



**MANITOU BF**  
**BP 10249**  
**44158 ANCENIS CEDEX - FRANCE**  
**TEL: 33 (0)2 40 09 10 11**

*YOUR DEALER*

547397 EN (22/11/2010)

**LIFTING PLATFORMS**

**80 VJR EVOLUTION**

**100 VJR EVOLUTION**

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



## *Foreword*

---

The manual is intended to explain the how to operate the lifting platform and the maintenance that must be performed periodically to ensure that the platform remains in a completely safe and operational condition.

The platform has been designed and produced to enable you to perform your overhead work completely safely.

Before it was delivered, MANITOU and the dealer have carefully inspected the platform so that it comes to you in perfect working order.

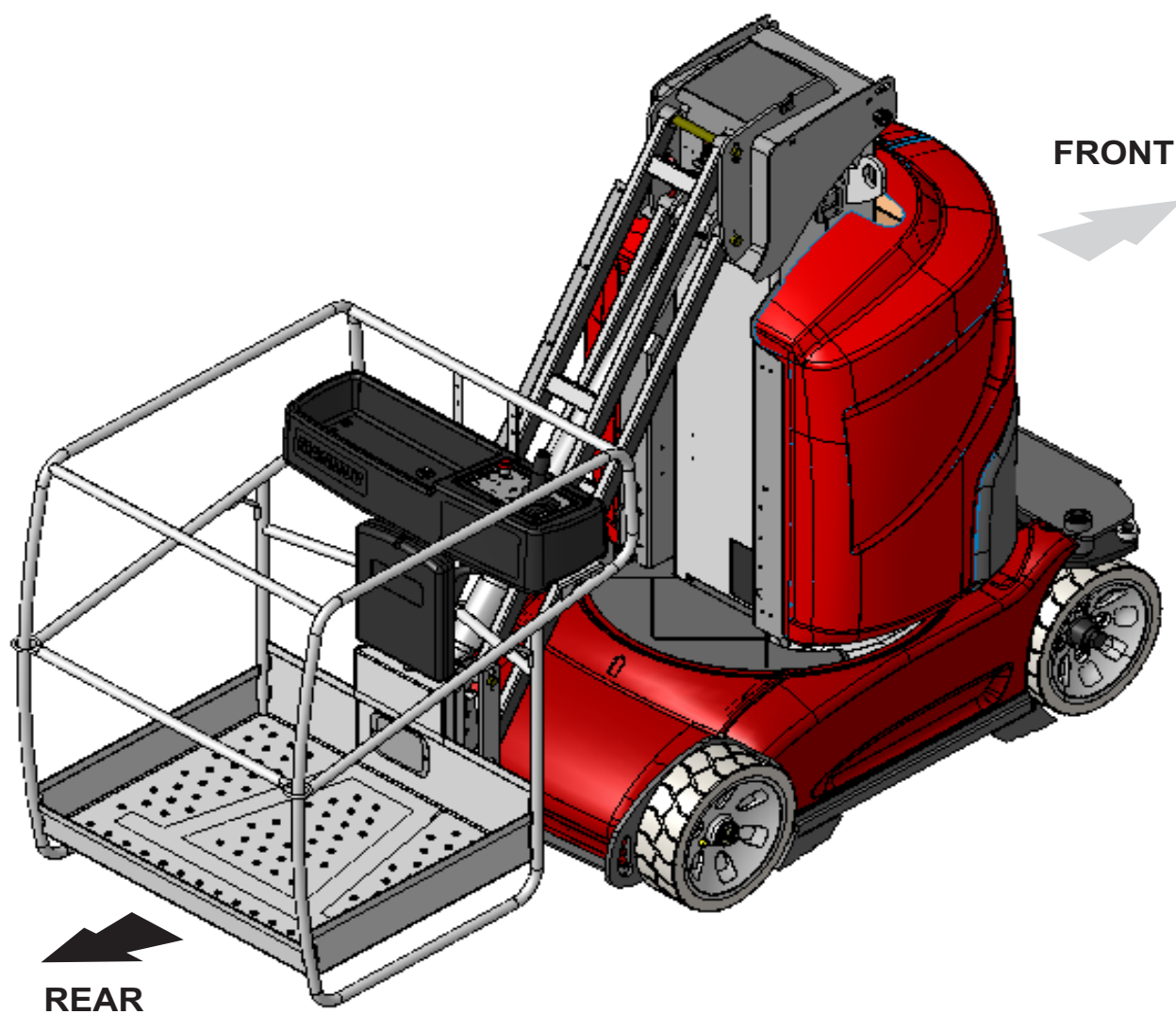


## 1 - INSTRUCTIONS AND SAFETY ADVICE

## 2 - DESCRIPTION

## 3 - MAINTENANCE

10/10/2008	1st PUBLICATION DATE
27/01/2009	UPDATE OF SECTIONS
28/08/2009	DELETION § 4 (REPLACE BY 720327EN)
31/08/2009	UPDATE 1-4 <-> 1-19 ; 2-4 ; 2-5 ; 2-8 ; 2-9 ; 3-5
22/11/2010	UPDATE 2-33





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



## TABLE OF CONTENTS

<i>INSTRUCTIONS TO THE COMPANY MANAGER</i>	<b>1-4</b>
<b>PREAMBLE</b>	<b>1-4</b>
<b>Le SITE</b>	<b>1-4</b>
<b>THE OPERATOR</b>	<b>1-4</b>
<b>THE PLATFORM</b>	<b>1-4</b>
<b>THE INSTRUCTIONS</b>	<b>1-5</b>
<b>THE MAINTENANCE</b>	<b>1-5</b>
<i>INSTRUCTIONS FOR THE OPERATOR</i>	<b>1-6</b>
<b>PREAMBLE</b>	<b>1-6</b>
<b>GENERAL INSTRUCTIONS</b>	<b>1-6</b>
<b>DRIVING INSTRUCTIONS</b>	<b>1-8</b>
<b>INSTRUCTIONS FOR WELDING AND BLOW TORCH WORK ON THE EXTERNAL STRUCTURE</b>	<b>1-15</b>
<i>PLATFORM MAINTENANCE INSTRUCTIONS</i>	<b>1-16</b>
<b>GENERAL INSTRUCTIONS</b>	<b>1-16</b>
<b>MAINTENANCE</b>	<b>1-16</b>
<b>LUBRICANT AND FUEL LEVELS</b>	<b>1-16</b>
<b>LEVEL OF ELECTROLYTE IN THE BATTERY</b>	<b>1-16</b>
<b>HYDRAULIC</b>	<b>1-17</b>
<b>ELECTRICITY</b>	<b>1-17</b>
<b>WELDING ON THE ACCESS PLATFORM</b>	<b>1-17</b>
<b>WASHING THE PLATFORM</b>	<b>1-17</b>
<i>IF THE PLATFORM IS NOT TO BE USED FOR A LONG TIME</i>	<b>1-18</b>
<b>INTRODUCTION</b>	<b>1-18</b>
<b>PREPARING THE PLATFORM</b>	<b>1-18</b>
<b>PROTECTING THE I.C. ENGINE</b>	<b>1-18</b>
<b>CHARGING THE BATTERIES</b>	<b>1-19</b>
<b>PROTECTING THE PLATFORM</b>	<b>1-19</b>
<b>BRINGING THE PLATFORM BACK INTO SERVICE</b>	<b>1-19</b>
<b>SAFETY DECALS</b>	<b>1-20</b>

## INSTRUCTIONS TO THE COMPANY MANAGER

### PREAMBLE

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



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

### THE SITE

- Good personal control of the lifting platform's operating area reduces the risk of accidents:
  - The floor must not be unnecessarily broken or cluttered,
  - No excessive slopes,
  - Controlled pedestrian traffic, etc.

### THE OPERATOR

- Only qualified, authorized personnel can use the platform. This authorization is given in writing by the appropriate person in the establishment with respect to the use of platform and must be carried permanently by the operator.

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

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



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

- Behaviour resulting from application of the "principle of least action" when performing a task.
- For certain machines, the foreseeable behaviour of such persons as : apprentices, teenagers, handicapped persons, trainees tempted to drive a platform, operator tempted to operate a truck to win a bet, in competition or for their own personal experience.
- The person in charge of the equipment must take these criteria into account when assessing whether or not a person will make a suitable driver.

**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).

### THE PLATFORM

#### A - THE PLATFORM'S SUITABILITY FOR US

- 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 standardised norm EN 280 for MPLP (Mobile Personnel Lifting Platforms).

Before commissioning, the company manager must make sure that the platform is appropriate for the work to be done, and perform certain tests (in accordance with current legislation).

#### B - ADAPTATING THE PLATFORM TO THE USUAL ENVIRONMENTAL CONDITIONS

- In addition to series equipment mounted on your platform, many options are available, such as : flashing light, working headlight, etc.  
Contact your dealer.
- Take into account climatic and atmospheric conditions of the site of utilisation.
  - Protection against frost (see chapter 3 - MAINTENANCE, LUBRICANTS page).
  - Adaptation of lubricants (ask your dealer for information).
  - I.C. engine filtration (see chapter 3 - MAINTENANCE, FILTER ELEMENTS page).





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

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



Your platform is designed for outdoor use (see chapter: 2 - DESCRIPTION, CHARACTERISTICS 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 inflammable products...). For use in these areas, specific equipment is available (ask your dealer for information).

### **C - 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 (hydraulic pressure, calibrating limiters, I.C. engine speed, addition of extra equipment, addition of counterweight, unapproved attachments, alarm systems, etc.) yourself. In this event, the manufacturer cannot be held responsible.
- Your lifting platform is delivered with standard wheels or all-terrain wheels. It is FORBIDDEN to switch from one type of wheels to another: RISK OF THE LIFTING PLATFORM BECOMING UNSTABLE.

## **THE 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 necessarily replace the instructions manual, as well as any plates or stickers, if they are no longer legible or are missing or damaged.

## **THE MAINTENANCE**

---

- Maintenance or repairs other than those detailed in the 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 current legislation in the country in which the platform is use

- Example for France : The manager of the compagny using the platform must set up a maintenance book for each machine and keep up-to-date (Ministerial Order of 2nd March 2004).

## INSTRUCTIONS FOR THE OPERATOR

### PREAMBLE

**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 instruction.

- Only the operations and manœuvres described in these operator's manual must be performed. The manufacturer cannot predict all possible risky situations. Consequently, the safety instructions given in the operator's manual and on the platform itself are not exhaustive.
- At any time, as an operator, you must envisage, within reason, the possible risk to yourself, to others or to the 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 must necessarily be forbidden right from the start.
- Follow the safety advice and the instructions on the platform.
- Ypu 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 necessarily be present on the ground as a safety measure when using the platform.
- Familiarise yourself with the platform on the terrain it has to travel over.
- The machine must also be used in accordance with good engineering practice.
- Do not use the platform if the wind speed is 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 - AUTHORIZATION FOR USE IN FRANCE (OR SEE CURRENT LEGISLATION IN OTHER COUNTRIES)

- Only qualified, authorized personnel may use the platform. This authorization is given in writing by the appropriate person in the company, in charge of using the platform, and must be permanently carried 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 the chapter : 2 - DESCRIPTION : CHARACTERISTICS pages). 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 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,
  - I.C. engine speed,
  - addition of extra equipment,
  - addition of counterweight,,
  - unapproved attachments,
  - alarm systems, etc...
- In this event, the manufacturer cannot be held responsible.



Your lifting platform is delivered with standard wheels or all-terrain wheels. It is FORBIDDEN to switch from one type of wheels to another: RISK OF THE LIFTING PLATFORM BECOMING UNSTABLE.

## E - IC PLATFORM AXLES

### - STANDARD AXLE :



The chassis is rigid, so the platform can have a ground reach on only three wheels.

### - OSCILLATING AXLE (IF THIS OPTION IS AVAILABLE) :



An oscillating axle enables the platform, when in transport position, to have a ground reach on four wheels. When moving in working position over uneven terrain, the oscillating axle is locked (the chassis is rigid) so the platform can have a ground reach 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 paragraph : before starting the platform for the first time in Chapter : 1 - safety advice and instructions.
- Carry out daily maintenance (see chapter 3 - MAINTENANCE, A - DAILY pages).
- Before starting the platform, check the levels
 

<ul style="list-style-type: none"> <li>• IC PLATFORMS :</li> <li>• IC engine oil</li> <li>• Hydraulic reservoir oil</li> <li>• Fuel</li> <li>• Coolant</li> </ul>	<ul style="list-style-type: none"> <li>• ELECTRIC PLATFORMS :</li> <li>• Hydraulic reservoir oil</li> <li>• Battery charge level</li> </ul>
---	---
- The lifting 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 you use the lifting platform that the access door is properly locked.

### **B - DRIVER'S OPERATING INSTRUCTIONS**

- Whatever his experience, the operator is advised to familiarize himself with the position and operation of all the controls and instruments before operating the 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.
- Always pay attention when using the platform. Do not listen to the radio or music using headphones or earphones
- For increased comfort, adopt the correct position in the driver's cab.
- The operator must always be in his normal position in the driver's seat : extending arms or legs (or, in general, any part of the body), outside the basket is forbidden.
- 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, coat-rack, 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).
- The platform must not be fitted with any accessory increasing the machine's wind profile.
- 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 use the lifting platform with wet or greasy hands and shoes.

### **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 do this, mark your operating area with warning signs.
- Travelling on a longitudinal slope :
  - Ensure that you adapt the platform's travelling speed by controlling the speed with the travelling manipulator.
- 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 platform is prescribed for the size and the total weight of the platform.
  - That the slope 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 land and manholes.
- Ensure that the ground under the wheels and/or stabilisers is firm and stable before raising the basket. If necessary, place suitable chocks under the stabilisers.
- Do not attempt any operations outside the platform's capabilities.
- Ensure that the materials on the platform (pipes, cables, containers, etc ...) cannot slip off and fall. Do not heap up these materials to the point where you have to step over them.

If the basket must remain stationary over a structure for a long period, there is a risk that the basket will rest on this structure because of the oil cooling in the cylinders or a minor leak in the cylinder locking system.



To eliminate this risk :

- Regularly check the distance between the basket and the structure and re-adjust if necessary.
- If possible use the platform at an oil temperature as close as possible to ambient temperature.

- In the case of work near aerial lines, ensure that the safety distance is sufficient between the working area of the 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 comes into contact with electric wires, press the Emergency Stop button. If you can, jump from the basket without simultaneously being in contact with the basket and the ground.  
If not, call for help, warn people not to touch the basket and to switch off the power supply to the wires or have it switched off.

- It is forbidden to use the lifting platform close to electrical power lines; observe the safety distances.

NOMINAL VOLTAGE IN VOLTS	DISTANCE ABOVE THE GROUND OR THE FLOOR IN METRES
50 < U < 1000	2,30 M
1000 < U < 30000	2,50 M
30000 < U < 45000	2,60 M
45000 < U < 63000	2,80 M
63000 < U < 90000	3,00 M
90000 < U < 150000	3,40 M
150000 < U < 225000	4,00 M
225000 < U < 400000	5,30 M
400000 < U < 750000	7,90 M



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

- To recognise this speed by eye, please refer to the empirical wind evaluation scale below:

BEAUFORT scale (wind speed at a height of 10m over flat terrain)						
Degree	Type of wind	Speed (knots)	Speed (km/h)	Speed (m/s)	Ground effects	Sea conditions
0	Calm	0 - 1	0 - 1	< 0,3	Smoke rises vertically.	The sea is like a mirror.
1	Very light breeze	1 - 3	1 - 5	0,3 - 1,5	The smoke drift indicates the wind direction.	Some wavelets, like fish scales, but no foam.
2	Light breeze	4 - 6	6 - 11	1,6 - 3,3	Wind felt on exposed skin, leaves rustle.	Small but noticeable wavelets.
3	Gentle breeze	7 - 10	12 - 19	3,4 - 5,4	Leaves and small twigs constantly moving.	Very small waves, crests beginning to break.
4	Moderate breeze	11 - 16	20 - 28	5,5 - 7,9	The wind raises dust and scraps of paper, it moves small branches.	Small waves with breaking crests, frequent white horses.
5	Fresh breeze	17 - 21	29 - 38	8 - 10,7	Small trees in leaf start to sway.	Wavelets form on stretches of water, moderate waves of some length.
6	Strong breeze	22 - 27	39 - 49	10,8 - 13,8	Large branches are moved, overhead wires whistle, umbrella use becomes difficult.	Waves form with white foam crests and airborne spray.
7	High wind	28 - 33	50 - 61	13,9 - 17,1	Whole trees are moving, effort required to walk against the wind.	The sea heaps up; some foam from breaking waves is blown into streaks in the wind direction.
8	Gale	34 - 40	62 - 74	17,2 - 20,7	The wind breaks off twigs, walking against the wind is very difficult.	Moderate height longer waves with breaking crests forming spindrift.
9	Strong gale	41 - 47	75 - 88	20,8 - 24,4	The wind damages roofs (chimneys, tiles, etc.).	Large waves, dense spindrift wrenched from the waves, airborne spray reducing visibility.
10	Storm	48 - 55	89 - 102	24,5 - 28,4	Rarely seen on land, trees uprooted, dwellings incur significant damage.	Very large waves, foam forming large amounts of airborne spray, reducing visibility.
11	Violent storm	56 - 63	103 - 117	28,5 - 32,6	Very rare, extensive damage.	Waves of exceptional height capable of sinking medium-sized ships, reduced visibility.
12	Hurricane	64 +	118 +	32,7 +	Disastrous damage.	Sea completely white, air full of spray and foam, severely reduced visibility.

**D - VISIBILITY**

- Maintain permanently good visibility throughout the route. To increase your visibility, you can move forwards with the pendular arm slightly raised (pay attention to the risk of falls in the basket from knocking into a low doorway, overhead electric wires, travelling cranes, highway bridges, tracks or any obstacle in the area in front of the platform). In reverse, look directly behind you. In any case, avoid reversing over 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.

## E - STARTING THE PLATFORM

### PLATFORMS WITH IC ENGINES

---

#### SAFETY NOTICE

- Do not pull or push the lifting platform to start it. This type of manoeuvre would cause severe damage to the transmission. In cases of necessity, towing requires that the lifting platform be placed in freewheeling mode (See chapter 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 notch I to switch on the electrical power, which automatically starts the pre-heating 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, CHECKING AND CONTROL INSTRUMENTS pages).
- Turn the ignition key to notch II to start.
- Release the ignition key and let the engine run at tick-over speed.
- Do not engage the starter motor for more than 15 seconds and carry out the preheating for 10 seconds between unsuccessful attempts.
- Check all control instruments when the I.C. engine is warm and at regular intervals during use, so as to quickly detect any faults and to be able to correct them without any delay.
- If any faults are displayed on the screen, stop the engine and immediately take the necessary measures.

### ELECTRIC PLATFORMS

---

#### SAFETY NOTICE

- 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 : EVERY DAY OR EVERY 10 HOURS FOR OPERATION pages, for the minimum permissible charge level).

#### INSTRUCTIONS

- Set the battery cut-out 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).

NB: 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 size, 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.



## F - DRIVING THE PLATFORM

### SAFETY NOTICE



Operators should be aware of the risks connected with using the platform, notably:

- Risk of losing control.
  - Risk of losing 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 (land configuration, load in the basket).
- Take extreme care if manoeuvring the platform with the basket in the high position. Ensure you have adequate 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 form of steering is very sensitive to movements.
- Never leave the I.C. 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 lifting platform must work in an obstacle-free area, where there is no danger descending to the ground.
- The operator using the lifting platform must be assisted by an appropriately instructed person on the ground.
- Comply with the limits shown on the lifting platform's load graph.

### 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 at less than one meter from the track of a railway.
- In the event of prolonged parking on a site, protect the platform from bad weather, particularly from frost (check the level of antifreeze), close and lock all the platform accesses (cowls...).
- Park the lifting platform on a flat surface or on a slight slope of less than 10%.

## INSTRUCTIONS

---

**PLATFORMS WITH IC ENGINES**

---

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



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

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

---

**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-out to the OFF position (ELECTRIC PLATFORM).

## ***INSTRUCTIONS FOR WELDING AND BLOW TORCH WORK ON THE 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 ELECTRIC WELDING EQUIPMENT**

- It is essential that the machine has a discharge braid connecting the platform's chassis to the ground.
- It is also essential that the external structure to be welded is connected to the earth. 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 an earthed socket and any extension required just also be earthed.
- In all cases, ensure that there are no electrical arcs in the basket or on the platform (contact between the brazing rod or the torch and the welding equipment's earth). To ensure this, at any time the welding equipment's earth must not be positioned on the platform's basket but instead only as close as possible to the element to be welded.
- Switch off the welding equipment before disconnecting the earth 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.
- Instructions for welding and blow torch work on the external structure
- 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

---

- Ensure the area is sufficiently ventilated before starting the platform.
- Wear clothes suitable for the maintenance of the platform, avoid wearing jewellery and loose clothes. Tie and protect your hair, if necessary.
- Stop the I.C. engine before conducting any work on the platform, remove the ignition key and disconnect the "Minus" battery terminal.
- Set the battery cut-out 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.
- Make sure that the disposal of process materials and of spare parts is carried out in total safety and in a ecological way.
- Be careful of the risk of burning and splashing (exhaust, radiator, I.C. engine, etc.).

### MAINTENANCE

---

- Perform the periodic service (see : 3 - MAINTENANCE) to keep your platform in good working conditions. Failure to perform the periodic service may cancel the contractual guarantee.

#### MAINTENANCE LOG

- The maintenance work performed following the recommendations in Part 3 - MAINTENANCE and the other inspection, servicing, repair and modification work performed on the lifting platform must be recorded in a maintenance log. A note must be made, for each operation, of the date of the work, the names of the persons or companies that have performed them, the nature of the 'operation and, where applicable, the maintenance intervals. When components in the lifting platform have to be replaced, the components' references must be noted.

### LUBRICANT AND FUEL LEVELS

---

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

### LEVEL OF ELECTROLYTE IN THE BATTERY

---

- Check the level of the battery or batteries.



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

## **HYDRAULIC**

---

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



**BALANCING VALVE** : It is dangerous to change the setting and remove the balancing valves or safety valves which may be fitted to your 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 can be fitted on your lifting platform are pressurised components; removal of these components and their hoses can be a dangerous operation. It should only be performed by accredited personnel (please contact 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 authorized 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 equipment directly to the part being welded, so as to avoid high tension current passing through the alternator or the live 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.

## **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...).
- 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 INTERVENTION OTHER THAN REGULAR MAINTENANCE,  
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 VACUOUS AND IN LOAD DRIVING INSTRUCTIONS).
- Make sure the cylinder rods are all in retracted position.
- Release the pressure in the hydraulic circuits.

### PROTECTING THE I.C. ENGINE

- Fill the tank with fuel (see : 3 - MAINTENANCE).
- Empty and replace the cooling liquid (see : 3 - MAINTENANCE).
- Leave the I.C. engine running at idling speed for a few minutes, then switch off.
- Replace the I.C. engine oil and oil filter (see : 3 - MAINTENANCE).
- Add the protective product to the engine oil.
- Run the I.C. engine for a short time so that the oil and cooling liquid circulate inside.
- Disconnect the battery and store it in a safe place away from the cold, after charging it to a maximum.
- Remove the injectors and spray the protective product into each cylinder for two seconds with the piston in low neutral position.
- Turn the crankshaft once slowly and refit the injectors (see I.C. engine REPAIR MANUAL).
- Remove the intake hose from the manifold or turbocharger and spray the protective product into the manifold or turbocharger.
- Cap the intake manifold hole 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 with waterproof adhesive tape.

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

- Open the filler plug, spray the protective product around the rocker arm shaft and refit the filler plug.
- Cap the fuel tank using waterproof adhesive tape.
- Remove the drive belts and store them in a safe place.
- Disconnect the engine cut-off solenoid on the injection pump and carefully insulate the connection.

### ***CHARGING THE BATTERIES***

---

- 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 will not be retracted, from corrosion.
- Wrap the tyres.

NB : If the platform is to be stored outdoors, cover it with a waterproof tarpaulin.

### ***BRINGING THE PLATFORM BACK INTO SERVICE***

---

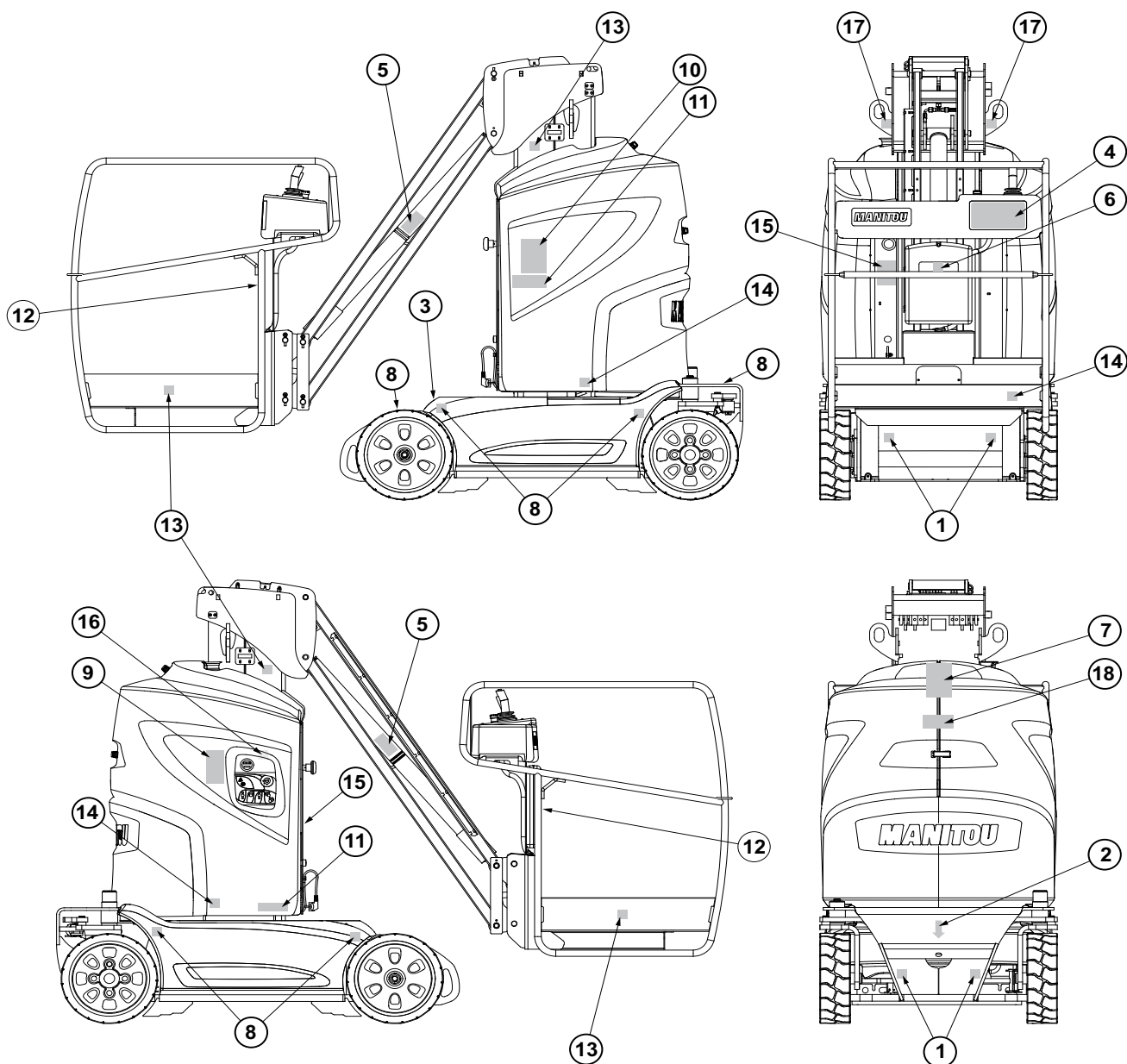
- Remove the waterproof adhesive tape from all the holes.
- Refit the intake hose.
- Reconnect the engine cut-off solenoid.
- Refit and reconnect the battery.
- Remove the protection from the cylinder rods.
- Perform the daily service (see : 3 - MAINTENANCE)
- Empty and replace the fuel and replace the fuel filter (see : 3 - MAINTENANCE).
- Refit and set the tension in the drive belts (see : 3 - MAINTENANCE).
- Turn the I.C. engine using the starter, to allow the oil pressure to rise.
- Lubricate the platform completely (see : 3 - MAINTENANCE, MAINTENANCE TABLE).



**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.

## SAFETY LABELS





## ***DESCRIPTION***

---

- 1 - TIE-DOWN HOOK**
- 2 - WHITE ARROW**
- 3 - BLACK ARROW**
- 4 - BASKET INSTRUCTIONS / LOAD CAPACITY**
- 5 - SAFETY VALVE**
- 6 - LOCATION OF THE PLATFORM KEY**
- 7 - REPLACING THE BATTERIES**
- 8 - WHEEL LOAD**
- 9 - SAFETY INSTRUCTIONS / WASHING / LOADING AND UNLOADING**
- 10 - MANUAL CONTROL PROCEDURE**
- 11 - TELESCOPE MANUAL CONTROL PROCEDURE**
- 12 - SAFETY ATTACHMENTS**
- 13 - DANGER, RISK OF CRUSHING**
- 14 - DANGER, KEEP AWAY**
- 15 - BATTERY SAFETY**
- 16 - FREEWHEELING**
- 17 - LIFTING HOOK**
- 18 - MANUAL PUMP LEVER**

## MEANINGS

### 1 - TIE-DOWN HOOK

This sticker shows the location of the anchoring points for tying the platform on a lorry bed.



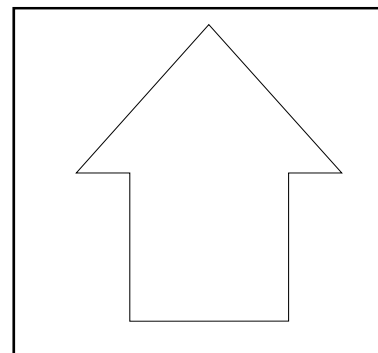
### 2 - WHITE ARROW

This indicates the translation direction when moving forward.



When the turret assembly, arm structure and the basket are rotating 180° with respect to the chassis, the translation controls are reversed.

Identify the forward motion direction by looking at the arrows on the chassis and those on the basket control console.

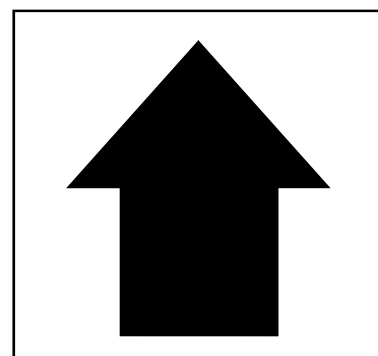


### 3 - BLACK ARROW

This indicates the translation direction when moving reversing.



Same as for the white arrow.

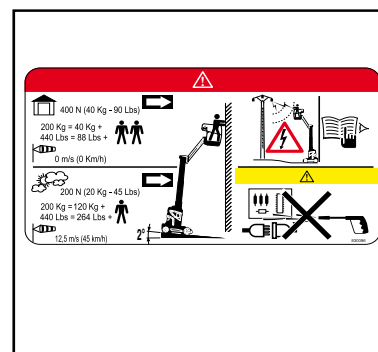


### 4 - BASKET INSTRUCTIONS AND LOAD CAPACITY

This describes several points:

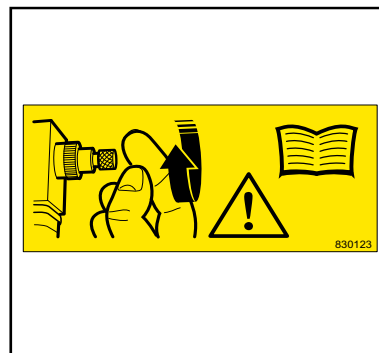
- The platform's capacity in indoor and outdoor use.
- The risks of electric shocks.
- An invitation to check the instructions for more details on the safety instructions.
- A prohibition on using a high-pressure water jet on the control buttons and electrical components.

NOTE: The capacities are individual to each platform; please refer to this sticker for your own machine.



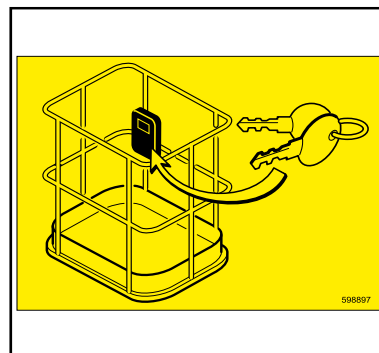
## 5 - SAFETY VALVE

This sticker shows the location of the safety valve on the pendular arm.



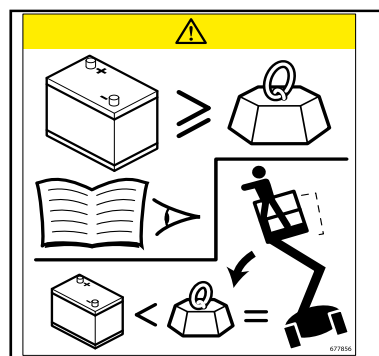
## 6 - LOCATION OF THE PLATFORM KEY

The duplicate platform keys (ignition, control selection, cover-opening keys...) are stored in this location specially provided.



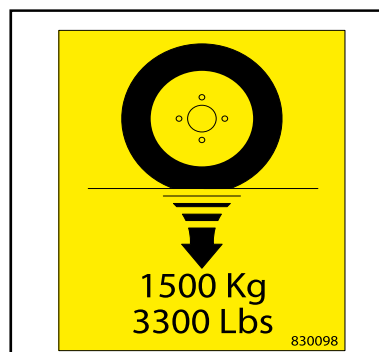
## 7 - REPLACING THE BATTERIES

This indicates that the weight of any new batteries must not exceed that of those you are replacing. If this instruction is not followed, the platform's stability will be compromised.



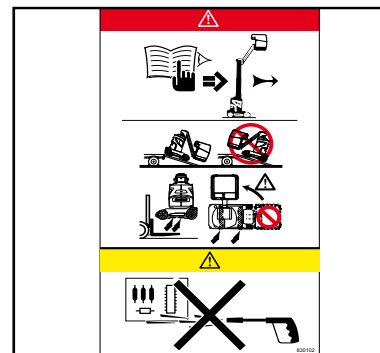
## 8 - WHEEL LOAD

This indicates the maximum load on one wheel and the load that the wheel will exert on the floor (see Section 2 - DESCRIPTION, CHARACTERISTICS pages for the stamped value).



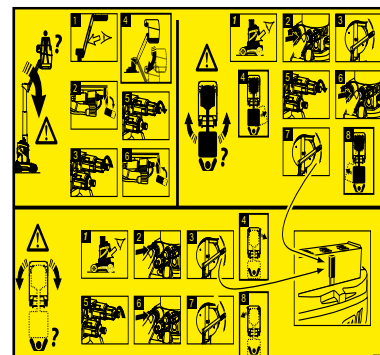
## 9 - SAFETY, WASHING, LOADING AND UNLOADING INSTRUCTIONS

This sticker indicates that the safety and use instructions must be read before starting the platform. It is strictly forbidden to play a high-pressure jet over the control knobs or any of the electrical components and it is essential to observe the raising /lowering direction on ramps when loading the vehicles.



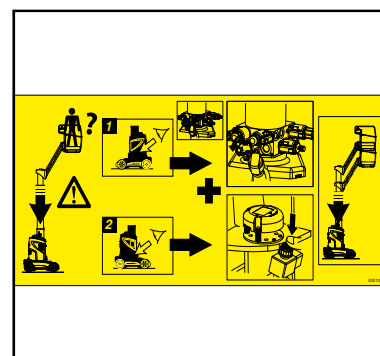
## 10 - MANUAL CONTROL PROCEDURE

This describes the procedure for turning the turret and locking the wheels with the emergency pump and the manual controls, if an accident or breakdown occurs.



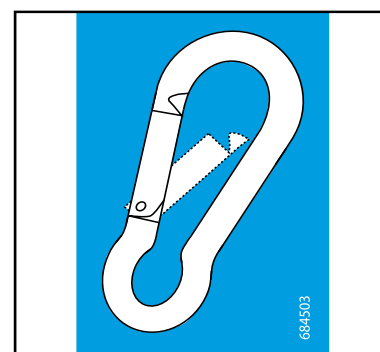
## 11 - TELESCOPE MANUAL CONTROL PROCEDURE

Describes the procedure for the telescope with a manual control, if an accident or breakdown occurs.



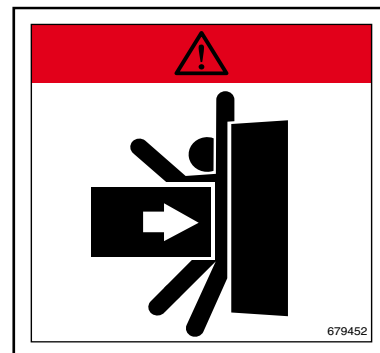
## 12 - SAFETY ATTACHMENTS

This sticker shows the location of the points for attaching the safety harness.



### 13 - DANGER, RISK OF CRUSHING

It is strictly forbidden to park in this area when the lifting platform is in motion (rotating, etc.). The elements on which the stickers are affixed could collide with you, with the risk of crushing you.



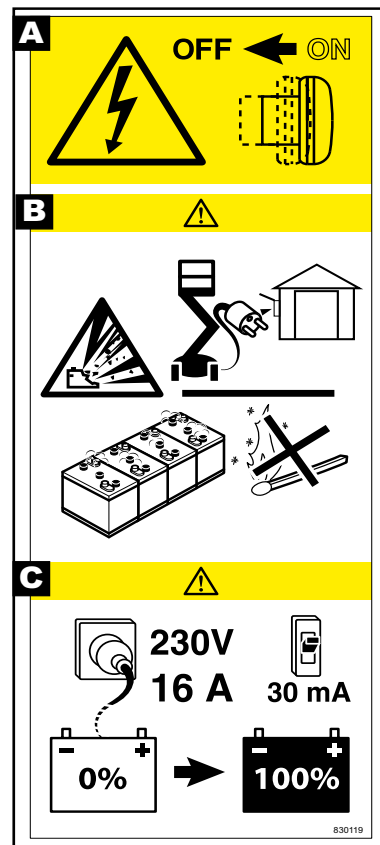
### 14 - DANGER, KEEP AWAY

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



### 15 A - BATTERY CUT OUT

This indicates the position of the battery cut out and its effect:  
Position OFF: the current does not pass.  
Position ON: the current passes.



### 15 B - DANGER: BATTERY CHARGING

This describes three points:

- The risks of explosion when the batteries are being charged.
- The batteries must be charged outdoors or in a well-ventilated area.
- The risk of explosion during charging, because of a spark, a flame or a short-circuit.



No smoking close to the platform while the batteries are charging

### 15 C - 230 VOLT 16A OUTLET

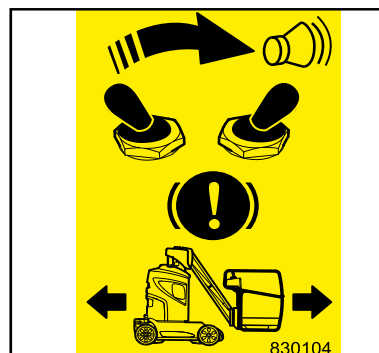
This informs you that in order to charge the batteries, you must connect the charger to a socket supplying 230V with an intensity of 16 Amps.



The socket must be protected with a differential breaker protected by a 30mA fuse.

## 16 - FREEWHEELING

This sticker signifies that the machine can be put in freewheeling mode.



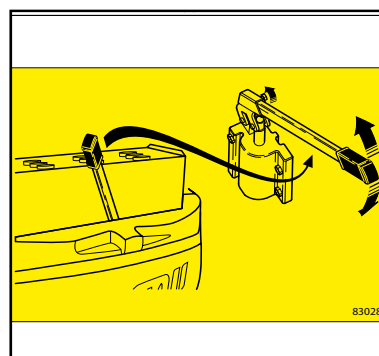
## 17 - CRANE HOOK

This sticker shows the location of the attachment points for moving the platform with a crane.



## 18 - LEVER FOR MANUAL PUMP

This sticker shows the location of the emergency manual pump lever.





## **2 - DESCRIPTION**





## CONTENTS

<b>« EC » DECLARATION OF CONFORMITY</b>	<b>2-4</b>
<b>IDENTIFICATION OF THE LIFTING PLATFORM</b>	<b>2-6</b>
<b>CHARACTERISTICS</b>	<b>2-7</b>
<b>DIMENSIONS 80 VJR EVOLUTION</b>	<b>2-10</b>
<b>DIMENSIONS 100 VJR EVOLUTION</b>	<b>2-12</b>
<b>HOW TO OPERATE THE LIFTING PLATFORM</b>	<b>2-14</b>
<b>CONTROLS AND INSTRUMENTS</b>	<b>2-16</b>
<b>CONTROL STATION ON THE PLATFORM</b>	<b>2-18</b>
<b>GROUND-LEVEL MAINTENANCE AND EMERGENCY STATION</b>	<b>2-20</b>
<b>BASKET COMMAND AND CONTROL STATION</b>	<b>2-24</b>
<b>HOW TO USE THE LIFTING PLATFORM</b>	<b>2-27</b>
<b>RESCUE PROCEDURE</b>	<b>2-30</b>
<b>FREEWHEELING PROCEDURE</b>	<b>2-32</b>
<b>ACTIVATING THE OPTIONS</b>	<b>2-33</b>

« EC » DECLARATION OF CONFORMITY

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

2) La société, **The company** : MANITOU BF

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

4) Dossier technique, **Technical file** : MANITOU BF - 430, rue de l'Aubinière  
BP 10249 - 44158 - ANCENIS CEDEX - FRANCE

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

80 VJR Evolution & 100 VJR Evolution

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

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

2006/42/CE

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

9) Numéro d'attestation, **Certificate number** : 0526 5179 760 12 09 4957

10) Organisme notifié, **Notified body** : CETIM NB N° 0526

52 avenue Felix Louat - BP 80067  
60304 SENLIS CEDEX FRANCE

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

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

17) Fait à, **Done at** : Ancenis

18) Date, **Date** : 29/12/2009

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

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

21) Signature, **Signature** :

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

## IDENTIFICATION OF THE LIFTING PLATFORM

In view of our policy of constantly improving our products, we may make certain modifications to our lifting platform range without notifying our customers in advance.

When placing any order for replacement parts or requesting any technical information, always specify:

NB: We recommend that you write these numbers down in the places provided when you receive the lifting platform so that you can pass them on more easily when required.

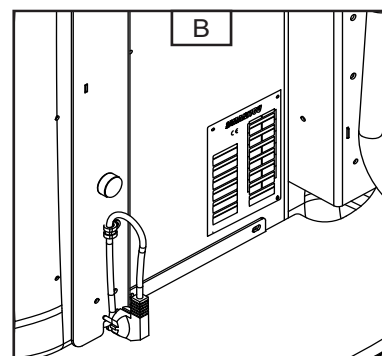
### LIFTING PLATFORM MANUFACTURER'S PLATE ( FIG.A)

- Type :
- Serial No. :
- Year of manufacture :

A	
<b>MANITOU</b>	
MANITOU BF 44138 ANCENIS CEDEX FRANCE	
MODELE MODEL	INTERIEUR INSIDE
N° dans la série Serial no.	EXTERIEUR OUTSIDE
Année de fabrication Year of manufacture	Charge maxi Max. load
Masse à vide Empty weight	kg
Puissance Power	kg
Tension Voltage	N° personnes maxi Max. no of persons
VDC	Equipement Attachment
	kg
	Forces manuelles Manual forces
	daN
	daN
	Inclinaison maxi Max. tilt
	°
	Vitesse maxi du vent Max. wind speed
	m/s
	m/s
	Source électrique ext Ext. electrical source
	Volts
	N° 830122

### LOCATION OF THE MANUFACTURER'S PLATE (FIG. B)

The manufacturer's plate is fastened on the upright of the telescope.



## CHARACTERISTICS

### ELECTRIC PUMP

- Power supply	24V
- Power	2.2 kW
- Capacity	4.8 cm <sup>3</sup>

### ELECTRIC WHEEL MOTORS

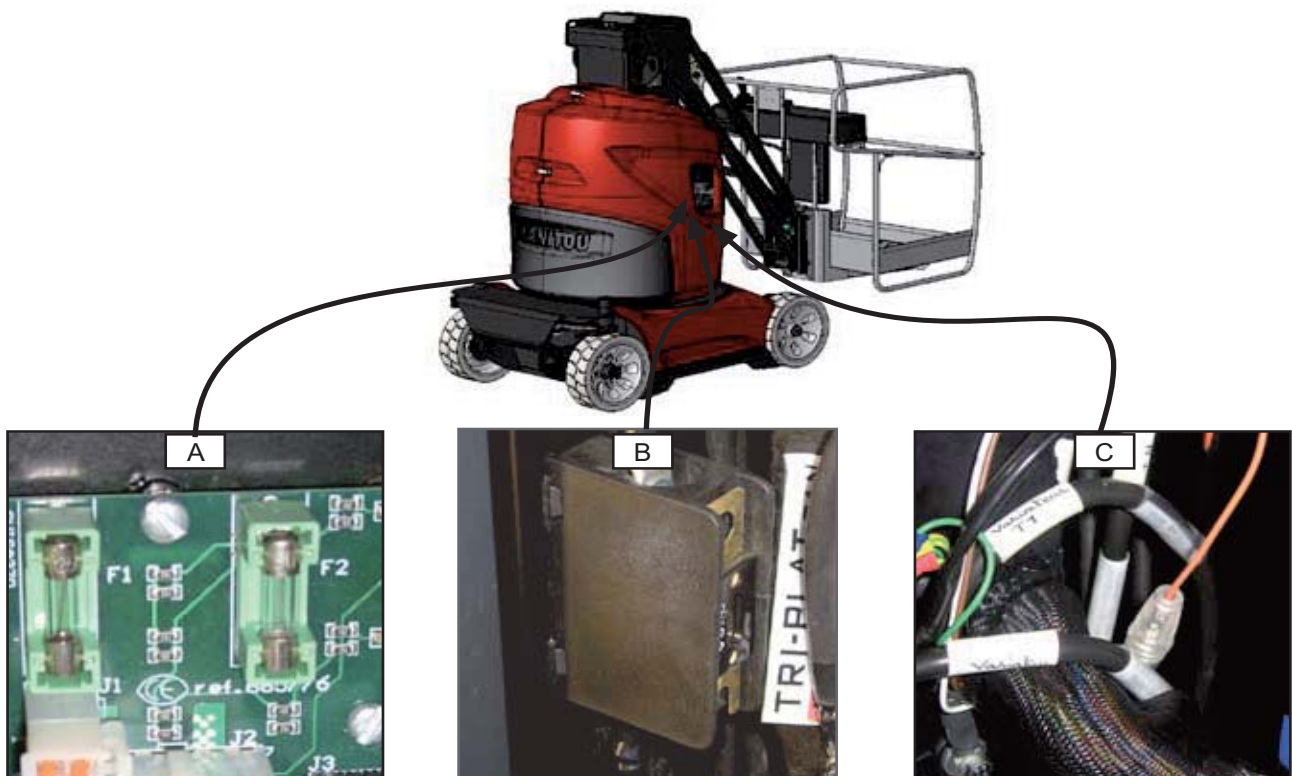
- Type	2x1.5 kW
--------	----------

### ELECTRIC CIRCUIT

- Battery	C5 24 250 Ah C20 24 270 Ah
- Charger	30 Ah

### FUSES

- Board (ground-level control station casing)	F1 5A and F2 8A (Fig. A)
- Power (Emergency and ground-level control box)	250 A (Fig. B)
- Brake release	5 A (Fig. C)



## 80 VJR EVOLUTION

### SPECIFICATIONS

- Use	Indoor and outdoor
- Capacity	Indoor 200kg, including 2 people Outdoor 200kg, including 1 person
- Max. authorised wind speed	45 Km/h
- Control system	Electro-hydraulic
- Turret rotation	350°
- Operating speed	0.65 Km/h
- Transport speed	4.5 Km/h
- Working height	7650 mm
- Floor height	5650 mm
- Maximum offset	3240 mm
- Lifting platform weight	
- Unladen	2250 kg
- Under nominal load	2450 kg
- No. of speeds	2
- Crossable slope	at 80 kg 25%
- Max permissible tilt	2° or 3.5%

### TYRES

- Tightening torque for front wheel nuts :	12 daNm
- Tightening torque for Hub centre nut :	18 daNm

## 100 VJR EVOLUTION

### SPECIFICATIONS

---

- Use	Indoor and outdoor
- Capacity	Indoor 200kg, including 2 people Outdoor 200kg, including 1 person
- Max. authorised wind speed	45 Km/h
- Control system	Electro-hydraulic
- Turret rotation	350°
- Operating speed	0.65 km/h
- Transport speed	4.5 Km/h
- Working height	9895 mm
- Floor height	7895 mm
- Maximum offset	3150 mm
- Lifting platform weight	
- Unladen	2650 kg
- Under nominal load	2850 kg
- No. of speeds	2
- Crossable slope	at 80 kg 25%
- Max permissible tilt	2° or 3.5%

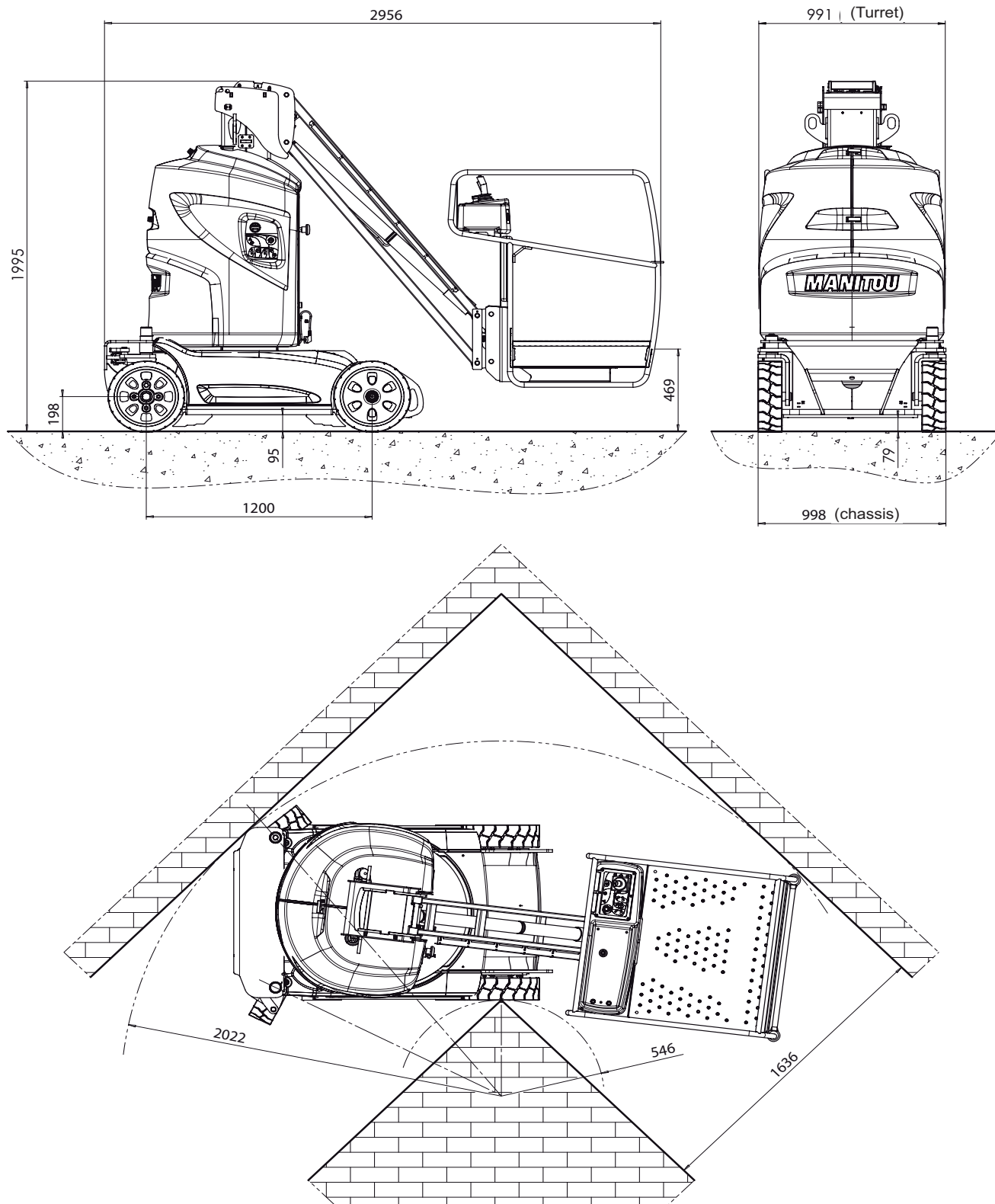
### TYRES

---

- Tightening torque for front wheel nuts :	12 daNm
- Tightening torque for Hub centre nut:	18 daNm

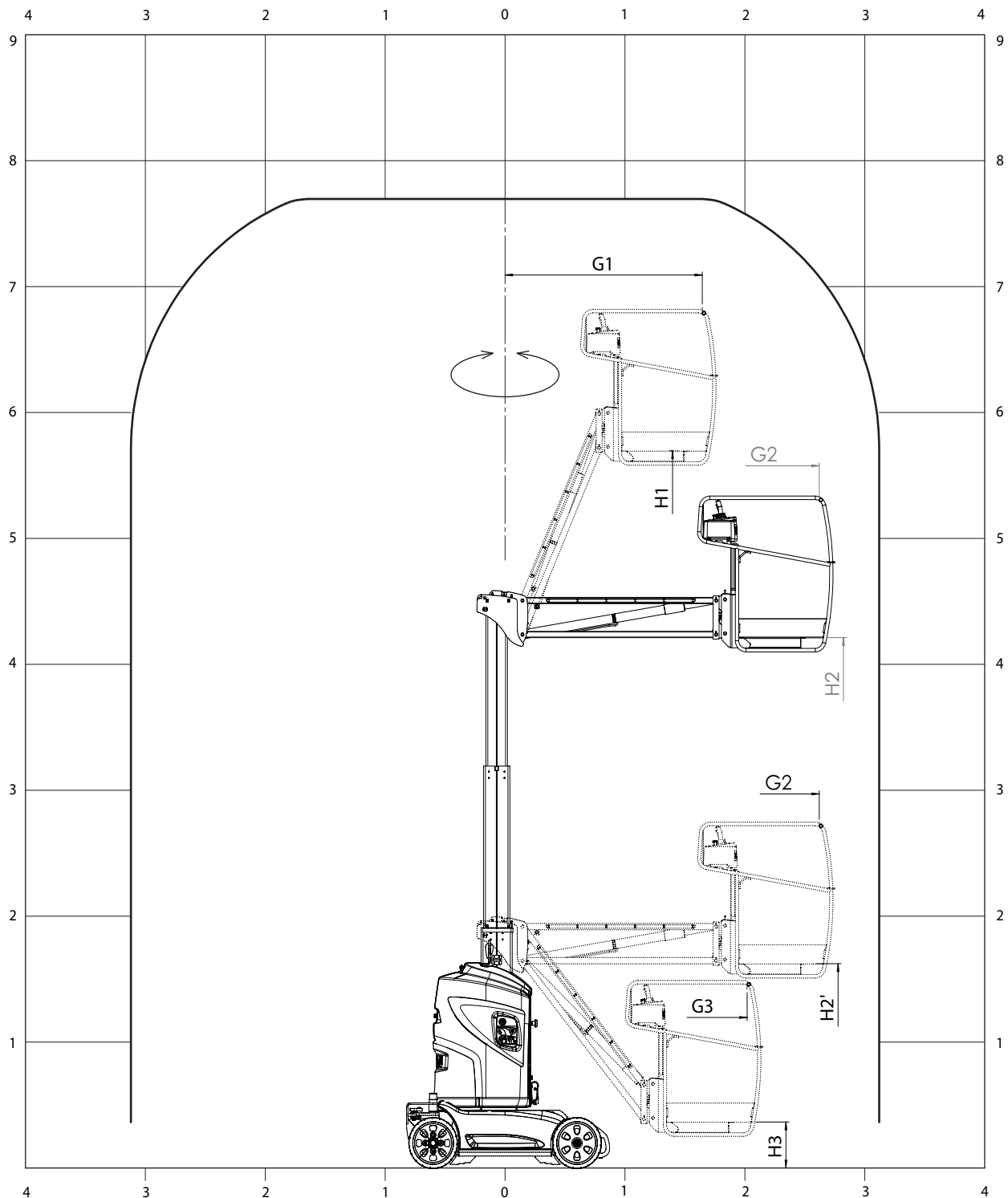


## DIMENSIONS 80 VJR EVOLUTION

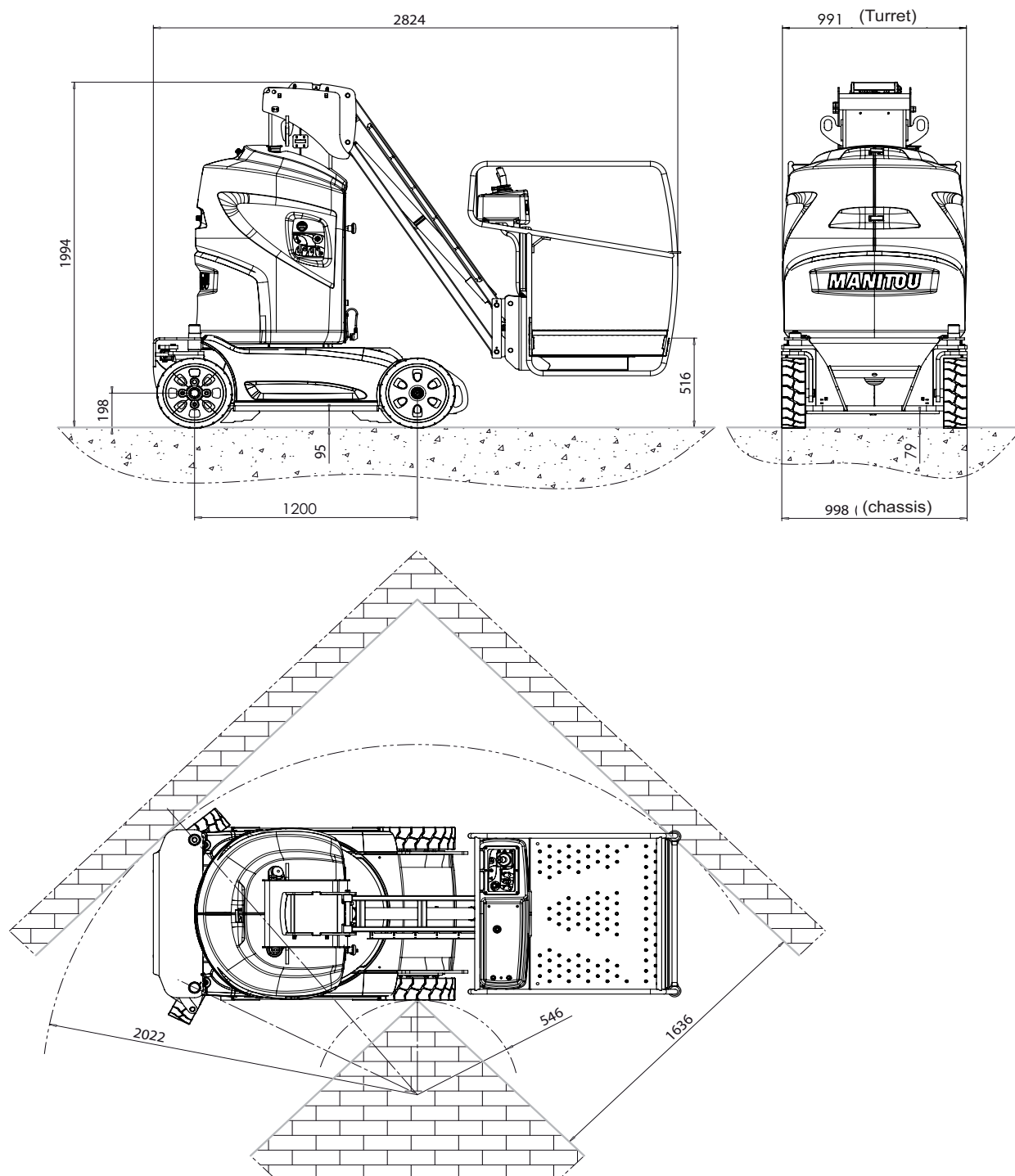




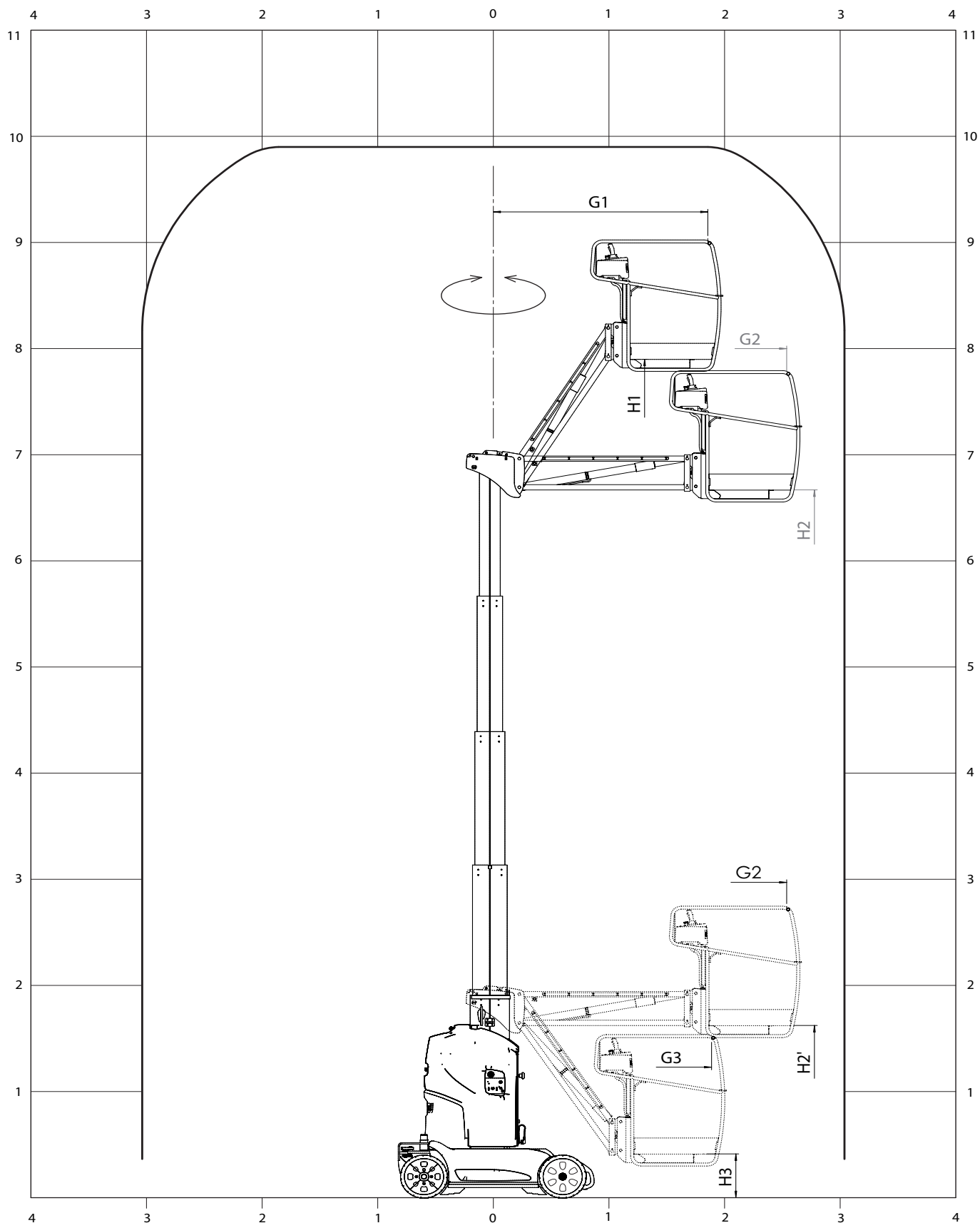
G1	1645
H1	5700
G2	2620
H2	4213
H2'	1623
G3	2020
H3	365



## DIMENSIONS 100 VJR EVOLUTION



G1	1855
H1	7900
G2	2537
H2	6669
H2'	1623
G3	1888
H3	412



## HOW TO OPERATE THE LIFTING PLATFORM

### DESCRIPTION

---

- This machine is a mobile lifting platform for people. 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 an articulated 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 pages in this section) to the desired operating height to reach hard-to-reach places above installations and buildings.
- The lifting platform is equipped with a control console in the basket. From this console, the operator can steer and move the machine forwards and backwards. The operator can also raise and lower the arm assembly, extend and retract the telescopic arm, and turn the turret or the basket to the right or the left.  
The basket, arm and turret assembly can rotate over an angle of 355 degrees, in a non-continuous step-by-step manner to the right and to the left of its folded position.
- The lifting platform is also equipped with a ground-level emergency and maintenance station from which all the lifting instructions except tracking can be issued. The ground controls should only be used to bring back an operator to floor level if he is incapable of doing this himself.
- The operator must make a daily inspection to ensure that the ground-level emergency and maintenance control station and then the basket console are operating correctly.



Stickers showing the characteristics, the safety instructions and the rescue procedure are fixed to the machine.

The operator must read these and understand their contents. To avoid any risk of misinterpreting the pictograms, please refer to the SAFETY STICKERS paragraph in Section 1 – SAFETY INSTRUCTIONS AND ADVICE.

- The lifting platform's movements are provided by a hydraulic pump actuated by a battery-powered electric motor. The hydraulic components are controlled by electro-valves actuated by contactors and the joystick.
- The controls on the base and/or basket console, consisting of switchover contactors, are either in On or Off mode.
- **The base console is equipped with a so-called "Dead Man's" button. This must be pushed in at the same time as a contactor is switched on. Releasing it stops the movement.**
- The lifting platform is a two-wheel-drive machine driven by an electric motor on each wheel. The driven wheels are provided with spring brakes and hydraulic release. These brakes tighten automatically as soon as the tracking joystick is returned to the Neutral position.
- The lifting platform can be raised within the limits of its capabilities (see the Specifications pages in this Section).  
A load of no more than the maximum capacity permissible in the basket will enable you to move in any position provided that the machine is on a surface with an inclination of no more than 3°.

### GENERAL

---

- On the following pages, you will find all the information required for using the machine. It includes the procedures for using, driving, parking, loading and transporting the lifting platform.

## SAFETY

### TILT

When the lifting platform reaches the maximum authorised tilt (see the "CHARACTERISTICS" pages in this Section), LED 17 on the basket console flashes regularly.

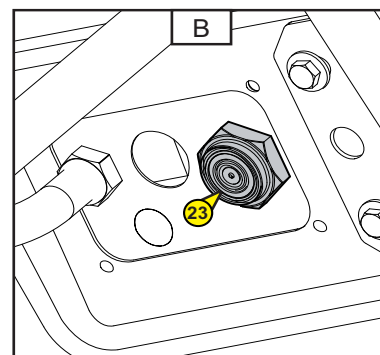
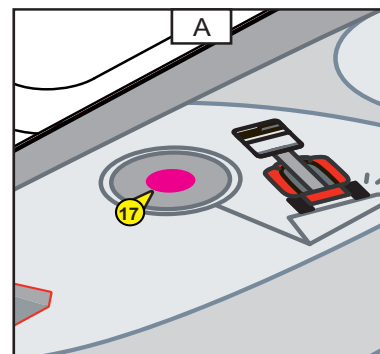
The vibrating buzzer 23 in the basket also sounds intermittently.

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



To resume control, only make non-aggravating movements:

- Return to the safe position by retracting the telescope, lowering the platform and then repositioning the lifting platform on a more horizontal surface in order to be able to make lifting and extension movements.



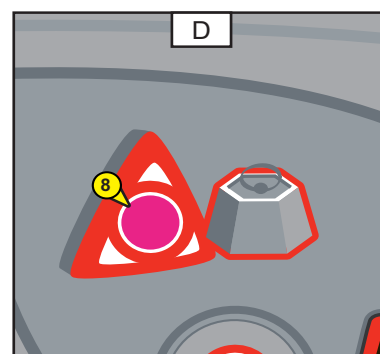
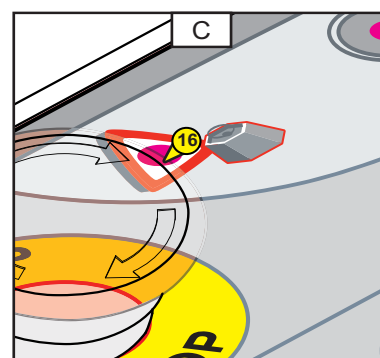
### OVERLOAD

When the lifting platform reaches the authorised weight limit for the basket (see the "CHARACTERISTICS" pages in this Section), the Overload LEDs on the ground-level emergency and maintenance station 8 and the basket console 16 will come on. The vibrating buzzer 23 in the basket also sounds continuously. All movements are forbidden as a safety measure.



To resume control:

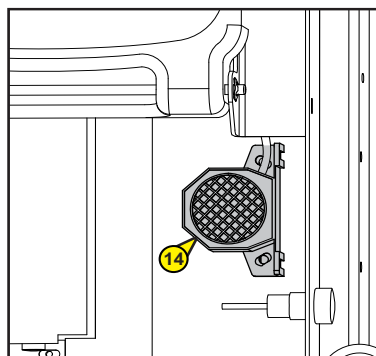
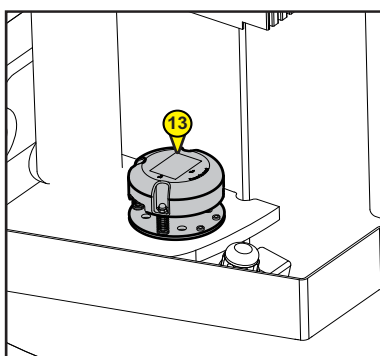
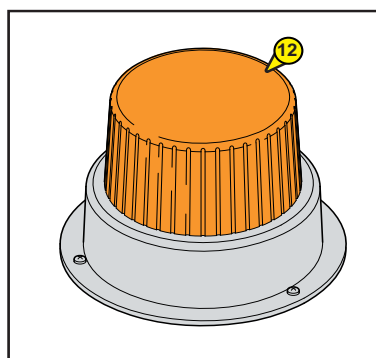
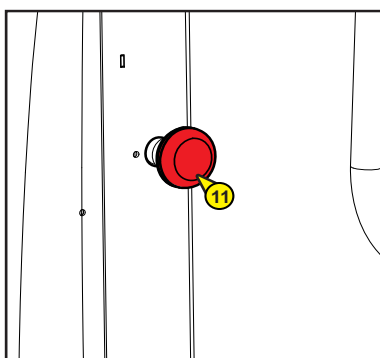
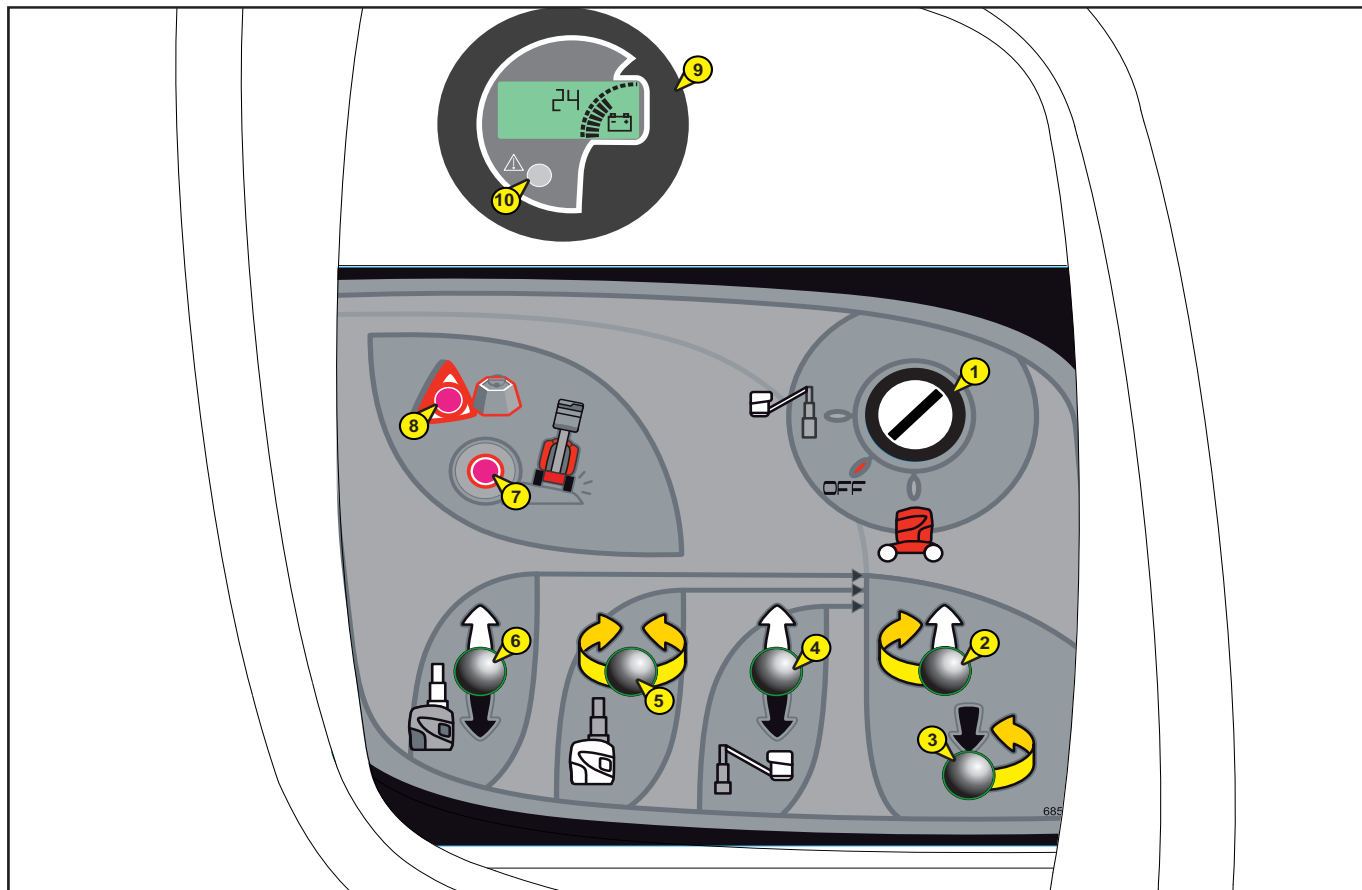
- Relieve the weight on the basket by removing the item(s) causing the overload,
- OR,
- Ask someone on the ground to bring the basket down under manual control (see the "Rescue procedure" pages and the "Safety stickers" pages in Section 1 – Safety instructions and advice).



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

## CONTROLS AND INSTRUMENTS

### A - GROUND-LEVEL EMERGENCY AND MAINTENANCE STATION

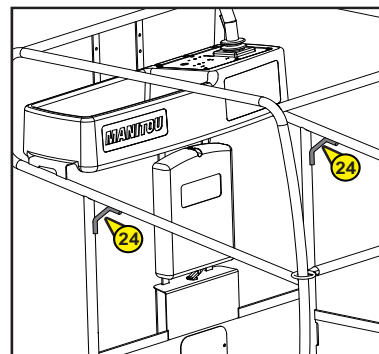
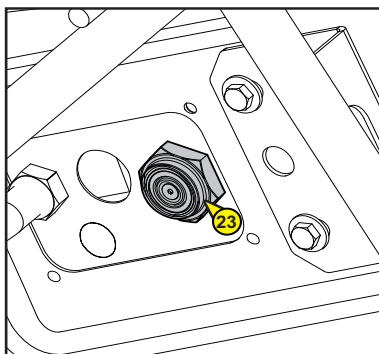
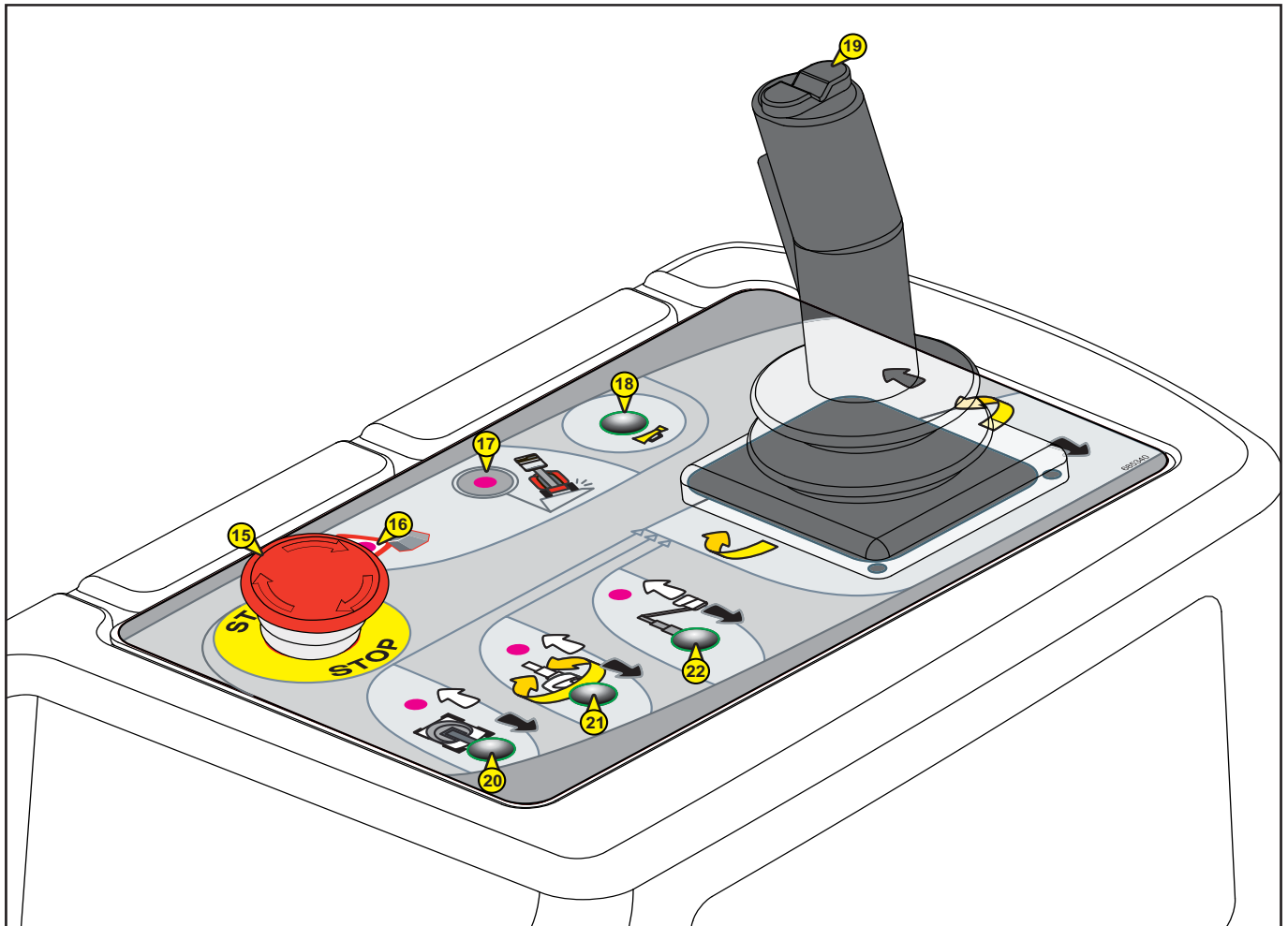


## **A - GROUND-LEVEL EMERGENCY AND MAINTENANCE STATION**

---

- 1 - KEY-OPERATED SELECTION SWITCH FOR GROUND-LEVEL OR BASKET CONTROLS**
- 2 - BUTTON FOR RAISING THE MAST, ROTATING THE TURRET LEFT AND RAISING THE JIB-MOUNTED PLATFORM**
- 3 - BUTTON FOR LOWERING THE MAST, ROTATING THE TURRET RIGHT AND LOWERING THE JIB-MOUNTED PLATFORM**
- 4 - JIB-MOUNTED PLATFORM SELECTION KEY**
- 5 - TURRET ROTATION SELECTION KEY**
- 6 - MAST SELECTION KEY**
- 7 - TILT WARNING LIGHT**
- 8 - OVERLOAD WARNING LIGHT**
- 9 - BATTERY CHARGE INDICATOR AND HOUR COUNTER**
- 10 - "MACHINE FAULT" LIGHT**
- 11 - EMERGENCY STOP BUTTON AND/OR BATTERY CUT-OUT**
- 12 - FLASHING LIGHT (OPTION)**
- 13 - TILT SENSOR**
- 14 - BUZZER**

## CONTROL STATION ON THE PLATFORM





## ***B - BASKET COMMAND AND CONTROL STATION***

---

**15 - EMERGENCY STOP BUTTON**

**16 - OVERLOAD WARNING LIGHT**

**17 - TILT WARNING LIGHT**

**18 - BUZZER CONTROL BUTTON**

**19 - JOYSTICK**

**20 - TRANSLATION KEY**

**21 - TURRET ROTATION KEY, AND RAISE/LOWER MAST**

**22 - JIB-MOUNTED PLATFORM UP/DOWN KEY**

**23 - BUZZER**

**24 - SAFETY HARNESS ATTACHMENT POINTS**

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

## GROUND-LEVEL MAINTENANCE AND EMERGENCY STATION

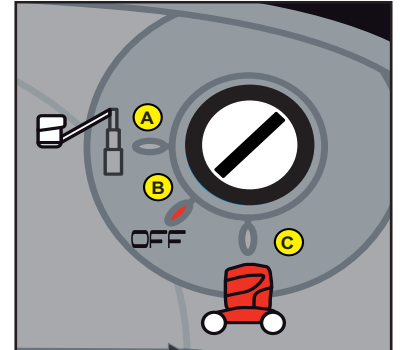
### 1 - Key-operated selection switch for ground-level or basket controls

This BASE/BASKET control selection switch has three positions.  
The central position is the STOP position

Position A: The instructions come from the basket control station.

Position B: Neutral position, the platform's controls are switched off (remove the key in this position).

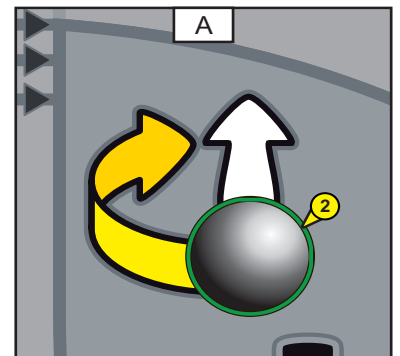
Position C: The instructions come from the ground-level maintenance and emergency station.



### 2 - BUTTON FOR RAISING THE MAST, ROTATING THE TURRET LEFT AND RAISING THE JIB-MOUNTED PLATFORM

Pressing this control button (Fig. A - 2), in conjunction with the selection button, enables you to:

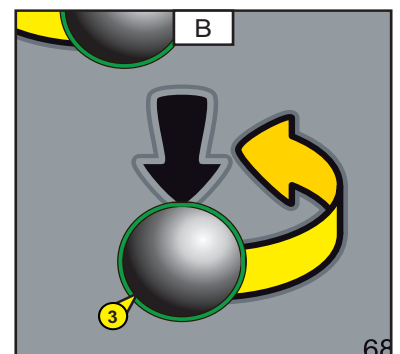
- Raise the telescopic mast, rotate the turret to the left or raise the jib-mounted platform.



### 3 - BUTTON FOR LOWERING THE MAST, ROTATING THE TURRET RIGHT AND LOWERING THE JIB-MOUNTED PLATFORM

Pressing this control button (Fig. B - 3) in conjunction with the selection button, enables you to:

- Lower the telescopic mast, rotate the turret to the right or lower the jib-mounted platform.



#### 4 - JIB-MOUNTED PLATFORM UP/DOWN SELECTION KEY

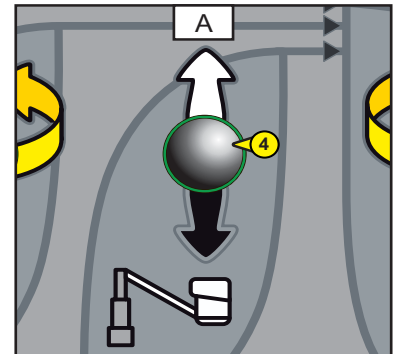
- This key in conjunction with the control key (2, 3 page 2-18) enables you to raise and lower the jib-mounted platform.

**Raising the pendulum:**

Hold down the selection (Fig. A - 4) and control (Fig. A - 2 - page 2-18) keys to raise the jib-mounted platform.

**Lowering the pendulum:**

Hold down the selection (Fig. A - 4) and control (Fig. B - 3 - page 2-18) keys to lower the jib-mounted platform.



#### 5 - TURRET ROTATION SELECTION KEY

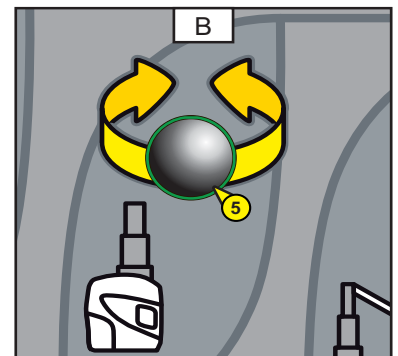
- This key in conjunction with the control key (2, 3 page 2-18) enables you to rotate the turret left and right.

**Turret rotation right:**

Hold down the selection (Fig. B - 5) and control (Fig. A - 2 - page 2-18) keys to rotate the turret to the right.

**Turret rotation left:**

Hold down the selection (Fig. B - 5) and control (Fig. B 3 - page 2-18) keys to rotate the turret to the left.



#### 6 - MAST UP/DOWN KEY

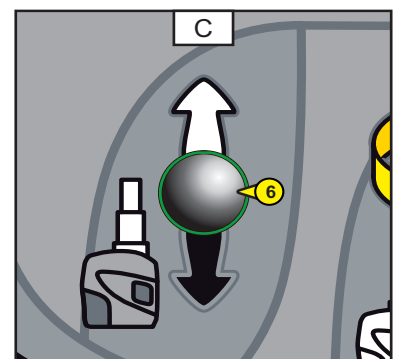
- This key in conjunction with the control key (2, 3 page 2-18) enables you to raise and lower the telescopic mast.

**Raising the telescopic mast:**

Hold down the selection (Fig. C - 6) and control (Fig. A - 2 - page 2-18) keys to raise the telescopic mast.

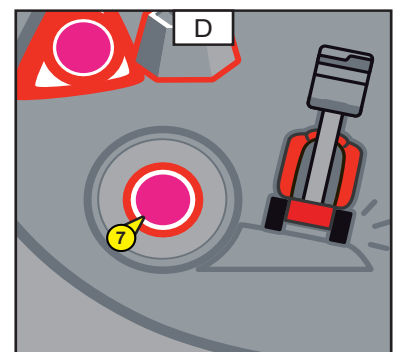
**Lowering the telescopic mast:**

Hold down the selection (Fig. C - 6) and control (Fig. B -3 page 2-18) keys to lower the telescopic mast.



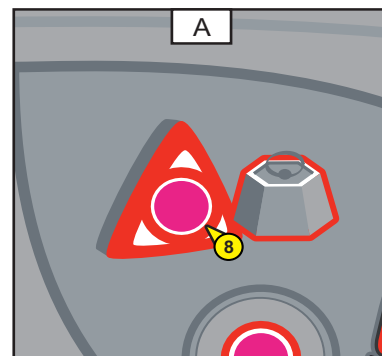
#### 7 - TILT WARNING LIGHT

This LED (Fig D, 7) flashes when the basket reaches the maximum authorised tilt (see "HOW TO OPERATE THE LIFTING PLATFORM – SAFETY ADVICE").



## 8 - OVERLOAD WARNING LIGHT

This LED (Fig A, 8) flashes if the basket becomes overloaded (see "HOW TO OPERATE THE LIFTING PLATFORM – SAFETY ADVICE").



## 9 - BATTERY CHARGE INDICATOR AND HOUR COUNTER

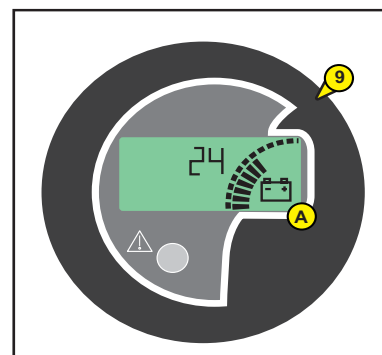
### A - BATTERY CHARGE INDICATOR BATTERY CHARGED

- All the bars are displayed (dark).

### BATTERY DISCHARGED

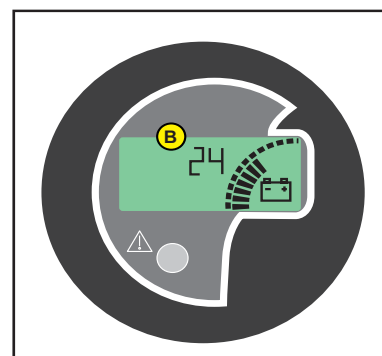
- Only 2 bars remain displayed, the batteries must be recharged (See "MAINTENANCE INTERVALS" section).

NB: The batteries must not be allowed to drop below the 20% charge level to avoid them deteriorating rapidly.



### B - DAILY HOUR COUNTER INDICATOR

This indicates the number of total hours for all movements performed and can be reset to zero.



## 10 - MACHINE FAULT LIGHT

- This LED informs you that there is a machine fault.

- Hour counter



- Speed



- Maintenance alarm



## 11 - EMERGENCY STOP BUTTON

This red mushroom-headed switch enables you to cut off all the machine's movements if there are anomalies or any danger arises.

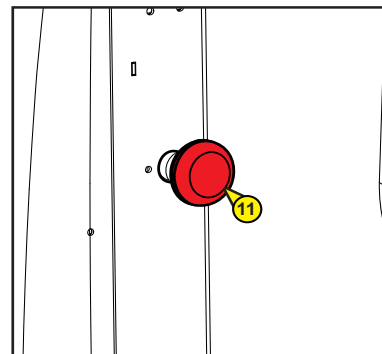
- Press the button to cut off the movements.



In all cases, this instruction takes priority, even when the movements are coming from the platform.

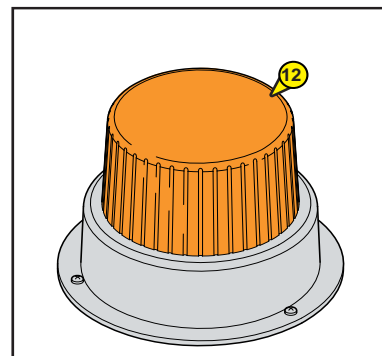


The movements may stop abruptly if the emergency stop is activated.



## 12 - FLASHING LIGHT (OPTION)

- The flashing light illuminates automatically when the platform is in tracking or making a movement (rising, rotating etc...).



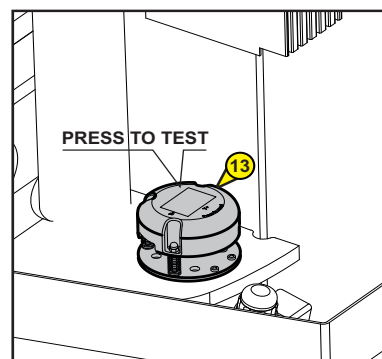
## 13 - TILT SENSOR

- This sensor controls the platform's tilt. When the platform achieves the maximum authorised tilt (See CHARACTERISTICS section), the buzzer 23 is activated intermittently and all the "AGGRAVATING" movements such as, raising the jib-mounted platform and raising the telescope are blocked. The LED number 17, in the platform is activated.

NB: TILT TEST; Set the platform on a flat surface in base control position (See 1 – KEY CONTACTOR). Press the "PRESS TO TEST" detector, the audible buzzer should sound and the LED light up.

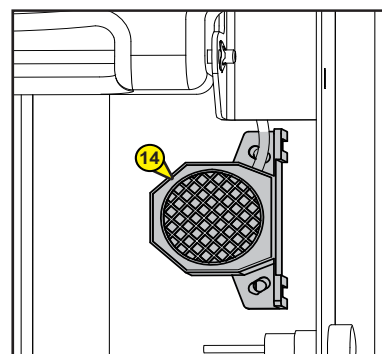


If the buzzer remains silent and the LED remains off, immobilise the platform and perform the necessary repairs.



## 14 - BUZZER

This buzzer (fixed on the turret under the ground-level control station casing) is activated when button 13 is pressed



## BASKET COMMAND AND CONTROL STATION

### 15 - EMERGENCY STOP

This red mushroom-headed cut-off switch (Fig. A -15) enables you to cut off all the machine's movements in the event of an anomaly or danger arising.

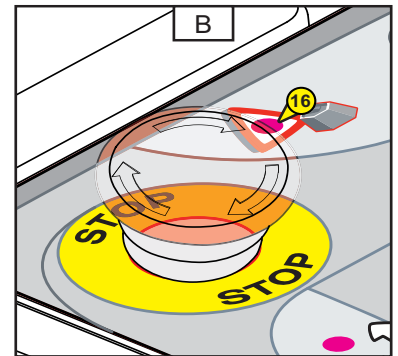
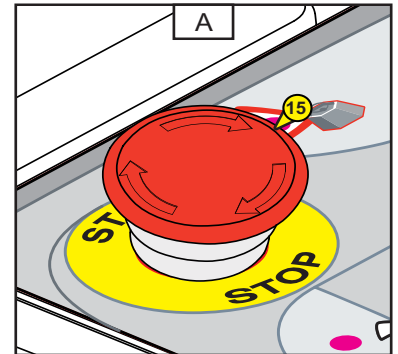
- Press the button to cut off all the movements
- Turn the knob a quarter of a turn to the right to restore supply (the switch returns automatically to its initial position).



This command takes priority in all cases except when movements are being controlled from the base maintenance and emergency station



Movement may stop very abruptly when the emergency stop is activated.

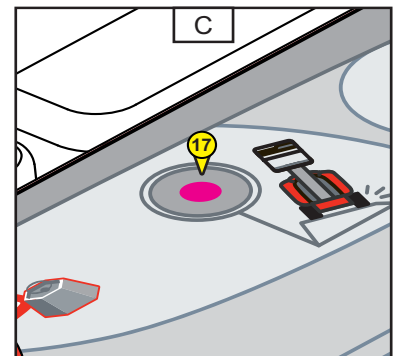


### 16 - OVERLOAD WARNING LIGHT

If there is an overload in the basket, the LED (Fig. B - 16) flashes (See: HOW TO USE THE LIFTING PLATFORM – SAFETY ADVICE).

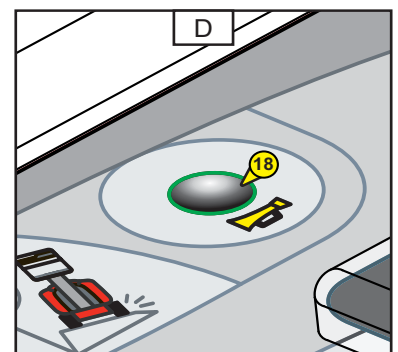
### 17 - TILT WARNING LIGHT

When the lifting platform reaches the maximum level of tilt authorised, the LED (Fig. C - 17) flashes (See: HOW TO USE THE LIFTING PLATFORM – SAFETY ADVICE).



### 18 - BUZZER CONTROL KEY

- Pressing this control (Fig. D - 18) activates the buzzer (13) located on the turret.



## 19 - JOYSTICK

NB: The joystick has progressive control enabling it to achieve high precision in approach. It must be operated flexibly and fluidly without jerkiness.



### SECURITY TRIGGER

- The trigger (A) on the joystick 19 must be held down constantly to execute movements from the platform's control box.

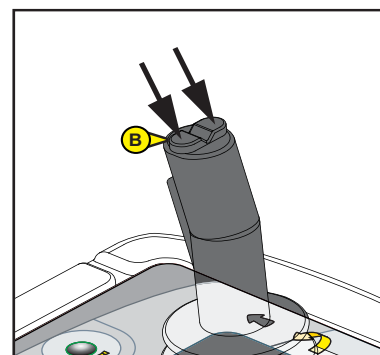
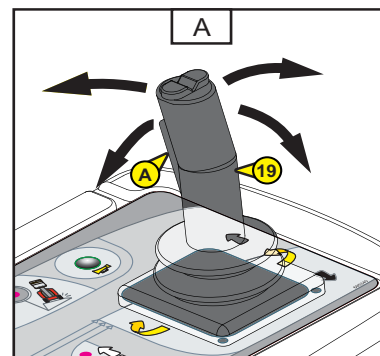
### STEERING:

#### - To STEER RIGHT OR LEFT WITHOUT ANY TRANSLATION MOVEMENT:

- Select the translation movement by pushing the key (Fig. B - 20) to steer left or right.
- Select the direction by pressing button B on the joystick 19 (continuous pressure) to the right or the left to go respectively right or left.

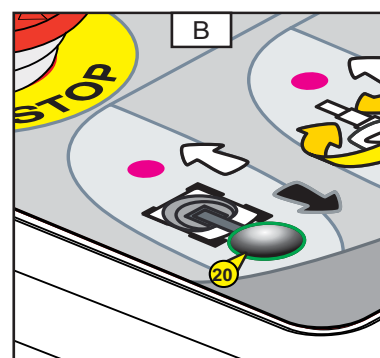
#### - To STEER RIGHT OR LEFT WITH TRANSLATION MOVEMENT:

- Select the translation movement by pushing the key to steer to the right or to the left (Fig. B - 20).
- Select the direction by pressing button B on the joystick 19 (continuous pressure) to the right or the left to go respectively right or left.
- Push the joystick 19 forward or pull backward respectively to advance or retreat while steering the wheels.



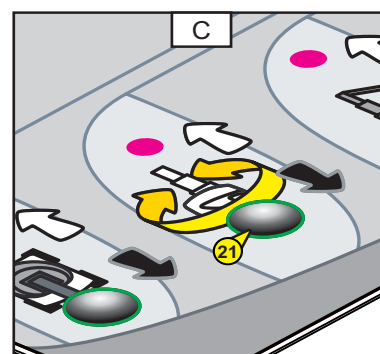
## 20 - TRANSLATION KEY

- Select the translation movement by pushing the key (Fig. B - 20).
- Push the joystick (Fig. A - 19) forward or pull backward respectively to advance or reverse.



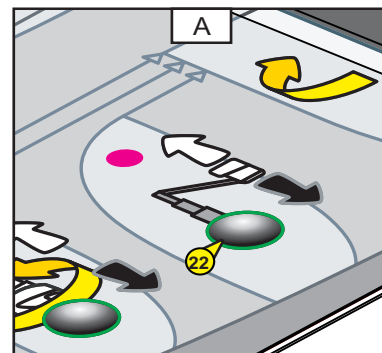
## 21 - BUTTON TO ROTATE TURRET, AND RAISE / LOWER MAST

- Select the rotation or up/down movement of the telescopic mast by pressing the key (Fig. C - 21).
- Tilt the joystick to the right or to the left (Fig. A - 19) to turn the turret right or left.
- Push the joystick (Fig. A - 19). forward or pull backward respectively to raise or lower the telescopic mast .



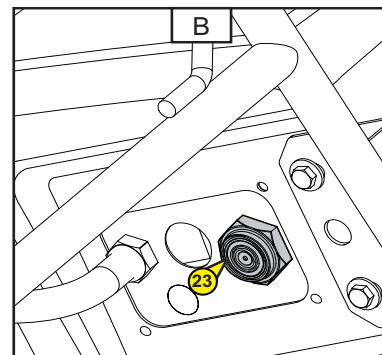
## 22 - JIB-MOUNTED PLATFORM UP/DOWN KEY

- Select the rotation or up/down movement of the jib-mounted platform by pressing the key (Fig. D - 22 ).
- Push the joystick (Fig. A-19). forward or pull it backward respectively to raise or lower the jib-mounted platform.



## 23 - BUZZER

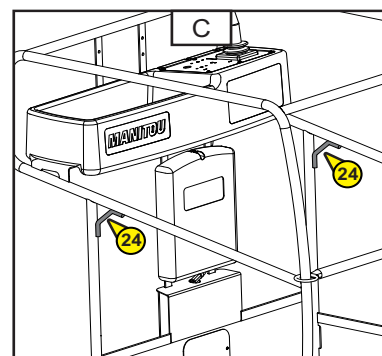
- This buzzer (Fig. B - 23) is activated when the machine is in the following 2 critical situations:
- **TILT: intermittent buzzing** (See: **HOW TO USE THE PLATFORM – SAFETY ADVICE**).
- **OVERLOAD: continuous buzzing** (See: **HOW TO USE THE PLATFORM – SAFETY ADVICE**).



## 24 - SAFETY HARNESS ATTACHMENT POINT

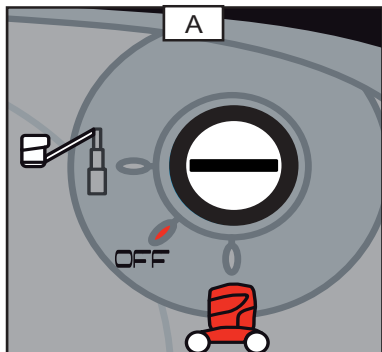
- These attachment points (Fig. C - 24) must be used for fixing the safety harnesses when the users are in the basket.

NB: See Section 1 - "INSTRUCTIONS AND SAFETY ADVICE".





## HOW TO USE THE LIFTING PLATFORM



### MOVING IN TRANSPORT MODE AND IN OPERATING MODE

Before moving or using the machine, position contactor A (transfer of control to the basket console).

The platform has two distinct modes of movement: transport mode (Fig. C) and operating mode (Fig. D) (direction of progress (Fig. B)).

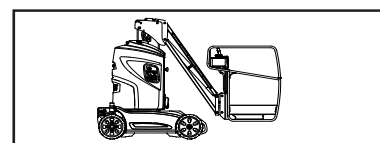
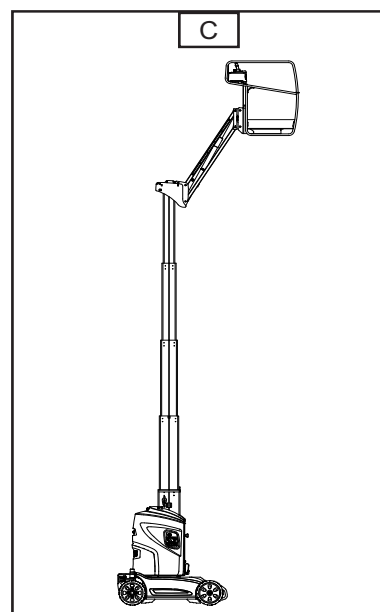
- Transport mode: the telescopic mast and the jib-mounted platform must be in the low position. This mode enables you to move at high speed and even beyond the tilt point (See CHARACTERISTICS of the machine) (Fig. C).
- Operating mode: when the telescope is extended or the pendulum is raised, tracking is only possible at a slow speed; the safety systems for tilt and overload are activated (Fig. D).



Do not drive over surfaces with slopes above the authorised inclinations (See: CHARACTERISTICS) or with irregularities likely to tip over the platform.



Before driving the platform, ensure that the basket control station is fully above the drive wheels; if it is above the steering wheels, the controls will be reversed with respect to the direction of the machine's travel.



## LIMITATIONS OF TRANSPORT SPEED/OPERATING SPEED MODES

The jib-mounted platform can rise and lower in transport speed mode.

## SET UP ON THE OPERATING AND LIFTING SITE

The platform has been designed to work on a flat horizontal surface; it is important to keep the area clear in which the platform will be operating.



Familiarise yourself the instruments on the emergency and ground maintenance station and in the basket as described in the preceding pages. In particular, the warnings and the risks in executing certain manoeuvres.

- Take the platform to the work site.
- If necessary, load the equipment and supplies distributing the load evenly (stack it so that it does not inconvenience the user and so as to avoid anything potentially dropping).
- Get into the basket.



The wearing safety helmets and a harness is strongly recommended.



When manoeuvring the platform (raising, rotation, etc.), look around and above you. Pay particular attention to electric cables and any object that may be found within the platform's operating area..

## DESCENT

When the work is completed, lower the telescopic mast and the jib-mounted platform to bring the platform into transport position.



Pay attention to any people still present on the ground when lowering

## STOPPING THE PLATFORM

When the platform is not being used, switch off the electrical power supply by setting the key contactor to neutral position (See 2 – KEY CONTACTOR).

At the end of the day, recharge the battery if necessary (See "MAINTENANCE INTERVALS").



Always set the battery cutoff to the OFF when you are no longer using the platform.

## LOADING / UNLOADING THE PLATFORM



Check that the safety instructions in relation to the lorry bed are being followed correctly before loading the platform and ensure that the lorry driver has been informed of the dimensional characteristics and the weight of the platform (See CHARACTERISTICS section).

When loading on a flatbed lorry, the platform must be in transport position:

- Counterweight facing the ramp (counterweight above the platform's steering wheels) (See 1 - INSTRUCTIONS AND SAFETY ADVICE 1 and 2).
- Jib retracted
- It is possible to raise the jib-mounted platform so it does not touch the ground, but we do not recommend that you make any tracking movement with the basket excessively raised; keep this in the lowest position possible during the manoeuvres (risk of items falling or of impact, See 1 – INSTRUCTIONS AND SAFETY ADVICE).



Ensure that the lorry bed is large enough and has sufficient loading capacity for transporting the platform. Also check the permissible floor contact pressure between the lorry bed and the platform.

### LOADING

- Block the wheels on the lorry (Fig. B - 1).
- Fasten the loading ramps to the lorry so as to achieve the flattest possible angle for fitting the platform.

### TYING DOWN THE PLATFORM

- Fix wedges to the lorry bed in front of and behind each tyre on the platform.
- Also fix wedges to the lorry bed on the inside and the outside of each tyre.
- Tie down the platform onto the lorry with sufficiently strong cords or belts, with the front the same as the rear and passing the cords through the sling hooks on the chassis (Fig. D).

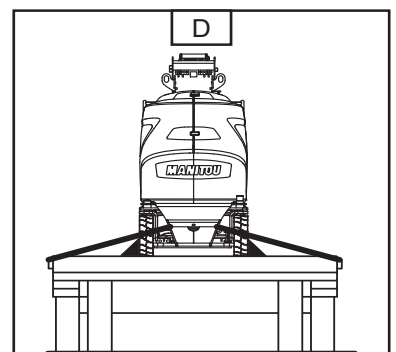
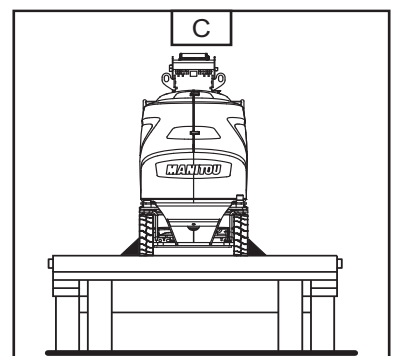
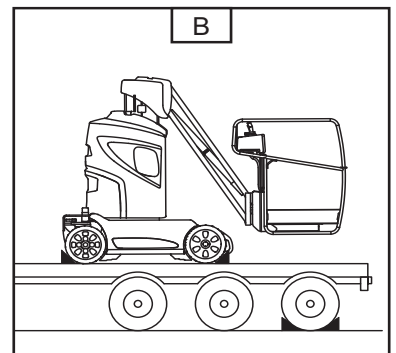
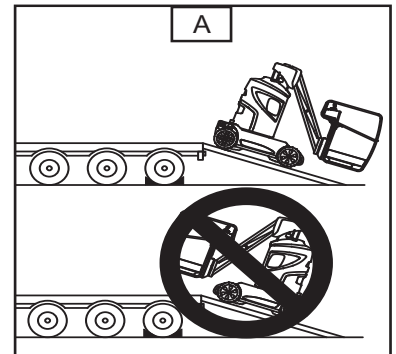
### UNLOADING



Never descend from a lorry in forward gear (counterweight facing front above the steering wheels). The low adherence of the rear wheels makes braking less effective.



Ensure that you adapt the platform's tracking speed by checking the speed with the tracking joystick.



## RESCUE PROCEDURE

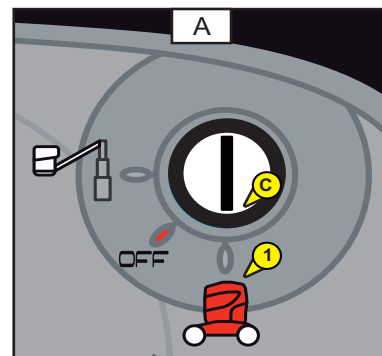
This paragraph describes the procedures to be followed and the controls to be used if there is a problem (platform broken down or someone stuck in the basket) while the platform is operating.

This must be practiced when possession is taken of the machine and regularly thereafter. The procedure must have been read and understood by the operator and any other people whose responsibilities are focused around activities in contact with the machine.

### IF THE USER FALLS ILL

If the operator should be taken ill or find himself incapable of manoeuvring the machine, the person on the ground may take over control of the machine from the emergency and ground maintenance station. Follow the instructions below.

- Switch the key contactor (Fig. A -1) on the maintenance and emergency ground station to position C, in order to recover control of the platform's movements.
- Proceed to lower the platform.



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

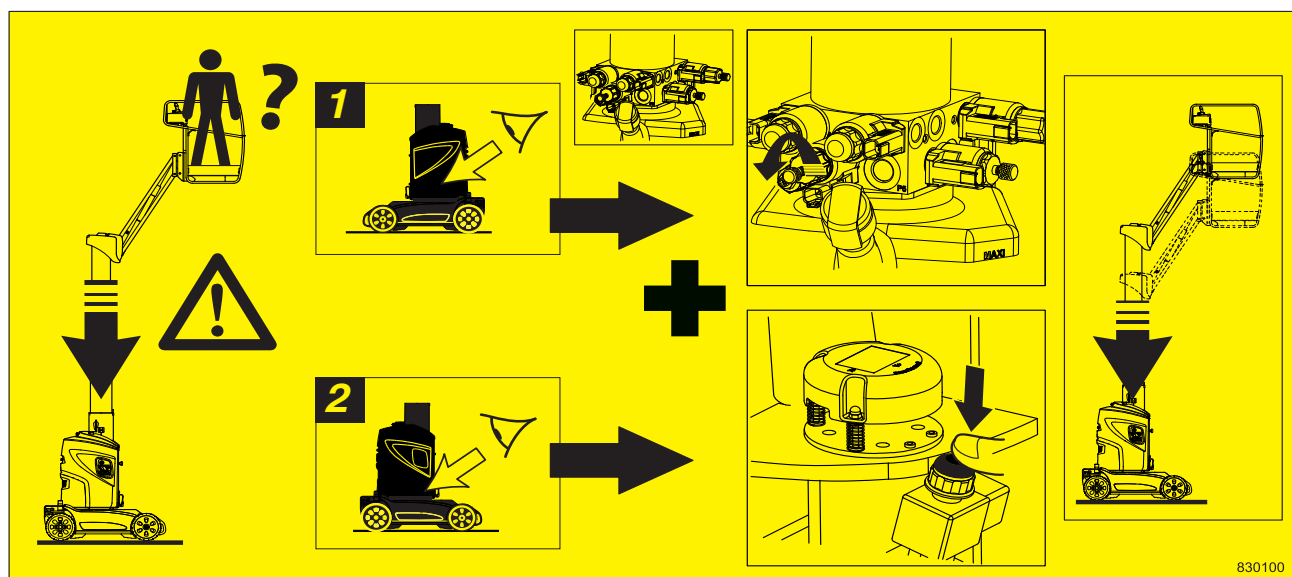
### IN THE EVENT OF AN ACCIDENT OR A BREAKDOWN

Remove the people from the basket.

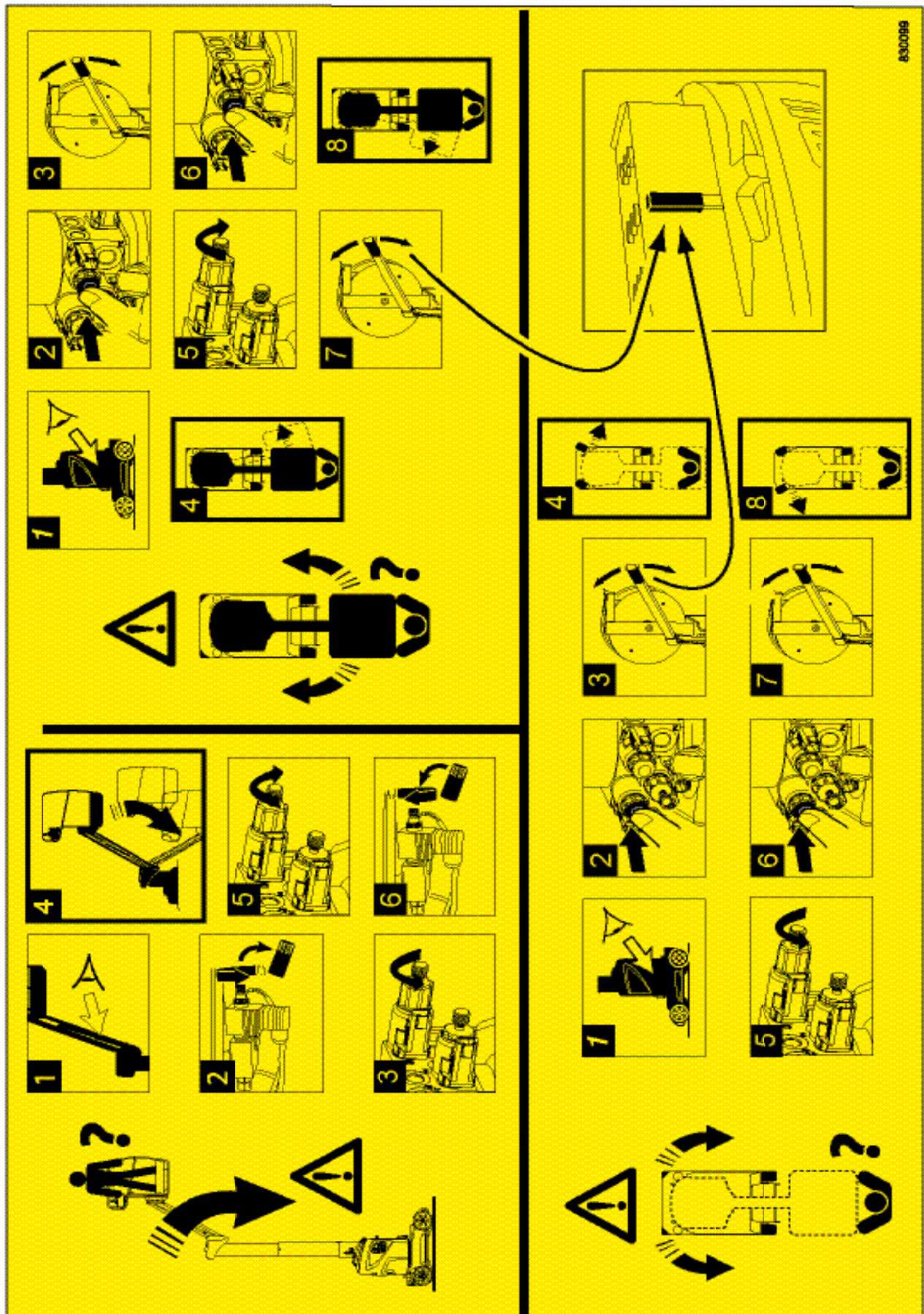
When an accident or breakdown occurs that makes the electrical control boxes unusable, the machine is provided with systems for performing all the movements manually.

- Open the turret covers and follow the procedure shown on the stickers.

The diagram below shows the procedure for lowering the telescope.



Please find below the diagram for the rescue procedure

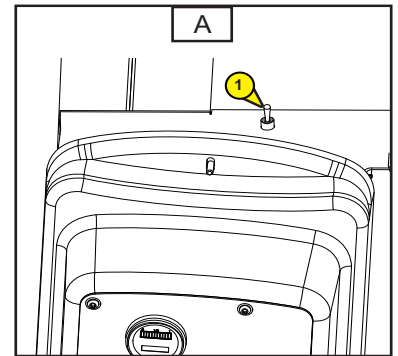




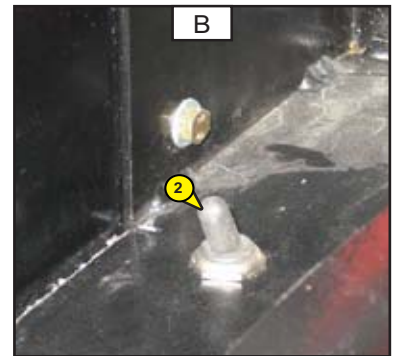
## FREEWHEELING PROCEDURE

Attach the platform to a vehicle that can tow and restrain it.

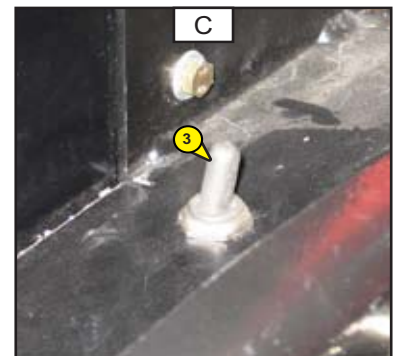
The freewheeling mode switch is located on the base console (Fig. A -1).



- Switch the knob (Fig. B - 2) to the right (Fig. C - 3) to set the machine in freewheeling mode. A continuous beep sounds indicating that the machine is no longer braked. All the machine's functions are blocked.



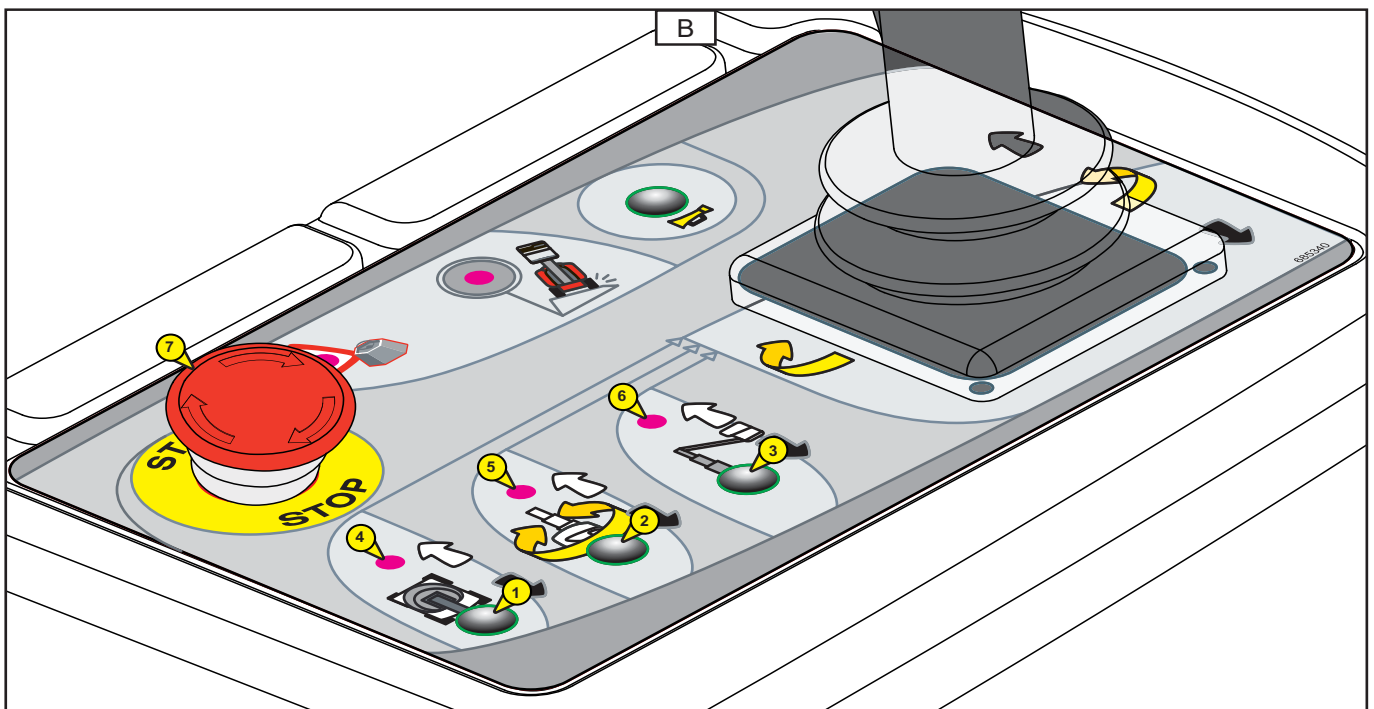
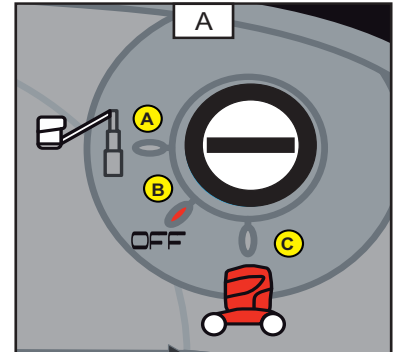
Return the knob to its initial position (Fig. B - 2) to bring the brakes on the platform back into operation.



## ACTIVATING THE OPTIONS

The basket base control station selector switch has 3 positions.  
The central position is the STOP position.

To activate the options, switch on the platform and turn the knob to position A (Fig. A).



- Hold down the control keys (Fig. B - 1, 2 and 3) simultaneously for 3 seconds.
  - A beep sounds and the 3 LEDs flash one after another (Fig. B - 4, 5 and 6).
- Hold down the keys (Fig. B - 1 and 2) simultaneously for 3 seconds.
  - The LEDs (Fig. B - 4, 5 and 6) go out.
- Select the desired function by briefly pressing the control keys (Fig. B -1, 2 or 3)
  - Control key 1: Beep on all movements (LED lit = function activated)
  - Control key 2: Flashing light (LED lit = function activated)
  - Control key 3: Maintenance reset to zero (LED lit = function activated)
- Confirm your choice and exit the menu by pressing one of the control keys (Fig. B -1, 2 or 3). The LED's (Fig. B - 4, 5 and 6) flash.
- Confirm the operation by pressing the emergency stop button (Fig. B - 7).
- Turn the knob a quarter of a turn to the right to restore supply (the knob returns automatically to its original position).







## **3 - *MAINTENANCE***





## CONTENTS

<i>MANITOU ORIGINAL EQUIPMENT AND REPLACEMENT PARTS</i>	<i>3 - 5</i>
<i>FILTER ELEMENTS AND LUBRICANTS</i>	<i>3 - 6</i>
<i>MAINTENANCE LOG</i>	<i>3 - 7</i>
<i>A - DAILY OR EVERY 5 HOURS OF OPERATION</i>	<i>3 - 8</i>
<i>B - EVERY 50 HOURS OF OPERATION</i>	<i>3 - 12</i>
<i>C - EVERY 100 HOURS OF OPERATION</i>	<i>3 - 13</i>
<i>D - MAINTENANCE</i>	<i>3 - 16</i>

## MANITOU ORIGINAL EQUIPMENT AND REPLACEMENT PARTS

**ONLY MANITOU ORIGINAL SPARE PARTS MUST BE USED WHEN SERVICING OUR PLATFORMS.**

**BY AUTHORISING THE USE OF NON-ORIGINAL MANITOU REPLACEMENT PARTS,**

**YOU RISK**

- Making yourself legally liable in the event of an accident,
- Technically causing operating breakdowns or reductions in the platform's operating life.



The use of counterfeit parts or components not approved by the manufacturer will rescind the benefits of the contractual warranty.

**BY USING MANITOU ORIGINAL PARTS IN THE MAINTENANCE OPERATIONS,**

**YOU PROTECT  
YOURSELF  
LEGALLY**

- Any user obtaining supplies from elsewhere does so at his own risk
- Any user modifying or having the platform modified by a service provider must take into consideration that any new equipment is placed on the market and that he therefore is liable for this.
- Any user copying the original parts or having them copied, exposes himself to legal risks.
- The declaration of conformity only covers the manufacturer for the items selected or developed under his control.
- The practical maintenance conditions are set by the manufacturer. The fact that the user does not follow these does not incur the manufacturer's liability.

**YOU BENEFIT  
FROM  
KNOW-HOW**

**THE MANUFACTURER PROVIDES THE USER WITH,**

- **Know-how and skills.**
- The guarantee of the quality of the work performed.
- Original replacement parts.
- A preventive maintenance guide.
- An effective troubleshooting guide.
- Improvements from experience from a feed back of experience.
- Training of the operating personnel.
- Only the MANITOU network has detailed knowledge of the platform's design and therefore has the best technical capabilities for providing maintenance.

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

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

## START-UP CHECKLIST

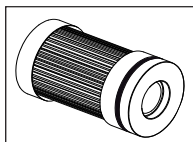
0 = OK    1 = Missing    2 = Incorrect

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

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

## FILTER ELEMENTS

## HYDRAULICS



HYDRAULIC OIL CARTRIDGE

Reference: 746308

Replace: 100 H

## LUBRICANTS

COMPONENTS TO BE LUBRICATED	CAPACITY	RECOMMENDATION	PACK	REFERENCE
HYDRAULIC OIL RESERVOIR	22 Litres	MANITOU HYDRAULIQUE ISO 46 OIL	20 L. 55 L. 209. L	582 297 546 108 546 109
GENERAL LUBRICATION TURRET CROWN BEARING RACEWAYS GREASING		MANITOU High performance GREASE	Cartridge 400 G	479 330
TOOTH LUBRICATION TURRET CROWNS		SHELL MALLEUS GL 205 OIL	Aerosol	545 834

## MAINTENANCE TABLE - VJR EVOLUTION



### (1) : COMPULSORY OVERHAUL AT 500 HOURS OR 6 MONTHS

*This overhaul must necessarily be performed on or around the expiry of the first 500 hours of operation or within 6 months following the machine's commissioning (whichever is the earlier)*

**A = SET, C = CHECK, G = GREASE,  
N = CLEAN, P = BLEED,  
R = REPLACE, V = DRAIN**

	PAGE	 (1)	DAILY OR EVERY 5 HOURS	EVERY 6 MONTHS OR 50 HOURS	EVERY YEAR OR 100 HOURS	EVERY 2 YEARS OR 200 HOURS	OCCASIONALLY
<b>TYRES</b>							
TIGHTNESS OF THE WHEEL NUTS	3-12	C		C	«	«	
CONDITION OF THE WHEELS AND TYRES	-	C*			C*	«	
<b>HYDRAULICS</b>							
HYDRAULIC OIL LEVEL	3-9	C	C	«	«	«	
HYDRAULIC OIL	3-14	V/R			V/R	«	
HYDRAULIC CIRCUIT STRAINER	3-14	N			N	«	R
HYDRAULIC FILTER	3-14				R	«	
EMERGENCY PUMP	3-12	C		C	«	«	
<b>ELECTRICITY</b>							
BATTERY CHARGE	3-8	C	C	«	«	«	
BATTERIES	3-8	C	Ch	«	«	«	
BATTERY ELECTROLYTE DENSITY	3-9	C	C	«	«	«	
BATTERY ELECTROLYTE LEVEL	3-9	C	C	«	«	«	
TIGHTNESS OF THE ELECTRICAL POWER CABLES	-	C		C	«	«	
REPLACEMENT OF THE BATTERIES	3-16						R
BATTERY TRAYS	3-10	V	V	«	«	«	
CONDITION OF THE JOYSTICK BELLOWS	3-10	C	C	«	«	«	
<b>CHASSIS</b>							
TURRET STEERING CROWN	3-13	G			G	«	
TIGHTNESS OF THE TURRET STEERING CROWN BOLT	3-13	C			C	«	
<b>LIFTING STRUCTURE</b>							
MAST	3-12	G		G	«	«	
CHOCKING OF THE TELESCOPE SKIDS	-	C/A		C/A	«	«	C/A
WEAR ON THE TELESCOPE SKIDS	3-16	C/R		C/R			C/R
OVERLOAD AND BASKET ROTATION	-	C		C	«	«	
TIGHTNESS OF THE TURRET ROTATION MOTOR'S BOLTS	3-15	C			C	«	
<b>SAFETY ELEMENTS</b>							
PENDULAR ARM POSITIONAL SENSORS	3-10	C	C	«	«	«	
TELESCOPE POSITIONAL SENSOR	3-10	C	C	«	«	«	
TILT SENSOR	3-11	C	C	«	«	«	
OVERLOAD SENSOR	3-15	C*			C*	«	
MACHINE STICKER	3-11	C	C	«	«	«	

\* : Contact your dealer

## DAILY OR EVERY 5 DAYS OF OPERATION

### 1 - BATTERY CHARGE

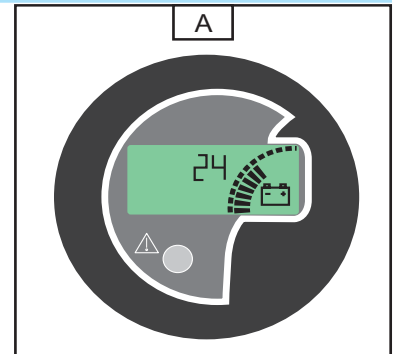
#### CHECK

The platform's autonomy is effectively 5 hours, with a fully charged battery.

When all the bars are dark, this indicates that the battery is fully charged.

- When using the platform, the number of bars indicates the battery charge level and the LED being lit indicates the battery level.
- When only 2 bars are dark, this indicates that the battery is 80% discharged and requires to be recharged.

NB: You must not drop below the threshold of 20% of the battery's charge, to avoid rapid and irreversible damage.



### 2 - BATTERY

#### CHARGE

- The platform is equipped with an electric charger located under the cover for the wheel chargers.

How to use the charger



Recharge the batteries in a well-ventilated space to avoid any risks of explosion and in which it is strictly forbidden to smoke

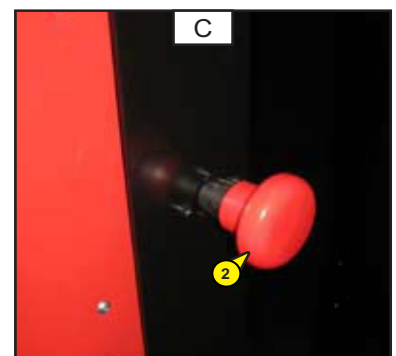
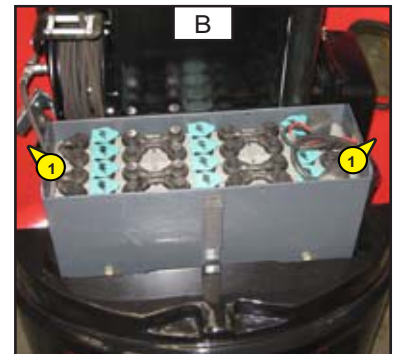
- Open the turret cowls (Fig. B -1) and leave them open throughout the charging process.
- Switch off the power to the platform using the battery cutoff (Fig. C -2).
- Do not lay any metal objects on the battery (risk of a short circuit).
- Do not remove the plugs.
- Do not recharge the battery if the electrolyte temperature is over 40°C. Let it cool down first.
- Connect the charger plug to the main supply.
- Once a battery recharging cycle has started, it must not be interrupted. Never place the batteries on charge for a period of just a few hours, as this will damage your battery.

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

Once the battery is charged:

- Disconnect the charger plug.
- Restore main power to the platform with the battery cutoff (Fig. C -2 ).
- Close the turret cowls (Fig. B - 1).

NB: The charger has been factory set with the cable with which it is supplied. If this cable requires replacement, ensure that you fit a cable of the same section and the same length.

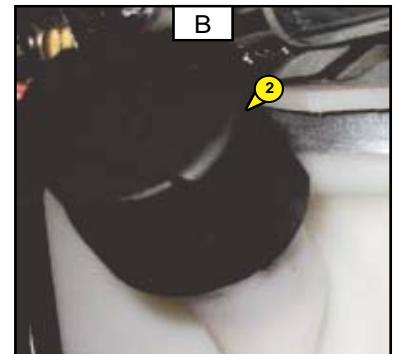
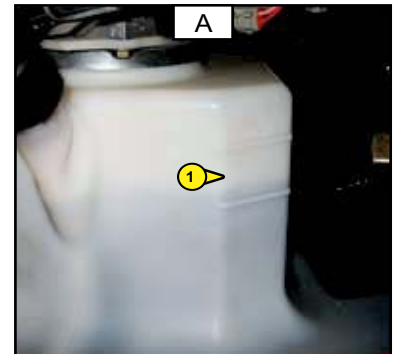




### 3 - HYDRAULIC OIL LEVEL

#### CHECK

- Open the left-hand cowl.
- Set the lifting platform in transport position
- The oil level must be in the middle of the indicator (Fig. A - 1).
- If necessary, add oil through the filling hole 2 (Fig. B) (see the chapter on Lubricants).



### 4 - THE DENSITY OF THE ELECTROLYTE IN THE BATTERY

#### CHECK

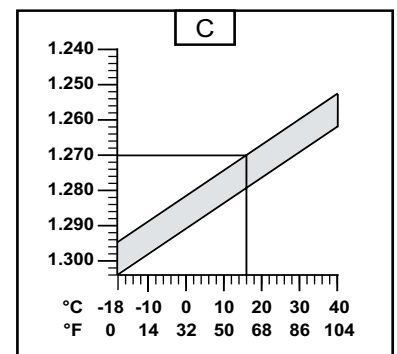
The electrolyte's density varies in accordance with the temperature but a minimum value of 1270 at 16°C must be maintained.

In the hatched area (Fig. C), the battery is normally charged. Above the hatched area, the battery must be recharged. The density must not vary by 0.0025 units from one battery element to another.

- Recharge the battery and wait for 1 hour before checking the electrolyte density in each battery cell with a battery acidometer.
- Never check after having added distilled water.

Handling and servicing batteries can be dangerous; take the following precautions:

- Wear protective goggles.
- Keep the battery horizontal while handling it.
- Never smoke or work close to a naked flame.
- Work in a sufficiently well-ventilated area.
- If any electrolyte splashes onto your skin or into your eyes, rinse thoroughly with fresh water for 15 minutes and call a doctor.

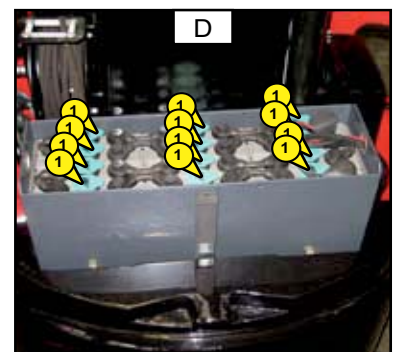


### 5 - THE BATTERY ELECTROLYTE LEVEL

#### CHECK

Check the level of the electrolyte in each cell of the battery.

- Remove the turret covers
- Open the cap over each battery cell (Fig. D - 1).
- The level must be 1cm above the plates in each cell.
- If necessary, top up with clean distilled water, kept in a glass container.
- Clean and dry the plugs (Fig. D - 1) and reinsert them
- Check the battery terminals and apply vaseline to avoid them corroding.



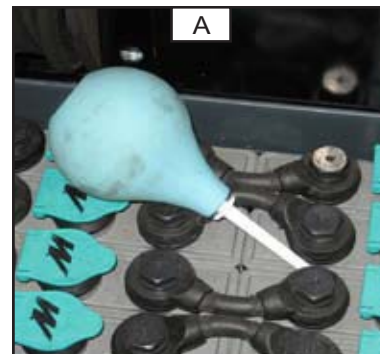
## 6 - THE BATTERY TRAYS

### DRAIN

- Switch off the lifting platform.
- Remove the turret covers.
- Check whether there is any water on the battery
- Drain away any water present on the battery with a suction bulb.



The presence of water in the trays causes damage to the batteries, causing them to short-circuit at the plus and minus terminals. Dispose of the fouled water (electrolyte and water mixed) in an environmentally-friendly way.

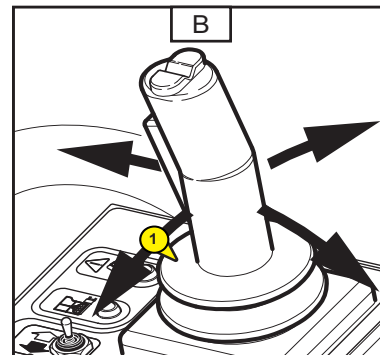


## 7 - CONDITION OF THE JOYSTICK BOOT

### CHECK

- Switch off the lifting platform.
- Climb into the basket for this operation.
- Check whether the rubber joystick boots are in good condition (Fig. B - 1), by operating them as if to make a movement.

The boots must not show any crazing or cracks, with the risk of water penetrating and interfering with the machine's correct operation.



## 8 - LOW PLATFORM POSITION SENSOR

### CHECK

Fold the arms into transport position for this operation.

- Conduct a translation at transport speed.
- Raise the pendulum.
- Move forwards.
- The lifting platform must switch to operating speed.



In the event of any malfunction, forbid the use of the lifting platform. Contact your dealer.

## 9 - TELESCOPE LOW POSITION SENSOR

### CHECK

For this operation, lower the telescope to transport position.

- Conduct a translation operation at transport speed.
- Raise the telescope.
- Move forward.
- The lifting platform must switch to operating mode.



In the event of any malfunction, forbid the use of the lifting platform. Contact your dealer.

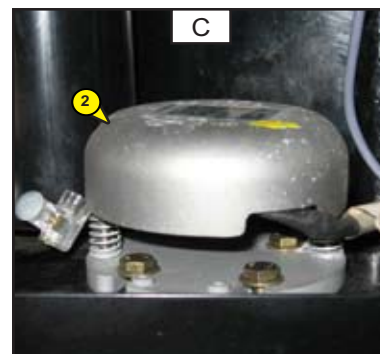
## 10 - THE TILT SENSOR

### CHECK

Test the sensor (Fig. C - 2) (See: 2 DESCRIPTION: CONTROLS AND INSTRUMENTS)



In the event of any malfunction, forbid the use of the lifting platform.  
Contact your dealer.



## 11 - MACHINE LABELS

### CHECK

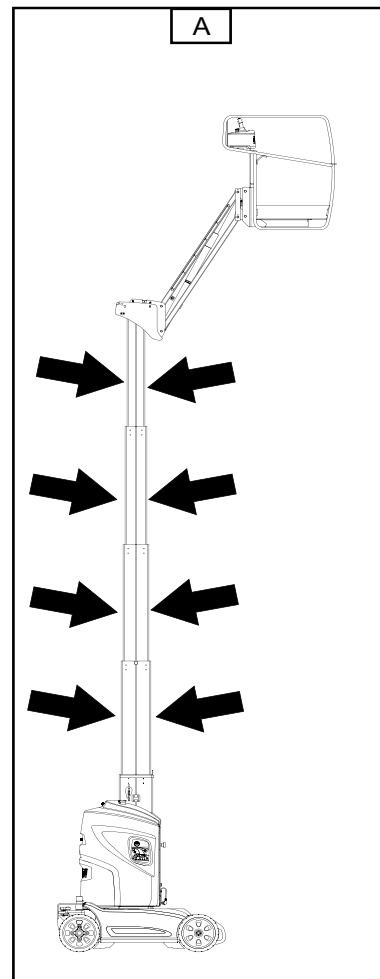
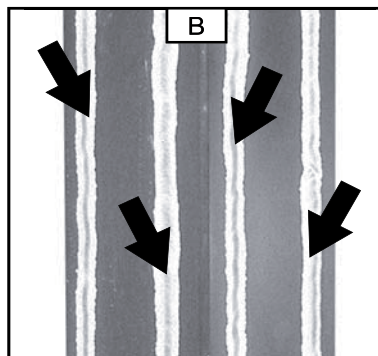
- Contact your dealer.

## EVERY 50 HOURS OF OPERATION

### 1 - GREASE THE MAST

#### GREASE

- Degrease the whole of the boom on all 4 sides with the help of a solvent (Fig. A).
- Apply new grease (See "LUBRICANTS Section") (Fig. B).



### 2 - CHECK THE TIGHTNESS OF THE WHEEL NUTS

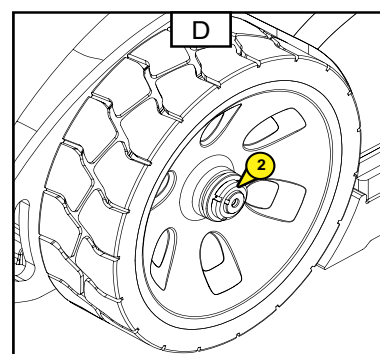
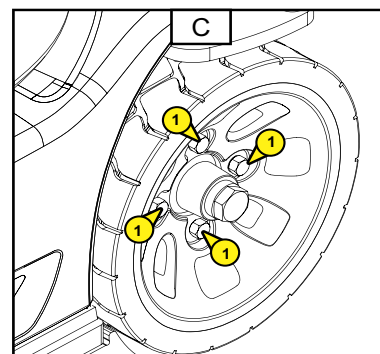
#### CHECK

- Check the tightness of the wheel nuts.

Failure to follow this instruction may cause the wheel pins to be damaged or break and the wheels to be deformed.

Front wheels (Fig. C - 1): 12 daNm

Rear wheels (Fig. D - 2): 18 daNm



### 3 - EMERGENCY PUMP

#### CHECK

- Switch off the lifting platform.
- Check that the emergency pump is operating correctly (see: 2 - DESCRIPTION: RESCUE PROCEDURE)
- Perform a movement (for example: lower an arm...).



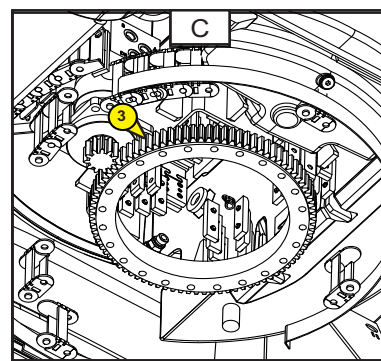
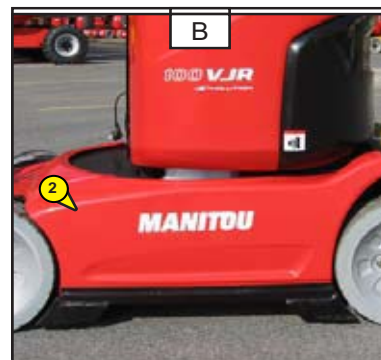
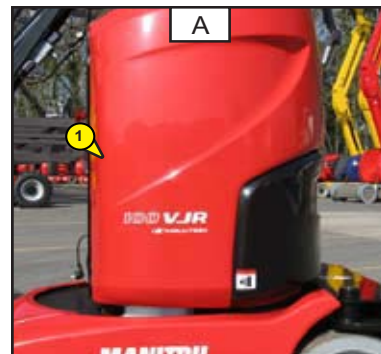
You must never use the lifting platform under any circumstances if the pump is not working.

## EVERY 100 HOURS OF OPERATION

### 1 - TURRET ORIENTATION CROWN GEAR

#### GREASE

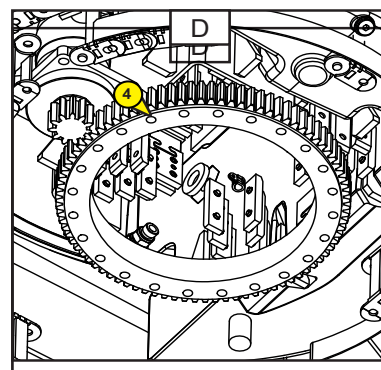
- The bearing raceways must be greased and the teeth lubricated every 100 operating hours, as well as before and after a long period at a standstill.
- Grease to use (see chapter "LUBRICANTS" ).
- Remove the cowls from turret (Fig. A -1).
- Remove the left hand bonnet from the chassis (Fig. B - 2)
- Use a brush to apply lubricant to the crown and pinion teeth (Fig. - 3)



### 2 - TIGHTNESS OF THE TURRET CROWN ORIENTATION BOLTS

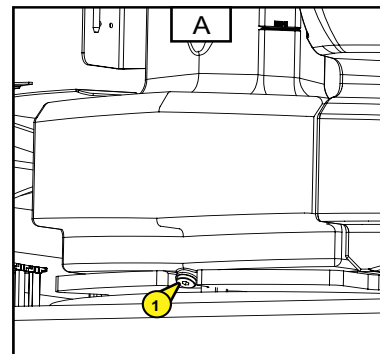
#### CHECK

- These bolts (Fig. D - 4) must be checked for tightness after the first 50 hours of operation. This operation must then be repeated every 100 hours of operation.
- The theoretical tightness torque for the bolts is  $12 \text{ daNm} \pm 10\%$
- $1 \text{ daN} = 1 \text{ kg}$



### 3 - HYDRAULIC OIL

#### DRAIN – REPLACE



### 4 - HYDRAULIC CIRCUIT STRAINER

#### CLEAN

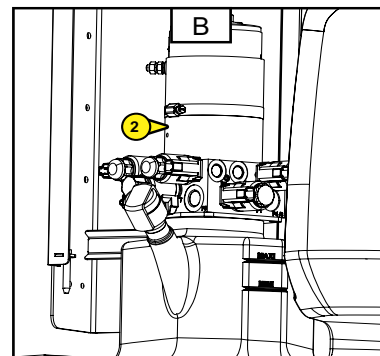
- Set the platform on a horizontal surface in transport position.
- Open the right hand cover.

#### EMPTYING THE OIL

- Lay a receptacle underneath the drain plug (Fig. A - 1) and loosen the plug.
- Remove the filling cap to facilitate drainage.

#### CLEANING THE STRAINER

- Remove the mini central hydraulic unit (Fig. B - 2), and then remove the strainer from the end of the plastic tube (Fig. C - 3).

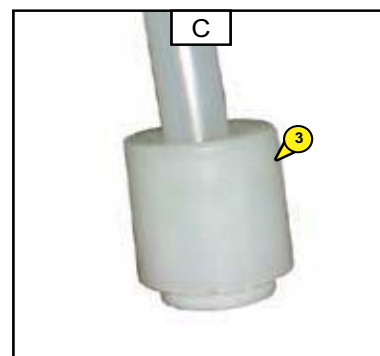


#### FILLING WITH OIL

- Reinsert and tighten the drain plug (Fig. A - 1)
- Fill with hydraulic oil (See “LUBRICANTS Section”) via the filling hole (Fig. B - 2
- Page 9).
- The oil level must lie between MIN and MAX on the gauge.



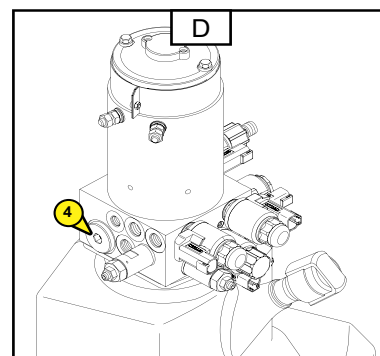
Dispose of the drained oil in a environmentally-friendly manner.



### 5 - HYDRAULIC FILTER

#### REPLACE

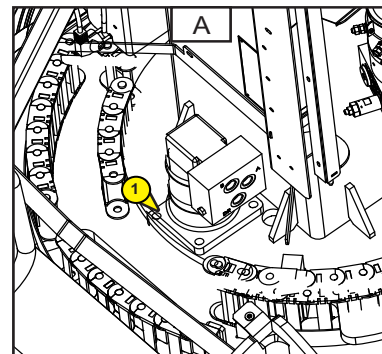
- Set the platform on a horizontal surface in transport position.
- Open the right hand cover.
- Remove the screw (Fig. D - 4) and remove the filter from inside it.  
Filter reference: 746308



## 6 - TIGHTNESS OF THE TURRET ROTATION MOTOR BOLTS

### CHECK

- Set the platform on a horizontal surface
- Remove the turret covers (Fig. A - 1 - Page 14).
- Remove the left hand bonnet from the chassis (Fig. B - 2 - Page 14).
- Check the tightness of the four bolts (Fig. A - 1)
- The tightening torque for the bolts is  $13.5 \text{ daN.m} \pm 10\%$
- $1 \text{ daN} = 1 \text{ Kg}$



## 7 - OVERLOAD SENSORS

### CHECK

- The jib-mounted platform must be folded back into transport position for this operation.
- Place a heavier weight in the basket than the one indicated (Cf: 2 - DESCRIPTION: SPECIFICATIONS).
- All the machine's movements should be blocked (the overload light in the basket should light up; the vibrating buzzer in the basket should sound continuously).



If there is a malfunction, prohibit use of the platform  
Contact your dealer.



## OCCASIONAL MAINTENANCE

### 1 - BATTERY

#### 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 (215 kg), so mechanical help will be required to lift it.

- PRECAUTIONS:**
- Keep the battery perfectly upright during lifting.
  - Ensure that you keep the slings out of the way to avoid a potential short-circuit.
  - Ensure that the battery is correctly positioned on the lifting platform.

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

### 2 - CHECK FOR WEAR OR LACK OF APPROPRIATE CHOCKING ON THE TELESCOPE

#### SKIDS



This stability test must be conducted by a qualified person who will implement the necessary protections for making this operation safe (securely anchoring the machine to the ground).

#### TEST CONDITIONS

- Lifting platform set on a flat surface.
- Telescope extended fully.
- Pendular arm raised to the horizontal position.
- Testing in an area shielded from the wind.

#### TEST

- Fix a load of 200 kg onto the basket, taking care to position the load's centre of gravity in the centre of the basket.
- Fix a plumbline on the overload axis (see Fig. A).

#### RESULT

- The distance between the plumbline and the turret's reinforcement must not be greater than 1700mm (see Fig. B).

#### CHECKING INTERVALS

The check must be made every time that one of the lifting platform's major components is modified, namely:

- Alteration or change of the telescope.
- Alteration or change of the counterweight.
- Alteration or change of the chassis.
- Alteration or change of the turret.
- Alteration or change of the pendular arm.
- Alteration or change of the wheels.
- Alteration or change of the telescope's skids or their chocking.
- Alteration or change of the basket.
- During each periodic general inspection of the machine, in accordance with the prevailing legislation.

