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YOUR DEALER

547408 EN (15/05/2012)

**160 ATJ PLUS Euro 3  
180 ATJ Euro 3  
180 ATJS Euro 3**

**INSTRUCTIONS MANUAL**  
*(ORIGINAL INSTRUCTIONS MANUAL)*

## *Foreword*

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This instruction for use is 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 - DESCRIPTIONS

## 3 - MAINTENANCE

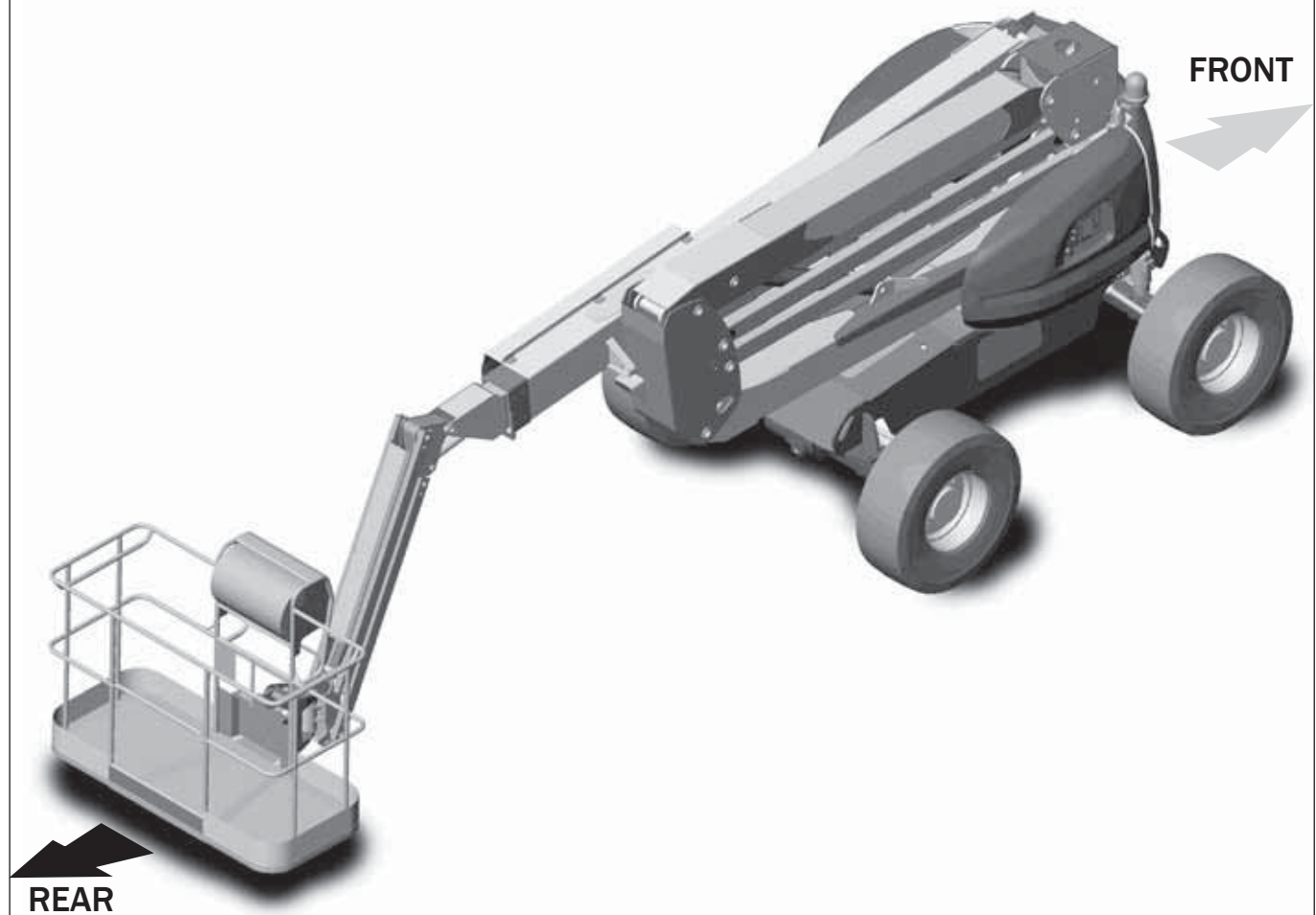
## 4 - ELECTRICITY

07/12/2010	1 <sup>st</sup> Publication date
21/11/2011	Update (1-20 ; 1-23 ; 2-10 ; 2-12 ; 2-15 ; 2-18 ; 2-19 ; 2-22 ; 2-23 ; 2-26 ; 2-28 ; 2-34 ; 2-35 ; 2-40 ; 2-41 ; 2-43 ; 2-47 ; 2-49 ; 2-53 ; 2-55 ; 2-61 ; 3-8 ; 3-9 ; 4-3 ; 5-3)
15/05/2012	Update all languages

160 ATJ PLUS Euro 3



180 ATJ Euro 3





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



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# INSTRUCTIONS TO THE COMPANY MANAGER

## PREAMBLE

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WHENEVER YOU SEE THIS SYMBOL IT MEANS :



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

## THE SITE

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- 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

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- 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

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### 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***

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- 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***

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- 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 manoeuvres described in these operator's manual must be performed. The manufacturer cannot predict all possible risky situations. Consequently, the safety instructions given in the operator's manual and on the 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

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### 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**

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### **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
  - IC PLATFORMS :
    - IC engine oil
    - Hydraulic reservoir oil
    - Fuel
    - Coolant
  - ELECTRIC PLATFORMS :
    - Hydraulic reservoir oil
    - Battery charge level
- 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

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#### 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

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#### 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

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#### **PLATFORMS WITH IC ENGINES**

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- 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...).

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#### **ELECTRIC PLATFORMS**

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- 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***

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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).

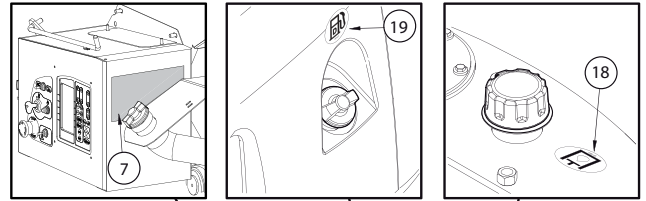
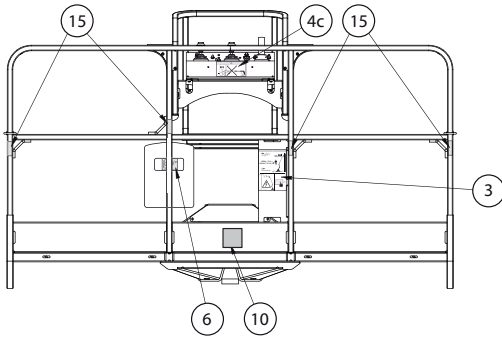


Make sure the area is adequately ventilated before starting up the platform.

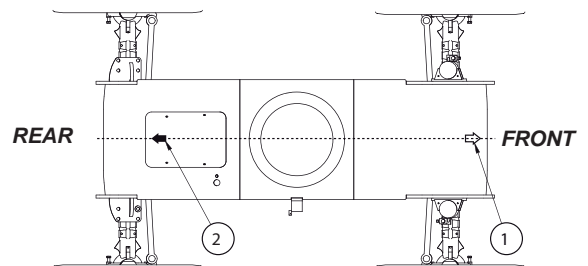
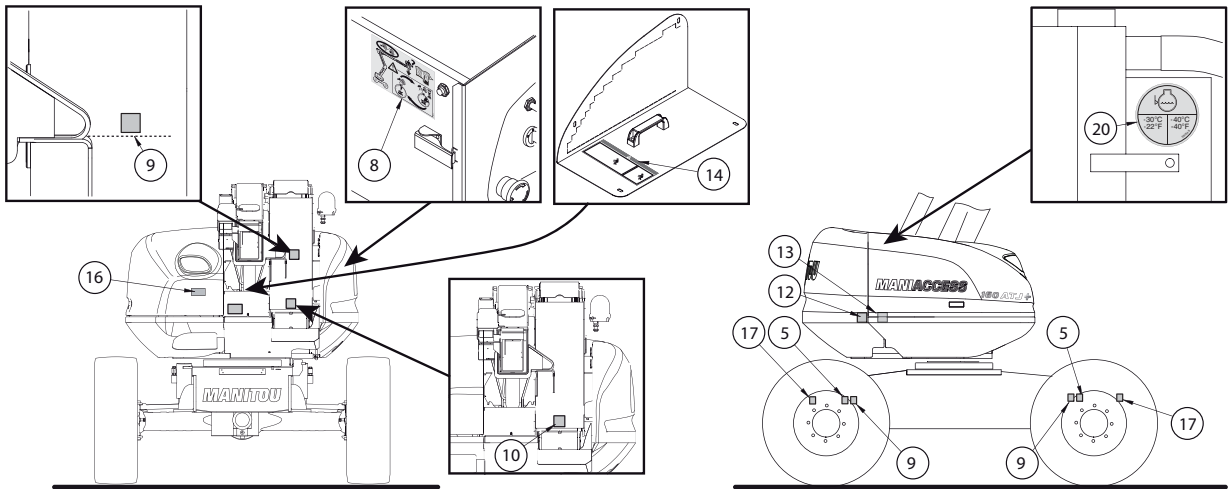
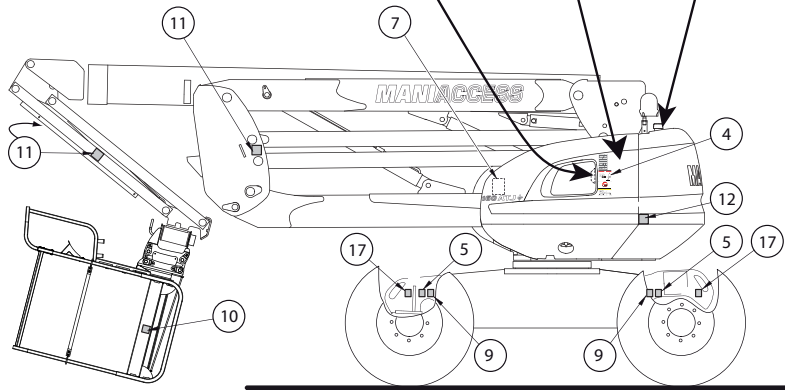
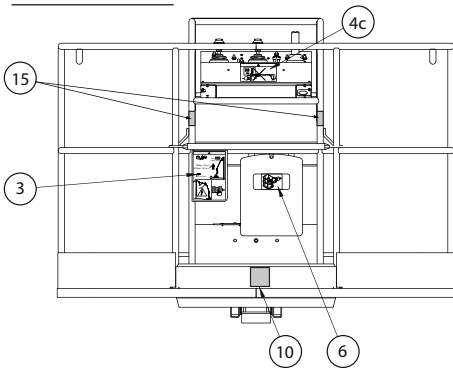
- Start up the platform, following the safety instructions and regulations (see DRIVING INSTRUCTIONS).
- Carry out all the lifting system's hydraulic movements right up to the limit switches for each cylinder.

# SAFETY LABELS

## 160 ATJ PLUS EURO 3



## 180 ATJ EURO 3



<b>1 - WHITE ARROW</b>	<b>1-22</b>
<b>2 - BLACK ARROW</b>	<b>1-22</b>
<b>3 - BASKET INSTRUCTIONS / LOAD CAPACITY</b>	<b>1-22</b>
<b>4A - SAFETY INSTRUCTIONS</b>	<b>1-23</b>
<b>4B - TOWING</b>	<b>1-23</b>
<b>4C - WASHING RECOMMENDATIONS</b>	<b>1-23</b>
<b>5 - WHEEL LOAD</b>	<b>1-23</b>
<b>6 - LOCATION OF THE PLATFORM KEY</b>	<b>1-24</b>
<b>7 - MANUAL CONTROL PROCEDURE</b>	<b>1-24</b>
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<b>10 - DANGER KEEP AWAY</b>	<b>1-25</b>
<b>11- RISK OF BEING CUT/AMPUTATION</b>	<b>1-25</b>
<b>12 - DANGER RISK OF CRUSHING</b>	<b>1-25</b>
<b>13 - RISK OF BURNS</b>	<b>1-26</b>
<b>14 - ARM SUPPORT</b>	<b>1-26</b>
<b>15 - SAFETY ATTACHMENTS</b>	<b>1-26</b>
<b>16 - RECOMMENDATIONS FOR WASHING THE BONNET</b>	<b>1-26</b>
<b>17 - TIE-DOWN HOOK</b>	<b>1-27</b>
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<b>19 - DIESEL</b>	<b>1-27</b>
<b>20 - ANTI-FREEZE</b>	<b>1-27</b>

## MEANINGS

---

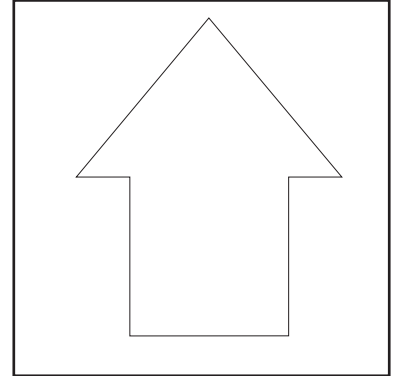
### 1 - WHITE ARROW

---

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.



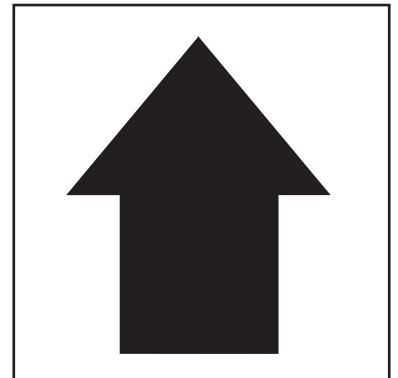
### 2 - BLACK ARROW

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This indicates the translation direction when reversing.



Same as for the white arrow.



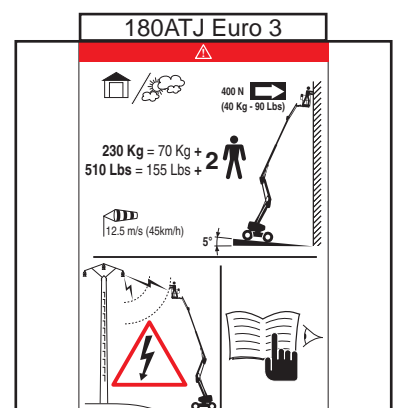
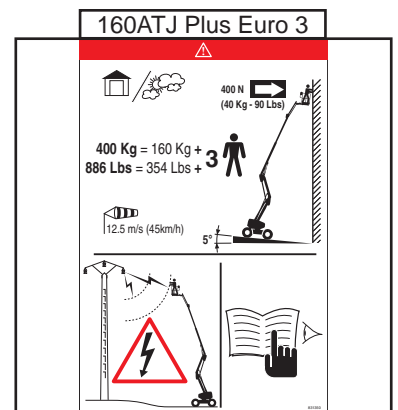
### 3 - BASKET INSTRUCTIONS AND LOAD CAPACITY

---

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.

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



#### 4A - SAFETY ADVICE

Read and take note of the operating instructions and safety measures before starting the lifting platform.

#### 4B - TOWING

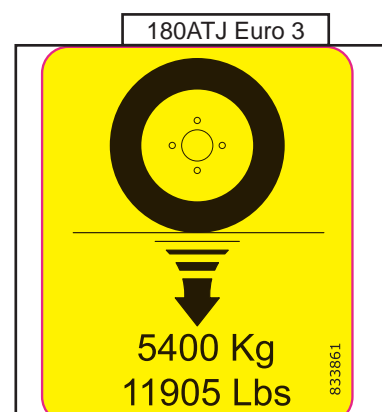
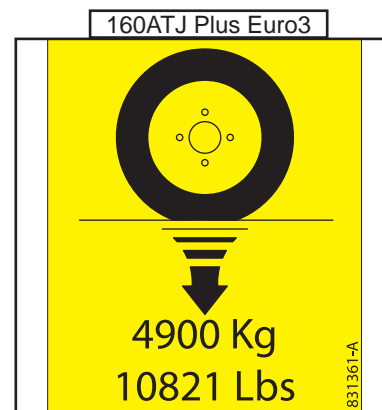
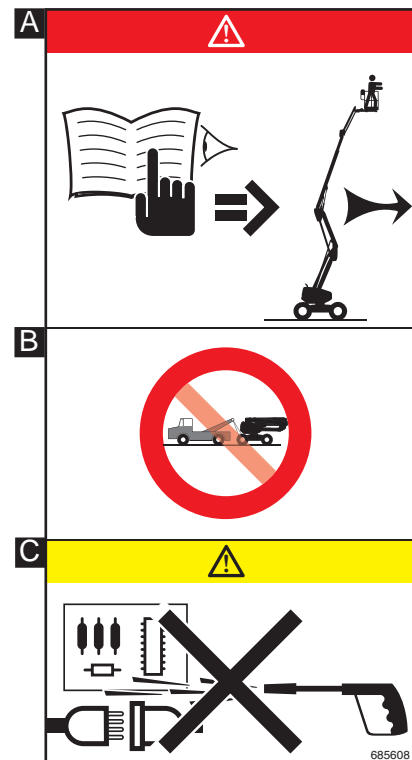
This sticker indicates that the machine should not be towed if it breaks down.

#### 4C - WASHING RECOMMENDATIONS

It is strictly forbidden to use a pressure washer to clean the control knobs and the electrical components.

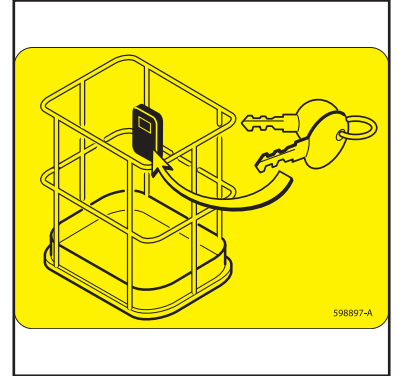
#### 5 - WHEEL LOAD

This shows the maximum load that a wheel may exert on the ground (see 2 - DESCRIPTION: CHARACTERISTICS for the break-through value).



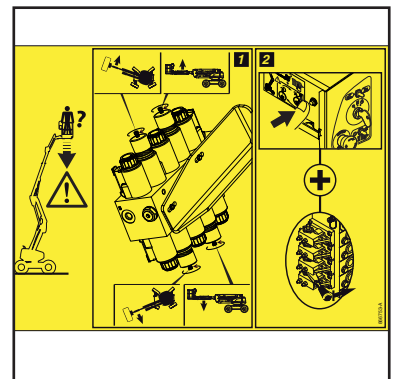
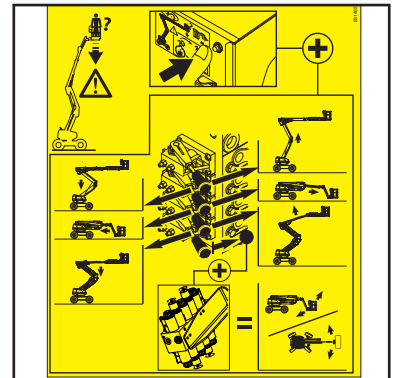
## 6 - LOCATION OF THE PLATFORM KEY

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



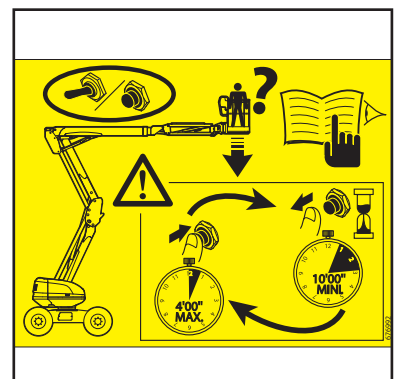
## 7 - MANUAL CONTROL PROCEDURE

This describes the procedure for performing movements with the emergency pump and the manual controls when an accident or breakdown occurs that makes the electrical control box inoperative. Operate ... (see the description in SECTION 2).



## 8 - EMERGENCY PUMP

The emergency pump must only be used in the event of a problem or breakdown occurring. It must not be used for longer than 4 minutes in every 10-minute period.





## 9. RISK OF BEING CRUSHED

---

It is strictly forbidden to insert your fingers, or any other part of your body, in the lifting structure's components (arms, scissors, pendular arm, etc.); there is a risk of being crushed.



## 10 - 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.



## 11 - RISK OF BEING CUT/AMPUTATION

---

It is strictly forbidden to insert your fingers, or any other part of your body, in the lifting structure's components (arms, scissors, pendular arm, etc.); there is a risk of being cut or amputation.



## 12 - DANGER OF BEING CRUSHED

---

It is strictly forbidden to park in this area when the lifting platform is moving (translation, rotation, etc.). The components to which the stickers are attached could hit you; there is a risk of your being crushed.



### 13 - RISK OF BURNS

---

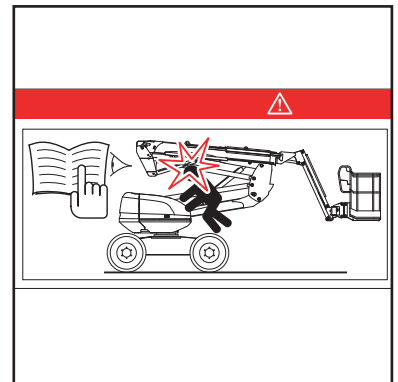
This sticker indicates that there is a significant risk of your being burnt in this region (engine silencer, IC engine, etc.).



### 14 - ARM SUPPORT

---

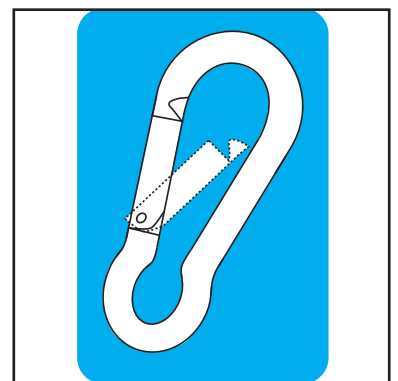
This sticker informs you of the use of a maintenance support when working on the lifting platform in operating position.



### 15 - SAFETY ATTACHMENTS

---

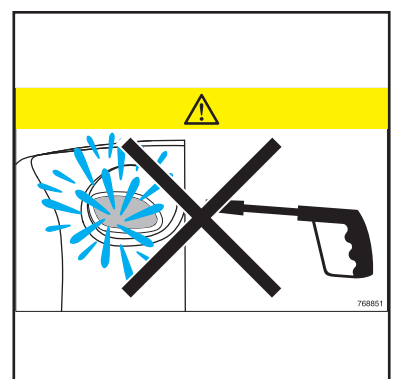
This sticker shows where the safety harness must be attached.



### 16 - RECOMMENDATIONS FOR WASHING THE BONNET

---

This sticker states that water must not be splashed on the air filter opening.



## 17 - TIE-DOWN HOOK

---

This sticker shows the location of the anchoring points for tying the platform on a lorry bed.  
(see 3 – OCCASIONAL MAINTENANCE).

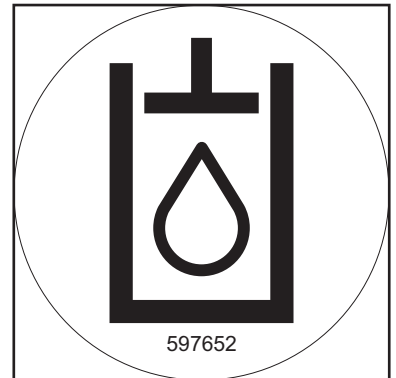


## 18 - HYDRAULIC OIL

---

This indicates that this reservoir is designed only to hold hydraulic oil.

NB: see MAINTENANCE: LUBRICANTS



## 19 - DIESEL

---

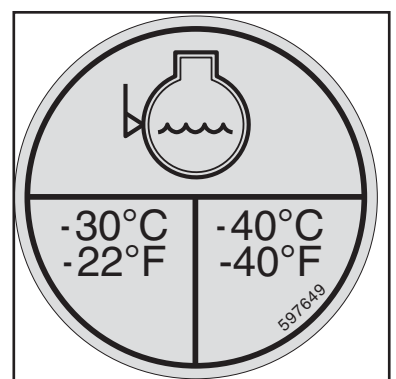
This indicates that this reservoir is designed only to hold fuel for diesel vehicles.



## 20 - ANTI-FREEZE

---

This sticker indicates that there is anti-freeze in the engine.  
When protection is provided by anti-freeze with properties differing from the original, the -30° or -40°C box must be ticked.





# **2 - DESCRIPTION**



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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** :

**160 ATJ PLUS EURO 3**

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 04 10 4959

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

52 avenue Felix Louat - BP 80067  
60304 SENLIS CEDEX FRANCE

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

11) Numéro d'attestation, **Certificate number** :

10) Organisme notifié, **Notified body** :

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

13) Mesuré, **Measured** : 101 dB (A)

14) Garanti, **Guaranteed** : 102 dB (A)

**2004/108/CE**

11) Numéro d'attestation, **Certificate number** :

10) Organisme notifié, **Notified body** :

15) Normes harmonisées utilisées, **Harmonised standards used** : EN12895

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** : Éric LAMBERT

20) Fonction, **Function** : Président division RTH

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 s 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.
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- et :** 1) **EÜ vastavusdeklaratsioon (algupärane)**, 2) Äriühing, 3) Aadress, 4) Tehniline dokumentatsioon, 5) Seadme tootja, 6) Kinnitab, et see toode, 7) On vastavuses järgmistele direktiivide ja nende riigisisesele õigusele 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) Allkirja.
- fi :** 1) **EY-vaatimustenmukaisuusvakuutus (alkuperäiset)**, 2) Yritys, 3) Osoite, 4) teknisen eritelmän, 5) Jäljessä kuvatuun koneen valmistaja, 6) Vakuuttaa, että tämä kone, 7) Täyttää seuraavien direktiivien sekä niitä vastaavien kansallisten säännösten vaatimukset, 8) Liitteen IV koneiden osalta, 9) Todistuksen numero, 10) Ilmoitettu laitos, 15) yhdenmukaistettuja standardeja käytetään, 16) muita standardeja tai eritelmät, 17) Paikka, 18) Aika, 19) Allekirjoittajan nimi, 20) Toimi, 21) Allekirjoitus.
- ga :** 1) « **EC »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 gcoilonn sé le na treoracha seo a leanas agus a trasúimh isteach i ndlí náisiúnta, 8) Le haghaidh innill an aguisin IV, 9) Uimhir teastais, 10) Comhlacht a chuireadh i bhfios, 15) caighdeán comhchuibhithe a úsáidtear, 16) caighdeán eile nó sonraíochtaí teicniúla a úsáidtear, 17) Déanta ag, 18) Dáta, 19) Ainm an tsínitheora, 20) Feidhm, 21) Síniú.
- hu :** 1) **CE megfelelőségi nyilatkozat (eredeti)**, 2) A vállalat, 3) Cím, 4) műszaki dokumentáció, 5) Az alábbi gép gyártója, 6) Kijelenti, hogy a gép, 7) Megfelel az alábbi irányelveknek valamint azok honosított előírásainak, 8) A IV. melléklet gépeihez, 9) Bizonylati szám, 10) Értesített szervezet, 15) felhasznált harmonizált szabványok, 16) egyéb felhasznált műszaki szabványok és előírások hivatkozásai, 17) Kelt (hely), 18) Dátum, 19) Aláíró neve, 20) Funkció, 21) Aláírás.
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- 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 mašinu, 9) Sertifiko Nr, 10) Paskebltoji 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) Apliecinā, ka šī iekārta, 7) Ir atbilstoša tālāk norādītajām direktīvām un to transpozīcijai nacionālajā likumdošanā, 8) Iekārtām IV pielikumā, 9) Apliecināšanas 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 (originali)**, 2) Il-kumpanija, 3) Indirizz, 4) fajl tekniku, 5) Manifattriċi tal-magna deskritta hawn isfel, 6) Tididkjarja li din il-magna, 7) Hija konformi hija konformi mad-Direttivi segwenti u l-Ilijiet li jimplimentawhom fil-ligi nazzjonali, 8) Għall-magni fl-Anness IV, 9) Numru tac-certifikat, 10) Entità notifikata, 15) l-istandards armonizzati użati, 16) standards teknici u specifikazzjonijiet oħra użati, 17) Magħmul f', 18) Data, 19) l-ism il-firmatarju, 20) Kariga, 21) Firma.
- nl :** 1) **EG-verklaring van overeenstemming (oorspronkelijke)**, 2) Het bedrijf, 3) Adres, 4) technisch dossier, 5) Constructeur van de hierna genoemde machine, 6) Verklaart dat deze machine, 7) In overeenstemming is met de volgende richtlijnen en hun omzettingen in het nationale recht, 8) Voor machines van bijlage IV, 9) Goedkeuringsnummer, 10) Aangezegde instelling, 15) gehanteerde geharmoniseerde normen, 16) andere gehanteerde technische normen en specificaties, 17) Opgemaakt te, 18) Datum, 19) Naam van ondergetekende, 20) Functie, 21) Handtekening.
- no :** 1) **CE-samsvarserklæring (original)**, 2) Selskapet, 3) Adresse, 4) tekniske arkiv, 5) Fabrikant av følgende maskin, 6) Erklærer at denne maskinen, 7) Oppfyller kravene i følgende direktiver, med nasjonale gjennomføringsbestemmelser, 8) For maskinene i tillegg IV, 9) Attestnummer, 10) Notifisert organ, 15) harmoniserte standarder som brukes, 16) Andre standarder og spesifikasjoner brukt, 17) Utstedt i, 18) Dato, 19) Underskriverens navn, 20) Stilling, 21) Underskrift.
- pl :** 1) **Deklaracja zgodności CE (oryginalne)**, 2) Spółka, 3) Adres, 4) dokumentacja technicznej, 5) Wykonawca maszyny opisanej poniżej, 6) Oświadczca, 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 diretivas 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) cârți 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) Semnătura.
- sk :** 1) **ES vyhlásenie o zhode (pôvodný)**, 2) Názov spoločnosti, 3) Adresa, 4) technickej dokumentácie, 5) Výrobca nižšie opísaného stroja, 6) Vyhlasuje, že tento stroj, 7) Je v súlade s nasledujúcimi smernicami a smernicami transponovanými do vnútroštátneho práva, 8) Pre stroje v prílohe IV, 9) Číslo certifikátu, 10) Notifikačný orgán, 15) použité harmonizované normy, 16) použité iné technické normy a predpisy, 17) Miesto vydania, 18) Dátum vydania, 19) Meno podpisujúceho, 20) Funkcia, 21) Podpis.
- sl :** 1) **ES Izjava o ustreznosti (izvirna)**, 2) Družba, 3) Naslov, 4) tehnične dokumentacije, 5) Proizvajalac tukaj opisanega stroja, 6) Izjavlja, da je ta stroj, 7) Ustreza naslednjim direktivam in njihovim transpoziciji v državno pravo, 8) Za stroje priloga IV, 9) Številka potrdila, 10) Obvestilo organu, 15) uporabljene harmonizirane standarde, 16) druge uporabljene tehnične standarde in zahteve, 17) V, 18) Datum, 19) Ime podpisnika, 20) Funkcija, 21) Podpis.
- sv :** 1) **CE-försäkran om överensstämmelse (original)**, 2) Företaget, 3) Adress, 4) tekniska dokumentationen, 5) Konstruktor av nedan beskrivna maskin, 6) Försäkrar att denna maskin, 7) Överensstämmer med nedanstående direktiv och införlivandet av dem i nationell rätt, 8) För maskinerna i bilaga IV, 9) Nummer för godkännande, 10) Organism som underrättats, 15) Harmoniserade standarder som använts, 16) andra tekniska standarder och specifikationer som använts, 17) Upprättat i, 18) Datum, 19) Namn på den som undertecknat, 20) Befattning, 21) Namntecknin.

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** :

**180 ATJ EURO 3**

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 4942

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

52 avenue Felix Louat - BP 80067  
60304 SENLIS CEDEX FRANCE

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

11) Numéro d'attestation, **Certificate number** :

10) Organisme notifié, **Notified body** :

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

13) Mesuré, **Measured** : 101 dB (A)

14) Garanti, **Guaranteed** : 102 dB (A)

**2004/108/CE**

11) Numéro d'attestation, **Certificate number** :

10) Organisme notifié, **Notified body** :

15) Normes harmonisées utilisées, **Harmonised standards used** : EN12895

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** : Éric LAMBERT

20) Fonction, **Function** : Président division RTH

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 s 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.
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- et :** 1) **EÜ vastavusdeklaratsioon (algupärane)**, 2) Äriühing, 3) Aadress, 4) Tehniline dokumentatsioon, 5) Seadme tootja, 6) Kinnitab, et see toode, 7) On vastavuses järgmistele direktiivide ja nende riigisisesele õigusele ülevõtmiseks vastuõetud 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) Allkirja.
- fi :** 1) **EY-vaatimustenmukaisuusvakuutus (alkuperäiset)**, 2) Yritys, 3) Osoite, 4) teknisen eritelmän, 5) Jäljessä kuvatu koneen valmistaja, 6) Vakuuttaa, että tämä kone, 7) Täyttää seuraavien direktiivien sekä niitä vastaavien kansallisten säännösten vaatimukset, 8) Liitteen IV koneiden osalta, 9) Todistuksen numero, 10) Ilmoitettu laitos, 15) yhdenmukaistettuja standardeja käytetään, 16) muita standardeja tai eritelmät, 17) Paikka, 18) Aika, 19) Allekirjoittajan nimi, 20) Toimi, 21) Allekirjoitus.
- ga :** 1) « **EC »dearbhu comhréireachta (bunaidh)**, 2) An comhlacht, 3) Seoladh, 4) comhad teicniúil, 5) Déantóir an innill a thuiriscítear thíos, 6) Dearbhaíonn sé go bhfuil an t-inneall, 7) Go gcomlóinn sé le na treoracha seo a leanas agus a trasúimh isteach i ndlí náisiúnta, 8) Le haghaidh innill an aguisin IV, 9) Uimhir teastais, 10) Comhlacht a chuireadh i bhfios, 15) caighdeán comhchuibhithe a úsáidtear, 16) caighdeán eile nó sonraíochtaí teicniúla a úsáidtear, 17) Déanta ag, 18) Dáta, 19) Ainm an tsínitheora, 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 stöðlum og staðfærslu þeirra með hljóðsjón af þjóðarrétti, 8) Fyrir tækin í aukakafli 8), 9) Staðfestingarnúmer, 10) Tilkynnt til, 15) samhæfða staða sem notaðir, 16) önnur staðlar eða forskrifir notað, 17) Staður, 18) Dagsetning, 19) Nafn undirritaðs, 20) Staða, 21) Undirskrift.
- it :** 1) **Dichiarazione CE di conformità (originale)**, 2) La società, 3) Indirizzo, 4) fascicolo tecnico, 5) Costruttore della macchina descritta di seguito, 6) 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 mašinu, 9) Sertifiko Nr, 10) Paskebltoji 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) Apliecināšanas 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 (originali)**, 2) Il-kumpanija, 3) Indirizz, 4) fajl tekniku, 5) Manifattriċi tal-magna deskritta hawn isfel, 6) Tididkjarja li din il-magna, 7) Hija konformi hija konformi mad-Direttivi segwenti u l-Ilijiet li jimplimentawhom fil-ligi nazjonalni, 8) Għall-magni fl-Anness IV, 9) Numru tac-certifikat, 10) Entità nnotifikata, 15) l-istandards armonizzati użati, 16) standards tekniċi u specifikazzjonijiet oħra użati, 17) Magħmul f', 18) Data, 19) l-ism il-firmatarju, 20) Kariga, 21) Firma.
- nl :** 1) **EG-verklaring van overeenstemming (oorspronkelijke)**, 2) Het bedrijf, 3) Adres, 4) technisch dossier, 5) Constructeur van de hierna genoemde machine, 6) Verklaart dat deze machine, 7) In overeenstemming is met de volgende richtlijnen en hun omzettingen in het nationale recht, 8) Voor machines van bijlage IV, 9) Goedkeuringsnummer, 10) Aangezegde instelling, 15) gehanteerde geharmoniseerde normen, 16) andere gehanteerde technische normen en specificaties, 17) Opgemaakt te, 18) Datum, 19) Naam van ondergetekende, 20) Functie, 21) Handtekening.
- no :** 1) **CE-samsvarserklæring (original)**, 2) Selskapet, 3) Adresse, 4) tekniske arkiv, 5) Fabrikant av følgende maskin, 6) Erklærer at denne maskinen, 7) Oppfyller kravene i følgende direktiver, med nasjonale gjennomføringsbestemmelser, 8) For maskinene i tillegg IV, 9) Attestnummer, 10) Notifisert organ, 15) harmoniserte standarder som brukes, 16) Andre standarder og spesifikasjoner brukt, 17) Utstedt i, 18) Dato, 19) Underskriverens navn, 20) Stilling, 21) Underskrift.
- pl :** 1) **Deklaracja zgodności CE (oryginalne)**, 2) Spółka, 3) Adres, 4) dokumentacji technicznej, 5) Wykonawca maszyny opisanej poniżej, 6) Oświadczca, 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 diretivas 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) Semnătura.
- sk :** 1) **ES vyhlásenie o zhode (pôvodný)**, 2) Názov spoločnosti, 3) Adresa, 4) technickej dokumentácie, 5) Výrobca nižšie opísaného stroja, 6) Vyhlasuje, že tento stroj, 7) Je v súlade s nasledujúcimi smernicami a smernicami transponovanými do vnútroštátneho práva, 8) Pre stroje v prílohe IV, 9) Číslo certifikátu, 10) Notifikačný orgán, 15) použité harmonizované normy, 16) použité iné technické normy a predpisy, 17) Miesto vydania, 18) Dátum vydania, 19) Meno podpisujúceho, 20) Funkcia, 21) Podpis.
- sl :** 1) **ES Izjava o ustreznosti (izvirna)**, 2) Družba, 3) Naslov, 4) tehnične dokumentacije, 5) Proizvajalac tukaj opisanega stroja, 6) Izjavlja, da je ta stroj, 7) Ustreza naslednjim direktivam in njihovih transpoziciji v državno pravo, 8) Za stroje priloga IV, 9) Številka potrdila, 10) Obvestilo organu, 15) uporabljene harmonizirane standarde, 16) druge uporabljene tehnične standarde in zahteve, 17) V, 18) Datum, 19) Ime podpisnika, 20) Funkcija, 21) Podpis.
- sv :** 1) **CE-försäkran om överensstämmelse (original)**, 2) Företaget, 3) Adress, 4) tekniska dokumentationen, 5) Konstruktor av nedan beskrivna maskin, 6) Försäkrar att denna maskin, 7) Överensstämmer med nedanstående direktiv och införlivandet av dem i nationell rätt, 8) För maskinerna i bilaga IV, 9) Nummer för godkännande, 10) Organism som underrättats, 15) Harmoniserade standarder som använts, 16) andra tekniska standarder och specifikationer som använts, 17) Upprättat i, 18) Datum, 19) Namn på den som undertecknat, 20) Befattning, 21) Namntecknin.



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** :

**180 ATJS EURO 3**

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 10 11 4964

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

52 avenue Felix Louat - BP 80067  
60304 SENLIS CEDEX FRANCE

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

11) Numéro d'attestation, **Certificate number** :

10) Organisme notifié, **Notified body** :

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

13) Mesuré, **Measured** : 101 dB (A)

14) Garanti, **Guaranteed** : 102 dB (A)

**2004/108/CE**

11) Numéro d'attestation, **Certificate number** :

10) Organisme notifié, **Notified body** :

15) Normes harmonisées utilisées, **Harmonised standards used** : EN12895

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** : Éric LAMBERT

20) Fonction, **Function** : Président division RTH

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 s 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 järgmistele direktiivide ja nende riigisisesele õigusele ülevõtmiseks vastuõetud 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) Allkirja.
- fi** : 1) **EY-vaatimustenmukaisuusvakuutus (alkuperäiset)**, 2) Yritys, 3) Osoite, 4) teknisen eritelmän, 5) Jäljessä kuvatu koneen valmistaja, 6) Vakuuttaa, että tämä kone, 7) Täyttää seuraavien direktiivien sekä niitä vastaavien kansallisten säännösten vaatimukset, 8) Liitteen IV koneiden osalta, 9) Todistuksen numero, 10) Ilmoitettu laitos, 15) yhdenmukaistettuja standardeja käytetään, 16) muita standardeja tai eritelmät, 17) Paikka, 18) Aika, 19) Allekirjoittajan nimi, 20) Toimi, 21) Allekirjoitus.
- ga** : 1) « **EC » dearbhú comhréireachta (bunaidh)**, 2) An comhlacht, 3) Seoladh, 4) comhad teicniúil, 5) Déantóir an innill a thuairiscítear thíos, 6) Dearbhaíonn sé go bhfuil an t-inneall, 7) Go gcoilonn sé le na treoracha seo a leanas agus a trasúimh isteach i ndlí náisiúnta, 8) Le haghaidh innill an aguisin IV, 9) Uimhir teastais, 10) Comhlacht a chuireadh i bhfios, 15) caihdeáin comhchuibhithe a úsáidtear, 16) caihdeáin eile nó sonraíochtaí teicniúla a úsáidtear, 17) Déanta ag, 18) Dáta, 19) Ainm an tsínitheora, 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.
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- nl** : 1) **EG-verklaring van overeenstemming (oorspronkelijke)**, 2) Het bedrijf, 3) Adres, 4) technisch dossier, 5) Constructeur van de hierna genoemde machine, 6) Verklaart dat deze machine, 7) In overeenstemming is met de volgende richtlijnen en hun omzettingen in het nationale recht, 8) Voor machines van bijlage IV, 9) Goedkeuringsnummer, 10) Aangezegde instelling, 15) gehanteerde geharmoniseerde normen, 16) andere gehanteerde technische normen en specificaties, 17) Opgemaakt te, 18) Datum, 19) Naam van ondergetekende, 20) Functie, 21) Handtekening.
- no** : 1) **CE-samsvarserklæring (original)**, 2) Selskapet, 3) Adresse, 4) tekniske arkiv, 5) Fabrikant av følgende maskin, 6) Erklærer at denne maskinen, 7) Oppfyller kravene i følgende direktiver, med nasjonale gjennomføringsbestemmelser, 8) For maskinene i tillegg IV, 9) Attestnummer, 10) Notifisert organ, 15) harmoniserte standarder som brukes, 16) Andre standarder og spesifikasjoner brukt, 17) Utstedt i, 18) Dato, 19) Underskriverens navn, 20) Stilling, 21) Underskrift.
- pl** : 1) **Deklaracja zgodności CE (oryginalne)**, 2) Spółka, 3) Adres, 4) dokumentacji technicznej, 5) Wykonawca maszyny opisanej poniżej, 6) Oświadczca, że ta maszyna, 7) Jest zgodna z następującymi dyrektywami i z odpowiedziami 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 diretivas 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) Semnătura.
- sk** : 1) **ES vyhlásenie o zhode (pôvodný)**, 2) Názov spoločnosti, 3) Adresa, 4) technickej dokumentácie, 5) Výrobca nižšie opísaného stroja, 6) Vyhlasuje, že tento stroj, 7) Je v súlade s nasledujúcimi smernicami a smernicami transponovanými do vnútroštátneho práva, 8) Pre stroje v prílohe IV, 9) Číslo certifikátu, 10) Notifikačný orgán, 15) použité harmonizované normy, 16) použité iné technické normy a predpisy, 17) Miesto vydania, 18) Dátum vydania, 19) Meno podpisujúceho, 20) Funkcia, 21) Podpis.
- sl** : 1) **ES Izjava o ustreznosti (izvirna)**, 2) Družba, 3) Naslov, 4) tehnične dokumentacije, 5) Proizvajalac tukaj opisanega stroja, 6) Izjavlja, da je ta stroj, 7) Ustreza naslednjim direktivam in njihovim transpoziciji v državno pravo, 8) Za stroje priloga IV, 9) Številka potrdila, 10) Obvestilo organu, 15) uporabljene harmonizirane standarde, 16) druge uporabljene tehnične standarde in zahteve, 17) V, 18) Datum, 19) Ime podpisnika, 20) Funkcija, 21) Podpis.
- sv** : 1) **CE-försäkran om överensstämmelse (original)**, 2) Företaget, 3) Adress, 4) tekniska dokumentationen, 5) Konstruktor av nedan beskrivna maskin, 6) Försäkrar att denna maskin, 7) Överensstämmer med nedanstående direktiv och införlivandet av dem i nationell rätt, 8) För maskinerna i bilaga IV, 9) Nummer för godkännande, 10) Organism som underrättats, 15) Harmoniserade standarder som använts, 16) andra tekniska standarder och specifikationer som använts, 17) Upprättat i, 18) Datum, 19) Namn på den som undertecknat, 20) Befattning, 21) Namntecknin.

# LIFTING PLATFORM ID

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

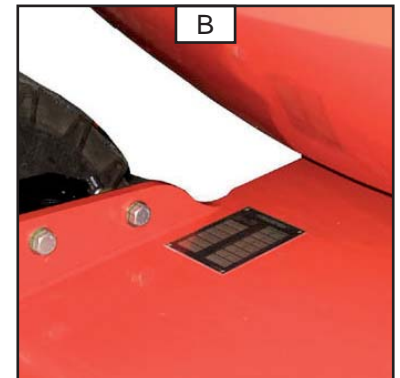
- Type :
- Serial No.:
- Year of manufacture:

A

<b>MANITOU</b>		CE	INTERIEUR INSIDE	EXTERIEUR OUTSIDE
MANITOU BF 44158 ANCENIS CEDEX FRANCE			Charge maxi Max. load	
MODELE MODEL			kg	kg
N° dans la série Serial no.			No personnes maxi Max. no of persons	
Année de fabrication Year of manufacture			Equipment Attachement	
Masse à vide Empty weight		kg	kg	kg
Puissance Power		kW	Forces manuelles Manual forces	daN
Tension Voltage		VDC	daN	daN
			Inclinaison maxi Max. tilt	°
			Vitesse maxi du vent Max. wind speed	m/s
			Source électrique ext Ext. electrical source	Volts
N° 830122				

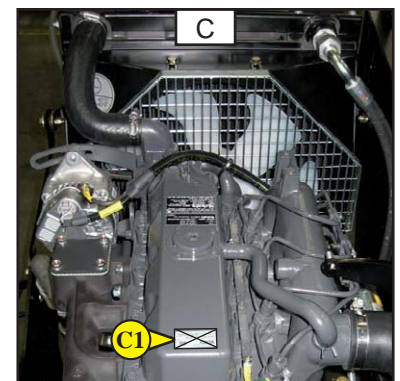
## LOCATION OF THE MANUFACTURER'S PLATE (FIG. B)

The manufacturer's plate is fixed on the front right of the chassis.



## IC ENGINE (FIG. C)

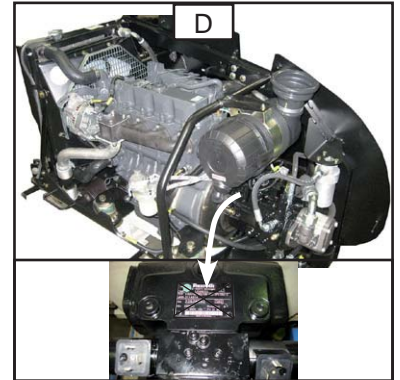
- Engine no.



## ***HYDROSTATIC PUMP (FIG. D)***

---

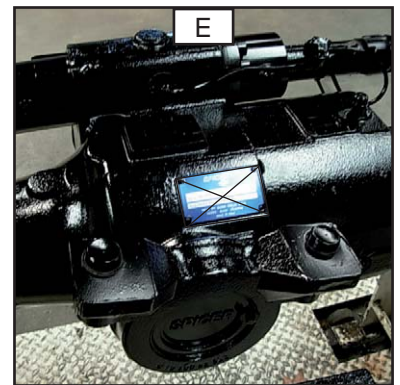
- Pump No.
- Coding type
- Manufacture No
- Year of manufacture



## ***FRONT AXLE (FIG. E)***

---

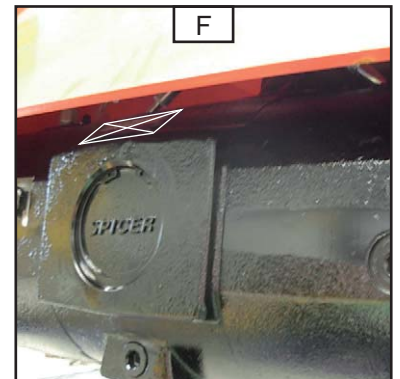
- Axle type
- Serial No.
- Manufacture No



## ***REAR AXLE (FIG. F)***

---

- Axle type
- Serial No.
- Manufacture No.



**ENGINE**

---

- Type	KUBOTA V2403-M
- Number of cylinders	4 in line
- Number of strokes	4
- Ignition sequence	1.3.4 2
- Cubic capacity	2434 cm <sup>3</sup>
- Bore	87 mm
- Stroke	102.4 mm
- Volumetric ratio	23.8 : 1
- Nominal rpm	2500 rpm
- Idling speed, unladen, for the 160 ATJ Plus Euro 3	1400 rpm
- Idling speed, unladen, for the 180 ATJ Euro 3 & 180 ATJS Euro 3	1300 rpm
- Idling speed, unladen, for the 160 ATJ Plus Euro 3, fitted with optional 3.5 kW generator	1400 rpm
- Idling speed, unladen, for the 180 ATJ Euro 3, fitted with optional 3.5 kW generator	1300 rpm
- Idling speed, unladen, for the 160 ATJ Plus Euro 3 & 180 ATJ Euro 3, fitted with optional 5 kW generator	1500 rpm
- ISO power / RPM (at 2400 rpm)	46 CV - 34,1 Kw
- Max torque (at 1800 tr/m)	162.5 Nm
- Mass	184 Kg

**COOLING CIRCUIT**

---

- Type	Air
- Fan	Suction type
- Number of blades	7
- Diameter	390 mm
- Thermostat	
- Starts to open at	82°C
- Fully open at	95°C

**ELECTRICAL CIRCUIT**

---

- Earth	Negative
- Battery	12 V - 105 A
- Alternator	12 V - 70 A
- Voltage regulator	Built into the alternator
- Starter	12 V - 2 kw



## HYDROSTATIC TRANSMISSION

---

### Hydrostatic pump

- Type	A10VG45 with variable cubic capacity
- Reverser	Electromagnetic 12 V
- Main pump	
Cubic capacity	45 cm <sup>3</sup>
Nominal engine speed output, unladen	64.5 l/min
Maximum engine speed output, unladen	115 l/min
Maximum operating pressure	300 bar
- Filtration	
Suction	100 Microns

## AUXILIARY HYDRAULIC CIRCUIT

---

- Type of pump	Fixed cubic capacity
Cubic capacity	19.5 cm <sup>3</sup>
- Lifting, tilting, telescoping, steering, rotation circuit	
Flow at max rpm unladen	47,5 L/min
Maximum operating pressure	210 Bar

## CONNECTION BOX FUSES\*

---

- F1	7,5 A
- F2	20 A
- F3	20 A
- F4	20 A
- F5	5 A
- F6	30 A
- F7	60 A

## EMERGENCY PUMP FUSE (POWER)\*

---

- F8	250 A
------	-------

\* : See 4- ELECTRICITY for their locations

## HYDROSTATIC TRANSMISSION

---

### Hydrostatic pump

- Type	MPV46 with variable cubic capacity
- Reverser	Electromagnetic 12 V
- Main pump	
Cubic capacity	46 cm <sup>3</sup>
Nominal engine speed output, unladen	60 l/min
Maximum engine speed output, unladen	115 l/min
Maximum operating pressure	300 bar
- Filtration	
Suction	100 Microns

## AUXILIARY HYDRAULIC CIRCUIT

---

- Type of pump	CASAPPA Fixed cubic capacity
Cubic capacity	19.5 cm <sup>3</sup>
- Lifting, tilting, telescoping, steering, rotation circuit	
Flow at max rpm unladen (180ATJ)	50 L/min
Flow at max rpm unladen (180ATJRC)	80 L/min
Flow at max rpm unladen (180ATJS)	48 L/min
Maximum operating pressure	210 Bar

## CONNECTION BOX FUSES\*

---

- F1	7,5 A
- F2	20 A
- F3	20 A
- F4	20 A
- F5	5 A
- F6	30 A
- F7	60 A

## EMERGENCY PUMP FUSE (POWER)\*

---

- F8	250 A
------	-------

\* : See 4- ELECTRICITY for their locations

## SPECIFICATIONS 160 ATJ PLUS EURO 3

### SPÉCIFICATIONS

---

- Use	Indoors and outdoors
- Capacity	400 Kg incl. 3 people
- Mass of the equipment that can be loaded on board:	
With 1 person in the basket	320 Kg
With 2 people in the basket	240 Kg
With 3 people in the basket	160 kg
- Transmission hydrostatique	4 wheel drive - 4 wheel steer
- Rotation tourelle :	
160 AJT Plus Standard	359°
160 ATJ Plus continuous rotation option	Continue
- Operating speed	0,8 km/h
- Transport speed	
Slow speed	1,7 km/h
Gradient speed	2 km/h
High speed	6 km/h
- Operating height	16210 mm
- Floor height	14210 mm
- Max operating offset	8440 mm
- Mass of the lifting platform	
Unladen	8100 kg
Under nominal load	8500 kg
- Number of gears	4
- Traversable slope	40%
- Ground clearance under the chassis	425 mm
- Ground clearance under the axle	325 mm
- Max permissible wind speed	45 km/h
- Maximum permissible tilt	5° ou 9%
- Max permissible manual horizontal force	40 daNm

### TYRES FRONT & REAR

---

- Dimensions	18" (12,5-18)
- Pressure	Foam
- Load per tyre unladen	
Front	1940 Kg
Rear	2110 Kg
- En charge maxi + déport sur 1 roue (avant / arrière)	4900 Kg
- Floor area supporting 1 wheel On hard ground	450 Cm <sup>2</sup>
- Floor area supporting 1 wheel On loose ground	1045 Cm <sup>2</sup>
- Pressure On hard ground	10,88 DaN/Cm <sup>2</sup>
- Pressure On loose ground	4,69 DaN/Cm <sup>2</sup>

### LEVEL OF VIBRATIONS

---

- Vibrations received by the hands, arms and body combined	
- Average quadratic values for the upper limbs	< 2,5 m/s <sup>2</sup>
- Average quadratic values for the body	< 0,5 m/s <sup>2</sup>

## SPECIFICATIONS 180 ATJ EURO 3

### SPÉCIFICATIONS

---

- Use	Indoors and outdoors
- Capacity	230 Kg incl. 2 people
- Mass of the equipment that can be loaded on board:	
With 1 person in the basket	150 Kg
With 2 people in the basket	70 Kg
- Transmission hydrostatique	4 wheel drive - 4 wheel steer
- Rotation tourelle :	
180 AJT Standard	359°
180 ATJ continuous rotation option	Continue
- Operating speed	0,8 km/h
- Transport speed	
Slow speed	1,7 km/h
Gradient speed	2 km/h
High speed	6 km/h
- Operating height	17635 mm
- Floor height	15635 mm
- Max operating offset	10540 mm
- Mass of the lifting platform	
Unladen	8090 kg
Under nominal load	8320 kg
- Number of gears	4
- Traversable slope	40%
- Ground clearance under the chassis	425 mm
- Ground clearance under the axle	325 mm
- Max permissible wind speed	45 km/h
- Maximum permissible tilt	5° ou 9%
- Max permissible manual horizontal force	40 daNm

### ROUES AVANT - ARRIERE

---

- Dimensions	18" (12,5-18)
- Pressure	Foam
- Load per tyre unladen	
Front	1655 Kg
Rear	2395 Kg
- En charge maxi + déport sur 1 roue (avant / arrière)	5400 Kg
- Floor area supporting 1 wheel On hard ground	465 Cm <sup>2</sup>
- Floor area supporting 1 wheel On loose ground	1050 Cm <sup>2</sup>
- Pressure On hard ground	11,6 DaN/Cm <sup>2</sup>
- Pressure On loose ground	5,14 DaN/Cm <sup>2</sup>

### NIVEAU DES VIBRATIONS

---

- Vibrations received by the hands, arms and body combined	
- Average quadratic values for the upper limbs	< 2,5 m/s <sup>2</sup>
- Average quadratic values for the body	< 0,5 m/s <sup>2</sup>

## SPECIFICATIONS 180 ATJ S EURO 3

### SPÉCIFICATIONS

---

- Use	Indoors and outdoors
- Capacity	230 Kg incl. 2 people
- Mass of the equipment that can be loaded on board:	
With 1 person in the basket	150 Kg
With 2 people in the basket	70 Kg
- Transmission hydrostatique	4 wheel drive - 2 wheel steer
- Rotation tourelle :	359°
- Operating speed	0,8 km/h
- Transport speed	
Slow speed	1,7 km/h
Gradient speed	2 km/h
High speed	6 km/h
- Operating height	17635 mm
- Floor height	15635 mm
- Max operating offset	9510 mm
- Mass of the lifting platform	
Unladen	7820 kg
Under nominal load	8050 kg
- Number of gears	4
- Traversable slope	40%
- Ground clearance under the chassis	425 mm
- Ground clearance under the axle	330 mm
- Max permissible wind speed	45 km/h
- Maximum permissible tilt	5° ou 9%
- Max permissible manual horizontal force	40 daNm

### ROUES AVANT - ARRIERE

---

- Dimensions	18" (12,5-18)
- Pressure	Foam
- Load per tyre unladen	
Front	1655 Kg
Rear	2395 Kg
- En charge maxi + déport sur 1 roue (avant / arrière)	5400 Kg
- Floor area supporting 1 wheel On hard ground	465 Cm <sup>2</sup>
- Floor area supporting 1 wheel On loose ground	1050 Cm <sup>2</sup>
- Pressure On hard ground	11,6 DaN/Cm <sup>2</sup>
- Pressure On loose ground	5,14 DaN/Cm <sup>2</sup>

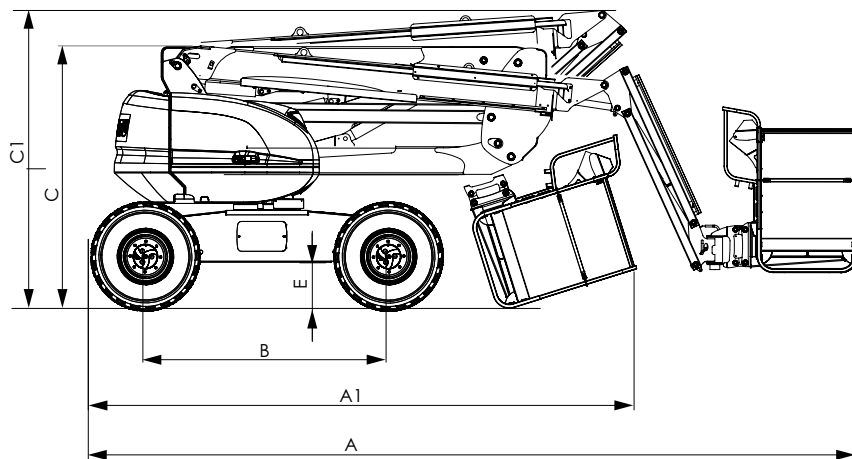
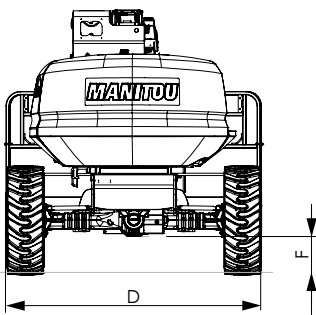
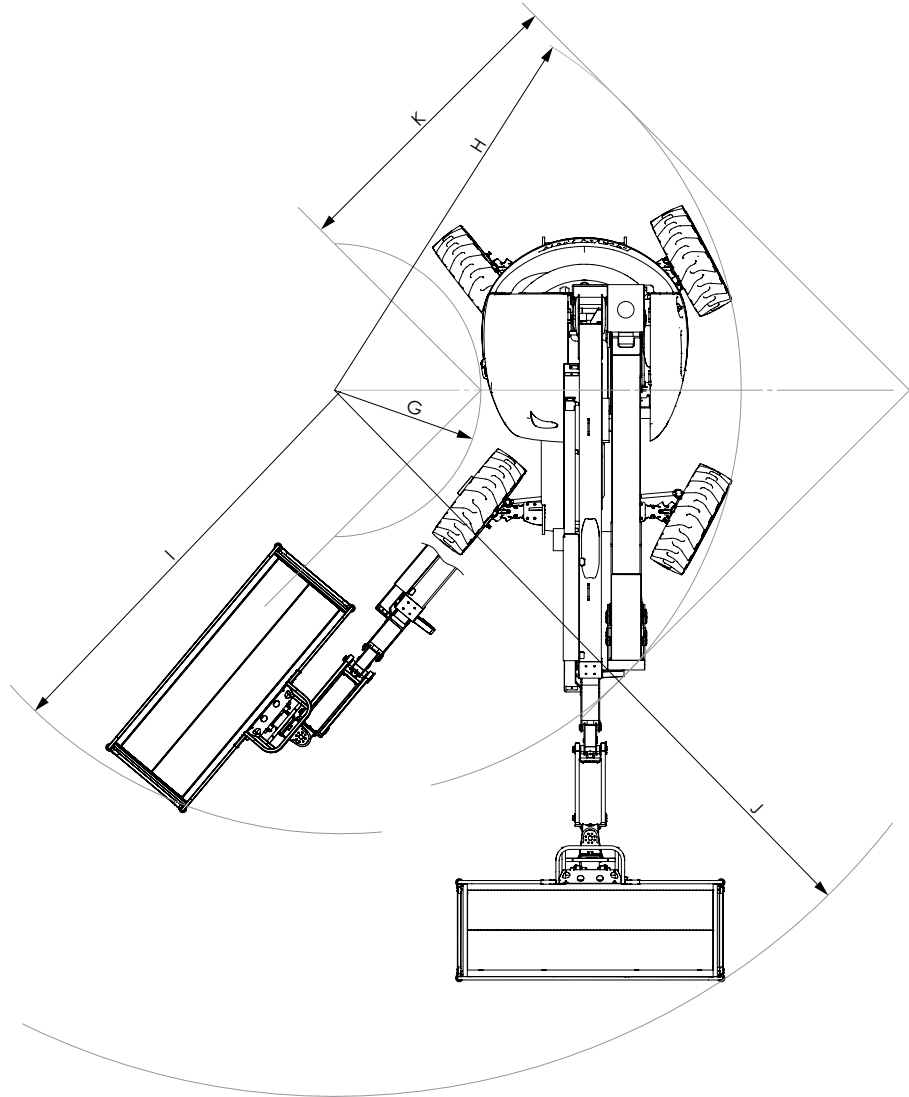
### NIVEAU DES VIBRATIONS

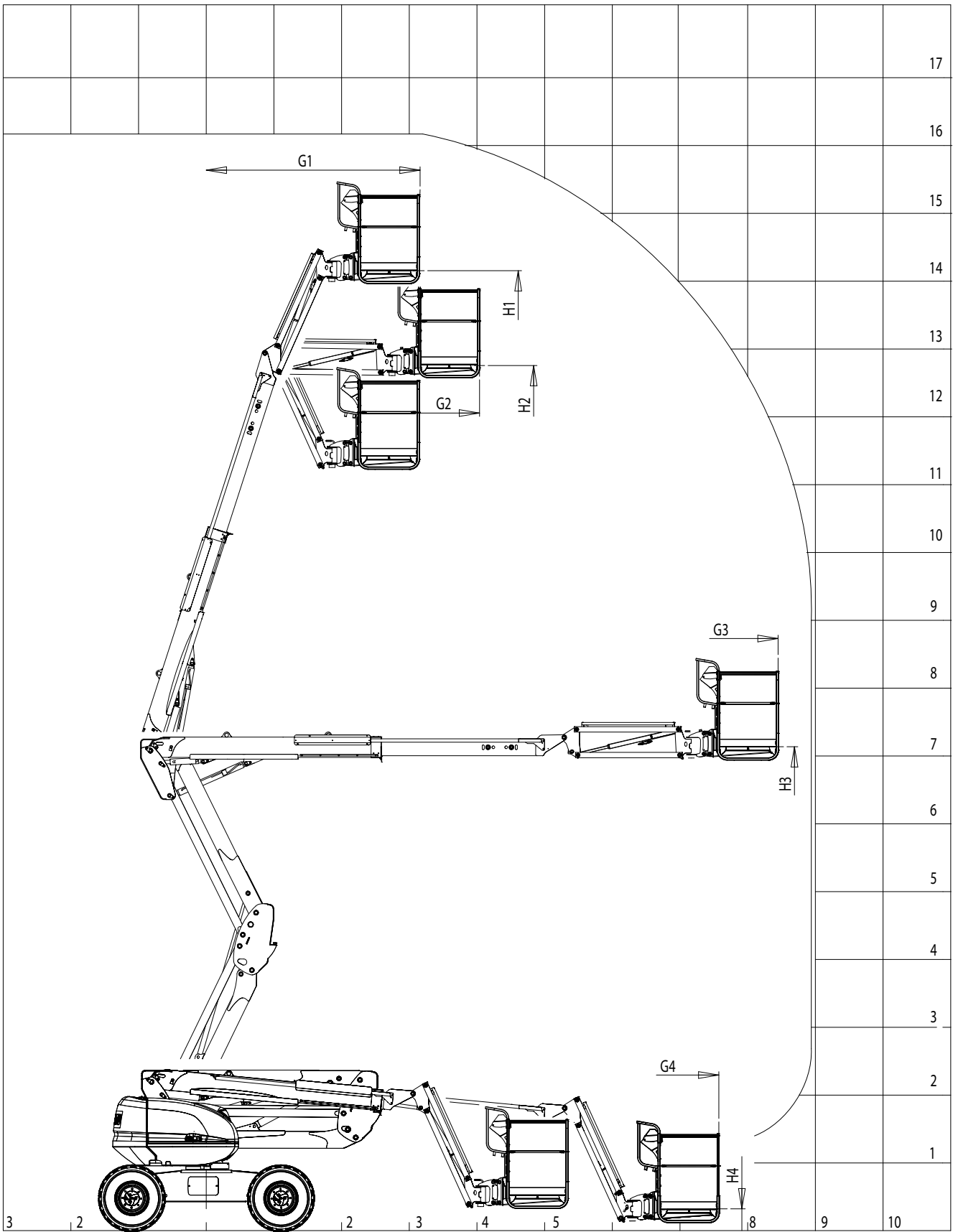
---

- Vibrations received by the hands, arms and body combined	
- Average quadratic values for the upper limbs	< 2,5 m/s <sup>2</sup>
- Average quadratic values for the body	< 0,5 m/s <sup>2</sup>

# DIMENSIONS 160 ATJ PLUS EURO 3

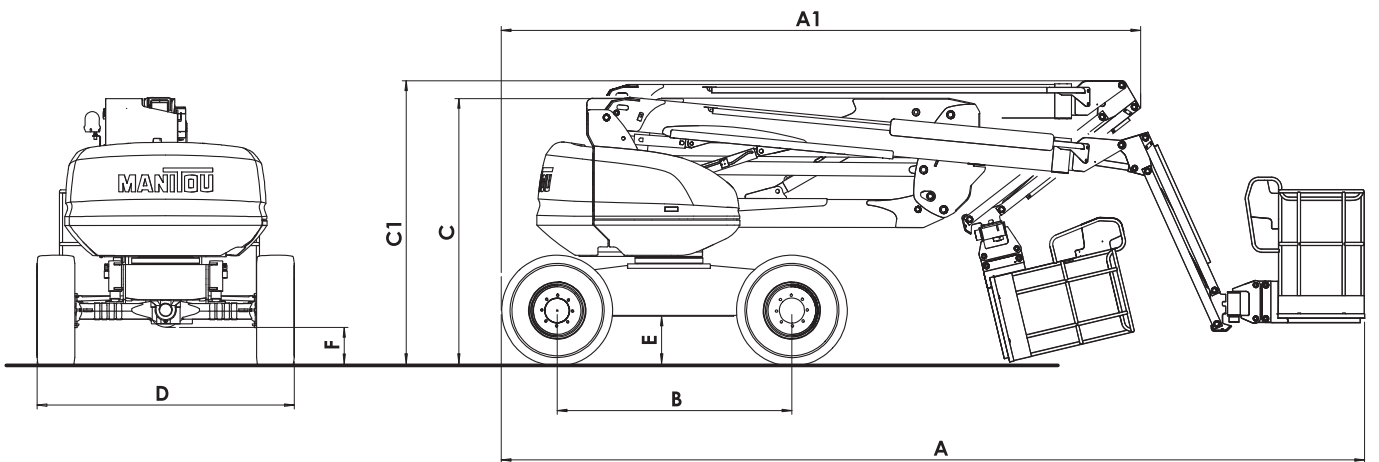
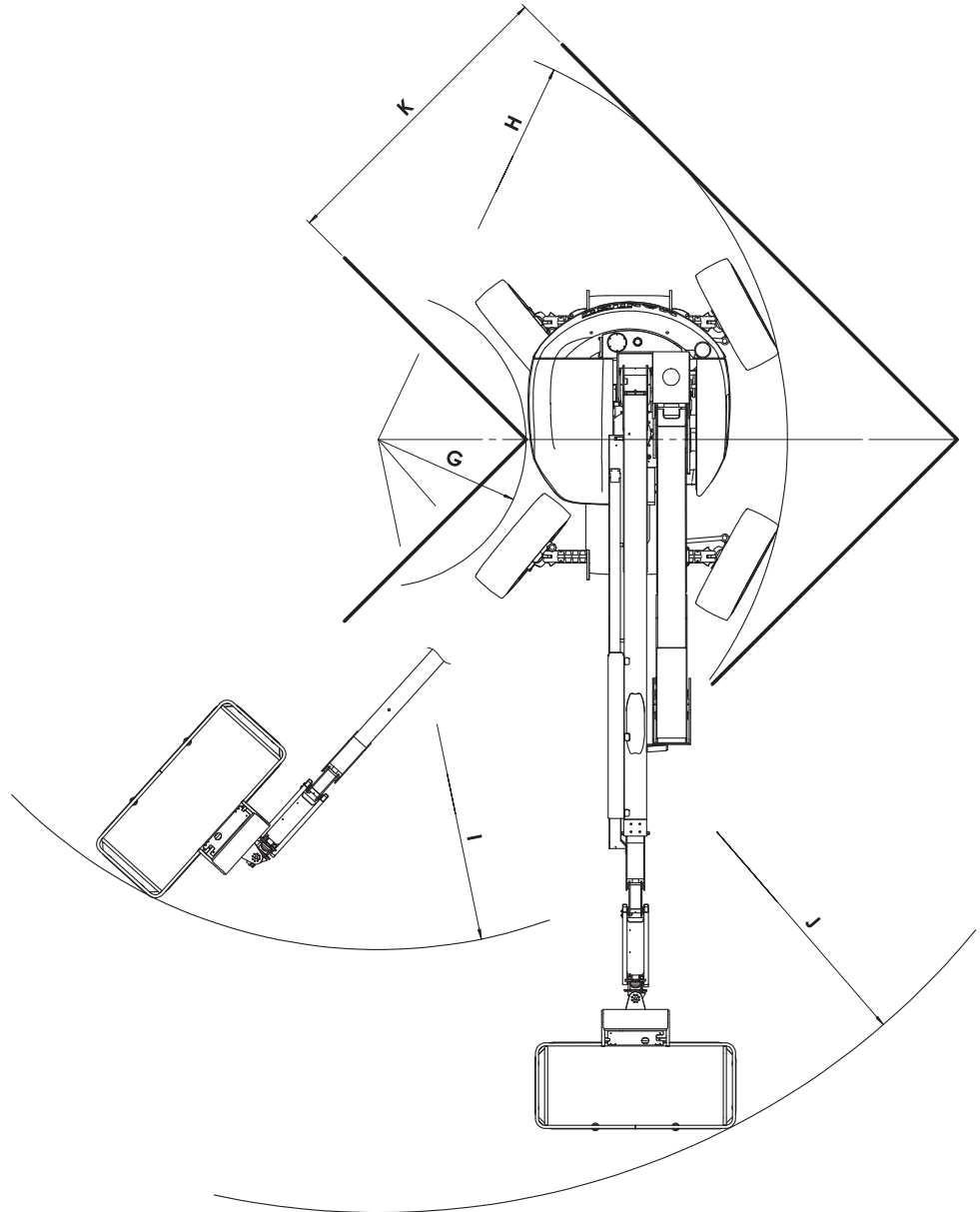
A	6929
A1	4938
B	2200
C	2370
C1	2705
D	2300
E	425
F	325
G	1325
H	3680
I	4040
J	6322
K	2742
L1	3160
L2	4050
L3	8450
L4	7574
M1	14200
M2	12790
M3	7150
M4	321



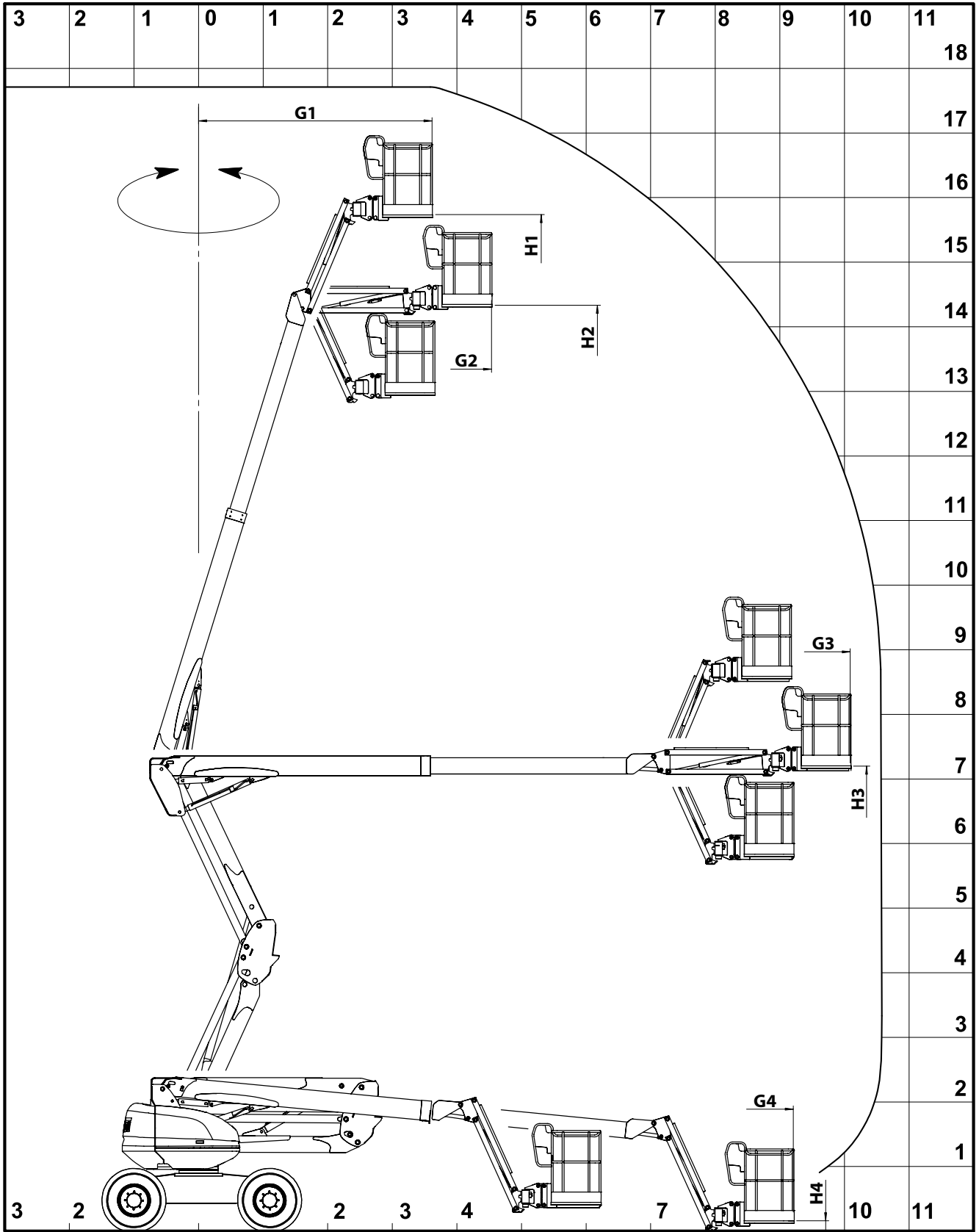


# DIMENSIONS 180 ATJ EURO 3

A	7775
A1	5770
B	2200
C	2370
C1	2560
D	2300
E	425
F	325
G	1325
H	3665
I	4530
J	6875
K	2730
G1	3660
G2	4580
G3	10040
G4	9160
H1	15635
H2	14250
H3	7150
H4	120

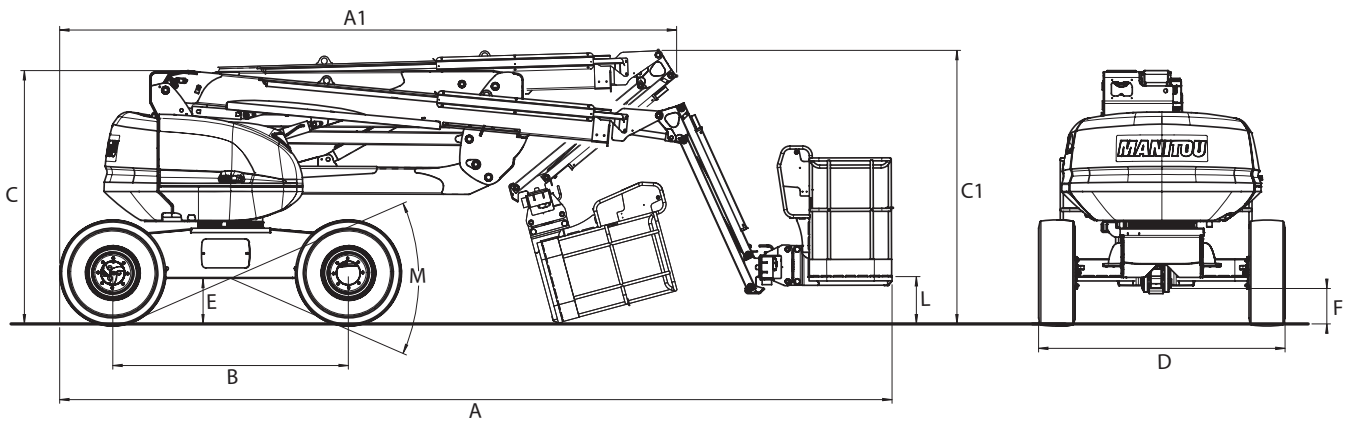
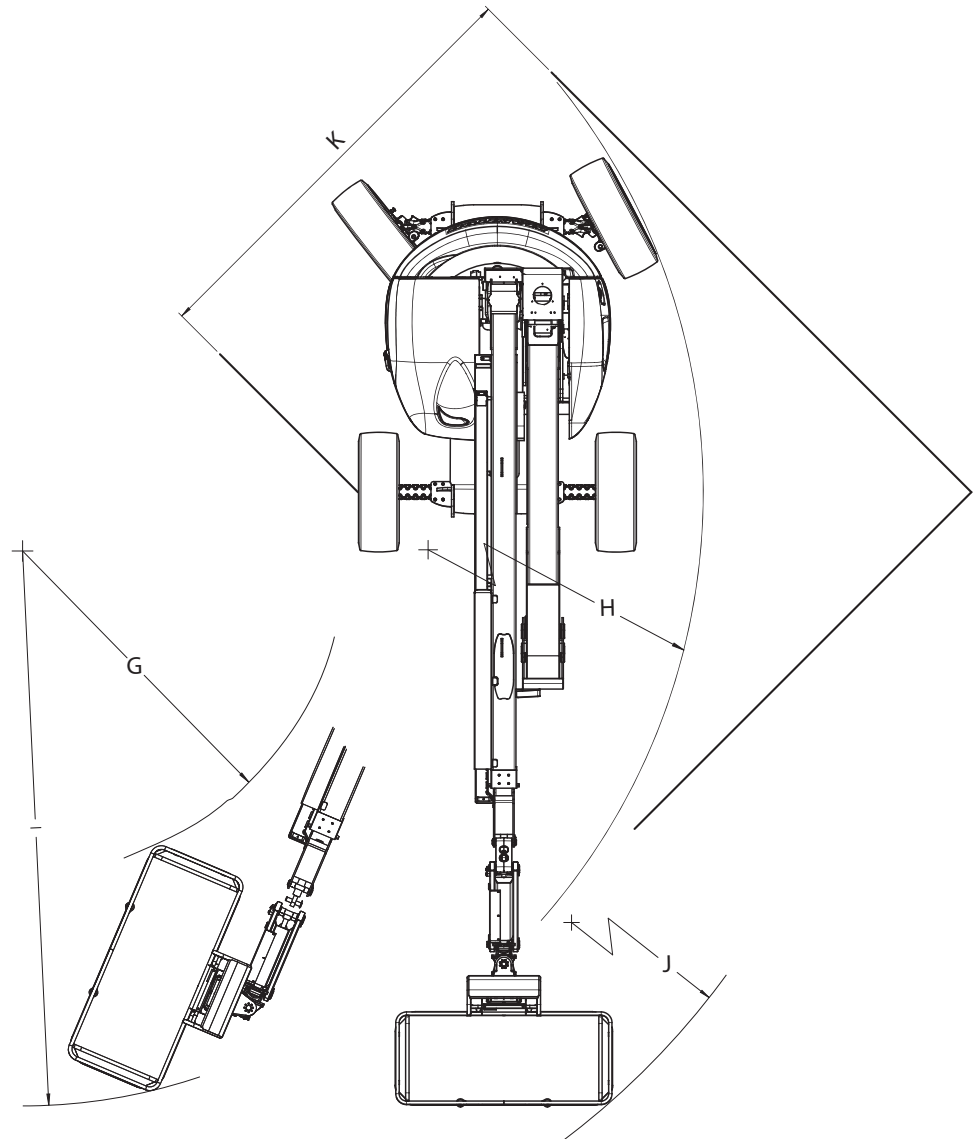


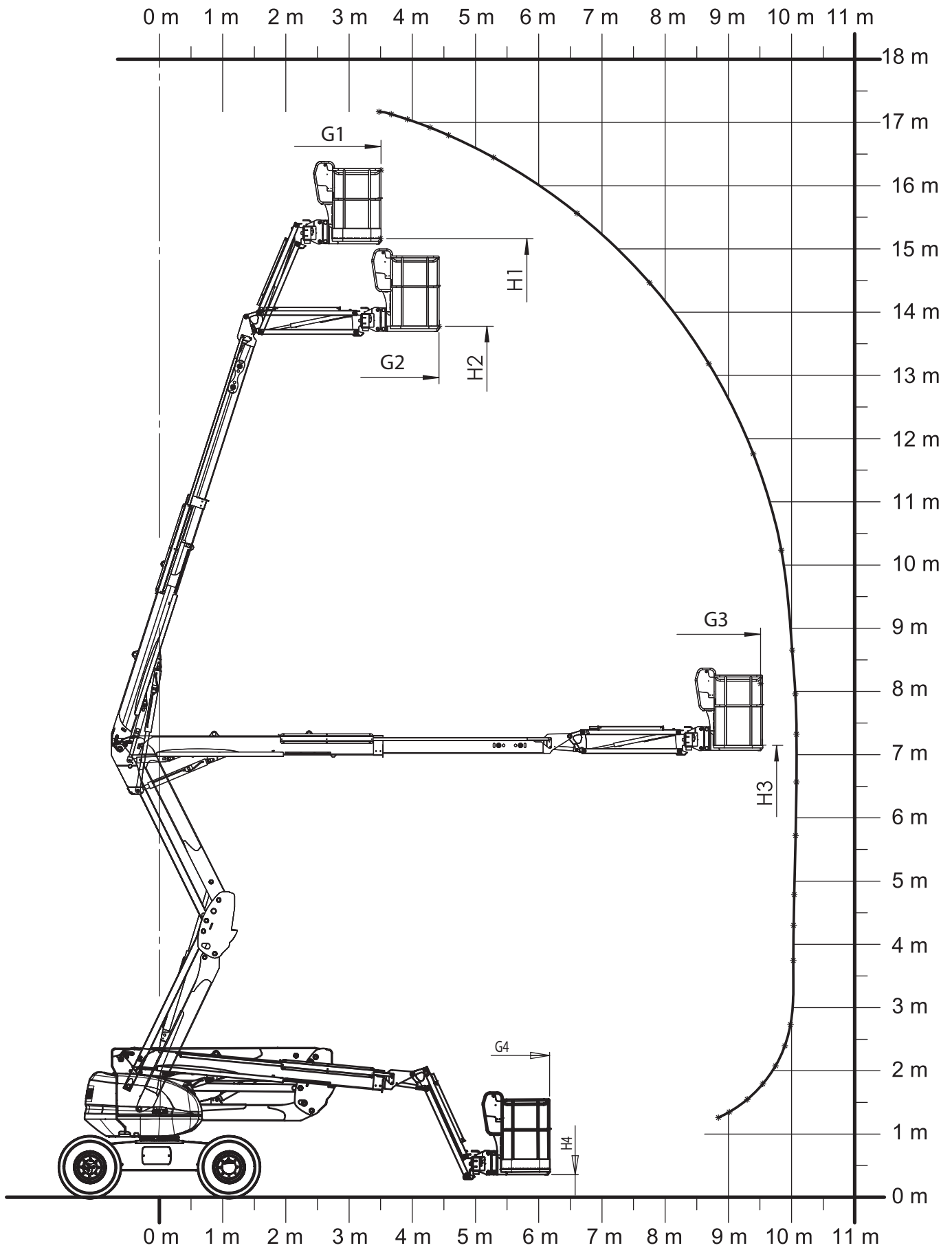




# DIMENSIONS 180 ATJ S EURO 3

A	7780
A1	5770
B	2200
C	2370
C1	2560
D	2300
E	425
F	330
G	2500
H	5360
I	4290
J	6830
K	3600
M	47° ou 107%
H1	15165
G1	3505
H2	13780
G2	4420
H3	7155
G3	9510
H4	-
G4	9010





# LIFTING PLATFORM OPERATION

## DESCRIPTION

---

This is a mobile people-lifting platform. It consists of a working platform fixed on the end of a pendular arm, itself fixed to the end of a telescopic arm, the whole assembly being mounted on an articulated arm structure.

- MANITOU lifting platforms are solely intended to be used to carry people, with their tools and supplies (up to the authorized weight limit: see the "SPECIFICATIONS" section), to the desired working height, to reach difficult to access areas over installations and buildings.
- The lifting platform is fitted with controls in the basket. From this control station, the operator can drive and operate his machine forwards and backwards. The operator can also raise or lower the arm assembly, extend or retract the telescopic arm and turn the turret or the basket to the right or the left.  
The basket-arm-turret assembly can rotate, non-continuously, over an angle of 359 degrees to the left or the right with respect to the set position.
- The lifting platform is also fitted with a ground maintenance and emergency station, from which all the lifting commands can be made, except for translation commands. The base controls are only to be used for rescue purposes, to bring the operator back to the ground if he is incapable of returning there himself.
- The operator must check on a daily basis that the ground maintenance and emergency station controls, and then the basket controls, are working correctly.



Stickers showing the characteristics, safety warnings and the rescue procedure are affixed to the machine. The operator must read these and fully understand their content. To avoid any risk of wrongly interpreting the pictograms, please refer to the paragraph "SAFETY STICKERS" Section 1 – SAFETY INSTRUCTIONS AND ADVICE.

- The lifting platform's movements are provided by a hydraulic pump operated by the IC engine. The hydraulic components are controlled by electro-valves actuated by means of contactors on the control joy stick.
- The controls on the base console and the basket console are in the form of rocker switches are in either ON or OFF mode.
- **The base console is fitted with a so called "Dead man's" button 2\*. This must be held down at the same time as switching over a contactor. Releasing it stops the movement.**
- The lifting platform is a four-wheel drive machine driven by an IC engine. The drive wheels are fitted with spring brakes with hydraulic release. These brakes activate automatically as soon as the translation joy stick is returned to the Neutral position.
- The lifting platform can lift within the limits of its capabilities (see "SPECIFICATIONS" in this section). A load equal to or less than the maximum capacity in the basket enables you to move into any position provided that the machine is on a surface with a slope of no more than the maximum authorised inclination.

## GENERAL

---

- On the following pages, you will find all the information you require for using the machine. This included the procedures for using, driving, parking, loading and transporting the lifting platform.

## SAFETY

### TILT

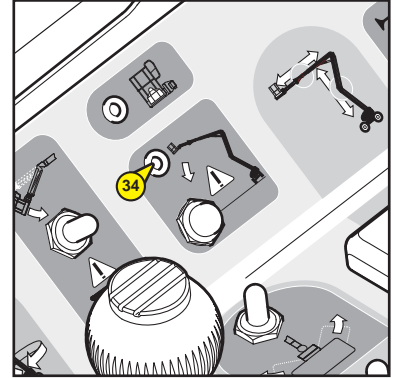
When the lifting platform reaches the maximum authorised level of tilt (see the CHARACTERISTICS section), LED 34\* on the basket console flashes regularly. Also the basket's buzzer 41\* sounds intermittently.

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



To resume control, only make movements that do not aggravate the situation:

- return to safety position by retracting the telescope, lowering the arms and then repositioning the lifting platform on a more horizontal surface so that you can make lifting and extension movements.



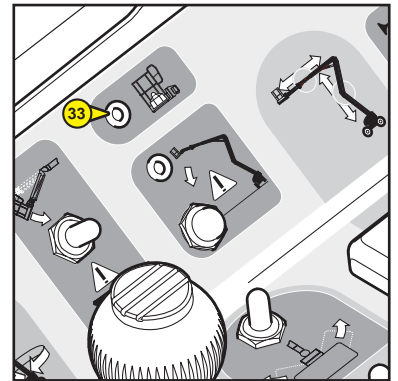
### OVERLOAD

When the lifting platform reaches the maximum authorised weight (see the CHARACTERISTICS section), the Overload LED 33\* on the basket console flashes regularly. Also the basket's buzzer 41\* sounds constantly. All movements are prohibited as a safety measure.

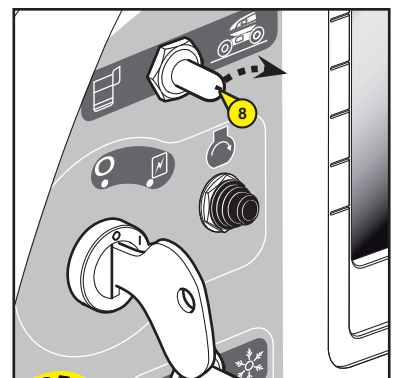
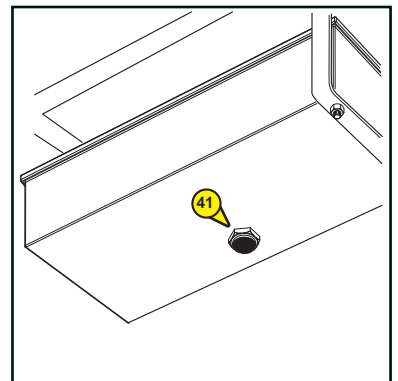


To resume control:

- Unburden the basket by removing the object or objects causing the overload,
- OR
- Ask a person on the ground to perform a descent under manual control (see the end of "Rescue procedure" in this section and "Safety stickers" in Section 1 "Safety instructions and advice").

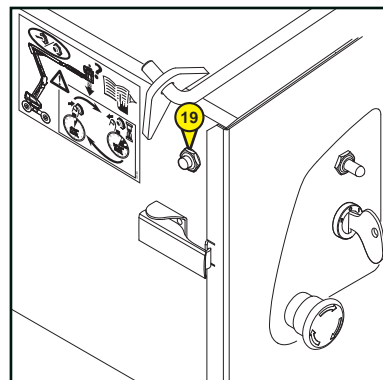
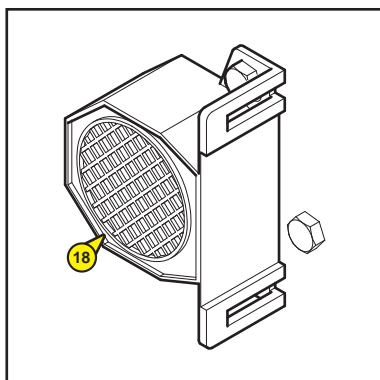
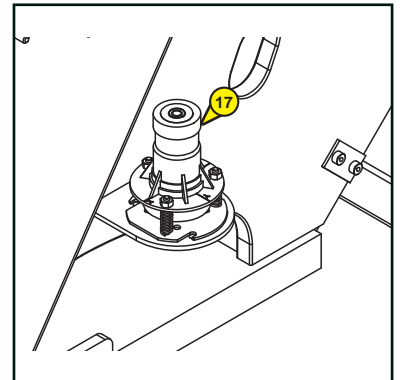
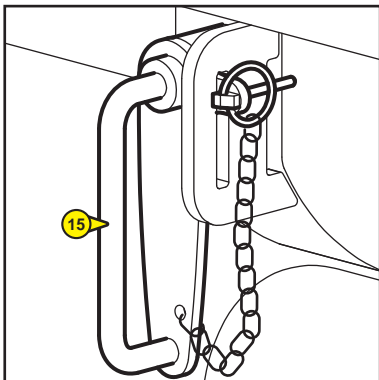
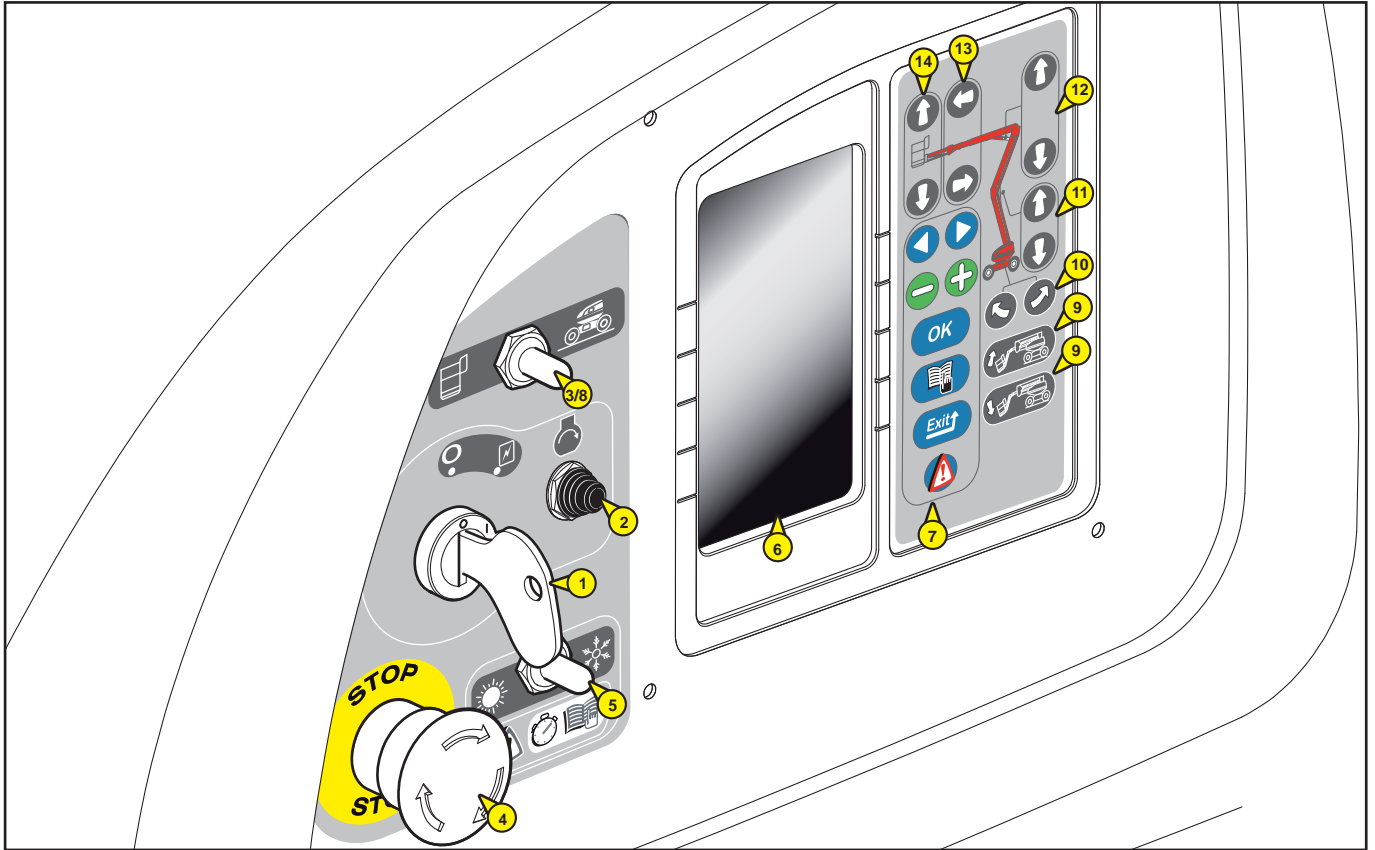


\* : The above reference numbers also correspond to those used in the description of these components on the following pages.



# BASE CONTROL INSTRUMENTATION

## A - GROUND MAINTENANCE AND EMERGENCY STATION



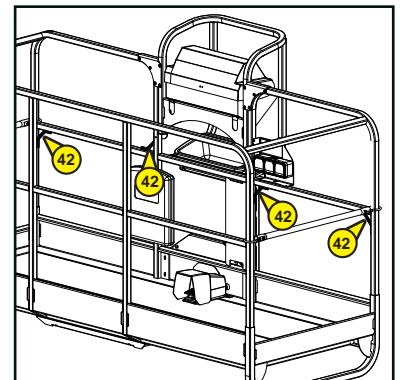
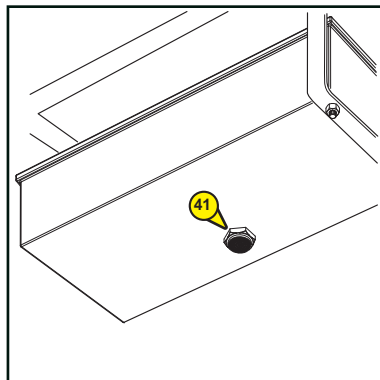
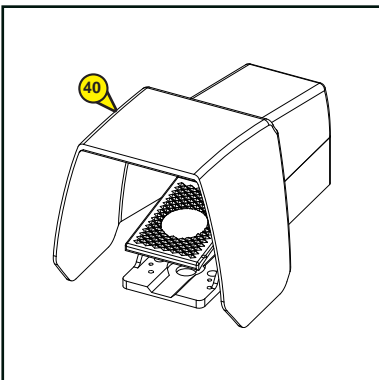
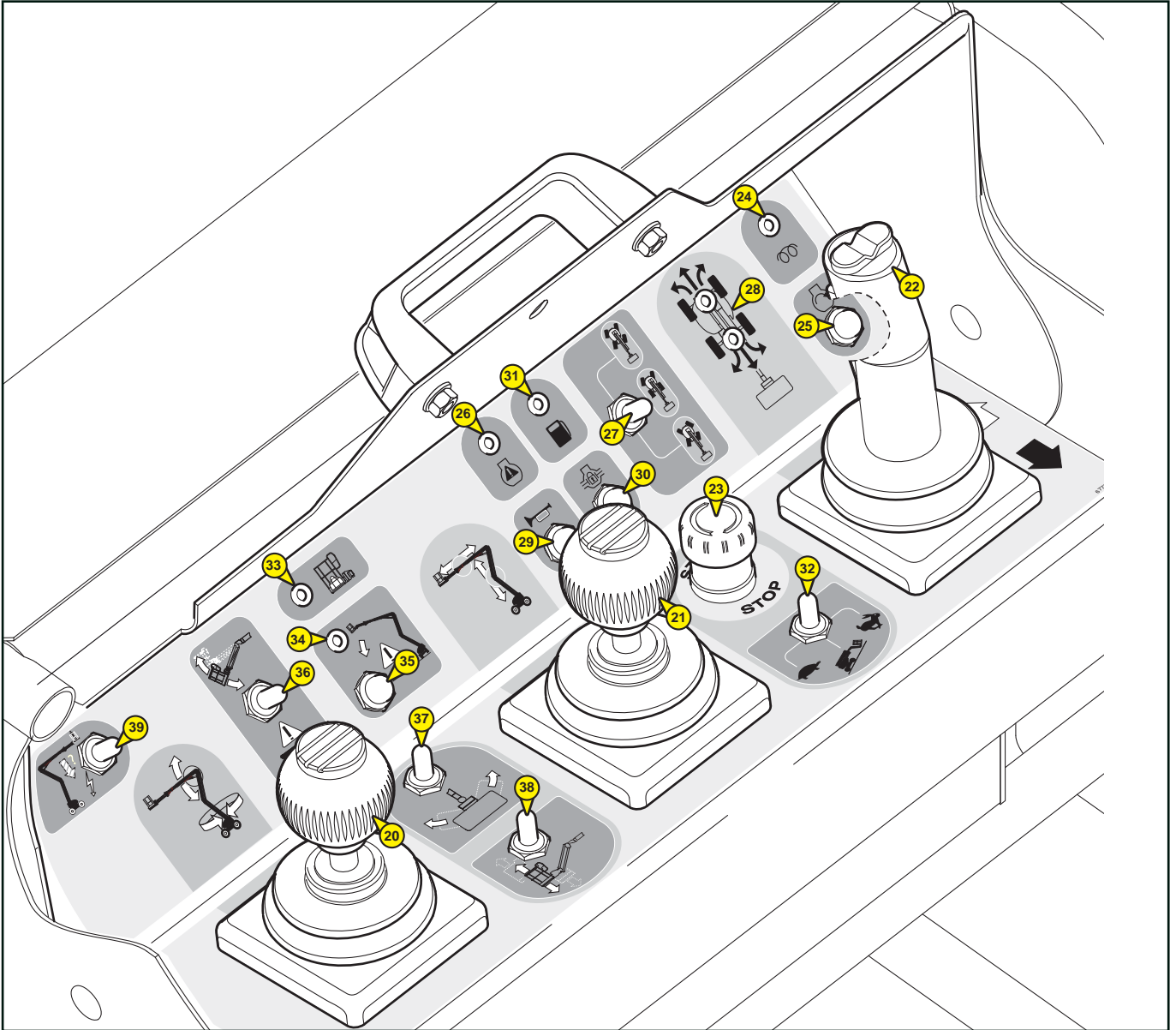
## **A - GROUND MAINTENANCE AND EMERGENCY STATION**

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- 1 - KEY-OPERATED IGNITION SWITCH
- 2 - STARTER BUTTON
- 3 - GROUND OR PLATFORM CONTROL SELECTRO SWITCH
- 4 - EMERGENCY STOP
- 5 - LOW-TEMPERATURE ENGINE START-UP AID
- 6 - INTERFACE SCREEN
- 7 - INFORMATION VALIDATION SCREEN KEYS
- 8 - DEAD MAN'S BUTTON
- 9 - BASKET TILT DOWN / TILT UP BUTTON
- 10 - TURRET ROTATION KEYS
- 11 - LOWER ARM UP / DOWN BUTTONS
- 12 - UPPER ARM UP / DOWN BUTTONS
- 13 - TELESCOPE EXTENSION / RETRACTION BUTTONS
- 14 - PENDULAR ARM UP / DOWN BUTTONS
- 15 - BLOCKING TURRET ROTATION
- 16 - FLASHING LIGHT
- 17 - TILT SENSOR
- 18 - BUZZER
- 19 - BASE EMERGENCY PUMP BUTTON

# BASKET CONTROL INSTRUMENTATION

## B - BASKET CONTROL STATION





## ***B - BASKET CONTROL STATION***

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- 20 - UPPER ARM UP / DOWN AND TURRET ROTATION CONTROL LEVER
- 21 - LOWER ARMS UP / DOWN AND TELESCOPE EXTENSION / RETRACTION CONTROL LEVER
- 22 - LIFTING PLATFORM FORWARD / REVERSE AND RIGHT / LEFT MOVEMENT CONTROL JOYSTICK
- 23 - EMERGENCY STOP
- 24 - "PREHEATING" INDICATOR LIGHT
- 25 - START-UP CONTROL BUTTON
- 26 - "ENGINE FAULT" LIGHT
- 27 - STEERING MODE SELECTOR
- 28 - AXLE ALIGNMENT LEDS
- 29 - BUZZER CONTROL BUTTON
- 30 - DIFFERENTIAL LOCKING CONTROL BUTTON
- 31 - LOW FUEL LEVEL INDICATOR
- 32 - TRANSLATION SPEED SELECTION CONTACTOR
- 33 - "OVERLOAD" INDICATOR LIGHT
- 34 - "TILT" INDICATOR LIGHT
- 35 - "USE UNDER TILT" BUTTON
- 36 - BASKET INCLINATION CONTACTOR
- 37 - BASKET ROTATION CONTACTOR
- 38 - BASKET PENDULAR ARM CONTACTOR
- 39 - BASKET "EMERGENCY PUMP" BUTTON
- 40 - "DEAD MAN'S" PEDAL
- 41 - BUZZER UNDER THE BASKET CONSOLE
- 42 - SAFETY HARNESS HOOK-UP POINTS

**NB:** The terms RIGHT-LEFT-FRONT-REAR are understood as being for an operator in the lifting platform looking forward with the platform in Transport position

## 1 - KEY-OPERATED IGNITION SWITCH

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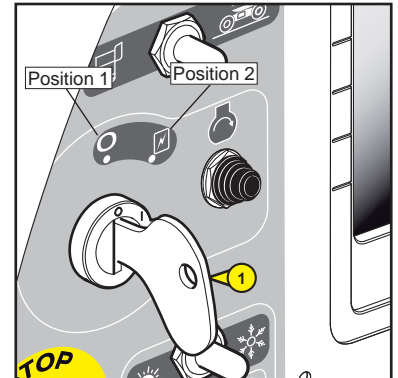
This key-operated contactor has two positions.

### POSITION 1

- Engine stop and electrical circuit supply off.

### POSITION 2

- Electrical circuit supply on and automatic engine preheating.

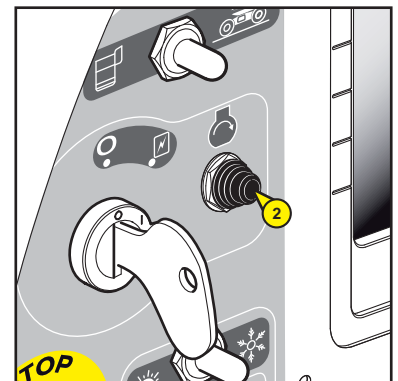


## 2 - STARTER BUTTON

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### BUTTON 2

- Engine start-up.



## 3 - GROUND OR PLATFORM CONTROL SELECTION SWITCH

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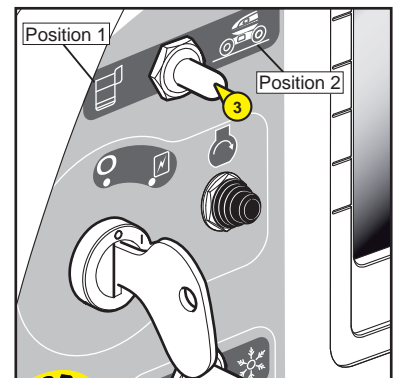
This contactor has two positions.

### POSITION 1

- The commands are made from inside the lifting platform.

### POSITION 2

- The commands come from the ground (base control). The button must be held down in position 2 (dead Man's system) to provide power to the base control. Releasing it prevents any movements from being made.



## 4 - EMERGENCY STOP

This red mushroom-headed switch cuts off all the machine's movements in the event of an anomaly or any danger.

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



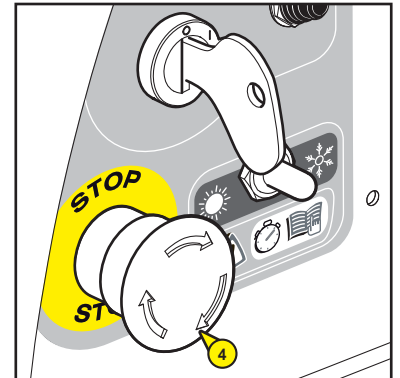
In all cases, this command takes precedence, even when the movements are being controlled from the basket control station.



If the Emergency Stop is activated, the movements may stop very suddenly.



Do not use the Emergency Stop just to stop the lifting platform. Otherwise, rearm it immediately, because no actions can be performed from the base control station.



## 5 - LOW-TEMPERATURE ENGINE START-UP AID

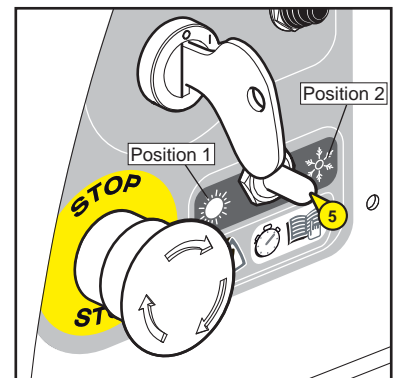
This selector switch has two positions to be selected according to the ambient air temperature.

### 1 : SUN POSITION

- If the temperature is over  $-10^{\circ}\text{C}$ , start the engine at tickover rpm.

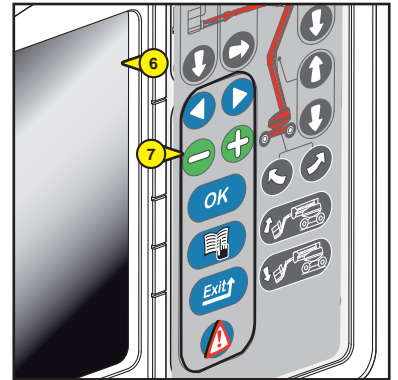
### 2 : SNOW POSITION

- If the temperature is less than around  $-10^{\circ}\text{C}$ , set the selector switch to this position before starting: the engine will be held at maximum rpm (only for the first start of the day).
- Leave the engine at maximum rpm for 30 to 60 seconds, depending on the temperature (no movement is possible during this time).
- Switch the selector switch from SNOW to SUN position and the rpm drop to tickover level (normal position, warm engine).



## 6 - INTERFACE SCREEN

- This screen enables you to see all the platform start-up, parametering and maintenance steps and any faults.
- NB: The current system time is displayed at the top of each page.



## 7 - INFORMATION VALIDATION SCREEN KEYS

- These keys enable you to validate the different information on the screens.

### FUNCTIONS OF THE KEYBOARD KEYS:

**7A :** Selection keys for the proposals on the menu pages.

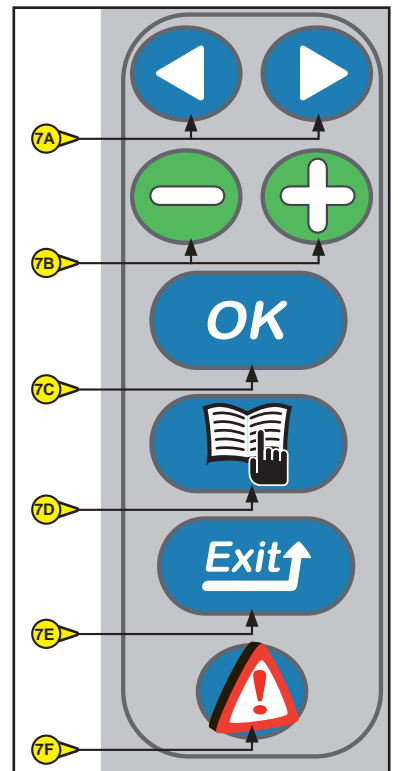
**7B :** Selection keys for the proposals on the sub-menu pages.

**7C :** This "Confirm / OK" key has two functions:  
"Confirmation" key for the selections made by the plus / minus keys,  
Fault acknowledgement key (the fault has been seen; this key enables you to get rid of the screen without necessarily resolving the problem).

**7D :** This "Menu" key has two functions:  
It enables you to open the "Access Code" page.  
Enter the code to get the desired menu (this code will be memorised for as long as the lifting platform is receiving power).  
It enables you to exit and return to the work screen page.

**7E :** The "ESC" key has two functions:  
It cancels a validation in progress.  
It enables you to return to the previous level in a menu.

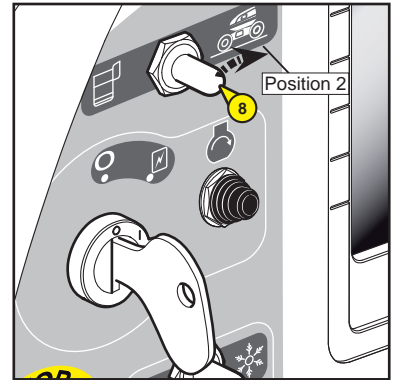
**7F :** The "DEF" key enables you to display the memorised faults on the lifting platform.



## 8 - DEAD MAN'S BUTTON

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- The button must be held down in the Dead Man's position (position 2) to provide power to the base control, at the same time as holding down the lifting and rotation keys.



## 9 - BASKET TILT DOWN / TILT UP BUTTON

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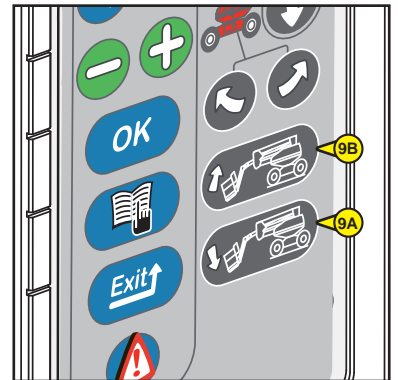
These keys control correction of the basket's horizontality or the complete folding back of the basket in Transport position.

### 9A : TILTING THE BASKET DOWNWARDS

- Hold down the Dead Man's button 8 and press key 9A.

### 9B : TILTING THE BASKET UPWARDS

- Hold down the Dead Man's button 8 and press key 9B.



## 10 - TURRET ROTATION KEYS

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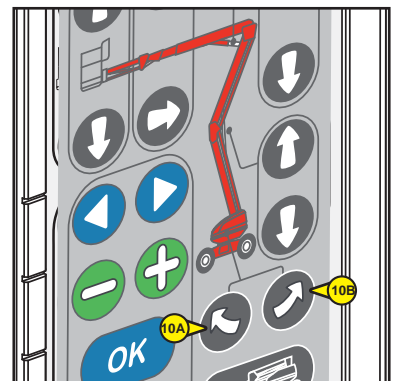
These keys enable you to rotate the turret.

### 10A : ROTATING THE TURRET LEFT

- Hold down the Dead Man's button 8 and press key 10A.

### 10B : ROTATING THE TURRET RIGHT

- Hold down the Dead Man's button 8 and press key 10B.



## 11 - LOWER ARM LIFTING AND LOWERING KEYS

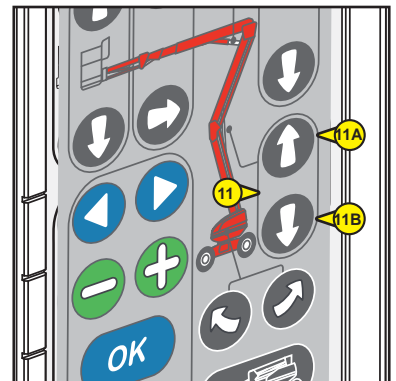
- Using these keys at the same time as pressing button 8 to the Dead Man's position enables the lower arms to be lifted and lowered.

### A : LIFTING THE LOWER ARMS

- Hold down the Dead Man's function 8 and press key 11A.

### B: LOWERING THE LOWER ARMS

- Hold down the Dead Man's function 8 and press key 11B.



## 12 - UPPER ARM LIFTING AND LOWERING KEYS

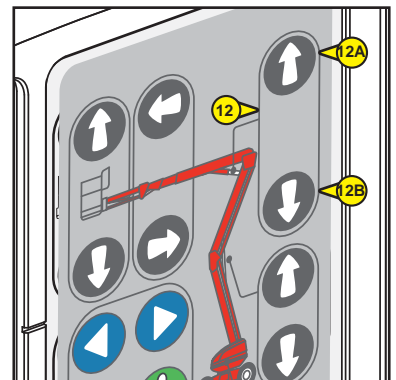
- Using these keys at the same time as pressing button 8 to the Dead Man's position enables the upper arm to be lifted and lowered.

### A : LIFTING THE UPPER ARM

- Hold down the Dead Man's function 8 and press key 12A.

### B: LOWERING THE UPPER ARM

- Hold down the Dead Man's function 8 and press key 12B.



## 13 - TELESCOPE EXTENSION AND RETRACTION KEYS

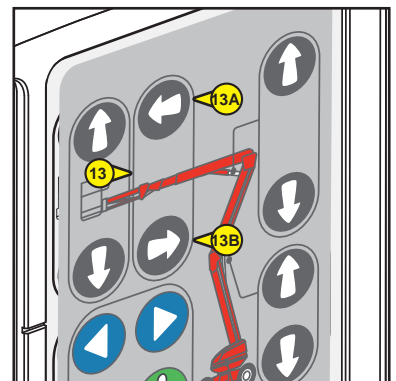
- Using these keys at the same time as pressing button 8 to the Dead Man's position enables the telescope to be extended and retracted.

### A : RETRACTING THE TELESCOPE

- Hold the Dead Man's system 8 and press key 13 A.

### B: EXTENDING THE TELESCOPE

- Hold the Dead Man's system 8 and press key 13 B



## 14 - PENDULAR ARM LIFTING AND LOWERING KEYS

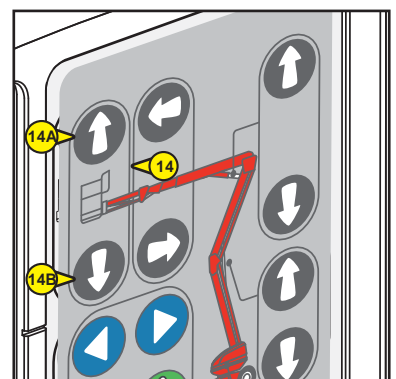
- Using these keys at the same time as pressing button 8 to the Dead Man's position enables the pendular arm to be lifted and lowered.

### A : LIFTING THE PENDULAR ARM

- Hold down the Dead Man's function 8 and press key 14A.

### B: LOWERING THE PENDULAR ARM

- Hold down the Dead Man's function 8 and press key 14B.

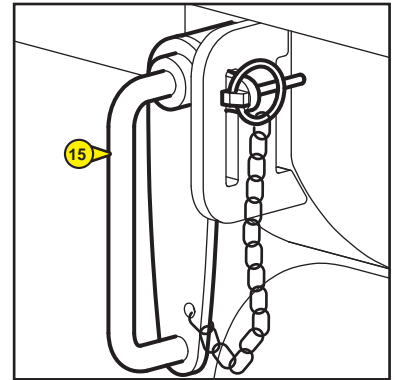


## 15 - BLOCKING TURRET ROTATION

- This pin must be used when the lifting platform is being transported by truck or some other means of transport (train, etc...), to prevent the turret from rotating.
- Remove the clip and swivel the pin to the left.
- Push the pin into the hole in the turret provided for this purpose.
- Swivel the pin to the right and engage the bolt in the opening.
- Lock it in position by reinserting the clip.



Remember to remove it when using the lifting platform.



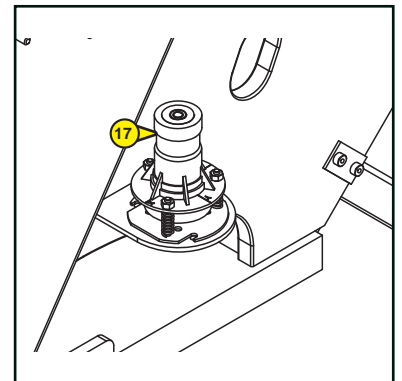
## 16 - FLASHING LIGHT

- The flashing light illuminates automatically when the lifting platform is in translation or making a movement.



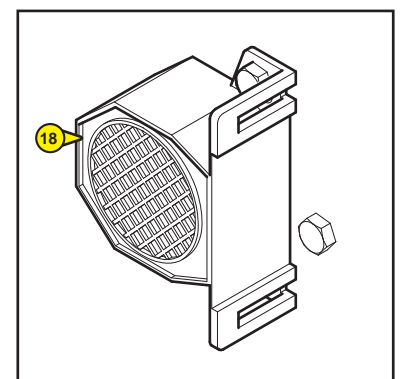
## 17 - TILT SENSOR

- This sensor controls the safety buzzer 41 when the lifting platform has reached the maximum authorised level of tilt. The buzzer sounds intermittently (see the "SAFETIES" section).



## 18 - BUZZER

- This buzzer (fixed on the outside of the hydraulic box, next to the telescopic arm) is activated when you press push-button 29 on the basket control station.



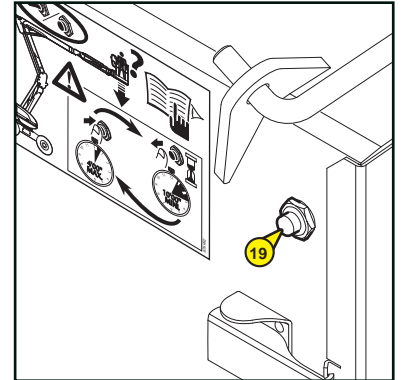
## 19 - BASE EMERGENCY PUMP BUTTON

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- This button starts the emergency pump, which enables you to make all the basket's movements and return to the ground in the event of a breakdown occurring (see the: RESCUE PROCEDURE section).



Only use this if the engine or the electrical system has broken down.







## BASKET CONTROL STATION

### **20 - UPPER ARM UP / DOWN AND TURRET ROTATION CONTROL LEVER**

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- Lever 20 enables you to raise the upper arm and rotate the turret.

NB: This is a progressive control lever, which provides you with great accuracy in approach. It must be manipulated flexibly, without jerking.

#### **RAISING THE UPPER ARM**

- Push the lever upwards.

#### **LOWERING THE UPPER ARM**

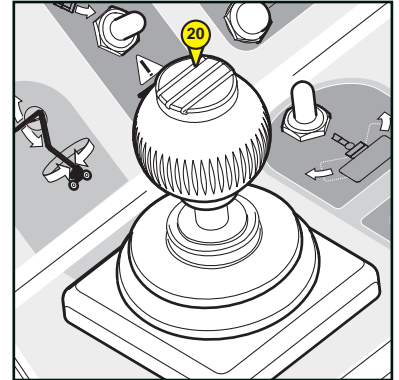
- Pull the lever downwards.

#### **ROTATING RIGHT**

- Push the lever to the right.

#### **ROTATING LEFT**

- Push the lever to the left.



### **21 - LOWER ARMS UP / DOWN AND TELESCOPE EXTENSION / RETRACTION CONTROL LEVER**

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- Lever 21 enables you to raise the platform's lower and intermediate arms and extend and retract the telescope.

NB: This is a progressive control lever, which provides you with great accuracy in approach. It must be manipulated flexibly, without jerking.

#### **RAISING THE LOWER ARMS**

- Push the lever upwards.

#### **LOWERING THE LOWER ARMS**

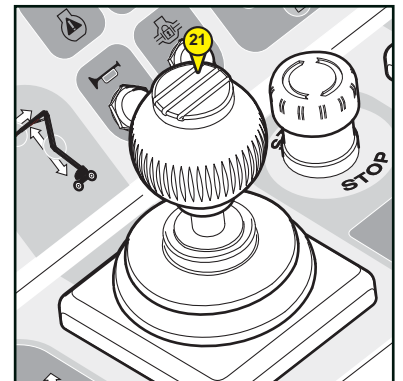
- Pull the lever downwards.

#### **EXTENDING THE TELESCOPE**

- Push the lever to the left.

#### **RETRACTING THE TELESCOPE**

- Push the lever to the right.



## 22 - LIFTING PLATFORM FORWARD / REVERSE AND RIGHT / LEFT MOVEMENT CONTROL JOYSTICK

- Lever 22 enables you to move the lifting platform.
- You must press trigger A together with the Dead Man's pedal (see 40) to perform movements from the lifting platform's control box.
- When the pedal or trigger A is released, no commands can be issued.

NB: This is a progressive control lever, which provides you with great accuracy in approach. It must be manipulated flexibly, without jerking.

### FORWARD TRANSLATION

- Push the lever forwards.

### REAR TRANSLATION

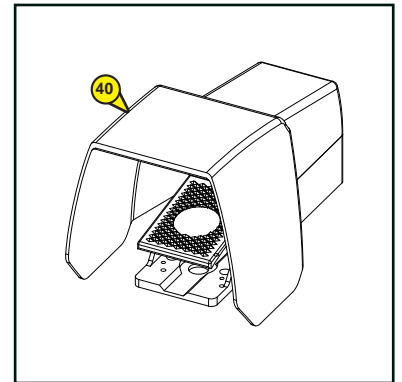
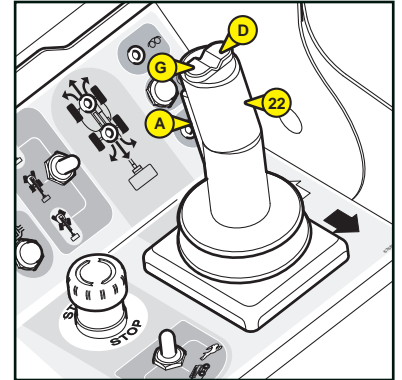
- Pull the lever backwards.

### STEER RIGHT

- Press button D.

### STEER LEFT

- Press button G.



When the turret / arm structure is rotated more than 90° with respect to the chassis, there is a correspondence between the direction of translation shown by the arrows affixed to the chassis and those on the basket control console (white and black arrows). Always refer to the arrows shown on the machine's chassis to know the direction of movement.

## 23 - EMERGENCY STOP

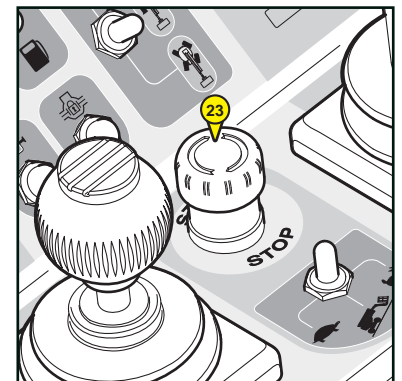
- This switch enables you to cut off all the machine's movements in the event of an anomaly or danger arising.
- Press the knob to cut off all movements.
- Turn the knob a quarter turn to the right to deactivate it (the switch will automatically return to its initial position).



In all cases, this control takes precedence.



Do not use the Emergency Stop just to stop the lifting platform. Otherwise, rearm it immediately, because no actions can be performed from the base control station.

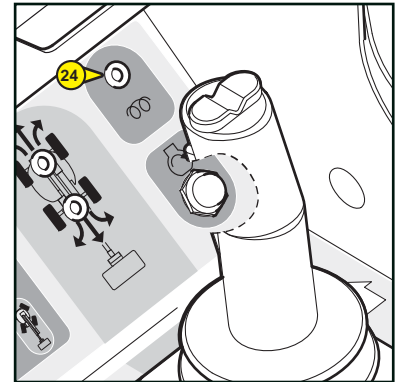


## **24 - "PREHEATING" INDICATOR LIGHT**

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This indicator light illuminates when the machine is supplied with power:

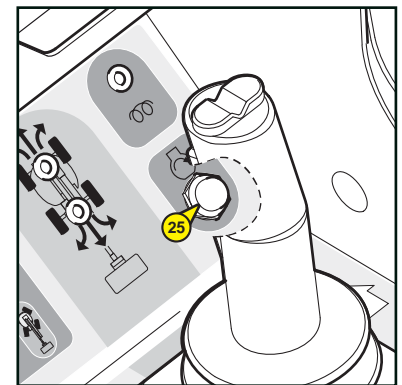
- Either by turning the ignition key on the base (the timing is identical to that shown on the bar graph on the screen).
- Or by rearming the Emergency Stop on the basket console in the lifting platform.
- Wait until the indicator light goes out before operating the starter button.



## **25 - START-UP CONTROL BUTTON**

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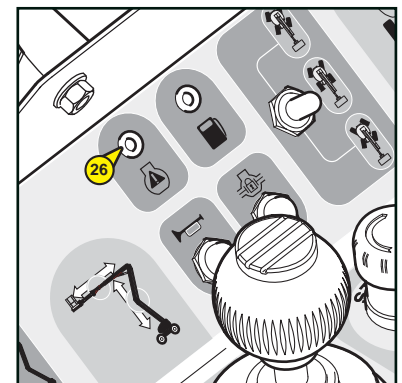
- Wait for the "Preheating" light to go out and then press button 25 to start the lifting platform from the basket console.



## **26 - "ENGINE FAULT" LIGHT**

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- This indicator light illuminates and a buzzer sounds with intermittent short signals when fault screens 11, 12 and 13 are displayed on the base (see screen display diagrams P.2-40 to P.2-41).
- Switch the engine off immediately.



## **27 - 28 STEERING MODE SELECTOR AND AXLE REALIGNMENTS**

This contactor has three positions.

### **POSITION 1**

- Select "Crab" mode.

### **POSITION 2**

- Select 2-wheel drive mode.

### **POSITION 3**

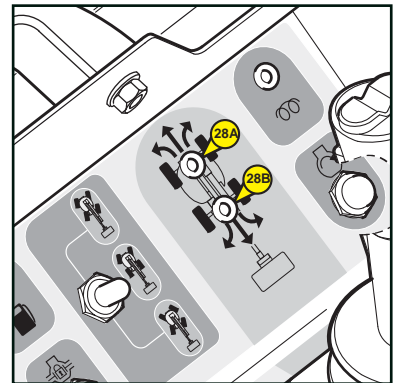
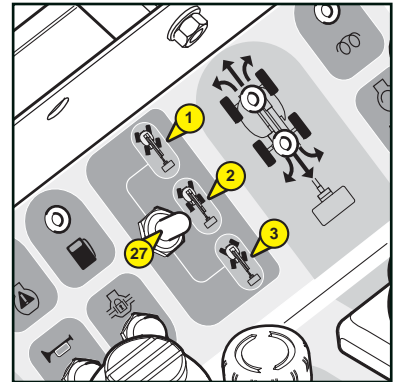
- Select 4-wheel drive mode. In this configuration, the only translation speeds are Slow or Ramp.

### **28A FRONT WHEEL ALIGNMENT**

- This indicator light illuminates when the front wheels are correctly aligned with the machine's axis.

### **28B REAR WHEEL ALIGNMENT**

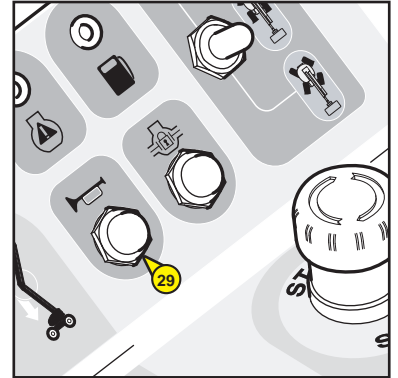
- This indicator light illuminates when the rear wheels are correctly aligned with the machine's axis.



## **29 - BUZZER CONTROL BUTTON**

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- When you press button 29, buzzer 18 sounds.



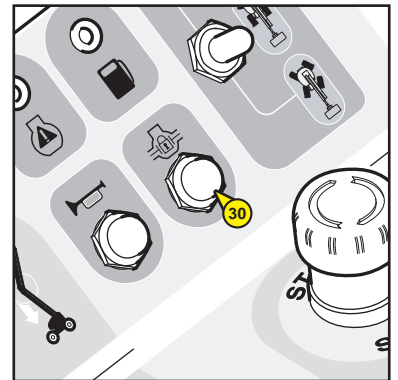
## **30 - DIFFERENTIAL LOCKING CONTROL BUTTON**

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**NB:** This control must be used at the same time as a translation operation.

Differential locking enables the 2 rear drive wheels to turn at the same speed.

- To use this, press button 30 and release the button to interrupt its use and note a stop in the translation movement.
- Preferably use differential locking while keeping the wheels in the machine's axis.

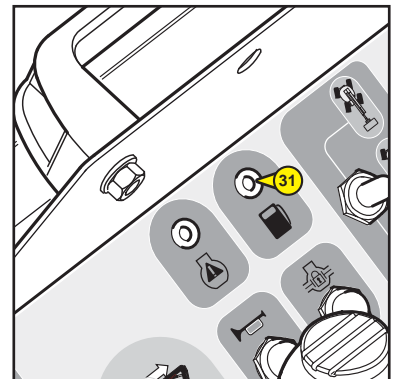


## **31 - LOW FUEL LEVEL INDICATOR**

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- This indicator light illuminates when the fuel level is low and the basket buzzer sounds 3 beeps every 10 minutes.

**NB:** When the indicator light illuminates, there are still approximately 5 hours of autonomous running, i.e. around 8 litres of fuel in the tank.



## 32 - TRANSLATION SPEED SELECTION CONTACTOR

- This contactor has 3 positions.

**POSITION 1** : TORTOISE (SLOW SPEED)

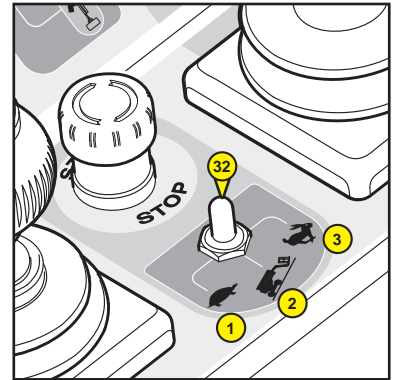
**POSITION 2** : RAMP (SLOW SPEED WITH FULL POWER) only when traversing very steep ramps.

**POSITION 3** : HARE (HIGH SPEED), only with the steering mode selector switch in position 1 (27: Movement crabwise) or in position 2 (27: Movement in 2-wheel drive).

**NB:** When the selector switch is in **position 3** (high speed) and the machine is in **4-wheel drive**, the switch moves automatically to **position 2** (ramp speed).

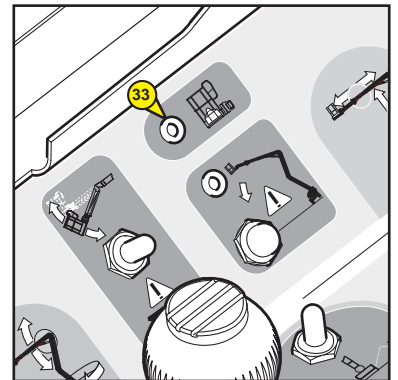


While in Hare/high speed mode (position 3), the turret must be in the machine's axis.



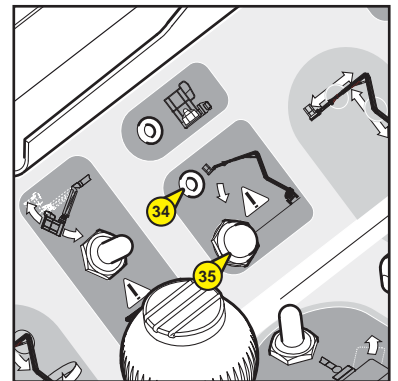
## 33 - "OVERLOAD" INDICATOR LIGHT

- This indicator light illuminates if the basket is overloaded and the buzzer sounds continuously (see the SAFETY SYSTEMS section)



## 34 - "TILT" INDICATOR LIGHT

- When the lifting platform reaches the maximum authorised tilt, the LED lights up, any movements to raise the arms are blocked and the buzzer sounds with intermittent long beeps.



## 35 - "USE UNDER TILT" BUTTON

- This button enables you to utilise the prohibition on movements when the lifting platform is tilting (see the SAFETY SYSTEMS section").



When using the platform when it is tilting, there is a risk of loss of stability. The basket overload safety system still remains active.

## 36 - BASKET INCLINATION CONTACTOR

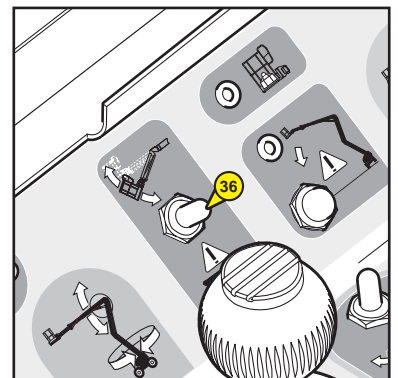
- This contactor enables you to correct the basket's horizontality or to fold the basket back completely in Transport position.

### CORRECTING THE BASKET UPWARDS

- Push the contactor up.

### CORRECTING THE BASKET DOWNWARDS

- Pull the contactor down.



### 37 - BASKET ROTATION CONTACTOR

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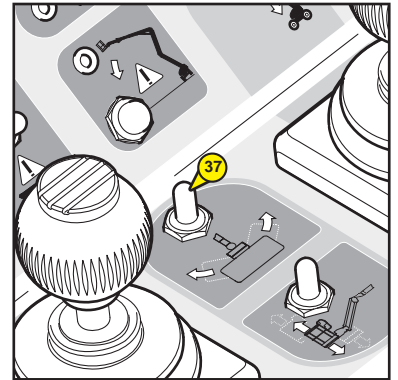
- This contactor enables you to rotate the basket left and right

#### RIGHT ROTATION

- Push the contactor to the right.

#### LEFT ROTATION

- Push the contactor to the left.



### 38 - BASKET PENDULAR ARM CONTACTOR

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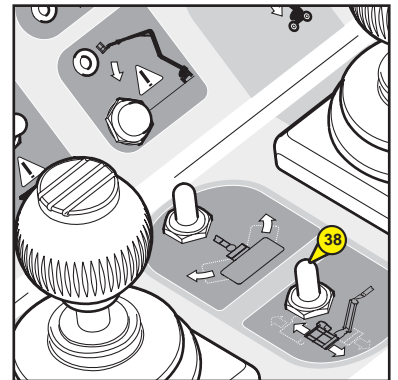
- This contactor enables you to raise and lower the pendular arm.

#### RAISING THE PENDULAR ARM

- Push the contactor forwards.

#### LOWERING THE PENDULAR ARM

- Pull the contactor backwards.



### 39 - BASKET "EMERGENCY PUMP" BUTTON

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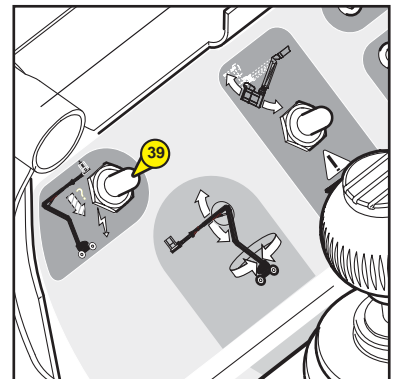
- This button enables you to make all the basket's movements to bring it back to the ground in the event of a breakdown (see the RESCUE PROCEDURE section).



Only to be used if the engine or electrical system breaks down.



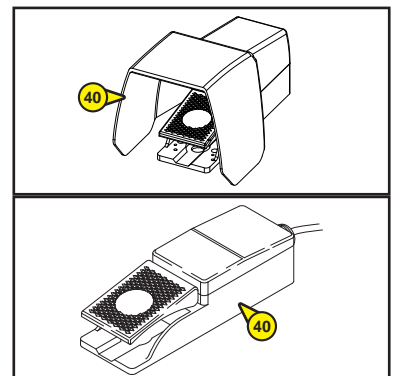
Check the engine battery's charge; this must be charged, otherwise the emergency pump cannot be operated.



### 40 - "DEAD MAN'S" PEDAL

---

- This pedal is fixed to the lifting platform's floor.
- You must push this pedal to perform movements from the basket console.
- When the pedal is released, no commands can be issued.

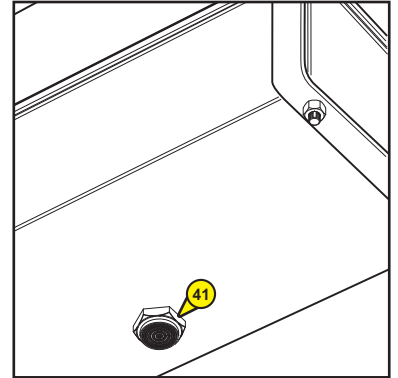




## 41 - BUZZER UNDER THE BASKET CONSOLE

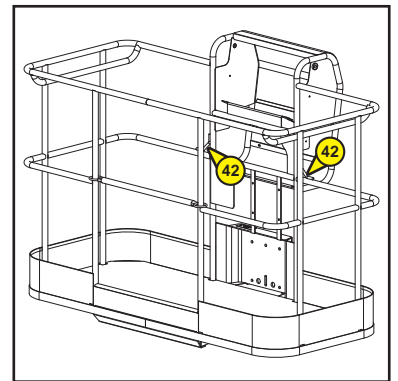
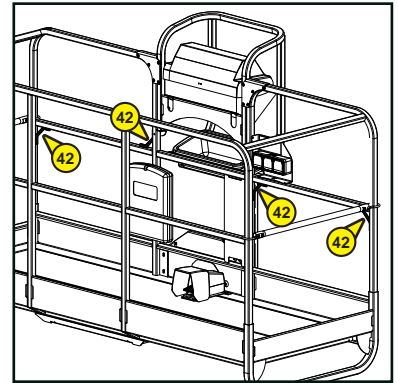
This buzzer is activated when the machine reaches the maximum authorised level of tilt or is overloaded.

- Sounding intermittently: the machine is tilting. When the authorised tilt limit threshold is crossed, all movements are blocked except for lowering the arms to enable return to an acceptable level.
- Sound continuously: the machine is overloaded. When the platform is overloaded, all movements are blocked. It is essential to unburden the machine so that you can manoeuvre.



## 42 - SAFETY HARNESS HOOK-UP POINTS

- These fittings are to be used for fastening the harnesses when operators are in the basket.



## 43 - LISSE DE SÉCURITÉ

- You must hold the rail to climb into the basket so that the rail does not fall back as the operator climbs in.

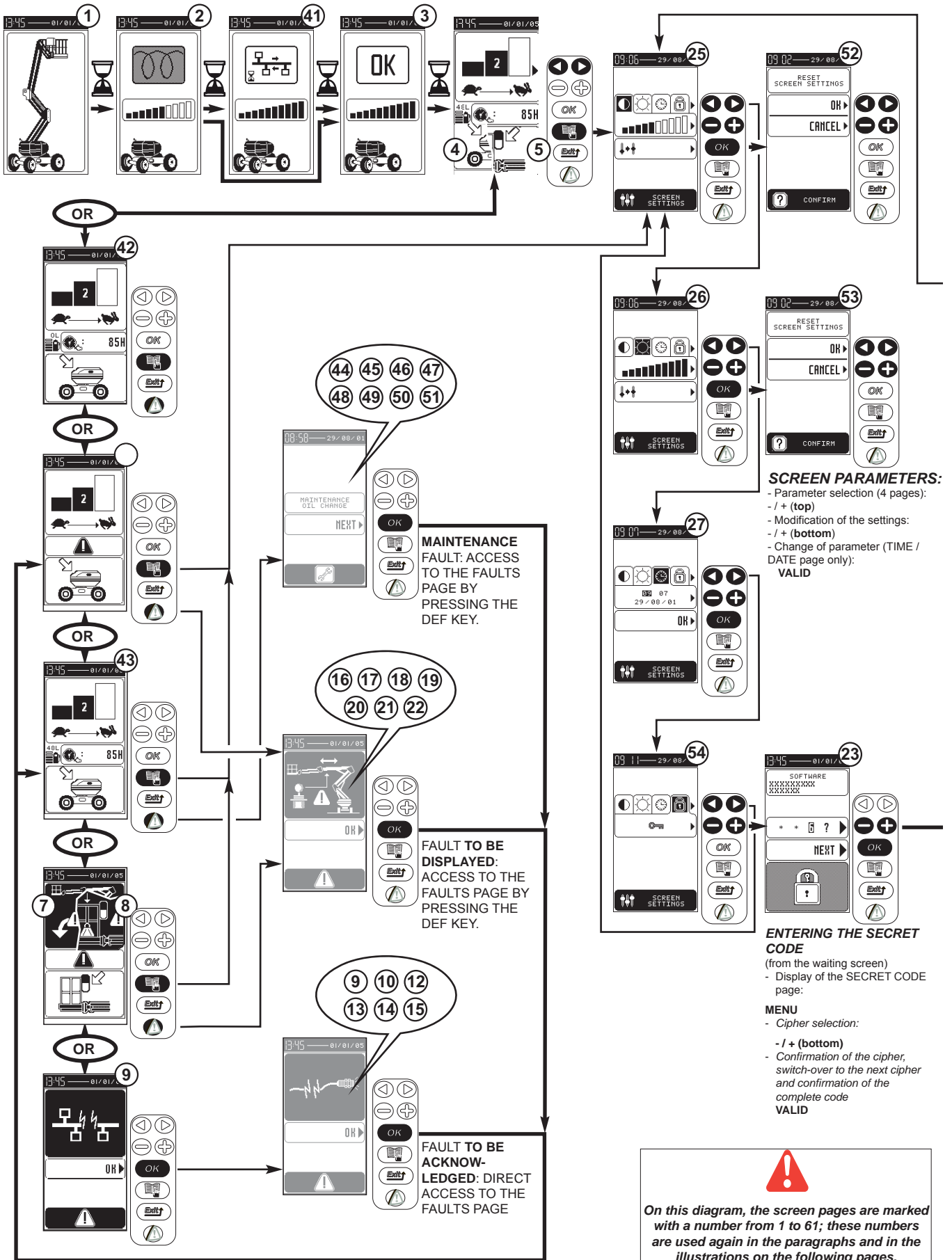


Do not hold the safety rail with a collar or string.



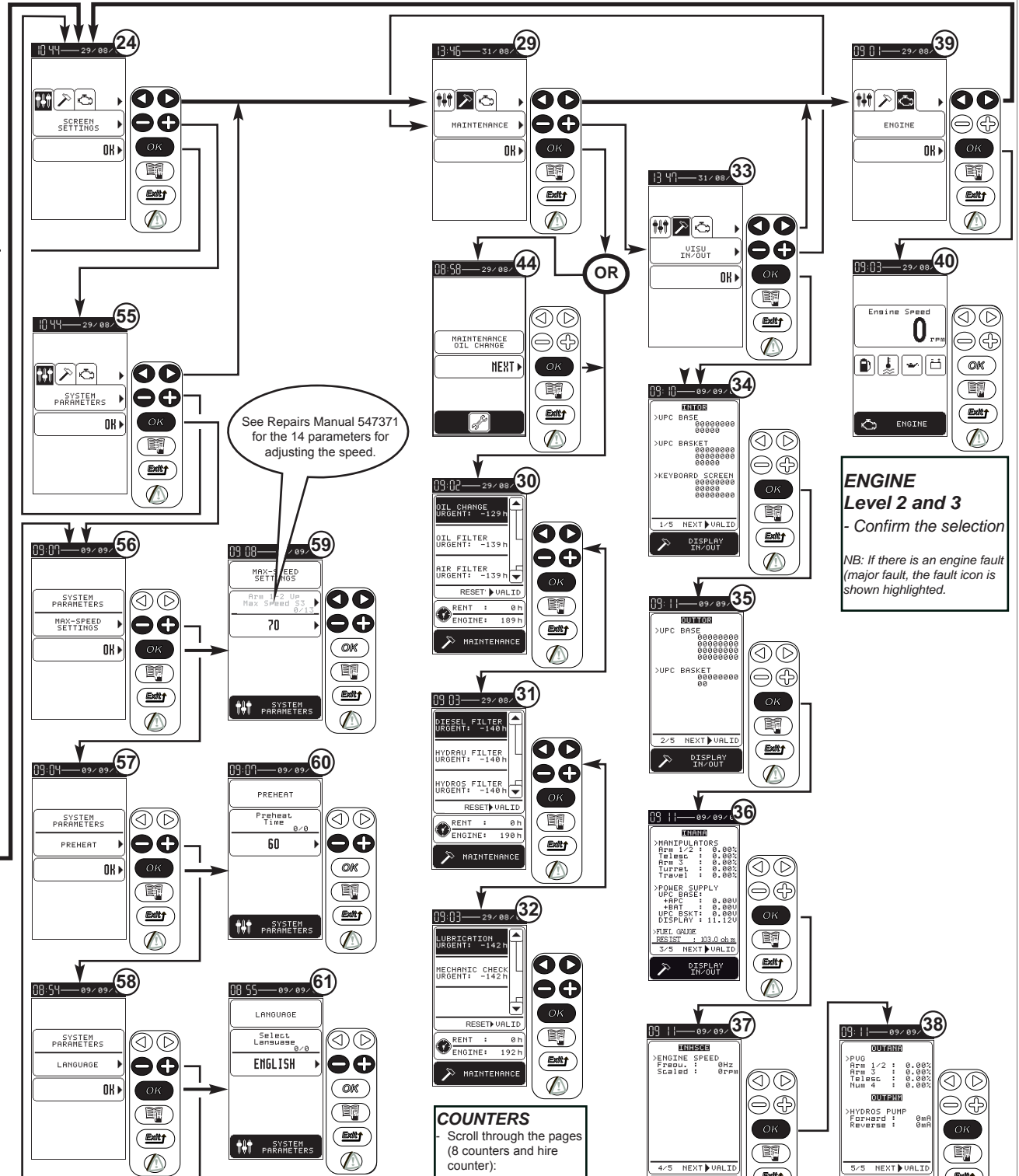
# 1B - SCREEN DISPLAY DIAGRAM

## USER LEVEL



# DEALER / LESSOR LEVEL

NB: In the sub-menus, pressing the MENU key brings you back to the main Menu page and pressing the ESC key brings you back to the preceding sub-menu.



See Repairs Manual 547371 for the 14 parameters for adjusting the speed.

**ENGINE Level 2 and 3**  
- Confirm the selection  
NB: If there is an engine fault (major fault, the fault icon is shown highlighted).

**COUNTERS**  
- Scroll through the pages (8 counters and hire counter):  
- /+ (up and down)  
- Reinitialisation of the maintenance counters and reset to zero of the hire counter:  
**VALID (twice)**

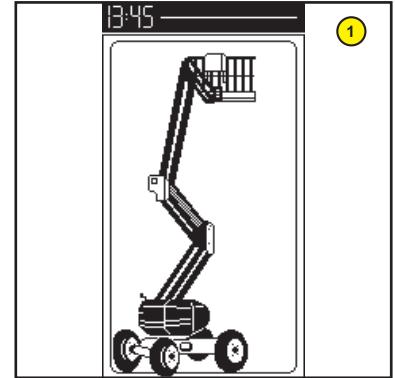
**VIEWING THE INPUTS AND OUTPUTS**  
- Viewing the status of the various electronic components.

**SYSTEM PARAMETERS**  
- Selection from the group of parameters (3 pages):  
- /+ (down)  
- Confirmation of the selection:  
**VALID**  
- Selection of the parameter (16 parameters):  
- /+ (up)  
- Alteration of the setting:  
- /+ (down)

## 2 - PRESENTATION PAGE

### 1 PRESENTATION PAGE :

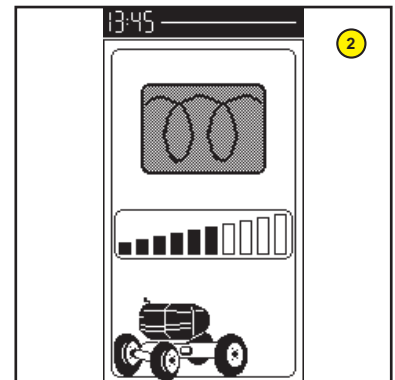
- When you switch on, an initialisation page appears briefly on the screen and then the pre-heating page is displayed.



## 3 - PRE-HEATING PAGES

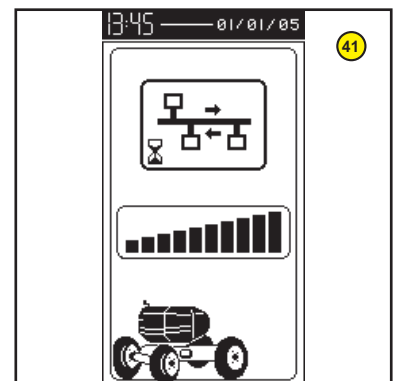
### 2 PRE-HEATING PAGES :

- The Pre-heating page is displayed for the whole of the adjustable pre-heating period and the bar graph increases in increments in proportion to the pre-heating time elapsed.



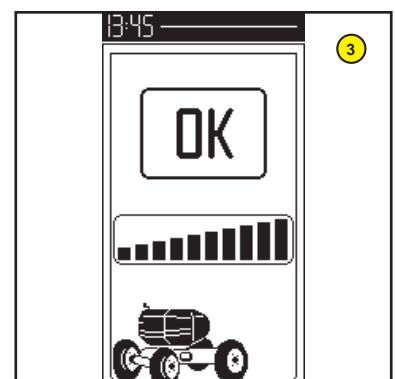
### 41 CONTROL / CAN TRANSFER PAGE :

- System control / update time required is greater than the pre-heating time.



### 3 START-UP PAGE :

- When the pre-heating period has elapsed (bar graph full), 'OK' is displayed and then the Work page is displayed or, when applicable, the Faults page.



## 5 - WORK PAGES

### 4 PAGE FOR WORKING FROM THE BASE (NO FAULTS SHOWING)

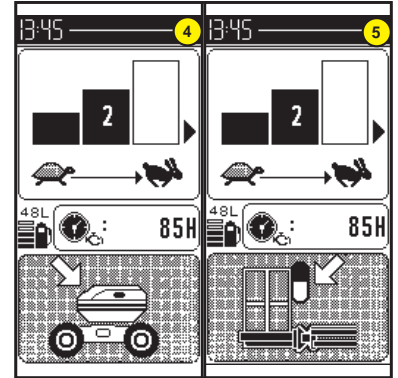
### 5 PAGE FOR WORKING FROM THE BASKET (NO FAULTS SHOWING)

- Selection of Speed 1, 2 or 3 corresponding to the speeds for raising and lowering the arms, when operating from the basket:

- 1: Slow speed
- 2: Moderate speed
- 3: High speed

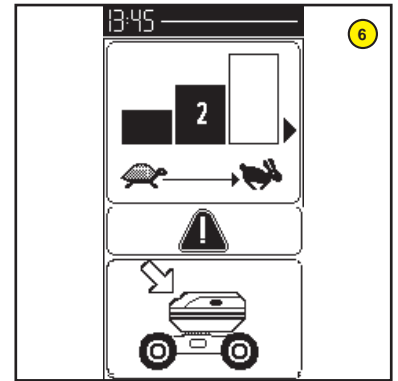
*NB: The speed when operating from the base is always Speed 2.*

*Only the engine operating hours counter is visible when no fault or maintenance symbol is present in the system.*

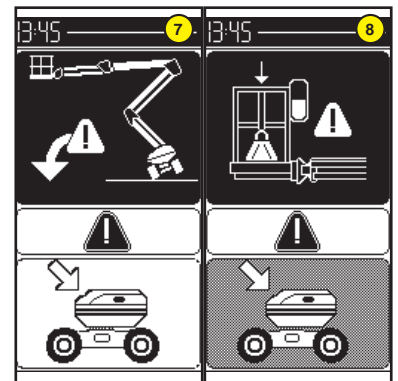


### 6 PAGE FOR WORKING FROM THE BASE (AT LEAST ONE FAULT PRESENT OR ALL TYPES OF VALID FAULTS EXCEPT FOR TILT AND OVERLOAD FAULTS)

*NB: The Warning triangle may appear during cessation of work.*



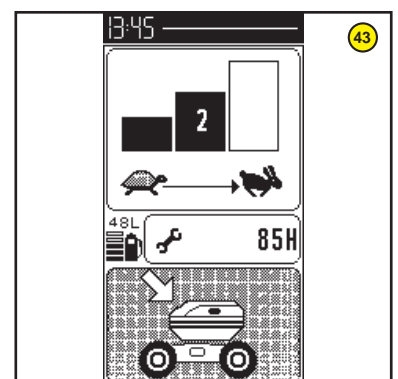
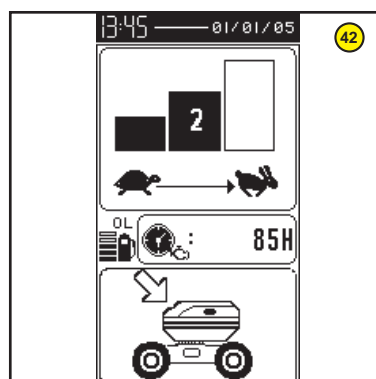
### 7 PAGE FOR WORKING FROM THE BASE WITH A TILT FAULT PRESENT



### 8 PAGE FOR WORKING FROM THE BASE WITH AN OVERLOAD FAULT PRESENT

### 42 PAGE FOR WORKING FROM THE BASE WITH A LOW DIESEL LEVEL FAULT ACTIVATED; THE PUMP LOGO FLASHES

### 43 PAGE FOR WORKING FROM THE BASE WITH A MAINTENANCE FAULT PRESENT; THE WRENCH LOGO FLASHES. ONE OR MORE MAINTENANCE OPERATIONS MUST BE PERFORMED

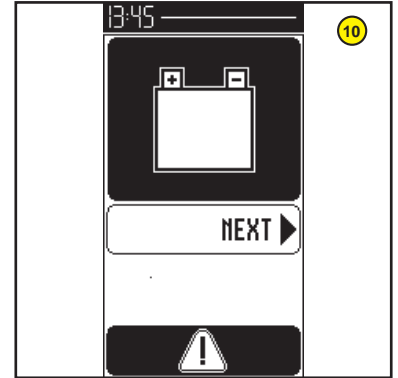
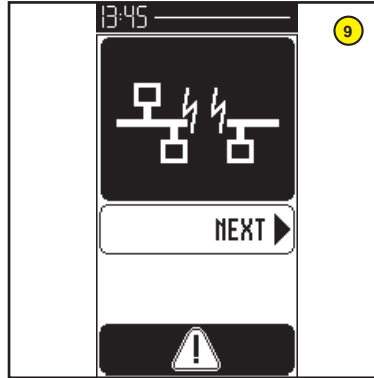


## 6 - FAULT PAGES

THE MAJOR FAULTS POSSIBLE ARE AS FOLLOWS:

9 CAN BUS FAULT PAGE

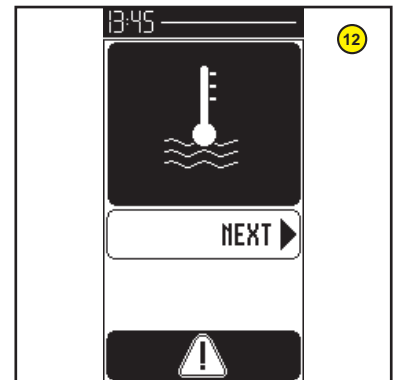
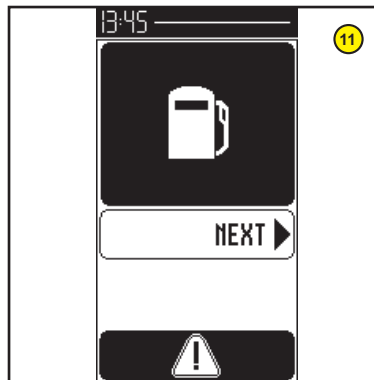
10 LOW POWER SUPPLY FAULT PAGE



11 LOW DIESEL LEVEL FAULT PAGE

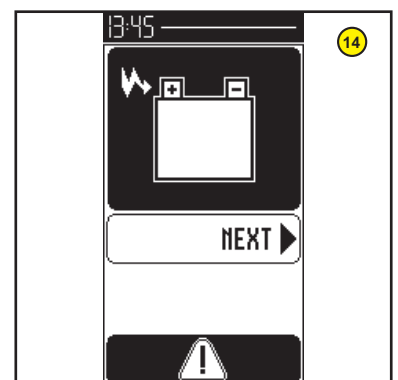
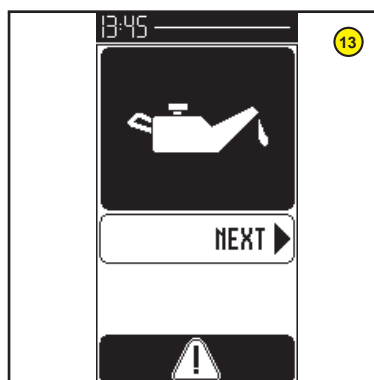
*NB: Program W678600-002, screen page deleted.*

12 ENGINE WATER TEMPERATURE FAULT PAGE

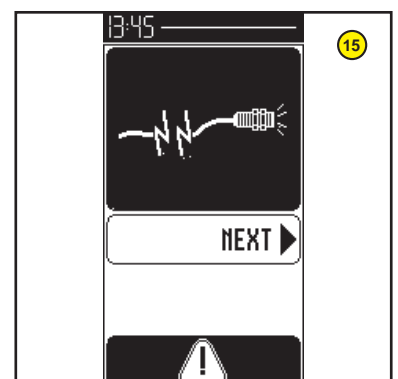


13 ENGINE OIL PRESSURE FAULT PAGE

14 BATTERY CHARGE FAULT PAGE



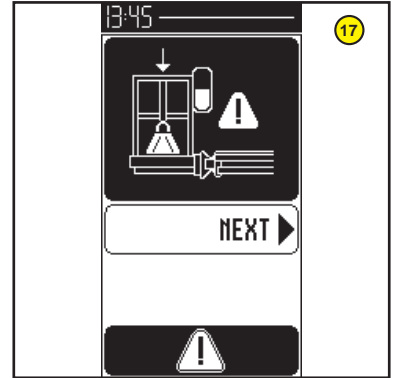
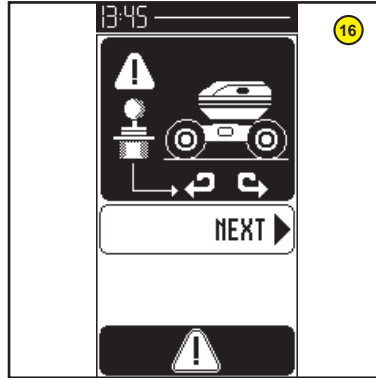
15 ARM POSITION SENSOR (WORK SPEED / TRANSPORT SPEED) FAULT PAGE



**THE MINOR FAULTS POSSIBLE ARE AS FOLLOWS:**

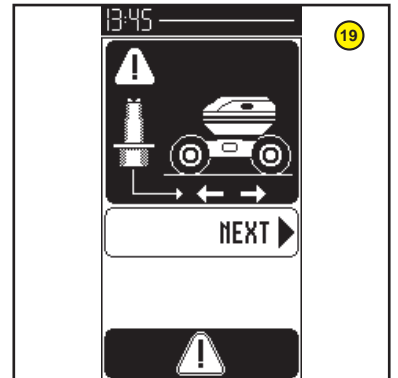
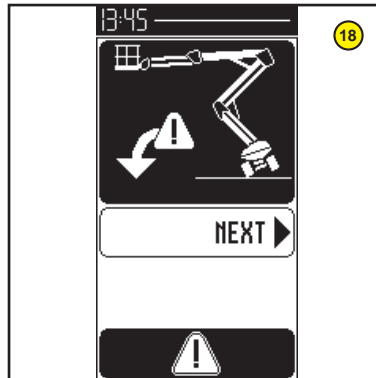
**16 TURRET ROTATION JOYSTICK FAULT PAGE**

**17 OVERLOAD FAULT PAGE**



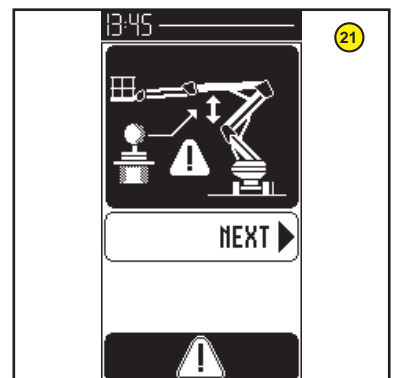
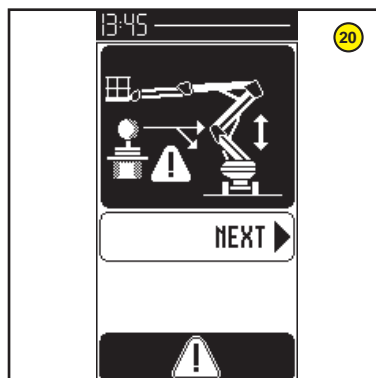
**18 TILT FAULT PAGE**

**19 FORWARD MOTION JOYSTICK FAULT PAGE**

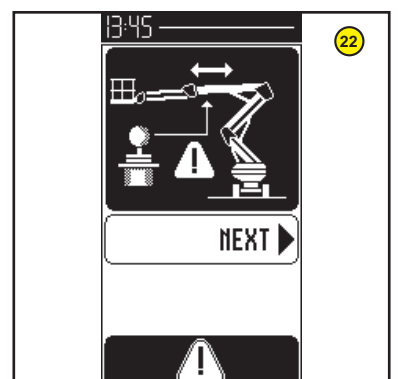


**20 LOWER ARMS JOYSTICK FAULT PAGE**

**21 UPPER ARM JOYSTICK FAULT PAGE**



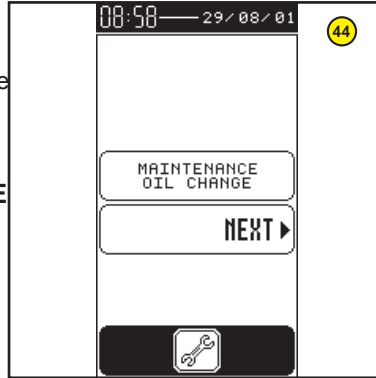
**22 TELESCOPE JOYSTICK FAULT PAGE**



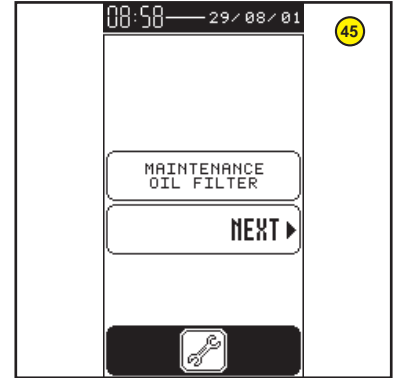
**THE MAINTENANCE FAULTS POSSIBLE ARE AS FOLLOWS:**

These pages appear on the screen 10 hours before the maintenance interval has expired.

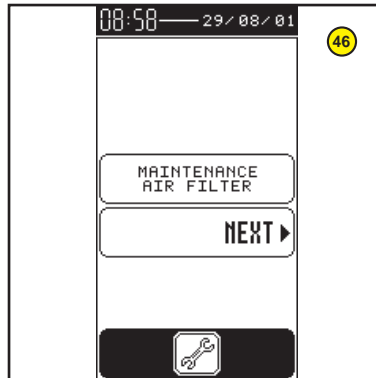
**44 OIL CHANGE MAINTENANCE FAULT PAGE**



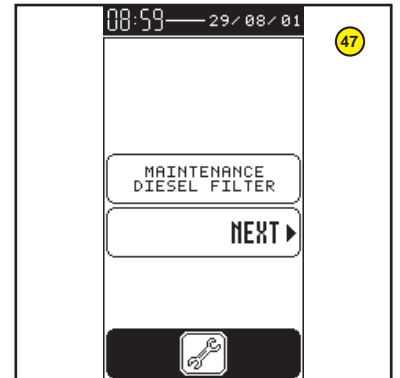
**45 OIL FILTER MAINTENANCE FAULT PAGE**



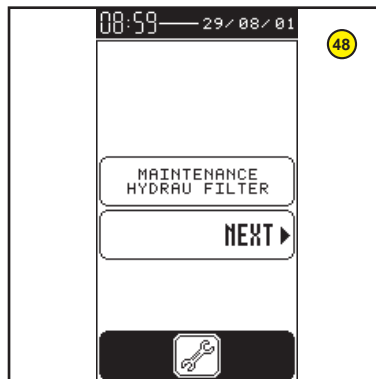
**46 AIR FILTER MAINTENANCE FAULT PAGE**



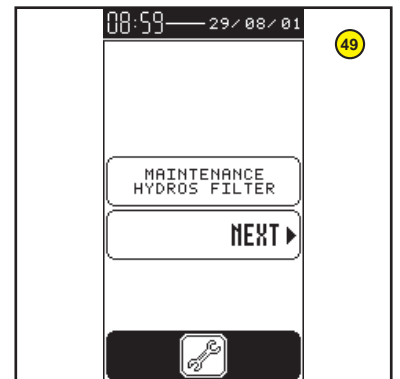
**47 DIESEL FILTER MAINTENANCE FAULT PAGE**



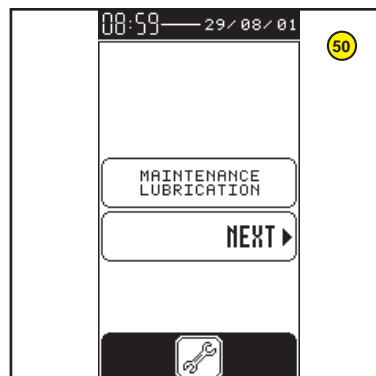
**48 HYDRAULIC FILTER MAINTENANCE FAULT PAGE**



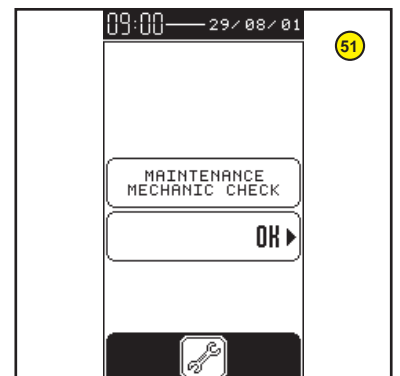
**49 HYDROSTATIC FILTER MAINTENANCE FAULT PAGE**



**50 GREASING MAINTENANCE FAULT PAGE**



**51 MECHANICAL INSPECTION MAINTENANCE FAULT PAGE**





## ACCESS CODE PAGE

### 23 ACCESS CODE PAGE :

This page enables you to enter the code authorising access to the menu (for entry of the secret code, see diagram).

## MENU PAGE

LEVEL 2 or DEALER / RENTER access

- A menu is selected by pressing the upper 'RIGHT' and 'LEFT' keys.
- A sub-menu is selected by pressing the lower PLUS and MINUS keys.
- A menu (and its associated sub-menu) is confirmed by pressing the key opposite the OK text (VALID or OK key).

The various menus available are:

## SETTINGS PAGES

24 The Settings menu " enables you to access the following sub-menus:

- 25 Setting the screen contrast
- 26 Setting the screen brightness
- 27 Setting the time and date

The parameters on pages 25 and 26 can be reinitialised to the default parameters. See pages 52 and 53 .

For this version of the program, the Settings menu enables you to access the following sub-menus:

55 Systems Parameters enables you to access the following pages:

- 56 Max speed control (14 pages)
- 57 Pre-heating period (1 page)
- 58 Operator's language (11 langues)

## MAINTENANCE PAGES

The Maintenance menu " enables you to access:

29 Maintenance page, sub-menus:

- 30 31 32 Counter viewing and maintenance (see Section 3: MAINTENANCE TABLE)

33 Viewing the status of the system's inputs and outputs, sub-menus:

- 34 35 36 37 38 Input and output pages (see the Repairs Manual for the statuses)

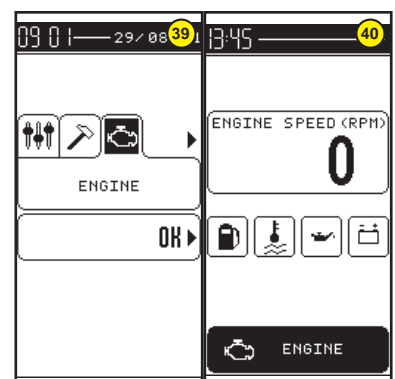
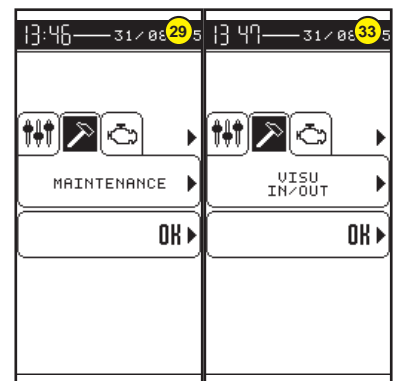
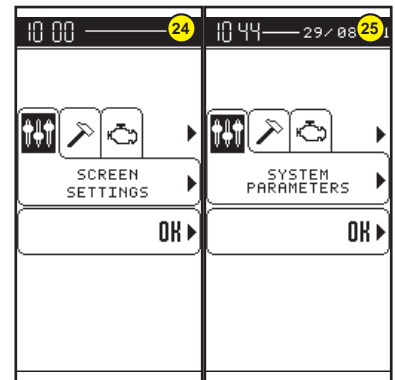
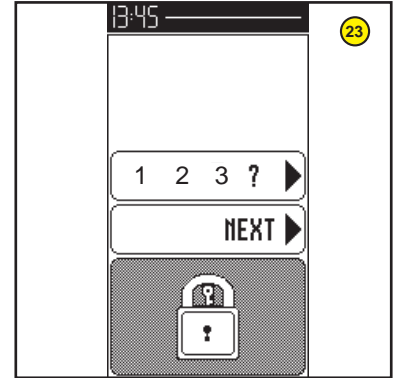
If there are maintenance operations to be performed (confirmed after start-up), Maintenance pages 44 to 51 appear before the view of the counters.

## ENGINE PAGE

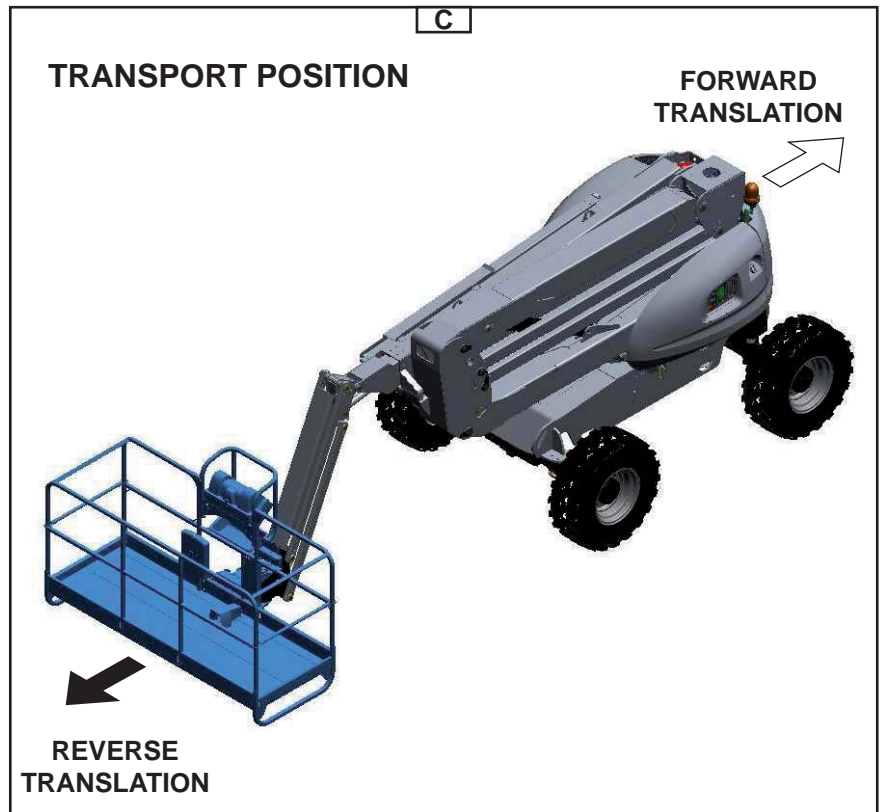
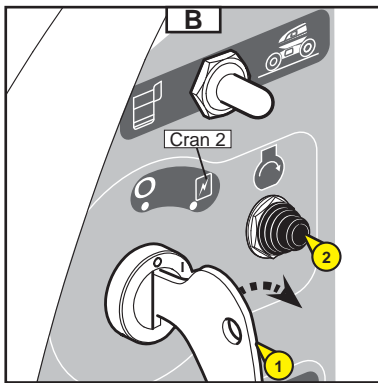
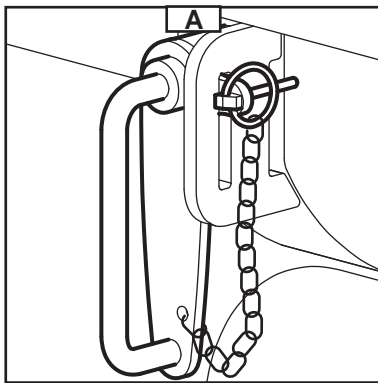
39 The Engine Dashboard menu " provides access to the following sub-menus:

- 40 " Engine": - engine rpm
  - ": Low diesel level fault
  - ": Engine water temperature fault
  - ": Engine oil pressure fault
  - ": Battery charge fault

A fault is indicated by displaying the corresponding icon in grey.



## USING THE LIFTING PLATFORM



### **BEFORE STARTING THE LIFTING PLATFORM**

- Check the following levels:
  - Engine oil.
  - Oil in the hydraulic reservoir.
  - Coolant.

### **STARTING THE LIFTING PLATFORM**

- Turn the ignition key 1 to notch 2 to make electrical contact (see Fig. B).
- Press button 2 to start the engine (see Fig. B).



Do not operate the starter for more than 30 seconds and run a pre-heating cycle between all failed attempts to start.

- Release the button as soon as the engine starts and let the engine run at tickover speed.



Never try to push or pull the lifting platform to start it. Such an action would cause severe damage to the transmission.

## ***MOVEMENT IN TRANSPORT / WORK MODE***

- Before moving or using the machine, remove the turret lock 1 (see Fig. A).
- The lifting platform has two separate movement modes: Transport mode (Fig. D) and Work mode (Fig. E) (direction of forward movement (Fig. C)).
- **Transport mode:** the lifting platform's arms are in the Low position and the telescope is retracted; the pendular arm may be raised completely. This mode enables you to move at high speed and operate beyond the tilt limit of the machine (See the CHARACTERISTICS section) (Fig. D).
- **Work mode :** one or more of the lifting platform's arms are raised and/or the telescope is extended. In this mode, translations are made at slow speed and the safety systems for tilt and overload are active (Fig. E).

**NB:** You must use Ramp speed (full power with the speed restricted to 2 km/h) to cross over steep slopes or move over very broken ground. This can prove very useful, for instance, if an access ramp must be borrowed to move the lifting platform onto a truck bed.



In Work mode, any movement over broken ground, loose surfaces, slopes greater than the authorised level of tilt (see the CHARACTERISTICS section) likely to overturn or unbalance the lifting platform is PROHIBITED.



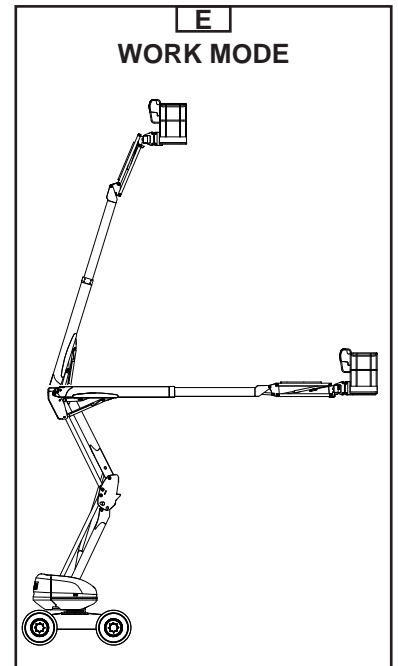
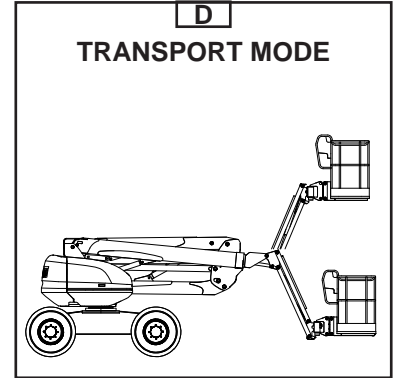
The turret must be in the lifting platform's axis when making a translation in Hare mode.



Before driving the lifting platform, ensure that the turret is correctly oriented with respect to the chassis, i.e. in the translation direction (black and white arrows).



In the case of a steep slope: - no load in the basket; use reverse gear.



## ***INSTALLATION ON THE WORK SITE AND LIFTING***

---

- The lifting platform has been designed to work on a flat, horizontal surface; it is important to clear the space in which the lifting platform will be working.
- Bring the lifting platform to the work site.
- If necessary, load the equipment to be carried (stack so as not to inconvenience the operator and prevent anything falling).
- Climb into the lifting platform.



**Wearing a safety helmet and a harness is compulsory.**

- Press the “Dead Man’s” pedal and start to manoeuvre to position yourself in the work area.

**NB:** *When the lifting platform is free of the chassis, translation switches automatically to slow speed.  
Only the pendular arm can be raised completely while maintaining Transport speed.*



**When manoeuvring the lifting platform (lifting, rotation...), look around and above you. Pay particular attention to the electric cables and any items that may be in the lifting platform’s operating space.**



**Familiarise yourself with the instruments on the ground maintenance and emergency station and in the basket, described in the previous pages and in particular the warnings specifying the risks involved in performing certain manoeuvres.**

## ***SAFETY SYSTEMS***

---

- When the lifting platform is overloaded, the buzzer sounds continuously and all movements are blocked.
  - Solution : unburden the basket.

## ***LOWERING***

---

- When the work is complete: retract the telescope and lower the arms to bring the lifting platform back to Transport position.



**Pay attention to the people on the ground when you are descending.**

## ***STOPPING THE LIFTING PLATFORM***

---

- When the lifting platform is not being used, cut off the electrical power supply by setting the ignition key to the Neutral position (see 1 – Ignition).

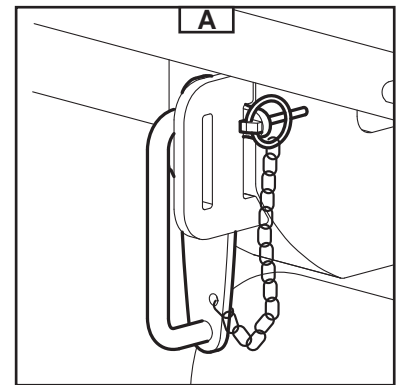


## LOADING / UNLOADING THE LIFTING PLATFORM



Check that the safety instructions relating to the truck bed have been correctly applied before loading the lifting platform and ensure that the transport vehicle's driver is aware of the lifting platform's dimensional characteristics and its weight (see the CHARACTERISTICS section).

- When loading the lifting platform on to a truck bed, the platform must be in Transport position:
- Counterweight facing the ramp (counterweight above the lifting platform's steering wheels) (see 1 – Safety instructions and advice in the SAFETY STICKERS section, Ref Nos. 1 and 2).
  - Upper arm on its stop
  - Lower and intermediate arm in the Low position
  - Telescope retracted
  - It is possible to raise the pendular arm so that it does not touch the ground but it is inadvisable to make a translation movement with the basket raised excessively; keep the basket in the lowest possible position during manoeuvres (danger of objects falling or impacts; see 1 - Safety Instructions and Advice; Driving Instructions section).
  - Block the lifting platform's turret from rotating by using the pin 1 (Fig. A (see the CONTROL INSTRUMENTS section, paragraph: BLOCKING TURRET ROTATION)
  - Use "Ramp" speed



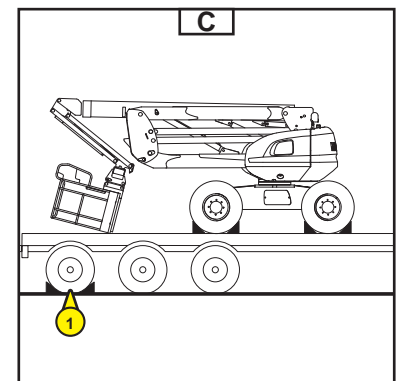
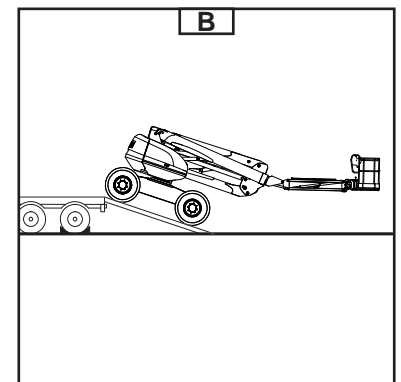
Ensure that the truck bed is large enough and has a sufficient load capacity to transport the lifting platform. Also check the truck bed's permissible ground contact pressure with regard to the lifting platform.



There is a risk of the lifting platform losing adherence (sliding or slipping) when going up or down the loading ramps, when these are wet, muddy or damp. It is therefore necessary to ensure the platform's stability with a winch attached to the lash-down points on the machine.

### LOADING

- Fix the loading ramps to the truck bed so as to have the smallest angle possible for loading the machine (Fig. B).
- Chock the truck bed's wheels 1 (Fig. C).



Please adapt the lifting platform's translation speed by controlling it with the translation joystick.

### PROCEDURE FOR FOLDING THE LIFTING PLATFORM

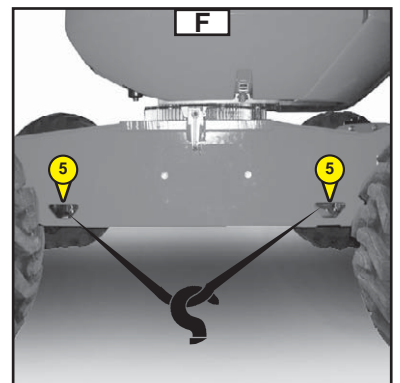
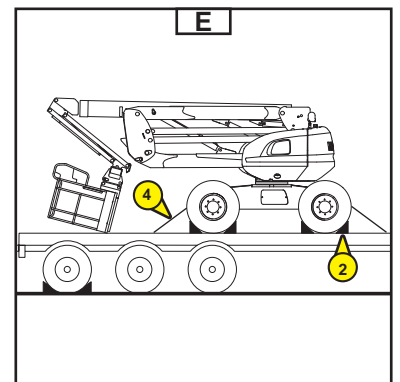
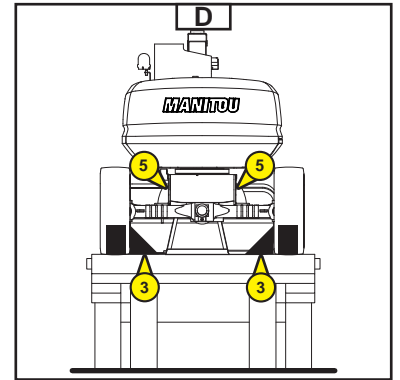
- Raise the upper arm.
- Initiate the basket tilt movement to fold the basket under the upper arm.
- Lower the upper arm, paying attention not to hit the basket on the ground.
- Initiate the basket tilt movement again to fold the basket to the maximum under the upper arm.



**160 ATJ PLUS** : Because the basket is wider, extend the telescope slightly to fold the basket under the upper arm to ensure that the machine is in transport position.

### LASHING DOWN THE LIFTING PLATFORM

- Set chocks on the truck bed on each of the lifting platform's tyres, front and rear 2 (Fig. E).
- Also set chocks on the truck bed on the inside and the outside of each tyre 3 (Fig. D).
- Lash the lifting platform down on the truck bed with sufficiently strong ropes 4 (Fig. E), to the front and the rear, passing the ropes through the slinging eyes 5 (Figs. D and F).

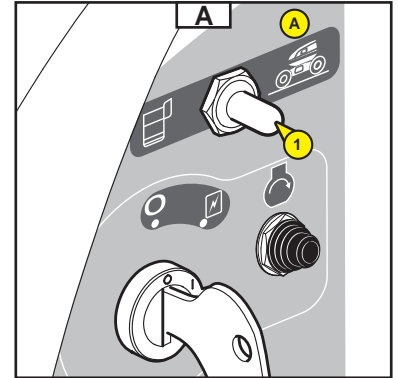


# RESCUE PROCEDURE

- This paragraph describes the procedures to follow, the controls to use in the event of a problem (breakdown of the lifting platform or someone trapped in the basket) while the lifting platform is working.
- When taking over the machine and regularly afterwards, the details of this procedure must be read and fully understood by the operator and everyone whose duties are centred on activities in contact with the machine.

## IF THE OPERATOR FALLS ILL

- If the operator is taken ill or finds himself incapable of manoeuvring the machine, the person on the ground can take control of the lifting platform.
- Follow the instructions below.
- Switch the contactor 1 (Fig. A) to Position A and hold it down to recover control of the platform's movements.
- Proceed to lower the platform using the base controls.

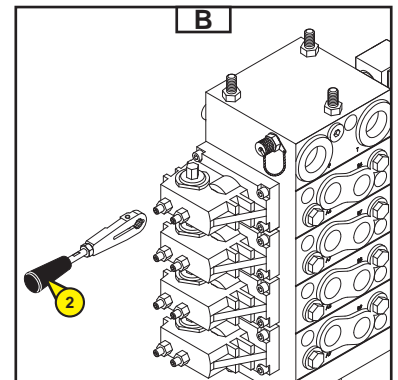


Pay attention to any constructions or objects that may be under the lifting platform.

## IN THE EVENT OF AN ACCIDENT OR BREAKDOWN

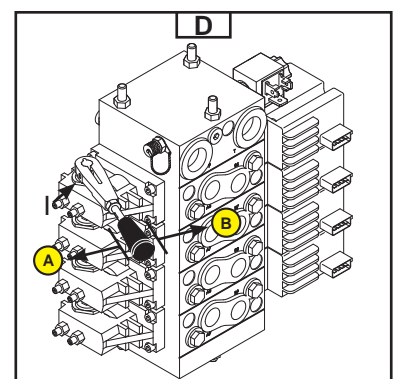
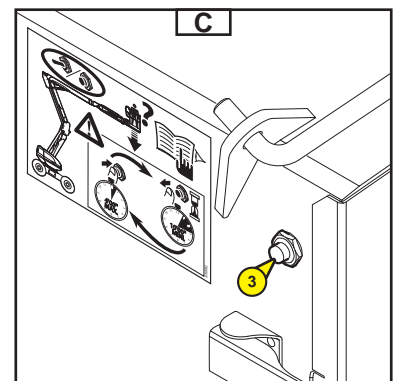
### **ELECTRICAL BREAKDOWN**

- When an accident occurs or a breakdown makes the electrical control boxes unusable, the machine is provided with systems for manually performing all the lifting platform's movements.
- Lift the turret's right-hand cover.
- Grasp the control lever 2 (Fig. B) and position it on one of the elements to perform the desired movement (Figs. D-E-F-G).



During these operations the system does not control:  
- The Tilt safety system.  
- The Basket Overload safety system.

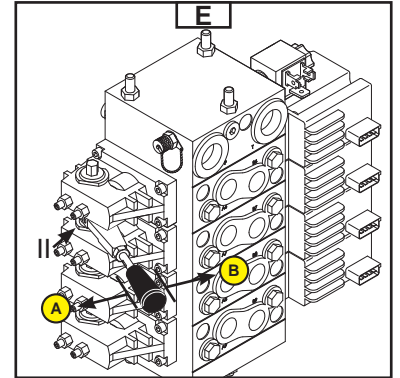
- **To raise and lower the lower arms** (set the lever to I).
- Press button 3 (Fig. C) to activate the emergency pump and, at the same time, push the lever (Fig. D) to:
  - A - to lower the lower arms
  - B - to raise the lower arms





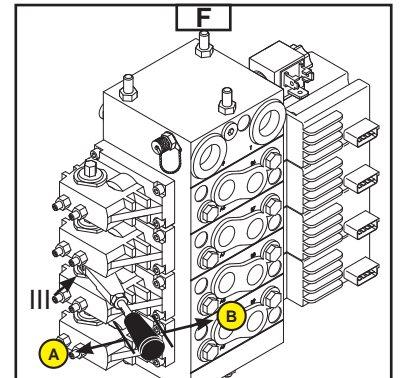
**To extend and retract the telescope (set the lever to II).**

- Press button 3 (Fig. C) to power the distributor and, at the same time, pull the lever (Fig. E) to:
  - A - to retract the telescope
  - B - to extend the telescope



**To raise and lower the upper arm (set the lever to III).**

- Press button 3 (Fig. C) to power the distributor and, at the same time, push the lever (Fig. F) to:
  - A - to lower the upper arm
  - B - to raise the upper arm



**Rescue procedure on the main distributor:**

**To rotate the turret left (set the lever to IV).**

- Turn the wheel on valve 4 (Fig. H) clockwise.
- Press button 3 (Fig. C) to power the distributor and, at the same time, pull the lever (Fig. G) to B.
- Turn the wheel on valve 4 (Fig. H) anti-clockwise.



**To rotate the turret right (set the lever to IV).**

- Turn the wheel on valve 5 (Fig. H) clockwise.
- Press button 3 (Fig. C) to power the distributor and, at the same time, pull the lever (Fig. G) to B.
- Turn the wheel on valve 5 (Fig. H) anti-clockwise.



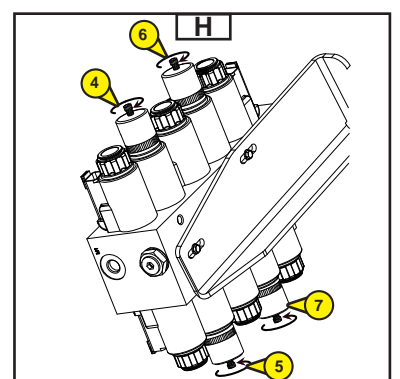
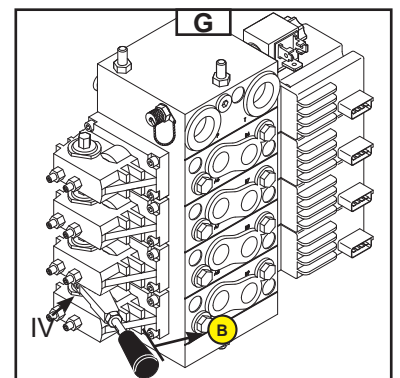
**To raise the pendular arm (set the lever to IV).**

- Turn the wheel on valve 6 (Fig. H) clockwise
- Press button 3 (Fig. C) to power the distributor and, at the same time, pull the lever (Fig. G) to B.
- Turn the wheel on valve 6 (Fig. H) anti-clockwise.



**To lower the pendular arm (set the lever to IV).**

- Turn the wheel on valve 7 (Fig. H) clockwise
- Press button 3 (Fig. C) to power the distributor and, at the same time, pull the lever (Fig. G) to B.
- Turn the wheel on valve 7 (Fig. H) anti-clockwise.

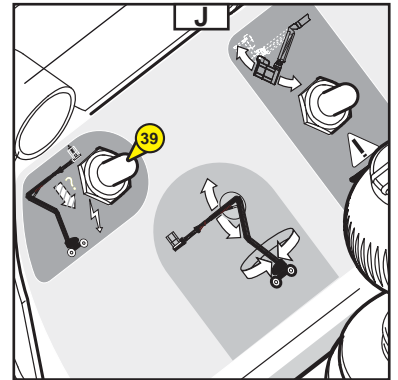


### REPAIRING A BREAKDOWN FROM THE BASKET

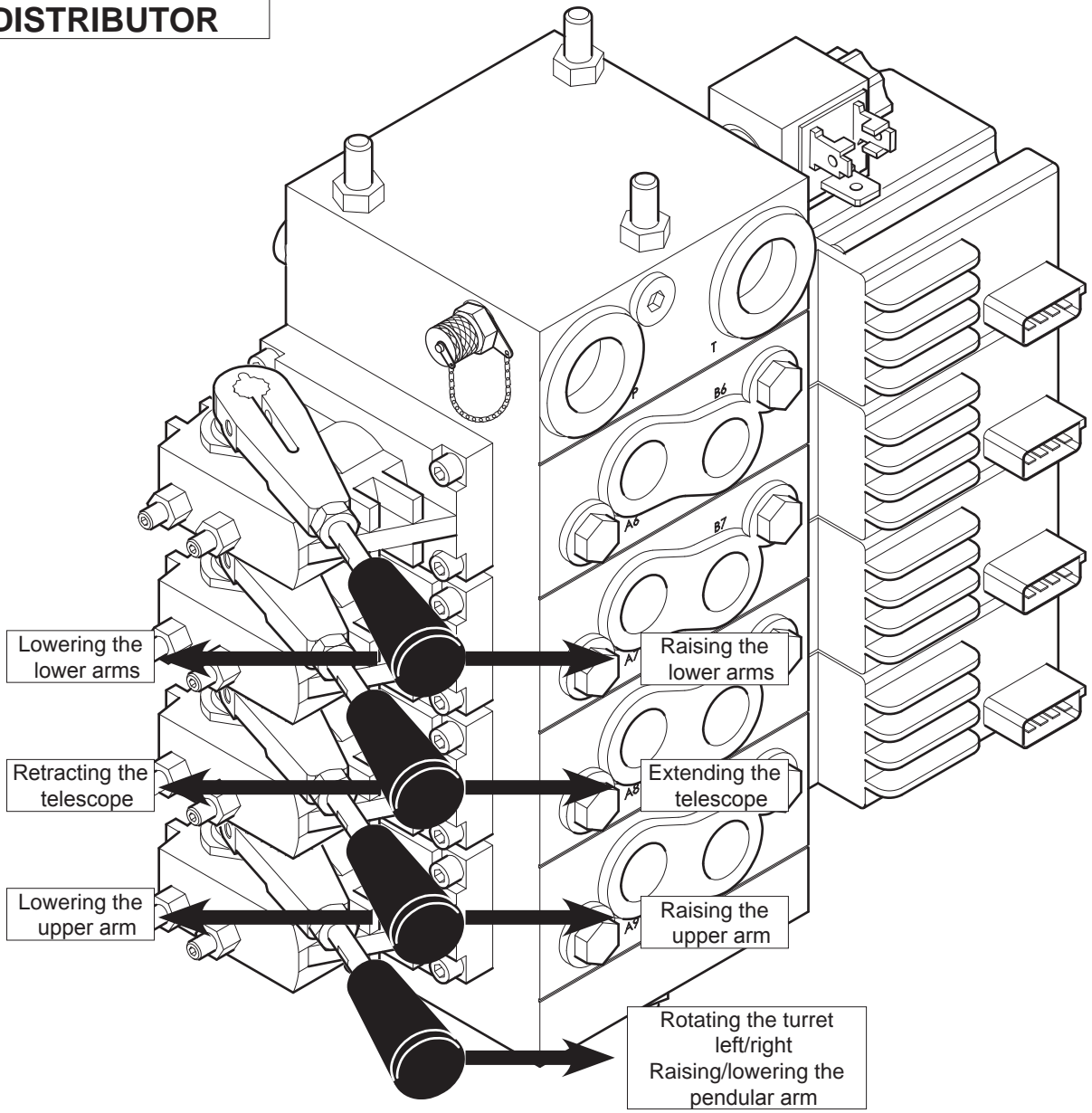
- Press button 39 (Fig. J) to activate the emergency pump and, at the same time, use the basket controls.
- (See the CONTROL INSTRUMENTS section B - LIFTING PLATFORM CONTROL STATION



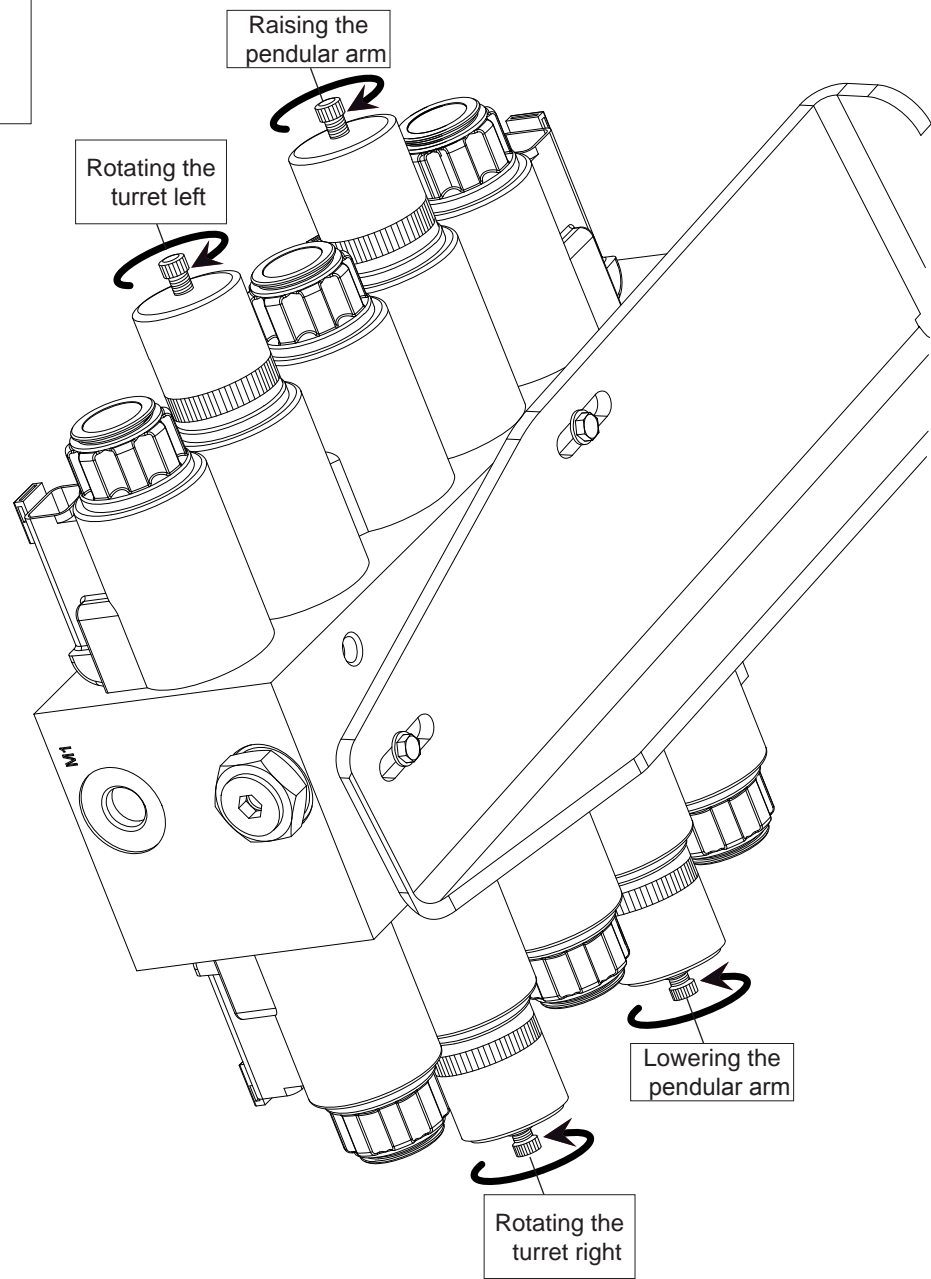
Only to be used to bring the basket down to the ground in the event of the engine breaking down



# PROPORTIONAL DISTRIBUTOR



# MAIN DISTRIBUTOR



# ACCESSORIES

## GENERATOR OPTION

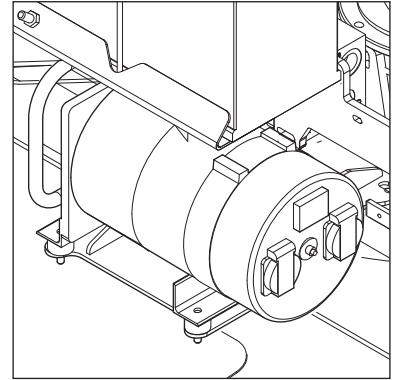
Precautions for use, for users of access platforms equipped with this option :



Do not connect electrical devices not equipped with switches.  
When starting up the generator, voltage surges may occur.

Reminder :

- Idling speed, unladen, for the 160 ATJ Plus Euro 3 (factory setting) fitted with optional 3.5 kW generator 1400 rpm
- Idling speed, unladen, for the 180 ATJ Euro 3 (factory setting) fitted with optional 3.5 kW generator 1300 rpm
- Idling speed, unladen, for the 160 ATJ Plus Euro 3 & 180 ATJ Euro 3 (factory setting) fitted with optional 5 kW generator 1500 rpm



## 2 - 20" WHEEL OPTION + WIDE BASKET OPTION ON 180 ATJ

---

Warning for users of access platforms equipped with these two options concerning loads and dimensions modified relative to a standard 180ATJ.

### SPECIFICATIONS

- Operating height 17 670 mm
- Floor height 15 670 mm

- Weight of platform:

- Empty 8465 Kg
- With nominal load 8695 Kg

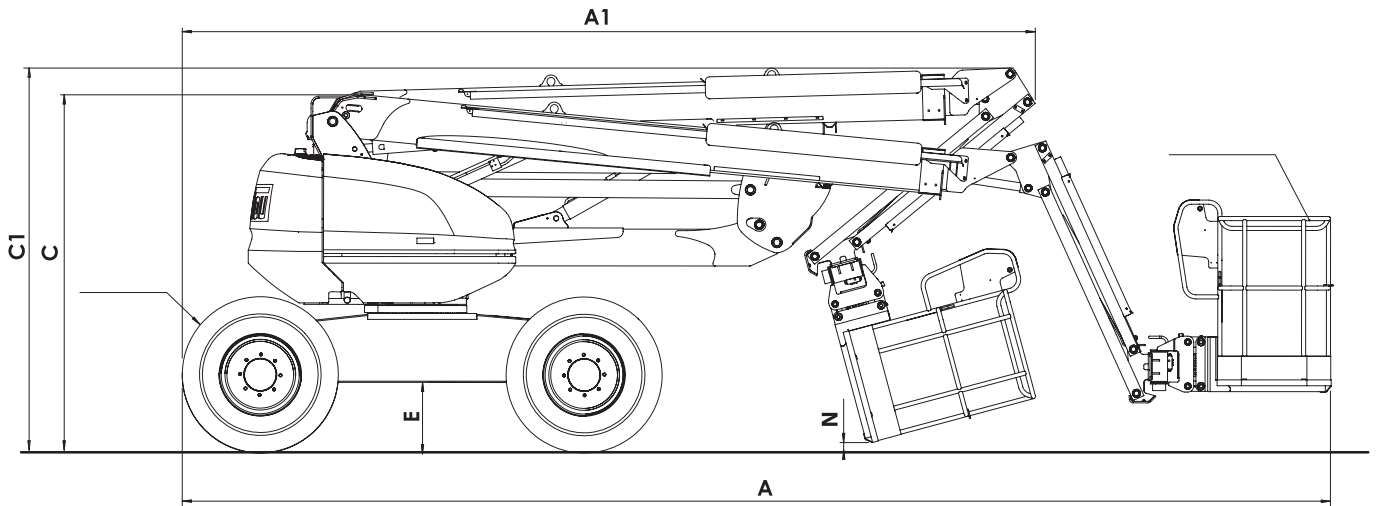
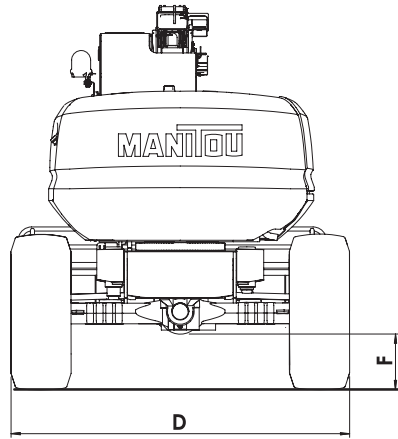
### FRONT - REAR TYRES

DIMENSIONS	TYRES FILLING	LOAD PER TYRE EMPTY		UNDER MAX LOAD + OFFSET ON 1 WHEEL F/R	FLOOR AREA SUPPORTING 1 WHEEL	PRESSURE
		F	R			
20" (405/70)	FOAM	1745 - KG	2485 - KG	4600 - KG	430 - CM2	10.7 - DAN/CM2



On the dimension drawing opposite, you will find only the modified dimensions ; for other dimensions (See 2 - DESCRIPTION : DIMENSIONS 180 ATJ).

	180 ATJ Option 20" + Wide basket option
A	7800
A1	5795
C	2413
C1	2595
D	2300
E	460
F	360
N	50







# **3 - MAINTENANCE**



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# MANITOU ORIGINAL EQUIPMENT AND REPLACEMENT PARTS

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

## BY AUTHORISING THE USE OF MANITOU NON-ORIGINAL PARTS,

### YOU RISK

- From a legal viewpoint, becoming liable in the event of an accident.
- From a technical viewpoint, causing operating breakdowns or reducing the lifting platform's operating life.

THE USE OF COUNTERFEIT PARTS OR COMPONENTS NOT APPROVED BY THE MANUFACTURER,  
RESCINDS THE BENEFITS ACCRUING FROM THE CONTRACTUAL WARRANTY.

## BY USING MANITOU ORIGINAL PARTS IN YOUR SERVICING OPERATIONS,

### YOU BENEFIT FROM KNOW-HOW

Through its network, MANITOU provides the operator with,

- Know-how and competence.
- Guarantee of the quality of the work performed.
- Original replacement parts.
- Help with preventive maintenance.
- Efficient diagnostic assistance.
- Improvements based on feedback from experience.
- Training of the operating personnel.
- Only the Manitou network knows the lifting platform's design in detail and therefore has the best technical capabilities to provide for its maintenance.

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

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

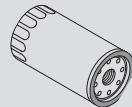
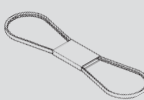
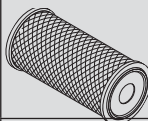
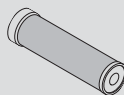

# COMMISSIONING CHECK LIST

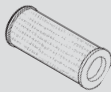
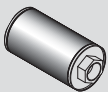
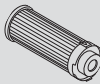
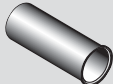
0 = Good 1 = Missing 2 = Incorrect

100	IC ENGINE	
01	Air filter	
02	Fuel tank	
03	Fuel lines - Filter	
04	Injection or carburettor system	
05	Radiator and cooling system	
06	Belts	
07	Hoses	
101	TRANSMISSION	
01	Reversing system	
02	Gearbox control	
03	Cut-off pedal	
04	Clutch	
102	AXLES / TRANSFER BOX	
01	Function and sealing	
02	Endstop adjustment	
103	HYDRAULIC / HYDROSTATIC CIRCUIT	
01	Tank	
02	Pumps and attachments	
03	Tightness of the connections	
04	Lifting cylinder(s)	
05	Tilting cylinder(s)	
06	Accessory cylinder(s)	
07	Telescope cylinder(s)	
08	Compensation cylinder(s)	
09	Steering cylinder(s)	
10	Distributor	
11	Balancing valve	
104	BRAKING CIRCUIT	
01	Operation of the service and parking brake	
02	Brake fluid level	
105	LUBRICATION AND GREASING	
106	JIB / MANISCOPIC / MANIACCES ASSEMBLY	
01	Beam and telescope(s)	
02	Skid	
03	Joints	
04	Protective plate	
05	Forks	
107	MAST ASSEMBLY	
01	Fixed and mobile uprights	
02	Protective plate	
03	Chains	
04	Pulleys	
05	Forks	

108	ACCESSORIES	
01	Adaptations to the machine	
02	Hydraulic connections	
109	CAB / PROTECTOR / ELECTRICAL CIRCUIT	
01	Seat	
02	Dashboard and radio	
03	Buzzer and alarm light / safety system	
04	Heating / Air conditioning	
05	Windscreen wiper / Windscreen washer	
06	Operating warning	
07	Reversing warning	
08	Road lights	
09	Additional lights	
10	Flashing light	
11	Battery	
110	WHEEL	
01	Rims	
02	Tyres / Pressure	
111	NUTS AND BOLTS	
112	CHASSIS AND BODYWORK	
113	PAINTWORK	
114	GENERAL OPERATION	
115	INSTRUCTIONS MANUAL	
116	CUSTOMER'S INSTRUCTIONS	

## FILTER ELEMENTS AND BELTS

IC ENGINE			
	<b>IC ENGINE OIL FILTER</b> Reference: <b>749613</b> Replace: <b>500 H</b>		<b>FAN BELT</b> Reference: <b>749605</b> Replace: <b>500 H</b>
	<b>DRY AIR FILTER CARTRIDGE</b> Reference: <b>227959</b> Clean: <b>50 H</b> Replace: <b>500 H</b>		
	<b>DRY AIR FILTER SAFETY CARTRIDGE</b> Reference: <b>227960</b> Replace: <b>1000 H*</b>		
	<b>FUEL FILTER CARTRIDGE</b> Reference: <b>781909</b> Replace: <b>500 H</b>		
*: This interval is provided only as an indication (see: 3 - MAINTENANCE: MAINTENACE TABLE) for cleaning and replacing this.			

HYDRAULIC SYSTEM			
	<b>HYDROSTATIC TRANSMISSION OIL FILTER CARTRIDGE</b> Reference: <b>518250</b> Replace: <b>500 H</b>		<b>HYDROSTATIC OIL RESERVOIR SUCTION STRAINER</b> Reference: <b>19910</b> Clean: <b>1000 H</b>
	<b>AUXILIARY HYDRAULIC OIL FILTER CARTRIDGE</b> Reference: <b>518251</b> Replace: <b>500 H</b>		<b>HYDRAULIC RESERVOIR FILLING STRAINER</b> Reference: <b>599523</b>



# LUBRICANTS AND FUEL



## USE THE RECOMMENDED LUBRICANTS AND FUEL:

- Oils may not be mixed when topping up.
- MANITOU oils are perfectly suitable for easy draining.

## OIL DIAGNOSTIC ANALYSIS

If you set up a maintenance or servicing contract with the dealer, a diagnostic analysis of the engine and axle oils may be requested, depending on the usage level.

## (\*) CHARACTERISTICS OF THE RECOMMENDED FUEL

Use a quality fuel to obtain optimum performance from the engine.

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

IC ENGINE				
COMPONENTS TO BE LUBRICATED	CAPACITY	RECOMMENDATION	PACKAGING	REFERENCE
IC ENGINE	9,5 Litres	MANITOU SAE 15W/40 engine oil	5 l	661706
			20 l	582357
			55 l	582358
			209 l	582359
			1000 l	490205
COOLANT	8 Litres	Cooling circuit (protection - 25°)	1.5 l	<b>894508</b>
			5 l	<b>788246</b>
			20 l	<b>788247</b>
FUEL TANK	Litres	Diesel (*)		

TRANSMISSION				
COMPONENTS TO BE LUBRICATED	CAPACITY	RECOMMENDATION	PACKAGING	REFERENCE
TRANSFER BOX	0,75 Litres	TRACTELF axle oil SF3	5 l	545 976
			20 l	582 391
			209 l	<b>894 257</b>
TRANSMISSION UNIVERSAL JOINT		MANITOU BLUE multi-purpose oil	400 g	161589
			1 kg	720683
			5 kg	554974
			20 kg	499233
			50 kg	489670

HYDRAULIC SYSTEM				
COMPONENTS TO BE LUBRICATED	CAPACITY	RECOMMENDATION	PACKAGING	REFERENCE
HYDRAULIC OIL RESERVOIR	55 Litres	MANITOU Hydraulic ISO VG 46 oil	5 l	545500
			20 l	582297
			55 l	546108
			209 l	546109



LIFTING STRUCTURE			
COMPONENTS TO BE LUBRICATED	RECOMMENDATION	PACKAGING	REFERENCE
GENERAL LUBRICATION	MANITOU high-performance grease	Cartridge 400 g	479330
TURRET CROWN GEAR BEARING RACEWAYS LUBRICATION			
TURRET CROWN GEAR TEETH LUBRICATION	SHELL MALLEUS GL 205 oil	Aerosol	744802
BRAKE REDUCER ON THE TURRET'S REDUCTION GEAR	MANITOU SAE80W90 axle / gearbox mechanical transmission oil	2 l 25 l 56 l 215 l	499237 546330 546221 546220

FRONT AXLE				
COMPONENTS TO BE LUBRICATED	CAPACITY	RECOMMENDATION	PACKAGING	REFERENCE
FRONT AXLE DIFFERENTIAL	4,8 Litres	Axle oil TRACTELF SF3	5 l 20 l 209 l 1000 l	545976 582391 <b>894257</b> 720149
FRONT WHEEL REDUCER	0,8 Litre	Oil SHELL SPIRAX A 90	20 l 209 l	661950 662000

REAR AXLE				
COMPONENTS TO BE LUBRICATED	CAPACITY	RECOMMENDATION	PACKAGING	REFERENCE
REAR AXLE DIFFERENTIAL	4 Litres	Axle oil TRACTELF SF3	5 l 20 l 209 l 1000 l	545976 582391 <b>894257</b> 720149
REAR WHEEL REDUCER	0,8 Litre	Oil SHELL SPIRAX A 90	20 l 209 l	661950 662000


# MAINTENANCE TABLE

(1): COMPULSORY OVERHAUL AFTER 500 HOURS or 6 MONTHS


This overhaul must compulsorily be performed after approximately the first 500 hours of operation or 6 months after the machine is put into service (when the earlier of the two periods is reached).

(2): The engine oil and the engine oil filter must be replaced after the first 50 hours of operation, and then every 500 hours of operation.

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

	PAGE	 (1)	DAILY OR EVERY 10 HOURS OF OPERATION	EVERY 50 HOURS OF OPERATION	EVERY 250 HOURS OF OPERATION	EVERY 500 HOURS OF OPERATION OR 6 MONTHS	EVERY 1,000 HOURS OF OPERATION OR 1 YEAR	EVERY 2,000 HOURS OF OPERATION OR 2 YEARS	EVERY 4,000 HOURS OF OPERATION	OCCASIONAL
<b>IC ENGINE</b>										
Engine oil level	3-12/3-29	C	C	<<<	<<<	<<<	<<<	<<<	<<<	
Coolant level	3-12/3-33	C	C	<<<	<<<	<<<	<<<	V/R	<<<	
Fuel level	3-12	C	C	<<<	<<<	<<<	<<<	<<<	<<<	
Fuel circuit hose	3-14/3-35			C	<<<	<<<	<<<	<<<	<<<	P
Radiator core	3-16	N		N	<<<	<<<	<<<	<<<	<<<	
Dry air filter cartridge	3-17/24	R		N	<<<	R	<<<	<<<	<<<	
Alternator/crankshaft/fan belt tension	3-16/3-23/ 3-28	C/A			C/A	R	<<<	<<<	<<<	
Cooling circuit	3-22	C			C	<<<	<<<	<<<	<<<	
Fuel filter	3-23	N			N	R	<<<	<<<	<<<	
Fuel filter cartridge (2)	3-16/3-24	R			N	R	<<<	<<<	<<<	
Engine oil (2)	3-12/3-29	V				V	<<<	<<<	<<<	
Engine oil filter (2)	3-29	R				R	<<<	<<<	<<<	
Fuel tank	3-30						V/N	<<<	<<<	
Dry air filter safety cartridge	3-30						R	<<<	<<<	
Engine silentblocks	3-32						C**	<<<	<<<	
Engine speeds	3-32						C**	<<<	<<<	
Valve sets	3-34	C**					C**	<<<	<<<	
Injectors	3-34							C	<<<	
Radiator	3-34							C**	<<<	
Water pump and thermostat	3-34							C**	<<<	
Alternator and starter	3-34							C**	<<<	
Fuel injection pressure	3-34							C**	<<<	
Turbocompressor	3-34							C**	<<<	
Injection pump	3-34							C**	<<<	
<b>TRANSMISSION</b>										
Brakes	3-13/3-28	C	C	<<<	<<<	C	<<<	<<<	<<<	
Axles	3-15	G		G	<<<	<<<	<<<	<<<	G/C**	
Tightness of the universal joint bolts	3-27	C			C	<<<	<<<	<<<	<<<	
Hydrostatic transmission circuit pressure	3-32						C**	<<<	<<<	
Start of hydrostatic transmission control	3-32						C/A*	<<<	<<<	
<b>TYRES</b>										
Condition of the wheels and tyres	3-13	C	C	<<<	<<<	<<<	<<<	<<<	<<<	
Tightness of the wheel nuts	3-19				C**	<<<	<<<	<<<	<<<	
Wheels	3-36									R
<b>LIFTING STRUCTURE</b>										
Telescope adjustment	3-19				C	<<<	<<<	<<<	<<<	
Brake reducer on the turret reduction gear	3-20/3-27				C	V/R	<<<	<<<	<<<	
Tightness of the bolts on the turret rotation motor	3-26					C	<<<	<<<	<<<	
<b>HYDRAULIC SYSTEM</b>										
Hydraulic oil	3-13/3-26/3-34	C	C	<<<	<<<	V/R	<<<	<<<	<<<	
Hydrostatic transmission oil filter cartridge	3-25	R				R	<<<	<<<	<<<	
Auxiliary oil filter cartridge	3-25					R	<<<	<<<	<<<	
Condition of the hoses	3-26					C**	<<<	<<<	<<<	
Hydraulic circuit strainer	3-32						N	<<<	<<<	
Hydraulic movement speeds	3-32						C**	<<<	<<<	
Condition of the cylinders (leaks, rods)	3-32						C**	<<<	<<<	
Hydraulic oil reservoir	3-34						N	<<<	<<<	
Hydraulic circuit pressures	3-34							C**	<<<	
Hydraulic circuit flows	3-34							C**	<<<	

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

	PAGE	 (1)	DAILY OR EVERY 10 HOURS OF OPERATION	EVERY 50 HOURS OF OPERATION	EVERY 250 HOURS OF OPERATION	EVERY 500 HOURS OF OPERATION OR 6 MONTHS	EVERY 1000 HOURS OF OPERATION OR 1 YEAR	EVERY 2000 HOURS OF OPERATION OR 2 YEARS	EVERY 4000 HOURS OF OPERATION	OCCASIONAL
<b>ELECTRICITY</b>										
Condition of the joystick bellows	3-13		C	<<<	<<<	<<<	<<<	<<<	<<<	
Level of electrolyte in the battery	3-14	C		C	<<<	<<<	<<<	<<<	<<<	
Emergency pump	3-19	C			C	<<<	<<<	<<<	<<<	
Arm position sensors	3-22	C			C	<<<	<<<	<<<	<<<	
Tilt sensor	3-22	C			C	<<<	<<<	<<<	<<<	
Overload sensors	3-22	C			C	<<<	<<<	<<<	<<<	
Density of the electrolyte in the battery	3-28	C			C	<<<	<<<	<<<	<<<	
Condition of the cable bundles and the cables themselves	3-32						C**	<<<	<<<	
<b>FRONT AND REAR AXLE</b>										
Front and rear axle differential oil	3-18/3-31	C			C	<<<	V/R	<<<	<<<	
Front and rear wheel reducer oil	3-19/3-31	C			C	<<<	V/R	<<<	<<<	
<b>CHASSIS</b>										
Turret orientation crown	3-20	G			G	<<<	<<<	<<<	<<<	
Shafts	3-21				G	<<<	<<<	<<<	<<<	
Tightness of the bolts fixing the axle assemblies on the chassis	3-22	C			C	<<<	<<<	<<<	<<<	
Tightness of the turret orientation crown bolts	3-28	C				C	<<<	<<<	<<<	
<b>LIFTING PLATFORM</b>										
Lifting platform stickers	3-18				C	<<<	<<<	<<<	<<<	
Fitting slings on the lifting platform	3-37									XXX
Setting in Freewheeling mode	3-40									XXX
Transporting the lifting platform on a truck bed	3-40									XXX
Maintenance stand	3-41									XXX

(\*): Every 10 hours for the first 50 hours and then a final time after 250 hours.

(\*\*): Contact your dealer.

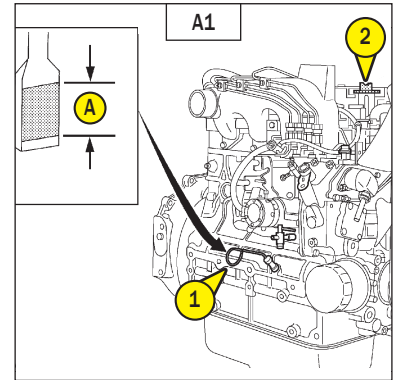
## A - DAILY OR EVERY 10 HOURS OF OPERATION

### A1 - IC ENGINE OIL LEVEL

CHECK

Set the lifting platform on a horizontal surface with the engine switched off and let the oil drain back into the sump.

- Open the left-hand cover
- Remove the dipstick 1 (Fig. A1).
- Wipe the dipstick and check that the oil level is between the two upper notches. Ref. A (Fig. A1).
- If necessary, add oil (see the LUBRICANTS section) via the filling hole 2 (Fig.A1).

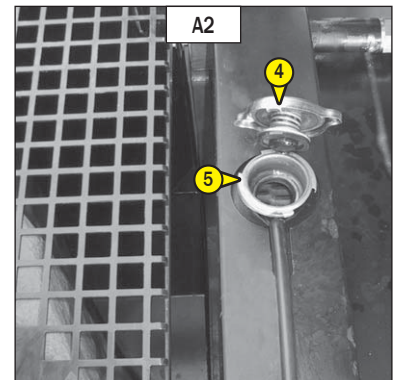


### A2 - COOLANT LEVEL

CHECK

Set the lifting platform on a horizontal surface with the engine switched off and wait for the engine to cool down.

- Open the left-hand cover.
- Slowly open the radiator cap 4 (Fig. A2) as far as the safety stop.
- Let the pressure and the steam escape.
- Press the cap down and turn it to remove it.
- Add coolant via the filling hole 5 (Fig. A2).
- Lightly grease the filling hole to assist inserting and removing the radiator cap.



To avoid the risk of splashes and scalds, wait for the engine to cool down before removing the filling cap for the cooling system. If the coolant is very hot, only add hot fluid (80°C). In the event of an emergency, you can use water as the coolant and then proceed to drain the cooling circuit as quickly as possible (see 3 - MAINTENANCE: E1 – COOLANT).

### A3 - FUEL LEVEL

CHECK

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

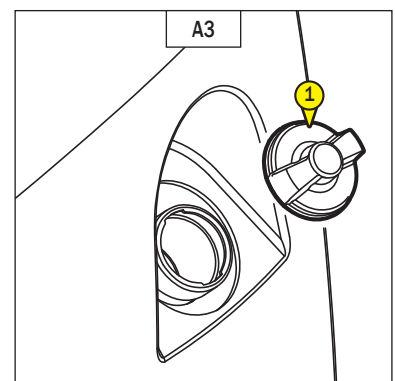
- Remove the cap 1 (Fig. A3)
- Top up the tank via the filling hole with clean Diesel, filtered through a strainer or a clean, lint-free cloth.



Do not smoke or bring a naked flame near to the tank during filling or when the tank is open. Never fill the tank with the engine running.



The fuel tank is vented by the filling cap. When changing the cap, always use an original cap with the vent hole.



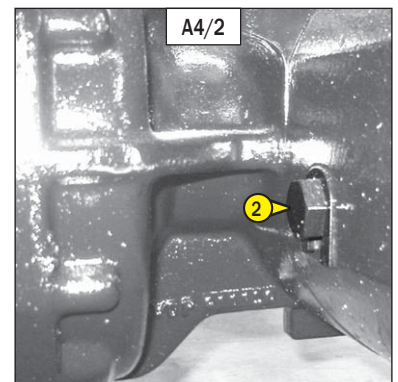
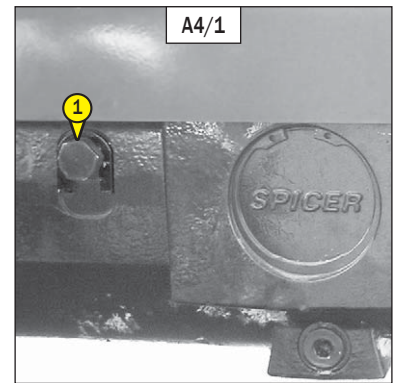
## A4 - BRAKING

CHECK

Check that the cotter pins 1 (Fig. A4/1) and 2 (Fig. A4/2) are in place on the rear axle.



If these pins are not in place, the machine has no brakes.

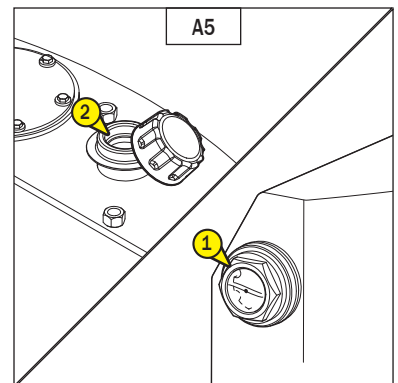


## A5 - HYDRAULIC OIL LEVEL

CHECK

Set the lifting platform on a horizontal surface in Transport position with the engine switched off.

- The oil level should be in the middle of indicator 1 (Fig. A5).
- If necessary, add oil (see the LUBRICANTS section) via the filling hole 2 (Fig.A5).



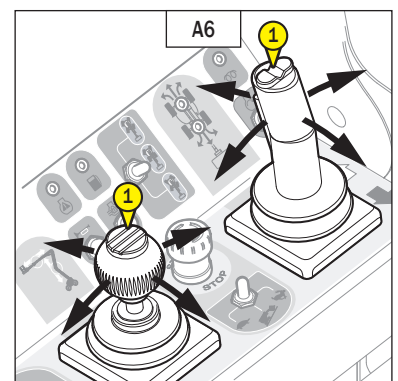
## A6 - CONDITION OF THE JOYSTICK BELLOWS

CHECK

For this operation, climb into the basket when the engine is switched off.

- Check that the joystick's rubber bellows 1 (Fig. A6) are in good condition by operating them as if you are making a movement.

The bellows should not show any cracking or fissures: risk of water penetration, which could impair the machine's operation.



## A7 - CONDITION OF THE TYRES & WHEELS

CHECK

- Check the condition of the tyres to discover any cuts, tears or swollen or worn patches, etc. on the tyres.

## B - EVERY 50 HOURS OF OPERATION

Perform the operations described above as well as the following operations.

### B1 - LEVEL OF BATTERY ELECTROLYTE

CHECK

Check the electrolyte level in each battery.

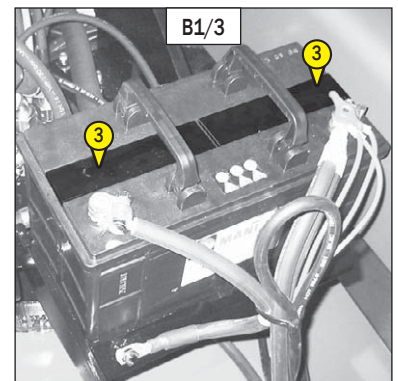
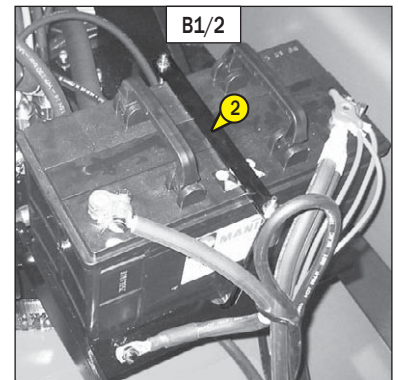
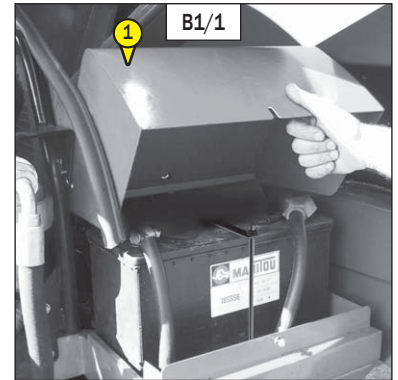
If the ambient temperature is high, check the level more often than every 50 hours of operation.

- Unscrew the two nuts from the battery cover.
- Remove the battery cover 1 (Fig. B1/1).
- Remove the battery clamp 2 (Fig. B1/2).
- Free both the caps over the elements 3 (Fig. B1/3).
- The level must be 1cm above the battery plates.
- If necessary, top up with clean distilled water kept in a glass container.
- Clean and dry the two caps 3 (Fig. B1/3) and refit them.
- Check the battery terminals and apply some Vaseline to prevent them from oxidising.
- Re-install the battery clamp 2 (Fig. B1/2).
- Refit the battery cover.
- Refit the two nuts on the battery cover.



Manipulating and servicing a battery can be dangerous; take the following precautions:

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



### B2 - FUEL CIRCUIT HOSE

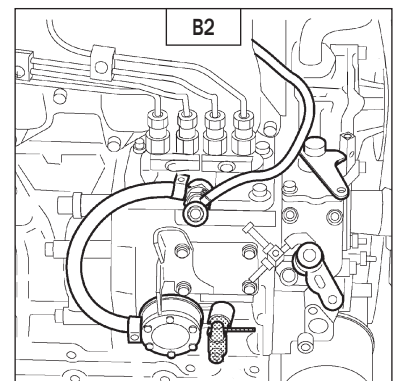
CHECK

Set the lifting platform on a horizontal surface, with the engine switched off, and wait for the engine to cool down.



Check the condition of the fuel circuit hoses after switching off the engine. If the fuel supply hoses are damaged, this can cause a fire.

- Open the bonnet.
- Visually check the condition of the fuel circuit supply hoses and the tightening collars. If these are damaged, replace them immediately (replace all the fuel supply hoses and the tightening collars at least every two years).

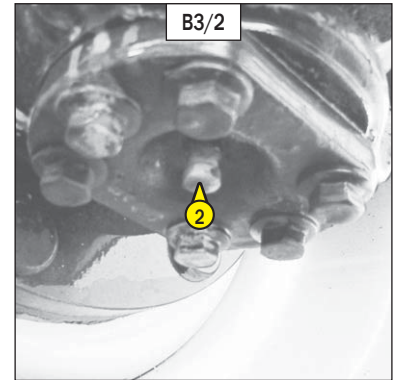
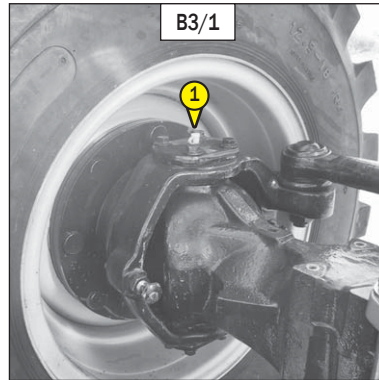




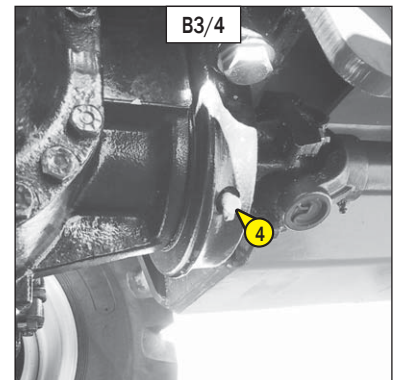
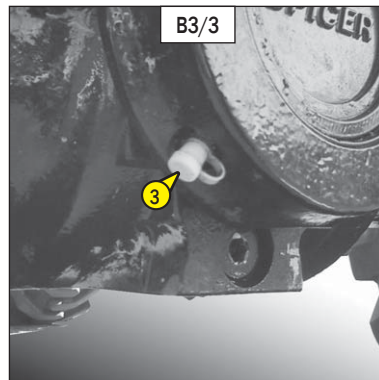
## B3 - AXLES

### GREASE

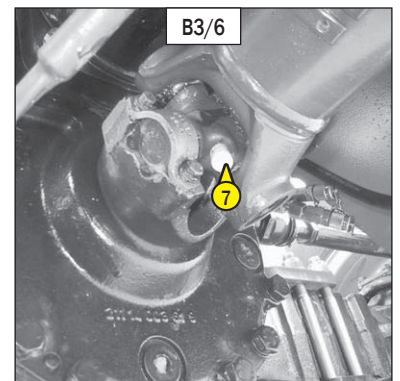
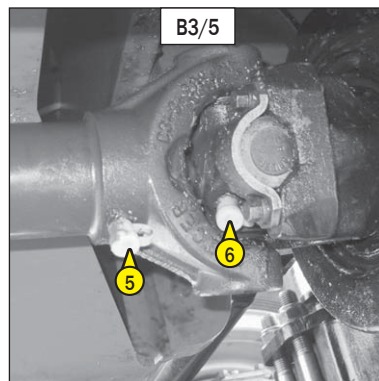
- Grease nipples for the pivots on the front and rear wheel reducers **1** (Fig. B3/1) and **2** (Fig. B3/2) (8 grease nipples)



- Grease nipples for the front axle oscillation shaft **3** (Fig. B3/3) and **4** (Fig. B3/4) (2 grease nipples).



- Grease nipples for the transmission universal joint: front axle **5** - **6** (Fig. B3/5) and transfer box / rear axle **7** (Fig. B3/6).



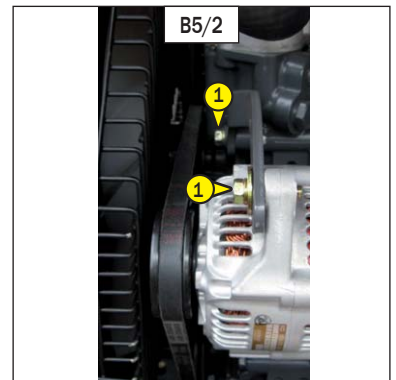
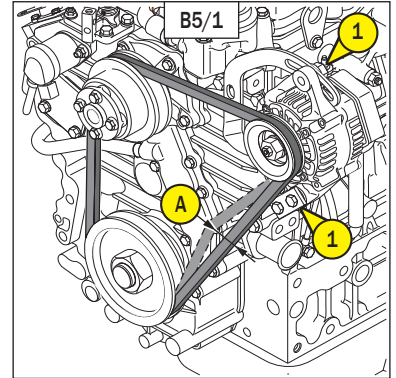
## B5 - ALTERNATOR/CRANKSHAFT/FAN BELT TENSION

ADJUST

- Open the left-hand cowl.
- Check the condition of the belt for any signs of wear or cracking and replace it, if necessary (see: 3 - MAINTENANCE: FILTER ELEMENTS AND BELTS).
- Check the tension between the crankcase and alternator pulleys.
- Under thumb pressure (98 N), the tension A (Fig. B5/1) must be be 7 to 9 mm (Fig. B5/1).
- Adjust, if necessary.
- Loosen the bolts 1 (Fig. B5/2) two or three turns.
- Swivel the alternator assembly to obtain the requisite belt tension.
- Retighten the bolts 1 (Fig. B5/1).



When changing an alternator belt, recheck the tension after the first 20 hours of operation.



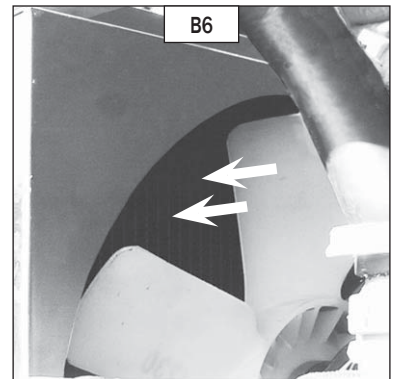
## B6 - RADIATOR CORE

CLEAN

- Open the bonnet.
- To avoid clogging the radiator core, clean it with a jet of compressed air directed from the front towards the back (Fig. B6). This is the only way to expel any dirt effectively.



Clean the radiator core daily when the lifting platform is being used in a very dusty area.





## B7 - DRY AIR FILTER CARTRIDGE

CLEAN

If you are using the machine in a very dusty atmosphere, reduce these maintenance intervals; see the FILTER ELEMENTS AND BELTS section.

- Open the left-hand cowl.
- Unclip the cover 1 (Fig. B7/1).
- Release the filter cartridge 2 (Fig. B7/2) by pulling it.
- Leave the safety cartridge in place 3 (Fig. B7/2).
- Clean the filter cartridge with a jet of compressed air directed only from the inside to the outside.

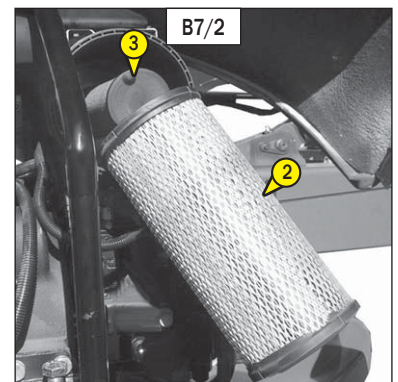
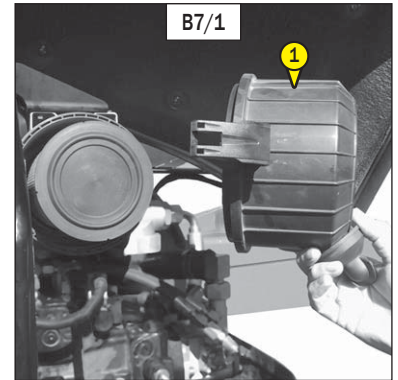


Observe the safety distance of 30 mm between the jet of air and the cartridge to avoid tearing or piercing the cartridge. You must not blow out the cartridge near the air filter casing. Never clean the cartridge by tapping it against a hard surface. Protect your eyes during this operation.

- Clean the inside of the filter with a clean, damp, lint-free cloth.
- Check the condition of the filter cartridge and replace it, if necessary.
- Refit the cartridge and the cover.



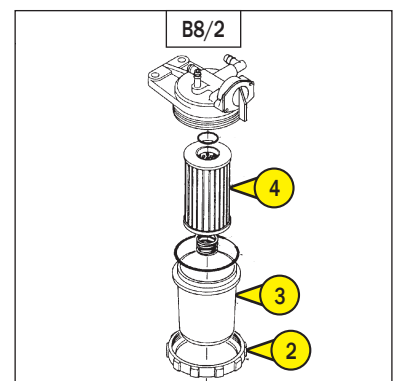
Never wash a dry air filter cartridge. You must not clean the safety cartridge located inside the filter cartridge under any circumstances; replace it with a new one if it is clogged or damaged.



## B8 - FUEL FILTER CARTRIDGE

REPLACE

- Open the left-hand cowl.
- Carefully clean the exterior of the filter and its holder to prevent dust from entering the system.
- Close the fuel tap 1 (Fig. B8/1) to the OFF position.
- Unscrew the retaining ring 2, remove the container 3 (Fig. B8/2) and clean the interior with a paintbrush impregnated with clean diesel.
- Throw away the filter cartridge 4 (Fig. B8/2).
- Reinstall the assembly with a new filter (see 3 - MAINTENANCE: FILTER ELEMENTS AND BELTS section).



## C - EVERY 250 HOURS OF OPERATION

### C1 - FRONT & REAR AXLE DIFFERENTIAL OIL LEVEL

CHECK

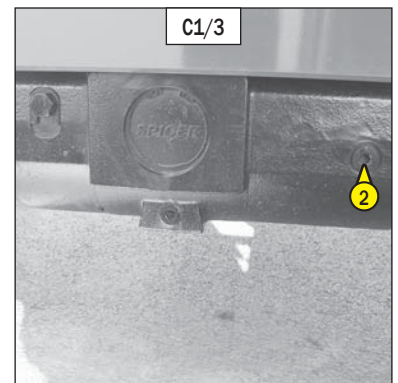
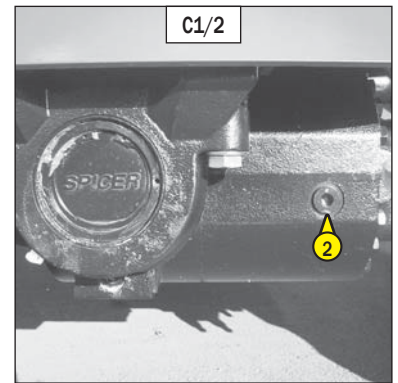
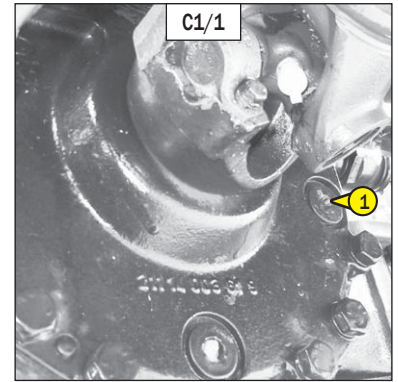
Set the lifting platform on a horizontal surface, with the engine switched off.

#### DIFFERENTIAL:

- Remove the plug 1 (Fig. C1/1); the oil level should be flush with the hole.
- If necessary, top up the oil through the same hole (see the LUBRICANTS section).
- Refit the plug 1 and tighten it (Fig. C1/1) (tightening torque: 6 daNm)

#### AXLES:

- Remove the level plug 2 (Fig. C1/2: front axle) (Fig. C1/3: rear axle); the oil level should be flush with the hole.
- If necessary, top up the oil through the same hole (see the LUBRICANTS section).
- Refit the level plug 2 and tighten it (Fig. C1/2: front axle) (Fig. C1/3: rear axle) (tightening torque: 6 daNm)



### C2 - MACHINE STICKERS

CHECK

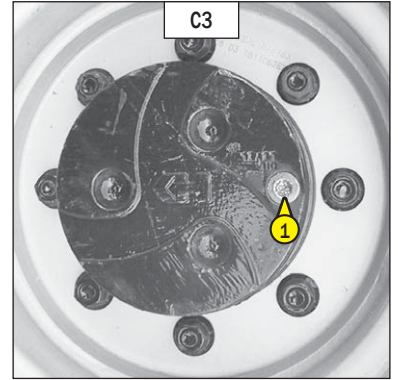
- Check that the safety stickers are present (see: 1 – SAFETY STICKERS).

### C3 - FRONT AND REAR WHEEL REDUCER OIL LEVEL

CHECK

Set the lifting platform on a horizontal surface, with the engine switched off.

- Check the level in each of the front wheel reducers.
- Set the level plug 1 (Fig. C3) horizontal.
- Remove the level plug; the oil level should be flush with the hole.
- If necessary, top up the oil through the same hole (see the LUBRICANTS section).
- Refit the level plug 1 and tighten it (Fig. C3 (tightening torque: 8 daNm)
- Perform the same operation on each of the rear wheel reducers.



### C4 - TIGHTENING THE WHEEL NUTS

CHECK

- Check the tightness of the wheel nuts (Fig. C4).



Failure to observe this instruction may cause the wheel pins to be damaged and break, as well as the wheels to deform.

C4 WHEEL NUT TIGHTENING TORQUE	
FRONT WHEELS	34 daN.m ± 15 %
REAR WHEELS	34 daN.m ± 15 %

### C5 - EMERGENCY PUMP

CHECK

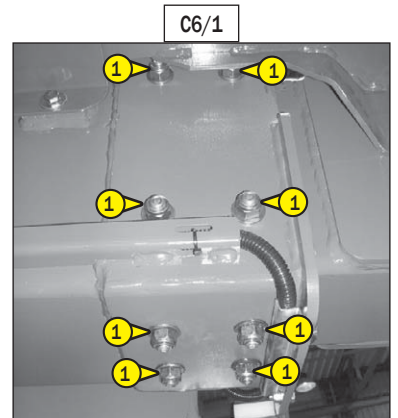
- Switch off the engine.

Check that the emergency pump is operating correctly by pressing the switch on the side of the base control box or the basket control box.

- Perform an arm lowering movement (example...)



You must not use the lifting platform under any circumstances if the pump is not working.



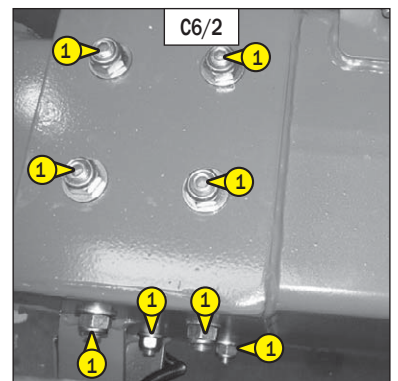
### C6 - TELESCOPE ADJUSTMENT

CHECK

- Check the tightness of the 16 nuts on the telescope skids 1 (Fig. C6/1 and C6/2).



Failure to observe this instruction may result in loss of the skids and damage to the telescope.

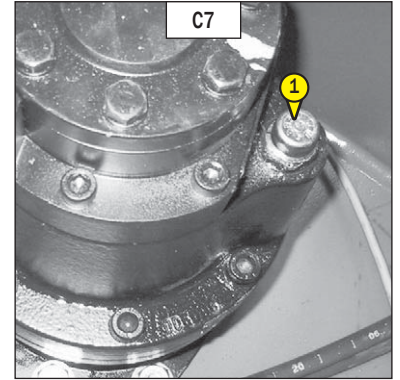


## C7 - TURRET REDUCTION GEAR BRAKE REDUCER LEVEL

CHECK

Set the lifting platform on a horizontal surface, with the engine switched off.

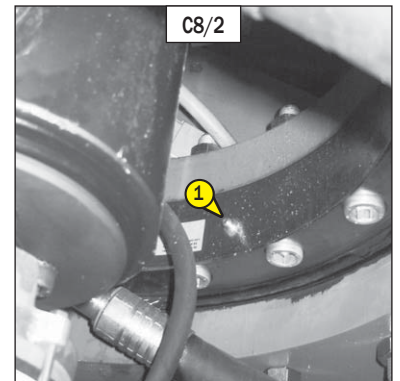
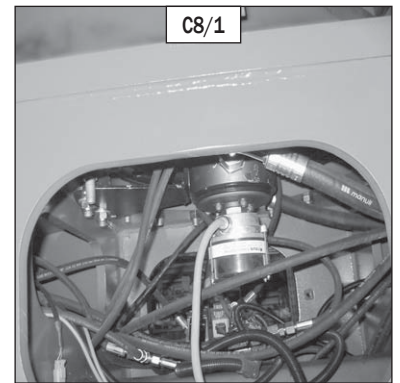
- Remove the turret's internal cowl.
- The reduction gear is revealed with the valve block to the rear.
- Remove the sniffer-filling plug 1 (Fig. C7)
- The level is correct when the sniffer is full of oil.
- If necessary, top up the level with a syringe by filling the reducer via the sniffer-filler plug. The oil capacity is 1.3 litres.
- Refit the sniffer-filler plug 1 (Fig. C7).



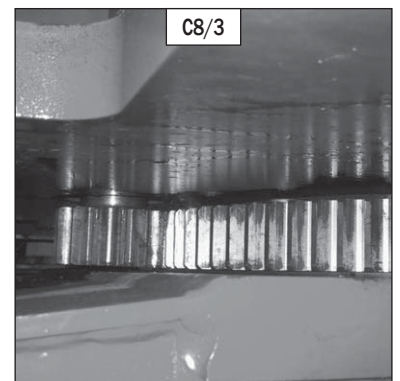
## C8 - TURRET ORIENTATION CROWN

GREASE

- The bearing raceways and gears must be lubricated every 250 hours of operation as well as before and after any long period at a standstill.
- Grease to use: see the LUBRICANTS section.
- Remove the left-hand casing from the chassis (see Fig. C8/1).
- Find the 2 grease nipples 1 (Fig. C8/2) and thoroughly grease the crown, while orienting the turret.
- Refit the left-hand casing on the chassis (see Fig. C8/1).



- Apply lubricant to the teeth of the crown and the pinion with a paintbrush (Fig. C8/3).
- Lubricant to use: see the LUBRICANTS section.



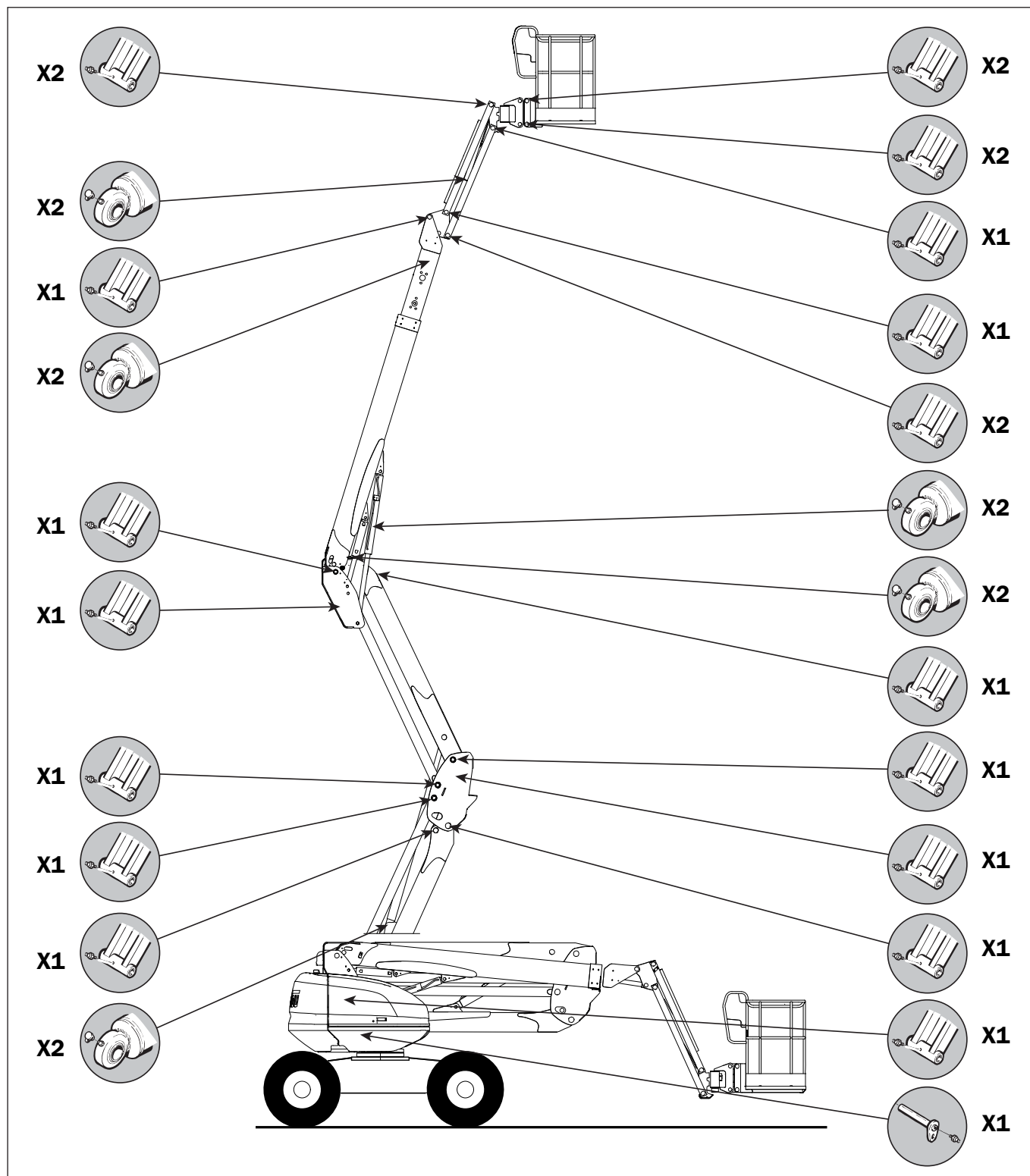
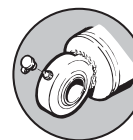
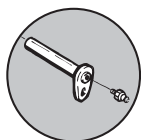
- Clean and then grease the following points (see the LUBRICANTS section for details of the grease) and remove the surplus.

Legend :

AXLE

HUB

JOINT





## C10 - TIGHTNESS OF THE BOLTS FIXING THE AXLE ASSEMBLIES ON THE CHASSIS

---

CHECK

- The tightness of the bolts must be checked at the latest after the first 50 hours of operation, and every 250 hours of operation thereafter.
- The tightening torque for the bolts is 28.5 daN.m  $\pm$  10 %.
- 1 daN = 1 Kg.

## C11 - ARM POSITION SENSORS

---

CHECK

For this operation, fold the arms into transport position.

- Make a translation movement at transport speed
- Raise the arms or extend the telescope
- Move forward
- The lifting platform should switch over to operating speed.



In the event of a malfunction occurring, prevent the lifting platform from being used. Contact your dealer.

## C12 - TILT SENSOR

---

CHECK

Fold the arms for this operation.

- Set the lifting platform in a tilted position greater than the authorised tilt (see: 2 - DESCRIPTION: SPECIFICATIONS).
- The movements for extending the telescope and raising the arms should be blocked (the tilt indicator light is lit in the basket and the buzzer is activated intermittently in the basket).



In the event of a malfunction occurring, prevent the lifting platform from being used. Contact your dealer.

## C13 - OVERLOAD SENSORS

---

CHECK

Fold the arms into transport position for this operation.

- Place a higher weight than that indicated in the basket (see: 2 - DESCRIPTION: SPECIFICATIONS).
- The movements for extending the telescope and raising the arms should be blocked (the tilt indicator light is lit in the basket and the buzzer is activated continuously in the basket).



In the event of a malfunction occurring, prevent the lifting platform from being used. Contact your dealer.

## C14 - COOLING CIRCUIT HOSES

---

CHECK



If the cooling circuit hoses are damaged or if coolant leaks, this can cause overheating or severe burns.

- Open the bonnet.
- Visually check the condition of the cooling circuit hoses and the tightening collars. If these are blistered, hardened or cracked, replace them immediately (replace all the cooling circuit hoses and the tightening collars, at least every two years). (Contact your dealer)

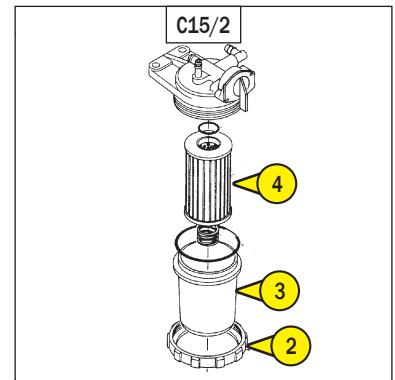
## C15 - FUEL FILTER

CLEAN

- Set the lifting platform on a horizontal surface, with the engine switched off.
- Open the left-hand cowl.
- Close the fuel tap 1 (Fig. C15/1) to the OFF position.
- Carefully clean the exterior of the filter and its holder to prevent dust from entering the system.
- Unscrew the retaining ring 2, remove the container 3 (Fig. C15/2) and clean the interior with a paintbrush impregnated with clean diesel.
- Remove the filter cartridge 4 (Fig. C15/2) and plunge it in diesel to rinse it.
- Refit the assembly.
- Open the fuel tap 1 (Fig. C15/1) to the ON position.
- Bleed the fuel supply circuit (see: 3 - MAINTENANCE: G1 - FUEL SUPPLY CIRCUIT).



If the fuel is contaminated with dust or dirt, the injection pump and the injectors wear more rapidly. To avoid this, regularly clean the fuel filter container.



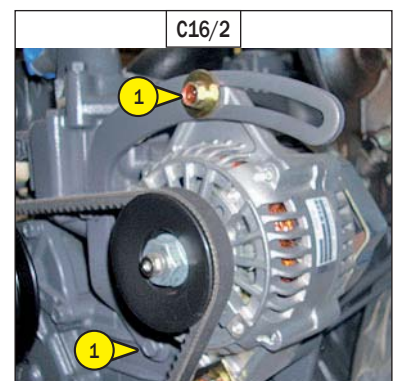
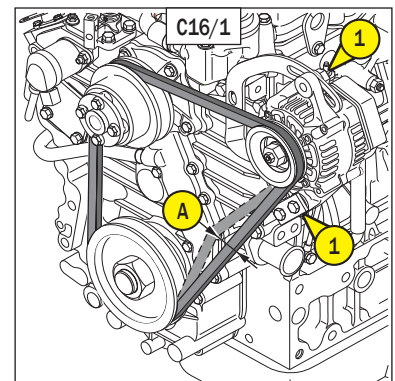
## C16 - ALTERNATOR/FAN/CRANKSHAFT BELT TENSION

ADJUST

- Open the left-hand cowl.
- Check the condition of the belt for signs of wear or cracking and replace, if necessary (see 3 - MAINTENANCE: FILTER ELEMENTS AND BELTS).
- Check the tension between the crankshaft and alternator pulleys.
- Under thumb pressure (98 N), the tension A (Fig. C16/1) should be 7 to 9 mm (Fig. C16/1).
- Adjust, if necessary.
- Loosen the bolts 1 (Fig. C16/2) two or three turns.
- Swivel the alternator assembly to get the required belt tension.
- Retighten the bolts 1 (Fig. C16/1).



If you replace the alternator belt, recheck the belt tension after the first 20 hours of operation.



## D - EVERY 500 HOURS OF OPERATION

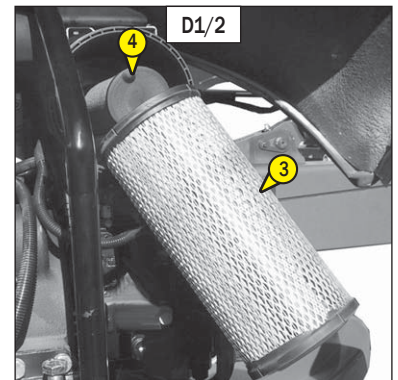
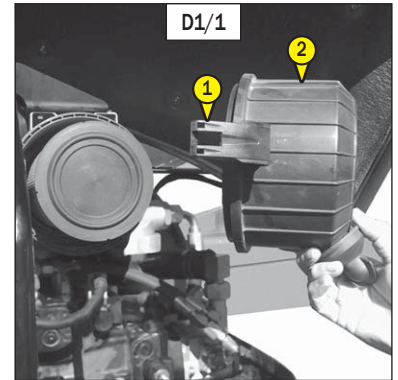
### D1 - DRY AIR FILTER CARTRIDGE

REPLACE

The air used for combustion is purified by a dry air filter. It is therefore forbidden to use the lifting platform with the cartridge removed or damaged.

- Open the left-hand cowl.
- Unclip the clips 1 (Fig. D1/1) and remove the cover 2 (Fig. D1/1).
- Carefully remove the cartridge 3 (Fig. D1/2) to reduce any dust falling as much as possible.
- Leave the safety cartridge in place.
- Carefully clean the following parts with a clean, damp, lint-free cloth.
  - The interior of the filter and the cover.
  - The interior of the filter inlet hose.
  - The seal holders in the filter and the cover.
- Check the condition of the engine connection pipework and its fasteners as well as the connection and the condition of the clogging indicator on the filter.
- Before fitting, check the condition of the new filter cartridge (see: 3 - MAINTENANCE: FILTER ELEMENTS AND BELTS).
- Insert the cartridge in the axis of the filter and push it in by pressing on the circumference and not on the centre.
- Refit the lid, orienting the valve to the rear.

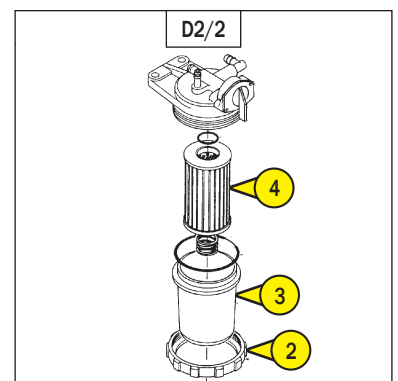
When using the machine in a very dusty atmosphere, see the FILTER ELEMENTS AND BELTS section.



### D2 - FUEL FILTER CARTRIDGE

REPLACE

- Open the left-hand cowl.
- Carefully clean the exterior of the filter and its holder to prevent dust from entering the system.
- Close the fuel tap 1 (Fig. D2/1) to the OFF position.
- Unscrew the retaining ring 2, remove the container 3 (Fig. D2/2) and clean the interior with a paintbrush impregnated with clean diesel.
- Throw away the filter cartridge 4 (Fig. D2/2).
- Reinstall the assembly with a new filter (see 3 - MAINTENANCE: FILTER ELEMENTS AND BELTS section).





### D3 - HYDROSTATIC TRANSMISSION OIL FILTER CARTRIDGE

REPLACE

#### REPLACING THE HYDROSTATIC TRANSMISSION OIL FILTER CARTRIDGE

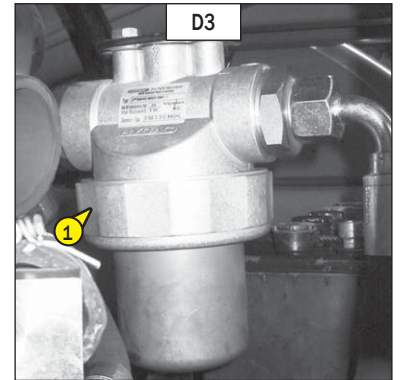
- Switch off the engine.
- Lift the cowl on the engine side.
- Unscrew the filter body 1 (Fig. D3).
- Remove the hydrostatic transmission oil filter cartridge and replace it with a new one.
- Ensure that the cartridge is correctly positioned and refit the cover.



Do not operate the lifting platform without a cartridge; this would immediately cause damage to the hydrostatic pump's hydraulic transmission circuit.

#### CLEANING OUT THE HYDRAULIC CIRCUIT

- Let the engine turn over for 5 minutes without using the lifting platform.



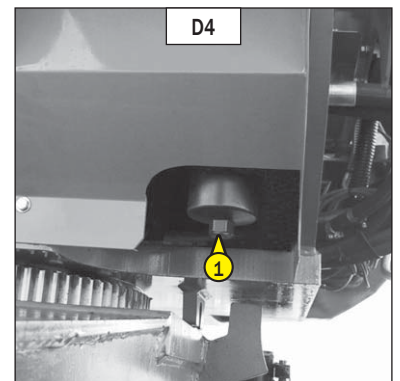
### D4 - AUXILIARY HYDRAULIC OIL FILTER CARTRIDGE

REPLACE

- With the machine stopped and the battery cutout in the OFF position.
  - Unscrew the filter body 1 (Fig. D4).
  - Remove the filter cartridge and replace it with a new one (see "FILTER ELEMENT" section).
- NB: Pay attention to the direction for fitting.
- Refit the filter body 1 (Fig. D4).



Carefully clean the exterior of the filter and its surroundings before performing any work in order to avoid any risk of pollution getting into the hydraulic circuit.



## D5 - HYDRAULIC OIL

### DRAIN - REPLACE

- Set the lifting platform on a horizontal surface in Transport position with the engine switched off.

#### DRAINING THE OIL

- Lay a receptacle under the drain plug 1 (Fig. D5/1) and loosen the collar 2 (Fig. D5/1).
- Remove the drain plug 1 (Fig. D5/1).
- Remove the filling cap 3 (Fig. D5/2) to assist drainage.

#### CLEANING THE STRAINER

- Remove the strainer 5 (Fig. D5/2) by pulling it upwards and clean it with a jet of compressed air.
- Refit the strainer.

#### FILLING WITH OIL



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

- Refit and tighten down the drain plug 1 (Fig. D5/1).
- Fill with hydraulic oil (see the LUBRICANTS section) via the filling hole 4 (Fig. D5/2).
- The oil level should be above the red dot on the dipstick 6 (Fig.D5/3).



Dispose of the drained oil in an environmentally friendly manner.

## D6 - CONDITION OF THE HOSES

### CHECK

- Check the apparent condition (cracking) of the hoses subject to heat stresses and UV; their technical characteristics may have altered (porosities).



#### BEWARE OF LEAKS

Hydraulic oil escaping under high pressure can pierce the skin and cause severe lesions. If you are injured by a jet of oil under pressure, immediately consult a doctor.

If you are in doubt about any leak, do not search with your hand: check with a piece of cardboard while protecting your hands and your body.

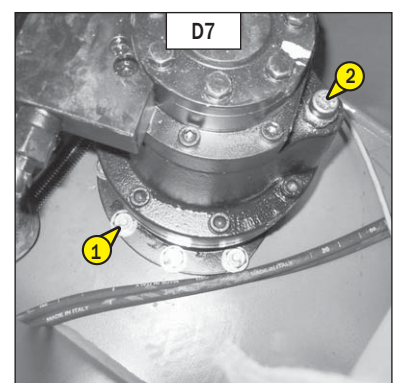
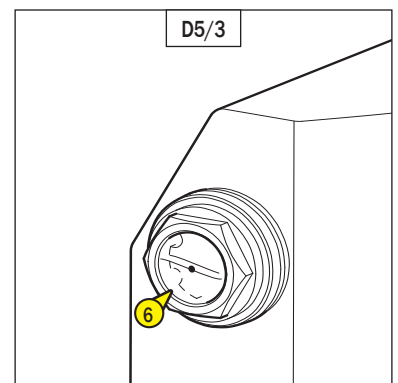
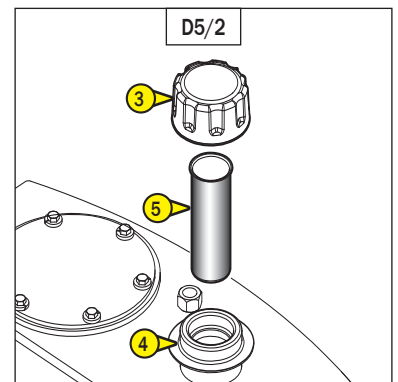
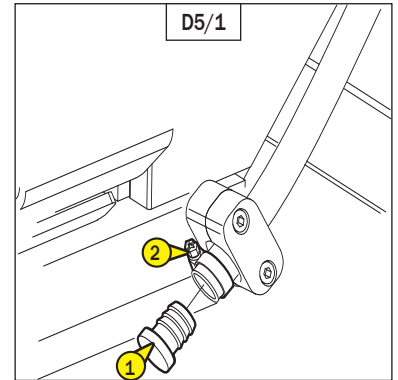
For your safety's sake, replace worn hoses

## D7 - TIGHTENING THE TURRET ROTATION MOTOR'S BOLTS

### CHECK

Set the lifting platform on a horizontal surface with the engine switched off.

- Check that the nine bolts are tight 1 (Fig. D7).
- The tightening torque for the screws is  $8 \text{ daN.m} \pm 10\%$ .
- $1 \text{ daN} = 1 \text{ Kg}$ .

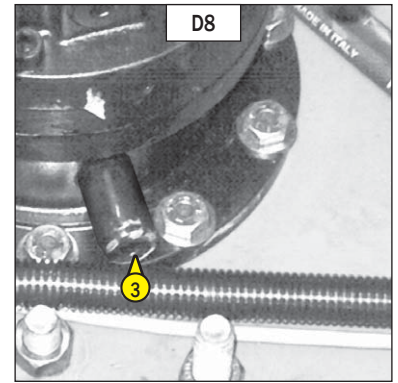


## D8 - TURRET MOTOR REDUCER BRAKE REDUCER

DRAIN - REPLACE

Set the lifting platform on a horizontal surface with the engine switched off.

- Remove the turret's inner cover.
- The motor reducer is presented with the valve unit to the rear.
- Remove the sniffer/filling cap 2 (Fig. D8) to ensure good drainage.
- Note the drain plug 3 located on the right-hand side reducer unit's sole plate (Fig. D8).
- Place a (small) receptacle to catch the oil.
- Unscrew the drain plug.



Dispose of the drained oil in an environmentally friendly manner.

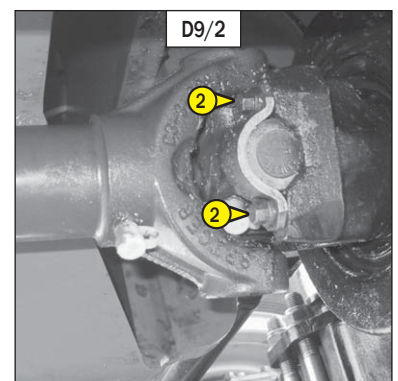
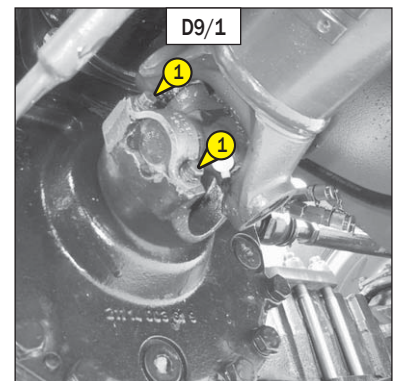
- Use a syringe to fill the reducer via the sniffer/filling hole 2 (Fig. D8). The oil capacity is 1.3 litres and the level is correct when the sniffer is full of oil.
- Refit the sniffer/filling cap 2 (Fig. D8).

## D9 - TIGHTENING THE UNIVERSAL JOINT'S BOLTS

CHECK

Set the lifting platform on a horizontal surface with the engine switched off.

- Check that the eight bolts are tight (four on each end) 1 (Fig. D9/1) and 2 (Fig. D9/2).
- The tightening torque for the screws is 8 daN.m  $\pm$  10%.
- 1 daN = 1 Kg



## D10 - DENSITY OF THE BATTERY ELECTROLYTE

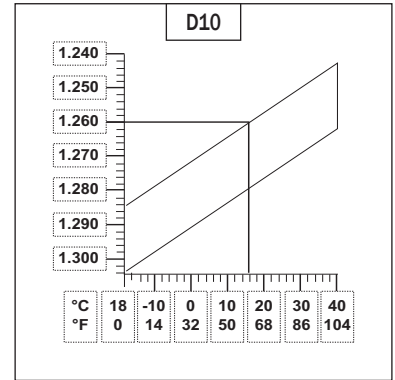
CHECK

The electrolyte's density varies according to the temperature but a minimum level of 1.260 at 16°C must be maintained.

In the hatched section (Fig. D10), the battery is normally charged. Above the hatched section, the battery must be recharged.

The density must not vary by 0.025 unit from one battery element to another.

- Open the battery cover.
- Check the electrolyte density in each battery element with an acidometer.
- Never check after having added distilled water. Recharge the battery and wait 1 hour before checking the battery electrolyte's density.



Manipulating and servicing a battery can be dangerous; take the following precautions:

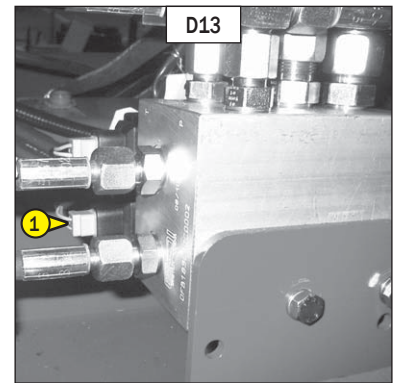


- Wear protective goggles.
- Keep the battery horizontal when manipulating it.
- Never smoke or work close to a naked flame.
- Work in a sufficiently well-ventilated area.
- If some electrolyte splashes onto your skin or in your eyes, rinse the affected area thoroughly with cold water for 15 minutes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

## D11 - TIGHTENING THE BOLTS ON THE TURRET ORIENTATION CROWN GEAR

CHECK

- The tightness of the screws must be checked at the latest after 50 hours of operation. This check must then be repeated every 500 hours of operation.
- The tightening torque for the screws is **27 daN.m ± 10 %**.
- **1 daN = 1 Kg.**



## D12 - BRAKING

CHECK

- Check the braking system by disconnecting the coil 1 (Fig. D12) from the hydraulic unit on the chassis (to access the unit, remove the casing on the left-hand side of the chassis) and make a translation movement.



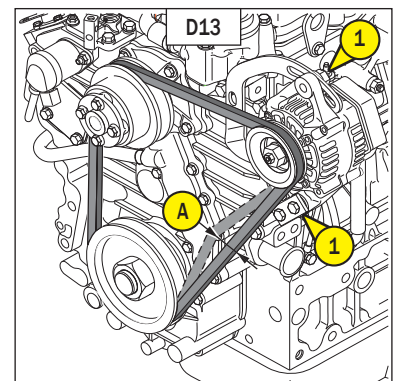
The lifting platform must not move forward.

- After the test, reconnect the coil.

## D13 - ALTERNATOR/FAN/CRANKCASE BELT

REPLACE

- Open the left-hand cowl.
- Loosen the bolts 1 (Fig. D13) two or three turns.
- Swivel the alternator assembly to free the belt and the replace it with a new one (see: 3 - MAINTENANCE: FILTER ELEMENTS AND BELTS).
- Adjust the tension between the crankcase and alternator pulleys.
- Under thumb pressure (98 N), the tension should be 7 to 9 mm (A, Fig. D13)
- Retighten the bolts 1 (Fig. D13).



Recheck the belt tension after the first 20 hours of operation.

## D14 - IC ENGINE OIL

DRAIN - REPLACE

## D15 - IC ENGINE OIL FILTER

REPLACE

- Set the lifting platform on a horizontal surface, leave the engine running at tickover speed for a few moments and then switch it off.

### DRAINING THE OIL

- Open the left-hand cover.
- Lay a receptacle on the ground
- Remove the filling cap 2 (Fig. D15/2) to ensure good drainage.
- When draining is complete, screw the plug back in



Dispose of the drained oil in an environmentally friendly manner.

### REPLACING THE FILTER

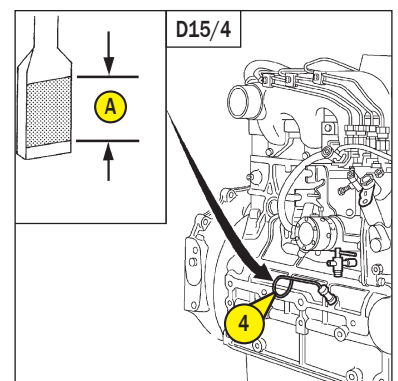
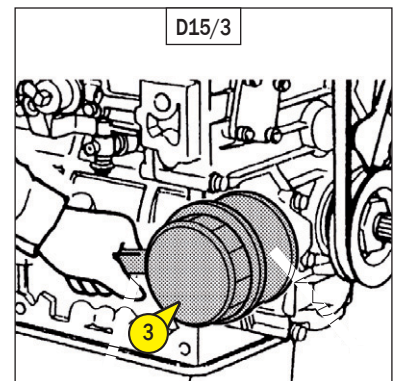
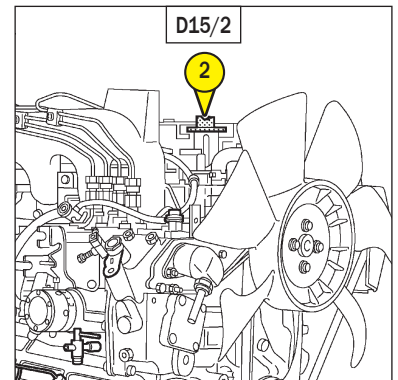
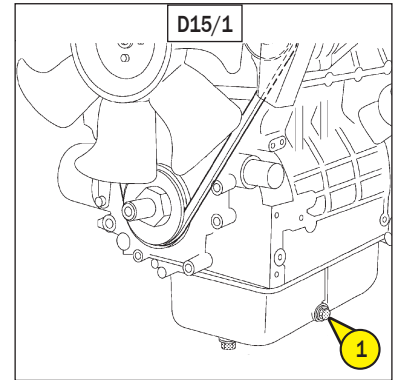
- Remove the engine oil filter 3 (Fig. D15/3) and throw it away, together with its seal.
- Clean the filter support with a clean, lint-free cloth.
- Light oil the new seal.
- Refit the oil filter on its support.



Only tighten the oil filter by hand and then lock it with a quarter turn from a filter wrench.

### REFILLING WITH OIL

- Ensure that the plug 1 (Fig. D15/1) is in place and tight.
- Fill up with oil (see the LUBRICANTS section) via the filling hole 2 (Fig. D15/2).
- Wait a few moments for the oil to flow into the sump.
- Check the level with the dipstick 4 (Fig. D15/4).
- Start the engine and let it run for a few moments.
- Check for any leaks from the drain plug and the engine oil filter.
- Stop the engine, wait a few moments and check that the level is between the two upper notches on the dipstick A (Fig. D15/4).
- Top up, if necessary.





## E - EVERY 1000 HOURS OF OPERATION

### E1 - FUEL TANK

DRAIN - CLEAN



Never smoke or approach the machine with a naked flame during this operation.

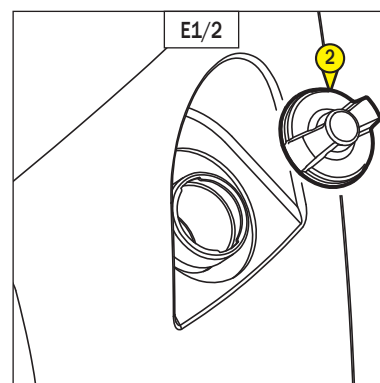
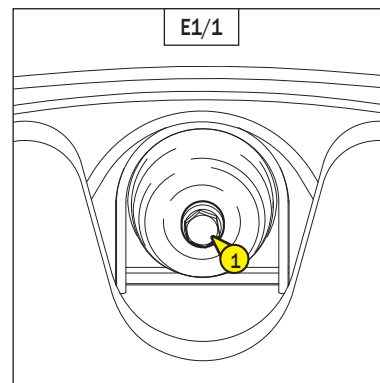
Set the lifting platform on a horizontal surface, rotate the machine 90° (so as to avoid having the drain plug over the chassis) and switch off the engine.

- Check visually and by touch the parts likely to have leaks in the fuel circuit and the tank.
- In the even of a leak, contact your dealer.



Never attempt to make a weld or any other operation by yourself; this could cause an explosion or a fire.

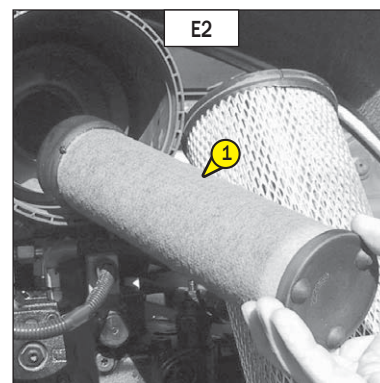
- Lay a receptacle under the drain plug 1 (Fig. E1/1) and unscrew the plug.
- Let the diesel flow out and rinse with ten litres of clean diesel poured in through the filling hole 2 (Fig. E1/2).
- Refit and tighten down the drain plug 1 (Fig. E1/1) (tightening torque 3 to 4 daN/m).
- Fill the fuel tank with clean diesel, filtered through a strainer or a clean lint-free cloth and refit the filling cap (Fig. E1/2).



### E2 - DRY AIR FILTER SAFETY CARTRIDGE

REPLACE

- Open the left-hand cover.
- Remove the dry air filter cartridge (see § D1).
- Remove the dry air filter safety cartridge 1 (Fig. E2) and replace it with a new one.
- Refit the assembly (see § D1).



## E3 - FRONT AND REAR AXLE DIFFERENTIAL OIL

### DRAIN - REPLACE

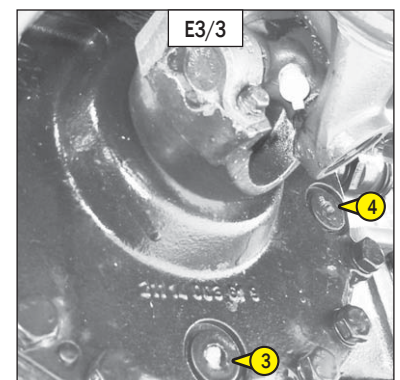
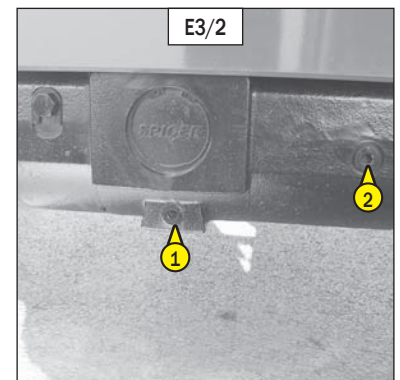
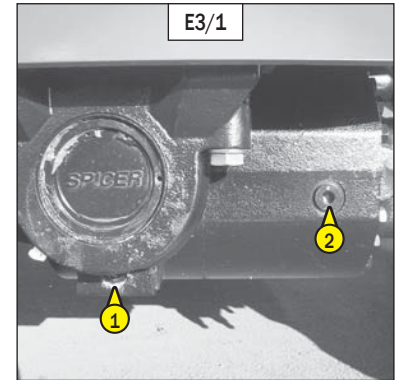
Set the lifting platform on a horizontal surface with the engine switched off and the differential oil still warm.

- Lay a receptacle under the drain plugs 1 (Fig. E3/1: front axle) (Fig. E3/2: rear axle).
- Remove the filling cap 2 (Fig. E3/1: front axle) (Fig. E3/2: rear axle) to ensure good drainage.
- Lay a receptacle under the drain plug 3 and remove the level-checking/filling cap 4 (Fig. E3/3: differential).



Dispose of the drained oil in an environmentally friendly manner.

- Refit and tighten down the drain plugs 1 (Fig. E3/1: front axle (tightening torque 8 daNm)) (Fig. E3/2: rear axle (Tightening torque 8 daNm)) and (Fig. E3/3: differential (tightening torque 8 daNm))
- Fill with oil (See the LUBRICANTS section) via the filling hole 2 (Fig. E3/1: front axle) (Fig. E3/2: rear axle) and 4 (Fig. E3/3: differential).
- The level is correct when the oil is flush with the opening.
- Check for any leaks from the drain plugs.
- Refit and tighten the level checking/filling cap 2 (Fig. E3/1: front axle) (Fig. E3/2: rear axle) and 4 (Fig. E3/3: differential) (tightening torque 6 daNm).



## E4 - FRONT AND REAR WHEEL REDUCER OIL

### DRAIN - REPLACE

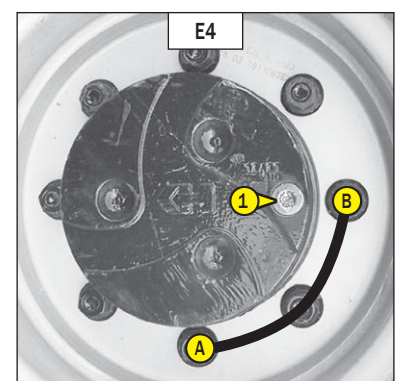
Set the lifting platform on a horizontal surface with the engine switched off and the oil in the reducers still warm.

- Drain and replace the oil in each of the front wheel reducers.
- Set the drain plug 1 (Fig. E4) in position A.
- Place a receptacle under the drain plug and unscrew the plug.
- Let the oil drain out completely.



Dispose of the drained oil in an environmentally friendly manner.

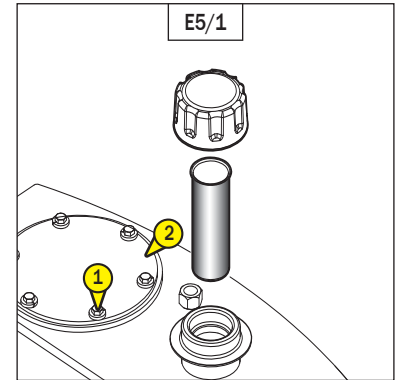
- Set the drain hole in position B, i.e. the level-checking/filling position.
- Fill with oil (See the LUBRICANTS section) through the level-checking/filling hole 1 (Fig. E4).
- The level is correct when the oil is flush with the opening.
- Re-insert the drain plug 1 (Fig. E4) and tighten it down (tightening torque 8 daNm).
- Proceed in the same way for each of the rear wheel reducers.



## E5 - HYDRAULIC CIRCUIT STRAINER

CLEAN

- Drain the oil (see § D15)
- Unscrew the six fixing screws 1 (Fig. E5/1) from the locking plate 2 (Fig. E5/1).
- Unscrew the strainer 3 (Fig. E5/2) from the container and clean it with a jet of compressed air.
- Screw the strainer back into the container and refit the locking plate 2 (Fig. E5/1).
- Fill with hydraulic oil (see § D6) (see the "LUBRICANTS" section).



## E6 - CONDITION OF THE CYLINDERS (LEAKS, RODS)

CHECK

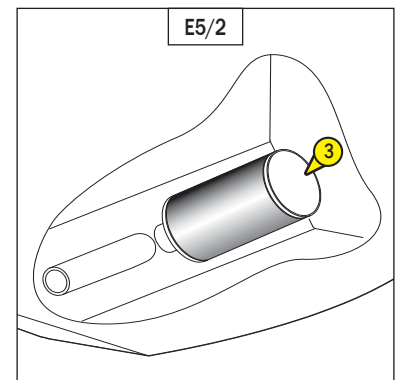
- Check the condition of the cylinders. There must be no:
  - Hydraulic leaks from the seals and the valve blocks
  - Impacts on the cylinder rods

## E7 - CONDITION OF THE CABLE BUNDLES AND THE CABLES THEMSELVES

CHECK

- Inspect the following sectors, check the condition of the bundles: no deterioration and nothing loose.

- Base control console,
- Hydraulic block,
- Battery,
- Intermediate joint,
- Basket control console.



## E8 - ENGINE SILENTBLOCKS (\*)

CHECK

## E9 - ENGINE SPEEDS (\*)

CHECK

## E10 - HYDROSTATIC TRANSMISSION CIRCUIT PRESSURES (\*)

CHECK

## E11 - START OF HYDROSTATIC TRANSMISSION CONTROL (\*)

CHECK - ADJUST

## E12 - MOVEMENT SPEEDS (\*)

CHECK

\*(Contact your dealer)



# F - EVERY 2000 HOURS OF OPERATION

Perform the operations described above as well as the following operations.

## F1 - COOLANT

### DRAIN - REPLACE

This series of operations must only be performed as necessary or once a year, on the approach of winter.

Set the lifting platform on a horizontal surface with the engine switched off and cold.

#### DRAINING THE FLUID

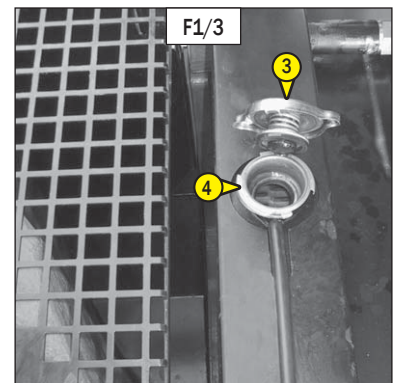
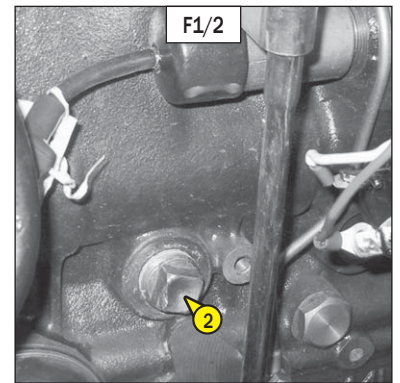
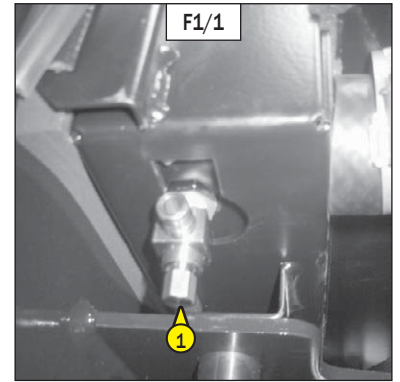
- Open the left-hand cover.
- Unscrew the radiator bleed screw 1 (Fig. F1/1).
- Loosen the engine block drain plug 2 (Fig. F1/2).
- Remove the radiator filling cap 3 (Fig. F1/3).
- Let the cooling circuit drain completely, ensuring that the holes are not blocked.
- Check the condition of the hoses and the fastenings and change the hoses, if necessary.
- Rinse out the circuit with clean water, using a cleaning product, if necessary.

#### FILLING WITH FLUID

- Retighten the bleed screw 1 (Fig. F1/1).
- Retighten the drain plug 2 (Fig. F1/2) (Tightening torque 0.8 to 1.2 daN/m).
- Prepare the coolant (Fig. F1/4).
- Slowly fill the cooling circuit completely via the filling hole 4 (Fig. F1/3).
- Turn the engine over at tickover speed for a few minutes.
- Check for any leaks.
- Check the level and top up, if necessary.
- Refit the filling cap 3 (Fig. F1/3).



The engine does not contain any anti-corrosion element and must be filled every year with a mixture containing at least 25% ethyl glycol based antifreeze.



F1/4	
FREEZING POINT BASED ON % OF ANTIFREEZE	
ANTIFREEZE 5110 NF	TEMPERATURE
30 %	-16° C
33 %	-18° C
40 %	-25° C
50 %	-37° C

Perform the operations described above as well as the following operations.

**F2 - VALVE PLAY (\*)**

CHECK - ADJUST

**F3 - WATER PUMP AND THERMOSTAT (\*)**

CHECK

**F4 - ALTERNATOR AND STARTER (\*)**

CHECK

**F5 - HYDRAULIC OIL RESERVOIR (\*)**

CLEAN

**F6 - HYDRAULIC CIRCUIT PRESSURES (\*)**

CHECK

**F7 - HYDRAULIC CIRCUIT OUTPUTS (\*)**

CHECK

**F8 - FUEL INJECTION PRESSURE (\*)**

CHECK

**F9 - INJECTION PUMP (\*)**

CHECK

**F10 - INJECTORS**

(CONTACT YOUR DEALER)

**F11 - RADIATOR (\*)**

CHECK - DESCALE

**F12 - TURBOCOMPRESSOR (\*)**

CHECK

\*(Contact your dealer)

# G - OCCASIONAL MAINTENANCE

## G1 - FUEL FEED CIRCUIT

BLEED

This series of operations must only be performed under the following circumstances:

- A component in the supply circuit replaced or drained.
- Ensure that there is sufficient fuel in the tank; turn the ignition key to notch 2 to make electrical contact.
- Open the left-hand cover.

### BLEEDING THE FUEL FILTER

- Unscrew the bleeding screw **1** (Fig. G1/1).
- Open tap **2** (Fig. G1/2).
- Press the priming bulb **3** (Fig. G1/3) until diesel flows, bubble-free, from the bleeding screw.
- Retighten the bleeding screw **1** (Fig. G1/1) while the diesel fuel is still flowing.

### BLEEDING THE INJECTORS

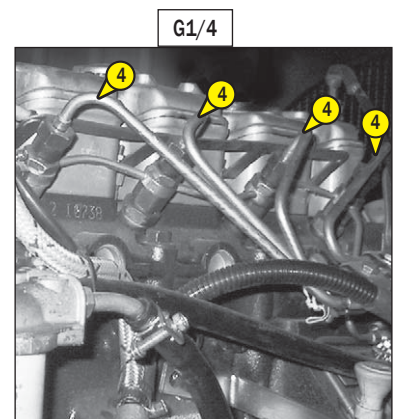
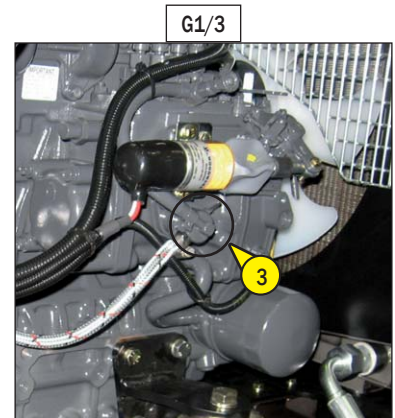
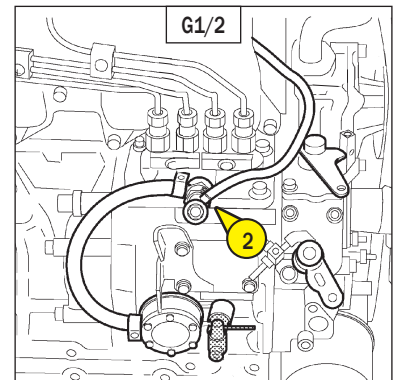
- Loosen the pipe connections **3** (Fig. G1/4) on one of the injectors.
- Turn the starter until diesel flows, without bubbles, from the pipe connections **4** (Fig. G1/4).
- Retighten the connections while the diesel fuel is still flowing.



**Do not turn the starter continuously for more than 30 seconds and let it cool down for 2 minutes between failed attempts.**

- The engine is now ready to start.
- Run the engine at tickover speed for 5 minutes immediately after bleeding the fuel supply circuit to ensure that the injection pump is completely purged.

NB: If the engine runs correctly for a short time and then stops or runs erratically, check for any leaks in the low pressure circuit. If in any doubt, contact your dealer.



## G2 - WHEEL

CHANGE

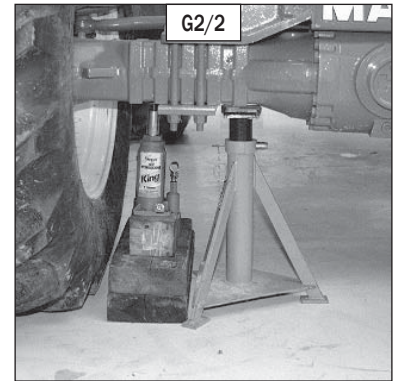
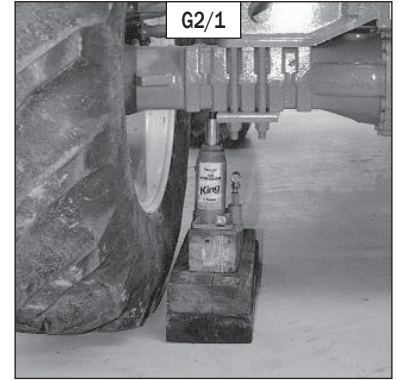
Or this operation, we recommend that you use the MANITOU hydraulic jack, reference 505507, and the MANITOU safety stand, reference 554772.

- Stop the lifting platform, if possible, on a firm, horizontal surface.
- Proceed to stop the lifting platform (see: 1 – SAFETY INSTRUCTIONS AND ADVICE: INSTRUCTIONS FOR DRIVING WHEN UNLADEN AND LADEN).
- Wedge the lifting platform in both directions on the axle opposite the wheel to be changed.
- Unscrew the wheel nuts on the wheel to be changed until they can be removed without much effort.
- Place the jack under the axle carrier, as close as possible to the wheel and adjust the jack (Fig. G2/1).
- Lift the wheel until it separates slightly from the ground and set the safety stand under the axle (Fig. G2/2).



The weight of one wheel is 210Kg.

- Unscrew the wheel nuts completely and remove them.
- Release the wheel by moving it to and fro and roll it to one side.
- Slip the new wheel onto the hub.
- Screw on the wheel nuts by hand; grease them, if necessary.
- Remove the safety stand and lower the lifting platform by means of the jack.
- Tighten the wheel nuts with a torque wrench (see: 3 - MAINTENANCE: B - EVERY 250 HOURS OF OPERATION for the tightening torque).



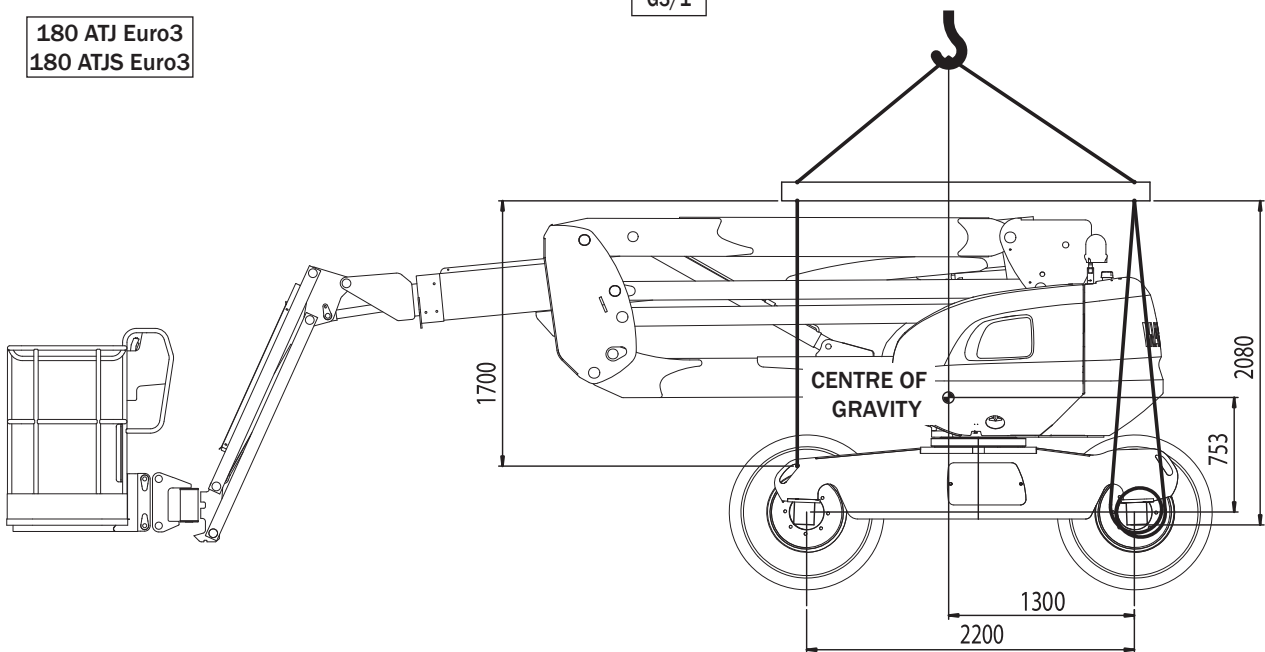
For lifting platform **180 ATJ**, see Fig. G3/1

For lifting platform **160 ATJ Plus**, see Fig. G3/2

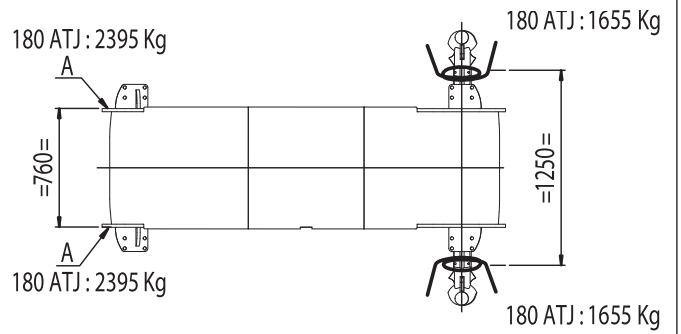
- Note the position of the lifting platform's centre of gravity for lifting it.
- Place hooks on the anchoring points A provided for this purpose.
- Strap the end of the front axle carriers with flexible straps.

180 ATJ Euro3  
180 ATJS Euro3

G3/1



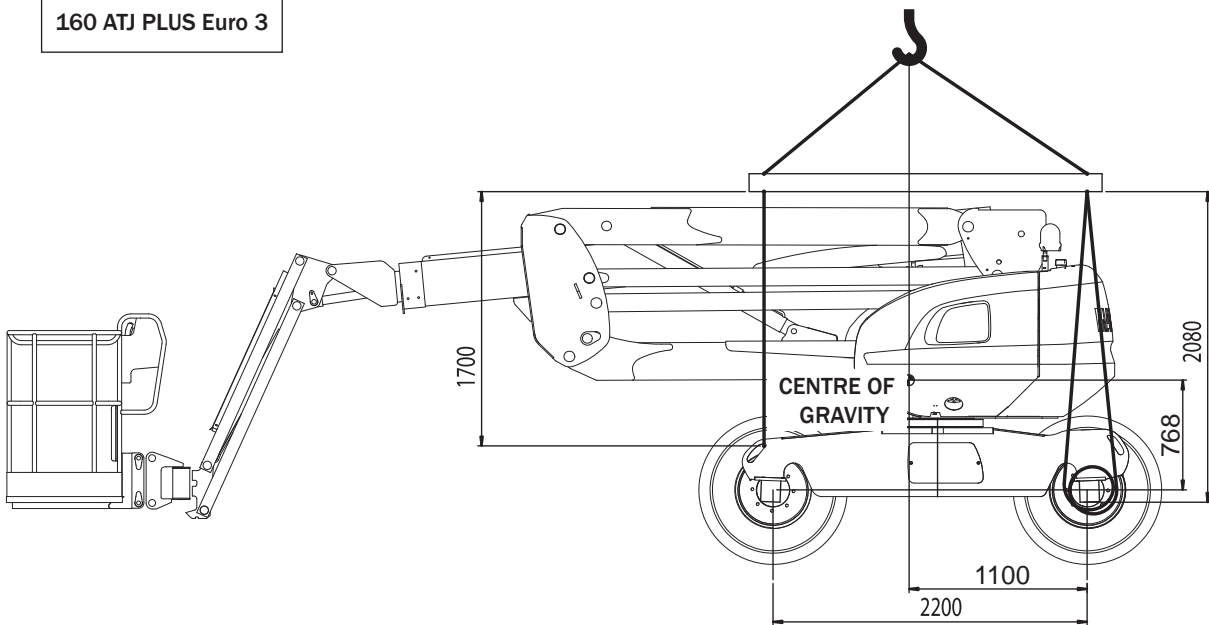
**LOAD ON THE WHEELS IN TRANSPORT POSITION**



**TOTAL WEIGHT OF LIFTING PLATFORM: -180 ATJ EURO 3: 8090 Kg  
- 180 ATJS EURO 3: 7820 Kg**

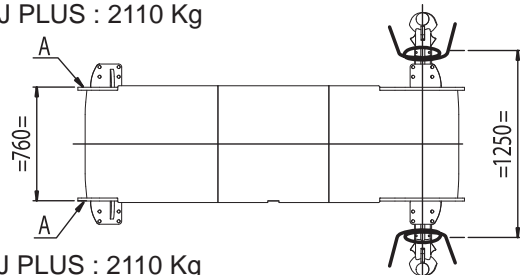
160 ATJ PLUS Euro 3

G3/2



**LOAD ON THE WHEELS IN TRANSPORT POSITION**

160 ATJ PLUS : 2110 Kg      160 ATJ PLUS : 1940 Kg



160 ATJ PLUS : 2110 Kg

160 ATJ PLUS : 1940 Kg

**TOTAL WEIGHT OF LIFTING PLATFORM: : 8100 Kg**

## G4 - LIFTING PLATFORM ON A TRUCK BED

TRANSPORT

- See Section 2: LOADING / UNLOADING THE LIFTING PLATFORM.

## G5 - FREEWHEELING (160 ATJ PLUS EURO 3)

ACTIVE

In the event that the lifting platform must be towed, follow the instructions below.



The lifting platform may only be towed a short distance and necessarily by a vehicle with significant braking power in order to be able to hold it and with a tow bar fitted between the two vehicles.

1 - Wedging the lifting platform in place.

2 - Hydrostatic declutching.



Warning: Take the necessary precautions before conducting this operation because the machine will no longer have any brakes.

- Lift the bonnet.

- Screw the HP restrictors 1 (Fig. G5/1) on the hydrostatic pump down to their sticking point + 1 turn and a half (No. 13 spanner and No. 6 hex spanner).

3 - Mechanical declutching on the rear axle

- Unscrew bolt 1 (Fig. G5/2) without removing it.

- Remove cotter pin 2 (Fig. G5/2).

- Screw down bolt 1 (Fig. G5/2).

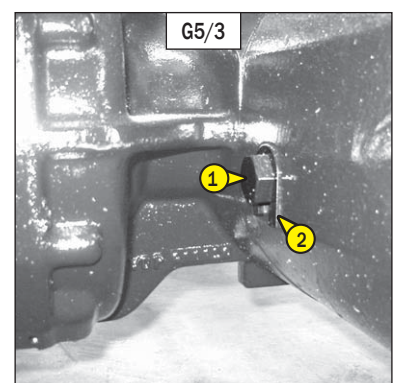
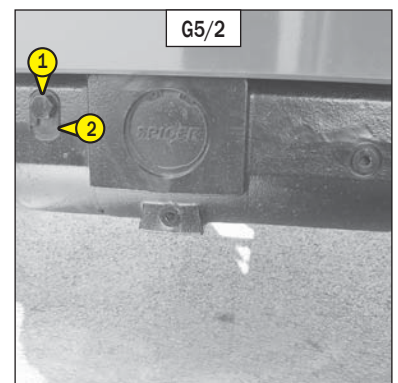
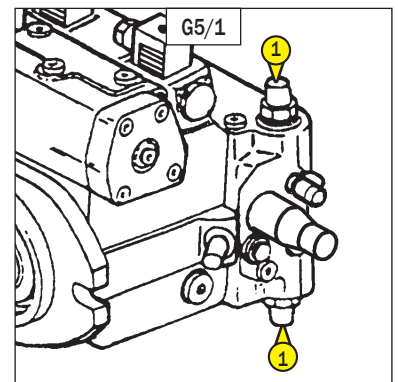
- Unscrew bolt 1 (Fig. G5/3) without removing it.

- Remove cotter pin 2 (Fig. G5/3).

- Screw down bolt 1 (Fig. G5/3).



Warning: after this operation, remember to remove the mechanical brake release.





In the event that the lifting platform must be towed, follow the instructions below.



The lifting platform may only be towed a short distance and necessarily by a vehicle with significant braking power in order to be able to hold it and with a tow bar fitted between the two vehicles.

- 1 - Wedging the lifting platform in place.
- 2 - Hydrostatic declutching.

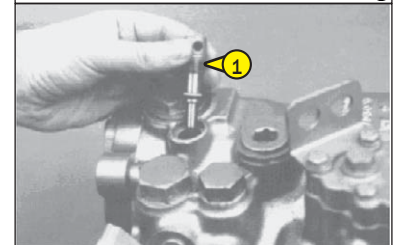
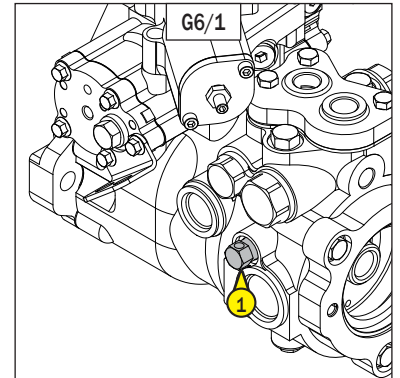


Warning: Take the necessary precautions before conducting this operation because the machine will no longer have any brakes.

- Lift the bonnet.
- Unscrew the by-pass valve 1 (Fig. G6/1, G6/2) on the hydrostatic pump with two turns.

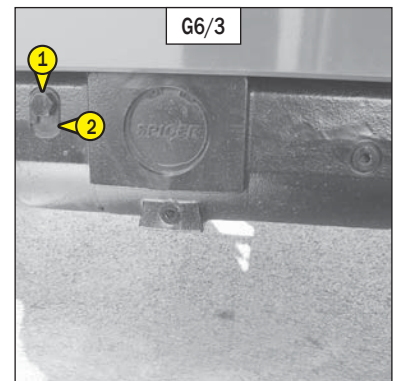


Do not loosen by more than two turns to open the valves. The valve's tightening torque is 9.5-14Nm. The components may be damaged if the tightening torque is too high on closing. The by-pass valve must operate at low speeds for short periods. As a general rule, the towing speed for vehicle applications must be less than 10% of the nominal operating speed.



- 3 - Mechanical declutching on the rear axle

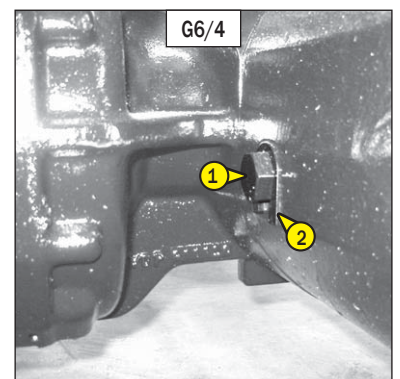
- Unscrew bolt 1 (Fig. G6/3) without removing it.
- Remove cotter pin 2 (Fig. G6/3).
- Screw down bolt 1 (Fig. G6/3).



- Unscrew bolt 1 (Fig. G6/4) without removing it.
- Remove cotter pin 2 (Fig. G6/4).
- Screw down bolt 1 (Fig. G6/4).



Warning: after this operation, remember to remove the mechanical brake release.

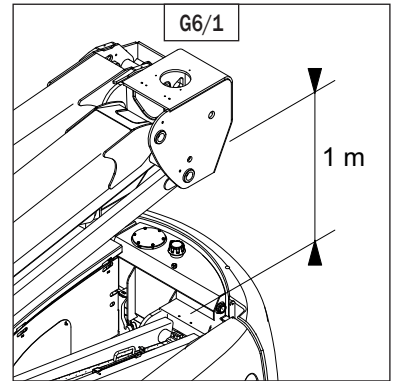


## G6 - MAINTENANCE STAND

USE

If you have to make repairs to the arms, the turret, the engine, etc.  
Follow the instructions below:

- From the base console, order the lower arms to rise until the upper joint is 1 m above the counterweight (Fig. G6/1).

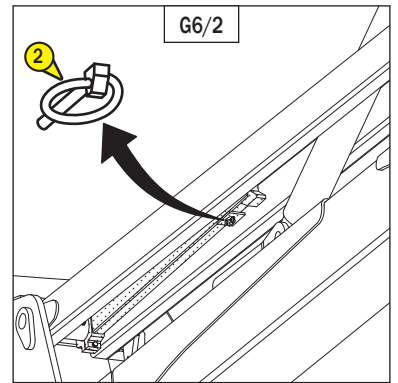


### MACHINES WITHOUT MAINTENANCE STAND

- Place a sling connected to a hoist on the upper joint 1 (Fig. G6/1).
- From the base console, order the lower arms to lower until the belt is taut: then immediately release the controls.
- Switch off the engine and cut the power to the platform using the battery cut-out.
- Make the necessary repairs....

### MACHINES WITH MAINTENANCE STAND

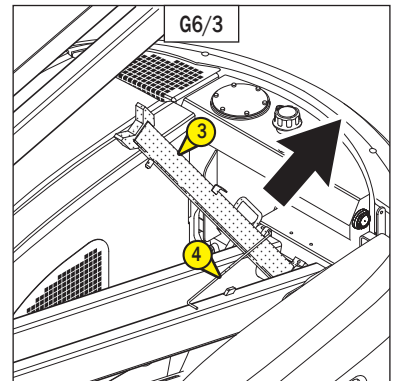
- Remove the locking pin 2 (Fig. G6/2).
- Climb onto the back part of the chassis (beside the counter-weight), remove the maintenance stand 3 (Fig. G6/3) manually and insert the holding bracket 4 (Fig. G6/3); take care to lock this (Fig. G6/4).
- From the base console, order the lower arms to lower until the upper joint is in contact with the maintenance stand (Fig. G6/4 and G6/5): then immediately release the controls.
- Switch off the engine and cut the power to the platform using the battery cut-out.
- Make the necessary repairs...



After these operations, follow the instructions below:

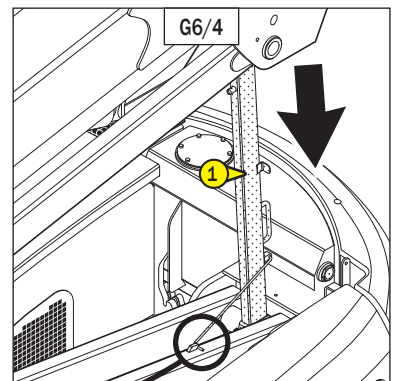
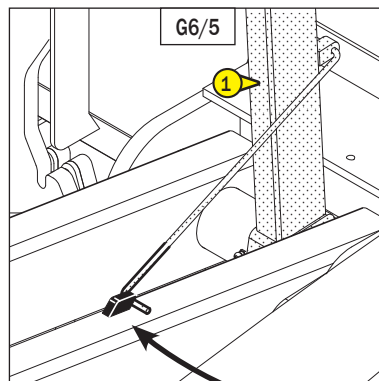
### MACHINES WITHOUT MAINTENANCE STAND

- From the base console, order the lower arms to rise until the belt is loose: release the controls.
- Remove the sling from the upper joint, put the lifting platform in Transport position and switch off the engine.



### MACHINES WITH MAINTENANCE STAND

- From the base console, order the lower arms to rise by 20cm: release the controls.
- Climb onto the chassis, remove the maintenance stand retaining bracket and then lower it (Fig. G6/3).
- Put the lifting platform in Transport position and switch off the engine.



# ***4 - ELECTRICITY***



# FUSES

## DESCRIPTION OF THE FUSES AND THEIR REPLACEMENT

The fuses are located in the connection box (Fig. A1) fixed to the turret inside the base control box.



To access the fuses, open the cabinet door 1 (Fig. A2) and remove the hatch 2 (Fig. A2).

Unlock the two toggle clips 1 (Fig. A1).

Release the guard 3 (Fig. A2) upwards.

Examine the defective fuses (Fig. A3 - A4 - A5):

F1: Emergency pump power supply	7,5 Amps
F2: Base power supply	20 Amps
F3: Base power supply	20 Amps
F4: Basket power supply	20 Amps
F5: "Plus" after ignition power supply	5 Amps
F6: BRC box power supply	30 Amps
F7: Preheating power supply	60 Amps
F8: Emergency pump power supply (power)	250 Amps

**When one of the fuses is blown, one of the four LEDs lights up (Fig. A3):**

- Fuse status LED, emergency pump 1
- Status of one of the fuses, base power supply 2
- Fuse status LED, basket power supply 3
- Fuse status LED, "Plus" after ignition 4

