

Agri Farmer

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d DIECI

OPERATION AND MAINTENANCE MANUAL



Agri Farmer - INGLESE

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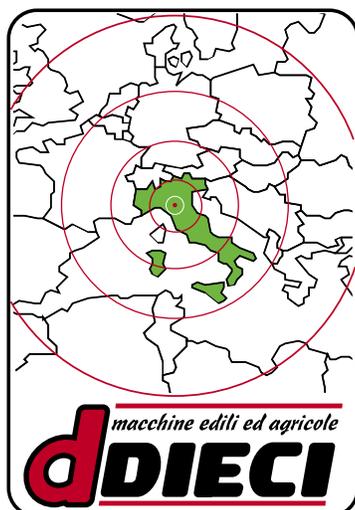


ATTENTION: ALWAYS KEEP A COPY OF THIS MANUAL
ON THE MACHINE AT THE OPERATOR'S DISPOSAL

AXH1152/UK

EVERY TELESCOPIC LIFT IS ACCOMPANIED BY:
A COPY OF THIS MANUAL,
A COPY OF THE ENGINE USE AND MAINTENANCE MANUAL DRAWN-UP BY THE MANUFACTURER
A COPY OF THE USE AND MAINTENANCE MANUAL RELATIVE TO EVERY DEVICE OR EQUIPMENT
WITH WHICH THIS VEHICLE IS SUPPLIED.

THESE MANUALS ARE WRITTEN BY THE RESPECTIVE PRODUCT SUPPLIERS, OR REPRODUCED
ACCURATELY AND IN FULL BY *DIECI S.r.l.* WITH THEIR SPECIFIC AUTHORISATION: THEY MAY INCLUDE
ADDITIONAL SPECIFICATIONS WRITTEN BY *DIECI S.r.l.*



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DIECI S.r.l. does not consider itself liable for damage
deriving from the use of NON original spare parts

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WARNINGS:

All documentation provided constitutes an integral and important part of the product and must always be available to users; users must carefully read the aforementioned documentation before using the machine.

Improper, incorrect, or irrational use of the vehicle or the accessories with which it is equipped as well as modification to its physical structure or functioning is prohibited.

**THE TOTAL OR PARTIAL REPRODUCTION OF THE CONTENTS OF THIS MANUAL
OR ANY MULTI-MEDIA ENCLOSURES IS PROHIBITED;**
Dieci S.r.l. WILL PROTECT THE OWNERSHIP RIGHTS OF THESE MATERIALS

ATTENTION: A COPY OF THIS MANUAL MUST ALWAYS BE IN THE VEHICLE FOR THE DRIVER'S REFERENCE.



CHAPTER "A"

INTRODUCTION, GUARANTEE, VEHICLE IDENTIFICATION

INTRODUCTION	A/3
GUARANTEE	A/4
VEHICLE IDENTIFICATION	A/6
TELESCOPIC LIFT IDENTIFICATION	A/7

CHAPTER "B"

SAFETY REGULATIONS

ACKNOWLEDGING SAFETY REGULATIONS	B/2
GENERAL WARNINGS	B/3
PROTECTIVE CLOTHING	B/4
INSPECT THE VEHICLE	B/4
PREPARING FOR EMERGENCIES	B/5
DRIVER'S CAB	B/6
DRIVING AUTHORISATION	B/7
STARTING THE VEHICLE	B/7
OPERATING IN SAFETY	B/8
HANDLING THE LOAD	B/12
PARKING THE VEHICLE	B/13
TEMPORARY HALT	B/13
ROAD TRAVEL	B/14
ROAD TRAVEL (INSTRUCTIONS)	B/14
LIFTING THE VEHICLE	B/15
TRANSPORTING THE VEHICLE	B/15
ELECTROMAGNETIC INTERFERENCE	B/16
VIBRATIONS	B/16
SAFELY CARRYING OUT MAINTENANCE WORK	B/16
STORING THE VEHICLE / PROLONGED INACTIVITY	B/19
PREPARING THE VEHICLE AFTER PROLONGED INACTIVITY	B/19
CLEANING THE VEHICLE	B/19
CLEANING THE WINDOWS	B/20
CLEANING THE CAB	B/20
SAFETY STICKERS	B/20
FIRE PREVENTION	B/21
BATTERIES	B/22
START-UP WITH AUXILIARY BATTERIES	B/23
ELECTRICAL SYSTEM PROTECTION	B/24
TIGHTENING WHEEL NUTS	B/25
TYRES	B/25
STORAGE OF DANGEROUS LIQUIDS	B/27
CONTACT WITH DANGEROUS LIQUIDS	B/27
DIESEL	B/28
FEATURES OF THE RECOMMENDED FUEL	B/28
CLEANING AND STORING DIESEL FUEL	B/29
ECOLOGICAL CONSIDERATIONS	B/30
WASTE DISPOSAL	B/30
FAN SPEED VERIFICATION	B/32
EVALUATING SUBSOIL CONSISTENCY	B/33
SAFETY DEVICES	B/34
DRIVER'S CAB	B/37
ROPS-FOPS CAB	B/37
LOAD TABLES	B/38
USING THE LOAD TABLES AND BOOM INDICATORS	B/38
HANDLING THE LOADS	B/42
SAFETY STICKERS	B/46

CHAPTER "C"**USER INSTRUCTIONS AND GETTING TO KNOW THE VEHICLE**

GENERAL WARNINGS	C/4
HAND SIGNALS	C/5
IDENTIFYING THE VEHICLE PARTS	C/6
CAB COMPONENTS	C/7
GETTING IN AND OUT OF THE DRIVER'S CAB	C/8
DOOR OPENING CONTROLS	C/8
INTERNAL DOOR OPENING CONTROLS	C/8
OPENING THE DOOR WINDOW	C/9
REAR WINDOW	C/9
UPPER ROOF	C/9
REAR EMERGENCY EXIT	C/10
MAX 180W SOCKET	C/10
TECHNICAL DOCUMENTATION POCKET	C/11
COURTESY COMPARTMENT	C/11
INTERIOR CAB LIGHTING	C/11
STEERING WHEEL (ADJUSTMENT)	C/12
SAFETY BELTS	C/13
SEAT	C/14
GETTING TO KNOW THE PARTS INSIDE THE CAB	C/17
CENTRAL DASHBOARD - INDICATOR LIGHTS	C/18
CENTRAL DASHBOARD - INSTRUMENT USE	C/19
LEFT FRONT DASHBOARD (STANDARD AND OPTIONAL ELECTRICAL SWITCHES, INDICATOR LIGHTS AND CONTROL LEVERS) ..	C/20
RIGHT DASHBOARD (STANDARD AND OPTIONAL ELECTRICAL SWITCHES, INDICATOR LIGHTS AND CONTROL LEVERS) ..	C/21
UPPER DASHBOARD (STANDARD AND OPTIONAL ELECTRICAL SWITCHES, INDICATOR LIGHTS AND CONTROL LEVERS) ..	C/22
ROOF DASHBOARD (STANDARD AND OPTIONAL ELECTRICAL SWITCHES, INDICATOR LIGHTS AND CONTROL LEVERS) ..	C/23
EMERGENCY BUTTON	C/24
IGNITION SWITCH	C/25
PEDALS	C/26
MULTI-FUNCTION LEVER	C/27
FAST/SLOW GEAR SWITCH	C/29
HYDRAULIC GEAR SWITCH (OPTIONAL)	C/30
PARKING BRAKE	C/31
SPIRIT LEVEL AND INCLINOMETER	C/32
BOOM CONTROL LEVER	C/33
JOYSTICK 3 IN 1 ON/OFF (STANDARD VERSION)	C/34
JOYSTICK 3 IN 1 PROPORTIONAL EXTENSION (STANDARD VERSION)	C/35
JOYSTICK 3 IN 1 FOR BASKET	C/36
JOYSTICK 4 IN 1 PROPORTIONAL CONTROL EXTENSION PROPORTIONAL SERVICES	C/37
JOYSTICK 4 IN 1 PROPORTIONAL CONTROL EXTENSION PROPORTIONAL SERVICES	C/38
ANTI-TIPPING DEVICE	C/40
LONGITUDINAL MOMENT INDICATOR	C/41
ANTI-TIPPING DEVICE CHECK	C/44
VEHICLE FUNCTIONS SELECTOR	C/46
STANDARD STEERING SELECTOR ALIGNMENT (STANDARD)	C/48
STEERING SELECTOR (OPTIONAL) ALIGNMENT (STANDARD)	C/49
REAR WINDSCREEN WIPER CONTROL	C/50
EMERGENCY LIGHTS SELECTOR	C/50
MANUAL ACCELERATOR	C/50
CAB INTERNAL VENTILATION	C/51
AIR RECIRCULATION INSIDE THE CAB	C/52
REVOLVING LIGHT SWITCH	C/54
FRONT CAB LIGHTS SWITCH (OPTIONAL)	C/54
REAR CAB LIGHTS SWITCH (OPTIONAL)	C/54
BOOM HEAD LIGHT SWITCH (OPTIONAL)	C/55
BOOM HEAD SOLENOID VALVE (OPTIONAL)	C/56

BOOM HEAD SOCKET (OPTIONAL)	C/56
REAR HYDRAULIC SOCKETS (OPTIONAL)	C/57
BOOM SUSPENSION (OPTIONAL)	C/58
2-SPEED BOOM (OPTIONAL).....	C/59
DUMP BODY DESCENT (OPTIONAL)	C/60
REVERSIBLE FAN (OPTIONAL ONLY ON AGRI FARMER 26.6)	C/61
WATER HEATER (OPTIONAL)	C/62
TOWING HOOK	C/63
TOWING HOOK	C/64
ADJUSTABLE TOWING HOOK (OPTIONAL).....	C/64
POWER TAKE-OFF (OPTIONAL).....	C/65
THREE-POINT LIFTING DEVICE (OPTIONAL)	C/66
HYDRAULIC BRAKING SYSTEM FOR TRAILERS (ITALY TYPE) (OPTIONAL).....	C/67
HYDRAULIC BRAKING SYSTEM FOR TRAILERS (OPTIONAL).....	C/68
PNEUMATIC BRAKING SYSTEM FOR TRAILERS	C/69
TOWING THE VEHICLE	C/71
PUTTING THE GEAR SHIFT IN NEUTRAL.....	C/72
DISENGAGING THE NEGATIVE PARKING BRAKE WITH THE ENGINE STOPPED.....	C/73
BASKET EMERGENCY	C/74
CATALYTIC PURIFIER (OPTIONAL).....	C/77
WATER DRIVEN PURIFIER (OPTIONAL).....	C/77

CHAPTER “C”

USER INSTRUCTIONS AND GETTING TO KNOW THE VEHICLE

“CENTRAL DASHBOARD” - INTEGRATED DEVICES

LCD DISPLAY	C/81
Speedometer (optional).....	C/81
Hodograph (optional).....	C/81
BUTTONS	C/82
Changing display visualisation	C/82
Clock regulation.....	C/82
Dashboard instrument initial check.....	C/83
ANTI-TIPPING SYSTEM TEST	C/84
Anti-tipping system mute	C/84
GENERAL ALARM INDICATOR LIGHT	C/84
Engine error.....	C/84
Switch-on of dashboard indicator lights.....	C/85
SERVICE.....	C/86
ANTI-TIPPING ERRORS	C/87

CHAPTER "D"**MAINTENANCE AND REGISTRATION**

MAINTENANCE PRESCRIPTIONS	D/3
INTRODUCTION	D/3
DECLARATION OF FIRST INSPECTION BY MANUFACTURER	D/5
IDENTIFYING THE VEHICLE PARTS	D/6
MAINTENANCE AND REGISTRATION SCHEDULE	D/8
CAPACITY OF PARTS TO LUBRICATE - MOD. AGRI FARMER 26.6	D/12
CAPACITY OF PARTS TO LUBRICATE - MOD. AGRI FARMER 28.9	D/12
CAPACITY OF PARTS TO LUBRICATE - MOD. AGRI FARMER 30.9	D/12
CAPACITY OF PARTS TO LUBRICATE - MOD. AGRI FARMER 28.7	D/12
CAPACITY OF PARTS TO LUBRICATE - MOD. AGRI FARMER 30.7	D/12
OIL COMPARISON TABLE	D/13
BATTERY ISOLATOR SWITCH	D/14
ENGINE BONNET OPENING	D/15
UNDERSIDE PROTECTION REMOVAL	D/17
PEDALS	D/18
PARKING BRAKE	D/20
HYDRAULIC OIL LEVEL	D/21
CHANGING HYDRAULIC OIL AND REPLACING FILTERS - MOD. AGRI FARMER 28.7-28.9-30.7-30.9	D/22
CHANGING HYDRAULIC OIL AND REPLACING FILTERS - MOD. AGRI FARMER 26.6	D/23
HYDROSTATIC SYSTEM OIL FILTER	D/24
FUEL TANK	D/25
WATER/OIL RADIATOR - MOD. AGRI FARMER 28.7-28.9-30.7-30.9	D/26
WATER/OIL RADIATOR - MOD. AGRI FARMER 26.6	D/28
AIR FILTER	D/30
CYLINDER BLOCK VALVES	D/34
REDUCTION GEAR - OIL CHANGE	D/36
FRONT DIFFERENTIAL AXLES - OIL CHANGE	D/36
REAR DIFFERENTIAL AXLES - OIL CHANGE	D/38
EPICYCLOIDAL REDUCTION GEAR - OIL CHANGE	D/40
TELESCOPIC BOOM SLIDING BLOCKS	D/42
EXTERNAL BOOM CHAINS	D/43
GREASING NIPPLES - ONE/TWO/THREE EXTENSION BOOMS	D/46
GREASING NIPPLES - TRANSMISSION SHAFT / DIFFERENTIAL AXLE	D/47
FUSES	D/48
ENGINE CONTROL UNIT	D/49
LIGHTING	D/50
FRONT LIGHT	D/50
REAR LIGHT	D/51
WORK LIGHT	D/51
DUAL REFLECTOR WORKING LIGHT	D/51
PRELOAD AND TORQUE TABLE FOR CLASS 1 NUTS AND BOLTS	D/52
PRELOAD AND TORQUE TABLE FOR CLASS 2 NUTS AND BOLTS	D/53
COUPLING TORQUE TABLES REGARDING THE HYDRAULIC FITTINGS	D/54
TROUBLESHOOTING	D/55
FILLING OUT THE SERVICE REGISTER	D/58
OBLIGATIONS AND FILING COMPLAINTS TO I.S.P.E.S.L.	D/58
PERIODIC INSPECTIONS AND REGISTRATION METHODS	D/58
RECORDING ROUTINE VERIFICATIONS AND MAINTENANCE INTERVENTIONS	D/61

CHAPTER "E"
ELECTRICAL DIAGRAMS AND CIRCUITS

CHAPTER "F"
HYDRAULIC SYSTEM

CHAPTER "G"
TECHNICAL SHEETS

CHAPTER "H"
ANALYTICAL INDEX

Dear customer,

Thank you for choosing a .

This Use and Maintenance Manual has been written to help you fully appreciate your vehicle.

We strongly recommend that you read this manual in its entirety before using the vehicle.

It contains information, advice and important warnings that will help you to fully take advantage of the technical capabilities of the .

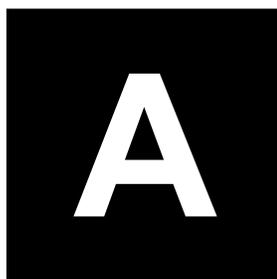
You will learn about its features and special practical information in addition to information about its maintenance, driver and operation safety to help maintain your vehicle overtime .

We are confident that you will be happy with your new vehicle and we remain at your disposal should you have any further queries.

Sincerely,

Sales Management

INTRODUCTION GUARANTEE VEHICLE IDENTIFICATION





BEFORE COMMISSIONING THE VEHICLE, THE OPERATOR MUST THOROUGHLY READ THIS MANUAL IN ORDER TO COMPLETELY UNDERSTAND FUNCTIONING OF THE TELESCOPIC LIFT AND BE SUITABLY PREPARED FOR ITS USE.

USE OF THE VEHICLE DIFFERENT TO THAT DESCRIBED IN THIS MANUAL IS PROHIBITED AND RELIEVES *DIECI* FROM ANY LIABILITY FOR INJURY/DAMAGE CAUSED TO PERSONS, ANIMALS AND OBJECTS.

WHEN USING THIS MACHINE, CAREFULLY FOLLOW DIAGRAMS CORRESPONDING TO MOUNTED ATTACHMENTS.



INTRODUCTION

The purpose of this manual is to provide the Operator with efficient and safe instructions on the use and maintenance of the telescopic lift.

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

This Use and Maintenance manual is provided by the Dealer upon delivery of the vehicle, in order to make sure that these instructions are read and correctly understood. 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 be fully understood and carefully observed. Routine maintenance should be carried out regularly, keeping a record of the vehicle's working hours.

Use only original spare parts when spare parts are required. Local Dealers can supply original spare parts as well as advice and instructions for their installation and use. The use of non-original spare parts may cause damage to other parts of the vehicle. Customers are advised to purchase all spare parts required only from an authorised Agent or Dealer.

Should the vehicle be destined for use in particularly severe conditions (for example on argillaceous or muddy terrain), we advise consulting your nearest dealer for specific instructions. Failure to observe these instructions may result in the vehicle's guarantee being voided.

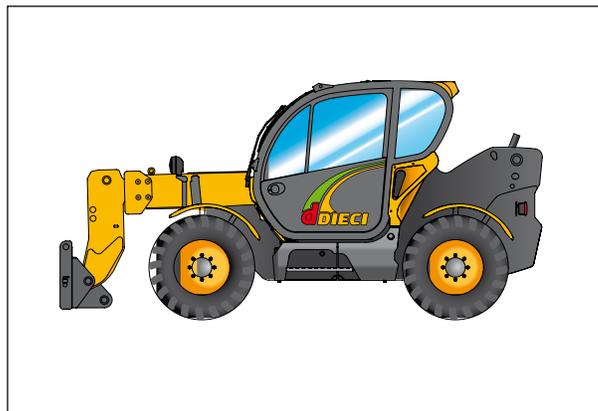
This manual has been published for worldwide distribution and the availability of certain equipment referred to as being essential or available on request may vary according to the geographical location in which the vehicle is being used. All details about the equipment available in your area can be obtained from your nearest Distributor or Dealer.

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

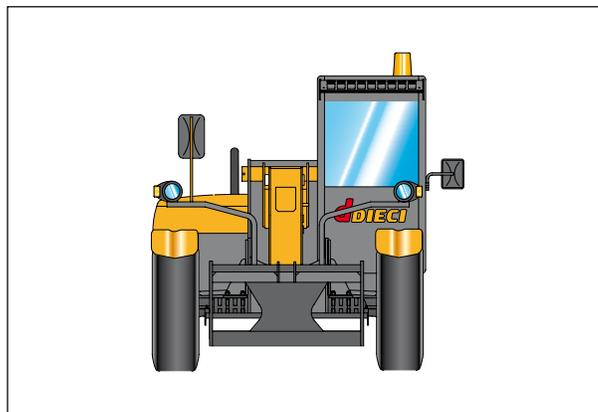
As a result of continuous technical improvements introduced, as well as updating and publication timetables, the data included in this manual may be subject to change at any time and should not be considered binding.

In some illustrations, the panels or covers have been removed in order to make the figure clearer. Never use the vehicle without these panels or protective coverings.

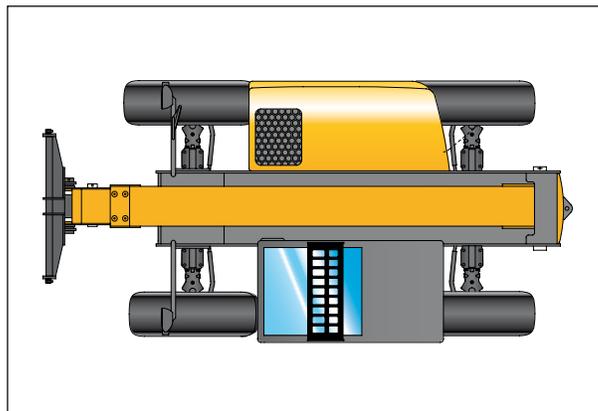
The left and right positions indicated in this manual refer to the vehicle as viewed from its back looking towards the front, or rather, the view of the operator when sitting in the driver's seat.



LEFT SIDE



FRONT VIEW



VIEW FROM ABOVE

GUARANTEE

GUARANTEE: DURATION, VALIDITY AND ACTIVATION

Warranty: duration

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

Warranty: entry into force

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

Warranty: activation

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

GUARANTEE: VALIDITY

Guarantee in countries with assistance centres

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

DIECI is responsible for:

- The materials used
- Labour
- Travel expenses.

The customer is responsible for:

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

Warranty in countries without assistance centres

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

Examining replaced faulty parts

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

Additional guarantee for repairs and replacement parts

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

Intervention campaigns for faulty products

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

WARRANTY:
REQUEST FOR REPAIR UNDER GUARANTEE**Warranty: making a claim**

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

Obligation to immobilise vehicle

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

Warranty: exclusions from the warranty

The following conditions and parts are excluded from the guarantee:

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

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

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

DIECI shall handle the application of the aforementioned guarantees.

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

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

CAUSES OF:
NON-ACTIVATION. FAILURE TO HONOUR. TERMINATION**Warranty: failure to honour**

The guarantee is not honoured:

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

Warranty: termination

The guarantee is terminated:

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

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

Final terms

- In cases of the non-activation of the guarantee or if it is not honoured or is terminated, the buyer shall not be granted annulment of the contract, payment of damages, or an extension of the guarantee.
- **DIECI** does not make payments for any type of debit which replacement machines or for rental, labour and lost profits, caused by machine stop. Unless otherwise previously agreed in writing by both parties.
- Conditions subject to guarantee different than those listed above must be agreed upon in writing and signed by both parties.

Spare parts supply

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

VEHICLE IDENTIFICATION

VEHICLE MODELS

This vehicle has been designed and constructed for use as a self-propelled vehicle, including an operator's driving seat, with tyres, intended for use on asphalt or natural surfaces and on rough ground. The vehicle consists of a main support structure aimed at supporting the extendible arm. Forks or other attachments approved by **DIECI** can be mounted on the boom head. In used normally, the vehicle lifts and places down loads through the extension/withdrawal and raising/lowering of the boom.

The Manufacturer offers a range of similar vehicles that have different technical features and capacities.

When consulting any Table or illustration provided in this manual or on the vehicle itself, always refer to the model code.

Agri Farmer TELESCOPIC LIFTS

LIABILITY

- The machines are manufactured in compliance with EC directives in force during the period of commercialisation.

- Failure to observe the user and safety regulations or use of the vehicle in less than perfect working condition may cause accidents that are punishable by law.

- The Manufacturer is not liable for injury or damage to people, things or animals caused by improper use of this vehicle or by unauthorised structural modification, applications and transformation.

- The Manufacturer reserves the right to carry out possible modifications to the vehicle for technical or commercial reasons without prior notice.

TELESCOPIC LIFT IDENTIFICATION

The vehicle can be identified by the serial number punch-marked on the front part of the chassis and inside the cab. In addition, the engine also has its own serial number punch-marked on the engine block.

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

Chassis serial number

Engine serial number.....

Cab serial number

Gear box serial number

Differential axles serial number

Type of vehicle.....

Owner/ Operator.....

Address of Dealer or agent.....

Delivery date.....

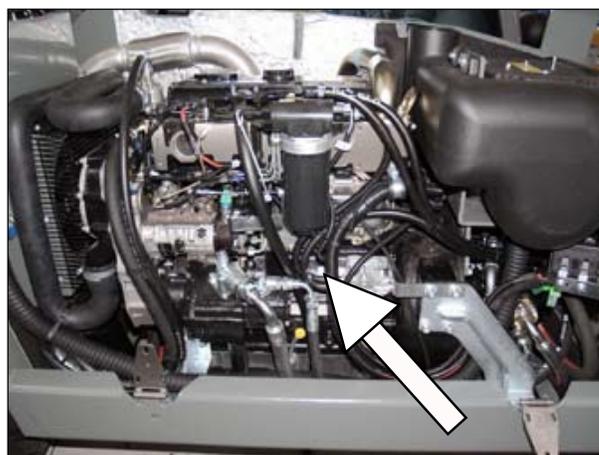
Guarantee expiry date

NOTE:

Agri Farmer lifts bear the stamping (type-approval code) (see first 4 numbers stamped on the chassis)



Chassis serial number



Engine serial number



Axle serial numbers



Gear serial number



Essential data



DECLARATION OF CONFORMITY

Below is the FAC-SIMILE of the declaration of conformity:

DECLARATION OF CONFORMITY



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

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

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

Declares that:

The L** xxx-type Telescopic Lift (xxxxxxx) Serial Number ***xx****

complies with all relevant dispositions of the following European Directives:

- Machinery Directive - **2006/42/EC**
- Electromagnetic Compatibility Directive – **2004/108/EC**
- Directive on the environmental noise emission of machines – **2000/14/EC**

Assessment of conformity 1st referred to in Annex VI, carried out by the following Notified Body:
n° 1232, REGGIOEMILIA INNOVAZIONE S.c.a.r.l. – Via Sicilia, 31 – 42122 Regio Emilia

Net power installed (kW): 74 kW

Measured sound power level: LWAm = 101 dB (A)

Guaranteed sound power level: LWam = 103 dB (A)

and, among others, the following harmonised European Standards:

UNI EN ISO 12100:2010

Safety of the machinery, General design principles, Risk evaluation and reduction

UNI EN 982:2009

Safety of the machinery - Safety requisites regarding systems and their components for hydraulic and pneumatic transmissions - Hydraulics

CEI EN 60204-1:2006

Safety of the machinery. Electrical equipment of machines.

UNI EN 1459:2010

Safety of the industrial trolleys - Telescopic arm self-propelling trolleys

UNI EN ISO 3471:2008 (ROPS)

Ground moving machines - Protective structures against tilting - Laboratory tests and performance requisites

UNI EN ISO 3449:2009 (FOPS II Level)

Ground moving machines - Protective structures against the falling of objects - Laboratory tests and performance requisites

UNI EN ISO 13309:2010

Construction machines - Electromagnetic compatibility of machines with internal electric power supply

EN15000

The machine is equipped with the following accessories:

BUD10** - Pair of forks

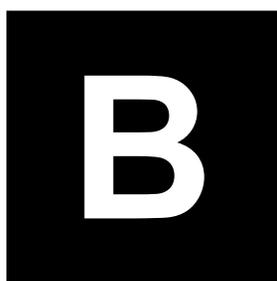
A plate bearing the CE marking is applied to the machine.

Montecchio Emilia, **/**/xxxx

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



SAFETY REGULATIONS



ACKNOWLEDGING SAFETY REGULATIONS

This is the "POTENTIAL HAZARD WARNING" SYMBOL.



Wherever this symbol "" appears, on the vehicle or in this manual, you must take care against potential damage or injury to the vehicle, other equipment, or people. Follow all recommended precautions and observe regulations for safe use and maintenance.

UNDERSTANDING WARNING NOTICES

In this manual certain terms are used to indicate different level of risk, including:



Indicates a situation of potential danger for the vehicle's operator or other people directly involved in its operation.



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



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



Indicates strictly prohibited actions or things that are dangerous to personnel

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

- NOTE -

Indicates an additional explanation for a given piece of information.

Carefully read the safety regulations given and follow all recommended precautions in order to avoid potential risks and safeguard your health and safety.

The "potential hazard" symbol and the "warning notices" have been included to highlight situations that **DIECI** feels are of particular importance.

However, the manual must be read and learned in full and must be kept inside the vehicle, in a covered and protected place.

If in doubt, contact the nearest agent or dealer.

GENERAL WARNINGS

Use of the vehicle for purposes different than those described in this manual is strictly forbidden. All functions and procedures concerning the operation and mounting of the vehicle's attachments that are not described in this manual are strictly forbidden.

If the vehicle is used for purposes different than those for which it was designed, DIECI cannot be held responsible for damage to things, the vehicle itself, or for injury to persons caused by such improper use.

The User's Manual and the parts catalogue are an integral part of the vehicle and must remain with it even when it is sold to a new owner. The manual, in the user's language, must be carefully stored aboard the vehicle at all times for quick reference. If the manual becomes creased, damaged or can no longer be easily read, it must be replaced immediately.

The instructions for use, maintenance and repair in this handbook must be followed if the vehicle is to be considered as being operated in accordance with the manufacturer's intended uses.

This vehicle must be used, assisted or repaired only by adequately informed, trained and educated personnel on the use of the mean and on the safety regulations to be observed.

The persons authorised to use and maintain the vehicle are:

USE OPERATOR: person trained and educated through appropriate theoretical-practical course specific for using such equipment;

GENERAL SERVICE TECHNICIAN: person trained and educated to carry out routine maintenance interventions with basic mechanical, electrical and hydraulic knowledge;

SPECIALISED SERVICE TECHNICIAN: person trained and educated to carry out routine and extraordinary maintenance interventions with in-depth and specific mechanical, electrical and hydraulic knowledge, usually appointed or authorised by **DIECI** or dealer.

All procedures and maintenance operations not described in this manual are strictly forbidden.

All the repairs and maintenance work must be performed in authorised repair centres.

The user must always observe the general safety regulations as well as those for accident prevention, such as traffic rules if the vehicle is used on public roads.

Any arbitrary modification made to the vehicle will absolve **DIECI from all liability FOR DAMAGE or injury resulting from such modification.**

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

Everything possible has been done during the design and construction phases 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 resulting from operations performed instinctively, as a reflex, while in a state panic, or in the event of malfunctioning, accidents, etc. during use of the vehicle.

DIECI is not liable for behaviour foreseeable on the part of certain categories of people, including: apprentices, adolescents, disabled persons, personnel in training.

DIECI vehicles cannot be used for betting, competitions or personal use.

Read all of the safety stickers on the vehicle and observe all regulations printed on these stickers before starting up, running or refuelling the vehicle or before carrying out maintenance work.

Clean the stickers if they are covered by dirt, cement or other deposits. Do not remove these stickers for any reason. Promptly replace any stickers which may be damaged, lost or illegible.

To guarantee your safety and that of others, do not modify the structure or adjust the various vehicle components (Hydraulic pressure, calibration of load limiters, engine rotation, assembly of additional attachments, etc.).

The same holds true for the deactivation or modification of safety systems. In such cases, the manufacturer shall be absolved from all liability.

Periodic inspections must be carried out in order to maintain the vehicle's "compliance status", as reported in the dedicated area of this Use and maintenance manual.

Take all necessary safety precautions to prevent potential risks when carrying out operations or procedures that are not explicitly recommended or allowed for in this manual.

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

If in doubt, contact the nearest agent or dealer.

PROTECTIVE CLOTHING

- Always wear clothing appropriate for the work that must be carried out. Do not wear loose clothing, ties, chains, belts or other accessories that may become caught in the control lever or in other parts of the vehicle.
- Do not wear jewellery or any other metal accessories as they could cause injury if caught in the vehicle or if an electric current passes through the body.
- Operators with long hair must tie it back and be careful to not to catch it in the vehicle.
- Depending on the type of work or construction site, operators must choose and wear clothing appropriate for protecting them from injury.

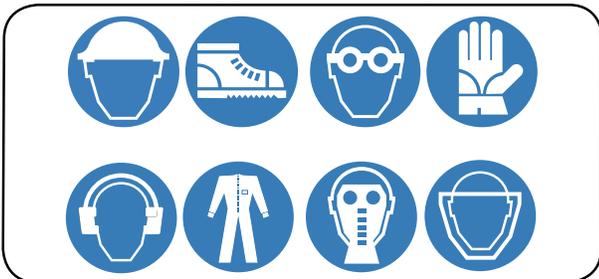


Before operating the vehicle, it is the operator's responsibility, to ask the construction site manager about the possible risks of the work and the accident prevention clothing that must be worn.



The following must always be available to the operator:

- Protective helmet
- Accident-prevention shoes
- Protective goggles or protective face mask
- Protective gloves
- Protective headwear against noise (earprotectors)
- Reflective clothing
- Waterproof clothing
- Breathing apparatus or filtering mask



- Different Individual Protection Devices are used by the operators depending on the type of site and risks present in the work place. Always use the most suitable IPD to the type of work being carried out.
- Accident prevention clothing is to be considered personal gear: Do not wear the accident prevention clothing of other people.
- Accident prevention equipment must always be whole and in good condition. Damaged clothing cannot ensure adequate protection. Do not wear damaged clothing: always replace damaged or torn clothing before operating the vehicle.
- Always protect yourself against noise as prolonged exposure to loud noise can damage your hearing or may cause hearing loss. Always wear anti-noise headphones or earplugs to protect yourself from excessive and irritating noises.
- Headphones for listening to the radio or music should not be worn while using the vehicle. The operator must always be fully alert while operating the vehicle.

INSPECTING THE VEHICLE



Inspect your vehicle every day or at the start of every shift, examining it carefully before beginning work.

- Make sure that the tyres are suitable to the type of ground present. There are different types of tyres for sand, road, agricultural land, snow, etc. For additional information, contact your nearest agent or dealer.



Users who detect any faults with their vehicle (noise, vibrations, unusual odours, instrument errors, smoke, oil leaks, etc.) or establish that the vehicle does not respond to safety regulations must suspend use of the vehicle and immediately inform their safety manager.

- Operators are **PROHIBITED** from carrying out repair or adjustment work unless they have been trained to do so. Only the person charged to do so should carry out maintenance work on the vehicle.



Before beginning operation, ensure the vehicle is in good working order for maximum efficiency in compliance with all safety regulations.

- Consult the maintenance chapter of this manual to carry out the checks listed below.
- Carry out the following checks to verify the proper working order of the functions listed below:
 - Efficiency of parking brakes.
 - Engine oil level (check and top up if necessary).
 - Hydraulic oil level (check and top up if necessary)
 - Air filter clogging indicator (check and clean if necessary)
 - Tyre condition and pressure (check).
 - Fuel level (check).
 - Signalling and warning devices (check).
 - Steering efficiency.
 - Service brake efficiency.
 - Ensure that all nuts and bolts are tight.
 - Lighting
 - Direction indicators
 - Emergency lights.
 - Switches.
 - Indicator lights.
 - Windscreen wipers.
 - Reverse motion alarm.

If the vehicle is not used for six months, it should be checked thoroughly before use. The operations are detailed at pages B/22.

Ensuring the vehicle is clean

- Clean the windows, lights and rear-view mirrors.
- Remove all mud and dirt deposits.
- Clear away any rubbish and dirt from inside the cab, particularly from the pedals and controls.
- Clean the engine, articulated joints and radiator.
- Remove any excess grease.
- Make sure the cab steps and the handle are clean and dry.
- Clean all safety stickers and manoeuvring instructions. Replace any stickers that are illegible or missing.

Checking for damage

- Make sure there are no damaged or missing parts
- Make sure all articulated pins are properly fastened.
- Make sure there are no signs of possible cracks or flaws or other damage to the windows.
- Make sure there are no oil, fuel or cooling liquid leaks underneath the vehicle.
- Make sure the wheel bolts are properly tightened.
- Check all safety devices.
- Ensure that the ROPS/FOPS structure is not damaged.
- Make sure that the seat belt and relevant attachments are not damaged or extremely worn.



- ATTENTION -

Whenever abnormalities are detected, repair them as soon as possible, contacting an Authorised Service Centre of the Manufacturer.



- PROHIBITION -

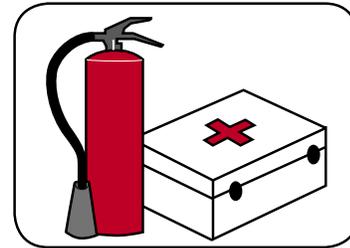
IF THE VEHICLE IS NOT IN PERFECT WORKING ORDER ITS OPERATION IS STRICTLY PROHIBITED.

Adjustments

- Adjust the seat and steering wheel so that the operator can comfortably reach all the driving controls.
- Adjust the rear view mirror/s so that when sitting in the driver's cab, the rear of the vehicle can be clearly seen

PREPARATION FOR EMERGENCIES

- Always be prepared in the event of a fire or an accident.



- ATTENTION -

Keep a fire extinguisher and first aid kit and (not supplied by the manufacturer) close at hand at all times.

- Carry out periodic inspections to ensure that the first aid kit contains all necessary items; replenish contents if necessary.
- To properly use the extinguisher, carefully read the instructions located on the extinguisher.
- Carry out periodic inspections and maintenance (six-monthly) to ensure that the extinguisher is ready for use at any given moment.
- Create a table of priorities with the manager responsible for safety in order to best deal with potential fires or accidents.
- Keep emergency telephone numbers (doctors, ambulance, hospital and fire brigade) clearly visible and near the telephone.
- Personnel adequately trained and educated for managing emergencies through appropriate theoretical-practical course must be present on site/in the work place.

FIRST AID

Below are a few standard procedures for First aid that can be activated in case of accident occurred following use of the vehicle or of the individual equipment and accessories that are used.

Can be useful for the operators during emergency situations during vehicle use in the various life phases of the same (transport, installation, use, maintenance, adjustment, etc.) or that rush to help the other operators near-by.

First-Aider Tasks

- activate first aid (emergency call);
- check the victim and, if necessary, support its vital functions;
- stop external bleeding;
- protect wounds and burns;
- protect the victim from further injuries;
- do not perform useless or damaging actions, which administering drinks, moving the victim, reducing dislocations and/or fractures, etc.

Emergency call

The good result of an emergency intervention also depends on how quickly 118 (Italian emergency medical support) manages to reach the place of the event.

This is why the first-aider in charge of calling the emergency must precisely indicate;

- the address of where the accident or illness took place;
- the number of injured or ill parties;
- the possible cause of the event;
- the state of the vital functions of the injured party, specifying whether the same is conscious or not and if breathing normally or not.

It is always opportune to also give:

- own details, a telephone number where to be contacted;
- await the aiders in an easily visible place.

Traumas

Distortion, dislocations and fractures treatment:

it is necessary to block the articulation in the position it is in after the trauma, using bandages or other, supporting the analgesic position of the injured party, without attempting dangerous manoeuvres. Apply ice (with ice bag or other means).

Contusions, crushing:

in case of contusions and/or crushing to upper and lower limbs (fingers, hand, feet, etc.) immediately place the limb under cold running water and place ice on it, also checking for wounds and/or cuts. If so, disinfect the affected area.

Haemorrhage

It is necessary to directly press on the injured part with sterile gauze pad, lift the limb and eventually compress the injured part upstream, using tourniquet.

Treating superficial wounds:

expose and accurately clean the wound by washing it, disinfect it with physiological solution, cover it with sterile gauze; proceeding with bandaging the wounded area, avoiding tightening the bandage excessively to enable good blood flow.

Treating deep wounds:

it is a priority to protect one self against the risk of contamination using gloves and face mask; staunch the bleeding until it stops, or until the ambulance arrives, by directly pressing or using other pressure points; call 118 informing them you are staunching an arterial bleeding.

Only after bleeding is under control, treat the wound.



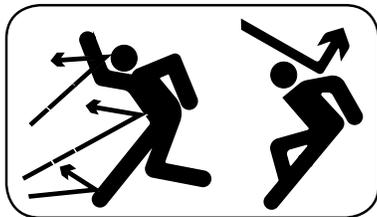
When disinfecting the wound DO NOT use cotton wool, denaturated alcohol, antibiotic powder.

DRIVER'S CAB

- Use available footsteps and handles to reach the driver's seat



- Always face the vehicle when getting in or out of it, maintain contact with the vehicle in three points at all times, using the handles and steps provided.
- Never use controls for purposes different than those for which they were created for (Ex.: Getting on or off the vehicle, hanging clothing, etc.)
- Never jump down from the vehicle.
- Never get on or off a moving vehicle.
- Never jump on or off the vehicle.
- If the vehicle begins to move without an operator inside the cab, do not jump on the vehicle to try to stop it.
- Never get on or off the vehicle while holding equipment.
- Always keep footboards, steps and handles clean and make sure they are not slippery.
- Do not put any suction cups on the windows. Suction cups act as lenses and can cause fires.
- Do not use cell phones in the operator's cab during vehicle operation.
- Never bring dangerous items such as inflammable or explosive objects, in the driving cab.



- When working in areas where there is a risk of falling, bouncing or interference from objects capable of hitting the operator or entering the cab, mount suitable safety panels to protect the operator. Always close windows. Always ensure that bystanders are at a safe distance and cannot be hit by bouncing or falling objects.
- If the cab window on the telescopic boom side should break, risk of contact between the operator and the boom exists. Immediately stop operation and replace glass.

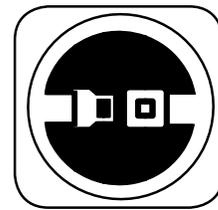


IT IS FORBIDDEN to operate the vehicle with arms, legs or any body part out of the driver's seat.



Only use the vehicle if the seat is correctly adjusted. A poorly adjusted seat can cause the driver to tire quickly and, thus, may lead to incorrect operation. It may also alter perception of external objects from the driver's seat and can compromise the proper execution of manoeuvres.

- The seat should be adjusted according to the height and weight of the driver.
- The driver should be able to fully press down the pedals and operate all control levers while resting his/her back fully up against the seat back.



Always fasten seat belts correctly before beginning operation.

- The seat belt has been fastened properly when it sits snugly around the body.



The vehicle is equipped with a cab that is able to support the weight of the vehicle itself should it tip over (ROPS). It is therefore, essential that the driver remains firmly fastened in the seat thanks to the seat-belt to prevent him/her from falling out of the cabin and possibly getting crushed.

- Before starting up the vehicle, carefully check the belt, the buckle and the fasteners of the structure. If any part shows sign of damage or wear and tear, replace the seat belt or component part before using the vehicle.
- Remain seated with seat belt properly fastened whenever using the vehicle in order to reduce the risk of injury in case of an accident.
- Following an accident, check the safety belts and the attachment points to frame are intact. If damaged, immediately replace.



Do not carry passengers on your vehicle.



The operator must always maintain a normal driving position.

DRIVING AUTHORISATIONS



Follow the laws relevant to the country where the vehicle is being used.



Only qualified and properly trained personnel can use the vehicle.

Depending on type of accessory used (Shovel, Forks, Basket, Hook), the operator must attend appropriate theoretical-practical course where, at least, the following subjects are dealt with:

Shovel Accessory:

Course for driving machines and earth handling personnel

Program:

- main risks linked to using the driving machine
- structural and operational features, technical and control components, safety devices, technical documentation
- checks and verifications
- pre-arrangement for eventual circulation/transport on road and specific behavioural Standards
- safe techniques for excavation, materials and earth handling, small demolitions
- Accessories, tooling operations
- IPD and safety signals
- practical test

Forks Accessory:

Course for personnel using the vehicles for handling and transporting materials

Program:

- main risks linked to using the vehicle with the specific accessory
- structural and operational features, technical and control components, safety devices, technical documentation
- checks and verifications
- pre-arrangement for eventual circulation/transport on road and specific behavioural Standards
- safe techniques for materials handling, loading and unloading
- safety arrangement and load stability
- accessories, tooling operations
- IPD and safety signals
- practical test

Basket Accessory:

Course for personnel using the elevation mobile work platforms (PLE)

Program:

- Standard of reference
- safe operating and use of the platform
- emergency descent procedures
- periodical checks and verifications
- routine and extraordinary maintenance
- IPD III cat. and safety signals
- practical test

Hook Accessory:

Course for personnel on using the crane, including lifting equipment and accessories

Program:

- Standard of reference regarding safety at work and crane specification
- verification crane conformity and minimum requisites
- specific risks for the operators and risks deriving from the presence of suspended loads
- checks and verifications
- routine and extraordinary maintenance
- IPD and safety signals
- practical test



Use of the vehicle is subject to driving authorisation/enabling issued by the facility/construction site manager where the vehicle is to be used.

- Users must always keep his/her driving authorisation on hand during vehicle use.
- Operators cannot authorise other people to drive the vehicle.

STARTING UP THE VEHICLE

- Regardless of their level of driving experience, operators must familiarise themselves with the position and function of all controls and instruments before operating the machine.
- Do not use the vehicle when hands or shoes are wet or dirty with grease or greasy substances.



Before starting the engine, make sure all control levers are in a neutral position, the parking brake is engaged, the engine bonnet is closed and that there is nobody in the area surrounding the vehicle.



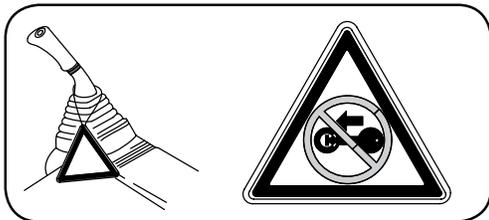
The vehicle can be started up or manoeuvred only when the operator is seated in the driver's seat, with the seat belt fastened and properly adjusted.



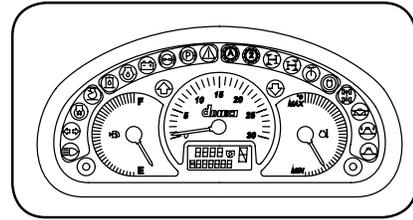
Before using the vehicle verify all safety devices are functional.

The operator must always maintain control of the vehicle.

- Use the acoustic warning device or other signals to alert people in the area before starting up the vehicle.
- The vehicle may move suddenly if started up without following the correct procedure, thus, creating the risk of damage personal injury.



- Do not start the engine or touch the levers if there is a danger sticker posted inside the cab.
- Never start the engine by causing short circuiting between the terminals on the starter.
- Be careful when using auxiliary batteries as the gas contained in these may explode, causing serious damage.
- To start the engine using auxiliary batteries, follow the instructions provided in the paragraph "START UP USING AUXILIARY BATTERIES". Incorrect procedure may cause serious damage to the electrical/electronic system, the vehicle to move suddenly, the battery to burst, and damage to objects and/or people.



- Inspect control instruments immediately after start up, while the engine is hot and at regular intervals during use, in order to promptly recognise and resolve any malfunctions.

ENVIRONMENTAL CONDITIONS

Despite the vehicle being used in the most different situations, it is necessary to observe, in advance, the compliance with the minimal operational Standards, as reported below:

Parameter	Admitted values
Working temperature	from -5°C to +40°C
Average daily temperature	<40°C
Storage temperature	from -15°C to +50°C
Humidity	from 20 to 95%
Altitude	<2500m

SAFE OPERATION



DO NOT USE THE VEHICLE IF YOU ARE UNDER THE EFFECT OF ALCOHOL, DRUGS OR IF YOU HAVE TAKEN MEDICINES THAT MAY MAKE YOU DROWSY OR MAY ALTER YOUR REFLEX AND REACTION TIME.



DO NOT CARRY PASSENGERS ON THE VEHICLE OR IN THE DRIVER'S CAB OR ON ANY OTHER PART OF THE TELEHANDLER OR ON ANY OTHER MOUNTED ATTACHMENTS EXCEPT ON THE PASSENGER CONVEYING BASKET.



CHECK THE CORRECT POSITION OF THE REAR VIEW MIRRORS.

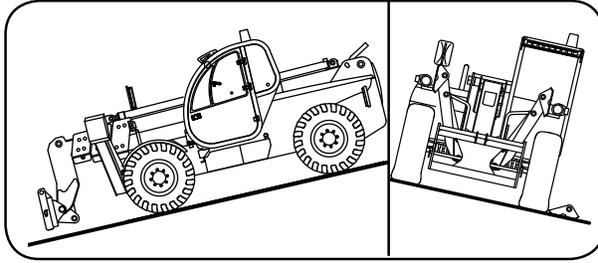


THE PERCEPTION OF OBJECTS' POSITIONS THROUGH THE REAR VIEW MIRRORS MAY NOT BE EXACTLY AS THEY ARE; THEY MAY SEEM FURTHER AWAY OR NEARER THAN THEY ARE IN REALITY. DESPITE THE USE OF REAR VIEW MIRRORS, BLIND SPOTS MAY BE PRESENT AND THE OPERATOR MAY NOT BE ABLE TO SEE CERTAIN POINTS WELL. ALWAYS WORK WITH MAXIMUM CARE.

- While the vehicle is running, always keep light signals on. These serve to warn people that the vehicle is about to move.
- Inspect the work zone before beginning operation.
- Inspect the ground and the conditions of the land at the work site; ensure safe conditions before operating the vehicle. Do not use in places at risk for landslides or rock falling.
- Take due precautions to prevent that any unauthorised persons from entering the working area.
- When moving through or operating in shallow water or soft ground, verify the shape and the conditions of the land, the depth and the speed of water flow beginning operation.
- Do not drive with foot on the brake pedal or with the parking brake engaged.
- Continually evaluate the stopping distance required.
- Do not drive at high speeds.
- Always look in the forward direction and maintain good road visibility. Frequently use the side view mirrors and check their conditions, cleanliness and position regularly.
- Keep windows, mirrors and lights clean and in good condition.
- Verify that bonnets and the door are closed before beginning operation.



- When working in a congested area, always use the required signals; during operations that require the use of more than vehicle, use signals known by all personnel. Designate one person to signal and coordinate the work zone. Make sure that everyone follows the directions given by the person in charge of signalling.
- When working conditions require an operator on the ground, he/she must use hand signals in compliance with local regulations in the country of use of the vehicle.
- When working alongside excavations or on the edge of the road or soft ground: keep at a safe distance as they vehicle may overturn. Designate a person on the ground to be in charge of signalling. Remember that after strong rains, the use of explosives or an earthquake, the ground is more fragile.
- **Operation on steep sloping roads can cause overturning or sliding. Take proper precautions.**
- **Always move in a straight line to go up or down a slope. Moving crosswise or along the slope is extremely dangerous.**
- Drive slowly on grass, leaves or wet steel slabs. Even when operating on slight inclines the vehicle may slip, lose balance or overturn.
- When working on the upper part or inside buildings or other structures, ensure stability before beginning operations. The risk of collapse exists and can cause serious injuries or damage.
- Do not use the vehicle's force of impact to carry out tasks. These vehicles have not been designed for said use, therefore, such use may cause vehicle overturning, damage, the breakage of components and attachments, in addition to serious personal injury.

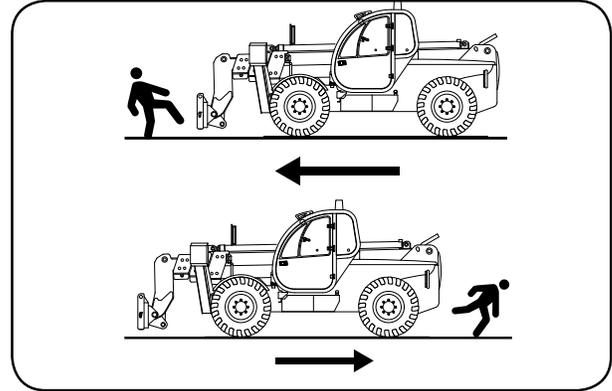


- Driving on side sloping roads may cause overturning or sliding. Take proper precautions.
- Do not leave the vehicle loaded on a slope exceeding 15%, even when the parking brake is engaged.
- Make sure the vehicle is level before lifting the boom when operating on sloping ground.
- When moving on longitudinal slopes:
 - Drive and brake delicately.
 - When moving without loads turn forks or attachments downstream.
 - When moving with loads turn forks or attachments upstream.

! - ATTENTION - !

Snow can hide obstacles and objects, and cover holes dug-out areas and ditches. Proceed with caution when working in snowy conditions. Operation of the vehicle if the quantity of snow does not allow for clear distinction of obstacles and possible dangers along the path IS STRICTLY PROHIBITED.

- Take care when clearing snow and do not venture off the main road; that which is hidden at the sides of the road may cause vehicle overturning or damage to various components.
- Surfaces covered by snow or ice are extremely dangerous. Operate with caution, reducing vehicle speed as much as possible and engaging levers slowly.
- Operate with caution. If the vehicle should sink into the snow, it may overturn or remain buried. Do not venture from the road and avoid remaining entrapped or buried under heaps of snow.
- Extra care should be taken, when working on icy terrain. Should the temperature rise, the ice could melt and the ground could become slippery.
- Use caution in the presence of electrical cables, ditches, or freshly excavated or worked ground.
- Make sure not to cause risk to others in the area when backing up the vehicle.
- Always check the space around the vehicle before carrying out any manoeuvres.



- Make sure there is no one in the vehicle's trajectory or in work zone.
- Designate someone on the ground to supervise manoeuvres if the operator's field of vision is obstructed. Always maintain visual contact with the person on the ground.

! - ATTENTION - !

Do not attempt to carry out operations which exceed vehicle's capability.

! - ATTENTION - !

Do not lift loads exceeding the capacity of the vehicle or accessories and do not increase the size any counter-balance regardless of the artifice utilised.

- Avoid obstacles.
- When lifting a load, ensure that nothing and no one hampers the movement and avoid false manoeuvres.
- Never leave the motor running when no operator is present.
- Never leave the key in the vehicle when it is unattended.

! - ATTENTION - !

Never leave the vehicle in the parked position with a load raised.

- Dust, rain, fog etc. may reduce visibility. If visibility is limited, reduce speed and use appropriate lighting.

- The vehicles are equipped with a special lighting system for transfers. If working at night or in a tunnel, adequate external lighting must be used.
- Do not lift, move or rotate the attachment above any person. If loads fall or bangs occur, damage may result.
- Do not authorise people to come near to or pass underneath a load.
- During operation in certain conditions, particles of material may be ejected. In such conditions, it is a good idea to wear protective goggles and clear the area of those people not in possession of such goggles.
- Pay careful attention to crumbling walls, landslides, falling material or objects that may break the cab window and hit the driver.
- Never operate the vehicle under an overhang as this could give way and fall onto the vehicle.
- Do not excessively weigh down the vehicle or transport loads that may fall out or overturn.
- Do not operate near flammable material.

! - ATTENTION - !

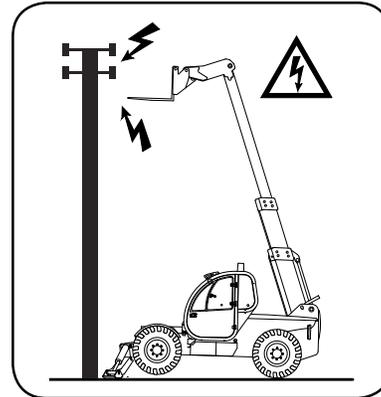
When manoeuvring the vehicle, pay attention to bulky parts above the vehicle. There are parts that jut out from the cab.

- The vehicle is equipped with a protective cab against falling objecting (FOPS). Use of a safety helmet is required if there is a risk of falling objects.
- Do not use the vehicle at night, in dark or scarcely lit conditions unless the vehicle is equipped with working lights (optional). for additional information, contact your local dealer.

! - ATTENTION - !

Do not get onto the cargo load without having checked that:

- **it is correctly positioned and anchored**
- **that the vehicle to which it is connected (van, truck etc.) is not able to move**
- **that the deck is able to support the total weight of the vehicle and its load**
- **that the width of the deck is appropriate for that of the vehicle.**
- Pay particular attention to loading docks, to trenches, scaffolding, to land that has been recently excavated or filled.
- When driving on roads or slopes pay close attention to the engine's RPM. A high engine RPM may result in mechanical damage. Always maintain control of RPMs and engine speed.



! - ATTENTION - !

If operating close to overhead electrical lines, check that the safety distance between the vehicle and the electrical line is sufficient, in compliance with current Standard.

Consult your local electric company.

In any case, never work at Operating or parking the vehicle too close to cables; less than 5 m from the lines. Damp ground may increase the risk of electrocution.

! - ATTENTION - !

electrical leads to increased risk of being struck by lightning or being seriously injured.

- Designate someone on the ground to signal when the vehicle is too close to power lines.
- Do not allow anyone near the vehicle when operating in the vicinity of power lines. Wear rubber shoes and gloves as a precaution against possible emergencies. Cover the seat with a rubber piece of fabric and take care to not touch the chassis with any unprotected body parts.
- Should the vehicle collide with an electrical cable, the operator, to avoid electrocution, must never abandon the driver's cab until he/she is certain that the electrical power supply has been properly disconnected.

- To prevent damaging hydraulic connections when changing an attachment, stop the engine and wait a minute to remove pressure from the circuit. Always clean connectors before their reinsertion.
- Check the cleanliness, protection and the conditions of rapid detachment connections in attachment circuits daily.



Operators who note that the vehicle is not operating properly or that it does not conform to safety regulations must immediately inform the construction site manager.



IT IS FORBIDDEN for operators to directly carry out repair or adjustment work unless trained to do so. Only the person charged to do so should carry out maintenance work on the vehicle.



IT IS STRICTLY FORBIDDEN to attempt starting the vehicle by pushing or pulling on it. This may cause serious damage to people and/or the vehicle.

- If operating the vehicle at low temperatures (-10°C), empty and refill the tank using lubricants, fuel or cooling liquids suitable for such temperatures.



The use of the vehicle in protected environments such as refineries or explosive atmospheres is STRICTLY PROHIBITED. Special optional equipment is available for use in these types of locations. Contact your agent or dealer.

- Ensure that service brakes and horn are working properly.
- Slow down before turning.
- Maintain control of the vehicle and its speed in all situations.
- Do not drive in reverse for long distances.
- Brake slowly, avoid abrupt braking.
- Hydraulic steering is very sensitive to steering wheel movements. Steer slowly and avoid any sudden movements.
- The speed of vehicles with loads must never exceed 10 Km/h. Should the load exceed 50% of the maximum admitted load, the machine speed must be reduced to 5Km/h.



Carrying people on or lifting people up with the vehicle is STRICTLY PROHIBITED unless the vehicle is equipped for said purpose and has a special certificate of conformity regarding the transport of people.

- Carefully follow loading programme instructions.



Before each use, check that attachments have been properly mounted and secured on their corresponding supports.



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 calibrated instruments. Regardless, limit values displayed on the load tables must never be exceeded.
- Never bring equipment near open flames.

LOAD HANDLING



Always adhere to safety regulations; always transport balanced, properly arranged loads to prevent overturning.

- Always fully insert forks under loads and bring them to the transport position (forks at 300 mm from the ground and slanted backwards, boom completely retracted).
- Never lift a load harnessed with a single fork or table.
- Always check that the pallets, boxes, etc. are in good condition and suitable for the type of load to be lifted.
- Manoeuvre the mean with the boom raised only in exceptional circumstances. In these circumstances, operate with due prudence, reduce speed as much as possible and brake delicately. Make sure that visibility is always sufficient. If necessary, ask an operator on the ground to guide operations.
- During handling operations, reduce speed as much as possible and brake delicately.
- Do not manoeuvre loads while the vehicle is moving.



Load handling can be carried out only in reduced gears "1" and "II" (first and second gear).

- Before turning, slow down as much as possible, and monitor the load.
- Handle loads with care, at low speed and without sudden or skipping movements, above all if carrying at great heights.
- Do not change direction sharply or at a high speed.



IN THE EVENT OF VEHICLE OVERTURNING, DO NOT ATTEMPT TO EXIT FROM THE TELEHANDLER DURING AN ACCIDENT. ALWAYS FASTEN SEAT-BELTS WHEN DRIVING THE VEHICLE. ALWAYS KEEP SEAT-BELTS FASTENED WHENEVER INSIDE THE CAB.

- Always use the parking brake when setting down or lifting a load on a slope.
- Always ensure good visibility in the work area, including direct vision and visibility using rear view mirrors in order to check for the presence of people, animals, obstacles, holes and changes in slope etc. animals, obstacles, animals, obstacles, holes, slope variations
- If visibility on the right side is limited during boom operation, before lifting the load, ensure that the work area is clear and make note of the position of any possible obstacles and irregularities in the terrain.
- Always ensure good visibility (clean windows, clean and properly working headlights etc.)



The standard illumination of the telescopic loader is not suitable in working conditions with poor visibility or for use at night. There are several ways to improve visibility in poor lighting conditions. Contact your local DIECI dealer.

- Lifting or transporting a load that exceeds the nominal capacity or the vehicle or accessory **IS PROHIBITED**.



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

- Load tables are valid for centres of gravity that are 500 mm from the heels of the forks. Contact your dealer for information regarding centres of gravity at greater distances.
- Pay **CAREFUL ATTENTION** during the transport of loads with a variable centre of gravity (e.g. liquids). Operate with caution in order to limit such variations and to prevent the risk of vehicle overturning.
- Pay **ATTENTION** regarding the risk of limbs being crushed during manual fork adjustment operations.

PARKING THE VEHICLE

- Always park on flat, even and level ground where there is no risk of falling masses, landslides or flooding.
- Lower outriggers to the ground (if present)
- Retract the boom completely and lower it to the ground.
- Engage the parking brake
- Move the "direction" lever to position "N".
- Run the engine for a minimum of 60 seconds before switching off in order to cool the engine down.
- Turn the key to the halt engine position.
- Remove the key from the ignition.
- Block the hydraulic controls using the devices provided (when present).
- Close and lock windows using the specially provided handles.
- Close and lock the cab door.
- Place wedges under the wheels.
- Make sure that the vehicle is parked so that it does not block traffic and at least 5 metres away from railway tracks.

TEMPORARY HALT

- Gradually release the accelerator pedal.
- Bring the vehicle to a halt on flat ground.
- Engage the parking brake
- Move the "direction" lever to position "N".
- While the vehicle is being run-in (50 h) do not keep the diesel engine at minimum revs for too long.



IF THE OPERATOR MUST ABANDON THE DRIVER'S SEAT, HE/SHE SHOULD FOLLOW THE INSTRUCTIONS PROVIDED IN THE PARAGRAPH REGARDING "PARKING THE VEHICLE".

ROAD TRAVEL



BEFORE THE VEHICLE IS TRANSFERRED TO THE ROAD MAKE SURE YOU ARE ACTING IN COMPLIANCE WITH THE RULES AND REGULATIONS PERTINENT IN THE COUNTRY OF USE.

THE OBLIGATIONS FOR ROAD TRAVEL ARE GIVEN IN THE VEHICLE REGISTRATION DOCUMENT.

- Dimmed headlights should be used during day hours and on roads where use of visual signals and lighting devices is not mandatory.
- Ensure correct operation and cleaning of headlights, directional lights and windscreen wipers.



ENSURE CORRECT POSITIONING OF REAR VIEW MIRRORS.

PAY ATTENTION AS THE PERCEPTION OF OBJECTS' POSITIONS THROUGH THE REAR VIEW MIRRORS MAY NOT BE EXACTLY AS THEY ARE; THEY MAY SEEM FURTHER AWAY OR NEARER THAN THEY ARE IN REALITY.

ROAD TRAVEL (INSTRUCTIONS)

- Use the levelling control switch to level the vehicle's chassis in relation to the axes of the wheels (if present).
- Ensure that all outriggers have been perfectly retracted and raised (if present).
- Close the telescopic arm (boom) completely. Lower the main boom completely and raise it slightly (300 mm from ground).
- Make sure the lights are functioning properly before driving the vehicle on roads. Check that the 'slow vehicle' revolving indicator light is installed and operational. Keep it activated during both day and night use.
- Carry out the wheel timing. Setting steering as shown in the vehicle handbook and to blocking the selection lever using the relevant device IS COMPULSORY. In Italy set the 4 wheel steering mode; on public roads do not use crosswise steering or 2 wheel steering.
- Ensure that the fuel quantity is sufficient.
- Mount all attachments provided for road driving in compliance with the country where operating.
- Install a overhanging load signal panel on the boom head before the entering onto the road.
- Always evaluate the itinerary to be covered, taking into consideration suspended structures (e.g. bridges, underpasses) that could be damaged by the vehicle.
- In some countries it is mandatory to place wedges under the tyres when the vehicle is stopped.
- Make sure that the vehicle complies with local regulations regarding number plates when travelling on roads during both day and night.



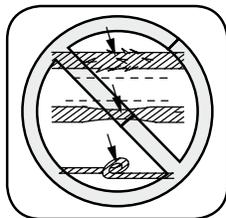
ROAD TRANSFER WITH ATTACHMENTS SECURED ON THE FORK HOLDING PLATE OTHER THAN THOSE PERMITTED BY THE LAW IN THE COUNTRY WHERE THE VEHICLE IS USED IS PROHIBITED.



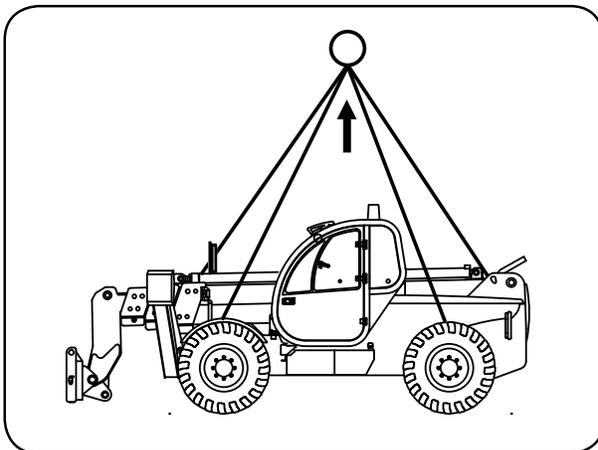
OPERATING THE VEHICLE ON THE ROAD WHEN IT IS CARRYING A LOAD IS PROHIBITED.

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.

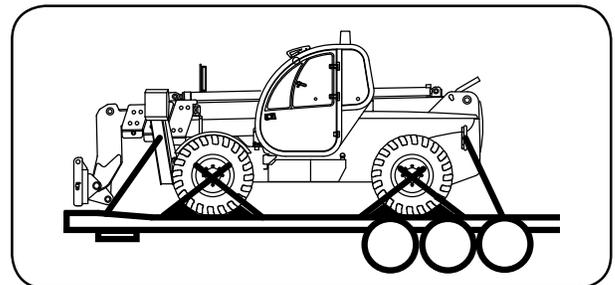


- Always ensure the devices used to anchor the machine (cables, chains, wedges, etc.) are in good condition; ensure they are not worn, broken or twisted.
- Check the capacity of the anchors before hoisting the machine.
- Check the overall dimensions of the machine.
- Use the hoisting points illustrated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

- If supplementary equipment is installed by the client, the user must verify if the installation causes any type of interference with vehicle's instruments.
If this is the case, the user must eliminate this interference.

It is important to pay careful attention to mobile attachments such as radio communications (telephones) which must be installed by specialised technicians and used with externally mounted antennas.

In general, all additional electrical equipment installed must comply with EMC Directive EC/2004/108 and must carry the "CE" marking.

VIBRATIONS

Take into consideration the following precautions to reduce the operator's exposure to vibrations:

- Always use equipment that is appropriate for the type of work being performed.
- The driver's seat must be properly adjusted.. Inspect and, if necessary, repair seat suspensions and adjustment mechanisms.
- Make sure that the vehicle is kept in good condition, follow vehicle maintenance schedule as described in this manual.
- Steer, accelerate, brake, change gears, move attachments slowly.
- While driving, adjust vehicle speed to minimise the vibration level. Reduce speed to prevent risk of jolting. Transport the vehicle if the distance between work sites is significant.
- Keep the work site in good condition, remove rocks and obstacles, fill-in depressions or holes, etc.
- To avoid back problems, use the vehicle only if in good health conditions. The operator should take periodic breaks to reduce the amount of time spent seated in the same position. Never jump down from the cab or the vehicle. Avoid repeatedly handling and lifting loads.

	<p>Agri Farmer</p>
<p>1) Vibration values on the seat Vibration emission value measured at = 1,8 m/s² Uncertainty factor K = 0,5 m/s² <i>Values determined in compliance with standard EN 13059</i></p>	
<p>2) Vibration values on the steering wheel Vibration emission value measured at = 4,5 m/s² Uncertainty factor K = 2,2 m/s² <i>Values determined in compliance with standard EN 13059</i></p>	

NOISE

The machine has been designed and realised to reduce the sound emission level at the origin.

The detected acoustic power data is equal to 104 dB LwA with reference to Outdoor Noise Directive EC/2000/14 Sources emissions in the environment of equipment and machines working outdoors.



- ATTENTION -

**THE GIVEN NOISE VALUES ARE EMISSION LEVELS
AND DO NOT NECESSARILY REPRESENT SAFE
OPERATIONAL LEVELS.**

The factors determining the level of exposure to which the work force is subjected, include the duration of exposure, the work areas and other eventual sources of noise (different manufacturing and equipment, background noise, etc.); furthermore, the admitted levels of exposure can vary from country to country.

During manufacturing, the users must use suitable Individual Protection Devices as indicated in the dedicated paragraph.

PERFORMING MAINTENANCE WORK SAFELY

- Do not leave tools or other instruments laying around in a disorderly fashion at the work site. Clean traces of grease, oil and other substances that could cause slipping. Always keep the work site clean and organised in order to guarantee safe operation of the vehicle. .
- Always deposit cloths soaked with grease and/or inflammable materials in a safe container to ensure safety at the work site.
- Only use attachments that are appropriate for the job and ensure their proper use. The use of damaged, defective, unsuitable and poor quality equipment may cause serious injury.
- Do not hit the vehicle or its parts with a hammer or any other instrument, as projected fragments could cause injury.
- If inspection or maintenance is carried out on vehicles which are still covered with mud, oil, etc., operators risk sliding or falling and the analysis of components is made more difficult. Carefully clean the vehicle before repair or maintenance work is carried out.

Before performing maintenance work on your vehicle, do the following:

- Park the vehicle on flat, even ground.
 - Lower and completely retract the boom.
 - Keep the boom raised and mount the safety rod if maintenance work must be carried out with the boom raised.
 - Run the engine at a minimum for 60 seconds to cool it down.
 - Switch off the key in the ignition switch.
 - Remove the key from the ignition.
 - Release any residual pressure from the hydraulic system, by repeatedly moving the hydraulic distribution levers with the engine switched off.
 - Hang up a sign that indicates maintenance work is underway. This sign can be hung on the manipulators or the cab door.
 - Set up barriers and spacers to prevent unauthorised personnel from approaching the vehicle.
 - Disconnect the battery isolator switch.
 - Allow the engine to cool down.
- Ensure you are familiar with maintenance procedures before starting work.
 - Keep the work zone clean and dry.
 - Do not lubricate parts or carry out maintenance work when the vehicle is in motion.

- Never carry out maintenance on a moving vehicle.
If maintenance needs carrying out with the engine running, **it must be carried out only by personnel authorised by the Dealer or directly by the Manufacturer, DIECI s.r.l.**

Request assistance of at least two workers and follow the instructions below:

- One worker must always be seated in the driver's seat, ready to switch off the engine at any time.
All workers must remain in contact with one another.
- Take care not to remain entrapped in components during the execution of operations performed on the fan, belt or other rotating parts.
- Do not touch levers or control pedals. Should a lever or pedal need to be moved, always warn operators first so they can move out of harm's way.
- Do not allow instruments or other objects to fall into the vehicle's rotating parts, as these parts may break and be projected out causing danger.

- If you need to perform repair or maintenance work under the vehicle, firmly support the equipment being used and the vehicle with blocks that are solid enough to support the weight.

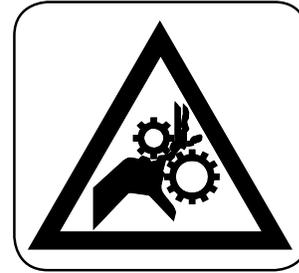
- Store attachments removed from the vehicle in a safe place where they do not risk falling. Take precautions to prevent unauthorized persons from approaching the storage area.

- Do not rest metal parts on the battery.

- Disconnect the battery wires before working on the electrical system or before carrying out arc welding on the vehicle.

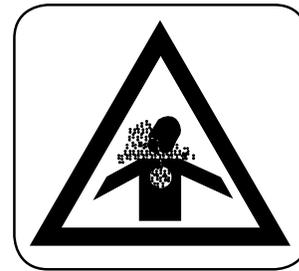
- Welding operations must always be carried out by qualified welders and in areas equipped with suitable equipment. There is danger of gas leaks, fire or electrocution during welding operations; Do not allow unqualified personnel to carry out such operations.

- When carrying out electric welding, connect the earth of the welding machine as close as possible to the area to be welded, and prevent the electric current from passing through ball bearings, articulated joints, hydraulic cylinders or sliding parts. If welding must be done in proximity to the oil or fuel tank, empty the tanks before welding.



! - ATTENTION - !

DAMAGE MAY BE CAUSED BY ENTANGLEMENT IN MOVING PARTS. PREVENT ACCIDENTS WHILE YOU ARE WORKING BY ENSURING THAT, HANDS, FEET, CLOTHING, JEWELLERY AND HAIR CANNOT GET CAUGHT IN MOVING PARTS.



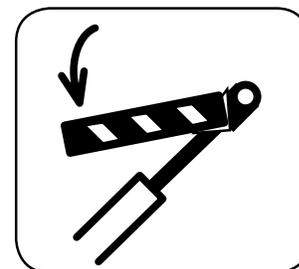
! - DANGER - !

EXHAUST GASES FROM THE ENGINE ARE TOXIC AND CAN CAUSE DAMAGE TO YOUR HEALTH.

! - DANGER - !

THE VEHICLE MUST BE OUTDOORS WHEN THE ENGINE IS RUNNING.

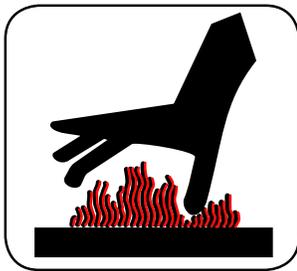
THE VEHICLE CAN BE KEPT IN A CLOSED AREA ONLY IF IT IS PROPERLY VENTILATED AND THE VEHICLE IS EQUIPPED WITH SPECIAL PURIFIERS.



! - ATTENTION - !

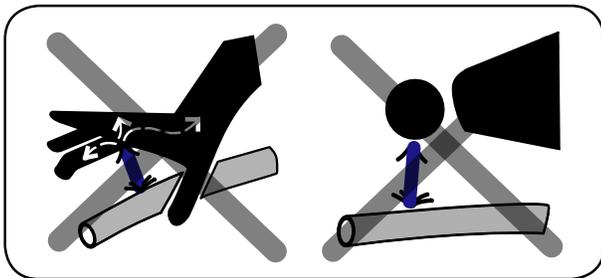
IF YOU NEED TO WORK UNDER THE RAISED MOBILE PARTS (BOOMS, SHOVELS, ETC.) OF THE VEHICLE, BLOCK THEM USING SPACERS PLACED ON THE CYLINDER RODS OR LEAN THEM UP AGAINST APPROPRIATELY SIZED SUPPORTS.

- 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.

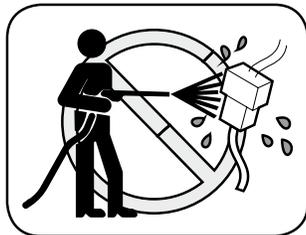
ONE OF THE AFOREMENTIONED VALVES CAN ONLY BE DISASSEMBLED IF THE RELATIVE JACK IS AT A STANDSTILL AND IF THERE IS NO PRESSURE IN THE HYDRAULIC CIRCUIT.

THIS OPERATION CAN ONLY BE CARRIED OUT BY AUTHORISED PERSONNEL.

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

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 immersed 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.



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.

STORING THE MACHINE/PROLONGED INACTIVITY

Before a six month period of machine inactivity, the following precautions should be observed:

- Clean the vehicle.
- Touch up paint where necessary to prevent rust.
- Lubricate all greasing nipples.
- Check to see if there are any worn or damaged parts on the vehicle and replace them if necessary.
- Drain the oil from the engine and replace it with new oil.
- Clean the fuel system and change the filter cartridges.
- Empty the normal fuel tank and fill it with ten litres of special prolonged inactivity fuel. Run the engine for ten minutes so the new solution can distribute evenly.
- Drain the coolant from the radiator and the cylinder block and refill them with a solution made of antifreeze and water.
- Remove any attachments.
- Realign the turret.
- Completely lower the boom.
- Remove the battery and store it in a warm, dry place. Recharge it periodically.
- Raise the vehicle onto tripods to take the weight off the tyres.
- Cover the exhaust opening.
- Cover the exposed rods of the hydraulic cylinders with a thin layer of grease.
- Close and lock all windows.
- Close and lock the door.

PREPARATION AFTER PROLONGED INACTIVITY

- Inflate tyres with the correct pressure.
- Remove the tripods from the axles.
- Fill the fuel tank.
- Check the radiator coolant level. .
- Check various oil levels.
- Insert a fully charged battery.
- Remove exhaust pipe cover.
- Remove the layer of grease from the exposed cylinder rods.
- Switch on the engine and make sure all controls are working properly.
- Leave the engine running at minimum speed without a load for a few minutes.
- Make sure the brakes are working properly.

FIRE PREVENTION



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.



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.



ONLY TRY TO PUT OUT THE FIRE IF IT IS SMALL AND IF YOU HAVE AN OF A CORRECTLY MAINTAINED EFFICIENT EXTINGUISHER



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.



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



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.



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

STARTING UP WITH AUXILIARY BATTERIES



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.



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.



ENSURE THE CABLES AND CLIPS ARE NOT CORRODED OR DAMAGED.

ENSURE THE CLIPS GRIP THE TERMINALS FIRMLY.



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



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

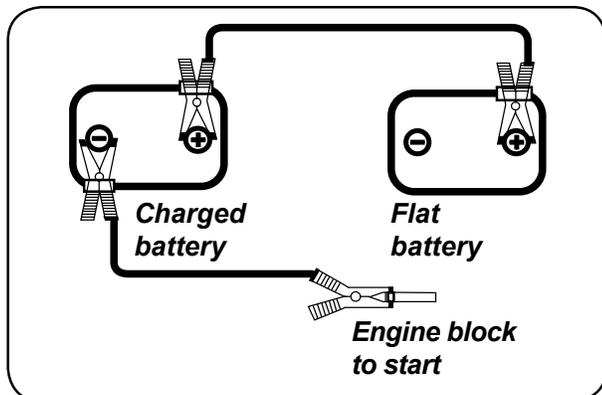
Connecting the cables and starting the engine

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

Removing the cables

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

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



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

ELECTRICAL SYSTEM OVERLOAD PROTECTION



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.



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.



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.



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 WHEEL NUTS

- Tighten nuts in accordance with the schedule provided in the maintenance table
- When tightening the wheel nuts, torque should be as follows:

Wheel stud 18	kgm 50
Wheel stud 22	kgm 60

- Always tighten the nuts positioned opposite each other, not consecutively.
- After having remounted the wheel, tighten the nuts between the wheel and axles. Check that nuts are tightened each day until torque has stabilised.



THE NUMBER OF AXLE STUDS MUST CORRESPOND TO THE NUMBER OF TIGHTENED NUTS. THEREFORE ALL NUTS MUST BE MOUNTED IN ON EACH TYRE; OTHERWISE THE VEHICLE WILL NOT OPERATE.

- In the event of tyre replacement, the vehicle or the lifted side can be set back on the ground only with tyres mounted and properly tightened.



NUT TIGHTENING MUST BE CARRIED OUT FIRST WITH THE VEHICLE, OR PARTS OF IT, LIFTED FROM THE GROUND, AND THEN WITH THE VEHICLE ON THE GROUND.

- Only use original DIECI nuts to tighten the wheels. Should even just a single nut be lost, contact the DIECI service centre.

TYRES



UPON RECEIPT OF THE VEHICLE, CHECK TYRE AIR PRESSURE.

- Check tyre pressure every 100 hours and every two weeks. Pressure should be checked when the tyres are cold.
- Before each use, verify that the sides of the tyres are not damaged.



TYRES THAT ARE TORN OR ARE EXCESSIVELY WORN SHOULD BE REPLACED IMMEDIATELY.

- Keep all oils, grease and corrosive liquids far from the tyres to prevent any damage to the rubber.
- Tyre pressure must be kept at the level indicated in the table. The tyre pressure given corresponds to the recommendations of the manufacturer, and should therefore be respected as far as possible.

Tyre pressure table

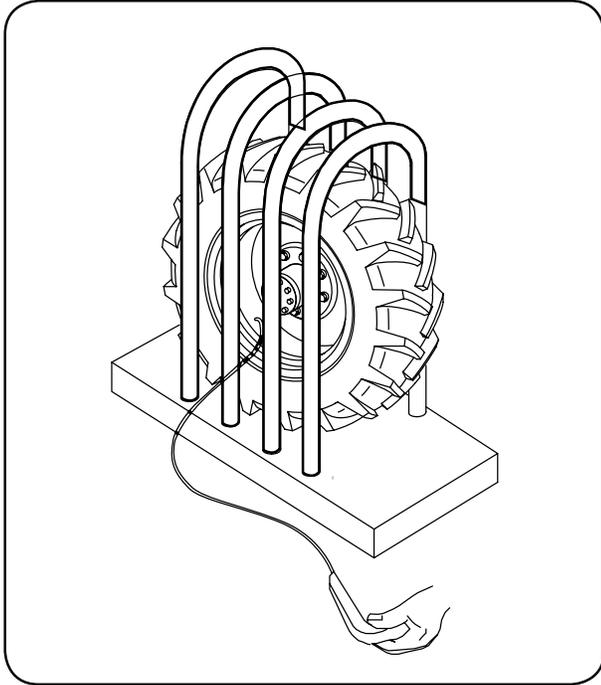
			
MISURA PNEUMATICO TYRES DIMENSIONS	CARATTERISTICHE DETAILS	MARCA BRAND	BAR BAR
10,5 -18	129D (10PR)	/	3,75
12,5 -18	132B (10PR)	/	3,0
12,5 -18	134D (12PR)	/	3,5
12,5 -20	136B (12PR)	/	3,5
18 R19,5	160A8(16PR)	/	4,5
16/70 -20	148D (14PR)	/	3,5
18 -22,5	163A8 (16PR)	/	4,5
405/70-20 (16/70-20)	149B (14PR)	/	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
445/65R22,5 (18R22,5)	169F	/	8,0
445/65 R22,5	168A8	/	8,5
14.00 -24	16PR	/	3,75
17.5L -24	152A8 (16PR)	/	3,2
445/70R24 (17.5LR24)	151G	/	4,1
500/70R24 (19.5LR24)	164A8	/	4,0

- 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% of tyre tread wear.



Inflating or working on tyres can be dangerous. Whenever possible, have specialised personnel intervene on or install tyres. To prevent serious or mortal injury, follow the safety precautions described below.

- Vehicle tyres are very heavy. Handle with care and ensure that, once stored, they cannot fall and injure anyone.
- Never attempt to repair a tyre on a public road or motorway.
- Make sure that the car jack is positioned on a solid, flat surface.
- Make sure that the jack is suitable to support the weight of the vehicle.
- Use jack tripods or other locking devices suitable for supporting the vehicle while repairing tyres.
- Never place any part of your body under the vehicle.
- Never start up the vehicle while it is on the jack.
- Never hit a tyre with a rim or hammer.
- Make sure that the rim is clean, and that there is no rust or damage. Do not weld, braze, repair or use a damaged rim in any way.



! - ATTENTION - !

WHEN MOUNTING A NEW OR REPAIRED TYRE, USE AN ADAPTER FOR THE SPRING VALVE WITH A DISTANCE MANOMETER WHICH ALLOWS THE OPERATOR TO KEEP AWAY FROM THE TYRE DURING INFLATION. USE A SAFETY FENCE SYSTEM.

- Do not inflate a tyre unless the rim is mounted on the vehicle or secured so that it will not move in the event that the tyre or rim should suddenly break.
- Never inflate tyres in excess of the pressure indicated by **DIECI**. If the heel does not settle on the rim when this pressure level is reached, deflate the tyre and lubricate with a soapy water solution, then inflate again. Do not use oil or grease. Inflation exceeding the permitted level on unsettled heels can cause heel or rim breakage with an explosive force that can cause serious injury.

⊘ - PROHIBITION - ⊘

DO NOT MOUNT INFLATED TYRES WITH POLYURETHANE FOAM UNLESS AUTHORISED BY THE MANUFACTURER.

- Do not re-inflate a tyre which has completely turned or that is very deflated until it has been properly inspected by a qualified technician.
- After having remounted the wheel, tighten the nuts between the wheel and axles. Check that nuts are tightened each day until torque has stabilised.

Replacing a tyre on the road

- When a tyre must be replaced along the road, proceed as follows:
 - If possible, park the vehicle on flat, even ground.
 - Engage the parking brake.
 - Switch off the engine.
 - Engage emergency lights.
 - Put wedges under tyres opposite from the tyre to be replaced in order to block the vehicle from moving in both directions.
 - Loosen the bolts of the tyre to be replaced.
 - Place the jack under the half-box of the axle, as close as possible to the tyre.
 - Lift the tyre until it comes off the ground; position the safety support under the axle.
 - Completely unscrew the bolts from the tyre and remove them.
 - Remove the tyre with "push and pull" rotating movements.
 - Insert the new tyre on the hub.
 - Manually screw in bolts. Lubricate them with grease if necessary. Tighten bolts securely with a torque wrench.
 - Remove the safety support and lower the telehandler with the jack.
 - Re-tighten bolts to the tyre securely with a torque wrench.

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.

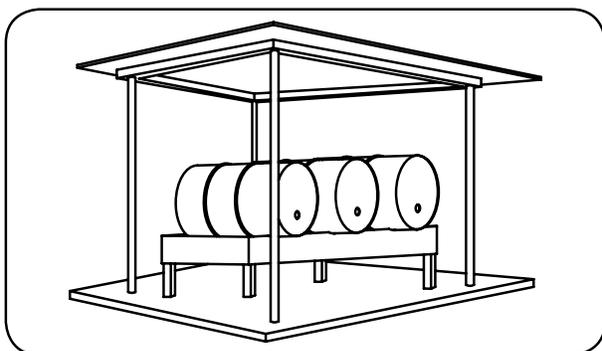
! - ATTENTION - !

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.



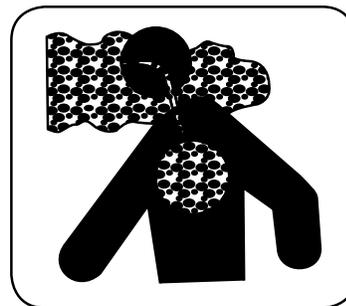
! - ATTENTION - !

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.



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.



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.



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

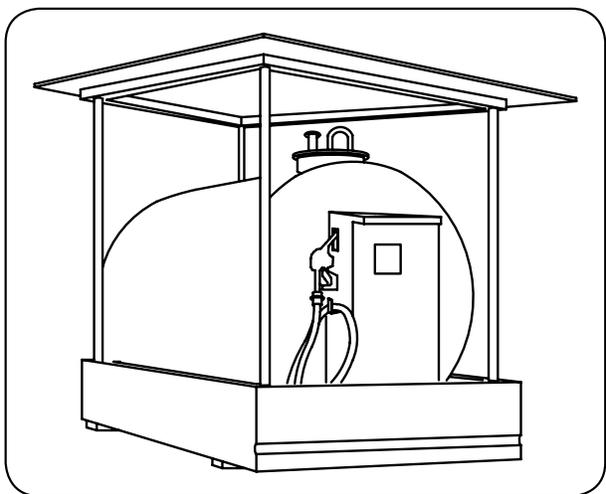
If the engine needs to be used at temperatures below 0°C, special winter fuels can be used. These fuels have a lower degree of viscosity and restrict the formation of paraffin in the fuel. The formation of paraffin prevents the fuel from passing through the filter.

CLEANING AND STORING DIESEL FUEL

It is essential the fuel is kept clean.

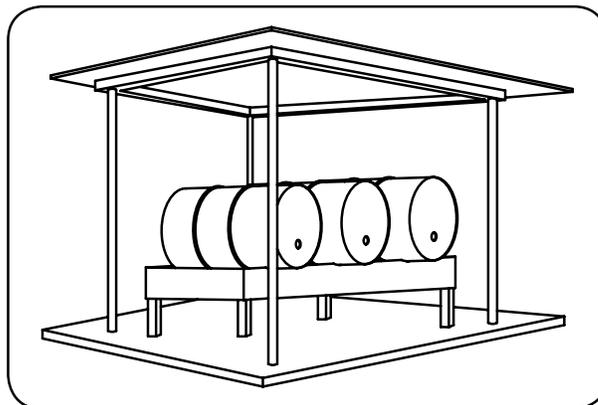
The advice given below will help to maintain the quality of the fuel.

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

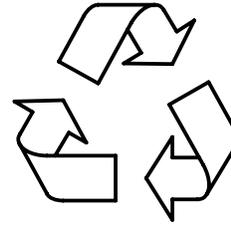


A few helpful recommendations are listed below. Find out about the current standards and legislation in effect in your country.

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.



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.



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.



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.



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.



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

- Comply with the following indications to avoid overturning the machine:
- Ask your employer (works manager, construction assistant) if there may be any hidden cavities below the stabilisers (pipelines, wells, old cisterns, basement ceilings, manure pits, etc.)
- The operator must evaluate the consistency of the ground, using the tables and graphs provided. In case of doubt, consult the civil engineer present on the site or seek the advice of an external engineer.
- Depending on the type of ground and its geomorphologic characteristics, the subsoil can only support a limited quantity of stress. The table in fig.3/B indicates the allowed surface pressure underneath the telehandler stabilisers.
- On the basis of the "Maximum pressure exercised on the ground by the stabiliser feet" Table (fig.2/B) and the data extracted from the table in fig.3/B, "Allowed surface pressure on varying ground types", it is possible to deduct the necessary support surface (increased support bases).



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.



On request, DIECI can provide enlarged base supports.

EXTENSION (mt)	PRESSURE (kg/cm)
7 mt	10 kg/cm ²
8 mt	10 kg/cm ²
9 mt	10 kg/cm ²
10 mt	10 kg/cm ²
11 mt	10 kg/cm ²
12 mt	10 kg/cm ²
13 mt	10 kg/cm ²
14 mt	10 kg/cm ²
16 mt	10 kg/cm ²
17 mt	10 kg/cm ²

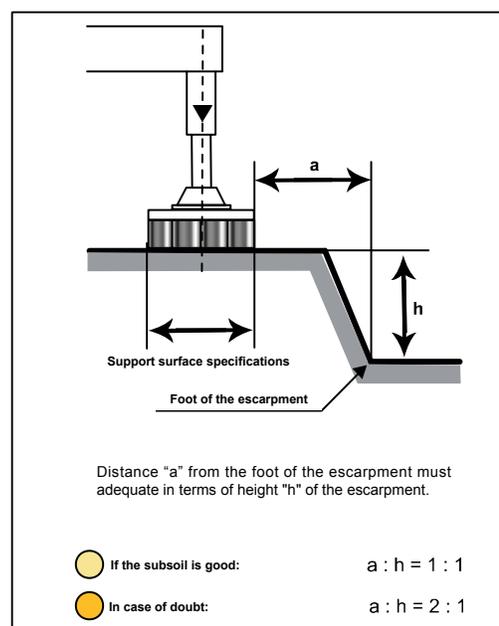
(fig. 2/B) "Maximum pressure exercised on the ground by the stabiliser feet" Table

Type of ground, geomorphologic specifications	Allowed surface pressure		
	Kg/cm ²	N/mm ²	
Loose, non-compacted ground	Generally not solid, requires special measures		
Limey, peaty, pasty ground			
Coherent, soft ground			
Incoherent, well compacted ground, sand, gravel	2.0	0.2	
Coherent ground	Solid	1.0	0.1
	Semi solid	2.0	0.2
	Hard	4.0	0.4
Rock, concrete, road surface suitable for the transit of heavy goods vehicles	Over 10.0	Over 1.0	

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

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

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



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

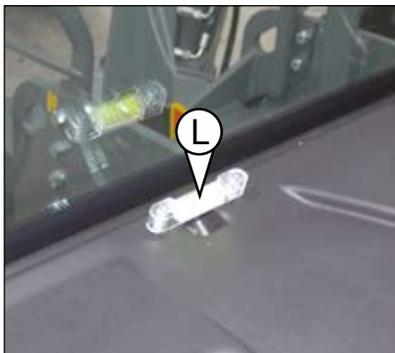
SAFETY DEVICES

The vehicle is equipped with certain safety devices (Proximity, Micro-switches, and Load monitoring devices) which safeguard its use from incorrect manoeuvres or from carelessness.

Safety device housing inside the cab



(fig. 7/B)



- (A) Seat micro switch (fig.7/B)
- (B) Hand grip micro switch boom joystick (fig.7/B)
- (C) Machine functions selector key (fig.7/B)
- (D) Load monitoring system (fig.7/B)
- (E) Override key selector anti-tipping device (fig.7/B)
- (F) Alarm re-entry push button anti-tipping device (plank) (fig.7/B)
- (G) Alarm re-entry push button anti-tipping device (Joystick) (fig.7/B)
- (H) Parking brake (fig.7/B)
- (I) Mushroom-shaped emergency button (fig.7/B)
- (L) Spirit level (fig.7/B)

Vehicle safety device housing

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



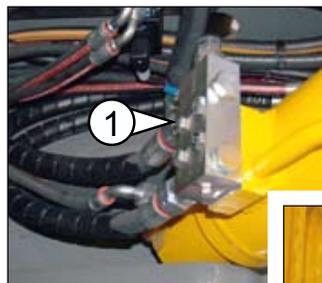
(fig.8/B)

Cab emergency exit (cab FRONT glass).
(fig.9/B, pos."1")

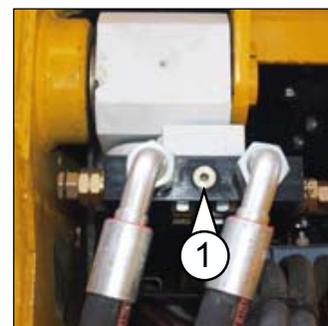


(fig.9/B)

Valve block in all hydraulic cylinders.
(fig.10/B - Pos."1")



(fig.10/B)



Boom support spacer.
(fig.11/B - Pos."1", fig.12/B)

! - ATTENTION - !

The boom support spacer must only be used during routine maintenance operations.

When carrying out maintenance work on the boom raising cylinder or on the related block valve, the boom must be supported by a suitable raising mechanism (Minimum capacity 3 tons).

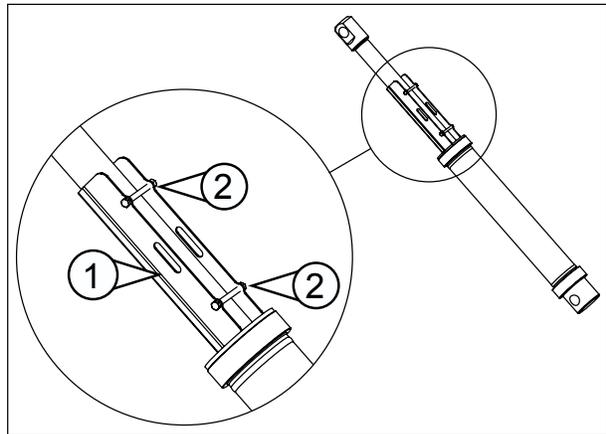
! - ATTENTION - !

To insert the spacer, proceed as follows:

- Completely close the boom extensions
- Raise the boom the minimum height necessary to mount the spacer to the rod;
- Lock the spacer (fig.12/B - Pos."1") with the relevant hooks (fig.12/B - Pos."2")



(fig.11/B)



(fig.12/B)

DRIVER'S CAB

(fig.13/B Pos."1")

All vehicles are equipped with a driver cab that also acts as a safety cell for the operator.



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



IT IS PROHIBITED to modify, perforate or alter the cab structure in any way. If the cab is tampered with the guarantee is automatically voided and the manufacturer is relieved of all liability.

- DO NOT weld or mechanically connect components to the cab's 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 overturning, do not attempt to exit from the cab during the accident.



REMAIN INSIDE THE CAB WITH SEAT-BELT FASTENED FOR BEST PROTECTION.

ROPS-FOPS CAB

(fig.13/B - Pos. "1")

The vehicle is equipped with a ROPS and FOPS-approved cab. The operator is therefore protected against overturning and falling objects, as prescribed for traxcavators. During use, it is compulsory the use of safety seat belts to prevent the driver's impact with the cab inner structures. The rear window may be used as emergency exit. Opening the window completely during use of the vehicle IS STRICTLY PROHIBITED, due to possible shearing hazards between boom and chassis



IF THE CAB SHOWS VISUAL DAMAGE, IT MUST BE REPLACED; CONTACT AN AUTHORISED SERVICE CENTRE OR AUTHORISED WORKSHOP OF DIECI.



(fig.13/B)

LOAD TABLES



CHECK THE LOAD TABLES FOR YOUR VEHICLE IN CHAPTER "G", TECHNICAL SHEETS

The Safe Working Load (SWL) of these vehicles depends on the extension and angle of the boom.

This vehicle is equipped with an anti-tipping device.

For further information on the **safe load indicator** 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 capacities in relation to the various positions of the boom. The boom extension is marked by letters: "A" "B" "C" "D", etc.

The load table illustrates the maximum height and extension achievable without exceeding the safe load. The telehandler is also equipped with its own load table. The load table is calculated with standard forks. When certain attachments are fitted on the vehicle the further Load Tables are supplied.

The load table indicated is for reference purposes only.

Before lifting or positioning modes, consult the relative tables in the book at the side of the steering wheel, or consult chapter "h" (vehicle technical sheets) in this manual.



The limits given in the load Tables refer to the vehicle at a halt. Do not lift or extend 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



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



The limits indicated in the load tables refer to the stopped vehicle on wheels or outriggers (if present) on levelled, solid ground.

Do not lift or extend 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.



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

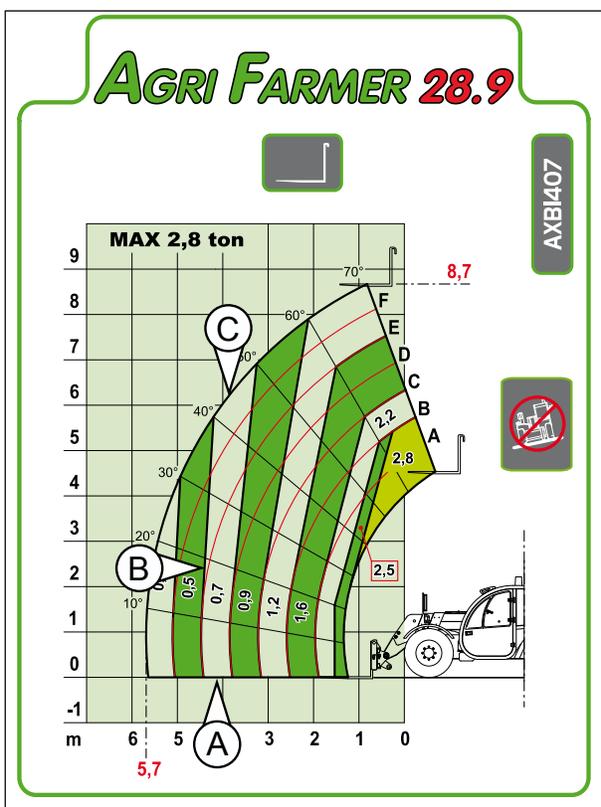
When the weight to be handled is known, consult the load table (chapter “G” vehicle technical sheets) and identify the section indicating the weight immediately above.

Example:

in the load table given as an example (fig.15/B), the weight of the load is 0.6 tons; go to the section with the 0.7 tons. (fig.15/B Pos. “A”).

The left-hand border (fig.15/B Pos. “B”) and the upper border (fig.15/B Pos. “C”) of this segment indicate the stability limits of the vehicle relative to the considered load. Do not slant or extend the boom beyond the indicated limits. (fig.15/B Pos. “B-C”).

After insertion of forks from under the load and before lifting them, check indicator values of boom angle (fig.16/B Pos. “1”) and extension (fig.17/B Pos. “1”).



(fig.15/B)



(fig.16/B)



(fig.17/B)

As seen on the table, the lines start from the graduated scale for the angling and extension of the boom and cross the section of the table. Check where the relevant lines for the parameters considered cross. If the cross point is within the maximum load section or to the right (known load weight), the load is within the safety limits.

If the lines cross above or to the left of the section, do not make any attempt to lift the load. Retract the boom.

If, even with the boom completely retracted, the angular and extension values of the boom intersect outside of the maximum load section, do not attempt to lift the load.

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

When the load is raised (for example, on a scaffolding) it should be let go (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 point of unloading. It should be possible to deposit the load without intersecting the limits indicated to the left or above the maximum load section.

Note-book with essential data
(Fig.18/B - Pos."1")

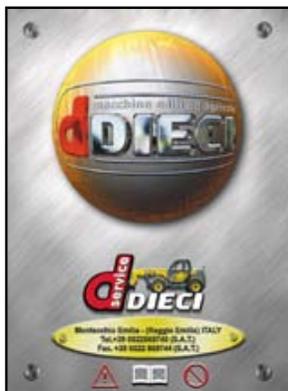
- A : cover page
- B : gear change page
- C : tyre inflation pressure page
- D : main safety regulation page
- E : driving on roads page
- F : symbol key (front)
- G : symbol key (back)
- H : load charts



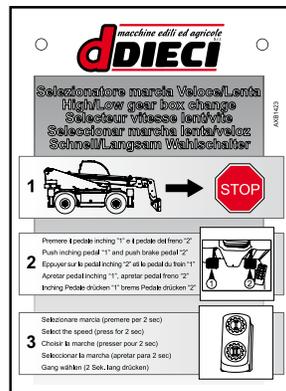
(fig.18/B)



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



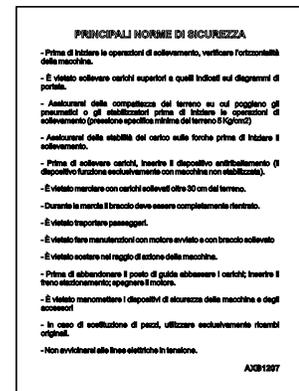
A : cover



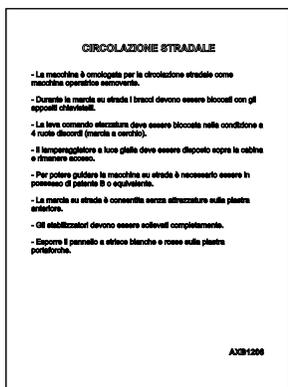
B : speed selection

MISURA PNEUMATICO TYRES DIMENSIONS DIMENSION DES PNEUS DIMENSION DE LOS NEUMATICOS REIFENMASS	CARATTERISTICHE DETAILS CARACTÉRISTIQUES CHARACTERISTICS EIGENSCHAFTEN	BAR
10,5-18	10PR	3,75
12,5-18	10PR	3,0
12,5-18	12PR	3,0
12,5-20	12PR	2,5
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)	163AB (16PR)	4,5
445/65R22,5	163AB	5,5
445/65R22,5	195F	6,0
14-00-24	16PR	3,75
17,5L824	16PR	4,0

C : tyre inflation pressure



D : main safety regulations



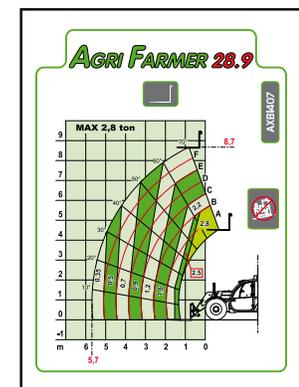
E : road travel



F : symbol key



G : symbol key (back)



H : load chart



LOAD HANDLING

Picking a load up from the ground

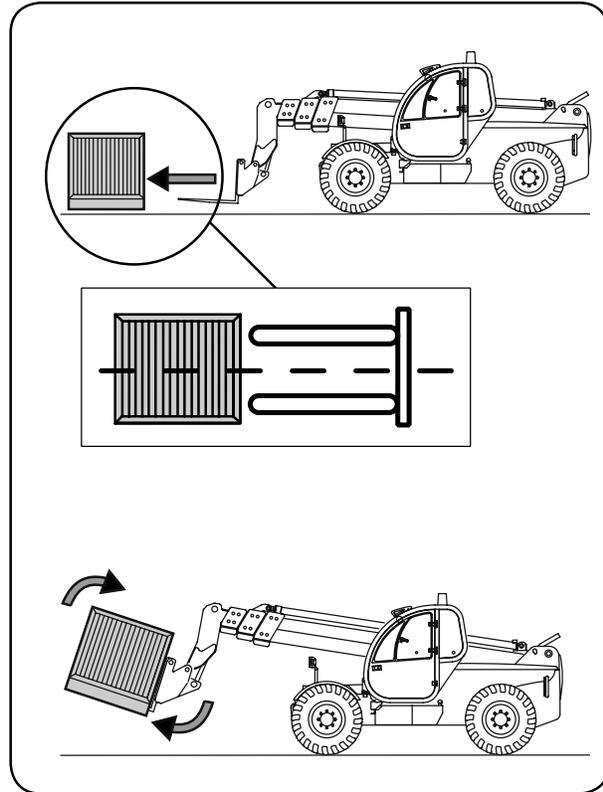
1. Slowly approach the load to be lifted with the boom completely retracted and the forks horizontally positioned at the height of the lifting position.
Keep forks raised just enough to avoid contact with the ground.
2. Bring forks under load to be lifted until contact is made with the fork holding plate. Engage the parking brake and move the gear selector to neutral.
3. Slightly lift up the load and tilt the fork holding plate backwards, bringing it to the transport position.

! - ATTENTION - !

Always respect 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 raised and/or extended



Lifting loads from high up

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



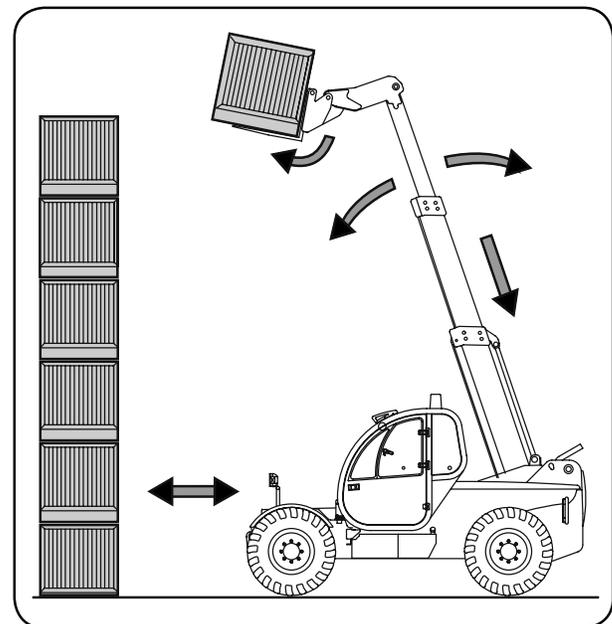
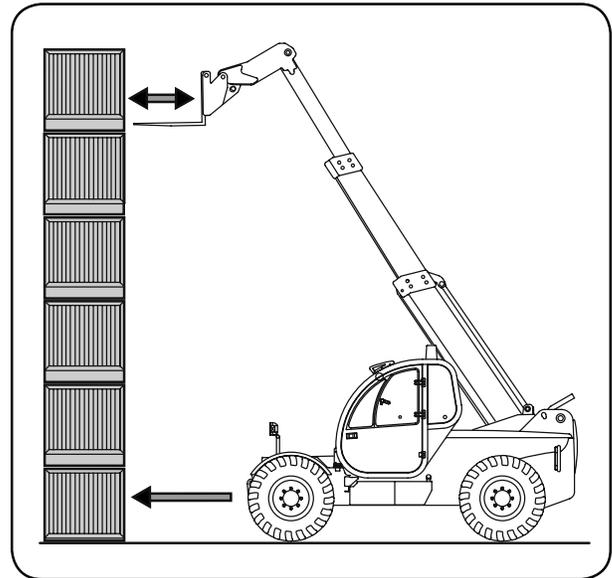
Always comply with the centre of gravity of the load, tilt the forks enough to ensure stability and to avoid dropping the load when braking.



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

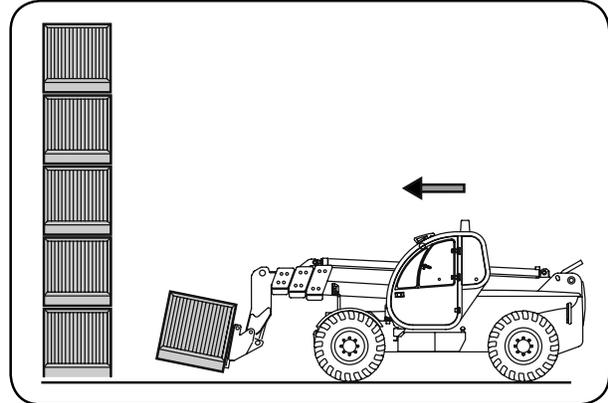


Never carry loads while the boom is raised and/or extended.



Placing loads in high places

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



! - ATTENTION - !

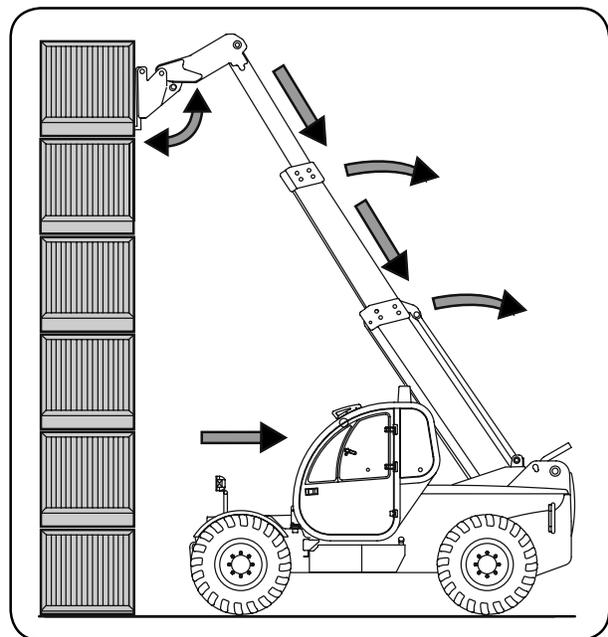
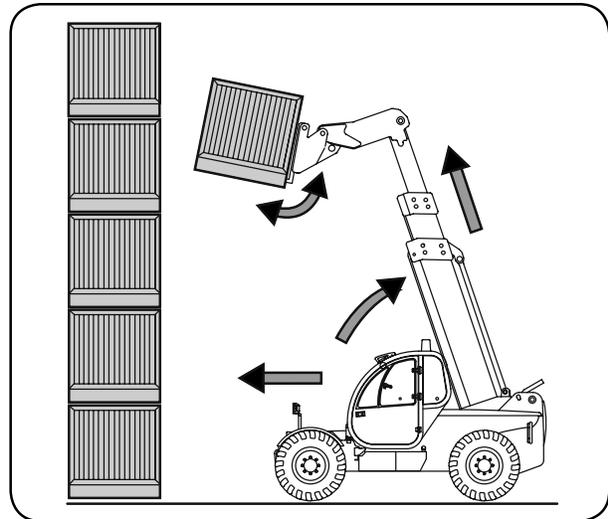
Always comply with the centre of gravity of the load, tilt the forks enough to ensure stability and to avoid dropping the load when braking.

⊘ - PROHIBITION - ⊘

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

! - ATTENTION - !

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



Picking up round-shaped loads

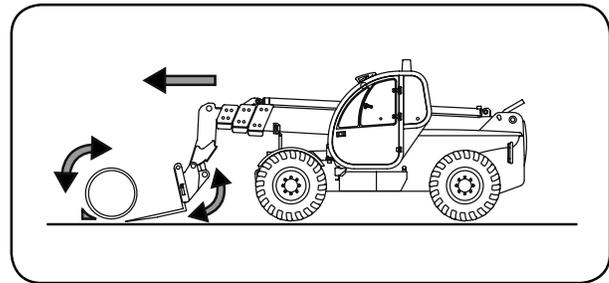
- Tilt the forks forward and retract the telescopic boom. At the same time, place the forks under the load, and turn the fork holding plate backwards in order to slide the load. If necessary, secure the load with wedges.

! - ATTENTION - **!**

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

! - ATTENTION - **!**

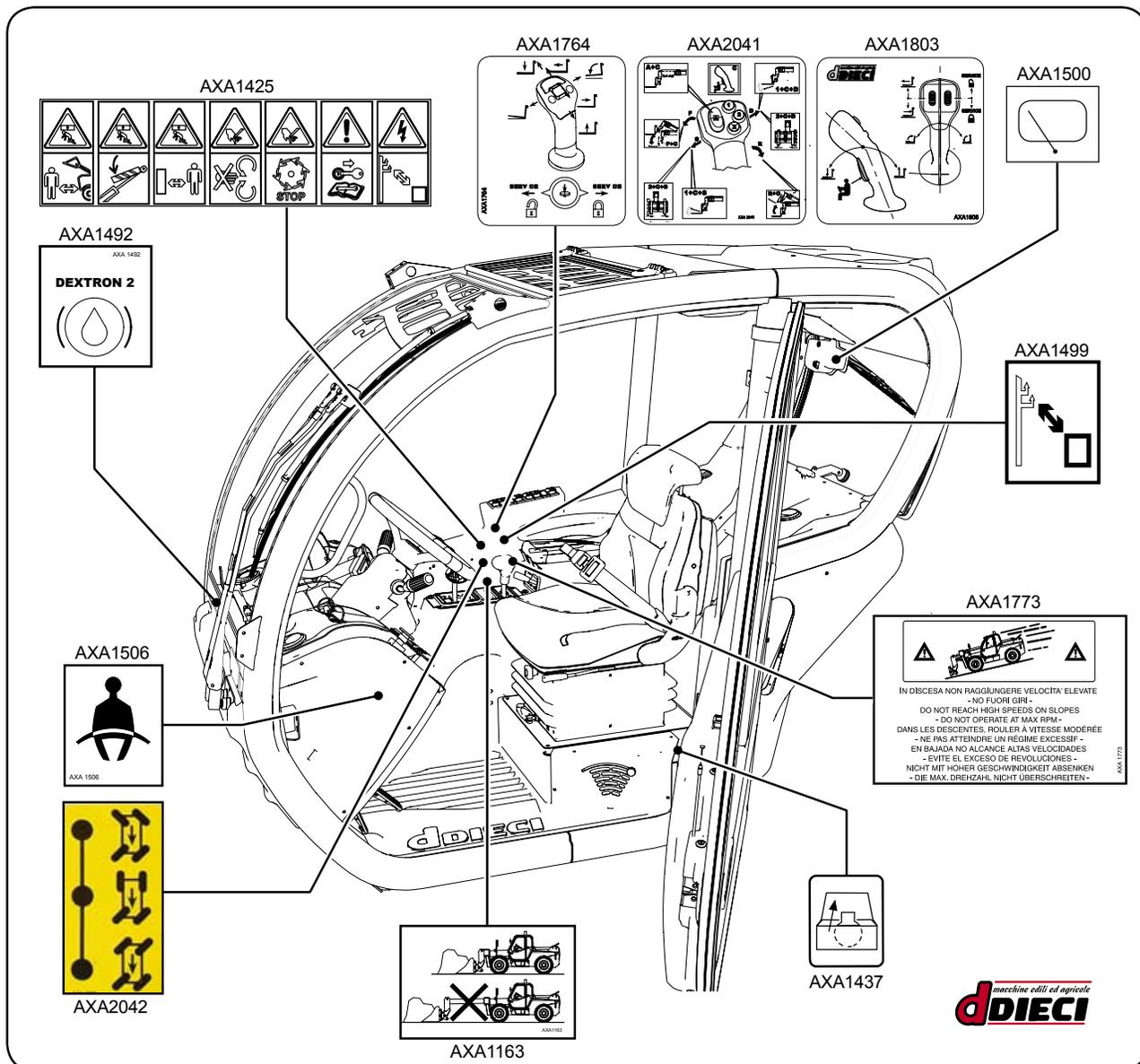
Never transport a load with the boom raised and/or extended

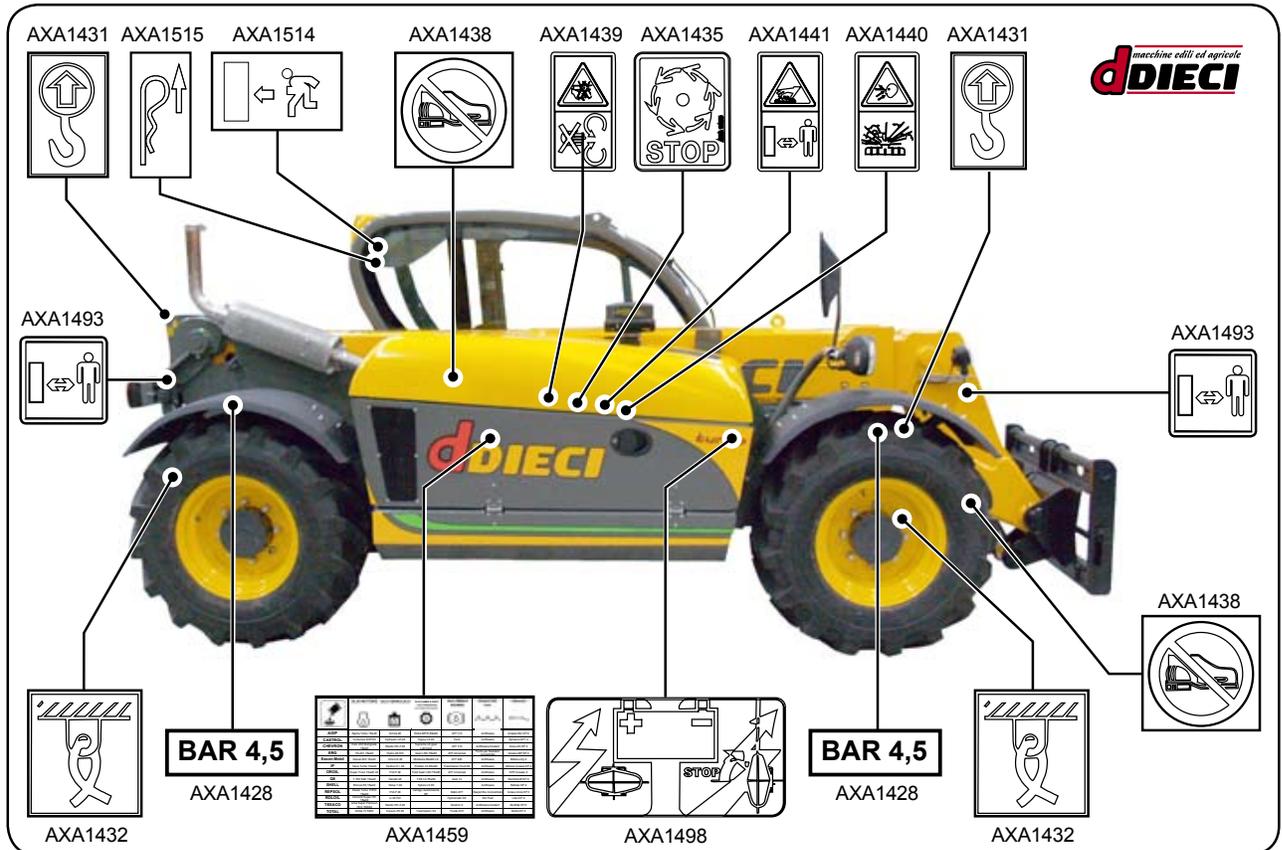


SAFETY STICKERS

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

- Ensure you fully acknowledge where they are located and understand their contents.
- To ensure the stickers are easy to read and comprehend, check they are in the correct position and that they are always kept clean. **IT IS STRICTLY FORBIDDEN** to clean the signs on the machine with solvents or petrol; the stickers may become unstuck. Additional stickers to the warning and safety stickers must always be treated in the same way.
- If the stickers deteriorate, become damaged or are lost, replace them because they must be legible and understood correctly. Orders for stickers must be placed using the same process as for spare parts (ensure you include the model and serial number of the machine when you place your order).
- In case of doubt, please consult your agent or dealer.

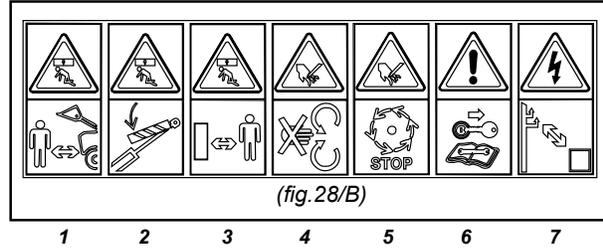




safety stickers and their location

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

- ! - DANGER (1)**
Keep all persons at a safe distance from the vehicle when starting loading operations.
- ! - DANGER (2)**
When carrying out maintenance work, block all hydraulic cylinders using safety locks.
- ! - DANGER (3)**
Keep all persons at a safe distance.
- ! - DANGER (4)**
Do not open or remove the safety panels while the engine is running.
- ! - DANGER (5)**
Wait until all moving parts have come to a halt.
- ! - DANGER (6)**
Switch off the engine and remove the key before starting maintenance work.
- ! - DANGER (7)**
Check the work zone and keep far away from power supplies.

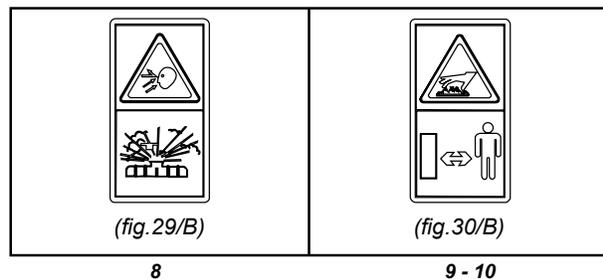


- **On the engine compartment radiator**(fig.29/B)

- ! - DANGER (8)**
Steam and hot water under high pressure. Protect the face. Remove the cap with due caution.

On the side of the intercooler radiator (fig.30/B)

- ! - DANGER (9)**
Risk of burns.
- ! - DANGER (10)**
Keep all persons at a safe distance.



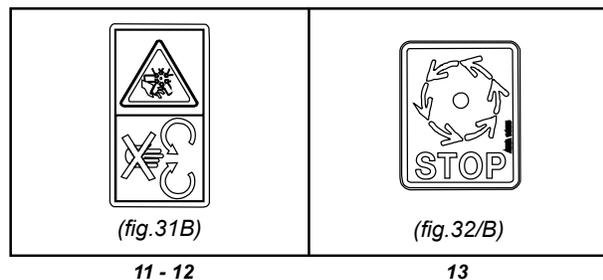
- **On the side of the intercooler radiator** (fig.31/B)

- ! - DANGER (11)**
Do not open or remove the safety panels while the engine is running.

- ! - DANGER (12)**
Wait until all moving parts have come to a halt.

- **On the side of the intercooler radiator** (fig.32/B)

- ! - DANGER (13)**
Do not open; wait until all moving parts have come to a stop.



Stickers for use and maintenance

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

Indicates the direction of clip extraction hindering total opening of the window

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

Indicates the emergency exit

- **Under the steering wheel** (fig.36/B)

Indicates the obligation to fasten seat-belts when using the vehicle.

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

Indicates the type of oil used in the brake system.

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

Shows the 4 places where the vehicle can be anchored if it should need to be lifted.

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

Shows the 4 places where the vehicle can be towed or anchored for transportation.

- **On the parts not to be stepped on** (fig.40/B)

- **DANGER**

Keep off "danger of breakage".

- **On the fuel tank** (fig.41/B)

Type of fuel to be used.

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

Indicator for hydraulic oil level.

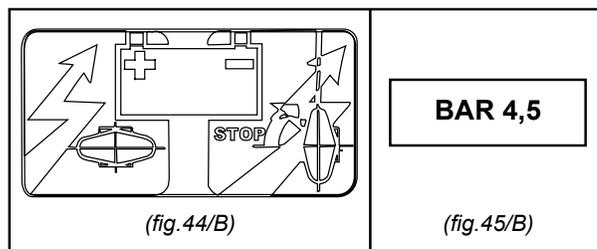
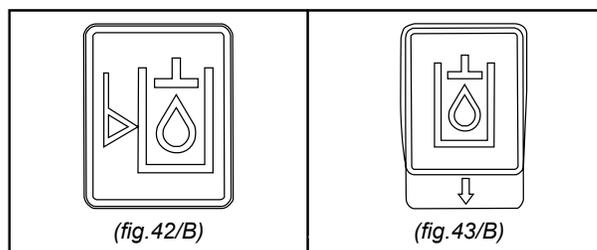
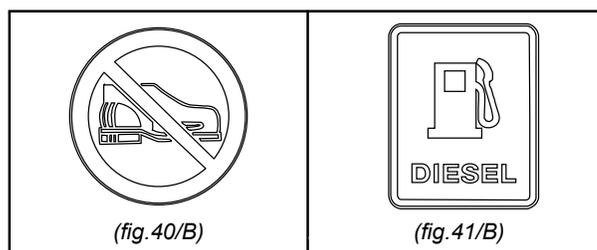
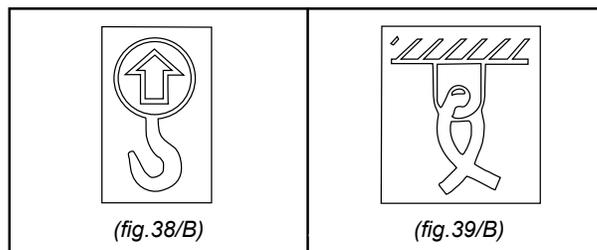
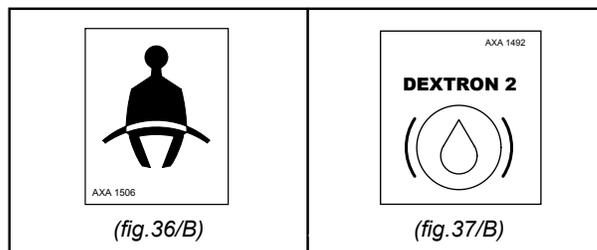
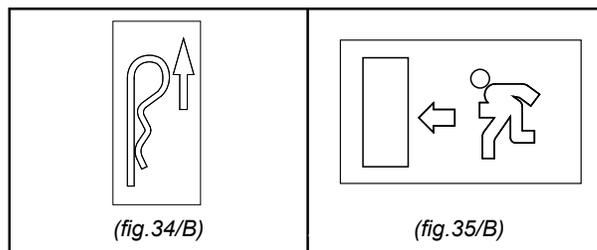
- **On the side of the hydraulic oil tank** (fig.43/B)

Marks the cap to top up the hydraulic oil.

- **Outside the engine bonnet** (fig.44/B)

- **On the 4 fenders** (fig.45/B)

Indicates the recommended tyre pressure.



- On the accumulators (fig. 46/B)

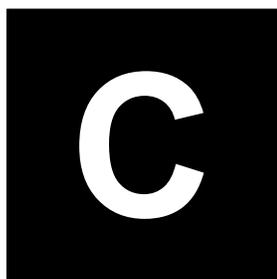
 - **DANGER**

Depressurize the hydraulic system before carrying out maintenance work.



(fig. 46/B)

USER INSTRUCTIONS AND GETTING TO KNOW THE VEHICLE







EVERY MODIFICATION MADE TO THE VEHICLE LEADS TO A NEW VERIFICATION OF CONFORMITY WITH THE 2006/42/EC MACHINERY DIRECTIVE THIS PROCEDURE IS ALSO VALID IN THE CASE OF REPAIRS WITH NON-ORIGINAL SPARE PARTS.

IT IS PROHIBITED TO OPERATE IF THIS MANUAL HAS NOT BEEN READ AND UNDERSTOOD.

THE OPERATOR IS REQUIRED TO LEARN THE LOCATION AND FUNCTION OF ALL INSTRUMENTS AND CONTROLS, INDEPENDENT OF HIS OR HER EXPERIENCE IN THE FIELD, BEFORE OPERATING THE VEHICLE.

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

ALL FUNCTIONS AND PROCEDURES CONCERNING THE OPERATION AND MOUNTING OF THE VEHICLE'S ATTACHMENTS THAT ARE NOT DESCRIBED IN THIS MANUAL ARE STRICTLY FORBIDDEN.

USE OF THE VEHICLE DIFFERENT TO THAT DESCRIBED IN THIS MANUAL IS PROHIBITED.

IT IS MANDATORY TO HAVE READ AND LEARNED CHAPTER "B" (SAFETY STANDARDS) BEFORE READING CHAPTER "C" AND USING THE VEHICLE.



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GENERAL WARNINGS **- ATTENTION**

The operator must only operate vehicle and its commands when properly seated in the driver's seat.

 **- ATTENTION**

The telescopic lift described in this manual cannot be used in closed spaces or anywhere where there might be explosive gases. To operate in closed spaces, the Manufacturer must be contacted so that the necessary modifications can be made to the vehicle.

 **- ATTENTION**

Working on a slope may be dangerous. The conditions of the terrain may vary according to climatic conditions (e.g. rain, snow, ice). Therefore, pay careful attention to the conditions of the terrain on which the vehicle is being used; the use of low speeds is recommended.

 **- ATTENTION**

When transporting a load on a gradient, the load should be kept up gradient with respect to the vehicle in order to increase its stability. Before mounting ramps or trailers with the vehicle, remove any mud, ice or oil which may cause accidents.

 **- ATTENTION**

Proceed with due caution on loose, wet or muddy surfaces.

 **- ATTENTION**

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

For indications on the hand signals to use, refer to the following chapter

 **- PROHIBITED**

IT IS PROHIBITED to use the vehicle's moveable hydraulic parts to lift people, with exception of the uses for which the vehicle is intended.

- ATTENTION

Before operating the moveable hydraulic parts of the vehicle, ensure the surrounding area is clear.

 **- ATTENTION**

The vehicle should be used exclusively by competent, authorised personnel who have thoroughly read this manual and have been adequately trained as reported in chapter B "General warnings". If the vehicle is to be used on roads, the operator must have a valid, category B driver's licence, or higher in accordance with Italian law.

 **- ATTENTION**

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

 **- ATTENTION**

Before operating the vehicle or before carrying out complicated or dangerous manoeuvres, it is essential that you practice in an empty, unobstructed part of the site.

 **- ATTENTION**

Clear, simple symbols are located near all controls for convenience purposes and to make them easier to understand for the operator.

 **- ATTENTION**

When diagonal steering has been selected, always proceed at a low speed.

 **- ATTENTION**

Should any potentially hazardous parts be damaged, stop the vehicle immediately. Do not resume operation of the vehicle until the problem has been resolved.

 **- ATTENTION**

Tyres which are over inflated or overheated may explode: Follow the instructions provided in this manual for correct tyre inflation. Do not weld or cut the rims; repair work should only be carried out by a qualified tyre repair shop.

 **- ATTENTION**

The boom should not be left raised for an extended period of time. This may cause the displacement of boom extensions; retract extensions at least once a day.

HAND SIGNALS

Accessories to hand signals:

- The signaller must be easily identified by the operator.
- The signaller must wear or hold one or more adequate recognition elements, like: jacket, helmet, sleeves, bracelets, signal paddles.
- The recognition elements are bright coloured, preferably one, and reserved exclusively for the signaller.

Start Attention Control	The two arms are open horizontally, the palm of the hands forward	
Stop Interruption End of movement	The right arm is stretched upwards, with palm of right hand forward	
End of operations	The two hands are joint at height of chest	

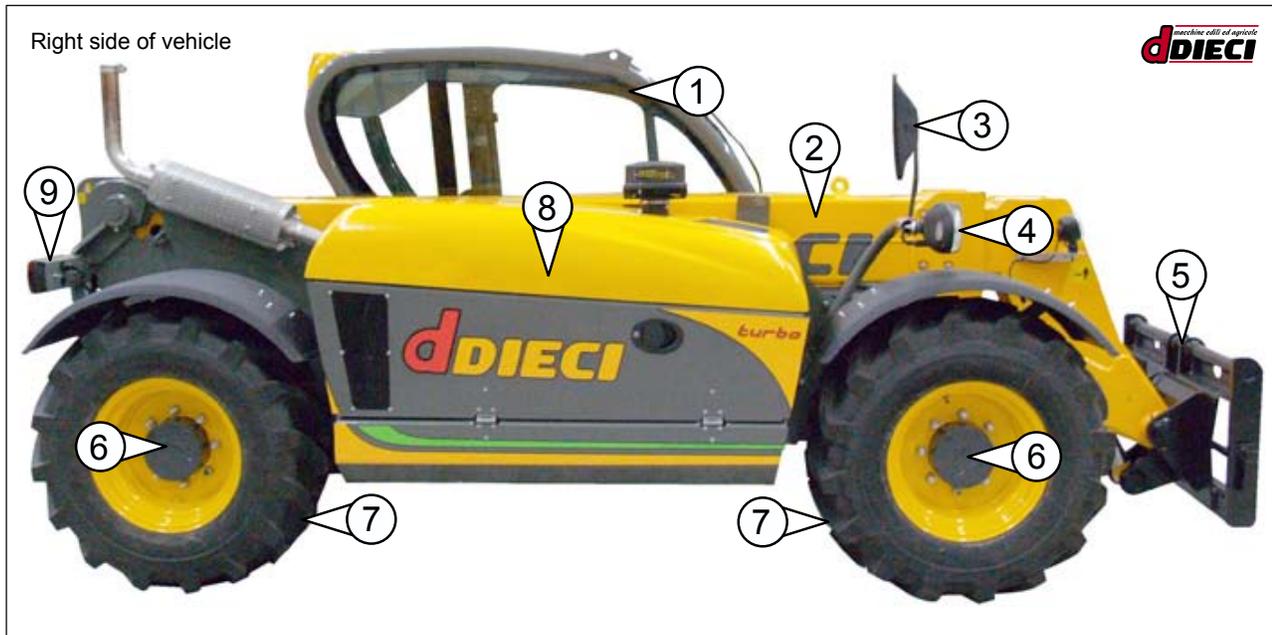
Lift	The right arm, stretched upwards, with palm of right hand forward, slowly makes a circle	
Lower	The right arm, stretched downwards, with palm of right hand towards the body, slowly makes a circle	
Vertical distance	The hands indicate the distance	

Move forward	Both arms are folded, the palms of the hands backwards; the forearms make slow movements towards the body	
Move backwards	Both arms are folded, the palms of the hands forward; the forearms make slow movements away from the body	
To the right compared to signaller	The right arm, stretched horizontally, with palm of right hand downwards, slowly makes small movements towards	

To the left compared to signaller	The left arm, stretched horizontally, with palm of right hand downwards, slowly makes small movements towards	
Horizontal distance	The hands indicate the distance	

Danger Stop or emergency stop	Both arms stretched upwards	
Quick movement	The conventional signals used to indicate movements are quickly made	
Slow movement	The conventional signals used to indicate movements are made very slowly	

IDENTIFYING THE VEHICLE PARTS



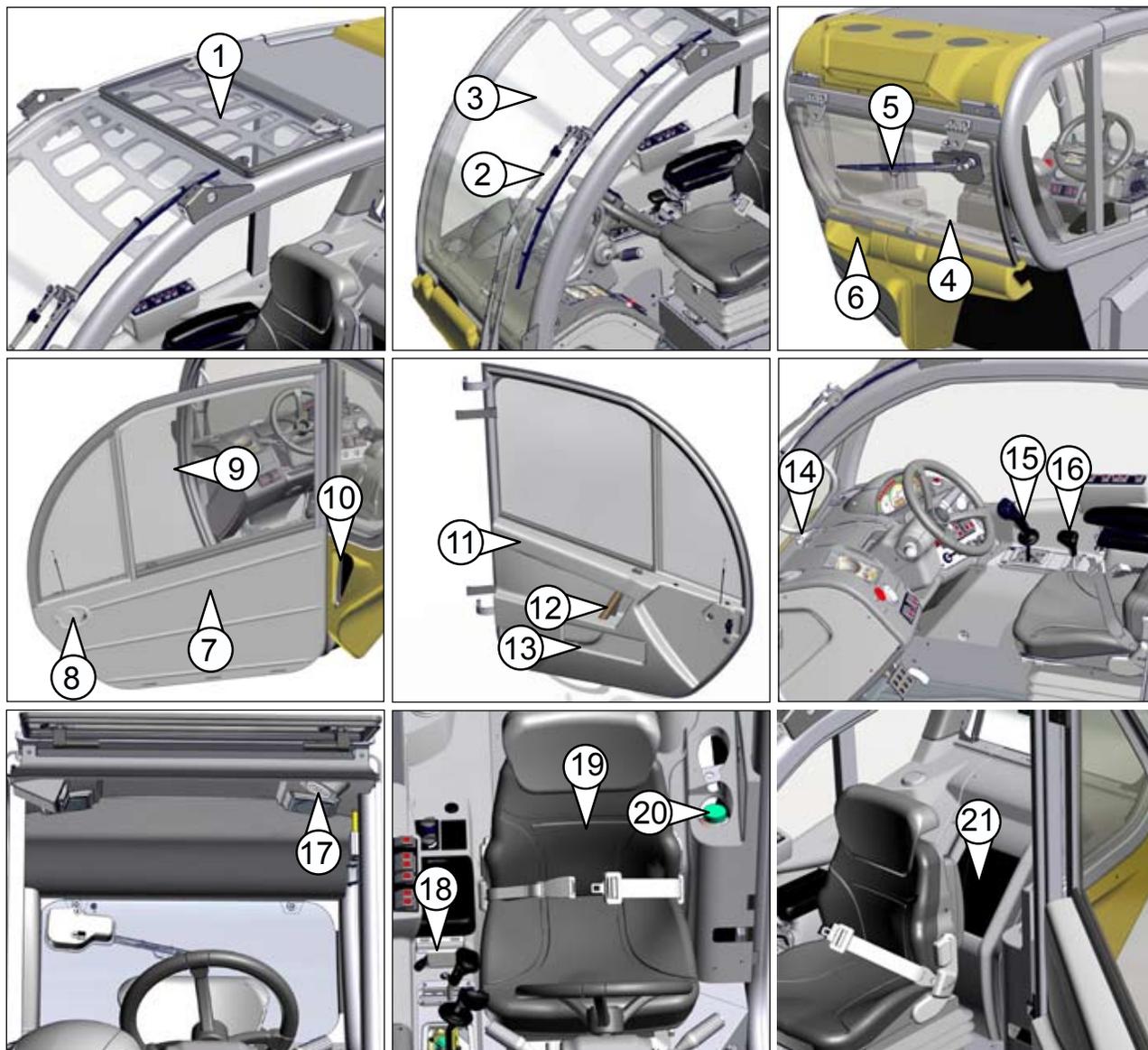
- 1. Cab
- 2. Telescopic boom
- 3. Right rear view mirror
- 4. Right front light
- 5. Attachment holding plate

- 6. Epicycloidal reduction gear
- 7. Wheel
- 8. Engine bonnet
- 9. Right rear light



- 1. Cab
- 2. Left rear light
- 3. Epicycloidal reduction gear
- 4. Fuel tank
- 5. Wheel

- 6. cab steps
- 7. Attachment holding plate
- 8. Left front light
- 9. Telescopic boom
- 10. Left rear view mirror.



Cab components

- | | |
|--|--|
| <ul style="list-style-type: none"> 1. Upper roof. 2. Front windscreen wipers. 3. Front window 4. Rear window / emergency exit. 5. Rear windscreen wiper. 6. Revolving light outlet. 7. Cab door (external view) 8. External opening/closure handle 9. Upper door window. 10. Cab internal ventilation intake 11. Cab door (internal view) | <ul style="list-style-type: none"> 12. Door opening/closure handle 13. Courtesy compartment 14. Spirit level 15. Boom movements joystick 16. Attachment control joystick (if present) 17. Ceiling lighting inside cab. 18. Steering selection lever 19. Seat 20. Windscreen washer liquid tank. 21. Technical documentation pocket |
|--|--|

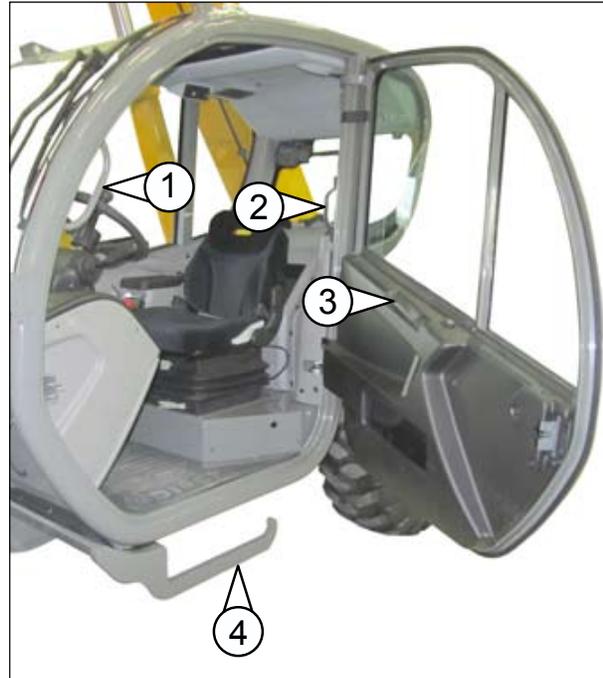
! - ATTENTION: - Read the SAFETY REGULATIONS (contained in this manual) carefully for the safety of all personnel and your vehicle.

GETTING IN AND OUT OF THE DRIVER'S CAB

Before entering the cab, make sure that your hands and shoes are clean and dry to prevent slipping and falling. Only use the handles provided (fig.1/C Pos."1", "2", "3", "4") to climb into the cab; do not use controls or steering wheel located on the inside. Always face the cab when getting in or out of the vehicle.

! - ATTENTION

Only get in and out of the cab when the vehicle is stopped and the parking brake is engaged. Do not carry out maintenance on a moving vehicle.



(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 into the lock (fig.2/C Pos."2") and turn clockwise/counter-clockwise to engage/disengage the lock.
- Pull the handle (fig.2/C Pos."3") toward you to unhook the door with the lock disengaged.

NOTE:

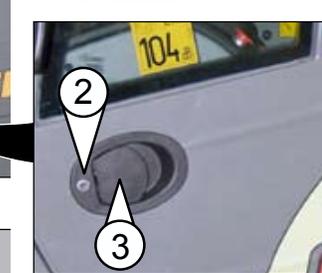
The door will not open if the door handle is pushed when the lock is engaged.

- PROHIBITION -

Operating the vehicle with the cab door open IS STRICTLY PROHIBITED.



(fig. 2/C)

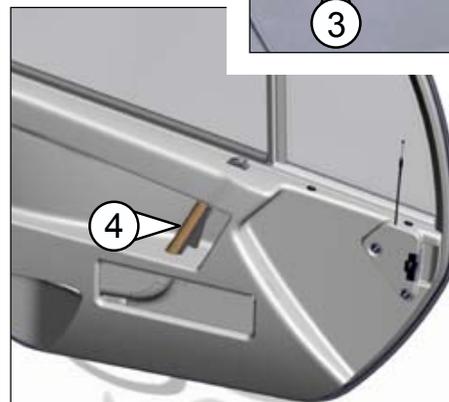


INTERNAL DOOR OPENING CONTROLS

- Press the button on the handle to release the door (fig.2/C Pos."4").
- Push the door outwards to complete opening.
- Accompany the door with hand when opening.

! - ATTENTION

Before pushing the door outward, make sure that the surrounding area is free of obstacles. Accompany the door with hand when opening.



OPENING THE DOOR WINDOW

(fig.3/C Pos."1")

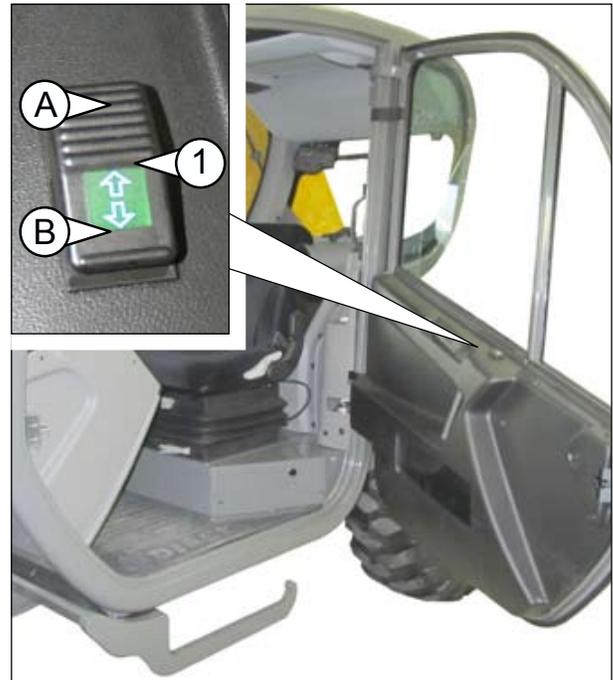
- Press the selector switch in "A" (fig.3/C) to lower the glass.
- Press the selector switch in "B" (fig.3/C) to raise the glass.

! - ATTENTION

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

! - ATTENTION

Before closing the window, make sure there are no objects or limbs in a position that can be crushed by this action.



(fig.3/C)

REAR WINDOW

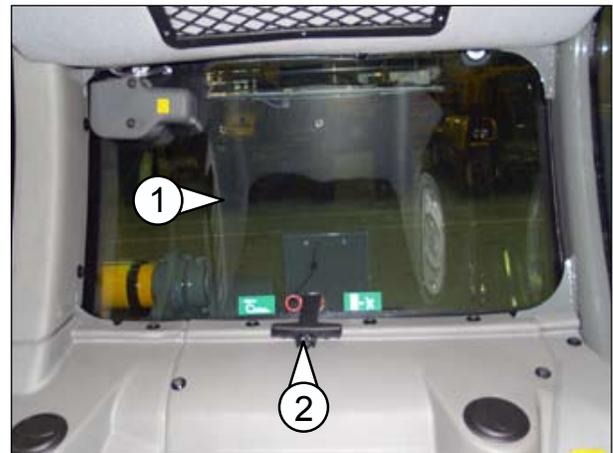
(fig.4/C Pos."1")

- 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.

! - ATTENTION

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



(fig.4/C)

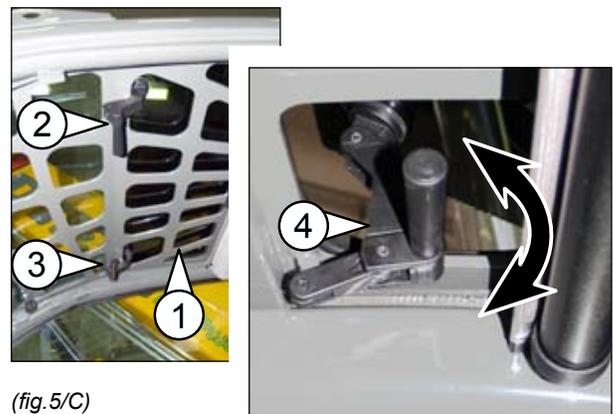
UPPER ROOF

(fig.5/C Pos."1")

To open the roof, grip the handles (fig.5/C Pos."2" and "3") and push them up using a circular motion (fig.5/C Pos."4"). The rotated handles will hold the window open. Do the opposite to close the roof.

! - ATTENTION

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



(fig.5/C)

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

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.

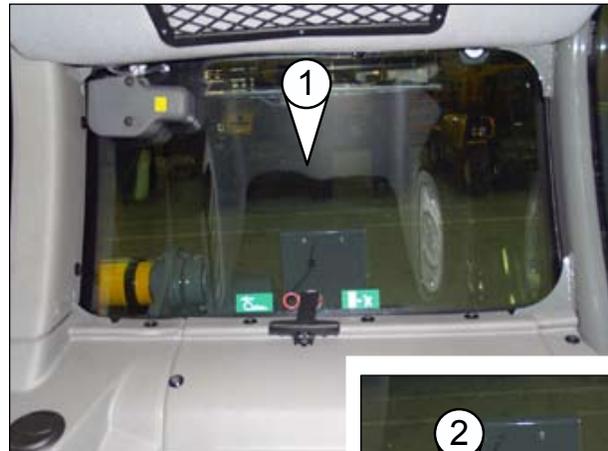
The pin must be kept in position as shown during normal working operations.

- **PROHIBITED**

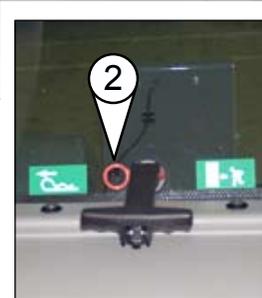
Opening the window completely during use of the vehicle **IS STRICTLY PROHIBITED**, due to possible shearing hazards between boom and chassis **The rear window is found near the telescopic boom.**

- **ATTENTION**

Pay attention 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. 8/C)

TECHNICAL DOCUMENTATION POCKET

(fig.9/C Pos."1")

Technical documents must be kept in their pocket (fig.9/C Pos."1").

The use and maintenance manual and the parts catalogue must always be available inside the vehicle for quick reference.

! - ATTENTION

The User's Manual and the parts catalogue are an integral part of the vehicle and must remain with it even when it is sold to a new owner. The manual must be carefully kept aboard the vehicle for a quick reference and it must be written in the operator's language. If the manual is creased, partially damaged or is not legible, replace it immediately.

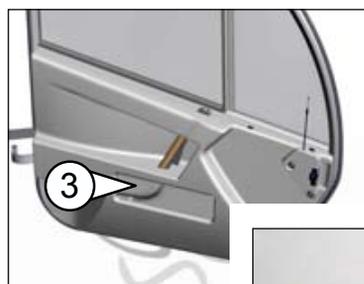


(fig.9/C)

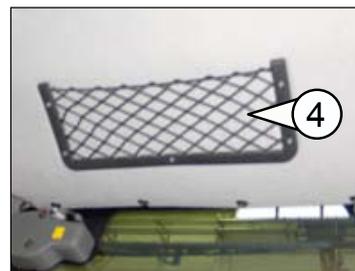
COURTESY COMPARTMENT

(fig.10/C Pos."1","2","3")

The courtesy compartment (fig.10/C Pos."4") is optional.



(fig.10/C)



Interior cab lighting

(fig.11/C Pos."1")

To switch the light on inside the cab, act on the ceiling light, pressing one of the ends.

In the central position (neutral) the lighting is off.



(fig.11/C)

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

STEERING WHEEL (adjustment)

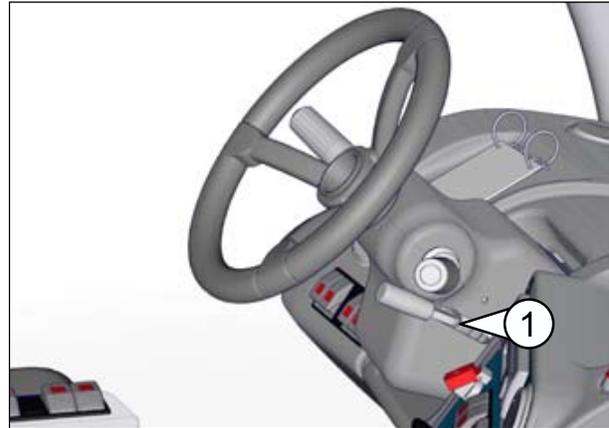
(Fig.15/C)

To adjust the steering wheel:

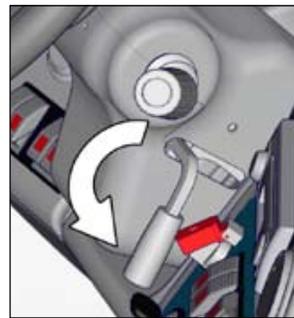
- Turn lever "1" (fig.15/C) downwards to release movements (fig.16/C).
- Push the steering wheel forward or pull it back in order to reach the desired position (fig.18/C).
- Push the steering wheel down or pull it up in order to reach the desired height (fig.19/C).
- Turn handle (fig.17/C) upwards to lock the steering wheel in its current position. Screw in with force to lock completely.

! - ATTENTION

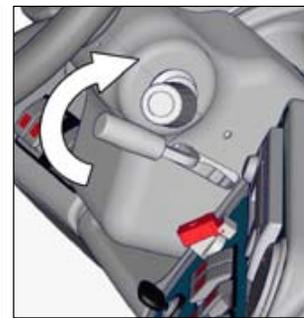
The steering wheel is correctly adjusted when the operator, with his/her back resting against the back of the seat, is able to take hold of the furthest part of the steering wheel with his/her elbows slightly bent.



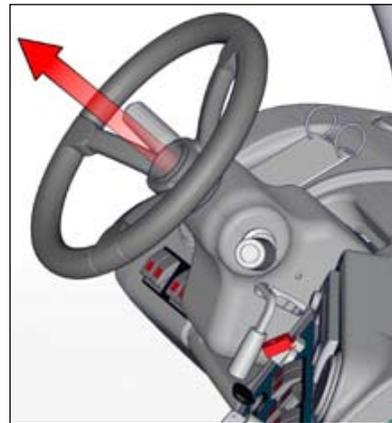
(fig. 15/C)



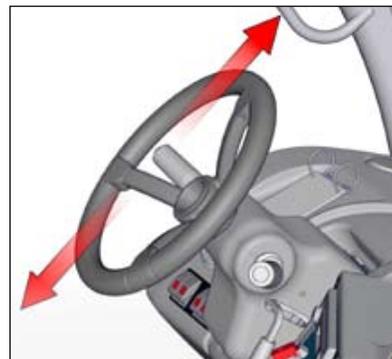
(fig. 16/C)



(fig. 17/C)



(fig. 18/C)



(fig. 19/C)

SEAT BELTS

(fig.20/C)

To fasten seat-belts:

1. Slide the tab (1) into the buckle (2) (pic."A").
2. Make sure it has been clicked in properly, then fit the belt around your body and adjust (pic."B").

! - ATTENTION

The belt is correctly adjusted when it fits tightly around the waist (fig.21/C).

To unfasten the seat-belt (tab. "C"):

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

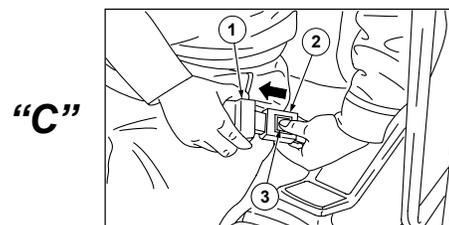
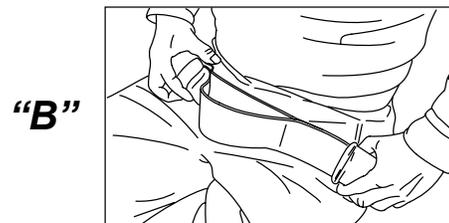
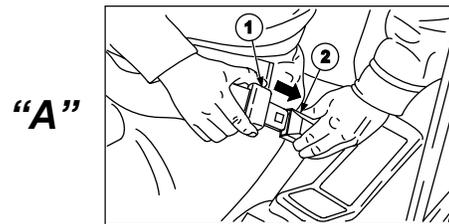
! - ATTENTION

Drive the vehicle only with the seat belt properly fastened and adjusted. Driving with the seat-belt unfastened, increases the risk of accidents.

! - ATTENTION

Do not use damaged or worn seat belts.

Do not use seat belts installed on vehicles that have been involved in accidents. Worn, damaged or weak the seat belts may break or give in during a collision, causing serious injury to the operator.



(fig.20/C)



(fig.21/C)

SEAT

(fig.22/C)

DIECI supplies different seat models depending on client requirements. The vehicle is equipped with a safety system called "man in" which uses an electrical micro switch in the driver's seat. This micro switch is located inside the seat cushion (fig.22/C Pos."A").

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



(fig. 22/C)

Seat adjustment

(fig.23/C)

The seat can be adjusted to different positions:

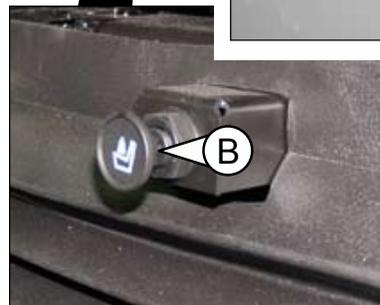
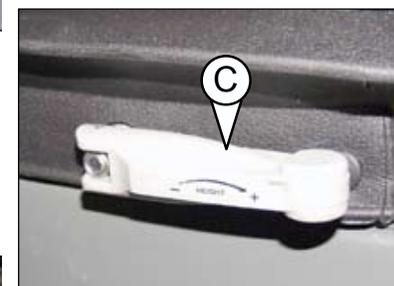
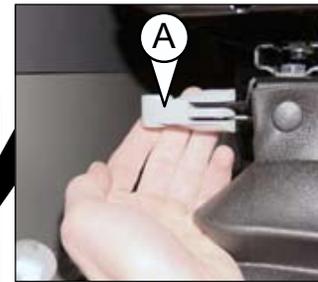
- A - Lock/unlock springing (horizontal/vertical) (fig.23/C).
- B - Adjustment of pneumatic springs (optional) (fig.23/C).
- C - Manual spring adjustment (optional) (fig.23/C).
- D - Longitudinal seat positioning (fig.24/C).
- E - Adjustment of backrest inclination (fig.24/C).

To unlock springs (horizontal/vertical) bring lever "A" (fig.23/C) toward the front of the vehicle.
Bring lever "A" (fig.23/C) toward the rear of the vehicle to lock springs.

- To adjust the pneumatic spring rate, pull pin "B" (fig. 23/C) to let out pressure and soften suspension.
Push pin "B" (fig.23/C) to increase pressure and harden suspension.
- Manual adjustment of the spring rate is obtained by rotating lever "C" (fig. 23/C) toward the symbol "+" printed on it to harden suspension.
Turn lever "C" (fig.23/C) toward the symbol "-" printed on it to soften suspension.
- For longitudinal seat adjustment, move lever "D" (fig.24/C) toward the left side of the vehicle by sliding along the runners.
Release the lever when the desired position has been reached.
Move slightly in order to make sure that the locking pin is positioned correctly in its housing.



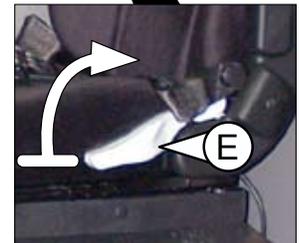
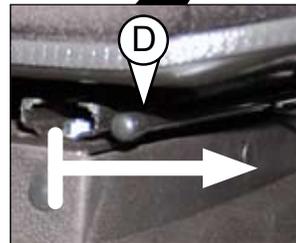
(fig. 23/C)



- To adjust backrest inclination, move lever "E" (fig.24/C) and push back on the backrest. The backrest will automatically adapt to the Operator's body.

! - ATTENTION

The seat has been correctly positioned when the operator is able to push the brake pedal completely down with his/her back firmly against the backrest.

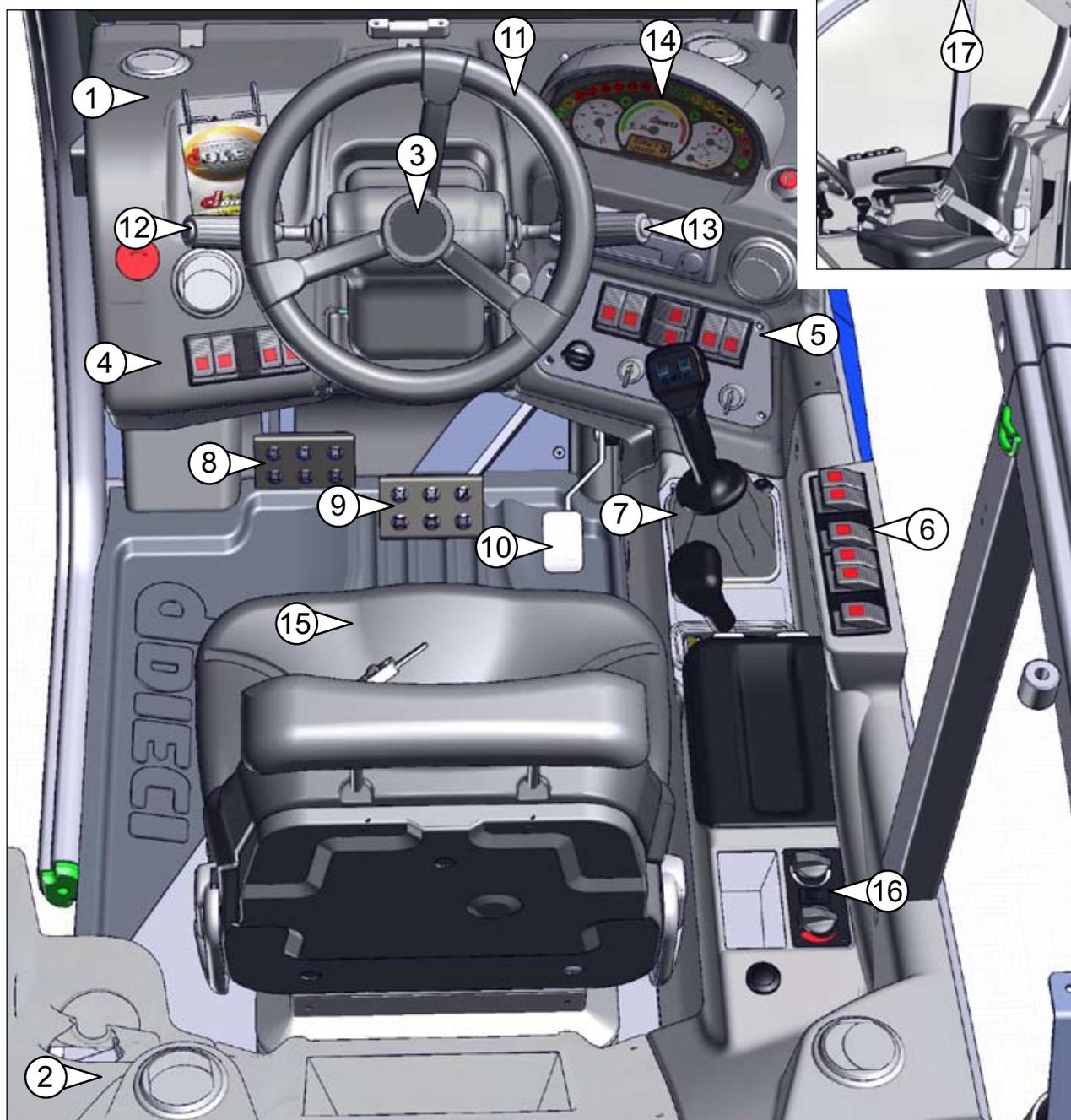


(fig.24/C)



GETTING TO KNOW THE PARTS INSIDE THE CAB

(fig.26/C)



(fig.26/C)

- | | |
|-----------------------------------|--------------------------|
| 1. Dashboard with front air-vents | 10. Accelerator pedal |
| 2. Dashboard with rear air-vents | 11. Steering wheel |
| 3. Adjustable steering shaft | 12. Gear lever |
| 4. Left dashboard | 13. Multi-function lever |
| 5. Right dashboard | 14. Central dashboard |
| 6. Upper dashboard | 15. Seat |
| 7. Lever dashboard/Joysticks | 16. Right rear dashboard |
| 8. "INCHING" pedal | 17. Roof dashboard |
| 9. Brake pedal | |

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

CENTRAL DASHBOARD - INDICATOR LIGHTS

(fig.27/C)



(fig.27/C)

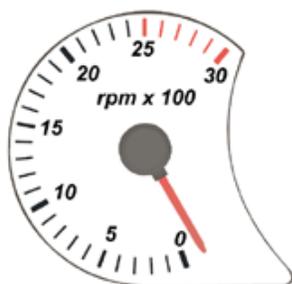
- | | | | |
|--|--|--|---|
| | Full beam headlights indicator light (Blue) | | Wheels alignment indicator consent (Yellow) |
| | Direction indicator lights (Green) | | Rear axle alignment indicator consent (Yellow) |
| | Spark plug pre-heating indicator light (Yellow) | | Slow gear (Yellow) |
| | Air filter obstructed light (Red) | | Fast gear (Yellow) |
| | Hydrostatic oil filter indicator light (Red) | | Rear axle block engagement light (Yellow) |
| | Engine oil pressure indicator light (Red) | | Parking brake and low brake fluid level indicator light (Red) |
| | Generator indicator light (Red) | | Drive oil temperature light. (Red) |
| | Insufficient pressure in the brake accumulator indicator light (Red) | | Outriggers lowered correctly light (Green) |
| | Parking brake light - Parking brake (Red) | | Fuel level indicator instrument |
| | General alarm indicator (Red) | | Water temperature indicator |
| | Mechanical gear engaged indicator light (Green) | | Forward gear indicator light (Green) |
| | Fast speed engaged light (Green) | | Reverse gear indicator light (Green) |

CENTRAL DASHBOARD - INSTRUMENT USE

(fig.28/C)



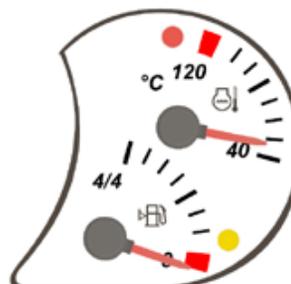
(fig.28/C)



Engine rev counter

Engine rev counter

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



Engine water temperature instrument

Engine water temperature instrument

During normal use, the temperature hand moves from the lower part of the instrument (right 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, almost reaching the maximum level (upper red mark), stop the engine and verify the cause. When the red indicator light switches on, the maximum temperature alarm is signalled. Operate at low RPMs (max 1500) in order to avoid damaging the cool engine. Avoid abrupt manoeuvres and acceleration until the right red mark has been passed.



Load monitoring instrument

Load monitoring instrument

The device detects the stability of the vehicle.

LCD

The LCD contains the clock, the hour meter displaying hours of use of the vehicle, the vehicle toeing state "N" (neutral), 1st, 2nd, 3rd, 4th gear engaged.

Fuel level indicator instrument

The instrument hand indicates the quantity of diesel present in the tank at any given moment. The maximum quantity is marked by the position of the hand on the left side. The hand will move down progressively, passing over a red mark which indicates minimum level (reserve), indicated by the same yellow light. When the hand completely stops (right side limit switch), the fuel tank is empty. To avoid damaging the engine, always keep the pointer above the minimum level.



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

Left front dashboard (Standard and optional electrical switches, indicator lights and control levers)
(fig.29/C)

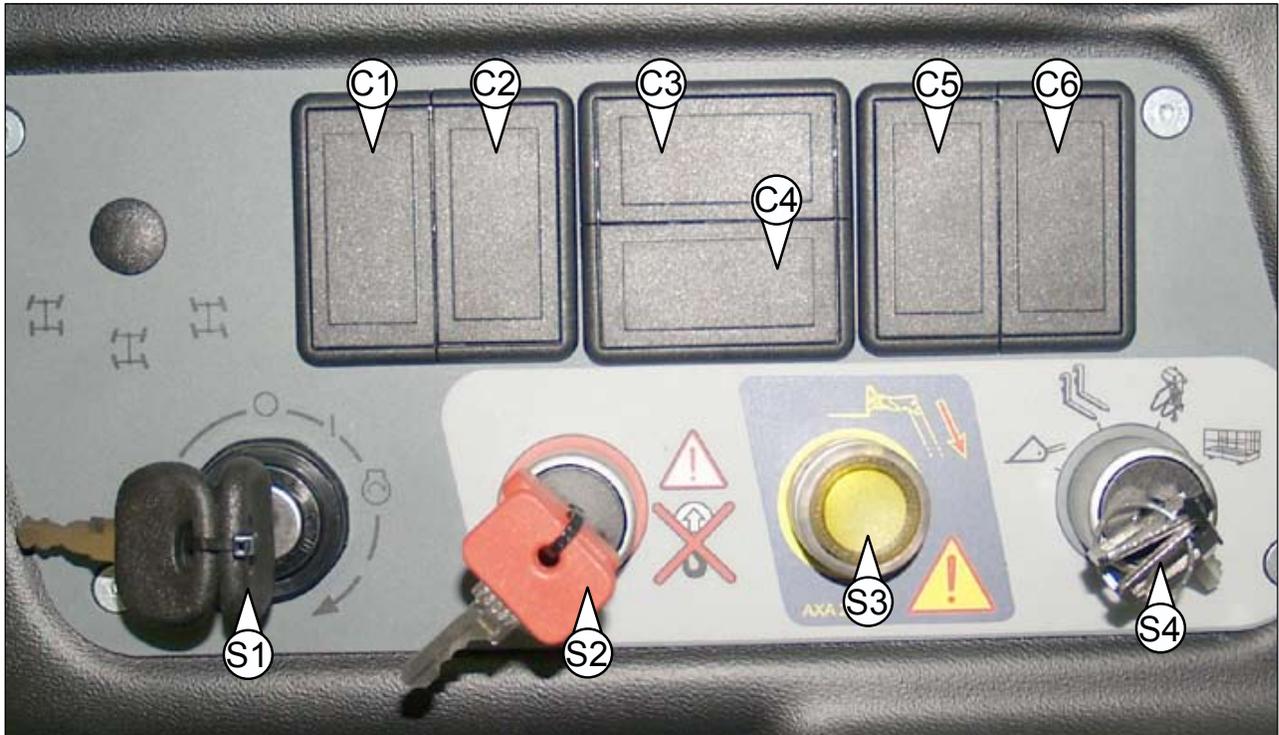


(fig.29/C)

- C1** → Optional (Available)
- C2** → Parking brakes switch (Red)
- C3** → Light on switch (Green)
- C4** → Optional (Available)
- C5** → Gear change switch (green)

- E6** → EMERGENCY BUTTON (hydraulic plant and thermal motor switch off)

Right dashboard (standard and optional electrical switches, indicator lights and control levers)
 (fig.30/C)



(fig.30/C)

C1 → Optional
 (Available)

C2 → Optional
 (Available)

C3 → Optional
 (Available)

C4 → Optional
 (Available)

C5 → Optional
 (Available)

C6 → Optional
 (Available)

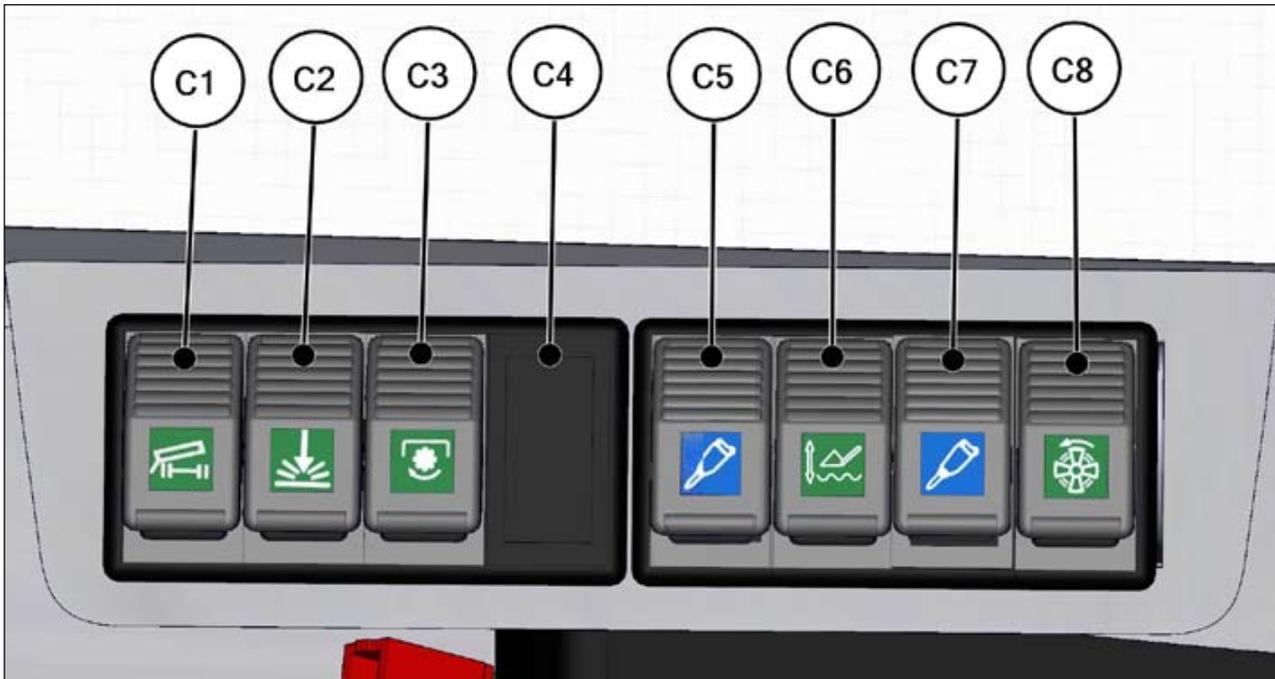
S1 → Thermal motor starter key/selector

S2 → Override key/selector
 (Red Key)

S3 → Anti-tipping device alarm re-entry push button
 (Red Button)

S4 → Vehicle functions selector/key (optional)
 (Grey Key)

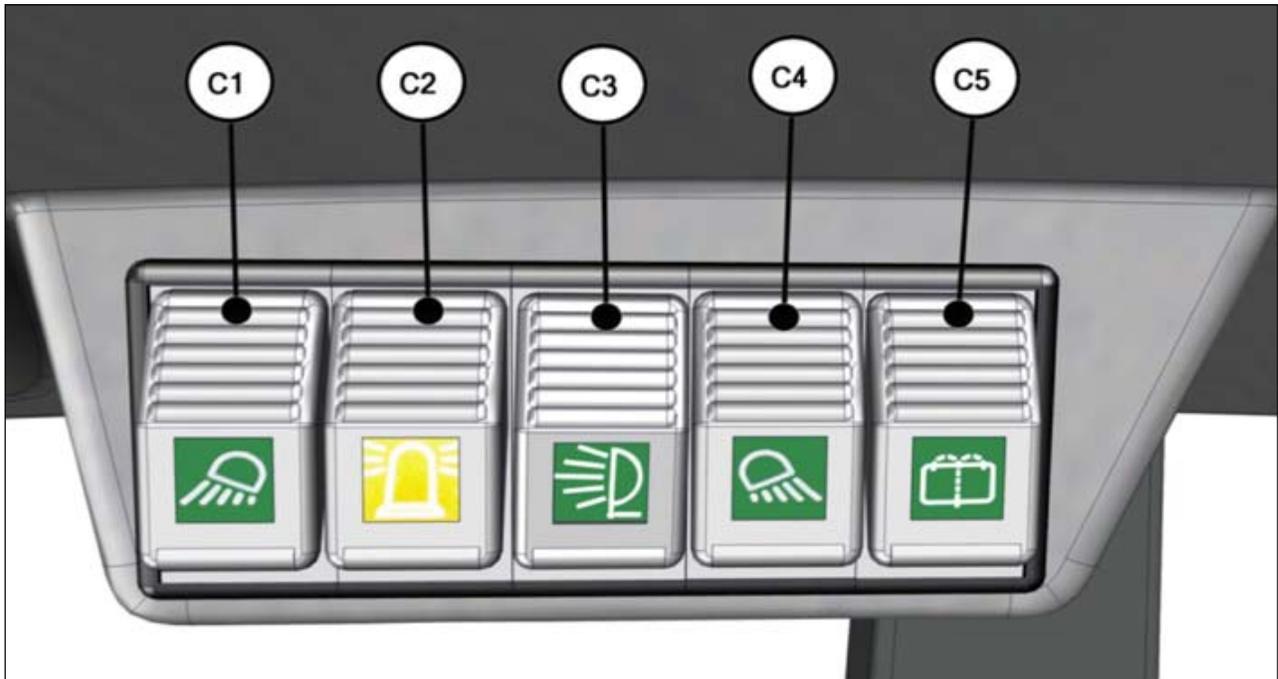
Upper dashboard (standard and optional electrical switches, indicator lights and control levers)
(fig.31/C)



(fig.31/C)

- C1** → Trailer Switch (optional)
(Green)
- C2** → Rear solenoid valve switch (optional)
(Green)
- C3** → PTO "Power take-off" switch (optional)
(Green)
- C4** → Optional
(Available)
- C5** → Boom head solenoid valve switch (optional)
(Blue)
- C6** → Boom suspension consent (optional)
(Green)
- C7** → Boom head 12v electric socket switch (optional)
(Blue)
- C8** → Fan inversion switch (optional)
(Green)

Roof dashboard (standard and optional electrical switches, indicator lights and control levers)
(fig.32/C)



(fig.32/C)

- C1** → Front work lights switch (optional)
(Green)
- C2** → Revolving light switch
(Yellow)
- C3** → Boom head work lights switch (optional)
(Green)
- C4** → Rear work lights switch (optional)
(Green)
- C5** → Rear window windscreen wiper/washer
(Green)

Emergency button

(fig.33/C Pos."1")

The vehicle is equipped with an emergency stop device that allows to avoid situations of imminent danger or danger in progress.

By pressing the emergency button (fig.33/C Pos."1") the thermal motor switches off and the vehicle stops.

The emergency stop device is released by turning the "mushroom-head" clockwise. Turning the button authorises machine re-start.

! - ATTENTION - !

The button must be used in the case of:

- **Emergency**, to switch the thermal motor off and the vehicle in situations of imminent danger or danger in progress.
- **Maintenance**, for safety to prevent accidental ignition of the vehicle during routine or extraordinary maintenance interventions.

! - ATTENTION - !

If the engine cannot be started, check that an emergency button has not been pressed (fig.33/C Pos."1"). If pressed, contact the Safety Manager to make sure there is no maintenance in progress, malfunctioning of the vehicle or dangerous situations.



(fig. 33/C)

IGNITION SWITCH

(fig.34/C)

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

- Switch on the instruments.
- Switch on the diesel engine.
- Release the parking brake automatically with the diesel engine in motion (fig.34/C Pos."1").
- Automatically engage the parking brake with the diesel engine off (fig.34/C Pos."0").

Conditions for start-up

Start-up can only occur if:

- The operator is correctly seated in the driver's seat.
- The gear selector is in the "N", or neutral, position.

Switching on instruments

Turn the key to position "1" (fig.374C) to power the electrical/electronic instruments.

When the dashboard is switched on, a check will be carried out on the instruments with all the indicator lights switched on and emission of an acoustic signal.

These will remain on until the engine is switched on:

- Battery indicator light
- Engine oil pressure indicator light

Other indicator lights may remain lit depending on the functions activated.

When the engine is running, the indicator lights signalling faults/malfunctions should go off and only those referring to active functions should remain switched on. If this is not the case, consult the "maintenance" chapter of this manual and contact a **DIECI** service centre.

Start-up

- Turn the key to position "1" (fig.34/C) to power the instruments.
- Turn the key to position "2" (fig.34/C) and keep it there for a few seconds in order to start-up.
- Once the engine has been started, release the key.

In the engine does not start within 5 seconds, try again at regular 15 second intervals to avoid overloading the starter.

During the first few minutes of use, keep transfer and load lifting speed low in order to heat up the engine and hydraulic oil. Operate at low RPMs (max 1500), avoiding sharp manoeuvres and accelerations until the 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.

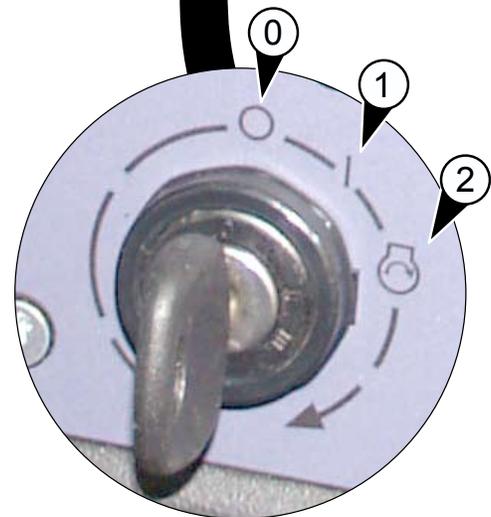
! - ATTENTION

With the motor started, the automatic parking brake disengages. Before starting up the vehicle, always verify that the parking brake has been manually engaged using its switch. To release the parking brake when the engine is stopped, refer to the paragraph, "towing the vehicle".

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



(fig.34/C)



! - ATTENTION - !

If the engine cannot be started, check that an emergency button has not been pressed (fig.34/C Pos."E"). If pressed, contact the Safety Manager to make sure there is no maintenance in progress, malfunctioning of the vehicle or dangerous situations.

If the engine does not start, consult the "maintenance" chapter of this manual and contact a **DIECI** service centre.

PEDALS

Accelerator pedal

(fig.35/C Pos."1")

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

The maximum speed of the vehicle varies on inflation pressure variation, the measurement and wear of the tyres.

Service brake pedal

(fig.35/C Pos."2")

Press the service pedal to slow down or stop the vehicle. The pedal operates directly on the service brakes inside the differential axles. When the brake pedal is pushed, the rear stop lights switch on. The lights remain switched 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 A PROBLEM.

"INCHING" PEDAL

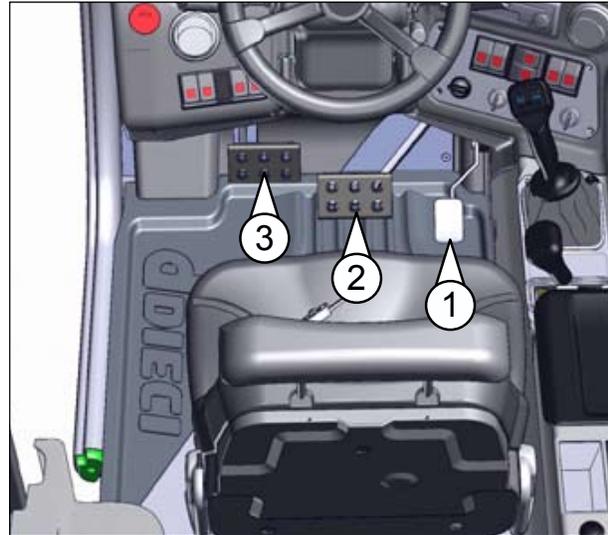
(fig.35/C Pos."3")

The pedal allows for slow, precise movements forward even when the engine is running at a high RPM. It acts directly on the hydrostatic transmission.

The vehicle stops, remaining partially braked, when the pedal is fully pressed down.

- ATTENTION

Do not press the "inching" pedal at high speeds, the vehicle will brake sharply and the Diesel engine could go into overrevving.



(fig.35/C)

MULTI-FUNCTION LEVER

Direction indicators

- Pull the lever towards the rear of the machine to signal a curve to the right (fig.36/C Pos."R").
- Push the lever towards the front of the vehicle to signal a turn to the left (fig.36/C Pos."L").

The indicators only function when the instruments are powered.

An indicator light on the central dashboard signals the activation of the direction indicators.



Function buttons

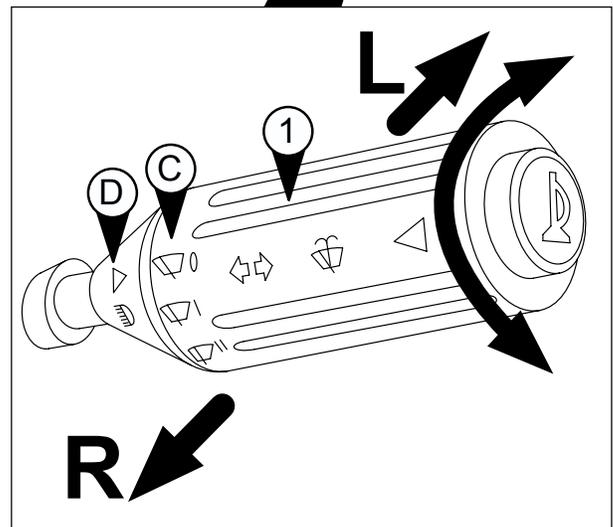
- The middle button on the handle activates the front windscreen wipers (fig.37/C Pos."2").
- The button located at the far end of the handle activates the Horn (fig.37C Pos."3").

Front windscreen wiper switch-on

Turning the knob "1" (fig. 36/C) the front windscreen wiper is switched on.

The symbols on the knob (fig.36/C Pos."C") indicate, with an arrow, (fig.36/C Pos."D") that the windscreen wiper is:

- 0 - Off
- I - Slow
- II - Fast

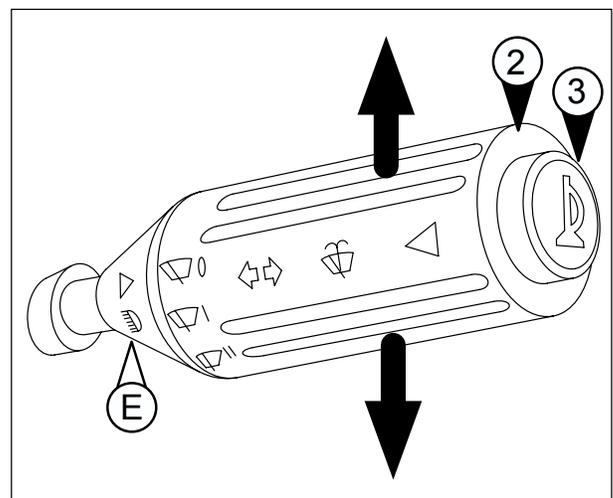


(fig.36/C)

Full beam headlights on

Full beam headlight (fig.37/C Pos."C") is activated.

- Pull lever up for individual flashes.
- Pull the lever down for continuous use.



(fig.37/C)

FORWARD / REVERSE GEAR SELECTION LEVER

This lever (fig.38/C) allows to change direction. On the dashboard, the indicator lights that indicate the direction in which the vehicle is travelling light up (fig. 39/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 towards the front of the vehicle (fig. 38/C), the FORWARD gear is engaged and the indicator light "F" (fig.39/ C) lights up.
- Moving the lever towards the rear of the vehicle (fig.38/C) , the reverse gear is engaged and indicator light "R" (fig.39/ C) lights up. When the reverse gear is engaged, an acoustic alarm is triggered.

! - ATTENTION - !

Lever movements are not active when:

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

! - ATTENTION - !

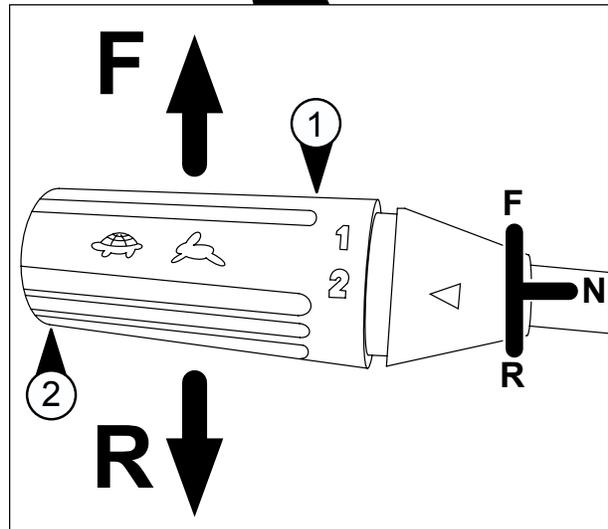
Load handling can be carried out only in "low" gear.

Procedure for changing direction:

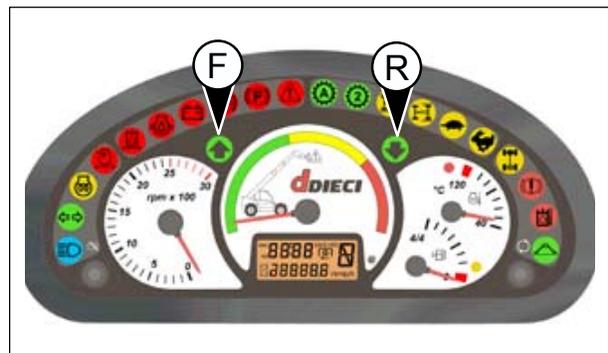
- Reduce engine speed to a minimum and bring the vehicle to a halt.
- Select the new direction.

! - 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.



(fig. 38/C)



(fig.39/C)

FAST/SLOW GEAR SWITCH

(fig.40/C Pos."A-B")

The two-speed mechanical selector is operated (fig.40/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 (fig.40/C Pos."B") for a few seconds to engage the FAST gear.
The indicator light (fig. 41/C Pos. "2") signals engagement.
- Hold the switch upward (fig.40/C Pos."A") for a few seconds to engage the LOW gear.
The indicator light (fig. 41/C Pos. "1") signals engagement.

! - ATTENTION

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

! - ATTENTION

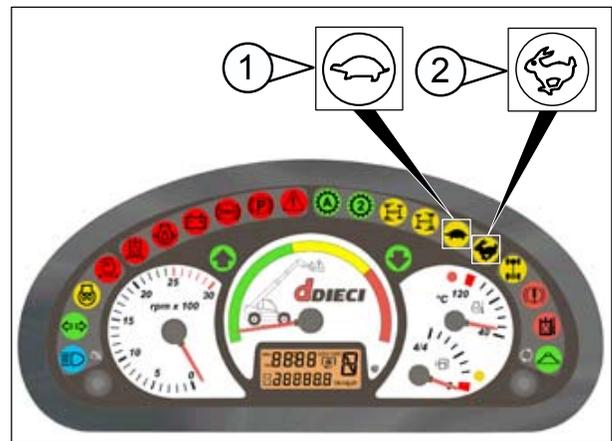
Do not change gears when the vehicle is in motion.

! - ATTENTION

Hold down the "inching" pedal until the selected gear's corresponding indicator light switches on.



(fig.40/C)



(fig.41/C)

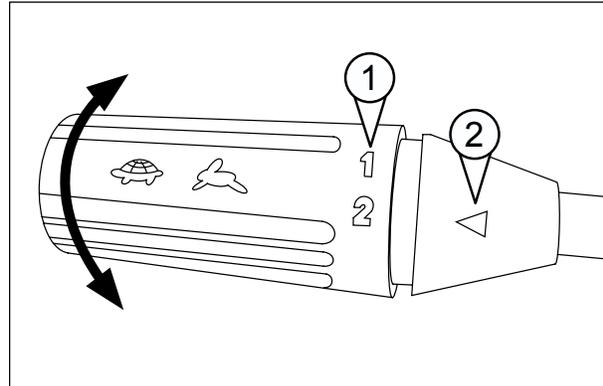
HYDRAULIC GEAR SWITCH (OPTIONAL)

(fig.42/C Pos."1")

The rotary function of the "forward/reverse" lever allows the hydraulic gear change.

To change gears:

- **Bring the vehicle to a complete stop,**
- Press and hold down the "inching" pedal,
- Turn the lever "1"(fig.42/C) taking symbol "2" to the arrow (fig.42/C Pos."2") to engage the FAST gear. The indicator light (fig. 43/C Pos. "2") signals engagement.
- Turn the lever "1"(fig.42/C) taking symbol "1" to the arrow (fig.42/C Pos."2") to engage the SLOW gear. The indicator light (fig. 43/C Pos. "2") SWITCH-OFF signals engagement.



(fig.42/C)

! - ATTENTION

The indicator light "1" (fig.43/C) signals that the mechanical gear is engaged.

! - ATTENTION

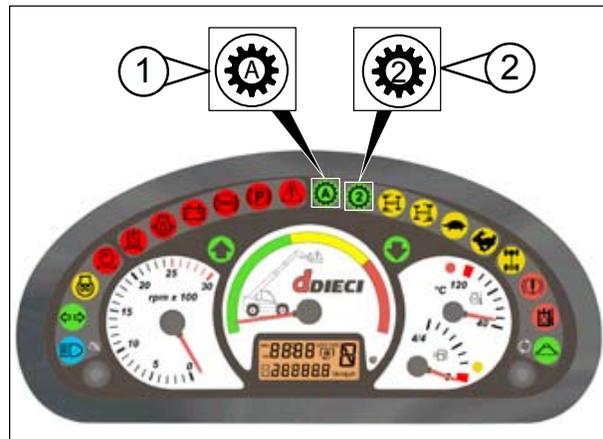
Insert SLOW gear to operate in the construction yard. Insert the FAST gear for long transfers without a load, in unobstructed places, with good visibility with flat land without danger of pedestrian crossings.

! - 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.



(fig.43/C)

PARKING BRAKE

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

When switch "A" (fig.44/C) is pressed, the parking brake is engaged. The indicator warning light on the push button and the central dashboard (fig.45/C Pos."1") indicate proper engagement of the parking brake. When the parking brake is engaged, the vehicle cannot move and the hydrostatic transmission is disengaged.

To ensure the parking brake is working properly, contact a **DIECI** authorised workshop.



- ATTENTION -

If the indicator light "2" switches on (fig.45/C) the parking brake is blocked.

Do not advance with the vehicle.

Consult the "D Maintenance" chapter in this manual.

If the indicator light should remain on, contact a **DIECI** after-sales centre.



- ATTENTION

In the event the parking brake fails do not use the vehicle.

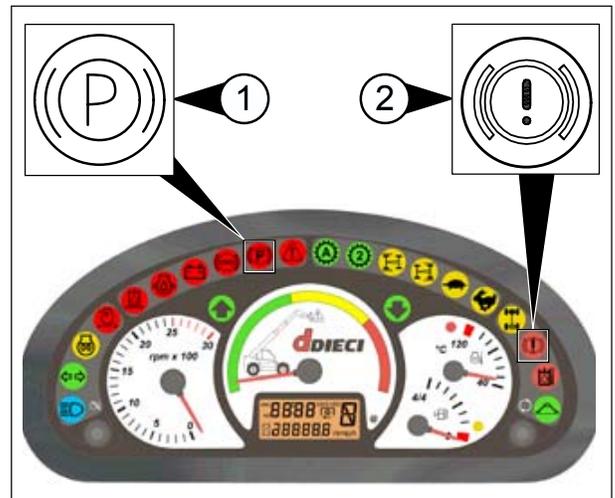
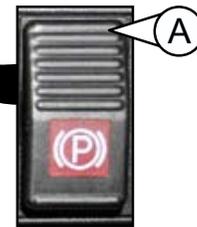


- ATTENTION

Unauthorised modifications of the rear axle ratio, the vehicle weight, or wheel and tyre dimensions may compromise proper functioning of the parking brake.



(fig.44/C)



(fig.45/C)

SPIRIT LEVEL AND INCLINOMETER

(fig.46/C)

The spirit level (fig.46/C Pos."1") is situated in the centre of the dashboard. Used to check the correct transversal leveling of the vehicle.

For safe operation, the air bubble must be in the centre; with maximum approximation margin of 2° to the right or left. The inclination exceeds 2° when the air bubble is completely outside of the two margins "A" and "B" (fig.47/C).

The vehicle can mount two types of spirit level, standard (fig.47/C) or optional (fig.48/C).

Reference grading is present in the optional level. The inclination exceeds 2° when the air bubble is completely outside of the two degrees (fig.48/C pos."A").

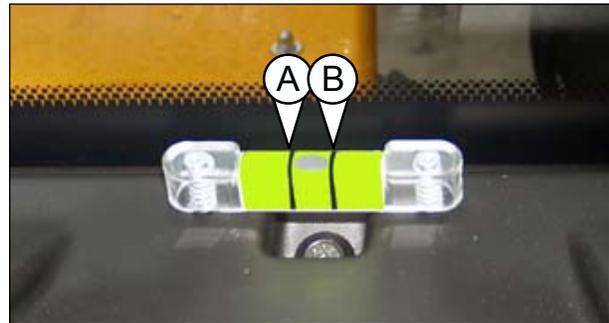


(fig.46/C)

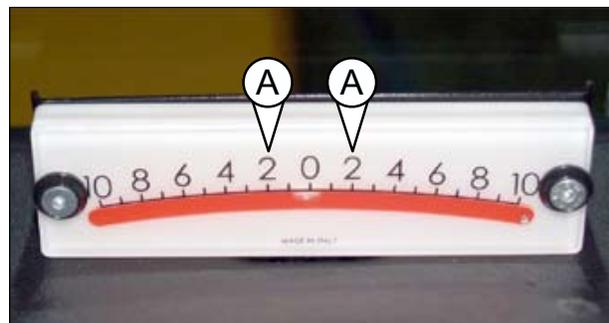


- PROHIBITION -

IT IS PROHIBITED to operate with transversal inclination exceeding 2°.



(fig.47/C)



(fig.48/C)



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

BOOM CONTROL LEVER

(fig.49/C Pos."1")

This lever is found to the right of the operator (fig.49/C Pos."1") . It is used to manoeuvre the boom and its extremities.

- ATTENTION

Before using the boom make sure that the surrounding area is free. Make sure that the loads to be raised correspond with the capacity diagrams of the vehicle.

- ATTENTION

The instructions refer to the standard version at the time of printing. In there are special options or following technical updates, lever movements may correspond to different controls. For this reason, always refer to instructions present inside the driver's cab.

- ATTENTION

The Manufacturer offers a range of levers (Joysticks) for boom movement with different technical specifications and those different than the standard version (see following pages).



(fig.49/C)

Joystick 3 in 1 ON/OFF (Standard version)

(fig.50/C)

Before each manoeuvre, press and hold down the “man in” control lever “A” (fig.50/C).

Boom manoeuvre:

- Pull joystick “B” (fig.50/C) backward to raise the boom.
- Push the lever “B” (fig.50/C) forward to lower the boom.

Boom extension:

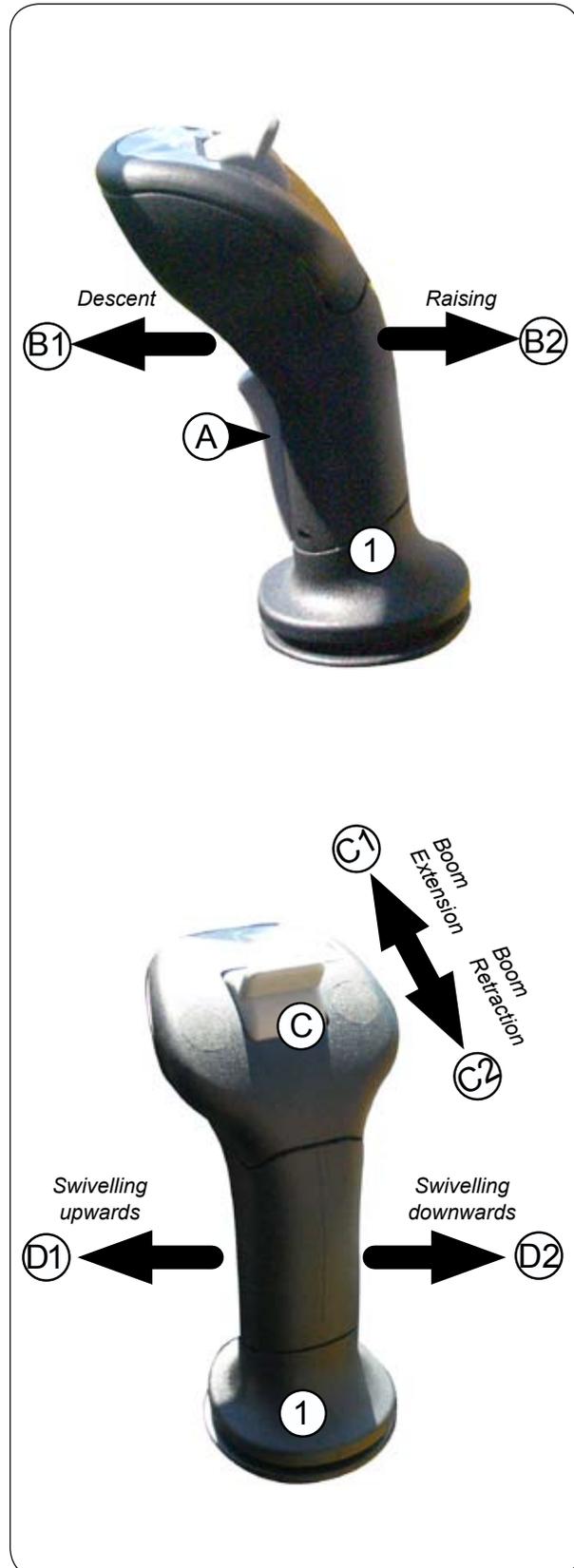
- Push the lever “C” (fig.50/C) forward to extend the boom.
- Push the lever “C” (fig.50/C) backward to return the boom.

Swivelling support attachment:

- Move joystick “B” (fig.50/C) to the right side to swing the support attachment downward.
- Move joystick “B” (fig.50/C) to the left side to swing the support attachment upward.

NOTE:

With 3 in 1 distributor installed, the vehicle is equipped with a second Joystick (fig.50/C pos.”A”) to control the services. For use, consult the “**Services control lever**” paragraph.



(fig.50/C)

Joystick 3 in 1 Proportional Extension (Standard version)

(Fig.51/C)

Before each manoeuvre, press and hold down the “man in” control lever “A” (fig.51/C).

Boom manoeuvre:

- Pull joystick “1” (fig.51/C) backward towards the letter “B2” (fig.51/C), to raise the boom.
- Push joystick “1” (fig.51/C) forward towards the letter “B1” (fig.51/C) to lower the boom.

Boom extension:

- Push the roller “C” (fig.51/C) forward towards the letter “C1” to extend the boom.
- Push the roller “C” (fig.51/C) backward towards the letter “C2” to retract the boom.

NOTE: the extension or retraction speed will be proportional to the movement of roller “C” (fig.51/C).

Swivelling support attachment:

- Move joystick “1” (fig.51/C) right toward letter “D2” to swivel the support attachment downward.
- Move joystick “1” (fig.51/C) left toward letter “D1” to swing the support attachment upward.

NOTE: with 3 in 1 distributor installed, the vehicle is equipped with a second Joystick (fig.51/C pos.”A”) to control the services. For use, consult the “**Services control lever**” paragraph.

ALARM RE-ENTRY PUSH BUTTON:

(If present)

Press the button “F (fig.51C) to bring the load back to safe conditions in case of intervention of the guards. For the functioning and use specifications, refer to chapter “C”, “Alarm re-entry push button” paragraph.



(fig.51/C)

3 in 1 Joystick for basket

(Fig.52/C)

Before each manoeuvre, press and hold down the “man in” control lever “A” (fig.52/C).

Boom manoeuvre:

- Pull joystick “B” (fig.52/C) backward to raise the boom.
- Push the lever “B”(fig.52/C) forward to lower the boom.

Boom extension:

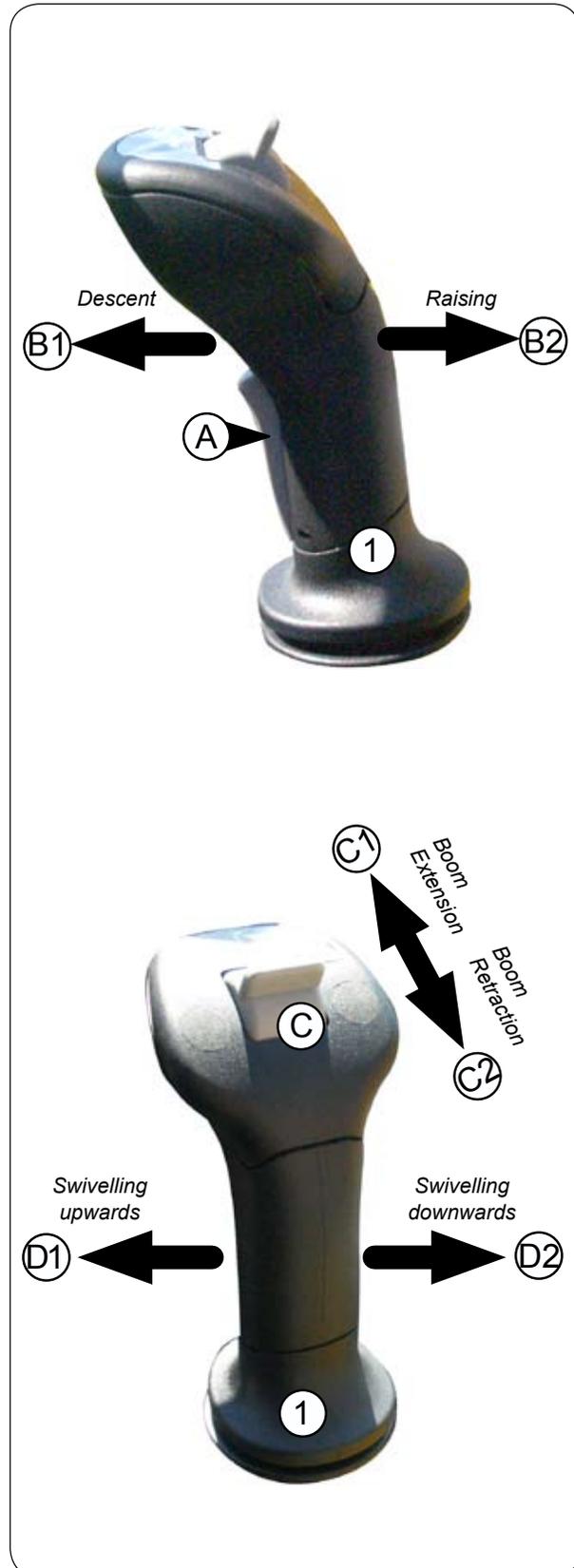
- Push the lever “C”(fig.52/C) forward to extend the boom.
- Push the lever “C”(fig.52/C) backward to return the boom.

Swivelling support attachment:

- Move joystick “B” (fig.52/C) to the right side to swing the support attachment downward.
- Move joystick “B” (fig.52/C) to the left side to swing the support attachment upward.

NOTE:

With 3 in 1 distributor installed, the vehicle is equipped with a second Joystick (fig.52/C pos.”A”) to control the services. For use, consult the “**Services control lever**” paragraph.



(fig.52/C)

Joystick 4 in 1 Extension
Proportional control
Proportional services
 (Fig.53/C)

Before each manoeuvre, press and hold down the “man in” control lever “A” (fig.53/C).

Boom manoeuvre:

- Pull joystick “1” (fig.53/C) backward towards the letter “B2” (fig.53/C), to raise the boom.
- Push the joystick “1” (fig.53/C) forward towards the letter “B1”(fig.53/C) to lower the boom.

Boom extension:

- Push the roller “C” (fig.53/C) forward towards the letter “C1” to extend the boom.
- Push the roller “C” (fig.53/C) backward towards the letter “C2” to retract the boom.

Note: the extension or retraction speed will be proportional to the movement of roller “C” (fig.53/C).

Swivelling support attachment:

- Move joystick “1” (fig.53/C) right toward letter “D2” to swivel the support attachment downward.
- Move joystick “1” (fig.53/C) left toward letter “D1” to swing the support attachment upward.

Service controls:

- Push roller “E” (fig.53/C) forward, towards letter “E1”, for services.
- Push roller “E” (fig.53/C) backward, towards letter “E2”, for services.

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

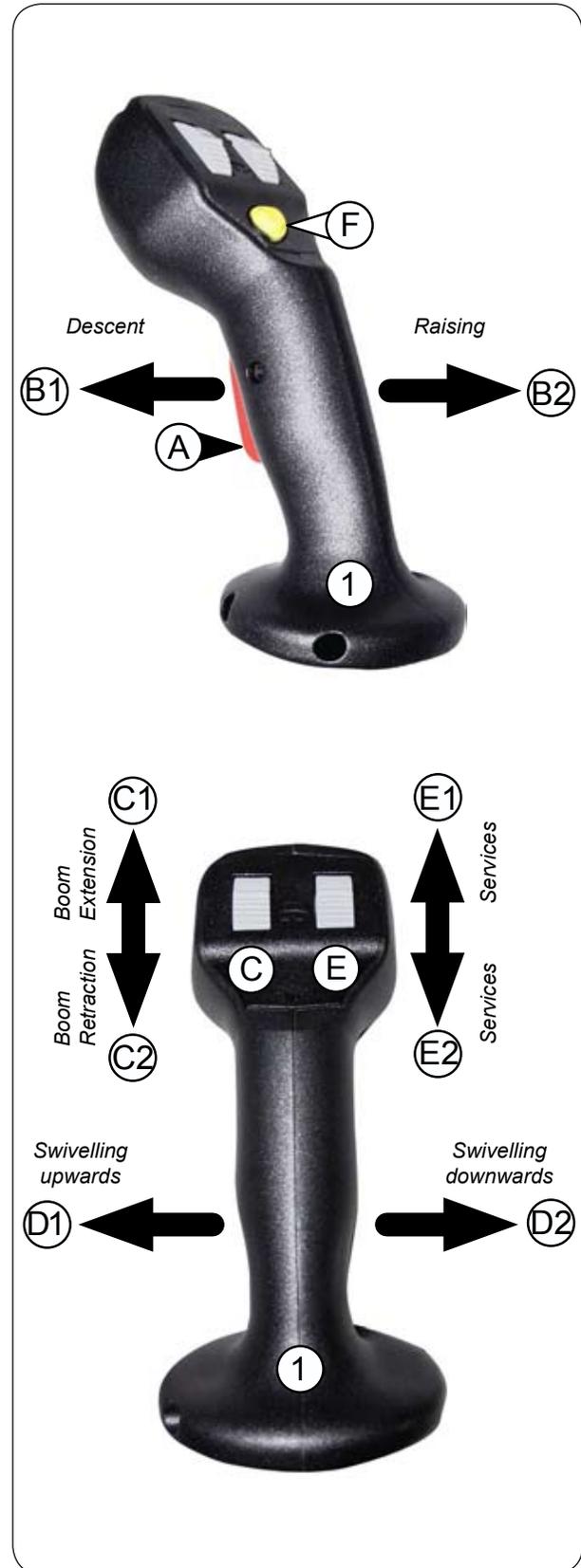
! - ATTENTION

Before operating the vehicle, ensure that service roller “E” is working properly.

Work in an area free of any obstacles to allow so that movements can be checked without risk of damaging things, other people or animals.

ALARM RE-ENTRY PUSH BUTTON:
 (If present)

Press the button “F (fig.53/C) to bring the load back to safe conditions in case of intervention of the guards. For the functioning and use specifications, refer to chapter “C”, “Alarm re-entry push button” paragraph.



(fig.53/C)

Joystick 4 in 1 Extension
Proportional control
Proportional services

(Fig.54/C)

Before each manoeuvre, press and hold down the “man in” control lever “A” (fig.54/C).

Boom manoeuvre:

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

Boom extension:

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

Note: the extension or retraction speed will be proportional to the movement of roller “C” (fig.54/C).

Swivelling support attachment:

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

Service controls:

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

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

- ATTENTION

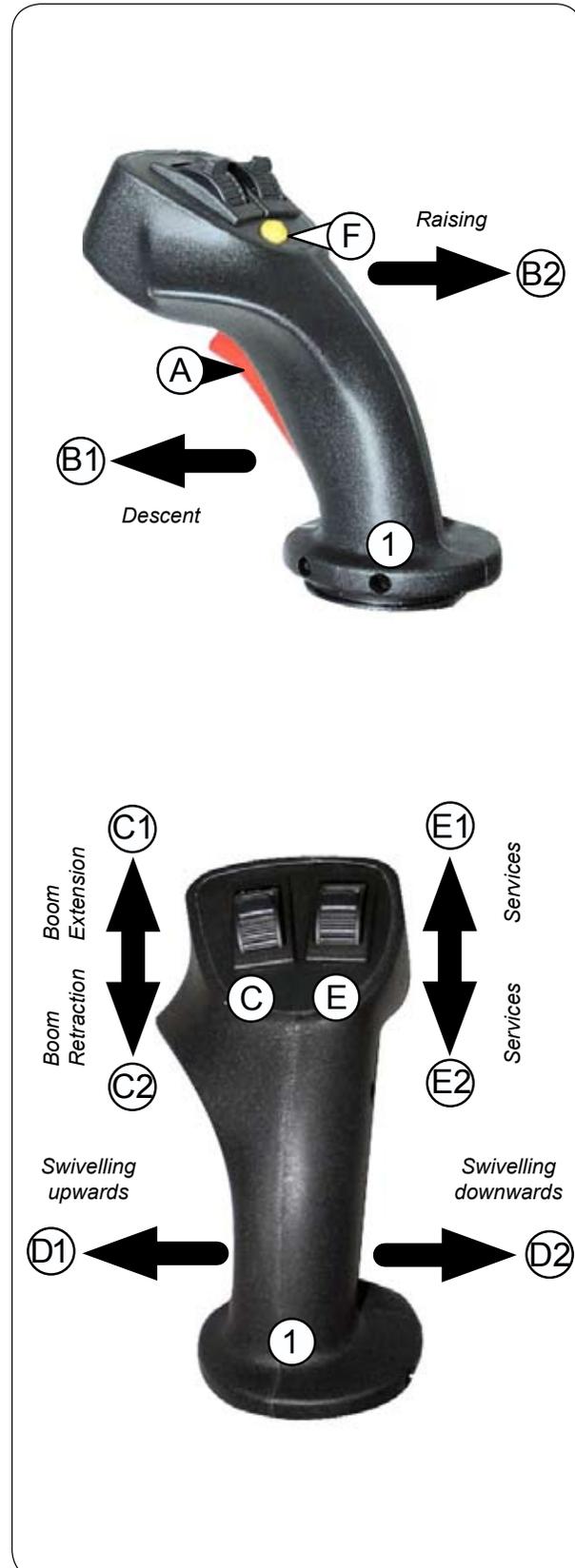
Before operating the vehicle, ensure that service roller “E” is working properly.

Work in an area free of any obstacles to allow so that movements can be checked without risk of damaging things, other people or animals.

ALARM RE-ENTRY PUSH BUTTON:

(If present)

Press the button “F (fig.54C) to bring the load back to safe conditions in case of intervention of the guards. For the functioning and use specifications, refer to chapter “C”, “Alarm re-entry push button” paragraph.



(fig.54/C)

Service control lever

With 3 in 1 distributor installed, the vehicle is equipped with a second Joystick (fig.55/C pos."A") to control the services.

To make movements:

- Grip the Joystick "A" (fig.55/C),
- Press and hold button "B" (fig.55/C)
- Move Joystick "A" to the right/left (fig.55/C).

! - **ATTENTION**

Before operating the vehicle, ensure that Joystick "A" (fig.62/C) is working properly. Work in an area free of any obstacles to allow so that movements can be checked without risk of damaging things, other people or animals.



(fig.55/C)

ANTI-TIPPING DEVICE

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

The device is made of:

- Longitudinal moment indicator.
- Alarm re-entry button.
- Override selector.

The device is always working.

The device is not intended for warning of the risk of overturning in case of:

- A sudden overload;
- When transporting/moving with loads lifted;
- Operation on rough grounds, with obstacles or holes.
- When moving on a gradient or near a slope;
- High speed on a straight road or a curve.

If the system malfunctions, the device blocks all telescopic boom movements. Display "1" (fig.56/C) will show the error code, general alarm light "2" (fig.56/C) will permanently switch-on (see "Central Dashboard - Indicator Lights" paragraph) and the buzzer will sound continuously. The error code will flash.

In these conditions the operator can return to clock display by pressing left key "3" (fig.56/C). Once pressed, the panel will stop sounding but the general alarm light will remain on for as long as the error remains active. By pressing the left key again, the error will be displayed again, if still active. To identify the anomaly search for the corresponding error code in the "Anti-tipping device errors" paragraph.

With the device blocked it is possible to bring the load to safe conditions by using the override selector "1" (fig.57/C) **for use specifications, refer to paragraph "Override selector"**.

! - ATTENTION - !

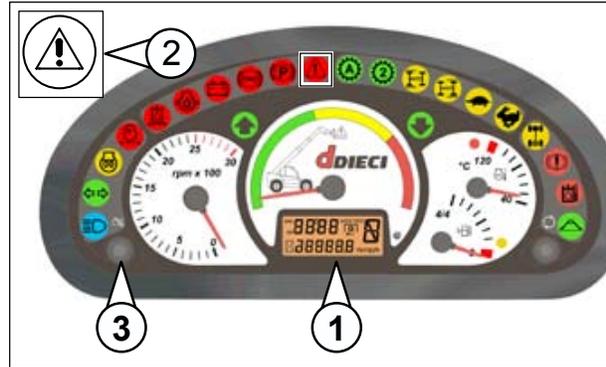
With the device blocked, the override selector can only be used to bring the load and the vehicle to safe conditions. The operation can only be performed by qualified personnel that has been authorised by the Safety Manager.

By pressing and holding button "3" (fig.56/C), the instrument performs a functioning test, repositioning itself on the indication of the current state of the load. Perform the test every 50h of vehicle use.

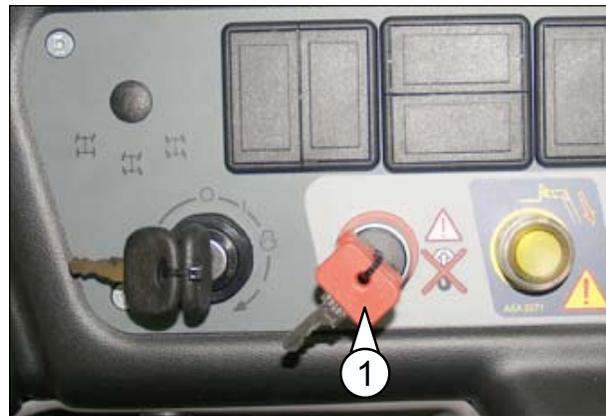
! - ATTENTION

The test must be performed with vehicle at a standstill, unloaded, on flat horizontal ground, parking brake engaged, boom closed and lowered.

A load test to verify efficiency of the device must be carried out every 100 working hours, during routine maintenance. This test can only be carried out by an authorised DIECI workshop.



(fig.56/C)



(fig.57/C)

Longitudinal moment indicator

(fig.58/C)

The indicator has a scale of three colours that respectively indicate:

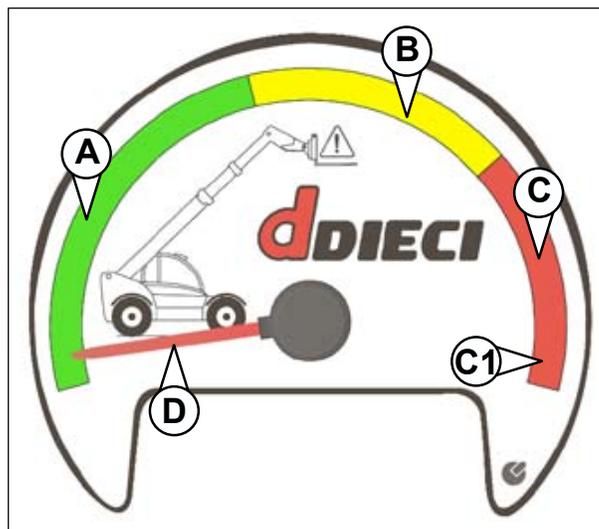
- Green "A" (fig.58/C), normal working condition; no acoustic signal.
- Yellow "B" (fig.58/C), no pre-alarm condition; no acoustic signal.
- Red "C" (fig.58/C), tipping limit load; intermittent acoustic alarm.
- Red "C1" (fig.58/C), tipping limit load, instrument full high scale; continuous audible signal, light "1" (fig.59/C) general alarm on.

The state of the load is signalled by the indicator "D" (fig.58/C), that turns from left to right upon the increasing of the detected load.

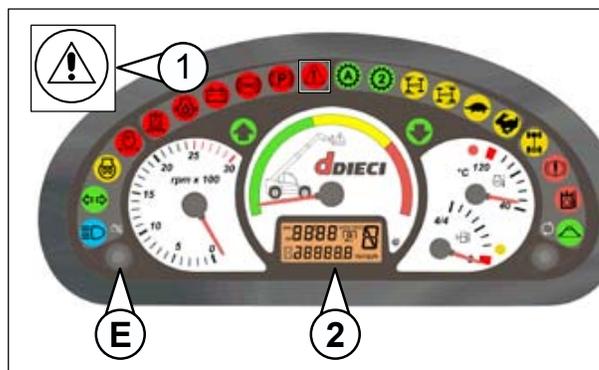
The intermittent acoustic signal that intervenes, on reaching the red zone "E" (fig.59/C) of the instrument, can be deactivated by pressing button "C" (fig.58/C). The acoustic signal is automatically re-enabled on reaching the Red "C1" (fig.58/C).

When the load limit is reached (fig.58/C Pos."C1"), the device automatically blocks all vehicle movements.

When the instruments are switched on, the device runs an automatic test. All LEDs switch on, indicators move and an audible signal is heard. If this is not the case, contact the **DIECI** after-sales network immediately.



(fig.58/C)



(fig.59/C)

Alarm re-entry button

(fig.60/C Pos."1" - fig.61/C Pos."1")

The button can be positioned on the dashboard (fig.60/C Pos."1") or on joystick (fig.61/C Pos."1") depending on the vehicle models.

When the load limit is reached (fig.58/C Pos."C1"), the device automatically blocks all vehicle movements, activating the alarm re-entry push button.

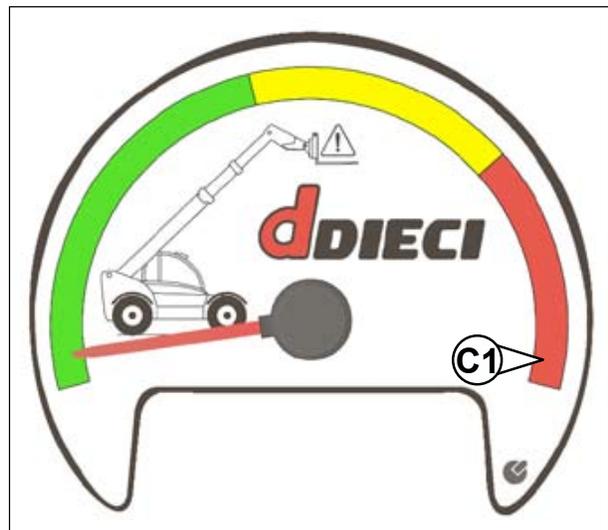
The alarm re-entry push button retracts the extension of the telescopic boom, bring the vehicle to safe conditions. Once the safe condition has been reached, the alarm will stop working, the button is disabled and the joystick starts working. The button must be kept pressed until it is automatically disabled.



(fig.60/C)



(fig.61/C)



(fig.62/C)

Override selector

(fig.63/C Pos."1")



- ATTENTION -

The override selector can only be used after having attempted restoring the safe conditions by using the Alarm re-entry push button.

With the indicator in position "C1" (fig.64/C), the **override selector** (fig.63/C Pos."1"), activates; the selector is the spring type.

When the load limit is reached (fig.64/C Pos."C1"), the device blocks all vehicle movements.

In these conditions it is possible return to safe conditions:

- Rotate the red key (fig.63/C Pos."1") to position "B" (fig.63/C) and keep it in this position.
- Retract or raise the boom **only** bringing the boom back to a safe position (see capacity diagram).
Do NOT lower or extend the boom as they are destabilising movements.
- Once the safety zone has been reached, the alarm will stop, the selector can be released.



- ATTENTION -

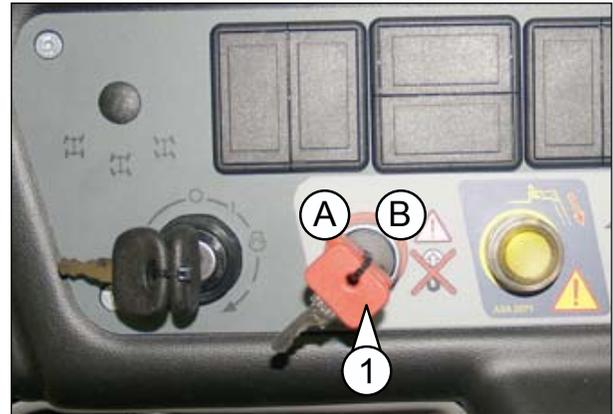
By turning the override selector (fig.63/C Pos."1") to position "B" (fig.63/C) the anti-tipping systems are deactivated. **IT IS MANDATORY** to consult the load diagram (found in the cab regarding use and maintenance) before carrying out any manoeuvre. Using the inclinometer and the letters on the boom, the exact position of the boom can be determined. Do make any pejorative movements in these conditions or vehicle stability may be compromised causing overturning.

The selector is a type of key that provides the Safety Manager with the possibility of removing the key and not allow anyone else to deactivate the anti-tipping system.

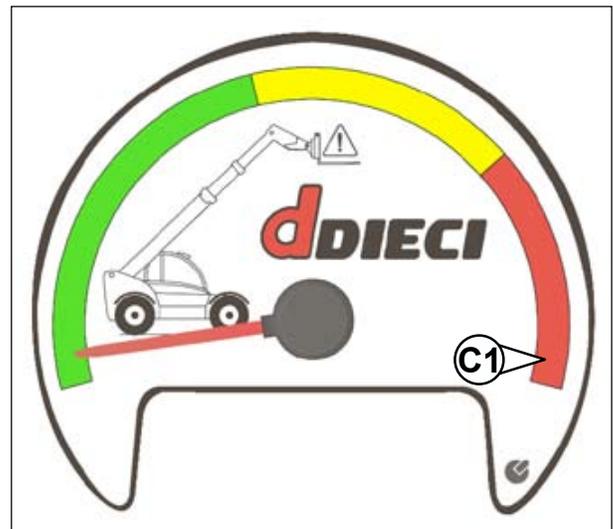


- ATTENTION -

These operations can only be performed by qualified personnel that has been authorised by the Safety Manager.



(fig.63/C)



(fig.64/C)



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

ANTI-TIPPING DEVICE CHECK

- ATTENTION -

IT IS COMPULSORY TO CHECK CORRECT FUNCTIONING OF THE ANTI-TIPPING DEVICE BEFORE STARTING WORK AGAIN.

To correctly check the device follow the operations:

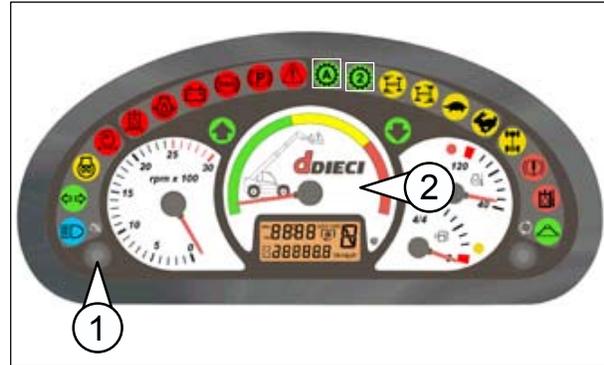
- Press the left button for five seconds (fig. 13, pos. 1), all instrumentation will perform a functioning test, by repositioning at indication of current status of the load.
- Ensure that work selection key (fig. 14, pos. 1) is positioned in Forks position.
- Place the machine on tyres with the outrigger feet fully lifted (if present), on flat and consistent soil.
- Using the forks load a weight above 300 kg or, however, significant for the capacity of the machine.
- Lift the load for about 1 m from the ground.
- Slowly slip off the boom.
During this manoeuvre monitor the Longitudinal Moment indicator (Fig. 13, pos. 2). Once the end of the red area is reached, the red general alarm warning light must switch on with continuous acoustic signal, the extension movement will be simultaneously blocked.
- Now check that all other boom movements are blocked.
- Check block happens in the point indicated in the capacity diagram in the notepad inside the cabin.
- If all works correctly, use the alarm retraction button to re-enable the movements of the boom and start work.

If outrigger feet are present on the machine, repeat the operations with the outrigger fully lowered but with a load above 500 kg or, however, significant for the capacity of the machine.

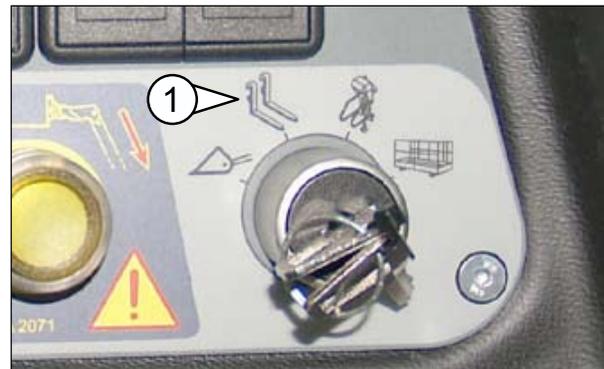

- DANGER -

IN CASE OF ANOMALIES TO THE SAFETY DEVICES, INTERRUPT WORK UNTIL REPAIRED.

Every 100 hours of functioning, a test must be carried out during routine maintenance with load to check the efficiency of the device. This test can only be carried out by a **DIECI** authorised workshop.



(fig. A)



(fig. B)





VEHICLE FUNCTION SELECTOR

(fig.65/C pos."1")

The vehicle possesses a "vehicle functions selector" (fig.65/C Pos."1") which must **ALWAYS** be set on the attachment to be used.

The selection categories are:

- **Shovel (shovel mode)**
(fig.65/C Pos."A" shovel symbol)
Other accessories:
Buckets, mixing buckets.
- **Handling objects (fork lift mode)**
(fig.65/C Pos."B" forks symbol)
Other accessories:
Forks, ladles, material baskets.
- **Handling objects (crane mode)**
(fig.65/C Pos."C" winch symbol)
Other accessories:
plate with lifting hook, winches, hoists,
extension trestles, winches with extension trestles.
- **Handling persons (elevation platform mode)**
(fig.65/C Pos."D" basket symbol)
Other accessories:
all man baskets.

The attachments applicable to the vehicles in question refer to the **DIECI** price list.

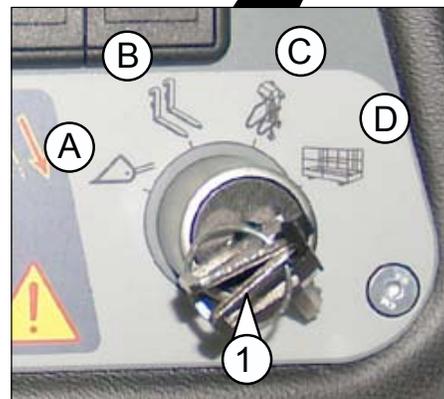
Select the attachment by turning the key. The selector is a type of key that provides the Safety Manager with the possibility of removing the key after having selected the tool, not allowing anyone else to use the selector.

In Shovel mode with boom fully retracted, the anti-tipping device is automatically deactivated.
Should the boom be extended or be subsequently extended, functioning will be the same as in forks mode.
In this mode:

- the instrument (fig.66/C Pos."A") is always functioning regularly and indicates only the load state.
- With boom closed, the buzzer does not work to signal the load state but starts working only to signal system errors.



(fig. 65/C)



(fig. 66/C)

 - **DANGER** - 

If using an accessory different to those indicated as “other accessories” when in “Shovel” mode, there is a danger of overturning.

 - **ATTENTION**

The selection of the “elevation platform mode” for lifting persons excludes the possibility of selecting steering different from that set.

 - **ATTENTION**

only use of **DIECI** original attachments is allowed. **DIECI** declines all responsibility for damage to the vehicle, people or things in cases where original attachments have not been used.

 - **ATTENTION**

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

 - **PROHIBITION** - 

IT IS PROHIBITED to use the vehicle with different attachments from those selected using the “vehicle functions selector”.

 - **ATTENTION** - 

THE BASKET CAN BE USED FROM THE CAB BY SETTING THE “VEHICLE FUNCTION SELECTOR” ON “FORKS” (FIG.65/C POS.”B”) ONLY TO TAKE THE BASKET TO THE GROUND IN THE EVENT THE OPERATOR IS FEELING ILL OR HAS BEEN HURT.

STANDARD STEERING SELECTOR

(fig.68/C Pos."1")

By moving the lever (fig.68/C Pos."1") 3 types of steering are obtained:

1 - Normal steering (fig.69/C Pos."B")

This type of steering allows for **front steering only**.

To activate front steering, move lever "1" (fig.68/C) to position "B" (fig.69/C) shown on the functions sticker.

2 - Beam steering (fig.69/C Pos."A")

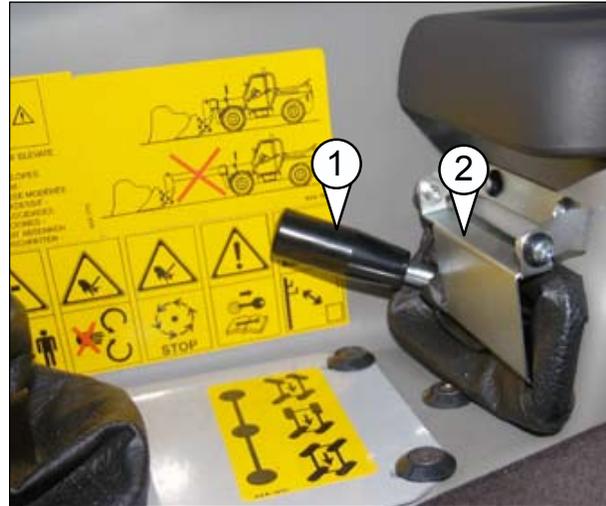
This type of steering allows for **maximum right steering to the right and the left**.

To activate beam steering, move lever "1" (fig.68/C) to position "A" (fig.69/C) shown on the functions sticker.

3 - Crab steering (fig.69/C Pos."C")

This type of steering allows for crab steering, **front and rear parallel wheels** (sideways movement of vehicle).

To activate crab steering, move lever "1" (fig.68/C) to position "C" (fig.69/C) shown on the functions sticker.



(fig.68/C)

- ATTENTION -

Steering selection is done when the vehicle is stopped.

- ATTENTION

For road travel **IT IS MANDATORY** to position the steering control selector in Position "A" (fig.69/C) blocked using the relevant retainer (fig.68/C Pos."2"); ("normal" front only steering mode).

- ATTENTION

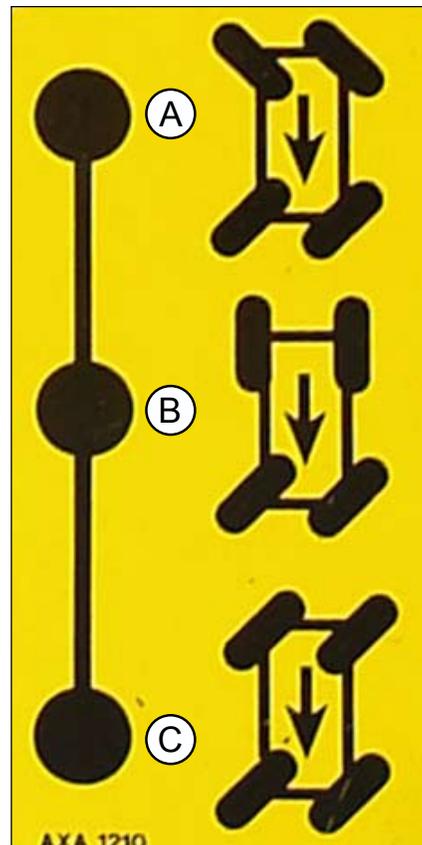
Before selecting a new steering type, align the wheels as explained in the procedure below. Wheel alignment must also be performed with the vehicle at a standstill.

Alignment (standard)

1. Position lever "1" (fig.68/C) in the position marked with "1" (fig.68/C) on the steering functions sticker.
2. Turn the steering wheel, until the rear wheels have been completely straightened.
3. Position lever "1" (fig.68/C) on the position marked with "1" (fig.68/C) on the steering functions sticker.
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.

- ATTENTION

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



(fig.69/C)

STEERING SELECTOR (OPTIONAL)

(fig.70/C Pos."1")

By turning the selector (fig.70/C Pos."1") 3 types of steering are obtained:

- 1 - **Normal steering** - (fig.70/C Pos."A")
This type of steering allows for **front steering only**.
To activate front steering, turn selector "1" (fig.70/C) to position "A" (fig.70/C) shown on the functions sticker.
- 2 - **Beam steering** - (fig.70/C Pos."B")
This type of steering allows for **maximum right steering to the right and the left**.
To activate beam steering, turn selector "1" (fig.70/C) to position "B" (fig.70/C) shown on the functions sticker.
- 3 - **Crab steering** - (fig.70/C Pos."C")
This type of steering allows for crab steering, **front and rear parallel wheels** (sideways movement of vehicle).
To activate crab steering, move lever "1" (fig.70/C) to position "C" (fig.70/C) shown on the functions sticker.



- ATTENTION -

Steering selection is done when the vehicle is stopped.



- ATTENTION

For road travel it is mandatory to position the steering control selector in Position "A" (fig.70/C) blocked using the relevant retainer (fig.70/C Pos."2"); ("normal" front only steering mode).



- ATTENTION

Before selecting a new steering type, align the wheels as explained in the procedure below. Wheel alignment must also be performed with the vehicle at a standstill.

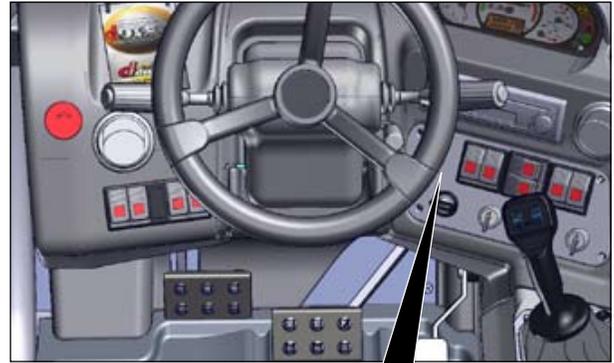
Alignment (standard)

1. Position selector "1" (fig.70/C) in the position marked with "B"(fig.70/C) on the functions sticker.
2. Turn the steering wheel, until the rear wheels have been completely straightened.
3. Position selector "1" (fig.70/C) in the position marked with "A" (fig.70/C) on the functions sticker.
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.

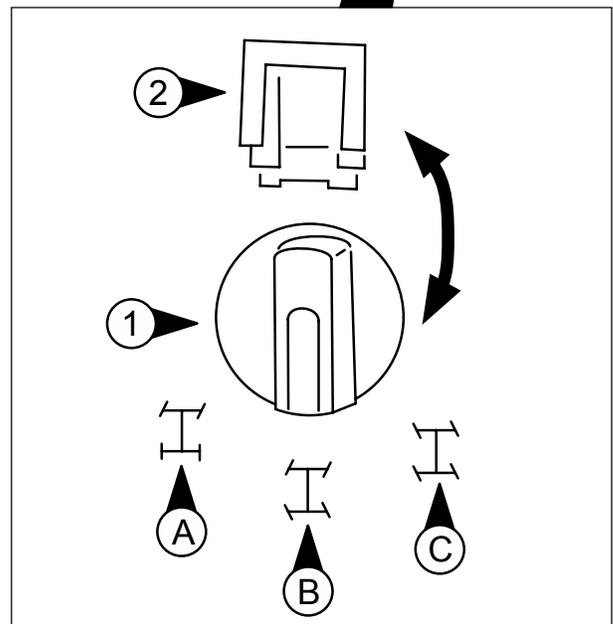


- ATTENTION

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



(fig.70/C)



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

REAR WINDSCREEN WIPER CONTROLS

(fig.73/C Pos."1")

- Use the selector to activate (fig.73/C Pos."1").
- 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.



(fig.73/C)

EMERGENCY LIGHTS SELECTOR

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

Use the selector (fig.74/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.74/C)

MANUAL ACCELERATOR

(fig.75/C Pos."1")

- ATTENTION

Engage the parking brake (Page C/29) and neutral gear (Page C/26) before acting on the lever to increase motor revs.

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

- Act by moving the lever towards the front of the vehicle
- Act by moving the lever towards the rear of the vehicle to decrease the engine revs.

- 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 and idle gear.

Always bring the manual accelerator (fig.75/C Pos."1") to the starting position (engine at minimum RPMs) before disengaging the parking brake. The vehicle may start suddenly, causing risk of damage.



(fig.75/C)

INTERNAL CAB VENTILATION

To activate ventilation, turn the knob (fig.76/C).

The positions indicate, respectively:

- 0 - Off
- 1 - First speed
- 2 - Second speed
- 3 - Third speed

- To open the air vents (fig.77/C, fig.78/C, fig.79/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.
- To regulate the front air flow, act on the vents "1" (fig.77/C) and "2" (fig.78/C).
- To regulate the lower air flow, act on the vents "1" (fig.78/C)
- To regulate the rear air flow, act on the vents "1" (fig.79/C)

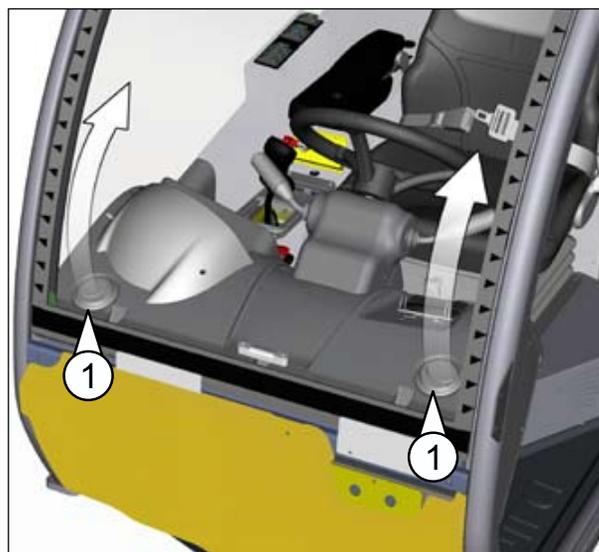
Air temperature adjustment

To adjust the temperature of the air coming from the vents, turn the knob "2" (fig.76/C).

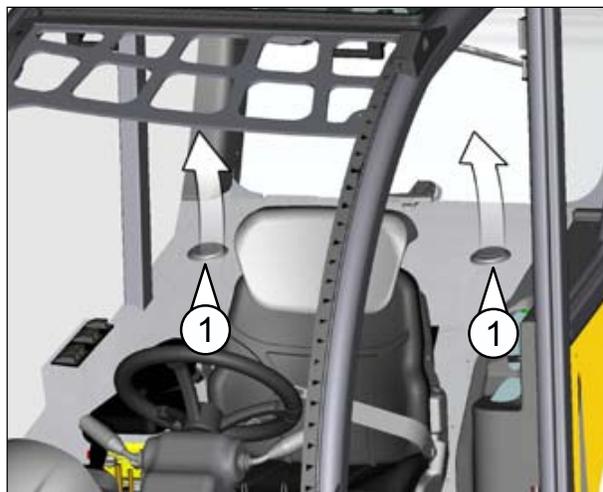
Turning the knob clockwise (in the red part of the scale) the temperature increases. Turning the knob anti-clockwise (in the blue part of the scale) the temperature decreases until it is near the external temperature.



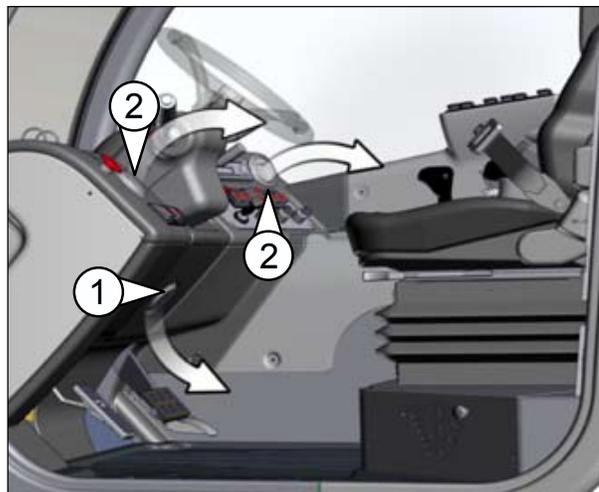
(fig.76/C)



(fig.77/C)



(fig.79/C)



(fig.78/C)



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

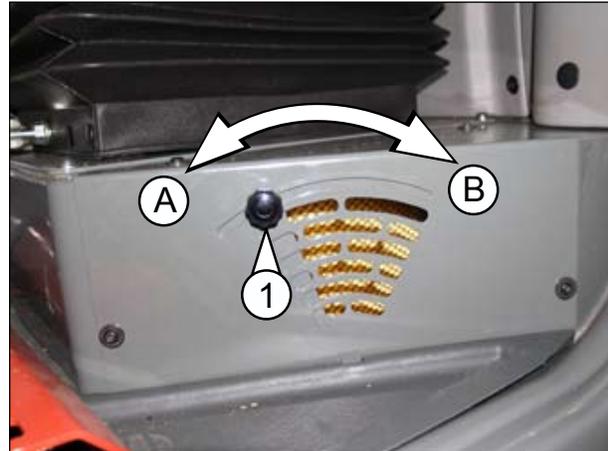
AIR RECIRCULATION INSIDE THE CAB

(fig.80/C Pos."1")

- Take the knob to position "A" (fig.80/C) to enable air recirculation inside the cab.
- Take the knob to position "B" (fig.80/C) to disable air recirculation inside the cab and allow the ventilation system to take in air from the outside.

NOTE:

The lever acts on the "suction" of air by the ventilation system. The flow of the air and the temperature must always be controlled by the ventilation system inside the cab.



(fig.80/C)

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 by pressing the switch (fig.81/C Pos."1") taking it to position "I".
4. Act on the fan (fig.81/C Pos."2") to select the air flow.
5. Open and adjust vents to obtain ideal cooling with regard to environment temperature. Increase or decrease fan speed to obtain desired conditions.
6. Turning the knob anti-clockwise (in the red part of the scale) the temperature increases. Turning the knob anti-clockwise (in the blue part of the scale) the temperature decreases.

- 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

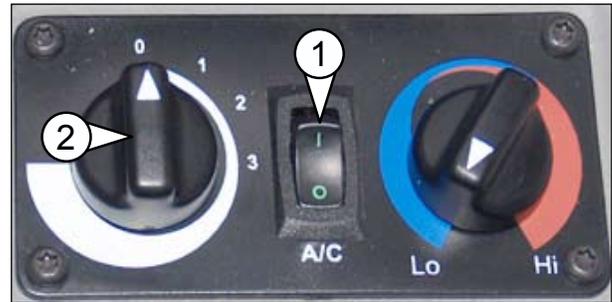
Keep the condenser clean to keep the conditioning system working efficiently (fig.82/C Pos."1").

- ATTENTION

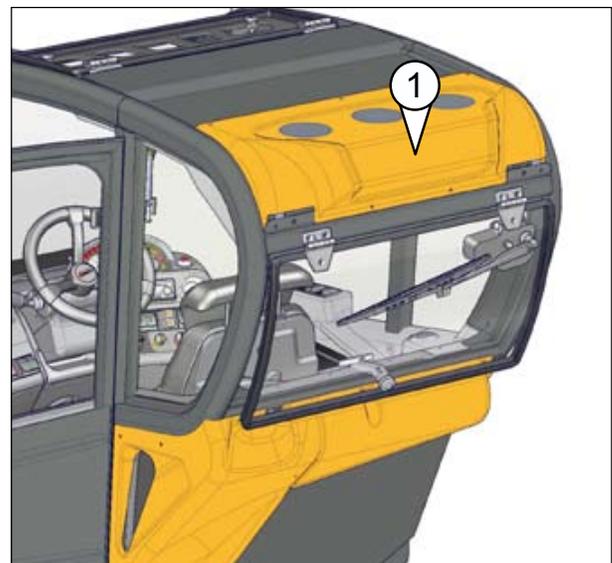
DO NOT loosen any of air conditioning system's tubes in order to reach the condenser, because skin contact with coolant can cause freezing.

- ATTENTION

Consult chapter "D" for system cleaning and maintenance.



(fig.81/C)



(fig.82/C)

REVOLVING LIGHT SWITCH

(fig.83/C Pos."1")

The revolving light must always be positioned above the driver's cab (fig.83/C Pos. "1") and must always be in operation both at the work site and when driving on roads.

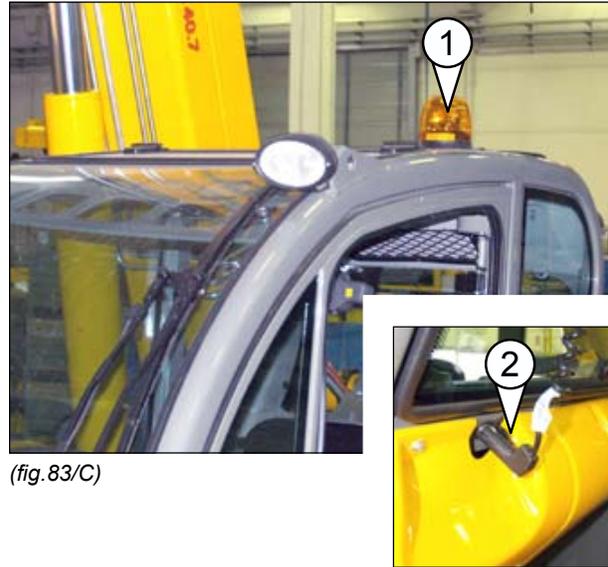
- Position the revolving light on the driver's cab (fig.83/C Pos."1").
- Plug the power plug in the socket at the rear of the cab (fig.83/C Pos."2").
- To switch on the revolving light push the button "B" (fig.84/C) . The indicator light on the same switch indicates start-up.

- ATTENTION

The vehicle can only mount lights supplied by **DIECI** and in compliance with the Standards in force in the country of use. Danger of damage to the electrical system.

- ATTENTION

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



(fig. 83/C)

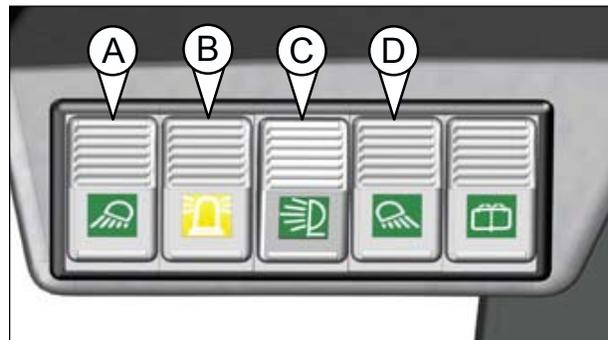
CAB FRONT LIGHTS SWITCH (OPTIONAL)

(fig.84/C Pos."A")

Use the switch (fig.84/C Pos."A") to turn on the front cab working lights (fig.85/C Pos."1"). The indicator light switches on to indicate successful activation.

- ATTENTION

The vehicle can only mount lights supplied by DIECI. Danger of damage to the electrical system in case of use of non original lights



(fig. 84/C)

CAB REAR LIGHTS SWITCH (OPTIONAL)

(fig.84/C Pos."D")

Use the switch (fig.84/C Pos."d") to turn on the rear cab working lights (fig.85/C Pos."2"). The indicator light switches on to indicate successful activation.

- ATTENTION

The vehicle can only mount lights supplied by DIECI. Danger of damage to the electrical system in case of use of non original lights.



(fig. 85/C)

BOOM HEAD LIGHT SWITCH (OPTIONAL)

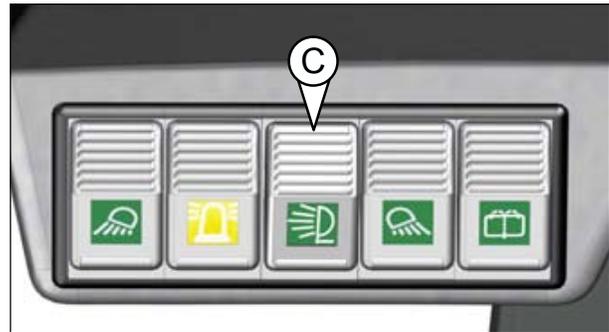
(fig.86/C Pos."C")

Use the relevant switch (fig.86/C Pos."C") to turn on the boom head light (fig.87/C Pos."1"). The indicator 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.

- ATTENTION

The vehicle can only mount lights supplied by **DIECI**. Danger of damage to the electrical system in case of use of non original lights.



(fig.86/C)



(fig.87/C)

BOOM HEAD SOLENOID VALVE (OPTIONAL)

(fig.102/C Pos."1")

The switch (fig.101/C Pos."1") is only installed in the presence of the boom head solenoid valve (fig.102/C Pos."1"). When using the solenoid valve it is possible to have divided hydraulic controls on the boom head.

- Activate the switch (fig.101/C Pos."A") to power the solenoid valve, which will deviate oil flow. The indicator light on the same switch indicates start-up.

The selector (fig.101/C Pos."1") is used parallel to normal service controls. First, choose the selector where oil flow will deviate from, then carry out manoeuvres with the routine service controls.

BOOM HEAD SOCKET (OPTIONAL)

(fig.101/C Pos."2")

The switch (fig.101/C Pos."2") is only installed in the presence of the boom head socket (fig.102/C Pos."2"). In presence of the socket, but not its switch, this is only used to power the boom head solenoid valve.

To use the socket:

- Remove any plug from the socket (fig.102/C Pos."4") and insert it into the socket-holder (fig.102/C Pos."3").
- Insert the user plug into the boom head socket (fig.102/C Pos."2").
- Activate the switch (fig.101/C Pos."2") to power the plug and user connected. The indicator light on the same switch indicates start-up.

- ATTENTION

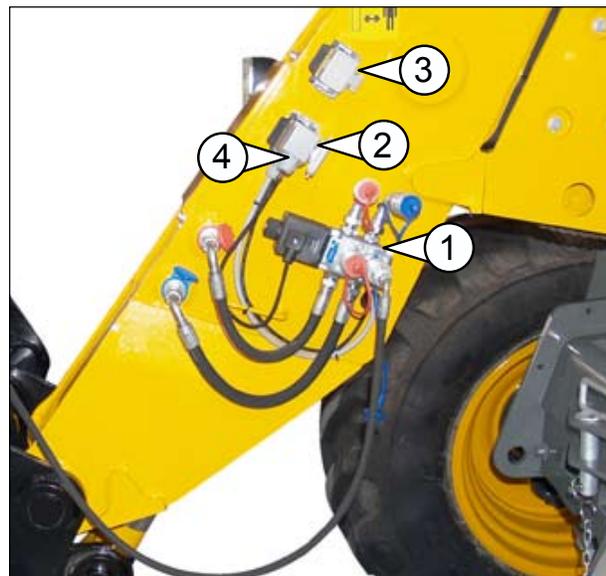
On connection of the user, before starting work operations, in a safe place check that all controls function correctly and perform the desired manoeuvres/operations.

- ATTENTION

Do not connect users with nominal voltage exceeding 12 volts and amperage over 3A. Danger of damage to the electrical system.



(fig.101/C)



(fig.102/C)

REAR HYDRAULIC SOCKETS (OPTIONAL)

(fig.106/C Pos."1")

Located at the rear of the vehicle (fig.106/C Pos."1").

- Press the relative switch to deviate oil to the rear hydraulic sockets (fig.103/C Pos."1"). The indicator light on the same switch indicates start-up.

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

Note: The switch can have 2 or 3 positions in relation to set-up.

! - ATTENTION

On connection of the user, before starting work operations, in a safe place check that all controls function correctly and perform the desired manoeuvres/operations.

"Continuous oil" function

The function allows to select and maintain the volume of oil transiting in the hydraulic sockets constant, without acting constantly on the Joystick selector.

- Press the relative switch to deviate oil to the rear hydraulic sockets (fig.103/C Pos."1").
- Select the volume of oil to keep constant through the Joystick Roller (fig.104/C Pos."1")
- Press the "Power take-off" selector (fig.103/C Pos."3") to enable the "continuous oil" function. The flashing LED on the Joystick (fig.104/C Pos."2") indicates activation.
- To disable the function intervene on the "Power take-off" (fig.103/C Pos."3").

To make other operations/movements with the Joystick, in "Continuous oil" mode, active:

- Press the "man in" button (fig.105/C Pos."1").
- Moving the joystick to make the desired operation.

Operating in this way, the above-mentioned function remains active.

! - ATTENTION

Movement of the joystick, without intervention on the roller "1" (fig.105/C), with "continuous oil" function enabled leads to the temporary disconnection of the function itself.

! - ATTENTION

With "Continuous oil" function enabled, do not move away from the driver's cab.



(fig.103/C)



(fig.104/C)



(fig.105/C)



(fig.106/C)

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

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 (fig.110/C).

Use the relevant switch to engage boom suspension (fig.109/C Pos."1"). The indicator light on the same switch indicates 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" button on the joystick.

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

! - ATTENTION

The presence of boom suspension does not cause an increase in the speed of vehicle transport or movement. Speed must always be proportional to the ground, to the area of use and to climatic conditions.

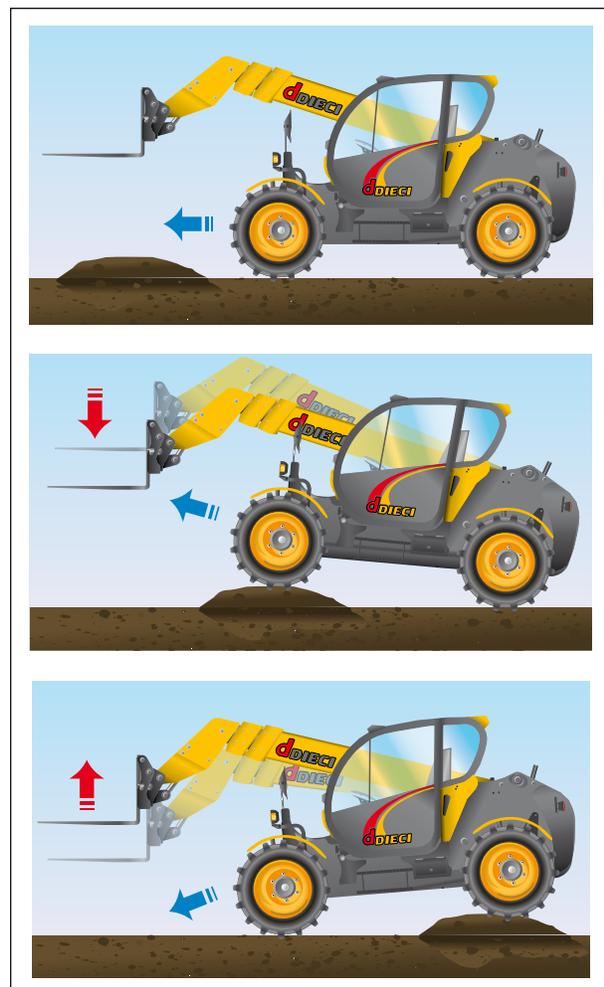
The vehicle must always be used with caution. Always refer to instructions detailed in chapter "B".

! - ATTENTION

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



(fig. 109/C)



(fig. 110/C)

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

2-SPEED BOOM (OPTIONAL)

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

To activate dual speed using the switch (fig.111/C pos."1"). The indicator light on the same switch indicates start-up.

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



(fig.111/C)

**DUMP BODY LOWERING
(OPTIONAL)**

The dump body lowering switch controls the solenoid valve which causes the closure of the dump body lifting cylinder connected to the rear hydraulic socket.

Activate dump body lowering using the relevant switch (fig. 112/C pos. "1").

The indicator light on the same switch indicates start-up.

! - ATTENTION

Before moving the vehicle with the dump body:

- Verify its correct operation (brake system, signalling system, hydraulic system).
- Verify that the dump body conforms to all laws relevant in 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.



(fig. 112/C)

REVERSIBLE FAN (OPTIONAL ONLY ON AGRI FARMER 26.6)

Activate reversible fan using the relevant button (fig.113/C pos."2"). The cleaning cycle is activated automatically by pressing the switch, which must not be held. 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 determined by the manufacturer.

- ATTENTION

The presence of fan reversal does not prevent operators from carrying out fan, radiator or engine compartment cleaning, in accordance with the required routine maintenance schedule.



(fig.113/C)

**WATER HEATER
(OPTIONAL)**
(fig.114/C Pos."1")

Located at the rear of the bonnet.

! - ATTENTION

Before switching on the water heater, carry out the operations included in Chapter B "STOPPING UPON COMPLETION OF WORK"

System operation:

1. Plug in connector "A" into socket "B" located in the rear part of the engine bonnet (fig.115/C).
2. Insert plug "C" into the electric socket (fig.115/C).

The heater is connected to its own control unit and maintains 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

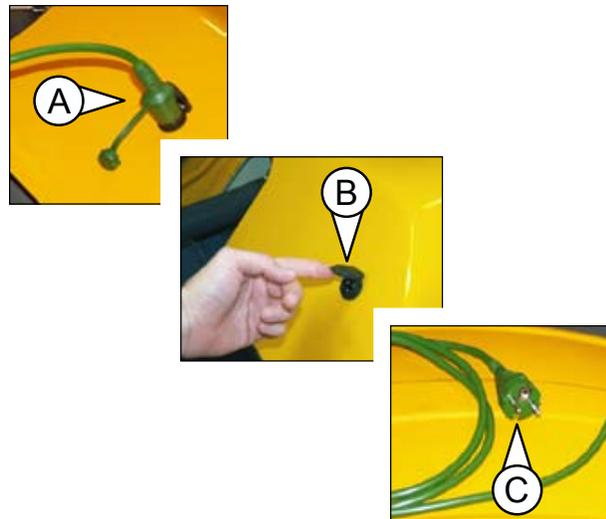
Do not use the water heater with the engine on and while the vehicle is moving.

! - ATTENTION

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



(fig.114/C)



(fig.115/C)

FRONT HOOK

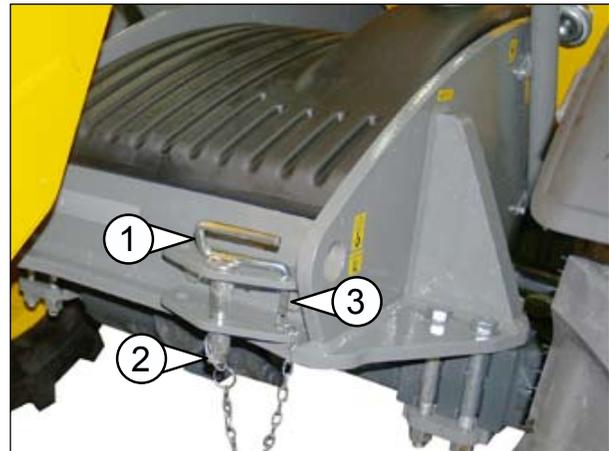
(fig.120/C Pos."1")

If located at the front of the vehicle, it can have different load capacities depending on client needs.

Consult the vehicle registration document to verify front 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.

The front hook clip (fig.120/C Pos."1") has been properly positioned and locked when the guide pin is in position "3" (fig.120/C) and is locked by its cotter pin "2" (fig.120/C).



(fig.120/C)

TOWING HOOK

(fig.121/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.

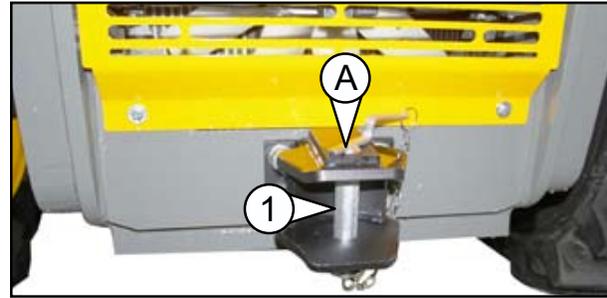
Verify proper locking pin position before moving the vehicle with the trailer.

The rear hook clip (fig.121/C Pos."1") has been properly positioned and locked when it goes through both parts of the hook (fig.122/C) and is locked by its cotter pin "1" (fig.122/C).

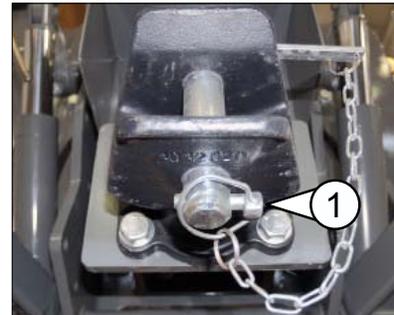
- ATTENTION

Before moving the vehicle with the trailer:

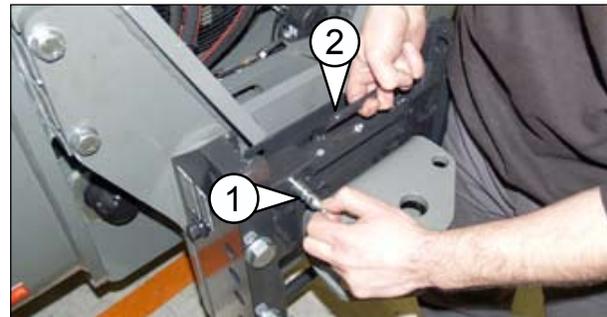
- Ensure that the brake and signalling systems are functioning properly.
- Verify that the trailer conforms to regulations in force in the country where the vehicle is being used.
- Make sure that the cotter pin is properly inserted (fig.122/C Pos."1").



(fig.121/C)



(fig.122/C)



(fig.123/C)

ADJUSTABLE TOWING HOOK (OPTIONAL)

(fig.124/C Pos."A")

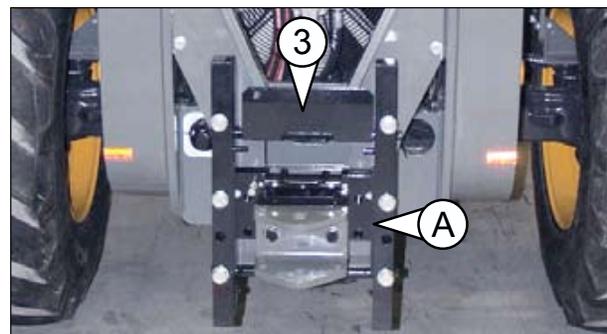
Located at the rear of the vehicle.

To adjust hook height:

1. Grip the pin (fig.123/C Pos."1") keeping it pulled towards yourself.
2. Lift the handle with safety lock (fig.123/C Pos."2"). In these conditions the hook is free to move in its own guides.
3. Lower or raise the hook accompanying it via the handle (fig.123/C Pos."2").
4. When the desired position has been reached, release the pin (fig.123/C Pos."1"); check that the pin returns to its house, release the safety handle (fig.123/C Pos."2").
5. Insert the protection (fig.124/C Pos."3") taking it to horizontal position.

- ATTENTION

To use the "adjustable towing hook" the prescriptions are the same as in the "Towing hook" paragraph.



(fig.124/C)

**PTO
(OPTIONAL)**
(fig.131/C pos."1")

To activate the power take-off, operate on its switch (fig.130/C pos."1").
The indicator light on the relevant switch will signal start-up.

! - ATTENTION

When the switch has been inserted the PTO starts immediately.
Engage the Cardan shaft before starting the PTO.
Keep at a safe distance from the Cardan shaft.
Before starting the PTO, check that no-one is in the vicinity of the same, the Cardan shaft and the mechanical user of the socket.

! - ATTENTION

If the PTO should undergo stress greater than nominal, supplied by the manufacturer, automatic disconnection takes place, with blocking of the revolving motion.



(fig.130/C)



(fig.131/C)

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

THREE-POINT LIFTING DEVICE (OPTIONAL)

(fig. 134/C)

Act on the relevant lever to activate the three-point lifting device (fig. 133/C pos. "1").

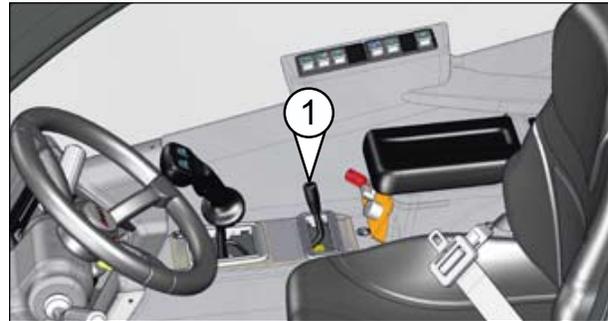
Acting on the lever, the lateral arms start to move (fig. 134/C pos. "1-2").

Before use, regulate the lateral arms (fig. 134/C pos. "1-2"), the chains (fig. 134/C pos. "3") and the central arm (fig. 134/C pos. "4") according to the type of use and tool to be connected.

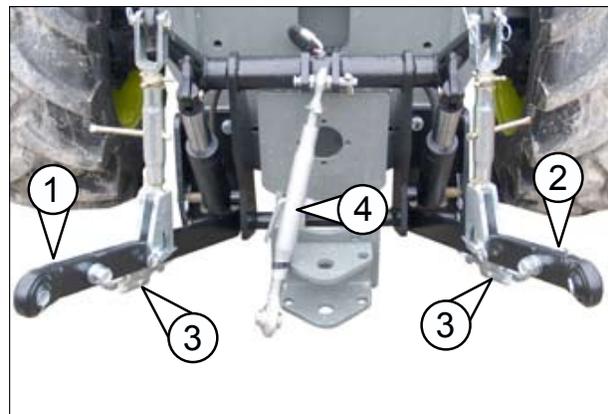
The central arm (fig. 134/C pos. "4") must always be connected correctly to the user.

- ATTENTION

Before use, check that no-one is in the vicinity of the vehicle, the three-point lifting device and the user.



(fig. 133/C)



(fig. 134/C)

Regulation of the 3-point lifting device

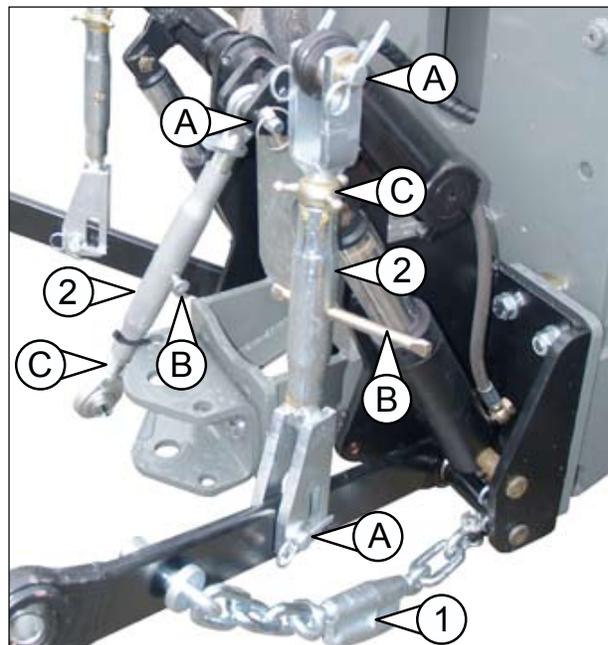
For regulation of the lifting unit, proceed as follows:

- To regulate opening of the lateral arms, act on the chains loosening/tightening the junction pin (fig. 135/C pos. "1").
- To regulate the height of the arms tighten/loosen the fixing rod (fig. 135/C pos. "2") forcing the lever (fig. 135/C pos. "B") and blocking the rod in the position using the lock-nut (fig. 135/C pos. "C").

- ATTENTION

Before use, check that all cotters are present in the pins that make up the 3-point lifting device (fig. 135/C pos. "A"). Also insert the cotters on the pins that will connect the tool to use to the 3-point lifting device.

DO NOT use the lifting device if all cotters and retainer/safety pins **ARE NOT** present.



(fig. 135/C)

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

The indicator light (fig. 140/C pos. "A") signals low braking system pressure.

Connect the trailer's hydraulic braking system to that of the vehicle using the hydraulic socket (fig. 141/C pos. "1"). If not being used, the socket must be suitably protected by its hydraulic socket cover (fig. 141/C pos. "1").

! - ATTENTION

Do not move the vehicle until the indicator 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 in the event of malfunctions.

! - ATTENTION

Connect the trailer to the towing hook (fig. 142/C pos. "A") before inserting the hydraulic part.

The trailer brake act under pressure. The vehicle hydraulic circuit supplies 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. 143/C pos. "A"), located at the rear of the vehicle, is equipped with a lever (fig. 143/C pos. "B") to put pressure on the braking system.

- The system is not under pressure when the lever is in position "0" (fig. 143/C). If connected, the trailer is braked.
- The system is under pressure when the lever is in position "1" (fig. 143/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 set to position "0" (fig. 143/C).

! - ATTENTION

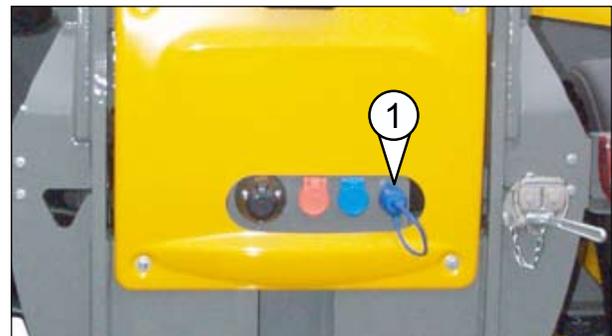
In the event that the trailer is not to be used, set the lever to position "0" (fig. 143/C) to prevent the system from remaining under pressure. Keeping the system under pressure causes an unnecessary loss of engine power, leading to higher consumption and unnecessary heating of hydraulic oil.

! - ATTENTION

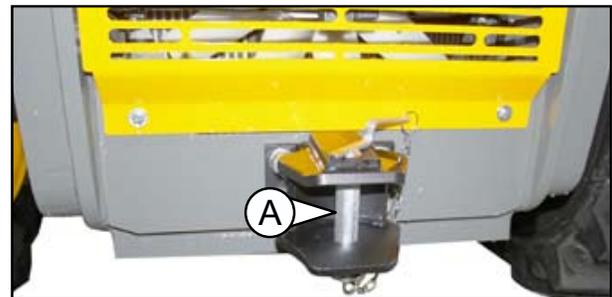
The trailer parking/emergency brake must be engaged in the same way as the vehicle parking brake.



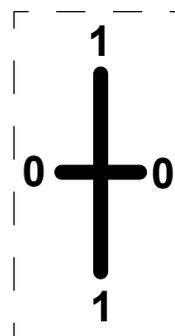
(fig. 140/C)



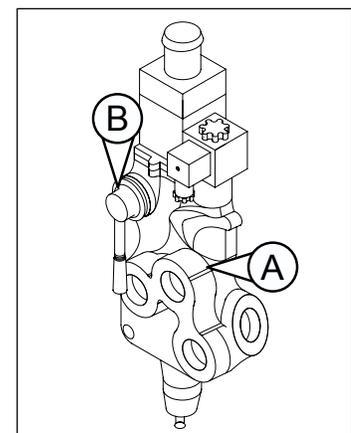
(fig. 141/C)



(fig. 142/C)



(fig. 143/C)



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

HYDRAULIC BRAKE SYSTEM FOR TRAILERS (OPTIONAL)

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

The indicator light (fig.144/C pos."A") signals low braking system pressure.

Connect the trailer's hydraulic braking system to that of the vehicle using the hydraulic socket (fig.145/C pos."1"). If not being used, the socket must be suitably protected by its hydraulic socket cover (fig.145/C pos."2").

! - ATTENTION

Do not move the vehicle until the indicator 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 in the event of malfunctions.

! - ATTENTION

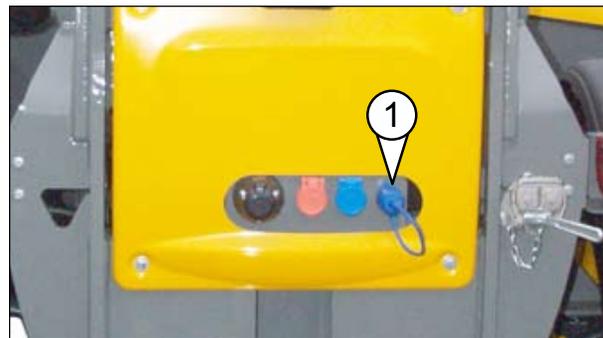
Connect the trailer to the towing hook (fig.146/C pos."A") before inserting the hydraulic part.

! - ATTENTION

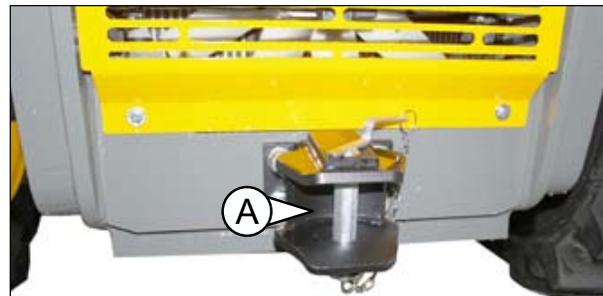
When the trailer is disconnected, use caution to prevent it from moving in an uncontrolled manner.



(fig. 144/C)



(fig. 145/C)



(fig. 146/C)

PNEUMATIC BRAKING SYSTEM FOR TRAILERS (OPTIONAL)

The indicator light (fig. 150/C pos. "A") signals low braking system pressure.

! - ATTENTION

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

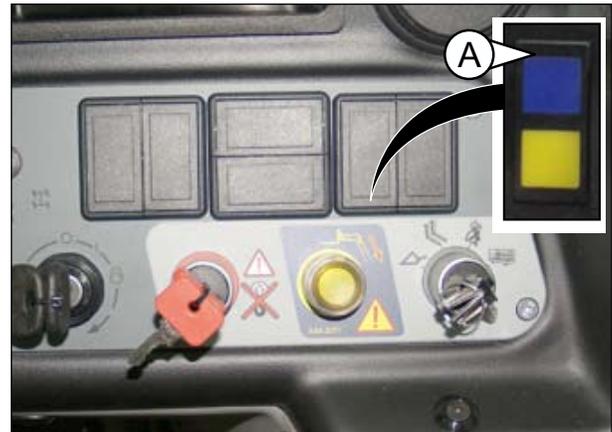
The vehicle may be equipped with one of two desired types of pneumatic attachments (fig. 11/C pos. "1", fig. 152/C pos. "1-2"). For ensure correct use, connect the attachment's pneumatic system to that of the vehicle using its fittings.

! - ATTENTION

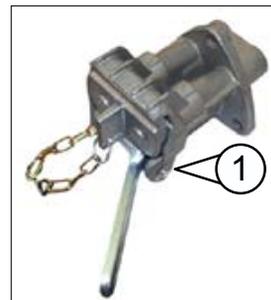
Verify that all connections are attached properly and that the trailer brakes regularly before moving the vehicle. Do not move the vehicle with the trailer attached in the event of malfunctions.

! - ATTENTION

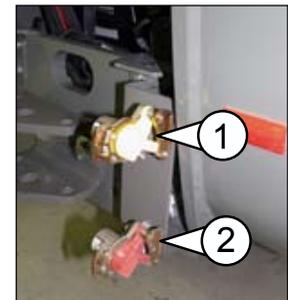
Connect the trailer to the towing hook (fig. 153/C pos. "A") before inserting the hydraulic part.



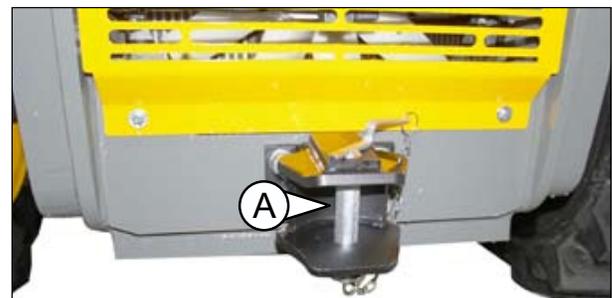
(fig. 150/C)



(fig. 151/C)



(fig. 152/C)



(fig. 153/C)

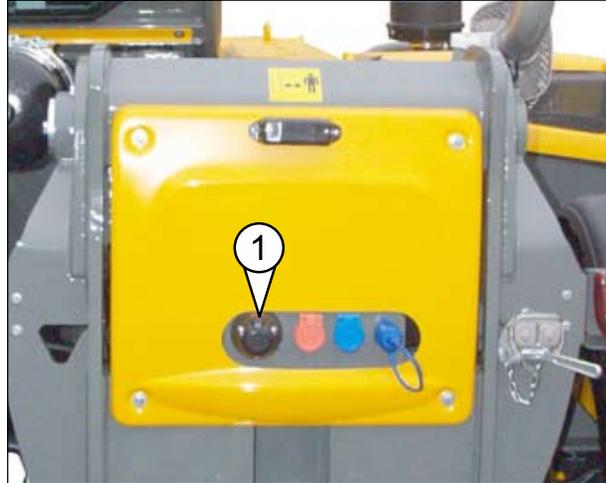
**7-POLE ELECTRIC SOCKET FOR TRAILER
(OPTIONAL)**
(fig. 154/C Pos."1")

Located at the rear of the vehicle.

! - 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.



(fig. 154/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). Only the anchorage points indicated in figure "156/C" can be used for the front side and figure "157/C" for the rear side. The anchorage points are present on both sides, left and right, and must both be connected for correct towing.

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.



Never attempt to start the vehicle by towing or pushing.

With engine off, the steering 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. When the vehicle has been started, position the gearbox in neutral (idle) before starting towing.

With engine off the gear could be engaged. If it is not possible to start the engine to engage the neutral gear "N", take the gear to neutral manually following the indications given in the "Putting the gear in neutral" chapter (Page C/70).

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" (Page C/71).



With engine running during towing, remain seated in the driver's seat to prevent the parking brake from engaging automatically.

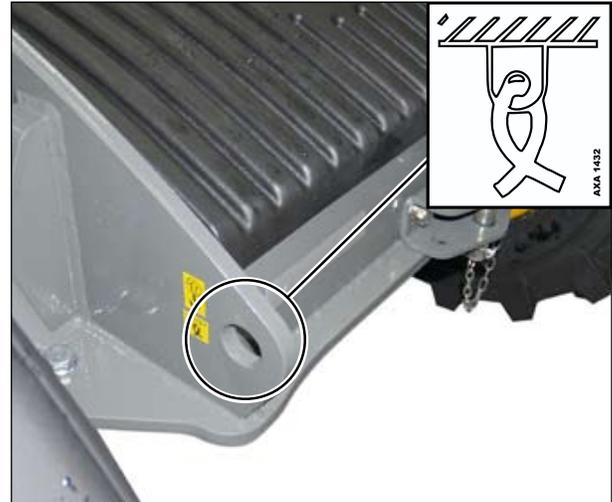
The towing bracket must be connected to the vehicle towing setups marked by corresponding symbols (fig.156/C, fig.157/C).



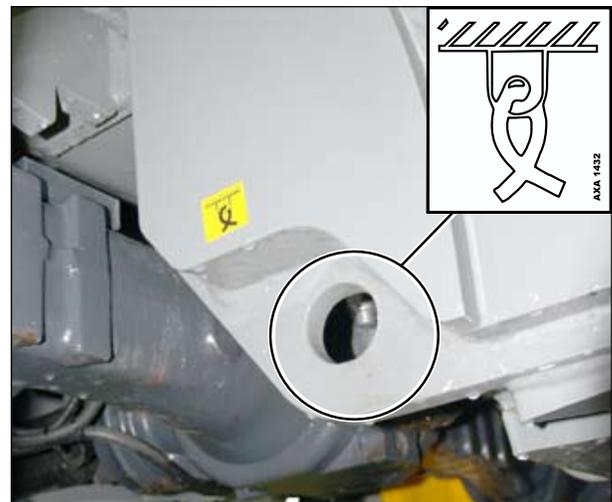
THE VEHICLE MUST BE TOWED WITH A towing bracket. The towing bracket must be able to support a towing weight of 10,000 Kg.

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.



(fig.156/C) Front anchorage point



(fig.157/C) Rear anchorage point



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



Have the operations described above performed by expert personnel.

PUTTING THE GEAR SHIFT IN NEUTRAL
Operating Description

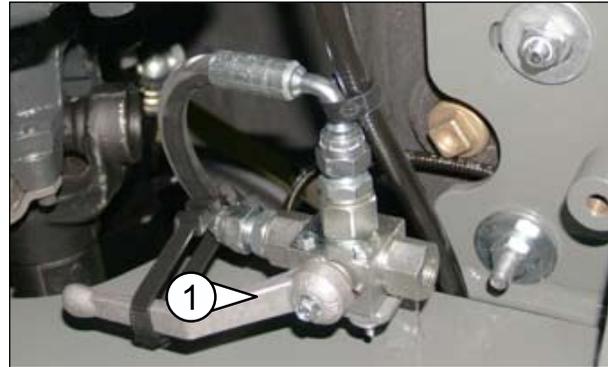
- Switch off the engine.
- Turn the lever (fig. 160/C Pos. "1") of the hydraulic valve towards the vehicle cab, bringing it to the closed position. The valve is located under the vehicle, in the front near the reducer.
- Position the gear selector pin (fig. 161/C Pos. "1") in neutral, using a screwdriver.

! - ATTENTION

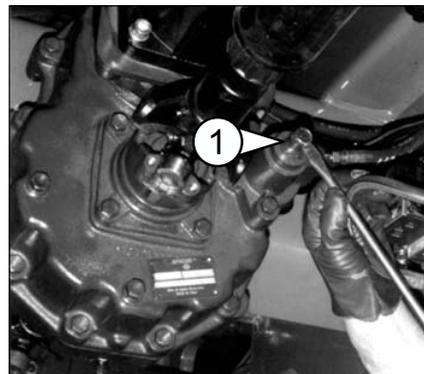
Before towing the vehicle, switch on the dashboard and if possible, ensure that the forward and reverse gear indicator lights are off .

! - 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" (page C/28).



(fig.160/C)



(fig.161/C)



(fig.162/C)

Fast gear engaged


(fig.163/C)

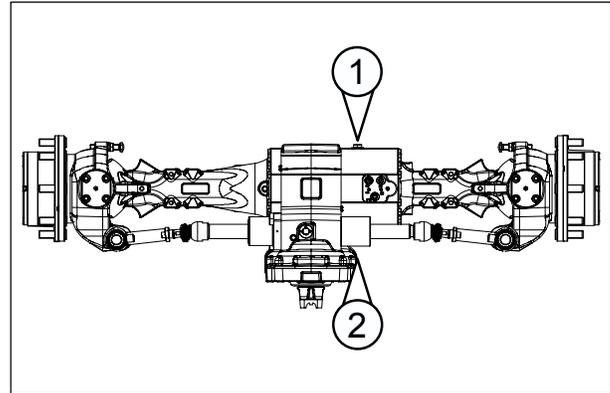
Neutral


(fig.164/C)

Slow gear engaged

Disengaging the negative parking brake with the engine stopped

- 1° Loosen the screws on both sides (fig. 167 pos. "1", "2") of the centre part of the front axle with a key (fig. 168/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. 169/C, Pos."1").
- 3° Re-tighten screws until the click into position in these conditions it is possible to tow the vehicle.
- 4° To return the brake to working condition, return in to its original conditions.



(fig. 167/C)



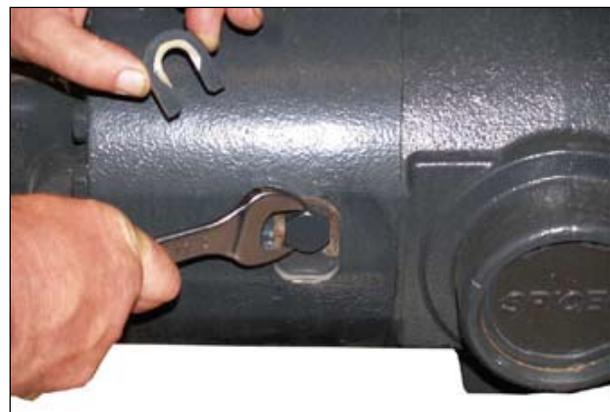
DO NOT USE THE VEHICLE WITH THE HAND BRAKE DISENGAGED. ONCE TOWING OPERATIONS ARE COMPLETE BRING EVERYTHING BACK TO ITS ORIGINAL POSITION.



It is recommended to have the operations described above performed by expert staff.



(fig. 168/C)



(fig. 169/C)

BASKET EMERGENCY

In the event of breakdown or malfunctioning during use of the basket, which lead to the same being blocked in a position that does not allow the operators to abandon the platform safely, it is possible to operate with manual systems in order to take the boom and operators to safe conditions. To make use of this emergency operation, use the emergency pump found in the control cab.

! - ATTENTION - !

When the emergency pump is used the anti-tipping systems are deactivated. IT IS MANDATORY to consult the load diagram (located in the cab notepad and in the use and maintenance manual) before completing any manoeuvres using the distributor levers. This way, using the inclinometer and the letters on the boom, it is possible to know the exact position the basket position is in and the work area where it is allowed to operate. During recovery of the basket, there must be no additional movements that may worsen the stability of the vehicle, due to the existence of tipping hazard.

! - ATTENTION - !

These operations must be performed by two qualified operators, experienced and authorised by the Safety Manager.

The following manoeuvres are possible with the emergency pump:

- Boom extension retraction
- Boom descent

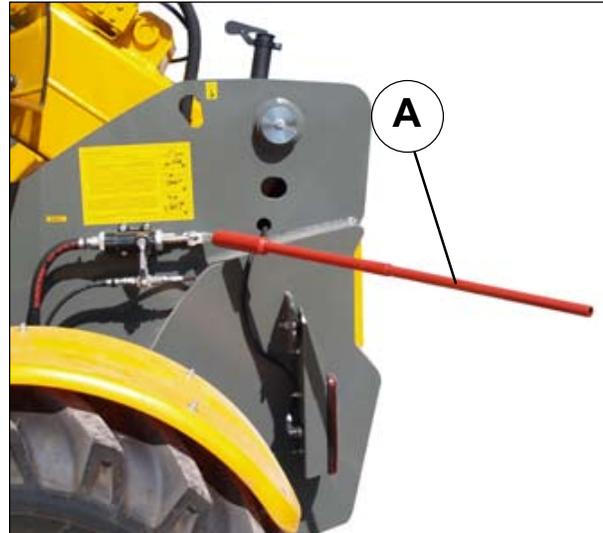
! - ATTENTION

Never attempt to climb down from the basket using makeshift means or using systems with exposure to personal risk.

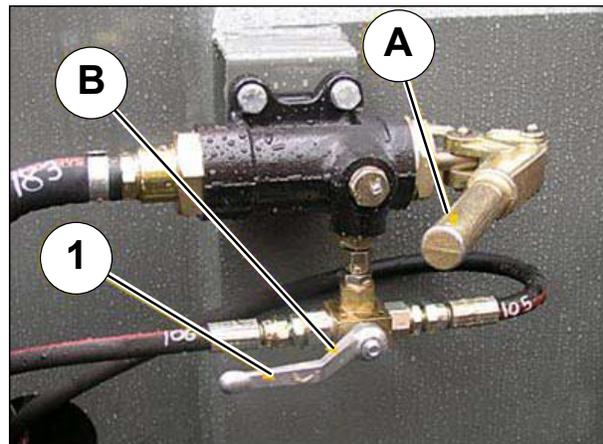
To retract the boom, carry out the procedure given below.

1. Switch the engine off.
2. The first operator must extract the rod in the tool box and insert it into the emergency hand pump (fig.173 Pos."A").
3. Position the lever "B" (fig.173) at "1" for extension retraction.
4. Position the lever "B" (fig.174) at "2" to lower the boom.
5. Act on the previously described rod (fig.140 Pos."A") to start the emergency pump. The first operator must push the rod up to end run first from one side and then the other to supply pressure to the plant. The operation must be performed until recovery has been completed.
6. The second operator, in cab, must move the joystick. This carries out different manoeuvres that depend on the type of distributor mounted, **see next paragraphs**.

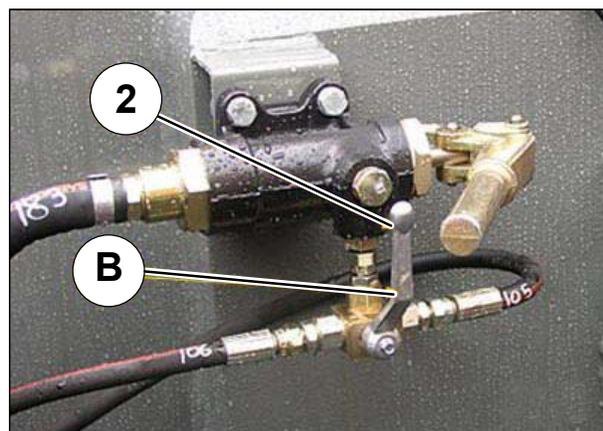
Move the basket by alternating extension retraction and boom descent movements, in a way to remain always within the work diagram.



(fig.172)



(fig.173)



(fig.174)

STANDARD DISTRIBUTOR

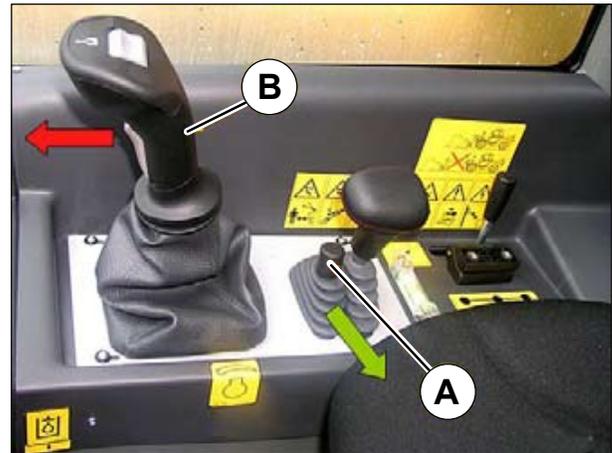
- Extension retraction

Activate the lever "A" to the left (fig.175) at the same time as pumping performed by the operator on the ground, to operate extension retraction.

- Boom descent

Activate Joystick "B" forward (fig.175) at the same time as pumping performed by the operator on the ground, to operate boom descent.

Move the basket by alternating extension retraction and boom descent movements, in a way to remain always within the work diagram.



(fig.175)

ELECTRO-HYDRAULIC PROPORTIONAL DISTRIBUTOR FOR BASKET

Take levers "A" and "B" and fasten them into their dedicated seats "C" (fig.176).

- Extension retraction

Activate the lever "A" to the left (fig.176 Pos. "A1") at the same time as pumping performed by the operator on the ground, to operate extension retraction.

- Boom descent

Activate the lever "B" to the right (fig.176 Pos."B1") at the same time as pumping performed by the operator on the ground, to operate boom descent.

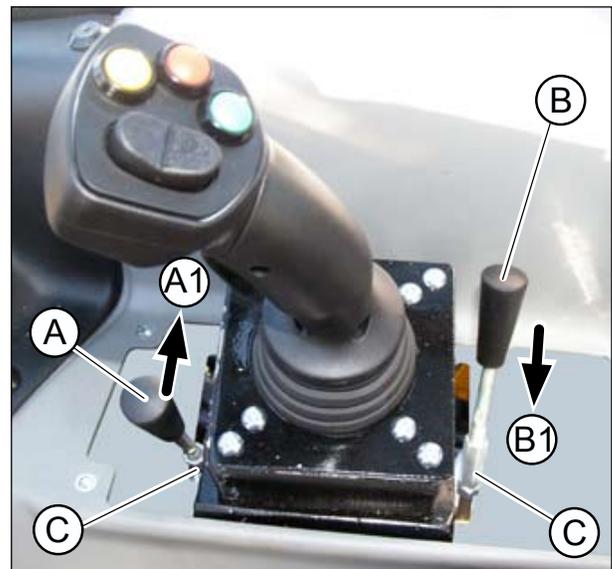
Move the basket by alternating extension retraction and boom descent movements, in a way to remain always within the work diagram.

! - ATTENTION

When the recovery has been made, open the cock on the hand pump and put the rod and any distributor levers back in the tool box.

! - ATTENTION

On conclusion of the recovery manoeuvre, take lever "B" (fig.144) to the start position.



(fig.176)



CATALYTIC PURIFIER (OPTIONAL)

(fig.178/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: engines not perfectly tuned, vehicle vibrations and the abrasive effect of fumes on the support, the life of the catalyst may be shortened. In reality, 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. It is advisable to clean 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.178/C)

WATER DRIVEN PURIFIER (OPTIONAL)

(fig.179/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 (sized according to engine power) which makes up the water tank, two mounting brackets and a cylindrical tower located on the upper part of the water tank that contains the separator.

The gases are directed through an entry tube to the interior part of the purifier and then passed to the water. The carbonaceous particles become heavier upon contact with the water and fall to the bottom of the water tank.

The gases are then directed towards the separator which recovers the carbonaceous particles that have not fused with the water. The white smoke emitted from the exhaust is simply water vapour.

Maintenance

Maintenance of the water driven purifier is **EXTREMELY IMPORTANT** and the water must be **changed every 8 working hours**. The tank must be emptied using the spherical drain valve and clean water must be added through the loading and level cock.

The black sludge which comes out when changing the water is proof of the purifier's effectiveness. **Every 300 working hours** the purifier must be **cleaned** : drain the water and clean the inside for a few minutes using a pressurised jet. **DIECI** also provides the additive TAM which, if added to the water at every change, helps to keep the purifier clean. TAM also improves the performance of the purifier: it neutralises sulphuric acids.



(fig.179/C)



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



USER INSTRUCTIONS AND GETTING TO KNOW THE VEHICLE

INTEGRATED DEVICES

“CENTRAL DASHBOARD”



EVERY MODIFICATION MADE TO THE VEHICLE LEADS TO A NEW VERIFICATION OF CONFORMITY WITH THE 2006/42/EC MACHINERY DIRECTIVE THIS PROCEDURE IS ALSO VALID IN THE CASE OF REPAIRS WITH NON-ORIGINAL SPARE PARTS.

IT IS PROHIBITED TO OPERATE IF THIS MANUAL HAS NOT BEEN READ AND UNDERSTOOD.

THE OPERATOR IS REQUIRED TO LEARN THE LOCATION AND FUNCTION OF ALL INSTRUMENTS AND CONTROLS, INDEPENDENT OF HIS OR HER EXPERIENCE IN THE FIELD, BEFORE OPERATING THE VEHICLE.

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

YOUR VEHICLE CAN BE SET-UP WITH OPTIONAL CONTROLS AND ACCESSORIES ON REQUEST.

ALL FUNCTIONS AND PROCEDURES CONCERNING THE OPERATION AND MOUNTING OF THE VEHICLE'S ATTACHMENTS THAT ARE NOT DESCRIBED IN THIS MANUAL ARE STRICTLY FORBIDDEN.

USE OF THE VEHICLE DIFFERENT TO THAT DESCRIBED IN THIS MANUAL IS PROHIBITED.

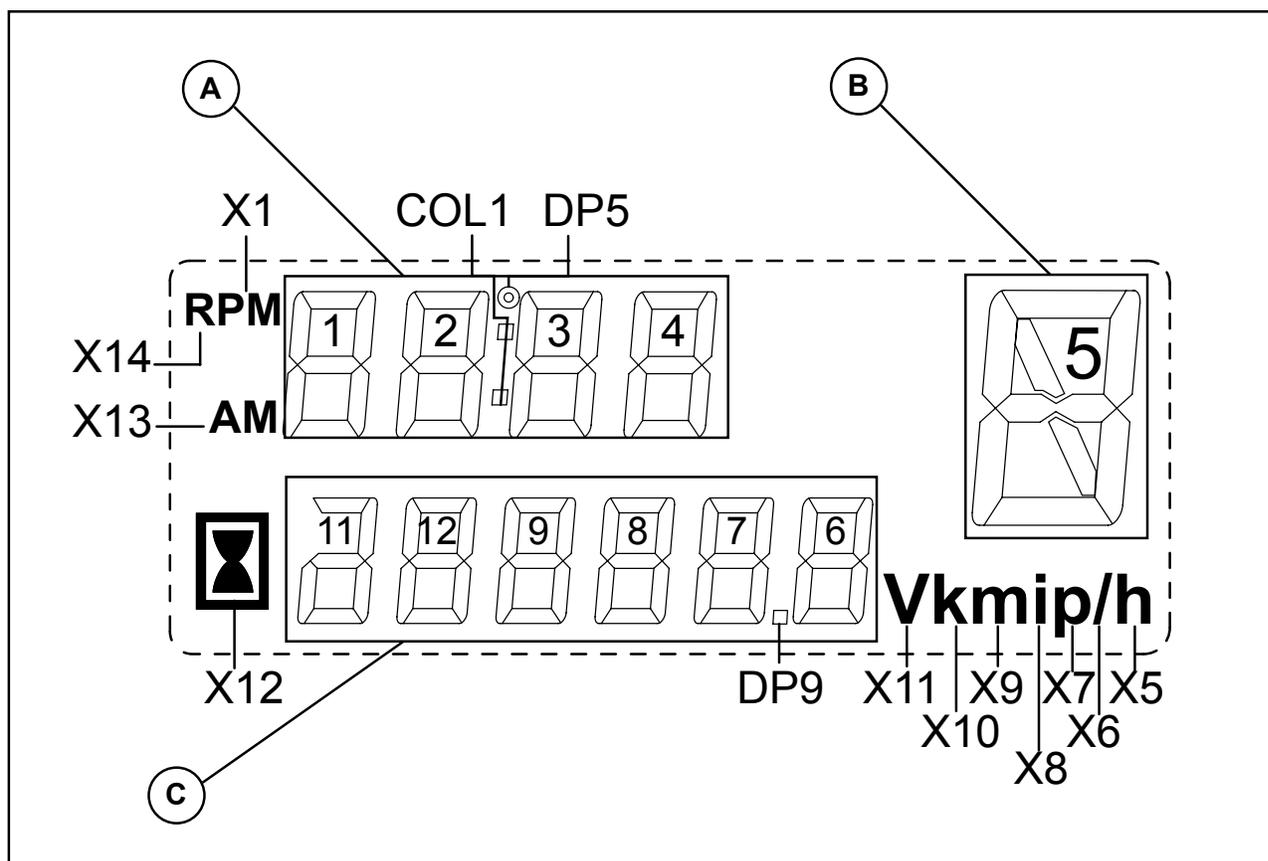
IT IS MANDATORY TO HAVE READ AND LEARNED CHAPTER "B" (SAFETY STANDARDS) BEFORE READING CHAPTER "C" AND USING THE VEHICLE.



LCD

The following functions will be shown on the display:

- Timer (6 characters of which one a decimal point plus hourglass) (fig.200/C pos."C").
- Clock (4 characters) (fig.101/C pos."A").
- Speedometer (3 characters of which one a decimal point plus km/h, m/h and mph) (fig.200/C pos."C"). (OPTIONAL)
- Hodograph (6 characters of which one a decimal point plus km and miles) (fig. 200/C pos."C"). (OPTIONAL)
- Neutral gear engaged (fig. 200/C pos."B"). (NOT AVAILABLE)
- Engine errors (Large E flashing + 3 characters at top) (fig. 200/C pos."A", fig. 200/C pos."B", fig. 200/C pos."C"). (NOT AVAILABLE)
- Service (Large S flashing + n° hours missing to service) (fig. 200/C pos."A", fig. 200/C pos."B")



(fig.200/C)

Speedometer (optional)

The speedometer allows to display the speed of the vehicle in real time.

In the vehicle with Vario System drive the speedometer shows the advancement speed on exceeding 3km/h. With lower speed the instrument displays the hours of use of the vehicle (Hour meter function).

The maximum speed of the vehicle varies on inflation pressure variation, the measurement and wear of the tyres.

Hodograph (optional)

The hodograph allows to display the kilometres travelled by the vehicle. The instrument is combined with the speedometer



(fig.201/C)

BUTTONS

There are two integrated buttons on the panel:

- Button "1" (fig. 201/C) temporarily prevents the acoustic signal (buzzer) of the anti-tipping system, anti-tipping system test.
- Button "2" (fig. 201/C) changes the display.

Changing display visualisation

By pressing key "2" (fig.201/C) display visualisation is changed cyclically following the logic below:

1. Timer and clock.
2. Speed and clock.
3. Hodograph and clock.
4. Timer and clock.

The normal visualisation of the display will be Clock and Hour counter. In the case of installation of the speedometer, the display will automatically pass to the Clock and Speed display.

Clock regulation

To regulate the clock:

- Switch off the dashboard.
- Press key "2" (fig. 201/C) and keep it pressed.
- Switch the dashboard on
- Keep key "2" (fig. 201/C) pressed for 1.5 seconds for the duration of the "check".
- Now you are in "Regulation" mode

With minutes characters flashing, press:

- key "1" (fig. 201/C) to increase the character.
- key "2" (fig. 201/C) to confirm selection.

With hours characters flashing, press:

- key "1" (fig. 201/C) to increase the character.
- key "2" (fig. 201/C) to confirm selection.

The calibration check has ended and the instrument starts to work normally (excluding the initial check).



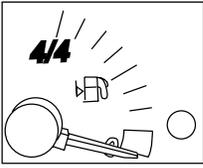
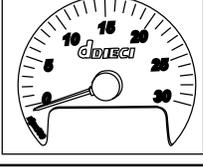
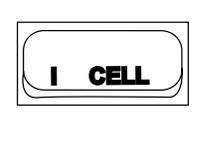
DASHBOARD INSTRUMENT INITIAL CHECK

On switch-on, the panel switches some indicator lights, the buzzer and all segments of the display on for the duration of 1.5 seconds. The tables are shown below (fig.202/C) that contain all dashboard indicator lights and their behaviour at the time of the check. The instruments (fig.203/C) carry out an initial check by moving the pointers and temporary switch-on of the corresponding LED. The LCD carries out complete temporary switch-on of all symbols that can be represented.

LEDS	INITIAL CHECK
	YES
	YES
	YES
	YES
	YES
	NO
	NO
	YES
	YES
	YES
	YES
	YES

(fig.202/C)

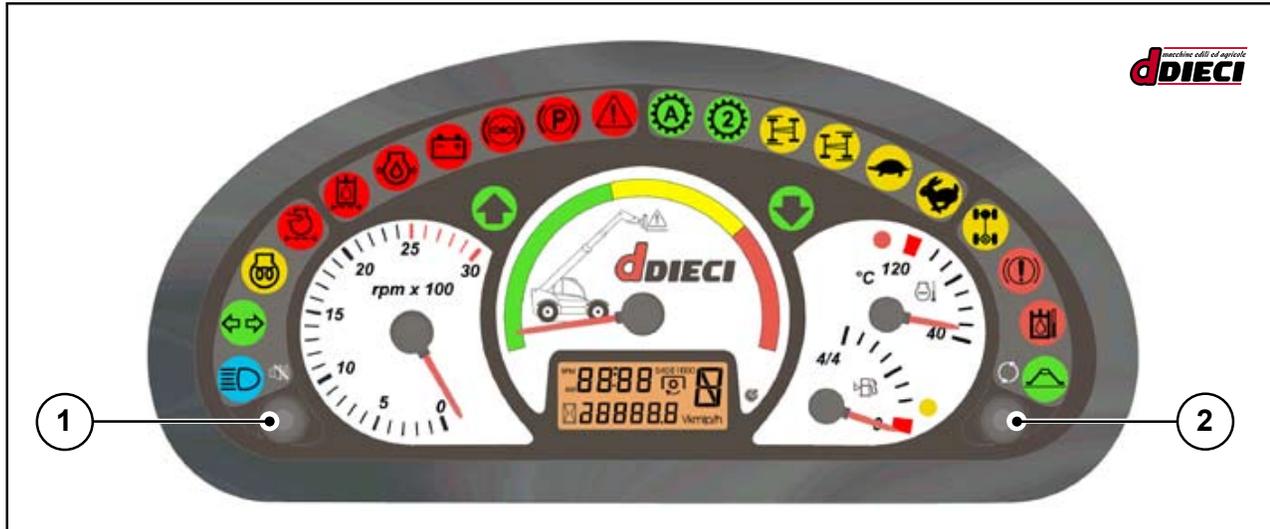
LEDS	INITIAL CHECK
	YES
	YES
	YES
	YES
	YES
	YES
	YES
	YES
	YES
	YES
	YES
	YES

INSTRUMENTS	INITIAL CHECK
	YES
	YES
	YES
	YES
	YES

(fig.203/C)



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

ANTI-TIPPING SYSTEM TEST

(fig.204/C)

Press and hold button “1”(fig.204/C) for 2 seconds, during normal functioning of the instrument, to carry out the anti-tipping system test.

The test consists in:

1. Indicator in start position 1st Green sector.
2. Indicator in end position 2nd Red sector.
3. Indicator in start position 1st Green sector.
4. Indicator in current work position.

The angular speed of the index during the test is 240 angular degrees in 2 sec. (120 degrees/sec).

ANTI-TIPPING SYSTEM MUTE

Press button “1” (fig.204/C) to suspend the acoustic signal due to an alarm of the anti-tipping system.

In the alarm zone (start of 1st Red sector start of 2nd Red sector) the acoustic signal must always be activated even if key “1” has been previously pressed (fig.204/C).

Example:

1. The indicator enters the 1st Red zone.
2. The buzzer starts to ring intermittently.
3. Pressing the last key suspends the acoustic signal.
4. The indicator continues to rise and enters the 2nd Red zone.
5. The buzzer starts to ring continuously. Pressing the left key does not suspend the acoustic signal.

GENERAL ALARM LED

The emergency indicator light/general alarm occur:

- in the event of engine error
- if one of the indicator lights indicated in the table below should switch on
- in the event of engine overrevving

Engine error

The engine has an electronic control unit that communicates directly with the central dashboard. The anomalies are signalled by the general alarm indicator light accompanied by the acoustic signal with duration of 1.5 seconds and the display of the error code on the LCD.

Switch-on of dashboard indicator lights

Some signal indicator lights, which are particularly important for the duration and use of the same in complete safety have been coupled to the general alarm indicator light (fig.205/C) with acoustic signal lasting 1.5 seconds. The acoustic signal functions only with the engine running. The signalling of alarms by the indicator light "1" (fig.205/C) has priority over other signals that this communicates. Other anomaly signal lights have not been coupled to the general alarm indicator light and have their own type of signal (fig.206/C).

	LED 1	LED 2	Acoustic signal (Buzzer)
Coupling 1			YES (1.5 seconds)
Coupling 2			YES (1.5 seconds)
Coupling 3			YES (1.5 seconds)
Coupling 4			YES (1.5 seconds)
Coupling 5			YES (1.5 seconds)

(fig.205/C)

Function	LED	Type of signal
Insufficient pressure in the accumulator		Fixed
Parking brake failure		Fixed
Brake fluid low level		Intermittent (0.5"on, 0.5"off)
Drive oil temperature		* Note

(fig.206/C)

* **Note: Fixed** (Vehicle with Power Shift Gearbox)

* **Note: Fixed on < -20°C < Intermittent on < 20°C < Off > 105°C > Intermittent > 115°C > Fixed on**
(Vehicle with Vario System Drive)

* Note: With Vario System drive

- The vehicle functions regularly between 20°C and 105°C.
- The power descends between -20°C and 20°C
- The power descends between -105°C and 115°C
- The vehicle blocks below -20°C
- The vehicle blocks over 115°C

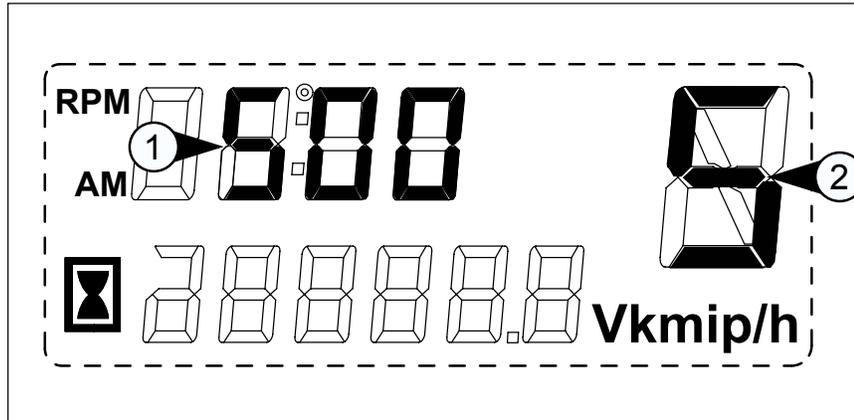


- ATTENTION: - Read the SAFETY REGULATIONS (contained in this manual) carefully for the safety of all personnel and your vehicle.

SERVICE

On reaching the SERVICE on the LCD, the letter "S" will be shown (fig.209/C pos."2") with the hours corresponding (fig.209/C pos."1") to the SERVICE.

Display will only occur on switch-on of the dashboard for a time of 10 seconds with letter "S" flashing.



(fig.209/C)

The hour count is managed from the panel.

Every 300 hours the letter "S" (flashing) must always be shown at every switch-on along with the service interval reached (e.g. 300,600,900) as shown in the table.

The service message will deactivate automatically after 20 hours have passed from display of the voucher.

ANTI-TIPPING ERRORS

The errors of the anti-tipping device are displayed in place of the clock. The displayed message will be of “Er : nn” type where “Er” means “error” and “nn” indicates the identification number (e.g. “ER:64”).

Main panel errors

Alarm code	Description
90	Hour meter message error (10FF80E3)
91	Hour meter message error (10FF80E3)
92	Hour meter message error (10FF80E3)
93	Hour meter message error (10FF80E3)
94	SARL response error, different response value
95	Calibration pin no longer connected during calibration
96	Errors inside panel
97	Errors inside panel
98	Errors inside panel
99	Errors inside panel

Alarm codes/system errors

Alarm code	Description	What to do
11	CRC error of the memory area containing the software	Contact the after-sales technical assistance
12	CRC error of the memory area containing the parameters	Contact the after-sales technical assistance
13	Program flow control error	Contact the after-sales technical assistance
14	Data exchange error between the two microcontrols	Contact the after-sales technical assistance
15	Over range power supply voltage error +7Vdc, +18Vdc	Check battery voltage with machine off and on is within the indicated field.
16	Internal power supply voltage error of first over range channel +7Vdc, +18Vdc	Contact the after-sales technical assistance
17	Internal power supply voltage error of second over range channel +7Vdc, +18Vdc	Contact the after-sales technical assistance
21	Congruency error of the Cut Off1 output status	Contact the after-sales technical assistance
22	Congruency error of the Cut Off2 output status	Contact the after-sales technical assistance
23	Congruency error of the WDO1 output status	Contact the after-sales technical assistance
24	Congruency error of the output 1 status	Contact the after-sales technical assistance
25	Congruency error of the output 2 status	Contact the after-sales technical assistance
26	Congruency error of the WDO2 output status	Contact the after-sales technical assistance
31	Load cell A: CRC error of the parameters inside load sensor.	Contact the after-sales technical assistance
32	Load cell A: Over range signal reading error (10-990)	Contact the after-sales technical assistance
33	Load cell A: Over range internal offset reading error (466-526)	Contact the after-sales technical assistance
34	Load cell A: Internal 5Vdc power supply voltage error	Contact the after-sales technical assistance



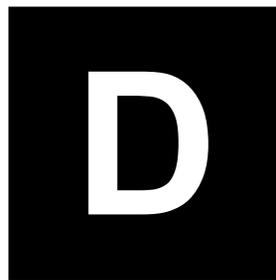
- ATTENTION: - Read the SAFETY REGULATIONS (contained in this manual) carefully for the safety of all personnel and your vehicle.

Alarm code	Description	What to do
35	Load cell A: Thermal calibration not present error	Contact the after-sales technical assistance
36	Load cell A: Check error on LIN bus message	Contact the after-sales technical assistance
37	Load cell A: CRC error of transmitted data	Contact the after-sales technical assistance
38	Load cell A: LIN bus message receiving error	Contact the after-sales technical assistance
39	Load cell A: LIN bus message hour meter control error	Contact the after-sales technical assistance
41	Load cell B: CRC error of the parameters inside load sensor.	Contact the after-sales technical assistance
42	Load cell B: Over range signal reading error (10-990)	Contact the after-sales technical assistance
43	Load cell B: Over range internal offset reading error (526-586)	Contact the after-sales technical assistance
44	Load cell B: Internal 5Vdc power supply voltage error	Contact the after-sales technical assistance
45	Load cell B: Thermal calibration not present error	Contact the after-sales technical assistance
46	Load cell B: Check error on LIN bus message	Contact the after-sales technical assistance
47	Load cell B: CRC error of transmitted data	Contact the after-sales technical assistance
48	Load cell B: LIN bus message receiving error	Contact the after-sales technical assistance
49	Load cell B: LIN bus message hour meter control error	Contact the after-sales technical assistance
51	Difference too wide between load cells A and B readings	Perform calibration test
52	Difference too wide between load percentages detected by channel 1 and 2	Perform calibration test
61	Twin safety input congruency error for ground outriggers reading.	Contact the after-sales technical assistance
62	Twin safety input congruency error for closed boom reading.	Contact the after-sales technical assistance
63	Inputs congruency error by mode selector	Contact the after-sales technical assistance
64	Exclusion key input active at ignition error	Contact the after-sales technical assistance
65	Movements block re-arm input active at ignition error.	Contact the after-sales technical assistance
66	Feedback in frequency signal reading error	Contact the after-sales technical assistance
67	Feedback signal reading of external actuator 1 error	Contact the after-sales technical assistance
68	Feedback signal reading of external actuator 2 error	Contact the after-sales technical assistance
71	Analogical signal reading from over range joystick error	Contact the after-sales technical assistance
72	Pressure transducer reading for re-arm check with joystick error	Contact the after-sales technical assistance
73	CAN BUS messages receiving from optional external unit error	Contact the after-sales technical assistance
81	Buttons pressed at ignition error	Contact the after-sales technical assistance





MAINTENANCE AND REGISTRATION





EVERY MODIFICATION MADE TO THE VEHICLE LEADS TO A NEW VERIFICATION OF CONFORMITY WITH THE 2006/42/EC MACHINERY DIRECTIVE THIS PROCEDURE IS ALSO VALID IN THE CASE OF REPAIRS WITH NON-ORIGINAL SPARE PARTS.

ALL PROCEDURES OR MAINTENANCE OPERATIONS NOT DESCRIBED IN THIS MANUAL MUST BE PERFORMED BY AUTHORISED WORKSHOPS AND BY QUALIFIED STAFF.

THE OPERATOR MAY ONLY CARRY OUT THE FOLLOWING CHECKS: LIQUID LEVEL CHECK, AIR FILTER CLEANING, TYRE PRESSURE CHECK. THESE OPERATIONS MUST BE PERFORMED IN COMPLIANCE WITH SAFETY STANDARDS AS DESCRIBED IN THIS MANUAL.

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

IT IS MANDATORY TO HAVE READ AND LEARNED CHAPTERS “B” AND “C” (SAFETY STANDARDS/TO KNOW AND USE THE VEHICLE) BEFORE READING CHAPTER “D”.

IT IS PROHIBITED TO START TO SERVICE THE VEHICLE IF THIS CHAPTER HAS NOT BEEN READ AND UNDERSTOOD.



MAINTENANCE PRESCRIPTIONS

INTRODUCTION

This vehicle has been designed and built to provide maximum performance, savings and facilitate its operation in various working conditions. Before delivery, the vehicle was tested both by the Manufacturer and by the Dealer to ensure its maximum condition. To preserve these conditions and guarantee problem-free operation, it is important to carry out the routine maintenance operations described in this manual at an authorised **DIECI** dealer in accordance with the maintenance schedule provided.

Maintenance

This section of the Manual provides all the maintenance prescriptions necessary for maintaining the **DIECI** vehicle in perfect working condition.

This chapter also provides information on carrying 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 be carried out as prescribed in the service schedule suggested 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 in order to guarantee their safety and the safety of others. Only **DIECI** Dealer maintenance staff have been trained to carry out said interventions and only they have the special equipment and tools necessary 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 improves the vehicle reliability but it 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 - **Provide the model and chassis serial number of the vehicle.**
- 3 - **Indicate the purchase date and working hours.**
- 4 - **Explain the type of malfunction.**

Only **DIECI** Dealers have access to **DIECI** client service resources. 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.

Protect the environment

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



IT IS MANDATORY TO HAVE READ AND LEARNED CHAPTERS "B"-"C" (SAFETY STANDARDS/TO KNOW AND USE THE VEHICLE) BEFORE READING CHAPTER "D" AND SERVICING THE VEHICLE.



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



DECLARATION OF FIRST INSPECTION BY MANUFACTURER

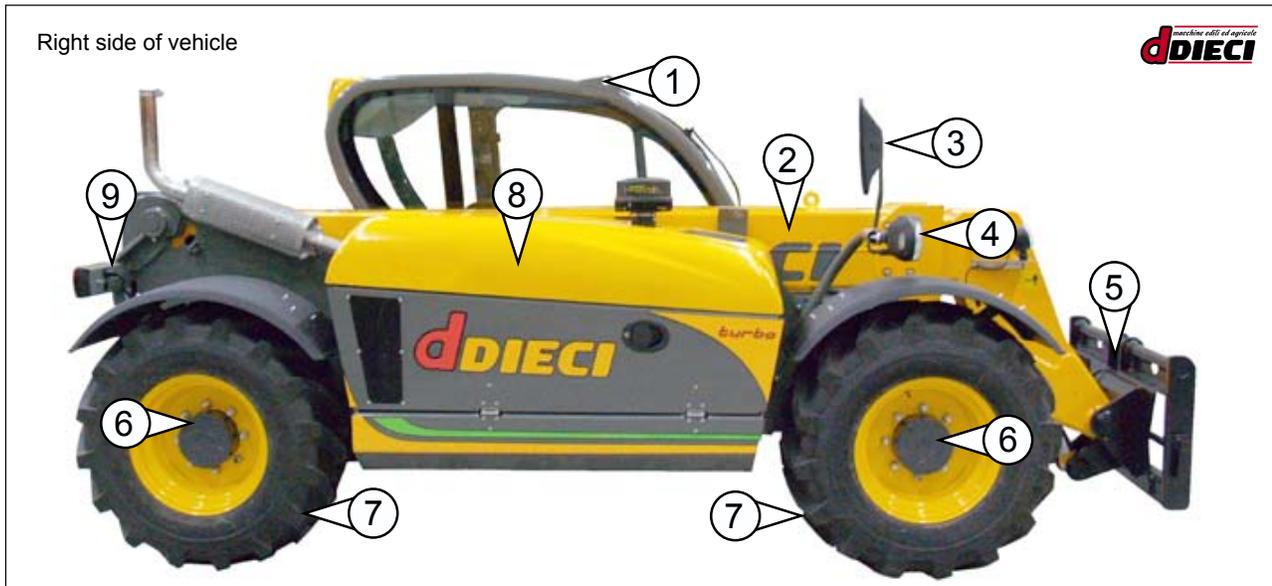


DECLARATION OF FIRST INSPECTION BY MANUFACTURER

DIECI S.r.l. declares that every vehicle produced in its factories undergoes static and dynamic inspections before being placed on the market in order to verify proper operation and compliance with all relative European directives. After inspections are performed, a CE certificate is issued that corresponds to the vehicle inspected and its supplied attachments.

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

IDENTIFYING THE VEHICLE PARTS



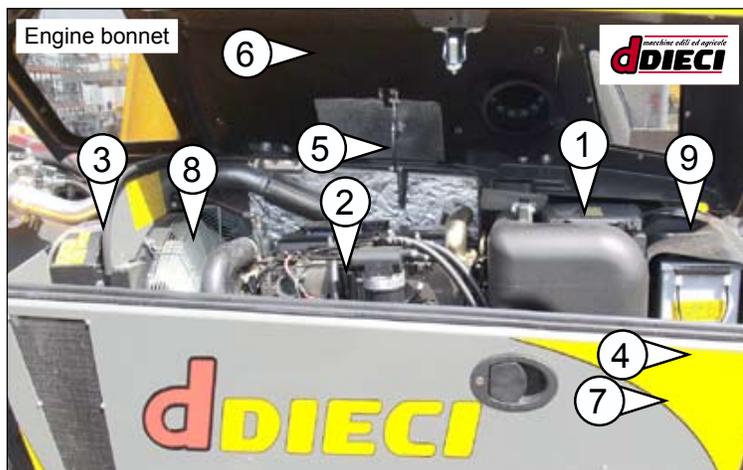
- | | |
|-----------------------------|--------------------------------|
| 1. Cab | 6. Epicycloidal reduction gear |
| 2. Telescopic boom | 7. Wheel |
| 3. Right rear view mirror | 8. Engine bonnet |
| 4. Right front light | 9. Right rear light |
| 5. Attachment holding plate | |



- | | |
|--------------------------------|-----------------------------|
| 1. Cab | 7. Attachment holding plate |
| 2. Left rear light | 8. Left front light |
| 3. Epicycloidal reduction gear | 9. Telescopic boom |
| 4. Cab air filter | 10. Left rear view mirror |
| 5. Wheel | 11. Hydrostatic oil filter |
| 6. Diesel tank | 12. Hydraulic oil tank |

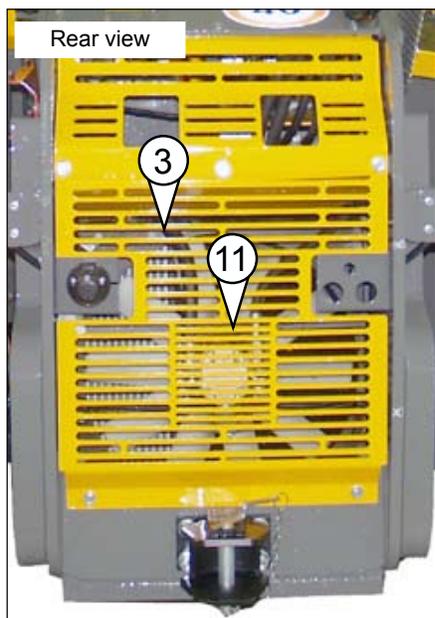
IDENTIFYING THE VEHICLE PARTS

MOD. AGRI FARMER 28.7 - 28.9 - 30.7 - 30.9



- | | |
|-----------------------------------|------------------------------------|
| 1. Engine air filter | 6. Engine bonnet |
| 2. Diesel Engine | 7. Engine control unit/Engine fuse |
| 3. Water radiator/oil/intercooler | 8. Cooling fan |
| 4. Battery isolator switch | 9. Battery |
| 5. Engine bonnet support rod | |

MOD. AGRI FARMER 26.6



- | |
|---|
| 3. Water radiator/oil/intercooler |
| 11. Radiator fan Water radiator/oil/intercooler |



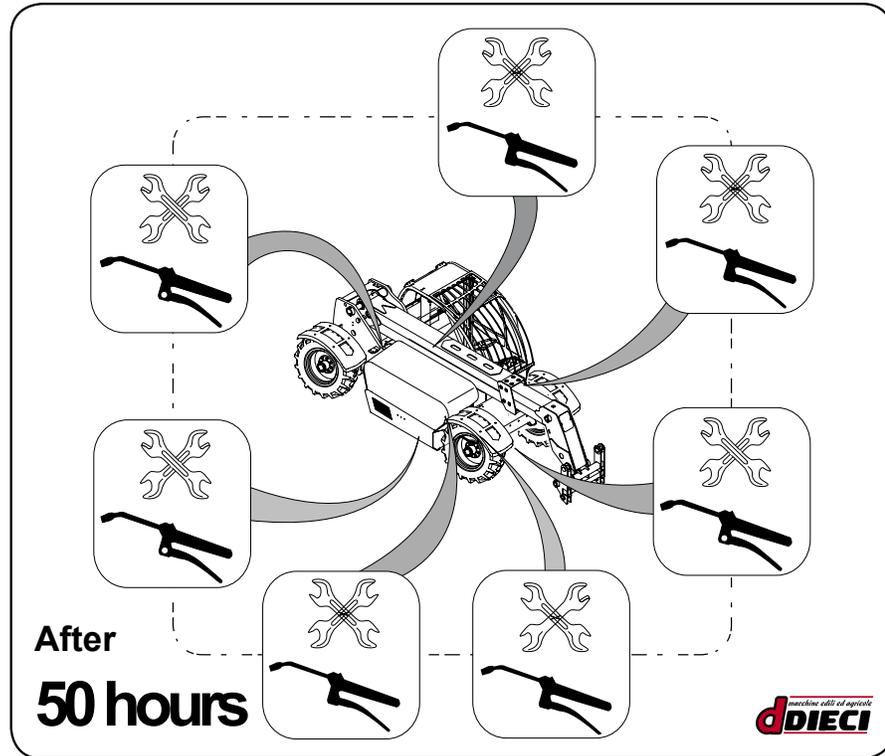
- | |
|---|
| 7. Engine control unit/Engine fuse |
| 8. Engine cooling fan |
| 9. Battery |
| 10. Radiator water reservoir. |
| 11. Radiator fan Water radiator/oil/intercooler |

MAINTENANCE AND REGISTRATION SCHEDULE

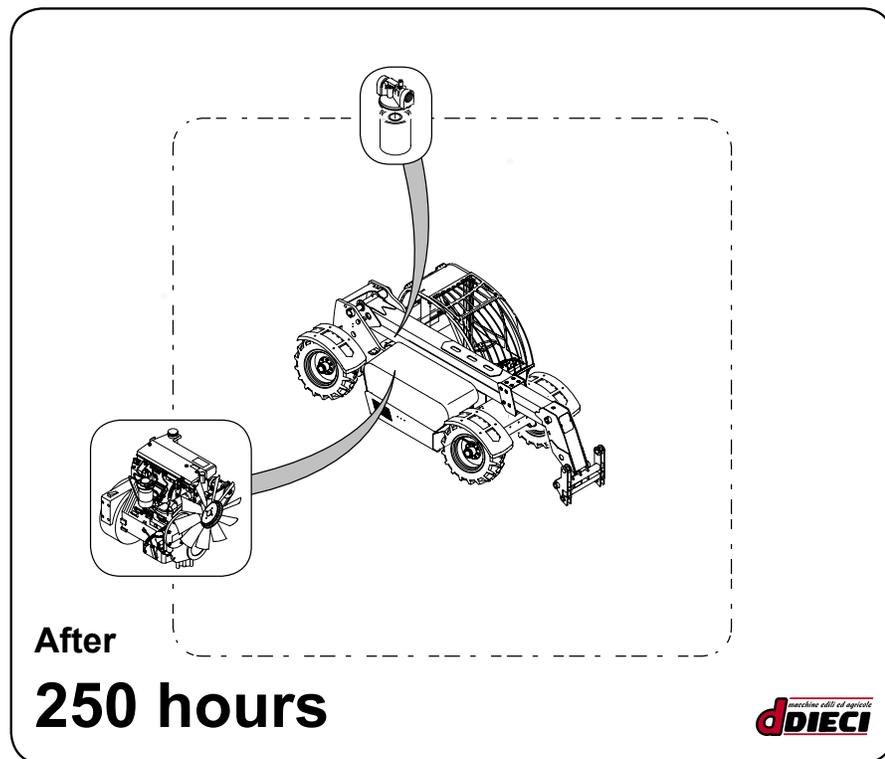
First maintenance

Maintenance operations to be carried out are listed on the left; the graph details the time period in hours and the approximate position of the part to be serviced. The asterisk (*) indicates maintenance in the event of the vehicle's use in special conditions.

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



- Replace external hydraulic oil filters
- Power supply system primary filter.
- Powersupplysystemsecondaryfilter.
- Replace engine oil.
- Replace engine oil filter.

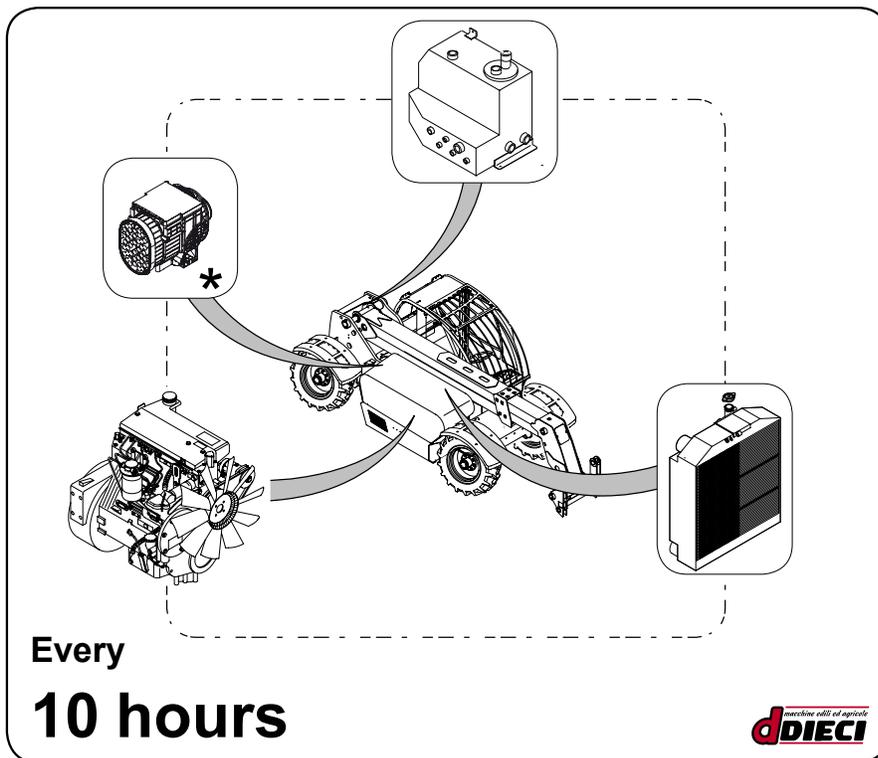


MAINTENANCE AND REGISTRATION SCHEDULE

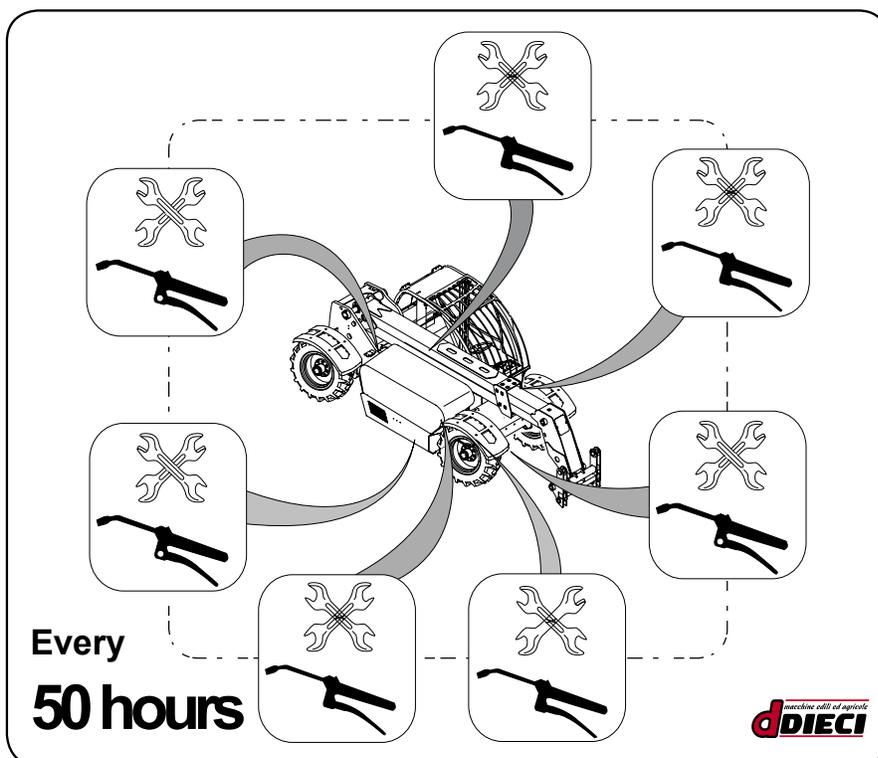
First maintenance

Maintenance operations to be carried out are listed on the left; the graph details the time period in hours and the approximate position of the part to be serviced. The asterisk (*) indicates maintenance in the event of the vehicle's use in special conditions.

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



- Perform anti-tipping device electronic test.
- Check for leaks on hydraulic circuit tubes
- Boom joint pin lubrication.
- Lubrication of jack feet/head.
- Lubrication of raising jack feet/head.
- Lubrication of front and rear articulated pins (PIVOT).
- Lubrication of rear axle oscillation bushing (if present).
- Lubrication of front axle oscillation bushing (if present).
- Lubrication of cross and Cardan transmission shafts.
- Lubrication of boom sliders.
- Lubrication of fork holding plate
- Lubrication of internal boom tubes.
- Lubrication of boom rollers and chains.

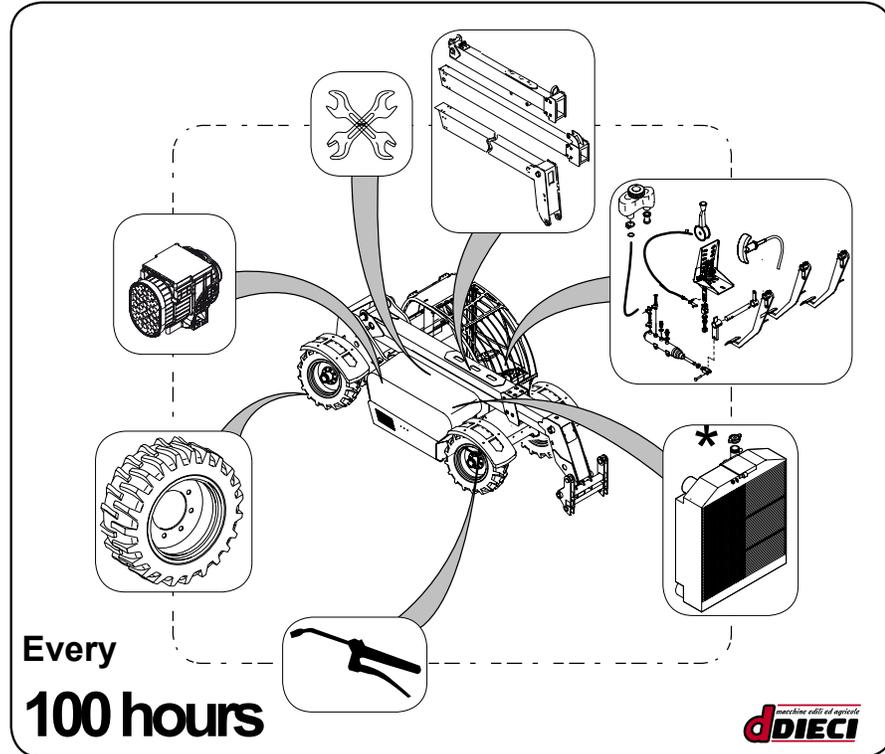


MAINTENANCE AND REGISTRATION SCHEDULE

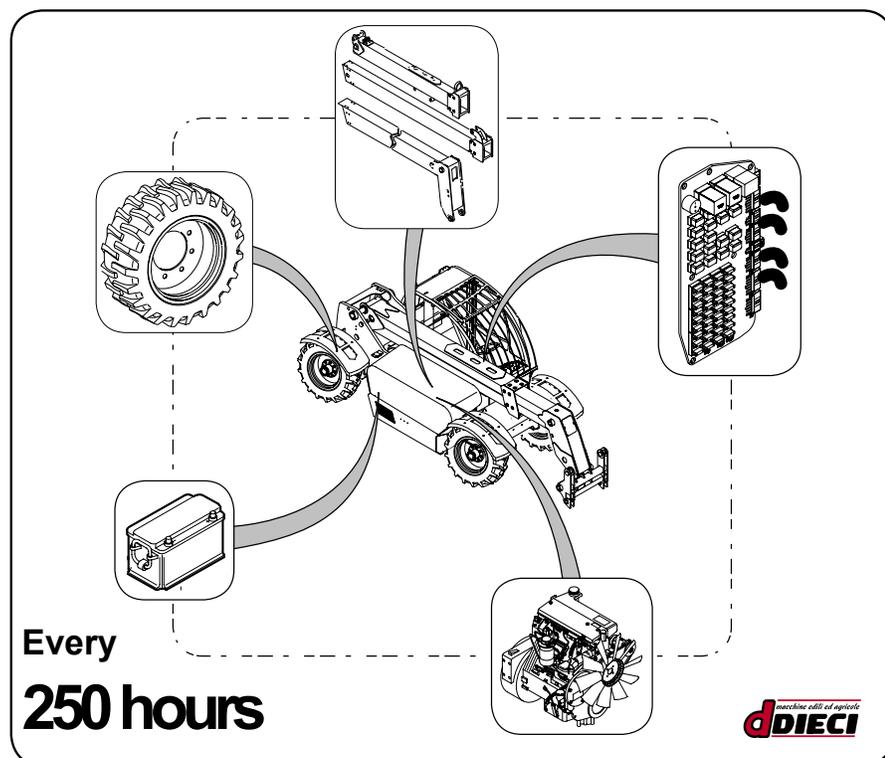
First maintenance

Maintenance operations to be carried out are listed on the left; the graph details the time period in hours and the approximate position of the part to be serviced. The asterisk (*) indicates maintenance in the event of the vehicle's use in special conditions.

- Air filter cleaning.
- Grease differential axle.
- Check tyre pressure.
- Check that all nuts and bolts are tight.
- Check that the radiator is not clogged.
- Check brake oil level.
- Check stickers.
- Check boom chain extension and conditions.
- Check anti-tipping device with load.



- Check battery electrolyte level.
- Check electric system.
- Check alternator belt
- Tighten wheel nuts.
- Replace cab filter.
- Tighten boom sliders.

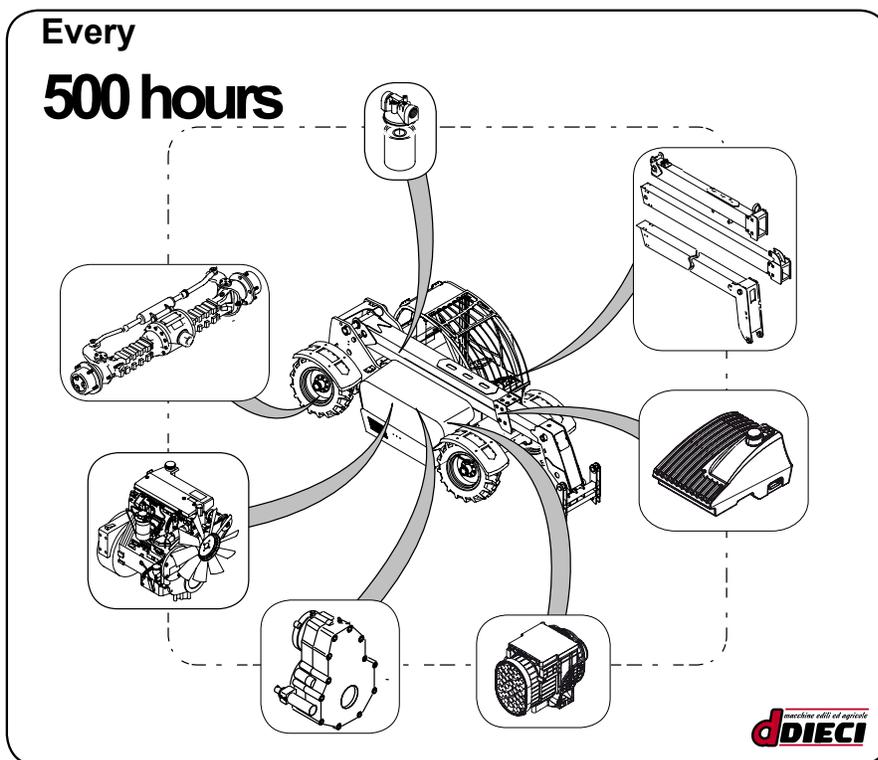


MAINTENANCE AND REGISTRATION SCHEDULE

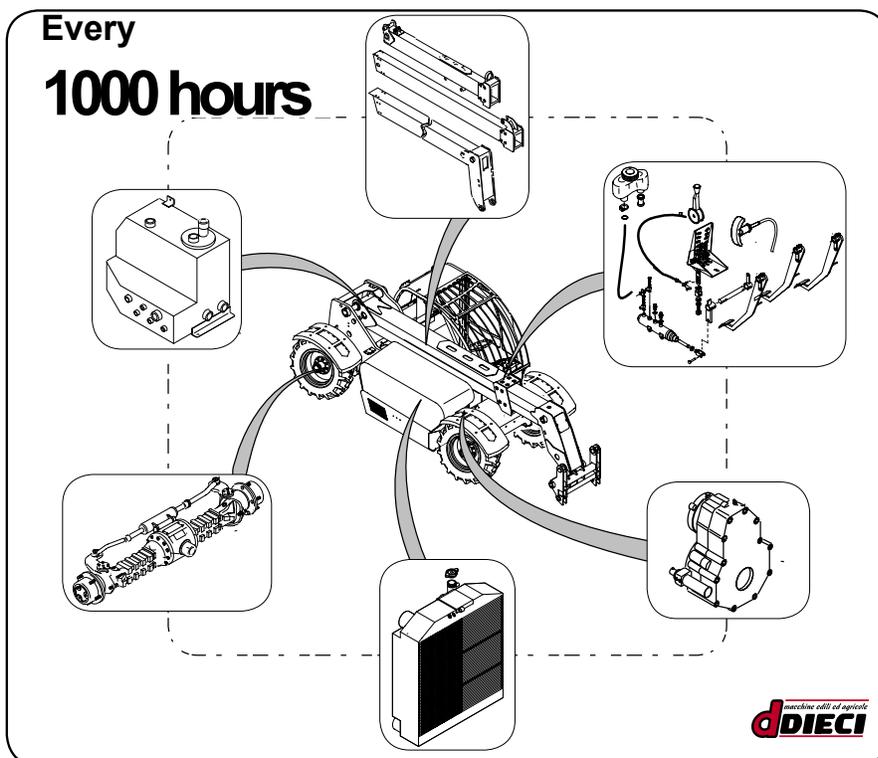
First maintenance

Maintenance operations to be carried out are listed on the left; the graph details the time period in hours and the approximate position of the part to be serviced. The asterisk (*) indicates maintenance in the event of the vehicle's use in special conditions.

- Power supply system primary filter.
- Powersupplysystemsecondaryfilter.
- Replace engine oil.
- Replace engine oil filter.
- Empty fuel tank.
- Check gear change oil level
- Check epicycloidal reduction gear oil level.
- Check differential sump oil level.
- Replace air filter
- Replace external hydraulic oil filters
- Replace hydraulic system oil
- Replacement or cleaning of hydraulic oil tank 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 external hydraulic oil filters.



CAPACITY OF PARTS TO LUBRICATE

AGRI FARMER 26.6

UNIT DESCRIPTION	CAPACITY
ENGINE OIL	7.00 lt
FRONT WHEEL REDUCER OIL	0.9 lt
OIL ON REAR WHEEL REDUCERS	0.9 lt
OIL ON FRONT DIFFERENTIAL AXLE	3.5 lt
OIL ON REAR DIFFERENTIAL AXLE	3.8 lt
GEAR BOX OIL	1.5 lt
HYDRAULIC SYSTEM OIL	130 lt
OIL FOR BRAKING CIRCUIT	1.0 lt
COOLING LIQUID	7.0 lt
FUEL FOR TRACTION	100 lt
GREASE	4 Kg

AGRI FARMER 28.7

UNIT DESCRIPTION	CAPACITY
ENGINE OIL	7.00 lt
FRONT WHEEL REDUCER OIL	0.9 lt
OIL ON REAR WHEEL REDUCERS	0.9 lt
OIL ON FRONT DIFFERENTIAL AXLE	3.5 lt
OIL ON REAR DIFFERENTIAL AXLE	3.8 lt
GEAR BOX OIL	1.5 lt
HYDRAULIC SYSTEM OIL	140 lt
OIL FOR BRAKING CIRCUIT	1.0 lt
COOLING LIQUID	7.0 lt
FUEL FOR TRACTION	100 lt
GREASE	4 Kg

AGRI FARMER 28.9

UNIT DESCRIPTION	CAPACITY
ENGINE OIL	7.00 lt
FRONT WHEEL REDUCER OIL	0.9 lt
OIL ON REAR WHEEL REDUCERS	0.9 lt
OIL ON FRONT DIFFERENTIAL AXLE	3.5 lt
OIL ON REAR DIFFERENTIAL AXLE	3.8 lt
GEAR BOX OIL	1.5 lt
HYDRAULIC SYSTEM OIL	140 lt
OIL FOR BRAKING CIRCUIT	1.0 lt
COOLING LIQUID	7.0 lt
FUEL FOR TRACTION	100 lt
GREASE	4 Kg

AGRI FARMER 30.7

UNIT DESCRIPTION	CAPACITY
ENGINE OIL	7.00 lt
FRONT WHEEL REDUCER OIL	0.9 lt
OIL ON REAR WHEEL REDUCERS	0.9 lt
OIL ON FRONT DIFFERENTIAL AXLE	3.5 lt
OIL ON REAR DIFFERENTIAL AXLE	3.8 lt
GEAR BOX OIL	1.5 lt
HYDRAULIC SYSTEM OIL	140 lt
OIL FOR BRAKING CIRCUIT	1.0 lt
COOLING LIQUID	7.0 lt
FUEL FOR TRACTION	100 lt
GREASE	4 Kg

AGRI FARMER 30.9

UNIT DESCRIPTION	CAPACITY
ENGINE OIL	7.00 lt
FRONT WHEEL REDUCER OIL	0.9 lt
OIL ON REAR WHEEL REDUCERS	0.9 lt
OIL ON FRONT DIFFERENTIAL AXLE	3.5 lt
OIL ON REAR DIFFERENTIAL AXLE	3.8 lt
GEAR BOX OIL	1.5 lt
HYDRAULIC SYSTEM OIL	140 lt
OIL FOR BRAKING CIRCUIT	1.0 lt
COOLING LIQUID	7.0 lt
FUEL FOR TRACTION	100 lt
GREASE	4 Kg



COMPARATIVE OIL TABLE

	ENGINE OIL	HYDRAULIC OIL	AXLES AND GEAR BOX OIL WITH SELF-BLOCKING DIFFERENTIAL	BRAKES AND INCHING OIL	PURE RADIATOR	GREASE
AGIP	Sigma Turbo 15w40	Arnica 46	Rotra MP/S 85w90	ATF II D	Antifreeze	Grease MU EP 2
CASTROL	Turbomax SHPDO	Hydraulic Lift 46	Hypoy LS 90	TQ-D	Antifreeze	Spherol APT 2
CHEVRON	Delo 400 Multigrade 15w40	Rando HD Z 46	Supreme LS gear Lubricant	ATF II D	Antifreeze-Coolant	Dura-Lith EP 2
ERG	TD 401 15w40	Hydro 46 HVI	Gear LSD 75w90	ATF Universal	Fluido per Radiatori concentrato	Grease MP EP 2
Exxon-Mobil	Delvac MX 15w40	Univis N 46	Mobilube 85w90 LS	ATF 220	Antifreeze	Mobilux Ep 2
IP	Tarus Turbo 15w40	Hydrus H.I. 46	Pontiac LS 85w90	Trasmission Fluid DX	Antifreeze	Athesia Grease EP 2
OROIL	Super Truck 15w40 LD	HVLP 46	Fluid Gear LSD 75w90	ATF Universal	Antifreeze	EPX Grease 2
Q8	T 700 SAE 15w40	Handel 46	T 65 LS 75w90	Auto 14	Antifreeze	Rembrandt EP 2
SHELL	Rimula R3 15w40	Tellus T 46	Spirax LS 90		Antifreeze	Retinax EP 2
REPSOL	Diesel Turbo THPD 15w40	HVLP 46	Cartago Autoblocante EP	Matic ATF	Respol Blu Concentrato	Grasa Litica EP 2
ROLOIL	Dolomiti Super HD 15w40	LI 46 HIV		Hydromatic DX	Rol Fluid	Litex EP 2
TEXACO	Ursa Super Premium TDX 15W40	Rando HD Z 46		Dextron II	Antifreeze-Coolant	Multifak EP 2
TOTAL	Rubia Tir 6400	Equivis ZS 46	Trasmission X4	Fluide ATX	Antifreeze	Multis EP 2



- ATTENTION -
FOR CONSUMPTION QUANTITIES OF THE PRODUCTS SEE "CAPACITY OF PARTS TO LUBRICATE" IN CHAPTER "G" - "VEHICLE TECHNICAL DATA AND TECHNICAL FEATURES".



- PROHIBITION -
**DO NOT USE
SYNTHETIC-BASED OIL**

DIECI DECLINES ALL LIABILITY IF OILS DIFFERENT TO THOSE RECOMMENDED ARE USED.

BATTERY ISOLATOR SWITCH

(fig. 1/D Pos. "1")

The battery isolator switch is located in the engine bonnet next to the battery. Its function is to cut off power to the electrical system, opening the circuit on the negative pole.

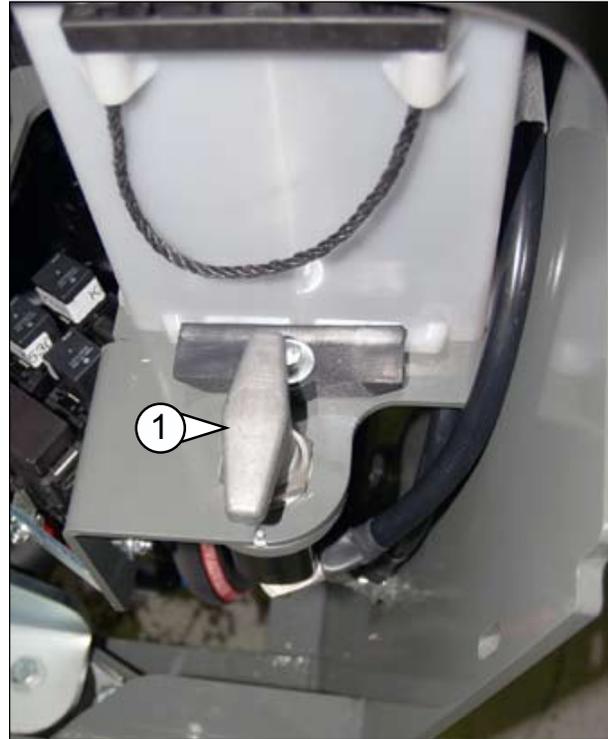
- Turn the handle clockwise to open the circuit and disconnect the electrical power supply (fig.2/D).
- Turn the handle anti-clockwise (fig. 1/D) to restore starting conditions and close the circuit.



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



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



(fig. 1/D) Routine work position - Closed circuit



(fig. 2/D) Maintenance position - Open circuit

OPENING THE ENGINE BONNET

(fig.5/D)

The engine bonnet is equipped with an outer locking handle (fig.5/D Pos."1").

To open:

- Insert the key in the lock (fig.5/D Pos."2") and turn clockwise/counter-clockwise to engage/disengage the lock.
- Pull the handle towards 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. 6/D Pos."1"):

- Push the engine bonnet upwards until the locking hinge has been fully extended.
- With one hand, push one of the two sides of the locking hinge (fig.6/D Pos."6") to make sure it is completely extended.

! - ATTENTION

Before leaving the bonnet, always check by hand that the locking hinge is fully extended 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.6/D Pos."2") toward you to unhook it.
- Accompany the bonnet down to lower.

! - 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 - ⊘

IT IS PROHIBITED to open the engine bonnet with the diesel engine running. Before opening the bonnet, switch the engine off and remove the ignition key, hang up a sign in the cab that reads "maintenance work under way", disconnect the battery by acting on the "battery isolator switch", see page D/14.

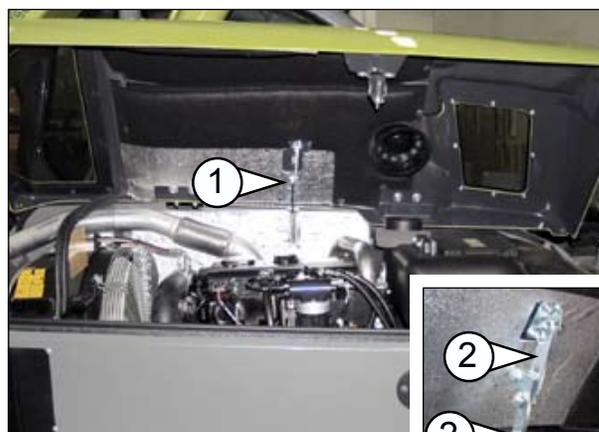
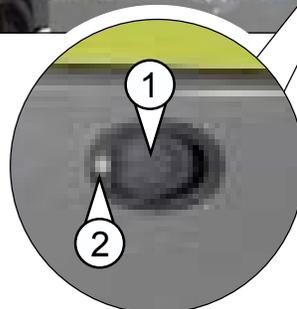
⊘ - PROHIBITION - ⊘

Operating the vehicle with the bonnet open IS STRICTLY PROHIBITED.

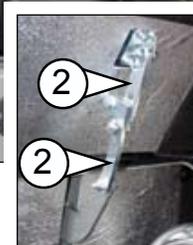
At the end of the maintenance operations, the bonnet must always be locked.



(fig.5/D)



(fig.6/D)



ENGINE

FOR ENGINE, AIR FILTER, AND FUEL FILTER MAINTENANCE ETC. CAREFULLY FOLLOW THE MANUFACTURER'S INSTRUCTIONS PROVIDED IN THE SPECIALLY INCLUDED HANDBOOK.

THE ENGINE USE AND MAINTENANCE HANDBOOK IS AN INTEGRAL PART OF THE DOCUMENTATION SUPPLIED WITH THE VEHICLE. IT MUST ALWAYS BE KEPT IN THE CAB.



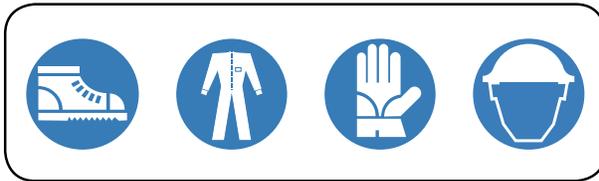
(fig. 8/D)

UNDERSIDE PROTECTION REMOVAL

To perform the maintenance interventions listed below, the vehicle underside protection must be temporarily removed from the vehicle.



IT IS MANDATORY TO USE THE I.P.D. TO CARRY OUT THE MAINTENANCE/CONTROL OPERATIONS.



The underside protections protect the bottom of the vehicle and the mechanics applied from any blows, collisions, dirt.

The vehicle has one underside protection:

- Engine Underside Protection (fig.9/D Pos."A")

Remove engine underside protection (fig.9/D Pos."A") to perform the following maintenance:

- Replace Diesel engine oil
- Replace Diesel engine oil filter
- Replace Diesel engine fuel filter



Remove the underside protection only after having:

- Take the vehicle onto firm and level ground.
- Retracted and lowered the boom
- Position cylinders in transport mode.
- Switched the engine off and removed the ignition key.
- Position a plate in the cab indicating "maintenance in progress".
- Disconnect the battery by acting on the "battery isolator switch" see page D/14.



Remove the guards and underside protection with care, taking all of the precautions necessary in order to prevent damage and/or injury. Once maintenance operations have been completed, remount the guards and underside protections.



For the safety specifications, refer to chapter "B", "Carrying out maintenance in safety" paragraph page B/16.



(fig.9/D)

PEDALS

Accelerator

(fig. 14/D Pos. "1")

The accelerator is an electronic type accelerator, and as such it does not require routine maintenance.

Brakes

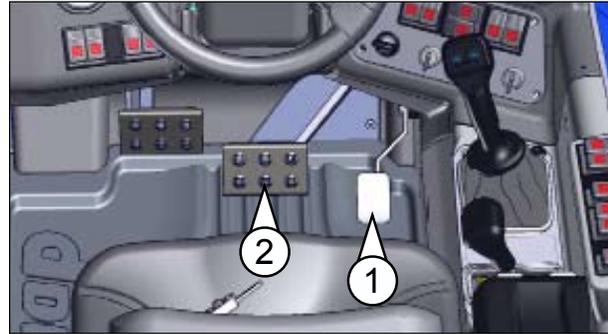
(fig. 14/D Pos. "2")

Hydraulic brakes do not require registration.

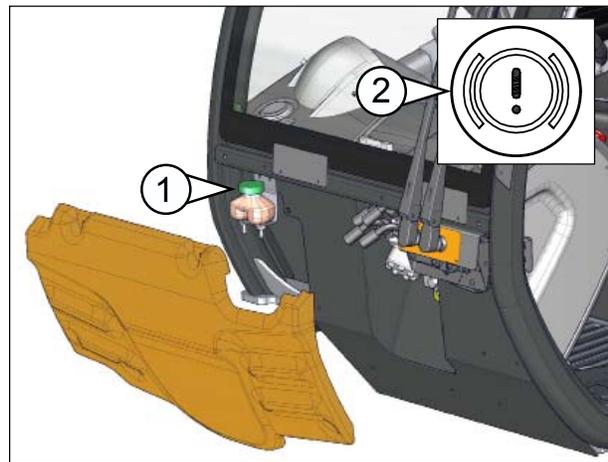
Check the reservoir found in the front of the cab under the guard (fig. 15/D Pos. "1") regularly. Oil must always be level; or rather the reservoir must always be full.

The intermittent switch-on of the indicator light on the dashboard (fig. 15/D Pos. "2"), indicates the low level in the reservoir. On switch-on of the indicator light, immediately interrupt the work operations and top up the reservoir, taking the oil to the correct level.

Before re-starting the work operations, make sure that the light on the dashboard is off and brake a few times at low speed (2km/h) for a brief tract (10m) in order to check regular functioning.



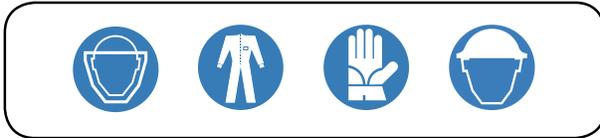
(fig. 14/D)



(fig. 15/D)

! - ATTENTION - !

IT IS MANDATORY TO USE THE I.P.D. to carry out the maintenance/control operations.



To top up:

- Take the vehicle onto firm and level ground.
- Retract the boom completely and lower it.
- Position cylinders in transport mode.
- Switch the engine off and remove the ignition key.
- Position a plate in the cab indicating "maintenance in progress".
- Disconnect the battery by acting on the "battery isolator switch" see page D/14.
- Unscrew tank cap (fig.16/D Pos."1"), turning it counter-clockwise.
- Check that oil is level. If it is not, fill the reservoir (fig.16/D Pos."2").
- Screw on the tank cap, turning it clockwise. Do not tighten it too much.
- Clean any spillage.

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

If the brake pedal seems too 'elastic', contact your **dIECI** dealer to have this fault corrected.

! - ATTENTION

Do not press the brake pedal until top-up has been completed. Check that the tank has been closed before acting on the pedal.

! - ATTENTION

Periodically check the condition of all brake pipes and tubes. If the level is drastically reduced there is a system leak. Contact your **dIECI** Dealer to replace all damaged, corroded or worn tubes.

! - ATTENTION

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

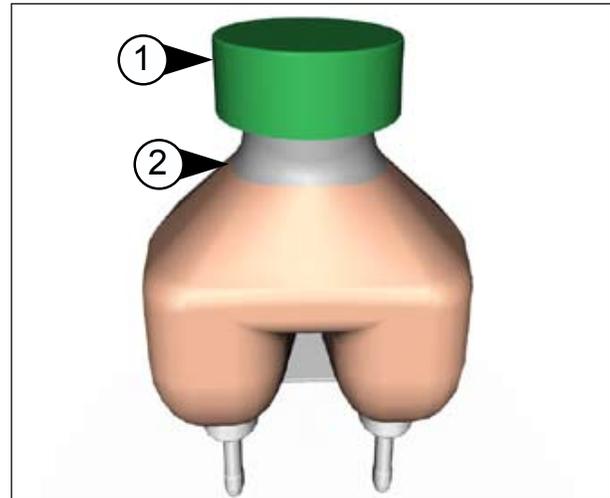
This type of oil can ruin coated surfaces and plastic dashboard parts.

For the safety specifications, refer to chapter "B", "Carrying out maintenance in safety" paragraph page B/16.

"INCHING" PEDAL

(Fig.17/D pos."3")

The pedal does not require any regulation because it is in direct contact with the inching valve.



(fig.16/D)

! - ATTENTION - !

If the indicator light "2" switches on (fig.15/D) the parking brake is blocked.

⊘ - PROHIBITION - ⊘

Operation when brake oil is not level is STRICTLY PROHIBITED.

The brakes could operate irregularly with the risk of accidents.



(fig.17/D)

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

PARKING BRAKE

(fig.20/D pos."1")

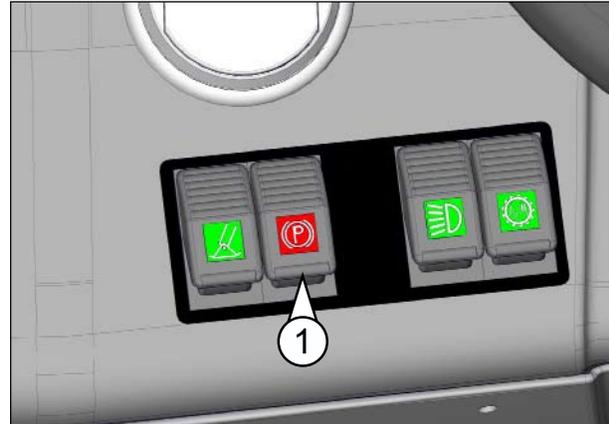
The electrically controlled parking brake does not need routine maintenance.

! - ATTENTION

In the event the parking brake fails do not use the vehicle.

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

Unauthorised modifications of the rear axle ratio, the vehicle weight, or wheel and tyre dimensions may compromise proper functioning of the parking brake.



(fig.20/D)

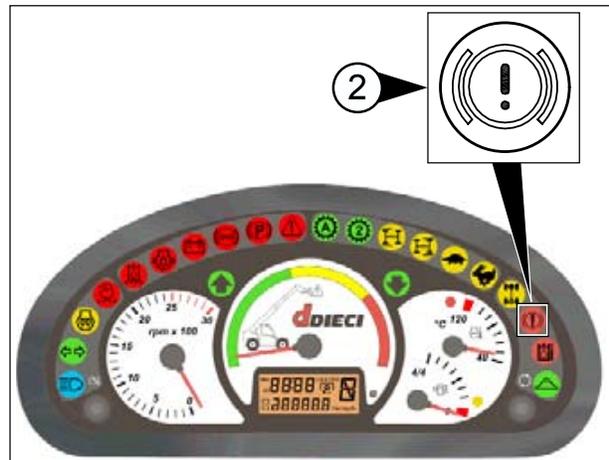
! - ATTENTION - !

If the indicator light "2" switches on (fig.21/C) the parking brake is blocked.

DO NOT ADVANCE WITH THE VEHICLE.

Consult the "Brakes" paragraph (page D/18) in this manual to top-up the brakes oil.

If the indicator light should remain on, contact a **DIECI** after-sales centre.



(fig.21/C)

HYDRAULIC OIL LEVEL

(Fig.22/D Pos."1")

The hydraulic oil tank is positioned inside the chassis, under the base of the telescopic arm (fig.23/D Pos."1").

The oil level can be checked via the transparent cap located on the left side of the tank itself (fig. 22/D Pos "1")

The level is correct when the oil can be seen through the transparent cap (fig.22/D Pos."1") 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 via the transparent indicator (fig.22/D Pos."1").

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

- Park the vehicle on a level and compact surface.
- Retract the boom completely and lower it to horizontal position.
- Switch off the engine and remove the ignition key, hang up a sign in the cab that reads "maintenance work under way".
- Remove the top up cap (fig.23/D Pos."2") and pour in the **DIECI** recommended oil.
Top up the quantity necessary to bring it back to level.

- ATTENTION

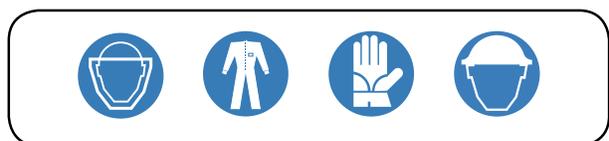
When topping up, do not exceed level and immediately clean any spillage.

- ATTENTION

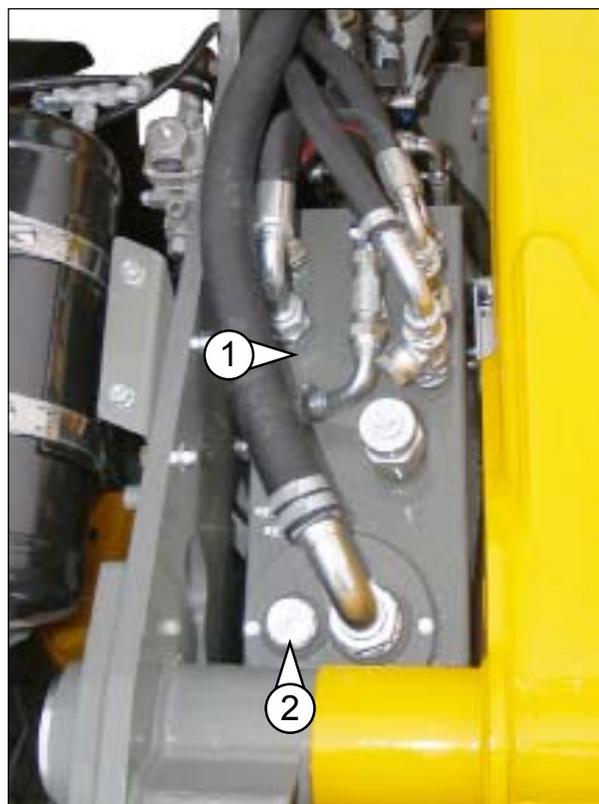
For the safety specifications, refer to chapter "B", "Carrying out maintenance in safety" paragraph page B/16.

- ATTENTION -

IT IS MANDATORY TO USE THE I.P.D. to carry out the maintenance/control operations.



(fig.22/D)



(fig.23/D)

CHANGING HYDRAULIC OIL AND REPLACING FILTERS MOD. AGRI FARMER 28.7-28.9-30.7-30.9

Inside the tank there is a mesh filter (fig.27/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 vehicle to a halt on flat ground.
- Retract the boom completely and lower it to horizontal position.
- Switch off the engine and remove the ignition key, hang up a sign in the cab that reads "maintenance work under way".
- Place a suitable capacity container under the drain plug.
- Remove the drain plug (fig.28/D Pos."1") to drain the oil. Remove the loading plug (fig.27/D Pos."2") to accelerate emptying.
- Once the tank is completely empty, remove the flange (fig.27/D Pos."1"), unscrewing its bolts to access the inside of the tank.
- Use a fork spanner to remove the filter (fig.27/D Pos."3") inside the tank.
- Insert new filters, tightening them with the fork spanner.
- Reposition the flange (fig.27/D Pos."1") in its housing, and tighten the bolts.
- Reinsert the drain plug (fig.28/D Pos."1").
- Fill up the tank to level via its filler cap (fig.27/D Pos."2").
- Once the tank has been filled, tighten the filler cap (fig.27/D Pos."2").
- Start up the vehicle and move hydraulic cylinders to discharge any air bubbles.
- Check the hydraulic oil level again and top up if necessary.

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



- ATTENTION -

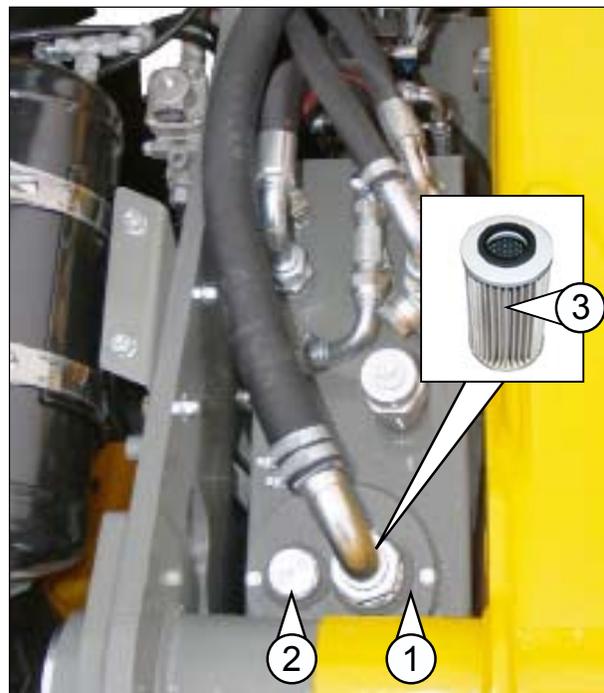
IT IS MANDATORY TO USE THE I.P.D. to carry out the maintenance/control operations.



For the safety specifications, refer to chapter "B", "Carrying out maintenance in safety" paragraph page B/16.



(fig.26/D)



(fig.27/D)



(fig.28/D)

CHANGING HYDRAULIC OIL AND REPLACING FILTERS MOD. AGRI FARMER 26.6

The Agri Farmer 26.6 has two tanks; the upper tank is on the left side between the boom and chassis (fig 30/D Pos. "4") and the lower tank is under the base of the raising cylinder (fig.31/D Pos. "1").

Inside the upper tank there is a mesh filter (fig.30/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 vehicle to a halt on flat ground.
- Retract the boom completely and lower it to horizontal position.
- Switch off the engine and remove the ignition key, hang up a sign in the cab that reads "maintenance work under way".
- Place a container of appropriate capacity under the discharge cap (fig. 31/D Pos. "1")
- Remove the drain plugs (fig.31/D Pos."1") to drain the oil. Remove the loading plug (fig.30/D Pos."2", fig.31/D Pos."2") to accelerate emptying.
- Once the tank is completely empty, remove the flange (fig.30/D Pos."1"), unscrewing its bolts to access the inside of the tank.
- Use a fork spanner to remove the filter (fig.30/D Pos."3") inside the tank.
- Insert new filters, tightening them with the fork spanner.
- Reposition the flange (fig.30/D Pos."1") in its housing, and tighten the bolts.
- Reinsert the drain plug (fig.31/D Pos."1") and the load plug (fig.31/D Pos."2").
- Fill up the tank to level via its filler cap (fig.30/D Pos."2").
- Once the tank has been filled, tighten the top up cap (fig.30/D Pos."2").
- Start up the vehicle and move hydraulic cylinders to discharge any air bubbles.
- Check the hydraulic oil level again and top up if necessary.

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



- ATTENTION -

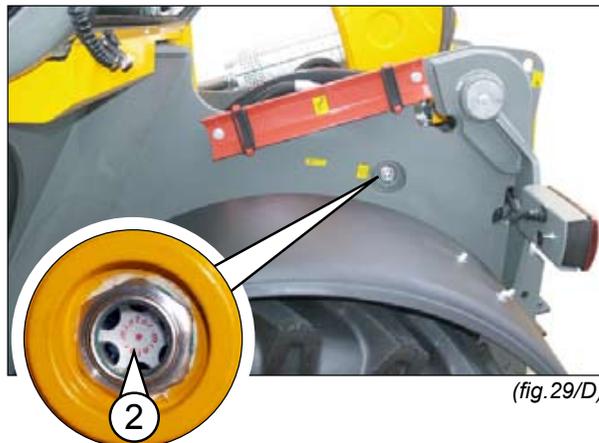
IT IS MANDATORY TO USE THE I.P.D. to carry out the maintenance/control operations.



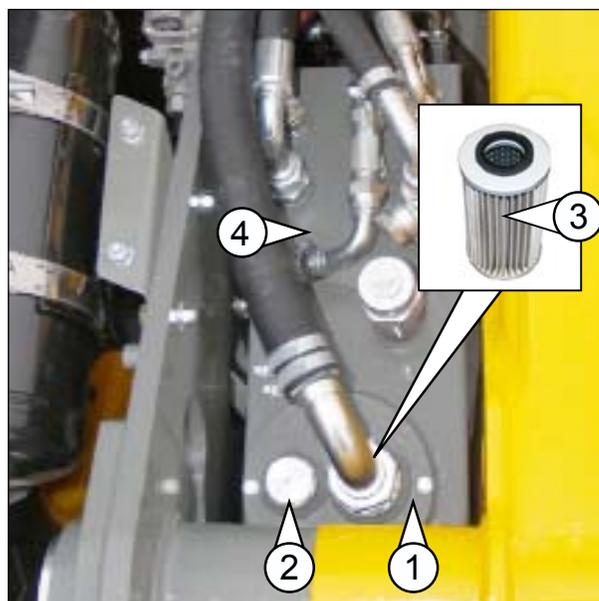
For the safety specifications, refer to chapter "B", "Carrying out maintenance in safety" paragraph page B/16.



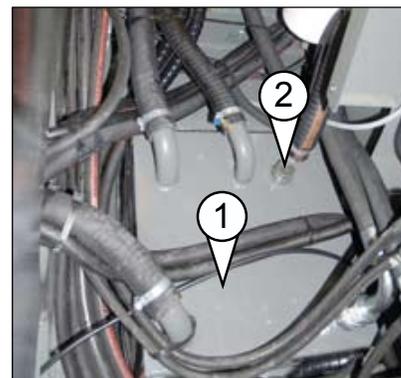
- ATTENTION: - Read the SAFETY REGULATIONS (contained in this manual) carefully for the safety of all personnel and your vehicle.



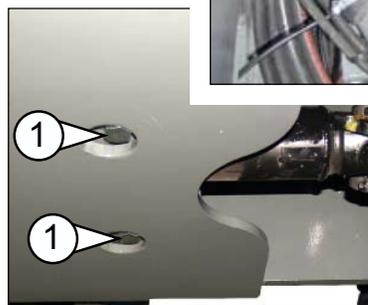
(fig.29/D)



(fig.30/D)



(fig.31/D)



HYDROSTATIC SYSTEM OIL FILTER

(fig.34/D pos."1")


- ATTENTION -

IT IS MANDATORY TO USE THE I.P.D. to carry out the maintenance/control operations.



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. 35/D Pos. "1")
7. Remove the filter cartridge, unscrewing it using a ribbon spanner (fig.36/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. Open the "supply tube filter" valve and block it with a nylon clamp (fig.35/D Pos."1").
12. Switch on the vehicle and make sure there are no leaks.


- ATTENTION

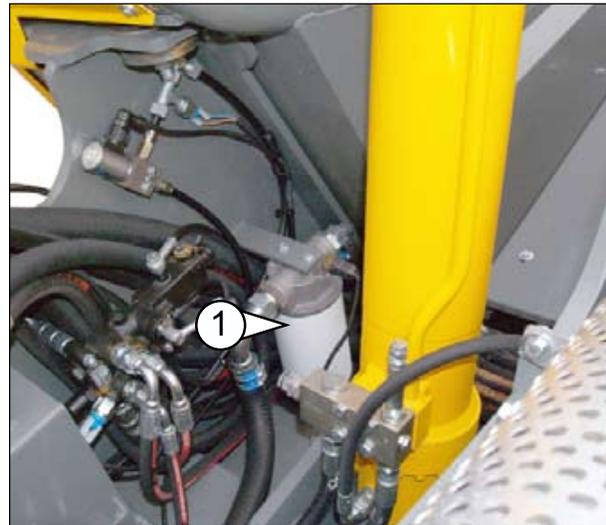
The Agri Farmer 26.6 (fig.35/D Pos."1") does not have the valve. Do not carry out operations described in numbers 6 and 11.


- ATTENTION

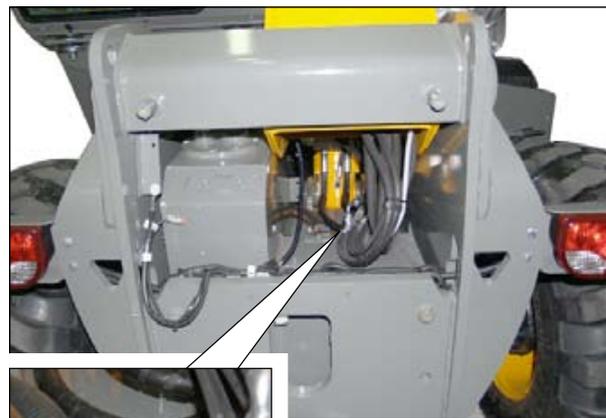
Waste oil is potentially harmful to the environment and must be disposed of properly.

For replacement of the filters, contact a **DIECI after-sales centre**.

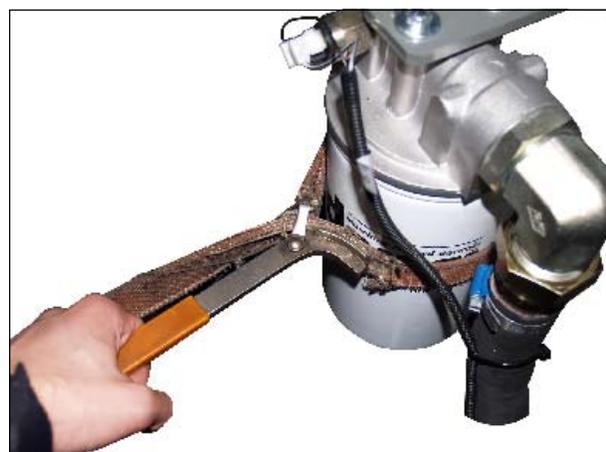
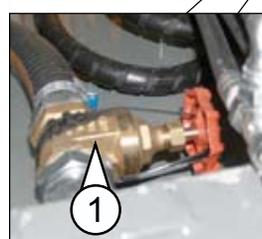
For the safety specifications, refer to chapter "B", "Carrying out maintenance in safety" paragraph page B/16.



(fig.34/D)



(fig.35/D)



(fig.36/D)



FUEL TANK

(fig.29/D Pos."1")

Cleaning



IT IS MANDATORY TO USE THE I.P.D. to carry out the maintenance/control operations.



For correct cleaning:

1. Park the vehicle on a level and compact 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. Disconnect the battery by acting on the "battery isolator switch" see page D/16.
3. Place a container of suitable capacity under the drain plugs (fig.38/D Pos."3") to collect fuel that may leak out during cleaning.
4. Unscrew the tank's filler cap (fig.37/D Pos."2").
5. Unscrew the tank's drain cap, situated underneath the tank (fig.38/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. Re-insert the drain cap and tighten it securely.
8. Top up the tank with clean fuel and replace cap.



For the safety specifications, refer to chapter "B", "Carrying out maintenance in safety" paragraph page B/16.



Fuel is highly inflammable.

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

Risk of fire or explosion.

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

To clean and drain the diesel tank, contact a DIECI after-sales centre.



(fig.37/D)



(fig.38/D)

**WATER/OIL RADIATOR
MOD. AGRIFARMER 28.7-28.9-30.7-30.9**

- ATTENTION -

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

Radiator grill cleaning

Radiator grills (fig.41/D Pos."1", fig.42/D Pos."1") and air recirculation networks (fig.43/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 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.


- 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.41/D Pos."2").

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

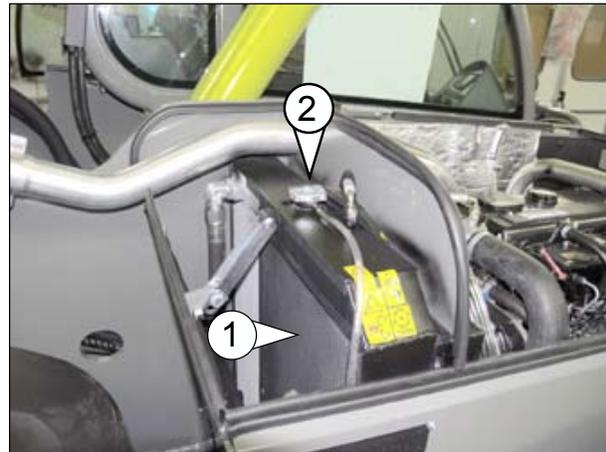
1. Stop the vehicle on a flat surface.
2. Switch off the engine and remove the ignition key, hang up a sign in the cab that reads "maintenance work under way".
3. Slowly turn the radiator cap (fig.41/D Pos."2") counter-clockwise until reaching the safety pin.
4. Discharge pressure and steam.
5. Remove 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

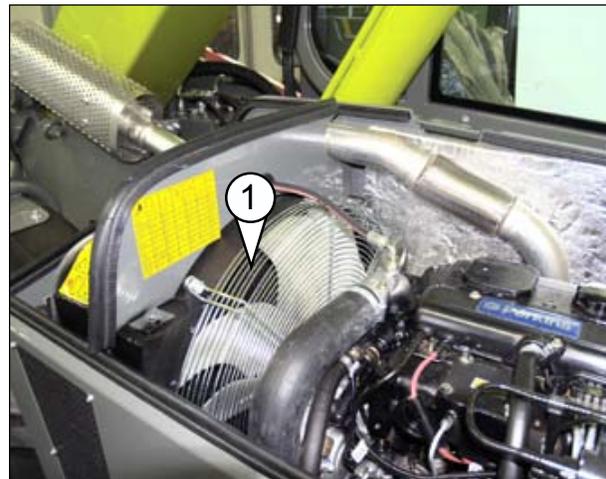
If frequent top ups are necessary in normal working conditions, verify that there are no cooling system leaks. Contact a **DIECI** after-sales centre if problems arise.


- ATTENTION -

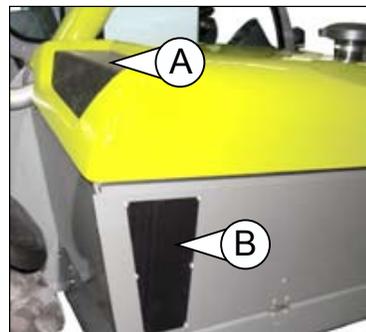
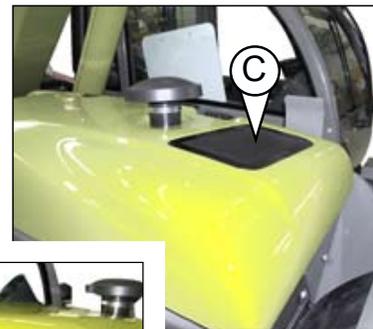
Use demineralised water to fill the cooling system. Calcareous water may cause incrustations and premature system ageing.



(fig.41/D)



(fig.42/D)



(fig.43/D)





IT IS MANDATORY TO USE THE I.P.D. to carry out the maintenance/control operations.



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.45/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. Rinse the radiator with clean water, pouring it in the top up cap (fig.44/D Pos."1"), making it drain through the sleeve inlet (fig.45/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.45/D Pos."1").
10. Fill up the cooling system from the cap (fig.44/D Pos."1") up to level (3 cm below the radiator cap) with the previously prepared cooling liquid.
11. Close the cap (fig.44/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.44/D)



(fig.45/D)

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



Use demineralised water to fill the cooling system. Calcareous water may cause incrustations and premature system ageing. The radiator must always be filled with a distilled water and anti-freeze solution in order to prevent corrosions and freezing of the water in the system.

THE MIXTURE PERCENTAGES CAN BE FOUND ON THE ANTI-FREEZE BOXES.



To change the refrigerant liquid, contact a DIECI after-sales centre.

AGRI FARMER 26.6 WATER RADIATOR / OIL

- ATTENTION -

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

Radiator grill cleaning

Radiator grills (fig.48/D Pos."1"), cooling fans (fig.48/D Pos."2" – fig.49/D Pos."1") and the air recirculation grills (fig.50/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.51/D Pos."1") must always be at level. The level is correct when the water is just above halfway (fig. 51/D Pos. "A"). Verification of the correct level of cooling liquid must be carried out as follows:

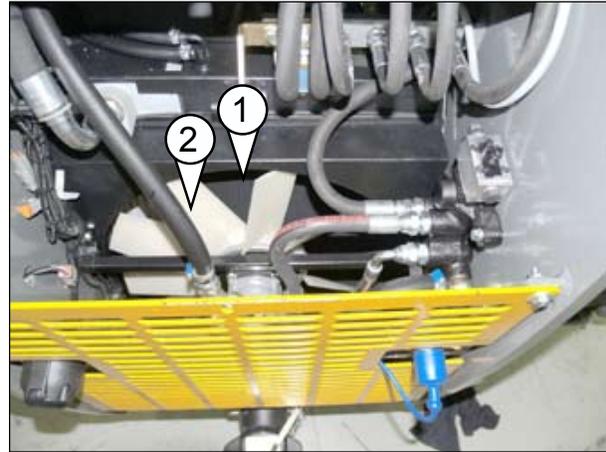
1. Stop the vehicle on a flat surface.
2. Switch off the engine and remove the ignition key, hang up a sign in the cab that reads "maintenance work under way".
3. Slowly turn the radiator reservoir cap (fig. 51/D Pos."2") counter-clockwise until reaching the safety pin.
4. Discharge pressure and steam.
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

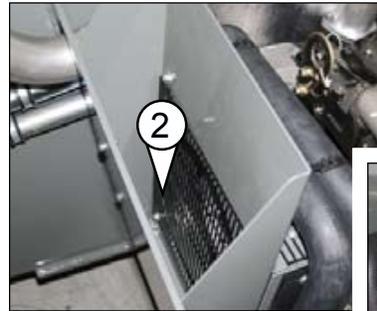
If frequent top ups are necessary in normal working conditions, verify that there are no cooling system leaks. Contact a **DIECI** after-sales centre if problems arise.


- ATTENTION -

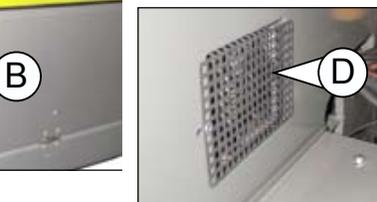
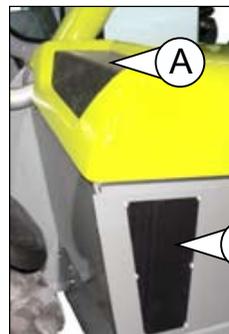
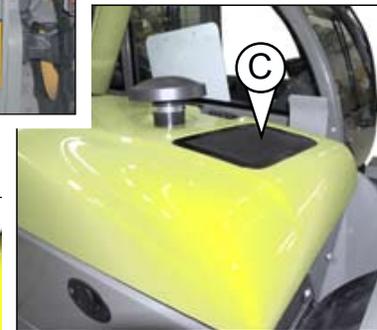
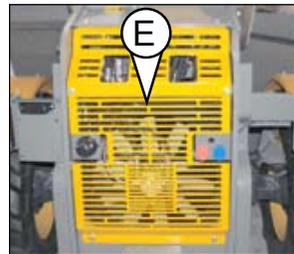
Use demineralised water to fill the cooling system. Calcareous water may cause incrustations and premature system ageing.



(fig. 48/D)



(fig. 49/D)



(fig. 50/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.52/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.51/D, pos."3"- "4") just enough so that the air can escape during filling.
9. Rinse the radiator with clean water, pouring it in the top up cap (fig.51/D Pos."2"), making it drain through the sleeve inlet (fig.52/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.52/D Pos."1").
12. Fill up the cooling system from the cap (fig. 51/D Pos."2") up to level (fig. 51/D Pos."A") with the previously prepared cooling liquid.
13. Start up 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. 51/D, pos."3"- "4"), the cooling system is completely full.
15. When filling is complete, tighten the two loosened vents (fig. 51/D, pos."3"- "4") and close the filler cap (fig.51/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.

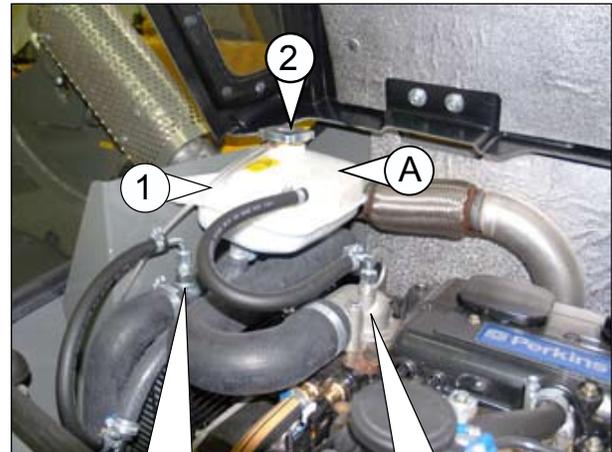
Waste coolant is potentially harmful to the environment and must be disposed of appropriately.



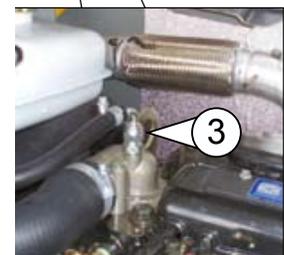
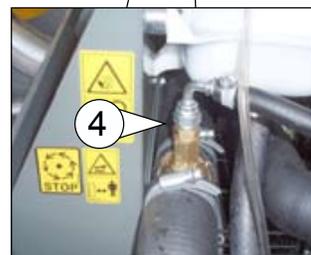
**Use demineralised water to fill the cooling system.
Calcareous water may cause incrustations and
premature system ageing.**

**The radiator must always be filled with a distilled water
and anti-freeze solution in order to prevent corrosions
and freezing of the water in the system.**

**THE MIXTURE PERCENTAGES CAN BE FOUND ON THE
ANTI-FREEZE BOXES.**



(fig.51/D)



(fig.52/D)

AIR FILTER

(fig.56/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 an indicator light found on the left dashboard (fig.63/D Pos."1"); once the indicator light switches on the vehicle can be used for a maximum of 10 hours. Maintenance must however be carried out as often as described.

Filter cleaning should be carried out with compressed air at maximum of 3 Bar and at a distance not 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 in the cab that reads "maintenance work under way".
3. Open and lock the bonnet.
4. Pull towards you the locking levers (fig. 57/D Pos."1"), located at the four corners of the filter cover (fig. 56/D Pos."2").
5. Remove the cover (fig.56/D Pos."2").
6. Push the internal handle (fig.58/D Pos."1") toward the cab (as indicated by the arrow) and pull it upward to extract the secondary filter.
7. Slide the paper filter (fig.59/D Pos."1") from the support, turning downward and over the part with a gasket. Keep one hand under it to prevent it from falling and being ruined.
8. Remove the primary filter (fig.60/D Pos."1"), pulling the extraction flap toward the (fig.60/D Pos."2") side or the central plastic (fig.60/D Pos."3").
9. Clean and replace filters and remount them following the same instructions in the opposite order.

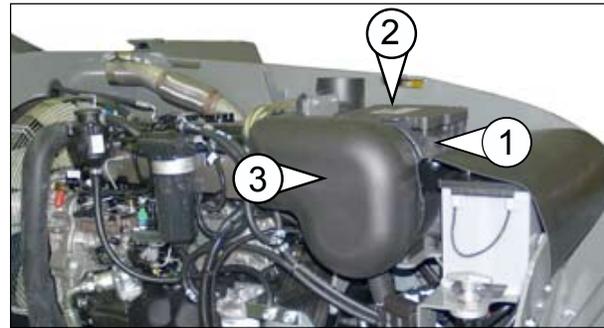
! - ATTENTION

Clean filters only when the indicator light signals clogging or at scheduled maintenance intervals. Unnecessary, frequent cleaning exposes components to handling damage which can allow dust and dirt to pass into the filtering phases, causing damage to the engine.

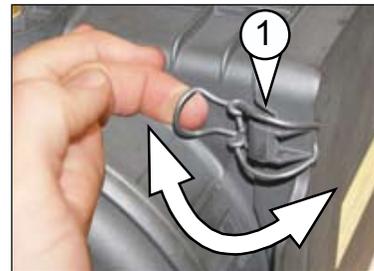
! - ATTENTION

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

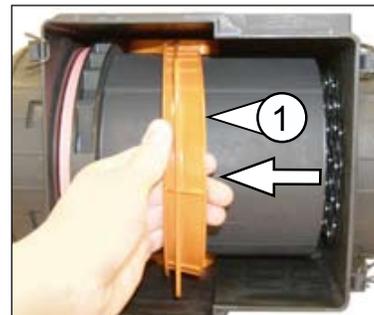
Regularly check the suction sleeves and replace them immediately if worn or damaged. Regularly check that bolts and clamps are properly tightened. No air should be allowed to enter the engine without having first passed through the filter.



(fig.56/D)



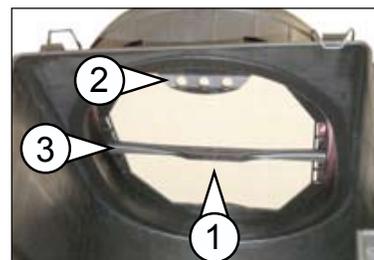
(fig.57/D)



(fig.58/D)



(fig.59/D)



(fig.60/D)

During filter cartridge replacement, the primary suction ducts (fig.56/D Pos."3") must be cleaned in addition to the filter holding plate.

Follow the operations listed below:

1. Remove bolts from the primary suction tube duct (fig.62/D Pos."1").
2. Remove the duct and clean it with a jet of compressed air.
3. Remove the front filter bolt (fig.61/D Pos."1") and remove the air input inlet (fig.61/D Pos."2").
4. Use a wet cloth that will not leave residue. Clean every air input inlet.
5. Repeat the same steps in the opposite order to remount all components.

! - 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.

! - ATTENTION

For the complete efficiency of the filter, it is advised to operate with the filter complete with all parts and components. All worn parts should be replaced as quickly as possible.

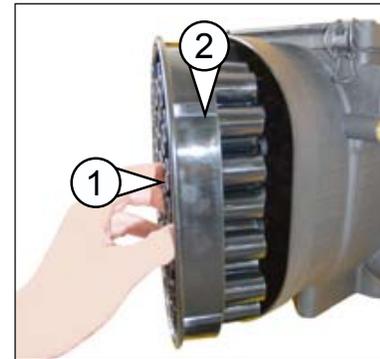
⊘ - PROHIBITION - ⊘

Operating the vehicle without the engine air filter IS STRICTLY PROHIBITED.

The engine suction in air continuously during use. Dust that enters into circulation can cause serious system damage.

! - ATTENTION - !

IT IS MANDATORY TO USE THE I.P.D. to carry out the maintenance/control operations.



(fig.61/D)



(fig.62/D)



(fig.63/D)

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

CAB VENTILATION FILTER

(fig.67/D Pos."1")

Routine maintenance should be carried out at the prescribed intervals.

On changing the cab ventilation filter, clean the intake pipe (fig.67/D Pos."2") using a jet of air from the inside of the cab to the outside.

Clean the air intake grill (fig.68/D Pos."1") at the end of every working day using a jet of air.


- ATTENTION -

IT IS MANDATORY TO USE THE I.P.D. to carry out the maintenance/control operations.



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 guard, in the left of the seat (fig.66/D Pos."1"), by unscrewing the fastening screws.
5. Remove the worn filter and insert the new one (fig.67/D Pos."1").
6. Reassemble the guard
7. Restart the engine with the fan moving to verify that the operation is correct.


- 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.

If the ventilation system malfunctions, check for filter clogging.

In the event that malfunctions persist even after filter replacement, contact a **DIECI** service centre.


- ATTENTION

Do not use the vehicle without a cab filter.

Dust that enters the cab can cause health risks for the operator and ventilation system malfunction.


- ATTENTION

For replacement of the engine air filter, contact a DIECI after-sales centre.



(fig.66/D)



(fig.67/D)



(fig.68/D)



AIR CONDITIONING (OPTIONAL)

Cleaning the system



IT IS MANDATORY TO USE THE I.P.D. to carry out the maintenance/control operations.



1. Park the vehicle on a level and compact 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. Disconnect the battery by acting on the "battery isolator switch" see page D/14.
4. Wait for the engine to cool.
5. Remove the protective guard (fig.69/D Pos"1").
6. Clean the condenser (fig.70/D Pos"1"), directing the compressed air, at a maximum pressure of 7 bar, through the radiant mass, from the side opposite the normal air flow. Jets of air must be directed perpendicularly to the surface of the radiator.
7. Be careful not to damage radiator flaps.
8. After cleaning, replace the condenser.

For the safety specifications, refer to chapter "B", "Carrying out maintenance in safety" paragraph page B/16.



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

Check the gas load every year via the corresponding valves (fig.71/D Pos"2").



Replace the radiator filter (fig.70/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. 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. **DO NOT** loosen any air conditioning system tubes. Contact between the skin and coolant can cause freezing.



For the maintenance of the air conditioning system, contact a DIECI after-sales centre.

Compressor belt tension

1. Park the vehicle on a level and compact 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. Disconnect the battery by acting on the "battery isolator switch" see page D/14.
4. Wait for the engine to cool.
5. Check compressor belt tension (fig.71 Pos."1") every 500 hours.



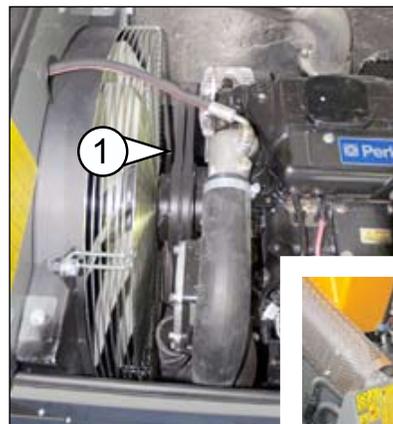
ATTENTION: - Read the SAFETY REGULATIONS (contained in this manual) carefully for the safety of all personnel and your vehicle.



(fig.69/D)



(fig.70/D)



(fig.71/D)



Compressor belt tension must be checked in a DIECI after-sales centre.

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.

Verifying proper operation of cylinder non return valves

- ATTENTION

Do not allow anybody near the vehicle while these checks are being carried out.

- ATTENTION

One movement at a time should be checked during verifications.

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

Contact a DIECI after-sales centre.

A) Boom raising cylinders: (fig.74/D)

1. Start up the engine. Make sure that the parking brake is engaged and the transmission in neutral.
2. Lift the boom to a 45° angle.
3. When the engine is running at 1400 RPMs, engage the control lever to lower the boom. During boom movement stop the engine. The boom must slow down and stop as the engine slows down and stops.

If the boom continues to move even after the motor stops, the boom raising cylinders are faulty. Repair the defect as quickly as possible, contact a **DIECI** service centre.



(fig.74/D)
(Boom raising cylinder block valve)

B) Boom extension cylinder: (fig.75/D)

1. Start up the engine. Make sure that the parking brake is engaged and the transmission in neutral.
2. Raise the boom and extend it completely.
3. When the engine is running at 1400 RPMs, engage the control lever to retract the boom. During boom movement stop the engine. The boom must slow down and stop as the engine slows down and stops.

If the boom continues to move even after the engine is switched off, the block valve is faulty. Repair the defect as quickly as possible, contact a **DIECI** service centre.



(fig.75/D)
(Boom internal extension cylinder block valve)

C) Fork swivel cylinder: (fig.76/D)

1. Start the engine, pick-up a load on the forks (e.g. a load of bricks or bales of hay). Tilt the forks completely backwards.
2. Engage the parking brake and put the transmission in neutral.
3. Lift the boom off the ground just enough necessary to allow the forward inclination of the forks.
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. Movement of the swivel must slow down and then stop as the engine slows down and stops.

If the forks continue to lower or move after the engine is switched off, the block valve is faulty. Repair the defect as quickly as possible, contact a **DIECI** service centre.



(fig.76/D)
(Swivel plate cylinder block valve)

REDUCTION GEAR

Changing the oil (fig.77/D)



IT IS MANDATORY TO USE THE I.P.D. to carry out the maintenance/control operations.



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. Disconnect the battery by acting on the "battery isolator switch" see page D/14.
4. Place a container under the drain plugs to collect any oil which may come out during replacement.
5. Remove the drain plug (fig.77/D Pos."G1") and the loading/level plug (fig.77/D Pos."F1") to carry out a complete drainage.
6. Allow the oil to completely drain out.
7. Replace the drain plugs and tighten them securely.
8. Pour an approved type of clean oil into the loading/level plug (fig.77/D Pos."F1").
9. The level is correct when oil comes out of the loading/level plug (fig.77/D Pos."F1").
10. Check for any leaks coming from the drain plugs.
11. Replace the load/level cap and tighten it securely.

FRONT DIFFERENTIAL AXLES

Changing the oil (fig.77/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.77/D Pos."G2") and the loading/level plug (fig.77/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.77/D Pos."F2").
8. The level is correct when oil comes out of the loading/level plug (fig.77/D Pos."F2").
9. Check for any leaks coming from the drain plugs.
10. Replace the load/level cap and tighten it securely.



The underside protection must be removed for this operation.
Consult the "Underside removal" paragraph.

For the safety specifications, refer to chapter "B", "Carrying out maintenance in safety" paragraph page B/16.

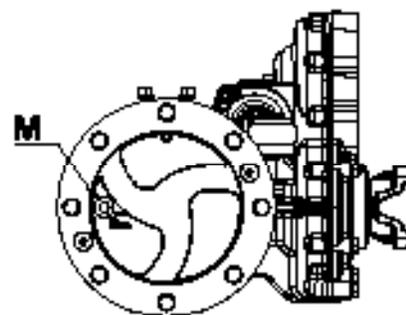
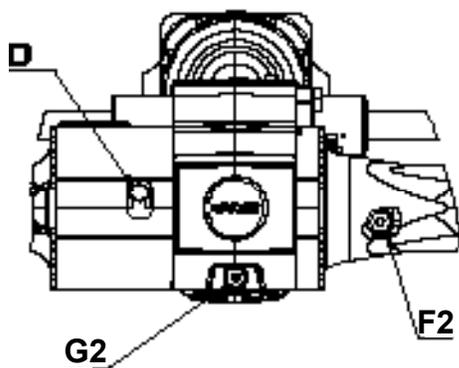
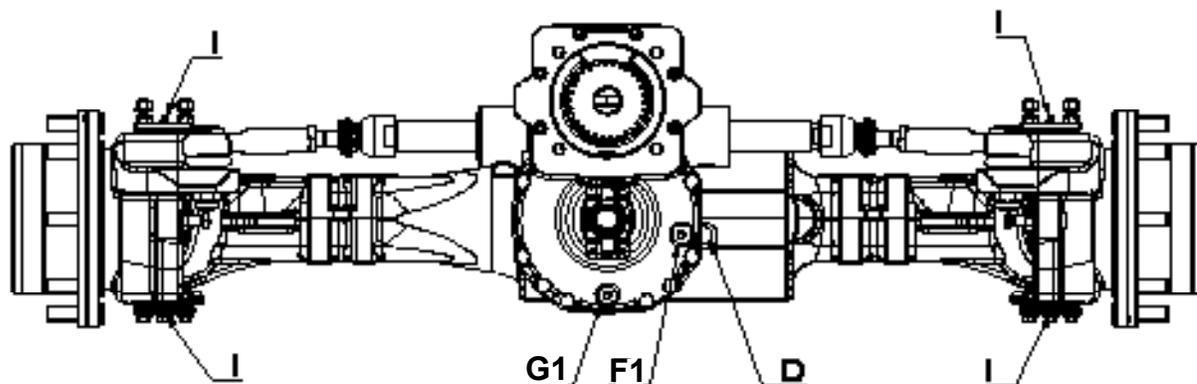
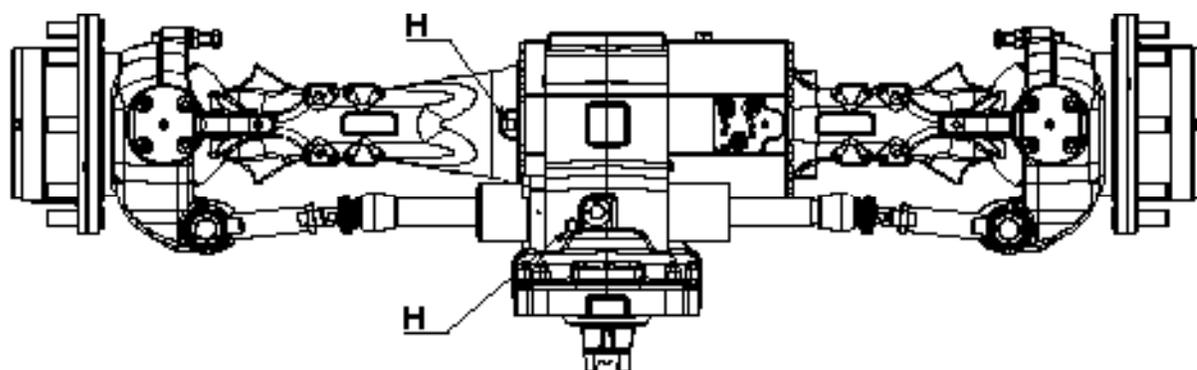


To change the oil contact a DIECI after-sales centre.



FRONT DIFFERENTIAL AXLE

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



(fig.77/D)

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

REAR DIFFERENTIAL AXLES
Changing the oil
 (fig.78/D)


IT IS MANDATORY TO USE THE I.P.D. to carry out the maintenance/control operations.



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. Disconnect the battery by acting on the "battery isolator switch" see page D/14.
4. Place a container under the drain plugs to collect any oil which may come out during replacement.
5. Remove the drain plug (fig.78/D Pos."G") and the load/level plug (fig.78/D Pos."F") to carry out a complete drainage.
6. Allow the oil to completely drain out.
7. Replace the drain plugs and tighten them securely.
8. Pour an approved type of clean oil into the loading/level plug (fig.78/D Pos."F").
9. The level is correct when oil comes out of the loading/level plug (fig.78/D Pos."F").
10. Check for any leaks coming from the drain plugs.
11. Replace the load/level cap and tighten it securely.

For the safety specifications, refer to chapter "B", "Carrying out maintenance in safety" paragraph page B/16.

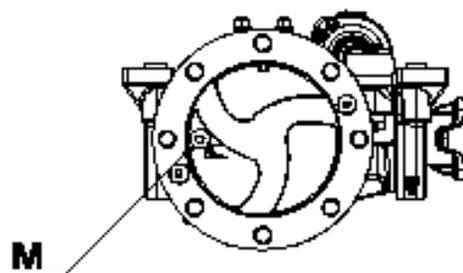
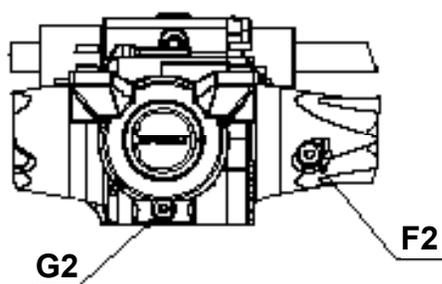
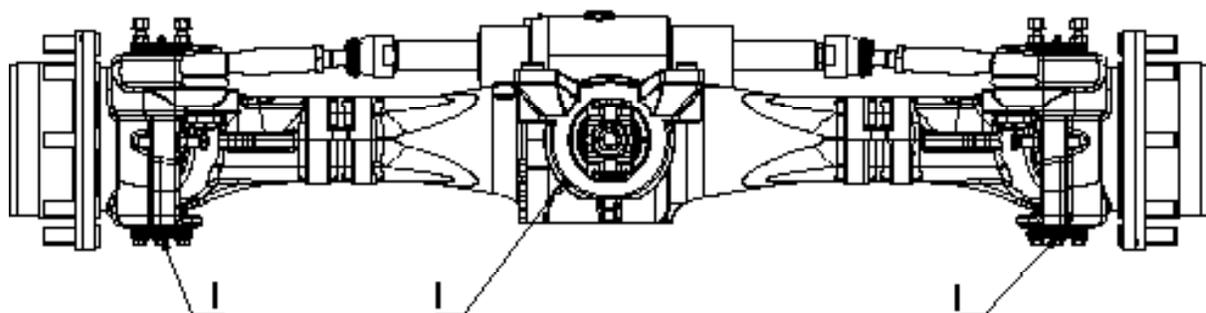
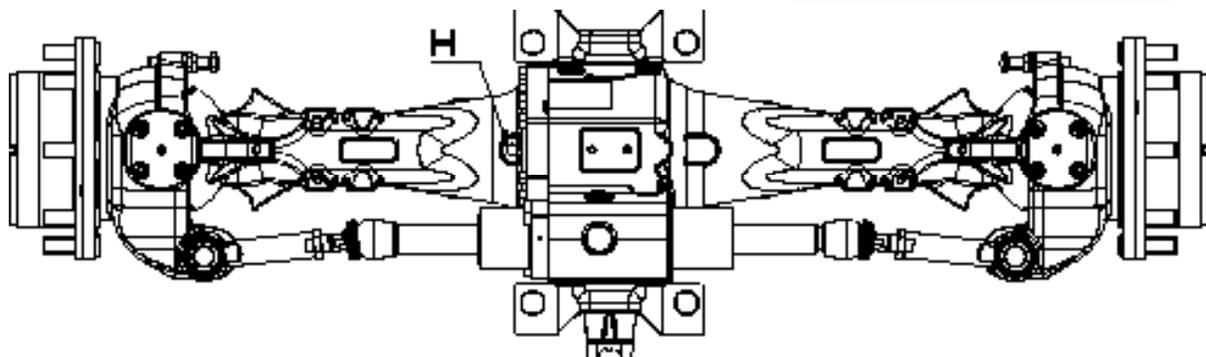


To change the oil contact a DIECI after-sales centre.



REAR DIFFERENTIAL AXLE

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



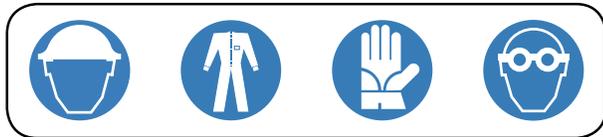
(fig. 78/D)

EPICYCLOIDAL REDUCTION GEAR
Changing the oil

(fig.81/D - fig.82/D - fig.83/D)



IT IS MANDATORY TO USE THE I.P.D. to carry out the maintenance/control operations.



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. Disconnect the battery by acting on the "battery isolator switch" see page D/14.
4. Place a container under the drain plugs to collect any oil which may come out during replacement.
5. Turn the wheel hub (fig.81/D Pos."1") so that the inlet (fig.82/D Pos."M") is moved to the lower position (fig.82/D), and then remove the oil cap.
6. Allow the oil to completely drain out.
7. Turn the wheel hub so that the inlet (fig.83/D Pos."M") is moved to the middle position (fig.83/D).
8. Fill the reduction gear to level via the inlet (fig.83/D).
9. The level is correct when oil comes out from the oil cap.
10. Replace the epicycloidal reduction gear cap and tighten it securely.
11. Repeat all the operations for each of the four reducer units.

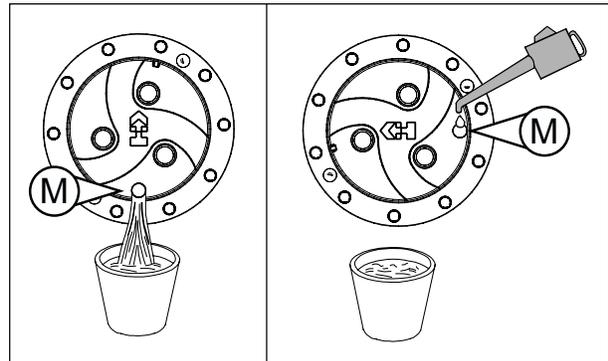
For the safety specifications, refer to chapter "B", "Carrying out maintenance in safety" paragraph page B/16.



To change the oil contact a DIECI after-sales centre.



(fig. 81/D)



(fig. 82/D)

(fig. 83/D)



BOOM SLIDING BLOCKS

(fig.88/D)

Lubricating



IT IS MANDATORY TO USE THE I.P.D. to carry out the maintenance/control operations.



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

- Stop the vehicle on a flat, level surface.
- Extend the boom completely in a horizontal position. Switch off the engine and remove the ignition key, hang up a sign in the cab that reads "maintenance work under way".
- Disconnect the battery by acting on the "battery isolator switch" see page D/16.
- With the boom completely extended horizontally, remove the layer of grease from the extension surfaces using a cloth.
- Use a brush to spread a layer of an approved type of grease on all sides of the telescopic boom.
- Move the boom several times to distribute the grease evenly.
- Remove any excess grease.



During the visual check phase and spreading the grease, the vehicle must be off and the key removed from the cab to prevent accidental manoeuvres.

For the safety specifications, refer to chapter "B", "Carrying out maintenance in safety" paragraph page B/16.



Should the vehicle be used in particularly severe conditions or very dusty environments lubricate more frequently.

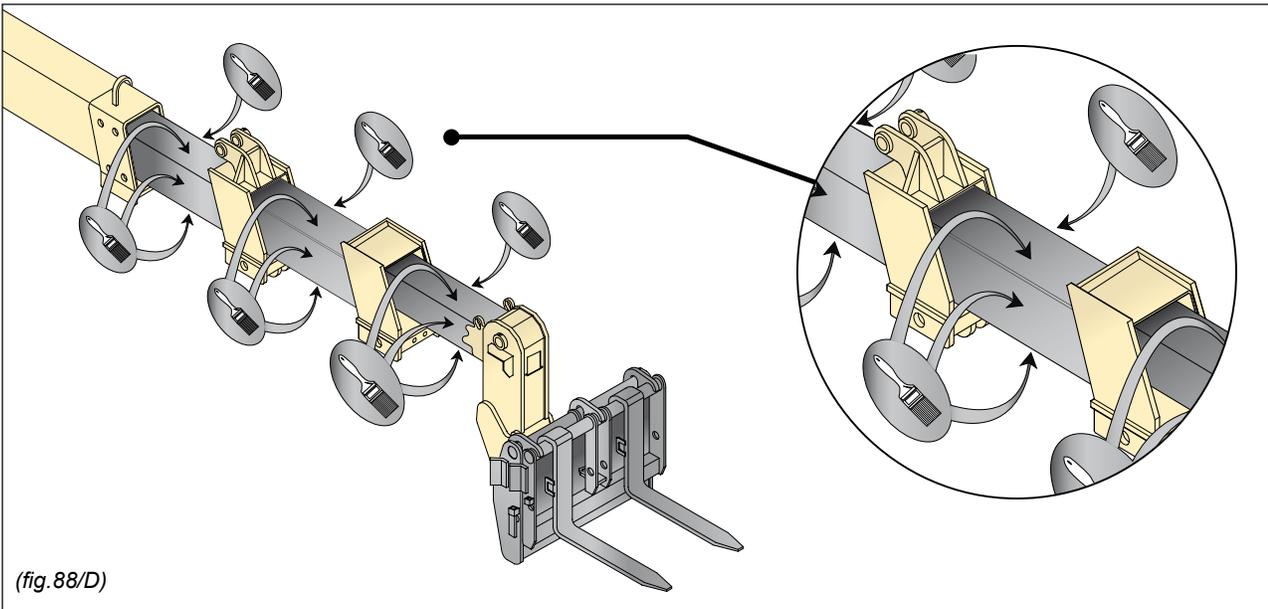


Only use lubricants indicated in *DIECI* tables. Different lubricants may cause serious damage to sliding surfaces.

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 extensions causing a loss of accuracy in movements and the risk of load loss.

The more difficult the working conditions, the greater the wear and tear on the vehicle. Boom sliding block maintenance must be carried out by an authorised workshop.



(fig.88/D)

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

EXTERNAL BOOM CHAINS

(fig.89/D)

Lubrication

Lubrication allows the operator to:

- Interpose liquid between contact surfaces to diminish wear and prevent seizure.
- Protect chains from rust.
- Reduce noise between the 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 surrounding temperature. Viscosity which is too low favours lubrication withdrawal and viscosity which is too high hinders lubricants from penetrating joints. For proper viscosity, refer to the table at the side (fig.90/D).

! - ATTENTION

In the event of special applications or use in adverse conditions, consult a **DIECI** service centre.

⊘ - PROHIBITION - ⊘

IT IS prohibited to lubricate the chains using grease

Checking for Wear

At prescribed intervals, verify:

- The installation geometry.
- The condition of the chain in order to analyse traces of friction that may indicate incorrect installation geometry. Wear on the side plate profile due to contact with pulleys and guiding systems. Wear on the sides of the external plates and on the pin heads due to contact with pulley flanges or with any guiding devices.
- Wear on chain joints both due to direct measurement of its length with measurement instrument or a control scale, and visually.
- Wear of Fleyer raising chain plates.

! - ATTENTION - !

The chains must be replaced when wear due to lengthening exceeds 2%.
When the chain is replaced IT IS MANDATORY also to replace the respective rollers.



(fig.89/D)

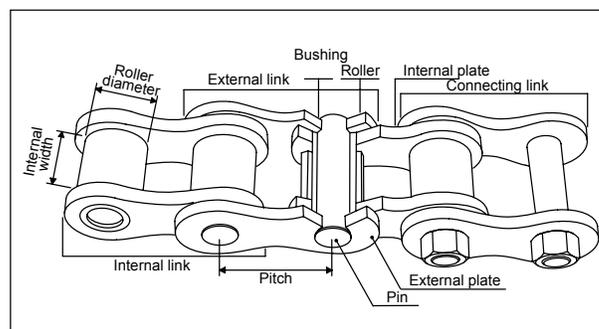
! - ATTENTION - !

IT IS MANDATORY TO USE THE I.P.D. to carry out the maintenance/control operations.



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.90/D) Chain oil viscosity table



(fig.91/D) Components of a standard chain

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

Determining wear due to extension

- Verify the type of chain installed, indicated on its external plate. If it cannot be read, contact a **DIECI** service centre.
- Identify the pitch of the chain on the table (fig.92/D).
(e.g. Fleyer AL8/BL8 Chain Pitch 1"/25.40mm) and multiply it by 10.
- Measure 10 pitches of the chain to be verified (fig.93/D).
- If the measurement exceeds 2% of the pitch indicated in the table multiplied by ten, the chain should be considered worn and must be replaced.

$$2\% \text{ of the measurement} = [\text{Measurement} : 100] \times 2$$

- 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 bore or a ruler divided into millimetres (fig.94/D).

Check, cleaning, lubrication

- Stop the vehicle on a flat, level surface.
- Position the vehicle on outrigger feet (if present).
- Extend the boom completely in a horizontal position.
- Switch off the engine and remove the ignition key, hang up a sign in the cab that reads "maintenance work under way".
- Clean the chains to eliminate surface impurities with a clean cloth that 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 the chains as described in the paragraph "checking for wear".
- Lightly lubricate the chains with a brush soaked in oil (see paragraph entitled "lubrication").
- Remove excess oil from the entire surface of the chains using a clean cloth.
- Move the boom several times to distribute the oil evenly.

- ATTENTION

In case of chain replacement, contact a **DIECI** service centre.

- ATTENTION -

Chains can be made fragile by hydrogen.

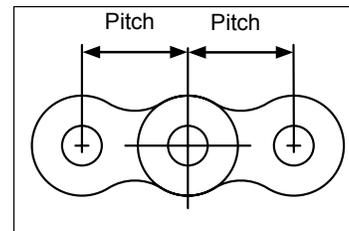
- PROHIBITION -

OPERATING in acidic environments is STRICTLY PROHIBITED.

Operate for as little time as possible when in oxidative or corrosive environments.

AL4	AL5	AL6	AL8	AL10	AL12	AL14	AL16	Fleyer chains
BL4	BL5	BL6	BL8	BL10	BL12	BL14	BL16	Fleyer chains
1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	1 3/4"	2"	Inch pitch
12,70	15,87	19,05	25,40	31,75	38,10	44,45	50,80	Mm pitch

(fig.92/D)



(fig.93/D)

- ATTENTION -

IT IS MANDATORY TO USE THE I.P.D. to carry out the maintenance/control operations.



(fig.94/D)



GREASING NIPPLES

One/two/three extension booms

The references of the greasing nipples of the booms with two extensions are the same as the booms with three extensions.

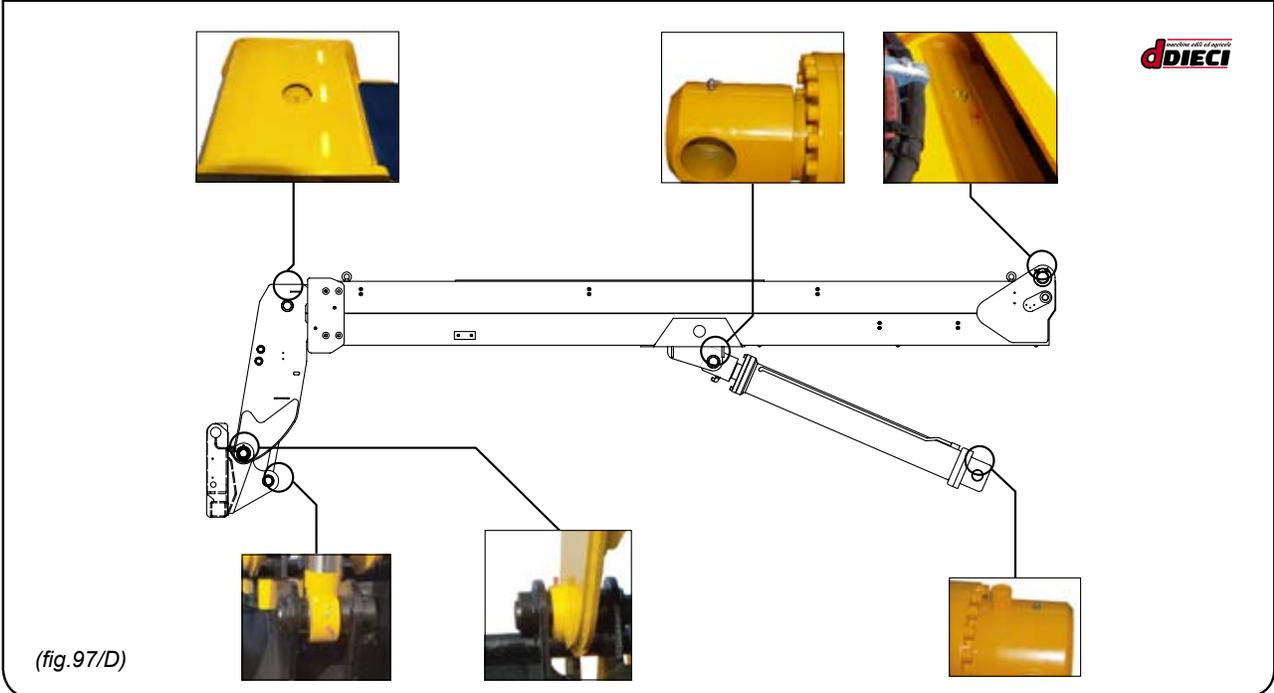
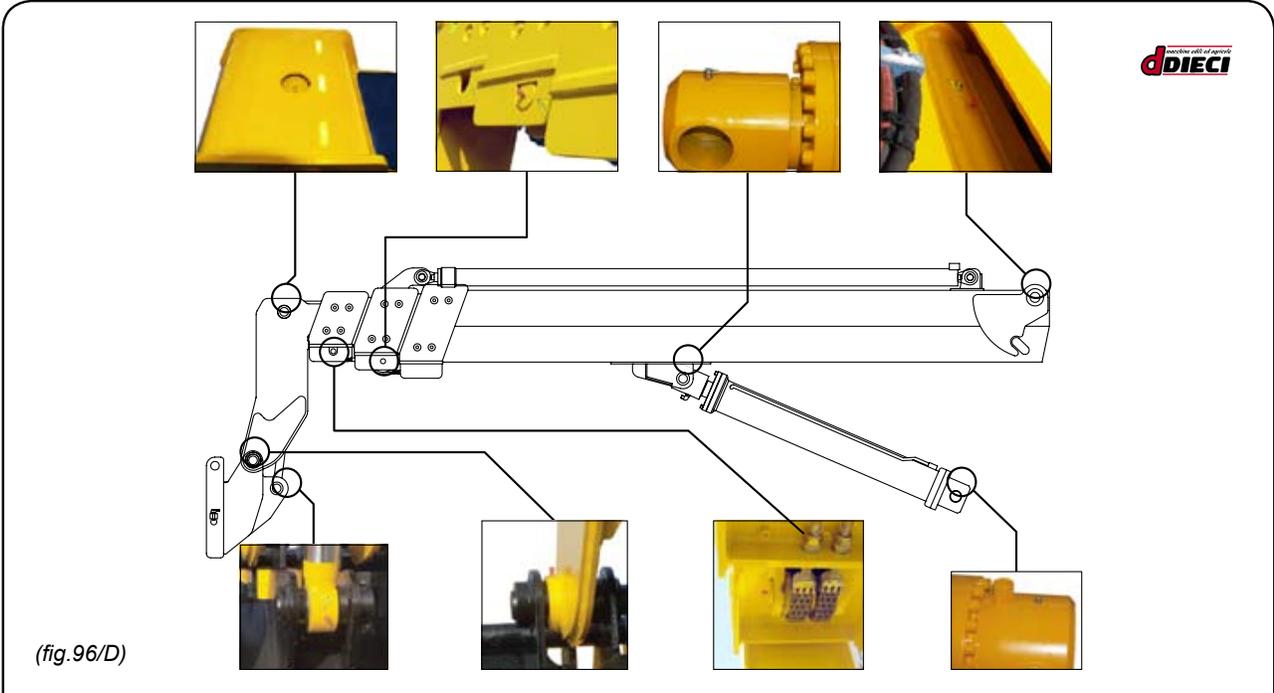
For the safety specifications, refer to chapter "B", "Carrying out maintenance in safety" paragraph page B/16.

! - ATTENTION - !

IT IS MANDATORY TO USE THE I.P.D. to carry out the maintenance/control operations.





GREASING NIPPLES

Transmission shafts and differential axles

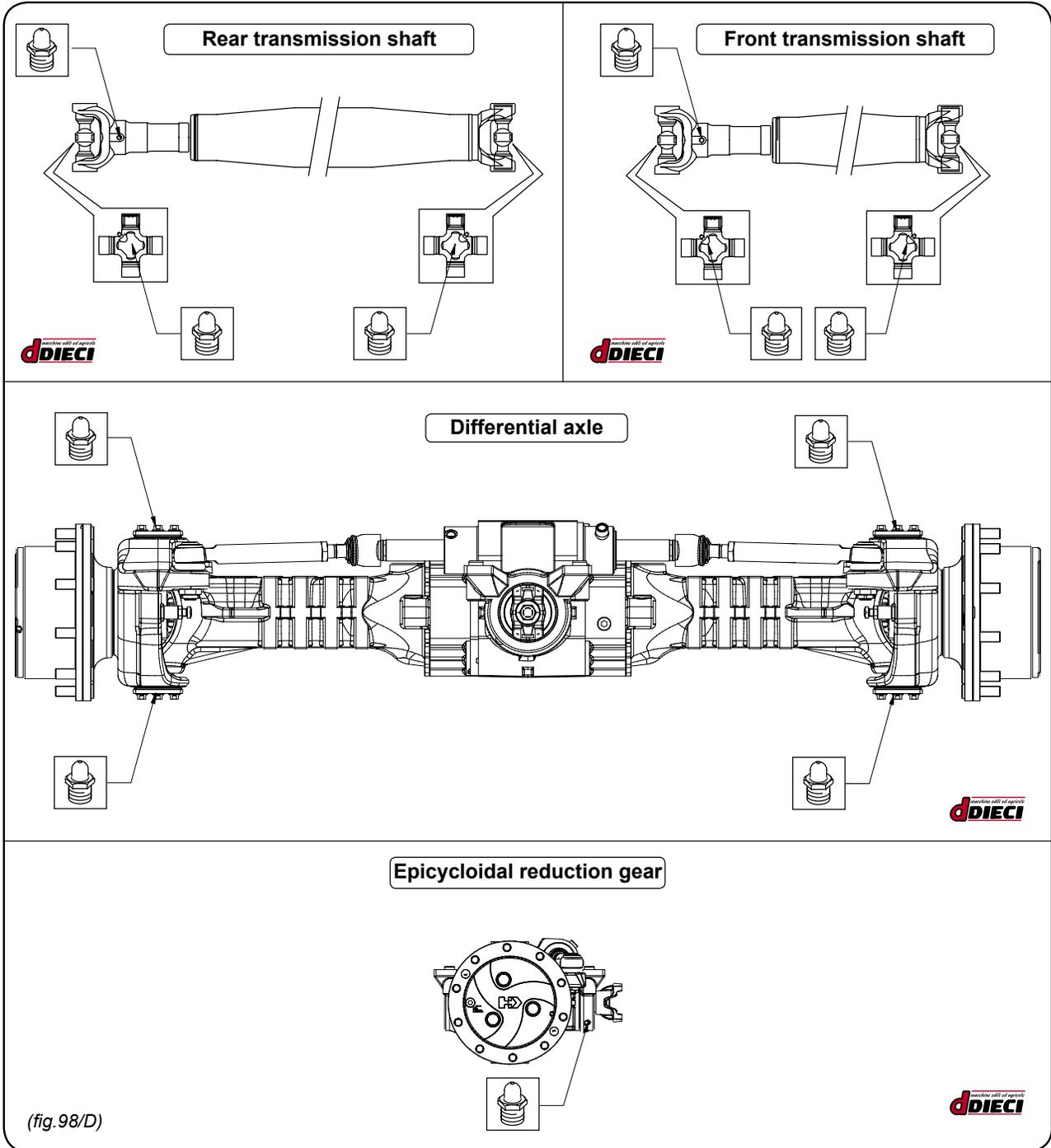
For the safety specifications, refer to chapter "B", "Carrying out maintenance in safety" paragraph page B/16.

! - ATTENTION - !

IT IS MANDATORY TO USE THE I.P.D. to carry out the maintenance/control operations.





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

FUSES

Main control unit (fig.100/D Pos."1")

The general electric circuit is protected by fuses located on the general electronic card (fig.100/D Pos."1"). Access the electronic card by removing the left plastic under the dashboard, removing its screws. In the event of an electrical malfunction, fuse conditions must be verified as the first troubleshooting operation. Fuses must be removed with special pliers.

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



IT IS MANDATORY TO USE THE I.P.D. to carry out the maintenance/control operations.



For the safety specifications, refer to chapter "B", "Carrying out maintenance in safety" paragraph page B/16.

! - ATTENTION

Before removing the plastic from under the dashboard:

- Stop the vehicle on a flat, level surface.
- Switch off the engine and remove the ignition key, hang up a sign in the cab that reads "maintenance work under way".
- Disconnect the battery by acting on the "battery isolator switch" see page D/16 cut off electrical power to the vehicle using the battery isolator.

! - ATTENTION

Do not attempt to repair fuses.



(fig.100/D)

ENGINE CONTROL UNIT

(fig.101/D Pos."1")

Engine electrical circuits and connected components are protected by a fuse control unit located within the engine compartment (fig.101/D Pos."1"). Remove the box cover to access the fuses. In the event of an electrical malfunction, fuse conditions must be verified as the first troubleshooting operation.

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



IT IS MANDATORY TO USE THE I.P.D. to carry out the maintenance/control operations.



For the safety specifications, refer to chapter "B", "Carrying out maintenance in safety" paragraph page B/16.



Before accessing the engine compartment:

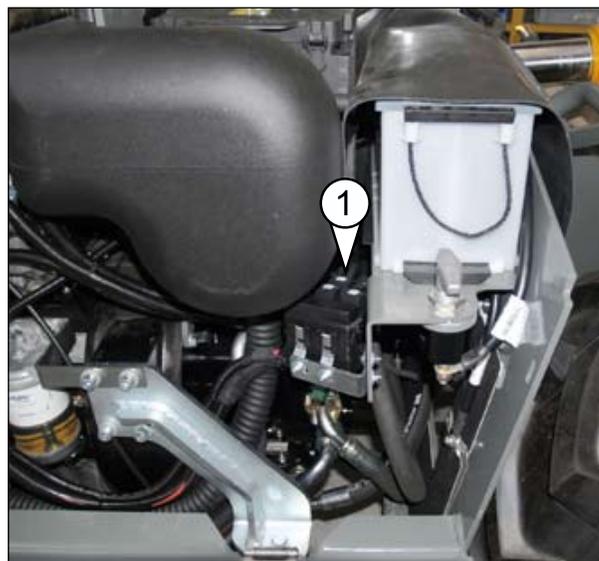
- Stop the vehicle on a flat, level surface.
- Switch off the engine and remove the ignition key, hang up a sign in the cab that reads "maintenance work under way".
- Disconnect the battery by acting on the "battery isolator switch" see page D/16 cut off electrical power to the vehicle using the battery isolator.



Do not attempt to repair fuses.



The main fuse of the vehicle is located on the



(fig.101/D)

LIGHTING

Vehicle lighting must always be efficient and functioning properly. Proper lighting function must be checked daily. If the lighting body is damaged in any way, replace the damaged part immediately. Burnt light bulbs should be replaced immediately.

For the safety specifications, refer to chapter "B", "Carrying out maintenance in safety" paragraph page B/16.

FRONT LIGHT

(fig.105/D)

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

To access the bulbs:

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

To close the light back up, carry out these steps in the opposite order, being careful to position the seal correctly.

Replacing direction indicator bulbs

(fig.106/D Pos."1") (21w)

- Press the upper part of the bulb.
- Turn and hold down the bulb to free it from the lock.

Carry out the same steps to insert the new bulb.

Replacing a position light bulb

(fig.107/D Pos."1") (4w)

- Take hold of the rear part where the electrical connections are located (fig.107/D Pos."2").
- Turn and pull the rear part towards you.
- Remove the support and press the upper part of the bulb.
- Turn and hold down the bulb to free it from the lock.

Carry out the same steps to insert the new bulb. Reinsert the support inside its housing.

Replacing a dipped light/headlight bulb

(fig.108/D Pos."1") (60/55w H4)

- Remove the electrical connector by pulling it towards you.
- Raise the locking tabs (fig.108/D Pos."2"), moving them laterally to free the bulb.
- Replace the bulb and proceed in the opposite order to lock and reconnect it. Respect bulb closing mechanisms (fig.85/D Pos."3") for proper insertion.



The bulbs are very fragile. Handle them with care.

The dipped beam bulbs must not be handles with bare hands.



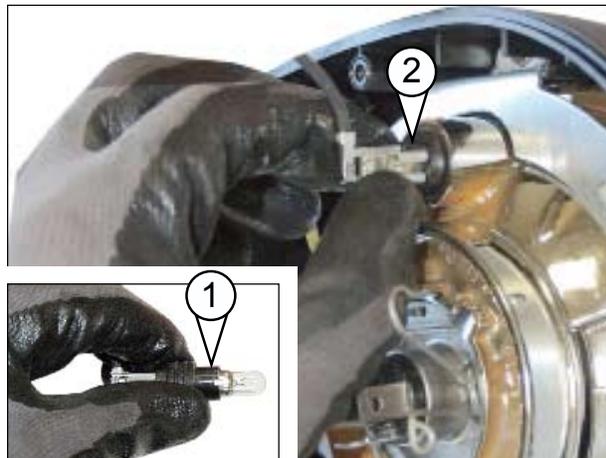
IT IS MANDATORY TO USE THE I.P.D. to carry out the maintenance/control operations.



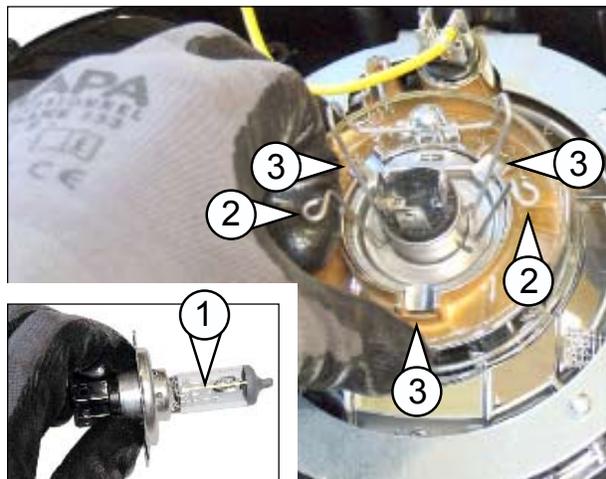
(fig.105/D)



(fig.106/D)



(fig.107/D)



(fig.108/D)



REAR LIGHT

(fig.109/D)

The rear light is composed of a reverse light (21W) (fig.109/D Pos."1"), rear red light (5W) (fig.109/D Pos."2"), a stop light (21W) (fig.109/D Pos."3"), and a direction indicator (21W) (fig.109/D Pos."4"), rear fog (21W) (fig.109/D Pos."5").

To access the bulbs:

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

! - ATTENTION

To close the light back up, carry out these steps in the opposite order, being careful to position the seal correctly.

Replacing the rear light bulb.

- Press the upper part of the bulb.
- Turn and hold down the bulb to free it from the lock.

Carry out the same steps in the opposite order to insert a new bulb.

WORKING LIGHT

(fig.110/D)

Replacing bulbs

(Fig.112/D Pos."1") (special bulb)

- Switch off the vehicle and use the battery isolator to cut-out electrical power.
- Remove the power connector of the light in the rear part (fig.111/D Pos."1").
- Press the connector grip on the light (fig. 111/D Pos."2").
- Turn and hold the grip down, to release it.

Carry out the same steps in the opposite order to insert a new bulb.

DUAL REFLECTOR WORKING LIGHT

(fig.113/D)

Replacing bulbs

(fig.114/D Pos."1") (Type 21w H3)

- Switch off the vehicle and use the battery isolator to cut-out electrical power.
- Remove the screws on the front part of the light.
- Remove the bulb power supply connectors (fig.114/D Pos."2").
- Move the locking tabs, bringing them towards the inside to release them (fig.114/D Pos."3").

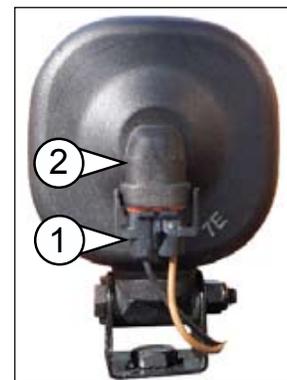
Carry out the same steps in the opposite order to insert a new bulb. Treat the bulb closing mechanisms with care (fig.114/D Pos."4") for proper insertion.



(fig.109/D)



(fig.110/D)



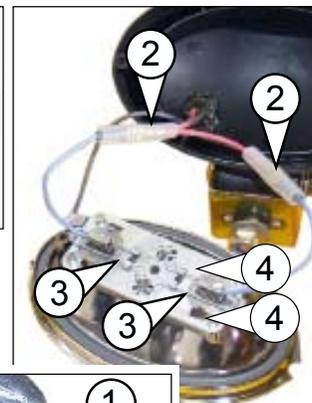
(fig.111/D)



(fig.112/D)



(fig.113/D)

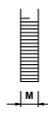


(fig.114/D)



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

**PRELOAD AND TORQUE TABLE FOR CLASS 1
NUTS AND BOLTS**

	friction coefficient	Categories of fine pitch bolts and nuts											
		4.8		5.8		6.8		8.8		10.9		12.9	
		preload N	tightening torque Nm	preload N	tightening torque Nm	preload N	tightening torque Nm	preload N	tightening torque Nm	preload N	tightening torque Nm	preload N	tightening torque Nm
M8	0.10	9798.1	10.87	12247.6	13.59	14697.1	16.31	19596.1	21.75	27557.1	30.58	33068.5	36.70
	0.14	9079.5	13.53	11349.4	16.91	13619.3	20.29	18159.1	27.05	25536.2	38.04	30643.4	45.65
M10	0.10	15296.9	21.13	19121.1	26.41	22945.3	31.69	30593.8	42.25	43022.5	59.42	51627.0	71.30
	0.14	14175.0	26.27	17718.8	32.84	21262.6	39.41	28350.1	52.55	39867.3	73.89	47840.8	88.67
M12	0.10	22020.7	35.83	27525.9	44.79	33031.0	53.75	44041.4	71.67	61933.2	100.78	74319.8	120.94
	0.14	20405.8	44.53	25507.2	55.66	30608.7	66.79	40811.6	89.06	57391.3	125.24	68869.5	150.29
M14	0.10	31610.0	59.04	39512.5	73.80	47415.0	88.57	63220.0	118.09	88903.1	166.06	106683.7	199.27
	0.14	29345.9	73.92	36682.4	92.40	44018.9	110.89	58691.9	147.85	82535.4	207.91	99042.5	249.49
M16	0.10	42581.3	89.78	53226.6	112.23	63871.9	134.67	85162.5	179.56	119759.8	252.51	143711.8	303.02
	0.14	39587.8	113.06	49484.7	141.32	59381.6	169.59	79175.5	226.12	111340.6	317.98	133608.7	381.57
M18	0.10	51457.2	124.03	64321.5	155.03	77185.8	186.04	102914.4	248.06	144723.3	348.83	173668.0	418.59
	0.14	47751.7	155.02	59689.6	193.78	71627.5	232.53	95503.3	310.05	134301.6	436.00	161161.9	523.20
M20	0.10	65534.1	173.72	81917.7	217.16	98301.2	260.59	131068.3	347.45	184314.8	488.60	221177.8	586.32
	0.14	60886.2	218.17	76107.8	272.71	91329.3	327.26	121772.4	436.34	171242.5	613.61	205491.0	736.33
M22	0.10	81220.8	236.88	101526.0	296.10	121831.2	355.32	162441.5	473.76	228433.4	666.23	274120.1	799.48
	0.14	75533.9	298.75	94417.4	373.43	113300.9	448.12	151067.8	597.49	212439.1	840.22	254927.0	1008.27
M24	0.10	98515.6	308.56	123144.5	385.70	147773.4	462.84	197031.1	617.12	277075.0	867.83	332490.0	1041.40
	0.14	91693.3	390.33	114616.6	487.92	137539.9	585.50	183386.5	780.67	257887.3	1097.82	309464.8	1317.38



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	
		preload N	tightening torque Nm	preload N	tightening torque Nm	preload N	tightening torque Nm	preload N	tightening torque Nm	preload N	tightening torque Nm	preload N	tightening torque Nm
M6	0.10	4874.7	4.24	6093.4	5.30	7312.1	6.35	9749.4	8.47	13710.1	11.92	16452.2	14.30
	0.14	4499.1	5.19	5623.9	6.48	6748.6	7.78	8998.2	10.37	12653.7	14.59	15184.4	17.51
M7	0.10	7134.5	6.97	8918.2	8.71	10701.8	10.45	14269.1	13.94	20065.9	19.60	24079.1	23.52
	0.14	6599.6	8.60	8249.5	10.76	9899.4	12.90	13199.2	17.21	18561.4	24.20	22273.6	29.04
M8	0.10	8947.1	10.20	11183.9	12.75	13420.7	15.30	17894.2	20.41	25163.7	28.70	30196.5	34.44
	0.14	8265.6	12.54	10332.0	15.67	12398.4	18.80	16531.2	25.07	23247.0	35.26	27896.5	42.31
M10	0.10	14244.5	20.11	17805.6	25.14	21366.8	30.16	28489.0	40.22	40062.7	56.56	48075.3	67.87
	0.14	13167.4	24.76	16459.2	30.95	19751.1	31.14	26334.8	49.52	37033.3	69.64	44439.9	83.56
M12	0.10	20766.6	34.43	25958.3	43.03	31149.9	51.64	41533.2	68.86	58406.1	96.83	70087.3	116.20
	0.14	19204.0	42.42	24005.0	53.03	28806.0	63.63	38408.0	84.84	54011.2	119.31	64813.5	143.17
M14	0.10	28389.9	54.77	35487.4	68.46	42584.9	82.15	56779.8	109.53	79846.6	154.03	95816.0	184.84
	0.14	26261.2	67.56	32826.5	84.45	39391.8	101.34	52522.4	135.13	73859.6	190.02	88631.5	228.03
M16	0.10	39242.1	85.14	49052.7	106.43	58863.2	127.72	78484.3	170.29	110368.5	239.47	132442.2	287.36
	0.14	36364.2	105.80	45455.3	132.26	54546.3	158.71	72728.5	211.61	102274.4	297.58	122729.3	357.09
M18	0.10	47533.0	117.48	59416.3	146.85	71299.6	176.22	95066.1	234.96	133686.7	330.41	160424.1	396.49
	0.14	43986.1	145.16	54982.7	181.45	65979.2	217.74	87972.3	290.32	123711.0	402.26	148453.2	489.92
M20	0.10	61238.0	166.08	76547.5	207.61	91857.0	249.13	122476.0	332.17	172231.9	467.11	206678.2	560.54
	0.14	56747.1	206.39	70933.9	257.98	85120.6	309.58	113494.2	412.78	159601.2	580.47	191521.5	696.56
M22	0.10	76305.2	227.22	95381.5	284.02	114457.8	340.82	152610.4	454.43	214608.3	639.05	257530.0	766.85
	0.14	70791.9	283.79	88489.8	352.74	106187.8	425.69	141583.7	567.58	199102.1	798.16	238922.5	957.80
M24	0.10	88232.4	287.16	110290.5	358.94	132348.6	430.73	176464.9	574.31	248153.7	807.63	297784.4	969.15
	0.14	81761.8	356.84	102202.2	446.05	122642.7	535.26	163523.6	713.68	229955.1	1003.61	275946.1	1204.33

TORQUE TABLE FOR HYDRAULIC FITTINGS

60° oval insert - BSP thread									
THREAD	1/18-28	1/4-19	3/8-19	1/2-14	5/8-14	3/4-14	1"-11	1"1/4-11	1"1/2-11
N.m	12-14	14-16	25-28	45-60	55-70	90-110	120-140	170-190	200-245

60° oval insert - METRIC thread									
THREAD	10x1	12x1,5	14x1,5	16x1,5	18x1,5	22x1,5	26x1,5	28x1,5	30x1,5
N.m	12-14	13-15	15-18	25-28	27-30	50-60	60-75	80-100	110-130

DIN FITTINGS SERIES / RANGE "L"										
THREAD	12x1,5	14x1,5	16x1,5	18x1,5	22x1,5	26x1,5	30x2	36x1,5	45x1,5	52x1,5
N.m	13-15	15-18	25-28	27-30	50-60	30-75	85-105	120-140	170-190	190-230

DIN FITTINGS SERIES / RANGE "S"										
THREAD	14x1,5	16x1,5	18x1,5	20x1,5	22x1,5	24x1,5	30x2	36x2	42x2	52x2
N.m	15-18	25-28	27-30	43-54	50-62	60-75	90-110	125-145	170-190	200-245

TROUBLESHOOTING

- 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 en- gaged (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/50

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

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 



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.



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



RECORD OF SCHEDULED INSPECTIONS AND MAINTENANCE WORK

REGULAR MAINTENANCE		50 h
Job	Job accomplished	<input checked="" type="checkbox"/>
Check for leaks on hydraulic circuit tubes		<input type="checkbox"/>
Boom joint pin lubrication		<input type="checkbox"/>
Lubrication of feet pins/head swivel jack		<input type="checkbox"/>
Lubrication of feet pins/head raising jack		<input type="checkbox"/>
Lubrication of front/rear wheel articulation pins		<input type="checkbox"/>
Lubrication of front/rear axle oscillation bush		<input type="checkbox"/>
Lubrication of cross and Cardan transmission shafts		<input type="checkbox"/>
Lubrication of internal boom tubes		<input type="checkbox"/>
Lubrication of boom rollers and chains		<input type="checkbox"/>
Perform anti-tipping device electronic test.		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
Date	Signature	
		

SPECIAL MAINTENANCE	
Job description	Machine working hours
Date	Signature
	

REGULAR MAINTENANCE		100 h
Job	Job accomplished	<input checked="" type="checkbox"/>
Air filter cleaning		<input type="checkbox"/>
Lubrication of differential axles		<input type="checkbox"/>
Checking tyre pressure		<input type="checkbox"/>
A general check of nuts and bolts tightness		<input type="checkbox"/>
Check brake oil level		<input type="checkbox"/>
Check safety stickers		<input type="checkbox"/>
Check boom chain extension and conditions		<input type="checkbox"/>
Check anti-tipping device with load.		<input type="checkbox"/>
		<input type="checkbox"/>
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 (contained in this manual) carefully for the safety of all personnel and your vehicle.





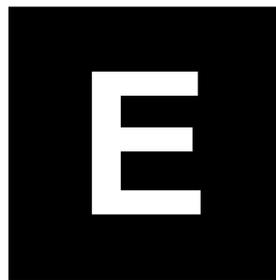








ELECTRICAL DIAGRAMS AND CIRCUITS





BASE SYSTEM KEY - DIA. N°25800-053 - (AGRI FARMER EN15K)

NAME	DESCRIPTION	SHEET
A149	Left speaker	7.3
A150	Right speaker	7.3
A151	Radio	7.2
A241	SARL Control box	9.2
B130	Micro seat	1.4
B138	Micro inching	3.5
B139	Micro stop lights	4.3
B181	Micro drive disconnection	2.4
B182	A/C thermal contact	5.5
B205	Conditioner pressure switch	5.5
B503	Horn	4.4
B512	Fuel level sensor	1.3
B513	Hydraulic oil filter pressure switch	1.3
B534	Micro gear engaged	3.1
B535	2nd gear pressure switch	6.1
B537	Water thermistor	1.3
B538	Engine oil pressure switch	1.4
B544	Lift/extension sensor	8.5
B545	Optional sensor	8.4
B546	Water thermal contact	1.4
B554	Negative brake pressure switch	2.4
B557	Chassis load cell	9.2
B558	Front axle sensor aligned	8.4
B559	Axle load cell	9.2
B560	Rear axle sensor aligned	8.4
B638	Clogged air filter pressure switch	1.3
B642	Radiator thermistor	5.3
B643	Micro closed boom	9.3
E102	Right front work light	7.2
E103	Right rear work light	7.4
E104	Left front work light	7.2
E118	Left rear work light	7.3
E127	Revolving light	5.2
E147	Ceiling light	7.1
E522	Left rear light	4.1
E524	Plate light	4.2
E526	Left front light	4.3
E548	Left rear light	4.1
E551	Right front light	4.2
F1	Fuse +15 outrigger button	8.3
F2	Fuse +15 radio and antenna	7.2
F3	Fuse +15 buzzer and reverse light	2.2
F4	Fuse +15 drive + relay K9	2.2
F5	Fuse +15 boom head solenoid valve, boom head socket and positive set-up. Centring handler	6.1
F6	Fuse +15 basket positive, +12V from ARB OK (pow.supp. Joystick)	10.2
F7	Fuse +15 pneumatic seat	8.4
F8	Fuse +15 inching micro switch and drive micro switch	2.5
F9	Fuse +15 block relay	2.4
F10	Fuse +15 lighting switches and warning	2.5

BASE SYSTEM KEY - DIA. N°25800-053 - (AGRI FARMER EN15K)

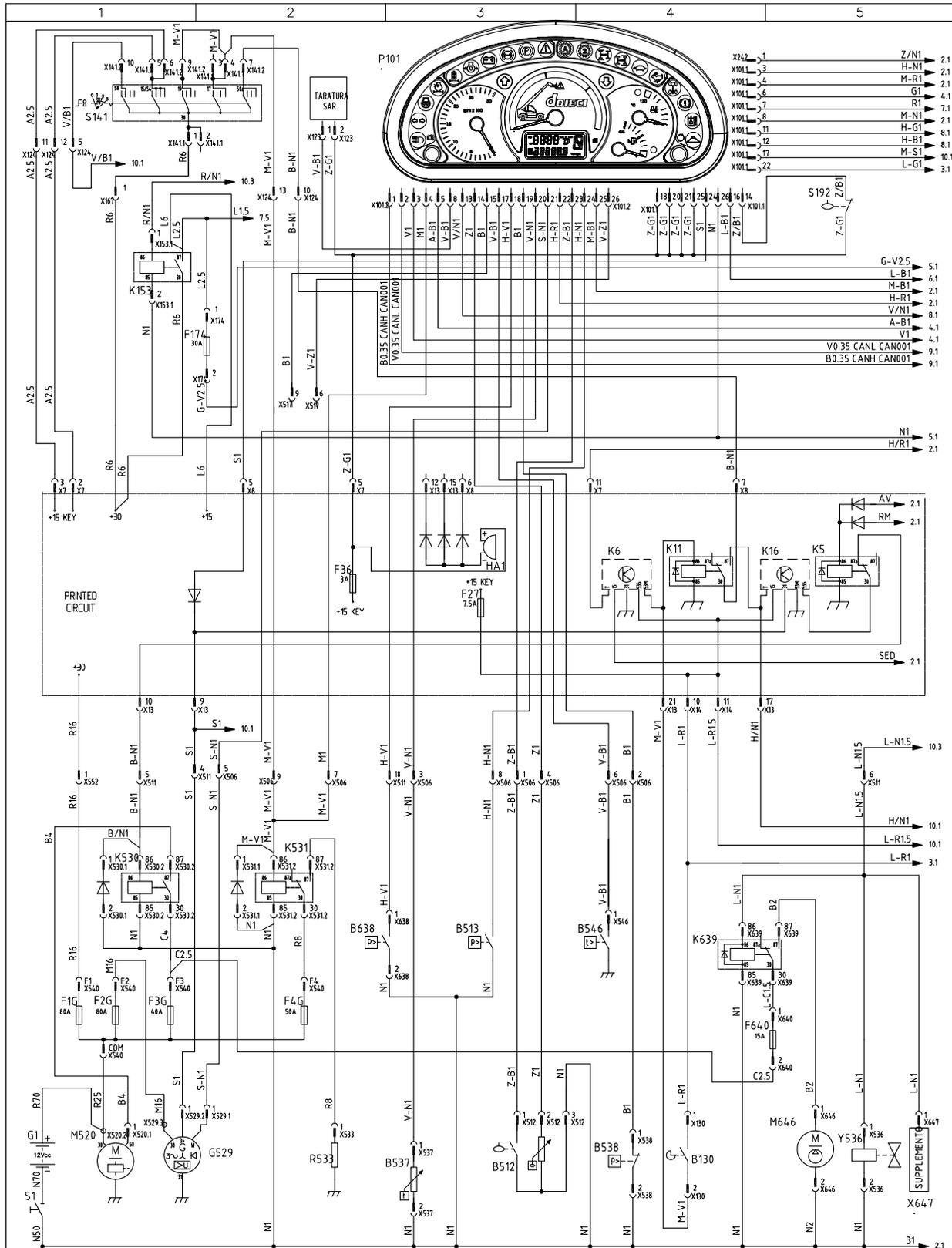
NAME	DESCRIPTION	SHEET
F11	Fuse +15 light switch (full and dipped beam switch) and stop lights	4.1
F12	Fuse +15 boom sensors, axle align sensors and negative brake pressure switch	25
F13	Fuse +15 PTO, rear solenoid valves and trailer	6.1
F14	Fuse +15 position lights right front and left rear lights	4.1
F15	Fuse +15 position lights left front and right rear lights	4.1
F16	Fuse +30 full beam head lights	4.2
F17	Fuse +30 horn	4.4
F18	Fuse +30 dipped beam head lights	4.2
F19	Fuse +15 front windscreen wiper and front pump	4.3
F1G	Power supply main fuse +30	1.1
F20	Fuse +15 rear windscreen wiper and rear pump	5.2
F21	Fuse +15 2nd pump and arm suspension	10.2
F22	Fuse +15 front work lights	7.3
F23	Fuse +15 rear work lights	7.3
F24	Fuse +15 radiator solenoid valve + fan inversion	5.3
F25	Fuse +15 heating fan speed selector switch	5.3
F26	Fuse +15 KEY micro inching temp and pow.supp. Start gear	2.1
F27	Fuse +15 KEY seat micro switch, int. seat timer (int. Negative brake), anti-tip relay, engine start and stop	1.3
F28	Fuse +30 lights switch (pos lights), lights switch (flashing+ horn) and warning	4.1
F29	Fuse +30 revolving light	5.1
F2G	Alternator fuse	1.1
F30	Fuse +30 radio and ceiling light	7.2
F31	Fuse +30 boom work lights switch	7.4
F32	Fuse +30 current socket	4.4
F33	Fuse +15 steering	7.2
F34	Fuse +15 electric windscreen winder	10.3
F35	Fuse +15 KEY equipment and basket selector switch (basket not inserted)	10.2
F36	Fuse +15 KEY ALGA AGRI + SAR	1.2
F3G	Fuel pump fuse + starting relay	1.1
F4G	Ignition plug fuse	1.2
F128	Fuse set-up	7.5
F174	Evaporator electric fan fuse	1.2
F640	Fuel pump fuse	1.5
G1	Battery	1.1
G529	Alternator	1.1
H502	Reverse buzzer	2.4
HA1	Instrument alarm buzzer	1.3
K1	Full beam headlights relay	4.2
K2	Horn relay	4.4
K3	Drive disconnection relay	2.3
K4	Buzzer relay and reverse light	2.2
K5	Start switch relay with gear in neutral	1.5
K6	Seat timer	1.4
K7	Dipped beam headlights relay	4.2
K8	Cut off 2 relay	10.2
K9	Fast gear	2.2
K10	Safety reverse relay	2.1
K11	Start consent from cab relay with operator sitting	1.4
K12	Optional relay	8.3
K13	Optional sensor relay	8.2

BASE SYSTEM KEY - DIA. N°25800-053 - (AGRI FARMER EN15K)

NAME	DESCRIPTION	SHEET
K14	Axle block relay	2.4
K15	Safety forward gear relay	2.1
K16	Start anti-repeat control unit	1.4
K17	Cut off 1 relay	10.1
K18	Lift/extension sensor relay	8.3
K19	Axle release relay	8.4
K20	Micro inching relay	2.4
K21	Intermittence	4.3
K153	Services relay	1.1
K158	2nd pump relay	10.3
K159	Engine stop relay from basket	10.3
K160	Services relay	10.3
K161	2nd pump switch relay	10.4
K162	UP relay + low boom	10.4
K163	Windscreen winder relay	105
K164	Windscreen winder relay	105
K173	Evaporator electric fan relay	5.4
K530	Ignition relay	1.1
K531	Ignition plugs relay	1.2
K639	Fuel pump relay	1.4
M112	Front windscreen wiper motor	4.3
M117	Windscreen washer front pump	4.3
M119	Windscreen washer rear pump	5.2
M122	Rear windscreen wiper	5.2
M129	Heating motor	5.4
M133	Evaporator electric fan	5.5
M152	Pneumatic seat	8.5
M179	Window winder motor	10.4
M520	Starter Motor	1.1
M555	A/C Compressor	5.2
M646	Fuel pump	1.5
P101	ALGA AGRI SAR Instrument	1.2
R196	CAN End line resistance	9.5
R533	Ignition plugs resistance	1.2
S1	Battery isolator switch	1.1
S105	Outriggers consent button	3.4
S106	Rear work lights switch	7.3
S108	Warning Switch	4.4
S109	Levelling button	8.1
S110	Mechanical gear change button	3.5
S111	Boom head solenoid valve switch	6.2
S113	Left front outrigger	3.1
S114	Right front outrigger	3.2
S115	Revolving light switch	5.1
S120	Rear windscreen wiper/washer switch	53
S121	Parking brake switch	2.2
S126	Fan speed selector	5.5
S131	Rear solenoid valve switch	6.4
S132	Trailer button	6.4

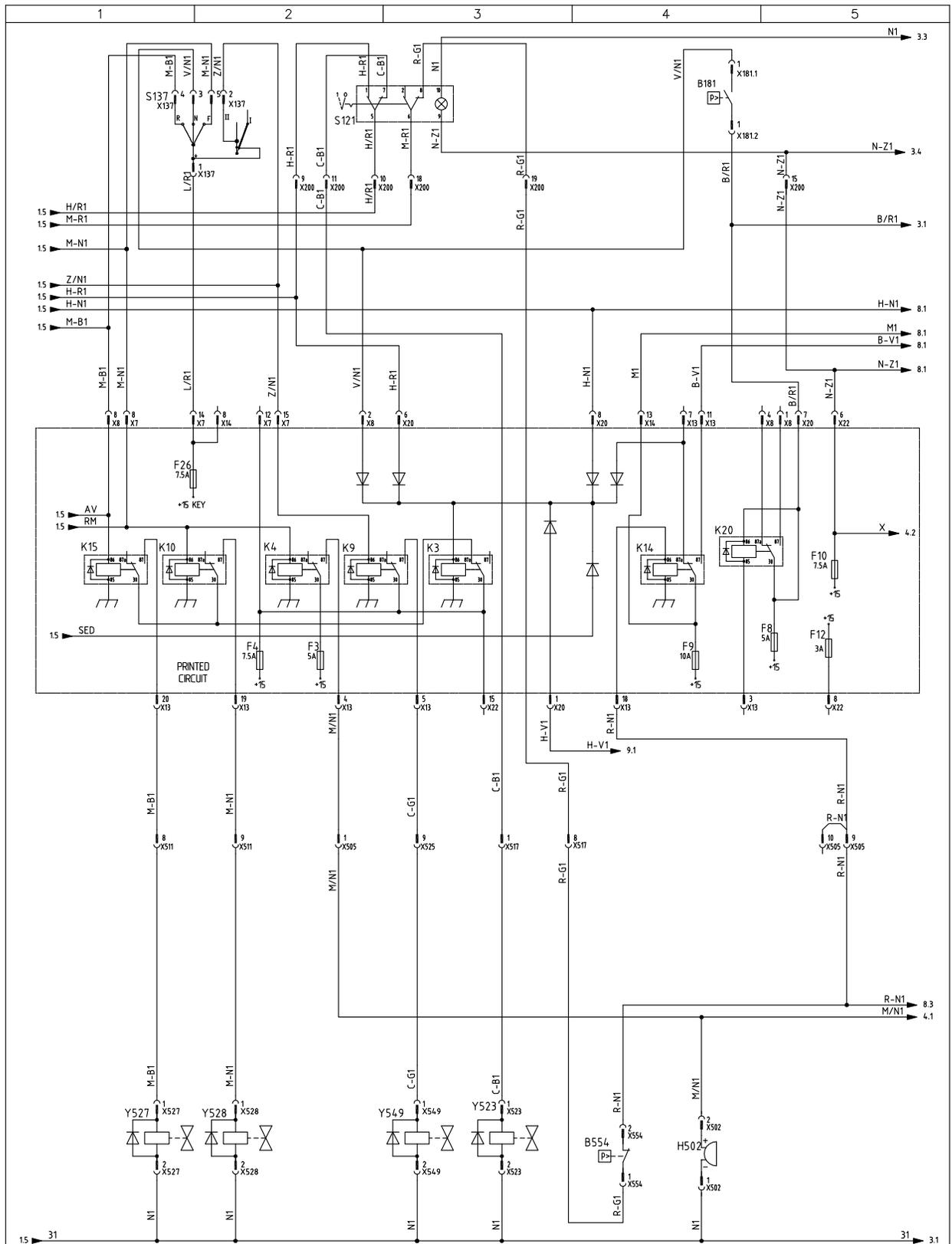
BASE SYSTEM KEY - DIA. N°25800-053 - (AGRI FARMER EN15K)

NAME	DESCRIPTION	SHEET
S136	Wheels alignment button	8.2
S137	Start gear	2.1
S140	Guide lights switch	4.3
S141	Starting control board	1.1
S142	Axle block switch	8.3
S143	Radiocontrol switch	3.3
S144	2nd pump switch	8.4
S145	A/C switch	5.4
S146	Manoeuvre restore unstable key	105
S148	Front work lights switch	7.2
S156	PTO Switch	6.3
S169	Boom suspension switch	6.2
S170	Boom head socket switch	6.1
S171	Fan inversion button	5.4
S180	Window winder button	10.4
S192	Brake oil level sensor	15
S202	Steering selector	7.1
S203	Lights switch	4.1
S204	Cab mushroom-shaped emergency button	10.1
S206	Boom work lights switch	7.4
S243	Work mode selector	9.1
W177	Antenna	7.1
Y516	1st mechanical gear solenoid valve	3.4
Y521	2nd mechanical gear solenoid valve	35
Y523	Parking brake solenoid valve	2.3
Y527	Forward gear solenoid valve	2.1
Y528	Reverse solenoid valve	2.2
Y536	Engine stop	15
Y549	Hydraulic speed gear solenoid valve	2.3
Y641	Radiator solenoid valve	5.3
X7	CONTROL UNIT CONNECTOR FUSES AND RELAY	
X8	CONTROL UNIT CONNECTOR FUSES AND RELAY	
X13	CONTROL UNIT CONNECTOR FUSES AND RELAY	
X14	CONTROL UNIT CONNECTOR FUSES AND RELAY	
X20	CONTROL UNIT CONNECTOR FUSES AND RELAY	
X22	CONTROL UNIT CONNECTOR FUSES AND RELAY	
X26	CONTROL UNIT CONNECTOR FUSES AND RELAY	
X99	CONTROL UNIT CONNECTOR FUSES AND RELAY	
X123	SAR CALIBRATION CONNECTOR	1
X124	INTERFACE CONNECTOR L. RIGHT DASHBOARD - L. DRIVER POSITION	
X124	INTERFACE CONNECTOR L. CAB ROOF - L. DRIVER POSITION	
X134.p	DO NOT CONNECT CONNECTOR WITH X134.S	6
X134.S	DO NOT CONNECT CONNECTOR WITH X134.p	6
X135	INTERFACE CONNECTOR L. RIGHT DASHBOARD - L. DRIVER POSITION	
X154.p	BASKET INTERFACE CONNECTOR	10
X154.p	BASKET COUNTERFIGURE CONNECTOR	10
X165	Current socket	4
X647	Additional device	1
X155.p	BASKET INTERFACE CONNECTOR	10
X155.S	BASKET COUNTERFIGURE CONNECTOR	10



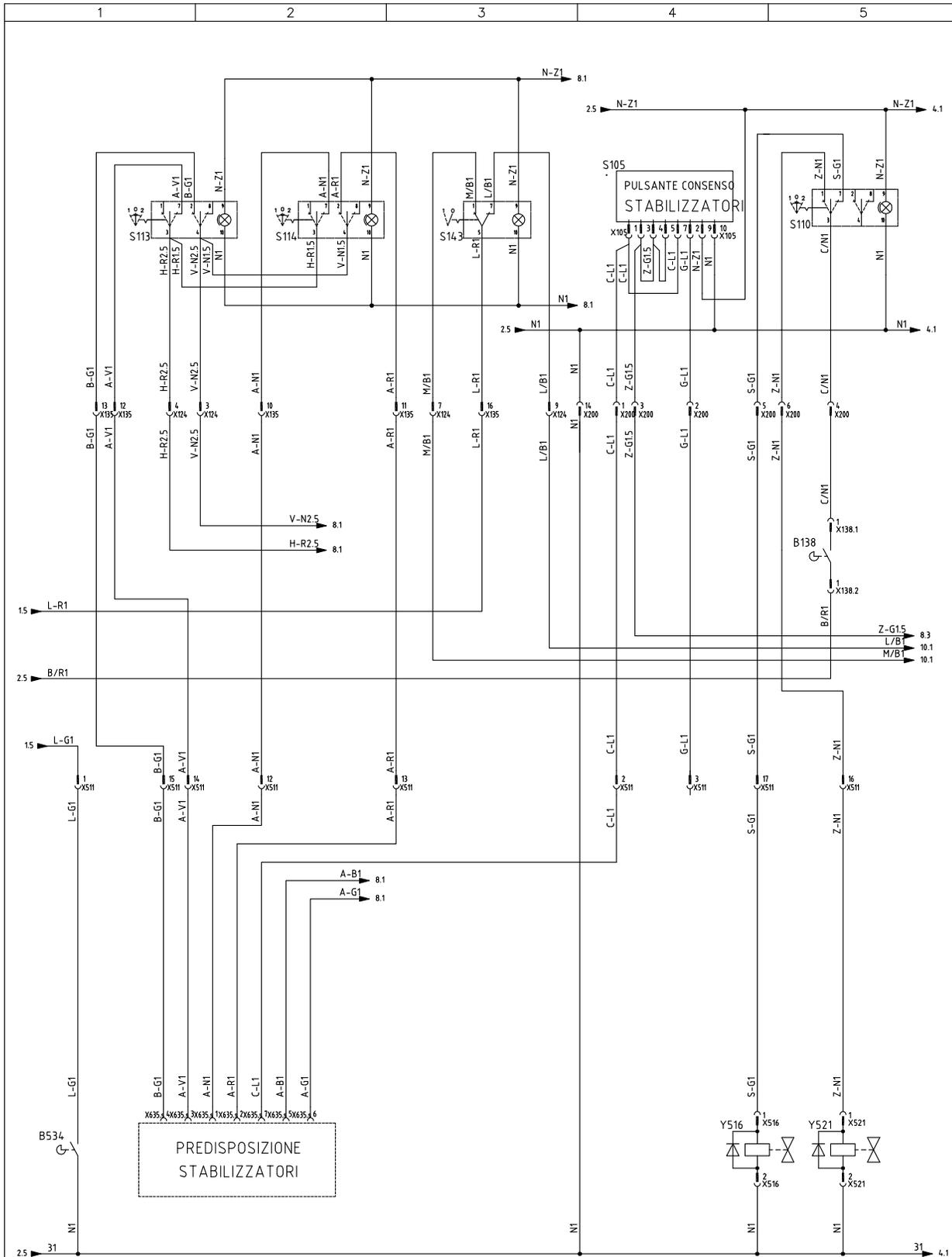
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DENOMINAZIONE/PART DESCRIPTION E25800-053	FORMATO/SIZE A3	ASDAK REV. 00	CONTROLLATO/CHECKED MORETTI A.	OF 10
			DATA/DATE 20/10/10	

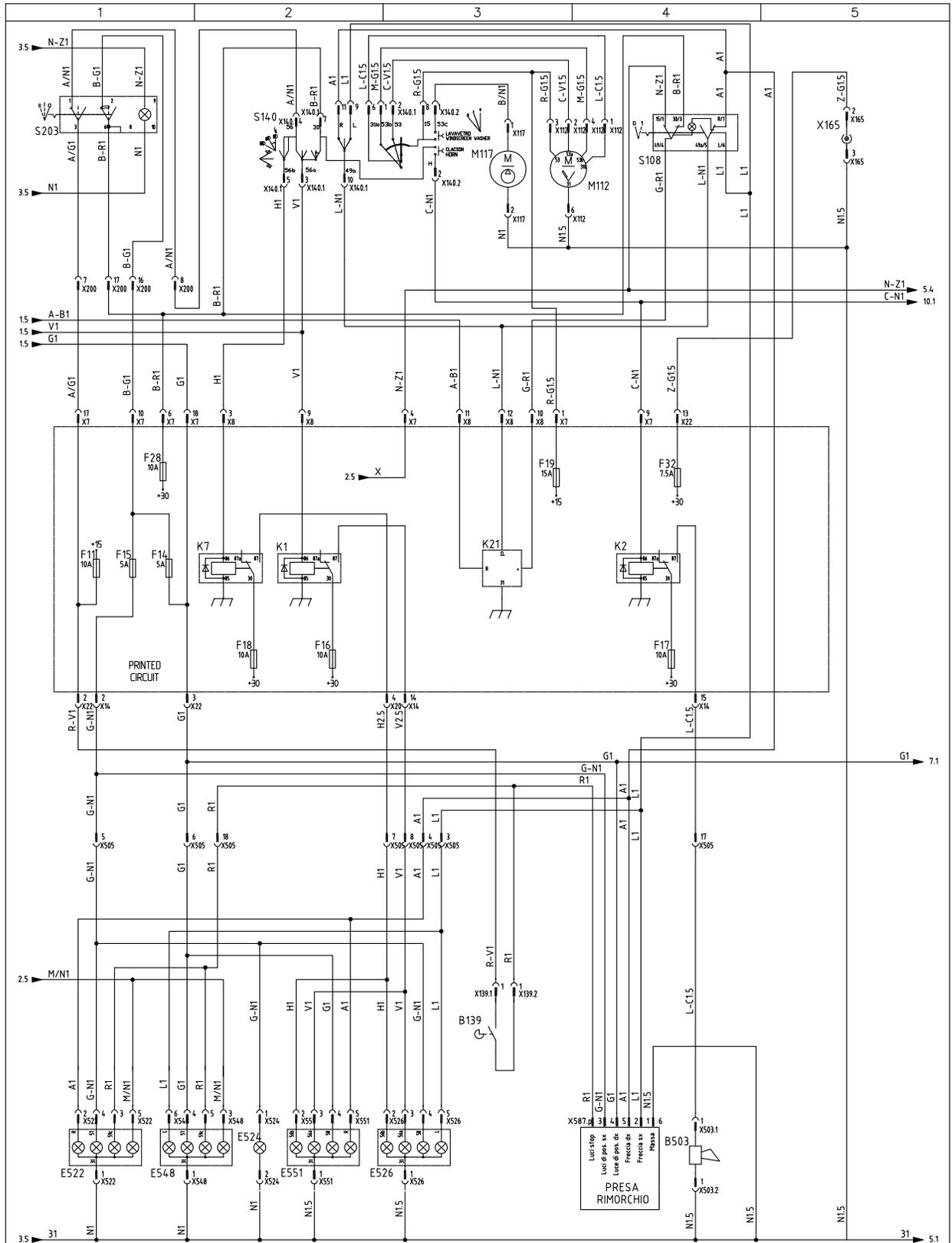


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DENOMINAZIONE/PART DESCRIPTION EN15000	FORMATO/SIZE A3	Valid certified copy only		CONTROLLATO/CHECKED MORETTI A.		OF 10
CODICE/REF. E25800-053	MODIFY -	AGGIORN. REV. 00		DATA/DATE 20/10/10		

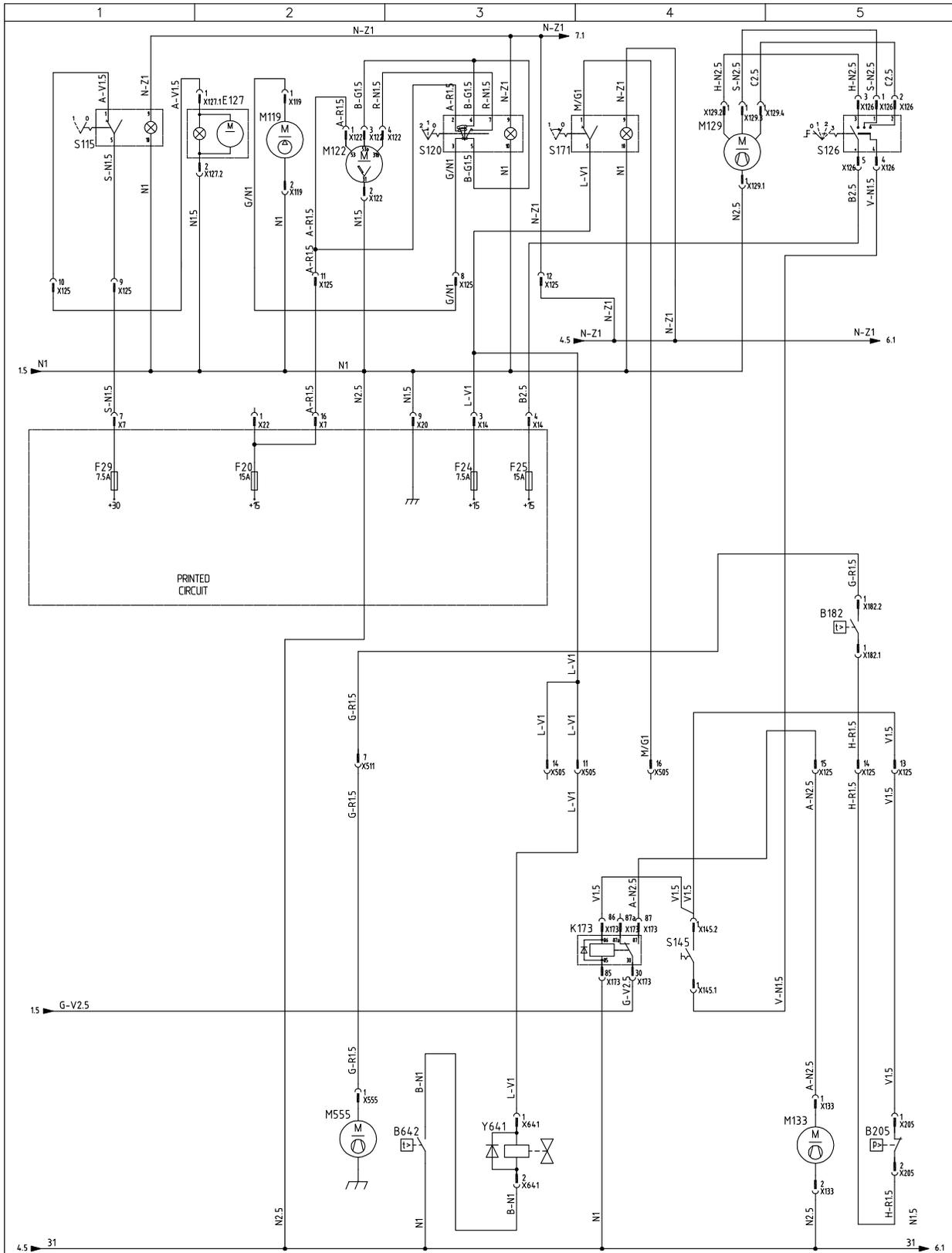


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DENOMINAZIONE/PART DESCRIPTION EN15000	FORMATO/SIZE A3	CONTROLLATO/CHECKED MORETTI A.	
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		OF 10	

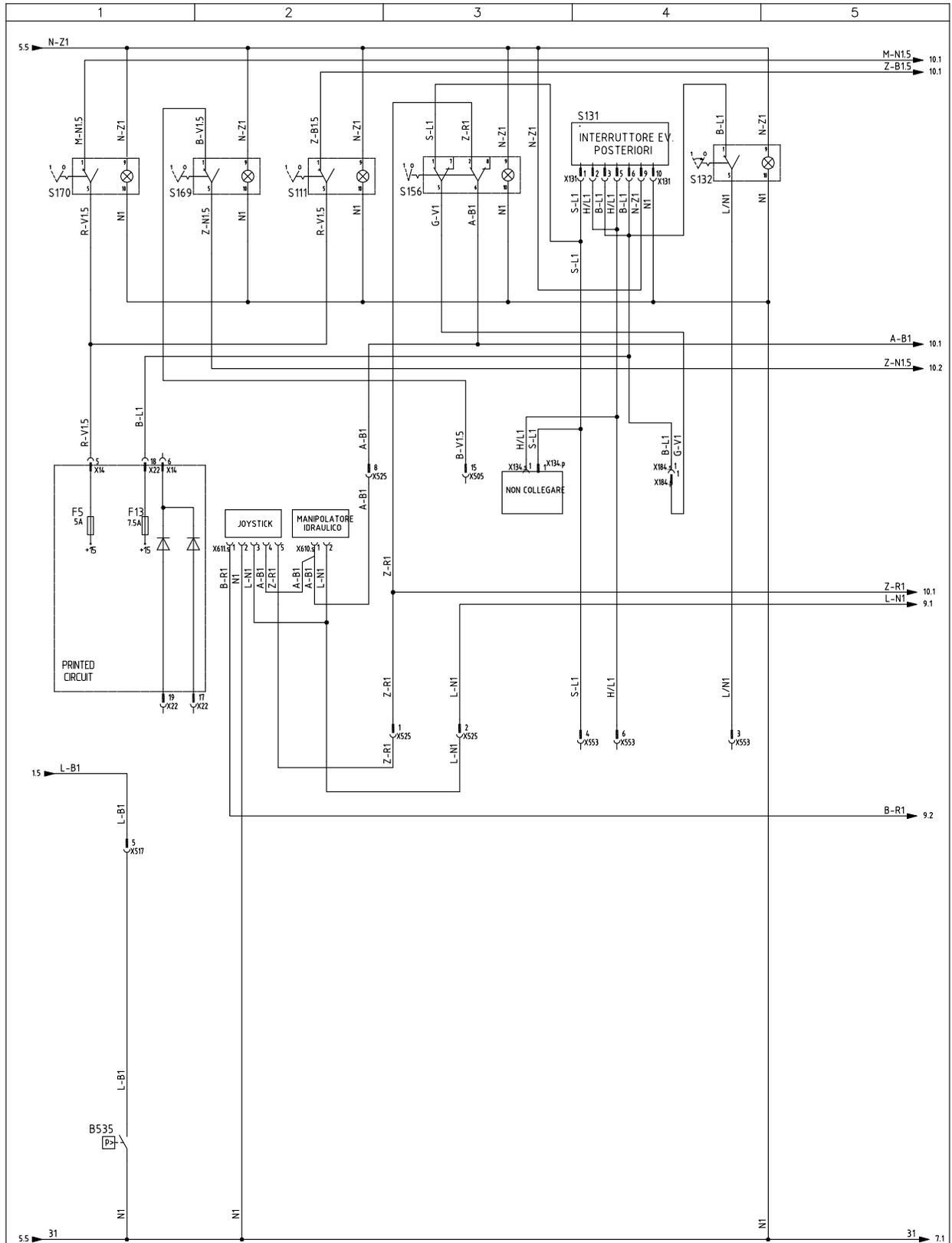


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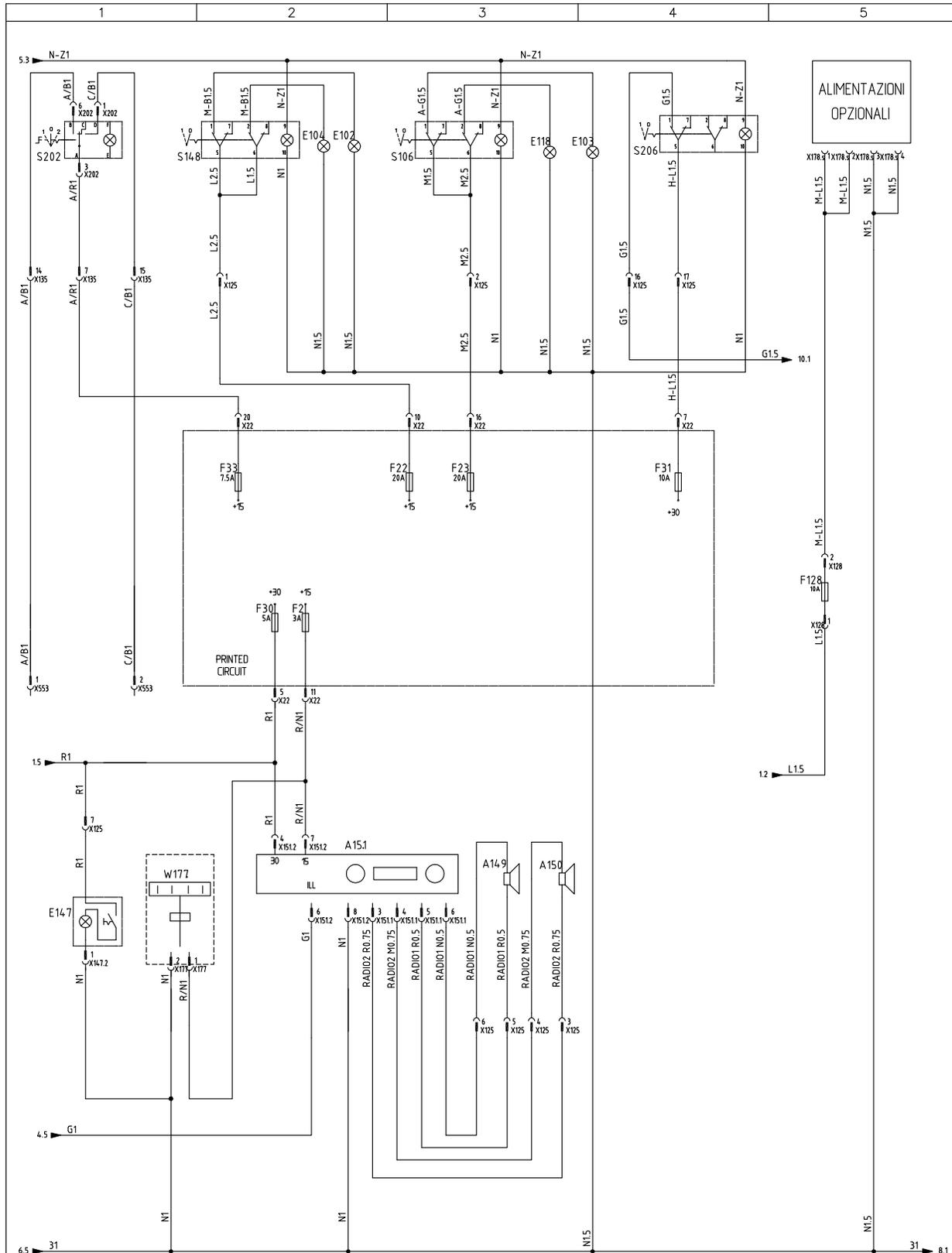


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			PAGE 5 OF 10



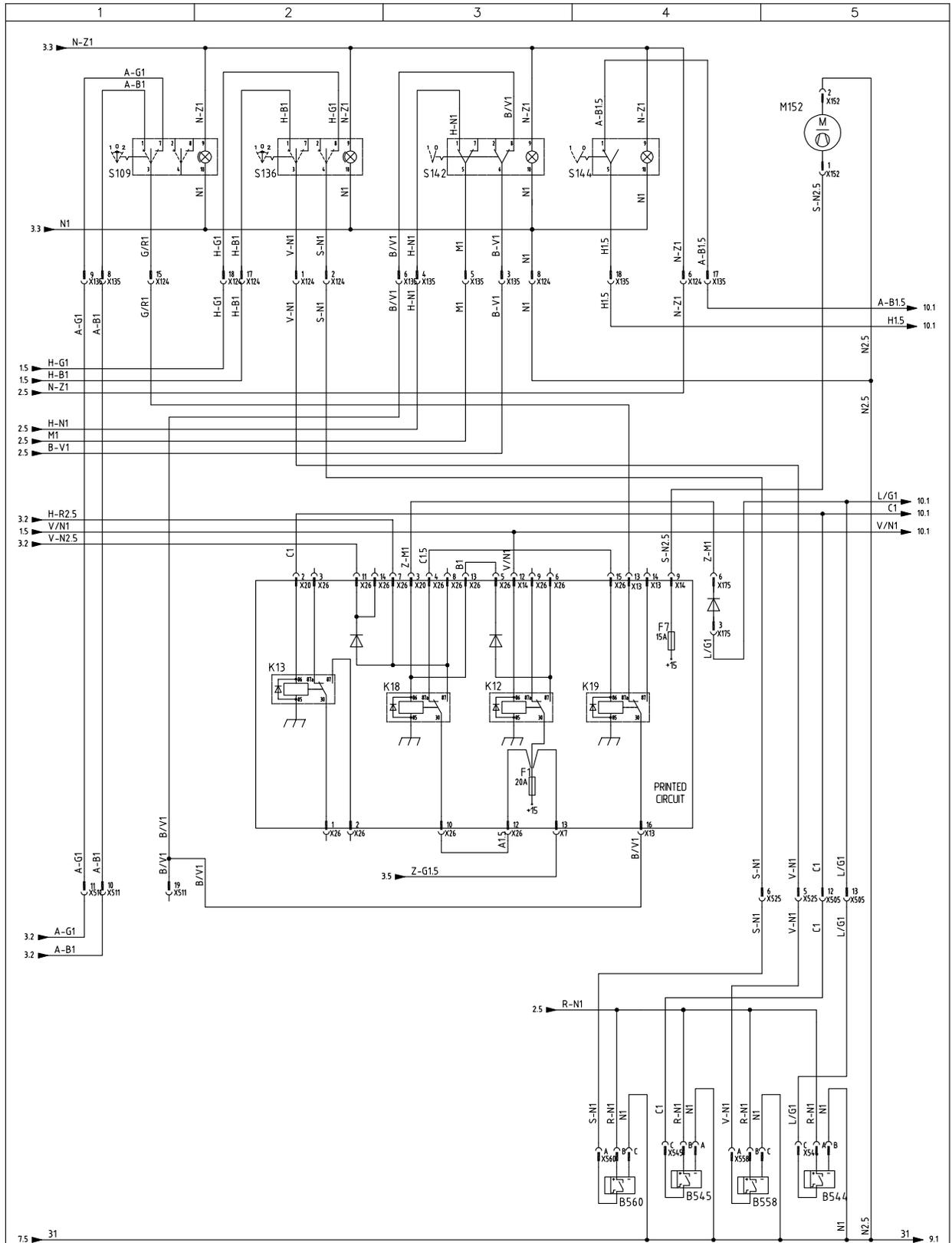
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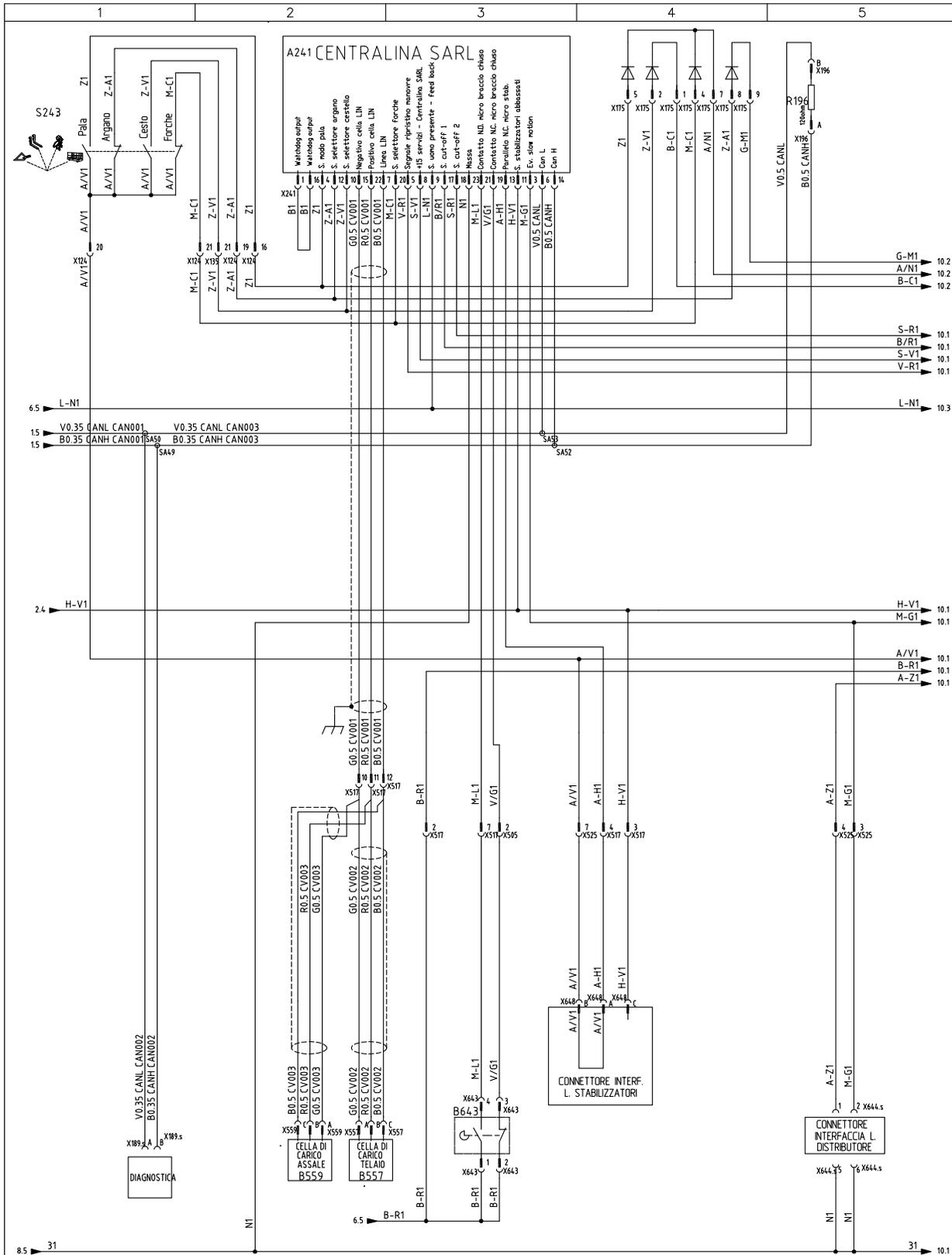
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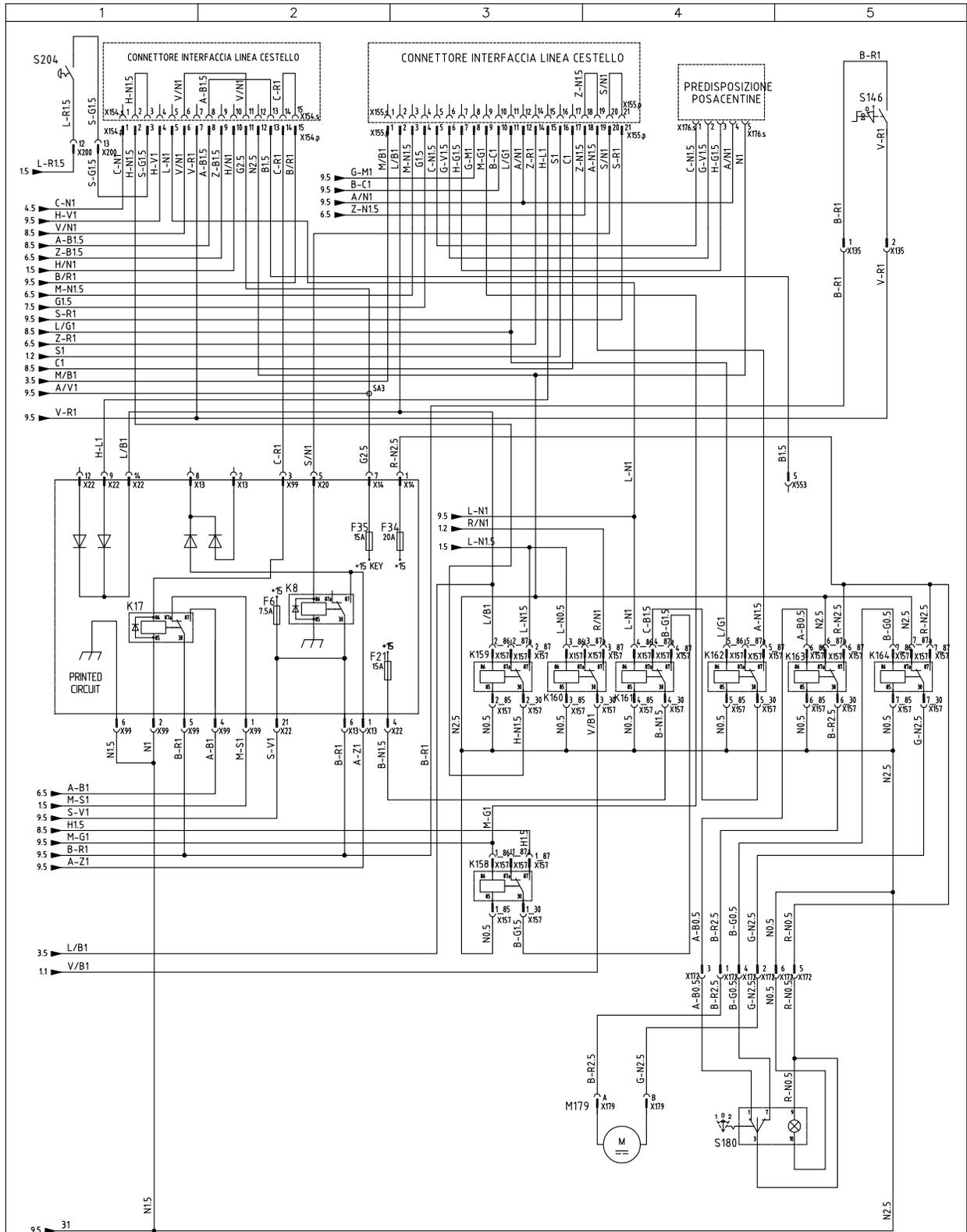


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<p>CODICE/REF. E25800-053</p>	<p>ADOK REV. 00</p>	<p>CONNETTORE INTERF. L. STABILIZZATORI</p>	<p>CONNETTORE INTERF. L. DISTRIBUTORE</p>
		<p>DATA/DATE 20/10/10</p>	<p>macchine edili ed agricole s.r.l. DIIECI</p>
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CODICE/REF. E25800-053	MODIFY -					



HYDRAULIC CIRCUIT







EVERY MODIFICATION MADE TO THE VEHICLE LEADS TO A NEW VERIFICATION OF CONFORMITY WITH THE 2006/42 MACHINERY DIRECTIVE “CE” THIS PROCEDURE IS ALSO VALID IN THE CASE OF REPAIRS WITH NON-ORIGINAL SPARE PARTS.

IT IS PROHIBITED TO OPERATE IF THIS MANUAL HAS NOT BEEN READ AND UNDERSTOOD.

ANY ARBITRARY MODIFICATION MADE TO THE VEHICLE WILL ABSOLVE DIECI FROM ALL LIABILITY FOR DAMAGE OR INJURY RESULTING FROM SUCH MODIFICATION.

TO GUARANTEE YOUR SAFETY AND THAT OF OTHERS, DO NOT MODIFY THE STRUCTURE OR ADJUST THE VARIOUS VEHICLE COMPONENTS (HYDRAULIC PRESSURE, CALIBRATION OF LOAD LIMITERS, ENGINE ROTATION, ASSEMBLY OF ADDITIONAL ATTACHMENTS, ETC.). THE SAME HOLDS TRUE FOR THE DEACTIVATION OR MODIFICATION OF SAFETY SYSTEMS. IN SUCH CASES, THE MANUFACTURER SHALL BE ABSOLVED FROM ALL LIABILITY.

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

YOUR VEHICLE CAN BE SET-UP WITH OPTIONAL CONTROLS AND ACCESSORIES ON REQUEST.

ALL FUNCTIONS AND PROCEDURES CONCERNING THE OPERATION AND MOUNTING OF THE VEHICLE'S ATTACHMENTS THAT ARE NOT DESCRIBED IN THIS MANUAL ARE STRICTLY FORBIDDEN.

USE OF THE VEHICLE DIFFERENT TO THAT DESCRIBED IN THIS MANUAL IS PROHIBITED.

IT IS MANDATORY TO HAVE READ AND LEARNED CHAPTER “B” (SAFETY STANDARDS) BEFORE READING CHAPTER “C” AND USING THE VEHICLE.



dDIECI
macchine edili ed agricole



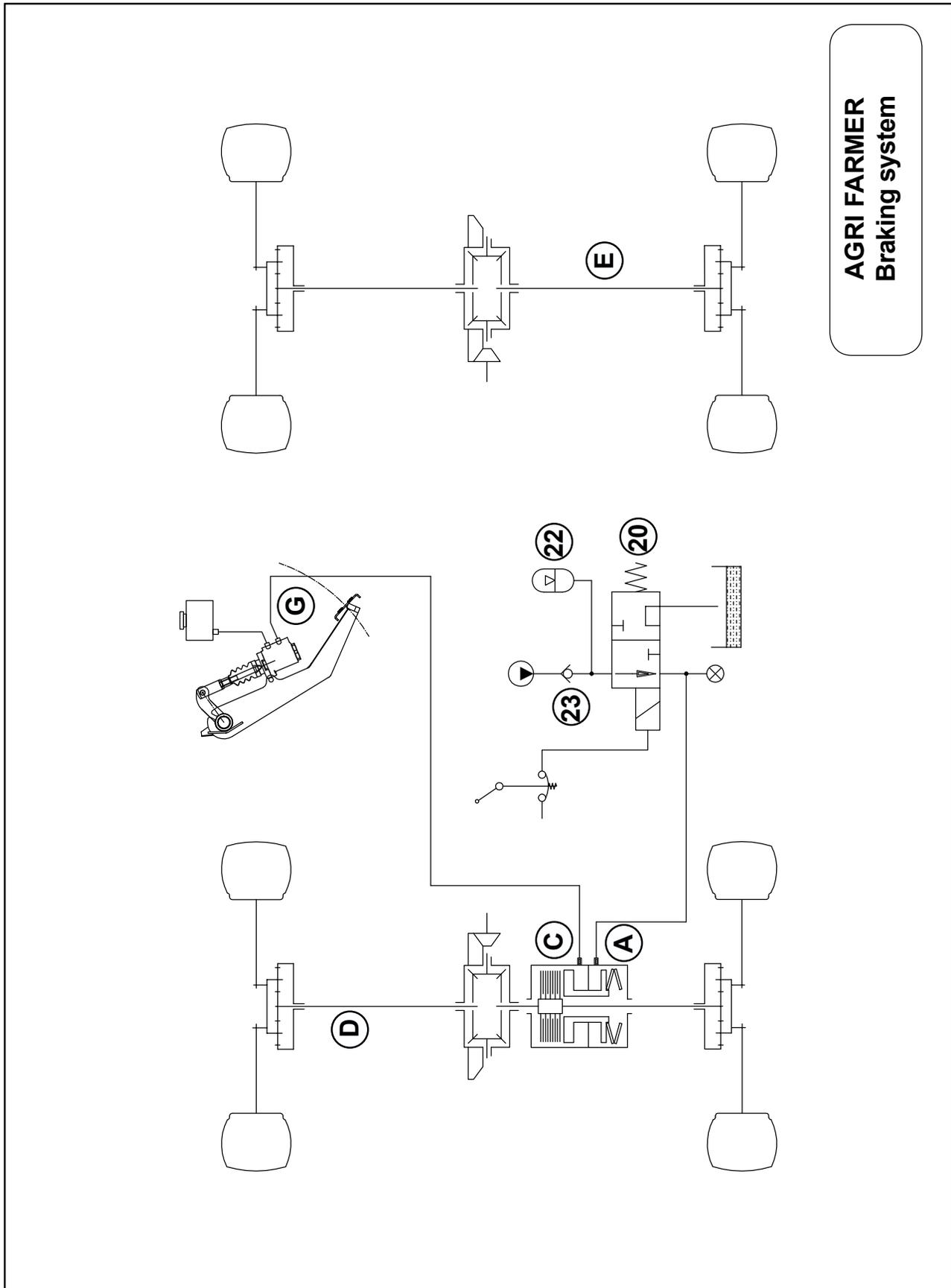
HYDRAULIC PLANT KEY

IM03_Agri Farmer vehicle plant with ON_OFF Walvoil-type

- | | |
|----------------------------|--------------------|
| 1. Pump | A - NEGATIVE BRAKE |
| 2. Priority valve | B - FRONT STEERING |
| 3. Power steering | C - FRONT BRAKE |
| 4. Steering distributor | D - FRONT AXLE |
| 5. Boom distributor | E - BACK AXLE |
| 6. Lifting piston | G - BRAKES PUMP |
| 7. Lock valve | H - REAR STEERING |
| 8. Swivel cylinder | |
| 9. Compensation cylinder | |
| 10. Lock valve | |
| 11. Extension cylinder | |
| 12. Lock valve | |
| 13. Boom head socket | |
| 14. Non-return valve | |
| 15. Heat exchanger | |
| 16. Hydrostatic pump | |
| 17. Hydrostatic motor | |
| 18. Hydrostatic oil filter | |
| 19. Inching valve | |
| 20. Negative brake valve | |
| 21. Speed change valve | |
| 22. Accumulator | |
| 23. Non-return valve | |



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



HYDRAULIC PLANT KEY

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| 16. Hydrostatic pump | |
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- ATTENTION: - Read the SAFETY REGULATIONS (contained in this manual) carefully for the safety of all personnel and your vehicle.



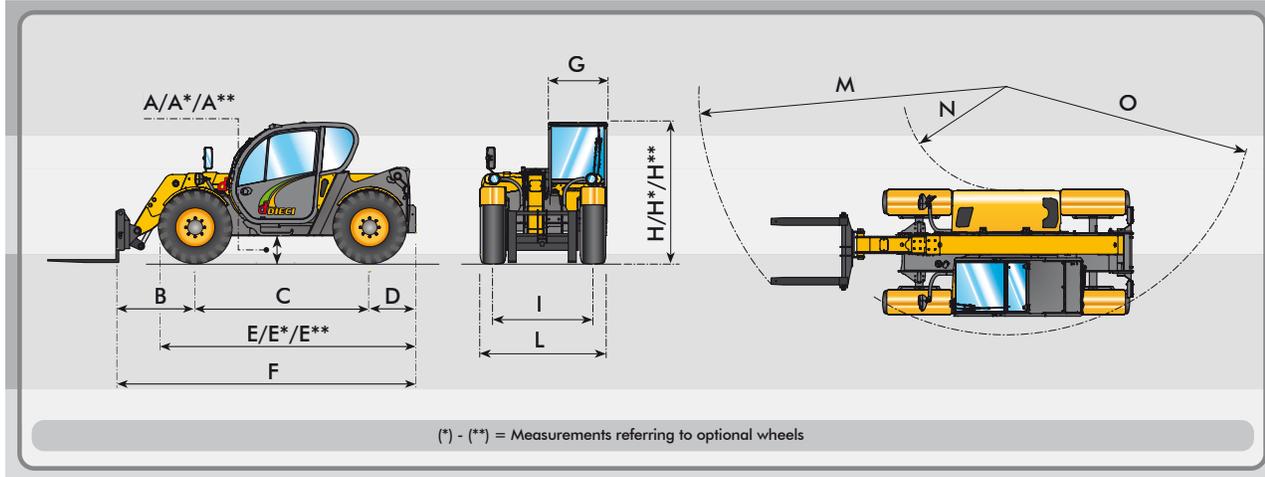
TECHNICAL DATA AND TECHNICAL FEATURES



Agri Farmer

DIMENSIONS	26.6	28.7	30.7	28.9	30.9
A/A*/A**	360/400*/440**	360/400*/440**	400/440*	360/400*/440**	400/440*
B	1195	1210	1210	1267	1267
C	2550	2800	2800	2800	2800
D	750	650	650	747	747
E/E*/E**	3790/3840*/3890**	3940/3990*/4040**	3990/4040*	4037/4087*/4137**	4087/4137*
F	4490	4670	4670	4720	4720
G	940	940	940	940	940
H/H*/H**	2200/2240*/2280**	2000/2040*/2080**	2220/2260*	2000/2040*/2080**	2220/2260*
I	1600	1600	1600	1600	1600
L	2000	2000	2000	2000	2000
M	4800	4900	4900	4900	4900
N	1530	1670	1670	1670	1670
O	3840	4000	4000	4000	4000

Measurements expressed in millimetres (*) - (**) = Measurements referring to optional wheels



PERFORMANCE	26.6	28.7	30.7	28.9	30.9
Maximum capacity (kg)	2.600	2.800	3.000	2.800	3.000
Maximum lifting height (m)	5,95	6,35	6,35	8,70	8,70
Maximum horizontal outreach (m)	3,35	3,65	3,65	5,70	5,70
Outreach at maximum height (m)	0,66	0,80	0,80	0,80	0,80
Fork swivelling angle	134°	130°	130°	130°	130°
Pull-out force (daN)	5.700	5.700	5.700	5.700	5.700
Towing force (daN)	7.300	7.300	7.300	7.300	7.300
Maximum climb angle	40%	40%	40%	40%	40%
Total weight empty (kg)	5.900	6.100	6.100	6.250	6.250
Max speed (km/h)	35	35	35	35	35

BOOM	26.6	28.7	30.7	28.9	30.9
Times: (in seconds)					
Lifting	7,6	9,5	9,5	10,3	10,3
Descent	3,9	4,9	4,9	5,3	5,3
Extension	6,2	7,2	7,2	9,5	9,5
Retraction	3,4	4,0	4,0	6,6	6,6
Forward swivelling	3,2	4,1	4,1	4,1	4,1
Reverse swivelling	2,0	2,6	2,6	2,6	2,6

Patented compensation system

ENGINE
Model: Perkins
Maximum power kW (hp): 74.5 (101)
Revolutions per minute (rpm): 2200
Operation: 4 stroke diesel
Injection: Direct mechanical
Number and arrangement of cylinders: 4, vertical in line
Engine size (cm3): 4400
Specific consumption at 2200 rpm (g/kWh): 251
Turbo compressor
Liquid cooling system

OPTIONALS AND ACCESSORIES
A/C; Webasto Heater; Digital speedometer; Water Heater; Driver's seat with pneumatic suspension; Light on boom head; Quick coupling for accessories; Radio; Anti-theft system; Glass protection.
(For additional customizations, contact the area dealer)

TRANSMISSION
Hydrostatic transmission with variable displacement pump.
Hydrostatic engine with automatic variation.
Electrical - hydraulic inversion.
Inching pedal for controlled advancement.
Servocontrolled 2-speed gearbox.

HYDRAULIC PLANT	
Gear pump with capacity at max. speed (lt/1'):	110
Max operational pressure (bar):	230
Distributor control with joystick:	3 in 1

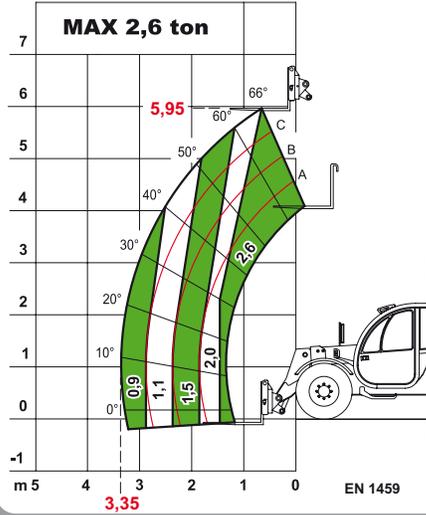
DIFFERENTIAL AXLES
Steering axles: 2, with planetary reduction gears
Steering types: 4 wheels / transversal / 2 wheels
Front axle: rigid
Back axle: oscillating
Oil bath service braking on the front axle
Negative action parking brake.

REFUELLING (Litres)	
Hydraulic plant (total)	130
Fuel tank	100

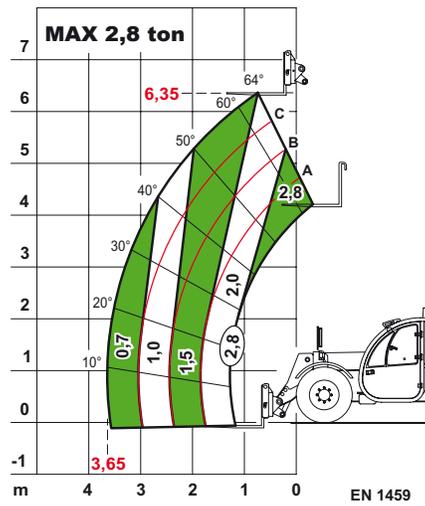
DEVICES AS PER STANDARD
Anti-tipping device with pejorative movement block.
Hydraulic socket for any accessories on the boom head.
Soundproof closed cab, ROPS-FOPS approved, with heater.
Self-blocking front axle differential (limited slip 45%).
Self-cleaning filter with cyclone filters.
Electric window winder.

TOWING CAPACITY (upon request)	
Trailer without brakes (ton):	3
Mechanical braking (ton):	5
Hydraulic/pneumatic braking (ton):	17
Including 20" wheels	

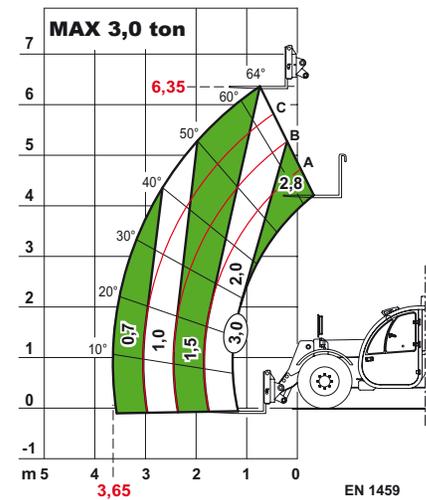
TYRES	26.6	28.7 28.9	30.7 30.9
Tyres	12,5x18"	12,5x18"	405/70x20"
(*) Alternative	405/70x20"	405/70x20"	405/70x24"
(**) Alternative	405/70x24"	405/70x24"	



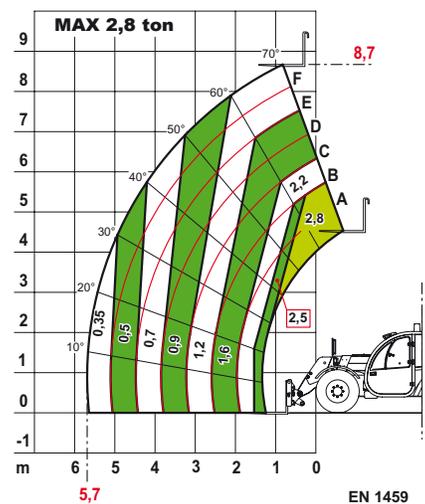
Agri Farmer 26.6



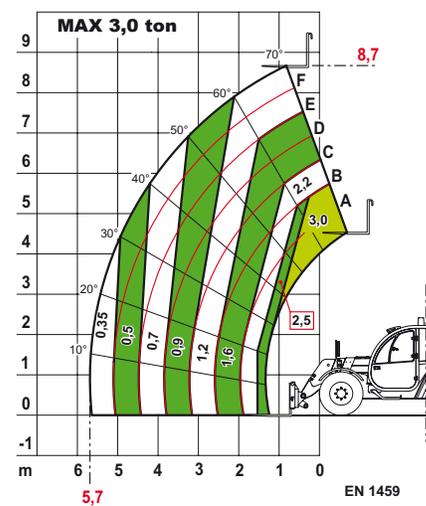
Agri Farmer 28.7



Agri Farmer 30.7



Agri Farmer 28.9



Agri Farmer 30.9

ALPHABETICAL INDEX



2-SPEED BOOM (OPTIONAL).....	C/59
------------------------------	------

"A"

ACKNOWLEDGING SAFETY REGULATIONS.....	B/2
ADJUSTABLE TOWING HOOK (OPTIONAL).....	C/64
AIR FILTER.....	D/30
AIR RECIRCULATION INSIDE THE CAB.....	C/52
ANTI-TIPPING DEVICE CHECK.....	C/44
ANTI-TIPPING DEVICE.....	C/40
ANTI-TIPPING ERRORS.....	C/87
ANTI-TIPPING SYSTEM MUTE.....	C/84
ANTI-TIPPING SYSTEM TEST.....	C/84

"B"

BASKET EMERGENCY.....	C/74
BATTERIES.....	B/22
BATTERY ISOLATOR SWITCH.....	D/14
BOOM CONTROL LEVER.....	C/33
BOOM HEAD LIGHT SWITCH (OPTIONAL).....	C/55
BOOM HEAD SOCKET (OPTIONAL).....	C/56
BOOM HEAD SOLENOID VALVE (OPTIONAL).....	C/56
BOOM SUSPENSION (OPTIONAL).....	C/58
BUTTONS.....	C/82

"C"

CAB COMPONENTS.....	C/7
CAB INTERNAL VENTILATION.....	C/51
CAPACITY OF PARTS TO LUBRICATE - MOD. AGRI FARMER 26.6.....	D/12
CAPACITY OF PARTS TO LUBRICATE - MOD. AGRI FARMER 28.7.....	D/12
CAPACITY OF PARTS TO LUBRICATE - MOD. AGRI FARMER 28.9.....	D/12
CAPACITY OF PARTS TO LUBRICATE - MOD. AGRI FARMER 30.7.....	D/12
CAPACITY OF PARTS TO LUBRICATE - MOD. AGRI FARMER 30.9.....	D/12
CATALYTIC PURIFIER (OPTIONAL).....	C/77
CENTRAL DASHBOARD - INDICATOR LIGHTS.....	C/18
CENTRAL DASHBOARD - INSTRUMENT USE.....	C/19
CHANGING DISPLAY VISUALISATION.....	C/82
CHANGING HYDRAULIC OIL AND REPLACING FILTERS - MOD. AGRI FARMER 28.7-28.9-30.7-30.9.....	D/22
CHANGING HYDRAULIC OIL AND REPLACING FILTERS - MOD. AGRI FARMER 26.6.....	D/23
CLEANING AND STORING DIESEL FUEL.....	B/29
CLEANING THE CAB.....	B/20
CLEANING THE VEHICLE.....	B/19
CLEANING THE WINDOWS.....	B/20
CLOCK REGULATION.....	C/82
CONTACT WITH DANGEROUS LIQUIDS.....	B/27
COUPLING TORQUE TABLES REGARDING THE HYDRAULIC FITTINGS.....	D/54
COURTESY COMPARTMENT.....	C/11
CYLINDER BLOCK VALVES.....	D/34

"D"

DASHBOARD INSTRUMENT INITIAL CHECK.....	C/83
DECLARATION OF FIRST INSPECTION BY MANUFACTURER.....	D/5
DIESEL.....	B/28
DISENGAGING THE NEGATIVE PARKING BRAKE WITH THE ENGINE STOPPED.....	C/73
DOOR OPENING CONTROLS.....	C/8
DRIVER'S CAB.....	B/37

DRIVER'S CAB	B/6
DRIVING AUTHORISATION	B/7
DUAL REFLECTOR WORKING LIGHT	D/51
DUMP BODY DESCENT (OPTIONAL)	C/60

"E"

ECOLOGICAL CONSIDERATIONS	B/30
ELECTRICAL SYSTEM PROTECTION	B/24
ELECTROMAGNETIC INTERFERENCE	B/16
EMERGENCY BUTTON	C/24
EMERGENCY LIGHTS SELECTOR	C/50
ENGINE BONNET OPENING	D/15
ENGINE CONTROL UNIT	D/49
ENGINE ERROR	C/84
EPICYCLOIDAL REDUCTION GEAR - OIL CHANGE	D/40
EVALUATING SUBSOIL CONSISTENCY	B/33
EXTERNAL BOOM CHAINS	D/43

"F"

FAN SPEED VERIFICATION	B/32
FAST/SLOW GEAR SWITCH	C/29
FEATURES OF THE RECOMMENDED FUEL	B/28
FILLING OUT THE SERVICE REGISTER	D/58
FIRE PREVENTION	B/21
FRONT CAB LIGHTS SWITCH (OPTIONAL)	C/54
FRONT DIFFERENTIAL AXLES - OIL CHANGE	D/36
FRONT LIGHT	D/50
FUEL TANK	D/25
FUSES	D/48

"G"

GENERAL ALARM INDICATOR LIGHT	C/84
GENERAL WARNINGS	B/3
GENERAL WARNINGS	C/4
GETTING IN AND OUT OF THE DRIVER'S CAB	C/8
GETTING TO KNOW THE PARTS INSIDE THE CAB	C/17
GREASING NIPPLES - ONE/TWO/THREE EXTENSION BOOMS	D/46
GREASING NIPPLES - TRANSMISSION SHAFT / DIFFERENTIAL AXLE	D/47
GUARANTEE	A/4

"H"

HAND SIGNALS	C/5
HANDLING THE LOAD	B/12
HANDLING THE LOADS	B/42
HODOGRAPH (OPTIONAL)	C/81
HYDRAULIC BRAKING SYSTEM FOR TRAILERS (ITALY TYPE) (OPTIONAL)	C/67
HYDRAULIC BRAKING SYSTEM FOR TRAILERS (OPTIONAL)	C/68
HYDRAULIC GEAR SWITCH (OPTIONAL)	C/30
HYDRAULIC OIL LEVEL	D/21
HYDROSTATIC SYSTEM OIL FILTER	D/24

"I"

IDENTIFYING THE VEHICLE PARTS	C/6
IDENTIFYING THE VEHICLE PARTS	D/6
IGNITION SWITCH	C/25
INSPECT THE VEHICLE	B/4
INTERIOR CAB LIGHTING	C/11
INTERNAL DOOR OPENING CONTROLS	C/8
INTRODUCTION	A/3
INTRODUCTION	D/3

"J"

JOYSTICK 3 IN 1 FOR BASKET.....	C/36
JOYSTICK 3 IN 1 ON/OFF (STANDARD VERSION).....	C/34
JOYSTICK 3 IN 1 PROPORTIONAL EXTENSION (STANDARD VERSION).....	C/35
JOYSTICK 4 IN 1 PROPORTIONAL CONTROL EXTENSION PROPORTIONAL SERVICES.....	C/37
JOYSTICK 4 IN 1 PROPORTIONAL CONTROL EXTENSION PROPORTIONAL SERVICES.....	C/38

"L"

LCD DISPLAY.....	C/81
LEFT FRONT DASHBOARD (STANDARD AND OPTIONAL ELECTRICAL SWITCHES, INDICATOR LIGHTS AND CONTROL LEVERS).....	C/20
LIFTING THE VEHICLE.....	B/15
LIGHTING.....	D/50
LOAD TABLES.....	B/38
LONGITUDINAL MOMENT INDICATOR.....	C/41

"M"

MAINTENANCE AND REGISTRATION SCHEDULE.....	D/8
MAINTENANCE PRESCRIPTIONS.....	D/3
MANUAL ACCELERATOR.....	C/50
MAX 180W SOCKET.....	C/10
MULTI-FUNCTION LEVER.....	C/27

"O"

OBLIGATIONS AND FILING COMPLAINTS TO I.S.P.E.S.L.....	D/58
OIL COMPARISON TABLE.....	D/13
OPENING THE DOOR WINDOW.....	C/9
OPERATING IN SAFETY.....	B/8

"P"

PARKING BRAKE.....	C/31
PARKING BRAKE.....	D/20
PARKING THE VEHICLE.....	B/13
PEDALS.....	C/26
PEDALS.....	D/18
PERIODIC INSPECTIONS AND REGISTRATION METHODS.....	D/58
PNEUMATIC BRAKING SYSTEM FOR TRAILERS.....	C/69
POWER TAKE-OFF (OPTIONAL).....	C/65
PRELOAD AND TORQUE TABLE FOR CLASS 1 NUTS AND BOLTS.....	D/52
PRELOAD AND TORQUE TABLE FOR CLASS 2 NUTS AND BOLTS.....	D/53
PREPARING FOR EMERGENCIES.....	B/5
PREPARING THE VEHICLE AFTER PROLONGED INACTIVITY.....	B/19
PROTECTIVE CLOTHING.....	B/4
PUTTING THE GEAR SHIFT IN NEUTRAL.....	C/72

"R"

REAR CAB LIGHTS SWITCH (OPTIONAL).....	C/54
REAR DIFFERENTIAL AXLES - OIL CHANGE.....	D/38
REAR EMERGENCY EXIT.....	C/10
REAR HYDRAULIC SOCKETS (OPTIONAL).....	C/57
REAR LIGHT.....	D/51
REAR WINDOW.....	C/9
REAR WINDSCREEN WIPER CONTROL.....	C/50
RECORDING ROUTINE VERIFICATIONS AND MAINTENANCE INTERVENTIONS.....	D/61
REDUCTION GEAR - OIL CHANGE.....	D/36
REVERSIBLE FAN (OPTIONAL ONLY ON AGRI FARMER 26.6).....	C/61
REVOLVING LIGHT SWITCH.....	C/54
RIGHT DASHBOARD (STANDARD AND OPTIONAL ELECTRICAL SWITCHES, INDICATOR LIGHTS AND CONTROL LEVERS).....	C/21
ROAD TRAVEL (INSTRUCTIONS).....	B/14
ROAD TRAVEL.....	B/14
ROOF DASHBOARD (STANDARD AND OPTIONAL ELECTRICAL SWITCHES, INDICATOR LIGHTS AND CONTROL LEVERS).....	C/23
ROPS-FOPS CAB.....	B/37

"S"

SAFELY CARRYING OUT MAINTENANCE WORK	B/16
SAFETY BELTS	C/13
SAFETY DEVICES	B/34
SAFETY STICKERS	B/20
SAFETY STICKERS	B/46
SEAT	C/14
SERVICE	C/86
SPEEDOMETER (OPTIONAL)	C/81
SPIRIT LEVEL AND INCLINOMETER	C/32
STANDARD STEERING SELECTOR ALIGNMENT (STANDARD)	C/48
STARTING THE VEHICLE	B/7
START-UP WITH AUXILIARY BATTERIES	B/23
STEERING SELECTOR (OPTIONAL) ALIGNMENT (STANDARD)	C/49
STEERING WHEEL (ADJUSTMENT)	C/12
STORAGE OF DANGEROUS LIQUIDS	B/27
STORING THE VEHICLE / PROLONGED INACTIVITY	B/19
SWITCH-ON OF DASHBOARD INDICATOR LIGHTS	C/85

"T"

TECHNICAL DOCUMENTATION POCKET	C/11
TELESCOPIC BOOM SLIDING BLOCKS	D/42
TELESCOPIC LIFT IDENTIFICATION	A/7
TEMPORARY HALT	B/13
THREE-POINT LIFTING DEVICE (OPTIONAL)	C/66
TIGHTENING WHEEL NUTS	B/25
TOWING HOOK	C/63
TOWING HOOK	C/64
TOWING THE VEHICLE	C/71
TRANSPORTING THE VEHICLE	B/15
TROUBLESHOOTING	D/55
TYRES	B/25

"U"

UNDERSIDE PROTECTION REMOVAL	D/17
UPPER DASHBOARD (STANDARD AND OPTIONAL ELECTRICAL SWITCHES, INDICATOR LIGHTS AND CONTROL LEVERS)	C/22
UPPER ROOF	C/9
USING THE LOAD TABLES AND BOOM INDICATORS	B/38

"V"

VEHICLE FUNCTIONS SELECTOR	C/46
VEHICLE IDENTIFICATION	A/6
VIBRATIONS	B/16

"W"

WASTE DISPOSAL	B/30
WATER DRIVEN PURIFIER (OPTIONAL)	C/77
WATER HEATER (OPTIONAL)	C/62
WATER/OIL RADIATOR - MOD. AGRI FARMER 26.6	D/28
WATER/OIL RADIATOR - MOD. AGRI FARMER 28.7-28.9-30.7-30.9	D/26
WORK LIGHT	D/51



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