Dedalus

macchine edili ed agricole S.r.l.
dDIECI

OPERATION AND MAINTENANCE MANUAL

AXH1135/UK

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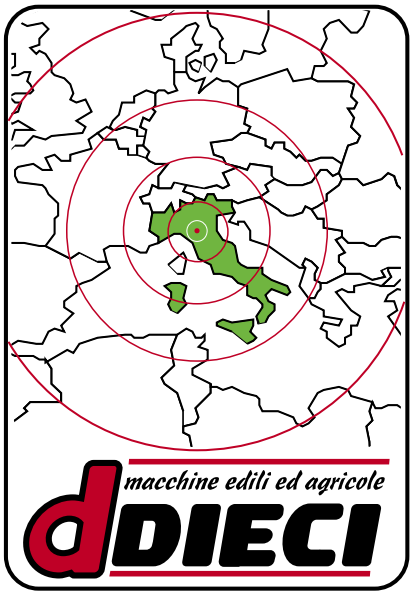
CE

ATTENTION: ALWAYS KEEP A COPY OF THIS MANUAL ON THE MACHINE AT THE OPERATOR'S DISPOSAL

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*.



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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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Code AXH1135/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.

1 Dieci **2** Dieci **3** Uff.Tec **4** Devid **5** MTKeR **7** BPrint **9** 06/2009 **10** AXH1135/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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CHAPTER A
INTRODUCTION, GUARANTEE, VEHICLE IDENTIFICATION

CHAPTER B
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CHAPTER D
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CHAPTER E
ELECTRICAL DIAGRAMS AND CIRCUITS

CHAPTER F
HYDRAULIC SYSTEM

CHAPTER G
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CHAPTER H
ANALYTICAL INDEX

Dear customer,

Congratulations and thank-you for choosing a 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 machine fully.

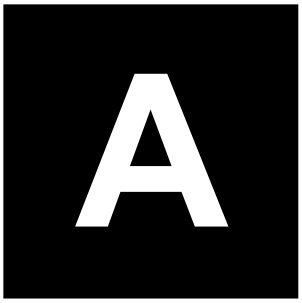
You will discover its specifications and special features, as well as find essential information regarding maintenance and care to ensure safe use and an extended lifetime of your machine.

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

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.

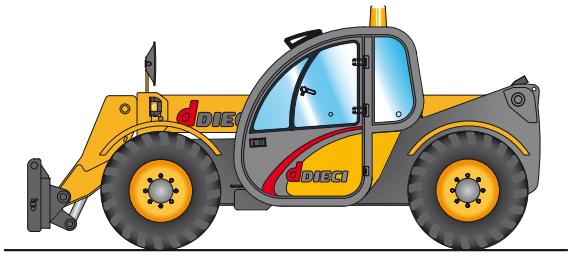
This manual has been published for worldwide distribution and the availability of certain equipment referred to from time to time as being essential or available on request may vary according to where the machine is being used. You can obtain all necessary details about the equipment available in your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

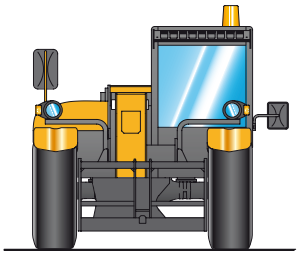
Because we continually introduce technical improvements and bearing in mind updating and publication times, the data in this manual may be changed at any time and therefore should not be considered binding.

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.

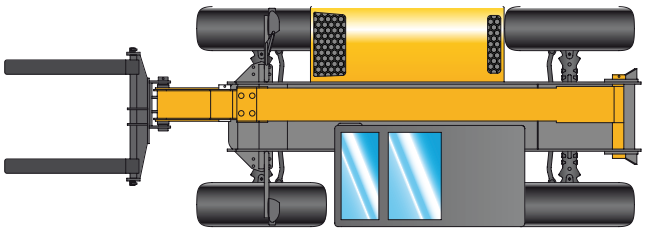
The left and right sides of the machine as referred to in this manual are to be considered looking at the truck from the back towards the front, or from the position of the operator in the driver's seat.



LEFT SIDE



FRONT VIEW



VIEW FROM ABOVE

WARRANTY

WARRANTY: TERM, STARTING DATE AND ACTIVATION

Warranty: term

DIECI S.r.l. (hereinafter referred to as ***DIECI***), guarantees its products for 12 months from delivery date to the end customer, but not exceeding 18 months from the date the machine left the manufacturer's factory (in sales to distributors or dealers).

Warranty: starting date

The guarantee is valid from the date the machine is forwarded from the factory (sale to distributors or dealers). When delivery is handled by the distributor or dealer, ***DIECI*** reserves the right to verify that the warranty starting date corresponds to the shipping or delivery date on the product transport document and/or the invoice date and may ask to see the original copies of these documents.

Warranty: activation

The warranty is activated automatically from the date the machine is forwarded from the factory (sale to distributors or dealers).

WARRANTY: VALIDITY

Warranty in countries with a customer service organisation

- The warranty covers the replacement or repair of faulty parts that have been proven defective in terms of material, manufacture and/or assembly.
- ***DIECI*** reserves the right to judge whether to repair or to replace defective parts.
- ***DIECI*** shall respond to claims using the means and methods it deems most appropriate.

DIECI shall be responsible for:
- The materials used.
- Labour.
- Travel and accommodation expenses.

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

Warranty in countries without a customer service organisation

- The warranty consists exclusively of the free supply (ex works from the ***DIECI*** factory), of replacements for parts which can no longer be used because proven to be made of faulty material or due to faulty manufacture and/or assembly.

Examination of replaced faulty parts

- Before acknowledging the warranty, ***DIECI*** may ask for any faulty parts replaced during repairs to be returned (***DIECI*** shall cover shipping costs).

Additional warranty for repairs and replacement parts

- Any repairs carried out whether covered by the warranty or not, and any spare parts replaced during repairs, are guaranteed for 3 months from the date of repair or installation if the original guarantee has expired.

WARRANTY:
REQUEST FOR REPAIRS UNDER GUARANTEE

Warranty: reporting a fault or a faulty part

- The fault must be reported by the end user, dealer, distributor, retailer or by an authorised repair shop and must be sent directly to the ***DIECI*** customer service, within 8 days of the occurrence of the malfunction.
  The report must include a clear description of the fault and exact machine specifications (type, model and serial number). The specifications can be found on the machine in the positions indicated in the USE AND MAINTENANCE MANUAL.

Compulsory machine immobilisation

- If there is a risk that the fault may jeopardise safety and accident prevention or may cause further damage, it is forbidden to use the machine until it has been repaired and tested.

Warranty: exclusion from the warranty

The following conditions and parts are not covered by the warranty:

- Components subject to wear or deterioration due to prolonged use: the clutch, belts, brake pads, sliding blocks, rollers, oils and fluids, filters, etc.
- Electrical systems and components.
- Damage caused by the weather, natural disasters, acts of vandalism, etc.
- Any other malfunction not due to an ascertained original fault or for which ***DIECI*** cannot be held liable.

The following parts are also not covered by this warranty; they are covered by the warranty provided by the relative manufacturers:

- Diesel engine
- Axles and reduction gears
- Pumps and hydraulic engines
- Tyres.

Application of the aforesaid warranties shall be managed by ***DIECI***.

Any modification made to the machine requires a new test to verify conformity with directive 98/37 "CE";this procedure also applies in the case of repairs with non-original spare parts.

In case of any disputes, the Court of Reggio Emilia - ITALY- shall be recognised as the competent authority.

REASONS FOR NON-EFFECT, NON-ACKNOWLEDGEMENT OR TERMINATION OF THE WARRANTY

Warranty: non-acknowledgement

The warranty is not acknowledged:

- If the fault is not reported in the prescribed way and within the established expiry.
- If there is a failure to return any faulty parts replaced during repairs to ***DIECI*** as requested.
- If the machine is not immobilised; the warranty shall not be acknowledged for any damage caused by the failure to comply with this requirement.

Warranty: termination

The guarantee is terminated:

- If the purchaser does not fulfil payment obligations according to contract.
- If any damage is caused by carelessness, negligence, or by any use that does not comply with the specifications in the use and maintenance manual (incorrect manoeuvres, overloading, use of incorrect fuel, poor maintenance*, failure to use warning signals, etc.).
- If the malfunction is due to applications, attachments, modifications or repair work not authorised by ***DIECI*** or carried out using faulty spare parts. (For this reason, we recommend always using original spare parts).

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

Final terms

- In case of non-effect, non-acknowledgement and termination of the warranty, the purchaser shall in no circumstance be granted annulment of the contract, payment of damages, or an extension of the warranty.

- Any warranty conditions other than those listed above must be agreed in writing and signed by both parties.

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.

DEDALUS 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.....

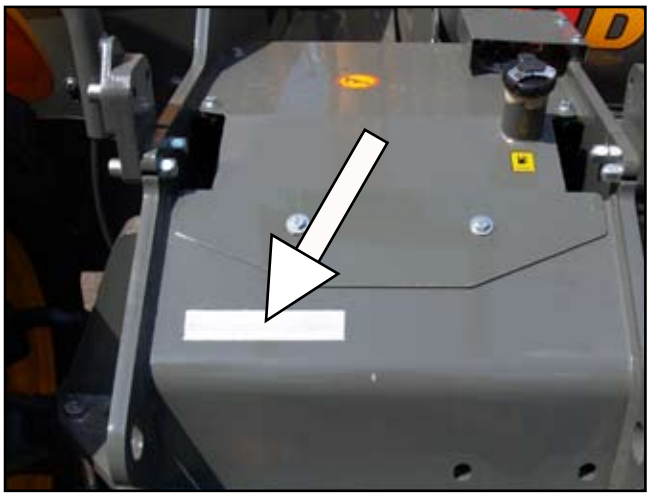
Dealer or agent's address .....

.....

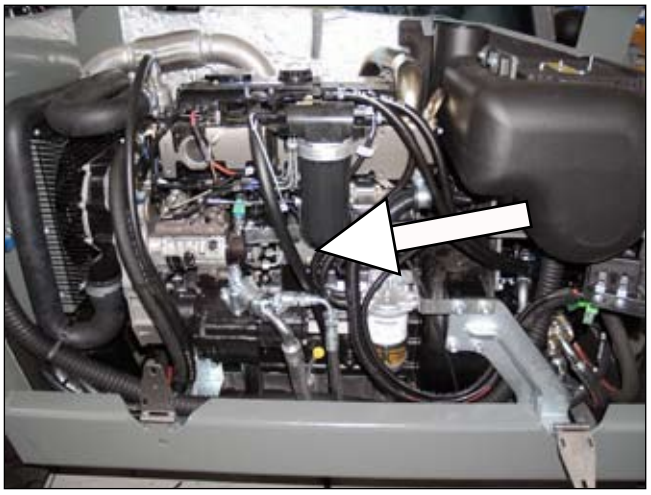
Delivery date.....

Warranty expiry date .....

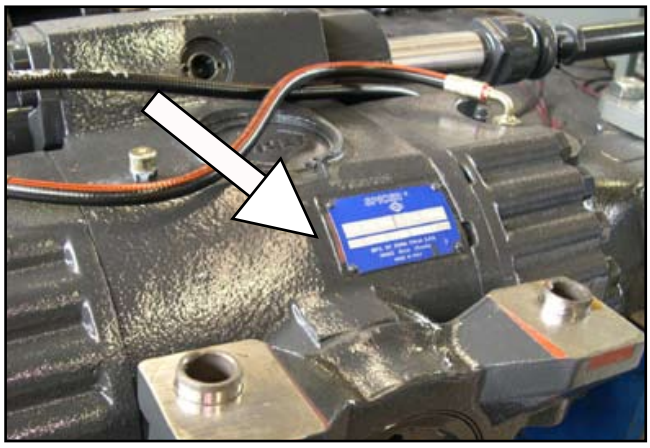
NOTE:
The telehandlers commercially known as Dedalus are stamped with a type-approval code (see the first four numbers stamped on the chassis)



Chassis type and serial number.



Engine serial number



Axle serial number

Specifications

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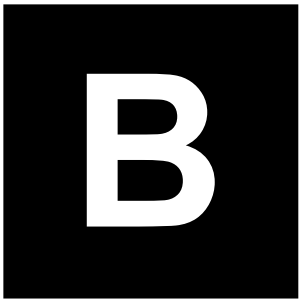
SAFETY RULES



RECOGNISING THE SAFETY RULES

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

Wherever this symbol "⚠" appears, on the vehicle or in this manual, you must take due care against injury hazard. Take all recommended precautions and observe regulations for use and maintenance in conditions of safety.

UNDERSTANDING WARNING NOTICES

Certain words are used in this manual as warning and safety notices and indicate the risk level, these are:

⚠ ***- DANGER -*** ⚠

indicate a situation of imminent danger which, if not averted, may cause damage to the operator or other directly involved persons.

⚠ ***- ATTENTION -*** ⚠

indicates a situation of imminent danger which, if not averted, may cause damage to the vehicle and to the safety of the operator or other directly involved persons.

⚠ ***- IMPORTANT -*** ⚠

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

⊘ ***- WARNING -*** ⊘

indicates strictly prohibited actions or things which are dangerous to personnel

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

- NOTE -

indicates additional explanations for pieces of information.

Read the safety regulations given and take all the recommended precautions in order to avoid potential risks and safeguard your own health and safety.

The "warning symbol for a potential hazard" and the "warning notices" have been used to highlight situations which ***DIECI*** feels are of particular importance. This manual must however be completely read and made familiar with.

If in any doubt, contact your nearest agent or dealer.

GENERAL WARNINGS

This vehicle has been designed and constructed only to be used as a self-propelled vehicle, with the operator in the driving seat, with tyres, designed for use on asphalt or natural surfaces and on rough ground. The vehicle consists of a main support structure suitable to support and rotate the extendible arm. The boom head can mount forks or other attachments approved by ***DIECI***. In normal use, the vehicle can lift and place loads thanks to the extension/withdrawal, raising/lowering of the boom.

If this vehicle is put to any other use, it will be considered in contrast to the use for which it was intended by DIECI who, consequently, cannot be considered responsible for any damage to things or to the vehicle itself or for any injury to persons which might arise from such use.

Use of the vehicle other than described in this manual is strictly forbidden. All the functions, procedures relevant to the operation and the preparation of the vehicle's attachment that are not described in this vehicle are strictly forbidden.

The operation manual and the spare parts catalogue are an integrating part of the vehicle and must follow it also when it is sold to a new proprietor. The manual in the operator's language must be carefully preserved and be aboard the vehicle for a quick reference. if the manual gets creased, damaged or cannot be read replace it immediately.

The instructions for use, maintenance and repair as given in this handbook must absolutely be followed in order to consider that the vehicle has been put to the use for which it was intended by the manufacturer.

This vehicle must be used, assisted or repaired only by persons preliminarily instructed on the vehicle and on the safety regulations, in addition to being authorised to use the vehicle itself.

All the procedures and maintenance operations not described in this manual are strictly forbidden.
All the operations must only be carried out in authorised repair centres by qualified personnel.

The user must always observe the general safety regulations and instructions for accident prevention, in addition to traffic regulations if the vehicle is used on public roads.

Any arbitrary modification to the vehicle will relieve ***DIECI*** from all responsibility for any consequent damage or injury which might derive from such modification.

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

DIECI is not liable for damage caused by negligent use of this vehicle even if said damage is not a result of improper use of the vehicle.

DIECI is not liable for damage caused by operations carried out instinctively, as a reflex, due to panic, in case of malfunctioning, accidents, faults, etc. during use of the vehicle.

DIECI is not liable for foreseeable behaviour from certain categories of persons, such as: apprentices, adolescents, disabled persons, personnel in training.

DIECI vehicles cannot be used for gaming, competitions or personal experience.

Read all the safety decals to be found on the vehicle and observe all regulations printed on these stickers before starting up, running, refuelling or carrying out maintenance work. Clean them if covered in mud, cement or other deposits. Do not remove them for any reason. Promptly replace any stickers which might be damaged, lost or illegible.

To guarantee the operator‘s safety and other peoples’ safety as well, do not modify the structure or adjust the various vehicle components by yourselves (Hydraulic pressure, load moment indicator calibration, engine rotation, assembly of additional attachments, etc.). The same holds true for any deactivation or modification of safety devices. In these cases, the manufacturer shall be released from all liability.

Periodic inspections must be carried out to maintain the vehicle's "state of conformity."

DIECI **cannot foresee all possible circumstances which many pose a potential risk during vehicle operation and maintenance. As a result, safety warnings indicated in this manual or on the vehicle may not include all possible safety precautions. Take all necessary safety precautions to prevent potential risks when carrying out operations or procedures which are expressly recommended or allowed for in this manual.**

Do not carry out or engage in any operations or actions expressly prohibited in this manual.

If in any doubt, contact your nearest 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.

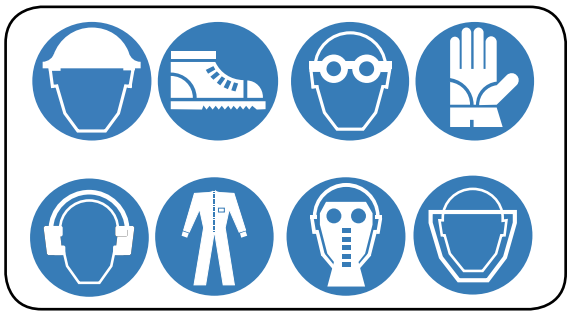
- DANGER -

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.

- ATTENTION -

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

- ATTENTION -

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.

- ATTENTION -

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.

- ATTENTION -

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.

- ATTENTION -

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

- PROHIBITION -

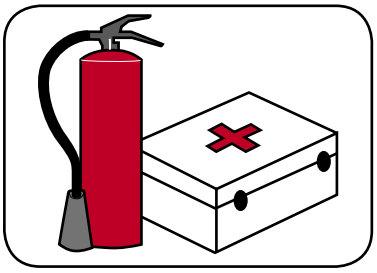
IT IS FORBIDDEN TO START OPERATING THE MACHINE UNLESS IT IS IN PERFECT CONDITION.

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.



- ATTENTION -

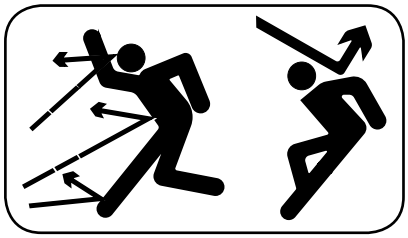
Always keep a first aid kit and fire extinguisher on hand (not supplied by the manufacturer).

- 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.

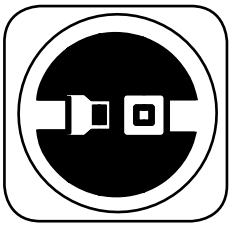
- PROHIBITION -

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

- ATTENTION -

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

- ATTENTION -

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

- ATTENTION -

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 -

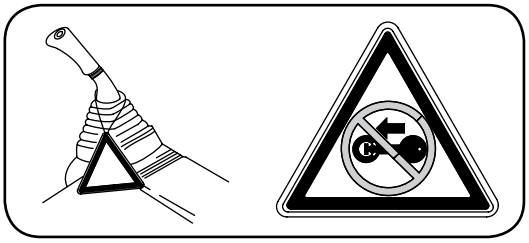
Before starting the engine, ensure all the control levers are in neutral, the parking brake is engaged, the engine bonnet is closed and that no one is standing near the machine.

- DANGER -

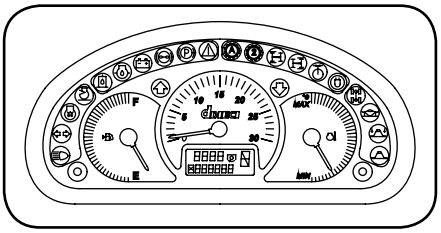
The machine may only be started or manoeuvred if the driver is sitting in the driver's seat with the seat belt properly adjusted and fastened.

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.

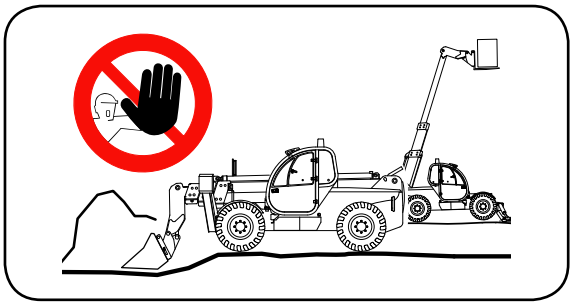
⚠ - DANGER - ⚠

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.

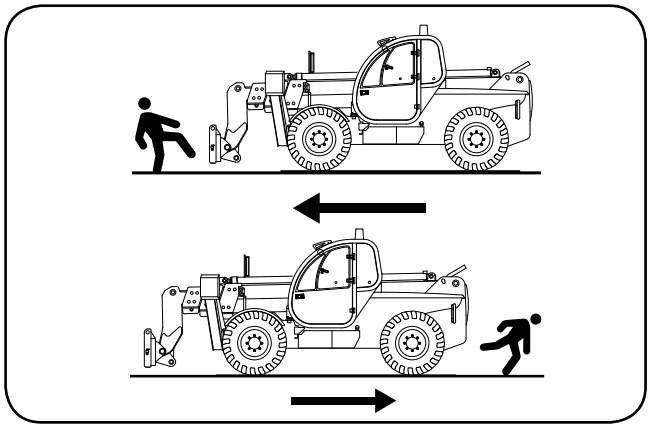


- When working in a congested area, always have someone else to give the necessary signals. When more than one vehicle is required for a particular job, use signals normally familiar to all those present. Designate one person to signal and coordinate the work zone. Make sure that everyone follows directions given by the person in charge of signalling.
- When working conditions require an operator on the ground, he/she must use hand signals compliant with local regulations.
- There is the risk of the vehicle tipping, when working alongside excavations or on the edge of the road or on sinking ground. Keep at a safe distance.
  Have someone on the ground to signal.
  Remember that heavy rain, use of explosives or earthquakes on the ground in those zones are more fragile.
- Operating on sloping roads can cause tipping or slipping. Use proper caution.
- Always move in a straight line to go up or down a slope. Moving crosswise or along the slope is extremely dangerous.
- When working on slopes, vehicles risk losing balance and overturning, during activation of working attachments. Always remain in a stable position, do not utilise attachments.
- Drive at a low speed on grass, leaves or on wet steel slabs. There is a risk of the vehicle slipping or losing balance, with a risk of tipping, even on slight slopes.
- When working on the upper part or inside building floors or other structures, verify stability before starting operations. A risk of collapse exists in buildings, which can cause serious injuries or damage.
- Do not use the vehicle force of impact for carrying out works. These vehicles have not been designed for said use and use of this kind could cause vehicle tipping, damage or breakage of some components and attachments and serious personal injury.

⚠ - ATTENTION - ⚠

Snow can cover obstacles and snares, bury objects, hide holes, excavations and ditches. Proceed with caution when working under snowy conditions. Operating if the quantity of snow does not allow for clear distinction of obstacles and itinerary snares IS STRICTLY PROHIBITED.

- Clean off snow with due care and do not abandon the road curb, or rather that which is hidden at the sides of the road which could cause vehicle tipping or damage to some components.
- Surfaces covered by snow or ice are extremely dangers. Operate with caution, lowering vehicle speed as much as possible and engaging levers slowly.
- Operate with caution. If the vehicle should sink into the snow, there is a risk of tipping or of the vehicle remaining buried. Take particular care to not leave the road curb and to not remain entrapped or buried under snow.
- Extra care should be taken, when working on icy terrain. If the temperature should go up, the terrain could melt and become slippery.
- Take particular care in the presence of electrical cables, ditches, or freshly excavated or worked ground.
- Make sure there is no one at risk while reversing the vehicle or rotating the turret.
- Always check the space around the vehicle before carrying out any manoeuvres.



- Make sure there is no one in the work zone.
- Use someone on the ground to supervise manoeuvres if the operator's field of vision is obstructed. Always make sure the person on the ground remains within sight.

⚠ - ATTENTION - ⚠

Do not attempt to carry out operations which exceed vehicle capabilities.

⚠ - ATTENTION - ⚠

Do not lift any loads exceeding those falling under the capabilities of the vehicle or accessories and do not increase the size any counterbalance regardless of the artifice utilised.

- Avoid obstacles.
- When lifting loads, pay careful attention that nothing and no one hinders movement and avoid carrying out any false manoeuvres.
- Never leave the engine running without the presence of an operator.
- Never leave the starter key on the vehicle without the presence of an operator.

⚠ - ATTENTION - ⚠

Never for any reason leave the vehicle parked with a lifted load.

- Dust, rain, fog, etc., may reduce visibility. If visibility is reduced, reduce 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.

- ATTENTION -

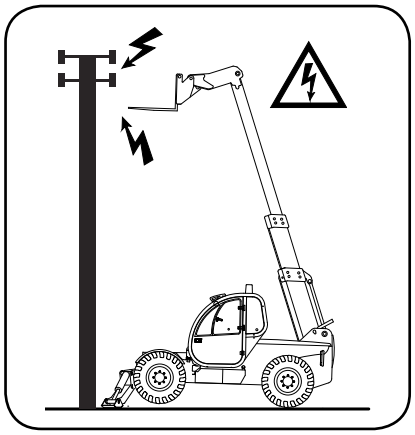
While driving or manoeuvring the machine, keep the height of the various parts of the machine in mind. Remember certain parts protrude beyond the dimensions of the cab.

- 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.

- ATTENTION -

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 on sloping roads, make sure to drive at slow speed because a high engine rpm could cause mechanical damages. Always maintain control over RPMs and engine speed.



- ATTENTION -

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

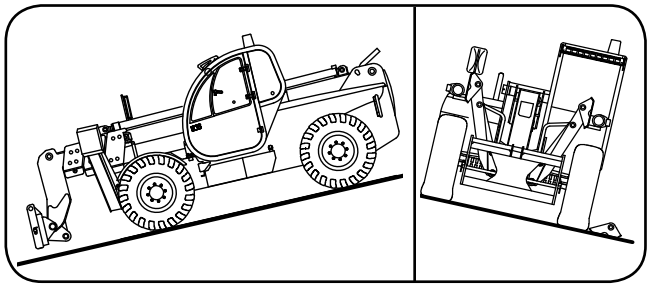
Ask your local electrical company for information. Never work less than 5 metres from electric cables. Damp ground increases the danger area affected by electric discharges.

- ATTENTION -

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.

- ATTENTION -

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.

- ATTENTION -

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.

- ATTENTION -

Before each use, check that attachments have been properly mounted and secured on its support.

- ATTENTION -

Prior to each use, check that the cab safety system has been set in compliance with the mounted attachment.

- Instructions supplied by the anti-tipping system must be considered valid for vehicles in standard working conditions, on flat, even ground and with properly functioning and correctly adjusted instruments. Regardless, limit values illustrated on the load tables must never in any situation be exceeded.
- Never bring equipment near open flames.
- Never lift a load harnessed with a single fork or table.
- Ensure that the turret does not collide against obstacles during rotation.
- Check that the machine has been properly levelled before lifting the boom when operating on sloping ground.
- When moving on longitudinal slopes:

- Drive and brake delicately.
- When moving without loads turn forks or attachments downstream.
- When moving with loads turn forks or attachments upstream.

HANDLING LOADS

- ATTENTION -

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.

- ATTENTION -

Load handling can be carried out only in "I" reduced speed and "II" (first and second 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.

- ATTENTION -

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.)

- ATTENTION -

Standard telescopic elevator lighting is not suitable for operating in environments with poor visibility or for night use. There are various options for improving visibility in adverse lighting conditions. Contact your *DIECI* dealer.

- Carrying or lifting loads exceeding those falling under vehicle or attachment capabilities is **STRICTLY PROHIBITED**.

- ATTENTION -

BEFORE LIFTING LOADS, OPERATORS MUST BE FAMILIAR WITH LOAD WEIGHT AND ITS CENTRE OF GRAVITY.

- Load tables are valid for centres of gravity at 500 mm from the heels of the forks. Contact your dealer for information regarding centres of gravity at a further distance.
- Pay **VERY CAREFUL ATTENTION** during load transport with a variable centre of gravity (e.g. liquids). Operate with due prudence in order to limit these variations and to prevent a danger of vehicle tipping.
- **TAKE CARE** of the risk of limbs being crushed during manual fork adjustment operations.

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

- ATTENTION -

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.

- ATTENTION -

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)

- Action the levelling control switch to level the vehicle‘s chassis in relation with the axles (if present).
- Check that all the stabilizers are perfectly retracted and raised (if present).
- 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 is therefore compulsory to place wedges under the tyres to avoid any shifting.
- Make sure that the vehicle complies with local regulations regarding the presence of plates when travelling on roads during both day and night.

- ATTENTION -

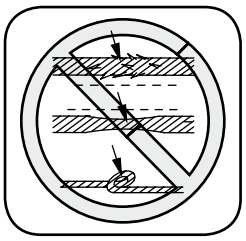
THE TRANSFER WITH ATTACHMENTS FITTED OUT ON THE FORK CARRIER PLATE OTHER THAN THOSE ADMITTED BY THE RULES AND REGULATIONS OF THE COUNTRY IN WHICH‘ THE VEHICLE OPERATES ARE NOT ALLOWED.

- ATTENTION -

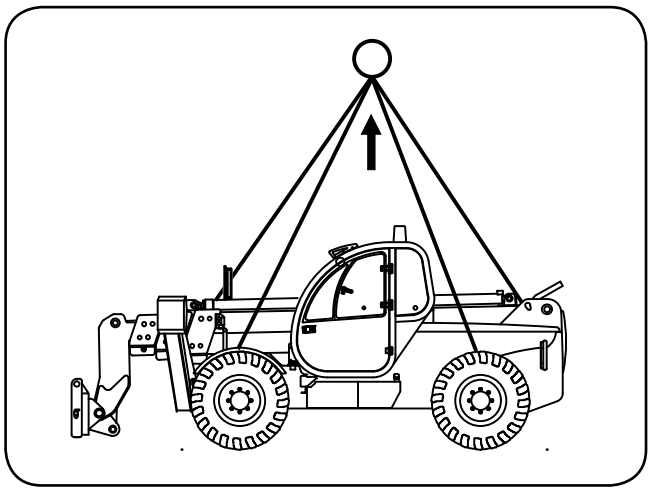
DO NOT USE THE VEHICLE ON PUBLIC ROADS WHEN IT IS CARRYING A LOAD

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.

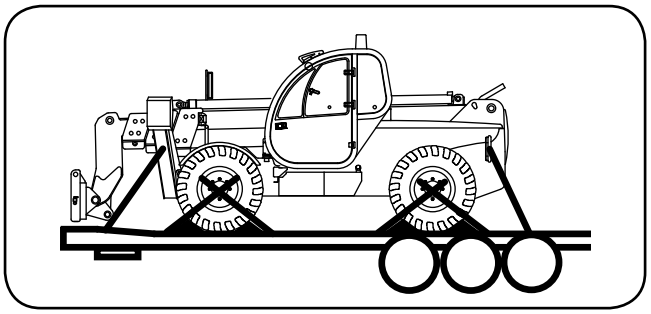


- Always ensure the devices used to anchor the machine (cables, chains, wedges, etc.) are in good condition; ensure they are not worn, broken or twisted.
- Check the capacity of the anchors before hoisting the machine.
- Check the overall dimensions of the machine.
- Use the hoisting points illustrated 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.

- ATTENTION -

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

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

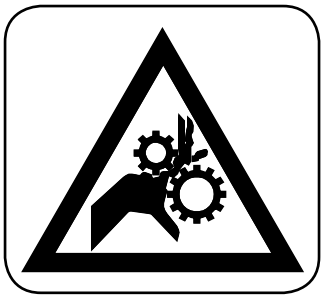
- Do not leave tools or other items lying around the workplace. Clean up any traces of grease, oil or other substances that could be slippery. Always keep the workplace clean and tidy so you can work safely.
- For the sake of safety, place rags soaked in grease and/or other inflammable materials in a 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.

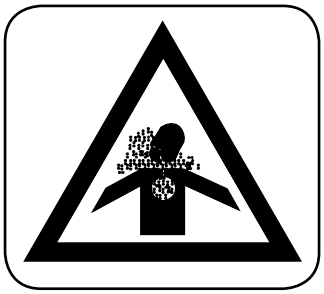
- Ensure you are familiar with the maintenance procedures before starting work.
- Keep the work area clean and dry.
- Do not lubricate parts or carry out any maintenance work when the machine is moving.

- 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.



- ATTENTION -

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.



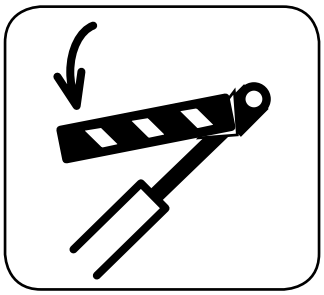
- DANGER -

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.



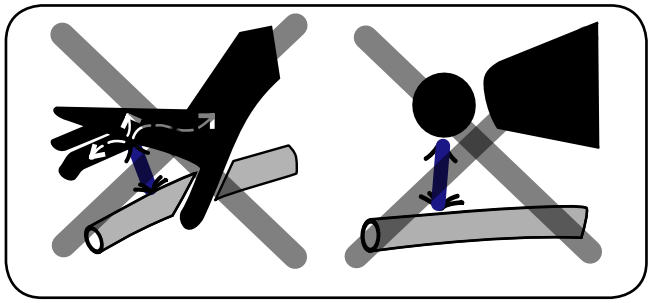
- ATTENTION -

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.

- ATTENTION -

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.

- ATTENTION -

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:

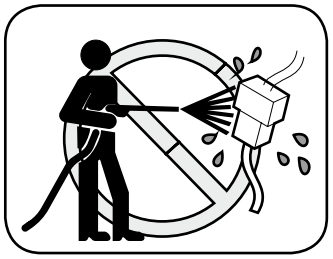
- Clean the machine.
- Touch up the paintwork where necessary to prevent rust.
- Lubricate all the lubricators.
- Check whether there are any worn or damaged parts on the machine and replace them as necessary.
- Drain the oil from the engine and replace with new oil.
- Clean the fuel system and change 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.

- ATTENTION -

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

- ATTENTION -

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.

- ATTENTION -

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.

- ATTENTION -

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

- ATTENTION -

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

BATTERIES

- ATTENTION -

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

- ATTENTION -

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.

- ATTENTION -

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.

- ATTENTION -

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

- ATTENTION -

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.

- ATTENTION -

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

STARTING UP WITH AUXILIARY BATTERIES

- ATTENTION -

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.

- ATTENTION -

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.

- ATTENTION -

ENSURE THE CABLES AND CLIPS ARE NOT CORRODED OR DAMAGED.

ENSURE THE CLIPS GRIP THE TERMINALS FIRMLY.

- ATTENTION -

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

- ATTENTION -

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.

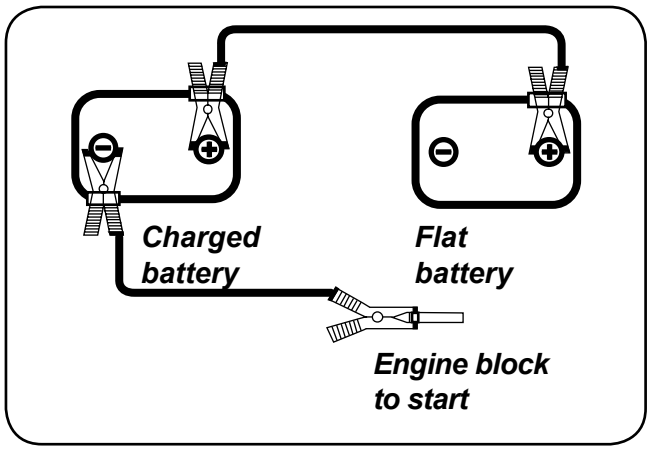
Connecting the cables and starting the engine

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.



- ATTENTION -

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

ELECTRICAL SYSTEM OVERLOAD PROTECTION

- ATTENTION -

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.

- ATTENTION -

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.

- ATTENTION -

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.

- ATTENTION -

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.

- ATTENTION -

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.

- ATTENTION -

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

- ATTENTION -

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.

- ATTENTION -

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

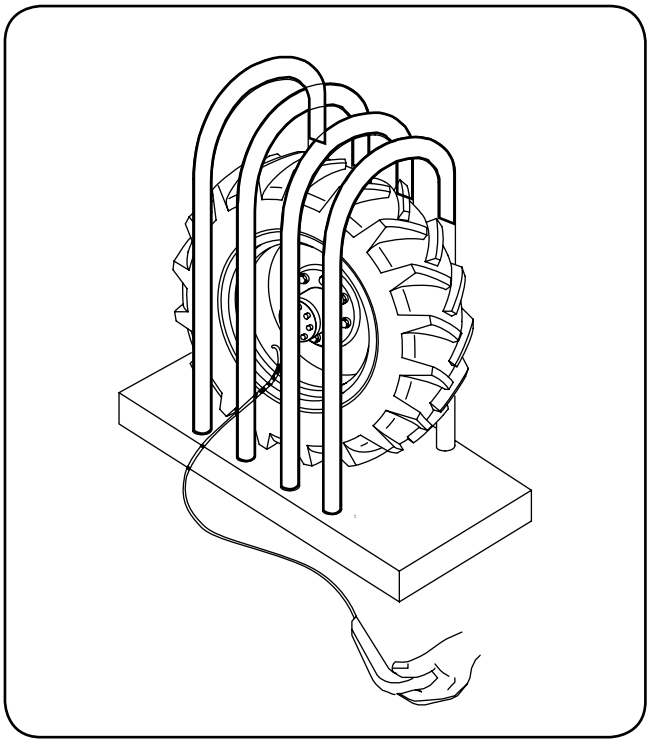
MISURA PNEUMATICO TYRES DIMENSIONS DIMENSION DES PNEUS DIMENSION DE LOS NEUMATICOS REIFENMASS	CARATTERISTICHE DETAILS CARATTERISTIQUES CARACTERISTICAS EIGENSHAFTEN	BAR
10,5-18	10PR	3,75
12,5 -18	10PR	3,0
12,5-18	12PR	3,0
12,5-20	12PR	3,5
18-19,5	16PR	4,5
16/70-20	14PR	3,5
18-22,5	16PR	4,5
405/70-20 (16/70-20)	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.



- ATTENTION -

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.

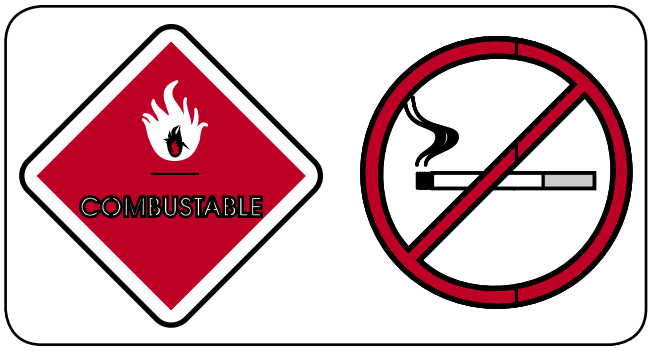
Replacing a wheel while on a public road

- 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.



- ATTENTION -

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.

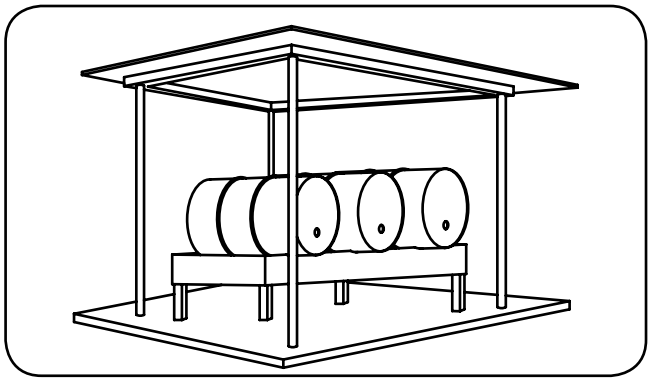
- ATTENTION -

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

- Different fluids must not be mixed together.

- ATTENTION -

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



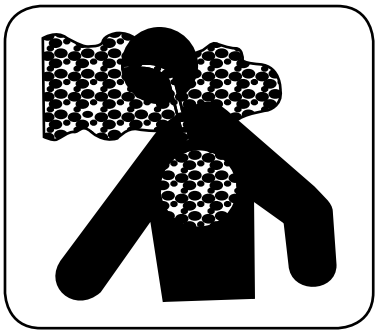
- ATTENTION -

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.

- ATTENTION -

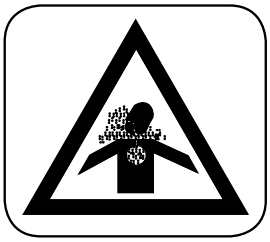
IT IS FORBIDDEN TO REFUEL WITH THE ENGINE SWITCHED ON.

- 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.

- ATTENTION -

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.



- ATTENTION -

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.

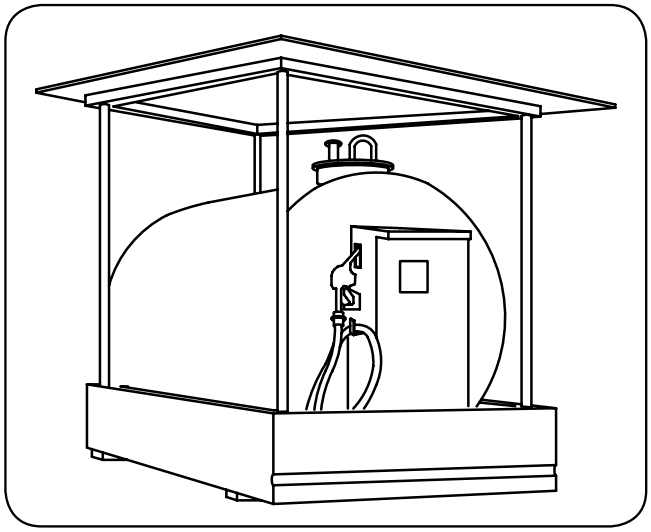
The advice given below will help to maintain the quality of the fuel.

1. Never use zinc containers.

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

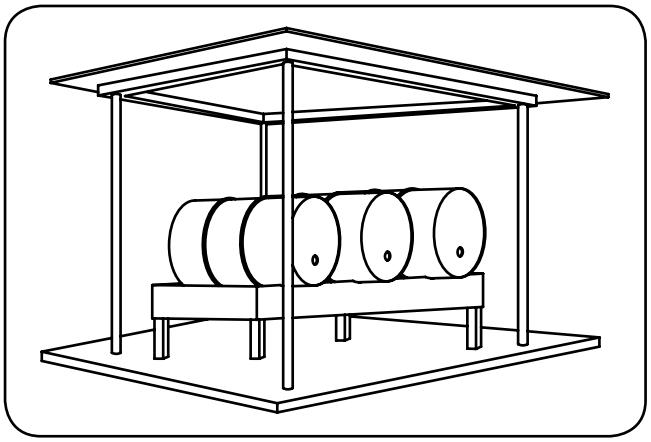
3. The capacity of the fuel storage tank must ensure that the intervals between one refuelling and the next are not too long. A capacity of 3,000 litres is sufficient for an average sized company.

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

- ATTENTION -

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.

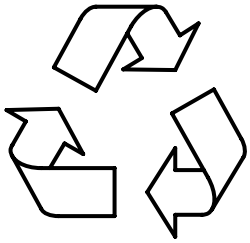
- Modern antifreeze fluids and their solutions (e.g. antifreeze and other additives) should be replaced every two years. Ensure they do not soak into the soil. They must be collected and disposed of appropriately.

- 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.

- ATTENTION -

***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.**

- ATTENTION -

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.

- ATTENTION -

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.

- ATTENTION -

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.

- ATTENTION -

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.

Type of ground, geomorphologic specifications		Allowed surface pressure Kg/cm²	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. 2/B) Allowed surface pressure on varying ground types

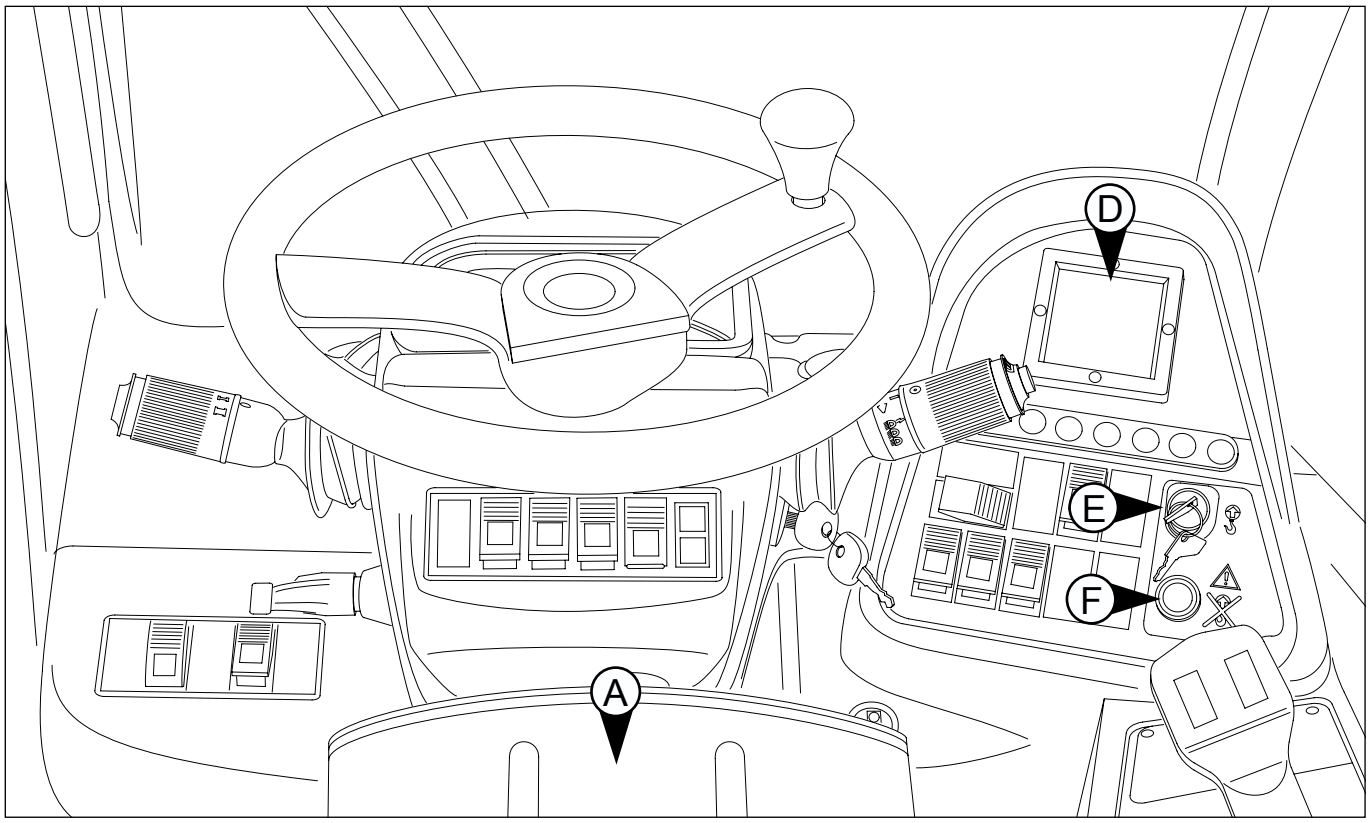
Maximum load bearing capacity	Allowed surface pressure		
	1 Kg/cm²	2 Kg/cm²	4 Kg/cm²
	Necessary support surface		
10t	1.0m x 1.0m	0.7m x 0.7m	0.5m x 0.5m
20t	1.4m x 1.4m	1.0m x 1.0m	0.7m x 0.7m
30t	1.7m x 1.7m	1.2m x 1.2m	0.9m x 0.9m
40t	2.0m x 2.0m	1.4m x 1.4m	1.0m x 1.0m
50t	2.2m x 2.2m	1.6m x 1.6m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

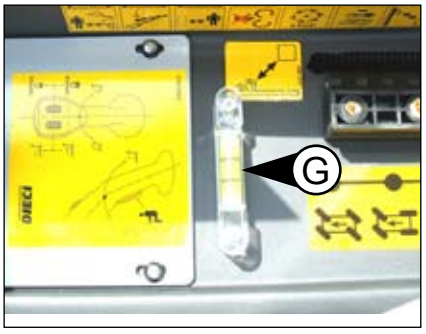
(fig. 3/B) Dimension of the support surface compared to the geomorphic characteristics of the ground

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) Hand grip microswitch boom joystick (fig.7/B)

(C) Machine functions selector key (fig.7/B)

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

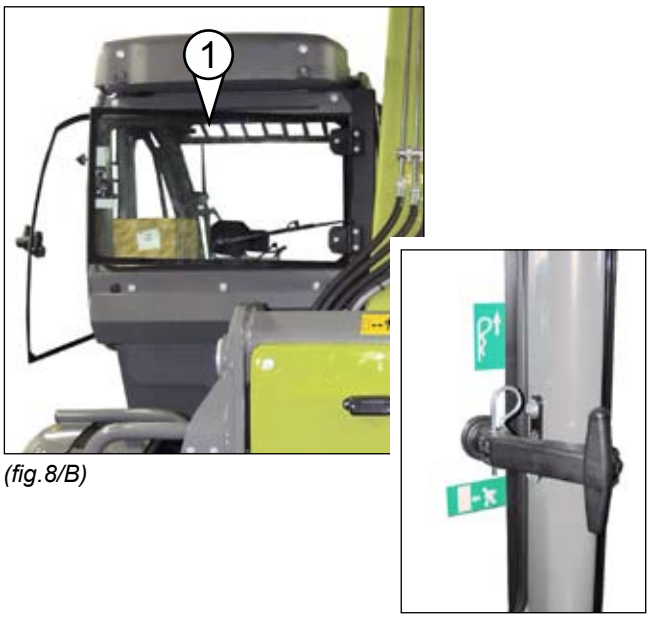
(E) Anti-tipping device selector key (fig.7/B)

(F) Alarm re-entry push button anti-tipping device (fig.7/B)

(G) Spirit level (fig.7/B)

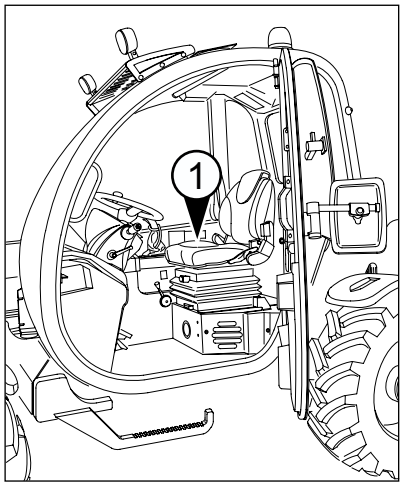
Vehicle safety device housing

Cab emergency exit (REAR cab window).
(fig.8/B pos."1")



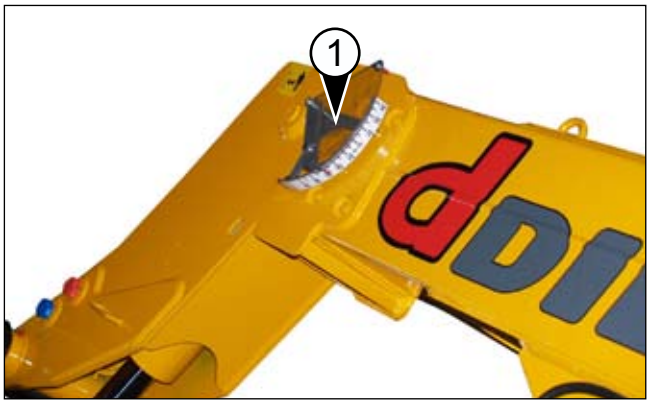
(fig.8/B)

Micro seat.
(Fig.9/B pos."1")



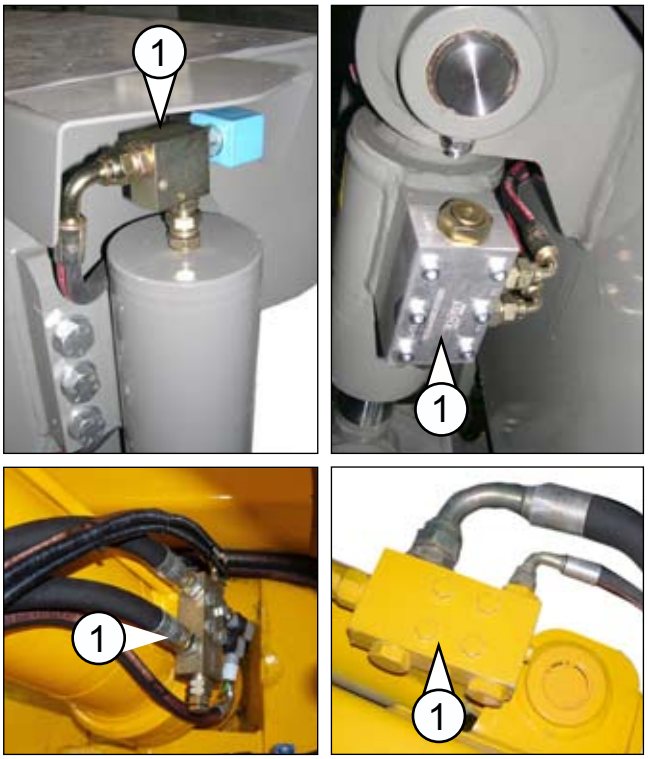
(fig.9/B)

Inclinometer.
(Fig.10/B pos."1")



(fig.10/B)

Non return cylinder valves.
(fig.15/B - Pos."1")



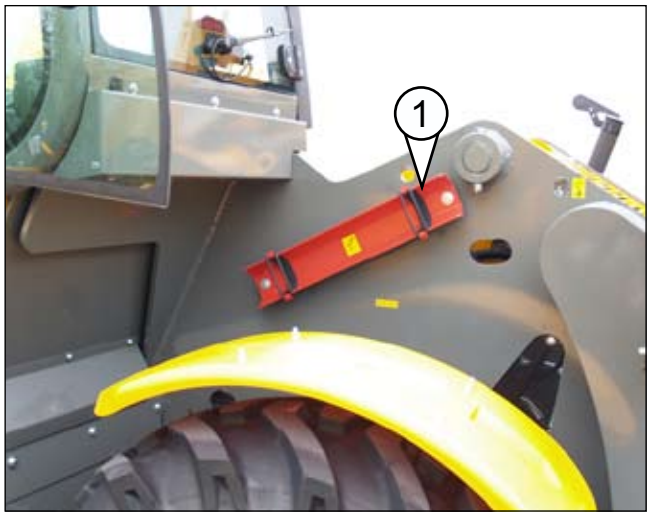
(fig.15/B)

Boom support spacer.
(fig.16/B - Pos."1")

- 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 3 tons).

- IMPORTANT:
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 with the hooks.



(fig.16/B)

DRIVING CAB

(fig.17/B Pos.”1”)

All vehicles are equipped with a driving cab which also plays the role of operator safety cell.

- ATTENTION -

THE CAB IS A SAFETY COMPONENT AND THEREFORE MUST ALWAYS BE KEPT ACCORDING TO PROPER CONDITIONS OF USE.

- WARNING -

Modifying, piercing or altering the cab structure in any way IS STRICTLY FORBIDDEN Any tampering makes the guarantee expire and releases the manufacturer from liability.

- **DO NOT** weld or mechanically connect components on the cab chassis.
- In case you need to replace attachment bolts, only use elements of the same class of resistance.
- Never connect chains or ropes to the cab for towing purposes.
- In the event of vehicle tipping, do not attempt to exit from the telescopic elevator during the accident.

- ATTENTION -

REMAIN INSIDE THE CAB WITH THE SEAT BELTS FASTENED FOR BEST PROTECTION.

ROPS-FOPS CAB

(fig.17/B - Pos. "1")

The vehicle is equipped with an approved ROPS and FOPS cab. The operator is therefore protected against tipping and falling objects, as prescribed for traxcavators. During use, it is compulsory the use of safety seatbelts to prevent the driver's impact with the cab inner structures. The rear windscreen can be used as an emergency exit. The total opening can be obtained by extracting the spring clip placed in the opening handle. **IT IS FORBIDDEN TO** open the windscreen completely during use of the vehicle, due to shearing hazard between boom and chassis.

- ATTENTION -

IF THE CAB PRESENTS VISUAL DAMAGES, REPLACE IT BY CONTACTING AN AUTHORISED SERVICE CENTRE OR AUTHORISED REPAIR SHOP OF *DIECI*.

(fig.17/B)

LOAD TABLES

- ATTENTION -

CHECK THE LOAD TABLES FOR YOUR VEHICLE WITH CHAPTER "H" TECHNICAL SHEETS

The Safe Working Load -SWL of these vehicles depends on their lever condition, extent of extraction and tilt of the boom.

This vehicle is equipped with an anti-tipping device.

For further information on **the indication of the safe load** see the relevant paragraph (in chapter "C" Getting to Know Your Vehicle "anti-tipping device").

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

The load table illustrates the maximum height and extraction achievable without exceeding the safe load. The telescopic elevator is also equipped with its own load table. The load table shows the admissible load with standard forks. When certain attachments are fitted on the vehicle the relevant diagram is supplied.

The load table illustrated is only given as an example.
Before lifting or positioning loads, consult the loading tables. Before lifting or positioning loads, consult the load tables located in the handbook located on the right of the central dashboard or consult chapter "H" (vehicle technical sheets) in this manual.

- ATTENTION -

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

USING THE LOAD TABLES AND BOOM INDICATORS

- ATTENTION -

For your safety and 'the safety of the vehicle, follow information described below.

- ATTENTION -

The restrictions indicated in the load tables refer to the vehicle at a halt on wheels or stabilisers in a level position.

Do not lift or extract the boom when the vehicle is in motion.

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

Check which boom attachment has been mounted on the vehicle and then consult the relevant load table.

Before proceeding to lift or put down a load, it is essential that you know how much it weighs.

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

- ATTENTION -

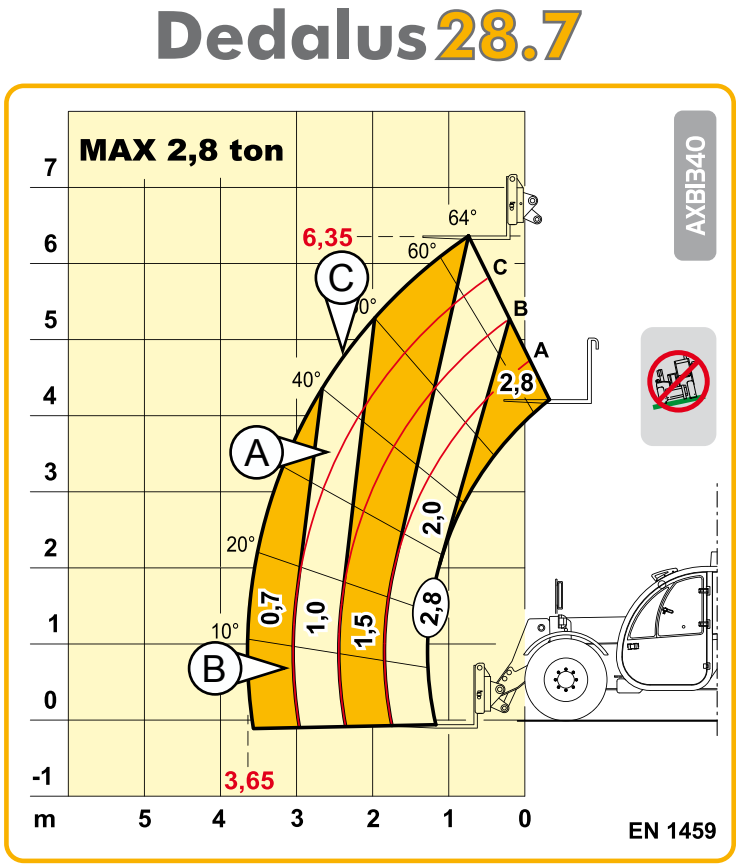
The centre of gravity of the load, may not necessarily be at the centre, you have to therefore work out its position.

When you know the weight of the load, consult the load table (chapter ”H“ vehicle technical sheets) and identify the section indicating the weight immediately above.

Example:
In the load table given as an example (fig.18/B), the weight of the load is 300 kg, go to the section with the 1.0 tons. (fig.18/B Pos.“A“).

The border to the left (fig.18/B Pos.“B“) and the upper border (fig.18/B Pos.“C“) of this segment indicate the limits of stability of the vehicle relative to considered loads. Do not slant or extract the boom beyond the indicated limits. (fig.18/B Pos.“B-C“).

After insertion of forks from under the load and before lifting them, check indicator values of boom angle and extraction.



(fig.18/B)

As you will see in the table, the lines start from the graduated scale for the angling and extraction of the boom and cross the section of the table. Check where the relevant lines for the parameters considered cross. If the crosspoint is within the section for the maximum load or to the right (known load weight), the load is within safety limits.

If the lines cross above or to the left of the section, do not make any attempt to lift the load. Extract the boom.
If, even with the boom completely retracted, the angular degrees and the extraction of the boom intersect outside the section for maximum load, do not make any attempt to lift the load.

When the load is on the forks, retract the boom before lifting or lowering it. This will reduce the risk of rendering the vehicle unstable.

It should be noted that when the load is raised (for example, on scaffolding) it should be set free (raise it) before retracting the boom completely.

Before depositing a load, check the load table to determine the maximum distance of the vehicle from the unloading point. You should be able to deposit the load without intersecting the limits indicated to the left or above the maximum load section.

Note-book with essential data
(fig.20/B - Pos."1")

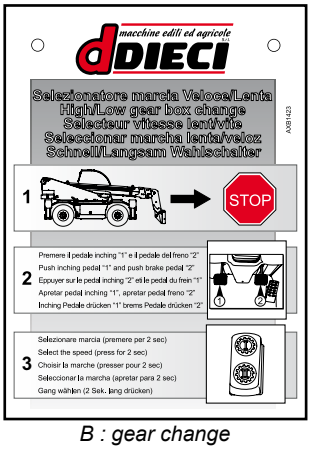
- A : cover page
- B : gear change page
- C : tyre inflation pressure page
- D : main safety regulation page
- E : driving on public roads page
- F : symbol key (front)
- G : symbol key (back)
- H : load charts

- ATTENTION -

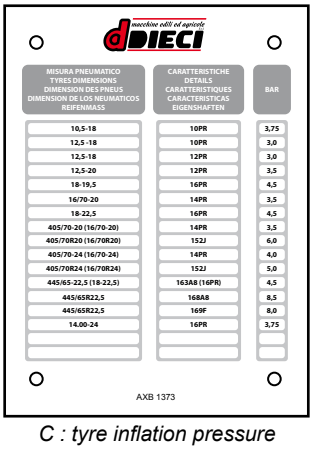
Tables illustrated are only an indication and may not correspond to those found inside the note pad in the cab.

(fig.20/B)

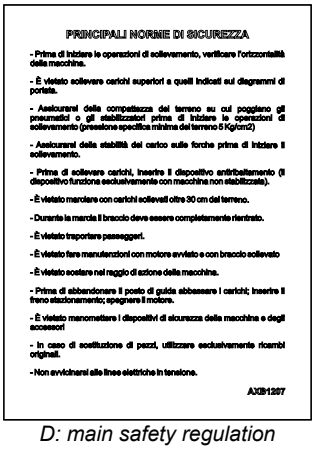
A : cover



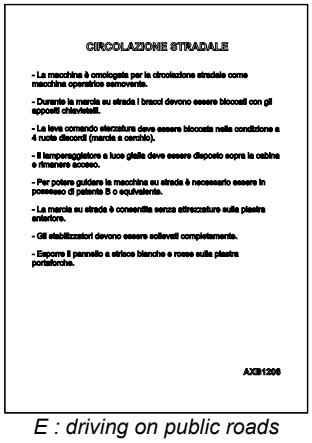
B : gear change



C : tyre inflation pressure

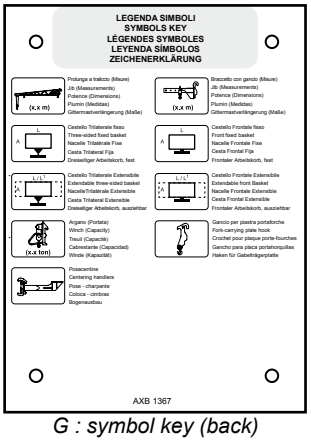


D: main safety regulation

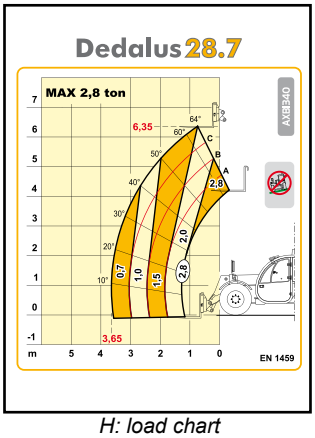


E : driving on public roads

F : symbol key (front)



G : symbol key (back)



H: load chart

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LOAD HANDLING

Withdrawing a load from the ground

1. Approach the load to be lifted with the boom completely retracted and the forks horizontally positioned in height from the lifting position.
   Keep forks raised just enough to avoid contact with the ground.

2. Bring forks under load to be lifted until contact is made with the fork carrier plate. Engage the parking brake and move the gear selector to neutral.

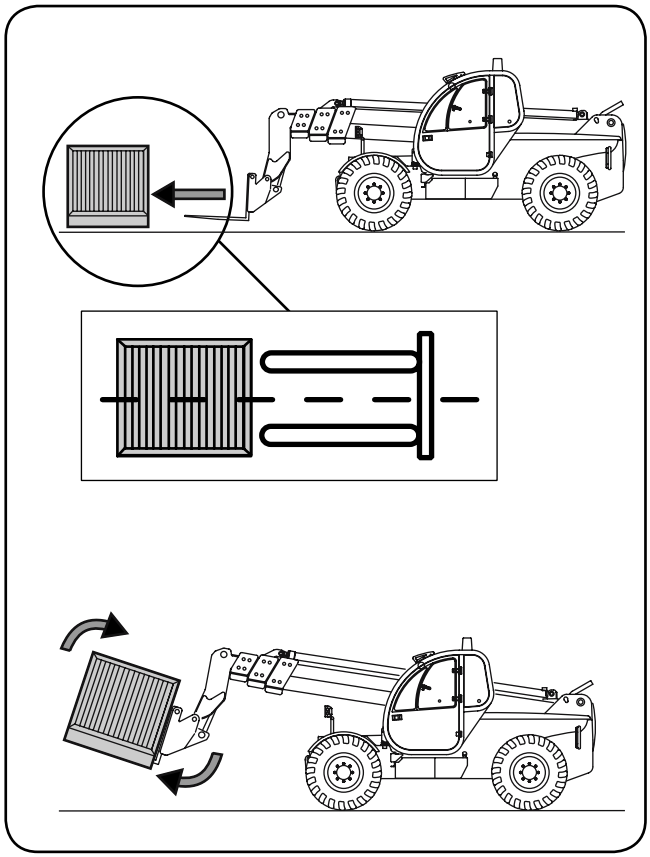
3. Slightly lift the load and slant the fork carrier plate backward, bringing it to the transport position.

- ATTENTION -

Always observe the load's centre of gravity, slant the forks just enough to ensure stability and prevent load loss during braking.

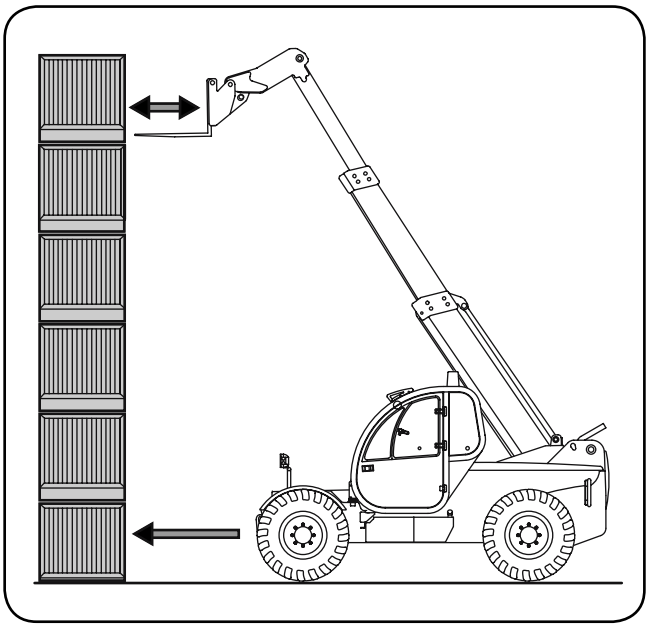
- ATTENTION -

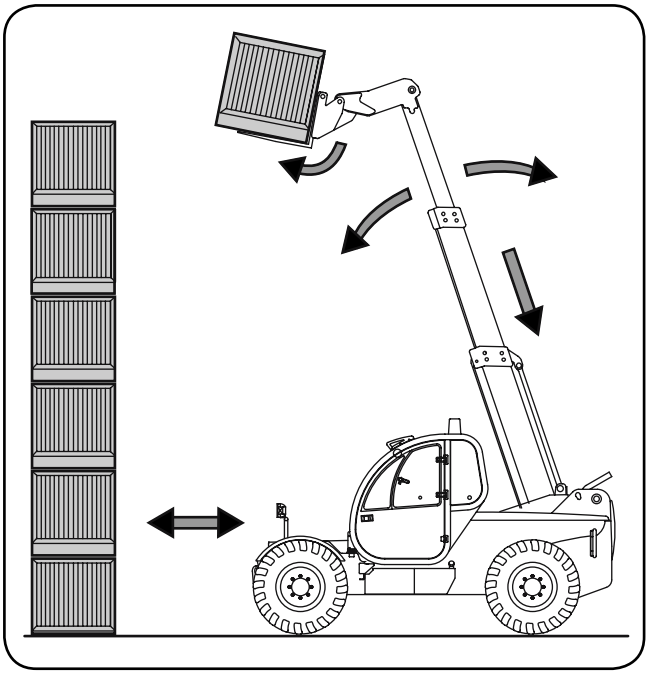
Never transport a load with the boom lifted and/or extracted



Withdraw loads upward

1. Make sure that forks pass easily under the load.
2. Driving the vehicle slowly and with caution, approach the load perpendicularly with the forks horizontal.
3. Always remember to maintain the distance necessary to insert forks under the load, between the pile and the vehicle. Extract the boom the least length possible.
4. After having brought the forks under the load to be lifted, until contact is made with the fork carrier plate, insert the parking brake and move the gear selector to neutral.
5. Slightly lift the load and slant the fork carrier plate backward, bringing it to the transport position.
6. If possible, lower the load without moving the vehicle. Raise the boom to move the load away, then have the extractions retract and lower the boom to bring the load to the transport position.
7. In the event that it is not possible, have the vehicle withdraw slowly and pay careful attention, after having sufficiently moved away the load, to have the extractions retract and lower the boom to bring the load to the transport position.





- ATTENTION -

Always observe the load's centre of gravity, slant the forks just enough to ensure stability and prevent load loss during braking.

- WARNING -

IT IS ABSOLUTELY FORBIDDEN to withdraw a load if the machine is not level.

- ATTENTION -

Never transport a load with the boom lifted and/or extracted

Position loads upward

1. Move the load in the transport position in front of the pile.
2. Raise and extract the boom until you bring the load over the pile. If necessary, have the vehicle move toward the pile very slowly and very carefully.
3. Engage the parking brake and move the gear selector to neutral.
4. Position the load horizontally and rest it over the pile. Lower the extractions and have them retract to properly position the load.
5. Free the forks having the extractions retract and lifting the boom alternatively. If possible, reverse the vehicle very slowly and very carefully.

- ATTENTION -

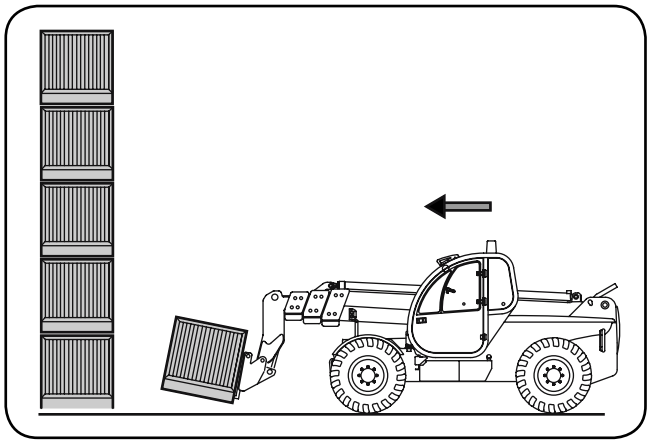
Always observe the load's centre of gravity, slant the forks just enough to ensure stability and prevent load loss during braking.

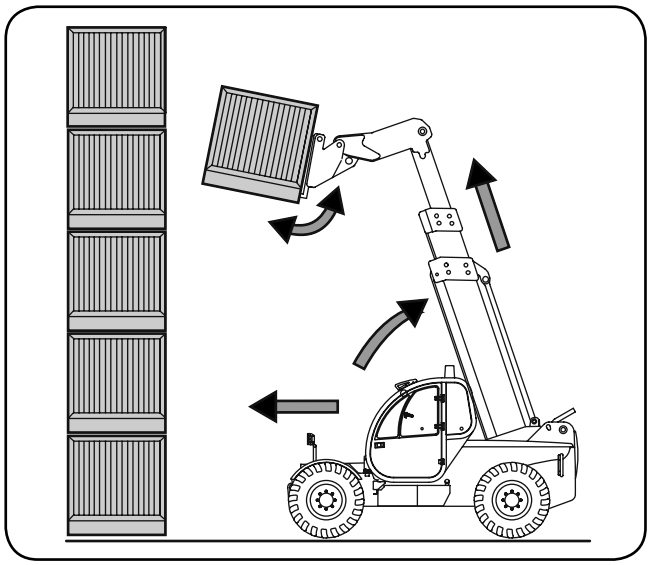
- WARNING -

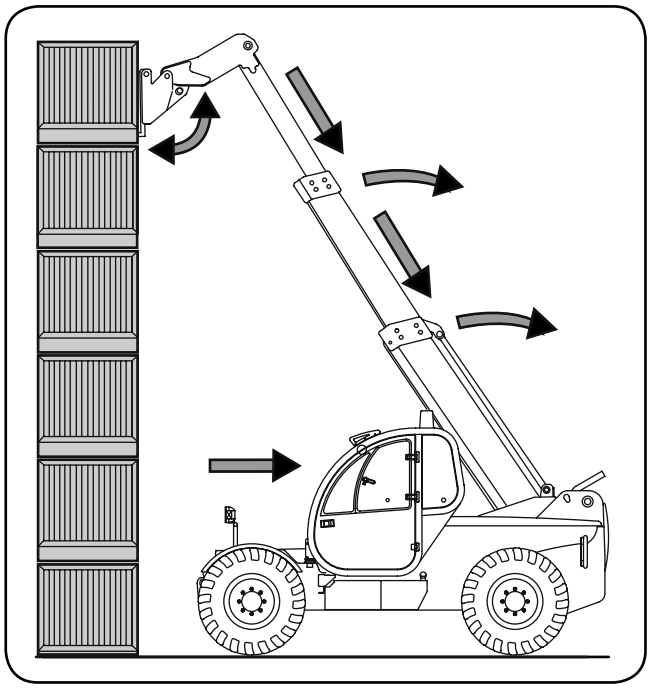
IT IS ABSOLUTELY FORBIDDEN to withdraw a load if the machine is not level.

- ATTENTION -

Never transport a load with the boom lifted and/or extracted

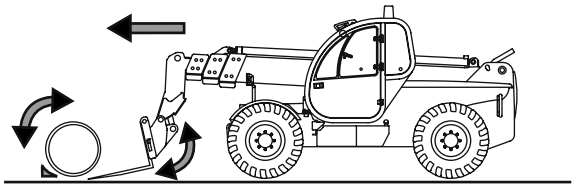






Withdrawing round-shaped loads

- Slope the forks forward and detract the telescopic boom. At the same time, insert forks under the load, turn the fork carrier plate backward to have the load slide. If necessary, fasten the load with wedges.



- ATTENTION -

Always observe the load's centre of gravity, slant the forks just enough to ensure stability and prevent load loss during braking.

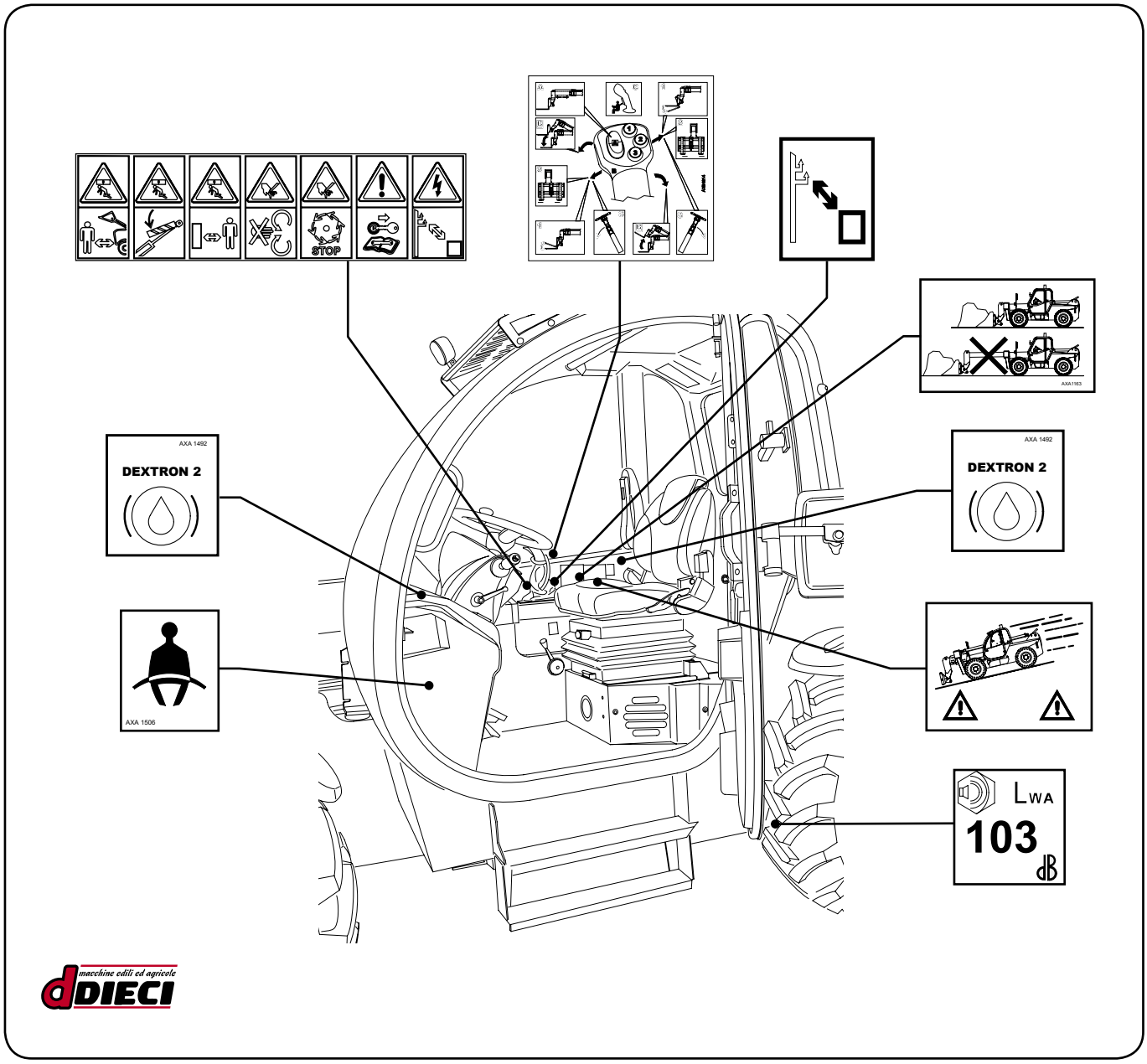
- ATTENTION -

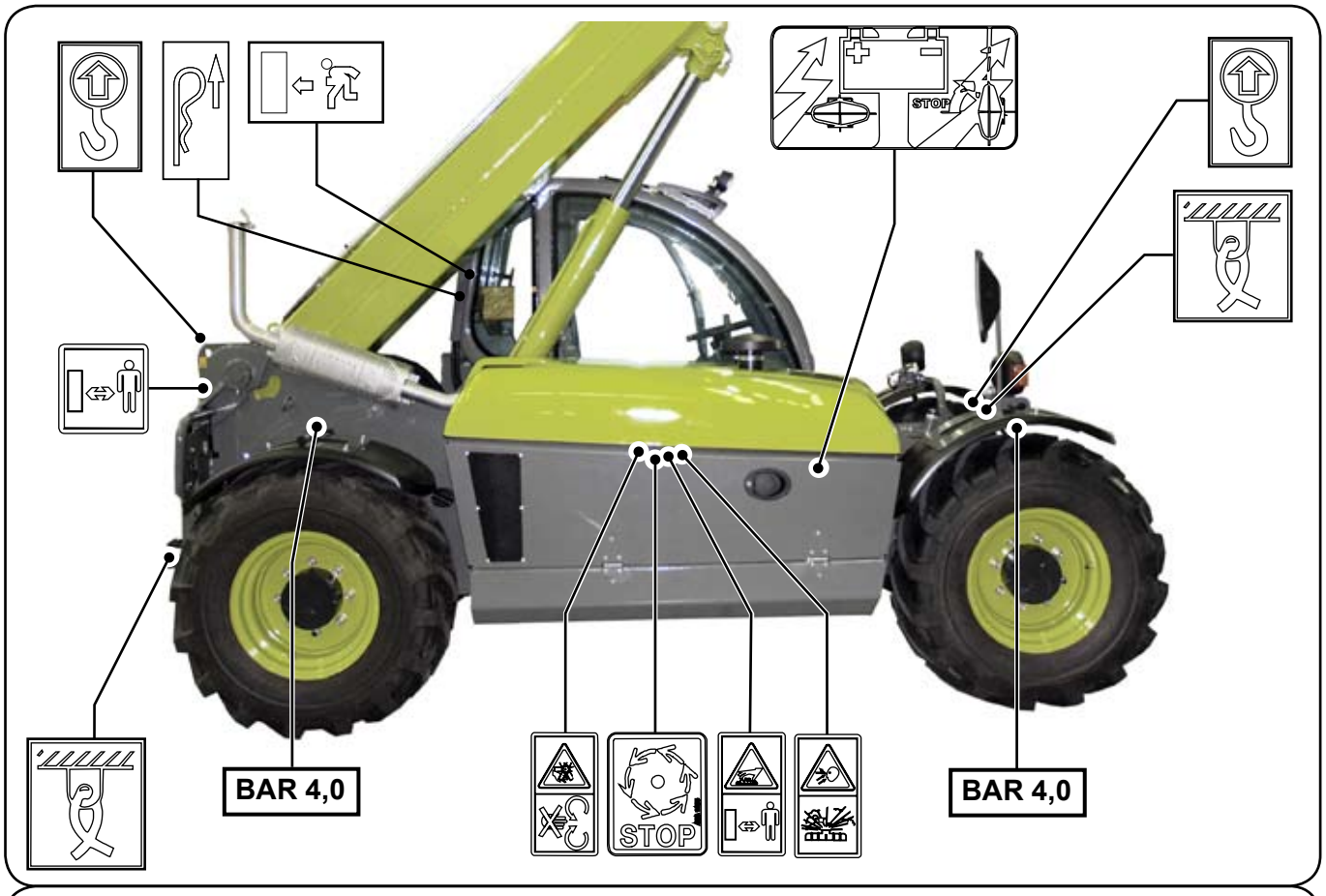
Never transport a load with the boom lifted and/or extracted

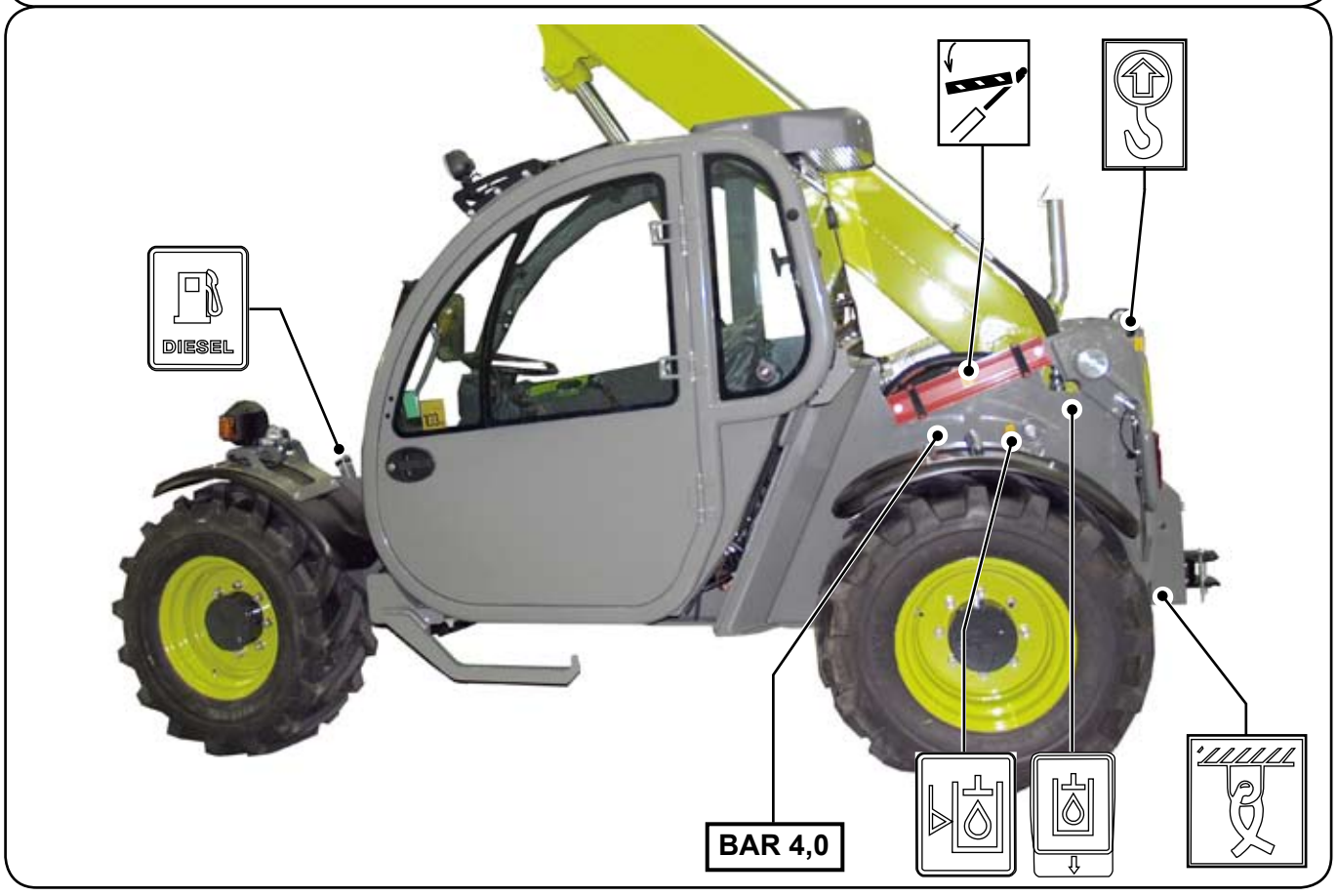
SAFETY DECALS

Safety decals have been placed on the vehicle in indicated positions. Their purpose is to supply a guide for preserving your safety and the safety of others. Before starting to operate the vehicle, verify the content and positioning of safety decals by looking around the vehicle with this manual in hand. Re-examine stickers with all operators who will use the vehicle.

- Make sure that all operators have fully understood positioning and content.
- To ensure correct interpretation, verify that they are located in the correct position and that they are always kept clean. **IT IS STRICTLY FORBIDDEN** to clean vehicle signalling with solvents or petrol. Stickers could discolour. Additional warning and safety decals must always be treated in the same way.
- In the event of wearing, damage or loss of stickers, replace them as these must be read and interpreted correctly. Sticker orders must be carried out just as you would order a spare part (make sure you give the model and serial number of your vehicle when placing the order).
- If in any doubt, contact your nearest agent or dealer.

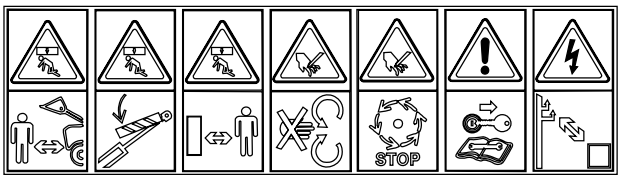



STOP
BAR 4,0
STOP
BAR 4,0


DIESEL
BAR 4,0

Safety stickers and where they are located

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



(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.

● **On the radiator** (fig.29/B)


(fig.29/B)

⚠ **- DANGER:**

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

● **On the engine bonnet** (fig.30/B)


(fig.30/B)

⚠ **- DANGER:**

Risk of burns.

⚠ **- DANGER:**

Keep all persons at a safe distance.

● **On the radiator** (fig.31/B)


(fig.31B)

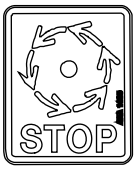
⚠ **- DANGER:**

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.

● **On the engine bonnet** (fig.32/B)



(fig.32/B)

⚠ **- DANGER:**

Do not open; wait until all moving parts have come to a halt.

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)

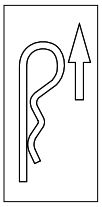
Indicates the emergency exit

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

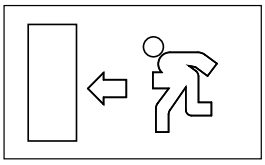
Indicates that the seat belts have to be fastened when using the machine.

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

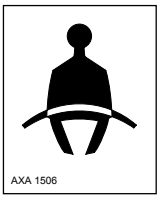
Indicates the type of oil used in the braking system.



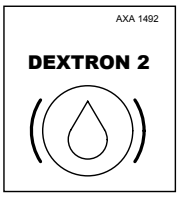
(fig.34/B)



(fig.35/B)



(fig.36/B)



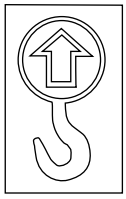
(fig.37/B)

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

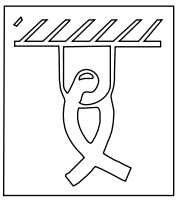
Shows the four places where the machine can be anchored if it needs to be lifted.

- **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)

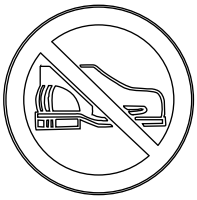
- On parts that must not be stepped on (fig.40/B)

⚠ - DANGER:

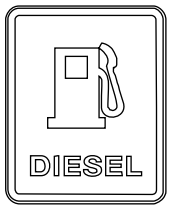
Keep off "danger of breakage".

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

Type of fuel to use.



(fig.40/B)



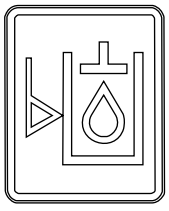
(fig.41/B)

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

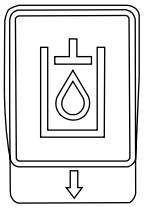
Hydraulic oil level indicator.

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

Indicates the hydraulic oil top up cap.



(fig.42/B)



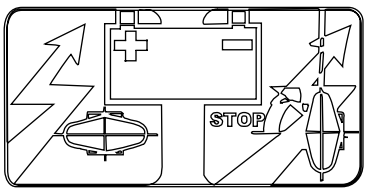
(fig.43/B)

- **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 4 fenders and chassis** (fig.45/B)

BelowIndicates the recommended tyre pressure.



(fig.44/B)

(fig.45/B)

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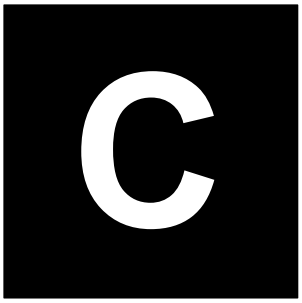
USER INSTRUCTIONS AND GETTING TO KNOW YOUR VEHICLE




ANY MACHINE MODIFICATION IMPLIES A NEW VERIFICATION OF CONFORMITY WITH THE DIRECTIVE 98/37 "CE" SUCH A PROCEDURE IS EVEN WORTH IN THE CASE OF REPAIRS WITH NON ORIGINAL SPARE PARTS.

IT IS FORBIDDEN TO USE THE VEHICLE UNTIL THE CONTENTS OF THE PRESENT HANDBOOK HAVE BEEN CAREFULLY READ AND LEARNT.

NO MATTER HOW MUCH SPECIFIC EXPERIENCE THE OPERATOR MAY HAVE, IT IS NEVERTHELESS ESSENTIAL THAT HE LEARNS THE EXACT LOCATION AND USE OF ALL INSTRUMENTS AND CONTROLS BEFORE USING THE VEHICLE.

THE IMAGES, DESCRIPTIONS, MEASUREMENTS CONTAINED IN THIS CHAPTER ALL REFER TO STANDARD VEHICLES.

UPON REQUEST, YOUR VEHICLE CAN BE FITTED OUT WITH OPTIONAL CONTROLS AND ATTACHMENTS.

ALL THE FUNCTIONS, PROCEDURES RELEVANT TO THE OPERATION AND THE PREPARATION OF THE VEHICLE'S ATTACHMENT THAT ARE NOT DESCRIBED IN THIS MANUAL ARE STRICTLY FORBIDDEN.

THE USE OF THE MACHINE OTHER THAN DESCRIBED IN THIS MANUAL IS STRICTLY FORBIDDEN.

READING AND UNDERSTANDING CHAPTER "B" (SAFETY REGULATIONS) IS OBLIGATORY BEFORE READING CHAPTER "C" AND USING THE VEHICLE.


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

GENERAL WARNINGS

- ATTENTION:

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

- ATTENTION:

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.

- ATTENTION:

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.

- ATTENTION:

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.

- ATTENTION:

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

- ATTENTION:

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.

- ATTENTION:

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

- ATTENTION:

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

- ATTENTION:

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).

- ATTENTION:

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.

- ATTENTION:

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.

- ATTENTION:

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

- ATTENTION:

When traverse steering is selected, always proceed slowly.

- ATTENTION:

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

- ATTENTION:

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.

- ATTENTION:

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.

- ATTENTION -

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

IDENTIFYING VEHICLE PARTS

Right side of the vehicle

1. Cab
2. Telescopic boom (boom)
3. Right rear view mirror
4. Right front light
5. Tool carrier plate
6. Epicyclic reduction gears
7. Tyre
8. Engine bonnet
9. Right rear light

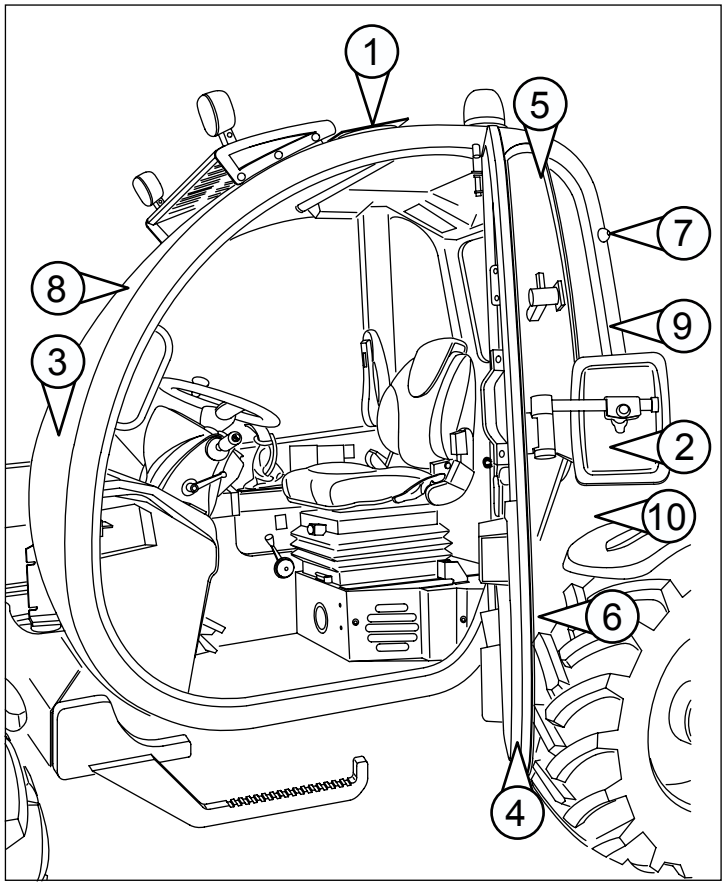
Left machine side

1. Cab
2. Left rear light
3. Epicyclic reduction gears
4. Fuel tank
5. Tyre
6. Vehicle cab steps
7. Tool carrier plate
8. Left front light
9. Telescopic boom (boom)
10. Left rear view mirror

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

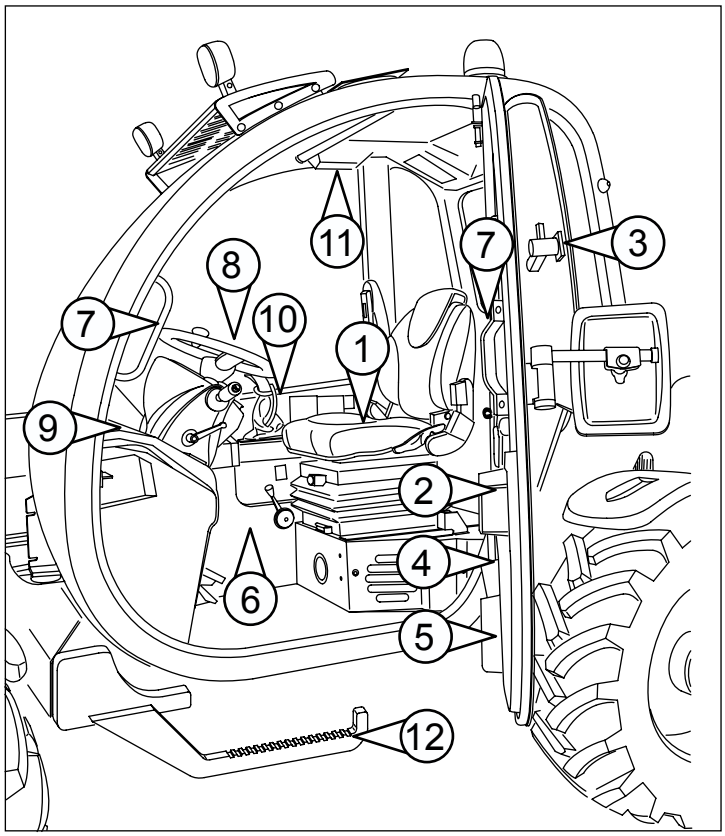
External cab components

1. Opening roof.
2. Left rear view mirror.
3. Rear windscreen wipers.
4. Cab door.
5. Upper door window.
6. Door opening handle.
7. Rear windscreen / emergency exit.
8. Front windscreen.
9. Rear windscreen wiper.
10. Revolving light signal outlet.



Internal cab components

1. Seat.
2. Door opening handle.
3. Upper window opening handle.
4. Ashtray.
5. Courtesy compartment, document holder compartment.
6. Vehicle identification plate.
7. Cab on/off grip.
8. Steering wheel.
9. Dashboard.
10. Joystick.
11. Lighting inside the cab
12. Cab on/off steps

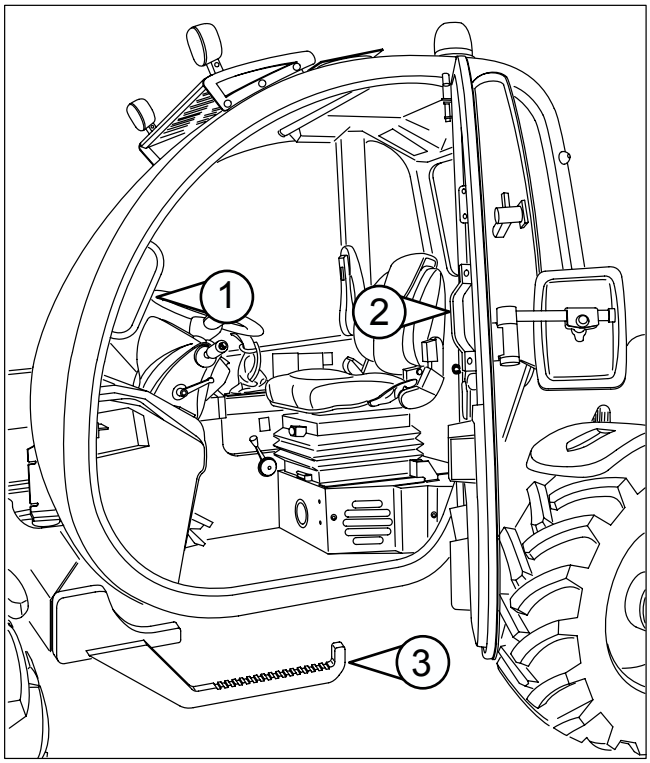


GETTING IN AND OUT OF THE CAB

Make sure that your hands and shoes are clean and dry to prevent slipping and falling. Only use suitable handles (fig.1/C Pos.”1”, “2”, “3”) to climb into the cab. Do not use controls or the internal steering wheel. Always face the driving cab when getting in or out of your vehicle.

- ATTENTION:

Getting in and out of the cab are allowed only when the vehicle is at a halt with the parking brake engaged. Do not leave the cab while the machine is moving.



(fig.1/C)

DOOR OPENING CONTROLS

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

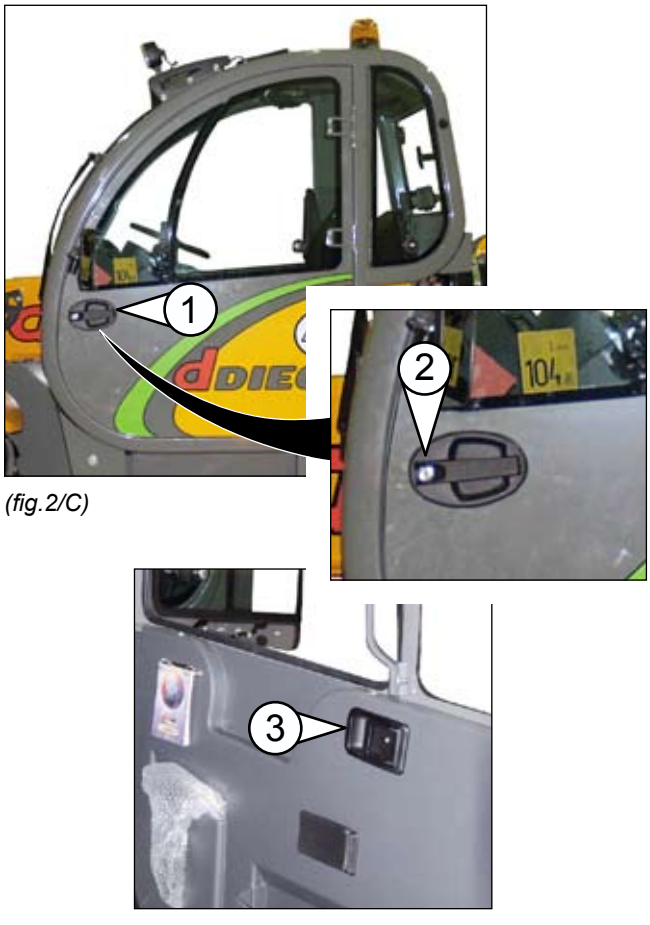
To open the door:

- Insert the key in the lock (fig.2/C Pos.”2”) and turn clockwise/counter-clockwise to engage/disengage the lock.
- Press the pushbutton (fig.2/C Pos.”2”) and pull the handle toward you to unhook the door with the lock disengaged.

NOTE:
The door will not open with the lock disengaged, pressing on the door pushbutton.

- WARNING -

IT IS ABSOLUTELY FORBIDDEN to operate with the cab door open.



(fig.2/C)

INTERNAL DOOR OPENING CONTROLS

- Pull the handle toward you to unhook the door (fig.2/C Pos.”3”).
- Push the door outward to complete opening.

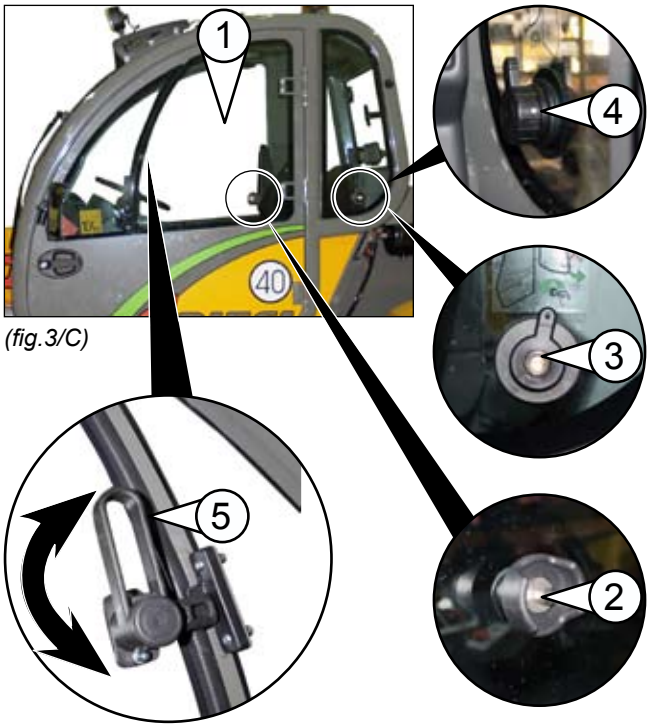
- ATTENTION:

Before pushing the door outward, verify that the opening area is free from any type of obstacles.

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

OPENING THE DOOR WINDOW
(Fig.3/C Pos.”1”)

- Lower the handle to open (fig.3/C Pos.”5”), turning it counter-clockwise and pushing the window outward.
- To block the window in the permanent open position, push the window pin (fig.3/C Pos.”2”) inside the pin lock (fig.3/C Pos.”3”), using slight pressure.
- Turn the handpiece from inside the cab (fig.3/C Pos.”4”) to unlock the window and then close it.
- To close the window, pull it toward you, returning it to its original position.
- Turn the hand grip clockwise to lock the window in the closed position.



(fig.3/C)

- ATTENTION:

Before opening or closing the window, verify that the surrounding area is free of obstacles.

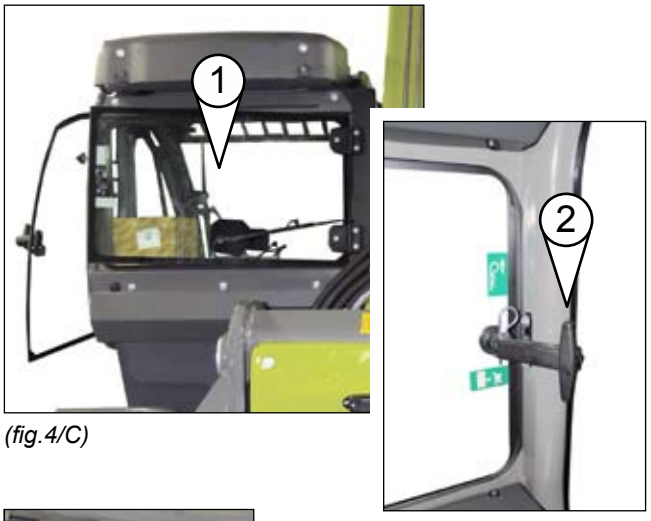
- ATTENTION:

Before operating, make sure that the door window is locked, independent of whether it is in the open or closed position.

REAR WINDOW
(Fig.4/C Pos.”1”)

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

The window will remain in the open position by the handle itself.



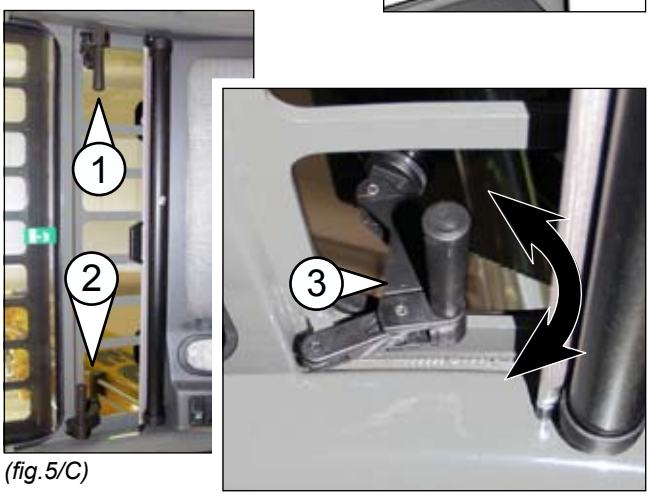
(fig.4/C)

- ATTENTION:

In the event the handle no longer blocks the window in the open position, replace it as soon as possible; risk of crushing.

UPPER ROOF
(Fig.5/C)

To open the roof, grip the handles (fig.5/C Pos.”1” and “2”) and push them up using a circular motion (fig.5/C Pos.”3”). The rotated handles will hold the window open. Do the opposite to close the roof.



(fig.5/C)

- ATTENTION:

In the event the handles should not hold the window open, replace them as soon as possible; risk of crushing.

REAR EMERGENCY EXIT
(Fig.6/C pos."1")

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

- In case the window must be opened completely, slide out the locking pin (fig.6/C Pos."2") and push the window outward.

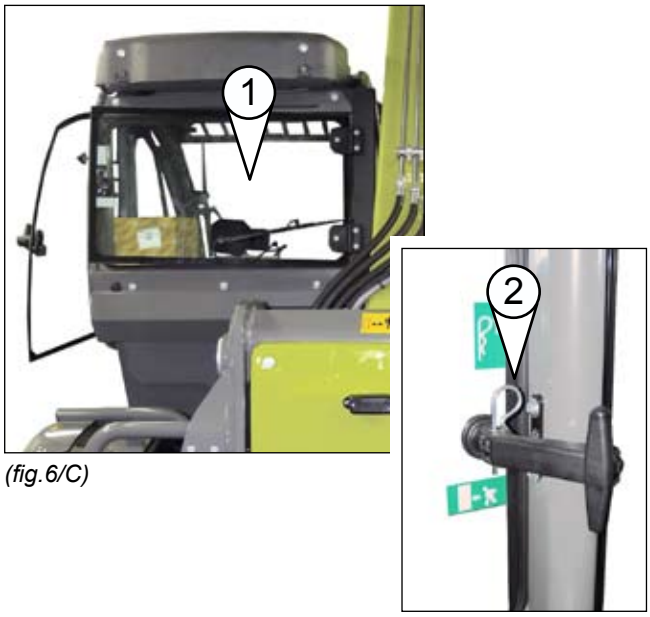
The pin must be kept in position as shown during normal working operations.

- PROHIBITED -

Opening the window completely during use of the vehicle **IS STRICTLY PROHIBITED,** due to possible shearing hazards between the boom and chassis.
The rear window is found near the telescopic boom.

- ATTENTION:

Use care when opening and/or removing windows as they may chip or shatter, creating risk of injury to the operator in the cab and to those in the surrounding area. Take proper precautions and use accident prevention equipment (goggles, gloves, helmet, etc.).



(fig.6/C)

MAX POWER 180W
(Fig.8/C Pos."1")

- Power 12v 180w for direct current users § (battery chargers, cell phones, etc.).

- ATTENTION:

Do not connect users with nominal voltage exceeding 12 volts and power consumption exceeding 180W.
Danger of damage to the electrical system.

(fig.7/C)

INTERNAL CAB LIGHT
(Fig.8/C Pos."1")

To switch on the internal cab light, push on its extremities. The light is switched off when in the middle position.

(fig.8/C)

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

ASHTRAY
(fig.9/C Pos.”1”)

To open, pull the upper side toward you.

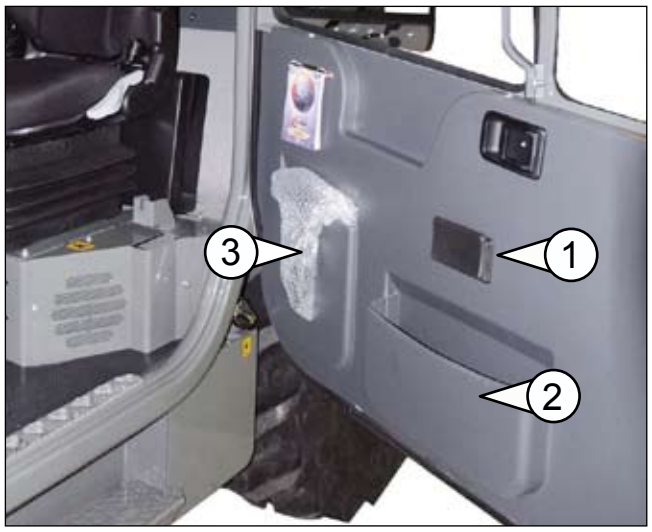
COURTESY COMPARTMENT
(fig.9/C Pos.”2”)

TECHNICAL DOCUMENTATION POCKET
(fig.9/C Pos.”3”)

Technical documents must be kept in their pocket positioned in the internal side of the cab entry door (fig.9/C Pos.”3”). The use and maintenance manual and spare parts catalogue must always be available to the operator inside the vehicle for a quick reference.

***- ATTENTION*:**

The operation manual and the spare parts catalogue are an integrating part of the vehicle and must follow it also when it is sold to a new proprietor. The manual in the operator’s language must be carefully preserved and be aboard the vehicle for a quick reference. If the manual gets creased, damaged or cannot be read replace it immediately.



(fig.9/C)

STEERING WHEEL (adjustment)
(fig.10/C)

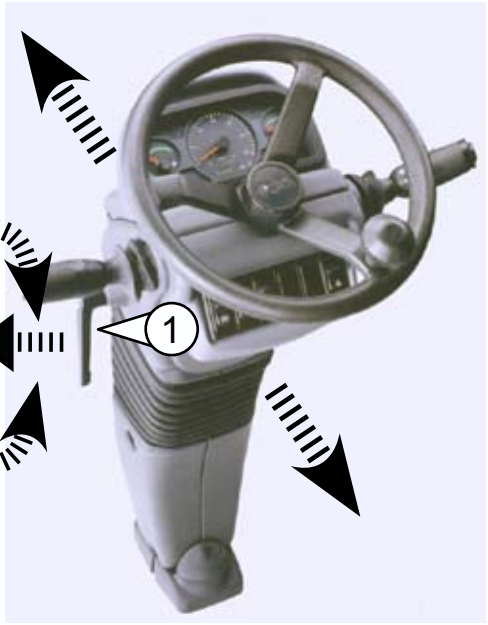
To adjust the steering wheel tilt:

- Turn lever “1” (fig.10/C) toward the front of the vehicle to unlock movement.
- Push or pull the steering wheel to find the desired position.
- Turn handle “1” (fig.10/C) toward you to lock the steering wheel in the desired position. Screw in with force to lock completely.

Pull lever “1” (fig.10/C) to the left and turn it if it should, in the locking position, should be in a position which may be disturbing operations.

***- ATTENTION*:**

The steering wheel has been correctly adjusted when the operator, with his/her back resting on the back of the seat, is able to take hold of the furthest part of the steering wheel with his/her elbows slightly bent.



(fig.10/C)

SEAT
(fig.12/C)

DIECI supplies different seat models depending on client requirements. The vehicle is equipped with a safety system called “man in” which uses a power microswitch in the driver’s seat. This microswitch is positioned inside the seat cushion (fig.12/C Pos.”A”).

The engine can be started only if the operator is seated properly in the driver’s seat and the forward/reverse lever is in the “**N**” neutral position.

(fig.12/C)

Seat adjustment
(fig.13/C)

The seat can be adjusted to different positions:

A - Lock/unlock springing (horizontal/vertical) (fig.13/C).

B - Pneumatic springing adjustment (optional) (fig.13/C).

C - Manual springing adjustment (optional) (fig.13/C).

D - Longitudinal positioning of the seat (fig.14/C).

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

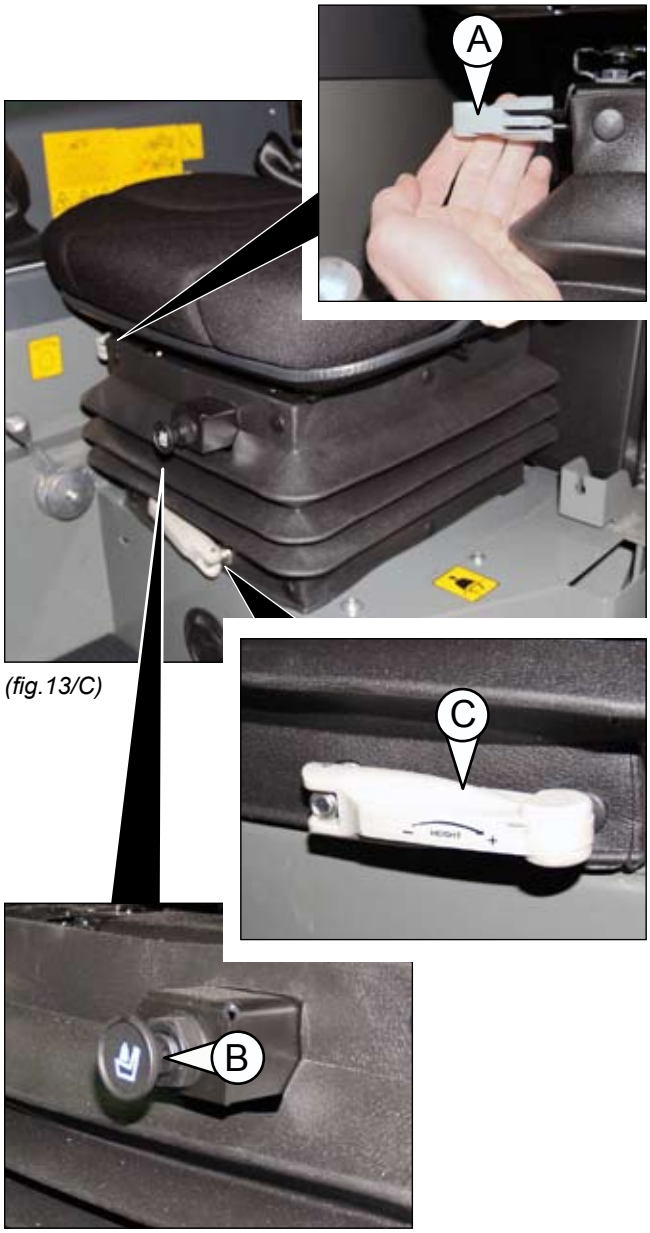
F - Armrest positioning (fig.14/C).

- To unlock springing (horizontal/vertical) bring lever “A” (fig.13/C) toward the front of the vehicle.
  Bring lever “A” (fig.13/C) toward the rear of the vehicle to lock springing.

- Pneumatic adjustment of the springing rate is obtained pulling pin “B” (fig. 13/C) to let out pressure and soften springing.
  Push pin ”B” (fig.13/C) to increase pressure and harden springing.

- Manual adjustment of the springing rate is obtained by rotating lever “C” (fig. 13/C) toward the symbol “+” printed on it to harden springing.
  Turn lever ”C” (fig.13/C) toward the symbol “-” printed on it to soften springing.

- For longitudinal seat adjustment, move lever “D” (fig.14/C) bringing it toward the left side of the vehicle, having the seat slide along the guides.
  Release the lever when the desired position has been established.
  Move slightly in order to make sure that the locking pin is correctly housed in its lock slot.

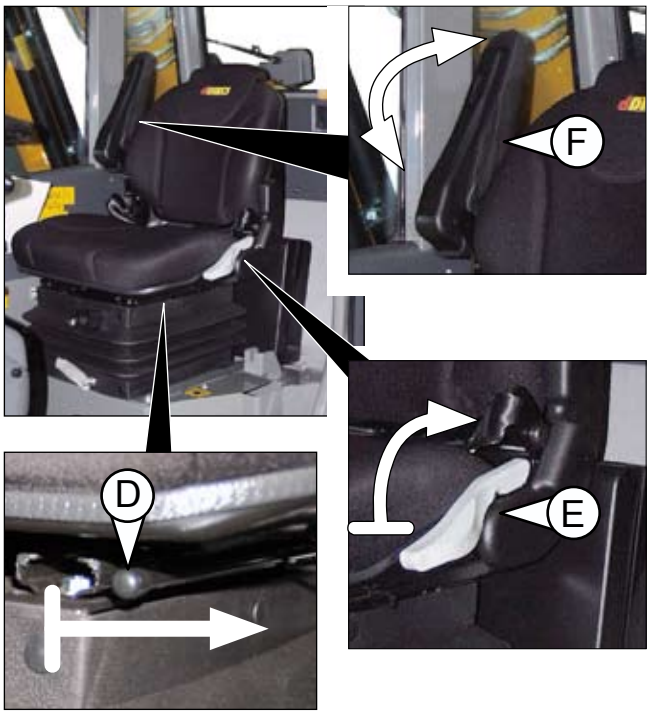


(fig.13/C)

- For backrest inclination adjustment, move lever “**E**”(fig.14/C) and push back on the backrest. The backrest will automatically adapt to the anatomy of the Operator.
- Fully raise or lower armrests with circular movements on the armrest itself ”**F**” (fig.14/C).

⚠ - *ATTENTION*:

The seat has been correctly adjusted when the operator is able to push the brake pedal completely to the end with the back leaned to the seat backrest.



(fig.14/C)

SEAT BELTS
(fig.15/C)

In order to fasten your seat belts you should:

1. Slide the tab (1) into the buckle (2) (pict.”A”).
2. Make sure this has clicked in properly, then adjust the fit of the belt around your body (pict.”B”).

⚠ - *ATTENTION*:

The belt has been correctly adjusted when it fits tightly to the waist.

To unfasten your seat belt you should (tab.”C”):

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

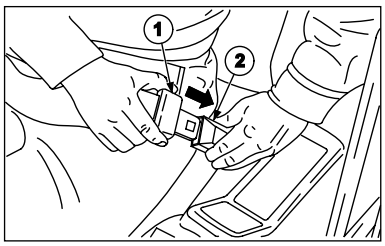
⚠ - *ATTENTION*:

Drive the vehicle only with the seat belt properly on, fastened and adjusted. Driving without the seat belt on, increases the risk of accidents.

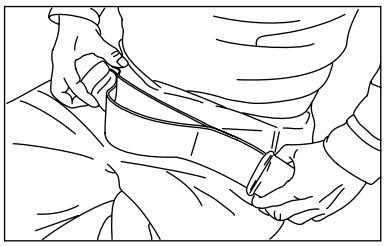
⚠ - *ATTENTION*:

Do not use damaged or warn seat belts.
Do not use seat belts installed on vehicles that have suffered from accidents. If worn, damaged or weak the seat belts can break or give in case of collision causing serious injuries to the operator.

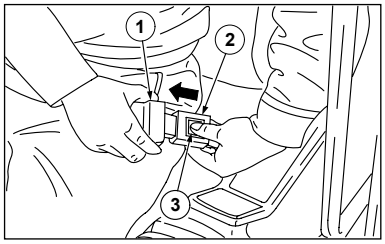
“A”



“B”

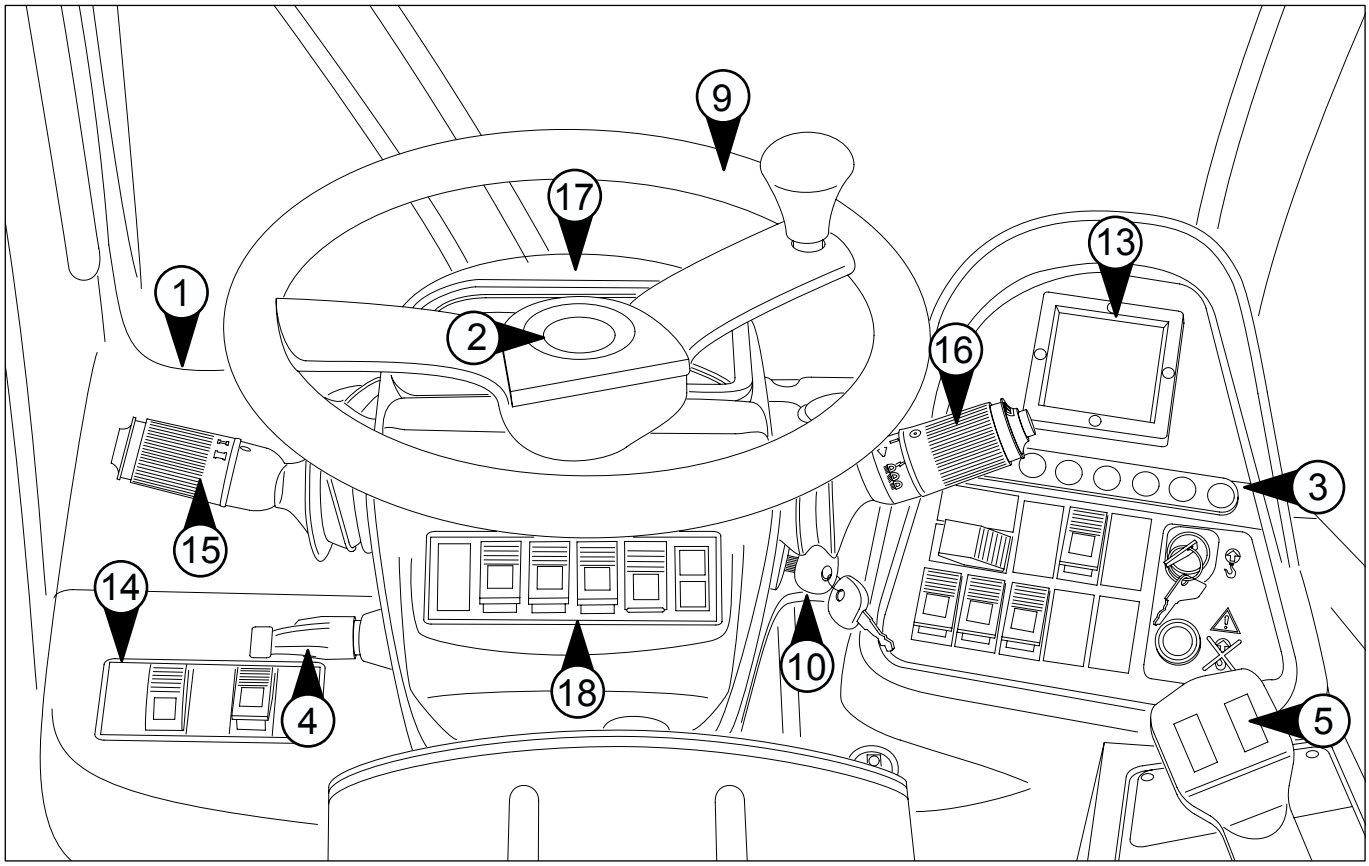


“C”

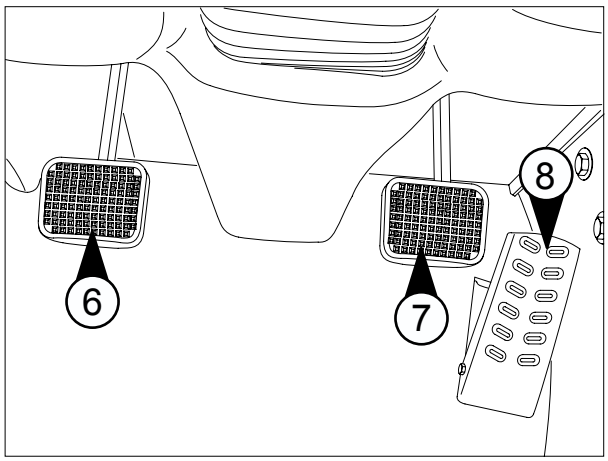


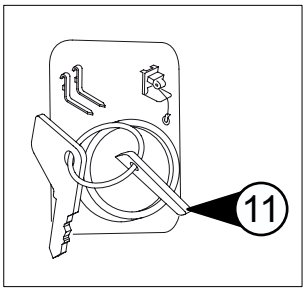
(fig.15/C)

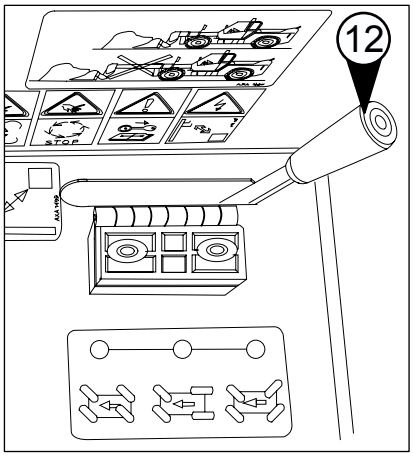
INTERIOR CAB INSTRUMENTS
(fig.16/C)



(fig.16/C)





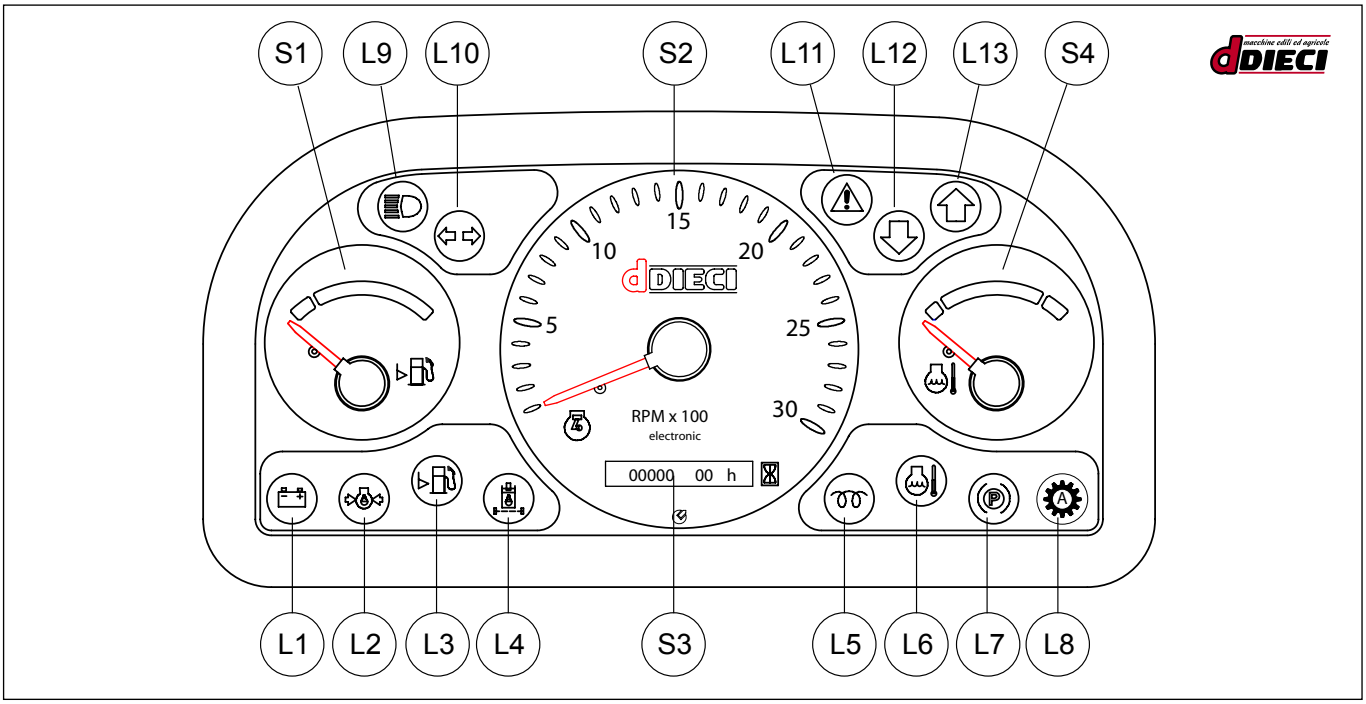


1. Dashboard with air-vents
2. Adjustable steering shaft
3. Right dashboard
4. Steering wheel adjustment lever
5. Boom movements joystick
6. “INCHING” pedal
7. Brake pedal
8. Accelerator pedal
9. Steering wheel.
10. Starter key
11. Machine functions selector
12. Wheel steering selector
13. Load monitoring display
14. Left dashboard
15. Gear lever
16. Multi-function lever
17. Central dashboard
18. Central dashboard - controls

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

CENTRAL DASHBOARD WARNING LIGHTS

(fig.17/C)



(fig.17/C)

L1 Generator warning light (red)

L2 Engine oil pressure warning light (red)

L3 Fuel reserve warning light (yellow)

L4 Hydraulic fluid filter warning light (red)

L5 Sparkles pre-heating warning light (yellow)

L6 Engine water temperature warning light. (red)

L7 Parking brake warning light (Negative) (red)

L8 Mechanical gear engaged warning light (green)

L9 Full beam headlights warning light (blue)

L10 Direction indicators warning lights (green)

L11 Emergency warning light (red)

L12 Reverse warning light (green)

L13 Forward warning light (green)

S1 Instrument indicator instrument warning light

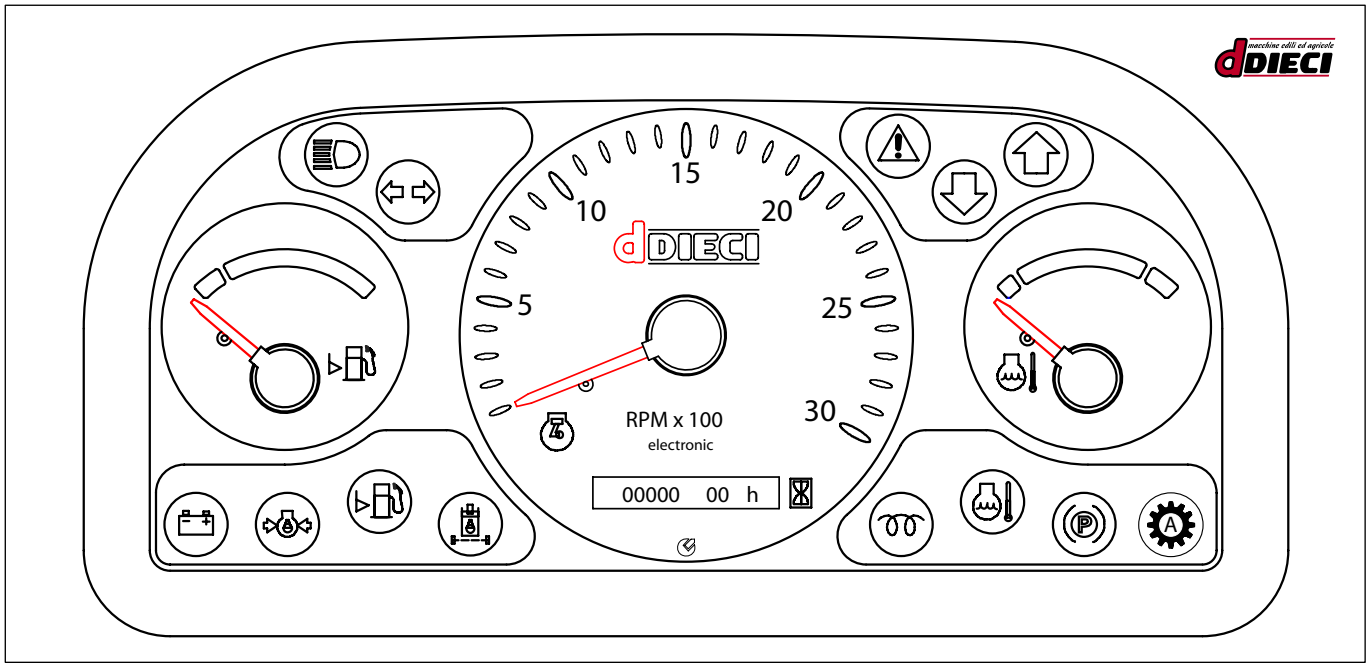
S2 Engine speed indicator

S3 Hour counter indicator

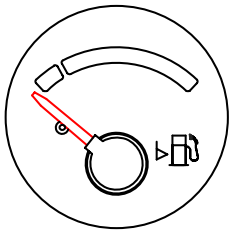
S4 Water temperature indicator

L - SYMBOLS AND WARNING LIGHTS COLOURS VISIBLE ONLY WHEN SWITCHED ON

CENTRAL DASHBOARD - INSTRUMENT USE
(fig.18/C)



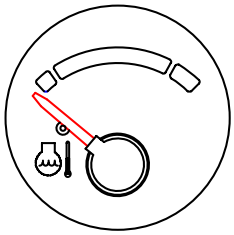
(fig.18/C)



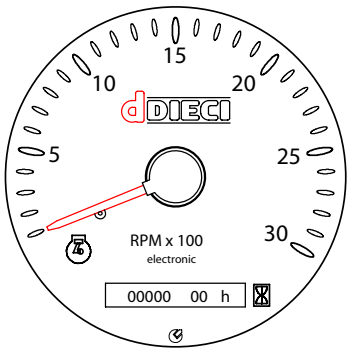
Fuel level indicator instrument

The instrument hand indicates the quantity of diesel present in the tank in that moment. Maximum quantity is signalled by the positioning of the hand on the right side. The hand will move down progressively, passing through a red mark which indicates minimum level (reserve), also signalled by means of a yellow warning light. When the hand completely stops (left side limit switch), the fuel tank is empty. We recommend always keeping the hand above the minimum level to prevent damage to the engine.

Engine water temperature indicator



During normal use, the temperature hand moves from the lower part of the instrument (left red mark), stopping when having reached the first fourth of the scale. This is the optimal condition for engine operation. If the temperature should rise excessively, arriving near maximum level (right red mark), stop the engine and verify the cause. The maximum temperature alarm is signalled when the red warning light switches on. Operate at low RPMs (max 1500) to not damage the cooled engine. Avoid sharp manoeuvres and acceleration until the left red mark has gone up.



Engine speed indicator

This instrument indicates the number of RPMs the engine is carrying out in that moment.

Hour counter 00000 00 h

The hour counter displays the hours of vehicle use.

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

DASHBOARD WITH INSTRUMENTS (electrical switches, indicator lights and control levers, standard)
(Fig.19/C)

C1 **Front windscreen wiper switch (green)**

C2 **Revolving light switch (yellow)**

C3 **Rear windscreen wiper switch (green)**

C4 **Fast/slow speed selector switch (green)**

C5 **Mechanicalgearindicatorselected (red)**

RIGHT SIDE DASHBOARD (standard) - SWITCHES/ FUNCTION SELECTOR SWITCHES / INDICATOR LIGHTS (fig.20/C)

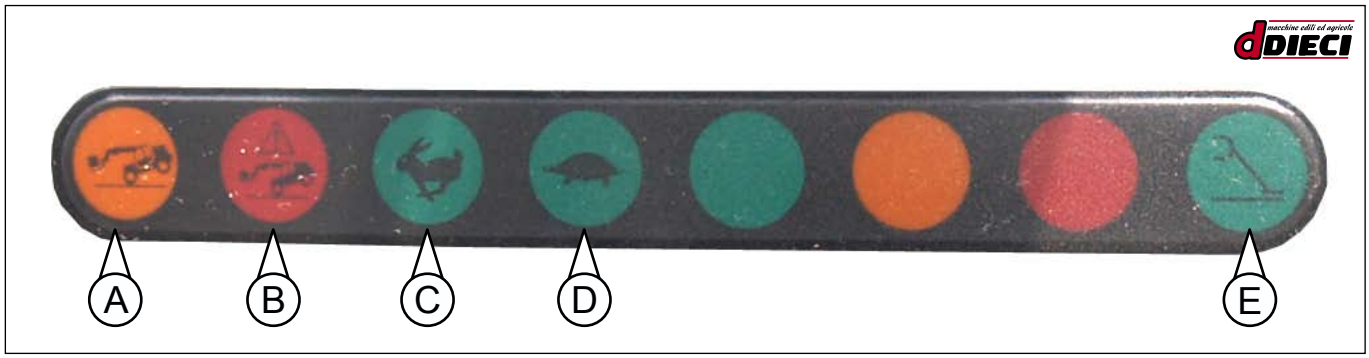
(fig.20/C)

A Anti-tipping device

B Right dashboard vehicle indicator lights

C Anti-tipping device selector key

D Anti-tipping device alarm re-entry push button



(fig.21/C)

A **Indicator light – Anti-tipping system Pre-alarm (orange)**

B **Indicator light – Anti-tipping system Alarm (red)**

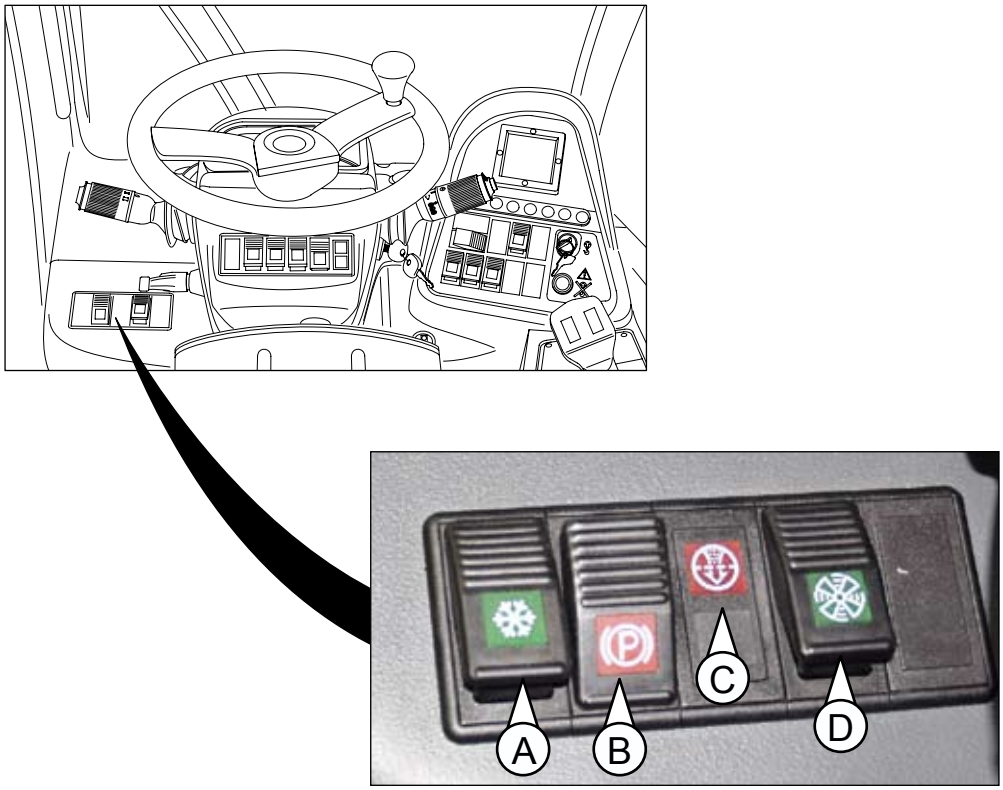
C **Indicator light - Fast speed engaged (green)**

D **Indicator light - Fast speed engaged (green)**

E **Indicator light - Stabilisers are fully lowered (green) – Where present**

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

RIGHT SIDE DASHBOARD (standard) - SWITCHES/ FUNCTION SELECTOR SWITCHES / INDICATOR LIGHTS (Fig.21/C)



(fig.21/C)

A **Air conditioner switch (green)**

B **“Negative” parking brake switch (red)**

C **Indicator light - Air filter obstructed (red)**

D **Cab ventilation fan switch (green)**

IGNITION SWITCH
(fig.30/C)

The ignition switch, with the key, allows you to:

- Switch on the diesel engine.
- Switch on instruments.
- Release the parking brake automatically with the diesel engine in motion (fig.30/C Pos.”1”).
- Release the parking brake automatically with the diesel engine switched off (fig.30/C Pos.”0”).

Conditions for start-up

Start-up can be carried out only if:

- The operator is correctly seated in the driver’s seat.
- The direction lever is positioned on “N” neutral.

Switching on instruments

Turn the key to position “1” (fig.30/C) to send an electrical current to the electrical/electronic instruments.
A check-up of all instruments, with all warning lights turning on, will take place when the dashboard is switched on.

These will remain on until the engine is switched on:

- Battery warning light
- Engine oil pressure warning light

Other warning lights may remain on depending on which functions have been activated.

In the event that warning lights should remain on signalling malfunctions, do not switch on, consult the “maintenance” chapter of this manual and contact a ***DIECI*** service centre.

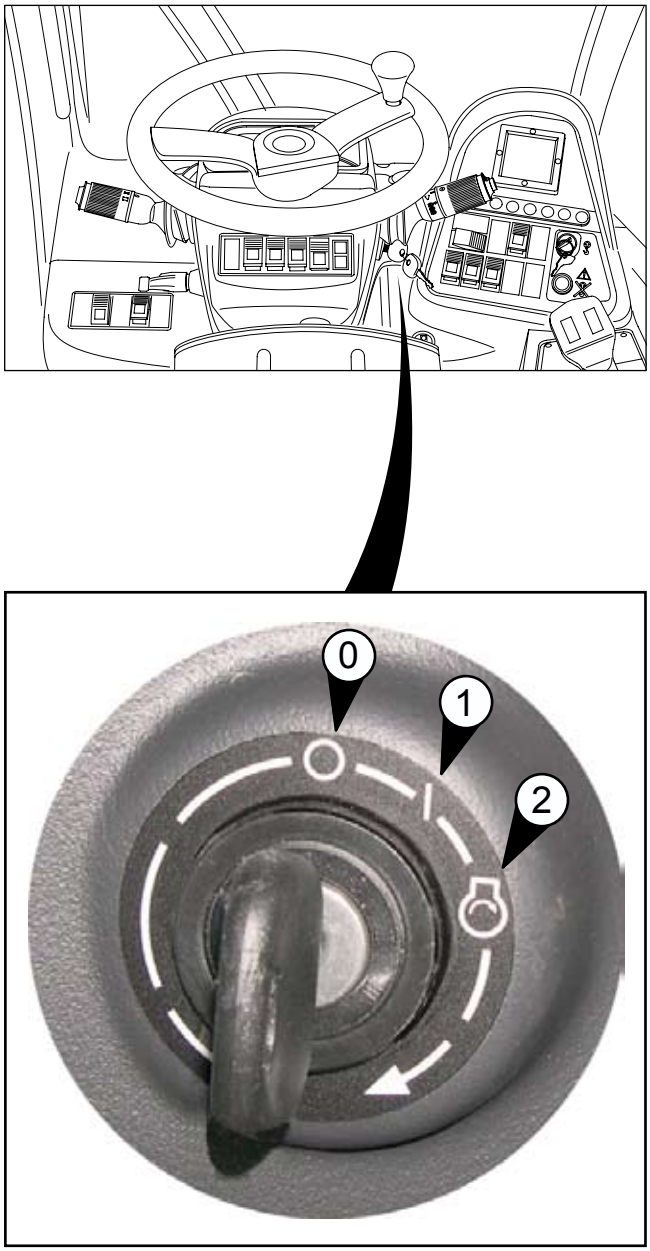
The first acoustic signal indicates the dashboard start-up with its relative function” check”. A second acoustic signal indicates load control panel start-up.

Start-up

- Turn the key to position “1” (fig.30/C) to power instruments.
- Turn the key to position “2” (fig.30/C) and keep it there for a few seconds to carry out start-up.
- Once the engine has started, release the key.

In the event that start-up cannot be carried out in a period of 5 seconds, try again at regular intervals of 15 seconds to not overload the starter button.

If the engine will not start, consult the “maintenance” chapter in this manual and contact a ***DIECI*** service centre.



(fig.30/C)

- *ATTENTION*:

The automatically engaging service brake will disengage with the engine started up. Before starting up the vehicle, always verify that the parking brake has been manually engaged by means of the switch.

- *ATTENTION*:

To release the service brake with the engine at a halt, see the “towing the vehicle” paragraph.

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

When the engine has started up, the warning lights signalling faults/malfunctions should go off and only those regarding active functions should remain on. If the engine will not start, consult the “maintenance” chapter in this manual and contact a ***DIECI*** service centre.

During the first minutes of use, keep transfer and load lifting speed low to heat up the engine and hydraulic fluid. Operate at low RPMs (max 1500), avoiding sharp manoeuvres and acceleration until temperature has risen.

- *ATTENTION*:

Bring the engine to a high number of RPMs before high temperature and pressure can cause any serious damage to the engine or the hydraulic system.

DASHBOARD LEVERS

Forward / reverse gear selection lever

This lever “1” (fig.31/C) allows the user to change direction and use the horn. On the dashboard, the indicator lights that indicate the direction in which the vehicle is travelling light up (fig. 32/C pos. “F-R”). If the indicator lights are switched off, the vehicle is in neutral. If the lever is kept in the intermediate position, the gear is in neutral.

- ATTENTION:

To engage the FORWARD/ REVERSE gear, move the lever upwards. This movement protects the lever from accidental manoeuvres.

- Moving the lever to position “F” (fig. 31/C), the FORWARD gear is engaged and the indicator light (fig.32/ C) lights up.
- Moving the lever to position “R” (fig. 31/C), the REVERSE gear is engaged and indicator light “R” (fig.32/ C) lights up. When the reverse gear is engaged, an acoustic alarm is set off.
- Pushing on the extremity of the lever activates the horn (Fig.31/C pos.”2”)

ATTENTION

Lever movements are not active when:

- The parking brake is engaged.
- The operator is not seated correctly in the driver’s seat.

Procedure for changing direction:

- Reduce engine speed to a minimum and bring the vehicle to a halt.
- Select the new direction.

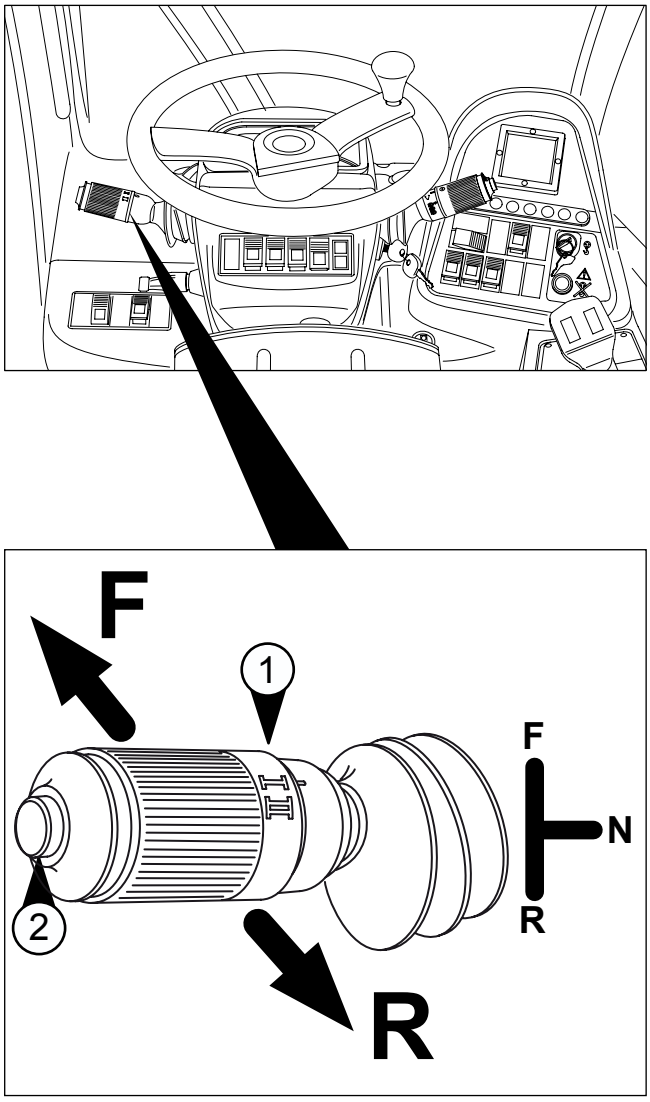
- ATTENTION:

Direction reversal is not permitted at speeds exceeding 2 km/h.

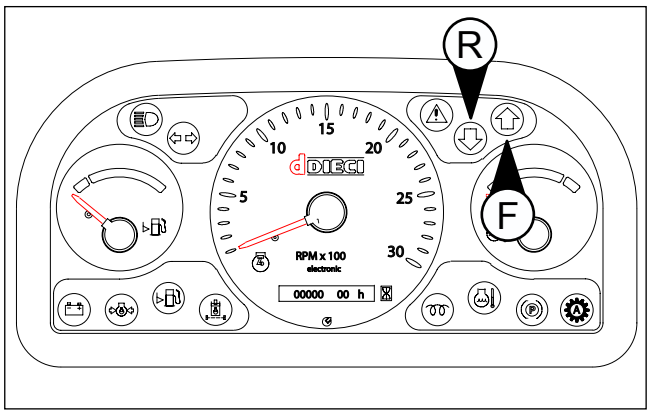
If the forward/reverse gear selector is moved to a position other than neutral when the parking brake is engaged, the transmission will not work.

Gear shift by lever
(Optional)

- Turning the lever to (Pos. “1”) (fig. 31/C), the slow hydraulic gear is engaged.
- Turning the lever to (Pos. “1”) (fig. 31/C), the fast hydraulic gear is engaged.



(fig.31/C)



(fig.32/C)

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

MULTI-FUNCTION LEVER

Direction indicators

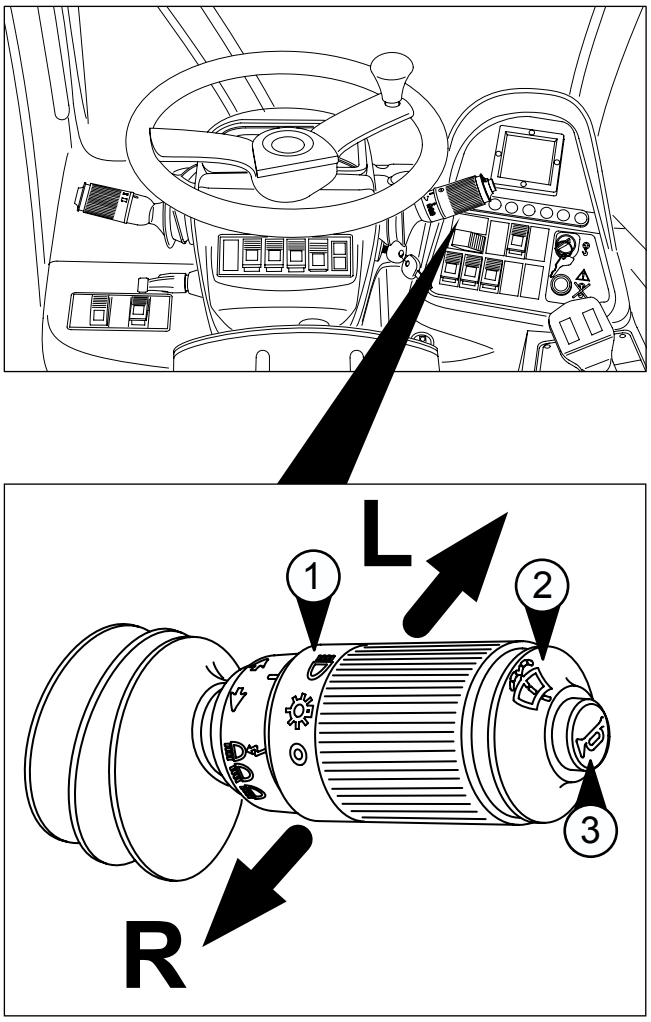
- Pull the lever towards you to signal a diversion to the right (fig.34/C Pos.”R”).
- push it forward to indicate a diversion to the left (fig.34/C Pos.”L”).

The indicators only function when the ignition switch is in the engaged position.

The corresponding warning lights prove that the operation is correct.

Pushbutton functions

- The intermediate pushbutton of the handpiece activates the rear windscreen wiper (fig.34/C Pos.”2”).
- The pushbutton to the far right of the handpiece activates the horn (fig.34/C Pos.”3”).



(fig.34/C)

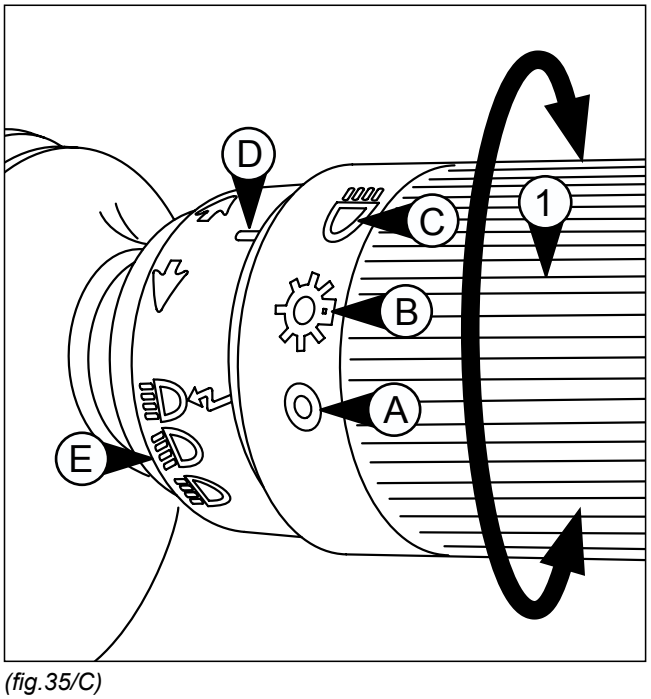
Switching on headlights

Rotate the handpiece “1” (fig.35/C) to switch on the lights.

The symbols on the handpiece near the arrow (fig.35/C Pos.”D”) indicate that the lights are:

- Switched off (fig.35/C Pos.”A”).
- Headlights (fig.35/C Pos.”B”).
- Dipped lights (fig.35/C Pos.”C”).

The full beams headlights (fig.35/C Pos.”E”) are activated shifting the lever upwards for single flashes, downward for continuous use.



(fig.35/C)

PEDALS

Accelerator pedal
(fig.36/C Pos.”1”)

Press the accelerator pedal to increase engine RPMs and release it to decrease RPMs. The pedal acts directly on the engine injection pump.

Service brake pedal
(fig.36/C Pos.”2”)

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

When the brake pedal is pushed, the rear light stop lights switch on. The lights remain on until the pedal is released.

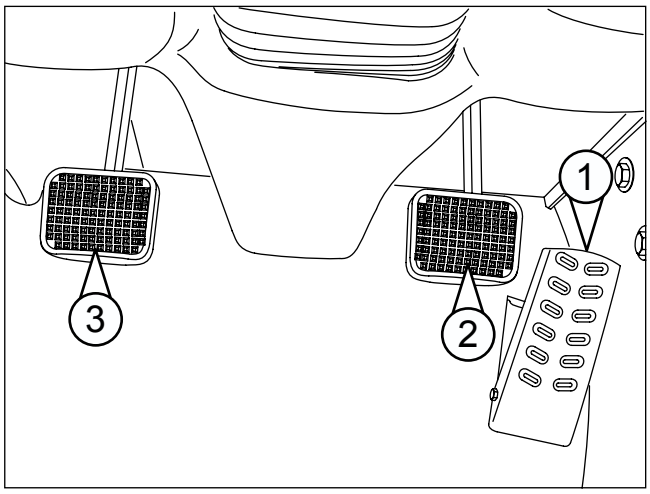
Periodically check that both lights are working.

***- ATTENTION*:**
In the event of limited use of the pedal, periodically check that it is working properly. Contact a ***DIECI*** SERVICE CENTRE IN THE EVENT OF PROBLEMS.

“INCHING” pedal
(Fig.36/C Pos.”3”)

The pedal allows for slow, precise movements forward even when the engine is running at a high RPM. It acts directly on the mechanical transmission.
The machine stops, remaining partially braked, when the pedal is fully pressed down.
When the pedal is fully pressed down, the gear can be changed. To change gears, follow the instructions provided in the paragraph “Changing gears”.

***- ATTENTION*:**
Do not press the “inching” pedal at high speeds, the vehicle will brake sharply.



(fig.36/C)

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

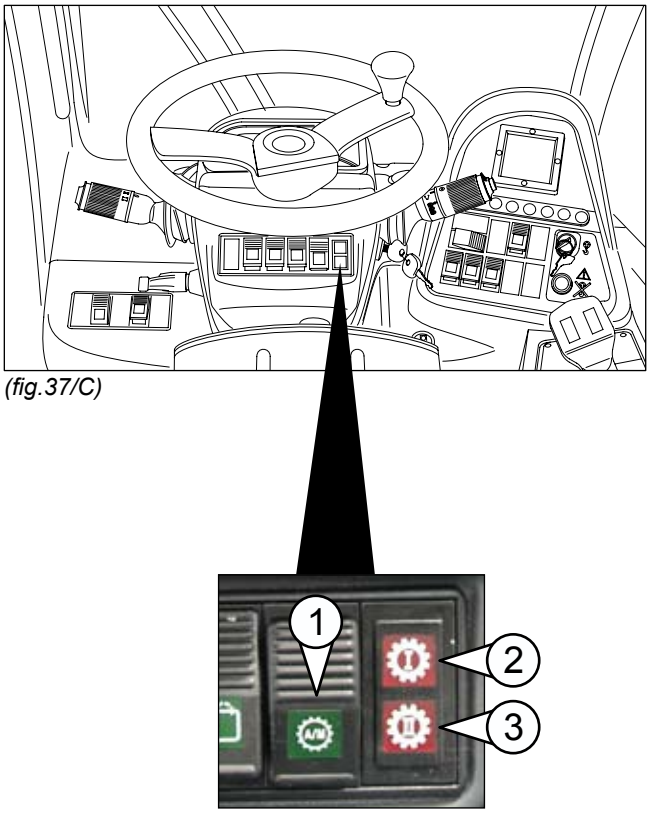
FAST GEARS SWITCH

(Fig.37/C Pos.”2-3”)

The two-speed mechanical selector is operated (fig.37/C Pos.”1”) using the selector.

To change gears:

- **Bring the vehicle to a complete stop**
- Press and hold down the “inching” pedal
- Hold the switch downward for a few seconds to engage the FAST gear “II”. The indicator light (fig. 37/C Pos. “2”) signals engagement. For road transfers, the indicator light fig. 37/C Pos. “2” switches on.
- Press and hold the switch up for a few seconds in order to insert the “SLOW” gear “I”. The switching on of the indicator light (fig.37/C Pos.”2”) indicates engagement. For work at the construction site. (the indicator light fig.37/C Pos.”3” switches on).



(fig.37/C)

***- ATTENTION*:**

Insert gear “I” to operate in the construction yard.
Insert the “II” gear for long transfers without a load, in unobstructed places, with good visibility with flat land without danger of pedestrian crossings.

***- ATTENTION*:**

Do not change gears when the vehicle is in motion.

***- ATTENTION*:**

Hold down the “inching” pedal until the selected gear’s corresponding indicator light switches on.

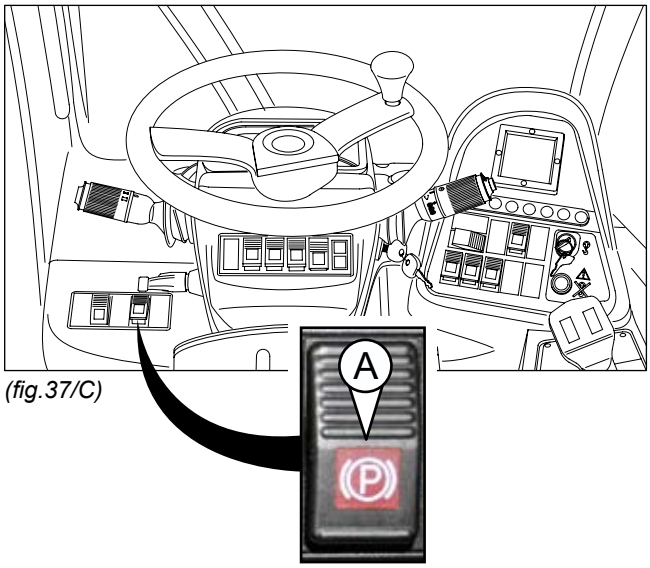
PARKING BRAKE

The parking brake must be engaged whenever the operator leaves the vehicle, whether it be at a halt or switched on, in the event of even momentary stops and any time the vehicle is working at a halt with the stabiliser feet lowered (if present). The brake is engaged automatically when the engine is switched off.

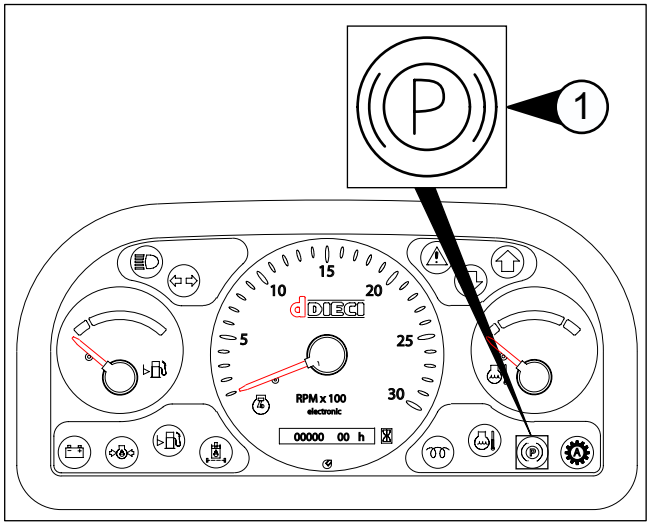
When switch “A” (fig.37/C) is pressed, the parking brake is engaged. The warning warning light on the pushbutton and the central dashboard (fig.38/C Pos.”1”) indicate engagement has been set properly. The vehicle cannot move and the hydrostatic transmission is disengaged while the parking brake is engaged.

Check the operation of the parking brake as follows:

1. Get on the vehicle, fasten your seat belt.
2. Start up the engine.
3. Park the vehicle on a flat and dry surface.
4. Engage the parking brake (fig.37/C Pos.”A”).
5. Raise the tools until they are in the position to be transferred.
6. Engage the slow speed.
7. Engage the forward gear switch.
8. If the vehicle does not move press the accelerator to improve gradually the rotation speed to 1500 RPM. The vehicle must not move.
9. The test should not last for more than 20 seconds.
10. If during the test the vehicle has not moved make the brake be checked at a ***DIECI*** service centre.



(fig.37/C)



(fig.38/C)

⚠ - *ATTENTION*:

In case the parking brake breaks down do not use the vehicle.

⚠ - *ATTENTION*:

Unauthorised modifications of the rear axle ratio, of the machine weight, of the wheels and tyres dimensions may hinder the parking brake efficiency.

⚠ - *ATTENTION* - ⚠

Before checking the operation of the parking brake, make sure that there are no persons around the vehicle.

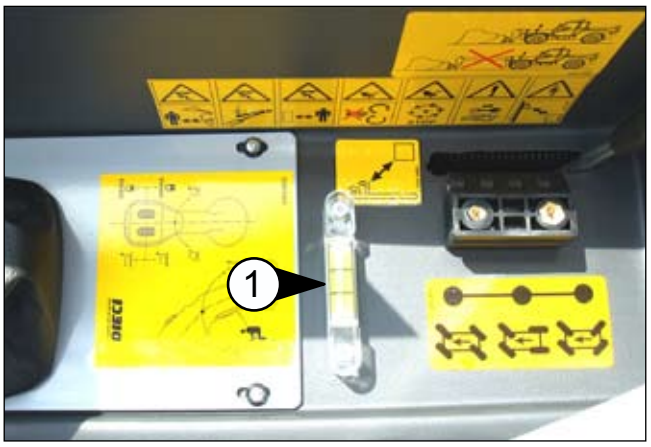
⚠ - ATTENTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

SPIRIT LEVEL
(fig.40/C)

The spirit level (fig.40/C Pos.”1”) is located to the right of the operator. It is used to verify the proper levelling of the vehicle.

***- ATTENTION*:**

To operate in absolute safety the vehicle should be level. Maximum slope allowed is 2°.



(fig.40/C)

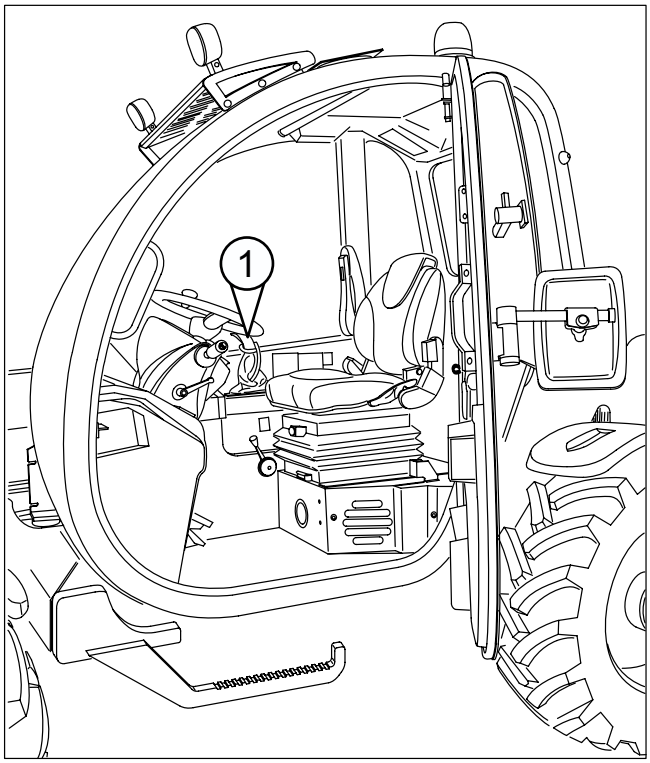
BOOM CONTROL LEVER
(fig.50/C Pos.”1”)

This lever is found to the right of the operator (fig.50/C Pos.”1”). It is used for boom and boom end manoeuvres.

***- ATTENTION*:**
Before raising the boom make sure that the area above is free. Make sure that the loads to be raised respect the capacity diagrams of the vehicle.

***- ATTENTION*:**
The restrictions indicated refer to a standard version in force when this manual was printed. In the presence of special optionals or after technical updates, lever movements may correspond to different controls. For this reason, always refer to indications present inside the driver’s cab.

***- ATTENTION*:**
The Manufacturer offers a range of levers (Joysticks) which are similar, but with different technical specifications and performances than the standard version (see following pages).



(fig.50/C)

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

Joystick 3 in 1 extension On/Off
(Standard version)
(Fig.51/C)

Before each manoeuvre, press and hold down control lever "**A**" (fig.51/C).

Boom manoeuvre:

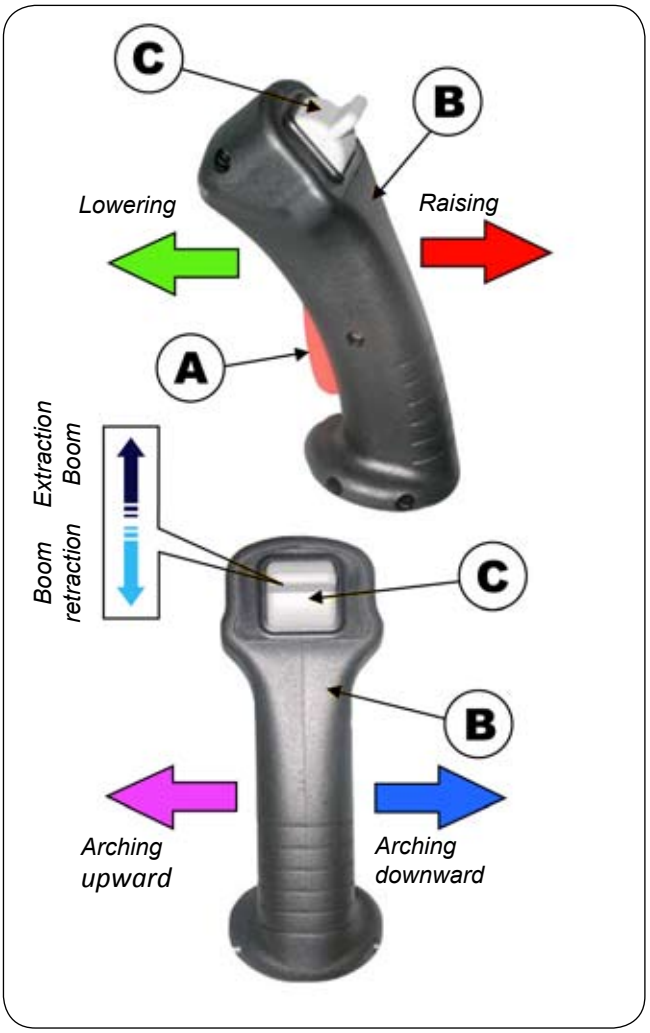
- Pull joystick "**B**"(fig.51/C) backward to raise the boom.
- Pull joystick "**B**"(fig.51/C) forward to lower the boom.

Boom extraction:

- Push lever "**C**"(fig.51/C) forward to extract the boom.
- Push lever "**C**"(fig.51/C) backward to retract the boom.

Arching attachment support:

- Move the joystick "**B**" (fig.51/C) to the right side to swing the attachment support downward.
- Move the joystick "**B**" (fig.51/C) to the left side to swing the attachment support upward.



(fig.51/C)

Single lever 4 in 1 On-Off Extraction Joystick
(fig.52/C)

Before each manoeuvre, press and hold down control lever "**B**" (fig.52/C).

Boom manoeuvre:

- Pull the joystick "**A**" (fig.52/C) backward to raise the boom.
- Pull joystick "**A**"(fig.52/C) forward to lower the boom.

Boom extraction:

- Press the red pushbutton "**1**" (fig.52/C) to extract the boom.
- Press the red pushbutton "**2**" (fig.52/C) to retract the boom.

Arching attachment support:

- Move the joystick "**A**"(fig.52/C) to the right side to swing the attachment support downward.
- Move the joystick "**A**"(fig.52/C) to the left side to swing the attachment support upward.

Service controls:

- Press the green pushbutton "**3**" (fig.52/C) for services.
- Press the green pushbutton "**4**" (fig.52/C) for services.

NOTE: When an electro hydraulic attachment is installed, pushbuttons "3" and "4" are used to control them in accordance with specifications in the corresponding attachment manual.

⚠ - *ATTENTION*:
Before starting any operations with the machine, verify the function and movements of service pushbuttons "3" and "4" (fig.52/C). Work from an area free of any obstacles to allow verifications of movements without risk of damage to things, persons or animals.

(fig.52/C)

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

4 in 1 Proportional Control Extraction Joystick On-Off Services

(fig.53/C)

Before each manoeuvre, press and hold down control lever "**A**" (fig.53/C).

Boom manoeuvre:

- Pull joystick "**B**"(fig.53/C) backward to raise the boom.
- Push joystick "**B**"(fig.53/C) forward to lower the boom.

Boom extraction:

- Push lever "**C**"(fig.53/C) forward to extract the boom.
- Push lever "**C**"(fig.53/C) backward to retract the boom.

Note: the extraction or retraction speed will be proportional to the movement of lever "**C**" (fig.53/C)

Arching attachment support:

- Move the joystick "**B**" (fig.53/C) to the right side to swing the attachment support downward.
- Move the joystick "**B**" (fig.53/C) to the left side to swing the attachment support upward.

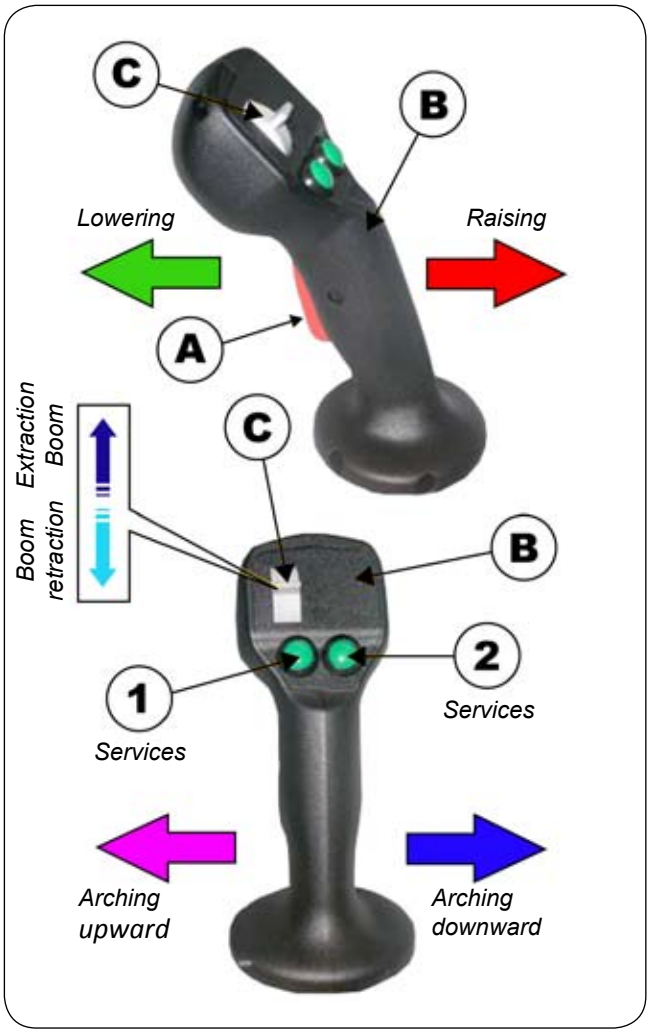
Service controls:

- Press the green pushbutton "**1**" (fig.53/C) for services.
- Press the green pushbutton "**2**" (fig.53/C) for services.

NOTE: When an electro hydraulic attachment is installed, pushbuttons "1" and "2" are used to control service movements in accordance with specifications in the corresponding attachment manual.

⚠ - *ATTENTION*:

Before starting any operations with the machine, verify the function and movements of service pushbuttons "1" and "2" (fig.53/C).
Work from an area free of any obstacles to allow verifications of movements without risk of damage to things, persons or animals.



(fig.53/C)

4 in 1 Proportional Control Extraction Joystick
Proportional services
(fig.54/C)

Before each manoeuvre, press and hold down the “man in” control lever “**A**”.

Boom manoeuvre:

- Pull joystick “**1**” (fig.54/C) backward toward letter “**B2**” (fig.54/C), to raise the boom.
- Push joystick “**1**” (fig.54/C) forward toward letter “**B1**” (fig.54/C), to lower the boom.

Boom extraction:

- Push roller “**C**”(fig.54/C) forward toward letter “**C1**” to extract the boom.
- Push roller “**C**”(fig.54/C) backward toward letter “**C2**” to retract the boom.

Note: the extraction or retraction speed will be proportional to the movement of roller “**C**”.

Arching attachment support:

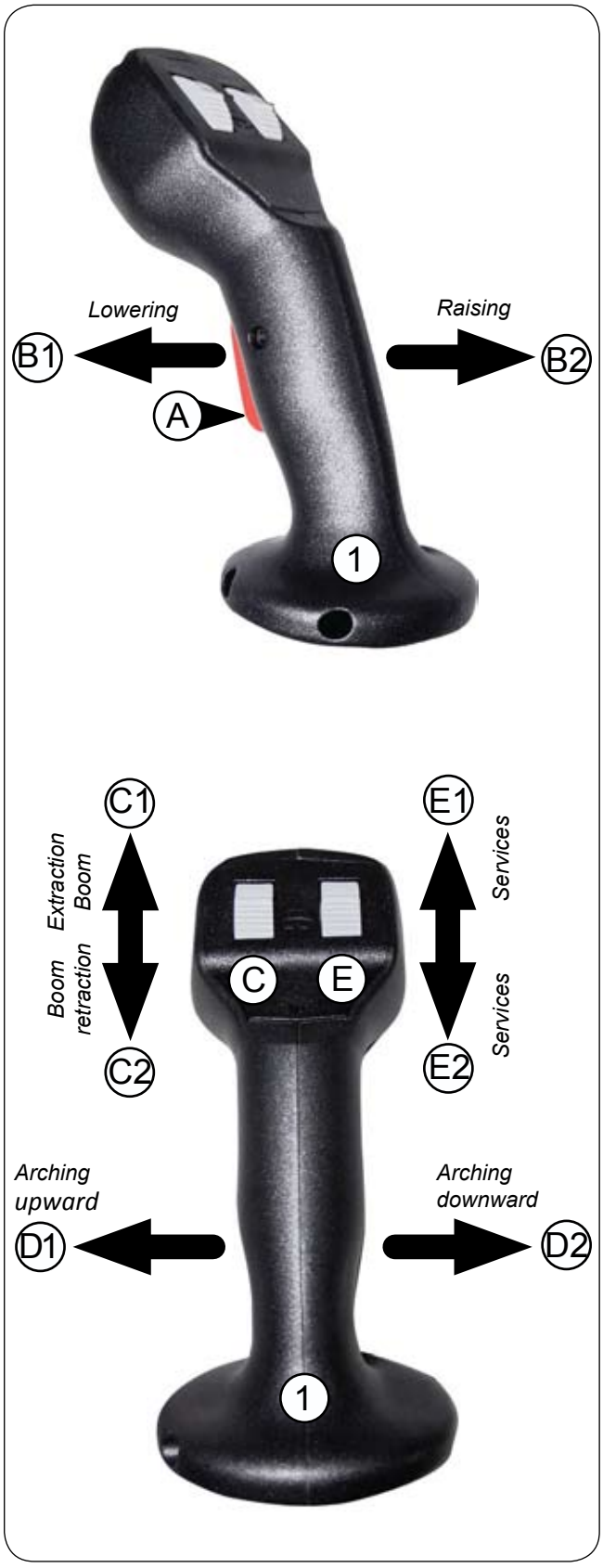
- Move the joystick “**1**” (fig.54/C) right toward letter “**D2**” to swing the attachment support downward.
- Move the joystick “**1**” (fig.54/C) left toward letter “**D1**” to swing the attachment support upward.

Service controls:

- Push roller “**E**”(fig.54/C) forward toward letter “**E1**” for services.
- Push roller “**E**”(fig.54/C) backward toward letter “**E2**” for services.

NOTE: When an electro hydraulic attachment is installed, roller “E” is used to control service movements in accordance with specifications in the corresponding attachment manual. The speed of services will be proportional to the movement of roller “**E**”.

***- ATTENTION*:**
Before starting any operations with the vehicle, verify the functions and movements of service roller “E”. Work from an area free of any obstacles to allow verifications of movements without risk of damage to things, persons or animals.



(fig.54/C)

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

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ROLL-OVER PROTECTION DEVICE
(fig.58/C and fig.59/C)

***- ATTENTION*:**
The “roll-over protection” device must **ALWAYS** be active, selector key (fig.58/C Pos.”**1**”) **ON** (fig.58/C Pos.”**2**”).

When the device instruments are switched on, a test is automatically carried out. All LEDs switch on and an acoustic signal is heard.
LED “**A”** (fig.59/C) switches on to indicate that the device is ready and powered. If this does not switch on, immediately contact ***DIECI*** Assistance Service.

The device detects longitudinal stability conditions of the vehicle, measuring the residual load weighing on the rear axis.

A scale of 6 lit LEDs (fig.59/C) accompanied by an acoustic signal indicate current working conditions with respect to the limit:

- Green LED “**D”**(fig.59/C), no acoustic signal normal operating conditions
- Yellow LED “**E”**(fig.59/C), intermittent acoustic signal pre-alarm conditions
- Red LED “**F”**(fig.59/C), continuous acoustic signal tipping limit load

When the last LED switches on, the alarm re-entry pushbutton is activated (fig.58/C Pos.”**3**”). A red warning light switches on the pushbutton as well.
When the load limit is reached (last LED switches on) (fig.59/C Pos.”**G**”), the device blocks all vehicle movements. In these conditions:

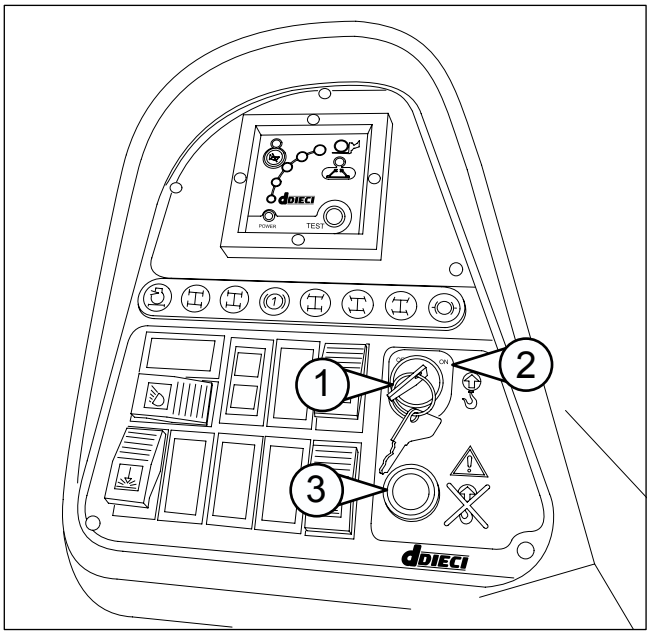
- Press the alarm re-entry pushbutton (fig.58/C Pos.”**3**”).
- Retract or raise the boom, bringing the boom back to a safe position (see capacity diagram).
- Once the safety zone has been reached, the alarm will stop.

- ATTENTION -

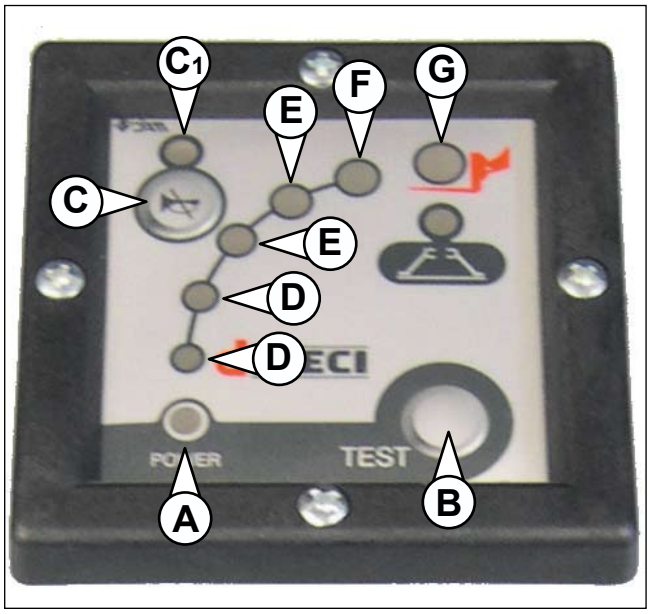
Pressing the alarm re-entry pushbutton (fig.58/C Pos.”3”), the roll-over protection system is deactivated. Consult the load table (found in the cab, use and maintenance manual) before carrying out any other manoeuvre. It is possible to know the exact position of the boom with the use of a clinometer and the letters on the boom. Do not carry out any pejorative movements in these conditions or vehicle stability will be put in danger of tipping.

- ATTENTION -

These operations should be carried out by expert, trained personnel who have been authorised by the safety officer.



(fig.58/C)



(fig.59/C)

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

The MUTE pushbutton (fig.59/C Pos.”C”) disables acoustic signals. This condition is signalled by a corresponding yellow LED (fig.59/C Pos.”**C**$_1$”). The acoustic signal is re-activated automatically at each ignition or when limit conditions of stability are reached.

In the event of system malfunction (signalled by the intermittent lighting of all LEDs and a continuous acoustic signal), device diagnosis can be carried out by pressing the TEST pushbutton (fig.59/C Pos.”B”). This procedure allows the operator to see the type of fault by means of codified switching on of LEDs on the scale (for faster identification of faults, contact ***DIECI*** Assistance Service explaining the sequence of LEDs which have switched on).
Once the problem has been resolved, system resetting for normal operation will be carried out as the vehicle is shut down and restarted.

With the roll-over protection device activated and the selector key in the ON position, the key can be removed (fig.58/C Pos.”**1**”) in order to prevent that the safety system become accidentally or intentionally deactivated, if not by means of its ‘special pushbutton (fig.58/C Pos.”**3**”). This key must be entrusted to the safety or works supervisor.

STEERING CONTROL LEVER (USE)

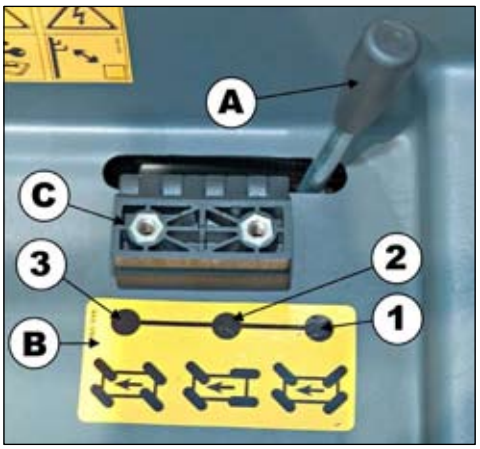
(Fig.62/C)

***- ATTENTION*:**

Before selecting a new steering type, align the wheels as explained in the relevant section. Steering selection is done when the vehicle is stopped.

***- ATTENTION*:**

Using the above-mentioned lever (fig. 60/"**A**") three steering types can be obtained. The steering type must be selected when the vehicle is stopped.

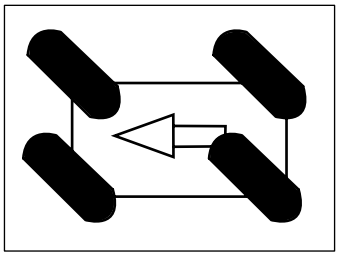


(fig.60/C)

1 – Beam steering:

This type of steering allows for maximum right steering (fig. 61/C).

To activate beam steering, turn lever "**A**" (fig.60/C) to position "**1**" shown on the functions sticker of steering "B" (fig.60/C).

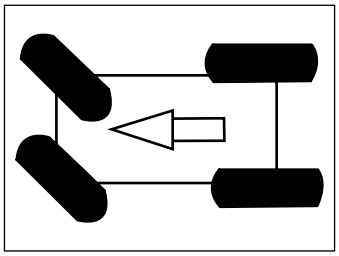


(fig.61/C)

2 – Normal steering:

This type of steering allows for normal steering, or front steering only (fig.62/C).

To activate normal steering, turn lever"**A**" (fig.60/C) to position "**2**" shown on the functions sticker of steering "**B**" (fig. 60/C).



(fig.62/C)

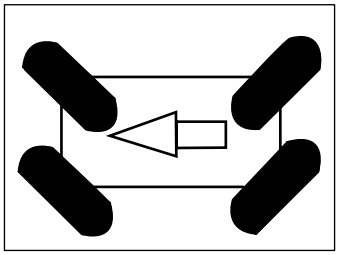
3 – Crab steering:

This type of steering allows for crab steering (fig. 63/C) (front and rear parallel wheels: sideways movement of vehicle).

To activate crab steering (fig.63/C) turn the lever to position "**A**" corresponding to position "**3**" as shown on the functions label of steering "**B**" (fig. 60/C).

- ATTENTION -

When driving on the road,
block the selector In Pos. 1 (fig. 60/C)
using the stopper provided (Pos. "C" fig. 60/C)



(fig.63/C)

ALIGNMENT OF FRONT AND REAR WHEELS

Introduction: The wheel alignment procedure must be done before selecting a new type of steering and when the vehicle is stopped.

Alignment (standard):

1) Position selector "**A**" (fig.64/C) in the position "**1**" on the steering "B" functions sticker (fig. 64/C);

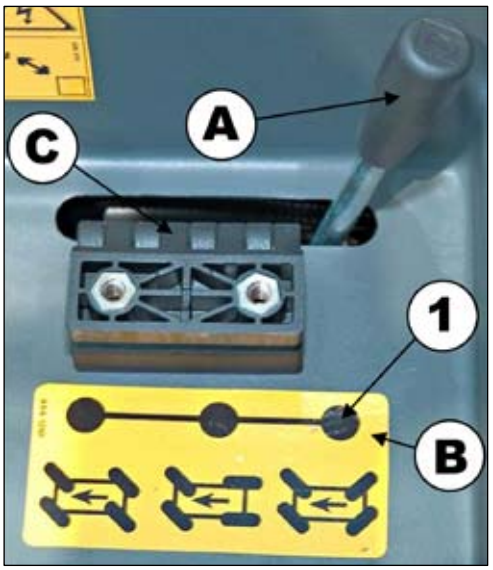
2) Turn the steering wheel, until the rear wheels have been completely straightened.

3) Position selector "**A**" (fig.65/C) in the position "**2**" on the steering "B" functions sticker (fig. 65/C);

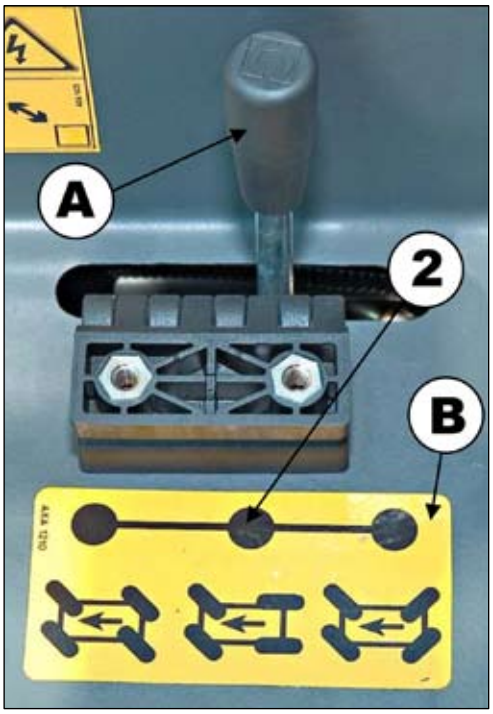
4) Turn the steering wheel, until the front wheels have been completely straightened.

5) At this point, the front and rear wheels are aligned and the desired steering type can be selected.

Note:
PERIODICALLY IT IS ADVISABLE TO ALIGN THE WHEELS (8-10 HOURS) DEPENDING ON THE CONTINUED USE OF THE VEHICLE.



(fig.64/C)



(fig.65/C)

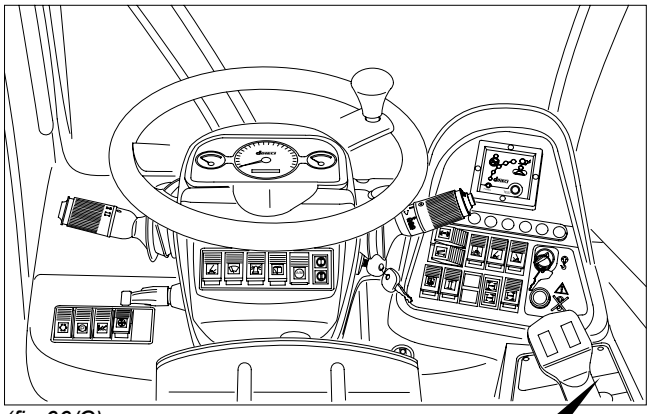
VEHICLE FUNCTION SELECTOR

This vehicle possesses a “vehicle functions selector” (fig.66/C Pos.”A”) which must always be set on the attachment to be used.

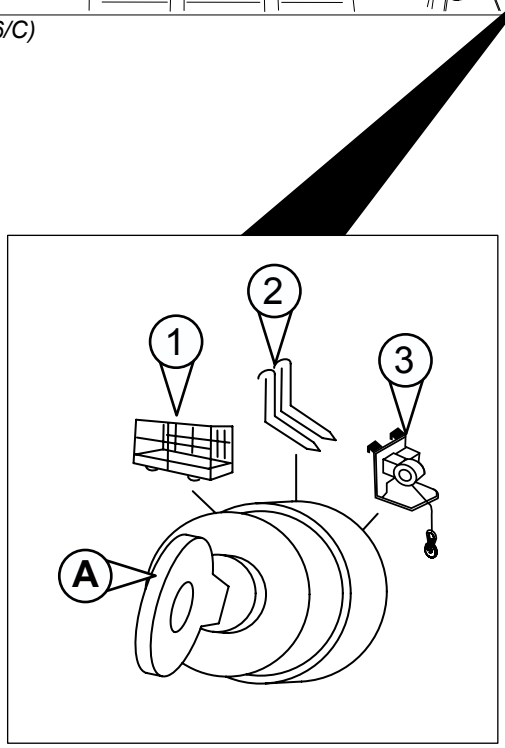
There are three selection categories:

- **WINCH**
  for use winches, hoists, extension trestles, winches with extension trestles, arms, and hook for fork holder (fig. 66/C Pos. “3”).
- **FORKS**
  for use with forks, buckets, mixing buckets, ladles and telehandler (fig. 66/C pos “2”).
- **BASKETS**
  for use with any type of basket for transporting people that the vehicle can hold (fig. 66/C pos “1”).

Select the tool by turning the key clockwise or counter-clockwise. The selector is a type of key that provides the works manager with the possibility of removing the key after having selected the tool, not allowing anyone else to use the selector.



(fig.66/C)



⚠ - *ATTENTION*:

Before each use check that the “vehicle function selector” is set to work with the attachment mounted on the boom head.

To see the attachments that can be used with the vehicle, consult the DIECI price list or contact your local dealer.

⚠ - *ATTENTION*:

Mounting attachments different that those approved by ***DIECI*** is prohibited.

⚠ - *ATTENTION*:

Only original ***DIECI*** attachments may be used.
DIECI declines all responsibility for damage to the vehicle, people or things in cases where original attachments have not been used.

⚠ - *ATTENTION* - ⚠

Use of the vehicle with an attachment mounted that is different than that selected with the “vehicle functions selector” <u>IS PROHIBITED</u>.

When the passenger basket is selected, a steering type different from that set cannot be selected.

⚠ - *ATTENTION* - ⚠

THE BASKET CAN BE USED FROM THE CAB BY SETTING THE “VEHICLE FUNCTION SELECTOR” TO “FORKS” (FIG. 57/C POS. “B”) **ONLY TO BRING THE BASKET TO THE GROUND IN THE EVENT THE OPERATOR IS FEELING ILL OR HAS BEEN HURT.**

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

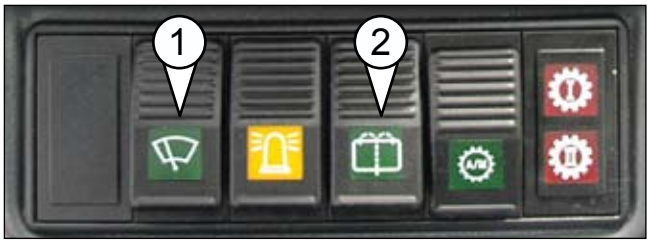
FRONT WINDSCREEN WIPER CONTROLS
(Fig.67/C Pos.”1”)

- Use the selector to activate (fig.67/C Pos.”1”).

The selector indicator light switches on to indicate successful activation.

⚠ - *ATTENTION*:

Worn blades may obstruct vision and scratch the glass.



(fig.67/C)

REAR WINDSCREEN WIPER CONTROLS
(Fig.67/C Pos.”2”)

- Use the selector to activate (fig.67/C Pos.”2”).
- Press and hold the selector to activate rear windscreen wipers.

The selector indicator light switches on to indicate successful activation.

⚠ - *ATTENTION*:

Worn blades may obstruct vision and scratch the glass.

EMERGENCY LIGHTS SELECTOR
(Fig.68/C Pos.”1”)

Use the selector (fig.68/C Pos.”1”) to activate emergency lights (direction indicators are fully lit in flashing mode).

The selector indicator light switches on to indicate successful activation.

(fig.68/C)

MANUAL ACCELERATOR
(Fig.69/C Pos.”1”)

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

- Move gli handle forward to increase engine rpms.
- Move the handle back to decrease engine rpms.

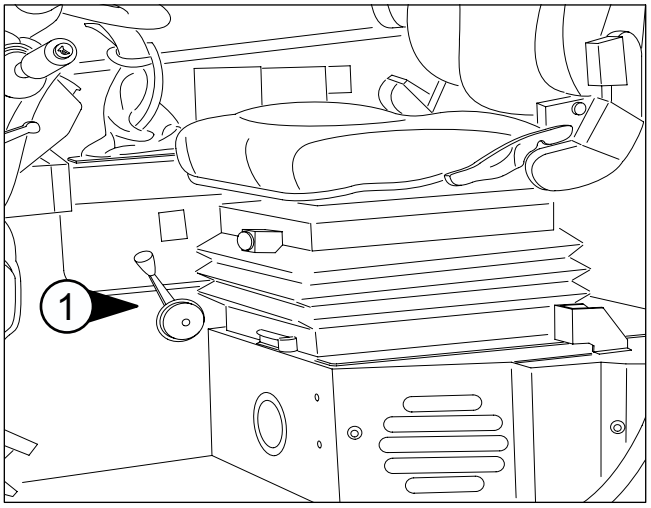
⚠ - *ATTENTION*:

When the vehicle must be switched off, the engine RPMs must be reduced to a minimum.

⚠ - *ATTENTION*:

Increasing RPMs, the vehicle may move without accelerator pedal having been pressed.
Use the manual accelerator only when using the vehicle with the parking brake engaged.

Always bring the manual accelerator (fig.69/C Pos.”1”) **to the starting position (engine at minimum RPMs) before disengaging the parking brake. The machine may start suddenly, causing risk of damage.**



(fig.69/C)

CAB INSIDE VENTILATION

To activate ventilation, press the pushbutton (fig.70/C Pos.”1”).

The positions indicate, respectively:

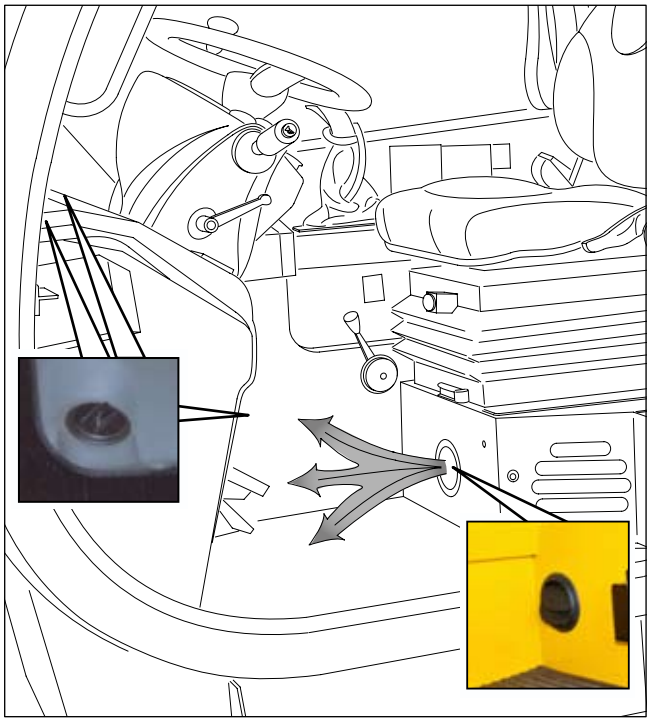
- Off
- First speed
- Second speed

- To open the air vents (fig.71/C, fig.73/C,) press down on one side of the vent and adjust the air flow direction with the tabs or turning the vent itself.
- To close the vents, push the tabs until they are in a horizontal closed position.

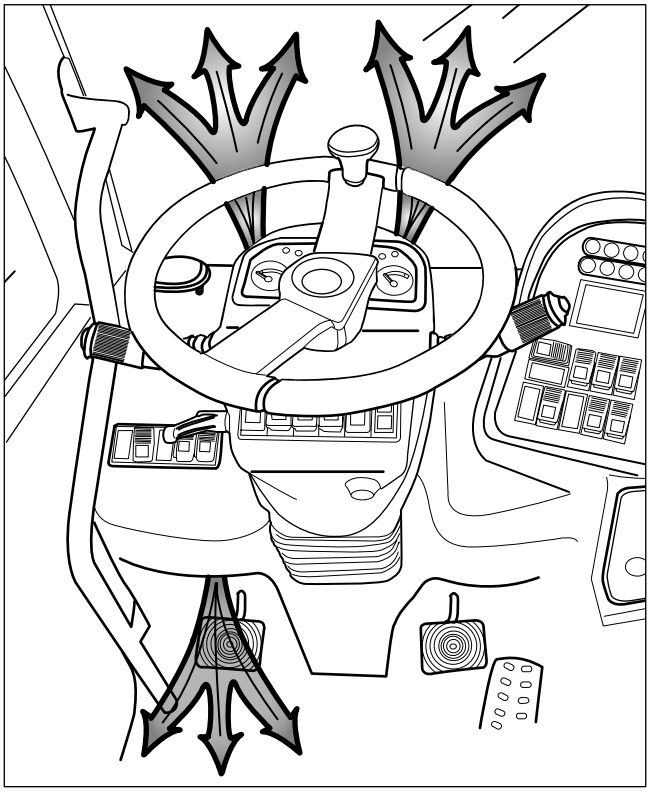
Air temperature adjustment

To adjust the temperature of the air coming from the vents, move the tab (fig.72/C Pos.”A”).
Turn the lever toward the red part of the scale (lower part) to increase temperature. Turn the blue part of the scale and the temperature will decrease until it is about the same as the outside temperature.

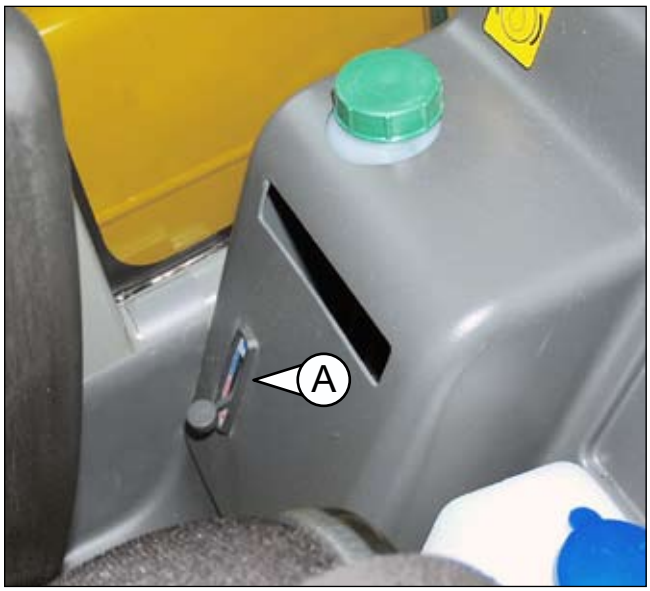
(fig.70/C)



(fig.71/C)



(fig.73/C) (Air flow representation)



(fig.72/C)

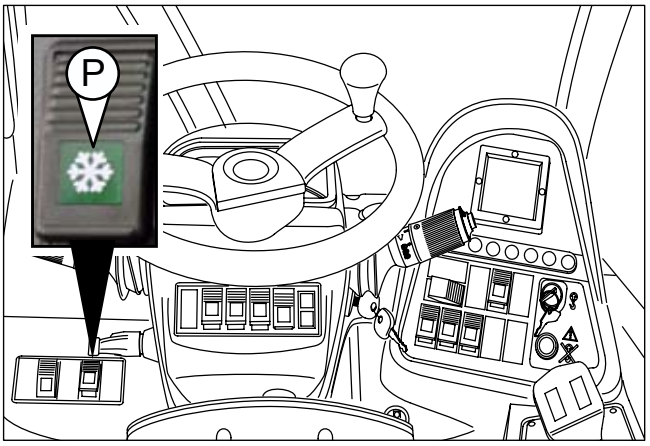
- ATTENTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

AIR CONDITIONING (OPTIONAL)

System operation:

1. Check that all doors and windows are closed.
2. Ensure that the heater is switched off, turning the lever towards the “blue” part of the scale.
3. With the engine on, switch on the air conditioning and the fan (fig.74/G Pos.”P”) on. Simply switching on the air conditioning, using the same switch, will automatically activate the fan in first speed. When the ventilation switch is on, it will be possible to select the second and third air speeds.
4. Open and adjust vents to obtain ideal cooling with regard to cab temperature. Increase or decrease fan speed to obtain desired conditions.

Should the air conditioning system not function properly, immediately inspect the condenser located on the outside of the cab above the emergency exit (fig.75/C Pos.”1”).



(fig.74/C)

(fig.75/C)

⚠ - *ATTENTION*:

Switch on the air conditioning every 15 days, even in the colder months, with the engine running at minimum (without accelerating). In this way, the moveable parts like the compressor and the general system can be lubricated.

⚠ - *ATTENTION*:

Keep the condenser clean to keep the conditioning system working efficiently (fig.75/C Pos.”1”).

⚠ - *ATTENTION*:

DO NOT loosen any of air conditioning system’s tubes in order to reach the condenser, because skin contact with coolant can cause freezing.

⚠ - *ATTENTION*:

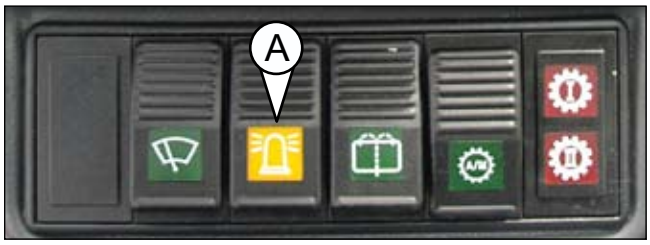
Consult chapter “D” for system cleaning and maintenance.

REVOLVING LIGHT SWITCH
(fig.80/C Pos.”1”)

The revolving light must always be positioned above the driving cab (fig.80/C Pos. “1”) and must always be in operation both at the work site and when driving on roads.

- Position the revolving light on the driving cab (fig.80/C Pos.”1”).
- Plug the power plug in the socket at the rear of the cab (fig.80/C Pos.”2”).
- To switch the revolving light on push the button ”A” (fig.81/C) . The pushbutton warning light switches on to indicate start-up.

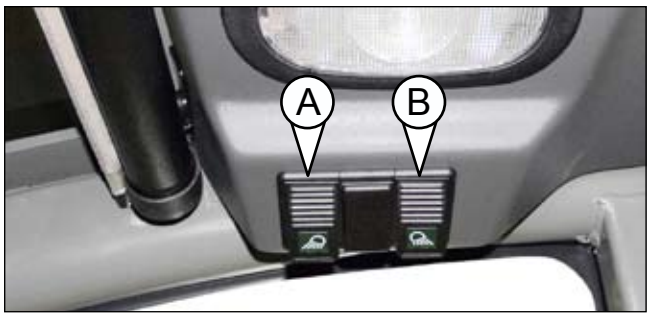
(fig.80/C)



(fig.81/C)

CAB FRONT LIGHTS SWITCH (OPTIONAL)
(fig.82/C Pos.”A”)

Use the switch (fig.82/C Pos.”A”) to switch on the front work lights on the cab (fig.83/C Pos.”1”).
The warning light switches on to indicate successful activation.



(fig.82/C)

CAB REAR LIGHTS SWITCH (OPTIONAL)
(fig.82/C Pos.”B”)

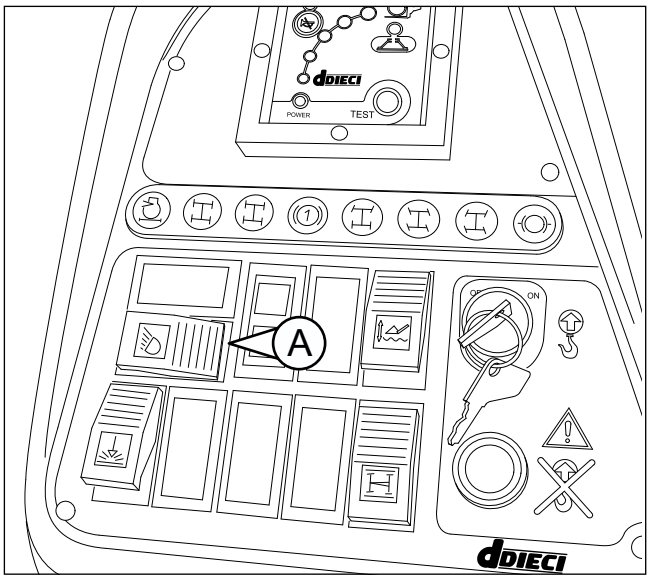
Use the switch (fig.82/C Pos.”B”) to switch on the rear work lights on the cab (fig.83/C Pos.”2”). The warning light switches on to indicate successful activation.

(fig.83/C)

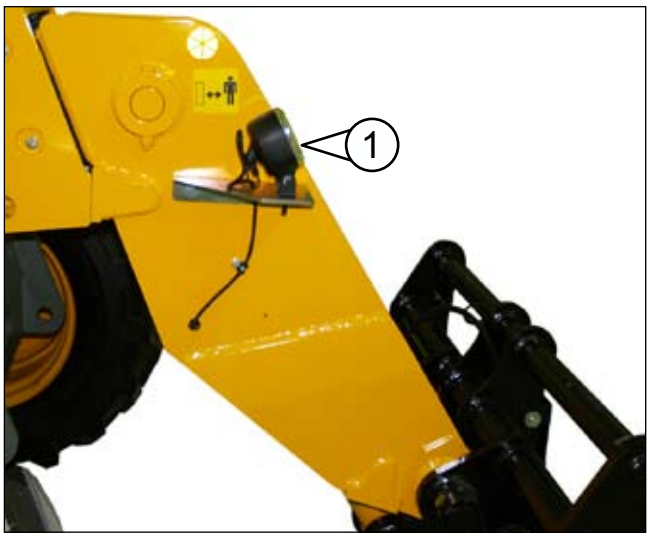
BOOM HEAD LIGHT SWITCH (OPTIONAL)
(fig.84/C Pos.”A”)

Use the switch (fig.84/C Pos.”C”) to switch on the boom head light (fig.85/C Pos.”1”). The warning light switches on to indicate successful activation.

Two work lights, one on the right side and the other on the left side of the boom, can be installed upon client request.



(fig.84/C)



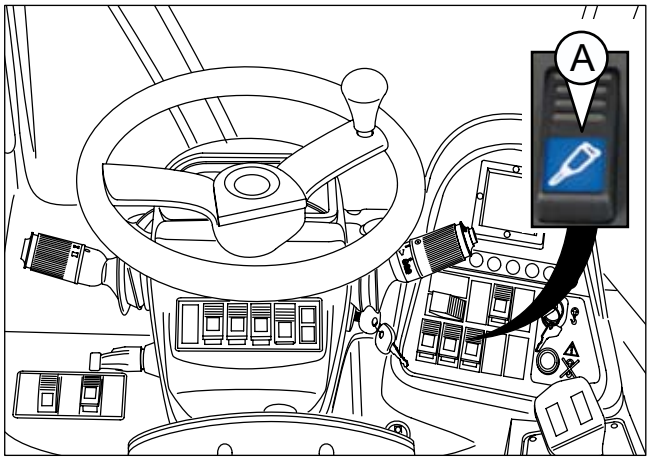
(fig.85/C)

ARM HEAD SOLENOID VALVE (OPTIONAL)
(fig.91/C Pos.”1”)

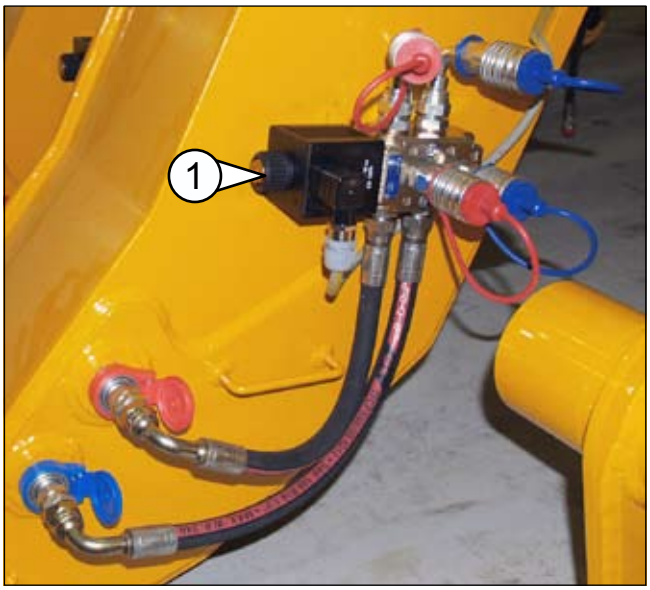
The switch is only installed in the presence of the arm head solenoid valve (fig.91/C Pos.”1”).
It is possible to have halved hydraulic controls on the arm head with the use of the solenoid valve.

- Activate the pushbutton (fig.90/C Pos.”A”) to bring a current to the solenoid valve, which will deviate oil flow. The pushbutton warning light switches on to indicate start-up.

The selector (fig.90/C Pos.”A”) is used parallely to normal service controls. First, choose the selector where oil flow will deviate from, then carry out manoeuvres with the routine service controls.



(fig.90/C)



(fig.91/C)

REAR HYDRAULIC SOCKETS (OPTIONAL)
(fig.93/C Pos.”1”)

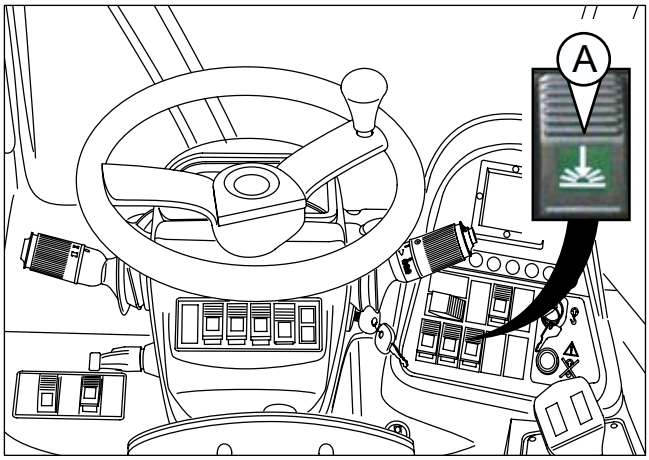
Located at the rear of the vehicle (fig.93/C Pos.”1”).

- Press the rear hydraulic sockets switch (fig.92/C Pos.”A”) to deviate oil. The pushbutton warning light switches on to indicate start-up.

The rear hydraulic sockets operate using Joystick service controls in the cab.

⚠ ***- ATTENTION*:**

Before starting any operations, verify function by means of corresponding switches.



(fig.92/C)

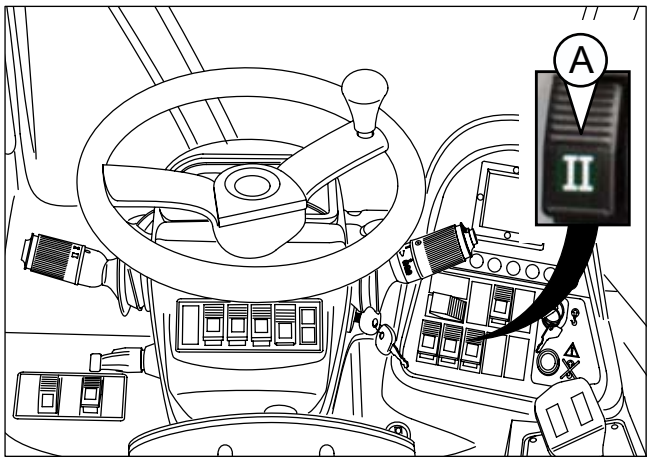
(fig.93/C)

2-SPEED BOOM (OPTIONAL)

The dual speed of the boom allows the operator to increase boom extraction and retraction speed.

Activate dual speed with the switch (fig.94/C pos.”A”). The pushbutton warning light switches on to indicate start-up.

When the 180 bar pressure has been exceeded, the second speed will deactivate automatically.



(fig.94/C)

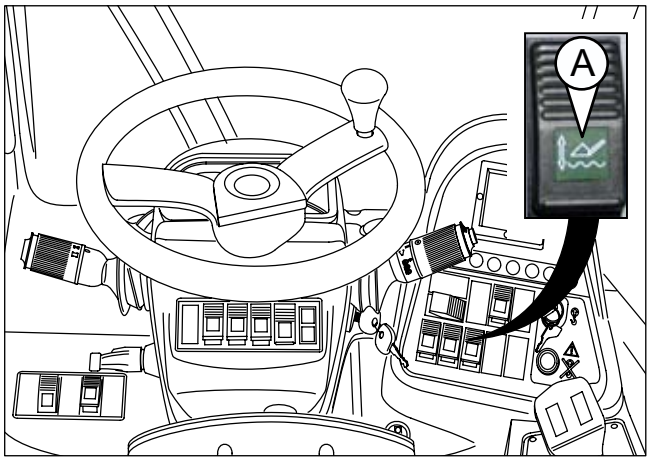
BOOM SUSPENSION (OPTIONAL)

Boom suspension allows the operator to carry out movements with the vehicle without feeling the strong oscillations and jumps caused by the boom, in the event that the ground is not perfectly flat.

Use the switch to engage boom suspension (fig.95/C Pos.”A”). The pushbutton warning light switches on to indicate start-up.

Boom suspension is activated only if the boom is in the horizontal position.
Boom suspension is deactivated automatically by pressing the “man in” pushbutton on the joystick.

Suspension can also be used during the transport of loads on the fork carrier plate, with the boom in the transport position (completely retracted and in a horizontal position).



(fig.95/C)

***- ATTENTION*:**

The presence of boom suspension does not cause an increase in transport speed or machine movement. Speed must always be proportional to the ground, to the area of use and to climatic conditions. The vehicle must always be used with due caution. Always refer to instructions detailed in chapter “B”.

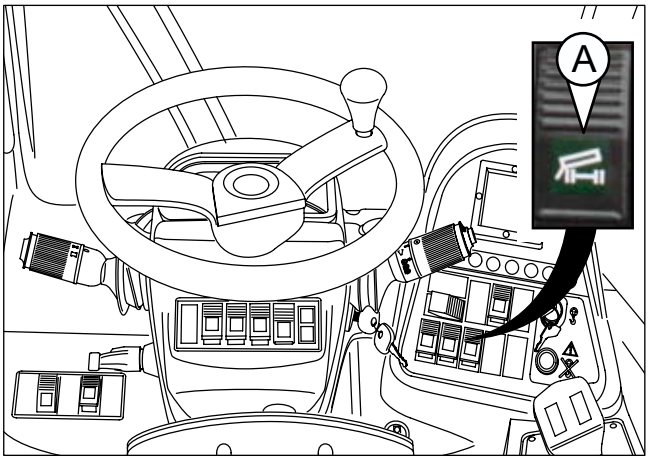
***- ATTENTION*:**

Boom suspension is a device which helps increase vehicle comfort but does not increase vehicle safety features.

DUMP BODY LOWERING (OPTIONAL)

The dump body lowering switch controls the solenoid valve which sends the rear hydraulic sockets into unloading with the consequential dump body boom raising cylinder extraction retraction and lowering.

Activate dump body lowering with the special switch (fig.96/C pos.”A”). The warning light switches on to indicate start-up.



(fig.96/C)

⚠ - *ATTENTION*:

Before moving the vehicle with the dump body:

- Verify its correct operation (braking system, signalling system, hydraulic system).
- Verify that the dump body respects the regulations relevant to the country where the vehicle is being used.

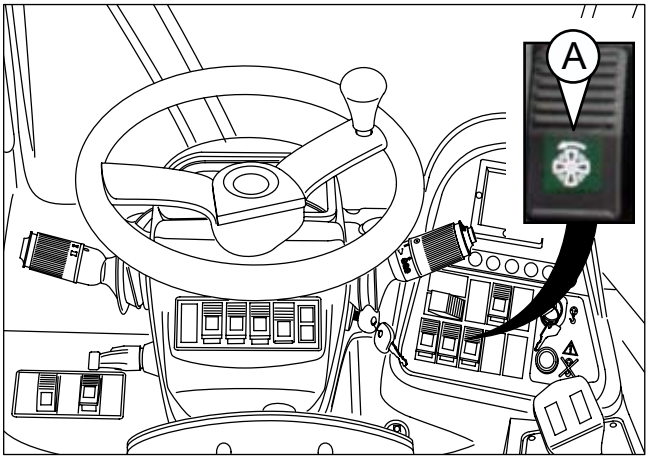
⚠ - *ATTENTION*:

When handling the dump body (lifting, lowering, moving), verify that no one is nearby. Risk of being crushed.

REVERSIBLE FAN (OPTIONAL)

Activate the reversible fan with its switch (fig.97/C pos.”A”). Reversal takes place automatically without having to switch off the vehicle. The fan remains in the “cleaning” position (engine reversed) for a pre-set amount of time set by the manufacturer. Deactivate the switch once cleaning has been carried out. The warning light switches on to indicate reversal engagement.

Reversal can be carried out in “automatic programmed” mode (optional).
“Automatic programmed” reversal must be engaged when the vehicle starts operations and carries out fan reversal in a programmed mode depending on the type of working environment and client need. Reversal is carried out with use of the special switch (fig.97/C pos.”A”). The warning light switches on to indicate reversal engagement.



(fig.97/C)

⚠ - *ATTENTION*:

The presence of fan reversal does not exclude operators from carrying out fan, radiator or engine bay cleaning in the required routine maintenance times.

WATER FILTER (OPTIONAL)

(fig.100/C Pos.”1”)

Located at the rear of the bonnet.

⚠ - *ATTENTION*:

Carry out operations recommended in chapt. “B” “HALTING AT THE END OF WORKS” before switching on the water filter.

System operation:

1. Connect connector “A” into socket “B” located in the rear part of the engine bonnet (fig.101/C).
2. Insert plug “C” into the electric socket (fig.101/C).

The filter is connected to its own control box and is responsible for keeping engine water at a temperature higher than the external temperature (in cold climates).

In the event of malfunction contact a ***DIECI*** service centre.

⚠ - *ATTENTION*:

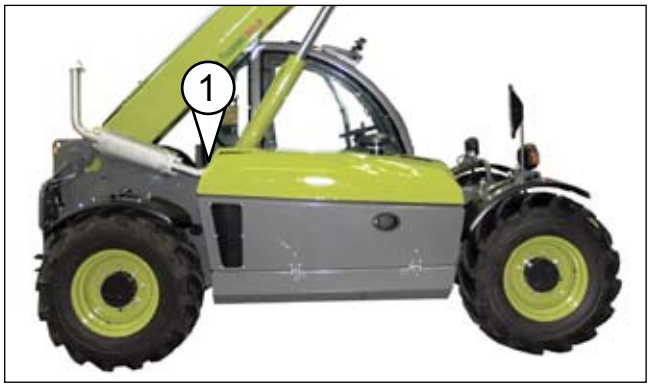
Verify the good conditions of the power supply cable before starting up the device.

⚠ - *ATTENTION*:

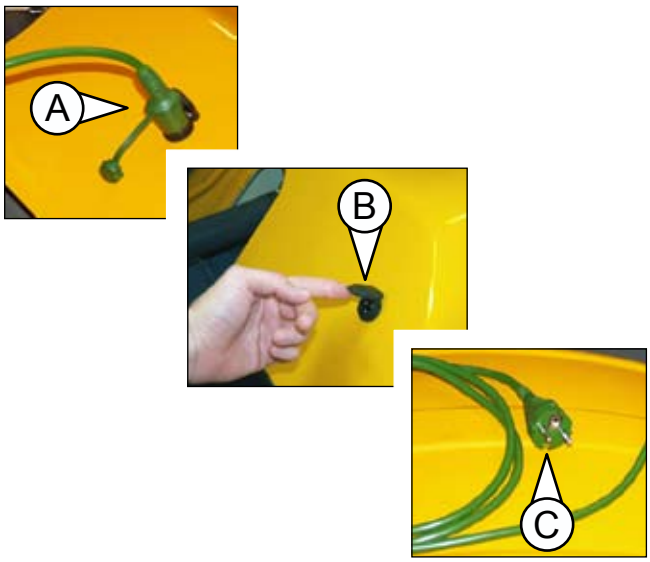
Do not use the water filter with the engine on and while the vehicle is moving.

⚠ - *ATTENTION*:

Remove water filter power supply connections before switching on and moving the vehicle.



(fig.100/C)



(fig.101/C)

7-POLE ELECTRIC SOCKET FOR THE TRAILER (OPTIONAL)

(fig.102/C Pos.”A”)

Located at the rear of the vehicle.

⚠ - *ATTENTION*:

Before moving the vehicle with the trailer:

- Verify correct operation of the braking and signalling systems.
- Verify that the trailer respects the regulations relevant to the country where the vehicle is being used.

(fig.102/C)

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

TOWING HOOK
(Fig.104/C Pos.”A”)

If located at the rear of the vehicle, it can have different load capacities depending on client needs.
Consult the vehicle registration document to verify rear hook load capacity.

Capacity is limited for each vehicle by the authorised circulating weight, by the towing weight and by the vertical strain of the towing pin. This information is detailed in the vehicle registration document.

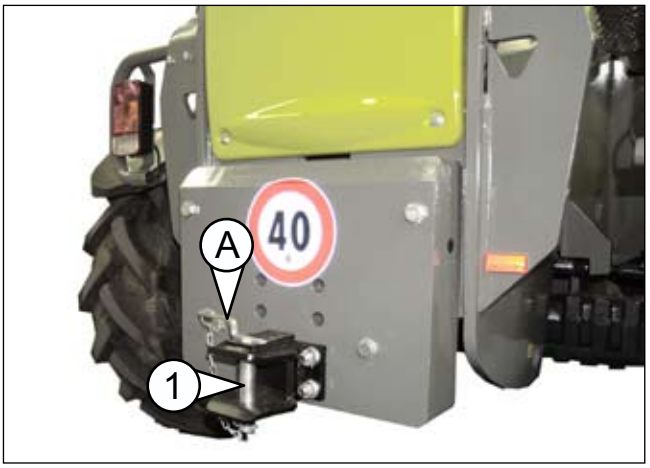
Only “Agricultural Tractors” are permitted to driving on the road with a trailer.

Verify proper locking pin position before moving the vehicle with the trailer.
The rear hook clip (fig.104/C Pos.”1”) has been properly positioned and locked when it goes through both parts of the hook (fig.105/C) and is locked by its cotter pin “1” (fig.105/C).

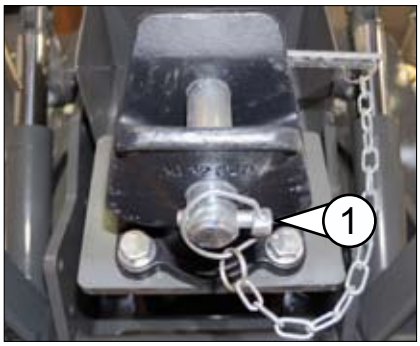
⚠ ***- ATTENTION*:**

Before moving the vehicle with the trailer:

- Ensure that the brake and signalling systems are functioning properly.
- Verify that the trailer conforms to regulations in force in the country where the vehicle is being used.
- Make sure that the cotter pin is properly inserted (fig.105/C Pos.”1”).



(fig.104/C)



(fig.105/C)

HYDRAULIC BRAKING SYSTEM FOR TRAILERS (ITALIAN TYPE) (OPTIONAL)

The warning light (fig.120/C pos."A") signals low braking system pressure.
Connect the hydraulic braking system of the trailer to that of the vehicle by means of the hydraulic socket (fig.121/C pos."1"). If not being used, the socket must be suitably protected by means its hydraulic socket cover (fig.121/C pos."2").

⚠ - *ATTENTION*:

Do not move the vehicle until the warning light has switched off, as the trailer may not brake properly.

⚠ - *ATTENTION*:

Verify that all connections are attached properly and that the trailer brakes regularly before moving the vehicle. Do not move the vehicle with the trailer attached for any reason in the event of malfunctions.

⚠ - *ATTENTION*:

Connect the trailer to the towing hook (fig.122/C pos."A") before inserting hydraulic parts.

The trailer brakes act under pressure. The vehicle hydraulic circuit supplies a constant pressure to the trailer braking system. This pressure is modulated by means of the brake pump. The trailer is freed from the brakes and can move when the brake system of the trailer is connected to the vehicle. The hydraulic braking valve (fig.123/C pos."A"), positioned at the rear of the vehicle, is equipped with a lever (fig.123/C pos."B") to send pressure to the braking system.

- The system has not been given pressure when the lever is in position "0" (fig.123/C). If connected, the trailer is braked.
- The system has been given pressure when the lever is in position "1" (fig.123/C). If connected, the trailer is free to move.

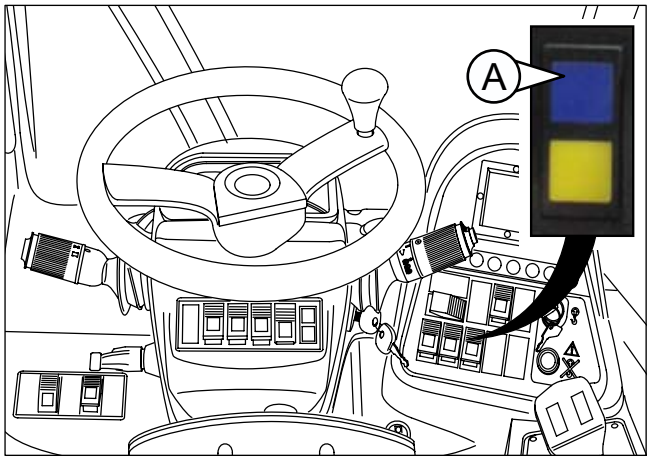
The lever must be used to insert the trailer parking/emergency brake. The trailer is braked when the lever is moved to position "0" (fig.123/C).

⚠ - *ATTENTION*:

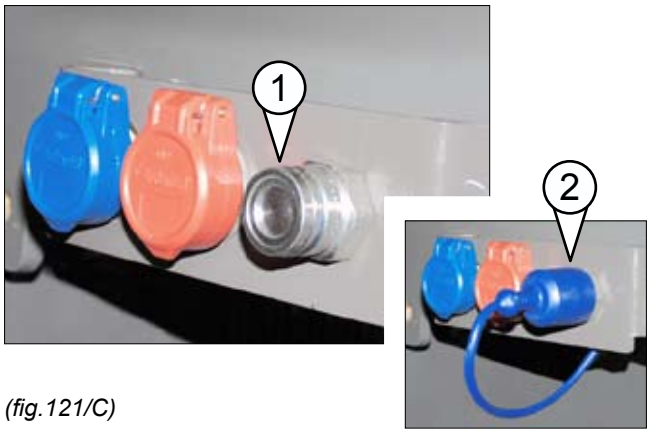
In the event that the trailer is not to be used, we recommend moving the lever to position "0" (fig.123/C) to prevent that any pressure remain in the system. Keeping the system under pressure causes a pointless loss of engine power, leading to higher consumption and pointless heating up of hydraulic fluid.

⚠ - *ATTENTION*:

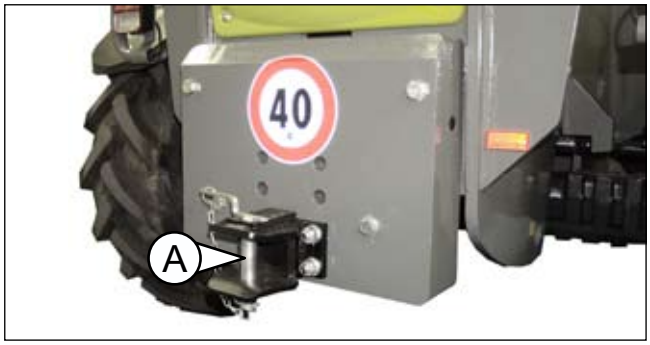
The trailer parking / emergency brake must be engaged in the same way as the holding brake (parking) of the vehicle.



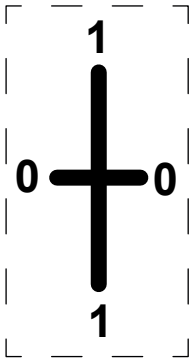
(fig.120/C)

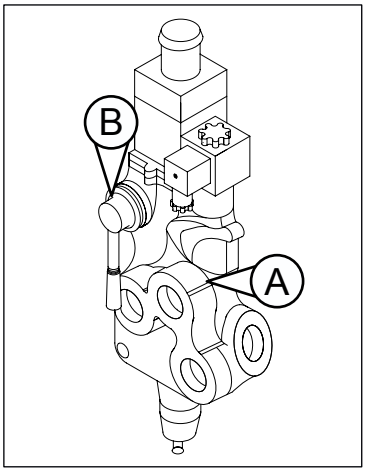


(fig.121/C)



(fig.122/C)





(fig.123/C)

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

HYDRAULIC BRAKING SYSTEM FOR TRAILERS (OPTIONAL)

The trailer brakes act under pressure. The vehicle hydraulic circuit supplies a constant pressure to the trailer braking system. This pressure is modulated by means of the brake pump.

The warning light (fig.124/C pos.”A”) signals low braking system pressure.
Connect the hydraulic braking system of the trailer to that of the vehicle by means of the hydraulic socket (fig.125/C pos.”1”). If not being used, the socket must be suitably protected by means its hydraulic socket cover (fig.125/C pos.”2”).

- *ATTENTION*:

Do not move the vehicle until the warning light has switched off, as the trailer may not brake properly.

- *ATTENTION*:

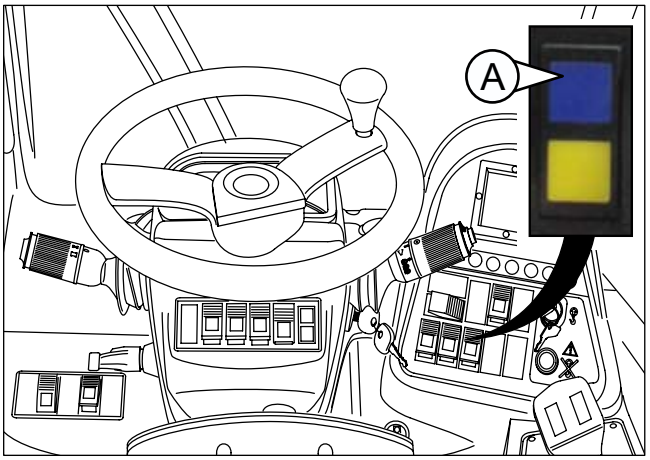
Verify that all connections are attached properly and that the trailer brakes regularly before moving the vehicle. Do not move the vehicle with the trailer attached for any reason in the event of malfunctions.

- *ATTENTION*:

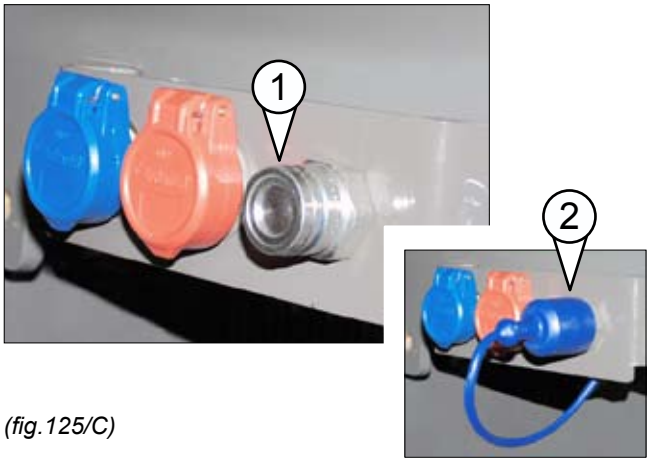
Connect the trailer to the towing hook (fig.126/C pos.”A”) before inserting hydraulic parts.

- *ATTENTION*:

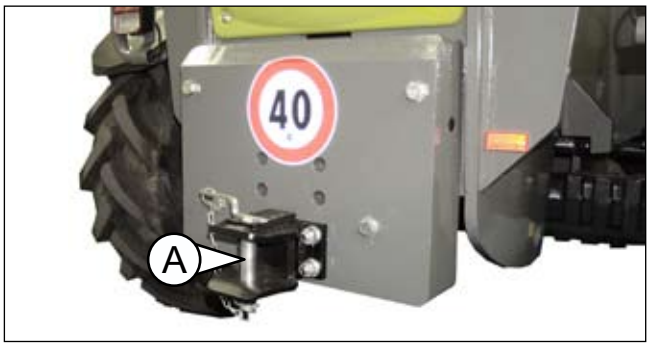
When the trailer is disconnected, use due caution to prevent it from moving in an uncontrolled manner.



(fig.124C)



(fig.125/C)



(fig.126/C)

PNEUMATIC BRAKING SYSTEM FOR TRAILERS (OPTIONAL)

The warning light (fig.131/C pos.”A”) signals low braking system pressure.

***- ATTENTION*:**

Do not move the vehicle until the warning light has switched off, as the trailer may not brake properly.

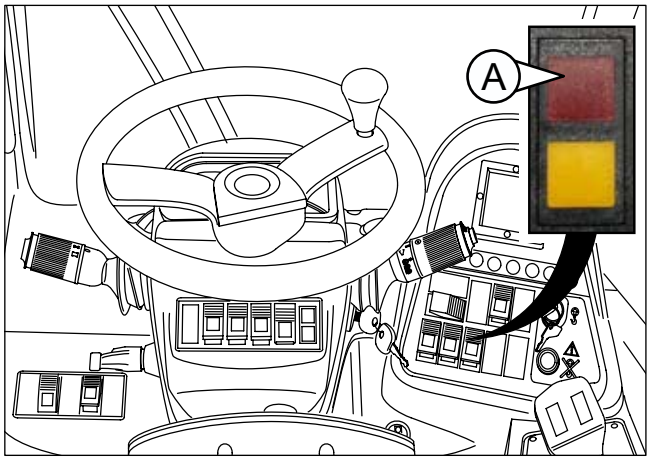
The vehicle can be equipped with one of two desired types of pneumatic attachments (fig.132/C pos.”1”, fig.133/C pos.”1-2”). Connect the attachment pneumatic system to the vehicle by means of the proper connections for proper use.

***- ATTENTION*:**

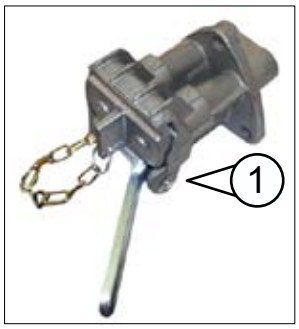
Verify that all connections are attached properly and that the trailer brakes regularly before moving the vehicle. Do not move the vehicle with the trailer attached for any reason in the event of malfunctions.

***- ATTENTION*:**

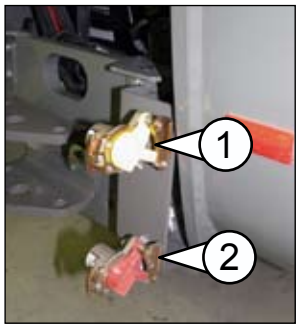
Connect the trailer to the towing hook (fig.134/C pos.”A”) before inserting hydraulic parts.



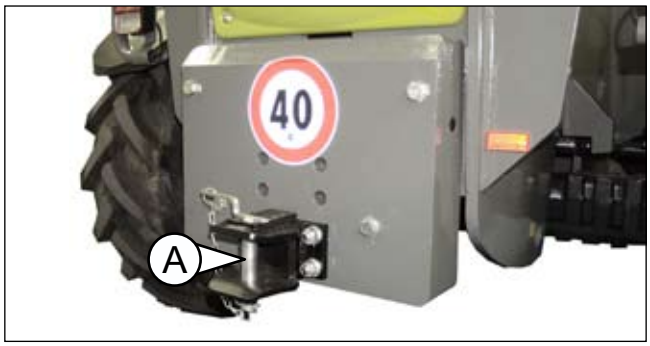
(fig.131/C)



(fig.132/C)



(fig.133/C)



(fig.134/C)

TOWING THE VEHICLE

The vehicle may only be towed in an emergency and at low speed (max 4 km/hour) and for short distances (max 500 m).

The operations to be carried out are as follows:

- Put the gear in neutral.
- Disengage the negative parking brake
- Connect the towing bracket between the towing vehicle and the broken down vehicle.

⚠ - *ATTENTION* - ⚠

Never try to start up the vehicle by towing or pushing it with the hydrostatic transmission engaged

When the engine is switched off the steering wheels servo control does not work. If the engine cannot be kept running, during towing keep in mind that it will be much more difficult to operate the steering wheel.

The parking brake is engaged with the engine switched off. If the engine cannot be kept running during vehicle towing, disengage the parking brake manually, following the instructions given in paragraph “Disengagement of Parking Brake with engine switched off”.

The towing bracket must be connected to the vehicle towing setups marked by corresponding symbols (fig.140/C- fig. 141).

⚠ - *ATTENTION*:

The vehicle must be towed with a <u>towing bracket.</u>
The <u>towing bracket</u> must be able to support a towing weight of 10,000 Kg.

Do not tow the vehicle on public roads and for long distances. If possible, keep the yellow flashing lights and emergency lights on.
Do not tow the vehicle on a slope.

⚠ - *ATTENTION* - ⚠

Do not stand between the towing vehicle and the towed vehicle.

⚠ - *ATTENTION* - ⚠

The operations described above should be carried out by expert personnel.

(fig.140/C)

(fig.141/C)

PUTTING THE GEAR SHIFT IN NEUTRAL

Operating Description

- Switch off the engine
- Turn the lever (fig. 142/C Pos. “1”) of the hydraulic valve counter clockwise towards the vehicle cab, bringing it to the closed position. The valve is located under the vehicle, in the centre near the reducer.
- Position the gear selector pin (fig. 143/C Pos. “1”) in neutral, using a screwdriver.

***- ATTENTION*:**

Before towing the vehicle, switch on the dashboard and ensure that the pilot light “gear engaged” on the central dashboard is switched off and that the letter “N” appears on the LCD display. If this is not the case, repeat operation and put the gear in neutral again.

***- ATTENTION*:**

Once the towing operations have been completed, reopen the valve, bringing it back to its original position.
To insert the gear, use the switch provided as described in paragraph “Fast/slow Gear Switch”.

Disengagement of negative brake with engine switched off

Operating Description

- Loosen the lock nuts located on both sides of the central body of the rear axle (fig. 149/C Pos. “2”).
- Tighten the screws (fig. 149/C Pos. “1”) until resistance is encountered; note the number of turns made in order to bring the screws back to their original position once towing operations have been completed.
- Tighten the screws another 1.5 turns.

The brake will be unlocked. Once towing operations are complete bring everything back to its original position.

***- ATTENTION*:**

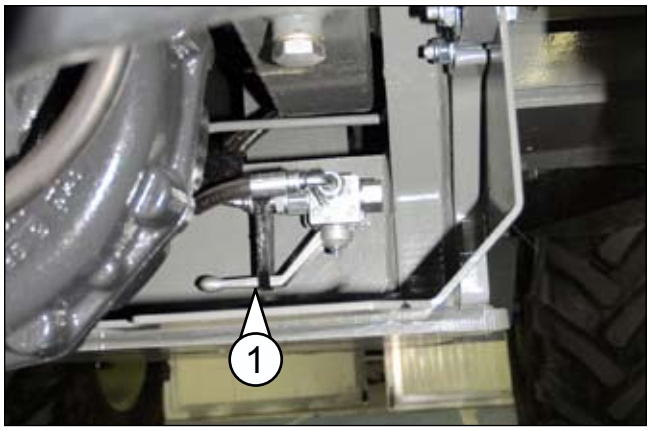
It is very IMPORTANT that the screws be re-tightened using the same number of turns used to loosen them.

- ATTENTION -

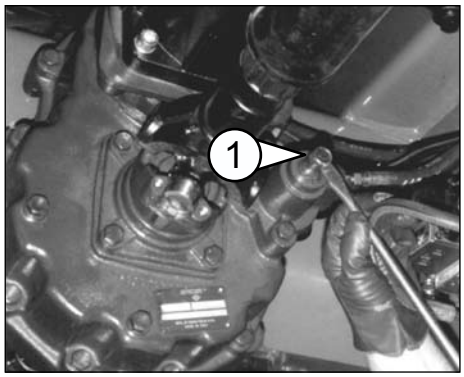
DO NOT USE THE VEHICLE WITH THE HAND BRAKE DISENGAGED. ONCE TOWING OPERATIONS ARE COMPLETE BRING EVERYTHING BACK TO ITS ORIGINAL POSITION.

- ATTENTION -

The operations described above should be carried out by qualified personnel only.



(fig.142/C)



(fig.143/C)


(fig.144/C) ***Fast gear engaged***


(fig.145/C) ***Neutral***


(fig.146/C) ***Slow gear engaged***

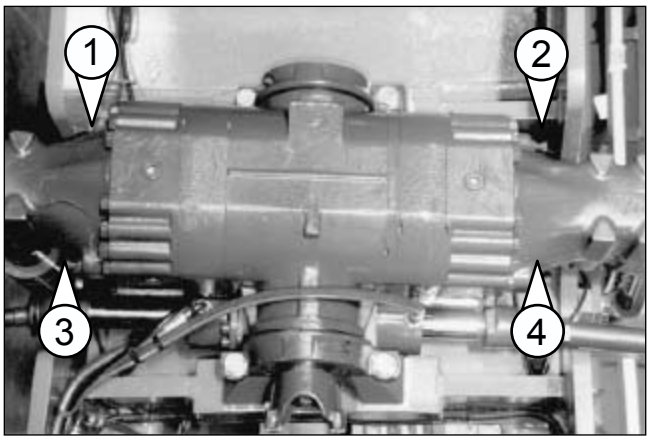
- ATTENTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

Disengaging the negative parking brake with the engine stopped

1° Loosen the screws on both sides (fig. 149/pos. “1” ,“2” , “3”, “4”) of the centre part of the front axle with a key (fig. 150/C). (Do not completely loosen the screws; loosen them only enough so that described in point 2 can be carried out).

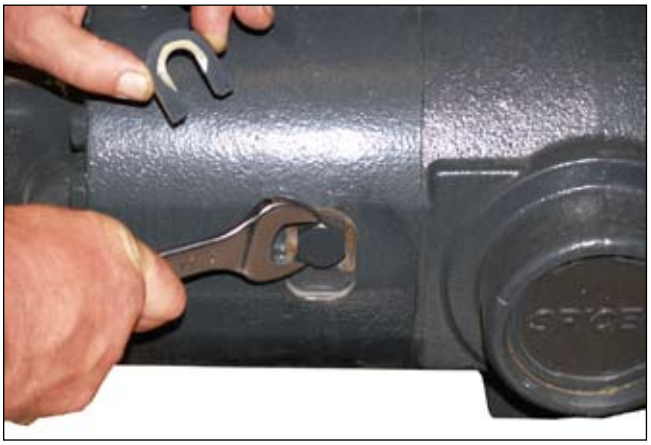
2° Remove the “U” shaped liners (fig. 152/C).

3° Re-tighten screws until the click into position in these conditions it is possible to tow the vehicle. To return the brake to working condition, return in to its original conditions.



(fig.149/C)

(fig.150/C)



(fig.152/C)

CATALYTIC PURIFIER (OPTIONAL)

(fig.155/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. In practice, 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 purifier **every 500 working hours**. Remove the catalyst and place it in a container with hot soapy water, making sure it is completely emerged. Leave it to soak for 5 hours, then wait for it dry completely (a gentle jet of compressed air could possibly be used to speed up drying) and remount.

(fig.155/C)

WATER DRIVEN PURIFIER (OPTIONAL)

(fig.156/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.

(fig.156/C)

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: it neutralises sulphuric and sulphurous acids.

MAINTENANCE AND ADJUSTMENTS

D


ANY MACHINE MODIFICATION IMPLIES A NEW VERIFICATION OF CONFORMITY WITH THE DIRECTIVE 98/37 "CE" SUCH A PROCEDURE IS EVEN WORTH IN THE CASE OF REPAIRS WITH NON ORIGINAL SPARE PARTS.

ALL THE PROCEDURES AND MAINTENANCE OPERATIONS NOT DESCRIBED IN THIS MANUAL ARE STRICTLY FORBIDDEN AND MUST ONLY BE CARRIED OUT IN AUTHORISED REPAIR CENTRES BY QUALIFIED PERSONNEL.

ONLY THE FOLLOWING CHECKS CAN BE CARRIED OUT BY THE OPERATOR: LIQUID LEVEL CHECK, AIR FILTER CLEANING, TYRE PRESSURE CHECK. SAID OPERATIONS MUST BE CARRIED OUT IN FULL RESPECT OF ALL SAFETY REGULATIONS AS DESCRIBED IN THIS MANUAL.

THE KNURLED PLATES (BULB PLATES) AND THE CAB FLOOR ARE THE ONLY PARTS OF THE VEHICLE WHICH CAN BE STEPPED ON. USE A LADDER (WITH SUITABLE CHARACTERISTICS FOR THE PURPOSE) FOR MAINTENANCE PARTS WHICH CANNOT BE REACHED FROM THE GROUND.

READING AND UNDERSTANDING CHAPTERS "B" AND "C" (SAFETY RULES/USER INSTRUCTIONS - GETTING TO KNOW YOUR VEHICLE) IS OBLIGATORY BEFORE READING CHAPTER "D".

IT IS FORBIDDEN TO USE THE VEHICLE UNTIL THE CONTENTS OF THE PRESENT HANDBOOK HAVE BEEN CAREFULLY READ AND LEARNT.


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

MAINTENANCE PRESCRIPTIONS

INTRODUCTION

This vehicle has been designed and constructed for maximum performance, savings and simplicity of operation in various working conditions. Before delivery, the vehicle was tested both by the Manufacturer and by the Dealer for supply in maximum conditions. Ordinary maintenance as specified in this Manual carried out at your local ***DIECI*** dealer at the prescribed frequency is important in order to preserve said conditions and ensure operations without malfunctions.

Maintenance

This section of the Manual supplies all details of maintenance prescriptions necessary for maintaining the ***DIECI*** vehicle in perfectly efficient conditions.

This chapter also gives information as to how to carry out the various adjustments necessary to keep the vehicle tuned. The vehicle must receive regular routine maintenance in order to give the best results. It is recommended that all services are carried out as prescribed in the service schedule recommended by ***DIECI***. Remember that it is the owner's and/or users responsibility to keep the vehicle in safe working condition and suitable to be driven on public and private roads.

Maintenance or adjustment operations not described in this chapter or in the rest of the manual must be carried out by qualified personnel respecting the conditions of safety to guarantee their safety and the safety of others. Only ***DIECI*** Dealer maintenance staff have been trained to carry out said specific interventions and only they have the necessary special equipment and tools available to guarantee maximum safety, precision and efficiency.

Spaces for registering periodic inspections can be found at the end of this Manual. These allow operators to plan interventions and register them in chronological order. After each inspection, the Dealer must insert the date of intervention, a signature and the Dealer stamp in the space.

Proper vehicle maintenance not only improved reliability but also preserves vehicle value over time.

Owner/ Operator assistance

Make note of this important data before contacting your service centre, in order to obtain maximised service assistance from your Dealer.

1 - Specify your name, address and telephone number.

2 - Give the model and chassis serial number of the vehicle.

3 - Indicate the purchase date and working hours.

4 - Explain the type of malfunction.

We remind users that only ***DIECI*** Dealers can access the available ***DIECI*** resources for client service. Moreover, Dealers are able to offer a variety of programmes concerning guarantee, fixed rate maintenance and safety checks including weight tests, in compliance with both legal and insurance requirements.

Protecting the environment

It is illegal to pollute sewers, culverts or the soil. Use only authorised collection centres, including the areas designated by the local authorities or repair shops equipped with the necessary tools for the disposal of used oils. If in doubt, contact your local authority for relevant instructions.

- ATTENTION -

READING AND UNDERSTANDING CHAPTERS "*B*"-"*C*" (SAFETY RULES, USER INSTRUCTIONS - GETTING TO KNOW YOUR VEHICLE) IS OBLIGATORY BEFORE READING CHAPTER "*D*" AND USING THE VEHICLE.

RUNNING IN

The operations indicated below must be carried out only once when the indicated time period has elapsed after the new vehicle has been put into service. After this adhere to the intervals specified in the general maintenance schedule.

After 10 hours of work:

- Check for leaks and eliminate.
- Check and tighten all hydraulic connections and nuts and bolts.

After 50 hours of work:

- Check for leaks and eliminate.
- Check and tighten all hydraulic connections and nuts and bolts.

After 250 hours of work:

- Change engine oil.
- Replace engine oil cartridge.
- Change mazut cartridge.
- Replace PowerShift hydraulic gear oil cartridge.
- Replace return hydraulic oil cartridge.

After 1000 hours of work:

- Replace PowerShift and distributor hydraulic gear oil.
- Replace differential axle oil.
- Replace brake oil.
- Change inching oil.

- ATTENTION -

IF THE VEHICLE IS DESTINED FOR USE IN CRITICAL CONDITIONS (DUST, MUD, SAND), MAINTENANCE INTERVALS ARE REDUCED BY 50%.

- ATTENTION -

CHECK THE HOUR COUNTER DAILY TO VERIFY IF THERE ARE ANY MAINTENANCE OPERATIONS TO BE CARRIED OUT.

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

DECLARATION OF VIBRATORY EMISSIONS

- The declared vibration emission value complies with standard EN 12096

Dedalus 28.7 - 30.7

1) Vibration values on the seat

Vibration emission value measured at = 1.6 m/s^2
Uncertainty factor K = 0.5 m/s^2

Values determined subject to standard EN 13059

2) Vibration values on the steering wheel

Vibration emission value measured at = 4.5 m/s^2
Uncertainty factor K = 2.2 m/s^2

Values determined subject to standard EN 13059

1st MANUFACTURER INSPECTION DECLARATION

DIECI S.r.l. declares that each vehicle produced in their factories undergoes static and dynamic inspections before being placed on the market to verify proper function and compliance with the European directives they are subject to. At the conclusion of performed inspections, a CE certificate is issued which corresponds to the machine inspected and its supplied attachments.

Every ***DIECI*** CE marked product is supplied with its own certificate, which must be kept by the vehicle's legitimate owner in accordance with the law.

IDENTIFYING VEHICLE PARTS

Right side of the vehicle

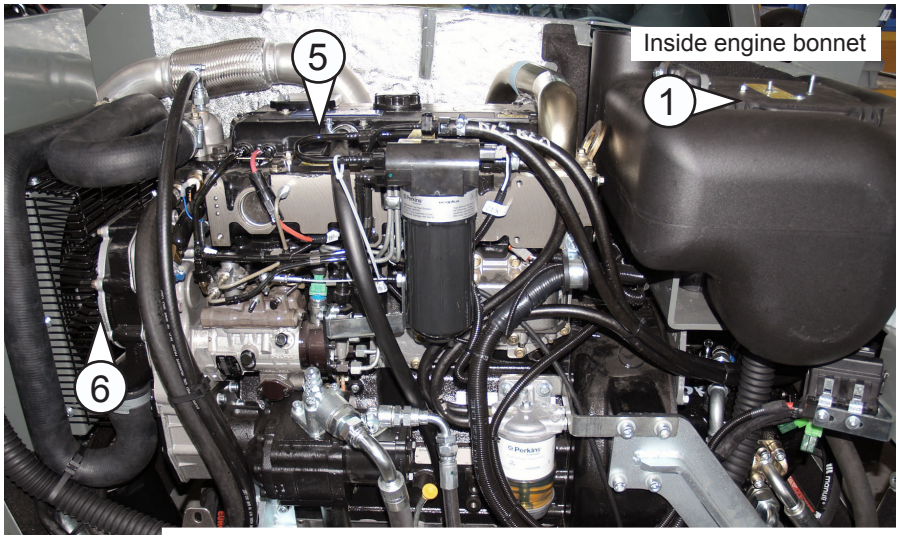
1. Cab
2. Telescopic boom
3. Right rear view mirror
4. Right front light
5. Tool carrier plate
6. Epicyclic reduction gear
7. Tyre
8. Engine bonnet
9. Right rear light

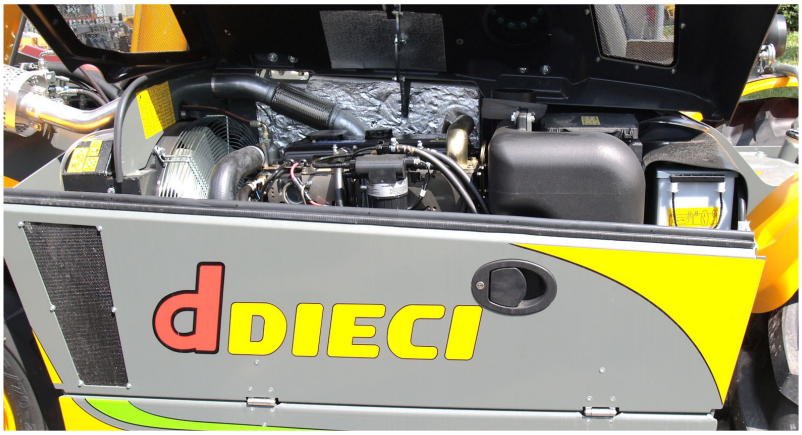
Left machine side

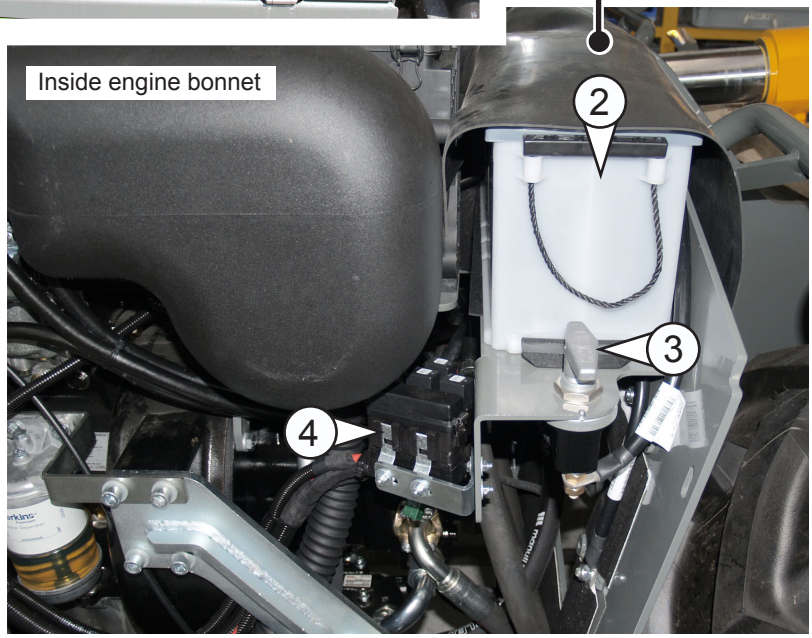
1. Cab
2. Left rear light
3. Epicyclic reduction gear
4. Fuel tank
5. Tyre
6. Vehicle cab steps
7. Tool carrier plate
8. Left front light
9. Telescopic boom
10. Left rear view mirror
11. Return hydraulic oil filter
12. Inclinometer
13. Fuel tank

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

IDENTIFYING THE VEHICLE PARTS







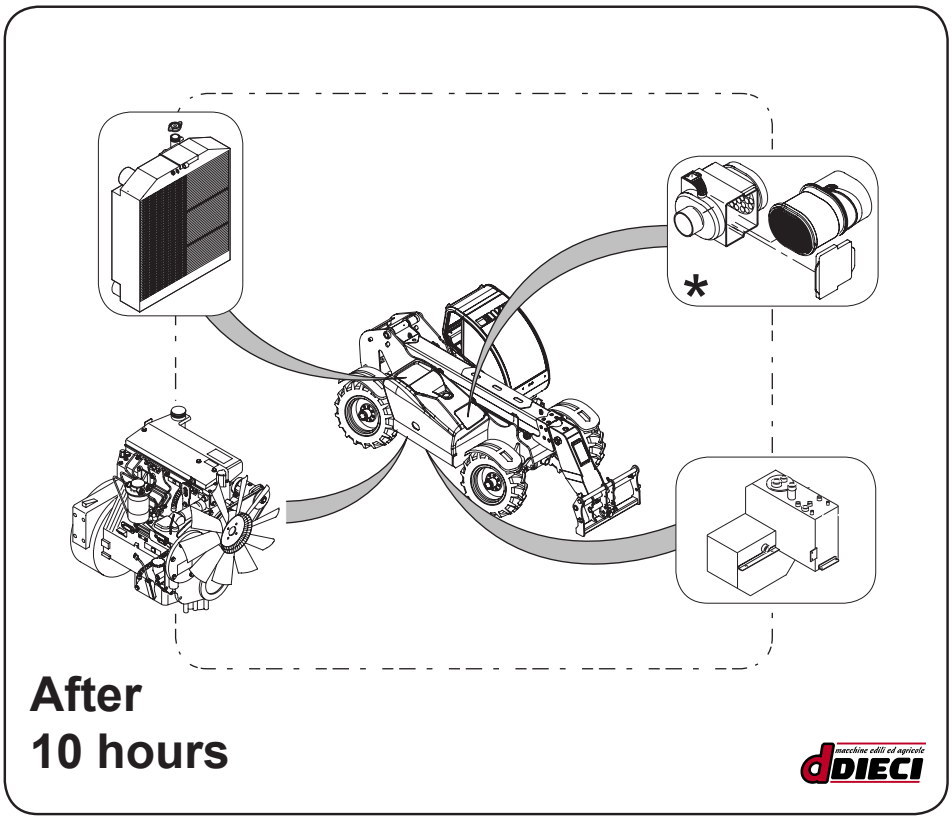
1. Air filter
2. Battery
3. Battery isolator switch
4. Engine control box / Engine fuses
5. Diesel Engine
6 . Cooling fan

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

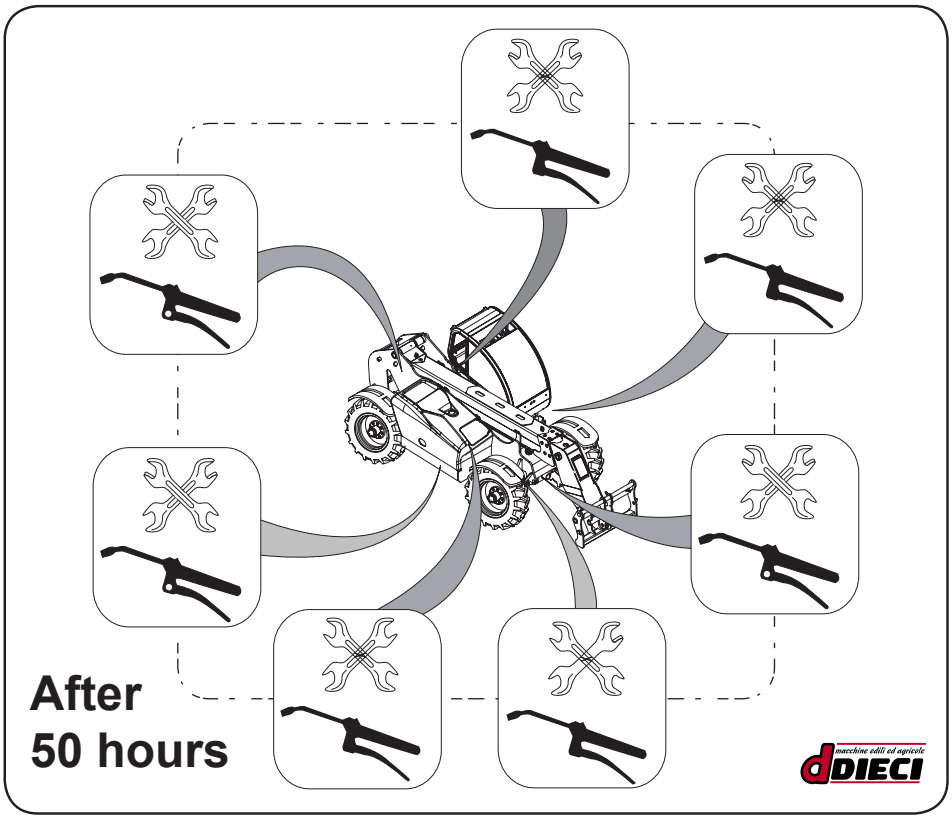
SCHEDULE FOR MAINTENANCE AND ADJUSTMENTS

Maintenance operations to be carried out are listed on the left. The graph details the period in hours and an indicative representation of the position of the component to be serviced. The asterisk (*) indicates maintenance in the event of use in particular conditions.

- Check engine oil level.
- Air filter cleaning.
- Check radiator water level.
- Check radiator is not clogged.
- Check hydraulic oil level



- Check for leaks in hydraulic circuit
- Lubricate boom joint pin
- Lubrication of jack feet/head.
- Lubrication of raising jack feet/head.
- Lubrication of levelling jack feet/head.
- Lubrication of jack feet/head and stabilisers.
- Lubrication of articulated pins (PIVOT) on front and rear wheels.
- Lubrication of front axle oscillation bushing (if present).
- Lubrication of front axle oscillation bushing (if present).
- Lubrication of spiders and cardan joints on transmission shafts.
- Lubrication of boom sliders.
- Lubrication of fork holding plate
- Lubrication of internal boom tubes
- Lubrication of boom rollers and chains

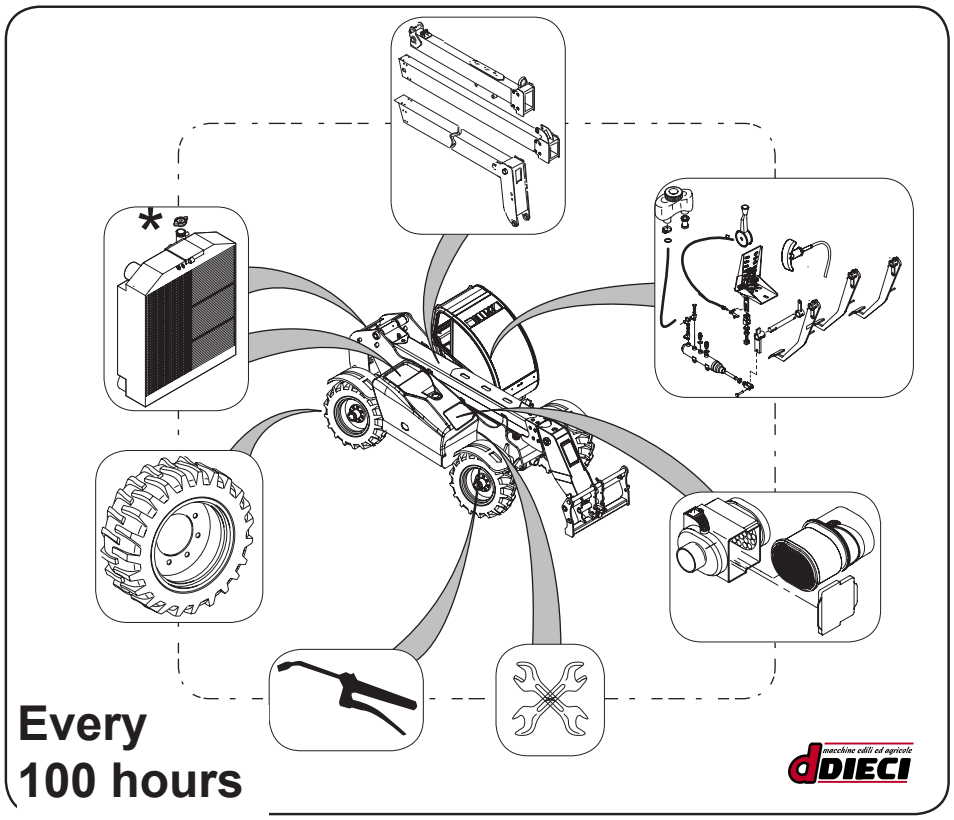


- ATTENTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

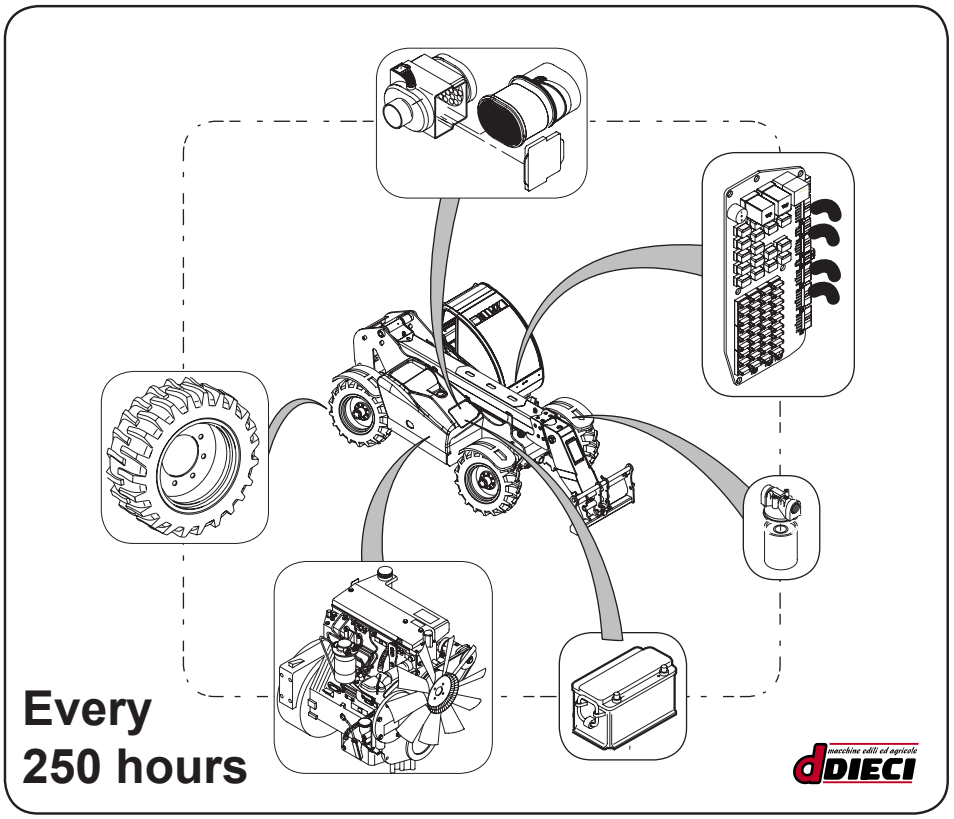
SCHEDULE FOR MAINTENANCE AND ADJUSTMENTS

Maintenance operations to be carried out are listed on the left. The graph details the period in hours and an indicative representation of the position of the component to be serviced. The asterisk (*) indicates maintenance in the event of use in particular conditions.

- Air filter cleaning.
- Grease differential axle.
- Check tyre pressure.
- Check all nuts and bolts are tight.
- Check radiator is not clogged.
- Check brake oil level.
- Check boom chain extraction.
- Check stickers.



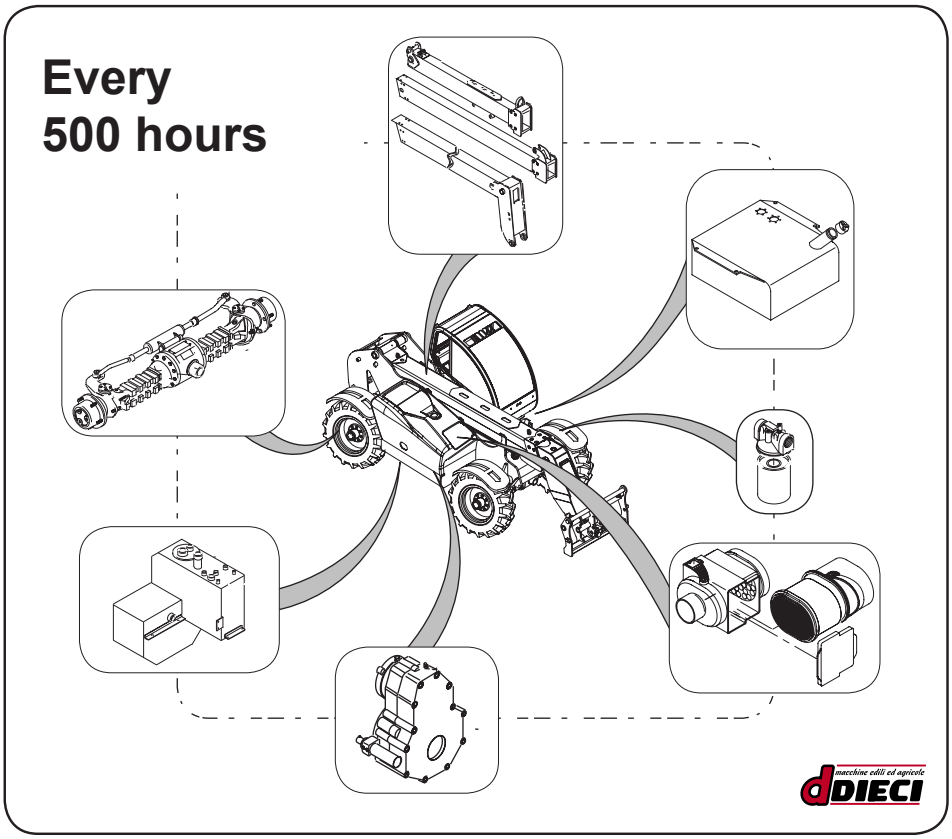
- Replace engine oil.
- Replace engine oil filter.
- Replace air filter.
- Check battery electrolyte level.
- Check electric system.
- Check alternator belt
- Tighten wheel nuts.
- Replace external hydraulic oil filters
- Replace fuel filter.
- Replace cab filter.
- Tighten boom sliders.
- Check chain tension.



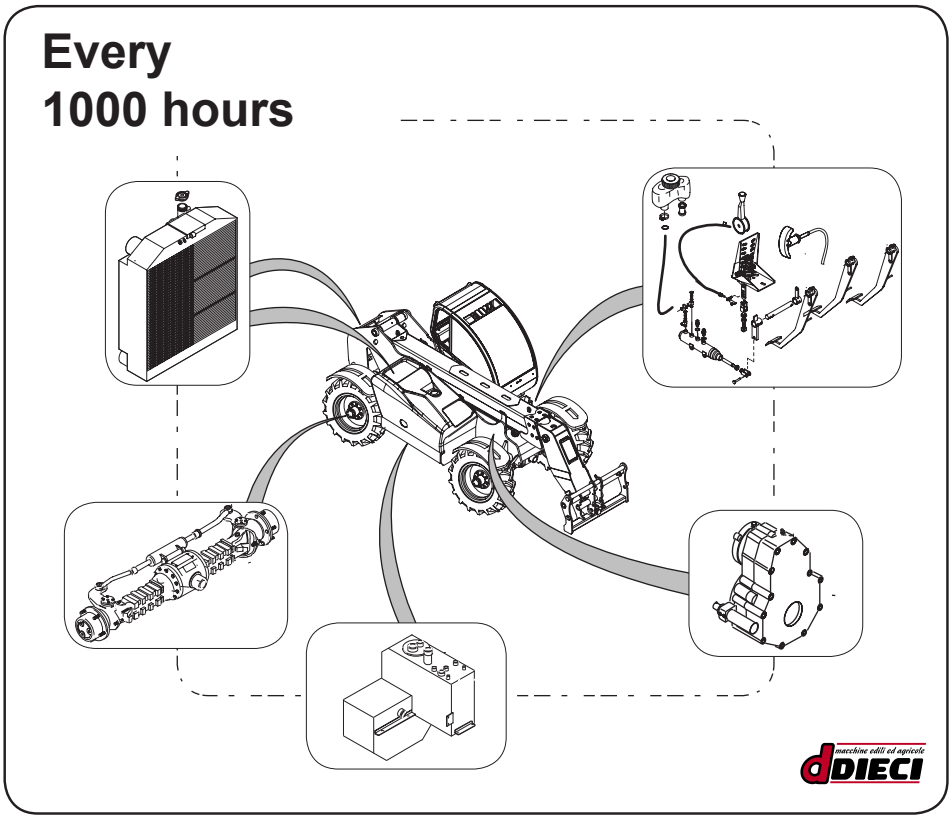
SCHEDULE FOR MAINTENANCE AND ADJUSTMENTS

Maintenance operations to be carried out are listed on the left. The graph details the period in hours and an indicative representation of the position of the component to be serviced. The asterisk (*) indicates maintenance in the event of use in particular conditions.

- Empty fuel tank.
- Clean fuel injection filter pump.
- Check gear change oil level
- Check epicycloidal reduction gear oil level.
- Check differential sump oil level.
- Replace air filter
- Replace hydraulic system oil
- Replace or clean tank hydraulic oil filters
- Parking brake registration



- Check boom chain
- Replace cooling liquid
- Replace oil in differential sump
- Replace oil level in epicycloidal reduction gears
- Replace gear oil.
- Replace distributor oil
- Replace brake oil
- Replace hydraulic system oil
- Replace external hydraulic oil filters



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

CAPACITY OF PARTS FOR LUBRICATION

GROUP DESCRIPTION	GENERIC DRY CAPACITY	GENERIC CHANGE CAPACITY	DRY CAPACITY 26.6	CHANGE CAPACITY 26.6
REDUCTION GEAR OIL ON FRONT WHEELS	0,9 lt	0,9 lt	0,9 lt	0,9 lt
REDUCTION GEAR OIL ON REAR WHEELS	0,9 lt	0,9 lt	0,9 lt	0,9 lt
OIL ON FRONT DIFFERENTIAL AXLE	3,5 lt	3,5 lt	3,5 lt	3,5 lt
OIL ON REAR DIFFERENTIAL AXLE	3,8 lt	3,8 lt	3,8 lt	3,8 lt
DISTRIBUTOR BOX OIL	1,5 lt	1,5 lt	1,5 lt	1,5 lt
HYDRAULIC SYSTEM OIL	140 lt	93 lt	130 lt	80 lt
OIL FOR BRAKING CIRCUIT	1,0 lt	1,0 lt	1,0 lt	1,0 lt
COOLING LIQUID	7,0 lt	7,0 lt	7,0 lt	7,0 lt
FUEL FOR TRACTION	58 lt	58 lt	58 lt	58 lt
GREASE	4,00 kg	---	4,00 kg	---

OIL COMPARISON TAB

	ENGINE OIL	HYDRAULIC OIL	AXLE OIL	BRAKE AND INCHING OIL	RADIATOR	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 THE PRODUCT CONSUMPTION AMOUNTS, CONSULT THE CAPACITY OF PARTS FOR LUBRICATION IN CHAPTER “G” (TECHNICAL DATA AND VEHICLE TECHNICAL FEATURES)“

DO NOT USE SYNTHETIC OIL

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

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OPENING THE ENGINE BONNET
(fig.1/D)

The engine bonnet is equipped with an outer locking handle (fig.1/D Pos.”1”).

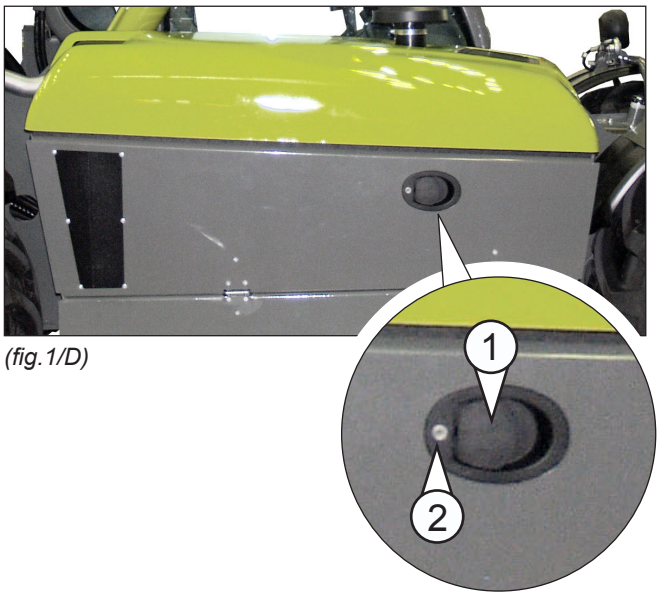
To open:

- Insert the key in the lock (fig.1/D Pos.”2”) and turn clockwise/counter-clockwise to engage/disengage the lock.
- Pull the handle toward you to unhook the bonnet with the lock disengaged.

NOTE:
The bonnet handle will not open with the lock engaged.

To insert the locking rod (fig.2/D Pos.”1”):

- Push the bonnet upward until the locking hinge has fully extracted.
- Push one of the two sides of the locking hinge (fig.2/D Pos.”1”) by hand to verify that it is completely extracted.



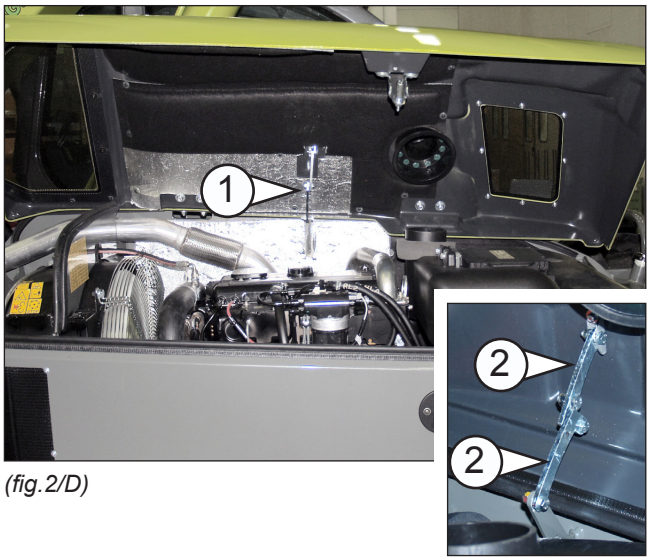
(fig.1/D)

⚠ - *ATTENTION*:

Before leaving the bonnet, always check by hand that the locking hinge is fully extracted and will keep the bonnet open safely. Take due care to not injure hands during the locking check.

To close the bonnet:

- Hold the bonnet up with one hand
- With the other hand, pull one of the two locking hinge sides (fig.2/D Pos.”1”) toward you to unhook.
- Accompany the bonnet down to lower.



(fig.2/D)

⚠ - *ATTENTION*:

Once the lock is disengaged, take due care not to cause the sudden fall of the bonnet, risk of crushing.

⚠ - *ATTENTION*:

Do not underestimate the weight or overall dimensions of the bonnet.

⊘ - *PROHIBITION* - ⊘

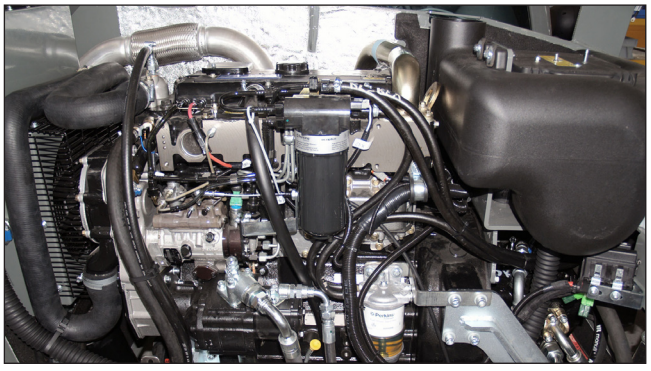
Working with the bonnet open IS STRICTLY PROHIBITED.

At the end of maintenance operations, the bonnet must always be locked closed.

ENGINE

FOR MAINTENANCE OF THE ENGINE, AIR FILTER, FUEL FILTER ETC. STRICTLY OBSERVE THE MANUFACTURER’S INSTRUCTIONS GIVEN IN THE RELEVANT HANDBOOK.

THE ENGINE USE AND MAINTENANCE HANDBOOK IS AN INTEGRAL PART OF THE DOCUMENTATION SUPPLIED WITH THE VEHICLE.


(fig.3/D)

PEDALS

Accelerator
(fig.4/D Pos.”1”)

The accelerator is a cable type accelerator, and as much does not require ordinary maintenance.

Brakes
(fig.4/D Pos.”2”)

Hydraulic brakes do not need adjusting.

Check the reservoir behind the seat (fig.5/D Pos.”1”) regularly. Oil must always be level, or rather the reservoir must always be full.

Consult the Summary Table at the start of the chapter to know how often this should be done.

To top up:

- Unscrew the cap from the tank (fig.6/D Pos.”1”), turning it counter-clockwise.
- Check that oil is level. If it is not, fill the reservoir.
- Screw back on the tank cap (fig.6/D Pos.”1”), turning clockwise. Do not screw on too hard.
- Clean any spillage.

A slight lowering of the level is due to normal consumption of brake pads.

***- ATTENTION*:**

If the pedal can be pushed down too far or seems too ‘elastic’, contact your ***DIECI*** dealer to have this fault corrected.

***- ATTENTION*:**

Check the condition of all brake pipes regularly, including flexible pipes. Notable level lowering is an indication of a system leak. Contact your ***DIECI*** dealer to have any damaged, corroded or worn pipes replaced

***- ATTENTION*:**

Always use the recommended type of oil, as indicated in the lubrication table.

***- ATTENTION*:**

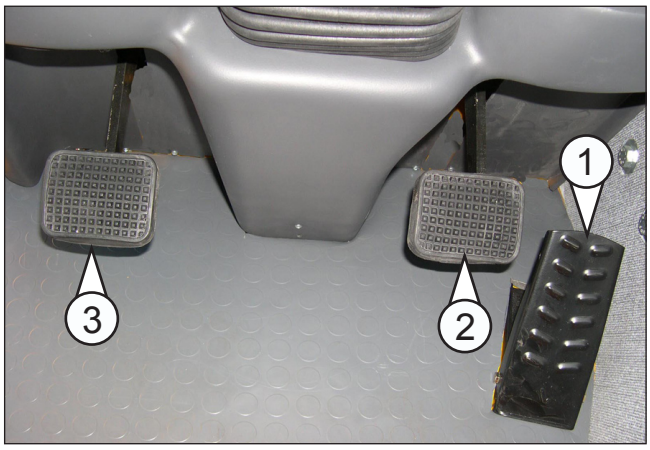
Brake oil is very dangerous. Consult chapter “B” for safety precautions.

***- ATTENTION*:**

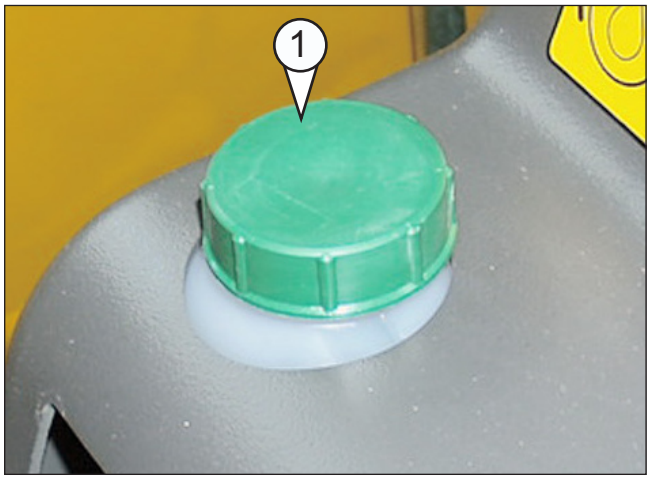
This type of oil can ruin coated surfaces and plastic dashboard parts.

Hydrostatic Engine (Inching) Control
(Fig.4/D Pos.”3”)

The pedal does not require adjustment because it is directly in contact with the “INCHING” valve that hydraulically controls the movement of the hydrostatic pump.



(fig.4/D)



(fig.5/D)

- PROHIBITION -

IT IS STRICTLY FORBIDDEN TO operate with the brake oil not at level.

Brakes may operate irregularly creating a risk of accidents.

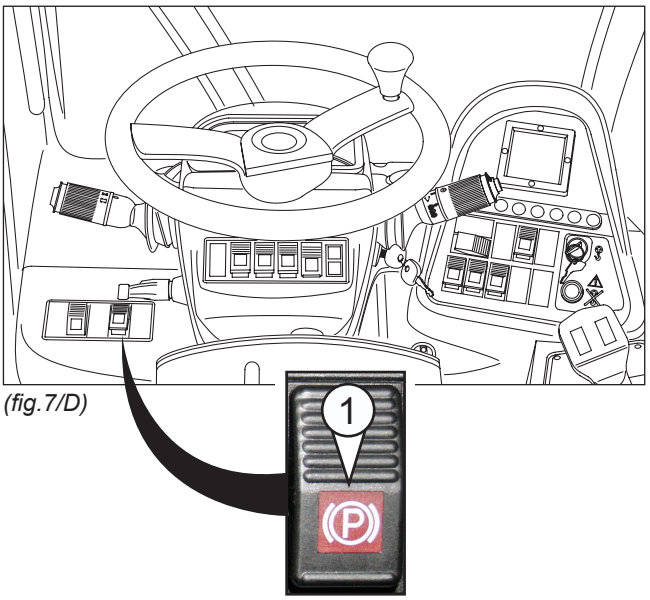
- ATTENTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

PARKING BRAKE
(fig.7/D pos.”1”)

The electrically controlled parking brake does not need ordinary maintenance.

⚠ ***- ATTENTION*:**

If the brake is not very effective, contact your ***DIECI*** dealer to have this fault corrected.



(fig.7/D)

HYDRAULIC OIL LEVEL

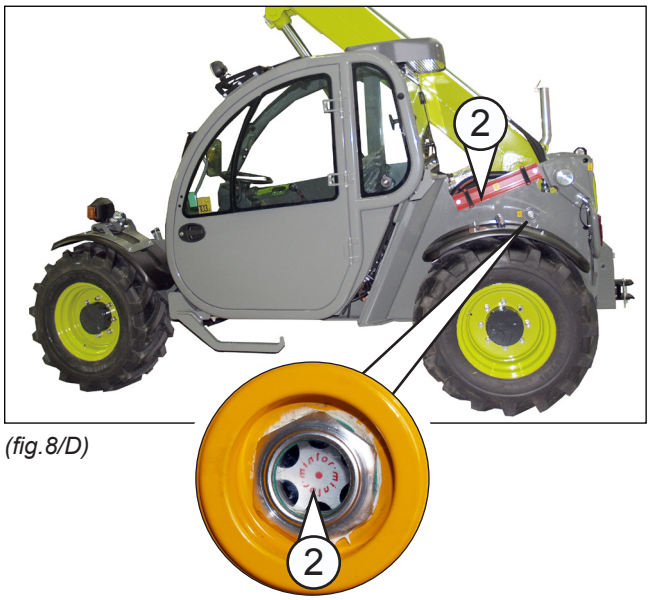
(Fig.8/D Pos."1")

The hydraulic oil tank is located on the inside of the chassis, under the telescopic boom base (fig.8/D Pos."1").
The oil level can be checked via the transparent cap located on the left side of the tank itself (fig. 8/D Pos "2")

The level is correct when the oil can be seen through the transparent cap (fig.8/D Pos."2") with all vehicle cylinders in transport position.

To correctly check the level:

- Park the vehicle on a level surface.
- Retract the boom completely and lower it.
- Position cylinders in transport mode.
- Switch off the engine.
- Check the oil level using the transparent indicator (fig.8/D Pos."2").



(fig.8/D)

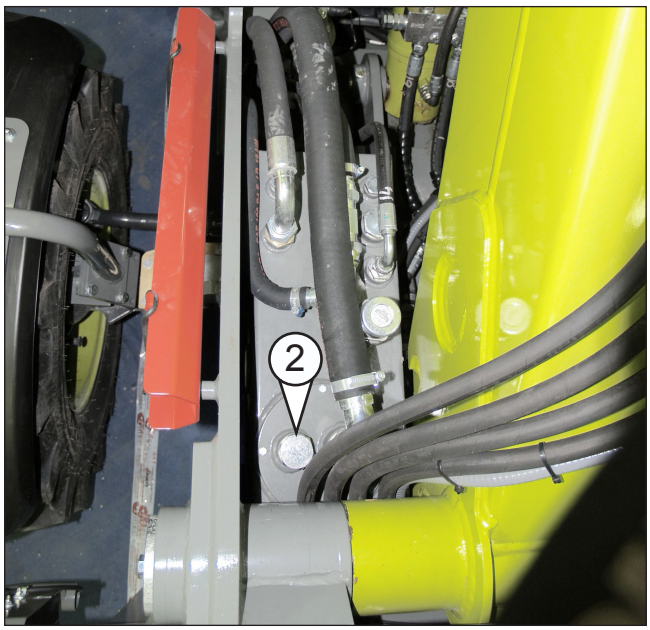
If the oil is not level, carry out the following operations:

- Bring the machine to a halt on flat ground.
- Retract the boom completely and raise just enough to insert the safety rod on the raising cylinder blocking rod.
- Switch off the engine and remove the ignition key, hang up a sign in the cab that reads "maintenance work under way".
- Insert the "boom support" safety rod on the raising cylinder blocking rod, once suitable safety supports have been set (e.g. tripods) on the telescopic boom.
- Remove the top up cap (fig.9/D Pos."2") and pour in the ***DIECI*** -recommended oil.
  Top up the quantity necessary to bring it back to level.

Routine maintenance should be carried out at the prescribed intervals.

***- ATTENTION*:**

When topping up, do not exceed level and immediately clean any spillage.



(fig.9/D)

CHANGING HYDRAULIC OIL AND REPLACING GENERIC DEDALUS FILTERS

Routine maintenance should be carried out at the prescribed intervals.

Inside the tank there is a mesh filter (fig.10/D Pos.”3”) are present inside the tank. These prevent any hazardous particles from entering the hydraulic system.

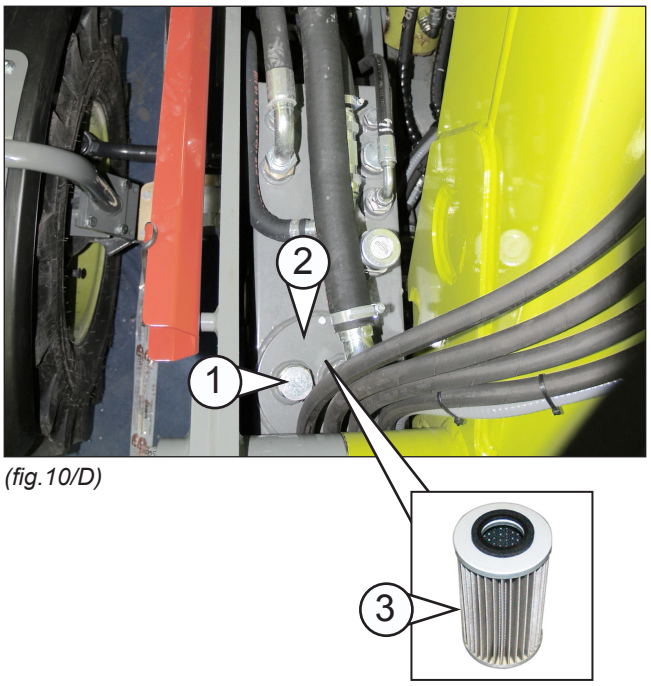
The replacement of hydraulic oil and internal tank filters must always be carried out in order. It is not possible to service only one of the two components.

To correctly change oil and filters:

- Bring the machine to a halt on flat ground.
- Retract the boom completely and raise it just enough to insert the safety rod on the raising cylinder blocking rod.
- Switch off the engine and remove the ignition key, hang up a sign in the cab that reads “maintenance work under way”.
- Insert the “boom support” safety rod on the raising cylinder blocking rod, once suitable safety supports (e.g. tripods) have been set on the telescopic boom.
- Place a suitable capacity container under the drain plug.
- Remove the drain plug (fig.12/D Pos.”1”) to drain the oil. Remove the loading plug (fig.10/D Pos.”1”) to accelerate emptying.
- Once the tank is completely empty, remove the flange (fig.10/D Pos.”2”), unscrewing its bolts to access the inside of the tank.
- Use a fork spanner to remove the filter (fig.10/D Pos.”3”) inside the tank.
- Insert new filters, tightening them with the fork spanner.
- Reposition the flange (fig.10/D Pos.”2”) in its housing, and tighten the bolts.
- Reinsert the drain plug (fig.12/D Pos.”1”).
- Fill up the tank to level via its filler cap (fig.11/D Pos.”1”).
- Once the tank has been filled, tighten the filler cap (fig.10/D Pos.”1”).
- Remove telescopic boom safeties, start up the vehicle and move hydraulic cylinders to discharge off any air bubbles.
- Check the hydraulic oil level again and top up if necessary.

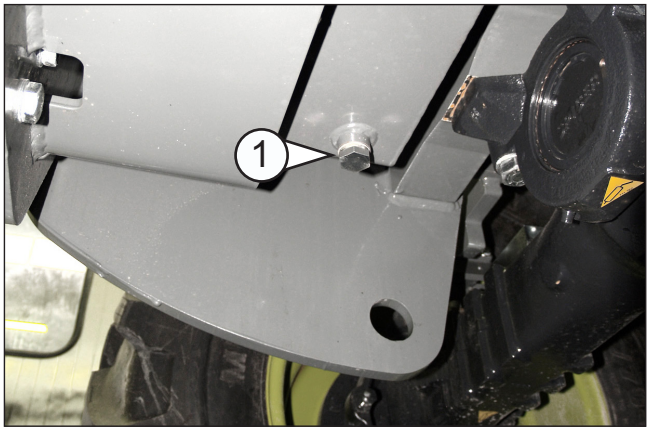
***- ATTENTION*:**

Waste oil is potentially harmful to the environment and must always be disposed of appropriately.



(fig.10/D)

(fig.11/D)



(fig.12/D)

CHANGING HYDRAULIC OIL AND REPLACING DEDALUS 26.6 FILTERS

The Dedalus 26.6 has two tanks; the upper tank is on the left side between the boom and chassis (fig 13/D Pos. “1”) and the lower tank is under the base of the raising cylinder (15/D Pos. “1”).

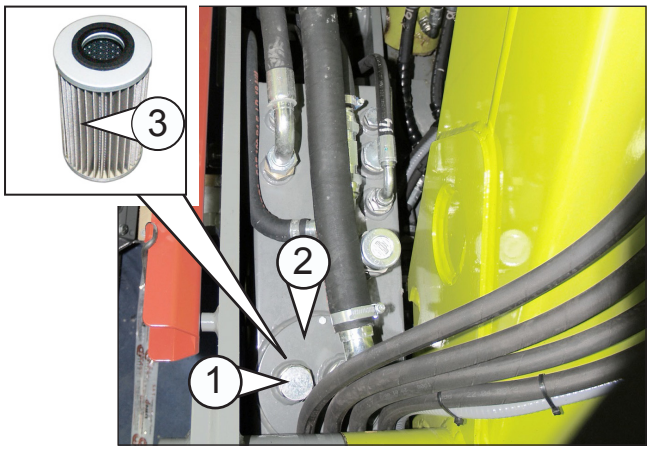
Inside the upper tank there is a mesh filter (fig.13/D Pos.”3”) are present inside the tank. These prevent any hazardous particles from entering the hydraulic system.
The replacement of hydraulic oil and internal tank filters must always be carried out in order.
It is not possible to service only one of the components.

To correctly change oil and filters:

- Bring the machine to a halt on flat ground.
- Retract the boom completely and raise it just enough to insert the safety rod on the raising cylinder blocking rod.
- Switch off the engine and remove the ignition key, hang up a sign in the cab that reads “maintenance work under way”.
- Insert the “boom support” safety rod on the raising cylinder blocking rod, once suitable safety supports (e.g. tripods) have been set on the telescopic boom.
- Place a container of appropriate capacity under the discharge caps (fig. 16/D Pos. “1”)
- Remove the drain plugs (fig.16/D Pos.”1”) to drain the oil. Remove the loading plug (fig.13/D Pos.”1”) to accelerate emptying.
- Once the tank is completely empty, remove the flange (fig.13/D Pos.”2”), unscrewing the bolts to access the inside of the tank.
- Use a fork spanner to remove the filter (fig.13/D Pos.”3”) inside the tank.
- Insert new filters, tightening them with the fork spanner.
- Reposition the flange (fig.13/D Pos.”2”) in its housing and tighten the bolts.
- Reinsert the drain plug (fig.16/D Pos.”1”).
- Fill up the tank to level via the filler cap (fig.14/D Pos.”1”).
- Once the tank has been filled, tighten the top up cap (fig.13/D Pos.”1”).
- Remove telescopic boom safety safeties, start up the vehicle and move hydraulic cylinders to discharge any air bubbles.
- Check the hydraulic oil level again and top up if necessary.

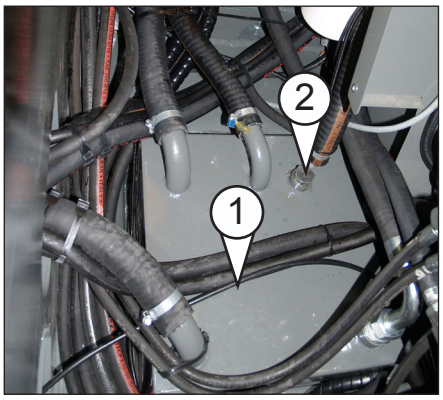
***- ATTENTION*:**

Waste oil is potentially harmful to the environment and must always be disposed of appropriately.

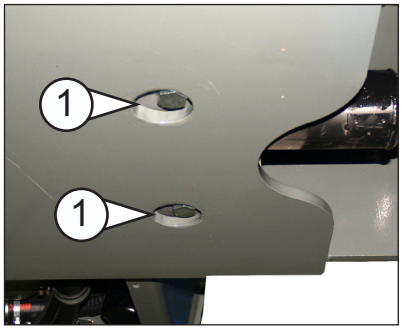


(fig.13/D)

(fig.14/D)



(fig.15/D)



(fig.16/D)

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

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HYDROSTATIC SYSTEM OIL FILTER
(Fig.17/D pos."1")

Operate as follows to correctly replace:

1. Park the vehicle on a level surface.
2. Retract the boom completely and raise it just enough to insert the safety rod on the raising cylinder blocking rod.
3. Switch off the engine and remove the ignition key, hang up a sign in the cab that reads "maintenance work under way".
4. Place a container under the filter to collect any oil that may come out during replacement.
5. Insert the "boom support" safety rod on the raising cylinder blocking rod; set suitable safety supports (e.g. tripods) on the telescopic boom.
6. Close the valve of the supply tube filter (fig. 18/D Pos. "2")
7. Remove the filter cartridge, unscrewing it using a ribbon spanner (fig.19/D).
8. Clean the filter support with a clean cloth which will not leave felt, making sure the old sealing ring is removed.
9. Take the new ***DIECI*** -approved filter. Lubricate with the same oil as used on the oil seal gasket.
10. Screw in the filter using only your hands, taking care to set the lubricated oil gasket in its proper position.
11. ⚠ - ***ATTENTION:*** open the "supply tube filter" valve and block it with a nylon clamp.
12. Switch on the vehicle and make sure there are no leaks.

⚠ ***- ATTENTION*:**

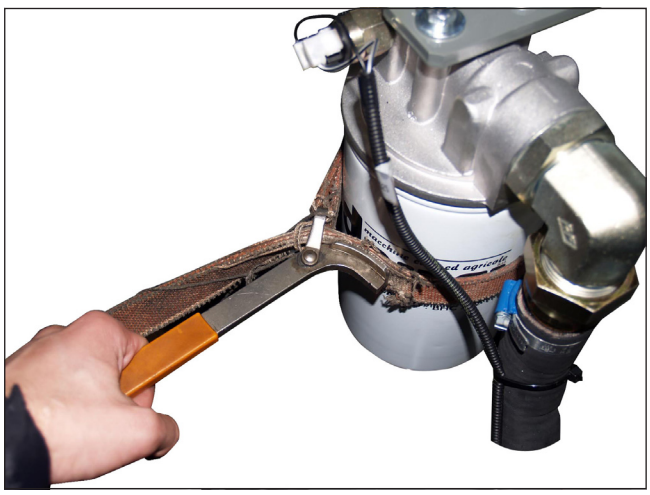
THE DEDALUS 26.6 (FIG.18/D POS."2") DOES NOT HAVE THE VALVE. DO NOT CARRY OUT OPERATIONS DESCRIBED IN NUMBERS 6 AND 11.

⚠ ***- ATTENTION*:**

Waste oil is potentially harmful to the environment and must be disposed of properly.

(fig.17/D)

(fig.18/D)


(fig.19/D)

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

FUEL TANK
(fig.22/D Pos.”1”)

Cleaning

For correct cleaning:

1. Stop the vehicle on a flat, level surface.
2. Switch off the engine and remove the ignition key, hang up a sign saying “maintenance work under way”.
3. Place a suitable capacity container under the drain plugs (fig.22/D Pos.”3”) to collect fuel coming out during cleaning.
4. Unscrew the tank top up cap (fig.22/D Pos.”2”).
5. Unscrew the tank drain plug (fig.22/D Pos.”3”).
6. Let fuel drain, then top up ten litres of clean fuel through the top up opening to eliminate any residual impurities.
7. Replace the drain plug and tighten it securely.
8. Top up the tank with clean fuel and replace cap.

- *ATTENTION* -

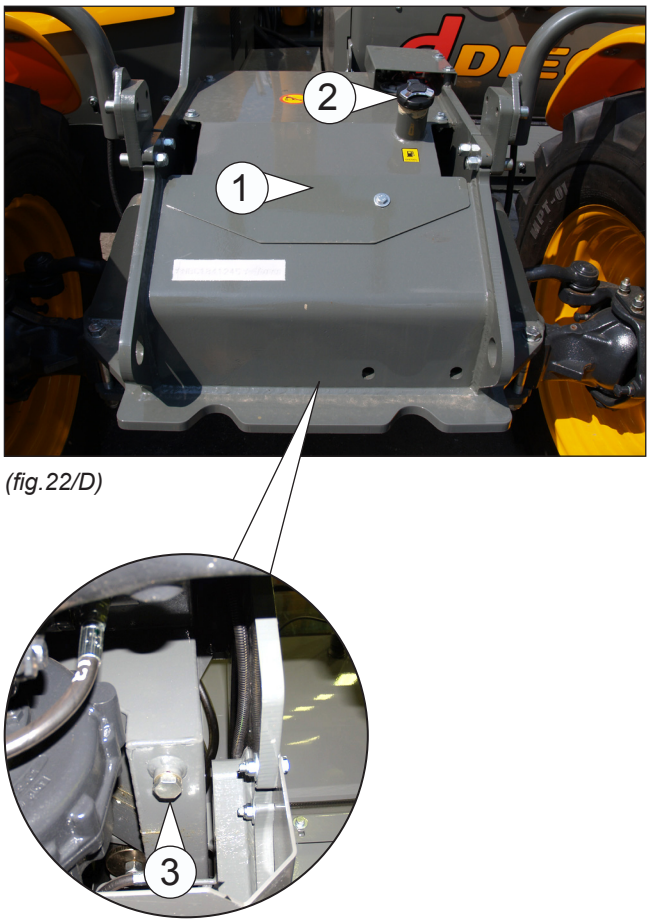
Fuel is highly inflammable.

Do not smoke and do not approach with a flame during these operations.

Risk of fire or explosion.

- *ATTENTION* -

Waste fuel is potentially harmful to the environment and must be disposed of appropriately.



(fig.22/D)

DEDALUS GENERIC RADIATOR WATER / OIL / INTERCOOLER

- ATTENTION -

These operations must be carried out when the engine is cold.

Radiator grill cleaning

Radiator grills (fig.24/D Pos.”1”, fig.25 /D Pos.”1”) and air recirculation networks (fig.26/D Pos.”A-B-C”) must be kept as clean as possible to allow for maximum heat exchange between the radiator and the circulating air. To remove impurities, use a low pressure jet of air directed from the inside towards the outside. Then pass the jet of air on the inner parts covered with dirt. If dirt is particularly compact, soften it with a low pressure water jet before using the air.

- ATTENTION:

Consult the engine operation and maintenance handbook before using jets of air or water.

- ATTENTION:

Heat exchange flaps are very delicate. Do not use rags or brushes to clean them. **Jets of water and air must be directed horizontally.**

Cooling liquid level check

During normal vehicle use, the water level should be at 3 cm under the radiator cap (fig.24/D Pos.”1”).

Verification of the correct level of cooling liquid must be carried out as follows:

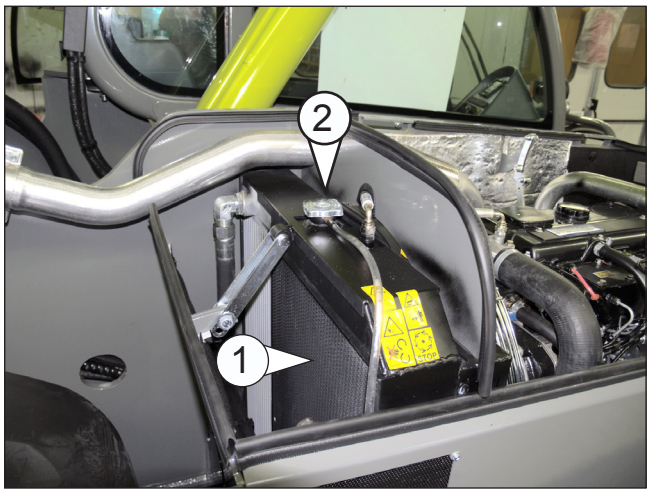
1. Stop the vehicle on a flat surface.
2. Switch off the engine and remove the ignition key, hang up a sign in the cab that reads “maintenance work under way”.
3. Slowly turn the radiator cap (fig.24/D Pos.”1”) counterclockwise until reaching the safety pin.
4. Discharge pressure and steam.
5. Remove the cap.
6. Check the coolant level. If necessary, top up using a mixture of water and antifreeze.
7. To reinsert the cap follow these steps in the opposite order.

- ATTENTION:

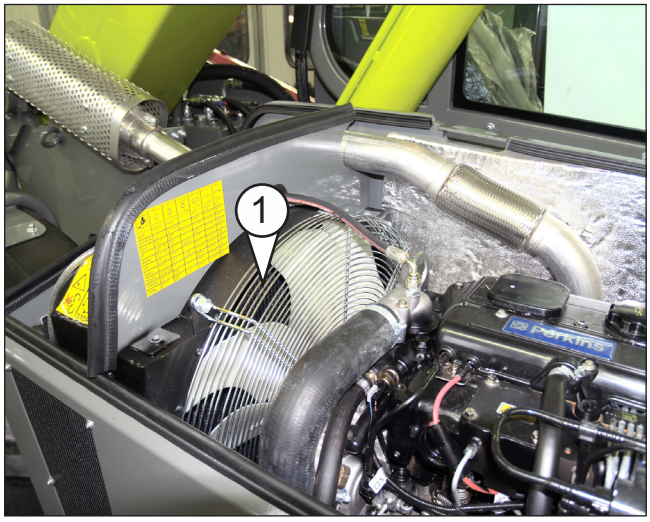
If frequent top ups are necessary in normal working conditions, verify that there are no cooling system leaks. Contact a ***DIECI*** service centre if problems arise.

- ATTENTION -

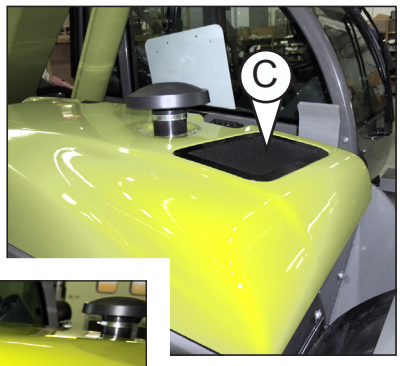
Use demineralised water to fill the cooling system. Calcareous water may cause incrustations and premature system ageing.

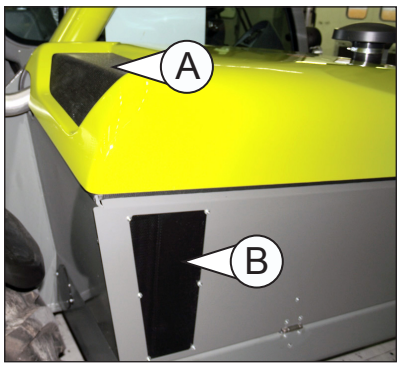


(fig.24/D)



(fig.25/D)





(fig.26/D)

Replacing cooling liquid

For correct replacement of cooling liquid:

1. Stop the vehicle on a flat surface.
2. Switch off the engine and remove the ignition key, hang up a sign in the cab that reads “maintenance work under way”.
3. Place a container under the radiator to collect any cooling liquid which may come out during replacement.
5. Remove the sleeve (fig.28/D, pos.”1”) to drain radiator water; remove the loading cap to speed up the emptying process.
6. Allow the cooling circuit to drain completely.
7. Check the conditions of the sleeves and their fastenings. Replace if necessary.
8. Rinse the radiator with clean water, pouring it in the top up cap (fig.27/D Pos.”1”), making it drain through the sleeve inlet (fig.28/D Pos.”1”). If necessary, add a detergent product to the clean water.
9. Once cleaning has been completed, close the drain inlet by reinserting the sleeve (fig.28/D Pos.”1”).
10. Fill up the cooling system from the cap (fig.27/D Pos.”1”) up to level (3 cm below the radiator cap) with the previously prepared cooling liquid.
11. Close the cap (fig.27/D Pos.”1”) and switch on the engine and allow it run at minimum for a few minutes.
12. Make sure that there are no leaks, check the level and, if necessary, add more liquid.

(fig.27/D)

(fig.28/D)

- *ATTENTION* -

Use demineralised water to fill the cooling system. Calcareous water may cause incrustations and premature system ageing.

- *ATTENTION*:

Always wear suitable protective clothing during these operations.

- *ATTENTION*:

Waste coolant is potentially harmful to the environment and must be disposed of appropriately.

- *ATTENTION* -

The radiator must always be filled with a solution made of distilled water and antifreeze to prevent the rusting and freezing of system water.

Mixing percentages can be found on antifreeze containers.

DEDALUS 26.6 RADIATOR WATER / OIL / INTERCOOLER

- ATTENTION -

These operations must be carried out when the engine is cold.

Radiator grill cleaning

Radiator grills (fig.34/D Pos."1"), cooling fans (fig.34/D Pos. "2" – fig.35 /D Pos."1") and the air recirculation grills (fig.36/D Pos."A","B","C","D","E") must be kept as clean as possible to maximise heat exchange between the radiator and the circulating air. To remove impurities, use a low pressure air jet directing it from the inside towards the outside. Then pass the jet of air on the inner parts covered with dirt. If dirt is particularly compact, soften it with a low pressure water jet before using the air. Remove any dirt that has accumulated in the conveyor of the fan motor with compressed air and a cloth wet cloth that does not leave residue.

***- ATTENTION*:**
Consult the engine operation and maintenance handbook before using jets of air or water.

***- ATTENTION*:**
Heat exchange flaps are very delicate. Do not use rags or brushes to clean them. Jets of water and air must be directed horizontally.

Cooling liquid level check

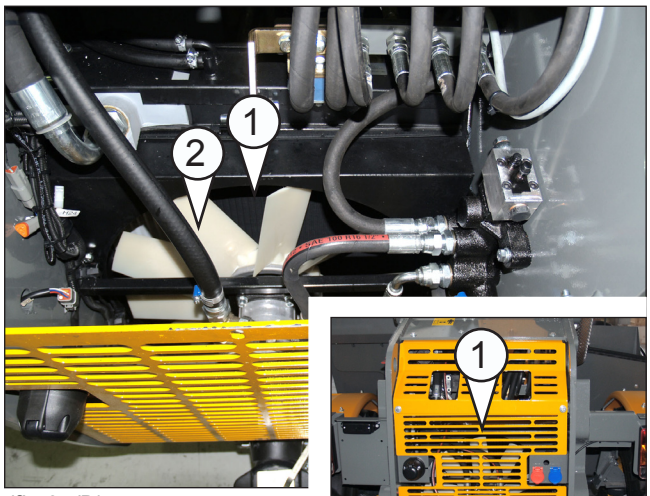
During normal vehicle use the radiator water reservoir (fig.37/D Pos."1") must always be at level. The level is correct when the water is just above halfway (fig. 37/D Pos. "A"). Verification of the correct level of cooling liquid must be carried out as follows:

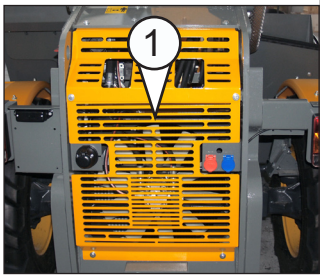
1. Stop the vehicle on a flat surface.
2. Switch off the engine and remove the ignition key, hang up a sign in the cab that reads "maintenance work under way".
3. Slowly turn the radiator reservoir cap (fig. 37D/ Pos."2") counter-clockwise until reaching the safety pin.
4. Discharge pressure and steam.
5. Remove the cap.
6. Check the coolant level. If necessary, top up using a mixture of water and antifreeze.
7. To reinsert the cap follow these steps in the opposite order.

***- ATTENTION*:**
If frequent top ups are necessary in normal working conditions, verify that there are no cooling system leaks.
Contact a ***DIECI*** service centre if problems arise.

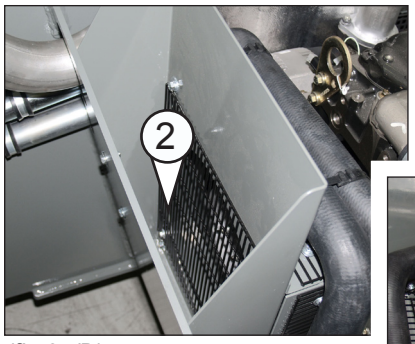
- ATTENTION -

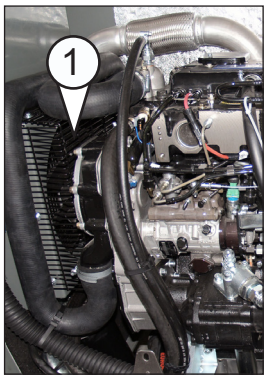
Use demineralised water to fill the cooling system. Calcareous water may cause incrustations and premature system ageing.



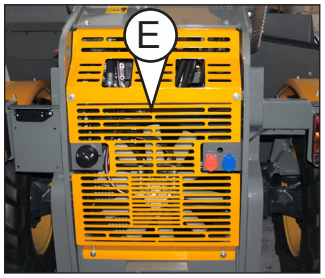


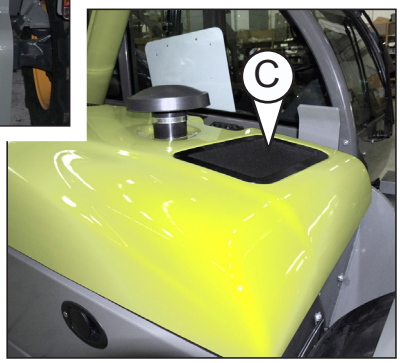
(fig.34/D)

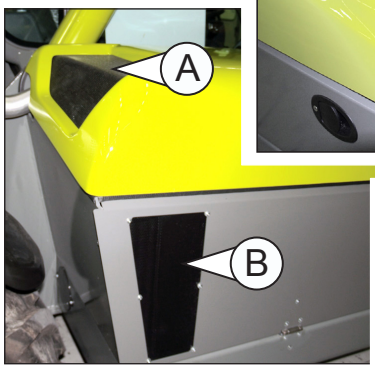


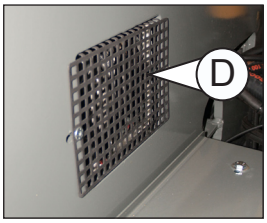


(fig.35/D)









(fig.36/D)

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

Replacing cooling liquid

For correct replacement of cooling liquid:

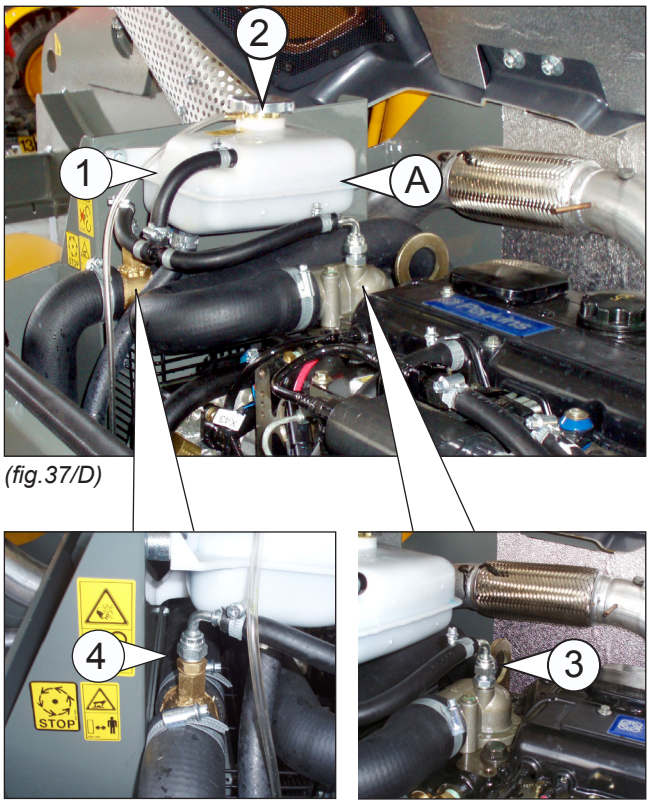
1. Stop the vehicle on a flat surface.
2. Switch off the engine and remove the ignition key, hang up a sign in the cab that reads “maintenance work under way”.
3. Place a container under the radiator to collect any cooling liquid which may come out during replacement.
5. Remove the sleeve (fig.38/D, pos.”1”) to drain radiator water; remove the loading cap to speed up the emptying process.
6. Allow the cooling circuit to drain completely.
7. Check the conditions of the sleeves and their fastenings. Replace them if necessary.
8. Loosen the air vent connectors (fig.37/D, pos.”3”-”4”) just enough so that the air can escape during filling.
9. Rinse the radiator with clean water, pouring it in from top up cap (fig.37/D Pos.”2”) draining it through the sleeve inlet (fig.38/D Pos.”1”). If necessary, add a detergent product to the clean water.
10. Once cleaning has been completed, close the drain inlet by reinserting the sleeve (fig.38/D Pos.”1”).
12. Fill up the cooling system from the cap (fig. 37/D Pos.”2”) up to level (fig. 37/D Pos.”A”) with the previously prepared cooling liquid.
13. Switch on the engine. Bring the engine to temperature to allow the water recirculation valve to open.
14. Maintain the water level and add water to the reservoir when it is empty, bringing it back up to the correct level. When necessary, repeat the operation to obtain the complete filling of the cooling system. When water seeps out from the previously loosened connectors (fig. 37/D, pos.”3”-”4”), the cooling system is completely full.
15. When filling is complete, tighten the two loosened vents (fig. 37/D, pos.”3”-”4”) and close the filler cap (fig.37 /D Pos.”2”).
16. Ensure that there are no leaks.
17. Monitor the water level in the reservoir during the first 8 hours of vehicle operation, as the water level may do down again. If it goes down, top it up.

- ATTENTION -

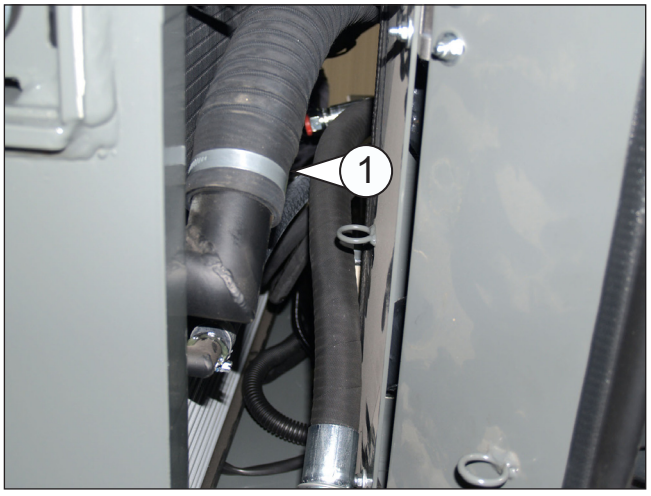
Use demineralised water to fill the cooling system. Calcareous water may cause incrustations and premature system ageing.

- ATTENTION:

Always wear suitable protective clothing during these operations.



(fig.37/D)



(fig.38/D)

- ATTENTION:

Waste coolant is potentially harmful to the environment and must be disposed of appropriately.

- ATTENTION -

The radiator must always be filled with a solution made of distilled water and antifreeze to prevent the rusting and freezing of system water.

Mixing percentages can be found on antifreeze containers.

AIR FILTER
(fig.39/D Pos.”1”)

Cartridge Cleaning / Replacement

An air filter in poor conditions can cause a reduction in power, excessive fuel consumption and shorten engine life.

Filter clogging is signalled by the corresponding warning light found on the central dashboard. It is possible to continue operating for another maximum 10 hours after clogging is signalled. Maintenance must however be carried out as often as described.

Filter cleaning should be carried out with compressed air at maximum 3 Bar at a distance of no less than 150mm, taking due caution to not damage components.
Use a wet cloth which will not leave residue to clean the box and cover.

For correct cleaning:

1. Stop the vehicle on a flat, level surface.
2. Switch off the engine and remove the ignition key, hang up a sign saying “maintenance work under way”.
3. Open and lock the bonnet.
4. Pull the locking lever (fig.40/D Pos.”1”), situated on the four corners of the filter cover (fig.29/D Pos.”2”), toward you.
5. Remove the cover (fig.39/D Pos.”2”).
6. Push the inside handle (fig.41/D Pos.”1”) toward the cab (as indicated by the arrows) and pull it upward to extract the secondary filter.
7. Slide the paper filter (fig.42/D Pos.”1”) from the support, overturning the part equipped with a gasket downward. Keep one hand under it to prevent it from falling and being ruined.
8. Remove the primary filter (fig.43/D Pos.”1”), pulling the extraction flap toward the (fig.43/D Pos.”2”) side or the central plastic (fig.43/D Pos.”3”).
9. Clean and replace filters and remount them following the same instructions in the opposite order.

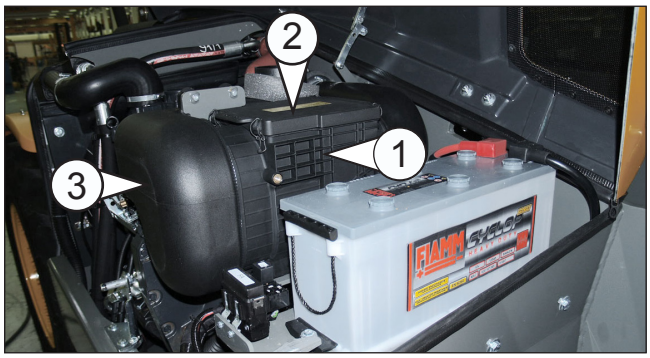
***- ATTENTION*:**

We recommend cleaning filters only when the warning light signals clogging or at prescribed intervals. Unnecessary and too frequent cleaning exposes components to handling damage which can allow dust and dirt to pass into the filtering phases, causing damage to the engine.

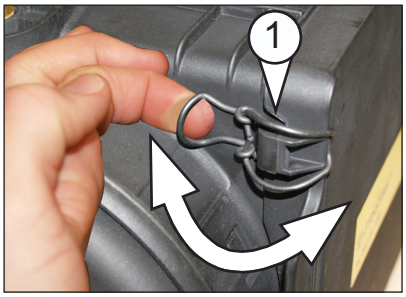
***- ATTENTION*:**

Filtration components which come into contact with any type of liquid will have to be replaced.

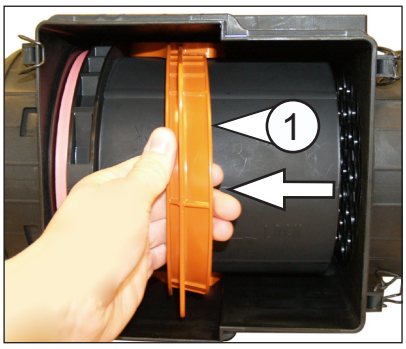
Regularly check the suction sleeves. Replace immediately if worn or damaged. Regularly check that bolts and clamps are properly tightened. No air should be allowed entrance into the engine without having first passed through the filter.



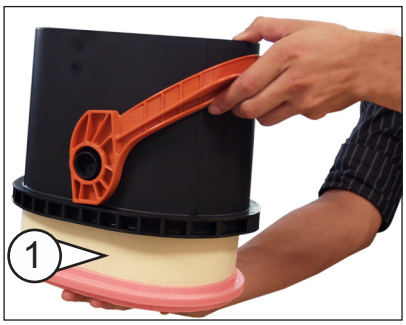
(fig.39/D)



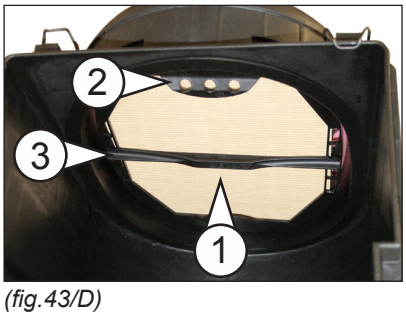
(fig.40/D)



(fig.41/D)



(fig.42/D)



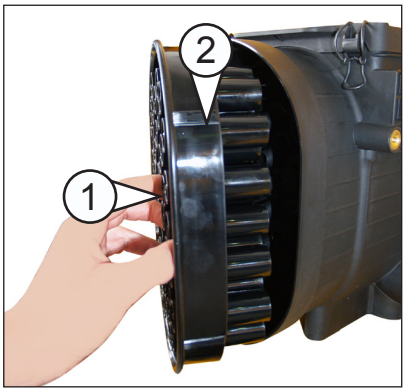
(fig.43/D)

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

During filter cartridge replacement, clean the primary suction duct (fig.39/D Pos.”3”) as well as cleaning the filter holding plate.

Operations specifications are listed below:

1. Remove bolts from the primary suction tube duct (fig.46/D Pos.”1”).
2. Remove the duct and clean with a jet of compressed air.
3. Remove the front filter bolt (fig.45/D Pos.”1”) and remove the air input inlet (fig.45/D Pos.”2”).
4. Clean with a wet cloth which will not leave residue. Clean every air input inlet.
5. Repeat the same operations in the opposite order to remount all components.



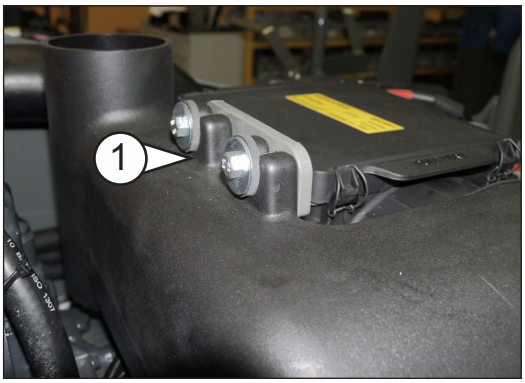
(fig.45/D)

⚠ - *ATTENTION*:

In the event that connecting gaskets between the suction duct and filter should become worn, replace them.

⚠ - *ATTENTION*:

Do not operate with an improperly assembled or damaged filter.



(fig.46/D)

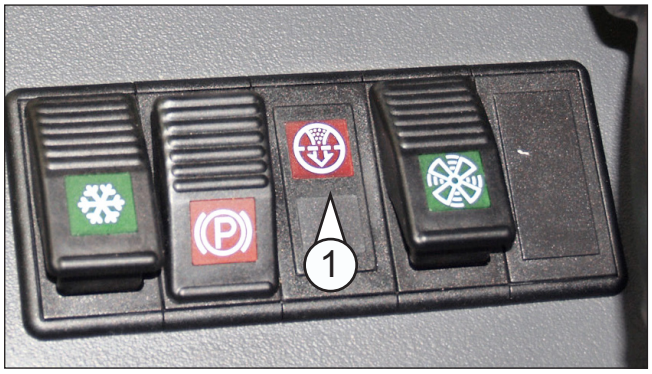
⚠ - *ATTENTION*:

To ensure maximum filter efficiency, we recommend operating with a complete filter on both parts and components. All worn parts should be replaced as quickly as possible.

⊘ - *WARNING* - ⊘

IT IS ABSOLUTELY FORBIDDEN
to operate without an engine air filter.

The engine suctions air continuously during use. Dust present which enters into circulation can cause serious system damage.



(fig.47/D)

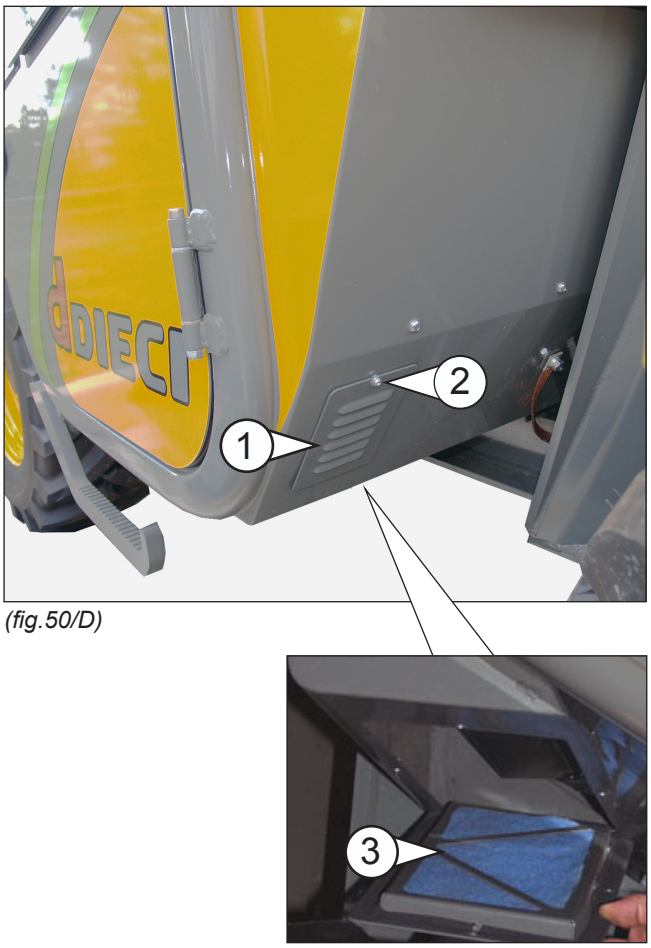
CAB FAN FILTER
(fig.50/D)

Cab fan filter replacement.

Routine maintenance should be carried out at the prescribed intervals.

The cab filter should be replaced every 250 working hours. Below you can find the sequence for proper replacement operations:

1. Park the vehicle on a level surface.
2. Completely retract and lower the boom.
3. Switch off the engine and remove the ignition key, hang up a sign saying “maintenance work under way”.
4. Remove the casing, positioned in the rear part of the cab (fig.50/D Pos.”1”), unscrewing the fastening screw (fig.50/D Pos.”2”).
5. Remove the worn filter and insert the new one (fig.50/D Pos.”3”).
6. Replace the casing
7. Restart the engine with the fan moving to verify that the operation is correct.



(fig.50/D)

- *ATTENTION*:

Do not clean the clogged filter with air or water and re-use. At the end of its life, the filter loses determined features which cannot be restored.

- *IMPORTANT*:

In the event of vehicle use in particularly dust rich environments (haylofts, etc.), the filter life is reduced by 100 hours.

- *IMPORTANT*:

Check for filter clogging in the event of fan system malfunction.

In the event that malfunctions continue despite filter replacement, contact a ***DIECI*** service centre.

- *ATTENTION*:

Do not use the vehicle without a cab filter.
The entrance of dust in the cab can cause health risks for the operator and risks of fan system breakage.

AIR CONDITIONING (OPTIONAL)

Cleaning the system

1 Remove the protective carter (fig.51/D Pos"1").

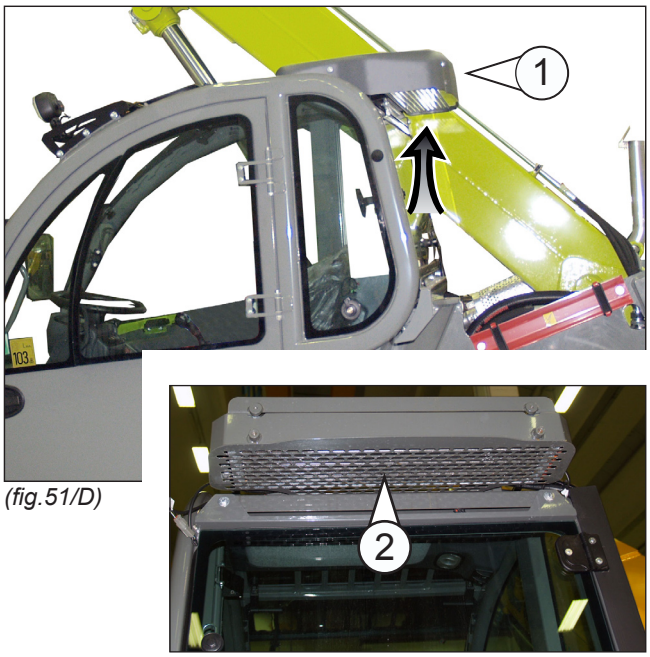
2. Clean the condenser (fig.51/D Pos"2"), directing the compressed air, at a maximum pressure of 7 bar, through the radiant mass, from the side opposite the normal air flow (fig.51/D).

3. Be careful not to damage radiator flaps.

4. After cleaning, replace the condenser.

- IMPORTANT:

Should the conditioning system not work properly, immediately inspect the condenser.



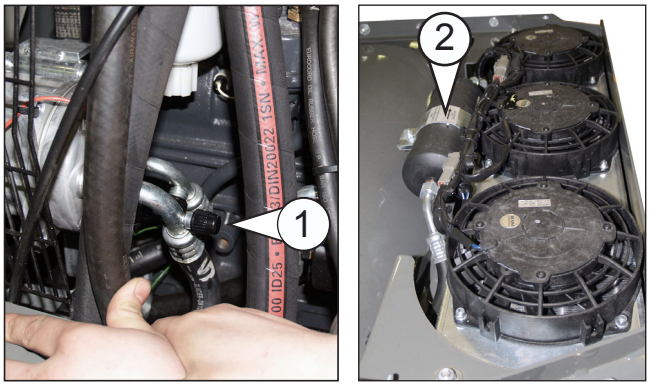
(fig.51/D)

- IMPORTANT:

Check the gas charge every year via the corresponding valves (fig.52/D Pos"1").

***- ATTENTION*:**

Replace the radiator filter (fig.52/D Pos"2") **every 2 years.** Its breakage could cause serious damage to the conditioning system and cause the introduction of particles into the air that are harmful to the operator's health.



(fig.52/D)

- IMPORTANT:

Turn on the air conditioning for two minutes every 15 days, even during the winter. In this way, the moveable parts like the compressor and the system in general can be lubricated.

***- ATTENTION*:**

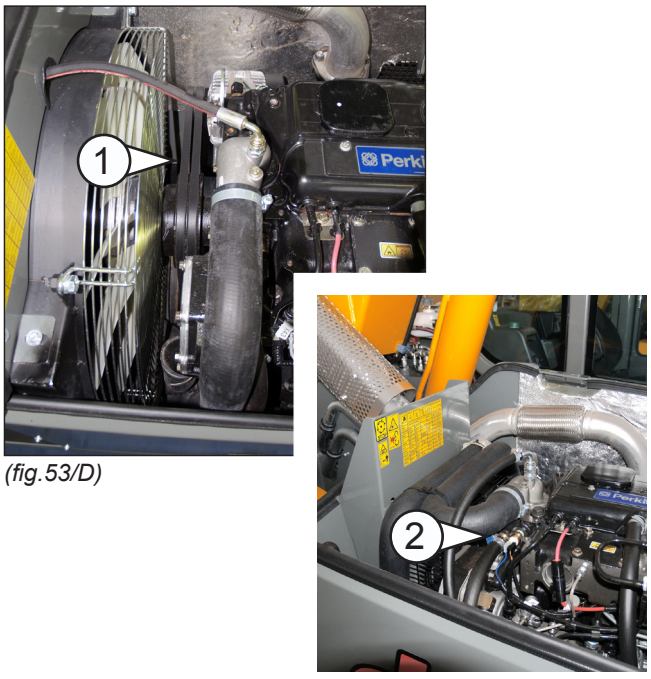
DO NOT loosen any air conditioning system tubes. Contact between the skin and coolant can cause freezing.

Compressor belt tension

Check the tension of the compressor belt (fig.53 Pos."1"), (fig.53 Pos."2") for Dedalus 26.6, every 500 hours.

***- ATTENTION*:**

The belt must be checked with the engine switched off. Before beginning the check, switch off the engine and remove the ignition key, hang up a sign, "maintenance work under way", altering others to stay clear of the area.



(fig.53/D)

CYLINDER BLOCK VALVES

Cylinder block valves hinder uncontrolled movement of the cylinder pistons in case of lacking hydraulic or bursting pressure of a flexible pipe.
The valves are directly mounted on the cylinders.

Cylinder nonreturn valves check

***- ATTENTION*:**
Whenever these checks take place do not allow anybody near the vehicle.

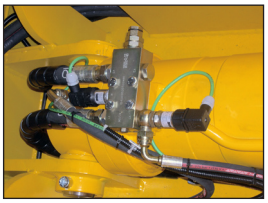
***- ATTENTION*:**
One movement at a time should be checked during verifications.

***- ATTENTION*:**
In the event of malfunction, do not use the vehicle until it has been repaired.

A) Boom raising cylinders: (fig.54/D)

1. Start up the engine. Make sure that the parking brake is engaged and the transmission in neutral.
2. Lift the boom at 45°.
3. When the engine is running at 1400 RPMs, engage 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 motor stop, the non return cylinder valves are faulty. Repair the defect as quickly as possible, contact a ***DIECI*** service centre.

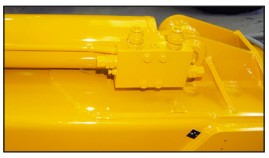


(fig.54/D) (Boom raising cylinder block valve)

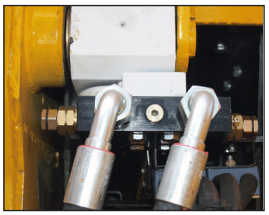
B) Boom extraction cylinder: (fig.55-56/D)

1. Start up the engine. Make sure that the parking brake is engaged and the transmission in neutral.
2. Rise the boom and extract it completely.
3. When the engine is running at 1400 RPMs, engage 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 is switched off, the cylinder block valve is faulty. Repair the defect as quickly as possible, contact a ***DIECI*** service centre.



(fig.55/D) (Outer boom outer cylinder block valve)



(fig.56/D) (Inner boom extraction cylinder block valve)

C) Fork arching cylinder (swinging): (fig.57/D)

1. Start up the engine, withdraw a load from the forks (example a brick loads or hay bales).
   Tilt the forks completely backwards.
2. Engage the parking brake and put the transmission in neutral.
3. Shift the boom from the ground as much as it is necessary to allow the forks forward inclination.
4. When the engine is running at 1400 RPMs, engage the control lever to tilt the forks forward. During the fork movement stop the engine. Arching movement must slow down and then stop as the engine slows down and stops.

If the forks keep on lowering or moving after the engine is switched off, the block valve is faulty.
Repair the defect as quickly as possible, contact a ***DIECI*** service centre.

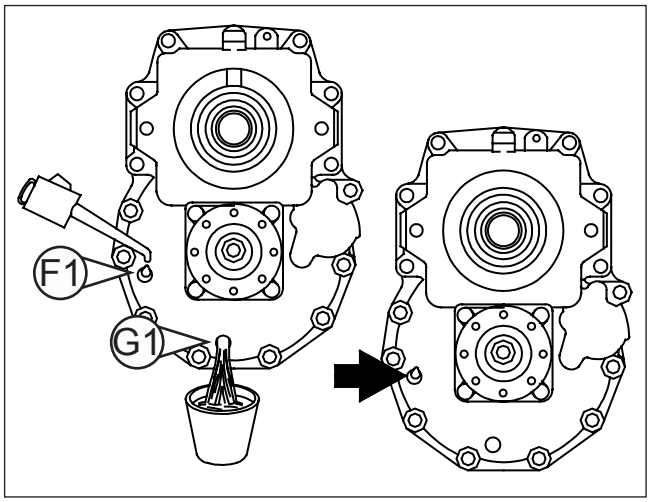
(fig.57/D) (Outer arching plate cylinder block valve)

REDUCERS AND DIFFERENTIAL AXLES

Figures illustrated are only an indication and may not correspond to those parts mounted on your vehicle.
References made to the maintenance inlets, refer to pages, (fig.66/D-(fig.67/D), where two standard axles have been described for more accurate identification.

Reducer
Changing the Oil
(Fig.60/D)

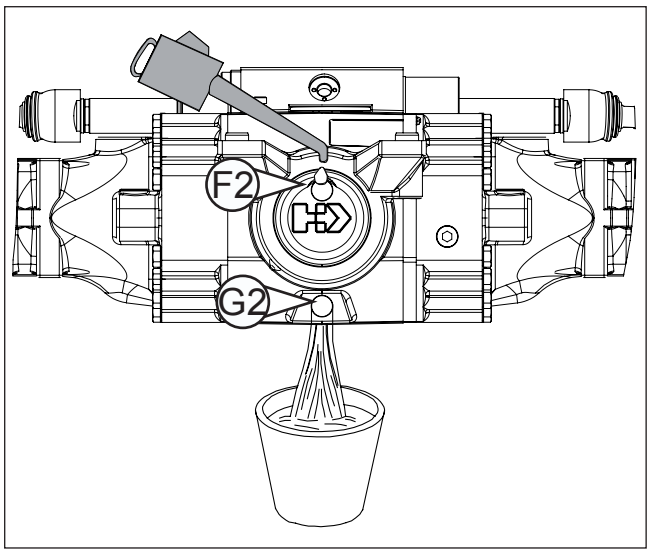
1. Stop the vehicle on a flat, level surface with differential oil still hot.
2. Switch off the engine and remove the ignition key, hang up a sign in the cab that reads “maintenance work under way”.
3. Place a container under the drain plugs to collect any oil which may come out during replacement.
4. Remove the drain plug (fig.60/D Pos.”G1”) and the loading/level plug (fig.60/D Pos.”F1”) to carry out a complete drainage.
5. Allow the oil to completely drain out.
6. Replace the drain plugs and tighten them securely.
7. Pour an approved type of clean oil into the loading/level plug (fig.60/D Pos.”F1”).
8. The level is correct when oil comes out of the loading/level plug (fig.60/D Pos.”F1”).
9. Check for any leaks coming from the drain plugs.
10. Replace the drain/level plug and tighten it securely.



(fig.60/D)

Front/Rear Differential Axles
Changing the oil
(Fig.61/D)

1. Stop the vehicle on a flat, level surface with differential oil still hot.
2. Switch off the engine and remove the ignition key, hang up a sign in the cab that reads “maintenance work under way”.
3. Place a container under the drain plugs to collect any oil which may come out during replacement.
4. Remove the drain plug (fig.61/D Pos.”G2”) and the loading/level plug (fig.61/D Pos.”F2”) to carry out a complete drainage.
5. Allow the oil to completely drain out.
6. Replace the drain plugs and tighten them securely.
7. Pour an approved type of clean oil into the loading/level plug (fig.61/D Pos.”F2”).
8. The level is correct when oil comes out of the loading/level plug (fig.61/D Pos.”F2”).
9. Check for any leaks coming from the drain plugs.
10. Replace the drain/level plug and tighten it securely.



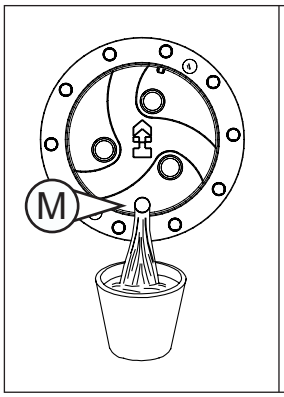
(fig.61/D)

Epicyclic reducer

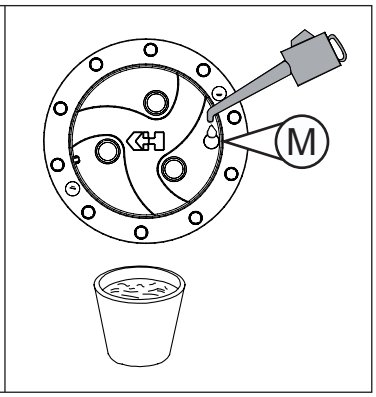
Changing the oil
(Fig.63/D - fig.64/D - fig.65/D)

1. Stop the vehicle on a flat, level surface with differential oil still hot.
2. Switch off the engine and remove the ignition key, hang up a sign in the cab that reads “maintenance work under way”.
3. Place a container under the drain plugs to collect any oil which may come out during replacement.
3. Turn the wheel hub (fig.63/D Pos.”1”) so that the inlet (fig.64/D Pos.”M”) is moved to the lower position (fig.64/D), and then remove the oil cap.
4. Allow the oil to completely drain out.
5. Turn the wheel hub so that the inlet (fig.65/D Pos.”M”) is moved to the middle position (fig.65/D).
6. Fill the reduction gear to level via the inlet (fig.65/D). The level is correct when oil comes out from the oil cap.
7. Replace the epicycloidal reduction gear cap and tighten it securely.
8. Repeat all the operations for each of the four reducer units.

(fig.63/D)



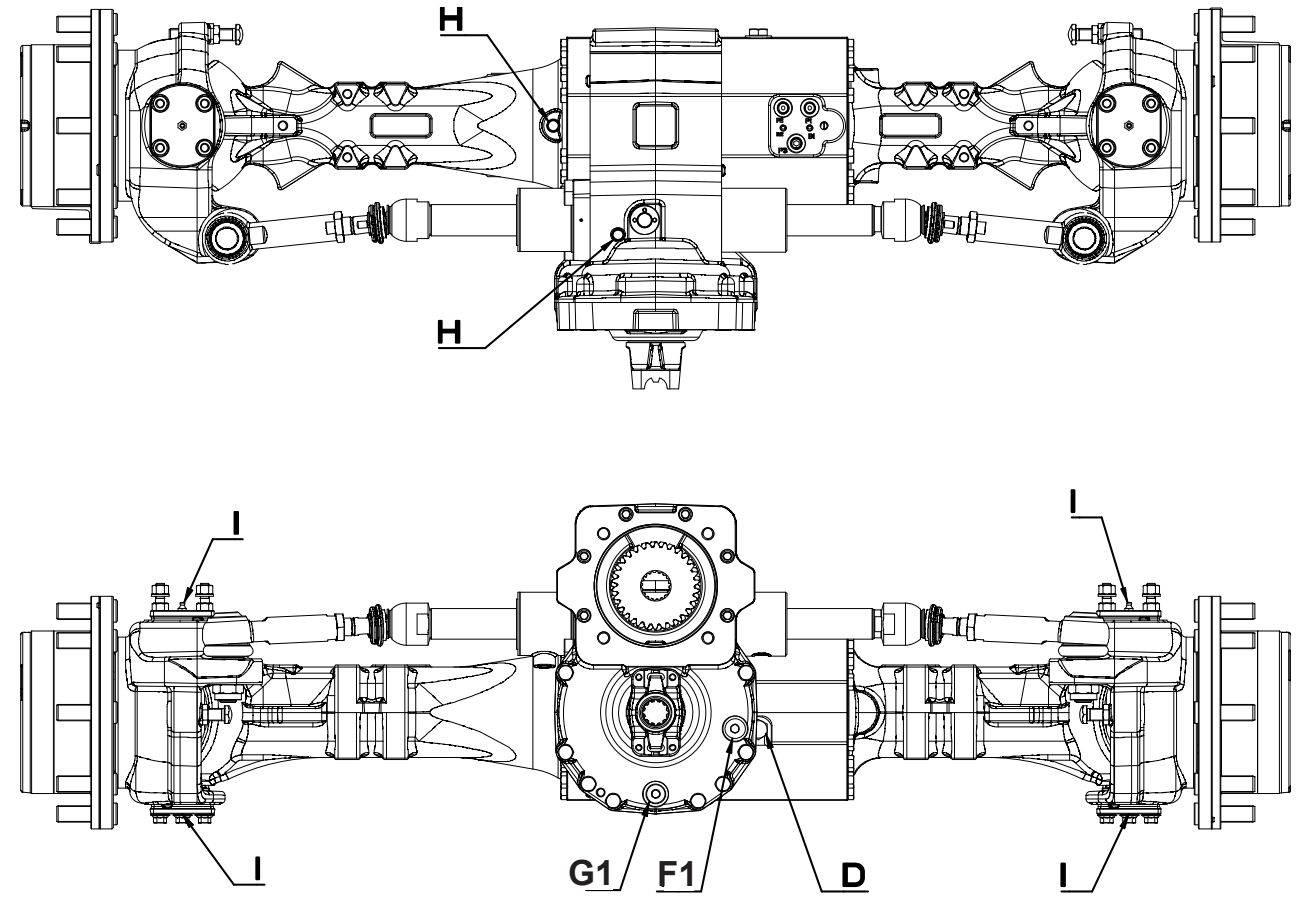
(fig.64/D)



(fig.65/D)

FRONT DIFFERENTIAL AXLE

Key	
F	Drain plug and oil level
G	Oil drain plug
H	Vent cap
I	Lubricator
M	Oil cap

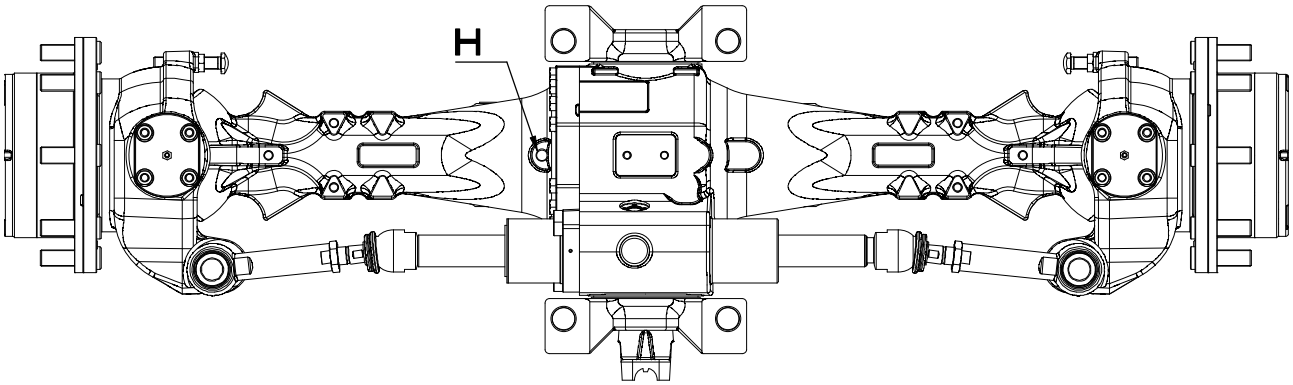


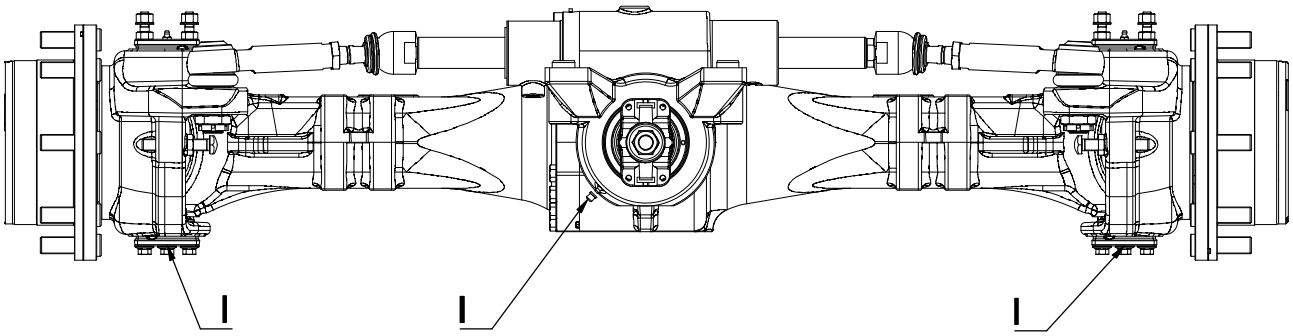
(fig.66/D)

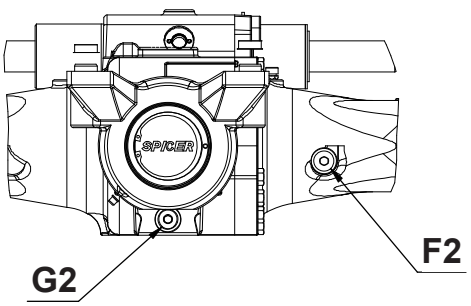
- ATTENTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.

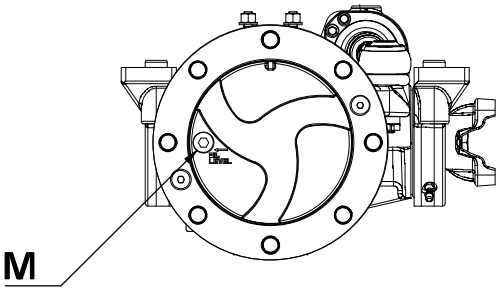
REAR DIFFERENTIAL AXLE

Key	
F	Drain plug and oil level
G	Oil drain plug
H	Vent cap
I	Lubricator
M	Oil cap









(fig.67/D)

BOOM SLIDING BLOCKS

Greasing
(fig.68/D)

Boom sliding blocks must be kept lubricated to prevent deterioration as much as possible and keep movements smooth.

Extract the boom completely and examine its surface. In the event that the layer of grease is thin or presents impurities (sand, dust, shavings, etc.) proceed as follows:

- With the boom completely horizontally extracted, remove the layer of grease from the extraction surfaces with a cloth.
- Use a brush to spread a layer of an approved type of grease on the four sides of the boom.
- Move the boom several times to distribute the grease evenly.
- Remove any excess grease.

- ATTENTION -

During this phase of visual inspection and spreading of grease the vehicle must be switched off and the key removed from the cab to prevent accidental manoeuvres.

***- ATTENTION*:**

Should the vehicle be destined for use in particularly severe conditions or very dusty environments, grease more frequently.

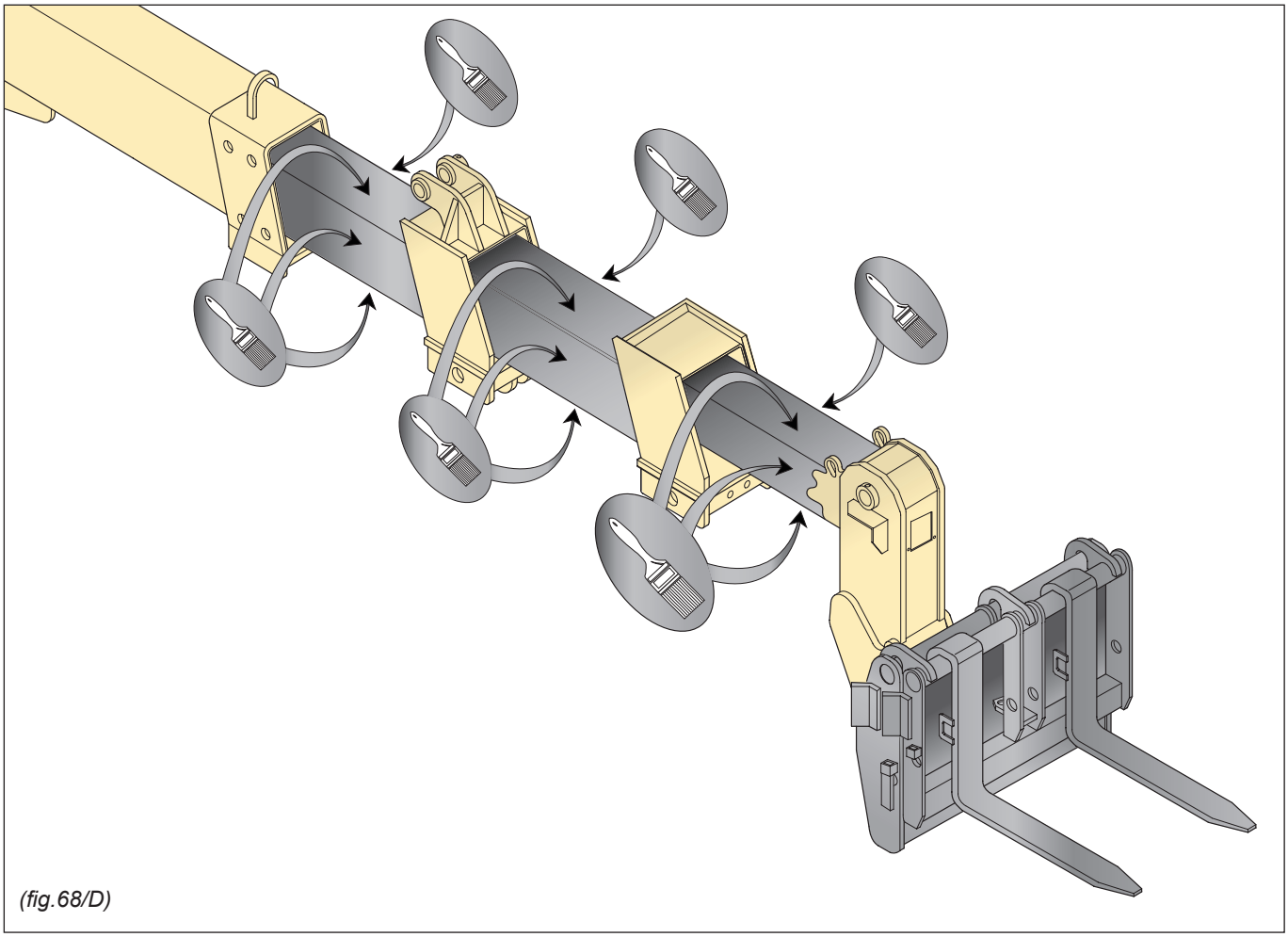
***- ATTENTION*:**

Only use lubricants indicated on ***DIECI*** tables. Different lubricants can cause serious damage to sliding surfaces.

Sliding block wear

Consult the Summary Table at the start of the chapter for servicing intervals.

Sliding block wear can cause oscillations and slack between an extraction and another, with consequential loss of precision movements and the risk of load loss. Wearing is increased in as much as severe working conditions are increased. Boom sliding block maintenance must be carried out by an authorised repair shop.



(fig.68/D)

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

Outer boom chains
(fig.69/D)

Lubrication

Lubrication allows for:

- Interposing of a liquid between contact surfaces to diminish wear and prevent seizure.
- Protecting of chains from rust.
- Diminishing noise between surfaces subject to collisions.

Lubrication must be carried out:

- Longitudinally, in an area where joints are only slightly strained to favour lubrication penetration.
- Crosswise, between the plates to facilitate oil penetration in joints.

Oil viscosity must be suitable to the environmental temperature. Viscosity which is too low favours lubrication withdrawal and viscosity which is too high hinders lubricants from penetrating into joints. Consult the table on the side for proper viscosities (fig.70/D).

***- ATTENTION*:**

In the event of special applications and use in adverse conditions, consult ***DIECI*** service assistance.

- WARNING -

IT IS ABSOLUTELY FORBIDDEN
to lubricate chains with grease.

Wear checks

At prescribed intervals, verify:

- Installation geometry.
- Chain conditions, to analyse traces of friction which can indicate incorrect installation geometry. Wearing on the side plate profile due to contact with pulleys and guiding systems. Wearing on the sides of the outer plates and on the pin heads due to contact with pulley flanges or with any guiding systems.
- Wearing of chains joints both due to direct measurement of its length with measurement instruments or a control scale, or visually.
- Wearing of Fleyer type raising chain plates.

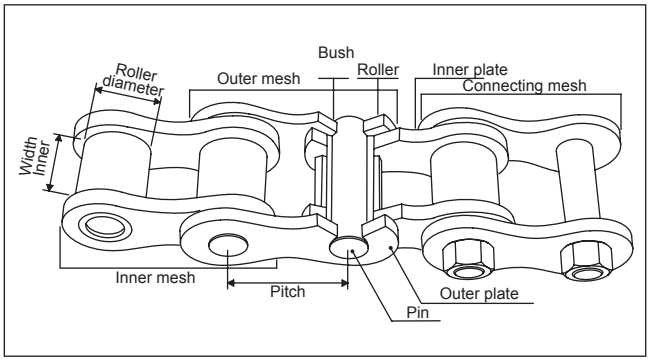
- ATTENTION -

Chain replacement when wearing
due to extraction exceeds 2% is compulsory.
Respective rollers MUST be replaced
when chains are replaced.

(fig.69/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.70/D) - Chain oil viscosity table



(fig.71/D) - Components of a standard chain

Determination of wearing due to extraction

- Verify the type of chain installed, indicated on its outer plate. If it cannot be read, contact a ***DIECI*** service centre.
- Identify the pitch of the chain on the table (fig.72/D). (e.g. Fleyer AL8/BL8 Chain Pitch 1"/25.40mm) and multiply by 10.
- Measure 10 pictures of the chain to be verified (fig.73/D).
- If the measurement exceeds 2% of the pitch indicated in the table multiplied by ten, the chain is to be considered worn and must be replaced.

2% of the measurement = [Measurement: 100] x 2

***- ATTENTION*:**

Measurements must be taken at several points as wearing may not be uniform. The chain must also be tight. Measurements can be carried out with a caliper or a ruler divided into millimetres (fig.74/D).

Check, cleaning, lubrication

- Stop the vehicle on a flat, level surface.
- Position the vehicle on stabilizer feet.
- Extract the boom completely in a horizontal position.
- Switch off the engine and remove the ignition key, hang up a sign in the cab saying "maintenance work under way".
- Clean chains to eliminate surface impurities with a clean cloth which will not leave residue.
- Forcefully brush chains to remove impurities, using a hard nylon brush and clean fuel. Then blow with compressed air.
- Carefully examine chains as described in the paragraph "wear checks".
- Lightly lubricate chains with a brush soaked in oil (see paragraph "lubrication").
- Remove excess oil over the entire surface of the chains with a clean cloth.
- Move the boom several times to distribute the grease evenly.

***- ATTENTION*:**

In the event of malfunction contact a ***DIECI*** service centre.

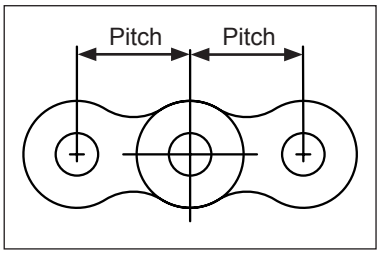
- ATTENTION -

Chains can be made fragile by hydrogen.

IT IS ABSOLUTELY FORBIDDEN
to operate in acidic locations and for as as little time as possible in oxidizing and corrosive locations.

AL4	AL5	AL6	AL8	AL10	AL12	AL14	AL16	**Flyer chains**
BL4	BL5	BL6	BL8	BL10	BL12	BL14	BL16	**Flyer 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	**Pitch mm**

(fig.72/D)



(fig.73/D)

(fig.74/D)

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

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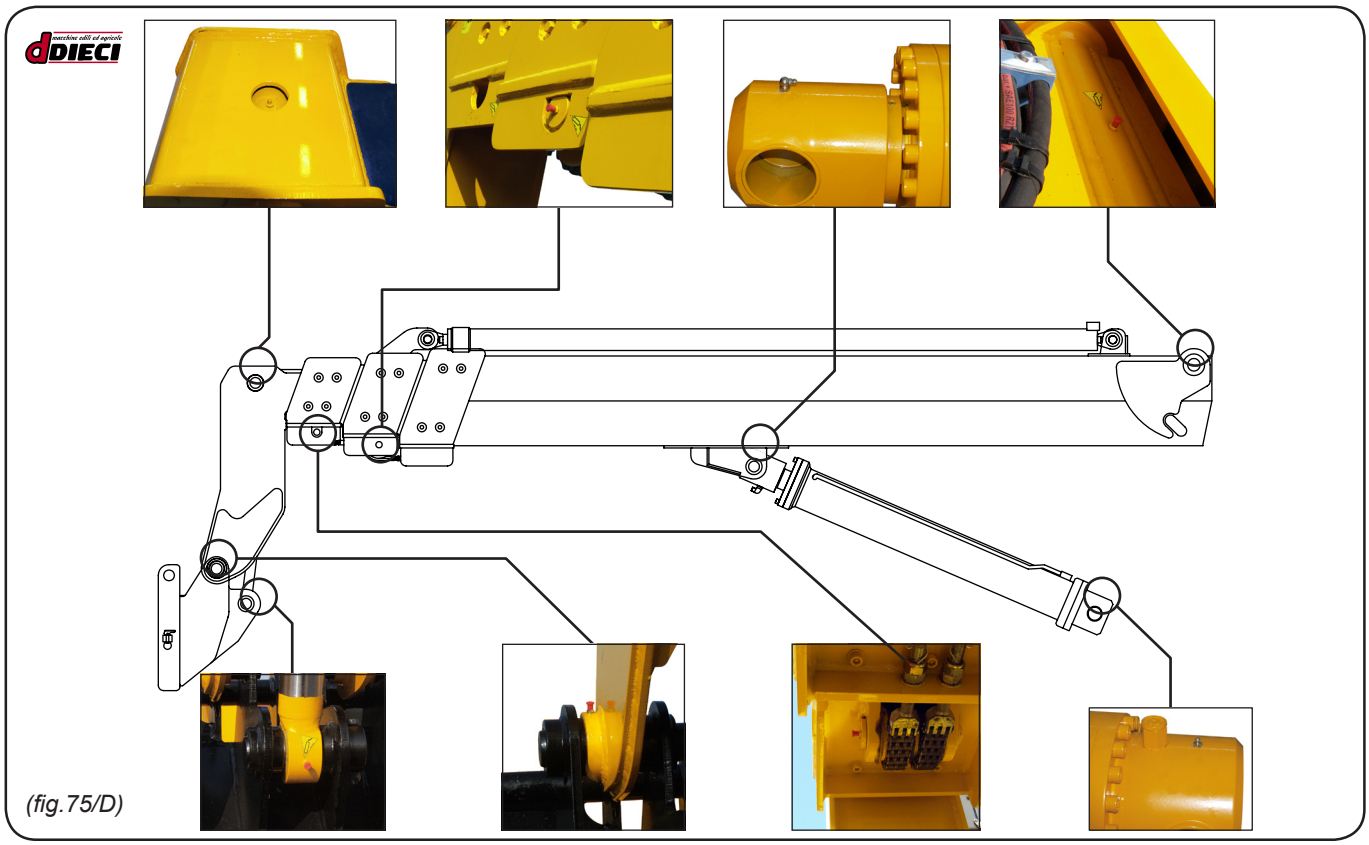
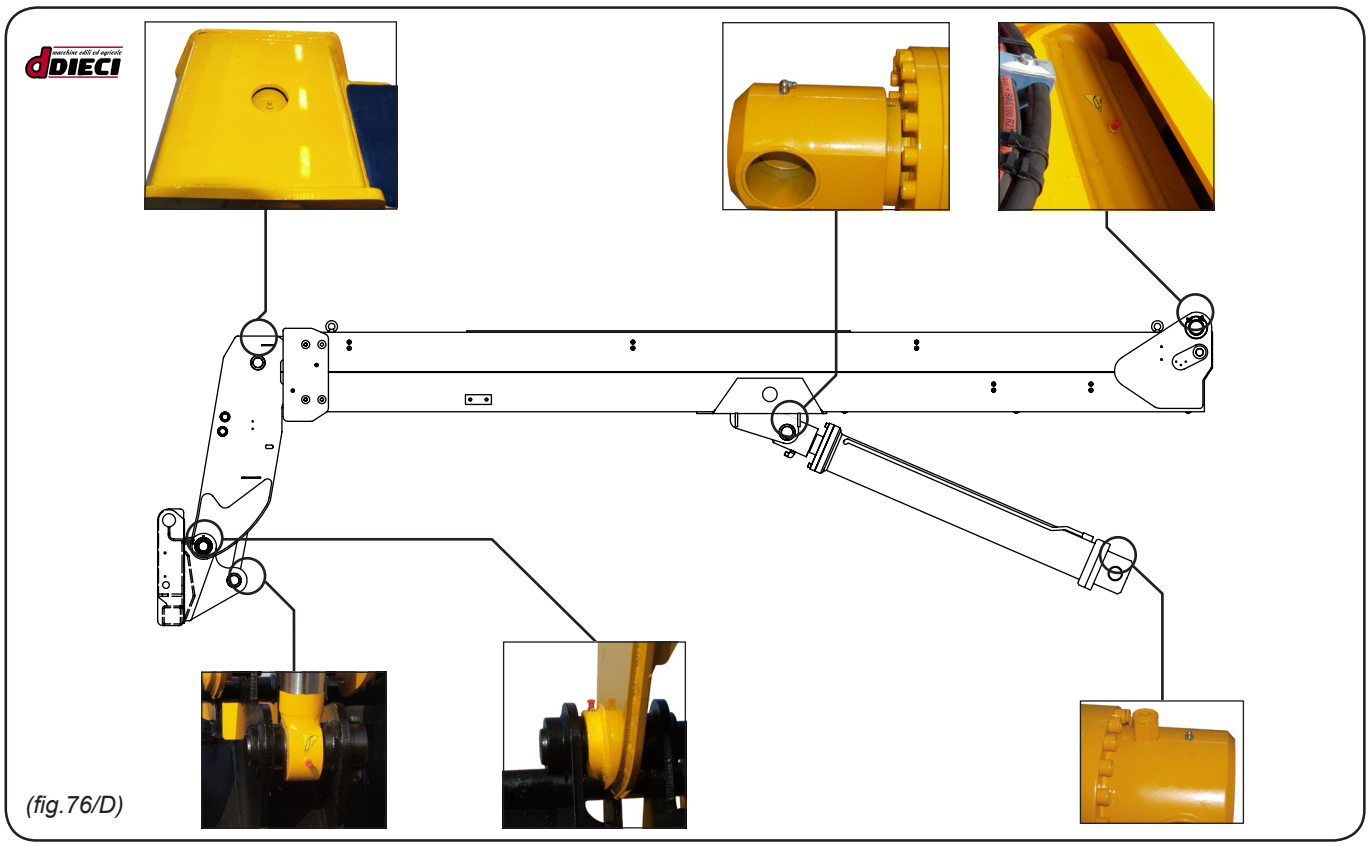
OILERS

One/two/three extraction booms

References to two extraction boom oilers are the same as for three extraction booms.



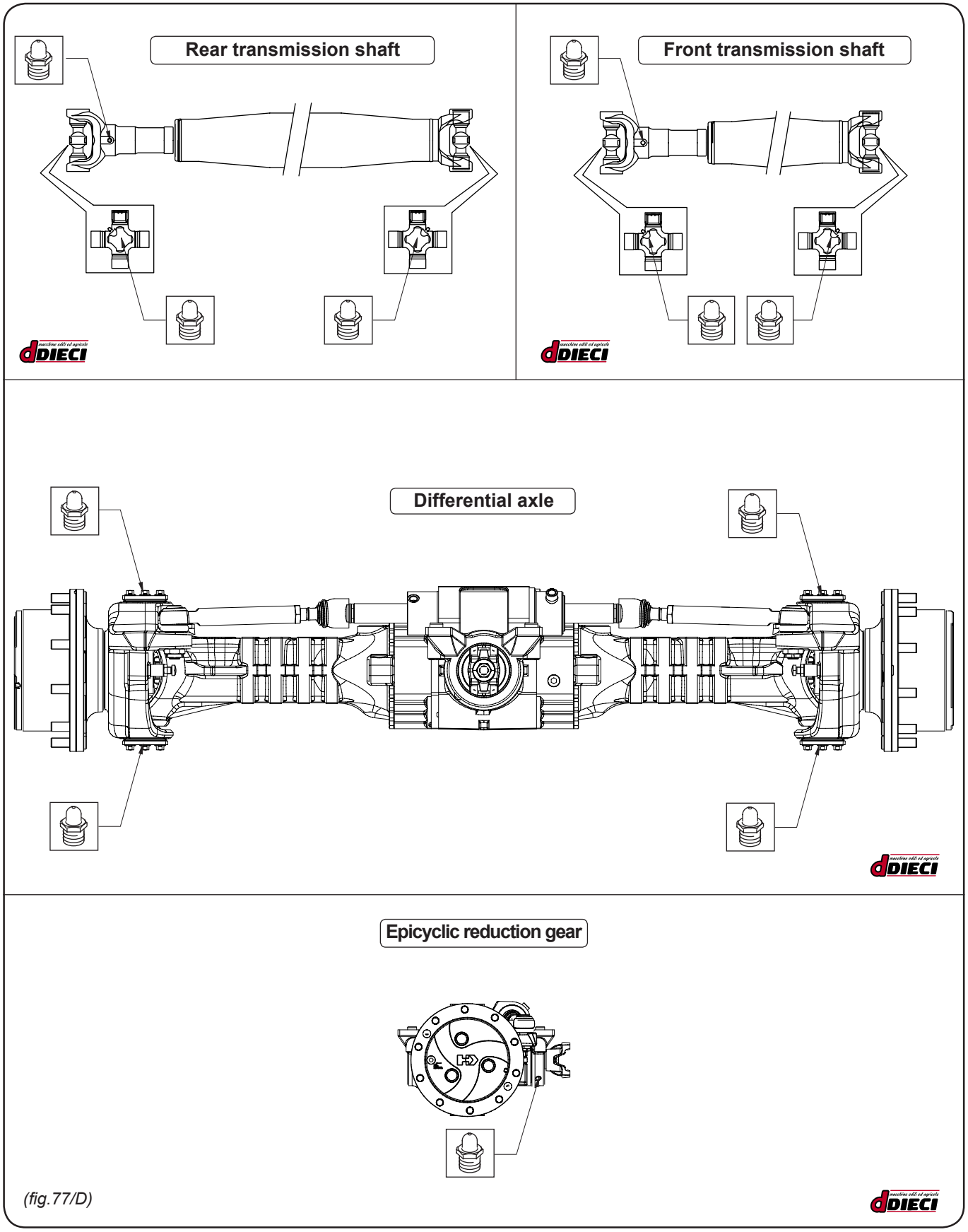
(fig.75/D)



(fig.76/D)

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

OILERS
Transmission shafts and differential axles



(fig.77/D)

BATTERY ISOLATOR SWITCH

(fig.78/D Pos.”1”)

The battery isolator switch is found under the cab next to the battery. Its function is to cut off power to the electrical system, opening the circuit on a negative pole.

- Turn the handle, bringing it to the position in which its long side sets up parallel to the battery to open the circuit and cut out electrical power.

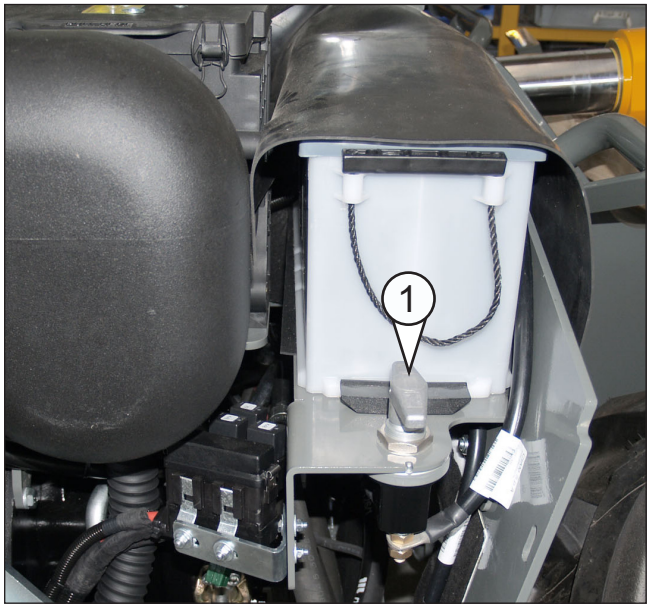
- Turn the handle, bringing it to the starting position (fig.78/D Pos.”1”) to reset starting conditions and close the circuit.

- ATTENTION -

The battery isolator switch must only be used with the vehicle switched off.

- ATTENTION -

Use the battery isolator switch to open the electrical circuit each time the vehicle is serviced.



(fig.78/D)

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

FUSES
(fig.80/D Pos.”1”)

General control box

The general electrical circuit is protected by fuses located in the general circuit board (fig.80/D Pos.”1”).
Access the circuit board by removing the plastic left under the dashboard, removing its screws.
In the event of electrical malfunction, fuse conditions must be verified as the first troubleshooting operation. Fuses must be removed with special grips.

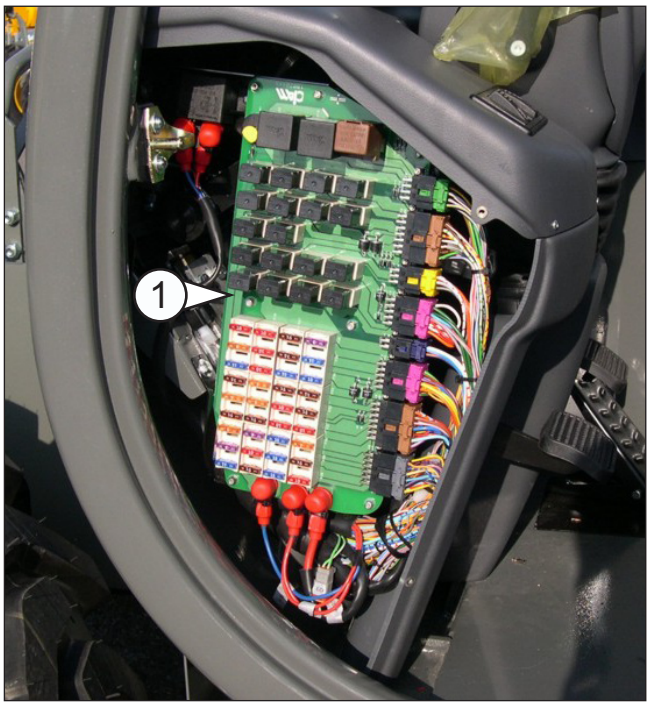
To replace a fuse, remove it from its housing by means of special grips and replace it with another equal class, quality and amperage fuse.

***- ATTENTION*:**

Before removing the plastics under the dashboard, cut out electrical power to the vehicle by means of the battery isolator switch.

***- ATTENTION*:**

Do not attempt to repair fuses.



(fig.80/D)

Engine control box
(fig.81/D Pos.”1”)

Engine electrical circuits and connected components are protected by a fuse control box connected to the engine bay (fig.81/D Pos.”1”).
Remove the box cover to access fuses.
In the event of electrical malfunction, fuse conditions must be verified as the first troubleshooting operation.

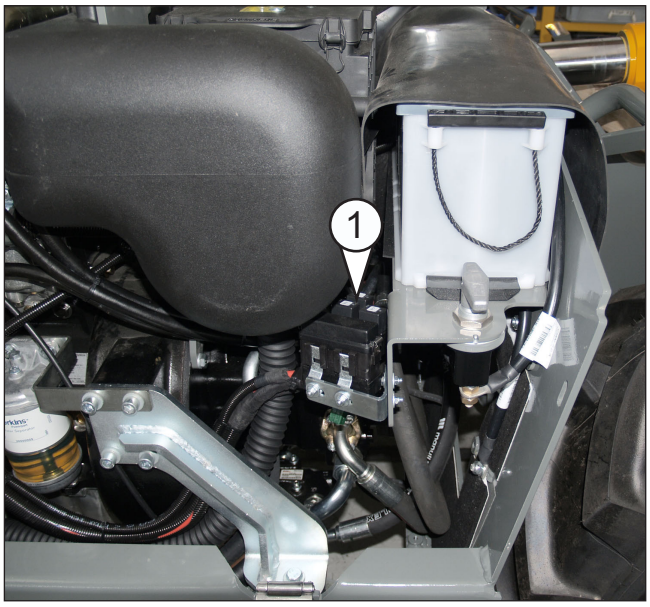
To replace a fuse, remove it from its housing by means of special grips and replace it with another equal class, quality and amperage fuse. All other operations must be carried out by qualified personnel only.

***- ATTENTION*:**

Before accessing the engine by, switch off the vehicle and remove the ignition key and cut out vehicle electrical power by means of the battery isolator switch.

***- ATTENTION*:**

Do not attempt to repair fuses.



(fig.81/D)

- ATTENTION -

The general fuse of the vehicle
is located inside the engine control box.

LIGHTS

Vehicle lighting must always be efficient and perfectly functioning. Function must be checked every day. In case of damage to the lighting body, replace the damaged part immediately. Burnt bulbs should be replaced immediately.

FRONT LIGHT
(fig.82/D)

The front light is composed of a direction indicator, a position light, dipped light/headlight.

To access bulbs:

- Switch off the vehicle and use the battery isolator switch to cut out electrical power.
- Remove the light power connection at the rear.
- Remove the front part of the light by removing its screws located in the rear cap.

To close the light back up, operate in the opposite order, taking due care of the correct positioning of the seal.

Replacing a direction indicator bulb
(fig.83/D Pos.”1”)(21w)

- Press the upper part of the bulb.
- Turn the bulb, keeping it pressed, to free it from the lock.

Carry out the same operations to insert a new bulb.

Replacing a position light bulb
(fig.84/D Pos.”1”)(4w)

- Hold the rear part where the electrical connections are located (fig.84/D Pos.”2”).
- Turn and pull the rear part toward you.
- Remove the support, press the upper part of the bulb.
- Turn the bulb, keeping it pressed, to free it from the lock.

Carry out the same operations to insert a new bulb. Replace the support inside its housing.

Replacing a dipped light/headlight bulb
(fig.85/D Pos.”1”)(60/55w H4)

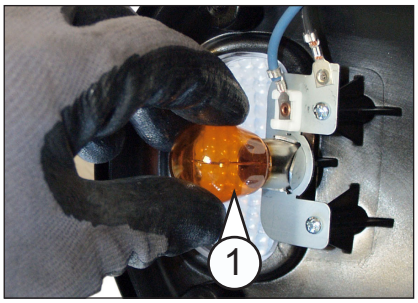
- Remove the electrical connector pulling it toward you.
- Raise the locking tab (fig.85/D Pos.”2”), moving it laterally to free the bulb.
- Replace the bulb, proceeding in the opposite order to lock it back in and connect it. Respect bulb closing mechanisms (fig.85/D Pos.”3”) for proper insertion.

- ATTENTION -

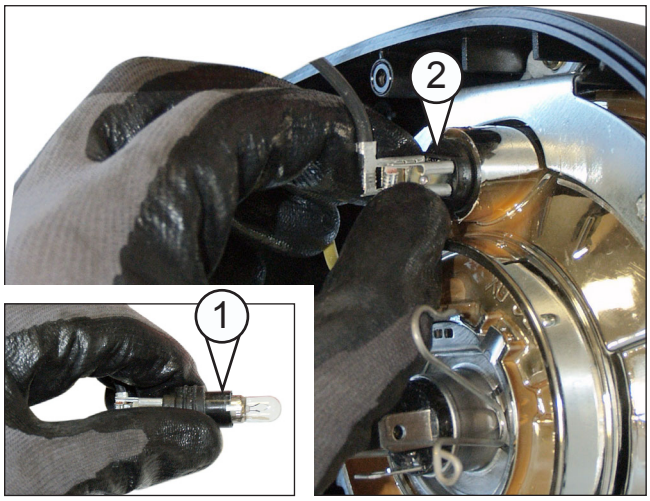
Bulbs are very fragile. Handle with care.

Dipped headlight bulbs must not be
managed with bare hands.

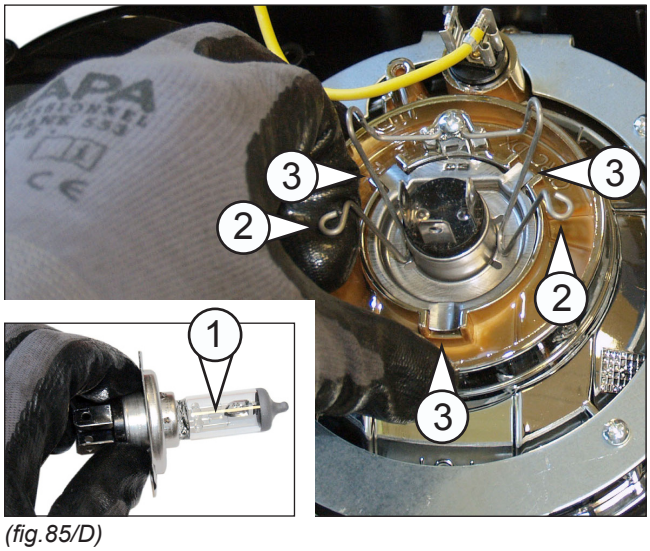
(fig.82/D)



(fig.83/D)



(fig.84/D)



(fig.85/D)

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

REAR LIGHT
(fig.86/D)

The rear light is composed of the reverse light (21W) (fig.89/D Pos.”1”), the rear light (5W) (fig.89/D Pos.”2”), the stop light (21W) (fig.89/D Pos.”3”), a direction indicator (21W) (fig.89/D Pos.”4”).

To access bulbs:

- Switch off the vehicle and use the battery isolator switch to cut out electrical power.
- Remove the light power connection at the rear.
- Remove the front part of the light by removing its screws located in the rear cap.

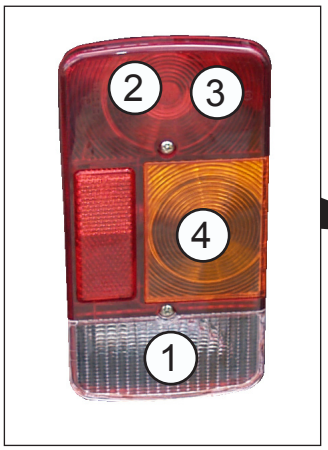
***- ATTENTION*:**

To close the light back up, operate in the opposite order, taking due care of the correct positioning of the seal.

Replacing the rear light bulb.

- Press the upper part of the bulb.
- Turn the bulb, keeping it pressed, to free it from the lock.

Carry out the same operations to insert a new bulb.



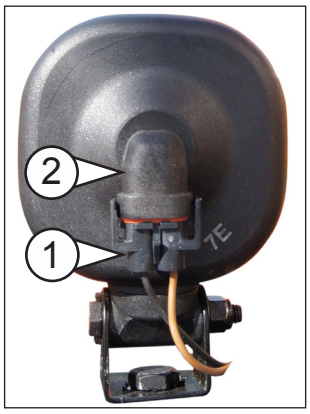

(fig.86/D)

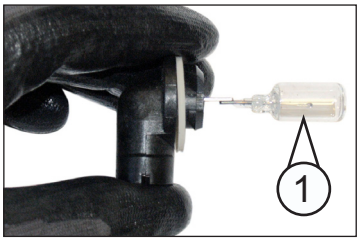
WORKING LIGHT
(fig.87/D)

Replacing bulbs
(fig.89/D Pos.”1”)(special bulb)

- Switch off the vehicle and use the battery isolator switch to cut out electrical power.
- Remove the light power connection at the rear (fig.88/D Pos.”1”).
- Press the connector on the light (fig88/D Pos.”2”).
- Turn the socket, keeping it pressed, to free it from the lock.

Carry out the same operations to insert a new bulb.


(fig.87/D)


(fig.88/D)


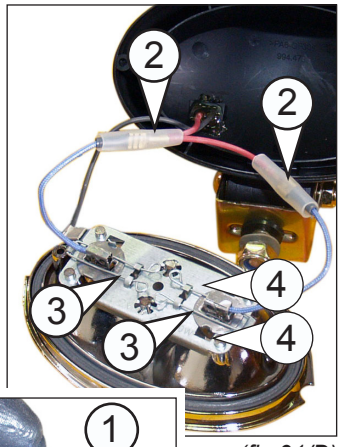
(fig.89/D)

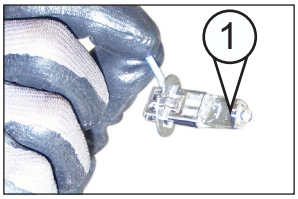
DUAL REFLECTOR WORKING LIGHT
(fig.90/D)

Replacing bulbs
(fig.91/D Pos.”1”) (Type 21w H3)

- Switch off the vehicle and use the battery isolator switch to cut out electrical power.
- Remove screws on the front part of the light.
- Remove the bulb power supply connectors (fig.91/D Pos.”2”).
- Move the locking tabs, bringing them inward to free them (fig.91/D Pos.”3”).

Carry out the same operations to insert a new bulb. Respect bulb closing mechanisms (fig.91/D Pos.”4”) for proper insertion.


(fig.90/D)


(fig.91/D)


PRELOAD AND TORQUE TABLE
FOR CLASS 1 NUTS AND BOLTS

	friction coefficient	categories of fine pitch nuts and bolts											
		4.8		5.8		6.8		8.8		10.9		12.9	
		preloading	torque	preloading	torque	preloading	torque	preloading	torque	preloading	torque	preloading	torque
		N.	Nm	N.	Nm	N.	Nm	N.	Nm	N.	Nm	N.	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**

PRELOAD AND TORQUE TABLE
FOR CLASS 2 NUTS AND BOLTS

	friction coefficient	categories of wide pitch nuts and bolts											
		4.8		5.8		6.8		8.8		10.9		12.9	
		preloading N.	torque Nm	preloading N.	torque Nm	preloading N.	torque Nm	preloading N.	torque Nm	preloading N.	torque Nm	preloading N.	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 - METRICO 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

***- ATTENTION*:**
Only authorised staff should intervene on the vehicle to eliminate any trouble or breakdown.

Make sure “User Instructions” and “Safety Regulations” have been read and clearly understood before attempting any repair work on the vehicle.

This symbol means that the trouble can NOT be remedied without the assistance of an authorised **DIECI *Service* repair shop.**

GROUP	TROUBLE	PROBABLE CAUSE	REMEDY
ENGINE	The vehicle will not start	Direction lever is engaged	Put the lever in neutral
		No fuel	Fill up the tank
		Battery dead	Recharge the battery or replace it
		Burnt out fuse	Change the fuse
		Others	Consult the handbook Engine User Instructions and Maintenance Manual

GROUP	TROUBLE	PROBABLE CAUSE	REMEDY
HYDRAULIC TRANSMISSION SYSTEM	The vehicle does move in any direction.	The sensor incorporated in the seat does not detect the driver’s presence.	Sit down correctly
		The forward/reverse lever is not engaged (indicator light switched off)	Engage the lever in the required position
		Slow/fast speed switch (indicator light switched off)	Press the switch
		The stabilizer feet are lowered.	Fully raise all stabilizer feet.
		Rear axle blocked. (optional)	Release the axle.
	The vehicle loses speed	Hydraulic oil suction filter blocked.	Remove the oil filter and replace it
		Hydrostatic transmission failure.	Repair or replace the transmission
		Inching pedal anomaly.	Check the pedal return spring Check distributor position

Cont. from page D/48

TROUBLE SHOOTING

GROUP	TROUBLE	PROBABLE CAUSE	REMEDY
HYDRAULIC TRANSMISSION SYSTEM	The vehicle does not move in any direction.	Level of hydraulic oil insufficient	Check the level of hydraulic oil
		Parking brake on	Disengage the brake
		Trasmissione idrostatica in avaria	Repair or replace the transmission
		Electric circuit damaged	Repair the circuit
		The slide valve under the car has been closed (vehicle tow)	Open the slide valve

GROUP	TROUBLE	PROBABLE CAUSE	REMEDY
BRAKES	The vehicle does not brake	There is no oil in the oil – brake tank	Drain the system or top up the tank
		Fluid leaking from the circuit	Check for leaks
		Brake pads worn	Change the brake pads
		Brake pump damaged	Repair or replace
		Unsuitable fluid in the circuit or differential sump	Consult the comparative oil table

GROUP	TROUBLE	PROBABLE CAUSE	REMEDY
STEERING	The vehicle moves diagonally/ The wheels are not aligned	The wheels are not aligned correctly	Proceed with realignment.
		Steering selection error	Position the lever in a different steering mode
		Control distributor failure	Repair or replace the distributor
		The steering wheel hydraulic cylinders leak oil.	Replace the gaskets

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

TROUBLE SHOOTING

GROUP	TROUBLE	PROBABLE CAUSE	REMEDY
TELESCOPIC BOOM	The vehicle will not lift load	Safety systems have been activated	Refer to the chapter entitled “Getting to know the vehicle”
		Electrical system failure	Check fuses and the electrical system
		Hydraulic oil level in tank insufficient	Top up
		Relevant hydraulic pump failure	Repair or replace pump
		Distributor calibrated too low	Check and retract the distributor
		Internal leakage of raising cylinders.	Replace the gaskets
	The boom does not extend	The safety devices have been activated (indicator lights switched on and audible alarm sounding)	Refer to the chapter entitled “Getting to know the vehicle”
	The boom cannot be lowered	The safety devices have been activated (indicator lights switched on and audible alarm sounding)	Refer to the chapter entitled “Getting to know the vehicle”

HOW TO WRITE OUT THE SERVICE REGISTER

- The **"SERVICE REGISTER"** must be written in compliance with the requirements imposed by the Essential Safety Requirement 4.4.2.b of Enclosure I of Machine Directive **EC/98/37**, in order to prove that all the inspection and service activities of the machine concerning safety of the same are carried out correctly.
- Together with all the activities concerning the life and use of the machine (replacement of parts, mot's, anomalies etc.) the Service Register must also include notes on all the quarterly and yearly inspections legally envisaged, amongst which are those indicated in the "Maintenance" section and "Equipment" chapter of this manual.
- The name of the service engineer and the date the job was carried must also be clearly written.
- **You are recommended to write out, up-date and keep this Service Register with care throughout the whole life of the machine.**
- We are providing some empty pages to help create your own Service Register.

COMMITMENTS AND HOW TO FORWARD DECLARATIONS TO I.S.P.E.S.L.

- The M.D. dated 12/09/1959, under Title II – Article 7, states that the employer and users of **engine-driven lifting equipment having capacities greater than 200 kg** and **people carrying platforms** , are obliged to inform the competent authority of the territory (currently the **I.S.P.E.S.L.** 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 **DPR 459** dated 24/07/1996, national law that transposes **Machine Directive EC/98/37**.
- The declaration to I.S.P.E.S.L. must be made by enclosing a copy of the **EC Declaration of conformity** of the machine, with reference to **Enclosure IIA** of DPR 459/96 – Machine Directive EC/98/37.
- The original declarations (EC Declaration of conformity – Enclosure IIA or rather the Declaration of the Manufacturer – Enclosure IIB) must be kept by the client.
- The declaration shall be forwarded to I.S.P.E.S.L.by Registered mail with receipt of reception.
- I.S.P.E.S.L. will then inform the local supervision authority (ASL in Italy) that the machine is in use; this authority is then in charge of **following yearly inspections**.

PERIODIC INSPECTIONS AND METHOD OF REGISTRATION

- The employer or the user of the machine is obliged to have the machine inspected periodically according to law (DPR 547 dated 27/4/55; MD 12/9/59 and LD 626 dated 19/9/94).
- He is also obliged to respect the maintenance and inspection schedule described in this Use and Maintenance manual.
- Inspections and periodic tests, together with maintenance jobs must be carried out by especially employed experts, or by a repair shop authorised by the manufacturer ***DIECI S.r.l.***
- The employer/user of the machine must register the results of the inspections in the Service Register, or have personnel trained for such purpose to register them:
  - **a)** **Quarterly inspections** that involve the operation and/or efficiency of ropes/chains according to **Article 179** of **DPR 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 **DPR 547** dated **27/4/55.**
- Law foresees administrative fines to the charge of those who fail to carry out these quarterly and yearly inspections.
- The Service Register, in which the inspections are to be written, 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 inspector of ASL will issue an acceptance report or will prescribe the fulfilments to be integrated. The user is obliged to keep the inspection report in the Service Register.
- If the local supervising authority (ASL 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 write the results down in the Service Register.
- The evaluations of the inspections must be registered in the reserved pages that follow, indicating the outcome of the inspection, the date, the signature and any comments of the inspector.
- If the pages reserved within this manual are not enough to hold all the notes concerning the life of the machine, use additional sheets of paper, remembering to write them out in the same manner.

MACHINE DETAILS

Manufacturer: ***Dieci S.r.l.***

Model: .....serial number ..... Year .....

Equipment code ..... serial number ..... Year .....

Max. capacity [kg]: .....

Equipment code ..... serial number ..... Year .....

Max. capacity [kg]: .....

Equipment code ..... serial number ..... Year .....

Max. capacity [kg]: .....

Equipment code ..... serial number ..... Year .....

Max. capacity [kg]: .....

Owner: .....

Work commencement date of machine: .....

FOR FURTHER CONTROLS OR REPORTS TO THE COMPETENT AUTHORITIES, PLEASE REFER TO THE LOCAL LEGISLATION IN FORCE IN THE COUNTRY WHERE THE VEHICLE IS BEING USED.

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RECORD OF SCHEDULED INSPECTIONS AND MAINTENANCE WORK

REGULAR MAINTENANCE 50 h

Job	Job accomplished ☒
Check for leaks on hydraulic circuit tubes	☐
Boom joint pin lubrication	☐
Lubrication of foot/head swivel jack	☐
Lubrication of foot/head raising jack	☐
Lubrication of foot/head levelling jack	☐
Lubrication of foot/head stabilizer jack	☐
Lubrication of front and rear articulated pins	☐
Lubrication of rear axle oscillation bush (if present)	☐
Lubrication of front axle oscillation bush (if present)	☐
Lubrication of cross and cardan transmission shafts	☐
Lubrication of boom sliders, rollers and chains	☐
Lubrication of internal boom tubes	☐
	☐

Date ..... **Signature** .....

SPECIAL MAINTENANCE

Job description	Machine working hours

Date ..... **Signature** .....

REGULAR MAINTENANCE 100 h

Job	Job accomplished ☒
Air filter cleaning	☐
Lubrication of differential axles	☐
Checking tyre pressure	☐
Ensure that all nuts and bolts are tight	☐
Ensure radiator is not clogged	☐
Check brake oil level	☐
Check boom chain extension and conditions	☐
Check safety stickers	☐
	☐
	☐
	☐
	☐
	☐

Date ..... **Signature** .....

SPECIAL MAINTENANCE

Job description	Machine working hours

Date ..... **Signature** .....

- ATTENTION -

The maintenance work in bold type is considered fundamental by *DIECI* for people's safety.

- ATTENTION -

Maintenance must be carried out by qualified personnel who must sign the scheduled maintenance report.

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

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REGULAR MAINTENANCE 250h

Job	Job accomplished ☒
Replace engine oil	☐
Replace engine oil filter	☐
Replace air filter	☐
Check battery electrolyte level	☐
Check electrical system	☐
Check alternator belt	☐
Tighten wheel nuts	☐
Replace external hydraulic oil filters	☐
Replace diesel fuel filter.	☐
Replace cab filter	☐
Tighten boom sliders	☐
Check chain tension	☐
	☐

Date ..... **Signature** .....

SPECIAL MAINTENANCE

Job description	Machine working hours

Date ..... **Signature** .....

REGULAR MAINTENANCE 500 h

Job	Job accomplished ☒
Fuel tank discharge	☐
Clean fuel injection pump filter	☐
Check gear oil level	☐
Check epicycloidal reduction gear oil level	☐
Check differential sump oil level.	☐
Replace air filter	☐
Replace hydraulic system oil	☐
Replacement or cleaning of hydraulic oil tank filters	☐
Parking brake registration	☐
	☐
	☐
	☐
	☐

Date ..... **Signature** .....

SPECIAL MAINTENANCE

Job description	Machine working hours

Date ..... **Signature** .....

- ATTENTION -

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REGULAR MAINTENANCE 1000h

Job	Job accomplished ☒
Check boom chain	☐
Replacing cooling liquid	☐
Replace differential sump oil	☐
Replace oil in epicycloidal reduction gears	☐
Replace gear oil	☐
Replace hydraulic system oil	☐
Replace internal hydraulic oil filter	☐
Replace brake oil	☐
	☐
	☐
	☐
	☐
	☐

Date ..... Signature .....

SPECIAL MAINTENANCE

Job description	Machine working hours

Date ..... Signature .....

REGULAR MAINTENANCE h

Job	Job accomplished ☒
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Date ..... Signature .....

SPECIAL MAINTENANCE

Job description	Machine working hours

Date ..... Signature .....

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REGULAR MAINTENANCE h

Job	Job accomplished ☒
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Date ..... Signature .....

SPECIAL MAINTENANCE

Job description	Machine working hours

Date ..... Signature .....

REGULAR MAINTENANCE h

Job	Job accomplished ☒
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Date ..... Signature .....

SPECIAL MAINTENANCE

Job description	Machine working hours

Date ..... Signature .....

- ATTENTION -

The tables must be filled out clearly, using the spaces provided.

- ATTENTION -

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REGULAR MAINTENANCE h

Job	Job accomplished ☒
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Date ..... Signature .....

SPECIAL MAINTENANCE

Job description	Machine working hours

Date ..... Signature .....

REGULAR MAINTENANCE h

Job	Job accomplished ☒
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Date ..... Signature .....

SPECIAL MAINTENANCE

Job description	Machine working hours

Date ..... Signature .....

- ATTENTION -

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- ATTENTION -

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REGULAR MAINTENANCE h

Job	Job accomplished ☒
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Date ..... Signature .....

SPECIAL MAINTENANCE

Job description	Machine working hours

Date ..... Signature .....

REGULAR MAINTENANCE h

Job	Job accomplished ☒
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Date ..... Signature .....

SPECIAL MAINTENANCE

Job description	Machine working hours

Date ..... Signature .....

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- ATTENTION -

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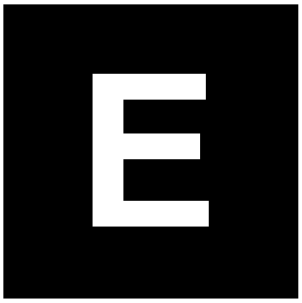
DIAGRAMS
AND
ELECTRIC CIRCUITS



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BASE SYSTEM KEY - DIS. N. E25800-039

NAME	DESCRIPTION	SHEET
B10	CLOGGED AIR FILTER PRESSURE SWITCH	7.5
EV0	ENGINE STOP SOLENOID VALVE	1.4
EV1	FORWARD SOLENOID VALVE	2.1
EV2	REVERSE SOLENOID VALVE	2.2
EV4	"IN" LEVELLING SOLENOID VALVE	3.1
EV5	"OUT" LEVELLING SOLENOID VALVE	3.1
EV6	FRONT RIGHT STABILISER UP SOLENOID VALVE/ FRONT RIGHT STABILISER BEAM	5.3
EV7	FRONT RIGHT STABILISER DOWN SOLENOID VALVE/ FRONT RIGHT STABILISER FOOT	5.3
EV8	FRONT LEFT STABILISER UP SOLENOID VALVE/ FRONT LEFT STABILISER BEAM	5.2
EV9	FRONT LEFT STABILISER DOWN SOLENOID VALVE/ FRONT LEFT STABILISER FOOT	5.2
EV14	GENERAL STABILISER SOLENOID VALVE/ PEGASUS STABILISERS DOWN SELECTION 18/21 M	5.1
EV15	REAR AXLE LOCK SOLENOID VALVE	2.4
EV16	REAR AXLE LOCK SOLENOID VALVE	2.5
EV21	2ND MECHANICAL GEAR SOLENOID VALVE	4.5
EV22	1ST MECHANICAL GEAR SOLENOID VALVE	4.5
EV23	PARKING BRAKE SOLENOID VALVE	2.3
EV25	HYDRAULIC FAST SPEED GEAR	2.3
EV37	EXTENSION SOLENOID VALVE	3.5
EV38	RETURN SOLENOID VALVE	3.5
EV39	GENERAL SOLENOID VALVE	3.5
EV41	RADIATOR SOLENOID VALVE	3.2
F1	STABILISER FUSE 15A	3.3
F2	CAR RADIO FUSE 3A	9.2
F3	BUZZER AND REVERSE LIGHT FUSE 5A	2.2
F4	SLOW/FAST SPEED GEAR SELECTOR FUSE 7.5A	2.2
F5	REAR HYDRAULIC SOCKET FUSE 5A	8.2
F6	ANTI-TIPPING 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	SWITCH LIGHTING FUSE	2.4
F11	LIGHTS AND BRAKE LIGHTS SWITCH UNIT POWER FUSE 10A	4.1
F12	SENSORS FUSE 3A	3.2
F13	BOOM HEAD SWITCH FUSE 7.5A	8.4
F14	POSITION LIGHTS FUSE 5A	4.1
F15	POSITION LIGHTS FUSE 5A	4.1
F16	FULL BEAMS FUSE 10A	4.2
F17	HORN FUSE 10A	4.4
F18	DIMMED HEADLIGHTS FUSE 10A	4.2
F19	FRONT WINDSCREEN WIPER FUSE 15A	6.3
F20	REAR WINDSCREEN WIPER FUSE 15A	6.2
F21	OPTIONAL POWER FUSE 15A	8.3
F22	FRONT WORKING LIGHTS FUSE 20A	7.1
F23	REAR WORKING LIGHTS FUSE 20A	7.2
F24	DIESEL OIL HEATER SWITCH FUSE 7.5A	8.3
F25	HEAT FAN FUSE 15A	8.2
F26	PARKING BRAKE FUSE + GEAR SWITCH UNIT 7.5A	2.2
F27	ENGINE STOP FUSE + MICRO SEAT 7.5A	1.4

NAME	DESCRIPTION	SHEET
F28	WARNING FUSE 7.5A	4.3
F29	REVOLVING HEADLIGHT FUSE 7.5A	6.1
F30	CAR RADIO FUSE 5A	9.2
F31	OPTIONAL FUSE 10A	4.4
F32	POWER SOCKET FUSE 7.5A	6.5
F33	BASKET SELECTOR FUSE 7.5A	8.2
F34	AIR CONDITIONER FUSE 15A	7.4
F35	BASKET FUSE 15A	1.5
F36	INSTRUMENT POWER FUSE 3A	1.3
F54	DIESEL OIL PUMP FUSE 15A	1.5
FA1	GENERAL FUSE 80A	1.1
FA2	ALTERNATOR FUSE 80A	1.1
FA3	START FUSE 50A	1.1
FA4	THERMAL STARTER FUSE 30A	1.1
G1	BATTERY	1.1
G2	ALTERNATOR	1.2
H1	LEFT REAR WORKING LIGHT	7.2
H2	RIGHT FRONT WORKING LIGHT	7.4
H3	1ST MECHANICAL GEAR ENGAGED INDICATOR LIGHT	4.4
H4	LEFT FRONT WORKING LIGHT	7.3
H5	STABILISERS LOWERED INDICATOR LIGHT	2.3
H6	YELLOW NEUTRAL INDICATOR LIGHT	5.5
H7	CEILING LAMP	9.1
H10	ANTI-TIPPING ALARM INDICATOR LIGHT	5.5
H12	HYDRAULIC FAST GEAR INDICATOR LIGHT	2.1
H14	ANTI-TIPPING PRE-ALARM	5.5
H15	FRONT AXLE ALIGNED INDICATOR LIGHT	5.4
H16	REAR AXLE ALIGNED INDICATOR LIGHT	5.4
H18	RIGHT REAR WORKING LIGHT	7.2
H21	2ND MECHANICAL GEAR ENGAGED INDICATOR LIGHT	4.4
H22	RIGHT REAR HEADLIGHT	4.1
H23	LEFT REAR HEADLIGHT	4.1
H24	LICENSE PLATE LIGHT	4.2
H25	RIGHT FRONT LIGHT	4.2
H26	LEFT FRONT LIGHT	4.3
H27	REVOLVING HEADLIGHT	6.2
H28	BOOM ALARM NEUTRAL RED INDICATOR LIGHT	9.4
H29	NEUTRAL ORANGE INDICATOR LIGHT	5.5
H30	HYDRAULIC SLOW SPEED GEAR INDICATOR LIGHT	2.1
H31	CAR RADIO	9.2
H32	PNEUMATIC SEAT	8.5
H33	AIR CONDITIONER	7.5
H40	AIR FILTER CLOGGED INDICATOR LIGHT	7.5
HA1	INSTRUMENT ALARM BUZZER	1.4
HA2	REVERSE BUZZER	2.2
HA3	HORN	4.4
HA4	LEFT SPEAKER	9.3
HA5	RIGHT SPEAKER	9.3
K1	MAIN BEAMS RELAY	4.2
K2	HORN RELAY	4.4
K3	TRANSMISSION ISOLATOR RELAY	2.3
K4	BUZZER AND REVERSE LIGHT RELAY	2.2

NAME	DESCRIPTION	SHEET
K5	START-UP IN NEUTRAL GEAR RELAY	1.5
K6	ENGINE RUNNING FREQUENCY RELAY	1.4
K7	DIMMED LIGHTS RELAY	4.2
K8	DEDALUS ANTI-TIPPING RELAY	3.4
K9	HYDRAULIC FAST GEAR RELAY	2.2
K01	ENGINE START RELAY	1.1
K02	SPARK PLUGS PRE-HEATING RELAY	1.2
K03	POWER RELAY +15	1.1
K10	REVERSE RELAY	2.1
K11	IGNITION FROM CAB RELAY WITH OPERATOR SEATED	1.4
K12	STABILISER INHIBITION WITH BASKET ENGAGED RELAY	3.3
K13	STABILISER INHIBITION BY OPTIONAL SENSOR RELAY	3.2
K14	AUTOMATIC AXLE LOCK RELAY	2.4
K15	FORWARD RELAY	2.1
K16	STABILISER INHIBITION BY EXTENSION/RAISE SENSOR RELAY	1.4
K17	ENABLE MANOEUVRE PUSHBUTTON RELAY	9.1
K18	STABILISER INHIBITION BY EXTENSION/RAISE SENSOR RELAY	3.3
K19	LEVELLING CONTROL RELAY	3.4
K20	MECHANICAL GEAR INDICATOR RELAYS	4.4
K21	INTERMITTENCE	4.3
K48	DIESEL OIL PUMP RELAY	1.5
KP1	RETURN RELAY ON KNOB	3.3
KP2	EXTENSION RELAY ON KNOB	3.3
M1	STARTER	1.1
M2	REAR WINDSCREEN MOTOR	6.2
M7	FRONT WINDSCREEN WIPER	6.4
M8	REAR WINDSCREEN WASHER	6.3
M9	FRONT WINDSCREEN WASHER	4.3
M10	HEAT FAN	8.3
M42	DIESEL OIL PUMP	1.5
M43	DIESEL SUPPLEMENT PUMP	10.3
P1	MULTIFUNCTIONAL INSTRUMENT	1.2
P2	OPTIONAL SPEEDOMETER	8.4
P95	SAR INSTRUMENT	9.4
R5	SPARK PLUGS	1.2
S0	BATTERY ISOLATOR SWITCH	1.1
S1	WARNING SWITCH	4.3
S2	HEAT FAN SWITCH	8.2
S4	STABILISER MANOEUVRE SWITCH	5.1
S5	REAR WINDSCREEN WASHER SWITCH	6.3
S6	REAR WORKING LIGHTS SWITCH	7.1
S7	REAR HYDRAULIC SOCKET SWITCH	8.2
S8	MECHANICAL GEAR SWITCH	4.5
S9	MANUAL LEVELLING SWITCH	3.1
S11	BOOM HEAD SOLENOID VALVE SWITCH	8.4
S12	REAR AXLE LOCK SWITCH	2.4
S13	LEFT FRONT STABILISER BUTTON	5.2
S14	RIGHT FRONT STABILISER BUTTON	5.3

NAME	DESCRIPTION	SHEET
S15	REVOLVING HEADLIGHT SWITCH	6.1
S19	DIESEL OIL HEATER SWITCH	8.3
S20	AIR CONDITIONER SWITCH	7.4
S21	PARKING BRAKE SWITCH	2.3
S24	FUEL RESERVE LEVEL	1.3
S25	HYDRAULIC OIL FILTER CLOGGED PRESSURE SWITCH	1.4
S26	ENGINE OIL LOW PRESSURE SWITCH	1.3
S27	MICRO SEAT	1.4
S28	FRONT WINDSCREEN WASHER SWITCH	6.4
S29	EXTENSION BUTTON ON KNOB	3.3
S30	"MAN IN" BUTTON	3.4
S31	RETURN RELAY ON KNOB	3.3
S34	MECHANICAL GEAR ENGAGED SWITCH	2.3
S35	2ND MECHANICAL GEAR ENGAGED PRESSURE SWITCH	4.4
S36	WHEEL ALIGNMENT SWITCH	5.4
S37	GEAR SWITCH UNIT	2.2
S38	MICRO INCHING	4.5
S39	BRAKE LIGHTS MICROSWITCH	4.3
S42	RADIATOR THERMISTOR	3.2
S44	EXTENSION + RAISE SENSOR	3.1
S45	OPTIONAL SENSOR	3.2
S46	REAR STABILISER MICROSWTICH	2.3
S47	FRONT STABILISER MICROSWITCH	2.3
S48	FRONT WORKING LIGHTS SWITCH	7.3
S54	POWER SOCKET	6.5
S55	HAND BRAKE MICROSWITCH	2.5
S56	PTO SWITCH	8.1
S57	LOAD CELL 2	9.4
S58	FRONT AXLE ALIGNED SENSOR	5.4
S59	LOAD CELL 1	9.4
S60	REAR BRIDGE ALIGNED SENSOR	5.4
S62	JOYSTICK BUTTON	3.4
S16C	ANTI-TIPPING SHUT-OFF SELECTOR	9.3
S23a	ENGINE WATER TEMPERATURE THERMOMETER	1.3
S23b	ENGINE WATER HIGH TEMPERATURE THERMOMETER	1.3
S24a	FUEL LEVEL INDICATOR	1.3
S40D	LIGHT SWITCH UNIT	4.1
S40P	ENABLE MANOEUVRE BUTTON	9.4
S16PG	OPTIONAL SWITCH	3.4
X23	SAR CALIBRATION	9.3
X215	BATTERY CHARGER	9.1
X10	BASKET INTERFACE CONNECTOR	
X11	ENGINE INTERFACE CONNECTOR - DRIVER'S SEAT	
X12	DASHBOARD INTERFACE CONNECTOR - DRIVER'S SEAT	
X13	FUSE AND RELAY CONTROL UNIT CONNECTOR	
X14	FUSE AND RELAY CONTROL UNIT CONNECTOR	
X15	UPPER CAB INTERFACE CONNECTOR - DRIVER'S SEAT	
X16	REAR CAB INTERFACE CONNECTOR - DRIVER'S SEAT	
X17	MAIN INTERFACE CONNECTOR - DRIVER'S SEAT	
X18	SOLENOID VALVES INTERFACE CONNECTOR	
X19	DASHBOARD INTERFACE CONNECTOR - DRIVER'S SEAT	
X20	FUSE AND RELAY CONTROL UNIT CONNECTOR	

NAME	DESCRIPTION	SHEET
X22	FUSE AND RELAY CONTROL UNIT CONNECTOR	
X23	SAR CALIBRATION CONNECTOR	
X24	DASHBOARD INTERFACE CONNECTOR - DRIVER'S SEAT	
X24a	OPTIONAL POWER CONNECTOR	
X25	MAIN INTERFACE CONNECTOR - DRIVER'S SEAT	
X26	FUSE AND RELAY CONTROL UNIT CONNECTOR	
X200	COLUMN INTERFACE CONNECTOR - DRIVER'S SEAT	
X3	RIGHT-LEFT STABILISERS MICROSWITCH CONNECTOR	
X49	ENGINE INTERFACE CONNECTOR - MAIN	
X5	MAIN INTERFACE CONNECTOR - DRIVER'S SEAT	
X6	ENGINE INTERFACE CONNECTOR - COLUMN	
X7	FUSE AND RELAY CONTROL UNIT CONNECTOR	
X71	STABILISER SET UP CONNECTOR	
X8	FUSE AND RELAY CONTROL UNIT CONNECTOR	
X88	DASHBOARD INTERFACE CONNECTOR - DRIVER'S SEAT	
X9	DRIVER'S SEAT INTERFACE CONNECTOR - COLUMN	
X99	FUSE AND RELAY CONTROL UNIT CONNECTOR	
XD	DIODE BRIDGE CONNECTOR	

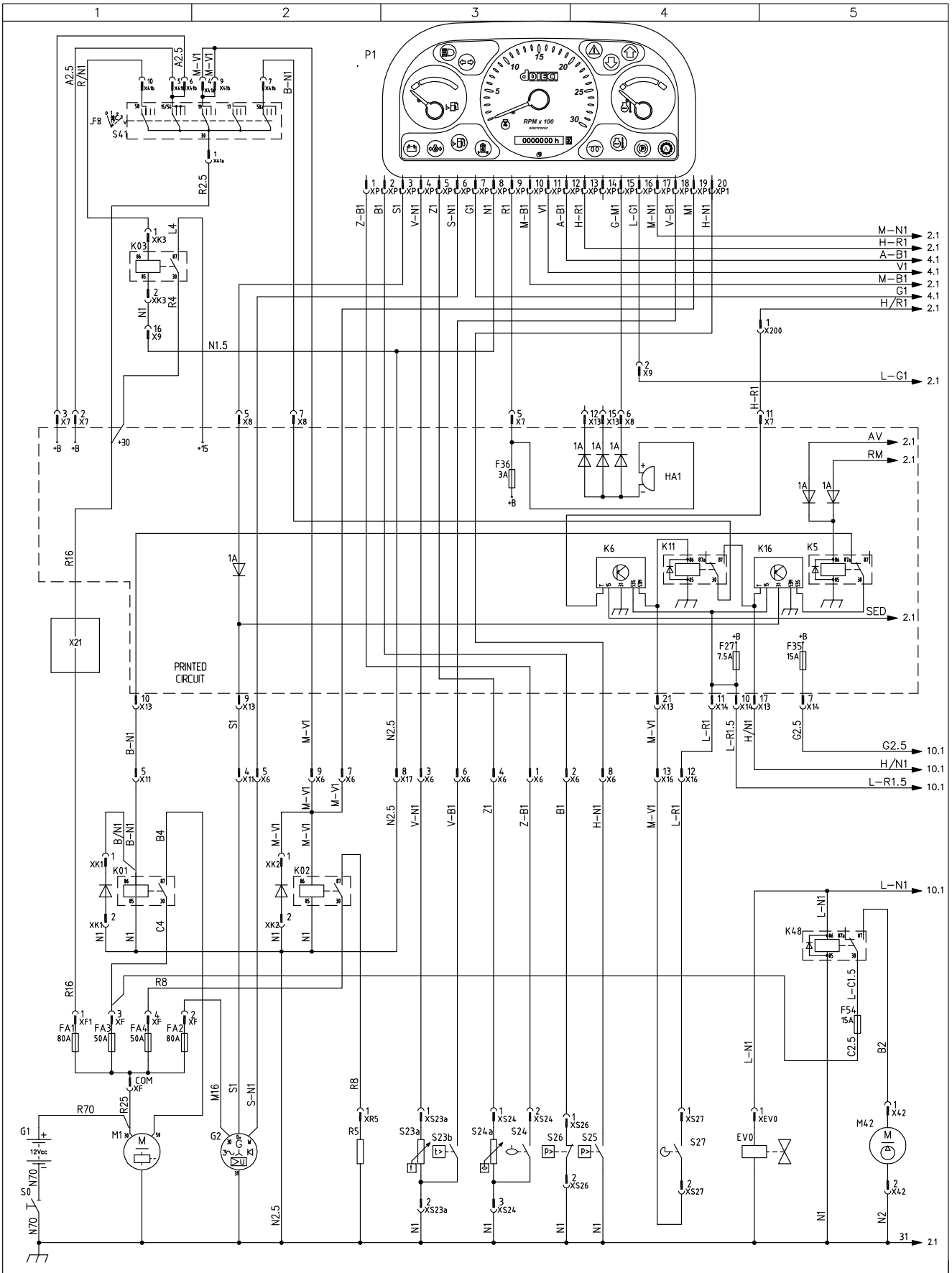
WIRE COLOURS

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)



CUSTOMER DIECI		COPIA VALIDA SOLO SE AUTENTICATA Valid certified copy only	DESCRIPTION	DRAWN VITO	PAGE 1
NAME DEDALUS MOTORE PK				CHECKED ANDREA	OF 12
DIAGRAM REF. E25800-042	REV. a	ADDAX REV. 01		DATE 17/06/08	

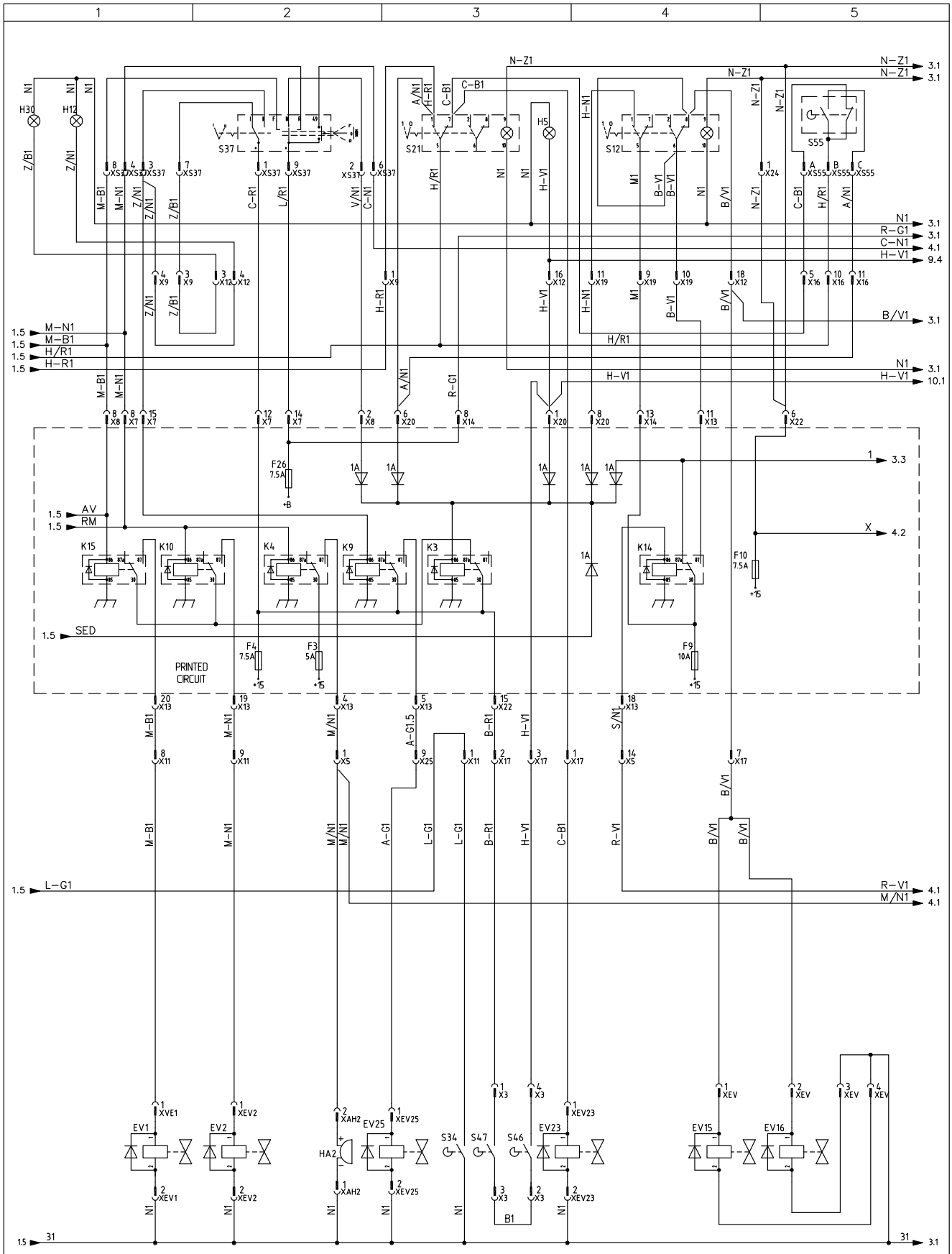


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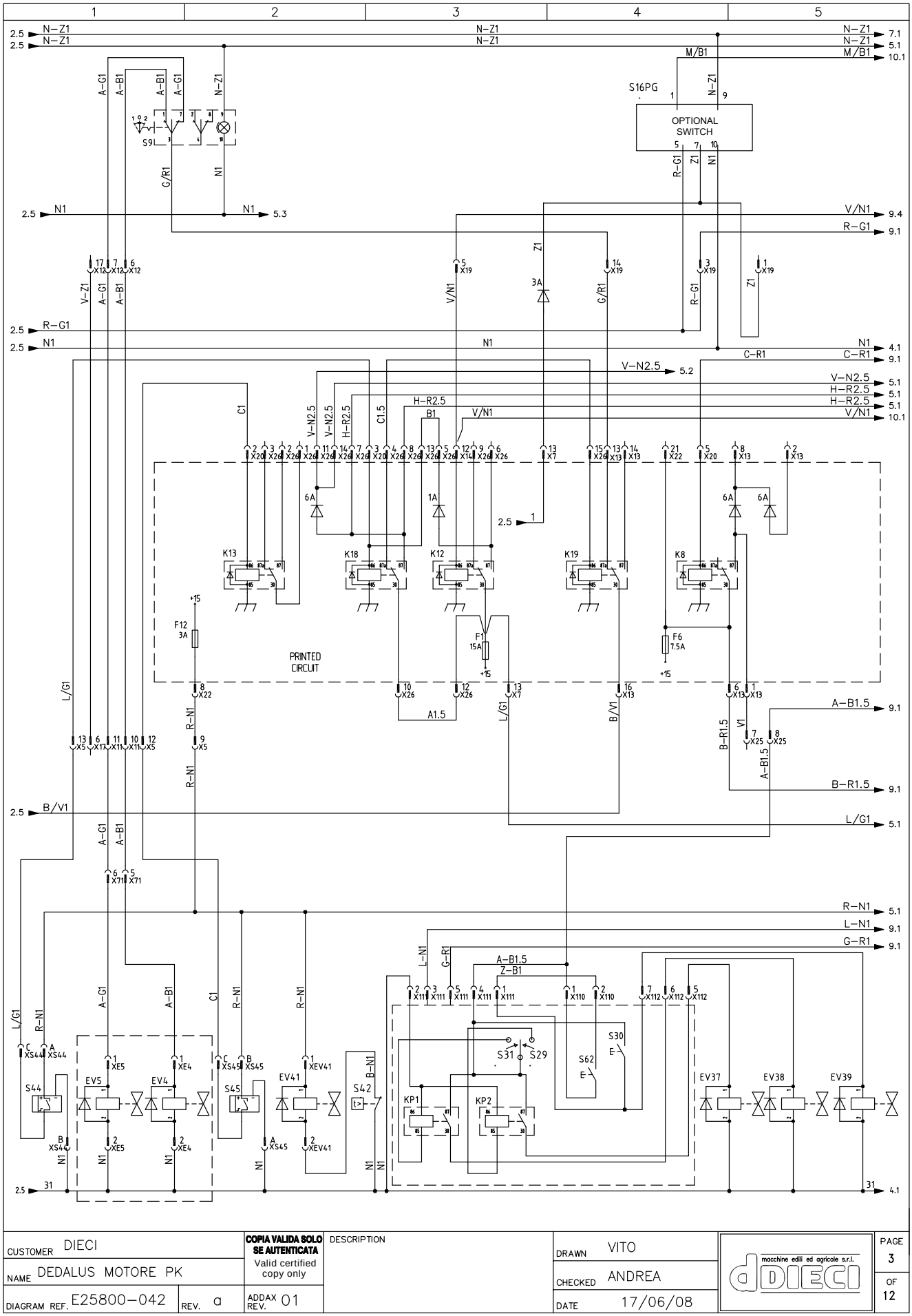
DIAGRAM REF. E25800–042 REV. a	ADDAX REV. 01		DATE 17/06/08		



CUSTOMER DIECI	COPIA VALIDA SOLO SE AUTENTICATA Valid certified copy only	DESCRIPTION	DRAWN VITO	macchine edili ed agricole s.r.l. DIECI	PAGE 3
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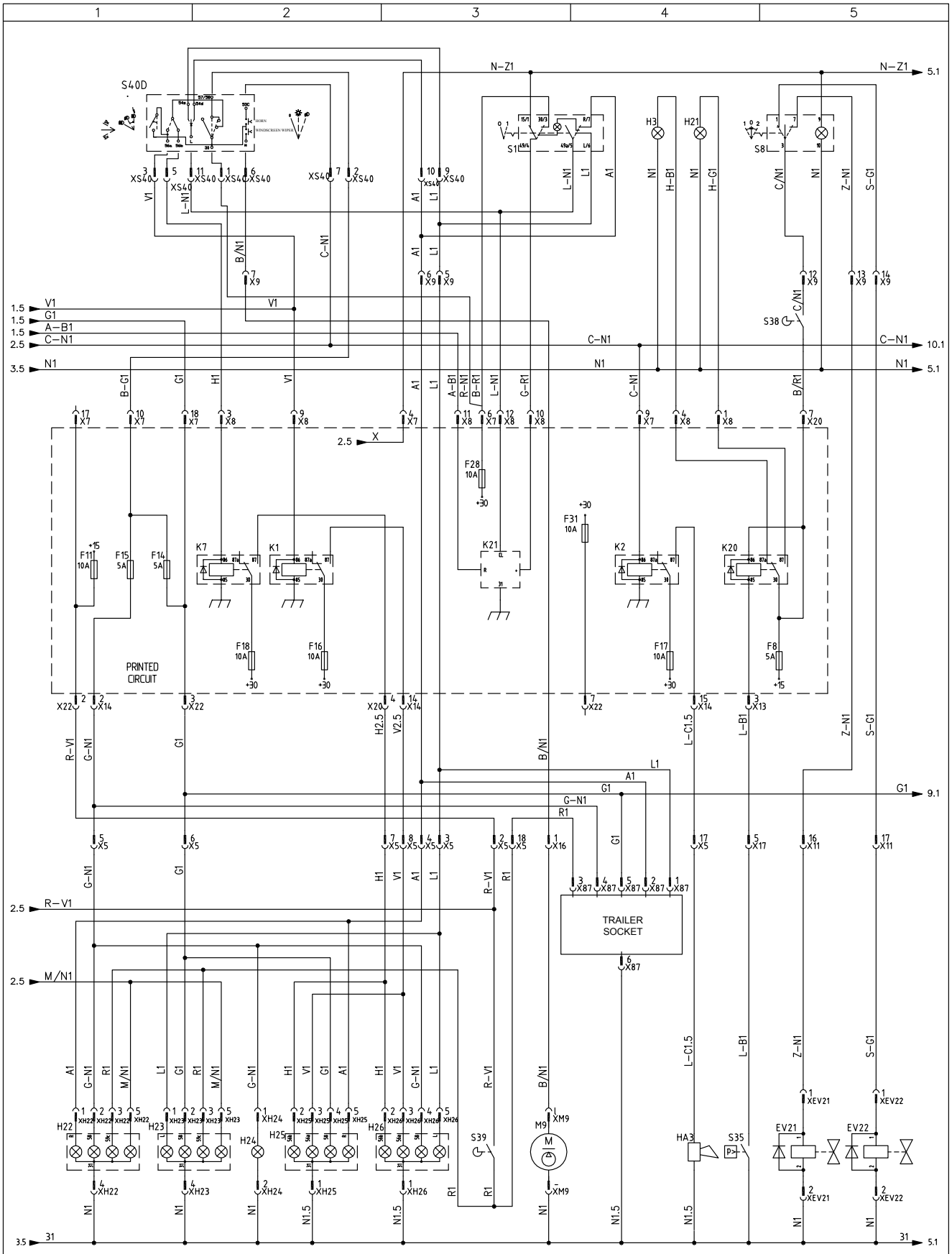

CUSTOMER DIECI	COPIA VALIDA SOLO SE AUTENTICATA Valid certified copy only	DESCRIPTION	DRAWN VITO	macchine edili ed agricole s.r.l. DIECI	PAGE 4
NAME DEDALUS MOTORE PK			CHECKED ANDREA		OF 12
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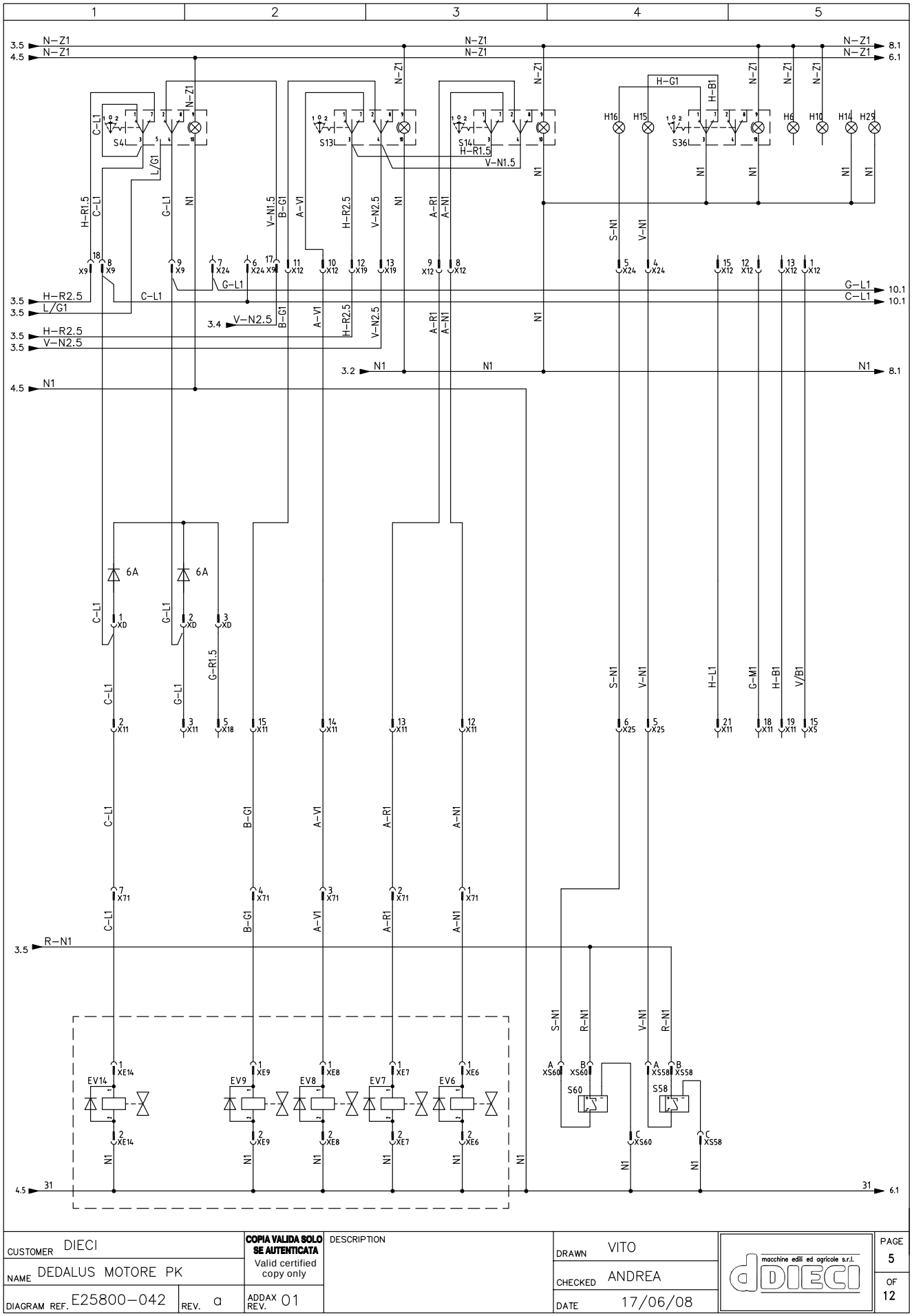

CUSTOMER DIECI	COPIA VALIDA SOLO SE AUTENTICATA Valid certified copy only	DESCRIPTION	DRAWN VITO	macchine edili ed agricole s.r.l. DIECI	PAGE 5
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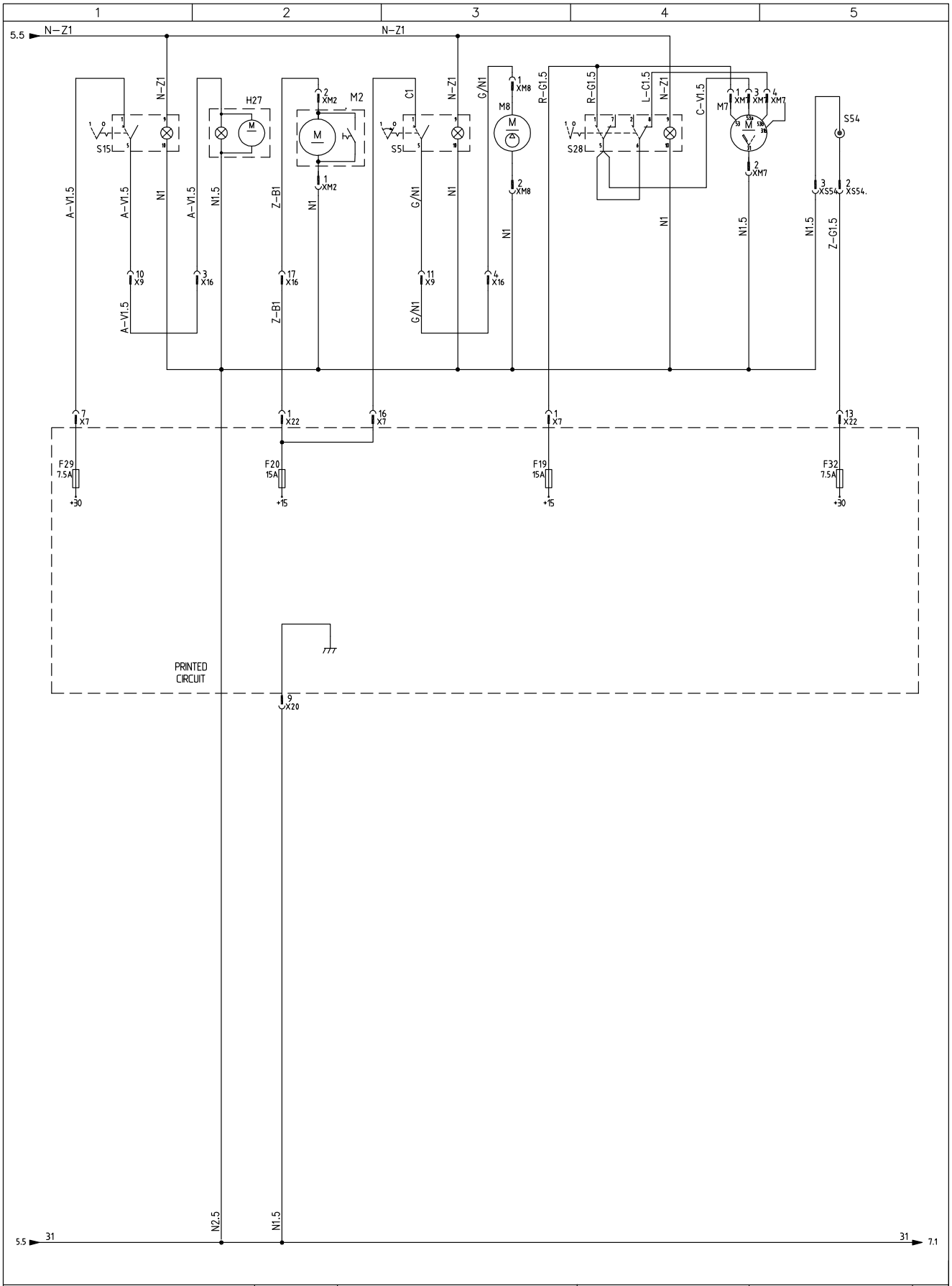

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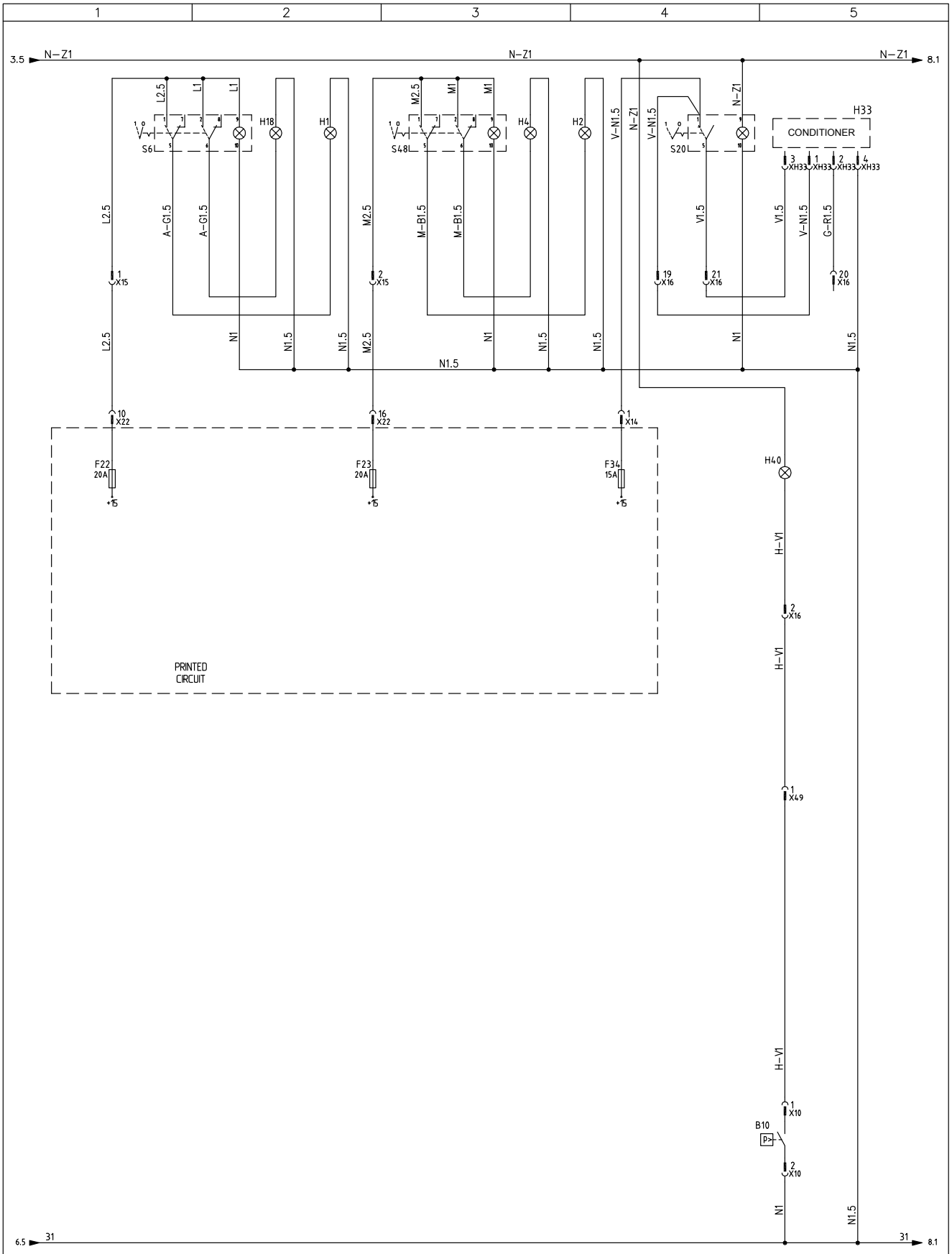

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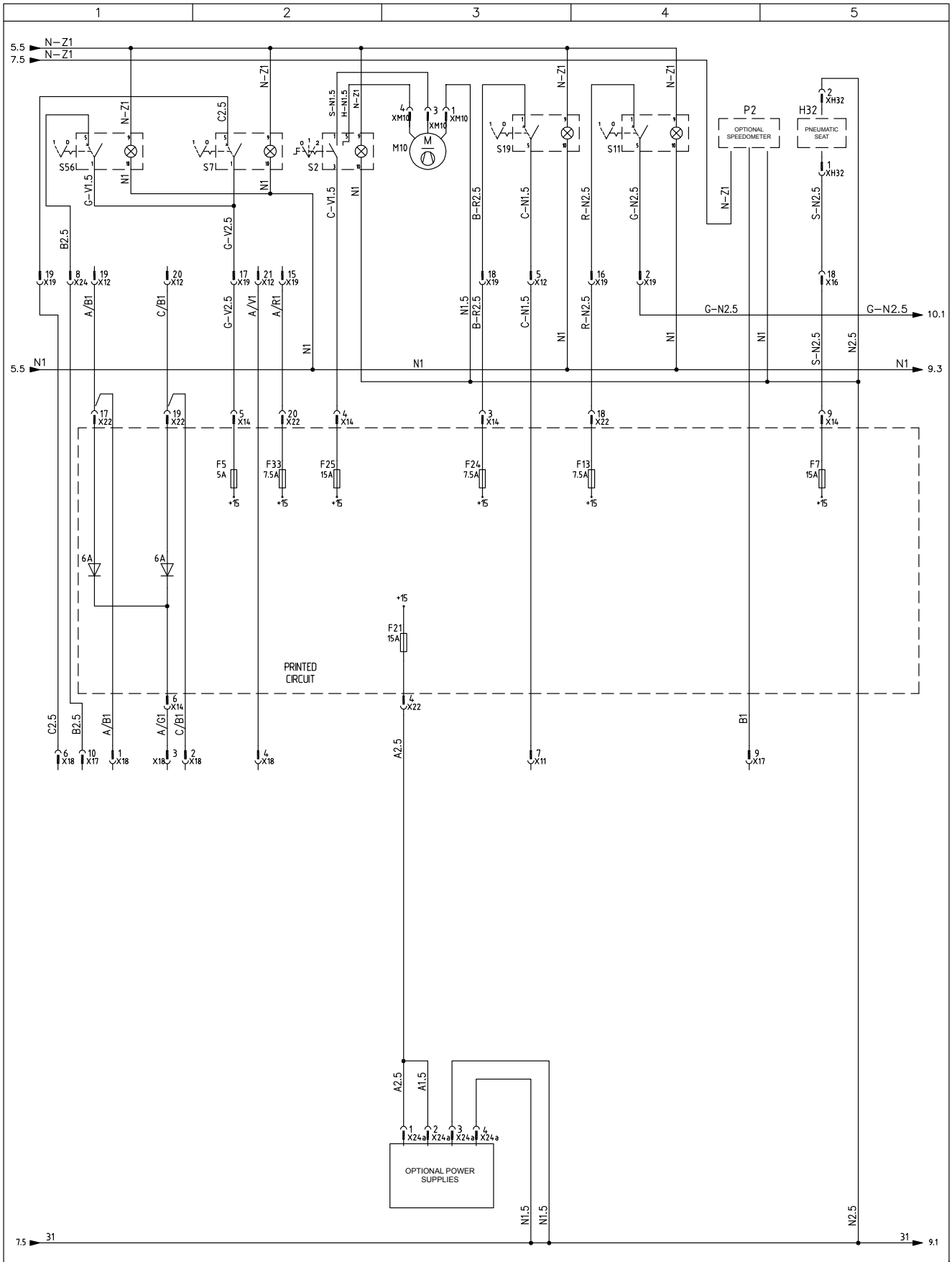

CUSTOMER DIECI		COPIA VALIDA SOLO SE AUTENTICATA Valid certified copy only	DESCRIPTION	DRAWN VITO	PAGE 8
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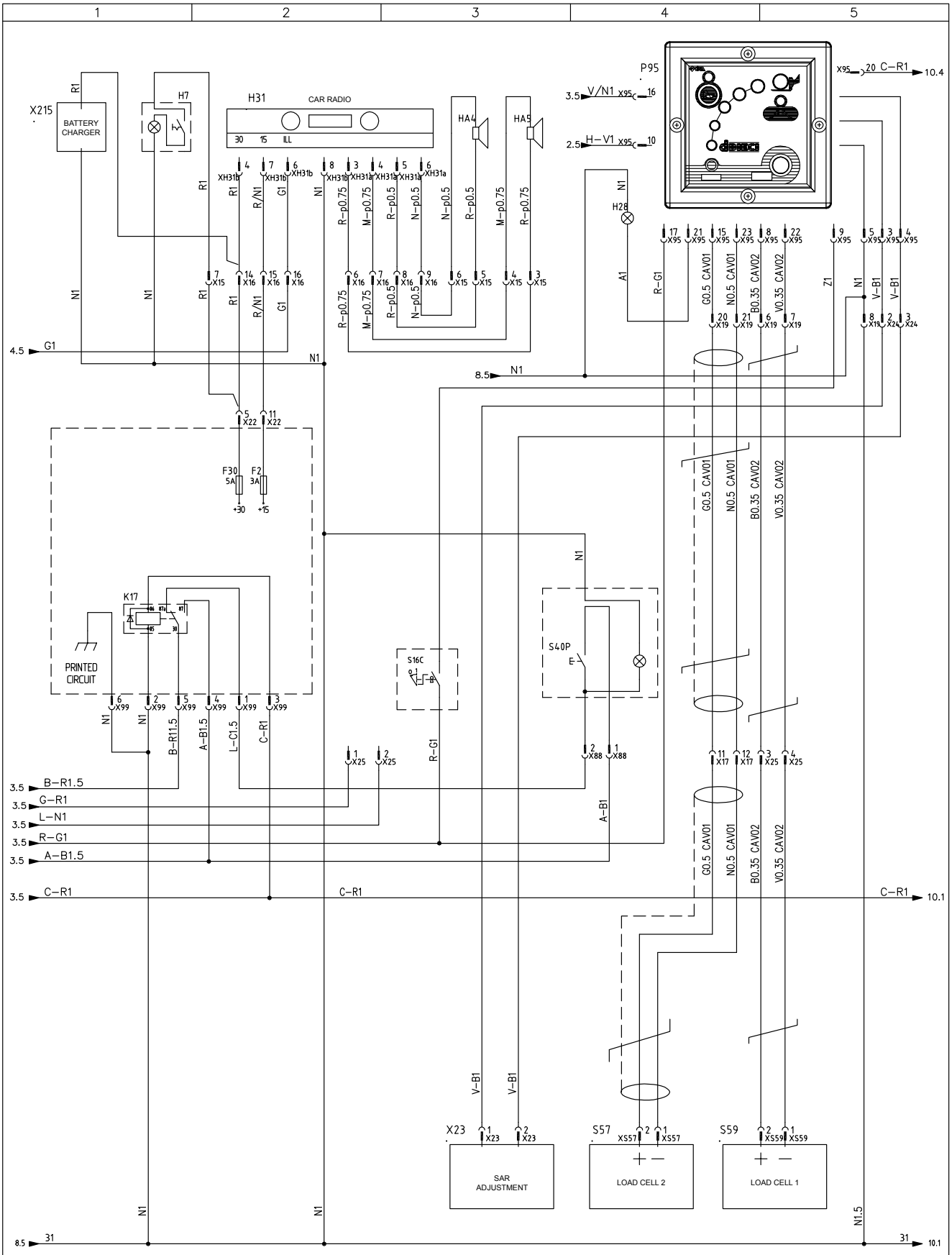

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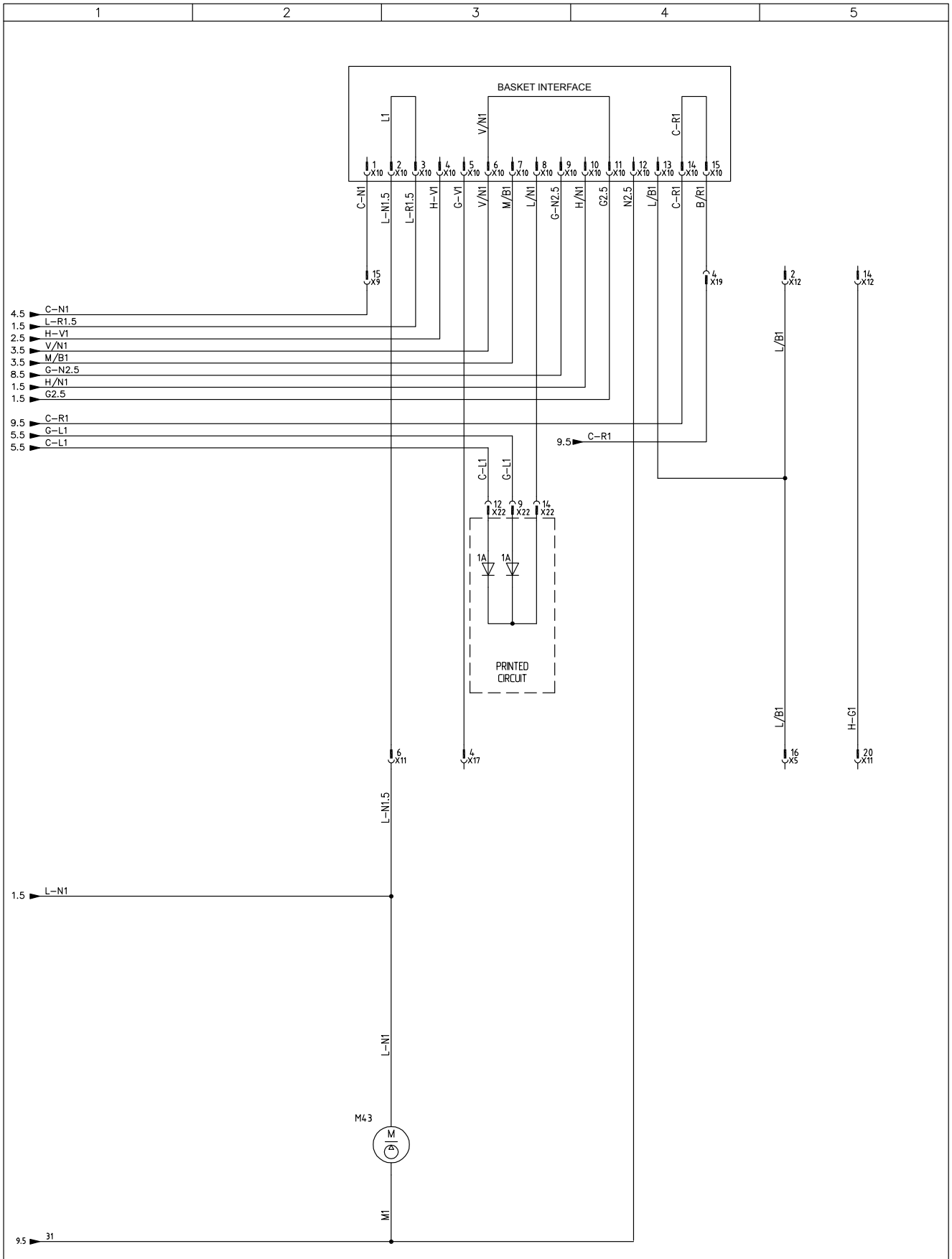

CUSTOMER DIECI		COPIA VALIDA SOLO SE AUTENTICATA Valid certified copy only	DESCRIPTION	DRAWN VITO	PAGE 10
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DIAGRAM REF. E25800–042	REV. a	ADDAX REV. 01		DATE 17/06/08	

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HYDRAULIC SYSTEM

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ANY MODIFICATION TO THE MACHINE REQUIRES A NEW TEST TO CHECK CONFORMITY WITH THE "CE" MACHINE DIRECTIVE 98/37. THE SAME 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.

ANY ARBITRARY MODIFICATION TO THE MACHINE SHALL RELEASE DIECI FROM ALL RESPONSIBILITY FOR ANY CONSEQUENT DAMAGE OR INJURY THAT MIGHT DERIVE FROM SUCH MODIFICATION.

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 ATTACHMENTS, ETC.) THE SAME APPLIES TO DISABLING OR MODIFYING SAFETY SYSTEMS. IN THESE CASES, THE MANUFACTURER SHALL BE RELEASED OF ANY LIABILITY.

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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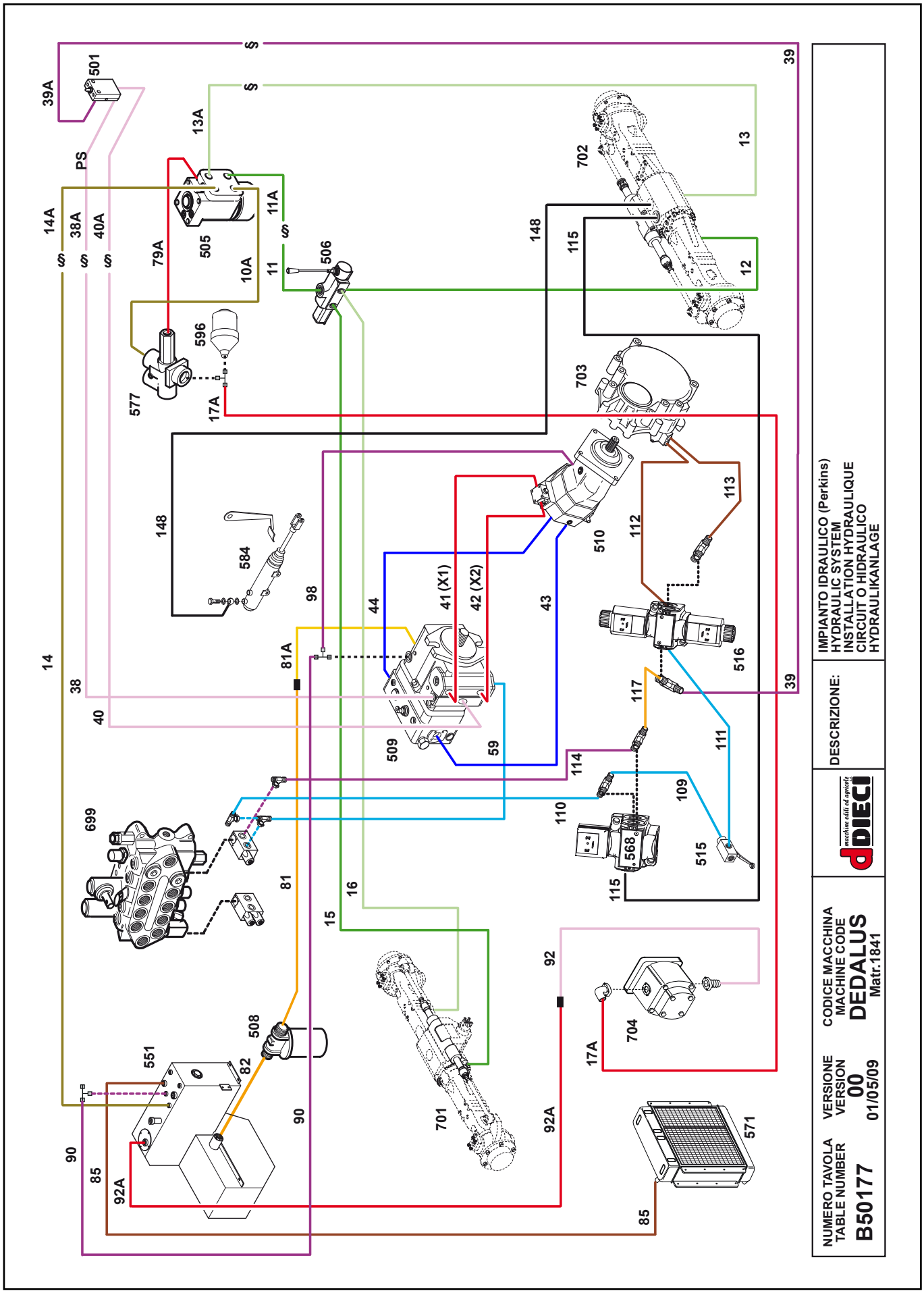

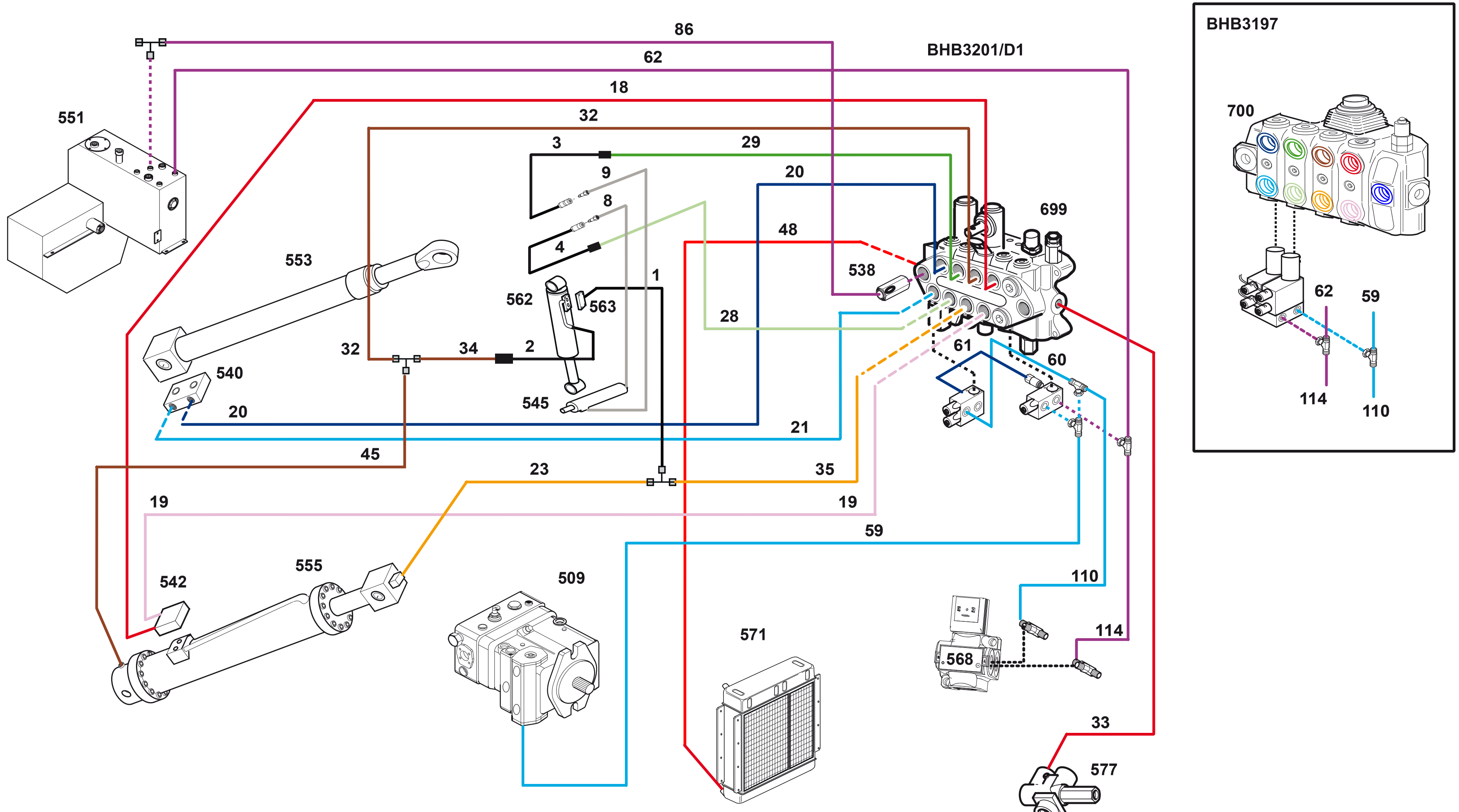

Braccio 7m

NUMERO TAVOLA TABLE NUMBER	VERSIONE VERSION	CODICE MACCHINA MACHINE CODE		DESCRIZIONE:	
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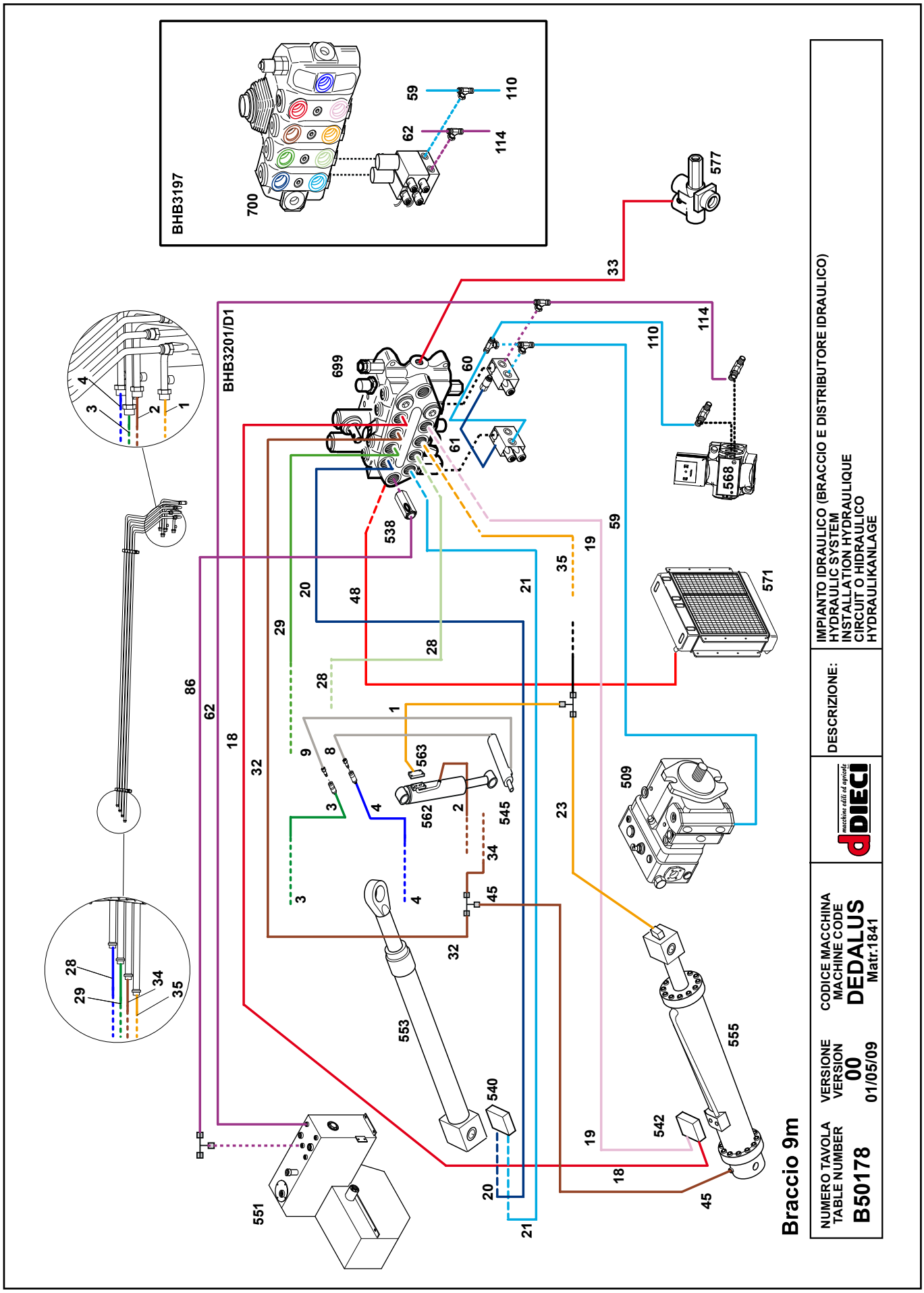
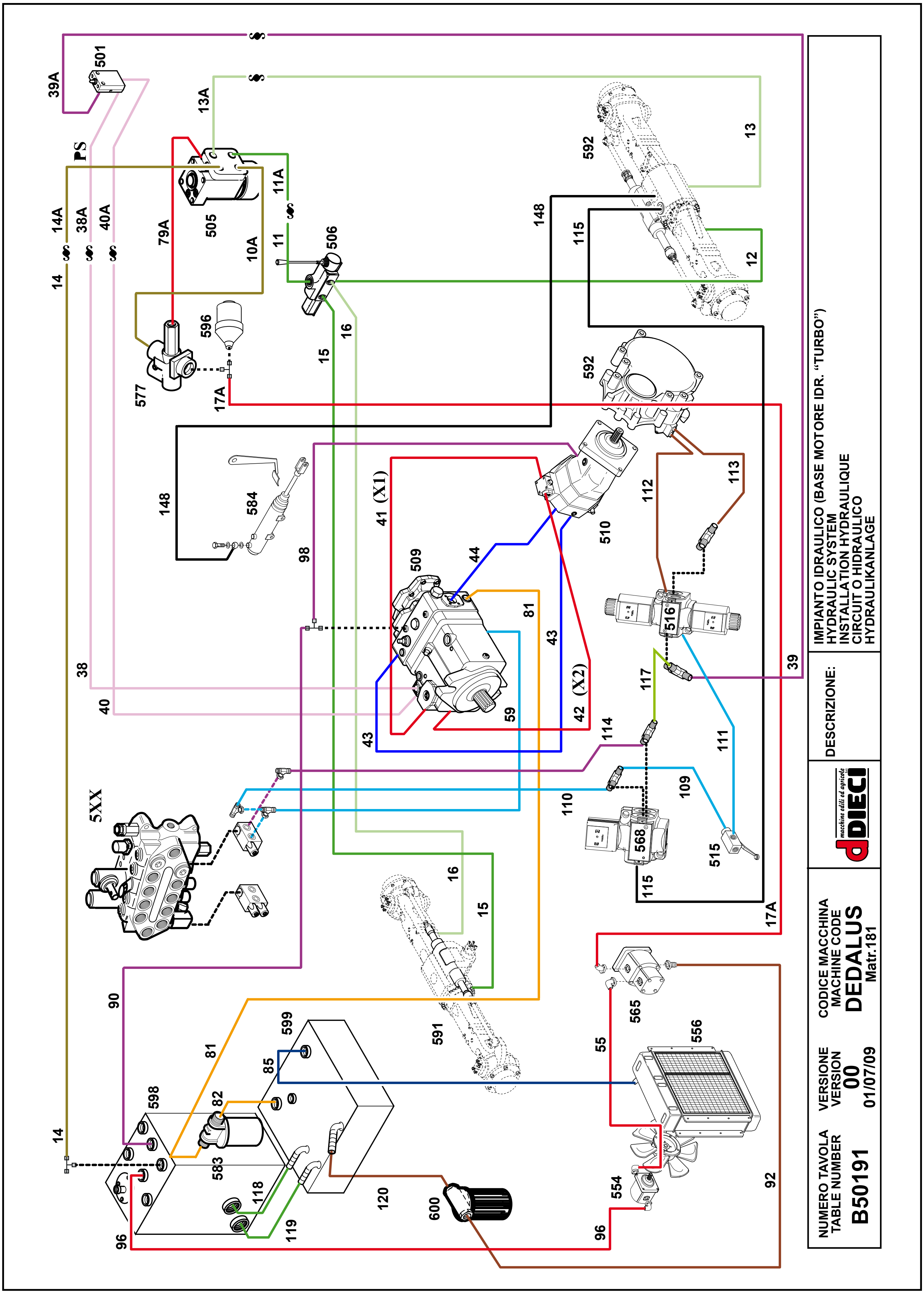
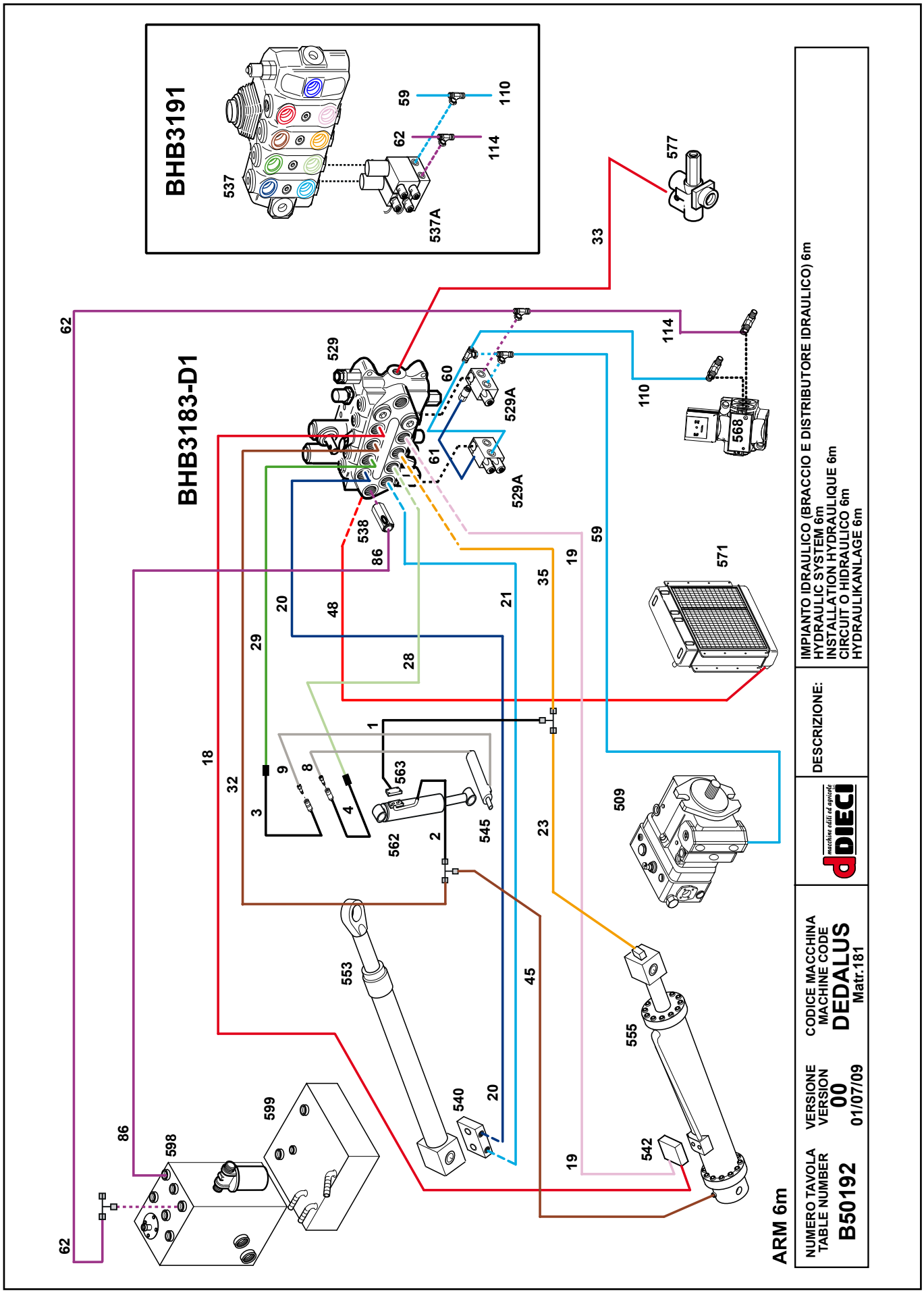
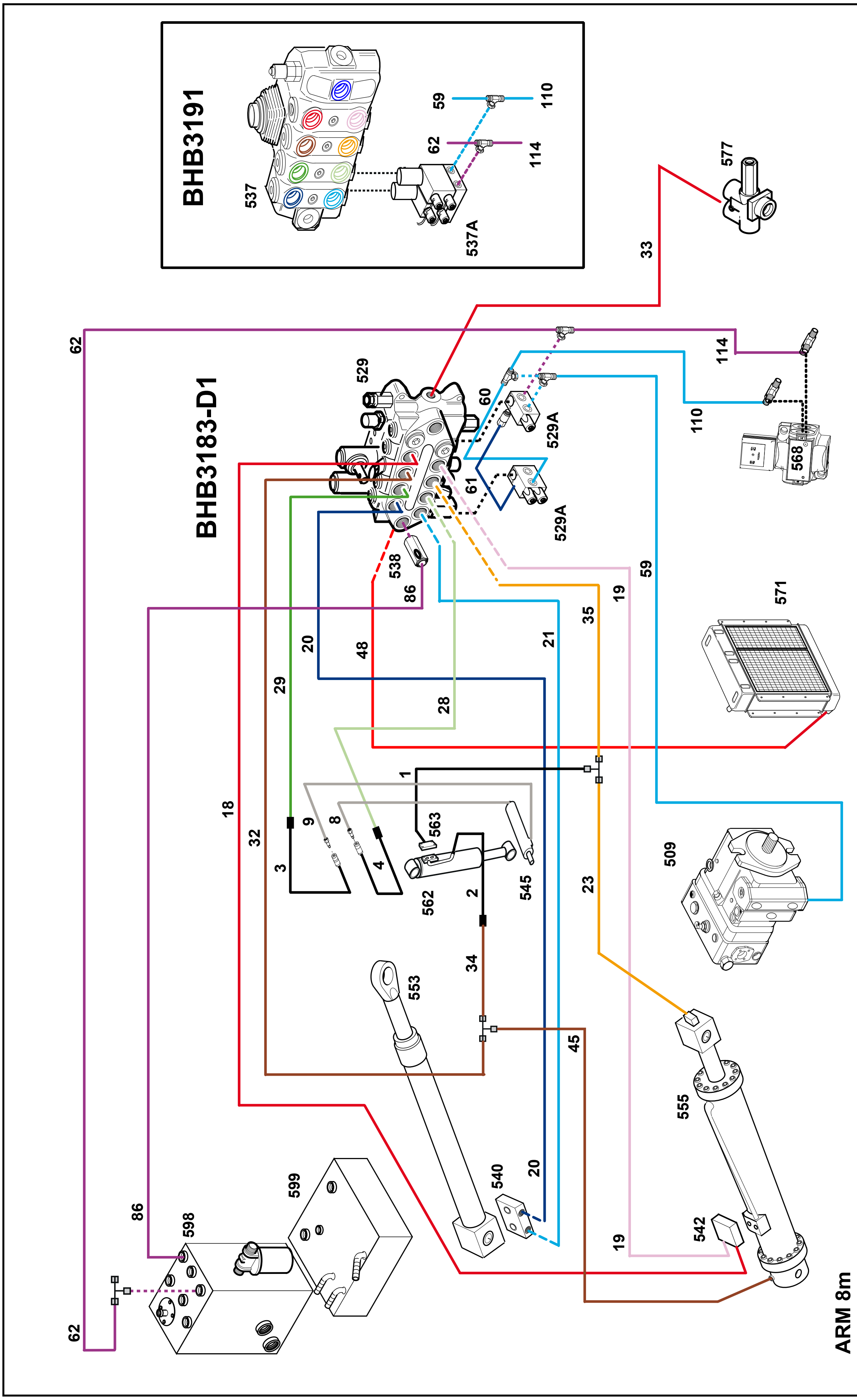


- CAUTION: - Read the SAFETY REGULATIONS (in this manual) carefully for the safety of all personnel and the machine.


IMPIANTO IDRAULICO (BASE MOTORE IDR. "TURBO")
HYDRAULIC SYSTEM
INSTALLATION HYDRAULIQUE
CIRCUITO HIDRAULICO
HYDRAULIKANLAGE
DESCRIZIONE:
dDIECI macchine edili ed agricole
CODICE MACCHINA
MACHINE CODE
DEDALUS
Matr.181
VERSIONE
VERSION
00
01/07/09
NUMERO TAVOLA
TABLE NUMBER
B50191





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TECHNICAL DATA
and
TECHNICAL SPECIFICATIONS

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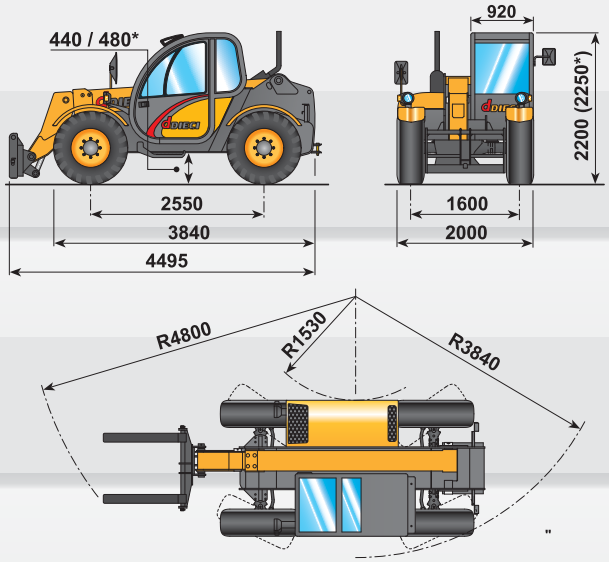

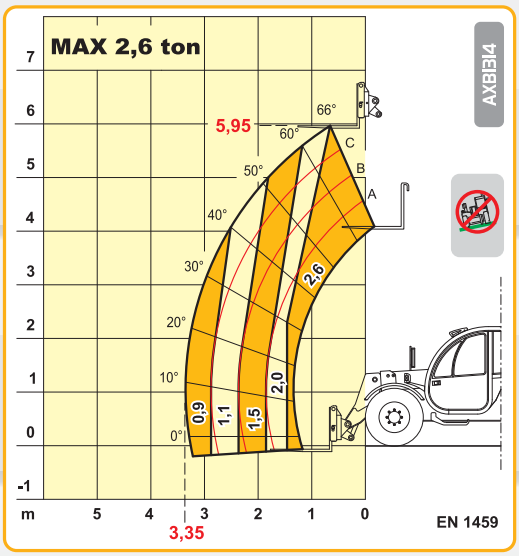

PERFORMANCES

Maximum capacity:..... 2.600 kg
Capacity at maximum height on tyres:..... 2.600 kg
Capacity at maximum boom extension on tyres:..... 900 kg
Maximum lifting height on tyres:..... 5,95 m
Maximum horizontal boom extension:..... 3,35 m
Boom extension at maximum height:..... 0,66 m
Fork tilting angle:..... 134°
Tearing force:..... 5.700 daN
Towing force:..... 7.300 daN
Maximum allowable slope:..... 40 %
Total empty weight:..... 5.800 kg
Max speed:..... 35 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

Gear pump with capacity at max speed:..... 110 lt/1'
Max working pressure:..... 230 bar
Control valve with joystick:..... 3 in 1

DIFFERENTIAL AXLES

Steering axles:..... 2, with planetary reduction gears
Type of steering:..... 4 wheels/transversal/2 wheels
Front axle:..... rigid
Rear axle:..... oscillating
Service brake:..... oil bath on the front axle
Negative parking brake.

ENGINE

PERKINS 1104D-44T - TC - 74.5 kW ENGINE
Maximum power:..... 74.5 kW (101 hp) at 2200 rpm
Operating principle:..... four-stroke, diesel engine
Cylinder number and layout:..... 4, vertical in line
Displacement:..... 4400 cm^3 - Turbo compressor
Cooling system:..... liquid

REFUELLING (litre)

Hydraulic tank:..... 130
Fuel tank:..... 60

STANDARD DEVICES

Anti-tipping device with block for hazardous movements.
Hydraulic socket for possible accessories on boom head.
Closed soundproof ROPS - FOPS approved driver's cab, with heating.
Self-locking differential on front axle (limited slip 45%).
Self-cleaning cyclone filter

TYRES

Tyres:..... 12,5x18"
Alternative:..... 16/70x20"

OPTIONAL AND ACCESSORIES

Optional and Accessories:..... see the relevant catalogue

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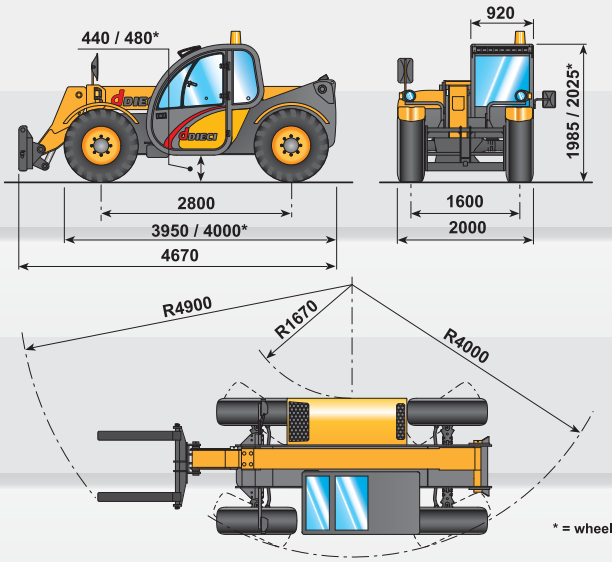

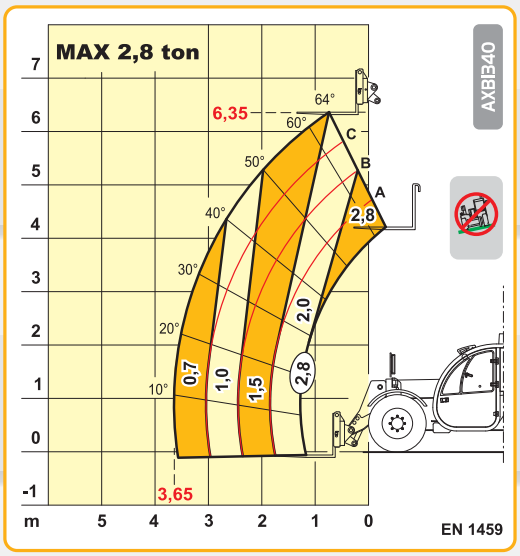

PERFORMANCES

Maximum capacity:..... 2.800 kg
Capacity at maximum height on tyres:..... 2.000 kg
Capacity at maximum boom extension on tyres:..... 700 kg
Maximum lifting height on tyres:..... 6,35 m
Maximum horizontal boom extension:..... 3,65 m
Boom extension at maximum height:..... 0,80 m
Fork tilting angle:..... 130°
Tearing force:..... 5.700 daN
Towing force:..... 7.300 daN
Maximum allowable slope:..... 40 %
Total empty weight:..... 6.000 kg
Max speed:..... 35 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

Gear pump with capacity at max speed:..... 110 lt/1'
Max working pressure:..... 230 bar
Control valve with joystick:..... 3 in 1

DIFFERENTIAL AXLES

Steering axles:..... 2, with planetary reduction gears
Type of steering:..... 4 wheels/transversal/2 wheels
Front axle:..... rigid
Rear axle:..... oscillating
Service brake:..... oil bath on the front axle
Negative parking brake.

ENGINE

PERKINS 1104D-44T - TC - 74.5 kW ENGINE
Maximum power:..... 74.5 kW (101 hp) at 2200 rpm
Operating principle:..... four-stroke, diesel engine
Cylinder number and layout:..... 4, vertical in line
Displacement:..... 4400 cm^3 - Turbo compressor
Cooling system:..... liquid

REFUELLING (litre)

Hydraulic tank:..... 130
Fuel tank:..... 60

STANDARD DEVICES

Anti-tipping device with block for hazardous movements.
Hydraulic socket for possible accessories on boom head.
Closed soundproof ROPS - FOPS approved driver's cab, with heating.
Self-locking differential on front axle (limited slip 45%).
Self-cleaning cyclone filter

TYRES

Tyres:..... 12,5x18"
Alternative:..... 16/70x20"
Alternative:..... 405/70x24"

OPTIONAL AND ACCESSORIES

Optional and Accessories:..... see the relevant catalogue

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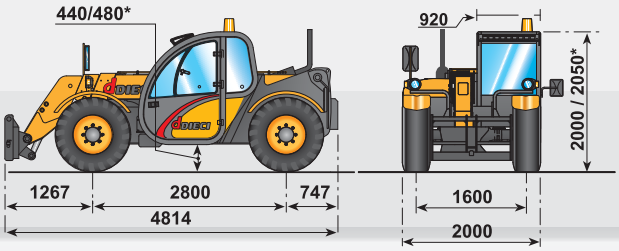

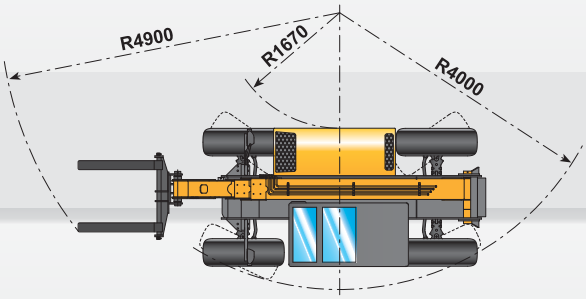

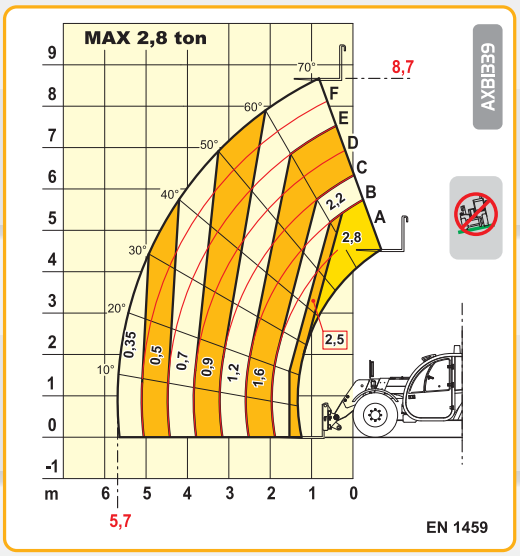

PERFORMANCES

Maximum capacity:..... 2.800 kg
Capacity at maximum height on tyres:..... 1.200 kg
Maximum capacity boom on tyres:..... 350 kg
Maximum lifting height on tyres:..... 8,70 m
Maximum horizontal boom extension:..... 5,70 m
Boom at maximum height:..... 0,80 m
Angle of fork arching:..... 130°
Tearing force:..... 5.700 daN
Towing force:..... 7.300 daN
Maximum slope for overtaking:..... 40 %
Total empty weight:..... 6.150 kg
Max speed:..... 35 km/h

TRANSMISSION

Transmission:..... hydrostatic with variable capacity pump
Hydraulic engine:..... with automatic change
Gear reversing:..... electro - hydraulic
Inching pedal for controlled forward movement.
2 speed power steering.

HYDRAULIC CIRCUIT

Gear pump with capacity at speed:.....110 lt/1'
Max working pressure:..... 230 bar
Distributor controls with joystick:..... 3 in 1

DIFFERENTIAL AXLES

Steering axles:..... 2, with epicycloidal reduction gears
Type of steering:..... 4 wheels / transversal / 2 wheels
Front axle:..... rigid
Rear axle:..... oscillating
Service braking:..... oil bath on the front axle
Parking brake:..... actuated negatively

ENGINE

PERKINS 1104D-44T - TC - 74.5 kW ENGINE
Maximum power:.....74.5 kW (101 hp) at 2200 rpm
Operating principle:..... four-stroke, diesel engine
Cylinder number and layout:..... 4, vertical in line
Displacement:..... 4400 cm^3 - Turbo compressor
Cooling system:..... liquid

REFUELLING (litre)

Hydraulic circuit:..... 130
Fuel tank:..... 60

STANDARD DEVICES

Anti-tipping device with block for hazardous movements.
Closed soundproof homologated cab ROPS - FOPS, with heating.
Hydraulic socket for possible accessories on boom head.
Front self-locking axle (limited slip 45%).
Self-cleaning cyclone filter

TYRES

Tyres:..... 12.5x18"
Alternative:..... 16/70x20"
Alternative:..... 405/70x24"

OPTIONAL AND ACCESSORIES

Optional and Accessories:..... see the relevant catalogue

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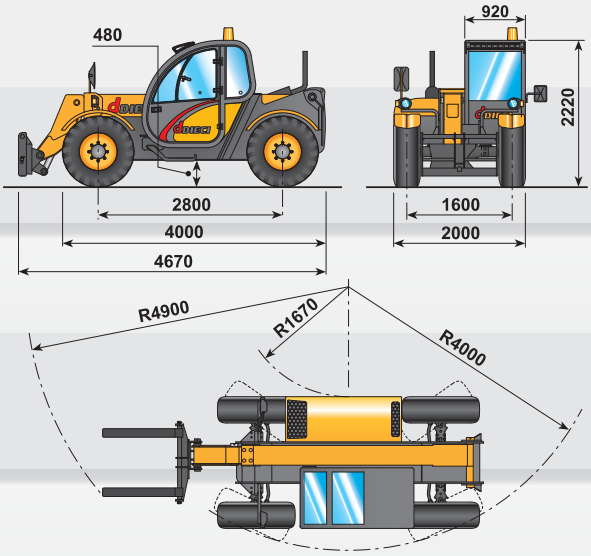

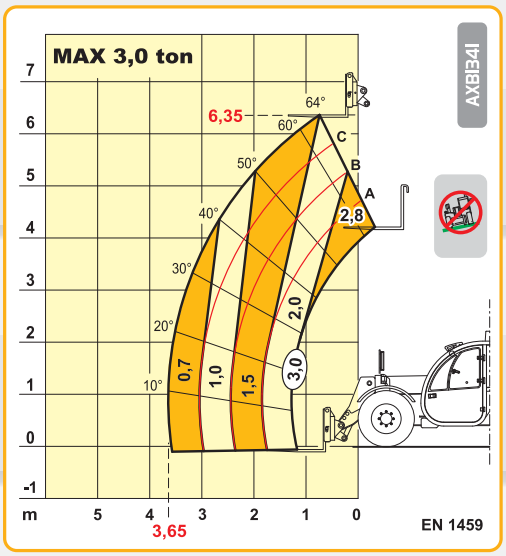

PERFORMANCES

Maximum capacity:..... 3.000 kg
Capacity at maximum height on tyres:..... 2.000 kg
Capacity at maximum boom extension on tyres:..... 700 kg
Maximum lifting height on tyres:..... 6,35 m
Maximum horizontal boom extension:..... 3,65 m
Boom extension at maximum height:..... 0,80 m
Fork tilting angle:..... 130°
Tearing force:..... 5.700 daN
Towing force:..... 7.300 daN
Maximum allowable slope:..... 40 %
Total empty weight:..... 6.000 kg
Max speed:..... 35 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

Gear pump with capacity at max speed:.....110 lt/1'
Max working pressure:..... 230 bar
Control valve with joystick:..... 3 in 1

DIFFERENTIAL AXLES

Steering axles:..... 2, with planetary reduction gears
Type of steering:..... 4 wheels / transversal / 2 wheels
Front axle:..... rigid
Rear axle:..... oscillating
Service brake:..... oil bath on the front axle
Negative parking brake.

ENGINE

PERKINS 1104D-44T - TC - 74.5 kW ENGINE
Maximum power:..... 74.5 kW (101 hp) at 2200 rpm
Operating principle:..... four-stroke, diesel engine
Cylinder number and layout:..... 4, vertical in line
Displacement:..... 4400 cm^3 - Turbo compressor
Cooling system:..... liquid

REFUELLING (litre)

Hydraulic tank:..... 130
Fuel tank:..... 60

STANDARD DEVICES

Anti-tipping device with block for hazardous movements.
Hydraulic socket for possible accessories on boom head.
Closed soundproof ROPS - FOPS approved driver's cab, with heating.
Self-locking differential on front axle (limited slip 45%).
Self-cleaning cyclone filter

TYRES

Tyres:..... 405/70x20"
Alternative:..... 405/70x24"

OPTIONAL AND ACCESSORIES

Optional and Accessories:..... see the relevant catalogue

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(Cod. AXE3163/UK - 09/2008 v0)

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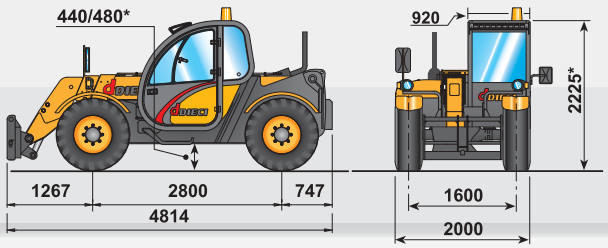

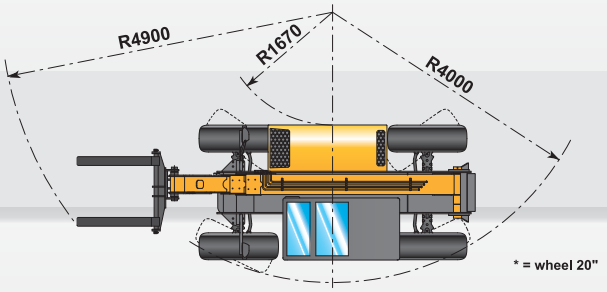

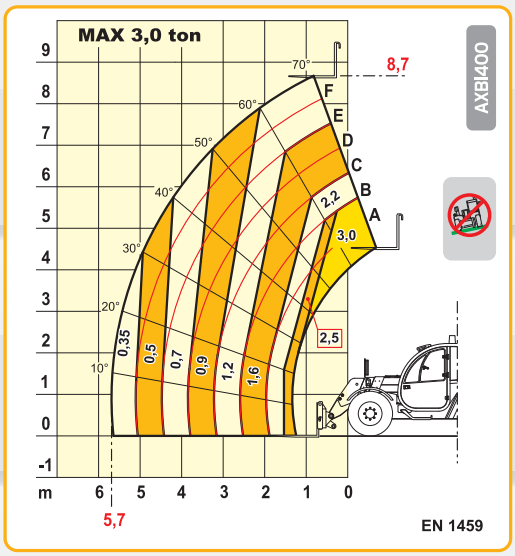

PERFORMANCES

Maximum capacity:..... 3.000 kg
Capacity at maximum height on tyres:..... 1.200 kg
Maximum capacity boom on tyres:..... 350 kg
Maximum lifting height on tyres:..... 8,70 m
Maximum horizontal boom extension:..... 5,70 m
Boom at maximum height:..... 0,80 m
Angle of fork arching:..... 130°
Tearing force:..... 5.700 daN
Towing force:..... 7.300 daN
Maximum slope for overtaking:..... 40 %
Total empty weight:..... 6.150 kg
Max speed:..... 35 km/h

TRANSMISSION

Transmission:..... hydrostatic with variable capacity pump
Hydraulic engine:..... with automatic change
Gear reversing:..... electro - hydraulic
Inching pedal for controlled forward movement.
2 speed power steering.

HYDRAULIC CIRCUIT

Gear pump with capacity at speed:.....110 lt/1'
Max working pressure:..... 230 bar
Distributor controls with joystick:..... 3 in 1

DIFFERENTIAL AXLES

Steering axles:..... 2, with epicycloidal reduction gears
Type of steering:..... 4 wheels / transversal / 2 wheels
Front axle:..... rigid
Rear axle:..... oscillating
Service braking:..... oil bath on the front axle
Parking brake:..... actuated negatively

ENGINE

PERKINS 1104D-44T - TC - 74.5 kW ENGINE
Maximum power:.....74.5 kW (101 hp) at 2200 rpm
Operating principle:..... four-stroke, diesel engine
Cylinder number and layout:..... 4, vertical in line
Displacement:..... 4400 cm^3 - Turbo compressor
Cooling system:..... liquid

REFUELLING (litre)

Hydraulic circuit:..... 130
Fuel tank:..... 60

STANDARD DEVICES

Anti-tipping device with block for hazardous movements.
Closed soundproof homologated cab ROPS - FOPS, with heating.
Hydraulic socket for possible accessories on boom head.
Front self-locking axle (limited slip 45%).
Self-cleaning cyclone filter

TYRES

Tyres:..... 405/70x20"
Alternative:..... 405/70x24"

OPTIONAL AND ACCESSORIES

Optional and Accessories:..... see the relevant catalogue

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