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120 AETJC
120 AETJC 3D

OPERATOR'S MANUAL
(ORIGINAL INSTRUCTIONS)

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FOREWORD

ABOUT THIS OPERATOR'S MANUAL

This operator's manual forms an integral part of this machine and must be kept in the platform's storage compartment at all times.

MANITOU reserves the right to change its models and their equipment without notice. Contact MANITOU for up-to-date information.

This operator's manual provides operators with all the information relating to the safety precautions, usage instructions and maintenance procedures to ensure safe and reliable use of this machine.

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

This manual has been produced based on the equipment list and technical specifications given at the time of its design. The level of equipment depends on the options chosen and the country of sale.

According to the options and the date of sale, certain items of equipment/functions described in this operator's manual may not be present on the machine.

Descriptions and illustrations are non binding.

ANTICIPATED USE

This machine is a mobile aerial work platform of the type 3b designed to transport and lift personnel and their tools and equipment to a workplace at height.

MANITOU has ensured that this machine is suitable for use in the standard operating conditions defined in this operator's manual.

TECHNICAL INFORMATION BULLETINS

The safety of the machine and personnel is essential for MANITOU. The technical information bulletins are written to communicate important safety information, intended for dealers, owners and users of the machine.

This machine must comply with all the relevant technical information bulletins. Contact MANITOU or your dealer to get information on the bulletins concerning your machine.

These technical information bulletins are sent to the owners of the machine. As a result, it is very important to register your machine and ensure that the information is accurate and up to date.

In the event of transfer of ownership of the machine, update the information to guarantee that the technical information bulletins are sent to the new owner.

CONTACT THE MANUFACTURER

You should contact MANITOU in the following scenarios:

- To report an accident.
- To update the information relating to the current owner.
- For questions about compliance with standards and regulations.
- For questions about machine use and safety.
- For questions about any special application or any modification of the product.

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WARNINGS AND SAFETY INSTRUCTIONS

The following safety alert is used in this manual to warn you of the risks during use or maintenance of this machine:



Follow the safety instructions following this warning to avoid any risk of injury, death or equipment damage.

IDENTIFICATION OF THE MACHINE

The identification plate of the machine is riveted on the turntable. The following informations are engraved on it :

"Designation" Designation	
"Year of manufacture" Year of manufacture	
"Model year" Model year	
"Unladen mass" Unladen weight	
"Nominal power" Nominal power	
"Voltage" Voltage	
"Inside / Outside" Interior/Exterior	
"Maximum load" Maximum load	
"Maximum number of persons" Maximum number of people	
"Mass of equipment" Equipment weight	
"Manual forces" Manual forces	
"Maximum inclination" Maximum tilt	
"Maximum wind speed" Maximum wind speed	
"Serial Number" Serial number	



Note: commercial names are used in this operator's manual in order to make it easier to read.

120 AETJC

120 AETJC 3D

Commercial name: 120 AETJC



SECTIONS

1 - OPERATING AND SAFETY INSTRUCTIONS

2 - DESCRIPTION

3 - MAINTENANCE

1 - OPERATING AND SAFETY INSTRUCTIONS

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FOREWORD

WHENEVER YOU SEE THIS SYMBOL IT MEANS:



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

SITE

- Proper management of the personnel lifting platform's area of travel will reduce the risk of accidents:
 - ground not unnecessarily uneven or obstructed,
 - no excessive slopes,
 - pedestrian traffic controlled, etc.

OPERATOR

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

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

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



- The reflex behaviour of a person in the event of a malfunction, incident, failure, etc. during use of the platform.
- Behaviour resulting from application of the "principle of least effort" when performing a task.
- For certain machines, the foreseeable behaviour of such persons as: apprentices, teenagers, handicapped persons, trainees tempted to drive a platform, operators 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 the suitability of a person to drive.



OBTAIN INFORMATION ON:

- How to behave when there is a fire.
- The location of the nearest first aid kit and fire extinguisher.
- The emergency telephone numbers for calling (the doctors, ambulance, hospital and fire brigade).

PLATFORM

A - THE PLATFORM'S SUITABILITY FOR USE

- MANITOU has ensured that this platform is suitable for use under the standard operating conditions defined in this operator's manual, with an overload test coefficient of 1.25 and an operational test coefficient of 1.1, as stipulated in standard EN 280 for MPLP (Mobile Personnel Lifting Platforms).

Before putting the platform into operation, the company manager must check that the platform is suitable for the work to be carried out and conduct certain tests (in accordance with current legislation).

B - ADAPTING THE PLATFORM TO THE USUAL ENVIRONMENTAL CONDITIONS

- In addition to standard equipment mounted on your platform, many options are available, such as: rotating beacon light, working light, etc.
Contact your dealer.
- Take into account the climatic and atmospheric conditions of the site of use.
 - Protection against frost (see chapter 3 - MAINTENANCE, LUBRICANTS page).
 - Adaptation of lubricants (ask your dealer for information).
 - Engine filtration (see chapter 3 - MAINTENANCE, FILTER CARTRIDGES page).

- The machines manufactured by MANITOU are designed to be used within the following temperature ranges:
 - Minimum temperature: -20 °C
 - Maximum temperature: +45 °C
- Special applications are available as options for particularly cold environments.



The factory fill of lubricants is for average climatic conditions, i.e. between -15 °C and +35 °C. For operation under more severe climatic conditions, before starting up, the systems should be drained and refilled using lubricants suited to the ambient temperatures. The same applies for the coolant.

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



Your platform may be designed for outdoor use (see chapter 2 - DESCRIPTION, SPECIFICATIONS pages) under normal atmospheric conditions and indoor use in suitably aerated and ventilated premises. It is prohibited to use the platform in areas where there is a risk of fire or which are potentially explosive (e.g. refineries, fuel or gas depots, stores of flammable products, etc.). For use in these areas, specific equipment is available (ask your dealer for information).

C - MODIFYING THE PLATFORM

- For your own safety and that of others, you must not change the structure and settings of the various components used in your platform by yourself (hydraulic pressure, limiter calibration, engine speed, addition of extra equipment, addition of counterweights, unapproved attachments, alarm systems, etc.). In this event, the manufacturer cannot be held liable.
- Your platform is supplied with standard wheels or all-terrain wheels. It is PROHIBITED to change from one type of wheel to the other: risk of loss of stability of the platform.

INSTRUCTIONS

- The operator's manual must always be in good condition and kept in the place provided on the platform and in the language used by the operator.
- You must replace the instructions manual, as well as any plates or stickers, if they are no longer legible or are missing or damaged.

MAINTENANCE

- Maintenance or repairs other than those detailed in chapter: 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 platform must be inspected periodically to ensure that it remains in compliance. The frequency of this inspection is defined by the current legislation applying in the country in which the platform is used.

- Example for France: The manager in charge of the establishment using an access platform must open and maintain a maintenance log for each machine (order of 2 March 2004).

FOREWORD

WHENEVER YOU SEE THIS SYMBOL IT MEANS:



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



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

- Only the operations and manoeuvres described in this 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 platform itself are not exhaustive.
- At all times as an operator you must envisage, within reason, the possible risk to yourself, to others or to the platform itself when you use it.



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

GENERAL INSTRUCTIONS

A - OPERATOR'S MANUAL

- Carefully read and understand the operator's manual.
- The operator's manual must always be kept in the place provided for it on the platform and be written in the language used by the operator.
- Any operations or manoeuvres not described in the operator's manual are categorically forbidden.
- Follow the safety advice and the instructions on the platform.
- You must necessarily replace the operator's manual, as well as any plates or stickers, if they are no longer legible or are damaged.
- A second operator must be present on the ground as a safety measure when using the platform.
- Familiarise yourself with the platform on the terrain where it will be used.
- The machine must also be used in accordance with good engineering practice.
- Do not use the platform if there is a wind speed of over 45 km/h. The platform's arms must not be subjected to a lateral force of more than 40 kg (platforms for indoor use must not be used outside the building).

B - AUTHORISATION FOR USE IN FRANCE

(OR SEE CURRENT LEGISLATION IN OTHER COUNTRIES)

- Only qualified, authorised personnel can use the platform. This authorisation is given in writing by the appropriate person in the establishment where the platform is to be used and must be carried permanently by the operator.
- The operator is not competent to authorise the driving of the platform by another person.

C - MAINTENANCE

- The operator must immediately advise his superior if his platform 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 platform properly cleaned if this is among his responsibilities.
- The operator must carry out daily maintenance (see chapter: 3 - MAINTENANCE, A - DAILY pages).
- The operator must ensure tyres are adapted to the nature of the ground (see area of the contact surface of the tyres in chapter 2 - DESCRIPTION: CHARACTERISTICS). There are optional solutions, consult your dealer.



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

In the case of electric platforms, the operator must ensure that:



- **The batteries are not replaced with lighter ones (compromising stability).**
- **Safety goggles are always worn when charging the batteries.**
- **The batteries are not charged in an explosive environment.**
- **There is no smoking and no naked flame directed towards the batteries when they are being handled;**
- **during removal, re-installation and when checking the levels.**

D - MODIFYING THE PLATFORM

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



Your platform is supplied with standard wheels or all-terrain wheels. It is PROHIBITED to change from one type of wheel to the other: risk of loss of stability of the platform.

E - I.C. PLATFORM AXLES

- STANDARD AXLE:



The chassis is rigid, so the platform can be load bearing on only three wheels.

- OSCILLATING AXLE (IF THIS OPTION IS AVAILABLE):



The oscillating axle enables the platform, in the transport position, to have load-bearing on four wheels. When moving in the working position over uneven terrain, the oscillating axle is locked (the chassis is rigid) so the platform can be load bearing on only three wheels.

DRIVING INSTRUCTIONS

A - BEFORE STARTING THE PLATFORM

- Ensure that the intermediate rail is fully in the locked position before operating the platform from the basket.
- If the platform is new, see the section: Before starting the platform for the first time in chapter 1 - operating and safety instructions.
- Carry out daily maintenance (see chapter 3 - MAINTENANCE, A - DAILY pages).
- Before starting the platform, check the levels:
 - PLATFORMS WITH I.C. ENGINES:
 - Engine oil
 - Hydraulic tank oil
 - Fuel
 - Coolant
 - ELECTRIC PLATFORMS:
 - Hydraulic tank oil
 - Battery charge level
- The platform must be in transport position (with the arms completely folded back or the scissors in the low position) before you enter it.
- Make sure the horn works.
- Check before operating the platform that the access gate has been properly locked.

B - DRIVER'S CAB OPERATING INSTRUCTIONS

- Whatever his experience, the operator is advised to familiarise himself with the position and operation of all the controls and instruments before operating the platform.
- Wear suitable clothing for driving the platform; do not wear baggy 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.
- Remain alert at all times when using the platform. Do not listen to the radio or music using headphones or earphones.
- For increased comfort, adopt the correct position at the platform's operator station.
- The 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.
- Safety helmets must be worn.
- MANITOU recommends a safety harness in the operator's size be provided when the platform is in use (for the harness attachment in the basket, see chapter 2 - DESCRIPTION, CHECKING AND CONTROL INSTRUMENTS pages).
- 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 platform, portmanteau, etc.).
- In the case of scissors-type platforms, it is forbidden to use the platform without the guardrails in place.
- Suspending a load under the basket or on any part of the lifting apparatus is strictly forbidden.
- The operator must not climb into or get down from the basket unless it is at ground level (with the lifting system folded).
- If the platform is equipped with steps, the basket must be positioned vertically with these before going up or down.
- The platform must not be fitted with attachments that increase the unit's wind load.
- Do not use a ladder or any improvised constructions in the basket to reach greater heights.
- Do not climb on the sides of the basket to reach greater heights.
- Never operate the platform when hands or feet are wet or soiled with greasy substances.

C - ENVIRONMENT

- Comply with site safety regulations.
- The platform can be manoeuvred from the ground: ensure that you forbid access.
- If you have to use the platform in a dark area or at night, make sure it is equipped with working lights.
- The platforms may not be used as cranes or elevators for the permanent transport of people or materials, nor as jacks or supports.
- When operating, ensure that there is no one or anything impeding the platform's progress and operation.
- When raising the platform, ensure that no one or anything impedes the platform's operation and do not perform any inappropriate manoeuvres.

- Do not allow anybody to come near the working area of the platform or pass beneath an elevated load. To ensure this, mark out your working area.
- Travelling on a longitudinal slope:
 - Ensure that you adapt the access platform's travel speed by controlling it with the joystick.
- Take into account the platform'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 bridge is prescribed for the size and weight of the platform.
 - That the slope of the bridge is not greater than the platform's maximum authorised slope.
- Never move onto a foot bridge, floor or freight lift, without being certain that they are prescribed for the weight and size of the platform to be loaded and without having checked that they are in sound working order.
- Be careful in the area of loading bays, trenches, scaffolding, soft ground and manholes.
- Make sure the ground is stable and firm under the wheels and/or stabilisers before lifting the basket. If necessary, add sufficient wedging under the stabilisers.
- Do not attempt any operations outside the platform's capabilities.
- 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.



If the platform must remain above a structure for a long time, there is the risk that it will rest on the structure as a result of the basket descending due to the cooling of the oil in the cylinders or minor leakage from the cylinder blocking systems. To eliminate this risk:

- Regularly check the distance between the basket and the structure, readjust if necessary.
- If possible, use the platform with the oil at a temperature as close as possible to the ambient temperature.

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



You must consult your local electrical agency. You could be electrocuted or seriously injured if you operate or park the platform too close to power cables.



If the platform is in contact with electric cables, press the emergency stop button. If you can, jump out of the basket without touching the basket and the ground at the same time. Otherwise call for help, inform people not to touch the platform, or cut off or have someone else cut off the electricity supply to the cables.

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

RATED VOLTAGE	DISTANCE ABOVE THE GROUND OR THE FLOOR IN METRES
50 < U < 1,000	2,30 M
1,000 < U < 30,000	2,50 M
30,000 < U < 45,000	2,60 M
45,000 < U < 63,000	2,80 M
63,000 < U < 90,000	3,00 M
90,000 < U < 150,000	3,40 M
150,000 < U < 225,000	4,00 M
225,000 < U < 400,000	5,30 M
400,000 < U < 750,000	7,90 M



If the wind is in excess of 45 km/h, do not perform any movements liable to endanger the access platform's stability.

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

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

D - VISIBILITY

- Ensure good visibility on your route at all times. To increase your visibility, you can move forwards with the jib arm slightly raised (beware of the risk of falls in the basket from knocking into a low doorway, overhead electric wires, travelling cranes, highway bridges, rail tracks or any obstacle in the area in front of the platform). In reverse, look directly behind you. At all events, avoid reversing long distances.
- If visibility of your road is inadequate, ask someone to help, standing outside the area in which the platform will be moving, and make sure you always have a good view of this person.

PLATFORMS WITH I.C. ENGINES

SAFETY INSTRUCTIONS

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



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).
- Turn the ignition key to position I to switch on the electrical power, which automatically starts the preheating system (all the bars must be displayed), the message "OK" is displayed.
- Check that everything is operating correctly by ensuring that no fault pages are displayed on the screen and no warning about the fuel level (a pump icon is present on the screen) (see chapter 2 - DESCRIPTION, INSTRUMENTS AND CONTROLS pages).
- Turn the ignition key to position I to start.
- Press the start button.
- Do not engage the starter motor for more than 15 seconds and carry out the preheating for 10 seconds between unsuccessful attempts.
- Check the control screen when the engine is warm and at regular intervals during use, so as to quickly detect any faults and to be able to correct them without delay.
- If any faults are displayed on the screen, stop the engine and immediately take the necessary measures.

ELECTRIC PLATFORMS

SAFETY INSTRUCTIONS

- Do not use the platform if the battery is discharged to the point that movements are slowed down. In certain cases, the platform may stop (see chapter 3 - MAINTENANCE: page DAILY OR EVERY 10 HOURS SERVICE, for the charge level not to be exceeded).

INSTRUCTIONS

- Set the battery cut-off to the ON position.
- Check the closing and locking of the hood(s).
- Turn the ignition key to the basket position.
- Check that everything is operating correctly by ensuring that no error messages are displayed on the screen and that the machine maintenance light is not flashing (see chapter 2 - DESCRIPTION, CHECKING AND CONTROL INSTRUMENTS pages).

NOTE: For machines not fitted with a display or a maintenance warning light, faults can be identified from the light directly on the variable speed drive unit (to access: open the cowl on the control side, remove the casing from the variable speed drive and see whether the light is flashing).

- If any error messages are constantly displayed or the machine maintenance light is flashing, return the key to the neutral position.
- Set the battery cut-off to the OFF position.
- Immediately take the necessary measures.

SAFETY NOTICE



We draw the operators' attention to the risks associated with using the platform, in particular:

- Risk of loss of control.
 - Risk of loss of lateral and frontal stability of the platform.
- The operator must remain in control of the platform.

- Do not carry out operations which exceed the capacities of your platform.
- Familiarise yourself with the platform on the terrain where it will be used.
- Ensure that the brakes work efficiently when stopping a travelling movement, taking into account the braking distances.
- Drive smoothly at an appropriate speed for the operating conditions (site configuration, load in the basket).
- Take extreme care when manoeuvring the platform with the basket in the high position. Ensure that there is sufficient visibility.
- Take bends slowly.
- In all circumstances make sure you are in control of your speed.
- Travel slowly on damp, slippery or uneven terrain or on truck ramps.
- Always remember that the hydraulic steering is very sensitive to movements.
- Never leave the engine on when the platform is unattended.
- Look where you are going and always make sure you have good visibility along the route.
- Drive round obstacles.
- Never drive on the edge of a ditch or steep slope.
- Whatever your travelling speed, you must reduce the speed as much as possible before stopping.
- 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.

INSTRUCTIONS

- When moving the platform a long distance, always travel with the arms folded or the scissors in the low position.
- Engage the appropriate gear (see chapter 2 - DESCRIPTION, CHECKING AND CONTROL INSTRUMENTS pages).

G - STOPPING THE PLATFORM

SAFETY NOTICE

- Never leave the ignition key in the platform during the operator's absence.
- Make sure that the platform is not stopped in any position that will interfere with the traffic flow and in particular the platform should not be at less than one metre from a railroad track.
- In the event of prolonged parking on a site, protect the platform from bad weather, particularly from frost (check the level of antifreeze), and close and lock all the platform accesses (cowls, etc.).
- Park the platform on flat ground or on an incline lower than 10%.

INSTRUCTIONS

PLATFORMS WITH I.C. ENGINES

- Before stopping the platform after a long working period, leave the engine idling for a few moments, to allow the coolant liquid and oil to lower the engine and transmission temperature.



Do not forget this precaution, in the event of frequent stops or warm stalling of the engine, otherwise the temperature of certain parts will rise significantly due to the stopping of the cooling system, with the risk of severely damaging such parts.

- Stop the engine with the ignition switch.
- Remove the ignition key.
- Check that all the accesses on the platform are closed and locked (cowls, etc.).

ELECTRIC PLATFORMS

- Remove the ground/platform control selection key.
- Check that all the accesses on the platform are closed and locked (cowls...).
- Set the battery cut-off to the OFF position (ELECTRIC PLATFORM). Hydraulic oil level.

INSTRUCTIONS FOR WELDING AND BLOW TORCH WORK ON AN EXTERNAL STRUCTURE



Ensure that there are no hydraulic or electrolyte leaks on the platform.



When welding, work in the opposite direction from the control console to avoid sparks damaging it.

- Any welding and cutting (blow torch) work from the basket on a building's metallic structures requires the following precautions to be taken:

A - WITH AN ELECTRICAL WELDING SET

- It is essential that the machine has a discharge braid connecting the chassis of the platform to the ground.
- The external structure to be welded must, without fail, be grounded. If the above conditions are observed, the platform can, in this case, be in contact with the structure or the elements to be welded without damaging the electronic components.
- The power supply to the welding equipment must be via a grounded socket, including the extension lead if required.
- In all cases, make sure that there are no electric arcs in the basket or on the platform (contact between the rod or torch and ground connector of the welding equipment). For this the ground connector of the welding must never be placed on the platform's basket; it must only be placed as close as possible to the part to be welded.
- Switch off the welding equipment before disconnecting the ground clamp from the element or elements to be welded.

B - WITH A BLOW TORCH

- Attach the blow torch's bottles to the basket's handrails.
- Sparks and clippings must not be directed towards the batteries.
- Do not set the blow torch down on the lip of the basket while it is still operating or point it towards the control console or its power cables.

PLATFORM MAINTENANCE INSTRUCTIONS

GENERAL INSTRUCTIONS

- Make sure the area is adequately ventilated before starting up the platform.
- 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 engine before conducting any work on the platform, remove the ignition key and disconnect the "Minus" battery terminal.
- Set the battery cut-off to the OFF position (ELECTRIC PLATFORM).
- Read the operator's manual carefully.
- Carry out all repairs immediately, even if the repairs concerned are minor.
- Repair all leaks immediately, even if the leak concerned is minor.
- Ensure that consumables and used parts are disposed of in a safe and ecological manner.
- Be careful of the risk of burning and splashing (exhaust, radiator, engine, etc.).

MAINTENANCE

- Perform the periodic service (see 3 - MAINTENANCE) to keep your platform in good working condition. Failure to perform the periodic service may annul 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 platform 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 platform items replaced shall also be indicated.

LUBRICANT AND FUEL LEVELS

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

BATTERY ELECTROLYTE LEVEL

- Check the level of the battery or batteries.



When doing this, ensure you take all the safety precautions (see 3 - MAINTENANCE).

HYDRAULICS

- Make any repairs and fix any leaks, including minor ones, immediately.
- Do not attempt to loosen unions, hoses or any hydraulic component while the circuit is under pressure.



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



Ensure that all consumables and replacement parts are disposed of safely, in an environmentally friendly manner.



The HYDRAULIC ACCUMULATORS that may be fitted on your platform are pressurised units. Removing these accumulators and their pipework is a dangerous operation and must only be performed by approved personnel (consult your dealer).

ELECTRICITY

- Do not drop metallic items on the battery (between the "Plus" and "Minus" terminals).
- Disconnect the battery or batteries before working on the electrical circuit.
- The electrical box must only be opened by authorised personnel.

WELDING ON THE ACCESS PLATFORM

- Disconnect the battery or batteries before welding on the platform.
- When carrying out electric welding work on the platform, connect the negative cable from the welding equipment directly to the part being welded, so as to avoid high tension current passing through the alternator or the slewing ring.
- If the platform is equipped with an electronic control unit, disconnect this before starting to weld, to avoid the risk of causing irreparable damage to electronic components.



Welding operations for the purposes of maintenance or repairs must only be carried out by persons authorised by MANITOU.

WASHING THE PLATFORM

- Clean the platform or at least the area concerned before any intervention.
- Remember to close and lock all accesses to the platform (cowls, etc.).
- When cleaning with a pressure washer, avoid the articulation joints, and the electrical components and connections.
- If necessary, protect components likely to be damaged, and in particular the electrical components (variable speed drive, charger) and connections and the injection pump from penetration by water, steam or cleaning products.
- Dry the electrical components.
- Clean the platform of any fuel, oil or grease trace.
- Grease the shafts.

FOR ANY OPERATIONS OTHER THAN REGULAR MAINTENANCE OPERATIONS,
CONSULT YOUR DEALER

IF THE PLATFORM IS NOT TO BE USED FOR A LONG TIME

INTRODUCTION

The following recommendations are intended to prevent the platform 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 platform is not to be used for a long time and for starting it up again afterwards must be performed by your dealership.

PREPARING THE PLATFORM

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

PROTECTING THE ENGINE

- Fill the tank with fuel (see 3 - MAINTENANCE).
- Empty and replace the coolant (see 3 - MAINTENANCE).
- Leave the engine running at idling speed for a few minutes, then switch off.
- Replace the engine oil and oil filter (see 3 - MAINTENANCE).
- Add the protective product for engine oil.
- Run the engine for a short time so that the oil and coolant 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 one to two seconds with the piston at bottom dead centre.
- Turn the crankshaft once slowly and refit the injectors (see 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 port with waterproof adhesive tape.
- Remove the exhaust pipe and spray the protective product into the exhaust manifold.
- Refit the exhaust pipe and block the outlet of the muffler with waterproof adhesive tape.

NOTE: The spray time is noted on the product packaging.

- Open the filler plug, spray the protective product around the rocker 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.

BATTERY CHARGE

- In the case of electric platforms, in order to preserve the batteries' life and their capacity, check them periodically and keep the charge level constant (see 3 - MAINTENANCE).

PROTECTING THE PLATFORM

- Protect cylinder rods which are not be retracted from corrosion.
 - Wrap the tyres.
- NOTE: If the platform is to be stored outdoors, cover it with a waterproof tarpaulin.

BRINGING THE PLATFORM BACK INTO SERVICE

- Remove the waterproof adhesive tape from all the orifices.
- Refit the intake hose.
- Reconnect the engine cut-off solenoid.
- Refit and reconnect the battery.
- Remove the protection from the cylinder rods.
- Perform the daily service (see 3 - MAINTENANCE).
- Empty and replace the fuel and replace the fuel filter (see 3 - MAINTENANCE).
- Refit the drive belts and adjust the tension (see 3 - MAINTENANCE).
- Turn the engine over with the starter to allow the oil pressure to rise.
- Lubricate the platform completely (see 3 - MAINTENANCE: SERVICING SCHEDULE).



Make sure the area is adequately ventilated before starting up the platform.

- Start up the platform, following the safety instructions and regulations (see DRIVING INSTRUCTIONS).
- Carry out all the lifting system's hydraulic movements right up to the limit switches for each cylinder.

DISPOSING OF THE PLATFORM



Consult your dealer before disposing of your platform.

RECYCLING OF MATERIALS

METALS

- Metals are 100% recoverable and recyclable.

PLASTICS

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

RUBBER

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

GLASS

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

ENVIRONMENTAL PROTECTION

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

WORN OR DAMAGED PARTS

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

USED OIL

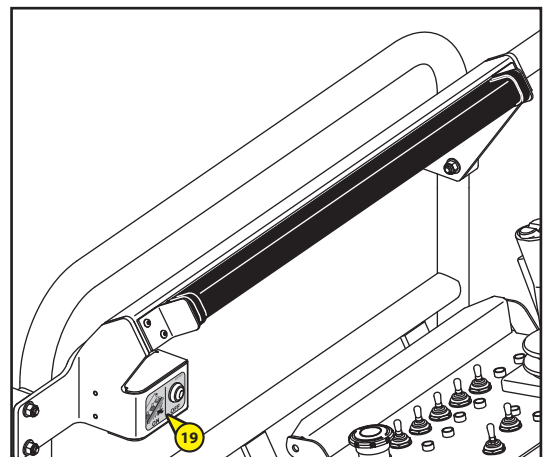
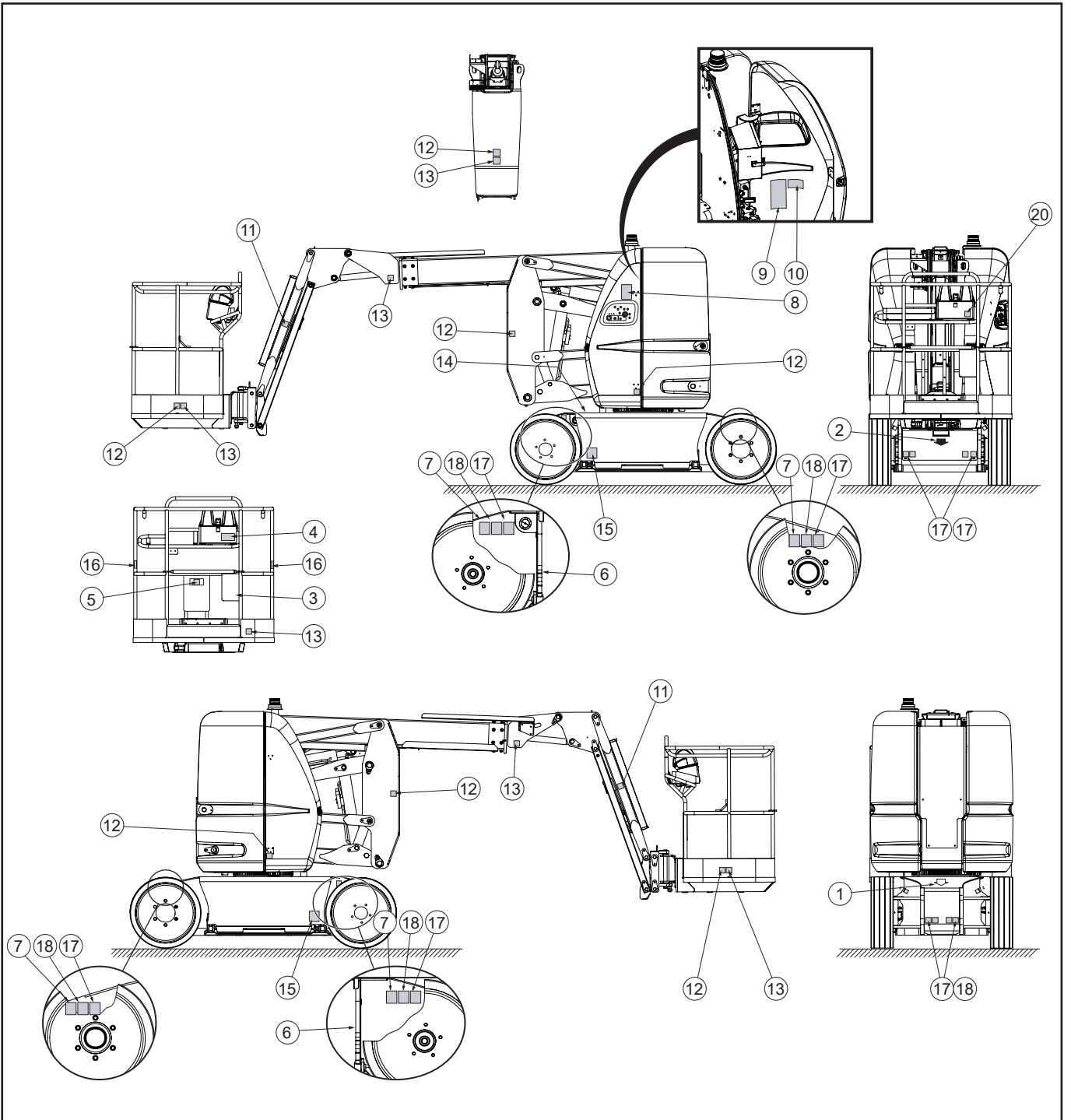
- The MANITOU network organises the collection and processing of used oil products.
- By handing over your waste oil to MANITOU, the risk of pollution is limited.

USED BATTERIES

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

NOTE: MANITOU aims to manufacture platforms that provide the best performance and limit polluting emissions.

SAFETY DECALS



DESCRIPTION

1 - WHITE ARROW	Part no. 498 327
2 - BLACK ARROW	Part no. 498 326
3 - BASKET INSTRUCTIONS / LOAD CAPACITY	Part no. 677 714
4 - WASHING RECOMMENDATIONS	Part no. 313 672
5 - LOCATION OF ACCESS PLATFORM KEY	Part no. 598 897
6 - BATTERY REPLACEMENT	Part no. 677 856
7 - LOAD ON WHEELS	Part no. 516 913
8 - SAFETY INSTRUCTIONS	Part no. 685 608
9 - MANUAL CONTROL PROCEDURE	Part no. 833 972
10 - ROTARY JIB MANUAL CONTROL PROCEDURE	Part no. 830 938
11 - DANGER! CUTTING	Part no. 676 988
12 - DANGER! CRUSHING	Part no. 679 452
13 - DANGER! KEEP AWAY	Part no. 679 450
14 - BATTERY SAFETY	Part no. 314 569
15 - ANTI-TOPPLING DANGER! CRUSHING OF FEET	Part no. 598 980
16 - SAFETY HOOK-UP	Part no. 834 438
17 - TOWING HITCH	Part no. 833 041
18 - LIFTING HOOK	Part no. 833 291
19 - RESET BUTTON LOCATION (SAFEMANSYSTEM OPTION)	Part no. 525 13 971
20 - ARNING risk of misuse (For UK only)	Part no. 527 67 186

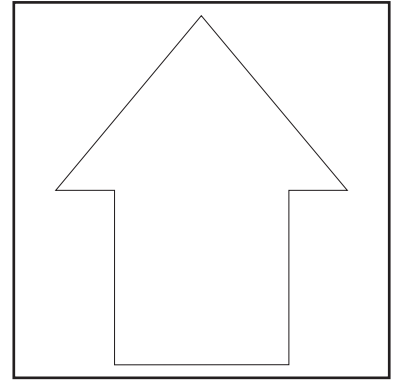
MEANING

1 - WHITE ARROW

This indicates the direction of travel when moving forward.



When the turntable, structure, arm and basket assembly rotates by 180° with respect to the frame, the travel controls are reversed. Identify the direction of movement by looking at the arrows on the frame and those on the basket control panel.

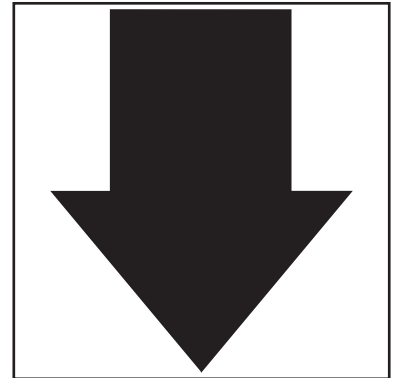


2 - BLACK ARROW

This indicates the direction of travel when reversing.



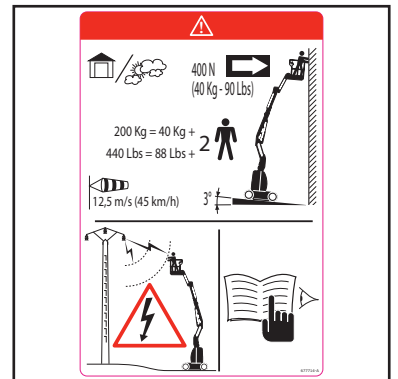
Same as the white arrow



3 - BASKET INSTRUCTIONS AND LOAD CAPACITY

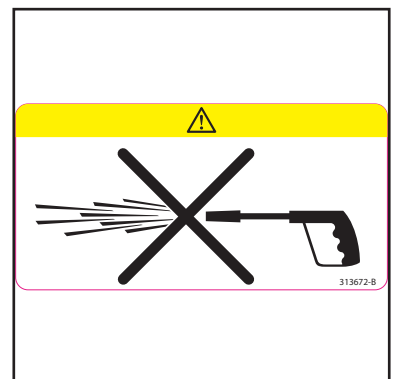
This describes several points:

- the platform's capacity for indoor and outdoor use.
- the risk of electric shock.
- an invitation to read the instructions for more detailed information on the safety instructions.



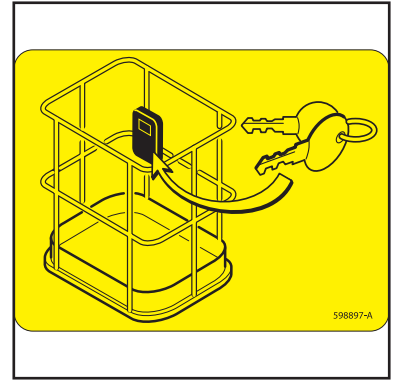
4 - WASHING RECOMMENDATIONS

It is strictly forbidden to play a high-pressure jet over the control knobs or any of the electrical components.



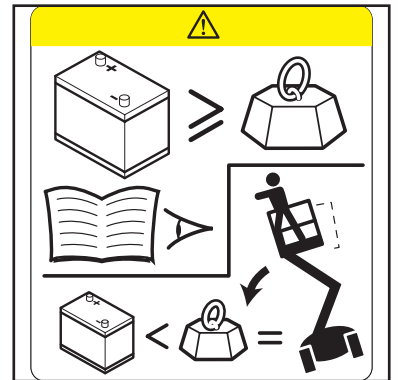
5 - LOCATION OF ACCESS PLATFORM KEY

The spare keys for the access platform (ignition key, control selector key, key for locking casings...) are stored in the place provided for the purpose.



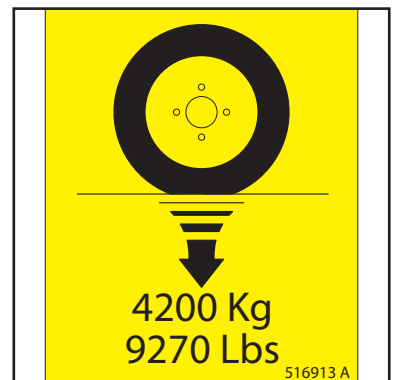
6 - BATTERY REPLACEMENT

Indicates that the weight of the new batteries must be the same or greater than that of the batteries you are replacing. If this rule is not respected, the stability of the platform will be compromised.



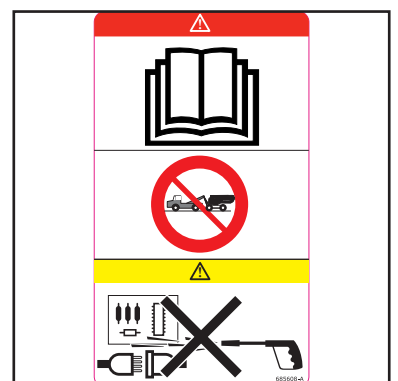
7 - LOAD ON WHEELS

This indicates the maximum load on one wheel and the load that the wheel will exert on the ground (see 2 - DESCRIPTION: SPECIFICATIONS to find out the ground bearing pressure).



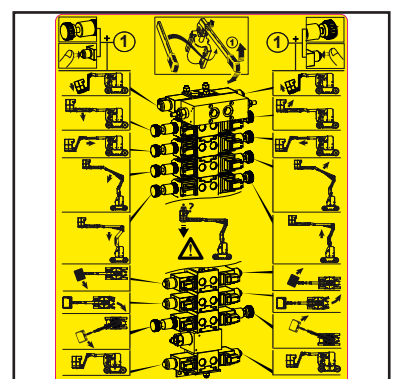
8 - SAFETY INSTRUCTIONS

This sticker states that the safety and operating instructions must be read before starting the platform, that it is strictly prohibited to direct a high-pressure jet onto the control buttons and electrical components, and that the machine must not be towed in the event of breakdown.



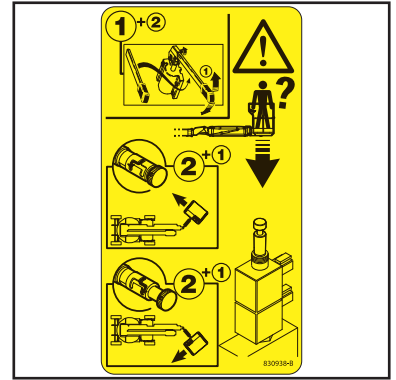
9 - MANUAL CONTROL PROCEDURE

This describes the procedure for performing movements with the backup pump and the manual controls, if an accident or breakdown occurs making the electrical control boxes unusable. (see description in CHAPTER 2).



10 - ROTARY JIB MANUAL CONTROL PROCEDURE

This describes the procedure for turning the basket jib assembly with the emergency pump and the manual controls, if an accident or breakdown occurs (only on 120AETJC 3D).



11 - FINGER CRUSHING HAZARD

It is strictly forbidden to place your fingers or any other part of the body in the parts of the lifting system (arm, jib, etc.); risk of cuts and crushing.



12 - DANGER, RISK OF CRUSHING

It is strictly prohibited to stand in this area when the platform is moving (translation, rotation, etc.). The components where the stickers are affixed could collide with you; risk of crushing.



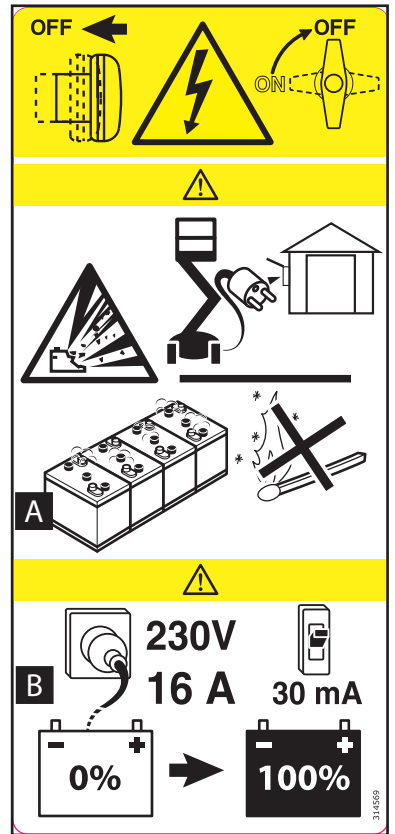
13 - DANGER, KEEP AWAY

It is strictly forbidden to walk under or park under the structure (arms, scissors, jib, basket, etc.) and in the access platform's operating area.



14 A - BATTERY CUT-OFF

This indicates the position of the battery cut-off and its effect:
OFF Position: no current flows.
ON Position: current flows.



14 B - BATTERY CHARGING DANGER

This describes three points:
- The risk of explosion when the batteries are being charged.
- The batteries must be charged out-of-doors or in a well-ventilated area.
- The risk of explosion during charging due to a spark, naked flame or short-circuit.

 Do not smoke near to the access platform while the batteries are being charged

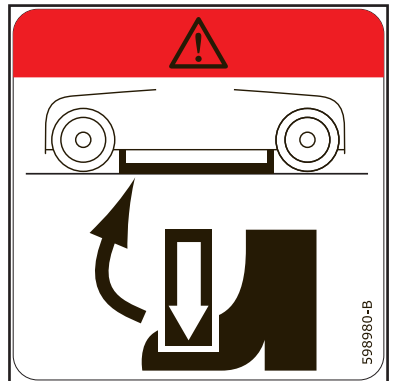
14 C - 230 V 16 A SOCKET

This informs you that, in order to charge the batteries, you must connect the charger to a socket supplying a voltage of 230 Volts with a current of 16 Amps.

 The socket must be protected by a differential circuit breaker providing 30 mA protection.

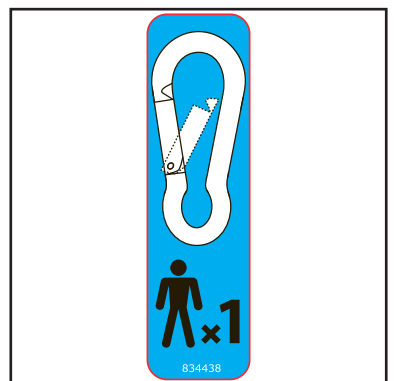
15 - ANTI-TOPPLING - DANGER! CRUSHING OF FEET

It is strictly prohibited to stand in this area when the platform is moving (structure elevation, etc.). The components where the stickers are affixed could collide with you; risk of crushing.



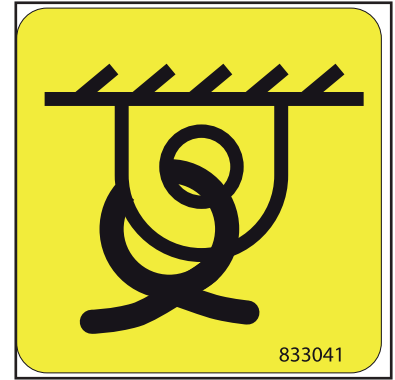
16 - SAFETY HOOK-UP

This sticker indicates the place where the safety harness must be attached and the number of people per attachment point.



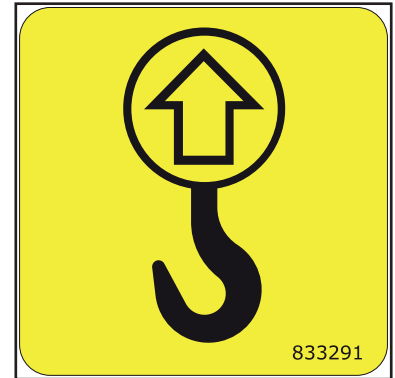
17 - TOWING HITCH

This sticker indicates the anchoring points for tying down the platform on the flatbed of a truck.



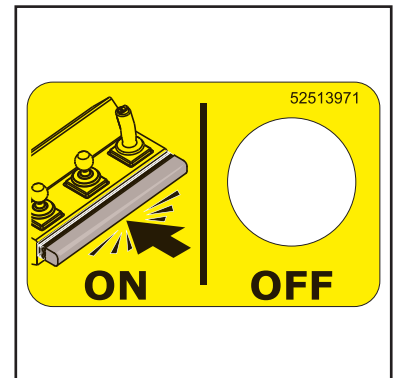
18 - LIFTING HOOK

This sticker indicates the location of the attachment points for slinging the platform.



19 - RESET BUTTON LOCATION (SAFEMANSYSTEM OPTION)

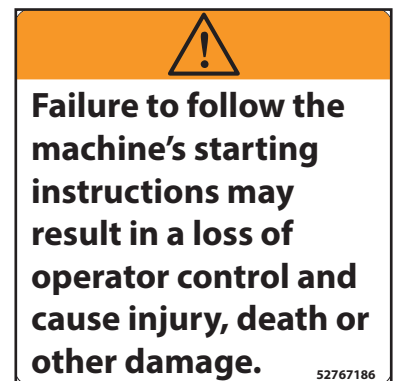
This sticker indicates the location of the reset button of the SafeManSystem option. See the "DESCRIPTION AND USE OF THE OPTIONS" chapter on page 2-39.



20 - WARNING RISK OF MISUSE (FOR UK ONLY)

Indicates:

" Failure to follow the machine's starting instructions may result in a loss of operator control and cause injury, death or other damage."



2 - DESCRIPTION

<i>CE DECLARATION OF CONFORMITY</i>	<i>2-4</i>
<i>UKCA DECLARATION OF CONFORMITY</i>	<i>2-8</i>
<i>ELECTRICAL CHARACTERISTICS 120 AETJC</i>	<i>2-9</i>
<i>GENERAL CHARACTERISTICS 120 AETJC</i>	<i>2-10</i>
<i>DIMENSIONS 120 AETJC</i>	<i>2-14</i>
<i>PLATFORM OPERATION</i>	<i>2-16</i>
<i>BASE INSTRUMENTS AND CONTROLS</i>	<i>2-18</i>
<i>BASKET INSTRUMENTS AND CONTROLS</i>	<i>2-20</i>
<i>GROUND-BASED EMERGENCY AND MAINTENANCE STATION</i>	<i>2-22</i>
<i>BASKET CONTROL CONSOLE</i>	<i>2-29</i>
<i>USE OF THE PLATFORM</i>	<i>2-35</i>
<i>RESCUE PROCEDURE</i>	<i>2-38</i>
<i>DESCRIPTION AND USE OF THE OPTIONS</i>	<i>2-41</i>

EC DECLARATION OF CONFORMITY

This document is a specimen of the "EC" declaration of conformity mirroring the content of the original declaration provided with the machine.

This specimen and the original document may contain data fields which does not apply to the machine. These fields are left blank if not relevant.

See the original certificates for all relevant values for your machine.

FIRST VERSION — 02/2017

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

2) Constructeur, *Manufacturer* : MANITOU BF

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

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

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

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

120 AETJC 2

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

2006/42/CE

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

8) Numéro d'attestation, *Certificate number* : 0526 5131 XXX XX XX XXXX

9) Organisme notifié, *Notified body* : CETIM

52 AVENUE FELIX LOUAT
BP 80067 - 60304 SENLIS CEDEX

2000/14/CE + 2005/88/CE

10) Procédure appliquée, *Applied procedure* :

9) Organisme notifié, *Notified body* :

SNCH
11 ROUTE DU LUXEMBOURG
5201 SANDWEILER - LUXEMBOURG

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

12) Mesuré, *Measured* : dB (A)

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

2014/108/CE jusqu'au 19/04/2016 et 2014/30/UE à partir du 20/04/2016

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

EN 12895

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

16) Fait à, *Done at* :

17) Date, *Date* :

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

19) Fonction, *Function* :

20) Société, *Company* :

21) Signature, *Signature* :

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

- 2) Constructeur, *Manufacturer* : MANITOU BF
- 3) Adresse, *Address* : 430, RUE DE L'AUBINIÈRE - B.P 10249
44158 - ANCENIS - CEDEX - FRANCE
- 4) Titulaire du dossier technique, *Holder of the technical file* : MANITOU BF
- 3) Adresse, *Address* : 430, RUE DE L'AUBINIÈRE - B.P 10249
44158 - ANCENIS - CEDEX - FRANCE
- 5) Le constructeur déclare que la machine décrite ci-après, *The manufacturer declares that the machine described below* :

120 AETJC 2

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

2006/42/CE

- 7) Pour les machines annexe IV, *For annex IV machines* :
- 8) Numéro d'attestation, *Certificate number* : 0526 5131 XXX XX XX XXXX
- 9) Organisme notifié, *Notified body* : BUREAU VERITAS INTERNATIONAL
61-71- BD DU CHATEAU
92200 NEUILLY-SUR-SEINE

2000/14/CE + 2005/88/CE

- 10) Procédure appliquée, *Applied procedure* :
- 9) Organisme notifié, *Notified body* : SNCH
11 ROUTE DU LUXEMBOURG
5201 SANDWEILER - LUXEMBOURG

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

- 12) Mesuré, *Measured* : dB (A)
- 13) Garanti, *Guaranteed* : dB (A)

2014/30/UE

- 14) Normes harmonisées utilisées, *Harmonised standards used* : EN 12895
- 15) Normes ou dispositions techniques utilisées, *Standards or technical provisions used* :

- 16) Fait à, *Done at* :
- 17) Date, *Date* :
- 18) Nom du signataire, *Name of signatory* :
- 19) Fonction, *Function* :
- 20) Société, *Company* :
- 21) Signature, *Signature* :

THIRD VERSION

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

2) Constructeur, *Manufacturer* : MANITOU BF

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

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

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

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

Mobile elevating work platform

120 AETJ C

120 AETJ C 3D

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

2006/42/CE

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

8) Numéro d'attestation, *Certificate number* : 2681/5131/XXX/XX/XX/XXXX

9) Organisme notifié, *Notified body* : BUREAU VERITAS INTERNATIONAL
8 COURS DU TRIANGLE
92800 PUTEAUX - FRANCE

10) Procédure appliquée, *Applied procedure* :

9) Organisme notifié, *Notified body* :

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

12) Mesuré, *Measured* : dB (A)

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

2014/30/UE

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

15) Normes ou dispositions techniques utilisées, *Standards or technical provisions used* :
EN 12895 ; EN ISO 3744

16) Fait à, *Done at* :

17) Date, *Date* :

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

19) Fonction, *Function* :

20) Société, *Company* :

21) Signature, *Signature* :

UKCA DECLARATION OF CONFORMITY

This document is a specimen of the "UKCA" declaration of conformity mirroring the content of the original declaration provided with the machine.

This specimen and the original document may contain data fields which does not apply to the machine. These fields are left blank if not relevant.

See the original certificates for all relevant values for your machine.

UKCA DECLARATION OF CONFORMITY

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

The manufacturer declares that the below described machinery:

Mobile elevating work platform

**120 AETJ C
120 AETJ C 3D**

Complies with the following legislation:

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

The machine is designed for the lifting of persons:

Applied procedure: Type examination by notified/approved body
Certificate number: 2681/5131/XXX/XX/XX/XXXX
Dated:
Approved body: **BUREAU VERITAS INTERNATIONAL
8 COURS DU TRIANGLE
92800 PUTEAUX - FRANCE**

Applied procedure:
Approved body:

Sound power level:
Measured: dB (A)
Guaranteed: dB (A)

Electromagnetic Compatibility Regulations 2016, as amended

The following designated standards have been addressed:

The following standards or technical guidance have been addressed:

EN 12895 ; EN ISO 3744

At: Date:
Name of signatory:
Position:
Company:
Signature:

ELECTRIC PUMP

- Power supply	48V
- Power	3.7 kW
- Cubic capacity	8 cm ³ (0.97664 cu0in.)
- Pressure	200 bar

WHEEL ELECTRIC MOTORS

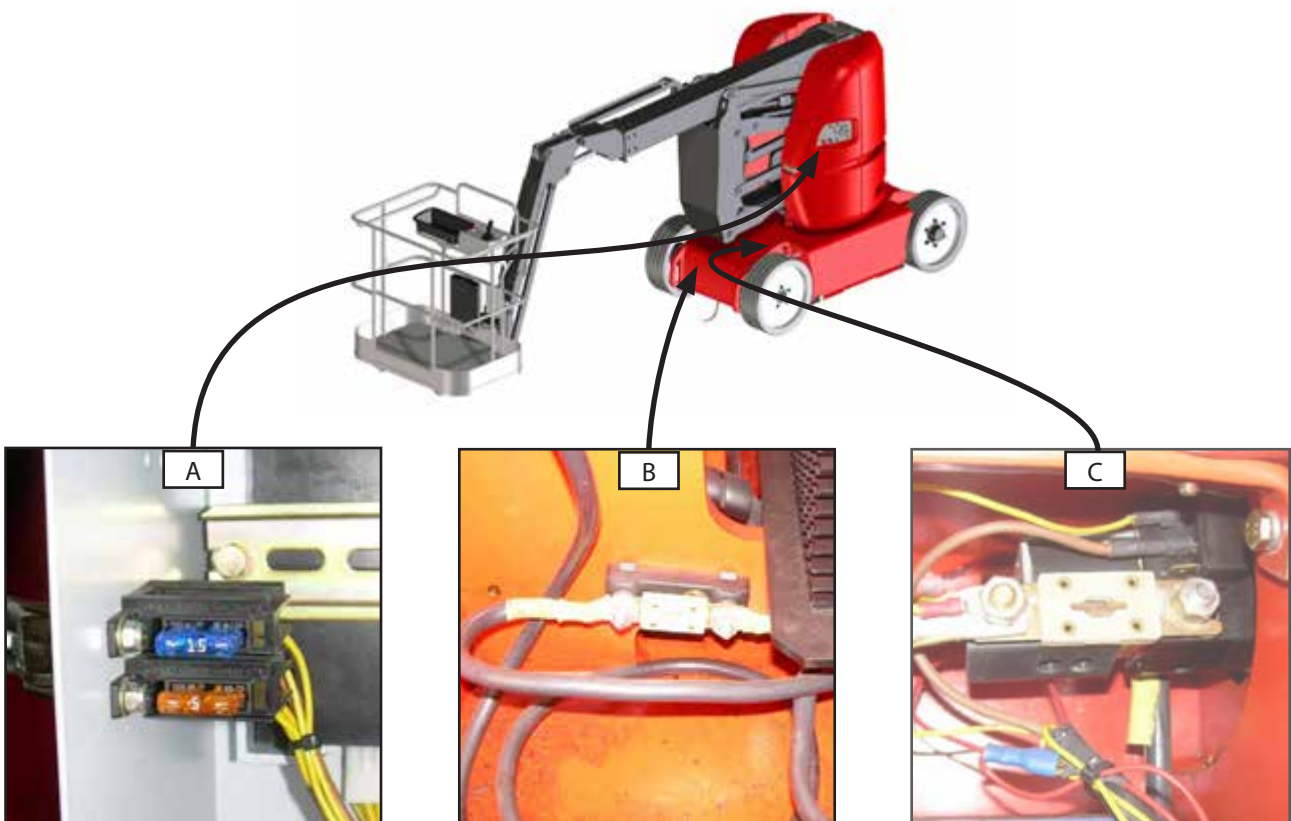
- Type	2 x 4.5 kW
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ELECTRICAL CIRCUIT

- Battery	48 V - 240 Ah
- Charger	48 V - 30 Ah

CARD FUSES

- Electric plate (Emergency station and ground control box)	5 A (1 Fig. A) and 15 A (2 Fig. A)
- Electric pump	100 A (Fig. B)
- Power	325 A (Fig. C)



GENERAL CHARACTERISTICS 120 AETJC

LOAD SPECIFICATIONS		120 AETJC	120 AETJC 3D	TOL ±
Platform				
Capacity for indoor use (Wind 0 Km/h)	kg	200	200	-
Capacity for outdoor use (Wind 45 Km/h)	kg	200	200	-
Number of people in the basket in indoor use		2	2	-
Number of people in the basket in outdoor use		2	2	-
Unladen platform weight	kg	6660	6660	20
Authorised maximum tilt	° - %	3 - 5.2	3 - 5.2	0.1
Gradeability (80 kg)	%	25	25	2
Gradeability (200 kg)	%	25	25	2
Working speed	Km/h	0.6	0.6	0.1
Transport speed (1)	Km/h	6.0	6.0	0.2
Transport speed (2)	Km/h	-	-	0.2
Transport speed (3)	Km/h	-	-	0.2
Wheels				
Front wheel loaded radius (Transport)	mm	295	295	2
Rear wheel loaded radius (Transport)	mm	295	295	2
Load on front wheel (transport position)	kg	1655	1655	5
Load on rear wheel (transport position)	kg	1620	1620	5
Maximum wheel load	kg	4200	4200	5
Bearing surface on ground (hard/soft)	cm ²	212	212	3
Ground bearing pressure (hard / loose)	daN/cm ²	20 / -	20 / -	-
Noise level LwA	dB	-	-	-

HYDRAULIC MOVEMENT (basket control signal)		120 AETJC	120 AETJC 3D	TOL ±
Arm movement 1/2				
Unladen / laden lifting	s	17 / 17	17 / 17	1
Unladen / laden lowering	s	25 / 25	25 / 25	1
Arm movement 3 (telescope extended)				
Unladen / laden lifting	s	26 / 28	26 / 28	1
Unladen / laden lowering	s	24 / 24	24 / 24	1
Telescope movement				
Extended unladen / laden	s	15 / 15	15 / 15	1
Retracted unladen / laden	s	13 / 13	13 / 13	1
Jib movement				
Unladen / laden lifting	s	17 / 19	17 / 19	1
Unladen / laden lowering	s	17 / 17	17 / 17	1
Turntable rotation movement (Telescope extended)				
Rotation through 355° (Telescope Extended / Retracted)	s	80 / 68	80 / 68	1
Basket rotation movement				
Rotation through 66° DRT / 59° GCH	s	8	8	1
JIB movement				
Rotation 140° GCH unladen / Load	s	14	14	1
Rotation 140° DRT unladen / Load	s	14	14	1

ENGINE		120 AETJC	120 AETJC 3D	TOL ±
Type		-		-
Fuel		-	-	-
Number of cylinders		-	-	-
Cubic capacity	cm3	-	-	-
Idling speed unladen (Manufacturer)	rpm	-	-	-
Idling speed unladen (Manitou setting)	rpm	-	-	20
Max. unladen speed (Manufacturer)	rpm	-	-	-
Max. unladen speed (Manitou setting)	rpm	-	-	20
Power ISO/TR (at 2,400 rpm)	HP - kW	-	-	-
Max torque (at 1,600 rpm)	Nm	-	-	-
Weight unladen	kg	-	-	5
Air cleaner	µm	-	-	-
Type of cooling		-	-	-
Fan		-	-	-

TRANSMISSION		120 AETJC	120 AETJC 3D	TOL ±
Type		SEPEX Electrical		-
Supplier		ISKRA		-
Capacity (hydraulic transmission)	cm3	-	-	-
Power (Electric transmission)	kW	2 x 4.5	2 x 4.5	-
Pulling force	daNm	-	-	-
Reduction ratio		51.8	51.8	-
Number of steering wheels				
Front / Rear		2 / 0	2 / 0	-
Number of drive wheels				
Front / Rear		0 / 2	0 / 2	-
Front Axle / Wheel				
Differential		NO SLIPPING		-
Tyre		Direct vulcanisation 600 x 190		-
Supplier		SOLIDEAL		-
Inflation / Pressure	bar	- / -	- / -	0.2
Rear Axle / Wheel				
Differential		NO SLIPPING		-
Tyre		Direct vulcanisation 600 x 190		-
Supplier		SOLIDEAL		-
Inflation / Pressure	bar	- / -	- / -	0.2

BRAKE SYSTEM (Parking brake)		120 AETJC	120 AETJC 3D	TOL ±
Type of brake		negative		-
Type of control		hydraulics		-
Braked wheels		2 rear wheels		-
Release (freewheel mode)		screw		-
Braking torque per rear wheel	daNm	378		0.5

VIBRATION LEVEL		120 AETJC	120 AETJC 3D	TOL ±
Average quadratic values for the body	m/s ²	<0.5	<0.5	-

HYDRAULIC CIRCUIT		120 AETJC	120 AETJC 3D	TOL ±
(Main) hydraulic pump				
Type		Gear		-
Cubic capacity	cm ³	8.25	8.25	-
Flow rate at nominal unladen rpm	l/mn	-	-	-
Flow rate at max. unladen rpm	l/mn	15	15	-
Maximum service pressure	bar	200	200	5
(Auxiliary) hydraulic pump				
Type		-		-
Cubic capacity	cm ³	-	-	-
Flow rate at nominal unladen rpm	l/mn	-	-	-
Flow rate at max. unladen rpm	l/mn	-	-	-
Maximum service pressure	bar	-	-	5
Filtration				
Return	µm	90	90	-
Suction	µm	25	25	-
Pressure	µm	-	-	-

ELECTRIC CIRCUIT		120 AETJC	120 AETJC 3D	TOL ±
Battery				
Supplier (Original equipment)		HAWKER		-
Capacity C5	Ah	240	240	-
Capacity C20	Ah	300	300	-
Rated voltage	V	48	48	-
Type		Traction		-
EARL cycle		60	60	-
Charger				
Supplier (Original equipment)		IES		-
Maximum current	Ah	30	30	-
Rated voltage	V	48	48	-
Electric pump				
Power	kW	3.7	3.7	-
Supply voltage	V/DC	48	48	-
Current	A	100	100	5
S2 (temporary operation)	min.	18	18	2
S3 (alternate operation)	%	30	30	2
Alternator				
Type		-	-	-
Current	A	-	-	-
Voltage	V	-	-	-
Starter				
Type		-	-	-
Power	kW	-	-	-
Voltage	V	-	-	-

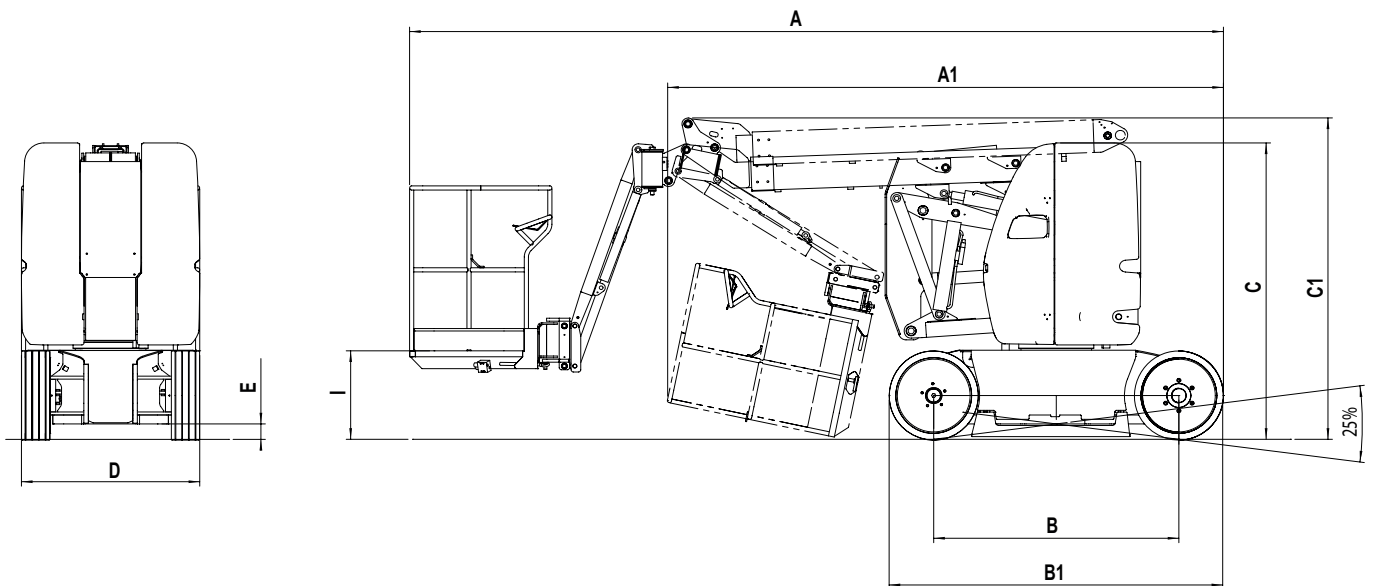
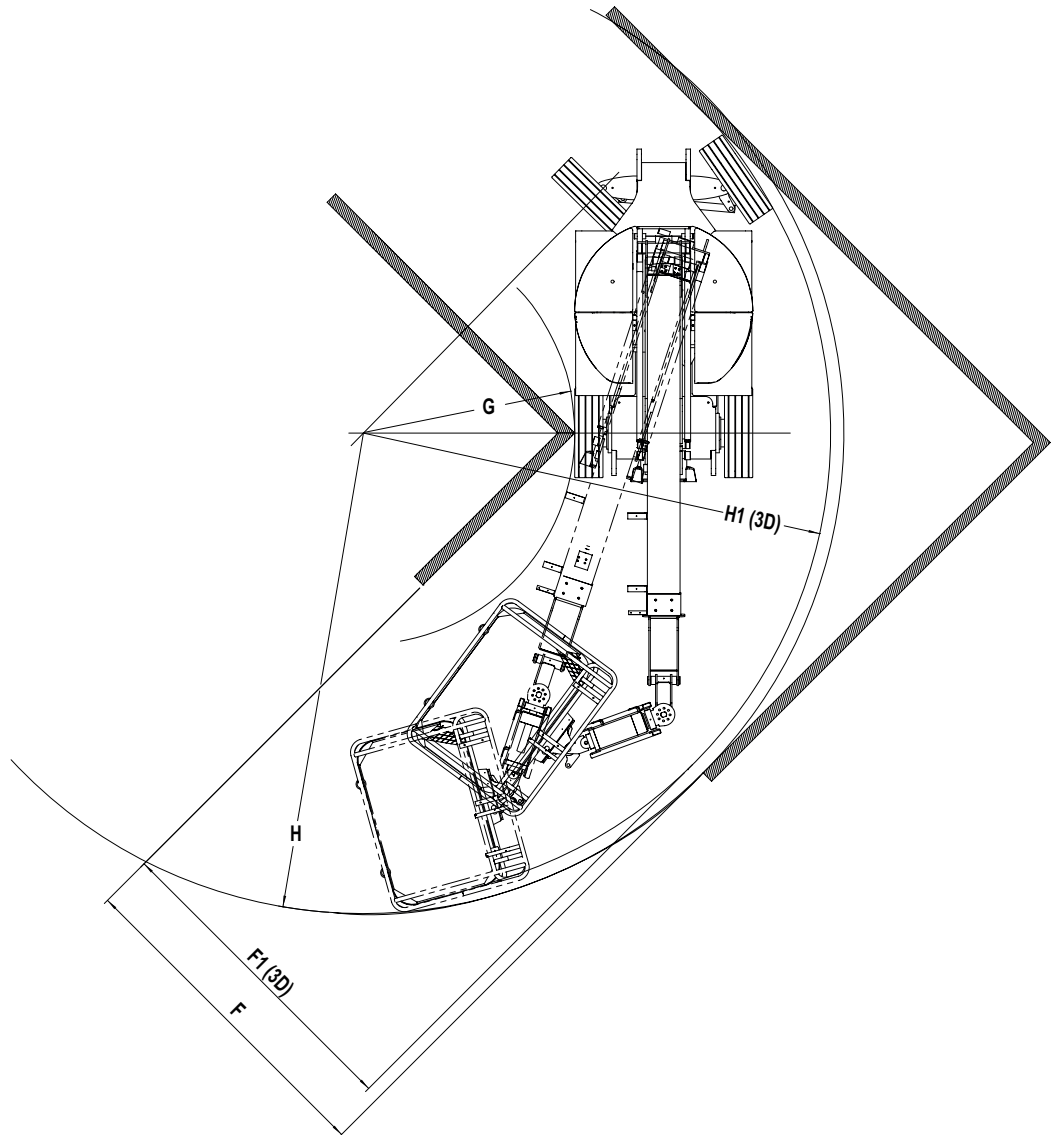
DIMENSIONS		120 AETJC	120 AETJC 3D	TOL ±
Transport position				
Width	mm	1200	1200	1%
Length	mm	5477	5477	2%
Length (truck transport)	mm	3740	3740	2%
Height	mm	1994	1994	2%
Floor height	mm	400	400	1%
Turntable overrun	mm	0	0	2%
Working position				
Working height	mm	11950	11950	1%
Floor height	mm	9950	9950	1%
Max. work outreach	mm	7000	7000	1%
Overhang	mm	6400	6400	1%
Ground clearance under frame 1	mm	100	100	2%
Ground clearance under frame 2	mm	-	-	2%
Max. angle under frame	°/%	14.9 / 26.6	14.9 / 26.6	2%
Inner turning radius (2 wheels/4 wheels)	mm	1550 / -	1550 / -	3%
Outer turning radius (2 wheels/4 wheels)	mm	3340 / -	3340 / -	3%
Basket				
Size	mm	1,200 x 922		1%
Floor area	mm	1,191 x 766		1%

CAPACITY		120 AETJC	120 AETJC 3D	TOL ±
Hydraulic oil tank	l	18	18	1
Fuel tank	l	-	-	2
Engine oil sump	l	-	-	2
Cooling circuit	l	-	-	2

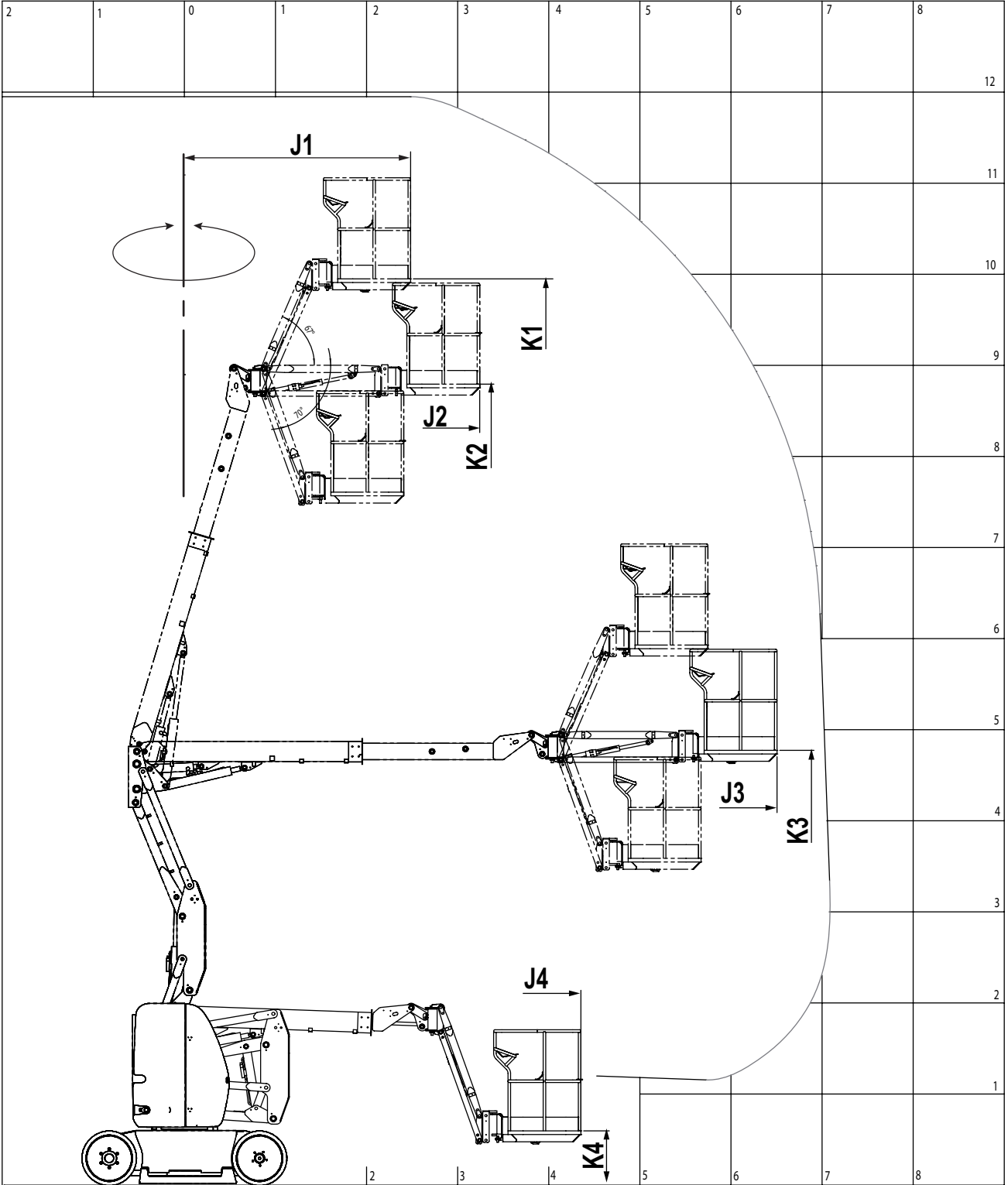
EQUIPMENT		120 AETJC	120 AETJC 3D	TOL ±
Backup pump				
Type		Manual		-
Cubic capacity	cm3	25	25	-
Power	kW	-	-	-
Voltage	V	-	-	-
Current	A	-	-	-
S2	mn	-	-	-
S3	%	-	-	-
All movements beep		Option		-
Flashing lights/Rotating beacon light		Option		-
Hour meter		Standard		-
230 V provision		Standard		-
Proportional diesel level display		-		-
Fuel/battery low level alarm		Standard		-
Dead man pedal		-		-
Basket tool box		Standard		-
User interface (diagnostic aid)		Standard		-
Oscillating axle		-		-
Safe Man System		Option		-

DIMENSIONS 120 AETJC

A	5477
A1	3740
B	1650
B1	2245
C	1994
C1	2171
D	1200
E	104
F	2228
F1	2138
G	1550
H	3340
H1	3250
I	595



J1	2483	K1	9950
J2	3242	K2	8794
J3	6506	K3	4773
J4	4353	K4	595



DESCRIPTION

- This machine is a mobile personnel lifting platform. It consists of an operating platform fixed on the end of a jib, itself fixed on the end of a telescopic arm, the whole mounted on a hinged arm structure.
- MANITOU lifting platforms are intended solely to be used for lifting people, and their tools and supplies (within authorised weight limits: see the SPECIFICATIONS paragraph) to the desired operating height to reach hard-to-reach places above installations and buildings.
- The platform has a basket control station. From this control station, the operator can drive and operate the machine forwards or backwards. The operator can lift or lower all of the arms, extend or retract the telescopic arm or rotate the turntable or the basket to the right or left. The basket, arm and turntable assembly can rotate continuously to the right and to the left. The basket, arm and turntable assembly can rotate a total of 350 degrees, not continuously, to the right and to the left in relation to its retracted position.
- The platform also has a ground emergency and maintenance console from which all the lifting controls can be executed, with the exception of translation. The base controls should only be used in an emergency to return the operator to the ground if he is unable to do so himself.
- The operator must make a daily inspection to ensure that the ground emergency and maintenance control console and then the basket console are operating correctly.



Specifications, safety and rescue procedure stickers are affixed to the machine. The operator must familiarise himself with them and understand their content. To avoid incorrect interpretation of the pictograms, refer to the "SAFETY STICKERS" paragraph in chapter 1 - OPERATING AND SAFETY INSTRUCTIONS.

- The lifting platform's movements are provided by a hydraulic pump actuated by an electric motor, which is supplied by batteries. The hydraulic components are controlled by solenoid valves actuated by buttons and the control joystick.
- The controls on the base and/or basket console, consisting of rocker switches, are either in On or Off mode.
- The base console has a "Dead Man" push button. This must be held down at the same time as a switch is moved. Releasing it stops the movement.
- The lifting platform is a machine with two drive wheels driven by an electric motor on each wheel. The drive wheels have spring brakes with hydraulic release. These brakes are applied automatically when the translation joystick is set to the neutral position.
- The lifting platform can lift to the limit of its capacities (see "SPECIFICATIONS" in this chapter). A load of up to the maximum capacity in the basket will enable you to work in any position, provided the machine is not on an incline greater than 3°.

GENERAL

- The following pages give all the necessary information for use of the machine, including the procedures for using, driving, parking, loading and transporting the platform.

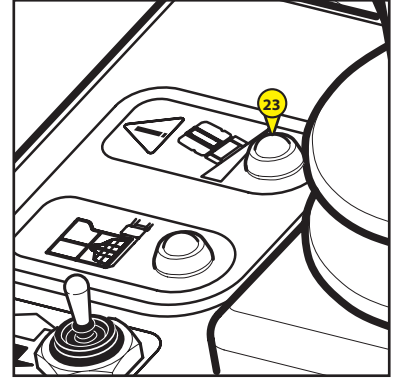
TILT

If the platform reaches the maximum authorised tilt (see SPECIFICATIONS chapter), the LED 23* on the basket console flashes steadily. The vibrating buzzer 33* in the basket also sounds intermittently.

All the "AGGRAVATING" movements of raising the arms and extending the telescope are forbidden as a safety measure.



- To resume control, perform only de-aggravating movements:
- return to a safe position by retracting the telescope and lowering the arms, then reposition the access platform on more level ground in order to perform lifting or extension operations.

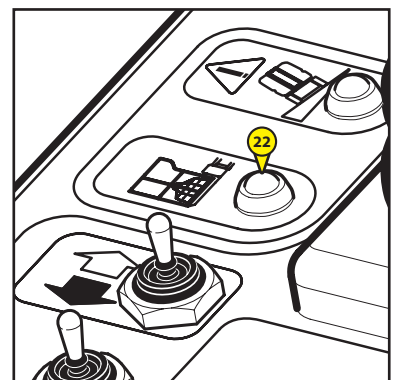
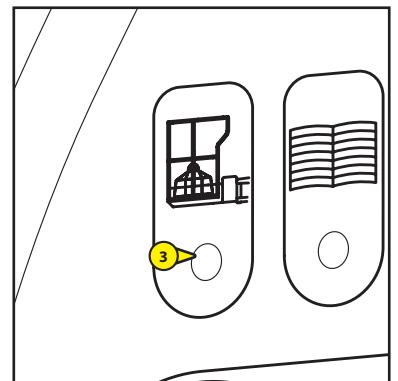
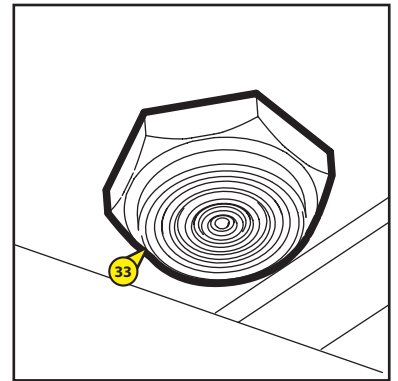


OVERLOAD

When the platform has reached the authorised weight limit (see SPECIFICATIONS chapter) in the basket, the overload LED in the emergency and maintenance console on the ground 3* and on the basket console 22* flashes steadily. The vibrating buzzer 33* in the basket also sounds intermittently. All movements are forbidden as a safety measure.

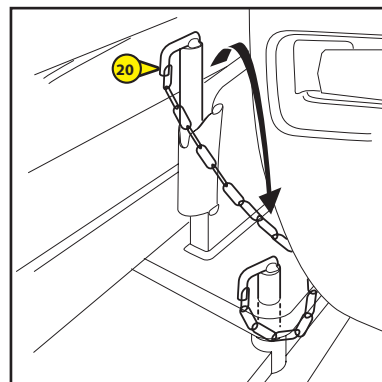
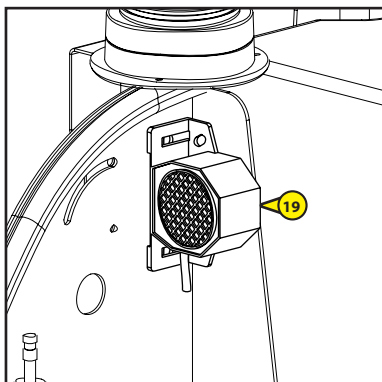
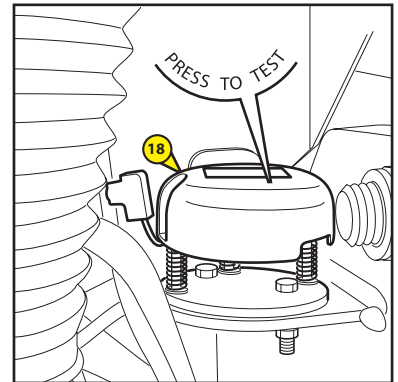
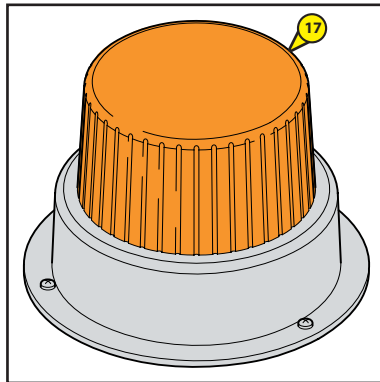
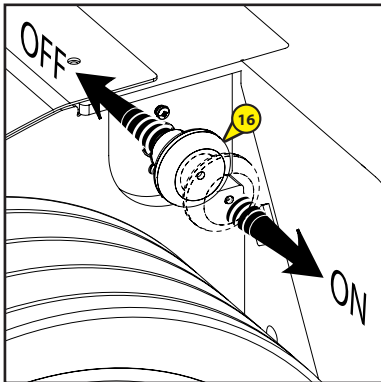
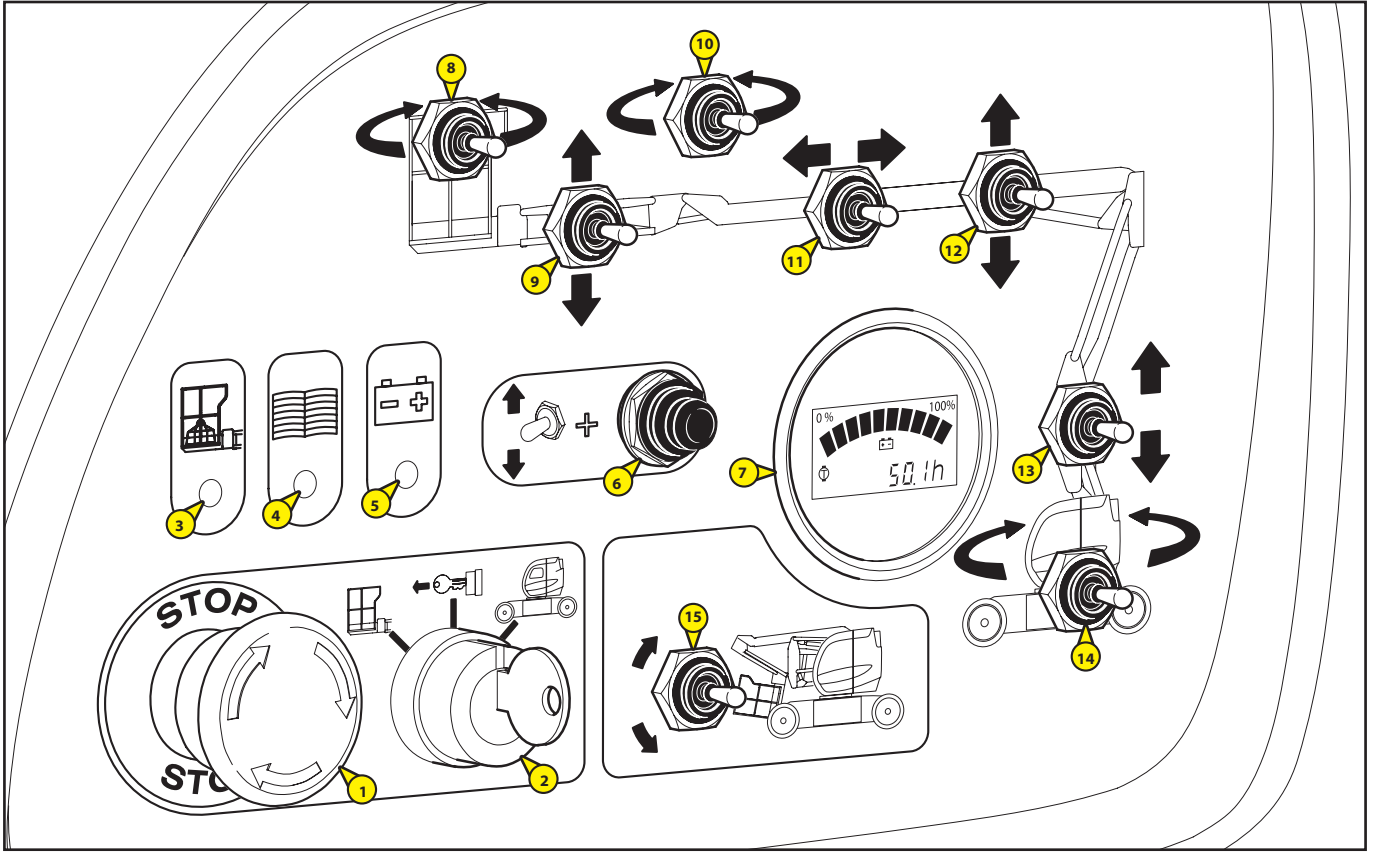


- To recover control:
- relieve the weight on the basket by removing the item(s) causing the overload,
 - OR,
 - ask someone on the ground to bring the basket down under manual control (see "Rescue procedure" in chapter 2 and "Safety stickers" in chapter 1 - "Operating and safety instructions").



*: the above markings also match those used in the descriptions of these components in the following pages.

A - GROUND EMERGENCY AND MAINTENANCE CONSOLE

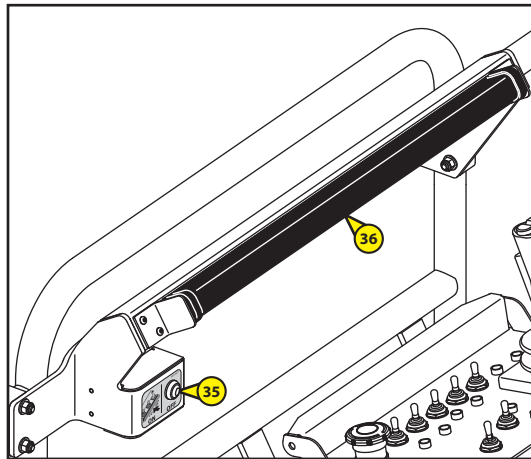
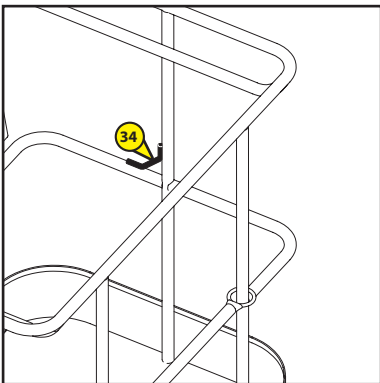
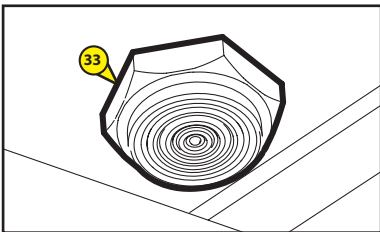
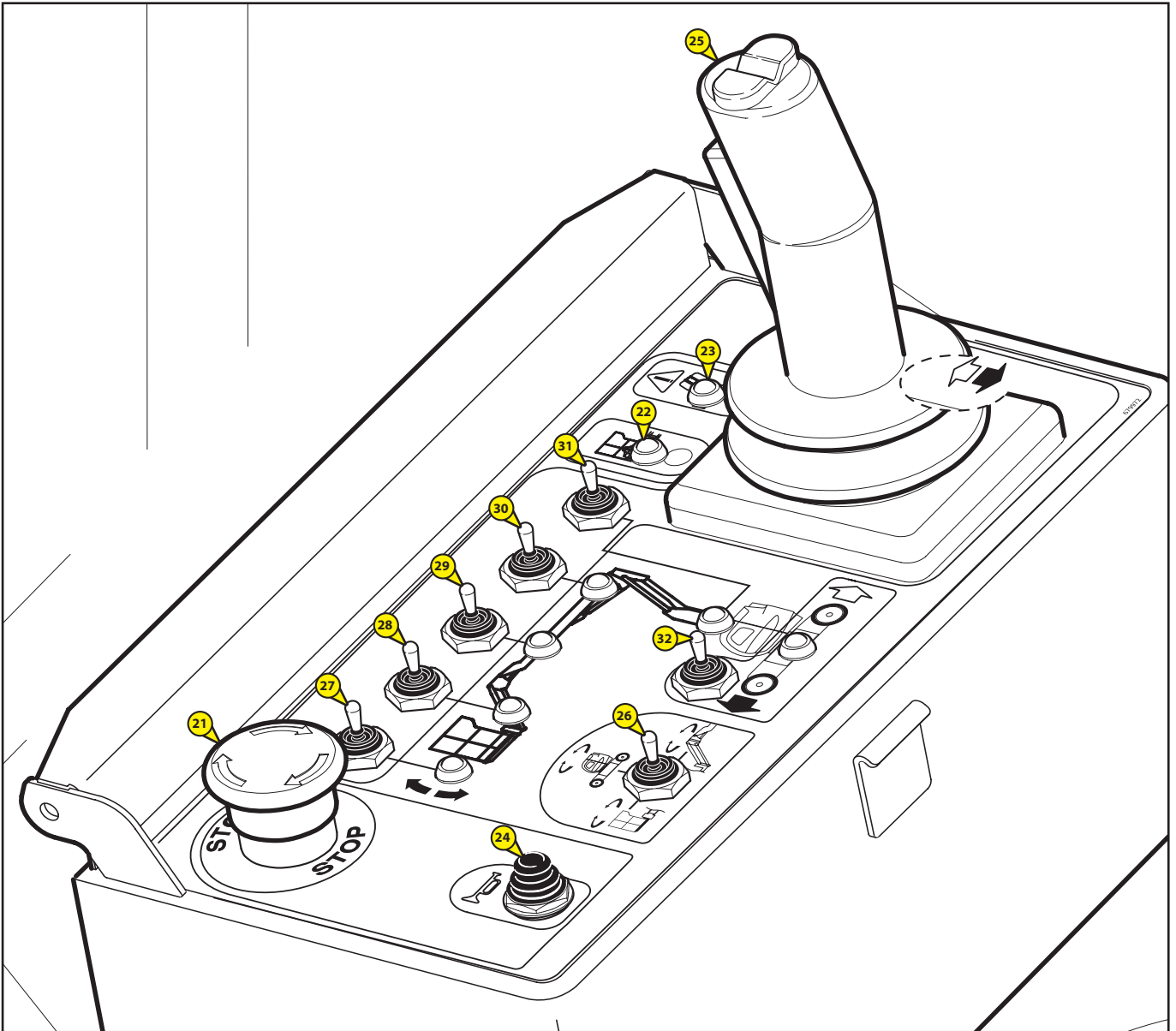


A - GROUND EMERGENCY AND MAINTENANCE CONSOLE

- 1 - EMERGENCY STOP**
- 2 - GROUND / BASKET CONTROL KEY-OPERATED SELECTOR SWITCH**
- 3 - OVERLOAD INDICATOR LIGHT**
- 4 - "MACHINE MAINTENANCE" AND VARIABLE SPEED DRIVE INDICATOR LIGHT**
- 5 - "BATTERY CHARGE LEVEL" INDICATOR LIGHT**
- 6 - "DEAD MAN'S" BUTTON**
- 7 - BATTERY CHARGE INDICATOR AND ACCESS PLATFORM HOUR METER**
- 8 - BASKET ROTATION SWITCH**
- 9 - JIB UP / DOWN SWITCH**
- 10 - ROTARY JIB ROTATION SWITCH (OPTION: 3D)**
- 11 - TELESCOPE EXTENSION / RETRACTION SWITCH**
- 12 - UPPER ARM UP / DOWN SWITCH**
- 13 - LOWER ARM UP / DOWN SWITCH**
- 14 - TURNTABLE ROTATION SWITCH**
- 15 - BASKET TILT SWITCH**
- 16 - BATTERY CUT-OFF**
- 17 - FLASHING LIGHT (OPTION)**
- 18 - TILT SENSOR**
- 19 - HORN**
- 20 - TURNTABLE ROTATION LOCKING SYSTEM**

BASKET INSTRUMENTS AND CONTROLS

B - BASKET COMMAND AND CONTROL STATION



B - BASKET COMMAND AND CONTROL STATION

21 - EMERGENCY STOP

22 - OVERLOAD AND VARIABLE SPEED DRIVE FAULT INDICATOR LIGHT

23 - TILT INDICATOR LIGHT

24 - HORN CONTROL BUTTON

25 - JOYSTICK

26 - ROTATION SELECTION SWITCH

27 - BASKET TILT SWITCH

28 - JIB UP / DOWN SWITCH

29 - TELESCOPE EXTENSION / RETRACTION SWITCH

30 - UPPER ARM UP / DOWN SWITCH

31 - LOWER ARMS UP / DOWN SWITCH

32 - TRANSLATION SWITCH

33 - VIBRATING BUZZER

34 - SAFETY HARNESS ATTACHMENT POINTS

35 - RESET BUTTON (SAFEMANSYSTEM OPTION)

36 - SAFETY EDGE (SAFEMANSYSTEM OPTION)

37 - BLUE FLASHING LIGHT (SAFEMANSYSTEM OPTION)

NOTE: The terms RIGHT-LEFT-FRONT-REAR are understood to be for an operator looking forwards from the basket while it is in transport position.

1 - EMERGENCY STOP

This red mushroom-head circuit breaker enables you to cut off all the machine's movements in the event of an anomaly or danger arising.

- Press the knob to cut off the movements.
- Turn the knob a quarter of a turn to the right to restore the power supply (the switch returns automatically to its initial position).



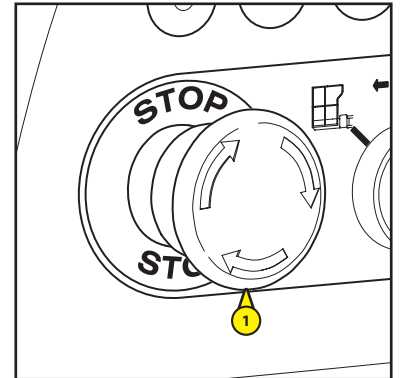
In all cases this control takes priority, even if the movements are executed from the basket control console.



When the Emergency Stop button is activated, the movements can stop very abruptly.



Do not use the emergency stop button to simply stop the access platform, otherwise reset it as quickly as possible as no action can be carried out on the ground emergency station or the basket control station.



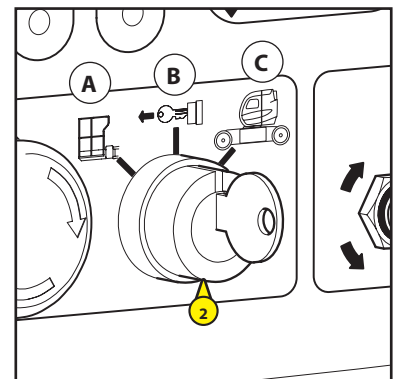
2 - GROUND / BASKET CONTROL KEY-OPERATED SELECTOR SWITCH

- This three-position BASKET / BASE selector switch with centre stop position provides power to the basket control console when it is in the ACCESS PLATFORM position. When the selector switch is in BASE position, the console power supply in the BASKET is interrupted and only the base controls can be used.

A: - The commands are issued from the basket control console.

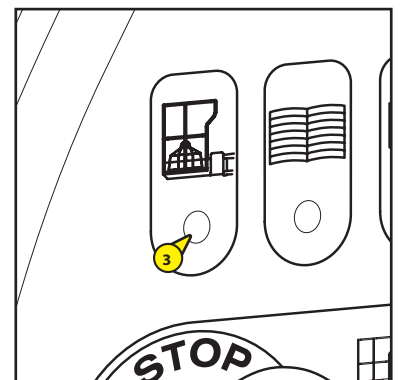
B: - Neutral position, the controls for the access platform are receiving no power (remove the key in this position).

C: - The commands are issued from the ground emergency and maintenance console.



3 - OVERLOAD INDICATOR LIGHT

- If the basket is overloaded, the LED is lit intermittently
- (See: PLATFORM OPERATION - SAFETY).



4 - "MACHINE MAINTENANCE" INDICATOR LIGHT

- THIS INDICATOR LIGHT SERVES TWO FUNCTIONS:

Function 1:

This indicator light is controlled by a timer set to switch on the light every 50 hours (from counting the hydraulic pump's operating hours).
When the indicator light is lit (constantly), this indicates the machine requires servicing (see "SERVICING SCHEDULE" chapter).

NOTE: To deactivate this light, see 7 "Battery charge and hour meter indicators".

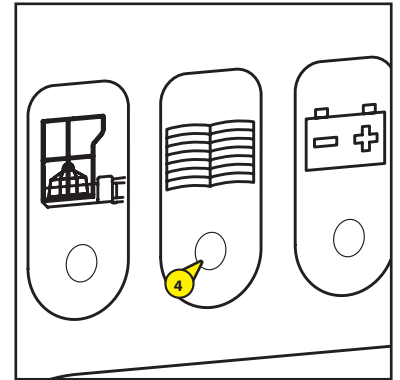
Function 2:

In the event of a breakdown, the number of flashes indicates the type of fault detected by the variable speed drive, as explained below:

- 1 flash: Variable speed drive settings fault
- 2 flashes: Incorrect start sequence
- 3 flashes: Variable speed drive short-circuit
- 4 flashes: Power contactor faults
- 5 flashes: Not used
- 6 flashes: Accelerator, joystick potentiometer or speed sensor wire.
- 7 flashes: Low or high battery voltage or cut-off of the battery charge indicator
- 8 flashes: Excessive variable speed drive temperature
- 9 flashes: Coil contactor short-circuit
- 12 flashes: CAN BUS link fault.



**If the LED flashes continually, immobilise the access platform.
Contact your dealer.**



5 - "BATTERY CHARGE LEVEL" INDICATOR LIGHT

The LED changes colour according to the battery charge level:

Red led:

- The charger is in the initial charging phase.

Yellow led:

- The battery is charged 80%.

Green led:

- The battery is charged 100%.

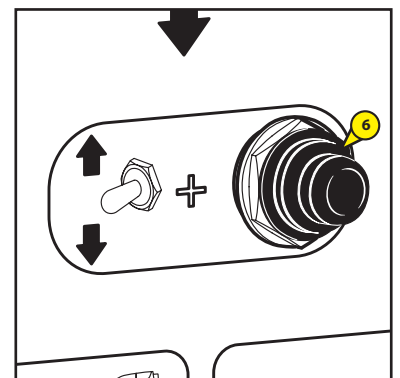
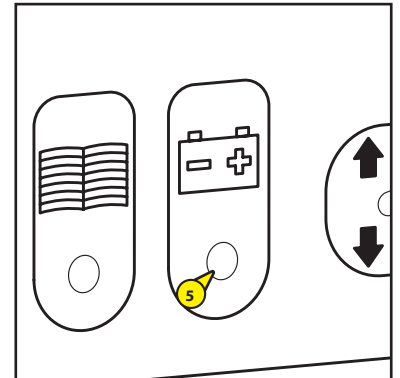
BATTERY LIFE

- The functions below are deactivated when you drop to 20% charge level in operating or transport speed position, under ground-based emergency and maintenance or basket control:

- Raising of the intermediate arms
- Raising of the upper arm
- Telescope extension

6 - "DEAD MAN'S" BUTTON

- As a safety measure, hold down this button continuously to activate the lifting and rotation functions.



7 - BATTERY CHARGE INDICATOR AND ACCESS PLATFORM HOUR METER

A - battery charge indicator

BATTERY CHARGED

All bars are displayed (blackened).

BATTERY DISCHARGED

Only two bars remain displayed, meaning it is necessary to recharge the batteries (see "MAINTENANCE INTERVALS" chapter).

NOTE: do not discharge the battery below 20% charge level to prevent them from rapidly deteriorating.

The following 2 meters disappear on start-up, only the meter with the symbol "T" remains displayed in normal operation:

B - daily hour meter indicator

Displays the total number of hours and all movements made and can be reset to zero.

C - Traction and pump counter indicator

This shows the total number of hours for all the movements made.

D - FAULT DISPLAY

In the event of a breakdown, a fault number is displayed (it shall be stored and can be analysed) along with warning light 4 "machine maintenance" (flashes following faults).

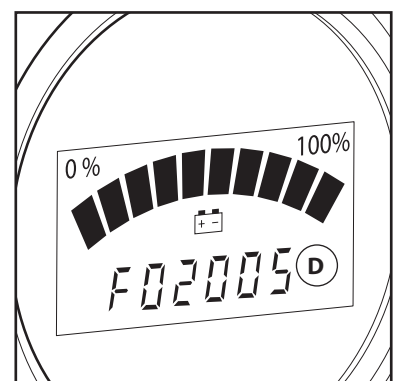
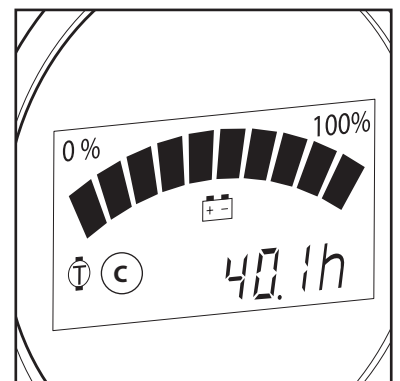
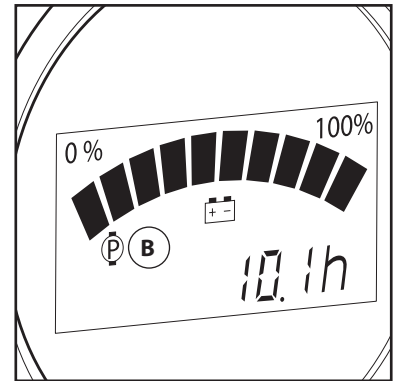
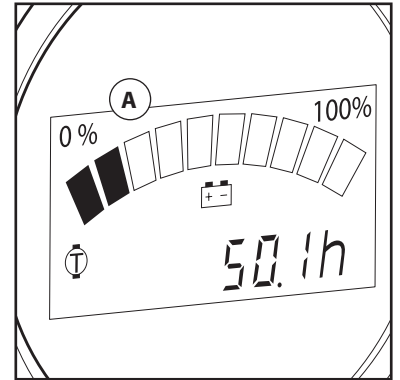


If the faults remains displayed, immobilise the access platform and perform the necessary maintenance.

NOTE: For descriptions and frequency of faults detected, see the REPAIR MANUAL for this machine.



Consult your dealer

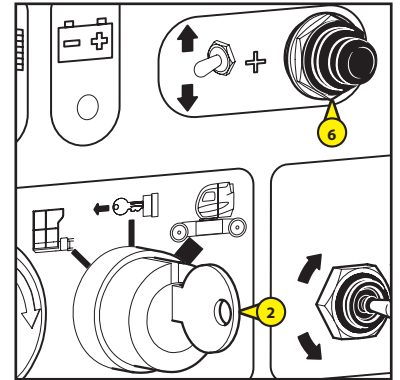


RESETTING THE DAY TIMER COUNTER

Proceed as follows:

- The access platform must be in transport position (arms and telescope folded completely),
- The access platform must not be in a tilting position,
- Set the position to "Ground emergency and maintenance station" using selector switch 2 "GROUND/BASKET key-operated selection switch" and wait for the initialisation beep.
- Press button 6 (dead man's system) together with the two switches 15 (jib up/down switch) and 9 (basket tilt switch) simultaneously until the counter is reset to zero.

N.B.: This manoeuvre must be made within 3-4 seconds of power to the electrical circuit being switched on.



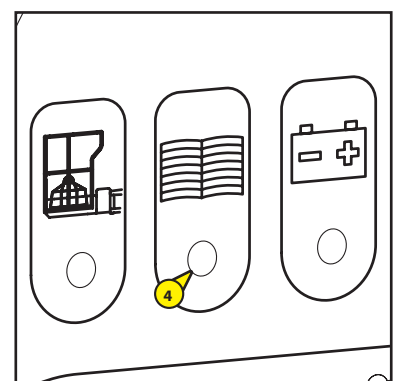
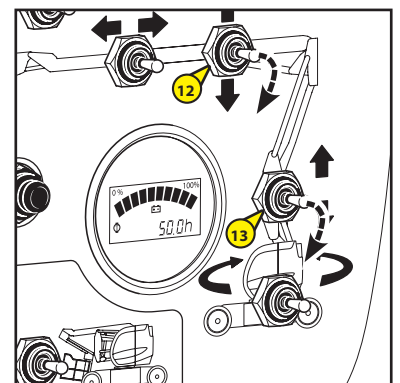
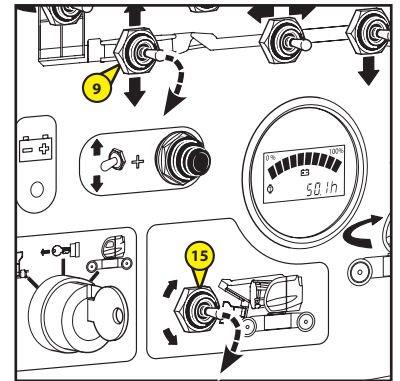
RESETTING THE TIMER TO ZERO EVERY 50 OPERATING HOURS

This adjustment must be done after the maintenance described in the chapter: MAINTENANCE "EVERY 50 HOURS OF OPERATION".

Proceed as follows:

- The access platform must be in transport position (arms and telescope folded completely),
- The access platform must not be in a tilting position,
- Set the position to "Ground emergency and maintenance station" using selector switch 2 "GROUND/BASKET key-operated selection switch" and wait for the initialisation beep.
- Press button 6 (dead man's system) together with the two switches 12 (upper arm up / down switch) and 13 (lower arm up / down switch) simultaneously until the "MACHINE MAINTENANCE" light 4 goes out (the timer is reset to zero).

N.B.: This manoeuvre must be made within 3-4 seconds of power to the electrical circuit being switched on.



8 - BASKET ROTATION SWITCH

This switch enables you to rotate the basket.

ROTATION RIGHT

- Position the base/basket selector in the base position, hold down the "Dead Man's" button and push the switch 8 to the right.

ROTATION LEFT

- Position the base/basket selector in the base position, hold down the "Dead Man's" button and push the switch 8 to the left.

9 - JIB UP / DOWN SWITCH

This switch enables you to raise and lower the jib.

RAISING THE JIB

- Position the base/basket selector in the base position, hold down the "Dead Man's" button and push the switch 9 upwards.

LOWERING THE JIB

- Position the base/basket selector in the base position, hold down the "Dead Man's" button and push the switch 9 downwards.

10 - ROTARY JIB ROTATION SWITCH (OPTION: 3D)

This switch enables you to rotate the jib.

ROTATION RIGHT

- Position the base/basket selector in the base position, hold down the "Dead Man's" button and push the switch 10 to the right.

ROTATION LEFT

- Position the base/basket selector in the base position, hold down the "Dead Man's" button and push the switch 10 to the left.

11 - TELESCOPE EXTENSION / RETRACTION SWITCH

This switch enables you to extend and retract the telescope.

EXTENDING THE TELESCOPE

- Position the base/basket selector in the base position, hold down the "Dead Man's" button and push the switch 11 to the left.

RETRACTING THE TELESCOPE

- Position the base/basket selector in the base position, hold down the "Dead Man's" button and push the switch 11 to the right.

12 - UPPER ARM UP / DOWN SWITCH

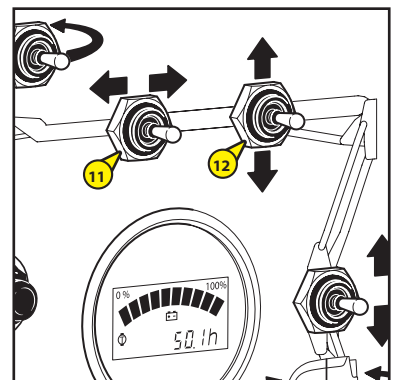
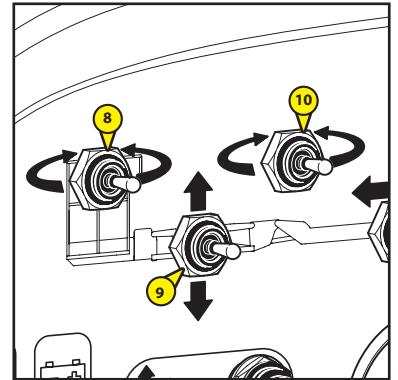
This switch enables you to raise and lower the upper arm.

RAISING OF THE UPPER ARM

- Position the base/basket selector in the base position, hold down the "Dead Man's" button and push the switch 12 upwards.

LOWERING THE UPPER ARM

- Position the base/basket selector in the base position, hold down the "Dead Man's" button and push the switch 12 downwards.



13 - LOWER ARM UP / DOWN SWITCH

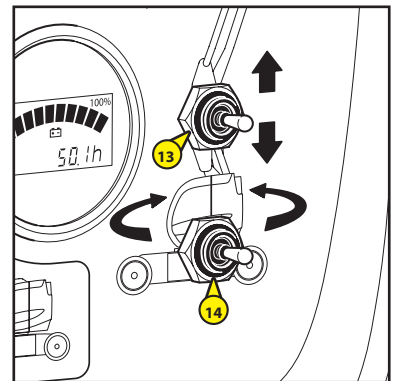
This switch enables you to raise and lower the lower arm.

RAISING THE LOWER ARM

- Position the base/basket selector in the base position, hold down the "Dead Man's" button and push the switch 13 upwards.

LOWERING THE LOWER ARM

- Position the base/basket selector in the base position, hold down the "Dead Man's" button and push the switch 13 downwards.



14 - TURNTABLE ROTATION SWITCH

This switch enables you to rotate the turntable.

ROTATION RIGHT

- Position the base/basket selector in the base position, hold down the "Dead Man's" button and push the switch 14 to the right.

ROTATION LEFT

- Position the base/basket selector in the base position, hold down the "Dead Man's" button and push the switch 14 to the left.

15 - BASKET TILT SWITCH

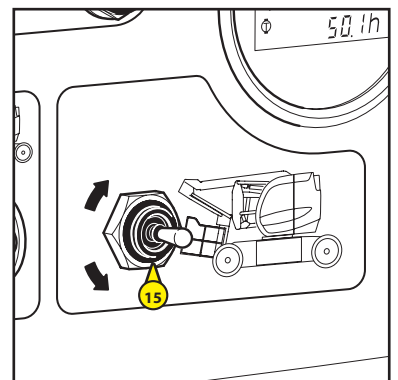
This switch enables you to correct the basket's horizontality and fold the basket away completely in transport position.

CORRECTING THE BASKET UPWARDS

- Position the base/basket selector in the base position, hold down the "Dead Man's" button and push the switch 15 upwards.

CORRECTING THE BASKET DOWNWARDS

- Position the base/basket selector in the base position, hold down the "Dead Man's" button and push the switch 15 downwards.



16 - BATTERY CUT-OFF

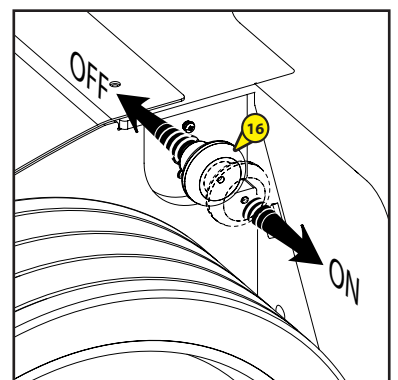
The battery cut-off is located on the chassis, next to the ground emergency and maintenance station.

ON POSITION

- Pull on the battery cut-off: current flows.

OFF POSITION

- Press down the battery cut-off: no current flows.



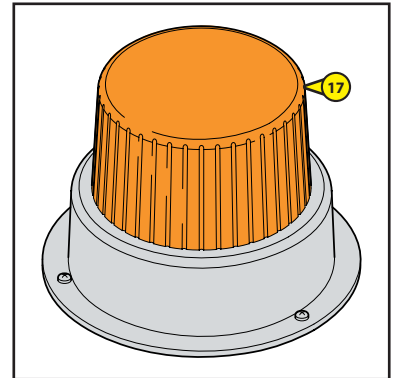
Always set the battery cut-off to the OFF position when you are no longer using the access platform.



The buzzer (see 19 - BUZZER) will activate if the battery cut-off is inadvertently left in the ON position when the batteries are being charged.

17 - FLASHING LIGHT (OPTION)

- The rotating beacon light illuminates automatically when the access platform is performing a translation or a movement (raising, rotating,...).



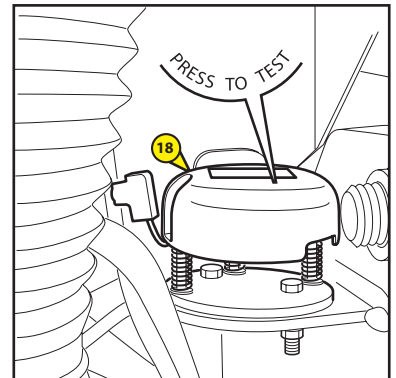
18 - TILT SENSOR

- This sensor checks the platform tilt. When the platform has reached the authorised maximum tilt (see CHARACTERISTICS chapter), the vibrating buzzer 19 is activated intermittently and all the "AGGRAVATING" movements of raising the arms and extending the telescope are blocked. LED 23 in the platform flashes.

N.B.: For the TILT TEST, place the platform on level ground, in base console control position (see 2 - ignition switch). Push on the "PRESS TO TEST" detector and the vibrating buzzer must sound and the LED 23 on the basket console must light up.



If the buzzer does not sound and the LED remains unlit, immobilise the access platform.

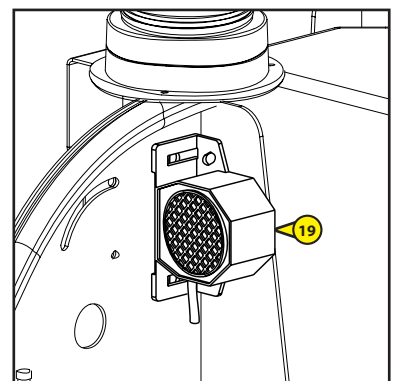


19 - HORN

- This buzzer (fastened on the turntable above the ground emergency and maintenance station's casing) is activated when button 24 is pressed.



The buzzer will activate if the battery cut-off is inadvertently left in the ON position when the batteries are being charged (see 16 - BATTERY CUT-OFF).



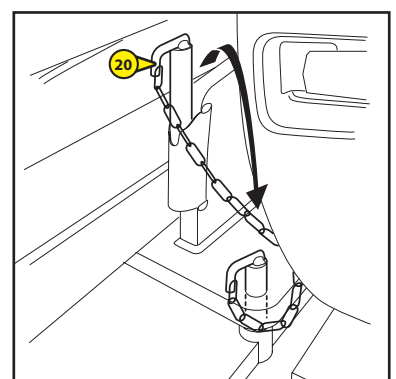
20 - TURNTABLE ROTATION LOCKING SYSTEM

- Insert the pin in the housing provided for this purpose.
- When set in position, this pin enables you to block the turntable from rotating.
- It must be used when the access platform is being transported by truck or some other means of transport (train, etc.)



Remember to remove it when using the access platform.

N.B.: Unlocking the pin: it may be necessary to rotate the turntable right or left to free the pin to extract it from its housing.



21 - EMERGENCY STOP

This red mushroom-head circuit breaker enables you to cut off all the basket control consoles movements in the event of an anomaly or danger arising.

- Press the emergency stop button to cut off the movements controlled from the basket console.
- Turn the knob a quarter of a turn to the right to restore the power supply (the switch returns automatically to its initial position).



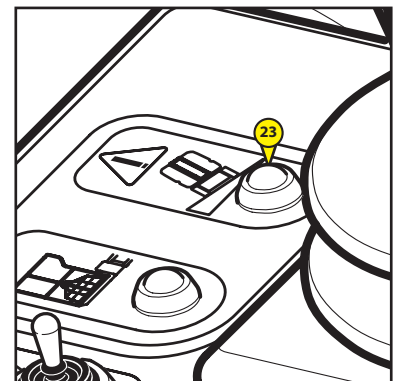
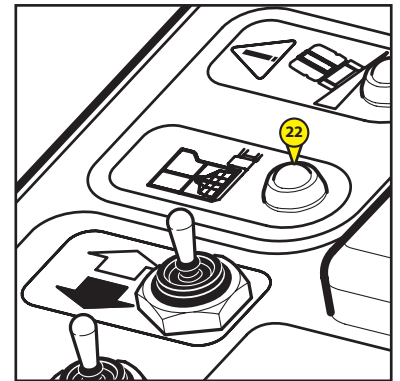
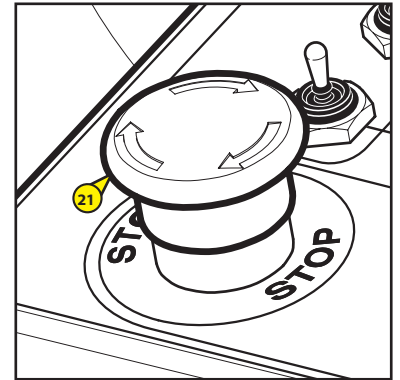
This command has priority under all circumstances, except when movements are controlled from the ground emergency and maintenance console.



Do not use the emergency stop button to simply stop the access platform, otherwise reset it as quickly as possible as no action can be carried out on the ground emergency station or the basket control station.



To lower to the ground in spite of the emergency stop activated, use the controls on the ground emergency and maintenance console (see the "Rescue Procedure" in chapter 2).



22 - OVERLOAD AND VARIABLE SPEED DRIVE FAULT INDICATOR LIGHT

- THIS INDICATOR LIGHT SERVES TWO FUNCTIONS:

Function 1:

If the basket is overloaded, the LED is lit intermittently (See: PLATFORM OPERATION - SAFETY).

Function 2:

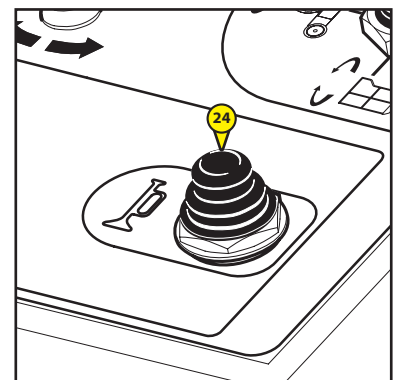
In the event of a breakdown, the number of flashes indicates the type of fault detected by the variable speed drive. (See: 4 - "MACHINE MAINTENANCE" LIGHT p 2-17).

23 - TILT INDICATOR LIGHT

- When the access platform reaches the maximum authorised tilt, the light comes on intermittently (see: "PLATFORM OPERATION - SAFETY").

24 - HORN CONTROL BUTTON

- Pressing this button 24 activates the buzzer 19 located on the turntable.



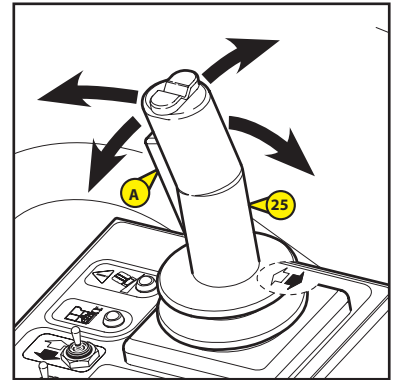
25 - JOYSTICK

NOTE: This joystick is controlled gradually, which enables a highly precise approach. It should be operated smoothly, without jerks.



SAFETY TRIGGER

The trigger A of joystick 25 must be continuously pressed down to make any movements from the access platform's control box.



26 - ROTATION SELECTION SWITCH

- This switch 26 has three positions. Switch it over according to the desired movements and then operate the joystick 25.

BASKET ROTATION

- Move switch 26 to the left (position I).
- Tilt the joystick 25 to the right or the left to steer the basket right or left respectively.

TURNTABLE ROTATION

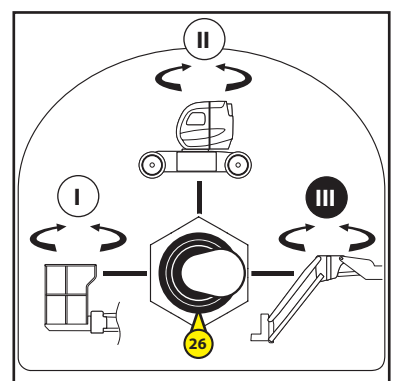
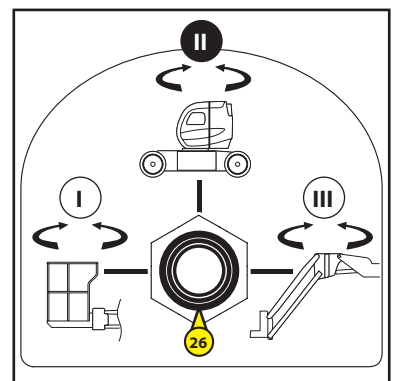
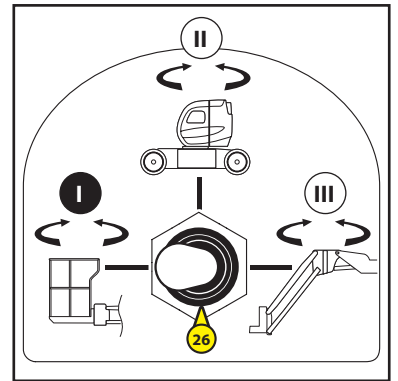
- Move switch 26 to the vertical position (position II).
- Tilt the joystick 25 to the right or the left to steer the basket right or left respectively.

ROTATING JIB ROTATION (3D ACCESS PLATFORMS)

- Move switch 26 to the right (position III).
- Tilt the joystick 25 to the right or the left to steer the basket right or left respectively.



Before making any rotation, check that there is sufficient space between the lifting platform or the turntable and the various walls and installations.



27 - 28 - 29 - 30 - 31 - 32 - MOVEMENT SELECTION SWITCHES

27 BASKET INCLINATION

- Select the movement with a quick press on button 27; the movement remains selected as long as the LED is lit (8 seconds).
- Push the joystick 25 forwards or pull it backwards respectively to raise or lower the basket.

N.B.: The basket can be tilted only when the machine is in transport position (see HOW TO USE THE ACCESS PLATFORM).

28 RAISING/LOWERING THE JIB

- Select the movement with a quick press on button 28; the movement remains selected as long as the LED is lit (8 seconds).
- Push the joystick 25 forwards or pull it backwards respectively to raise or lower the basket.

29 EXTENDING/RETRACTING THE TELESCOPE

- Select the movement with a quick press on button 29; the movement remains selected as long as the LED is lit (8 seconds).
- Push the joystick 25 forwards or pull it backwards respectively to extend or retract the telescope.

30 RAISING/LOWERING THE UPPER ARM

- Select the movement with a quick press on button 30; the movement remains selected as long as the LED is lit (8 seconds).
- Push the joystick 25 forwards or pull it backwards respectively to raise or lower the basket.

31 RAISING/LOWERING THE LOWER ARMS

- Select the movement with a quick press on button 31; the movement remains selected as long as the LED is lit (8 seconds).
- Push the joystick 25 forwards or pull it backwards respectively to raise or lower the basket.

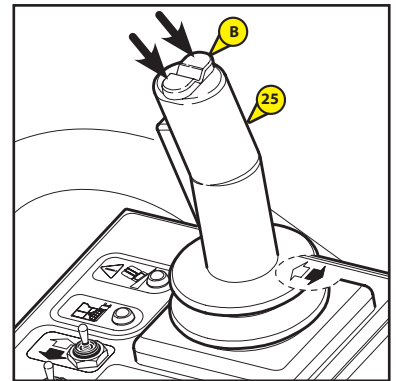
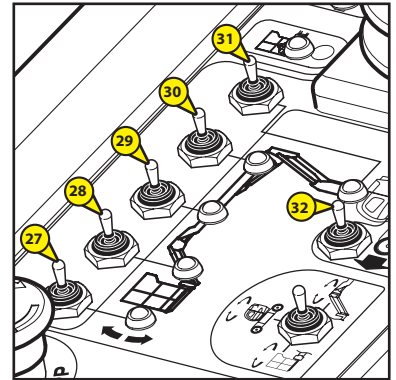
32 FORWARD/BACKWARD TRANSLATION

- Select the movement with a quick press on button 32 (see NOTE for button B); the movement remains selected as long as the LED is lit (8 seconds).
- Push the joystick 25 forwards or pull it backwards respectively to move forward or back.

STEERING:

- To steer to the right or to the left without travelling:
 - Select the direction by pressing and holding down the joystick button to the right or the left of the button in order to turn respectively to the right or the left.
- To steer to the right or to the left with travelling:
 - Select the direction by pressing and holding down the joystick button to the right or the left of the button in order to turn respectively to the right or the left.
 - Push the joystick 25 forwards or pull it backwards respectively to move forward or back while turning the wheels.

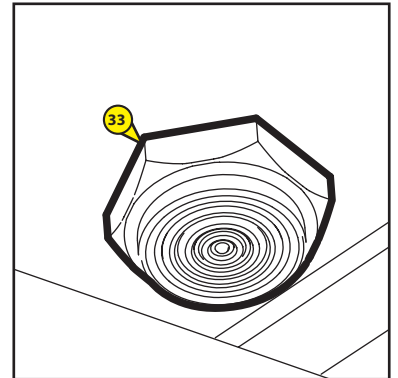
N.B.: **Pressing button B on the joystick also selects the translation movement**, the movement remains selected while the LED (same as for switch 32) is lit (8 seconds).



33 - VIBRATING BUZZER

- This vibrating buzzer activates when the machine is in one of the two following critical situations:

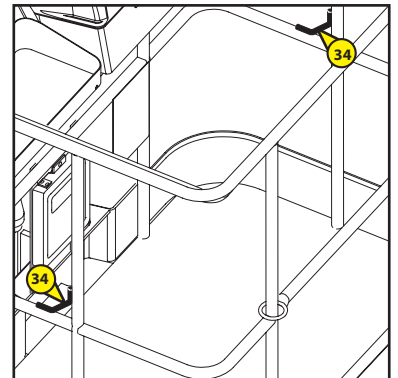
- TILT: discontinuous buzzer
(See: PLATFORM OPERATION - SAFETY).
- OVERLOAD: continuous buzzer
(See: PLATFORM OPERATION - SAFETY).



34 - SAFETY HARNESS ATTACHMENT POINTS

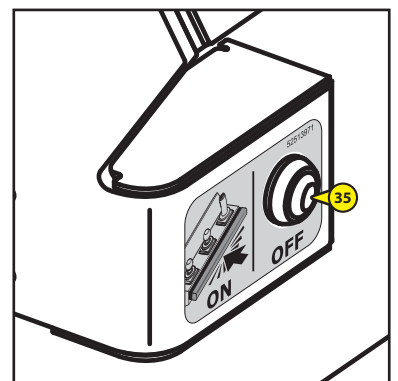
- These attachment points are used to fasten the harness when the operators are in the basket.

NOTE: See chapter 1 - "OPERATING AND SAFETY INSTRUCTIONS".



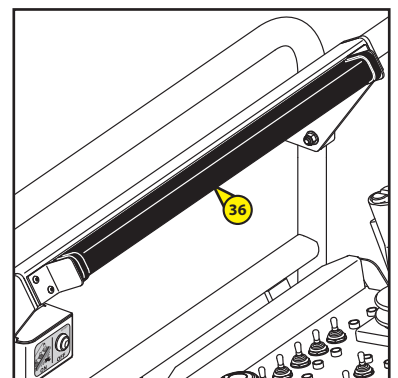
35 - RESET BUTTON (SAFEMAN SYSTEM OPTION)

See the "DESCRIPTION AND USE OF THE OPTIONS" chapter on page 2-39.



36 - SAFETY EDGE (SAFEMAN SYSTEM OPTION)

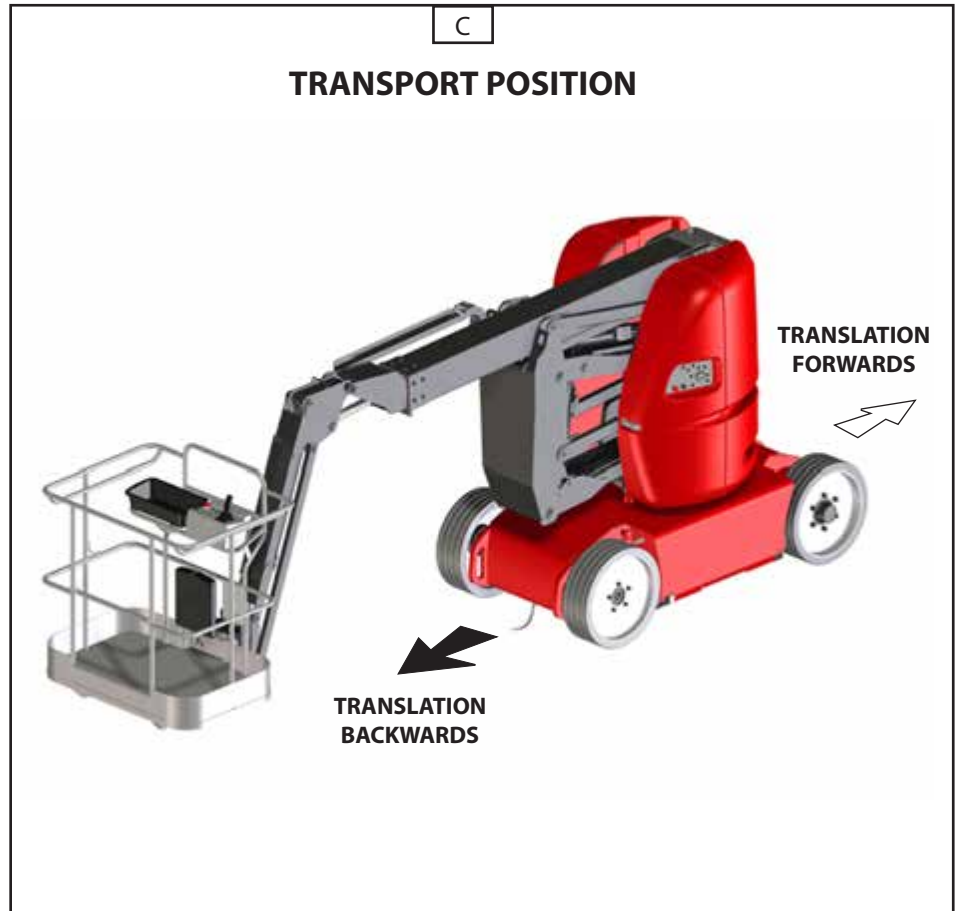
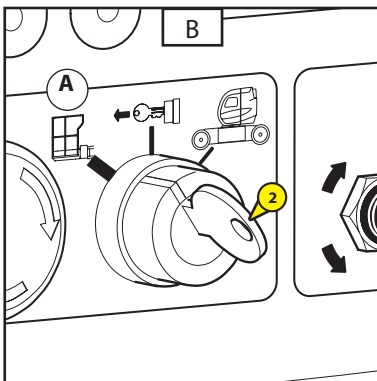
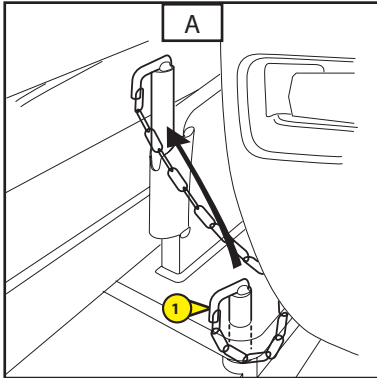
See the "DESCRIPTION AND USE OF THE OPTIONS" chapter on page 2-39.



37 - BLUE FLASHING LIGHT (SAFEMANSYSTEM OPTION)

See the "DESCRIPTION AND USE OF THE OPTIONS" chapter on page 2-39.



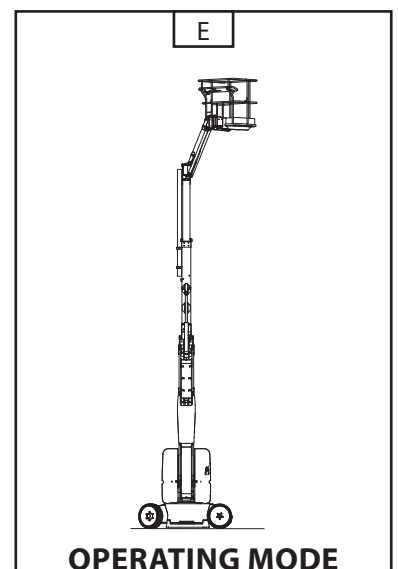
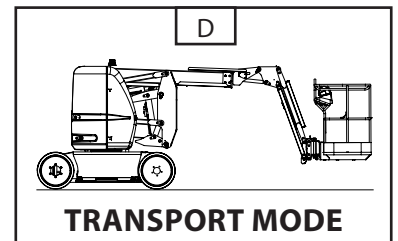


Moving in TRANSPORT / OPERATING MODE

- Before moving and using the machine, remove the locking pin 1 from the turntable (see Fig. A).
- Switch 2 (Fig. B) must be in position A (transfer of control to the basket console).
- The platform has two distinct movement modes: transport mode (Fig. D) and operating mode (Fig. E) (forward direction (Fig. C)).
- Transport mode: the platform's arms are in low position. This mode permits movement at high speed, and movement in excess of the machine's tilt (see SPECIFICATIONS chapter) (Fig. D).
- Operating mode: one or more of the platform's arms are lifted and/or the telescope is extended. In this mode, translation movements are made at slow speed and the tilt and overload safety systems are activated (Fig. E).



No movements are to be performed on sloping ground with a gradient that exceeds the authorised tilt (see the "SPECIFICATIONS" chapter) or unevenness that could rock the platform, or with the boom above the horizontal when the machine is on unstable ground.

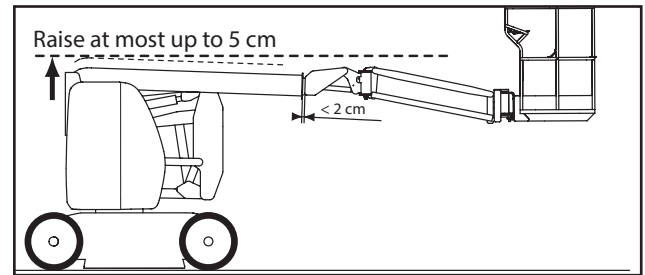


TRANSPORT SPEED / OPERATING SPEED LIMITS

The jib can be raised and lowered in transport speed mode with the telescope retracted.

Specific details regarding switching from transport speed to operation speed mode:

- Telescope extension less than 2 cm and lower arms on the stops (elevation < 5 cm); over either of these values, the access platform switches to operating speed mode.



INSTALLATION IN THE WORKPLACE AND LIFTING

The access platform has been designed to work on a flat, horizontal surface: it is important to clear the area in which the access platform must work.



Read the instruments on the ground emergency and maintenance station and basket stations described in the preceding pages and in particular the notices specifying the risks in performing certain manoeuvres.

- Bring the access platform to the workplace.
- If necessary, load the equipment and supplies and distribute the load evenly (stack it in a manner so as not to inconvenience the operator and avoid anything falling off).
- Climb into the basket.



We strongly recommend that you wear a safety helmet and a harness.



When manoeuvring the platform (lifting, rotation, etc.), look around and above you. Pay particular attention to electrical cables and any object that may be within the access platform's field of operation.

LOWERING

- Once work is completed: retract the telescope, then lower the arms to bring the platform into the transport position.



Pay attention to people on the ground when lowering the basket

STOPPING THE ACCESS PLATFORM

- When the access platform is not being used, switch off the electrical power supply by positioning the key-operated switch in the Neutral position (see 2 - Key-operated switch).
- At the end of the day: recharge the battery as needed (see Chapter "3 - MAINTENANCE FREQUENCY").



Always set the battery cut-off to the OFF position when you are no longer using the access platform.

LOADING / UNLOADING THE ACCESS PLATFORM



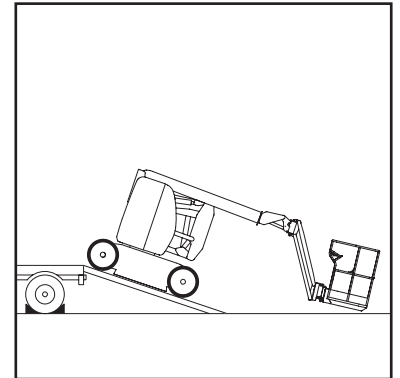
Check that the safety instructions associated with the flatbed have been correctly applied before loading the access platform and ensure that the driver of the vehicle has been informed of the dimensional characteristics and ground of the platform (see SPECIFICATIONS chapter).

When being loaded onto a truck bed, the access platform must be in transport position:

- Counterweight facing the ramp (counterweight over the access platform's steering wheels) (see 1 - operating and safety instructions; chapter SAFETY STICKERS; items 1 and 2).
- Upper arm on its stop
- Lower and intermediate arms in the low position
- Telescope retracted
- It is possible to raise the jib so that it does not touch the ground but we do not advise that you make any translation movements with the basket elevated excessively; keep this in the lowest position possible during manoeuvres (risk of something falling or of impacts, see 1 - operating and safety instructions, chapter Driving instructions).
- Block the turntable.



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



LOADING

- Block the transport truck bed's wheels Item 1 (Fig. A).
- Fasten the loading ramps to the truck bed so as to obtain the shallowest possible angle for the access platform to climb.

N.B.: The machine is shown reduced to its most compact size (basket completely folded) (Fig. A).

PROCEDURE FOR FOLDING UP THE ACCESS PLATFORM

- Rotate to the left up to the basket's stop.
- Raise the upper arm.
- Activate basket inclination to fold up the basket under the upper arm.
- Lower the upper arm; take care not to bump the basket on the ground.
- Activate basket inclination once again to fold up the basket as much as possible under the upper arm.
- Active turntable rotation to the right so that the overall width does not exceed the chassis' width.

LASHING DOWN THE ACCESS PLATFORM

- Fix wedges on the truck bed in front of and behind each of the access platform's tyres Item 2 (Fig. A).
- Also fix wedges to the truck bed on the outside and the inside of each tyre Item 3 (Fig. A).
- Fasten the access platform to the transport platform with ropes that are sufficiently resistant Item 4 (Fig. A), at the front and rear by passing the ropes in the slinging rings Item 5 (Fig. B).

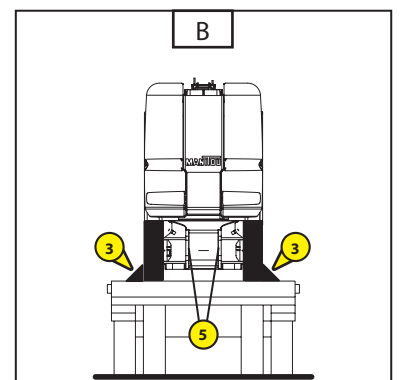
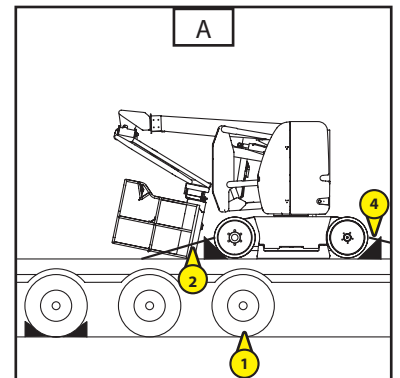
UNLOADING



Never descend from a truck in the forwards direction (with the counterweight forward over the steering wheels); the rear wheels' low adherence make the braking less efficient.



Ensure that you adapt the access platform's travel speed by controlling it with the joystick.



RESCUE PROCEDURE

- This section describes the procedures to follow and the controls to be used in the event of a problem (if the access platform breaks down or there is a person stuck in the basket) while the access platform is being used.
- When first taking over the machine and regularly thereafter, this procedure must be read and thoroughly understood by the operator and all the people whose responsibilities focus around activities in contact with the machine.

IN THE EVENT OF OPERATOR INDISPOSITION

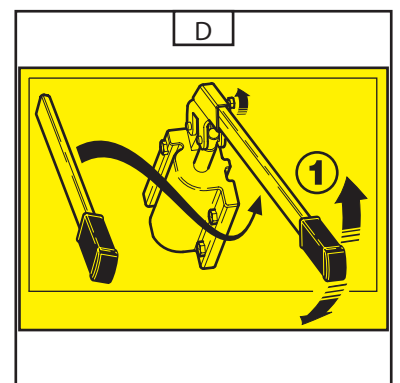
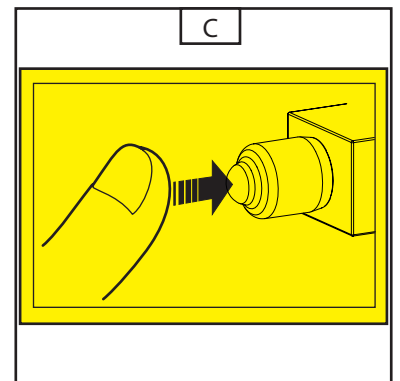
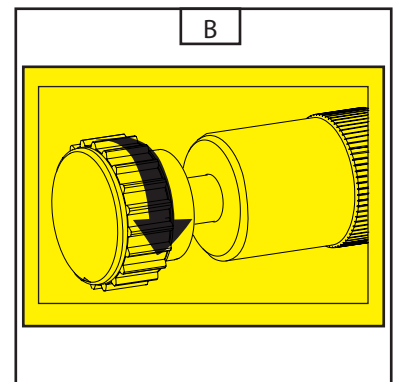
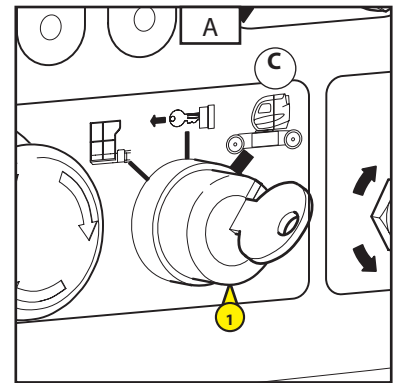
- If the operator should fall ill, accidentally trigger the basket emergency stop button or find himself incapable of manoeuvring, the person present on the ground can take over control from the ground emergency and maintenance station.
- Follow the instructions below.
- Switch the ignition switch 1 (Fig. A) on the ground emergency and maintenance console to position C in order to retrieve control of the access platform.
- Proceed to lower the access platform.



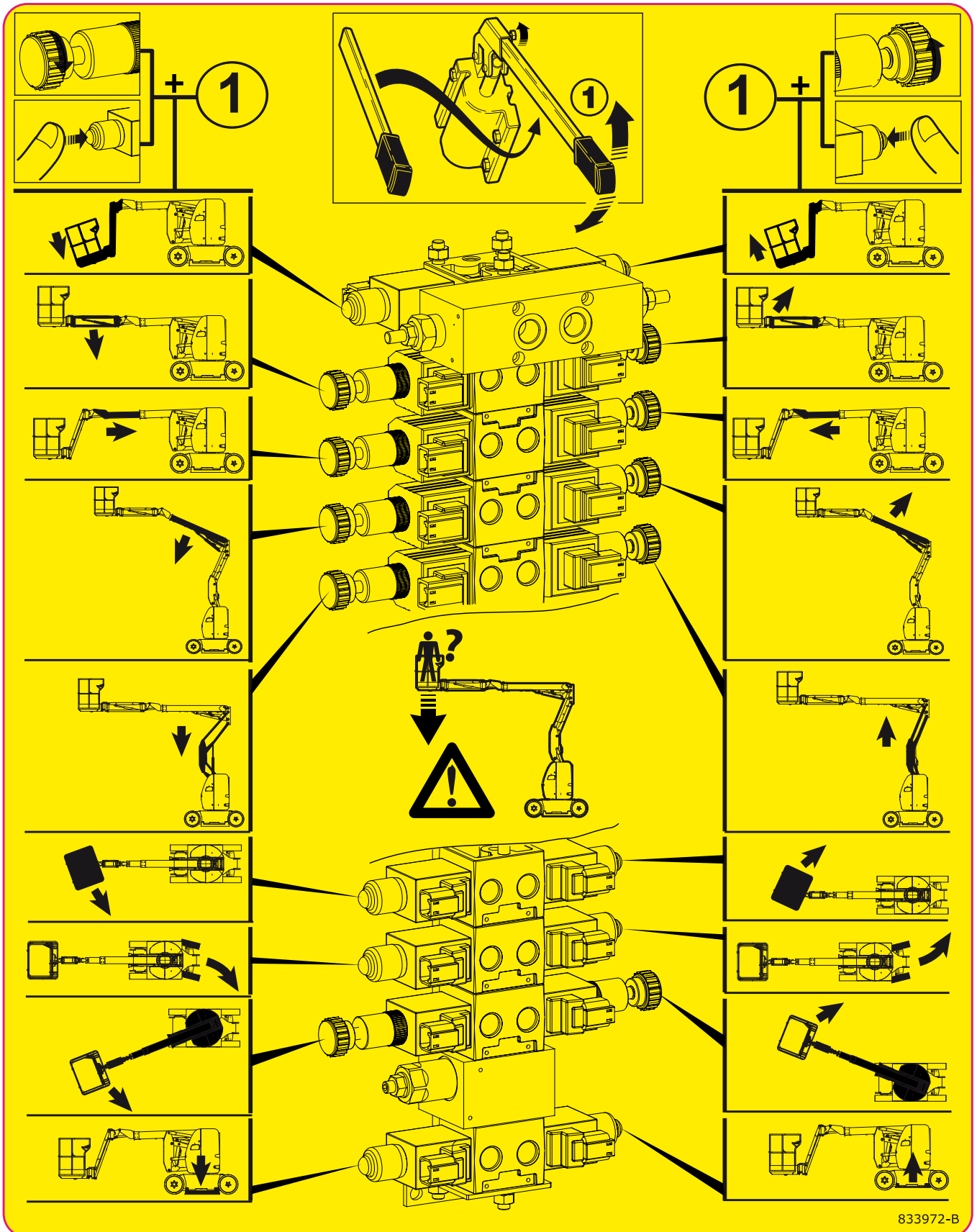
Pay attention to any constructions or objects that may be under the access platform.

IN THE EVENT OF AN ACCIDENT OR A BREAKDOWN

- Evacuate the people in the basket.
 - If an accident or breakdown occurs making the electrical control boxes unusable, the machine is provided with systems for making all the movements manually.
 - - Open the right-hand turntable cover.
 - To perform one of the platform movement's, you need to turn the distributor's manual repair wheels (Fig. B) and pump simultaneously (Fig. D)
- OR
- Press on the push button (Fig. C) of one of the distributor's elements and pump simultaneously (Fig. D).



- A diagram of the distributor's functions is shown below.



833972-B

FREEWHEELING PROCEDURE



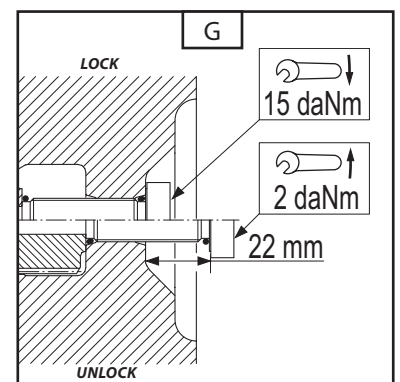
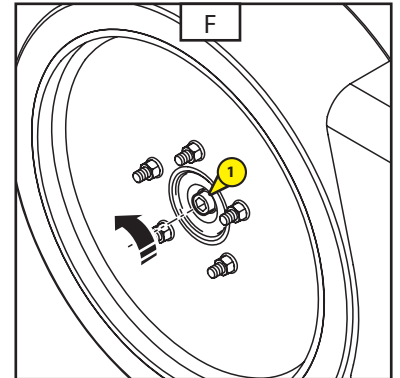
The platform may only be towed for a short distance and this must be by a machine with high braking power in order to hold it and with a connecting bar between the two machines.

- To set the access platform in freewheeling mode, the platform must be subject to translation constraints due to a slope. The wheels must be able to turn freely.
- Raise the access platform, if possible, in order to detach the drive wheels from the ground so as to facilitate the operation
- Loosen screw 1 (Fig. F), 22 mm on the edge of each wheel up to the friction point without forcing it (2 daNm): see (Fig. G).
- The machine can now be towed.



Take care not to loosen the screw more than 22 mm; otherwise there is a risk of breaking and significantly damaging the reducer. If in any doubt, contact your dealer.

- Refit
- Turn the wheel gently to the left and right to rearm the gear while retightening the screws 1 (Fig. F), carefully comply with the tightening torque (15 daNm).

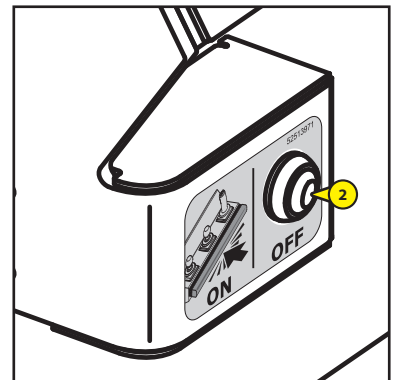
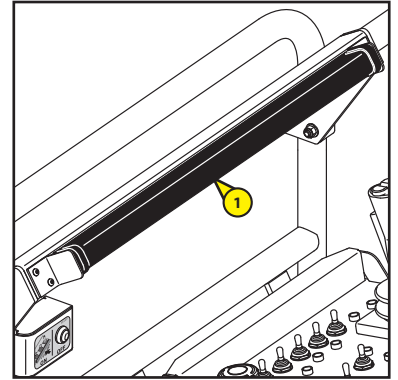


1 - SAFEMANSYSTEM

The "Safe Man System" option is a safety system that cuts off all controls from the basket when activated by the user of the access platform.

OPERATION

- Every time the platform is powered up the system is checked: a beep sounds and the blue light flashes.
- When pressure is applied to the safety edge 1, the system cuts off all platform controls. The blue light flashes and a horn sounds.
- If the user stops applying pressure to the safety edge:
 - Pressing once on the platform's "OFF" reset button 2, the user can retake control of the platform controls. The flashing blue light and the horn are deactivated.
- If the user continues to apply pressure to the safety edge:
 - By pressing the platform's "OFF" reset button 2 once, the user can resume control of the platform. The flashing blue light and the horn will stop when the user ceases to apply pressure to the safety edge.



3 - MAINTENANCE

CONTENTS

<i>ORIGINAL MANITOU SPARE PARTS AND EQUIPMENT</i>	3-4
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ORIGINAL MANITOU SPARE PARTS AND EQUIPMENT

OUR PERSONNEL LIFTING PLATFORMS MUST BE SERVICED USING ORIGINAL MANITOU PARTS.

IF YOU USE PARTS THAT ARE NOT ORIGINAL MANITOU PARTS,

- YOU RISK**
- Legally, incurring liability on yourself in the event of an accident.
 - Technically, causing operating malfunctions or reducing the access platform's service life.

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

BY USING ORIGINAL MANITOU PARTS FOR MAINTENANCE OPERATIONS,

- YOU BENEFIT FROM
OUR EXPERTISE**
- Through its network, MANITOU provides the user with,
- Know-how and competence.
 - The guarantee of high-quality work.
 - Original replacement parts.
 - Help with preventive maintenance.
 - Efficient diagnostic help.
 - Improvements due to experience feedback.
 - Training of the operating personnel.
 - Only the MANITOU network knows the personnel lifting platform's design in detail and therefore has the best technical capabilities for providing maintenance.

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

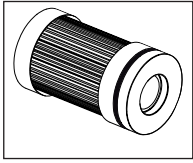
START-UP CHECKLIST

0 = OK 1 = Missing 2 = Incorrect

100	ENGINE	
01	Air filter	
02	Fuel tank	
03	Fuel lines - Filter	
04	Injection or carburising 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	Distributor	
11	Counterbalance valve	
104	BRAKE SYSTEM	
01	Service brake and parking brake operation	
02	Brake fluid level	
105	LUBRICATION AND GREASING	
106	JIB / MANISCOPIIC / MANIACCESS ASSEMBLY	
01	Beam and telescope(s)	
02	Skid	
03	Hinges	
04	Fork carriage	
05	Forks	
107	MAST ASSEMBLY	
01	Fixed and mobile uprights	
02	Fork 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	Horn 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	PAINTWORK	
114	GENERAL OPERATION	
115	OPERATOR'S MANUAL	
116	CUSTOMER INSTRUCTIONS	

FILTER ELEMENTS

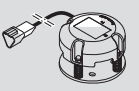
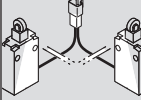
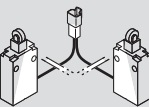
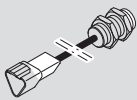


HYDRAULIC OIL CARTRIDGE
Part number: 599004
Change: 100 H

LUBRICANTS

PARTS TO BE LUBRICATED	CAPACITY	RECOMMENDATION	PACKAGING	REFERENCE
HYDRAULIC OIL TANK	12 Litres	MANITOU oil HYDRAULIC OIL	20 L. 55 L. 209 L	582297 546108 546109
TURNTABLE REDUCTION GEAR BRAKE / REDUCER	1.5 Litres	SHELL oil SPIRAX A80W90	2 L. 20 L. 55 L	499237 546330 546221
GENERAL GREASING TURNTABLE CROWN GEAR & BEARING RACEWAY LUBRICATION		High performance MANITOU grease	Cartridge 400 Gr	479330
TURNTABLE CROWN GEAR TEETH LUBRICATION		SHELL oil MALLEUS GL 205	Aerosol	545834

SAFETY COMPONENTS

ELECTRIC	
 <p>TILT SENSOR Part number: 525 30 120</p>	 <p>ANTI-TOPPLING BAR SENSORS Part number: 676322</p>
 <p>OVERLOAD SENSOR Part number: 769143</p>	 <p>INDUCTIVE SENSOR Part number: 678901</p>

SERVICING SCHEDULE - 120 AETJC



(1): MANDATORY 50 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		DAILY OR EVERY 5 HOURS	6 MONTHS OR 50 HOURS	1 YEAR or 100 HOURS	2 YEARS OR 200 HOURS	OCCASIONAL
TRANSMISSION							
REAR WHEEL REDUCTION GEAR OIL	3-16	V/R			V/R	◀◀	
TYRES							
WHEEL NUT TIGHTENING	3-14	C		C	◀◀	◀◀	
CONDITION OF WHEELS AND TIRES	3-8	C*	C		C*	◀◀	
HYDRAULICS							
HYDRAULIC RETURN OIL FILTER CARTRIDGE	3-17	R			R	◀◀	
HYDRAULIC OIL LEVEL	3-10	C	C	◀◀	◀◀	◀◀	
HYDRAULIC OIL	3-17	V/R			V/R	◀◀	
HYDRAULIC CIRCUIT STRAINER	3-17	N			N	◀◀	R
BACKUP PUMP	3-14	C		C	◀◀	◀◀	
TURNTABLE REDUCTION GEAR BRAKE / REDUCER	3-18	V/R			V/R	◀◀	
ELECTRICITY							
BATTERY CHARGE	3-9	C	C	◀◀	◀◀	◀◀	
BATTERIES	3-9	C	Ch	◀◀	◀◀	◀◀	
BATTERY ELECTROLYTE SPECIFIC GRAVITY	3-10	C	C	◀◀	◀◀	◀◀	
BATTERY ELECTROLYTE LEVEL	3-10	C	C	◀◀	◀◀	◀◀	
TIGHTNESS OF THE ELECTRICAL POWER CABLES	-	C		C	◀◀	◀◀	
REPLACE THE BATTERIES	3-20						R
BATTERY TRAYS	3-11	V	V	◀◀	◀◀	◀◀	
CONDITION OF THE JOYSTICK BELLOWS	3-11	C	C	◀◀	◀◀	◀◀	
FRAME							
TURNTABLE ORIENTATION CROWN GEAR	3-15	G			G	◀◀	
TURNTABLE ORIENTATION CROWN GEAR BOLTS	3-15	C			C	◀◀	
SHAFTS	3-13	G		G	◀◀	◀◀	
LIFTING STRUCTURE							
TIGHTNESS OF THE TURNTABLE ROTATION MOTOR BOLTS	3-18	C			C	◀◀	
SAFETY COMPONENTS							
ARM POSITION SENSORS	3-11	C	C*	◀◀	◀◀	◀◀	
TILT SENSOR	3-8	C	C*	◀◀	◀◀	◀◀	
OVERLOAD SENSOR	3-8	C*			C*	◀◀	
PLATFORM							
GENERAL INSPECTION	3-8	C	C	◀◀	◀◀	◀◀	
FUNCTIONAL INSPECTION	3-8	C	C	◀◀	◀◀	◀◀	
PLATFORM STICKERS	3-11					C	
OVERLOAD	3-19					C	
STOPPING DISTANCE	3-19					C	
SLINGING	3-21						
OPTION							
STATUS OF SAFE MAN SYSTEM	3-12		C				

*: Consult your dealer

A1 - GENERAL INSPECTION

CHECK

- Meticulously inspect the machine and check that there is no weld cracking, corrosion or structural damage, loose or missing screws, hydraulic leaks, damaged control cable or loose electrical connections, and check the condition of the tyres (no tears, wear).

A2 - FUNCTIONAL INSPECTION

CHECK



Any platform malfunction must be detected before the platform is started up each day. Identify and remove the platform from service if a malfunction is detected.

Find a test area on a firm and even surface that is free of any obstacle.

When manoeuvring the platform (lifting, rotation, etc.), look around and above you. Pay particular attention to electrical cables and any object that may be within the access platform's field of operation.

EMERGENCY STOP

- Hold down the ground control emergency stop buttons.
- > Result: the platform must stop and there should not be any active function.
- Pull the red emergency stop button to the operational position.
- Carry out the test with the basket emergency stop button. Only controls from the ground are permitted.

DEAD MAN FUNCTIONS

- Without holding down the lifting validation button known as dead man, select a platform raising function.
- > Result: the platform must not rise.
- Hold down the lifting validation button known as dead man and select a platform raising function.
- > Result: the platform should rise.

Perform this test on the lifting, lowering turntable rotation and side shift functions of the base and basket consoles in order to obtain the same result.

AUDIBLE ALARM

- Press the basket horn button
- > Result: the horn should sound.

RAISING / LOWERING FUNCTIONS

- From the base console, select all the lifting and then lowering functions.
- > Result: the platform should rise and then lower.
- From the basket console, select all the lifting and then lowering functions.
- > Result: the platform should rise and then lower.

TURNTABLE ROTATION FUNCTION

- From the basket console, select the left then right turntable rotation function.
- > Result: the turntable should rotate left then right.
- Carry out the same test from the base console.

STEERING

- Nb: during steering and side shift function tests, hold the platform by turning in the direction of machine movement.
- From the basket console, select the steering control.
 - > Result: the steering wheels must turn in the direction controlled.

TRAVELLING AND BRAKING

- Select a travel control
- > Result: the machine must move in the direction indicated by the white arrow to move forward and the black arrow to reverse and then stop when the control is released.

TRAVEL SPEED IN WORKING MODE

- Lift one or more platform arms and / or extend the telescope.
- Perform a translation movement.
- > Required result: the side shift must be carried out at operating speed.

TILT SENSOR

Fold the arms for this operation.

- Place the platform in a tilt position that is more than that authorised.
- > Result to be obtained: the movements of extending the telescope and raising the arms must be blocked. The tilt indicator light flashes on the base console and the basket console and the vibrating buzzer sounds intermittently in the basket. All movements from the base console are authorised.

OVERLOAD SENSOR

Fold the arms into transport position for this operation.

- Place a heavier weight than that indicated in the basket.
- > Result: all the movements must be blocked. The overload indicator light is lit in the basket and on the base console, and the vibrating buzzer is continuously activated in the basket.

A3 - BATTERY CHARGE

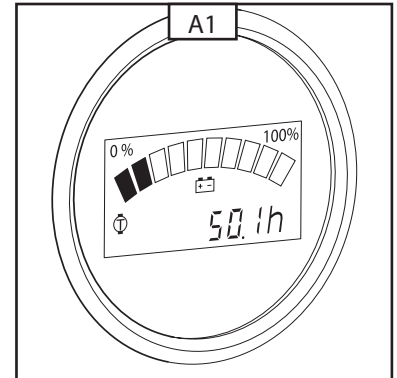
CHECK

The access platform's autonomy is 5 hours of operation with the battery fully charged.

When all the bars are blackened, this means that the battery is fully charged.

- When using the access platform, the number of bars indicates the level of charge in the battery.
- When there are only two bars still blackened, this means that the battery is 80% discharged and requires to be recharged.

NOTE: The battery charge level must not drop below the 20% charge level, otherwise there is the risk of rapid and irreversible damage to the battery.



A4 - BATTERY

CHARGE

- The platform has an electric charger located under the wheel motor cowl.

HOW TO USE THE CHARGER.



Recharge batteries in a well-ventilated space, in which smoking is strictly forbidden, to avoid any risk of explosion.

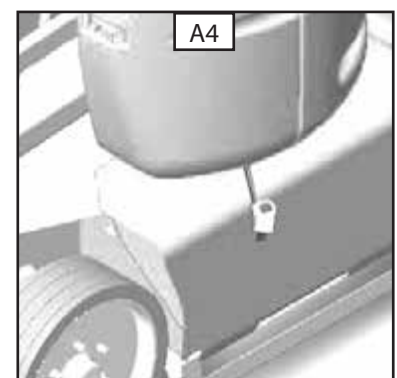
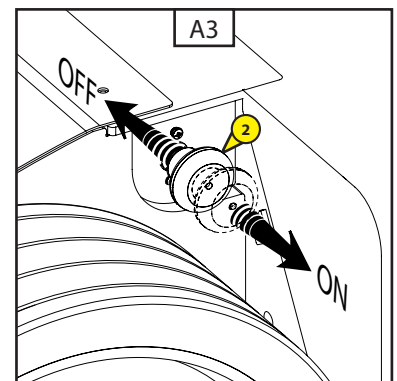
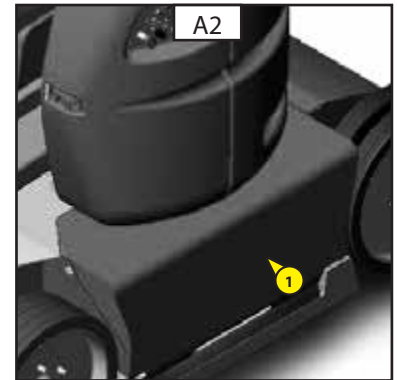
- Remove the battery covers 1 (Fig. A2) throughout the period the batteries are being charged.
- Switch off the power supply to the access platform using the battery cut-off 2 (Fig. A3).
- Do not place any metal objects on the batteries (risk of a short-circuit).
- Do not remove the cell caps.
- Do not recharge the batteries if the electrolyte's temperature is over 40 °C. Let it cool down first.
- Take out and connect the extension 3 to the mains (Fig. A4).

NOTE: Around 10 hours of charging are required for batteries discharged 70% to 80%.

When the batteries are charged:

- Disconnect the extension 3 (Fig. A4) and return it to its proper place.
- Close the battery covers 1 (Fig. A2).
- Restore the power to the access platform via the battery cut-off 2 (Fig. A3).

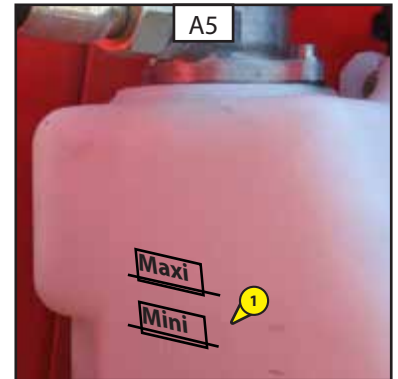
NOTE: The charger has been factory set with its own cable. If this cable requires replacement, ensure that you fit a cable of the same section and the same length.



A5 - HYDRAULIC OIL LEVEL

CHECK

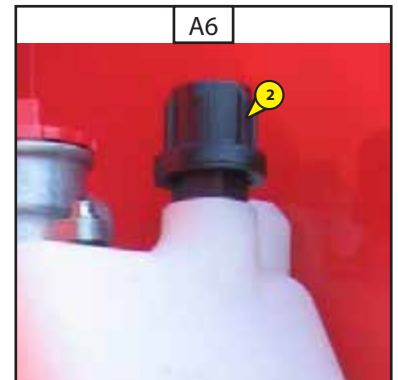
- Open the left-hand cowl.
- Place the platform in the transport position.
- The oil level must be between the max. and min. levels (Fig. A5).
- If necessary, add oil (see LUBRICANTS chapter) through the filling port (Fig. A6).



A6 - BATTERY ELECTROLYTE SPECIFIC GRAVITY

CHECK

- The electrolyte's specific gravity varies with temperature but a minimum value of 1,270 at 16 °C must be maintained. In the hatched part (Fig. A7), the battery is normally charged. Above this hatched area, the battery must be recharged. The density must not vary by 0.0025 units from one element to another of the battery.
- Recharge the battery and wait for 1 hour before checking the electrolyte specific gravity in each battery cell using a hydrometer.
- Never check after having added distilled water.



Handling and servicing a battery can be dangerous, take the following precautions:

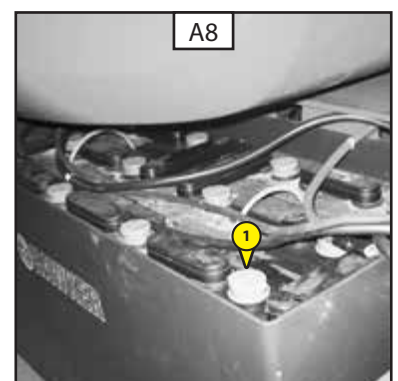
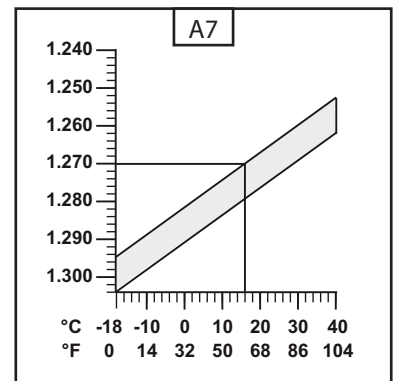


- Wear protective goggles.
- Keep the battery horizontal.
- Never smoke or work near a naked flame.
- Work in a well-ventilated area.
- In the event of electrolyte being spilled onto the skin or splashed in the eyes, rinse thoroughly with cold water for 15 minutes and call a doctor.

A7 - BATTERY ELECTROLYTE LEVEL

CHECK

- Check the electrolyte level in each cell of the battery.
- Open the turntable covers.
- Remove the cap 1 (Fig. A8) from each battery cell.
- The level must be 1 cm above the plates in each cell.
- If necessary, top up with clean distilled water, kept in a glass container.
- Clean and dry the caps (Fig. A8), and refit them.
- Check the terminal connections and lightly smear with petroleum jelly to prevent the formation of verdigris.



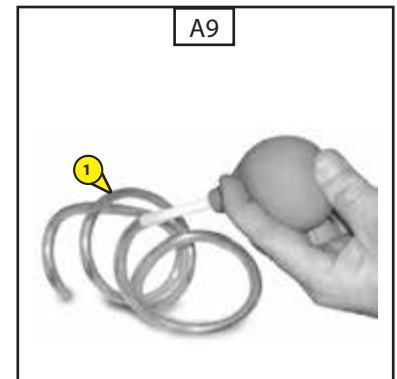
A8 - BATTERY TRAY

DRAIN

- Switch off the access platform
- Open the turntable covers.
- Check for water in the battery tray.
- Drain off any water in the battery with a suction bulb 1 and the tube 2.



The presence of water in the tray causes damage to the battery, causing it to short-circuit at the plus or minus terminals. Dispose of the dirty water (electrolyte+water) in an ecological manner.



A9 - CONDITION OF JOYSTICK BELLOWS

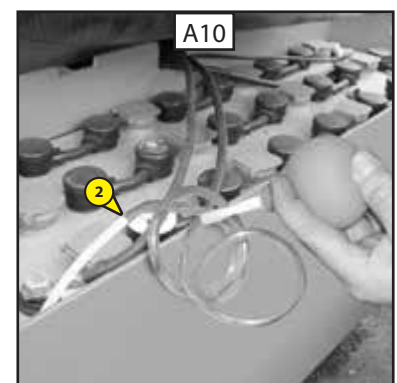
CHECK

- Switch off the access platform.

Climb into the basket for this operation.

- Check the condition of the joystick's rubber bellows (Fig. A11) by operating it to perform a movement.

The bellows must not show any crazing or cracks, which risk to allow water infiltration and adversely affect the correct operation of the machine.



A10 - ARM DOWN POSITION SENSOR

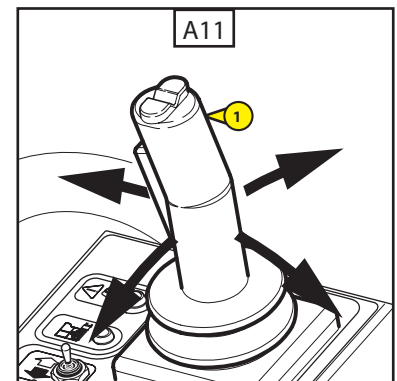
CHECK

Lower the jib to transport position for this operation.

- Conduct a translation at transport speed.
- Raise the jib.
- Move forwards.
- The access platform must switch to working mode.



Prohibit use of the access platform in the event of a malfunction. Contact your dealer.



A11 - TELESCOPE RETRACTED POSITION SENSOR

CHECK

Retract the telescope to transport position for this operation.

- Conduct a translation at transport speed.
- Extend the telescope.
- Move forwards.
- The access platform must switch to working mode.



Forbid the use of the access platform in the event of a malfunction. Contact your dealer.

A12 - TILT SENSOR

CHECK

Sensor test

(See: 2 - DESCRIPTION: INSTRUMENTS AND CONTROLS)



Forbid the use of the access platform in the event of a malfunction. Contact your dealer.

A13 - MACHINE STICKERS

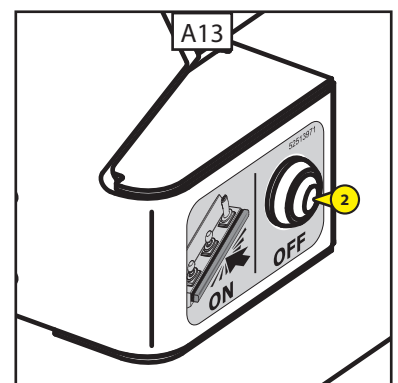
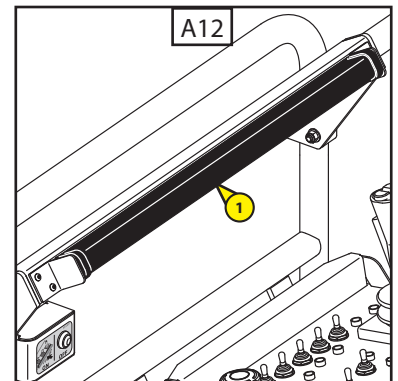
CHECK

Consult your dealer.

A14 - CONDITION OF THE SAFEMANSYSTEM (OPTION)

CHECK

- Press the safety edge 1 (Fig. A12) and check:
 - That all the platform's movements stop.
 - The operation of the flashing blue light and horn.
 - Operation of the platform's movements when you press the OFF button 2 (Fig. A13) once.
- If the safety edge is faulty, the blue flashing light will flash quickly and a special beep will be activated. The machine can continue to operate normally however.
- If the OFF reset button is not working correctly, use the emergency stop to reset the platform.



B - EVERY 50 HOURS SERVICE

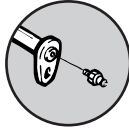
B1 - AXLES

GREASE

- Clean and then lubricate the following points with grease (see the "LUBRICANTS" chapter) and remove the surplus.

Key:

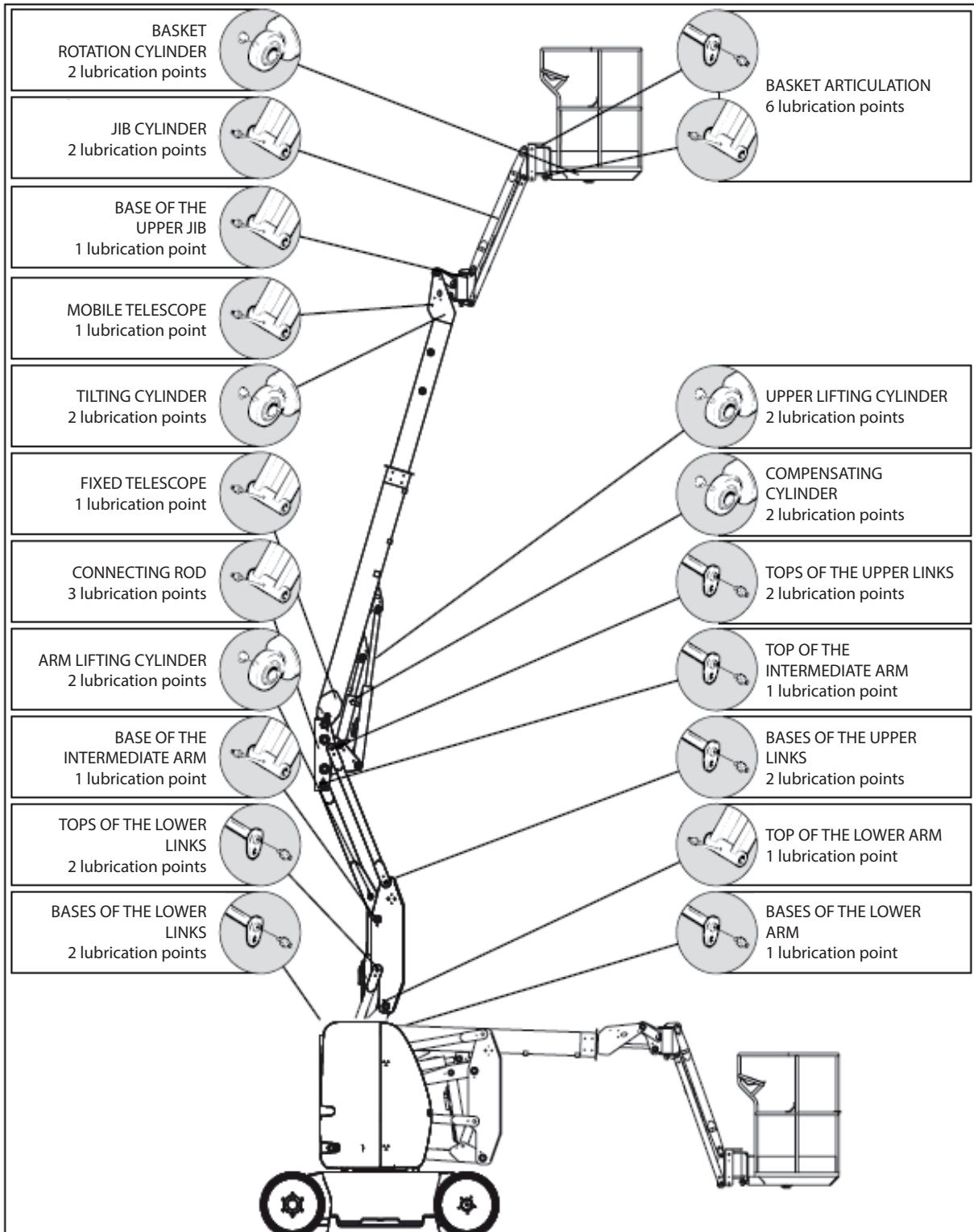
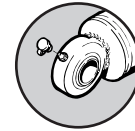
Shaft end:



Hub:



Ball joint:



B2 - TIGHTNESS OF THE WHEEL NUTS

CHECK

- Check the wheel nut tightening torques.



Failure to observe this instruction may cause the wheel studs to be damaged or broken, and the wheels to be deformed.

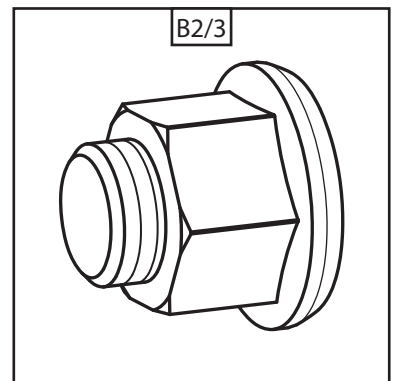
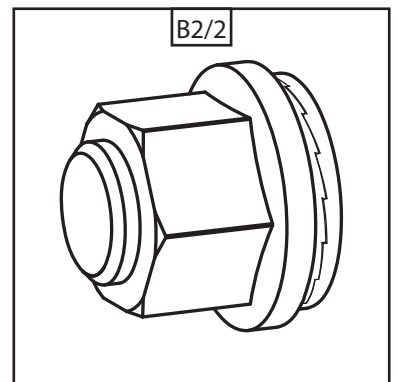
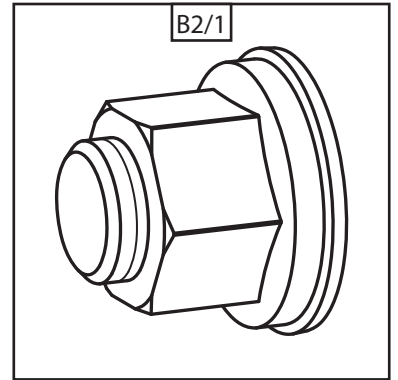
WHEEL NUT TIGHTENING TORQUES		
FRONT WHEELS	250 N.m ± 12 N.m	
REAR WHEELS	"DIN 74361 B" nuts + "Belleville" washers (Fig. B2/1)	160 N.m ± 8 N.m
	"DIN 74361 B" nuts + "Nord Lock" washers (Fig. B2/2)	160 N.m ± 8 N.m
	"DIN 74361 A" nuts without washers (Fig. B2/3)	140 N.m ± 7 N.m



Tightening protection: after tightening the nuts, place a drop of normal thread lock (MBF part no.: 187526) on the end of the studs.



It is highly recommended to replace the "Nord Lock" washers in the event of retightening or significant tightening.



B3 - EMERGENCY PUMP

CHECK

- Switch off the access platform.
- Check that the emergency pump is working correctly (See 2 - DESCRIPTION: RESCUE PROCEDURE)
- Perform a movement (e.g.: lower arm).



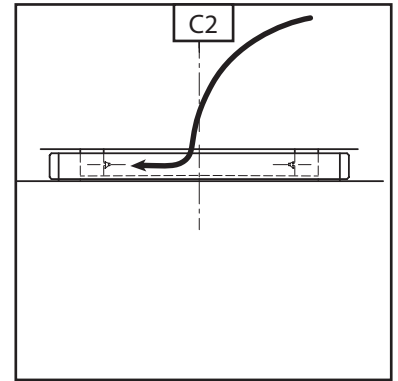
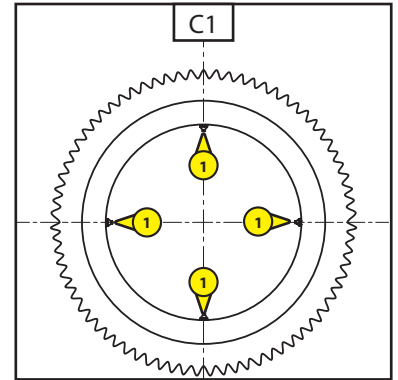
You must never use the lifting platform under any circumstances if the pump is not working.

C - EVERY 100 HOURS OPERATION

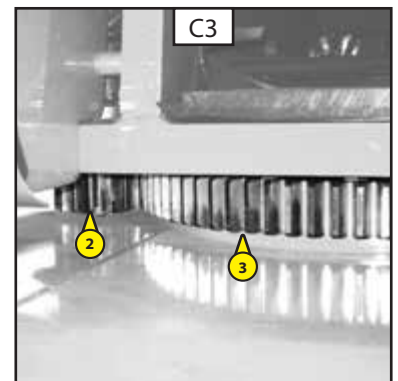
C1 - LUBRICATE THE TURNTABLE ORIENTATION CROWN GEAR

GREASE

- The bearing raceways must be greased and the teeth lubricated every 100 operating hours, as well as before and after a long period at a standstill.
- Grease to use: (see LUBRICANTS chapter)
- Lift the lower and upper arms high enough to enable access.
- Open the turntable covers.
- Access the 4 grease nipples 1 (Fig. C1) and thoroughly grease the crown gear by orienting the turntable (access to grease nipples shown in Fig. C2).



- Spray lubricant onto the teeth of crown gear 2 and pinion 3 (Fig. C3).
- Lubricant to use: (see LUBRICANTS chapter)



C2 - CHECK THE TIGHTENING OF THE SCREWS ON THE TURNTABLE ORIENTATION CROWN GEAR

CHECK

- The tightening of the screws should be checked at the latest after 50 hours of service. Then the check should be repeated every 100 hours of service.
- The theoretical tightening torque for the screws is $120 \text{ N.m} \pm 12 \text{ N.m}$

C3 - REAR WHEEL REDUCTION GEAR OIL

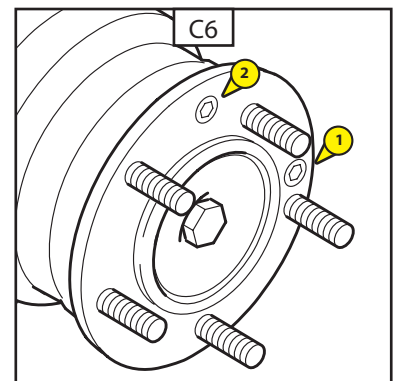
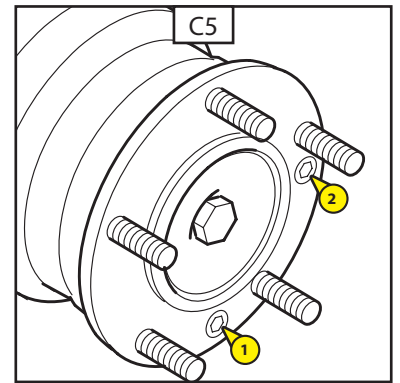
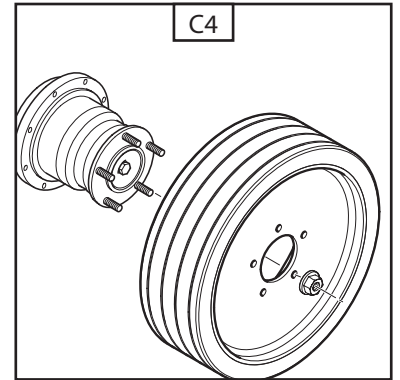
DRAIN - REPLACE

- Set the access platform on a horizontal surface in transport position, with the oil in the reducers still warm.
- Remove the rear wheels (Fig. C4).
- Position the drain plug 1 (Fig. C5) at the bottom.
- Place a container under the drain plug and unscrew the plug.
- Remove the cap 2 (Fig. C5) to assist drainage.
- Let the oil drain fully.



Dispose of the drain oil in an ecological manner.

- Bring the port 1 into position as shown (Fig. C6).
- Fill with oil (see the LUBRICANTS chapter) via the port 2 (Fig. C6).
- The level is correct when the oil is flush with the top of the filling hole 1 (Fig. C6).
- Refit and tighten the plugs 1 and 2 (Fig. C6).
- Refit the wheels (tightening: see B2).



C4 - HYDRAULIC OIL

DRAIN - REPLACE

C5 - HYDRAULIC CIRCUIT STRAINER

CLEAN

C6 - HYDRAULIC RETURN OIL FILTER CARTRIDGE

REPLACE

- Set the access platform on a horizontal surface in transport position.
- Open the distributor cover.

DRAINING THE OIL

- Place a container under drain plug 1 (Fig. C7) and unscrew the plug.
- Remove the filling cap 3 (Fig. C9) to assist draining.

CLEANING THE STRAINER

- Unscrew the strainer 2 (Fig. C8) in the tank and clean it using a compressed air jet.
- Re-insert the strainer in the tank.

REFILLING WITH OIL

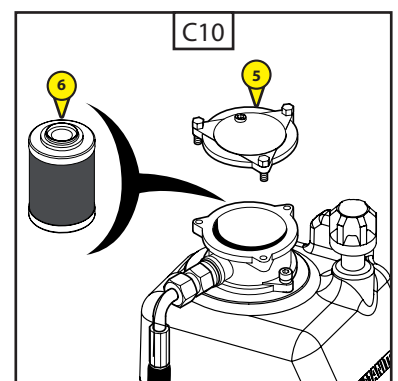
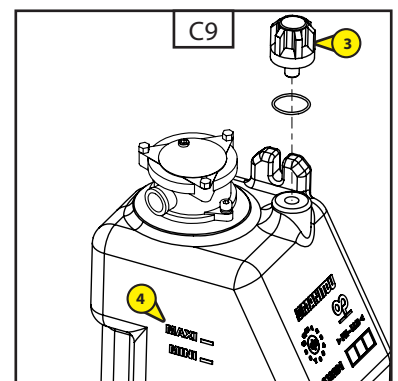
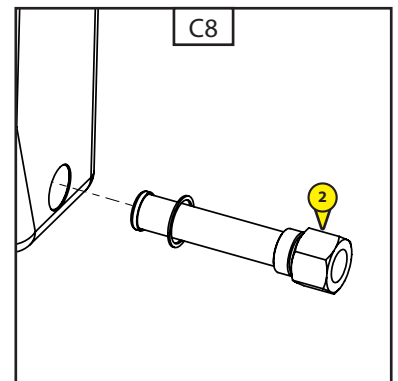
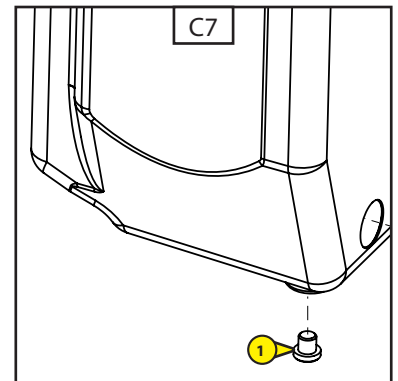
- Refit and tighten drain plug 1 (Fig. C7).
- Fill with hydraulic oil (see the LUBRICANTS chapter) via the filling hole 3 (Fig. C9).
- The oil level must be in the middle of the indicator 4 (Fig. C9).



Dispose of the drain oil in an ecological manner. Use a very clean container and funnel and clean the underside of the oil drum before filling.

REPLACING THE HYDRAULIC RETURN OIL FILTER CARTRIDGE

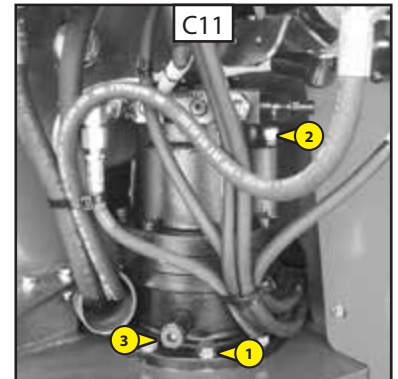
- Unscrew the three screws fastening down the cover 5 (Fig. C10).
 - Remove the filter cartridge 6 (Fig. C10) and replace it with a new one. (See "FILTER ELEMENTS" chapter).
- NOTE: Note the direction of assembly.
- Refit the cover 5 (Fig. C10) on the filter bracket.



C7 - CHECK THE TIGHTNESS OF THE TURNTABLE ROTATION MOTOR BOLTS

CHECK

- Set the access platform on a horizontal surface.
- Check the tightness of the nine bolts 1 (Fig. C11).
- The tightening torque for the bolts is $80 \text{ N.m} \pm 8 \text{ N.m}$



C8 - DRAIN THE TURNTABLE REDUCTION GEAR BRAKE/REDUCER

DRAIN - REPLACE

Set the access platform on a horizontal surface.

- Open the left-hand cowl.
- The reduction gear is presented with the valve block to the rear.
- Remove the filling-breather cap 2 (Fig. C11) to ensure proper drainage.
- Locate the drain plug 3 located on the reduction unit's sole plate (Fig. C11).
- Place a receptacle to retrieve the oil.
- Unscrew the drain plug.



Dispose of the drain oil in an ecological manner. Use a very clean container and funnel and clean the underside of the oil drum before filling.

C9 - OVERLOAD SENSORS

CHECK

- Fold the arms into transport position for this operation.
- Place a heavier weight than indicated in the basket (see 2 - DESCRIPTION: SPECIFICATIONS).
- The movements of extending the telescope and raising the arms must be blocked (the overload indicator light is lit in the basket and the vibrating buzzer is also permanently active in the basket).



Prohibit use of the access platform in the event of a malfunction. Contact your dealer.

D - EVERY 200 HOURS OF OPERATION

D1 - OVERLOAD

CHECK

- The overload must be activated between 1,1 and 1,2 times the rated load (see CHAPTER: 2 - General characteristics).

Required result:

- rated load 200 kg: active load between 220 kg and 240 kg

- The strain gauges must be activated at the same time.

◀ Refer to the repairs manual for the overload setting

D2 - STOPPING DISTANCE

CHECK

STOPPING DISTANCE ON HORIZONTAL GROUND:

- The stopping distance is checked on even ground with 1,1 times the rated load in the basket.
- Reach the maximum speed and then release the joystick.

Required result:

On horizontal ground	Stopping distance
Transport speed	1,000 mm + or - 200 mm
Working speed	70 mm + or - 30 mm

CHECKING THE BRAKES ON A SLOPE

- Put the access platform on a 20% slope gradient, static with 1.1 times the load in the basket.

Required result: the platform must not reverse within one minute.

D3 - MACHINE STICKERS

CHECK

- Check that the safety decals are in place (see 1 - SAFETY STICKERS).

E1 - BATTERY REPLACEMENT

REPLACE

When it is necessary to replace the battery, it is essential to use batteries of the same weight and capacity in order to ensure the machine's stability.



A traction battery is heavy (266 kg); a lifting system should therefore be used.

- PRECAUTION :
- Keep the battery quite straight while lifting it.
 - Ensure that you keep the slings apart to avoid a short-circuit.
 - Ensure that the battery is correctly positioned on the access platform.

If you are installing new batteries, recharge them 3-5 times after 3 to 4 hours of use.

Take into account the position of the access platform centre of gravity for lifting.
 - Place the hooks in the fastening points provided for this purpose.

- (A) Centre of gravity
- (B) Sling length
- (C) Slinging rings axis line

