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MT 732 EASY 75D ST3B S1
MT 932 EASY 75D ST3B S1

OPERATOR'S MANUAL
(ORIGINAL INSTRUCTIONS)

IMPORTANT

Carefully read and understand this instruction manual before using the lifting platform.

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

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

WHENEVER YOU SEE THIS SYMBOL IT MEANS:



WARNING! BE CAREFUL! YOUR SAFETY OR THE SAFETY OF THE LIFTING PLATFORM IS AT RISK.

- This manual has been produced on the basis of the equipment list and the technical characteristics given at the time of its design.
- The level of equipment of the lifting platform depends on the options chosen and the country of sale.
- According to the lifting platform options and the date of sale, certain items of equipment/functions described herein may not be available.
- 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 at your disposal to answer all your questions.
- This manual is an integral part of the lifting platform.
- It is to be kept in its storage space at all times for ease of reference.
- Hand this manual to the new owner if the lifting platform is resold.

CALIFORNIA PROPOSITION 65 WARNINGS

WARNING

This product can expose you to lead which is known to the State of California to cause cancer and birth defects or other reproductive harm.

For more information go to www.P65Warnings.ca.gov

WARNING

Breathing diesel engine exhaust exposes you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

- Always start and operate the engine in a well-ventilated area.
- If in an enclosed area, vent the exhaust to the outside.
- Do not modify or tamper with the exhaust system.
- Do not idle the engine except as necessary.

For more information go to www.P65Warnings.ca.gov/diesel

SILICA DUST HAZARD

Exposure to crystalline silica (found in sand, soil and rocks) has been associated with silicosis, a debilitating and often fatal lung disease. Comply with all applicable rules and regulations for the workplace. Wear approved respiratory protection or use water spray or other means if there is no other way to control the dust.

A Silica rule "29 CFR 1929.1153" by the U.S. Occupational Safety and Health (OSHA) indicates a significant risk of chronic silicosis for workers exposed to inhaled crystalline silica over a working lifetime. Refer to the rule for more information regarding exposure limits and hazard prevention.



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1 - OPERATING AND SAFETY INSTRUCTIONS

2 - DESCRIPTION

3 - MAINTENANCE

4 - OPTIONAL ATTACHMENTS FOR USE WITH THE RANGE



1 - OPERATING AND SAFETY INSTRUCTIONS

ASSISTANCE | 23 SIMPLE TIPS

The Manitou Group wishes to assist you in reducing the consumption of the machines to help you reduce your carbon footprint.



Chose a machine with an appropriate power rating for your needs.



Switch off your engine after running at idle for more than 3 minutes.



Optimum engine efficiency is achieved at the maximum torque engine speed.



Preferably use a fan control and reversal system.



Favor "smart" electronically-managed transmissions.



Use the air-conditioning with windows and doors closed.



Preferably use LED headlights.



Adapt the type of tire to your environment.



Ensure that your tires are inflated to the correct pressure.



Check the parking brake adjustment.

Preferably use manufacturer-recommended attachments



Check the general condition of your trailer.



Adapt your maximum towable load.



Use the attachments that are suitable for your machine.



Check the hydraulic adjustment of your attachments.



Observe the maintenance periods.



Regularly clean the radiator, the air filter, etc.



Lubricate regularly.



Preferably buy through a manufacturer-approved dealer.



Favor OEM parts.



Study the manufacturers' maintenance contracts.



You can follow eco-driving courses.



Demand to know the consumption and emissions of the machines.



Calculate your consumption and emissions at reduce.manitou.com

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INSTRUCTIONS TO THE COMPANY MANAGER

THE SITE

Proper management of lift truck'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 lift truck. This authorization is given in writing by the appropriate person in the establishment with respect to the use of lift trucks and must be carried permanently by the operator.

⚠ IMPORTANT ⚠

Experience has shown that there are a number of inappropriate ways in which the lift truck might be used. Such foreseeable misuse, of which the main examples are listed below, is strictly forbidden.

-The foreseeable abnormal behaviour resulting from ordinary negligence, but not from any intentional misuse of the machinery.

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

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

- For certain machines, the foreseeable behaviour of such persons as: apprentices, teenagers, handicapped persons, trainees tempted to drive a lift truck, operators tempted to operate the 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 LIFT TRUCK

A - THE TRUCK'S SUITABILITY FOR THE JOB

- MANITOU has ensured that this lift truck is suitable for use under the standard operating conditions defined in this operator's manual, with a **STATIC test coefficient of 1.33** and a **DYNAMIC test coefficient of 1**, as specified in harmonised standard **EN 1459** for variable reach trucks.
- Before commissioning, the company manager must make sure that the lift truck is appropriate for the work to be done, and perform certain tests (in accordance with current legislation).

B - ADAPTATION OF THE LIFT TRUCK TO STANDARD ENVIRONMENTAL CONDITIONS

- In addition to series equipment mounted on your lift truck, many options are available, such as: road lighting, stop lights, revolving light, reverse lights, reverse buzzer alarm, front light, rear light, light at the jib head, etc. (according to the lift truck model).
- The operator must take into account the operating conditions to specify the lift truck's signaling and lighting equipment. Contact your dealer.
- Take into account climatic and atmospheric conditions of the site of utilisation.
 - Protection against frost (↙ 3 - MAINTENANCE: LUBRICANTS AND FUEL).
 - Adaptation of lubricants (ask your dealer for information).
 - Engine filtration (↙ 3 - MAINTENANCE: FILTER CARTRIDGES AND BELTS).

⚠ IMPORTANT ⚠

For operation under average climatic conditions, i.e.: between -15 °C and 35 °C, correct levels of lubricants in all the circuits are checked in production. For operation under more severe climatic conditions, before starting up, it is necessary to drain all the circuits, then ensure correct levels of lubricants using lubricants properly suited to the relevant ambient temperatures.

The same applies to the cooling liquid.

- Preventing fire risks associated with use in dusty and flammable conditions (e.g. straw, flour, sawdust, organic waste, etc.).
- A lift truck operating in an area without fire extinguishing equipment must be equipped with an individual extinguisher. There are solutions, consult your dealer.

⚠ IMPORTANT ⚠

Your lift truck is designed for outdoor use under normal atmospheric conditions and indoor use in suitably aerated and ventilated premises.

It is prohibited to use the lift truck in areas where there is a risk of fire or which are potentially explosive (e.g. refineries, fuel or gas depots, stores of flammable products, etc.).

For use in these areas, specific equipment is available (ask your dealer for information).

- Our trucks comply with Directive 2004/108/EC concerning electromagnetic compatibility (EMC), and with the corresponding harmonized standard EN 12895. Their proper operation is no longer guaranteed if they are used within areas in which the electromagnetic fields exceed the limit specified by that standard (10 V/m).
- Directive 2002/44/EC prohibits company managers from exposing their employees to excessive levels of vibration. There is no recognized code of measurement for comparing the machines of different manufacturers. The actual doses received can only 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 lift truck and attachment for the intended use.
 - Adapt the seat adjustment to the operator's weight (according to lift truck model) and maintain it in good condition, as well as the cab suspension. Inflate the tires in accordance with recommendations.
 - 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 - MODIFICATION OF THE LIFT TRUCK

- For your safety and that of others, you must not change the structure and settings of the various components used in your lift truck (hydraulic pressure, calibrating limiters, engine speed, addition of extra equipment, addition of counterweight, unapproved attachments, alarm systems, etc.) yourself. In this event, 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 of lift trucks are subject to the provisions of the highway code, according to the following categories:
 - Construction-type trucks (MT range): public works vehicle not predominantly for use on roads (point 6.9 of Article R311-1 of the French Highway Code). The truck must have a 25 disc displayed on the rear of the vehicle and an operating licence plate.
 - Agricultural-type trucks (MLT range) that are non-EC type approved tractors: (point 6.2 of Article R311/1 of the French Highway Code). The truck must be fitted with an operating licence plate.
 - Agricultural-type trucks (MLT range) that are EC type approved tractors: agricultural tractor type T1a (point 5.1.1 of Article R311/1 of the French Highway Code). The truck must be registered.

SPECIAL INSTRUCTION APPLYING TO "EC TRACTOR" TYPE-APPROVED LIFT TRUCKS

- All EC tractor type-approved lift trucks are supplied with an "EC tractor" certificate complying with directive 2003/37/EC, 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 lift truck owner 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 licence, unless granted an exemption.
- The lift truck must be driven on the public highway in accordance with the instructions given in the manual supplied with the lift truck (Gross weight, Gross combination weight, towing load, axle loads, maximum speeds, etc. according to type/version). The operator must be in possession of the lift truck's registration document.

⚠ IMPORTANT ⚠

When towing a trailer or agricultural equipment, the travelling speed of the lift truck is limited to 25 km/h. In this case, a "25" disc must be affixed to the rear of the convoy.

E - LIFT TRUCK CAB PROTECTION

- All lift trucks comply with the requirements of ISO 3471 (wheel loader code) regarding cab rollover protection (ROPS) and ISO 3449 (Level II) regarding the protection of the cab against falling objects (FOPS).
- "EC TRACTOR" type-approved lift trucks comply, in addition, with Directive 79/622/EC (OECD Code 4) regarding cab rollover protection (ROPS).

⚠ IMPORTANT ⚠

Structural damage or overturning, modification, changes or poorly executed repairs can reduce the protective efficiency of the cab, resulting in cancellation of its compliance. Do not carry out any welding or drilling on the cab structure. Consult your dealer to determine the limits of this structure without cancelling its compliance.

INSTRUCTIONS

- The operator's manual must always be in good condition and kept in the place provided on the lift truck and in the language used by the operator.
- The operator's manual and any plates or stickers which are no longer legible or are damaged, must be replaced immediately.

MAINTENANCE

- Maintenance or repairs other than those detailed in part: 3 - MAINTENANCE must be carried out by qualified personnel (your dealer) and under the necessary safety conditions to maintain the health of the operator and any third party.

⚠ IMPORTANT ⚠

*Your lift truck must be inspected periodically to ensure that it remains in compliance.
The frequency of this inspection is defined by current legislation in the country in which the lift truck is used.*

- Example for France "The manager in charge of the establishment using a lift truck must open and maintain a maintenance log for each machine (order of 2 March 2004) and undergo a general periodic inspection every 6 months (order of 1 March 2004)".

INSTRUCTIONS FOR THE OPERATOR

FOREWORD

⚠ IMPORTANT ⚠

The risk of accident while using, servicing or repairing your lift truck can be reduced if you follow the safety instructions and preventive measures detailed in these instructions.

Failure to comply with the safety instructions and instructions for the use, repair or servicing of your lift truck may result in serious or even fatal accidents.

- Only the operations and manoeuvres 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 lift truck itself are not exhaustive.
- At any time, as an operator, you must envisage, within reason, the possible risk to yourself, to others or to the lift truck itself when you use it.

⚠ IMPORTANT ⚠

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

GENERAL INSTRUCTIONS

A - INSTRUCTION MANUAL

- Read the operator's manual carefully.
- The operator's manual must always be in good condition and in the place provided for it on the lift truck.
- You must report any plates and stickers which are no longer legible or which are damaged.

B - AUTHORISATION FOR USE IN FRANCE

(or see current legislation in other countries).

- Only qualified, authorized personnel can use the lift truck. This authorization is given in writing by the appropriate person in the establishment with respect to the use of lift trucks and must be carried permanently by the operator.
- The operator is not competent to authorise the driving of the lift truck by another person.

C - MAINTENANCE

- The operator must immediately advise his superior if his lift truck is not in good working order or does not comply with the safety notice.
- The operator is prohibited from carrying out any repairs or adjustments himself, unless he has been trained for this purpose. He must keep the lift truck properly cleaned if this is among his responsibilities.
- The operator must carry out daily maintenance (⚡ 3 - MAINTENANCE: 10 HOUR - DAILY MAINTENANCE OR EVERY 10 HOURS OF SERVICE).
- The operator must ensure tyres are appropriate for the type of ground (⚡ area of the contact surface of the tyres in the chapter: 2 - DESCRIPTION: TYRES). There are optional solutions, consult your dealer.
 - SAND tires.
 - FARM tires.
 - Snow chains.

⚠ IMPORTANT ⚠

Do not use the lift truck if the tyres are incorrectly inflated, damaged or excessively worn, because this could put your own safety or that of others at risk, or cause damage to the lift truck itself.

The fitting of foam inflated tyres is prohibited and is not guaranteed by the manufacturer, excepting prior authorisation.

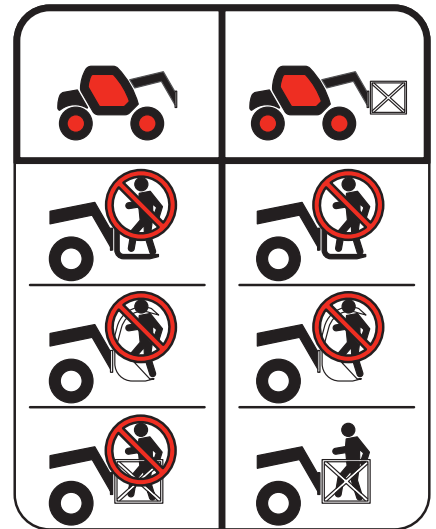
- The operator is responsible for deciding and adjusting the frequency of cleaning needed to prevent the risk of fire ensuing from the build-up of flammable material(s). The operator should pay special attention to all the areas of the lift truck where these risk materials are likely to accumulate.

D - MODIFICATION OF THE LIFT TRUCK

- For your safety and that of others, you must not change the structure and settings of the various components used in your lift truck (hydraulic pressure, calibrating limiters, engine speed, addition of extra equipment, addition of counterweight, unapproved attachments, alarm systems, etc.) yourself. In this event, the manufacturer cannot be held responsible.

E - LIFTING PEOPLE

- The use of working equipment and load lifting attachments to lift people is:
 - either forbidden
 - or authorised exceptionally and under certain conditions (Current regulations in the country in which the lift truck 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 lift truck.
 - Right-hand column
 - With a PLATFORM-fitted lift truck, people can only be lifted using platforms designed by MANITOU for the purpose.
- MANITOU sells equipment specifically designed for lifting people (OPTION PLATFORM lift truck, contact your dealer).



OPERATING INSTRUCTIONS UNLADEN AND LADEN

A - BEFORE STARTING THE LIFT TRUCK

- Carry out daily maintenance (3 - MAINTENANCE: 10 HOUR - DAILY MAINTENANCE OR EVERY 10 HOURS OF SERVICE).
- 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 lift truck.
- Make sure the lights, indicators and windscreen wipers are working properly.
- Make sure the rear view mirrors are in good condition, clean and properly adjusted.
- Make sure the horn works.

B - DRIVER'S OPERATING INSTRUCTIONS

- Whatever his experience, the operator is advised to familiarize himself with the position and operation of all the controls and instruments before operating the lift truck.
- Wear clothes suited for driving the lift truck, avoid loose clothes.
- 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 lift truck when getting into and leaving the driving seat and use the handle(s) provided for this purpose. Do not jump out of the seat to get down.
- Always pay attention when using the lift truck. 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.

▲ IMPORTANT ▲

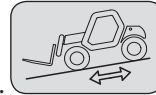
Under no circumstances must the seat be adjusted while the lift truck is moving.

- 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, protruding from the driver's cab of the lift truck.
- The safety belt must be worn and adjusted to the operator's size.
- The control units must never in any event be used for any other than their intended purposes (e.g. climbing onto or down from the lift truck, portmanteau, 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 lift truck or in the driver's cab.

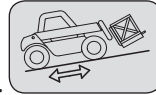
C - ENVIRONMENT

- Comply with site safety regulations.
- If you have to use the lift truck in a dark area or at night, make sure it is equipped with working lights.
- During handling operations, make sure that no one is in the way of the lift truck and its load.
- Do not allow anybody to come near the working area of the lift truck or pass beneath an elevated load.
- When using the lift truck on a transverse slope, before lifting the jib, follow the instructions given in the paragraph: INSTRUCTIONS FOR HANDLING A LOAD: D - TRANSVERSE ATTITUDE OF THE LIFT TRUCK.

- Travelling 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 lift truck's dimensions and its load before trying to negotiate a narrow or low passageway.
- Never move onto a loading platform without having first checked:
 - That it is suitably positioned and made fast.
 - That the unit to which it is connected (wagon, lorry, etc.) will not shift.
 - That this platform is prescribed for the total weight of the lift truck to be loaded.
 - That this platform is prescribed for the size of the lift truck.
- Never move onto a foot bridge, floor or freight lift, without being certain that they are prescribed for the weight and size of the lift truck to be loaded 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 sufficient 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 long time, there is the risk that it will rest on the structure because of the boom descending owing to the oil in the cylinders cooling down.

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 lift truck with the oil temperature as close as possible to ambient temperature.*

- When working near aerial lines, ensure that the safety distance is sufficient between the working area of the lift truck and the aerial line.

⚠ IMPORTANT ⚠

You must consult your local electrical agency.

You could be electrocuted or seriously injured if you operate or park the lift truck too close to power cables.

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

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

D - VISIBILITY

- The safety of people within the lift truck's working area, as well as that of the lift truck itself and the operator are depend on good operator visibility of the lift truck's immediate vicinity in all situations and at all times.
- This lift truck has been designed to allow good operator visibility (direct or indirect by means of rear-view mirrors) of the immediate vicinity of the lift truck while travelling with no load and with the jib 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 manoeuvre (while standing outside the truck'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 truck to travel with the jib 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 manoeuvre (while standing outside the truck'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 manoeuvre (while standing outside the truck'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. windscreens, windows, windscreen wipers, windscreen washers, driving and work lights, rear-view mirrors).

E - STARTING THE LIFT TRUCK

SAFETY INSTRUCTIONS

⚠ IMPORTANT ⚠

The lift truck must only be started up or manoeuvred when the operator is sitting in the driver's cab, with his seat belt adjusted and fastened.

- Never try to start the lift truck by pushing or hauling it. Such an operation may cause severe damage to the transmission. If necessary, towing requires the transmission to be put in neutral (< 3 - MAINTENANCE: OCCASIONAL OPERATION).
- 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 charging.

INSTRUCTIONS

- Check the closing and locking of the hood(s).
- Check that the cab door is closed.
- Check that the forward/reverse selector is in neutral, and that the parking brake is engaged.
- Turn the ignition key to the position I to activate the electrical and pre-heating system.
- Check the fuel level on the indicator.
- Turn the ignition key fully, the engine should then start. Release the ignition key and let the engine run at idle.
- Do not engage the starter motor for more than 15 seconds and carry out the preheating between unsuccessful attempts.
- Make sure all the signal lights on the control instrument panel are off.
- 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 - DRIVING THE LIFT TRUCK

SAFETY INSTRUCTIONS

⚠ IMPORTANT ⚠

Operators' attention is drawn to the risks involved in using the forklift truck, in particular:

- Risk of losing control.

- Risk of losing lateral and frontal stability of the forklift truck.

The operator must remain in control of the lift truck. In the event of the lift truck overturning, do not try to leave the cabin during the incident.

YOUR BEST PROTECTION IS TO STAY FASTENED IN THE CABIN.

- Observe the company's traffic regulations or, by default, the public highway code.
- Do not carry out operations which exceed the capacities of your lift truck or attachments.
- Always drive the lift truck with the forks or attachment to the transport position, i.e. at 300 mm from the ground, the jib retracted and the carriage sloping backwards.
- Only carry loads which are balanced and properly anchored to avoid any risk of a load falling off.
- Ensure that pallets, crates, etc, are in good condition and suitable for the load to be lifted.
- Familiarise yourself with the lift truck on the terrain where it will be used.
- Ensure that the service brakes are working properly.
- The loaded lift truck 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 lift truck).
- Do not use the hydraulic jib controls when the lift truck is moving.
- Never change the steering mode whilst driving.
- Do not manoeuvre the lift truck with the jib in the raised position unless under exceptional circumstances and then with extreme caution, at very low speed and using gentle braking. Ensure that visibility is adequate.
- 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 lift truck'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 lift truck 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 round obstacles.
- Never drive on the edge of a ditch or steep slope.
- It is dangerous to use two lift trucks 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 lift trucks not fitted with a punch-operated cut-out.

INSTRUCTIONS

- Always drive the lift truck with the forks or attachment to the transport position, i.e. at 300 mm from the ground, the jib retracted and the carriage sloping backwards.
- For lift trucks with gearboxes, use the recommended gear (☞ 2 - DESCRIPTION: CONTROL AND COMMAND INSTRUMENTS).
- Select the steering mode appropriate for the use and/or working conditions (☞ 2 - DESCRIPTION: CONTROL AND COMMAND INSTRUMENTS) (according to model of lift truck).
- Release the hand brake.
- Shift the forward/reverse selector to the selected direction of travel and accelerate gradually until the lift truck moves off.

⚠ IMPORTANT ⚠

- Starting and driving a lift truck on a slope can present a very real danger.
The lift truck being parked or stopped, scrupulously follow the following instructions for moving off:*
- *Press the service brake pedal.*
 - *Engage 1st or 2nd gear and select forward or reverse.*
 - *Check that there is nothing and no-one obstructing the lift truck's path.*
 - *Release the service brake pedal and increase the engine revs.*
- The risk is increased if the lift truck is laden or towing a trailer, requiring extreme vigilance.*

G - STOPPING THE LIFT TRUCK

SAFETY INSTRUCTIONS

- Never leave the ignition key in the lift truck during the operator's absence.
- When the lift truck 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 lift truck 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 lift truck from bad weather, particularly from frost (check the level of antifreeze), close and lock all the lift truck accesses (doors, windows, cowls, etc.).

INSTRUCTIONS

- Park the lift truck on flat ground or on an incline lower than 15 %.
- Set the forward/reverse selector to neutral.
- Apply the parking brake.
- For lift trucks with gearboxes, place the gear lever in neutral.
- Fully retract the jib.
- 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 lift truck after a long working period, leave the engine idling for a few moments, to allow the coolant liquid 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.
- Remove the ignition key.
- Lock all access to the lift truck (doors, windows, cowls, etc).

H - DRIVING THE LIFT TRUCK ON THE PUBLIC HIGHWAY

(or see current legislation in other countries)

FRENCH ROAD TRAFFIC RULES

- The driving of non EC type-approved tractors on the public highway is subject to the provisions of the highway code relating to special machines, defined in article R311-1 of the highway code, in category B of the Equipment Order of 20 November 1969 that determines the procedures applicable to special machines. The lift truck must be fitted with a licence plate.
- The driving of EC type-approved tractors on the public highway is subject to the provisions of the highway code regarding agricultural tractors, defined in article R311-1 of the highway code. The lift truck must be registered.
- The lift truck must be driven on the public highway in accordance with the instructions given in the manual supplied with the lift truck (Gross weight, Gross combination weight, towing load, axle loads, maximum speeds, etc. according to type/version). The operator must be in possession of the lift truck's registration document.
- The operator must hold an HGV licence, unless granted an exemption.
- When towing a trailer or agricultural equipment, the travelling speed of the lift truck is limited to 25 km/h. In this case, a "25" disc must be affixed to the rear of the convoy. When driving with a trailer, the fact of not engaging 4th gear will ensure compliance with the towing speed limit (max. 25 km/h). On "POWERSHIFT" models, as 3rd gear is slower than on other models, it is preferable to use 5th gear and disable automatic upshifting to 6th gear (☞ 2 - DESCRIPTION: CONTROL AND COMMAND INSTRUMENTS).

SAFETY INSTRUCTIONS

- Operators driving on the public highway must comply with current highway code legislation.
- The lift truck 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, indicators and windscreen wipers are working properly.
- Switch off the working headlights if the lift truck is fitted with them.
- Select the steering mode "HIGHWAY TRAFFIC" (according to model of lift truck) (☞ 2 - DESCRIPTION: CONTROL AND COMMAND INSTRUMENTS).
- Fully retract the jib and set the attachment approximately 300 mm off the ground.
- Place the roll corrector in the central position, i.e. the transverse axis of the axles parallel to the chassis (as model of lift truck).
- Fully raise the stabilizers and turn the blocks inwards (according to model of lift truck).

⚠ IMPORTANT ⚠

Never move in neutral (forward/reverse selector or gear lever in neutral or transmission cut-off button pressed) to preserve the lift truck engine brake. Failure to respect this instruction on a slope will lead to excessive speed which may make the lift truck uncontrollable (steering, brakes) and cause serious mechanical damage.

DRIVING THE LIFT TRUCK 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 lift truck.
- 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: ATTACHMENT SHIELDS).
 - 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 LIFT TRUCK 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 lift truck.
- The trailer's braking system must comply with current legislation.
- If pulling a trailer with assisted braking, the tractor lift truck must be equipped with a trailer braking mechanism. In this case, do not forget to connect the trailer braking equipment to the lift truck.
- The vertical force on the towing hook must not exceed the maximum authorised by the manufacturer (consult the manufacturer's plate on your lift truck).
- The authorised gross vehicle weight must not exceed the maximum weight authorised by the manufacturer (☞ 2 - DESCRIPTION: CHARACTERISTICS).

IF NECESSARY, CONSULT YOUR DEALER.

INSTRUCTIONS FOR HANDLING A LOAD

A - CHOICE OF ATTACHMENTS

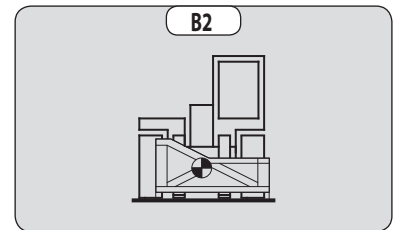
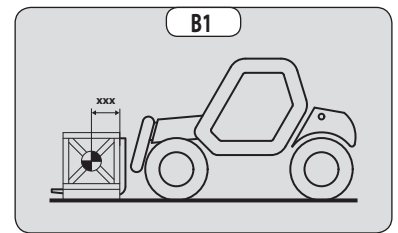
- Only attachments approved by MANITOU can be used on its lift trucks.
- Make sure the attachment is appropriate for the work to be done (☞ 4 - ADAPTABLE ATTACHMENTS AVAILABLE ON THE RANGE).
- If the lift truck is equipped with the single side-shift carriage OPTION (TSDL), use only the authorised attachments (☞ 4 - ADAPTABLE ATTACHMENTS AVAILABLE ON THE RANGE).
- Make sure the attachment is correctly installed and locked onto the lift truck carriage.
- Make sure that your lift truck attachments work properly.
- Comply with the load chart limits for the lift truck for the attachment used.
- Do not exceed the rated capacity of the attachment.
- Never lift a load in a sling without the attachment provided for the purpose, as there is a risk of the sling slipping (☞ INSTRUCTIONS FOR HANDLING A LOAD: H - TAKING UP AND LAYING DOWN A SUSPENDED LOAD).
- Do not handle loads that are hung directly from the forks with straps (e.g.: big bags), as there is a risk that the straps will shear against the sharp edges. Use an attachment designed for this purpose.

B - WEIGHT OF LOAD AND CENTRE OF GRAVITY

- Before taking up a load, you must know its mass and its centre of gravity.
- The load chart for your lift truck is valid for a load in which the longitudinal position of the centre of gravity is xxx (fig. B1) from the base of the forks (see: 2 - DESCRIPTION: DIMENSION AND LOADCHART). For a higher centre of gravity, contact your dealer.
- For irregular loads, determine the transverse centre of gravity before any movement (fig. B2) and set it in the longitudinal axis of the lift truck.

⚠ IMPORTANT ⚠

*It is forbidden to handle a load heavier than the effective capacity specified on the truck load chart.
For loads with a moving centre of gravity (e.g. liquids), take account of the variations in the centre 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.*

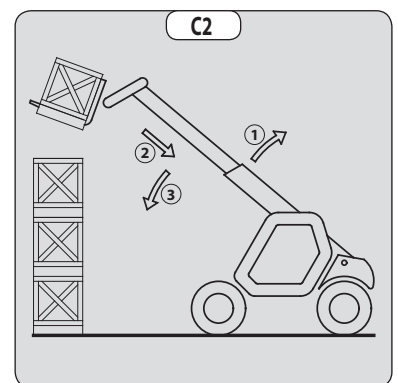
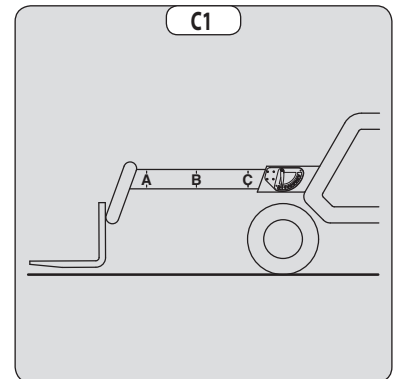


C - LONGITUDINAL STABILITY INDICATOR

⚠ IMPORTANT ⚠

Always watch this device during handling operations.

- Letters and angle indicator (fig. C1) allow to read and respect load capacities of the lift truck according to the load chart (see: 2 - DESCRIPTION: DIMENSION AND LOADCHART).
- When the device is in limit stability, it is forbidden to perform so-called «AGGRAVATING» movements, these being:
 - A - Extending the jib.
 - B - Lowering the jib.
- Perform movements to relieve aggravation in the following order (fig. C2): if necessary, raise the jib (1), retract the jib as far as possible (2) and lower the jib (3) to release the load.



D - TRANSVERSE ATTITUDE OF THE LIFT TRUCK

Depending on the model of lift truck

The transverse attitude is the transverse slope of the chassis with respect to the horizontal.

Raising the jib reduces the lift truck's lateral stability. The transverse attitude must be set with the jib in down position as follows:

1 - LIFT TRUCK WITHOUT ROLL CORRECTOR USED ON TYRES

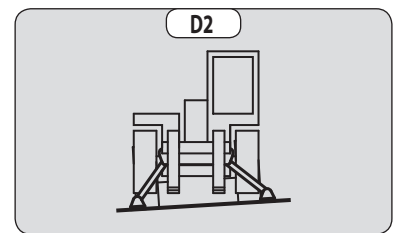
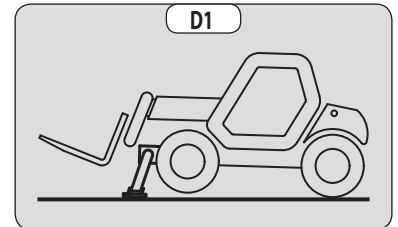
- Position the lift truck so that the bubble in the level is between the two lines (↔ 2 - DESCRIPTION: CONTROL AND COMMAND INSTRUMENTS).

2 - LIFT TRUCK WITH ROLL CORRECTOR USED ON TYRES

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

3 - LIFT TRUCK USED ON STABILIZERS

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



E - TAKING UP A LOAD ON THE GROUND

- Approach the lift truck perpendicular to the load, with the jib retracted and the forks in a horizontal position (fig. E1).
- Adjust the fork spread 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.

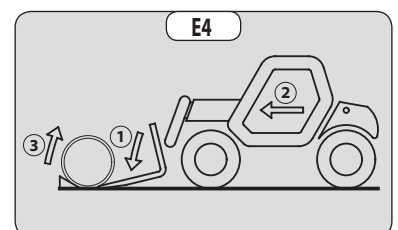
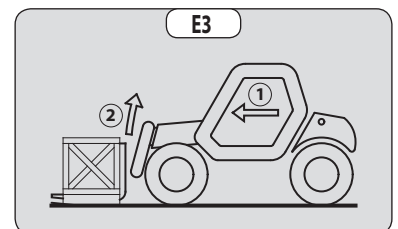
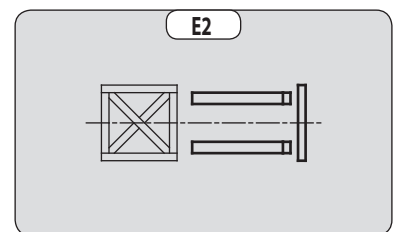
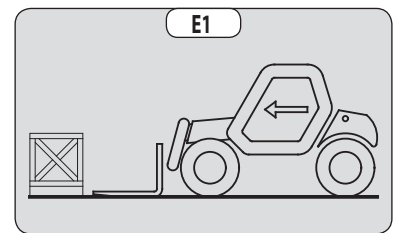
⚠ IMPORTANT ⚠

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

- Move the lift truck forward slowly (1) and insert the forks under the load as far as they will go (fig. E3). If necessary, slightly lift the jib (2) while taking up the load.
- Bring the load into the transport position.
- Tilt the load far enough backwards to ensure stability (loss of load on braking or going downhill).

FOR A NON-PALLETIZED LOAD

- Tilt the carriage (1) forwards and move the lift truck slowly forwards (2), to insert the fork under the load (fig. E4) (block the load if necessary).
- Continue to move the lift truck forwards (2) tilting the carriage (3) (fig. E4) backwards to position the load on the forks and check the load's longitudinal and lateral stability.



F - TAKING UP AND SETTING DOWN A HIGH LOAD ON TYRES

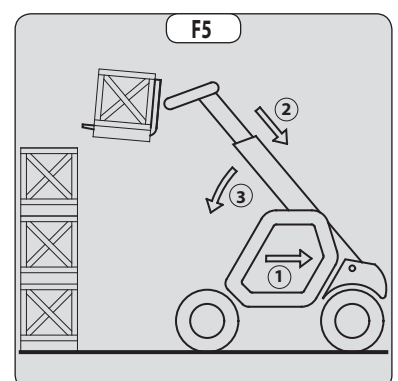
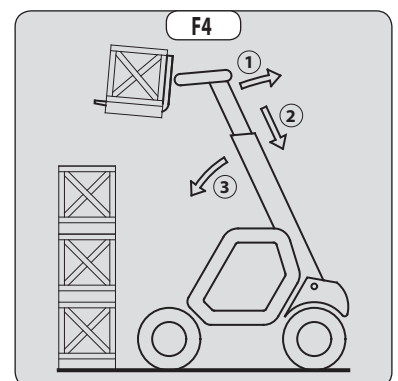
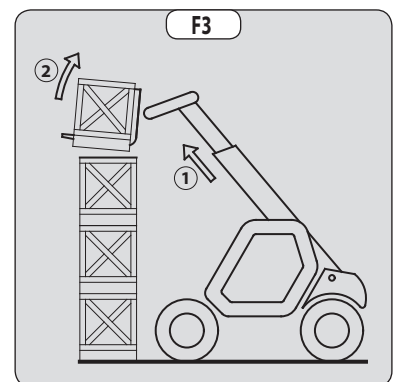
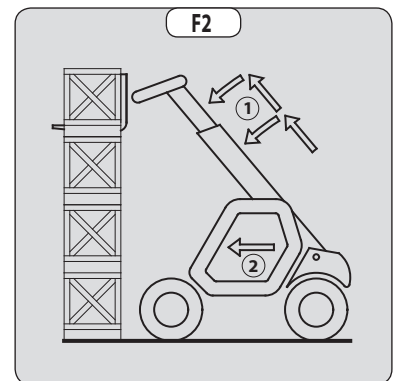
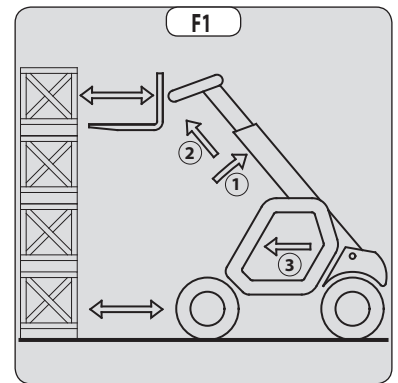
⚠ IMPORTANT ⚠

You must not raise the jib if you have not checked the transverse attitude of the lift truck (← INSTRUCTIONS FOR HANDLING A LOAD: D - TRANSVERSE ATTITUDE OF THE LIFT TRUCK).

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

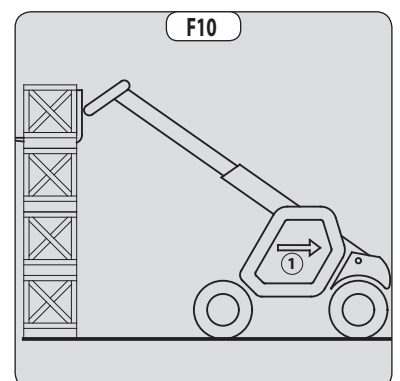
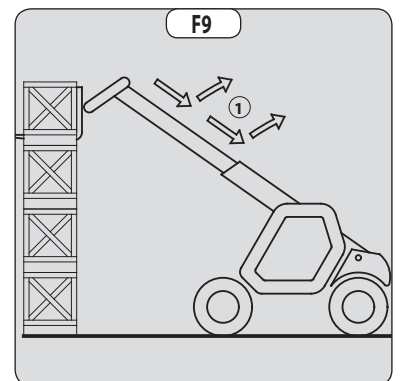
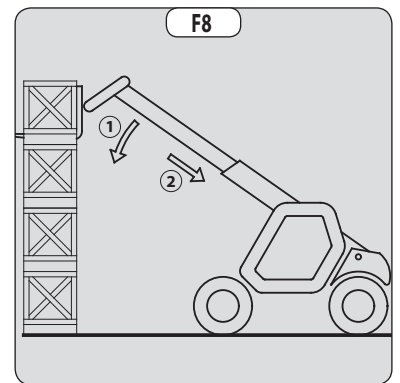
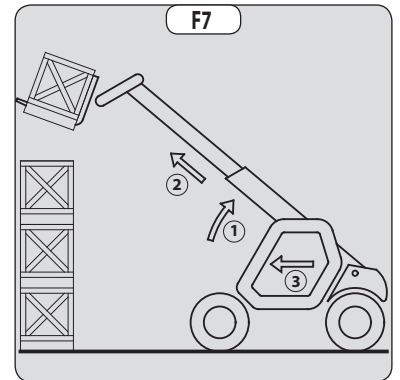
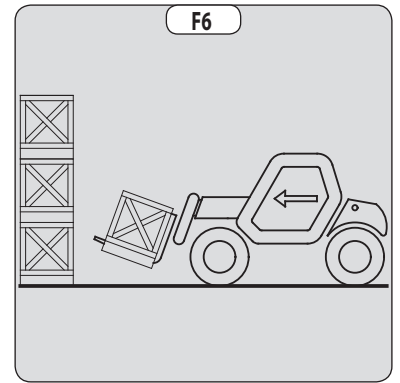
TAKING UP A HIGH LOAD ON TYRES

- Ensure that the forks will easily pass under the load.
- Lift and extend the jib (1) (2) until the forks are level with the load, moving the lift truck (3) forward if necessary (fig. F1), moving very slowly and carefully.
- Always remember to keep the distance necessary for inserting the forks under the load, between the stack and the lift truck (fig. F1) and use the shortest possible length of jib.
- Insert the forks under the load as far as they will go by alternately extending and lowering the jib (1) or, if necessary, moving the lift truck forward (2) (fig. F2). Apply the handbrake and place the forward/reverse selector in neutral.
- Slightly raise the load (1) and tilt the carriage (2) backwards to stabilize the load (fig. F3).
- Tilt the load sufficiently backwards to ensure its stability.
- Monitor the longitudinal stability indicator (← INSTRUCTIONS FOR HANDLING A LOAD: C - LONGITUDINAL STABILITY INDICATOR). If it is overloaded, set the load back down in the place from which it was taken.
- If possible lower the load without shifting the lift truck. Lift the jib (1) to release the load, retract (2) and lower the jib (3) to bring the load into the transport position (fig. F4).
- If this is not possible, back up the lift truck (1), manoeuvring very gently and carefully to release the load. Retract (2) and lower the jib (3) to bring the load into the transport position (fig. F5).



SETTING DOWN A HIGH LOAD ON TYRES

- Approach the load in the transport position in front of the stack (fig. F6).
- Apply the parking brake and place the forward/reverse selector in neutral.
- Raise and extend the jib (1) (2) until the load is above the stack, while monitoring the longitudinal stability indicator (← INSTRUCTIONS FOR HANDLING A LOAD: C - LONGITUDINAL STABILITY INDICATOR). If necessary, move the lift truck (3) forward (fig. F7), driving very slowly and carefully.
- Place the load in a horizontal position and lay it down on the pile by lowering and retracting the jib (1) (2) in order to position the load correctly (fig. F8).
- If possible, release the fork by alternately retracting and raising the jib (1) (fig. F9). Then set the forks into transport position.
- If this is not possible, reverse the lift truck (1), manoeuvring very slowly and carefully to release the forks (fig. F10). Then set them into transport position.



G - TAKING UP AND SETTING DOWN A HIGH LOAD ON STABILISERS

Depending on the model of lift truck

⚠ IMPORTANT ⚠

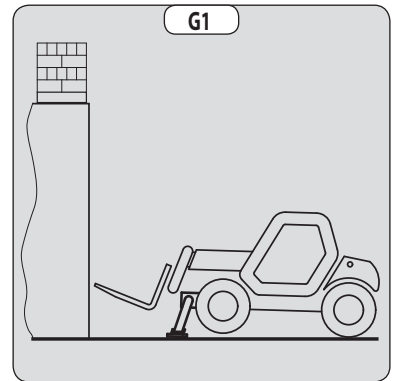
You must not raise the jib if you have not checked the transverse attitude of the lift truck (⚠ INSTRUCTIONS FOR HANDLING A LOAD: D - TRANSVERSE ATTITUDE OF THE LIFT TRUCK).

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

The stabilisers are used to optimise the lift truck's lifting performance (⚠ 2 - DESCRIPTION: CONTROL AND COMMAND INSTRUMENTS).

POSITIONING THE STABILISERS 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 have room for the jib to be raised.
- Apply 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 lift truck (fig. G1), while maintaining its transverse stability.



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

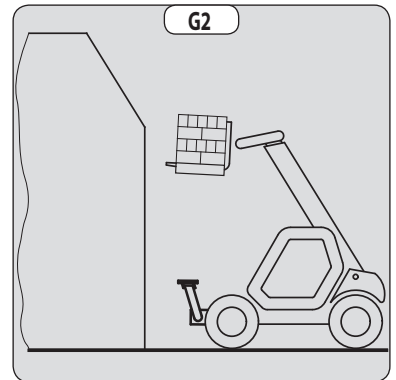
- Raise both stabilizers fully and at the same time.

LOWERING OF STABILISERS WITH JIB UP (UNLADEN AND LADEN)

⚠ IMPORTANT ⚠

This operation must be exceptional and performed with great care.

- Raise the jib and retract the telescopes completely.
- Set the lift truck in position in front of the elevation (fig. G2) moving very slowly and carefully.
- Apply 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 lift truck (fig. G3). During this operation, transverse attitude must be permanently maintained: the bubble in the level must be kept between the two lines.

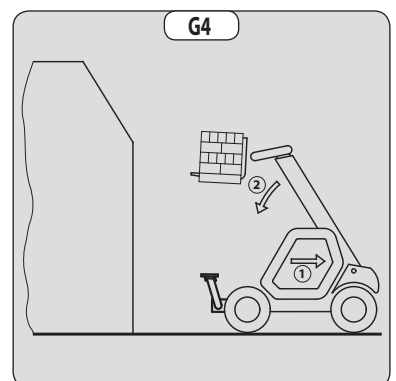
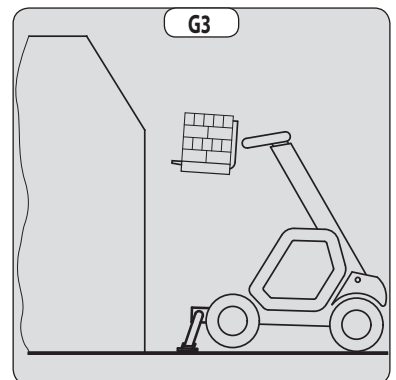


SETTING THE STABILISERS WITH THE BOOM UP (UNLADEN AND LADEN)

⚠ IMPORTANT ⚠

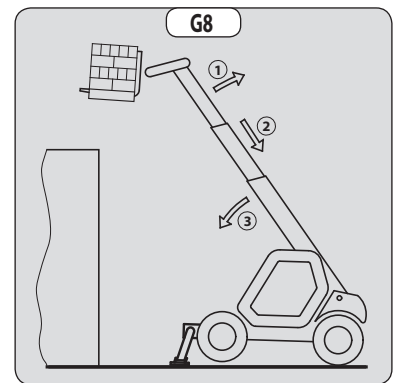
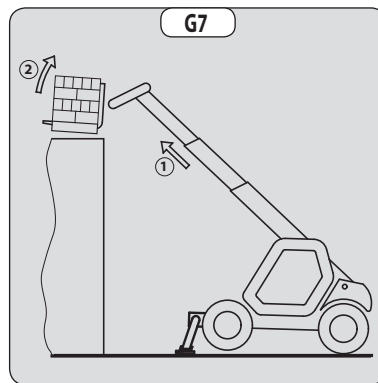
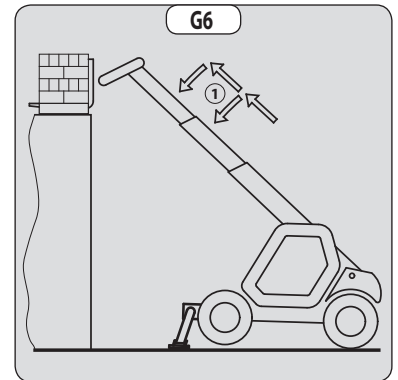
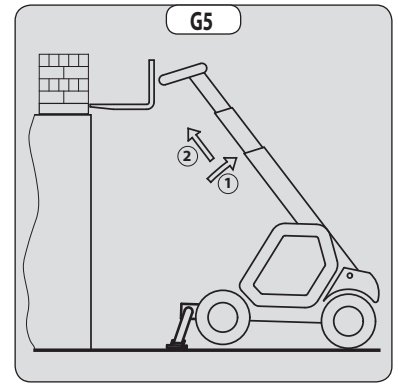
This operation must be exceptional and performed with great care.

- Keep the jib up 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, the transverse attitude must be permanently maintained: the bubble in the level must be kept between the two lines.
- Raise both stabilizers completely.
- Release the parking brake and reverse the lift truck (1) very slowly and carefully, to release it and lower the forks (2) into transport position (fig. G4).



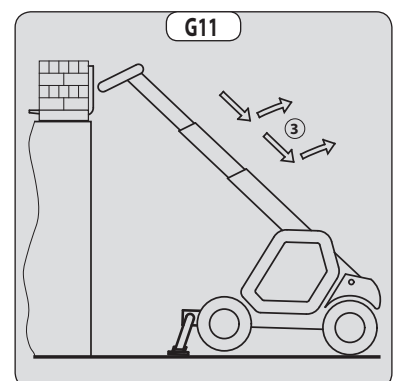
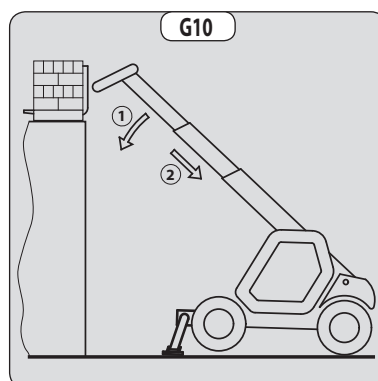
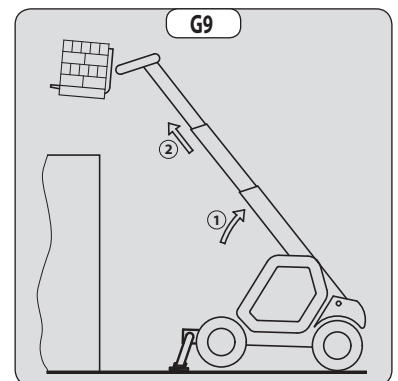
TAKING UP A HIGH LOAD ON STABILISERS

- Ensure that the forks will easily pass under the load.
- Check the position of the lift truck with respect to the load and make a test run, if necessary, without taking the load.
- Raise and extend the jib (1) (2) until the forks are at the level of the load (fig. G5).
- Insert the forks under the load as far as they will go by alternately extending and lowering the jib (1) (fig. G6).
- Lift the load slightly (1) and tilt the carriage (2) backwards to stabilise the load (fig. G7).
- Monitor the longitudinal stability indicator (INSTRUCTIONS FOR HANDLING A LOAD: C - LONGITUDINAL STABILITY INDICATOR). If it is overloaded, set the load back down in the place from which it was taken.
- If possible lower the load without moving the lift truck. Raise the jib (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 STABILISERS

- Raise and extend the jib (1) (2) until the load is above the elevation (fig. G9), while monitoring the longitudinal stability indicator (INSTRUCTIONS FOR HANDLING A LOAD: C - LONGITUDINAL STABILITY INDICATOR).
- Position the load horizontally and release it by lowering and retracting the jib (1) (2) to position the load correctly (fig. G10).
- Free the forks by alternating retracting and raising the jib (3) (fig. G11).
- If possible, set the jib in transport position without moving the lift truck.



H - PICKING UP AND SETTING DOWN A SUSPENDED LOAD

⚠ IMPORTANT ⚠

*Failure to follow the above instructions may lead the lift truck to lose stability and overturn.
MUST be used with a lift truck equipped with an operational hydraulic movement cut-out 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 LIFT TRUCK

- Whether on stabilisers or on tyres, 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 lift truck.

I - TRAVELLING 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 lift truck must not travel at more than 0.4 m/s (1.5 km/h, i.e., one quarter walking speed).
- Drive and stop the lift truck gently and smoothly to minimise swinging of the load.
- Carry the load a few centimetres 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.
- 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 jib angle must not exceed 45°.

INSTRUCTIONS FOR USE AS A LOADER

For agricultural-type lift trucks (MLT range)

A - LOADING

⚠ IMPORTANT ⚠

You must not raise the jib if you have not checked the transverse attitude of the lift truck (⚠ INSTRUCTIONS FOR HANDLING A LOAD: D - TRANSVERSE ATTITUDE OF THE LIFT TRUCK).

REMINDER: Make sure that the following operations can be performed with good visibility (⚠ OPERATION 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 lift truck (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 indicator (⚠ INSTRUCTIONS FOR HANDLING A LOAD: C - LONGITUDINAL STABILITY INDICATOR). (fig. A4).
- Drive the lift truck forward (3) very carefully and gently so that the bucket empties its load at the centre of the trailer (fig. A4).
- Apply the parking brake on and set the reversing lever to neutral.
- Slowly discharge the material (4) (fig. A4).

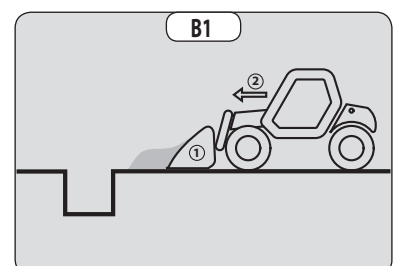
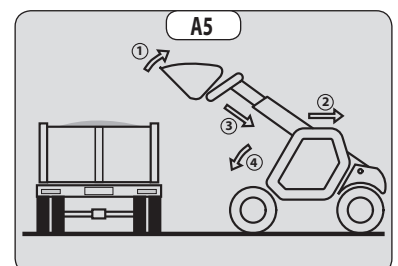
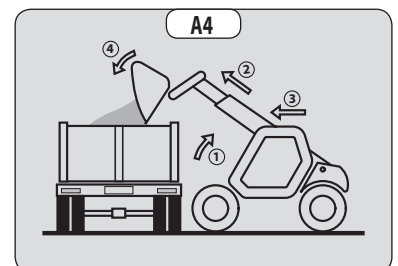
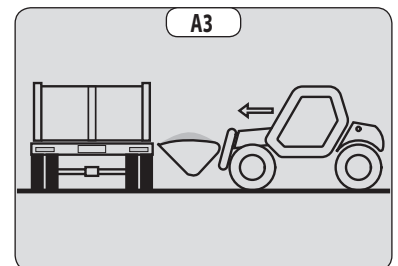
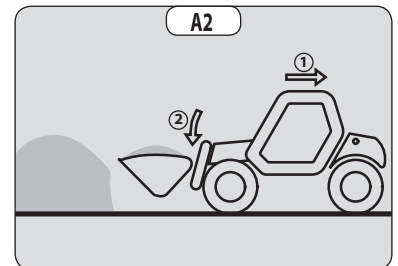
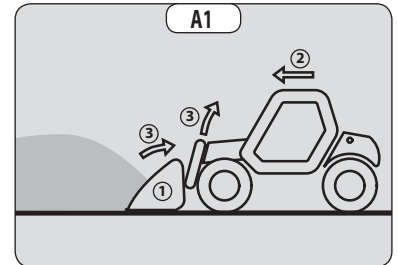
- Tilt back the bucket (1) and reverse the lift truck (2) very carefully and gently (fig. A5).
- Retract (3) and lower the boom (4) into the transport position (fig. A5).

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 levelling blade (fig. B1).

⚠ IMPORTANT ⚠

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



PLATFORM OPERATING INSTRUCTIONS

For lift trucks fitted with a PLATFORM

A - AUTHORISATION FOR USE

- Operation of the platform requires further authorisation in addition to that of the lift truck.

B - LIFT TRUCK SUITABILITY FOR USE

- MANITOU has ensured that this platform is suitable for use under the normal operating conditions defined in this operator's manual, with a **STATIC test coefficient of 1.25** and a **DYNAMIC test coefficient of 1.1** as specified in harmonised standard **EN 280** for "mobile elevating work platforms".
- Before commissioning, the company manager must make sure that platform is appropriate for the work to be done, and perform certain tests (in accordance with current legislation).

C - PRECAUTIONS WHEN USING THE PLATFORM

- Wear suitable clothing when using the platform, avoid loosely-fitting garments.
- Never operate the platform when hands or feet 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.
- For increased comfort, adopt the correct position at the platform's operator station.
- The platform's guard rail exempts the operator from wearing a safety harness under normal operating conditions. As a result, you are responsible for deciding whether to wear a safety harness.
- The control units must never in any event be used for any other than their intended purposes (e.g. climbing onto or down from the lift truck, portmanteau, etc.).
- Safety helmets must be worn.
- The operator must always be in the normal operator's position. It is prohibited to have arms or legs, or generally any part of the body, protruding from the basket.
- Ensure that any 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

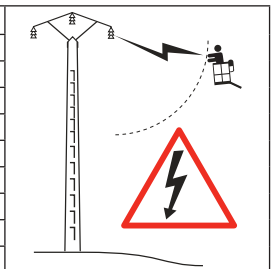
- However experienced they may be, operators must acquaint themselves with the emplacement and operation of all control instruments prior to operating the platform.
- Check before use that the platform has been correctly assembled and locked onto the lift truck.
- Check before operating the platform that the access gate has been properly locked.
- 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 on the ground by a person with adequate training.
- You should stay within the limits set out in the platform load chart.
- The lateral constraints are limited (↔ 2 - DESCRIPTION: CHARACTERISTICS).
- It is strictly forbidden to suspend a load from the platform or the lift truck jib without a specially designed attachment (↔ INSTRUCTIONS FOR HANDLING A LOAD: H - PICKING UP AND SETTING 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 lift truck must not be moved with one (or more) person(s) in the platform.
- It is forbidden to transport people on the platform using the hydraulic controls in the lift truck's driver'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 platform must not be fitted with attachments that increase the unit's wind load.
- Do not use ladders or improvised structures in the platform to gain extra height.
- Do not climb onto the sides 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



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

RATED VOLTAGE	SAFE DISTANCE (METRES)
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 recognise 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 inspected periodically to ensure that it remains in compliance.

The frequency of this inspection is defined by the current legislation in force in the country in which the equipment is used

For France, this means one general periodic inspection every 6 months (Decree of 1 March 2004).

INSTRUCTIONS FOR USING THE RADIO-CONTROL

For lift trucks with RC radio control

HOW TO USE THE RADIO-CONTROL

SAFETY INSTRUCTIONS

- 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 lift truck and other neighbouring items.*

Everyone working with this radio-control:

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

- The system is used to control the lift truck remotely via radio waves. Commands are also transmitted if the lift truck 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 lift truck 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 lift truck will be immobilised 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 lift truck.
 - 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 manipulator (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 manipulators 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).

LIFT TRUCK MAINTENANCE INSTRUCTIONS

GENERAL INSTRUCTIONS

- Ensure the area is sufficiently ventilated before starting the lift truck.
- Wear clothes suitable for the maintenance of the lift truck, avoid wearing jewelry and loose clothes. Tie and protect your hair, if necessary.
- Stop the engine and remove the ignition key, when an intervention is necessary.
- Read the operator's manual carefully.
- Carry out all repairs immediately, even if the repairs concerned are minor.
- Repair all leaks immediately, even if the leak concerned is minor.
- Ensure that process materials and of spare parts are disposed in all safely and in an ecological manner.
- Be careful of the risk of burning and splashing (exhaust, radiator, engine, etc.).

MAINTENANCE

- Perform the periodic service (☞ 3 - MAINTENANCE) to keep your lift truck in good working condition. Failure to perform the periodic service may cancel the contractual guarantee.

MAINTENANCE LOGBOOK

- The maintenance operations carried out in accordance with the recommendations given in part: 3 - MAINTENANCE and the other inspection, servicing or repair operations or modifications performed on the lift truck or its attachments shall be recorded in a maintenance logbook. The entry for each operation shall include details of the date of the works, the names of the individuals or companies having performed them, the type of operation and its frequency, if applicable. The part numbers of any lift truck items replaced shall also be indicated.

LUBRICANT AND FUEL LEVELS

- 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 lift truck with a flame, when the fuel tank is open or is being filled.

HYDRAULIC SYSTEM

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

⚠ IMPORTANT ⚠

COUNTERBALANCE VALVE: *It is dangerous to change the settings and remove the counterbalance valves or safety valves which may be fitted to your lift truck cylinders. The HYDRAULIC ACCUMULATORS that may be fitted on your lift truck are pressurised units. Removing these accumulators and their pipework is a dangerous operation and must only be performed by approved personnel (consult your dealer).*

ELECTRICITY

- 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 applied, the lift truck may suddenly start to move.
- Do not place metal items on the battery.
- Disconnect the battery before working on the electrical circuit.

WELDING

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

WASHING THE LIFT TRUCK

- Clean the lift truck or at least the area concerned before any intervention.
- Remember to close and lock all accesses to the lift truck (doors, windows, cowls...).
- During washing, avoid the articulations and electrical components and connections.
- 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 lift truck of any fuel, oil or grease trace.

TRANSPORTING THE LIFT TRUCK

⚠ IMPORTANT ⚠

Transporting the lift truck involves real risks for the operator and others involved.

- Towing, slinging or transporting the lift truck (↩ 3 - MAINTENANCE: OCCASIONAL OPERATION).

IF THE LIFT TRUCK IS NOT TO BE USED FOR A LONG TIME

INTRODUCTION

The following recommendations are intended to prevent the lift truck from being damaged when it is withdrawn from service for an extended period.

⚠ IMPORTANT ⚠

Procedures to follow if the lift truck is not to be used for a long time and for starting it up again afterwards must be performed by your dealership. This long-term storage period must not exceed 12 months.

After 12 months, perform the lift truck return to service and long term shutdown procedures again.

PREPARING THE LIFT TRUCK

- Clean the lift truck 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 lift truck in clear and cold water and wipe them.
- Touch up the paintwork if necessary.
- Shut down the lift truck (⚡ OPERATING INSTRUCTIONS UNLADEN AND LADEN).
- Make sure the jib cylinder rods are all in retracted position.
- Release the pressure in the hydraulic circuits.

DEF (Diesel Exhaust Fluid) TANK

Depending on the model of lift truck

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

PROTECTING THE ENGINE

- Contact your dealer to obtain the procedure for protecting the inside of the engine (use of protection product).
- Fill the fuel tank.
- Empty and replace the cooling liquid (⚡ 3 - MAINTENANCE).
- Leave the engine running at idling speed for a few minutes, then switch off.
- Replace the engine oil and oil filter (⚡ 3 - MAINTENANCE).
- 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 a maximum.
- 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.

PROTECTING THE LIFT TRUCK

- Set the lift truck on axle stands so that the tyres are off the ground.
- Release the parking brake (according to model of lift truck).
- Protect cylinder rods which will not be retracted, from corrosion.
- Wrap the tires.

NOTE: If the lift truck is to be stored outdoors, cover it with a waterproof tarpaulin.

BRINGING THE LIFT TRUCK BACK INTO SERVICE

- Remove the waterproof adhesive tape from all the holes.
- Refit and reconnect the battery.
- Remove the protection from the cylinder rods.
- Carry out daily maintenance (↖ 3 - MAINTENANCE).
- Put the handbrake on and remove the axle stands.
- Empty and clean the fuel tank (↖ 3 - MAINTENANCE)
- Fill the fuel tank with clean diesel filtered through the filler port.
- Replace the fuel filter (↖ 3 - MAINTENANCE).
- Replace the fuel pre-filter (↖ 3 - MAINTENANCE) (according to model of lift truck).
- Drain and rinse the DEF tank (according to model of lift truck).
- Slowly fill the tank with new "DEF" (Diesel Exhaust Fluid) up to the bottom of the filler neck (according to model of lift truck).
- Refit and set the tension in the drive belts (↖ 3 - MAINTENANCE: FILTER CARTRIDGES AND BELTS).
- Turn the engine over with the starter, to allow the oil pressure to rise.
- Reconnect the engine cut-off solenoid.
- Grease the lift truck completely (↖ 3 - MAINTENANCE).

⚠ IMPORTANT ⚠

Ensure the area is sufficiently ventilated before starting the lift truck.

- Start up the lift truck, following the safety instructions and regulations (↖ OPERATING INSTRUCTIONS UNLADEN AND LADEN).
- Run all the jib's hydraulic movements, concentrating on the ends of travel for each cylinder.

LIFT TRUCK DISPOSAL

⚠ IMPORTANT ⚠

Please consult your dealer before disposing of your lift truck.

RECYCLING OF MATERIALS

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 plastic components are made of "thermoplastic" plastics, that 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

By entrusting the maintenance of your lift truck to the MANITOU network, the risk of pollution is limited and the contribution to environmental protection contribution 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 products.
- 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.

NOTE: MANITOU seeks to manufacture lift trucks that provide the best performance and limit polluting emissions.

2 - DESCRIPTION

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2 - DESCRIPTION

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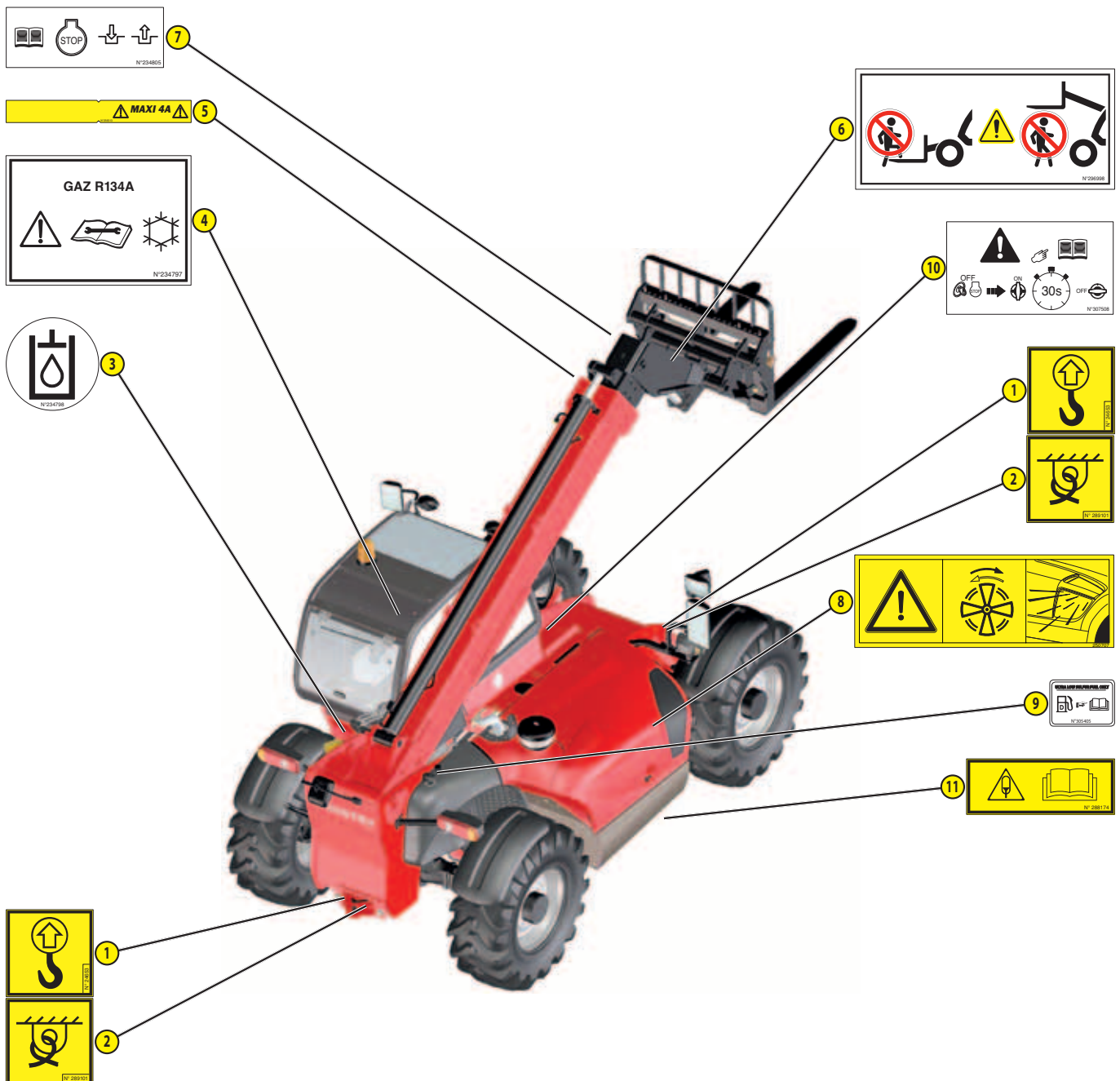
SAFETY PLATES AND STICKERS

⚠ IMPORTANT ⚠

*Clean all the safety plates and stickers to make them legible.
It is essential to replace safety plates and stickers which are illegible or damaged.
Check the presence of safety plates and stickers after replacing any spare parts.*

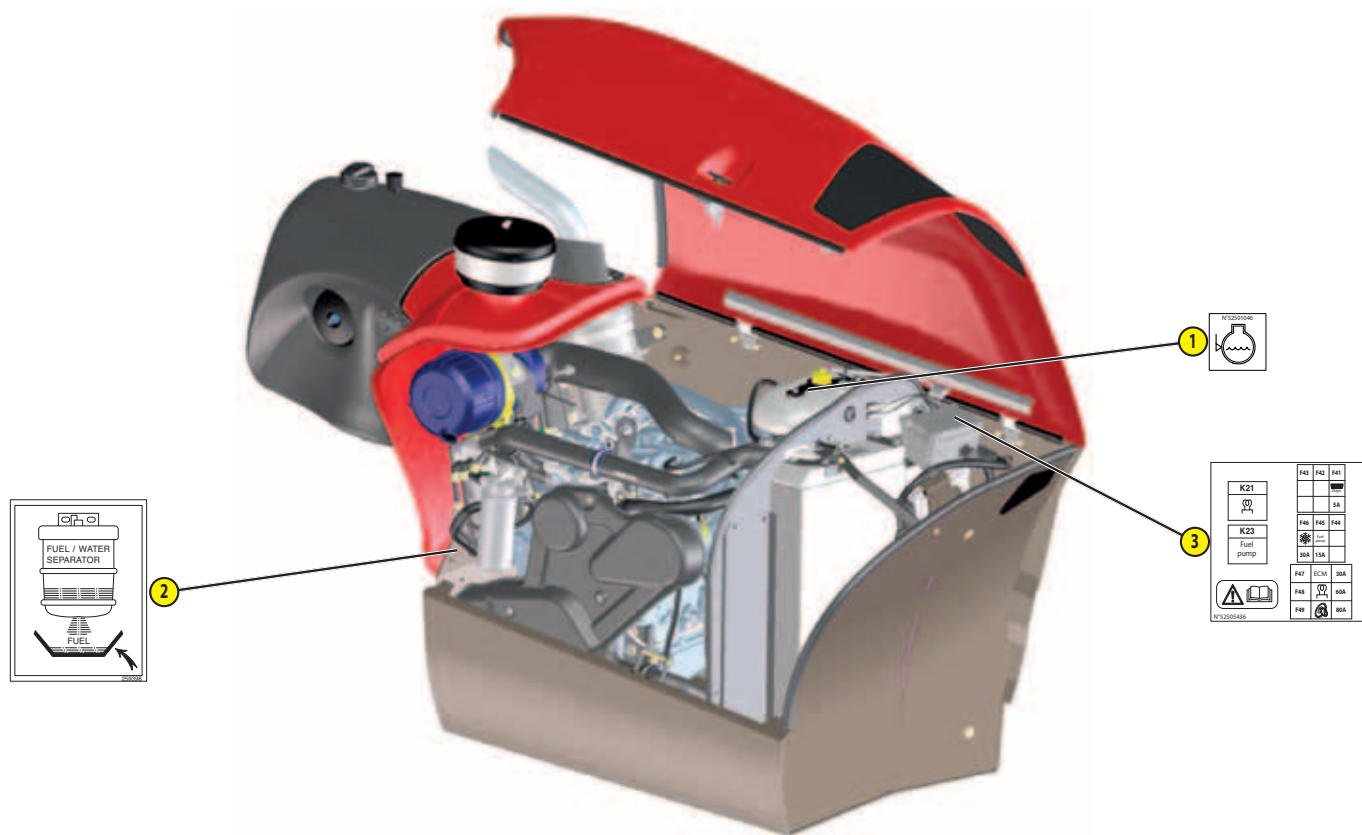
EXTERNAL PLATES AND STICKERS

ITEM	PART NO.	DESCRIPTION
1	24653	- Slings point
2	289101	- Tie-down point
3	234798	- Hydraulic oil
4	234797	- Air conditioning (option)
5	256513	- Boom electrical predisposition (option)
6	296998	- Maniscopic safety instruction (option)
7	234805	- Hydraulic coupling instruction
8	250707	- Fan reversal (option)
9	305405	- Diesel fuel
10	307508	- Battery cut-off instruction
11	288174	- Accumulator Instructions



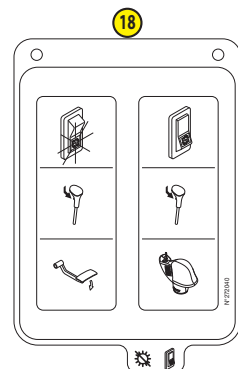
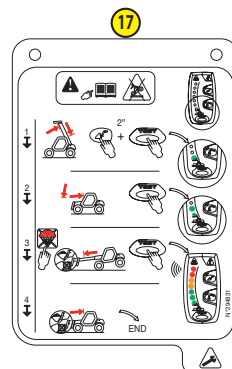
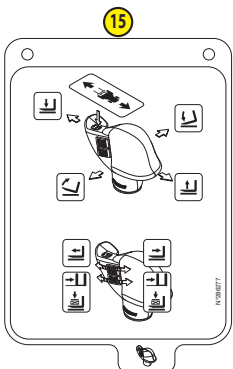
PLATES AND STICKERS UNDER THE ENGINE BONNET

ITEM	PART NO.	DESCRIPTION
1	52501046	- Anti-freeze
2	259398	- Water/diesel separator
3	52505436	- Engine fuse



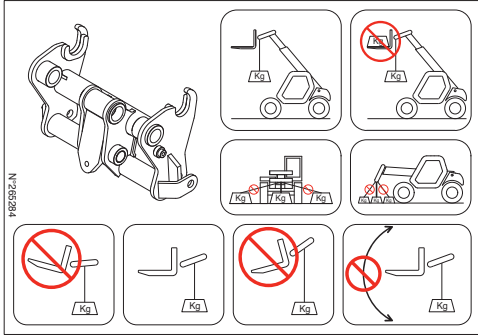
PLATES AND STICKERS IN THE CAB

ITEM	PART NO.	DESCRIPTION
1	193032	- Cab compliance
2	223324	- Patents
4	239594	- Sound power level 104dB
5	268491	- Brake fluid instruction
6	33460	- Gear lever
7	265284	- Lifting ring on single carriage (option)
8	184276	- Steering selection control
11	52505437	- Fuses
12	52503175	- Reach chart sheet
15	286277	- Manipulator function
16	241621	- Safety instruction
17	294831	- Resetting procedure
18	272040	- Transmission cut-off switch function
19	52618158	- PROP 65 warning plomb
20	52618159	- PROP 65 warning diesel engine exhaust
21	52588137	- ADH CAN ICES-2 NMB-2





8



7



6

⚠ WARNING
 This product can expose you to lead which is known to the State of California to cause cancer and birth defects or other reproductive harm.
 For more information go to: www.P65Warnings.ca.gov

19

⚠ WARNING
 Breathing diesel engine exhaust exposes you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
 - Always start and operate the engine in a well-ventilated area.
 - If in an enclosed area, vent the exhaust to the outside.
 - Do not modify or tamper with the exhaust system.
 - Do not idle the engine except as necessary.
 For more information go to www.P65Warnings.ca.gov

20

21 CANICES-2/NMB-2

LWA
104dB
 229594

4

CABINE CONFORME A :
 CAB CONFORMS TO :
 FOPS-ISO 3449
 ROPS-ISO 3471
 ANSI B 56.6
 N°193032

1

BREVETS - PATENTS
 FR 30 3460 P
 EP 0 658 315
 US PENDING
 N° 30332

2



5

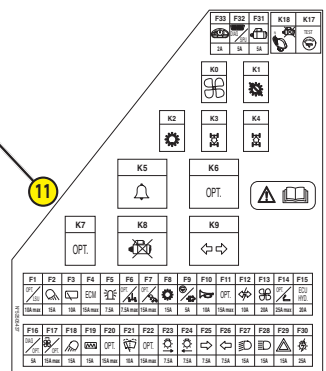
HUILE MINERALE Uniquement
 MINERAL OIL ONLY
 MINERALÖL Nur
 ACEITE MINERAL Solamente
 OLIO MINERALE Soltanto

⚠

LHMS

N°288891

11



IDENTIFICATION OF THE LIFT TRUCK

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

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

NOTE: For the owner's convenience, it is recommended that a note of these numbers is made in the spaces provided at the time of the delivery of the lift truck.

LIFT TRUCK MANUFACTURER'S PLATE

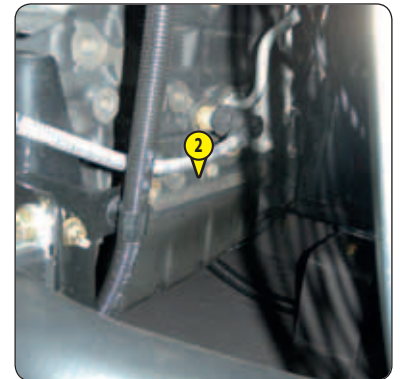
- 1 - MODEL
- 2 - SERIES
- 3 - Year of manufacture
- 4 - Model year
- 5 - Serial No.
- 6 - Power ISO/TR 14396
- 7 - Empty ground
- 8 - Authorised gross vehicle weight
- 9 - Rated capacity
- 10 - Pulling force
- 11 - Maximum vertical force (on trailer hook)
- 12 - Tyre pressure (bar)
- 13 - Homologation no.

MANITOU			
MANITOU BF 44158 ANGENIS CEDEX FRANCE			
MODELE	MODELLO	SERIE	SERIE
MODEL	MODELLO	SERIE	SERIE
1			2
3			4
5			6
7			8
8			9
10			11
12			13

For any further technical information regarding your lift truck refer to chapter: 2 - DESCRIPTION: CHARACTERISTICS.

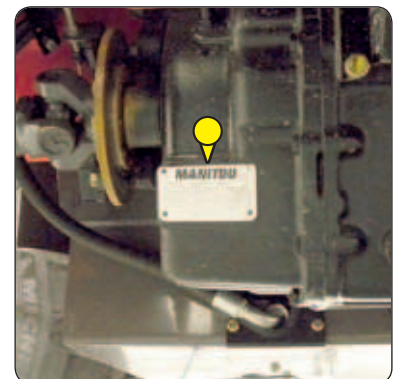
ENGINE

- 1 - Type
- 2 - Engine No.



GEAR BOX

- Type
- MANITOU Part no.
- Serial No.



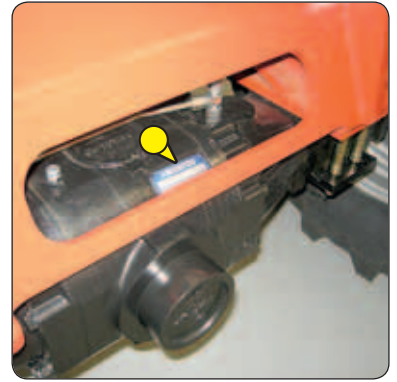
ANGLE GEAR-BOX

- Type
- MANITOU Part no.
- Serial No.



FRONT AXLE

- Type
- Serial No.
- MANITOU Part no.



REAR AXLE

- Type
- Serial No.
- MANITOU Part no.



CAB

- Type
- Serial No.



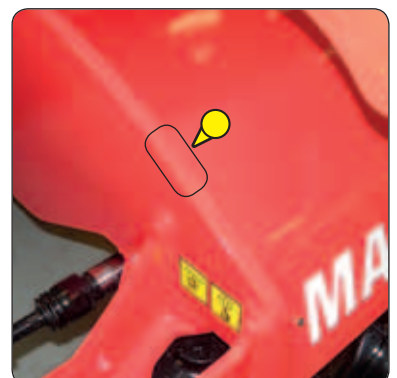
BOOM

- MANITOU Part no.
- Date of manufacture



FRAME

- Lift truck serial no.



CONNECTION MANUFACTURER'S PLATE

- Model
- Serial no.
- Year of manufacture

MANITOU
MANITOU BP
45100 ANCIENS CEDEX
FRANCE

CE

MODELE

N° dans la série

Année fabrication

Masse à vide kg

C d G / Tablier
A vide / En charge : mm /

Cap. Nominale

Pression de service

AVERTISSEMENT - RESPECTEZ
LA CAPACITÉ DE CHARGE
"CHARIOT ET EQUIPEMENT"

N° 241415

I.C. ENGINE		
Type		DEUTZ TD3,6L/313
Fuel		Diesel
Number of cylinders		4 in line
Suction		Supercharged
Injection system		Direct
Ignition sequence		1.3.4.2
Capacity	cm ³	3621
Bore and stroke	mm	98 x 120
Compression ratio		18
Nominal speed laden	rpm	2200
Idling speed slow unladen	rpm	930
Max. speed unladen	rpm	2360
Power ISO/TR 14396	cv - kW	75 - 55,4
Power SAE J 1995	cv - kW	75 - 55,4
Maximum torque ISO/TR 14396	Nm	330 to 1600 rpm
Air cleaner	µm	3
Type of cooling		By water
Fan		Puller

TRANSMISSION		
Gear box		TURNER
- Type		Mechanical
- Forward/reverse selector		Electro-hydraulic
- Torque converter		SACHS
- Number of forward speeds		4
- Number of reverse speeds		4
Angle gear box		TURNER
Front axle		DANA
- Differential		Limited slip
Rear axle		DANA
- Differential		Without locking
Drive wheels		4RM Permanent
- Switch for 2/4 drive wheels		No
Front tyres		ALLIANCE
- Size		400/80-24 A325 162A8 ATG
- Pressure	bar	3
Rear tyres		ALLIANCE
- Size		400/80-24 A325 162A8 ATG
- Pressure	bar	3

ELECTRIC CIRCUIT		
Battery	STANDARD OPTION	12 V - 180 Ah - 900 A EN
Alternator		12 V - 95 A
- Type		ISKRA AAK3869
Starter		12 V - 3,2 kW
- Type		ISKRA AZE4668

BRAKE CIRCUIT		
Service brake		Non-servo hydraulic brake
- Type of brake		Multidisk brake immersed in oil
- Type of control		Foot-operated for the front and rear axles
Parking brake		Mechanical
- Type of brake		Disk on gear-box output
- Type of control		Manual

SOUND AND VIBRATION		
Sound pressure level in the driver's cab LpA (according to standard NF EN 12053)	dB(A)	78 (cab closed) ; xx (cab open)
Sound pressure (according to directive 2009/76)	dB(A)	xx (cab closed) ; xx (cab open)
Sound pressure level ensured in the LwA environment (according to directive 2000/14/EC modified by directive 2005/88/EC)	dB(A)	104 (measured) ; 104 (ensured)
Sound level in motion (according to directive 2009/63)	dB(A)	xx
Average weighted acceleration on driver's body (according to standard NF EN 13059)	m/s ²	1,1
The average weighted acceleration transmitted to the driver's hand/ arm system (according to standard ISO 5349-2)	m/s ²	< 2,5
Standard seat vibration	m/s ²	xx (lightweight operator) ; xx (heavyweight operator)

HYDRAULIC CIRCUIT			
Hydraulic pump			
- Type		Gear type with flow divider	
		1st casing	2nd casing
- Capacity	cm ³	44	8
- Max. rating capacity unladen	l/mn	104	20
- Flow rate at 1600 rpm	l/mn	70	13
Filtration			
- Return	µm	10	
- Suction	µm	125	
Maximum service pressure		260	
- Telescoping circuit	bar	190 / 260	
- Lifting circuit	bar	260 / 260	
- Tilt circuit	bar	260 / 190	
- Attachment circuit	bar	260	
- Steering circuit	bar	140	

HYDRAULIC MOVEMENTS			
Lifting motions (boom retracted)			
- Unladen lifting	s - m/mn	6,8 - 39,7	
- Laden lifting	s - m/mn	7,2 - 37,5	
- Unladen lowering	s - m/mn	5,8 - 46,6	
- Laden lowering	s - m/mn	5,7 - 47,4	
Telescoping motions (boom raised)			
- Unladen extending	s - m/mn	6,8 - 22,5	
- Laden extending	s - m/mn	7,2 - 23,8	
- Unladen retracting	s - m/mn	4,7 - 34,5	
- Laden retracting	s - m/mn	4,2 - 38,6	
Tilting movements			
- Unladen digging	s - °/s	3 - 48,7	
- Forward tilting unladen	s - °/s	2,9 - 50,3	

SPECIFICATIONS AND WEIGHTS			
Speed of movement for lift truck in standard configuration on flat ground (except particular conditions)			
Front unladen	1	km/h	4,5
	2	km/h	7,3
	3	km/h	15
	4	km/h	26,3
Rear unladen	1	km/h	4,5
	2	km/h	7,3
	3	km/h	15
	4	km/h	26,3
Standard attachment			TFF 35 MT-1040
- Weight with forks		kg	165
- Weight of forks (each one)		kg	67,5
Rated capacity with standard attachment		kg	3175 (7000 Lb)
Tipping load at maximum reach on tyres		kg	1100
Distance from the centre of gravity from the load to the lug of the forks		mm	600
Standard lifting height		mm	6900
Lift truck weight without attachment		kg	6480
Lift truck weight with standard attachment			
- Unladen		kg	6780
- At rated load		kg	9980
Weight per axle with standard attachment (transport position)			
- Front unladen		kg	3280
- Rear unladen		kg	3500
- Front rated load		kg	8680
- Rear rated load		kg	1300
Weight per axle with standard attachment (boom extended)			
- Front rated load		kg	7190
- Rear rated load		kg	690
Drag strain on the coupling hook			
- Unladen (sliding)		daN	5300
- At rated load (transmission setting)		daN	8000
Pull strain with open carrier (according to standard ISO 8313)		daN	5770

I.C. ENGINE		
Type		DEUTZ TD3,6L/313
Fuel		Diesel
Number of cylinders		4 in line
Suction		Supercharged
Injection system		Direct
Ignition sequence		1.3.4.2
Capacity	cm ³	3621
Bore and stroke	mm	98 x 120
Compression ratio		18
Nominal speed laden	rpm	2200
Idling speed slow unladen	rpm	930
Max. speed unladen	rpm	2360
Power ISO/TR 14396	cv - kW	75 - 55,4
Power SAE J 1995	cv - kW	75 - 55,4
Maximum torque ISO/TR 14396	Nm	330 to 1600 rpm
Air cleaner	µm	3
Type of cooling		By water
Fan		Puller

TRANSMISSION		
Gear box		TURNER
- Type		Mechanical
- Forward/reverse selector		Electro-hydraulic
- Torque converter		SACHS
- Number of forward speeds		4
- Number of reverse speeds		4
Angle gear box		TURNER
Front axle		DANA
- Differential		Limited slip
Rear axle		DANA
- Differential		Without locking
Drive wheels		4RM Permanent
- Switch for 2/4 drive wheels		No
Front tyres		ALLIANCE
- Size		400/80-24 A325 162A8 ATG
- Pressure	bar	3
Rear tyres		ALLIANCE
- Size		400/80-24 A325 162A8 ATG
- Pressure	bar	3

ELECTRIC CIRCUIT		
Battery	STANDARD OPTION	12 V - 180 Ah - 900 A EN
Alternator		12 V - 95 A
- Type		ISKRA AAK3869
Starter		12 V - 3,2 kW
- Type		ISKRA AZE4668

BRAKE CIRCUIT		
Service brake		Non-servo hydraulic brake
- Type of brake		Multidisk brake immersed in oil
- Type of control		Foot-operated for the front and rear axles
Parking brake		Mechanical
- Type of brake		Disk on gear-box output
- Type of control		Manual

SOUND AND VIBRATION		
Sound pressure level in the driver's cab LpA (according to standard NF EN 12053)	dB(A)	78 (cab closed) ; xx (cab open)
Sound pressure (according to directive 2009/76)	dB(A)	xx (cab closed) ; xx (cab open)
Sound pressure level ensured in the LwA environment (according to directive 2000/14/EC modified by directive 2005/88/EC)	dB(A)	104 (measured) ; 104 (ensured)
Sound level in motion (according to directive 2009/63)	dB(A)	xx
Average weighted acceleration on driver's body (according to standard NF EN 13059)	m/s ²	1,1
The average weighted acceleration transmitted to the driver's hand/ arm system (according to standard ISO 5349-2)	m/s ²	< 2,5
Standard seat vibration	m/s ²	xx (lightweight operator) ; xx (heavyweight operator)

HYDRAULIC CIRCUIT			
Hydraulic pump			
- Type		Gear type with flow divider	
		1st casing	2nd casing
- Capacity	cm ³	44	8
- Max. rating capacity unladen	l/mn	104	20
- Flow rate at 1600 rpm	l/mn	70	13
Filtration			
- Return	µm	10	
- Suction	µm	125	
Maximum service pressure		260	
- Telescoping circuit	bar	190 / 260	
- Lifting circuit	bar	260 / 260	
- Tilt circuit	bar	260 / 190	
- Attachment circuit	bar	260	
- Steering circuit	bar	140	

HYDRAULIC MOVEMENTS			
Lifting motions (boom retracted)			
- Unladen lifting	s - m/mn	8 - 33,8	
- Laden lifting	s - m/mn	9 - 30	
- Unladen lowering	s - m/mn	5,5 - 49,1	
- Laden lowering	s - m/mn	5,5 - 49,1	
Telescoping motions (boom raised)			
- Unladen extending	s - m/mn	13,3 - 23,1	
- Laden extending	s - m/mn	13,5 - 23,5	
- Unladen retracting	s - m/mn	8,3 - 37,6	
- Laden retracting	s - m/mn	8,4 - 37,1	
Tilting movements			
- Unladen digging	s - °/s	3 - 48,7	
- Forward tilting unladen	s - °/s	2,9 - 50,3	

SPECIFICATIONS AND WEIGHTS			
Speed of movement for lift truck in standard configuration on flat ground (except particular conditions)			
Front unladen	1	km/h	4,5
	2	km/h	7,3
	3	km/h	15
	4	km/h	26,3
Rear unladen	1	km/h	4,5
	2	km/h	7,3
	3	km/h	15
	4	km/h	26,3
Standard attachment		TFF 35 MT-1040	
- Weight with forks	kg	165	
- Weight of forks (each one)	kg	67,5	
Rated capacity with standard attachment	kg	3175 (7000 Lb)	
Tipping load at maximum reach on tyres	kg	450	
Distance from the centre of gravity from the load to the lug of the forks	mm	600	
Standard lifting height	mm	9000	
Lift truck weight without attachment	kg	6845	
Lift truck weight with standard attachment			
- Unladen	kg	7145	
- At rated load	kg	10345	
Weight per axle with standard attachment (transport position)			
- Front unladen	kg	3445	
- Rear unladen	kg	3700	
- Front rated load	kg	8745	
- Rear rated load	kg	1600	
Weight per axle with standard attachment (boom extended)			
- Front rated load	kg	7165	
- Rear rated load	kg	430	
Drag strain on the coupling hook			
- Unladen (sliding)	daN	5530	
- At rated load (transmission setting)	daN	7320	
Pull strain with open carrier (according to standard ISO 8313)	daN	5770	

TIRES

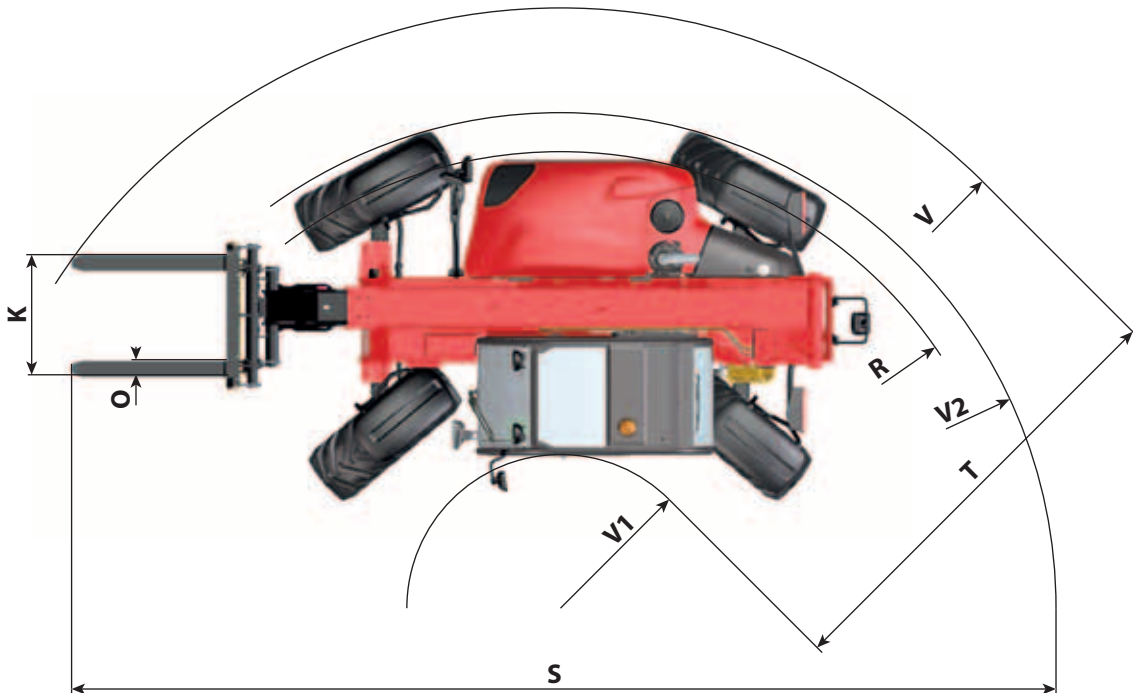
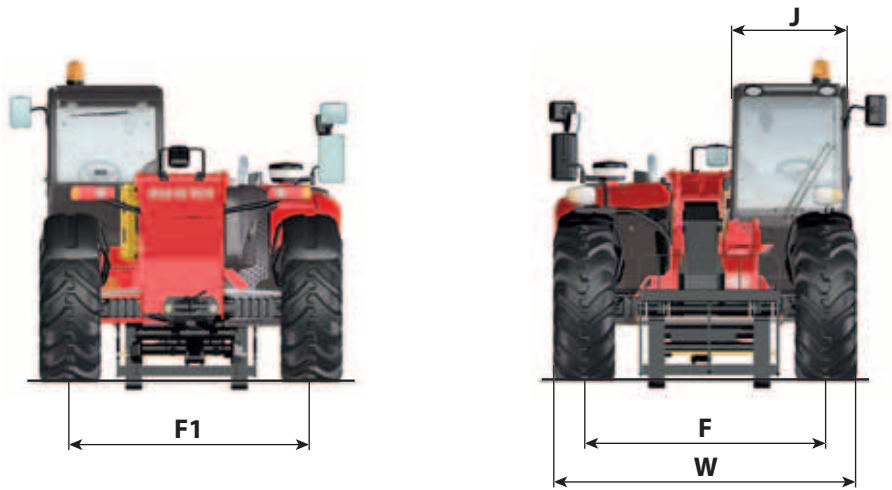
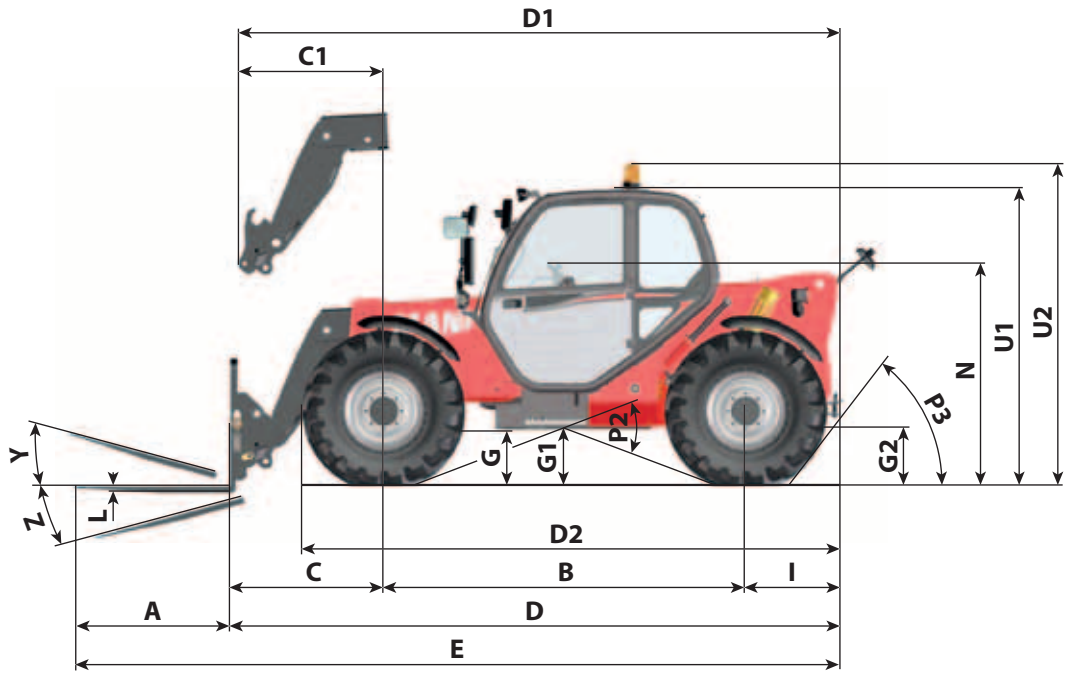
MT 732 EASY 75D ST3B S1		PRESSURE (bar)	TYRE LOAD (kg)			
			FRONT UNLADEN	FRONT LADEN	REAR UNLADEN	REAR LADEN
ALLIANCE	400/80-24 A325 162A8 ATG	3	1650	4350	1750	650
GOODYEAR	15,5/80-24 SGI 12PR TUBELESS	4				
MICHELIN	460/70R24 XMCL 159A8 TUBELESS	3,4				
	400/80-24 156A8 IND POWER CL TUBELESS	3				
	15,5R25 XHA TUBELESS	2,75				

MT 932 EASY 75D ST3B S1		PRESSURE (bar)	TYRE LOAD (kg)			
			FRONT UNLADEN	FRONT LADEN	REAR UNLADEN	REAR LADEN
ALLIANCE	400/80-24 A325 162A8 ATG	3	1700	4350	1850	800
GOODYEAR	15,5/80-24 SGI 12PR TUBELESS	4				
MICHELIN	460/70R24 XMCL 159A8 TUBELESS	3,4				
	400/80-24 156A8 IND POWER CL TUBELESS	3				
	15,5R25 XHA TUBELESS	2,75				

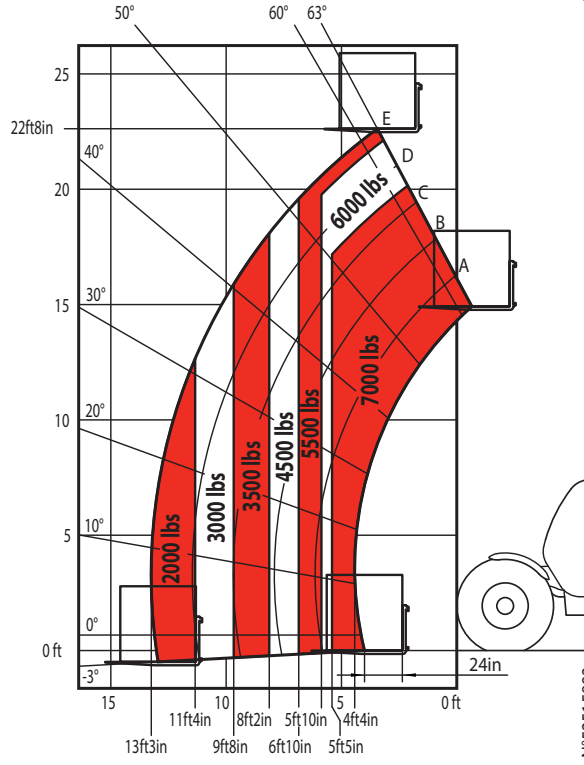
		PRESSURE (bar)	LOAD (kg)	PRESSURE ON THE CONTACT SURFACE (kg/cm ²)		AREA OF THE CONTACT SURFACE (cm ²)	
				HARD SOIL	LOOSE SOIL	HARD SOIL	LOOSE SOIL
ALLIANCE	400/80-24 A325 162A8 ATG	3	650				
			800				
			1650				
			1700				
			1750				
			1850				
			4350				
GOODYEAR	15,5/80-24 SGI 12PR TUBELESS	4	650	7,27	1,99	90	330
			800	6,95	1,84	115	435
			1650	7,86	2,14	210	770
			1700	7,94	2,16	214	786
			1750	8,02	2,18	218	802
			1850	8,18	2,22	226	834
			4350	12,08	3,18	360	1370
MICHELIN	460/70R24 XMCL 159A8 TUBELESS	3,4	650	1,46	0,45	476	1512
			800	1,54	0,52	529	1568
			1650	1,99	0,87	827	1885
			1700	2,01	0,89	843	1903
			1750	2,03	0,91	858	1922
			1850	2,08	0,94	888	1959
			4350	2,84	1,49	1519	2888
	400/80-24 156A8 IND POWER CL TUBELESS	3	650	5,12	0,53	127	1221
			800	5,41	0,63	148	1273
			1650	6,63	1,05	249	1571
			1700	6,67	1,07	255	1588
			1750	6,73	1,09	260	1606
			1850	6,83	1,13	271	1640
	15,5R25 XHA TUBELESS	2,75	650	4,03	2,27	169	297
			800	4,15	2,31	195	350
			1650	4,81	2,54	343	650
			1700	4,84	2,55	351	667
			1750	4,86	2,55	360	685
			1850	4,90	2,57	377	719
4350			5,59	2,89	774	1497	

DIMENSIONS AND LOAD CHART MT 732 EASY 75D ST3B S1

A	mm	1200
B	mm	2810
C	mm	1193
C1	mm	1128
D	mm	4761
D1	mm	4696
D2	mm	4193
E	mm	5961
F	mm	1930
F1	mm	1930
G	mm	450
G1	mm	435
G2	mm	435
I	mm	758
J	mm	890
K	mm	1260
L	mm	45
N	mm	1715
O	mm	125
P2	°	38
P3	°	53
R	mm	3685
S	mm	6485
T	mm	3490
U1	mm	2299
U2	mm	2488
V	mm	4800
V1	mm	1310
V2	mm	3800
W	mm	2340
Y	°	13
Z	°	134



MT732-75 -USA-

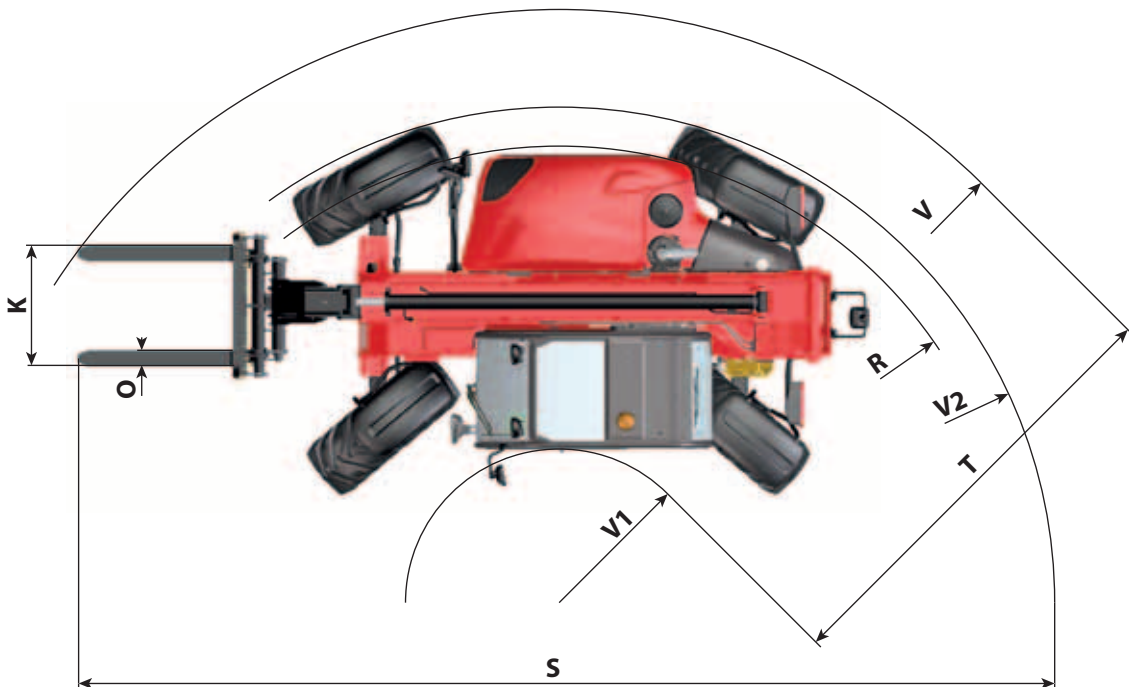
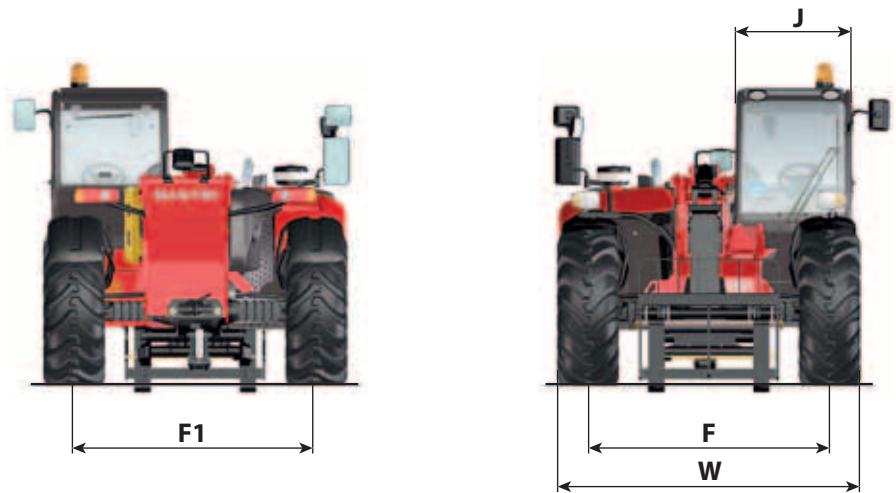
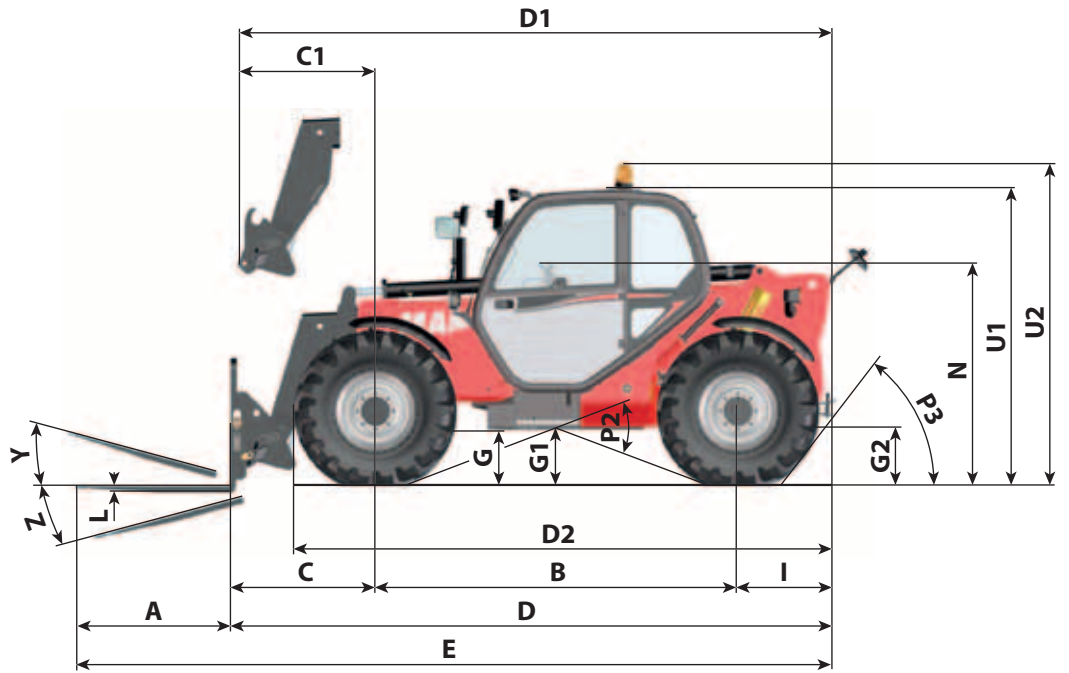


N°52515893

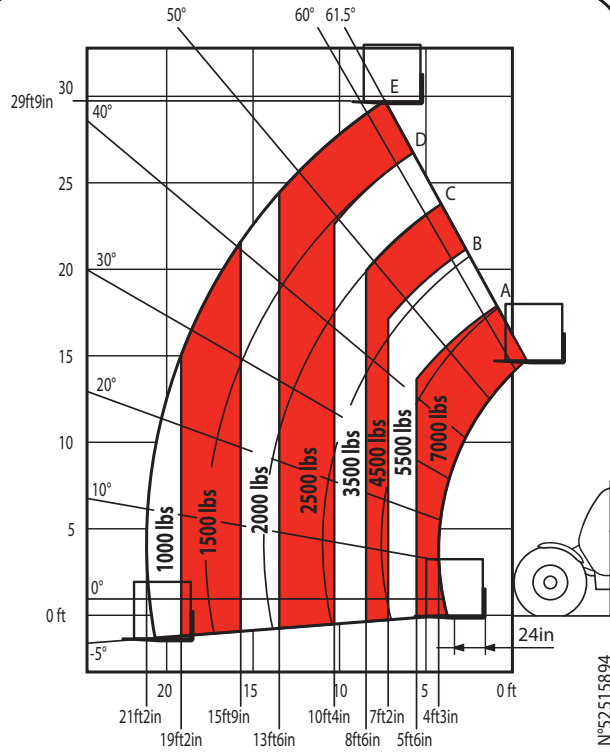


DIMENSIONS AND LOAD CHART MT 932 EASY 75D ST3B S1

A	mm	1200
B	mm	2810
C	mm	1128
C1	mm	1064
D	mm	4696
D1	mm	4632
D2	mm	4193
E	mm	5896
F	mm	1930
F1	mm	1930
G	mm	450
G1	mm	435
G2	mm	435
I	mm	758
J	mm	890
K	mm	1260
L	mm	45
N	mm	1715
O	mm	125
P2	°	38
P3	°	53
R	mm	3685
S	mm	7620
T	mm	3460
U1	mm	2299
U2	mm	2488
V	mm	4770
V1	mm	1310
V2	mm	3800
W	mm	2340
Y	°	13
Z	°	134



MT932-75 -USA-



According norme ANSI/ITSDF B56-6-2011

N°52515894



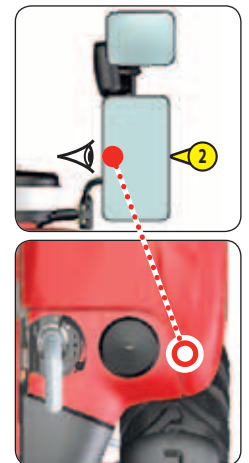
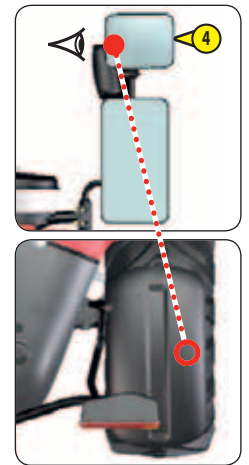
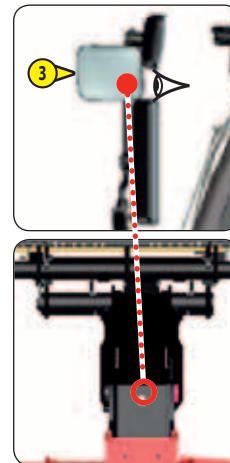
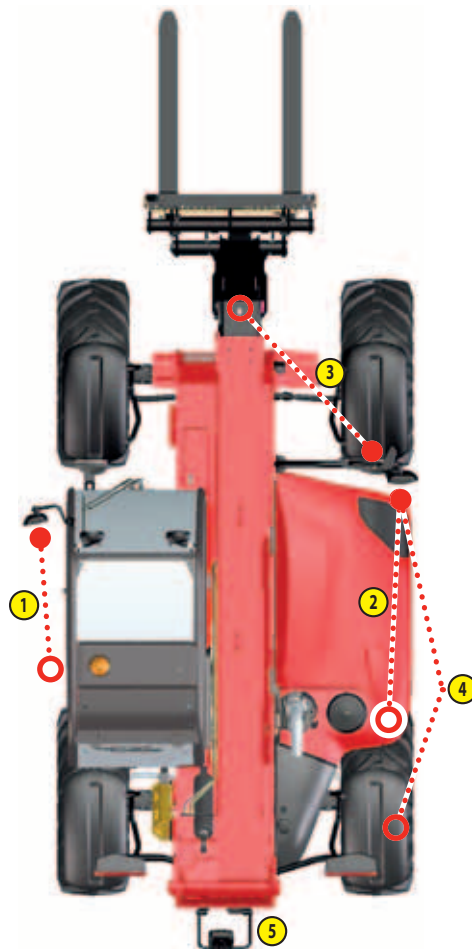
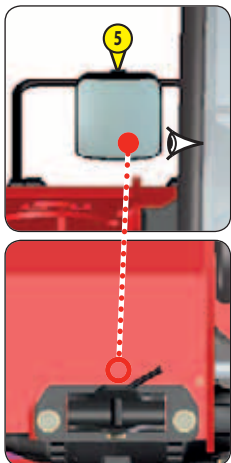
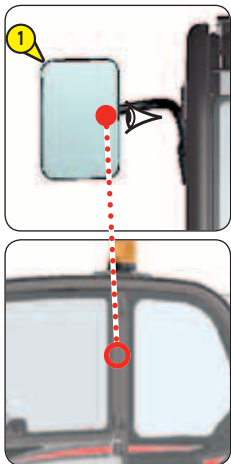
Our lift trucks conform to European standard EN15830 with regard to operator visibility.

- Follow the instructions for optimizing operator visibility of the immediate vicinity (see: 1 - OPERATING AND SAFETY INSTRUCTIONS: INSTRUCTIONS TO THE OPERATOR: DRIVING INSTRUCTIONS UNLADEN AND LADEN: 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 - REAR REAR-VIEW MIRROR

- Place the lift truck on level ground with the I.C. engine stopped, and the jib 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.



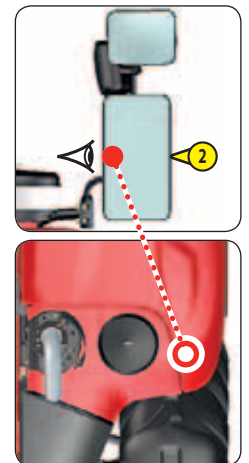
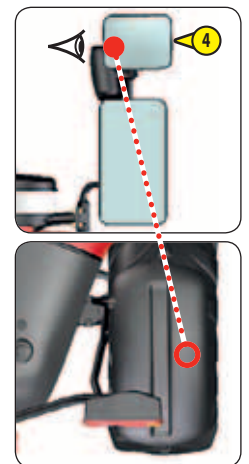
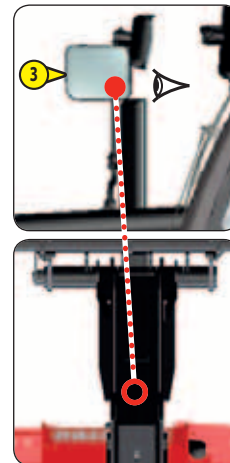
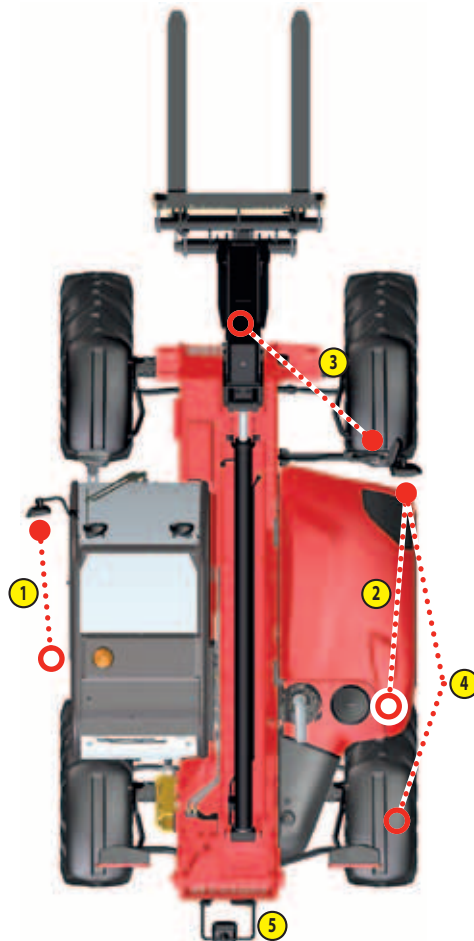
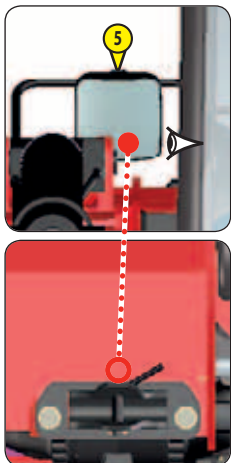
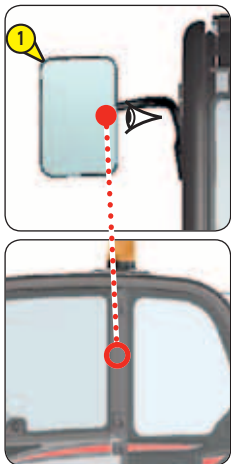
Our lift trucks conform to European standard EN15830 with regard to operator visibility.

- Follow the instructions for optimizing operator visibility of the immediate vicinity (see: 1 - OPERATING AND SAFETY INSTRUCTIONS: INSTRUCTIONS TO THE OPERATOR: DRIVING INSTRUCTIONS UNLADEN AND LADEN: D - VISIBILITY).

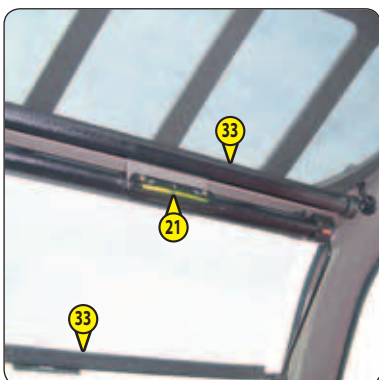
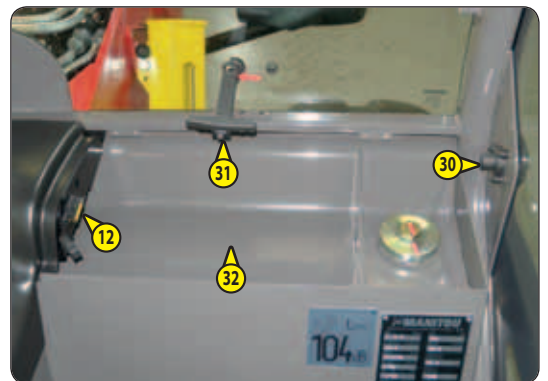
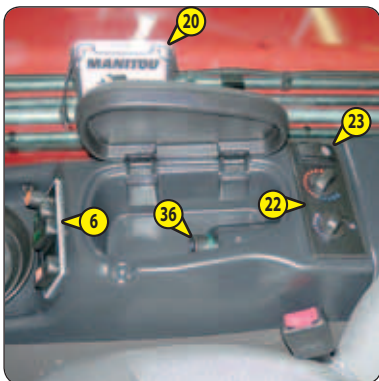
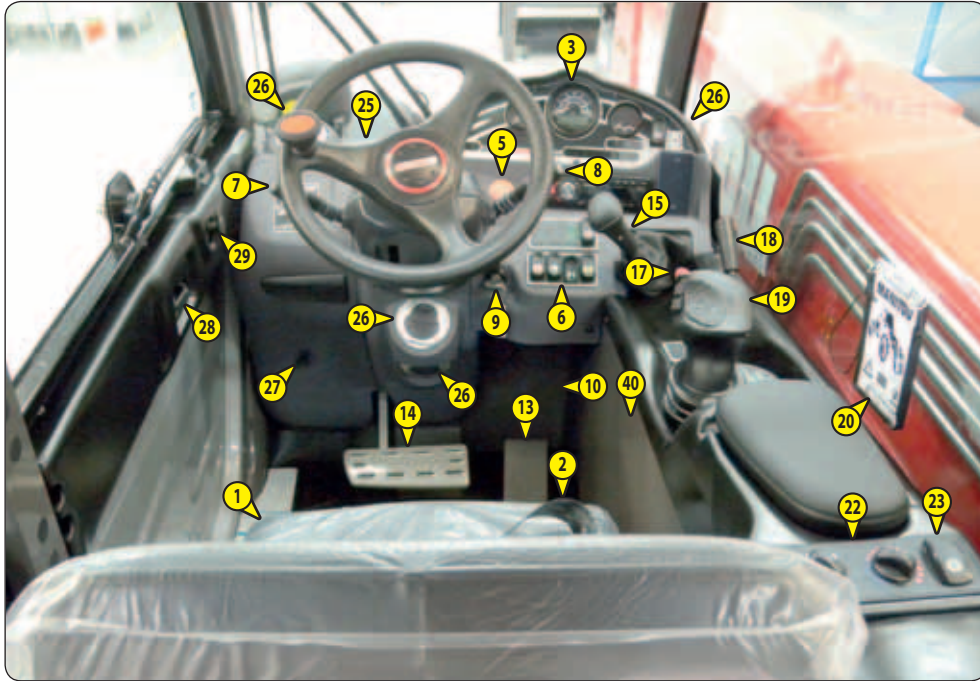
DESCRIPTION AND ADJUSTMENT OF REAR-VIEW MIRRORS

- 1 - LEFT REAR-VIEW MIRROR
- 2 - MAIN RIGHT REAR-VIEW MIRROR
- 3 - CENTRAL RIGHT REAR-VIEW MIRROR
- 4 - UPPER RIGHT REAR-VIEW MIRROR
- 5 - REAR REAR-VIEW MIRROR

- Place the lift truck on level ground with the I.C. engine stopped, and the jib 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.



INSTRUMENTS AND CONTROLS



DESCRIPTION

- 1 - DRIVER'S SEAT
- 2 - SEAT BELT
- 3 - CONTROL AND SIGNAL LIGHTS PANEL
- 4 - ANGULAR SECTOR ON BOOM
- 5 - EMERGENCY STOP BUTTON
- 6 - SWITCHES
- 7 - LIGHTING, HORN AND INDICATOR LIGHTS
- 8 - FRONT AND REAR WINDSCREEN WIPER SWITCH
- 9 - IGNITION SWITCH
- 10 - FUSES AND RELAYS IN THE CAB
- 11 - FUSES AND RELAYS UNDER THE ENGINE BONNET
- 12 - DIAGNOSTIC PLUG
- 13 - ACCELERATOR PEDAL
- 14 - SERVICE BRAKE PEDAL AND TRANSMISSION CUT-OFF
- 15 - GEAR LEVER AND TRANSMISSION CUT-OFF
- 16 - PARKING BRAKE LEVER
- 17 - FORWARD/NEUTRAL/REVERSE GEAR SELECTION
- 18 - STEERING SELECTION
- 19 - HYDRAULIC CONTROLS
- 20 - FUNCTION FILES
- 21 - LEVEL INDICATOR
- 22 - HEATER CONTROL
- 23 - AIR CONDITIONING CONTROLS (AIR CONDITIONING OPTION)
- 24 - CAB VENTILATION FILTER
- 25 - WINDSCREEN DEMISTER VENTS
- 26 - HEATING VENTS
- 27 - BRAKE OIL AND WINDSCREEN WASHER TANK ACCESS PANEL
- 28 - DOOR LOCK
- 29 - LOCKING HANDLE FOR UPPER HALF-DOOR
- 30 - UNLOCKING BUTTON FOR UPPER HALF-DOOR
- 31 - HANDLE FOR REAR WINDOW OPENING
- 32 - STORAGE COMPARTMENT
- 33 - SUN VISOR (OPTION)
- 34 - ROOF LIGHT (NOT ILLUSTRATED)
- 35 - HOOK
- 36 - CIGARETTE LIGHTER
- 37 - ARMREST AND STORAGE
- 38 - TOOL BOX (OPTION)
- 39 - BATTERY CUT-OFF
- 40 - FRONT HEADLIGHTS (NOT ILLUSTRATED)
- 41 - REAR LIGHTS (NOT ILLUSTRATED)
- 42 - ROTATING BEACON LIGHT (NOT ILLUSTRATED)
- 43 - BOOM SAFETY WEDGE

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

1 - DRIVER'S SEAT

DRIVER'S SEAT (STANDARD)

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

LONGITUDINAL ADJUSTMENT

- Unlock the locking lever 1.
- Slide the seat to the desired position.
- Release the lever and be sure it returns to the lock position.

SEAT HEIGHT ADJUSTMENT

- Sit down correctly in the seat.
- Turn the knob 2 according to the desired height, clockwise to rise, anti-clockwise to lower.

SEAT SUSPENSION ADJUSTMENT

- Ensure that the indicator 3 is in the green zone.

BACK-REST ANGLE ADJUSTMENT

- Hold the back-rest, push lever 4 backwards and tilt the back-rest to the desired position.



If you do not support the back-rest when making adjustments, it swings completely forwards.

DRIVER'S SEAT (OPTION)

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

SEAT HEIGHT ADJUSTMENT

- Sit down correctly in the seat.
- Turn the knob 1 according to the desired height, clockwise to rise, anti-clockwise to lower, ensuring that the green indicator lamp 2 remains visible.
- If indicator lamp 2 is red, re-adjust the height.

NOTE: The seat is designed so as not to require adjustment according to the driver's weight.

LONGITUDINAL ADJUSTMENT

- Pull lever 3 upwards.
- Slide the seat to the desired position.
- Release the lever and be sure it returns to the lock position.

BACK-REST ANGLE ADJUSTMENT

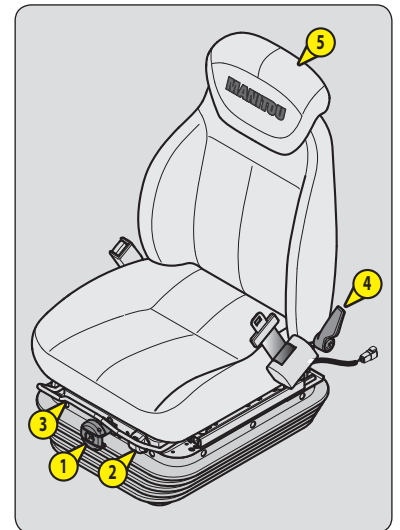
- Hold the back-rest, push lever 4 backwards and tilt the back-rest to the desired position.



If you do not support the back-rest when making adjustments, it swings completely forwards.

EXTENDING THE HEAD-REST

- The height of the head-rest 5 can be adjusted by pulling it upwards (the notches will click) up to the stop.
- The head-rest can be removed by applying sufficient pressure to pull it off the stop.



DRIVER'S PNEUMATIC SEAT (OPTION)

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

SEAT HEIGHT ADJUSTMENT

- Sit down correctly in the seat.
- Switch on lift truck ignition.
- Pull or push lever 1 according to the desired height, making sure that the green indicator lamp 2 remains visible.
- If indicator lamp 2 is red, re-adjust the height.

NOTE: The seat is designed so as not to require adjustment according to the driver's weight.

LONGITUDINAL ADJUSTMENT

- Swing lever 3 upwards.
- Slide the seat to the desired position.
- Release the lever and be sure it returns to the lock position.

HORIZONTAL SHOCK ABSORBER

In certain conditions (e.g. driving with a trailer) it is advised to use the horizontal shock absorber. The driver's seat is thus better able to absorb jerks in the direction of travel.

- Swing lever 3 downwards to block the horizontal damper.

BACK-REST ANGLE ADJUSTMENT

- Hold the back-rest, push lever 4 backwards and tilt the back-rest to the desired position.



If you do not support the back-rest when making adjustments, it swings completely forwards.

EXTENDING THE HEAD-REST

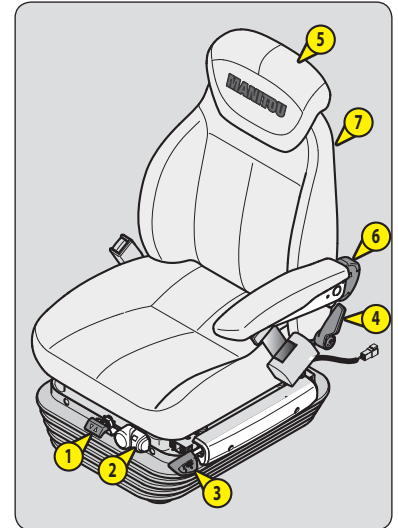
- The height of the head-rest 5 can be adjusted by pulling it upwards (the notches will click) up to the stop.
- The head-rest can be removed by applying sufficient pressure to pull it off the stop.

LUMBAR ADJUSTMENT

- Turn knob 6 anti-clockwise to select one of the 5 lumbar support settings.

SEAT HEATING

- Switch 7 operates the heating of the seat cushion and the back-rest.



2 - SEAT BELT



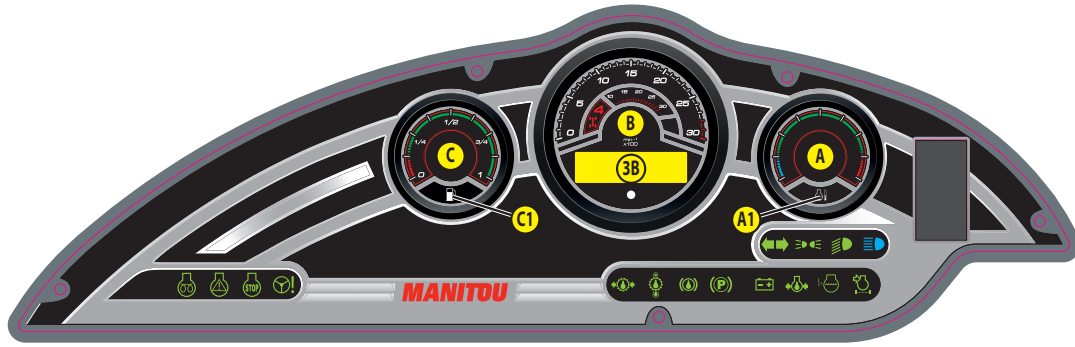
*In no event should the lift truck be used if the seat belt is defective (fixing, locking, cuts, tears, etc.).
Repair or replace the seat belt immediately.*

- Sit correctly on the seat.
- Check that 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 squeezing your hip and without over-slack.

3 - CONTROL PANEL

- 3A - CONTROL PANEL
- 3B - SCREEN DISPLAY

3A - CONTROL PANEL



⚠ IMPORTANT ⚠

A permanently lit or flashing warning lamp, with the engine running, is the sign of an operating fault. The lighting of some lamps may be accompanied by an audible signal. Do not ignore this warning, consult your dealer without delay. If one of the warning lamps comes on while the lift truck is in motion, stop the lift truck under the safest possible conditions.

When activating the electrical system of the lift truck, all the red and orange lamps and the panel's buzzer must light to indicate their good working order. If one of the red lamps or the buzzer does not function, carry out the necessary repairs.

A - ENGINE WATER TEMPERATURE

If indicator lamp A1 comes on when the lift truck is running, this means that the coolant temperature is high. Stop the engine immediately and seek the cause of the cooling system malfunction.

B - REV COUNTER

C - FUEL LEVEL

Indicator lamp C1 indicates that you are in reserve and that your running time is limited.

SIGNAL LIGHTS

ENGINE PREHEAT INDICATOR LAMP

Preheat is necessary. When the lift truck is switched on, the indicator lamp comes on for 2 seconds and goes off as soon as preheat is ended. Start the lift truck's engine.

ENGINE PREHEATING FAULT INDICATOR LIGHT

If the indicator lamp lights up on or flashes while the lift truck is in operation, a diagnostic fault has been detected. The lift truck will operate in reduced mode. Consult your dealer without delay.

CUT-OFF ENGINE INDICATOR LAMP

If the indicator lamp lights up or flashes, when the lift truck is running, stop the engine immediately and consult your dealer.

STEERING SYSTEM OIL PRESSURE WARNING INDICATOR LAMP

If the indicator lamp lights up when the lift truck is running, stop the engine immediately and look for the cause (possible leak, etc.).

GEAR BOX OIL PRESSURE WARNING INDICATOR LAMP

The indicator lamp and buzzer come on when there is an abnormal drop in gear box pressure, in forward gear. Stop the engine and look for the cause (gear box oil level, possible leak, radiator, etc.).

NOTE: This indicator lamp operates in forward travel conditions only, and can be ignored when the lift truck is stopped with the engine idling.

GEAR BOX OIL TEMPERATURE WARNING INDICATOR LAMP

The indicator lamp and buzzer come on when the gearbox oil temperature is abnormally high. Stop the engine and look for the cause (gear box oil level, possible leak, radiator, etc.).

 **BRAKING OIL LEVEL WARNING INDICATOR LAMP**

If the indicator lamp and buzzer come on, when the lift truck is running, stop the engine immediately and look for the cause (braking oil level, possible leak, etc.). In the event of an abnormal drop in the level, consult your dealer.

 **PARKING BRAKE INDICATOR LAMP**

This indicator lamp comes on when the parking brake is applied.

 **BATTERY CHARGE WARNING INDICATOR LAMP**

If the indicator lamp and buzzer come on when the lift truck is running, stop the engine immediately and look for the cause (electric circuit, alternator belt, alternator, etc.).

 **ENGINE OIL PRESSURE INDICATOR LAMP**

If the indicator lamp comes on when the lift truck is running, stop the engine immediately and look for the cause (see oil level in engine crankcase).

NOTE: After starting the engine, the indicator lamp remains lit for a few seconds then goes out when the correct engine oil pressure is reached. The full engine power is then available.

 **ENGINE WATER LEVEL WARNING INDICATOR LAMP**

If the indicator lamp and buzzer come on when the lift truck is running, stop the engine immediately and look for the cause (coolant level, possible leak, radiator, etc.).

 **AIR FILTER OR HYDRAULIC RETURN FILTER CLOGGING WARNING INDICATOR LAMP**

The indicator lamp and buzzer come on when the air filter cartridge or the hydraulic return oil filter cartridge is clogged up. Stop the engine and carry out the necessary repairs (see cleaning and replacement requirements in chapter: 3 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS).





 **INDICATOR LIGHTS INDICATOR LAMP**

 **SIDELIGHTS INDICATOR LAMP**

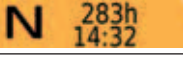




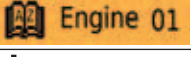

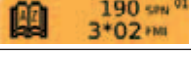



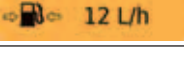
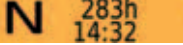
 **LOW BEAM INDICATOR LAMP**

 **MAIN BEAM INDICATOR LAMP**

3B - SCREEN DISPLAY

- Turn on the lift truck ignition using the ignition key.
- The initialization screen  appears, please wait.
- The screen  appears to show:
 - The direction of travel (F for forward/R for reverse/N for neutral).
 - The hour meter.
 - The clock.
- Short press  button A to move successively from one screen to another, hold down the button  to enter the menus.



Main screen. 		To set the time, short press to increment the value or hold down to move to the next number.	
Daily hour meter screen. 		Reset to zero.	
Engine fault screen. 		Fault code display. 	
ECU fault screen. 		Fault code display. 	
Instantaneous consumption screen. 			
Main screen. 			

HELP SCREENS



FanOff



FanOn

Self-cleaning fan, these screens are displayed for 3 seconds (see: 2 - DESCRIPTION: 6 - SWITCHES).

WARNING SCREENS



Water

This screen is displayed for 3 seconds every 10 minutes in the event that there is water in the diesel. Drain the fuel pre-filter (see: 3 - MAINTENANCE: A - DAILY OR EVERY 10 HOURS OF SERVICE).

4 - ANGULAR SECTOR ON BOOM

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



5 - EMERGENCY STOP BUTTON

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

⚠ IMPORTANT ⚠

*Warning, hydraulic movements suddenly stop when using this button.
If possible, stop the lift truck before using the emergency stop.*

- Turn the knob to deactivate it before restarting the lift truck.



6 - SWITCHES

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

A - BOOM ELECTRICAL PREDISPOSITION OPTION OR HEAD TELESCOPE ELECTROVALVE OPTION

See: 2 - DESCRIPTION: DESCRIPTION AND USE OF THE OPTIONS.

B - BLUE FRONT AND REAR WORKING LIGHTS OPTION

C - WHEEL ALIGNMENT LAMPS

See: 2 - DESCRIPTION: 20 - STEERING SELECTION.

D - HAZARD WARNING LIGHTS



E - REAR FOG LIGHTS

F - SELF-CLEANING FAN OPTION

Cleans the radiator core and the grille of the engine cover by reversing the air flow.

⚠ IMPORTANT ⚠

*The self-cleaning fan is operational as from an engine water temperature of 40°C.
Beware of the risk of splashes in the eyes.*

- Position 1: The help  FanOn screen comes on for 3 seconds, the indicator lamp is lit, the fan operates in self-cleaning mode for a few seconds once every 3 minutes.
- Position 2: The help  FanOff screen comes on for 3 seconds, indicator lamp is off, the fan is in normal operating mode.

G - STEERING SELECTION

See: 2 - DESCRIPTION: 18 - STEERING SELECTION.

H - TRANSMISSION CUT-OFF

NOTE: In all cases transmission cut-off can be activated using the gear lever.

- Position 1: Indicator lamp is on, transmission is cut-off with the service brake pedal and the forward/neutral/reverse gear lever.
- Position 2: Indicator lamp is off, transmission is cut-off with the forward/neutral/reverse gear selector.

USE OF TRANSMISSION CUT-OFF

- Transmission cut-off to brake pedal (position 1).
 - When loading.
- Transmission cut-off with forward/neutral/reverse gear selector (position 2).
 - When driving.
 - For inching and continuous stop/start (delicate handling).
 - Start-up on a slope.



I - OPTION

J - FRONT AND REAR WORKING LIGHTS OPTION

K - HEAD TELESCOPE WORKING LIGHT OPTION

L - REAR WINDOW DEFROSTER OPTION

M - SIDE WINDSCREEN WIPER OPTION + ROOF WINDSCREEN WIPER OPTION



N - ENGINE SPEED REGULATOR

See: 2 - DESCRIPTION: DESCRIPTION AND USE OF THE OPTIONS.

O - ROTATING BEACON LIGHT

P - FRONT AND REAR WORKING LIGHTS OPTION

Q - ATTACHMENT HYDRAULIC LOCKING OPTION

See: 2 - DESCRIPTION: DESCRIPTION AND USE OF THE OPTIONS.

R - NEUTRALIZATION OF HYDRAULIC MOVEMENTS

When driving on the road, it is highly recommended (mandatory in Germany) that you cut-off all the hydraulic movements. The indicator lamp shows when it is in use.

S - ATTACHMENT EASY HYDRAULIC CONNECTION OPTION

See: 2 - DESCRIPTION: DESCRIPTION AND USE OF THE OPTIONS.

T - TELESCOPE SUSPENSION OPTION

See: 2 - DESCRIPTION: DESCRIPTION AND USE OF THE OPTIONS.



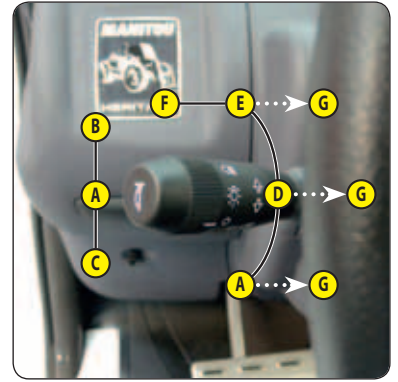
7 - LIGHTING, HORN AND INDICATOR LIGHTS

The switch controls the visual and sound alarms.

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

Pressing the end of the switch sounds the horn.

NOTE: The positions D - E - F - G can be carried out without the ignition being on.



8 - FRONT AND REAR WINDSCREEN WIPER SWITCH

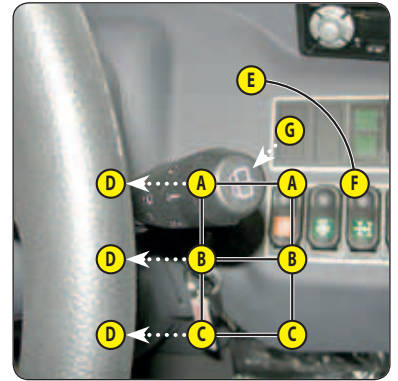
FRONT WINDSCREEN WIPER

- A - Front windscreen wiper off.
- B - Front windscreen wiper low speed setting.
- C - Front windscreen wiper high speed setting.
- D - Front windscreen wiper intermittent setting.

REAR WINDSCREEN WIPER

- E - Rear windscreen wiper off.
- F - Rear windscreen wiper on.
- G - Rear windscreen washer, pulse driven (not used).

NOTE: These functions will only work when the ignition is switched on.



9 - IGNITION SWITCH

The ignition switch has five positions:

- P - Not used.
- O - Ignition switched off and engine stopped.
- I - Ignition + preheat.
- II - Not used.
- III - The engine starts and returns to position I as soon as the key is released.

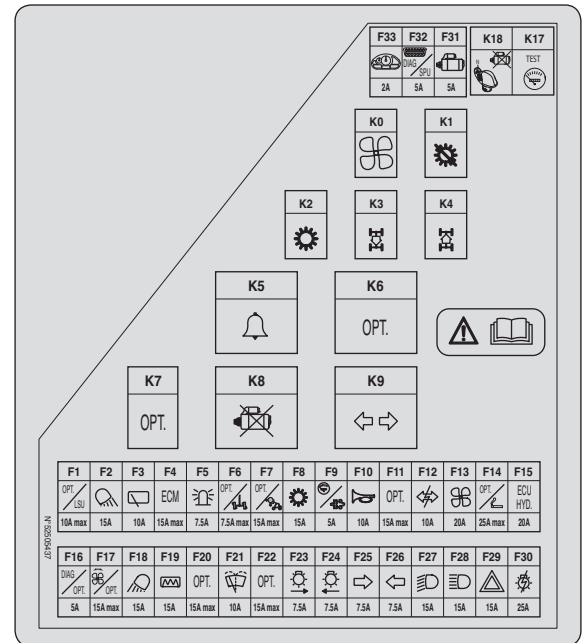
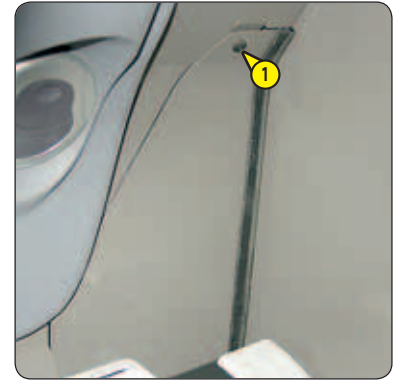
10 - FUSES AND RELAYS IN THE CAB

A sticker on the inside of the access panel provides a quick indication of the use of the fuse plate's components described below.

- Remove access panel 1 to gain access to the fuses and relays, Replace a used fuse with a new fuse of the same quality and capacity. Never reuse a repaired fuse.

MINIFUSE

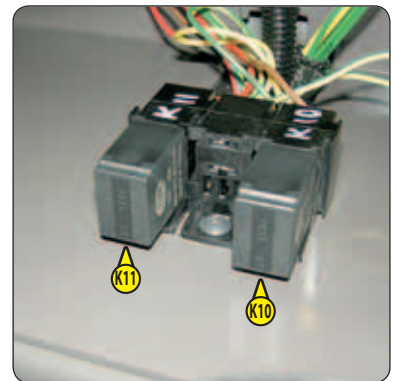
- F1 - Hydraulic control unit (7,5A).
OPTION.
- F2 - Rear working lights (15A).
- F3 - Rear windscreen wiper + OPTION roof windscreen wiper + OPTION side windscreen wiper (10A).
- F4 - Engine and cab electronic control unit (7,5A).
- F5 - Rotating beacon light (7,5A).
- F6 - Wheel alignment (5A).
OPTION.
- F7 - OPTION Blue front and rear working lights (15A).
- F8 - Forward/neutral/reverse gear selection (15A).
Transmission cut-off (15A).
Reversing lights (15A).
Reversing sound alarm (15A).
- F9 - Control panel (5A).
- F10 - Sound alarm (10A).
Stop switch (10A).
- F11 - OPTION Head telescope working lights (15A).
- F12 - Flashing unit (10A).
- F13 - Ventilation/heating (20A).
- F14 - Cigarette lighter (25A).
OPTION.
- F15 - Hydraulic movement control unit (20A).
- F16 - Diagnostic plug (5A).
Ventilation/heating relay control (5A).
- F17 - OPTION Self-cleaning fan (10A).
OPTION MODCOD / MODCLÉ Anti-theft system (10A).
- F18 - Front working lights (15A).
- F19 - OPTION Rear windscreen defrost (15A).
- F20 - OPTION Pneumatic seat (15A).
- F21 - Front windscreen wiper and front windscreen washer (10A).
- F22 - OPTION Boom suspension (10A).
OPTION Boom electrical predisposition (5A).
OPTION Head telescope electrovalve (7,5A).
- F23 - Right sidelights (7,5A).
Dashboard lighting (7,5A).
- F24 - Left sidelights (7,5A).
OPTION Number plate lighting (7,5A).
- F25 - Right indicator lights (7,5A).
- F26 - Left indicator lights (7,5A).
- F27 - Dipped beam headlights (15A).
Dipped beam headlights indicator lamp (15A).
Rear fog lights (15A).
- F28 - Main beam headlights (15A).
Main beam headlights indicator lamp (15A).



- F29 - Hazard warning lights (15A).
Roof light (15A).
Anti-theft device predisposition (15A).
Clock (15A).
Rev. counter (15A).
- F30 - Lights, horn and indicator lights switch (25A).
- F31 - Starter relay (5A).
- F32 - Diagnostic plug (5A).
Hydraulic movement control unit (5A).
Driver presence switch (5A).
- F33 - Control panel power supply (2A).

RELAYS

- K0 - OPTION Ventilation/heating relay.
- K1 - Transmission cut-off relay.
- K2 - Transmission cut-off relay.
- K3 - Reverse gear relay.
- K4 - Forward gear relay.
- K5 - Buzzer.
- K6 - OPTION.
- K7 - OPTION.
- K8 - Safety system starting switch relay.
- K9 - Flashing unit.
- K17 - Indicator lamp module relay.
- K18 - Neutral safety relay.
- Remove hydraulic control console casings 2 and 3 to gain access to the relays.
- K10 - OPTION Telescope suspension cut-off.
- K11 - OPTION Telescope suspension power supply.



11 - FUSES AND RELAYS UNDER THE ENGINE BONNET

- Open engine bonnet 1 in order to gain access to the fuses and relays. Replace a used fuse with a new fuse of the same quality and capacity. Never reuse a repaired fuse.

RELAYS

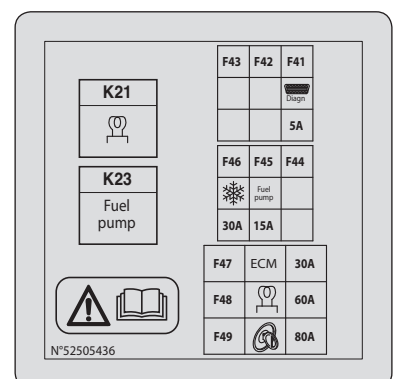
- K21 - Engine preheat relay.
- K27 - OPTION Diesel pump relay.

MINIFUSE

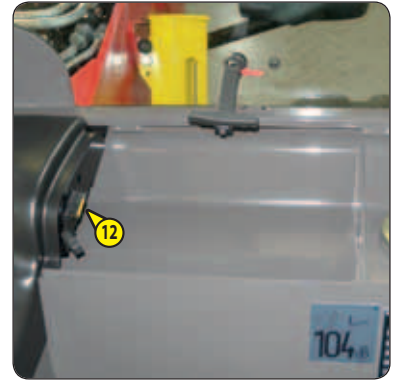
- F41 - Diagnostic plug (3A)
- F45 - OPTION Diesel ump power supply (10A).
- F46 - OPTION Air conditioning (30A).

MAXIFUSE

- F47 - Engine computer power supply relay (30A).
- F48 - Engine preheat module (60A).
- F49 - Ignition switch (80A).



12 - DIAGNOSTIC PLUG



13 - ACCELERATOR PEDAL

14 - SERVICE BRAKE PEDAL AND TRANSMISSION CUT-OFF

The pedal acts on the front and rear wheels via a power assisted hydraulic braking system that slows the lift truck and brings it to a halt. Depending on the position of the transmission cut-off switch, it enables the transmission to be cut off during the free travel (see: 2 - DESCRIPTION: 6 - SWITCHES).

15 - GEAR LEVER AND TRANSMISSION CUT-OFF

In order to change speeds, it is necessary to cut the transmission by pressing the button 1 on the lever.

- 1st gear: To the right, backwards.
- 2nd gear: To the right, forwards.
- 3rd gear: To the left, backwards.
- 4th gear: To the left, forwards.

USING THE GEARS ON THE GEAR BOX

On lift trucks such as these, that are equipped with torque converters, it is not necessary to systematically set off in first gear and work up through the gears.

⚠ IMPORTANT ⚠

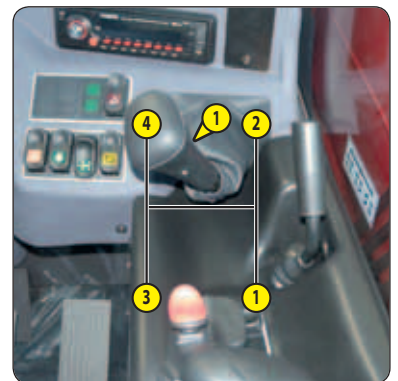
The choice of transmission gear ratio should be made carefully according to the nature of the work being carried out.

A poor choice may result in the extremely rapid rise of the transmission oil temperature through excessive slipping of the converter, which could lead to serious damage to the transmission (it is essential to stop and change the working conditions if the transmission oil temperature indicator lamp comes on).

This poor choice may also result in a reduction in the lift truck's performance in forward gear. When the forward force increases, the forward speed in the r gear (for example, in 3rd gear) may be lower than the forward speed that could be obtained with the r-1 gear (in 2nd instead of 3rd).

In general, we would advise you to use the following gears according to the nature of the work being carried out.

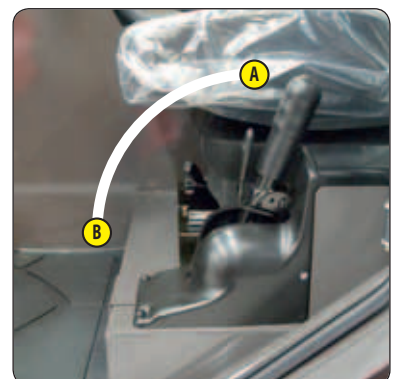
- ON THE ROAD: Set off in 3rd gear and change up to 4th if the conditions and state of the road permit it.
In hilly areas, set off in 2nd gear and change up to 3rd if the conditions and state of the road permit it.
- WITH A TRAILER ON THE ROAD: Set off in 2nd gear and change up to 3rd if the conditions and state of the road permit it.
- HANDLING: Use 3rd gear. In confined spaces use 2nd gear.
- LOADING (picking-up with bucket, manure fork, etc.): Use 2nd gear.
- EARTH MOVING: Use 1st gear.



16 - PARKING BRAKE LEVER

To prevent accidental loosening or release, the lever is fitted with safety locking.

- To apply the parking brake, pull the lever backwards (position A).
- To loosen the parking brake, release and push the lever forwards (position B).



17 - FORWARD/NEUTRAL/REVERSE GEAR SELECTION

When changing the direction of travel, the lift truck should be traveling at slow speed and not accelerating.

- FORWARD: Push the switch forward (position A).
- REVERSE: Pull the switch backward (position B). Reversing lights and a reversing sound alarm indicate that the lift truck is running in reverse.
- NEUTRAL: The switch must be in the intermediate position to start the lift truck (position C).

SAFETY FOR MOVING THE LIFT TRUCK

Authorization to move the lift truck is controlled by an electronic unit. The operator must observe the following sequence to move the truck forwards or backwards:

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

NOTE: The alternating display of F/N or R/N on the screen and a rapid, discontinuous beep indicates that the selector needs to be set to neutral.

To stop the lift truck, he must observe the following sequence:

- 1 - set the forward/reverse selector to neutral,
- 2 - engage the parking brake,
- 3 - get out of the lift truck.

NOTE: A discontinuous beep will inform the driver if he has left the driver's cab without applying the parking brake.



18 - STEERING SELECTION

A - GREEN WHEEL ALIGNMENT INDICATOR LAMPS

⚠ IMPORTANT ⚠

*Before selecting one of the three possible steering positions, bring all 4 wheels into alignment with the lift truck axis.
Never change the steering mode whilst driving.*

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

B - STEERING SELECTION LEVER

- B1 - Front drive wheels (highway traffic).
- B2 - Front and rear drive wheels in opposite direction (short steering lock).
- B3 - Front and rear drive wheels in the same direction (crab steering).

CHECKING WHEEL ALIGNMENT

⚠ IMPORTANT ⚠

Before driving on roads, it is necessary to check the alignment of the rear wheels and to drive in front wheel steering mode.

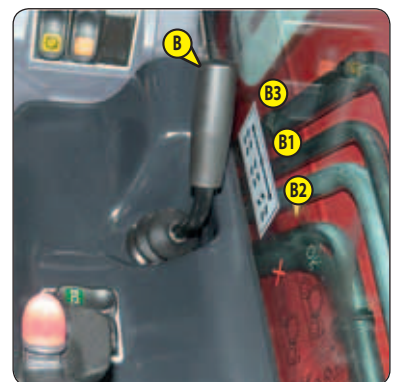
The alignment of the rear wheels must be regularly checked done using the green indicator lamps, while driving the lift truck.

In case of anomalies, consult your dealer.

- Shift the steering selection lever B into position B2 (short steering lock).
- Turn the steering wheel and bring the rear wheels into alignment until the A2 indicator lamp comes on.
- Shift the steering selection lever B into position B1 (highway traffic).
- Turn the steering wheel and bring the front wheels into alignment until the A1 indicator lamp comes on.

C - SWITCH FOR ALIGNMENT OF THE WHEELS

This switch enables or disables the wheel alignment device. The indicator light indicates that it is in use.



19 - HYDRAULIC CONTROLS

⚠ IMPORTANT ⚠

*Do not attempt to alter the hydraulic system pressure. In the event of malfunction, contact your dealer. ANY ALTERATION MAY RENDER THE WARRANTY NULL AND VOID.
Operate the hydraulic controls gently and smoothly to avoid accidents caused by jerking of the lift truck.*

NOTE: If necessary, operate the steering to reset the hydraulic control steering accumulator.

NOTE: When driving on the road, it is highly recommended (mandatory in Germany) that you cut-off all the hydraulic movements (see: 2 - DESCRIPTION: 6 - SWITCHES).

- A - Lifting and tilting control lever.
- B - Telescoping control button.
- C - Attachment OPTION control button.
- D - Head telescope electrovalve OPTION control button .

LIFTING THE LOAD

- The lever A backwards when lifting.
- The lever A forwards when lowering.

TILT OF CARRIAGE

- The lever A to the left for reverse tilt.
- The lever A to the right for forward tilt.

TELESCOPING

- Button B forwards for extending.
- Button B backwards for retracting.

ATTACHMENT OPTION

- Button C forwards or backwards.

BOOM ELECTRICAL PREDISPOSITION OPTION

HEAD TELESCOPE ELECTROVALVE OPTION

- Button D (see: 2 - DESCRIPTION: DESCRIPTION AND USE OF OPTIONS).

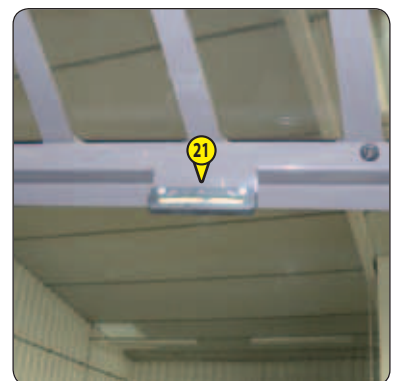
20 - FUNCTION FILES

These files contain the description of the hydraulic controls and the load charts for the attachments used on the lift truck.



21 - LEVEL INDICATOR

Enables the operator to check that the lift truck is in the horizontal position.



22 - HEATER CONTROL

A - FAN CONTROL

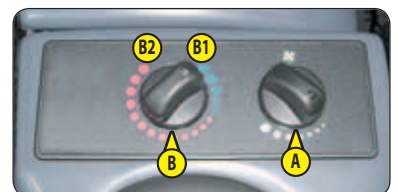
This 3-speed control allows the air to be ventilated through the air vents.

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.



23 - AIR CONDITIONING CONTROLS (AIR CONDITIONING OPTION)

⚠ IMPORTANT ⚠

The air conditioning only works if the lift truck has been started up.

When using your air conditioning unit you must work with the cab closed.

In winter: So as to ensure correct operation and complete efficiency of the air conditioning unit, start up the compressor once a week, if only for a short spell, so as to lubricate the internal seals.

In cold weather: Warm the engine before switching on the compressor, so as to allow the coolant that has collected in a liquid state at the lowest point of the compressor 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 a liquid state.

If your air conditioning does not seem to be working correctly, have it examined by your dealer (see: 3 - MAINTENANCE: F - EVERY 2000 HOURS OF SERVICE).

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 required temperature.
 - A - At the desired speed: 1, 2 or 3.

AIR CONDITIONING MODE

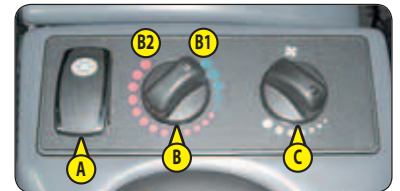
- The controls must be adjusted in the following way:
 - C - Control with pilot light on.
 - B - At the required temperature.
 - A - At the desired speed: 1, 2 or 3.

DEMISTING MODE

- The controls must be adjusted in the following way:
 - C - Control with pilot light on.
 - B - At the required temperature.
 - A - At speed 2 or 3.
- For optimum effectiveness, close the heating ventilators.

NOTE: Possible losses of water under the lift truck are due to condensate discharges caused by the dehumidifying effect of the system, especially under high outside temperature and high relative humidity conditions.

For the air conditioning to perform properly, the air intakes must not be blocked by frost, snow or leaves. When the system is in operation, at least one of the cab air grilles must be open so as to avoid any risk of freezing to the evaporator.



24 - CAB VENTILATION FILTER

See: 3 - MAINTENANCE: D - EVERY 500 HOURS SERVICE.

25 - WINDSCREEN DEMISTER VENTS

For optimum effectiveness, close the heating ventilators.

26 - HEATING VENTS

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

27 - BRAKING OIL AND WINDSCREEN WASHER TANK ACCESS PANEL

- Loosen screw 1 and lift up the braking oil and windscreen washer tank access panel (see: 3 - MAINTENANCE: B - EVERY 50 HOURS OF SERVICE).



28 - DOOR LOCK

Two keys are provided with the lift truck to enable the cabin to be locked.

29 - LOCKING HANDLE FOR UPPER HALF-DOOR

30 - UNLOCKING BUTTON FOR UPPER HALF-DOOR

31 - HANDLE FOR REAR WINDOW OPENING

EMERGENCY EXIT

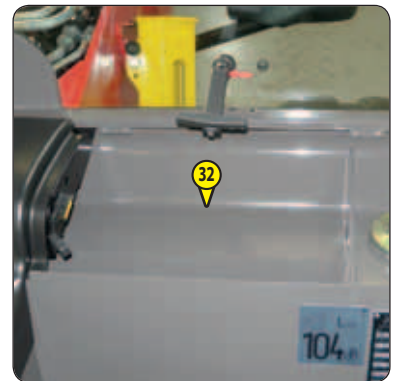
Use the rear window as an emergency exit, in the event that it is impossible to leave the cab by the door or by opening the windscreen.



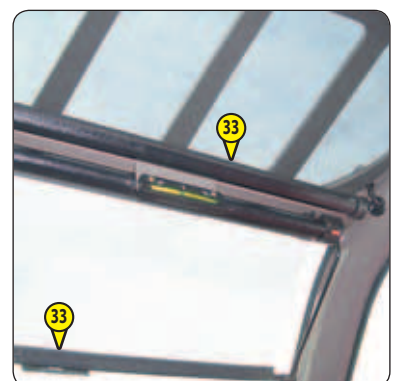
32 - STORAGE COMPARTMENT

Ensure that the operator's manual is in its place in the document holder.

NOTE: An OPTION waterproof document-holder exists.

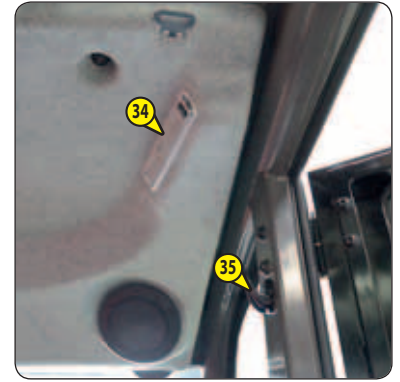


33 - SUN VISOR (OPTION)



34 - ROOF LIGHT (OPTION)

35 - HOOK



36 - CIGARETTE LIGHTER

For 12 V appliance and max. amperage 10A.



37 - ARMREST AND STORAGE

Lift the armrest to access the storage.



38 - TOOL BOX (OPTION)

39 - BATTERY CUT-OFF

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

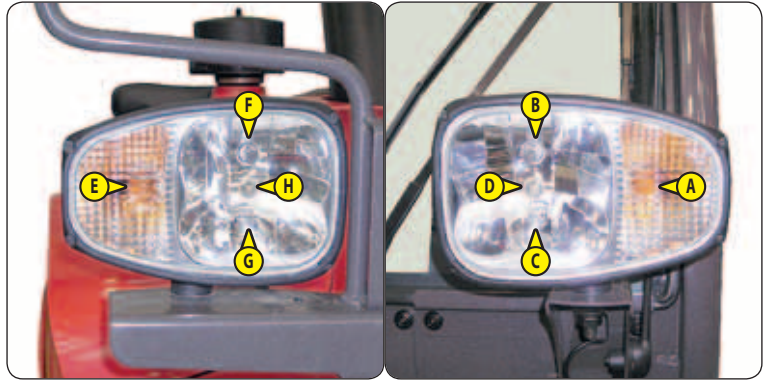
⚠ IMPORTANT ⚠

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



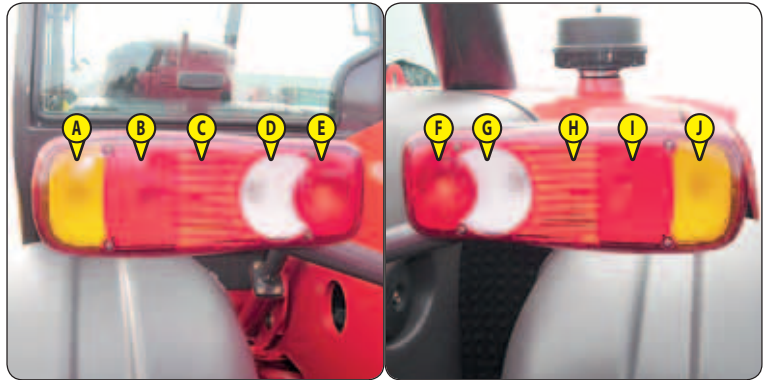
40 - FRONT HEADLIGHTS

- A - Left front indicator.
- B - Left front dipped beam headlight.
- C - Left front main beam headlight.
- D - Left front sidelight.
- E - Right front indicator.
- F - Right front dipped beam headlight.
- G - Right front main beam headlight.
- H - Right front sidelight.



41 - REAR LIGHTS

- A - Left rear indicator.
- B - Left rear stoplight.
- C - Left rear headlight.
- D - Left rear reverse light.
- E - Left rear fog light.
- F - Right rear fog light.
- G - Right rear reverse light.
- H - Right rear headlight.
- I - Right rear stoplight.
- J - Right rear indicator.



42 - ROTATING BEACON LIGHT

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



43 - BOOM SAFETY WEDGE

⚠ IMPORTANT ⚠

Only use the wedge supplied with the lift truck.

The lift truck is equipped with a boom safety wedge that must be installed on the rod of the lifting cylinder when working beneath the boom (see: 1 - OPERATING AND SAFETY INSTRUCTIONS).



TOWING PIN AND HOOK

⚠ IMPORTANT ⚠

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

Using a trailer that is not in good condition may affect the steering and braking of the lift truck and therefore the safety of the whole unit.

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 lift truck has stopped, the handbrake is on and the engine is switched off before performing the operation.

Located at the rear of the lift truck, this device is used to attach a trailer. Its capacity is limited for each lift truck by the authorized gross vehicle weight, tractive effort and maximum vertical force on the coupling point. This information is indicated on the manufacturer's plate affixed to each lift truck (see: 2 - DESCRIPTION: IDENTIFICATION OF THE LIFT TRUCK).

- 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...).

1 - COUPLING FITTING

⚠ IMPORTANT ⚠

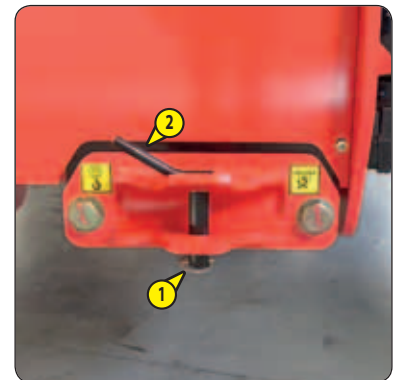
Be careful not to get your fingers caught or crushed during this operation.

Do not forget to 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 lift truck as close as possible to the trailer ring.
- Apply the handbrake on and switch off the engine.
- Remove the clip 1, lift the trailer pin 2 and place or remove the trailer ring.



2 - COUPLING LADDER (OPTIONAL)

⚠ IMPORTANT ⚠

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

Do not forget to put the pins and cotter pins back in place.

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

COUPLING AND UNCOUPLING THE TRAILER

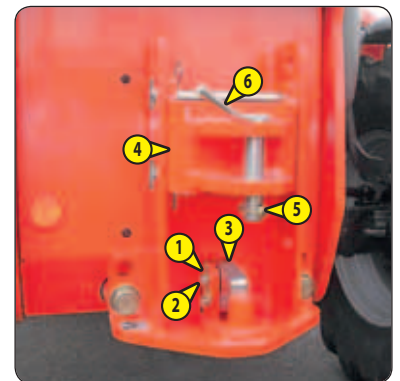
- To couple the trailer, position the lift truck as close as possible to the trailer ring.
- Apply the handbrake on and switch off the engine.

ON THE FIXED PIN

- Remove pin 1, remove rod 2 and raise latch 3.
- Insert or remove the trailer ring, lower latch 3 and refit rod 2.

ON THE COUPLING LADDER

- Set the coupling fitting 4 according to the height of the trailer ring.
- Remove the clip 5, lift the trailer pin 6 and place or remove the trailer ring.



DESCRIPTION AND USE OF THE OPTIONS

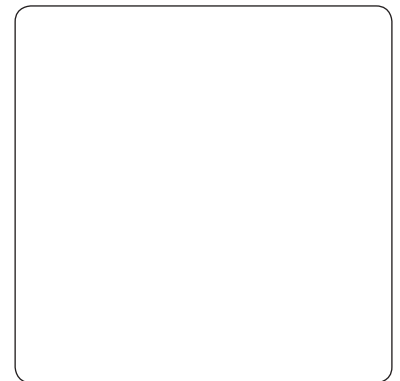
- 1 - MODCOD ANTI-THEFT SYSTEM
- 2 - MODCLE ANTI-START SYSTEM
- 3 - QUICK-RELEASE COUPLER ON ATTACHMENT CIRCUIT
- 4 - ENGINE SPEED REGULATOR
- 5 - ATTACHMENT HYDRAULIC CONTROL FORCED OPERATION
- 6 - TELESCOPE SUSPENSION
- 7 - ATTACHMENT EASY HYDRAULIC CONNECTION
- 8 - BOOM ELECTRICAL PREDISPOSITION
- 9 - HEAD TELESCOPE ELECTROVALVE
- 10 - ATTACHMENT HYDRAULIC LOCKING
- 11 - HEAD TELESCOPE ELECTROVALVE + HYDRAULIC ATTACHMENT LOCKING
- 12 - EXTERIOR DRAIN-BACK
- 13 - LIFTING RING ON SINGLE CARRIAGE

1 - MODCOD ANTI-THEFT SYSTEM

OPERATION

- Switch on the lift truck: the red indicator 1 will flash.
- Enter your user code followed by "V" to validate: the green indicator 2 will come on.
- Start the lift truck within the next 60 seconds; otherwise the anti-theft system will be reactivated and the red indicator 1 will flash.

NOTE: 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 or do not complete entering the code, the anti-theft system will be reactivated and the red indicator will flash.



2 - MODCLE ANTI-START SYSTEM

OPERATION

- Switch on lift truck ignition, red LED 1 will flash.
- Apply key 2 to its base 3, and withdraw the moment the system emits a continuous beep, and LED 1 turns green.
- Start the lift truck within the next 20 seconds; otherwise the anti-theft system will be reactivated and red LED 1 will flash.

NOTE: You can restart the lift truck within 20 seconds of stopping it; after this time, the anti-start system reacts and red LED 1 flashes.



3 - QUICK-RELEASE COUPLER ON ATTACHMENT CIRCUIT

4 - ENGINE SPEED REGULATOR

⚠ IMPORTANT ⚠

The engine speed regulator cannot under any circumstances be used while driving on the road.

OPERATION

- Turn button 1 to increase or reduce the engine speed, and thus control the hydraulic flow within the attachment circuit.
- View the rev. counter to adjust the engine speed.
- Return the engine to idle before switching off the lift truck's ignition.



5 - ATTACHMENT HYDRAULIC CONTROL FORCED OPERATION

⚠ IMPORTANT ⚠

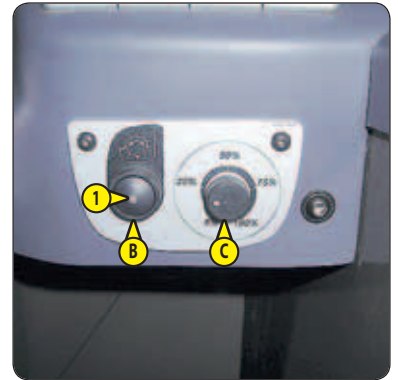
This OPTION must only be used with an attachment requiring continuous hydraulic movement, such as a brush, feeder bucket, mixer, spray etc. It is strictly forbidden for use in handling operations and all other applications (winch, crane jib, crane jib with winch, hook, etc.).

*Never leave the driver's cab without resetting the potentiometer C to 0%.
Before starting the lift truck, make sure the potentiometer is set to 0%.*

CONTINUOUS HYDRAULIC MOVEMENT OF THE ATTACHMENT

- Check that potentiometer C is set to 0%.
- Switch button A to the front or the back (depending on the type of attachment), press button B and release button A. The red indicator 1 flashes to indicate that it is in operation.
- Set the required flow rate using potentiometer C.
- To stop continuous hydraulic movement of the attachment, move switch A forwards or backwards or press button B. Indicator 1 goes out.
- Set potentiometer C to 0%.

NOTE: If the operator leaves the driver's cab, the continuous hydraulic movement will automatically stop and must be restarted.



6 - TELESCOPE SUSPENSION

The telescope is suspended to dampen jerking of the lift truck on rough ground (e.g. handling straw in a field).

⚠ IMPORTANT ⚠

Boom suspension is active to a lifting height of 3m00 from the axis of articulation of the carriage with respect to the ground with the boom retracted.

When you move beyond this height or make another hydraulic movement (tilting, telescoping, attachment), telescope suspension is momentarily deactivated and the indicator lamp of switch 1 goes out.

OPERATION

- Set the forks or attachment on the ground and raise the front wheels a few centimeters only.
- Press switch 1 to position A, the visual indicator comes on indicating that telescope suspension is activated.
- Press switch 1 to position B, the visual indicator goes out indicating that telescope suspension is deactivated.
- When the engine is off, telescope suspension is automatically deactivated.



7 - ATTACHMENT EASY HYDRAULIC CONNECTION

For easy attachment hydraulic connection and disconnection.

OPERATION

- Switch on lift truck ignition.
- Press for two seconds on push-button 1 to release the attachment circuit hydraulic pressure.
- Connect or disconnect the rapid connectors of the hydraulic attachment (see: 4 - OPTIONAL ATTACHMENTS FOR USE WITH THE RANGE: PICKING UP THE ATTACHMENTS).



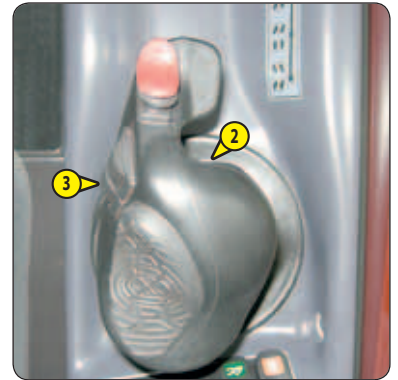
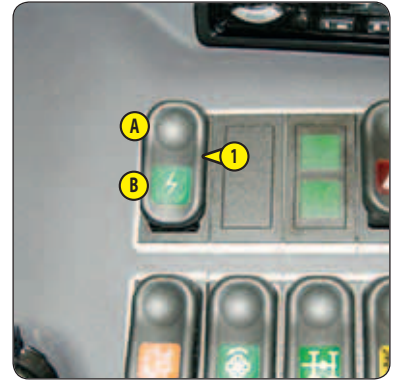
8 - BOOM ELECTRICAL PREDISPOSITION

Enables an electrical function to be used at the telescope head.

BOOM ELECTRIC FUNCTION CONTROL

- Set switch 1 to position B (indicator lamp on).
- Hold down button 2 and operate button 3 forwards or backwards.

NOTE: Setting switch 1 to position A (indicator lamp off) controls the hydraulic attachment line (see: 2 - DESCRIPTION: 20 - HYDRAULIC AND TRANSMISSION CUT-OFF CONTROLS).



9 - HEAD TELESCOPE ELECTROVALVE

Enables use of two hydraulic functions on the attachment circuit.

⚠ IMPORTANT ⚠

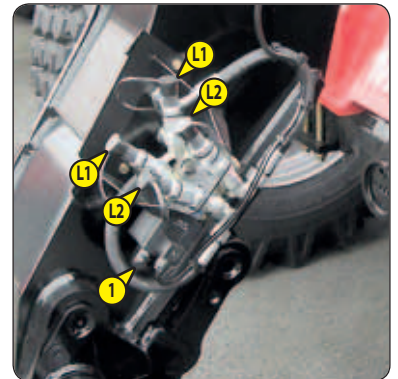
For ease of connection of the quick-release couplers, decompress the hydraulic circuit by pressing button 1 on the electrovalve.

ATTACHMENT LINE L1 CONTROL

- Set switch 2 to position A (indicator lamp off).
- Operate button 3 forward or backward.

ATTACHMENT LINE L2 CONTROL

- Set switch 2 to position B (indicator lamp on).
- Hold down button 4 and operate button 3 forwards or backwards.



10 - ATTACHMENT HYDRAULIC LOCKING

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

⚠ IMPORTANT ⚠

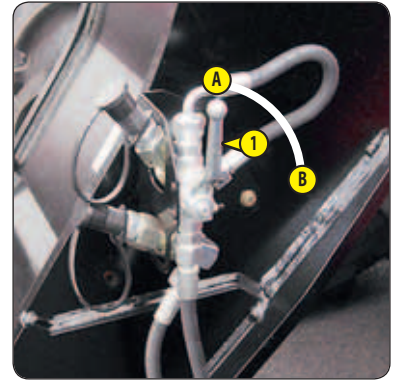
After locking the attachment, return switch 2 to position A (indicator lamp off) to prevent accidental release of the attachment.

ATTACHMENT LOCKING CONTROL

- Set valve 1 to position A and place switch 2 in position B (indicator lamp on).
- Push button 3 forward to lock the attachment and backward to release it.

HYDRAULIC ATTACHMENT CONTROL

- Set valve 1 to position B and press switch 2 in position B (indicator lamp on).
- Operate button 3 forward or backward.



11 - HEAD TELESCOPE ELECTROVALVE + HYDRAULIC ATTACHMENT LOCKING

The addition of these two options on the attachment line allows two hydraulic functions to be used and locks the attachment onto the carriage.

⚠ IMPORTANT ⚠

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

After locking the attachment, return valve 4 to position B to prevent accidental release of the attachment.

ATTACHMENT LINE L1 CONTROL

- Set switch 2 to position A (indicator lamp off).
- Operate button 3 forward or backward.

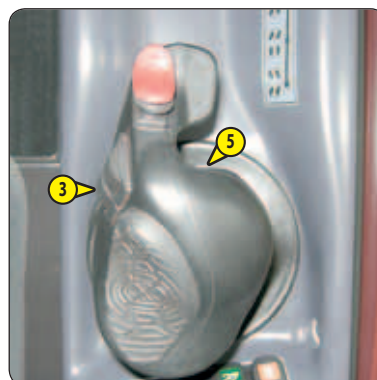
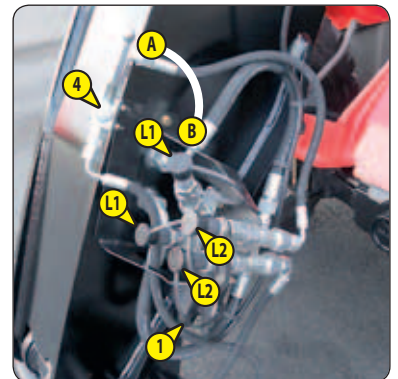
ATTACHMENT LINE L2 CONTROL + HYDRAULIC ATTACHMENT LOCKING

LOCKING AN ATTACHMENT

- Set valve 4 to position A.
- Set switch 2 to position B (indicator lamp on).
- Hold down button 5 and push button 3 forward to lock the attachment and backward to release it.

HYDRAULIC ATTACHMENT

- Set switch 2 to position B (indicator lamp on).
- Hold down button 5 and operate button 3 forwards or backwards.



12 - EXTERIOR DRAIN-BACK

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



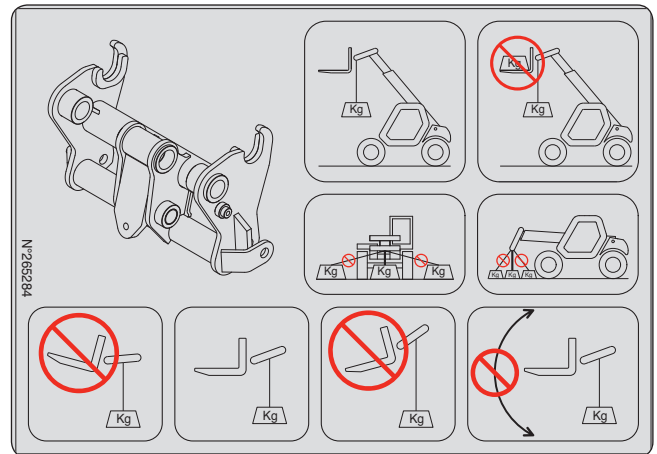
13 - LIFTING RING ON SINGLE CARRIAGE

CONDITIONS OF USE

⚠ IMPORTANT ⚠

Follow the instructions given in the instruction manual (see: 1 - OPERATING AND SAFETY INSTRUCTIONS: INSTRUCTIONS FOR HANDLING LOADS).

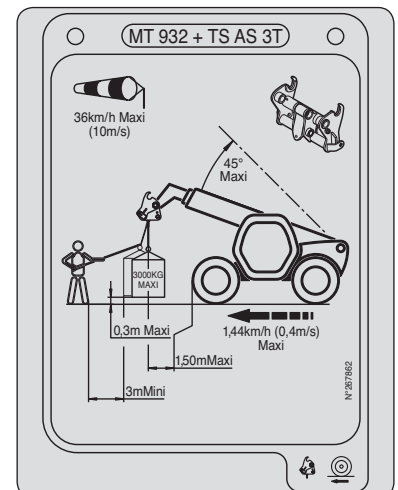
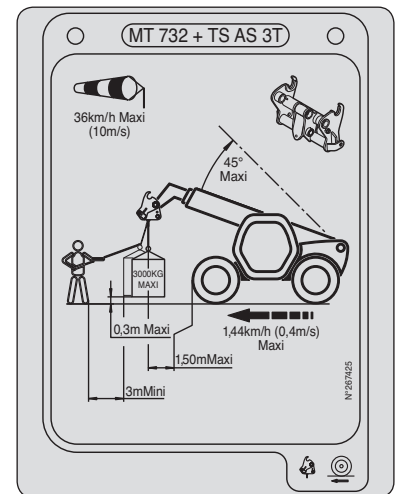
- The lifting ring must be used WITHOUT FORKS AND ATTACHMENTS, but the angle of inclination of the carriage must be the same as when the forks are used in the horizontal position.
- Check the maximum permitted angle, which is 45°.
- Do not change the angle of the carriage while using the lifting ring.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



LOAD CHARTS AND FUNCTION SHEETS

⚠ IMPORTANT ⚠

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



3 - MAINTENANCE

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3 - MAINTENANCE

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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:

- Legally -to be held responsible in the event of an accident.
- Technically - to cause operating malfunctions or shorten the life of the lift truck.

⚠ IMPORTANT ⚠

**THE USE OF COUNTERFEIT PARTS OR COMPONENTS NOT APPROVED BY THE MANUFACTURER,
WILL CAUSE YOU TO LOSE THE BENEFIT OF THE CONTRACTUAL GUARANTEE.**

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 due to experience feedback.
- Operator training.
- Only the MANITOU network has detailed knowledge of the design of the lift truck and therefore the best technical ability to provide maintenance.

⚠ IMPORTANT ⚠

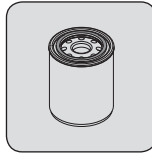
ORIGINAL REPLACEMENT PARTS ARE DISTRIBUTED EXCLUSIVELY BY MANITOU AND ITS DEALER NETWORK.

The dealer network list is available on the MANITOU web site www.manitou.com

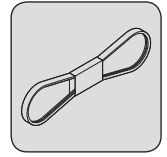
FILTERS CARTRIDGES AND BELTS

ENGINE

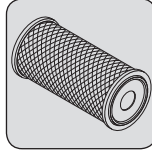
ENGINE OIL FILTER
Part number: 799966
Change: 500 H



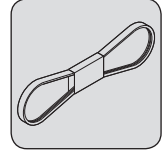
ALTERNATOR BELT
Part number: 941243
Change: 1000 H



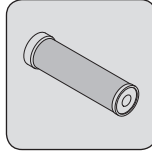
DRY AIR FILTER CARTRIDGE
Part number: 563416
Clean: 50 H*
Change: 500 H *



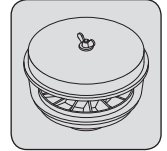
COMPRESSOR BELT
(AIR CONDITIONING OPTION)
Part number: 319790
Change: 3000 H



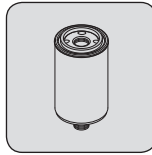
SAFETY DRY AIR FILTER CARTRIDGE
Part number: 563415
Change: 1000 H *



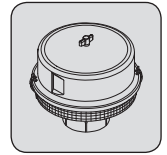
CYCLONIC PRE-FILTER
Part number: 224713
Clean: 10 H



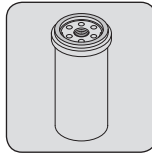
FUEL PRE-FILTER
Part number: 799968
Change: 1000 H



AUTOMATIC VACUUM-CLEANING PRE-FILTER (OPTION)
Part number: 226611



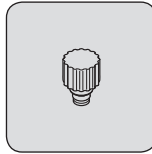
FUEL FILTER
Part number: 799967
Change: 1000 H



TURBO 2 SELF-CLEANING PRE-FILTER (OPTION)
Part number: 266360

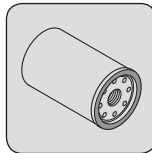


FUEL TANK BREATHER
Part number: 266219
Change: 1000 H



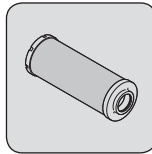
TRANSMISSION

GEAR BOX OIL FILTER
Part number: 561749
Change: 500 H

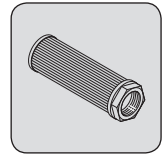


HYDRAULIC SYSTEM

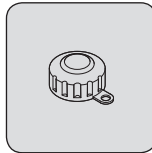
HYDRAULIC RETURN OIL FILTER CARTRIDGE
Part number: 236095
Change: 500 H



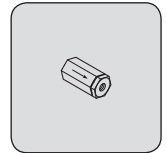
SUCTION STRAINER FOR HYDRAULIC OIL TANK
Part number: 224726
Clean: 1000 H



HYDRAULIC FLUID TANK FILTER CAP
Part number: 62415
Change: 1000 H

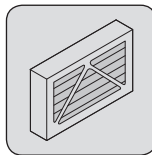


DISTRIBUTOR CONTROL HEAD FILTER
Part number: 254780
Change: 1000 H

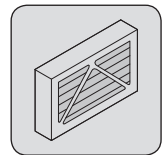


CAB

CAB VENTILATION FILTER (WITHOUT AIR CONDITIONING)
Part number: 282619
Clean: 500 H



CAB VENTILATION FILTER (WITH AIR CONDITIONING)
Part number: 282619
Clean: 50 H
Change: 250 H



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 organized with the dealer, a diagnostic analysis of engine, transmission and axle oils may be requested depending on the rate of use.

(*) REQUIRED FUEL SPECIFICATION:

Use a high-quality fuel to obtain optimal performance of the engine.

- Type of diesel fuel EN590 (rate of sulfur < 10 ppm)
- Type of diesel fuel ASTM D975 (rate of sulfur < 15 ppm)

RECOMMENDATION

ENGINE			RECOMMENDATION										
ORGANS TO BE LUBRICATED	CAPACITY		-40°C	-30	-20	-10	0	+10	+20	+30	+40	+50°C	
ENGINE	10 Litres												
COOLING CIRCUIT	20,5 Litres												
FUEL TANK	120 Litres												

TRANSMISSION			RECOMMENDATION										
ORGANS TO BE LUBRICATED	CAPACITY		-40°C	-30	-20	-10	0	+10	+20	+30	+40	+50°C	
GEAR BOX	16,6 Litres												
ANGLE GEAR BOX	2,2 Litres												

BOOM			RECOMMENDATION										
ORGANS TO BE LUBRICATED			-40°C	-30	-20	-10	0	+10	+20	+30	+40	+50°C	
BOOM PADS													
GREASING OF THE BOOM													

HYDRAULIC			RECOMMENDATION										
ORGANS TO BE LUBRICATED	CAPACITY		-40°C	-30	-20	-10	0	+10	+20	+30	+40	+50°C	
HYDRAULIC OIL TANK	128 Litres												

BRAKE			RECOMMENDATION										
ORGANS TO BE LUBRICATED	CAPACITY		-40°C	-30	-20	-10	0	+10	+20	+30	+40	+50°C	
BRAKE CIRCUIT	1 Litre												

CAB										
ORGANS TO BE LUBRICATED	CAPACITY	RECOMMENDATION								
		-40°C	-30	-20	-10	0	+10	+20	+30	+40
CAB DOOR		MANITOU GREASE BLUE MULTI-PURPOSE								
WINDSCREEN WASHER TANK	2 Litres	WINDSCREEN WASHER LIQUID								

FRONT AXLE										
ORGANS TO BE LUBRICATED	CAPACITY	RECOMMENDATION								
		-40°C	-30	-20	-10	0	+10	+20	+30	+40
FRONT AXLE DIFFERENTIAL	8,1 Litres	MANITOU OIL SPECIAL IMMERSER BRAKES								
FRONT WHEELS REDUCTION GEARS	2 x 0,8 Litre	MANITOU OIL SAE80W90 MECHANICAL TRANSMISSION								
FRONT WHEELS REDUCTION GEAR PIVOTS		MANITOU GREASE BLUE MULTI-PURPOSE								

REAR AXLE										
ORGANS TO BE LUBRICATED	CAPACITY	RECOMMENDATION								
		-40°C	-30	-20	-10	0	+10	+20	+30	+40
REAR AXLE DIFFERENTIAL	8,1 Litres	MANITOU OIL SPECIAL IMMERSER BRAKES								
REAR WHEEL REDUCTION GEAR	2 x 0,8 Litre	MANITOU OIL SAE80W90 MECHANICAL TRANSMISSION								
REAR WHEEL REDUCTION GEAR PIVOTS REAR AXLE OSCILLATION		MANITOU GREASE BLUE MULTI-PURPOSE								

PACKAGING

OIL						
PRODUCT	PACKAGING / PART NUMBER					
	1 LITRE	2 LITRES	5 LITRES	20 LITRES	55 LITRES	209 LITRES
- MANITOU OIL EVOLOGY 10W40 API CJ4			895837	895838	895839	895840
- MANITOU OIL AUTOMATIC TRANSMISSION	786663			546332	546217	546195
- MANITOU OIL HYDRAULIC ISO VG 46			545500	582297	546108	546109
- MANITOU OIL MINERAL BRAKE FLUID	490408					4500078
- MANITOU OIL SPECIAL IMMERSER BRAKES			545976	582391		894257
- MANITOU OIL SAE80W90 MECHANICAL TRANSMISSION		499237	720184	546330	546221	546220

GREASE						
PRODUCT	PACKAGING / PART NUMBER					
	400 ML	400 GR	1 KG	5 KG	20 KG	50 KG
- MANITOU GREASE BLACK MULTI-PURPOSE		947766	161590			499235
- MANITOU GREASE BLUE MULTI-PURPOSE		161589	720683	554974	499233	489670

LIQUID						
PRODUCT	PACKAGING / PART NUMBER					
	1 LITRE	2 LITRES	5 LITRES	20 LITRES	55 LITRES	210 LITRES
- COOLING LIQUID -35°C			894967	894968		894969
- WINDSCREEN WASHER LIQUID	490402		486424			

SERVICING SCHEDULE



(1): MANDATORY 500 HOUR OR 6 MONTH SERVICE. This service must be carried out after approximately the first 500 hours of operation or within the 6 months following the start-up of the machine (whichever occurs first).

(2): Every 10 hours during the first 50 hours then a final time at 250 hours.

(3): Contact your dealer.

A = ADJUST, C = CHECK, G = GREASE, N = CLEAN, P = BLEED, R = REPLACE, V = DRAIN	PAGE	(1)	DAILY OR EVERY 10 HOURS OF SERVICE	EVERY 50 HOURS OF SERVICE	EVERY 250 HOURS OF SERVICE	EVERY 500 HOURS OF SERVICE OR EVERY YEAR	EVERY 1000 HOURS OF SERVICE OR EVERY TWO YEARS	EVERY 2000 HOURS OF SERVICE OR EVERY TWO YEARS	EVERY 3000 HOURS OF SERVICE	EVERY 4000 HOURS OF SERVICE	OCCASIONALLY
ENGINE											
- Engine oil level	3-10		C								
- Cooling liquid level	3-10	C	C								
- Fuel level	3-10	C	C								
- Fuel pre-filter	3-11		C								
- Cyclonic pre-filter	3-11	N	N								
- Dry air filter cartridge	3-12/19	R		C/N		R					
- Radiator cores	3-12	N		N							
- Engine oil	3-18	V				V					
- Engine oil filter	3-18	R				R					
- Alternator/fan/crankshaft belt tension	3-19	C				C					
- Fuel pre-filter cartridge	3-22	R					R				
- Fuel filter cartridge	3-22	R					R				
- Fuel tank	3-23						N				
- Fuel tank breather	3-23						R				
- Safety dry air filter cartridge	3-23						R				
- Alternator/fan/crankshaft belt	3-23						R				
- I.C. engine silent blocks							C (3)				
- I.C. engine rates							C (3)				
- Valves clearances		C					C (3)				
- Cooling liquid	3-28							V			
- Radiator								C (3)			
- Water pump and the thermostat								C (3)			
- Alternator and the starter motor								C (3)			
- Turbocompressor								C (3)			
- Compressor belt (Air conditioning OPTION)									R (3)		
TRANSMISSION											
- Gear box oil level	3-12			C							
- Angle gear box oil level	3-16				C						
- Gear box oil filter	3-20	R				R					
- Gear box oil	3-24	V					V				
- Gear box sump strainer	3-24	N					N				
- Angle gear box oil	3-25	V					V				
- Silentblocks in the gear box							C (3)				
- Gear box controls							C (3)				
- Transmission pressures								C (3)			
- Wear of the brake pads and the brake disk										C (3)	
TYRES											
- Tyre pressures	3-12	C		C							
- Wheel nut torques	3-12	C		C							
- Wheel nut tightening torque	3-29	C						C			
- Wheel	3-30										R
BOOM											
- Boom pads	3-11		N/G (2)								
- Boom	3-13	G		G							
- Boom pad wear							C (3)				
- Condition of boom unit		C						C (3)			
- Bearings and articulation rings								C (3)			
HYDRAULICS											
- Hydraulic oil level	3-14	C		C							
- Hydraulic return oil filter cartridge	3-20	R				R					
- Hydraulic oil	3-25						V				
- Suction strainer for hydraulic oil tank	3-25						R				
- Filter cap for hydraulic oil tank	3-25						R				
- Distributor control head filter	3-25						R				
- Condition of hoses and flexible pipes								C (3)			
- Condition of cylinders (leakage, shafts)								C (3)			

A = ADJUST, C = CHECK, G = GREASE, N = CLEAN, P = BLEED, R = REPLACE, V = DRAIN		PAGE	(1)	DAILY OR EVERY 10 HOURS OF SERVICE	EVERY 50 HOURS OF SERVICE	EVERY 250 HOURS OF SERVICE	EVERY 500 HOURS OF SERVICE OR EVERY YEAR	EVERY 1000 HOURS OF SERVICE OR EVERY TWO YEARS	EVERY 2000 HOURS OF SERVICE OR EVERY TWO YEARS	EVERY 3000 HOURS OF SERVICE	EVERY 4000 HOURS OF SERVICE	OCCASIONALLY
- Hydraulic circuit pressures									C (3)			
- Hydraulic oil tank									N (3)			
BRAKE												
- Brake oil level	3-14	C			C							
- Parking brake	3-16	C/R				C/R						
- Parking brake lever mechanism	3-20	G					G					
- Parking brake mechanism on the transmission		G					G (3)					
- Brake oil									V (3)			
- Brake system									P (3)			
- Brake system pressure									C (3)			
- Brake									A (3)			
STEERING												
- Steering									C (3)			
- Steering swivel joints											C (3)	
CAB												
- Cab door	3-13	G			G							
- Windscreen washer liquid level	3-14	C			C							
- Cab ventilation filter (Air conditioning OPTION)	3-15/16	R			N	R						
- Condenser core (Air conditioning OPTION)	3-15	C/N			C/N							
- Heating block non-return valve	3-17	N				N						
- Cab ventilation filters	3-21	N					N					
- Seat belt	3-26								C			
- Condition of the rear view mirrors									C (3)			
- Structure									C (3)			
- Air conditioning (OPTION)	3-29									N/C		
ELECTRICITY												
- Condition of wiring harness and cables									C (3)			
- Lights and signals									C (3)			
- Warning indicators									C (3)			
- Front headlights	3-30											A
- Battery failure	3-31											R
FRONT AXLE												
- Front wheel reduction gear pivots	3-13	G			G							G/C (3)
- Front axle differential oil level	3-17					C						
- Front wheels reduction gear oil level	3-17					C						
- Front axle differential oil	3-21	V					V					
- Front wheel reduction gear oil	3-26	V						V				
- Wear of front axle brake discs												C (3)
- Front wheel reduction gear universal joint												C (3)
- Front wheel reduction gear clearance												C (3)
REAR AXLE												
- Rear wheel reduction gear pivots	3-13	G			G							G/C (3)
- Rear axle oscillation	3-13	G			G				G/C (3)			
- Rear axle differential oil level	3-17					C						
- Rear wheel reduction gear oil level	3-17					C						
- Rear axle differential oil	3-21	V					V					
- Rear wheel reduction gear oil	3-26	V						V				
- Wearing of rear axle brake discs												C (3)
- Rear wheel reduction gear universal joint												C (3)
- Rear wheels reduction gear clearance												C (3)
CHASSIS												
- Structure									C (3)			
- Bearings and articulation rings										C (3)		
ATTACHMENTS												
- Forks wear		C					C (3)					
- Attachment carriage									C (3)			
- Condition of attachments									C (3)			
LIFT TRUCK												
- Tow the lift truck	3-31											XXX
- Sling the lift truck	3-31											XXX
- Transport the lift truck on a platform	3-32											XXX

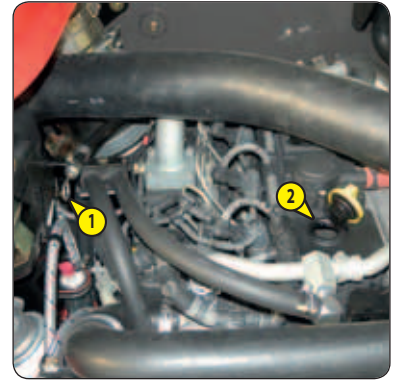
A - DAILY OR EVERY 10 HOURS OF SERVICE

A1 - ENGINE OIL LEVEL

CHECK

Place the lift truck on level ground with the engine stopped, and let the oil drain into the sump.

- Open the engine bonnet.
- Pull out dipstick 1.
- Clean the dipstick and check the correct level between the two notches.
- If necessary, add oil (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) through the filler port 2.
- Visually check that there is no leakage or seepage of oil in the engine.



A2 - COOLING LIQUID LEVEL

CHECK

Place the lift truck on level ground with the engine stopped, and allow the engine to cool.

⚠ IMPORTANT ⚠

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

If the cooling liquid is very hot, add only hot cooling liquid (80°C).

In an emergency, you can use water as a cooling liquid, then change the cooling circuit liquid as soon as possible (see: 3 - MAINTENANCE: F1 - COOLING LIQUID).

- Open the engine bonnet.
- The liquid must be at the MAXIMUM level on the expansion tank 1.
- If necessary, add cooling liquid (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) through the filler port 2.
- Visually check that there is no leakage in the radiator and pipes.



A3 - FUEL LEVEL

CHECK

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.

- Check the fuel gauge on the instrument panel.
- If necessary, add diesel (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL).
- Remove cap 1.
- Fill the fuel tank with clean diesel filtered through the filler port 2.
- Refit the cap.
- Visually check that there is no leakage in the tank and pipes.

NOTE: A locking tank cap is available as an OPTION.



A4 – FUEL PRE-FILTER

CHECK

⚠ IMPORTANT ⚠

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

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



A5 – CYCLONIC PRE-FILTER

CLEAN

The cleaning interval is given as a guide, however the pre-filter must be emptied 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.



A6 – BOOM PADS

CLEAN - GREASE

To be carried out every 10 hours during the first 50 hours service, then once at 250 hours.

⚠ IMPORTANT ⚠

If the lift truck is used in an abrasive environment (dust, sand, coal) Use lubricating varnish (MANITOU part no.: 483536). Please consult your dealer. Fully extend the boom.

- Apply the grease with a brush (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) to the 4 sides of the telescope(s).
- Telescope the boom several times in order to spread the coat of grease evenly.
- Remove the surplus of grease.

NOTE: A boom sealing kit is available as an OPTION.



B - EVERY 50 HOURS SERVICE

Carry out the operations described previously as well as the following operations.

B1 – DRY AIR FILTER CARTRIDGE

CHECK - CLEAN

In case of use in a heavily dust laden atmosphere, there are pre-filtration cartridges (see: 3 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS). Also, the checking and cleaning periodicity of the cartridge must be reduced.

⚠ IMPORTANT ⚠

If the clogging indicator light comes on, this operation must be carried out as quickly as possible (1 hour maximum). The cartridge must not be cleaned more than seven times, after which it must be changed. Never use the lift truck without an air filter or with a damaged air filter.

Respect the safety distance of 30 mm between the air jet and the cartridge to avoid tearing or making a hole in the cartridge. The cartridge must not be blown anywhere near the air filter box. Never clean the cartridge by tapping it against a hard surface. Your eyes must be protected during this intervention.

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

- For the disassembly and reassembly of the cartridge, see: 3 - MAINTENANCE: D3 - DRY AIR FILTER CARTRIDGE.
- Clean the filter cartridge using a compressed air jet (max. pressure 3 bar) directed from the top to the bottom and from the inside towards 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 surfaces with a damp, clean lint-free cloth and grease with a silicone lubricant (MANITOU reference: 479292).
- Check visually the outer condition of the air filter and its mounts. Verify the condition of the hoses and their mounts also.

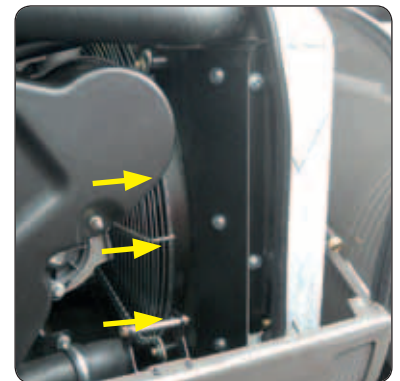
B2 – RADIATOR CORES

CLEAN

⚠ 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 radiator fins.

- Open the engine bonnet.
- If necessary, clean the intake grille on the engine hood.
- 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 towards the radiator, in the opposite direction to the cooling air flow.



B3 – GEAR BOX OIL LEVEL

CHECK

Park the lift truck on level ground with the boom raised, the engine shut down. Carry out the check within 5 minutes of engine shutdown.

⚠ IMPORTANT ⚠

Raise the boom and place the boom safety wedge on the rod of the lifting cylinder (see: 1 - OPERATING AND SAFETY INSTRUCTIONS: LIFT TRUCK MAINTENANCE INSTRUCTIONS).

- Remove the plastic cap 1.
- Pull out dipstick 2.
- Wipe the dipstick and check the correct level between the two MIN and MAX marks.
- If necessary, add oil (see: 3 - MAINTENANCE: E5 - GEAR BOX OIL).
- Visually check that there is no leakage or seepage of oil in the transmission.



B4 – TYRE PRESSURE AND WHEEL NUT TORQUES

CHECK

⚠ IMPORTANT ⚠

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

- Check the condition of the tires, to detect cuts, blisters, wear, etc.
- Check the torque load of the wheel nuts. Non-compliance with this instruction can lead to damage and failure of the wheel bolts and distortion of the wheels.
- Check and restore tire pressures if necessary (see: 2 - DESCRIPTION: TIRES).

NOTE: There is an OPTIONAL wheel toolkit.

To be carried out weekly, if the lift truck 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 every 10 hours of service or every day.

Clean and lubricate the following points with grease (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) and remove the surplus of grease.

BOOM

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

CAB DOOR

- 9 - Door lubricators (4 lubricators).

FRONT AND REAR WHEEL REDUCTION GEAR PIVOTS

- 10 - Lubricators of the wheel reduction gear pivot pins (8 lubricators).

REAR AXLE OSCILLATION

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



B6 – HYDRAULIC OIL LEVEL

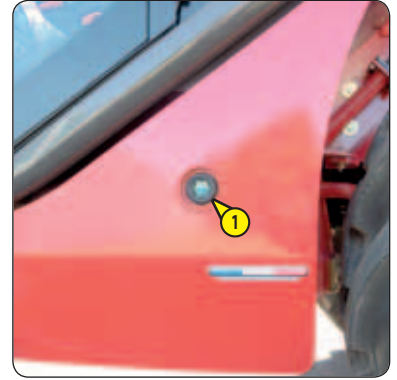
CHECK

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

⚠ IMPORTANT ⚠

Use a clean funnel and clean the underside of the oil drum before filling.

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



B7 – BRAKE OIL LEVEL

CHECK

Place the lift truck on level ground.

⚠ IMPORTANT ⚠

If the brake oil level is abnormally low, consult your dealer.

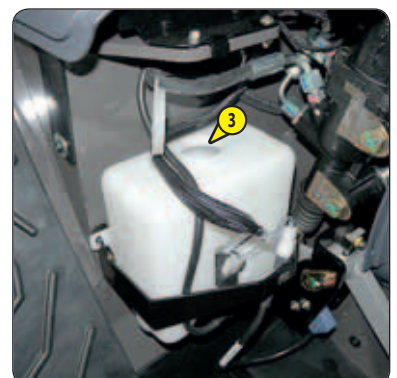
- Loosen screw 1 and lift up the brake fluid and windscreen washer tank access panel 2.
- The level is correct when it is at the MAX level on the tank 3.
- If necessary, add oil (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) via the filler port.
- Pivot the tank 3 to access filler cap 4.
- Visually check that there is no leakage in the tank and pipes.



B8 – WINDSCREEN WASHER LIQUID LEVEL

CHECK

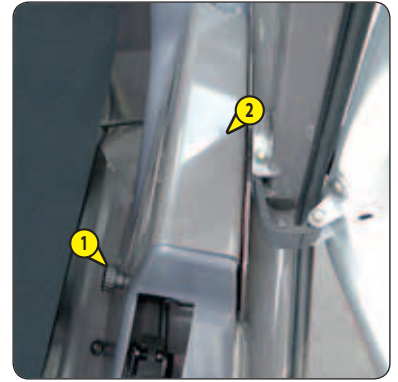
- Visually check the level.
- If necessary, add windscreen washer fluid (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) through the filler port 3.
- Refit the brake oil and windscreen washer tank access panel 2 and re-tighten screw 1.



B9 – CAB VENTILATION FILTER (AIR CONDITIONING OPTION)

CLEAN

- Unscrew thumbscrew 1 and remove protective casing 2.
- Lift out cab ventilation filter 3.
- Clean the filter with a compressed air jet.
- Check its condition and change if necessary (see: 3 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS).
- Refit the filter and protective casing.



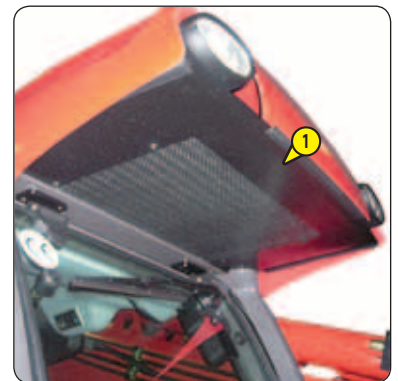
B10 – CONDENSER CORE (AIR CONDITIONING OPTION)

CHECK - CLEAN

⚠ IMPORTANT ⚠

In a polluting atmosphere, clean the radiator core every day. 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.



C - EVERY 250 HOURS OF SERVICE

Carry out the operations described previously as well as the following operations.

C1 - ANGLE GEAR BOX OIL LEVEL

CHECK

Park the lift truck on level ground with the boom raised and the engine stopped.

⚠ IMPORTANT ⚠

Raise the boom and place the boom safety wedge on the rod of the lifting cylinder (see: 1 - OPERATING AND SAFETY INSTRUCTIONS: LIFT TRUCK MAINTENANCE INSTRUCTIONS).

- Pull out dipstick 1.
- Wipe the dipstick and check the correct level between the MIN and MAX marks.
- If necessary, add oil (see: 3 - MAINTENANCE: E9 - ANGLE GEAR BOX OIL).

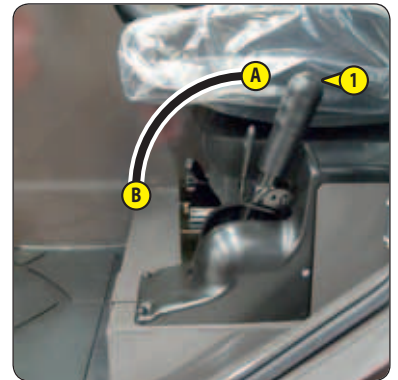


C2 - PARKING BRAKE

CHECK - ADJUST

Place the lift truck on level ground with the rated load in the transport position.

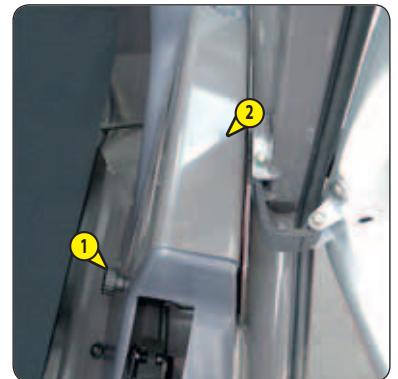
- Check the tightening adjustment by locking the parking brake in position A.
- Pull on the lift truck rear towing pin with a minimum force of 3500 daN. The wheels of the lift truck must not rotate.
- Adjust if necessary.
- Progressively tighten the end of the lever 1 and recheck braking.
- Repeat the operation until correct braking is obtained.



C3 - CAB VENTILATION FILTER (AIR CONDITIONING OPTION)

CHANGE

- Unscrew thumbscrew 1 and remove protective casing 2.
- Lift out cab ventilation filter 3 and replace it with a new one (see: 3 - MAINTENANCE: FILTERS, CARTRIDGES AND BELTS).
- Refit the protective casing.



C4 - HEATING BLOCK ONE WAY VALVE

CLEAN

- Since one way valve 1 is located under the cab, it is possible for it to become obstructed with spattered mud for example. Clean if necessary.



C5 - FRONT AND REAR AXLE DIFFERENTIAL OIL LEVEL

CHECK

Place the lift truck on level ground with the engine stopped.

- Remove the level plug 1; the oil should be flush with the edge of the hole.
- If necessary, add oil (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) through the filler port 2.
- Refit and tighten the level plug 1 (tightening torque 34 to 49 N.m).



C6 - FRONT AND REAR WHEEL REDUCTION GEAR OIL LEVEL

CHECK

Place the lift truck on level ground with the engine stopped.

- Check the level on each wheel reduction gear.
- Place level plug 1 in a horizontal position.
- Remove the level plug; the oil should be flush with the edge of the opening.
- If necessary, add oil (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) through the same port.
- Refit and tighten the level plug (tightening torque 34 to 49 N.m).



D - EVERY 500 HOURS OF SERVICE OR EVERY YEAR

Carry out the operations described previously as well as the following operations.

D1 - ENGINE OIL

DRAIN

D2 - ENGINE OIL FILTER

CHANGE

Place the lift truck on level ground, let the engine run at idle for a few minutes, then stop the engine.

⚠ IMPORTANT ⚠

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

DRAINING THE OIL

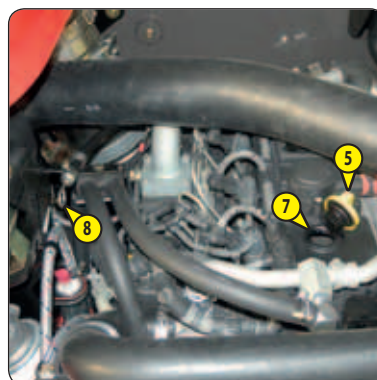
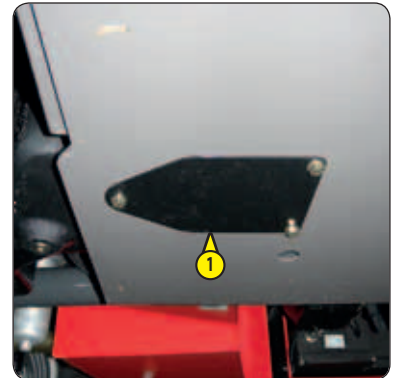
- Open the engine bonnet.
- Remove access panels 1 and 2.
- Place a container under the drain port and unscrew the drain plug 3.
- Take drain hose 4.
- Place the end of the drain hose in the container and screw the hose fully to the drain connector 3.
- Remove filling plug 5 to ensure that the oil is drained properly.

REPLACEMENT OF THE FILTER

- Unscrew and discard the engine oil filter 6, together with its seal.
- Clean the filter bracket with a clean, lint-free cloth.
- Lightly grease the new seal before refitting the new oil filter (see: 3 - MAINTENANCE: FILTERS, CARTRIDGES AND BELTS) on its bracket (tightening torque 15-17 N.m).

FILLING UP THE OIL

- Remove, clean and refit drain hose 4.
- Refit and tighten the drain plug 3.
- Fill up with oil (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) through filler port 7.
- 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 level marks on the dipstick 8.
- Top up the level if necessary.
- Refit access panels 1 and 2.



D3 – DRY AIR FILTER CARTRIDGE

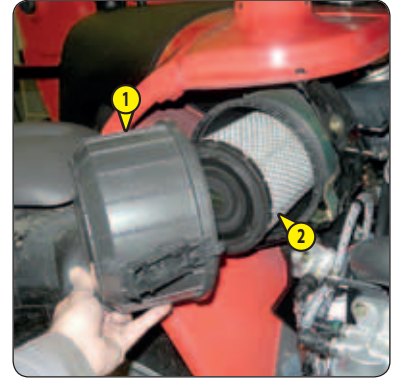
CHANGE

In case of use in a heavily dust laden atmosphere, there are pre-filtration cartridges, see: 3 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS. Also, the checking and cleaning periodicity of the cartridge must be reduced (up to 250 hours in a heavily laden dust atmosphere and with pre-filtration).

⚠ IMPORTANT ⚠

Change the cartridge in a clean location, with the engine stopped. Never operate the lift truck with the air filter removed or damaged.

- Open the engine bonnet.
- Loosen the bolts and remove cover 1.
- Gently remove the cartridge 2 taking care to avoid spilling the dust.
- Leave the safety cartridge in place.
- The following parts must be cleaned 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 mounting check the condition of the new cartridge (see: 3 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS).
- Insert the cartridge within the axis of the filter and push it home, pressing against the outer edge and not the center.
- Reassemble the cover, guiding the valve downwards.



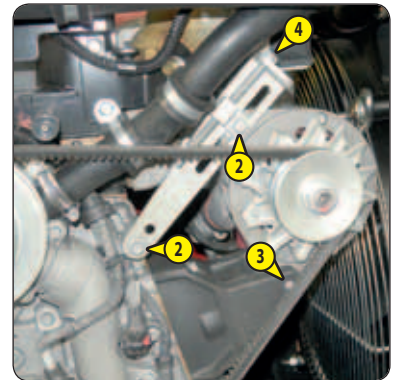
D4 – ALTERNATOR/FAN/CRANKSHAFT BELT TENSION

CHECK - ADJUST

⚠ IMPORTANT ⚠

If the belt has to be changed, check the tension again after the first 20 hours of operation.

- Open the engine bonnet.
- Remove the protective casing 1.
- Check the belt for signs of wear and cracks and change if necessary (see: 3 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS).
- Check the belt tension between the pulleys of the crankshaft and of the alternator.
- Under a normal pressure exerted with the thumb (45 N), the belt should move approximately 10 mm.
- Adjust if necessary.
- Loosen screws 2 and 3 by two to three turns.
- Tighten screw 4 to tension the belt so as to obtain the required tension.
- Re-tighten screws 2 (tightening torque 30 N.m) and screw 3 (tightening torque 42 N.m).
- Refit the protective casing 1.



D5 – GEAR BOX OIL FILTER

CHANGE

⚠ IMPORTANT ⚠

Raise the boom and place the boom safety wedge on the rod of the lifting cylinder (see: 1 - OPERATING AND SAFETY INSTRUCTIONS: LIFT TRUCK MAINTENANCE INSTRUCTIONS).

Tighten the gear box oil filter by hand only and lock in place by a quarter turn.

- Remove the cover plate 1.
- Unscrew and discard gear box oil filter 2.
- Carefully clean the filter head with a clean, lint-free cloth.
- Lightly oil the new seal and fit it to the filter.
- Fill up the new gear box oil filter (see: 3 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS) with oil (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL).
- Refit the filter, making sure that the seal is correctly positioned and tightened.
- Refit cover plate 1.



D6 – HYDRAULIC RETURN OIL FILTER CARTRIDGE

CHANGE

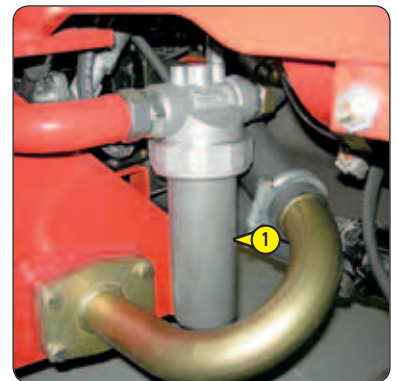
Stop the engine and remove the pressure from the circuits by acting on the hydraulic controls.

⚠ IMPORTANT ⚠

Thoroughly clean the outside of the filter and its surroundings before any intervention in order to prevent any risk of polluting the hydraulic circuit.

Tighten the body of the filter by hand pressure only and lock the body of the filter in place by a quarter turn.

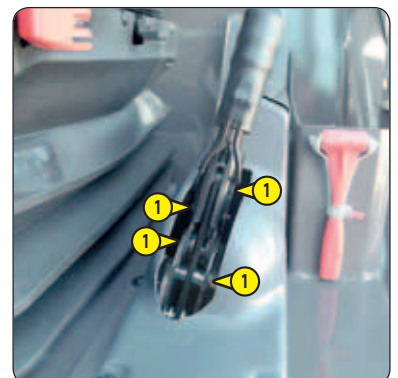
- Place a container under hydraulic drain filter 1.
- Unscrew the body of the filter.
- Remove the hydraulic return oil filter cartridge and fit new replacement cartridge (see: 3 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS).
- Make sure that the cartridge is correctly positioned and refit the body of the filter.



D7 – PARKING BRAKE LEVER MECHANISM

GREASE

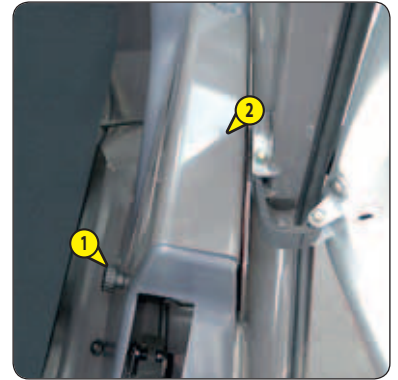
- Clean and grease hinge pins 1 with grease (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL).



D8 – CAB VENTILATION FILTER

CLEAN

- Unscrew thumbscrew 1 and remove protective casing 2.
- Lift out cab ventilation filter 3.
- Clean the filter with a compressed air jet.
- Check its condition and change if necessary (see: 3 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS).
- Refit the filter and protective casing.



D9 – FRONT AND REAR AXLE DIFFERENTIAL OIL

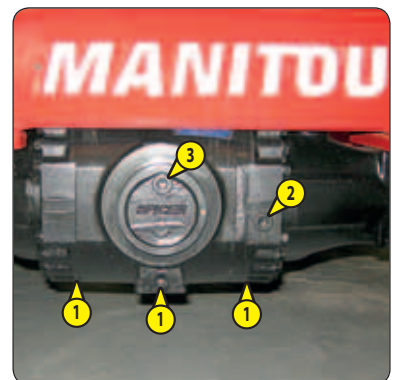
DRAIN

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

⚠ IMPORTANT ⚠

Dispose of the drain oil in an ecological manner.

- Place a container under the drain plugs 1 and unscrew them.
- Remove level plug 2 and filling plug 3 to ensure that the oil is drained properly.
- Refit and tighten the drain plugs 1 (tightening torque 34 to 49 N.m).
- Fill up with oil (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) through filler port 3.
- The level is correct when the oil level is flush with the edge of opening 2.
- Check for any possible leaks at the drain plugs.
- Refit and tighten level plug 2 (tightening torque 34 to 49 N.m) and filler plug 3 (tightening torque 34 to 49 N.m).
- Repeat this operation for the rear axle differential.



E - EVERY 1000 HOURS OF SERVICE OR EVERY TWO YEARS

Carry out the operations described previously as well as the following operations.

E1 – FUEL PRE-FILTER

CHANGE

⚠ IMPORTANT ⚠

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

Tighten the fuel filter by hand only and lock in place by a quarter turn.

- Switch off the lift truck's ignition.
- Open the engine bonnet.
- Shut off the fuel supply turning the thumbwheel 1 clockwise.
- Disconnect electrical wiring harness 2 from the fuel pre-filter.
- Place a receptacle under the drain plug 3 and unscrew by two to three turns.
- Open bleed screw 4 to ensure proper emptying.
- Retighten bleed screw 4 once the pre-filter is emptied.
- Loosen pre-filter 5 and discard it, together with its seal.
- Clean the inside of the pre-filter head using a brush immersed in clean diesel oil.
- Refit a pre-filter and a new seal lubricated with clean diesel beforehand (see: 3 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS).
- Reconnect the fuel pre-filter wiring harness 2.
- Replace the fuel filter.



E2 – FUEL FILTER

CHANGE

⚠ IMPORTANT ⚠

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

- Unscrew and discard the fuel filter 1.
- Clean the inside of the filter head using a brush immersed in clean diesel oil.
- Refit a filter and a new seal lubricated with clean diesel beforehand (see: 3 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS).
- Tighten the filter, making sure that the seal is correctly positioned (tightening torque 10-12 N.m).
- Turn on the fuel supply by turning the thumbwheel 2 anti-clockwise.
- Open the bleed screw 4 of the fuel pre-filter and the bleed screw 3 of the fuel filter.
- Switch on the lift truck's ignition, and close the bleed screw as soon as the diesel flows with no air.



E3 – FUEL TANK

CLEAN

E4 – FUEL TANK BREATHER

CHANGE

Place the lift truck on level ground with the engine stopped.

⚠ IMPORTANT ⚠

While carrying out these operations, do not smoke or approach with a flame.

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

- Inspect the parts susceptible to leaks in the fuel circuit and in the tank 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.
- Remove filling plug 2 to ensure that the oil is drained properly.
- Rinse out with ten liters of clean diesel through filler port 3.
- Refit and tighten the drain plug 1 (tightening torque 29 to 39 N.m).
- Unscrew the breather 4 and replace with a new one (see: 3 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS) (tightening torque 5 ± 2 N.m).
- Fill the fuel tank with clean diesel filtered through the filler port.
- Refit the filler plug.



E5 – SAFETY DRY AIR FILTER CARTRIDGE

CHANGE

- For the disassembly and reassembly of the dry air filter cartridge, see: 3 - MAINTENANCE: D3 - AIR FILTER CARTRIDGE.
- Gently remove the dry air filter safety cartridge 1, taking care to avoid spilling the dust.
- Clean the gasket surface on the filter with a damp, clean lint-free cloth.
- Check the condition of the new safety cartridge before fitting (see: 3 - MAINTENANCE: FILTERS AND BELTS).
- Insert the cartridge in the filter axis and push it home, pressing against the outer edge and not the center.

NOTE: The safety cartridge replacement frequency is given for information only. It must be changed every second time the dry air filter cartridge is changed.



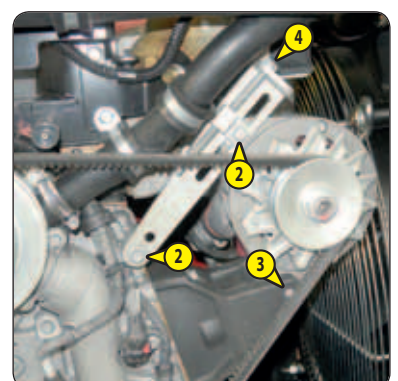
E6 – ALTERNATOR/FAN/CRANKSHAFT BELT

CHANGE

⚠ IMPORTANT ⚠

Check the tension again after the first 20 hours of operation.

- Open the engine bonnet.
- Remove the protective casing 1.
- Loosen screws 2 and 3 by two to three turns.
- Tighten screw 4 to swivel the alternator assembly so as to free belt 5.
- Remove the belt and replace with a new one (see: 3 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS).
- Adjust the belt tension between the pulleys of the crankshaft and of the alternator.
- Tighten screw 4 to tension the belt so as to obtain the required tension.
- Under a normal pressure exerted with the thumb (45 N), the belt should move approximately 10 mm.
- Adjust if necessary.
- Re-tighten screws 2 (tightening torque 30 N.m) and screw 3 (tightening torque 42 N.m).
- Refit the protective casing 1.



Place the lift truck on level ground with the engine stopped, the gear box oil still warm.

⚠ IMPORTANT ⚠

Raise the boom and place the boom safety wedge on the rod of the lifting cylinder (see: 1 - OPERATING AND SAFETY INSTRUCTIONS: LIFT TRUCK MAINTENANCE INSTRUCTIONS).

Dispose of the drain oil in an ecological manner.

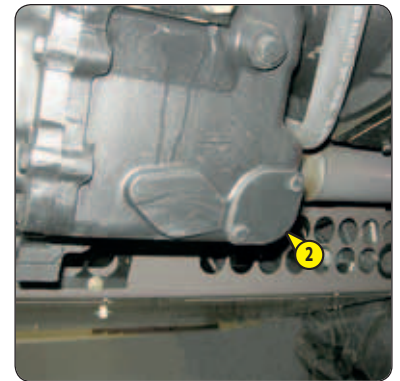
DRAINING THE OIL

- Place a container under drain plug 1 and under cover 2 and unscrew the drain plug.
- Remove the cover plate 3.
- Remove dipstick 4 and unscrew filling plug 5 in order to ensure that the oil is drained properly.



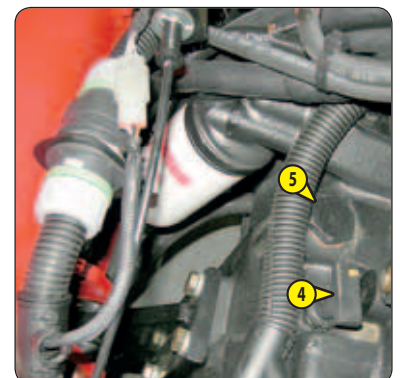
CLEANING THE STRAINER

- Remove cover 2 and set aside the O-ring joint and sealing washer.
- Allow the rest of the oil to drain away.
- Remove and clean the strainer using a compressed air jet.
- Clean the magnetic section on the plate.
- Refit the assembly and tighten up plate 2 (tightening torque 18 to 31 N.m).



FILLING UP THE OIL

- Refit and tighten the drain plug 1 (tightening torque 34 to 54 N.m).
- Fill up with oil (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) through the filler port 5 and refit the plug.
- Start the engine and let it run for a few minutes.
- Check any possible leaks from the drain plug or cover.
- Stop the engine, and within 5 minutes of the engine being stopped, check the correct level between the MIN and MAX marks on the dipstick 4.
- Top up the level if necessary.
- Refit cover plate 3.



E9 – ANGLE GEAR BOX OIL

DRAIN

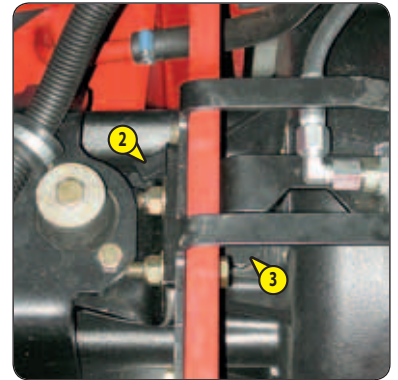
Place the lift truck on level ground with the engine stopped, the angle gear box oil still warm.

⚠ IMPORTANT ⚠

Raise the boom and place the boom safety wedge on the rod of the lifting cylinder (see: 1 - OPERATING AND SAFETY INSTRUCTIONS: LIFT TRUCK MAINTENANCE INSTRUCTIONS).

Dispose of the drain oil in an ecological manner.

- Place a container under drain plug 1 and unscrew the plug.
- Remove dipstick 2 and unscrew filling plug 3 in order to ensure that the oil is drained properly.
- Refit and tighten the drain plug 1 (tightening torque 20 to 29 N.m).
- Fill up with oil (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) through the filler port 3 and refit the plug.
- Check the correct level between the MIN and MAX marks on dipstick 2.
- Check for any possible leaks at the drain plug.



E10 – HYDRAULIC OIL

DRAIN

E11 – HYDRAULIC OIL TANK SUCTION STRAINER

CLEAN

E12 – HYDRAULIC FLUID TANK FILTER CAP

CHANGE

E13 – DISTRIBUTOR CONTROL HEAD FILTER

CHANGE

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

⚠ IMPORTANT ⚠

Before carrying out any work, thoroughly clean the area around the filter, the drain plugs and the inlet cover on the hydraulic tank.

Dispose of the drain oil in an ecological manner.

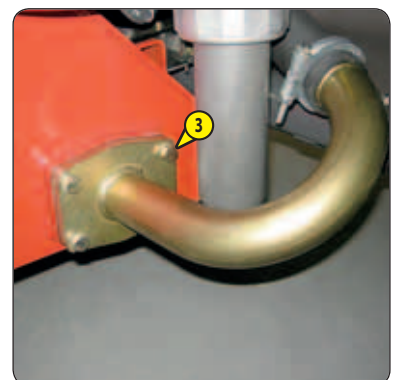
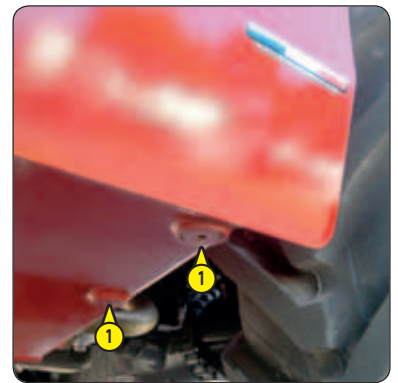
Use a very clean container and funnel and clean the top of the oil drum before filling.

DRAINING THE OIL

- Place a container under the drain plugs 1 and unscrew them.
- Remove level and filling plug 2 to ensure that the oil is drained properly and discard.

CLEANING THE STRAINER

- Remove the inlet cover 3.
- Remove and clean the suction strainer using a compressed air jet, check its condition and replace if necessary (see: 3 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS).
- Refit the strainer and tighten the inlet cover 3 (tightening torque 81 N.m) making sure the seal is in the correct position.



REPLACING THE DISTRIBUTOR CONTROL HEAD FILTER

⚠ IMPORTANT ⚠

NOTE: Be careful to mount the filter 6 in the same direction as the arrow.

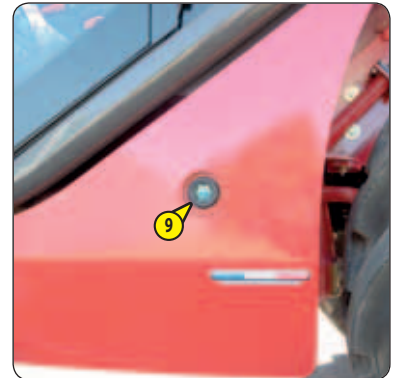
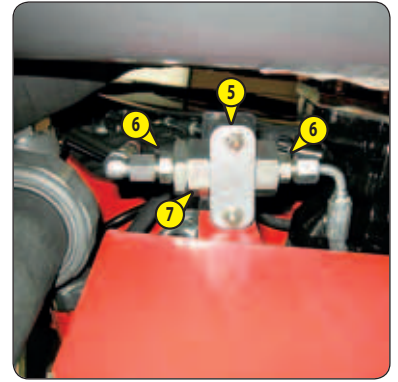
- Remove the half clamp 4.
- Undo the two couplings 5 and replace the filter 6.
- Refit half clamp 4.

FILLING UP THE OIL

- Clean and refit the drain plugs 1 (tightening torque 29 to 39 N.m).
- Fill up with oil (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) through filler port 7.
- Observe the oil level on dipstick 8, the oil level should be at the level of the red point.
- Check for any possible leaks at the drain plugs.
- Replace filler plug with a new filler plug 2 (see: 3 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS).

HYDRAULIC CIRCUIT DECONTAMINATION

- This should be carried out by your dealer after each oil change.
- The hydraulic oil used in the circuit must be at least equal in quality to class 8 (according to NAS 1638). Your dealer will be able to clean the hydraulic circuit using an external unit and check the quality of the oil in order to ensure the long life of hydraulic components and particularly of the main pump.



E14 – SEAT BELT

CHECK

⚠ IMPORTANT ⚠

*In no event should the lift truck be used if the seat belt is defective (fixing, locking, cuts, tears, etc.).
Repair or replace the seat belt immediately.*

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.

NOTE: After an accident, replace the seat belt.

E15 – FRONT AND REAR WHEEL REDUCTION GEAR OIL

DRAIN

Place the lift truck on level ground with the engine stopped and the oil of the reducers still warm.

⚠ IMPORTANT ⚠

Dispose of the drain oil in an ecological manner.

- Drain and change the oil of each wheel reduction gear.
- 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 (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) through level port 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 to 49 N.m).



F - EVERY 2000 HOURS OF SERVICE OR EVERY TWO YEARS

Carry out the operations described previously as well as the following operations.

F1 - COOLING LIQUID

DRAIN

These operations are to be carried out whenever necessary or once every two years at the approach of winter. Place the lift truck on level ground with the engine stopped and cold.

⚠ IMPORTANT ⚠

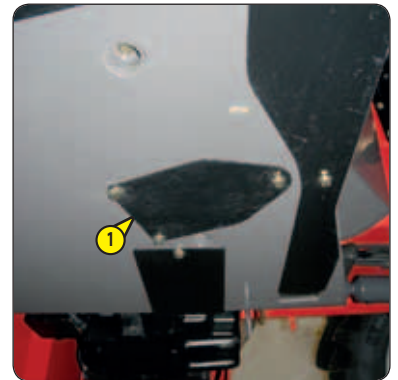
The engine does not contain any corrosion resistor and must be filled during the whole year with a mixture containing 25% of ethylene glycol-based antifreeze.

DRAINING THE LIQUID

- Open the engine bonnet.
- Remove access panel 1.
- Place a container under radiator drain plug 2 and unscrew the plug.
- Take drain hose 3.
- Place the end of the drain hose in the container and screw the hose fully to the drain connector 2.
- Remove filler plug 4 from the expansion tank and fully open the heating control to ensure proper emptying.
- 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 THE LIQUID

- Remove, clean and refit drain hose 3.
- Refit and tighten the radiator drain plug 2.
- Slowly fill the circuit with cooling liquid through the filler port (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) up to the middle of the expansion tank 5.
- Refit the filler plug 4.
- Run the engine at idle for a few minutes.
- Check for any possible leaks.
- Refit access panel 1.
- Check the level and refill if necessary.



F2 – WHEEL NUTS TIGHTENING TORQUE

CHECK

- 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 15%
 - Rear wheels: 630 N.m \pm 15%

F3 – AIR CONDITIONING (OPTION)

CLEAN – CHECK

CLEANING CONDENSER AND EVAPORATOR COILS (*)

CLEANING CONDENSATE TRAY AND RELIEF VALVE (*)

COLLECTING COOLANT TO REPLACE FILTER-DRIER (*)

REFILLING WITH COOLANT AND CHECKING THE THERMOSTATIC CONTROL AND PRESSURE SWITCHES (*)

NOTE: When opening the evaporator unit, remember to replace the cover seal.

(*): (CONSULT YOUR DEALER).

⚠ IMPORTANT ⚠

DO NOT ATTEMPT TO REPAIR ANY FAULTS BY YOURSELF. ALWAYS REFER TO YOUR DEALER WHEN REFILLING CIRCUITS, AS THEY HOLD THE CORRECT SPARE PARTS, AS WELL AS HAVING THE NECESSARY TECHNICAL KNOWLEDGE AND TOOLS.

In the event of inhalation, take the victim into fresh air, give oxygen or artificial respiration if necessary and call a doctor.

In the event of contact with the skin, wash immediately with copious amounts of water and remove any contaminated garments.

In the event of contact with the eyes, rinse with clear water for 15 minutes and call a doctor.

- Do not open the circuit under any circumstances as this would loss of coolant.
- The cooling circuit contains a gas which can be dangerous under certain conditions. This gas, coolant R-134a, is colorless, odorless and heavier than air.
- The compressor has a fluid level gage; never unscrew this gage because it would depressurize the system. The fluid level should only be checked when draining the system.



G - OCCASIONAL MAINTENANCE

G1 - WHEEL

CHANGE

For this operation, we advise you to use the MANITOU hydraulic jack, part no. 505507 and the MANITOU safety support, part no. 554772.

⚠ IMPORTANT ⚠

In the event of a wheel being changed on the public highway, secure the lift truck vicinity:

- Stop the lift truck, if possible on firm, level ground.
- Shut-down the lift truck (see: 1 - OPERATING AND SAFETY INSTRUCTIONS: DRIVING INSTRUCTIONS UNLADEN AND LADEN).
- Switch on the hazard warning lights.
- Immobilize the lift truck in both directions on the axle opposite to the wheel to be changed.
- Loosen 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 by reciprocating 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 and lower the lift truck with the jack.
- Tighten the wheel nuts with a torque wrench (see: 3 - MAINTENANCE: A - DAILY OR EVERY 10 HOURS OF SERVICE for tightening torque).



G2 - FRONT HEADLIGHTS

ADJUST

RECOMMENDED SETTING

(as per standard ECE-76/756 76/761 ECE20)

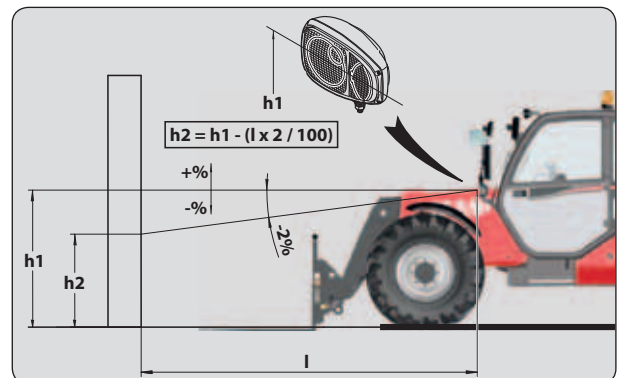
Adjustment of -2 % of the dipped beam relative to the horizontal axis of the headlight.

ADJUSTMENT PROCEDURE

- Place the unladen lift truck in the transport position and perpendicular to a white wall on flat, level ground.
- Check the tyre pressures (see: 2 - DESCRIPTION: FRONT AND REAR TYRES).
- Place the forward/reverse selector 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.



G3 – BATTERY FAILURE

CHANGE

⚠ IMPORTANT ⚠

Operate the battery cut-off no less than 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.

- Remove the protective casing and the toolbox 1 (OPTION).
- Bring a backup battery of the same type as that of the lift truck, together with battery cables.
- Connect the backup battery with the correct (-) (+) polarity.
- Start the lift truck 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 (see: 1 - OPERATING AND SAFETY INSTRUCTIONS: LIFT TRUCK MAINTENANCE INSTRUCTIONS).

- Remove the protective casing 2.
- Change the battery 3.



G4 – LIFT TRUCK

TOWING

⚠ IMPORTANT ⚠

Do not tow the lift truck at more than 25 km/h.

- Place the forward/reverse selector in neutral and the gear shift in neutral.
- Release the hand brake.
- Switch on the hazard warning lights.
- Since there will be no steering or braking hydraulic assistance, operate the steering and pedal slowly avoiding sudden or jerky movements.

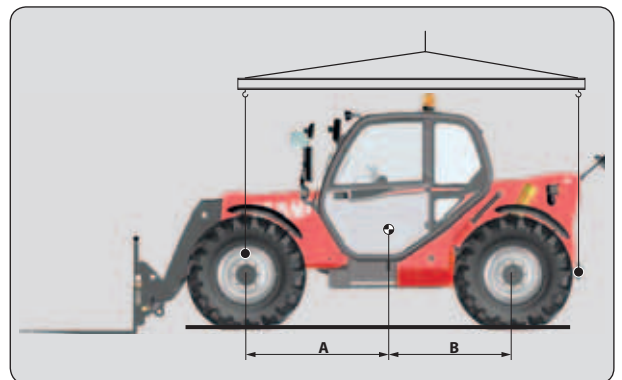
G5 – LIFT TRUCK

SLINGING

- Take into account the position of the lift truck center of gravity for lifting.

A = 1450 mm	B = 1360 mm	MT 732 EASY 75D ST3B S1
A = 1455 mm	B = 1355 mm	MT 932 EASY 75D ST3B S1

- Place the hooks in the fastening points 1 provided.



⚠ IMPORTANT ⚠

Ensure that the safety instructions associated with the platform are complied with before loading the lift truck and that the driver of the carrier vehicle is informed of the dimensions and the ground of the lift truck (see: 2 - DESCRIPTION: CHARACTERISTICS).

Ensure that the platform is of sufficient size and load capacity for transporting the lift truck. Check also the allowable ground contact pressure of the platform relative to the lift truck.

⚠ IMPORTANT ⚠

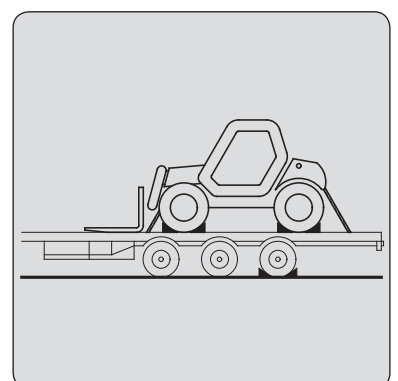
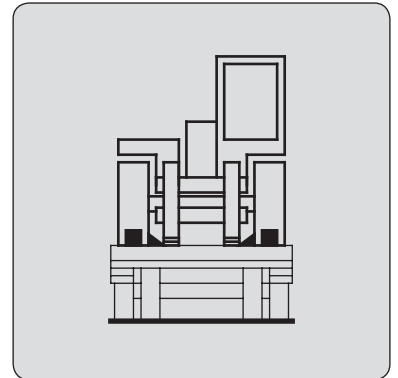
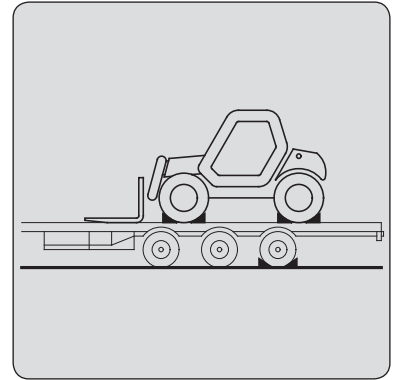
For lift trucks equipped with a turbo-charged engine, block off the exhaust outlet to avoid rotation of the turbo shaft without lubrication when transporting the vehicle.

LOADING THE LIFT TRUCK

- Block the wheels of the platform.
- Attach the loading ramps to the platform in such a way as to give the shallowest possible ramp angle for the lift truck.
- Load the lift truck parallel to the platform.
- Shut down the lift truck (see: 1 - OPERATING AND SAFETY INSTRUCTIONS: DRIVING INSTRUCTIONS UNLADEN AND LADEN).

STOWING THE LIFT TRUCK

- Fix the chocks to the platform at the front and the rear of each tire.
- Also fix the chocks to the platform on the inside of each tire.
- Secure the lift truck to the platform with sufficiently strong ropes to the anchoring points 1 provided.
- Tighten the ropes.



***4 - O P T I O N A L
A T T A C H M E N T S
F O R U S E W I T H
T H E R A N G E***

TABLE OF CONTENTS

4 - OPTIONAL ATTACHMENTS FOR USE WITH THE RANGE

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INTRODUCTION

- Your lift truck must be used with interchangeable equipment. These items are called: ATTACHMENTS.
- A wide range of attachments, specially designed and perfectly suitable for your lift truck is available and guaranteed by MANITOU.

⚠ IMPORTANT ⚠

Only attachments approved by MANITOU are to be used on our lift trucks

(see: 4 - ADAPTABLE ATTACHMENTS IN OPTION ON THE RANGE: TECHNICAL SPECIFICATIONS OF ATTACHMENTS).

The manufacturer's liability will be denied in case of modification or of attachment adaptation carried out without his knowing it.

- The attachments are delivered with a load chart concerning your lift truck. The operator's manual and the load chart should be kept in the places provided in the lift truck. For standard attachments, their use is governed by the instructions contained on this notice.

⚠ IMPORTANT ⚠

Maximum loads are defined by the capacity of a lift truck taking account of the attachment's mass and centre of gravity.

In the event of the attachment having less capacity than the lift truck, never exceed this limit.

- Some particular uses require the adaptation of the attachment which is not provided in the price-listed options. Optional 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 tyres and cause damage to them, if reverse tilt is activated in the forward tilt direction.

TO REMOVE THIS RISK, EXTEND THE TELESCOPE TO A SUFFICIENT EXTENT FOR THE PARTICULAR LIFT TRUCK AND ATTACHMENT SO THAT THIS CONTACT IS NOT POSSIBLE.

SUSPENDED LOAD

⚠ IMPORTANT ⚠

Suspended load MUST be handled with a lift truck designed for that purpose

(see: 1 - OPERATING AND SAFETY INSTRUCTIONS: LOAD HANDLING INSTRUCTIONS: H - TAKING-UP AND SETTING-DOWN A SUSPENDED LOAD).

USE THE BUCKETS

⚠ IMPORTANT ⚠

The MT 732 EASY 75D ST3B S1 and MT 932 EASY 75D ST3B S1, are lift trucks essentially intended for handling. Occasional use with the buckets CBC/CBR/CB4x1 is authorised (only with the boom completely retracted, in order to reduce stress on the boom head), but under no circumstances is intensive use for difficult applications (quarry, waste, cereals, agriculture, etc) permissible.

PICKING UP THE ATTACHMENTS

1 - ATTACHMENT WITHOUT HYDRAULICS AND HAND LOCKING DEVICE

TAKING UP 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 and the clip are in position in the bracket (fig. A).
- Place the lift truck with the boom fully lowered in front of and parallel to the attachment, tilt the carriage forwards (fig. B).
- Bring the carriage under the locking tube of the attachment, slightly lift the boom, incline the carriage backwards in order to position the attachment (fig. C).
- Lift the attachment off the ground to facilitate locking.

HAND LOCKING

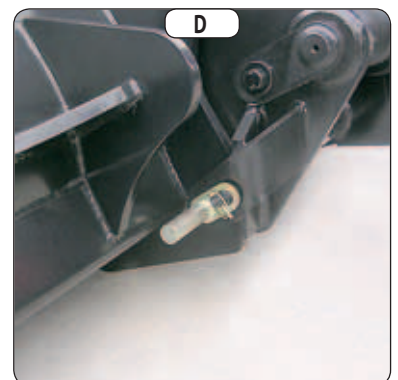
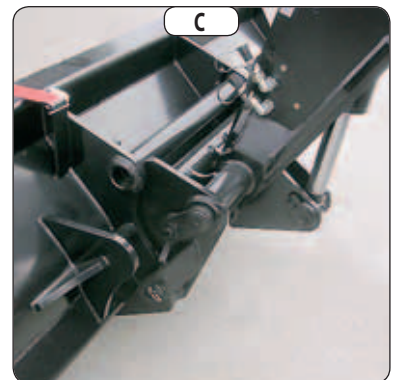
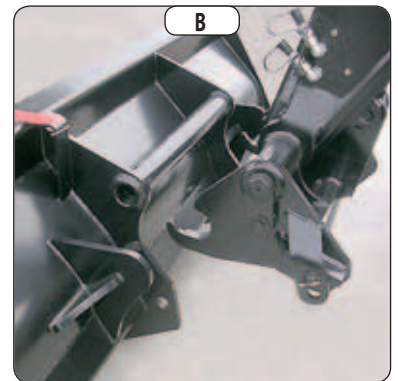
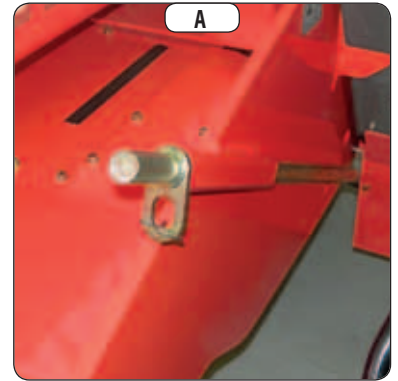
- Take the locking pin and the clip on the bracket (fig. A) and lock the attachment (fig. D). Do not forget to refit the clip.

HAND RELEASING

- Proceed in the reverse order of paragraph HAND LOCKING while making sure you put back the locking pin and the clip in the bracket (fig. A).

LAYING AN ATTACHMENT

- Proceed in the reverse order of paragraph TAKING UP AN ATTACHMENT while making sure you place the attachment flat on the ground and in closed position.



2 - HYDRAULIC ATTACHMENT AND MANUAL LOCKING DEVICE

TAKING UP 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 and the clip are in position in the bracket (fig. A).
- Place the lift truck with the boom fully lowered in front of and parallel to the attachment, tilt the carriage forwards (fig. B).
- Bring the carriage under the locking tube of the attachment, slightly lift the boom, incline the carriage backwards 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.

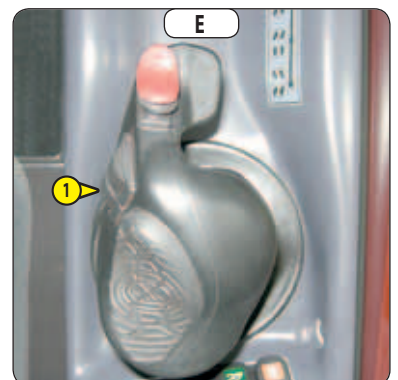
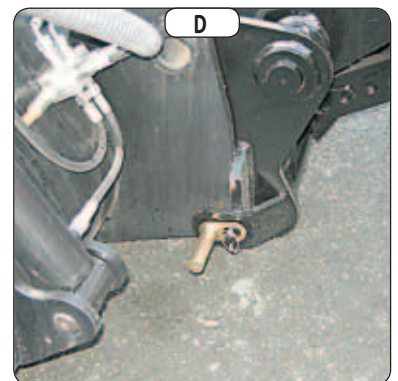
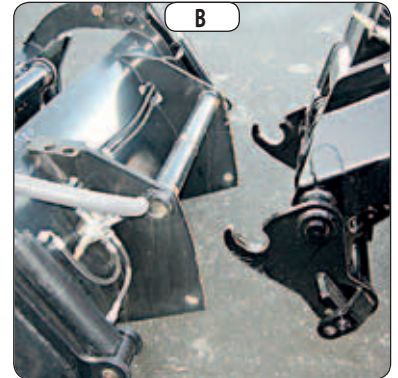
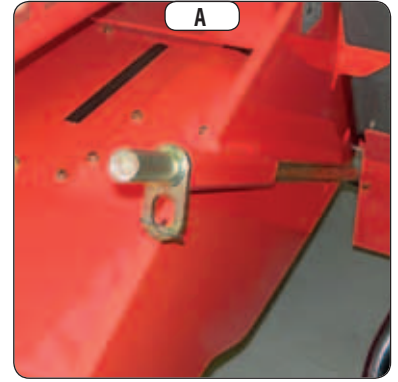
- Take the locking pin and the clip on the bracket (fig. A) and lock the attachment (fig. D). Do not forget to refit the clip.
- Stop the I.C. engine and keep the ignition on the lift truck.
- Remove the pressure of the hydraulic circuit by operating switch 1 (fig. E) on the distributor lever backwards and forwards 4 or 5 times.
- Connect the rapid connectors according to the logic of the attachment's hydraulic movements.

HAND RELEASING AND DISCONNECTING THE ATTACHMENT

- Proceed in the reverse order of paragraph HAND LOCKING AND CONNECTING THE ATTACHMENT while making sure you put back the locking pin and the clip in the bracket (fig. A).

LAYING AN ATTACHMENT

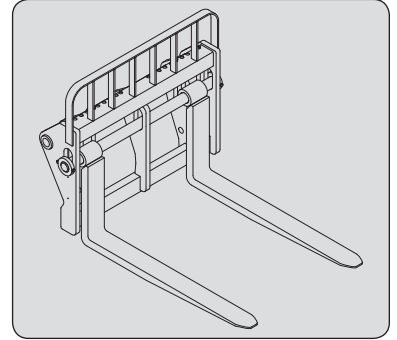
- Proceed in the reverse order of paragraph TAKING UP AN ATTACHMENT while making sure you place the attachment flat on the ground and in closed position.



TECHNICAL SPECIFICATIONS OF ATTACHMENTS

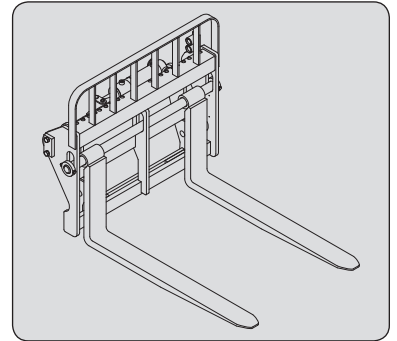
FLOATING FORK CARRIAGE

	TFF 35 MT-1040	TFF 35 MT-1300
PART NUMBER	654093	654094
Rated capacity	3500 kg	3500 kg
Width	1040 mm	1300 mm
Weight	300 kg	340 kg



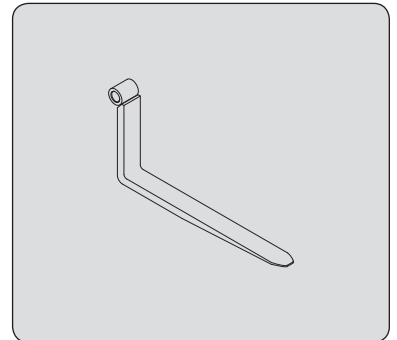
FLOATING FORK SIDE-SHIFT CARRIAGE

	TFF 35 MT-1040 DL	TFF 35 MT-1300 DL
PART NUMBER	751543	751544
Rated capacity	3500 kg	3500 kg
Side-shift	2x100 mm	2x100 mm
Width	1040 mm	1300 mm
Weight	345 kg	375 kg



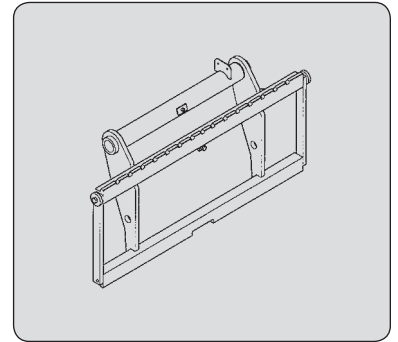
FLOATING FORK

	415801
PART NUMBER	415801
Section	125x45x1200 mm
Weight	68 kg



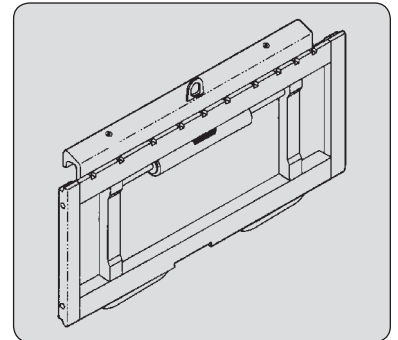
STANDARDISED TILTING FORK CARRIAGE

	PFB 35 N MT-1260 S2	PFB 35 N MT-1470 S2	PFB 35 N MT-1580 S2
PART NUMBER	653744	653745	653746
Rated capacity	3500 kg	3500 kg	3500 kg
Width	1260 mm	1470 mm	1580 mm
Weight	95 kg	120 kg	125 kg



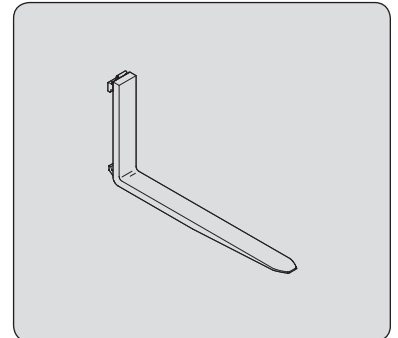
STANDARDISED SIDE-SHIFT CARRIAGE

	TDL 3T5 L1260 FEM3	TDL 5T L1470 FEM3	TDL 5T L1580 FEM3
PART NUMBER	751375	751376	751377
Rated capacity	3500 kg	5000 kg	5000 kg
Side-shift	2x100 mm	2x100 mm	2x100 mm
Width	1260 mm	1470 mm	1580 mm
Weight	79 kg	192 kg	200 kg



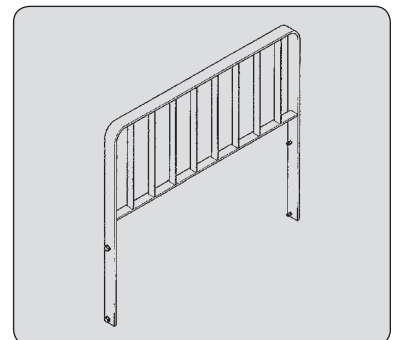
STANDARDISED FORK

	415618
PART NUMBER	415618
Section	125x45x1200 mm
Weight	72 kg



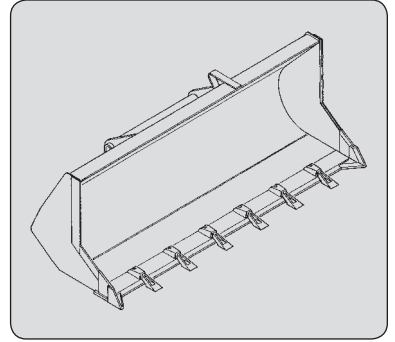
LOAD BACK REST

	556008	555325	556010
PART NUMBER	556008	555325	556010
Width	1260 mm	1470 mm	1580 mm
Weight	36 kg	39 kg	42 kg



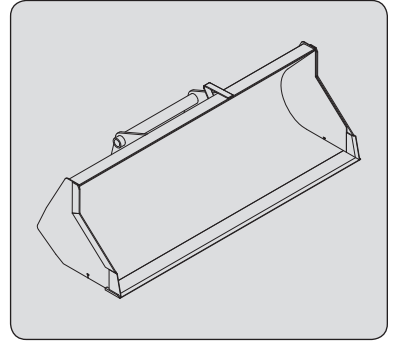
BUILDING BUCKET

PART NUMBER	CBC 900 L2450
Rated capacity	654470 893 l
Width	2450 mm
Weight	410 kg



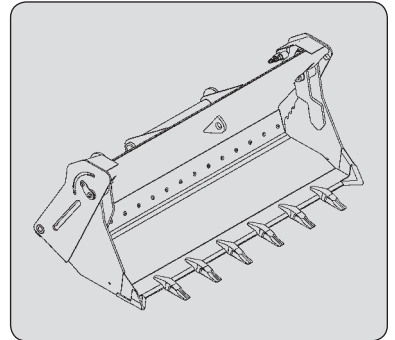
LOADING BUCKET

PART NUMBER	CBR 1000 L2450
Rated capacity	654716 990 l
Width	2450 mm
Weight	410 kg



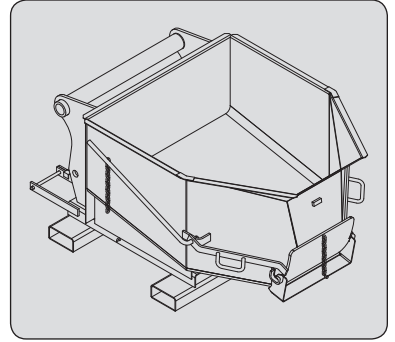
MULTIPURPOSE BUCKET

PART NUMBER	CB4X1-900 L2450
Rated capacity	751465 900 l
Width	2450 mm
Weight	765 kg



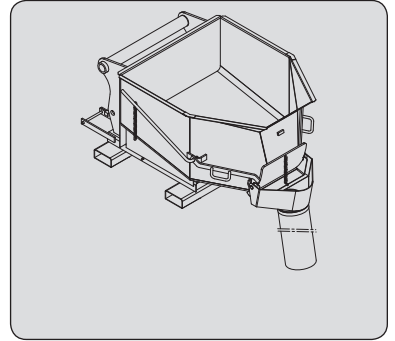
CONCRETE BUCKET (ADAPTABLE ON FORKS)

PART NUMBER	BB 500 S4 654409
Rated capacity	500 l/1300 kg
Width	1100 mm
Weight	205 kg



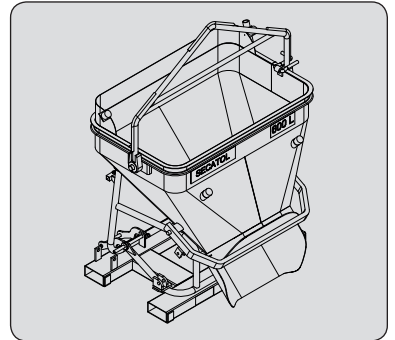
CONCRETE BUCKET WITH SPOUT (ADAPTABLE ON FORKS)

PART NUMBER	BBHG 500 S4 751464
Rated capacity	500 l/1300 kg
Width	1100 mm
Weight	235 kg



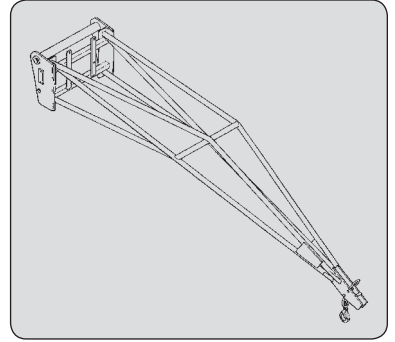
SPOUT BUCKET (ADAPTABLE ON FORKS)

PART NUMBER	GL 600 S2 174373	GL 600 H S2 784630
Rated capacity	600 l/1440 kg	600 l/1440 kg
Weight	290 kg	290 kg



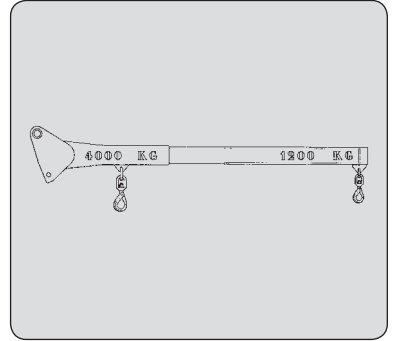
CRANE JIB

PART NUMBER	P 600 MT S3 653228
Rated capacity	600 kg
Weight	170 kg



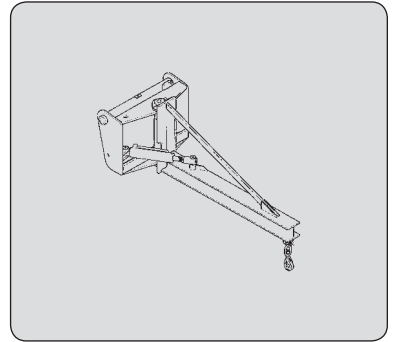
CRANE JIB

PART NUMBER	P 4000 MT S2 653226
Rated capacity	4000 kg/1200 kg
Weight	210 kg



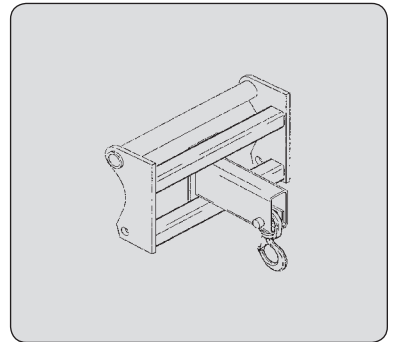
15°/15° MULTI-DIRECTIONAL CRANE JIB

PART NUMBER	PO 1000 L1500 S2 748642
Rated capacity	1000 kg
Weight	275 kg



CRANE JIB

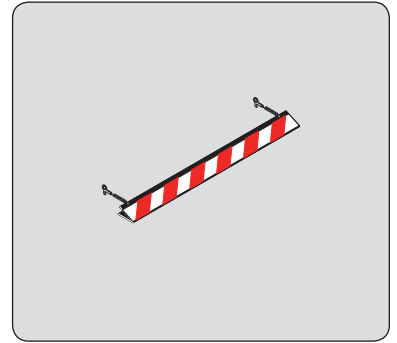
PART NUMBER	PC 50 708544
Rated capacity	5000 kg
Weight	120 kg



ATTACHMENT SHIELDS

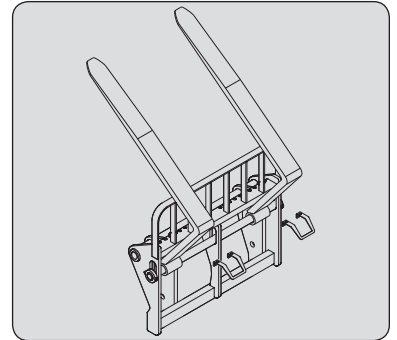
FORK PROTECTOR

PART NUMBER 227801



FORK BLOCK FOR FLOATING FORK CARRIAGE

PART NUMBER 261210



BUCKET PROTECTOR

Always ensure that the width of the protector you choose is less than or equal to the width of the bucket.

	PART NUMBER	206734	206732	206730
Width		1375 mm	1500 mm	1650 mm
	PART NUMBER	235854	206728	206726
Width		1850 mm	1950 mm	2000 mm
	PART NUMBER	223771	223773	206724
Width		2050 mm	2100 mm	2150 mm
	PART NUMBER	206099	206722	223775
Width		2250 mm	2450 mm	2500 mm

