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YOUR DEALER

547998 EN (19/03/2010)

MT 728 Série D-E3
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MT 932 Série D-E3
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

OPERATOR'S MANUAL
(ORIGINAL INSTRUCTIONS)

THIS OPERATOR'S MANUAL MUST BE KEPT IN THE LIFT TRUCK AND MUST BE READ AND UNDERSTOOD BY OPERATORS.

1 - OPERATING AND SAFETY INSTRUCTIONS

2 - DESCRIPTION

3 - MAINTENANCE

4 - ADAPTABLE ATTACHMENTS IN OPTION ON THE RANGE

5 - SPECIFIC AUSTRALIA

See also the operator's manual supplement: 647065 AU

07/03/2008	**1ST DATE OF ISSUE**
19/03/2010	**UP DATING (1-3 – 1-6 ; 1-10 ; 1-12 – 1-14 ; 1-21 – 1-23 ; 2-3 – 2-32 ; 2-42 ; 2-47 ; 2-53 ; 2-54 ; 2-58 ; 2-59 ; 2-66 ; 2-67 ; 2-68 ; 3-3 – 3-6 ; 3-9 ; 3-10 ; 3-11 ; 3-27 – 3-30 ; 3-40 – 3-44 ; 4-3 ; 4-18)** **ADDING: 5 - SPECIFIC AUSTRALIA**


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1 - OPERATING AND SAFETY INSTRUCTIONS

TABLE OF CONTENTS

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.

On the basis of experience, there are a number of possible situations in which operating the lift truck is contra-indicated. Such foreseeable abnormal uses, the main ones being listed below, are strictly forbidden.

- The foreseeable abnormal behaviour resulting from ordinary neglect, but does not result from any wish to put the machinery to any improper use.

- 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 action» 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, operator tempted to operate a truck 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 makea 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 harmonized norm **EN 1459** for variable range 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, flashing light, reverse lights, reverse buzzer alarm, front light, rear light, light at the jib head, etc.
- The operator must take into account the operating conditions to define the lift truck's signalling and lighting equipment. Contact your dealer.
- Take into account climatic and atmospheric conditions of the site of utilisation.
  . Protection against frost (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL).
  . Adaptation of lubricants (ask your dealer for information).
  . I.C. engine filtration (see: 3 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS).

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. It is the same for the cooling liquid.

- A lift truck operating in an area without fire extinguishing equipment must be equipped with an individual extinguisher. There are solutions, consult your dealer.

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 inflammable products...). 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 norm 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 norm (10 V/m).
- Directive 2002/44/EC requires company managers to not expose their employees to excessive vibration doses. There is no recognized code of measurement for comparing the machines of different manufacturers. The actual doses received can therefore be measured only 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, I.C. 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 certificate of conformity is issued. It must be kept in a safe place.

THE 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.

THE MAINTENANCE

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

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.

INSTRUCTIONS FOR THE OPERATOR

PREAMBLE

WHENEVER YOU SEE THIS SYMBOL IT MEANS:

WARNING ! BE CAREFUL ! YOUR SAFETY OR THE SAFETY OF THE LIFT TRUCK IS AT RISK.

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

- Only the operations and manœuvres 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.

Failure to respect the safety and operating instructions, or the instructions for repairing or servicing your lift truck may lead to serious, even fatal accident.

GENERAL INSTRUCTIONS

A - OPERATOR'S 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 (see: 3 - MAINTENANCE: A - DAILY OR EVERY 10 HOURS SERVICE).
- The operator must ensure tyres are adapted to the nature of the ground (see area of the contact surface of the tyres in the chapter: 2 - DESCRIPTION: FRONT AND REAR TYRES). There are optional solutions, consult your dealer.
  - . SAND tyres.
  - . LAND tyres.
  - . Snow chains.

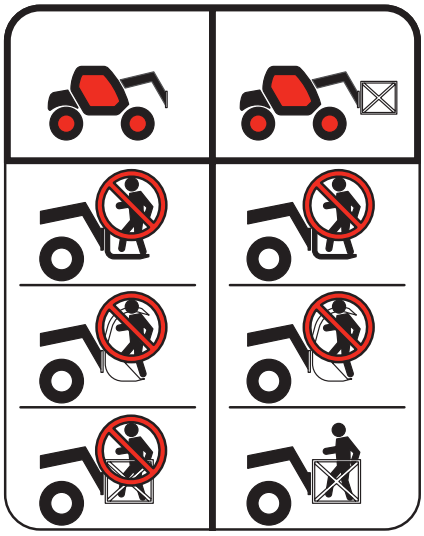
Do not use the lift truck if the tyres are incorrectly inflated, damaged or excessively worn, because this could put your own safety or that of others at risk, or cause damage to the lift truck itself. The fitting of foam inflated tyres is prohibited and is not guaranteed by the manufacturer, excepting prior authorisation.

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, I.C. 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 authorized exceptionally and under certain conditions (see 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 (see: 3 - MAINTENANCE: A - DAILY OR EVERY 10 HOURS SERVICE).
- 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.

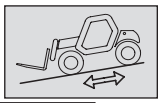
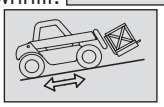
B - DRIVER'S OPERATING INSTRUCTIONS

- 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 job to be done.
- 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.

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 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 land 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.

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 jib 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 at an oil temperature as close as possible to ambient temperature.

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

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 jeopardizes the stability of the lift truck and its load, particularly if the load catches the wind badly.

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 traveling 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 maneuver (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 maneuver (while standing outside the truck's area of travel).
- If visibility of your road is inadequate, ask someone to assist by directing the maneuver (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

The lift truck must only be started up or maneuvered 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 towing it. Such operation may cause severe damage to the transmission. If necessary, to tow the lift truck in an emergency, the transmission must be placed in the neutral position (see: 3 - MAINTENANCE: G - OCCASIONAL MAINTENANCE).
- If using an emergency battery for start-up, use a battery with the same characteristics and respect battery polarity when connecting it. Connect at first the positive terminals before the negative terminals.

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.
- Turn the ignition key to the position I to activate the electrical system and the preheat.
- Whenever you switch on the lift truck, perform the automatic check on the longitudinal stability alarm system (see: 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS). Do not use the lift truck if it does not conform to the regulations.
- Check the fuel level on the indicator.
- Turn the ignition key fully: the I.C. engine should then start. Release the ignition key and let the I.C. 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 I.C. 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 I.C. engine and immediately carry out the necessary operations.

F - DRIVING THE LIFT TRUCK

SAFETY INSTRUCTIONS

Operators' attention is drawn to the risks involved in using the lift truck, in particular:
- Risk of losing control.
- Risk of losing lateral and frontal stability of the lift 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 palettes, cases, etc, are in good order 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 I.C. 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 voluminous 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 (see: 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS).
- Select the steering mode appropriate for its use and/or working conditions (see: 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS) (as model of lift truck).
- Release the parking brake.
- Shift the forward/reverse selector to the selected direction of travel and accelerate gradually until the lift truck moves off.

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...).

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.
- Retract entirely 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 I.C. engine idling for a few moments, to allow the coolant liquid and oil to lower the temperature of the I.C. engine and transmission. Do not forget this precaution, in the event of frequent stops or warm stalling of the I.C. 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 I.C. engine with the ignition switch.
- Remove the ignition key.
- Lock all the accesses to the lift truck (doors, windows, cowls...).

H - DRIVING THE LIFT TRUCK ON THE PUBLIC HIGHWAY

(or see current legislation in other countries)

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” (as model of lift truck) (see: 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS).
- Retract entirely the jib and put the attachment at 300 mm from the ground.
- Place the slope correctors in the central position, i.e. the transverse shaft of the axles parallel to the chassis (as model of lift truck).
- Lift up the stabilizers to the maximum and turn the blocks inwards (as model of lift truck).

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 (see: 4 - ADAPTABLE ATTACHMENTS IN OPTION 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 (consult the manufacturer's plate on your lift truck).

IF NECESSARY, CONSULT YOUR DEALER.

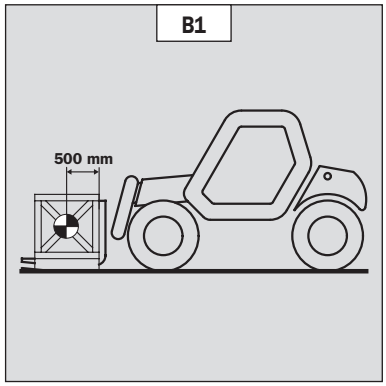
INSTRUCTIONS FOR HANDLING A LOAD

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 (see: 4 - ADAPTABLE ATTACHMENTS IN OPTION ON THE RANGE).
- If the lift truck is equipped with the Single side-shift carriage OPTION (TSDL), use only the authorised attachments (see: 4 - ADAPTABLE ATTACHMENTS IN OPTION 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 the sling risks to slip (see: INSTRUCTIONS FOR HANDLING A LOAD: H - TAKING UP AND LAYING DOWN A SUSPENDED LOAD).

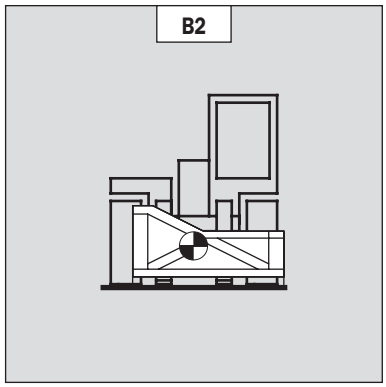
B - MASS OF LOAD AND CENTRE OF GRAVITY

- 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 500 mm from the base of the forks (fig. B1). 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.



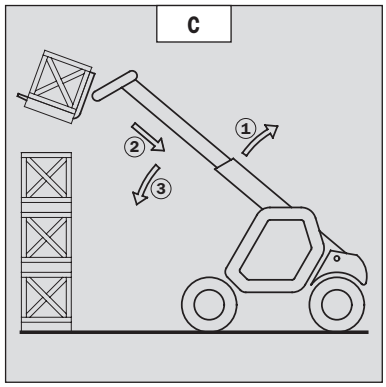
It is forbidden to move a load heavier than the effective capacity defined on the lift truck load chart.

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 vigilant and take extra care to limit these variations as far as possible.



C - LONGITUDINAL STABILITY ALARM

- This device gives an indication of the lift truck's longitudinal stability. Move the jib very carefully when approaching the authorized load limit (see: 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS).
- Always watch this device during handling operations.
- When the device is in alert mode, it is forbidden to perform so-called «AGGRAVATING» movements, these being:
  - A - Extending the jib.
  - B - Lowering the jib.
  - C - Tilt the carriage forwards.
- Perform movements to relieve aggravation in the following order (fig. C): if necessary, raise the jib (1), retract the jib as far as possible (2) and lower the jib (3) to release the load.

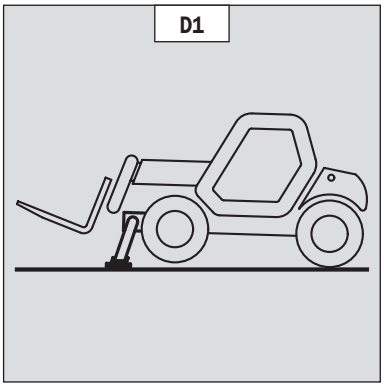


The instrument reading may be erroneous when the steering is at its maximum limit or the rear axle oscillated to its limit. Before lifting a load, make sure that the lift truck is not in either of these situations.

D - TRANSVERSE ATTITUDE OF THE LIFT TRUCK

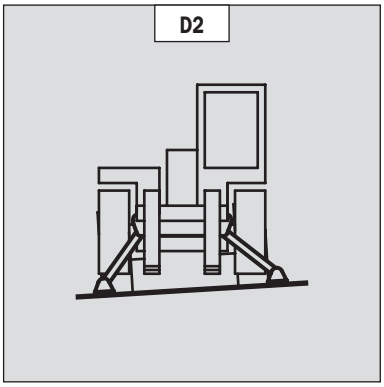
Depending on the model of lift truck

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 SLOPE CORRECTOR USED ON TYRES
- Position the lift truck so that the bubble in the level is between the two lines (see: 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS).

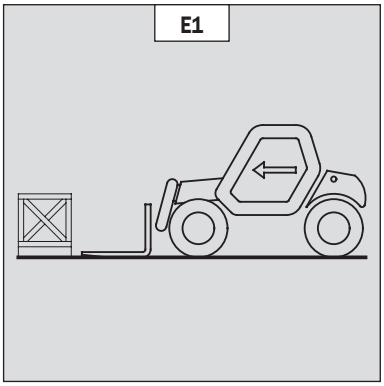
2 - LIFT TRUCK WITH SLOPE CORRECTOR USED ON TYRES
- Correct the slope using the hydraulic control and verify the horizontality via the level. The bubble in the level must be between the two lines (see: 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS).



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 slope using the stabilizers (fig. D2) and make sure the truck is horizontal by checking the level. The bubble of the level must be between the two lines (see: 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS). In this position, the two front wheels must be off the ground.

E - TAKING UP A LOAD ON THE GROUND

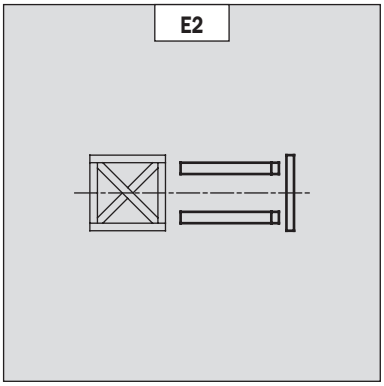
- Approach the lift truck perpendicular to the load, with the jib retracted and the forks in a horizontal position (fig. E1).
- Adjust the fork spread and centering in connection with the load (fig. E2) (optional solutions exist, consult your dealer).
- Never lift a load with a single fork.

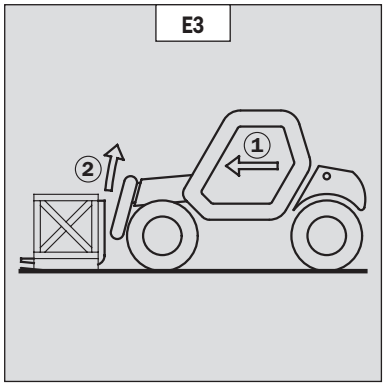


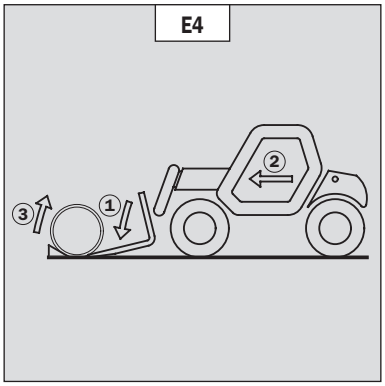
Beware of the risks of trapping or squashing limbs when manually adjusting the forks.

- Move the lift truck forward slowly (1) and bring the forks to stop in front of the load (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 LAYING A HIGH LOAD ON TYRES

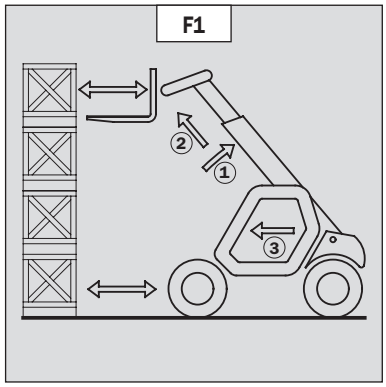
You must not raise the jib if you have not checked the transverse attitude of the lift truck (see: INSTRUCTIONS FOR HANDLING A LOAD: D - TRANSVERSE ATTITUDE OF THE LIFT TRUCK).

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

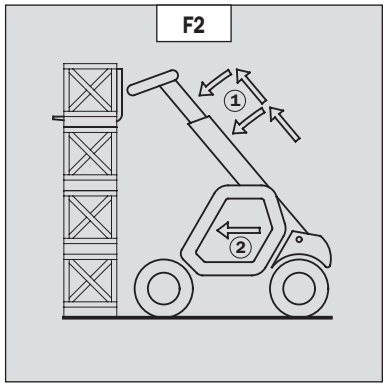
TAKING UP A HIGH LOAD ON TYRES

- 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 think about keeping the distance necessary to fit the forks under the load, between the pile and the lift truck (fig. F1) and use the shortest possible length of jib.
- Stop the forks in front of the load by alternately extending and retracting the jib (1) or, if necessary, moving the lift truck forward (2) (fig. F2). Put the handbrake on and set the forward/reverse selector to neutral.
- Slightly lift the load (1) and incline the carriage (2) backwards to stabilize the load (fig. F3).
- Tilt the load sufficiently backwards to ensure its stability.
- Watch the longitudinal stability alarm (see: INSTRUCTIONS FOR HANDLING A LOAD: C - LONGITUDINAL STABILITY ALARM). If it is overloaded, replace the load 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).

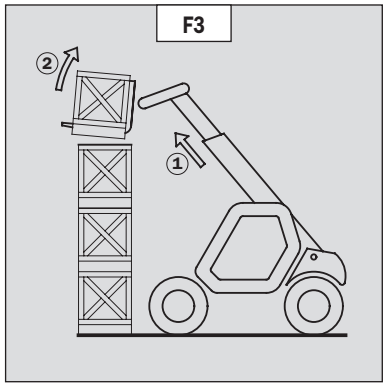
F1



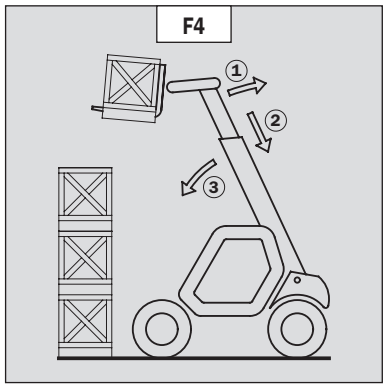
F2



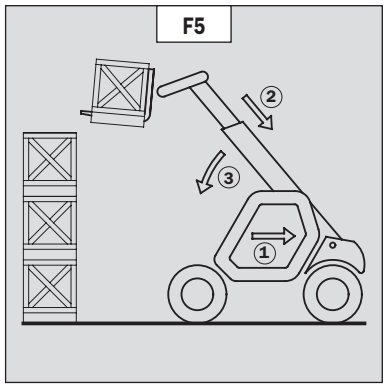
F3



F4



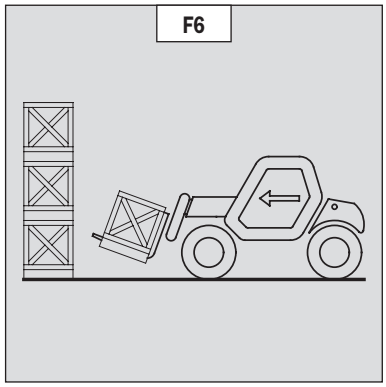
F5



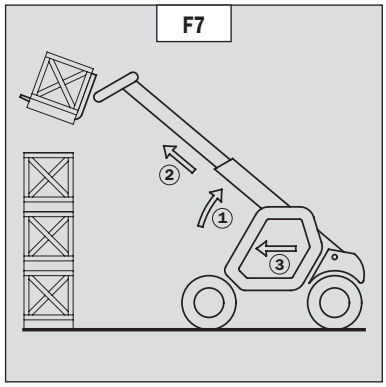
LAYING A HIGH LOAD ON TYRES

- Approach the load in the transport position in front of the pile (fig. F6).
- Put the handbrake on and set the forward/reverse selector to neutral.
- Lift and extend the jib (1) (2) until the load is above the pile, while keeping an eye on the longitudinal stability alarm (see: INSTRUCTIONS FOR HANDLING A LOAD: C - LONGITUDINAL STABILITY ALARM). 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) very slowly and carefully to release the forks (fig. F10). Then set them into transport position.

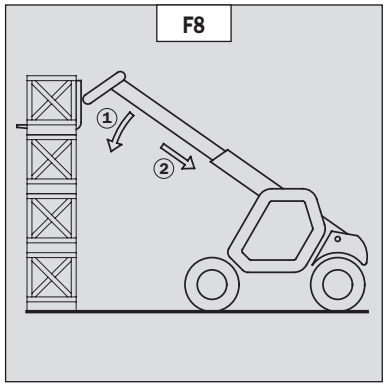
F6



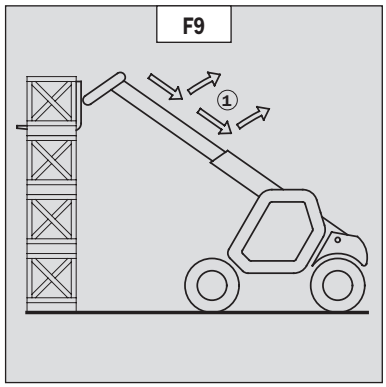
F7



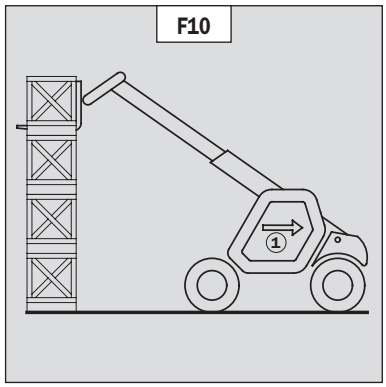
F8



F9



F10



G - TAKING UP AND LAYING A HIGH LOAD ON STABILIZERS

Depending on the model of lift truck

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

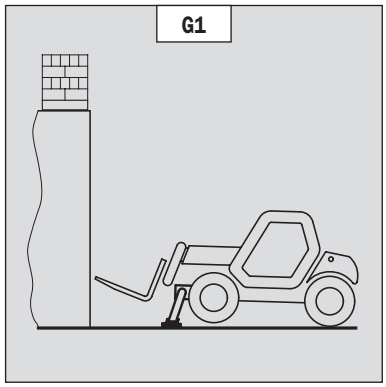
REMINDER: Make sure that the following operations can be performed with good visibility (see: OPERATIONS INSTRUCTIONS UNLADEN AND LADEN: D - VISIBILITY).

USING THE STABILIZERS

The stabilizers are used to optimise the lift truck's lifting performances (see: 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS).

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

- Set the forks in transport position in front of the elevation.
- Stay far enough away to have room for the jib to be raised.
- Put the handbrake on and put the gearshift lever into 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.



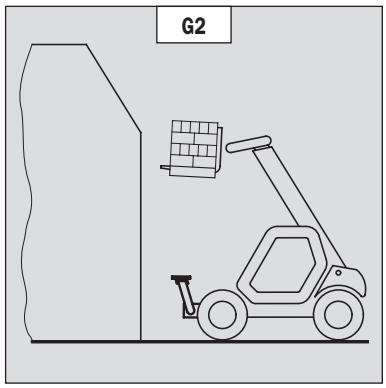
RAISE THE STABILIZERS WITH THE FORKS IN TRANSPORT POSITION (UNLADEN AND LADEN)

- Raise both stabilizers fully and at the same time.

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

This operation must be exceptional and performed with great care.

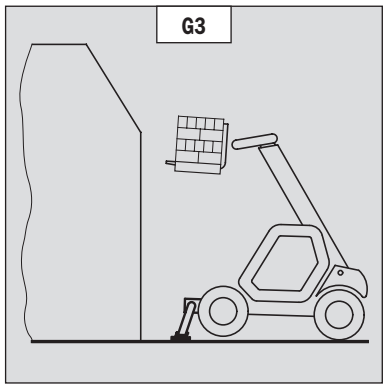
- Raise the jib and retract the telescopes completely.
- Set the lift truck in position in front of the elevation (fig. G2) moving very slowly and carefully.
- Put the handbrake on and put the gearshift lever into neutral.
- Move the stabilizers very slowly and gradually as soon as they are close to 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.

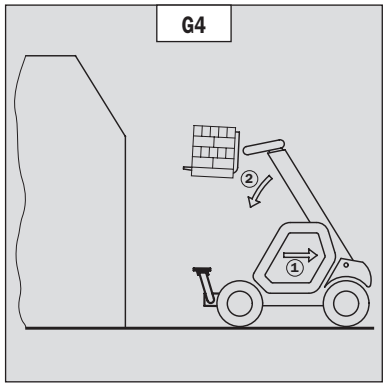


SETTING THE STABILIZERS WITH THE JIB UP (UNLADEN AND LADEN)

This operation must be exceptional and performed with great care.

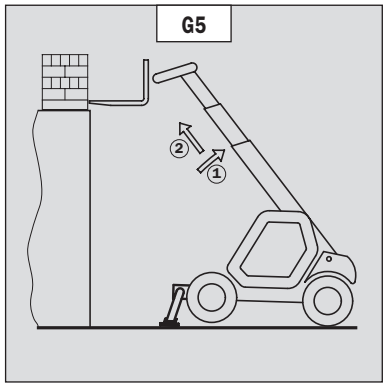
- Keep the jib up and retract the telescopes completely (fig. G3).
- Move the stabilizers very slowly and gradually as soon as they are in contact with the ground and when they leave the ground. During this operation, the transverse attitude must be permanently maintained: the bubble in the level must 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).

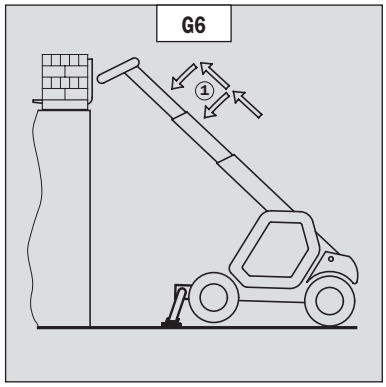


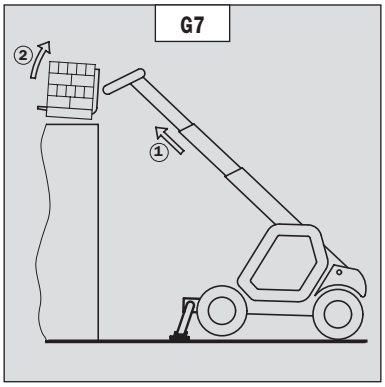


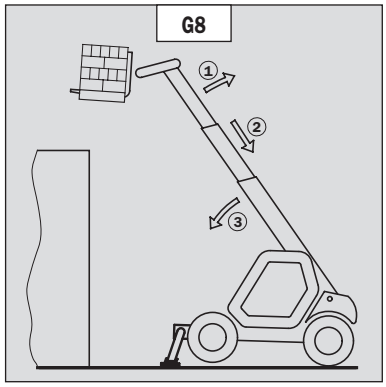
TAKING UP A HIGH LOAD ON STABILIZERS

- Make sure the forks will fit easily 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).
- Block the forks in front of the load by alternately using the controls to extend and lower 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 alarm (see: INSTRUCTIONS FOR HANDLING A LOAD: C - LONGITUDINAL STABILITY ALARM). If it is overloaded, set the load down in the place from where 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).



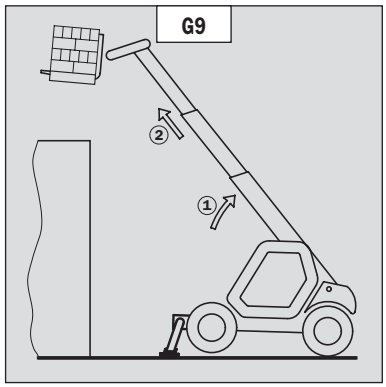


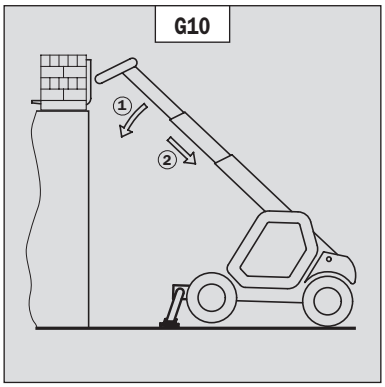


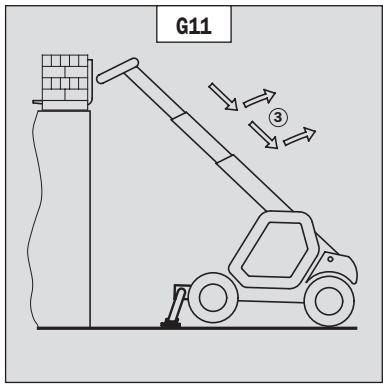


LAYING A HIGH LOAD ON STABILIZERS

- Raise and extend the jib (1) (2) until the load is above the elevation (fig. G9), while monitoring the longitudinal stability alarm (see: INSTRUCTIONS FOR HANDLING A LOAD: C - LONGITUDINAL STABILITY ALARM).
- Position the load horizontally and release it by lowering and retracting the jib (1) (2) to position the load correctly (fig. G10).
- Release 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 - TAKING UP AND LAYING DOWN A SUSPENDED LOAD

WARNING: Failure to follow the above instructions may lead the lift truck to loose 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 10 m/s.
- 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.
- Before moving the lift truck, check the longitudinal stability alarm device (see: 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS), only the green LEDs and possibly the yellow LEDs should be lit.
- During transport, the lift truck operator must be assisted by a person on the ground (standing a minimum of 3 m from the load), who will limit swinging of the load using a bar or a rope. Ensure that this person is always clearly in view.
- The lateral attitude must not exceed 5%, the bubble in the level must be kept between the two “MAX.” marks
- The longitudinal attitude must not exceed 15%, with the load facing uphill, and 10%, with the load facing downhill.
- The jib angle must not exceed 45°.
- If the first red LED of the longitudinal stability alarm device (see: 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS) comes on while travelling, gently bring the lift truck to a stop and stabilise the load. Retract the telescope to reduce the offset of the load.

Installation of the platform on the lift truck is only possible if the shields "operating the platform" of the lift truck and the platform are identical (see: 2 - DESCRIPTION: OPERATING THE PLATFORM).

A - AUTHORISATION FOR USE

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

B - SUITABILITY OF THE TRUCK FOR USE

- 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 1.25** 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 the 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 clothes suited for operating the platform, avoid loose clothes.
- Never operate the platform when hands or feet are wet or soiled with greasy substances.
- Always pay attention 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 deciding whether to wear a safety harness.
- The controls must not be used for any other than their intended purpose (e.g. getting in and out of the lift truck, coat hanger 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 operating 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 stresses are limited pressure (see: 2 - DESCRIPTION: CHARACTERISTICS).
- It is strictly forbidden to hand a load from the platform or the lift truck jib without a specially designed attachment (see: INSTRUCTIONS FOR HANDLING A LOAD: H - TAKING UP AND LAYING 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 get in or out of 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.

E - ENVIRONMENT

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

NOMINAL VOLTAGE	DISTANCE ABOVE THE GROUND OR THE FLOOR IN 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

Operation of the platform is strictly forbidden in the event of wind speeds of over 45 km/h.

- The following scale is given for an empiric evaluation of the wind speed:

BEAUFORT scale (wind speed at a height of 10 m from flat ground)						
Force	**Type of wind**	**Speed (knots)**	**Speed (kph)**	**Speed (m/s)**	**Effects on Land**	**Sea condition**
0	Calm	**0 - 1**	**0 - 1**	**< 0,3**	Smoke rises vertically.	Sea like a mirror.
1	Light air	**1 - 3**	**1 - 5**	**0,3 - 1,5**	The wind bends the smoke.	Ripples but without foam crests.
2	Light breeze	**4 - 6**	**6 - 11**	**1,6 - 3,3**	The wind can be felt on the face, shakes the leaves.	Small but evident wavelets.
3	Gentle breeze	**7 - 10**	**12 - 19**	**3,4 - 5,4**	The wind continuously shakes the leaves and twigs.	Large wavelets Perhaps scattered white horses.
4	Moderate breeze	**11 - 16**	**20 - 28**	**5,5 - 7,9**	The wind raises dust and scraps of paper, shakes the twigs.	Small waves. Fairly frequent white horses.
5	Fresh breeze	**17 - 21**	**29 - 38**	**8 - 10,7**	Leafy shrubs sway.	Small waves form on inland waters. Moderate waves, many white horses.
6	Strong breeze	**22 - 27**	**39 - 49**	**10,8 - 13,8**	Shakes thick branches, metal wires hum, it becomes difficult to keep an umbrella open.	Large waves begin to form, white foam crests, probably spray.
7	Near gale	**28 - 33**	**50 - 61**	**13,9 - 17,1**	Whole trees sway, it is difficult to walk against the wind.	Sea heaps up and white foam blown in streaks along the direction of the wind.
8	Gale	**34 - 40**	**62 - 74**	**17,2 - 20,7**	Breaks the branches of trees, it is almost impossible to walk against the wind.	Moderately high waves, crests begin to break into spindrift.
9	Strong gale	**41 - 47**	**75 - 88**	**20,8 - 24,4**	Causes slight damage to buildings (stacks, tiles, etc..).	High waves. Dense foam along the direction of the wind. Crests of waves begin to roll over. Spray may affect visibility.
10	Storm	**48 - 55**	**89 - 102**	**24,5 - 28,4**	Rare inland, uproots trees, causes considerable damage to buildings.	Very high waves with long overhanging crests. Visibility affected.
11	Violent storm	**56 - 63**	**103 - 117**	**28,5 - 32,6**	Very rare, causes extensive devastation.	Exceptionally high waves that may hide medium sized ships. Visibility affected.
12	Hurricane	**64 +**	**118 +**	**32,7 +**	Causes very serious catastrophes.	The air is filled with foam and spray. Sea completely white with driving spray. Visibility very seriously affected.

F - MAINTENANCE

Your platform must be periodically inspected to ensure its continued compliance. The inspection frequency is defined by the current legislation in the country in which the platform is used.

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.

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 button (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.).

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.

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 450 milliseconds (approx. 0.5 second) at most:
  - If the transmitter emergency stop button (50 milliseconds), or the one on the lift is pressed.
  - 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 accumulator reaches the end of its autonomy.
  - If the transmitter is switched off by turning the key button to stop.
- These protective devices are provided for the safety of personnel and property and must never be altered, removed or bypassed in any way whatsoever!
- The hand-guard frame prevents external action on a manipulator (if the transmitter falls, for example, 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.

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

MAINTENANCE INSTRUCTIONS OF THE LIFT TRUCK

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 jewellery and loose clothes. Tie and protect your hair, if necessary.
- Stop the I.C. 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.
- Make sure that the disposal of process materials and of spare parts is carried out in total safety and in a ecological way.
- Be careful of the risk of burning and splashing (exhaust, radiator, I.C. engine, etc.).

MAINTENANCE

- Perform the periodic service (see: 3 - MAINTENANCE) to keep your lift truck in good working conditions. 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 I.C. 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

- 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.

BALANCING VALVE: It is dangerous to change the setting and remove the balancing valves or safety valves which may be fitted to your lift truck cylinders. These operations must only be performed by approved personnel (consult your dealer).

The HYDRAULIC ACCUMULATORS that may be fitted on your lift truck are pressurized 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 IC engine. If the forward/reverse selector is not in neutral and the parking brake is not engaged, the lift truck may suddenly start to move.
- Do not drop metallic 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.

FOR ANY INTERVENTION OTHER THAN REGULAR MAINTENANCE, CONSULT YOUR DEALER.

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.
For these operations, we recommend the use of a MANITOU protective product, reference 603726.
Instructions for using the product are given on the packaging.

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.

PREPARING THE LIFT TRUCK

- Clean the lift truck thoroughly.
- Check and repair any leakage of fuel, oil, water or air.
- 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 (see: OPERATING INSTRUCTIONS UNLADEN AND LADEN).
- Make sure the jib cylinder rods are all in retracted position.
- Release the pressure in the hydraulic circuits.

PROTECTING THE I.C. ENGINE

- Fill the tank with fuel (see: 3 - MAINTENANCE: A - DAILY OR EVERY 10 HOURS SERVICE).
- Empty and replace the cooling liquid (see: 3 - MAINTENANCE: F - EVERY 2000 HOURS SERVICE).
- Leave the I.C. engine running at idling speed for a few minutes, then switch off.
- Replace the I.C. engine oil and oil filter (see: 3 - MAINTENANCE: D - EVERY 500 HOURS SERVICE).
- Add the protective product to the engine oil.
- Run the I.C. 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.
- Remove the injectors and spray the protective product into each cylinder for two seconds with the piston in low neutral position.
- Turn the crankshaft once slowly and refit the injectors (see I.C. engine REPAIR MANUAL).
- Remove the intake hose from the manifold or turbocharger and spray the protective product into the manifold or turbocharger.
- Cap the intake manifold or turbocharger hole with waterproof adhesive tape.
- Remove the exhaust pipe and spray the protective product into the exhaust manifold or turbocharger.
- Refit the exhaust pipe and block the outlet with waterproof adhesive tape.

NOTE: The spray time is noted on the product packaging and must be increased by 50 % for turbo engines.

- Open the filler plug, spray the protective product around the rocker arm shaft and refit the filler plug.
- Cap the fuel tank using 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 not in contact with the ground and release the handbrake.
- Protect cylinder rods which will not be retracted, from corrosion.
- Wrap the tyres.

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 the intake hose.
- Refit and reconnect the battery.
- Remove the protection from the cylinder rods.
- Perform the daily service (see: 3 - MAINTENANCE: A - DAILY OR EVERY 10 HOURS SERVICE).
- Put the handbrake on and remove the axle stands.
- Empty and replace the fuel and replace the fuel filter (see: 3 - MAINTENANCE: D - EVERY 500 HOURS SERVICE).
- Refit and set the tension in the drive belts (see: 3 - MAINTENANCE: C - EVERY 250 HOURS SERVICE).
- Turn the I.C. engine using the starter, to allow the oil pressure to rise.
- Reconnect the engine cut-off solenoid.
- Lubricate the lift truck completely (see: 3 - MAINTENANCE: SERVICING SCHEDULE).

Make sure the area is adequately ventilated before starting up the lift truck.

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

2 - DESCRIPTION

TABLE OF CONTENTS

1) DÉCLARATION «CE» DE CONFORMITÉ (originale)

« EC» DECLARATION OF CONFORMITY (original)

2) La société, The company : **MANITOU B.F.**

3) Adresse, Address : **430, rue de l'Aubinière - B.P. 10249 - 44158 - ANCENIS CEDEX - FRANCE**

4) Dossier technique,Technical file : **MANITOU B.F - 430, rue de l'Aubinière - B.P. 10249 - 44158 - ANCENIS CEDEX - FRANCE**

5) Constructeur de la machine décrite ci-après, Manufacturer of the machine described below :

MLT 634 Turbo LSU Série E-E3 / MLT 634 -120 LSU Série E-E3 / MLT 634 -120 LSU POWERSHIFT Série E-E3
MLT 731 Turbo Série E-E3
MLT 735 Turbo LSU Série 5-E3 / MLT 735 -120 LSU Série 5-E3 / MLT 735 -120 LSU POWERSHIFT Série 5-E3
MLT 741 -120 LSU Série 5-E3 / MLT 741 -120 LSU POWERSHIFT Série 5-E3
MLT 1035 L Turbo LSU Série 5-E3

6) Déclare que cette machine, Declares that this machine :

7) Est conforme aux directives suivantes et à leurs transpositions en droit national, Complies with the following directives and their transpositions into national law :

2006/42/CE

8) Pour les machines annexe IV , For annex IV machines :

9) Numéro d'attestation, Certificate number :

10) Organisme notifié, Notified body :

15) Normes harmonisées utilisées, Harmonised standards used :

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

17) Fait à, Done at : **Ancenis** 18) Date, Date : **29/12/2009**

19) Nom du signataire, Name of signatory : **Christian CALECA**

20) Fonction, Function : **Directeur Général Adjoint**

21) Signature, Signature :

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

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

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

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

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

es : 1)Declaración DE de conformidad (original), 2) La sociedad, 3) Dirección, 4) expediente técnico, 5) Constructor de la máquina descrita a continuación, 6) Declara que esta máquina, 7) Está conforme a las siguientes directivas y a sus transposiciones en derecho nacional, 8) Para las máquinas anexo IV, 9) Número de certificación, 10) Organismo notificado, 15) normas armonizadas utilizadas, 16) Otras normas o especificaciones técnicas utilizadas, 17) Hecho en, 18) Fecha, 19) Nombre del signatario, 20) Función, 21) Firma.

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

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

ga : 1) « EC »dearbhú comhréireachta (bunaidh), 2) An comhlacht, 3) Seoladh, 4) comhad teicniúil, 5) Déantóir an innill a thuairiscítear thíos, 6) Dearbhaíonn sé go bhfuil an t-inneall, 7) Go gcloíonn sé le na treoracha seo a leanas agus a trasuímh isteach i ndlí náisiúnta, 8) Le haghaidh innill an aguisín IV, 9) Uimhir teastais, 10) Comhlacht a chuireadh i bhfios, 15) caighdeáin comhchuibhithe a úsáidtear, 16) caighdeáin eile nó sonraíochtaí teicniúla a úsáidtear, 17) Déanta ag, 18) Dáta, 19) Ainm an tsínitheora, 20) Feidhm, 21) Síniú.

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

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

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

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

lv : 1) EK atbilstības deklarācija (oriģināls), 2) Uzņēmums, 3) Adrese, 4) tehniskās lietas, 5) Tālāk aprakstītās iekārtas ražotājs, 6) Apliecina, ka šī iekārta, 7) Ir atbilstoša tālāk norādītajām direktīvām un to transpozīcijai nacionālajā likumdošanā, 8) Iekārtām IV pielikumā, 9) Apliecības numurs, 10) Reģistrētā organizācija, 15) lietotajiem saskaņotajiem standartiem, 16) lietotajiem tehniskajiem standartiem un specifikācijām, 17) Sastādīts, 18) Datums, 19) Parakstītāja vārds, 20) Amats, 21) Paraksts.

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

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

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

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

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

ro : 1) Declaraţie de conformitate CE (originală), 2) Societatea, 3) Adresa, 4) cărtii tehnice, 5) Constructor al maşinii descrise mai jos, 6) Declară că prezenta maşină, 7) Este conformă cu directivele următoare şi cu transpunerea lor în dreptul naţional, 8) Pentru maşinile din anexa IV, 9) Număr de atestare, 10) Organism notificat, 15) standardele armonizate utilizate, 16) alte standarde si specificatii tehnice utilizate, 17) Întocmit la, 18) Data, 19) Numele persoanei care semnează, 20) Funcţia, 21) Semnătura.

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

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

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

IDENTIFICATION OF THE LIFT TRUCK

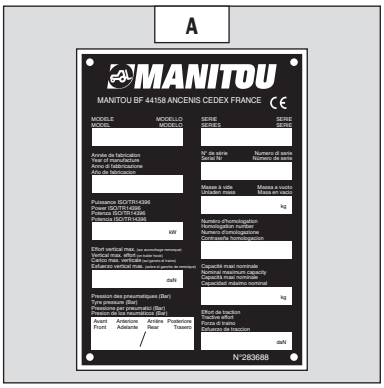
As our policy is to promote a constant improvement of our products, our range of telescopic lift trucks may undergo certain modifications, without obligation for us to advise our customers.

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 (FIG. A)

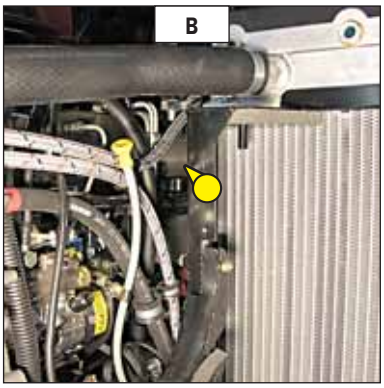
- Model .....
- Series .....
- Serial Nr .....
- Chassis Nr .....
- Year of manufacture .....



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

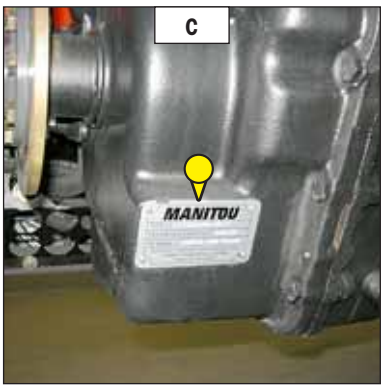
I.C. ENGINE (FIG. B)

- I.C. engine Nr .....



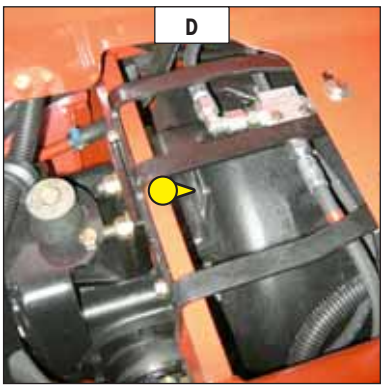
GEAR BOX (FIG. C)

- Type .....
- MANITOU reference .....
- Serial Nr .....



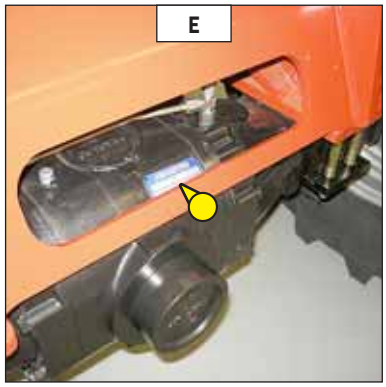
ANGLE GEARBOX (FIG. D)

- Type .....
- MANITOU reference .....
- Serial Nr .....



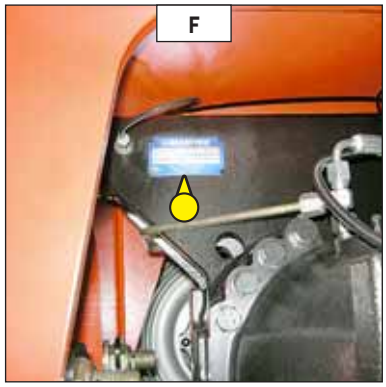
FRONT AXLE (FIG. E)

- Type .....
- Serial Nr .....
- MANITOU reference .....



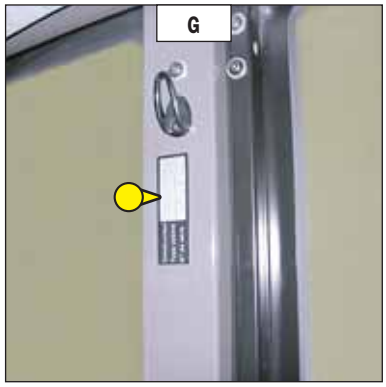
REAR AXLE (FIG. F)

- Type .....
- Serial Nr .....
- MANITOU reference .....



CAB (FIG. G)

- Type .....
- Serial Nr .....



BOOM (FIG. H)

- MANITOU reference .....
- Date of manufacture .....

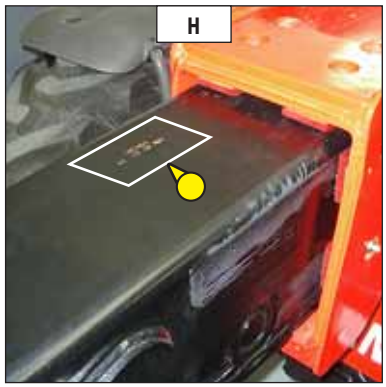
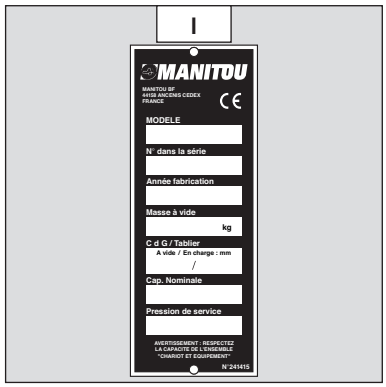


PLATE MANUFACTURER OF THE ATTACHMENT (FIG. I)

- Model .....
- Serial Nr .....
- Year of manufacture .....



CHARACTERISTICS

MT 728 Série D-E3

I.C. ENGINE		
Type		
Fuel		
Number of cylinders		
Suction		
Injection system		
Ignition sequence		
Capacity	cm3	
Bore and stroke	mm	
Compression ratio		
Nominal rating loaded	rpm	
Rating slow unladen	rpm	
Max. rating unladen	rpm	
Power ISO/TR 14396	cv- kW	
Power SAE J 1995	cv- kW	
Maximum torque ISO/TR 14396	Nm	
Air cleaner	µm	
Type of cooling		
Fan		

TRANSMISSION		
Gear box		
Type		
Forward/reverse selector		
Torque converter		
Number of forward speeds		
Number of reverse speeds		
Angle gear box		
Front axle		
Differential		
Rear axle		
Differential		
Drive wheels		
Switch for 2/4 drive wheels		
Front tyres		
Size		
Pressure	bar	
Rear tyres		
Size		
Pressure	bar	

ELECTRIC CIRCUIT		
Battery	Standard	
	Option	
Alternator		
Type		
Starter		
Type		

BRAKE CIRCUIT		
Service brake		
Type of brake		
Type of control		
Parking brake		
Type of brake		
Type of control		

SOUND AND VIBRATION		
Level of sound pressure in the driver's cab LpA (according to standard NF EN 12053)	dB	
Level of sound power ensured in the LwA environment (according to directive 2000/14/EC modified by directive 2005/88/EC)	dB	
Average weighted acceleration on driver's body (according to standard NF EN 13059)	m/s2	
The average weighted acceleration transmitted to the driver's hand/arm system (according to standard ISO 5349-2)	m/s2	

HYDRAULIC CIRCUIT			
Hydraulic pump			
Type			
Capacity		cm3	
Max. rating capacity unladen		l/mn	
Flow rate at 1600 rpm		l/mn	
Filtration			
Return		µm	
Suction		µm	
Maximum service pressure		bar	
Telescoping circuit		bar	
Lifting circuit		bar	
Tilt circuit		bar	
Attachment circuit		bar	
Steering circuit		bar	

HYDRAULIC MOVEMENTS			
Longitudinal stability alarm device			
Lifting motions (boom retracted)			
Unladen lifting		s - m/mn	
Laden lifting		s - m/mn	
Unladen lowering		s - m/mn	
Laden lowering		s - m/mn	
Telescoping motions (boom raised)			
Unladen extending		s - m/mn	
Laden extending		s - m/mn	
Unladen retracting		s - m/mn	
Laden retracting		s - m/mn	
Tilting movements			
Unladen digging		s - °/s	
Forward tilting unladen		s - °/s	

SPECIFICATIONS AND WEIGHTS			
Speed of movement for lift truck in standard configuration on flat ground (except particular conditions)			
Front unladen	1	km/h	
	2	km/h	
	3	km/h	
	4	km/h	
Rear unladen	1	km/h	
	2	km/h	
	3	km/h	
	4	km/h	
Standard attachment			
Weight of equipment		kg	
Weight of forks (each one)		kg	
Rated capacity with standard attachment		kg	
Tipping load at maximum reach on tyres		kg	
Distance from the centre of gravity from the load to the lug of the forks		mm	
Standard lifting height		mm	
Lift truck weight without attachment		kg	
Lift truck weight with standard attachment			
Unladen		kg	
At rated load		kg	
Weight per axle with standard attachment (transport position)			
Front unladen		kg	
Rear unladen		kg	
Front rated load		kg	
Rear rated load		kg	
Weight per axle with standard attachment (boom extended)			
Front rated load		kg	
Rear rated load		kg	
Contact pressure on the ground for the whole surface of each stabilizer at maximum load when tilting		kg/cm2	
Drag strain on the coupling hook			
Unladen (sliding)		daN	
At rated load (transmission setting)		daN	
Pull strain with open carrier (according to standard ISO 8313)		daN	

CHARACTERISTICS

MT 732 Série D-E3

I.C. ENGINE		
Type		PERKINS 1104D-44T NL38857
Fuel		Diesel
Number of cylinders		4 in line
Suction		Turbocharged
Injection system		Direct
Ignition sequence		1,3,4,2
Capacity	cm3	4400
Bore and stroke	mm	105 x 127
Compression ratio		18,2:1
Nominal rating loaded	rpm	2200
Rating slow unladen	rpm	930
Max. rating unladen	rpm	2380
Power ISO/TR 14396	cv- kW	95 - 70
Power SAE J 1995	cv- kW	95 - 70
Maximum torque ISO/TR 14396	Nm	392 to 1400 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		MICHELIN
Size		400-80 - 24 156A8 IND TL PCL
Pressure	bar	3
Rear tyres		MICHELIN
Size		400-80 - 24 156A8 IND TL PCL
Pressure	bar	3

ELECTRIC CIRCUIT		
Battery	Standard	12 V - 110 Ah - 750 A EN
	Option	12 V - 145 Ah - 1000 A EN
Alternator		12 V - 85 A
Type		Denso Ai115
Starter		12 V - 3,2 kW
Type		AZE

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		
Level of sound pressure in the driver's cab LpA (according to standard NF EN 12053)	dB	78
Level of sound power ensured in the LwA environment (according to directive 2000/14/EC modified by directive 2005/88/EC)	dB	104 (measured) 105 (ensured)
Average weighted acceleration on driver's body (according to standard NF EN 13059)	m/s2	
The average weighted acceleration transmitted to the driver's hand/arm system (according to standard ISO 5349-2)	m/s2	< 2,5

HYDRAULIC CIRCUIT			
Hydraulic pump			
Type		Gear type with flow divider	
Capacity	cm3	1st chamber	2nd chamber
Max. rating capacity unladen	l/mn	22	22
Flow rate at 1600 rpm	l/mn	52	52
Filtration		35	35
Return	µm		
Suction	µm	15	15
Maximum service pressure	bar	125	125
Telescoping circuit	bar	250	
Lifting circuit	bar	190 / 250	
Tilt circuit	bar	250 / 250	
Attachment circuit	bar	250 / 190	
Steering circuit	bar	250	
Circuit direction	bar	140	

HYDRAULIC MOVEMENTS		
Longitudinal stability alarm device		Electronic
Lifting motions (boom retracted)		
Unladen lifting	s - m/mn	7,2 - 37,6
Laden lifting	s - m/mn	7,2 - 37,6
Unladen lowering	s - m/mn	5,5 - 49,2
Laden lowering	s - m/mn	5,8 - 46,6
Telescoping motions (boom raised)		
Unladen extending	s - m/mn	6,5 - 24,9
Laden extending	s - m/mn	6,5 - 24,9
Unladen retracting	s - m/mn	5,4 - 30,0
Laden retracting	s - m/mn	5,9 - 27,5
Tilting movements		
Unladen digging	s - °/s	2,9 - 43,3
Forward tilting unladen	s - °/s	2,8 - 44,9

SPECIFICATIONS AND WEIGHTS			
Speed of movement for lift truck in standard configuration on flat ground (except particular conditions)			
Front unladen	1	km/h	4,4
	2	km/h	7,1
	3	km/h	15,0
	4	km/h	26,7
Rear unladen	1	km/h	4,4
	2	km/h	7,1
	3	km/h	15,0
	4	km/h	26,7
Standard attachment			TFF
Weight of equipment		kg	165
Weight of forks (each one)		kg	67,5
Rated capacity with standard attachment		kg	3200
Tipping load at maximum reach on tyres		kg	1620
Distance from the centre of gravity from the load to the lug of the forks		mm	500
Standard lifting height		mm	6900
Lift truck weight without attachment		kg	7030
Lift truck weight with standard attachment			
Unladen		kg	7330
At rated load		kg	10530
Weight per axle with standard attachment (transport position)			
Front unladen		kg	3160
Rear unladen		kg	4170
Front rated load		kg	9060
Rear rated load		kg	1470
Weight per axle with standard attachment (boom extended)			
Front rated load		kg	7830
Rear rated load		kg	750
Contact pressure on the ground for the whole surface of each stabilizer at maximum load when tilting		kg/cm2	-
Drag strain on the coupling hook			
Unladen (sliding)		daN	6155
At rated load (transmission setting)		daN	9280
Pull strain with open carrier (according to standard ISO 8313)		daN	7400

CHARACTERISTICS

MT 928 Série D-E3

I.C. ENGINE		
Type		
Fuel		
Number of cylinders		
Suction		
Injection system		
Ignition sequence		
Capacity	cm3	
Bore and stroke	mm	
Compression ratio		
Nominal rating loaded	rpm	
Rating slow unladen	rpm	
Max. rating unladen	rpm	
Power ISO/TR 14396	cv- kW	
Power SAE J 1995	cv- kW	
Maximum torque ISO/TR 14396	Nm	
Air cleaner	µm	
Type of cooling		
Fan		

TRANSMISSION		
Gear box		
Type		
Forward/reverse selector		
Torque converter		
Number of forward speeds		
Number of reverse speeds		
Angle gear box		
Front axle		
Differential		
Rear axle		
Differential		
Drive wheels		
Switch for 2/4 drive wheels		
Front tyres		
Size		
Pressure	bar	
Rear tyres		
Size		
Pressure	bar	

ELECTRIC CIRCUIT		
Battery	Standard	
	Option	
Alternator		
Type		
Starter		
Type		

BRAKE CIRCUIT		
Service brake		
Type of brake		
Type of control		
Parking brake		
Type of brake		
Type of control		

SOUND AND VIBRATION		
Level of sound pressure in the driver's cab LpA (according to standard NF EN 12053)	dB	
Level of sound power ensured in the LwA environment (according to directive 2000/14/EC modified by directive 2005/88/EC)	dB	
Average weighted acceleration on driver's body (according to standard NF EN 13059)	m/s2	
The average weighted acceleration transmitted to the driver's hand/arm system (according to standard ISO 5349-2)	m/s2	

HYDRAULIC CIRCUIT		
Hydraulic pump		
Type		
Capacity	cm3	
Max. rating capacity unladen	l/mn	
Flow rate at 1600 rpm	l/mn	
Filtration		
Return	µm	
Suction	µm	
Maximum service pressure	bar	
Telescoping circuit	bar	
Lifting circuit	bar	
Tilt circuit	bar	
Attachment circuit	bar	
Steering circuit	bar	

HYDRAULIC MOVEMENTS		
Longitudinal stability alarm device		
Lifting motions (boom retracted)		
Unladen lifting	s - m/mn	
Laden lifting	s - m/mn	
Unladen lowering	s - m/mn	
Laden lowering	s - m/mn	
Telescoping motions (boom raised)		
Unladen extending	s - m/mn	
Laden extending	s - m/mn	
Unladen retracting	s - m/mn	
Laden retracting	s - m/mn	
Tilting movements		
Unladen digging	s - °/s	
Forward tilting unladen	s - °/s	

SPECIFICATIONS AND WEIGHTS			
Speed of movement for lift truck in standard configuration on flat ground (except particular conditions)			
Front unladen	1	km/h	
	2	km/h	
	3	km/h	
	4	km/h	
Rear unladen	1	km/h	
	2	km/h	
	3	km/h	
	4	km/h	
Standard attachment			
Weight of equipment		kg	
Weight of forks (each one)		kg	
Rated capacity with standard attachment		kg	
Tipping load at maximum reach on tyres		kg	
Distance from the centre of gravity from the load to the lug of the forks		mm	
Standard lifting height		mm	
Lift truck weight without attachment		kg	
Lift truck weight with standard attachment			
Unladen		kg	
At rated load		kg	
Weight per axle with standard attachment (transport position)			
Front unladen		kg	
Rear unladen		kg	
Front rated load		kg	
Rear rated load		kg	
Weight per axle with standard attachment (boom extended)			
Front rated load		kg	
Rear rated load		kg	
Contact pressure on the ground for the whole surface of each stabilizer at maximum load when tilting		kg/cm2	
Drag strain on the coupling hook			
Unladen (sliding)		daN	
At rated load (transmission setting)		daN	
Pull strain with open carrier (according to standard ISO 8313)		daN	

CHARACTERISTICS

MT 932 Série D-E3

I.C. ENGINE		
Type		PERKINS 1104D-44T NL38857
Fuel		Diesel
Number of cylinders		4 in line
Suction		Turbocharged
Injection system		Direct
Ignition sequence		1,3,4,2
Capacity	cm3	4400
Bore and stroke	mm	105 x 127
Compression ratio		18,2:1
Nominal rating loaded	rpm	2200
Rating slow unladen	rpm	930
Max. rating unladen	rpm	2380
Power ISO/TR 14396	cv- kW	95 - 70
Power SAE J 1995	cv- kW	95 - 70
Maximum torque ISO/TR 14396	Nm	392 to 1400 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		MICHELIN
Size		400-80 - 24 156A8 IND TL PCL
Pressure	bar	3
Rear tyres		MICHELIN
Size		400-80 - 24 156A8 IND TL PCL
Pressure	bar	3

ELECTRIC CIRCUIT		
Battery	Standard	12 V - 110 Ah - 750 A EN
	Option	12 V - 145 Ah - 1000 A EN
Alternator		12 V - 85 A
Type		Denso Ai115
Starter		12 V - 3,2 kW
Type		AZE

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		
Level of sound pressure in the driver's cab LpA (according to standard NF EN 12053)	dB	77
Level of sound power ensured in the LwA environment (according to directive 2000/14/EC modified by directive 2005/88/EC)	dB	104 (measured) 105 (ensured)
Average weighted acceleration on driver's body (according to standard NF EN 13059)	m/s2	
The average weighted acceleration transmitted to the driver's hand/arm system (according to standard ISO 5349-2)	m/s2	< 2,5

HYDRAULIC CIRCUIT			
Hydraulic pump			
Type		Gear pump with flow divider	
		1st casing	2nd casing
Capacity	cm3	22	22
Max. rating capacity unladen	l/mn	52	52
Flow rate at 1600 rpm	l/mn	35	35
Filtration			
Return	µm	15	15
Suction	µm	125	125
Maximum service pressure	bar	250	
Telescoping circuit	bar	190 / 250	
Lifting circuit	bar	250 / 250	
Tilt circuit	bar	250 / 190	
Attachment circuit	bar	250	
Steering circuit	bar	140	

HYDRAULIC MOVEMENTS		
Longitudinal stability alarm device		Electronic
Lifting motions (boom retracted)		
Unladen lifting	s - m/mn	7,15 - 37,4
Laden lifting	s - m/mn	11,2 - 23,3
Unladen lowering	s - m/mn	5,2 - 51,5
Laden lowering	s - m/mn	5,3 - 50,5
Telescoping motions (boom raised)		
Unladen extending	s - m/mn	12,1 - 12,7
Laden extending	s - m/mn	12,3 - 12,9
Unladen retracting	s - m/mn	9,4 - 16,6
Laden retracting	s - m/mn	9,1 - 17,1
Tilting movements		
Unladen digging	s - °/s	2,7 - 46,5
Forward tilting unladen	s - °/s	2,6 - 48,3

SPECIFICATIONS AND WEIGHTS			
Speed of movement for lift truck in standard configuration on flat ground (except particular conditions)			
Front unladen	1	km/h	4,4
	2	km/h	7,1
	3	km/h	15,0
	4	km/h	25
Rear unladen	1	km/h	4,4
	2	km/h	7,1
	3	km/h	15,0
	4	km/h	25,0
Standard attachment			TFF
Weight with forks		kg	165
Weight of forks (each one)		kg	67,5
Rated capacity with standard attachment		kg	3200
Tipping load at maximum reach on tyres		kg	673
Distance from the centre of gravity from the load to the lug of the forks		mm	500
Standard lifting height		mm	9000
Lift truck weight without attachment		kg	7455
Lift truck weight with standard attachment			
Unladen		kg	7755
At rated load		kg	10955
Weight per axle with standard attachment (transport position)			
Front unladen		kg	3160
Rear unladen		kg	4420
Front rated load		kg	9195
Rear rated load		kg	1760
Weight per axle with standard attachment (boom extended)			
Front rated load		kg	7655
Rear rated load		kg	600
Contact pressure on the ground for the whole surface of each stabilizer at maximum load when tilting		kg/cm2	-
Drag strain on the coupling hook			
Unladen (sliding)		daN	6320
At rated load (transmission setting)		daN	9240
Pull strain with open carrier (according to standard ISO 8313)		daN	7400

CHARACTERISTICS

MT 1030 S Série 4-E3

I.C. ENGINE		
Type		PERKINS 1104D-44T NL38857
Fuel		Diesel
Number of cylinders		4 in line
Suction		Turbocharged
Injection system		Direct
Ignition sequence		1,3,4,2
Capacity	cm3	4400
Bore and stroke	mm	105 x 127
Compression ratio		18,2:1
Nominal rating loaded	rpm	2200
Rating slow unladen	rpm	930
Max. rating unladen	rpm	2380
Power ISO/TR 14396	cv- kW	95 - 70
Power SAE J 1995	cv- kW	95 - 70
Maximum torque ISO/TR 14396	Nm	392 to 1400 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		MICHELIN
Size		400-80 - 24 156A8 IND TL PCL
Pressure	bar	3,4
Rear tyres		MICHELIN
Size		400-80 - 24 156A8 IND TL PCL
Pressure	bar	3,4

ELECTRIC CIRCUIT		
Battery	Standard	12 V - 110 Ah - 750 A EN
	Option	12 V - 145 Ah - 1000 A EN
Alternator		12 V - 85 A
Type		Denso Ai115
Starter		12 V - 3,2 kW
Type		AZE

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		
Level of sound pressure in the driver's cab LpA (according to standard NF EN 12053)	dB	78
Level of sound power ensured in the LwA environment (according to directive 2000/14/EC modified by directive 2005/88/EC)	dB	104 (measured) 105 (ensured)
Average weighted acceleration on driver's body (according to standard NF EN 13059)	m/s2	
The average weighted acceleration transmitted to the driver's hand/arm system (according to standard ISO 5349-2)	m/s2	< 2,5

HYDRAULIC CIRCUIT			
Hydraulic pump			
Type		Gear pump with flow divider	
		1st casing	2nd casing
Capacity	cm3	22	22
Max. rating capacity unladen	l/mn	52	52
Flow rate at 1600 rpm	l/mn	35	35
Filtration			
Return	µm	15	15
Suction	µm	125	125
Maximum service pressure	bar	250	
Telescoping circuit	bar	190 / 250	
Lifting circuit	bar	250 / 250	
Tilt circuit	bar	250 / 190	
Stabilizer circuit	bar	250	
Attachment circuit	bar	250	
Steering circuit	bar	140	

HYDRAULIC MOVEMENTS		
Longitudinal stability alarm device		Electronic
Lifting motions (boom retracted)		
Unladen lifting	s - m/mn	6,8 - 41,3
Laden lifting	s - m/mn	7,5 - 37,5
Unladen lowering	s - m/mn	5,3 - 53,0
Laden lowering	s - m/mn	5,2 - 54,0
Telescoping motions (boom raised)		
Unladen extending	s - m/mn	13,5 - 12,7
Laden extending	s - m/mn	13,5 - 12,7
Unladen retracting	s - m/mn	9,2 - 18,6
Laden retracting	s - m/mn	9,5 - 18,0
Tilting movements		
Unladen digging	s - °/s	2,8 - 44,9
Forward tilting unladen	s - °/s	2,5 - 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	4,4
	2	km/h	7,1
	3	km/h	15,0
	4	km/h	26,7
Rear unladen	1	km/h	4,4
	2	km/h	7,1
	3	km/h	15,0
	4	km/h	26,7
Standard attachment			TFF
Weight with forks		kg	165
Weight of forks (each one)		kg	67,5
Rated capacity with standard attachment		kg	3000
Tipping load at maximum reach on stabilisers		kg	1160
Distance from the centre of gravity from the load to the lug of the forks		mm	500
Standard lifting height		mm	9640
Lift truck weight without attachment		kg	7195
Lift truck weight with standard attachment			
Unladen		kg	7495
At rated load		kg	10495
Weight per axle with standard attachment (transport position)			
Front unladen		kg	4115
Rear unladen		kg	3380
Front rated load		kg	9515
Rear rated load		kg	980
Weight per axle with standard attachment (boom extended)			
Front rated load		kg	7045
Rear rated load		kg	570
Contact pressure on the ground for the whole surface of each stabilizer at maximum load when tilting		kg/cm2	-
Drag strain on the coupling hook			
Unladen (sliding)		daN	6370
At rated load (transmission setting)		daN	8830
Pull strain with open carrier (according to standard ISO 8313)		daN	5330

CHARACTERISTICS

MT 1030 S Turbo Série 4-E3

I.C. ENGINE		
Type		PERKINS 1104D-44TA NM38858
Fuel		Diesel
Number of cylinders		4 in line
Suction		Turbocharged
Injection system		Direct
Ignition sequence		1,3,4,2
Capacity	cm3	4400
Bore and stroke	mm	105 x 127
Compression ratio		18,2:1
Nominal rating loaded	rpm	2200
Rating slow unladen	rpm	930
Max. rating unladen	rpm	2400
Power ISO/TR 14396	cv- kW	101 - 74,5
Power SAE J 1995	cv- kW	101 - 74,5
Maximum torque ISO/TR 14396	Nm	410 to 1400 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		MICHELIN
Size		400-80 - 24 156A8 IND TL PCL
Pressure	bar	3,4
Rear tyres		MICHELIN
Size		400-80 - 24 156A8 IND TL PCL
Pressure	bar	3,4

ELECTRIC CIRCUIT		
Battery	Standard	12 V - 110 Ah - 750 A EN
	Option	12 V - 145 Ah - 1000 A EN
Alternator		12 V - 85 A
Type		Denso Ai115
Starter		12 V - 3,2 kW
Type		AZE

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		
Level of sound pressure in the driver's cab LpA (according to standard NF EN 12053)	dB	76
Level of sound power ensured in the LwA environment (according to directive 2000/14/EC modified by directive 2005/88/EC)	dB	104 (measured) 105 (ensured)
Average weighted acceleration on driver's body (according to standard NF EN 13059)	m/s2	
The average weighted acceleration transmitted to the driver's hand/arm system (according to standard ISO 5349-2)	m/s2	< 2,5

HYDRAULIC CIRCUIT			
Hydraulic pump			
Type		Gear pump with flow divider	
		1st casing	2nd casing
Capacity	cm3	22	22
Max. rating capacity unladen	l/mn	53	53
Flow rate at 1600 rpm	l/mn	35	35
Filtration			
Return	µm	15	15
Suction	µm	125	125
Maximum service pressure	bar	250	
Telescoping circuit	bar	190 / 250	
Lifting circuit	bar	250 / 250	
Tilt circuit	bar	250 / 190	
Stabilizer circuit	bar	250	
Attachment circuit	bar	250	
Steering circuit	bar	140	

HYDRAULIC MOVEMENTS		
Longitudinal stability alarm device		Electronic
Lifting motions (boom retracted)		
Unladen lifting	s - m/mn	6,7 - 41,9
Laden lifting	s - m/mn	8,5 - 33,1
Unladen lowering	s - m/mn	5,4 - 52,0
Laden lowering	s - m/mn	5,5 - 51,1
Telescoping motions (boom raised)		
Unladen extending	s - m/mn	13,6 - 12,6
Laden extending	s - m/mn	13,6 - 12,6
Unladen retracting	s - m/mn	8,7 - 19,7
Laden retracting	s - m/mn	8,4 - 20,4
Tilting movements		
Unladen digging	s - °/s	2,7 - 46,5
Forward tilting unladen	s - °/s	2,3 - 54,6

SPECIFICATIONS AND WEIGHTS			
Speed of movement for lift truck in standard configuration on flat ground (except particular conditions)			
Front unladen	1	km/h	4,4
	2	km/h	7,1
	3	km/h	15,0
	4	km/h	26,7
Rear unladen	1	km/h	4,4
	2	km/h	7,1
	3	km/h	15,0
	4	km/h	26,7
Standard attachment			TFF
Weight with forks		kg	165
Weight of forks (each one)		kg	67,5
Rated capacity with standard attachment		kg	3000
Tipping load at maximum reach on stabilisers		kg	1160
Distance from the centre of gravity from the load to the lug of the forks		mm	500
Standard lifting height		mm	9640
Lift truck weight without attachment		kg	7225
Lift truck weight with standard attachment			
Unladen		kg	7525
At rated load		kg	10525
Weight per axle with standard attachment (transport position)			
Front unladen		kg	4145
Rear unladen		kg	3380
Front rated load		kg	9605
Rear rated load		kg	920
Weight per axle with standard attachment (boom extended)			
Front rated load		kg	7125
Rear rated load		kg	520
Contact pressure on the ground for the whole surface of each stabilizer at maximum load when tilting		kg/cm2	-
Drag strain on the coupling hook			
Unladen (sliding)		daN	6340
At rated load (transmission setting)		daN	9100
Pull strain with open carrier (according to standard ISO 8313)		daN	5330

FRONT AND REAR TIRES

		PRESSURE (bar) / TYRE LOAD (kg)	MT 728 Série D-E3	MT 732 Série D-E3	MT 928 Série D-E3	MT 932 Série D-E3	MT 1030 S Série 4-E3	MT 1030 S Turbo Série 4-E3
MICHELIN	460/70R24 XMCL 159A8 TUBELESS	**PRESSURE**		**3,4**		**3,4**	**3,4**	**3,4**
		Front unladen		1600		1650	2050	2050
		Front laden		4550		4600	4750	4800
		Rear unladen		2100		2200	1700	1700
		Rear laden		750		900	500	450
	400/80-24 156A8 IND POWER CL TUBELESS	**PRESSURE**		**2,7**		**2,8**	**3**	**3**
		Front unladen		1600		1650	2050	2050
		Front laden		4550		4600	4750	4800
		Rear unladen		2100		2200	1700	1700
		Rear laden		750		900	500	450
	15,5R25 XHA TUBELESS	**PRESSURE**		**3,5**		**3,5**	**3,5**	**3,5**
		Front unladen		1600		1650	2050	2050
		Front laden		4550		4600	4750	4800
		Rear unladen		2100		2200	1700	1700
		Rear laden		750		900	500	450
DUNLOP	14,9-24 T35 STABILARGE 18PR	**PRESSURE**		**3,4**		**3,4**	**3,4**	**3,4**
		Front unladen		1600		1650	2050	2050
		Front laden		4550		4600	4750	4800
		Rear unladen		2100		2200	1700	1700
		Rear laden		750		900	500	450
	400/70-20 T37 150B 14PR TUBELESS	**PRESSURE**		**3,25**		**3,25**	**3,3**	**3,3**
		Front unladen		1600		1650	2050	2050
		Front laden		4550		4600	4750	4800
		Rear unladen		2100		2200	1700	1700
		Rear laden		750		900	500	450
	405/70-24 MPT SPT9 158A2-152J TUBELESS	**PRESSURE**		**5**				
		Front unladen		1600				
		Front laden		4550				
		Rear unladen		2100				
		Rear laden		750				
GOODYEAR	15,5/80-24 SGI 12PR TUBELESS	**PRESSURE**		**4**		**4**	**4**	**4**
		Front unladen		1600		1650	2050	2050
		Front laden		4550		4600	4750	4800
		Rear unladen		2100		2200	1700	1700
		Rear laden		750		900	500	450
	460/70R24 IT520 152A8 TUBELESS	**PRESSURE**		**3,3**		**3,3**	**3,3**	**3,3**
		Front unladen		1600		1650	2050	2050
		Front laden		4550		4600	4750	4800
		Rear unladen		2100		2200	1700	1700
		Rear laden		750		900	500	450
	445/70R24 MPT IT510 151G TUBELESS	**PRESSURE**		**4,1**		**4,1**	**4,1**	**4,1**
		Front unladen		1600		1650	2050	2050
		Front laden		4550		4600	4750	4800
		Rear unladen		2100		2200	1700	1700
		Rear laden		750		900	500	450
	15,5-25 SGL DL 2A 12PR TUBELESS	**PRESSURE**		**3**		**3,25**		
		Front unladen		1600		1650		
		Front laden		4550		4600		
		Rear unladen		2100		2200		
		Rear laden		750		900		
ALLIANCE	18-19,5 I224 16PR TUBELESS	**PRESSURE**		**5**		**5**	**5**	**5**
		Front unladen		1600		1650	2050	2050
		Front laden		4550		4600	4750	4800
		Rear unladen		2100		2200	1700	1700
		Rear laden		750		900	500	450
GALAXY	13,00x24 14PR L-2 TUBELESS	**PRESSURE**		**3,15**				
		Front unladen		1600				
		Front laden		4550				
		Rear unladen		2100				
		Rear laden		750				

		PRESSURE (bar)	LOAD (kg)	PRESSURE ON THE CONTACT SURFACE (kg/cm2)		AREA OF THE CONTACT SURFACE (cm2)	
				HARD SOIL	LOOSE SOIL	HARD SOIL	LOOSE SOIL
MICHELIN	460/70R24 XMCL 159A8 TUBELESS	3,4	450	1,35	0,37	406	1438
			500	1,38	0,39	424	1457
			750	1,51	0,50	511	1550
			900	1,59	0,56	564	1605
			1600	1,96	0,85	809	1866
			1650	1,99	0,87	827	1885
			1700	2,01	0,89	843	1903
			2050	2,16	1,00	947	2033
			2100	2,18	1,02	962	2051
			2200	2,22	1,05	992	2088
			4550	2,90	1,53	1568	2962
			4600	2,91	1,54	1580	2961
			4750	2,95	1,57	1617	3027
			4800	2,97	1,58	1629	3055
	400/80-24 156A8 IND POWER CL TUBELESS	3	750				
			900				
			1600				
			1650				
			2100				
			2200				
			4550				
			4600				
		3,4	450				
			500				
			1700				
			2050				
			4750				
			4800				
	15,5R25 XHA TUBELESS	3,5	450	3,88	2,21	134	226
			500	3,91	2,23	143	244
			750	4,11	2,29	186	332
			900	4,23	2,33	212	385
			1600	4,77	2,52	334	632
			1650	4,81	2,54	343	650
			1700	4,84	2,55	351	667
			2050	4,98	2,60	412	789
			2100	5,00	2,60	419	806
			2200	5,04	2,62	436	841
			4550	5,65	2,92	805	1558
			4600	5,66	2,92	813	1573
			4750	5,70	2,94	837	1619
			4800	5,71	2,95	844	1634

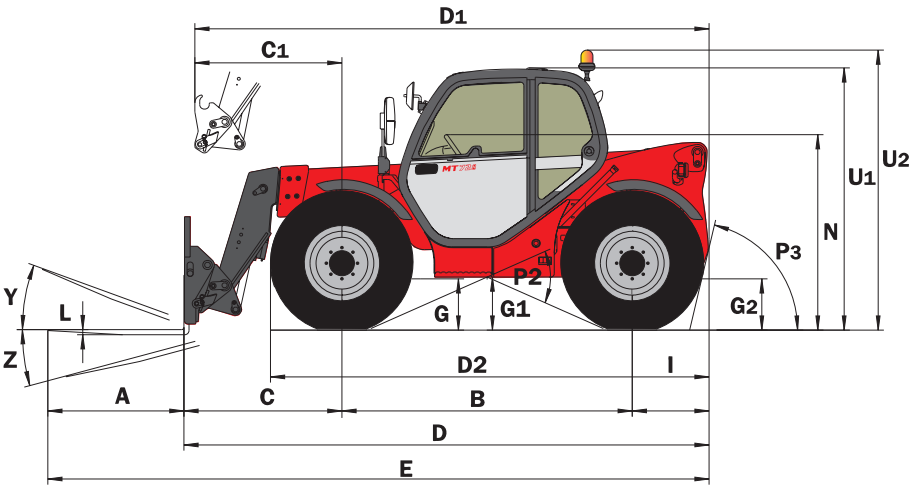
		PRESSURE (bar)	LOAD (kg)	PRESSURE ON THE CONTACT SURFACE (kg/cm2)		AREA OF THE CONTACT SURFACE (cm2)	
				HARD SOIL	LOOSE SOIL	HARD SOIL	LOOSE SOIL
DUNLOP	14,9X24 T35 STABILARGE 18PR	3,4	450	4,15	1,42	111	325
			500	4,22	1,45	120	350
			750	4,55	1,58	165	475
			900	4,79	1,66	187	540
			1600	5,71	1,98	280	810
			1650	5,69	1,99	290	830
			1700	5,74	2,00	296	848
			2050	6,21	2,14	330	960
			2100	6,27	2,16	335	970
			2200	6,47	2,22	340	990
			4550	9,38	3,12	485	1460
			4600	9,42	3,13	488	1470
			4750	9,54	3,17	498	1500
			4800	9,58	3,18	502	1510
	400/70-20 T37 150B 14PR TUBELESS	3,25	750				
			900				
			1600				
			1650				
			2100				
			2200				
			4550				
			4600				
		3,3	450	5,26	1,68	88	275
			500	5,38	1,72	94	295
			1700	7,39	2,37	230	716
			2050	7,74	2,48	265	825
			4750	10,72	3,37	443	1410
			4800	10,76	3,38	447	1420
	405/70-24 MPT SPT9 158A2/152J TUBELESS	5	750				
			1600				
			2100				
			4550				
ALLIANCE	18-19,5 I224 16PR TUBELESS	5	450	1,60	0,67	282	670
			500	1,68	0,71	293	696
			750	2,12	0,89	349	825
			900	2,36	1,00	380	898
			1600	3,29	1,39	486	1147
			1650	3,35	1,42	492	1162
			1700	3,41	1,44	499	1177
			2050	3,80	1,61	540	1275
			2100	3,85	1,63	546	1288
			2200	3,95	1,68	557	1313
			4550	5,98	2,55	761	1787
			4600	6,02	2,56	765	1795
			4750	6,13	2,61	775	1820
			4800	6,17	2,63	779	1828
GALAXY	13,00x24 14PR L-2 TUBELESS	3,15	750				
			1600				
			2100				
			4550				

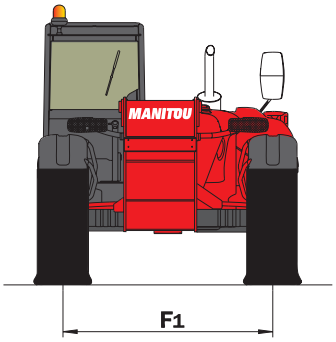
		PRESSURE (bar)	LOAD (kg)	PRESSURE ON THE CONTACT SURFACE (kg/cm2)		AREA OF THE CONTACT SURFACE (cm2)	
				HARD SOIL	LOOSE SOIL	HARD SOIL	LOOSE SOIL
GOODYEAR	15,5/80-24 SGI 12PR TUBELESS	4	450	6,12	2,30	61	219
			500	6,58	2,22	67	242
			750	6,82	1,83	110	410
			900	7,12	1,86	126	481
			1600	7,62	2,08	210	770
			1650	7,86	2,14	210	770
			1700	7,94	2,16	214	786
			2050	8,63	2,29	238	895
			2100	8,57	2,31	245	910
			2200	8,72	2,35	251	931
			4550	12,04	3,40	378	1340
			4600	12,14	3,41	379	1348
			4750	12,43	3,47	382	1370
			4800	12,53	3,48	383	1378
	460/70R24 IT520 152A8 TUBELESS	3,3	450	6,70	2,15	59	230
			500	7,22	2,06	65	255
			750	8,33	2,21	90	340
			900	8,51	2,23	106	403
			1600	8,65	2,25	185	710
			1650	8,25	2,26	200	730
			1700	8,41	2,28	202	744
			2050	9,15	2,39	224	858
			2100	9,25	2,42	227	866
			2200	9,44	2,47	233	890
			4550	11,94	3,10	381	1470
			4600	11,93	3,09	386	1488
			4750	11,91	3,08	399	1542
			4800	11,90	3,08	404	1559
	445/70R24 MPT IT510 151G TUBELESS	4,1	450	5,63	1,96	80	230
			500	5,87	2,04	85	245
			750	7,08	2,32	105	320
			900	7,32	2,41	120	364
			1600	8,42	2,81	190	570
			1650	8,46	2,82	195	586
			1700	8,49	2,82	200	601
			2050	8,91	2,93	230	700
			2100	8,88	2,92	237	718
			2200	8,80	2,91	250	755
			4550	9,90	3,28	456	1376
			4600	9,92	3,29	460	1389
			4750	9,98	3,31	474	1430
			4800	10,00	3,31	478	1443
	15,5-25 SGL DL 2A 12PR TUBELESS	3	750	6,76	2,50	102	309
			1600	8,50	2,82	188	566
			2100	8,79	2,92	239	720
			4550	10,05	3,34	454	1367
		3,25	900				
			1650				
			2200				
			4600				

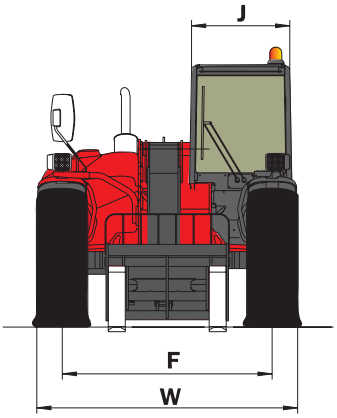
DIMENSIONS AND LOAD CHART

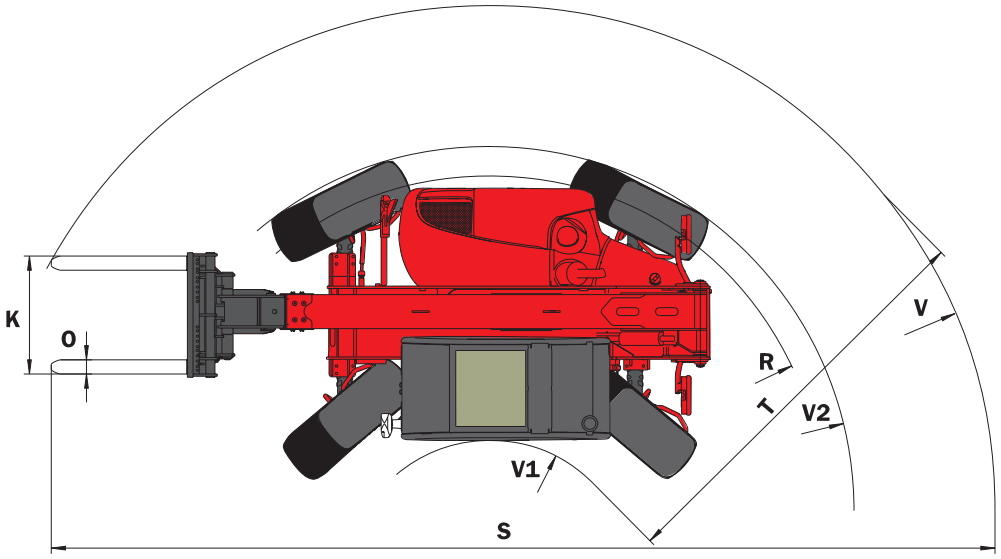
MT 728 Série D-E3

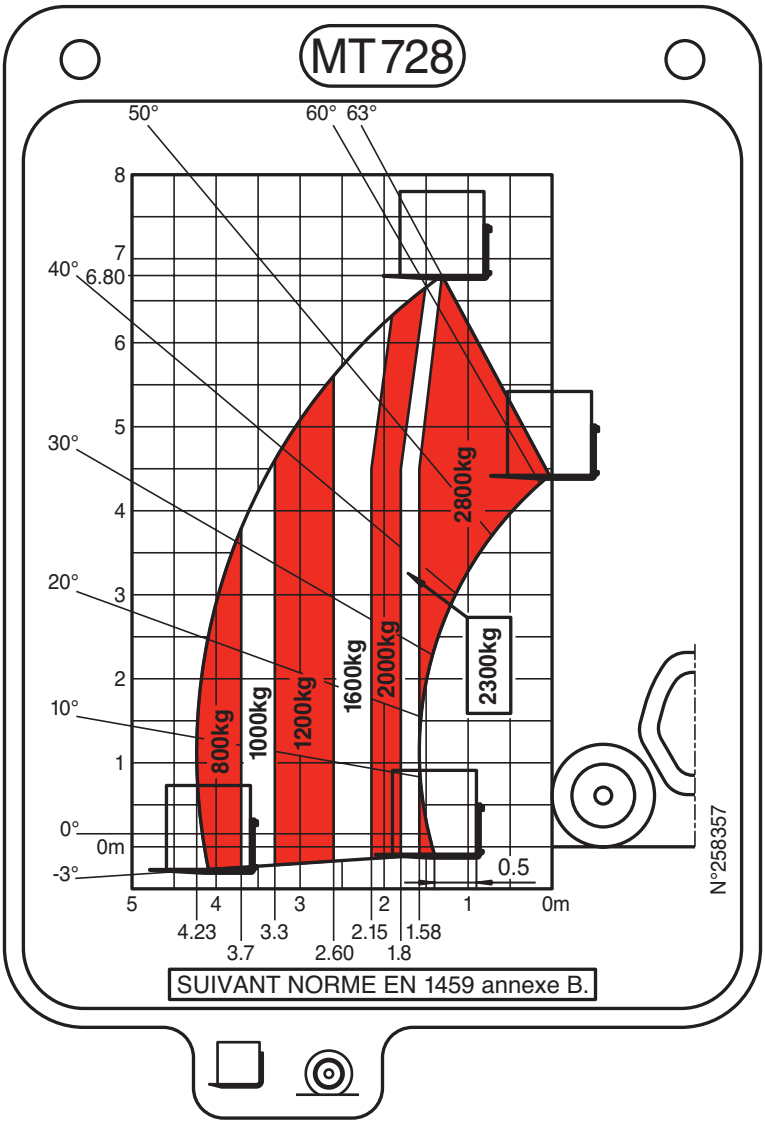
A	(mm)	
B	(mm)	
C	(mm)	
C1	(mm)	
D	(mm)	
D1	(mm)	
D2	(mm)	
E	(mm)	
F	(mm)	
F1	(mm)	
G	(mm)	
G1	(mm)	
G2	(mm)	
I	(mm)	
J	(mm)	
K	(mm)	
L	(mm)	
N	(mm)	
O	(mm)	
P2	(°)	
P3	(°)	
R	(mm)	
S	(mm)	
T	(mm)	
U1	(mm)	
U2	(mm)	
V	(mm)	
V1	(mm)	
V2	(mm)	
W	(mm)	
Y	(°)	
Z	(°)	







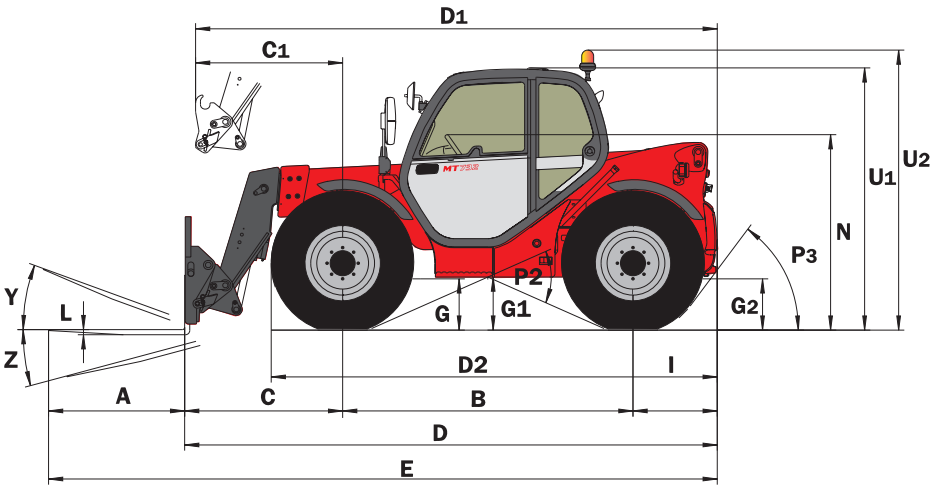


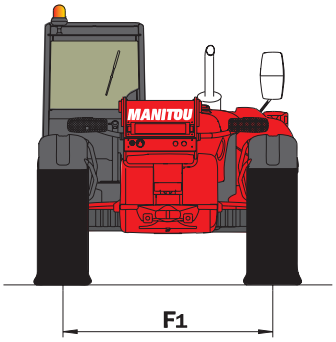

MT728
50°
60°
63°
8
7
40°
6.80
6
5
30°
4
20°
3
2
10°
1
0°
0m
-3°
800kg
1000kg
1200kg
1600kg
2000kg
2800kg
2300kg
0.5
5
4
3
2
1
0m
4.23
3.7
3.3
2.60
2.15
1.8
1.58
N°258357
SUIVANT NORME EN 1459 annexe B.

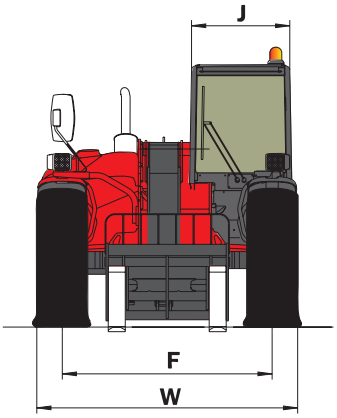
DIMENSIONS AND LOAD CHART

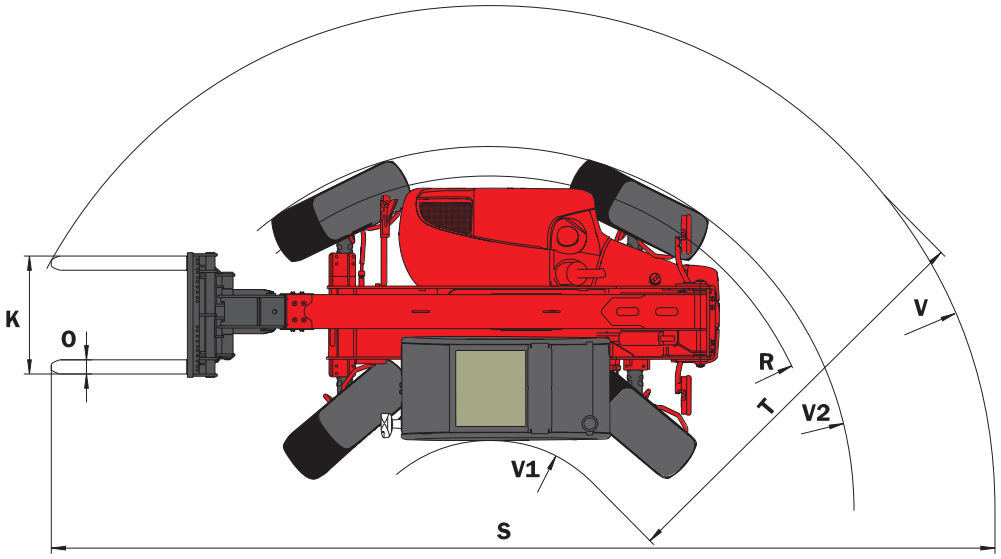
MT 732 Série D-E3

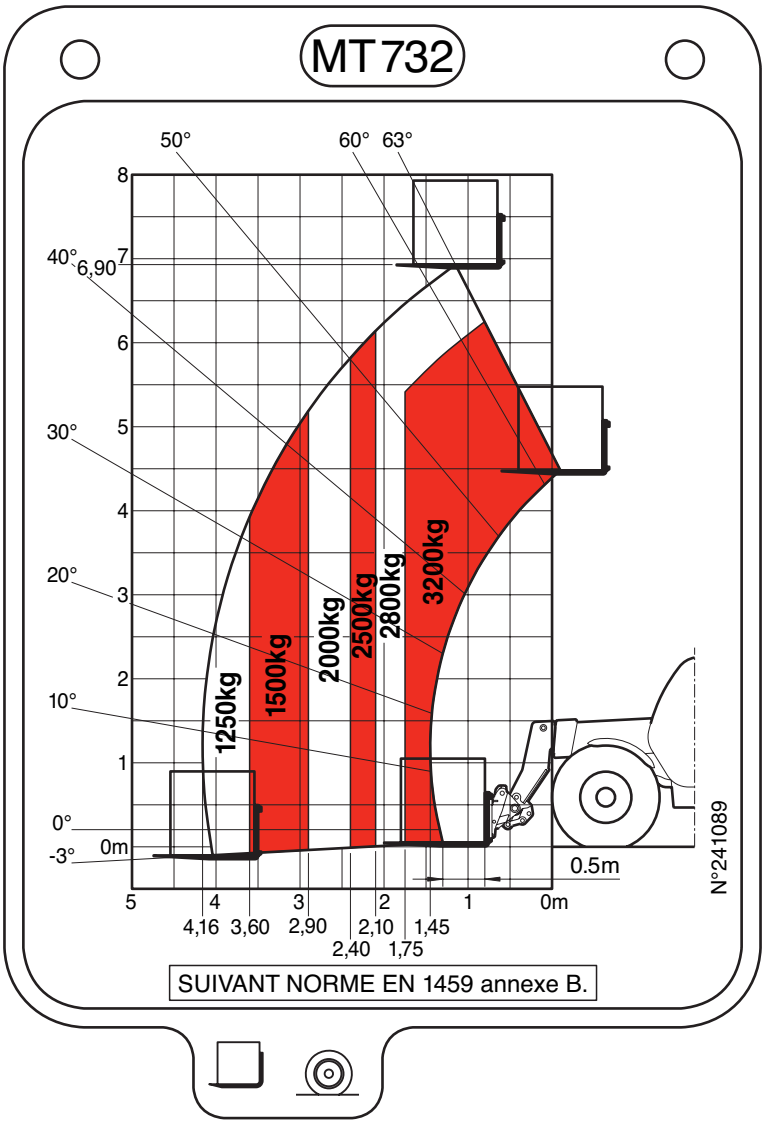
A	(mm)	1200
B	(mm)	2560
C	(mm)	1444
C1	(mm)	1537
D	(mm)	4767
D1	(mm)	4860
D2	(mm)	3894
E	(mm)	5967
F	(mm)	1846
F1	(mm)	1846
G	(mm)	455
G1	(mm)	440
G2	(mm)	440
I	(mm)	763
J	(mm)	865
K	(mm)	1040
L	(mm)	45
N	(mm)	1690
O	(mm)	125
P2	(°)	47,5
P3	(°)	53
R	(mm)	3460
S	(mm)	7591
T	(mm)	3555
U1	(mm)	2300
U2	(mm)	2550
V	(mm)	4805
V1	(mm)	1250
V2	(mm)	3667
W	(mm)	2260
Y	(°)	11,9
Z	(°)	113,8









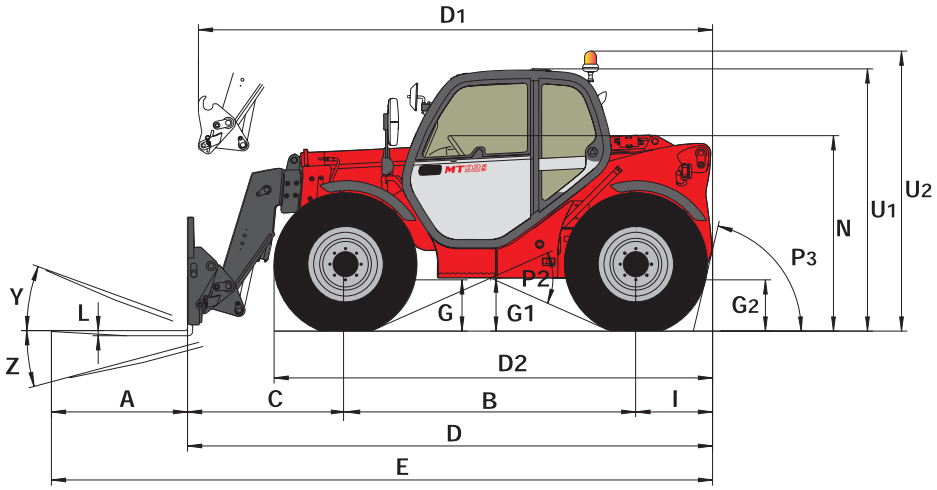


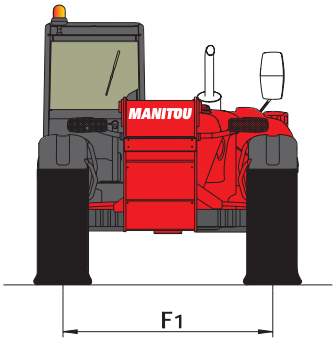
NOTE: For Australia (see: 5 - SPECIFIC AUSTRALIA)

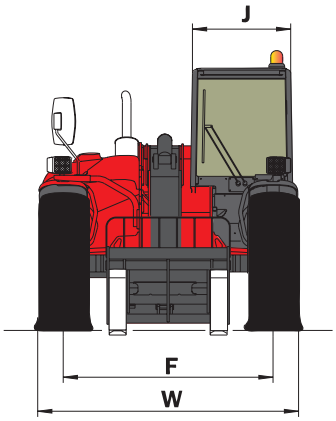
DIMENSIONS AND LOAD CHART

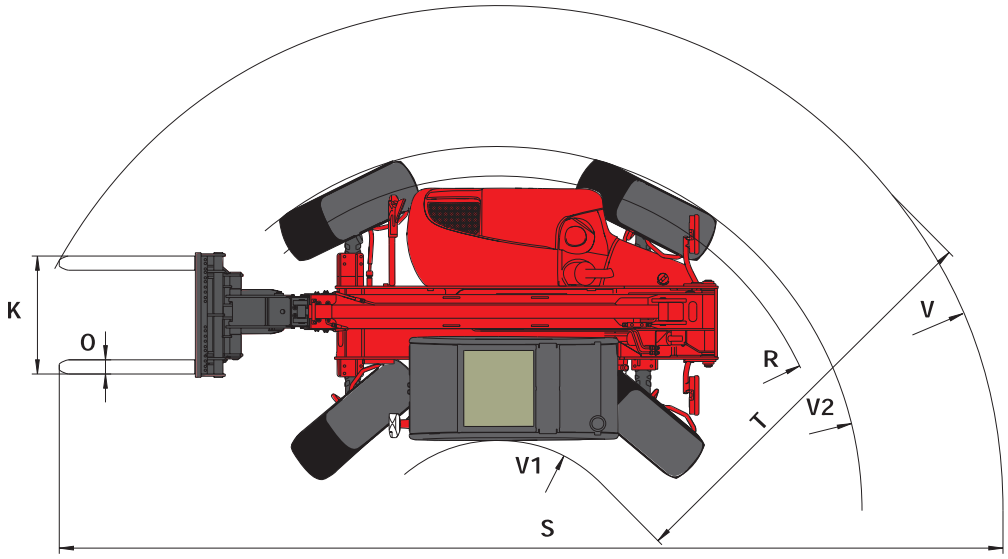
MT 928 Série D-E3

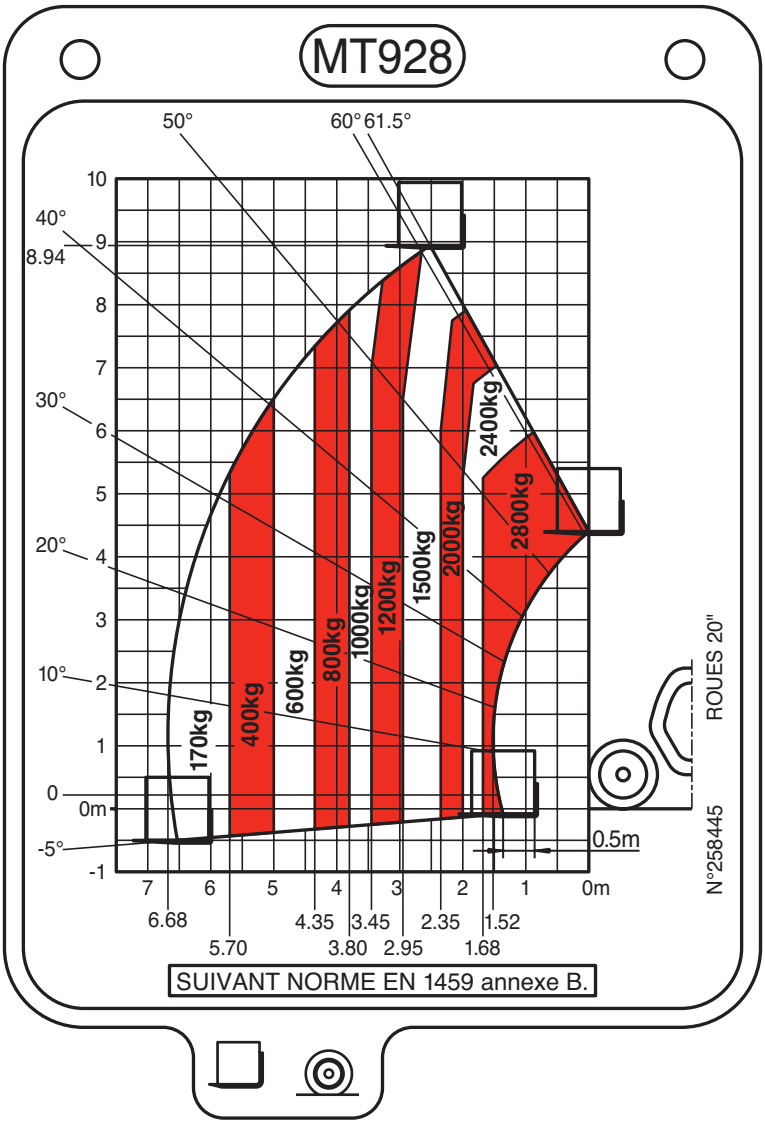
A	(mm)	
B	(mm)	
C	(mm)	
C1	(mm)	
D	(mm)	
D1	(mm)	
D2	(mm)	
E	(mm)	
F	(mm)	
F1	(mm)	
G	(mm)	
G1	(mm)	
G2	(mm)	
I	(mm)	
J	(mm)	
K	(mm)	
L	(mm)	
N	(mm)	
O	(mm)	
P2	(°)	
P3	(°)	
R	(mm)	
S	(mm)	
T	(mm)	
U1	(mm)	
U2	(mm)	
V	(mm)	
V1	(mm)	
V2	(mm)	
W	(mm)	
Y	(°)	
Z	(°)	







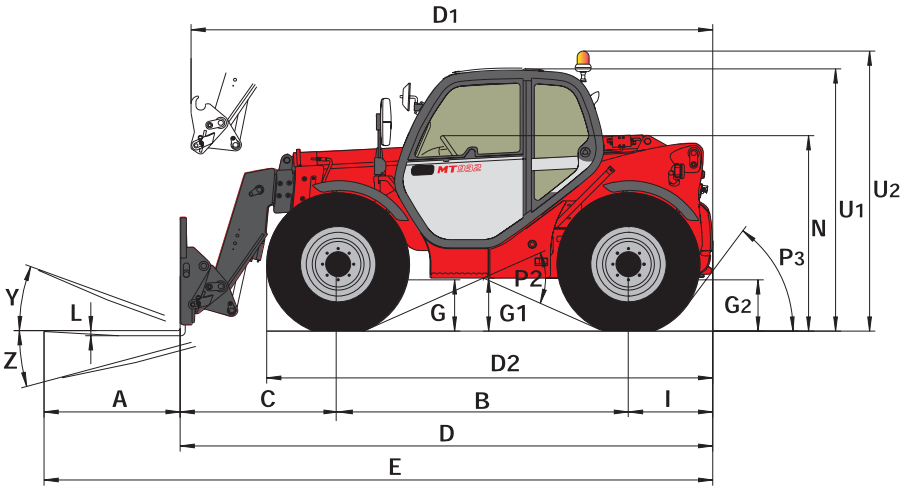


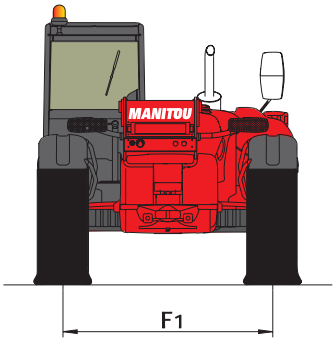

MT928
50°
60°
61.5°
40°
30°
20°
10°
0m
-5°
8.94
10
9
8
7
6
5
4
3
2
1
0
-1
170kg
400kg
600kg
800kg
1000kg
1200kg
1500kg
2000kg
2400kg
2800kg
0.5m
7
6
5
4
3
2
1
0m
6.68
5.70
4.35
3.80
3.45
2.95
2.35
1.68
1.52
ROUES 20"
N°258445
SUIVANT NORME EN 1459 annexe B.

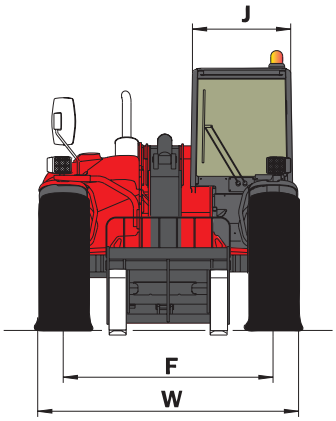
DIMENSIONS AND LOAD CHART

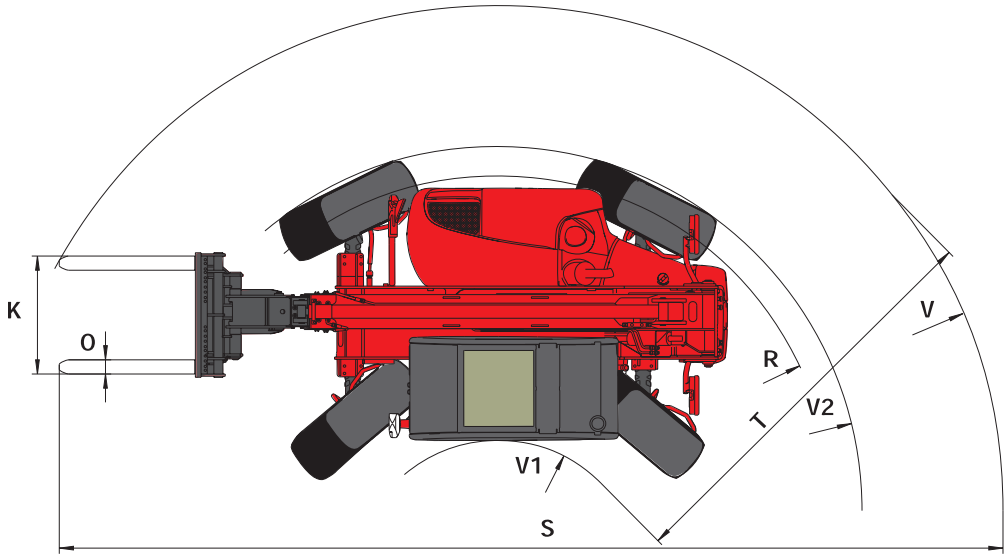
MT 932 Série D-E3

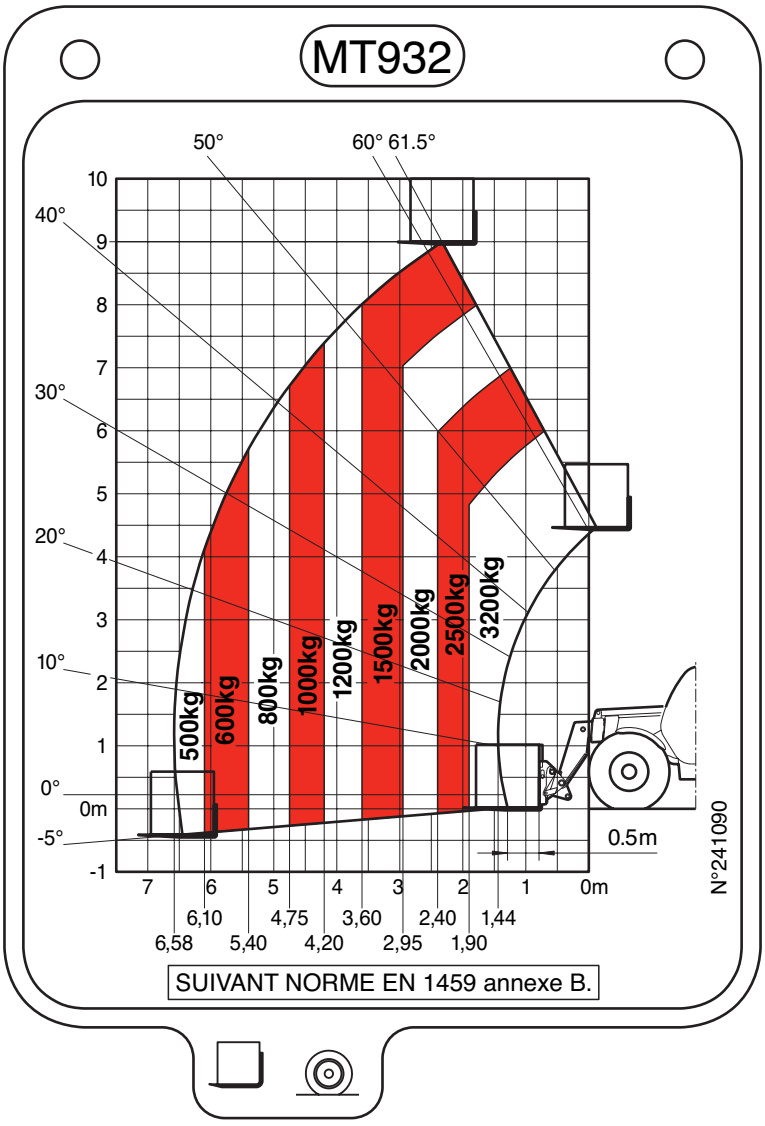
A	(mm)	1200
B	(mm)	2560
C	(mm)	1393
C1	(mm)	1537
D	(mm)	4716
D1	(mm)	4811
D2	(mm)	5916
E	(mm)	5967
F	(mm)	1846
F1	(mm)	1846
G	(mm)	455
G1	(mm)	440
G2	(mm)	440
I	(mm)	763
J	(mm)	865
K	(mm)	1040
L	(mm)	45
N	(mm)	1690
O	(mm)	125
P2	(°)	47,5
P3	(°)	53
R	(mm)	3460
S	(mm)	7540
T	(mm)	3510
U1	(mm)	2300
U2	(mm)	2550
V	(mm)	4760
V1	(mm)	1250
V2	(mm)	3667
W	(mm)	2260
Y	(°)	11,9
Z	(°)	113,8









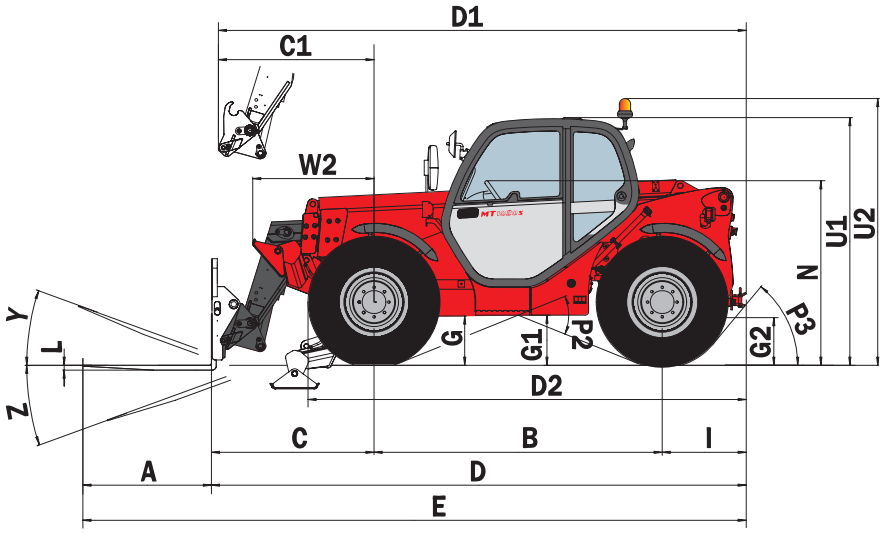


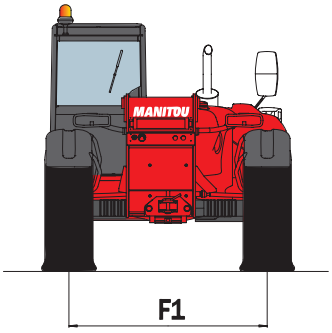
NOTE: For Australia (see: 5 - SPECIFIC AUSTRALIA)

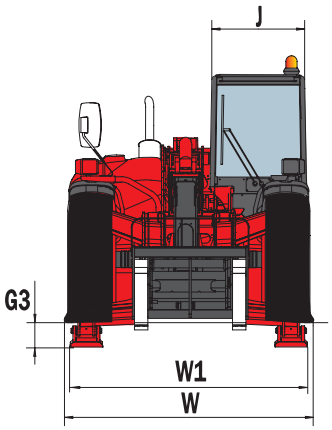
DIMENSIONS AND LOAD CHART

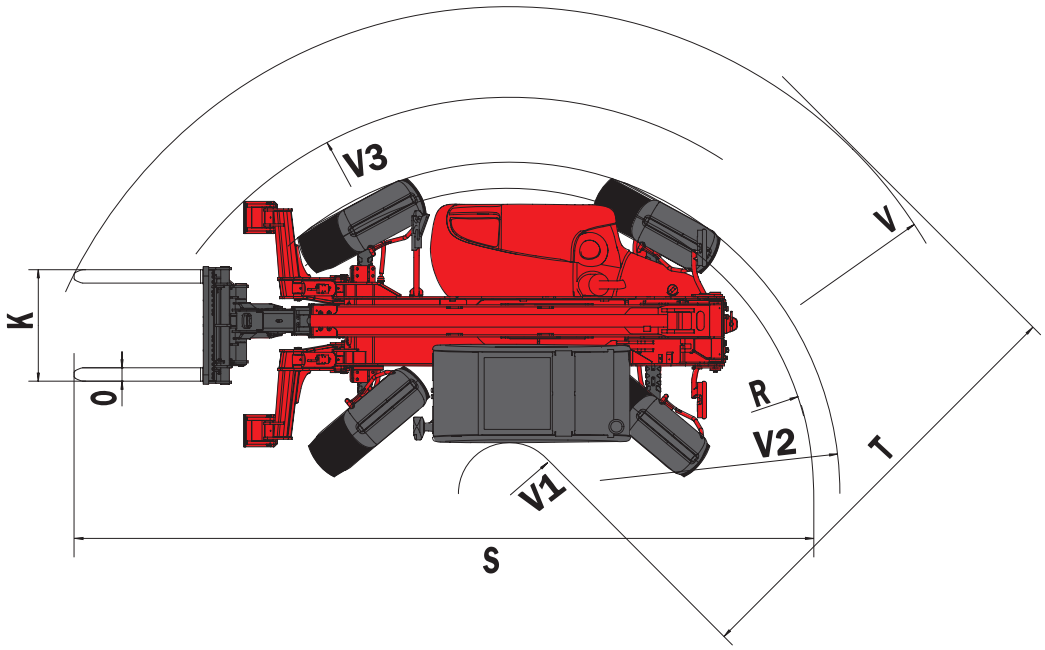
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

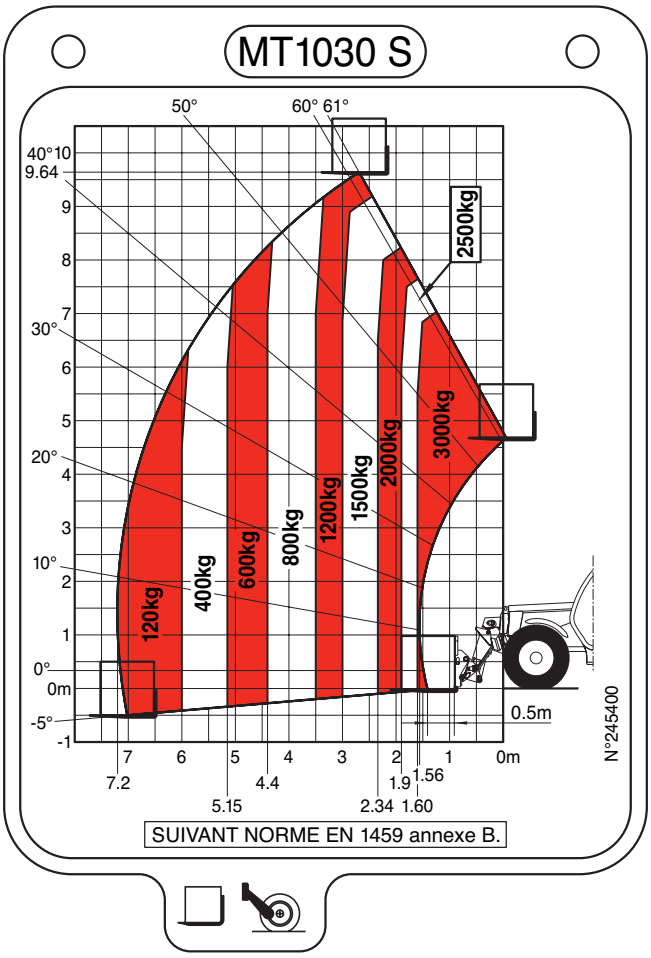
A	(mm)	1200
B	(mm)	2690
C	(mm)	1513
C1	(mm)	1602
D	(mm)	4992
D1	(mm)	5081
D2	(mm)	4050
E	(mm)	6192
F	(mm)	1846
F1	(mm)	1846
G	(mm)	455
G1	(mm)	440
G2	(mm)	440
G3	(mm)	220
I	(mm)	789
J	(mm)	865
K	(mm)	1040
L	(mm)	45
N	(mm)	1690
O	(mm)	125
P2	(°)	44
P3	(°)	53
R	(mm)	3545
S	(mm)	7810
T	(mm)	3640
U1	(mm)	2300
U2	(mm)	2550
V	(mm)	4950
V1	(mm)	1310
V2	(mm)	3752
V3	(mm)	4200
W	(mm)	2260
W1	(mm)	2210
W2	(mm)	1132
Y	(°)	11,9
Z	(°)	113,7

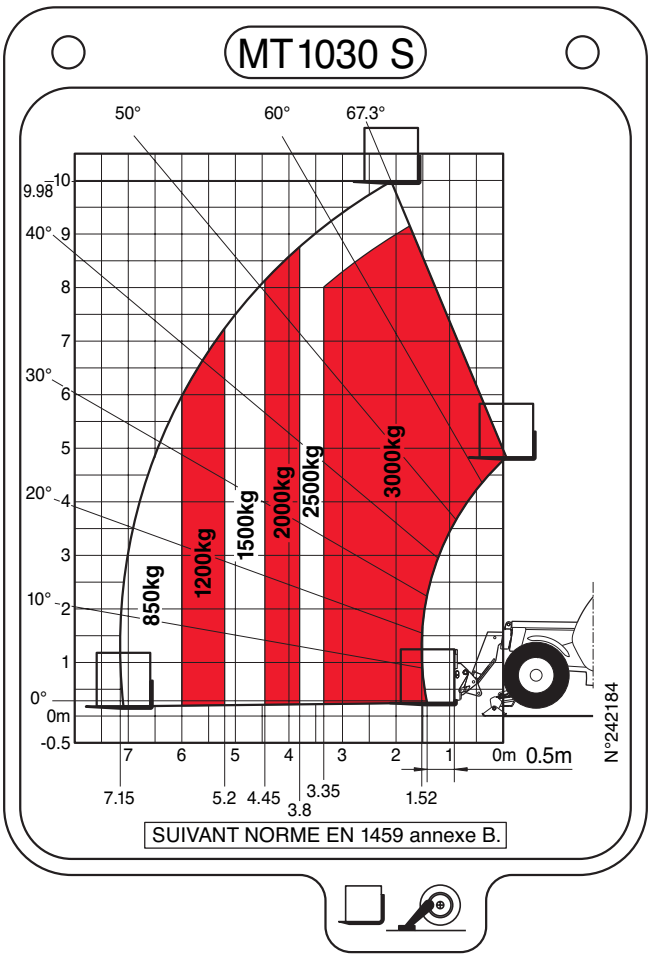


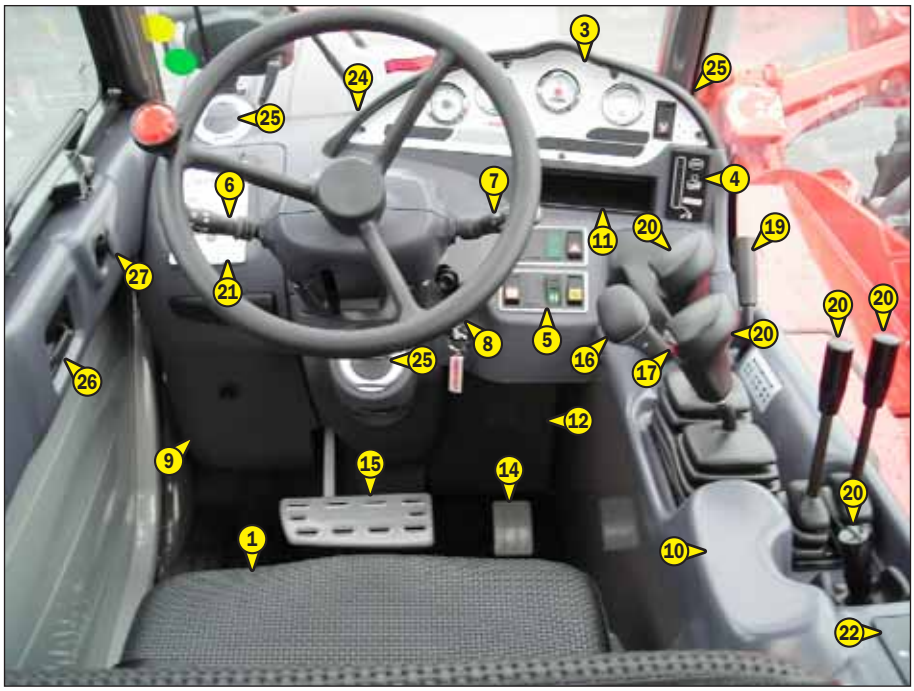







MT1030 S
50°
60° 61°
40° 10
9.64
9
8
30°
7
6
5
20°
4
3
10°
2
1
0°
0m
-5°
-1
2500kg
3000kg
2000kg
1500kg
1200kg
800kg
600kg
400kg
120kg
0.5m
7 6 5 4 3 2 1 0m
7.2
5.15
4.4
2.34
1.9
1.56
1.60
N°245400
SUIVANT NORME EN 1459 annexe B.

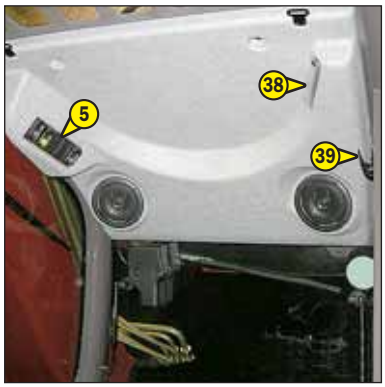

MT1030 S
50°
60°
67.3°
9.98 10
40° 9
8
7
30°
6
5
20°
4
3
10°
2
1
0°
0m
-0.5
3000kg
2500kg
2000kg
1500kg
1200kg
850kg
0.5m
7 6 5 4 3 2 1 0m
7.15
5.2
4.45
3.8
3.35
1.52
N°242184
SUIVANT NORME EN 1459 annexe B.


3
24
25
25
6
7
4
11
20
19
27
21
20
20
8
5
16
20
25
17
26
12
9
15
14
20
1
10
22


2
2
18
23


12


13


38
5
39


29
30
28


36
36
35


34

DESCRIPTION

1 - DRIVER'S SEAT
2 - SAFETY BELT
3 - CONTROL AND SIGNAL LIGHTS PANEL
4 - LONGITUDINAL STABILITY ALARM
5 - SWITCHES
6 - LIGHT SWITCH, HORN AND INDICATOR SWITCH
7 - FRONT AND REAR WINDSCREEN WIPER SWITCH
8 - IGNITION SWITCH
9 - BRAKING OIL AND WINDSCREEN WASHER TANK ACCESS PANEL
10 - ARMREST
11 - CAR RADIO (OPTION)
12 - FUSES AND RELAYS IN THE CAB
13 - FUSES AND RELAYS UNDER THE ENGINE HOOD
14 - ACCELERATOR PEDAL
15 - SERVICE BRAKE PEDAL AND TRANSMISSION CUT-OFF
16 - GEAR LEVER AND TRANSMISSION CUT-OFF
17 - FORWARD/NEUTRAL/REVERSE GEAR SELECTION
18 - PARKING BRAKE LEVER
19 - STEERING SELECTION
20 - HYDRAULIC CONTROLS AND TRANSMISSION CUT-OFF
21 - FUNCTION FILES
22 - HEATER CONTROL
22 - AIR CONDITIONING CONTROLS (OPTION AIR CONDITIONING)
23 - CAB FILTER VENTILATORS
24 - WINDSCREEN DEMISTER VENTS
25 - HEATING VENTS
26 - DOOR LOCK
27 - LOCKING HANDLE FOR UPPER HALF-DOOR
28 - UNLOCKING BUTTON FOR UPPER HALF DOOR
29 - HANDLE FOR REAR WINDOW OPENING
30 - TOOL BOX AND DOCUMENT HOLDER
31 - FRONT LIGHTS (NOT ILLUSTRATED)
32 - REAR LIGHTS (NOT ILLUSTRATED)
33 - FLASHING LIGHT (NOT ILLUSTRATED)
34 - DOCUMENT HOLDER NET
35 - LEVEL INDICATORS
36 - SUN-SHADE (OPTION)
37 - INSIDE REAR-VIEW MIRROR (OPTION) (NOT SHOWN)
38 - ROOF LIGHT
39 - HOOK
40 - TOOL BOX (OPTION) (NOT SHOWN)

NOTE: All the terms such as: RIGHT, LEFT, FRONT, REAR are meant for an observer seated on driver's seat and looking in front of him.

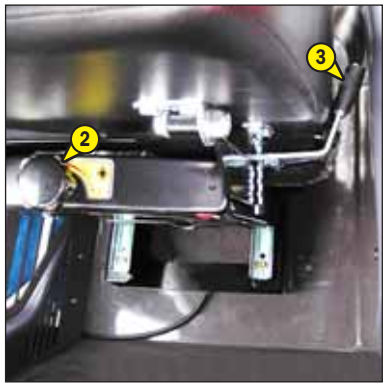
1 - DRIVER'S SEAT

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

LONGITUDINAL ADJUSTMENT
- Pull locking lever 1 towards the right.
- Slide the seat to the required position.
- Release the lever and be sure it returns to the lock position.

SEAT SUSPENSION ADJUSTMENT
- Refer to the seat's graduation.
- Turn handle 2 depending on the driver's weight.

ADJUSTMENT OF THE ANGLE OF THE BACK-REST
- Pull locking lever 3 upwards.
- Slide the back-rest to the required position.
- Release the lever and be sure it returns to the lock position.



1 - DRIVER'S SEAT (OPTION)

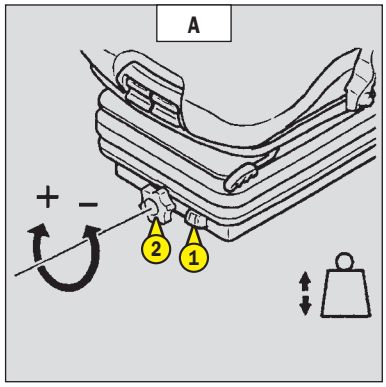
DESIGNED FOR MAXIMUM COMFORT, THIS SEAT CAN BE ADJUSTED AS FOLLOWS.

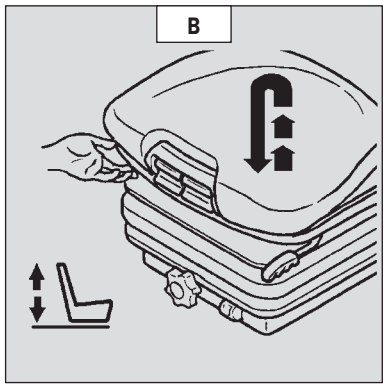
WEIGHT ADJUSTMENT (FIG. A)
It is advised that the weight be adjusted when the driver is not sitting in the cab.
- Refer to graduation 1 of the seat.
- Turn handle 2 according to the driver's weight.

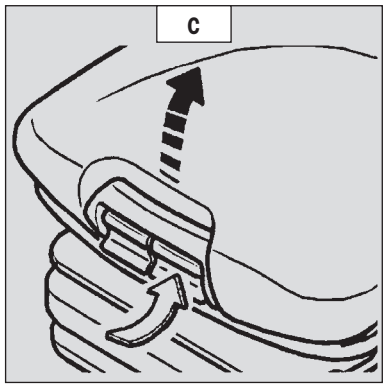
NOTE: To avoid any health problems, it is recommended that the weight should be checked and adjusted before starting up the lift truck.

SEAT HEIGHT ADJUSTMENT (FIG. B)
Raise the seat to the desired position, until you hear the ratchet click. If you raise the seat above the last notch (stop), the seat drops down to the lowest position.

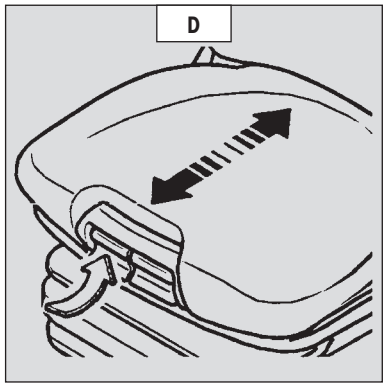
SEAT BACK-REST ANGLE ADJUSTMENT (FIG. C)
The back-rest angle of the seat may be adjusted to suit the individual.
- Press the left-hand button while pushing on the seat or relaxing pressure on the seat to find a comfortable position.







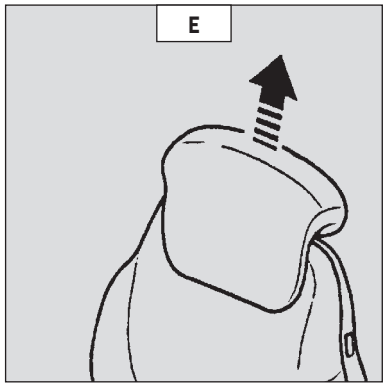
SEAT DEPTH ADJUSTMENT (FIG. D)
The depth of the seat may be adjusted to suit the individual.
- Press the right-hand button while raising or lowering the seat to find the desired position.



EXTENDING THE HEAD-REST (FIG. E)
- The height of the back-rest 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 (FIG. F)
This increases the comfort of the seat and the driver's freedom of movement.
- Turn the handle either left or right to adjust the height or depth of the lumbar support.

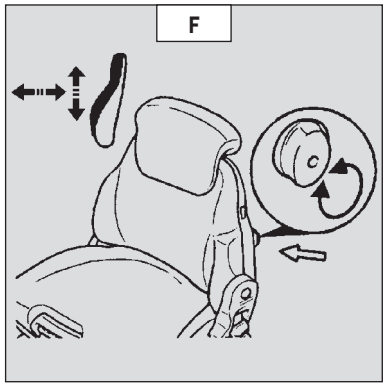
ADJUSTMENT OF THE ANGLE OF THE BACK-REST (FIG. G)
- Support the back-rest, pull the lever and position the back-rest to find the desired position.



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

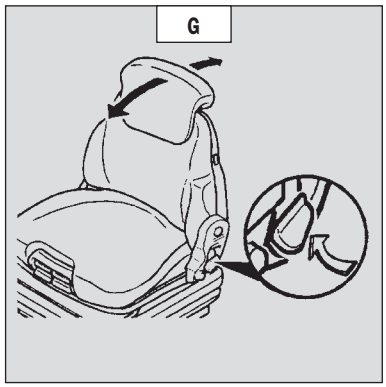
LONGITUDINAL ADJUSTMENT (FIG. H)
- Adjust the locking lever until you reach the position required. This then locks and the seat will not shift into another position.

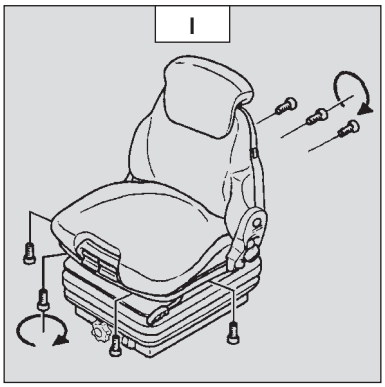
MAINTENANCE (FIG. I)
Dirt may adversely affect the correct functioning of the seat. For this reason, make sure your seat is always clean.
- To clean or change the cushions, simply remove them from the seat frame.

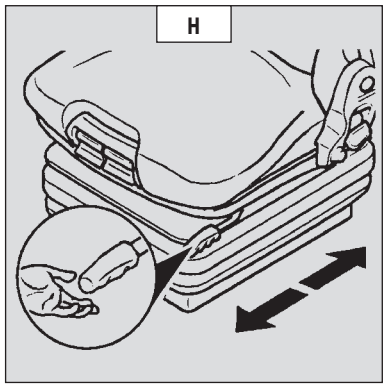


A rocking head-rest increases the risk of an accident !

Avoid wetting the cushion fabric when cleaning. Check the resistance of the fabric on a small hidden area before using any fabric or plastic cleaner.







1 - BASIC PNEUMATIC DRIVER'S SEAT (OPTION)

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

WEIGHT ADJUSTMENT (FIG. A)
It is advised that you adjust the seat according to your weight when sitting.
- Switch on lift truck ignition.
- Push or pull lever 1 until green appears in display 2 indicating correct adjustment according to your weight.

NOTE: To avoid any health problems, it is recommended that the weight should be checked and adjusted before starting up the lift truck.

SEAT HEIGHT ADJUSTMENT (FIG. B)
When weight adjustment has been carried out, you can then modify seat height.
- Keep the ignition on in the lift truck.
- Push or pull lever 1 until green appears and adjust the height of the seat while checking that the green in display 2 remains visible.

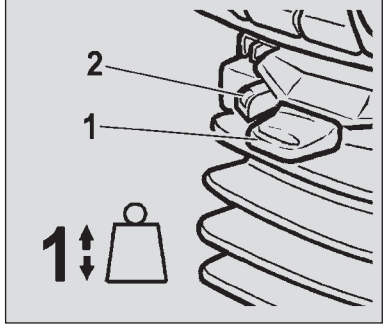
To avoid causing any damage, do not activate the compressor for over 1 minute.

SEAT BACK-REST ANGLE ADJUSTMENT (FIG. C)
The back-rest angle of the seat may be adjusted to suit the individual.
- Press the left-hand button while pushing on the seat or relaxing pressure on the seat to find a comfortable position.

SEAT DEPTH ADJUSTMENT (FIG. D)
The depth of the seat may be adjusted to suit the individual.
- Press the right-hand button while raising or lowering the seat to find the desired position.

EXTENDING THE HEAD-REST (FIG. E)
- The height of the back-rest 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.

A



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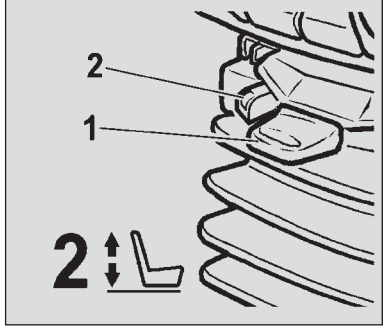
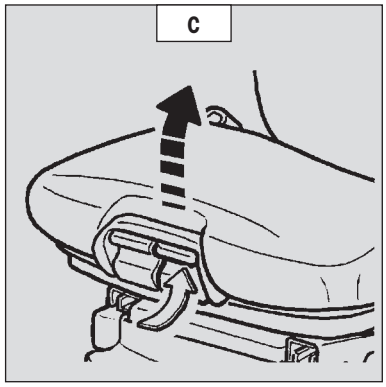


C



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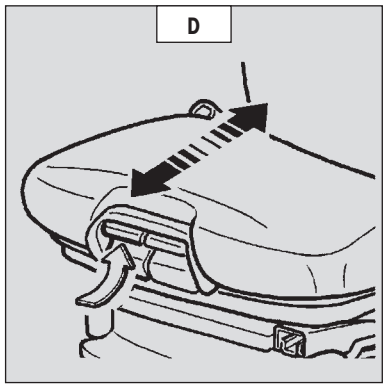

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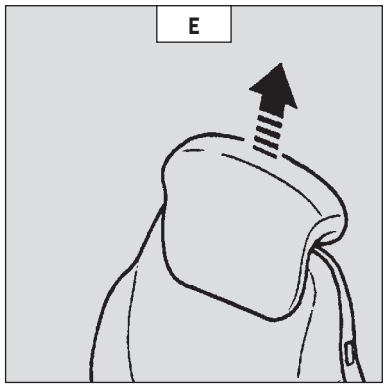
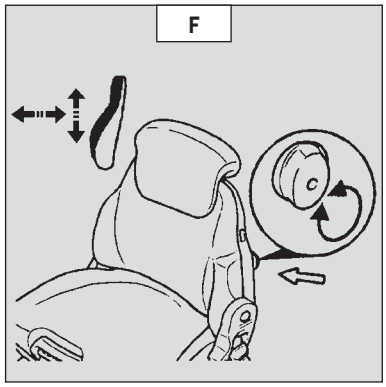


LUMBAR ADJUSTMENT (FIG. F)

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

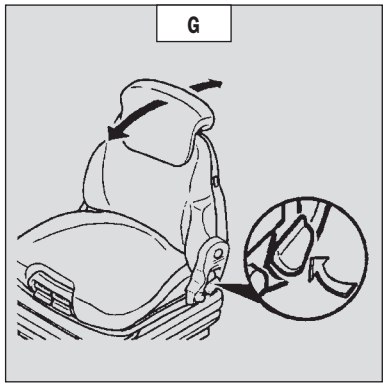
- Turn the handle either left or right to adjust the height or depth of the lumbar support.



ADJUSTMENT OF THE ANGLE OF THE BACK-REST (FIG. G)

- Support the back-rest, pull the lever and position the back-rest to find the desired position.

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



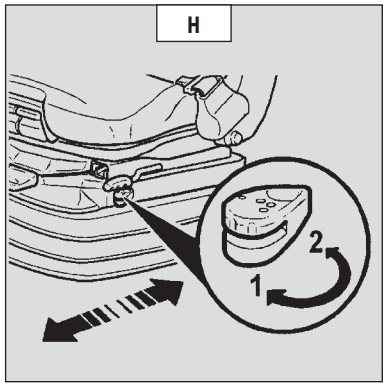
HORIZONTAL SHOCK ABSORBER (FIG. H)

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

- Position 1: Horizontal shock absorber fitted.
- Position 2: Horizontal shock absorber removed.

LONGITUDINAL ADJUSTMENT (FIG. I)

- Adjust the locking lever until you reach the position required. This then locks and the seat will not shift into another position.



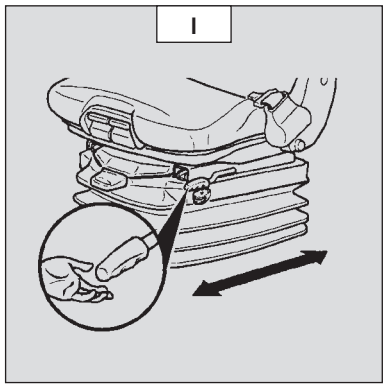
SERVICING (FIG. J)

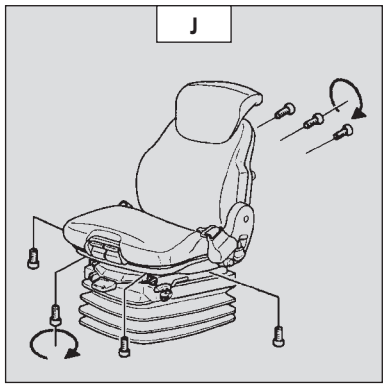
Dirt may adversely affect the correct functioning of the seat. For this reason, make sure your seat is always clean.

- To clean or change the cushions, simply remove them from the seat frame.

A rocking head-rest increases the risk of an accident !

Avoid wetting the cushion fabric when cleaning. Check the resistance of the fabric on a small hidden area before using any fabric or plastic cleaner.



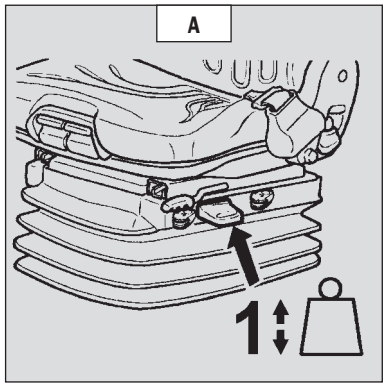


1 - DELUXE PNEUMATIC DRIVER'S SEAT (OPTION)

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

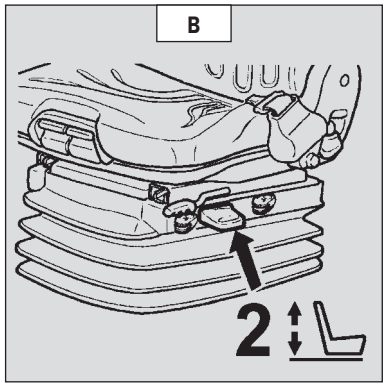
WEIGHT ADJUSTMENT (FIG. A)
It is advised that you adjust the seat according to your weight when sitting.
- Switch on lift truck ignition.
- Pull or push lever 1 briefly. Adjustment is automatic.

NOTE: To avoid any health problems, it is recommended that the weight should be checked and adjusted before starting up the lift truck.



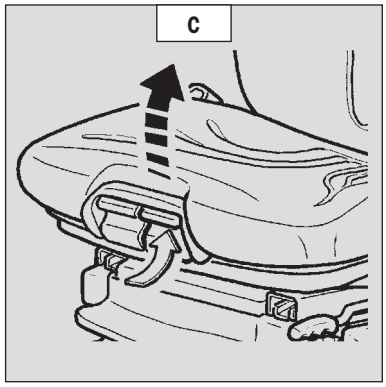
SEAT HEIGHT ADJUSTMENT (FIG. B)
When weight adjustment has been carried out, you can then modify seat height.
- Keep the ignition on in the lift truck.
- Pull or push lever 1 and adjust the seat height.

To avoid causing any damage, do not activate the compressor for over 1 minute.



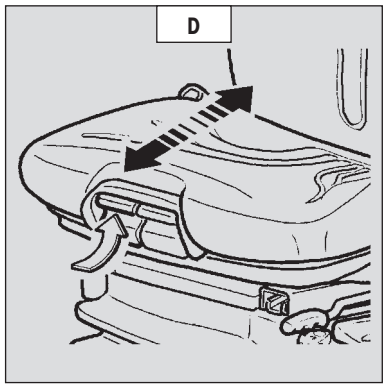
SEAT BACK-REST ANGLE ADJUSTMENT (FIG. C)
The back-rest angle of the seat may be adjusted to suit the individual.
- Press the left-hand button while pushing on the seat or relaxing pressure on the seat to find a comfortable position.

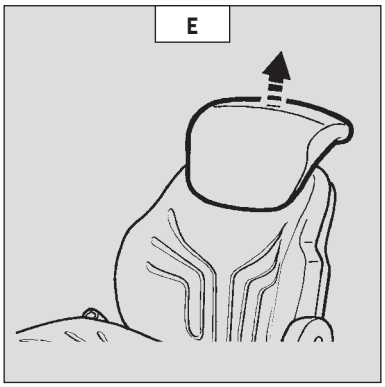
SEAT DEPTH ADJUSTMENT (FIG. D)
The depth of the seat may be adjusted to suit the individual.
- Press the right-hand button while raising or lowering the seat to find the desired position.

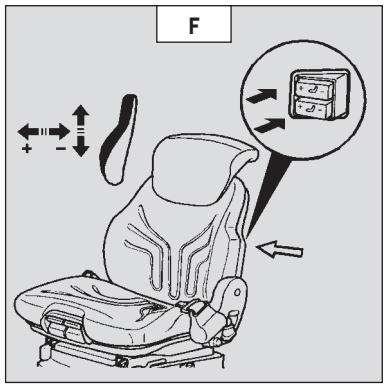


EXTENDING THE HEAD-REST (FIG. E)
- The height of the back-rest can be adjusted by pulling it upwards (the notches will click) up to the stop.
- The head-rest can be removed by applying sufficient pressure to pull it off the stop.

LUMBAR ADJUSTMENT (FIG. F)
This increases the comfort of the seat and the driver's freedom of movement.
- Press the raise and lower switches to adjust the curvature of the seat back to your requirements.



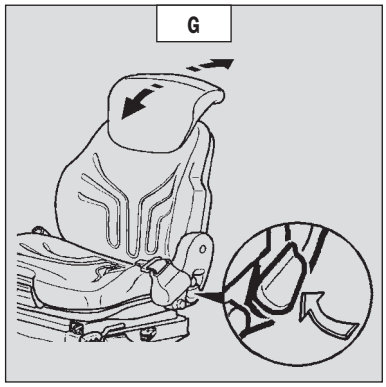




ADJUSTMENT OF THE ANGLE OF THE BACK-REST (FIG. G)

- Support the back-rest, pull the lever and position the back-rest to find the desired position.

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



HORIZONTAL SHOCK ABSORBER (FIG. H)

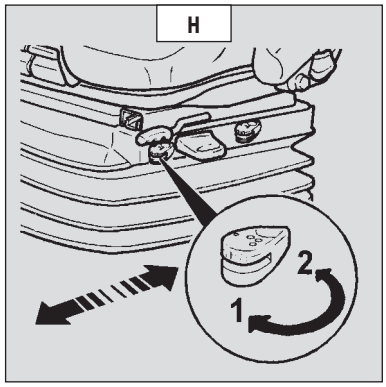
In certain conditions (e.g. driving with a trailer) it is advised that a horizontal shock absorber be used. The driver's seat is thus better able to absorb jerks in the direction of travel.

- Position 1: Horizontal shock absorber fitted.
- Position 2: Horizontal shock absorber removed.

DAMPING (FIG. I)

The damping of the seat can be adjusted to suit the nature of the terrain. The comfort of the seat is thus adjustable to suit your requirements.

- Position 1: Soft damping.
- Position 2: Hard damping.



LONGITUDINAL ADJUSTMENT (FIG. J)

- Adjust the locking lever until you reach the position required. This then locks and the seat will not shift into another position.

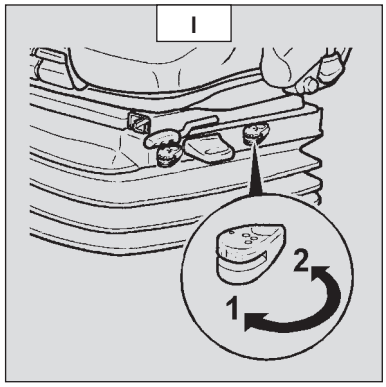
MAINTENANCE (FIG. K)

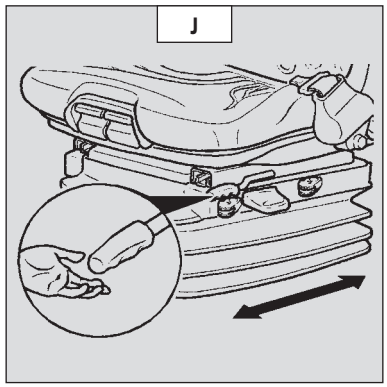
Dirt may adversely affect the correct functioning of the seat. For this reason, make sure your seat is always clean.

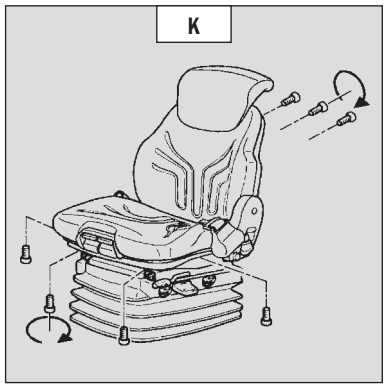
- To clean or change the cushions, simply remove them from the seat frame.

A rocking head-rest increases the risk of an accident!

Avoid wetting the cushion fabric when cleaning. Check the resistance of the fabric on a small hidden area before using any fabric or plastic cleaner.





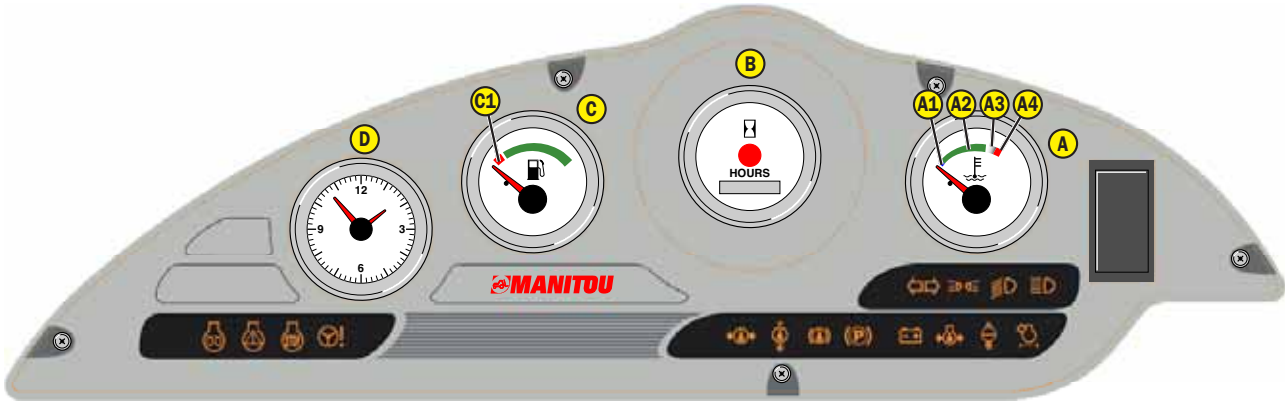


2 - SAFETY BELT

- 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.

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.

3 - CONTROL AND SIGNAL LIGHTS PANEL



CONTROL INSTRUMENTS

A - I.C. ENGINE WATER TEMPERATURE

Temperature zone:

A1 - Blue zone (0° - 50°) Use the lift truck with moderation, wait for temperature to increase before normal operation.
A2 - Green zone (50° - 100°) Use lift truck normally.
A3 - White/red zone (100° - 105°) Use lift truck with moderation, monitor the temperature.
A4 - Red zone (105° - 120°) Stop the lift truck, look for the cause of overheating.

NOTE: Red indicator light comes on between zone A3 and A4.

B - HOUR METER

C - FUEL LEVEL

Red zone C1 indicates that you are using the reserve supply and that time of use is limited.

D - CLOCK

SIGNAL LIGHTS

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 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.

NOT USED

NOT USED

NOT USED

NOT USED

RED GEAR BOX OIL PRESSURE WARNING INDICATOR LIGHT

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

NOTE: The signal light operates in forward travel conditions only, the signal should not be taken into account when the I.C. engine is running at idle or is stopped.

RED TRANSMISSION OIL TEMPERATURE FAULT INDICATOR LIGHT

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

RED BRAKING OIL LEVEL WARNING INDICATOR LIGHT

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

RED PARKING BRAKE LAMP

This lamp comes on when the parking brake is applied.

RED BATTERY CHARGE WARNING INDICATOR LIGHT

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

RED I.C. ENGINE OIL PRESSURE WARNING INDICATOR LIGHT

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

RED I.C. ENGINE WATER TEMPERATURE WARNING INDICATOR LIGHT

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

RED AIR FILTER OR HYDRAULIC RETURN FILTER CLOGGED INDICATOR LIGHT

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

GREEN DIRECTION INDICATOR LAMP

GREEN SIDELIGHTS LAMP

GREEN LOW BEAM LAMP

BLUE MAIN BEAM LAMP

4 - LONGITUDINAL STABILITY ALARM

This device warns the operator that the lift truck is approaching the limit of longitudinal stability. However, lateral stability can reduce the load chart in the upper part, and this reduction is not detected by the longitudinal stability alarm.

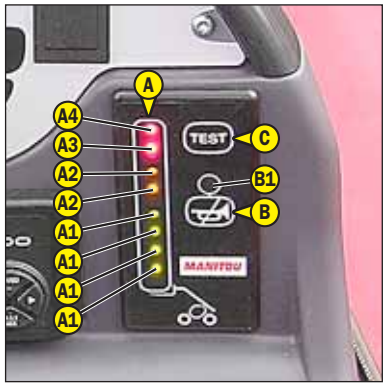
NOTE: Since January 2010, Simple movement cut-off is fitted as standard (See: 2 - DESCRIPTION: DESCRIPTION AND USE OF THE OPTIONS).

The operator must respect the lift truck's load chart.

OPERATION
When the lift truck is switched on a control test is automatically carried out.
- Correct operation: All leds and the sound alarm function continuously for 2 seconds.
- Faulty operation: All leds and the sound alarm function intermittently (stop the lift truck and consult your dealer, never attempt a repair yourself).

A - VISUAL ALARM

A1 - 4 green leds: There is a large reserve of longitudinal stability.
A2 - 2 yellow leds: The lift truck is approaching the limit of longitudinal stability, move carefully.
A3 - 1 red led: The lift truck is very near at the limit of longitudinal stability. The alarm sounds simultaneously with a slow intermittent sound. Move very carefully.
A4 - 1 red led: The lift truck is at the authorized limit of longitudinal stability. The alarm sounds simultaneously with a speed intermittent sound. Only make de-aggravating hydraulic movements in the following order; retract and raise the boom.



B - SOUND ALARM

Used to switch off the sound alarm when using the lift truck with loading and earth moving buckets. When it is switched off, the red led B1 indicates that the sound alarm has been cut off and only the visual alarm is working. Under other operating conditions, the sound alarm must be switched on.

C - TEST SWITCH

Press the switch to verify at any time that the longitudinal stability alarm is working.
NOTE: This test does not verify that the alarm is correctly set; this must be checked at every periodic service.
- Correct operation: All leds and the sound alarm function continuously.
- Faulty operation: All leds and the sound alarm function intermittently (stop the lift truck and consult your dealer, never attempt a repair yourself).

D - STRAIN GAUGE

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

5 - SWITCHES

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

A - OPTION

MT 732 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3
- OPTION Electrical boom provision (See: 2 - DESCRIPTION: DESCRIPTION AND USE OF THE OPTIONS).

B - OPTION

C - WHEEL ALIGNMENT LAMPS

D - WARNING LIGHTS

E - REAR FOG LIGHT

F - OPTION

MT 732 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3
- OPTION Self-cleaning fan (See: 2 - DESCRIPTION: DESCRIPTION AND USE OF THE OPTIONS).

G - STEERING SELECTION

H - TRANSMISSION CUT-OFF

The switch selects transmission cut-off to the service brake pedal or the hydraulic controls lever.

Position 1: Indicator light on, transmission cut-off to service brake pedal effected.
Position 2: Indicator light off, transmission cut-off to hydraulic control lever effected.

USE OF TRANSMISSION CUT-OFF
Transmission cut-off to brake pedal (position 1).

- When loading.

Transmission cut-off to hydraulic controls lever (position 2).

- When driving.
- For inching and continuous stopping and starting (delicate handling). In order to optimise hydraulic movements, cut off transmission to the hydraulic controls lever.
- Starting up on a slope.

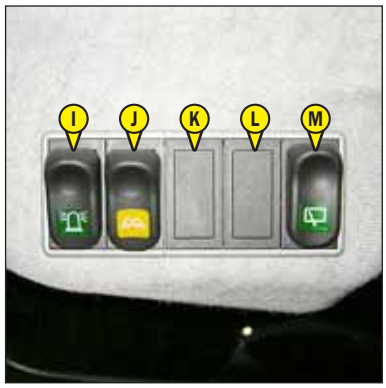
NOTE: In all cases transmission cut-off can be effected using the gear lever.

I - REVOLVING LIGHT

J - OPTION FRONT AND REAR WORKING LIGHTS

K - OPTION

MT 732 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3
- OPTION Boom head light.



L - REAR WINDOW DEFROSTING OPTION

M - SIDE WINDSCREEN WIPER + ROOF WINDSCREEN WIPER OPTION

N - OPTION

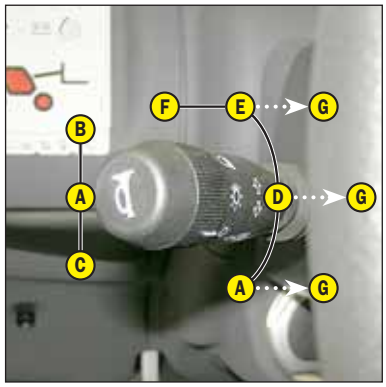
O - OPTION

P - OPTION

MT 732 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3
- OPTION Attachment hydraulic locking device (See: 2 - DESCRIPTION: DESCRIPTION AND USE OF THE OPTIONS).

Q - OPTION

6 - LIGHT SWITCH, HORN AND INDICATOR SWITCH

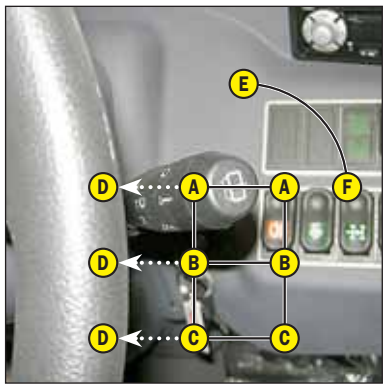


The switch controls the visual and sound alarms.

A - All lights are off, the direction indicators do not flash.
B - The right hand direction indicators flash.
C - The left hand direction indicators 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 switch sounds the horn.
NOTE: The positions D - E - F - G can be carried out without the ignition being on.

7 - 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.

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

8 - IGNITION SWITCH

The key switch has five positions:

P - Ignition off, parking position.
O - Ignition switched off and I.C. engine stopped.
I - Ignition on.
II - Heating.
III - The I.C. engine starts, return to position I as soon as the key is released.

9 - 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 SERVICE.)

10 - ARMREST

11 - CAR RADIO (OPTION)

12 - FUSES AND RELAYS IN THE CAB

- Lift up the fuse and relay access panel 1.

NOTE: A sticker on the inside of the access panel gives a clear display of the use of the components described below.

Always replace a faulty fuse with another of equivalent rating. Never use a fuse that has been repaired.

F1 - Security stabilizers (7,5A). **(E F)**
- OPTION. **(A B C D)**

F2 - OPTION Working tail light (10A).
F3 - Rear windscreen wiper (7,5A).
- OPTION Roof windscreen wiper (7.5A).
- OPTION Side windshield wiper (7,5A).

F4 - Stop I.C. engine electrovalve (7,5A).
- OPTION.

F5 - Revolving light (7,5A).
F6 - Wheel alignment (5A).
F7 - Longitudinal stability alarm (10A).
- Cutting-off “simple” hydraulic movements (10A). **(A C)**
- OPTION Cutting-off “simple” hydraulic movements. (10A). **(B D E F)**
- OPTION Cutting off “aggravating” hydraulic movements (10A).

F8 - Forward/neutral/reverse selector (15A).
- Transmission cut-off (15A).
- Reverse buzzer alarm (15A).
- Reverse lights (15A).

F9 - Control panel (5A).
F10 - Sound alarm (15A).
- Stop switch (15A).

F11 - OPTION Boom head light (10A). **(B D E F)**
- OPTION Blue front and rear working lights (10A). **(B D)**
- OPTION. **(A C)**

F12 - Indicators (10A).
F13 - Heating (30A).
F14 - OPTION.
F15 - OPTION.
F16 - OPTION Air conditioning (7,5A).
F17 - OPTION Electrovalve on boom head (10A). **(B D E F)**
- OPTION Electrovalve on boom head + attachment hydraulic locking device (10A). **(B D E F)**
- OPTION Electrical boom provision (10A). **(B D E F)**
- OPTION Anti-theft device provision (10A).
- OPTION Anti-theft system (10A).
- OPTION Anti-start system (10A).
- OPTION Self-cleaning fan (10A). **(B D E F)**
- OPTION Electrovalve on boom head + self-cleaning fan (15A). **(B D E F)**

F18 - OPTION Front working head light (15A).
F19 - OPTION Rear window defrosting (15A).
F20 - OPTION Pneumatic seat (10A).
F21 - Front windscreen wiper and windscreen washer (10A).
F22 - OPTION.
F23 - Right sidelight (7,5A).
- Sidelight indicator light (7,5A).
- Control panel lighting (7,5A).
- OPTION Number plate lighting (7,5A). **(B D E F)**

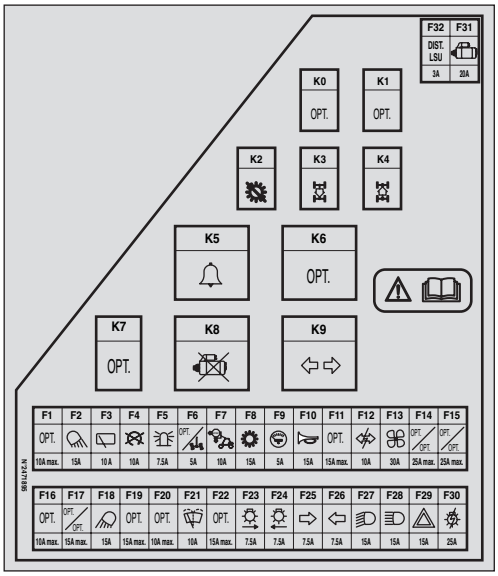
F24 - Left sidelights (7,5A).
F25 - Right indicators (7,5A).
F26 - Left indicators (7,5A).
F27 - Low beam (15A).
- Low beam indicator light (15A).
- Rear fog light (15A).

F28 - Main beam (15A).
- Main beam lamp (15A).

F29 - Warning lights (15A).
- Roof light (15A).
- OPTIONAL (+)permanent (15A).

F30 - Lights, horn and indicator switch (25A).
F31 - Starter (25A).

A: MT 728 Série D-E3
B: MT 732 Série D-E3
C: MT 928 Série D-E3
D: MT 932 Série D-E3
E: MT 1030 S Série 4-E3
F: MT 1030 S Turbo Série 4-E3



K0 - OPTION Air conditioning.
K1 - OPTION.
K2 - Transmission cut-off relay.
K3 - Reverse gear relay.
K4 - Forward gear relay.
K5 - Buzzer.
K6 - OPTION Electrovalve on boom head. (B D E F)
- OPTION Electrical boom provision. (B D E F)
- OPTION Electrovalve on boom head + attachment hydraulic locking device. (B D E F)
- OPTION. (A C)

K7 - Cutting off “simple” hydraulic movements. (A C)
- OPTION Cutting off “simple” hydraulic movements. (B D E F)
- OPTIONAL Cutting off “aggravating” hydraulic movements.

K8 - Safety system starting switch relay.
K9 - Flashing unit.

A: MT 728 Série D-E3
B: MT 732 Série D-E3
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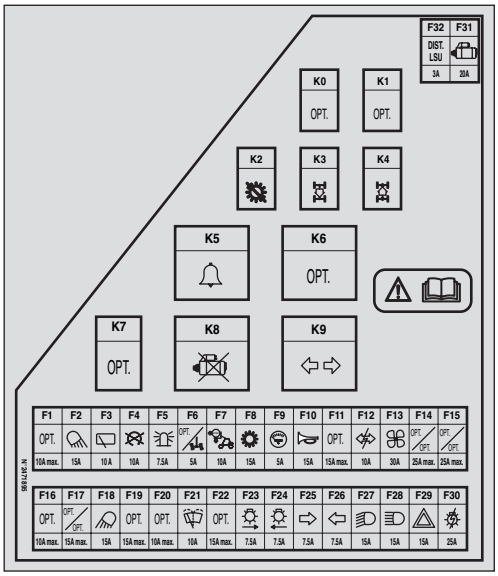


13 - FUSES AND RELAYS UNDER THE ENGINE HOOD

Remove casing 1 and cover 2 for access to fuses and relays.

Always replace a faulty fuse with another of equivalent rating. Never use a fuse that has been repaired.

F40 - Lift truck electrical equipment (40A).
F41 - Lift truck electrical equipment (40A).
F42 - Preheating I.C. engine (80A).
F43 - Alternator (80A).
F45 - OPTION Diesel decongealant (15A). (B D E F)

K16 - Engine preheating relay.
K20 - OPTION Diesel decongealant. (B D E F)

14 - ACCELERATOR PEDAL

15 - SERVICE BRAKE PEDAL AND TRANSMISSION CUT-OFF

MT 728 Série D-E3
MT 928 Série D-E3

The pedal applies on the front and rear wheels by an hydraulic brake system, and allows the lift truck to be slowed down and stopped. Depending on the position of the transmission cut-off switch, it enables the free travel to cut off transmission (see: 2 - DESCRIPTION: 5 - SWITCH PANEL).

MT 732 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

The pedal applies on the front and rear wheels by an hydraulic brake system, and allows the lift truck to be slowed down and stopped. Depending on the position of the transmission cut-off switch, it enables the free travel to cut off transmission (see: 2 - DESCRIPTION: 5 - SWITCH PANEL).

16 - 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 these lift trucks with a torque converter, it is not necessary to automatically start up in 1st speed and progress up the gears.

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 light 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 go up to 4th if the conditions and state of the road permit it. In hilly areas, set off in 2nd gear and go 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 switch to 3rd if the conditions and state of the road permit it.
- Handling: 3rd gear.
  2nd gear in restricted spaces.
- Loading (reclaiming with bucket, manure fork, etc.): 2nd gear.
- Earth moving: 1st gear.

17 - FORWARD/NEUTRAL/REVERSE GEAR SELECTION

FORWARD: Push the knob forward (position A).
REVERSE: Pull the knob backwards (position B).
NEUTRAL: The knob must be in the intermediate position to start the lift truck (position C).

When operating this control, the lift truck should be travelling at slow speed and not accelerating.

NOTE: The reverse lights and an acoustic reversing alarm indicate that the lift truck is running in reverse.

SAFETY FOR MOVING THE LIFT TRUCK

Authorisation 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.

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: If the operator leaves the driving cab with forward or reverse engaged, a continuous alarm will sound. While this alarm sounds, the operator can simply sit back in the seat and continue advancing or reversing.
If the alarm becomes discontinuous, the operator must sit back in the seat, put the forward/reverse selector back in neutral and select forward or reverse if he wishes to continue moving.

18 - 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).

19 - STEERING SELECTION

Before selecting one of the three possible steering positions, bring the 4 wheels into alignment, i.e., in the straight ahead position.

A - GREEN WHEEL ALIGNMENT LAMPS

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

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

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).

C - SWITCH FOR ALIGNMENT OF THE WHEELS

This switch enables the use or not of the device for alignment of the wheels. The indicator light indicates its use.

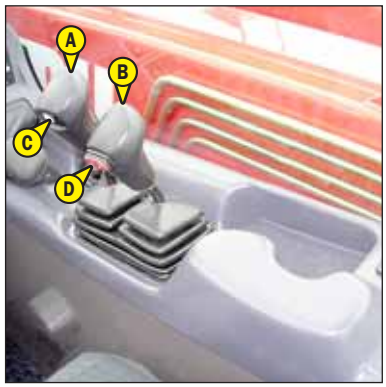
CONTROL FOR ALIGNMENT OF THE WHEELS
- Connect the switch (signal light ON).
- Shift the steering selection lever B into position B2 (short steering lock).
- Turn the steering wheel and bring the rear wheels into alignment until lamp A2 lights up.
- Shift the steering selection lever B into position B1 (highway traffic).
- Turn the steering wheel and bring the front wheels into alignment until lamp A1 lights up.

Before driving on roads, it is necessary to check the alignment of the rear wheels and to drive in front wheel steer. The control of the alignment of the rear wheels must be regularly done with the help of the green lamps, while driving the lift truck. In case of anomalies, consult your dealer.

20 - HYDRAULIC CONTROLS AND TRANSMISSION CUT-OFF

Do not attempt to alter the hydraulic system pressure by interfering with the pressure regulating valve. In the event of suspected malfunction, contact your dealer. ANY ALTERATION MAY RENDER THE WARRANTY NULL AND VOID.

Use the hydraulic controls carefully without jerking, to avoid accidents caused by shaking the lift truck.



MT 728 Série D-E3
MT 928 Série D-E3

A - Lifting and telescoping control lever.
B - Lifting and tilting control lever.
C - Transmission cut-off button.
D - Forward/neutral/reverse selector control button.

LIFTING THE LOAD
- Move lever A or B backwards to lift.
- Move lever A or B forwards to lower.

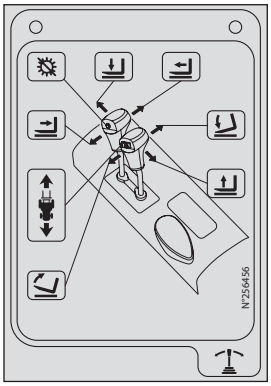
TELESCOPING
- Move lever A to the right to extend.
- Move lever A to the left to retract.

NOTE: Only for MT 928 Série D-E3
When completely retracting the telescopes, insistently operate the control so as to allow all the telescopes to retract fully.

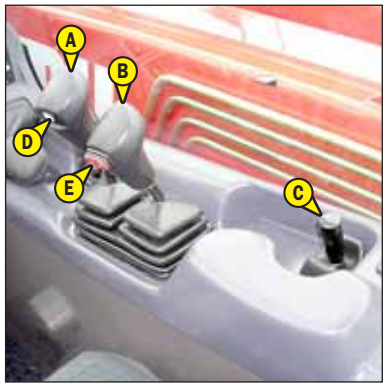
TILT OF CARRIAGE
- Move lever B to the left to excavate.
- Move lever B to the right to tip.

TRANSMISSION CUT-OFF
- Button C (see: 2 - DESCRIPTION: 5 - SWITCHES).

FORWARD/REVERSE SELECTOR
- Switch D (see 2 - DESCRIPTION: 17 - FORWARD/NEUTRAL/REVERSE GEAR SELECTOR).



MT 732 Série D-E3
MT 932 Série D-E3

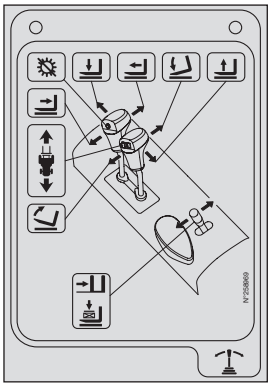


A - Lifting and telescoping control lever.
B - Lifting and tilting control lever.
C - Attachment cut-off control lever.
D - Transmission cut-off control button.
E - Forward/neutral/reverse selector control button.

LIFTING THE LOAD
- Move lever A or B backwards to lift.
- Move lever A or B forwards to lower.

TELESCOPING
- Move lever A to the right to extend.
- Move lever A to the left to retract.

NOTE: Only for MT 932 Série D-E3
When completely retracting the telescopes, insistently operate the control so as to allow all the telescopes to retract fully.



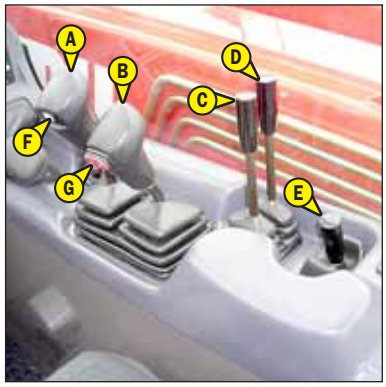
TILT OF CARRIAGE
- Move lever B to the left to excavate.
- Move lever B to the right to tip.

ATTACHMENT
- Raise lever C and turn to the left or right.

TRANSMISSION CUT-OFF
- Switch D (see: 2 - DESCRIPTION: 5 - SWITCHES).

FORWARD/REVERSE SELECTOR
- Switch E (see 2 - DESCRIPTION: 17 - FORWARD/NEUTRAL/REVERSE GEAR SELECTOR).

MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

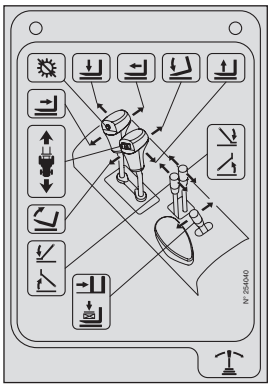


A - Lifting and telescoping control lever.
B - Lifting and tilting control lever.
E - Attachment cut-off control lever.
F - Transmission cut-off control button.
G - Forward/neutral/reverse selector control button.

LIFTING THE LOAD
- Move lever A or B backwards to lift.
- Move lever A or B forwards to lower.

TELESCOPING
- Move lever A to the right to extend.
- Move lever A to the left to retract.

NOTE: When completely retracting the telescopes, insistently operate the control so as to allow all the telescopes to retract fully.



TILT OF CARRIAGE
- Move lever B to the left to excavate.
- Move lever B to the right to tip.

L.H. STABILIZER
- Move lever C forwards to lower.
- Move lever C backwards to lift.

NOTE: The stabilizers can only be raised after the boom has been retracted.

R.H. STABILIZER
- The lever D forwards when lowering.
- The lever D backwards when lifting.

NOTE: The stabilizers can only be raised after the boom has been retracted.

ATTACHMENT
- Raise lever E and turn to the left or right.

TRANSMISSION CUT-OFF
- Button F (see: 2 - DESCRIPTION: 5 - SWITCH PANEL).

FORWARD/REVERSE SELECTOR
- Switch G (see 2 - DESCRIPTION: 17 - FORWARD/NEUTRAL/REVERSE GEAR SELECTOR).

21 - FUNCTION FILES

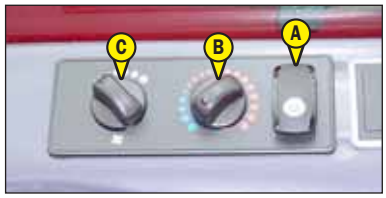
These files contain the description of the hydraulic controls and the load charts for the attachments used on the lift truck.

22 - HEATER CONTROL

A - HEATING FAN CONTROL
This 3-speed control regulates warm or cold air through the heating ventilators.

B - HEATING TEMPERATURE CONTROL
Allows the temperature inside the cab to be adjusted.
B1 - With the valve closed, the fan delivers fresh air.
B2 - With the valve opened completely, the fan delivers warm air.
The intermediate positions allow the temperature to be adjusted.

22 - AIR CONDITIONING CONTROLS (OPTION AIR CONDITIONING)



The air conditioning only comes on when the forklift truck has been started up. When using your air conditioning, you must work with the doors and windows 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 I.C. engine before switching on the compressor, so as to allow the coolant that has collected in the liquid state at the lowest point of the compressor circuit to turn into gas under the effect of the heat given off by the I.C. engine, as the compressor is liable to be damaged by coolant in the liquid state.

If your air conditioning does not seem to be working properly, have it examined by your dealer (see: 3 - MAINTENANCE: F - EVERY 2000 HOURS OF SERVICE). Never try to repair any possible problems by yourself.

DESCRIPTION OF THE AIR CONDITIONING CONTROLS
A - Air conditioning system ON/OFF control switch with indicator lamp. Only works when control switch “C” set to 1, 2 or 3.
B - Air temperature control.
C - Air flow and fan speed control. When this control is set to “0” the air conditioning system will not work.

NOTE: Possible losses of water under the lift truck are due to condensate discharges caused by the drying effect of the installation, especially with high outside temperatures and high relative humidity.
For the air conditioning to perform properly, the air intakes must not be blocked by frost, snow or leaves.
When the facility is running, at least one of the cab air grilles must be open so as to avoid any risk of freezing to the evaporator.

HEATING MODE
The controls must be adjusted in the following way:
A - Control with signal light off.
B - At the required temperature.
C - To the desired position 1, 2 or 3.

CONDITIONED AIR MODE
The controls must be adjusted in the following way:
A - Control with signal light on.
B - At the required temperature.
C - To the desired position 1, 2 or 3.

DEMISTING MODE
The controls must be adjusted in the following way:
A - Control with signal light on.
B - At the required temperature.
C - To the desired position 1, 2 or 3.
NOTE: Direct the ventilators onto the cab’s windows for increased efficiency.

23 - CAB FILTER VENTILATORS

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

24 - WINDSCREEN DEMISTER VENTS

For optimum effectiveness, close the heating ventilators.

25 - HEATING VENTS

These heating vents enable the air to be directed to the interior of the cabin and onto the side windows.

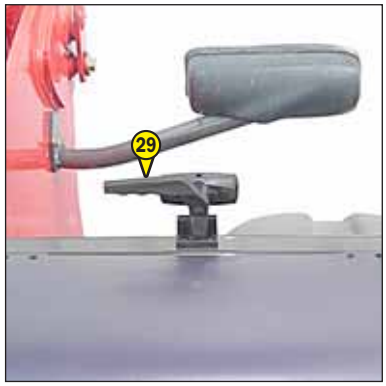
26 - DOOR LOCK

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

27 - LOCKING HANDLE FOR UPPER HALF-DOOR

28 - UNLOCKING BUTTON FOR UPPER HALF DOOR

29 - HANDLE FOR REAR WINDOW OPENING



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

NOTE: There is an OPTIONAL rear window stay.

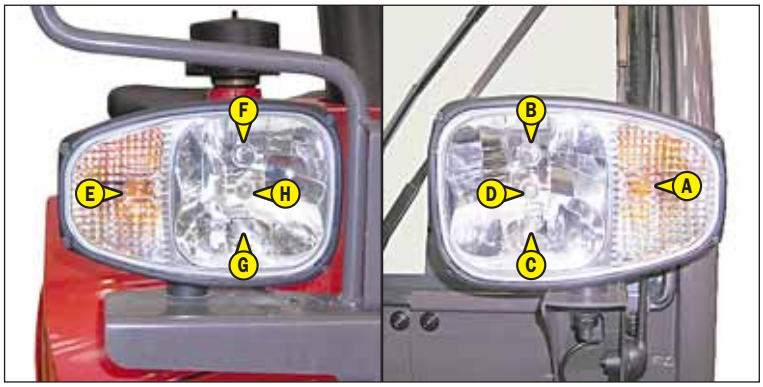
30 - DOCUMENT HOLDER

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

NOTE: An OPTION waterproof document-holder exists.

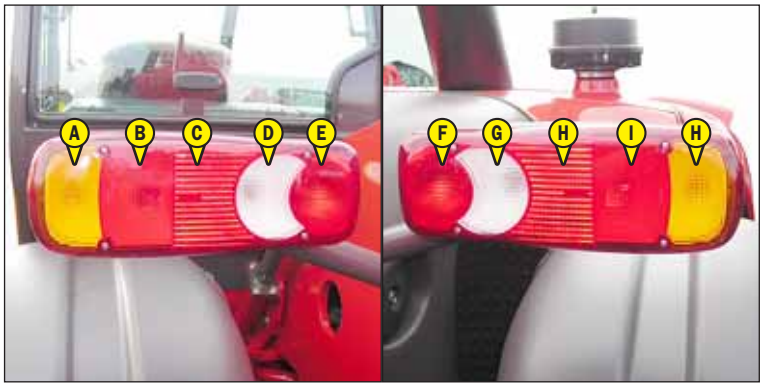
31 - FRONT LIGHTS

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



32 - REAR LIGHTS

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



33 - REVOLVING LIGHT

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

34 - DOCUMENT HOLDER NET

35 - SPIRIT LEVEL

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

36 - SUN VISOR

37 - INSIDE REAR-VIEW MIRROR

38 - ROOF LIGHT

39 - HOOK

40 - TOOL BOX (OPTION)

MT 732 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

TOWING PIN AND HOOK

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 authorised gross vehicle weight, tractive effort and maximum vertical force on the coupling point. This information is given on the manufacturer's plate fixed to each 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 (tyre condition and pressures, electrical connection, hydraulic hose, brake system...).

Do not tow a trailer or attachment which is not in perfect working order. Using a trailer in poor condition may effect the lift truck's steering and braking, and hence safety.

If a third party helps in coupling or uncoupling the trailer, this person must be permanently visible to the driver and wait until the lift truck has stopped, the handbrake is on and the I.C. engine is switched off before performing the operation.

MT 732 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

NOTE: There is an OPTIONAL rear-view mirror which allows the lift truck to be approached more closely to the trailer ring.

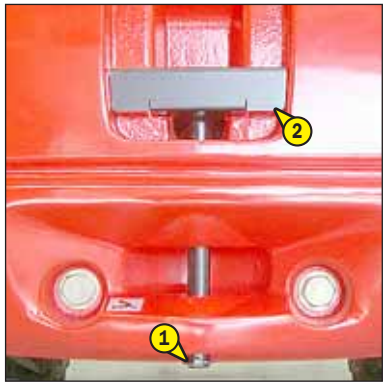
A - PROJECTING HOOK

MT 732 Série D-E3
MT 932 Série D-E3

COUPLING AND UNCOUPLING THE TRAILER

- To couple the trailer, position the lift truck as close as possible to the trailer ring.
- Put the handbrake on and switch off the I.C. engine.
- Remove the clip 1, lift the trailer pin 2 and place or remove the trailer ring.

Be careful not to get your fingers caught or crushed during this operation.
Do not forget to put clip 1 back in place.
When uncoupling, make sure that the trailer is supported independently.

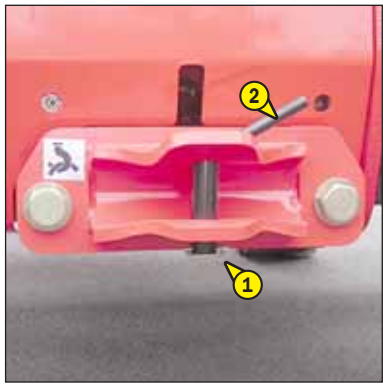


STANDARD MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3
OPTION MT 732 Série D-E3
MT 932 Série D-E3

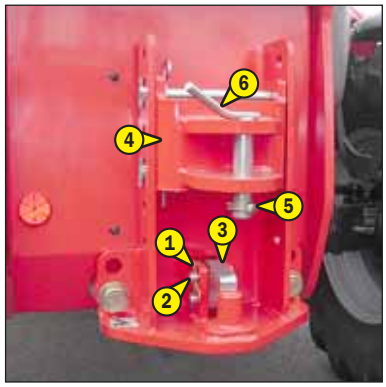
COUPLING AND UNCOUPLING THE TRAILER

- To couple the trailer, position the lift truck as close as possible to the trailer ring.
- Put the handbrake on and switch off the I.C. engine.
- Remove the clip 1, lift the trailer pin 2 and place or remove the trailer ring.

Be careful not to get your fingers caught or crushed during this operation.
Do not forget to put clip 1 back in place.
When uncoupling, make sure that the trailer is supported independently.



B - COUPLING LADDER (OPTIONAL)



MT 732 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

COUPLING AND UNCOUPLING THE TRAILER

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

Be careful not to get your fingers caught or crushed during this operation.
Do not forget to put clip 1 back in place.
When uncoupling, make sure that the trailer is supported independently.

ON THE COUPLING LADDER

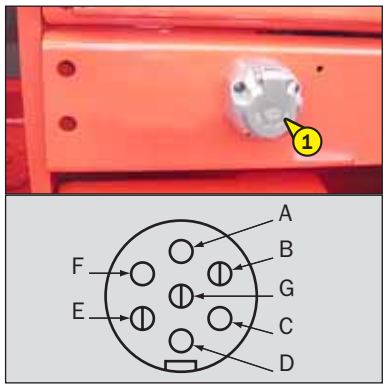
- Set the coupling fitting 4 according to the height of the trailer ring.

Do not forget to put rods and clip back in place.

- Remove the clip 5, lift the trailer pin 6 and place or remove the trailer ring.

Be careful not to get your fingers caught or crushed during this operation.
Do not forget to put clip 5 back in place.
When uncoupling, make sure that the trailer is supported independently.

C - REAR ELECTRIC SOCKET (OPTION)



MT 732 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

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

A - Left rear indicator.
B - Rear fog lights.
C - Earth.
D - Right rear indicator.
E - Rear lights.
F - Rear stoplight.
G - Reversing light.

D - CONNECTING THE BRAKE SYSTEM (OPTION)

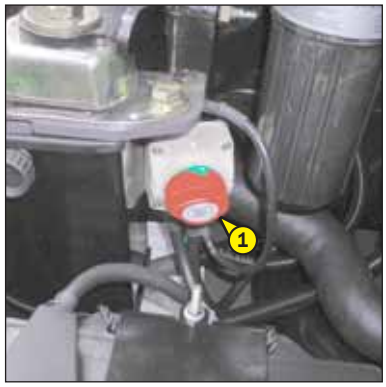
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

- Connect the brake hose to the provided brake unit 1 on the lift truck.
- Make sure the trailer brakes are working properly and test the effects of braking before taking the trailer onto the public highway.

DESCRIPTION AND USE OF THE OPTIONS

1 - BATTERY CUT-OFF

MT 732 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3



2 - NUMBER PLATE

MT 732 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

3 - NUMBER PLATE LIGHTING

MT 732 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

4 - PREHEATING ELEMENT

MT 732 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

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

SUPPLY CHARACTERISTICS OF PREHEATING SYSTEM:

- Rated range of power: 220-240V; 50-60Hz
- Current consumed: 4,5A
- Equipment in class 1
- Equipment connectable only on feeder circuit TT or TN
- Category of insulation 2

ENVIRONMENTAL CONDITIONS FOR USE:

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

CONDITIONS FOR CONNECTION AND USE OF PREHEATING:

- The preheating system should not be used for an external ambient temperature higher than + 25° C.
- It is essential that the power supply to the preheating system is:
  - Effected with a cable that conforms to the installation standards in force and contains a protective earth conductor.
  - Contains an appropriate sectioning system.
  - Incorporate an appropriate safety system against short circuits (fuses or circuit breaker) and a differential circuit breaker with 30 mA sensitivity.
- Only connect to and disconnect from the power supply while the unit is off and the I.C. engine is stopped.

5 - 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.

6 - FINTRONIC ANTI-START SYSTEM

OPERATION

- Switch on the lift truck and set the black key A next to the antenna B (maximum 80 mm).
- Wait a few seconds for red LED C to go out before starting the lift truck.

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

7 - ELECTRICAL PROVISION ON BOOM

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

MT 732 Série D-E3
MT 932 Série D-E3

OPERATION

- Hold down button 1 and move the lever to the left or right.

MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

OPERATION

- Hold down button 1 and move the lever to the left or right.

8 - QUICK-RELEASE COUPLER ON ATTACHMENT CIRCUIT

MT 732 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

9 - EXTERIOR DRAIN-BACK

MT 732 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

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

10 - HYDRAULIC ATTACHMENT LOCKING

MT 732 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

Enables attachment locking to be controlled on the carriage and the use of a hydraulic attachment on the same hydraulic circuit (see: 4 - OPTIONAL ATTACHMENTS FOR USE WITH THE RANGE: PICKING UP THE ATTACHMENTS).

11 - ELECTROVALVE ON BOOM HEAD

Enables use of two hydraulic functions on the attachment circuit.

To make connection of the rapid connectors easier, decompress the hydraulic circuit by pressing button 1 on the electrovalve.

MT 732 Série D-E3
MT 932 Série D-E3

OPERATION

- Without pressing Button 1, the lever controls a hydraulic function.
- Hold button 1 down, the lever controls another hydraulic function.

MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

OPERATION

- Without pressing Button 1, the lever controls a hydraulic function.
- Hold button 1 down, the lever controls another hydraulic function.

12 - BOOM HEAD ELECTROVALVE + HYDRAULIC ATTACHMENT LOCKING

MT 732 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

The addition of these two options enables the combining of several hydraulic functions.

13 - CUTTING OFF “SIMPLE” HYDRAULIC MOVEMENTS

The function which cuts hydraulic movements is used to automatically stop dangerous movement of the boom when you are close to the limit of longitudinal stability. However, lateral stability can reduce the load chart in its upper part and this reduction is not detected by the longitudinal stability alarm.

NOTE: Since January 2010, Simple movement cut-off is fitted as standard.

The operator must respect the lift truck’s load chart.

All attachments with a suspended load (winch, crane boom, crane boom with winch, hook, etc.) MUST be used with a lift truck equipped with a working hydraulic movement cut-out device.

OPERATION

Switch A allows you to cut off “SIMPLE” hydraulic movements or not. The cutting-off of “SIMPLE” hydraulic movements is automatically enabled when the lift truck is started-up.

WITH CUT-PUT OF “SIMPLE” HYDRAULIC MOVEMENTS: VISUAL INDICATOR A1 OFF:
- Led B1 indicates that the lift truck has reached the authorized limit of longitudinal stability and all hydraulic movements are neutralized.
- The sound alarm goes off at the same time.
- To restart hydraulic movement, proceed as follows:
- Press the bottom of switch A, visual indicator A1 comes on and indicates that the hydraulic movement cut-out is disabled.
- Only perform de-aggravating hydraulic movements in the following order: boom retracted and raised.
- Re-enable the hydraulic movement cut-out by pressing the top of switch A, visual indicator A1 will go out.

NOTE: When the boom is retracted, the function for switching off “SIMPLE” hydraulic movements is disconnected.

WITHOUT CUTTING-OUT “SIMPLE” HYDRAULIC MOVEMENTS: VISUAL INDICATOR A1 ON:
- To allow the use of loading or earth moving buckets, for example.
- In this case, the user is only informed by the longitudinal stability alarm system B (see: 2 - DESCRIPTION: 4 - LONGITUDINAL STABILITY ALARM SYSTEM).

14 - CUTTING OFF “AGGRAVATING” HYDRAULIC MOVEMENTS

The function which cuts hydraulic movements is used to automatically stop dangerous movement of the boom when you are close to the limit of longitudinal stability. However, lateral stability can reduce the load chart in its upper part and this reduction is not detected by the longitudinal stability alarm.

The operator must respect the lift truck’s load chart.

All attachments with a suspended load (winch, crane boom, crane boom with winch, hook, etc.) MUST be used with a lift truck equipped with a working hydraulic movement cut-out device.

OPERATION

Switch A allows you to cut-off “AGGRAVATING” hydraulic movements or not. The cutting-off of “AGGRAVATING” hydraulic movements is automatically enabled when the lift truck is started-up.

WITH CUT-OUT OF “AGGRAVATING” HYDRAULIC MOVEMENTS: VISUAL INDICATOR A1 OFF:
- Led B1 indicates that the lift truck has reached the authorized limit of longitudinal stability and all aggravating hydraulic movements are neutralised.
- The sound alarm goes off at the same time.
- To restart hydraulic movements, only perform de-aggravating hydraulic movements in the following order: boom retracted and raised.

NOTE: When the boom is retracted, the function for switching off “AGGRAVATING” hydraulic movements is disconnected.

WITHOUT CUTTING-OUT “AGGRAVATING” HYDRAULIC MOVEMENTS: VISUAL INDICATOR A1 ON:
- To allow the use of loading or earth moving buckets, for example.
- In this case, the user is only informed by the longitudinal stability alarm system B (see: 2 - DESCRIPTION: 4 - LONGITUDINAL STABILITY ALARM SYSTEM).

15 - PREARRANGED TRAILER LOCKING

MT 732 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

Enables the hydraulic connection of a braked trailer (see: 2 - DESCRIPTION: TOWING PIN AND HOOK).

16 - CLEANFIX SELF-CLEANING FAN

MT 732 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

This system, operated by switch 1, cleans the radiator core and the grille of the engine cover by reversing the air flow.

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

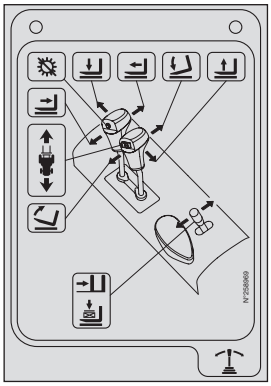
Position A: The indicator light is on, the fan operates in self-cleaning mode for a few seconds once every 3 minutes.
Position B: The indicator light is off, the fan is in normal operating mode.

18 - ATTACHMENT CIRCUIT WITH QUICK-RELEASE COUPLERS

MT 728 Série D-E3
MT 928 Série D-E3

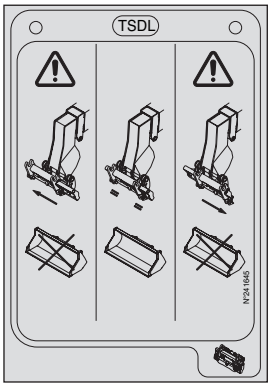
Enables the use of a hydraulic attachment.

OPERATION
- Raise lever 1 and turn to the left or right.



19 - SINGLE SIDE-SHIFT CARRIAGE (TSDL)

MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

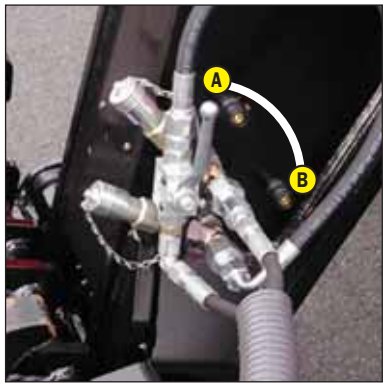


The single side-shift carriage (TSDL) is only compatible with the following attachments:

- ***floating fork carriage (TFF)***
- ***tilting fork carriage (PFB)***
- ***loading bucket (CBR)***
- ***concrete bucket (BB, BBG)***
- ***spout bucket (GL)***
- ***crane boom and crane boom with winch (P, PT, PO, PC)***
- ***winch (H)***

It is prohibited to use any other attachments on the TSDL.

If it is being used with a loading bucket (CBR), the single side-shift carriage MUST be centred and no side-shift operations performed.



WITH COUPLER ON BOOM HEAD

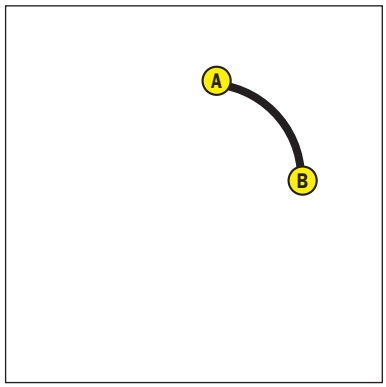
SINGLE SIDE-SHIFT CARRIAGE
- Put the valve in position B, and used hydraulic control of the attachment of the lift truck.

ATTACHMENT
- Put the valve in position A, and used hydraulic control of the attachment of the lift truck.

WITH BOOM HEAD ELECTROVALVE

SINGLE SIDE-SHIFT CARRIAGE
- Move the lever to left or right.

ATTACHMENT
- Hold button 1 down and move the lever to left or right.



WITH BOOM HEAD ELECTROVALVE +PREARRANGED HYDRAULIC ATTACHMENT LOCKING

SINGLE SIDE-SHIFT CARRIAGE
- Move the lever to left or right.

ATTACHMENT
- Set the valve to position A, hold down button 1 and move the lever to left or right.

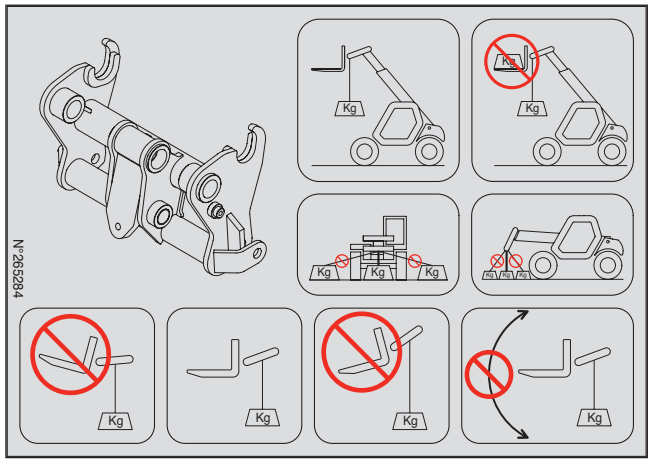
PREARRANGED HYDRAULIC ATTACHMENT LOCKING
- Set the valve to position B, hold down button 1 and move the lever to left or right.

20 - LIFTING RING ON SINGLE CARRIAGE

CONDITIONS OF USE

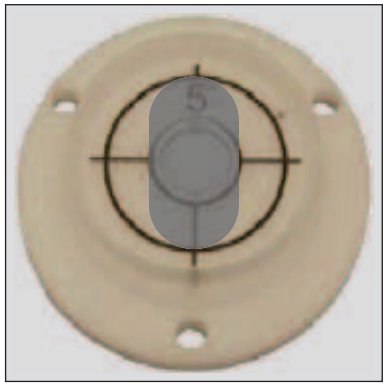
Follow the instructions given in the instruction manual (see: 1 - OPERATING AND SAFETY INSTRUCTIONS: INSTRUCTIONS FOR HANDLING A LOAD).

- The lifting ring must be used WITHOUT FORKS AND ATTACHMENTS, but the angle of inclination of the carriage must be same as when the forks are used in the horizontal position.
- 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.



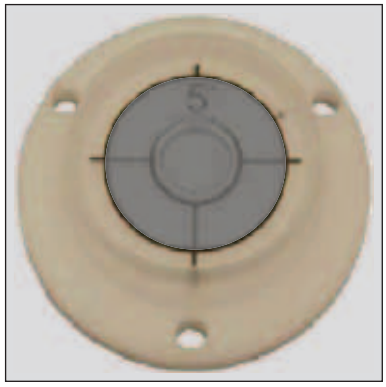
HANDLING WITH NO MOVEMENT OF THE LIFT TRUCK

- Whether on stabilisers or on tyres, the lateral attitude must not exceed 1 % and the longitudinal attitude must not exceed 8,75 % (5°).
- The bubble of the level indicator must remain within the outer circle and be centred in the longitudinal direction.



HANDLING WITH MOVEMENT OF THE LIFT TRUCK

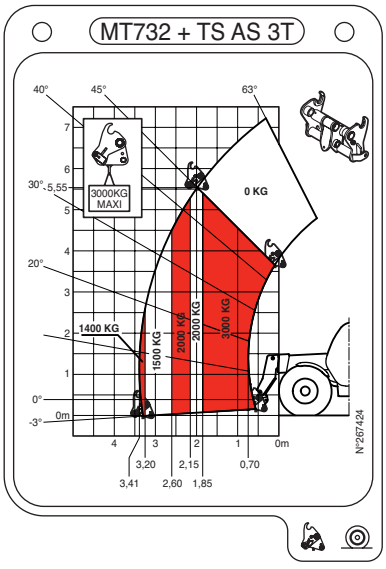
- The lateral attitude must not exceed 8,75 % (5°). The bubble must remain within the outer circle.

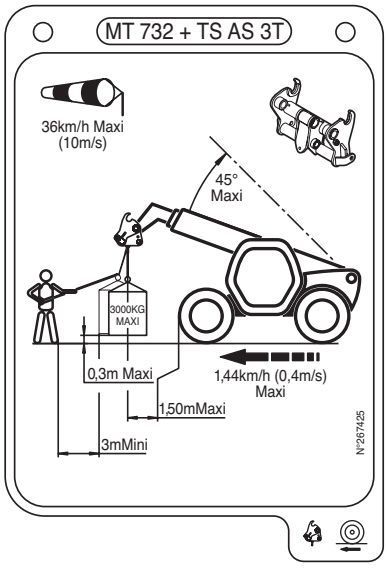


LOAD CHARTS AND FUNCTION SHEETS

MT 732 Série D-E3

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

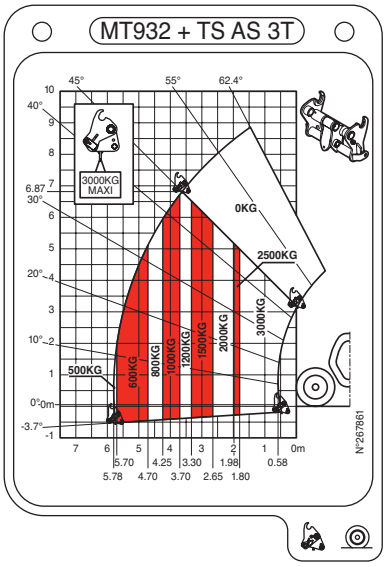


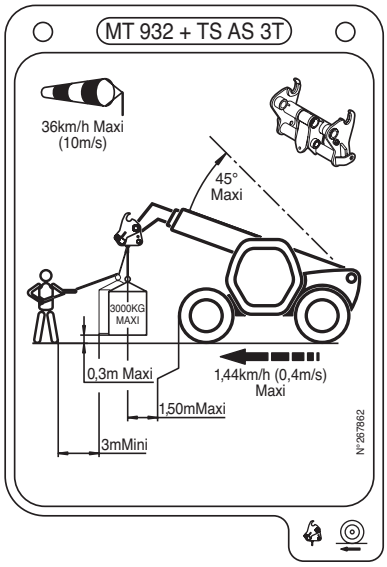


LOAD CHARTS AND FUNCTION SHEETS

MT 932 Série D-E3

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



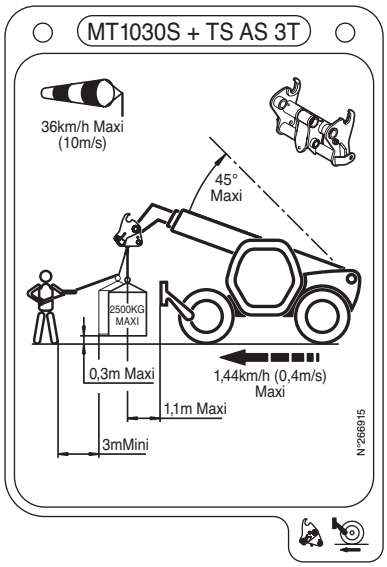


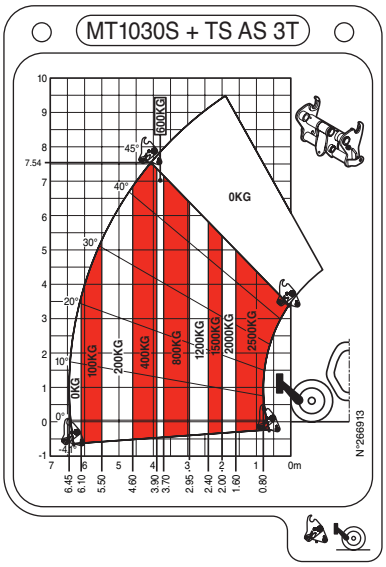
LOAD CHARTS AND FUNCTION SHEETS

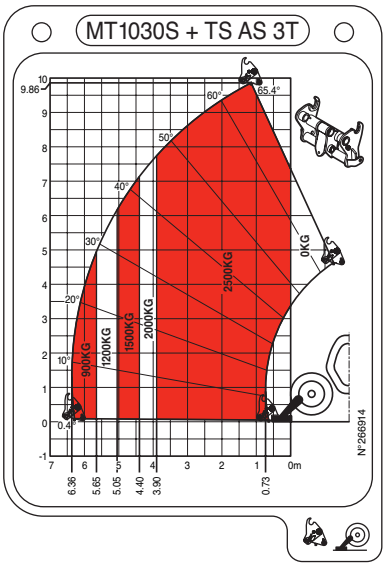
MT 1030 S Série 4-E3

MT 1030 S Turbo Série 4-E3

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







3 - MAINTENANCE

TABLE OF CONTENTS

MANITOU ORIGINAL SPARE PARTS AND EQUIPMENT

OUR LIFT TRUCKS MUST BE SERVICED USING ORIGINAL MANITOU PARTS.

IF YOU USE PARTS WHICH ARE NOT ORIGINAL MANITOU PARTS,

YOU RISK

- Legally - to be held responsible in the event of an accident.

- Technically - to generate operating failure or shorten the life of the lift truck.

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

BY USING ORIGINAL MANITOU PARTS FOR MAINTENANCE OPERATIONS,

YOU BENEFIT EXPERTISE

Through its network, MANITOU provides the user with

- Know-how and competence.

- The guarantee of high-quality work.

- Original replacement components.

- 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.

ORIGINAL REPLACEMENT PARTS ARE DISTRIBUTED EXCLUSIVELY BY MANITOU AND ITS DEALER NETWORK.
the dealer network list is available on manitou web site www.manitou.com

START-UP CHECKLIST

0 = OK 1 = Missing 2 = Incorrect

100	ENGINE	
01	Air filter	
02	Fuel tank	
03	Fuel lines - Filter	
04	Injection or carburetion system	
05	Radiator and cooling system	
06	Belts	
07	Hoses	
101	**TRANSMISSION**	
01	Direction reversal system	
02	Gear shift	
03	Cut-off pedal	
04	Clutch	
102	**AXLES/TRANSFER GEAR BOX**	
01	operation and seal	
02	Stop settings	
103	**HYDRAULIC/HYDROSTATIC CIRCUIT**	
01	Tank	
02	Pumps and couplings	
03	Tightening of connections	
04	Lift cylinder(s)	
05	Tilt cylinder(s)	
06	Attachment cylinder(s)	
07	Telescope cylinder(s)	
08	Compensation cylinder(s)	
09	Steering cylinder(s)	
10	Control Valve	
11	Balancing valve	
104	**BRAKE SYSTEM**	
01	Service brake and parking brake operation	
02	Brake fluid level	
105	**LUBRICATION AND GREASING**	
106	**JIB/MANISCOPIC/MANIACCESS ASSEMBLY**	
01	Beam and telescope(s)	
02	Skid	
03	Hinges	
04	Carriage	
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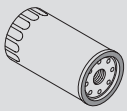
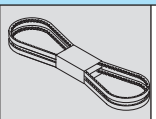
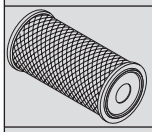
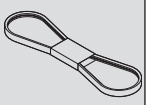
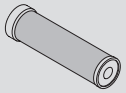
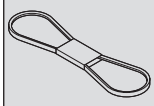
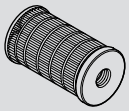
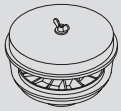
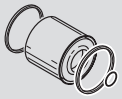
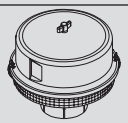
107	**MAST ASSEMBLY**	
01	Fixed and mobile uprights	
02	Carriage	
03	Chains	
04	Rollers	
05	Forks	

108	ATTACHMENTS	
01	Fitting on machine	
02	Hydraulic couplings	
109	**CABIN/PROTECTOR/ELECTRIC CIRCUIT**	
01	Seat	
02	Dashboard and radio	
03	Sound and visual alarm/safety system	
04	Heating/Air conditioning	
05	Windscreen wiper/windscreen washer	
06	Road horn	
07	Reversing horn	
08	Road lights	
09	Additional lights	
10	Rotating beacon light	
11	Battery	
110	**WHEEL**	
01	Rims	
02	Tyre/Pressure	
111	**SCREWS**	
112	**FRAME AND BODYWORK**	
113	**PAINTING**	
114	**GENERAL OPERATION**	
115	**OPERATOR'S MANUAL**	
116	**CUSTOMER INSTRUCTIONS**	

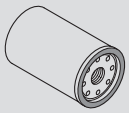
FILTERS CARTRIDGES AND BELTS

I.C. ENGINE

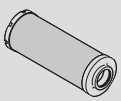
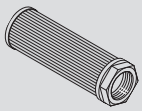
	I.C. ENGINE OIL FILTER Part number: 476954 Change: 500 H		ALTERNATOR BELT Part number: 702974
	DRY AIR FILTER CARTRIDGE Part number: 563416 Clean: 50 H* Change: 500 H*		FAN BELT Part number: 257524
	SAFETY DRY AIR FILTER CARTRIDGE Part number: 563415 Change: 1000 H*		COMPRESSOR BELT (OPTION AIR CONDITIONING) Part number: 244237
	FUEL FILTER CARTRIDGE Part number: 605013 Change: 500 H		CYCLONIC PRE-FILTER Part number: 224713 Clean: 10 H
	FUEL PRE-FILTER Part number: 706497 Change: 500 H		AUTOMATIC VACUUM-CLEANING PRE-FILTER (OPTION) Part number: 226611
	CLEANFIX COMPRESSOR FILTER (OPTION) Part number: 781443 Change: 500 H		AUTOMATIC VACUUM-CLEANING PRE-FILTER (OPTION) Part number: 223510

*: This periodicity is given for information only (see: 3 - MAINTENANCE: SERVICING SCHEDULE) for cleaning and changing.

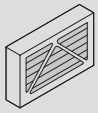
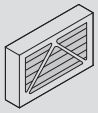
TRANSMISSION

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

HYDRAULIC

	HYDRAULIC RETURN OIL FILTER CARTRIDGE Part number: 236095 Change: 500 H		SUCTION STRAINER FOR HYDRAULIC OIL TANK Part number: 224726 Clean: 1000 H
	FILTER CAP FOR HYDRAULIC OIL TANK Part number: 62415 Change: 1000 H		

CAB

	CAB VENTILATION FILTER (WITHOUT AIR CONDITIONING) Part number: 225052 Clean: 500 H		CAB VENTILATION FILTER (WITH AIR CONDITIONING) Part number: 225052 Clean: 50 H Change: 250 H

LUBRICANTS AND FUEL

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, gear box and axle oils may be requested depending on the rate of use.

(*) RECOMMENDED FUEL SPECIFICATION
Use a high-quality fuel to obtain optimal performance of the I.C. engine.

- N590 diesel fuel type - Auto/C0/C1/C2/C3/C4
- BS2869 Class A2
- ASTM D975-91 Class 2-2DA, US DF1, US DF2, US DFA
- JIS K2204 (1992) Grades 1, 2, 3 and Special Grade 3.

I.C. ENGINE				
ORGANS TO BE LUBRICATED	CAPACITY	RECOMMENDATION	PACKAGING	PART NUMBER
I.C. ENGINE	11 Litres	MANITOU Oil API CH4	5 l 20 l 55 l 209 l 1000 l	661706 582357 582358 582359 490205
COOLING CIRCUIT	18,5 Litres	Cooling liquid (protection - 30°)	2 l 5 l 20 l	473076 470077 470078
		Cooling liquid (protection - 25°)	2 l 5 l 20 l	554002 554003 554004
FUEL TANK	120 Litres	Diesel fuel (*)		

TRANSMISSION				
ORGANS TO BE LUBRICATED	CAPACITY	RECOMMENDATION	PACKAGING	PART NUMBER
GEAR BOX	16,6 Litres	MANITOU Oil Automatic transmission	1 l 20 l 55 l 209 l 1000 l	62148 546332 546217 546195 720148
ANGLE GEAR BOX	2,2 Litres	MANITOU Oil SAE80W90 Mechanical transmission	2 l 5 l 20 l 55 l 209 l	499237 720184 546330 546221 546220
TRANSMISSION UNIVERSAL JOINT		MANITOU Grease BLUE multi-purpose	400 g 1 kg 5 kg 20 kg 50 kg	161589 720683 554974 499233 489670

BOOM			
ORGANS TO BE LUBRICATED	RECOMMENDATION	PACKAGING	PART NUMBER
BOOM PADS	MANITOU Grease BLACK multi-purpose	400 g 1 kg 5 kg	545996 161590 499235
GREASING OF THE BOOM	MANITOU Grease BLUE multi-purpose	400 g 1 kg 5 kg 20 kg 50 kg	161589 720683 554974 499233 489670

HYDRAULIC				
ORGANS TO BE LUBRICATED	CAPACITY	RECOMMENDATION	PACKAGING	PART NUMBER
HYDRAULIC OIL TANK	128 Liters	MANITOU Oil Hydraulic ISO VG 46	5 l 20 l 55 l 209 l	545500 582297 546108 546109

BRAKE			
ORGANS TO BE LUBRICATED	RECOMMENDATION	PACKAGING	PART NUMBER
BRAKE CIRCUIT	MANITOU Oil Mineral brake fluid	1 l	490408

CAB			
ORGANS TO BE LUBRICATED	RECOMMENDATION	PACKAGING	PART NUMBER
CAB DOOR	MANITOU Grease BLUE multi-purpose	400 g 1 kg 5 kg 20 kg 50 kg	161589 720683 554974 499233 489670
WINDSCREEN WASHER TANK	Windscreen washer fluid	1 l 5 l	490402 486424

FRONT AXLE				
ORGANS TO BE LUBRICATED	CAPACITY	RECOMMENDATION	PACKAGING	PART NUMBER
FRONT AXLE DIFFERENTIAL	7,3 Liters	MANITOU Oil Special immersed brakes	5 l 20 l 209 l 1000 l	545976 582391 546222 720149
FRONT WHEELS REDUCERS	0,75 Liter	MANITOU Oil SAE80W90 Mechanical transmission	2 l 5 l 20 l 55 l 209 l	499237 720184 546330 546221 546220
FRONT WHEEL REDUCING GEAR PIVOTS		MANITOU Grease BLACK multi-purpose	400 g 1 kg 5 kg	545996 161590 499235

REAR AXLE				
ORGANS TO BE LUBRICATED	CAPACITY	RECOMMENDATION	PACKAGING	PART NUMBER
REAR AXLE DIFFERENTIAL	7,3 Liters	MANITOU Oil Special immersed brakes	5 l 20 l 209 l 1000 l	545976 582391 546222 720149
REAR WHEELS REDUCERS	0,75 Liter	MANITOU Oil SAE80W90 Mechanical transmission	2 l 5 l 20 l 55 l 209 l	499237 720184 546330 546221 546220
REAR WHEEL REDUCING GEAR PIVOTS REAR AXLE OSCILLATION		MANITOU Grease BLACK multi-purpose	400 g 1 kg 5 kg	545996 161590 499235

CHASSIS			
ORGANS TO BE LUBRICATED	RECOMMENDATION	PACKAGING	PART NUMBER
STABILIZERS MT 1030 S Série 4-E3 MT 1030 S Turbo Série 4-E3	MANITOU Grease BLUE multi-purpose	400 g 1 kg 5 kg 20 kg 50 kg	161589 720683 554974 499233 489670

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).

A = ADJUST, C = CHECK, G = GREASE, N = CLEAN, P = BLEED, R = REPLACE, V = DRAIN	PAGE	(1)	DAILY OR EVERY 10 HOURS SERVICE	EVERY 50 HOURS SERVICE	EVERY 250 HOURS SERVICE	EVERY 500 HOURS SERVICE OR 6 MONTHS	EVERY 1000 HOURS SERVICE OR 1 YEAR	EVERY 2000 HOURS SERVICE OR 2 YEARS	EVERY 4000 HOURS SERVICE	OCCASIONALLY
I.C. ENGINE										
I.C. engine oil level	3-12	C	C	<<<	<<<	<<<	<<<	<<<	<<<	
Cooling liquid level	3-12	C	C	<<<	<<<	<<<	<<<	<<<	<<<	
Fuel level	3-12	C	C	<<<	<<<	<<<	<<<	<<<	<<<	
Fuel pre-filter	3-13	C	C	<<<	<<<	<<<	<<<	<<<	<<<	
Cyclonic pre-filter	3-13	N	N	<<<	<<<	<<<	<<<	<<<	<<<	
Dry air filter cartridge	3-16/27	R		C/N	<<<	R	<<<	<<<	<<<	
Radiator cores	3-16	N		N	<<<	<<<	<<<	<<<	<<<	
Condenser core (OPTION Air conditioning)	3-16	C/N		C/N	<<<	<<<	<<<	<<<	<<<	
Fan belt tension	3-22	A			C/A	<<<	<<<	<<<	<<<	
Alternator/crankshaft belt tension	3-22	A			C/A	<<<	<<<	<<<	<<<	
Compressor belt tension (OPTION Air conditioning)	3-23	A			C/A	<<<	<<<	<<<	<<<	
I.C. engine oil	3-26	V				V	<<<	<<<	<<<	
I.C. engine oil filter	3-26	R				R	<<<	<<<	<<<	
Fuel pre-filter	3-27	R				R	<<<	<<<	<<<	
Fuel filter	3-28	R				R	<<<	<<<	<<<	
CLEANFIX compressor filter (OPTION)	3-28	R				R	<<<	<<<	<<<	
Fuel tank	3-32						N	<<<	<<<	
Safety dry air filter cartridge	3-32						R	<<<	<<<	
I.C. engine silent blocks							C**	<<<	<<<	
I.C. engine rates							C**	<<<	<<<	
Valves clearances		C**					C**	<<<	<<<	
Cooling liquid	3-38							V	<<<	
Radiator								C**	<<<	
Water pump and the thermostat								C**	<<<	
Alternator and the starter motor								C**	<<<	
Turbocompressor								C**	<<<	
Fuel system	3-40									P
TRANSMISSION										
Oil levelgear box	3-13	C	C	<<<	<<<	<<<	<<<	<<<	<<<	
Transmission universal joint	3-17	G		G	<<<	<<<	<<<	<<<	G/C**	
Angle gear box oil level	3-23	C			C	<<<	<<<	<<<	<<<	
Gear box oil filter	3-29	R				R	<<<	<<<	<<<	
Gear box oil	3-33	V					V	<<<	<<<	
Gear box sump strainer	3-33	N					N	<<<	<<<	
Angle gear box oil	3-34	V					V	<<<	<<<	
Silentblocks in the gear box							C**	<<<	<<<	
Gear box controls							C**	<<<	<<<	
Gear box pressures								C**	<<<	
Converter pressure								C**	<<<	
TYRES										
Tyres pressure	3-13	C	C	<<<	<<<	<<<	<<<	<<<	<<<	
Wheel nuts torque	3-13	C	C	<<<	<<<	<<<	<<<	<<<	<<<	
Condition of wheels and tyres							C**	<<<	<<<	
Wheel	3-40									R
BOOM										
Boom pads	3-14		G*	<<<	<<<	<<<	<<<	<<<	<<<	
Boom	3-18	G		G	<<<	<<<	<<<	<<<	<<<	
Boom pads wear							C**	<<<	<<<	
Condition of boom unit								C**	<<<	
Bearings and articulation rings								C**	<<<	
HYDRAULIC										
Hydraulic oil level	3-19	C		C	<<<	<<<	<<<	<<<	<<<	
Hydraulic return oil filter cartridge	3-29	R				R	<<<	<<<	<<<	
Hydraulic oil	3-34						V	<<<	<<<	
Suction strainer for hydraulic oil tank	3-34						N	<<<	<<<	
Filter cap for hydraulic oil tank	3-34						R	<<<	<<<	
Speeds of hydraulic movements							C**	<<<	<<<	
Hydraulic pump pipe filter							N**	<<<	<<<	
Condition of hoses and flexible pipes							C**	<<<	<<<	
Condition of cylinders (leakage, shafts)							C**	<<<	<<<	
Hydraulic circuit pressures								C**	<<<	
Hydraulic circuit outputs								C**	<<<	
Hydraulic oil tank								N**	<<<	

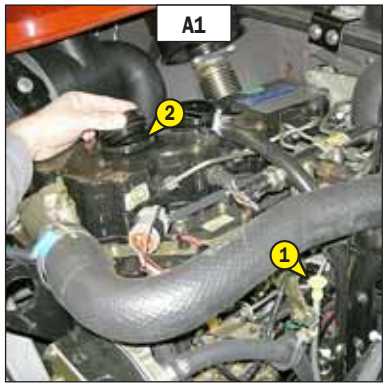
A = ADJUST, C = CHECK, G = GREASE, N = CLEAN, P = BLEED, R = REPLACE, V = DRAIN	PAGE	(1)	DAILY OR EVERY 10 HOURS SERVICE	EVERY 50 HOURS SERVICE	EVERY 250 HOURS SERVICE	EVERY 500 HOURS SERVICE OR 6 MONTHS	EVERY 1000 HOURS SERVICE OR 1 YEAR	EVERY 2000 HOURS SERVICE OR 2 YEARS	EVERY 4000 HOURS SERVICE	OCCASIONALLY
BRAKE										
Brake oil level	3-19	C		C	<<<	<<<	<<<	<<<	<<<	
Parking brake	3-23	C/A			C/A	<<<	<<<	<<<	<<<	
Parking brake lever mechanism	3-29	G				G	<<<	<<<	<<<	
Parking brake mechanism on the transmission		G**				G**	<<<	<<<	<<<	
Brake oil							V**	<<<	<<<	
Brake system							P**	<<<	<<<	
Brake system pressure							C**	<<<	<<<	
Brake							A**	<<<	<<<	
STEERING										
Steering								C**	<<<	
Steering swivel joints									C**	
CAB										
Windscreen washer liquid level	3-20	C		C	<<<	<<<	<<<	<<<	<<<	
Cab door	3-20	G		G	<<<	<<<	<<<	<<<	<<<	
Cab ventilation filter (OPTION Air conditioning)	3-20/24	R		N	R	<<<	<<<	<<<	<<<	
Heating block non-return valve	3-24	N			N	<<<	<<<	<<<	<<<	
Cab ventilation filters	3-30	N				N	<<<	<<<	<<<	
Seat belt	3-35						C	<<<	<<<	
Condition of the rear view mirrors							C**	<<<	<<<	
Structure							C**	<<<	<<<	
Air conditioning (OPTION)	3-39							C	<<<	
ELECTRICITY										
Longitudinal stability alarm device							C**	<<<	<<<	
Condition of wiring harness and cables							C**	<<<	<<<	
Lights and signals							C**	<<<	<<<	
Warning indicators							C**	<<<	<<<	
Front headlights	3-41									A
FRONT AXLE										
Front wheels reducers pivots	3-21	G		G	<<<	<<<	<<<	<<<	G/C**	
Front axle differential oil level	3-24	C			C	<<<	<<<	<<<	<<<	
Front wheels reducers oil level	3-24	C			C	<<<	<<<	<<<	<<<	
Front axle differential oil	3-30	V				V	<<<	<<<	<<<	
Front wheels reducers oil	3-36	V					V	<<<	<<<	
Wear of front axle brake discs									C**	
Front wheels reducers universal joint									C**	
Front wheels reducers clearance									C**	
REAR AXLE										
Rear wheels reducers pivots	3-21	G		G	<<<	<<<	<<<	<<<	G/C**	
Rear axle oscillation	3-21	G		G	<<<	<<<	<<<	G/C**	<<<	
Rear axle differential oil level	3-24	C			C	<<<	<<<	<<<	<<<	
Rear wheels reducers oil level	3-24	C			C	<<<	<<<	<<<	<<<	
Rear axle differential oil MT 732 / MT 932 / MT 1030	3-30	V				V	<<<	<<<	<<<	
Rear axle differential oil MT 728 / MT 928	3-35	V					V	<<<	<<<	
Rear wheels reducers oil	3-36	V					V	<<<	<<<	
Wearing of rear axle brake discs									C**	
Rear wheels reducers universal joint									C**	
Rear wheels reducers clearance									C**	
CHASSIS										
Stabilizers	3-21	G		G	<<<	<<<	<<<	<<<	<<<	
Structure							C**	<<<	<<<	
Bearings and articulation rings								C**	<<<	
ATTACHMENTS										
Forks wear		C**				C**	<<<	<<<	<<<	
Attachment carriage							C**	<<<	<<<	
Condition of attachments							C**	<<<	<<<	
LIFT TRUCK										
Tow the lift truck	3-41									XXX
Sling the lift truck	3-41									XXX
Transport the lift truck on a platform	3-43									XXX

(*): Every 10 hours during the first 50 hours, then once at 250 hours.
(**): Consult your dealer.

A - DAILY OR EVERY 10 HOURS SERVICE

A1 - I.C. ENGINE OIL LEVEL

CHECK

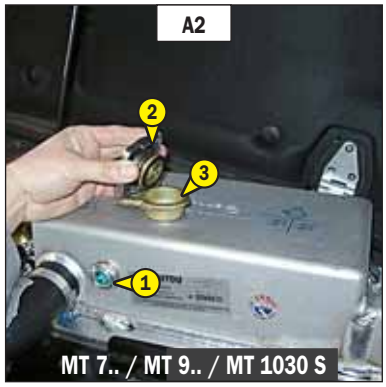


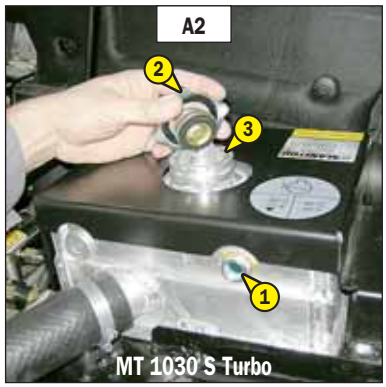
Place the lift truck on level ground with the I.C. engine stopped, and let the oil drain into the sump.

- Open the I.C. engine bonnet.
- Remove the dipstick 1 (fig. A1).
- Clean the dipstick and check the correct level between the two notches.
- If necessary, add oil (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) by the filler port 2 (fig. A1).
- Check visually that there is no leakage or seepage of oil in the I.C. engine.

A2 - COOLING LIQUID LEVEL

CHECK





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

- Open the I.C. engine bonnet.
- Check the correct level in the middle of gauge 1 (fig. A2).
- If necessary, add cooling liquid (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL).
- Slowly turn the cap of the radiator 2 (fig. A2) up to the safety stop.
- Allow the pressure and the steam to escape.
- Press down and turn the cap so as to release it.
- Add cooling liquid via filler port 3 (fig. A2) up to the middle of gauge 1 (fig. A2).
- Lubricate slightly the filler neck in order to facilitate the setting and the removal of the radiator cap.
- Check visually that there is no leakage in the radiator and pipes.

To avoid any risk of spraying or burning, wait until the I.C. 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).

A3 - FUEL LEVEL

CHECK

Keep the fuel tank full, to reduce as much as possible any condensation due to the atmospheric conditions.

- Remove cap 1 (fig. A3).
- Fill the fuel tank with clean fuel (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL), filtered through a strainer or a clean, lint free cloth, through filler port 2 (fig. A3).
- Put the cap back 1 (fig. A3).
- Check visually that there is no leakage in the tank and pipes.

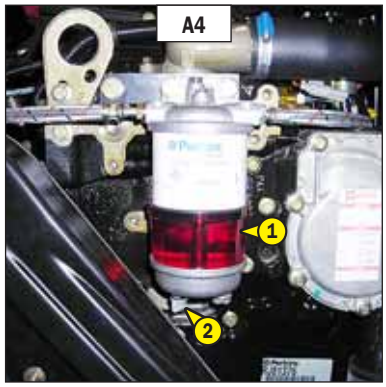
Never smoke or approach with a flame during filling operations or when the tank is open. Never refill while I.C. engine is running.

The fuel tank is degassed via the filler plug. When changing it, always use an original part, with degassing hole.

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

A4 - FUEL PRE-FILTER

CHECK



- Open the I.C. engine bonnet.
- Check for the presence of water in the pre-filter bowl 1 (fig. A4) and empty it out if necessary.
- Place a receptacle under the drain plug 2 (fig. A4) and loosen it in two to three thread turns.
- Allow the diesel fuel to flow out until it is free from impurities and water.
- Retighten the drain plug while the diesel fuel is flowing out.

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 MAXI level on the tank.

- Loosen nut 1 (fig. A5), remove cover 2 (fig. A5) and empty the tank.
- Clean the pre-filter unit with a clean dry cloth and reassemble the unit.

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

A6 - GEAR BOX OIL LEVEL

CHECK

Park the lift truck on level ground with the boom raised, the I.C. engine cold and stopped. Carry out the control within 5 minutes of the I.C. engine being stopped.

- Remove the plastic cap 1 (fig. A6).
- Remove the dipstick 2 (fig. A6).
- Wipe the dipstick and check the correct level between the two MIN and MAX marks.
- If necessary, add oil (see: 3 - MAINTENANCE: E3 - GEAR BOX OIL).
- Check visually that there is no leakage or seepage of oil in the transmission.

A7 - TYRES PRESSURE AND WHEEL NUTS TORQUE

CHECK

- Check the condition of the tyres, to detect cuts, protuberances, wear, etc.
- Check the torque load of the wheel nuts. Non compliance with this instruction can cause damage and rupture to the wheel bolts and distortion to the wheels.

  Wheel nuts tightening torque
  - Front tyres: 630 N.m ± 15 %
  - Rear tyres: 630 N.m ± 15 %
- Check and adjust the tyre pressures if necessary (see: 2 - DESCRIPTION: FRONT AND REAR TYRES).

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

NOTE: There is an OPTIONAL wheel toolkit and anti-puncture kit.

A8 - BOOM PADS

CLEAN - GREASE

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

- Extend the boom completely.
- With a brush, apply a coat of grease (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) on the 4 sides of the telescope(s) (fig. A8).
- Telescope the boom several times in order to spread the coat of grease evenly.
- Remove the surplus of grease.

If the lift truck is used in an abrasive environment (dust, sand, coal...) Use lubricating varnish (MANITOU reference: 483536). In this respect, consult your dealer.

MT 732 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

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.

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 the cartridge must be changed. Never use the lift truck without an air filter or with a damaged air filter.

- 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.

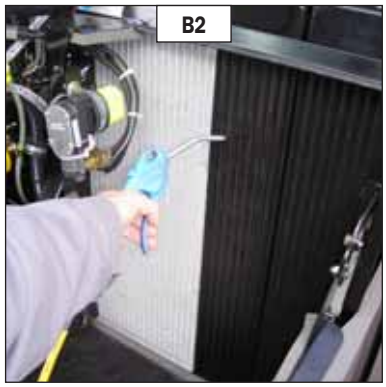
Respect the safety distance of 30 mm between the air jet and the cartridge to avoid tearing or making a hole in the cartridge. The cartridge must not be blown anywhere near the air filter box. Never clean the cartridge by tapping it against a hard surface. Your eyes must be protected during this intervention.

- 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.

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.

B2 - RADIATOR CORES

CLEAN



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 radiator fins.

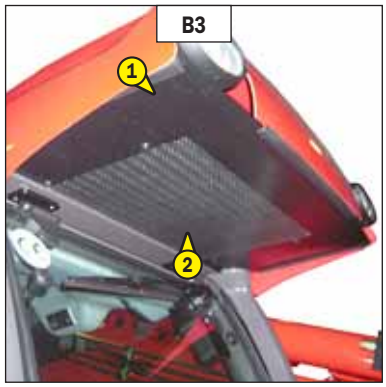
- Open the I.C. engine bonnet.
- If necessary, clean the suction grid on the engine hood.
- Using a soft cloth, clean the radiator cores in order to remove as much dirt as possible.
- Clean the cores using a compressed air jet aimed in the same direction as the cooling air flow (fig. B2).
- Clean with the fan running for best results.

MT 732 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

NOTE: An OPTIONAL straw defector and self-cleaning fan can also be fitted.

B3 - CONDENSER CORE (OPTION AIR CONDITIONING)

CHECK - CLEAN



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 (fig. B3) and clean it if necessary.
- Visually check whether the condenser 2 (fig. B3) is clean and clean it if necessary.
- Clean the condenser using a compressed air jet aimed in the same direction as the air flow (fig. B3).

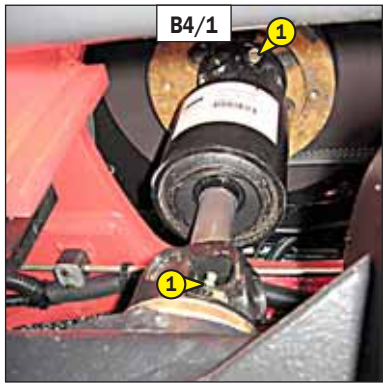
NOTE: So as to enhance the cleaning, carry out this operation with the fans running.

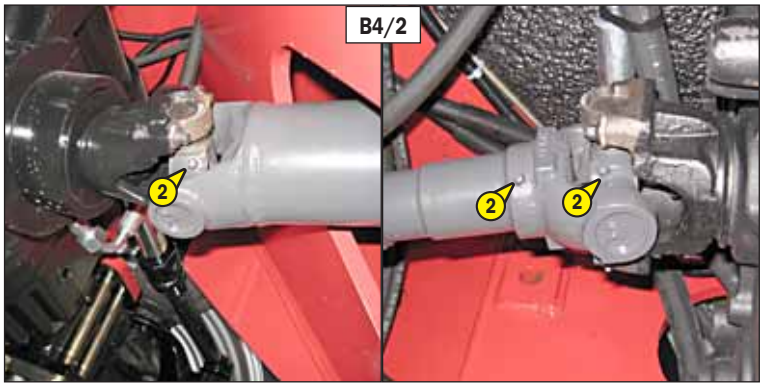
B4 - TRANSMISSION UNIVERSAL JOINT

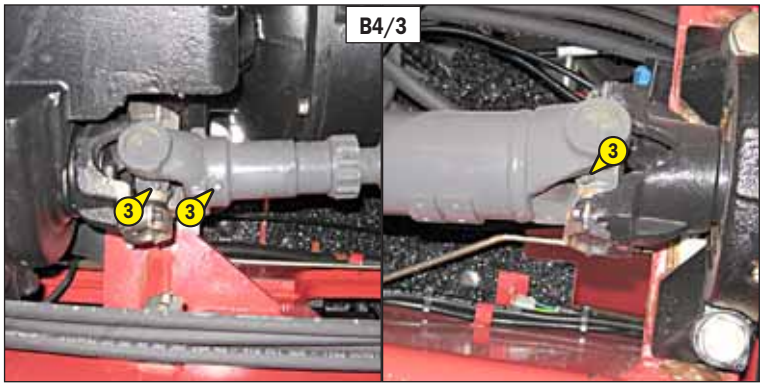
GREASE

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

  1 - Lubricators of the universal joint I.C. engine/Angle gear box (2 lubricators) (fig. B4/1).
  2 - Lubricators of the universal joint Transmission/Front axle (3 lubricators) (fig. B4/2).
  3 - Lubricators of the universal joint Transmission/Rear axle (3 lubricators) (fig. B4/3).







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

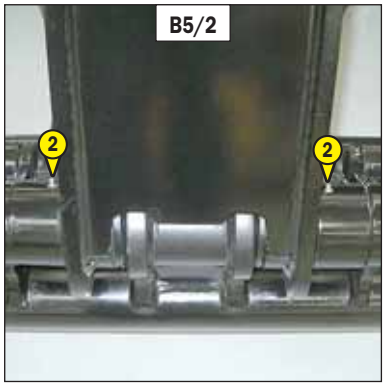
In the event of prolonged use in an extremely dusty or oxidising atmosphere, reduce this interval to 10 working hours or every day.

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

1 - Lubricators of the boom axle (2 lubricators) (fig. B5/1).
2 - Lubricators of the carriage axle (2 lubricators) (fig. B5/2).
3 - Lubricator of the tilt cylinder foot axle (1 lubricator) (fig. B5/3).
4 - Lubricator of the tilt cylinder head axle (1 lubricator) (fig. B5/4).
5 - Lubricator of the lifting cylinder foot axle (1 lubricator) (fig. B5/5).
6 - Lubricator of the lifting cylinder head axle (1 lubricator) (fig. B5/6).
7 - Lubricator of the compensation cylinder foot axle (1 lubricator) (fig. B5/5).
8 - Lubricator of the compensation cylinder head axle (1 lubricator) (fig. B5/7).

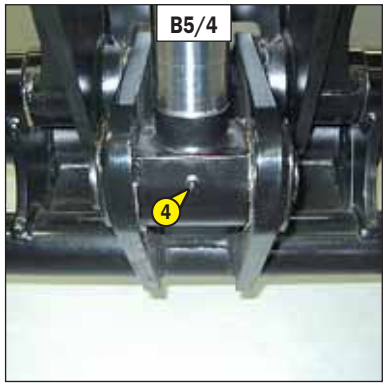
B5/1

B5/2

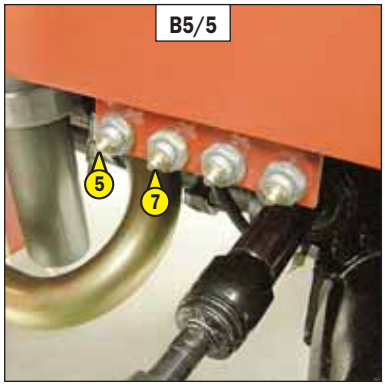


B5/3

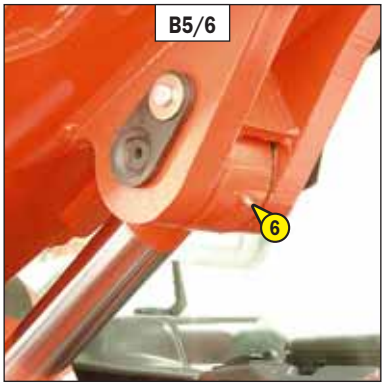
B5/4



B5/5



B5/6



B5/7

B6 - HYDRAULIC OIL LEVEL

CHECK

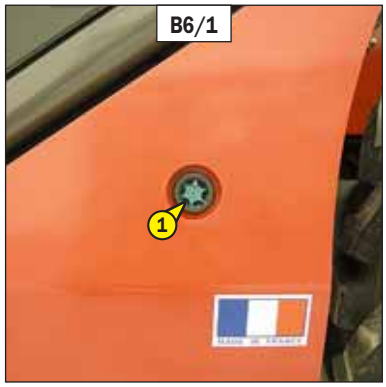
Place the lift truck on level ground with the I.C. engine stopped, and the boom retracted and lowered as far as possible.

- Refer to gauge 1 (fig. B6/1).
- The oil level is correct when it is at the level of the red point.
- If necessary, add oil (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL).
- Remove cap 2 (fig. B6/2).
- Add oil by filler port 3 (fig. B6/2).

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

- Put the cap back.
- Check visually that there is no leakage in the tank and pipes.

Always maintain the oil level at maximum as cooling depends on the oil flowing through the tank.



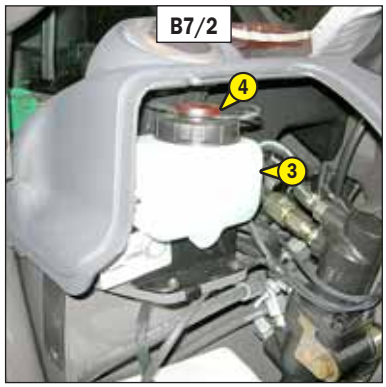
B7 - BRAKE OIL LEVEL

CHECK

Place the lift truck on level ground.

- Loosen screw 1 (fig. B7/1) and remove the access panel for braking oil tank and windscreen washer tank 2 (fig. B7/1).
- The level is correct when it is at the MAX. level in tank 3 (fig. B7/2)
- If necessary, add oil (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) by the filler port.
- Pivot the tank 3 (fig. B7/2) to access the filler cap 4 (fig. B7/2).
- Check visually that there is no leakage in the tank and pipes.

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



B8 - WINDSCREEN WASHER LIQUID LEVEL

CHECK

- Loosen screw 1 (fig. B8/1) and remove the access panel for braking oil tank and windscreen washer tank 2 (fig. B8/1).
- Check visually the level.
- If necessary add windscreen washer liquid (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) by filler port 3 (fig. B8/2).

B9 - CAB DOOR

GREASE

- Clean and lubricate the points 1 (4 lubricators) (fig. B9) with grease (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) and remove the surplus of grease.

B10 - CAB VENTILATION FILTER (OPTION AIR CONDITIONING)

CLEAN

- Lift up protective casing 1 (fig. B10).
- Lift out cabin ventilation filter 2 (fig. B10).
- 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.

B11 - FRONT AND REAR WHEEL REDUCER PIVOTS

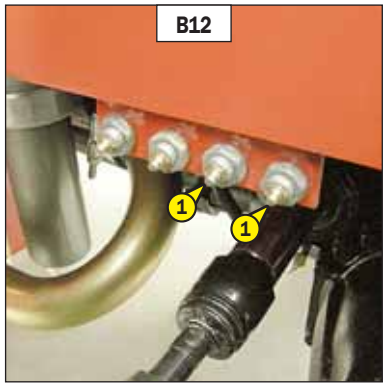
GREASE

- Clean and lubricate the points 1 (8 lubricators) (fig. B11) with grease (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) and remove the surplus of grease.

B12 - REAR AXLE OSCILLATION

GREASE

- Clean and lubricate the points 1 (2 lubricators) (fig. B12) with grease (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) and remove the surplus of grease.



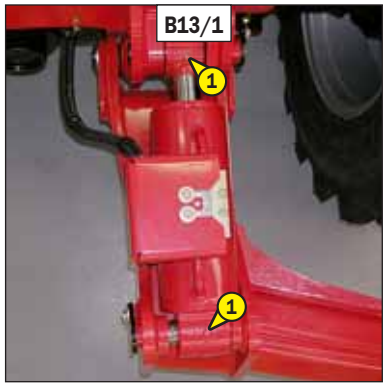
B13 - STABILIZERS

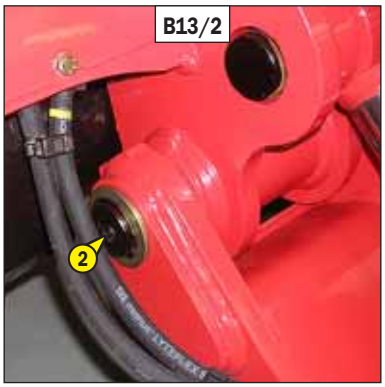
GREASE

MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

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

1 - Nipples on stabilizer actuator shafts (4 nipples) (fig. B13/1).
2 - Nipples on stabilizer actuator shafts (4 nipples) (fig. B13/2 et B13/3).





C - EVERY 250 HOURS SERVICE

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

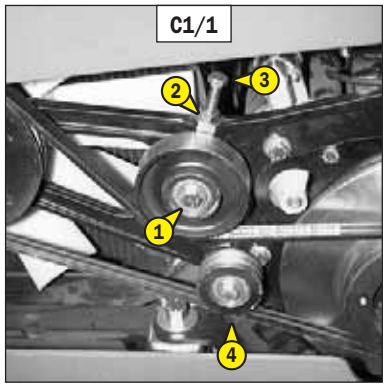
C1 - FAN BELT TENSION

CHECK - ADJUST

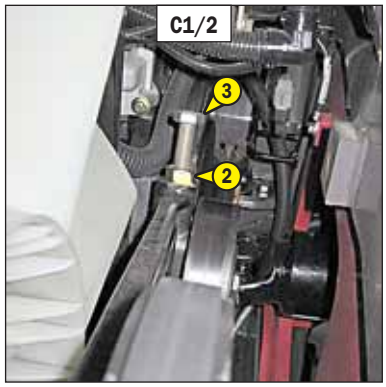
- Open the I.C. engine bonnet.
- Check the belt for signs of wear and cracks and change if necessary (see: 3 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS).
- Loosen screw 1 (fig. C1/1) on the tension pulley.
- Loosen lock nut 2 (fig. C1/1 and C1/2) and screw 3 (fig. C1/1 and C1/2).
- Tighten the screw 2 (fig. C1/1 and C1/2) until the belt is as close as possible to the groove of the pulley 4 (fig. C1/1).
- Make a mark on the head of screw 3 (fig. C1/1 and C1/2) and tighten, turning it 5 times.
- Tighten the lock nut 2 (fig. C1/1 and C1/2).
- Retighten screw 1 (fig. C1/1) on the tension pulley.

When changing the fanbelt, tighten screw 3 (fig. C1/1 and C1/2) by one and a half turns, having allowed the I.C. engine to idle for 30 minutes.

C1/1



C1/2



C2 - ALTERNATOR/CRANKSHAFT BELT TENSION

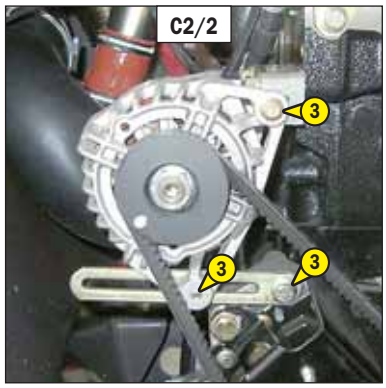
CHECK - ADJUST

- Open the I.C. engine bonnet.
- Unscrew the fastening screws 1 (fig. C2/1).
- Lay down the protective guard 2 (fig. C2/1).
- 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.
- Carry out adjustments if necessary.
- Untighten screws 3 (fig. C2/2) by two to three thread turns.
- Swivel the alternator assembly so as to obtain the belt tension required.
- Retighten screws 3 (fig. C2/2) (tightening torque 22 N.m).
- Put the protective guard back 2 (fig. C2/1).

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

C2/1

C2/2

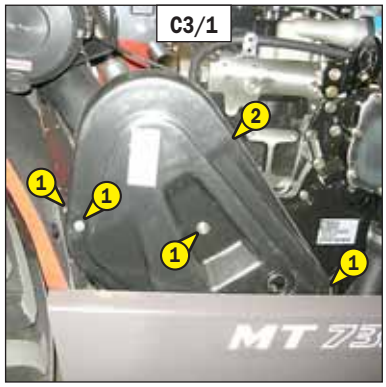


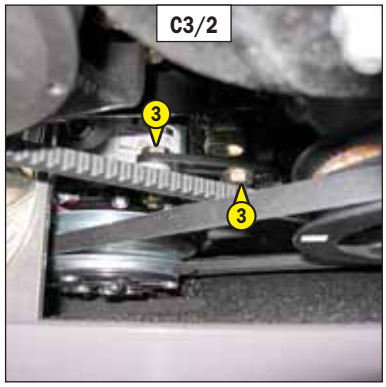
C3 - COMPRESSOR BELT TENSION (OPTION AIR CONDITIONING)

CHECK - ADJUST

- Open the I.C. engine bonnet.
- Unscrew the fastening screws 1 (fig. C3/1).
- Lay down the protective guard 2 (fig. C3/1).
- 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 compressor.
- Under a normal pressure exerted with the thumb (45 N), the tension should be approximately 10 mm.
- Carry out adjustments if necessary.
- Untighten screws 3 (fig. C3/2) by two to three thread turns.
- Swivel the compressor assembly so as to obtain the belt tension required.
- Retighten screws 3 (fig. C3/2).
- Put the protective guard back 2 (fig. C3/1).

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



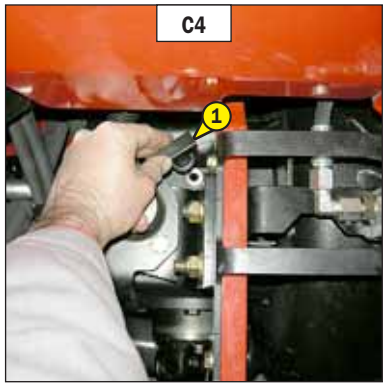


C4 - ANGLE GEAR BOX OIL LEVEL

CHECK

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

- Remove level plug 1 (fig. C4).
- Wipe the dipstick and check the correct level between the MINI and MAXI marks.
- If necessary, add oil (see: 3 - MAINTENANCE: E5 - ANGLE GEAR BOX OIL).

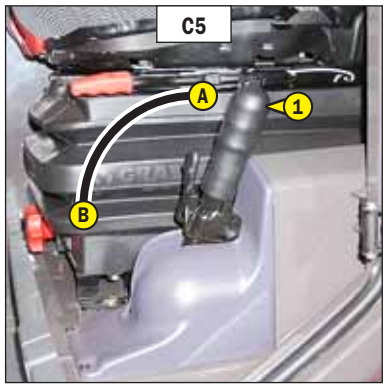


C5 - PARKING BRAKE

CHECK - ADJUST

Place the lift truck on a slope less than 15 % with the rated load in the transport position.

- Check the tightening adjustment by locking the parking brake in position A (fig. C5).
- The adjustment is correct when the lift truck is held stationary on a slope.
- Carry out adjustments if necessary.
- Press and release the brake pedal, then release the parking brake, putting it in position B (fig. C5).
- Progressively tighten the end piece of the lever 1 (fig. C5) and recheck braking.
- Repeat the operation until the correct braking adjustment is obtained.



C6 - CAB VENTILATION FILTER (OPTION AIR CONDITIONING)

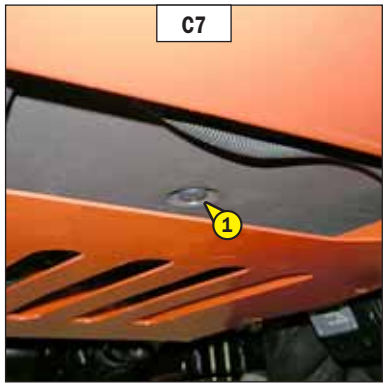
CHANGE

- Lift up protective casing 1 (fig. C6).
- Lift out cabin ventilation filter 2 (fig. C6) and fit new replacement filter (see: 3 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS).
- Refit the protective casing.

C7 - HEATING BLOCK NON-RETURN VALVE

CLEAN

- Since non-return valve 1 (fig. C7) is located under the cab, it is possible for it to become obstructed with spattered mud for example. Clean if necessary.

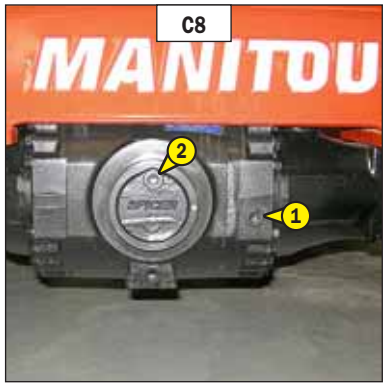


C8 - FRONT AND REAR DIFFERENTIAL OIL LEVEL

CHECK

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

- Remove level plug 1 (fig. C8). The oil should be flush with the edge of the hole.
- If necessary, add oil (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) by the filler port 2 (fig. C8).
- Replace and tighten the level plug 1 (fig. C8) (tightening torque 34 to 49 N.m).
- Repeat this operation for the rear axle differential.

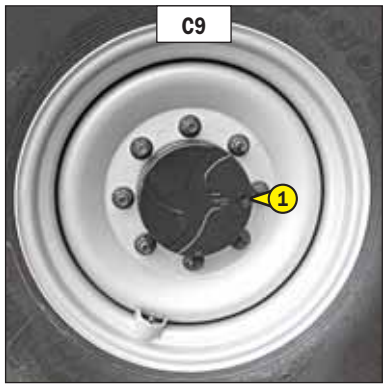


C9 - FRONT AND REAR WHEELS REDUCERS OIL LEVEL

CHECK

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

- Check the level on each front wheel reducer.
- Place level plug 1 (fig. C9) in the horizontal position.
- Remove the level plug, the oil should be flush with the edge of the hole.
- If necessary, add oil (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) by the same hole.
- Replace and tighten the level plug 1 (fig. C9) (tightening torque 34 to 49 N.m).
- Repeat this operation on each rear wheel reducer.



D - EVERY 500 HOURS SERVICE

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

D1 - I.C. ENGINE OIL

DRAIN

D2 - I.C. ENGINE OIL FILTER

CHANGE

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

DRAINING THE OIL

- Open the I.C. engine bonnet.
- Remove access panel 1 (fig. D1/1).
- Place a container under drain plug 2 (fig. D1/2) and unscrew the plug 3 (fig. D1/3).
- Take drain hose 4 (fig. D1/4).
- Place the end of the drain hose in the container and screw fully the union on draining port 5 (fig. D1/5).
- Remove filler cap 6 (fig. D1/6) in order to ensure that the oil is drained properly.

Dispose of the drain oil in an ecological manner.

REPLACEMENT OF THE FILTER

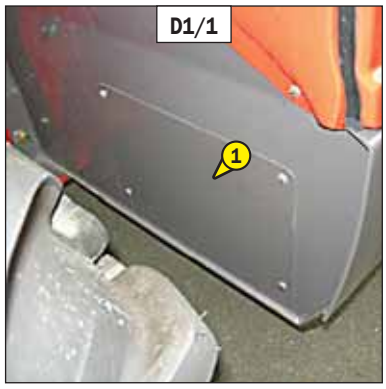
- Remove I.C. engine oil filter 7 (fig. D1/3); discard the filter and the filter seal.
- Clean the filter bracket with a clean, lint-free cloth.
- Lightly grease the new oil filter seal and refit the oil filter (see: 3 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS) on the filter bracket.

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

FILLING UP THE OIL

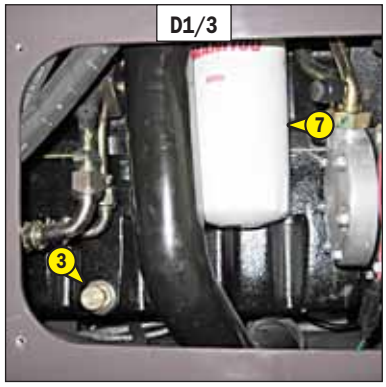
- Loosen, clean and put back in place the drain hose 4 (fig. D1/4).
- Refit and tighten drain plug 3 (fig. D1/3).
- Refit access panel 1 (fig. D1/1).
- Fill up with oil (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) through filler port 8 (fig. D1/6).
- Wait a few minutes to allow the oil to flow into the sump.
- Start the I.C. engine and let it run for a few minutes.
- Check for possible leaks at the drain plug and the oil filter.
- Stop the I.C. engine, wait a few minutes and check the level between the two notches on dipstick 9 (fig. D1/6).
- Top up the level if necessary.

D1/1

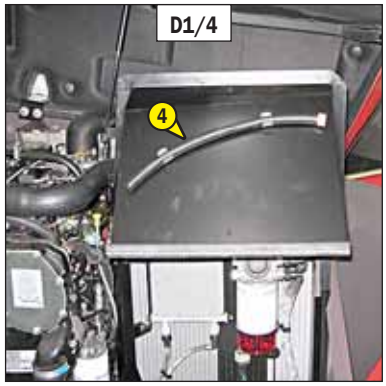


D1/2

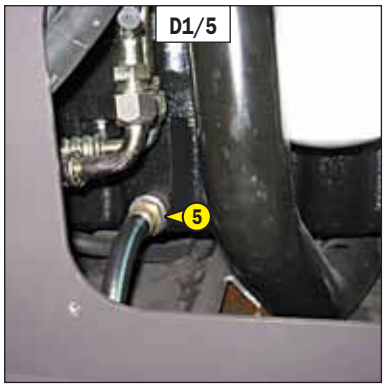
D1/3



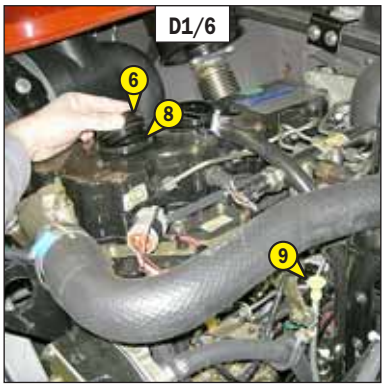
D1/4



D1/5

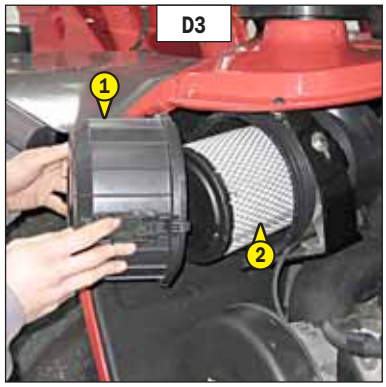


D1/6



D3 - DRY AIR FILTER CARTRIDGE

CHANGE



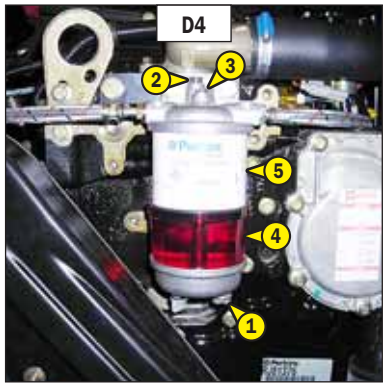
In case of use in a heavily dust laden atmosphere, there are pre-filtration cartridges, see: 3 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS. Also, the checking and cleaning periodicity of the cartridge must be reduced (up to 250 hours in a heavily laden dust atmosphere and with pre-filtration).

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

- Open the I.C. engine bonnet.
- Loosen the bolts and remove cover 1 (fig. D3).
- Gently remove the cartridge 2 (fig. D3), 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 I.C. engine and the connection and state of the clogging indicator on the filter.
- Before mounting check the state of the new cartridge (see: 3 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS).
- Introduce the cartridge into the filter axis and push it in, pressing the edges and not the middle.
- Reassemble the cover, guiding the valve downwards.

D4 - FUEL PRE-FILTER

CHANGE



Make sure the electrical contact on the lift truck is cut, otherwise fuel will be released if the lift pump is on.

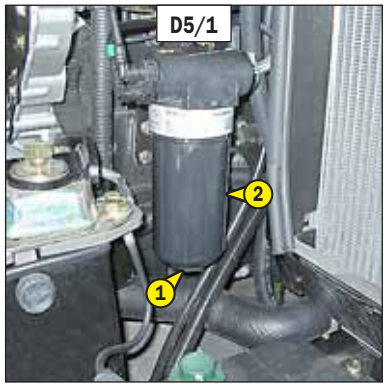
- Open the I.C. engine bonnet.
- Carefully clean the outside of the pre-filter and its holder, to prevent dust from getting into the system.
- Place a container under the pre-filter and drain it using drain plug 1 (fig. D4).
- Remove bleeder screw 2 (fig. D4) in order to ensure that the oil is drained properly.
- Unscrew locking screw 3 (fig. D4).
- Remove housing 4 (fig. D4) and discard pre-filter 5 (fig. D4) and its seals.
- Clean the inside of the pre-filter head and the housing, using a brush immersed in clean diesel oil.
- Refit the assembly with a new pre-filter and new seals (see: 3 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS).
- If necessary, bleed the fuel circuit (see: 3 - MAINTENANCE: G1 - FUEL SYSTEM).

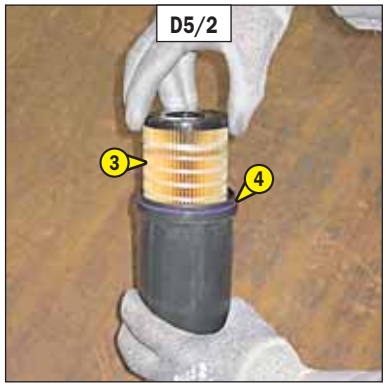
D5 - FUEL FILTER

CHANGE

Make sure the electrical contact on the lift truck is cut, otherwise fuel will be released if the lift pump is on.

- Open the I.C. engine bonnet.
- Carefully clean the outside of the filter and its holder, to prevent dust from getting into the system.
- Place a container under the filter and drain it through drain plug 1 (fig. D5/1).
- Loosen the body of filter 2 (fig. D5/1).
- Remove the filter cartridge by pressing cartridge 3 (fig. D5/2) down against the pressure of the spring and turn it to the left to extract it.
- Insert a new cartridge (see: 3 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS), by pressing cartridge 3 (fig. D5/2) down against the pressure of the spring and turn it to the right to lock it into the body of the filter.
- Place the new seal 4 (fig. D5/2) onto the body of the filter and lightly lubricate the contact surface of the seal using clean motor oil.
- Refit the body of the filter onto its holder, hand-tighten it only and lock it with a quarter-turn.
- Close drain plug 1 (fig. D5/1) and remove the container.
- Before starting the I.C. engine, leave the ignition on for three minutes on the lift truck, to give the lift pump time to release air from the filter.
- Start up the I.C. engine and make sure there is no leakage.
- If necessary, bleed the fuel circuit (see: 3 - MAINTENANCE: G1 - FUEL SYSTEM).

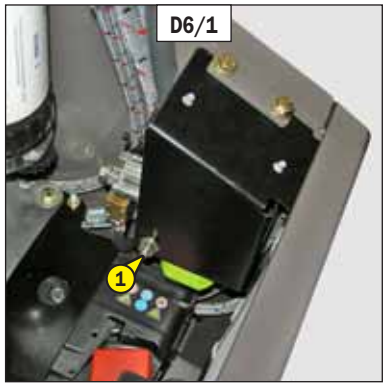


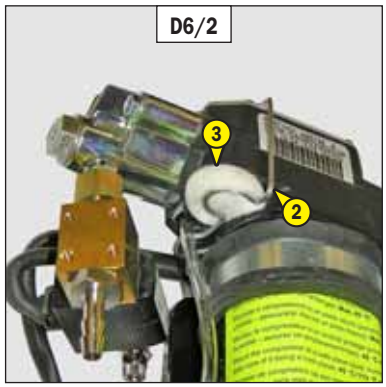


D6 - CLEANFIX COMPRESSOR FILTER (OPTION)

CHANGE

-Open the I.C. engine bonnet.
- Remove compressor securing nut 1 (fig. D6/1).
- Remove clip 2 (fig. D6/2).
- Replace filter 3 (fig. D6/2) with a new one (see: 3 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS) and correctly refit clip 2 (fig. D6/2).
- Refit the compressor securing nut 1 (fig. D6/1).





D7 - GEAR BOX OIL FILTER

CHANGE

- Remove the cover plate 1 (fig. D7/1).
- Unscrew and discard gear box oil filter 2 (fig. D7/2).
- Carefully clean the filter head with a clean, lint-free cloth.
- Slightly lubricate the new seal and fit the seal on 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.

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

- Put back the cover plate 1 (fig. D7/1).

D8 - HYDRAULIC RETURN OIL FILTER CARTRIDGE

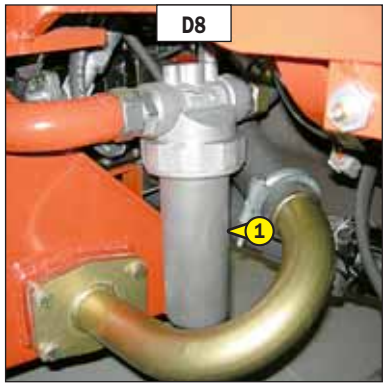
CHANGE

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

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

- Place a container under hydraulic drain filter 1 (fig. D8).
- 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.

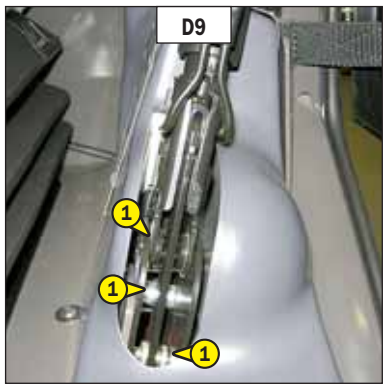
Tighten the body of the filter by hand pressure only and lock the body of the filter in place by a quarter turn.



D9 - PARKING BRAKE LEVER MECHANISM

GREASE

- Clean and grease articulation axles 1 (fig. D9) with grease (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL).



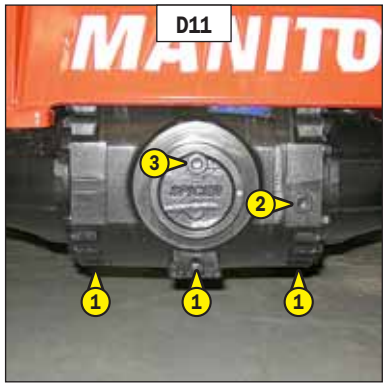
D10 - CAB VENTILATION FILTER

CLEAN

- Remove protective casing 1 (fig. D10).
- Lift out cabin ventilation filter 2 (fig. D10).
- Clean the filter using a compressed air jet.
- Check its condition and change if necessary (see: 3 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS).
- Refit the filter and protective casing.

D11 - FRONT AXLE DIFFERENTIAL OIL

DRAIN



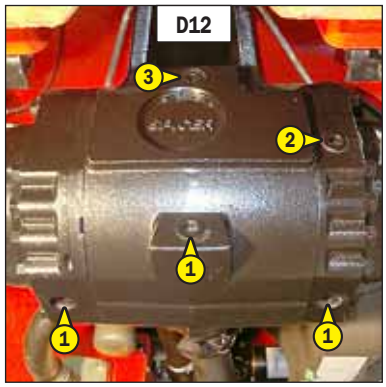
Place the lift truck on level ground with the I.C. engine stopped and the differential oil still warm.

Dispose of the drain oil in an ecological manner.

- Place a container under drain plugs 1 (fig. D11) and unscrew the plugs.
- Remove level plug 2 (fig. D11) and filler plug 3 (fig. D11) in order to ensure proper emptying.
- Refit and tighten drain plugs 1 (fig. D11) (tightening torque 34 to 49 N.m).
- Fill up with oil (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) through filler port 3 (fig. D11).
- The level is correct when the oil level is flush with the edge of port 2 (fig. D11).
- Check for any possible leaks at the drain plugs.
- Refit and tighten level cap 2 (fig. D11) (tightening torque 34 to 49 Nm) and filler port 3 (fig. D11) (tightening torque 34 to 49 N.m).

D12 - REAR AXLE DIFFERENTIAL OIL

DRAIN



MT 732 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

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

Dispose of the drain oil in an ecological manner.

- Place a container under drain plugs 1 (fig. D12) and unscrew the plugs.
- Remove level plug 2 (fig. D12) and filler plug 3 (fig. D12) in order to ensure proper emptying.
- Refit and tighten drain plugs 1 (fig. D12) (tightening torque 34 to 49 N.m).
- Fill up with oil (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) through filler port 3 (fig. D12).
- The level is correct when the oil level is flush with the edge of port 2 (fig. D12).
- Check for any possible leaks at the drain plugs.
- Refit and tighten level plug 2 (fig. D12) (tightening torque 34 to 49 N.m) and filler plug 3 (fig. D12) (tightening torque 34 to 49 N.m).

E - EVERY 1000 HOURS SERVICE

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

E1 - FUEL TANK

CLEAN

While carrying out these operations, do not smoke or work near a flame.

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

- Inspect the parts susceptible to leaks in the fuel circuit and in the tank.
- In the event of a leak, contact your dealer.

Never try to carry out a weld or any other operation by yourself, this could provoke an explosion or a fire.

- Place a container under drain plug 1 (fig. E1/1) and unscrew the plug.
- Remove filling plug 2 (fig. E1/2) in order to ensure that the oil is drained properly.
- Rinse out with ten litres of clean diesel through filler port 3 (fig. E1/2).
- Refit and tighten the drain plug (tightening torque 29 to 39 N.m).
- Fill the fuel tank with clean diesel filtered through the filler port.
- Refit the filling cap.

E2 - 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 (fig. E2), taking care to avoid spilling the dust.
- Clean the gasket surface on the filter with a damp, clean lint-free cloth.
- Before mounting, check the state of the new safety cartridge (see: 3 - MAINTENANCE: FILTERS AND BELTS).
- Introduce the cartridge into the filter axis and push it in, pressing the edges and not the middle.

NOTE: The periodicity for changing the safety cartridge is given for information only. It must be changed for every two changes of the dry air filter cartridge.

E3 - GEAR BOX OIL

DRAIN

E4 - GEAR BOX SUMP STRAINER

CLEAN

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

DRAINING THE OIL

- Place a container under drain plug 1 (fig. E3/1) and under cover 2 (fig. E3/2) and unscrew the drain plug.
- Remove cover plate 3 (fig. E3/3).
- Remove dipstick 4 (fig. E3/4) and unscrew filling plug 5 (fig. E3/4) in order to ensure that the oil is drained properly.

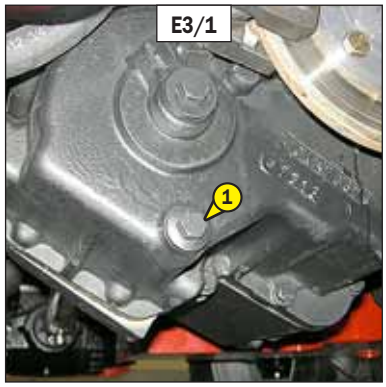
Dispose of the drain oil in an ecological manner.

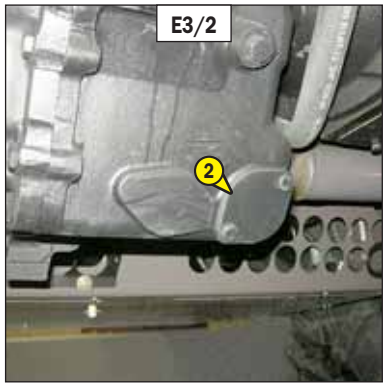
CLEANING THE STRAINER

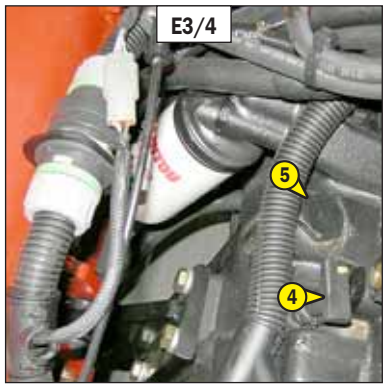
- Remove cover 2 (fig. E3/2) and set aside the O-ring joint and sealing washer.
- Allow the rest of the oil to drain away.
- Remove and clean the strainer using a compressed air jet.
- Clean the magnetic section on the plate.
- Refit the assembly and tighten up plate 2 (fig. E3/2) (tightening torque 18 to 31 N.m).

FILLING UP THE OIL

- Refit and tighten drain plug 1 (fig. E3/1) (tightening torque 34 to 54 N.m).
- Fill up with oil (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) by filler port 5 (fig. E3/4) and refit the filler cap.
- Start the I.C. engine and let it run for a few minutes.
- Check any possible leaks from the drain plug or cover.
- Stop the I.C. engine, and within 5 minutes of the I.C. engine being stopped, check on the dipstick 4 (fig. E3/4) the correct level between the two MIN and MAX. marks.
- Top up the level if necessary.
- Put back the cover plate 3 (fig. E3/3).







E5 - ANGLE GEARBOX OIL

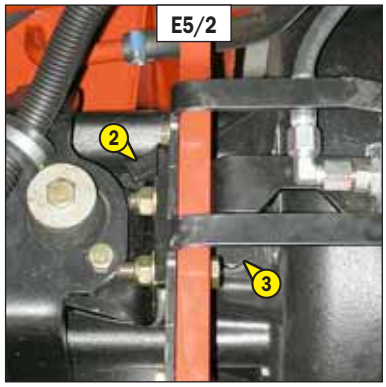
DRAIN

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

- Place a container under drain plug 1 (fig. E5/1) and unscrew the plug.
- Remove dipstick 2 (fig. E5/2) and unscrew filler cap 3 (fig. E5/2) in order to ensure that the oil is drained properly.

Dispose of the drain oil in an ecological manner.

- Refit and tighten drain plug 1 (fig. E5/1) (tightening torque 20 to 29 N.m).
- Fill up with oil (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) by filler port 3 (fig. E5/2) and refit the filler cap.
- Check the correct level between the MINI and MAX. marks on dipstick 2 (fig. E5/2).
- Check for any possible leaks at the drain plug.



E6 - HYDRAULIC OIL

DRAIN

E7 - SUCTION OIL STRAINER FOR HYDRAULIC OIL TANK

CLEAN

E8 - FILTER CAP FOR HYDRAULIC OIL TANK

CHANGE

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

Before any intervention, thoroughly clean the area surrounding the drain plugs and the suction cover on the hydraulic tank.

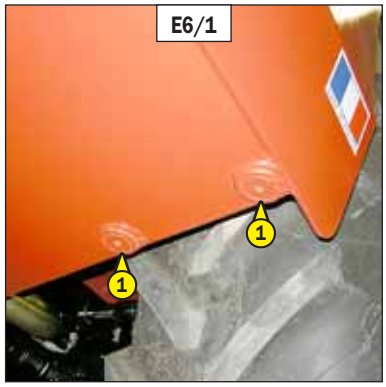
DRAINING THE OIL

- Place a container under drain plug 1 (fig. E6/1) and unscrew the plug.
- Remove filler cap 2 (fig. E6/2) in order to ensure that the oil is drained properly.

Dispose of the drain oil in an ecological manner.

CLEANING THE STRAINER

- Remove suction cover 3 (fig. E6/3).
- Remove and clean the 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 suction cover 3 (fig. E6/3) (tightening torque 81 N.m) making sure the seal is in the correct position.

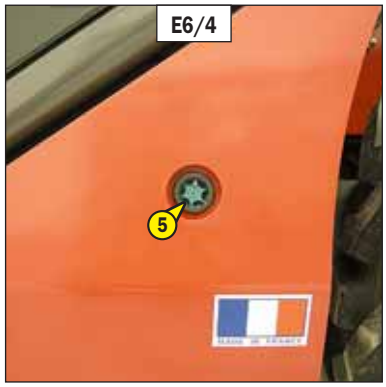


FILLING UP THE OIL

- Clean and refit drain plugs 1 (fig. E6/1) (tightening torque 29 to 39 N.m).
- Fill up with oil (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) by filler port 4 (fig. E6/2).

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

- Observe the oil level on dipstick 5 (fig. E6/4), the oil level should be at the level of the red point.
- Check for any possible leaks at the drain plugs.
- Replace filler plug 2 (fig. E6/2) with a new filler plug (see: 3 - MAINTENANCE: FILTERS CARTRIDGES AND BELTS).



HYDRAULIC CIRCUIT DECONTAMINATION

- Let the I.C. engine run (accelerator pedal at halfway travel) for 5 minutes without using anything on the lift truck, then for 5 more minutes while using completely the hydraulic movements (except the steering system and the service brakes).
- Accelerate the I.C. engine at full speed for 1 minute, then activate the steering system.
- This operation makes a pollution abatement of the circuit possible through the hydraulic return oil filter.

E9 - SEAT BELT

CHECK

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 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.

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.

E10 - REAR AXLE DIFFERENTIAL OIL

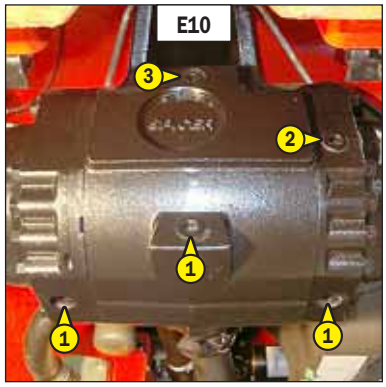
DRAIN

MT 728 Série D-E3
MT 928 Série D-E3

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

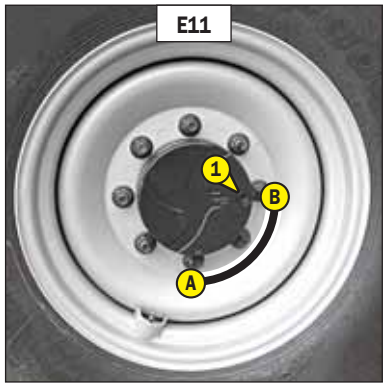
Dispose of the drain oil in an ecological manner.

- Place a container under drain plugs 1 (fig. E10) and unscrew them.
- Remove the level plug 2 (fig. E10) and the filler plug 3 (fig. E10) to ensure proper emptying.
- Refit and tighten the drain plugs 1 (fig. E10) (tightening torque 34 to 49 N.m).
- Fill up with oil (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) by filler port 3 (fig. E10).
- The level is correct when the oil is level is flush with the edge of port 2 (fig. E10).
- Check for any possible leaks at the drain plugs.
- Refit and tighten the level plug 2 (fig. E10) (tightening torque 34 to 49 N.m) and the filler plug 3 (fig. E10) (tightening torque 34 to 49 N.m).



E11 - FRONT AND REAR WHEELS REDUCERS OIL

DRAIN



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

Dispose of the drain oil in an ecological manner.

- Drain and change each front wheel reducer.
- Place drain plug 1 (fig. E11) 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) by level port 1 (fig. E11).
- The level is correct when the oil level is flush with the edge of the hole.
- Refit and tighten the drain plug 1 (fig. E11) (tightening torque 34 to 49 N.m).
- Repeat this operation on each rear wheel reducer.

F - EVERY 2000 HOURS SERVICE

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

F1 - COOLING LIQUID

DRAIN

MT 728 Série D-E3
MT 732 Série D-E3
MT 928 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 4-E3

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

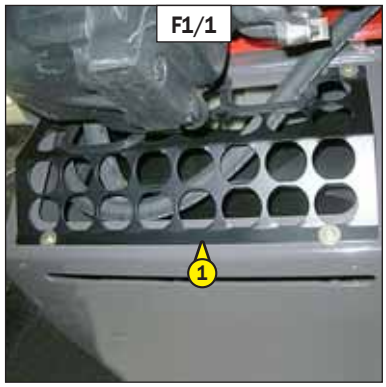
DRAINING THE LIQUID

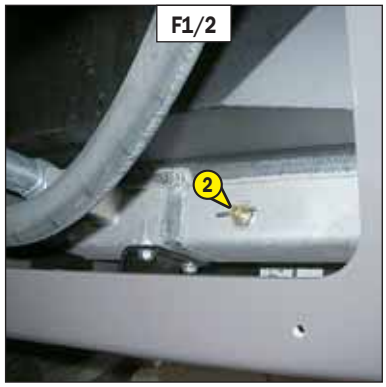
- Open the I.C. engine bonnet.
- Remove the shroud 1 (fig. F1/1).
- Set a container under drain valve 2 (fig. F1/2) on the radiator and drain plug 3 (fig. F1/3) of the engine block and loosen them.
- Remove filler cap 4 (fig. F1/4) of the radiator.
- Let the cooling circuit drain entirely while ensuring 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.

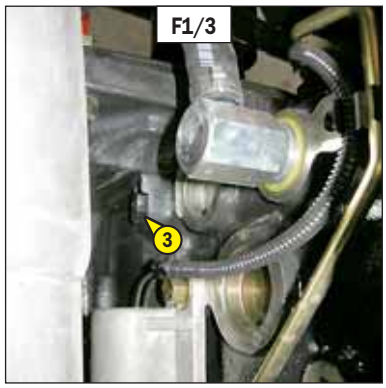
FILLING THE LIQUID

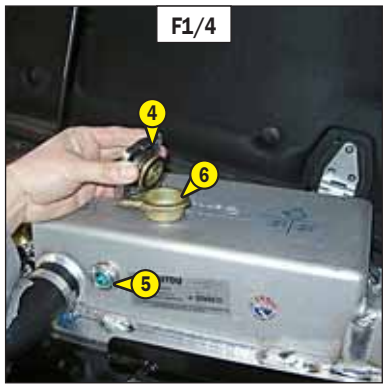
- Tighten the drain valve 2 (fig. F1/2) and drain plug 3 (fig. F1/3) (tightening torque 40 N.m).
- Slowly fill up the circuit with cooling liquid (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) to the middle of gauge 5 (fig. F1/4) through filler port 6 (fig. F1/4).
- Put back filler cap 4 (fig. F1/4).
- Run the I.C. engine at idle for a few minutes.
- Check for any possible leaks.
- Put back the shroud 1 (fig. F1/1)
- Check the level and refill if necessary.

The I.C. 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.









F1 - COOLING LIQUID

DRAIN

MT 1030 S Turbo Série 4-E3

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

DRAINING THE LIQUID

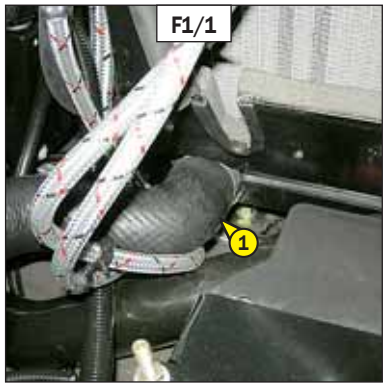
- Open engine hood and lift the battery cover.
- Place a container under hose 1 (fig. F1/1) on the radiator and drain plug 2 (fig. F1/2) of the engine block. Remove the hose and loosen the drain plug.
- Remove filling plug 3 (fig. F1/3) of the radiator.
- Let the cooling circuit drain entirely while 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

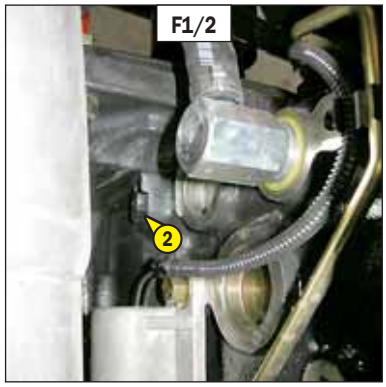
- Refit and tighten the hose 1 (fig. F1/1) and drain plug 2 (fig. F1/2) (tightening torque 40 N.m).
- Slowly fill up the circuit with cooling liquid (see: 3 - MAINTENANCE: LUBRICANTS AND FUEL) to the middle of gauge 4 (fig. F1/3) through filler port 5 (fig. F1/3).
- Put back filling plug 3 (fig. F1/3).
- Run the I.C. engine at idle for a few minutes.
- Check for any possible leaks.
- Check the level and refill if necessary.

The I.C. 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.

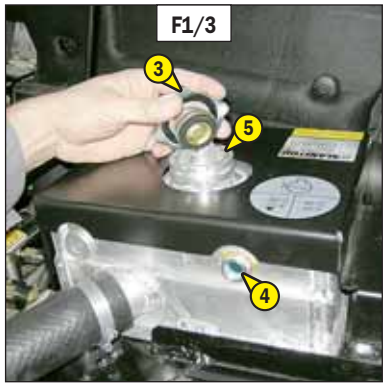
F1/1



F1/2



F1/3



F2 - AIR CONDITIONING (OPTION)

CLEANING - INSPECTION

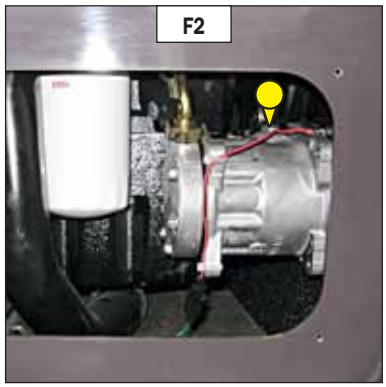
CLEANING CONDENSER AND EVAPORATOR COILS (*)
CLEANING CONDENSATE TRAY AND RELIEF VALVE (*)
COLLECTING COOLANT TO REPLACE FILTER-DRIER (*)
REFILLING WITH COOLANT AND CHECKING THE THERMOSTATIC CONTROL AND PRESSURE SWITCHES (*)

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

(*): (CONSULT YOUR DEALER).

CAUTION: DO NOT ATTEMPT TO REPAIR ANY PROBLEMS 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.

F2



- Do not open the circuit under any circumstances as this would cause the coolant to be lost.
- The cooling circuit contains a gas which can be dangerous under certain conditions. This gas, coolant R 134a, is colourless, odourless and heavier than air.

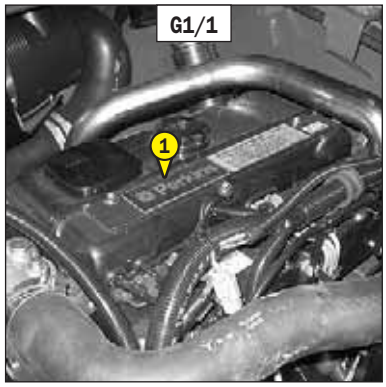
• If this gas is inhaled, take the victim into fresh air, give oxygen or artificial respiration if necessary and call a doctor.
• If the gas is in contact with the skin, wash it immediately under running water and remove any contaminated garments.
• If the gas is in contact with the eyes, rinse them in clear water for 15 minutes and call a doctor.

- The compressor has an oil level gauge (fig. F2). Never unscrew this gauge because it would depressurizes the installation. The oil level is only checked when changing the oil in the circuit.

G - OCCASIONAL MAINTENANCE

G1 - FUEL SYSTEM

BLEED

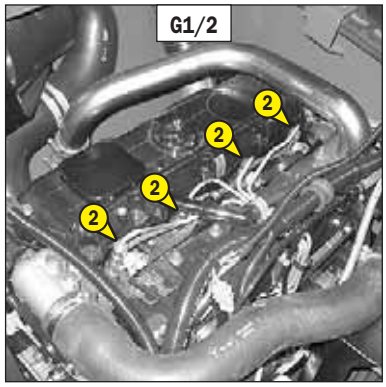


These operations are to be carried out only in the following cases:

- A component of the fuel system replaced.
- A drained tank.
- Running out of fuel.

Ensure that the level of fuel in the tank is sufficient and bleed in the following order:

- Open the I.C. engine bonnet.
- Put the ignition on for three minutes on the lift truck, to give the lift pump time to release air from the filter.
- Switch off the ignition with the ignition key.



BLEEDING THE INJECTORS

- Remove the injectors cover 1 (fig. G1/1).
- Loosen high pressure connectors 2 (fig. G1/2) of all the injectors.
- Activate the starter until the diesel fuel flows out free of air at high pressure connectors 2 (fig. G1/2).

Do not engage the starter motor on a continual basis for more than 30 seconds and let it cool between unsuccessful attempts.

- Tighten the connection while the diesel fuel is flowing out (tightening torque 30 N.m).

- The I.C. engine is then ready to be started up.
- Turn the I.C. engine over slowly for 5 minutes immediately after bleeding the fuel feed circuit, in order to ensure that the injection pump has been bled thoroughly.

NOTE: If the I.C. engine functions correctly for a short time then stops or functions irregularly, check for possible leaks in the low pressure circuit. If in doubt, contact your dealer.

G2 - WHEEL

CHANGE

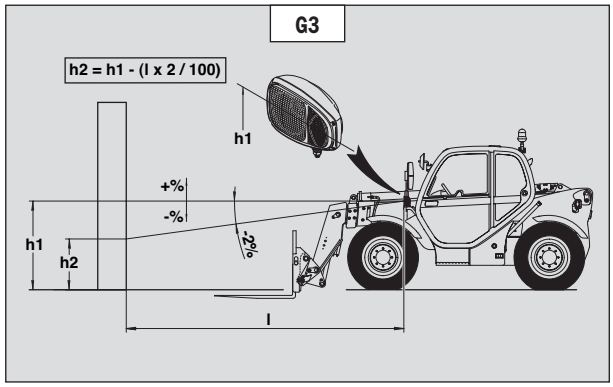
In the event of a wheel being changed on the public highway, make sure of the following points:

For this operation, we advise you to use the hydraulic jack MANITOU reference 505507 and the safety support MANITOU reference 554772.

- Stop the lift truck, if possible on even and hard ground.
- To pass on stop of lift truck (see: 1 - OPERATING AND SAFETY INSTRUCTIONS: DRIVING INSTRUCTIONS UNLADEN AND LADEN).
- Put the warning lights on.
- Immobilise the lift truck in both directions on the axle opposite to the wheel to be changed.
- Unlock the nuts of the wheel to be changed.
- Place the jack under the flared axle tube, as near as possible to the wheel and adjust the jack (fig. G2/1).
- Lift the wheel until it comes off the ground and put in place the safety support under the axle (fig. G2/2).
- 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.
- Refit the nuts by hand, if necessary grease them.
- 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 SERVICE for tightening torque).

G3 - FRONT HEADLIGHTS

ADJUST



RECOMMENDED SETTING

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

Set to -2 % of the dipped beam in relation to the horizontal line of the headlamp.

ADJUSTING PROCEDURE

- Place the lift truck unloaded and in the transport position and perpendicular to a white wall on flat, level ground (fig. G3).
- Check the tyre pressures (see: 2 - DESCRIPTION: CHARACTERISTICS).
- Place the forward/reverse selector in neutral and release the parking brake.

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.

G4 - LIFT TRUCK

TOW

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 (according to model of lift truck).
- Release the parking brake.
- Put the warning lights on.
- If the I.C. engine is not running there will be no steering or braking assistance. Operate the steering and pedal slowly avoiding sudden jerky movements.

G5 - LIFT TRUCK

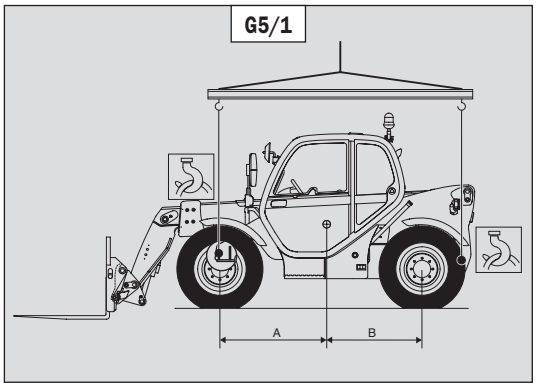
SLING

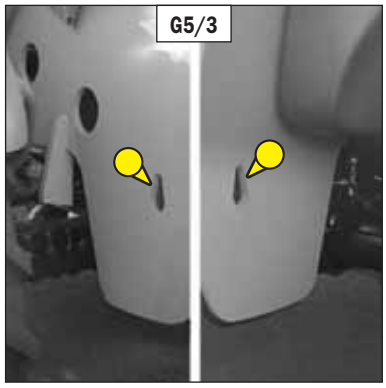
MT 728 Série D-E3
MT 928 Série D-E3

- Take into account the position of the lift truck centre of gravity for lifting (fig. G5/1).

A =	mm	B =	mm	MT 728 Série D-E3
A =	mm	B =	mm	MT 928 Série D-E3

- Place the hooks in the fastening points provided (fig. G5/2 and G5/3).





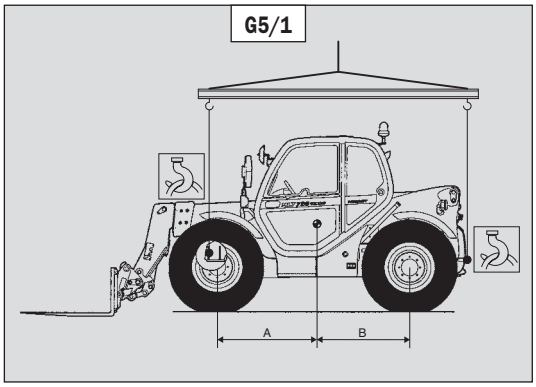
MT 732 Série D-E3
MT 932 Série D-E3

- Take into account the position of the lift truck centre of gravity for lifting (fig. G5/1).

A = 1456 mm	B = 1104 mm	MT 732 Série D-E3
A = 1459 mm	B = 1101 mm	MT 932 Série D-E3

- Place the hooks in the fastening points provided (fig. G5/2 and G5/3).

G5/1



G5/2

G5/3

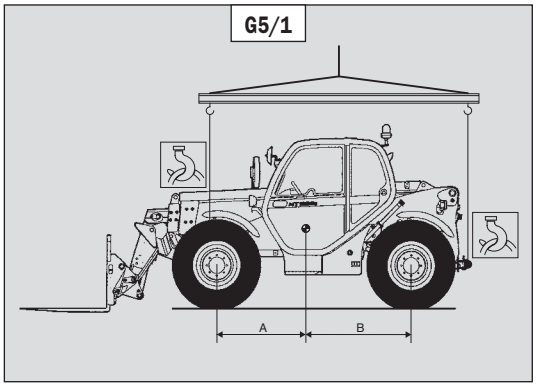
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

- Take into account the position of the lift truck centre of gravity for lifting (fig. G5/1).

A = 1213 mm	B = 1477 mm	MT 1030 S Série 4-E3
A = 1208 mm	B = 1482 mm	MT 1030 S Turbo Série 4-E3

- Place the hooks in the fastening points provided (fig. G5/2 and G5/3).

G5/1



G5/2

G5/3

Ensure that the safety instructions connected to the platform are respected before the loading of the lift truck and that the driver of the means of transport is informed about the dimensions and the weight of the lift truck (see: 2 - DESCRIPTION: CHARACTERISTICS).

Ensure that the platform has got dimensions and a load capacity sufficient for transporting the lift truck. Check also the pressure on the contact surface allowable for the platform in connection with the lift truck.

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

MT 728 Série D-E3
MT 928 Série D-E3

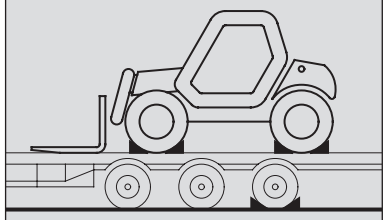
LOAD THE LIFT TRUCK

- Block the wheels of the platform.
- Fix the loading ramps so that you obtain an angle as little as possible to lift the lift truck.
- Load the lift truck parallel to the platform.
- Stop the lift truck (see: 1 - OPERATING AND SAFETY INSTRUCTIONS: DRIVING INSTRUCTIONS UNLADEN AND LADEN).

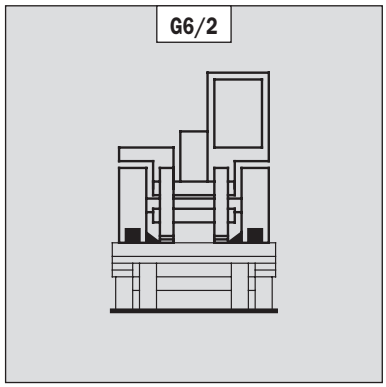
STOW THE LIFT TRUCK

- Fix the chocks to the platform at the front and at the back of each tyre (fig. G6/1).
- Fix also the chocks to the platform in the inside of each tyre (fig. G6/2).
- Stow the lift truck on the platform using sufficiently strong ropes. At the front of the lift truck, on the fastening points 1 (fig. G6/3) and at the back, over the axle 2 (fig. G6/4).
- Tighten the ropes (fig. G6/5).

G6/1



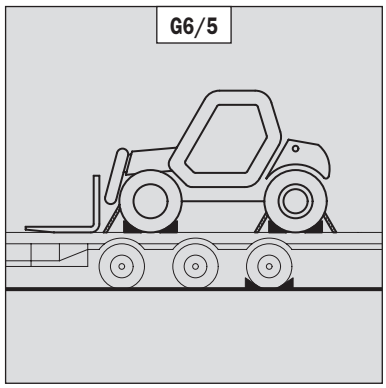
G6/2



G6/3

G6/4

G6/5



MT 732 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

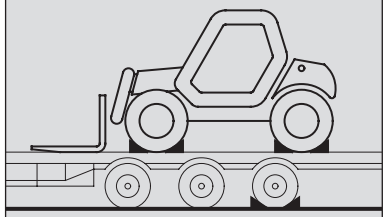
LOAD THE LIFT TRUCK

- Block the wheels of the platform.
- Fix the loading ramps so that you obtain an angle as little as possible to lift the lift truck.
- Load the lift truck parallel to the platform.
- Stop the lift truck (see: 1 - OPERATING AND SAFETY INSTRUCTIONS: DRIVING INSTRUCTIONS UNLADEN AND LADEN).

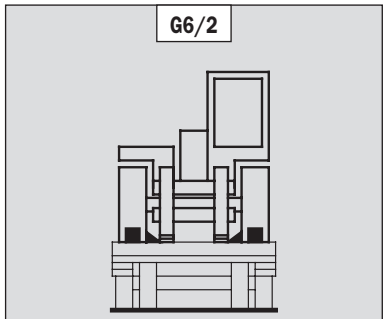
STOW THE LIFT TRUCK

- Fix the chocks to the platform at the front and at the back of each tyre (fig. G6/1).
- Fix also the chocks to the platform in the inside of each tyre (fig. G6/2).
- Secure the lift truck to the platform with sufficiently strong ropes. At the front of the lift truck, attach the ropes to the fastening points 1 (fig. G6/3) and at the rear to the towing pin 2 (fig. G6/4).
- Tighten the ropes (fig. G6/5).

G6/1



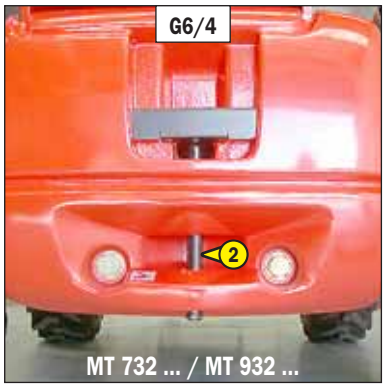
G6/2



G6/3

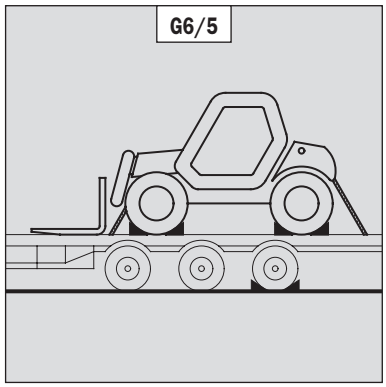
G6/3

G6/4



G6/4

G6/5



4 - OPTIONAL ATTACHMENTS FOR USE WITH THE RANGE

TABLE OF CONTENTS

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.

- 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.

We would remind users that the MT 928 Série D-E3, MT 932 Série D-E3, MT 1030 S Série 4-E3, MT 1030 S Turbo Série 4-E3, are lift trucks essentially intended for handling. Occasional use with the buckets CBC 800/900 and CBR 900/1000 is authorised, but under no circumstances is intensive use for difficult applications (quarry, waste, cereals, agriculture, etc) permissible.
In addition, use of the lift truck with the buckets CBC 800/900 and CBR 900/1000 should be with the jib completely retracted, in order to reduce the constraints on the jib head.
Use other buckets CBA, CBC, CBM, CBR, CB, CBG and manure forks FFGR is forbidden.

- Some particular uses require the adaptation of the attachment which is not provided in the price-listed options. Optional solutions exist, consult your dealer.

All attachments with a suspended load (winch, crane jib, crane jib with winch, hook, etc.) MUST be used with a lift truck equipped with a hydraulic movement cut-out device. In this case, the movement cut-out must be switched on and the transverse attitude perfectly horizontal.

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 single side-shift carriage (TSDL) is only compatible with the following attachments:
- ***floating fork carriage (TFF)***
- ***tilting fork carriage (PFB)***
- ***loading bucket (CBR)***
- ***concrete bucket (BB, BBG)***
- ***spout bucket (GL)***
- ***crane jib and crane jib with winch (P, PT, PO, PC)***
- ***winch (H)***
- ***fixed platform, swivelling platform, roofer's platform.***

It is prohibited to use any other attachments on the TSDL.
Attachments authorised for use on the TSDL must comply strictly with the applications for which they are designed.
It is prohibited to use them for any other application (for example, earth moving, excavation, desurfacing, back scraping, etc. for the loading bucket CBR) or any application placing abnormal stress on the structure of the TSDL: risk of deformation which could cause the load to fall.

Depending on their size, certain attachments may, when the jib 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.

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.

PICKING UP THE ATTACHMENTS

A - 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 jib 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 jib, incline the carriage backwards in order to position the attachment (fig. C).
- Lift the attachment off the ground to facilitate locking.

HAND LOCKING

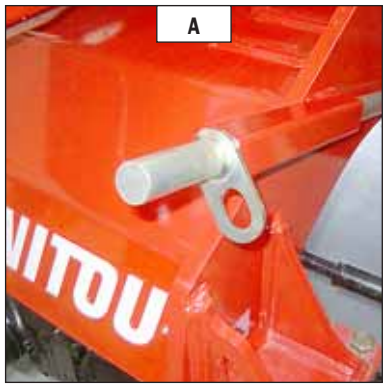
- Take the locking pin and the clip on the bracket (fig. A) and lock the attachment (fig. D). Do not forget to refit the clip.

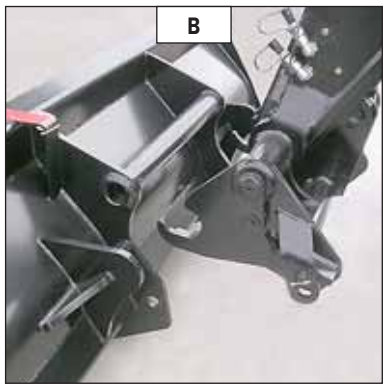
HAND RELEASING

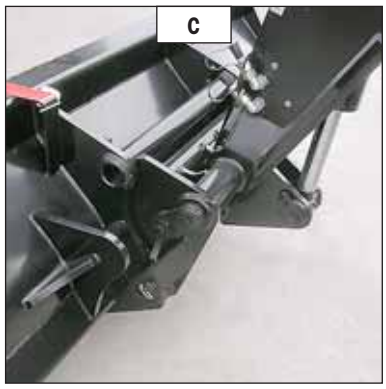
- Proceed in the reverse order of paragraph HAND LOCKING while making sure you put back the locking pin and the clip in the bracket (fig. A).

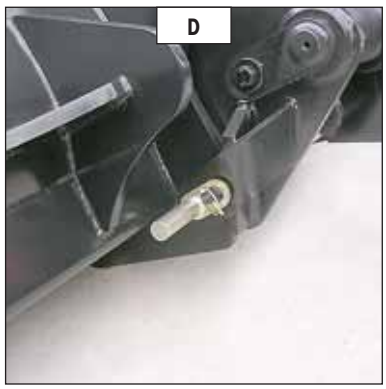
LAYING AN ATTACHMENT

- 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.









B - ATTACHMENT WITHOUT HYDRAULICS AND HYDRAULIC LOCKING DEVICE (OPTION)

MT 732 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

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 rods on the locking cylinder are retracted (fig. A).
- Place the lift truck with the jib 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 jib, incline the carriage backwards in order to position the attachment (fig. C).
- Lift the attachment off the ground to facilitate locking.

HYDRAULIC LOCKING

- Put the valve in position A (fig. D), that is to say, the hydraulic circuit of the attachment locking open.
- Lift up and push the lever of the distributor 1 (fig. E) to the right in order to completely lock the attachment on the carriage.
- Close the valve in position B (fig. D), that is to say, the hydraulic circuit of the attachment locking closed.

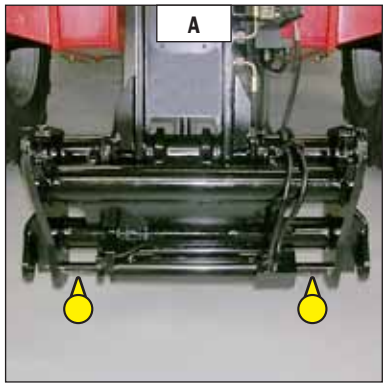
Always close the valve in position B (fig. D) after the locking of the attachment, in order to avoid accidental unlocking and use the attachment safety.

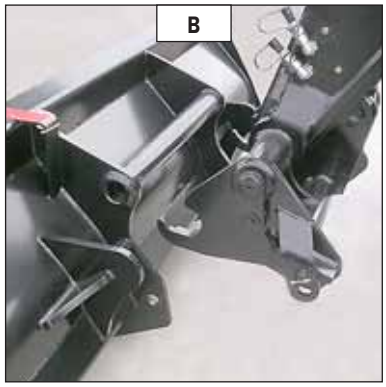
HYDRAULIC RELEASING

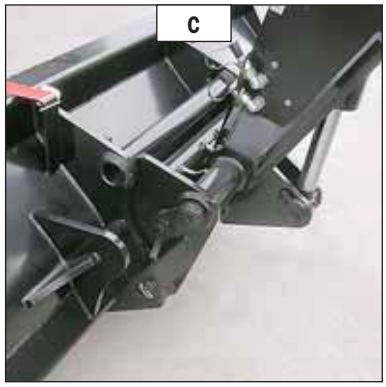
- Put the valve in position A (fig. D), that is to say, the hydraulic circuit of the attachment locking open.
- Lift up and push the lever of the distributor 1 (fig. E) to the left in order to unlock the attachment.

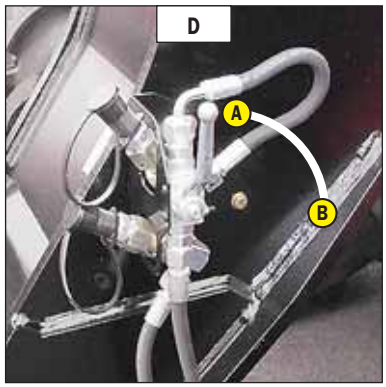
LAYING AN ATTACHMENT

- 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.









C - HYDRAULIC ATTACHMENT AND HAND LOCKING DEVICE

STANDARD MT 732 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 3-E3
MT 1030 S Turbo Série 3-E3
OPTION MT 728 Série D-E3
MT 928 Série D-E3

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 jib 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 jib, incline the carriage backwards in order to position the attachment (fig. C).
- Lift the attachment off the ground to facilitate locking.

HAND LOCKING AND CONNECTING THE ATTACHMENT

- 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.
- Remove the pressure of the hydraulic circuit by using the lever of the distributor 1 (fig. E).
- Connect the rapid connectors according to the logic of the attachment's hydraulic movements.

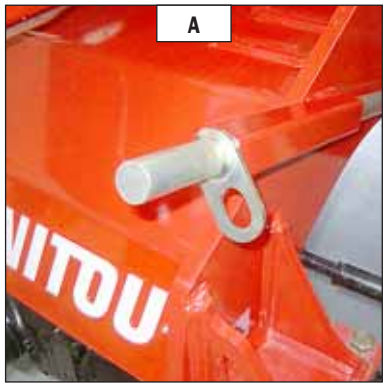
Make sure that the rapid connectors are clean and protect the holes which are not used, with the caps provided.

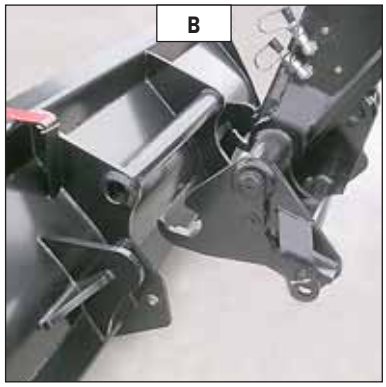
HAND RELEASING AND DISCONNECTING THE ATTACHMENT

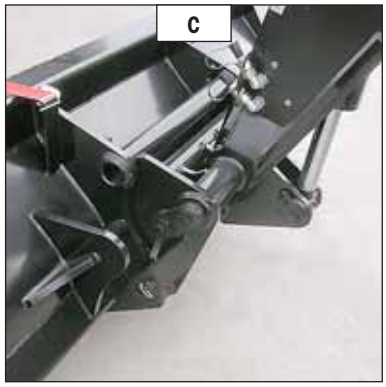
- Proceed in the reverse order of paragraph HAND LOCKING AND CONNECTING THE ATTACHMENT while making sure you put back the locking pin and the clip in the bracket (fig. A).

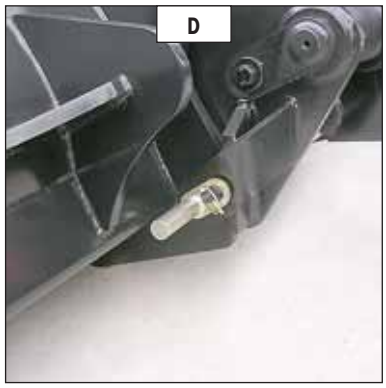
LAYING AN ATTACHMENT

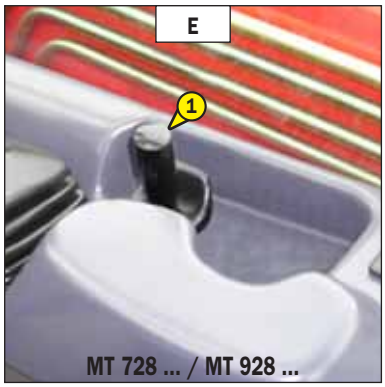
- Proceed in the reverse order of paragraph TAKING UP AN ATTACHMENT while making sure you place the attachment flat on the ground and in closed position.









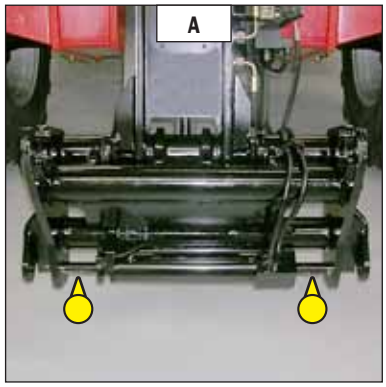


D - HYDRAULIC ATTACHMENT AND HYDRAULIC LOCKING DEVICE (OPTION)

MT 732 Série D-E3
MT 932 Série D-E3
MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

TAKING UP AN ATTACHMENT

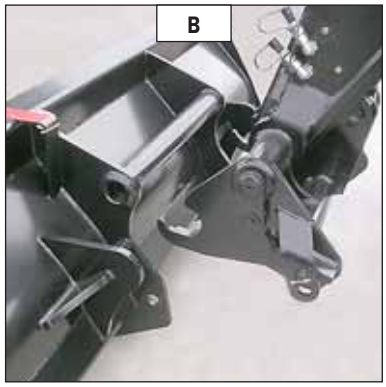
- Ensure that the attachment is in a position facilitating the locking to the carriage. If it is not correctly oriented, take the necessary precautions in order to move it safely.
- Check that the rods on the locking cylinder are retracted (fig. A).
- Place the lift truck with the jib lowered in front 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 jib, incline the carriage backwards in order to position the attachment (fig. C).
- Lift the attachment off the ground to facilitate locking.



HYDRAULIC LOCKING AND CONNECTING THE ATTACHMENT

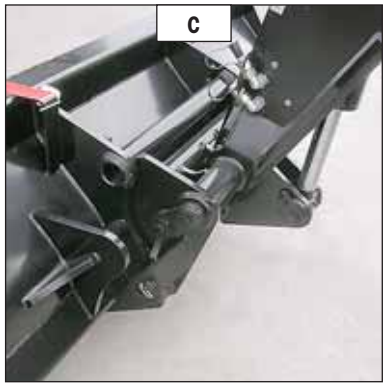
- Put the valve in position A (fig. D), that is to say, the hydraulic circuit of the attachment locking open.
- Lift up and push the lever of the distributor 1 (fig. E) to the right in order to completely lock the attachment on the carriage.
- Stop the I.C. engine.
- Remove the pressure of the attachment hydraulic circuit by using the lever of the distributor 1 (fig. E).
- Connect the rapid connectors according to the logic of the attachment's hydraulic movements.

Make sure that the rapid connectors are clean and protect the holes which are not used, with the caps provided.



- Close the valve in position B (fig. D), that is to say, the hydraulic circuit of the attachment locking closed.

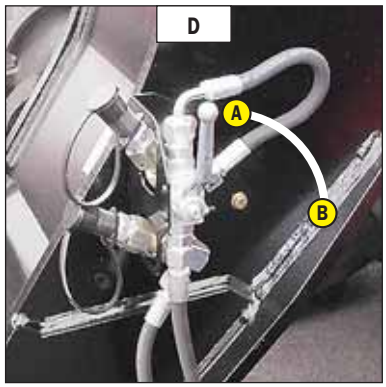
Always close the valve in position B (fig. D) after the locking of the attachment, in order to avoid accidental unlocking and use the attachment safety.



HYDRAULIC RELEASING AND DISCONNECTING THE ATTACHMENT

- Close the attachment.
- Put the valve in position A (fig. D), that is to say, the hydraulic circuit of the attachment locking open.
- Lift up and push the lever of the distributor 1 (fig. E) to the left in order to unlock the attachment.
- Stop the I.C. engine.
- Remove the pressure of the attachment hydraulic circuit by using the lever of the distributor 1 (fig. E).
- Disconnect the rapid connectors of the attachment.

Make sure that the rapid connectors are clean and protect the holes which are not used, with the caps provided.

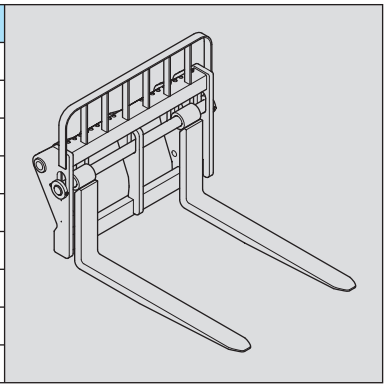


LAYING AN ATTACHMENT

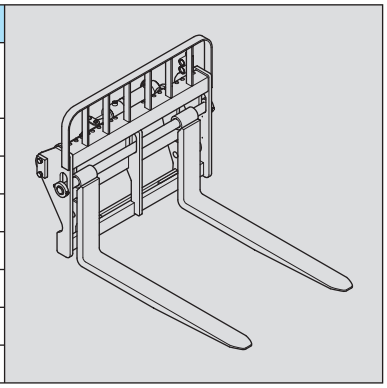
- Proceed in the reverse order of paragraph TAKING UP AN ATTACHMENT while making sure you place the attachment flat on the ground and in closed position.

TECHNICAL SPECIFICATIONS OF ATTACHMENTS

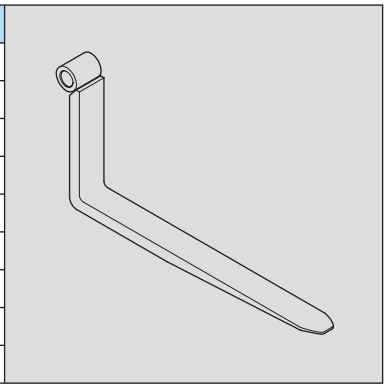
FLOATING FORK CARRIAGE			
	TFF 35 MT-1040	TFF 35 MT-1300	
PART NUMBER	**654093**	**654094**	
Rated capacity	3500 kg	3500 kg	
Width	1040 mm	1300 mm	
Weight	300 kg	340 kg	



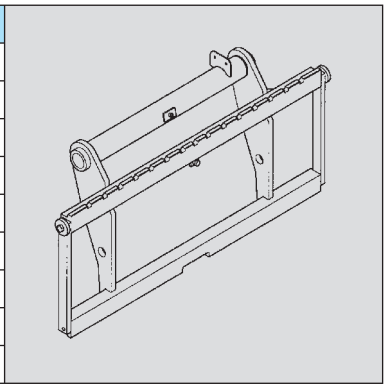
FLOATING FORK SIDE-SHIFT CARRIAGE			
Use is prohibited with the optional single side-shift carriage (TSDL).			
	TFF 35 MT-1040 DL	TFF 35 MT-1300 DL	
PART NUMBER	**751543**	**751544**	
Rated capacity	3500 kg	3500 kg	
Side-shift	2x100 mm	2x100 mm	
Width	1040 mm	1300 mm	
Weight	345 kg	375 kg	



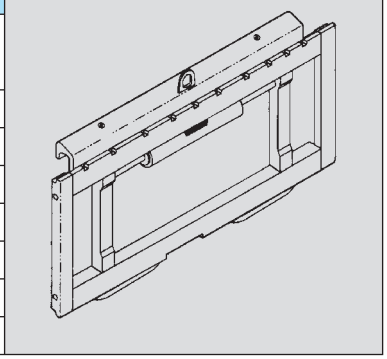
FLOATING FORK			
PART NUMBER	**415801**		
Section	125x45x1200 mm		
Weight	68 kg		



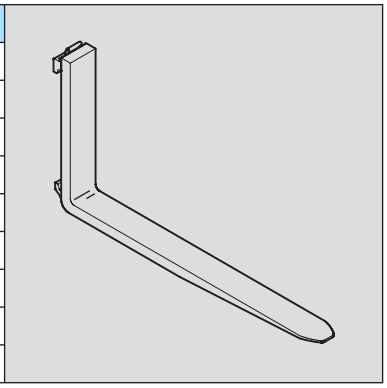
STANDARDISED TILTING FORK CARRIAGE			
	PFB 35 N MT-1260 S2	**PFB 35 N MT-1470 S2**	**PFB 35 N MT-1580 S2**
PART NUMBER	**653744**	**653745**	**653746**
Rated capacity	3500 kg	3500 kg	3500 kg
Width	1260 mm	1470 mm	1580 mm
Weight	103 kg	126 kg	131 kg



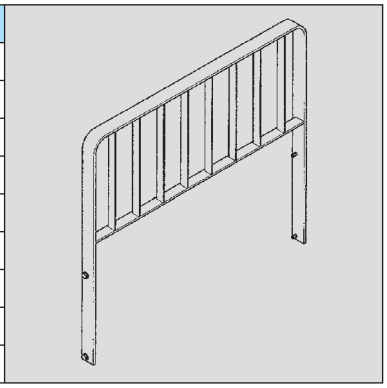
STANDARDISED SIDE-SHIFT CARRIAGE			
Use is prohibited with the optional single side-shift carriage (TSDL).			
	TDL 3T5 L1260 FEM3	**TDL 5T L1470 FEM3**	**TDL 5T L1580 FEM3**
PART NUMBER	**751375**	**751376**	**751377**
Rated capacity	3000 kg	5000 kg	5000 kg
Side-shift	2x100 mm	2x100 mm	2x100 mm
Width	1260 mm	1470 mm	1580 mm
Weight	79 kg	192 kg	200 kg



STANDARDISED FORK			
PART NUMBER	**415618**		
Section	125x45x1200 mm		
Weight	72 kg		



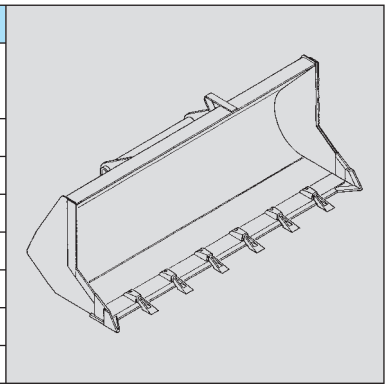
LOAD BACK REST			
PART NUMBER	**556008**	**555325**	**556010**
Width	1260 mm	1470 mm	1580 mm
Weight	36 kg	39 kg	41 kg



BUILDING BUCKET

MT 728 Série D-E3
MT 732 Série D-E3

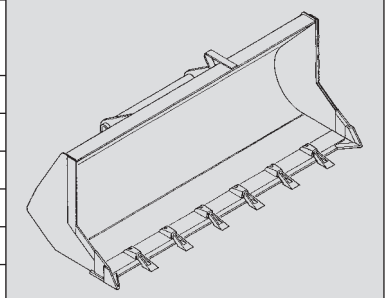
	CBC 700 L1950 S2		
PART NUMBER	**654472**		
Rated capacity	697 l		
Width	1950 mm		
Weight	330 kg		



BUILDING BUCKET

Use is prohibited with the optional single side-shift carriage (TSDL).

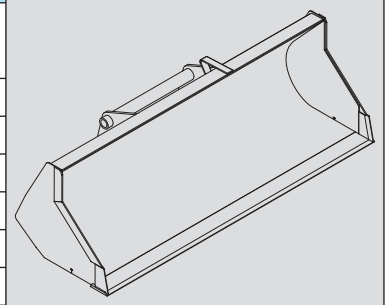
	CBC 800 L2250 S3	CBC 900 L2450 S3	
PART NUMBER	**654471**	**654470**	
Rated capacity	814 l	893 l	
Width	2250 mm	2450 mm	
Weight	385 kg	410 kg	



LOADING BUCKET

MT 728 Série D-E3
MT 732 Série D-E3

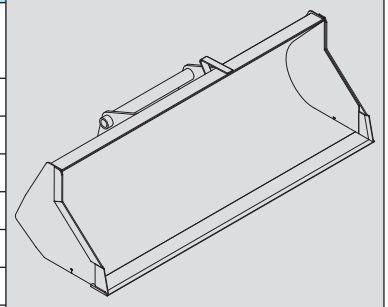
	CBR 780 L1950 S2		
PART NUMBER	**570613**		
Rated capacity	778 l		
Width	1950 mm		
Weight	340 kg		



LOADING BUCKET

Use is prohibited with the optional single side-shift carriage (TSDL).

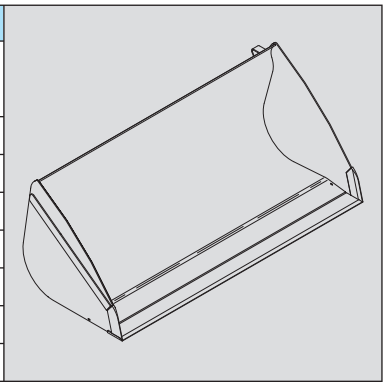
	CBR 900 L2250 S2	CBR 1000 L2450 S2	
PART NUMBER	**653749**	**654716**	
Rated capacity	904 l	990 l	
Width	2250 mm	2450 mm	
Weight	390 kg	410 kg	



GRAIN BUCKET

MT 728 Série D-E3
MT 732 Série D-E3

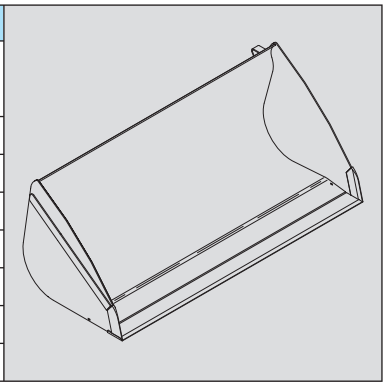
	CBA 1500 L2450 S3	CBA 1800 L2250 S3	
PART NUMBER	**570547**	**570550**	
Rated capacity	1502 l	1820 l	
Width	2450 mm	2250 mm	
Weight	514 kg	571 kg	



GRAIN BUCKET

MT 728 Série D-E3
MT 732 Série D-E3

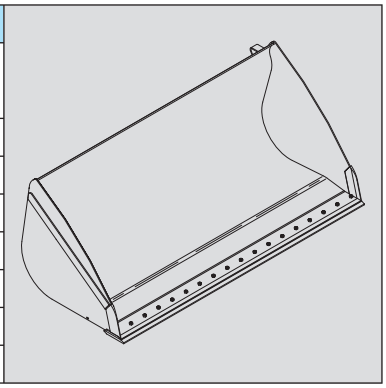
	CBA 2000 L2450 S3	CBA 2500 L2450 S3	
PART NUMBER	**570551**	**570553**	
Rated capacity	1998 l	2508 l	
Width	2450 mm	2450 mm	
Weight	607 kg	701 kg	



GRAIN BUCKET (REVERSING AND DISMOUNTABLE CUTTING EDGE)

MT 728 Série D-E3
MT 732 Série D-E3

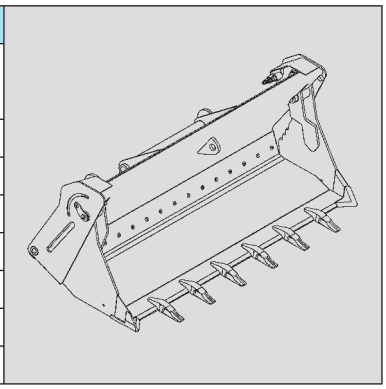
	CBA 1500 L2450 LDR S3	CBA 2000 L2450 LDR S3	CBA 2500 L2450 LDR S3
PART NUMBER	**570548**	**570552**	**570554**
Rated capacity	1502 l	1998 l	2508 l
Width	2450 mm	2450 mm	2450 mm
Weight	585 kg	678 kg	772 kg



BUCKET 4X1

MT 728 Série D-E3
MT 732 Série D-E3

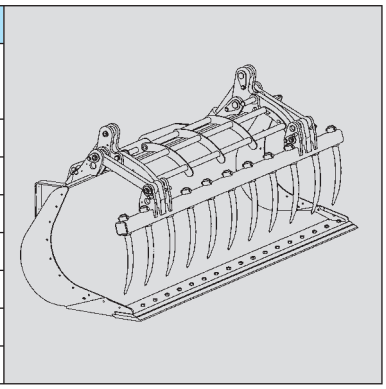
	CB4x1-700 L1950	CB4x1-850 L2300	CB4x1-900 L2450
PART NUMBER	**751402**	**751401**	**751465**
Rated capacity	700 l	850 l	900 l
Width	1950 mm	2300 mm	2450 mm
Weight	640 kg	735 kg	765 kg



MULTIPURPOSE BUCKET (REVERSING AND DISMOUNTABLE CUTTING EDGE)

MT 728 Série D-E3
MT 732 Série D-E3

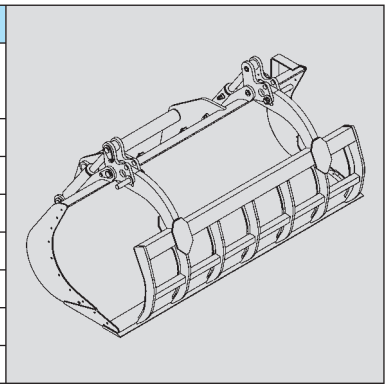
	CBM 2450 LDR S5		
PART NUMBER	**752195**		
Rated capacity	1,03 m3		
Width	2450 mm		
Grab	11		
Weight	790 kg		



GRAB BUCKET

MT 728 Série D-E3
MT 732 Série D-E3

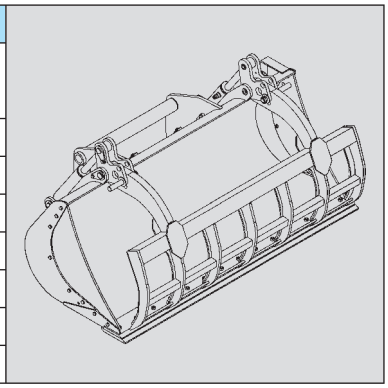
	CBG 1950 S4	CBG 2300 S4	CBG 2450 S4
PART NUMBER	**751407**	**751414**	**751418**
Rated capacity	1 m3	1,2 m3	1,26 m3
Width	1950 mm	2300 mm	2450 mm
Grab	7	8	8
Weight	555 kg	615 kg	635 kg



GRAB BUCKET (NON-HAZARDOUS INDUSTRIAL WASTE)

MT 728 Série D-E3
MT 732 Série D-E3

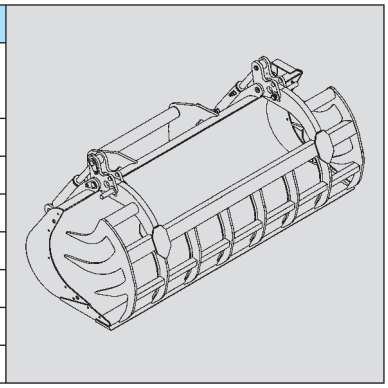
	CBG 1950 DIB S4	CBG 2300 DIB S4	CBG 2450 DIB S4
PART NUMBER	**653016**	**653018**	**653020**
Rated capacity	1 m3	1,2 m3	1,26 m3
Width	1950 mm	2300 mm	2450 mm
Grab	7	8	8
Weight	678 kg	740 kg	767 kg



GRAB BUCKET (GRAB CLOSED)

MT 728 Série D-E3
MT 732 Série D-E3

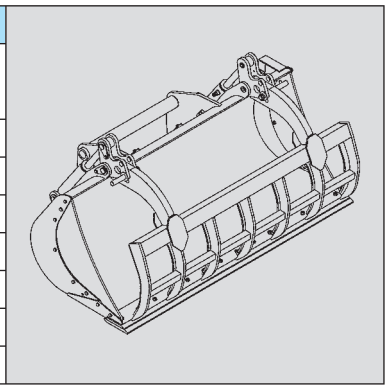
	CBG 2300 GF S4		
PART NUMBER	**653008**		
Rated capacity	1,2 m3		
Width	2300 mm		
Grab	8		
Weight	637 kg		



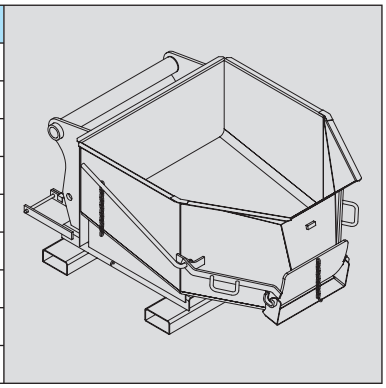
GRAB BUCKET (CLOSED JAWS AND REVERSIBLE REMOVABLE BLADE)

MT 728 Série D-E3
MT 732 Série D-E3

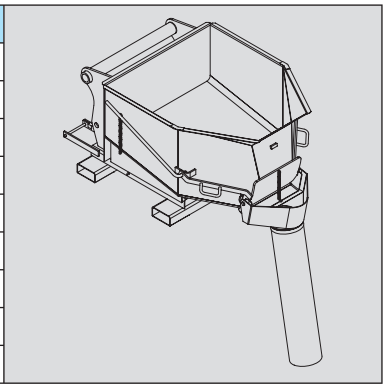
	CBG 1950 JFD-LDR S4	CBG 2300 JFD-LDR S4	CBG 2450 JFD-LDR S4
PART NUMBER	**653003**	**653006**	**653009**
Rated capacity	1 m3	1,2 m3	1,26 m3
Width	1950 mm	2300 mm	2450 mm
Grab	7	8	8
Weight	655 kg	715 kg	742 kg



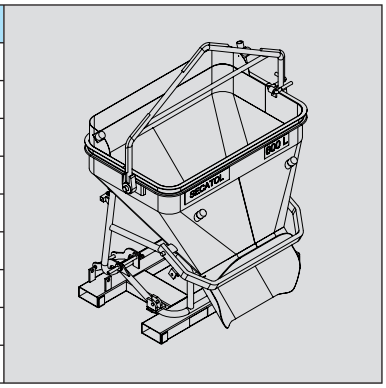
CONCRETE BUCKET (ADAPTABLE ON FORKS)			
	BB 500 S4	**BBH 500 S4**	
PART NUMBER	**654409**	**751462**	
Rated capacity	500 l/1300 kg	500 l/1300 kg	
Width	1100 mm	1100 mm	
Weight	205 kg	220 kg	



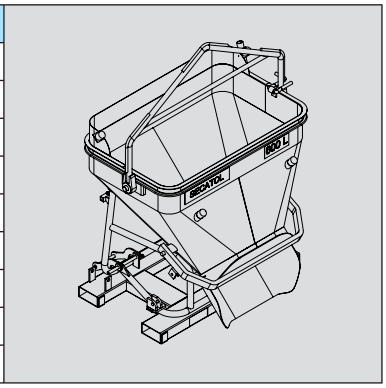
CONCRETE BUCKET WITH SPOUT (ADAPTABLE ON FORKS)			
	BBG 500 S4	**BBHG 500 S4**	
PART NUMBER	**654411**	**751464**	
Rated capacity	500 l/1300 kg	500 l/1300 kg	
Width	1100 mm	1100 mm	
Weight	220 kg	235 kg	



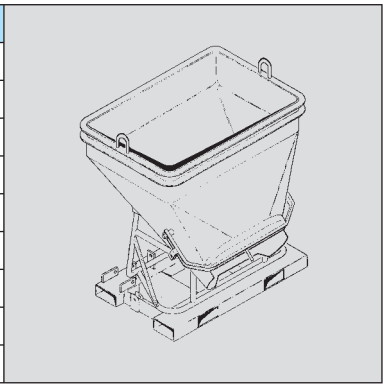
SPOUT BUCKET (ADAPTABLE ON FORKS)			
	GL 300 S2	**GL 400 S2**	
PART NUMBER	**174371**	**174372**	
Rated capacity	300 l/725 kg	400 l/969 kg	
Weight	150 kg	166 kg	
HYDRAULIC KIT TO OPEN THE SPOUT			
PART NUMBER	**653750**		



SPOUT BUCKET (ADAPTABLE ON FORKS)			
	GL 600 S2	**GL 800 S2**	
PART NUMBER	**174373**	**174374**	
Rated capacity	600 l/1440 kg	800 l/1920 kg	
Weight	290 kg	325 kg	
HYDRAULIC KIT TO OPEN THE SPOUT			
PART NUMBER	**653750**		



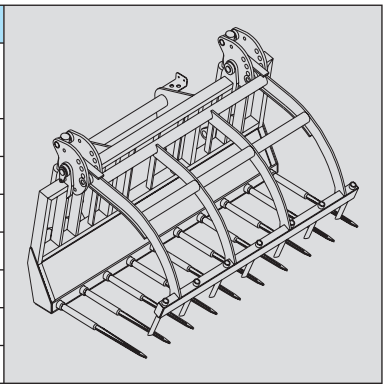
SPOUT BUCKET (ADAPTABLE ON FORKS)			
	GL 1000 S2	**GL 1500 S2**	
PART NUMBER	**174375**	**174376**	
Rated capacity	1000 l/2440 kg	1500 l/3591 kg	
Weight	360 kg	409 kg	
HYDRAULIC KIT TO OPEN THE SPOUT			
PART NUMBER	**653750**		



MANURE FORK WITH GRAB

MT 728 Série D-E3
MT 732 Série D-E3

	FFGR 30 MT 2100 S5	FFGR 30 MT 2400 S5	FFGR 30 MT 2100 DR
PART NUMBER	**556843**	**570594**	**570728**
Rated capacity	1700 Kg	1700 Kg	1700 Kg
Width	2100 mm	2400 mm	2100 mm
Finger	10	12	10 (round finger)
Grab	7	8	7
Weight	567 kg	606 kg	567 kg

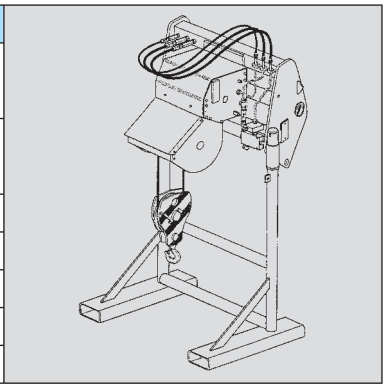


WINCH

MUST be used with a lift truck equipped with an operational hydraulic movement cut-out device.

MT 1030 S Série 4-E3
MT 1030 S Turbo Série 4-E3

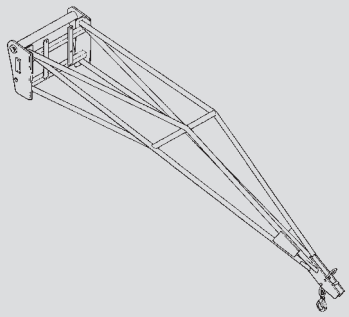
	H3T S4	H4T S4	
PART NUMBER	**708534**	**708535**	
Rated capacity	3000 Kg	4000 Kg	
Weight	310 kg	420 kg	



CRANE JIB

MUST be used with a lift truck equipped with an operational hydraulic movement cut-out device.

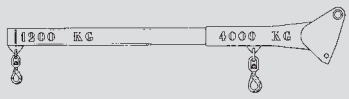
	P 600 MT S3		
PART NUMBER	**653228**		
Rated capacity	600 kg		
Weight	170 kg		



CRANE JIB

MUST be used with a lift truck equipped with an operational hydraulic movement cut-out device.

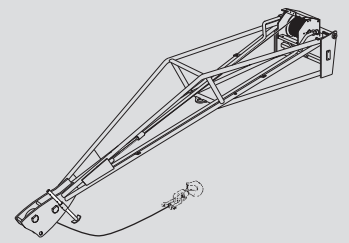
	P 4000 MT S2		
PART NUMBER	**653226**		
Rated capacity	4000 kg/1200 kg		
Weight	210 kg		



CRANE JIB WITH WINCH

MUST be used with a lift truck equipped with an operational hydraulic movement cut-out device.

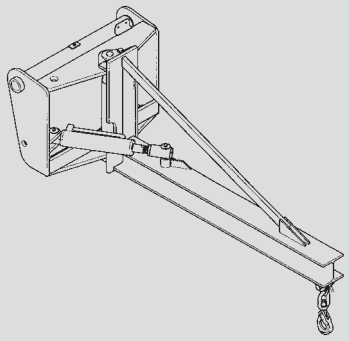
	PT 600 MT S6		
PART NUMBER	**708538**		
Rated capacity	600 kg		
Weight	288 kg		



15°/15° MULTI-DIRECTIONAL CRANE JIB

MUST be used with a lift truck equipped with an operational hydraulic movement cut-out device.

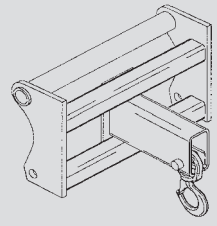
	P0 600 L2500 S2	P0 1000 L1500 S2	P0 2000 L1000 S2
PART NUMBER	**751547**	**751548**	**751549**
Rated capacity	600 kg	1000 kg	2000 kg
Weight	320 kg	275 kg	255 kg



CRANE JIB

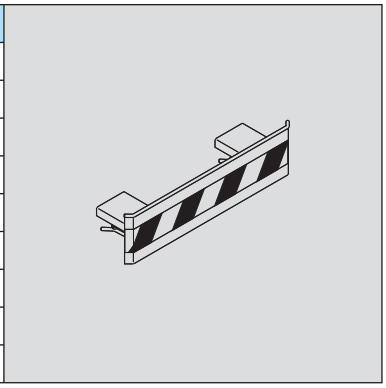
MUST be used with a lift truck equipped with an operational hydraulic movement cut-out device.

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

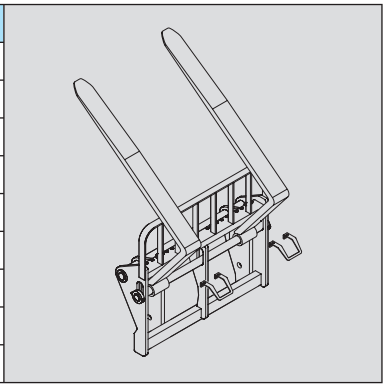


ATTACHMENT SHIELDS

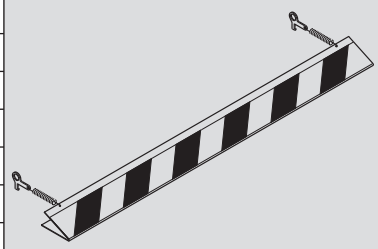
FORK PROTECTOR			
PART NUMBER	**227801**		



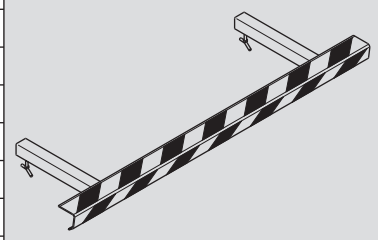
FORK BLOCK FOR FLOATING FORK CARRIAGE			
PART NUMBER	**261210**		



BUCKET PROTECTOR			
NOTE: 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



MANURE FORK PROTECTOR			
PART NUMBER	**230689**		

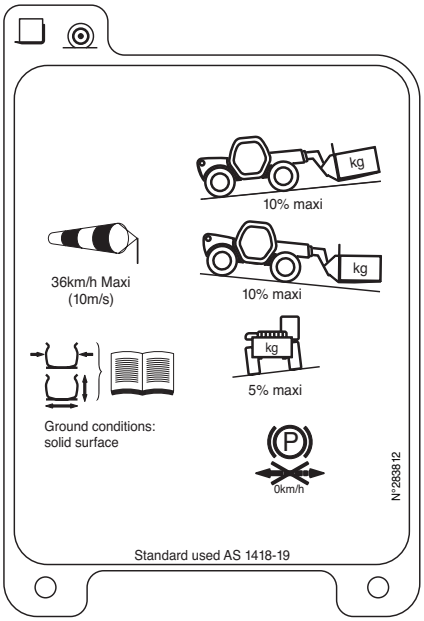


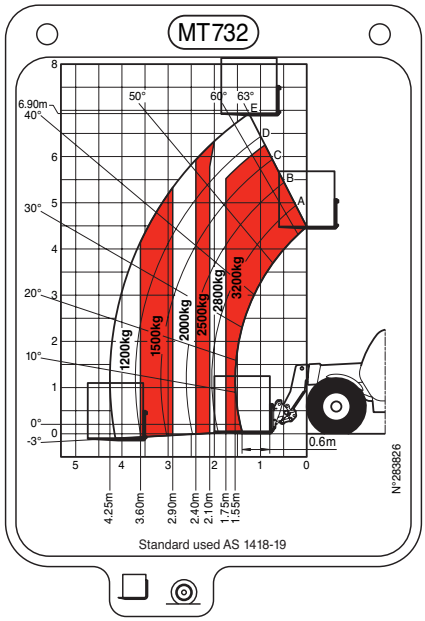
5 - SPECIFIC AUSTRALIA

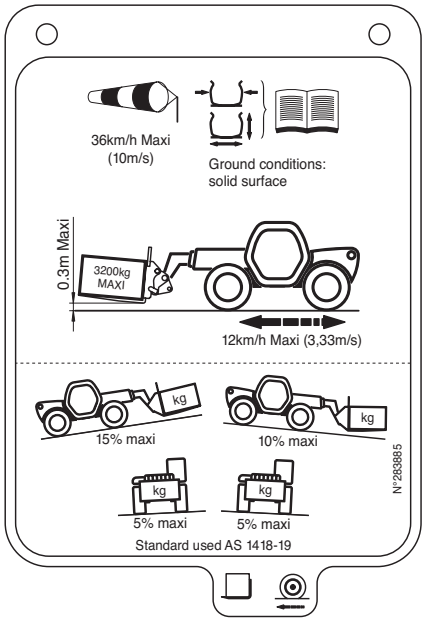
See also the operator's manual supplement: 647065 AU

LOAD CHART

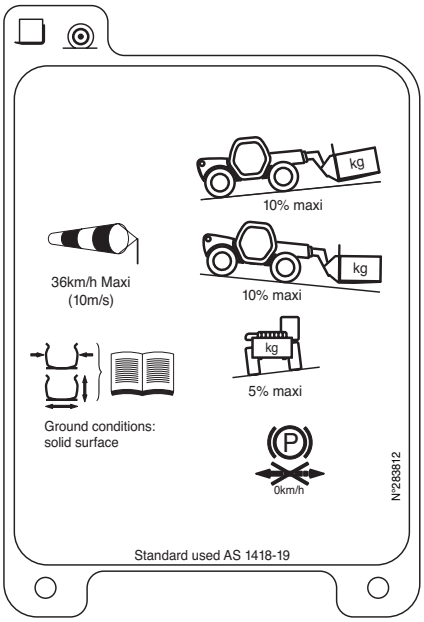
MT 732 Série D-E3

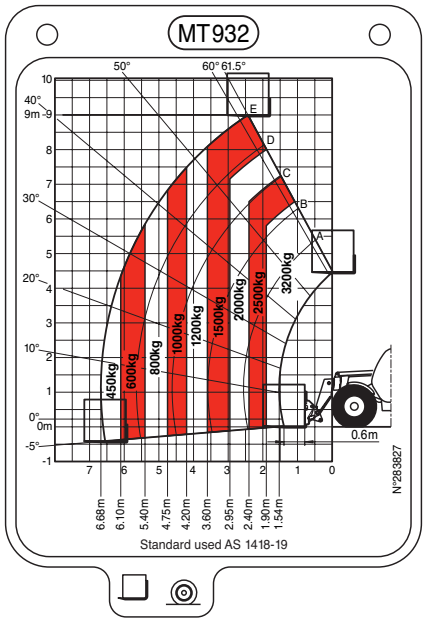


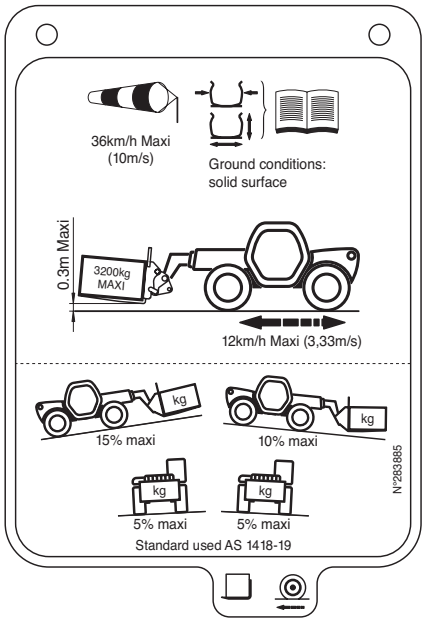




MT 932 Série D-E3







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MT 1030 S Turbo Série 4-E3