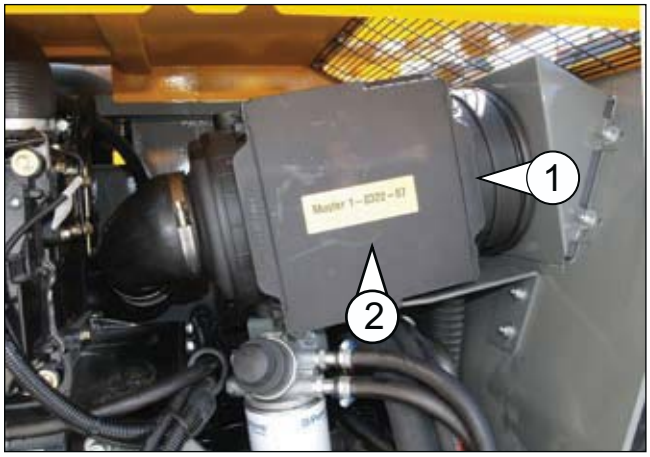
(fig.29/D) (Pegasus 38.16 air filter)

Cleaning/Replacing the cartridges engine air filter electronic

1. Place the machine on a flat and level surface.

2. Switch off the engine and remove the ignition key.
   Place a “maintenance work in progress” sign in the cab.

3. Open and fasten the bonnet.



(fig.35/D)

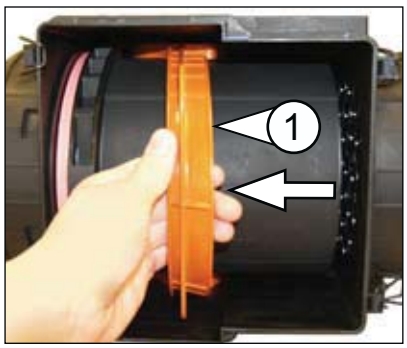
4. Pull the locking levers (fig.36/D Pos.“1”) located on the four corners of the filter lid (fig.35/D Pos.“2”) towards you

5. Remove the lid (fig.35/D Pos.“2”).



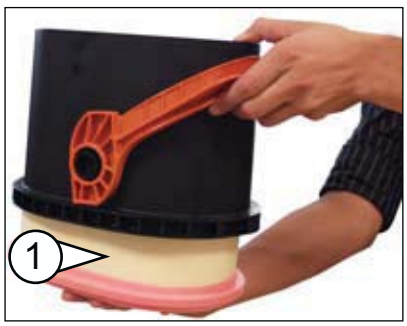
(fig.36/D)

6. Push the internal handle (fig.37/D Pos.“1”) towards the engine (as indicated by the arrow) and pull towards you to remove the secondary filter.



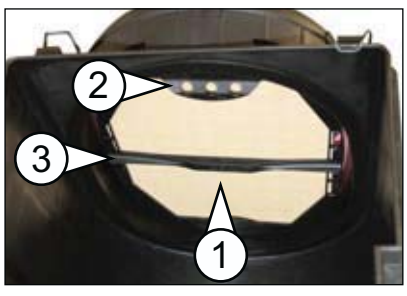
(fig.37/D)

7. Allow the paper filter (fig.38/D Pos.“1”) to slide out of its housing by turning the end with the seal upside down. Hold one hand below the seal to ensure it does not fall and break.



(fig.38/D)

8. Pull the tongue (fig.39/D Pos.“2”) on the side or the central plastic (fig.39/D Pos.“3”) towards you to remove the primary filter (fig.39/D Pos.“1”).



(fig.39/D)

9. Clean or replace the filter and reassemble all the parts by reversing the procedure described above.

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

When changing the filter cartridges, as well as cleaning the filter housing, it is necessary to clean the primary intake duct. To do this, proceed as follows:

1. Loosen the clamp on the engine intake pipe from the air filter side (fig. 40/D Pos. “1”).

2. Loosen the clamp on the front part of the engine intake pipe (fig.41/D Pos.“1”).

3. Unscrew the filter fixing screws below the support plate (fig.41/D Pos.“2”).

4. Remove the filter taking care to remove the seal on the front without damaging it.

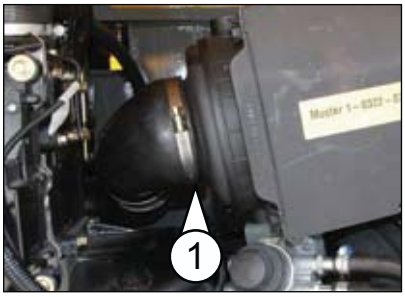
5. Place yourself on an appropriate workbench to disassemble the filter with ease.

6. Remove the bolt on the front of the filter (fig.42/D Pos.“1”) and remove the air intake honeycomb (fig.42/D Pos.“2”).

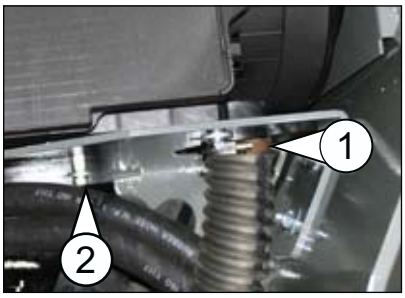
7. Use a wet cloth that does not leave any residues to clean. Clean every air intake hole.

8. Remove the front plate from the filter (fig.43/D Pos.“1”) by unscrewing the bolts (fig.43/D Pos.“2”) and clean this with a wet cloth that does not leave any residues.

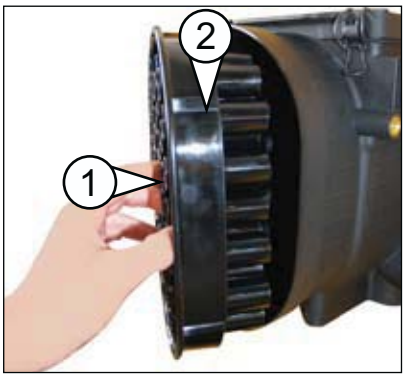
9. Reverse the procedure to reinstall all the parts.



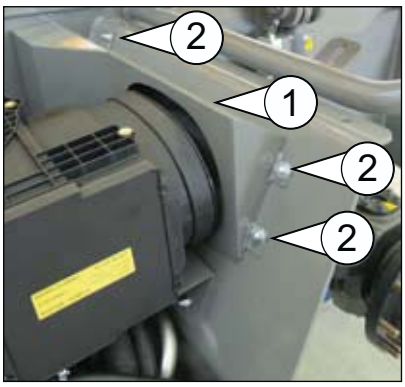
(fig.40/D)



(fig.41/D)



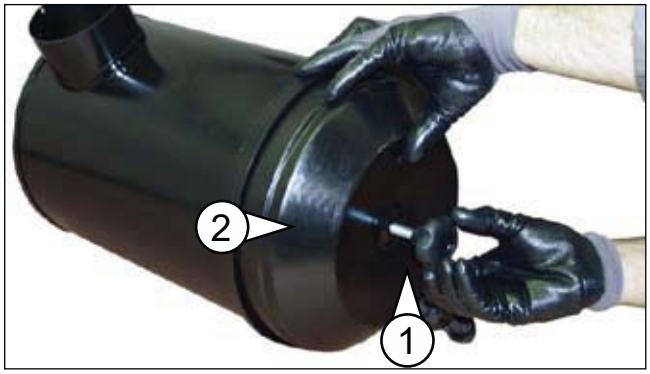
(fig.42/D)



(fig.43/D)

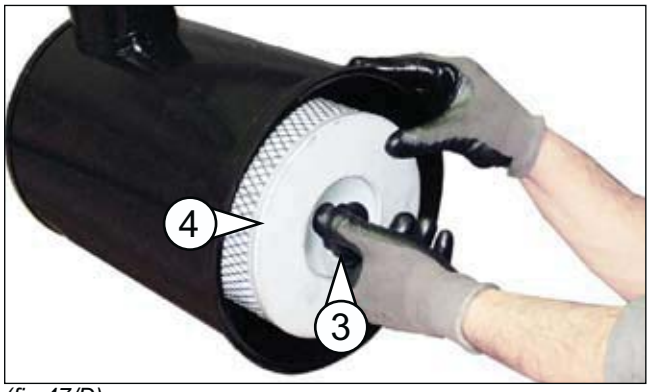
Cleaning/replacement of the mechanical engine air filter cartridge
(Pegasus 38.16)

1. Loose the knob “1” (Fig.46/D) anti-clockwise 1. and remove the lid “2” (Fig.46/D).



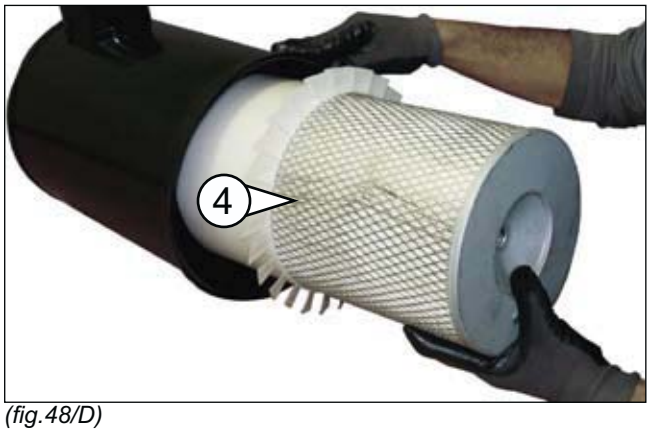
(fig.46D)

2. Remove the knob “3” (Fig.47/D) by screwing it anti-clockwise in order to extract the pre-filter ”4” (Fig.47/D).



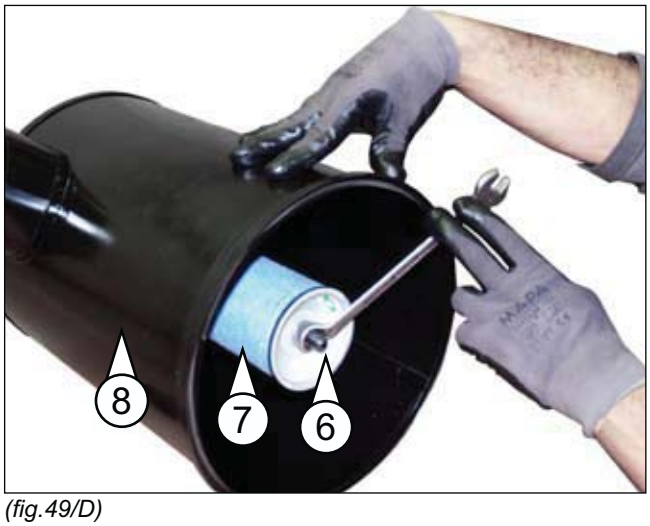
(fig.47/D)

3. Extract the prefilter “4” (Fig.48/D).



(fig.48/D)

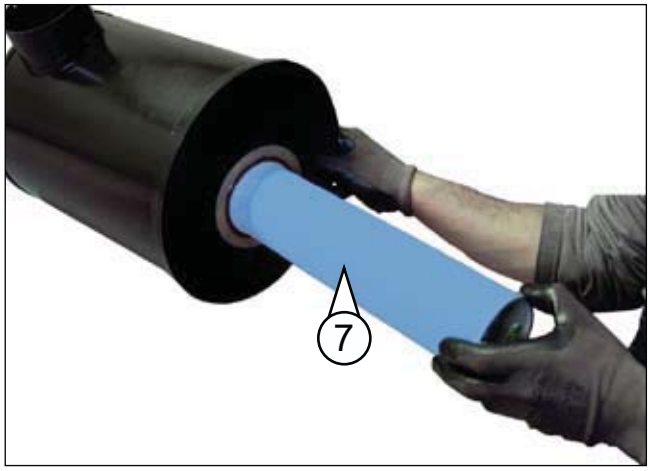
4. Disassemble the filter “7” (Fig.49/D) from the body “8” (fig.49/D) loosening the bolt ”6” (Fig.49/D) with a wrench, as in figure, paying attention not to loose or damage the washer.



(fig.49/D)

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

5. Extract the filter “7” (Fig.50/D).



(fig.50/D)

6. Clean and replace the filters and re-mount everything carrying out the same operations in the reverse order taking care not to tighten the bolts and knobs excessively.

A sealing ring is present in the lid in order to prevent “1” (Fig.51/D) draughts of air. Due to atmospheric agents, the rubber of which it is composed, tends to deteriorate, meaning it must be replaced when cracks appear.
Use a small flat screwdriver to remove it. To insert the new gasket, rest this in its seat and insert it exerting slight pressure. The sealing ring will be taken exactly into its seat, remounting the lid.

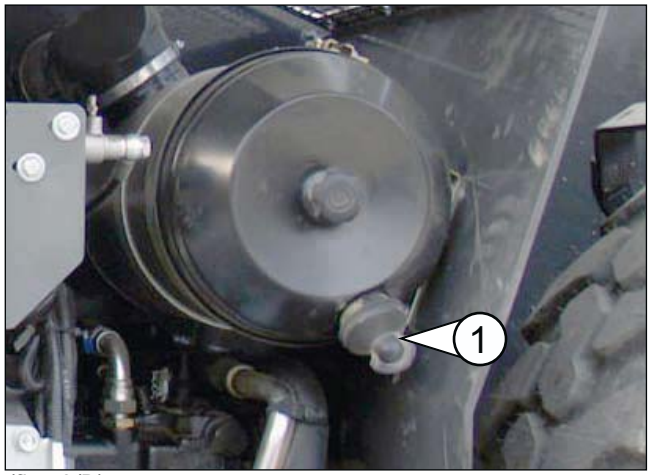


(fig.51/D)

During assembly of the filter, the valve (fig.51/D Pos.”1”) must must always be positioned in the lowest part possible with respect to the filter. If this is not the case, the expulsion functionality is compromised, reducing the lifespan of the filter.

- ATTENTION:

Periodically check the state of the dust discharge valve and replace it if deteriorated. Do not operate in absence of the drain valve.



(fig.52/D)

ROTATION REDUCTION GEAR WITH OIL LEVEL ROD

Checking the oil level.

While the machine is being used, the rotation reduction gear oil heats up and increases its volume. Therefore, check the level when the temperature is close to the ambient temperature.

To check the oil level, proceed as follows:

- Place the machine on a flat and level surface.
- Switch off the engine and remove the ignition key. Place a “maintenance work in progress” sign in the cab.
- Raise the boom as far as possible and install the safety rod.
- Disassemble the guard protecting the rotating parts (fig.55/D Pos.“1”) by unscrewing the four sealing screws (fig. 55/D Pos.“2”).
- Unscrew the cap (fig.56/D Pos.“1”), clean the rod with a cloth that does not leave any residues and then re-screw in its housing.
- Unscrew the cap again (fig.56/D Pos.“1”) and check the oil level on the graded rod (fig.56/D Pos. 2”).
- If the level is below minimum (fig.56/D Pos. “4”) (MIN) top up through the cap hole (fig.56/D Pos.“1”) until the oil reaches the correct level (fig.56/D Pos.“3”) (MAX).
- Reverse the procedure to reinstall all the parts.

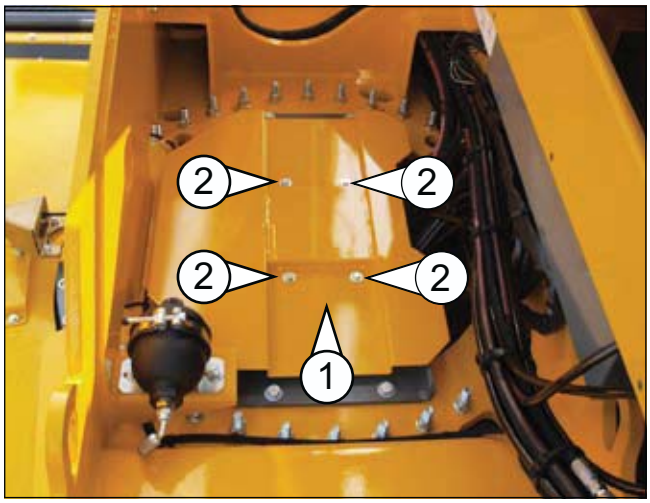
Changing the oil in the rotation reduction gear

Replace the oil at the prescribed times as follows:

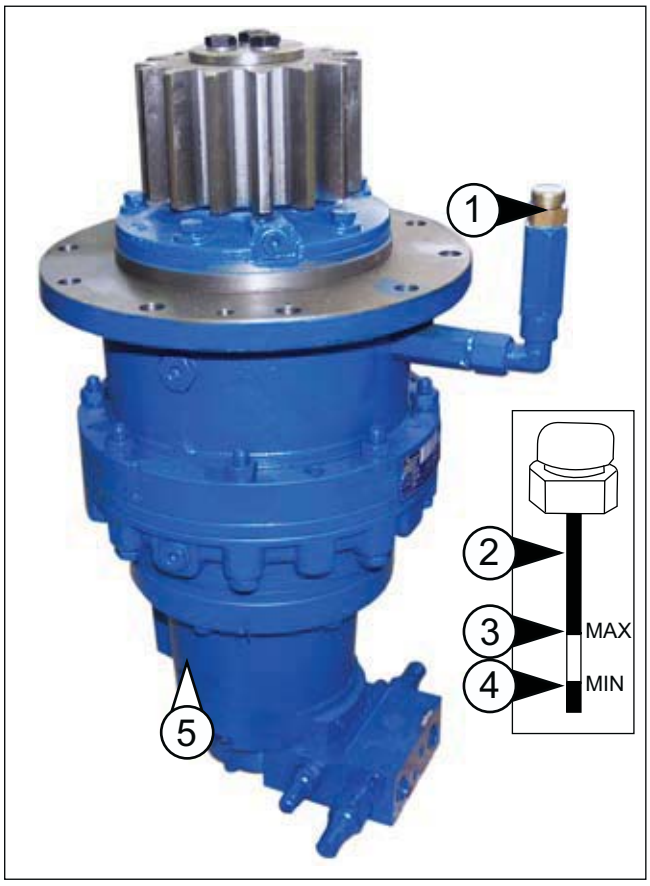
- Place the machine on a flat and level surface.
- Switch off the engine and remove the ignition key. Place a “maintenance work in progress” sign in the cab.
- Raise the boom as far as possible and install the safety rod.
- Disassemble the guard protecting the rotating parts (fig.55/D Pos.“1”) by unscrewing the four sealing screws (fig.55/D Pos.“2”).
- Place a suitably sized container below the reduction gear to collect any oil that may leak during the replacement procedure.
- Remove the drain plug (fig 56/D Pos.“5”) and the filler cap (fig.56/D Pos.“1”) to speed up the operation.
- When you have finished draining the oil, reinsert the drain plug (fig.56/D Pos.“5”) and fasten tightly.
- Fill the reduction gear through the filler cap hole (fig.56/D Pos.“1”) with an approved oil to the correct level (fig.56/D Pos.“3”) (MAX).
- Reverse the procedure to reinstall all the parts.

- CAUTION:

In some machines, rotation reduction gears with “zero maintenance” are installed. It is not necessary to check the oil level or replace the oil on these machines.



(fig.55/D)



(fig.56/D)

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

ROTATION REDUCTION GEAR WITHOUT AN OIL LEVEL ROD

Checking the oil level.

While the machine is being used, the rotation reduction gear oil heats up and increases its volume. While the machine is being used, the rotation reduction gear oil heats up and increases its volume. Therefore, check the level when the temperature is close to the ambient temperature.

To check the oil level, proceed as follows:

- Place the machine on a flat and level surface.
- Switch off the engine and remove the ignition key. Place a “maintenance work in progress” sign in the cab.
- Raise the boom as far as possible and install the safety rod.
- Disassemble the guard protecting the rotating parts (fig.57/D Pos.“1”) by unscrewing the four sealing screws (fig.57/D Pos.“2”).
- Unscrew the level cap (fig.58/D Pos.“2”) and ensure the oil is level with the lower part f the hole.
- If there is insufficient oil, unscrew the filler cap (fig.58/D Pos.“1”) and top up until oil exits from the level cap (fig.58/D Pos.“2”).
- Reverse the procedure to reinstall all the parts.

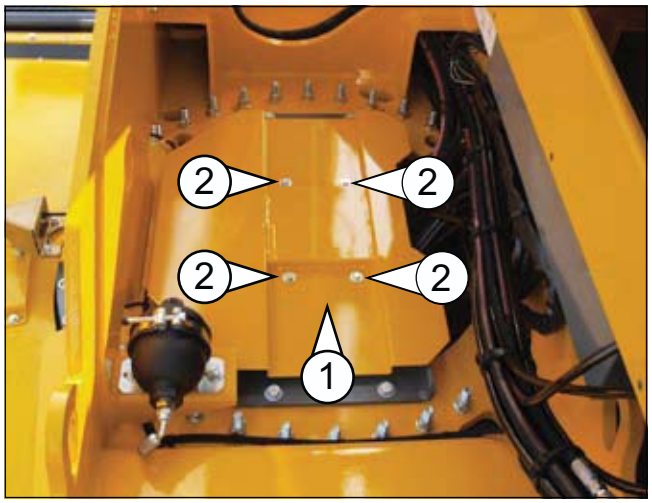
Changing the oil in the rotation reduction gear

Replace the oil at the prescribed times as follows:

- Place the machine on a flat and level surface.
- Switch off the engine and remove the ignition key. Place a “maintenance work in progress” sign in the cab.
- Raise the boom as far as possible and install the safety rod.
- Disassemble the guard protecting the rotating parts (fig.57/D Pos.“1”) by unscrewing the four sealing screws (fig.57/D Pos.“2”).
- Place a container below the filter to collect the exhausted oil during the replacement procedure.
- Remove the drain plug (fig.58/D Pos.“3”) and the level cap (fig. 58/D Pos. “2”) to speed up the operation.
- When you have finished draining the oil, re-screw the drain plug (fig.58/D Pos.“3”) and fasten tightly.
- Unscrew the filler cap (fig.58/D Pos.“1”) and fill with approved oil until the oil exits from the level cap (fig.58/D Pos.“2”).
- Reverse the procedure to reinstall all the parts.

- CAUTION:

Some vehicles have rotation reducers installed which are “Maintenance free”. The level check and replacement of the oil must never be performed.



(fig.57/D)



(fig.58/D)

CYLINDER CHECK VALVES

The cylinder check valves prevent uncontrolled cylinder piston movement if there is no hydraulic pressure or a flexible hose bursts. The valves are directly mounted on the cylinders.

Checking the cylinder check valves

- CAUTION:

Ensure there are no bystanders within range of the machine during the check procedures.

- CAUTION:

During the test procedure, one movement must be controlled at a time.

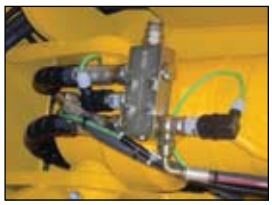
- CAUTION:

If there are any faults, do not use the machine until it has been repaired.

A) Boom raising cylinders: (fig.61/D)

1. Start the engine. Ensure that the parking brake is engaged and the gear selector is in neutral.
2. Raise the boom approximately 45°.
3. While the engine is running at 1400 rpm, act on the control lever to lower the boom. During the boom movement, stop the engine. The movement of the boom must slow down and stop as the engine slows down and stops.

If the boom keeps on moving after the engine has stopped running, the cylinder check valves are faulty. Repair the fault as soon as possible. Contact a ***DIECI*** service centre.



(fig.61/D) (Raise boom cylinder check valve)

B) Boom extension cylinder: (fig.62-63/D)

1. Start the engine. Ensure that the parking brake is engaged and the gear selector is in neutral.
2. Raise and extend the boom completely.
3. While the engine is running at 1400 rpm, act on the control lever to retract the boom. During the boom movement, stop the engine. The movement of the boom must slow down and stop as the engine slows down and stops.

If the boom keeps on moving after the engine has stopped, the cylinder check valve is faulty. Repair the fault as soon as possible. Contact a ***DIECI*** service centre.



(fig.62/D) (Extend boom external cylinder check valve)



(fig.63/D) (Extend boom internal cylinder check valve)

C) Fork pivot and turn cylinder (pivot and turn): (fig. 64/D)

1. Start the engine. Pick up a load with the forks (for example, a load of bricks hay bales).
   Completely tilt the forks backwards.
2. Engage the parking brake and shift the gear selector to neutral,
3. Distance the boom from the ground enough to be able to tilt the forks forwards.
4. While the engine is running at 1400 rpm, act on the control lever to tilt the forks forwards. Stop the engine while the forks are moving. The pivoting movement must slow down and stop as the engine slows down and stops.

If the forks keep on lowering or moving after the engine has stopped, the check valve is faulty.
Repair the fault as soon as possible. Contact a ***DIECI*** service centre.



(Fig. 64/D) (Plate pivot and turn external cylinder check valve)



(Fig. 65/D) (Levelling cylinder check valve)

D) Rear axle oscillation lock levelling cylinders: (fig. 65-66/D)

1. Start the engine. Ensure that the parking brake is engaged and the gear selector is in neutral.
2. Level the machine using the levelling device and engage the rear axle oscillation lock (keep the machine on the tyres).
3. Raise the boom high enough above ground to be able to rotate the turret without encountering obstacles.
4. Completely extend the boom.
5. While the engine is idling, engage the turret rotation control lever and rotate 360°.

If during rotation the machine looses stability, the levelling cylinder check valves or the oscillation lock are faulty. Repair the fault as soon as possible. Contact a ***DIECI*** service centre.



(Fig. 66/D) (Oscillation lock cylinder check valve)

E) Stabiliser cylinders: (fig. 67-68/D)

1. Start the engine. Ensure that the parking brake is engaged and the gear selector is in neutral.
2. Position the machine on the stabilisers and level using the stabilisers.
3. Completely extend the boom.
4. While the engine is idling, engage the turret rotation control lever and rotate 360°.

If during rotation the machine looses stability on the stabilisers, the cylinder check valves are faulty.
Repair the fault as soon as possible. Contact a ***DIECI*** service centre.



(Fig. 67/D) (8-movement extension – 4-movement stabiliser descent cylinder check valve)



(Fig. 68/D) (8-movement stabiliser cylinder check valve)

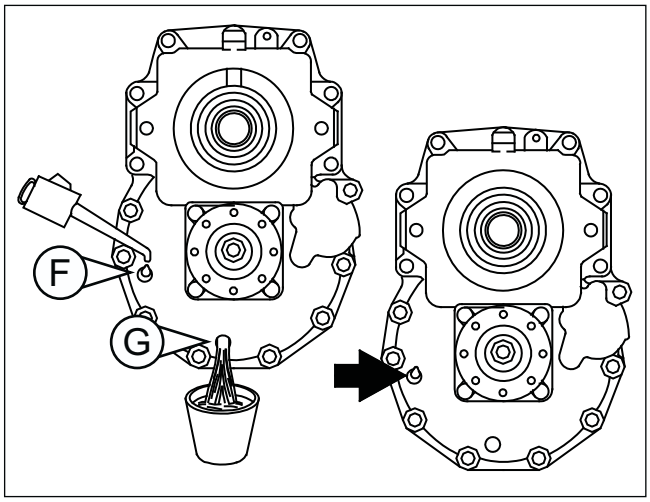
REDUCTION GEAR AND DIFFERENTIAL AXLES

The figures are indicative and may not be the same as the parts assembled on your machine.
The references to maintenance holes refer to the following pages, which illustrate two standard axles with reduction gear for more exact identification.

Reduction gear

Changing the oil
(Fig.71/D)

1. Place the machine on a flat and level surface while the differential oil is still hot.
2. Switch off the engine and remove the ignition key. Place a “maintenance work in progress” sign in the cab.
3. Place a container below the drain caps to collect the exhausted oil during the replacement procedure.
4. Remove the drain plug (fig.71/D Pos. “G”) and the filler/level cap (fig. 71/D Pos. “F”) to drain all the oil completely.
5. Allow the oil to drain away completely.
6. Replace the drain plugs and tighten well.
7. Pour clean oil of the approved type through the filler/level cap (fig.71/D Pos. “F”).
8. The level is correct when oil flows out of the filler/level cap (fig.71/D Pos. “F”).
9. Check for any leaks from the drain caps.
10. Reassemble the filler/level cap and tighten securely.

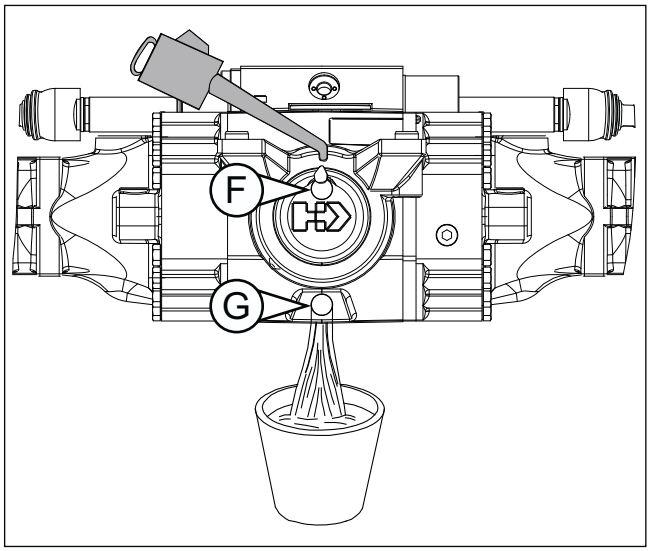


(fig.71/D)

Front/rear differential axles

Changing the oil
(Fig.72/D)

1. Place the machine on a flat and level surface while the differential oil is still hot.
2. Switch off the engine and remove the ignition key. Place a “maintenance work in progress” sign in the cab.
3. Place a container below the drain caps to collect the exhausted oil during the replacement procedure.
4. Remove the drain plug (fig.72/D Pos. “G”) and the filler/level cap (fig.72/D Pos. “F”) to drain all the oil completely.
5. Allow the oil to drain away completely.
6. Replace the drain plugs and tighten well.
7. Pour clean oil of the approved type through the filler/level cap (fig.72/D Pos. “F”).
8. The level is correct when oil flows out of the filler/level cap (fig.72/D Pos. “F”).
9. Check for any leaks from the drain caps.
10. Reassemble the filler/level cap and tighten securely.



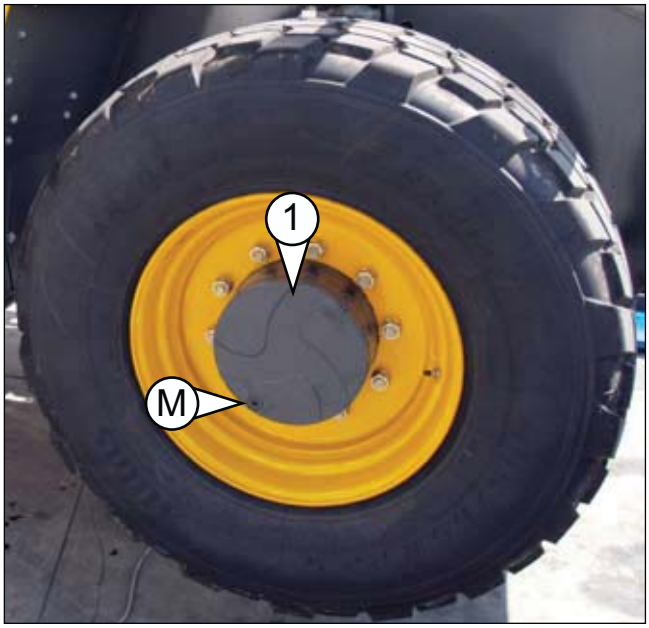
(fig.72/D)

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

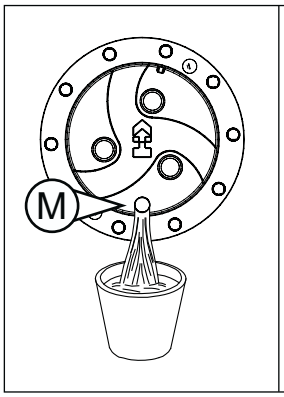
Epicyclic reduction gear

Changing the oil
(fig.73/D - fig.74/D - fig.75/D)

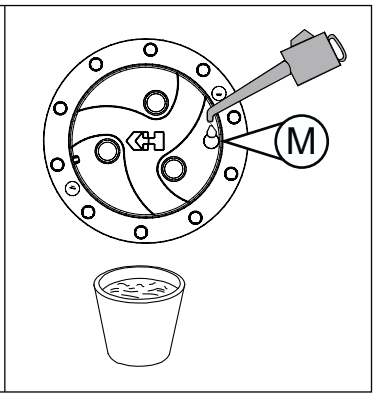
1. Place the machine on a flat and level surface while the differential oil is still hot.
2. Switch off the engine and remove the ignition key.
   Place a “maintenance work in progress” sign in the cab.
3. Place a container below the drain caps to collect the exhausted oil during the replacement procedure.
4. Turn the wheel hub (fig.73/D Pos. “1”) so that the hole (fig.73/D Pos. “M”) is at the bottom (fig.74/D) and then remove the oil cap.
5. Allow the oil to drain away completely.
6. Turn the wheel hub so that the hole (fig.73/D Pos. “M”) is in the middle position (fig.75/D).
7. Fill the reduction gear through the hole (fig.75/D) up to the correct level.
   The level is correct when oil flows out of the oil cap.
8. Reassemble the epicyclic reduction gear cap and tighten securely.
9. Repeat the above procedure for all four reduction gear assemblies.



(fig.73/D)



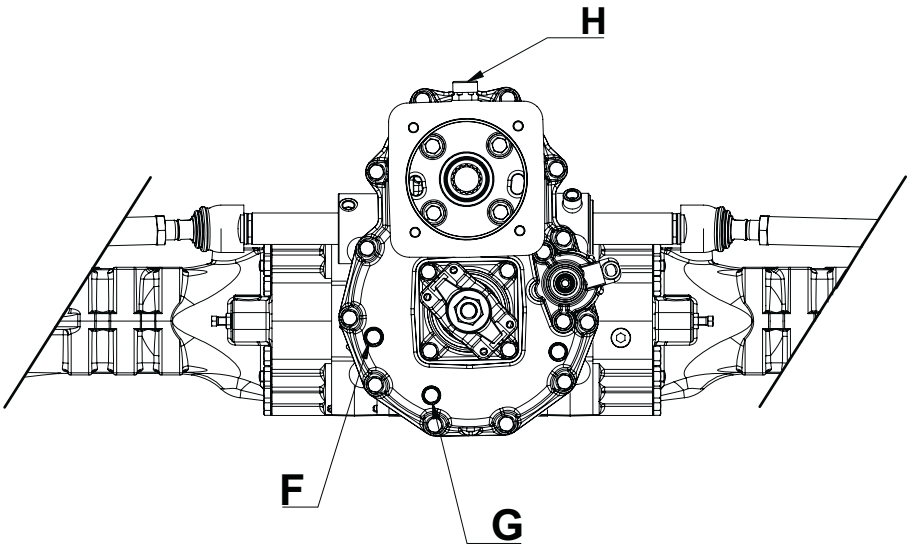
(fig.74/D)

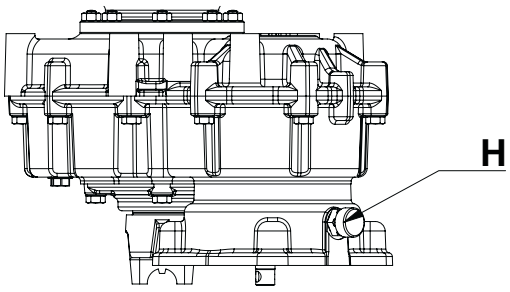


(fig.75/D)

REDUCTION GEAR

Key	
E	Oil level cap
F	Oil filler and level cap
G	Drain plug
H	Air vent
M	Oil cap



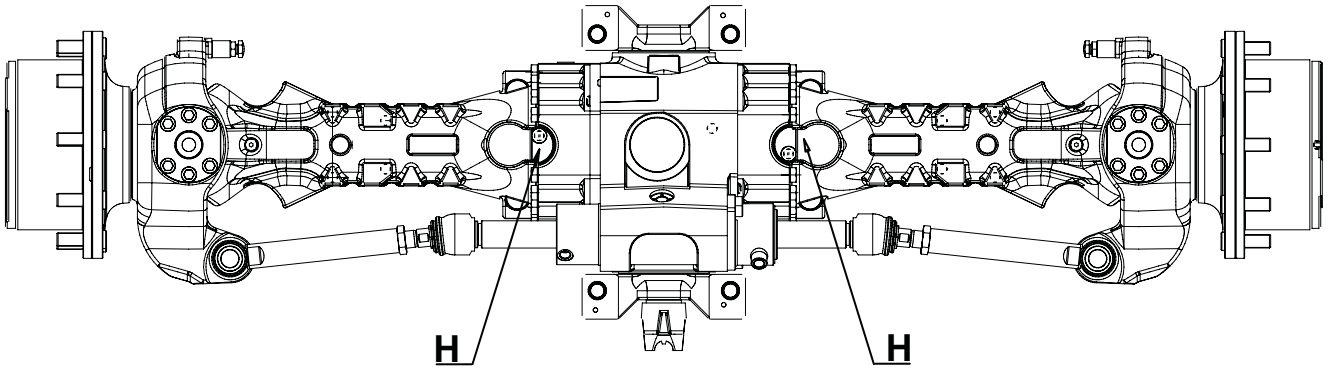


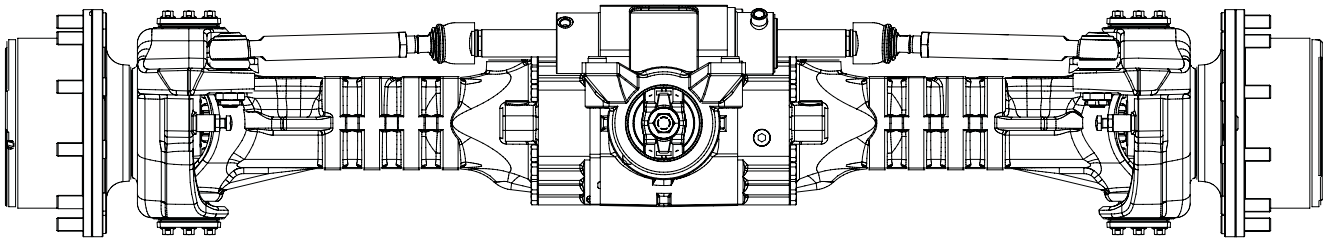
(fig.78/D)

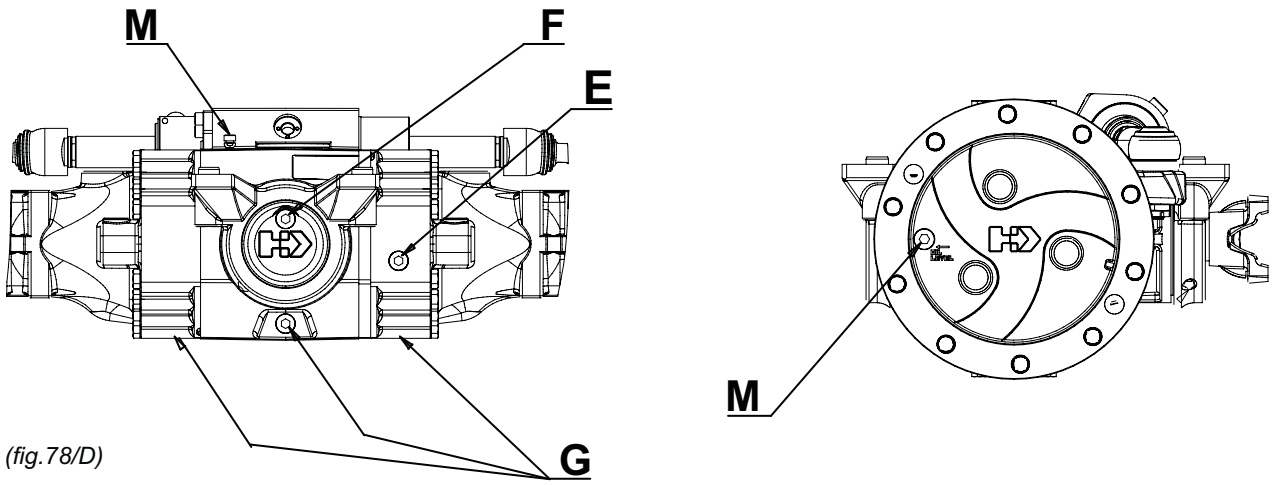
- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

DIFFERENTIAL AXLE

Key	
E	Oil level cap
F	Oil filler and level cap
G	Drain plug
H	Air vent
M	Oil cap







(fig.78/D)

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- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

BOOM SLIDING BLOCKS

Lubrication
(fig.80/D)

The boom sliding blocks must be kept lubricated to avoid wear and keep movements smooth.

Completely extend the boom and inspect its surface. If the layer of lubricant is thin or with impurities (sand, dust, sawdust, etc.) act as follows:

- While the boom is completely extended horizontally, remove the layer of lubricant from the extensions with a cloth.
- Use a brush to apply a layer of lubricant of the approved type on the four sides of the telescopic boom.
- Activate the boom several times to distribute the lubricant evenly.
- Remove any excess lubricant.

- CAUTION -

During the visual inspection and while applying the lubricant, the machine must be switched off and the key removed from the cab to avoid accidental manoeuvres.

- CAUTION:

If the machine is used in extreme conditions or in very dusty environments, lubricate more often.

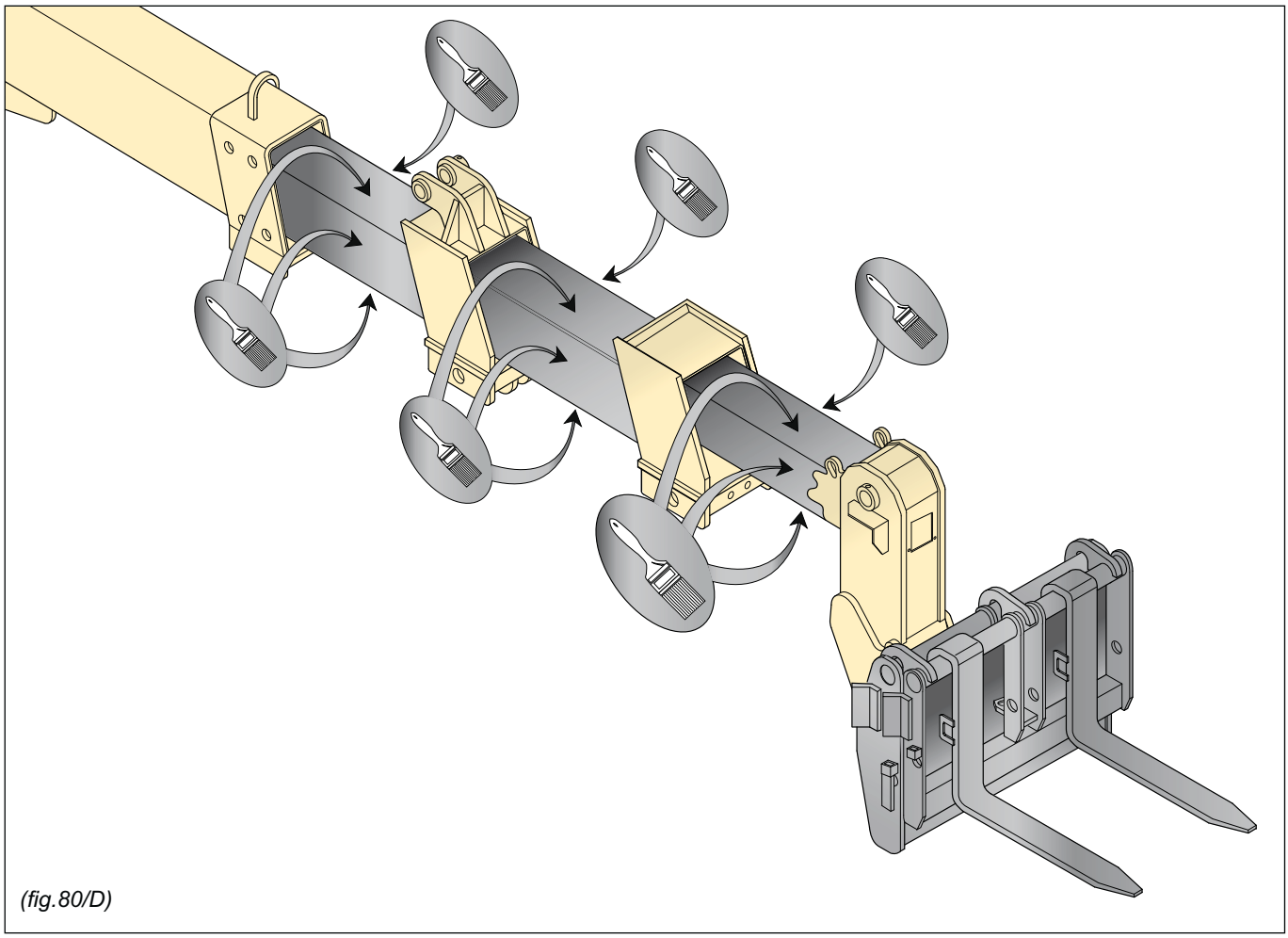
- CAUTION:

Only use the lubricants indicated in the ***DIECI*** tables. Different lubricants can cause serious damage to the sliding surfaces.

Sliding block wear

Consult the summary table at the start of this chapter to find out how often this must be done.

Worn sliding blocks can cause oscillations and backlash between one extension and another with a consequent loss of precision and danger of dropping the load. The more extreme the working conditions, the greater the wear. Any maintenance work carried out on the boom sliding blocks must be carried out by an authorised service centre.



(fig.80/D)

EXTERNAL BOOM CHAINS
(fig.81/D)

Lubrication

Lubrication means:

- Introducing a liquid between contact surfaces to decrease wear and avoid seizure.
- Protecting the chains against corrosion.
- Reducing the noise produced by contact surfaces.

Lubrication must be carried out:

- Lengthways in an area where the joints are not subjected to very much stress to ease the penetration of lubricant.
- Transversally between the plates to ease penetration of the lubricant in the joint.

The viscosity of the lubricant must suit the ambient temperature. Insufficient viscosity increases lubricant loss, too much viscosity prevents the lubricant from penetrating the joints. Consult the table on the right for the correct viscosity (fig.82/D).

- CAUTION:

In the case of special applications or use in adverse conditions, consult a ***DIECI*** service centre.

- PROHIBITION -

IT IS STRICTLY FORBIDDEN to lubricate the chains with grease.

Wear inspection

At the prescribed times it is necessary to inspect:

- The installation geometry.
- The condition of the chain, to analyse any traces of friction that may indicate an incorrect installation geometry. Wear on the profile of the external plates due to contact with the pulleys and the drive systems. Wear on the sides of the external plates and on the heads of the pins due to contact with the pulley flanges or any drive devices.
- Wear on the chain joints either by directly measuring their length using a measuring tool or control ruler, or by carrying out a visual inspection.
- Wear of the Flyer hoisting chain plates.

- CAUTION -

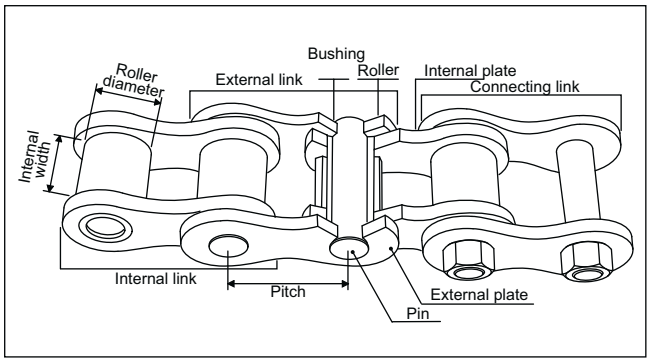
The chains must be replaced when wear due to elongation exceeds 2%.
When chains are replaced, the respective rollers MUST also be replaced.



(fig.81/D)

Temperature (C°)	Recommended viscosity ISO VG (Cst)
- 15 < T< 0	Between 15 and 32
0 < T< 50	Between 46 and 150
50 < T< 80	Between 220 and 320

(Fig. 82/D) - Chain oil viscosity table



(Fig. 83/D) - Standard chain components

How to determine wear caused by elongation

- Check the type of chain installed; this is indicated on the external plates of the chain (if illegible contact a ***DIECI*** service centre).
- Identify the chain pitch using the table (fig.84/D). (E.g. AL8/BL8 Fleyer Chain; Pitch: 1”/25.40 mm) and multiply by per 10.
- Measure 10 pitches of the chain to check (fig.67/D).
- If the measurement is 2% longer than the pitch indicated in the table multiplied by ten, the chain is worn and must be replaced.

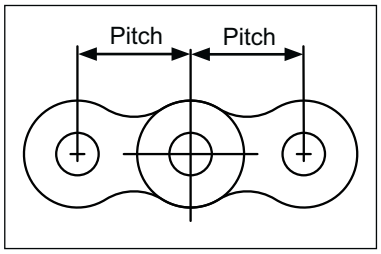
2% of the measurement = [Measurement: 100] x 2

- CAUTION:

The measurement must be made in more than one point (because the degree of wear may not be the same everywhere) and while the chain is tensioned. Measurement can be carried out with a gauge or ruler featuring a scale in millimetres (fig.86/D).

AL4	AL5	AL6	AL8	AL10	AL12	AL14	AL16	**Fleyer chains**
BL4	BL5	BL6	BL8	BL10	BL12	BL14	BL16	**Fleyer chains**
1/2”	5/8”	3/4”	1”	1 1/4”	1 1/2”	1 3/4”	2”	**Inch pitch**
12,70	15,87	19,05	25,40	31,75	38,10	44,45	50,80	**Mm pitch**

(fig.84/D)



(fig.85/D)



(fig.86/D)

Inspection, cleaning and lubrication

- Place the machine on a flat and level surface.
- Position the machine on the stabilisers.
- Completely extract the boom so it is horizontal.
- Switch off the engine and remove the ignition key. Place a “maintenance work in progress” sign in the cab.
- Clean the chains with a clean cloth that does not leave residues to remove surface dirt.
- Thoroughly brush the chains to remove all dirt using a hard nylon brush and clean diesel fuel. Then blow with compressed air.
- Carefully inspect the chains as described in the “check for wear” paragraph.
- Lightly lubricate the chains using a brush soaked in oil (see the “lubrication” paragraph).
- Remove any excess oil from the entire surface of the chains with a clean cloth.
- Activate the boom several times to distribute the lubricant evenly.

- CAUTION:

If the chains need to be replaced, contact a ***DIECI*** service centre.

- CAUTION -

The chains can be weakened by hydrogen.

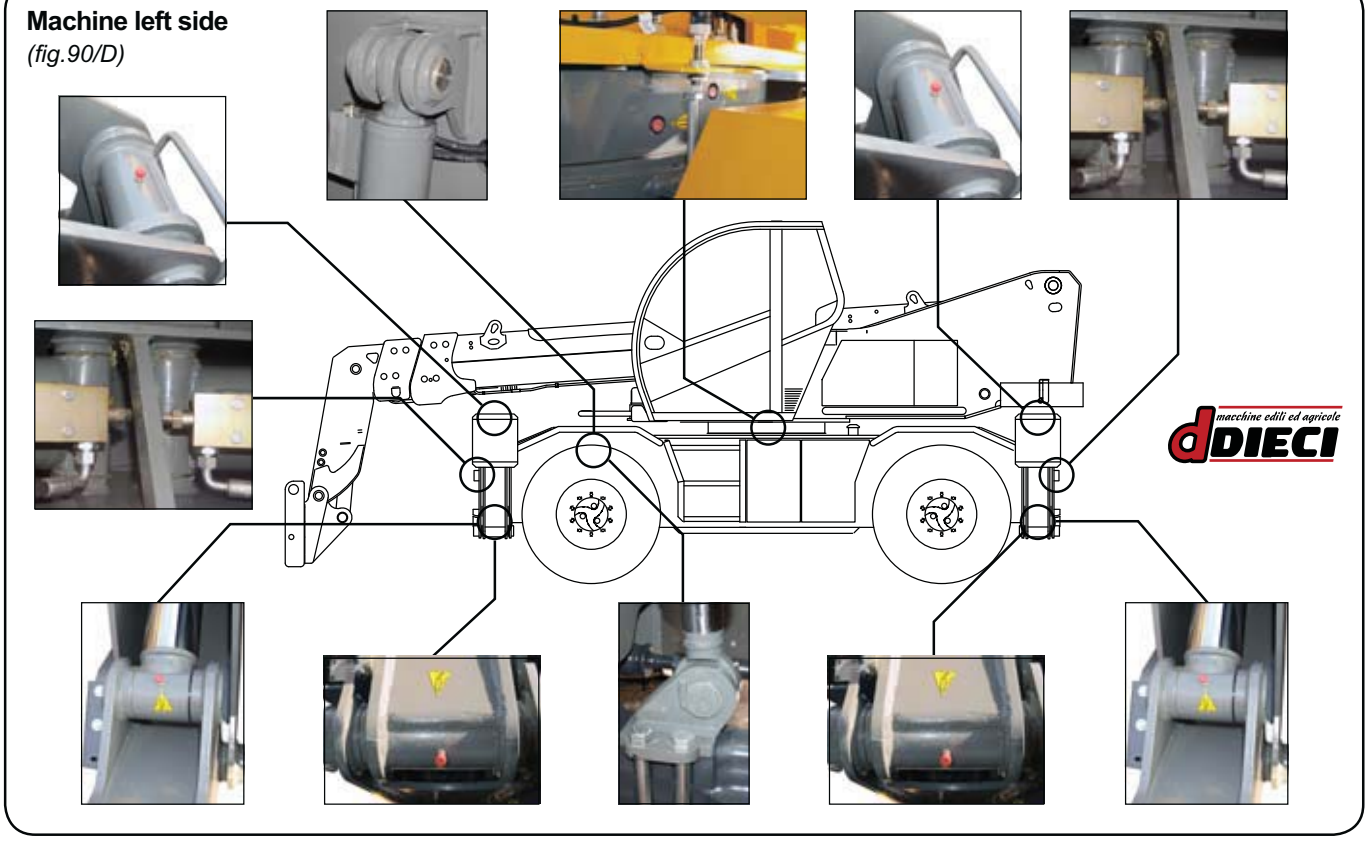
IT IS STRICTLY FORBIDDEN to work in acid areas. Work in oxidising and corrosive environments for the shortest possible time.

LUBRICATORS

Machine with four movement stabilisers (PEGASUS 70.11, 60.16, 30.16, 40.17, 38.16)

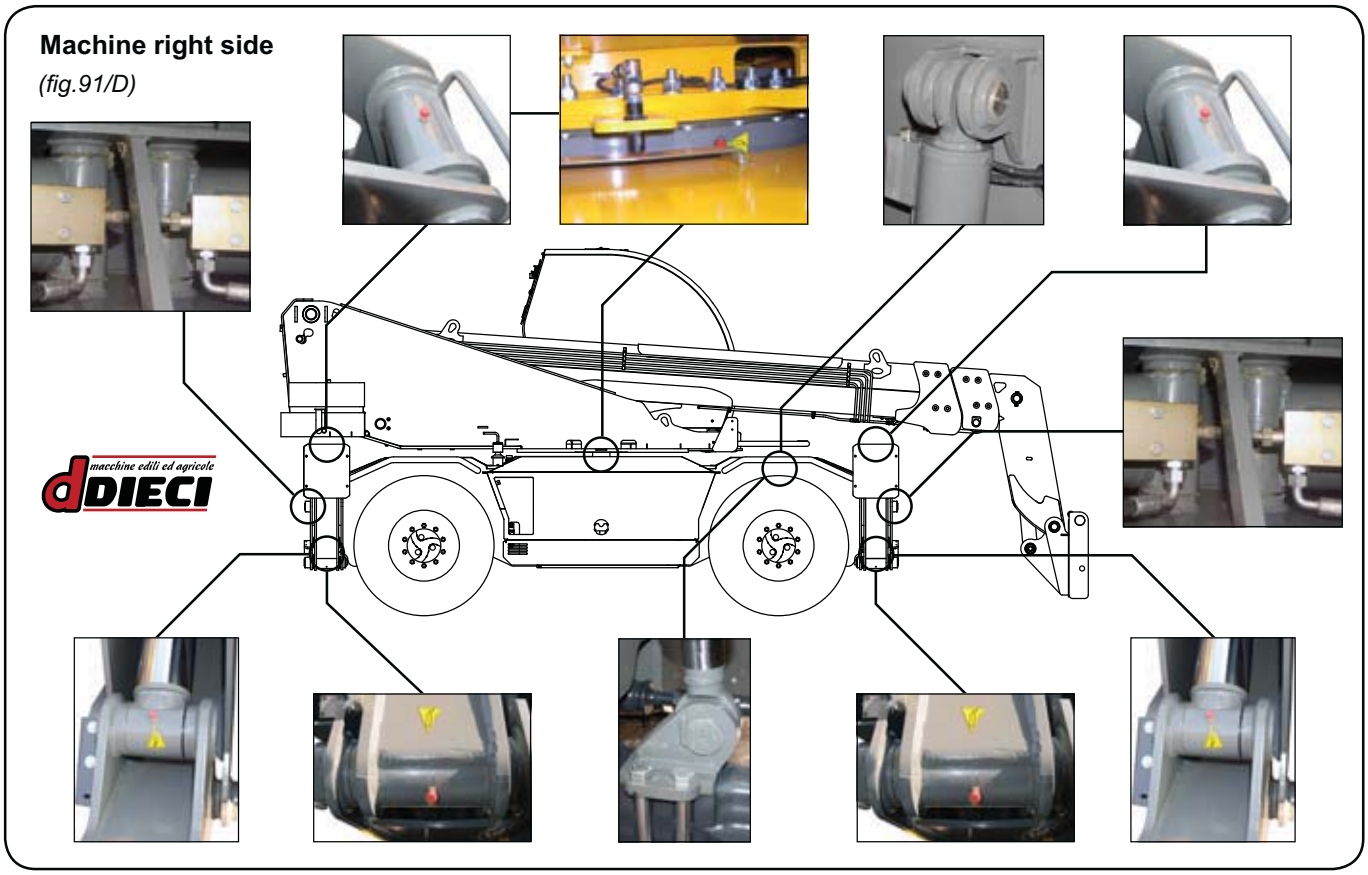
Machine left side

(fig.90/D)



Machine right side

(fig.91/D)



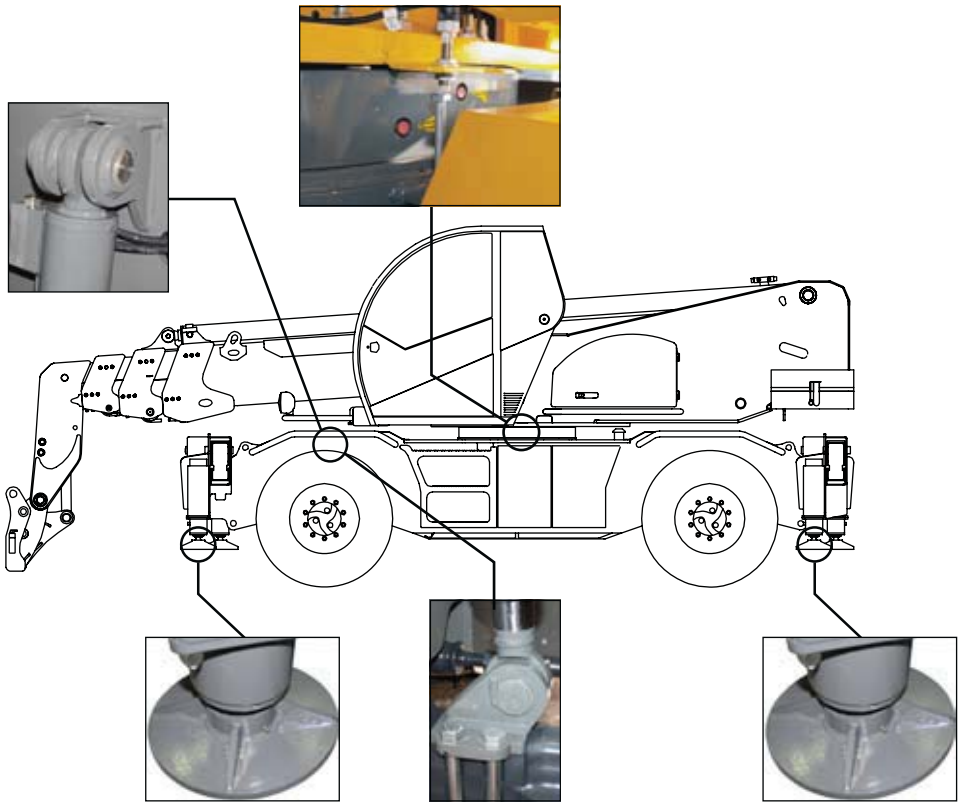
- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

LUBRICATORS

Machine with eight movement stabilisers (PEGASUS 45.19, 45.21, 50.21, 40.25)

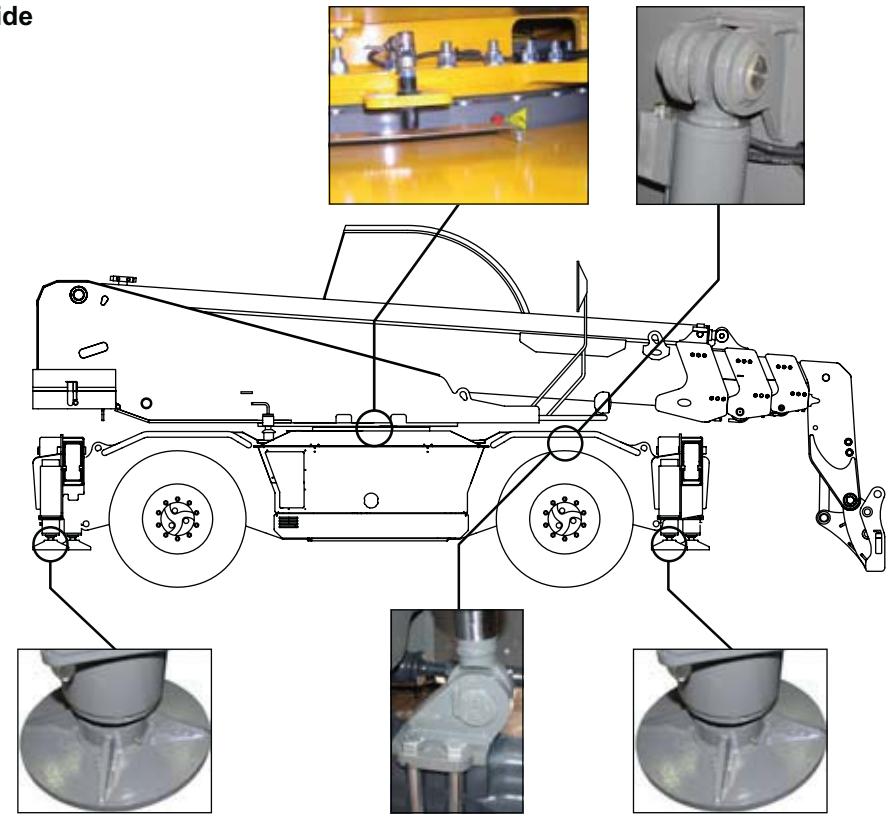
Machine left side

(fig.92/D)



Machine right side

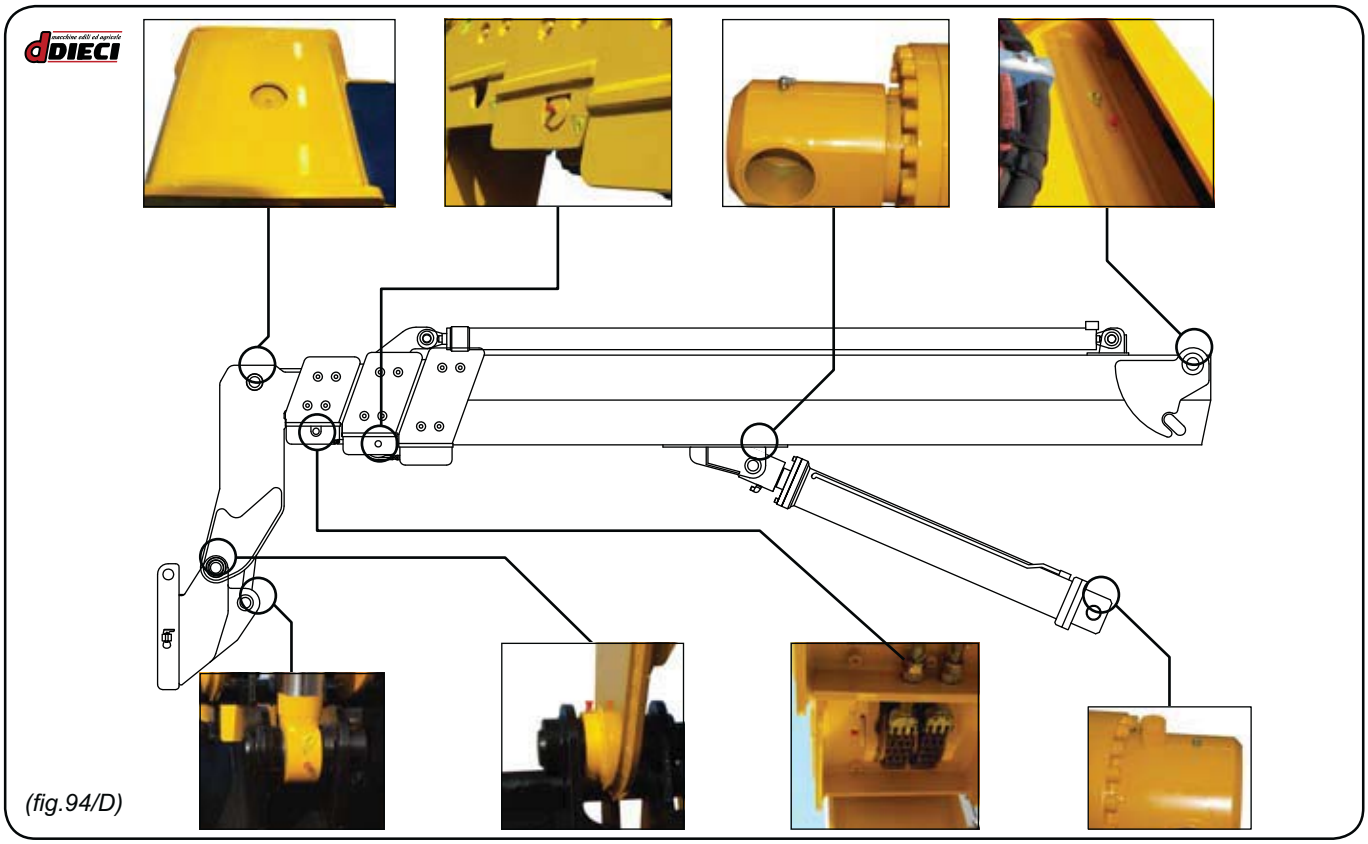
(fig.93/D)



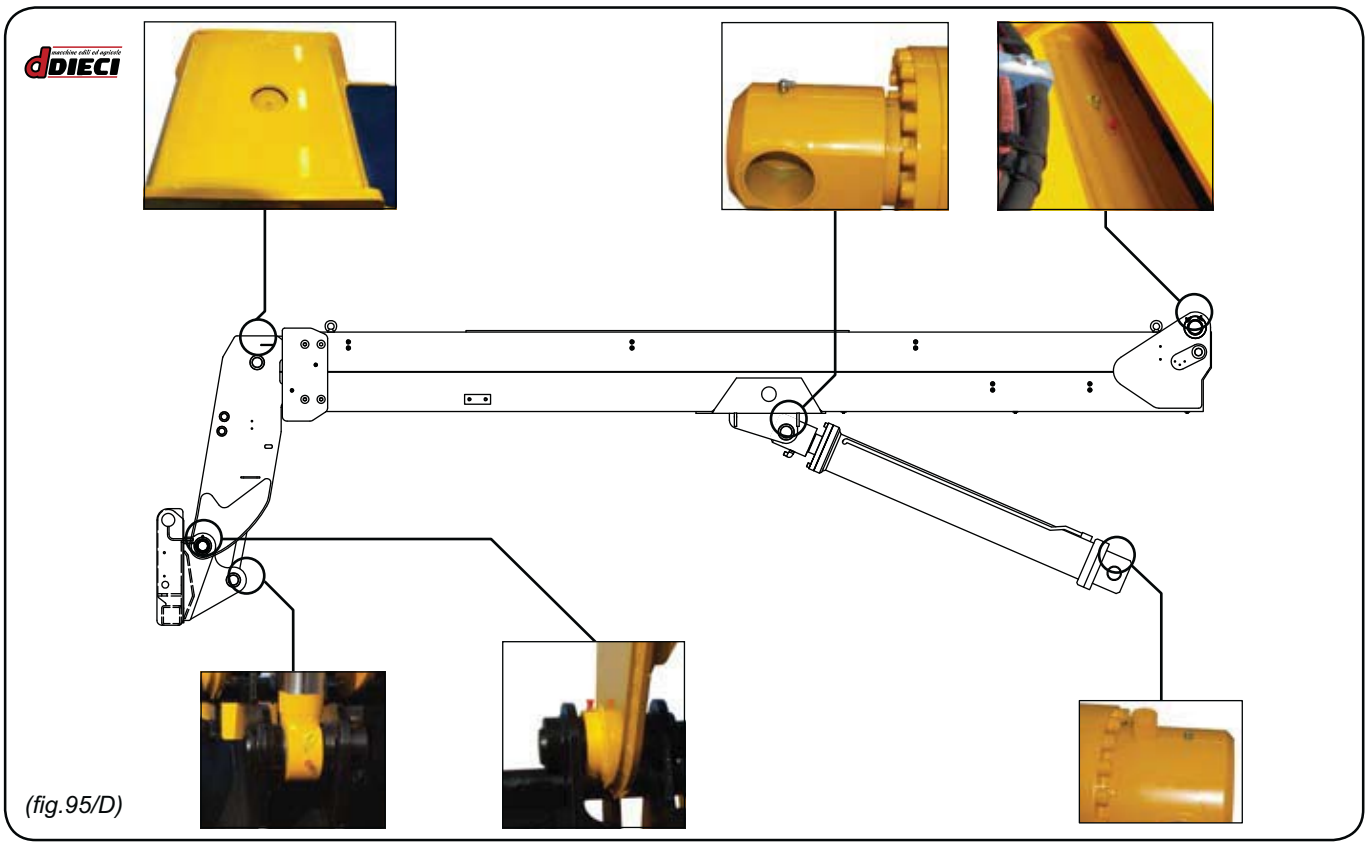
LUBRICATORS

One/two/three extension booms

The references for the lubricators on two extension booms are the same as for three extension booms.



(fig.94/D)

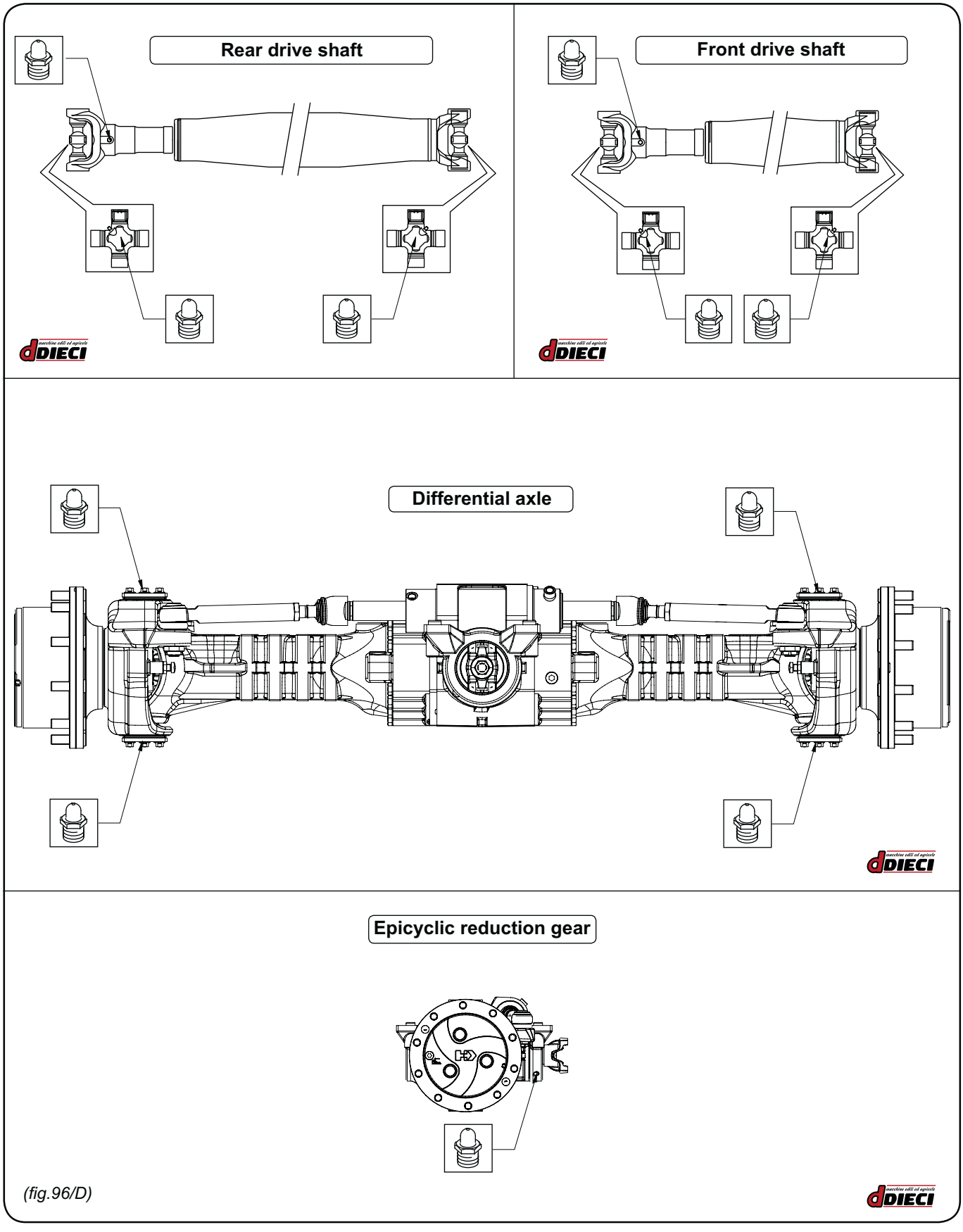


(fig.95/D)

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

LUBRICATORS

Drive shafts and differential axles



(fig.96/D)

BATTERY CUT-OFF SWITCH

(fig.97/D Pos.“1”)

The battery cut-off switch is below the cab next to the battery. The battery cut-off switch disconnects the power supply to the electrical system by opening the circuit on the negative pole.

- Turn the handle so it is vertical to open the circuit and disconnect the power supply (fig.98/D Pos.“1”).
- Turn the handle so it is horizontal to restore the original conditions and close the circuit (fig.97/D Pos.“1”).

- CAUTION -

Only use the battery cut-off switch when the machine is switched off.

- CAUTION -

Every time any maintenance work is carried out on the machine, it is compulsory to act on the battery cut-off switch to open the electrical circuit.



(fig.97/D)



(fig.98/D)

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

FUSES
(fig. 99/D Pos. “1”)

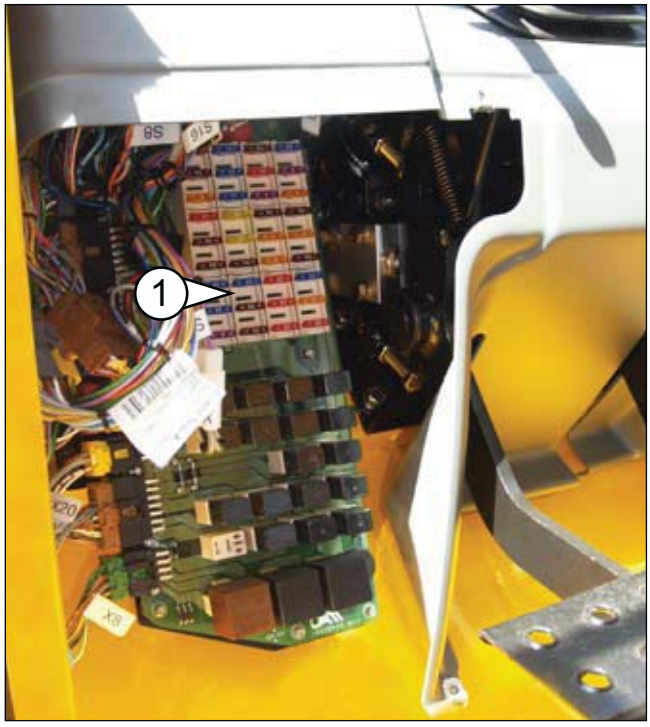
General control unit

The general electrical circuit is protected by fuses located in the general control board (fig.99/D Pos.“1”).
To access the electronic board, remove the left plastic cover below the dashboard by unscrewing the screws.
If there are any electrical malfunctions, first check the condition of the fuses when looking for the source of the problem.
Use the special pliers to remove the fuses.

To replace a fuse, remove it from its housing using the special pliers and replace with another fuse featuring the same class, quality and amperage.

- CAUTION:
Before removing the plastic covers below the dashboard, disconnect the power supply by acting on the battery cut-off switch.

- CAUTION:
Never attempt to repair a fuse in any way.



(fig.99/D)

Engine control unit
(fig.100/D Pos. “1”)

The engine electrical circuits and connected components are protected by a fuse control box located in the engine compartment (fig.100/D Pos.“1”).
Remove the lid on the box to access the fuses. If there are any electrical malfunctions, first check the condition of the fuses when looking for the source of the problem.

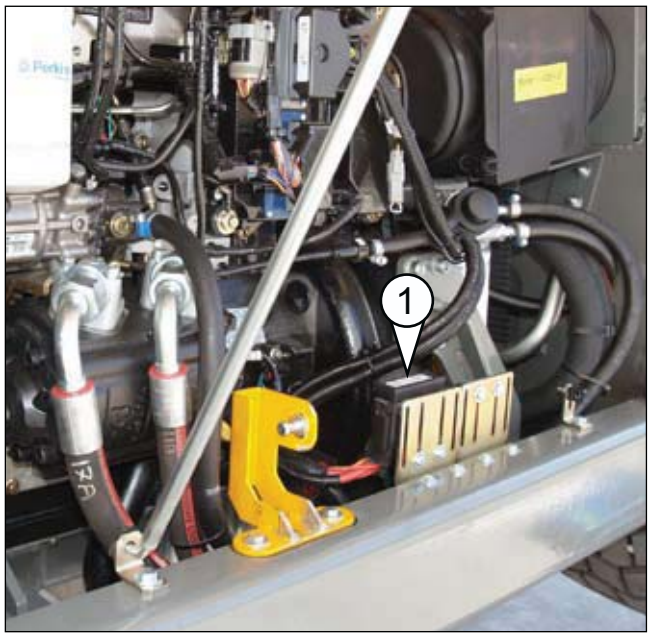
To replace a fuse, remove it from its housing using the special pliers and replace with another fuse featuring the same class, quality and amperage. Any other type of procedure must be carried out by authorised personnel.

- CAUTION:

Before accessing the engine compartment, switch off the machine and remove the ignition key, disconnect the power supply by acting on the battery cut-off switch.

- CAUTION:

Never attempt to repair a fuse in any way.



(fig.100/D)

- CAUTION -

The general machine fuse is located inside the engine control unit.

LIGHTS

The lights on the machine must always be efficient and function perfectly. Check the lights are functioning properly every day. If any lights are damaged, they must be replaced immediately. Immediately replace any burnt out light bulbs.

FRONT HEADLIGHT

(fig.101/D)

The front headlight consists in an indicator light, side light and low/high beam headlight.

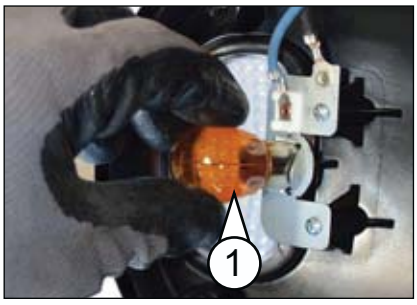


(fig.101/D)

To access the light bulbs:

- Stop the machine and act on the battery cut-off switch to disconnect the power supply.
- Remove the head light power connector on the rear.
- Remove the front part of the head light by unscrewing the screws located on the rear cover.

To re-close the head light, reverse the procedure described above (ensure the seal is positioned correctly).



(fig.102/D)

How to replace the direction indicator light bulb
(fig.102/D Pos.“1”)

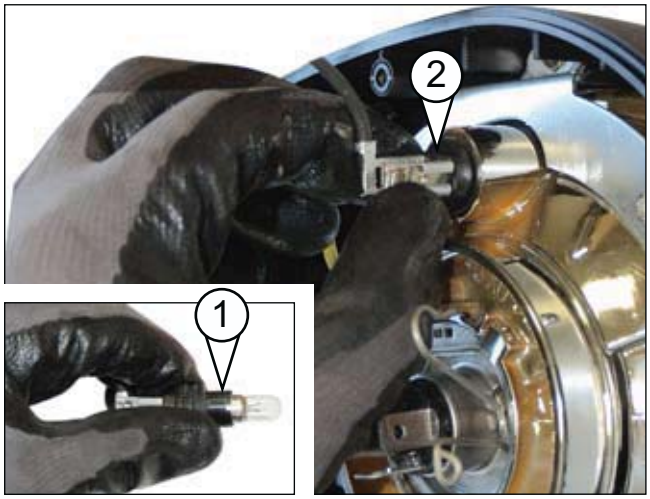
- Press the upper part of the light bulb.
- Turn the light bulb while continuing to press to release the light bulb.

Carry out the same procedure to install a new light bulb.

How to replace the side light bulb
(fig.103/D Pos.“1”)

- Grip the rear where the electrical connections are located (fig.103/D Pos.“2”).
- Turn and pull the rear part towards you.
- Extract the support; press the upper part of the light bulb.
- Turn the light bulb while continuing to press to release the light bulb.

Carry out the same procedure to install a new light bulb. Re-insert the support in its housing.



(fig.103/D)

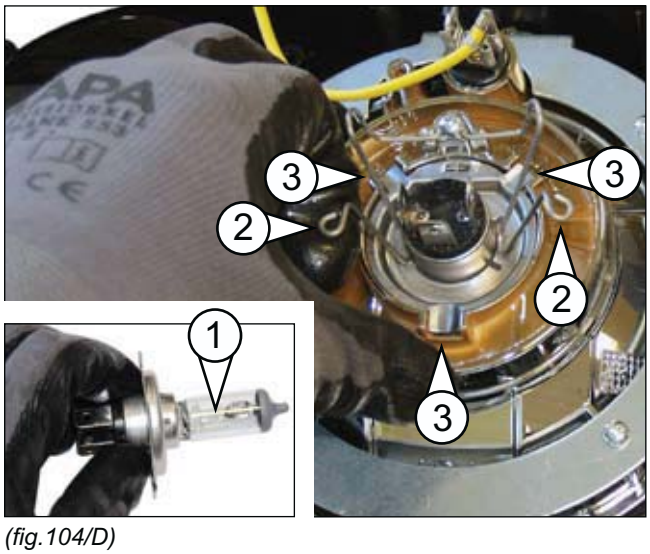
How to replace the low/full beam light bulb
(fig.104/D Pos.“1”)

- Pull the electrical connector towards you to remove.
- Raise the tabs (fig.104/D Pos.“2”) and shift sideways to release the bulb.
- Replace the bulb and then reverse the procedure described above to fasten and reconnect the light bulb. Ensure you match the slots on the light fixture (fig.104/D Pos.“3”) to guarantee correct installation.

- CAUTION -

Light bulbs are very fragile. Handle with care.

Never handle low beam light bulbs with bare hands.



(fig.104/D)

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

REAR LIGHT
(fig. 105/D)

The rear light consists in an indicator light, rear red light, stop light and reversing light.

To access the light bulbs:

- Stop the machine and act on the battery cut-off switch to disconnect the power supply.
- Remove the head light power connector on the rear.
- Remove the front part of the head light by unscrewing the screws located on the rear cover.

- CAUTION:

To re-close the head light, reverse the procedure described above (ensure the seal is positioned correctly).

How to replace the light bulbs in the rear light.

- Press the upper part of the light bulb.
- Turn the light bulb while continuing to press to release the light bulb.

Reverse the procedure described above to install a new light bulb.



(fig.105/D)

WORK SPOTLIGHT
(fig.106/D)

How to change the light bulbs
(fig.108/D Pos.“1”)

- Stop the machine and act on the battery cut-off switch to disconnect the power supply.
- Remove the spotlight power connector on the rear (fig.107/D Pos.“1”).
- Press the connector outlet on the spotlight (fig.107/D Pos “2”).
- Turn the connector outlet while continuing to press to release.

Reverse the procedure described above to install a new light bulb.



(fig.106/D)



(fig.107/D)



(fig.108/D)

DUAL REFLECTOR WORK SPOTLIGHT
(fig.109/D)

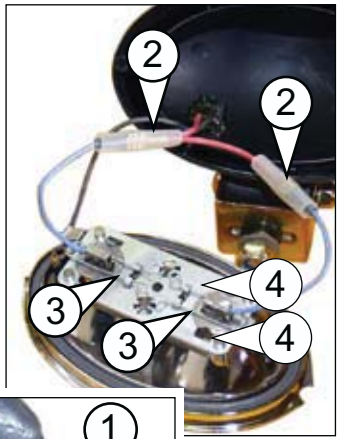
How to change the light bulbs
(fig.110/D Pos.“1”)

- Stop the machine and act on the battery cut-off switch to disconnect the power supply.
- Remove the screws on the front of the spotlight.
- Remove the spotlight power connectors (fig.110/D Pos.“2”).
- Push the tabs inwards to release (fig.110/D Pos.“3”).

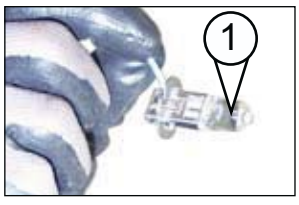
Reverse the procedure described above to install a new light bulb. Ensure you match the slots (fig.110/D Pos “4”) to guarantee correct installation.



(fig.109/D)



(fig.110/D)



PRELOAD AND TIGHTENING TORQUE TABLE FOR CLASS 1 NUTS AND BOLTS

	friction factor	fine pitch nut and bolt classes											
		4.8		5.8		6.8		8.8		10.9		12.9	
		preload N	tightening torque Nm	preload N	tightening torque Nm	preload N	tightening torque Nm	preload N	tightening torque Nm	preload N	tightening torque Nm	preload N	tightening torque Nm
M8	**0.10**	9798.1	**10.87**	12247.6	**13.59**	14697.1	**16.31**	19596.1	**21.75**	27557.1	**30.58**	33068.5	**36.70**
	0.14	9079.5	**13.53**	11349.4	**16.91**	13619.3	**20.29**	18159.1	**27.05**	25536.2	**38.04**	30643.4	**45.65**
M10	**0.10**	15296.9	**21.13**	19121.1	**26.41**	22945.3	**31.69**	30593.8	**42.25**	43022.5	**59.42**	51627.0	**71.30**
	0.14	14175.0	**26.27**	17718.8	**32.84**	21262.6	**39.41**	28350.1	**52.55**	39867.3	**73.89**	47840.8	**88.67**
M12	**0.10**	22020.7	**35.83**	27525.9	**44.79**	33031.0	**53.75**	44041.4	**71.67**	61933.2	**100.78**	74319.8	**120.94**
	0.14	20405.8	**44.53**	25507.2	**55.66**	30608.7	**66.79**	40811.6	**89.06**	57391.3	**125.24**	68869.5	**150.29**
M14	**0.10**	31610.0	**59.04**	39512.5	**73.80**	47415.0	**88.57**	63220.0	**118.09**	88903.1	**166.06**	106683.7	**199.27**
	0.14	29345.9	**73.92**	36682.4	**92.40**	44018.9	**110.89**	58691.9	**147.85**	82535.4	**207.91**	99042.5	**249.49**
M16	**0.10**	42581.3	**89.78**	53226.6	**112.23**	63871.9	**134.67**	85162.5	**179.56**	119759.8	**252.51**	143711.8	**303.02**
	0.14	39587.8	**113.06**	49484.7	**141.32**	59381.6	**169.59**	79175.5	**226.12**	111340.6	**317.98**	133608.7	**381.57**
M18	**0.10**	51457.2	**124.03**	64321.5	**155.03**	77185.8	**186.04**	102914.4	**248.06**	144723.3	**348.83**	173668.0	**418.59**
	0.14	47751.7	**155.02**	59689.6	**193.78**	71627.5	**232.53**	95503.3	**310.05**	134301.6	**436.00**	161161.9	**523.20**
M20	**0.10**	65534.1	**173.72**	81917.7	**217.16**	98301.2	**260.59**	131068.3	**347.45**	184314.8	**488.60**	221177.8	**586.32**
	0.14	60886.2	**218.17**	76107.8	**272.71**	91329.3	**327.26**	121772.4	**436.34**	171242.5	**613.61**	205491.0	**736.33**
M22	**0.10**	81220.8	**236.88**	101526.0	**296.10**	121831.2	**355.32**	162441.5	**473.76**	228433.4	**666.23**	274120.1	**799.48**
	0.14	75533.9	**298.75**	94417.4	**373.43**	113300.9	**448.12**	151067.8	**597.49**	212439.1	**840.22**	254927.0	**1008.27**
M24	**0.10**	98515.6	**308.56**	123144.5	**385.70**	147773.4	**462.84**	197031.1	**617.12**	277075.0	**867.83**	332490.0	**1041.40**
	0.14	91693.3	**390.33**	114616.6	**487.92**	137539.9	**585.50**	183386.5	**780.67**	257887.3	**1097.82**	309464.8	**1317.38**

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

PRELOAD AND TIGHTENING TORQUE TABLE FOR CLASS 2 NUTS AND BOLTS

	friction factor	large pitch nut and bolt classes											
		4.8		5.8		6.8		8.8		10.9		12.9	
		preload N	tightening torque Nm	preload N	tightening torque Nm	preload N	tightening torque Nm	preload N	tightening torque Nm	preload N	tightening torque Nm	preload N	tightening torque Nm
M6	0.10	4874.7	**4.24**	6093.4	**5.30**	7312.1	**6.35**	9749.4	**8.47**	13710.1	**11.92**	16452.2	**14.30**
	0.14	4499.1	**5.19**	5623.9	**6.48**	6748.6	**7.78**	8998.2	**10.37**	12653.7	**14.59**	15184.4	**17.51**
M7	0.10	7134.5	**6.97**	8918.2	**8.71**	10701.8	**10.45**	14269.1	**13.94**	20065.9	**19.60**	24079.1	**23.52**
	0.14	6599.6	**8.60**	8249.5	**10.76**	9899.4	**12.90**	13199.2	**17.21**	18561.4	**24.20**	22273.6	**29.04**
M8	0.10	8947.1	**10.20**	11183.9	**12.75**	13420.7	**15.30**	17894.2	**20.41**	25163.7	**28.70**	30196.5	**34.44**
	0.14	8265.6	**12.54**	10332.0	**15.67**	12398.4	**18.80**	16531.2	**25.07**	23247.0	**35.26**	27896.5	**42.31**
M10	0.10	14244.5	**20.11**	17805.6	**25.14**	21366.8	**30.16**	28489.0	**40.22**	40062.7	**56.56**	48075.3	**67.87**
	0.14	13167.4	**24.76**	16459.2	**30.95**	19751.1	**31.14**	26334.8	**49.52**	37033.3	**69.64**	44439.9	**83.56**
M12	0.10	20766.6	**34.43**	25958.3	**43.03**	31149.9	**51.64**	41533.2	**68.86**	58406.1	**96.83**	70087.3	**116.20**
	0.14	19204.0	**42.42**	24005.0	**53.03**	28806.0	**63.63**	38408.0	**84.84**	54011.2	**119.31**	64813.5	**143.17**
M14	0.10	28389.9	**54.77**	35487.4	**68.46**	42584.9	**82.15**	56779.8	**109.53**	79846.6	**154.03**	95816.0	**184.84**
	0.14	26261.2	**67.56**	32826.5	**84.45**	39391.8	**101.34**	52522.4	**135.13**	73859.6	**190.02**	88631.5	**228.03**
M16	0.10	39242.1	**85.14**	49052.7	**106.43**	58863.2	**127.72**	78484.3	**170.29**	110368.5	**239.47**	132442.2	**287.36**
	0.14	36364.2	**105.80**	45455.3	**132.26**	54546.3	**158.71**	72728.5	**211.61**	102274.4	**297.58**	122729.3	**357.09**
M18	0.10	47533.0	**117.48**	59416.3	**146.85**	71299.6	**176.22**	95066.1	**234.96**	133686.7	**330.41**	160424.1	**396.49**
	0.14	43986.1	**145.16**	54982.7	**181.45**	65979.2	**217.74**	87972.3	**290.32**	123711.0	**402.26**	148453.2	**489.92**
M20	0.10	61238.0	**166.08**	76547.5	**207.61**	91857.0	**249.13**	122476.0	**332.17**	172231.9	**467.11**	206678.2	**560.54**
	0.14	56747.1	**206.39**	70933.9	**257.98**	85120.6	**309.58**	113494.2	**412.78**	159601.2	**580.47**	191521.5	**696.56**
M22	0.10	76305.2	**227.22**	95381.5	**284.02**	114457.8	**340.82**	152610.4	**454.43**	214608.3	**639.05**	257530.0	**766.85**
	0.14	70791.9	**283.79**	88489.8	**352.74**	106187.8	**425.69**	141583.7	**567.58**	199102.1	**798.16**	238922.5	**957.80**
M24	0.10	88232.4	**287.16**	110290.5	**358.94**	132348.6	**430.73**	176464.9	**574.31**	248153.7	**807.63**	297784.4	**969.15**
	0.14	81761.8	**356.84**	102202.2	**446.05**	122642.7	**535.26**	163523.6	**713.68**	229955.1	**1003.61**	275946.1	**1204.33**

TORQUE TABLE FOR HYDRAULIC FITTINGS

60° oval insert - BSP thread									
THREAD	1/18-28	1/4-19	3/8-19	1/2-14	5/8-14	3/4-14	1”-11	1”1/4-11	1”1/2-11
N.m	12-14	14-16	25-28	45-60	55-70	90-110	120-140	170-190	200-245

60° oval insert - METRIC thread									
THREAD	10x1	12x1,5	14x1,5	16x1,5	18x1,5	22x1,5	26x1,5	28x1,5	30x1,5
N.m	12-14	13-15	15-18	25-28	27-30	50-60	60-75	80-100	110-130

DIN FITTINGS SERIES / RANGE “L”										
THREAD	12x1,5	14x1,5	16x1,5	18x1,5	22x1,5	26x1,5	30x2	36x1,5	45x1,5	52x1,5
N.m	13-15	15-18	25-28	27-30	50-60	30-75	85-105	120-140	170-190	190-230

DIN FITTINGS SERIES / RANGE “S”										
THREAD	14x1,5	16x1,5	18x1,5	20x1,5	22x1,5	24x1,5	30x2	36x2	42x2	52x2
N.m	15-18	25-28	27-30	43-54	50-62	60-75	90-110	125-145	170-190	200-245

- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

TROUBLE SHOOTING

⚠ ***- CAUTION:*** Work to repair malfunctions must only be carried out by qualified personnel.

Ensure you have read and understood the “User Instructions” and “Safety Regulations” before carrying out any repairs on the machine.

This symbol: dDIECI means that the problem CANNOT be fixed without the assistance of an authorised ***DIECI Service*** workshop.

Troubleshooting with the load monitoring display and the LCD on the instrument cluster is described in chapter “G”

ASSEMBLY	PROBLEM	PROBABLE CAUSE	REMEDY
ENGINE	The engine does not start	The operator is not seated in the driver’s seat.	Sit on the driver’s seat properly
		The gear selector is engaged	Position the lever in neutral
		There is no fuel	Fill the tank
		The battery cut-off switch is disconnected	Connect the battery cut-off switch
		The battery is flat	Recharge or replace the battery
		There is a burnt fuse	Replace the fuse
		Other	Consult the engine Use and Maintenance Manual

ASSEMBLY	PROBLEM	PROBABLE CAUSE	REMEDY
HYDRAULIC CIRCUIT AND TRANSMISSION	The machine does not move in any direction ⚠ ***- CAUTION:*** *Remain seated in the driver’s seat while the machine is moving or being towed, otherwise the parking brake is engaged automatically (within 20 seconds).*	Manual electronic accelerator engaged	Disengage the electronic accelerator
		The sensor in the seat cannot detect the driver’s presence	Ensure you are seated properly
		The forward/reverse lever is not engaged (pilot light off)	Engage the lever in the required position
		The slow-fast gear is not engaged (pilot light off)	Switch on
		The stabilisers have been lowered	Completely raise all stabilisers
		The rear axle is blocked	Release the axle.
	The machine loses speed	Hydraulic oil intake filter clogged	Remove and replace the oil filter
		Hydrostatic transmission malfunction	Repair or replace the transmission
		Diesel engine malfunction	Consult the engine Use and Maintenance Manual

Continues on Page D/54

TROUBLE SHOOTING

ASSEMBLY	PROBLEM	PROBABLE CAUSE	REMEDY
HYDRAULIC CIRCUIT AND TRANSMISSION	The machine does not move in any direction ⚠ ***- CAUTION:*** *Remain seated in the driver's seat while the machine is moving or being towed, otherwise the parking brake is engaged automatically (within 20 seconds).*	Insufficient hydraulic oil level	Check the hydraulic oil level
		The parking brake is engaged	Disengage the brake
		Hydrostatic transmission malfunction	Repair or replace the transmission
		Electric circuit malfunction	Repair the circuit
		The shutter under the machine is closed (machine towing)	Open the shutter

ASSEMBLY	PROBLEM	PROBABLE CAUSE	REMEDY
BRAKES	The machine does not brake	There is no oil in the brake oil tank -brakes	Drain the circuit or top up the tank
		Fluid is leaking from the circuit	Check for leaks
		Brake disks worn	Replace the brake disks
		Brake pump malfunction	Repair or replace
		Unsuitable fluid in the circuit	Check the oil comparison table

ASSEMBLY	PROBLEM	PROBABLE CAUSE	REMEDY
STEERING	The machine does not advance in a straight line The wheels are unaligned	The wheels are not correctly aligned	Realign
		Wrong steering mode selected	Reposition the lever in a different steering mode
		Control distributor malfunction	Repair or replace the distributor
		Oil leaking from hydraulic steering cylinders	Replace the gaskets

⚠ - CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

TROUBLE SHOOTING

ASSEMBLY	PROBLEM	PROBABLE CAUSE	REMEDY
TURRET ROTATION	The turret does not turn (on itself)	The rotation locking pin is inserted	Remove the pin
		The safety devices have been enabled (pilot light and acoustic alarm on)	See the chapter “Getting to know your machine”
		Hydraulic pump malfunction (turret rotation pump)	Install a gauge and check the pressure
		Low working pressure	Calibrate the distributor
		Hydraulic engine malfunction	Disconnect the drain pipe and ensure the oil flows out correctly. Replace if necessary.
		Electric push button malfunction	Check the current on the coil Coils burnt

ASSEMBLY	PROBLEM	PROBABLE CAUSE	REMEDY
BOOM	The machine does not lift loads	The safety devices are enabled	See the chapter “Getting to know your machine”
		Electric system malfunction	Check fuses and the electric system
		Insufficient hydraulic oil level in the tank	Top up
		Relative hydraulic pump malfunction	Repair or replace the pump
		Distributor regulated too low	Check and re-calibrate the distributor
		Internal leak in the lifting cylinders	Replace the gaskets
	The boom does not extend	The safety devices have been enabled (pilot light and acoustic alarm triggered)	See the chapter “Getting to know your machine”
	The boom does not lower	The safety devices have been enabled (pilot light and acoustic alarm triggered)	See the chapter “Getting to know your machine”

HOW TO COMPLETE THE SERVICE REGISTER

- The **"SERVICE REGISTER"** must be completed in compliance with the Essential Safety Requirement 4.4.2.b of Enclosure I of Machine Directive **EC/98/37**, to prove that all machine inspection and service activities concerning safety have been carried out correctly.
- Together with every activity concerning the life and use of the machine (replacement of parts, services, malfunctions, etc.) the Service Register must also include information regarding all the quarterly and yearly inspections provided for by law, including those indicated in the "Maintenance" section and "Attachments" chapter of this Manual.
- The name of the service engineer and the date the job was carried must also be clearly indicated.
- **You are recommended to complete, up-date and keep this Service Register with care throughout the entire life of the machine.**
- The following pages have been left free to ease creation of your own Service Register.

OBLIGATIONS AND HOW TO FORWARD STATEMENTS TO I.S.P.E.S.L. (SUPREME INSTITUTE FOR ACCIDENT PREVENTION AND SAFETY IN THE WORKPLACE)

- The Italian Ministerial Decree dated 12/09/1959, under Title II – Article 7, states that the employers and users of **engine-driven lifting equipment having capacities greater than 200 kg** and **personnel platforms**, are obliged to inform the competent authority (currently **I.S.P.E.S.L.** - the **Supreme Institute For Accident Prevention And Safety In The Workplace** in Italy) when the machine is commissioned, specifying the place of installation of the machine so that this authority may make an **initial inspection**.
- This fulfilment is confirmed by Article 11 – section 3 of **Italian Presidential Decree 459** dated 24/07/1996, a national law that transposes **Machine Directive EC/98/37**.
- The statement to the Supreme Institute for Accident Prevention and Safety in the Workplace is made by enclosing a **copy** of the **EC Statement of Conformity** of the machine, with reference to **Enclosure IIA** of Italian PRESIDENTIAL DECREE 459/96 – Machine Directive EC/98/37.
- The original statements (EC Statement of Conformity – Enclosure IIA or Manufacturer's Statement –Enclosure IIB) must be kept by the client.
- The statement shall be forwarded to the Supreme Institute for Accident Prevention and Safety in the Workplace by registered post with advice of receipt.
- The Supreme Institute For Accident Prevention And Safety In The Workplace will then inform the local surveillance authority (A.S.L. in Italy) that the machine is in use; this authority is then in charge of the **subsequent yearly inspections**.

SCHEDULED INSPECTIONS AND REGISTRATION METHOD

- The employer or user of the machine must ensure the machine is inspected regularly pursuant to the law (Italian Presidential Decree 547 dated 27/4/55; Italian Ministerial Decree 12/9/59 and Italian Decree Law 626 dated 19/9/94).
- He or she must also comply with the maintenance and inspection schedule described in this Use and Maintenance Manual.
- Inspections and scheduled tests, together with maintenance work must be carried out by especially employed experts, or by a workshop authorised by the manufacturer, ***DIECI S.r.l.***
- The employer/user of the machine must record the results of the tests and inspections in the Service Register, or ask specifically trained personnel to record them.
- The scheduled tests and inspections that must be recorded in the "Service Register" are:
  - **a)** **Quarterly inspections** that involve the operation and/or efficiency of ropes/chains according to **Article 179** of **Italian Presidential Decree 547** dated **27/4/55**.
  - **b)** **Yearly inspections** that involve the operation and the preservation of the machine in terms of safety (yearly tests, corrosion inspections, calibration tests, etc.) according to **Article 194** of **Italian Presidential Decree 547** dated **27/4/55**.
- The law foresees administrative fines for those who fail to carry out quarterly and yearly inspections.
- The Service Register, in which the inspections are recorded, must be shown on request to the inspectors in charge of ensuring that the current laws are observed.
- After the yearly inspection has been carried out, the A.S.L. inspector issues an acceptance report or prescribes the action necessary to fulfil legal requirements. The user is obliged to store the inspection report with the Service Register.
- If the local surveillance authority (A.S.L. in Italy) should fail to make the yearly inspection, you are in any event recommended to have the yearly inspection carried out by a qualified engineer and record the results in the Service Register.
- The evaluations of the inspections must be registered in the reserved pages below, indicating the outcome of the inspection, the date, the signature and any comments by the inspector.
- If not enough pages have been reserved within this manual to contain all the notes concerning the life of the machine, use additional sheets of paper, remembering to complete them in the same manner.



MACHINE DETAILS

Manufacturer: ***Dieci S.r.l.***

Model: ..... serial number ..... Year .....

Attachment..... serial number ..... Year .....

Max. capacity [kg]: .....

Attachment ..... serial number ..... Year .....

Max. capacity [kg]: .....

Attachment..... serial number ..... Year .....

Max. capacity [kg]: .....

Attachment..... serial number ..... Year .....

Max. capacity [kg]: .....

Owner: .....

Machine commissioning date: .....

FOR FURTHER CONTROLS OR REPORTS TO THE COMPETENT AUTHORITIES, PLEASE REFER TO THE LOCAL LEGISLATION IN FORCE IN THE COUNTRY WHERE THE MACHINE IS USED.

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RECORD OF SCHEDULED INSPECTIONS AND MAINTENANCE WORK

REGULAR MAINTENANCE 50 h

Job	Job accomplished ☒
Empty diesel tank	☐
Check for leaks on hydraulic system pipes	☐
Lubricate boom joint pin.	☐
Lubricate pivot foot pins/jack head.	☐
Lubricate lifting foot pins/jack head.	☐
Lubricate levelling foot pins/jack head.	☐
Lubricate stabiliser foot pins/jack head.	☐
Lubricate stabiliser assembly pins.	☐
Lubricate turret rotation swing gear.	☐
Lubricate front and rear wheel pivot pins.	☐
Lubricate front/rear axle oscillation bushings.	☐
Lubricate spiders and Cardan joints on drive shafts.	☐
Lubricate boom sliding blocks.	☐

Date ..... **Signature** .....

SPECIAL MAINTENANCE

Job description	Machine working hours

Date ..... **Signature** .....

REGULAR MAINTENANCE 100 h

Job	Job accomplished ☒
Clean air filter	☐
Lubricate differential axles	☐
Check tyre pressure	☐
Check tightening torque of nuts and bolts in general	☐
Check radiator is not clogged	☐
Check brake oil level	☐
Check boom chain condition and elongation.	☐
Check stickers	☐
	☐
	☐
	☐
	☐
	☐

Date ..... **Signature** .....

SPECIAL MAINTENANCE

Job description	Machine working hours

Date ..... **Signature** .....

- CAUTION -

The maintenance work in bold type is considered fundamental by *DIECI* for people's safety.

- CAUTION -

Maintenance must be carried out by qualified personnel who must sign the scheduled maintenance report.

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REGULAR MAINTENANCE 250 h

Job	Job accomplished ☒
Replace engine oil	☐
Replace engine oil filter	☐
Replace air filter	☐
Check battery electrolyte level	☐
Check electric system	☐
Check alternator belt.	☐
Tighten wheel nuts	☐
Replace anti humidity bag on rotation coupling.	☐
Replace hydraulic oil filter	☐
	☐
	☐
	☐
	☐

Date ..... **Signature** .....

SPECIAL MAINTENANCE

Job description	Machine working hours

Date ..... **Signature** .....

REGULAR MAINTENANCE 500 h

Job	Job accomplished ☒
Replace air filter	☐
Replace fuel filter	☐
Empty diesel tank	☐
Clean diesel injection pump filter	☐
Replace hydraulic system oil	☐
Replace oil tank pre-filter	☐
Replace external hydraulic oil filter	☐
Check oil level in differential sump	☐
Check oil level in epicyclic reduction gears	☐
Check gear oil level	☐
Check turret rotation reduction gear oil level	☐
Tighten boom sliding blocks	☐
Check chain tension	☐

Date ..... **Signature** .....

SPECIAL MAINTENANCE

Job description	Machine working hours

Date ..... **Signature** .....

- CAUTION -

The maintenance work in bold type is considered fundamental by *DIECI* for people's safety.

- CAUTION -

Maintenance must be carried out by qualified personnel who must sign the scheduled maintenance report.

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REGULAR MAINTENANCE 1000h

Job	Job accomplished ☒
Replace the coolant	☐
Replace oil in differential sump	☐
Replace oil in epicyclic reduction gears.	☐
Replace gear oil	☐
Replace turret rotation reduction gear oil	☐
Replace hydraulic system oil	☐
Checktighteningtorqueofupperandlowerswinggearbolts.	☐
	☐
	☐
	☐
	☐
	☐
	☐

Date ..... Signature .....

SPECIAL MAINTENANCE

Job description	Machine working hours

Date ..... Signature .....

REGULAR MAINTENANCE h

Job	Job accomplished ☒
	☐
	☐
	☐
	☐
	☐
	☐
	☐
	☐
	☐
	☐
	☐
	☐
	☐

Date ..... Signature .....

SPECIAL MAINTENANCE

Job description	Machine working hours

Date ..... Signature .....

- CAUTION -

The maintenance work in bold type is considered fundamental by *DIECI* for people's safety.

- CAUTION -

Maintenance must be carried out by qualified personnel who must sign the scheduled maintenance report.

PAGE INTENTIONALLY LEFT BLANK FOR EDITING PURPOSES

REGULAR MAINTENANCE h

Job	Job accomplished ☒
	☐
	☐
	☐
	☐
	☐
	☐
	☐
	☐
	☐
	☐
	☐
	☐
	☐
	☐

Date ..... Signature .....

SPECIAL MAINTENANCE

Job description	Machine working hours

Date ..... Signature .....

REGULAR MAINTENANCE h

Job	Job accomplished ☒
	☐
	☐
	☐
	☐
	☐
	☐
	☐
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SPECIAL MAINTENANCE

Job description	Machine working hours

Date ..... Signature .....

- CAUTION -

The tables must be completed clearly using the spaces provided.

- CAUTION -

Maintenance must be carried out by qualified personnel who must sign the scheduled maintenance report.

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REGULAR MAINTENANCE h

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SPECIAL MAINTENANCE

Job description	Machine working hours

Date ..... Signature .....

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SPECIAL MAINTENANCE

Job description	Machine working hours

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SPECIAL MAINTENANCE

Job description	Machine working hours

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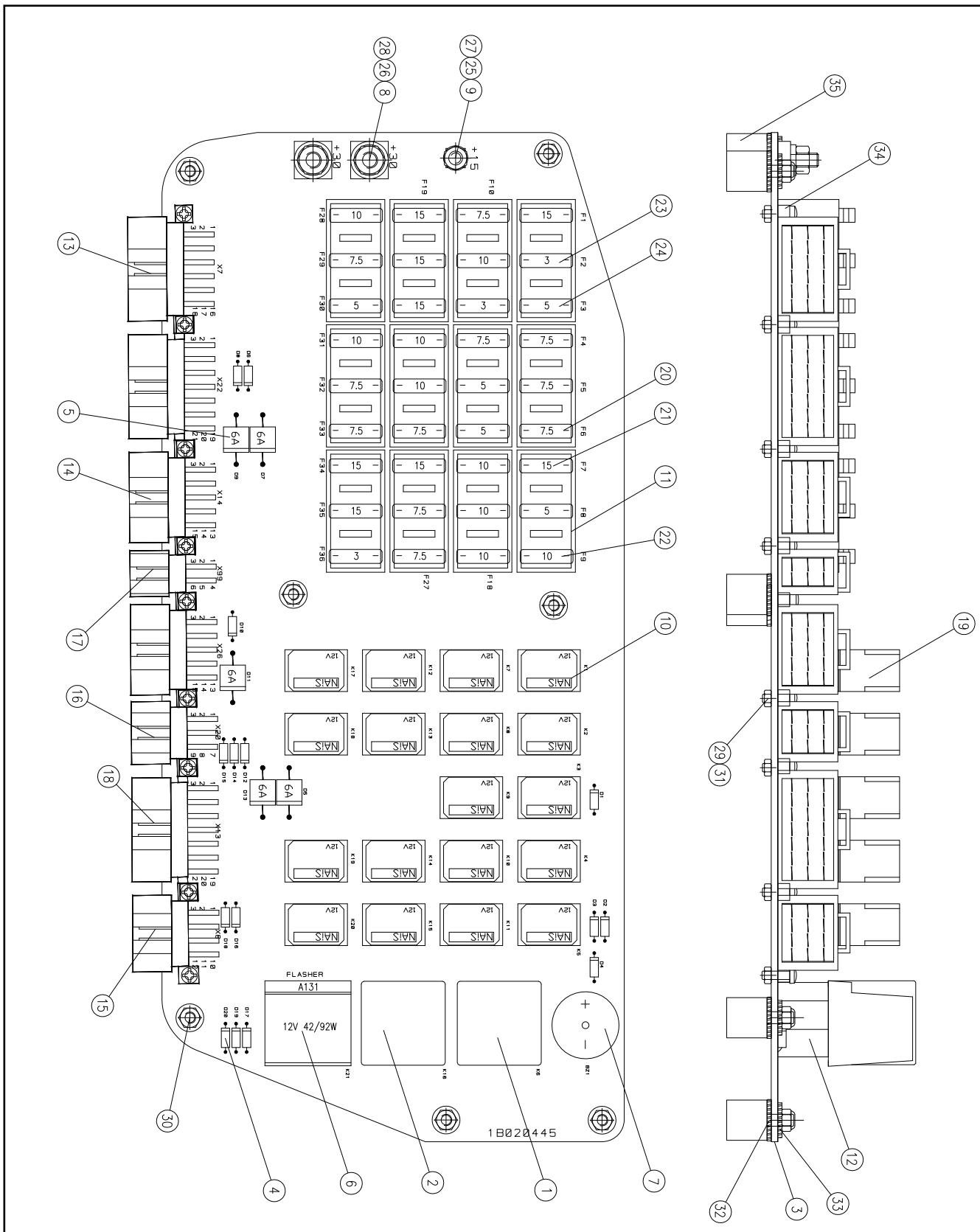
ELECTRICAL DIAGRAMS AND CIRCUITS

Electronic engine



FUSE BOX KEY – DIA. N° 01171037

POS	DESCRIPTION	Q.TY
1	DELAYED TIMER 3” 12V	1
2	BASKET START ANTI-REP. CONTROL UNIT	1
3	PRINTED CIRCUIT	1
4	DIODES 1N 4007 BLACK	15
5	DIODE P 600 M	5
6	INTERMITTENCE 12 V	1
7	BUZZER	1
8	POWER TERMINAL M6	2
9	POWER TERMINAL M5	1
10	BOARDS RELAY MICRO SWITCH CONNECTOR	18
11	BOARDS FUSE-HOLDER CONNECTOR	12
12	BOARDS RELAY-HOLDER CONNECTOR	3
13	18 WAY F 90° C.S. CONNECTOR	1
14	15 WAY F 90° C.S. CONNECTOR	2
15	12 WAY F 90° C.S. CONNECTOR	1
16	9 WAY F 90° C.S. CONNECTOR	1
17	6 WAY F 90° C.S. CONNECTOR	1
18	21 WAY F 90° C.S. CONNECTOR	2
19	MICRO SWITCH RELAY WITH 12V DIODE	18
20	BLADE FUSE 7.5 A	11
21	BLADE FUSE 15 A	8
22	BLADE FUSE 10 A	9
23	BLADE FUSE 3A	3
24	BLADE FUSE 5 A 257005	5
25	EXT. TOOTHED WASHER 5 DIN 6798 STAINLESS STEEL	1
26	EXT. TOOTHED WASHER 6 DIN 6798 STAINLESS STEEL	2
27	HEX NUT M5 UNI 5588-65 STAINLESS STEEL	1
28	NUT M6 UNI 588 STAINLESS STEEL A2	2
29	HIGH LOCK NUT M 3 DIN 982 STAINLESS STEEL	9
30	M4 LOCK NUT UNI 7473 STAINLESS STEEL A2	7
31	TC SCREW + 3X12 UNI 7687 STAINLESS STEEL	9
32	WASHER 3.5X13.6X2 CERTENE	7
33	WASHER 4.4X10X1.1 NYLON	7
34	SPACER DCK 19 3X2	1
35	ANTIVIBRATING M/F M4X10 H15 STAINLESS STEEL V0	7



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		CONTROLLATO/CHECKED Melotti G.	DATA/DATE 21/07/2003
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FUSE BOX KEY – DIA. N° E25800-036

POS	DESCRIPTION	Q.TY
A1	Perkins Control unit	1.4
A31	CAR RADIO	9.2
A110	RADIO	10.4
B3	REAR OUTRIGGER MICRO SWITCH	2.3
B4	FRONT OUTRIGGER MICRO SWITCH	2.3
B5	SPEED SENSOR	3.2
B10	Air filter pressure sensor clogged	1.4
B12	FUEL LEVEL SENSOR	1.4
B13	Hydraulic oil pressure sensor	1.4
B27	SEAT MICRO SWITCH	1.4
B28	BRAKE PRESSURE SWITCH	4.5
B31	ACCUMULATOR PRESSURE SWITCH	1.1
B34	MECHANICAL GEAR ENGAGED MICRO SWITCH	2.3
B35	2nd MECHANICAL GEAR PRESSURE SWITCH ENGAGED	4.4
B38	INCHING MICRO SWITCH	4.5
E1	Right rear work light	7.3
E2	Right front work light	7.2
E4	Left front work light	7.2
E18	Left rear work light	7.2
E22	RIGHT REAR LIGHT	4.1
E23	LEFT REAR LIGHT	4.1
E24	PLATE LIGHT	4.2
E25	RIGHT FRONT LIGHT	4.2
E26	LEFT FRONT LIGHT	4.3
E27	REVOLVING LIGHT	6.2
F1	OUTRIGGERS FUSE 15A	3.3
F2	RADIO FUSE 3A	9.2
F3	BUZZER AND REVERSE LIGHT FUSE 5A	2.2
F4	FAST/SLOW GEAR SELECTOR FUSE 7.5A	2.2
F5	REAR HYDRAULIC SOCKETS FUSE	8.2
F6	ANTI-TIPPING FUSE 7.5A	2.5
F7	FUSE 15A	8.5
F8	MECHANICAL GEAR FUSE 5A	4.5
F9	AXLE LOCK FUSE 10A	2.4
F10	SWITCHES LEDS POWER SUPPLY FUSE	2.5
F11	LIGHT SWITCH AND STOP LIGHTS POWER SUPPLY FUSE 10A	4.1
F12	SENSORS FUSE 3A	10.2
F13	FUSE 7.5A	2.4
F14	POSITION LIGHTS FUSE 5A	4.1
F15	POSITION LIGHTS FUSE 5A	4.1
F16	FULL BEAM HEADLIGHT FUSE 10 A	4.2
F17	HORN FUSE 10A	4.4
F18	DIPPED BEAM HEADLIGHT FUSE 10 A	4.2
F19	FRONT WINDSCREEN WIPER FUSE 15A	6.4
F20	REAR WINDSCREEN WIPER FUSE 15A	6.2
F21	OPTIONAL FUSE 15A	9.1
F22	FRONT WORK LIGHTS FUSE 20A	7.1
F23	REAR WORK LIGHTS FUSE 20A	7.1
F24	FUSE F7.5A	7.1
F25	HEATING FAN FUSE 15A	7.1

FUSE BOX KEY – DIA. N° E25800-036

POS	DESCRIPTION	Q.TY
F26	PARKING BRAKE + START GEAR FUSE 7.5A	2.2
F27	ENGINE STOP + SEAT MICRO SWITCH FUSE 7.5A	1.4
F28	WARNING FUSE 7.5A	4.3
F29	REVOLVING LIGHT FUSE 7.5A	6.2
F30	RADIO FUSE 5A	9.2
F31	OPTIONAL FUSE	4.4
F32	CURRENT SOCKET FUSE 7.5A	6.4
F33	BASKET SELECTOR FUSE 7.5A	8.4
F34	AIR CONDITIONER FUSE 15A	7.1
F35	BASKET FUSE 15A	1.5
F36	INSTRUMENT POWER SUPPLY FUSE 3A	1.4
FG1	GENERAL FUSE + 30	1.1
FG2	ALTERNATOR FUSE	1.1
FG3	START RELAY FUSE	1.1
FG4	IGNITION PLUG FUSE	1.1
FG5	ECU Engine fuse	1.1
G1	BATTERY	1.1
G2	ALTERNATOR	1.1
H2	REVERSE BUZZER	2.2
H3	HORN	4.4
H4	LEFT SPEAKER	9.3
H5	RIGHT SPEAKER	9.3
H7	CEILING LIGHT	9.1
H1	INSTRUMENT ALARM BUZZER	1.4
K5	START SWITCH RELAY WITH GEAR IN NEUTRAL	1.5
K6	SEAT MICRO SWITCH TIMER	1.4
K11	START CONSENT FROM CAB RELAY WITH OPERATOR	1.4
K16	RUNNING ENGINE FREQUENCY RELAY	1.4
K3M	Starting relay	1.5
K4M	Ignition plug relay	1.2
K5M	Emergency relay	1.4
K3 power supply +15		1.1
KS2	Fan 3rd speed relay	7.4
M1	STARTER MOTOR	1.1
M2	FRONT WINDSCREEN WIPER	6.3
M7	FRONT WINDSCREEN WIPER	6.5
M8	REAR WINDSCREEN WASHER	6.3
M9	FRONT WINDSCREEN WASHER	4.3
M10	HEATING	7.3
M32	PNEUMATIC SEAT COMPRESSOR	8.5
M33	Air conditioner	7.1
P1	INSTRUMENT	1.2
R1	Resistor	10.3
R8	CAN resistance	1.2
R14	Ignition plugs	1.2
S1	Emergency switch	4.2
S2	FAN SWITCH	7.3
S5	Rear windscreen switch	6.2
S6	Rear work light switch	7.3
S8	Gear change switch	4.4

FUSE BOX KEY – DIA. N° E25800-036

POS	DESCRIPTION	Q.TY
S9	Levelling switch	3.1
S11	Boom head solenoid valve switch	8.3
S12	Manual axle lock switch	2.3
S13	Left front outrigger switch	5.2
S14	Right front outrigger switch	5.3
S15	Revolving light switch	6.1
S16	Anti-tipping exclusion switch	2.4
S17	Left rear outrigger switch	5.4
S18	Right rear outrigger switch	5.5
S20	Air condition switch	7.1
S21	Parking brake switch	2.2
S22	steering selector switch	8.1
S28	Front windscreen switch	6.3
S37	START GEAR	2.1
S39	STOP LIGHTS MICRO SWITCH	4.1
S40	LIGHT SWITCH	4.1
S41	Starter control board switch	1.1
S42	BATTERY ISOLATOR SWITCH	1.1
S43	AXLE LOCK SENSOR	9.4
S44	EXTENSION AND LIFTING DEVICE SENSOR	9.4
S45	OPTIONAL PROXIMITY SENSOR	9.3
S48	Front work light switch	7.2
S50	Outrigger consent	6.1
S51	foot cross member switch	5.1
S52	ALIGNED CAB PROXIMITY SENSOR	9.3
S53	BLOCKED CAB PROXIMITY SENSOR	9.3
S54	CURRENT SOCKET	6.4
S103	Electric contact switch	8.2
S104	Accelerator switch	3.2
S105	OUTRIGGER DESCENT SELECTOR	6.2
S106	Wheels alignment check switch	8.3
S106.1	OUTRIGGERS ASCENT SELECTOR	6.2
S107	CROSS MEMBER MOVEMENT SELECTOR	8.2
S108	FOOT MOVEMENT SELECTOR	6.2
S111	Mushroom shaped emergency button switch	3.3
X29	Accelerator pedal	3.4
Y1	FORWARD GEAR SOLENOID VALVE	2.1
Y2	REVERSE SOLENOID VALVE	2.2
Y4	LEFT LEVELLING SOLENOID VALVE	3.2
Y5	RIGHT LEVELLING SOLENOID VALVE	3.1
Y6	RIGHT FRONT OUTRIGGER/ RIGHT FRONT OUTRIGGER CROSS MEMBER ASCENT SOLENOID VALVE	5.3
Y7	RIGHT FRONT OUTRIGGER/ RIGHT FRONT OUTRIGGER FEET DESCENT SOLENOID VALVE	5.3
Y8	LEFT FRONT OUTRIGGER/LEFT FRONT OUTRIGGER CROSS MEMBER ANTERIORE SX	5.2
Y9	LEFT FRONT OUTRIGGER/LEFT FRONT OUTRIGGER FEET ANTERIORE SX	5.2
Y10	RIGHT REAR OUTRIGGER/ RIGHT REAR OUTRIGGER CROSS MEMBER POSTERIORE DX	5.4
Y11	RIGHT REAR OUTRIGGER/ RIGHT REAR OUTRIGGER FEET DESCENT SOLENOID VALVE	5.5
Y12	LEFT REAR OUTRIGGER/LEFT REAR OUTRIGGER FEET ASCENT SOLENOID VALVE	5.3
Y13	LEFT REAR OUTRIGGER/ LEFT REAR OUTRIGGER FEET DESCENT SOLENOID VALVE	5.4
Y14	OUTRIGGERS GENERAL SOLENOID VALVE/OUTRIGGERS DESCENT SELECTION PEGASUS 18/21 mt	5.1

FUSE BOX KEY – DIA. N° E25800-036

POS	DESCRIPTION	Q.TY
Y15	RIGHT REAR AXLE LOCK SOLENOID VALVE.	2.4
Y16	LEFT REAR AXLE LOCK SOLENOID VALVE.	2.5
Y17	STEERING SOLENOID VALVE	8.1
Y18	STEERING SOLENOID VALVE	8.2
Y19	STEERING SOLENOID VALVE	8.1
Y20	STEERING SOLENOID VALVE	8.2
Y21	2nd MECHANICAL GEAR HURT SOLENOID VALVE	4.5
Y22	1st MECHANICAL GEAR HURT SOLENOID VALVE	4.5
Y23	PARKING BRAKE SOLENOID VALVE	2.3
Y36	OUTRIGGERS ASCENT SELECTION SOLENOID VALVE PEGASUS 18/21 mt	5.1
Y98	AUXILIARY PUMP SOLENOID VALVE	6.1
Y99	OUTRIGGERS SOLENOID VALVE	5.5
X10.1.p	LOWER CAB LINE INTERFACE CONNECTOR WITH BASKET LINE	10.1
X10.2.p	LOWER CAB LINE INTERFACE CONNECTOR WITH BASKET LINE	10.2
X10.3.p	LOWER CAB LINE INTERFACE CONNECTOR WITH BASKET LINE	10.3
X4	RIGHT DASHBOARD LINE INTERFACE CONNECTOR WITH OPTIONAL LINE	2
X1	LEFT DASHBOARD LINE INTERFACE CONN. WITH LOW. CAB LINE.	1
X1	ENGINE LINE INTERFACE CONNECTOR WITH JOINT	3
X1	ENGINE LINE INTERFACE CONNECTOR WITH DASHBOARD LINE 386	3
X12	LOW. CAB LINE INTERFACE CON. WITH RIGHT DASHBOARD LINE	3
X13	LOW. CAB LINE INTERFACE CONN. WITH CONTROL UNIT LINE	1
X14	LOW. CAB LINE INTERFACE CONN. WITH CONTROL UNIT LINE	1
X15	UPP. CAB LINE INTERFACE CON. WITH LOW.CAB LINE INTERFACE	4
X17.1	LOW. CAB LINE INTERFACE CON. WITH SOLENOID VALVES LINE	1
X17.2	LOW. CAB LINE INTERFACE CON. WITH SOLENOID VALVES LINE	2
X19	LOW. CAB LINE INTERFACE CON. WITH RIGHT DASHBOARD LINE	2
X2	LOW. CAB LINE INTERFACE CON. WITH LEFT DASHBOARD LINE	6
X2.1	LOW. CAB LINE INTERFACE CON. WITH SOLENOID VALVES LINE	6
X20	LOW. CAB LINE INTERFACE CONN. WITH CONTROL UNIT LINE	2
X22	LOW. CAB LINE INTERFACE CONN. WITH CONTROL UNIT LINE	2
X23	LOW. CAB LINE INTERFACE CON. WITH RIGHT DASHBOARD LINE	4
X25	RIGHT DASHBOARD LINE INTERFACE CONN. WITH LOW. CAB LINE.	4
X26	LOW. CAB LINE INTERFACE CON. WITH CONTROL UNIT LINE	10
X3	LEFT DASHBOARD LINE INTERFACE CONN. WITH LOW. CAB LINE.	2
X32	CURRENT SOCKET	9.2
X5	LOW. CAB LINE INTERFACE CONN. WITH PEGASUS TOWER LINE	2
X6	LOW. CAB LINE INTERFACE CONN. WITH ENGINE LINE	1
X7	LOW. CAB LINE INTERFACE CONN. WITH CONTROL UNIT LINE	1
X99	LOW. CAB LINE INTERFACE CONN. WITH CONTROL UNIT LINE	8
XR	OUTRIGGERS MOVEMENT SWITCH DOUBLE RELAY	6

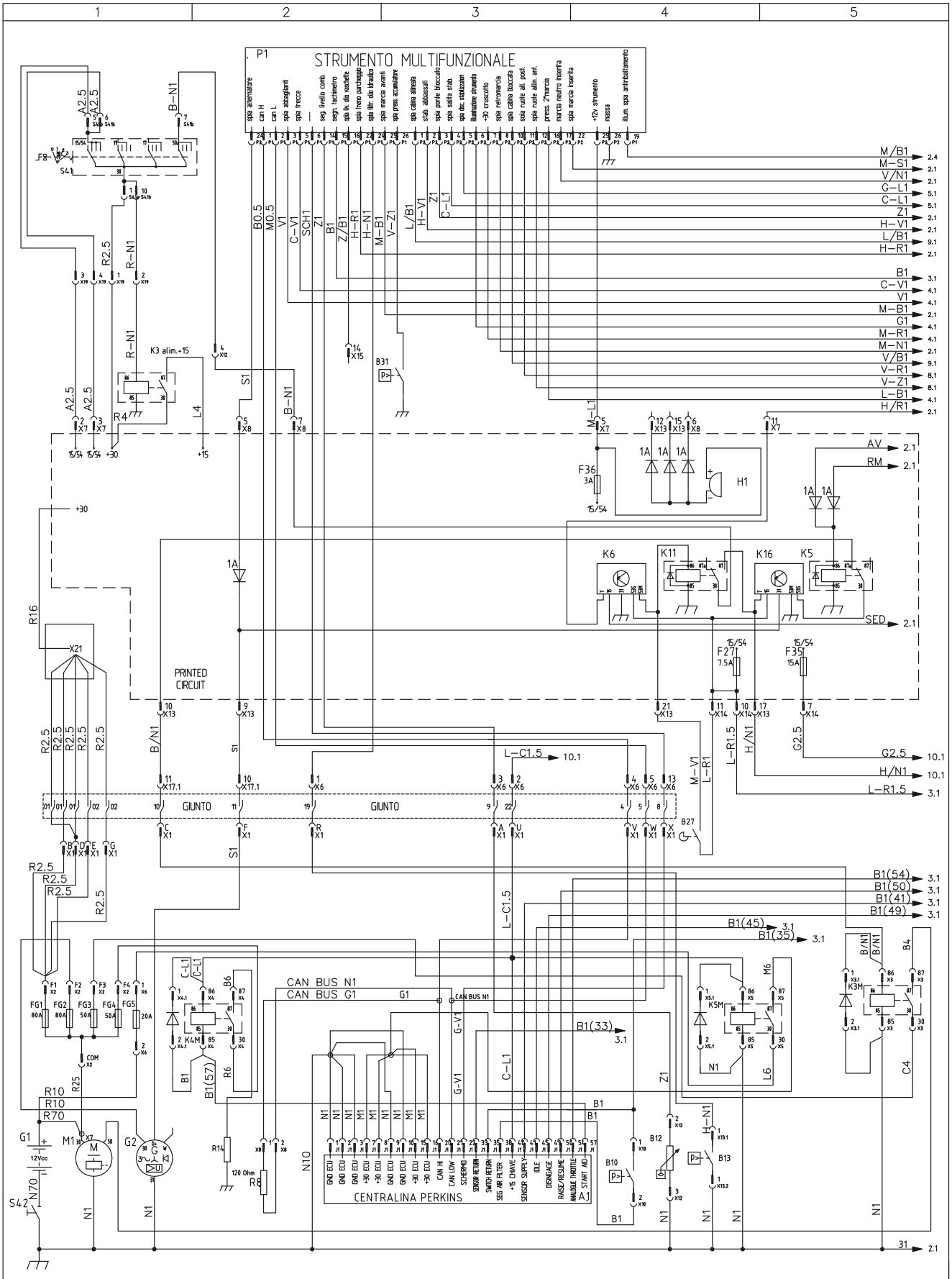
WIRE COLOURS

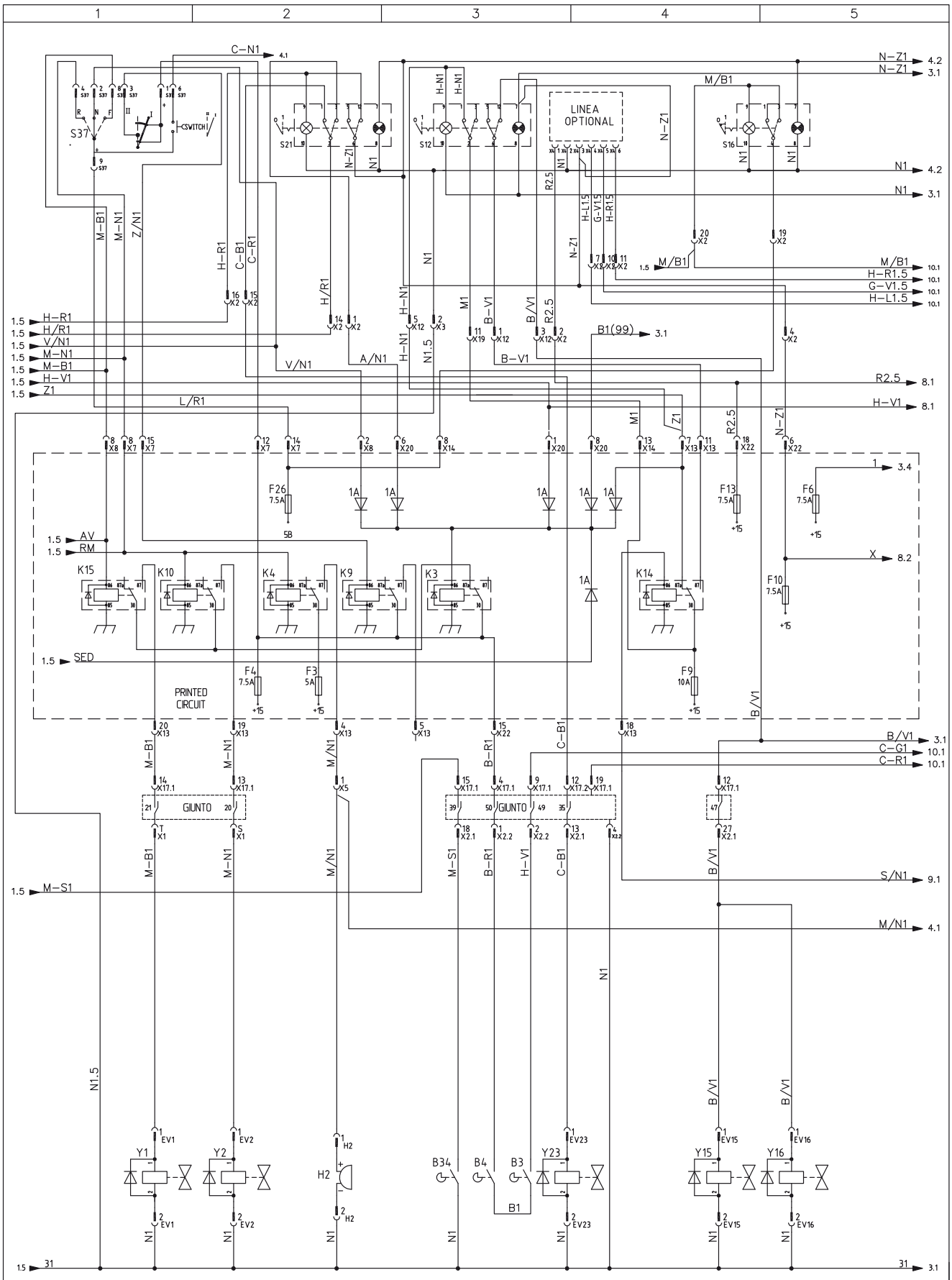
A	***SKY BLUE***
B	***WHITE***
C	***ORANGE***
G	***YELLOW***
H	***GREY***
L	***DARK BLUE***
M	***BROWN***
N	***BLACK***
R	***RED***
S	***PINK***
V	***GREEN***
Z	***PURPLE***

NOTE:
WIRES WITH TWO COLOURS ARE INDICATED BY COMBINING THE SYMBOLS ABOVE, FOR EXAMPLE:

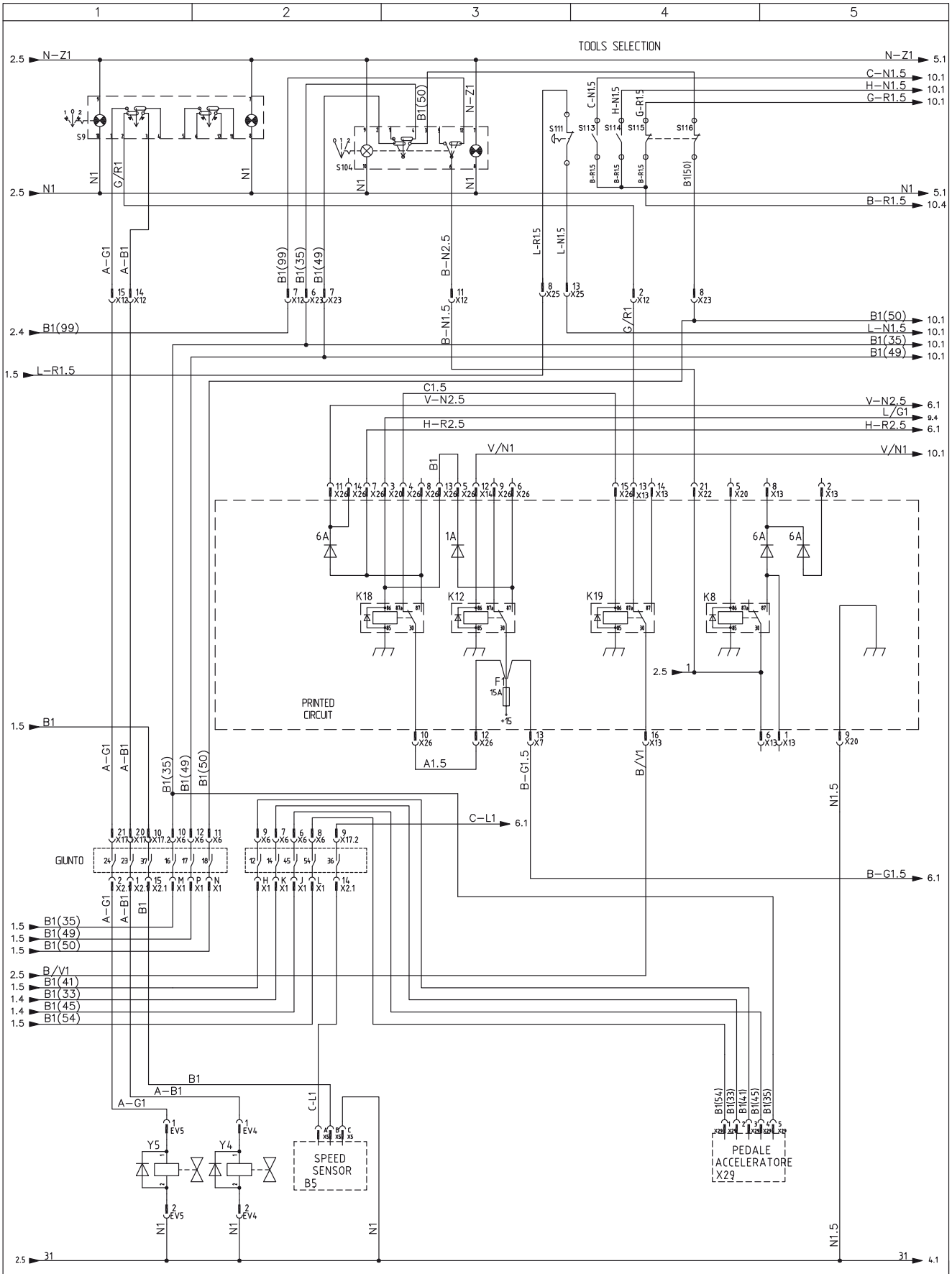
G/V - YELLOW/GREEN (HORIZONTAL STRIPES)

Y-G- YELLOW-GREEN (VERTICAL STRIPES)

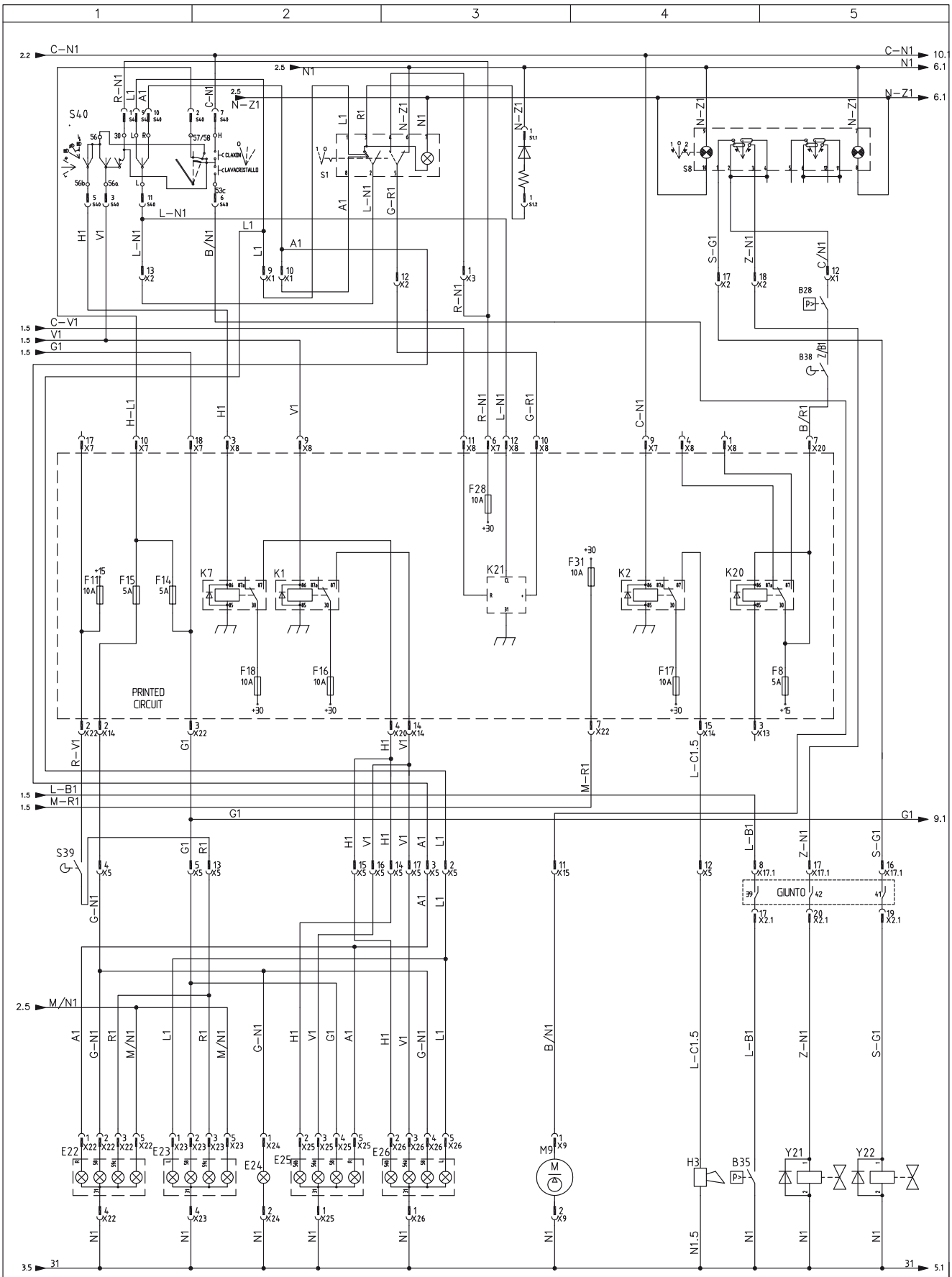

STRUMENTO MULTIFUNZIONALE
CENTRALINA PERKINS
PRINTED CIRCUIT
GIUNTO
GIUNTO
CAN BUS N1
CAN BUS G1
SED
AV
RM
H1
K3 alim.+15
K6
K11
K16
K5
K4M
K5M
F36 3A
F27 7.5A
F35 15A
+30
+15
S41
S42
S1
B31
B27
B12
B13
B10
R4
R6
R8
R10
R14
R16
R25
R70
120 Ohm
12Vcc
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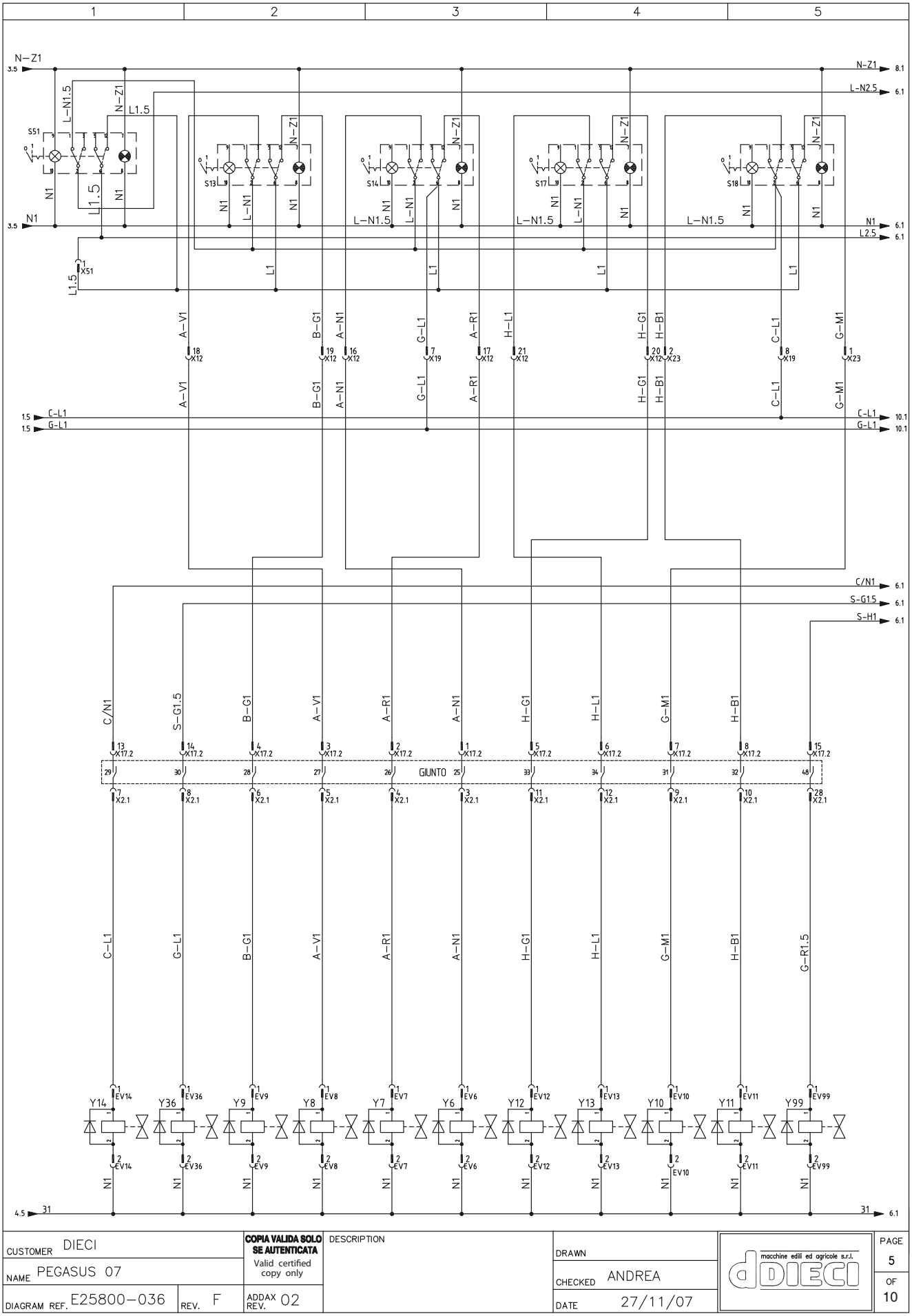


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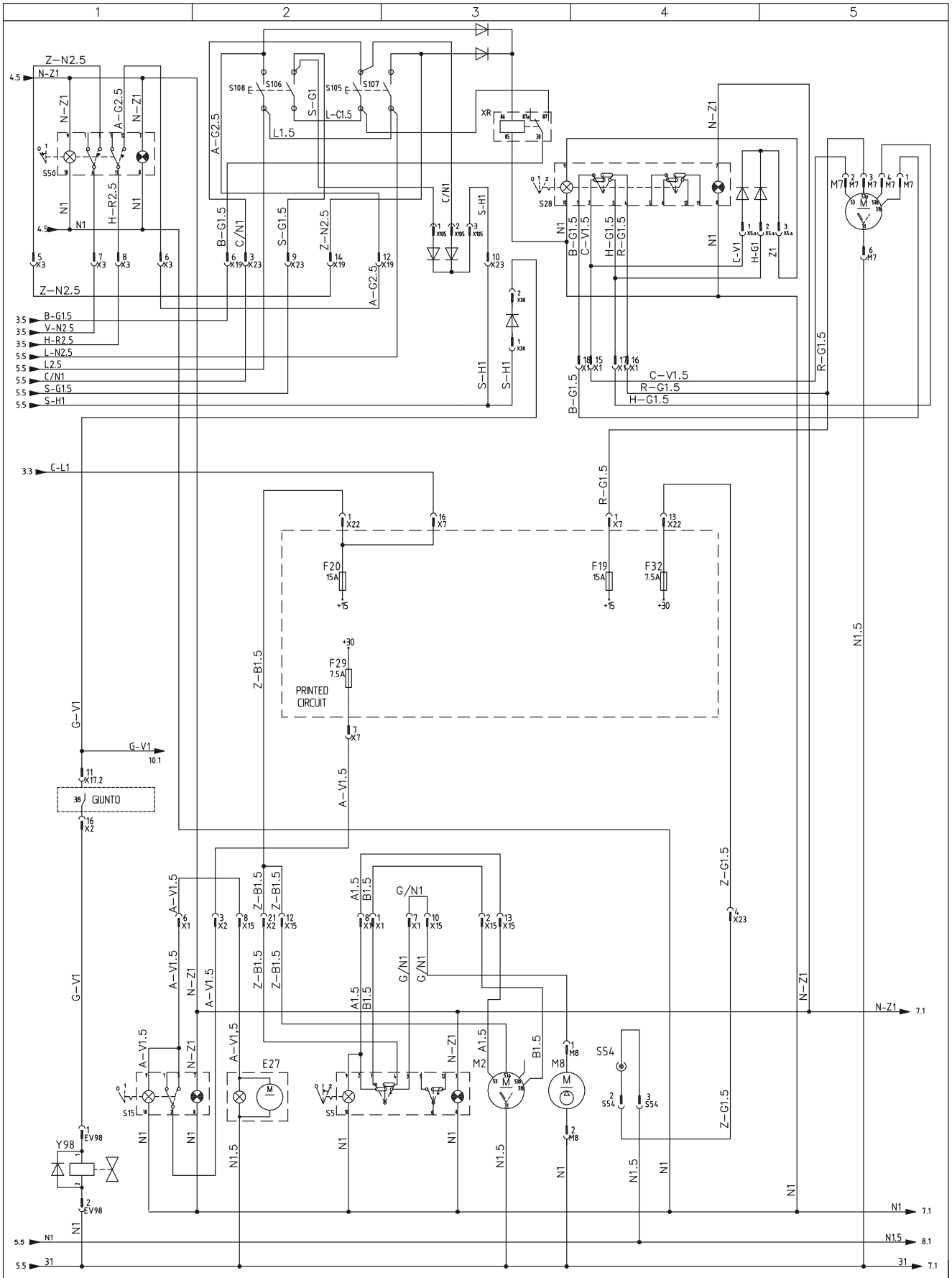


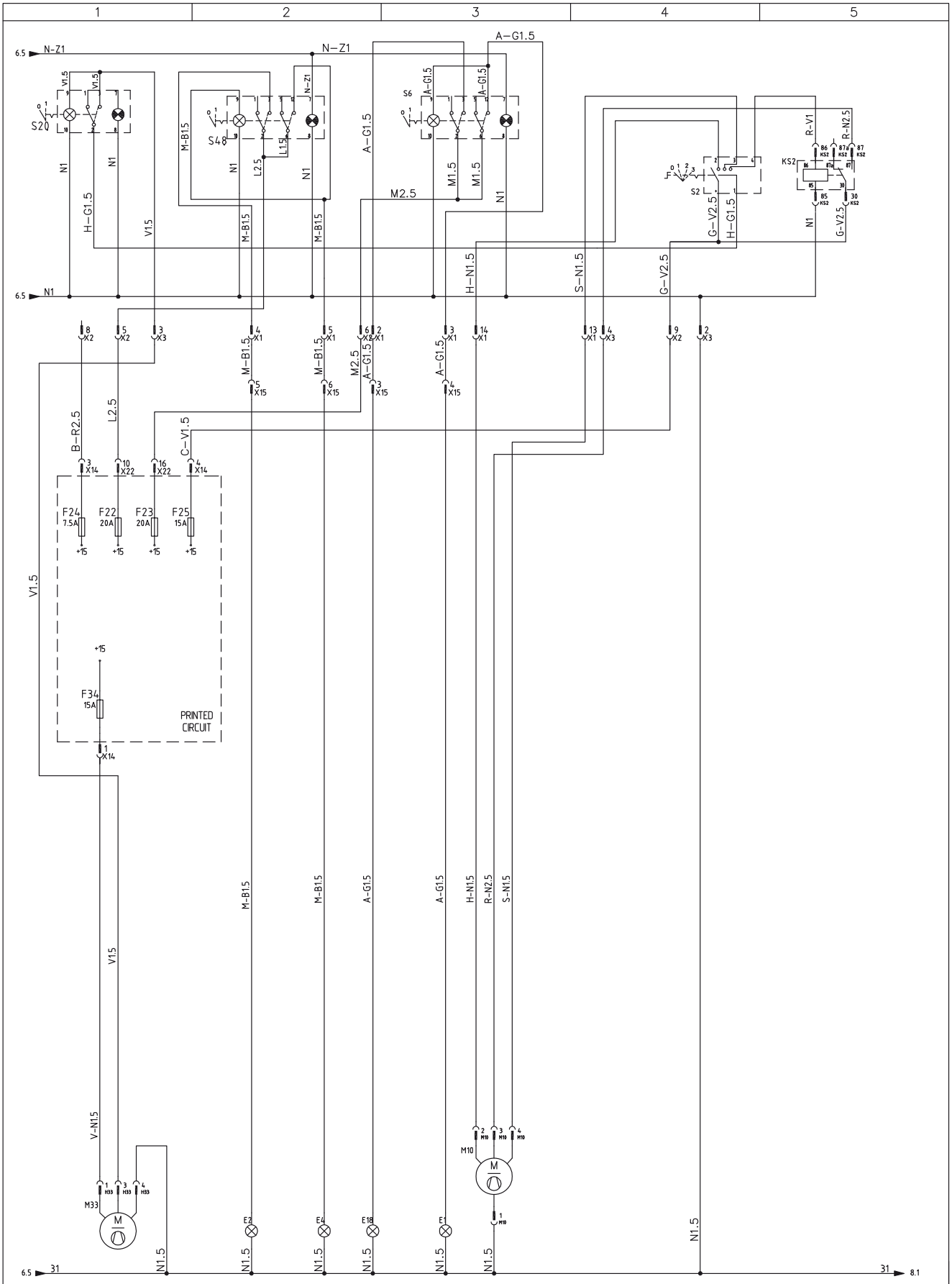
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C-N1
N1
N-Z1
L-N1
S40
CLAXON
LAVACRISTALLO
C-V1
V1
G1
L-B1
M-R1
M/N1
PRINTED CIRCUIT
F11 10A
F15 5A
F14 5A
F18 10A
F16 10A
F28 10A
F31 10A
F17 10A
F8 5A
K7
K1
K21
K2
K20
S39
S1
S8
B28
B38
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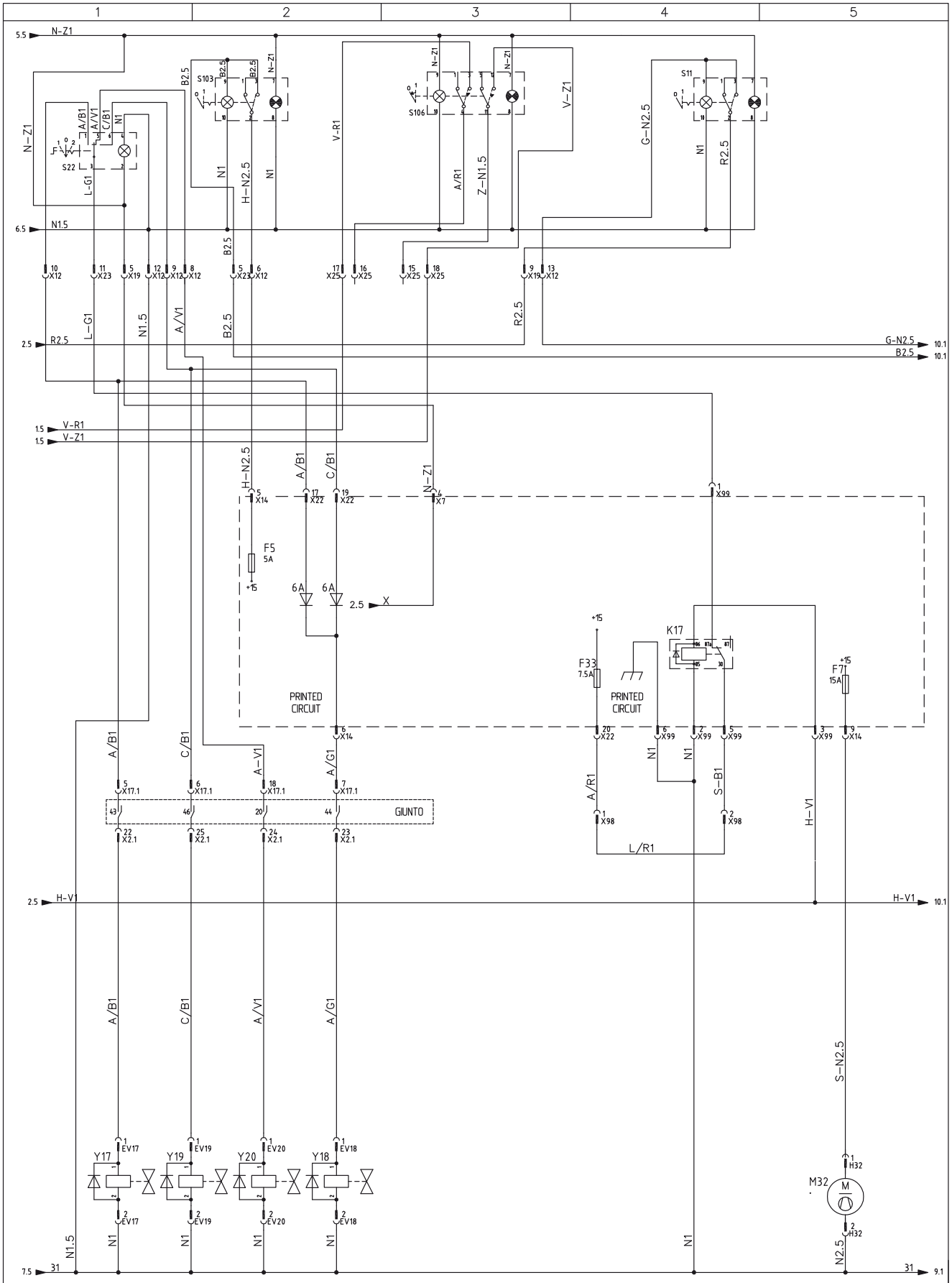


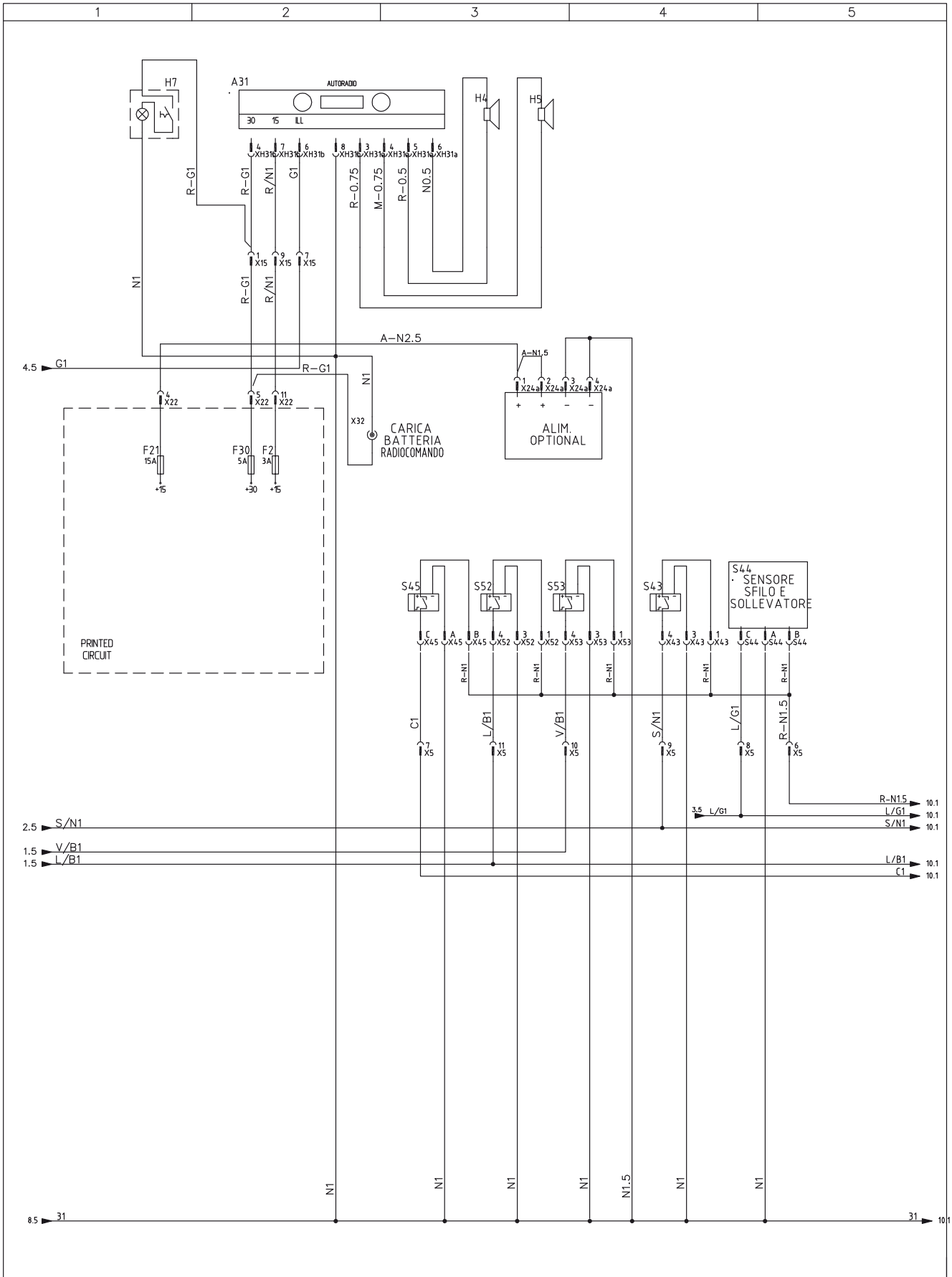
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1
2
3
4
5
PRINTED CIRCUIT
GIUNTO
F20 15A
F19 15A
F32 7.5A
F29 7.5A
S108
S106
S105
S107
S-G1
L-C1.5
L1.5
XR
S28
S50
S15
S5
S54
M2
M8
E27
Y98
EV98
C-L1
G-V1
A-V1.5
Z-B1.5
A1.5
B1.5
G/N1
N-Z1
A-G2.5
B-G1.5
C/N1
S-G1.5
Z-N2.5
S-H1
H-R2.5
L-N2.5
L2.5
V-N2.5
H-G1.5
R-G1.5
C-V1.5
Z1
H-G1
N1
N1.5
Z-G1.5
31
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OF 10



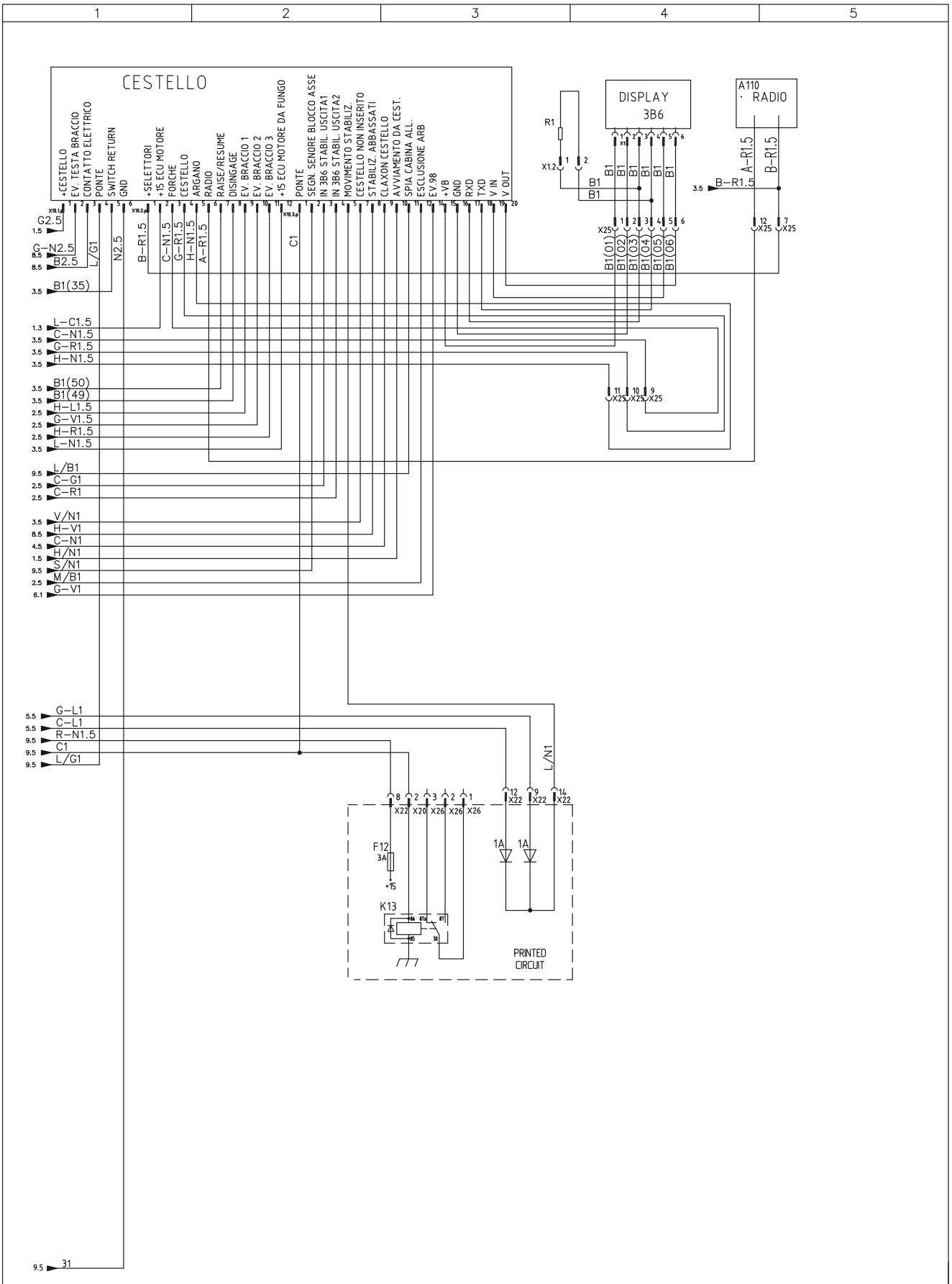
CUSTOMER DIECI	COPIA VALIDA SOLO SE AUTENTICATA Valid certified copy only	DESCRIPTION	DRAWN	macchine edili ed agricole s.r.l.	PAGE 7
NAME PEGASUS 07			CHECKED ANDREA		OF 10
DIAGRAM REF. E25800-036 REV. F	ADDAX REV. 02		DATE 27/11/07		


1
2
3
4
5
N-Z1
A/B1
A/V1
C/B1
N1
L-G1
S22
S103
B2.5
S106
V-R1
V-Z1
A/R1
Z-N1.5
G-N2.5
S11
R2.5
H-N2.5
N1.5
A/V1
B2.5
L-G1
G-N2.5
B2.5
V-R1
V-Z1
H-N2.5
A/B1
C/B1
N-Z1
F5
5A
+15
6A
6A
2.5
X
PRINTED CIRCUIT
K17
F33
7.5A
F7
15A
A/B1
C/B1
A-V1
A/G1
GIUNTO
N1
S-B1
A/R1
L/R1
H-V1
S-N2.5
Y17
Y19
Y20
Y18
EV17
EV19
EV20
EV18
M32
H32
N1.5
N2.5
31
CUSTOMER DIECI
NAME PEGASUS 07
DIAGRAM REF. E25800-036
REV. F
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DIAGRAM REF. E25800-036	REV. F	ADDAX REV. 02		DATE 27/11/07		

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NAME PEGASUS 07				CHECKED ANDREA	OF 10
DIAGRAM REF. E25800–036	REV. F	ADDAX REV. 02		DATE 27/11/07	

CONTROL BOX RELAY

DISTRIBUTOR

CM1		
1	EXTENSION SIGNAL 1	V
2	LIFTING SIGNAL 2	G
3	SERVICES SIGNAL 3	L
4	ROTATION SIGNAL 4	H
5	SWIVEL SIGNAL 5	B
M1		
1	GND	6N
2	12V DISTRIBUTOR (+GEN SOL. VALVE)	6Z

BOOM HEAD PIN (24 POLE)

CM2		
1	IN ACCELERATOR FROM PUSH BUTTON CON-	H-R
2	TROL PANEL	C
3	INSIDE EXTENSION DIRECTIONAL SIGNAL	M-V
4	DIRECTIONAL SIGNAL A	-
5	DIRECTIONAL SIGNAL B	-
6	EXTENSION SIGNAL 1	V
7	LIFTING SIGNAL 2	G
8	SERVICES SIGNALS 3	L
9	ROTATION SIGNAL 4	H
10	SIGNAL 5	-
M2		
1	GND	N
2	WORK LIGHT OUT	C-V
CM3		
1	12V	B-R
2	MUSHROOM-SHAPE EMERGENCY BUTTON	L-N
3	12V TO BASKET	R
4	12V TO WINCH	H-N
5	VEHICLE LIGHT OK	Z-N
6	BOOM HEAD SOLENOID VALVE	B
7	HORN	C
8	START ENGINE	B-N
CM4		
1	ANTI-TIPPING LIGHT OK	R-N
2	ALARM FROM BOOM HEAD	Z-N
3	12V DISTRIB. (from basket joystick)	Z
4	BASKET SIGNAL (for upp. Radioc.)	G-R

BOOM END RUN and flashing Radioc.

CM10		
1	12V FLS1 (LOW BOOM)	B-R
2	GND	N
3	-	-
4	12V FLS2 (HIGH BOO) (FROM 3B6)	B-N
5	RETURN FLS1 (LOW BOOM)	R-A
6	FLASHING	R

CAB (Selectors and Accelerator switch)

CM6		
1	12V	B-R
2	ACCELERATOR (disengage)	A-R
3	ACCELERATOR (raise-resume)	A-B
4	MUSHROOM-SHAPED EMERGENCY BUTTON (TRIPOD)	L-N
5	MUSHROOM-SHAPED EMERGENCY BUTTON (TRIPOD)	L-N
CM7		
1	FORKS SEL.	C-N
2	WINCH SEL.	H-N
3	BASKET SEL.	G-R
4	RADIO CONTROL SEL.	R

IN/OUT MIDAC (3B6)

CM5		
1	12V POSITIVE SUPPLY MIDAC	B-R
2	GND SUPPLY MIDAC	N
3	IN ANTI-TIPPING	C
4	-	-
5	OUT OUTRIGGERS LOWERED 2	M-B
6	-	-
7	OUT BASKET NOT ENGAGED OUT	G-N
8	OUTRIGGERS LOWERED 1	M

CAB AND ON MACHINE

CM8		
1	STOP FUEL 12V	L-N
2	RETRUN DIESEL STOP	L-N
3	START ENGINE	B-N
4	HORN	C
5	BOOM HEAD SOLENOID VALVE	B
6	PUMP 2	M-V
7	-	-
8	12V	B-R
CM9		
1	BASKET NOT ENAGAGED (out x Cab)	G-N
2	-	-
3	OUTRIGGERS 1 LOWERED	M
4	OUTRIGGERS MOVEMENT	M-N
5	ANTI-TIPPING EXCLUSION	H-R
M3		
1	GND	N
2	GND	N
M4		
1	OARD 12 V POWER SUPPLY	B-R
2	OARD 12 V POWER SUPPLY	B-R
3	WORK LIGHT IN	C-V

JOYSTICKT1 or 2

CM11		
1	BOOM ASCENT DIRECTIONAL SIGNAL	H-S
2	WINCH DIRECTIONAL SIGNL A	M
3	INSIDE EXTENSION DIRECTIONAL SIGNAL	M-V
4	DIRECTIONAL SIGNAL A	-
5	DIRECTIONAL SIGNAL B	-
6	EXTENSION SIGNAL 1	V
7	LIFTING SIGNAL 2	G
8	SERVICES SIGNAL 3	L
9	ROTATION SIGNAL 4	H
10	SWIVEL SIGNAL 5	B
CM12		
1	12V POWER SUPPLY	R
2	GND	N
3	12V DISTRIBUTOR	Z
4	BUTTON A	R-L
5	BUTTON B	S
6	BUTTON C	V-B

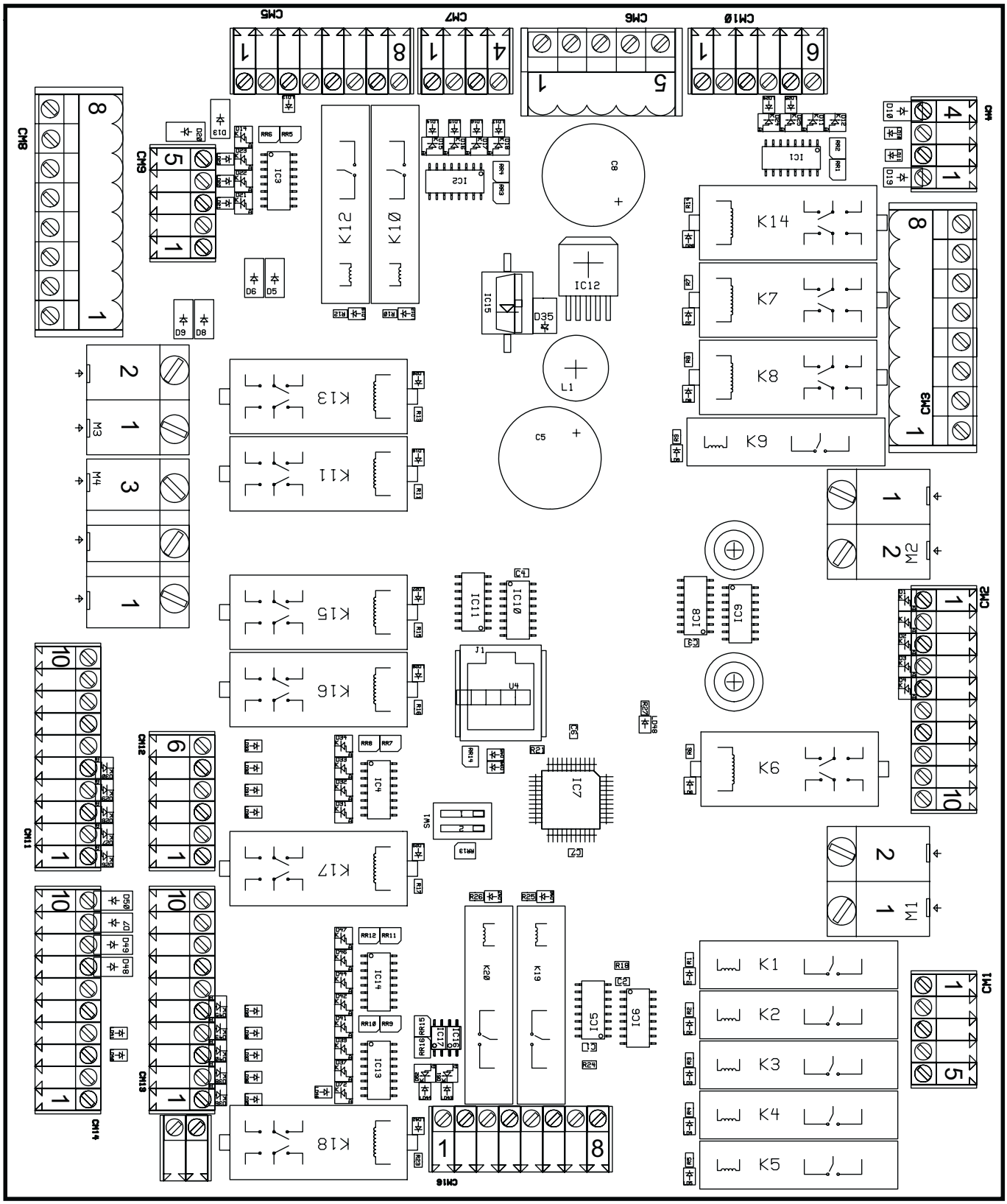
RADIO CONTROL

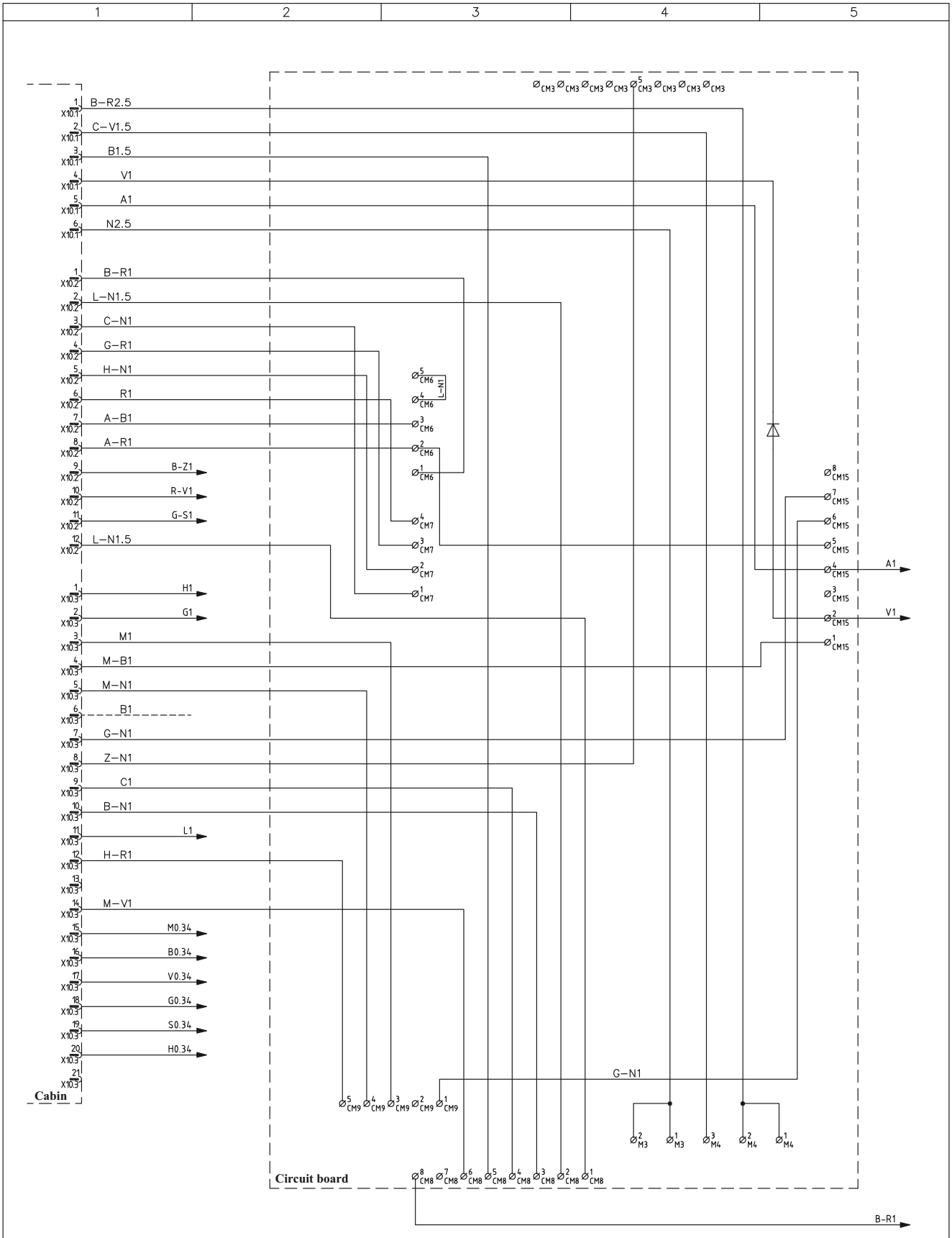
CM13		
1	BOOM ASCENT DIRECTIONAL SIGNALS	H-R
2	WINCH DIRECTIONAL AND DESCENT SIGNAL	M-N
3	INSIDE EXTENSION DIRECTIONAL SIGNAL	M-V
4	DIRECTIONAL SIGNAL A	-
5	DIRECTIONAL SIGNAL B	-
6	EXTENSION SIGNAL 1	V
7	LIFTING SIGNAL 2	G
8	SERVICES SIGNAL 3	L
9	ROTATION SIGNAL 4	H
10	SWIVEL SIGNAL 5	B
CM14		
1	12V RADIOCONTROL POWER SUPPLY	R
2	GND	N
3	12V DISTRIBUTOR	Z
4	RADIO CONTROL OK (out from radio)	G-S
5	CAB (Selectors and Accelerator switch)	A-B
6	ACCELERATOR	A-R
7	ACCELERATOR	C
8	CLACSON	B-N
9	START ENGINE	G-N
10	BASKET NOT ENGAGE (x red. Radio Speed)-	-
CM15		
1	OUTR. LOWERED 2 (IN x E3001)	M-B
2	BOOM DOWN (OUT FROM 3B6)	V
3	-	-
4	ACCELERATOR COM.	A
5	ACCELERATOR SPEED_1	A-R
6	BOOM DOWN FOR BASKET COM	G-N
7	BOOM DOWN FOR BASKET NC	G-N
8		

RELAY FUNCTIONS

K1	LIFTING
K2	EXTENSION OR
K3	SERVICES
K4	ROTATION
K5	SWIVEL
K6	12V DISTRIBUTOR
K7	BASKET
K8	WINCH
K9	STAB OUT (x CAB LED)
K10	OUTRIGGERS 1)
K11	STOP
K12	OUTRIGGERS 2
K13	PUMP 2
K14	FLASHING RADIO CONTROL
K15	JOYSTICK (Proportional signals)
K16	JOYSTICK (Proportional signals)
K17	JOYSTICK (Proportional signals)
K18	RADIO CONTROL
K19	BOOM DOWN (x basket)
K20	ACCELERATOR

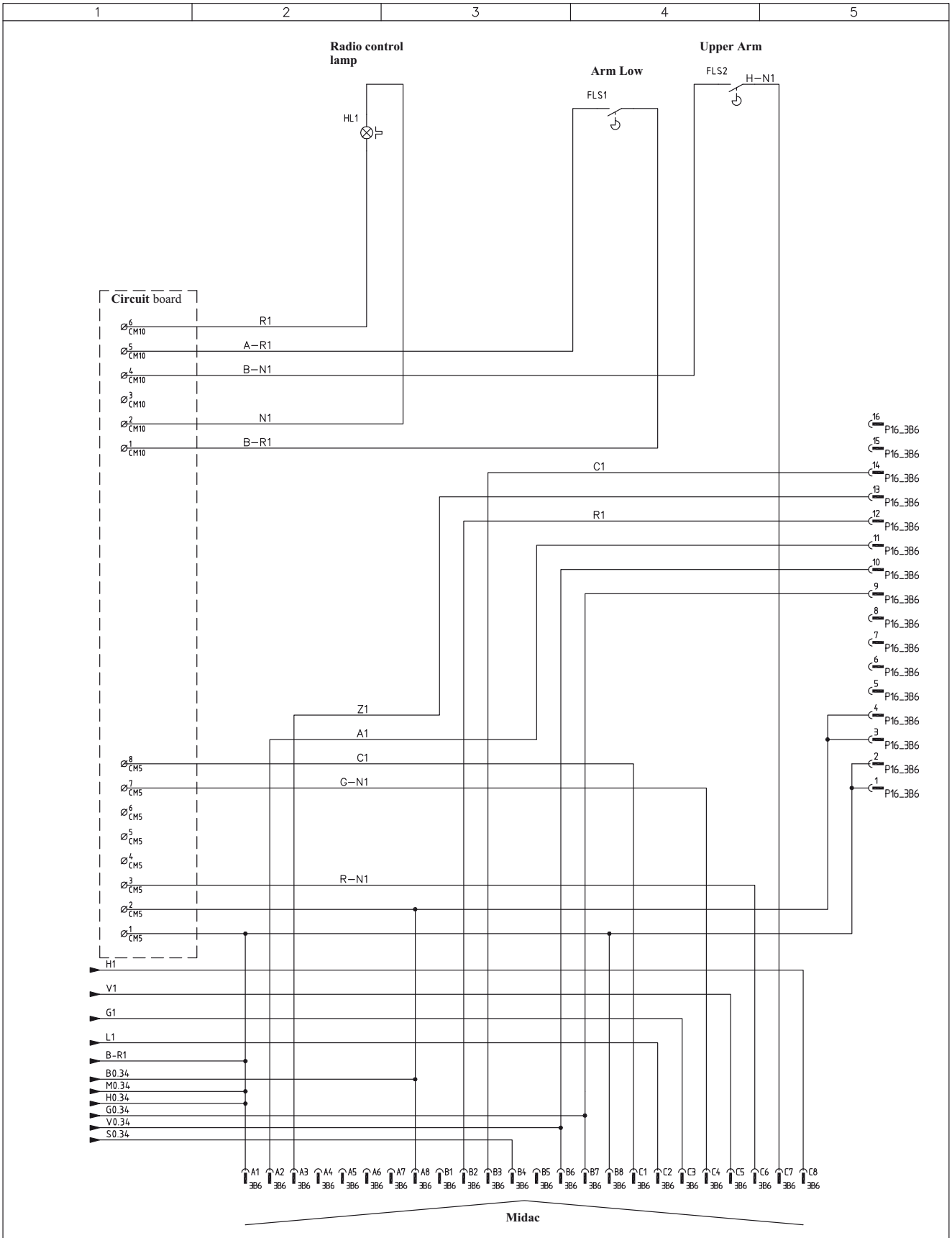
CONTROL BOX RELAY





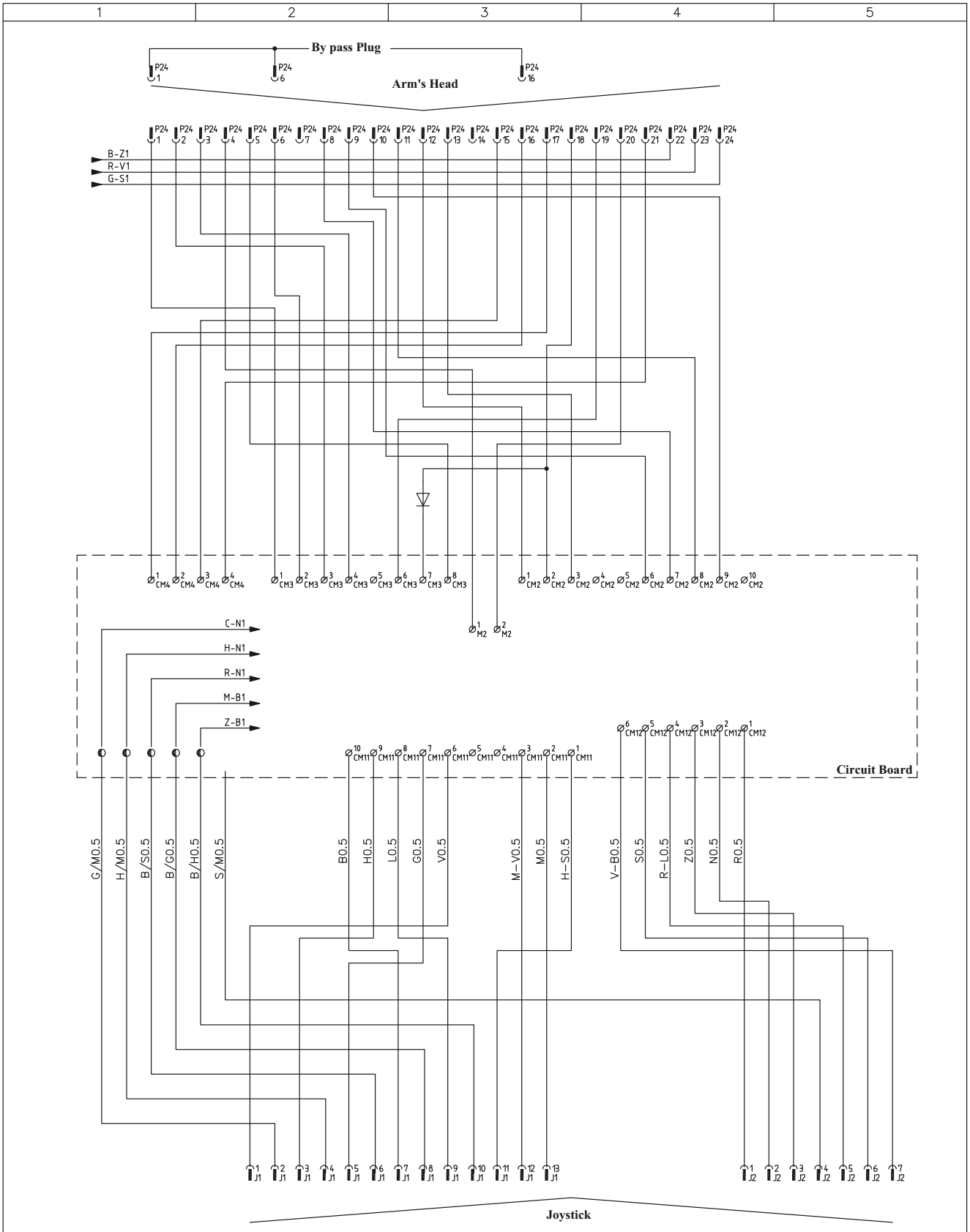
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CODICE/REF. 140	MODIFY b	ADDAX REV. 01		DATA/DATE 09/11/2009	



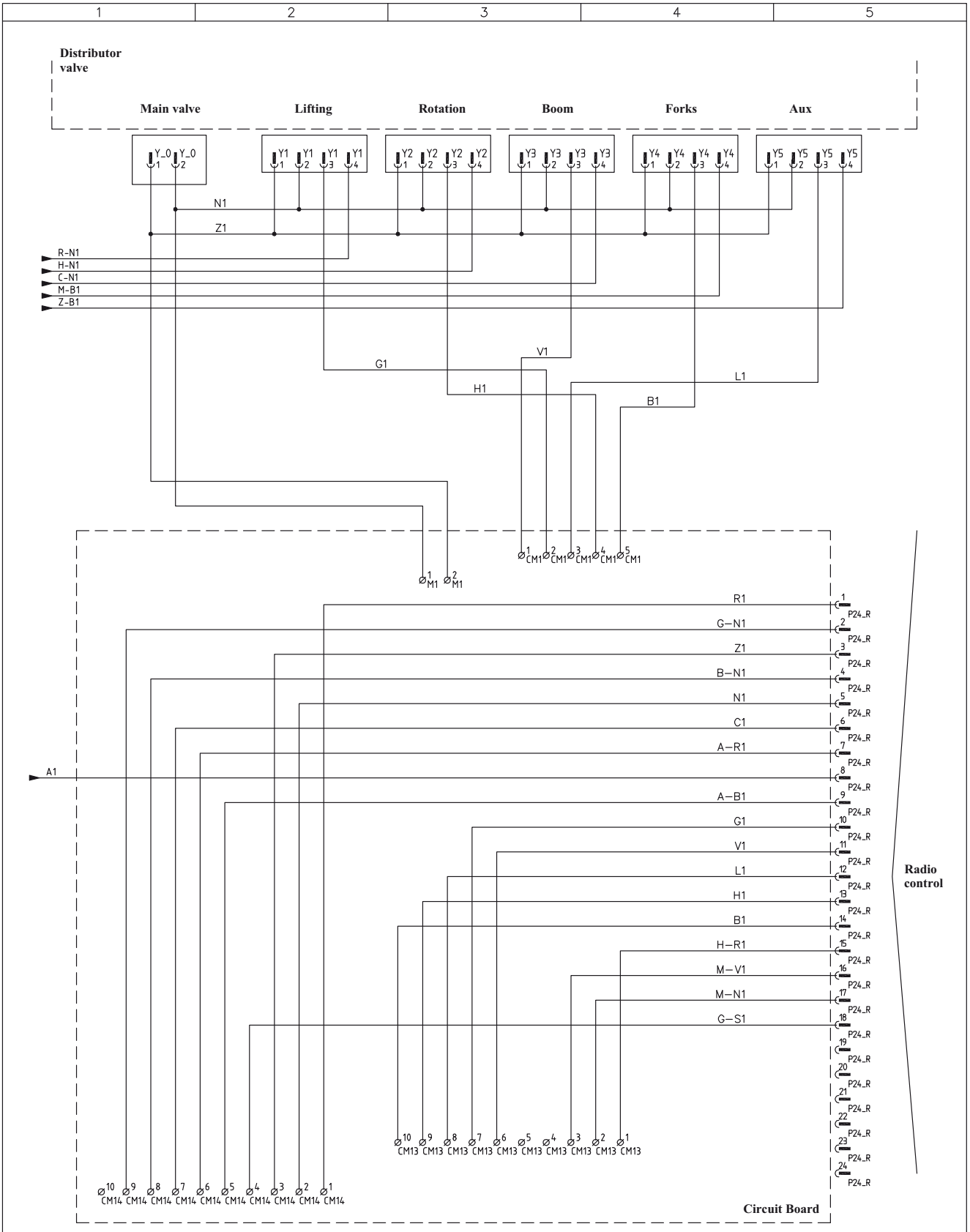
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CODICE/REF. 140	MODIFY b	ADDAX REV. 01		DATA/DATE 09/11/2009	macchine edili ed agricole s.r.l.



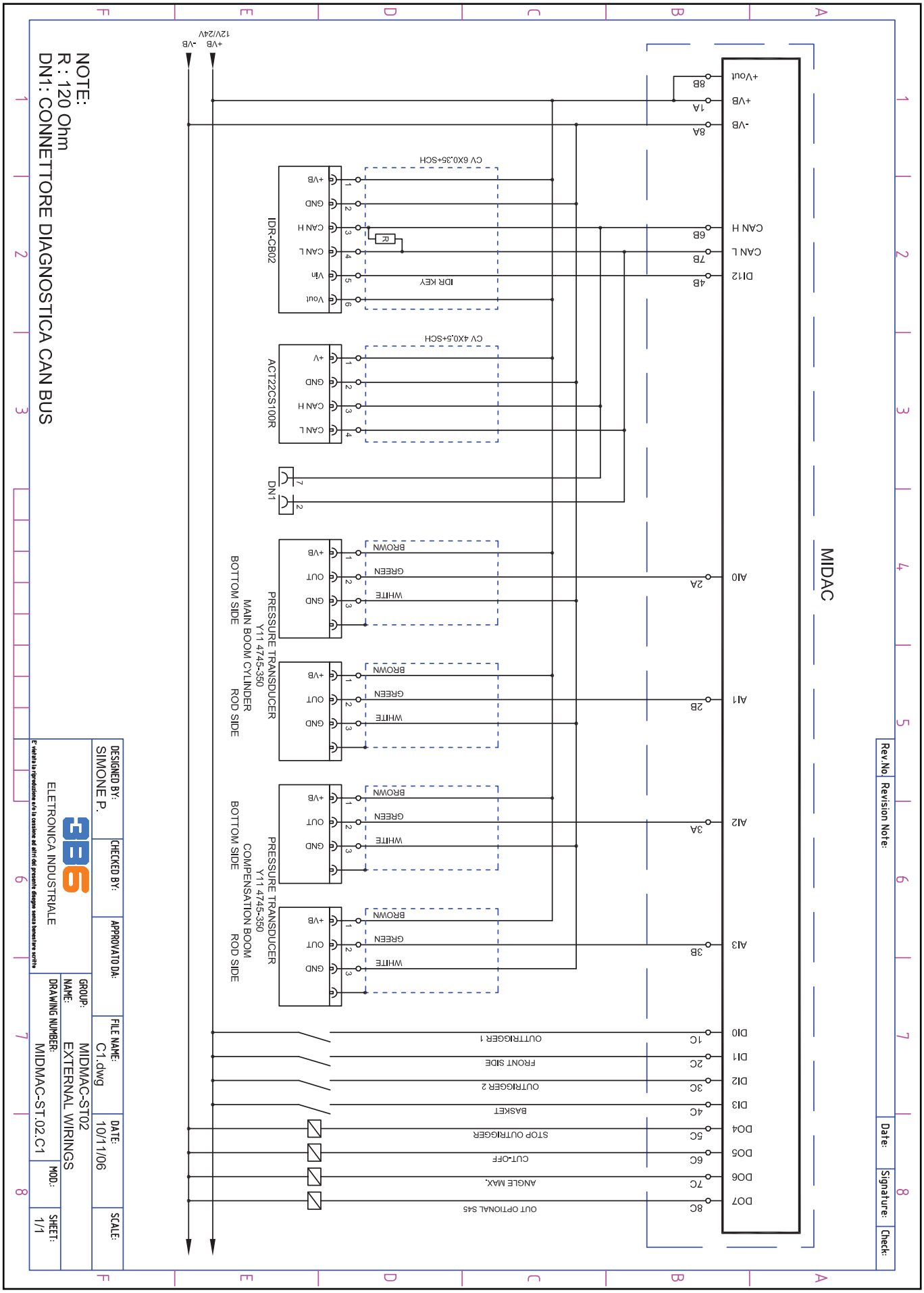
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DENOMINAZIONE/PART DESCRIPTION BEF4162	FORMATO/SIZE A3		QUADRO ELETTRICO PEGASUS 07 DISTRIBUTORE REXROTH MIDAC SCHEDA BEP0271	CONTROLLATO/CHECKED	OF 4
CODICE/REF. 140	MODIFY b	ADDAX REV 01		DATA/DATE 09/11/2009	macchine edili ed agricole s.r.l.

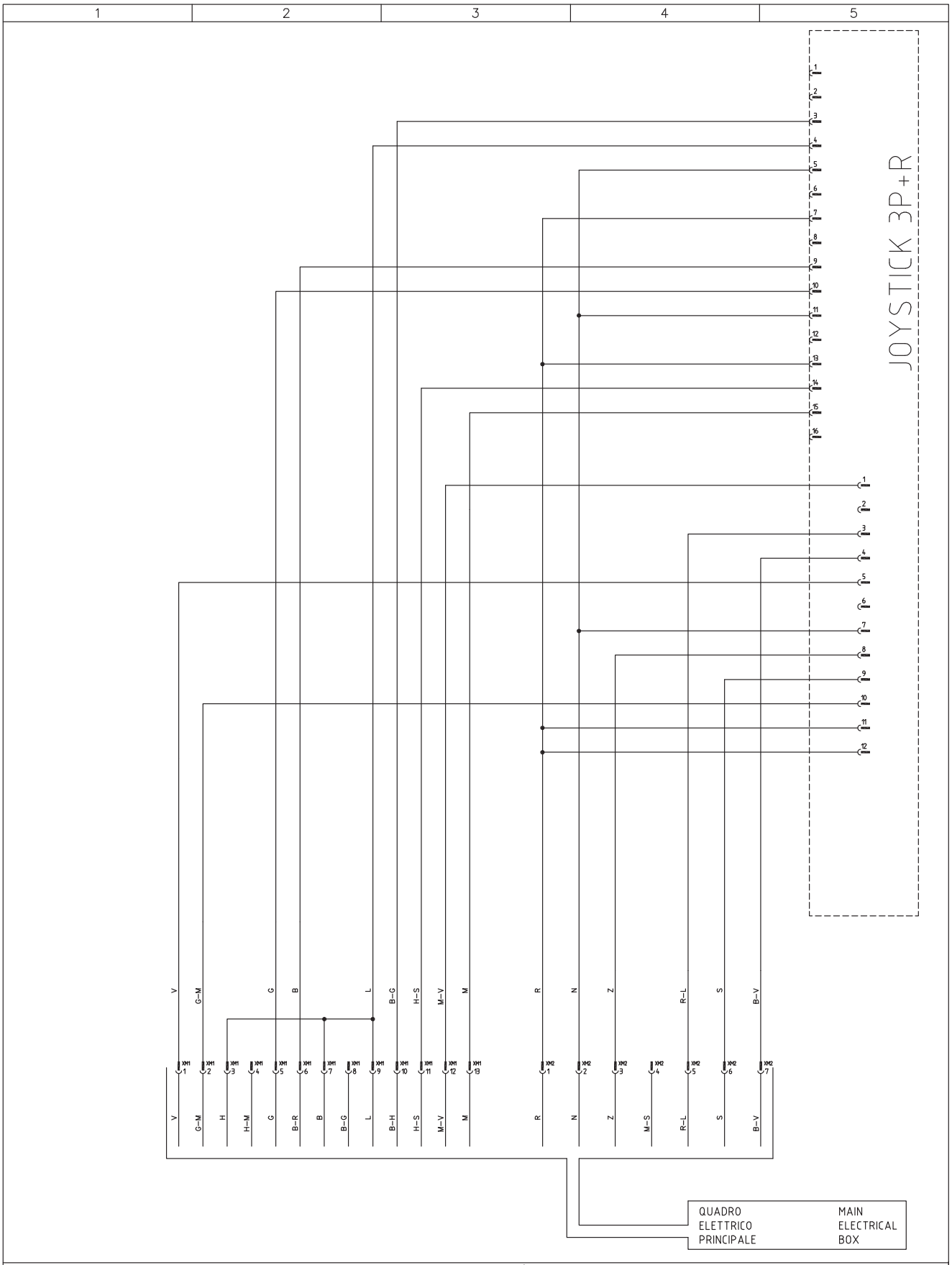


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CODICE/REF. 140	MODIFY b	ADDAX REV. 01		DATA/DATE 09/11/2009	


NOTE:
R : 120 Ohm
DN1: CONNETTORE DIAGNOSTICA CAN BUS
MIDAC
+VB
-VB
12V/24V
CAN H
CAN L
DI12
AI0
AI1
AI2
AI3
DI0
DI1
DI2
DI3
DO4
DO5
DO6
DO7
IDR-CB02
ACT22CS100R
DN1
PRESSURE TRANSDUCER
Y11 4745-350
MAIN BOOM CYLINDER
ROD SIDE
BOTTOM SIDE
COMPENSATION BOOM
OUTTRIGGER 1
FRONT SIDE
OUTTRIGGER 2
BASKET
STOP OUTRIGGER
CUT-OFF
ANGLE MAX.
OUT OPTIONAL S45
IDR KEY
BROWN
GREEN
WHITE
DESIGNED BY: SIMONE P.
CHECKED BY:
APPROVED BY:
FILE NAME: C1.dwg
DATE: 10/11/06
SCALE:
SHEET: 1/1
MOD.:
DRAWING NUMBER: MIDMAC-ST.02.C1
GROUP:
NAME: MIDMAC-ST02 EXTERNAL WIRINGS
ELETRONICA INDUSTRIALE
Rev.No
Revision Note:
Date:
Signature:
Check:

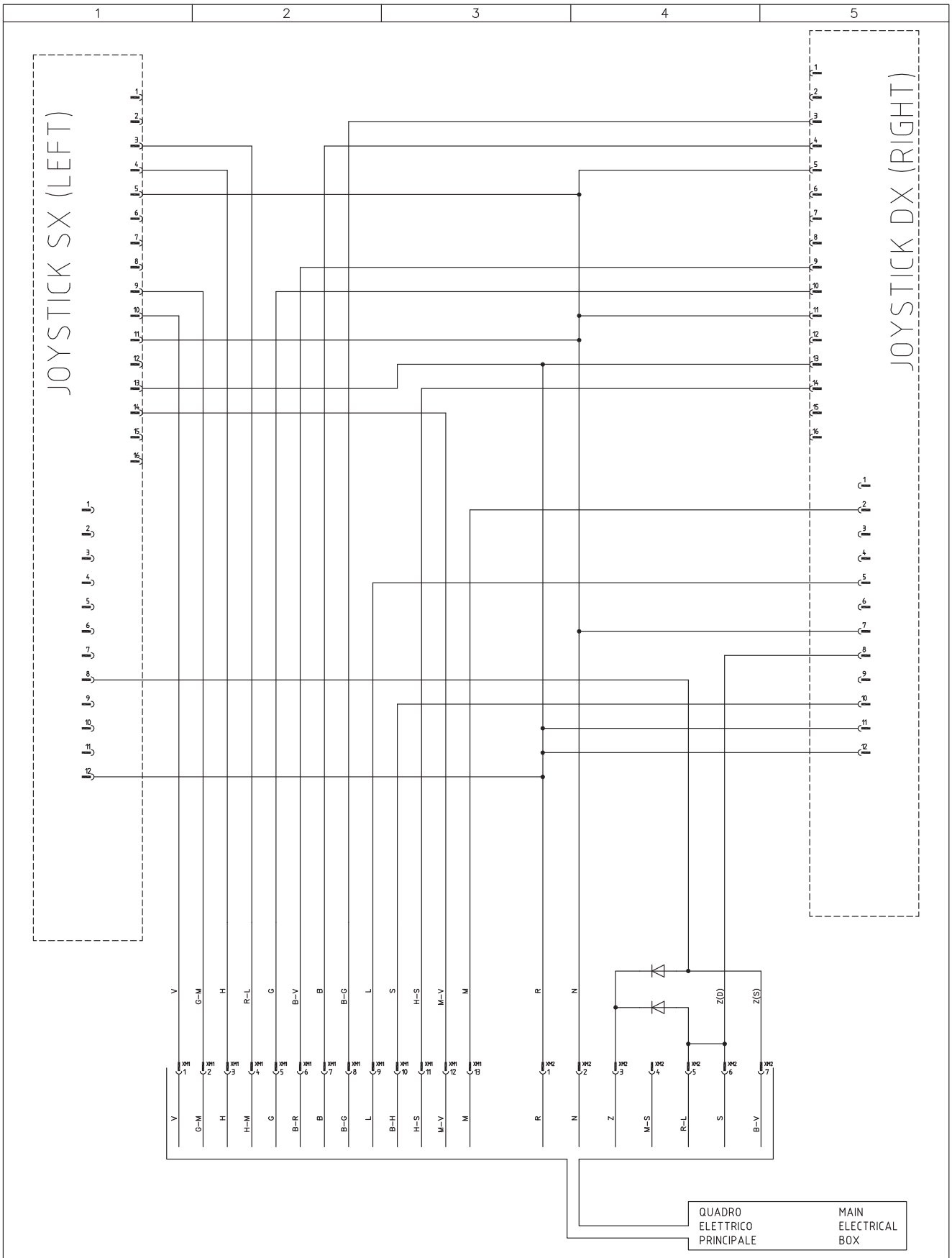
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DENOMINAZIONE/PART DESCRIPTION 422_02	FORMATO/SIZE A3		CABLAGGIO MANIPOLATORE SINGOLO (PEGASUS '10) JOYSTICK POTENZIOMETRICI 5V 10%-90%	CONTROLLATO/CHECKED	OF
CODICE/REF. BEF4335	MODIFY	ADDAX REV.		DATA/DATE 21/12/09	

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DENOMINAZIONE/PART DESCRIPTION 422_01	FORMATO/SIZE A3		CABLAGGIO MANIPOLATORE DOPPIO (PEGASUS '10) JOYSTICK POTENZIOMETRICI 5V 10%–90%	CONTROLLATO/CHECKED	OF
CODICE/REF. BEF4336	MODIFY	ADDAX REV.		DATA/DATE 21/12/09	

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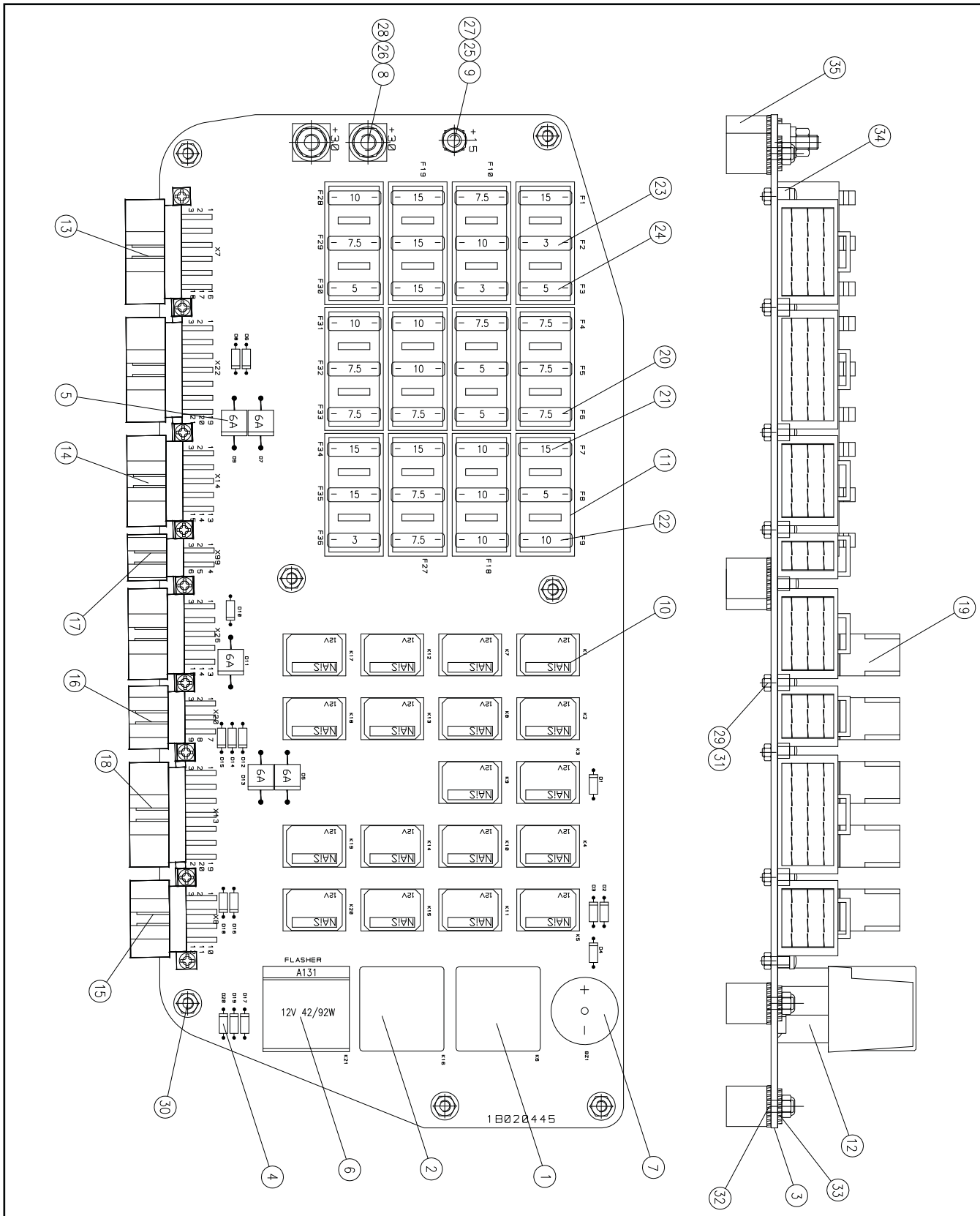
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ELECTRICAL DIAGRAMS AND CIRCUITS
Mechanical Engine 38.16_400°

E2

FUSE BOX KEY – DIA.N° 01171037

POS	DESCRIPTION	QTY
1	DELAYED TIMER 3” 12V	1
2	BASKET START ANTI-REP. CONTROL UNIT	1
3	PRINTED CIRCUIT	1
4	DIODES 1N 4007 BLACK	15
5	DIODE P 600 M	5
6	INTERMITTENCE 12 V	1
7	BUZZER	1
8	POWER TERMINAL M6	2
9	POWER TERMINAL M5	1
10	BOARDS RELAY MICRO SWITCH CONNECTOR	18
11	BOARDS FUSE-HOLDER CONNECTOR	12
12	BOARDS RELAY-HOLDER CONNECTOR	3
13	18 WAY F 90° C.S. CONNECTOR	1
14	15 WAY F 90° C.S. CONNECTOR	2
15	12 WAY F 90° C.S. CONNECTOR	1
16	9 WAY F 90° C.S. CONNECTOR	1
17	6 WAY F 90° C.S. CONNECTOR	1
18	21 WAY F 90° C.S. CONNECTOR	2
19	MICRO SWITCH RELAY WITH 12V DIODE	18
20	BLADE FUSE 7.5 A	11
21	BLADE FUSE 15 A	8
22	BLADE FUSE 10 A	9
23	BLADE FUSE 3A	3
24	BLADE FUSE 5 A 257005	5
25	EXT. TOOTHED WASHER 5 DIN 6798 STAINLESS STEEL	1
26	EXT. TOOTHED WASHER 6 DIN 6798 STAINLESS STEEL	2
27	HEX NUT M5 UNI 5588-65 STAINLESS STEEL	1
28	NUT M6 UNI 588 STAINLESS STEEL A2	2
29	HIGH LOCK NUT M 3 DIN 982 STAINLESS STEEL	9
30	M4 LOCK NUT UNI 7473 STAINLESS STEEL A2	7
31	TC SCREW + 3X12 UNI 7687 STAINLESS STEEL	9
32	WASHER 3.5X13.6X2 CERTENE	7
33	WASHER 4.4X10X1.1 NYLON	7
34	SPACER DCK 19 3X2	1
35	ANTIVIBRATING M/F M4X10 H15 STAINLESS STEEL V0	7



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	GRADO DI PRECISIONE PER QUOTE SENZA TOLLERANZA (UNI EN 22768-1) DEGREE OF ACCURANCY FOR QUOTES WITHOUT TOLERANCE (UNI EN 22768-1)	CODICE CLIENTE/CUSTOMER REF.	
SCALA/SCALE 1:1 VERIFICARE CON RIFERIMENTO TO VERIFY WITH REFER	NOTE GENERALI (MATERIALE E LAVORAZIONE)/GENERAL NOTES (MATERIAL AND WORKING) Descrizione Procedura di Resinatura: Unico Trattamento: Vernice Dow Corning	SOSTITUISCE/REPLACED CODE	
FORMATO/SIZE A2		DISEGNATO/DRAWN Zilioli P.	DATA/DATE 19/07/2003
		CONTROLLATO/CHECKED Melotti G.	DATA/DATE 21/07/2003
	DENOMINAZIONE/PART DESCRIPTION CENTRALINA DIECI 2003 12V	CODICE/REF. 01171037	MODIFY e / ADDAX REV. 07
			D.R.C. 04.15.02 rev 00

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BASE SYSTEM KEY - DIA. N° E25800-038F_38.16_400° (mechanical motor)

NAME	DESCRIPTION	SHEET
A65	PRE-HEATING CONTROL UNIT	1.5
A74	ELECTRONIC ACCELERATOR	1.4
B23a	MOTOR WATER THERMAL CONTACT	1.4
B23b	IGNITION PLUG THERMISTOR	1.4
B24	FUEL LEVEL INDICATOR SENSOR	1.3
B23as	WATER TEMPERATURE INSTRUMENT THERMOSTAT	1.3
B26	MOTOR OIL PRESSRE SWITCH	1.3
B27	SEAT MICRO SWITCH	1.4
B28	BRAKE PRESSURE SWITCH	4.4
B31	ACCUMULATOR PRESSURE SWITCH	1.5
B4	REAR OUTRIGGER MICRO SWITCH	2.3
B61	FILTER PRE-HEAT THERMISTOR	1.2
B63	FRONT OUTRIGGER MICRO SWITCH	2.3
B64	SPEED SENSOR	3.2
B79	ACCELERATOR LIQUID PRESSURE SWITCH	1.4
E1	Right rear work light	7.3
E2	Right front work light	7.2
E4	Left front work light	7.2
E7	CEILING LIGHT	9.1
E18	Left rear work light	7.2
E22	RIGHT REAR LIGHT	4.1
E23	LEFT REAR LIGHT	4.1
E24	PLATE LIGHT	4.2
E25	RIGHT FRONT LIGHT	4.2
E26	LEFT FRONT LIGHT	4.3
E27	REVOLVING LIGHT	6.2
F1	OUTRIGGERS FUSE 15A	3.3
F2	RADIO FUSE 3A	9.2
F3	BUZZER AND REVERSE LIGHT FUSE 5A	2.2
F4	FAST/SLOW GEAR SELECTOR FUSE 7.5A	2.2
F5	OPTIONAL EL CONTROL SWITCH FUSE 5A	8.2
F6	ACCELERATOR SWITCH FUSE 7.5A	3.4
F7	PNEUMATIC SEAT FUSE 15A	8.5
F8	MECHANICAL GEAR FUSE 5A	4.5
F9	AXLE LOCK FUSE 10A	2.4
F10	SWITCHES LEDS POWER SUPPLY FUSE	2.5
F11	LIGHT SWITCH AND STOP LIGHTS POWER SUPPLY FUSE 10A	4.1
F12	SENSORS FUSE 3A	9.2
F13	OPTIONAL BOOM HEAD SOLENOID VALVE SWITCH FUSE+POWER SUPPLY OPTIONAL LINE 7.5A	2.4
F14	POSITION LIGHTS FUSE 5A	4.1
F15	POSITION LIGHTS FUSE 5A	4.1
F16	FULL BEAM HEADLIGHT FUSE 10 A	4.2
F17	HORN FUSE 10A	4.4
F18	DIPPED BEAM HEADLIGHT FUSE 10 A	4.2
F19	FRONT WINDSCREEN WIPER FUSE 15A	6.4
F20	REAR WINDSCREEN WIPER FUSE 15A	6.2
F21	OPTIONAL FUSE 15A	9.1
F22	FRONT WORK LIGHTS FUSE 20A	7.1
F23	REAR WORK LIGHTS FUSE 20A	7.1
F24	OPTIONAL FUSE 7.5A	7.1

BASE SYSTEM KEY - DIA. N° E25800-038F_38.16_400° (mechanical motor)

NAME	DESCRIPTION	SHEET
F25	HEATING FAN FUSE 15A	7.1
F26	PARKING BRAKE + START GEAR FUSE 7.5A	2.2
F27	ENGINE STOP + SEAT MICRO SWITCH FUSE 7.5A	1.4
F28	WARNING FUSE 7.5°	4.3
F29	REVOLVING LIGHT FUSE 7.5A	6.2
F30	RADIO, CEILING LIGHT AND RADIO CONTROL BATTERY CHARGER FUSE 5A	9.2
F31	OPTIONAL FUSE 10A	4.4
F32	CURRENT SOCKET FUSE 7.5A	6.4
F33	STEERING SELECTOR FUSE 7.5A	8.4
F34	AIR CONDITIONER FUSE 15A	7.1
F35	OPTIONAL FUSE 15A	1.5
F36	INSTRUMENT POWER SUPPLY FUSE 3A	1.3
F61	BASKET AND RADIO CONTROL FUSE 15A	10.1
F71	ACCELERATOR FUSE SET-UP	1.3
F72	POWER SUPP. FUSE SET-UP +30	1.3
FG1	ALTERNATOR FUSE 80A	1.1
FG2	GENERAL FUSE 80A	1.1
FG4	STARTING RELAY FUSE 40A	1.1
G1	BATTERY	1.1
G2	ALTERNATOR	1.1
H2	REVERSE BUZZER	2.2
HA1	INSTRUMENT ALARM BUZZER	1.4
HA3	HORN	4.4
HA4	LEFT SPEAKER	9.3
HA5	RIGHT SPEAKER	9.3
K1	FULL BEAM HEADLIGHTS RELAY	4.2
K1M	START RELAY	1.2
K2	HORN RELAY	4.4
K2M	FILTER PRE-HEAT RELAY	1.2
K3	DRIVE DISCONNECTION RELAY	2.3
K3M	HEAT STARTER RELAY	1.4
K3PG	POWER SUPPLY RELAY +15	1.2
K4	BUZZER AND REVERSE LIGHT RELAY	2.2
K6	SEAT MICRO SWITCH TIMER	1.4
K7	DIPPED BEAM HEADLIGHTS RELAY	4.2
K8	DEDALUS ANTI-TIPPING RELAY	3.4
K9	HYDRAULIC FAST GEAR RELAY	2.2
K10	REVERSE RELAY	2.1
K12	OUTRIGGERS PREVENTION RELAY WITH BASKET ENGAGED	3.3
K13	OUTRIGGERS INHIBITION RELAY FROM OPTIONAL SENSOR	10.3
K14	AUTOMATIC AXLE BLOCK RELAY	2.4
K15	FORWARD GEAR RELAY	2.1
K17	STEERING SELECTOR RELAY	8.4
K18	INHIBITION RELAY FROM LIFTING/EXTEN. SENSOR	3.3
K19	LEVELLING LIMITATION RELAY	3.4
K20	MECHANICAL GEARS LEDS RELAY	4.4
K21	INTERMITTENCE	4.3
K5	START SWITCH RELAY WITH GEAR IN NEUTRAL	1.5
K60	USERS ABSORPTION EXCLUSIONS RELAY	1.1
K73	ACCELERATOR RELAY (OPTIONAL)	1.4
K11	START CONSENT FROM CAB RELAY WITH OPERATOR SITTING	1.4

BASE SYSTEM KEY - DIA. N° E25800-038F_38.16_400° (mechanical motor)

NAME	DESCRIPTION	SHEET
K16	RUNNING MOTOR FREQUENCY RELAY	1.4
KR	JOYSTICK SWITCH RELAY	6.1
K401	OPTIONAL REVS VARIATION CONTROL UNIT	3.1
KS2	Fan 3rd speed relay	7.4
M1	STARTER MOTOR	1.1
M2	REAR WINDSCREEN WIPER MOTOR	6.3
M7	FRONT WINDSCREEN WIPER MOTOR	6.5
M8	REAE WINDSCREEN WASHER PUMP	6.3
M9	FRONT WINDSCREEN WASHER	4.3
M10	FAN MOTOR	7.3
M33	Air conditioner motor	7.1
P1	INSTRUMENT	1.2
R5	FILTER PRE-HEATING	1.2
R1	Resistor	10.4
R510	Resistor	1.4
S0	BATTERY ISOLATOR SWITCH	1.1
S1	Emergency switch	4.2
S2	Fan switch	7.3
S5	Rear windscreen switch	6.2
S6	Rear work light switch	7.3
S8	Gear change switch	4.4
S9	Levelling switch	3.1
S11	Boom head solenoid valve switch	8.3
S12	Manual axle lock switch	2.3
S13	Left front outrigger switch	5.2
S14	Right front outrigger switch	5.3
S15	Revolving light switch	6.1
S16	Anti-tipping exclusion switch	2.4
S17	Left rear outrigger switch	5.4
S18	Right rear outrigger switch	5.5
S20	Air condition switch	7.1
S21	Parking brake switch	2.2
S22	Steering selector switch	8.1
S25	Hydraulic oil filter pressure switch	1.3
S28	Front windscreen switch	6.3
S34	MECHANICAL GEAR ENGAGED MICRO SWITCH	2.3
S35	2nd MECHANICAL GEAR PRESSURE SWITCH ENGAGED	4.4
S37	START GEAR	2.1
S38	INCHING MICRO SWITCH	4.5
S39	STOP LIGHTS MICRO SWITCH	4.1
S40	LIGHTS-INDICATORS SWITCH	4.1
S43	AXLE LOCK SENSOR	9.4
S44	ROTATION SPEED REDUCTION IN END RUN SENSOR	9.3
S48	Front work light switch	7.2
S50	OUTRIGGERS CONSENT SWITCH	6.1
S51	Foot cross member switch	5.1
S52	ALIGNED CAB PROXIMITY SENSOR	9.3
S53	BLOCKED CAB PROXIMITY SENSOR	9.3
S103	Opt. electric control switch	8.2
S104	ACCELERATOR SWITCH	3.2

BASE SYSTEM KEY - DIA. N° E25800-038F_38.16_400° (mechanical motor)

NAME	DESCRIPTION	SHEET
S105	OUTRIGGERS DESCENT SELECTOR	6.2
S106.1	OUTRIGGERS ASCENT SELECTOR	6.2
S107	CROSS MEMBER MOVEMENT SELECTOR	6.2
S108	FOOT MOVEMENT SELECTOR	6.2
S106	Wheels alignment check switch	8.2
S110	RADIO	10.1
S111	Emergency	3.3
S113	FORKS SWITCH	3.4
S114	WINCH SWITCH	3.4
S115	BASKET SWITCH	3.4
S116	RPM SWITCH	3.4
X44	LOW BOOM BY PASS	4.3
X54	CURRENT SOCKET	6.4
Y0	ENGINE STOP SOLENOID VALVE	1.2
Y1	FORWARD GEAR SOLENOID VALVE	2.1
Y2	REVERSE SOLENOID VALVE	2.2
Y7	RIGHT FRONT OUTRIGGER/RIGHT FRONT OUTRIGGER FEET DESCENT SOLENOID VALVE	5.3
Y9	LEFT FRONT OUTRIGGER/LEFT FRONT OUTRIGGER FEET DESCENT SOLENOID VALVE	5.2
Y10	RIGHT REAR OUTRIGGER/RIGHT REAR OUTRIGGER FEET ASCENT SOLENOID VALVE	5.4
Y12	LEFT FRONT OUTRIGGER/LEFT REAR OUTRIGGER FEET ASCENT SOLENOID VALVE	5.3
Y14	OUTRIGGERS GENERAL SOLENOID VALVE/OUTRIGGERS DESCENT SELECTION PEGASUS 18/21mt	5.1
Y15	RIGHT REAR AXLE LOCK SOLENOID VALVE	2.4
Y16	LEFT REAR AXLE LOCK SOLENOID VALVE.	2.5
Y17	STEERING SOLENOID VALVE	8.1
Y18	STEERING SOLENOID VALVE	8.2
Y19	STEERING SOLENOID VALVE	8.1
Y20	STEERING SOLENOID VALVE	8.2
Y21	2nd MECHANICAL GEAR HURT SOLENOID VALVE	4.5
Y22	1st MECHANICAL GEAR HURT SOLENOID VALVE	4.5
Y23	PARKING BRAKE SOLENOID VALVE	2.3
Y36	OUTRIGGERS ASCENT SELECTION SOLENOID VALVE PEGASUS 18/21 mt1	5.1
Y99	OUTRIGGERS SOLENOID VALVE	5.5
X45	basket line CONNECTOR	10
X46	basket line CONNECTOR	10
X47	basket line CONNECTOR	10
X4	opt line CONNECTOR	2
X1	INTERFACE CONNECTOR L. DRIVER POSITION - L. LEFT DASHBOARD	
X1	DASHBOARD CONNECTOR 386	10
X12	INTERFACE CONNECTOR L. DRIVER POSITION - L. RIGHT DASHBOARD	
X13	CONTROL UNIT INTERFACE CONNECTOR RELAY FUSES	
X14	CONTROL UNIT INTERFACE CONNECTOR RELAY FUSES	
X15	INTERFACE CONNECTOR L. DRIVER POSITION - L. UPPER CAB	
X19	INTERFACE CONNECTOR L. DRIVER POSITION - L. RIGHT DASHBOARD	
X2	INTERFACE CONNECTOR L. DRIVER POSITION - L. LEFT DASHBOARD	
X20	CONTROL UNIT INTERFACE CONNECTOR RELAY FUSES	
X21	INTERFACE CONNECTOR L DRIVER POSITION - JOINT	
X22	CONTROL UNIT INTERFACE CONNECTOR RELAY FUSES	
X23	INTERFACE CONNECTOR L. DRIVER POSITION - L. RIGHT DASHBOARD	
X24a	POWER SUPPLY CONNECTOR OPTIONAL9	9
X25	INTERFACE CONNECTOR L. DRIVER POSITION - L. RIGHT DASHBOARD	
X26	CONTROL UNIT INTERFACE CONNECTOR RELAY FUSES	

BASE SYSTEM KEY - DIA. N° E25800-038F_38.16_400° (mechanical motor)

NAME	DESCRIPTION	SHEET
X3	INTERFACE CONNECTOR L. DRIVER POSITION - L. LEFT DASHBOARD	
X4	INTERFACE CONNECTOR L. DRIVER POSITION - L. LEFT DASHBOARD	
X44	LOW BOOM BY PASS CONNECTOR	4
X45	BASKET LINE CONNECTOR	10
X48	INTERFACE CONNECTOR L DRIVER POSITION - JOINT	1
X49	INTERFACE CONNECTOR L DRIVER POSITION - JOINT	2
X68	CONNECTOR L. SOLENOID VALVE - JOINT	
X69	MOTOR CONNECTOR L. - JOINT	
X7	CONTROL UNIT INTERFACE CONNECTOR RELAY FUSES	
X70	INTERFACE CONNECTOR L. DRIVER POSITION - L. TOWER	2
X8	CONTROL UNIT INTERFACE CONNECTOR RELAY FUSES	
X99	CONTROL UNIT INTERFACE CONNECTOR RELAY FUSES	
X150	RADIO CONTROL BATTERY CHARGER SOCKET	9.2

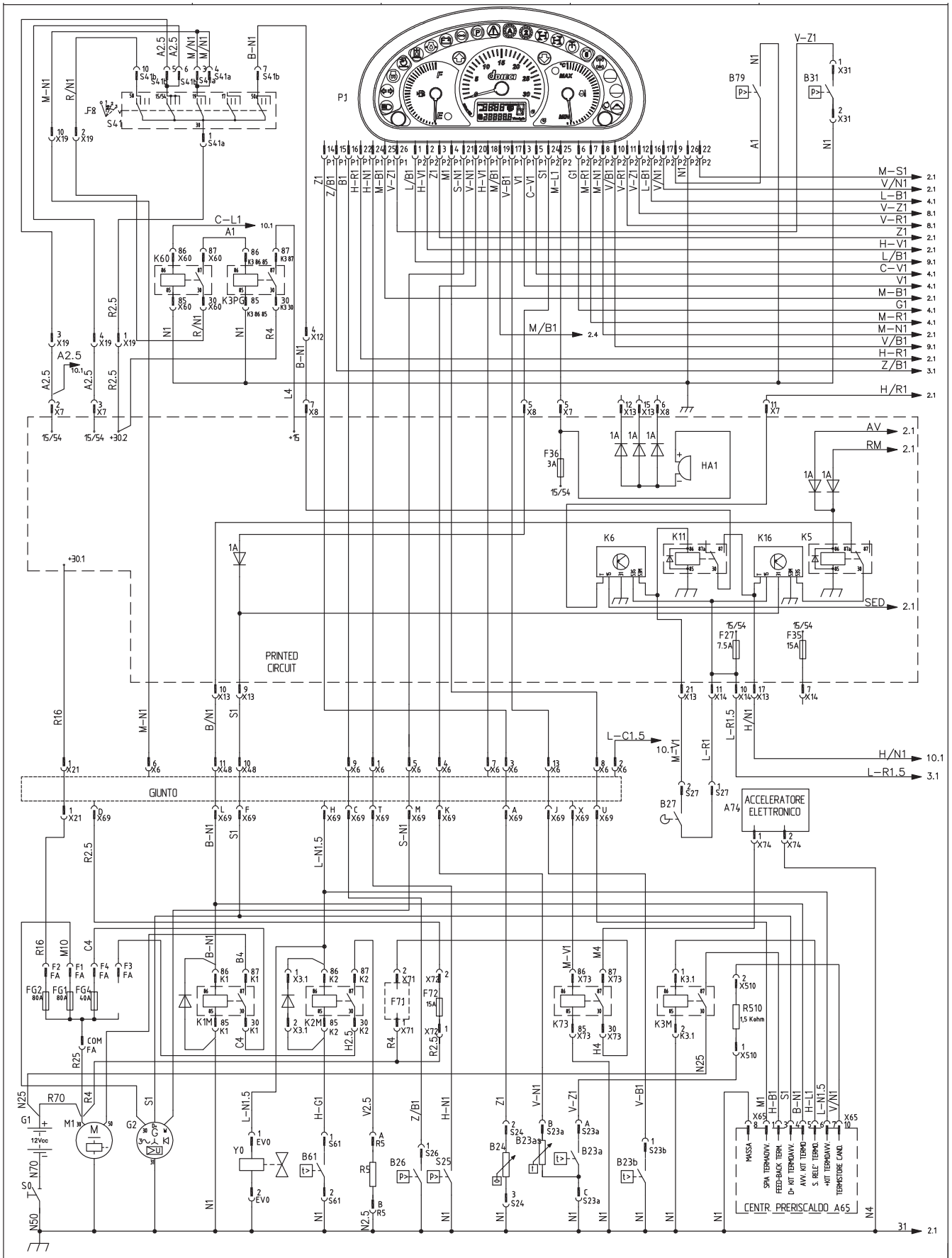
WIRE COLOURS

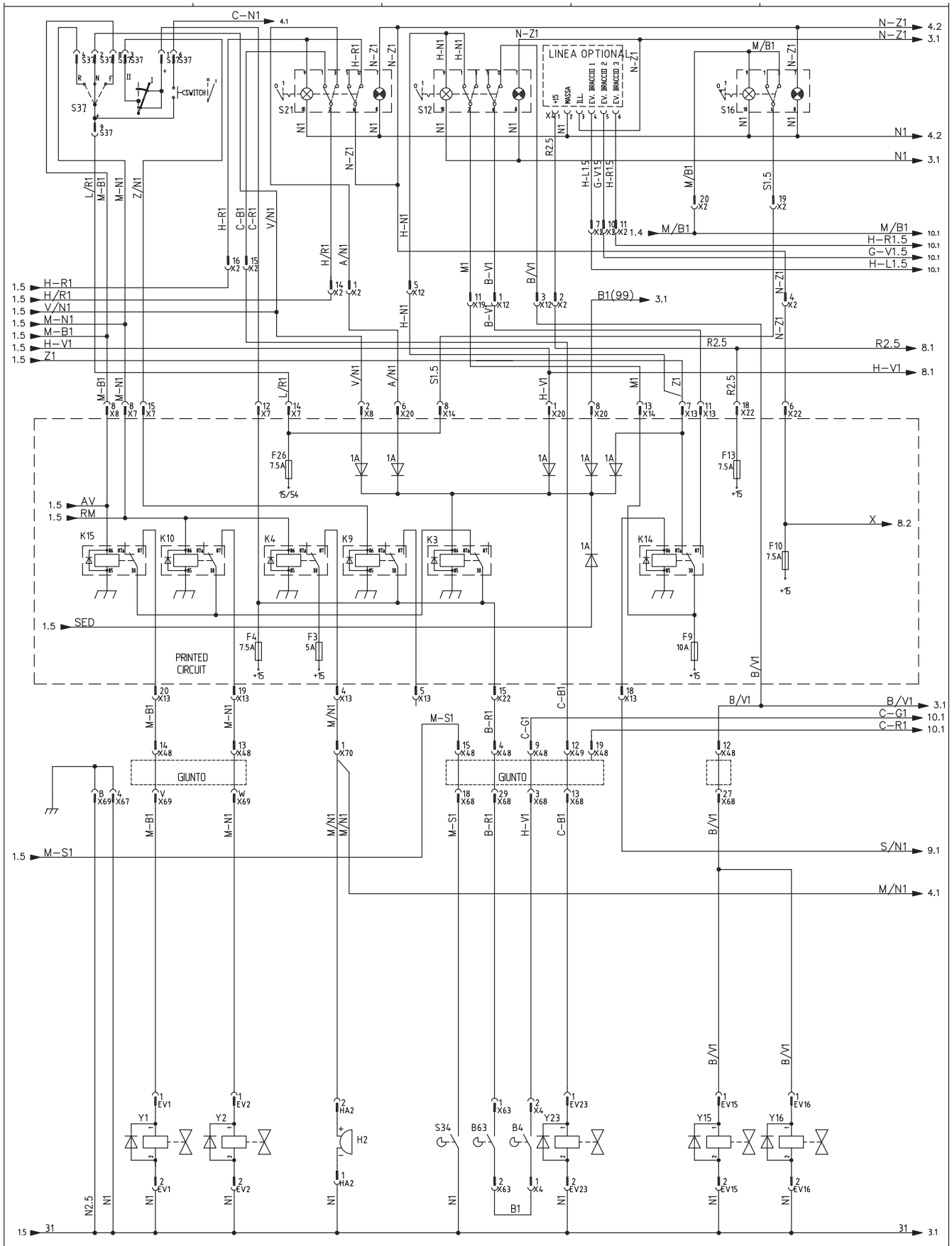
A	***SKY BLUE***
B	***WHITE***
C	***ORANGE***
G	***YELLOW***
H	***GREY***
L	***DARK BLUE***
M	***BROWN***
N	***BLACK***
R	***RED***
S	***PINK***
V	***GREEN***
Z	***PURPLE***

NOTE:
WIRES WITH TWO COLOURS ARE INDICATED BY COMBINING THE SYMBOLS ABOVE, FOR EXAMPLE:

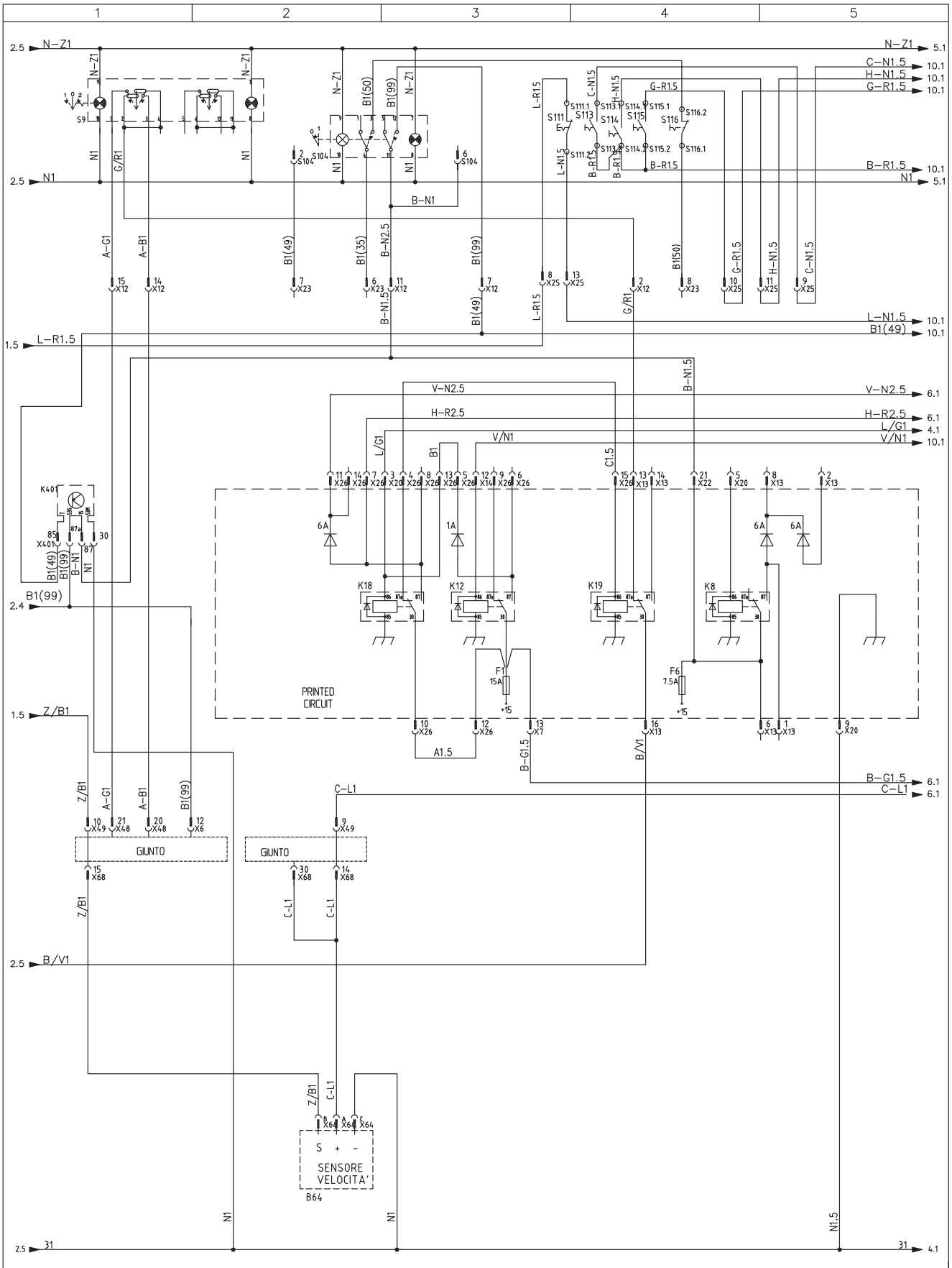
G/V - YELLOW/GREEN (HORIZONTAL STRIPES)

Y-G- YELLOW-GREEN (VERTICAL STRIPES)

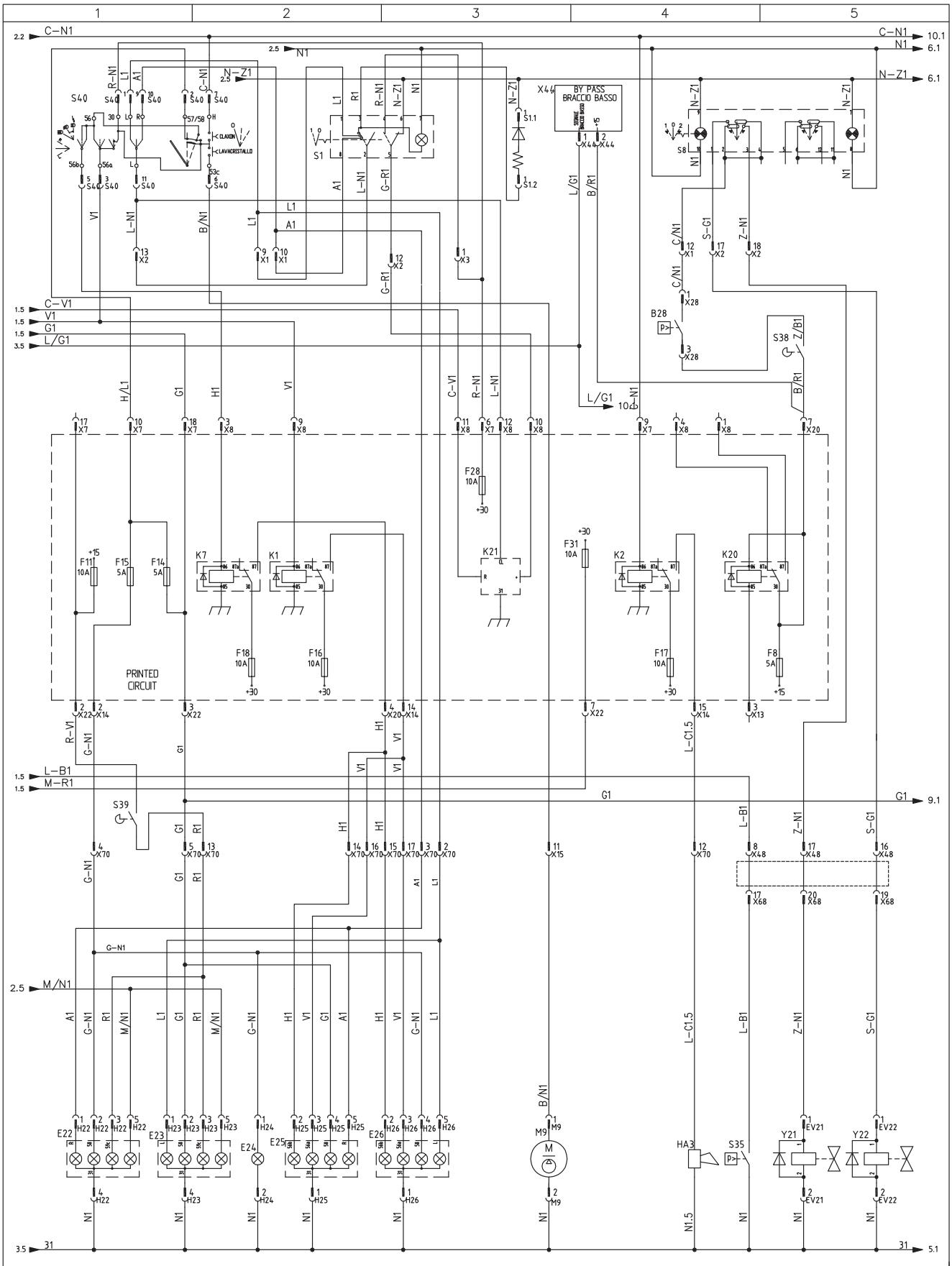

PJ
PRINTED CIRCUIT
GIUNTO
ACCELERATORE ELETTRONICO
CENTR. PRERISCALDO A65
HA1
K6
K11
K16
K5
K1M
K2M
K3M
K73
F27 7.5A
F35 15A
F72 15A
F71
R510 1,5 Kohm
B24
B23a
B23b
B26
B61
Y0
EV0
M1
G1 12Vcc
G2
MASSA
SPIA TERMOAVV.
FEED-BACK TERM.
D+ KIT TERMOAVV.
AVV. KIT TERMO.
S. RELE' TERMO.
+KIT TERMOAVV.
TERMISTORE CAND.
CUSTOMER DIECI
NAME PEGASUS 400° MOTORE NEF
DIAGRAM REF. E25800-038
REV. b
ADDAX REV. 02
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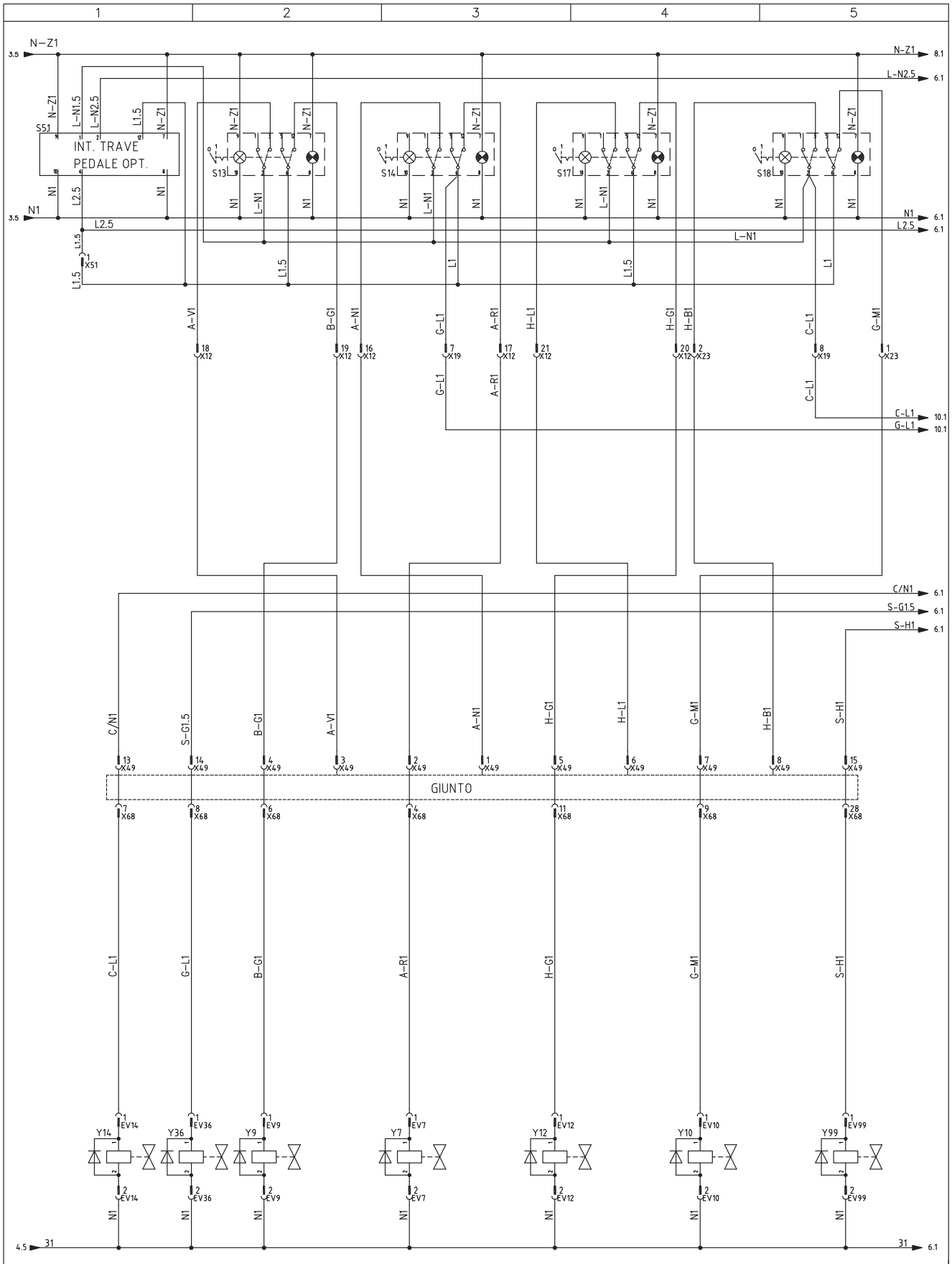


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NAME PEGASUS 400° MOTORE NEF				CHECKED ANDREA	OF 10
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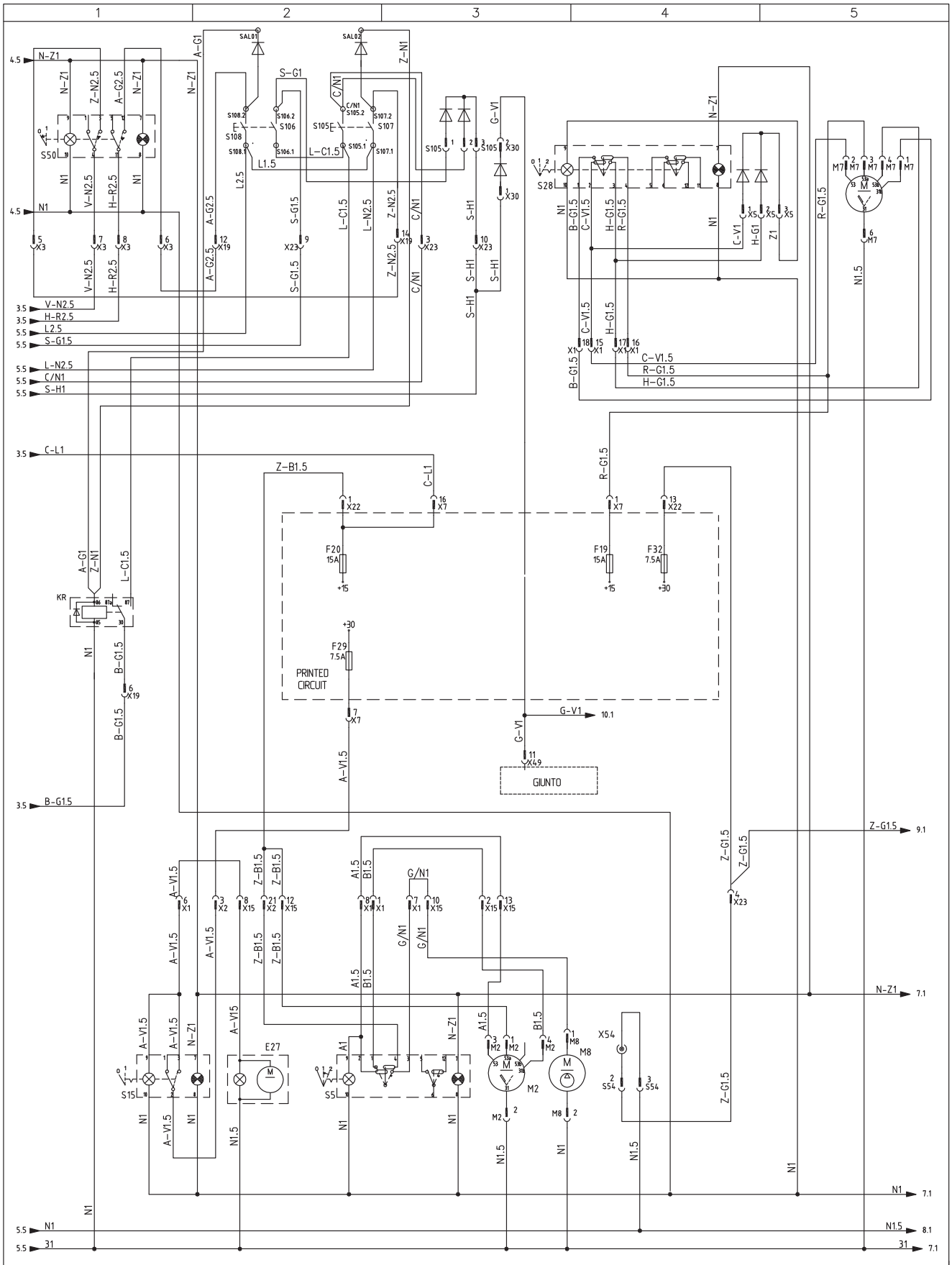


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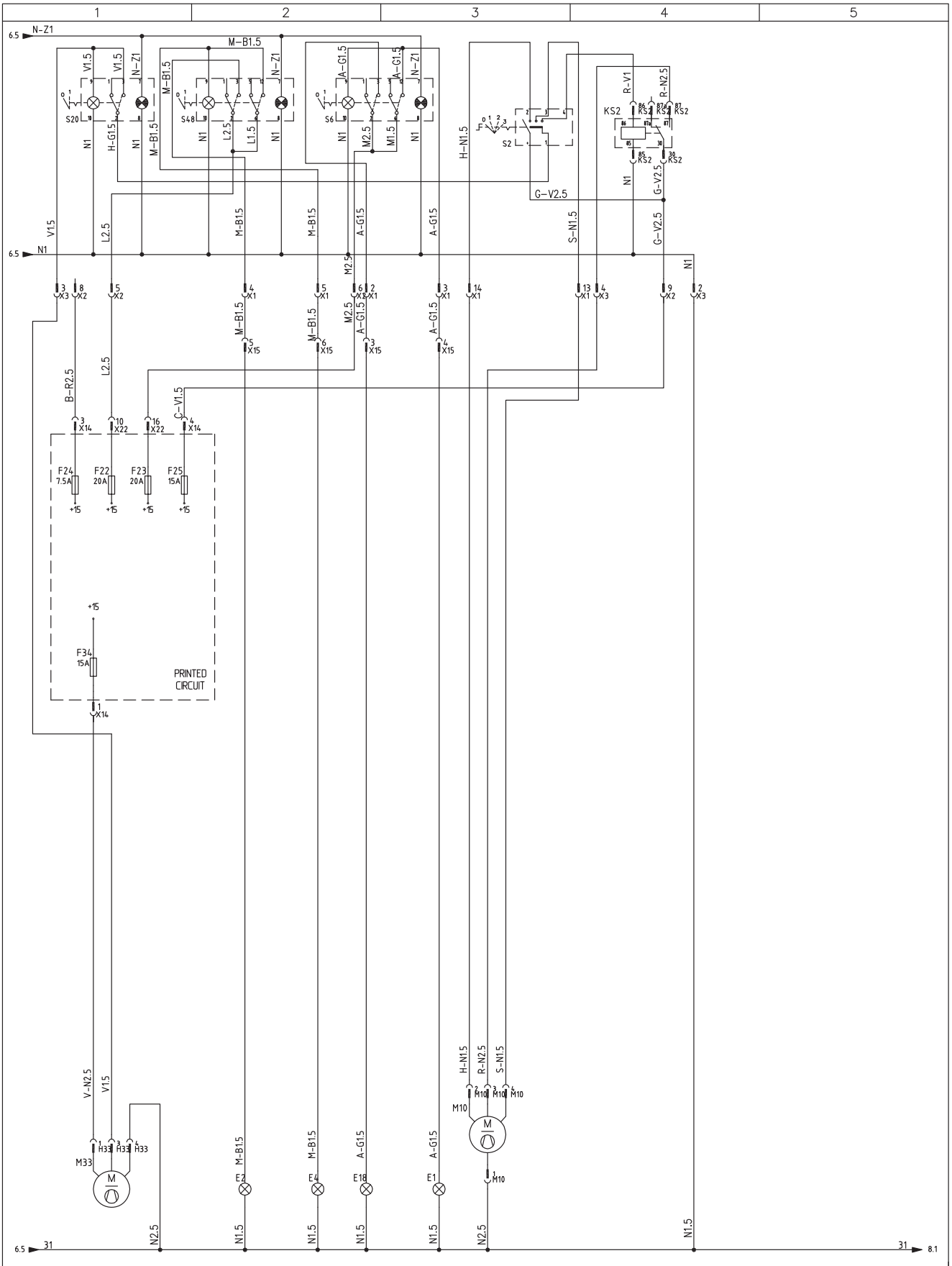

1
2
3
4
5
BY PASS BRACCIO BASSO
PRINTED CIRCUIT
CLAXON
LAVACRISTALLO
F11 10A
F15 5A
F14 5A
F18 10A
F16 10A
F28 10A
F31 10A
F17 10A
F8 5A
K7
K1
K21
K2
K20
B28
S38
S39
S35
HA3
Y21
Y22
E22
E23
E24
E25
E26
M9
C–N1
N1
N–Z1
C–V1
V1
G1
L/G1
L–B1
M–R1
M/N1
G–N1
R–V1
L–N1
B/N1
H/L1
L1
A1
R1
G–R1
L–C1.5
B/R1
Z–N1
S–G1
C/N1
Z/B1
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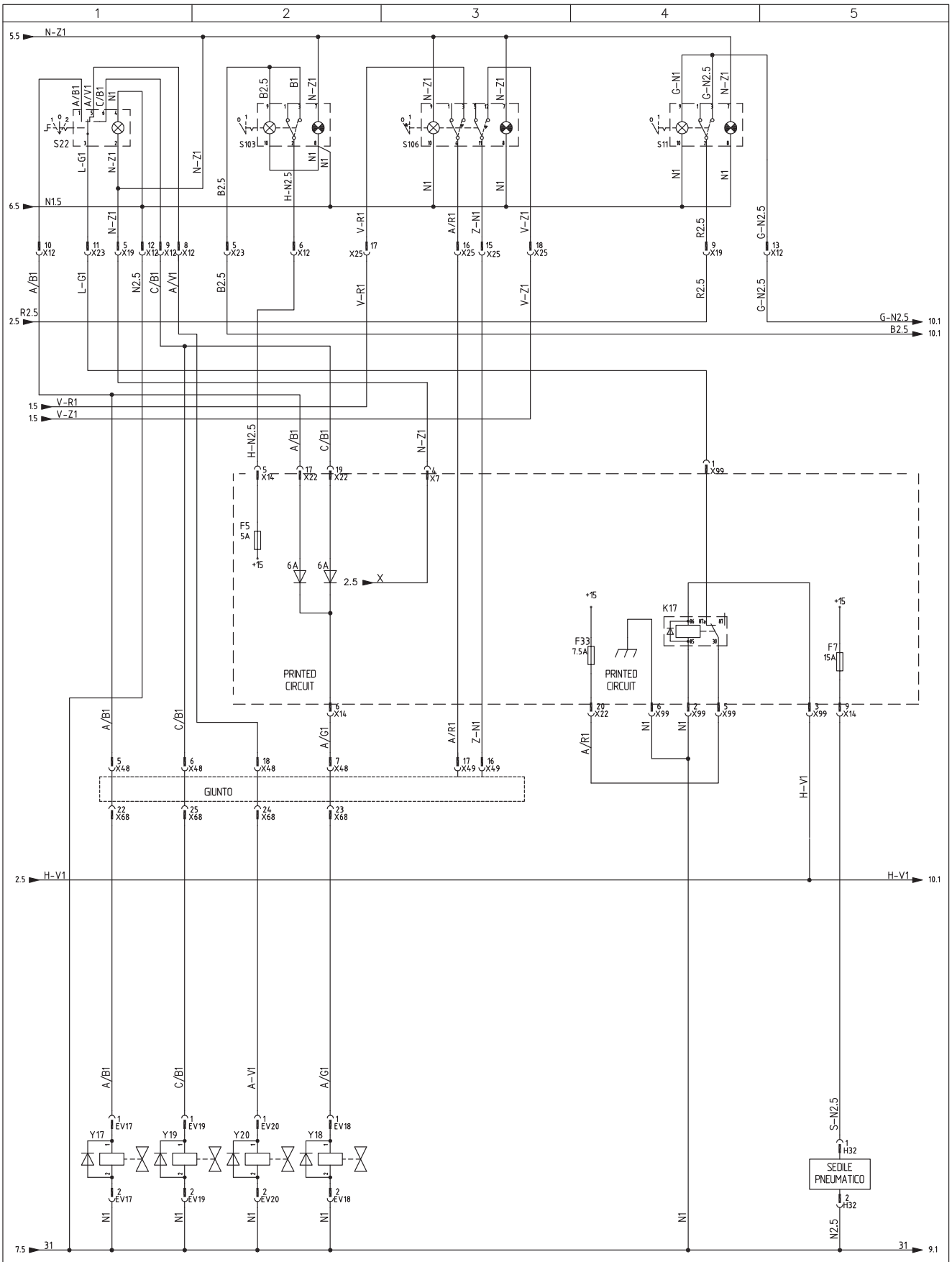
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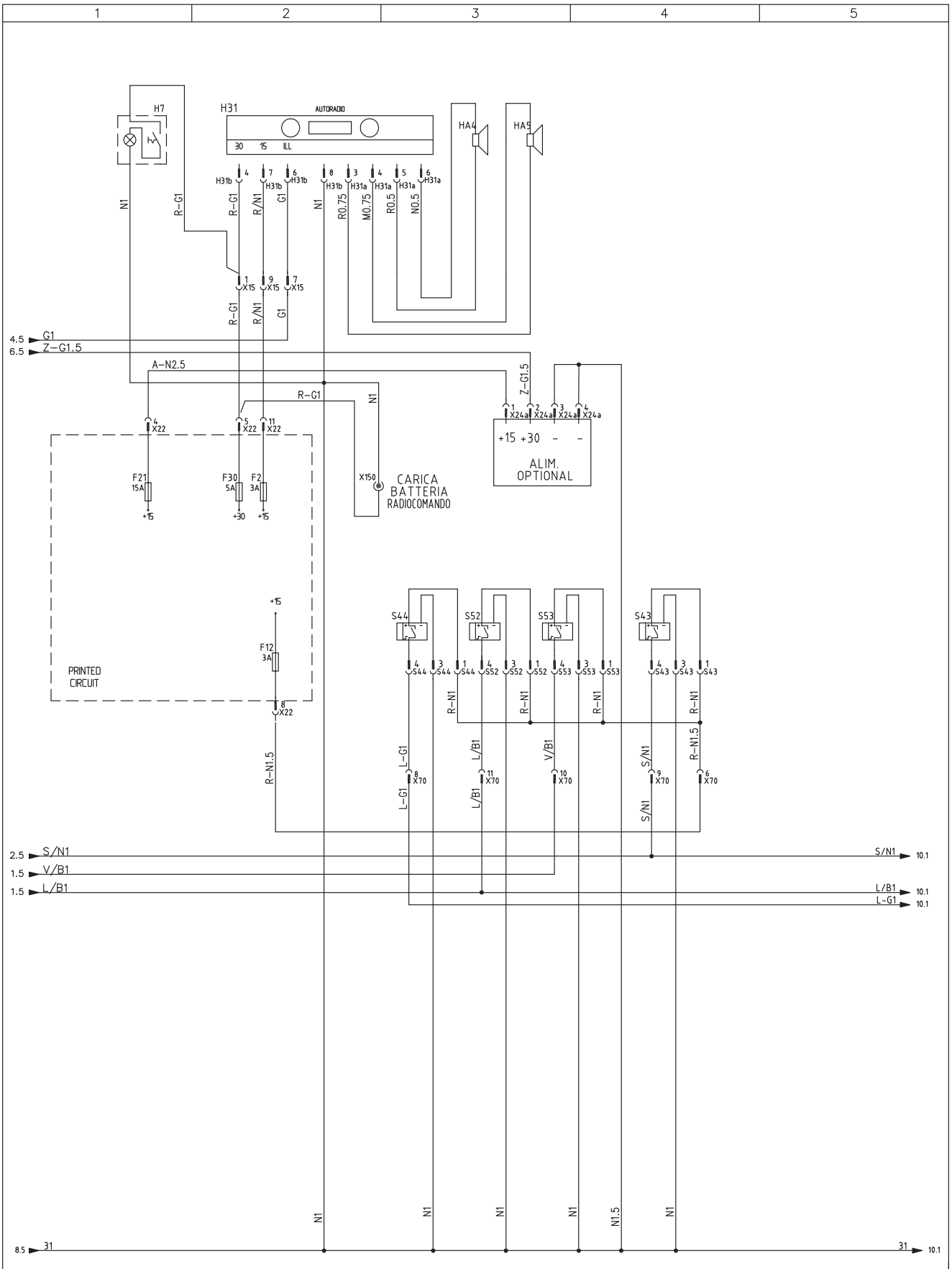
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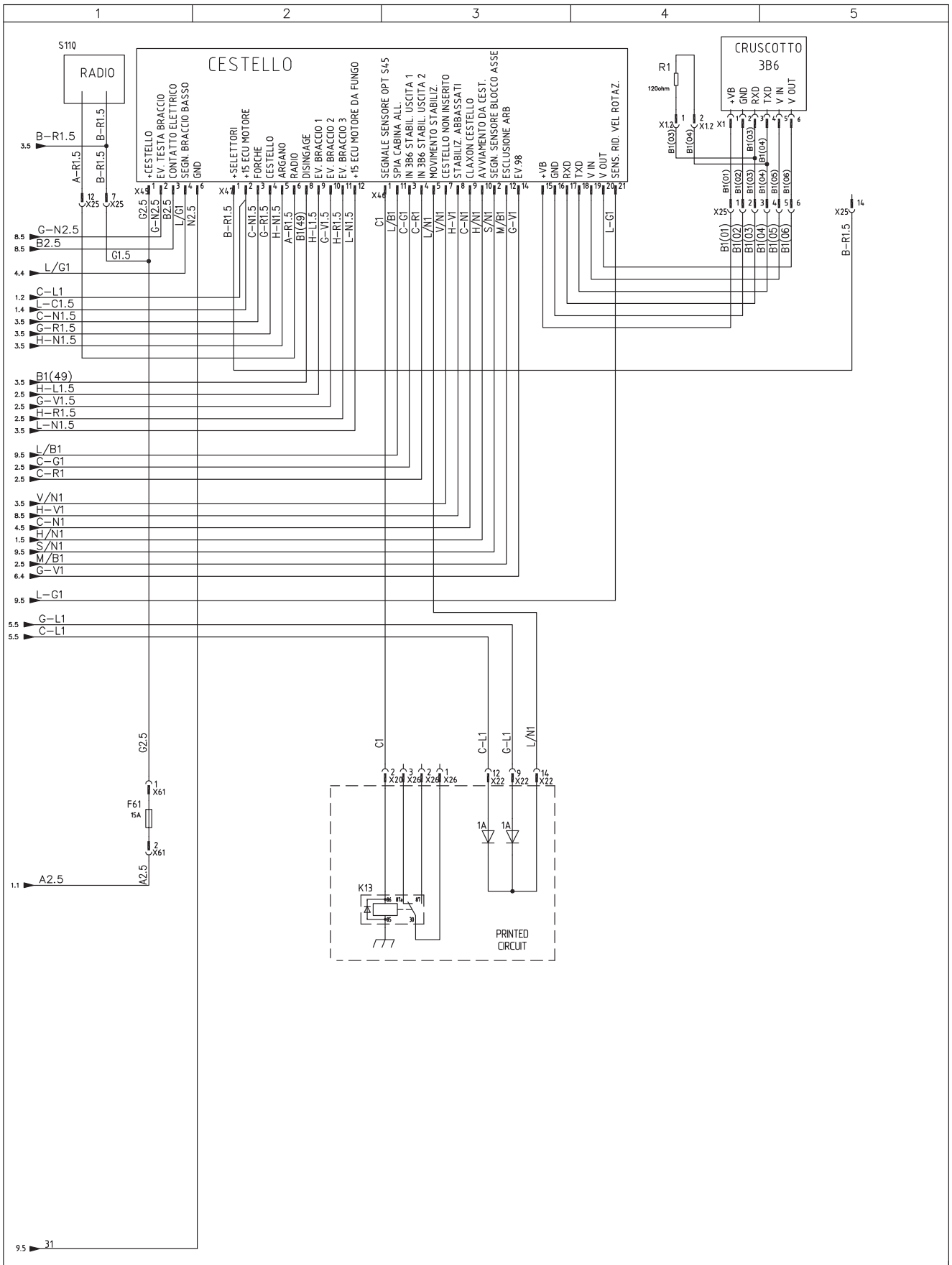
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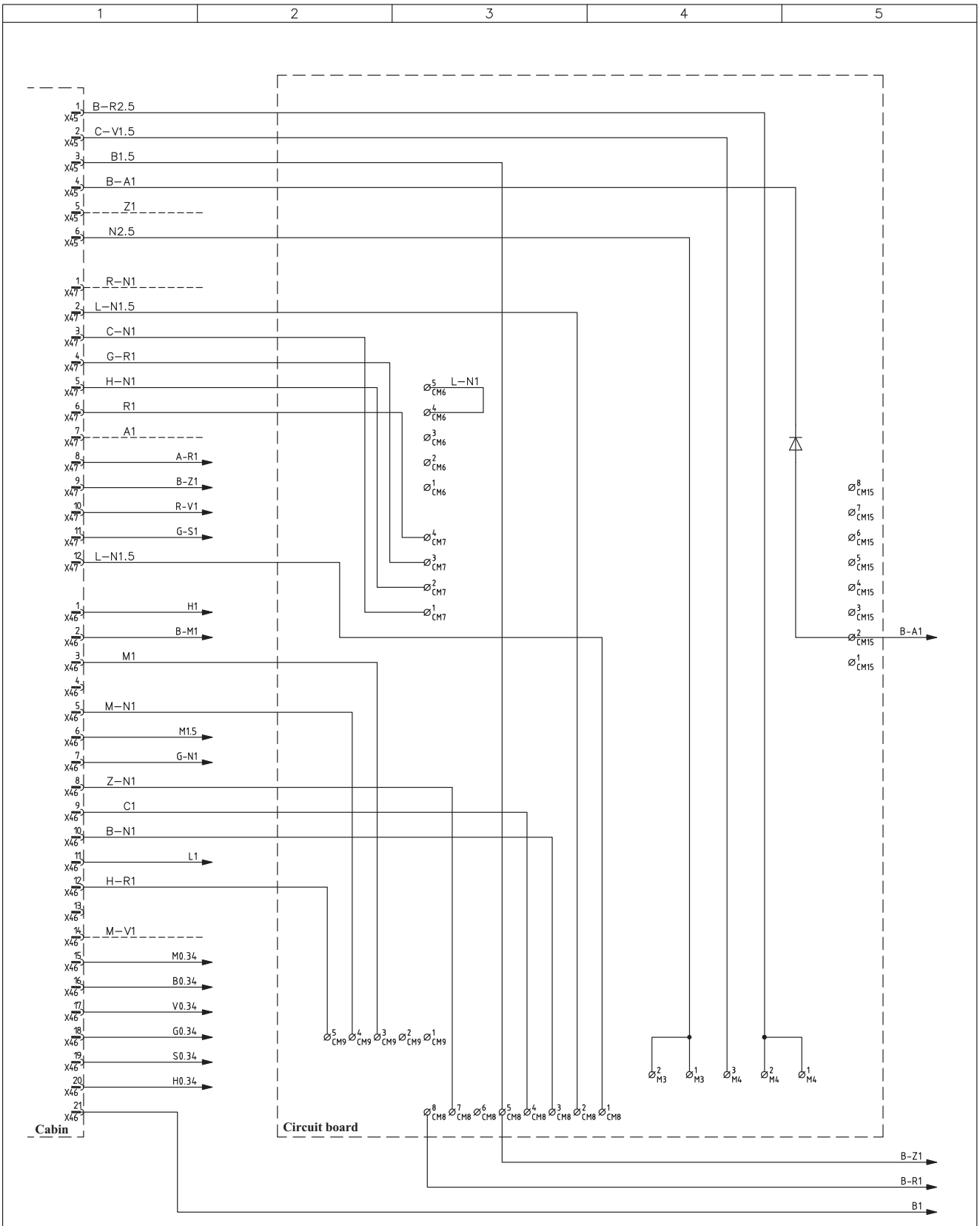
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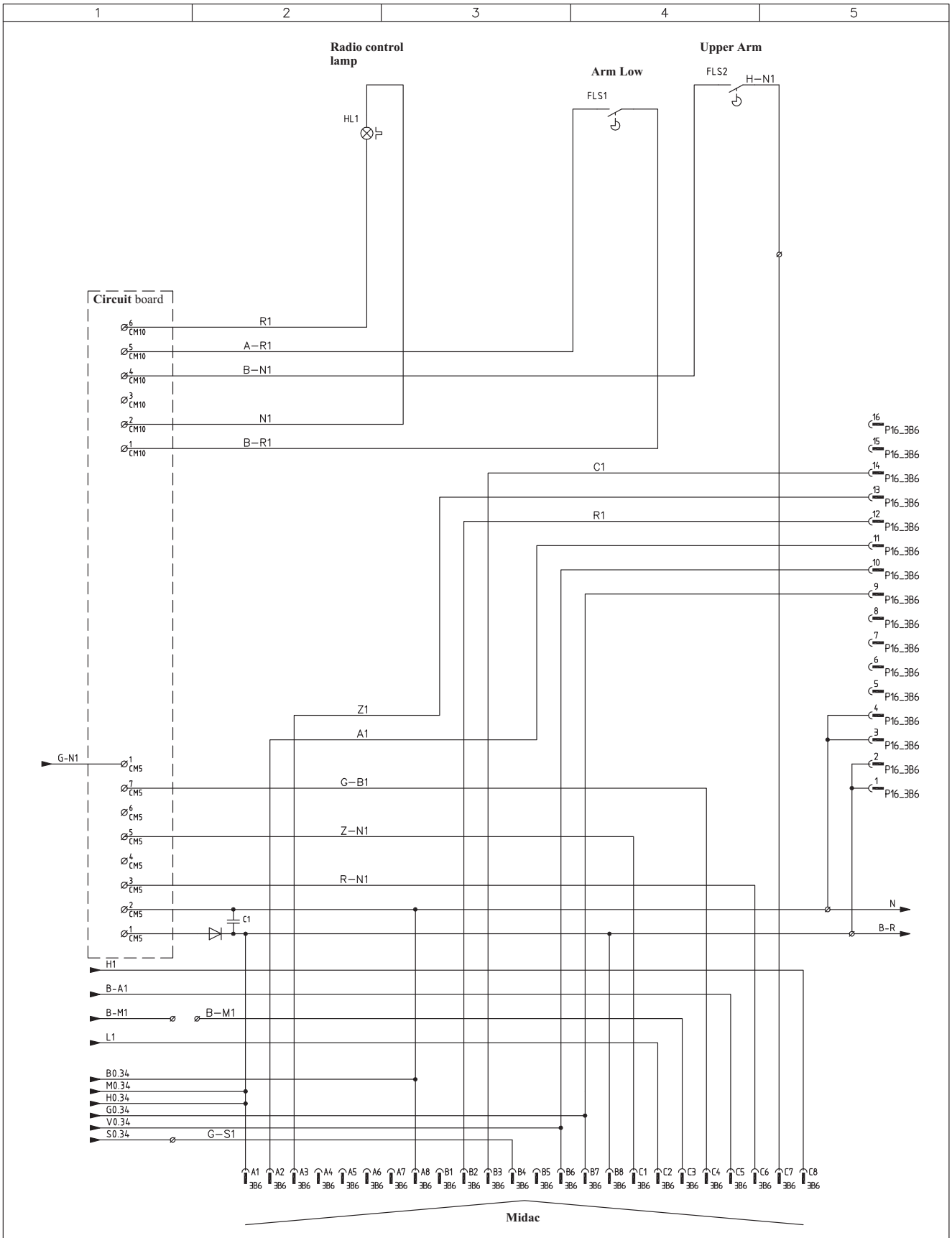


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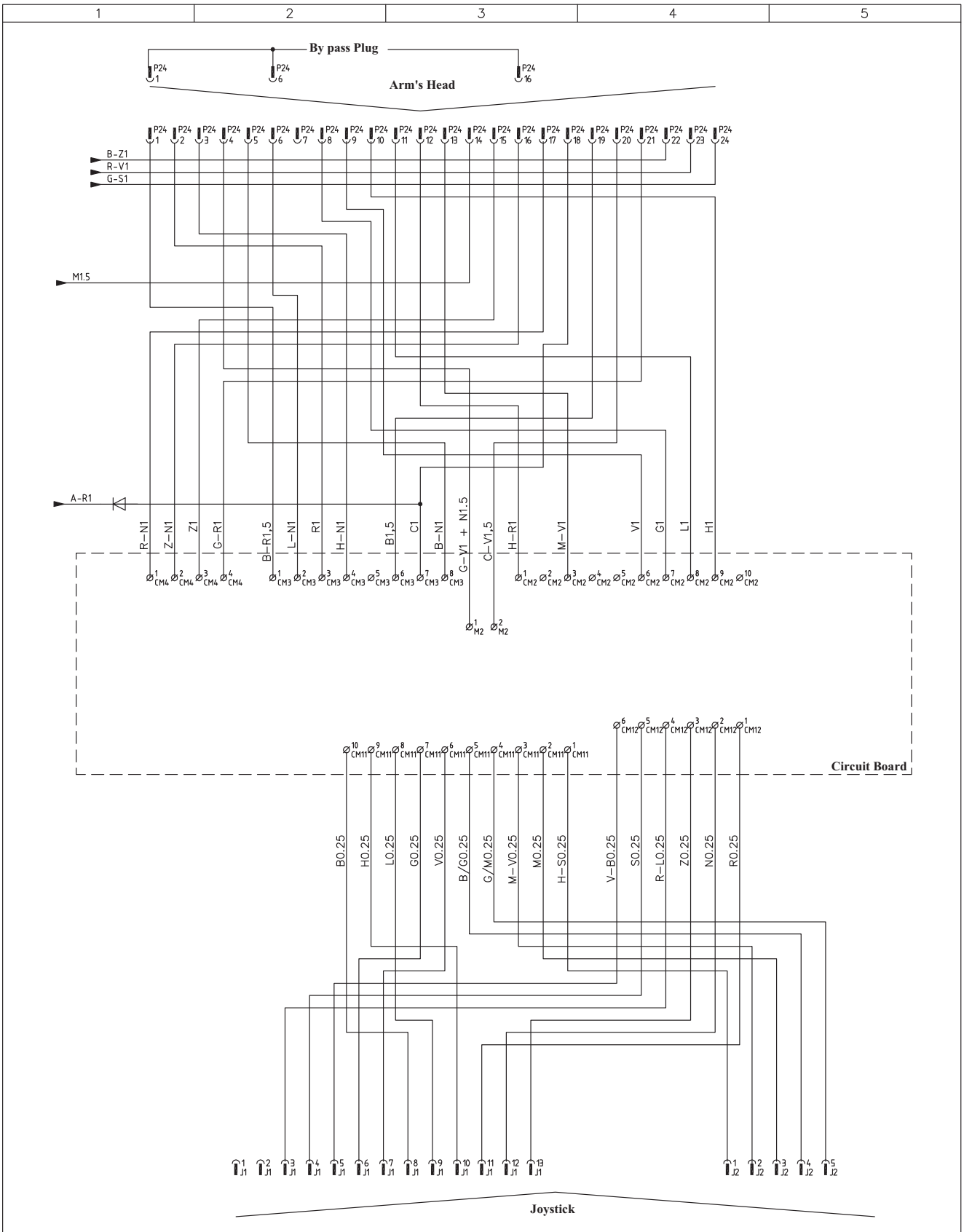
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CODICE/REF. 141	MODIFY	ADDAX REV. 00		DATA/DATE 25/03/2010	



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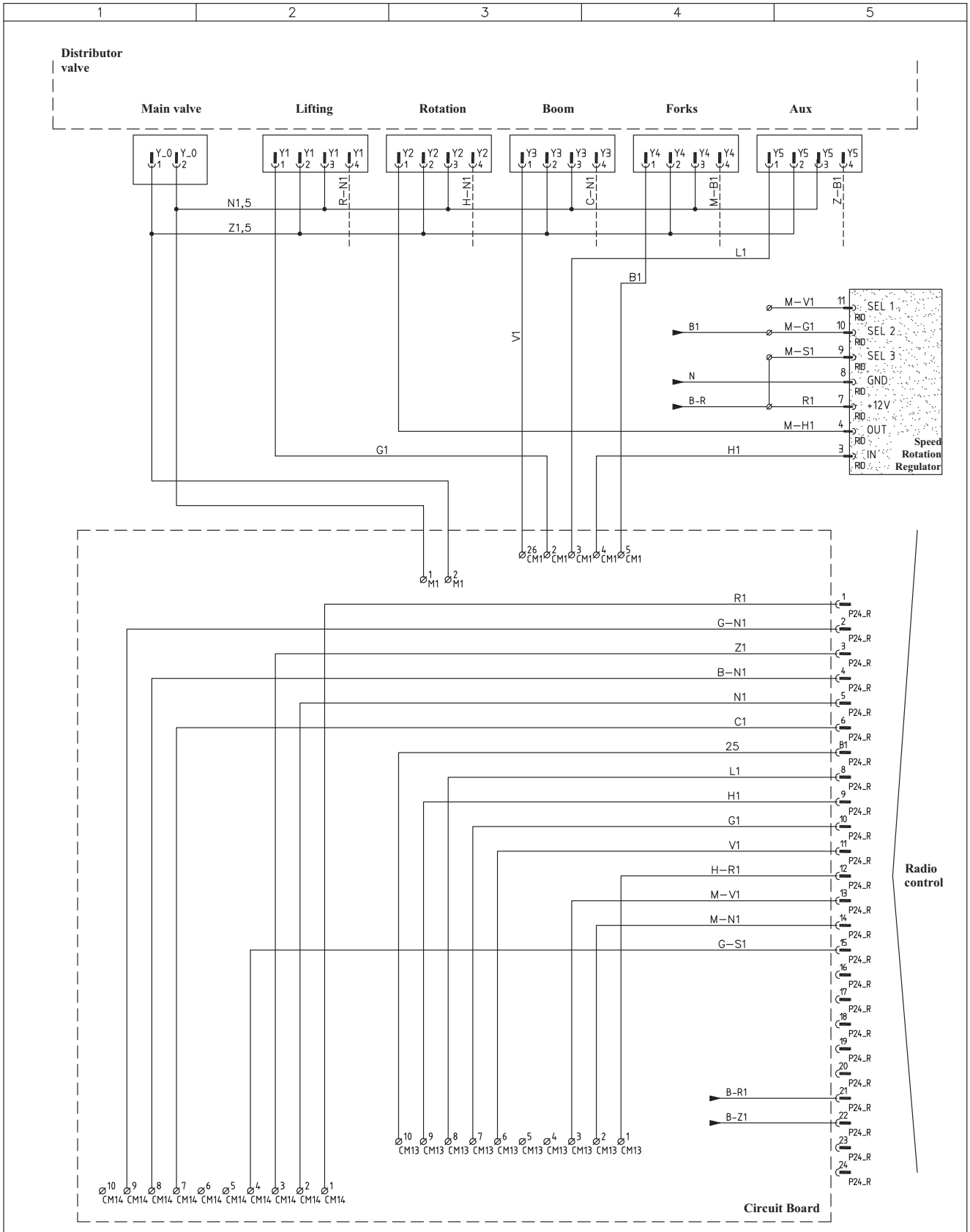
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CODICE/REF. 141	MODIFY	ADDAX REV. 00		DATA/DATE 25/03/2010	

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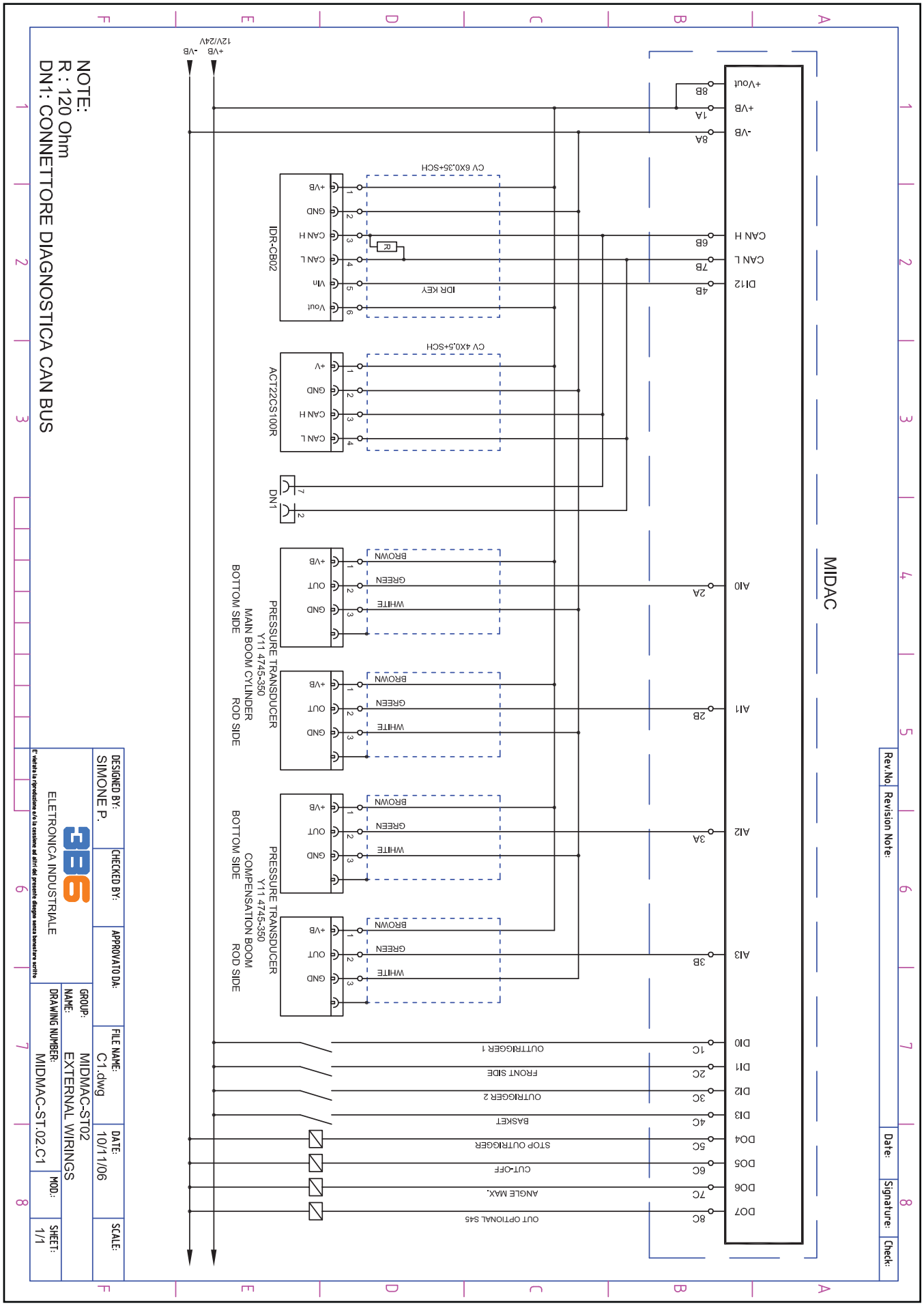


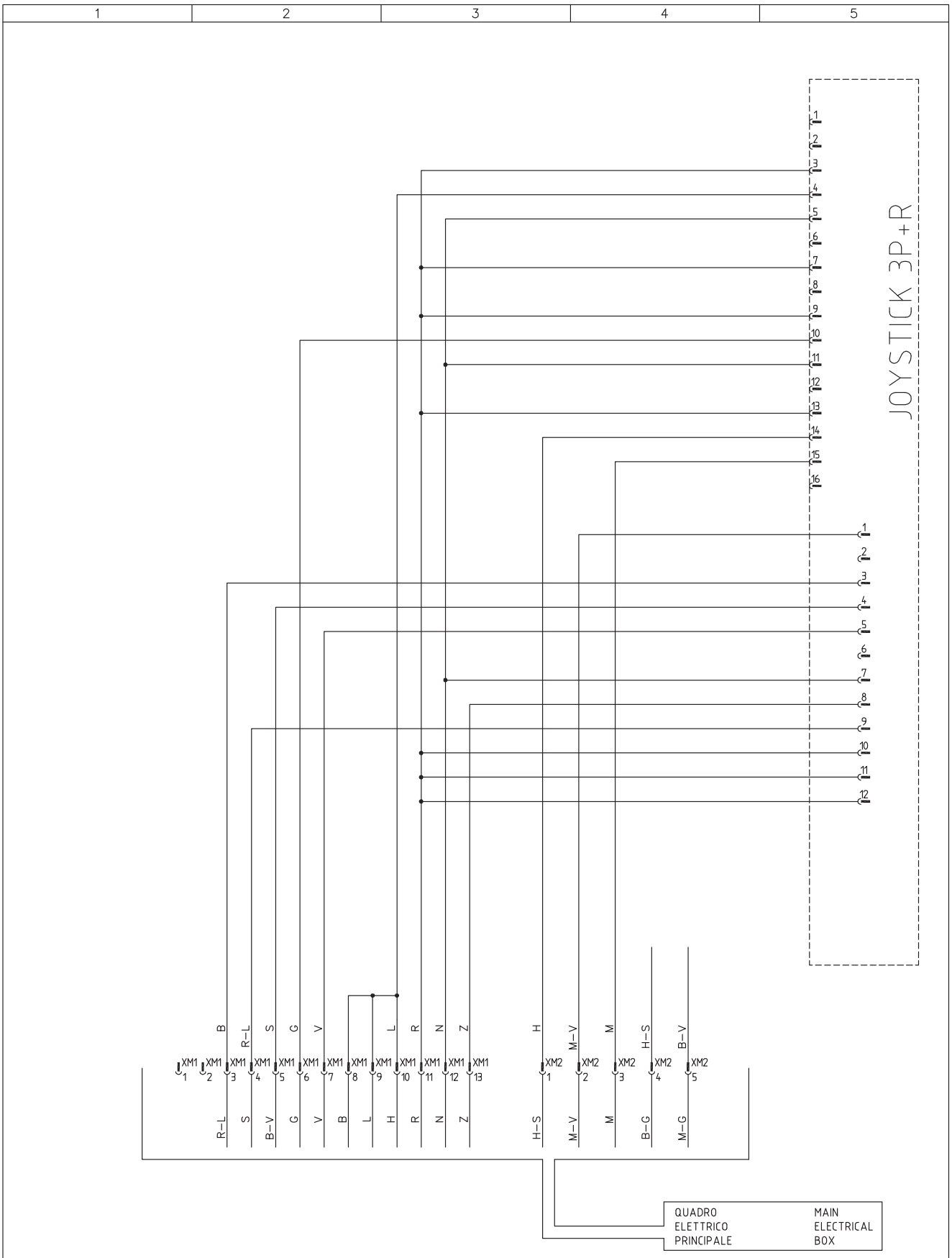
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CLIENTE/CUSTOMER	SOSTITUISCE/REPLACED CODE	COPIA VALIDA SOLO SE AUTENTICATA Valid certified copy only	NOTE GENERALI/GENERAL NOTES	DISEGNATO/DRAWN S.GABRINI	PAGE 4
DENOMINAZIONE/PART DESCRIPTION BEF4169	FORMATO/SIZE A3		QUADRO ELETTRICO PEGASUS '10 – 400' DISTRIBUTORE DANFOSS MIDAC SCHEDA BEP0290	CONTROLLATO/CHECKED	OF 4
CODICE/REF. 141	MODIFY	ADDAX REV. 00		DATA/DATE 25/03/2010	

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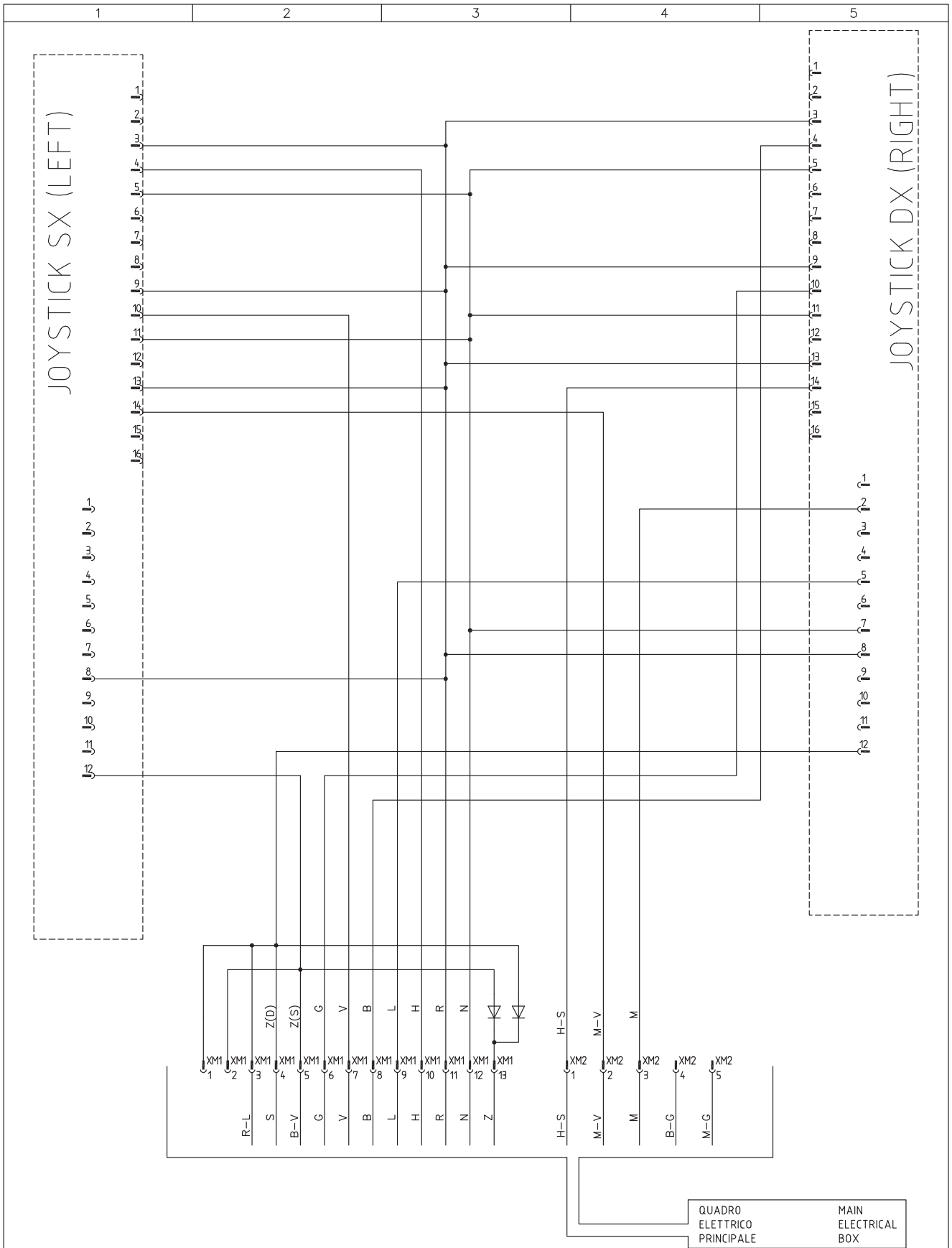

NOTE:
R : 120 Ohm
DN1: CONNETTORE DIAGNOSTICA CAN BUS
MIDAC
+VOut
+VB
-VB
CAN H
CAN L
DI12
AI0
AI1
AI2
AI3
DI0
DI1
DI2
DI3
DO4
DO5
DO6
DO7
IDR-CB02
IDR KEY
ACT22CS100R
DN1
PRESSURE TRANSDUCER
Y11 4745-350
MAIN BOOM CYLINDER
BOTTOM SIDE
ROD SIDE
COMPENSATION BOOM
OUTTRIGGER 1
FRONT SIDE
OUTRIGGER 2
BASKET
STOP OUTRIGGER
CUT-OFF
ANGLE MAX.
OUT OPTIONAL S45
DESIGNED BY: SIMONE P.
CHECKED BY:
APPROVATO DA:
FILE NAME: C1.dwg
DATE: 10/11/06
SCALE:
GROUP: MIDMAC-ST02
NAME: EXTERNAL WIRINGS
DRAWING NUMBER: MIDMAC-ST.02.C1
MOD.:
SHEET: 1/1
ELETRONICA INDUSTRIALE
Rev.No
Revision Note:
Date:
Signature:
Check:



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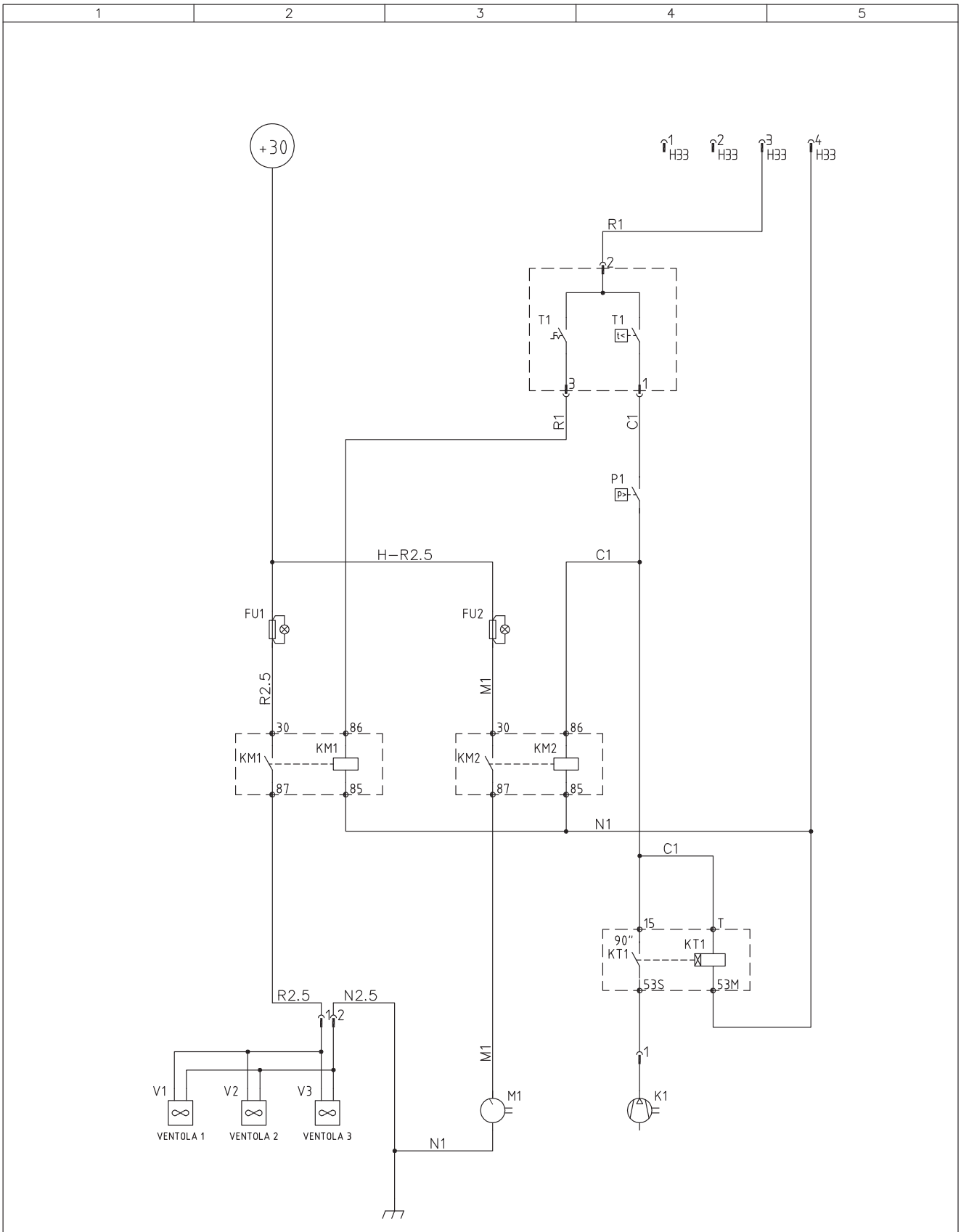
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DENOMINAZIONE/PART DESCRIPTION 423_02	FORMATO/SIZE A3		CABLAGGIO MANIPOLATORE SINGOLO (PEGASUS '10 – 400') JOYSTICK POTENZIOMETRICI 12V 25%–75%	CONTROLLATO/CHECKED	OF
CODICE/REF. BEF4334	MODIFY	ADDAX REV.		DATA/DATE 25/03/10	

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DENOMINAZIONE/PART DESCRIPTION 423_01	FORMATO/SIZE A3		CABLAGGIO MANIPOLATORE DOPPIO (PEGASUS '10 – 400') JOYSTICK POTENZIOMETRICI 12V 25%-75%	CONTROLLATO/CHECKED	OF
CODICE/REF. BEF4305	MODIFY	ADDAX REV.		DATA/DATE 25/03/10	



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CLIENTE/CUSTOMER: DIECI	SOSTITUISCE/REPLACED CODE	COPIA VALIDA SOLO SE AUTENTICATA Valid certified copy only	NOTE GENERALI/GENERAL NOTES: A/C MASI X PEGASUS	DISEGNATO/DRAWN: GABRINI	PAGE 1
DENOMINAZIONE/PART DESCRIPTION: A/C PEGASUS	FORMATO/SIZE: A3			CONTROLLATO/CHECKED	OF 2
CODICE/REF.: 2012	MODIFY: 01	ADDAX REV.	BEK7093/LE	DATA/DATE: 07/09/2009	

HYDRAULIC CIRCUIT



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- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.




EVERY MODIFICATION MADE TO THE VEHICLE LEADS TO A NEW VERIFICATION OF CONFORMITY WITH THE 98/37 MACHINERY DIRECTIVE. THIS PROCEDURE IS ALSO VALID IN THE CASE OF REPAIRS WITH NON-ORIGINAL SPARE PARTS.

IT IS PROHIBITED TO OPERATE IF THIS MANUAL HAS NOT BEEN READ AND UNDERSTOOD.

ANY ARBITRARY MODIFICATION MADE TO THE VEHICLE WILL ABSOLVE DIECI FROM ALL LIABILITY FOR DAMAGE OR INJURY RESULTING FROM SUCH MODIFICATION.

TO GUARANTEE YOUR SAFETY AND THAT OF OTHERS, DO NOT MODIFY THE STRUCTURE OR ADJUST THE VARIOUS VEHICLE COMPONENTS BY YOURSELF (HYDRAULIC PRESSURE, CALIBRATION OF LIMITING DEVICES, ENGINE ROTATION, INSTALLATION OF SUPPLEMENTARY ATTACHMENTS, ETC.). THE SAME HOLDS TRUE FOR THE DEACTIVATION OR MODIFICATION OF SAFETY SYSTEMS. IN SUCH CASES, THE MANUFACTURER SHALL BE ABSOLVED FROM ALL LIABILITY.

THE IMAGES, DESCRIPTIONS, MEASUREMENTS STATED IN THIS CHAPTER REFER TO STANDARD VEHICLES.

UPON REQUEST, YOUR VEHICLE CAN BE FITTED WITH OPTIONAL CONTROLS AND ATTACHMENTS.

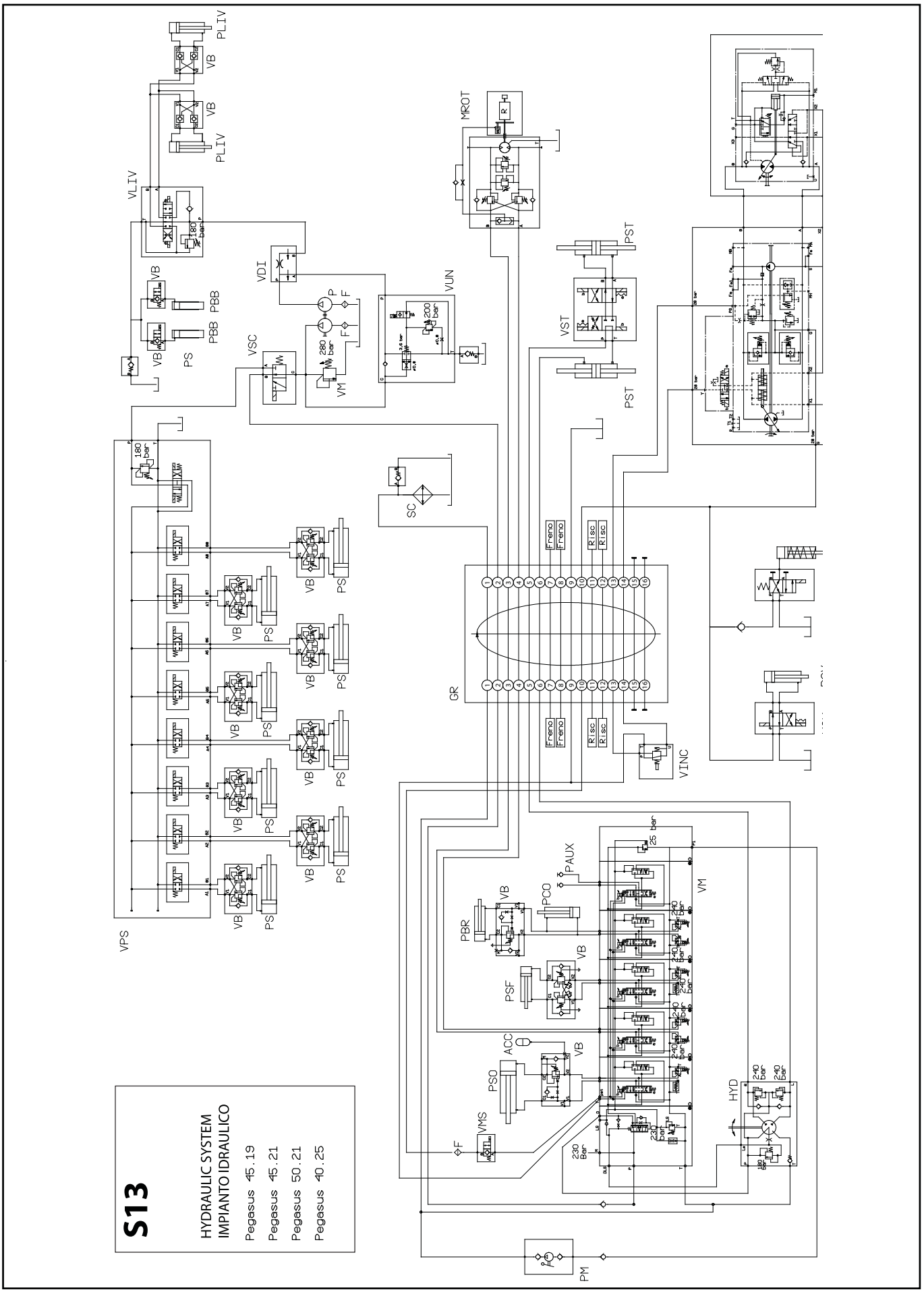
ALL FUNCTIONS AND PROCEDURES CONCERNING THE OPERATION AND MOUNTING OF THE VEHICLE'S ATTACHMENTS THAT ARE NOT DESCRIBED IN THIS MANUAL ARE STRICTLY FORBIDDEN.

USE OF THE VEHICLE FOR PURPOSES DIFFERENT THAN THOSE DESCRIBED IN THIS MANUAL IS STRICTLY FORBIDDEN.

IT IS MANDATORY TO HAVE READ AND LEARNED CHAPTER "B" (SAFETY STANDARDS) BEFORE READING CHAPTER "C" AND USING THE VEHICLE.




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HYDRAULIC PLANT KEY

GR = ROTATING JOINT

HYD = POWER STEERING

MH = HYDROSTATIC ENGINE

MROT = ROTATION ENGINE

P = PUMP

PAUX = AUXILIARY SOCKETS

PBB = ROCKER ARM LOCK PISTON

PBR = SWIVEL PISTON

PCO= COMPENSATION PISTON

PCV= SPEED CHANGE PISTON

PH = HYDROSTATIC PUMP

PLIV = LEVELLING PISTON

PM = MANUAL PUMP

PS = OUTRIGGERS PISTON

VD = PRIORITY DIVIDER VALVE

ACC = ACCUMULATOR

PSFE = EXTERNAL EXTENSION PISTON

PSFI = INTERNAL EXTENSION PISTON

VSM = MOVEMENTS SELECTION VALVE

PSO = LIFTING PISTON

PST = STEERING PISTON

SC = HEAT EXCHANGER

VB = LOCK VALVE

VCV = SPEED CHANGE VALVE

VDI = DIVIDER VALVE

VFN = NEGATIVE BRAKE VALVE

VINC = INCHING VALVE

VLIV = LEVELLING VALVE T

VM = MOVEMENTS VALVE

VPS = OUTRIGGERS FEET VALVE

VSC = EXCHANGE VALVE

VST = STEERING VALVE

VUN = UNLODING VALVE

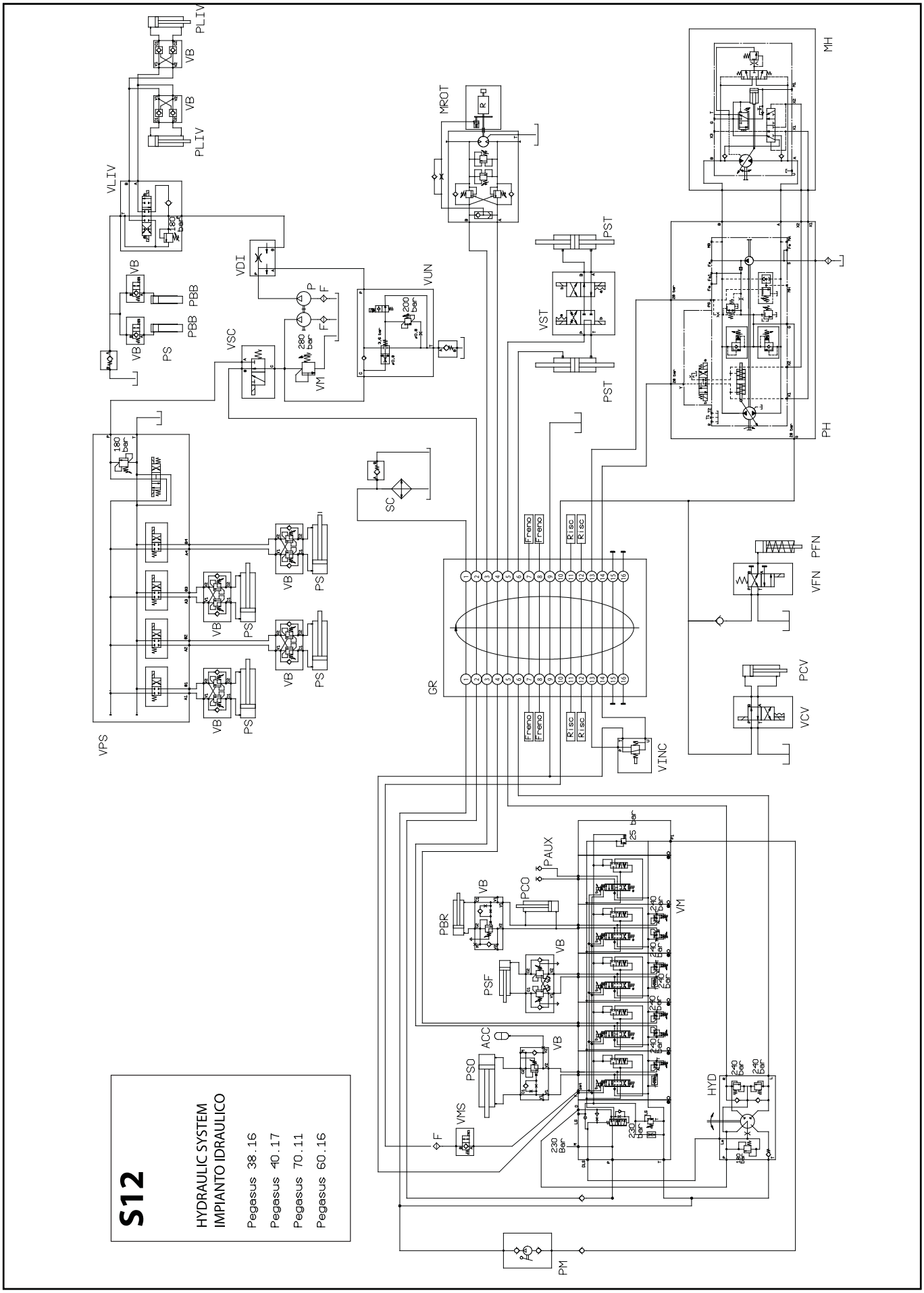
VP = PRIORITY VALVE

VMS = DISCHARGE VALVE

F = FILTER

MV = FAN MOTOR

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VSC = EXCHANGE VALVE

VST = STEERING VALVE

VUN = UNLODING VALVE

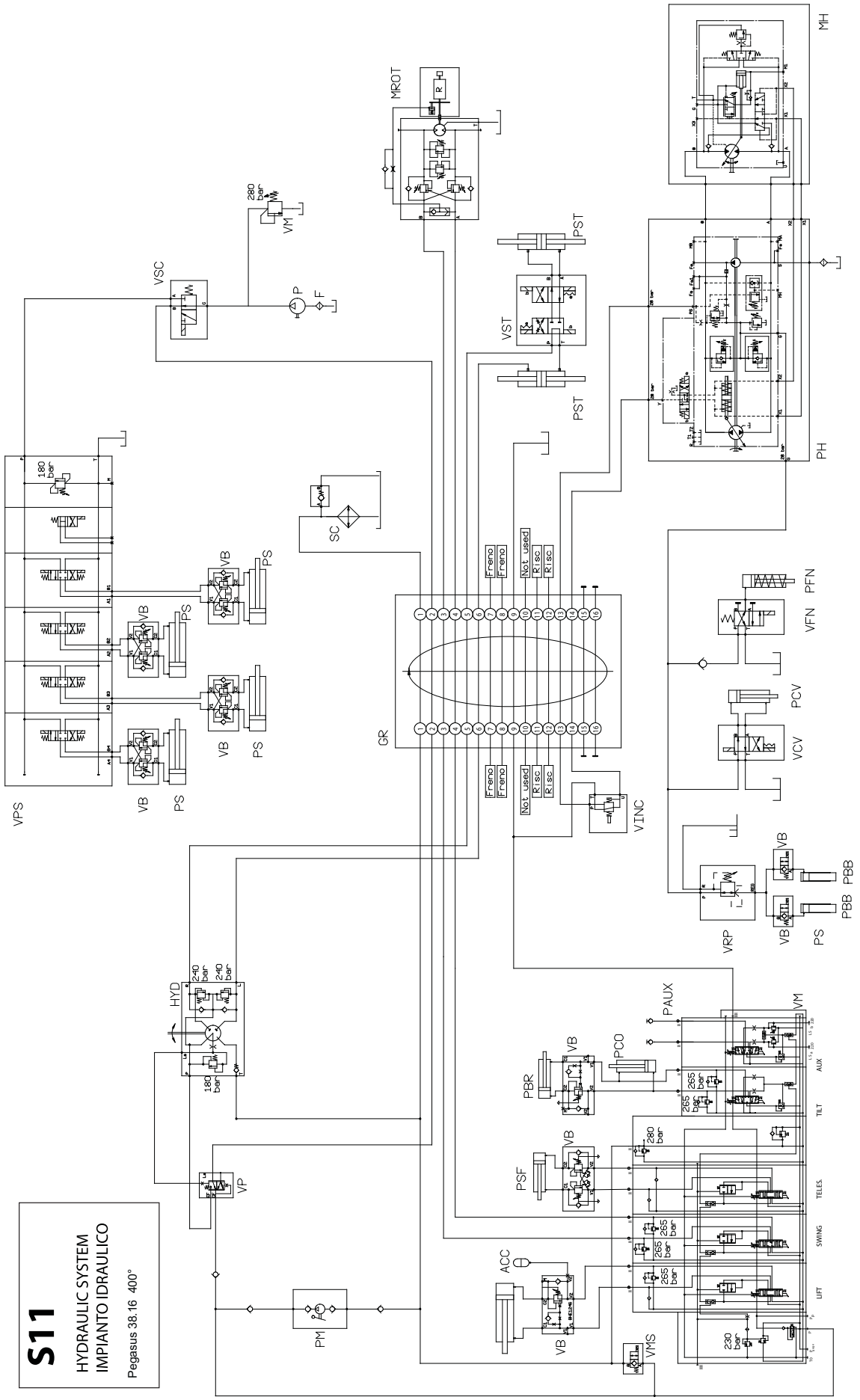
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S11
HYDRAULIC SYSTEM
IMPIANTO IDRAULICO
Pegasus 38.16 400°

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TECHNICAL DATA
and
TECHNICAL SPECIFICATIONS



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CAUTION

An operator on the ground must be present while the basket is being used.

CAUTION

To use attachments, consult the capacity diagrams.

CAUTION

To use attachments with radio control, read the instructions in the enclosed manual.

CAUTION

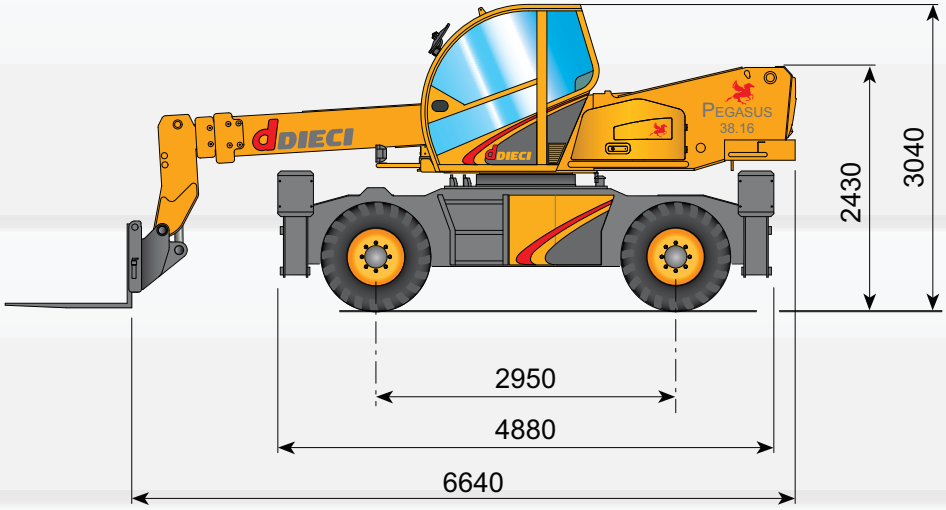
To use attachments with the load limiting device (with display) (optional), read the instructions in the enclosed manual.

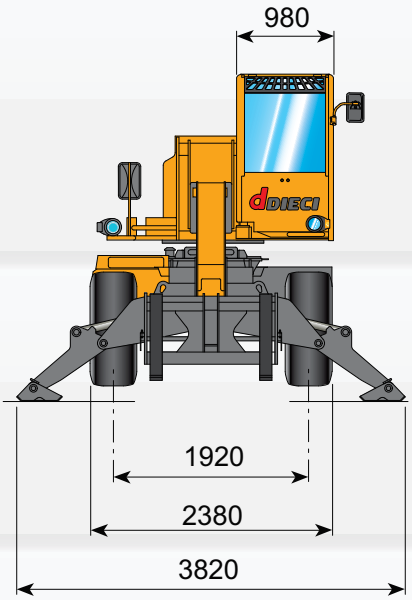
CAUTION

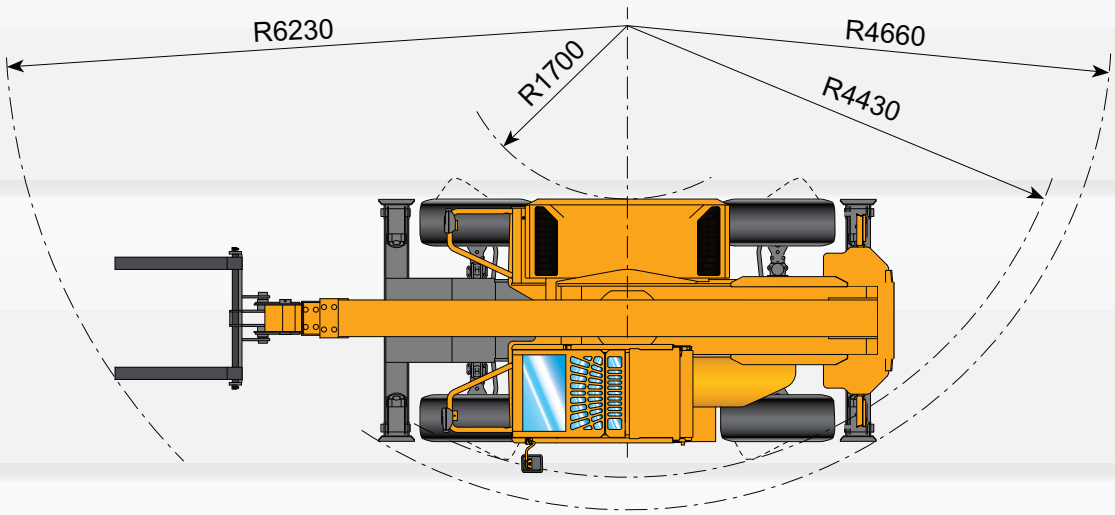
Before assembling attachments on the machine, check machine/attachment compatibility according to the contents of the conformity certificates issued by the manufacturer.



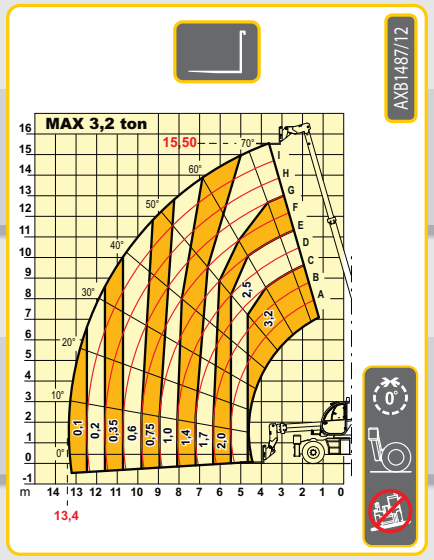

Pegasus 38.16

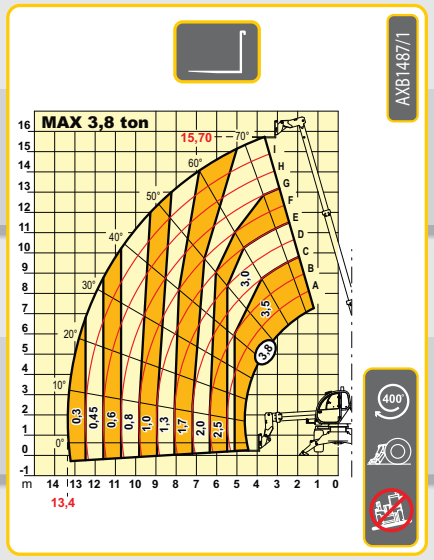


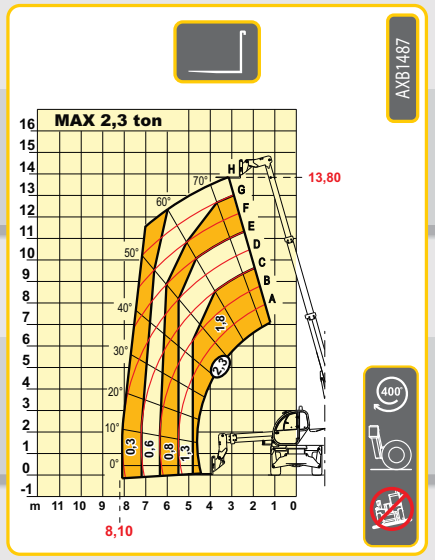




Pegasus 38.16 400°







PERFORMANCES

Maximum capacity:..... 3.800 kg
Capacity at maximum height on stabilizers:..... 2.000 kg
Capacity at maximum height on tyres:..... 1.700 kg
Capacity at maximum boom extension on stabilizers:..... 300 kg
Capacity at maximum boom extension on tyres:..... 300 kg
Maximum lifting height on stabilizers:..... 15,70 m
Maximum lifting height on tyres:..... 13,80 m
Maximum horizontal boom extension:..... 13,35 m
Boom extension at maximum height:..... 3,70 m
Fork tilting angle:..... 134°
Tearing force:..... 5.700 daN
Towing force:..... 7.300 daN
Maximum allowable slope:..... 40 %
Total empty weight:..... 13.100 kg
Max speed:..... 30 km/h

TRANSMISSION

Transmission:..... Hydrostatic with variable capacity pump
Hydraulic engine:..... with automatic adjustment
Reversing gear:.....Electro - hydraulic
Inching pedal for controlled forward movement
Servocontrolled 2 speed gearbox

HYDRAULIC SYSTEM

Gear pump with capacity at max speed:..... 100 lt/1'
Max working pressure:..... 230 bar
Control distributor with joystick:..... 5 in 1 proportional

DIFFERENTIAL AXLES

Steering axles:.....2, with planetary reduction gears
Type of steering:..... 4 wheels / transversal / 2 wheels
Front axle:..... levelling
Rear axle:..... oscillating (can be blocked)
Service brake:..... oil bath on the 4 wheels with double hydraulic system and servo brake
Negative parking brake.

ENGINE

IVECO NEF - TA - 74 kW ENGINE
Maximum power:.....74 kW (101 hp) at 2200 rpm
Operating principle:..... four-stroke, diesel engine
Cylinder number and layout:..... 4, vertical in line
Displacement:..... 4485 cm³ - Aftercooler turbo compressor
Cooling system:..... liquid

REFUELLING (litre)

Hydraulic system (total):..... 245
Fuel tank:..... 126

STANDARD DEVICES

Hydraulic movements with proportional control distributor .
Anti-tipping device with block for hazardous movements.
Turret rotation 400°.
Oscillation block on rear axle.
Hydraulic socket for possible accessories on boom head.
Closed soundproof FOPS approved driver's cab, with heating.
Stabilizers.

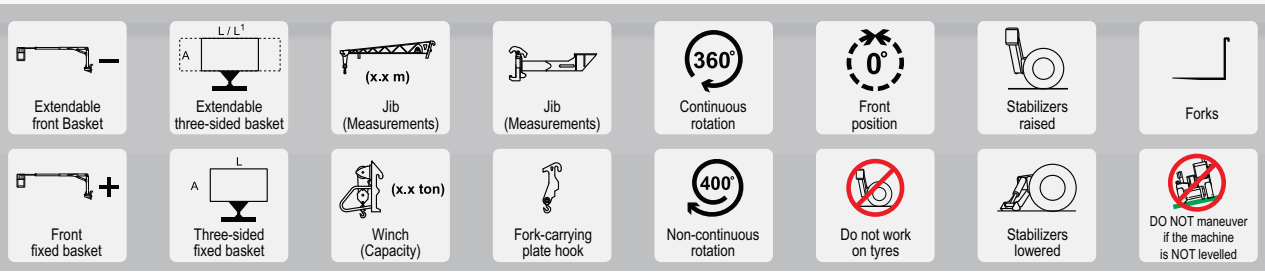
TYRES

Tyres:..... 405/70x20"

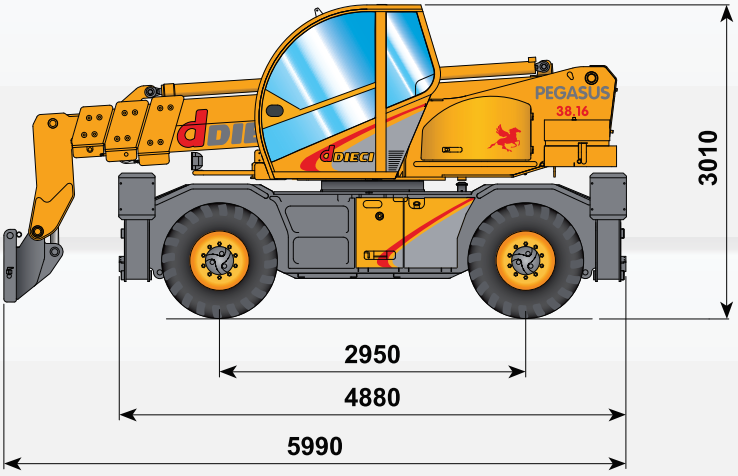
OPTIONALS AND ACCESSORIES

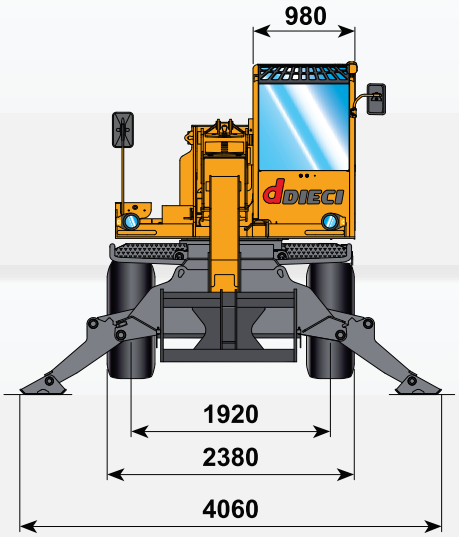
Optionals and Accessories:.....see the relevant catalogue.

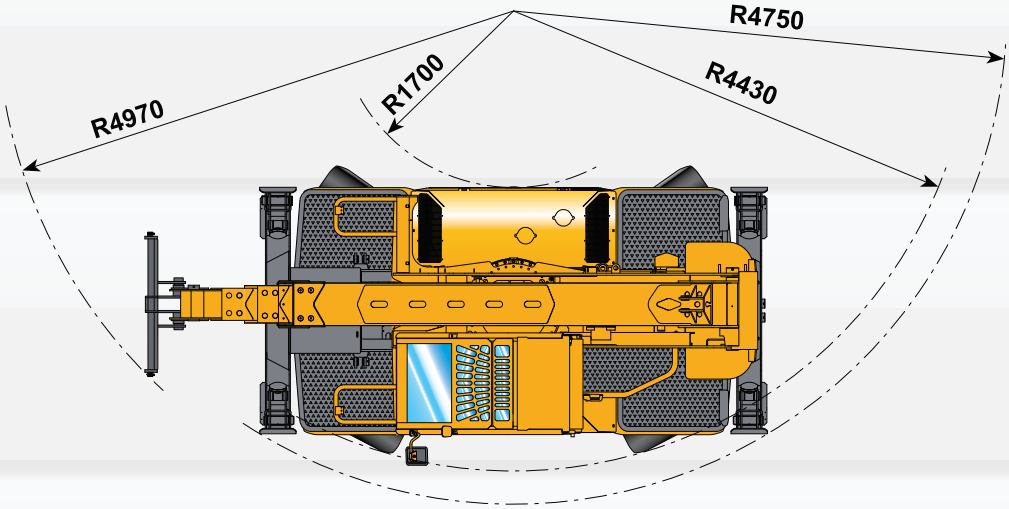
SYMBOLS KEY



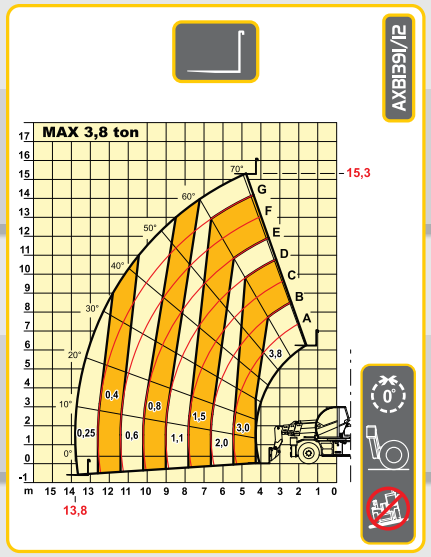
Pegasus 38.16

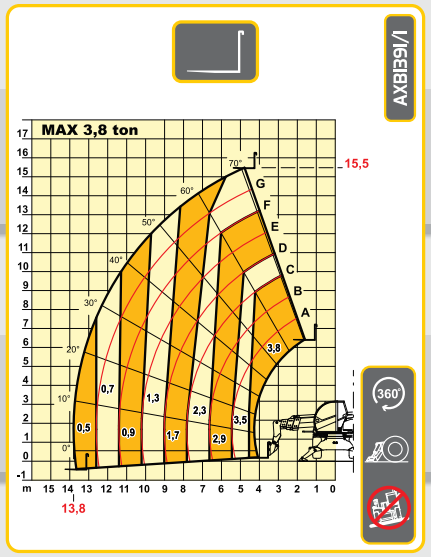


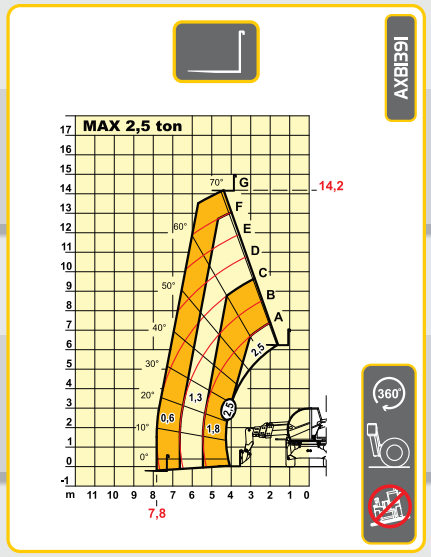




Pegasus 38.16







PERFORMANCES

Maximum capacity:..... 3.800 kg
Capacity at maximum height on stabilizers:..... 2.300 kg
Capacity at maximum height on tyres:..... 1.100 kg
Capacity at maximum boom extension on stabilizers:..... 500 kg
Capacity at maximum boom extension on tyres:..... 250 kg
Maximum lifting height on stabilizers:..... 15,50 m
Maximum lifting height on tyres:..... 15,30 m
Maximum horizontal boom extension:..... 13,80 m
Boom extension at maximum height:..... 4,80 m
Fork tilting angle:..... 134°
Tearing force:..... 5.700 daN
Towing force:..... 9.000 daN
Maximum allowable slope:..... 40 %
Total empty weight:..... 14.700 kg
Max speed:..... 40 km/h

TRANSMISSION

Transmission:..... Hydrostatic with variable delivery pump
Hydraulic engine:..... with automatic adjustment
Reversing gear:..... Electro - hydraulic
Inching pedal for controlled forward movement
Servocontrolled 2 speed gearbox

HYDRAULIC SYSTEM

Double gear pump with “Energy Saving” system
Gear pump with capacity at max speed:..... 135 lt/1'
Max working pressure:..... 230 bar
Control valve with joystick:..... 5 in 1 proportional
Simultaneous movements:..... 5
Proportional control distributor “Load Sensing” with “Flow Sharing”

DIFFERENTIAL AXLES

Steering axles:..... 2, with planetary reduction gears
Type of steering:..... 4 wheels / transversal / 2 wheels
Front axle:..... levelling
Rear axle:..... oscillating
Service brake:..... oil bath on the 4 wheels with double hydraulic system and servo brake
Negative parking brake.

ENGINE

PERKINS 1104D-ETA - 106 kW
Power:..... 106 kW (144 hp) at 2200 rpm
Type:..... four-stroke engine, diesel, Common-Rail
Cylinders number and layout:..... 4, vertical in line
Displacement:..... 4399 cm^3 -Turbo compressor aftercooler
Cooling system:..... liquid
Specific fuel consumption per hour (2.200 rpm):..... 230g/kWh
Electronic accelerator.
Manual accelerator.
Air pre-heater for cold climates.

REFUELLING (litre)

Hydraulic tank:..... 270
Fuel tank:..... 180

STANDARD DEVICES

Anti-tipping device with block for hazardous movements.
Continuous turret rotation over 360°.
Oscillation block on rear axle.
Hydraulic socket for possible accessories on boom head.
ROPS-FOPS approved closed soundproof cab with heating and opening roof.
Stabilizers with joystick control
Grammer deluxe seat.
High efficiency cyclone air filter.
Self-blocking rear axle (Limited Slip)

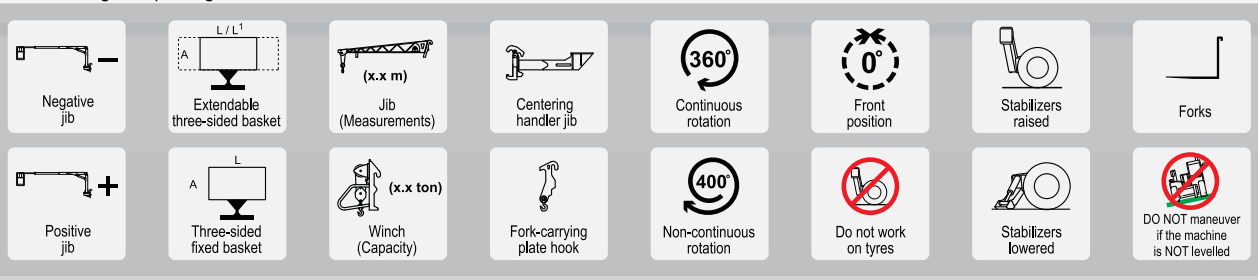
OPTIONAL AND ACCESSORIES

A/C; Webasto heater; digital speedometer; water heater; pneumatic seat suspension; light on boom head; quick attachment for accessories; radio; anti-theft alarm; glass protection; transverse levelling device on wheels and others...
(For further customised accessories, please consult your local dealer)

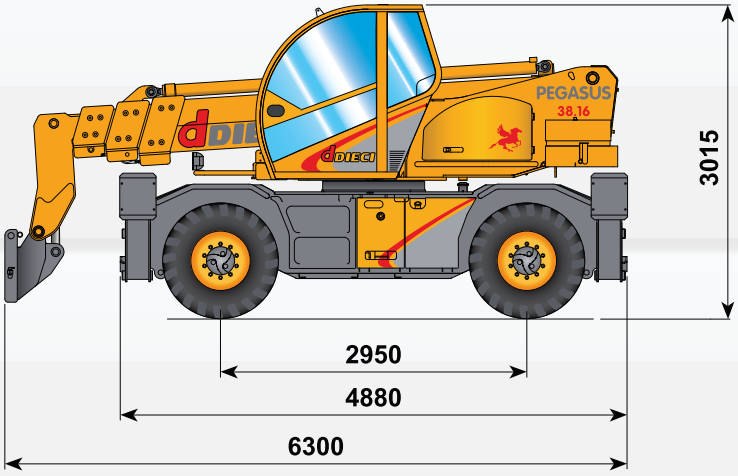
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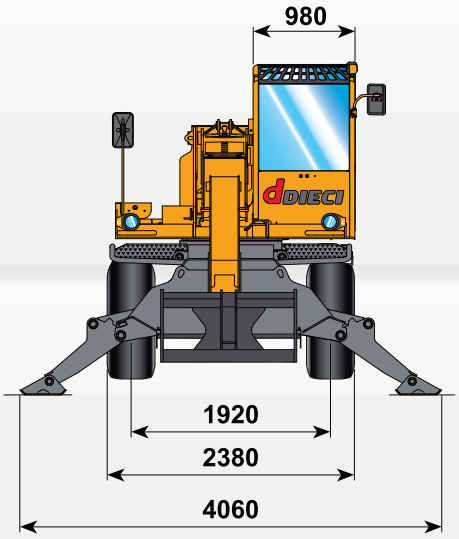
Tyres:..... 18x19,5” (Industrial)
Alternative:..... 18x19,5” (Agricultural)

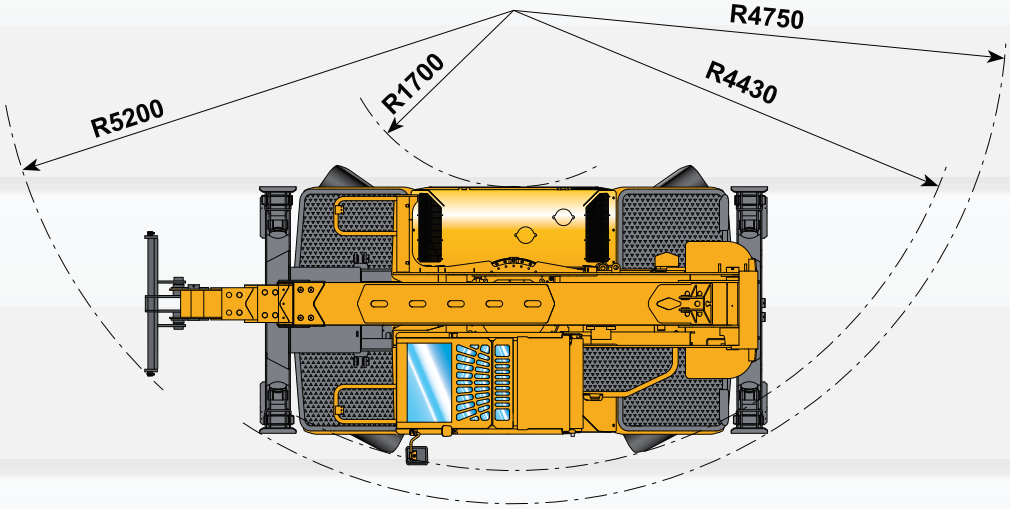
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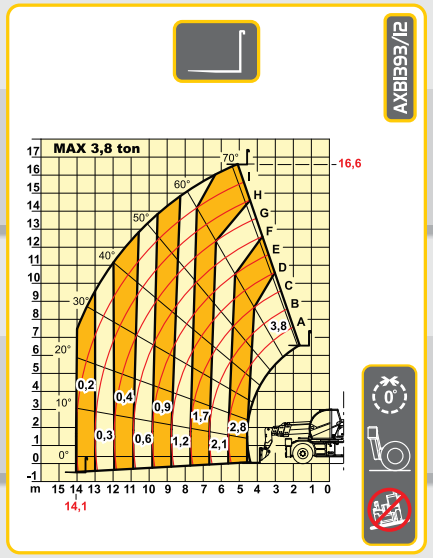
Pegasus 40.17

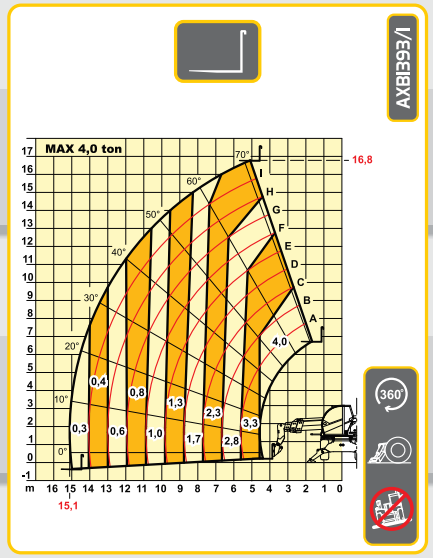


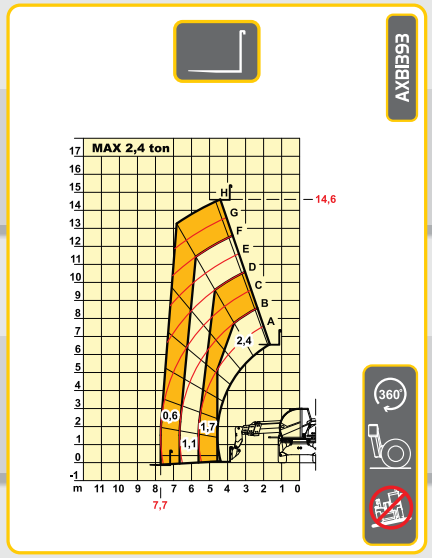




Pegasus 40.17







PERFORMANCES

Maximum capacity:..... 4.000 kg
Capacity at maximum height on stabilizers:..... 2.300 kg
Capacity at maximum height on tyres:..... 1.700 kg
Capacity at maximum boom extension on stabilizers:..... 300 kg
Capacity at maximum boom extension on tyres:..... 200 kg
Maximum lifting height on stabilizers:..... 16,80 m
Maximum lifting height on tyres:..... 16,60 m
Maximum horizontal boom extension:..... 15,10 m
Boom extension at maximum height:..... 5,10 m
Fork tilting angle:..... 134°
Tearing force:..... 5.700 daN
Towing force:..... 9.000 daN
Maximum allowable slope:..... 40 %
Total empty weight:..... 15.000 kg
Max speed:..... 40 km/h

TRANSMISSION

Transmission:..... Hydrostatic with variable delivery pump
Hydraulic engine:..... with automatic adjustment
Reversing gear:..... Electro - hydraulic
Inching pedal for controlled forward movement
Servocontrolled 2 speed gearbox

HYDRAULIC SYSTEM

Double gear pump with “Energy Saving” system
Gear pump with capacity at max speed:..... 135 lt/1'
Max working pressure:..... 230 bar
Control valve with joystick:..... 5 in 1 proportional
Simultaneous movements:..... 5
Proportional control distributor “Load Sensing” with “Flow Sharing”

DIFFERENTIAL AXLES

Steering axles:..... 2, with planetary reduction gears
Type of steering:..... 4 wheels / transversal / 2 wheels
Front axle:..... levelling
Rear axle:..... oscillating
Service brake:..... oil bath on the 4 wheels with double hydraulic system and servo brake
Negative parking brake.

ENGINE

PERKINS 1104D-ETA - 106 kW
Power:..... 106 kW (144 hp) at 2200 rpm
Type:..... four-stroke engine, diesel, Common-Rail
Cylinders number and layout:..... 4, vertical in line
Displacement:..... 4399 cm^3 -Turbo compressor aftercooler
Cooling system:..... liquid
Specific fuel consumption per hour (2.200 rpm):..... 230g/kWh
Electronic accelerator.
Manual accelerator.
Air pre-heater for cold climates.

REFUELLING (litre)

Hydraulic tank:..... 270
Fuel tank:..... 180

STANDARD DEVICES

Anti-tipping device with block for hazardous movements.
Continuous turret rotation over 360°.
Oscillation block on rear axle.
Hydraulic socket for possible accessories on boom head.
ROPS-FOPS approved closed soundproof cab with heating and opening roof.
Stabilizers with joystick control
Grammer deluxe seat.
High efficiency cyclone air filter.
Self-blocking rear axle (Limited Slip)

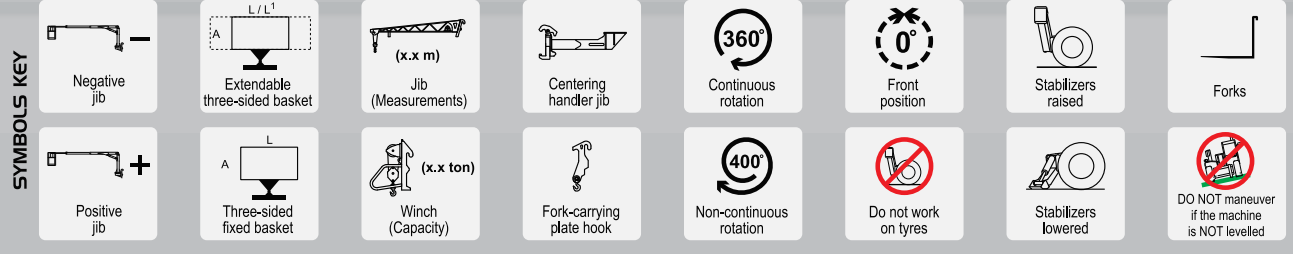
OPTIONAL AND ACCESSORIES

A/C; Webasto heater; digital speedometer; water heater; pneumatic seat suspension; light on boom head; quick attachment for accessories; radio; anti-theft alarm; glass protection; transverse levelling device on wheels and others...
(For further customised accessories, please consult your local dealer)

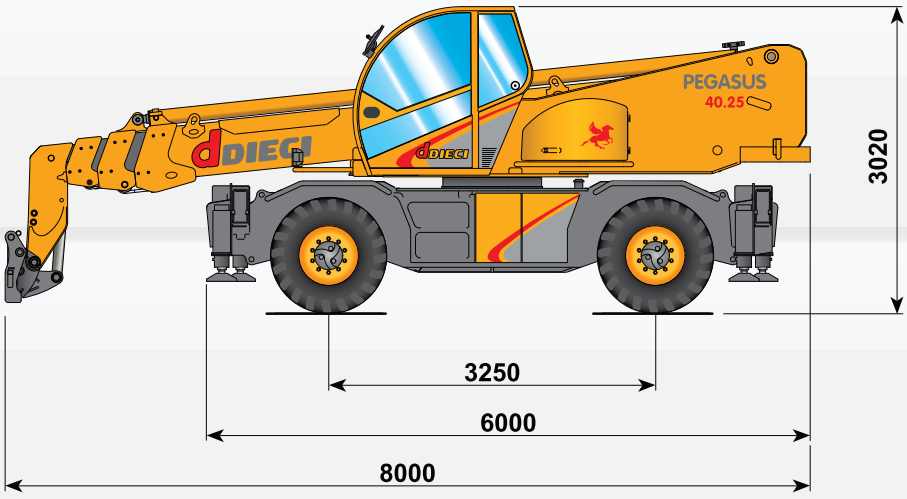
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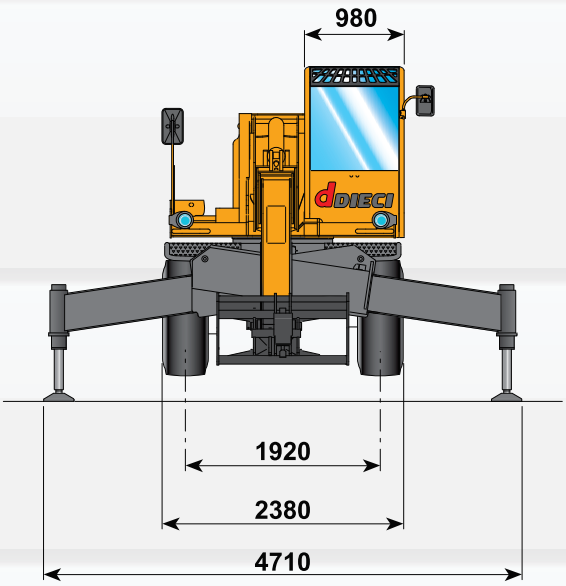
Tyres:..... 18x19,5” (Industrial)
Alternative:..... 18x19,5” (Agricultural)

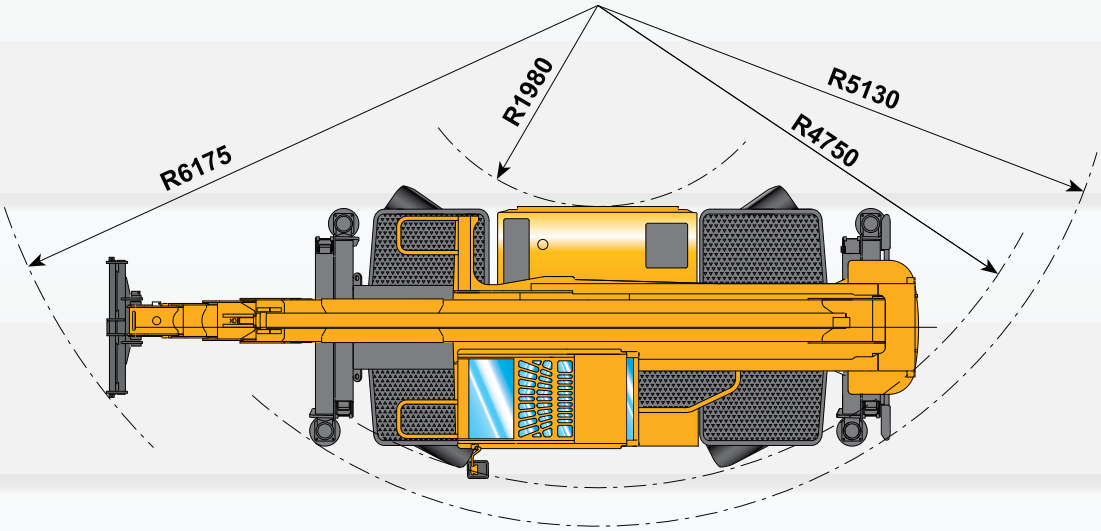
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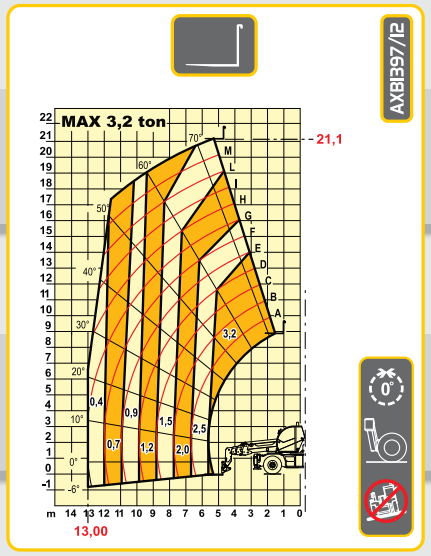
Pegasus 40.25

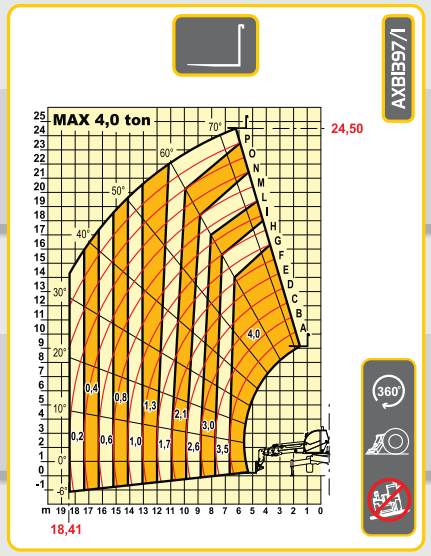


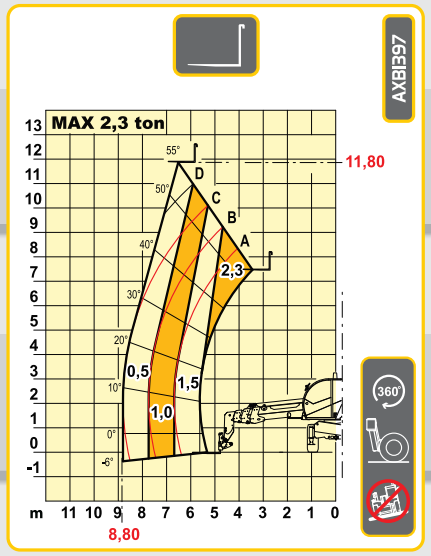




Pegasus 40.25







PERFORMANCES

Maximum capacity:..... 4.000 kg
Capacity at maximum height on stabilizers:..... 1.700 kg
Capacity at maximum height on tyres:..... 1.500 kg
Capacity at maximum boom extension on stabilizers:..... 200 kg
Capacity at maximum boom extension on tyres:..... 400 kg
Maximum lifting height on stabilizers:..... 24,50 m
Maximum lifting height on tyres:..... 21,10 m
Maximum horizontal boom extension:..... 18,41 m
Boom extension at maximum height:..... 6,23 m
Fork tilting angle:..... 120°
Tearing force:..... 5.700 daN
Towing force:..... 9.400 daN
Maximum allowable slope:..... 40 %
Total empty weight:..... 17.500 kg
Max speed:..... 40 km/h

TRANSMISSION

Transmission:..... Hydrostatic with variable delivery pump
Hydraulic engine:..... with automatic adjustment
Reversing gear:..... Electro - hydraulic
Inching pedal for controlled forward movement
Servocontrolled 2 speed gearbox

HYDRAULIC SYSTEM

Double gear pump with “Energy Saving” system
Gear pump with capacity at max speed:..... 135 lt/1'
Max working pressure:..... 230 bar
Control valve with joystick:..... 5 in 1 proportional
Simultaneous movements:..... 5
Proportional control distributor “Load Sensing” with “Flow Sharing”

DIFFERENTIAL AXLES

Steering axles:..... 2, with planetary reduction gears
Type of steering:..... 4 wheels / transversal / 2 wheels
Front axle:..... levelling
Rear axle:..... oscillating
Service brake:..... oil bath on the 4 wheels with double hydraulic system and servo brake
Negative parking brake.

ENGINE

PERKINS 1104D-ETA - 106 kW
Power:..... 106 kW (144 hp) at 2200 rpm
Type:..... four-stroke engine, diesel, Common-Rail
Cylinders number and layout:..... 4, vertical in line
Displacement:..... 4399 cm^3 -Turbo compressor aftercooler
Cooling system:..... liquid
Specific fuel consumption per hour (2.200 rpm):..... 230g/kWh
Electronic accelerator.
Manual accelerator.
Air pre-heater for cold climates.

REFUELLING (litre)

Hydraulic tank:..... 270
Fuel tank:..... 180

STANDARD DEVICES

Anti-tipping device with block for hazardous movements.
Continuous turret rotation over 360°.
Oscillation block on rear axle.
Hydraulic socket for possible accessories on boom head.
ROPS-FOPS approved closed soundproof cab with heating and opening roof.
Stabilizers with joystick control
Grammer deluxe seat.
High efficiency cyclone air filter.
Self-blocking rear axle (Limited Slip)

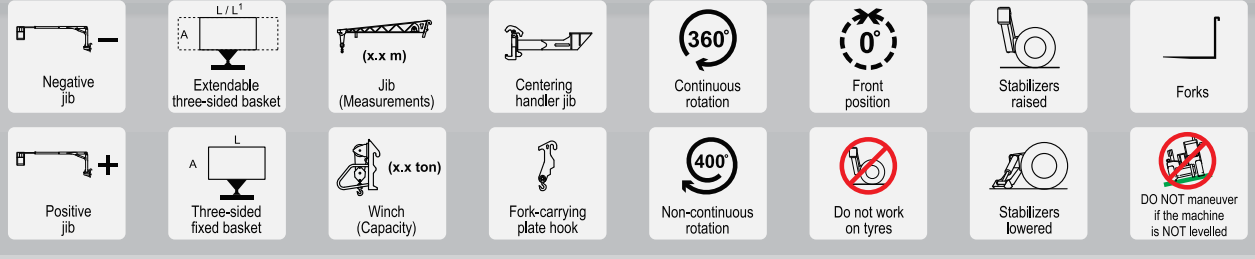
OPTIONAL AND ACCESSORIES

A/C; Webasto heater; digital speedometer; water heater; pneumatic seat suspension; light on boom head; quick attachment for accessories; radio; anti-theft alarm; glass protection; Transverse levelling device on wheels and others...
(For further customised accessories, please consult your local dealer)

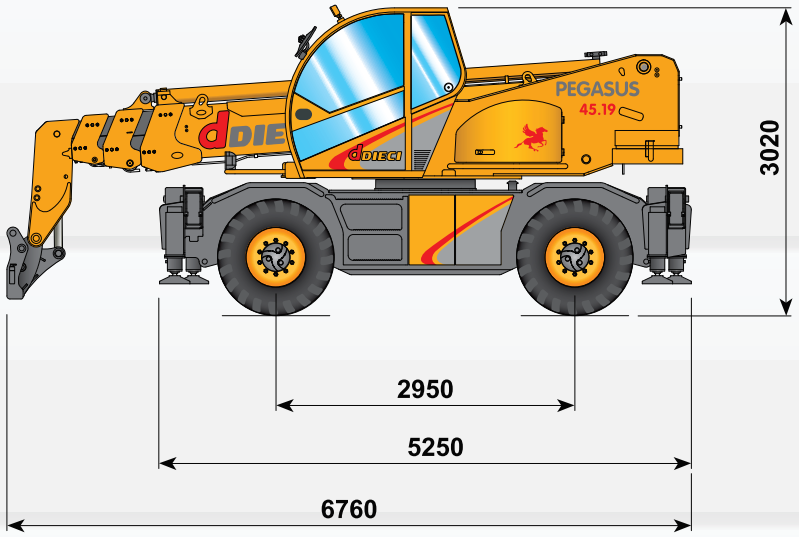
TYRES

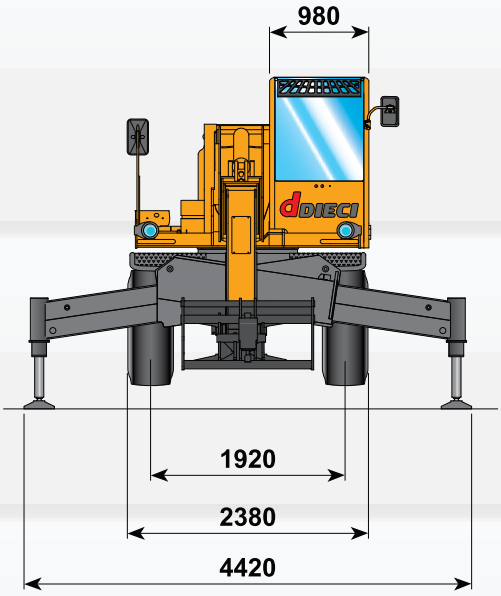
Tyres:..... 18 - R22,5” (Industrial)
Alternative:..... 18 - R22,5” (Agricultural)

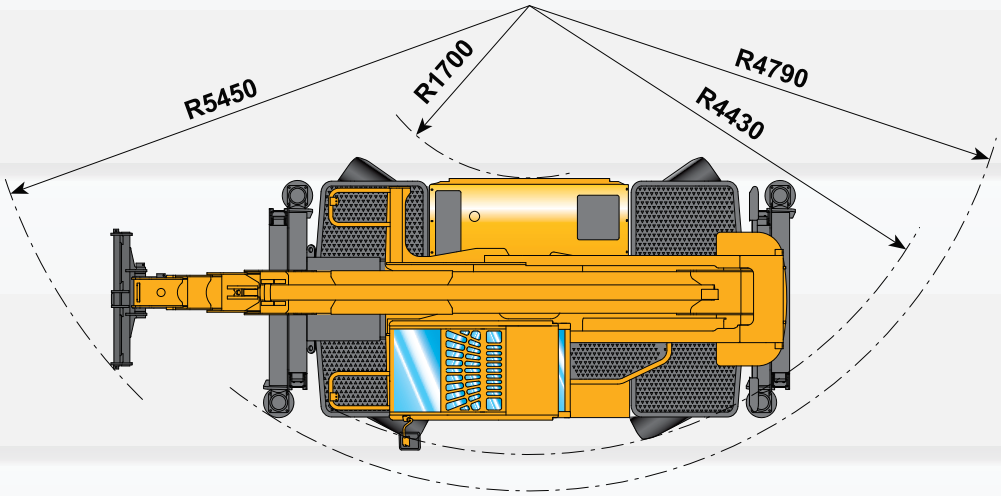
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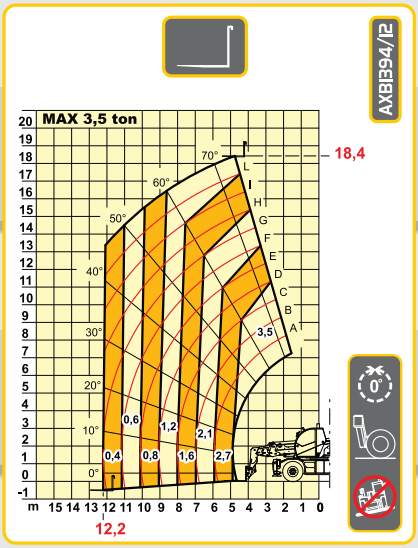
Pegasus 45.19

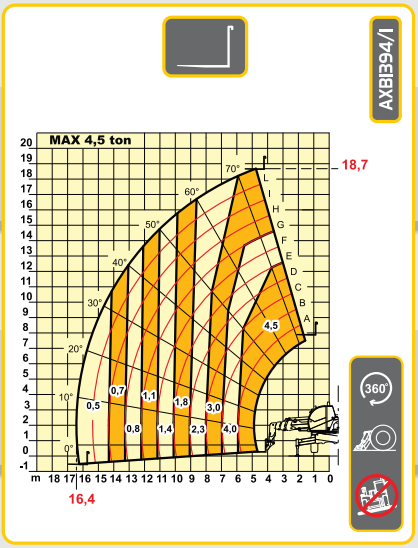


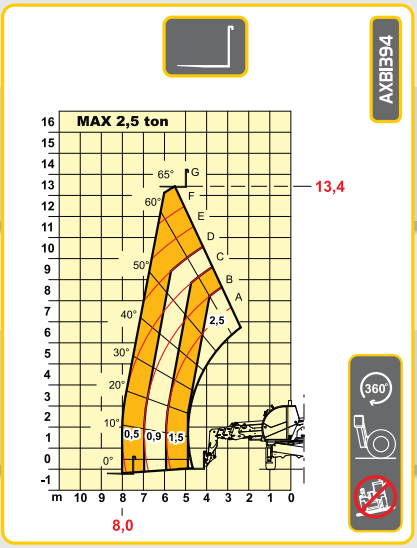




Pegasus 45.19







PERFORMANCES

Maximum capacity:..... 4.500 kg
Capacity at maximum height on stabilizers:..... 3.000 kg
Capacity at maximum height on tyres:..... 1.200 kg
Capacity at maximum boom extension on stabilizers:..... 500 kg
Capacity at maximum boom extension on tyres:..... 400 kg
Maximum lifting height on stabilizers:..... 18,70 m
Maximum lifting height on tyres:..... 18,40 m
Maximum horizontal boom extension:..... 16,40 m
Boom extension at maximum height:..... 4,80 m
Fork tilting angle:..... 134°
Tearing force:..... 5.700 daN
Towing force:..... 9.400 daN
Maximum allowable slope:..... 40 %
Total empty weight:..... 16.400 kg
Max speed:..... 40 km/h

TRANSMISSION

Transmission:..... Hydrostatic with variable delivery pump
Hydraulic engine:..... with automatic adjustment
Reversing gear:..... Electro - hydraulic
Inching pedal for controlled forward movement
Servocontrolled 2 speed gearbox

HYDRAULIC SYSTEM

Double gear pump with “Energy Saving” system
Gear pump with capacity at max speed:..... 135 lt/1'
Max working pressure:..... 230 bar
Control valve with joystick:..... 5 in 1 proportional
Simultaneous movements:..... 5
Proportional control distributor “Load Sensing” with “Flow Sharing”

DIFFERENTIAL AXLES

Steering axles:..... 2, with planetary reduction gears
Type of steering:..... 4 wheels / transversal / 2 wheels
Front axle:..... levelling
Rear axle:..... oscillating
Service brake:..... oil bath on the 4 wheels with double hydraulic system and servo brake
Negative parking brake.

ENGINE

PERKINS 1104D-ETA - 106 kW
Power:..... 106 kW (144 hp) at 2200 rpm
Type:..... four-stroke engine, diesel, Common-Rail
Cylinders number and layout:..... 4, vertical in line
Displacement:..... 4399 cm^3 -Turbo compressor aftercooler
Cooling system:..... liquid
Specific fuel consumption per hour (2.200 rpm):..... 230g/kWh
Electronic accelerator.
Manual accelerator.
Air pre-heater for cold climates.

REFUELLING (litre)

Hydraulic tank:..... 270
Fuel tank:..... 180

STANDARD DEVICES

Anti-tipping device with block for hazardous movements.
Continuous turret rotation over 360°.
Oscillation block on rear axle.
Hydraulic socket for possible accessories on boom head.
ROPS-FOPS approved closed soundproof cab with heating and opening roof.
Stabilizers with joystick control
Grammer deluxe seat.
High efficiency cyclone air filter.
Self-blocking rear axle (Limited Slip)

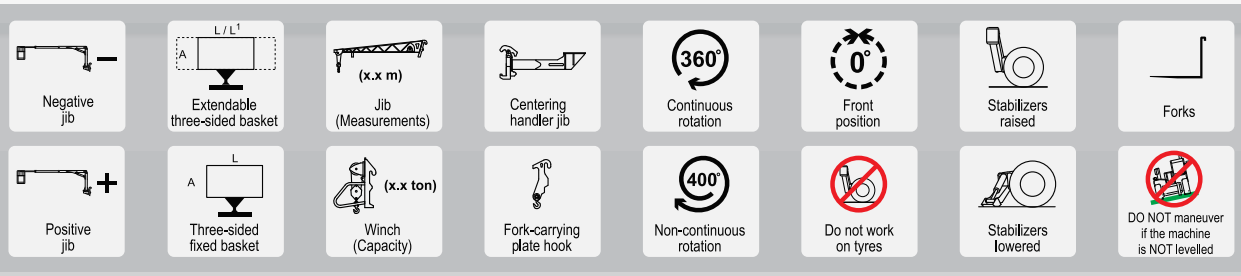
OPTIONAL AND ACCESSORIES

A/C; Webasto heater; digital speedometer; water heater; pneumatic seat suspension; light on boom head; quick attachment for accessories; radio; anti-theft alarm; glass protection; Transverse levelling device on wheels and others...
(For further customised accessories, please consult your local dealer)

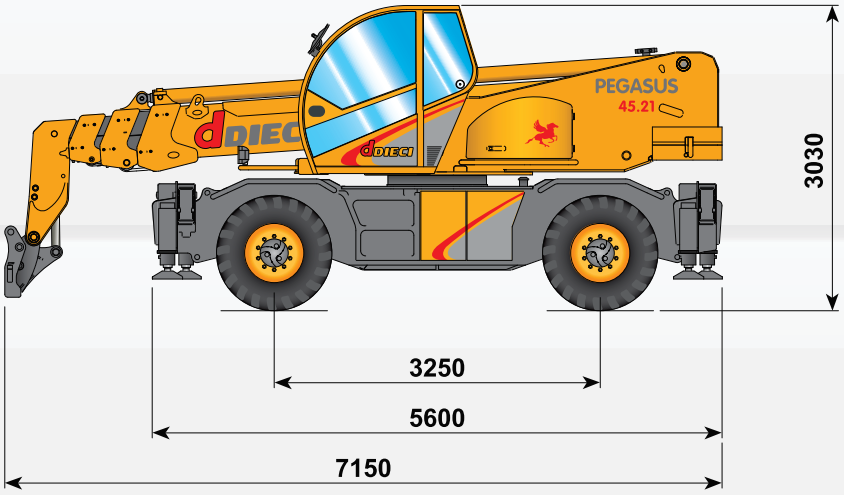
TYRES

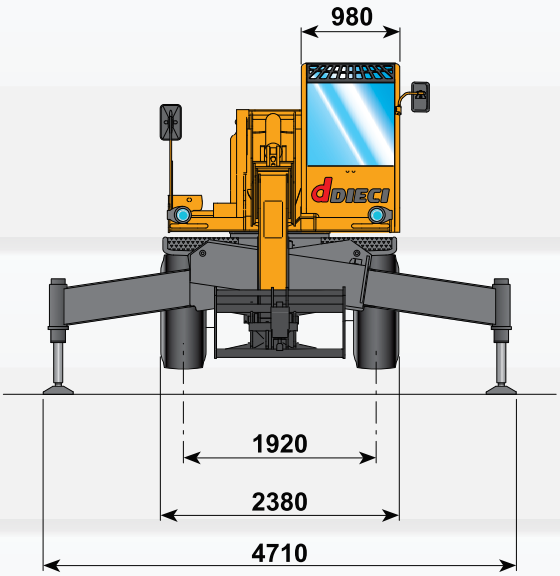
Tyres:..... 18 - R22,5” (Industrial)
Alternative:..... 18 - R22,5” (Agricultural)

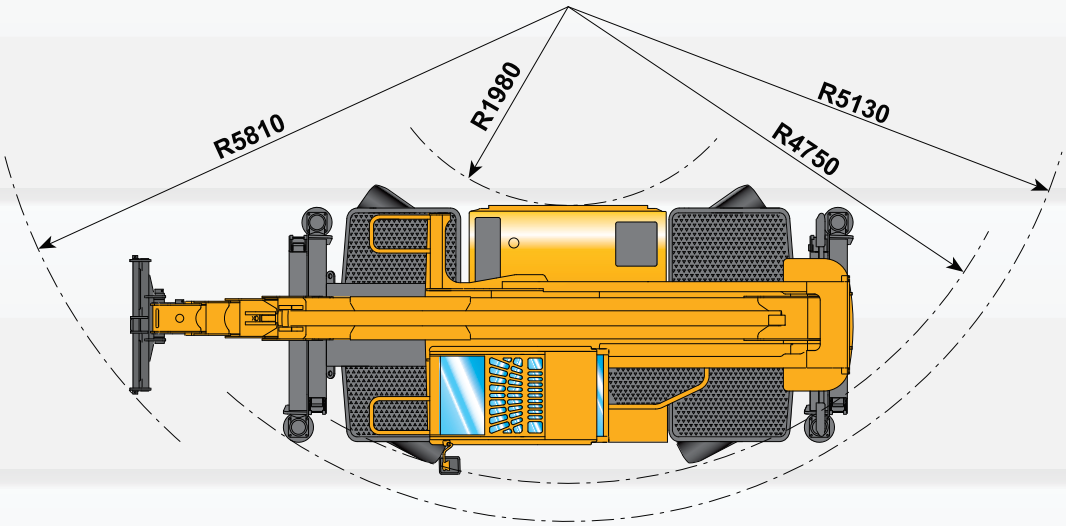
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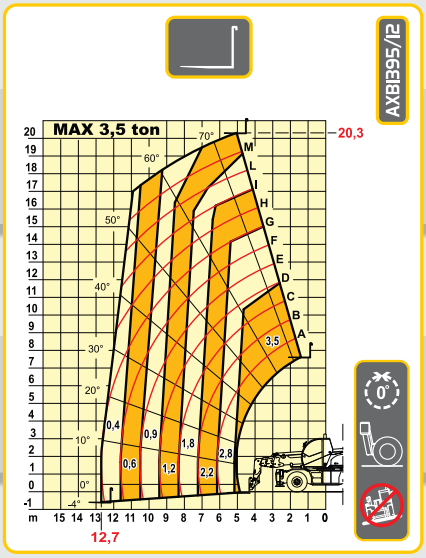
Pegasus 45.21

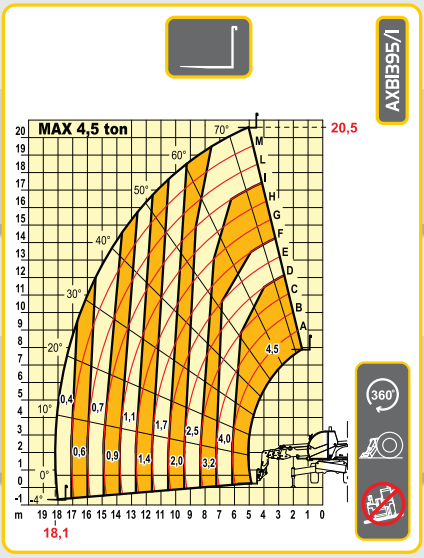


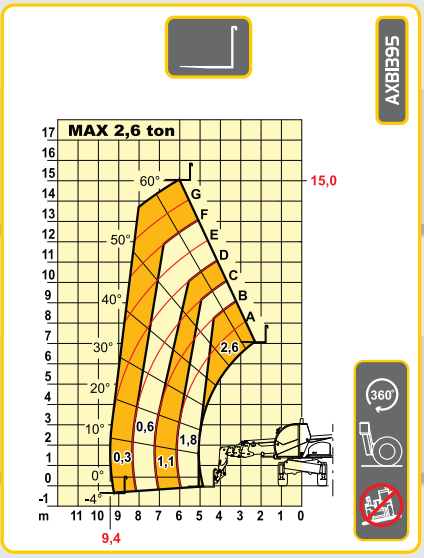




Pegasus 45.21







PERFORMANCES

Maximum capacity:..... 4.500 kg
Capacity at maximum height on stabilizers:..... 2.500 kg
Capacity at maximum height on tyres:..... 1.200 kg
Capacity at maximum boom extension on stabilizers:..... 400 kg
Capacity at maximum boom extension on tyres:..... 400 kg
Maximum lifting height on stabilizers:..... 20,50 m
Maximum lifting height on tyres:..... 20,30 m
Maximum horizontal boom extension:..... 18,10 m
Boom extension at maximum height:..... 5,50 m
Fork tilting angle:..... 134°
Tearing force:..... 5.700 daN
Towing force:..... 9.400 daN
Maximum allowable slope:..... 40 %
Total empty weight:..... 17.100 kg
Max speed:..... 40 km/h

TRANSMISSION

Transmission:..... Hydrostatic with variable delivery pump
Hydraulic engine:..... with automatic adjustment
Reversing gear:..... Electro - hydraulic
Inching pedal for controlled forward movement
Servocontrolled 2 speed gearbox

HYDRAULIC SYSTEM

Double gear pump with “Energy Saving” system
Gear pump with capacity at max speed:..... 135 lt/1'
Max working pressure:..... 230 bar
Control valve with joystick:..... 5 in 1 proportional
Simultaneous movements:..... 5
Proportional control distributor “Load Sensing” with “Flow Sharing”

DIFFERENTIAL AXLES

Steering axles:..... 2, with planetary reduction gears
Type of steering:..... 4 wheels / transversal / 2 wheels
Front axle:..... levelling
Rear axle:..... oscillating
Service brake:..... oil bath on the 4 wheels with double hydraulic system and servo brake
Negative parking brake.

ENGINE

PERKINS 1104D-ETA - 106 kW
Power:..... 106 kW (144 hp) at 2200 rpm
Type:..... four-stroke engine, diesel, Common-Rail
Cylinders number and layout:..... 4, vertical in line
Displacement:..... 4399 cm^3 -Turbo compressor aftercooler
Cooling system:..... liquid
Specific fuel consumption per hour (2.200 rpm):..... 230g/kWh
Electronic accelerator.
Manual accelerator.
Air pre-heater for cold climates.

REFUELLING (litre)

Hydraulic tank:..... 270
Fuel tank:..... 180

STANDARD DEVICES

Anti-tipping device with block for hazardous movements.
Continuous turret rotation over 360°.
Oscillation block on rear axle.
Hydraulic socket for possible accessories on boom head.
ROPS-FOPS approved closed soundproof cab with heating and opening roof.
Stabilizers with joystick control
Grammer deluxe seat.
High efficiency cyclone air filter.
Self-blocking rear axle (Limited Slip)

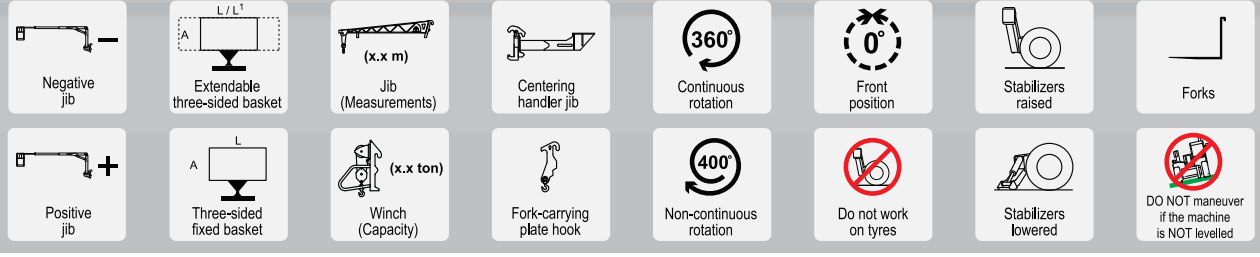
OPTIONAL AND ACCESSORIES

A/C; Webasto heater; digital speedometer; water heater; pneumatic seat suspension; light on boom head; quick attachment for accessories; radio; anti-theft alarm; glass protection; Transverse levelling device on wheels and others...
(For further customised accessories, please consult your local dealer)

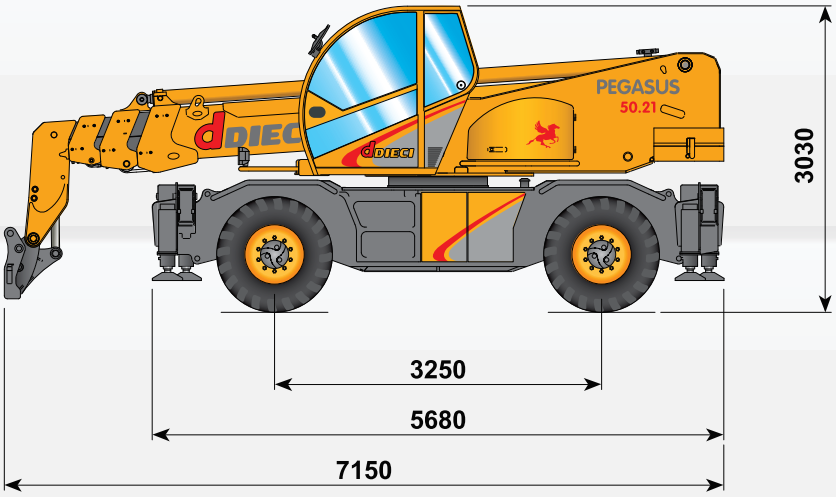
TYRES

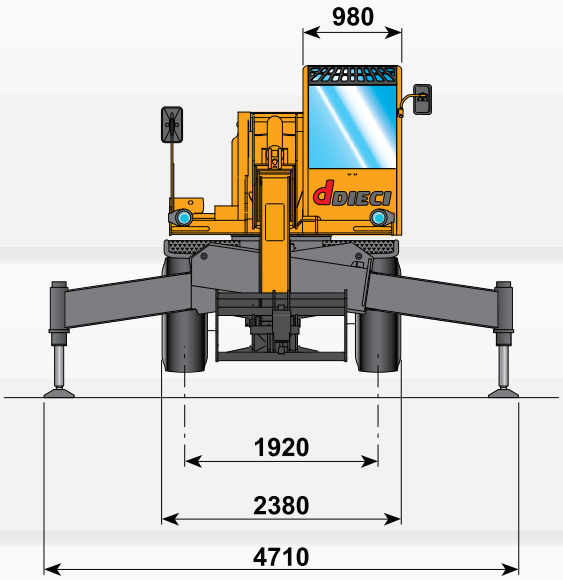
Tyres:..... 18 - R22,5” (Industrial)
Alternative:..... 18 - R22,5” (Agricultural)

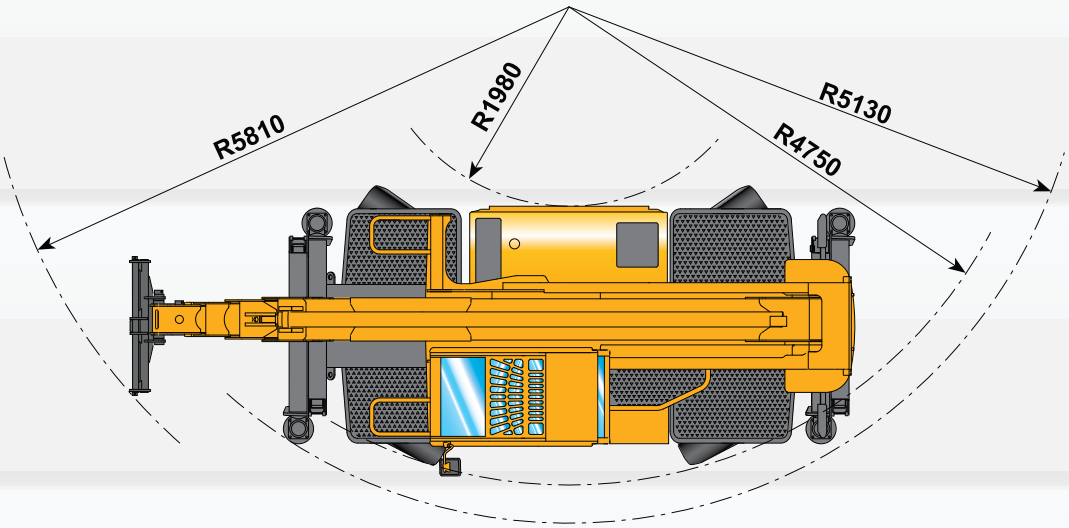
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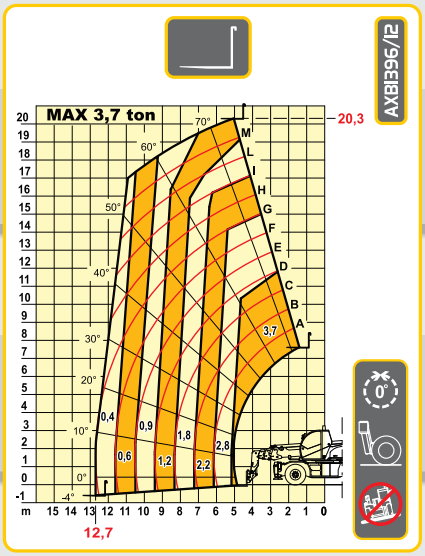
Pegasus 50.21

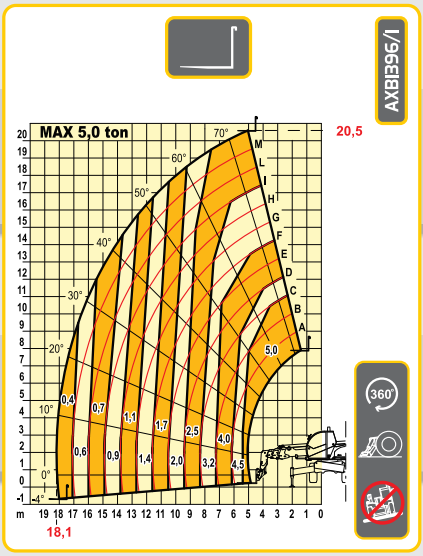


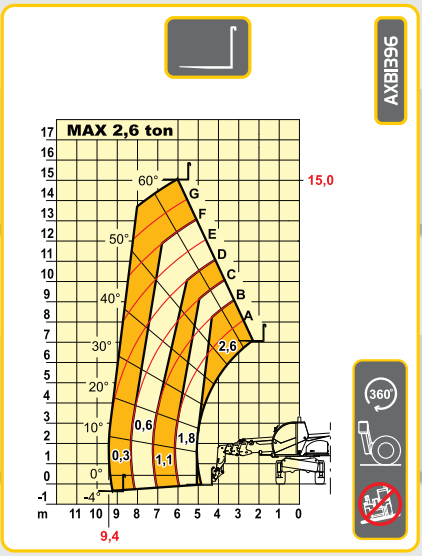




Pegasus 50.21







PERFORMANCES

Maximum capacity:..... 5.000 kg
Capacity at maximum height on stabilizers:..... 2.500 kg
Capacity at maximum height on tyres:..... 1.200 kg
Capacity at maximum boom extension on stabilizers:..... 400 kg
Capacity at maximum boom extension on tyres:..... 400 kg
Maximum lifting height on stabilizers:..... 20,50 m
Maximum lifting height on tyres:..... 20,30 m
Maximum horizontal boom extension:..... 18,10 m
Boom extension at maximum height:..... 5,50 m
Fork tilting angle:..... 134°
Tearing force:..... 5.700 daN
Towing force:..... 9.400 daN
Maximum allowable slope:..... 40 %
Total empty weight:..... 17.200 kg
Max speed:..... 40 km/h

TRANSMISSION

Transmission:..... Hydrostatic with variable delivery pump
Hydraulic engine:..... with automatic adjustment
Reversing gear:..... Electro - hydraulic
Inching pedal for controlled forward movement
Servocontrolled 2 speed gearbox

HYDRAULIC SYSTEM

Double gear pump with “Energy Saving” system
Gear pump with capacity at max speed:..... 135 lt/1'
Max working pressure:..... 230 bar
Control valve with joystick:..... 5 in 1 proportional
Simultaneous movements:..... 5
Proportional control distributor “Load Sensing” with “Flow Sharing”

DIFFERENTIAL AXLES

Steering axles:..... 2, with planetary reduction gears
Type of steering:..... 4 wheels / transversal / 2 wheels
Front axle:..... levelling
Rear axle:..... oscillating
Service brake:..... oil bath on the 4 wheels with double hydraulic system and servo brake
Negative parking brake.

ENGINE

PERKINS 1104D-ETA - 106 kW
Power:..... 106 kW (144 hp) at 2200 rpm
Type:..... four-stroke engine, diesel, Common-Rail
Cylinders number and layout:..... 4, vertical in line
Displacement:..... 4399 cm^3 -Turbo compressor aftercooler
Cooling system:..... liquid
Specific fuel consumption per hour (2.200 rpm):..... 230g/kWh
Electronic accelerator.
Manual accelerator.
Air pre-heater for cold climates.

REFUELLING (litre)

Hydraulic tank:..... 270
Fuel tank:..... 180

STANDARD DEVICES

Anti-tipping device with block for hazardous movements.
Continuous turret rotation over 360°.
Oscillation block on rear axle.
Hydraulic socket for possible accessories on boom head.
ROPS-FOPS approved closed soundproof cab with heating and opening roof.
Stabilizers with joystick control
Grammer deluxe seat.
High efficiency cyclone air filter.
Self-blocking rear axle (Limited Slip)

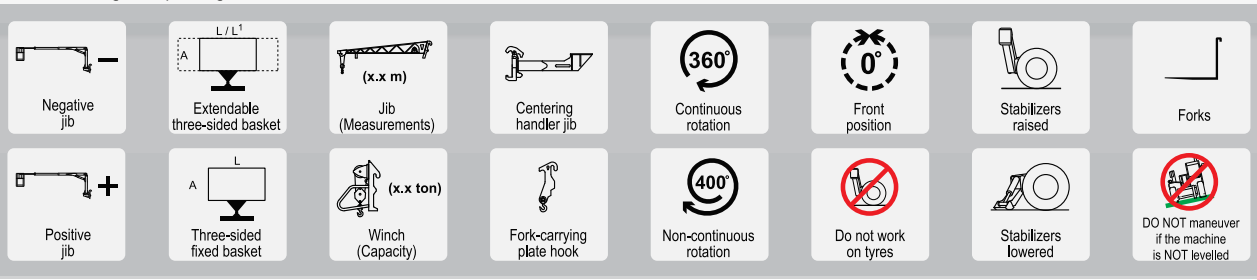
OPTIONAL AND ACCESSORIES

A/C; Webasto heater; digital speedometer; water heater; pneumatic seat suspension; light on boom head; quick attachment for accessories; radio; anti-theft alarm; glass protection; Transverse levelling device on wheels and others...
(For further customised accessories, please consult your local dealer)

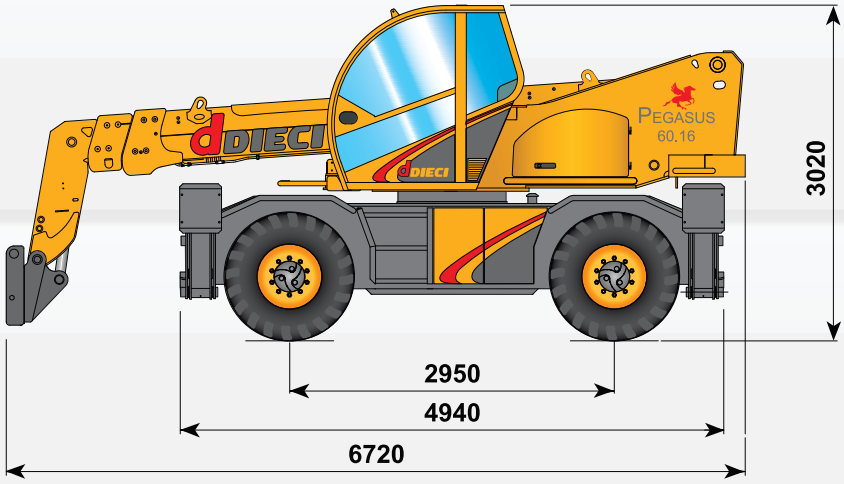
TYRES

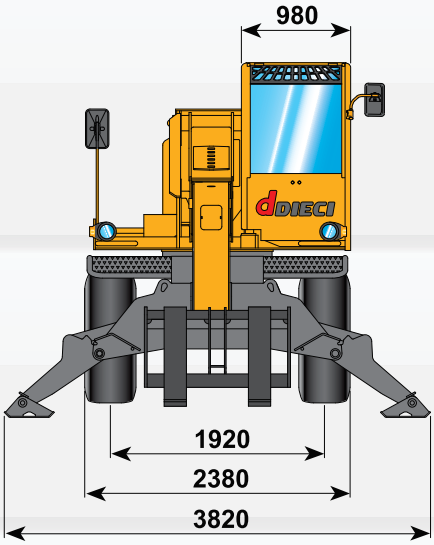
Tyres:..... 18 - R22,5” (Industrial)
Alternative:..... 18 - R22,5” (Agricultural)

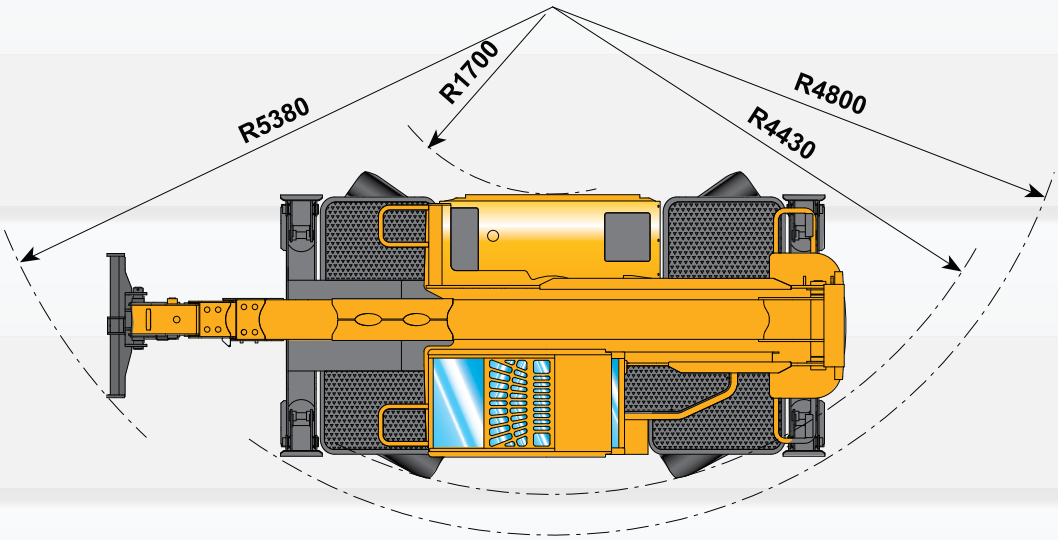
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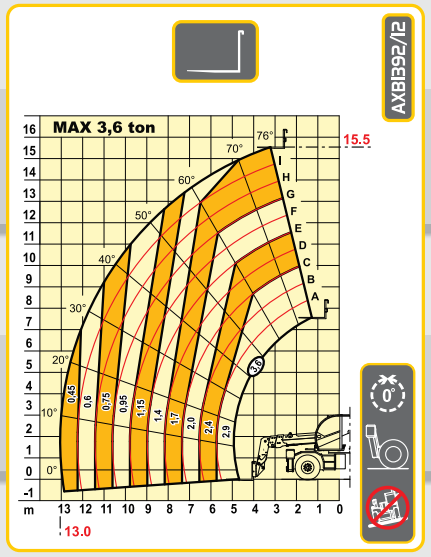
Pegasus 60.16

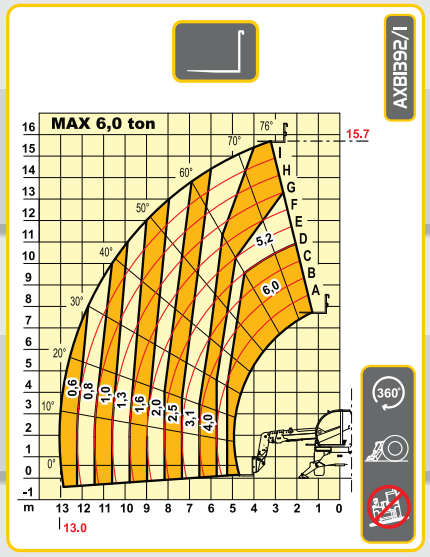


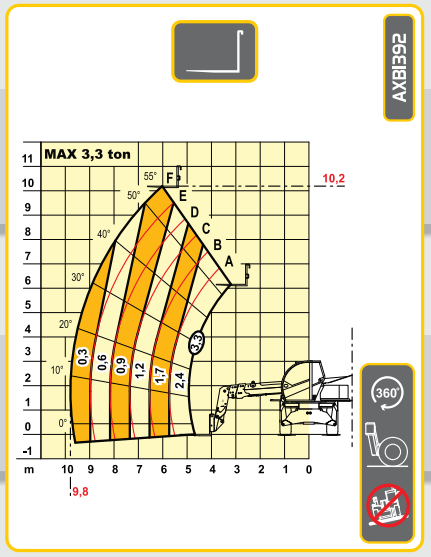




Pegasus 60.16







PERFORMANCES

Maximum capacity:..... 6.000 kg
Capacity at maximum height on stabilizers:..... 4.000 kg
Capacity at maximum height on tyres:.....1.700 kg
Capacity at maximum boom extension on stabilizers:..... 600 kg
Capacity at maximum boom extension on tyres:..... 450 kg
Maximum lifting height on stabilizers:..... 15,70 m
Maximum lifting height on tyres:..... 15,50 m
Maximum horizontal boom extension:..... 13,00 m
Boom extension at maximum height:..... 3,20 m
Fork tilting angle:..... 134°
Tearing force:..... 5.700 daN
Towing force:..... 9.000 daN
Maximum allowable slope:..... 40 %
Total empty weight:..... 16.600 kg
Max speed:..... 40 km/h

TRANSMISSION

Transmission:..... Hydrostatic with variable delivery pump
Hydraulic engine:..... with automatic adjustment
Reversing gear:..... Electro - hydraulic
Inching pedal for controlled forward movement
Servocontrolled 2 speed gearbox

HYDRAULIC SYSTEM

Double gear pump with “Energy Saving” system
Gear pump with capacity at max speed:..... 135 lt/1'
Max working pressure:..... 230 bar
Control valve with joystick:..... 5 in 1 proportional
Simultaneous movements:..... 5
Proportional control distributor “Load Sensing” with “Flow Sharing”

DIFFERENTIAL AXLES

Steering axles:..... 2, with planetary reduction gears
Type of steering:..... 4 wheels / transversal / 2 wheels
Front axle:..... levelling
Rear axle:..... oscillating
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Cooling system:..... liquid
Specific fuel consumption per hour (2.200 rpm):..... 230g/kWh
Electronic accelerator.
Manual accelerator.
Air pre-heater for cold climates.

REFUELLING (litre)

Hydraulic tank:..... 270
Fuel tank:..... 180

STANDARD DEVICES

Anti-tipping device with block for hazardous movements.
Continuous turret rotation over 360°.
Oscillation block on rear axle.
Hydraulic socket for possible accessories on boom head.
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Grammer deluxe seat.
High efficiency cyclone air filter.
Self-blocking rear axle (Limited Slip)

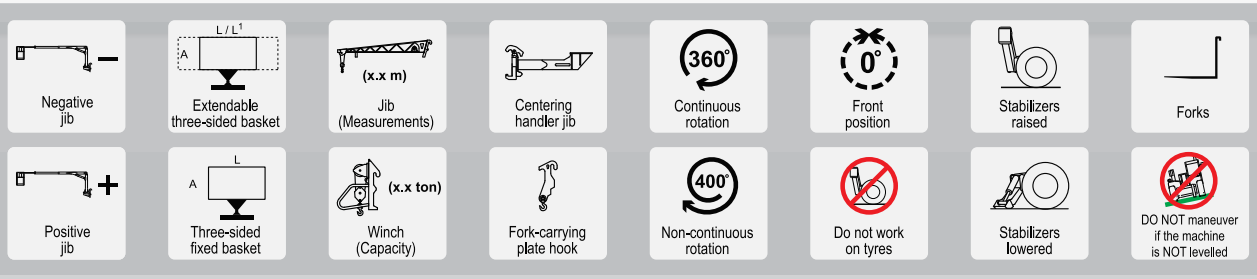
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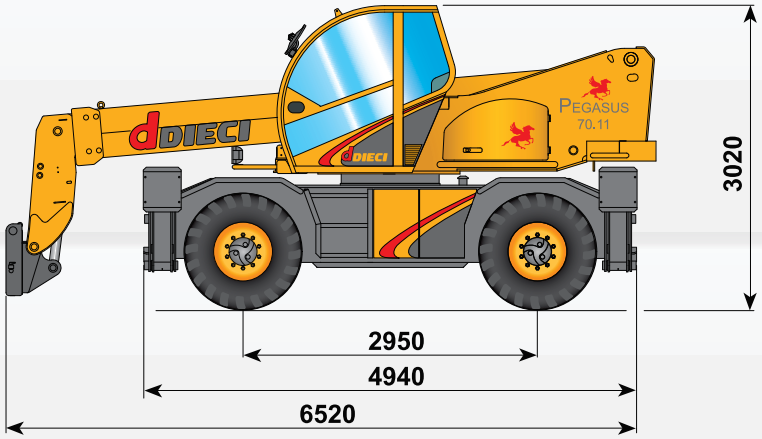
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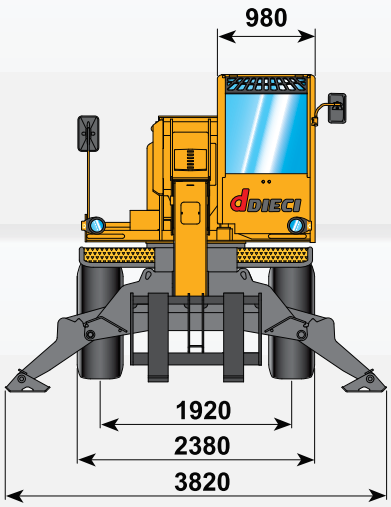
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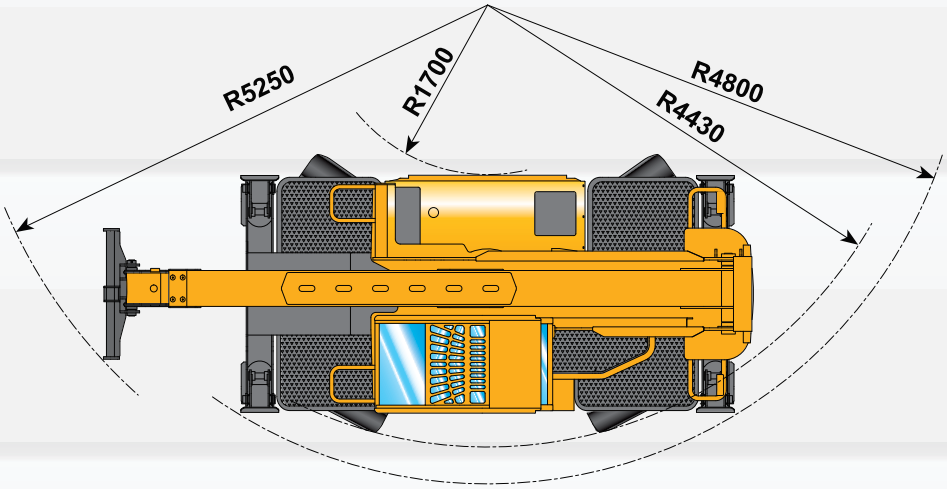
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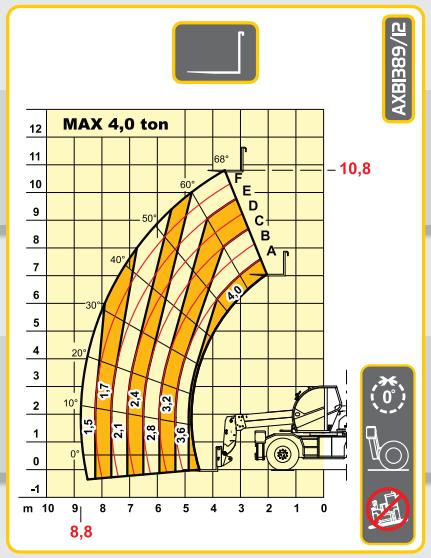
Pegasus 70.11

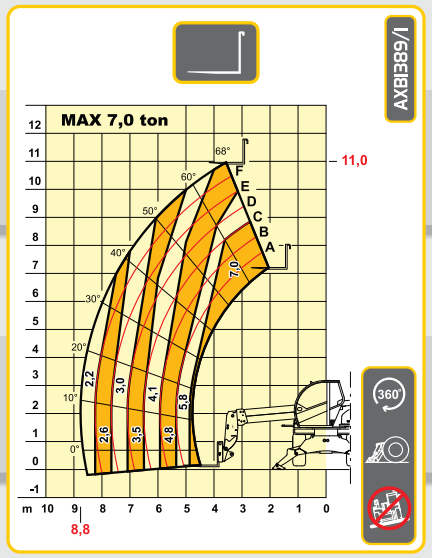


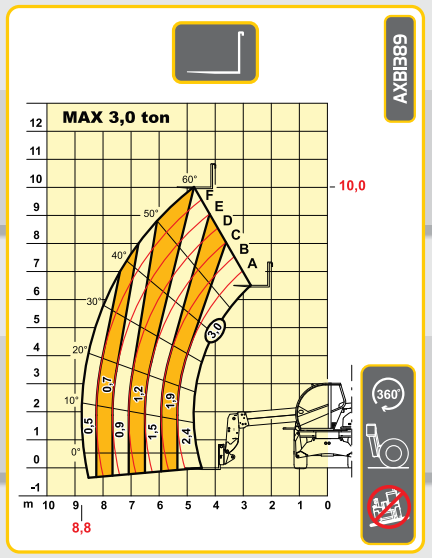




Pegasus 70.11







PERFORMANCES

Maximum capacity:..... 7.000 kg
Capacity at maximum height on stabilizers:..... 4.800 kg
Capacity at maximum height on tyres:..... 2.800 kg
Capacity at maximum boom extension on stabilizers:.. 2.200 kg
Capacity at maximum boom extension on tyres:..... 1.500 kg
Maximum lifting height on stabilizers:..... 11,00 m
Maximum lifting height on tyres:..... 10,80 m
Maximum horizontal boom extension:..... 8,80 m
Boom extension at maximum height:..... 3,60 m
Fork tilting angle:..... 134°
Tearing force:..... 5.700 daN
Towing force:..... 9.000 daN
Maximum allowable slope:..... 40 %
Total empty weight:..... 16.000 kg
Max speed:..... 40 km/h

TRANSMISSION

Transmission:..... Hydrostatic with variable delivery pump
Hydraulic engine:..... with automatic adjustment
Reversing gear:..... Electro - hydraulic
Inching pedal for controlled forward movement
Servocontrolled 2 speed gearbox

HYDRAULIC SYSTEM

Double gear pump with “Energy Saving” system
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Cooling system:..... liquid
Specific fuel consumption per hour (2.200 rpm):..... 230g/kWh
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Air pre-heater for cold climates.

REFUELLING (litre)

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Anti-tipping device with block for hazardous movements.
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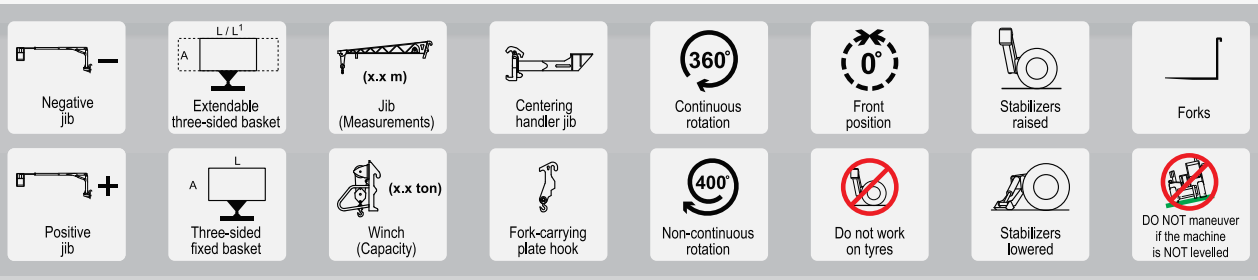
OPTIONAL AND ACCESSORIES

A/C; Webasto heater; digital speedometer; water heater; pneumatic seat suspension; light on boom head; quick attachment for accessories; radio; anti-theft alarm; glass protection; Transverse levelling device on wheels and others...
(For further customised accessories, please consult your local dealer)

TYRES

Tyres:..... 18 - R22,5” (Industrial)
Alternative:..... 18 - R22,5” (Agricultural)

SYMBOLS KEY



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