



**647731EN (22/08/2025)**

MLT 625 H 75K ST5 S1

**OPERATOR'S MANUAL**  
*(ORIGINAL MANUAL)*

## **IMPORTANT**

*Carefully read and understand this instruction manual before using this machine.*

*It contains all information relating to operation, handling and equipment, as well as important recommendations to be followed.*

*This document also contains precautions for use, as well as information on the service and routine maintenance required to ensure the machine's continued reliability and safety of use.*

**WHENEVER YOU SEE THIS SYMBOL, IT MEANS:**



**PLEASE NOTE! BE CAREFUL! YOUR SAFETY, THAT OF OTHERS, OR THE SAFETY OF THE MACHINE IS AT RISK.**

- This manual has been produced based on the equipment list and technical characteristics given at the time of its design.
- The machine's equipment level depends on the options chosen and the country of sale.
- Depending on the machine's options and the date of sale, certain equipment or functions described in this manual may not be present on this machine.
- Descriptions and figures are non-binding.
- MANITOU reserves the right to change its models and their equipment without being required to update this manual.
- The MANITOU network, consisting exclusively of qualified professionals, is available to answer all your questions.
- This manual is an integral part of the machine.
- It is to be kept in its storage location at all times for ease of reference.
- Give this manual to the new owner if the machine is resold.

**1<sup>st</sup> EDITION**

**28/01/2019**

**UPDATED**

|                   |  |
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| <b>26/03/2021</b> | <b>1-6 ; 1-10 ; 1-15 ; 1-25 ; 1-26<br/>2-30<br/>3-7 ; 3-8 ; 3-28 ; 3-29</b>  |
| <b>26/03/2024</b> | <b>1-1 – 1-17 ; 1-26 – 1-33<br/>2-4 – 2-7 ; 2-38 ; 2-50<br/>3-25 – 3-29 ; 3-38<br/>4-7</b>   |
| <b>21/11/2024</b> | <b>2-14 ; 2-18</b>   |
| <b>22/08/2025</b> | <b>0-0<br/>1-1 – 1-34<br/>2-41<br/>3-23 ; 3-29 ; 3-31</b>  |

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*Tel.: +33 (0) 2 40 09 10 11*

*www.manitou.com*

## **1 - OPERATING AND SAFETY INSTRUCTIONS**

## **2 - DESCRIPTION**

## **3 - MAINTENANCE**

## **4 - ATTACHMENTS**





# ***1 - OPERATING AND SAFETY INSTRUCTIONS***

# 1 - OPERATING AND SAFETY INSTRUCTIONS

## **INSTRUCTIONS TO THE COMPANY MANAGER** **1-4**

|  |            |
|--|------------|
| <b>THE SITE</b>  | <b>1-4</b> |
| <b>THE OPERATOR</b>  | <b>1-4</b> |
| <b>THE MACHINE</b>   | <b>1-4</b> |
| A - SUITABILITY OF THE MACHINE FOR THE TASK . . . . .                | 1-4        |
| B - ADAPTING THE MACHINE TO USUAL ENVIRONMENTAL CONDITIONS . . . . . | 1-4        |
| C - MODIFYING THE MACHINE. . . . .                                   | 1-5        |
| D - FRENCH ROAD TRAFFIC RULES. . . . .                               | 1-5        |
| E - MACHINE CAB PROTECTION. . . . .                                  | 1-5        |
| <b>INSTRUCTIONS</b>  | <b>1-6</b> |
| <b>MAINTENANCE</b>   | <b>1-6</b> |

## **INSTRUCTIONS FOR THE OPERATOR** **1-8**

|   |             |
|---|-------------|
| <b>FOREWORD</b>   | <b>1-8</b>  |
| <b>GENERAL INSTRUCTIONS</b>   | <b>1-8</b>  |
| A – OPERATOR'S MANUAL. . . . .                                      | 1-8         |
| B - AUTHORIZATION FOR USE IN FRANCE. . . . .                        | 1-8         |
| C - MAINTENANCE . . . . .   | 1-8         |
| D - TIRES . . . . .   | 1-9         |
| E - MODIFYING THE MACHINE. . . . .                                  | 1-9         |
| F - LIFTING PEOPLE. . . . .   | 1-9         |
| <b>OPERATING INSTRUCTIONS UNLADEN AND LADEN</b>                     | <b>1-10</b> |
| A - BEFORE STARTING UP THE MACHINE . . . . .                        | 1-10        |
| B - AVAILABLE IN THE DRIVER'S CAB. . . . .                          | 1-10        |
| C - ENVIRONMENT . . . . .   | 1-10        |
| D - VISIBILITY . . . . .  | 1-11        |
| E - STARTING THE MACHINE . . . . .                                  | 1-12        |
| F - OPERATING THE MACHINE . . . . .                                 | 1-12        |
| G - STOPPING THE MACHINE. . . . .                                   | 1-14        |
| H - DRIVING THE MACHINE ON THE PUBLIC HIGHWAY. . . . .              | 1-15        |
| <b>INSTRUCTIONS FOR HANDLING A LOAD</b>                             | <b>1-18</b> |
| A - CHOICE OF ATTACHMENTS . . . . .                                 | 1-18        |
| B - WEIGHT OF LOAD AND CENTER OF GRAVITY . . . . .                  | 1-18        |
| C - LONGITUDINAL STABILITY LIMITER AND WARNING DEVICE. . . . .      | 1-18        |
| D - TRANSVERSE ATTITUDE OF THE MACHINE. . . . .                     | 1-19        |
| E - PICKING UP A LOAD ON THE GROUND . . . . .                       | 1-19        |
| F - PICKING UP AND PUTTING DOWN A HIGH LOAD ON TIRES . . . . .      | 1-20        |
| G - PICKING UP AND PUTTING DOWN A HIGH LOAD ON STABILIZERS. . . . . | 1-22        |
| H - PICKING UP AND PUTTING DOWN A SUSPENDED LOAD. . . . .           | 1-24        |
| I - TRAVELING WITH A SUSPENDED LOAD. . . . .                        | 1-24        |
| <b>INSTRUCTIONS FOR USE AS A LOADER</b>                             | <b>1-25</b> |
| A - LOADING . . . . .   | 1-25        |
| B - BACKFILLING. . . . .  | 1-25        |
| <b>INSTRUCTIONS FOR USING THE MOBILE ELEVATING WORK PLATFORM</b>    | <b>1-26</b> |
| A - AUTHORIZATION FOR USE . . . . .                                 | 1-26        |
| B - SUITABILITY OF THE PLATFORM FOR THE JOB . . . . .               | 1-26        |
| C - PROVIDED ON THE PLATFORM . . . . .                              | 1-26        |
| D - USING THE PLATFORM. . . . .                                     | 1-27        |
| E - ENVIRONMENT . . . . .   | 1-28        |
| F - MAINTENANCE . . . . .   | 1-28        |
| <b>INSTRUCTIONS FOR USING THE RADIO-CONTROL</b>                     | <b>1-29</b> |
| HOW TO USE THE RADIO-CONTROL. . . . .                               | 1-29        |
| PROTECTIVE DEVICES. . . . .   | 1-29        |

**MACHINE MAINTENANCE INSTRUCTIONS** **1-30**

---

|                                     |             |
|-------------------------------------|-------------|
| <b>GENERAL INSTRUCTIONS</b>         | <b>1-30</b> |
| <b>PLACING THE JIB SAFETY WEDGE</b> | <b>1-30</b> |
| FITTING THE WEDGE . . . . .         | 1-30        |
| REMOVING THE WEDGE . . . . .        | 1-30        |
| FITTING THE WEDGE . . . . .         | 1-30        |
| REMOVING THE WEDGE . . . . .        | 1-30        |
| <b>MAINTENANCE</b>                  | <b>1-31</b> |
| MAINTENANCE LOGBOOK . . . . .       | 1-31        |
| <b>LUBRICANT AND FUEL LEVELS</b>    | <b>1-31</b> |
| <b>HYDRAULICS</b>                   | <b>1-31</b> |
| <b>ELECTRICITY</b>                  | <b>1-31</b> |
| <b>WELDING ON THE MACHINE</b>       | <b>1-31</b> |
| <b>WASHING THE MACHINE</b>          | <b>1-32</b> |
| <b>TRANSPORTING THE MACHINE</b>     | <b>1-32</b> |

**PROLONGED MACHINE SHUTDOWN** **1-32**

---

|   |             |
|---|-------------|
| <b>INTRODUCTION</b>                     | <b>1-32</b> |
| <b>PREPARATION OF THE MACHINE</b>       | <b>1-32</b> |
| <b>DEF (Diesel Exhaust Fluid) TANK</b>  | <b>1-32</b> |
| <b>PROTECTING THE ENGINE</b>            | <b>1-33</b> |
| <b>MACHINE PROTECTION</b>               | <b>1-33</b> |
| <b>RETURNING THE MACHINE TO SERVICE</b> | <b>1-33</b> |

**DISPOSING OF THE MACHINE** **1-34**

---

|                                 |             |
|---------------------------------|-------------|
| <b>RECYCLING OF MATERIALS</b>   | <b>1-34</b> |
| METALS . . . . .                | 1-34        |
| PLASTICS . . . . .              | 1-34        |
| RUBBER . . . . .                | 1-34        |
| GLASS . . . . .                 | 1-34        |
| <b>ENVIRONMENTAL PROTECTION</b> | <b>1-34</b> |
| WORN OR DAMAGED PARTS . . . . . | 1-34        |
| USED OIL . . . . .              | 1-34        |
| USED BATTERIES . . . . .        | 1-34        |

# INSTRUCTIONS TO THE COMPANY MANAGER

## THE SITE

Proper management of the machine's area of travel will reduce the risk of accidents:

- ground not unnecessarily uneven or obstructed,
- no excessive slopes,
- pedestrian traffic controlled, etc.

## THE OPERATOR

- Only qualified, authorized personnel can use the machine. This authorization is given in writing by the appropriate person in the establishment where the machine is to be used and must be carried permanently by the operator.

### ⚠ IMPORTANT ⚠

*Experience has shown that there are a number of inappropriate ways in which the machine might be operated. Such foreseeable misuse, of which the main examples are listed below, are strictly forbidden.*

*- The foreseeable abnormal behavior resulting from ordinary negligence, but not from any intentional misuse of the equipment.*

*- The reflex reactions of a person in the event of a malfunction, incident, fault, etc. during operation of the machine.*

*- Behavior resulting from application of the "principle of least effort" when performing a task.*

*- For certain machines, the foreseeable behavior of such persons as: apprentices, teenagers, handicapped persons, trainees tempted to drive a machine, operators tempted to operate a machine to win a bet, in competition or for their own personal experience.*

*The person in charge of the equipment must take these criteria into account when assessing whether or not a person will make a suitable driver.*

## THE MACHINE

### A - SUITABILITY OF THE MACHINE FOR THE TASK

- MANITOU has ensured that this machine is suitable for use under the standard operating conditions defined in this operator's manual, with a **STATIC TEST COEFFICIENT OF 1.25** and a **DYNAMIC TEST COEFFICIENT OF 1**, as specified in harmonized standard **EN 1459** for variable reach machines.
- Before commissioning, the facility manager must make sure that the machine is appropriate for the work to be done, and perform certain tests (in accordance with applicable legislation).

### B - ADAPTING THE MACHINE TO USUAL ENVIRONMENTAL CONDITIONS

#### ⚠ IMPORTANT ⚠

*Lubricants are filled in the factory for average climatic use, i.e.: -15°C to 35°C.*

*For operation under more severe climatic conditions, before starting up, drain all circuits then fill using lubricants suitable for the ambient temperatures.*

*The same applies to the coolant.*

#### ⚠ IMPORTANT ⚠

*The machines are designed for outdoor use under normal atmospheric conditions and indoor use in suitably aerated and ventilated premises. It is prohibited to operate the machine in areas which presents a risk of fire or which are potentially explosive (e.g. refineries, fuel or gas depots, stores of flammable products, etc.).*

*Specialized equipment is available when operating in these areas (ask your dealer for information).*

- Our machines are designed to be used within a temperature range of -18 °C to +43 °C.
- In addition to the standard equipment fitted on your machine, many options are available, such as: road lighting, stop lights, rotating beacon light, reverse lights, front worklight, rear worklight, lifting structure worklight, etc. (depending on machine model).
- The operator must take into account the operating conditions to specify the machine's signaling and lighting equipment. Consult your dealer.
- Take into account the climatic and atmospheric conditions of the operation site. Consult your dealer for the suitability of lubricants and frost protection.
- Take into account the fire risk associated with use in dusty and flammable conditions (e.g. straw, flour, sawdust, organic waste, etc.).
- A machine operating in an area without fire extinguishing equipment must be equipped with an individual extinguisher. Solutions exist, consult your dealer.

Our machines comply with Directive 2014/30/EU (2015/208/EU for our type-approved "TRACTOR" machines) concerning electromagnetic compatibility (EMC), (UK : Electromagnetic Compatibility Regulations 2016) and with the corresponding harmonized standard EN 12895. Their correct operation is no longer guaranteed if they are used within areas in which the electromagnetic fields exceed the limit specified by this standard (20 V/m).

- Directive 2002/44/EC requires company managers to not expose their employees to excessive vibration doses. There is no recognized code of measurement for comparing the machines of different manufacturers. The actual doses received cannot therefore be measured under actual operating conditions at the user's premises.
- The following are some tips for minimizing these vibration doses:
  - Select the most suitable machine and attachment for the intended use.
  - Adapt the seat adjustment to the operator's weight (**depending on machine model**) and maintain it in good condition, as well as the cab suspensions. Inflate the tires in accordance with recommendations.
  - The seat is an essential way of reducing the vibrations transmitted to the operator. In the event of seat replacement, please contact MANITOU.
  - Ensure that the operators adapt their operating speed to suit the conditions on site.
  - As far as possible, arrange the site in such a way as to provide a flat running surface and remove obstacles and harmful potholes.

## C - MODIFYING THE MACHINE



**Modifying the structure and settings of the various components of your machine (hydraulic pressure, taring of limiters, engine speed, sensors, addition of extra equipment, addition of counterweights, unapproved and unauthorized attachments, alarm systems, etc.) yourself is strictly prohibited. In this case, the manufacturer cannot be held responsible.**

## D - FRENCH ROAD TRAFFIC RULES

(or see current legislation in other countries)

- Only one EC declaration of conformity is issued. It must be kept in a safe place.
- The road traffic rules for the machines are subject to the provisions of the highway code, according to the following categories:
  - Construction machinery (MT range): public works vehicle not predominantly for use on roads (point 6.9 of Article R.311-1 of the French Highway Code). The machine must have a 25 disc displayed on the rear of the machine and an operating license plate.
  - Non-type-approved "Tractor" machinery for agricultural work: (point 6.2 of Article R.311-1 of the French Highway Code). The machine must be fitted with an operating license plate.
  - Type-approved "Tractor" machinery for agricultural work: Agricultural tractor type T1a (point 5.1.1 of Article R.311-1 of the French Highway Code). The machine must be licensed.

## SPECIAL INSTRUCTIONS APPLICABLE TO TYPE-APPROVED "TRACTOR" MACHINES

- All approved machines are supplied with a "Tractor" certificate of compliance with Regulation 167/2013, to be retained by the owner, and a page of administrative details together with a CNIT number (national type approval code) for registration at the prefecture.
- The owner of the machine is responsible for carrying out the necessary procedures for obtaining the vehicle registration document within the time limit defined by the regulations.
- The operator must hold a category B driver's license, unless granted an exemption.
- The machine must be driven on the public highway in accordance with the instructions given in the manual supplied with the machine (Gross weight, Gross combination weight, towing load, axle loads, maximum speeds, etc. according to the type/version). The operator must be in possession of the machine's registration document.



**When towing a trailer or agricultural equipment, the traveling speed of the machine is limited to 25 km/h.**

**In this case, a "25" disc must be affixed to the rear of the convoy.**

## E - MACHINE CAB PROTECTION

- All machines comply with standard ISO 3471 Roll-over Protective Structures (ROPS)
- All machines comply with standard ISO 3449 Falling-Object Protective Structures (FOPS) (Level I or II) (↔ 2 - DESCRIPTION OF STICKERS AND PLATES)
- The windows used on our machines comply with standard ECE-R43 Operator Protective Structures (OPS).
- Approved "TRACTOR" machines also comply with the regulations:
  - (appendix 1322/2014-OCDE Code 4).
  - (appendix 1322/2014-OCDE Code 10).



**Structural damage or overturning, a modification, changes or a poorly executed repair can reduce the protective efficiency of the cab, canceling its compliance.**

**Do not perform welding or drilling on the cab structure.**

**Consult your dealer to determine the limits of this structure without canceling its compliance.**

## **INSTRUCTIONS**

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- The operator's manual must always be in good condition, in the language of the operator and placed in the storage compartment provided.
- The operator's manual and any plates or stickers which are no longer legible or are damaged, must be replaced immediately.

## **MAINTENANCE**

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**⚠ IMPORTANT ⚠**

*Refer to chapter: MACHINE MAINTENANCE INSTRUCTIONS.*

**⚠ IMPORTANT ⚠**

*Your machine must be periodically inspected to ensure its continued compliance.*

*The frequency of this inspection is defined by the legislation in force in the country in which the machine is used.*

- Maintenance or repairs other than those detailed in Part: 3 - MAINTENANCE must be carried out by qualified personnel (consult your dealer) and in the necessary safety conditions to preserve the health of the operator and any third party.
- Example for France "The manager in charge of the establishment using a machine must open and maintain a maintenance log for each machine (order of March 2, 2004) and undergo a general periodic inspection every 6 months (order of March 1, 2004)".



# INSTRUCTIONS FOR THE OPERATOR

## FOREWORD

### **⚠ IMPORTANT ⚠**

*The risk of accident while using, servicing or repairing this machine can be reduced if you follow the safety instructions and preventive measures detailed in this instruction manual.*

*Failure to respect the safety and operating instructions, or the instructions for repairing or servicing your machine may lead to serious, even fatal accidents.*

### **⚠ IMPORTANT ⚠**

*In order to reduce or prevent any danger with a MANITOU-approved attachment, follow the instructions in paragraph: 4 - ADAPTABLE ATTACHMENTS AVAILABLE ON THE RANGE: INTRODUCTION.*

- Only the operations and maneuvers described in these operator's manual must be performed. The manufacturer cannot predict all possible risky situations. Consequently, the safety instructions given in the operator's manual and on the machine itself are not exhaustive.
- At all times, as an operator, you must envisage, within reason, the possible risk to yourself, to others or to the machine when you use it.
- The operator is responsible for the machine in all circumstances, regardless of whether he is present in the driver's cab.

## GENERAL INSTRUCTIONS

### A – OPERATOR'S MANUAL

#### **⚠ IMPORTANT ⚠**

*Carefully read and understand this operator's manual before operating this machine.*

- The operator's manual must always be in good condition, in the language of the operator and placed in the storage compartment provided.
- Any operations or maneuvers not described in the operator's manual are proscribed.
- Follow the safety advice and the instructions described on the machine's stickers.
- Familiarize yourself with the machine on the ground where it will be operated.
- You must replace the instruction manual, as well as any plates or stickers, if they are no longer legible or are missing or damaged.

### B - AUTHORIZATION FOR USE IN FRANCE

*(or see current legislation in other countries).*

- Only qualified, authorized personnel can use the machine. This authorization is given in writing by the appropriate person in the establishment where the machine is to be used and must be carried permanently by the operator.
- The operator is not empowered to authorize the driving of the machine by another person.

### C - MAINTENANCE

- If the operator sees that the machine is not in good working order or does not comply with the safety instructions, he must inform his manager of this immediately.
- The operator is prohibited from carrying out any repairs or adjustments himself, unless he has been trained for this purpose. He must keep the machine properly cleaned if this is his responsibility.
- The operator must carry out the daily maintenance (↩ 3 - MAINTENANCE) before using the machine in his place of work.
- The operator is responsible for deciding and adjusting the frequency and type of the cleaning needed to prevent the risk of fire ensuing from the build-up of flammable material(s). The operator should pay special attention to all the areas of the machine where these high-risk materials are likely to accumulate (e.g. engine compartment, under the lifting structure, above the axles, inside the chassis, etc.).

## D - TIRES

### ⚠ IMPORTANT ⚠

*Do not use the machine if the wheels are damaged or excessively worn, because this could put your own safety or that of others at risk, or cause damage to the machine.*

- The operator must ensure tires are suitable for the nature of the ground (see contact surface with the ground for the tires in the chapter: 2 - DESCRIPTION: TIRES). Optional solutions are available, please consult your dealer.
  - SAND tires.
  - FARM tires.
  - Snow chains.
- The machine's four tires must be the same brand, the same dimensions, the same structure (radial or diagonal) and the same usage category (normal, snow or special), and must have the same degree of tread wear.
- In the event of tire replacement, use tires authorized by MANITOU that are the same type and dimensions. Using different tires voids the machine's type approval and you may be liable.
- If you are replacing just one of the machine's tires (e.g. because it is damaged), we recommend choosing a tire with the same degree of wear as the remaining tires so as not to damage the transmission's kinematic chain.

### ⚠ IMPORTANT ⚠

*Do not use the machine if the tires are damaged or excessively worn, because this could put your own safety or that of others at risk, or cause damage to the machine itself.*

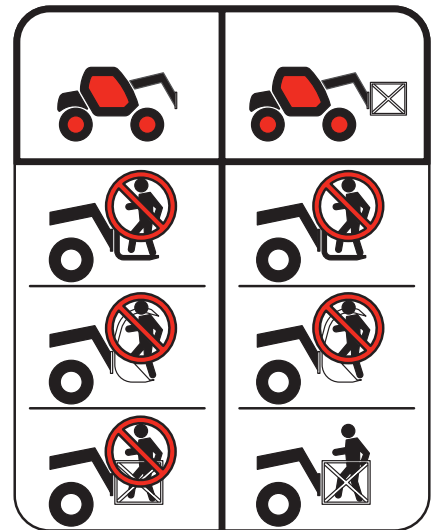
*The fitting of foam inflated tires is prohibited and is not guaranteed by the manufacturer unless with prior authorization.*

## E - MODIFYING THE MACHINE

- ⚠ INSTRUCTIONS TO THE COMPANY MANAGER: ⚠ C - MODIFYING THE MACHINE.

## F - LIFTING PEOPLE

- The use of working equipment and load lifting attachments to lift people is:
  - either forbidden
  - or authorized exceptionally and under certain conditions (⚠ regulations in force in the country in which the machine is used).
- The pictogram posted at the operator station reminds you that:
  - Left-hand column
    - It is forbidden to lift people, with any kind of attachment, using a non PLATFORM-fitted machine.
  - Right-hand column
    - With a PLATFORM-fitted machine, people can only be lifted using platforms designed by MANITOU for this purpose.
- MANITOU sells equipment specifically designed for lifting people (OPTION PLATFORM-fitted machine; contact your dealer).



**A - BEFORE STARTING UP THE MACHINE**

- Perform the daily maintenance operations (< 3 - MAINTENANCE).
- Make sure that the driver's cab is clean, particularly the floor and floor mat. Check that no movable object may hinder the operation of the machine.
- Make sure the lights, turn signals and windshield wipers are working properly.
- Make sure the rear-view mirrors are in good condition, clean and properly adjusted.
- Make sure the horn works.

**B - AVAILABLE IN THE DRIVER'S CAB**

- Whatever his experience, the operator is advised to familiarize himself with the position and operation of all the controls and instruments before operating the machine.
- Wear clothes suitable for driving the machine, avoid loose clothing.
- Make sure you have the appropriate protective equipment for the task to be performed.
- Prolonged exposure to high noise levels may cause hearing problems. It is recommended to wear ear muffs to protect against excessive noise.
- Always face the driver's cab access when getting in and out of the lift truck and use the handle(s) provided for this purpose. Do not jump out of the machine.
- Remain alert at all times when using the machine. Do not listen to the radio or music using headphones or earphones.
- Never operate the lift truck when hands or feet are wet or soiled with greasy substances.
- For increased comfort, adjust the seat to your requirements and adopt the correct position in the driver's cab.



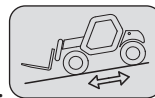
*Under no circumstances must the seat be adjusted while the machine is moving.*

- The operator must always be in his normal position in the driver's cab: Arms and legs, and generally any part of the body, should be kept inside the driver's cab of the machine.
- The safety belt must be worn and adjusted to the operator's size.
- The control units must never be used for any other than their intended purposes (e.g. Climbing onto or down from the machine, coat hanger, etc.).
- If the control components are fitted with a forced operation (lever lock) device, it is forbidden to leave the cab without first putting these controls in neutral.
- It is prohibited to carry passengers either on the machine or in the cab.

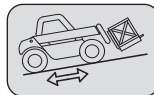
**C - ENVIRONMENT**

- Comply with site safety regulations.
- If you have to use the machine in a dark area or work at night, make sure it is equipped with work lights.
- During handling operations, make sure that no one is in the way of the machine and its load.
- Do not allow anybody to come near the working area of the machine or pass beneath an elevated load.
- The maximum slope on which the machine can be used in relation to the capacity of the brake is 20%.
- When using the lift truck on a transverse slope, before lifting the lifting structures, observe the instructions given in the paragraph: INSTRUCTIONS FOR HANDLING A LOAD: D - TRANSVERSE ATTITUDE OF THE MACHINE.
- Traveling on a longitudinal slope:
  - Drive and brake gently.

- Moving without load: Forks or attachment facing downhill.



- Moving with load: Forks or attachment facing uphill.



- Take into account the machine's dimensions and its load before trying to negotiate a narrow or low passageway.
- Never move onto a load bridge without having first checked:
  - That it is suitably positioned and made fast.
  - That the unit to which it is connected (wagon, truck, etc.) will not shift.
  - That this bridge is prescribed for the total weight of the machine, laden or unladen.
  - That this bridge is prescribed for the size of the machine.

- Never move onto a foot bridge, floor or freight lift, without being certain that they are suitable for the weight and size of the machine, laden or otherwise, and without having checked that they are in sound working order.
- Be careful in the area of loading bays, trenches, scaffolding, soft ground and manholes.
- Make sure the ground is stable and firm under the wheels and/or stabilizers before lifting or removing the load. If necessary, add appropriate wedging under the stabilizers.
- Make sure that the scaffolding, loading platform, pilings or ground is capable of bearing the load.
- Never stack loads on uneven ground, they may tip over.

**⚠ IMPORTANT ⚠**

*If the load or the attachment must remain above a structure for a prolonged period of time, there is the risk that it will bear on the structure as the lifting structure descends due to cooling of the oil in the cylinders.*

*To eliminate this risk:*

*- Regularly check the distance between the load or the attachment and the structure and readjust this if necessary.*

*- If possible use the machine at an oil temperature as close as possible to ambient temperature.*

- In the case of work near to overhead lines, ensure that the safety distance is sufficient between the machine's working area and the overhead line.

**⚠ IMPORTANT ⚠**

*Do not operate this machine during thunderstorms, snowstorms, periods of frost, or in hazardous weather conditions.*

**⚠ IMPORTANT ⚠**

*You must consult your local electrical supplier.*

*You could be electrocuted or seriously injured if you operate or park the machine too close to power lines.*

*In the event of high winds, do not carry out handling work that jeopardizes the stability of the machine and its load, particularly if the load catches the wind badly.*

- Prevent the fire risk associated with use in dusty and flammable conditions (e.g. straw, flour, sawdust, organic waste, etc.).

## **D - VISIBILITY**

- The safety of people within the machine's working area, as well as that of the machine itself and the operator, are dependent on good operator visibility of the machine's immediate surroundings in all situations and at all times.
- This machine has been designed to allow good operator visibility (direct or indirect by means of rear-view mirrors) of the immediate surroundings of the machine while driving with no load and with the boom in the transport position.
- Special precautions must be taken if the size of the load restricts visibility towards the front:
  - moving in reverse,
  - site layout,
  - assisted by a person directing the operation (while standing outside the machine's area of travel), making sure to keep this person clearly in view at all times,
  - in any case, avoid reversing over long distances.
- Certain special accessories may require the machine to travel with the boom in the raised position. In such cases, visibility on the right hand side is restricted, and special precautions must be taken:
  - site layout,
  - assisted by a person directing the operation (while standing outside the machine's area of travel).
  - replacement of a suspended load by a load on a pallet.
- If visibility of your road is inadequate, ask someone to assist by directing the operation (while standing outside the machine's area of travel), making sure to keep this person clearly in view at all times.
- Keep all components affecting visibility in a clean, properly adjusted state and in good working order (e.g. windshields, windows, windshield wipers, windshield washers, driving lights and worklights, rear-view mirrors).

## E - STARTING THE MACHINE

### SAFETY INSTRUCTIONS

#### **⚠ IMPORTANT ⚠**

*The machine must only be started up or maneuvered when the operator is sitting in the driver's cab with seat belt fastened and adjusted.*

- Never try to start the machine by pushing or towing it. Such an operation may cause severe damage to the transmission. If necessary, towing requires the transmission to be put in neutral (↩ 3 - MAINTENANCE).
- If using an emergency battery for start-up, use a battery with the same characteristics and respect battery polarity when connecting it. Connect at first the positive terminals before the negative terminals.

#### **⚠ IMPORTANT ⚠**

*Failure to respect polarity between batteries can cause serious damage to the electrical circuit.*

*The electrolyte in the battery may produce an explosive gas. Avoid flames and generation of sparks close to the batteries.*

*Never disconnect a battery while it is in charge.*

### INSTRUCTIONS

- Check the closing and locking of the hood(s).
- Check that the cab door is closed.
- Firmly press and hold down the brake pedal.
- Turn the ignition key to position (I) to switch on the machine and the engine preheat system.
- Check that the forward/reverse selector is in neutral, and that the manual parking brake is on.
- Check the fuel level on the dashboard gauge.
- Check the DEF (diesel exhaust fluid) level on the dashboard gauge. (depending on machine model)
- Turn the ignition key to position (III) for no longer than 15 seconds. The engine should then start. Release the ignition key and let the engine run at idling speed.
- Preheat the engine between each start attempt.
- Make sure all the signal lights on the control instrument panel are off.
- Check the longitudinal stability limiter and warning device (↩ 3 - MAINTENANCE).
- Do not use a machine that is non-compliant.
- Check all control instruments when the engine is warm and at regular intervals during use, so as to quickly detect any faults and to be able to correct them without any delay.
- If an instrument does not show the correct display, stop the engine and immediately carry out the necessary operations.

## F - OPERATING THE MACHINE

### SAFETY INSTRUCTIONS

#### **⚠ IMPORTANT ⚠**

*We would like to draw the operators' attention to the risks involved in using the machine, in particular:*

*- Risk of losing control.*

*- Risk of loss of lateral and frontal stability of the machine.*

*The operator must remain in control of the machine.*

*In the event of the machine overturning, do not try to leave the cab during the incident.*

**YOUR BEST PROTECTION IS TO STAY FASTENED IN THE CAB.**

- Observe the company's traffic regulations or, by default, the public highway code.
- Do not carry out operations which exceed the capacities of your machine or attachment.
- Always drive the machine with the forks or attachment in the transport position, i.e., 300 mm from the ground, the boom retracted and the forks carriage sloping backwards.
- Only carry loads which are balanced and properly anchored to avoid any risk of a load falling off.
- Ensure that pallets, cases, etc. are in good order and suitable for the load to be lifted.
- Familiarize yourself with the machine on the terrain where it will be used.
- Ensure that the brakes are working properly.
- The loaded machine must not travel at speeds in excess of 12 km/h.
- Drive smoothly at an appropriate speed for the operating conditions (land configuration, load on the machine).
- Do not use the hydraulic boom controls when the machine is moving.
- Never change the steering mode whilst driving.
- Ensure that visibility is adequate.
- Do not maneuver the machine with the boom in the raised position unless under exceptional circumstances and then with extreme caution, at very low speed and using gentle braking.
- Take bends slowly.

- In all circumstances make sure you are in control of your speed.
- On damp, slippery or uneven terrain, drive slowly.
- Brake gently, never abruptly.
- Only use the machine's forward/reverse selector from a stationary position and never do so abruptly.
- Do not drive with your foot on the brake pedal.
- Always remember that hydrostatic type steering is extremely sensitive to movement of the steering wheel, so turn it gently and not jerkily.
- Never leave the engine on when the lift truck is unattended.
- Do not leave the cab when the machine has a raised load.
- Look where you are going and always make sure you have good visibility along the route.
- Use the rear-view mirrors frequently.
- Drive around obstacles.
- Never drive on the edge of a ditch or steep slope.
- It is dangerous to use two machines simultaneously to handle heavy or bulky loads, since this operation requires particular precautions to be taken. It must only be used exceptionally and after risk analysis.
- The ignition switch has an emergency stop mechanism in case of an operating anomaly occurring in the case of machines not fitted with a punch-operated cut-out.

## INSTRUCTIONS

- Always drive the machine with the forks or attachment in the transport position, i.e., 300 mm from the ground, the telescopic arm retracted and the forks carriage sloping backward.
- For machines with gearboxes, use the recommended gear (↩ 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS).
- Select the steering mode appropriate for the use and/or working conditions (↩ 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS) (depending on machine model).
- Deactivate the parking brake.
- Shift the forward/reverse selector to the selected direction of travel and accelerate gradually until the machine moves off.

### **⚠ IMPORTANT ⚠**

***Starting and moving the machine on a slope may be a real hazard.***

***If the machine is parked or stopped, adhere scrupulously to the following instructions for moving it:***

***- Press the brake pedal.***

***- Release the parking brake.***

***- Engage the appropriate gear. (depending on machine model)***

***- Select forward or reverse direction.***

***- Ensure that there is no one or anything impeding the movement of the machine.***

***- Release the brake pedal and accelerate the engine.***

***The use of the machine loaded or with a trailer increases the risk. In this case, remain extremely vigilant.***

***Each braking system operates independently.***

***In an emergency, use the brake pedal and/or the manual parking brake to immobilize the machine.***

***With the engine off, release the manual parking brake only after restarting the engine and making sure that the brake pedal is functional.***

## **G - STOPPING THE MACHINE**

### **SAFETY INSTRUCTIONS**

- Never leave the ignition key in the machine during the operator's absence.
- When the machine is stationary, or if the operator has to leave his cab (even for a moment), place the forks or attachment on the ground, apply the parking brake and place the forward/reverse selector in neutral.
- Make sure that the machine is not stopped in any position that will interfere with the traffic flow and at less than one meter from the track of a railway.
- In the event of prolonged parking on a site, protect the machine from bad weather, particularly from frost (check the level of antifreeze), and close and lock all the machine accesses (doors, windows, cowls, etc.).

### **INSTRUCTIONS**

- Park the machine on level ground.
- When parking on slopes of less than 15%, position the machine perpendicular to the slope.
- The slope must not exceed 15%.
- Press and hold the brake pedal.
- Set the forward/reverse selector to neutral.
- Activate the parking brake.
- Release the brake pedal.
- The machine must be stationary before leaving the driver's cab.
- Fully retract the telescopic arm.
- Lower the forks or attachment to rest on the ground.
- When using an attachment with a grab or jaws, or a bucket with hydraulic opening, close the attachment fully.
- Before stopping the machine after intensive work, leave the engine idling for a few moments to allow the coolant and oil to lower the temperature of the engine and transmission. Do not forget this precaution, in the event of frequent stops or warm stalling of the engine, or else the temperature of certain parts will rise significantly due to the stopping of the cooling system, with the risk of badly damaging such parts.
- Stop the engine with the ignition switch and remove the key.
- Lock all the openings to the machine (doors, windows, cowls, etc.).
- Turn the battery cut-off to the "OFF" position in accordance with the recommendations (↩ 2 - DESCRIPTION).

## H - DRIVING THE MACHINE ON THE PUBLIC HIGHWAY

(or see current legislation in other countries)

### FRENCH ROAD TRAFFIC RULES

- The driving of non-type-approved "Tractor" machines on the public highway is subject to the provisions of the French Highway Code relating to special machines, defined in Article R.311-1 of the French Highway Code, in category B of the Equipment Order of November 20, 1969, which determines the procedures applicable to special machines. The machine must be fitted with an operating license plate.
- The driving of type-approved "Tractor" machines on the public highway is subject to the provisions of the French Highway Code relating to agricultural tractors, defined in Article R.311-1 of the French Highway Code. The machine must be licensed.
- The machine must be driven on the public highway in accordance with the instructions given in the manual supplied with the machine (Gross weight, Gross combination weight, towing load, axle loads, maximum speeds, etc. according to the type/version). The operator must be in possession of the machine's registration document.
- The operator must hold an HGV license, unless granted an exemption.
- When towing a trailer or agricultural equipment, the travel speed of the machine is limited to 25 km/h. In this case, a "25" disc must be affixed to the rear of the convoy.

### GERMAN ROAD TRAFFIC RULES

#### **⚠ IMPORTANT ⚠**

*For machines with the "Allgemeine Betriebserlaubnis" (general operating permit or ABE, in accordance with Article 20 of the StVZO "Straßenverkehrs-Zulassungsordnung"), follow the instructions below:*

- Disconnect the reversing sound alarm before using a machine with a general operating permit (ABE) on the public highway.

#### **⚠ IMPORTANT ⚠**

*Always reconnect the sound alarm before handling on private roads.*

- Before you use the machine for handling operations on private roads:
  - Make sure that the machine's reversing sound alarm is connected and working properly.
  - Perform a functional test by putting the machine into reverse gear.
  - The audible alarm sounds.
  - Do not use the machine if the audible alarm is not working. Check the audible alarm's connection and repeat the test. Consult your dealer if the problem persists.

### SAFETY INSTRUCTIONS

- Operators driving on the public highway must comply with current highway code legislation.
- The machine must comply with current road legislation. If necessary, there are optional solutions. Contact your dealer.

### INSTRUCTIONS

- Make sure the revolving light is in place, switch it on and verify its operation.
- Make sure the lights, turn signals and windshield wipers are working properly.
- Check the cleanliness of the machine's mudguards.
- Check the general cleanliness of the machine before driving on public roads.
- Switch off the worklights if the machine is fitted with them.
- Select the steering mode "HIGHWAY TRAFFIC" (↩ 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS) (depending on machine model).
- Fully retract the telescopic arm and set the attachment approximately 300 mm off the ground.
- Put the frame leveling in the central position, i.e., the transverse axis of the axles parallel to the frame (depending on the machine model).
- Fully raise the stabilizers and turn the shoes inwards (depending on the machine model).

#### **⚠ IMPORTANT ⚠**

*Never coast in neutral (forward/reverse selector or gear lever in neutral or transmission cut-off button pressed) to preserve the machine's engine brake.*

*Failure to observe this instruction on a slope will lead to excessive speed, which may make the machine uncontrollable (steering, brakes) and cause serious mechanical damage.*

#### DRIVING THE MACHINE WITH A FRONT-MOUNTED ATTACHMENT

- You must comply with current regulations in your country, covering the possibility of driving on the public highway with a front-mounted attachment on your machine.
- If road legislation in your country authorizes circulation with a front-mounted attachment, you must at least:
  - Protect and report any sharp and/or dangerous edges on the attachment (↖ 4 - ADAPTABLE ATTACHMENTS AVAILABLE ON THE RANGE).
  - The attachment must not be loaded.
  - Make sure that the attachment does not mask the lighting range of the forward lights.
  - Make sure that current legislation in your country does not require other obligations.

#### OPERATING THE MACHINE WITH A TRAILER

- For using a trailer, observe the regulations in force in your country (maximum travel speed, braking, maximum weight of trailer, etc.).
- Do not forget to connect the trailer's electrical equipment to that of the machine.
- The trailer's braking system must comply with current legislation.
- If pulling a trailer with assisted braking, the tractor machine must be equipped with a trailer braking mechanism. In this case, do not forget to connect the trailer braking equipment to that of the machine.
- The vertical force on the towing hook must not exceed the maximum authorized by the manufacturer (consult the manufacturer's plate on your machine).
- The authorized gross vehicle weight must not exceed the maximum weight authorized by the manufacturer (↖ 2 - DESCRIPTION: SPECIFICATIONS).

**IF NECESSARY, CONSULT YOUR DEALER.**



## INSTRUCTIONS FOR HANDLING A LOAD

### A - CHOICE OF ATTACHMENTS

- Only attachments approved and authorized by MANITOU can be used on its machines.
- Make sure the attachment is suitable for the work to be done (◀ 4 - ADAPTABLE ATTACHMENTS AS OPTIONS ON THE RANGE).
- If the machine is equipped with the single sideshift attachment OPTION (TSDL), use only the authorized attachments (◀ 4 - ADAPTABLE ATTACHMENTS AS OPTIONS ON THE RANGE).
- Make sure the attachment is correctly installed and locked onto the machine carriage.
- Make sure that your machine attachments are working properly.
- Comply with the load chart limits for the machine for the attachment used.
- Do not exceed the rated capacity of the attachment.
- Never lift a slung load without the attachment provided for the purpose, as there is a risk of the sling slipping (◀ INSTRUCTIONS FOR HANDLING A LOAD: H - PICKING UP AND PUTTING DOWN A SUSPENDED LOAD).
- Do not handle loads suspended by straps directly on the forks (e.g.:big bags), as there is a risk of shearing on sharp edges. Use an attachment designed for this purpose.

### B - WEIGHT OF LOAD AND CENTER OF GRAVITY

- Before picking up a load, you must know its weight and its center of gravity.
- The longitudinal position of the center of gravity in relation to the heel of the forks (Fig. B1) is defined on the load chart for your machine (◀ 2 - DESCRIPTION: DIMENSIONS AND LOAD CHARTS). For loads with center of gravity exceeding this distance, contact your dealer.
- For irregular loads, determine the transverse center of gravity before any handling (fig. B2) and set it in the longitudinal axis of the machine.

#### ⚠ IMPORTANT ⚠

*It is forbidden to handle a load heavier than the effective capacity defined on the machine load chart.*

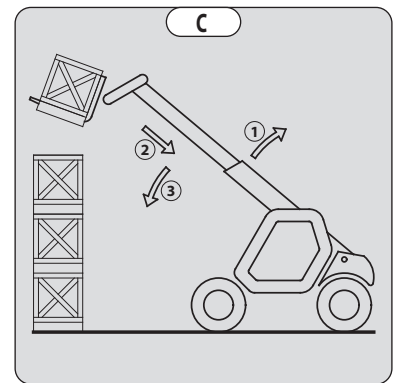
*For loads with a moving center of gravity (e.g. liquids), take account of the variations in the center of gravity in order to determine the load to be handled and be extra vigilant and careful to limit these variations as far as possible.*



### C - LONGITUDINAL STABILITY LIMITER AND WARNING DEVICE

This device gives an indication of the longitudinal stability of the machine, and limits hydraulic movements in order to ensure this stability, at least under the following operating conditions:

- when the machine is at a standstill,
  - when the machine is on firm, stable and consolidated ground,
  - when the machine is performing handling and placing operations.
- Move the boom very carefully when approaching the authorized load limit (◀ 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS).
  - Always watch this device during handling operations.
  - If the "AGGRAVATING" hydraulic movements are cut off, perform only de-aggravating hydraulic movements in the following order (Fig. C): if necessary, raise the boom (1), retract the boom as far as possible (2) and lower the boom (3) to put down the load.



#### ⚠ IMPORTANT ⚠

*The instrument reading may be erroneous when the steering is at full lock or the rear axle is oscillated to its maximum extent.*

*Before lifting a load, ensure that the machine is not in any of these situations.*

## D - TRANSVERSE ATTITUDE OF THE MACHINE

Depending on machine model

The transverse attitude is the transverse slope of the frame with respect to the horizontal. Raising the boom reduces the machine's lateral stability. The machine's transverse attitude must be set with the boom in the down position as follows:

### 1 - MACHINE WITHOUT FRAME LEVELING USED ON TIRES

- Position the machine so that the bubble in the level is between the two lines (↔ 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS).

### 2 - MACHINE WITH FRAME LEVELING USED ON TIRES

- Correct the tilt using the hydraulic control and check the horizontality with the spirit level. The bubble of the level must be between the two lines (↔ 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS).

### 3 - MACHINE USED ON STABILIZERS

- Set the two stabilizers on the ground and raise the two front wheels of the machine (fig. D1).
- Correct the tilt using the stabilizers (Fig. D2) and check the horizontality with the spirit level. The bubble of the level must be between the two lines (↔ 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS). In this position, the two front wheels must be off the ground.

## E - PICKING UP A LOAD ON THE GROUND

- Approach the machine perpendicular to the load, with the boom retracted and the forks in a horizontal position (fig. E1).
- Adjust the fork spacing and centering relative to the load to ensure stability (Fig. E2) (optional solutions exist, consult your dealer).
- Never lift a load with a single fork.

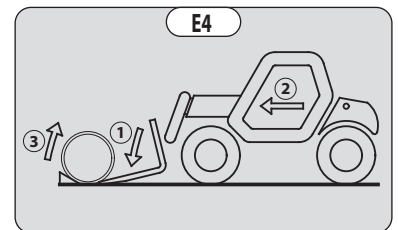
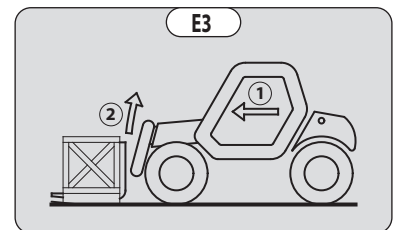
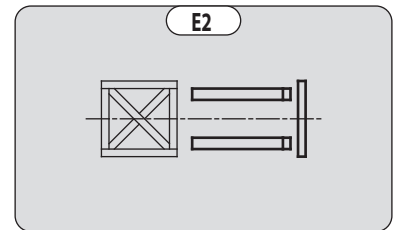
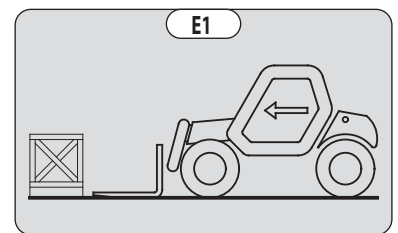
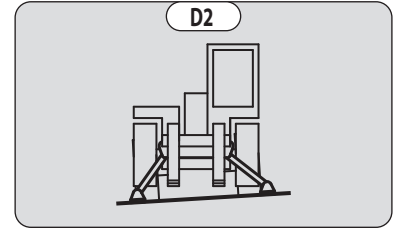
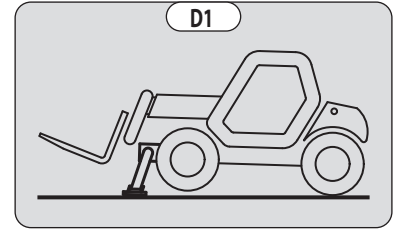
### ⚠ IMPORTANT ⚠

*Beware of the risks of trapping or squashing limbs when manually adjusting the forks.*

- Move the machine forward slowly (1) and bring the forks up to the stop in front of the load (Fig. E3). If necessary, slightly lift the boom (2) while picking up the load.
- Bring the load into the transport position.
- Tilt the load far enough backward to ensure stability (loss of load on braking or going downhill).

### FOR A NON-PALLETIZED LOAD

- Tilt the carriage (1) forwards and move the machine slowly forwards (2), to insert the fork under the load (Fig. E4) (chock the load if necessary).
- Continue to move the machine (2) forward, tilting the carriage (3) (fig. E4) backward to position the load on the forks and check the load's longitudinal and lateral stability.



## F - PICKING UP AND PUTTING DOWN A HIGH LOAD ON TIRES

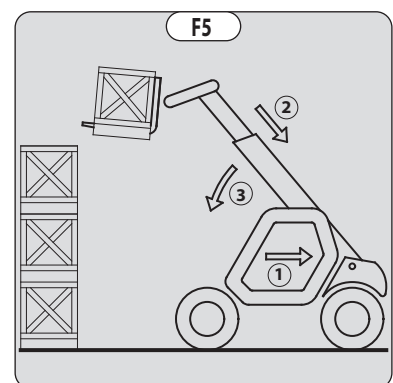
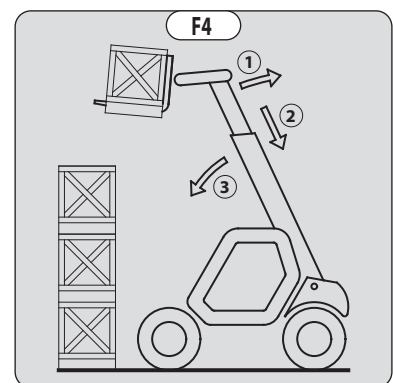
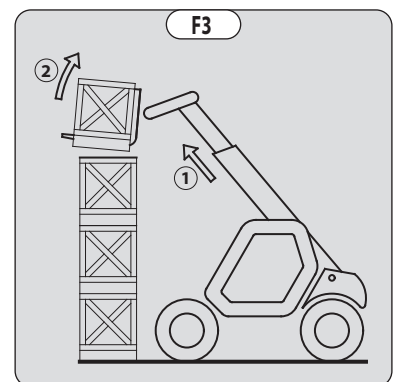
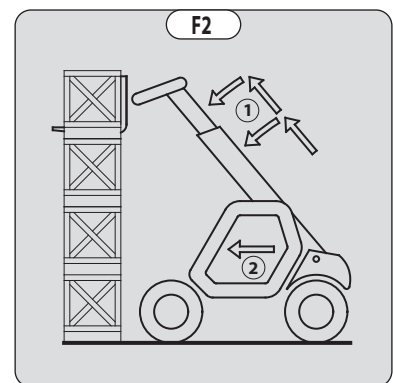
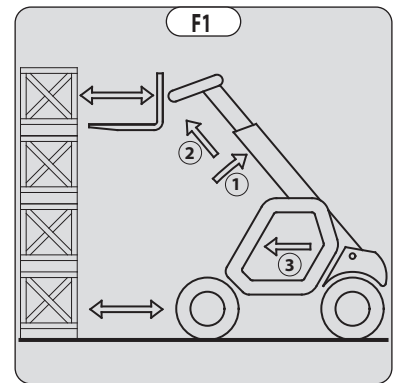
### ⚠ IMPORTANT ⚠

*You must not raise the boom if you have not checked the transverse attitude of the machine (← INSTRUCTIONS FOR HANDLING A LOAD D - TRANSVERSE ATTITUDE OF THE MACHINE).*

REMINDER: Make sure that the following operations can be performed with good visibility (← OPERATING INSTRUCTIONS UNLADEN AND LADEN: D - VISIBILITY).

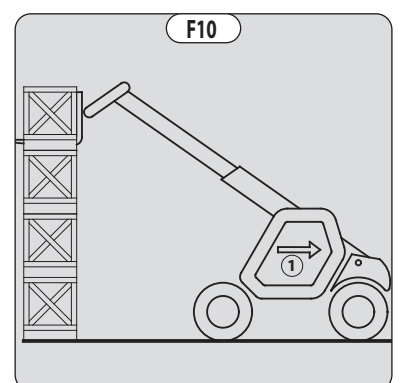
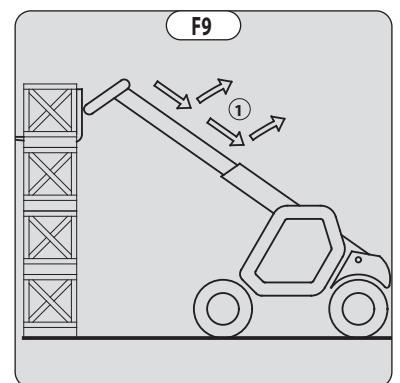
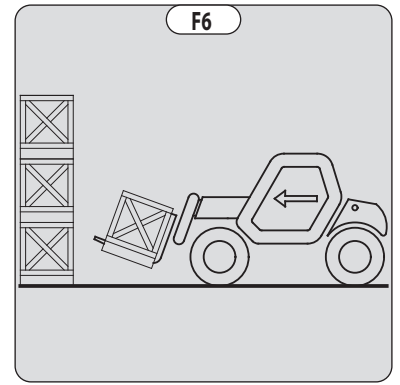
### PICKING UP A HIGH LOAD ON TIRES

- Ensure that the forks will easily pass under the load.
- Raise and extend the boom (1) (2) until the forks are at the level of the load. If necessary, move the machine (3) forward (fig. F1), driving very slowly and carefully.
- Always remember to keep the distance necessary for inserting the forks under the load, between the stack and the machine (fig. F1) and use the shortest possible length of boom.
- Insert the forks under the load as far as they will go by alternately extending and lowering the boom (1) or, if necessary, moving the machine forward (2) (fig. F2). Activate the parking brake and place the forward/reverse selector in neutral.
- Lift the load slightly (1) and tilt the carriage (2) backwards to stabilize the load (Fig. F3).
- Tilt the load sufficiently backward to ensure its stability.
- Monitor the longitudinal stability limiter and warning device (← INSTRUCTIONS FOR HANDLING A LOAD: C - LONGITUDINAL STABILITY LIMITER AND WARNING DEVICE). If it is overloaded, set the load back down in the place from which it was picked up.
- If possible, lower the load without moving the machine. Raise the boom (1) to release the load, retract (2) and lower the jib (3) to set the load into transport position (fig. F4).
- If this is not possible, reverse the machine (1), maneuvering very gently and carefully to release the load. Retract (2) and lower the boom (3) to bring the load into the transport position (fig. F5).



## PUTTING DOWN A HIGH LOAD ON TIRES

- Approach the load in the transport position in front of the stack (Fig. F6).
- Activate the parking brake and place the forward/reverse selector in neutral.
- Raise and extend the boom (1) (2) until the load is above the stack, while monitoring the longitudinal stability limiter and warning device (☞ INSTRUCTIONS FOR HANDLING A LOAD: C - LONGITUDINAL STABILITY LIMITER AND WARNING DEVICE). If necessary, move the machine (3) forward (fig. F7), driving very slowly and carefully.
- Place the load in a horizontal position and put it down on the pile by lowering and retracting the boom (1) (2) in order to position the load correctly (Fig. F8).
- If possible, release the forks by alternately retracting and raising the boom (1) (Fig. F9). Then set the forks into transport position.
- If this is not possible, reverse the machine (1), maneuvering very slowly and carefully to release the forks (fig. F10). Then set the forks into transport position.



## G - PICKING UP AND PUTTING DOWN A HIGH LOAD ON STABILIZERS

Depending on machine model

### ⚠ IMPORTANT ⚠

*You must not raise the boom if you have not checked the transverse attitude of the machine (← INSTRUCTIONS FOR HANDLING A LOAD D - TRANSVERSE ATTITUDE OF THE MACHINE).*

REMINDER: Make sure that the following operations can be performed with good visibility (← OPERATING INSTRUCTIONS UNLADEN AND LADEN: D - VISIBILITY).

The stabilizers are used to optimize the machine's lifting performance (← 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS).

POSITIONING THE STABILIZERS WITH THE FORKS IN TRANSPORT POSITION (UNLADEN AND LADEN)

- Set the forks in transport position in front of the elevation.
- Stay far enough away to allow the boom to be raised.
- Activate the parking brake and place the forward/reverse selector in neutral.
- Set the two stabilizers on the ground and lift the two front wheels of the machine (fig. G1), while maintaining its transverse stability.

RAISING THE STABILIZERS WITH THE FORKS IN TRANSPORT POSITION (UNLADEN AND LADEN)

- Raise both stabilizers fully and at the same time.

LOWERING THE STABILIZERS WITH JIB UP (UNLADEN AND LADEN)

### ⚠ IMPORTANT ⚠

*This operation must be exceptional and performed with great care.*

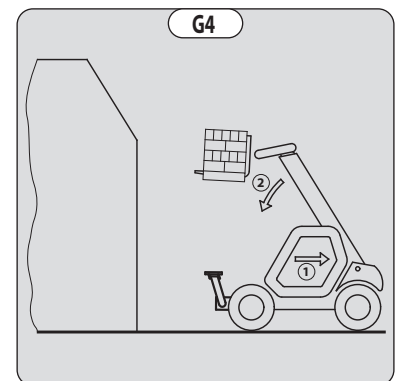
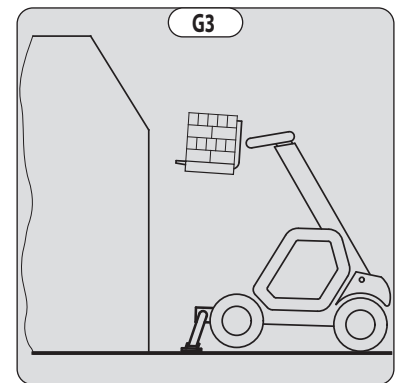
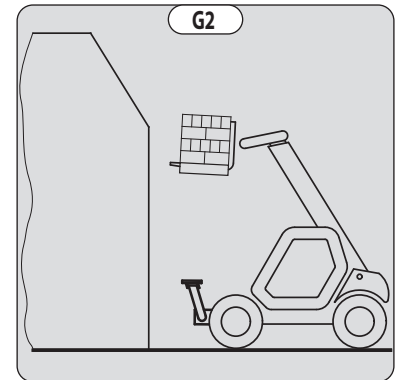
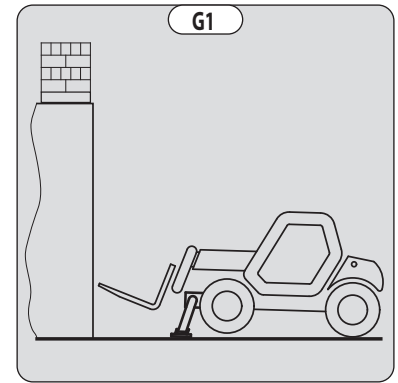
- Raise the boom and retract the telescopes completely.
- Set the machine in position in front of the elevation (fig. G2), moving very slowly and carefully.
- Activate the parking brake and place the forward/reverse selector in neutral.
- Move the stabilizers very slowly and gradually as soon as they are close to the ground or in contact with it.
- Lower the two stabilizers and lift the two front wheels of the machine (fig. G3). During this operation, transverse attitude must be permanently maintained: the bubble in the level must be kept between the two lines.

SETTING THE STABILIZERS WITH THE BOOM UP (UNLADEN AND LADEN)

### ⚠ IMPORTANT ⚠

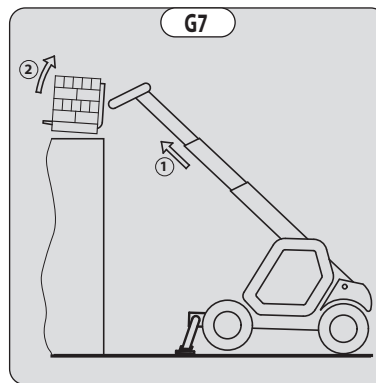
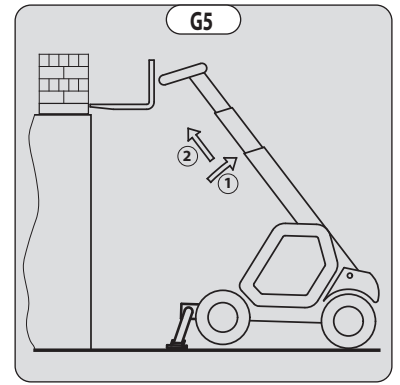
*This operation must be exceptional and performed with great care.*

- Keep the boom raised and retract the telescopes completely (Fig. G3).
- Move the stabilizers very slowly and gradually as soon as they are in contact with the ground and when they leave the ground. During this operation, transverse attitude must be permanently maintained: the bubble in the level must be kept between the two lines.
- Raise both stabilizers completely.
- Deactivate the parking brake and reverse the machine (1) very slowly and carefully to release it and lower the forks (2) into transport position (fig. G4).



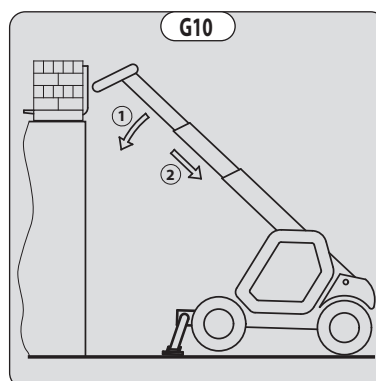
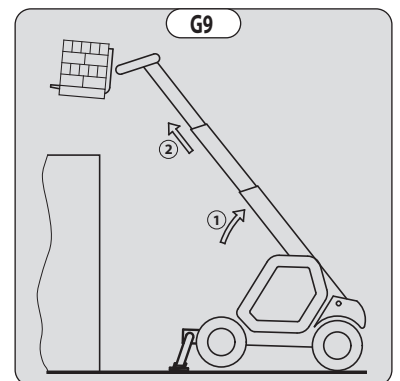
## PICKING UP A HIGH LOAD ON STABILIZERS

- Ensure that the forks will easily pass under the load.
- Check the position of the machine with respect to the load and make a test run, if necessary, without picking up the load.
- Raise and extend the boom (1) (2) until the forks are at the level of the load (Fig. G5).
- Bring the forks to the stop in front of the load by alternately extending and lowering the boom (1) (Fig. G6).
- Lift the load slightly (1) and tilt the carriage (2) backwards to stabilize the load (Fig. G7).
- Monitor the longitudinal stability limiter and warning device (← INSTRUCTIONS FOR HANDLING A LOAD: C - LONGITUDINAL STABILITY LIMITER AND WARNING DEVICE). If it is overloaded, set the load back down in the place from which it was picked up.
- If possible, lower the load without moving the machine. Raise the boom (1) to release the load, retract (2) and lower the jib (3) to set the load into transport position (fig. G8).



## SETTING DOWN A HIGH LOAD ON STABILIZERS

- Raise and extend the boom (1) (2) until the load is above the elevation (Fig. G9), while monitoring the longitudinal stability limiter and warning device (← INSTRUCTIONS FOR HANDLING A LOAD: C - LONGITUDINAL STABILITY LIMITER AND WARNING DEVICE).
- Position the load horizontally and release it by lowering and retracting the boom (1) (2) to position the load correctly (Fig. G10).
- Free the forks by alternately retracting and raising the boom (3) (Fig. G11).
- If possible, set the boom in transport position without moving the machine.



## H - PICKING UP AND PUTTING DOWN A SUSPENDED LOAD

### **IMPORTANT**

*Failure to follow the above instructions may lead the machine to lose stability and overturn.*

*MUST be used with a machine equipped with an operational hydraulic movement cut-off device.*



#### CONDITIONS OF USE

- The length of the sling or the chain shall be as short as possible to limit swinging of the load.
- Lift the load vertically along its axis, never by pulling sideways or lengthways.

#### HANDLING WITHOUT MOVING THE MACHINE

- Whether on stabilizers or on tires, the lateral attitude must not exceed 1% and the longitudinal attitude must not exceed 5%: the bubble of the level must be held at "0".
- Ensure that the wind speed is not higher than 10 m/s.
- Ensure that there is no one between the load and the machine.

#### I - TRAVELING WITH A SUSPENDED LOAD

- Before moving, inspect the terrain in order to avoid excessive slopes and cross-falls, bumps and potholes, or soft ground.
- Ensure that the wind speed is not higher than 36 km/h.
- The machine must not travel at more than 0.4 m/s (1.4 km/h, i.e. one quarter walking speed).
- Drive and stop the machine gently and smoothly to minimize swinging of the load.
- Carry the load a few centimeters above the ground (max. 30 cm) the shortest possible jib length. Do not exceed the offset indicated on the load chart. If the load begins to swing excessively, do not hesitate to stop and lower the jib to set down the load.
- Before moving the machine, check the longitudinal stability limiter and warning device ( 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS), only the green LEDs and possible the yellow LEDs should be lit
- During transport, the lift truck operator must be assisted by a person on the ground (standing a minimum of 3 m from the load), who will limit swinging of the load using a bar or a rope. Ensure that this person is always clearly in view.
- The lateral attitude must not exceed 5%: the bubble in the level must be kept between the two "MAX" marks.
- The longitudinal attitude must not exceed 15% with the load facing uphill and 10% with the load facing downhill.
- The boom angle must not exceed 45°.
- If the first red LED of the longitudinal stability limiter and warning device ( 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS) comes on while traveling, gently bring the machine to a halt and stabilize the load. Retract the telescope to reduce the offset of the load.

## INSTRUCTIONS FOR USE AS A LOADER

For agricultural-type machines (MLT range)

### A - LOADING

#### ⚠ IMPORTANT ⚠

*You must not raise the boom if you have not checked the transverse attitude of the machine (← INSTRUCTIONS FOR HANDLING A LOAD D - TRANSVERSE ATTITUDE OF THE MACHINE).*

REMINDER: Make sure that the following operations can be performed with good visibility (← OPERATING INSTRUCTIONS UNLADEN AND LADEN: D - VISIBILITY).

#### FILLING THE BUCKET

- Place the bottom of the bucket in a horizontal position, just in contact with the ground (1) (Fig. A1).
- Move forward gradually (2) while simultaneously raising the boom and tilting the bucket backwards (3), for improved filling and breakout (Fig. A1).
- Reverse the machine (1) very carefully and gently to free the bucket. Lower the boom (2) into the transport position (Fig. A2).

#### ⚠ IMPORTANT ⚠

*Tilt the bucket sufficiently back to avoid spilling product and ensure its stability (loss of product under braking).*

#### LOADING A TRAILER

- Approach the side of the trailer in the transport position (Fig. A3).
- Raise and extend the boom (1) (2) until the bucket is above the trailer, while monitoring the longitudinal stability limiter and warning device (← INSTRUCTIONS FOR HANDLING A LOAD: C - LONGITUDINAL STABILITY LIMITER AND WARNING DEVICE) (Fig. A4).
- Drive the machine forward (3) very carefully and gently so that the bucket empties its load in the center of the trailer (Fig. A4).
- Immobilize the machine with the brake pedal and put the reversing shift lever in neutral.

N.B.: Immobilizing the machine with the brake pedal means that the transmission should be in neutral. Failure to follow this recommendation may lead to overheating and damage to the brakes.

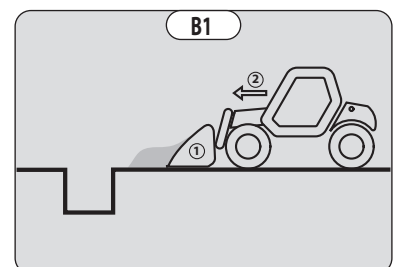
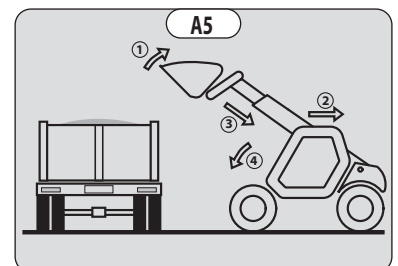
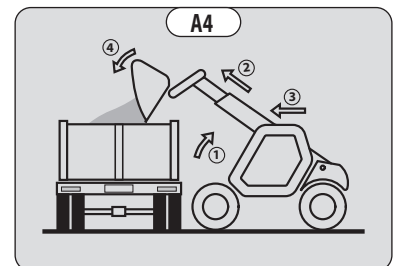
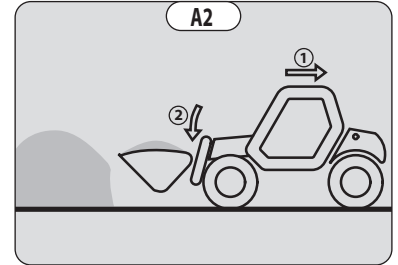
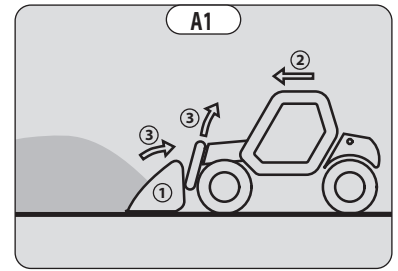
- Slowly discharge the product (4) (Fig. A4).
- Tilt the bucket backwards (1) and reverse the machine (2) very carefully and gently (Fig. A5).
- Retract (3) and lower the boom (4) into the transport position (Fig. A5).

### B - BACKFILLING

- Place the bottom of the bucket in a horizontal position, just in contact with the ground (1) (Fig. B1).
- Drive forward gradually (2). Once filled, the bucket will act as a leveling blade (Fig. B1).

#### ⚠ IMPORTANT ⚠

*When driving, beware of trenches as well as recently excavated and/or backfilled ground.*



## **INSTRUCTIONS FOR USING THE MOBILE ELEVATING WORK PLATFORM**

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For machines equipped with a MOBILE ELEVATING WORK PLATFORM

### **A - AUTHORIZATION FOR USE**

- Operation of the platform requires further authorization in addition to that of the machine.

### **B - SUITABILITY OF THE PLATFORM FOR THE JOB**

- Our machines fitted with mobile elevating work platforms are compliant with standard **EN 280** for Europe and standard **AS/NZS 1418.10:2011** for Australia, corresponding to the classification of Group C1 to C3 in accordance with this standard.
- MANITOU has ensured that this platform is suitable for use under the normal operating conditions provided in this operator's manual, with a STATIC test coefficient of 1.25 and a DYNAMIC test coefficient of 1.1 as specified in harmonized European standard **EN 280** for mobile elevating work platforms.
- Before commissioning, the company manager must make sure that the platform is appropriate for the work to be done, and perform certain tests (in accordance with current legislation).

### **C - PROVIDED ON THE PLATFORM**

- Wear suitable clothing when using the platform, avoid loose-fitting garments.
- Never use the platform with hands or shoes that are wet or soiled with greasy substances.
- Remain alert at all times when using the platform. Do not listen to the radio or music using headphones or earphones.
- MANITOU strongly recommends wearing a safety harness attached to an attachment point in the platform. Wearing a safety harness or other personal protection equipment against falls may be compulsory. Comply with local, government and national regulations in force, employer's safety rules and work site regulations .
- The safety harness or other personal protection equipment against falls must comply with local, government, and national regulations in force. They must be inspected in accordance with the regulations in force.
- The control units must never be used for any other than their intended purposes (e.g. Climbing onto or down from the machine, coat hanger, etc.).
- Safety helmets must be worn.
- The operator must always be in his normal position in the driver's cab: it is prohibited to have arms or legs, or generally any part of the body, outside the platform.
- Ensure that materials loaded onto the platform (pipes, cables, containers, etc.) cannot fall out. Do not pile these materials to the point where it is necessary to step over them.

## D - USING THE PLATFORM

- However experienced they may be, operators must acquaint themselves with the emplacement and operation of all control instruments prior to operating the platform.
- Check before use that the platform has been correctly assembled and locked onto the machine.
- Do not enter or exit the platform unless it is fully lowered.
- Always enter and exit the platform through the gate or using the sliding mid rails (depending on the model).
- Always enter and exit facing the interior of the platform.
- Always use both hands and one foot or both feet and one hand to enter and exit the platform.
- Make sure that the sliding intermediate cross members (depending on the model) are in the lower position and that the gate is properly closed (depending on the model) before using this platform.
- Do not attach the sliding mid rails in the high position.
- The platform should be operated in an area free of any obstructions or danger when it is lowered to the ground.
- The operator using the platform must be aided by someone on the ground with adequate training.
- You should stay within the limits set out in the platform load chart.
- The lateral constraints are limited (↔ 2 - DESCRIPTION: SPECIFICATIONS).
- It is strictly forbidden to suspend a load from the platform or the machine's boom without an attachment provided for the purpose (↔ INSTRUCTIONS FOR HANDLING A LOAD: H - PICKING UP AND PUTTING DOWN A SUSPENDED LOAD).
- The platform cannot be used as a crane or a lift for permanently transporting people or materials, nor as jacks or supports.
- The machine must not be moved with one (or more) person(s) on the platform.
- It is forbidden to transport people on the platform using the hydraulic controls in the machine's cab (except in case of rescue).
- The operator must not climb onto to off the platform when it is not on ground level (jib retracted and in the down position).
- The machine must not be fitted with unauthorized attachments that increase the windage of the assembly.
- Do not use ladders or improvised structures on the platform to gain extra height.
- Do not climb onto the rails of the platform to gain extra height.
- It is forbidden to use the platform on forks. The fork slots are only to, be used for storing the platform and not for lifting people under any circumstances.

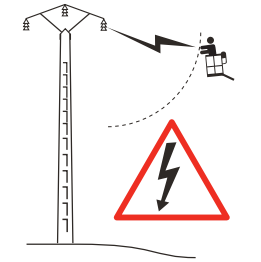
**E - ENVIRONMENT**

- Respect a safety distance between power lines or live components and any part of the body, any conductive object or any part of the machine, unless the local, government and national applicable regulations, the safety rules of the employer or construction site regulations are more strict in terms of distance required.
- Allow for platform movement and swaying or sagging power lines.

**⚠ IMPORTANT ⚠**

*It is forbidden to use the platform close to electricity cables. Maintain the specified safe distances.*

| RATED VOLTAGE (VOLTS) | SAFETY DISTANCE (METERS) |
|-----------------------|--------------------------|
| 50 < U < 1000         | 2,30 M                   |
| 1000 < U < 30000      | 2,50 M                   |
| 30000 < U < 45000     | 2,60 M                   |
| 45000 < U < 63000     | 2,80 M                   |
| 63000 < U < 90000     | 3,00 M                   |
| 90000 < U < 150000    | 3,40 M                   |
| 150000 < U < 225000   | 4,00 M                   |
| 225000 < U < 400000   | 5,30 M                   |
| 400000 < U < 750000   | 7,90 M                   |



**⚠ IMPORTANT ⚠**

*It is strictly forbidden to use the platform when the wind speed exceeds 45 km/h.*

- To visually recognize this wind speed, refer to the empirical wind evaluation scale below:

| BEAUFORT scale (wind speed at a height of 10 m on a flat site) |                 |               |              |             |  |   |
|--|-----------------|---------------|--------------|-------------|--|---|
| Force  | Type of wind    | Speed (knots) | Speed (km/h) | Speed (m/s) | Effects on Land  | Sea conditions  |
| 0  | Calm            | 0 - 1         | 0 - 1        | < 0.3       | Smoke rises vertically.  | Sea is like a mirror.   |
| 1  | Light air       | 1 - 3         | 1 - 5        | 0.3 - 1.5   | Smoke indicates direction of wind.   | Ripples with appearance of scale, no foam crests.   |
| 2  | Light breeze    | 4 - 6         | 6 - 11       | 1.6 - 3.3   | Wind felt on face, leaves rustle.  | Short wavelets, but pronounced.   |
| 3  | Gentle breeze   | 7 - 10        | 12 - 19      | 3.4 - 5.4   | Leaves and small twigs in constant motion.   | Very small waves, crests begin to break.  |
| 4  | Moderate breeze | 11 - 16       | 20 - 28      | 5.5 - 7.9   | Wind raises dust and loose pieces of paper; small branches are moved.                        | Small waves, becoming longer, numerous whitecaps.   |
| 5  | Fresh breeze    | 17 - 21       | 29 - 38      | 8 - 10.7    | Small trees in leaf begin to sway.   | Wavelets form on inland waters; moderate waves, taking longer form.   |
| 6  | Strong breeze   | 22 - 27       | 39 - 49      | 10.8 - 13.8 | Large branches in motion, whistling heard in overhead wires, umbrella use becomes difficult. | Larger waves forming, whitecaps everywhere, some spray.   |
| 7  | Near gale       | 28 - 33       | 50 - 61      | 13.9 - 17.1 | Whole trees in motion, inconvenience felt when walking against the wind.                     | Sea heaps up; white foam from breaking waves begins to be blown in streaks along the direction of the wind. |
| 8  | Gale            | 34 - 40       | 62 - 74      | 17.2 - 20.7 | Wind breaks twigs off trees; impedes progress.   | Moderately high waves of greater length; edges of crests begin to break into spindrift.                     |
| 9  | Strong gale     | 41 - 47       | 75 - 88      | 20.8 - 24.4 | Wind damages roofs (chimneys, slates, etc.).   | High waves, crests of waves begin to topple, streaks of foam; reduced visibility.                           |
| 10   | Storm           | 48 - 55       | 89 - 102     | 24.5 - 28.4 | Seldom experienced inland; trees uprooted; considerable structural damage occurs.            | Very high waves; white streaks of foam; reduced visibility.   |
| 11   | Violent storm   | 56 - 63       | 103 - 117    | 28.5 - 32.6 | Very rare, widespread damage.  | Exceptionally high waves able to hide medium sized ships from view, reduced visibility.                     |
| 12   | Hurricane       | 64 +          | 118 +        | 32.7 +      | Devastating damage.  | Sea completely white; air filled with foam and spray, very reduced visibility.                              |

**F - MAINTENANCE**

**⚠ IMPORTANT ⚠**

*Your platform must be periodically inspected to ensure its continued compliance.*

*The frequency of this inspection is defined by the legislation in force in the country in which the platform is used.*

*In France, a general periodic inspection every 6 months (Decree of March 1, 2004).*

## INSTRUCTIONS FOR USING THE RADIO-CONTROL

For machines with RC radio control

### HOW TO USE THE RADIO-CONTROL

#### SAFETY INSTRUCTIONS

#### **⚠ IMPORTANT ⚠**

*It is prohibited to lift people in the platform using the radio-control.*

*It is prohibited to use the radio-control from the platform:*

- This radio-control consists of electronic and mechanical safety elements. It cannot receive commands from another transmitter because the internal encoding is unique to each radio-control.

#### **⚠ IMPORTANT ⚠**

*If it is used improperly or incorrectly, there is a risk of danger to:*

- *The physical and mental health of the user or others.*
- *The machine and other neighboring items.*

*Everyone working with this radio-control:*

- *Must be qualified in line with current regulations and trained accordingly.*
- *Must follow this instruction manual as closely as possible.*

- The system is used to control the machine remotely via radio waves. Commands are also transmitted if the machine is out of sight (behind an obstacle or a building for example), this is why:
  - After stopping the truck and removing the key switch (only possible when it is stationary), always place the transmitter in a safe, dry place.
  - Before performing any installation, servicing or repair work, always switch off power sources (in particular, electric welding devices and electric head units on hydraulic distributors must be disconnected at each section).
  - Never remove or alter the safety devices (such as the hand-guard frame, key, emergency stop button, etc.).

#### **⚠ IMPORTANT ⚠**

*Never drive the machine if it is not continuously and perfectly within view of the operator.*

- Before leaving the transmitter, the operator must make sure that it cannot be used by an unauthorized third person: either by removing the key button from the transmitter or locking it in an inaccessible place.
- The user must ensure that the instruction manual is accessible at all times and that operators have read and understood it.

#### INSTRUCTIONS

- Take up position in a stable place with no risk of slipping.
- Before using the transmitter, make sure there is nobody within the working area.
- Only use the transmitter with its carrying device or installed correctly on the platform.

#### **⚠ IMPORTANT ⚠**

*When you remove the transmitter, remove the accumulator and key button so that it cannot be used accidentally or deliberately by anyone else.*

#### PROTECTIVE DEVICES

- The machine will be immobilized within a maximum of 450 milliseconds (approx. 0.5 second):
  - If the emergency stop button of the transmitter is pressed (50 milliseconds), or that of the machine.
  - If the transmission distance of the radio waves is exceeded.
  - If the transmitter is faulty.
  - If an interfering radio signal is received from elsewhere.
  - If the accumulator is removed from its housing in the transmitter.
  - If the battery reaches the end of its autonomy.
  - If the transmitter is switched off by turning the key switch to the off position.
- These protective devices are provided for the safety of personnel and property and must never be modified, removed or bypassed in any way whatsoever!
- The hand-guard frame prevents external action on a joystick (e.g. if the transmitter is dropped, or if the operator leans on a guard-rail).
- An electronic safety device prevents radio transmission from being initiated if the joysticks are not mechanically and electrically at rest and if the internal combustion engine speed selector is not set to idle.

#### **⚠ IMPORTANT ⚠**

*In an emergency, press the transmitter emergency stop button immediately; then follow the manual's instructions (→ 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS).*

# MACHINE MAINTENANCE INSTRUCTIONS

## GENERAL INSTRUCTIONS

### ⚠ IMPORTANT ⚠

Carefully read and understand this operator's manual before any operation on this machine.

Carry out all repairs immediately, even if the repairs concerned are minor.

Repair all leaks immediately, even if the leak concerned is minor.

Be careful of the risk of burns and splashing (exhaust, radiator, engine, hydraulic oil, etc.).

- Make sure the area is adequately ventilated before starting up the machine.
- Wear clothes suitable for the maintenance of the machine. Avoid wearing jewelry and loose clothes. Tie back and protect your hair, if necessary.
- Stop the engine and remove the ignition key before carrying out any work.

## PLACING THE JIB SAFETY WEDGE

- The machine is equipped with a boom safety wedge (↔ 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS) that must be installed on the lifting cylinder rod when working beneath the boom.
- Boom retracted without forks or attachments.

ACCORDING TO INSTALLATION

### FITTING THE WEDGE

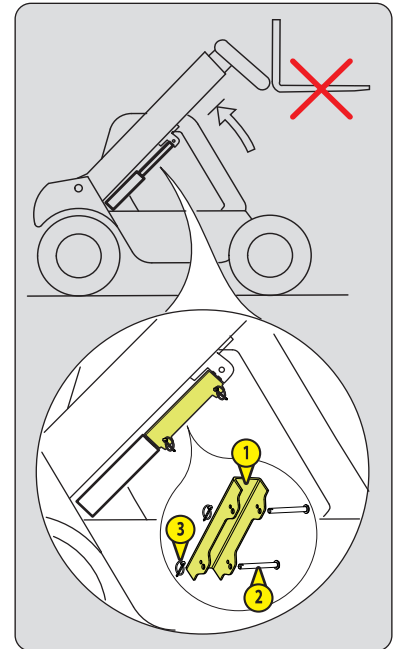
- Fully raise the jib.
- Place the safety wedge 1 on the rod of the lifting cylinder and secure with the rod 2 and the pin 3.
- Slowly lower the jib then stop the hydraulic movements before it comes into contact with the wedge.

### REMOVING THE WEDGE

- Fully raise the jib.
- Remove the pin and the rod.
- Return the safety wedge to the storage location provided on the machine.

### ⚠ IMPORTANT ⚠

Only use the wedge supplied with the machine.



ACCORDING TO INSTALLATION

### FITTING THE WEDGE

- Fully raise the jib.
- Loosen the thumbwheels 1.
- Assemble the parts of the safety wedge 2 around the cylinder rod and lock with the pins 3.

NOTE: the stop flats 4 of the safety wedge must be located towards the bottom of the lifting cylinder 5.

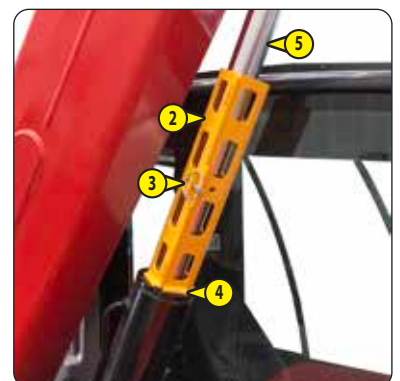
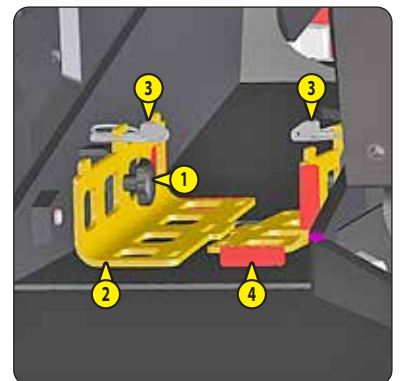
- Slowly lower the jib then stop the hydraulic movements before it comes into contact with the wedge.

### REMOVING THE WEDGE

- Fully raise the jib.
- Remove the pins 3.
- Put the parts of the safety wedge 2 back on the machine and lock them with the thumbwheels 1.
- Replace the pins 3 on the parts of the safety wedge.

### ⚠ IMPORTANT ⚠

Only use the wedge supplied with the machine.



## MAINTENANCE

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- Perform the periodic service (↩ 3 - MAINTENANCE) to keep your machine in good working order. Failure to perform periodic maintenance may invalidate the contractual warranty.

### MAINTENANCE LOGBOOK

- The maintenance operations carried out in accordance with the recommendations given in section 3 - MAINTENANCE and the other inspection, servicing or repair operations or modifications performed on the machine shall be recorded in a maintenance logbook.
- The entry for each operation should include the date of the work, the names of the individuals or companies having performed them, the type of operation and its frequency, if applicable.
- If machine elements are replaced, the part numbers of these elements shall be indicated.

## LUBRICANT AND FUEL LEVELS

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- Use the recommended lubricants (never use contaminated lubricants).
- Do not fill the fuel tank when the engine is running.
- Only fill up the fuel tank in areas specified for this purpose.
- Do not fill the fuel tank to the maximum level.
- Do not smoke or approach the machine with a flame when the fuel tank is open or is being filled.

## HYDRAULICS

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- Any work on the load handling hydraulic circuit is forbidden except for the operations described in chapter: 3 - MAINTENANCE.
- Do not attempt to loosen unions, hoses or any hydraulic component with the circuit under pressure.



**COUNTERBALANCE VALVE:** *it is dangerous to change the setting or remove the counterbalance valves or safety valves which may be fitted to the cylinders of your machine.*

**HYDRAULIC ACCUMULATOR:** *dismantling hydraulic accumulators and their pipes which may be fitted on your machine is dangerous. Such operations must only be performed by approved personnel (consult your dealer).*

## ELECTRICITY

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- Do not short-circuit the starter relay to start the engine. If the forward/reverse selector is not in neutral and the parking brake is not on, the machine may suddenly start to move.
- Do not place metal items on the battery.
- Disconnect the battery before working on the electrical circuit.

## WELDING ON THE MACHINE

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**Welding operations on the machine for the purposes of maintenance or repairs must only be carried out by people authorized by MANITOU.**

- Disconnect the battery before any welding operations on the machine.
- When carrying out electric welding work on the machine, connect the negative cable from the equipment directly to the part being welded so as to avoid very high current passing through the alternator.
- Never carry out welding or work which gives off heat on an assembled tire. The heat would increase the pressure which could cause the tire to explode.
- If the machine is equipped with an electronic control unit, disconnect it before starting to weld so as to avoid the risk of causing irreparable damage to electronic components.

## WASHING THE MACHINE

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### **⚠ IMPORTANT ⚠**

*When washing with a high pressure cleaner, avoid the engine air intakes, the cylinder rod wiper seals, the hinges, the structural components and the electrical connections, etc.*

- Clean the machine or at least the area concerned before any intervention.
- Remember to close and lock all openings on the machine (doors, windows, cowls, etc.).
- If necessary, protect against penetration of water, steam or cleaning agents, components susceptible of being damaged, particularly electrical components and connections and the injection pump.
- Clean the machine of any traces of fuel, oil or grease.

## TRANSPORTING THE MACHINE

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### **⚠ IMPORTANT ⚠**

*Transporting the machine involves real risks for the operator and others involved.*

- Towing, winching, slinging or transporting the machine (⚠ 3 - MAINTENANCE).

## PROLONGED MACHINE SHUTDOWN

### INTRODUCTION

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### **⚠ IMPORTANT ⚠**

*Procedures to follow for long duration standstill and for bringing back the machine into service must be performed by your dealership.*

*This period of long duration standstill must not exceed 12 months.*

*After 12 months, repeat the procedures for putting the machine back into service and long-term shutdown.*

The recommendations below are intended to prevent the machine from being damaged when it is not used for a period of more than 3 months.

### PREPARATION OF THE MACHINE

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- Clean the machine thoroughly.
- Check and repair any fuel, oil, water or air leaks.
- Replace or repair any worn or damaged parts.
- Wash the painted surfaces of the machine in clear and cold water and wipe them.
- Touch up the paintwork if necessary.
- Lower the lifting structure fully.
- Retract the telescopic arms.
- Release the pressure in the hydraulic circuits.
- Shut down the machine.

### DEF (Diesel Exhaust Fluid) TANK

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Depending on machine model

- Drain down and rinse the DEF (Diesel Exhaust Fluid) tank.
- Replace the "DEF" (Diesel Exhaust Fluid) feed pump filter (⚠ 3 - MAINTENANCE).
- Slowly fill the tank with new DEF up to the bottom of the filler neck.
- Start up the machine to pressurize the circuit and bring it up to working temperature, then shut down the engine.
- If necessary, top up the tank.

## PROTECTING THE ENGINE

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- Contact your dealer to obtain the procedure for protecting the inside of the engine (use of protection product).
- Fill the tank with fuel (<img alt="arrow icon" data-bbox="245 85 255 95"/> 3 - MAINTENANCE).
- Replace the engine oil and oil filter (<img alt="arrow icon" data-bbox="245 100 255 110"/> 3 - MAINTENANCE).
- Replace the coolant (<img alt="arrow icon" data-bbox="245 115 255 125"/> 3 - MAINTENANCE).
- Leave the engine running at idling speed for a few minutes, then switch off.
- Run the engine for a short time so that the oil and cooling liquid circulate inside.
- Disconnect the battery and store it in a safe place away from the cold, after charging it to maximum capacity.
- Block the outlet with waterproof adhesive tape.
- Remove the drive belts and store them in a safe place.
- Disconnect the engine cut-off solenoid on the injection pump and carefully insulate the connection.

## MACHINE PROTECTION

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Place the machine on level ground.

- Set the machine on axle stands so that the tires are off the ground.
- Deactivate the parking brake (*depending on machine model*).
- Protect cylinder rods which will not be retracted from corrosion.
- Wrap the wheels.

N.B.: If the machine is to be stored outdoors, cover it with a waterproof tarpaulin.

## RETURNING THE MACHINE TO SERVICE

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### **IMPORTANT**

*Make sure the area is adequately ventilated before starting up the machine.*

- Remove the waterproof adhesive tape from all the orifices.
- Remove the protection from the cylinder rods and wheels.
- Refit and reconnect the battery.
- Activate the parking brake and remove the axle stands.
- Perform the daily maintenance operations (<img alt="arrow icon" data-bbox="245 480 255 490"/> 3 - MAINTENANCE).
- Perform the weekly maintenance operations (<img alt="arrow icon" data-bbox="245 495 255 505"/> 3 - MAINTENANCE).
- Drain and clean the fuel tank (<img alt="arrow icon" data-bbox="245 510 255 520"/> 3 - MAINTENANCE).
- Fill the fuel tank with clean diesel filtered through the filler port.
- Replace the fuel filter (<img alt="arrow icon" data-bbox="245 535 255 545"/> 3 - MAINTENANCE).
- Replace the fuel pre-filter (<img alt="arrow icon" data-bbox="245 550 255 560"/> 3 - MAINTENANCE) (*depending on the model of machine*).
- Drain and rinse the DEF tank (*depending on the machine model*).
- Top up, slowly fill the tank with new "DEF" (Diesel Exhaust Fluid) up to the bottom of the filler neck (*depending on the machine model*).
- Refit and set the tension in the belts. (<img alt="arrow icon" data-bbox="245 605 255 615"/> 3 - MAINTENANCE).
- Turn the engine over with the starter, to allow the oil pressure to rise.
- Reconnect the engine cut-off solenoid.
- Lubricate the machine completely (<img alt="arrow icon" data-bbox="245 650 255 660"/> 3 - MAINTENANCE).
- Start up the machine, following the operating and safety instructions (<img alt="arrow icon" data-bbox="245 665 255 675"/> OPERATING INSTRUCTIONS UNLADEN AND LADEN).
- Perform all the lifting structure's hydraulic movements up to the end position for each cylinder.

## DISPOSING OF THE MACHINE



*Consult your dealer before disposing of the machine.*

### RECYCLING OF MATERIALS

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#### METALS

- Metals are 100% recoverable and recyclable.

#### PLASTICS

- Plastic parts are identified with a marking in accordance with current regulations.
- A limited range of materials is used to simplify the recycling process.
- The majority of the plastic components are made of "thermoplastic" plastics, which are easily recycled by melting, granulating or grinding.

#### RUBBER

- Tires and seals can be ground for use in cement manufacture or to obtain reusable granules.

#### GLASS

- Glass items can be removed and collected for processing by glaziers.

### ENVIRONMENTAL PROTECTION

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By entrusting the maintenance of your machine to the MANITOU network, the risk of pollution is limited and the contribution to environmental protection is made.

#### WORN OR DAMAGED PARTS

- Do not dump them in the countryside.
- MANITOU and its network have signed-up to a scheme of environmental protection through recycling.

#### USED OIL

- The MANITOU network organizes the collection and processing of used oil.
- By handing over your waste oil to MANITOU, the risk of pollution is limited.

#### USED BATTERIES

- Do not throw away batteries, as they contain metals that are harmful for the environment.
- Return them to the MANITOU network or any other approved collection point.

N.B.: MANITOU aims to manufacture machines that provide the best performance and limit polluting emissions.

# ***2 - DESCRIPTION***



## 2 - DESCRIPTION

|   |             |
|---|-------------|
| <u>CE DECLARATION OF CONFORMITY</u>       | <u>2-4</u>  |
| <u>UKCA DECLARATION OF CONFORMITY</u>     | <u>2-6</u>  |
| <u>SAFETY PLATES AND DECALS</u>           | <u>2-8</u>  |
| <u>MACHINE IDENTIFICATION</u>             | <u>2-12</u> |
| <u>CHARACTERISTICS</u>                    | <u>2-14</u> |
| <u>TIRES</u>                              | <u>2-16</u> |
| <u>DIMENSIONS AND LOAD CHARTS</u>         | <u>2-18</u> |
| <u>VISIBILITY</u>                         | <u>2-20</u> |
| <u>INSTRUMENTS AND CONTROLS</u>           | <u>2-22</u> |
| <u>TOWING DEVICE</u>                      | <u>2-46</u> |
| <u>DESCRIPTION AND USE OF THE OPTIONS</u> | <u>2-48</u> |

## CE DECLARATION OF CONFORMITY

This document is a specimen of the EC Declaration of Conformity and includes the contents of the original declaration supplied with the machine.

This specimen and the original document may contain fields that are not applicable to your machine. These fields are left blank if not applicable.

Refer to the original Declaration of Conformity for all data applicable to your machine.

### 1) **DÉCLARATION «CE» DE CONFORMITÉ (originale)** **«EC» DECLARATION OF CONFORMITY (original)**

2) Constructeur, *Manufacturer* : **MANITOU BF**

3) Adresse, *Address* : **430, RUE DE L'AUBINIÈRE - B.P 10249  
44158 - ANCENIS - CEDEX - FRANCE**

4) Titulaire du dossier technique, *Holder of the technical file* : **MANITOU BF**

3) Adresse, *Address* : **430, RUE DE L'AUBINIÈRE - B.P 10249  
44158 - ANCENIS - CEDEX - FRANCE**

5) Le constructeur déclare que la machine décrite ci-après, *The manufacturer declares that the machine described below* :

**COMPACT ROUGH-TERRAIN VARIABLE-REACH TRUCK**

**MLT 625 H 75K ST5 S1**

6) Est conforme aux directives suivantes et à leurs transpositions en droit national (si applicables),  
*Complies with the following directives and their transpositions into national law (if applicable)* :

**2006/42/CE**

7) Pour les machines annexe IV, *For annex IV machines* : Non applicable

8) Numéro d'attestation, *Certificate number* : Non applicable

9) Organisme notifié, *Notified body* : Non applicable

**2000/14/CE + 2005/88/CE**

10) Procédure appliquée, *Applied procedure* : ANNEXE VIII

9) Organisme notifié, *Notified body* : TÜV SÜD INDUSTRIE SERVICE GMBH  
WESTENDSTRASSE 199  
80686 MUNICH - GERMANY

11) Niveau de puissance acoustique, *Sound power level* :

12) Mesuré, *Measured* : dB (A)

13) Garanti, *Guaranteed* : dB (A)

**2014/30/UE**

14) Normes harmonisées utilisées, *Harmonised standards used* :

EN 12895

15) Normes ou dispositions techniques utilisées, *Standards or technical provisions used* :

EN 1459

16) Fait à, *Done at* :

17) Date, *Date* :

18) Nom du signataire, *Name of signatory* :

19) Fonction, *Function* :

20) Société, *Company* :

21) Signature, *Signature* :

**bg :** 1) удостоверение за « CE » съответствие (оригинална), 2) Фирмата, 3) Адрес, 4) Техническо досие, 5) Фабрикант на описаната по-долу машина, 6) Обявява, че тази машина, 7) товара на следните директиви и на тяхното съответствие национално право, 8) За машините към допълнение IV, 9) Номер на удостоверението, 10) Наименувана фирма, 15) хармонизирани стандарти използвани, 16) стандарти или технически правила, използвани, 17) Изработено в, 18) Дата, 19) Име на разписалия се, 20) Функция, 21) Функция.

**cs :** 1) ES prohlášení o shodě (původní), 2) Název společnosti, 3) Adresa, 4) Technická dokumentace, 5) Výrobce níže uvedeného stroje, 6) Prohlašuje, že tento stroj, 7) Je v souladu s následujícími směrnicemi a směrnicemi transponovanými do vnitrostátního práva, 8) Pro stroje v příloze IV, 9) Číslo certifikátu, 10) Notifikační orgán, 15) harmonizované normy použity, 16) Normy a technických pravidel používaných, 17) Místo vydání, 18) Datum vydání, 19) Jméno podepsaného, 20) Funkce, 21) Podpis.

**da :** 1) EF Overensstemmelseserklæring (original), 2) Firmaet, 3) Adresse, 4) tekniske dossier, 5) Konstruktor af nedenfor beskrevne maskine, 6) Erklærer, at denne maskine, 7) Overholder nedennævnte direktiver og disses gennemførelse til national ret, 8) For maskiner under bilag IV, 9) Certifikat nummer, 10) Bemyndigede organ, 15) harmoniserede standarder, der anvendes, 16) standarder eller tekniske regler, 17) Udfærdiget i, 18) Dato, 19) Underskrivers navn, 20) Funktion, 21) Underskrift.

**de :** 1) EG-Konformitätserklärung (original), 2) Die Firma, 3) Adresse, 4) Technischen Unterlagen, 5) Hersteller der nachfolgend beschriebenen Maschine, 6) Erklärt, dass diese Maschine, 7) den folgenden Richtlinien und deren Umsetzung in die nationale Gesetzgebung entspricht, 8) Für die Maschinen laut Anhang IV, 9) Bescheinigungsnummer, 10) Benannte Stelle, 15) angewandten harmonisierten Normen, 16) angewandten sonstigen technischen Normen und Spezifikationen, 17) Ausgestellt in, 18) Datum, 19) Name des Unterzeichners, 20) Funktion, 21) Unterschrift.

**el :** 1) Δήλωση συμμόρφωσης CE (πρωτότυπο), 2) Η εταιρεία, 3) Διεύθυνση, 4) τεχνικό φάκελο, 5) Κατασκευάστρια του εξής περιγραφόμενου μηχανήματος, 6) Δηλώνει ότι αυτό το μηχάνημα, 7) Είναι σύμφωνο με τις εξής οδηγίες και τις προσαρμογές τους στο εθνικό δίκαιο, 8) Για τα μηχανήματα παραρτήματος IV, 9) Αριθμός δήλωσης, 10) Κοινοποιημένος φορέας, 15) Εναρμονισμένα πρότυπα που χρησιμοποιούνται, 16) Πρότυπα ή τεχνικούς κανόνες που χρησιμοποιούνται, 16) Είναι σύμφωνο με τα εξής πρότυπα και τεχνικές διατάξεις, 17) Έν, 18) Ημερομηνία, 19) Ονομα του υπογράφοντος, 20) Θέση, 21) Υπογραφή.

**es :** Declaración DE de conformidad (original), 2) La sociedad, 3) Dirección, 4) expediente técnico, 5) Constructor de la máquina descrita a continuación, 6) Declara que esta máquina, 7) Está conforme a las siguientes directivas y a sus transposiciones en derecho nacional, 8) Para las máquinas anexo IV, 9) Número de certificación, 10) Organismo notificado, 15) normas armonizadas utilizadas, 16) Otras normas o especificaciones técnicas utilizadas, 17) Hecho en, 18) Fecha, 19) Nombre del signatario, 20) Función, 21) Firma.

**et :** 1) EÜ vastavusdeklaratsioon (algupärane), 2) Äriühing, 3) Aadress, 4) Tehniline dokumentatsioon, 5) Seadme tootja, 6) Kinnitab, et see loode, 7) On vastavuses järgmiste direktiivide ja nende riigisisesesse õigusesse ülevõtmiseks vastuvõetud õigusaktidega, 8) IV lisas loetletud seadmete puhul, 9) Tunnistuse number, 10) Tunnistuse aeg, 15) harmoniseeritud standardite, 16) Muud standardites või spetsifikatsioonides kasutatakse, 17) Väljaandmise koht, 18) Väljaandmise aeg, 19) Alkiriastaja nimi, 20) Amet, 21) Alkiri.

**fi :** 1) EY-vaatimustenmukaisuusvakuutus (alkuperäiset), 2) Yritys, 3) Osoite, 4) teknisen eritelmän, 5) Jäljessä kuvattun koneen valmistaja, 6) Vakuuttaa, että tämä kone, 7) Täyttää seuraavien direktiivien sekä niitä täytäntöönpanneiden kansallisten säännösten vaatimukset, 8) Liitteeseen IV koneiden osalta, 9) Todistuksen numero, 10) Ilmoitettu laitos, 15) yhdenmukaistettuja standardeja käytetään, 16) muita standardeja tai eritelmiä, 17) Paikka, 18) Aika, 19) Allekirjoittajan nimi, 20) Toimi, 21) Allekirjoitus.

**ga :** 1) « CE » dearbhuí comhréireachta (bunaidh), 2) An comhlacht, 3) Seoladh, 4) comhad teicniúil, 5) Déantóir an innill a thuariscítear thíos, 6) Dearbhaionn sé go bhfuil an t-inneall, 7) Go gcoinnn sé le na teoracha seo a leanas agus a trasuimh isteach i ndlí náisiúnta, 8) Le haghaidh innill an agusín IV, 9) Uimhir teastais, 10) Comhlacht a chuirtear i bhfios, 15) caighdeán comhchuibhíne a úsáidtear, 16) caighdeán eile nó sonraíochtaí teicniúla a úsáidtear, 17) Déanta ag, 18) Dáta, 19) Ainm an tsinitheora, 20) Feidhm, 21) Síniú.

**hu :** 1) CE megfelelősségi nyilatkozat (eredeti), 2) A vállalat, 3) Cím, 4) műszaki dokumentáció, 5) Az alábbi gép gyártója, 6) Kijelenti, hogy a gép, 7) Megfelel az alábbi irányelveknek valamint azok hozosított előírásainak, 8) A IV. melléklet gépeihez, 9) Bizonylati szám, 10) Értécsített szervezet, 15) felhasznált harmonizált szabványok, 16) egyéb felhasznált műszaki szabványok és előírások hivatkozásai, 17) Kelt (hely), 18) Dátum, 19) Aláíró neve, 20) Funkció, 21) Aláírás.

**is :** 1) (Samræmisvottorð ESB (upprunalega), 2) Fyrirtækið, 3) Aðsetur, 4) Tæknilegar skrá, 5) Smíður tækisins sem lýst er hér á eftir, 6) Staðfestir að tækið, 7) Samræmist eftirfarandi stöðlum og staðfarslu þeirra með hlöðsón af þjóðarrétti, 8) Fyrir tækin í aukakafla IV, 9) Staðfestingarnúmer, 10) Tilkynnt til, 15) samhæfða staða sem notaðir, 16) önnur staðlar eða forskrifir notað, 17) Staður, 18) Dagsetning, 19) Nafn undirritaðs, 20) Staða, 21) Undirskrift.

**it :** 1) Dichiarazione CE di conformità (originale), 2) La società, 3) Indirizzo, 4) fascicolo tecnico, 5) Costruttore della macchina descritta di seguito, 6) Dichiara che questa macchina, 7) È conforme alle direttive seguenti e alle relative trasposizioni nel diritto nazionale, 8) Per le macchine Allegato IV, 9) Numero di Attestazione, 10) Organismo notificato, 15) norme armonizzate applicate, 16) altre norme e specifiche tecniche applicate, 17) Stabilita a, 18) Data, 19) Nome del firmatario, 20) Funzione, 21) Firma.

**lt :** 1) CE atitikties deklaracija (originalas), 2) Bendrovė, 3) Adresas, 4) Techninė byla, 5) Žemiau nurodytas įrenginio gamintojas, 6) Pareiškia, kad šis įrenginys, 7) Atitinka toliau nurodytas direktyvas ir į nacionalinius teisės aktus perkeltas jų nuostatas, 8) Iviečia IV priedas dël mašinų, 9) Certifikato Nr, 10) Paskelbtoji įstaiga, 15) suderintus standartus naudojamus, 16) kitus standartus ir technines specifikacijas, 17) Pasirašyta, 18) Data, 19) Pasirašiusio asmens vardas ir pavardė, 20) Pareigos, 21) Parašas.

**lv :** 1) EK atbilstības deklarācija (oriģināls), 2) Uzņēmums, 3) Adrese, 4) tehniskās lietas, 5) Tālāk aprakstītās iekārtas ražotājs, 6) Apliecinā, ka šī iekārtā, 7) Ir atbilstoša tālāk norādītajām direktīvām un to transpozīcijai nacionālajā likumdošanā, 8) Iekārtām IV pielikumā, 9) Iekārtām IV pielikumā, 9) Reģistrētā organizācija, 15) Lietotajiem saskaņotajiem standartiem, 16) lietotajiem tehniskajiem standartiem un specifikācijām, 17) Sastādīts, 18) Datums, 19) Parakstītāja vārds, 20) Amats, 21) Paraksts.

**mt :** 1) Dikjarazzjoni ta' Konformità KE (oriġinali), 2) Il-kumpanija, 3) Indirizz, 4) fajl tekniku, 5) Manifattriċi tal-magna deskritta hawn isfel, 6) Tidlikjara li din il-magna, 7) Hija konformi hija konformi mad-Direttivi segwenti u l-ligijiet li jimplimentawhom fil-ligji nazzjonali, 8) Għall-magni fl-Anness IV, 9) Numru taċ-certifikat, 10) Entità nnotifikata, 15) l-istandards armonizzati użati, 16) standards tekniċi u specifikazzjonijiet oħra użati, 17) Magħmul f, 18) Data, 19) Isem il-firmatarju, 20) Kariga, 21) Firma.

**nl :** 1) EG-verklaring van overeenstemming (oorspronkelijke), 2) Het bedrijf, 3) Adres, 4) technische dossier, 5) Constructeur van de hierna genoemde machine, 6) Verklaart dat deze machine, 7) In overeenstemming is met de volgende richtlijnen en hun omzettingen in het nationale recht, 8) Voor machines van bijlage IV, 9) Goedgekeuringsnummer, 10) Aangezegde instelling, 15) gehanteerde geharmoniseerde normen, 16) andere gehanteerde technische normen en specificaties, 17) Opgemaakt te, 18) Datum, 19) Naam van ondergetekende, 20) Functie, 21) Handtekening.

**no :** 1) CE-samsvarserklæring (original), 2) Selskapet, 3) Adresse, 4) tekniske arkiv, 5) Fabrikant av følgende maskin, 6) Erklærer at denne maskinen, 7) Oppfyller kravene i følgende direktiver, med nasjonale gjennomføringsbestemmelser, 8) For maskinene i tillegg IV, 9) Attestnummer, 10) Notifisert organ, 15) harmoniserte standarder som brukes, 16) Andre standarder og spesifikasjoner brukt, 17) Utstedt i, 18) Dato, 19) Underskriverens navn, 20) Stilling, 21) Underskrift.

**pl :** 1) Deklaracja zgodności CE (oryginalne), 2) Spółka, 3) Adres, 4) dokumentacja technicznej, 5) Wykonawca maszyny opisanej poniżej, 6) Oświadczka, że ta maszyna, 7) Jest zgodna z następującymi dyrektywami i odpowiadającymi przepisami prawa krajowego, 8) Dla maszyn załącznik IV, 9) Numer certyfikatu, 10) Jednostka certyfikująca, 15) zastosowanych norm zharmonizowanych, 16) innych zastosowanych norm technicznych i specyfikacji, 17) Sporządzono w, 18) Data, 19) Nazwisko podpisującego, 20) Stanowisko, 21) Podpis.

**pt :** 1) Declaração de conformidade CE (original), 2) A empresa, 3) Morada, 4) processo técnico, 5) Fabricante da máquina descrita abaixo, 6) Declara que esta máquina, 7) Está em conformidade às diretrizes seguintes e às suas transposições para o direito nacional, 8) Para as máquinas no anexo IV, 9) Número de certificado, 10) Entidade notificada, 15) normas harmonizadas utilizadas, 16) outras normas e especificações técnicas utilizadas, 17) Elaborado em, 18) Data, 19) Nome do signatário, 20) Cargo, 21) Assinatura.

**ro :** 1) Declarație de conformitate CE (originală), 2) Societatea, 3) Adresa, 4) cârții tehnice, 5) Constructor al mașinii descrise mai jos, 6) Declară că prezenta mașină, 7) Este conformă cu directivele următoare și cu transpunerea lor în dreptul național, 8) Pentru mașinile din anexa IV, 9) Număr de atestare, 10) Organism notificat, 15) standardele armonizate utilizate, 16) alte standarde și specificații tehnice utilizate, 17) Intocmit la, 18) Data, 19) Numele persoanei care semnează, 20) Funcția, 21) Semnătura.

**sk :** 1) ES vyhlásenie o zhode (pôvodný), 2) Názov spoločnosti, 3) Adresa, 4) technickej dokumentácie, 5) Výrobca nižšie opísaného stroja, 6) Vyhlasuje, že tento stroj, 7) Je v súlade s nasledujúcimi smernicami a smernicami transponovanými do vnitrostátného práva, 8) Pre stroje v prílohe IV, 9) Číslo certifikátu, 10) Notifikačný orgán, 15) použité harmonizované normy, 16) použité iné technické normy a predpisy, 17) Miesto vydania, 18) Dátum vydania, 19) Meno podpisujúceho, 20) Funkcia, 21) Podpis.

**sl :** 1) ES Izjava o ustreznosti (izvirna), 2) Družba, 3) Naslov, 4) tehnične dokumentacije, 5) Proizvajalac tukaj opisanega stroja, 6) Izjavlja, da je ta stroj, 7) Ustreza naslednjim direktivam in njihovi transpoziciji v državno pravo, 8) Za stroje priloga IV, 9) Številka potrdila, 10) Obvestilo organu, 15) uporabljene harmonizirane standarde, 16) druge uporabljene tehnične standarde in zahteve, 17) V, 18) Datum, 19) Ime podpisnika, 20) Funkcija, 21) Podpis.

**sv :** 1) CE-försäkran om överensstämmelse (original), 2) Företaget, 3) Adress, 4) tekniska dokumentationen, 5) Konstruktor av nedan beskrivna maskin, 6) Försäkrar att denna maskin, 7) Överensstämmer med nedanstående direktiv och införlivandet av dem i nationell rätt, 8) För maskinerna i bilaga IV, 9) Nummer för godkännande, 10) Organism som underrättats, 15) Harmoniserade standarder som använts, 16) andra tekniska standarder och specifikationer som använts, 17) Upprättat i, 18) Datum, 19) Namn på den som undertecknat, 20) Befattning, 21) Namnteckning.

## UKCA DECLARATION OF CONFORMITY

This document is a specimen of the UKCA Declaration of Conformity and includes the contents of the original declaration supplied with the machine.

This specimen and the original document may contain fields that are not applicable to your machine. These fields are left blank if not applicable.

Refer to the original Declaration of Conformity for all data applicable to your machine.

### UKCA DECLARATION OF CONFORMITY

Manufacturer: **MANITOU BF**  
Address: **430, RUE DE L'AUBINIÈRE - BP 10249  
44158 ANCENIS CEDEX - FRANCE**  
Authorized representative: **MANITOU UK  
Ebbleke Industrial Estate - Dorset BH 31 6BB  
Verwood - United Kingdom**

The manufacturer declares that the below described machinery:

**COMPACT ROUGH-TERRAIN VARIABLE-REACH TRUCK**

**MLT 625 H 75K ST5 S1**

Complies with the following legislation:

#### The supply of Machinery (Safety) Regulations 2008, as amended

The machine is designed for the lifting of persons:

Applied procedure: Non applicable  
Certificate number: Non applicable  
Dated:  
Approved body: Non applicable

#### Noise Emission in the Environment by Equipment for use Outdoors Regulations 2001, as amended

Applied procedure: Schedule 11  
Approved body: TÜV SÜD INDUSTRIE SERVICE GMBH  
WESTENDSTRASSE 199  
80686 MUNICH - GERMANY

Sound power level:

Measured: dB (A)  
Guaranteed: dB (A)

#### Electromagnetic Compatibility Regulations 2016, as amended

The following designated standards have been addressed:

EN 12895

The following standards or technical guidance have been addressed:

EN 1459

At: Date:

Name of signatory:

Position:

Company:

Signature:



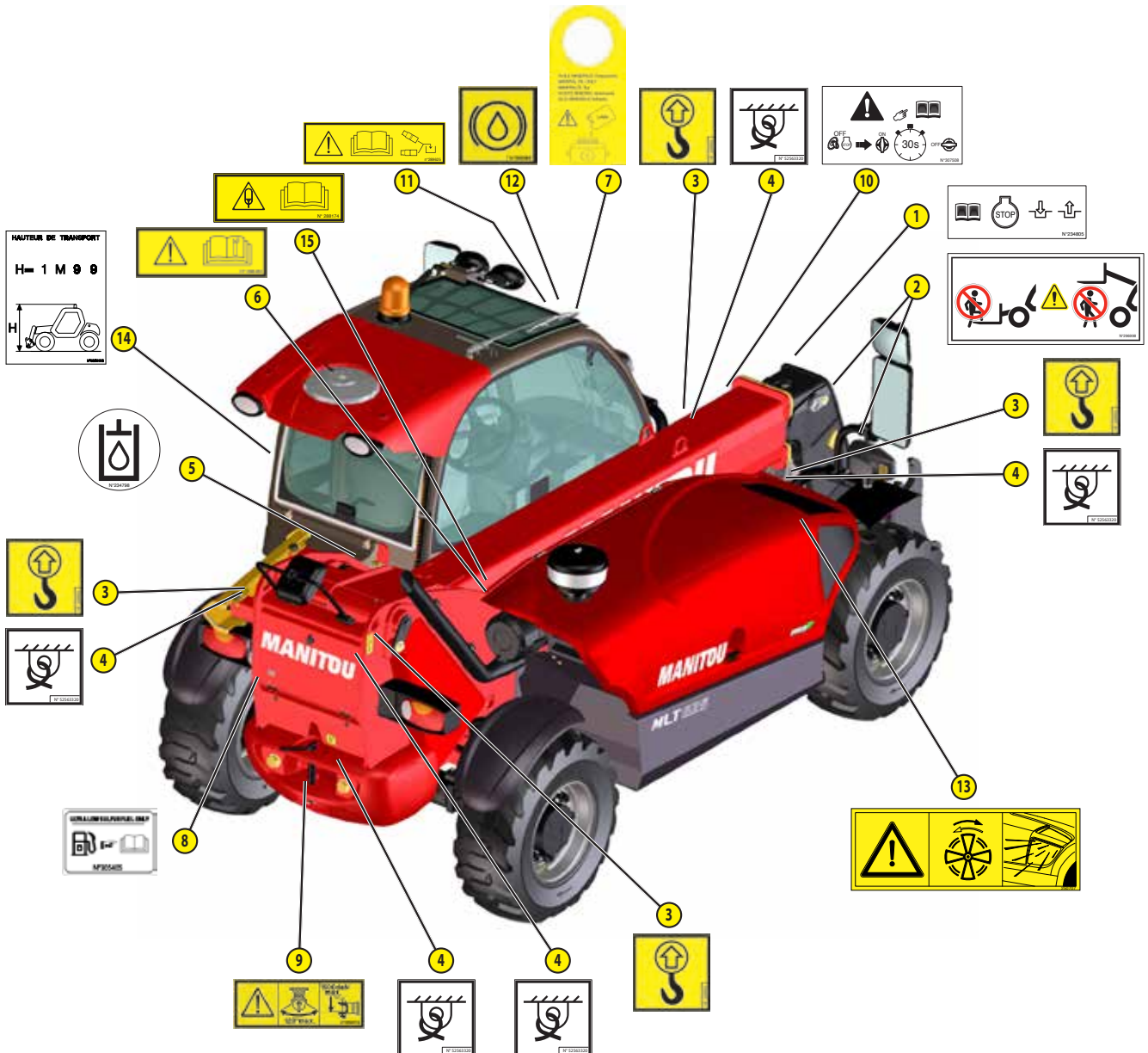
# SAFETY PLATES AND DECALS

## ⚠ IMPORTANT ⚠

Clean all decals and safety plates so that they are legible.  
 Any safety plates and decals which are illegible or damaged must be replaced.  
 Check that decals and safety plates are present after replacing any spare parts.

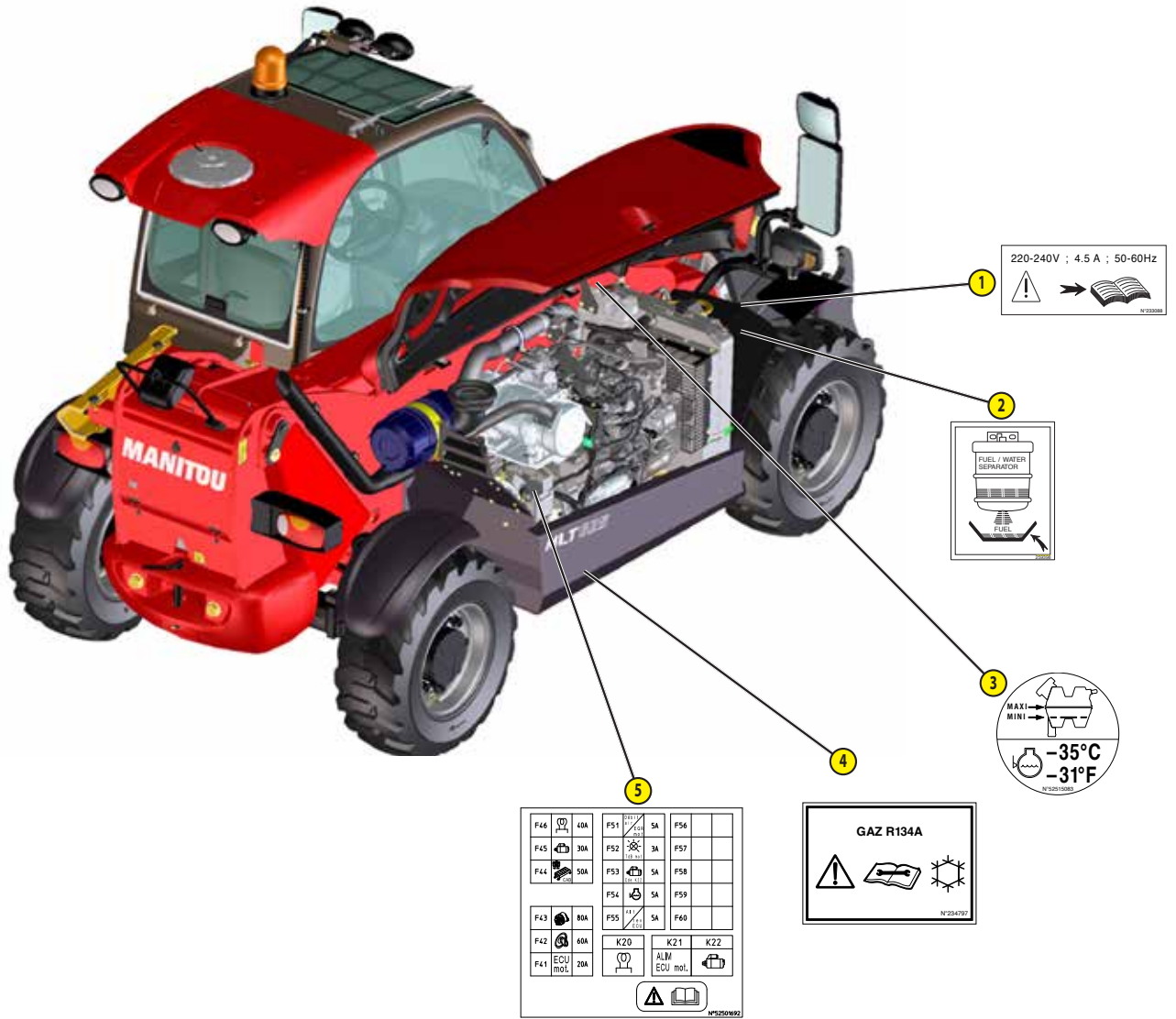
### EXTERNAL PLATES AND STICKERS

| REF. | REFERENCE | DESCRIPTION                                 |
|------|-----------|---|
| 1    | 234805    | - Hydraulic coupling instruction            |
| 2    | 296998    | - Maniscopic safety instruction             |
| 3    | 24653     | - Slings point                              |
| 4    | 52563320  | - Tie-down point                            |
| 5    | 234798    | - Hydraulic fluid                           |
| 6    | 288430    | - Repairing instructions (on lift cylinder) |
| 7    | 268491    | - Brake fluid instruction                   |
| 8    | 305405    | - Diesel fuel                               |
| 9    | 289013    | - Towing instruction (OPTION)               |
| 10   | 307508    | - Battery cut-off instruction               |
| 11   | 289625    | - Easy attachment connection (OPTION)       |
| 12   | 290065    | - Brake fluid                               |
| 13   | 250707    | - Ventilation reversal                      |
| 14   | 52631112  | - Overall height (OPTION)                   |
| 15   | 288174    | - Boom suspension (OPTION)                  |



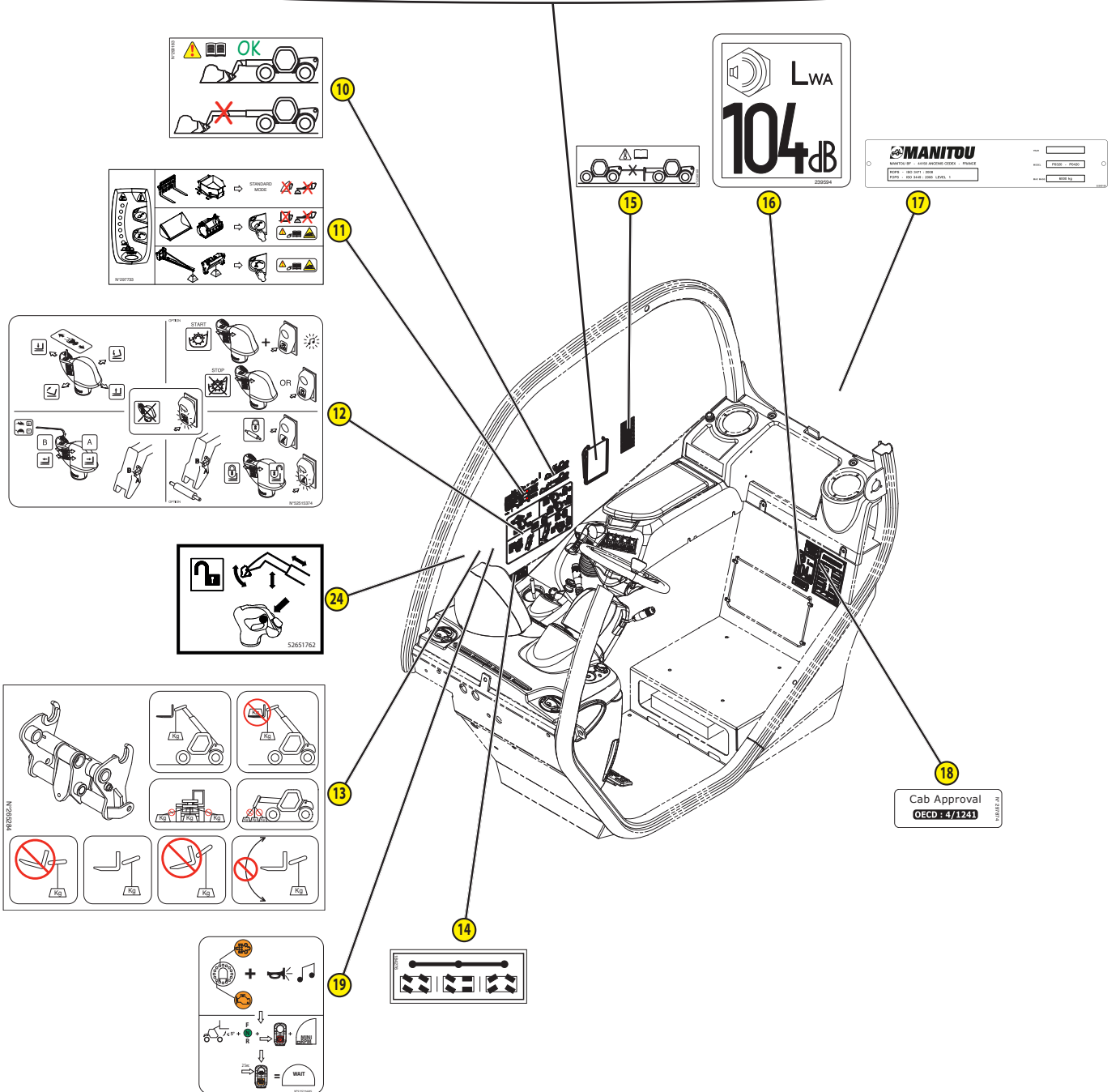
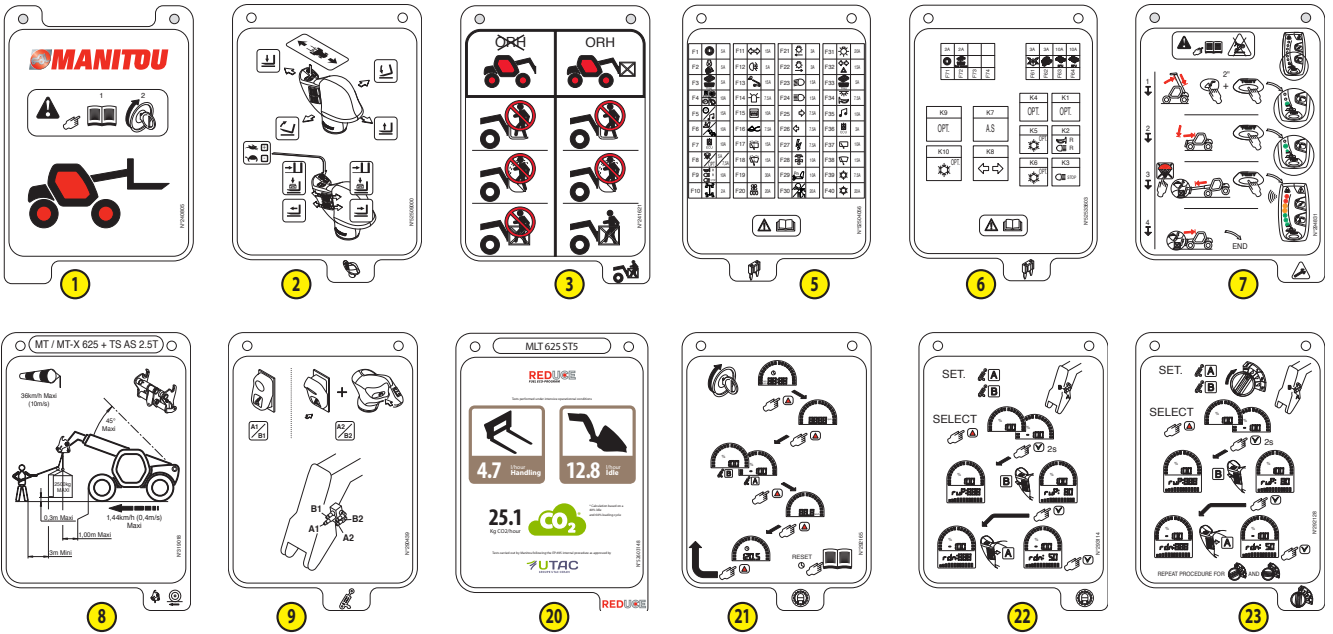
## STICKERS AND PLATES UNDER THE ENGINE HOOD

| REF. | REFERENCE | DESCRIPTION                 |
|------|-----------|-----------------------------|
| 1    | 233088    | - Preheat rod (OPTION)      |
| 2    | 259398    | - Water/diesel separator    |
| 3    | 52515083  | - Anti-freeze               |
| 4    | 234797    | - Air conditioning (OPTION) |
| 5    | 52501692  | - Fuses                     |



## PLATES AND STICKERS IN THE CAB

| REF. | REFERENCE | DESCRIPTION   |
|------|-----------|---|
| 1    | 240805    | - Reach chart sheet   |
| 2    | 52509000  | - Manipulator function sheet                                      |
| 3    | 241621    | - Safety instruction sheet  |
| 5    | 52504056  | - Fuse sheet  |
| 6    | 52533603  | - Relay sheet   |
| 7    | 294831    | - Reset procedure sheet   |
| 8    | 319018    | - Carriage lifting ring sheet (OPTION)                            |
| 9    | 290439    | - Boom head electrovalve function sheet (OPTION)                  |
| 10   | 290183    | - Bucket instruction on telescope                                 |
| 11   | 297733    | - Operating mode management instruction                           |
| 12   | 52515374  | - Main functions  |
| 13   | 265284    | - Lifting ring on carriage (OPTION)                               |
| 14   | 184276    | - Steering selection  |
| 15   | 52580160  | - Towing prohibited   |
| 16   | 239594    | - Sound power level   |
| 17   | 52580168  | - Cab compliance  |
| 18   | 297874    | - Cab homologation  |
| 19   | 52521685  | - Diesel exhaust particle filter regeneration function sheet      |
| 20   | 52603148  | - Consumption sheet   |
| 21   | 292165    | - Screen display function sheet                                   |
| 22   | 293114    | - Attachment hydraulic flow rate adjustment function sheet        |
| 23   | 292128    | - Attachment hydraulic flow rate selector function sheet (OPTION) |
| 24   | 52651762  | - Hydraulic controls activation (DEPENDING ON ASSEMBLY)           |



## MACHINE IDENTIFICATION

As our policy is to promote a constant improvement in our products, our range of lift trucks may undergo certain modifications, without any obligation for us to advise our customers.

When you order parts, or when you require any technical information, always specify:

N.B.: In order to have all these numbers on hand when needed, it is recommended that they are noted in the spaces provided, at the time of the delivery of the machine.

For any further technical information regarding your machine refer to chapter: SPECIFICATIONS.

### MACHINE MANUFACTURER'S PLATE

|   |  |
|---|--|
| "Designation" Designation   |  |
| "Series" Series   |  |
| "Year of manufacture" Year of manufacture   |  |
| "Model year" Model year   |  |
| "Serial Number / Product Identification Number" Serial number / Product Identification Number |  |
| "Unladen mass" Unladen weight   |  |
| "Power" Power   |  |
| "Authorized gross vehicle weight" Authorized gross vehicle weight                             |  |
| "Rated capacity" Rated capacity   |  |
| "Max vertical force (on trailer hook)" Maximum vertical force (on trailer hook)               |  |
| "Drag strain" Tractive force  |  |



### ENGINE

|                 |  |
|-----------------|--|
| "MODEL" Model   |  |
| "FAMILY" Family |  |
| "POWER" Power   |  |



### HYDROSTATIC PUMP

|                       |  |
|-----------------------|--|
| "MODEL" Model         |  |
| "CODE" Code           |  |
| "E1" Identification   |  |
| "SERNO" Serial number |  |
| "SPEC" Specification  |  |



### HYDROSTATIC MOTOR

|                       |  |
|-----------------------|--|
| "MODEL" Model         |  |
| "CODE" Code           |  |
| "E1" Identification   |  |
| "SERNO" Serial number |  |
| "SPEC" Specification  |  |



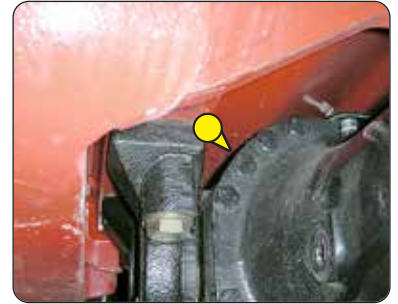
**FRONT AXLE**

|                   |  |
|-------------------|--|
| Type              |  |
| Serial number     |  |
| MANITOU reference |  |



**REAR AXLE**

|                   |  |
|-------------------|--|
| Type              |  |
| Serial number     |  |
| MANITOU reference |  |



**CAB**

|                                 |  |
|---------------------------------|--|
| "Constructeur" Manufacturer     |  |
| "Type Cabine" Cab type          |  |
| "Numéro de série" Serial number |  |



**BOOM**

|                                      |  |
|--------------------------------------|--|
| MANITOU reference                    |  |
| Date of manufacture and manufacturer |  |



**CHASSIS**

|   |  |
|---|--|
| Serial number / Product Identification Number |  |
|---|--|



**ATTACHMENT MANUFACTURER'S PLATE**

|   |  |
|---|--|
| "MODELE" Model                          |  |
| "N° série" Serial number                |  |
| "Année Fabrication" Year of manufacture |  |
| "Masse à vide" Unladen weight           |  |
| "Centre de gravité" Center of gravity   |  |
| "Capacité Nominale" Rated capacity      |  |
| "Pression service" Working pressure     |  |



## CHARACTERISTICS

| ENGINE                    |                 |                 |
|---------------------------|-----------------|-----------------|
| Type                      |                 | KUBOTA V3307    |
| Fuel                      |                 | Diesel          |
| Number of cylinders       |                 | 4 in line       |
| Suction                   |                 | Supercharged    |
| Injection system          |                 | Direct          |
| Ignition sequence         |                 | 1.3.4.2         |
| Displacement              | cm <sup>3</sup> | 3331            |
| Bore and stroke           | mm              | 94 x 120        |
| Compression ratio         |                 | 17,5            |
| Nominal speed laden       | rpm             | 2600            |
| Min. rpm unladen          | rpm             | 895             |
| Max. rpm unladen          | rpm             | 2800            |
| Power ISO 3046-1          | hp - kW         | 75 - 55,4       |
| Power SAE J 1995          | hp - kW         | 75 - 55,4       |
| Maximum torque ISO 3046-1 | Nm              | 265 at 1400 rpm |
| Air filtration efficiency | µm              | 3               |
| Type of cooling           |                 | Coolant         |
| Fan                       |                 | Suction         |

| TRANSMISSION                |                      |                                    |
|-----------------------------|----------------------|------------------------------------|
| Hydrostatic pump            |                      | DANFOSS                            |
| - Type                      |                      | Variable displacement piston motor |
| - Forward/reverse selector  |                      | Electro-hydraulics                 |
| - Number of forward speeds  |                      | 2 (1 slow and 1 fast)              |
| - Number of reverse speeds  |                      | 2 (1 slow and 1 fast)              |
| Main pump                   |                      |                                    |
| - MAX - MIN. displacement   | cm <sup>3</sup> /rev | 0 - 60                             |
| - MAX. flow rate            | ℓ/min                | 211                                |
| - Working pressure          | bar                  | 400                                |
| Booster pump                |                      |                                    |
| - Displacement              | cm <sup>3</sup> /rev | 14                                 |
| - MAX. flow rate            | ℓ/min                | 33                                 |
| - Boost pressure MAX. speed | bar                  | 26 (transmission in neutral)       |
| Hydrostatic motor           |                      | DANFOSS                            |
| - Type                      |                      | variable bi-directional            |
| - MAX - MIN. displacement   | cm <sup>3</sup> /rev | 29 - 110                           |
| Transfer box                |                      | DANA                               |
| Front axle                  |                      | DANA                               |
| - Differential              |                      | 45% limited slip differential      |
| Rear axle                   |                      | DANA                               |
| - Differential              |                      | Without locking                    |
| Drive wheels                |                      | Permanent 4 WD                     |
| - 2/4 wheel drive control   |                      | no                                 |
| Front tires                 |                      | ALLIANCE                           |
| - Size                      |                      | 300/75 R18 A580                    |
| - Pressure                  | bar                  | 5                                  |
| Rear tires                  |                      | ALLIANCE                           |
| - Size                      |                      | 300/75 R18 A580                    |
| - Pressure                  | bar                  | 5                                  |

| ELECTRIC CIRCUIT |  |                          |
|------------------|--|--------------------------|
| Battery          |  | 12 V - 110 Ah - 750 A EN |
| Alternator       |  | 12 V - 80 A              |
| - Type           |  | A5TA59 77C               |
| Starter          |  | 12 V - 3 kW              |
| - Type           |  | M008T50672               |

| SOUND AND VIBRATION   |                  |  |
|---|------------------|--|
| Sound pressure level in the driver's cab LpA<br>(according to standard EN 12053)  | dB(A)            | 76 (cab closed); xx (cab open)                       |
| Sound pressure (according to Directive 2009/76)   | dB(A)            | xx (cab closed); xx (cab open)                       |
| Guaranteed sound power level in the environment LwA<br>(according to Directive 2000/14/EC modified by Directive 2005/88/EC) | dB(A)            | 104 (measured); 104 (guaranteed)                     |
| Sound level in motion (according to Directive 2009/63)  | dB(A)            | xx   |
| Average weighted acceleration on driver's body<br>(according to standard EN 13059)  | m/s <sup>2</sup> | 1,1  |
| The average weighted acceleration transmitted to the driver's hand/<br>arm system (according to standard ISO 5349-2)        | m/s <sup>2</sup> | < 2,5  |
| Standard seat vibration   | m/s <sup>2</sup> | xx (lightweight operator); xx (heavyweight operator) |

| BRAKE SYSTEM    |                                   |
|-----------------|-----------------------------------|
| Service brake   | Non-servo hydraulic brake         |
| - Type of brake | Oil-immersed multi-disc           |
| - Type of order | By foot on front axle             |
| Parking brake   | Low pressure hydraulic brake      |
| - Type of brake | Oil-immersed multi-disc brake     |
| - Type of order | Switch-operated electro-hydraulic |

| HYDRAULIC CIRCUIT              |                 |                  |             |
|--------------------------------|-----------------|------------------|-------------|
| Hydraulic pump                 |                 | Double gear pump |             |
| - Type                         |                 | 1st housing      | 2nd housing |
| - Displacement                 | cm <sup>3</sup> | 31               | 11          |
| - Max. rating capacity unladen | ℓ/min           | 86               | 31          |
| - Flow at 1600 rpm             | ℓ/min           | 49               | 18          |
| Filtration                     |                 |                  |             |
| - Back                         | μm              | 10               | 10          |
| - Suction                      | μm              | 125              | 125         |
| Maximum working pressure       |                 | 235              |             |
| - Telescoping circuit          | bar             | 235 / 235        |             |
| - Lift circuit                 | bar             | 235 / 235        |             |
| - Tilt circuit                 | bar             | 245 / 245        |             |
| - Attachment circuit           | bar             | 235              |             |
| - Steering circuit             | bar             | 140              |             |

| HYDRAULIC MOVEMENTS                               |           |             |
|---|-----------|-------------|
| Longitudinal stability limiter and warning device |           | Electronics |
| Lifting motions (boom retracted)                  |           |             |
| - Unladen lifting                                 | s - m/min | 7,3 - 32,1  |
| - Laden lifting                                   | s - m/min | 7,45 - 31,4 |
| - Unladen lowering                                | s - m/min | 4,95 - 47,3 |
| - Laden lowering                                  | s - m/min | 5 - 46,8    |
| Telescoping motions (boom raised)                 |           |             |
| - Unladen extending                               | s - m/min | 5,2 - 24,8  |
| - Laden extending                                 | s - m/min | 5,3 - 25,3  |
| - Unladen retracting                              | s - m/min | 3,7 - 35,5  |
| - Laden retracting                                | s - m/min | 3,75 - 35   |
| Tilting movements                                 |           |             |
| - Crowd unladen                                   | s - °/s   | 3,2 - 40,1  |
| - Unladen dump                                    | s - °/s   | 3,2 - 40,1  |

| SPECIFICATIONS AND WEIGHTS   |          |                 |      |
|--|----------|-----------------|------|
| Speed of movement for machine in standard configuration on flat ground   |          |                 |      |
| • Front unladen  | • 1 Slow | km/h            | 7    |
|  | • 1 fast | km/h            | 24,8 |
| • Rear unladen   | • 1 Slow | km/h            | 7    |
|  | • 1 fast | km/h            | 24,8 |
| Standard attachment  |          | PFB 25N 1020 MT |      |
| - Weight of attachment (without forks)                                   | kg       | 80              |      |
| - Weight of forks (each)   | kg       | 76              |      |
| Rated capacity with standard attachment                                  | kg       | 2500            |      |
| Tipping load at maximum reach on tires                                   | kg       | -               |      |
| Distance from the center of gravity of the load to the base of the forks | mm       | 500             |      |
| Standard lifting height  | mm       | 5900            |      |
| Weight of machine without attachment                                     | kg       | 4700            |      |
| Weight of machine with standard attachment                               |          |                 |      |
| - Unladen  | kg       | 4932            |      |
| - At rated load  | kg       | 7432            |      |
| Weight per axle with standard attachment (transport position)            |          |                 |      |
| - Front unladen  | kg       | 2295            |      |
| - Rear unladen   | kg       | 2630            |      |
| - Front rated load   | kg       | 6572            |      |
| - Rear rated load  | kg       | 860             |      |
| Weight per axle with standard attachment (boom extended)                 |          |                 |      |
| - Front rated load   | kg       | 5152            |      |
| - Rear rated load  | kg       | 580             |      |
| Tractive effort on the coupling hook                                     |          |                 |      |
| - Unladen (sliding)  | daN      | 3240            |      |
| - At rated load (transmission setting)                                   | daN      | 3240            |      |
| Break-out force with bucket (according to standard ISO 8313)             | daN      | 4205            |      |

## TIRES

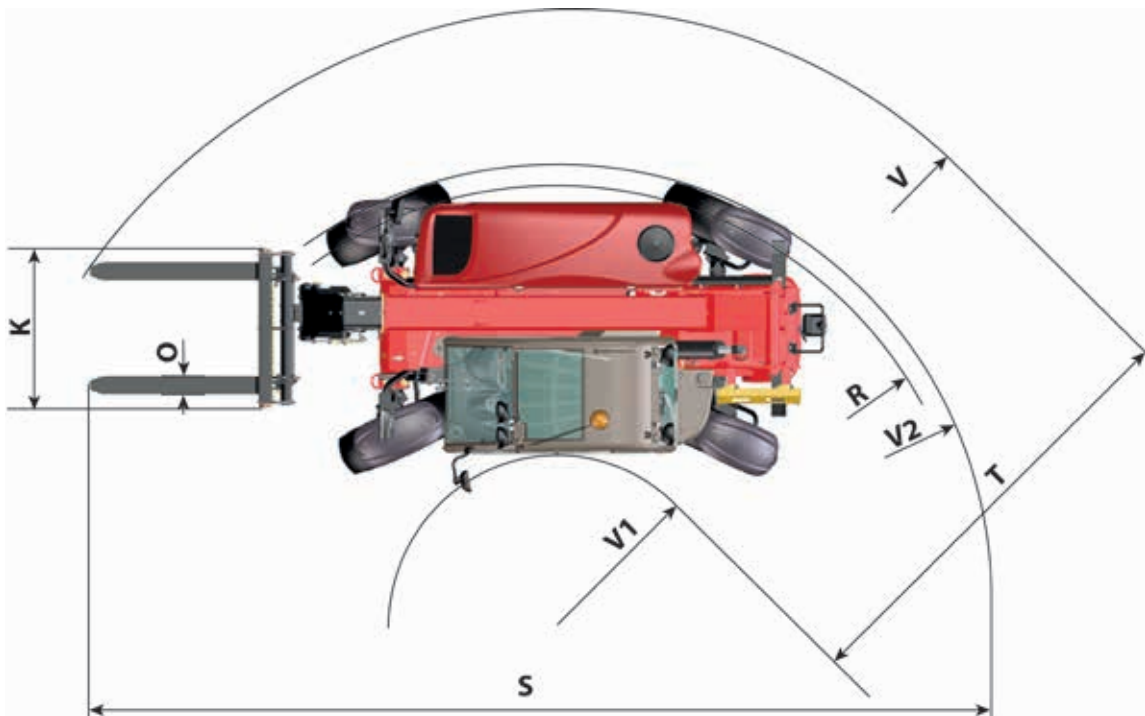
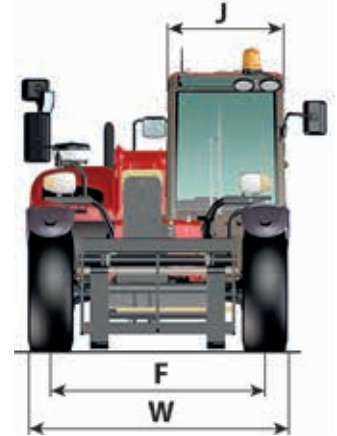
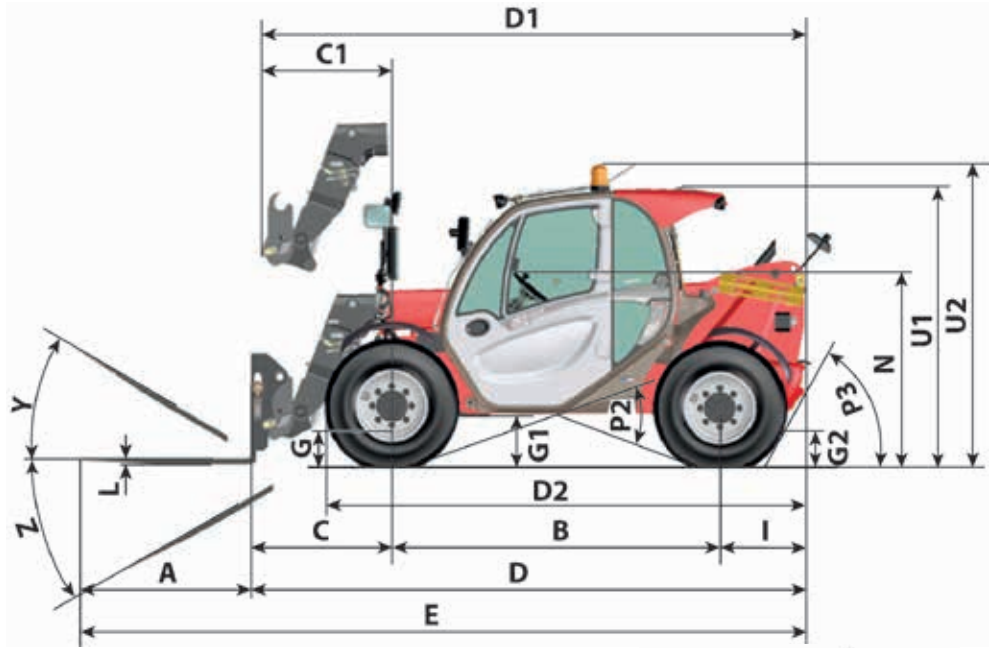
|          |                          | PRESSURE<br>(bar) | LOAD PER TIRE<br>(kg) |               |                |              |
|----------|--------------------------|-------------------|-----------------------|---------------|----------------|--------------|
|          |                          |                   | FRONT UNLADEN         | FRONT (LADEN) | REAR (UNLADEN) | REAR (LADEN) |
| ALLIANCE | 300/75 R18 A580          | 5                 | 1100                  | 3250          | 1250           | 350          |
|          | 400/55 R17,5 A328 145B   | 3,2               |                       |               |                |              |
| MICHELIN | 280/80 R20 133A8 XMCL    | 4.4               |                       |               |                |              |
|          | 280/80 R18 132A8 XMCL    | 4.2               |                       |               |                |              |
| BKT      | 15.0/55-17 AS504 14PR TL | 3,6               |                       |               |                |              |

|          |                          | PRESSURE<br>(bar) | LOAD<br>(kg) | PRESSURE ON THE CONTACT SURFACE<br>(kg/cm <sup>2</sup> ) |             | GROUND CONTACT AREA<br>(cm <sup>2</sup> ) |             |
|----------|--------------------------|-------------------|--------------|--|-------------|---|-------------|
|          |                          |                   |              | HARD GROUND  | SOFT GROUND | HARD GROUND                               | SOFT GROUND |
|          |                          |                   |              |  |             |   |             |
| ALLIANCE | 300/75 R18 A580          | 5                 | 350          |  |             |   |             |
|          |                          |                   | 1100         |  |             |   |             |
|          |                          |                   | 1250         |  |             |   |             |
|          |                          |                   | 3250         |  |             |   |             |
|          | 400/55 R17,5 A328 145B   | 3.2               | 350          |  |             |   |             |
|          |                          |                   | 1100         |  |             |   |             |
|          |                          |                   | 1250         |  |             |   |             |
|          |                          |                   | 3250         |  |             |   |             |
| MICHELIN | 280/80 R20 133A8 XMCL    | 4.4               | 350          | 3.80   | 0.40        | 92  | 882         |
|          |                          |                   | 1100         | 6.43   | 0.95        | 171                                       | 1157        |
|          |                          |                   | 1250         | 7.02   | 1.05        | 178                                       | 1191        |
|          |                          |                   | 3250         | 10.80  | 1.73        | 301                                       | 1877        |
|          | 280/80 R18 132A8 XMCL    | 4.2               | 350          |  |             |   |             |
|          |                          |                   | 1100         |  |             |   |             |
|          |                          |                   | 1250         |  |             |   |             |
|          |                          |                   | 3250         |  |             |   |             |
| BKT      | 15.0/55-17 AS504 14PR TL | 3.6               | 350          |  |             |   |             |
|          |                          |                   | 1100         |  |             |   |             |
|          |                          |                   | 1250         |  |             |   |             |
|          |                          |                   | 3250         |  |             |   |             |

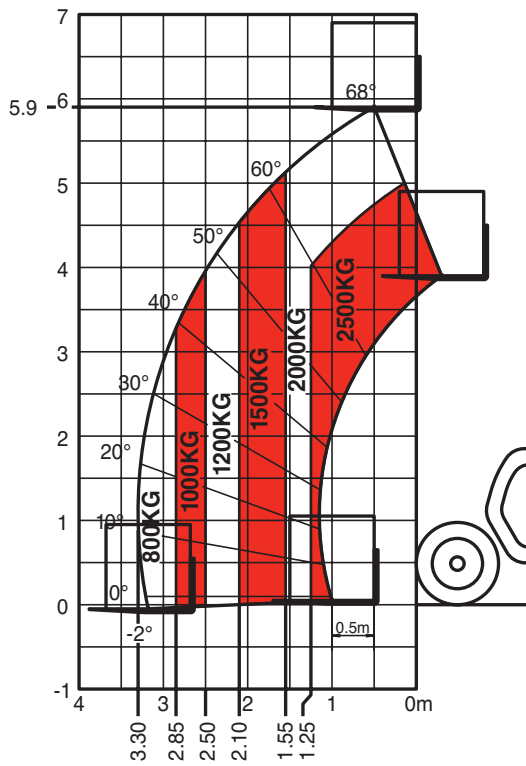


# DIMENSIONS AND LOAD CHARTS

|    |    |      |
|----|----|------|
| A  | mm | 1200 |
| B  | mm | 2300 |
| C  | mm | 991  |
| C1 | mm | 928  |
| D  | mm | 3894 |
| D1 | mm | 3831 |
| D2 | mm | 3393 |
| E  | mm | 5094 |
| F  | mm | 1500 |
| F1 | mm | 1500 |
| G  | mm | 318  |
| G1 | mm | 378  |
| G2 | mm | 322  |
| G3 | mm | -    |
| H  | °  | -    |
| H1 | °  | -    |
| I  | mm | 603  |
| J  | mm | 797  |
| K  | mm | 1015 |
| L  | mm | 45   |
| N  | mm | 1398 |
| O  | mm | 125  |
| P2 | °  | 45   |
| P3 | °  | 65   |
| R  | mm | 3033 |
| S  | mm | 6531 |
| T  | mm | 3475 |
| U1 | mm | 2000 |
| U2 | mm | 2167 |
| V  | mm | 4240 |
| V1 | mm | 765  |
| V2 | mm | 3190 |
| W  | mm | 1814 |
| W1 | mm | -    |
| W2 | mm | -    |
| W3 | mm | -    |
| Y  | °  | 12   |
| Z  | °  | 117  |



# MLT/MLT-X 625-75 H



SUIVANT NORME EN 1459 annexe B.

N°315374



## VISIBILITY

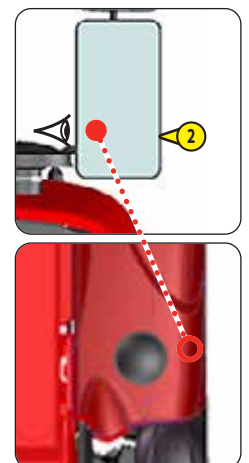
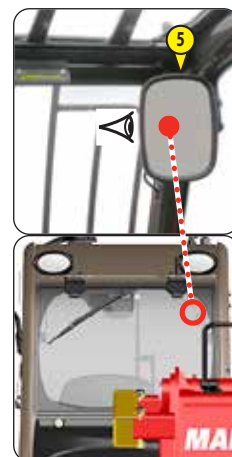
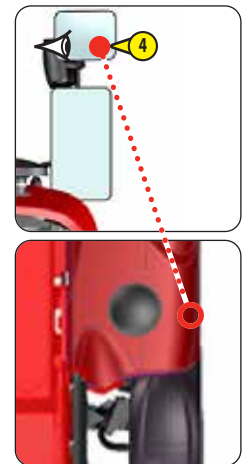
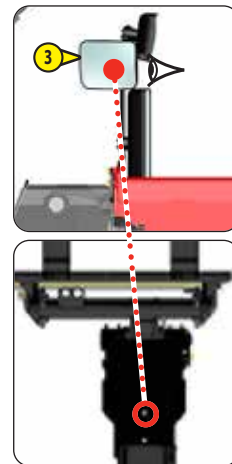
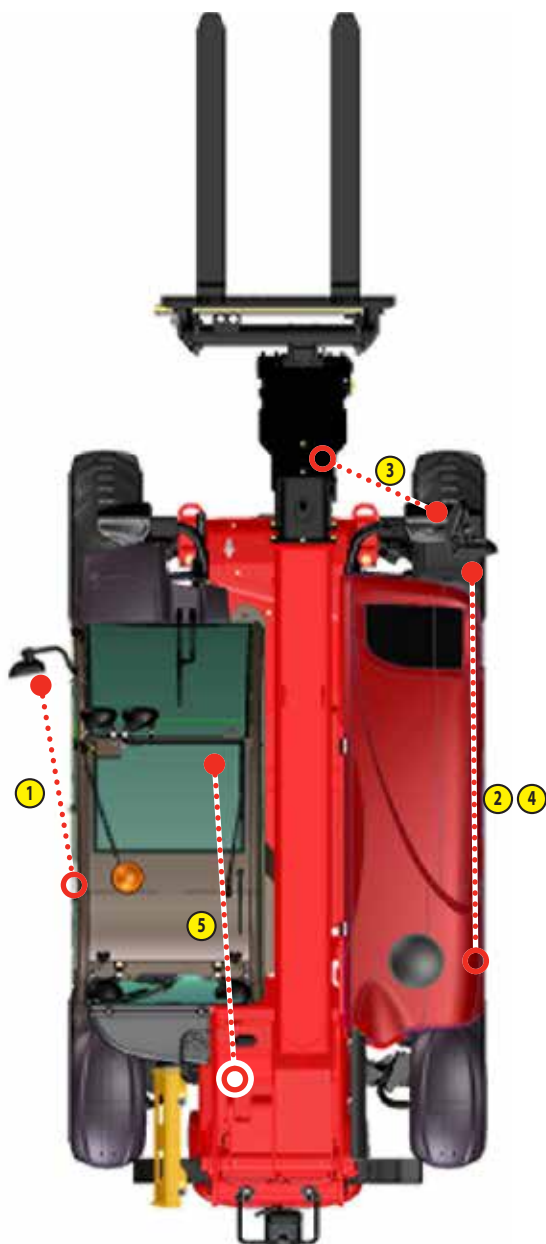
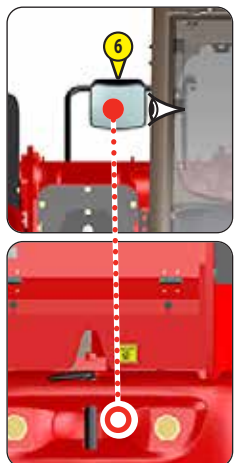
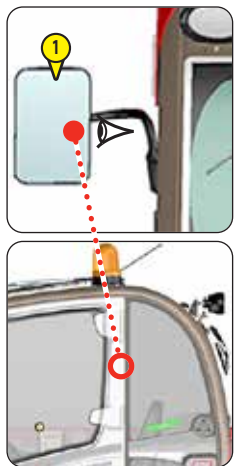
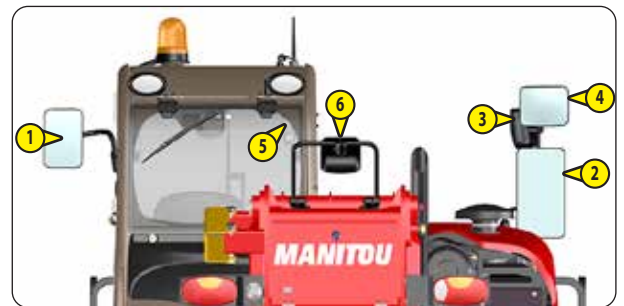
We use European standard EN15830 relating to operator visibility.

- Adhere to the instructions for optimizing operator visibility in the immediate vicinity (1 - OPERATING AND SAFETY INSTRUCTIONS: OPERATOR INSTRUCTIONS: OPERATING INSTRUCTIONS WITH AND WITHOUT LOAD: D - VISIBILITY).

### DESCRIPTION AND ADJUSTMENT OF REAR-VIEW MIRRORS

- 1 - LEFT REAR-VIEW MIRROR
- 2 - MAIN RIGHT REAR-VIEW MIRROR
- 3 - CENTRAL RIGHT REAR-VIEW MIRROR
- 4 - UPPER RIGHT REAR-VIEW MIRROR
- 5 - INSIDE REAR-VIEW MIRROR (OPTION)
- 6 - REAR-VIEW MIRROR (OPTION)

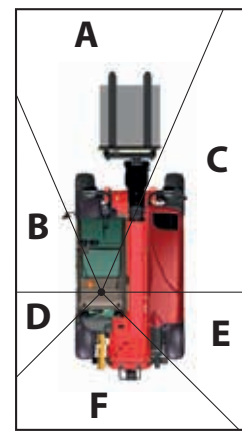
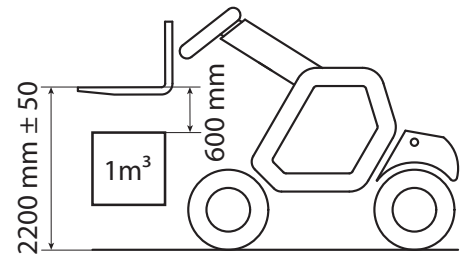
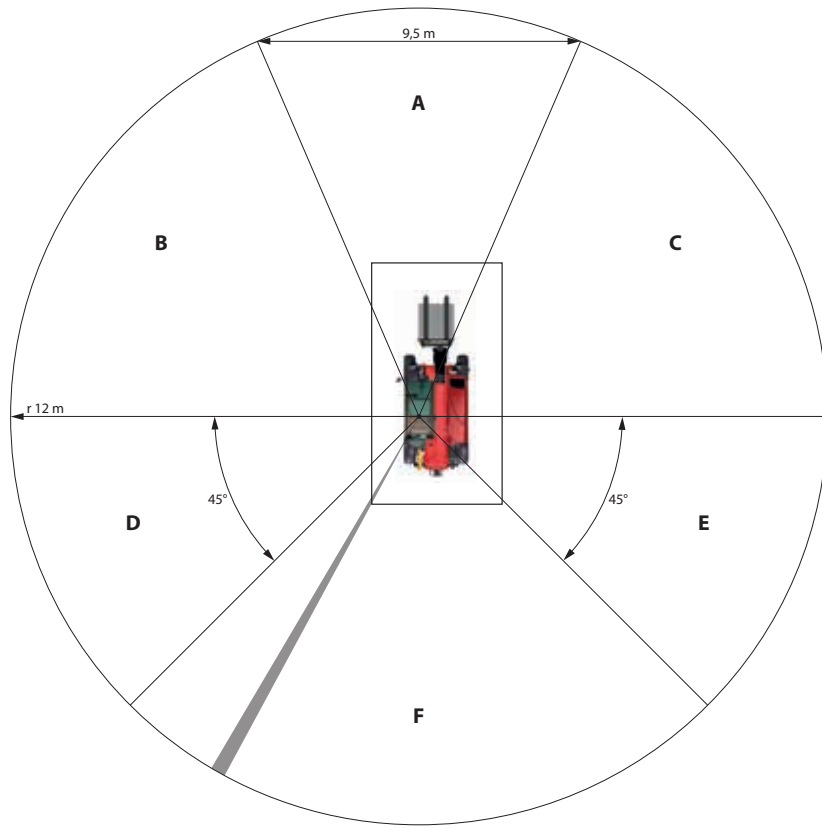
- Place the machine on level ground with the engine stopped, and the boom retracted and lowered as far as possible.
- Note the position of the reference points ●...○ in the illustrations, to see and correctly adjust the rear-view mirrors.



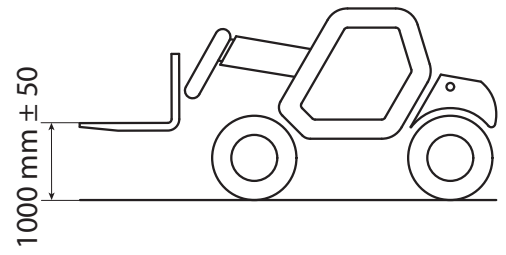
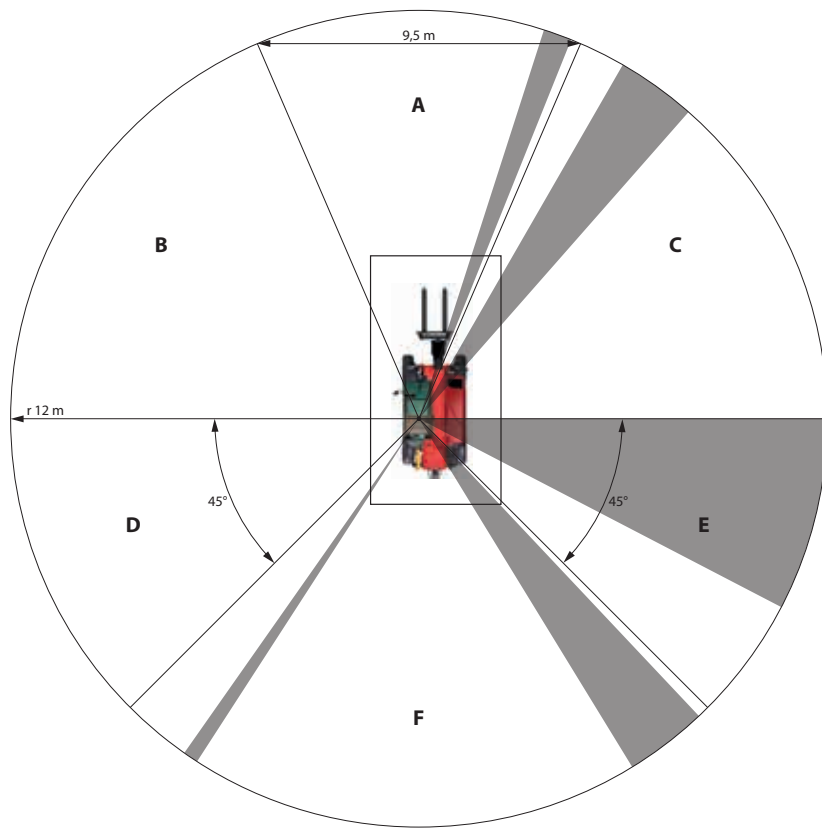
**DIRECT AND/OR INDIRECT VISIBILITY BLIND SPOT ZONES**

The two diagrams below indicate blind spot zones on the visibility test circle (12 m radius) and the 1 m rectangular zone around the machine, according to tests carried out in accordance with EN 15830.

**HANDLING SUSPENDED LOADS (Test carried out in accordance with 6.3.3 of EN 15830)**



**LOADING THE TRAILER (Test carried out in accordance with 6.3.4 of EN 15830)**



# INSTRUMENTS AND CONTROLS

## DESCRIPTION

N.B.: All the terms such as: RIGHT, LEFT, FRONT, REAR are as seen by an observer occupying the driver's seat and looking straight ahead.

|   |      |
|---|------|
| 1 - DRIVER'S CAB ACCESS .....   | 2-24 |
| 2 - SEAT BELT .....   | 2-24 |
| 3 - DRIVER'S SEAT .....   | 2-25 |
| 4 - IGNITION SWITCH .....   | 2-27 |
| 5 - EMERGENCY STOP .....  | 2-27 |
| 6 - BATTERY CUT-OFF .....   | 2-27 |
| 7 - BATTERY .....   | 2-27 |
| 8 - MAN-MACHINE INTERFACE (MMI) .....                                   | 2-28 |
| 9 - LONGITUDINAL STABILITY LIMITER AND WARNING DEVICE .....             | 2-32 |
| 10 - SWITCHES .....   | 2-34 |
| 11 - ARMREST AND STORAGE .....  | 2-35 |
| 12 - DIAGNOSTIC PLUG .....  | 2-35 |
| 13 - FUSES AND RELAYS .....   | 2-36 |
| 14 - CIGARETTE LIGHTER .....  | 2-37 |
| 15 - LIGHTING, HORN AND INDICATOR SWITCH .....                          | 2-37 |
| 16 - FRONT AND REAR WINDSHIELD WIPER SWITCH .....                       | 2-38 |
| 17 - FUNCTION FILES .....   | 2-38 |
| 18 - HYDRAULIC CONTROLS .....   | 2-38 |
| 19 - ACCELERATOR PEDAL .....  | 2-40 |
| 20 - SERVICE BRAKE PEDAL AND TRANSMISSION CUT-OFF .....                 | 2-40 |
| 21 - FORWARD/NEUTRAL/REVERSE SELECTOR .....                             | 2-40 |
| 22 - STEERING SELECTION .....   | 2-41 |
| 23 - HEATER CONTROL .....   | 2-42 |
| 24 - AIR CONDITIONING CONTROLS (AIR CONDITIONING OPTION) .....          | 2-42 |
| 25 - HEATING VENTS .....  | 2-43 |
| 26 - DEMIST VENTS .....   | 2-43 |
| 27 - LEVEL INDICATOR .....  | 2-43 |
| 28 - DOOR LOCK .....  | 2-43 |
| 29 - DOOR WINDOW OPENING HANDLE .....                                   | 2-43 |
| 30 - DOOR WINDOW RELEASE BUTTON .....                                   | 2-43 |
| 31 - HANDLE FOR REAR WINDOW OPENING .....                               | 2-43 |
| 32 - REAR STORAGE SPACE .....   | 2-43 |
| 33 - DOCUMENT STORAGE NET .....   | 2-43 |
| 34 - STEERING WHEEL ADJUSTMENT LEVER (OPTION) .....                     | 2-43 |
| 35 - FRONT HEADLIGHTS .....   | 2-44 |
| 36 - REAR LIGHTS .....  | 2-44 |
| 37 - ROTATING BEACON LIGHT .....  | 2-44 |
| 38 - ROOF LIGHT .....   | 2-44 |
| 39 - ROOF WINDSHIELD WIPER SWITCH .....                                 | 2-44 |
| 40 - SUN VISOR .....  | 2-44 |
| 41 - INTERNAL REAR-VIEW MIRROR .....                                    | 2-45 |
| 42 - TELEPHONE HOLDER (DEPENDING ON ASSEMBLY) .....                     | 2-45 |
| 43 - BOOM SAFETY WEDGE .....  | 2-45 |
| 44 - FUEL TANK .....  | 2-45 |
| 45 - EASY HYDRAULIC ATTACHMENT CONNECTION (DEPENDING ON ASSEMBLY) ..... | 2-45 |



## 1 - DRIVER'S CAB ACCESS

Use the contact points 1 to get into or out of the driver's cab.

- Mounting at the front.
- Descending at the rear.



## 2 - SEAT BELT

### **⚠ IMPORTANT ⚠**

*Under no circumstances must the machine be used if the seat belt is defective (fixing, locking, cuts, tears, etc.).  
Immediately repair or replace the seat belt.*

- Sit correctly on the seat.
- Check that the seat belt is not twisted.
- Place the seat belt at hip level.
- Attach the seat belt and check that it locks.
- Adjust the seat belt to your body shape without compressing your pelvis and without excessive slack.



### 3 - DRIVER'S SEAT

#### DRIVER'S SEAT (STANDARD)

DESIGNED FOR MAXIMUM COMFORT, THIS SEAT CAN BE ADJUSTED AS FOLLOWS.

#### WEIGHT ADJUSTMENT

Adjust the weight when the driver is sitting on the seat.

- Pull the weight adjustment lever 1 fully out.
- Move the weight adjustment lever 1 upwards to increase the weight or downwards to reduce it.
- There are ten possible positions between the min and max weights. Before each run, return the lever to the central position. The max. or min. position is indicated by a freely traveling lever.
- The driver's weight is correctly adjusted when the arrow is in the center of the indicator 2.
- After completing the weight adjustment, fully lower the lever 1.

N.B.: To avoid health problems, it is recommended that the weight adjustment should be checked and adjusted before starting the machine.

#### LONGITUDINAL ADJUSTMENT

- Adjust the locking lever until you reach the position required. Once locked, you can no longer move the seat into another position.

**⚠ IMPORTANT ⚠**

*Only operate the lever by its recessed section and do not grasp from below, at the risk of crushing the hand.*

#### LUMBAR ADJUSTMENT

This increases the comfort of the seat and the driver's freedom of movement.

- Turn the handle to 1 to adjust the height and depth of the lumbar support of the upper part of the back-rest.
- Turn the handle to 2 to adjust the height and depth of the lumbar support of the lower part of the back-rest.

#### BACKREST ANGLE ADJUSTMENT

- Support the backrest, pull the lever and tilt the backrest to the desired position.

**⚠ IMPORTANT ⚠**

*If you do not support the backrest when making adjustments, it swings forward.*

#### MAINTENANCE

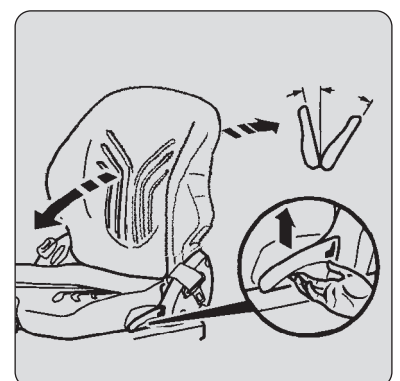
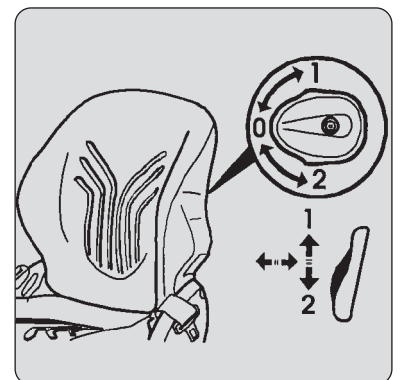
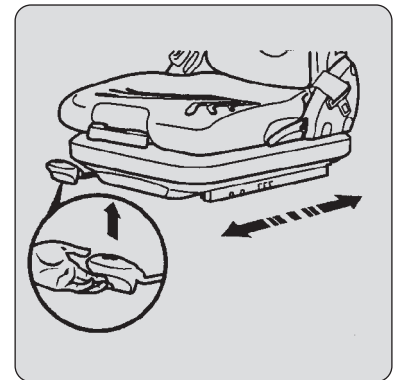
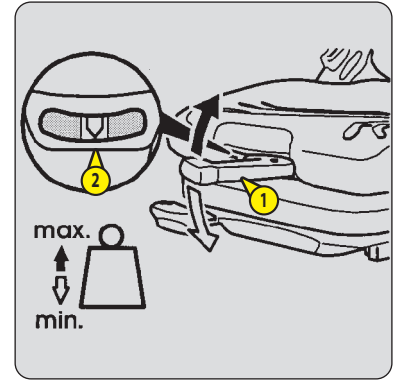
Dirt may adversely affect the correct functioning of the seat. For this reason, make sure your seat is always clean.

- The cushions do not need to be removed from the seat frame for cleaning.

**⚠ IMPORTANT ⚠**

*Accident risks are increased when the back-rest tilts.*

First check the resistance of the fabric on a small concealed area before using any fabric and plastic cleaner.



## DRIVER'S SEAT (OPTION)

DESIGNED FOR MAXIMUM COMFORT, THIS SEAT CAN BE ADJUSTED AS FOLLOWS.

### SEAT WEIGHT AND HEIGHT ADJUSTMENT

Adjust the weight when the driver is sitting on the seat.

- Switch on the machine's ignition.
- Move the weight adjustment lever 1 upwards to increase the weight or downwards to reduce it.
- The min and max weight can be set by engaging the upper or lower limit switch.
- The driver's weight is correctly adjusted when the arrow is in the center of the indicator 2.
- The seat height can be adjusted within this zone.

N.B.: To avoid health problems, it is recommended that the weight adjustment should be checked and adjusted before starting the machine.

#### ⚠ IMPORTANT ⚠

*To avoid damage, do not operate the compressor for more than 1 minute.*

### LONGITUDINAL ADJUSTMENT

- Adjust the locking lever until you reach the position required. Once locked, you can no longer move the seat into another position.

#### ⚠ IMPORTANT ⚠

*Only operate the lever by its recessed section and do not grasp from below, at the risk of crushing the hand.*

### LUMBAR ADJUSTMENT

This increases the comfort of the seat and the driver's freedom of movement.

- Turn the handle to 1 to adjust the height and depth of the lumbar support of the upper part of the back-rest.
- Turn the handle to 2 to adjust the height and depth of the lumbar support of the lower part of the back-rest.

### BACKREST ANGLE ADJUSTMENT

- Support the backrest, pull the lever and tilt the backrest to the desired position.

#### ⚠ IMPORTANT ⚠

*If you do not support the backrest when making adjustments, it swings forward.*

### MAINTENANCE

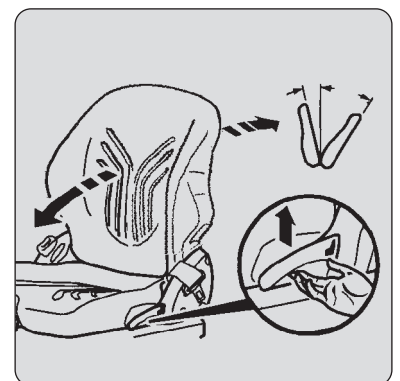
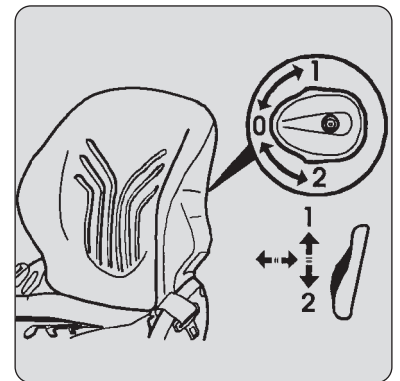
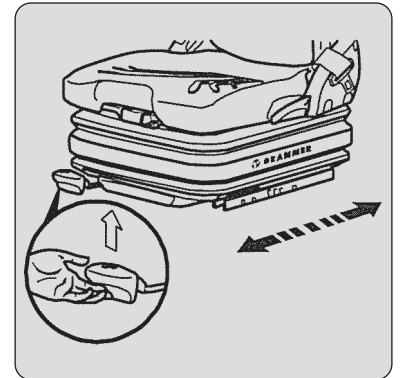
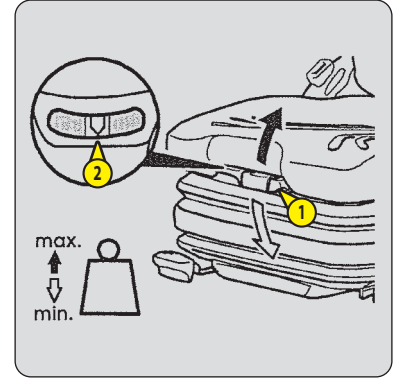
Dirt may adversely affect the correct functioning of the seat. For this reason, make sure your seat is always clean.

- The cushions do not need to be removed from the seat frame for cleaning.

#### ⚠ IMPORTANT ⚠

*Accident risks are increased when the back-rest tilts*

First check the resistance of the fabric on a small concealed area before using any fabric and plastic cleaner.



## 4 - IGNITION SWITCH

This key switch has 5 positions:

- P - Not used.
- O - Ignition cut-off and engine stop.
- I - Ignition + preheat.
- II - Not used.
- III - Starting and return to position I as soon as the key is released.

## 5 - EMERGENCY STOP

In the event of danger, it enables the engine to be shut down, thereby cutting-off all hydraulic movements.

### **⚠ IMPORTANT ⚠**

*Be ready for hydraulic movements suddenly stopping when you press this button.*

*If possible stop the machine before using the emergency stop button.*

- Turn the knob to deactivate it before restarting the machine.



## 6 - BATTERY CUT-OFF

For quickly disconnecting the battery when working on the electric circuit or when soldering, for example.

### **⚠ IMPORTANT ⚠**

*Operate the battery cut-off for a minimum of 30 seconds after having switched off the ignition with the ignition key.*



## 7 - BATTERY



## 8 - MAN-MACHINE INTERFACE (MMI)

- A - CONTROL PANEL
- B - SCREEN DISPLAYS

### A - CONTROL PANEL

#### **⚠ IMPORTANT ⚠**

*A permanently lit or flashing warning light, with the engine running, is the sign of an operating fault. Illumination of some indicator lights may be accompanied by an audible signal. Do not ignore this warning. Contact your dealer as soon as possible. If any of the warning lamps come on while the machine is in motion, stop the machine under the safest possible conditions.*



#### **REV COUNTER**


10-level LED display from 0 to 3000 rpm.



#### **ENGINE WATER TEMPERATURE**

Temperature zones:

- 1 LED - (< 40 °C) zone. Use the machine with moderation, wait for temperature to increase before normal operation.
- 2 LEDs - (40 °C - 60 °C). zone
- 3 LEDs - (60 °C - 80 °C). zone
- 4 LEDs - (80 °C - 85 °C). zone
- 5 LEDs - (85 °C - 90 °C). zone
- 6 LEDs - (90 °C - 95 °C) zone from 40 °C to 95 °C. Use the machine normally.
- 7 LEDs - (95 °C - 105 °C) zone. Use the machine with moderation.
- 8 LEDs - (105 °C - 110 °C) zone. Use the machine with moderation, ventilation control operating at full speed.
- 9 LEDs - Red zone (110 °C - 115 °C).
- 10 LEDs - Red zone (> 115 °C). Stop the machine, seek the cause of overheating.

N.B.: The red indicator lamp  and the buzzer come on (> 110 °C) when the machine is running. Stop the engine immediately and look for the cause of the failure in the cooling circuit.



#### **FUEL LEVEL**

When only one LED is still displayed, the indicator lamp  comes on, indicating that you are using the reserve fuel supply and that your operating time is limited.



#### **FORWARD/NEUTRAL/REVERSE INDICATOR**

◀ FORWARD/NEUTRAL/REVERSE SELECTOR.



#### **AIR FILTER CLOGGING WARNING INDICATOR**

The light and the buzzer come on when the air filter cartridge is clogged. If this indicator lamp comes on and stays on, the cartridge needs replacing. Stop the engine and carry out the necessary repairs (◀ 3 - MAINTENANCE: FILTER CARTRIDGES AND BELTS).



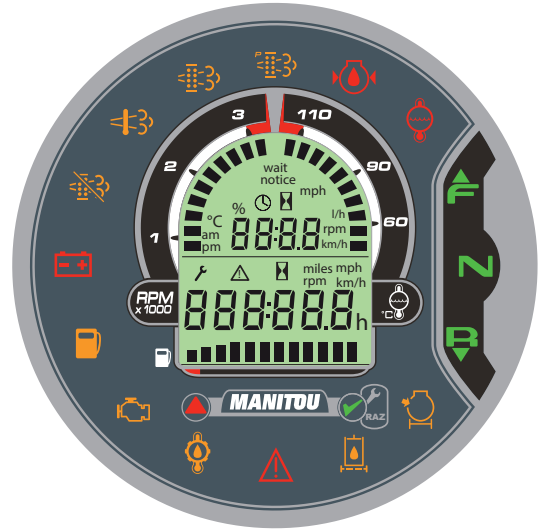
#### **HYDRAULIC OIL FILTER CLOGGING WARNING INDICATOR LAMP**

The lamp and the buzzer come on when the hydraulic return oil filter cartridge is clogged up. Stop the engine and carry out the necessary repairs (◀ 3 - MAINTENANCE: FILTER CARTRIDGES AND BELTS).



#### **GENERAL FAULT WARNING INDICATOR LAMP**

If the lamp and the buzzer come on when the machine is running, stop the engine immediately and consult your dealer.





### TRANSMISSION OIL TEMPERATURE WARNING INDICATOR LAMP

The lamp and the buzzer come on when the transmission oil temperature is abnormally high. Stop the machine and seek the cause of this overheating.



### ENGINE FAULT INDICATOR

If the indicator light comes on or flashes while the machine is in operation, a diagnostic fault has been detected. The machine will operate in reduced mode. Consult your dealer as soon as possible.



### FUEL LEVEL LAMP WARNING INDICATOR LAMP



FUEL LEVEL



### BATTERY CHARGE WARNING INDICATOR

If the indicator and the buzzer come on when the machine is running, stop the engine immediately and determine the cause (electric circuit, alternator belt, alternator, etc.).



### AUTOMATIC EXHAUST PURIFICATION DEACTIVATED INDICATOR LAMP

The indicator lamp comes on when the machine is running to indicate that the automatic exhaust purification is disabled (<img alt="switch icon" data-bbox="75 345 95 355"/> SWITCHES).



### HIGH EXHAUST GAS TEMPERATURE INDICATOR LAMP

The indicator lamp comes on while the machine is operating to indicate a high exhaust gas temperature. You can continue to use the machine (<img alt="switch icon" data-bbox="215 408 235 418"/> SWITCHES).



### SOOT LEVEL INDICATOR LAMP

The indicator lamp comes on while the machine is operating to indicate the soot level (<img alt="switch icon" data-bbox="675 458 695 468"/> SWITCHES).



### "STATIONARY MACHINE" EXHAUST PURIFICATION INDICATOR LAMP

The indicator lamp comes on while the machine is operating, indicating that a "stationary machine" exhaust purification is in progress (<img alt="switch icon" data-bbox="215 521 235 531"/> 3 - MAINTENANCE: OCCASIONAL MAINTENANCE).



### ENGINE OIL PRESSURE WARNING INDICATOR LAMP

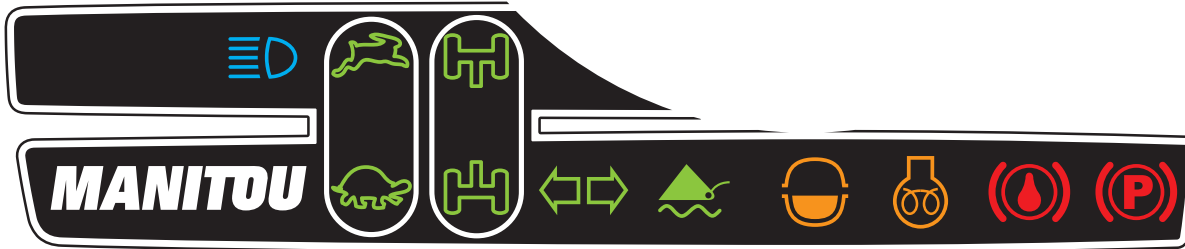
If the indicator lamp and the buzzer come on when the machine is operating, stop the engine immediately and look for the cause (engine oil level, etc.).



### ENGINE WATER TEMPERATURE WARNING INDICATOR



ENGINE WATER TEMPERATURE



**(P) PARKING BRAKE FAULT INDICATOR LAMP**

The indicator lamp comes on when the parking brake is applied (↔ SWITCHES).

**(🔴) BRAKE FLUID LEVEL WARNING INDICATOR**

If the lamp comes on when the machine is running, stop the engine immediately and check the brake fluid level. If the brake fluid level is abnormal, consult your dealer.

**(🔴) ENGINE PREHEAT FAULT INDICATOR LAMP**

If preheating is required, the lamp comes on when the machine's ignition is switched on and should go out as soon as preheating is ended. If the lamp comes on while the machine is in operation, immediately stop the engine and determine the cause.

**(🔴) WATER IN FUEL PRE-FILTER WARNING INDICATOR LAMP**

The indicator light will come on when water is detected in the fuel pre-filter. Stop the machine and carry out the necessary repairs.

**(🟢) BOOM SUSPENSION OPTION**

When the indicator lamp is on this indicates the boom suspension is activated (↔ DESCRIPTION AND USE OF THE OPTIONS).

**(↔) TURN SIGNAL INDICATOR**

**(🟢) FRONT WHEEL ALIGNMENT INDICATOR LAMP**

**(🟢) REAR WHEEL ALIGNMENT INDICATOR LAMP**

**(🟢) FAST GEAR INDICATOR LAMP**

**(🟢) SLOW GEAR INDICATOR LAMP**

**(💡) BLUE MAIN BEAM HEADLIGHTS INDICATOR LAMP**

**B - SCREEN DISPLAYS**



UPPER SCREEN DISPLAY



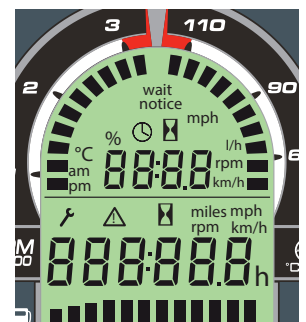
LOWER SCREEN DISPLAY



SCROLL BUTTON

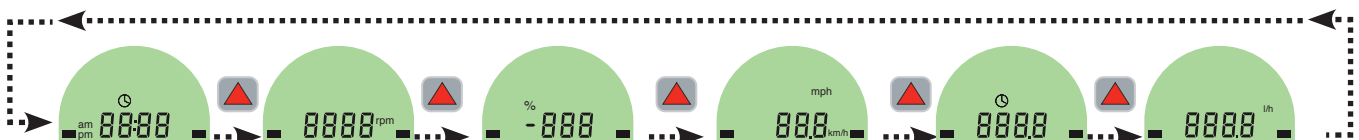


VALIDATION, RESET AND ERROR CODE BUTTON



**UPPER SCREEN DISPLAY**

Switch on the machine's ignition. By default, the screen will show the time. Press the scroll button to switch from one screen to the other in turn.



Clock

Tachometer.








Attachment hydraulic circuit flow (↵ HYDRAULIC CONTROL).

Speed of the machine (consult your dealer).


Partial hour meter.

Instantaneous consumption.

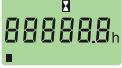

### SETTING THE TIME

- Display clock screen.
- Press the  button for 2 seconds, choose the "24 hour" or "12 hour am/pm" clock with the  button and confirm .
- Set the hours with the  button and confirm .
- Set the minutes with the  button and confirm .


### RESETTING THE PARTIAL HOUR METER



- Display the partial hour meter screen.
- Press the button  for two seconds, resetting is confirmed by an audible signal.


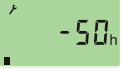


### LOWER SCREEN DISPLAY

Switch on the machine's ignition. By default, the screen will show the hour meter , i.e. the total number of hours the machine has been used. As soon as the engine is running, the flashing  pictogram is displayed and the hour meter records the hours of operation.

### MAINTENANCE INTERVAL

N.B.: When the new machine is started, the maintenance key  will logically be displayed to provide a reminder to replace the engine oil and the oil filter after the first 50 hours of use of the new machine (↵ 3 - MAINTENANCE: DAILY AND WEEKLY SERVICING).



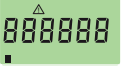



The maintenance key  appears on the hour meter screen  50 hours before the maintenance deadline and generates an audible signal.

- Press the  button to display the time remaining before maintenance . In the event that the deadline is exceeded, the hours are shown with a plus sign.
- Press the  button again to return to the hour meter screen. The maintenance key  will be displayed for information.
- Contact your dealer to carry out the necessary maintenance operations and reset the maintenance interval.

N.B.: The maintenance frequency interval displayed by default is 500 hours; this interval can be modified. Please contract your dealer about this.

### ERROR CODES

The appearance of the pictogram  on the hour meter screen , together with an audible signal, indicates that a fault has been detected by one of the machine's Electronic Control Units (ECUs).

- Press the  button to display the information  on the upper screen, as well as the error code .
- If there are several error codes, press the button  to scroll through all the error codes.
- Press the button  again to return to the hour meter screen; the pictogram  will remain displayed as long the as the required repairs have not been carried out.
- Contact your dealer, stating the error code or codes.

N.B.: A faulty fuse can generate a number of error codes. When "error codes" and "maintenance interval" are displayed together, the maintenance reminder time will appear at the end of the list.

## 9 - LONGITUDINAL STABILITY LIMITER AND WARNING DEVICE

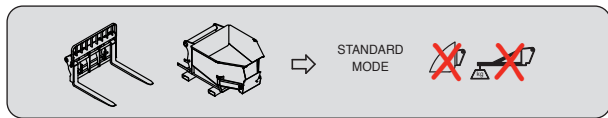
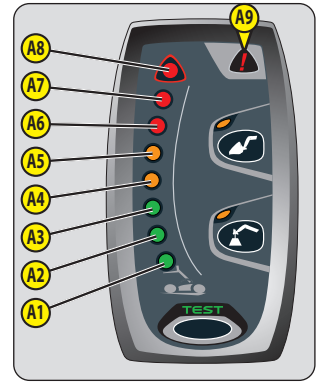
### ⚠ IMPORTANT ⚠

The operator must respect the machine's load chart, and the operating mode according to the attachment.

This device warns the operator of the machine's longitudinal stability limits. However, lateral stability can reduce the load chart in the upper part, and this reduction is not detected by the device.

Depending on the type of work required, the operating modes of the longitudinal stability limiter and warning device allow the operator to operate the machine in complete safety.


UPDATE: To gain maximum advantage from the longitudinal stability limiter and warning device of your machine, contact your dealer to receive the latest version of the software available.

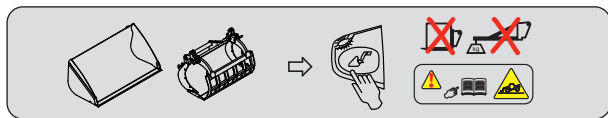


### "HANDLING" MODE

#### USE ON FORKS


- By default, the device is in "HANDLING" MODE each time the machine is started.
- Protection against tilting forward during aggravating movements is guaranteed, except when the telescope is retracted.


| STATUS OF THE DEVICE  |   |                  |  |
|---|---|------------------|--|
| HALTED  | SLOW SPEED 1 to 5 km/h  | SPEED > 5 km/h   | TELESCOPE(S) RETRACTED   |
| A4-A5 : Very slow intermittent sound alarm.<br>A6 : Slow intermittent sound alarm.<br>A7 : Fast intermittent audible alarm.<br>A8 : Very fast intermittent audible alarm. | A7 : Fast intermittent audible alarm.<br>A8 : Very fast intermittent audible alarm. | -No sound alarm. | -No sound alarm.<br>-Indicator lamp A9  on. |

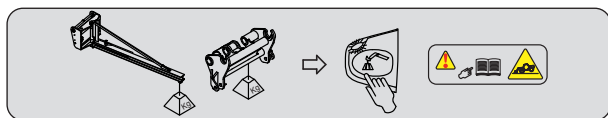


### "BUCKET" MODE

#### USE WITH BUCKET


- Place the machine in transport position.
- Hold down the  button, "BUCKET" MODE is confirmed by a sound signal and the indicator lamp coming on.
- Press this button again or switch off the ignition with the ignition key to return to "HANDLING" MODE.
- Protection against tilting forward during aggravating movements is guaranteed, except when the telescope is retracted.


| STATUS OF THE DEVICE  |   |   |  |
|---|---|---|--|
| HALTED  | SLOW SPEED 1 to 5 km/h  | SPEED > 5 km/h  | TELESCOPE(S) RETRACTED   |
| -The "BUCKET" mode deactivates automatically if the machine remains stationary. | A6 : An audible signal upon passing into the red zone.<br>-The hydraulic movements are adapted. | -No sound alarm.<br>-The hydraulic movements are adapted. | -No sound alarm.<br>-Indicator lamp A9  on. |



### "SUSPENDED LOAD" MODE


#### USE WITH LIFTING DEVICE (offering a higher margin of safety)

- Place the machine in transport position.
- Press the  button, the "SUSPENDED LOAD" MODE is confirmed by a sound signal and the indicator lamp coming on. Hydraulic tilting movements are neutralized, as well as the lifting movement, when the longitudinal stability limit is reached (indicator lamp A8 on).
- Press this button again or switch off the ignition with the ignition key to return to "HANDLING" MODE.
- Protection against tilting forward during aggravating movements is guaranteed, except when the telescope is retracted.

| STATUS OF THE DEVICE |   |                |   |
|----------------------|---|----------------|---|
| HALTED               | SLOW SPEED 1 to 5 km/h  | SPEED > 5 km/h | TELESCOPE(S) RETRACTED  |
|                      | A4-A5 : Very slow intermittent sound alarm.<br>A6 : Slow intermittent sound alarm.<br>A7 : Fast intermittent audible alarm.<br>A8 : Very fast intermittent audible alarm. |                | -No sound alarm.<br>-Indicator light A9 on.  |

### A - VISUAL ALARMS

- A1 - A2 - A3: There is a significant reserve of longitudinal stability.
- A4 - A5: The machine is nearing the longitudinal stability limit. Maneuver with care.
- A6: The machine is close to the longitudinal stability limit. Maneuver with care.
- A7: The machine is very close to the longitudinal stability limit. Manoeuvre with extreme caution.
- A8: The machine is at the authorized limit of longitudinal stability.
- A9: The "AGGRAVATING" hydraulic movement cut-off is disabled.

- The  warning indicator and an audible signal indicate a fault. To view this error code (↩ SCREEN DISPLAYS).

### B - HYDRAULIC MOVEMENT CUT-OFF

"HANDLING" MODE

- A8: All "AGGRAVATING" hydraulic movements are cut off. Only perform de-aggravating hydraulic movements in the following order: retract and raise the boom.

"BUCKET" MODE

- A8: The boom lowering and extension movements are cut off; the other movements remain available.

"SUSPENDED LOAD" MODE

- A8: All "AGGRAVATING" and boom raising hydraulic movements are cut off. Only the boom retraction hydraulic movement is available.

### C - DISABLING "AGGRAVATING" HYDRAULIC MOVEMENT CUT-OFF

**⚠ IMPORTANT ⚠**


*Remain very vigilant during this operation. The only information available to the operator is the machine's dynamic stability.*

In certain cases, in order to get out of a difficult situation, the operator can bypass this safety device. Button C temporarily disables the cut-off of "AGGRAVATING" hydraulic movements.



- Hold down button C, indicator lamps A9 and C1 will light (60 second time delay), and at the same time perform the necessary "AGGRAVATING" hydraulic movement with extreme care.

### D - TESTING THE LONGITUDINAL STABILITY LIMITER AND WARNING DEVICE

- Press briefly on the  button at any time to verify that the longitudinal stability alarm is working.
  - Correct operation: All the LEDs A1 to A8 light for two seconds and an audible alarm is sounded.

N.B.: This test does not make it possible to check the correct adjustment of the longitudinal stability limiter device which must be inspected daily or after every 10 hours of service (↩ 3 - MAINTENANCE: 10H - DAILY MAINTENANCE OR EVERY 10 HOURS OF SERVICE).

### E - STRAIN GAGE









**⚠ IMPORTANT ⚠**

*Disassembly or calibration of the strain gauge is prohibited, this must only be done by specially trained personnel, consult your dealer.*



## 10 - SWITCHES

N.B.: The location of the switches may vary depending on the options.

-  **HAZARD WARNING LIGHTS**
-  **REAR FOG LIGHT (OPTION)**
-  **ROTATING BEACON LIGHT**
-  **FRONT AND REAR WORKLIGHTS (OPTION)**
-  **BOOM HEAD WORKLIGHTS (OPTION)**
-  **BLUE WORKLIGHTS (OPTION)**
-  **REAR WINDOW DEFROSTER (OPTION)**
-  **HYDRAULIC MOVEMENT NEUTRALIZATION**



When driving on the road, it is highly recommended (mandatory in Germany) that you disconnect all hydraulic movement. The indicator lamp indicates it is in use.

### "STATIONARY MACHINE" EXHAUST PURIFICATION



 3 - MAINTENANCE: OCCASIONAL MAINTENANCE
















### AUTOMATIC EXHAUST SUBLIMATION DEACTIVATION

**⚠ IMPORTANT ⚠**

*Disabling the automatic exhaust purification remains a function that is only to be used in case of necessity (confined or unventilated space, etc.).*

By default, the automatic exhaust purification is activated each time the machine is started.

- To deactivate the automatic exhaust purification, hold down the bottom of the switch. The indicator lamp  lights up and an audible signal confirms deactivation.
- To reactivate the automatic exhaust purification hold down the bottom of the switch again. The  indicator lamp goes out to confirm reactivation.

| EXHAUST PURIFICATION MANAGEMENT   |   |    |  |
|---|---|----|--|
| SIGNALS   | ACTIONS   |    |  |
|  + 1 short sound alarm.<br>Moderate soot level.  | Indicator lamp  comes on.<br>Preferably wait until automatic purification is completed before switching off the ignition.                  | Or | Activate "stationary machine" exhaust purification (  3 - MAINTENANCE: OCCASIONAL MAINTENANCE). |
|  +  + 1 short sound alarm.<br>Moderate soot level, automatic purification disabled.   | Enable automatic purification as soon as possible.  | Or | Activate "stationary machine" exhaust purification (  3 - MAINTENANCE: OCCASIONAL MAINTENANCE). |
|  +  + permanent sound alarm.<br>High soot level.  | Engine speed limited to 1,200 rpm, only a "stationary machine" purification must be performed (  3 - MAINTENANCE: OCCASIONAL MAINTENANCE). |    |  |
|  +  +  + permanent sound alarm.<br>Moderate soot level, automatic purification disabled. |   |    |  |
|  +  +  + 1 short sound alarm.<br>Very high soot level, particle filter clogged.          | <b><i>If the machine is under-performing, stop the machine and contact your dealer.</i></b>   |    |  |

## **PARKING BRAKE**

To connect the parking brake, press the bottom of the switch. The indicator lamp indicates it is in use. To disconnect the parking brake, press the top of the switch.

## **DISABLING "AGGRAVATING" HYDRAULIC MOVEMENT CUT-OFF**

<img alt="Arrow icon" data-bbox="72 132 88 146"/> LONGITUDINAL STABILITY LIMITER AND WARNING DEVICE

## **BOOM ELECTRICAL PREDISPOSITION (OPTION)**

<img alt="Arrow icon" data-bbox="72 179 88 193"/> DESCRIPTION AND USE OF THE OPTIONS

## **BOOM SUSPENSION (OPTION)**

<img alt="Arrow icon" data-bbox="72 227 88 241"/> DESCRIPTION AND USE OF THE OPTIONS

## **ATTACHMENT HYDRAULIC CONTROL FORCED OPERATION (OPTION)**

<img alt="Arrow icon" data-bbox="72 271 88 285"/> DESCRIPTION AND USE OF THE OPTIONS

## **ATTACHMENT HYDRAULIC LOCKING (OPTION)**

OR

**BOOM HEAD ELECTROVALVE (OPTION)**

OR

**BOOM HEAD ELECTROVALVE + ATTACHMENT HYDRAULIC LOCKING (OPTION)**

<img alt="Arrow icon" data-bbox="72 375 88 389"/> DESCRIPTION AND USE OF THE OPTIONS

## **SELF-CLEANING FAN**

The system cleans the radiator core and the grille of the engine cover by reversing the air flow.

- Position A: The indicator lamp is on, the fan's rotation reverses for a few seconds every 3 minutes.
- Position B: The indicator light is off, the fan is operating normally.

**⚠ IMPORTANT ⚠**

*When in use, beware of the risk of projection into the eyes.*



## **11 - ARMREST AND STORAGE**

- Lift the armrest 1 to access the storage.



## **12 - DIAGNOSTIC PLUG**

- Remove the access panel to access the plugs.



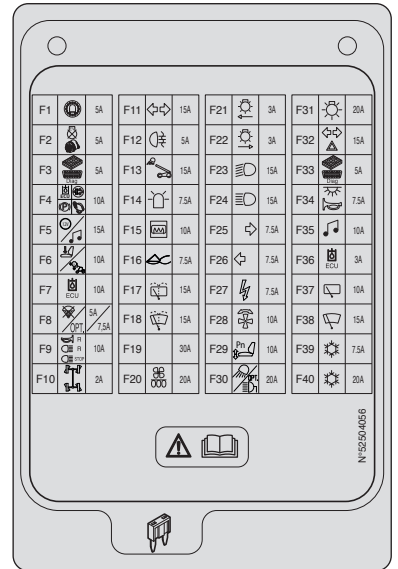
### 13 - FUSES AND RELAYS

A sticker on the inside of the access hatch provides a quick view of the use of the electric plate's components described below.

- Remove access panel 1 to gain access to the fuses and relays. Replace a blown fuse with a new fuse of the same quality and rating. Never use a repaired fuse.

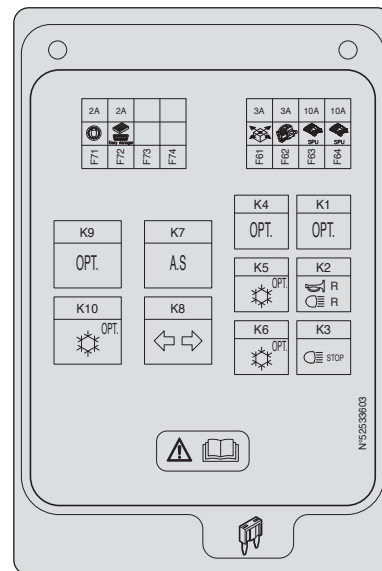
#### IN THE CAB

|     |      |  |
|-----|------|--|
| F1  | 5A   | Control instrument module.   |
| F2  | 5A   | Water in fuel sensor.<br>Alternator excitation.<br>Longitudinal stability limiter and warning device.<br>ECM wake-up.  |
| F3  | 5A   | Anti-theft device predisposition.<br>Diagnostics plug.   |
| F4  | 10A  | "Transmission" electronic control unit.<br>Seat switch.<br>Telescoping and attachment movement control.<br>Exhaust purification switch.<br>Negative parking brake electrovalve.<br>Hydraulic movement cut-off. |
| F5  | 15A  | 12 V socket.<br>Car radio (OPTION).  |
| F6  | 10A  | Presence of driver on seat.<br>Retraction and boom angle sensors.  |
| F7  | 10A  | "Hydraulics" electronic control unit.  |
| F8  | 5A   | Deactivation of aggravating hydraulic movement cut-off.  |
|     | 7,5A | Deactivation of aggravating hydraulic movement cut-off.<br>Boom head solenoid valve (OPTION).  |
| F9  | 10A  | Brake light relay power supply.<br>Reversing light relay power supply.<br>Reversing sound alarm relay power supply (DEPENDENT ON ASSEMBLY).  |
| F10 | 2A   | Wheel alignment.   |
| F11 | 15A  | Flashing light unit.   |
| F12 | 5A   | Rear fog lights.   |
| F13 | 15A  | Working lights on boom switch (OPTION).  |
| F14 | 7,5A | Rotating beacon.   |
| F15 | 10A  | Rear window defroster (OPTION).  |
| F16 | 7,5A | Boom suspension (OPTION).  |
| F17 | 15A  | Rear windshield wiper and windshield washer.<br>Roof windshield wiper.   |
| F18 | 15A  | Front windshield wiper and windshield washer.  |
| F19 | 30A  | Power supply F27-F28-F29-F30.  |
| F20 | 20A  | Heating.   |
| F21 | 3A   | Left parking lights.   |
| F22 | 3A   | Right parking lights.  |
| F23 | 15A  | Dipped beam headlights.  |
| F24 | 15A  | Main beam headlights.  |
| F25 | 7,5A | Right turn signals.  |
| F26 | 7,5A | Left turn signals.   |
| F27 | 7,5A | Boom head electric power socket (OPTION).<br>Boom head electrovalve (OPTION).  |
| F28 | 10A  | Ventilation adjustment (OPTION).   |
| F29 | 10A  | Pneumatic seat (OPTION).   |
| F30 | 20A  | Front and rear working lights.   |
|     | 25A  | Front and rear working lights.<br>Worklights on boom (OPTION).   |
| F31 | 20A  | Lighting, horn and indicator switch.   |
| F32 | 15A  | Hazard warning lights (K4).  |
| F33 | 5A   | Diagnostics plug.<br>Anti-theft device predisposition.   |
| F34 | 7,5A | Warning device.<br>Roof light.   |
| F35 | 10A  | Car radio.   |
| F36 | 5A   | "Hydraulics" electronic control unit power supply.   |
| F37 | 10A  | Rear windshield wiper (+) permanent.   |
| F38 | 15A  | Front windshield wiper (+) permanent.  |
| F39 | 7,5A | Air conditioning compressor (OPTION).  |
| F40 | 20A  | Air conditioning electric fan (OPTION).  |



|     |    |   |
|-----|----|---|
| F61 |    | Not used.                               |
| F62 |    | Not used.                               |
| F63 |    | Not used.                               |
| F64 |    | Not used.                               |
| F71 | 2A | Control instrument module power supply. |
| F72 | 2A | Battery power supply (+).               |
| F73 |    | Unused.                                 |
| F74 |    | Unused.                                 |

|     |  |   |
|-----|--|---|
| K1  |  | Boom suspension cut-off (OPTION).                                   |
| K2  |  | Reversing lights.<br>Reversing sound alarm (DEPENDING ON ASSEMBLY). |
| K3  |  | Brake lights.   |
| K4  |  | Working lights on boom (OPTION).                                    |
| K5  |  | Air conditioning electric fan (OPTION).                             |
| K6  |  | Air conditioning compressor (OPTION).                               |
| K7  |  | Heating.  |
| K8  |  | Flashing light unit.  |
| K9  |  | Blue worklight (OPTION).  |
| K10 |  | Air conditioning (OPTION).  |

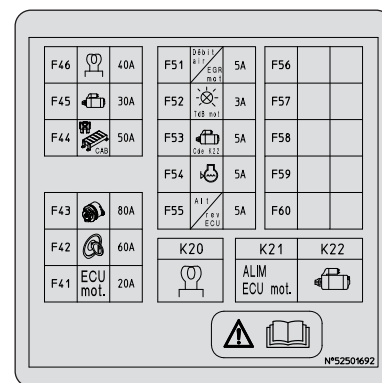


### IN THE ENGINE COMPARTMENT

- Open the engine hood, remove cover 1 to gain access to the fuses and relays. Replace a blown fuse with a new fuse of the same quality and rating. Never use a repaired fuse.

|     |     |   |
|-----|-----|---|
| F41 | 20A | Engine ECU power supply.                            |
| F42 | 60A | Ignition switch.                                    |
| F43 | 80A | Alternator.   |
| F44 | 50A | Power supply for fuses in the cab.                  |
| F45 | 30A | Starter relay power supply.                         |
| F46 | 40A | Engine preheat.<br>Fuel preheater (OPTION).         |
| F51 | 5A  | Air flow sensor.<br>Engine EGR valve.               |
| F52 | 3A  | Dashboard power supply.                             |
| F53 | 5A  | Start relay control K22.<br>Engine ECU information. |
| F54 | 5A  | Water in fuel sensor power supply.                  |
| F55 | 5A  | Engine ECU control power supply.                    |

|     |  |                          |
|-----|--|--------------------------|
| K20 |  | Engine preheat.          |
| K21 |  | Engine ECU power supply. |
| K22 |  | Starter control.         |



### 14 - CIGARETTE LIGHTER

For 12 V appliance and max. amperage 15A.

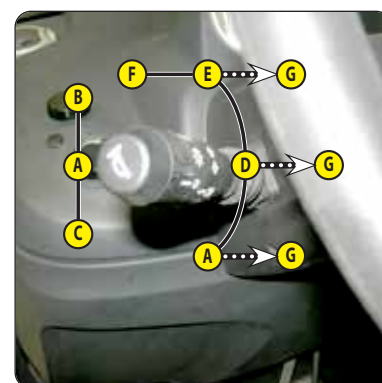
### 15 - LIGHTING, HORN AND INDICATOR SWITCH

The switch controls the visual and sound alarms.

- A - All lights are off, the turn signals do not flash.
- B - The right-hand turn signals flash.
- C - The left-hand turn signals flash.
- D - The sidelights and rear lights are on.
- E - The dipped beam headlights and rear lights are on.
- F - The main beam headlights and rear lights are on.
- G - Headlight signaling.

Pressing the end of the switch sounds the horn.

N.B.: Positions D - E - F - G can be used without switching on the ignition.



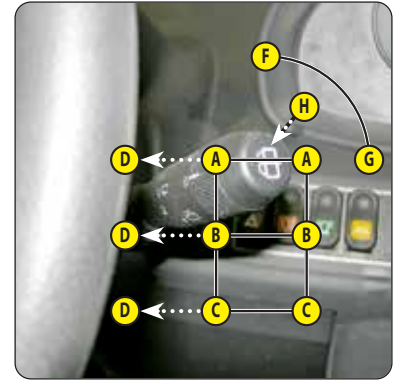
## 16 - FRONT AND REAR WINDSHIELD WIPER SWITCH

### FRONT WINDSHIELD WIPER

- A - Front windscreen wiper stop.
- B - Front windscreen wiper low speed.
- C - Front windscreen wiper high speed.
- D - Front windscreen washer by pressing.

### REAR WINDSHIELD WIPER

- F - Rear windscreen wiper stop.
- G - Rear windshield wiper.
- H - Rear windscreen washer by pressing.



## 17 - FUNCTION FILES

These files contain, among other things, the description of the hydraulic controls and the load charts for the attachments used on the machine.

## 18 - HYDRAULIC CONTROLS

### ⚠ IMPORTANT ⚠

**Do not try to modify the hydraulic pressure of the system. If it malfunctions contact your dealer. ANY MODIFICATION INVALIDATES THE WARRANTY AND YOU WILL BE CRIMINALLY LIABLE IN THE EVENT OF AN ACCIDENT.**

**Use the hydraulic controls gently without jerking to avoid incidents caused by shaking the machine.**

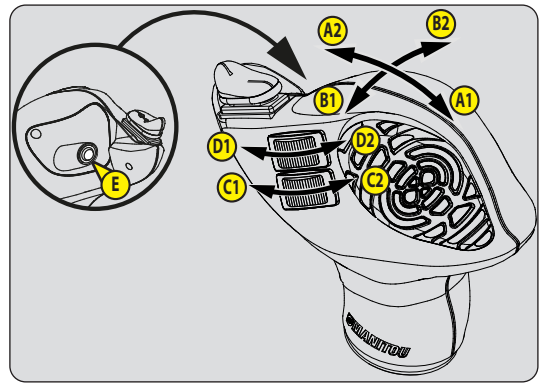
N.B.: When driving on the road, it is highly recommended (mandatory in Germany) that all the hydraulic movements are cut off. (↔ SWITCHES).

### HYDRAULIC CONTROLS ACTIVATION

To avoid inadvertent operation of the hydraulic lifting, tilting, telescoping and attachment controls, a safety device is added to the machine (SECOND FIT).

| FIRST FIT: NO HYDRAULIC CONTROLS ACTIVATION   |   |
|---|---|
|   | - Place your hand on the lever and perform the hydraulic movement.  |
| SECOND FIT: HYDRAULIC CONTROLS ACTIVATION   |   |
|   | - Place your hand on the lever, activate the hydraulic controls by contact on the capacitive sensor and perform the hydraulic movement. |
| - Hydraulic controls activation is maintained on a timer while the machine is being used.<br>- If necessary, reactivate the hydraulic controls. |   |

- A1 - LIFTING
- A2 - LOWERING
- B1 - CROWD
- B2 - DUMP
- C1 - TELESCOPIC BOOM EXTENSION
- C2 - TELESCOPIC BOOM RETRACTION
- D1 - ATTACHMENT
- D2 - ATTACHMENT
- E - BOOM HEAD SOLENOID VALVE (OPTION)



< DESCRIPTION AND USE OF THE OPTIONS

ADJUSTMENT OF ATTACHMENT HYDRAULIC FLOW RATE

- Switch on the machine's ignition.

- Select the attachment circuit hydraulic flow screen with the scroll button . In turn the screen displays the hydraulic flow stored in the memory of circuit B (without "-" sign) and of circuit A (with "-" sign).

- Press the button for two seconds, the screen will appear on the lower screen display.

- Turn button C forwards to select a hydraulic flow for circuit B of between 10% and 100%.

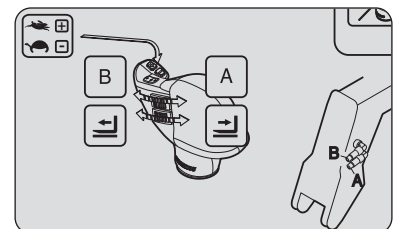
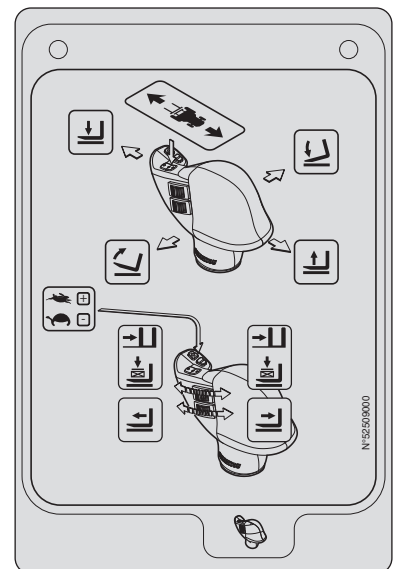
- Hold button C at the desired flow and confirm with the button.

- The screen appears on the lower screen display.

- Turn button C backwards to select a hydraulic flow for circuit A between -10% and -100%.

- Hold button C at the desired flow and confirm with the button.

- The hour meter screen appears on the lower display screen, confirming that adjustment is completed.

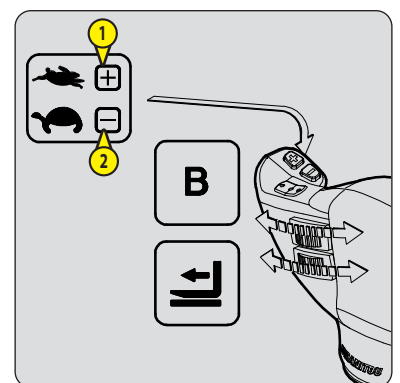


SPEED SELECTION

Speeds can be selected while driving.

Buttons 1 and 2 are used to select a speed.

- HIGH SPEED: For driving on the road. Press button 1, the high speed indicator lamp comes on.
- LOW SPEED: For handling operations. Press button 2, the slow speed indicator lamp comes on.



## 20 - SERVICE BRAKE PEDAL AND TRANSMISSION CUT-OFF

The pedal acts on the front wheels by means of a hydraulic brake system enabling the machine to be slowed down and stopped. During clearance travel it enables the transmission to be cut off progressively thus allowing a gradual approach (delicate handling) with all the I.C. engine power.

## 21 - FORWARD/NEUTRAL/REVERSE SELECTOR

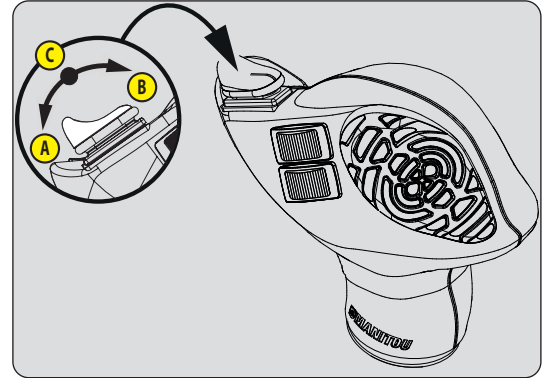
Changing the direction of travel should take place at low speed without acceleration.

**FORWARD:** Push the switch forward (position A).

**REVERSE:** Push the switch backward (position B). A reversing light and a reversing sound alarm (DEPENDING ON ASSEMBLY) indicate that the machine is traveling in reverse.

**NEUTRAL:** If indicator lamps   or   are flashing, move the forward/reverse selector back through neutral (position C).

N.B.: Backup alarm (OPTIONAL or STANDARD).









### SAFETY FOR MOVING THE MACHINE

Authorization for movement of the machine is controlled by an electronic module. The operator must observe the following sequence to move the truck forward or backward:

- 1 - sit down correctly in the driver's seat,
- 2 - release the parking brake,
- 3 - engage forward or reverse gear.

To stop the machine, the operator must observe the following sequence:

- 1 - set the forward/reverse selector to neutral,
- 2 - apply the parking brake,
- 3 - get out of the machine.

- If the operator leaves the driver's cab with forward or reverse engaged, the screen  SEAT  will appear and generate a sound alarm for two seconds. During this time, the operator can sit back down in the seat and continue advancing or reversing. When this time is exceeded, the transmission will switch to neutral and the indicator lamps   or   will flash. The operator must sit back down and pass the forward/reverse selector back through neutral.

### SAFETY FOR MOVING THE MACHINE

The operator must observe the following sequence to move the truck forward or backward:

- 1 - sit down correctly in the driver's seat,
- 2 - release the parking brake,
- 3 - engage forward or reverse gear.

## 22 - STEERING SELECTION

### A - GREEN WHEEL ALIGNMENT INDICATOR LAMPS

#### ⚠ IMPORTANT ⚠

*Before selecting one of the three steering possibilities, align the 4 wheels in relation to the machine axis.  
Never change the steering mode whilst driving.*

These green indicator lamps come on to indicate the alignment of the wheels in relation to the machine. The A1 indicator lamp for the front wheels and the A2 indicator lamp for the rear wheels.

### B - STEERING SELECTION LEVER

- B1 - Front steering wheels (road mode).
- NB: The reversing sound alarm is deactivated when this mode is selected.
- B2 - Front and rear steering wheels in opposite directions (short steering).
- B3 - Front and rear steering wheels in the same direction (crab steering).

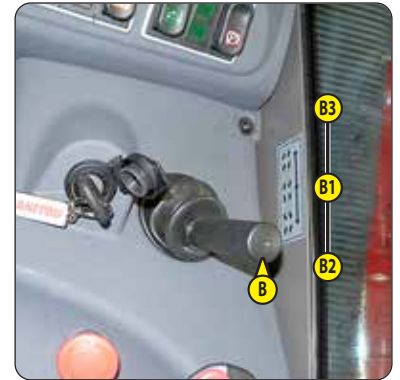
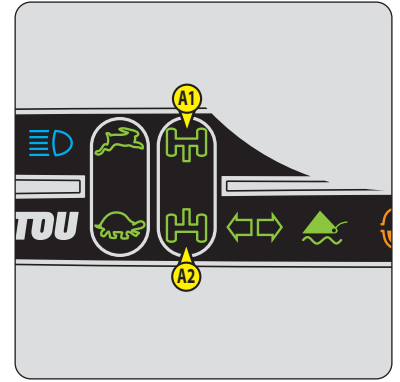
### WHEEL ALIGNMENT CONTROL

#### ⚠ IMPORTANT ⚠

*Before traveling on a public road, it is necessary to check the rear wheel alignment and to travel on front drive wheels.  
Checking the rear wheel alignment must be performed regularly using the green indicator lamps when the machine is in motion.*

*In case of technical faults, consult your dealer.*

- Place the steering selection lever B in position B2 (short turning circle).
- Turn the steering wheel and bring the rear wheels into alignment until the A2 indicator lamp comes on.
- Place the steering selection lever B in position B1 (road traffic).
- Turn the steering wheel and align the front wheels until lamp A1 lights up.



## 23 - HEATER CONTROL

### A - FAN CONTROL

This 3-speed control allows the air to be ventilated through the air vents.

### B - TEMPERATURE CONTROL

Adjusts the temperature inside the cab.

- B1 - The fan pumps in the air at ambient temperature.
- B2 - The fan pumps in warm air.

The intermediate positions allow the temperature to be adjusted.



## 24 - AIR CONDITIONING CONTROLS (AIR CONDITIONING OPTION)

### ⚠ IMPORTANT ⚠

*The air conditioning only works if the machine has been started.*

*When using your air conditioning, it is essential to work with the cab closed.*

*In winter: So as to ensure that the air conditioning unit is correctly operated and completely efficient, start up the compressor once a week, even for a short period of time, in order to lubricate the internal seals.*

*In cold weather: Warm the engine before switching on the compressor, in order to allow the coolant that has collected in the liquid state at the lowest point of the compressor's circuit to turn into gas under the effect of the heat given off by the engine, as the compressor is liable to be damaged by coolant in the liquid state.*

*If it seems to you that the air conditioning is not working properly, have it inspected by your dealer.*

*Never try to repair any faults yourself.*



### A - FAN CONTROL

This 3-speed control allows the air to be ventilated through the air vents.

### B - TEMPERATURE CONTROL

Adjusts the temperature inside the cab.

- B1 - The fan pumps in cold air.
- B2 - The fan pumps in warm air.

The intermediate positions allow the temperature to be adjusted.

### C - AIR CONDITIONING CONTROL

This control with a pilot light allows the air conditioning unit to be switched on.

#### HEATING MODE

The controls must be adjusted in the following way:

- C - Control with pilot light off.
- B - At the desired temperature.
- A - At the desired speed: 1, 2 or 3.

#### AIR CONDITIONING MODE

The controls must be adjusted in the following way:

- C - Control with indicator lamp on.
- B - At the desired temperature.
- A - At the desired speed: 1, 2 or 3.

#### DEFROST MODE

The controls must be adjusted in the following way:

- C - Control with indicator lamp on.
- B - At the desired temperature.
- A - At speed 3.

For optimum effectiveness, close the heating vents.

## **25 - HEATING VENTS**

These swiveling heating vents, which can be shut off, allow you to direct and adjust the flow inside the cab.

## **26 - DEMIST VENTS**

These vents allow the windshield and side windows to be demisted. For optimum effectiveness, close the heating vents.

## **27 - LEVEL INDICATOR**

Enables the operator to check that the machine is in the horizontal position.



## **28 - DOOR LOCK**

Two keys are provided with the machine to enable the cab to be locked.

## **29 - DOOR WINDOW OPENING HANDLE**

## **30 - DOOR WINDOW RELEASE BUTTON**

## **31 - HANDLE FOR REAR WINDOW OPENING**

EMERGENCY EXIT

Use the rear window as an emergency exit, if it is impossible to leave the cab by the door.

## **32 - REAR STORAGE SPACE**

## **33 - DOCUMENT STORAGE NET**

Make sure that the operator's manual is in the right place, i.e. in the document holder net.

N.B.: An OPTIONAL waterproof document-holder is available.

## **34 - STEERING WHEEL ADJUSTMENT LEVER (OPTION)**

This handle enables the angle and height of the steering wheel to be adjusted.

- Pull the handle 1 backwards.
- Adjust the steering wheel to the desired position.
- Push the knob back to lock the steering wheel in position.



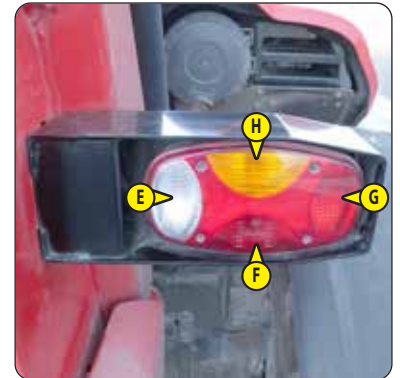
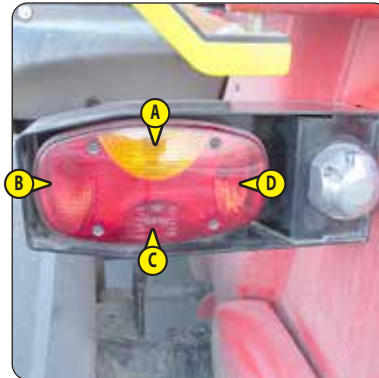
**35 - FRONT HEADLIGHTS**

- A - Front left-hand indicator light.
- B - Front left-hand dipped headlight.
- C - Front left-hand headlight.
- D - Front left-hand sidelight.
- E - Front right-hand indicator light.
- F - Front right-hand low beam headlight.
- G - Front left-hand high beam headlight.
- H - Right front sidelight.



**36 - REAR LIGHTS**

- A - Rear left-hand indicator light.
- B - Rear left-hand stop light.
- C - Left rear light.
- D - Rear fog light.
- E - Reversing light.
- F - Right rear light.
- G - Rear right-hand stop light.
- H - Rear right-hand indicator light.



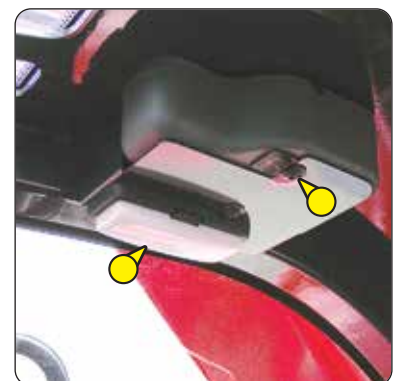
**37 - ROTATING BEACON LIGHT**

The magnetic rotating beacon light must be clearly visible on the roof of the cab and plugged into socket 1.



**38 - ROOF LIGHT**

**39 - ROOF WINDSHIELD WIPER SWITCH**



**40 - SUN VISOR**



## 41 - INTERNAL REAR-VIEW MIRROR

## 42 - TELEPHONE HOLDER (DEPENDING ON ASSEMBLY)



## 43 - BOOM SAFETY WEDGE

### ⚠ IMPORTANT ⚠

*Only use the wedge supplied with the machine.*

The machine is equipped with a boom safety wedge which must be installed on the rod of the lifting cylinder when working beneath the boom (↩ 1 - OPERATING AND SAFETY INSTRUCTIONS).



## 44 - FUEL TANK

As far as possible, keep the fuel tank well filled in order to minimize condensation due to the atmospheric conditions.

### ⚠ IMPORTANT ⚠

*Never smoke or approach with a flame during filling operations or when the tank is open.*

*Never refill while the engine is running.*

- If necessary, add diesel (↩ 3 - MAINTENANCE: LUBRICANTS AND FUEL).
- Remove the cap 1.
- Fill the fuel tank with clean diesel filtered through the filler port.
- Refit the cap.
- Visually check that there is no leakage in the tank and pipes.



## 45 - EASY HYDRAULIC ATTACHMENT CONNECTION (DEPENDING ON ASSEMBLY)

For easy connection and disconnection of hydraulic attachments.

### OPERATION

- Switch on the machine's ignition.
- Press for two seconds on pushbutton 1 to release the attachment circuit hydraulic pressure.
- Connect or disconnect the quick couplers of the hydraulic attachment (↩ 4 - ADAPTABLE ATTACHMENTS AS AN OPTION ON THE RANGE: PICKING UP THE ATTACHMENTS).



## TOWING DEVICE

|                                     |      |
|-------------------------------------|------|
| 1 - TOWING PIN .....                | 2-47 |
| 2 - REAR ELECTRIC SOCKET .....      | 2-47 |
| 3 - COUPLING FITTING (OPTION) ..... | 2-47 |
| 4 - REAR-VIEW MIRROR (OPTION).....  | 2-47 |

### **⚠ IMPORTANT ⚠**

*Do not tow a trailer or an attachment that is not in perfect working condition.*

*Using a trailer in poor condition may affect the machine's steering and braking, and hence the safety of the assembly.*

*If a third party helps in coupling or uncoupling the trailer, this person must remain visible to the driver at all times and must wait until the machine has stopped, the parking brake is applied and the engine is switched off before performing the operation.*

Located at the rear of the machine, this device is used to attach a trailer. Its capacity is limited for each machine by the authorized gross vehicle weight, tractive effort and maximum vertical force on the coupling point. This information is given on the manufacturer's plate fixed to each machine (↖ IDENTIFICATION OF THE MACHINE).

- To use a trailer, see current regulations in your country (maximum running speed, braking, maximum weight of trailer, etc.).
- Verify the trailer's condition before using it (tire condition and pressures, electrical connection, hydraulic hose, brake system, etc.).

N.B.: Our tractor type-approved lift trucks are not compatible for use with trailers fitted with the ISO7638 socket.

## 1 - TOWING PIN

### **⚠ IMPORTANT ⚠**

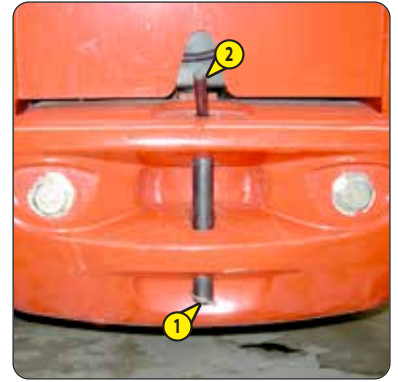
*Be careful not to get your fingers caught or crushed during this operation.*

*Do not forget to put the cotter pin back in place.*

*When uncoupling, make sure that the trailer is supported independently*

### COUPLING AND UNCOUPLING THE TRAILER

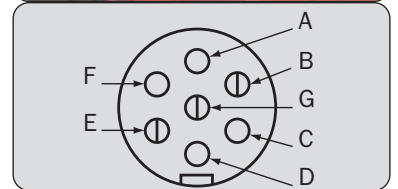
- To couple the trailer, position the machine as close as possible to the trailer ring.
- Apply the parking brake and switch off the engine.
- Remove the pin 1, lift the towing pin 2 and place or remove the trailer ring.



## 2 - REAR ELECTRIC SOCKET

Connect the male plug to the female socket 1 on the machine and make sure the lights of the trailer or the light bar are working properly.

- A - Rear left-hand indicator light.
- B - Rear fog lights option.
- C - Ground.
- D - Rear right-hand indicator light.
- E - Right rear light.
- F - Rear brake lights.
- G - Left rear light + number plate.



## 3 - COUPLING FITTING (OPTION)

### **⚠ IMPORTANT ⚠**

*Be careful not to get your fingers caught or crushed during this operation.*

*Do not forget to put the cotter pin back in place.*

*When uncoupling, make sure that the trailer is supported independently.*

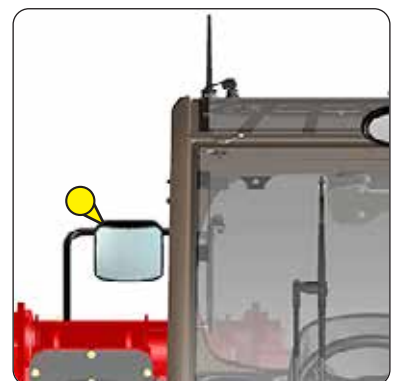
### COUPLING AND UNCOUPLING THE TRAILER

- To couple the trailer, position the machine as close as possible to the trailer ring.
- Stop the engine.
- Remove the pin 1, lift the towing pin 2 and place or remove the trailer ring.



## 4 - REAR-VIEW MIRROR (OPTION)

The rear-view mirror allows the machine to approach the trailer ring more precisely.



## DESCRIPTION AND USE OF THE OPTIONS

|  |      |
|--|------|
| 1 - ENGINE BLOCK HEATER .....                                    | 2-48 |
| 2 - MODCOD ANTI-THEFT SYSTEM .....                               | 2-48 |
| 3 - WINDSHIELD GRILLE .....                                      | 2-49 |
| 4 - LICENSE PLATE LIGHT .....                                    | 2-49 |
| 5 - ANGULAR SECTOR ON BOOM .....                                 | 2-49 |
| 6 - BOOM ELECTRICAL PREDISPOSITION .....                         | 2-49 |
| 7 - EXTERIOR DRAIN-BACK .....                                    | 2-49 |
| 8 - WATERPROOF DOCUMENT HOLDER .....                             | 2-50 |
| 9 - ATTACHMENT HYDRAULIC LOCKING .....                           | 2-50 |
| 10 - BOOM SUSPENSION .....                                       | 2-50 |
| 11 - BOOM HEAD ELECTROVALVE .....                                | 2-51 |
| 12 - BOOM HEAD ELECTROVALVE + HYDRAULIC ATTACHMENT LOCKING ..... | 2-51 |
| 13 - ATTACHMENT HYDRAULIC CONTROL FORCED OPERATION .....         | 2-52 |
| 14 - ATTACHMENT HYDRAULIC FLOW SELECTOR .....                    | 2-52 |
| 15 - FUEL PREHEATER .....  | 2-52 |
| 16 - LIFTING RING ON SINGLE CARRIAGE .....                       | 2-53 |
| 17 - CAR RADIO .....   | 2-53 |
| 18 - REFLECTIVE BANDS .....                                      | 2-53 |
| 19 - ENGINE SPEED REGULATOR .....                                | 2-53 |
| 20 - SPEED LIMITER .....   | 2-54 |
| 21 - COMBINED HYDRAULIC MOVEMENTS .....                          | 2-54 |

### 1 - ENGINE BLOCK HEATER

Enables the engine block to be kept warm during prolonged periods of stoppage and thus improves engine starting.

#### SUPPLY CHARACTERISTICS OF PREHEATING SYSTEM:

- Rated power supply voltage range: 220-240 V; 50-60 Hz.
- Current consumed: 4.5A.
- Class 1 equipment.
- Equipment can only be connected to TT or TN supply diagrams.
- Installation category 2.

#### ENVIRONMENTAL CONDITIONS FOR USE:

- Maximum ambient temperature for using preheat: + 25 °C.
- Pollution level 2.

#### CONDITIONS FOR CONNECTION AND USE OF PREHEATING:

- The preheat system should not be used for an external ambient temperature higher than + 25°C.
- It is essential that the power supply to the preheating system:
  - Is effected with a cable that conforms to the installation standards in force and contains a protective earth conductor.
  - Contains an appropriate sectioning system.
  - Include an appropriate short-circuit protection system (fuses or circuit breaker) and a ground-fault circuit breaker, sensitive to 30 mA.
- Only connect to and disconnect from the power supply while the unit is switched off and the engine is stopped.



### 2 - MODCOD ANTI-THEFT SYSTEM

#### OPERATION

- Switch on the machine's ignition; red LED 1 will flash.
- Enter your user code followed by "V" to validate, green LED 2 will light.
- Start the machine within 60 seconds. After this time, the anti-theft system reactivates and the red LED 1 will flash.

N.B.: If you make a mistake when entering the code, press key "A" to cancel and re-enter the code in full. If you wait more than 5 seconds between key presses, code entry is abandoned, the anti-theft system is reactivated and the red LED will flash.



### 3 - WINDSHIELD GRILLE

---

#### DESCRIPTION

The windshield grille provides additional protection for the operator from any external elements spattered on the windshield.

This grille must be removable from inside the cab to enable an emergency exit.

#### EMERGENCY EXIT

- After breaking the windshield with the emergency hammer, push (with force) on the windshield grille at A to remove it.



### 4 - LICENSE PLATE LIGHT

---



### 5 - ANGULAR SECTOR ON BOOM

---

The angular sector displays the boom angle, and thus improves the reading of the load charts.



### 6 - BOOM ELECTRICAL PREDISPOSITION

---

Enables an electrical function to be used at the head of the jib.

#### OPERATION

- Set switch 1 to position A to activate the predisposition. The indicator lamp comes on to show that it is activated.



### 7 - EXTERIOR DRAIN-BACK

---

Enables connection of an attachment for which drain-back is required.



**8 - WATERPROOF DOCUMENT HOLDER**



**9 - ATTACHMENT HYDRAULIC LOCKING**

Enables the attachment to be locked onto the carriage and a hydraulic attachment to be used by the same hydraulic circuit.

**ATTACHMENT LOCKING CONTROL**

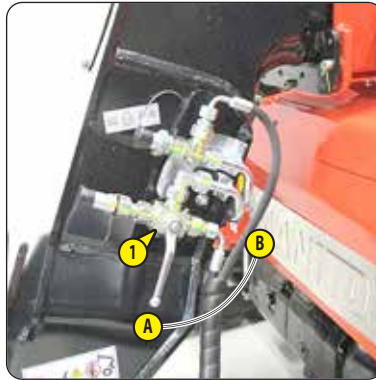
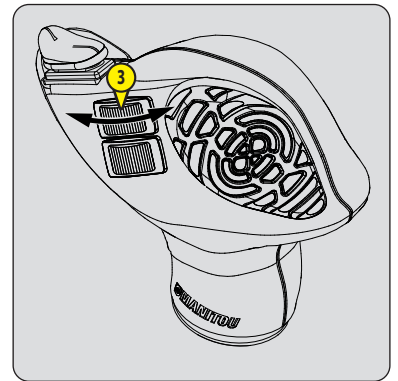
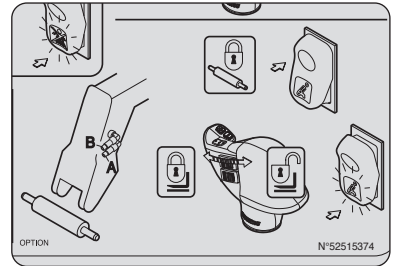
- Put tap 1 in position A and press switch 2 at position B (indicator lamp on).
- Push switch 3 forward to lock the attachment and backward to release it.

**⚠ IMPORTANT ⚠**

*After locking the attachment, return switch 2 to position A (indicator lamp off) to prevent accidental unlocking of the attachment.*

**HYDRAULIC ATTACHMENT CONTROL**

- Put the tap in position B and press switch 2 at position B (indicator lamp on).
- Push switch 3 forward or backward.



**10 - BOOM SUSPENSION**

Boom suspension absorbs the shocks to the machine on uneven ground (e.g. handling straw in a field).

**OPERATION**

**⚠ IMPORTANT ⚠**

*When you make a hydraulic downward movement, boom suspension is temporarily disabled.  
Boom suspension is active from 3 km/h and deactivated below 2 km/h.*

- Press switch 1 in position A, the indicator lamp comes on indicating that boom suspension is activated.
- Press switch 1 in position B, the indicator lamp goes out indicating that the boom suspension is deactivated.



## 11 - BOOM HEAD ELECTROVALVE

Enables use of two hydraulic functions on the attachment circuit.

### ⚠ IMPORTANT ⚠

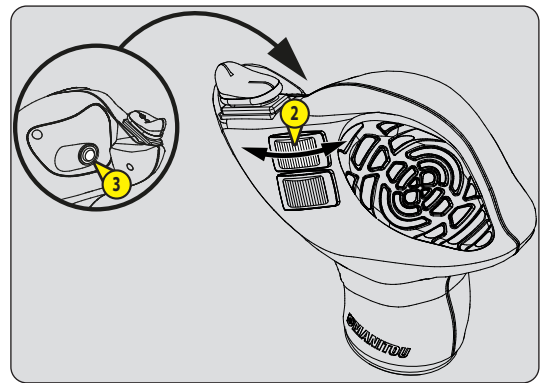
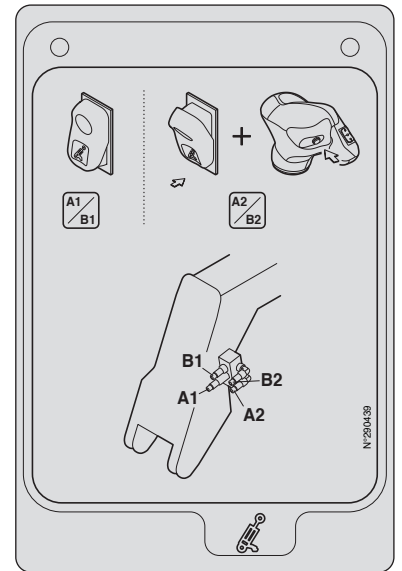
*For ease of connection of the quick-release couplers, decompress the hydraulic circuit by pressing button 1 on the electrovalve.*

#### ATTACHMENT LINE CONTROL A1/B1

- Put switch 1 to position A (indicator lamp off).
- Push switch 2 forward or backward.

#### ATTACHMENT LINE CONTROL A2/B2

- Put switch 1 to position B (indicator light on) and hold down button 3.
- Push switch 2 forward or backward.



## 12 - BOOM HEAD ELECTROVALVE + HYDRAULIC ATTACHMENT LOCKING

Enables the use of a hydraulic function and hydraulic locking of the attachment on the attachment circuit.

### ⚠ IMPORTANT ⚠

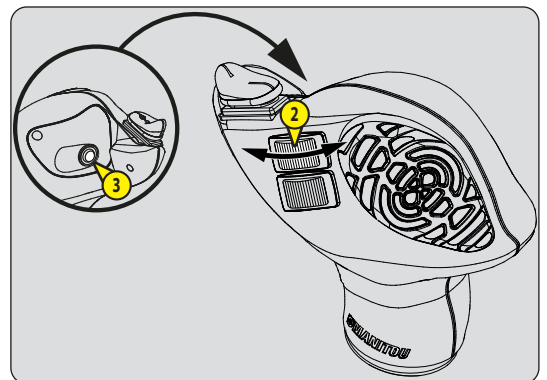
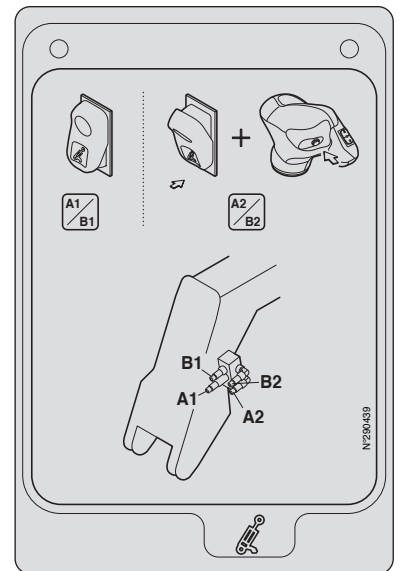
*For ease of connection of the quick-release couplers, decompress the hydraulic circuit by pressing button 1 on the electrovalve.*

#### ATTACHMENT LINE CONTROL A1/B1

- Put switch 1 to position A (indicator lamp off).
- Push switch 2 forward or backward.

#### ATTACHMENT LOCKING CONTROL A2/B2

- Put switch 1 to position B (indicator light on) and hold down button 3.
- Push switch 2 forward to lock the attachment and backward to release it.



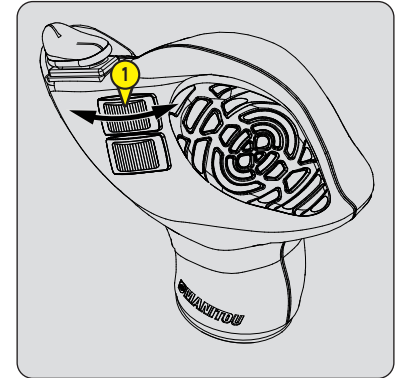
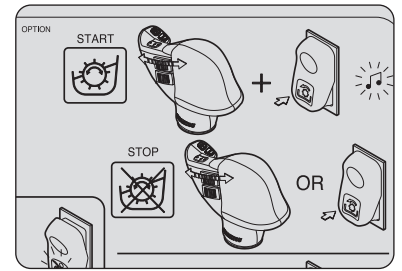
## 13 - ATTACHMENT HYDRAULIC CONTROL FORCED OPERATION

### ⚠ IMPORTANT ⚠

*This OPTION must only be used with an attachment that requires continuous hydraulic movement such as: a sweeper, feed wagon, mixer, sprayer, etc. It is strictly prohibited for handling operations and for all other attachments (winch, crane, crane jib with winch, hook, etc.).*

#### CONTINUOUS HYDRAULIC MOVEMENT OF THE ATTACHMENT

- Simultaneously hold button 1 in the forward or backward position (according to the type of attachment) and switch 2 in position B (indicator light on). An audible alarm will sound when activated. Release button 1 and switch 2.
  - To stop the movement, press again on the bottom of switch 1, or operate button 2.
- N.B.: If the operator leaves the driver's cab, the continuous hydraulic movement will automatically stop and must be restarted.




## 14 - ATTACHMENT HYDRAULIC FLOW SELECTOR


The selector has 4 positions, of which 3 can be configured according to the type of attachment, the 4th position being set at 100%.

#### ADJUSTING HYDRAULIC FLOW RATES

- Place the selector in position 1 and adjust the attachment flow rate (↔ HYDRAULIC CONTROLS).
- Repeat the procedure for the two other positions 2 and 3.

#### READING HYDRAULIC FLOW RATES

- Scroll the upper display screen  until the attachment hydraulic flow

display screen  is displayed and set the flow selector to positions 1, 2 or 3 to read the recorded flow.



## 15 - FUEL PREHEATER

The paraffin particles found naturally in diesel crystallize at low temperatures. The fuel preheater limits their accumulation in the filter.

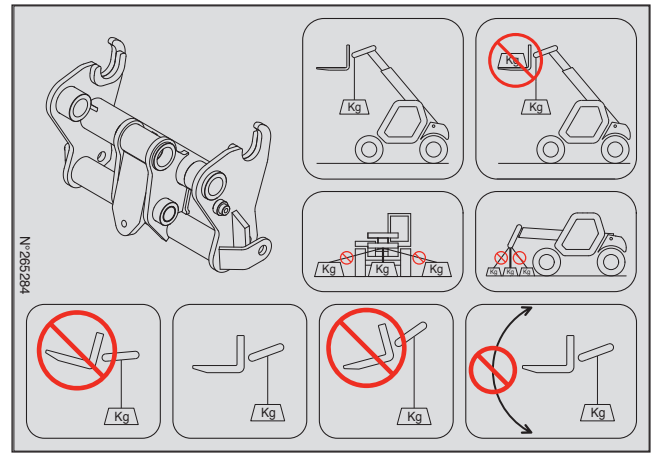
## 16 - LIFTING RING ON SINGLE CARRIAGE

### CONDITIONS OF USE

#### ⚠ IMPORTANT ⚠

Follow the instructions given in the instruction manual (1 - OPERATING AND SAFETY INSTRUCTIONS: INSTRUCTIONS ON HANDLING LOADS), in addition to those given below.

- The lifting ring must be used WITHOUT FORKS AND ATTACHMENTS, but the angle of inclination of the carriage must be same as when the forks are used in the horizontal position.
- Check the maximum permitted angle, which is 45°.
- Do not change the angle of the carriage while using the lifting ring.
- The lifting hook, the chains and slings shall have a minimum capacity of 3000 kg with a safety coefficient of 4 in relation to breakage.



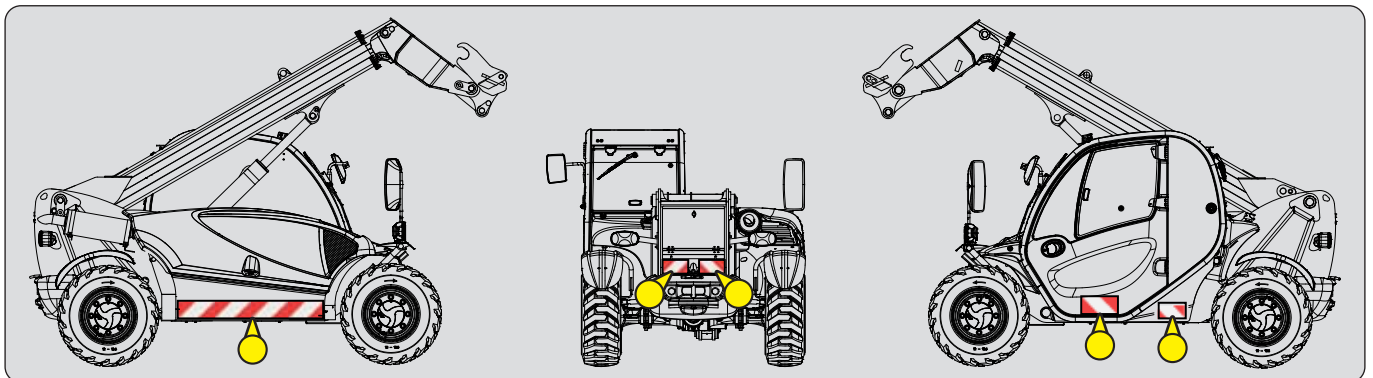
### LOAD CHARTS AND FUNCTION SHEETS

#### ⚠ IMPORTANT ⚠

The load charts are defined for use without forks and without attachments.

## 17 - CAR RADIO

## 18 - REFLECTIVE BANDS



## 19 - ENGINE SPEED REGULATOR

#### ⚠ IMPORTANT ⚠

The option cannot under any circumstances be used while driving on the road.  
Caution when driving, sudden acceleration or braking of the machine when you use button 2.

The regulator controls the engine speed, increases the hydraulic flow and therefore increases the speed of all the movements.

- Adjust the engine speed with lever 1.

Used for an attachment requiring continuous hydraulic movement (brush, feeder bucket, mixer, spray).



## 20 - SPEED LIMITER

### ⚠ IMPORTANT ⚠

*The option cannot under any circumstances be used while driving on the road.*

Only accessible in TORTOISE MODE, the speed limiter limits the speed from 0,4 km/h to 12 km/h by turning the button 1.

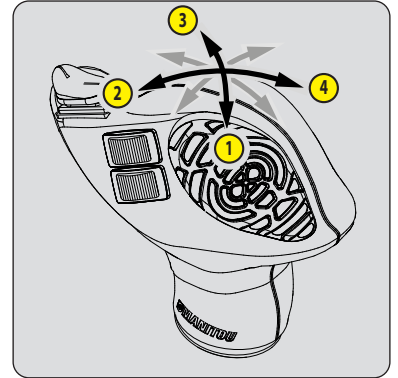
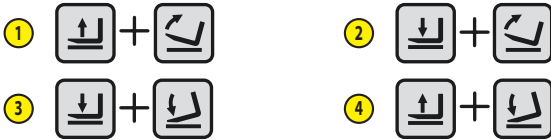
Used for an attachment requiring a constant speed of travel (brush, feeder bucket, spray).

After having switched off the ignition with the ignition key turn button 1 to zero to reinitialise this option then reset to the desired value.



## 21 - COMBINED HYDRAULIC MOVEMENTS

This function allows several hydraulic movements to be combined.



# ***3 - MAINTENANCE***

## 3 - MAINTENANCE

|  |             |
|--|-------------|
| <b>ORIGINAL MANITOU SPARE PARTS AND EQUIPMENT</b>                                      | <b>3-3</b>  |
| <b>MACHINE MAINTENANCE</b>   | <b>3-4</b>  |
| <b>DAILY AND WEEKLY MAINTENANCE</b>  | <b>3-4</b>  |
| <b>MANDATORY SERVICE AFTER FIRST 500 HOURS OR 6 MONTHS</b>                             | <b>3-5</b>  |
| <b>PERIODIC MAINTENANCE</b>  | <b>3-6</b>  |
| <b>OCCASIONAL MAINTENANCE AND OPERATION</b>  | <b>3-8</b>  |
| <b>FILTER CARTRIDGES AND BELTS</b>   | <b>3-9</b>  |
| <b>LUBRICANTS AND FUEL</b>   | <b>3-10</b> |
| <b>➔ 10H - DAILY SERVICE OR EVERY 10 HOURS OF SERVICE</b>                              | <b>3-12</b> |
| <b>➔ 50H - WEEKLY MAINTENANCE OR EVERY 50 HOURS OF SERVICE</b>                         | <b>3-14</b> |
| <b>➔ ① 500H - PERIODIC MAINTENANCE - EVERY 500 HOURS OF SERVICE OR 1 YEAR</b>          | <b>3-20</b> |
| <b>➔ ② 1000H - PERIODIC MAINTENANCE - EVERY 1000 HOURS OF SERVICE OR EVERY 2 YEARS</b> | <b>3-25</b> |
| <b>➔ ③ 2000H - PERIODIC MAINTENANCE - EVERY 2000 HOURS OF SERVICE OR EVERY 4 YEARS</b> | <b>3-30</b> |
| <b>➔ ④ 3000H - PERIODIC MAINTENANCE - EVERY 3000 HOURS OF SERVICE OR EVERY 6 YEARS</b> | <b>3-33</b> |
| <b>➔ OCCASIONAL MAINTENANCE</b>  | <b>3-34</b> |
| <b>➔ OCCASIONAL OPERATION</b>  | <b>3-38</b> |

## ORIGINAL MANITOU SPARE PARTS AND EQUIPMENT

OUR LIFT TRUCKS MUST BE SERVICED USING ORIGINAL MANITOU PARTS.

### **BY ALLOWING THE USE OF NON ORIGINAL MANITOU PARTS, YOU RISK:**

#### **⚠ IMPORTANT ⚠**

**THE USE OF COUNTERFEIT PARTS OR COMPONENTS NOT APPROVED BY THE MANUFACTURER MEANS YOU LOSE THE BENEFIT OF THE CONTRACTUAL GUARANTEE.**

- Legally, incurring liability in the event of an accident.
- Technically, causing operating malfunctions and reducing the machine's service life.

### **BY USING ORIGINAL MANITOU PARTS FOR MAINTENANCE OPERATIONS, YOU BENEFIT FROM OUR KNOW-HOW**

Through its network, MANITOU provides the user with,

- Know-how and competence.
- The guarantee of high-quality work.
- Original replacement parts.
- Help with preventive maintenance.
- Efficient help with diagnosis.
- Improvements as a result of feedback.
- Operator training.
- Only the MANITOU network has detailed knowledge of the design of the machine and therefore the best technical ability to provide maintenance.

#### **⚠ IMPORTANT ⚠**

**ORIGINAL REPLACEMENT PARTS ARE DISTRIBUTED EXCLUSIVELY BY MANITOU AND ITS DEALER NETWORK.**

*The dealer network list is available on the MANITOU web site: [www.manitou.com](http://www.manitou.com)*

## MACHINE MAINTENANCE

### DAILY AND WEEKLY MAINTENANCE



**THE OPERATOR IS AUTHORIZED TO CARRY OUT THIS MAINTENANCE.**

This maintenance enables the operator to keep the machine in a clean and safe condition.

### MANDATORY SERVICE AFTER FIRST 500 HOURS OR 6 MONTHS



**THIS SERVICE MUST BE CARRIED OUT AFTER THE FIRST 500 HOURS OF SERVICE OR WITHIN THE 6 MONTHS FOLLOWING THE START-UP OF THE MACHINE (WHICHEVER OCCURS FIRST).**

### PERIODIC MAINTENANCE



**THE PERIODIC MAINTENANCE MUST BE CARRIED OUT BY A PROFESSIONAL APPROVED BY THE MANITOU NETWORK**

### MAINTENANCE SCHEDULE

This schedule enables the operator to keep the periodic maintenance on the machine up-to-date by reporting the total number of hours worked and the date of the service carried out by the professional approved by the MANITOU network.

### OCCASIONAL MAINTENANCE AND OPERATION

These maintenance operations are to be carried out when needed for the safety and upkeep of the machine.

## DAILY AND WEEKLY MAINTENANCE

### 🔄 10H - DAILY SERVICE OR EVERY 10 HOURS OF SERVICE

|         |  |      |
|---------|--|------|
| - CHECK | Machine environment.....                               | 3-12 |
| - CHECK | Engine oil level.....                                  | 3-12 |
| - CHECK | Coolant level.....                                     | 3-12 |
| - CHECK | Longitudinal stability limiter and warning device..... | 3-13 |
| - CLEAN | Cyclonic pre-filter.....                               | 3-13 |

### 🔄 50H - WEEKLY MAINTENANCE OR EVERY 50 HOURS OF SERVICE

|             |  |      |
|-------------|--|------|
| - CHECK     | Alternator/crankshaft belt tension.....                | 3-14 |
| - CHECK     | Compressor belt tension (Air conditioning option)..... | 3-14 |
| - CHECK     | Transfer box oil level.....                            | 3-14 |
| - CHECK     | Tire pressure.....                                     | 3-14 |
| - CHECK     | Wheel nut tightening.....                              | 3-14 |
| - CHECK     | Front axle differential seal.....                      | 3-15 |
| - CHECK     | Rear axle differential seal.....                       | 3-15 |
| - CHECK     | Front wheel reducer seals.....                         | 3-15 |
| - CHECK     | Rear wheel reducer seals.....                          | 3-15 |
| - CHECK     | Brake fluid level.....                                 | 3-15 |
| - CHECK     | Boom pad slide pathways.....                           | 3-15 |
| - CHECK     | Hydraulic fluid level.....                             | 3-16 |
| - CHECK     | Windshield washer fluid level.....                     | 3-16 |
| - CLEAN     | Fuel pre-filter.....                                   | 3-16 |
| - CLEAN     | Radiator cores.....                                    | 3-17 |
| - CLEAN     | Dry air filter cartridge.....                          | 3-17 |
| - CLEAN     | Condenser harness (Air conditioning OPTION).....       | 3-17 |
| - LUBRICATE | General lubrication.....                               | 3-18 |
| - REPLACE   | Engine oil *.....                                      | 3-19 |
| - REPLACE   | Engine oil filter *.....                               | 3-19 |

**\* Only for the first 50 hours of service, and then every 500 hours of service or 1 year.**

## MANDATORY SERVICE AFTER FIRST 500 HOURS OR 6 MONTHS

### FIRST 500 HOURS BEFORE THE FIRST 6 MONTHS

- If the machine has reached the first 500 hours of service before the first 6 months have expired, perform both the mandatory service and periodic 500 hours service (◀ ▶ ⓘ 500H - PERIODIC MAINTENANCE - EVERY 500 HOURS OF SERVICE OR 1 YEAR).

### FIRST 6 MONTHS BEFORE THE FIRST 500 HOURS

- If the machine has not completed 500 hours of service in the first 6 months, carry out only the mandatory service.

## MANDATORY SERVICE

|             |  |      |
|-------------|--|------|
| - CHECK     | Alternator/crankshaft belt tension   | 3-14 |
| - CHECK     | Compressor belt tension (Air conditioning option)                              | 3-14 |
| - CHECK     | Transfer box oil level   | 3-14 |
| - CHECK     | Tire pressure  | 3-14 |
| - CHECK     | Wheel nut tightening   | 3-14 |
| - CHECK     | Front axle differential seal   | 3-15 |
| - CHECK     | Rear axle differential seal  | 3-15 |
| - CHECK     | Front wheel reducer seals  | 3-15 |
| - CHECK     | Rear wheel reducer seals   | 3-15 |
| - CHECK     | Brake fluid level  | 3-15 |
| - CHECK     | Boom pad slide pathways  | 3-15 |
| - CHECK     | Hydraulic fluid level  | 3-16 |
| - CHECK     | Windshield washer fluid level  | 3-16 |
| - CLEAN     | Fuel pre-filter  | 3-16 |
| - CLEAN     | Radiator cores   | 3-17 |
| - CLEAN     | Dry air filter cartridge   | 3-17 |
| - CLEAN     | Condenser harness (Air conditioning OPTION)                                    | 3-17 |
| - LUBRICATE | General lubrication  | 3-18 |
| - CHECK     | Hoses and differential pressure hoses for the exhaust particle filter "DPF" ** | 3-24 |
| - CHECK     | Exhaust gas recirculation piping "EGR" **                                      | 3-24 |
| - CHECK     | Intake hose **   | 3-24 |
| - CHECK     | **Exhaust manifold   | 3-24 |
| - CHECK     | Fork wear *  | 3-24 |
| - CHECK     | Seat belt  | 3-25 |
| - CHECK     | Silentblocks **  | 3-29 |
| - CHECK     | Valve lash **  | 3-29 |
| - CHECK     | Injectors **   | 3-29 |
| - CHECK     | Exhaust gas recirculation cooler "EGR" **                                      | 3-29 |
| - CHECK     | Casing gas recycling valve **  | 3-29 |
| - CHECK     | Brake system pressure *  | 3-29 |
| - CHECK     | Boom pad wear *  | 3-29 |
| - CHECK     | Condition of wiring harnesses and cables *                                     | 3-29 |
| - CHECK     | Lights and signals *   | 3-29 |
| - CHECK     | Warning indicators *   | 3-29 |
| - CHECK     | Condition of the rear view mirrors *   | 3-29 |
| - CHECK     | Cab structure *  | 3-29 |
| - CHECK     | Chassis structure *  | 3-29 |
| - CHECK     | Attachment mounting system *   | 3-29 |
| - CHECK     | Condition of attachments *   | 3-29 |

**\*\* Engine service, consult your dealer.**

**\* Consult your dealer.**

## PERIODIC MAINTENANCE

### MAINTENANCE SCHEDULE

| SCHEDULE →             | ↻ OR ↻            |                          | 500 H<br>or 1 YEAR | 1000 H<br>or 2 YEARS | 1500 H<br>or 3 YEARS | 2000 H<br>or 4 YEARS |
|------------------------|-------------------|--------------------------|--------------------|----------------------|----------------------|----------------------|
|                        | FIRST 6 MONTHS    | FIRST 500 HOURS          |                    |                      |                      |                      |
| PERIODIC MAINTENANCE → | MANDATORY SERVICE | MANDATORY SERVICE<br>+ ① | ①                  | ①+②                  | ①                    | ①+②+③                |
| MACHINE COUNTER →      |                   |                          |                    |                      |                      |                      |
| DATE OF SERVICING →    |                   |                          |                    |                      |                      |                      |

| SCHEDULE →             | 2500 H<br>or 5 YEARS | 3000 H<br>or 6 YEARS | 3500 H<br>or 7 YEARS | 4000 H<br>or 8 YEARS | 4500 H<br>or 9 YEARS | 5000 H<br>or 10 YEARS | 5500 H<br>or 11 YEARS |
|------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------------------|-----------------------|
| PERIODIC MAINTENANCE → | ①                    | ①+②+④                | ①                    | ①+②+③                | ①                    | ①+②                   | ①                     |
| MACHINE COUNTER →      |                      |                      |                      |                      |                      |                       |                       |
| DATE OF SERVICING →    |                      |                      |                      |                      |                      |                       |                       |

| SCHEDULE →             | 6000 H<br>or 12 YEARS | 6500 H<br>or 13 YEARS | 7000 H<br>or 14 YEARS | 7500 H<br>or 15 YEARS | 8000 H<br>or 16 YEARS | 8500 H<br>or 17 YEARS | 9000 H<br>or 18 YEARS |
|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| PERIODIC MAINTENANCE → | ①+②+③+④               | ①                     | ①+②                   | ①                     | ①+②+③                 | ①                     | ①+②+④                 |
| MACHINE COUNTER →      |                       |                       |                       |                       |                       |                       |                       |
| DATE OF SERVICING →    |                       |                       |                       |                       |                       |                       |                       |

### → ① 500H - PERIODIC MAINTENANCE - EVERY 500 HOURS OF SERVICE OR 1 YEAR

|           |  |      |
|-----------|--|------|
| - CHECK   | Hydraulic oil .....  | 3-20 |
| - REPLACE | Engine oil .....   | 3-20 |
| - REPLACE | Engine oil filter .....  | 3-20 |
| - REPLACE | Fuel filter .....  | 3-21 |
| - REPLACE | Fuel pre-filter .....  | 3-21 |
| - REPLACE | Reversible fan control filter connector .....  | 3-21 |
| - REPLACE | Transfer box oil .....   | 3-22 |
| - REPLACE | Front axle differential oil .....  | 3-22 |
| - REPLACE | Hydraulic oil tank filter cap .....  | 3-22 |
| - REPLACE | Hydraulic return oil filter cartridge .....  | 3-23 |
| - REPLACE | Cab fan filter .....   | 3-23 |
| - CHARGE  | 12 V battery .....   | 3-23 |
| - CHECK   | Hoses and differential pressure hoses for the exhaust particle filter "DPF" ** ..... | 3-24 |
| - CHECK   | Exhaust gas recirculation piping "EGR" ** .....                                      | 3-24 |
| - CHECK   | Intake hose ** .....   | 3-24 |
| - CHECK   | **Exhaust manifold .....   | 3-24 |
| - CHECK   | Fork wear * .....  | 3-24 |

**\*\* Engine service, consult your dealer.**

**\* Consult your dealer.**

## ➔ ② 1000H - PERIODIC MAINTENANCE - EVERY 1000 HOURS OF SERVICE OR EVERY 2 YEARS

**ALSO CARRY OUT THE PERIODIC MAINTENANCE FOR 500 HOURS OF SERVICE.**

|           |  |      |
|-----------|--|------|
| - CHECK   | Seat belt .....                                  | 3-25 |
| - CLEAN   | Fuel tank .....                                  | 3-25 |
| - REPLACE | Alternator belt .....                            | 3-26 |
| - REPLACE | Engine crankcase ventilation filter .....        | 3-27 |
| - REPLACE | Dry air filter cartridge .....                   | 3-27 |
| - REPLACE | Coolant .....                                    | 3-28 |
| - REPLACE | Rear axle differential oil .....                 | 3-28 |
| - REPLACE | Front wheel reducer oil .....                    | 3-29 |
| - REPLACE | Rear wheel reducer oil .....                     | 3-29 |
| - CHECK   | Silentblocks ** .....                            | 3-29 |
| - CHECK   | Valve lash ** .....                              | 3-29 |
| - CHECK   | Injectors ** .....                               | 3-29 |
| - CHECK   | Exhaust gas recirculation cooler "EGR" ** .....  | 3-29 |
| - CHECK   | Casing gas recycling valve ** .....              | 3-29 |
| - CHECK   | Brake system pressure * .....                    | 3-29 |
| - CHECK   | Boom pad wear * .....                            | 3-29 |
| - CHECK   | Condition of wiring harnesses and cables * ..... | 3-29 |
| - CHECK   | Lights and signals * .....                       | 3-29 |
| - CHECK   | Warning indicators * .....                       | 3-29 |
| - CHECK   | Condition of the rear view mirrors * .....       | 3-29 |
| - CHECK   | Cab structure * .....                            | 3-29 |
| - CHECK   | Chassis structure * .....                        | 3-29 |
| - CHECK   | Attachment mounting system * .....               | 3-29 |
| - CHECK   | Condition of attachments * .....                 | 3-29 |
| - REPLACE | Brake fluid * .....                              | 3-29 |
| - REPLACE | Fan belt * .....                                 | 3-29 |
| - BLEED   | Braking system * .....                           | 3-29 |
| - ADJUST  | Brake * .....                                    | 3-29 |

**\*\* Engine service, consult your dealer.**

**\* Consult your dealer.**

## ➔ ③ 2000H - PERIODIC MAINTENANCE - EVERY 2000 HOURS OF SERVICE OR EVERY 4 YEARS

**ALSO PERFORM THE 500 HOUR AND 1,000 HOUR PERIODIC MAINTENANCE.**

|           |   |      |
|-----------|---|------|
| - CHECK   | Wheel nut tightening torque .....                 | 3-30 |
| - REPLACE | Dry air filter safety cartridge .....             | 3-30 |
| - REPLACE | Hydraulic oil .....                               | 3-31 |
| - REPLACE | Brake accumulator unit filter .....               | 3-31 |
| - CHECK   | Radiator * .....                                  | 3-32 |
| - CHECK   | Transmission pressures * .....                    | 3-32 |
| - CHECK   | Steering * .....                                  | 3-32 |
| - CHECK   | Steering swivel joints * .....                    | 3-32 |
| - CHECK   | Brake pad and brake disk wear * .....             | 3-32 |
| - CHECK   | Condition of boom assembly * .....                | 3-32 |
| - CHECK   | Bearings and bushings * .....                     | 3-32 |
| - CHECK   | Condition of hoses and flexible pipes * .....     | 3-32 |
| - CHECK   | Condition of cylinders (leakage, rods) * .....    | 3-32 |
| - CHECK   | Hydraulic circuit pressures * .....               | 3-32 |
| - CLEAN   | Air conditioning (OPTION) * .....                 | 3-32 |
| - REPLACE | Compressor belt (Air Conditioning OPTION) * ..... | 3-32 |

**\* Consult your dealer.**

## ➔ ④ 3000H - PERIODIC MAINTENANCE - EVERY 3000 HOURS OF SERVICE OR EVERY 6 YEARS

**ALSO PERFORM THE 500 HOUR AND 1000 HOUR PERIODIC MAINTENANCE.**

|         |   |      |
|---------|---|------|
| - CHECK | Turbocharger ** .....                           | 3-33 |
| - CHECK | Exhaust gas recirculation system "EGR" ** ..... | 3-33 |
| - CLEAN | Exhaust particle filter "DPF" ** .....          | 3-33 |

**\*\* Engine service, consult your dealer.**

## OCCASIONAL MAINTENANCE AND OPERATION

### ↻ OCCASIONAL MAINTENANCE

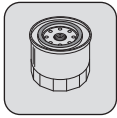
|           |   |      |
|-----------|---|------|
| - CLEAN   | “Stationary machine” exhaust purification .....         | 3-34 |
| - REPLACE | Wheels .....  | 3-35 |
| - REPLACE | Battery failure .....                                   | 3-36 |
| - ADJUST  | Front headlights .....                                  | 3-36 |
| - RESET   | Longitudinal stability limiter and warning device ..... | 3-37 |

### ↻ OCCASIONAL OPERATION

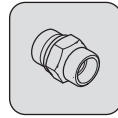
|             |               |      |
|-------------|---------------|------|
| - TOW/WINCH | Machine ..... | 3-38 |
| - SLING     | Machine ..... | 3-39 |
| - TRANSPORT | Machine ..... | 3-39 |

## FILTER CARTRIDGES AND BELTS

### ➔ ① 500H - PERIODIC MAINTENANCE - EVERY 500 HOURS OF SERVICE OR 1 YEAR



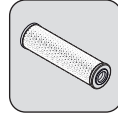
ENGINE OIL FILTER



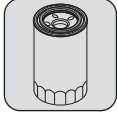
SELF-CLEANING FAN FILTER CONNECTION



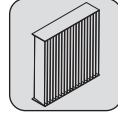
FUEL PRE-FILTER



HYDRAULIC RETURN OIL FILTER CARTRIDGE



FUEL FILTER



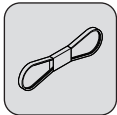
INTERIOR CAB VENTILATION FILTER



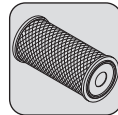
HYDRAULIC OIL TANK FILTER CAP

### ➔ ② 1000H - PERIODIC MAINTENANCE - EVERY 1000 HOURS OF SERVICE OR EVERY 2 YEARS

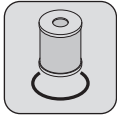
*ALSO ADD THE FILTER CARTRIDGES FROM THE PERIODIC MAINTENANCE FOR 500 HOURS OF SERVICE.*



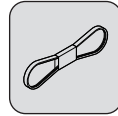
ALTERNATOR BELT



DRY AIR FILTER CARTRIDGE



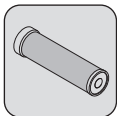
ENGINE CRANKCASE VENTILATION FILTER



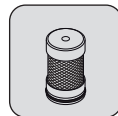
VENTILATION ADJUSTMENT BELT

### ➔ ③ 2000H - PERIODIC MAINTENANCE - EVERY 2000 HOURS OF SERVICE OR EVERY 4 YEARS

*ALSO ADD THE FILTER CARTRIDGES FROM THE PERIODIC MAINTENANCE FOR 500 HOURS AND 1,000 HOURS OF SERVICE.*



SAFETY DRY AIR FILTER CARTRIDGE

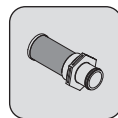


BRAKE ACCUMULATOR UNIT FILTER

### ➔ OCCASIONAL MAINTENANCE



CYCLONIC PRE-FILTER



SUCTION STRAINER FOR HYDRAULIC OIL TANK

## LUBRICANTS AND FUEL

### ⚠ IMPORTANT ⚠

- USE THE RECOMMENDED LUBRICANTS AND FUEL:**
- For topping up, oils may not be miscible.
  - For oil changes, MANITOU oils are perfectly appropriate.

### DIAGNOSTIC ANALYSIS OF OILS

If a service or maintenance contract has been set up with the dealer, a diagnostic analysis of engine, transmission and axle oils may be requested depending on the rate of use.

### (\* ) REQUIRED FUEL SPECIFICATION

### ⚠ IMPORTANT ⚠

- Replace the water separator O-ring when switching from diesel fuel to biodiesel fuel such as HVO.**  
**Pay special attention to the seals and fuel hoses when using HVO.**

Use fuel that meets the following standards:

- Diesel EN590
- Diesel ASTM D975
- Biodiesel HVO100 EN15940

### RECOMMENDATION

| ENGINE                  |          | RECOMMENDATION                               |     |     |     |   |     |     |     |     |       |  |
|-------------------------|----------|--|-----|-----|-----|---|-----|-----|-----|-----|-------|--|
| DESCRIPTION             | CAPACITY | -40°C  | -30 | -20 | -10 | 0 | +10 | +20 | +30 | +40 | +50°C |  |
| ENGINE                  | 11,2 ℓ   | 0W30   |     |     |     |   |     |     |     |     |       |  |
|                         |          | 0W40   |     |     |     |   |     |     |     |     |       |  |
|                         |          | 5W30   |     |     |     |   |     |     |     |     |       |  |
|                         |          | 5W40   |     |     |     |   |     |     |     |     |       |  |
|                         |          | 10W30  |     |     |     |   |     |     |     |     |       |  |
|                         |          | <b>MANITOU EVOLGY OIL 10W40 API CJ4</b>      |     |     |     |   |     |     |     |     |       |  |
|                         |          | 15W40  |     |     |     |   |     |     |     |     |       |  |
| 20W50                   |          |  |     |     |     |   |     |     |     |     |       |  |
| COOLING CIRCUIT         | 12 ℓ     | <b>COOLANT -35 °C</b>                        |     |     |     |   |     |     |     |     |       |  |
| FUEL TANK               | 63 ℓ     | <b>HP NON-ROAD DIESEL (GNR) *</b>            |     |     |     |   |     |     |     |     |       |  |
| BOOM                    |          | RECOMMENDATION                               |     |     |     |   |     |     |     |     |       |  |
| DESCRIPTION             | CAPACITY | -40°C  | -30 | -20 | -10 | 0 | +10 | +20 | +30 | +40 | +50°C |  |
| BOOM PAD SLIDE PATHWAYS |          | <b>MANITOU BLACK MULTI-PURPOSE LUBRICANT</b> |     |     |     |   |     |     |     |     |       |  |
| GREASING OF THE BOOM    |          | <b>MANITOU BLUE MULTI-PURPOSE LUBRICANT</b>  |     |     |     |   |     |     |     |     |       |  |
| HYDRAULICS              |          | RECOMMENDATION                               |     |     |     |   |     |     |     |     |       |  |
| DESCRIPTION             | CAPACITY | -40°C  | -30 | -20 | -10 | 0 | +10 | +20 | +30 | +40 | +50°C |  |
| HYDRAULIC OIL TANK      | 85 ℓ     | ISO VG 100                                   |     |     |     |   |     |     |     |     |       |  |
|                         |          | ISO VG 68                                    |     |     |     |   |     |     |     |     |       |  |
|                         |          | <b>MANITOU ISO VG 46 HYDRAULIC FLUID</b>     |     |     |     |   |     |     |     |     |       |  |
|                         |          | ISO VG 37                                    |     |     |     |   |     |     |     |     |       |  |
|                         |          | ISO VG 32                                    |     |     |     |   |     |     |     |     |       |  |
| BRAKES                  |          | RECOMMENDATION                               |     |     |     |   |     |     |     |     |       |  |
| DESCRIPTION             | CAPACITY | <b>MANITOU MINERAL BRAKE FLUID</b>           |     |     |     |   |     |     |     |     |       |  |
| BRAKE SYSTEM            | 1 ℓ      |  |     |     |     |   |     |     |     |     |       |  |
| CAB                     |          | RECOMMENDATION                               |     |     |     |   |     |     |     |     |       |  |
| DESCRIPTION             | CAPACITY | <b>WINDSHIELD WASHER FLUID</b>               |     |     |     |   |     |     |     |     |       |  |
| WINDSHIELD WASHER TANK  | 2 ℓ      |  |     |     |     |   |     |     |     |     |       |  |

| <b>FRONT AXLE</b>                              |                     |   |     |     |     |   |     |     |     |     |       |
|--|---------------------|---|-----|-----|-----|---|-----|-----|-----|-----|-------|
| DESCRIPTION                                    | CAPACITY            | RECOMMENDATION                                      |     |     |     |   |     |     |     |     |       |
| FRONT AXLE DIFFERENTIAL                        | 4,2 ℓ               | <b>SPECIAL MANITOU OIL FOR IMMERSSED BRAKES</b>     |     |     |     |   |     |     |     |     |       |
|  |                     | -40°C   | -30 | -20 | -10 | 0 | +10 | +20 | +30 | +40 | +50°C |
| TRANSFER GEAR BOX<br>FRONT WHEEL REDUCING GEAR | 0,75 ℓ<br>2 x 0,9 ℓ | <b>MANITOU SAE80W90 MECHANICAL TRANSMISSION OIL</b> |     |     |     |   |     |     |     |     |       |
|  |                     | -40°C   | -30 | -20 | -10 | 0 | +10 | +20 | +30 | +40 | +50°C |
| FRONT WHEEL REDUCING GEAR PIVOTS               |                     | <b>MANITOU BLACK MULTI-PURPOSE LUBRICANT</b>        |     |     |     |   |     |     |     |     |       |

| <b>REAR AXLE</b>                |           |   |     |     |     |   |     |     |     |     |       |
|---------------------------------|-----------|---|-----|-----|-----|---|-----|-----|-----|-----|-------|
| DESCRIPTION                     | CAPACITY  | RECOMMENDATION                                      |     |     |     |   |     |     |     |     |       |
| REAR AXLE DIFFERENTIAL          | 4,2 ℓ     | <b>SPECIAL MANITOU OIL FOR IMMERSSED BRAKES</b>     |     |     |     |   |     |     |     |     |       |
|                                 |           | -40°C   | -30 | -20 | -10 | 0 | +10 | +20 | +30 | +40 | +50°C |
| REAR WHEEL REDUCING GEAR        | 2 x 0,9 ℓ | <b>MANITOU SAE80W90 MECHANICAL TRANSMISSION OIL</b> |     |     |     |   |     |     |     |     |       |
|                                 |           | -40°C   | -30 | -20 | -10 | 0 | +10 | +20 | +30 | +40 | +50°C |
| REAR AXLE OSCILLATION           |           | <b>MANITOU BLUE MULTI-PURPOSE LUBRICANT</b>         |     |     |     |   |     |     |     |     |       |
|                                 |           | -40°C   | -30 | -20 | -10 | 0 | +10 | +20 | +30 | +40 | +50°C |
| REAR WHEEL REDUCING GEAR PIVOTS |           | <b>MANITOU BLACK MULTI-PURPOSE LUBRICANT</b>        |     |     |     |   |     |     |     |     |       |

**CHECK**

**Machine environment**

Carry out a general inspection around the machine:

- Fluid leaks or stains on the ground.
- Additional objects on the machine and in the cab.
- Mounting and locking of the attachment.
- Mounting and adjustment of rear-view mirrors.
- Condition of the tires, to detect cuts, blisters, wear, etc.

**⚠ IMPORTANT ⚠**

*Follow the operator instructions (↩ 1 - OPERATING AND SAFETY INSTRUCTIONS: OPERATOR INSTRUCTIONS).*

**CLEANLINESS OF THE MACHINE**

- Cleanliness of lights and rear-view mirror.
- Excess dirt or build-up of material (e.g. straw, flour, sawdust, organic waste, etc.).
- On a daily basis, according to the conditions of use and the environment, the operator must ensure that the machine is kept in a clean condition.
- Particular attention must be paid to accumulations of flammable materials (e.g. straw, flour, sawdust, organic waste, etc.) and fuel or lubricant leaks, as these significantly increase the risk of fire outbreaks.
- A regular inspection of the whole machine, especially the engine housing and the central part of the chassis, is necessary to see how frequently it needs to be cleaned to prevent these potential accumulations of material or leakages.

**CHECK**

**Engine oil level**

Set the machine on level ground with the engine off and let the oil drain into the sump.

- Open the engine hood.
- Pull out the dipstick 1.
- Clean the dipstick and check the correct level between the two notches.
- If necessary, add oil (↩ LUBRICANTS AND FUEL) through the filler hole 2.
- Visually check that there is no leakage or seepage.



**CHECK**

**Coolant level**

Set the machine on level ground with the engine off and wait for the engine to cool down.

**⚠ IMPORTANT ⚠**

*To avoid any risk of spraying or scalding, wait until the engine has cooled down before removing the cooling circuit filler plug.*

*In the event of an emergency, it is possible to use water as the coolant, but then proceed to drain the coolant circuit as quickly as possible.*

- Open the engine hood.
- The liquid must be at mid-height in the expansion tank 1.
- If necessary, add coolant (↩ LUBRICANTS AND FUEL) through the filler hole 2.
- Visually check that there is no leakage or seepage.




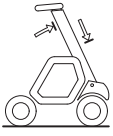



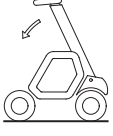







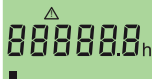
**⚠ IMPORTANT ⚠**

Use the test button  only when instructed, following the guidance for a short press (less than 1 second) or a long press (5 seconds).

In case of doubt during the test procedure, exit cleanly by a short press on the "BUCKET" MODE  or "SUSPENDED LOAD" buttons .

These tests are essential for checking the correct operation and adjustment of the different components of the device.

- Place the machine on flat, level ground with the wheels straight.
- Hold down the test button .

|                                |  |  |  |
|--------------------------------|--|--|--|
| <p><b>STAGE 1</b></p> <p>↓</p> |  <ul style="list-style-type: none"> <li>- A beep.</li> <li>- First green LED flashing.</li> <li>- Test button lit.</li> </ul>   | <p>⇒</p>  <ul style="list-style-type: none"> <li>- Place the machine without any attachments, with the boom fully retracted and raised.</li> </ul>  | <p>⇒</p> <p>Short press the test button. </p> <p>⇒</p> <p><b>TEST OK</b></p> <ul style="list-style-type: none"> <li>- Beeps once and progresses to stage 2.</li> </ul> <p><b>TEST NOT OK</b></p> <ul style="list-style-type: none"> <li>- Beeps twice and warning indicator lamp comes on .</li> <li>- Exit test mode.</li> <li>- Go to stage 4.</li> </ul>   |
| <p><b>STAGE 2</b></p> <p>↓</p> |  <ul style="list-style-type: none"> <li>- First green LED continuously lit.</li> <li>- Second green LED flashing.</li> <li>- Test button lit.</li> </ul>              | <p>⇒</p>  <ul style="list-style-type: none"> <li>- Lower the boom with the engine running at full revs and the hydraulic control at the maximum setting. Slow lowering until movement is cut-off.</li> </ul>  | <p>⇒</p> <p>Short press the test button. </p> <p>⇒</p> <p><b>TEST OK</b></p> <ul style="list-style-type: none"> <li>- Beeps once and progresses to stage 3.</li> </ul> <p><b>TEST NOT OK</b></p> <ul style="list-style-type: none"> <li>- Beeps twice and warning indicator lamp comes on .</li> <li>- Exit test mode.</li> <li>- Go to stage 4.</li> </ul>   |
| <p><b>STAGE 3</b></p> <p>↓</p> |  <ul style="list-style-type: none"> <li>- First and second green LEDs continuously lit.</li> <li>- Third green LED flashing.</li> <li>- Test button lit.</li> </ul> | <p>⇒</p> <ul style="list-style-type: none"> <li>- Lower the boom until the movement is cut off.</li> <li>- Request, in the following order: an excavation, dumping and a telescope boom extension. None of these 3 movements should be feasible.</li> </ul>  | <p>⇒</p> <p>Short press the test button. </p> <p>⇒</p> <p><b>TEST OK</b></p> <ul style="list-style-type: none"> <li>- Conformity of aggravating movement cut-off.</li> <li>- Exit test mode. All the LEDs will light for 2 seconds and a beep will sound.</li> </ul> <p><b>TEST NOT OK</b></p> <ul style="list-style-type: none"> <li>- Fault indicator lamp  comes on.</li> <li>- Exit test mode.</li> <li>- Go to stage 4.</li> </ul> |
| <p><b>STAGE 4</b></p>          |  <ul style="list-style-type: none"> <li>- The fault indicator goes out.</li> </ul>  | <p>⇒</p> <ul style="list-style-type: none"> <li>- Pictogram  appears on the hour meter screen  and an audible beep is sounded.</li> <li>- Scroll through the error codes (⏪ 2 - DESCRIPTION: 6B - SCREEN DISPLAYS: ERROR CODES).</li> <li>- If the error code "520393" is displayed, the problem may be resolved by resetting the longitudinal stability limiter and warning device (⏪ OCCASIONAL SERVICE). Otherwise consult your dealer and provide the error code numbers.</li> </ul> <p>N.B.: For the stage 3 test, if necessary, specify the non-compliant aggravating hydraulic movements.</p> |  |

CLEAN

Cyclonic pre-filter

The cleaning interval is given as a guide, however the pre-filter must be emptied and cleaned as soon as impurities reach the MAX level on the tank.

**⚠ IMPORTANT ⚠**

When cleaning, take care not to let impurities into the dry air filter.

- Loosen nut 1 remove cover 2 and empty the tank.
- Clean the pre-filter unit with a clean dry cloth and reassemble the unit.



## ➔ 50H - WEEKLY MAINTENANCE OR EVERY 50 HOURS OF SERVICE

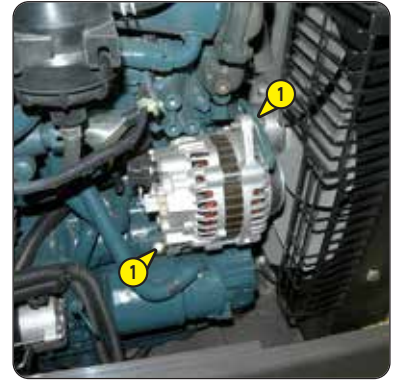
### CHECK

#### Alternator/crankshaft belt tension

##### **⚠ IMPORTANT ⚠**

*If the belt is changed, check the tension again after the first 20 hours of service.*

- Open the engine hood.
- Check the belt for signs of wear and cracks, and change if necessary (☞ FILTER CARTRIDGES AND BELTS).
- Adjust the belt tension between the crankshaft pulley and the alternator pulley (98 N). The clearance should be about 7 to 9 mm.
- Adjust if necessary.
- Loosen screws 1 by two to three thread turns.
- Swivel the alternator assembly so as to obtain the required belt tension.
- Retighten screws 1 (tightening torque 22 N.m).



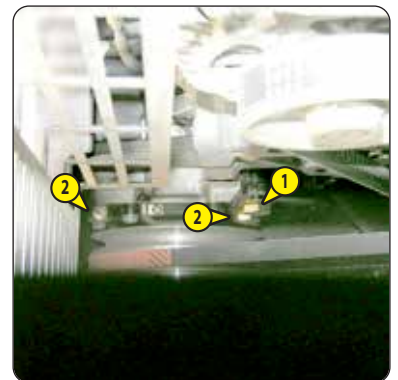
### CHECK

#### Compressor belt tension (Air conditioning option)

##### **⚠ IMPORTANT ⚠**

*If the belt is changed, check the tension again after the first 20 hours of service.*

- Open the engine hood.
- Check the belt for signs of wear and cracks, and change if necessary (☞ FILTER CARTRIDGES AND BELTS).
- Check the belt tension between the pulleys of the crankshaft and the compressor.
- Under a normal pressure exerted with the thumb (45 N), the clearance should be approximately 10 mm.
- Adjust if necessary.
- Loosen the screws 1 and nuts 2 by two to three thread turns.
- Swivel the compressor assembly so as to obtain the belt tension required.
- Re-tighten screws 1 and nuts 2 (tightening torque 22 N.m).



### CHECK

#### Transfer box oil level

Set the machine on level ground with the engine stopped.

- Visually check for any traces of seepage or leakage from the various filler, level and drain plugs.
- If there is any leakage or seepage, check the level.
- Remove the level plug 1, the oil must be flush with the edge of the hole.
- If necessary, add oil (☞ LUBRICANTS AND FUEL) through the same hole.
- Refit and tighten the level plug 1 (tightening torque 34 - 49 N.m).



### CHECK

#### Tire pressure

### CHECK

#### Wheel nut tightening

##### **⚠ IMPORTANT ⚠**

*Check that the air hose is correctly connected to the tire valve before inflating and keep all persons at a distance during inflation. Inflate to the recommended tire pressures.*

- Check the condition of the tires, to detect cuts, blisters, wear, etc.
- Check the wheel nut torque. Non-compliance with this instruction can lead to deterioration and breakage of the wheel lugs and distortion of the wheels.
- Check and restore tire pressure, if necessary (☞ 2 - DESCRIPTION: TIRES).

N.B.: An OPTIONAL wheel tool kit is available.

**CHECK**

**Front axle differential seal**

**CHECK**

**Rear axle differential seal**

Set the machine on level ground with the engine stopped.

- Visually check for any traces of seepage or leakage from the various filler, level and drain plugs.
- If there is any leakage or seepage, check the level.
- Remove the level plug 1, the oil must be flush with the edge of the hole.
- If necessary, add oil (↖ LUBRICANTS AND FUEL) through the filler hole 2.
- Refit and tighten the level plug 1 (tightening torque 34 - 49 N.m).



**CHECK**

**Front wheel reducer seals**

**CHECK**

**Rear wheel reducer seals**

Set the machine on level ground with the engine stopped.

- Visually check for any traces of seepage or leakage from the level plug.
- If there is any leakage or seepage, check the level.
- Place level plug 1 in a horizontal position.
- Remove the level plug; the oil must be flush with the edge of the opening.
- If necessary, add oil (↖ LUBRICANTS AND FUEL) through the same hole.
- Refit and tighten the level plug (tightening torque 34 - 49 N.m).



**CHECK**

**Brake fluid level**

Place the machine on level ground.

**⚠ IMPORTANT ⚠**

*If the brake fluid level is abnormal, consult your dealer.*

- Open the protective casing 1 with the screws 2.
- Check tank 3. The correct level must be at the MAX. level on the tank.
- If necessary, add oil (↖ LUBRICANTS AND FUEL).
- Remove the cap 4.
- Add oil through filler port 5.
- Refit the cap.
- Visually check that there is no leakage in the tank and pipes.



**CHECK**

**Boom pad slide pathways**

To preserve optimum operation, the pad slide pathways must be correctly lubricated:

**⚠ IMPORTANT ⚠**

**MANDATORY GREASING OF THE BOOM AFTER:**

*Cleaning the boom, especially after using high pressure cleaner.*

*Machine not used for a long time.*

- Fully extend the boom.
- Check the condition of the surface of the pad slide pathways, surface run in (steel whitened) without traces of corrosion.
- If necessary lubricate the pad slide pathways (↖ LUBRICANTS AND FUEL).
- Telescope the boom several times in order to spread the lubricant evenly.
- Remove the surplus lubricant.

**⚠ IMPORTANT ⚠**

*If the lift truck is used in an abrasive environment (dust, sand, and coal), use lubricating varnish (MANITOU Part No: 483536). Consult your dealer.*



## CHECK

### Hydraulic fluid level

Place the machine on level ground with the engine stopped, and the boom retracted and lowered as far as possible.

#### **⚠ IMPORTANT ⚠**

*Use a very clean funnel and clean the top of the oil can before filling.*

- Check dipstick 1, the correct level must be at the level of the red dot.
- If necessary, add oil (☞ LUBRICANTS AND FUEL).
- Remove the cap 2.
- Add oil through filler port 3.
- Refit the cap.
- Visually check that there is no leakage in the tank and pipes.



## CHECK

### Windshield washer fluid level

- Visually check the level in the tank.
- If necessary, add windshield washer fluid (☞ LUBRICANTS AND FUEL).
- Remove the cap 1.
- Add windshield washer liquid through filler port.
- Refit the cap.



## CLEAN

### Fuel pre-filter

#### **⚠ IMPORTANT ⚠**

*Carefully clean the outside of the pre-filter and its holder, to prevent dust from getting into the system.*

- Open the engine hood.
- Disconnect electrical wiring harness 1 from the fuel pre-filter.
- Place a receptacle under the drain plug 2 and unscrew it by two thread turns.
- Allow the diesel fuel to flow out until it is free from impurities and water.
- Retighten drain plug 2 and reconnect the wiring harness 1.



## CLEAN

### Radiator cores

#### ⚠ IMPORTANT ⚠

*In a polluting atmosphere, clean the radiator cores every day. Do not use a water jet or high pressure steam as this could damage the fins.*

- Open the engine hood.
- If necessary, clean the intake grille on the engine cover.
- Using a soft cloth, clean the radiator cores in order to remove as much dirt as possible.
- Clean the radiator using a compressed air jet aimed from the engine toward the radiator, in the opposite direction to the cooling air flow.



## CLEAN

### Dry air filter cartridge

Prefiltration elements are available for use in very dusty conditions (⇐ FILTER CARTRIDGES AND BELTS). The cartridge checking and cleaning interval must also be reduced.

#### ⚠ IMPORTANT ⚠

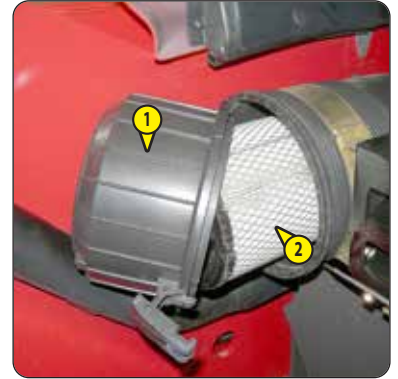
*If the clogging indicator lamp comes on, this operation should be performed as soon as possible (maximum 1 hour).*

*Never use the machine without an air filter or with a damaged air filter.*

*Maintain a safety distance of 30 mm between the jet of air and the cartridge to avoid tearing or piercing the cartridge. The cartridge must not be blown through close to the air filter casing. Never clean the cartridge by tapping it on a hard surface. Protect your eyes during this operation.*

*Do not clean the dry air filter cartridge by washing it in liquid. Never clean the safety cartridge located inside the filter cartridge. Change it for a new one if it is clogged or damaged.*

- For the dismantling and refitting of the cartridge (⇐ 1000H: REPLACE Air filter cartridge).
- Clean the filter cartridge using a compressed air jet (max. pressure 3 bars) directed from the top to the bottom and from the inside toward the outside at a minimum distance of 30 mm from the cartridge wall.
- Cleaning is completed when there is no more dust on the cartridge.
- Clean the cartridge seal surface with a damp, clean, lint-free cloth and grease with a silicone lubricant (MANITOU Part No.: 479292).
- Visually inspect the external condition of the air filter and its mounts. Check also the condition of the hoses and their attachments.



## CLEAN

### Condenser harness (Air conditioning OPTION)

#### ⚠ IMPORTANT ⚠

*In a polluting atmosphere, clean the radiator harness daily. Do not use a water jet or high-pressure steam as this could damage the condenser fins.*

- Remove the protective grid 1 and clean it if necessary.
- Visually check whether the condenser is clean and clean it if necessary.
- Clean the condenser using a compressed air jet aimed in the same direction as the air flow.
- Clean with the fans running for best results.



To be carried out weekly, if the machine has been operated for less than 50 hours during the week.

**⚠ IMPORTANT ⚠**

*In the event of prolonged use in an extremely dusty or oxidizing atmosphere, reduce this interval to 10 hours of service or every day.*

Clean, then lubricate the following points with grease (← LUBRICANTS AND FUEL) and remove the surplus.

**BOOM**

- 1 - Lubricators of the boom pin (2 lubricators).
- 2 - Lubricator of the carriage pin (1 lubricator).
- 3 - Lubricator of the tilting cylinder foot pin (1 lubricator).
- 4 - Lubricator of the tilting cylinder head pin (1 lubricator).
- 5 - Lubricator of the lifting cylinder foot pin (1 lubricator).
- 6 - Lubricator of the lifting cylinder head pin (1 lubricator).
- 7 - Lubricator of the compensating cylinder foot pin (1 lubricator).
- 8 - Lubricator of the compensating cylinder head pin (1 lubricator).

**FRONT AND REAR WHEEL REDUCER PIVOTS**

- 9 - Lubricators of the wheel reducer pivot pins (8 lubricators).

**REAR AXLE OSCILLATION**

- 10 - Rear axle oscillation lubricators (2 lubricators).



**REPLACE**

**Engine oil \***

**REPLACE**

**Engine oil filter \***

Set the machine on a horizontal surface, leave the engine idling for a few minutes and then switch it off.

**⚠ IMPORTANT ⚠**

*Dispose of the used oil in an ecological manner.  
Hand-tighten the oil filter and lock in place with a quarter turn.*

**DRAINING THE OIL**

- Open the engine hood.
- Remove access panel 1.

N.B.: When removing cover plates and hatches, clean the surrounding area and remove any accumulations of flammable materials.

- Place a container under the drain hole and unscrew the drain plug 2.
- Remove the filler plug 3 to ensure correct drainage.

**REPLACEMENT OF THE FILTER**

- Unscrew and discard the engine oil filter 4, together with its seal.
- Clean the filter bracket with a clean, lint-free cloth.
- Lightly oil the seal before refitting the new oil filter (< FILTER CARTRIDGES AND BELTS) on its bracket (tightening torque 15 - 17 N.m).

**FILLING WITH OIL**

- Refit and tighten the drain plug 1.
- Fill up with oil (< LUBRICANTS AND FUEL) through filler hole 5.
- Wait a few minutes to allow the oil to flow into the sump.
- Start the engine and let it run for a few minutes.
- Check for possible leaks from the drain plug and the oil filter.
- Stop the engine, wait a few minutes and check the correct level between the two marks on the dipstick 6.
- Top up the level, if necessary.
- Refit the access cover 1.

*\* Only for the first 50 hours of service, and then every 500 hours of service or 1 year.*



**CHECK**

**Hydraulic oil**

MANITOU offers a hydraulic fluid analysis kit which might make it possible to delay the recommended deadline in the periodic maintenance schedule (2,000 hours). In this case we recommend an analysis of the hydraulic fluid every 500 hours of service or 1 year.

The oil analysis kit also makes it possible to confirm the oil quality so as to obtain a deadline of 2,000 hours for specific uses causing constraints on the hydraulic circuit: extreme environmental conditions, use of the attachments with a very high hydraulic flow rate (such as a sweeper, or a concrete mixer).

- Order an oil analysis kit from your dealer.
- Upon receiving the kit, take a sample of oil and follow the instructions shown on the kit.
- According to the results, keep the analysis report or replace the hydraulic fluid.



**REPLACE**

**Engine oil**

**REPLACE**

**Engine oil filter**

Set the machine on a horizontal surface, leave the engine idling for a few minutes and then switch it off.



**Dispose of the used oil in an ecological manner.  
Hand-tighten the oil filter and lock in place with a quarter turn.**

**DRAINING THE OIL**

- Open the engine hood.
- Remove access panel 1.
- N.B.: When removing cover plates and hatches, clean the surrounding area and remove any accumulations of flammable materials.
- Place a container under the drain hole and unscrew the drain plug 2.
- Remove the filler plug 3 to ensure correct drainage.



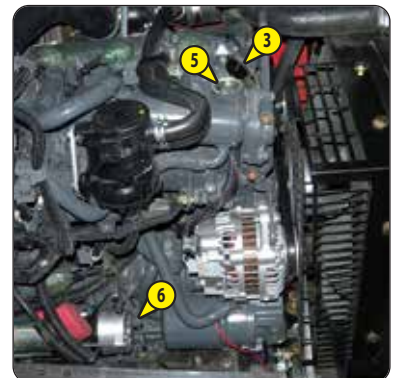
**REPLACEMENT OF THE FILTER**

- Unscrew and discard the engine oil filter 4, together with its seal.
- Clean the filter bracket with a clean, lint-free cloth.
- Lightly oil the seal before refitting the new oil filter (⚡ FILTER CARTRIDGES AND BELTS) on its bracket (tightening torque 15 - 17 N.m).



**FILLING WITH OIL**

- Refit and tighten the drain plug 2.
- Fill up with oil (⚡ LUBRICANTS AND FUEL) through filler hole 5.
- Wait a few minutes to allow the oil to flow into the sump.
- Start the engine and let it run for a few minutes.
- Check for possible leaks from the drain plug and the oil filter.
- Stop the engine, wait a few minutes and check the correct level between the two marks on the dipstick 6.
- Top up the level, if necessary.
- Refit the access cover 1.



## REPLACE

## Fuel filter

### ⚠ IMPORTANT ⚠

*Carefully clean the outside of the filter and around it, to prevent dust from getting into the system.  
Tighten the filter by hand only and lock it by a quarter turn.*

- Switch off the machine's ignition with the ignition key.
- Unscrew the filter 1.
- Clean the inside of the filter head using a brush immersed in clean diesel oil.
- Refit a new filter lubricated with clean diesel beforehand (◀ FILTER CARTRIDGES AND BELTS).



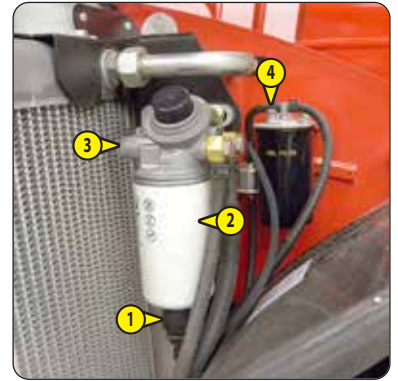
## REPLACE

## Fuel pre-filter

### ⚠ IMPORTANT ⚠

*Carefully clean the outside of the filter and around it, to prevent dust from getting into the system.  
Tighten the filter by hand only and lock it by a quarter turn.*

- Disconnect the wiring harness 1.
- Place a receptacle under the filter 2.
- Unscrew the filter 2.
- Clean the inside of the filter head using a brush immersed in clean diesel oil.
- Refit a new filter lubricated with clean diesel beforehand (◀ FILTER CARTRIDGES AND BELTS).
- Reconnect the wiring harness 1.
- Open bleed screws 3 and 4.
- Turn on the machine's ignition with the ignition key.
- Close the bleed screws 3 and 4 as soon as the diesel flows free of air.



## REPLACE

## Reversible fan control filter connector

### ⚠ IMPORTANT ⚠

*Raise the boom and place the boom safety wedge on the rod of the lifting cylinder (◀ 1 - INSTRUCTIONS AND SAFETY RECOMMENDATIONS: MACHINE MAINTENANCE INSTRUCTIONS).*

- Remove access panel 1.
- Replace the filter connector 2 with a new one (◀ FILTER ELEMENT AND BELTS).



## REPLACE

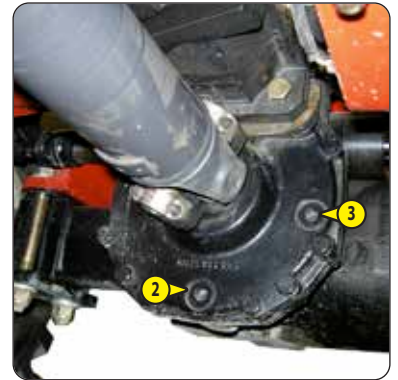
### Transfer box oil

Place the machine on level ground with the engine stopped and the transfer case oil still warm.

#### **⚠ IMPORTANT ⚠**

*Dispose of the used oil in an ecological manner.*

- Remove access panel 1.
- Place a container under drain plug 2 and unscrew the plug.
- Remove level and filling plug 3 to ensure correct drainage.
- Refit and tighten the drain plug 2 (tightening torque 34 - 49 N.m).
- Fill up with oil (↩ LUBRICANTS AND FUEL) through filler hole 3.
- The level is correct when the oil level is flush with the edge of the hole.
- Check for any possible leaks at the drain plug.
- Refit and tighten the level and filling plug 3 (tightening torque 34 - 49 N.m).
- Refit the access cover 1.



## REPLACE

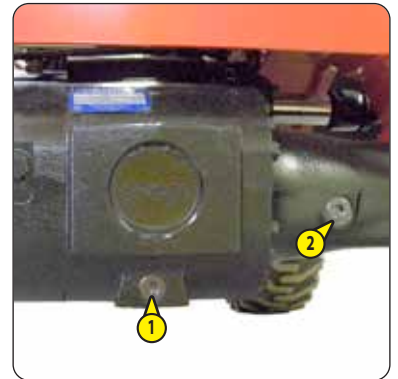
### Front axle differential oil

Place the machine on level ground with the engine stopped and the differential oil still warm.

#### **⚠ IMPORTANT ⚠**

*Dispose of the used oil in an ecological manner.*

- Place a container under drain plug 1 and unscrew the plug.
- Remove level and filling plug 2 to ensure correct drainage.
- Refit and tighten the drain plug 1 (tightening torque 34 - 49 N.m).
- Fill up with oil (↩ LUBRICANTS AND FUEL) through filler hole 2.
- The level is correct when the oil level is flush with the edge of the hole.
- Check for any possible leaks at the drain plug.
- Refit and tighten the level and filling plug 2 (tightening torque 34 - 49 N.m).



## REPLACE

### Hydraulic oil tank filter cap

Set the machine on level ground with the engine stopped.

- Unscrew plug 1, remove and replace the filter 2 with a new one (↩ FILTER CARTRIDGES AND BELTS).
- Refit and tighten the filter 2 (tightening torque  $3 \pm 0,5$  N.m).
- Refit the filler plug 1.



## REPLACE

### Hydraulic return oil filter cartridge

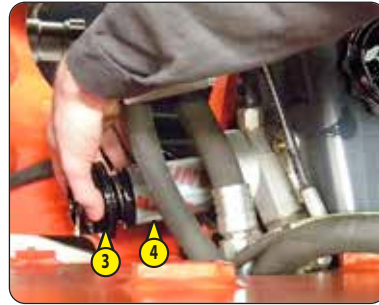
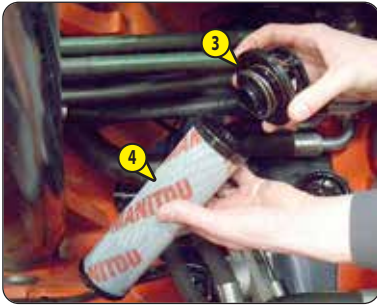
Stop the engine and release the pressure from the systems by operating the hydraulic controls.

#### **⚠ IMPORTANT ⚠**

*Raise the boom and place the boom safety wedge on the rod of the lifting cylinder (⇐ 1 - INSTRUCTIONS AND SAFETY RECOMMENDATIONS: MACHINE MAINTENANCE INSTRUCTIONS).*

*Thoroughly clean the outside of the filter and its surroundings before any operation to prevent any risk of polluting the hydraulic system.*

- Remove the cap 1.
- Place a container under hydraulic return oil filter.
- Unscrew the cover 2.
- Wait a few seconds for the oil to flow into the container.
- Slowly take out filter cartridge assembly 3 and 4.
- Separate the head 3 from the filter cartridge 4 with a twisting motion.
- Refit the head onto a new cartridge (⇐ FILTER CARTRIDGES AND BELTS).
- Fit the assembly in place and re-tighten cover 2.
- Put the cap 1 back.



## REPLACE

### Cab fan filter

#### INTERNAL CAB VENTILATION FILTER

- Remove the protective grid 1.
- Remove the cab ventilation filter and replace it with a new one (⇐ FILTER CARTRIDGES AND BELTS).
- Refit the protective grid.



## CHARGE

### 12 V battery

#### **⚠ IMPORTANT ⚠**

*Operate the battery cut-off no less than 30 seconds after having switched off the ignition with the ignition key.*

*Handling a 12V battery can be dangerous. Take the following precautions:*

- Wear protective goggles.
- Keep the 12V battery horizontal.
- Never smoke or direct a naked flame toward the batteries.
- The batteries are not charged in an explosive environment.
- Do not leave the battery charger connected during an electrical storm.

*In the event of electrolyte being spilled onto the skin or splashed in the eyes, rinse thoroughly with cold water for 15 minutes and call a doctor.*

To prolong battery life, MANITOU recommends fully recharging the 12 V battery a few months before the start of the winter season.

- Open the engine hood.
- Disconnect the 12 V battery in the following order: negative (-) terminal first, then positive (+) terminal.
- Fully charge the battery.
- Reconnect the 12 V battery in the following order: positive (+) terminal first, then negative (-) terminal.
- Close the engine hood.

**CHECK** *Hoses and differential pressure hoses for the exhaust particle filter "DPF" \*\**

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**CHECK** *Exhaust gas recirculation piping "EGR" \*\**

---

**CHECK** *Intake hose \*\**

---

**CHECK** *\*\*Exhaust manifold*

---

**CHECK** *Fork wear \**

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**\*\* Engine service, consult your dealer.**

**\* Consult your dealer.**

## 🔄 1000H - PERIODIC MAINTENANCE - EVERY 1000 HOURS OF SERVICE OR EVERY 2 YEARS

ALSO CARRY OUT THE PERIODIC MAINTENANCE FOR 500 HOURS OF SERVICE.

### CHECK

### Seat belt

#### ⚠️ IMPORTANT ⚠️

*Under no circumstances must the machine be used if the seat belt is defective (fixing, locking, cuts, tears, etc.).  
Immediately repair or replace the seat belt.*

#### SEAT BELT WITH TWO ANCHORING POINTS

- Check the following points:
  - Fixing of the anchoring points on the seat.
  - Cleanness of the strap and the locking mechanism.
  - Triggering of the locking mechanism.
  - Condition of the strap (cuts, curled edges).

#### REELED SEAT BELT WITH TWO ANCHORING POINTS

- Check the points listed above together with the following points:
  - The correct winding of the belt.
  - Condition of the reel guards.
  - Roller locking mechanism when the strap is given a sharp tug.

N.B.: Replace the seat belt after an accident.

### CLEAN

### Fuel tank

Set the machine on level ground with the engine stopped.

#### ⚠️ IMPORTANT ⚠️

*Do not smoke or approach with a flame during this operation.*

*Never attempt to carry out welding or any other operation by yourself, as this could cause an explosion or a fire.*

- Inspect the parts of the fuel circuit and the tank liable to leak, both visually and by touch.
- In the event of a leak, contact your dealer.
- Place a container under drain plug 1 and unscrew the plug.
- Open the fuel filler access panel 2 with the ignition key.
- Remove the filler plug 3 to ensure correct drainage.
- Rinse with ten liters of clean diesel through the filler hole 4.
- Refit and tighten the drain plug 1 (tightening torque 29 - 39 N.m).
- Fill the fuel tank with clean diesel filtered through the filler port.
- Refit the filler plug.
- Close access panel 2.



**⚠ IMPORTANT ⚠**

*Check the belt tension again after the first 20 hours of service.*

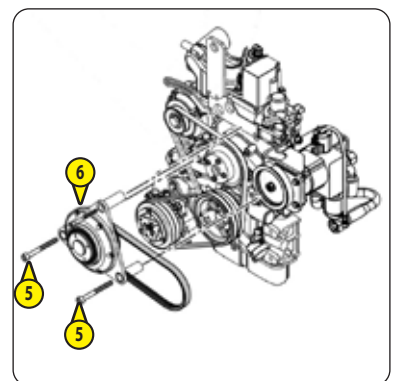
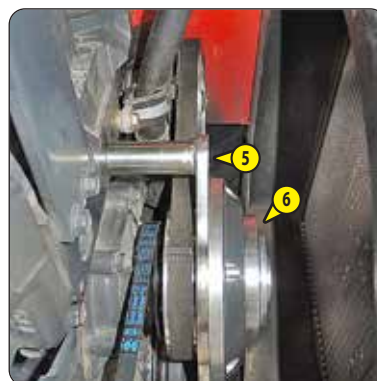
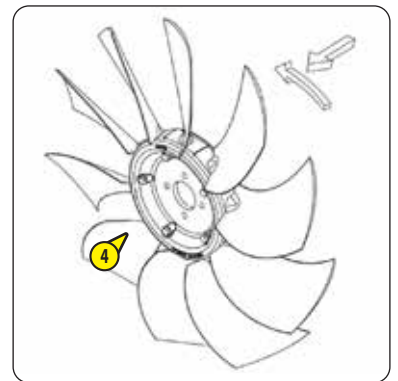
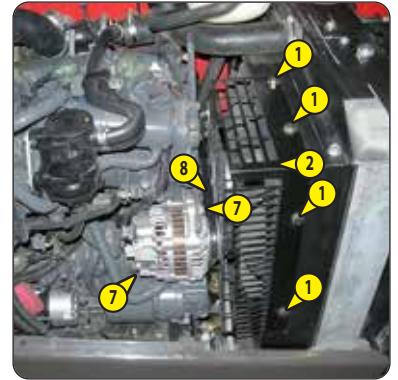
**REMOVING THE BELT**

- Unscrew the screws 1.
- Remove the radiator protection grille 2.
- Undo the screw 3 and swivel the radiator as far as it will go.
- Remove the fan 4, making a note of the direction.
- Undo the screws 5 and remove the assembly 6.
- Loosen screws 7 by two to three thread turns.
- Swivel the alternator assembly so as to free the belt 8.
- Remove the belt 8.

N.B.: Take the opportunity provided by the removal of the belt to check that the pulleys and bearings are working correctly (noise, friction, play, etc.).

**REFITTING THE BELT**

- Refit a new alternator belt (⇐ FILTER CARTRIDGES AND BELTS). Ensure that it is properly seated in the grooves of each pulley.
- Adjust the belt tension between the crankshaft pulley and the alternator pulley (98 N). The clearance should be about 7 to 9 mm.
- Swivel the alternator assembly so as to obtain the belt tension required.
- Retighten screws 7 (tightening torque 22 N.m).
- Refit the unit 6.
- Refit the fan 4.
- Swivel the radiator and replace the screw 3.
- Refit the radiator protection grill 2.



## REPLACE

### Engine crankcase ventilation filter

- Open the engine hood.
- Carefully clean the outside of the filter and its holder, to prevent dust from getting into the system.
- Disconnect the hose 1 at the filter.
- Unscrew the cover 2.
- Take out the filter 3 and discard it together with the seal of the cover 2.
- Refit a new seal on the cover and insert a new filter (⇐ FILTER CARTRIDGES AND BELTS).
- Tighten the cover 2 by hand only and lock in place by a quarter turn.
- Reconnect hose 1.



## REPLACE

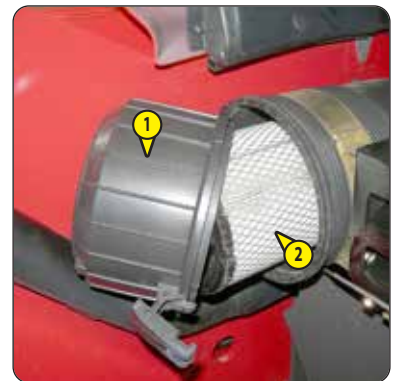
### Dry air filter cartridge

Prefiltration elements are available for use in very dusty conditions (⇐ FILTER CARTRIDGES AND BELTS). Also, the checking and cleaning periodicity of the cartridge must be reduced (up to 250 hours in a very dusty atmosphere and with pre-filtration).

#### ⚠ IMPORTANT ⚠

*Change the cartridge in a clean location, with the engine stopped. Never operate the machine with a cartridge removed or damaged.*

- Open the engine hood.
- Loosen the locks and remove cover 1.
- Gently remove the cartridge 2 to reduce dust falling as far as possible.
- Leave the safety cartridge in place.
- Carefully clean the following parts with a damp, clean lint-free cloth.
  - The inside of the filter and cover.
  - The inside of the filter inlet hose.
  - The gasket surfaces in the filter and in the cover.
- Check pipes and connections between the air filter and the engine and the connection and state of the clogging indicator on the filter.
- Before fitting check the condition of the new cartridge (⇐ FILTER CARTRIDGES AND BELTS).
- Insert the cartridge in the filter axis and push the cartridge pressing against the outer edge and not in the center.
- Reassemble the cover, guiding the valve downwards.



## REPLACE

## Coolant

These operations are to be carried out as necessary or every 2 years at the beginning of winter. Place the machine on level ground with the engine stopped and cold.

### ⚠ IMPORTANT ⚠

*The engine does not contain any anti-corrosion elements and must be filled throughout the year with a mixture containing 25% ethylene glycol-based antifreeze.*

### DRAINING THE LIQUID

- Open the engine hood.
- Remove the access panel 5.
- Place a container under the radiator drain plug 1 and unscrew the plug.
- Remove filler plug 2 from the expansion tank and fully open the heating control to ensure correct drainage.
- Let the cooling circuit drain entirely while ensuring that the ports do not get clogged.
- Check the condition of the hoses as well as the fastening devices and change the hoses if necessary.
- Rinse the circuit with clean water and use a cleaning agent if necessary.

### FILLING WITH COOLANT

- Refit and tighten the radiator drain plug 1 (tightening torque 20 N.m).
- Slowly fill the circuit with coolant (⚠ LUBRICANTS AND FUEL) up to the middle of the expansion tank 3 by the filler hole 4.
- Refit the filler plug 2.
- Run the engine at idle for a few minutes.
- Check for any possible leaks.
- Check the level and top up if necessary.



## REPLACE

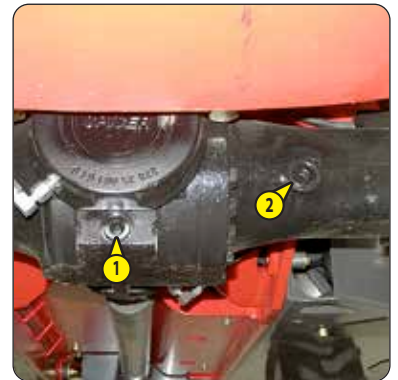
## Rear axle differential oil

Place the machine on level ground with the engine stopped and the differential oil still warm.

### ⚠ IMPORTANT ⚠

*Dispose of the used oil in an ecological manner.*

- Place a container under drain plug 1 and unscrew the plug.
- Remove level and filling plug 2 to ensure correct drainage.
- Refit and tighten the drain plug 1 (tightening torque 34 - 49 N.m).
- Fill up with oil (⚠ LUBRICANTS AND FUEL) through filler hole 2.
- The level is correct when the oil level is flush with the edge of the hole.
- Check for any possible leaks at the drain plug.
- Refit and tighten the level and filling plug 2 (tightening torque 34 - 49 N.m).



**REPLACE**

**Front wheel reducer oil**

**REPLACE**

**Rear wheel reducer oil**

Place the machine on level ground with the engine stopped and the reducer oil still warm.

**⚠ IMPORTANT ⚠**

*Dispose of the used oil in an ecological manner.*

- Drain and change the oil of each wheel reducer.
- Place drain plug 1 in position A.
- Place a container under the drain plug and unscrew the plug.
- Let the oil drain fully.
- Place the drain port in position B, i.e. in a level port.
- Fill up with oil (⚠ LUBRICANTS AND FUEL) through level hole 1.
- The level is correct when the oil level is flush with the edge of the hole.
- Refit and tighten the drain plug (tightening torque 34 - 49 N.m).



**CHECK**

**Silentblocks \*\***

**CHECK**

**Valve lash \*\***

**CHECK**

**Injectors \*\***

**CHECK**

**Exhaust gas recirculation cooler "EGR" \*\***

**CHECK**

**Casing gas recycling valve \*\***

**CHECK**

**Brake system pressure \***

**CHECK**

**Boom pad wear \***

**CHECK**

**Condition of wiring harnesses and cables \***

**CHECK**

**Lights and signals \***

**CHECK**

**Warning indicators \***

**CHECK**

**Condition of the rear view mirrors \***

**CHECK**

**Cab structure \***

**CHECK**

**Chassis structure \***

**CHECK**

**Attachment mounting system \***

**CHECK**

**Condition of attachments \***

**REPLACE**

**Brake fluid \***

**REPLACE**

**Fan belt \***

**BLEED**

**Braking system \***

**ADJUST**

**Brake \***

**\*\* Engine service, consult your dealer.**

**\* Consult your dealer.**

## 🔄 2000H - PERIODIC MAINTENANCE - EVERY 2000 HOURS OF SERVICE OR EVERY 4 YEARS

ALSO PERFORM THE 500 HOUR AND 1,000 HOUR PERIODIC MAINTENANCE.

### CHECK

### Wheel nut tightening torque

- Check the condition of the tires, to detect cuts, blisters, wear, etc.
- Check the tightening torque of the wheel nuts with a torque wrench.
  - Front wheels: 630 N.m  $\pm$  94 N.m
  - Rear wheels: 630 N.m  $\pm$  94 N.m

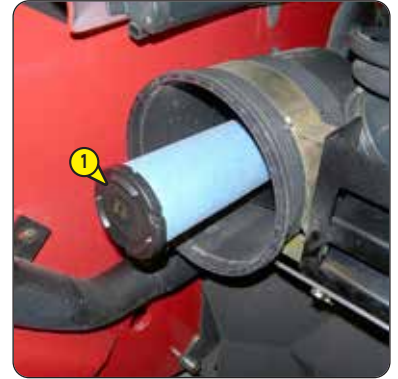
### REPLACE

### Dry air filter safety cartridge

#### ⚠ IMPORTANT ⚠

*The safety cartridge replacement frequency is given for information only. It must be changed every second time the dry air filter cartridge is changed.*

- For the dismantling and refitting of the cartridge (↩ 1000H: REPLACE Air filter cartridge).
- Carefully remove the dry air filter safety cartridge 1 to reduce dust fall as much as possible.
- Clean the gasket surface on the filter with a damp, clean lint-free cloth.
- Check the condition of the new safety cartridge before fitting (↩ FILTER CARTRIDGES AND BELTS).
- Insert the cartridge in the filter axis and push the cartridge pressing against the outer edge and not the center.



**REPLACE**

**Hydraulic oil**

**REPLACE**

**Brake accumulator unit filter**

Set the machine on level ground with the engine stopped.

**⚠ IMPORTANT ⚠**

*Raise the boom and place the boom safety wedge on the rod of the lifting cylinder (↖ 1 - INSTRUCTIONS AND SAFETY RECOMMENDATIONS: MACHINE MAINTENANCE INSTRUCTIONS).*

*Before any intervention, thoroughly clean the area surrounding the drain and filler plugs.*

*Dispose of the used oil in an ecological manner.*

*Use a clean container and funnel and clean the underside of the oil drum before filling.*

**DRAINING THE OIL**

- Place a container under drain plugs 1 and unscrew them.
- Remove the filler plug 2 to ensure correct drainage.

**REPLACING THE BRAKE ACCUMULATOR UNIT FILTER**

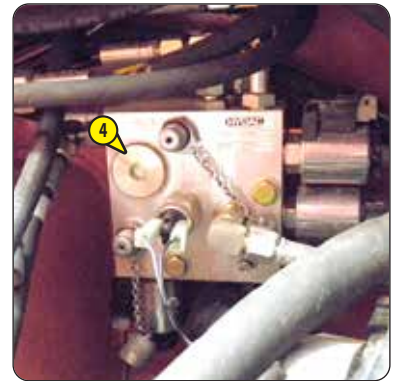
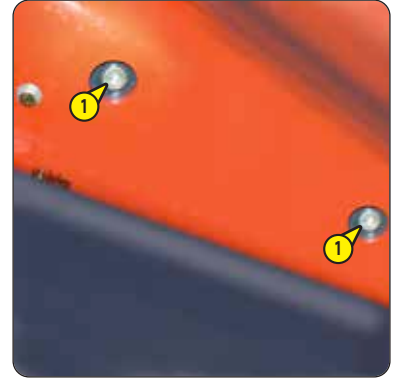
- Remove the cover plate 3.
- Unscrew plug 4, remove and replace the filter with a new one (↖ FILTER CARTRIDGES AND BELTS).
- Refit and tighten the plug 4 (tightening torque 70 - 80 N.m).
- Refit cover plate 3.

**FILLING WITH OIL**

- Clean and refit the drain plugs 1 (tightening torque 29 - 39 N.m).

NB: For machines that have one, check that the grounding lug 7 on the drain plug 1 is firmly in place.

- Fill up with oil (↖ LUBRICANTS AND FUEL) through filler hole 5.
- Observe the oil level on dipstick 6, the oil level should be at the level of the red dot.
- Check for any possible leaks at the drain plugs.
- Refit the filler plug 2.



|                |  |
|----------------|--|
| <b>CHECK</b>   | <b>Radiator *</b>                                  |
| <b>CHECK</b>   | <b>Transmission pressures *</b>                    |
| <b>CHECK</b>   | <b>Steering *</b>                                  |
| <b>CHECK</b>   | <b>Steering swivel joints *</b>                    |
| <b>CHECK</b>   | <b>Brake pad and brake disk wear *</b>             |
| <b>CHECK</b>   | <b>Condition of boom assembly *</b>                |
| <b>CHECK</b>   | <b>Bearings and bushings *</b>                     |
| <b>CHECK</b>   | <b>Condition of hoses and flexible pipes *</b>     |
| <b>CHECK</b>   | <b>Condition of cylinders (leakage, rods) *</b>    |
| <b>CHECK</b>   | <b>Hydraulic circuit pressures *</b>               |
| <b>CLEAN</b>   | <b>Air conditioning (OPTION) *</b>                 |
| <b>REPLACE</b> | <b>Compressor belt (Air Conditioning OPTION) *</b> |

**\* Consult your dealer.**

**➔ ④ 3000H - PERIODIC MAINTENANCE - EVERY 3000 HOURS OF SERVICE OR EVERY 6 YEARS**

**ALSO PERFORM THE 500 HOUR AND 1000 HOUR PERIODIC MAINTENANCE.**

**CHECK** **Turbocharger \*\***

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**CHECK** **Exhaust gas recirculation system "EGR" \*\***

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**CLEAN** **Exhaust particle filter "DPF" \*\***

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**\*\* Engine service, consult your dealer.**





### CLEAN

### "Stationary machine" exhaust purification

#### ⚠ IMPORTANT ⚠

Exhaust purification is an automated procedure activated by the operator when the following indicator lamps are displayed:



- Park the machine in a safe and adequately ventilated place.
- Check the following points:
  - forward/reverse selector in neutral,
  - parking brake applied,
  - boom angle less than 5°,
  - accelerator pedal released,
  - hand throttle not used (option),
- Check that the fuel level is sufficient.
- Start the machine and run the engine for a few minutes to bring it up to its operating temperature.
- Press the top of switch 1 for more than two seconds to begin the regeneration procedure.
- Lighting of the indicator lamp  plus a beep confirms the start of the "stationary machine" exhaust purification procedure.
- The "wait" display will flash throughout the "stationary machine" exhaust purification.
- Otherwise, "notice" will be displayed for 3 seconds indicating a fault in the procedure. In this event check the positioning of the machine and contact your dealer if necessary.
- At the end of the procedure, indicator lamps  +  go out.
- During the procedure, the engine speed increases to approx. 1800 rpm, and the indicator lamp  comes on when the exhaust particle filter gases reach a high temperature.



#### ⚠ IMPORTANT ⚠

*The exhaust sublimation procedure must only be stopped if absolutely necessary.*

*The procedure stops automatically if the operator:*

- activates the hydraulic control joystick,
  - engages forward or reverse gear,
  - switches off the engine,
  - or pressing on the top of the switch 1.
- The time taken for exhaust purification varies (between 15 and 30 minutes) according to several criteria, such as:
    - the level of clogging of the filter,
    - the ambient temperature,
    - the fuel quality and type of engine oil,
    - the number of exhaust particle filter automatic regeneration requests previously canceled.
  - The engine will return to its initial idling speed to indicate that the procedure has finished.

#### ⚠ IMPORTANT ⚠

*Once the exhaust sublimation procedure is completed, leave the engine idling for a few minutes to lower the temperature before switching off the ignition.*

## REPLACE

## Wheels

For this operation, we advise you to use the hydraulic jack (MANITOU part no.: 505507) and the safety support prop (MANITOU part no.: 554772).

### **⚠ IMPORTANT ⚠**

*In the event of a wheel being changed on the public highway, secure the machine vicinity:*

- If possible, stop the machine on firm, level ground.
- Stop the machine (⚠ 1 - SAFETY INSTRUCTIONS: DRIVING INSTRUCTIONS UNLADEN AND LADEN).
- Switch on the hazard warning lights.
- Immobilize the machine in both directions on the axle opposite to the wheel to be changed.
- Unlock the nuts of the wheel to be changed.
- Place the jack under the flared axle tube, as near as possible to the wheel, and adjust the jack.
- Raise the wheel until it is clear of the ground and place the safety support under the axle.
- Completely unscrew the wheel nuts and remove them.
- Free the wheel using back and forth movements and roll it to the side.
- Slip the new wheel on the wheel hub.
- Hand-tighten the nuts, grease them if necessary.
- Remove the safety support prop and lower the machine using the jack.
- Tighten the wheel nuts to the prescribed torque value (⚠ 2000H - PERIODIC MAINTENANCE - EVERY 2,000 HOURS OF SERVICE OR EVERY 4 YEARS) using a torque wrench.



## REPLACE

## Battery failure

### ⚠ IMPORTANT ⚠

Operate the battery cut-off for a minimum of 30 seconds after having switched off the ignition with the ignition key.  
Handling and servicing a battery can be dangerous. Take the following precautions:

- Wear protective goggles.
- Keep the battery horizontal.
- Never smoke or work near a naked flame.
- Work in a well-ventilated area.

- In the event of electrolyte being spilled onto the skin or splashed in the eyes, rinse thoroughly with cold water for 15 minutes and call a doctor.

- Open the engine hood.
- Bring a back-up battery of the same type as the one used for the machine, together with battery cables.
- Connect the backup battery according to the correct polarity with the (-) on the engine earth 1 and the (+) on the (+) of starter 2.
- Start the machine and remove the cables as soon as the engine is running.

### ⚠ IMPORTANT ⚠

Raise the boom and place the boom safety wedge on the rod of the lifting cylinder (⚠ 1 - INSTRUCTIONS AND SAFETY RECOMMENDATIONS: MACHINE MAINTENANCE INSTRUCTIONS).

- Remove the protective casing 3.
- Change the battery 4.



## ADJUST

## Front headlights

### RECOMMENDED SETTING

(As per standard ECE-76/756 76/761 ECE20)

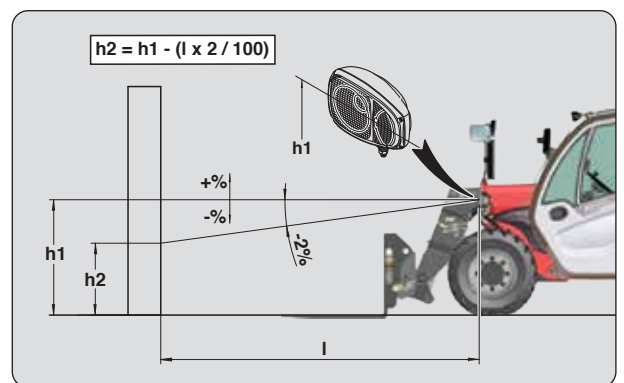
Adjustment of -2 % of the dipped beam harness relative to the horizontal axis of the headlight.

### ADJUSTMENT PROCEDURE

- Place the unladen machine in the transport position and perpendicular to a white wall on flat, level ground.
- Check the tire pressures (⚠ 2 - DESCRIPTION: TIRES).
- Put the gearshift lever in neutral.

### CALCULATING THE HEIGHT OF THE DIPPED BEAM (H2)

- h1 = Height of the dipped beam in relation to the ground.
- h2 = Height of the adjusted beam.
- l = Distance between the dipped beam and the white wall.



Depending on how the machine is used, the device may need to be periodically reset.

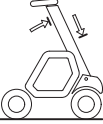



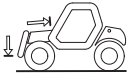


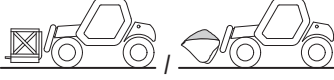
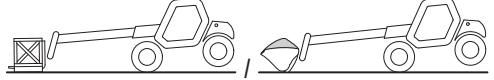



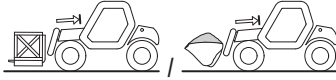
This operation can be easily performed by means of the following procedure.

- Provide a fork carrier or a bucket and a load corresponding to at least half the machine's rated capacity.
- Preferably perform the reset when the machine is still cold (before it is used) or ensure that the temperature of the rear axle is not more than 50 °C.
- Place the machine on flat, level ground with the wheels straight.

**⚠ IMPORTANT ⚠**

Carefully follow the boom positioning instructions. Two beeps and lighting of the fault indicator lamp  informs you these instructions have not been following. If in doubt, consult your dealer.

When the reset is completed, check the operation of the longitudinal stability limiter and warning device (⏱ 10H - DAILY SERVICE OR EVERY 10 HOURS OF SERVICE).

|                                |  |
|--------------------------------|--|
| <p>STAGE 1<br/>ENTRY<br/>↓</p> |  <p>→</p> <p><b>Simultaneously press and hold down the "BUCKET" MODE  and TEST  buttons.</b></p> <ul style="list-style-type: none"> <li>- Without attachments.</li> <li>- Boom fully retracted and raised.</li> <li>- Two beeps will sound and all the LEDs will flash twice to confirm the start of the procedure.</li> </ul>  |
| <p>STAGE 2<br/>↓</p>           |  <p>→</p>  <p>→</p> <p><b>Short press the test button.</b></p>  <ul style="list-style-type: none"> <li>- Without attachments.</li> <li>- Carriage tilted fully backwards.</li> <li>- Boom fully retracted and in the down position a few centimetres off the ground.</li> </ul>   |
| <p>STAGE 3<br/>↓</p>           |  <p>→</p>  <p>→</p>  <p><b>Short press the test button.</b></p>  <p>→ <b>Two beeps will sound and all the LEDs will flash twice to confirm the end of the procedure.</b></p> <p><b>⚠ IMPORTANT ⚠</b></p> <p><b>Always keep the load as close to the ground as possible during this operation.</b></p> <ul style="list-style-type: none"> <li>- With the fork carrier or the bucket and a load (keep boom retracted to allow all other hydraulic movements).</li> <li>- Boom fully retracted and in the down position a few centimetres off the ground.</li> <li>- Hold down the disable "aggravating" hydraulic movement cut-off button  (indicator lamp lit), and telescope the load until the rear wheels leave the ground.</li> </ul> <p>N.B.: This stage consists of unloading the rear axle. It can be done using a jack but without bearing on the rear axle.</p> |
| <p>STAGE 4<br/>EXIT</p>        |  <p>→</p>  <ul style="list-style-type: none"> <li>- After completing the resetting procedure, the machine is in an overloaded condition. Retract the telescope to restore the situation.</li> <li>- All LEDs lit.</li> <li>- A continuous audible beep.</li> </ul>  |

## TOW/WINCH

## Machine

### ⚠ IMPORTANT ⚠

*If the machine is not on level ground, chock it so that it does not descend the slope.*

*The machine must be towed very slowly (less than 5 km/h) and for as short a distance as possible (less than 100 m).*

*The parking brake is a negative brake, which deactivates under hydraulic pressure.*

For towing the machine, the high pressure relief valves must be unlocked to avoid damaging the hydrostatic transmission, and the parking brake on the front axle must be released.

- Switch on the machine's ignition.
- Set the forward/reverse selector to neutral.
- Deactivate the parking brake (↔ 1 - SWITCHES).

### UNLOCKING THE HIGH PRESSURE LIMITERS

- Open the engine hood.
- Loosen nuts 1 on the hydrostatic pump by no more than three turns.

### RELEASING THE PARKING BRAKE ON THE FRONT AXLE

#### STANDARD AXLE:

- Unscrew the screws 2 on the front axle, remove the shims 3 and fully re-tighten the screws 2.

#### 35-40 KM/H AXLE:

- Loosen the four nuts 4 by approximately 12 mm.
- Screw in the four screws 5 by hand until there is resistance (a bit-holding screwdriver can be used with care).
- Turn the four screws 5 in turn by 1/4 turn until they stop.

### ⚠ IMPORTANT ⚠

*Do not tighten each screw more than 1/4 turn at a time to avoid jamming the parking brake mechanism.*

### TOWING

- Switch on the hazard warning lights.
- Since there will be no power steering or hydraulic brake assistance, operate the steering and controls slowly and forcefully. Avoid sudden or jerky movements.
- After towing, re-tighten nuts 1 (tightening torque 70 N.m).

#### STANDARD AXLE:

- Unscrew the screws 2, refit the shims 3 and retighten the screws 2 (tightening torque 95 - 115 N.m).

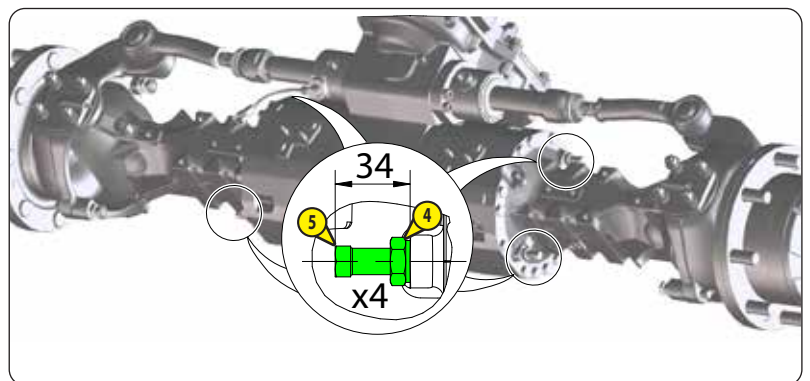
#### 35-40 KM/H AXLE:

- Unscrew the four screws 5 in turn by 1/4 turn until the initial dimension of 34 mm is reached.

### ⚠ IMPORTANT ⚠

*Do not unscrew each screw more than 1/4 turn at a time to avoid jamming the parking brake mechanism.*

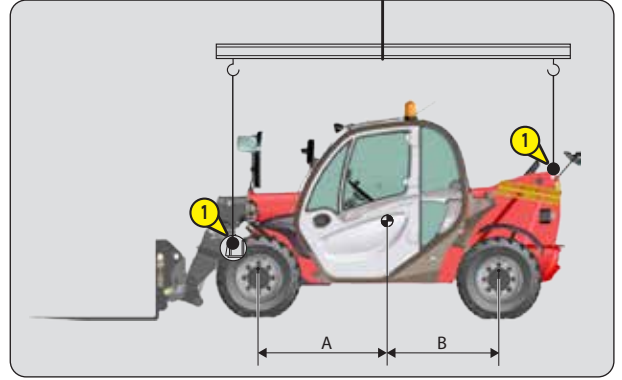
- Tighten the four locknuts 4 on the front axle (tightening torque 15 - 20 N.m).



## SLING

## Machine

- Take into account the position of the machine's center of gravity for lifting.  
A = 1200 mm      B = 1100 mm
- Place the hooks in the anchoring points 1 provided.



## TRANSPORT

## Machine

### ⚠ IMPORTANT ⚠

Check that the safety instructions associated with the flatbed have been correctly applied before loading the machine and ensure that the driver of the vehicle has been informed of the dimensional specifications and weight of the machine (↩ 2 - DESCRIPTION: SPECIFICATIONS).

Ensure that the truck bed is of sufficient size and load capacity for transporting the machine.  
Check also the allowable ground contact pressure of the truck bed relative to the machine.

### ⚠ IMPORTANT ⚠

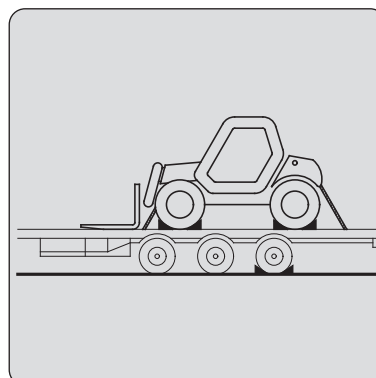
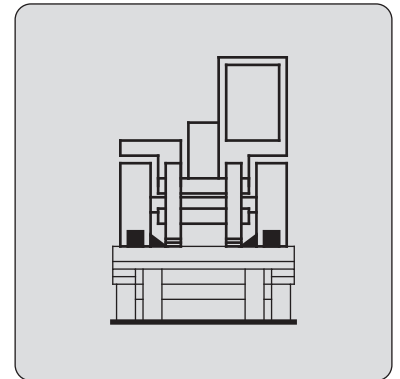
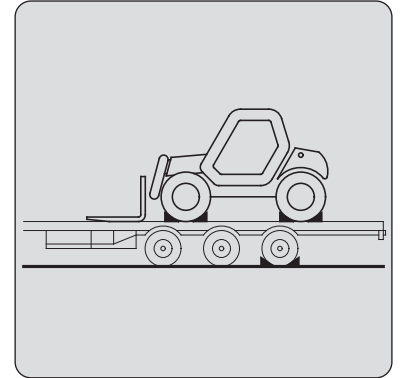
For lift trucks equipped with a turbo-charged engine, block off the exhaust outlet to avoid rotation of the turbo shaft without lubrication when transporting the vehicle.

## LOADING THE MACHINE

- Block the wheels of the platform.
- Fasten the loading ramps to the truck bed so as to obtain the shallowest possible angle for the machine to be loaded.
- Load the machine parallel to the truck bed.
- Stop the machine (↩ 1 - OPERATING AND SAFETY INSTRUCTIONS: DRIVING INSTRUCTIONS UNLADEN AND LADEN).

## SECURING THE MACHINE

- Fix the chocks to the platform at the front and at the back of each tire.
- Also fix the chocks to the platform on the inside of each tire.
- Secure the machine on the truck bed with sufficiently strong ropes to the anchoring points 1 provided.
- Tighten the ropes.





# ***4 - ATTACHMENTS***



## 4 - ATTACHMENTS

|  |      |
|--|------|
| <u>INTRODUCTION</u>                            | 4-3  |
| <u>PICKING UP THE ATTACHMENTS</u>              | 4-4  |
| <u>TECHNICAL SPECIFICATIONS OF ATTACHMENTS</u> | 4-6  |
| <u>ATTACHMENT GUARDS</u>                       | 4-12 |

### INTRODUCTION

- Your machine must be used with interchangeable equipment. These items are called: ATTACHMENTS.
- A wide range of attachments is available, guaranteed by MANITOU and designed to fit your machine perfectly.

#### **⚠ IMPORTANT ⚠**

*Only attachments approved by MANITOU can be used with their lift trucks (↪ 4 - ADAPTABLE ATTACHMENTS AS OPTIONS IN THE RANGE: TECHNICAL SPECIFICATIONS OF ATTACHMENTS).*

*The manufacturer cannot be held responsible for any modifications or adaptations to attachments without its knowledge.*

- The attachments are delivered with a load chart concerning your machine. The operator's manual and the load chart should be kept in the places provided in the machine. For standard attachments, their use is governed by the instructions contained on this notice.

#### **⚠ IMPORTANT ⚠**

*Maximum loads are defined by the capacity of the machine, taking account of the attachment's weight and center of gravity.*

*Should the attachment have a lower capacity than the machine, never exceed this limit.*

- Some particular uses require the adaptation of the attachment which is not provided in the price-listed options. Solutions exist, consult your dealer.

#### **⚠ IMPORTANT ⚠**

*Depending on their size, certain attachments may, when the boom is lowered and retracted, come into contact with the front tires and cause damage to them if excavation is activated in the direction of the discharge.*

*TO PREVENT THIS RISK, EXTEND THE TELESCOPE TO A SUFFICIENT EXTENT FOR THE PARTICULAR MACHINE AND ATTACHMENT SO THAT THIS CONTACT IS NOT POSSIBLE.*

### SUSPENDED LOAD

#### **⚠ IMPORTANT ⚠**

*Suspended loads MUST be handled with a machine designed for that purpose (↪ 1 - OPERATING AND SAFETY INSTRUCTIONS: INSTRUCTIONS FOR HANDLING LOADS: H - LIFTING UP AND SETTING DOWN A SUSPENDED LOAD).*

## PICKING UP THE ATTACHMENTS

### 1 - ATTACHMENT WITHOUT HYDRAULICS AND HAND LOCKING DEVICE

#### FITTING AN ATTACHMENT

- Ensure that the attachment is in a position facilitating the locking to the carriage. If it is not correctly oriented, take the necessary precautions in order to move it safely.
- Check that the locking pin is in position in the bracket (Fig. A).
- Place the machine with the boom lowered in front of and parallel to the attachment, and tilt the carriage forward (Fig. B).
- Bring the carriage under the locking tube of the attachment, slightly raise the boom, tilt the carriage backward in order to position the attachment (Fig. C).
- Lift the attachment off the ground to facilitate locking.

#### MANUAL LOCKING

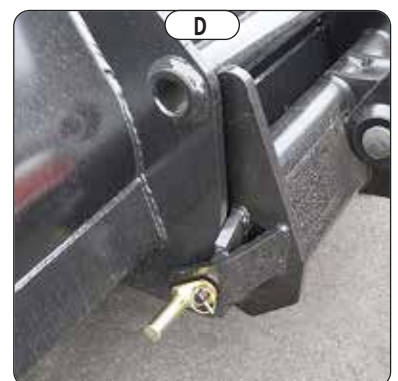
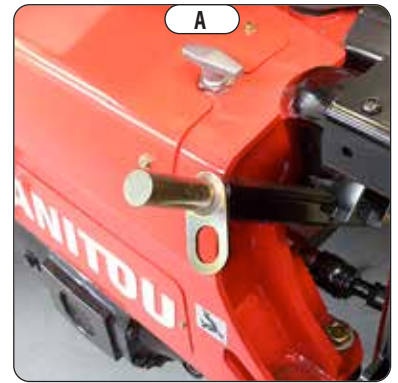
- Take the locking pin on the bracket (Fig. A) and lock the attachment (Fig. D). Do not forget to fit the pin.

#### MANUAL UNLOCKING

- Proceed in the reverse order to MANUAL LOCKING, taking care to refit the locking pin in the bracket (Fig. A).

#### REMOVING THE ATTACHMENT

- Proceed in the reverse order to FITTING AN ATTACHMENT, taking care to store the attachment flat on the ground and in the closed position.



## 2 - HYDRAULIC ATTACHMENT AND MANUAL LOCKING DEVICE

### FITTING AN ATTACHMENT

- Ensure that the attachment is in a position facilitating the locking to the carriage. If it is not correctly oriented, take the necessary precautions in order to move it safely.
- Check that the locking pin is in position in the bracket (Fig. A).
- Place the machine with the boom lowered in front of and parallel to the attachment, and tilt the carriage forward (Fig. B).
- Bring the carriage under the locking tube of the attachment, slightly raise the boom, tilt the carriage backward in order to position the attachment (Fig. C).
- Lift the attachment off the ground to facilitate locking.

### MANUAL LOCKING AND CONNECTION OF THE ATTACHMENT

#### ⚠ IMPORTANT ⚠

*Make sure that the rapid connectors are clean and protect the holes which are not used, with the caps provided.*

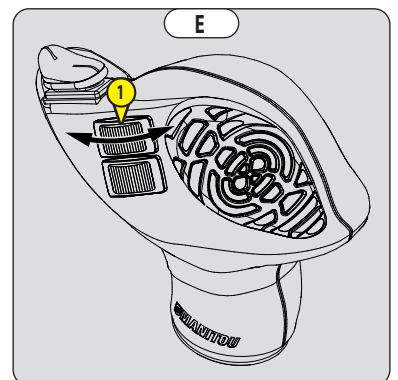
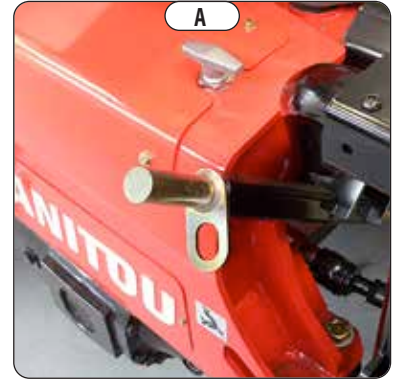
- Take the locking pin on the bracket and lock the attachment (fig. D). Do not forget to fit the pin.
- Stop the engine and keep the ignition on the machine.
- Release the pressure in the attachment hydraulic circuit by operating switch 1 on the distributor lever backward and forward 4 or 5 times.
- Connect the quick-release couplers according to the logic of the attachment's hydraulic movements.

### MANUAL RELEASE AND DISCONNECTION OF THE ATTACHMENT

- Proceed in the reverse order of paragraph MANUAL LOCKING AND CONNECTION OF THE ATTACHMENT, taking care to refit the locking pin in the bracket.

### REMOVING THE ATTACHMENT

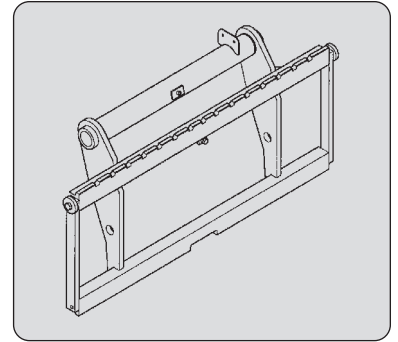
- Proceed in the reverse order to FITTING AN ATTACHMENT, taking care to store the attachment flat on the ground and in the closed position.



## TECHNICAL SPECIFICATIONS OF ATTACHMENTS

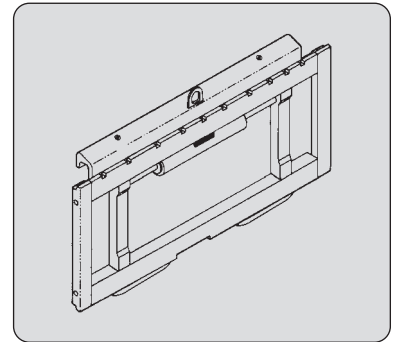
### STANDARDIZED TILTING FORK CARRIAGE

| REFERENCE      | PFB 25 N MT-1020 S2 | PFB 25 N MT-1260 S2 |
|----------------|---------------------|---------------------|
| Rated capacity | 571958<br>2300 kg   | 571959<br>2300 kg   |
| Width          | 1020 mm             | 1260 mm             |
| Weight         | 71 kg               | 80 kg               |



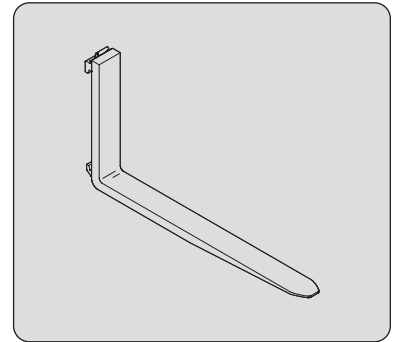
### STANDARDISED SIDE-SHIFT CARRIAGE

| REFERENCE      | TDL 2T5 L1020 FEM2 | TDL 2T5 L1260 FEM2 |
|----------------|--------------------|--------------------|
| Rated capacity | 751370<br>2300 kg  | 751371<br>2300 kg  |
| Side-shift     | 2x100 mm           | 2x100 mm           |
| Width          | 1020 mm            | 1260 mm            |
| Weight         | 54 kg              | 67 kg              |



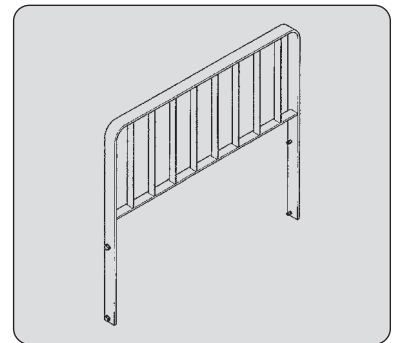
### STANDARDIZED FORK

| REFERENCE     | 415835         |
|---------------|----------------|
| Cross-section | 125x40x1200 mm |
| Weight        | 76 kg          |



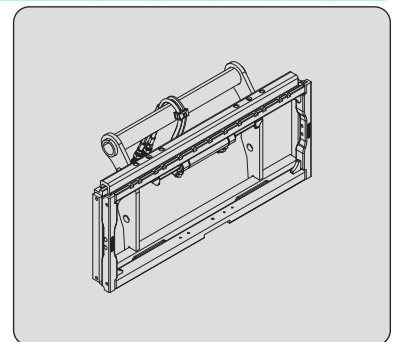
### LOAD BACK REST

| REFERENCE | 555320  | 570518  |
|-----------|---------|---------|
| Width     | 1020 mm | 1260 mm |
| Weight    | 31 kg   | 35 kg   |



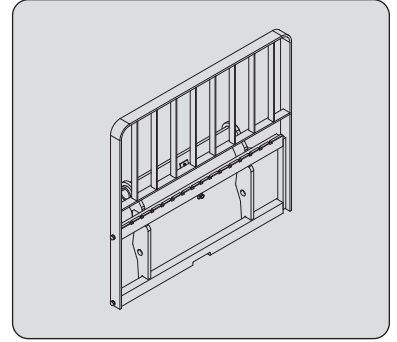
### STANDARDIZED TILTING FORK CARRIAGE + STANDARDIZED SIDE-SHIFT CARRIAGE

| REFERENCE      | PFB 25 N 1020 DL   | PFB 25 N 1260 DL    |
|----------------|--------------------|---------------------|
| Rated capacity | 5200099<br>2500 kg | 52000100<br>2500 kg |
| Side-shift     | 2x100 mm           | 2x100 mm            |
| Width          | 1020 mm            | 1260 mm             |
| Weight         | 135 kg             | 145 kg              |



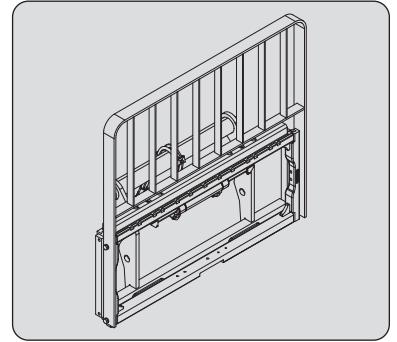
### STANDARDIZED TILTING FORK CARRIAGE + LOAD BACK REST

| REFERENCE      | PFB 25N 1020 LB<br>52000198 | PFB 25N 1260 LB<br>52000199 |
|----------------|-----------------------------|-----------------------------|
| Rated capacity | 2500 kg                     | 2500 kg                     |
| Width          | 1020 mm                     | 1260 mm                     |
| Weight         | 105 kg                      | 118 kg                      |



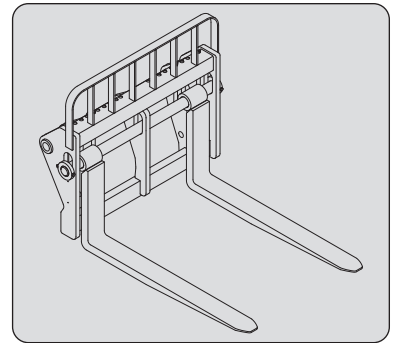
### STANDARDIZED TILTING FORK CARRIAGE + STANDARDIZED SIDE-SHIFT CARRIAGE + LOAD BACK REST

| REFERENCE      | PFB 25 N 1020 DL/LB<br>52000204 |
|----------------|---------------------------------|
| Rated capacity | 2500 kg                         |
| Side-shift     | 2x100 mm                        |
| Width          | 1020 mm                         |
| Weight         | 170 kg                          |



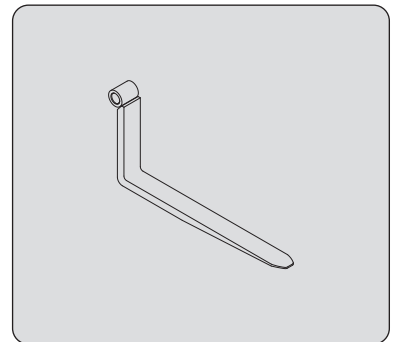
### FLOATING FORK CARRIAGE

| REFERENCE      | TFF 29 MT-1040<br>653340 |
|----------------|--------------------------|
| Rated capacity | 2900 kg                  |
| Width          | 1040 mm                  |
| Weight         | 285 kg                   |



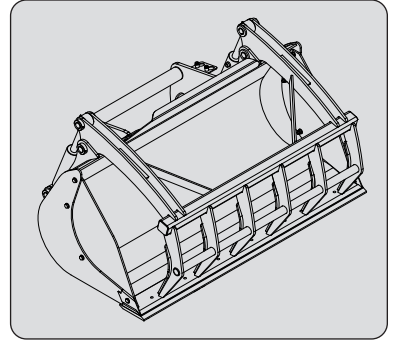
### FLOATING FORK

| REFERENCE     | 211919         |
|---------------|----------------|
| Cross-section | 125x40x1200 mm |
| Weight        | 62 kg          |



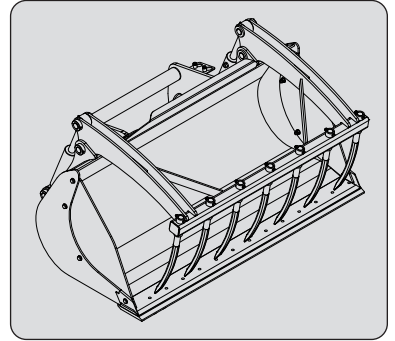
## BUCKET WITH GRAB

| REFERENCE      | CBG 1850 DA MS<br>790302 |
|----------------|--------------------------|
| Rated capacity | 850 ℓ                    |
| Width          | 1850 mm                  |
| Teeth          | 6                        |
| Weight         | 630 kg                   |



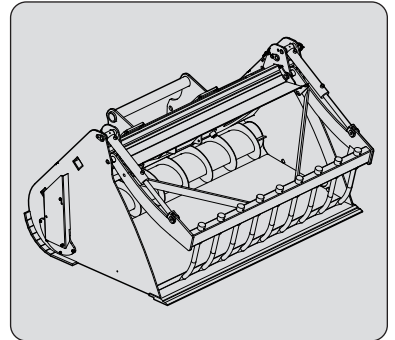
## BUCKET WITH GRAB

| REFERENCE      | CBG 1850 DA FO<br>790303 |
|----------------|--------------------------|
| Rated capacity | 850 ℓ                    |
| Width          | 1850 mm                  |
| Teeth          | 7                        |
| Weight         | 636 kg                   |



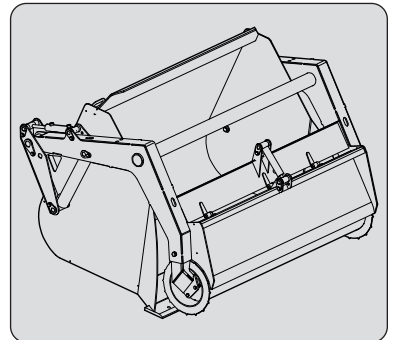
## SPREADER GRAB SHELL

| REFERENCE      | CGD 2200/1700 FO<br>790310 |
|----------------|----------------------------|
| Rated capacity | 1700 ℓ                     |
| Width          | 2205 mm                    |
| Teeth          | 9                          |
| Weight         | 1025 kg                    |



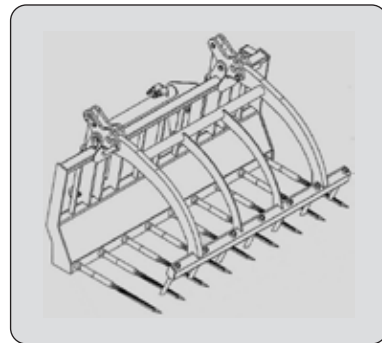
## SINGLE ROTOR SHELL

| REFERENCE      | CRS 1700/1500 DA<br>790331 |
|----------------|----------------------------|
| Rated capacity | 1500 ℓ                     |
| Width          | 2030 mm                    |
| Weight         | 820 kg                     |



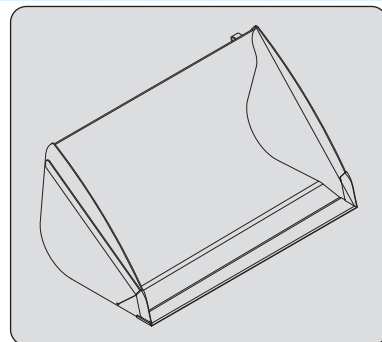
## MANURE FORK WITH GRAB

| REFERENCE      | FFGR 1700<br>751429 | FFGR 1900 DA<br>751428 |
|----------------|---------------------|------------------------|
| Rated capacity | 2,5 m <sup>3</sup>  | 2,9 m <sup>3</sup>     |
| Width          | 1700 mm             | 1950 mm                |
| Finger         | 8                   | 9                      |
| Teeth          | 7                   | 7                      |
| Weight         | 505 kg              | 530 kg                 |



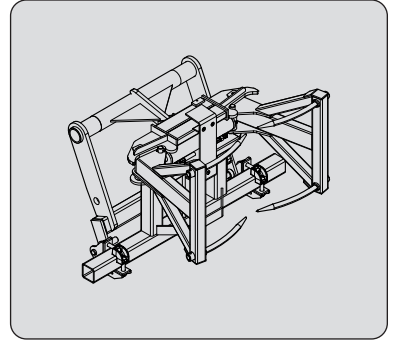
## AGRICULTURAL BUCKET (CHICKEN MANURE)

| REFERENCE      | CBA 1500 L2050 FP S3<br>653035 |
|----------------|--------------------------------|
| Rated capacity | 1507 ℓ                         |
| Width          | 2050 mm                        |
| Weight         | 492 kg                         |



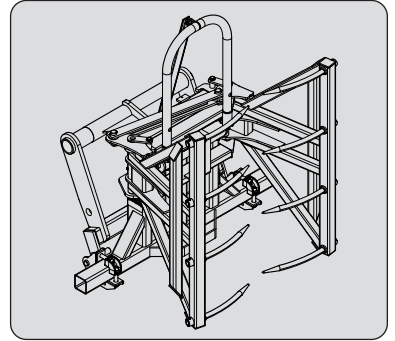
## BALE CLAMP

|                  |                                 |
|------------------|---------------------------------|
| <b>REFERENCE</b> | <b>PBG 2X2</b><br><b>757639</b> |
| Rated capacity   | 800 kg                          |
| Width            | 1090 mm                         |
| Teeth            | 2x2                             |
| Weight           | 158 kg                          |



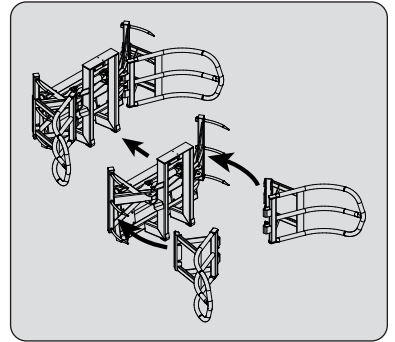
## BALE CLAMP

|                  |                                 |
|------------------|---------------------------------|
| <b>REFERENCE</b> | <b>PBG 2X4</b><br><b>757612</b> |
| Rated capacity   | 1000 kg                         |
| Width            | 1300 mm                         |
| Teeth            | 2x4                             |
| Weight           | 262 kg                          |



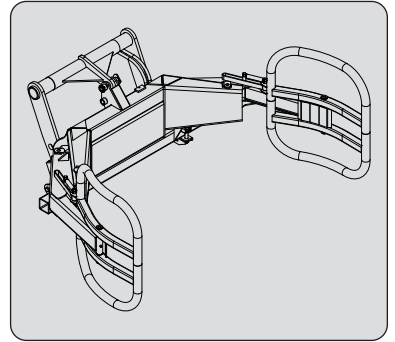
## BALE CLAMP

|                  |                                 |
|------------------|---------------------------------|
| <b>REFERENCE</b> | <b>MBC 2X3</b><br><b>790506</b> |
| Rated capacity   | 800 kg                          |
| Width            | 1196 mm                         |
| Weight           | 290 kg                          |



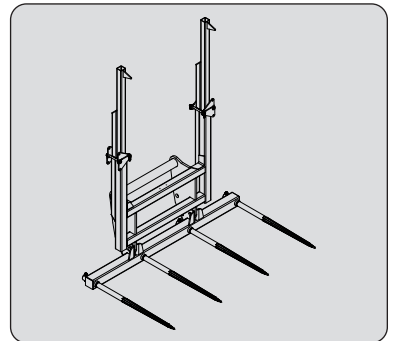
## BALE CLAMP

|                  |                             |
|------------------|-----------------------------|
| <b>REFERENCE</b> | <b>PBE</b><br><b>757613</b> |
| Rated capacity   | 1000 kg                     |
| Width            | 1600 mm                     |
| Weight           | 242 kg                      |



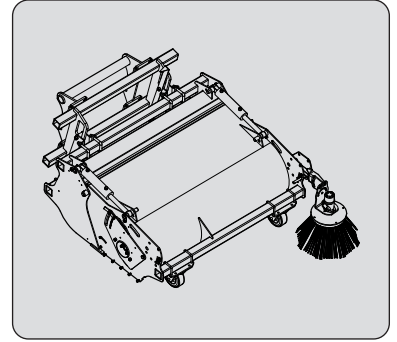
## BALE FORK

|                  |                                      |
|------------------|--------------------------------------|
| <b>REFERENCE</b> | <b>FB 1900/1700</b><br><b>790699</b> |
| Rated capacity   | 1700 kg                              |
| Width            | 1878 mm                              |
| Teeth            | 4                                    |
| Weight           | 215 kg                               |



## **SWEEPER COLLECTOR WITH BRUSH**

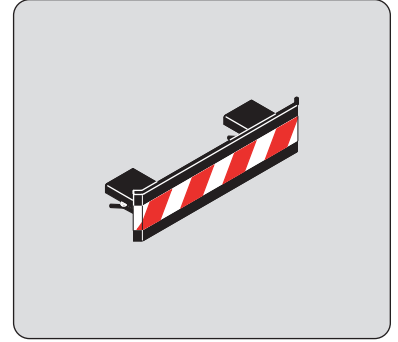
|                  |                 |
|------------------|-----------------|
| <b>REFERENCE</b> | <b>BRB 1600</b> |
|                  | <b>790313</b>   |
| Rated capacity   | 380 ℓ           |
| Width            | 2000 mm         |
| Weight           | 775 kg          |



## ATTACHMENT GUARDS

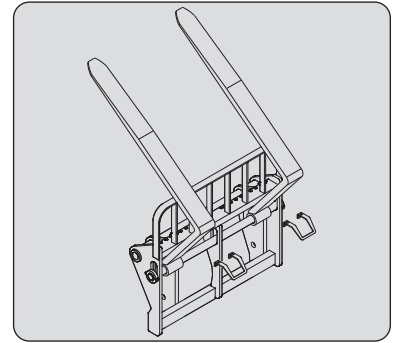
### FORK GUARD

REFERENCE 227801



### FORK BLOCK FOR FLOATING FORK CARRIAGE

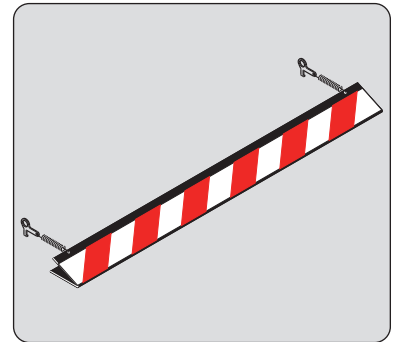
REFERENCE 261210



### BUCKET PROTECTOR

*Always ensure that the width of the protector you choose is less than or equal to the width of the bucket.*

|       |                  |         |         |
|-------|------------------|---------|---------|
| Width | REFERENCE 206734 | 206732  | 206730  |
|       | 1375 mm          | 1500 mm | 1650 mm |
| Width | REFERENCE 235854 | 206728  | 206726  |
|       | 1850 mm          | 1950 mm | 2000 mm |
| Width | REFERENCE 223771 | 223773  | 206724  |
|       | 2050 mm          | 2100 mm | 2150 mm |
| Width | REFERENCE 206099 | 206722  | 223775  |
|       | 2250 mm          | 2450 mm | 2500 mm |



### MANURE FORK GUARD

REFERENCE 230689

