404602-E

ANDERSON

Self-Propelled Smart-Mix Mixer

M-600 et M-800

User's manual ORIGINAL -

2018

1 - THE PURPOSE OF THIS MANUAL

This user manual contains all of the practical information you will need to safely and correctly operate, tune and maintain your machine.

It has been written for the AUTOSPIRE range - please refer to the sections which deal directly with your machine.

Some of the illustrations used in this user manual may be based on machine prototypes. Standard production models may differ slightly with regards to certain details.

PLEASE PAY CLOSE ATTENTION TO ALL OF THE INSTRUCTIONS PROVIDED IN ORDER TO OBTAIN THE BEST POSSIBLE LEVELS OF PERFORMANCE FROM YOUR MACHINE.
PLEASE KEEP THIS USER MANUAL IN A SAFE PLACE TO CONSULT WHEN REQUIRED. PLEASE ENSURE IT IS PASSED ON TO ANY OTHER USER, INCLUDING IN THE EVENT OF THE MACHINE BEING RE-SOLD.

Level of information :

WARNING
This warning symbol identifies important messages to pay close attention to from a security point of view. When you see this symbol, please be aware of the potential risk of damage, carefully read the message which follows and notify any other users.

IMPORTANT
Information relating to the risk of your machine deteriorating, with potential future consequences for your safety.

NOTE
Additional information.

Please retain this user manual in a safe, nearby location at all times in order to be able to use it at a later stage (in the cabin of the machine, for example).
Please ensure that it is passed on to any other user, including in the event of the machine being re-sold or rented out.

Store the user manual in the location provided in the cabin of the machine (the glove compartment behind the seat).

2 - STEPS TO FOLLOW IN THE EVEN OF AN ACCIDENT

In the event of any accidents or in the event of your machine developing a fault, please contact your retailer **LUCAS G.**

They will then contact our after-sales service, which will include sending us a warranty request in accordance with our terms and conditions.
In order to avoid any confusion, you will be asked to include the serial number of your machine on your parts order. This number can be found on the manufacturer's plate.

NOTE : Any spare parts that have been disassembled will not be covered by the warranty. This also applies to any elements on which the seal has been broken.

3 - CONTENTS

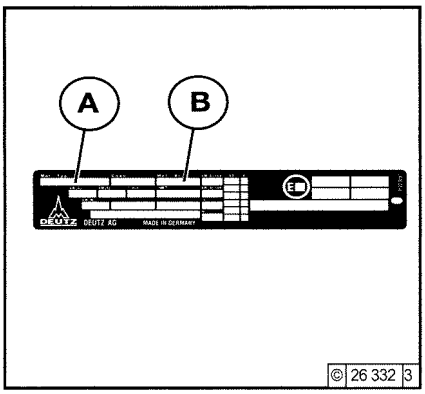
4- MACHINE IDENTIFICATION

This machine is identified by a "MANUFACTURER" plate. It can be found on the right hand-side of the machine. You may write the characteristics of your machine on it.

Plate and marking on the front section, at the right of the machine's chassis beneath the lateral casing.

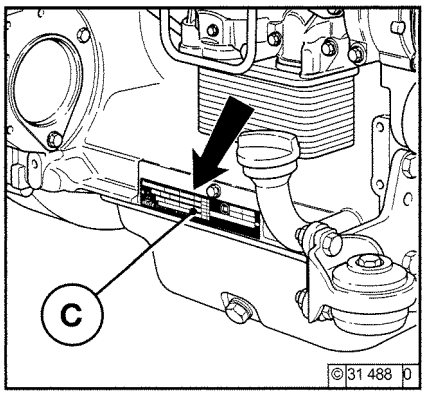
DO NOT REMOVE THE PLATES ATTACHED TO YOUR MACHINE

Motorist name plate



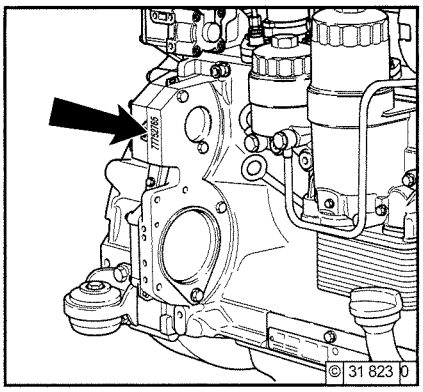
Construction type **A**, the engine number **B** and the power data are stamped onto the name plate.

Name plate space



The name plate **C** is attached to the crankshaft housing.

Engine number



The engine number is stamped onto the crankshaft housing (arrow) and the name plate.

NOTE : Users will find these numbers useful when ordering spare parts (removed), seeking information from the manufacturer (or retailer) or when repairing or re-selling the machine.

5 - CONDITIONS OF USE

The AUTOSPIRE is a motorised mixer/front-end loader designed to be used to feed livestock. It is used::

. To store silage, supplements and all types of bales of hay, straw and wrapped bales,
. To load these different products,
. To mix and, where necessary, to cut these different products,
. To transport them towards the site for dispensing loaded products,
. To distribute the loaded products.

IMPORTANT
Using the AUTOSPIRE for purposes other than feeding livestock is strictly prohibited.

5.1 OPERATOR QUALIFICATION

Only qualified personnel having been granted the appropriate authorisation by the relevant manager within the company may use the machine.
This authorisation will be given in writing by the relevant manager within the company using the machine. Operators must have it with them at all times.
The machine must only be used, serviced and repaired by personnel with the requisite knowledge of the machine, its specific characteristics and its corresponding safety operating modes.
Prior to using your machine, please ensure you have familiarised yourself with the controls. This will enable you to use the machine correctly.
It will be too late to do this once you have started using the machine.

IMPORTANT
From experience, we know that certain contraindications with regards to using the machine can arise. This type of predictable unconventional use, which is briefly summarised below, is strictly prohibited.

- Predictable, unconventional use which arises as a result of ordinary negligence but which does not arise as a result of a willingness to use the equipment in an incorrect manner.
- A reflex reaction on the part of an operator in the event of a fault or defect developing, or an accident occurring while the machine is being used.
- Behaviour resulting from the application of the "law of the least effort" while carrying out a particular task.
- The predictable behaviour of certain groups of people, such as: apprentices, teenagers, people with disabilities, interns tempted to drive the machine, operators tempted to use the machine as a part of a bet or competition, based on personal experience.
- High-risk behaviour, including using the machine under the influence of alcohol, medication incompatible with the use of mobile machinery or mind-altering substances, in accordance with the penal code.

The equipment manager must take these criteria into account when evaluating an individual's suitability for operating a machine.

5.2. WORK STATION DEFINITIONS

The driver's cabin has been exclusively designed for one individual.

You must never leave the driver's cabin while the AUTOSPIRE is switched on.

Individuals must never operate outside of clearly-defined work stations.

In order to access work stations, please use the modes of access provided (ladder, footboard, etc.).

5.3. CONDITIONS IN THE SURROUNDING AREA

Adapt your speed and your driving method to the surfaces, roads and tracks in question. Please remain cautious and vigilant at all times.
At all times, particularly when travelling on uneven or sloped surfaces, drive the machine at a reduced speed. Particular care must be taken when turning corners - please avoid any sudden changes in direction.
Avoid braking or starting suddenly when ascending or descending a slope.

IMPORTANT
Either operate your machine during daylight hours or ensure that appropriate artificial lighting is used.

5.4. MANUFACTURER AND USER RESPONSIBILITY

You must respect all of the recommendations relating to installation, use, tuning, maintenance and repairs contained within this user manual.

You must only use spare parts and accessories that are compliant with manufacturer recommendations.

You must never make modifications to the machine or its accessories yourself or have another person make any modifications (to the machine's mechanical, electrical, hydraulic or pneumatic properties), without first obtaining written approval from the manufacturer.

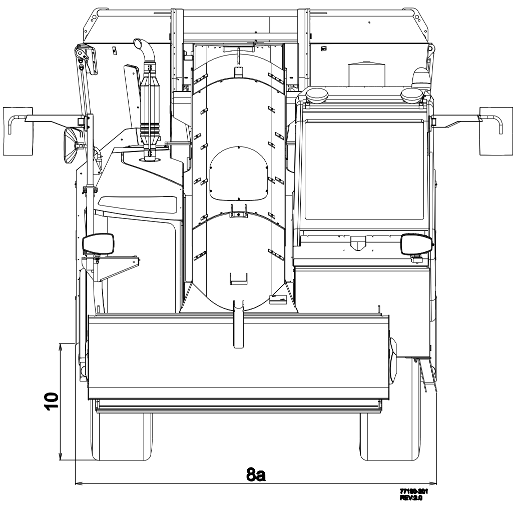
Failure to respect these regulations could result in your machine becoming dangerous. The manufacturer may in no way be considered liable in the event of any damage or injury.

6 - TECHNICAL PROPERTIES

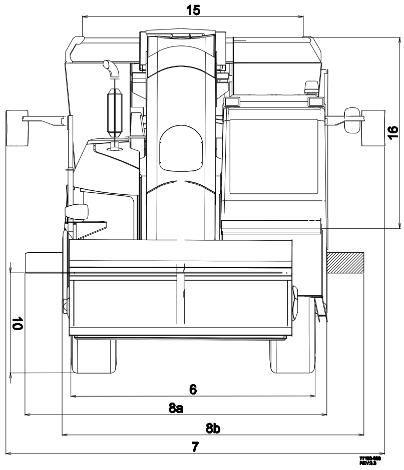
6.1. MECHANICAL, ELECTRICAL, HYDRAULIC AND PNEUMATIC PROPERTIES

6.1.1. Mass and dimensions

Version A

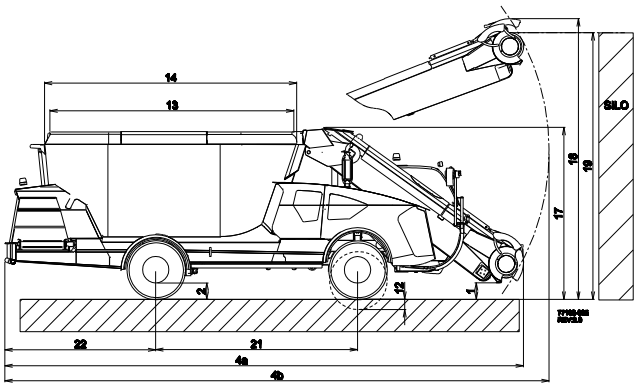


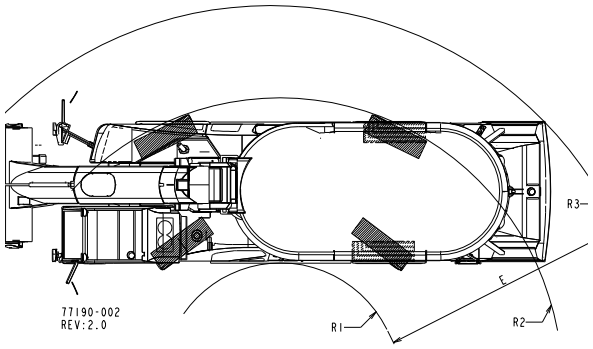
Version B



	AUTOSPIRE TYPE				
Reference					Version

GVWR				
Net weight				
Volume (m3)				
Power (HP)				





AUTOSPIRE TYPE										
VARIATIONS										
2 guide wheels										
4 guide wheels										

6.1.2. Engine properties depending on the Autospire model, type, variation and version

	12 to 14m3 models 4 cylinders Type variations in versions	16 to 18m3 models 6 cylinders Type variations in versions	20 to 24m3 models 6 cylinders Type variations in versions
BRAND	DEUTZ	DEUTZ	DEUTZ
TYPE	TCD 4.1 L4	TCD 6.1 L6	TCD 6.1 L6
Operating mode	4-speed	4-speed	4-speed
Number of cylinders	4	6	6
Cylinder layout	In line	In line	In line
Bore / stroke (mm)	101/126	101/126	101/126
Total capacity (L)	4.038	6.057	6.057
Combustion process	Compression	Compression	Compression
Fuel	Diesel fuel	Diesel fuel	Diesel fuel
Cooling method	liquid	liquid	liquid
Engine oil coolant	Integrated	Integrated	Integrated
High idle (tr / min)	2400	2300	2300
Reduced idle (tr / min)	900 ± 25	900 ± 25	900 ± 25
Maximum torque (Nm)	609 to 1600 tr / min	900 to 1450 tr / min	1000 to 1450 tr / min
Maximum power according to DIN 6271 in Kw	115	160	180
Injection type	Shared ramp	Shared ramp	Shared ramp
Tuning	Electronic management	Electronic management	Electronic management
Injection sequence	1.3.4.2	1.5.3.6.2.4	1.5.3.6.2.4
Alternator	12 V - 150 A	12 V - 150 A	12 V - 150 A

Type of oil, quantity, filter: see table in § 13.3 Lubricants and fuel

6.1.3. Hydraulic properties

FORWARD MOVEMENT Pump type: piston, variable displacement pump Engine: 89 cm3 Pressure: Maxi 400 b Filter: return and suction	MIXER Pump type: piston, variable displacement pump Engine: 115 cm3 Pressure: Maxi 400 b Filter: return and suction
REAMER Pump type: piston, variable displacement pump Engine: 68 cm3 Pressure: Maxi 350 b Filter: return and suction	
BELT Pump type: geared Engine: 21 cm3 Pressure: Maxi 250 b Filter: return and suction	STEERING, BRAKING, CYLINDERS Pump type: geared Engine: 43 cm3 Pressure: Maxi 150 b Filter: return and suction

6.1.4. Electrical properties

Standard equipment :

Mass :	Negative
Battery :	12 V 180A, 1100 Ne [A]
Alternator :	12V 150A
Type :	
Voltage regulator :	
Ignition : 12 V, 3 kw supply	

Optional equipment, Special battery for Cold locations :

Mass	Negative
Battery :	12V 172A, 1390 Ne [A]
Alternator :	12V 150A
Type :	
Voltage regulator :	
Ignition : 12 V, 3 kw supply	

6.1.5. Pneumatic properties

Tyre type	Inflation pressure (bars)	Wheel tightening torque
445/45 R19.5	**6.5 b Front / 8b Rear**	Between 320 and 350 Nm
495/65 R22.5	**6.5 b Front / 8b Rear**	Between 320 and 350 Nm

6.2. SOUND EMISSION LEVELS AT WORK STATIONS

The level of continuous acoustic pressure at the work station, with the cabin closed, of 79 dB(A) was measured in accordance with the recommendations of the ISO 5131 standard second version from 01/08/1996 "Acoustics - tractors and agricultural / forestry equipment - Measuring noise in drivers' cabins - Control method".

6.3. VIBRATION LEVELS AT WORK STATIONS

Contact us.

7 - SAFETY REGULATIONS

7.1. OVERVIEW

The other sections of this user manual contain additional information that is extremely important from a safety point of view.

You must always follow the safety guidelines given on the pictograms attached to this machine.

Remember: remaining vigilant and cautious at all times is the best way to guarantee your safety.
Operators must always ensure that they have sufficient visibility when working in dangerous areas.
Proper maintenance will ensure maximum levels of safety, in addition to ensuring that your machine functions effectively for an extended period of time.

You must ensure that the safety mechanisms, casings, ducts and bearing protectors are in place and in proper working order..

Do not wear baggy clothing, long flowing hair or jewellery, all of which could end up becoming caught or trapped by moving parts of the machine.

All rules and regulations relating to accident prevention, safety, occupational health, environmental protection and road traffic must be observed at all times.

When using the machine on public roads, you must respect the traffic code, paying particular attention to the speed limit - you must not exceed 25 km/h or 40 km/h depending on your vehicle's accreditation.

The machine must be operated by one single person, who must have been given the appropriate training with regards to how to use it. In the event of the machine being used by an intern or a temporary employee, the owner must provide the user with the necessary training and information with regards to safety and use.

Please ensure that no person, animal or obstacle is in the immediate vicinity of your vehicle prior to switching it on or during use. Pay particular attention to overhead electrical lines when lifting the loading arm.

Children should be kept away from the machine at all times.

Use of this machine to transport people, animals or objects is strictly prohibited.

You must never transport passengers either in or on the machine.

Do not walk on the bonnet or on any other section of the machine not designed for this purpose (ladder, modes of accessing the cabin).

Never try to extract anything from the machine prior to it being brought to a complete halt and the engine being switched off (operators should pay particular attention to this when working close to dispensing hatches, where there is a risk of fingers or hands being mutilated by the mixing auger). Switch the engine off any time it is necessary to carry out on work on the machine (lubrication, tuning, maintenance). This will involve removing the ignition key.
The interior of the tank can be accessed using the emptying hatch, but under no circumstances should you access the tank by climbing the ladder.

Prior to carrying out any work on the machine, please ensure that there is no risk of it moving accidentally. This will involve removing the ignition key.

Prior to using the machine, check that all screws, nuts and fastenings are properly tightened. Tighten them where necessary.

Pressurised hydraulic fluid may escape with sufficient force to pierce the skin and cause serious harm. Should this fluid come into contact with the body, you should immediately seek medical assistance.

Prior to using the machine after fine-tuning or maintenance has been carried out, please ensure that all of the safety mechanisms are in place and are in proper working order and that their screws have been correctly tightened.

Please ensure that there are no hazards involving the surface or debris in the working area (wood, scrap iron, plastic, fencing, etc.) which could come into contact with the machine or result in it becoming damaged.

Keep your hands, arms and feet away from any moving parts, even when operating at relatively low speeds. Please ensure that you keep a safe distance.

Should you hear a noise or become aware of an uncharacteristic vibration, switch the machine off, identify the cause and resolve the issue prior to restarting work. If necessary, contact your retailer.

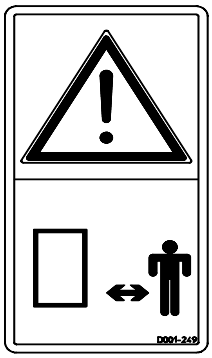
NOTE
All terms such as: RIGHT, LEFT, FRONT and REAR relate to someone sitting in the driver's seat and facing forwards.

7.2. PERSONAL PROTECTIVE EQUIPMENT (PPE)

In order to ensure that you are fully protected, Personal Protective Equipment (PPE) adjusted to your size and bearing CE marking in accordance with the 89/686/CEE directive must be worn.

7.3. WARNING / PICTOGRAMS

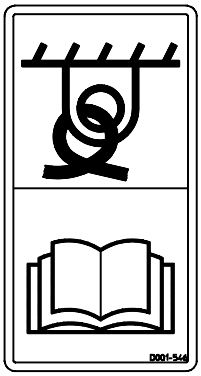
7.3.1. Descriptions of safety pictograms



D001-249

Warning

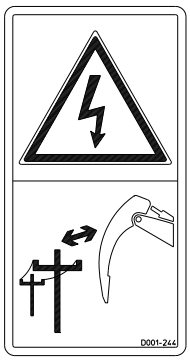
While work is ongoing, please ensure that no other individual is in the immediate vicinity of the machine.



D001-546

Connection point

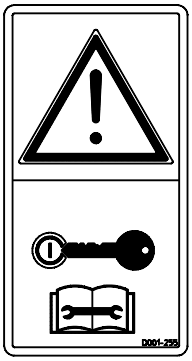
Please refer to the user manual.



D001-244

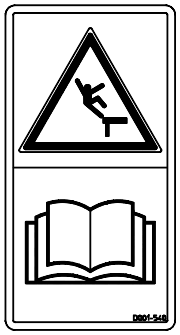
Risk of electrocution

Keep a safe distance from overhead electrical wires.



D001-255

Stop the engine and remove the key prior to carrying out any maintenance operation.



D001-540

Risk of falling.

Please refer to the user manual.

D001-252

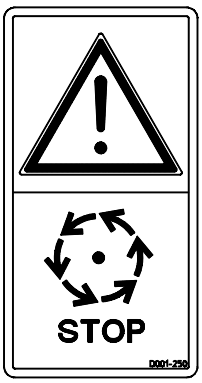
Risk of fingers or hands being severed.

Use a tool for unblocking operations.

D001-291

Risk of fingers or hands being crushed.

Keep your hands away from the chute while it is moving.



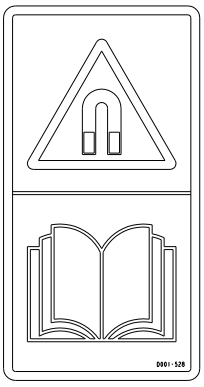
D001-250

Wait for any moving parts to have come to a completely stop prior to carrying out any work.

There is a risk of objects being ejected or projected.

Please ensure that you keep a safe distance from the projection zone when the machine is operating.

D001-243



Magnetic field.

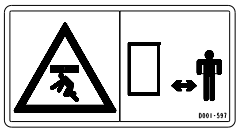
Please refer to the user manual.

D001-528

Risk of hands being crushed.

Please refer to the paragraph on "safety regulations".

D001-529



Crushing risk.

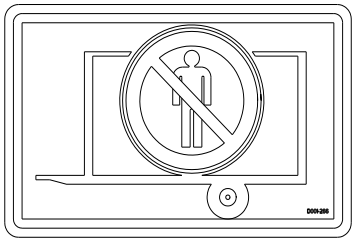
While work is ongoing, please ensure that no other individual is in the immediate vicinity of the machine.

D001-597

Warning

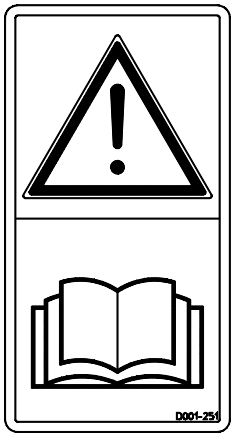
Do not attempt to enter the machine without first having consulted the user manual.

D001-586



Entering the machine is strictly prohibited.

D001-266



Read the user manual.

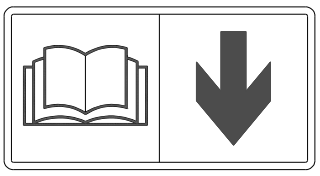
D001-251

7.3.2. Description of usage icons

D001-541

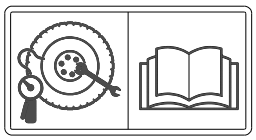
Warning
Risk of injury

Hand protection must be worn.



D001-409

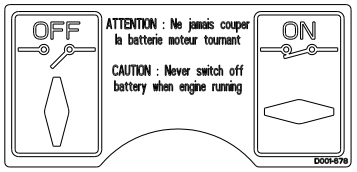
Please refer to the user manual.



D001-006

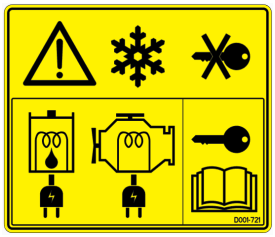
Check the tyre pressure

Please refer to the user manual.



D001-678

Battery master switch



D001-721

Extreme cold Ignition

Warnings and pictograms attached to the machine provide information with regards to obligatory safety measures, helping to avoid accidents.

WARNING
Please ensure that these warnings and pictograms are kept clean and visible at all times. In the event of them deteriorating, request new stickers from your manufacturer (or retailer) (the reference for each pictogram will be included on it and can also be found next to the copy of the pictogram in this user manual).
For repairs, you must ensure that any spare parts bear the same pictogram stickers as the original parts.

7.4. TOXIC PRODUCTS

It is recommended that you keep a first-aid kit nearby at all times.
Please ensure that products such as fuel, oil, solvents, anti-freeze or cleaning products do not come into contact with the skin, the eyes or the mouth. The majority of these products contain substances that are harmful for your health.
In the event of any accidents, please seek medical assistance.

Closely follow all guidelines found on the safety labels of containers of toxic products.

The batteries contain sulphuric acid. In the event of this coming into contact with your skin, rinse thoroughly with clean water and seek medical assistance.

Pressurised hydraulic fluid may escape with sufficient force to pierce the skin and cause serious harm. Should this fluid come into contact with the body, you should immediately seek medical assistance.

7.5. BLOCKAGE

7.5.1. Early blockage

Loading blocked by the reamer :
The loading reamer is equipped with an automatic unblocking system, which is used to invert the reamer where necessary depending on its loading rate.
This automated unblocking system can be deactivated (§10.5.4.5.2) and it is possible to reverse the rotational direction of the reamer using the joystick (§10.1.17).
The reamer's loading rate is represented by the green, orange or red colour of the reamer symbol on the screen (§ 10.5.2.3).

Distribution blockage :
Leave the counter-cutters in their active position (inside the tank) in order to reduce the risk of any jams at the entrance to the hatch.
Open the dispensing hatch wider.

Blockage on the distribution belt :
Reduce the extent to which the hatch is open.

7.5.2. If the jam persists

When loading using the reamer :
Stop the engine and remove the ignition key or activate the circuit breaker.
Apply the parking brake.
Wait until all moving parts have come to a complete halt.

Check the conveyor belt mechanism and check to ensure that there are no materials or foreign bodies inside the conveyor.
Check the tension of the conveyor belt, as any slippage might result in a jam.
Check the general condition of the reamer cutting tools.
Carry out a new test.

Rear hatch dispensing jam :
Extend the mixing time in order to cut the material more - the shorter the material, the easier it will be to dispense.

7.6. FIRE

To avoid any risk of fire :

- Please ensure that the machine and its accessories are kept clean.
- Please ensure that the moving parts of the machines are kept free of grass, straw, hay, leaves or excess grease.
- Clean the area around the exhaust pipe and the clean-up system daily in order to prevent any fires from breaking out.

Take the necessary precautions when handling fuel. It is highly flammable and its fumes are explosive.
You must never store a fuel canister or a machine whose tank still contains fuel in an environment where the fumes might come into contact with a flame or a spark.
You must never fill the fuel tank inside. Smoking during filling is strictly prohibited.

You must never remove the cap from the fuel tank or add fuel to the tank while the engine is running (or still warm).

Should a fire break out, use common sense and do as much as you can to bring it under control.
Or
Remove yourself immediately from the vicinity of the machine and check to ensure that no one else is close to it.

7.7. OVERHEAD ELECTRICAL WIRES

Check to ensure that there is sufficient clearance for the machine in all circumstances of use **(pay attention when opening the reamer hood, which will increase the height of the machine).**

Be aware of any original accessories or accessories added at a later stage and which alter the height of the machine.

Should the machine come into contact with an electrical wire, please bring it to a complete halt, cut the engine and apply the hand brake.

Check to ensure that you are able to leave your current position without touching the electrical wires before jumping from your position in such a way that avoids any sustained contact between yourself and the earth while moving.

Do not touch the machine until the voltage running through the electrical wires has been switched off.
For any personnel approaching the machine, warn them against touching the machine and ask for the voltage running through the electrical wires to be switched off.

7.8. COUPLING / TOWING

7.8.1. Overview

This motorised machine has not been designed to tow tools or trailers. Accordingly, the vehicle has not been fitted with a tow hitch, nor should one be fitted at a later stage.

7.8.2. Specific instances of machine towing

See §11.2 "towing a broken-down vehicle".

7.9. MAINTENANCE AND REPAIRS

7.9.1. Overview

- Please ensure that the space is sufficiently well-ventilated prior to starting up the machine.
- Appropriate clothing for carrying out maintenance on the machine must be worn. Avoid wearing any jewellery or baggy clothing. Please ensure that your hair is tied back and protected where necessary.
- Switch off the combustion engine prior to carrying out any maintenance on the machine and remove the ignition key.

IMPORTANT
You must never apply the battery master switch while the engine is running.

- Risk of damage or engine breakdown.
- Carefully read the user manual.
- Carry out any necessary repair work, however minor it might be, at the earliest available opportunity.
- Repair any leaks, however minor they might be, at the earliest available opportunity.
- In the event of an accidental leak involving one of these fluids resulting in animal foodstuffs such as silage, hay or supplements becoming contaminated, these contaminated products must be destroyed as ingesting them could prove harmful.
- Please ensure that the removal of any consumable materials or used parts is carried out in a safe and environmentally-friendly manner.
- Please be aware of the risks of burning and projection (from the exhaust, radiator, combustion engine, etc.).
- Any maintenance operations must be carried out on a flat and stable surface.
- Allow the engine and the gearbox to cool prior to carrying out any maintenance, unless advice to the contrary has been given.
- Before entering the mixing tank - when changing or sharpening the cutters, for example - please ensure that the machine will not be started up and that the ignition key has been removed.

WARNING
Any maintenance or repair work must only be carried out by personnel is possession of the appropriate qualifications.

7.9.2. Lubricant and fuel levels

- Only use recommended lubricants (under no circumstances should used lubricants be used).
- Do not fill the fuel tank while the combustion engine is running.
- You must only fill the fuel tank in appropriate designated locations.
- Do not fill the fuel tank to the maximum level.
- You must not smoke or approach the machine with a flame while the fuel tank is open or in the process of being filled.

7.9.3. Welding

- Switch off the combustion engine.
- Disconnect the battery prior to carrying out any welding work.
- Disconnect the engine control unit.
- Connect the end of the negative cable of the welding set directly to the part to be welded in order to avoid the extremely high current crossing the alternator.

WARNING
You must never carry out any welding work or work emitting heat on a tyre unit - the heat will lead to the pressure increasing, which may cause the tyre to explode.

- Protect the pipes, rubber and, in particular, the tyres, in order to avoid these components sustaining damage as a result of sparks being projected, which might result in a loss of oil, hydraulic fluid, coolant, etc.

7.9.4. Tyre maintenance

You must only carry out work on the tyres provided you have the requisite specialist tools and experience. Incorrect fitting might seriously compromise your safety. Should any doubt persist, please enlist the support of a qualified person.

Fitting tyres with different properties from those recommended by the manufacturer is strictly prohibited.

7.9.5. Electrical work

- You must never short-circuit the starter relay in order to start the combustion engine.
- You must never place metal components on top of the battery.
- Disconnect the battery or use the battery master switch prior to carrying out any work on the electrical circuit.

7.9.6. Hydraulic work

- Carrying out work on the hydraulic circuit of the loading arm is prohibited, with the exception of those operations describe in section 13 - MAINTENANCE.
- Do not try to loosen the connectors, the pipes or any hydraulic component while the system is pressurised.
- Prior to pressure being re-applied to the hydraulic lines, please ensure that all of the connectors have been properly tightened.

7.9.7. Cleaning

- You must clean the machine or, at the very least, the zone in question prior to carrying out any work.
- All entrances should be closed and locked (doors, windows, bonnets, etc.).
- During cleaning, please avoid hinges, components and electrical connections, as well as cameras.
- If necessary, steps should be taken to ensure that no water, steam or cleaning products are able to enter. Components may suffer damage, particularly electrical connections and components and the injection pump.
- Thoroughly clean the machine to remove any traces of fuel, oil or grease.

Never clean the compartment housing the combustion engine and the air filters.

7.9.8. Maintenance

- Frequent maintenance (see section on MAINTENANCE) must be carried out in order to ensure that your machine remains in proper working order. Failure to respect this frequent maintenance could result in the conditions of the contractual warranty being terminated.
- Maintenance work carried out in application of the recommendations contained in the section on MAINTENANCE and other operations involving checks, maintenance, repair or modifications made to the machine or its accessories must be recorded in a maintenance file. The following information must be provided for each operation: the date on which the work took place, the names of the personnel or companies having carried out the work, the nature of the work and, where applicable, its frequency. With regards to replacing parts, the references for these parts will be recorded.

7.9.9. Repairs

You must deal with any error likely to compromise safety.
You must immediately repair any leak or issue with the hydraulic circuit and the machine's cooling circuit.
Do not search for a hydraulic leak (pressurised) using your fingers.
Defective or damaged protectors and screws must be replaced immediately. No original protector fitted to the machine should be removed or modified.
The pipes must not be comprised of components that have already been in use in a circuit.
Rigid pipes must not contain any welding joints. Once a soft or rigid pipe has sustained any damage, it must be replaced immediately.
Repair work relating to pressurised components or components with voltage running through them (springs, accumulators, etc.) will require specific procedures and tools. Only qualified personnel should carry out this type of work.

FOR ALL WORK OTHER THAN REGULAR MAINTENANCE, PLEASE CONTACT YOUR DEALER.

8 - ENVIRONMENTAL PROTECTION

8.1. WASTE STORAGE AND DISPOSAL (POLLUTANTS)

8.1.1. Soil pollution

Do not empty used oils and substances such as motor oil, hydraulic oil, coolant, brake fluid, fuel, etc. into drains and do not spread them on the ground.

Do not mix fuel and oil.

Recycling used oil :

Collect used liquids in sealed, clean and appropriate containers. Avoid using food containers or drinks bottles.

Recycling batteries, accumulators and cells :

Used batteries and accumulators should be returned to your manufacturer (or retailer). Alternatively, you may send them to a specialist recycling centre.

Recycling used tyres :

Storing, abandoning or leaving tyres in natural environments is strictly prohibited. The same applies for burning. These should be returned to an accredited retailer or collector.

8.1.2. Air pollution

Do not open an air conditioning circuit (these contain gases which should not be released into the atmosphere). Only your manufacturer (or retailer) may empty or recharge an air conditioning circuit or recycle noxious gases.

9 - ASSEMBLY AND INSTALLATION

Your manufacturer will be responsible for assembling, adapting and installing your machine, in addition to initial start-up.

9.1. MACHINE DELIVERY

For deliveries to farmyards, please ensure that you have sufficient visibility for loading and unloading the vehicle. For this purpose, please use the vehicle's mirrors or cameras and secure the manoeuvring area.

The machine will be transported on a truck, in a forward-facing direction and in two-wheel drive/steering mode.
For truck loading and unloading, please ensure you have optimum ground clearance by using the function for lifting the machine using the front axle.
In the event of ground clearance not being available, you may remove the first step for accessing the cabin.

Please check to ensure that the machine corresponds to the model that you ordered, including any accessories or optional extras, as well as to ensure that the machine has not sustained any damage in transit.

9.2. OPERATOR ACCREDITATION

Operators must have been granted the requisite driving authorisation by their employers and must be familiar with the machine's user manual.

9.3. PACKAGING ENVIRONMENT

Carry out all assembly and installation operations on a stable, flat surface in order to avoid any issues arising.

9.4. ASSEMBLY METHODS

With regards to assembling accessories, please consult the manuals supplied with them.

9.5. STORAGE

In the case of storage for extended periods of time, please refer to the section on "Storage".

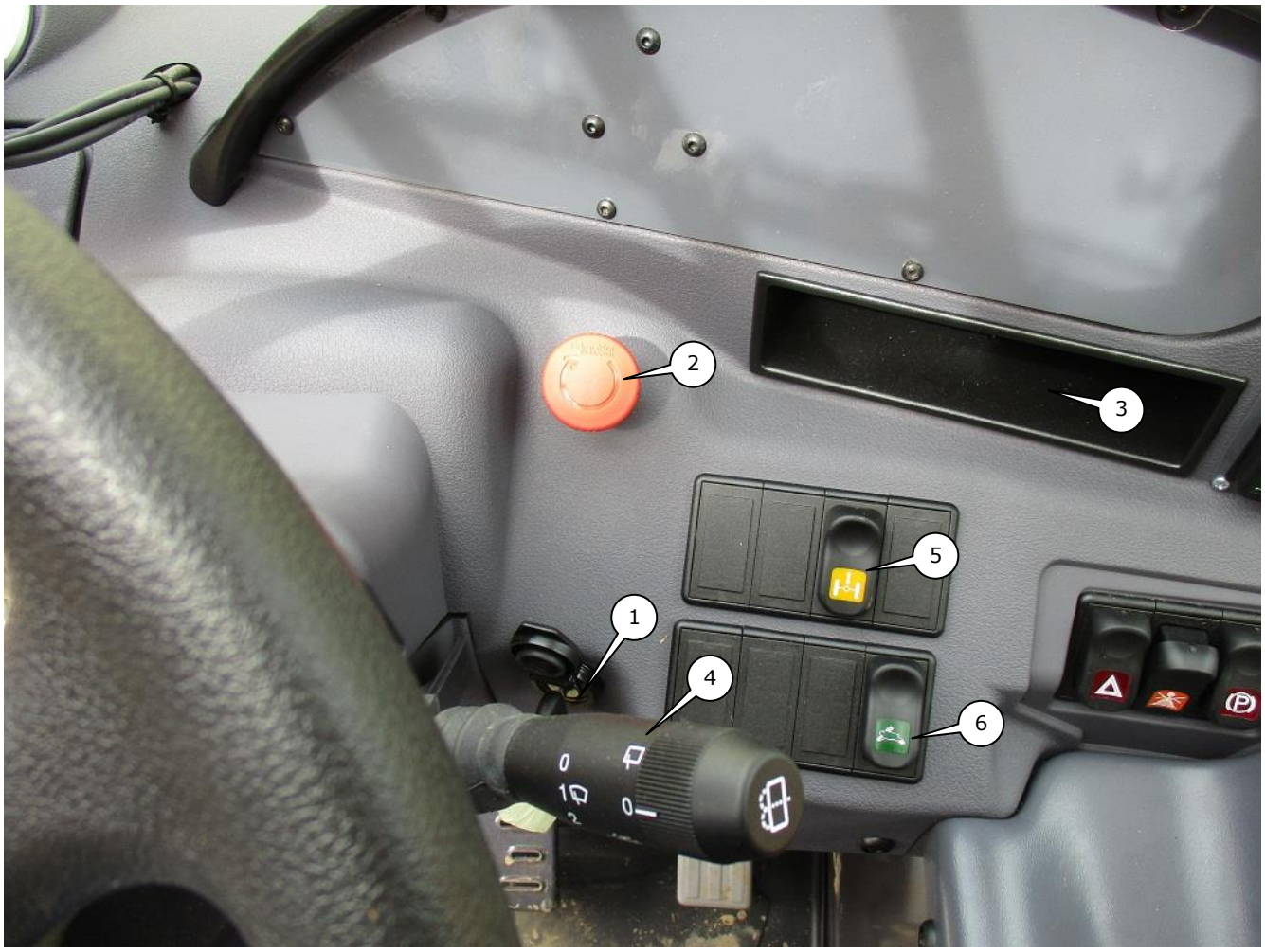
The following minimum precautions must be taken when storing the machine:

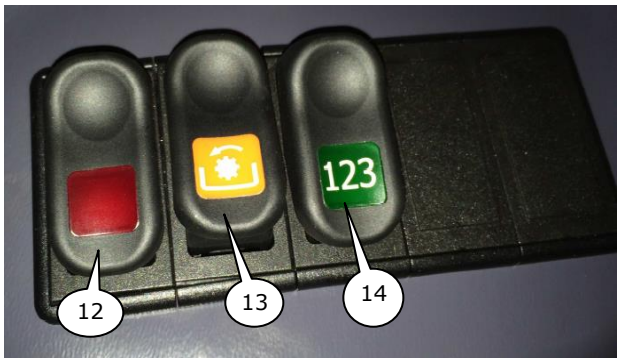
. The silage unloading arm must be kept in its low position.
. The reamer casing, hatch and belt must all be closed and locked.
. The cylinder rods must be lubricated during the storage period. Prior to use, these same rods should be cleaned using a cloth soaked in diesel and then dried using a clean, dry cloth.
. The hand brake should be applied.
. The ignition key must be removed and the cabin locked.
. The battery master switch must be deactivated.

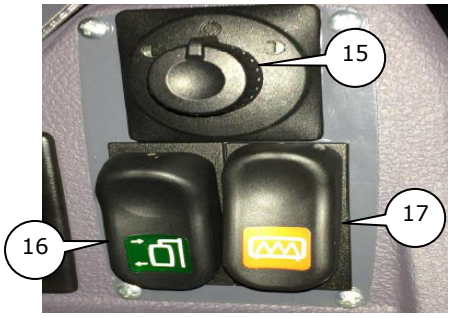
10 - SWITCHING ON AND OPERATING

10.1. DESCRIPTION, LOCATION AND IDENTIFICATION OF THE CONTROLS

10.1.1. Description of the cabin interior



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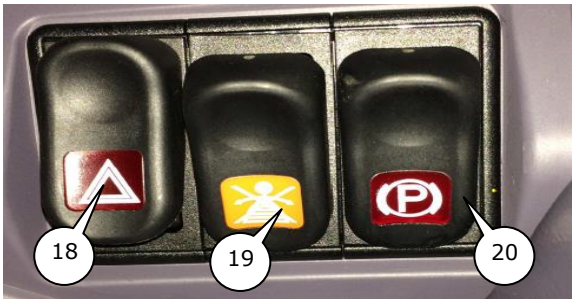
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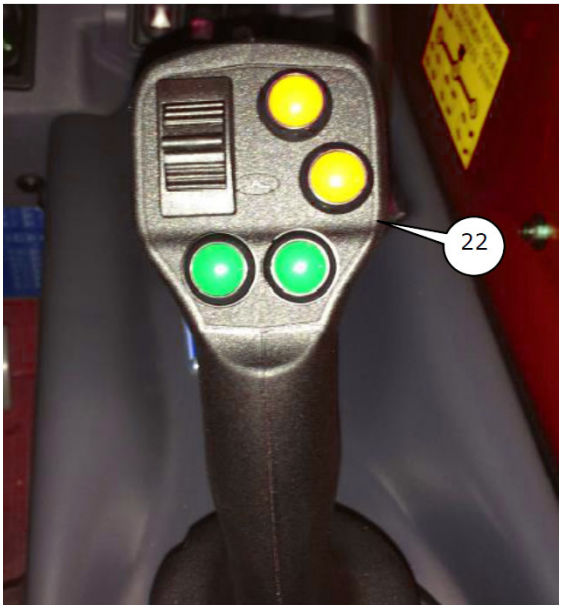
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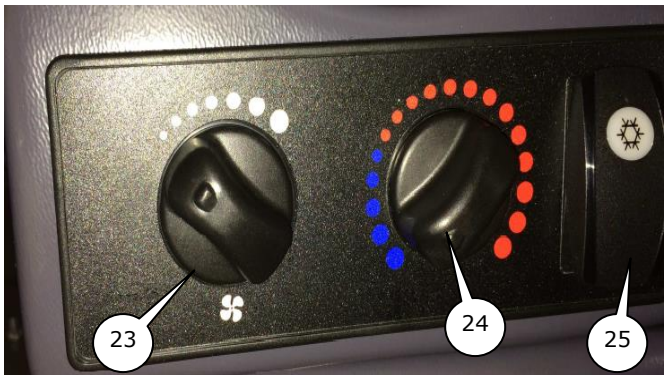
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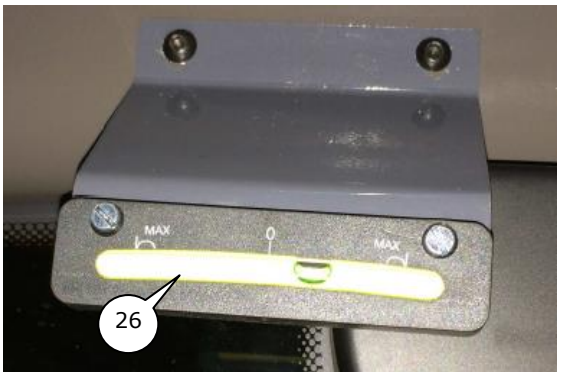
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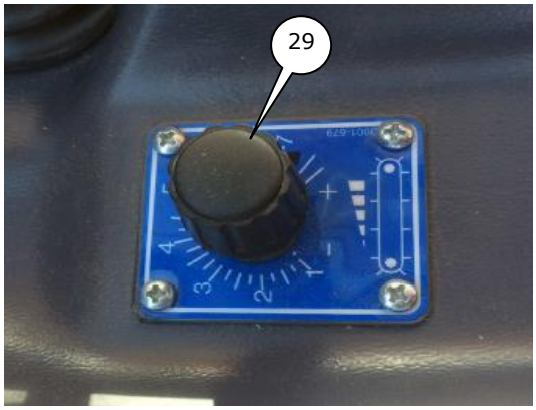
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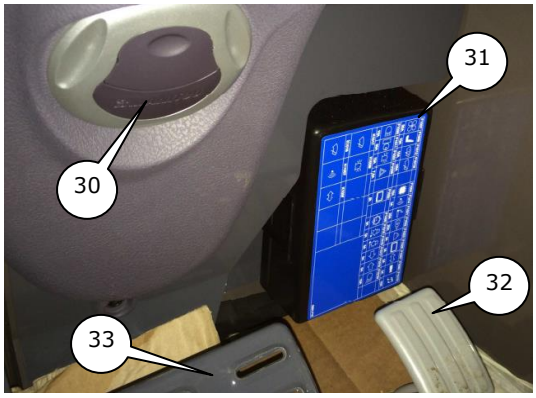
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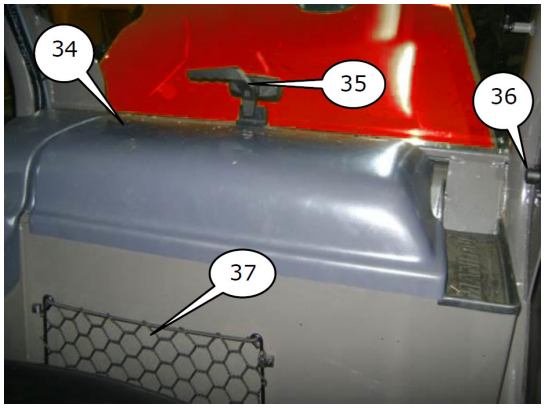
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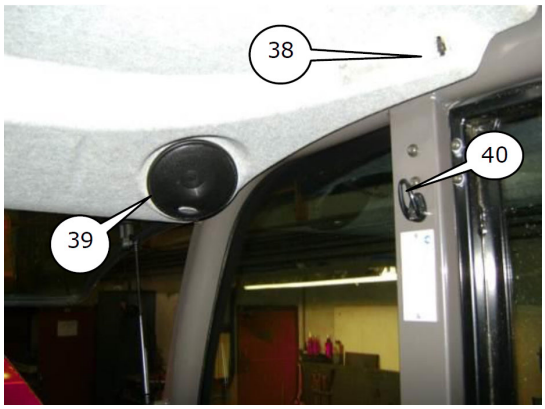
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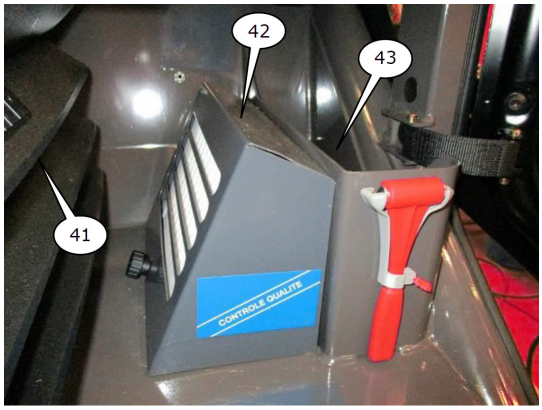
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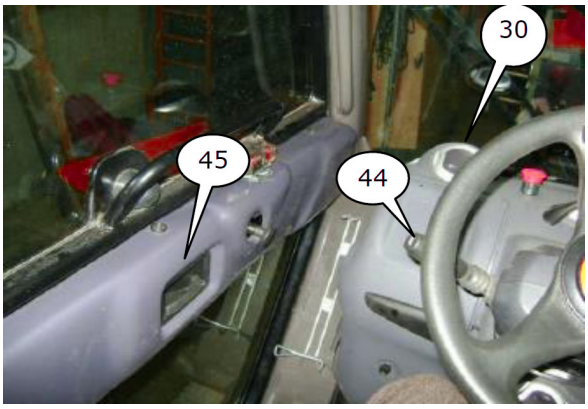
CONTROLE QUALITE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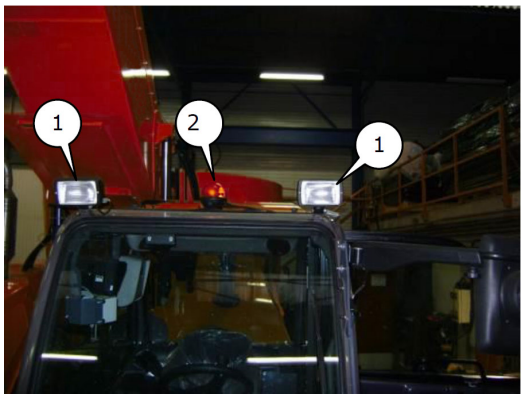
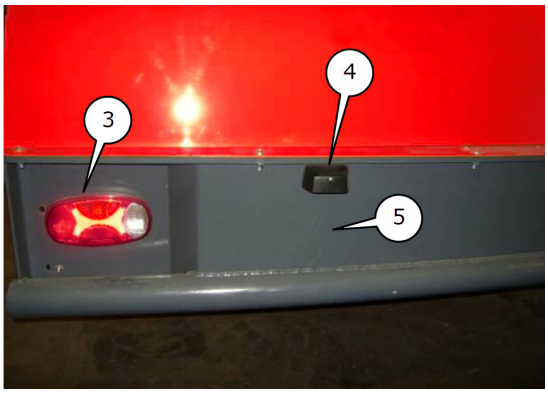
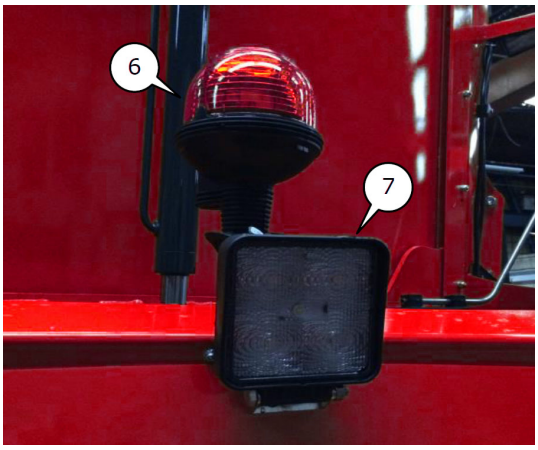
1 - Key switch
2 -Emergency stop
3 - Car radio slot
4 - Front, top and right windscreen wiper lever.
5 - Switch for raising/lowering the front axle
6 - Switch for reduced speed/enhanced speed
7 - Rotating light switch
8 - Zone 1 switch and 2 work lights
9 - Zone 3 switch and 4 work lights
10 - Switch for rear fog lamps
11 - Rear windscreen wiper switch
12 - Loading / drive / unloading mode switch
13 - Mixing auger ON/OFF switch
14 - Mixing auger 1, 2, 3 speed switch
15 - Rear-view mirror adjustment button (optional)
16 - Switch to fold out/fold back the right wing mirror (optional)
17 - Rear-view mirror defrost switch (optional)
18 - Hazard lights switch
19 - Block / unblock hydraulic functions switch
20 - Parking brake switch
21 - Wheel position selection lever
22 - Steering joystick
23 - Cabin ventilation intensity selector
24 - Cabin ventilation temperature selector
25 - Climate control switch
26 - Machine level indicator
27 - Weighing unit
29 - XPA tablet
29 - Potentiometer for adjusting the speed of the unloading belt and adjusting the flow of the molasses tank (optional)
30 - Air vent
31 - Fuse box (cabin)
32 - Accelerator pedal
33 - Brake pedal used to cut transmission
34 - Glove compartment
35 - Handle for opening the rear window
36 - Handle for locking the upper half-door
37 - Document holder
38 - Interior light
39 - Loudspeaker
40 - Coat peg
41 - Driver's seat
42 - Cabin filter
43 - Toolbox
44 - Horn and headlight lever
45 - Handle for opening the side door

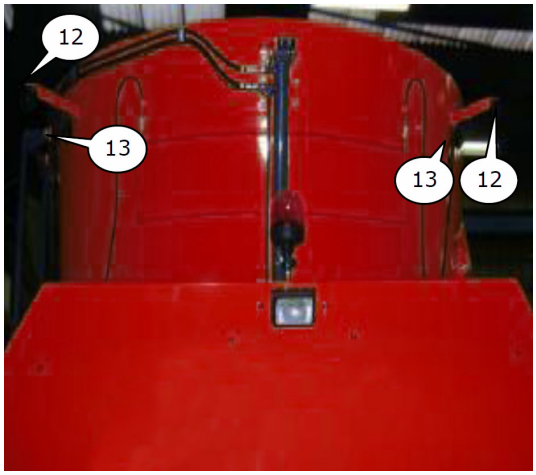
NOTE
All terms such as: RIGHT, LEFT, FRONT and REAR relate to someone sitting in the driver's seat and facing forwards.

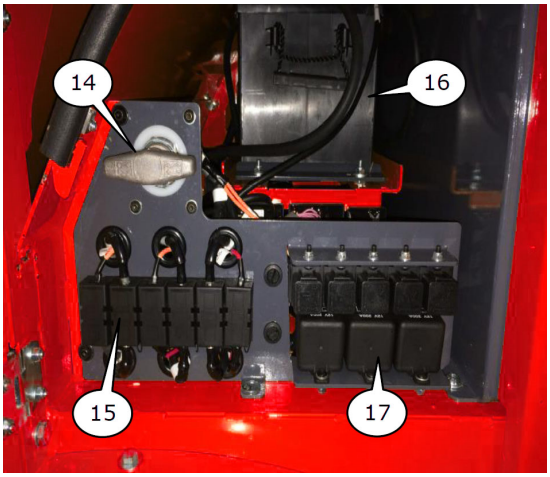
10.1.2. Description of the exterior of the cabin

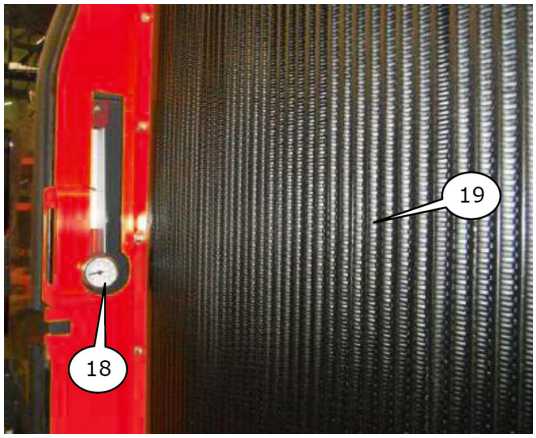


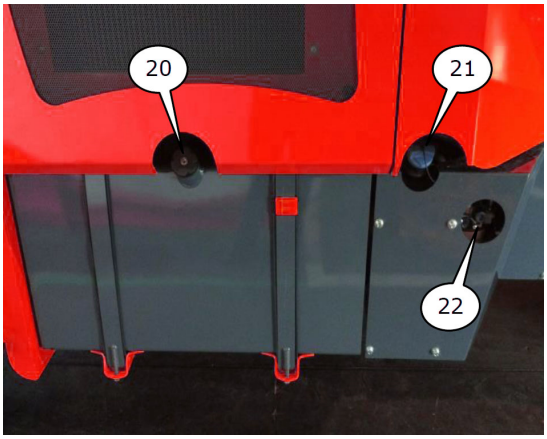










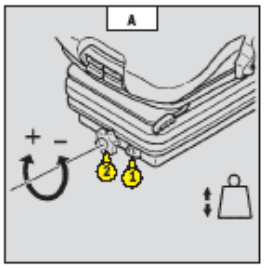


1 - Work light
2 - Front rotating light
3 - Traffic light
4 - Registration plate light
5 - Registration plate space
6 - Rear rotating light
7 - Work light
8 - Main right wing mirror
9 - Small right wing mirror
10 - Exhaust pipe
11 - Air filter vent
12 - Camera
13 - Work light
14 - Main circuit breaker
15 - Fuses
16 - Battery
17 - Relay
18 - Hydraulic tank with indicator
19 - Hydraulic oil cooler
20 - Diesel tank
21 - AD-Blue tank
22 - Diesel pre-filter with manual start-up pump.

NOTE
All terms such as: RIGHT, LEFT, FRONT and REAR relate to someone sitting in the driver's seat and facing forwards.

10.1.3. Driver's seat

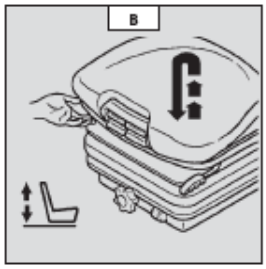
10.1.3.1. Standard seat



WEIGHT ADJUSTMENT (FIG. A)

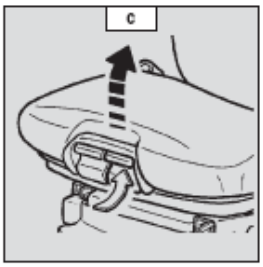
It is recommended that you adjust the weight when the conductor is not sitting on the seat.
- Make a note of the seat's 1st position.
- Turn handle 2 in accordance with the weight of the driver.

PLEASE NOTE :
In order to avoid any safety issues, it is recommended that you check the weight adjustment and make any changes needed to it prior to starting the machine up.



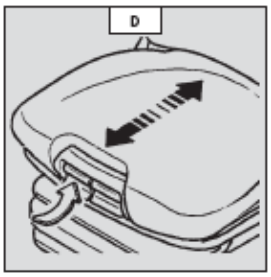
ADJUSTING THE HEIGHT OF THE BASE (FIG. B)

Raise the seat to the desired position until you hear a click indicating that it is locked into place. Should you raise the seat above the last notch (where it stops) the seat will return to its lowest position.



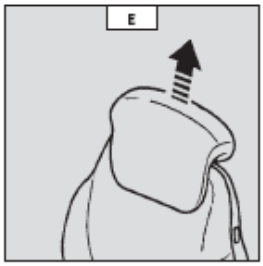
ADJUSTING THE INCLINCATION OF THE SEAT (FIG. C)

The inclination of the seat can be adjusted individually.
- Press the button on the left while holding down on the seat or releasing the pressure on the seat until you find a comfortable position.



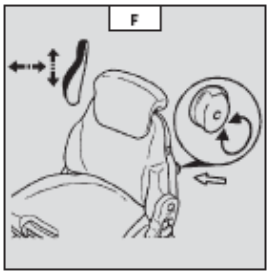
ADJUSTING THE DEPTH OF THE SEAT (FIG. D)

The depth of the seat can be adjusted individually.
Press the button on the right while sliding the seat forward or back until you find the desired position.



EXTENDING THE BACKREST (FIG. E)

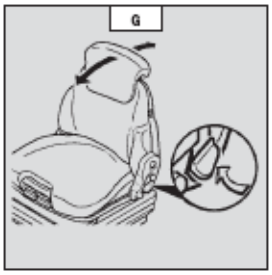
The height of the backrest can be increased by pulling it upwards (the notches are audible) until it locks into place.
The backrest extension can be removed by exerting more pressure in order to release the notch.



LUMBAR ADJUSTMENT (FIG. F)

This feature can be used to adjust the comfort of the seat as well as to adjust the driver's freedom of movement.

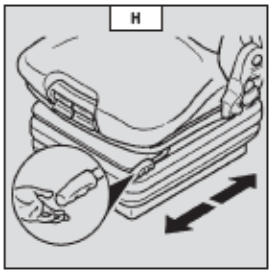
Turn the handle to the left or to the right to adjust the lumbar support, both in terms of its height and its depth.



ADJUSTING THE INCLINCATION OF THE BACKREST (FIG. G)

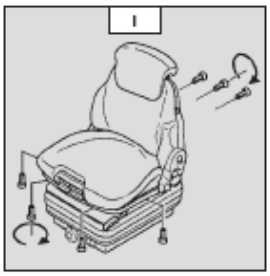
Hold the backrest in place, pull on the lever and tilt the backrest into the desired position.

If you do not hold down on the backrest while tilting it, it will tilt fully forwards.



ADJUSTING THE LENGTH (FIG. H)

Lock the lever into the desired position. Once it is locked into place, you will no longer be able to move the seat to another position.



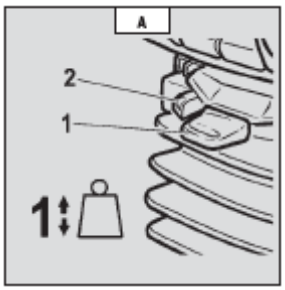
MAINTENANCE (FIG. I)

A lack of cleanliness can affect the proper functioning of the seat. This is why we recommend that you ensure your seat is kept clean at all times.
To care for or change seat cushions, you will need to remove them from the seat casing. There is a greater risk of an accident occurring when the back rest is inclined.

Please ensure that the fabric of the cushions does not become damp during cleaning. Begin by checking the fabric's resistance by testing on a small surface before going any further. Standard cleaning products for fabrics and plastic materials may be used.

10.1.3.2. Pneumatic seat (optional)

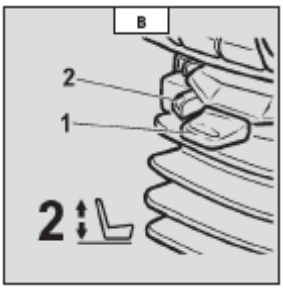
FOR ENHANCED COMFORT, A NUMBER OF DIFFERENT ADJUSTMENT OPTIONS ARE AVAILABLE WITH THIS SEAT.



ADJUSTING THE WEIGHT (FIG. A)

It is recommended that you adjust your seat in accordance with your weight when seated.
- Switch the machine on.
- Pull or press lever 1 until the green zone appears in light 2 indicating the adjustment matches your weight.

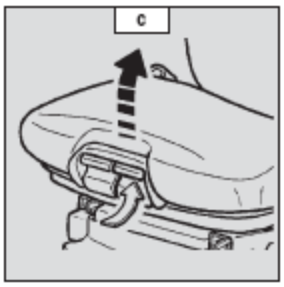
PLEASE NOTE : In order to avoid any safety issues, it is recommended that you check the weight adjustment and make any changes needed to it prior to starting the machine up.



ADJUSTING THE HEIGHT OF THE BASE (FIG. B)

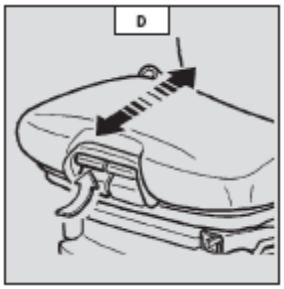
Once you have adjusted the weight, you can now modify the height of the base.
- Keep the machine switched on.
- Pull or press lever 1 and adjust the height of the seat while checking to ensure that the green zone in light 2 remains visible.

In order to avoid any damage, do not use the compressor for at least 1 minute.



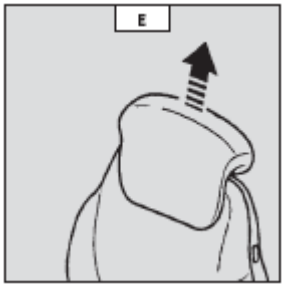
ADJUSTING THE INCLINATION OF THE SEAT (FIG. C)

The inclination of the seat can be adjusted individually.
- Press the button on the left while holding down on the seat or releasing the pressure on the seat until you find a comfortable position.



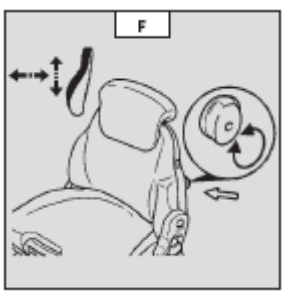
ADJUSTING THE DEPTH OF THE SEAT (FIG. D)

The depth of the seat can be adjusted individually.
Press the button on the right while sliding the seat forward or back until you find the desired position.



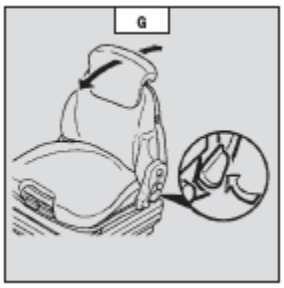
EXTENDING THE BACKREST (FIG. E)

- The height of the backrest can be increased by pulling it upwards (the notches are audible) until it locks into place.
- The backrest extension can be removed by exerting more pressure in order to release the notch.



LUMBAR ADJUSTMENT (FIG. F)

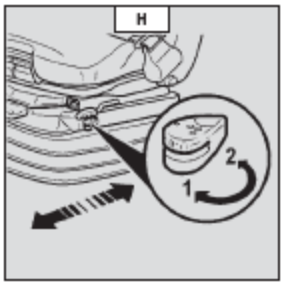
This feature can be used to adjust the comfort of the seat as well as to adjust the driver's freedom of movement.
- Turn the handle to the left or to the right to adjust the lumbar support, both in terms of its height and its depth.



ADJUSTING THE INCLINATION OF THE BACKREST (FIG. G)

- Hold the backrest in place, pull on the lever and tilt the backrest into the desired position.

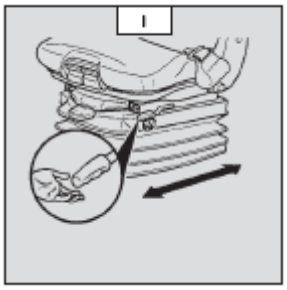
If you do not hold down on the backrest while tilting it, it will tilt fully forwards.



HORIZONTAL SHOCK ABSORBER (FIG. H)

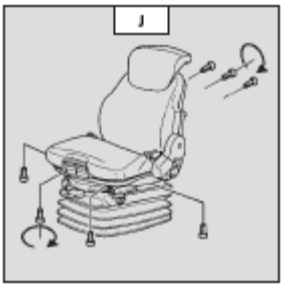
In some cases (for example, when driving with a trailer) it is recommended that you use a horizontal shock absorber. The driver's seat will thus be able to better absorb any jolts as the vehicle moves forward.

- Position 1: Horizontal shock absorber applied.
- Position 2: Horizontal shock absorber deactivated.



ADJUSTING THE LENGTH (FIG. I)

- Lock the lever into the desired position. Once it is locked into place, you will no longer be able to move the seat to another position.



MAINTENANCE (FIG. J)

A lack of cleanliness can affect the proper functioning of the seat. This is why we recommend that you ensure your seat is kept clean at all times.

- To care for or change seat cushions, you will need to remove them from the seat casing.

There is a greater risk of an accident occurring when the back rest is inclined.
Please ensure that the fabric of the cushions does not become damp during cleaning.
Begin by checking the fabric's resistance by testing on a small surface before. Standard cleaning products for fabrics and plastic materials may be used.

10.1.4. The seat belt

- Please ensure you are sitting correctly on the seat.
- Check to make sure that the seat belt has not become twisted.
- Pass the belt around your waist.
- Attach the seat belt and check to ensure it is properly locked into place.
- Adjust the belt to match your size without it pressing into your lap and without excessive slack.

WARNING
Under no circumstances should you use the machine if there is a fault with the seat belt (fastening, locking, stitching, tears, etc.). Should this occur, the seat belt should be replaced immediately.

10.1.5. XPA tablet

See section 10.5 - Using the XPA tablet

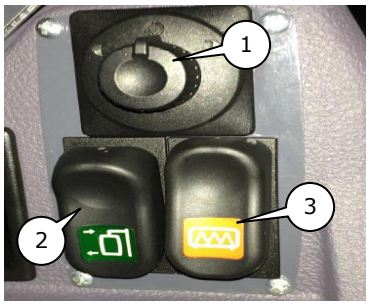
10.1.6. Emergency stop

In an emergency, pressing this button will allow you to switch off the combustion engine and to bring any hydraulic movement to a halt.

Turn the button to deactivate it before restarting the machine.

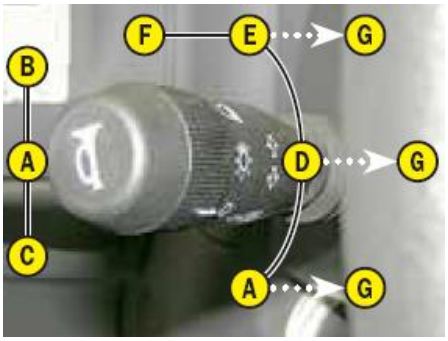
WARNING
Please be aware that the hydraulic movement will stop abruptly when you use this button.

10.1.7. Adjusting the wing mirrors



Turn the button to the left or to the right to select the side you want to adjust. You will now be able to adjust the wing mirror using button 1, with 4 directions available (Optional).
Switch 2 can be used to fold down the right wing mirror (Optional).
Switch 3 can be used to defrost the wing mirrors (Optional). You do not have to hold down on the button - pressing once will activate the defrosting mechanism for 30 seconds.

10.1.8. Switch for the lights, warning light and indicators



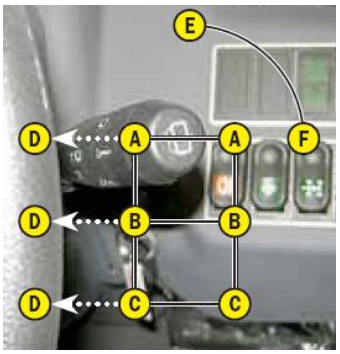
This switch controls both the light and sound signals.
A - The lights have been switched off and the indicators are not working.
B - The right side indicators are working.
C - The left side indicators are working.
D - The pilot lights and the rear lights are lit.
E - The dipped-beam headlamps and the rear lights are lit.
F - The main-beam headlamps and the rear lights are lit.
G - Headlights control
Pressing on the end of the switch will sound the alarm.

NOTE
Positions D - E - F - G can be used without the power being switched on.

10.1.9. Front and Rear windscreen wipers switch

Front windscreen wiper
A - The front windscreen wipers are stationary.
B - The front windscreen wipers are set to slow.
C - The front windscreen wipers are set to quick.
D - The front windscreen washer is on pulse mode.

Right and roof windscreen wiper
E - The windscreen wipers are stationary.
F - The windscreen wipers are operational.



NOTE
These functions can only be used when the power is switched on.

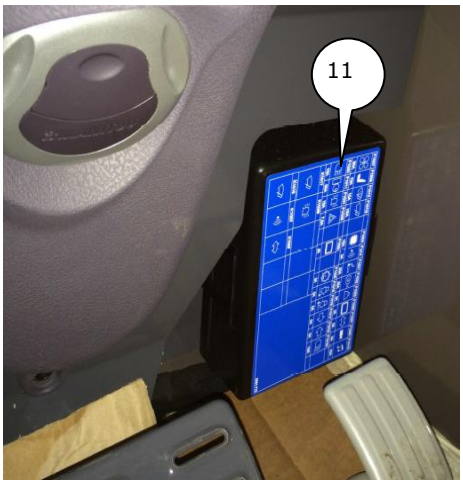
10.1.10. Key switch

This switch has 5 positions:

P - Power off in parking position (navigation lights lit).
O - Electrical power and combustion engine switched off.
I - Power switched on
II - Preheating.
III - Start- up - will return to position I once the key is released.

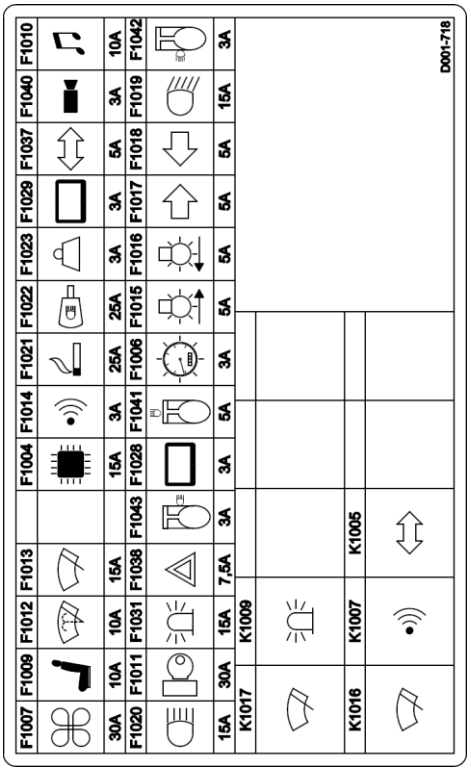
10.1.11. Fuses and relays in the cabin

Lift the access hatch for fuses and relays



WARNING
Never replace a burnt-out fuse with one of a greater intensity as this could result in a fire. Please check the location of the fuse (a fuse table can be found in this manual).
Contact your retailer.

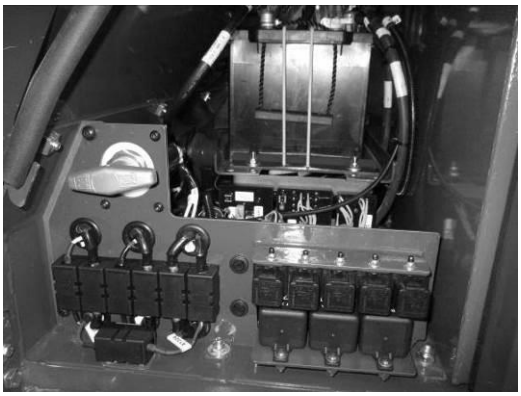
Locations of fuses and relays in the driver's cabin



FUSE	CALIBRE	REFERENCE	ELEMENT
F1007	30 A	EFUS-030	Cabin ventilation
F1009	10 A	EFUS-010	Seat compressor
F1012	10 A	EFUS-010	Front windscreen wiper and windscreen washer pump
F1013	15 A	EFUS-015	Side and roof windscreen wiper
/	/	/	No location
F1004	15 A	EFUS-015	Electronic cabin module
F1014	3 A	EFUS-003	Backup alarm and lights
F1021	25 A	EFUS-025	Auxiliary jack
F1022	25 A	EFUS-025	Lighting stalk switch
F1023	3 A	EFUS-003	Weighing
F1029	3 A	EFUS-003	Screen
F1037	5 A	EFUS-005	Indicator
F1040	3 A	EFUS-003	Video converter
F1010	10 A	EFUS-010	Pocket, switch, car radio and wing mirrors
F1020	15 A	EFUS-015	Main-beam headlights
F1011	30 A	EFUS-030	Néman
F1031	15 A	EFUS-015	Rotating light
F1038	7,5 A	EFUS-007	Hazard lights
F1043	3A	EFUS-003	Front right tank projector
F1028	3 A	EFUS-003	Screen
F1041	5A	EFUS-005	Cabin projectors
F1006	3 A	EFUS-003	Backlighting
F1015	5 A	EFUS-005	Right pilot lights
F1016	5 A	EFUS-005	Left pilot lights
F1017	5 A	EFUS-005	Right indicators
F1018	5 A	EFUS-005	Left indicators
F1019	15 A	EFUS-015	Dipped-beam headlights
F1042	3A	EFUS-003	Front left tank projector
K1005		EREL-1005	Indicator Unit
K1007		EREL-031M	Backup Warning System
K1009		EREL-031M	Side windscreen wiper motor
K1017		EREL-031M	Rotating light
K1016		EREL-031M	Roof windscreen wiper motor

10.1.12. Main relays and fuses and engine accessories

Open the casing behind the cabin on the left hand-side to access the main relays and fuses and engine accessories.



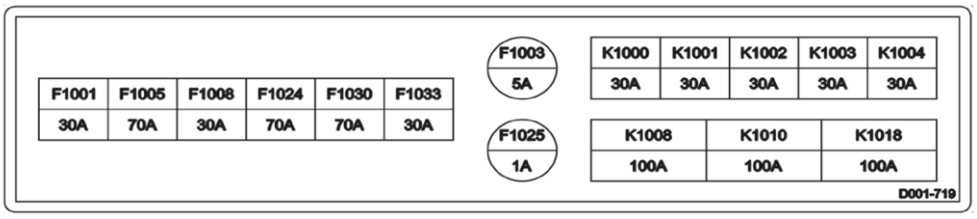
Always replace a defective fuse with a fuse of an equivalent calibre. Never use a repaired fuse.

Switch off the power and refer to the section detailing the locations of the fuses and relays.

* For machines equipped with a diesel heater, an additional F1048 30 A fuse will be included (see the table below).

WARNING
After having switched off the power to the cabin, wait 2 minutes before turning the battery master switch to OFF (this time is needed to allow certain electronic components to finish their control processes).

Locations of fuses and relays



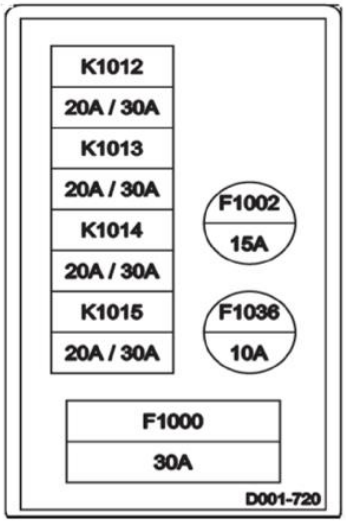
	FUSE	CALIBRE	REFERENCE	ELEMENT
	F1001	30 A	EFUS-D030	SCR relay supply fuse
	F1005	70 A	EFUS-D070	Main cabin fuse 2
	F1008	30 A	EFUS-D030	Climate control fuse
	F1024	70 A	EFUS-D070	Power off cabin fuse
	F1030	70 A	EFUS-D070	General chassis fuse
	F1033	30 A	EFUS-D030	Chassis module fuse
	F1003	5 A	EFUS-V005	Adblue pump fuse
	F1025	1 A	EFUS-V001	5V & 8V converter fuses
*	F1048	30 A	EFUS-D030	Diesel heater fuse
	K1000		EREL-030M	K27 heating supply relay
	K1001		EREL-030M	K28 heating ventilation relay
	K1002		EREL-030M	K29 heating return relay
	K1003		EREL-030M	K30 heating pressure relay
	K1004		EREL-030M	SCR K31 control relay
	K1008		EREL-H100	Main cabin relay 1
	K1010		EREL-H100	Main +15A chassis relay
	K1018		EREL-H100	Main cabin relay 2

10.1.13. Engine and retro fuses and relays

Open the casing at the front on the right-hand side around the engine radiator.

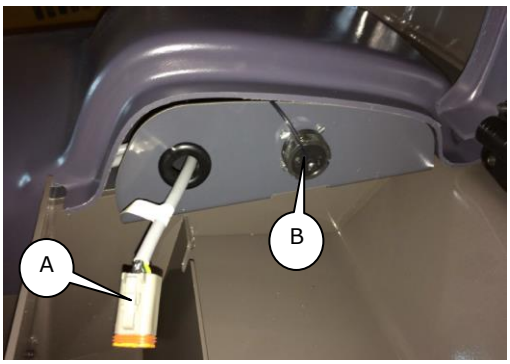
Always replace a defective fuse with a fuse of an equivalent calibre. Never use a repaired fuse.

Switch off the power and refer to the section detailing the locations of the fuses and relays.



FUSE	CALIBRE	REFERENCE	ELEMENT
F1002	15 A	EFUS-V015	EGR sluice fuse + alternator + NOX sensors
F1036	10 A	EFUS-V010	Wing mirror fold back fuse
F1000	30 A	EFUS-D030	EMR engine supply fuse
K1012		EREL-031M	Wing mirror fold out relay
K1013		EREL-031M	Wing mirror return relay
K1014		EREL-031M	No location
K1015		EREL-031M	No location

10.1.14. Diagnostic plug

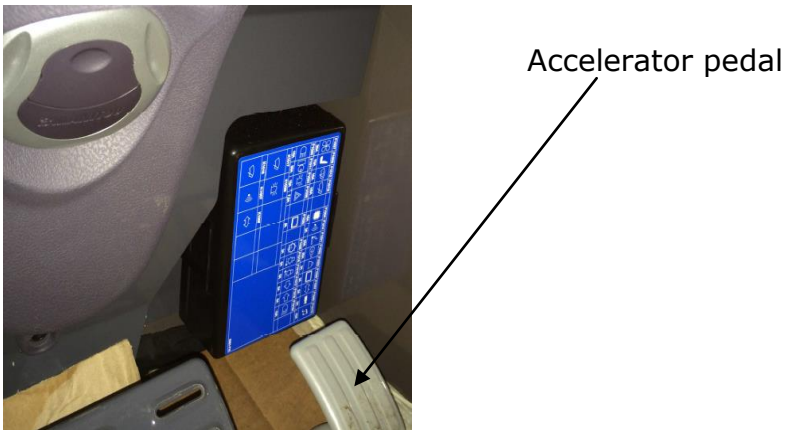


The diagnostic plugs can be found in the glove compartment, behind the driver's seat. These can be used for troubleshooting as well as for tuning the machine and the engine.

A - X6060 machine diagnostic plugs for pocket connection.

B - Engine diagnostic plug

10.1.15. Accelerator pedal

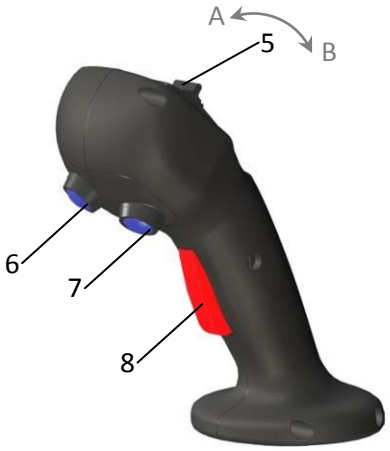


10.1.16. Brake pedal used to cut transmission

This pedal controls the front and rear wheels via a hydraulic disk braking system used to slow down and stop the machine.

IMPORTANT
For emergency braking (firmer braking), the transmission will be cut. To reactivate the transmission, you will need to return the drive joystick to neutral and release the dead man's button.

10.1.17. Drive/control joystick



Permanent (regardless of the mode)

A	⇨	Drive
B	⇨	Reverse
7 + 3	⇨	Extend counter-cutters
7 + 4	⇨	Withdraw counter-cutters
3 + 4	⇨	Switch the counter-cutter cycle on or off
5A	⇨	Raise the reamer
5B	⇨	Lower the reamer
5A+6	⇨	Raise the arm stand and close the reamer hood
5B+6	⇨	Lower the arm stand and open the reamer hood
8	⇨	Dead man's button

Loading mode

2	⇨	Close all hatches
3	⇨	Unblock the reamer
3 + 6	⇨	Unblock the reamer, reamer stationary
4 + 6	⇨	Start reamer
6	⇨	Stop reamer

Rear belt unloading mode

1	⇨	Open the central rear hatch
2	⇨	Close the central rear hatch
3	⇨	Move the belt left (Optional)
4	⇨	Move the belt right (Optional)
3 + 6	⇨	Start dispensing - left
4 + 6	⇨	Start dispensing - right
6	⇨	Stop belt

10.1.18. Parking brake switch

When you press the parking brake switch, an icon (P) will appear on the screen of your XPA tablet. When the parking brake switch has been deactivated, the icon will remain on the screen and the hand brake will remain applied until a drive request has been made using the joystick.

WARNING
Braking and starting is not instantaneous - please wait a few seconds.

10.1.19. Drive / Neutral / Reverse gear selector

Drive: push forwards on the lever

Reverse: pull back on the lever

In order for this to function properly, you must first press the dead man's button on the handle (see § 10.1.18 rep 8).

NOTE
The reverse lights and the sound alarm will indicate when you are reversing.

Moving around safely

Authorisation to move is controlled by an electronic module. In order for operators to move forwards or backwards, they must respect the following sequence:

NOTE
Begin by checking to ensure that the ladder has been folded away.

1 - Ensure that you are sitting correctly on the driver's seat
2 - Release the parking brake
3 - Select the drive speed
4 - Press the dead man's button. You will hear the machine begin to rev up. These revs can be adjusted (see § 10.5.4.5.1.A.)
5 - Engage drive or reverse gear.

The speed of movement is proportional to the position of the lever.

NOTE
If the operator gets up from the seat for less than 3 seconds while the vehicle is moving forward or reversing, the operator will be able to sit back down and continue to move either forwards or backwards.
If they get up for more than 3 seconds, the transmission will be cut and the brakes will be applied. The operator will need to sit back down, return the gear selector to neutral, press on the dead man's button and engage drive or reverse gear in order to continue moving.

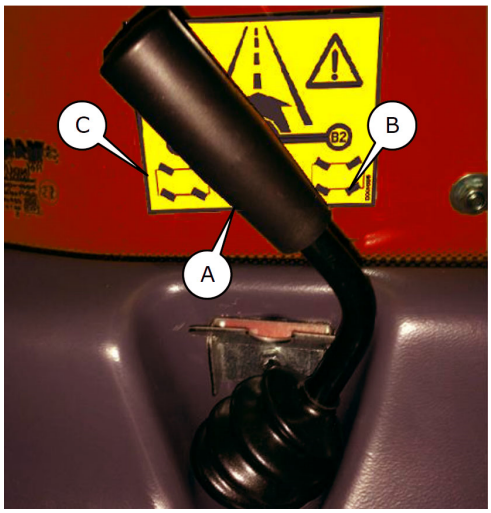
10.1.20. Selecting a direction

Direction selector lever
Lift the red latch to unlock the lever.

A - Front steering wheels (for road driving).

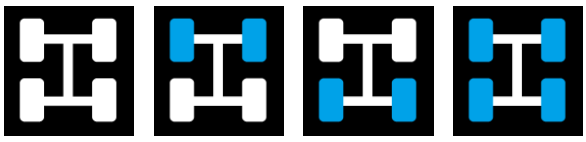
B - Front and rear steering wheels in opposite directions (for small turns).

C - Front and rear steering wheels in the same direction (lateral movement).

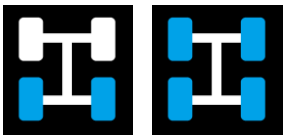


WARNING
Prior to selecting one of the three direction options, align the 4 wheels in relation to the machine's axis. Never change direction mode while driving.

BLUE warning light wheel alignment
The wheel symbol on the alignment warning light will change to blue when they are parallel to the machine. It can be used to realign the wheels when changing direction mode.



Control wheel alignment
Move the direction selection lever to position B (for small turns).
Turn the steering wheel slowly to align the rear wheels until one of the rear wheel alignment warning lights appears.



Identify the position of the steering wheel and continue to turn it in the same direction until light A is switched off. Identify the position of the steering wheel again and move it to the halfway point of the angle formed by the two positions of the warning light - "light starting" and "off" - in order to obtain perfect alignment.
Move the direction selection lever to position A (for road driving).

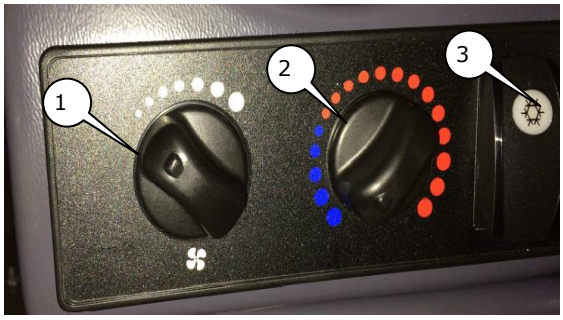
Turn the steering wheel and align the wheels until the warning light  is lit.

WARNING
Before driving on public roads, you will need to check the alignment of the rear wheels and to drive using the front drive wheels. You will need to check the alignment of the rear wheels regularly using the blue warning lights when driving around using the machine. In the event of any errors occurring, please contact your dealer.

10.1.21. Level indicator

This is used to ensure that the machine is horizontal.

10.1.22. Heating control



1) *Ventilation selector*
2) *Heating selector*
3) *Switch climate control on/off*

10.1.23. Cabin ventilation filter

See: MAINTENANCE: Every 500 hours of use.

10.1.24. Windscreen demisting vents

For optimum efficiency, please close the other heating vents.

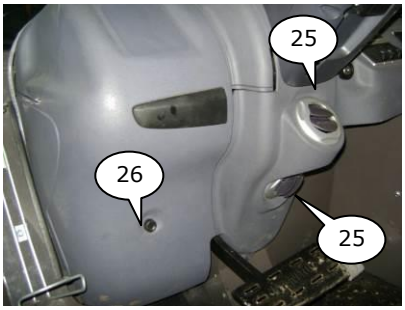
10.1.25. Heating vents

These heating vents are used to direct ventilated air throughout the cabin and onto the windows at the sides.

10.1.26. Windscreen washer tank access hatch

Loosen the screws and remove the windscreen washer tank access hatch.

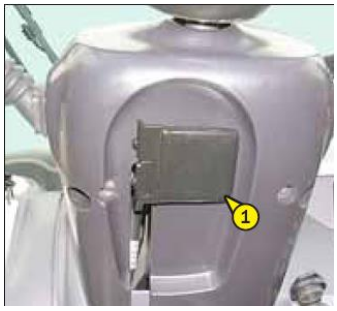
(see: MAINTENANCE: Every 500 hours of driving).



10.1.27. Handle for adjusting the steering wheel

This handle is used to adjust the inclination and the height of the steering wheel.

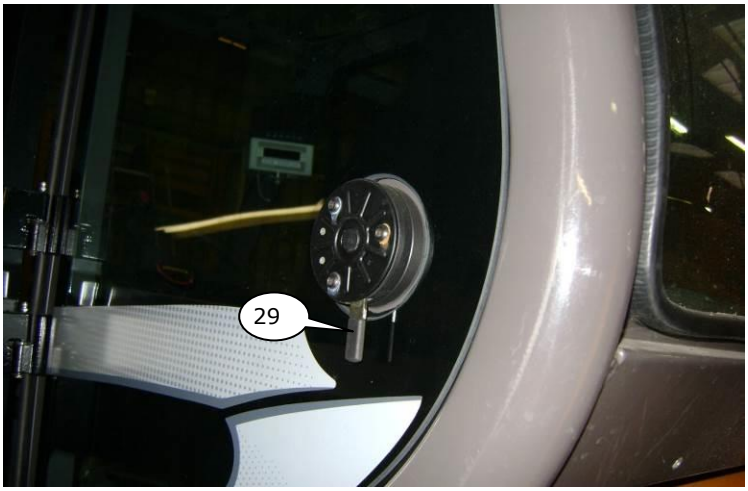
- Pull lever 1 to adjust the steering wheel.
- Push lever 1 back to lock the steering wheel into the desired position.



10.1.28. Door locking

The machine comes supplied with two keys used to lock the cabin.

10.1.29. External locking handle for the upper half-door

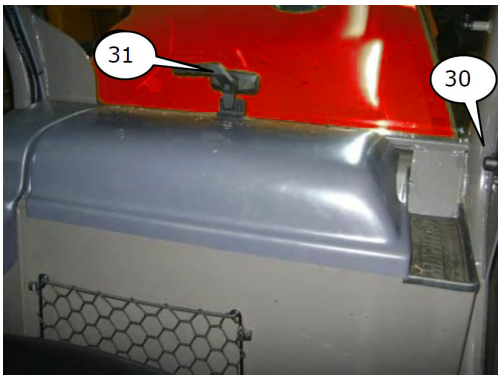


10.1.30. Internal unlocking button for the open upper half-door

10.1.31. Handle for opening the rear window

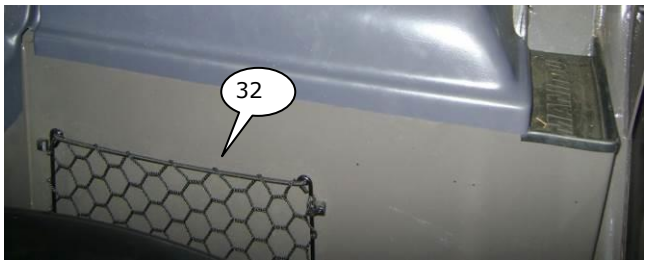
Emergency exit

The rear window can be used as an emergency exit in circumstances where it is impossible to exit the cabin using the door or by opening the windscreen.



10.1.32. Document holder

Please ensure that the user manual is in its correct place in the document holder.

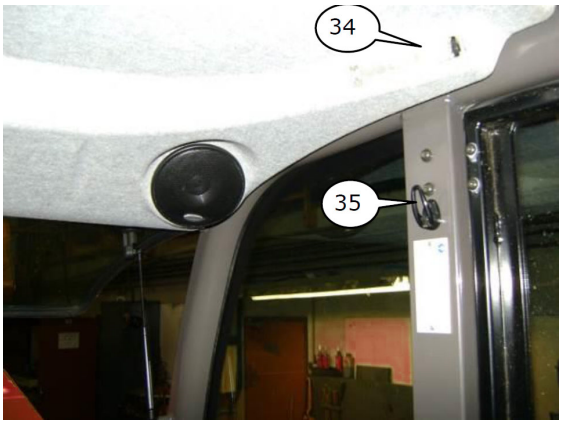


10.1.33. Sunshade

Move the sunshade with two hands in order to either fasten or unfasten it.

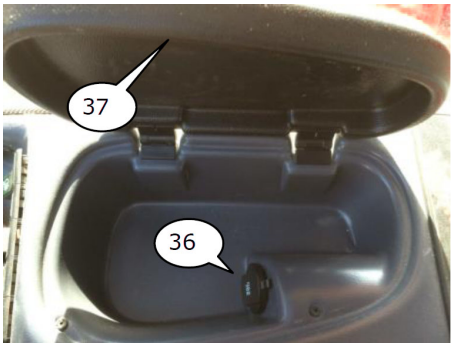
10.1.34. Interior light

10.1.35. Coat peg



10.1.36. Cigarette lighter

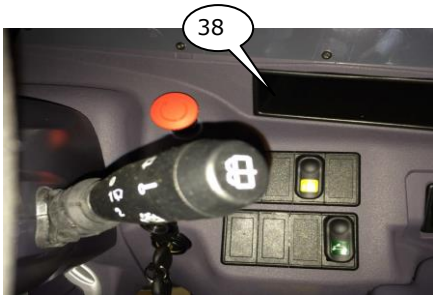
For 12V appliances and maximum 10A amperage.



10.1.37. Armrest and storage space

Lift the armrest to access the storage space

10.1.38. Car radio (Optional)



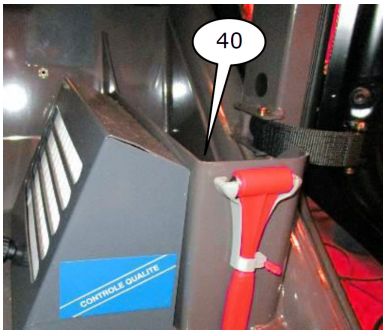
Consult the appliance manual.

10.1.39. Wing mirrors

A button can be used to adjust the wing mirrors (see point 10.1.7).

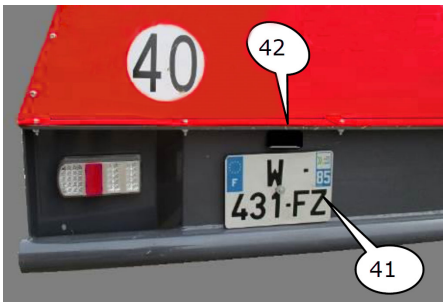
The outside right wing mirror can be hidden away with the use of a switch (optional).

10.1.40. Toolbox



10.1.41. Registration plate space

10.1.42. Registration plate light

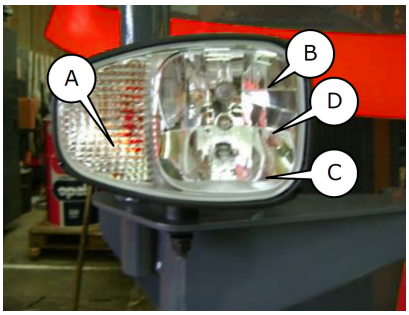


10.1.43. Lateral reflectors

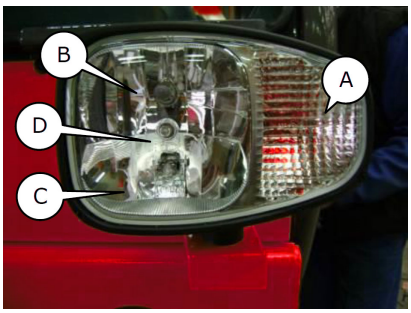
10.1.44. Front headlights

A - Front indicator.
B - Front dipped-beam lights
C - Front full-beam lights
D - Front pilot light

Right headlamp



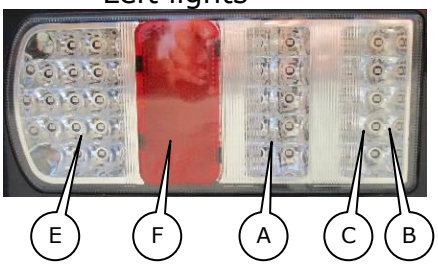
Left headlamp



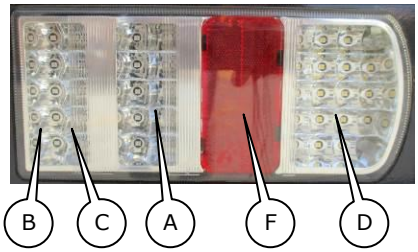
10.1.45. Rear lights

A - Rear indicator
B - Rear stop light
C - Rear light
D - Backup lightl
E - Fog lamp
F - Reflector

Left lights

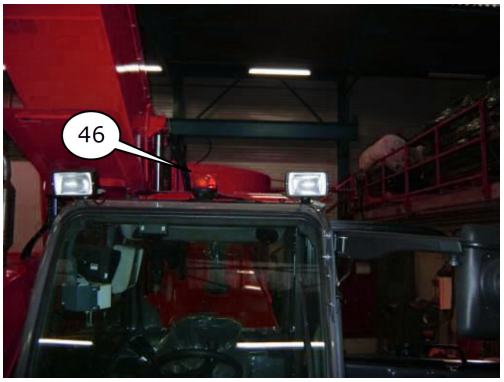


Right lights

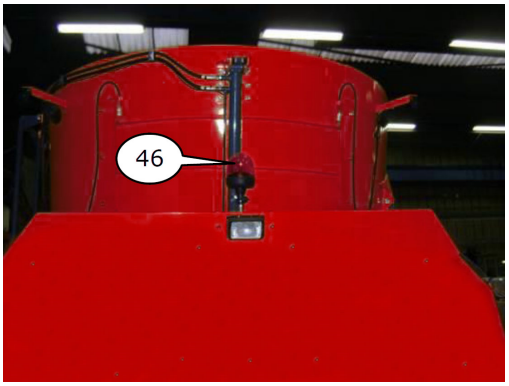


10.1.46. Rotating light

Front



Rear



10.1.47. Weighing unit (optional)

Please refer to the manual supplied with your machine in order to ensure that it is used properly.
1 - Function and programming button
2 - Connector to supply accessories
3 - 16-character LCD
4 - ON/OFF switch
5 - 5 digit diode
6 - Support
7 - Identification label

10.1.48. Weighing repeater

Some information on the weighing unit will be repeated on the XPA screen.

For loading:
- *The n° and the name of the ingredients*
- *The total or partial loading weight.*

For unloading:
- *The n° and batch being unloaded*
- *The total or partial weight being unloaded*

10.1.49. Control screen

See § 10.1.15 XPA tablet

10.1.50. Mixing camera (CAM1)

Used to view the inside of the tank.

10.1.51. Reverse camera (CAM4)

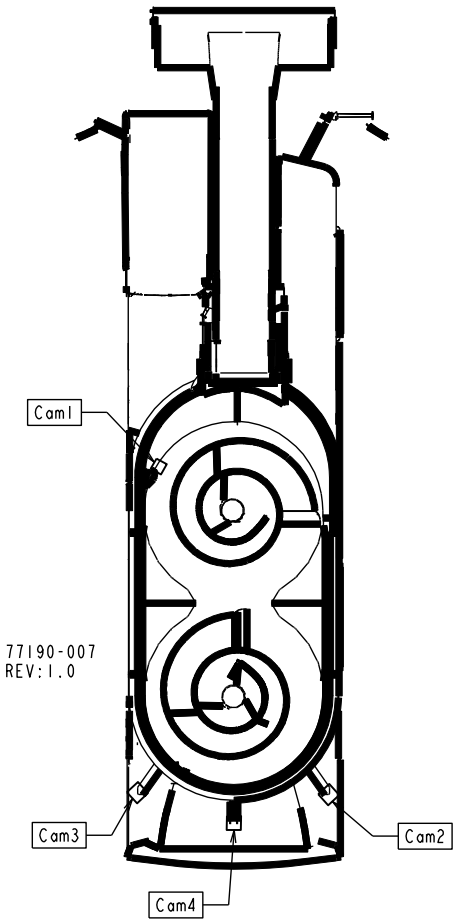
This is used to view the rear of the machine. The rear camera covers the rear area not covered by the wing mirrors. You may not modify its orientation.

10.1.52. Left dispensing camera (CAM3)

Used to view the rear to the left.

10.1.52. Right dispensing camera (CAM2)

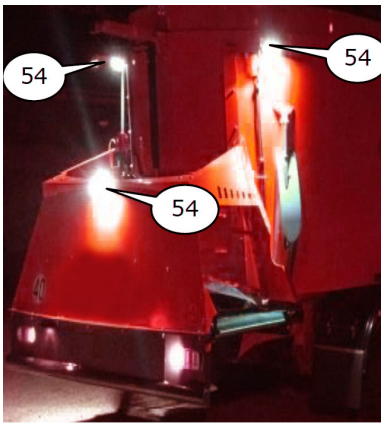
Used to view the rear to the right.

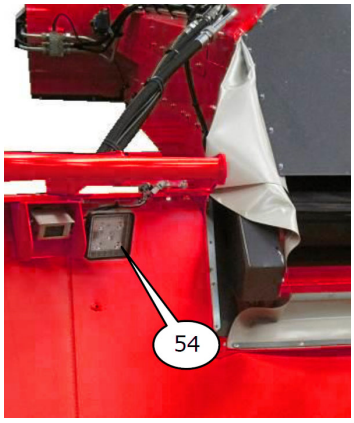


10.1.54. Work lights

6 lights (depending on the machine), used to ensure a safe work environment:

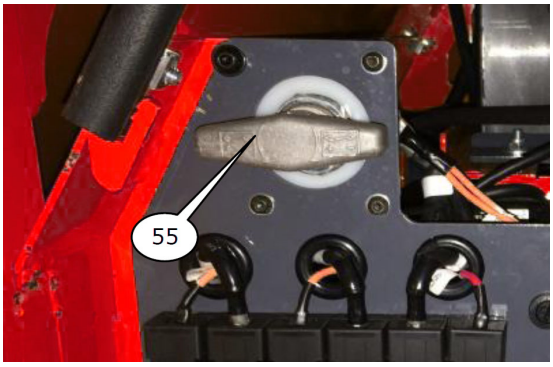
2 at the front + 2 to the rear + 1 in the tank





10.1.55. Battery master switch

Used to cut the power supply to all of the machine's components.



WARNING
After having switched off the power to the cabin, wait 2 minutes before turning the battery master switch to OFF (this time is needed to allow certain electronic components to finish their control processes).

WARNING
Do not use while the engine is running.

10.1.56. Fuel start-up pump

In cases where the fuel is being defused - as a result of a breakdown, for example - activate the start-up pump 3 or 4 times.

10.2. STARTING THE MACHINE

10.2.1. Preliminary checks

Checks on the levels, to ensure the machine is horizontal, as well as checks on fuel, oil, pressure and that the tyres are in proper working order.

Check to ensure that all protective measures are in place, that all work tools are in proper working order and that there are no fuel or oil leaks.

Check to ensure that the brakes are working properly. Carry out a series of brakes in order to "run in" the disks and plates for enhanced efficiency.
Check to ensure that the sound alarm is functioning normally.

10.2.2. Conditions in the surrounding area

Start the machine on a solid, flat and horizontal surface.
Determine your working area and ensure it is secure.

If you are required to start up your machine inside, please ensure that the space is sufficiently ventilated. Gases escaping from the engine contain toxic CO.

10.2.3. Systems for starting the engine and operating work tools

After having understood the method for starting up the engine, do this while sitting on the seat.
Let the engine run for a few moments before beginning a work phase.
During this time, you can adjust your seat and the wing mirrors and attach your seat belt before moving.

10.3. STOPPING THE MACHINE

Where possible, do not cut the engine suddenly while it is running at full capacity. Let the engine run at a reduced capacity for roughly 2 minutes before stopping it.

. Apply the parking brake.
. Turn the key on the dashboard to position 0.

WARNING
You must never activate the battery master switch when the engine is running.
This may result in damage to the electrical installation of the load system.
What's more, voltage spikes around the alternator can also be dangerous.

WARNING
You must never activate the battery master switch within 2 minutes of switching off the power. The engine control unit will record the data and the AD-BLUE pump will ventilate any liquid remaining in the ducts during this time.

10.4. ADJUSTMENTS TO ENSURE THAT THE MACHINE FUNCTIONS CORRECTLY

Normal operating mode :

Drive : . The parking brake must be released.
. You must be sitting on the seat.
. Select the desired drive speed.
. On the joystick, press on the dead man's button and push to go forward or pull on the lever to reverse. When pressing the button, the machine will accelerate automatically at a pre-determined speed.
. The travelling speed will be proportional to the distance of the joystick from its neutral point.

WARNING
Should you stand up from the seat for too long, the machine will slow down and eventually stop. To start back up again, you will need to return the joystick to neutral: press on the dead man's button, re-select your driving direction and ensure you are sitting on the seat.

Silage unloading
Select the type of foodstuff to load on the screen (fibre / corn / supplement) in order to select the right speed for the engine (adjustable speed).
Switch on the reamer. Depending on the type of cut desired, switch on the mixing auger.
Speed 1 will be the default option in order to boost the power of the reamer.
In the bunker silo, begin silage unloading from the top by pressing the reamer heel on the silo's previous cut.
In big baler mode, start at the top of the bale, at the end, and proceed fold by fold.
For round bales, place the bale on a flat surface and start at the top.
To cut fibres, turn the counter-cutters to their active position.

Mix
Switch on speed 1 for the mixing auger(s), with the engine speed exceeding 1600 tr/min.
Reminder :
Button in position:
1: mixing and loading speed: normally set at 12 tr/min.
2. dispensing and mixing speed: normally set at 25 tr/min.
3: timed function dispensing end speed: normally set at between 45 and 60 tr/min (depending on the model).
To cut fibres, turn the counter-cutters to their active position.
You can control the rotation of the mixing auger(s) on the screen. Should these fail to rotate, the safety auger(s) might have sustained damage. See § maintenance to change the safety bolt.

Dispensing
Dry feed rations : Select speed 2 for the mixing auger.
Ensure that the counter-cutters remain active.
Combustion engine speed greater than or equal to 1600 tr/min.
Wet feed rations : Select speed 2 for the mixing auger.
Deactivate the counter-cutters.
Combustion engine speed greater than or equal to 1600 tr/min.
You can manage the dispensing flow by opening/closing the hatch.
To dispense using the belt, switch one of them on in order to open the drainage hatch.
To empty quickly and easily once dispensing is complete and where less than 200 kg is left, switch to speed 3.

10.5. USING THE XPA TABLET

10.5.1. XPA screen description

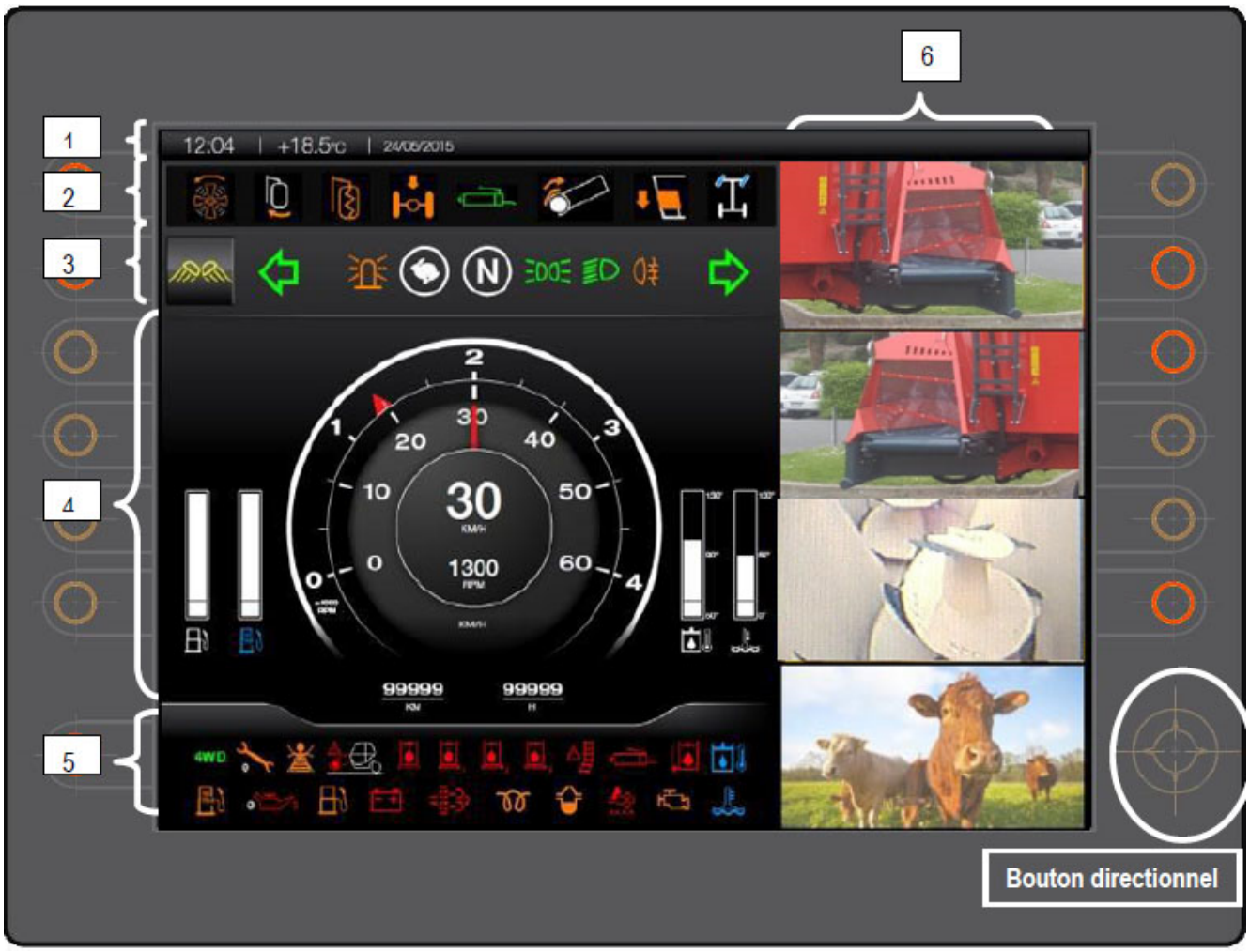
The XPA screen has both a touchscreen and buttons and can be navigated using both the touchscreen and the buttons. A directional button can be found at the bottom right in addition to the touchscreen mode to make more precise selections on the screen.

10.5.1.1. Zone information

The screen display is divided into several different zones

Zone 1 : Strip showing time / date / outside temperature
Zone 2 : Strip showing information for the current activity
Zone 3 : Strip showing lights and drive information
Zone 4 : Strip showing information depending on the page
- Road page: meters, levels, outside temperature
- Loading page: reamer information, belt, mixing auger
- Unloading page: dispensing belt, mixing auger information.

Zone 5 : Strip for engine, hydraulic alerts, etc.
Zone 6 : Camera strip



10.5.1.2. Page information

The screen has 3 display pages while in use - driving, loading, unloading - which are customised versions of the dashboard depending on the use phase in question, as well as a main menu page.
The display for each of the 3 pages will appear automatically depending on the position selected on switch 12 (switch: mode).
However, it is possible to change the display mode manually using the first 3 buttons at the top right of the screen (see below).
Details on these 3 pages can be found in the paragraphs below.

10.5.1.3. Button information

The buttons on the sides of the screen are used to open another page. These are shortcuts to other pages or sub-menus from the main menu page. Details can be found in each of the paragraphs below.
Whatever the page, the lateral buttons will be lit when they are active. Any buttons that are not lit will not be in use.

10.5.1.4. Information on touchscreen buttons

On the 3 pages, in normal use, some areas will be touch-sensitive. These will either be represented by a raised button or a small arrow next to an icon representing a shortcut to another page.

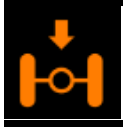
10.5.2. Icon descriptions

10.5.2.1. Icon for the strip showing information on current activity


Changing the direction of the vent

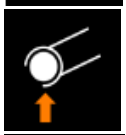

Defrost the wing mirror


Raise the suspension


Lower the suspension


Lift the hood


Lower the stand

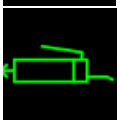

Raise the arm


Open the hatch

Counter-cutters

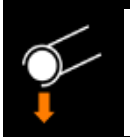

Fold back the wing mirror


Fold out the wing mirror


Lubrication unit during lubrication (Optional)


Lower the hood


Raise the stand


Lower the arm


Close the hatch

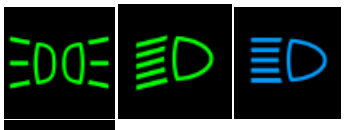

Align Front / Rear wheels

10.5.2.2. Icon for the strip showing Lights and drive information


Work lights


Rotating light


High/low speed


Full-beam / dipped-beam / pilot lights


Rear fog lamps


Left indicator


Right indicator


Drive / Neutral / Park

10.5.2.3. Icon for customised strips: Driving, loading and unloading

An unlit warning light indicates the reamer is stationary.

A green warning light indicates that the reamer is functioning normally.

An orange warning light indicates a significant load on the reamer.

A flashing red warning light indicates that the reamer is blocked - an automated unblocker will take over (Optional).

A flashing orange warning light with an exclamation mark indicates that the reamer is turning in the opposite direction (unblocking mode).

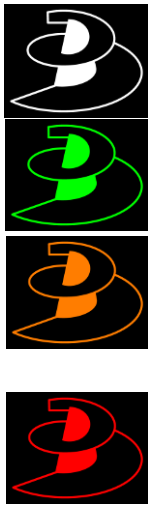
An unlit warning light indicates that the conveyor is stationary.

A green warning light indicates that the conveyor is functioning normally.

An orange warning light indicates that the conveyor has been slowed down by a heavy load.

A flashing orange warning light indicates that the conveyor is blocked - an automated unblocker will take over (Optional).

A flashing orange warning light with an exclamation mark indicates that the conveyor is running in the opposite direction (unblocking mode).



A white warning light indicates that the mixing auger is stationary.

A green warning light indicates that the mixing auger is rotating at a normal speed.

An orange warning light indicates the mixing speed.
Speed 1 < 6 tr/min linked to a higher load or a reduced engine speed.
Speed 2 < 22 tr/min linked to a higher load or a reduced engine speed.
Speed 3 < 46 tr/min linked to a higher load or a reduced engine speed.

A red warning light indicates that the mixing auger was engaged during start-up.
A flashing red warning light indicates that the mixing auger is turning in the opposite direction.

Dispensing on the right

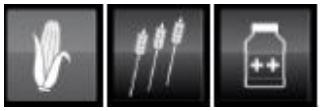
Dispensing on the left

Belt stop

Move dispensing to the right

Move dispensing to the left

Molasses pump activated



Type of material loaded switch (program speeds depending on the type of ingredients - silage, fiber, supplements - using the tablet)

Loading/unloading logo

Rev-counter information logo

10.5.2.4. - Alert symbols

WARNING
A lit or flashing warning light while the engine is running indicates that there is an operating error. When certain warning lights are lit, an alarm may sound. Do not ignore this warning - contact your retailer at the earliest available opportunity.
Should one of the warning lights come on while the machine is running, bring the machine to a stop while following the appropriate safety precautions.

Engine temperature lights

- Blue: Coolant temperature < 20°C

- Red: Excessive engine temperature warning

Engine temperatures:

-Below 50°	During reduced use of the machine, please wait to allow the temperature to rise before optimal use.
-Between 50° and 100°	Normal machine use.
-Between 100° and 105°	Reduced use of the machine, please monitor the temperature.
-Between 105° and 120°	The engine has been stopped, searching for the overheating cause.

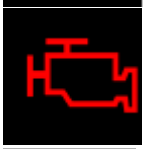
Warning light to indicate the presence of water in the diesel

SCR warning light

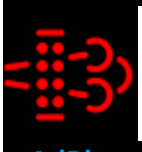
Engine oil warning light

Preheating warning light

Amber engine warning light



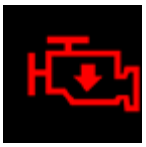
Red engine notification warning light



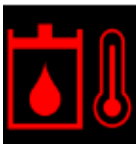
DPF warning light

Diesel reserve warning light

AdBlue reserve warning lights



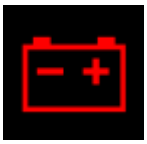
Power reduction warning light



Hydraulic oil temperature warning light

Red: Warning for Excessive oil temperature > 70° C

Blue - when lit, there is a risk that the machine will lock out as a safety precaution § 10.5.4.5.4
Oil temperature < 20° C and pump casing pressure > 3.5 b
or
Oil temperature > 20° C and pump casing pressure > 5 b



Battery charge warning light

Locked hydraulic function warning light

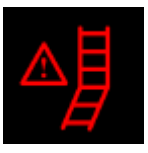
Hydraulic tank filter clog warning light

Cylinder block filter clog warning light

Belt pad filter clog warning light

Low oil levels in the hydraulic tank warning light

Arm in low position warning light
See § 10.5.4.5.2.A: Automated units, arm configuration



Ladder open warning light

Warning light for maintenance or checks

4RM engaged warning light

10.5.3. Adjusting the cameras

10.5.3.1. Remote control

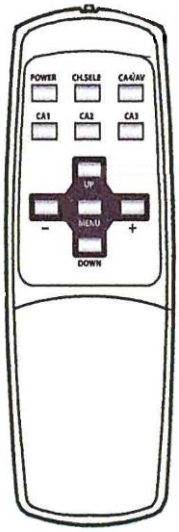
Prior to using the remote control provided, please check to ensure batteries have been inserted.

The receiver for the remote control is located below the dashboard above the accelerator pedal. Direct the remote control towards this area.

Button information:

POWER : ON/OFF for the 4-camera splitter
CH.SELE : Menu selection button
CA4/AV : Button for selecting camera 4 and the AV channel
CA1 : Button for selecting camera 1
CA2 : Button for selecting camera 2
CA3 : Button for selecting camera 3
UP/DOWN/+/- : Move button.
MENU : Button for displaying the menus and going back to the menus

Short press1 : **DISPLAY MENU** : to adjust camera colours
Short press2: to display the name of the cameras
Long press: **MAIN MENU** : adjust the position, the direction and automation display of the cameras.



10.5.3.2. Menu Tree

Short press Menu Button ⇨ Adjust brightness

Long press Menu Button ⇨ Main Menu

MAIN MENU

- 1. CAMERA SETTING
  - CAM1
    - MIRROR
    - ROTATION 180°
    - NAME
    - SORT
  - CAM2
    - MIRROR
    - ROTATION 180°
    - NAME
    - SORT
  - CAM3
    - MIRROR
    - ROTATION 180°
    - NAME
    - SORT
  - CAM4
    - MIRROR
    - ROTATION 180°
    - NAME
    - SORT
- 2. TRIGGER MODE
  - TRIGGER1
    - SPLIT SOURCE
    - DELAI
    - SCALE
    - DISPLAY SCALE
  - TRIGGER2
    - SPLIT SOURCE
    - DELAI
    - SCALE
    - DISPLAY SCALE
  - TRIGGER3
    - SPLIT SOURCE
    - DELAI
    - SCALE
    - DISPLAY SCALE
  - TRIGGER4
    - SPLIT SOURCE
    - DELAI
    - SCALE
    - DISPLAY SCALE
- 3. SPLIT MODE
  - SPLIT 1
    - SOURCE 1
    - SOURCE 2
    - SOURCE 3
    - SOURCE 4
    - AUDIO
    - CUSTOM
      - SCALER
      - POSITION
  - SPLIT 2
    - SOURCE 1
    - SOURCE 2
    - SOURCE 3
    - SOURCE 4
    - AUDIO
    - CUSTOM
      - SCALER
      - POSITION
  - SPLIT 3
    - SOURCE 1
    - SOURCE 2
    - SOURCE 3
    - SOURCE 4
    - AUDIO
    - CUSTOM
      - SCALER
      - POSITION
- 4. AUTO SCAN
- 5. ADVANCED MENU

10.5.3.3. SPLIT information

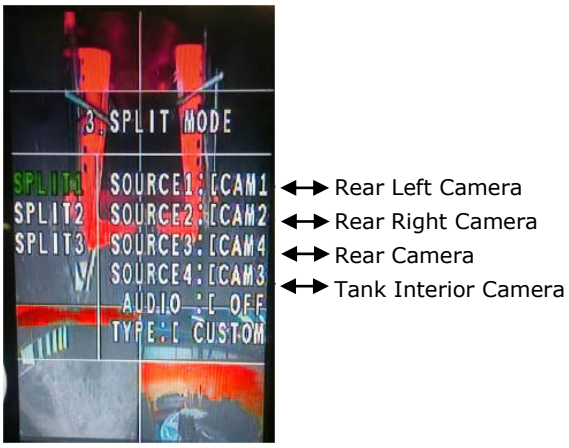
The video multiplexer is used to display the 4 cameras, one after another, on the screen as well as to create 3 SPLITs, which are simultaneous camera display combinations, for 2 to 4 cameras.

Execute a long press on **MENU** to display the window ***MAIN MENU***, select ***3. SPLIT MODE*** with the button **CH.SELE**, you will see 3 SPLITS appear that you will then be able to customise.
It is recommended that you have the view in the background of the SPLIT when making any adjustments.
To change the current view, exit using the button **MENU** and change the view using the button **CH.SELE.**

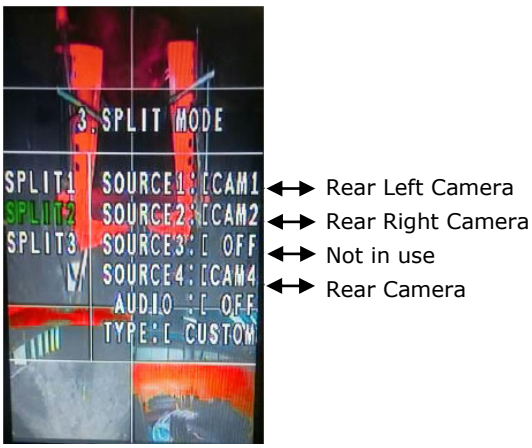
In the menu ***3. SPLIT MODE***, select the **SPLIT1** using the button **CH.SELE** and specify the cameras to be linked to each SOURCE, with the source representing the frame of a video on the screen.

It is possible that the n° of cameras might be different. This will depend on how the 4 cameras are connected to the video multiplexer located beneath the cabin. When exiting the factory, the cameras are adjusted as specified below.

SPLIT 1 (permanent configuration)



SPLIT 2 (reverse configuration)



It is possible to configure a 3rd SPLIT.

10.5.3.4. Determining the location of the cameras

Once you have specified the SPLITS, you must determine the location and the size of each of the cameras.
Using the arrows and the button **CH.SELE**, select from the sub-menu ***3. SPLIT MODE***, ***TYPE : CUSTOM*** to access the location adjustment menu (***POSITION***) and the size (***SCALER***) of the cameras.

It is recommended that you start by ***POSITION***, before switching from ***POSITION*** to ***SCALER*** by pressing on **CH.SELE** and repeat the same steps to return to ***POSITION***. Press on the button **CA1** to adjust camera 1. To adjust the location of a camera, you must move the top left corner of the frame of the camera you wish to adjust to the desired location by moving the frame using the arrows. Follow the same procedure for all other cameras.

Repeat using the button **CH.SELE** in mode ***SCALER***. To change the size of the camera frames, use the arrows on the remote control.
Exiting the factory, the cameras will be adjusted as specified below:

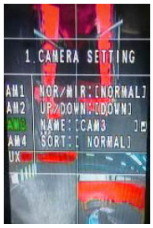
The location of the cameras is complete for SPLIT1. Exit using the button **MENU** and follow the same procedure for SPLIT2 using the specified definition. Exiting the factory, the SPLIT2 will be adjusted as specified below because it will be indexed on the reverse. More details on this feature can be found in point 5.

If the cameras are not in the desired direction, you will be able to turn them 180° or to obtain a mirror effect. Details on this can be found in next section.

10.5.3.5. Adjusting the direction of the cameras

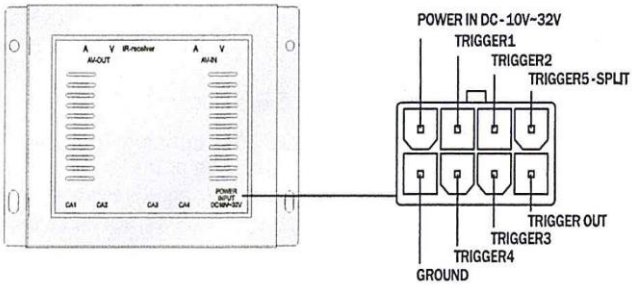
Start by displaying the view of the SPLIT you want to modify on the screen by pressing several times (where necessary) on the button **CH.SELE.** Execute a long press on **MENU**, the window ***MAIN MENU*** will appear. Access the sub-menu ***1. CAMERA SETTING***

This menu is used to adjust the direction of the cameras, to rotate them 180°, to obtain a mirror effect and to modify the camera names. Their positions cannot be adjusted from this menu. Exiting the factory, the cameras are adjusted as specified below:



10.5.3.6. Information on the TRIGGER

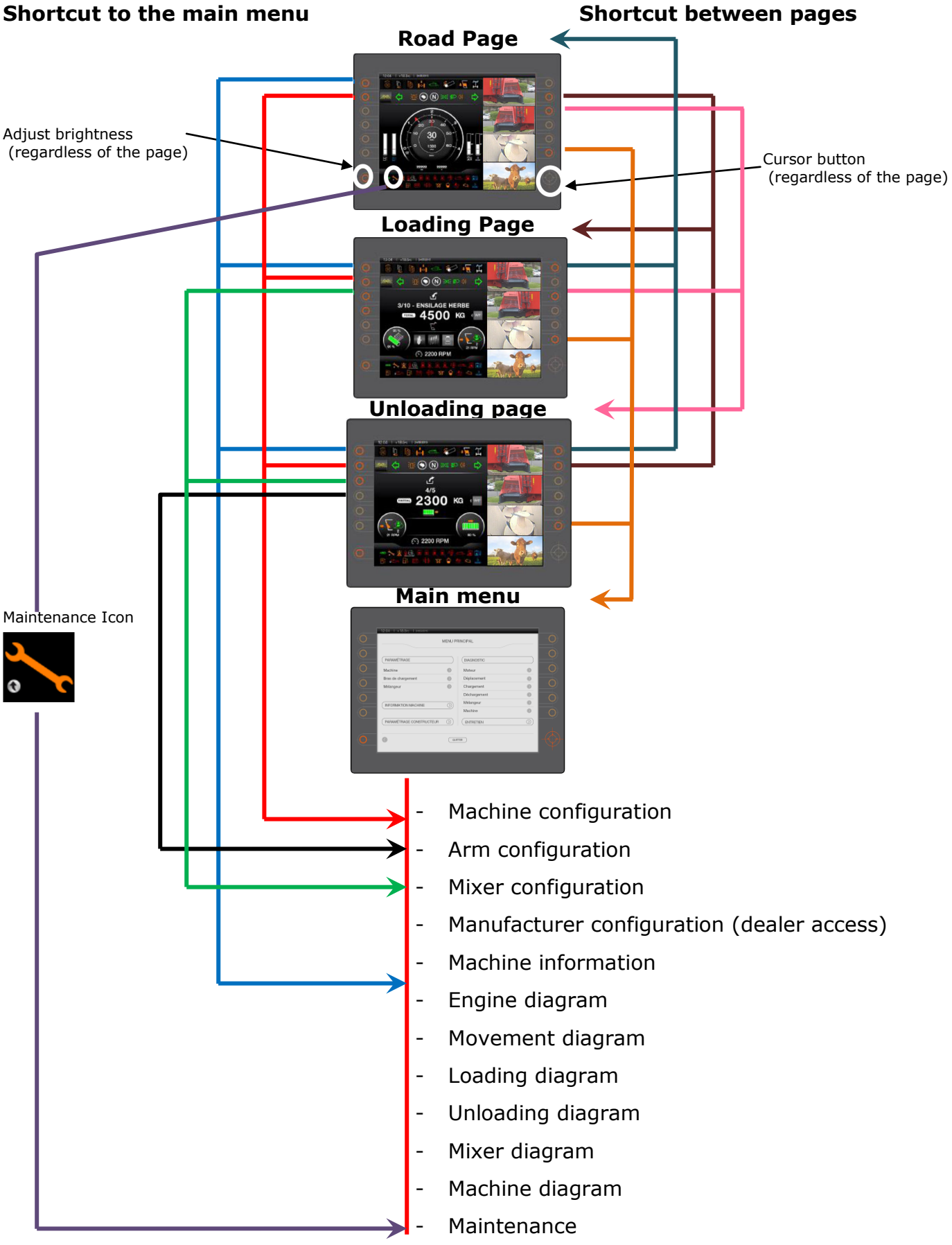
To determine the SPLIT display, i.e. to display a pre-determined SPLIT for reversing, for example, in ***MAIN MENU***, select the sub-menu ***2. TRIGGER MODE***. Out of the 5 TRIGGERs available, only TRIGGER 1 will be programmed. It corresponds to pin 7 of the supply plug for the multiplexer, in this case reverse. See below:



In the menu ***TRIGGER MODE***, to determine TRIGGER 1, select ***SOURCE*** in order to link it to SPLIT 2, which corresponds to the reverse SPLIT.
WARNING : on the screen, the SPLIT number will not be displayed. You will need to scroll down the possible sources - once the SPLIT corresponding to SPLIT 1 appears, press once again to switch to SPLIT 2, even if SPLIT is still displayed.
Exiting the factory, the cameras will be adjusted as specified below:

10.5.4. Page descriptions

10.5.4.1. Tree structure and shortcuts



10.5.4.2. Road Page

The only differences between the road page and the other 2 pages can be found around zone 4 (control zone) and the buttons at the side.

From right to left:

- Diesel level
- AdBlue level
- Odometer
- Hour meter
- Speed
- Rev counter
- Hydraulic oil temperature
- Engine water temperature

10.5.4.3 - Loading Page

The only differences between the loading page and the other 2 pages can be found around zone 4 (control zone) and the buttons at the side.

From right to left and from top to bottom:

- The loading symbol
- The n° and the name of the ingredient currently being loaded
- The total or partial weight that can be selected, with the P/T touch button to the right
- The symbol for loading molasses, where applicable
- The reamer's maximum speed %
- The maximum speed % of the loading conveyor
- The 3 buttons for pre-selecting speeds depending on which materials are being loaded (can be configured, see § configuring the loading arm)
- Engine speed
- The counter-cutter symbol, where applicable
- The symbol for the mixing auger with the speed selected and the actual speed of the auger.

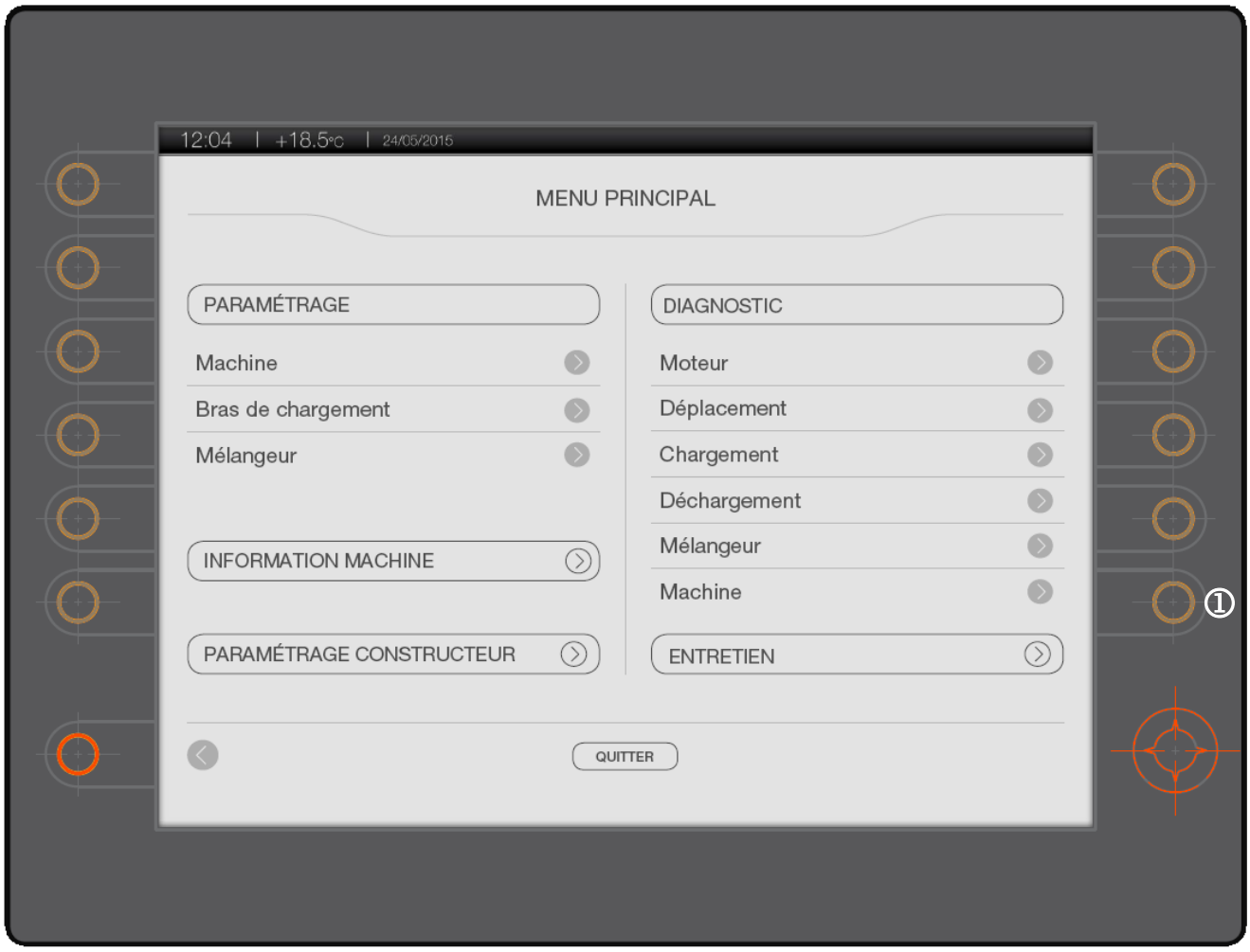
10.5.4.4 - Unloading Page

The only differences between the loading page and the other 2 pages can be found around zone 4 (control zone) and the buttons at the side.

From right to left and from top to bottom:

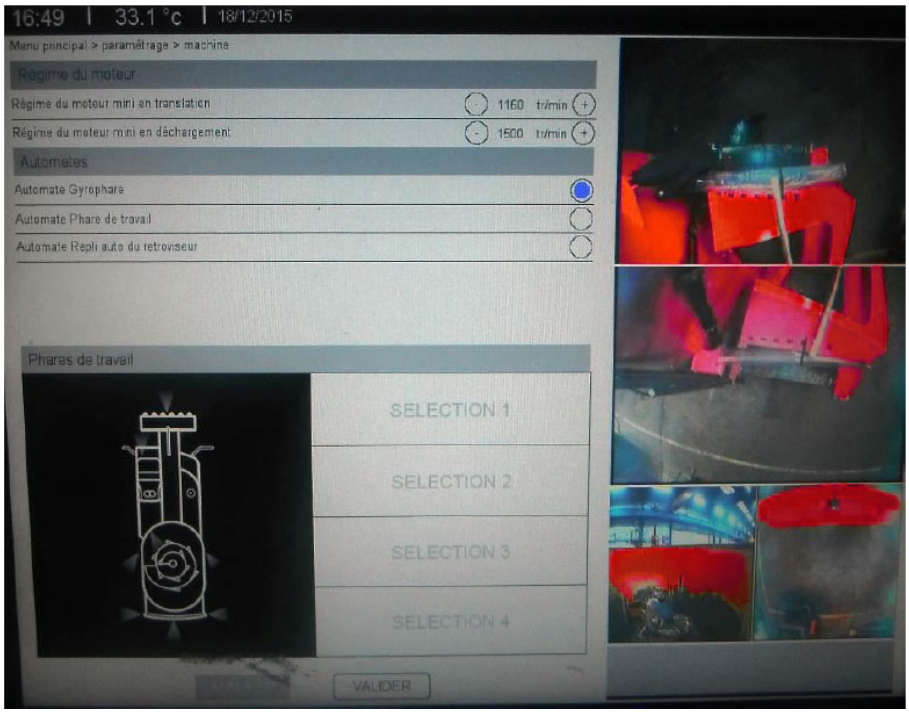
- The unloading symbol
- The unloading batch n°
- The total or partial weight that can be selected, with the P/T touch button to the right
- The symbol for the dispensing side, where applicable
- The counter-cutter symbol, where applicable
- The symbol for the mixing auger with the speed selected and the actual speed of the auger.
- The engine speed
- The maximum speed % of the dispensing belt

10.5.4.5 - Main Menu



The Home Page can be accessed at any time using the button ① which can be found above the cursor button. It can be used to access configuration, information and machine diagnostics in addition to allowing you to track any maintenance. Details on the pages can be found below

10.5.4.5.1. Machine Configuration



A - Engine Speed

- The minimum engine speed is the default engine speed chosen when the "dead man's button" is pressed to advance in road mode.
- The minimum engine speed when unloading is the default engine speed chosen when the "dead man's button" is pressed to advance in road mode.

B - Robots

- Robot for automatically folding out the wing mirror: when activated, the wing mirror on the right will fold out once the reamer has been set in motion and will fold back in once the reamer casing has been closed and the machine is moving backwards at a speed of more than 1 km/h (for machines equipped with the Fold out right wing mirror option).

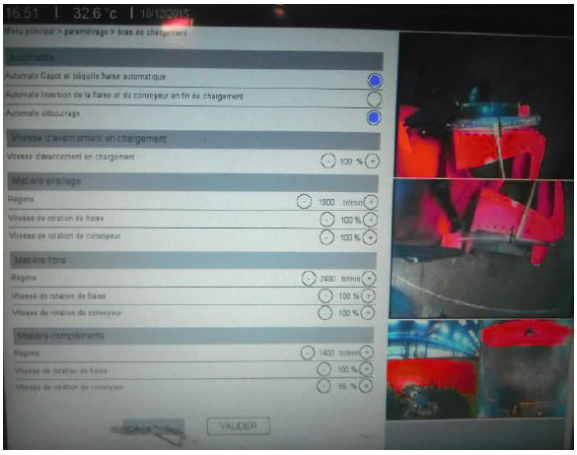
C - Work lights

The work light zone allows you to configure 4 projector light combinations, each one corresponding to the 4 buttons on the ceiling of the cabin. For example, Option 1 corresponds to all projector lights being lit at the same time, Option 2 corresponds to the projectors on the left being lit for distribution on the left.
To configure an option, press on the option you wish to configure, e.g. Option 1. The symbols ✖ and ✔ will appear in the box. Now press on the projectors which will be lit for button 1 in the box with the machine symbol. Then confirm your selection using the ✔ or cancel using the ✖.

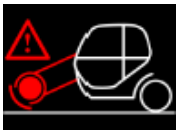
D - Cancel / Confirm button

This will cancel or confirm any changes you may have made to the machine configuration.

10.5.4.5.2. Configuring the loading arm



A - Robots



- Robot for the hood and stand of the automatic reamer: When this robot is activated, the hood of the reamer, the cap and the stand will close automatically once the reamer has stopped rotating and provided the arm is in an upright position to avoid closing the hood on the silo and to prevent the stand from colliding with the arm (light not activated).
- Robot for reversing the reamer and the conveyor once loading is completed: when this robot is activated, the reamer and the loading belt will be reversed once loading is completed in order to empty any supplements loaded onto the belt which have not been weighed. This is used to ensure enhanced precision when loading costly food products.
- Unblocking robot: when this robot is activated, the reamer and the loading belt will be reversed when the reamer is blocked in order to carry out an automatic unblocking procedure.

B - Drive speed during loading

This allows you to decrease or increase the very low drive speed during loading. By default, this speed is set at around 6 km/h.

C - Silage material

- Speed: this will be the automatic engine speed in loading mode when the "Silage" button is pressed.
- Reamer rotation speed: this will be the rotation speed of the reamer in loading mode when the "Silage" button is pressed. Please note, this is linked to the engine speed previously determined.
- Conveyor rotation speed: this will be the rotation speed of the conveyor in loading mode when the "Silage" button is pressed. Please note, this is linked to the engine speed previously determined.

D - Fibrous materials

This configuration will be the same as for "Silage materials" in loading mode when the "Fibre" button is pressed.

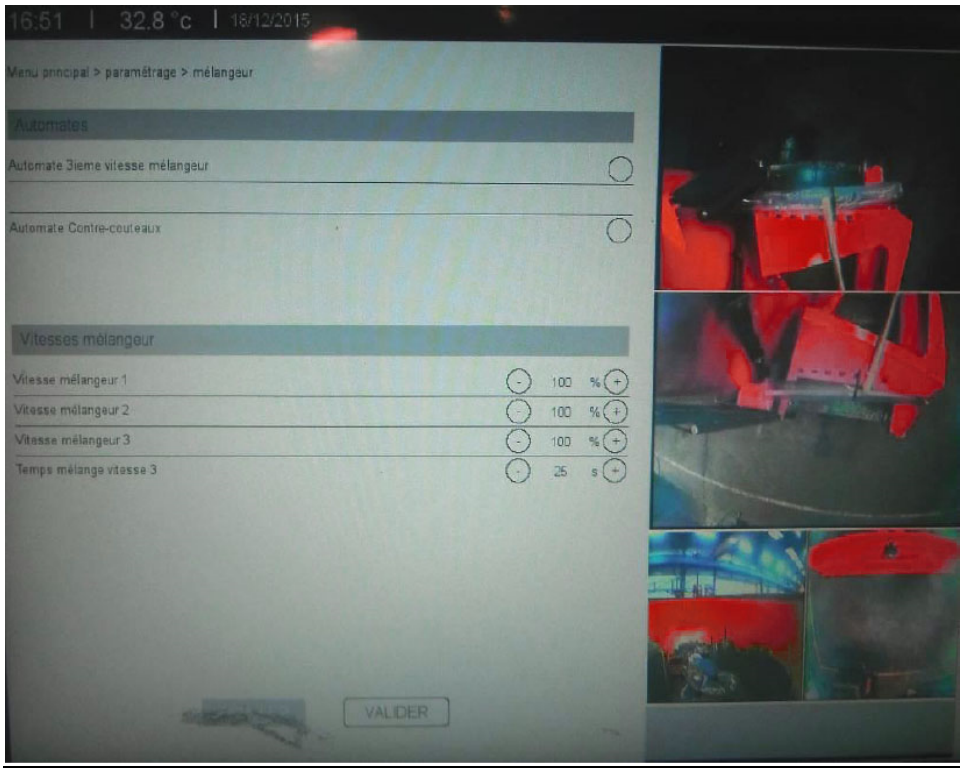
E - Supplements

This configuration will be the same as for "Silage materials" in loading mode when the "supplements" button is pressed.

F - Cancel / Confirm button

This is used to cancel or confirm any changes you may have made to the machine configuration.

10.5.4.5.3. Auger Configuration



A - Robots

- Auger 3rd speed robot: This robot is used to automatically trigger the third speed of the auger based on a weight remaining in the tank. This trigger weight can be adjusted when this robot is activated.
- Counter-cutter robots: These robots are used to automatically deploy and withdraw the counter-cutters during loading and unloading. The deployment and withdrawal times can be adjusted when this robot is activated.

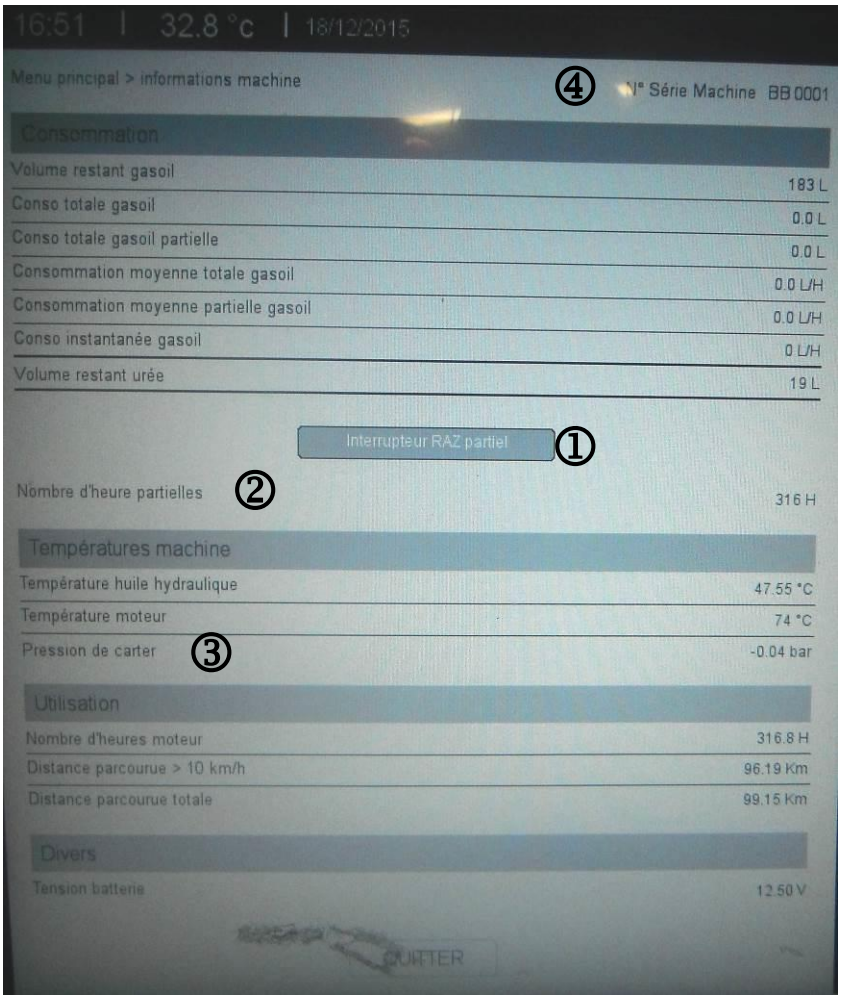
B - Auger speeds

- Auger speed 1: this will be mixing speed 1.
- Auger speed 2: this will be mixing speed 2.
- Auger speed 3: this will be mixing speed 3.
- Speed 3 mixing time: this will be the mixing time in speed 3 for cleaning the mixing augers during emptying and cutting.

C - Cancel / Confirm button

This is used to cancel or confirm any changes you may have made to the machine configuration.

10.5.4.5.4. Machine information



The machine information page provides details of the remaining volumes and consumption of diesel and AdBlue; machine temperatures; distance travelled and battery voltage.

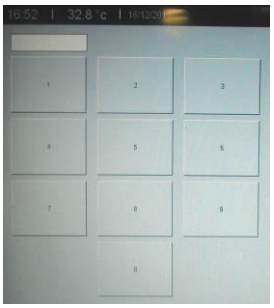
The machine's serial n° can be found on this screen ④.

A "Partial RESET switch" touch button ① in the middle of the page allows you to reset average consumption to zero. The partial number of hours ② is the number of hours since the consumption levels were last reset to zero.

WARNING

The sump pressure line ③ corresponds to the pressure in the pump drains (drive, mixer, reamer). Should this value exceed 5 bars, a safety mechanism will be activated to protect the pumps. The combustion engine will revert to a safety speed of 1250 tr/min. This safety mechanism will be activated when the hydraulic oil is cold. Allow the machine to heat up at a low speed using the features to standardise the temperature of the hydraulic oil in the circuits.

10.5.4.5.5. Machine configuration

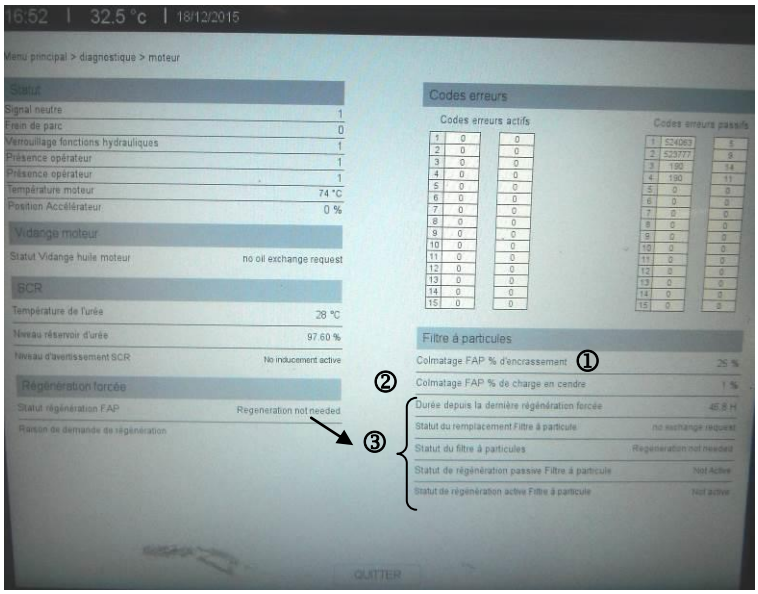


This page is for dealers only and is used for troubleshooting purposes. It will be password protected.

10.5.4.5.6. Diagnostic

All of the diagnostic pages are help pages designed to help you identify the source of any error as quickly as possible. They are available to consult, but are targeted more at dealers.

The only page which will be of interest to customers is the engine diagnostic page, details on which can be found below.



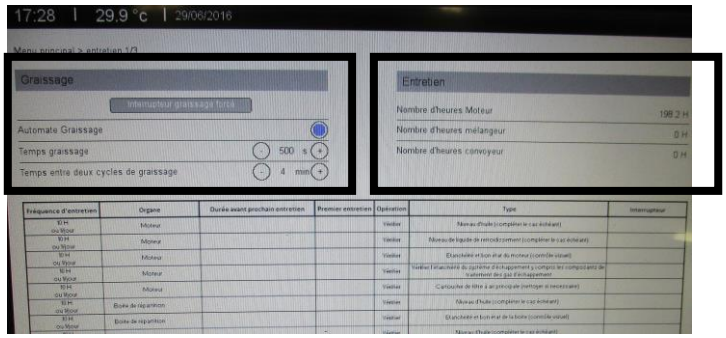
① DPF clog %: The machine is equipped with a particle filter which, depending on use, will require occasional internal cleaning. It will be cleaned automatically as part of normal use of the machine, but will require manual action to be taken when the DPF clog % exceeds 100% (see § DPF).

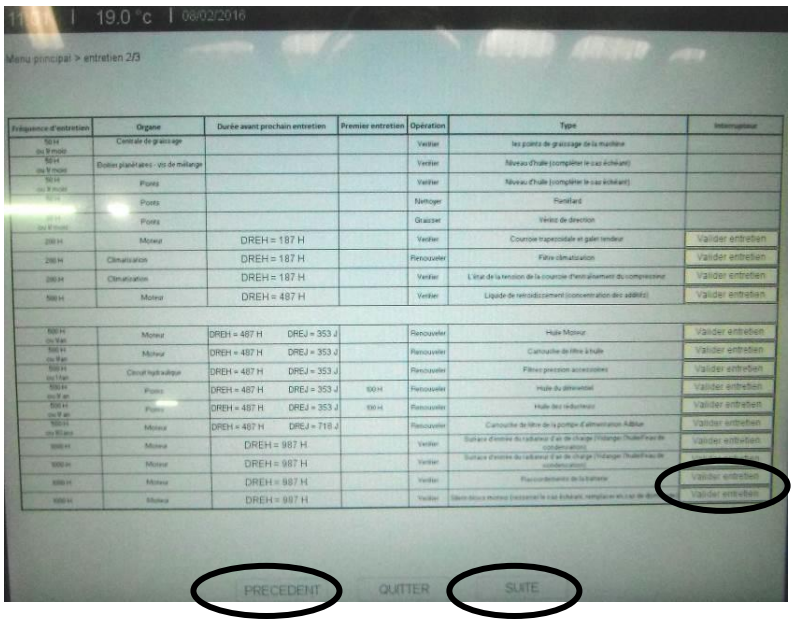
② DPF clog % for ash load: The ash load % will indicate the age of the particle filter. Once the levels exceed 100%, it will be necessary to change it (see § DPF).

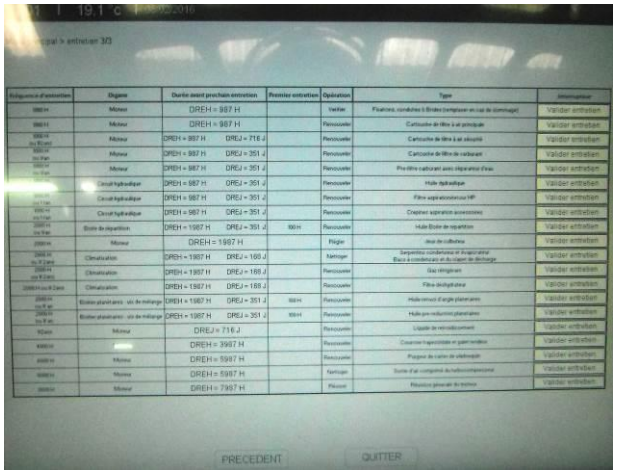
③ Renewal: all of the lines relating to the renewal of the DPF will indicate a renewal status or request (see § DPF).

The other sections on this particular page are targeted at dealers.

10.5.4.5.7. Maintenance







The maintenance page is subdivided into 3 pages. Press CONTINUE or BACK to switch between them.

For machines equipped with centralised lubrication through a lubrication unit, a lubrication robot will be displayed at the top left of the screen. You can activate this robot to fully automate the lubrication process and to adjust lubrication times and frequency.
A forced lubrication button is also available when it is necessary to force lubrication.

The table will indicate the maintenance frequencies for a given appliance alongside the type of operation to be carried out.

An hourmeter is available for all operations for which the frequency is greater than or equal to 200 h.
TRH = 487 h: Time remaining in hours
TRD= 353 d: Time remaining in days
The text on this meter will turn red when there are fewer than 50 hours or 7 days left until the maintenance date for the operation in question.

On the column on the right, a "Maintenance Confirmation" touch button can be found, which is used to reset the maintenance counter we just discussed. When this button is pressed, the TRH and the TRD will change to 0.
WARNING: When a maintenance operation has been confirmed, it will not be possible to cancel this action. It is recommended that you use the cursor button on the screen to confirm maintenance operations.

11 - TRANSPORT / TRAVELLING

11.1. SWITCHING TO TRANSPORT POSITION

To move the machine about, you must first put the silo unloading arm on its rest (for machines equipped with the stand option).
To lift the arm, press the button to put the stand in position and lower the arm so that it rests on the stand.

WARNING
It will be the user's responsibility to ensure that the area around the machine's movement zone is kept clear of any personnel.

11.2. TOWING A BROKEN-DOWN VEHICLE

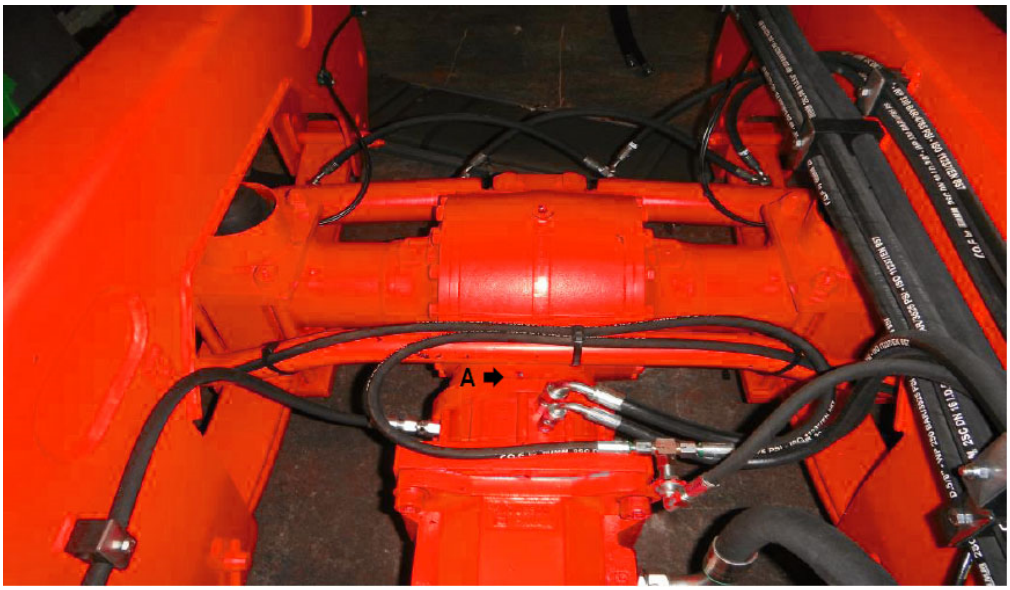
In the event of a breakdown forcing you to remain in a set location, begin by ensuring the zone is secure prior to calling out a breakdown service.
On public roads, please ensure that other vehicles are made aware of your vehicle by using the features available to you: Hazard lights, warning triangles, etc.
For your own safety, please ensure that high-visibility clothing is worn.

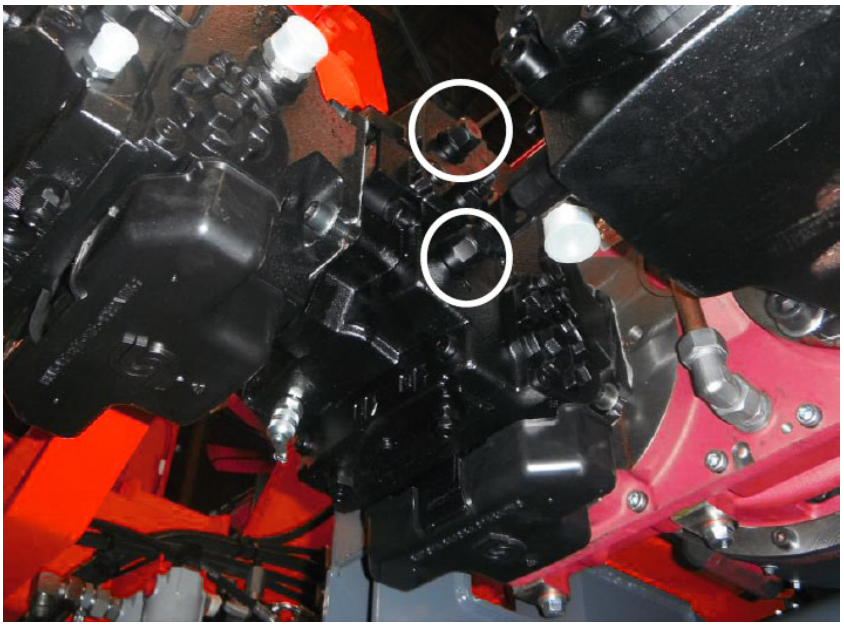
1 -If the combustion engine is running, follow the procedure below :

. Engine running at a minimum speed of 1200 t/min.
. Hand brake not applied.
. Sitting on the seat.
. Apply the joystick as you would to move the vehicle forward and then switch to neutral (in order to release the low pressure brake).
. Pull on the machine using the anchorage points provided on the rear bridge.

2 - If the combustion engine is not running ,follow the procedure below :

. Bring the machine to a halt on a flat surface and, if possible, chock the wheels.
. Disconnect the tube for park brake A. Please ensure you have placed a tray underneath to collect the oil before you begin.
. Put the stopper provided in the kit at the end of the tube.
. Connect the tube from the kit in place of the tube you have just removed.
. Take the kit into the cabin, paying attention to the tube connected.
. In the cabin, start the machine and apply the brakes. Pump and close the kit's lever valve while pumping to lock the pressure at between 35 and 40 bars. Once this pressure has been reached, the parking brake will be unblocked.
. Release the footbrake gently in order to ensure that the parking brake has been released.
. The machine is now ready to be towed.
. During towing, keep an eye on the pressure gauge. The pressure must not move below 35 or above 40 bars.
. Hydraulic drive pump to be set to free wheel.
. Loosen the 2 pressure release valves (no more than 3 turns - any more will result in leaks) in order to enable oil to flow freely into the pump.





11.3. DRIVING ON PUBLIC ROADS

SAFETY GUIDELINES
- Operators driving on public roads must follow all applicable road traffic regulations.
- The machine must be compliant with the terms of the applicable road traffic regulations.

INSTRUCTIONS
- Before driving on public roads, please ensure that the right wing mirror is locked into road position.
- Check to make sure that the rotating light is in place, switch it on and ensure that it is working properly.
- Check to make sure that the lights, indicators and windscreen wipers are clean and are in proper working order.
- Switch off the work projector lights.
- Select the correct direction mode for driving on roads: For mode 1, see § 10.2.
- Activate the arm stand and lower the arm until it comes into contact with the stand (optional).
- Once you are on the road, activate speed 2.
  . In mountainous regions, activate speed 1.
- Check to make sure that the brakes are working properly.
- Respect the maximum speed limits.

IMPORTANT
Control the machine using the joystick in order to ensure that speed limits are not exceeded.

WARNING
Never drive in neutral as this can damage the machine's engine brake. Failure to respect this guideline on an incline will lead to the machine's speed increasing to levels that might make it impossible to control (direction, braking, etc.) and which could cause significant mechanical damage.

11.4. SWITCHING TO WORK POSITION AFTER TRANSIT

Remove the support stand from the silo emptying arm. In order to do so, lift the arm, press to withdraw the stand and the silo emptying arm will be free to move..

12 - HANDLING

The machine can only be handled through rolling auto movement.
Please ensure the area around the machine is kept clear of any personnel.

Lifting the machine for handling purposes is not advised and is not authorised.

For transport using trucks/flatbeds, use the anchorage points provided on the front and rear bridges (details on their locations can be found in the pictograms).

13 - MAINTENANCE AND REPAIRS

13.1. SPARE PARTS AND ORIGINAL LUCAS G. EQUIPMENT

IMPORTANT
Maintenance on our machines must always be carried out using LUCAS G. original parts.

THE USE OF COUNTERFEIT PARTS OR COMPONENTS NOT APPROVED BY THE MANUFACTURER WILL RESULT IN THE WARRANTY BECOMING VOID.
ORIGINAL SPARE PARTS ARE DISTRIBUTED EXCLUSIVELY BY LUCASG AND THEIR NETWORK OF DEALERS.

BY AUTHORISING THE USE OF NON-LUCASG PARTS, YOU RUN THE RISK OF :
. Becoming liable from a legal standpoint in the event of an accident.
. Experiencing technical issues or reducing the lifespan of your machine.

BY USING ORIGINAL LUCAS G. PARTS FOR MAINTENANCE OPERATIONS, YOU WILL BENEFIT FROM THE EXPERTISE THAT LUCASG PROVIDE USERS THROUGH THEIR NETWORK.

- Knowledge and expertise.
- Guaranteed quality.
- Original replacement parts.
- Assistance with preventative maintenance.
- Efficient assistance with diagnostics.
- Improvements through feedback.
- Training for operator personnel.
- With our extensive knowledge of how our machines are designed, only the LUCASG network have the necessary technical skills to take care of maintenance operations.

IMPORTANT
Some components on your machine will be lead-sealed in order to ensure correct factory adjustment.
Do not do anything to these components. Removing the lead will result in the warranty for these parts becoming void in addition to possible consequences as a result of this damage.

WARNING
Prior to carrying out any maintenance work, please ensure you are wearing the appropriate protective equipment, including gloves and goggles, and that you are using the right tools for the task in question.

13.2. SPARE PARTS

ENGINE	Machines in question	REFERENCE	OBJECT	BRAND AND TYPE	QTY
Engine oil	4 CYL T4F	H001-0162	10W40 DQC III-10 LA ENGINE OIL	IGOL PRO 400X 10W-40	11
	6 CYL T4F	H001-0162	10W40 DQC III-10 LA ENGINE OIL	IGOL PRO 400X 10W-40	16
Engine oil filter	All machines	MTH0-0755	ENGINE OIL FILTER		1
ADBLUE pump filter	All machines	MTH1-1153	ADBLUE PUMP FILTER		1
ADBLUE supply filter	All machines	MTH1-1151	ADBLUE TANK BREATHER PIPE FILTER		1
Coolant	4 CYL T4F	LQR0-001	COOLANT	IGOL TRANSMIX -35	40
	6 CYL T4F	LQR0-001	COOLANT	IGOL TRANSMIX -35	55
Diesel pre-filter	All machines	MTH1-1005	ENGINE OIL PRE-FILTER		1
Diesel filters	4 CYL	MTH1-1036	PRIM. 4CYL. DIESEL FILTER		2
	6 CYL	MTH1-1296	PRIM. 6CYL. DIESEL FILTER		2
Main cartridge air filter	All machines	MTH1-12911	MAIN ENGINE AIR FILTER		1
Safety cartridge air filter	All machines	MTH1-12912	BACK-UP ENGINE AIR FILTER		1
Alternator belt	All machines	MTH2-201	ALTERNATOR BELT		1
	All machines	MTH2-202	BELT TENSION IDLER		1
Climate control belt	With climate control	MTH2-205	BELT CLIMATE CONTROL COMPRESSOR		1
Particle filter	4 CYL 115KW	MTH1-1152	4CYL 115kW PARTICLE FILTER		1
	6 CYL 160KW	MTH1-1602	6 CYL 160kW PARTICLE FILTER		1

ENGINE	Machines in question	Reference	NAME	BRAND AND TYPE	QTY
BRIDGE OIL					
BRIDGE AV - 2RM - hub D		H001-0101	BPA 90 BRIDGE OIL	BPA 90 HYPOID IGOL	1,7
BRIDGE AV - 2RM - hub G		H001-0101	BPA 90 BRIDGE OIL	IGOL HYPOID BPA 90	1,7
BRIDGE AV - 4RM - hub D		H001-0101	BPA 90 BRIDGE OIL	IGOL HYPOID BPA 90	1,3
BRIDGE AV - 4RM - hub G		H001-0101	BPA 90 BRIDGE OIL	IGOL HYPOID BPA 90	1,3
BRIDGE AV - 4RM - central section		H001-0101	BPA 90 BRIDGE OIL	IGOL HYPOID BPA 90	6,4
BRIDGE AR - 2RD CLASSIC - hub D		H001-0101	BPA 90 BRIDGE OIL	IGOL HYPOID BPA 90	1,1
BRIDGE AR - 2RD CLASSIC - hub G		H001-0101	BPA 90 BRIDGE OIL	IGOL HYPOID BPA 90	1,1
BRIDGE AR - 2RD CLASSIC - central section		H001-0101	BPA 90 BRIDGE OIL	IGOL HYPOID BPA 90	9,3
BRIDGE AR - 4RD CLASSIC - hub D		H001-0101	BPA 90 BRIDGE OIL	IGOL HYPOID BPA 90	1,3
BRIDGE AR - 4RD CLASSIC - hub G		H001-0101	BPA 90 BRIDGE OIL	IGOL HYPOID BPA 90	1,3
BRIDGE AR - 4RD CLASSIC - central section		H001-0101	BPA 90 BRIDGE OIL	IGOL HYPOID BPA 90	6,4
BRIDGE AR - 2RD PERFORMANCE - hub D		H001-0101	BPA 90 BRIDGE OIL	IGOL HYPOID BPA 90	2
BRIDGE AR - 2RD PERFORMANCE - hub G		H001-0101	BPA 90 BRIDGE OIL	IGOL HYPOID BPA 90	2
BRIDGE AR - 2RD PERFORMANCE - central section		H001-0101	BPA 90 BRIDGE OIL	IGOL HYPOID BPA 90	13
BRIDGE AR - 4RD PERFORMANCE - hub D		H001-0101	BPA 90 BRIDGE OIL	IGOL HYPOID BPA 90	2,75
BRIDGE AR - 4RD PERFORMANCE - hub G		H001-0101	BPA 90 BRIDGE OIL	IGOL HYPOID BPA 90	2,75
BRIDGE AR - 4RD PERFORMANCE - central section		H001-0101	BPA 90 BRIDGE OIL	IGOL HYPOID BPA 90	11

SIDE GEARS	Machines in question	Reference	NAME	BRAND AND TYPE	QTY
Angular side gear oil	Single-auger only	H001-010	SP150 CASE OIL	IGOL DYNAM SP 150	22
Side gear pre-reduction oil	All machines	H001-010	SP150 CASE OIL	IGOL DYNAM SP 150	1,3
Angular side gear oil	Dual-auger only	H001-010	SP150 CASE OIL	IGOL DYNAM SP 150	44

TRANSFER CASE	Machines in question	Reference	NAME	BRAND AND TYPE	QTY
Transfer case oil	Performance only	H001-012	GRADE 150 CASE OIL	IGOL SYNAROK SYNTH 150	2,3

HYDRAULIC FILTERS	Machines in question	Reference	NAME	BRAND AND TYPE	QTY
Hydraulic oil	All machines	H001-022	ZNS 46 HYDRAULIC OIL	IGOL MATIC ZNS 46	240
Suction strainer accessories	All machines	HRE0-30062	SUCTION STRAINER		2
HP suction/return filter	All machines	V103-401	SUCTION / RETURN FILTER ELEM.		1
Pressure filter accessories	All machines	V103-3301	FILTER ELEMENT + O RING		2

CABIN	Machines in question	Reference	NAME	BRAND AND TYPE	QTY
Heating filter	Without climate control	L225052	CABIN FILTER		1
	With climate control	L282619	HEATING FILTER		1
Renewing climate control gas	With climate control	Service for renewing climate control gas			1
Dryer filter	With climate control		DRYER FILTER		1

LUBRICATION	Machines in question	Reference	NAME	BRAND AND TYPE	QTY
Lubricant	All machines	H001-011	EP2 LUBRICANT	EP GRADE NLGI 2 DRIVING IGOL	2

Engine oil equivalence

DQCIIILA(lowashoil)			
Manufacturer	**Brandname**	**SAE class**	**DQC release**
AGCO	AGCO Parts Premium Extra Engine Oil 15W-40	15W-40	DQC III-10 LA
	AGCO Parts Premium Grade Plus 10W-40	10W-40	DQC III-10 LA
	Fendt Premium Grade 15W-40	15W-40	DQC III-10 LA
	Fendt Premium Grade 10W-40	10W-40	DQC III-10 LA
BP Plc.	BP Vanellus Max Eco 15W-40	15W-40	DQC III-10 LA
Castrol Limited	Castrol CRB Turbo G4 15W-40	15W-40	DQC III-10 LA
	Castrol Enduron Global 15W-40	15W-40	DQC III-10 LA
	Castrol Vecton 15W-40 CJ-4	15W-40	DQC III-10 LA
ELF Lubricants	ELF Agritec ZS FE	10W-30	DQC III-10 LA
IGOL FRANCE	IGOL PRO 400 X 10W-30	10W-30	DQC III-10 LA
	IGOL PRO 400 X 10W-40	10W-40	DQC III-10 LA
	IGOL PRO 400 X 15W-40	15W-40	DQC III-10 LA
Shell International	Pennzoil Long-Life Gold	15W-40	DQC III-10 LA
	Shell Rimula R5 LE	10W-30	DQC III-10 LA
	Shell Rimula R5 LE	10W-40	DQC III-10 LA
	Shell Rimula R4 L	15W-40	DQC III-10 LA
	Shell Rimula R4 MV	15W-40	DQC III-10 LA
	Shell Rimula RT4 L Shell Rimula Super Shell Rotella T3 Shell Rotella T Triple Protection	15W-40 15W-40 15W-40 15W-40	DQC III-10 LA
TOTAL Lubricants	TOTAL Rubia Works 2000 FE	10W-30	DQC III-10 LA
	TOTAL Rubia Works 2000	10W-40	DQC III-10 LA
	TOTAL Star Max FE	10W-30	DQC III-10 LA
	TOTAL Tractagri HDZ FE	10W-30	DQC III-10 LA
	TOTAL Tractagri HDZ	10W-40	DQC III-10 LA
	HITACHI Genuine Oil 10W-40 DH-2	10W-40	DQC III-10 LA
Unil Opal	PALLAS 725	10W-40	DQC III-10 LA
DQCIVLA(lowashoil)			
Manufacturer	**Brandname**	**SAE class**	**DQC release**
DEUTZ AG	DEUTZ OEL Rodon 10W40 low SAPS	10W-40	DQC IV-10 LA
AGCO	Fendt Power Grade 10W-40	10W-40	DQC IV-10 LA
BP Plc.	BP Vanellus Max Eco 5W-30 BP Vanellus Max Eco 10W-40	5W-30 10W-40	DQC IV-10 LA DQC IV-10 LA
Castrol Limited	Castrol Enduron Low SAPS 10W-40	10W-40	DQC IV-10 LA
	Castrol Vecton Fuel Saver 5W-30 E6/E9	5W-30	DQC IV-10 LA
	Castrol Vecton Long Drain 10W-40 E6/E9	10W-40	DQC IV-10 LA
	Castrol Vecton Long Drain 10W-30 E6/E9	10W-30	DQC IV-10 LA
Shell International	Shell Rimula R6 LME	5W-30	DQC IV-10 LA
	Shell Rimula R6 LM	10W-40	DQC IV-10 LA
	Shell Rimula Ultra	5W-30	DQC IV-10 LA
	Shell Rimula Ultra	5W-30	DQC IV-10 LA
TOTAL Lubricants	TOTAL Rubia Works 2500	10W-40	DQC IV-10 LA
Unil Opal	PALLAS 900	10W-40	DQC IV-10 LA
Valvoline	Valvoline ProFleet LS SAE 10W-40	10W-40	DQC IV-10 LA
	Valvoline ProFleet LS NTI SAE 10W-40	10W-40	DQC IV-10 LA
	Valvoline ProFleet LS SAE 5W-30	5W-30	DQC IV-10 LA

Splitter box oil equivalence

Schmierstoffart Lubricant type Type de graisse	Mineralöl Mineral oil Huile minérale	Synthetiköl Synthetic oil Huile synthétique
	CLP DIN 51517-3	CLP HC DIN 51517-3
Kinematische Viskosität Kinem. viscosity Viscositékiném. [mm^2/s] 40 °C	220	150
Umgebungstemperatur Ambient temperature Température ambiente	-10 m 40 °C	-35 m 80 °C
AVIA BANTLEON	GEAR RSX 220	Synthogear PE 150
eni	Agip Blasia 220	Agip Blasia SX 150
ARAL	Degol BG 220	--
bp	Energol GR-XP 220	Enersyn EP-XF 150
Castrol	Alpha SP 220	Alphasyn T 150 Optigear Synthetic X 150 Tribol 1510/150
Esso	Spartan EP 220	--
FUCHS	Renolin CLP 220 Renolin CLP 220 Plus	Renolin Unisyn CLP 150
Mobil	Mobilgear XMP 220	Mobilgear SHC XMP 150
KLÜBER LUBRICATION	Klüberoil GEM 1-220 N	Klübersynth GEM-4-150 N
Shell	Omala 220	Omala HD 150

Bridge oil equivalence

MANUFACTURER	TYPE	ACCREDITATION
TOTAL	DYNATRANS DA 80W-90	GL-5-LS
BP	BP Energear Limslip 90	API GL-5 LS
IGOL	HYPOID BPA90	API GL-5 LS

13.3. LUBRICANTS AND FUEL

IMPORTANT
Use only the lubricants and fuel recommended:
- For peak needs, oils must not be miscible.
- For oil changes, oils available in dealer networks are suitable for use.

OIL DIAGNOSTIC ANALYSIS
In cases where a maintenance contract is in place with the dealer, a diagnostic analysis of the engine, transmission and axle oils may be requested depending on the usage rate.
Oil properties
Use a quality fuel in order to ensure optimum performance for your combustion engine.

PROPERTIES OF RECOMMENDED OILS :

. For the hydraulic circuit

Manufacturer	Manufacturers Brand Name ISO Viscosity Classification VG 46
AGIP	ARNICA 46
ARAL	VITAM HF 46 VITAM VF 46
AVIA	AVIA FLUID HVI
BP	BARTRAN HV 32 ENERGOL SHF- HV
CASTROL	HYSPIN AWH-M 46
CONDAT	HYDROLUB S 46
ESSO	UNIVIS N 46
FINKE	AVIATICON HV 46
FRAGOL	HYDRAULIKÖL HVLP
FUCHS	RENOLIN MR 102S MC
LD LUBRICATING	LD HVI 46
MOBIL	DTE 15 M
SHELL	SHELL TELLUS OIL T 46 SHELL TELLUS OIL TX 46
SRS	WINTERSHALL WIOLAN HV 46
TEXACO	RANDO HD-Z 46
TOTAL FINA ELF	EQUIVIS ZS 46
UNIL	UNIL HVC HV

. For the angular gearbox used to control the mixing auger

Lubricant for the Wheels and Seal Rings

BP	ESSO	MOBIL	SHELL	ARAL	TOTAL
Energrease HTO	Beacon BPO	Mobilplex 45	Alvania EP/RO	Aralub FDPO	Multis EP2

Recommended oil types depending on the temperature.
ISO, AGMA, SAE Viscosity Gradation

Standard	Room temperature (° C)		
	between -10 and +15	between 0 and +30	between +10 and +50
ISO AGMA SAE	VG 100 3 EP 80	VG 220 5 EP 90	VG 320 6 EP 90

Recommended Mineral Oils

ISO Viscosity at 40°C	BP Energol	ESSO Spartan	MOBIL Mobilgear	SHELL Omala	TEXACO Meropa	TOTAL Carter	AGIP Blasia
VG 320	GR-XP 320	EP 320	632	320	320	EP 320	320
VG 220	GR-XP 220	EP 220	630	220	220	EP 220	220
VG 100	GR-XP 100	EP 100	627	100	100	EP 100	100

13.4. MAINTENANCE FREQUENCY TABLE

For 50 hour maintenance, you must contact your accredited LUCAS G. distributor and schedule a meeting for the first technical visit (See table below).

IMPORTANT
The table below indicates the operations to carry out both during and after the warranty period.

Checks must always be carried out on a flat, horizontal surface. The maintenance frequency values are the maximum allowable values.

Appliances / Operations	Elements	*10 h or every day*	*50 h or every week*	*200 h*	*500 h*	*500 H or every 6 months*	*500 H or every year*	*1000 H*	*1000 H or every 6 months*	*1000 H or every year*	*2000 h*	*2000 h or every year*	*2000 h or every 2 years*	*Every 2 years*	*4000 h*	*6000 h*	*8000 h*
ENGINE																	
Check	Engine sealing	*															
Check	Oil level (complete where applicable)	*															
Check	Coolant level (complete where applicable)	*															
Check	Sealing and condition of the engine (visual inspection)	*															
Check	Inspect the sealing of the exhaust system, including the components used to treat exhaust gas.	*															
Check	Main air filter cartridge (clean as required)	*															
Check	Radiator surface cleanliness	*															
Check	Cleanliness around the exhaust pipe	*															
Check	V-Belt and tension idler	-	-	*													
Check	Coolant (supplement concentration)	-	-	-	*												
Renew	Filter cartridge for the AdBlue supply pump	-	-	-	-	*											
Renew	Engine Oil	-	-	-	-	-	*										
Renew	Oil filter cartridge	-	-	-	-	-	*										
Check	Engine support	-	-	-	-	-	-	*									
Check	Pipe connectors / chains	-	-	-	-	-	-	*									
Check	Entrance surface for the loading air radiator (To change the condensation oil/water)	-	-	-	-	-	-	*									
Check	Battery connectors	-	-	-	-	-	-	*									
Check	Engine bushing (re-tighten where applicable, replace in the event of damage being sustained)	-	-	-	-	-	-	*									
Check	Fastenings, pipes & flanges (replace in the event of damage being sustained)	-	-	-	-	-	-	*									
Renew	Main air filter cartridge	-	-	-	-	-	-	*									
Renew	Back-up air filter cartridge	-	-	-	-	-	-	-	*								
Renew	Oil filter cartridge	-	-	-	-	-	-	-	-	*							
Renew	Oil pre-filter with water separator	-	-	-	-	-	-	-	-	*							
Adjust	Rocker arm sets	-	-	-	-	-	-	-	-	-	*						
Renew	Coolant	-	-	-	-	-	-	-	-	-	-	-	-	*			
Renew	V-Belt and tension idler	-	-	-	-	-	-	-	-	-	-	-	-	-	*		
Renew	Crankcase drain	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*	
Clean	Turbocompressor compressed air exhaust pipe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*	
Review	Overall engine review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*

Appliances / Operations	Elements	10 h or every day	50 h or every week	200 h	500 h	500 H or every 6 months	500 H or every year	1000 H	1000 H or every 6 months	1000 H or every year	2000 h	every year	2000 h or every 2 years	Every 2 years	4000 h	6000 h	8000 h
Splitter box (Performance)																	
Check	Oil level (add oil if necessary)	*															
Check	Sealing and condition of the engine (visual inspection)	*															
Renew	Splitter box oil	-	100 H	-	-	-	-	-	-	-	-	-	*				
Loading conveyor																	
Check	Voltage	*															
Check	Gasket position	*															
Clean	Belt wheels	-	*														
Dispensing conveyor																	
Check	Voltage	*															
Check	Position of the gaskets	*															
Clean	Belt rollers	-	*														
Hydraulic circuit																	
Check	Oil level (add oil if necessary)	*															
Renew	Additional pressure filters	-	-	-	-	-	*										
Renew	Hydraulic oil	-	-	-	-	-	-	-	-	*							
Renew	HP suction/return filter	-	-	-	-	-	-	-	-	*							
Renew	Additional suction strainers	-	-	-	-	-	-	-	-	*							
Side gear box - mixing auger																	
Check	Oil level (add oil if necessary)	-	*														
Lubricate	Transmission	-	*														
Lubricate	Upper box bearing	-	-	-	-	*											
Renew	Angular side gear oil	-	100 H	-	-	-	-	-	-	-	-	*					
Renew	Side gear pre-reduction oil	-	100 H	-	-	-	-	-	-	-	-	*					
Climate Control / Heating																	
Renew	Climate control filter (for machines equipped with climate control)	-	-	*													
Check	The voltage status of the compressor drive belt	-	-	*													
Renew	Heating filter (for machines not equipped with climate control)	-	-	-	-	*											
Clean	Condenser and vaporiser coils Drain pan and dump valve	-	-	-	-	-	-	-	-	-	-	-	*				
Renew	Coolant gas	-	-	-	-	-	-	-	-	-	-	-	*				
Renew	Dryer filter	-	-	-	-	-	-	-	-	-	-	-	*				
Lubrication unit																	
Check	Lubricant level in the lubrication unit (for machines equipped with lubrication units).	*															
Lubricate	Point by point or for each of the 3 lubrication pressure gauges (for machines equipped with 3-point lubrication units).	*															
Check	the machine's lubrication points	-	*														

Appliances / Operations	Elements	10 h or every day	50 h or every week	200 h	500 h	500 H or every 6 months	500 H or every year	1000 H	1000 H or every 6 months	1000 H or every year	2000 h	2000 h or every year	2000 h or every 2 years	Every 2 years	4000 h	6000 h	8000 h
Bridges																	
Check	Oil level (complete where applicable)	-	*														
Check	Lubrication on the bridge pivots and the suspension axes	-	*														
Clean	Breather pipe	-	*														
Lubricate	Steering cylinders	-	*														
Lubricate	Suspension strips	-	-	*													
Check	Parking brake	-	-	*													
Renew	Differential oil	-	100 H	-	-	-	*										
Renew	Gearbox oil	-	100 H	-	-	-	*										
Wheels																	
Check	Tyre inflation pressure	*															
Check	Wheel nut tightness	*															
Battery																	
Lubricate	Terminals	-	-	*													
Check	Electrolyte charge	-	-	*													
Windscreen washer																	
Check	Windscreen washer liquid	-	*														

13.5. MAINTENANCE

13.5.1. Combustion engine maintenance

13.5.1.1. Combustion engine oil

A - Combustion engine oil level to be checked

Ensure the AUTOSPIRE has been placed on a flat, horizontal surface with the combustion engine switched off. Leave the oil to come to a rest in the sump if the engine has been running.

- Open the engine cover on the left-hand side of the machine.
- Remove dipstick 1.
- Wipe the dipstick clean and check to ensure that the level is correct between the two markers.
- Where necessary, add oil (refer to the section MAINTENANCE: LUBRICANTS AND FUEL) using filling opening 2.
- Carry out a visual examination to ensure there are no leaks and that no oil has seeped onto the combustion engine.

WARNING
Do not smoke while these inspections are being carried out..

B - Changing the oil in the combustion engine

C - Combustion engine oil filter REPLACE

Ensure the machine has been placed on a flat, horizontal surface and leave the combustion engine running at a reduced speed for a few minutes before switching it off completely.

NOTE
Dispose of any used oils in an environmentally-friendly way.

IMPORTANT
Tighten the oil filter using only your hands and lock with a quarter turn.

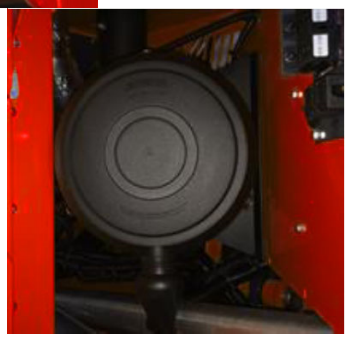
CHANGING OIL
- Fill up with oil (refer to the section MAINTENANCE: LUBRICANTS AND FUEL) via the filling opening.
- Wait a few minutes to allow the oil to flow through the sump.
- Start the engine and allow it to run for a few minutes.
- Check to ensure there are no leaks around the drain plug and engine oil filter.
- Switch off the engine, wait a few minutes and then check the level between the two markers on the dipstick.
- Adjust the levels if necessary.

13.5.1.2. Air filter

A - Self-cleaning cyclonic pre-filter

Without any maintenance, do not remove the pre-filter.

B - Check and clean the dry air filter cartridge



When using in extremely dusty environments, pre-filter elements are available (refer to the section MAINTENANCE: Spare parts). Similarly, the frequency of inspections and cleaning for the cartridge should be reduced.

IMPORTANT
Cartridges should not be cleaned more than seven times - once this number has been reached, the cartridge must be replaced. You must never use the machine without an air filter or with a damaged air filter.

Removing and replacing the cartridge
- Open the front right casing
- Loosen the wing nut and remove cover 1.
- Remove the cartridge, taking care to prevent too much dust from falling.
- Leave the back-up cartridge in place.
- Carefully clean the following sections using a damp, clean and non-fluffy cloth.
  . The interior of the filter and the lid.
  . The interior of the filter input hose.
  . The gasket surfaces in the filter and in the lid.
- Inspect the condition of the connector pipe and ensure it is linked to the combustion engine. Check the connection and the condition of the clog indicator on the filter.
- Prior to assembly, check the condition of the new filter cartridge (refer to section MAINTENANCE: Spare parts).
- Insert the cartridge into the axis of the filter and push the cartridge by pressing on the edges, not on the centre.
- Replace the lid by turning the valve towards the bottom.

Cleaning
- Using a compressed air jet (maximum pressure 3 bars), clean the filter cartridge from top to bottom, and from the inside towards the outside to a minimum of 30 mm from the inside of the cartridge.
- Cleaning will be complete once there is no dust emanating from the cartridge.

IMPORTANT
Maintain a safety distance of 30 mm between the jet of air and the cartridge in order to avoid tearing or piercing it. The cartridge must not be blown close to the air filter housing. You must never clean the cartridge by tapping it against a hard surface.

NOTE
Ensure your eyes are sufficiently protected while carrying out this operation.

- Clean the gasket area of the cartridge using a damp, clean and non-fluffy cloth before lubricating it using a silicon lubricant.
- Carry out a visual examination of the external condition of the air filter and its connectors. Also check the condition of the hoses and their connectors.

IMPORTANT
You must never wash a dry air filter cartridge. Under no circumstances should you clean the back-up cartridge located within the filter cartridge - should it suffer a clog or become damaged, it should be replaced with a new one.

Similarly, the frequency for replacing the cartridges should be reduced (up to 250 hours in particularly dusty environments and where pre-filtering is in place).

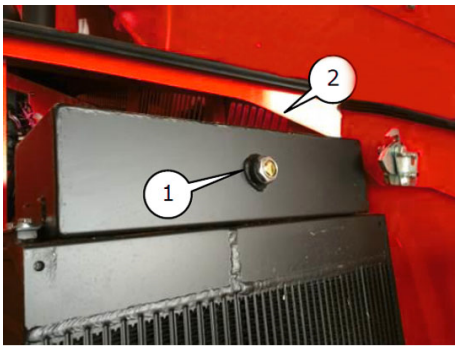
IMPORTANT
Replace the cartridge in a clean location after having switched the combustion engine off. You must never use the machine with a damaged or stripped down cartridge.

D - Replace the air filter and the 2 filter cartridges

13.5.1.3. Coolant

A - Coolant level CHECK

Ensure the machine has been placed on a flat, horizontal surface with the combustion engine switched off and wait for the engine to cool down.



- Open the hood on the right-hand side at the back.
- Check to ensure that the levels are correct: coolant visible on dipstick 1. The liquid should brush against the bottom of the level.
- Where necessary, add coolant (refer to section MAINTENANCE: LUBRICANTS AND FUEL).
- Slowly bring the stopper on tank 2 up to the safety stop.
- Allow the pressure and the steam to escape.
- Press on the stopper and turn it to take it out.
- Add coolant via the filling opening.
- Lightly lubricate the filling opening in order to make it easier to replace and remove the tank stopper.
- Carry out a visual examination to ensure there are no leaks on the radiator or in the pipes.

WARNING
In order to avoid any risks of projection or burns, please wait for the combustion engine to cool before removing the stopper for filling the cooling circuit. If the coolant is particularly hot, only add warm liquid (80°C). In an emergency, you may use water instead of coolant - should this be the case, drain the cooling circuit at the earliest available opportunity (refer to section MAINTENANCE: COOLANT).

B - Draining the coolant from the combustion engine

C - Cleaning the radiator bundle

Use the ventilator inversion on a daily basis if the machine is equipped with one in order to clean the grill.

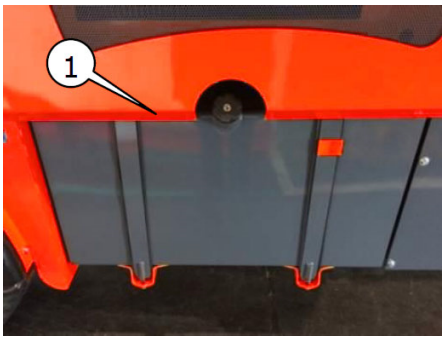
IMPORTANT
In pollutant environments, clean the radiator bundle on a daily basis. You must not use a water jet or a high-pressure steam as this might damage the radiator fins.

- Open the lateral hood.
- In order to avoid the radiator bundle becoming clogged, clean it using a jet of compressed air directed from the inside towards the outside. This is the only way to effectively get rid of any dirt or impurities.
- Where necessary, clean the suction grill on the lateral hood.

13.5.1.4. Fuel

A - Fuel level

As far as possible, keep the fuel tank full - this will greatly contribute towards reducing any condensation resulting from atmospheric conditions.
- Remove stopper 1.
- Fill the tank with clean GNR (MAINTENANCE: LUBRICANTS AND FUEL), filtered through an inlet filter/strainer or a clean, non-fluffy cloth via the filling opening.
- Replace stopper 1.
- Carry out a visual examination to ensure there are no leaks on the tank or in the pipes.



B - Pre-filter cartridge

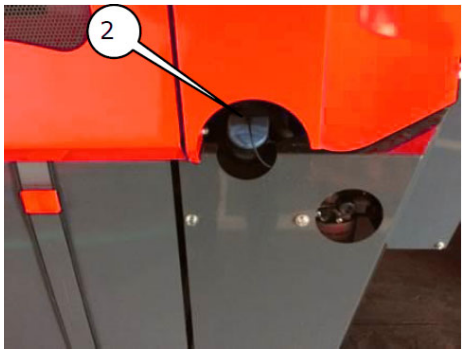
- Check to ensure that the machine has been switched off, otherwise fuel will be released if voltage is running through the lift pump.

C - 2 Filter cartridges

- Check to ensure that the machine has been switched off, otherwise fuel will be released if voltage is running through the lift pump.

13.5.1.5. Ad-Blue

A - AdBlue level



Keep the AdBlue reservoir as clean as possible.

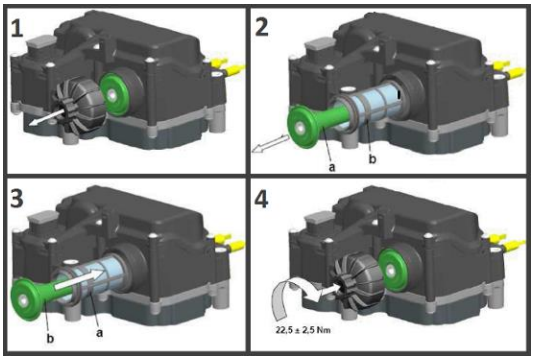
- Remove stopper 2.
- Fill the tank with AdBlue (MAINTENANCE: LUBRICANTS AND FUEL).
- Replace stopper 2.
- Carry out a visual examination to ensure there are no leaks on the tank or in the pipes.

WARNING
You must never smoke or approach with a flame while filling is taking place or while the tank is open. You must never fill up when the engine is running.

WARNING
The fuel tank is vented via the filling cap. Should you need to change the cap, always use an original cap with a vent opening.

B - Replacing AdBlue cartridges

The AdBlue pump is located to the rear of the AdBlue tank, next to the fuel tank and can be accessed via the underside of the machine. Loosen the plastic cap and replace cartridge b and the tab a with new parts. Tighten the cover in accordance with the torque values listed below.



13.5.1.6. Belt and engine adjustment

A - Check and adjust the voltage/tension of the alternator/crankcase belt

4 and 6 CYLINDER models
- Open the engine cover.
- Assess the condition of the belt, checking for any signs of wear or cracks, and change it if necessary (refer to MAINTENANCE: Spare parts).

B - Check and adjust the tension of the compressor belt (climate control option)

- Open the engine cover.
- Assess the condition of the belt, checking for any signs of wear or cracks, and change it if necessary (refer to MAINTENANCE: Spare parts).
- Check the tension between the crankcase and alternator pulleys.
- Adjust if necessary.

IMPORTANT
Should you need to change the alternator belt, check the tension again after the first 20 hours of it being used.

C - Replacing the alternator belt

D - Replacing the climate control belt

E - Adjusting the rocker arm

13.5.1.7. Engine mounting, connectors, drive chains

A - Checking the engine mounting, connectors and drive chains

13.5.1.8. Exhaust

A - Exhaust

- Clean the area around the exhaust pipe to avoid the risk of any fires starting.

13.5.1.9. Comprehensive review

After 8000 h: comprehensive review. Contact us.

13.5.1.10. AdBlue and Particle filter

The machine is equipped with a system for processing exhaust fumes in accordance with the Tier 4 final pollution standard.

This exhaust system involves a treatment process using a DOC (Diesel Oxidation Catalyst), a DPF (Diesel Particulate Filter) and AdBlue injection, followed by SCR (Selective Catalytic Reduction).

The DPF is filled with particles over the period of time during which the machine is in use. The DPF clog rate can be accessed by going to the Home Page / Diagnostic / Engine (refer to § Home Page). It is referred to as "DPF Clog % and is expressed as a %. Regeneration is the term used for the combustion phase for particles in the DPF.

For a DPF clog rate of between 0% and 78%
This indicates normal functioning levels - regeneration will continue once the conditions have been reached. The regeneration light will be unlit.

When the DPF clog rate exceeds 78%
If the engine use conditions mean that continuous regeneration is not possible, the engine will switch to heat mode as the clog rate will continue to increase. No action will be required. In this mode, mechanisms within the engine using, for example, the air intake temperature sensor will raise the temperature of the exhaust in order to trigger continuous regeneration. The regeneration light will be unlit.

When the DPF clog rate exceeds 100%

If heat mode is not sufficient to reduce the clog rate, the filter will continue to clog up and forced (i.e. manual) regeneration will become necessary. This should be seen as a last resort if all previous solutions have failed. The following message will appear on the screen, irrespective of the page displayed:

Particle filter regeneration required	
Do you wish to carry it out?	
Yes	No

Press YES to begin forced regeneration or NO to carry this out at a later stage. The message will reappear each time the engine is started up. It is strongly recommended that you do not wait more than 2 hours after the message has appeared for the 1st time.

If you press YES, a second window will appear showing the list of guidelines to follow in order to initiate forced regeneration. These are as follows:

EXECUTING FORCED REGENERATION	
Stop the machine and switch off the engine	OK
Apply the parking brake	OK
Lock all hydraulic functions	OK
The engine coolant temperature must be in excess of 60%.	OK
SCR system status.	OK
Approximate regeneration time: 40 min.	
LAUNCH REGENERATION	CANCEL

If all of the above conditions are OK, you may launch the regeneration by pressing LAUNCH REGENERATION or CANCEL to do it at a later stage.

If one of these conditions is not OK, take the necessary steps to ensure all conditions are met. If the temperature of the coolant is not OK, you will need to wait to allow the engine to heat up. If the SCR system status is not OK, this means that an internal combustion engine process is currently in operation. You will normally need to wait roughly 2 or 3 minutes after having switched on the engine.

This forced regeneration will take between 30 and 40 minutes. The following window will be displayed:

Regeneration in progress
Time remaining for regeneration: 30 min.
CANCEL

Regeneration will be stopped automatically if the user makes a change to one of the conditions for accessing this mode, e.g. locking the hydraulic functions. The engine's speed configuration is pre-determined and may not be changed by the user. The regeneration light will be lit while this mode is ongoing and will be switched off once it is complete.

For clog rates in excess of 125%

For clog rates in excess of 125%, there is a risk of the engine and the DPF suffering damage - as a result, the engine power will be reduced by 30%. At this point, regeneration becomes necessary, otherwise the user will not be able to trigger it themselves. This functions in the same way as the previous mode. Regeneration will take between 30 and 40 minutes and must only be interrupted in an emergency. The regeneration light will flash and the engine error light will be lit.

For clog rates in excess of 156%
For clog rates in excess of 156%, the engine power will be reduced by 30% and the speed restricted to 1200 tr/min.
At this point, forced regeneration may only be triggered by the dealer Deutz using SERDIA diagnostic software. If the engine has not been switched off, the filter will become completely clogged and it will not be possible to trigger regeneration, meaning the DPF will need to be replaced.
The regeneration light will flash rapidly and the engine error light will flash.

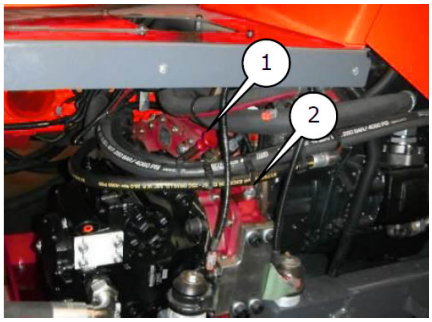
WARNING
Contact your dealer.

For clog rates in excess of 187%
For clog rates in excess of 187%, the particle filter will need to be changed - this is the equivalent to a particle filter load rate > 100%. The regeneration light will flash rapidly, the engine error light will flash and the change particle filter light will be lit.

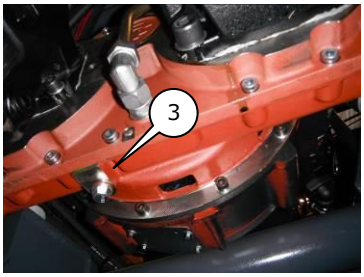
Reason for regeneration request.
On the engine diagnostic page, you will find the DPF regeneration status (whether the regeneration has been requested or not requested), as well as the reason for the regeneration request. A regeneration request can also be made if AdBlue has become crystalised in the pipes or in the injection head in the exhaust pipe. The clog rate of the DPF may be lower than 100% during a regeneration request.

13.5.2. Splitter box maintenance

A - Checking the level of the splitter box (machine performance only)
The level can be checked using a dipstick once the engine has been switched off and left to cool ①. The level should be positioned between the 2 minimum/maximum markers on the dipstick. To refill, unscrew the cap ② and add oil (see § Maintenance: lubricants and fuel).



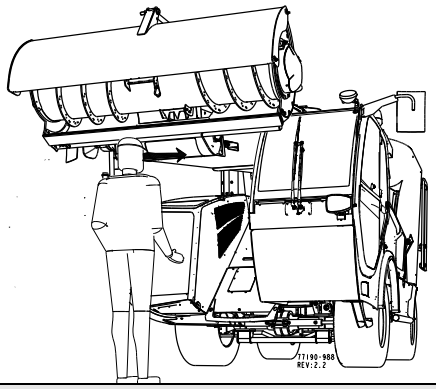
B - Draining the splitter box (machine performance only)
Ensure the machine has been placed on a flat, horizontal surface and allow the engine to run for a few minutes to heat up the oil. Switch off the engine and drain the box via the cap ③ located beneath the splitter box.
Once all oil has been drained from the box, replace the cap ② with 2.3 L of oil (see § Maintenance: lubricants and fuel). The level will now be above the maximum level on the dipstick. Leave the engine running for 15 minutes to allow the splitter box's lubrication channels to fill. Switch off the engine and allow the oil to settle for 5 minutes before measuring the level again. The level should be between the 2 minimum/maximum markers on the dipstick. Add more oil if necessary.



NOTE
Dispose of any used oils in an environmentally-friendly way.

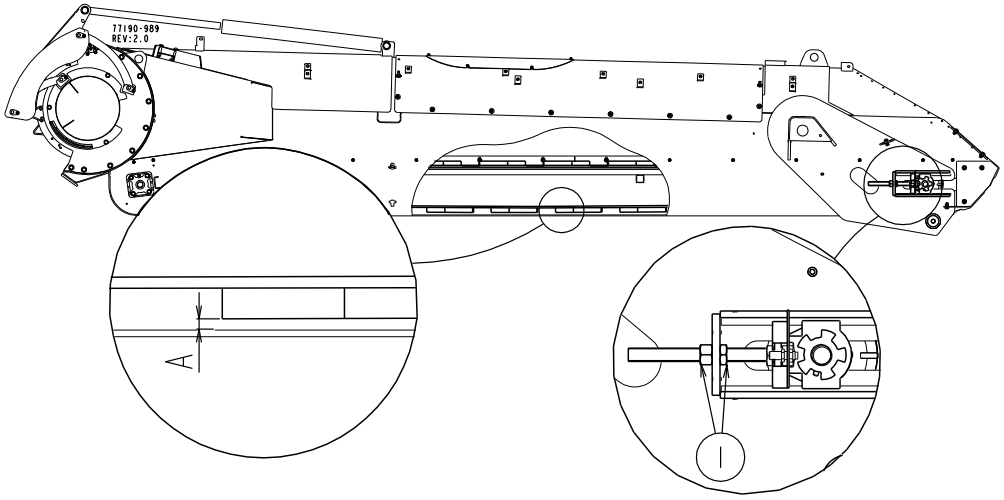
13.5.3. Loading conveyor

A - Conveyor belt tension



Lift the loading arm to eye level from the interior of the conveyor using the end on the reamer side.
Check the tension by looking through the conveyor's front opening. If the belt is touching the bottom, tighten it again.
Begin by checking to ensure that the conveyor belt has been correctly centred and balance the tension using the 1 nuts to re-centre it if necessary.

IMPORTANT :
In order to re-centre the belt, loosen the tension on the opposite side or rub the belt.



To re-stretch it, progressively tighten the nuts on the wire-strainers until you obtain slack A between the conveyor belt and the metal underside of the loading arm, roughly 2 or 3 mm.

IMPORTANT :
- When tightening and loosening the tension rods, check to make sure that the star does not collide with the conveyor's rotation sensor (see above).
- Excess tension on the belt could result in its drive system breaking down. You should only re-stretch the conveyor belt if it is making noise or if it is starting to slip.

Test the belt's rotation and check to make sure that it has been properly centred, that it is working properly and that it is not making any noise.
Repeat the adjustment if necessary.

B - Cleaning the conveyor belt

13.5.4. Dispensing conveyor

A - Gasket and conveyor tension

B - Cleaning the conveyor

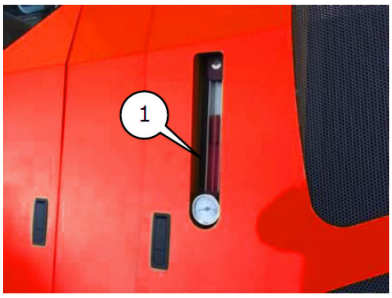
C - Inspecting sections of the reamer

Procedure for opening the reamer's protective casing:
. Position the arm at the correct height.
. Switch the reamer on and allow it to run at a reduced speed.
. Switch off the combustion engine and remove the keys.
Check the condition of the sections and change them if necessary.

13.5.5. Hydraulic circuit

A - Check the level of the hydraulic oil

Ensure the machine has been placed on a flat, horizontal surface, that the combustion engine has been switched off and that the reamer arm has been lowered as far as possible.
- Refer to dipstick 1.
- The correct level is at the bottom of the dipstick.
- If necessary, add more oil (MAINTENANCE: LUBRICANTS AND FUEL).
- Remove the cap.
- Add oil via the filling opening.



IMPORTANT
Use a funnel, making sure that it is clean, and clean the top of the oil can before filling.

- Replace the cap.
- Carry out a visual examination to ensure there are no leaks on the tank or in the pipes.
You will need to retain a maximum level of oil - cooling is obtained via the passage of oil in the tank.

B - Replacing additional filters

C - Draining oil from the hydraulic circuit

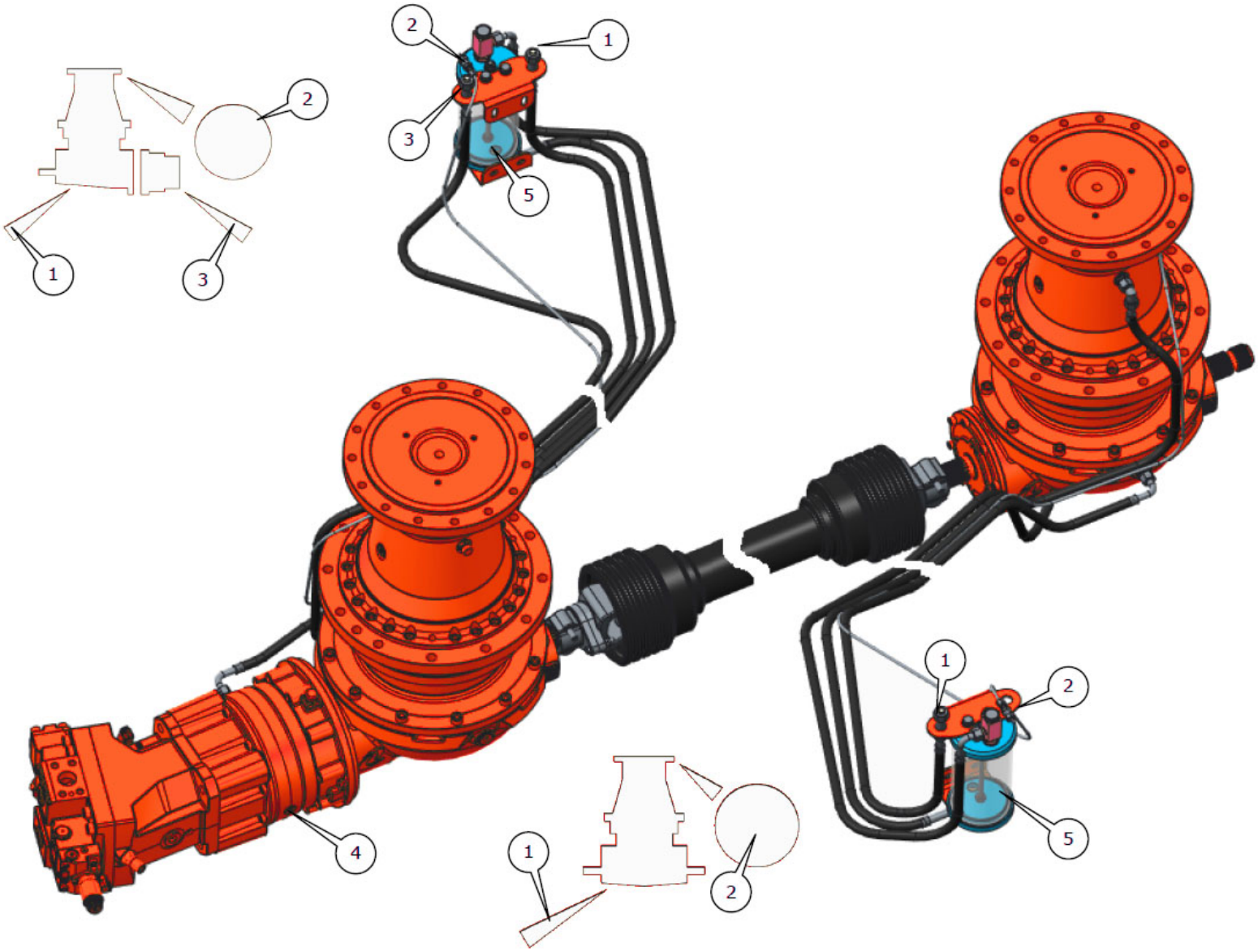
D - Replacing suction/return filters

E - Replacing the suction strainer on the hydraulic circuit

13.5.6. Side gear box

A - Checking the oil levels and lubricating the angular gearbox

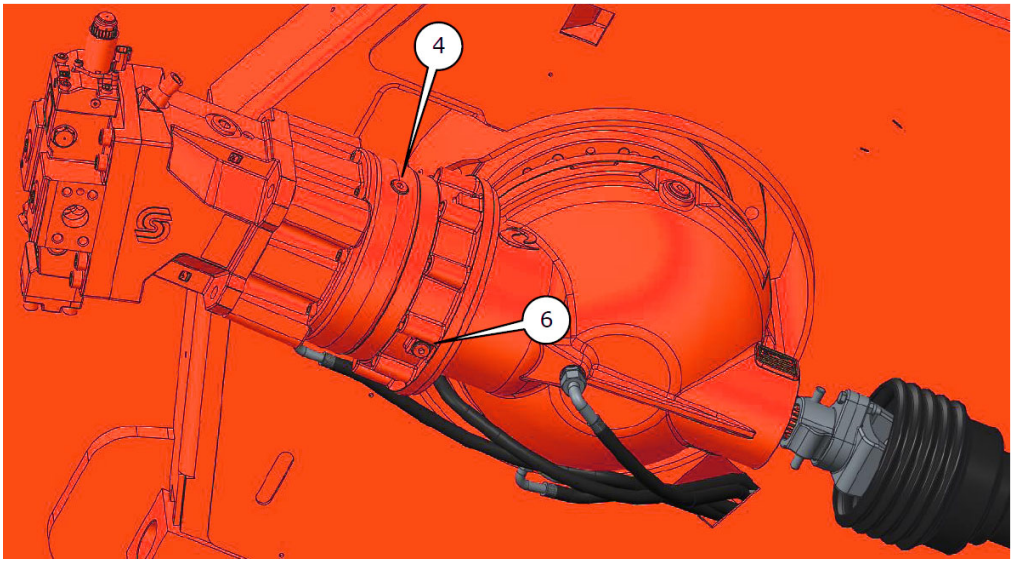
The levels should be horizontal. Check the level using the indicators on the (5) oil tanks on each side of the tank for dual-auger models and next to the hydraulic exchanger for single-auger models. Filling should take place using the pipe at location 1. Please note: this level only relates to the central section of the side gear boxes.
The side gear box where the hydraulic engine is fitted is equipped with a pre-reducer. Levels should be taken using the pipe at location 3 by loosening cap 4. Once the oil is running through opening 4, this means that the level has been reached.
You must never fill the oil level above the tank's maximum level.
The upper bearing of the box can be lubricated via location 2. This should be done once every 6 months or every 500 hours, using a suitable lubricant.
(Refer to MAINTENANCE: § SPARE PARTS and § LUBRICANTS AND FUEL).



B - Draining the angular gearbox

In order to empty the central section of the angular gearbox :
. Loosen the caps (location 1 and 7) in order to allow air to enter.
. Loosen the drainage cap located beneath the angular gearboxes.
. Collect the oil in a sealable container.
. Fit a new seal prior to replacing the drainage cap.
. In order to make draining the box easier, it is recommended that you drain immediately after using the machine.

In order to drain the pre-reducer on the angular gearbox :
. Loosen the caps (location 4 and 6) in order to allow air to enter.
. Collect the oil in a sealable container.
. Fit a new seal prior to replacing the drainage cap.
. In order to make draining the box easier, it is recommended that you drain immediately after using the machine.



Filling the central section of the angular gearbox :
. Check to make sure that the caps (location 1 and 7) have been removed.
. Connect the pump pipe to the hose and hold it in place using a clamp.
. Pump until the oil reaches the MIN level of the reservoir.
. Wait around 10 minutes to allow the oil time to settle.
. Add oil via the cap (location 1) so that the oil level sits somewhere between the MIN and MAX level on the tank prior to replacing the caps.

Filling the pre-reducer on the angular gearbox :
. Check to make sure that the cap (location 3) has been removed.
. Connect the pump pipe to the hose and hold it in place using a clamp.
. Pump until oil starts to emanate from the cap (location 4).
. Replace the caps (location 3 and 4).

IMPORTANT
Should you open the angular gearbox, this will result in it no longer being covered by the warranty.

NOTE
Waste oil should be collected in a clean, sealable and suitable container and should be disposed of via a specialist recycling centre.

C - Lubricating the transmission drive shaft

Clean and lubricate the following points using lubricant (refer to section MAINTENANCE: LUBRICANTS AND FUEL) and remove what was there previously.

1 Transmission drive shaft greasers: Side gear box 1st screw (2 greasers).
2 Transmission drive shaft greasers: side gear box 1st screw / side gear box 2nd screw (2 greasers).

13.5.7. Climate control / heating

A - Cabin ventilation filter (climate control option)

Remove the protective casing.

Remove the cabin ventilation filter, clean the inside and replace it with a new one (see section MAINTENANCE: Spare parts).

Replace the protective casing.

B - Cabin ventilation filter

- Remove the protective casing.
- Remove the cabin ventilation filter.
- Using a jet of compressed air, clean the filter.
- Check to see what condition it is in and change it if necessary (see section MAINTENANCE: Spare parts).
- Replace the filter and the protective casing.

C - Climate control belt tension (see § 13.5.1.6. Belts and engine adjustment)

D - Replacing the climate control belt (see § 13.5.1.6. Belts and engine adjustment)

E - Cleaning the condenser bundle (climate control option)

IMPORTANT
When working in a pollutant environment, you should clean the radiator bundle on a daily basis. Do not use a water jet or high pressure steam as this might damage the radiator fins.

- Open the hood.
- Loosen the knurled screw and turn the condenser and filter unit.
- Clean the bundle using a jet of compressed air directed from the inside towards the outside - this is the only way to effectively get rid of any dirt or impurities.

F - Heating unit check valve

Given that the check valve is located beneath the cabin, it may become obstructed by items such as mud. If necessary, it can be cleaned.

G - Condenser coils, coolant gas, dryer filter

WARNING
YOU MUST NEVER TRY TO REPAIR ANY POTENTIAL DEFECTS YOURSELF. TO RECHARGE A CIRCUIT, YOU SHOULD ALWAYS CONTACT YOUR DEALER, WHO WILL HAVE THE SPARE PARTS, THE TECHNICAL EXPERTISE AND THE TOOLS REQUIRED.

Under no circumstances should you open the circuit - this could result in coolant being lost.

The cooling circuit contains a gas which, under certain circumstances, can prove harmful. This gas, a coolant known as R-134a, is colourless, odourless and heavier than air.

WARNING
In the event of this gas being inhaled, take the person outside and give them oxygen. Perform any necessary artificial respiration and seek medical assistance.
In the event of the gas coming into contact with the skin, wash immediately and thoroughly and remove any contaminated items of clothing.
In the event of the gas coming into contact with the eyes, rinse for 15 minutes using clean water and seek medical assistance.

The compressor has a dipstick for checking oil levels; this should never be loosened as this can result in the installation being unloaded. The oil level can only be checked when the circuit is being drained.

A - Cleaning the evaporator and condenser coils (*)
B - Cleaning the condensation tray and the relief/dump valve (*)
C - Collecting coolant in order to replace the dryer filter (*)
D - Recharge while cooling and check the thermostatic regulation and the pressure regulators. (*)

NOTE
Remember: when opening the evaporator unit, always replace the lid's sealing joint.

(*) : Contact your dealer.

13.5.8. Lubrication unit

A - Check the level of lubricant in the lubrication unit (for machines equipped with one)

Check the level of lubricant and the condition of the pipes in order to ensure that all of the points are lubricated.

Fill with lubricant so that the level is somewhere between the MIN and MAX levels on the tank.

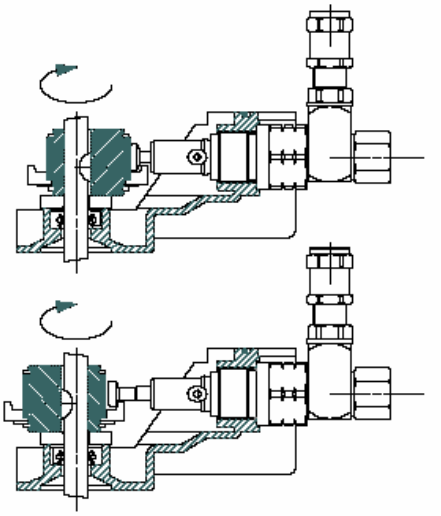
Recommended lubricant: UNIL OPAL 182DS multiservice

The unit can be switched on and controlled via the screen. The lubrication time and the lubrication frequency can be adjusted via the screen. When it is working, a specific icon will appear on the screen. Details on how it can be configured can be found in § 10.5.4.5.7. Maintenance

Pumps for lubricant (PEG-N) and oil (PEO-N).

Application

These pumps have been designed to automatically lubricate all types of industrial machines and vehicles (public works vehicles, trucks, vehicles used in agriculture and wine-making, port vehicles, etc.).
Used with progressive DPA and DPM splitters, up to 300 points can be lubricated using just one pump.



How it works

These pumps have been designed to be used continuously or otherwise, with programmable lubrication cycles available depending on the version.
A geared motor is used to drive a central shaft, on which sits a crank which turns the piston controlling the 3 maxi external pumps.
Each pump comes equipped with an adjustable safety relief valve to protect the pump and the other components from overpressurisation.
It is possible to combine 2 or 3 pumps externally in order to increase the pump flow.

Progressive splitters

How they work

The diagrams provide a detailed description of how the DPA and DPM progressive splitters work.
The black line indicates the pressurised lubricant used to move the pistons. The grey line indicates the dosed lubricant used for distribution.

All of the pistons are located on the right.

Figure 1 :
The pressurised lubricant moves piston "A" and enables distribution at exit "4".

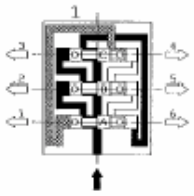


Figure 2 :
The movement of piston "A" enables the pressurised lubricant to move piston "B", which enables distribution at exit "1".

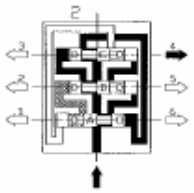


Figure 3 :
The movement of piston "B" enables the pressurised lubricant to move piston "C", which enables distribution at exit "2".
All of the pistons are located on the left.

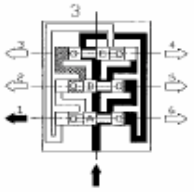
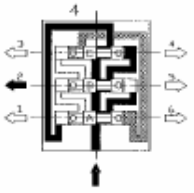


Figure 4 :
The movement of piston "C" enables the pressurised lubricant to move piston "A", which enables distribution at exit "3".
The movement of piston "A" enables the pressurised lubricant to move piston "B", which enables distribution at exit "6".
The movement of piston "B" enables the pressurised lubricant to move piston "C", which enables distribution at exit "5".



Progressive splitters

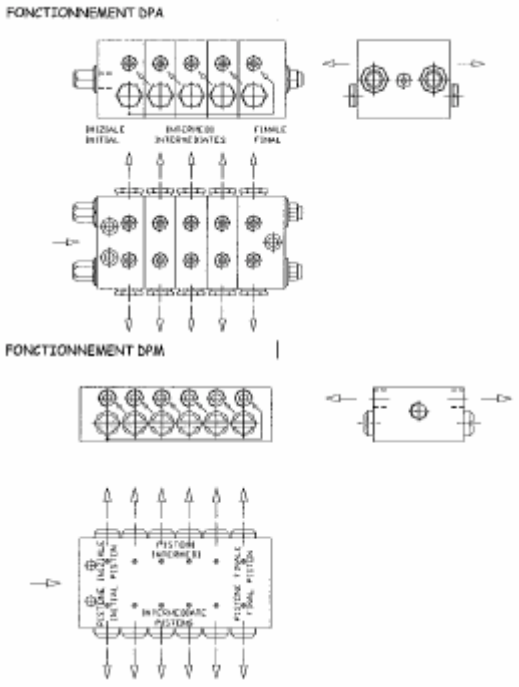
Lubricant distribution sequence

The input piston (initial) distributes lubricant to the final piston exits.

The final piston distributes lubricant to the intermediary piston exits and, in cases involving splitters with more than 3 pistons, to the neighbouring intermediary piston exits.

The intermediary piston distributes lubricant to the input piston exits (initial).

The dosing pistons on the DPA and DPM type progressive splitters do not distribute lubricant to the corresponding exits. Instead, the lubrication process is based on a pre-determined operating sequence.



How the progressive system works

Maintenance instructions - troubleshooting

This section deals with maintenance instructions and troubleshooting.
How to prevent breakdowns
Keep a full tank. Pumps operating with empty tanks can bring air into the system, prevent filling at the pump inlet and can create pressure issues.
Use a clean lubricant, one free from any foreign bodies that could obstruct the pump filling filter.
Check the entire system on a regular basis, as well as the rigid pipes and pressurised hoses (these should be changed if they are damaged). The seals and connectors at all points should also be checked (you should be able to see a small quantity of lubricant around the edges of each).

How to locate and solve breakdowns

Air will be present in the tank when the pump is not able to increase the pressure in order to fill normally. For manual pumps, the lever will not provide any resistance during runs. Drain and clean the tank. Fill the tank using a small quantity of oil (this helps with filling and to drain air from the system). Fill the tank using a clean lubricant. In order to ensure that the system is kept free from air, open the pipes at the entrances to the splitters and pump several times to expel any air still inside.

Please note :
The system should be kept free from air. Pressure control will depend on a circuit full of lubricant. With air present, splitters will not be able to signal any clogs.

Locate clog points using the following method. It will render your search easier if the splitters are equipped with overpressure indicators with memories.

Remove the pipes from the input to the primary progressive splitter in order to search for the origin of the blockage. When the pump is working, the lubricant will exit without raising the pressure on the pump's manometer.

Loosen the connectors from the tubes at all of the inputs to the secondary progressive splitters and replace the pipes at the input to the primary. The primary splitter may be damaged if lubricant has not been able to reach these tubes. The manometer should indicate increased pressure.

How the progressive system works

If the primary is working, replace the tubes one by one at the inputs to the secondary progressive splitters until the manometer indicates increased pressure. Loosen the connectors at the lubrication points facing the defective splitter. If this splitter is working, connect the points one by one until the manometer indicates increased pressure. Identify the faulty point and remove the clog using a manual pump.

With the manual pumps obstructed, you will notice that the handle will be locked in position and will tend to quickly return to its initial position. Clean and fill the tank.

Identifying causes

The system is working but is indicating high pressure.

CAUSES	SOLUTIONS
Clogged point.	Locate the point, clean it and, if necessary, change the defective part.
Line obstructed or crushed.	Change the pipes.
Blocked splitter.	Clean or change.
Splitter poorly assembled.	Check the operating diagram.
The tabs on the splitter are too tight.	Carefully and gently loosen.
The correct type of connectors have not been used at the splitter exits.	Check the operating diagram and change the connector.
The lubricant is too thick.	Change the lubricant.
The pipes are too small or too long.	Check the outline diagram of the installation
The splitter exits have become obstructed as a result of an error.	You should never obstruct an exit. Remove the cap.
Defective pump.	Clean or change.
Not enough lubricant.	Fill the tank.
There is air in the pump or in the pipes.	Drain any air from the pumps or the pipes.
The main pipes have been incorrectly sized.	Remove and replace.
The line filter is clogged.	Clean or replace.
There is dirt or impurities in the pump.	Clean or replace.
The lubricant is too thick for the pump.	Change for a more fluid lubricant.
The pipes or connectors are broken.	Repair or replace.
The tuning on the safety relief valve is too weak.	Increase the pressure by tightening the relief valve.

AVERAGE VISCOSITY VALUE IN cSt 40°C	ISO SYMBOL
10	ISO VG-10
15	ISO VG-15
22	ISO VG-22
32	ISO VG-32
46	ISO VG-46
68	ISO VG-68
100	ISO VG-100
150	ISO VG-150
220	ISO VG-220
320	ISO VG-320
460	ISO VG-460
680	ISO VG-680
1000	ISO VG-1000

VISCOSITY CORRESPONDENCE TABLE

cSt 40° C	SUS 100°F	E 50°C	cSt 40° C	SUS 100°F	E 50°C	cSt 40° C	SUS 100°F	E 50°C
2	32.64	1.119	41	190.5	5.465	200	925.6	26.32
3	36.05	1.217	42	195.0	5.590	210	971.8	27.65
4	39.15	1.308	43	199.5	5.720	220	1018	28.95
5	42.36	1.400	44	204.1	5.845	230	1065	30.28
6	45.57	1.481	45	208.7	5.975	240	1111	31.60
7	48.77	1.563	46	213.3	6.105	250	1157	32.90
8	52.07	1.653	47	217.9	6.235	260	1203	34.25
9	55.48	1.746	48	222.5	6.365	270	1249	35.55
10	58.88	1.837	49	227.1	6.495	280	1296	36.85
11	62.39	1.928	50	231.7	6.630	290	1342	38.18
12	66.00	2.020	55	254.8	7.238	300	1388	39.50
13	69.70	2.120	60	277.8	7.896	310	1434	40.80
14	73.50	2.219	65	300.8	8.554	320	1480	42.12
15	77.31	2.323	70	323.8	9.912	330	1527	43.45
16	81.21	2.434	75	347.0	9.870	340	1574	44.75
17	85.22	2.540	80	370.2	10.53	350	1620	46.10
18	89.32	2.664	85	393.3	11.19	360	1666	47.40
19	93.43	2.755	90	416.5	11.85	370	1712	48.70
20	97.64	2.870	95	439.5	12.51	380	1759	50.00
21	101.8	2.984	100	462.6	13.16	390	1805	51.35
22	106.1	3.100	105	485.8	13.82	400	1851	52.65
23	110.4	3.215	110	509.0	14.47	450	2082	59.25
24	114.7	3.335	115	532.1	15.14	500	2314	65.80
25	119.0	3.455	120	555.3	15.80	550	2545	72.40
26	123.4	3.575	125	578.5	16.45	600	2777	79.00
27	127.8	3.695	130	601.6	17.11	650	3008	85.60
28	132.3	3.820	135	624.7	17.76	700	3239	92.20
29	136.7	3.945	140	647.9	18.43	750	3471	98.80
30	141.1	4.070	145	671.1	19.08	800	3702	105.3
31	145.5	4.195	150	694.2	19.75	850	3934	111.9
32	149.9	4.320	155	717.2	20.40	900	4165	118.5
33	154.4	4.445	160	740.4	21.05	950	4396	125.0
34	158.9	4.570	165	763.4	21.72	1000	4628	131.6
35	163.4	4.695	170	786.6	22.38			
36	167.9	4.825	175	809.7	23.03			
37	172.4	4.955	180	832.9	23.70			
38	176.9	5.080	185	856.1	24.35			
39	181.4	5.205	190	879.3	25.00			
40	185.9	5.355	195	902.5	26.67			

cSt = *CENTISTOKES* *40°c*
SUS = *SAYBOLT INTERNATIONAL* *100°F*
E° = *ENGLER* *50°C*

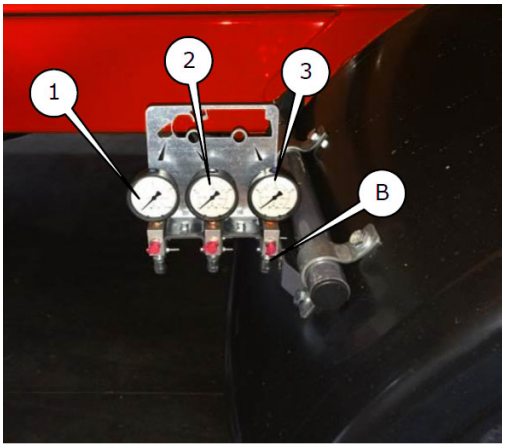
B - 3-point centralised lubrication unit

Used to lubricate several marker points ① ② ③.
To be used with the recommended frequencies.

Recommended lubricant: UNIL OPAL 182DS multiservice.

For effective lubrication, carry out a visual examination to ensure that excess lubricant arrives at each point you lubricate.

① Arm lubrication.
② Lubricating the front suspension and front bridge unit.
③ Lubricating the rear belt, rear suspension and rear bridge unit.



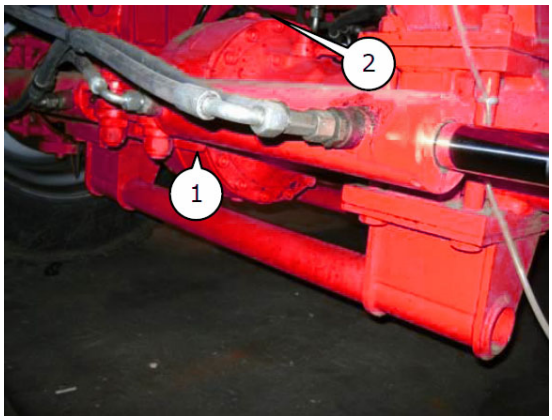
NOTE
A pressure limiter located at point B, set to 110 bars when exiting the factory, is used to protect your lubrication circuit (limiter leak). In this case, check your circuit for any obstructions or to determine whether or not the lubricant you are using is too thick, which will result in it not providing effective lubrication.

13.5.9. Bridge maintenance

A - Check the differential oil level for the front and rear axle

Ensure the machine has been placed on a flat, horizontal surface with the combustion engine switched off.

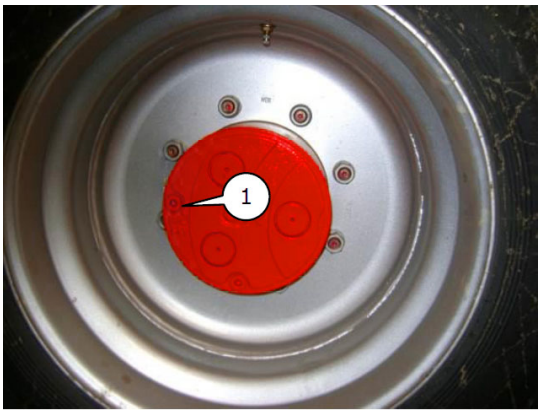
- Remove the level 1 cap. Oil should be brushing against the opening.
- If necessary, add more oil (see section MAINTENANCE: LUBRICANTS AND FUEL) via filling opening 2.
- Replace and tighten the level 1 cap (tightening torque between 34 and 49 N.m).
- Repeat the same steps for the two axle differentials.



B - Check the oil levels for the front and rear wheel gear reducers

Ensure the machine has been placed on a flat, horizontal surface with the combustion engine switched off.

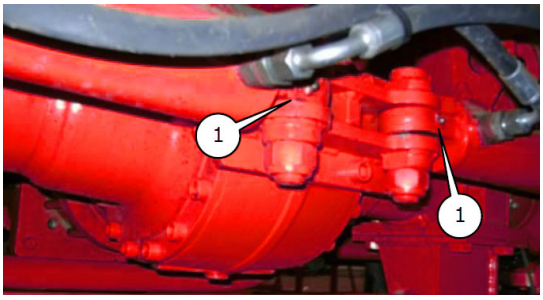
- Check the level for each of the gear reducers on the wheels.
- Position the level 1 cap horizontally.
- Remove the level cap. Oil should be brushing against the opening.
- If necessary, add more oil (see section MAINTENANCE: LUBRICANTS AND FUEL) via the same opening.
- Replace and tighten the level 1 cap (tightening torque between 34 and 49 N.m).
- Repeat the same steps for each front and rear wheel gear reducer (this may vary depending on the model).



C - Lubricating the steering cylinder and the front and rear gear reducer pivots

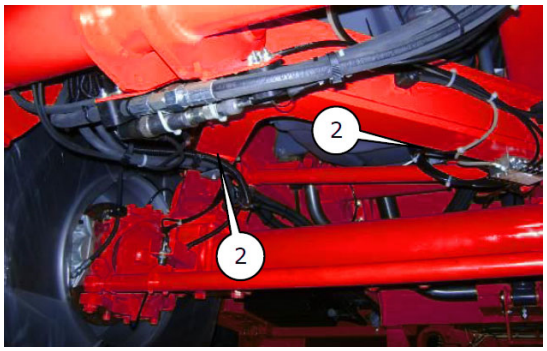
Clean and then lubricate the 1 points (8 greasers) using lubricant (see section MAINTENANCE: LUBRICANTS AND FUEL) and remove what was there previously.

For machines with a centralised lubrication unit, check only to ensure that there is a lubrication supply. Where necessary, check the levels on the automatic lubrication unit and the condition of the channels.



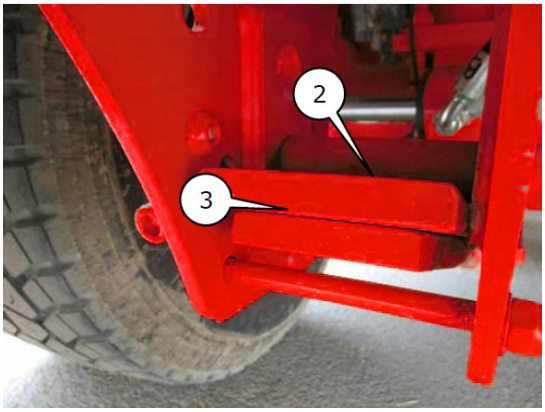
D - Front axle wobbling

Clean and then lubricate the 2 points (2 greasers) using lubricant (see section MAINTENANCE: LUBRICANTS AND FUEL) and remove what was there previously.



E - Lubricating suspension strips

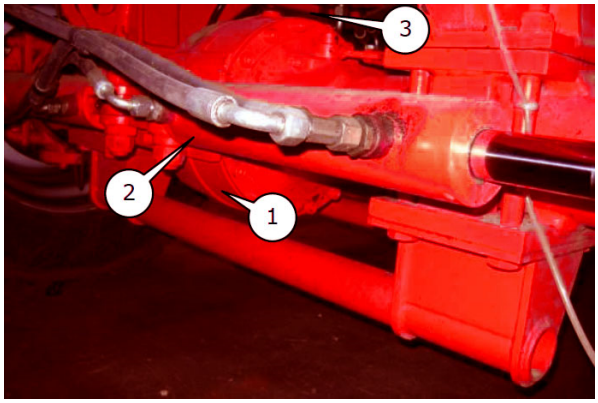
The suspension strips must be lubricated in order to ensure they function properly and without making any noise. Please refer to the maintenance table § 13.4. The front axis 1 should be lubricated at least once a week or inspected once a week if the machine is equipped with a centralised lubrication unit.
At the rear, you will need to lubricate between the support axis 2 and the strips, between strips 2 and 3. A creaking sound coming from the rear bridge normally indicates a lack of lubricant between the strips.
To lubricate between the strips, you will need to lift the machine from the rear in order to unballast the rear bridge and separate the strips (this can be done using a chisel, for example). Use a molybdenum-based lubricant (Belleville, for example).



F - Draining the differential oil from the front (for engine) and rear axle

Ensure the machine has been placed on a flat, horizontal surface, that the combustion engine has been switched off and that the differential oil is still hot.

- Place a tray beneath the drainage caps ☐☐1 and loosen them.
- Remove the level 2 cap and the filling cap 3 in order to drain properly.
- Replace and tighten the drainage 1 caps (tightening torque between 34 and 49 N.m).
- Fill with oil (see: section MAINTENANCE: LUBRICANTS AND FUEL) via filling opening 3.
- The level will be correct once the oil brushes against the level 2 opening. Check for any potential leaks around the drainage caps.
- Replace and tighten the level 2 cap (tightening torque between 34 and 49 N.m) and filling cap 3 (tightening torque between 34 and 49 N.m).
- Repeat the same steps for the rear differential axle.

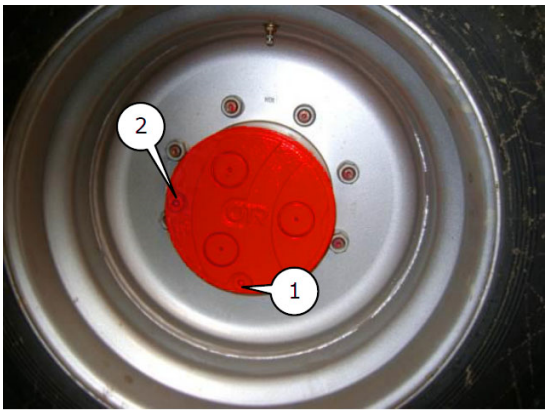


NOTE
Dispose of any waste oil in an environmentally-friendly way.

G - Draining reducer oil from the front and rear wheels

Ensure the machine has been placed on a flat, horizontal surface, that the engine has been switched off and that the reducer oil is still hot.

- Drain and replace the oil for each of the front wheel reducer gears (for drive wheels)
- Turn the drainage cap to position 1.
- Place a tray beneath the drainage cap and loosen it.
- Loosen the level 2 cap.
- Allow the oil to completely drain away.
- Close cap 1.
- Fill with oil via opening 2 (see section MAINTENANCE: LUBRICANTS AND FUEL).
- The level will be correct once the oil brushes against opening 2.
- Replace and tighten the 2 drainage caps.
- Repeat the same steps for each wheel gear reducer.



NOTE
Dispose of any waste oil in an environmentally-friendly way.

13.5.10. Wheel maintenance

A - Check the tyre pressure and the tightness of the wheel nuts

- Check the condition of the tyres for any tears, lumps or wear.
- Check to make sure the wheel nuts are sufficiently tight. Failure to adhere to this guideline may result in the wheel studs becoming damaged or breaking and could lead to the wheels themselves falling out of shape.
- Check the tyre pressure and adjust it if necessary.

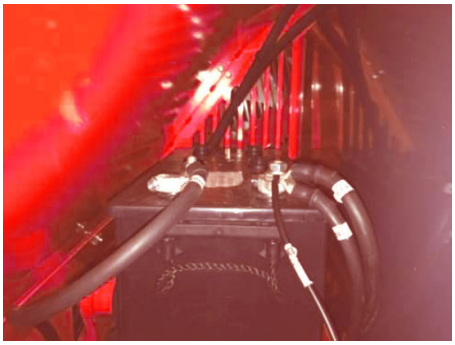
WARNING
Check to ensure that the air pipe is properly connected to the tyre valve prior to inflation and keep the area clear of any personnel while inflation is ongoing. You must follow the recommended inflation pressure values.

13.5.11. Battery maintenance

A - Check the battery's electrolyte levels

Check the electrolyte levels in each part of the battery.
In situations where the working room temperature is particularly high, check the level more regularly than once every 50 hours of use.

- Open the battery cover.
- Remove the attachment plate (depending on the model).
- Remove the caps from each part of the battery.
- The level should be 1.5 cm above the battery pads.
- If necessary, you may add clean, distilled water, stored in a glass container.
- Clean and dry the caps and replace them.
- Check the terminals and apply vaseline to prevent oxidation.
- Replace the attachment plate (depending on the model).
- Close the battery cover.



NOTE
Handling and working on a battery can be dangerous. Please take the following precautions:
- Wear protective goggles.
- Handle the battery on a flat, horizontal surface.
- You must never smoke or work close to a flame.
- Work in a sufficiently ventilated area.
- In the event of electrolytes being projected onto the skin or into the eyes, rinse thoroughly for 15 minutes using cold water and seek medical assistance.

B - Checking the density of the electrolyte in the battery

- Check the density of the electrolyte in each section of the battery using an acid tester.

- These checks should never be carried out after distilled water has been added. Recharge the battery and wait 1 hour before checking the density of the electrolyte in the battery.

WARNING
Handling and working on a battery can be dangerous. Please take the following precautions:
. Wear protective goggles.
. Handle the battery on a flat, horizontal surface.
. You must never smoke or work close to a flame.
. Work in a sufficiently ventilated area.
. In the event of electrolytes being projected onto the skin or into the eyes, rinse thoroughly for 15 minutes using cold water and seek medical assistance.

13.5.12. Cabin maintenance

A - Checking the seat belt

SEAT BELT WITH TWO ANCHORAGE POINTS

- Please check the following points:
. How the anchorage points are attached to the seat.
. The cleanliness of the strap and the locking mechanism.
. The interlocking of the locking mechanism.
. The condition of the strap (tears, rips, etc.).

SEAT BELT WITH TWO ANCHORAGE POINTS AND REWINDER

- Check the points referenced above in addition to the following points:
. That the belt rolls out properly.
. The condition of the rewinder covers.
. The locking of the rewinder mechanism by tugging sharply on the strap.

WARNING
In the event of an accident occurring, the seat belt must be replaced.

WARNING
Under no circumstances should you operate the machine if the seat belt is faulty (attachment, locking, cuts, tears, etc.). The seat belt should be repaired or replaced immediately.

B - Checking the parking / emergency brakes

The parking brake should be able to halt the machine when loaded to its GVWR on a steep slope. It should be able to operate going forward and in reverse.

It should be checked on a regular basis to make sure it is working.

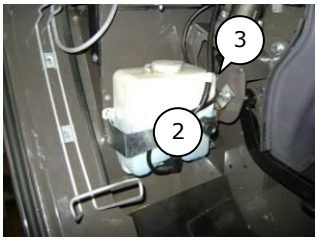
Place the machine on a surface with a 10% incline and loaded to its GVWR.

Check the brakes by locking the parking brake in position A.

WARNING
Should you need to park for a prolonged period of time on a steep slope, safety chocks should be used.
For your safety, the machine should ideally be parked on a flat, horizontal surface.

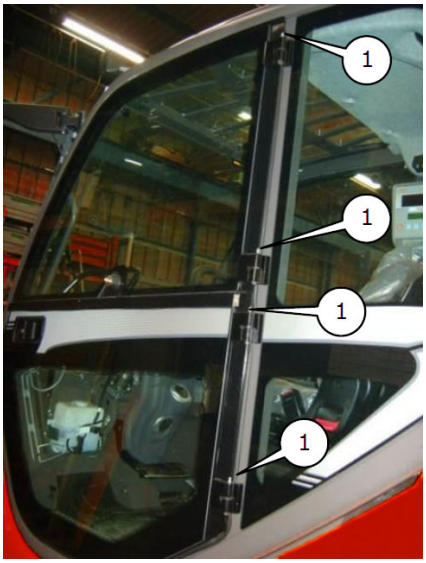
C - Checking windscreen washer fluid levels

- Loosen screw 1 and remove windscreen washer tank access hatch 2. Carry out a visual examination of the level.
- If necessary, add windscreen washer fluid (see section MAINTENANCE: LUBRICANTS AND FUEL) via filling opening 3.



D - Cabin door

- Clean and then lubricate the 1 points (4 greasers) using lubricant (see section MAINTENANCE: LUBRICANTS AND FUEL) and remove what was there previously



13.6. REPAIRS

Belts (engine, compressor), pre-filters and filters (oil, diesel, air, cabin climate control), cutters (sections), joints, pipes, brake pads, etc.
Only spare parts and accessories compliant with the terms of this document should be used.

13.7. TROUBLESHOOTING

13.7.1. Troubleshooting table

Contact us

13.7.2. Engine power reduction

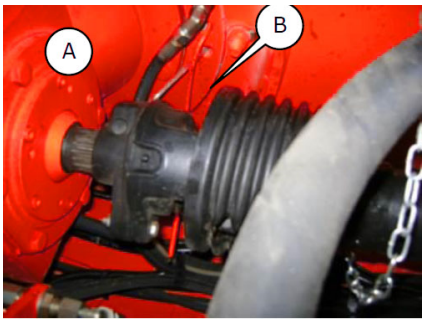
In the event of the engine developing a fault, power reduction mode can be applied.
There are 2 reduction levels:

- Derating Step1 : engine power reduced by 25%.
- Derating Step2 : engine power reduced by 60%.

This reduction level can be viewed on the engine diagnostic page and is represented by  .

WARNING
In both cases, contact your dealer.

13.7.2. Broken security bolts

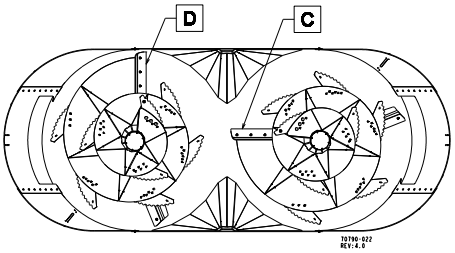


Autospire machines equipped with 2 mixing augers are secured using a limiter bolt for each box. The limiters are located behind the box of the front auger.
The limiter for the front auger can be found on the side gear box (Location A) and the limiter for the rear auger can be found on the transmission (Location B).

a) Changing the security bolt on the front auger
- Bring the machine to a halt and switch off the engine.
- Uncouple the transmission for the rear auger around the front box.
- Remove the fastening plate for the box's security bolt (Location A).
- Remove the piece of auger from the plate.
- Replace the box plate and add a new bolt (M8.50 10.9 screw).
- Replace the transmission for the rear auger.

b) Changing the security bolt on the rear auger
- Bring the machine to a halt and switch off the engine.
- Uncouple the transmission for the rear auger on the limiter side.
- Remove the piece of auger from the limiter (Location B).
- Fit a new bolt (M8.50 10.9 auger)
- Replace the transmission for the rear auger.
- Reset the speed for the front box.

IMPORTANT
Once the machine has been drained, check the indexation of the mixing augers - the gap between the gasket of the front auger (Location C) and the gasket of the rear auger (Location D) should be identical.



In order to reset the mixing augers, disconnect the transmission for the rear auger and then turn the front auger. Once the augers have been reset, replace the transmission for the rear auger.

13.8. USING THE MACHINE AGAIN AFTER REPAIR WORK HAS BEEN CARRIED OUT

Contact us.

14 - CLEANING

In order to ensure a long life for your machine, we would recommend that you do not leave silage or any other corrosive product inside the tank for an extended period of time.

Each time the machine is stopped to be stowed, it must first be fully cleaned and lubricated.
Please refer to the section on "Washing" for the relevant guidelines.

14.1. WHERE TO CARRY OUT CLEANING

Ideally, the machine should be cleaned in an area where you are able to collect and recycle any cleaning waste.

14.2. WEARING PERSONAL PROTECTIVE EQUIPMENT

Ensure you are properly protected by wearing anti-slip boots, gloves, overalls, etc.

14.3. CLEANING METHOD

Cover all openings that need to be protected to prevent water, steam or other cleaning products from entering.
Ideally, appropriate cleaning tools should be used. This includes a fork, a broom and a high-pressure cleaner.
When cleaning using a high-pressure spray gun, avoid holding it too close to the machine and avoid directing the jet onto electronic components, the engine or electrical connections, pipes and hydraulic connectors, seals, filling caps, etc.
Washing using jets of water will be sufficient for removing products that may have accumulated during work. Such products will speed up the oxidation process for your machine.

Sometimes, a high-pressure cleaning device will be required. It is essential in all cases that you follow the rules below:

- . Water temperature: maximum 60°.
- . Washing pressure: maximum 60 bars.
- . Distance between the machine and the nozzle: minimum 30 cm.
- . Distance between the front face of the machine's dashboard and the nozzle: minimum 1m.

You should avoid focusing on sensitive components such as the dashboard, electrical or hydraulic components, bearings, chains, safety stickers, etc. You must also follow the guidelines for using your high-pressure cleaning device.
When cleaning the engine, you must not spray the alternator using a direct jet of water/steam.
Heat the engine in order to evaporate any last traces of water.
Should it be necessary to access the tank, protect the edges of the cutters.
In order to clean the strip of the right/left belt, it has been cut in order to access the inside of the belt using the jet of water.

14.4. TYPE OF CLEANING PRODUCTS

You must not use aggressive cleaning products (e.g. chlorinated).
Use non-fluffy cloths or soft brushes.

14.5. ASSESSING THE CONDITION OF THE MACHINE AFTER CLEANING

Once cleaning is complete, check the fuel, engine oil and brake pipes as well as the hydraulic oil pipes and ensure that there are no leaks, that the connectors have not become loose and that no damage has been sustained.

Should you become aware of any damage, this should be dealt with at the earliest available opportunity.

15 - STORING AND STOWAGE

The aim of the guidelines below is to prevent the vehicle from sustaining damage when it has been removed from service for an extended period of time (maximum 6 months). Should it become necessary to immobilise the machine for an extended period of time, corrosion protection will be necessary. The measures described here are applicable for immobilisation periods of up to six months. Beyond this point, the engine must be switched back on again, reheated and re-treated for an extended stowage period.

WARNING
Store the machine out of the reach of children in a stable and secure location.

15.1. PREPARING THE MACHINE

- Clean the machine thoroughly: see section "cleaning"
- Check for any fuel, oil, water or air leaks and repair them where necessary.
- Replace or repair all worn or damaged parts.
- Wash the painted surfaces of the machine using clean, cold water and wipe them dry.
- Add a touch of paint in areas where it is necessary to do so.
- Bring the machine to a halt (see: DRIVING INSTRUCTIONS).
- Close the dispensing hatch or hatches, return the conveyor (optional) to its central position, activate the counter-cutters, lift the dispensing belt (optional), lower the loading arm and activate all protective casings.
- Check to ensure that the cylinder rods are in good condition, that they have been withdrawn. If this is not the case, lubricate the rods.
- Lubricate the hinges and the drive shaft.
- Release the pressure in the hydraulic circuits.

IMPORTANT
To prevent any rust from forming, a touch of oil and paint would help.

15.2. PREPARING THE COMBUSTION ENGINE

Clean the engine (where possible using a cold cleaning product): see section "cleaning".
Clean and blow the radiator.
Drain the transmission (box) and clean the suction strainer.
Fill the transmission with fresh oil up to the "full" point on the dipstick.
You should only use oil recommended for the box to function. Do not use conservation oil.
Heat the engine and then switch it off.
Drain the engine and fill it using an anti-corrosion oil. Anti-corrosion protection oil should be used, depending on the specifications.

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. Code OTAN C 640/642

Drain the cooling circuit.
Fill the cooling circuit with a clean, suitable coolant.
Drain the fuel tank.
Create a fuel mix comprised of 90% diesel and 10% anti-corrosion oil and fill the tank.
Leave the engine running for around 10 minutes.
Switch off the engine.
Turn the engine by hand (several turns).
Remove the belts, wrap them and store them.
Spray the belt pulley tumblers using an anti-corrosion product.
Hermetically seal the filling openings for engine oil and the oil dipstick (e.g. use water-resistant adhesive tape).
Hermetically seal the suction and exhaust openings.
Hermetically seal the breather pipe and the oil dipstick for the transmission (box).
Remove and clean the battery. Store the battery in a cold location, but ensure that it is kept away from ice. Make sure that the battery remains charged for the entire stowage period.
Store the machine in a dry, sheltered location. Should it be necessary to store the machine outdoors, cover using waterproof tarpaulin.
Apply the parking brake (hand brake).
Protect the tyres from heat and sun radiation.

15.3. USING THE MACHINE AGAIN AFTER IT HAS BEEN STOWED

Remove the anti-corrosion product from the pulley tumblers using a cleaning agent (petroleum spirit, hazard class A3).
Fit the belts.
Remove the protections from the filling openings and the oil dipsticks for the engine and the transmission (box).
Remove the protections from the suction and exhaust openings on the engine.
Remove the protections from the transmission's breathing pipe.
Replace the battery and reconnect the cables.

IMPORTANT
You must never reverse the battery connectors.
When the engine is running, do not interrupt the connection between the battery, the alternator and the regulator.

Check the levels (engine oil, transmission oil, coolant, fuel tank, hydraulic oil).
Clean the cylinder rods using a cloth soaked in diesel and then dry using a clean, dry cloth.
Check the inflation pressure of the tyres.

WARNING
Prior to using the machine again, check to ensure there are no foreign bodies in the tank. Please ensure that the area around the machine is kept clear of any personnel while these usage checks are being carried out.

WARNING
The engine should never be allowed to run in a sealed space. Please ensure there is sufficient ventilation, otherwise you run the risk of asphyxiation.

16 - DISASSEMBLY AND SCRAPPAGE

Drain the machine's boxes and the hydraulic circuit.
Drain the engine (oil, coolant).
Drain the transmission.
Drain the steering fluid.
Drain the windscreen washer fluid.
Drain the brake fluid.
Remove the battery and recycle it.
During disassembly, separate the materials into different categories: iron, plastic, rubber, electrical components, tyres, oil, coolant, batteries, etc. and/or send them to specialist recycling centres.

WARNING
For your safety and to avoid pollution, ensure the dismantling of your machine is carried out by a specialist operator.

17 - SPECIFIC INFORMATION REGARDING PRESSURISED EQUIPMENT

WARNING
Hydropneumatic suspension and braking units are pressurised gas appliances.
You may not make any modifications to their external appearance through machining, welding, milling, drilling or any other method. Making modifications to their inflation pressure is also prohibited.
Hydropneumatic units and their attachments must also be kept in proper condition at all times, and checked regularly for corrosion.
Prior to carrying out any work on the hydraulic circuit, please ensure that the installation is not pressurised. Do not search for a hydraulic leak using your fingers.